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All data, including phase data, are available on CD-ROM and from the internet - http://www.isc.ac.uk

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,2170S×17955W,h600km,mb4.6/6,Error ellipse: s-maj=75.5km s-min=25.7km az=151.0*
*IDC **01** 18:45:46.3±2.6,2176S×17970W,h627km±37km,mb3.5/4, mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km s-min=20.6km az=159.0*
ISC 01 18:45:43.1±2.7,223S±02×1796W±03,h613km±42km,n22, σ1§15/21,mb4.4/9,1C,South of Fiji Islands

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

*IDC **01** 00:38:05.0±1.7, 7.11S×130.78E, h0km, mb3.9/3, mb1 4.0/6, mb1mx3.8/12, mbtmp3.8/6, ML3.8/3, Error ellipse: s-maj=77.5km s-min=24.6km az=82.0*
*NEIC **01** 00:38:06.1±0.8, 7.11S×130.95E, h10km, mb3.9/1, Error ellipse: s-maj=26.5km s-min=11.8km az=75.0*
*ISCJB **01** 00:38:09.1±1.9, 7.30S±0.06×131.0E±0.1, h59km±21km, mb3.9/3, Error ellipse: s-maj=24.1km s-min=10.2km az=4.8*
ISC 01 00:38:10.7±1.5**, 7.37S**±0.05×**131.2E**±0.1**, h60**km±19km**, n8,** σ**1.57**/12**, mb3.9**/3**, 1D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.29**	**41**	⇓*e*P	**Pn**	**00 38 48.0**	**+1.9**
TLE				*e*S	**Sn**	**00 39 11.0**	**-2.2**
FITZ	**Fitzroy Crossi**	**11.97**	**206**	Pn	**Pn**	**00 40 58.2**	**-0.5**
	0.8nm,0.3s,baz=34,slow=14,SNR=23						
FITZ				Sn	**Sn**	**00 43 01.8**	**-8.9**
	1.7nm,0.3s,baz=154,slow=22,SNR=11						
WRA	**Warramunga Arr**	**12.86**	**167**	Pn	**Pn**	**00 41 13.0**	**+2.2**
	0.4nm,0.3s,baz=348,slow=14,SNR=5.9						
WRA				Sn	**Sn**	**00 43 30.3**	**-2.0**
	0.8nm,0.3s,baz=336,slow=22,SNR=7.5						
ASAR	**Alice Springs**	**16.41**	**171**	Pn	**Pn**	**00 42 01.7**	**+4.5**
	0.3nm,0.3s,baz=353,slow=9.0,SNR=18						
ASAR				Sn	**Sn**	**00 44 58.1**	**-0.5**
	0.3nm,0.3s,baz=357,slow=27,SNR=5.9						
CTAO	**Charters Tower**	**19.29**	**132**	*e*P	**Pn**	**00 42 35.0**	**+2.6**
	8.1nm,1.2s						
SONM	**Songino Array**	**59.18**	**341**	P	**P**	**00 48 06.0**	**+0.6**
	0.5nm,0.6s,mb3.7,baz=167,slow=6.3,SNR=3.3						
MKAR	**Makanchi Array**	**69.20**	**326**	P	**P**	**00 49 11.2**	**+0.2**
	1.0nm,0.5s,mb4.0,baz=128,slow=7.9,SNR=9.3						
ZALV	**Zalesovo Beam**	**72.45**	**333**	P	**P**	**00 49 29.1**	**-1.6**
	0.7nm,0.5s,mb3.9,baz=97,slow=4.6,SNR=4.3						

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*ISCJB **01** 00:45:18.8±1.1, 38.13N±0.04×26.58E±0.06, h5km±9km, Error ellipse: s-maj=8.2km s-min=6.1km az=174.6*
*ATH **01** 00:45:18.5, 38.14N×26.46E, h4km, MD3.1/3*
*CSEM **01** 00:45:19.6±0.1, 38.12N×26.63E, h20km, MD3.1, Error ellipse: s-maj=3.0km s-min=2.2km az=77.0*
*DDA **01** 00:45:20.5, 38.16N×26.74E, h3km±3km, Md3.1*
ISC 01 00:45:19.0±1.0**, 38.13N**±0.04×**26.58E**±0.06**, h12**km±9km**, n8,** σ**0.98**/15**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.47**	**154**	*e*PG	**Pg**	**00 45 28.4**	**+0.1**
SMG				*e*SG	**Sg**	**00 45 36.0**	**+1.5**
KDAG	**Bornova**	**0.61**	**63**	*i* P	**Pg**	**00 45 30.1**	**-0.7**
KDAG				*i* S	**Sg**	**00 45 38.4**	**-0.4**
AYDN	**Tasoluk**	**1.13**	**114**	*i* P	**Pb**	**00 45 39.9**	**-0.6**
AYDN				*i* S	**Sb**	**00 45 54.6**	**-0.6**
PRK	**Paraskevi**	**1.14**	**348**	*e*PB	**Pb**	**00 45 40.1**	**-0.5**
PRK				*e*SB	**Sb**	**00 45 54.4**	**-1.0**
AYVA	**Ayvalik**	**1.18**	**4**	*i* P	**Pn**	**00 45 42.7**	**+1.3**
AYVA				*i* S	**Sb**	**00 45 58.6**	**+2.0**
AKHS	**Akhisar**	**1.22**	**52**	*i* P	**Pn**	**00 45 43.1**	**+1.2**
AKHS				*i* S	**Sb**	**00 45 57.6**	**-0.3**
APE	**Apeiranthos**	**1.35**	**218**	*e*PB	**Pb**	**00 45 43.1**	**-1.1**
BALY	**Balya**	**1.80**	**27**	*i* P	**Pn**	**00 45 49.3**	**-0.6**
BALY				*i* S	**Sn**	**00 46 17.5**	**+4.8**

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*IDC **01** 00:51:02.6±2.0, 0.30N×127.56E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/14, mbtmp3.9/4, ML3.9/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/21, Error ellipse: s-maj=111.7km s-min=25.6km az=70.0*
*NEIC **01** 00:51:05.4±1.2, 0.04S×126.74E, h10km, mb4.0/3, Error ellipse: s-maj=65.7km s-min=19.1km az=62.0*
*ISCJB **01** 00:51:06.3±1.3, 0.2N±0.2×127.1E±0.3, h33km, mb4.0/5, Error ellipse: s-maj=45.1km s-min=19.1km az=158.8*
ISC 01 00:51:08.8±1.3**, 0.1N**±0.2×**127.0E**±0.3**, h35**km**, n10,** σ**0.98**/9**, mb4.0**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**8.89**	**235**	LR	LR	00 56 55.9	
	comp=Z,70nm,19.5s,baz=140,slow=38						
FITZ	**Fitzroy Crossi**	**18.16**	**184**	*e*P	**Pn**	**00 55 19.4**	**+1.1**
	4.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.16**	**184**	P	**Pn**	**00 55 19.5**	**+1.1**
	0.3nm,0.3s,baz=28,slow=13,SNR=8.0						
WRA	**Warramunga Arr**	**21.18**	**161**	P	**P**	**00 55 51.7**	**+0.4**
	4.2nm,0.5s,mb4.0,baz=341,slow=10,SNR=19						
WB2	**Warramunga Arr**	**21.19**	**161**	*e*P	**P**	**00 55 51.6**	**+0.2**
ASAR	**Alice Springs**	**24.57**	**165**	P	**P**	**00 56 23.4**	**-2.2**
	1.3nm,0.4s,mb3.9,baz=341,slow=9.9,SNR=14						
CTAO	**Charters Tower**	**27.52**	**138**	*e*P	**P**	**00 56 53.0**	**+0.7**
	3.1nm,0.9s,mb3.9						
MKAR	**Makanchi Array**	**60.69**	**326**	P	**P**	**01 01 17.0**	**+0.4**
	0.7nm,0.7s,mb3.9,baz=99,slow=5.1,SNR=4.5						
MKAR	**Makanchi Array**	**60.69**	**326**	P	**P**	**01 01 17.0**	**+0.4**
CASY	**Casey**	**67.30**	**187**	*e*P	**P**	**01 01 58.8**	**-0.9**
	1.4nm,0.8s,mb4.0						

MAN 01 00:56:07, 18.05N×121.66E, h7km, mb4.1, ML2.9, MS2.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**0.42**	**63**	*e*P	Pg	00 56 15.8	+0.7
SGCP				*e*S	Sg	00 56 22.1	+1.5
APYP	**Conner**	**0.43**	**244**	*e*P	Pg	00 56 16.3	+0.9
APYP				*e*S	Sg	00 56 22.8	+1.7
ABRA	**Dolores**	**0.98**	**246**	*e*P	Pg	00 56 24.9	-1.0
ABRA				*e*S	Sg	00 56 38.3	-0.4
CAUP	**Cauayan**	**1.11**	**172**	*e*P	Pg	00 56 28.9	+0.5
CAUP				*e*S	Sg	00 56 46.0	+3.1
SIPP	**Brgy, Tapao**	**1.15**	**264**	⇓*i*P	Pg	00 56 28.9	-0.1
SIPP				*i* S	Sg	00 56 45.9	+1.9
PALP	**Palanan**	**1.23**	**143**	*e*P	Pb	00 56 30.4	-0.1
PALP				*e*S	Sg	00 56 48.1	+1.6
BALP	**Baler**	**2.30**	**182**	*e*P	Pn	00 56 44.9	-0.4

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*SZGRF **01** 01:09:19.6, 26.70N×44.31W, h20km, mb5.0, MS4.2, Northern Mid-Atlantic Ridge*
*IDC **01** 01:09:24.4±0.6, 27.70N×44.04W, h0km, mb4.2/19, mb1 4.4/19, mb1mx4.3/24, mbtmp4.2/19, MS4.0/7, Ms1 4.0/7, ms1mx3.7/27, Error ellipse: s-maj=17.8km s-min=13.5km az=158.0*
*ISCJB **01** 01:09:25.1±0.3, 27.74N±0.07×44.13W±0.03, h10km, mb4.7/118, MS4.2/20, Error ellipse: s-maj=10.3km s-min=3.3km az=173.4*
*MOS **01** 01:09:25.0±0.9, 27.74N×44.14W, h10km, mb5.1/61, MS4.1/13, Error ellipse: s-maj=8.5km s-min=4.3km az=136.4*
*BJI **01** 01:09:26.8, 27.70N×44.10W, h10km, mB5.5, Ms5.1, Msz4.7*
*NEIC **01** 01:09:26.8±0.2, 27.70N×44.12W, h10km, mb4.9/83, Error ellipse: s-maj=7.7km s-min=2.6km az=173.0*
*GCMT **01** 01:09:26.8±0.3, 27.81N×44.09W, h12km, MW4.9/76, Moment Tensor Solution. s27,c29; s76,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.73±.07; $M_{\theta\theta}$0.60±.09; $M_{\phi\phi}$2.13±.07; $M_{r\theta}$0.02±.31; $M_{\theta\phi}$0.73±.06; $M_{\phi r}$0.30±.23; Best double couple: $M_0$2.59400×10^{16} NP1:ϕ_s24.00000°, δ42.00000°, λ-87.00000°. NP2: ϕ_s200.00000°, δ48.00000°, λ-92.00000°. Principal axes: T 2.4400, Plg3.0000°, Azm292.0000°; N 0.3130, Plg2.0000°, Azm202.0000°; P -2.7480, Plg86.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 01 01:09:27.0±0.3**, 27.73N**±0.07×**44.10W**±0.03**, h10**km**, (h21**km±1.2km**:pP-P), n328,** σ**0.87**/317**, mb4.7**/118**, MS4.2**/20**, 15C-7D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**22.42**	**249**	LR	LR	01 21 11.1	
	comp=Z,528nm,21.7s,MS3.9,baz=84,slow=32						
BBTS	**Babate**	**28.73**	**111**	LR	LR	01 24 12.5	
	comp=Z,578nm,19.0s,MS4.2,baz=266,slow=31						
SCHQ	**Schefferville**	**31.73**	**335**	P	**P**	**01 15 50.4**	**-0.5**
	1.5nm,0.6s,mb4.0,baz=152,slow=15,SNR=3.6						
SCHQ				LR	LR	01 27 38.2	
	comp=Z,211nm,18.9s,MS3.8,baz=143,slow=34						
BLA	**Blacksburg**	**31.90**	**297**	*e*P	**P**	**01 15 52.6**	**-0.1**
BLA				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
BLA	**Blacksburg**	**31.90**	**297**	*e*P	**P**	**01 15 52.6**	**-0.1**
	comp=Z,15nm,1.1s,mb4.7						
TKL	**Tuckaleechee C**	**34.49**	**293**	P	**P**	**01 16 15.5**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.2,baz=90,slow=7.1,SNR=2.6						
ESDC	**Sonseca Array**	**35.18**	**60**	P	**P**	**01 16 20.0**	**-1.2**
	comp=Z,2.4nm,0.9s,mb4.1,baz=265,slow=8.2,SNR=5.6						
ESDC				LR	LR	01 27 00.6	
	comp=Z,219nm,21.5s,MS3.9,baz=250,slow=30						
WCI	**Wyandotte Cave**	**36.63**	**298**	*e*P	**P**	**01 16 34.0**	**+0.3**
WCI				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.7						
WCI	**Wyandotte Cave**	**36.63**	**298**	*e*P	**P**	**01 16 34.0**	**+0.3**
	comp=Z,16nm,1.2s,mb4.7						
ROSC	**El Rosal**	**36.66**	**237**	LR	LR	01 30 41.2	
	comp=Z,52nm,18.5s,MS3.3,baz=27,slow=35						
QUIF	**Quistinic**	**37.54**	**46**	*e*P	**P**	**01 16 40.9**	**-0.3**
	comp=Z,124nm,1.7s,mb5.1						
QUIF	**Quistinic**	**37.54**	**46**	*e*P	**P**	**01 16 40.9**	**-0.3**
QUIF				pmax	pmax		
	comp=Z,62nm,1.7s,mb5.1						
QUIF	**Quistinic**	**37.54**	**46**	*e*P	**P**	**01 16 40.9**	**-0.3**
	comp=Z,62nm,1.7s,mb5.1						
ROSF	**Rostrenen**	**37.60**	**46**	*e*P	**P**	**01 16 41.6**	**-0.1**
	comp=Z,129nm,1.7s,mb5.1						
ROSF	**Rostrenen**	**37.60**	**46**	*e*P	**P**	**01 16 41.6**	**-0.1**
ROSF				pmax	pmax		
	comp=Z,64nm,1.7s,mb5.1						
ROSF	**Rostrenen**	**37.60**	**46**	*e*P	**P**	**01 16 41.6**	**-0.1**
	comp=Z,64nm,1.7s,mb5.1						
SJPF	**Ste Jean**	**37.73**	**55**	*e*P	**P**	**01 16 43.0**	**+0.1**
	comp=Z,115nm,1.7s,mb5.0						
SJPF	**Ste Jean**	**37.73**	**55**	*e*P	**P**	**01 16 43.0**	**+0.1**
SJPF				pmax	pmax		
	comp=Z,57nm,1.7s,mb5.0						
SJPF	**Ste Jean**	**37.73**	**55**	*e*P	**P**	**01 16 43.0**	**+0.1**
	comp=Z,57nm,1.7s,mb5.0						
PLAL	**Pickwick Lake**	**38.00**	**292**	*e*P	**P**	**01 16 46.3**	**+1.0**
	comp=Z,47nm,2.0s,mb4.9						
SGMF	**Saint Gilles**	**38.03**	**46**	*e*P	**P**	**01 16 45.5**	**+0.1**
	comp=Z,124nm,1.5s,mb5.1						
SGMF	**Saint Gilles**	**38.03**	**46**	*e*P	**P**	**01 16 45.5**	**+0.1**
SGMF				pmax	pmax		
	comp=Z,62nm,1.5s,mb5.1						
SGMF	**Saint Gilles**	**38.03**	**46**	*e*P	**P**	**01 16 45.5**	**+0.1**
	comp=Z,62nm,1.5s,mb5.1						
OLIL	**Olney**	**38.08**	**298**	*e*P	**P**	**01 16 46.0**	**+0.1**
	comp=Z,7.6nm,0.8s,mb4.5						
ETSF	**Etsaut**	**38.18**	**55**	*e*P	**P**	**01 16 47.3**	**+0.6**
	comp=Z,53nm,1.5s,mb4.7						
ETSF	**Etsaut**	**38.18**	**55**	*e*P	**P**	**01 16 47.3**	**+0.6**
ETSF				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.7						
ETSF	**Etsaut**	**38.18**	**55**	*e*P	**P**	**01 16 47.3**	**+0.6**
	comp=Z,26nm,1.5s,mb4.8						
EPF	**Esparros**	**38.85**	**55**	*e*P	**P**	**01 16 52.9**	**+0.5**
	comp=Z,62nm,1.5s,mb4.8						
EPF	**Esparros**	**38.85**	**55**	*e*P	**P**	**01 16 52.9**	**+0.5**
EPF				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.8						
EPF	**Esparros**	**38.85**	**55**	*e*P	**P**	**01 16 52.9**	**+0.5**
	comp=Z,31nm,1.5s,mb4.8						
GRR	**Gorron**	**39.16**	**46**	*e*P	**P**	**01 16 54.9**	**+0.1**
	comp=Z,94nm,1.5s,mb5.0						
GRR	**Gorron**	**39.16**	**46**	*e*P	**P**	**01 16 54.9**	**+0.1**
GRR				pmax	pmax		
	comp=Z,47nm,1.5s,mb5.0						
GRR	**Gorron**	**39.16**	**46**	*e*P	**P**	**01 16 54.9**	**+0.1**
	comp=Z,47nm,1.5s,mb5.0						
MFF	**Saint Martin d**	**39.18**	**49**	*e*P	**P**	**01 16 55.3**	**+0.3**
	comp=Z,75nm,1.3s,mb5.0						
MFF	**Saint Martin d**	**39.18**	**49**	*e*P	**P**	**01 16 55.3**	**+0.3**
MFF				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.0						
MFF	**Saint Martin d**	**39.18**	**49**	*e*P	**P**	**01 16 55.3**	**+0.3**
	comp=Z,37nm,1.3s,mb5.0						
LFF	**La Frestale**	**39.45**	**52**	*e*P	**P**	**01 16 57.1**	**-0.2**
	comp=Z,78nm,1.3s,mb5.0						
LFF	**La Frestale**	**39.45**	**52**	*e*P	**P**	**01 16 57.1**	**-0.2**
LFF				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.0						
LFF	**La Frestale**	**39.45**	**52**	*e*P	**P**	**01 16 57.1**	**-0.2**
	comp=Z,39nm,1.3s,mb5.0						
FLN	**La Foliniere**	**39.50**	**46**	*e*P	**P**	**01 16 57.5**	**-0.2**
FLN				*e*MLR	MLR		
	comp=Z,334nm,18.8s,MS3.9						
FLN	**La Foliniere**	**39.50**	**46**	*e*P	**P**	**01 16 57.5**	**-0.2**
FLN				LR	LR		
	comp=Z,330nm,18.8s,MS4.2						
LDF	**La Druitiere**	**39.68**	**46**	*e*P	**P**	**01 16 59.2**	**0.0**
	comp=Z,44nm,1.1s,mb4.8						
LDF	**La Druitiere**	**39.68**	**46**	*e*P	**P**	**01 16 59.2**	**0.0**
LDF				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.8						
LDF	**La Druitiere**	**39.68**	**46**	*e*P	**P**	**01 16 59.2**	**0.0**
	comp=Z,22nm,1.1s,mb4.8						
BORG	**Borgarnes**	**39.76**	**15**	LR	LR	01 29 43.6	
	comp=Z,7µm,21.6s,MS5.5,baz=325,slow=31						
RJF	**Les Rejaudoux**	**40.05**	**52**	*e*P	**P**	**01 17 01.9**	**-0.4**
	comp=Z,69nm,1.5s,mb4.9						
RJF				*e*MLR	MLR		
	comp=Z,415nm,22.5s,MS3.9						
RJF	**Les Rejaudoux**	**40.05**	**52**	*e*P	**P**	**01 17 01.9**	**-0.4**
RJF				pmax	pmax		
	comp=Z,35nm,1.5s,mb4.9						
RJF				MLR	MLR		
	comp=Z,420nm,22.5s,MS4.2						
RJF	**Les Rejaudoux**	**40.05**	**52**	*e*P	**P**	**01 17 01.9**	**-0.4**
	comp=Z,34nm,1.5s,mb4.9						
RJF				LR	LR		
	comp=Z,420nm,22.5s,MS4.2						
JFWS	**Jewell Farm**	**40.08**	**305**	*e*P	**P**	**01 17 02.2**	**-0.4**
JFWS				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
JFWS	**Jewell Farm**	**40.08**	**305**	*e*P	**P**	**01 17 02.2**	**-0.4**
	comp=Z,4.6nm,0.5s,mb4.5						
MTLF	**Montolieu**	**40.26**	**55**	*e*P	**P**	**01 17 03.6**	**-0.5**
	comp=Z,47nm,1.4s,mb4.7						
MTLF	**Montolieu**	**40.26**	**55**	*e*P	**P**	**01 17 03.6**	**-0.5**
MTLF				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.7						
MTLF	**Montolieu**	**40.26**	**55**	*e*P	**P**	**01 17 03.6**	**-0.5**
	comp=Z,24nm,1.4s,mb4.7						
CAF	**Calviac**	**40.37**	**52**	*e*P	**P**	**01 17 04.7**	**-0.3**
	comp=Z,25nm,1.2s,mb4.5						
CAF	**Calviac**	**40.37**	**52**	*e*P	**P**	**01 17 04.7**	**-0.3**
CAF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.5						
CAF	**Calviac**	**40.37**	**52**	*e*P	**P**	**01 17 04.7**	**-0.3**
	comp=Z,13nm,1.2s,mb4.5						
CCM	**Cathedral Cave**	**40.53**	**297**	*e*P	**P**	**01 17 06.1**	**-0.3**
CCM				pmax	pmax		
	comp=Z,23nm,1.5s,mb4.6						
CCM	**Cathedral Cave**	**40.53**	**297**	*e*P	**P**	**01 17 06.1**	**-0.3**
	comp=Z,23nm,1.5s,mb4.6						
TCF	**Toulx Ste Croi**	**40.71**	**50**	*e*P	**P**	**01 17 07.7**	**0.0**
	comp=Z,71nm,1.5s,mb4.8						
TCF	**Toulx Ste Croi**	**40.71**	**50**	*e*P	**P**	**01 17 07.7**	**0.0**
TCF				pmax	pmax		
	comp=Z,36nm,1.5s,mb4.8						
TCF	**Toulx Ste Croi**	**40.71**	**50**	*e*P	**P**	**01 17 07.7**	**0.0**
	comp=Z,36nm,1.5s,mb4.8						
TEIG	**Tepich**	**40.88**	**269**	P	**P**	**01 17 09.6**	**+0.1**
	comp=Z,2.3nm,0.4s,mb4.2,baz=72,slow=8.4,SNR=3.3						
BGF	**Bois d'Agland**	**41.19**	**50**	*e*P	**P**	**01 17 11.5**	**-0.2**
LBL	**Lubilhac**	**41.25**	**52**	*e*P	**P**	**01 17 13.6**	**+1.4**
LASF	**Ste Croix**	**41.52**	**54**	*e*P	**P**	**01 17 14.8**	**+0.3**
	comp=Z,39nm,1.2s,mb4.6						
AVF	**Avril sur Loir**	**41.57**	**50**	*e*P	**P**	**01 17 14.7**	**-0.2**
	comp=Z,43nm,1.3s,mb4.6						
AVF	**Avril sur Loir**	**41.57**	**50**	*e*P	**P**	**01 17 14.7**	**-0.2**
AVF				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.6						
AVF	**Avril sur Loir**	**41.57**	**50**	*e*P	**P**	**01 17 14.7**	**-0.2**
	comp=Z,22nm,1.3s,mb4.6						
PLDF	**La Plantade**	**41.62**	**51**	*e*P	**P**	**01 17 16.6**	**+1.3**
SSF	**Saint Saulge**	**41.73**	**49**	*e*P	**P**	**01 17 15.9**	**-0.2**
	comp=Z,53nm,1.3s,mb4.7						
SSF	**Saint Saulge**	**41.73**	**49**	*e*P	**P**	**01 17 15.9**	**-0.2**
SSF				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.7						
SSF	**Saint Saulge**	**41.73**	**49**	*e*P	**P**	**01 17 15.9**	**-0.2**
	comp=Z,26nm,1.3s,mb4.7						
SMF	**Signal de Mont**	**41.88**	**50**	*e*P	**P**	**01 17 17.4**	**0.0**
	comp=Z,95nm,1.3s,mb5.0						
SMF	**Signal de Mont**	**41.88**	**50**	*e*P	**P**	**01 17 17.4**	**0.0**
SMF				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.0						
SMF	**Signal de Mont**	**41.88**	**50**	*e*P	**P**	**01 17 17.4**	**0.0**
	comp=Z,48nm,1.3s,mb5.0						
LOR	**Lormes**	**42.00**	**49**	*e*P	**P**	**01 17 18.2**	**-0.1**
	comp=Z,63nm,1.4s,mb4.8						
LOR				*e*MLR	MLR		
	comp=Z,176nm,22.5s,MS3.6						
LOR	**Lormes**	**42.00**	**49**	*e*P	**P**	**01 17 18.2**	**-0.1**
LOR				pmax	pmax		
	comp=Z,31nm,1.4s,mb4.8						
LOR				MLR	MLR		
	comp=Z,180nm,22.5s,MS3.9						
LOR	**Lormes**	**42.00**	**49**	*e*P	**P**	**01 17 18.2**	**-0.1**
	comp=Z,31nm,1.4s,mb4.8						
LOR				LR	LR		
	comp=Z,180nm,22.5s,MS3.9						
VIVF	**Saint-Julien-l**	**42.20**	**53**	*e*P	**P**	**01 17 20.7**	**+0.7**
	comp=Z,35nm,1.3s,mb4.5						
VIVF	**Saint-Julien-l**	**42.20**	**53**	*e*P	**P**	**01 17 20.7**	**+0.7**
VIVF				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.5						
VIVF	**Saint-Julien-l**	**42.20**	**53**	*e*P	**P**	**01 17 20.7**	**+0.7**
	comp=Z,17nm,1.3s,mb4.5						
DBIC	**Dimbokro**	**42.67**	**112**	LR	LR	01 32 05.3	
	comp=Z,633nm,20.3s,MS4.5,baz=268,slow=32						
SMRF	**Simiane la Rot**	**42.75**	**54**	*e*P	**P**	**01 17 24.5**	**0.0**
	comp=Z,51nm,1.3s,mb4.8						
SMRF	**Simiane la Rot**	**42.75**	**54**	*e*P	**P**	**01 17 24.5**	**0.0**
	comp=Z,51nm,1.3s,mb5.1						
BAIF	**Baives**	**42.79**	**45**	*e*P	**P**	**01 17 24.5**	**-0.2**
	comp=Z,47nm,1.3s,mb4.7						
BAIF	**Baives**	**42.79**	**45**	*e*P	**P**	**01 17 24.5**	**-0.2**
BAIF				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.8						
BAIF	**Baives**	**42.79**	**45**	*e*P	**P**	**01 17 24.5**	**-0.2**
	comp=Z,23nm,1.3s,mb4.8						
OTAV	**Otavalo**	**42.80**	**236**	*e*P	**P**	**01 17 24.5**	**-0.7**
	comp=Z,8.1nm,1.3s,mb4.3						
MEZF	**Maizieres J'vi**	**43.01**	**48**	*e*P	**P**	**01 17 26.5**	**-0.1**
	comp=Z,150nm,1.5s,mb5.2						
MEZF	**Maizieres J'vi**	**43.01**	**48**	*e*P	**P**	**01 17 26.5**	**-0.1**
	comp=Z,150nm,1.5s,mb5.5						
ORIF	**Oris-en-Rattie**	**43.06**	**53**	*e*P	**P**	**01 17 29.3**	**+2.3**
	comp=Z,18nm,1.1s,mb4.4						
ORIF				*e*MLR	MLR		
	comp=Z,395nm,22.5s,MS4.0						
ORIF	**Oris-en-Rattie**	**43.06**	**53**	*e*P	**P**	**01 17 29.3**	**+2.3**
ORIF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
ORIF	**Oris-en-Rattie**	**43.06**	**53**	*e*P	**P**	**01 17 29.3**	**+2.3**
	comp=Z,9.3nm,1.1s,mb4.4						
GIVF	**Givet**	**43.19**	**45**	*e*P	**P**	**01 17 27.5**	**-0.4**
BDFB	**Brasilia**	**43.28**	**185**	LR	LR	01 31 58.7	
	comp=Z,117nm,21.8s,MS3.8,baz=96,slow=31						
CABF	**La Chapelle**	**43.41**	**50**	*e*P	**P**	**01 17 30.1**	**+0.3**
	comp=Z,71nm,1.4s,mb4.9						
CABF	**La Chapelle**	**43.41**	**50**	*e*P	**P**	**01 17 30.1**	**+0.3**
CABF				pmax	pmax		
	comp=Z,36nm,1.4s,mb4.9						
CABF	**La Chapelle**	**43.41**	**50**	*e*P	**P**	**01 17 30.1**	**+0.3**
	comp=Z,36nm,1.4s,mb4.9						
FRF	**La Foret Royal**	**43.49**	**55**	*e*P	**P**	**01 17 30.7**	**+0.2**
	comp=Z,76nm,1.4s,mb5.0						
FRF	**La Foret Royal**	**43.49**	**55**	*e*P	**P**	**01 17 30.7**	**+0.2**
FRF				pmax	pmax		
	comp=Z,38nm,1.4s,mb4.9						
FRF	**La Foret Royal**	**43.49**	**55**	*e*P	**P**	**01 17 30.7**	**+0.2**
	comp=Z,38nm,1.4s,mb4.9						
THEF	**They Montfort**	**43.58**	**48**	*e*P	**P**	**01 17 32.4**	**+1.3**
MBDF	**Montbardon**	**43.67**	**53**	*e*P	**P**	**01 17 31.8**	**-0.1**
	comp=Z,39nm,1.3s,mb4.7						
MBDF	**Montbardon**	**43.67**	**53**	*e*P	**P**	**01 17 31.8**	**-0.1**
MBDF				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.7						
MBDF	**Montbardon**	**43.67**	**53**	*e*P	**P**	**01 17 31.8**	**-0.1**
	comp=Z,19nm,1.3s,mb4.7						
LPL	**La Plagne**	**43.72**	**52**	*e*P	**P**	**01 17 33.5**	**+1.2**
	comp=Z,21nm,1.3s,mb4.4						
LPL	**La Plagne**	**43.72**	**52**	*e*P	**P**	**01 17 33.5**	**+1.2**
LPL				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.4						
LPL	**La Plagne**	**43.72**	**52**	*e*P	**P**	**01 17 33.5**	**+1.2**
	comp=Z,11nm,1.3s,mb4.4						
LPG	**La Plagne**	**43.73**	**52**	*e*P	**P**	**01 17 33.8**	**+1.4**
	comp=Z,41nm,1.4s,mb4.7						
LPG	**La Plagne**	**43.73**	**52**	*e*P	**P**	**01 17 33.8**	**+1.4**
LPG				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.7						
LPG	**La Plagne**	**43.73**	**52**	*e*P	**P**	**01 17 33.8**	**+1.4**
	comp=Z,20nm,1.4s,mb4.7						
HAU	**Haudompre**	**43.78**	**48**	*e*P	**P**	**01 17 32.5**	**-0.3**
	comp=Z,46nm,1.3s,mb4.8						
HAU				*e*MLR	MLR		
	comp=Z,172nm,22.8s,MS3.6						
HAU	**Haudompre**	**43.78**	**48**	*e*P	**P**	**01 17 32.5**	**-0.3**
HAU				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.8						
HAU				MLR	MLR		
	comp=Z,170nm,22.8s,MS3.9						
HAU	**Haudompre**	**43.78**	**48**	*e*P	**P**	**01 17 32.5**	**-0.3**
	comp=Z,23nm,1.3s,mb4.8						
HAU				LR	LR		
	comp=Z,170nm,22.8s,MS3.9						
LOMF	**Lomont**	**44.01**	**49**	*e*P	**P**	**01 17 35.4**	**+0.8**
HINF	**Hinteralfeld**	**44.09**	**49**	*e*P	**P**	**01 17 34.8**	**-0.5**
	comp=Z,35nm,1.3s,mb4.6						
HINF	**Hinteralfeld**	**44.09**	**49**	*e*P	**P**	**01 17 34.8**	**-0.5**
HINF				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.6						
HINF	**Hinteralfeld**	**44.09**	**49**	*e*P	**P**	**01 17 34.8**	**-0.5**
	comp=Z,17nm,1.3s,mb4.6						
ECH	**Echery**	**44.35**	**48**	*e*P	**P**	**01 17 38.0**	**+0.6**
CDF	**Champ du Feu**	**44.46**	**48**	*e*P	**P**	**01 17 38.0**	**-0.2**
	comp=Z,70nm,1.4s,mb4.9						
CDF	**Champ du Feu**	**44.46**	**48**	*e*P	**P**	**01 17 38.0**	**-0.2**
CDF				pmax	pmax		
	comp=Z,35nm,1.4s,mb4.9						
CDF	**Champ du Feu**	**44.46**	**48**	*e*P	**P**	**01 17 38.0**	**-0.2**
	comp=Z,35nm,1.4s,mb4.9						
AGMN	**Agassiz Refuge**	**44.69**	**312**	*e*P	**P**	**01 17 39.5**	**-0.5**
	comp=Z,45nm,1.8s,mb5.0						
KSU1	**Kansas State U**	**44.72**	**299**	*e*P	**P**	**01 17 38.7**	**-1.8**
	comp=Z,11nm,0.9s,mb4.7						
ECSD	**EROS,Sioux Fal**	**44.77**	**305**	*e*P	**P**	**01 17 39.5**	**-1.3**
	comp=Z,7.4nm,1.3s,mb4.4						
FELD	**Feldberg im Sc**	**44.87**	**49**	*e*P	**P**	**01 17 44.0**	**+2.5**
BUG	**Bochum--Univer**	**44.98**	**44**	*e*P	**P**	**01 17 42.4**	**0.0**
	comp=Z,39nm,1.7s,mb5.0						
ULM	**Lac du Bonnet**	**45.01**	**315**	P	**P**	**01 17 40.5**	**-2.1**
	comp=Z,3.3nm,0.7s,mb4.3,baz=46,slow=4.4,SNR=7.0						
TORD	**Torodi Ar. Bea**	**45.04**	**99**	P	**P**	**01 17 41.0**	**-2.2**
	comp=Z,5.2nm,1.1s,mb4.3,baz=298,slow=4.2,SNR=14						
HKT	**Hockley**	**45.06**	**286**	*e*P	**P**	**01 17 43.5**	**+0.2**
HKT				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
HKT	**Hockley**	**45.06**	**286**	*e*P	**P**	**01 17 43.5**	**+0.2**
	comp=Z,4.1nm,1.0s,mb4.2						
BFO	**Black Forest**	**45.14**	**48**	*e*P	**P**	**01 17 43.4**	**-0.3**
BFO				*e**PP	pP	01 17 49.6	+2.8
BFO				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.0						
BFO	**Black Forest**	**45.14**	**48**	*e*P	**P**	**01 17 43.4**	**-0.3**
	comp=Z,37nm,1.3s,mb5.0						
BFO				*e*pP	pP	01 17 49.6	+2.8
PGF	**Pioggiola**	**45.16**	**56**	*e*P	**P**	**01 17 43.7**	**-0.2**
	comp=Z,124nm,1.4s,mb5.2						
PGF	**Pioggiola**	**45.16**	**56**	*e*P	**P**	**01 17 43.7**	**-0.2**
PGF				pmax	pmax		
	comp=Z,62nm,1.4s,mb5.2						
PGF	**Pioggiola**	**45.16**	**56**	*e*P	**P**	**01 17 43.7**	**-0.2**
	comp=Z,62nm,1.4s,mb5.2						
SPAK	**Spaichingen-Ko**	**45.42**	**49**	*e*P	**P**	**01 17 46.6**	**+0.8**
IBBN	**Ibbenburen**	**45.46**	**43**	*e*P	**P**	**01 17 46.1**	**0.0**
TNS	**Taunus Mts**	**45.50**	**46**	*e*P	**P**	**01 17 46.8**	**+0.4**
TNS				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.9						
TNS	**Taunus Mts**	**45.50**	**46**	*e*P	**P**	**01 17 46.8**	**+0.4**
	comp=Z,24nm,1.3s,mb4.9						
KEST	**Kesra**	**45.69**	**66**	P	**P**	**01 17 46.7**	**-1.5**
	comp=Z,1.9nm,1.0s,mb4.0,baz=232,slow=9.8,SNR=3.6						
STU	**Stuttgart**	**45.77**	**48**	*e*P	**P**	**01 17 48.0**	**-0.6**
	comp=Z,22nm,0.9s,mb5.1						
STU				*e*pP	pP	01 17 54.7	+2.9
SIV	**San Ignacio**	**46.47**	**203**	P	**P**	**01 17 53.5**	**-0.9**
	comp=Z,2.2nm,0.8s,mb4.1,baz=30,slow=8.2,SNR=12						
WMOK	**Wichita Mounta**	**46.79**	**293**	*e*P	**P**	**01 17 57.2**	**+0.3**

NRDL Niedersach Rie 46.91 43 *e*P **P 01 17 58.0 +0.5**
comp=Z,28nm,1.2s,mb5.1
CLZ Clausthal 46.96 44 *e*P **P 01 17 58.0 +0.1**
CLZ pmax pmax
comp=Z,36nm,1.7s,mb5.0
CLZ Clausthal 46.96 44 *e*P **P 01 17 58.0 +0.1**
comp=Z,36nm,1.7s,mb5.0
GRA1 Grafenberg Arr 47.20 47 *e*P **P 01 17 59.7 -0.1**
comp=Z,21nm,1.3s,mb4.9
GRA1 *e*pP pP 01 18 05.8 +2.8
GRA1 LR LR
comp=Z,200nm,18.9s,MS4.1
GRF Grafenberg Arr 47.20 47 *e*P **P 01 17 59.7 -0.1**
GRF *e**PP pP 01 18 05.8 +2.8
GRF pmax pmax
comp=Z,21nm,1.3s,mb4.9
GRF MLR MLR
comp=Z,200nm,18.9s,MS4.1
GRF Grafenberg Arr 47.20 47 *e*P **P 01 17 59.7 -0.1**
GRF *e**PP pP 01 18 05.8 +2.8
GRF pmax pmax
comp=Z,21nm,1.3s,mb4.9
GRF MLR MLR
comp=Z,200nm,18.9s,MS4.1
GRF Grafenberg Arr 47.20 47 *e*P **P 01 17 59.7 -0.1**
comp=Z,21nm,1.3s,mb4.9
GRF *e*pP pP 01 18 05.8 +2.8
GRF *e*L 01 34 45.1
comp=Z,208nm,18.9s
BSEG Bad Segeberg 47.30 41 *e*P **P 01 18 01.0 +0.5**
comp=Z,74nm,1.2s,mb5.5
MOX Moxa 47.56 45 *e*P **P 01 18 08.7 +6.0**
comp=Z,27nm,1.8s,mb5.0
MOX
comp=Z,300nm,20.0s
MOX Moxa 47.56 45 *e*P **P 01 18 08.7 +6.0**
MOX pmax pmax
comp=Z,27nm,1.8s,mb5.0
MOX MLR MLR
comp=Z,300nm,20.0s,MS4.3
MANZ Manzenberg 47.80 46 *e*P **P 01 18 04.7 +0.2**
comp=Z,25nm,1.5s,mb5.0
NKC Novy Kostel 48.05 46 *e*P **P 01 18 06.3 -0.1**
NKC *e*pP pP 01 18 12.7 +3.1
NKC AMS AMS 01 35 00.0
comp=Z,300nm,20.4s
NKC Novy Kostel 48.05 46 *e*P **P 01 18 06.3 -0.1**
NKC *e* 01 18 12.7
WET Wettzell 48.22 48 *e*P **P 01 18 07.5 -0.3**
WET *e**PP pP 01 18 13.7 +2.8
WET pmax pmax
comp=Z,22nm,1.5s,mb5.0
WET Wettzell 48.22 48 *e*P **P 01 18 07.5 -0.3**
comp=Z,22nm,1.5s,mb5.0
WET *e*pP pP 01 18 13.7 +2.8
KONO Kongsberg 48.30 33 *e*P **P 01 18 07.4 -0.8**
CLL Collm 48.51 45⇑*i*P **P 01 18 09.7 -0.3**
CLL *i* 01 18 15.9
CLL *e*S **S 01 25 17.0 +5.9**
CLL pmax pmax
comp=Z,59nm,2.6s,mb5.2
CLL MLR MLR
comp=Z,200nm,20.7s,MS4.1
CLL Collm 48.51 45 *e*P **P 01 18 09.6 -0.4**
comp=Z,15nm,1.2s,mb4.9
CLL *e*pP pP 01 18 15.9 +2.8
CLL Collm 48.51 45⇑*i*P **P 01 18 09.7 -0.3**
comp=Z,59nm,2.6s,mb5.2
CLL *i* pP pP 01 18 15.9 +2.8
comp=Z,15nm,1.2s
CLL *i* (sP) sP 01 18 19.5 +5.1
CLL *e*PP PP 01 20 04.0 +1.4
CLL *e*S **S 01 25 17.0 +5.9**
CLL *e*SS SS 01 28 48.0 +7.3
CLL Lm 01 34 00.0
comp=Z,200nm,20.7s
CLL Collm 48.51 45⇑*i*P **P 01 18 09.7 -0.3**
comp=Z,59nm,2.6s,mb5.2
CLL *i* 01 18 15.9
CLL *i* 01 18 19.5
CLL *e*S **S 01 25 17.0 +5.9**
CLL LR LR
comp=Z,200nm,20.7s,MS4.1
KHC Kasperske Hory 48.68 48 *e*P **P 01 18 11.0 -0.3**
KHC *e*pP pP 01 18 17.0 +2.5
KHC *e*S **S 01 25 15.4 +1.8**
KHC AMS AMS 01 33 40.0
comp=Z,200nm,27.8s
GEC2 GERESS Array S 48.74 48 *e*P **P 01 18 11.5 -0.3**
GEC2 *e**PP pP 01 18 17.6 +2.6
GEC2 pmax pmax
comp=Z,32nm,1.4s,mb5.2
GEC2 GERESS Array S 48.74 48 *e*P **P 01 18 11.5 -0.3**
comp=Z,32nm,1.4s,mb5.2
GEC2 *e*pP pP 01 18 17.6 +2.6
GERES GERESS Array B 48.74 48 P **P 01 18 11.2 -0.6**
comp=Z,1.9nm,0.9s,mb4.1,baz=266,slow=6.4,SNR=11
BRG Berggiesshubel 49.06 45 *e*P **P 01 18 15.7 +1.5**
BRG *e* pP 01 18 20.4 +3.1
BRG pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
BRG MLR MLR
comp=Z,180nm,17.6s,MS4.1
BRG Berggiesshubel 49.06 45 *e*P **P 01 18 14.0 -0.2**
comp=Z,21nm,1.4s,mb5.0
BRG Berggiesshubel 49.06 45 *e*P **P 01 18 15.7 +1.5**
comp=Z,9.5nm,1.3s,mb4.7
BRG *e* pP 01 18 20.4 +3.0
comp=Z,21nm,1.4s
BRG
comp=Z,307nm,17.6s
BRG
comp=N,112nm,18.4s
BRG
comp=E,259nm,18.4s
BRG Berggiesshubel 49.06 45 *e*P **P 01 18 15.7 +1.5**
comp=E,5.7nm,1.3s,mb4.4
BRG *e* pP 01 18 20.4 +3.0
BRG LR LR
comp=Z,180nm,17.6s,MS4.1
PRU Pruhonice 49.37 47 *e*P **P 01 18 13.5 -3.1**
PRU *ex* x 01 18 17.5
PRU *e*S **S 01 25 16.6 -6.6**
PRU AMS AMS 01 36 00.0
comp=Z,200nm,18.2s
PVCC Panska Ves 49.42 46 *e*P **P 01 18 16.8 -0.2**
PVCC *e*pP pP 01 18 23.3 +3.1
PVCC AMS AMS 01 35 30.0
comp=Z,300nm,22.1s
NB2 NORSAR Subarra 49.47 32 P **P 01 18 17.3 +0.1**
comp=Z,33nm,1.2s,mb5.2,baz=253,slow=7.9
NOA NORSAR Array B 49.47 32 P **P 01 18 17.4 +0.1**
comp=Z,6.9nm,0.9s,mb4.7,baz=254,slow=7.7,SNR=13
LPAZ La Paz 49.57 211 P **P 01 18 18.1 -0.3**
comp=Z,5.0nm,1.1s,mb4.5,baz=34,slow=11,SNR=8.3
DGMT Dagmar 50.24 311 *e*P **P 01 18 22.6 -0.6**
comp=Z,9.7nm,0.8s,mb4.9
DGMT *e*PcP PcP 01 19 42.8 +0.5
UPC Upice 50.34 46 *e*P **P 01 18 20.5 -3.5**
UPC *e*pP pP 01 18 26.4 -0.7
DPC Dobruska-Polom 50.53 46 *e*P **P 01 18 26.1 +0.7**
DPC *e*pP pP 01 18 31.9 +3.3
DPC AMS AMS 01 36 40.0
comp=Z,200nm,20.9s
KSP Ksiaz 50.54 46 *e*P **P 01 18 25.7 +0.2**
KSP *e**PP pP 01 18 31.6 +3.0
ZST Bratislava 50.98 49 *e*P **P 01 18 24.5 -4.3**
ZST pmax pmax
comp=Z,17nm,1.2s,mb4.8
ZST Bratislava 50.98 49 *e*P **P 01 18 24.5 -4.3**
comp=Z,17nm,1.2s,mb4.8
MODS Modra-Piesok 51.09 49 *e*P **P 01 18 30.1 +0.4**
MORC Moravsky Berou 51.30 47⇑*i*P **P 01 18 32.1 +0.9**
PHWY Pilot Hill 51.35 302 *e*P **P 01 18 33.3 +1.5**
ISCO Idaho Springs 51.62 300 *e*P **P 01 18 34.6 +0.8**
OKC Ostrava-Krasne 51.69 47 *e*P **P 01 18 30.9 -3.2**
OKC *e*pP pP 01 18 40.1 +2.8
SDCO Great Sand Dun 51.79 298 *e*P **P 01 18 37.3 +2.3**
KOLL Kolacno 51.84 49 *e*P **P 01 18 34.7 -0.6**
TXAR Lajitas Array 51.85 287 P **P 01 18 35.0 -0.7**
comp=Z,1.1nm,0.7s,mb3.9,baz=100,slow=7.6,SNR=9.9
PKSM Moragy 52.05 52⇓*i*P **P 01 18 35.2 -1.7**
VYHS Vyhne 52.13 49 *e*P **P 01 18 37.0 -0.5**
VYHS pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
VYHS Vyhne 52.13 49 *e*P **P 01 18 37.0 -0.5**
comp=Z,6.0nm,1.4s,mb4.3
SMCO Snowmass 52.74 300 *e*pP pP 01 18 56.1 +11
OJC Ojcow 52.76 46 *e*P **P 01 18 42.1 0.0**
ANMO Albuquerque 53.00 294⇑*i*P **P 01 18 43.4 -0.7**
ANMO Albuquerque 53.00 294 *e*P **P 01 18 45.2 +1.1**
comp=Z,26nm,1.9s,mb4.8
NIE Niedzica 53.10 47 *e*P **P 01 18 45.6 +1.0**
KECS Kecovo 53.23 49 *e*P **P 01 18 45.1 -0.5**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
KECS Kecovo 53.23 49 *e*P **P 01 18 45.1 -0.5**
comp=Z,2.7nm,1.1s,mb4.1
LAZ Ladron 53.65 294 *e*P **P 01 18 49.9 +1.0**
STHS Stebnicka Huta 53.70 47 *e*P **P 01 18 48.9 -0.1**
STHS pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
STHS Stebnicka Huta 53.70 47 *e*P **P 01 18 48.9 -0.1**
comp=Z,8.4nm,1.3s,mb4.5
RLMT Red Lodge 53.81 307 *e*P **P 01 18 49.9 +0.1**
comp=Z,24nm,1.5s,mb4.9
CRVS Cervenica-Dubn 53.86 48 *e*P **P 01 18 51.0 +0.8**
EGMT Eagleton 53.96 311 *e*P **P 01 18 50.7 -0.2**
GCMT Greycliff 54.04 308 *e*P **P 01 18 51.3 -0.3**
PV01 Paradox Valley 54.13 299 *e*P **P 01 18 53.1 +0.7**
BZS Buzias 54.16 52⇓*i*P **P 01 18 52.7 +0.2**
MVCO Mesa Verde 54.23 297 *e*P **P 01 18 54.2 +1.2**
comp=Z,18nm,1.5s,mb4.8
PDAR Pinedale Array 54.25 304 P **P 01 18 52.6 -0.5**
comp=Z,5.4nm,0.7s,mb4.6,baz=90,slow=8.9,SNR=38
BW06 Boulder Array 54.25 304 *e*P **P 01 18 52.5 -0.6**
comp=Z,14nm,1.0s,mb4.8
KRUS Krusevo 54.34 57 *i*P **P 01 18 54.8 +1.0**
KOLS Kolonicke sedl 54.40 48 *e*P **P 01 18 54.4 +0.3**
UZH Uzhgorod 54.42 48⇓*i*P **P 01 18 55.0 +0.7**
UZH *i* 01 19 00.5
BIA Bitola 54.44 58 *i*P **P 01 18 54.3 -0.3**
KWP Kalwaria 54.65 47⇑*i*P **P 01 18 57.0 +1.1**
DRGR 54.83 51⇓*i*P **P 01 18 57.6 +0.3**
LOHW Long Hollow 54.91 306 *e*P **P 01 18 58.0 +0.1**
comp=Z,36nm,1.9s,mb5.1
STIP Stip 54.99 57 *i*P **P 01 18 58.2 -0.4**
SNOW Snow King Moun 55.04 305 *e*P **P 01 18 59.3 +0.5**
comp=Z,16nm,1.2s,mb4.9
IMW Indian Meadow 55.12 306 *e*P **P 01 18 59.8 +0.4**
comp=Z,11nm,1.0s,mb4.8
REDW Red Top Meadow 55.12 305 *e*P **P 01 18 59.8 +0.3**
TPAW Teton Pass 55.17 305 *e*P **P 01 19 00.2 +0.4**
comp=Z,8.3nm,0.9s,mb4.8
VAY Valandovo 55.33 57 *i*P **P 01 19 02.0 +0.9**
BOZ Bozeman (W) 55.42 308 *e*P **P 01 19 01.3 -0.3**
BOZ pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
BOZ Bozeman (W) 55.42 308 *e*P **P 01 19 01.3 -0.3**
comp=Z,1.1nm,0.7s,mb4.0
RRI2 Red Ridge 55.46 305 *e*P **P 01 19 01.9 0.0**
comp=Z,22nm,1.3s,mb5.0
SRU San Rafael 55.48 300 *e*P **P 01 19 02.5 +0.4**
LVV L'vov 55.50 47 *e*P **P 01 19 03.1 +1.0**
DAU Daniels Canyon 55.83 302 *e*P **P 01 19 05.2 +0.6**
HWUT Hardware Ranch 55.88 303 *e*P **P 01 19 05.0 +0.1**
comp=Z,18nm,1.5s,mb4.9
JLU Jordanelle 55.94 302 *e*P **P 01 19 05.8 +0.4**
DLMT Dillon 56.13 308 *e*P **P 01 19 06.8 +0.1**
MCMT McKenzie Canyo 56.37 307 *e*P **P 01 19 08.9 +0.5**
BURAR Bucovina Array 56.45 49⇓*i*P **P 01 19 09.2 +0.3**
NLU North Lily Min 56.52 301 *e*P **P 01 19 10.5 +0.9**
WALA Waterton Lakes 56.64 312 *e*P **P 01 19 09.4 -0.8**
comp=Z,5.9nm,1.0s,mb4.6
HVU Hansel Valley 56.75 304 *e*P **P 01 19 11.4 +0.3**
YKA Yellowknife Ar 56.82 328 P **P 01 19 09.9 -1.3**
comp=Z,1.3nm,0.7s,mb4.0,baz=90,slow=7.4,SNR=7.6
YKA Yellowknife Ar 56.82 328 P **P 01 19 09.9 -1.3**
WUAZ Wupatki 56.83 296 *e*P **P 01 19 12.9 +1.1**
comp=Z,30nm,1.8s,mb5.0
MSU Marysvale 56.86 300 *e*P **P 01 19 12.9 +0.9**
DUG Dugway 57.04 302 *e*P **P 01 19 13.6 +0.4**
DUG pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
DUG Dugway 57.04 302 *e*P **P 01 19 13.6 +0.3**
comp=Z,8.6nm,0.9s,mb4.8
ZIMR 57.04 54⇓*i*P **P 01 19 13.1 -0.1**
BGU Big Grassy Mou 57.08 303 *e*P **P 01 19 13.2 -0.2**
TUC Tucson 57.09 292 *e*P **P 01 19 13.9 +0.2**
TUC pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
TUC Tucson 57.09 292 *e*P **P 01 19 13.9 +0.2**
comp=Z,2.3nm,0.9s,mb4.2
ARCES ARCESS Array B 57.19 23 P **P 01 19 13.0 -0.8**
comp=Z,5.6nm,0.9s,mb4.6,baz=338,slow=2.9,SNR=7.4
ARCES ARCESS Array B 57.19 23 P **P 01 19 13.0 -0.8**
MLR Muntele Rosu 57.20 52⇑*i*P **P 01 19 15.2 +0.9**
MNK Minsk 57.57 41 *e*P **P 01 19 14.0 -2.7**
HLID Hailey 57.66 306 *e*P **P 01 19 17.9 +0.4**
HLID *e*pP pP 01 19 30.1 +9.4
KIEV Kiev 58.73 45 *e*P **P 01 19 24.1 -0.8**
KIEV pmax pmax
comp=Z,21nm,1.1s,mb5.1
KIEV Kiev 58.73 45 *e*P **P 01 19 24.1 -0.8**
comp=Z,21nm,1.1s,mb5.1
AKASG Malin Array Be 58.74 45 P **P 01 19 23.4 -1.6**
comp=Z,4.4nm,0.8s,mb4.5,baz=271,slow=6.4,SNR=22
ELK Elko 58.76 303 *e*P **P 01 19 25.1 -0.2**
NEW Newport 58.85 312 *e*P **P 01 19 25.6 -0.2**
KIS Kishinev 58.96 50 *e*P **P 01 19 25.0 -1.6**
KIS *i* 01 19 31.5
KIS Kishinev 58.96 50 *e*UNK 01 19 25.0
BALY Balya 59.40 58 *i*P **P 01 19 29.6 -0.1**
LNOR Lincton Mounta 60.00 309 *e*P **P 01 19 32.9 -0.9**
AYDN Tasoluk 60.05 61 *i*P **P 01 19 31.8 -2.5**
TPNV Topopah Spring 60.35 299 *e*P **P 01 19 37.3 +1.0**
HAWA Hanford 60.76 310 *e*P **P 01 19 39.0 0.0**
comp=Z,8.9nm,0.9s,mb4.9
RSW Rattlesnake Hi 60.80 310 *e*P **P 01 19 39.0 -0.3**
WVOR Wild Horse Val 60.91 305 *e*P **P 01 19 39.6 -0.5**
WVOR pmax pmax
comp=Z,23nm,1.8s,mb5.0
WVOR Wild Horse Val 60.91 305 *e*P **P 01 19 39.6 -0.5**
comp=Z,23nm,1.8s,mb5.0
GDZ Gediz 60.95 59 *i*P **P 01 19 41.0 +0.6**
GOLH Golhisar 61.46 61 *i*P **P 01 19 44.8 +0.9**
ESKT Eskisehir 61.88 58 *i*P **P 01 19 46.3 -0.3**
PAHR Pah Rah Range 62.08 302 *e*P **P 01 19 48.0 0.0**
comp=Z,12nm,0.9s,mb5.0
MOD Modoc 62.24 305 *e*P **P 01 19 48.8 -0.2**
comp=Z,9.9nm,1.2s,mb4.8
ISA Isabella 62.41 298 *e*P **P 01 19 51.8 +1.5**
WAKR Walker 62.42 301 *e*P **P 01 19 51.1 +0.8**
WAKR *e*pP pP 01 20 04.0 +10
SGKT Sivrigoynuk 62.52 56 *i*P **P 01 19 59.2 +8.3**
OBN Obninsk 62.53 40⇑*i*P **P 01 19 49.7 -1.0**
OBN *i* 01 19 57.6
OBN *i* 01 20 29.1
OBN *i*S **S 01 28 20.9 +2.8**
OBN *e*SS SS 01 32 25.5 +3.8
OBN pmax pmax
comp=Z,47nm,1.6s,mb5.4
MOS Moscow 63.01 39 *e*P **P 01 19 52.8 -1.2**
KDHN Kadinhani 63.08 59 *i*P **P 01 19 54.8 0.0**
ANTO Ankara 63.25 57 *e*P **P 01 19 56.9 +1.1**
ANTO pmax pmax
comp=Z,28nm,1.4s,mb5.2
ANTO Ankara 63.25 57 *e*P **P 01 19 56.9 +1.1**
comp=Z,28nm,1.4s,mb5.2
NLWA Neilton Lookou 63.47 312 *e*P **P 01 19 57.3 +0.1**
comp=Z,12nm,1.0s,mb5.0
OHCM Honcut 63.74 302 *e*P **P 01 19 59.2 +0.1**
CDAG Cicekdag 64.48 57 *i*P **P 01 20 03.8 -0.2**
VRSR Storozhevoye 64.85 44 *e*P **P 01 20 05.5 -0.7**
VRSR pmax pmax
comp=Z,3.0nm,1.3s,mb4.2
VRSR pmax pmax
comp=N,5.0nm,1.0s
VRSR pmax pmax
comp=E,2.0nm,1.0s
HOPS Hopland 65.03 302 *e*P **P 01 20 08.8 +1.3**
ANN Anapa 65.30 51 *e*P **P 01 20 06.9 -2.3**
ANN pmax pmax
comp=Z,52nm,2.0s,mb5.2
ANDN Andirin 66.55 59 *i*P **P 01 20 17.7 +0.3**
SOC Sochi 67.22 52 *e*P **P 01 20 21.8 +0.3**
SOC *e* 01 20 49.4
SOC *e*PPP 01 24 29.0
SOC *e*S S 01 29 16.3 +0.1
SOC *e* 01 30 13.7
SOC pmax pmax
comp=Z,19nm,1.0s,mb5.1
GZT Gaziantep 67.54 59 *i*P **P 01 20 24.6 +0.9**
DAWY Dawson 67.68 332 *e*P **P 01 20 23.4 -0.7**
MALT Malatya 67.89 57⇑*i*P **P 01 20 25.8 -0.1**
EGAK Eagle 68.19 333 *e*P **P 01 20 25.9 -1.4**
comp=Z,2.8nm,0.8s,mb4.3
KIV Kislovodsk 69.15 50 *c i*P **P 01 20 33.6 0.0**
KIV *i* 01 20 40.8
KIV *i* 01 20 57.2
KIV pmax pmax
comp=Z,21nm,1.6s,mb4.8
HOMI Horasan 69.88 55 *i*P **P 01 20 38.7 +0.5**
GNI Garni 71.88 54 *c i*P **P 01 20 48.4 -2.0**
GNI pmax pmax
comp=Z,36nm,1.7s
GNI Garni 71.88 54 *e*P **P 01 20 52.5 +2.0**
HAKT HAKKARI 72.07 57 *i*P **P 01 20 52.4 +0.8**
PLCA Paso Flores 72.40 201 P **P 01 20 52.2 -1.0**
comp=Z,2.6nm,0.9s,mb4.1,baz=7.1,slow=8.1,SNR=4.6
IMA2 Indian Mountai 72.46 336 *e*P **P 01 20 53.3 -0.1**
ARU Arti 73.93 34 *d i*P **P 01 21 01.2 -1.0**
ARU *e* 01 23 42.4
ARU *e*PPP 01 25 32.5
ARU *e*S S 01 30 33.0 -1.1
ARU pmax pmax
comp=Z,30nm,2.5s,mb4.8
SVE Sverdlovsk 74.78 33 *e*P **P 01 21 07.3 +0.2**
SVE pmax pmax
comp=Z,21nm,1.5s,mb4.8
SVW2 Sparrevohn 75.71 332 *e*P **P 01 21 10.7 -1.7**
TSUM Tsumeb 75.76 121 *e*P **P 01 21 15.1 +1.8**
comp=Z,14nm,1.3s,mb4.7
TIXI Tiksi 80.78 2 *e*P **P 01 21 39.4 -0.9**
TIXI pmax pmax
comp=Z,16nm,1.3s,mb4.8
LSZ Lusaka 82.01 112 *e*P **P 01 21 48.5 +0.8**
LSZ *e* 01 21 55.5
LSZ pmax pmax
comp=Z,18nm,1.5s,mb4.8
LSZ Lusaka 82.01 112 *e*P **P 01 21 48.5 +0.8**
comp=Z,18nm,1.5s,mb4.8
LSZ *e*PcP PcP 01 21 55.5 +2.2
KURK Kurchatov 86.98 32⇑*i*P **P 01 22 12.4 0.0**
KURK pmax pmax
comp=Z,10.0nm,1.7s,mb4.8
ZAL Zalesovo 87.47 27 P **P 01 22 14.5 -0.2**
ZALV Zalesovo Beam 87.47 27 P **P 01 22 14.5 -0.2**
comp=Z,2.7nm,1.0s,mb4.4,baz=305,slow=5.2,SNR=6.8
YAK Yakutsk 90.42 3 *c i*P **P 01 22 26.2 -2.2**
YAK pmax pmax
comp=Z,19nm,0.7s,mb5.5
MKAR Makanchi Array 91.44 34 P **P 01 22 32.1 -1.4**
comp=Z,2.5nm,1.1s,mb4.4,baz=235,slow=5.8,SNR=6.5
MKAR Makanchi Array 91.44 34⇓*e*P **P 01 22 33.5 0.0**
BOD Bodaibo 92.82 12 *e*P **P 01 22 36.8 -2.9**
BOD pmax pmax
comp=Z,4.0nm,2.1s,mb4.5
KSH Kashi 92.89 42 *e*P **P 01 22 42.1 +1.7**
KSH *e*AP pP 01 22 46.0 +2.3
KSH *e*XP sP 01 22 49.4 +4.5
KSH *e*PP PP 01 26 28.1 +6.0
KSH *e*SKS 01 33 14.0
KSH *e*S S 01 33 45.0 -1.2
KSH *e*XS sS 01 33 53.4 +1.6
KSH *e*SS SS 01 40 05.0 +6.4
KSH AMB AMB
comp=Z,238nm,3.0s
KSH LR LR
comp=Z,353nm,6.0s
TLY Talaya 96.00 20 *e*P **P 01 22 51.6 -2.8**
TLY pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
WMQ Urumqi 96.22 33 *e*P **P 01 22 55.0 -0.5**
WMQ AMB AMB
comp=Z,91nm,5.0s
HHC Hu-ho-hao-te 108.13 19 *e*PDIF Pdif 01 23 44.5 -4.1
HHC S Sdif 01 35 46.1 -8.8
HHC PP PP
comp=Z,69nm,8.4s
HHC LR LR
comp=N,116nm,17.9s,MS4.7
HHC LR LR
comp=E,123nm,18.2s,MS4.7
HHC LR LR
comp=Z,80nm,18.1s,MS4.3
CN2 Changchun 108.18 8 *e*PDIF Pdif 01 23 50.9 +2.1
CN2 PP PP 01 28 22.6 +5.3
CN2 PP PP
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,14.0s,MS5.0
CN2 LR LR
comp=E,230nm,14.0s,MS5.0
CN2 LR LR
comp=Z,190nm,17.0s,MS4.7
LZH Lanzhou 109.70 27 *e*PDIF Pdif 01 23 51.5 -4.1
LZH PP PP 01 28 33.5 +4.8
LZH PP PP
comp=Z,102nm,4.5s
CD2 Chengdu 114.12 30 *e*PKP PKiKP 01 28 05.4 -1.6
CD2 PP PP 01 29 03.7 +3.3
CD2 PKS 01 31 40.8
CD2 SKS SKSdf 01 35 12.6 -6.9
CD2 SKKS SKKSac 01 35 52.6 -11
CD2 PP PP
comp=Z,90nm,10.2s
KMI Kunming 118.51 34 PKP PKPdf 01 28 15.0 -0.6
GYA Guiyang 119.23 30 *e*PDIF Pdif 01 24 38.2 +0.3
GYA PKP PKPdf 01 28 16.9 -0.1
GYA PP PP 01 29 40.2 +4.0
GYA PKS 01 31 51.8
GYA SKS SKSdf 01 35 26.4 -3.0
GYA SKKS SKKSac 01 36 32.0 -6.0
GYA PP PP
comp=Z,120nm,7.6s
GYA LR LR
comp=N,180nm,20.9s,MS4.7
GYA LR LR
comp=E,100nm,21.7s,MS4.7
GYA LR LR
comp=Z,130nm,20.9s,MS4.5
CMAR Chiang Mai Arr 121.79 42 PKP PKPdf 01 28 19.9 -2.2
comp=Z,1.2nm,0.3s,baz=310,slow=0.8,SNR=6.3
CMAR Chiang Mai Ar 121.79 42⇑*i*PKiKP PKPdf 01 28 21.6 -0.4
WRA Warramunga Arr 172.12 11 PKPab PKPab 01 30 58.9 -0.8
comp=Z,2.0nm,1.0s,baz=0.8,slow=4.3,SNR=4.5

SZGRF ***01*** *01:27:43.3,2552N±4571W,h12km,mb4.8,MS4.4, Northern Mid-Atlantic Ridge*
IDC ***01*** *01:28:00.6±0.5,2785N±4416W,h0km,mb4.3/22, mb1 4.5/22,mb1mx4.4/24,mbtmp4.3/22,MS4.3/18, Ms1 4.3/18,ms1mx4.1/24,Error ellipse: s-maj=14.8km s-min=12.8km az=135.0*
MOS ***01*** *01:28:01.7±1.4,2794N±4396W,h10km,mb5.1/75, MS4.3/13,Error ellipse: s-maj=7.2km s-min=4.2km az=136.2*
BJI ***01*** *01:28:02.8,2780N±4400W,h10km,mB5.5,Ms4.7,Msz4.6*
ISCJB ***01*** *01:28:02.1±0.3,2800N±006×4402W±002,h10km, mb4.8/167,MS4.3/31,Error ellipse: s-maj=9.4km s-min=3.1km az=175.3*
GCMT ***01*** *01:28:02.8±0.2,2778N×44.10W,h12km,MW5.2/86, Moment Tensor Solution. s43,c50; s86,c158; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-7.26±.13; Mθθ1.56±.13; Mφφ5.70±.12; Mrθ0.22±.48; Mrφ2.38±.11; Mθφ0.52±.38; Best double couple: Mo7.04500×10^16 NP1:ϕs25.00000°,δ43.00000°,λ-90.00000°. NP2: ϕs204.00000°,δ47.00000°,λ-90.00000°. Principal axes: T 6.8070, Plg2.0000°, Azm294.0000°; N 0.4760, Plg0.0000°, Azm204.0000°; P -7.2820, Plg88.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***01*** *01:28:02.8±0.3,2784N×4399W,h10km,mb4.8/127 Error ellipse: s-maj=8.9km s-min=3.6km az=173.0*
ISC 01 01:28:04.0±0.3,2799N±006×4400W±003,h10km, (h20km±3.3km:pP-P),n428,σ1§37/414,mb4.8/167, MS4.3/31,17C-20D,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUMP	Col San Antoni	22.33	249	eP	P	01 32 58.9	-3.1
	182nm,2.0s,mb5.2						
CPD	Cerro la Pandu	22.44	248	eP	P	01 33 04.5	+1.4
CPD				pmax	pmax		
	comp=Z,127nm,1.6s,mb5.1						
CPD	Cerro la Pandu	22.44	248	eP	P	01 33 04.5	+1.3
	comp=Z,127nm,1.6s,mb5.1						
SJG	San Juan	22.59	249	LR	LR	01 39 49.5	
	comp=Z,1µm,21.1s,MS4.3,baz=75,slow=32						
BBTS	Babate	28.73	112	LR	LR	01 42 31.0	
	comp=Z,1µm,20.1s,MS4.5,baz=140,slow=30						
MVL	Millersville	29.22	303	eP	P	01 33 59.1	-6.8
	comp=Z,30nm,1.4s,mb4.8						
PFVI	Vila Bisbo	30.87	64	eLQ		01 38 34.5	
PFVI				eLR	LR	01 41 53.3	
	comp=Z,954nm,19.6s						
MORF	Marmelete	31.03	63	A		01 44 05.3	
	comp=Z,1µm,20.6s						
SCHQ	Schefferville	31.54	335	P	P	01 34 25.7	-0.5
	comp=Z,2.0nm,0.6s,mb4.1,baz=101,slow=9.8,SNR=3.3						
SCHQ				LR	LR	01 46 06.2	
	comp=Z,464nm,19.9s,MS4.2,baz=357,slow=34						
SCHQ	Schefferville	31.54	335	P	P	01 34 25.7	-0.5
SCHQ				LR	LR	01 46 06.2	
PBDV	Barranco-do-Ve	31.60	64	eP	P	01 34 32.6	+5.7
	comp=Z,42nm,1.2s,mb5.2						
PBDV				eLQ		01 39 44.2	
PBDV				eLR	LR	01 41 43.9	
	comp=Z,1µm,19.7s						
PBEJ	Beja	31.74	62	eP	P	01 34 33.2	+5.0
	comp=Z,21nm,1.0s,mb4.9						
PVAQ	Vaqueiros	31.78	63	eLQ		01 39 18.7	
PVAQ				eLR	LR	01 42 33.3	
	comp=Z,1µm,18.2s						
BLA	Blacksburg	31.87	296	eP	P	01 34 32.4	+3.1
BLA				pmax	pmax		
	comp=Z,91nm,1.6s,mb5.3						
BLA	Blacksburg	31.87	296	eP	P	01 34 32.4	+3.1
	comp=Z,91nm,1.6s,mb5.3						
EGRO	El Granado	31.98	63	P	P	01 34 33.3	+3.0
	comp=Z,12nm,1.0s,mb4.7						
PESTR	Estremoz	32.08	61	eLR	LR	01 42 25.9	
	comp=Z,683nm,18.4s						
ELOB	Lobios	32.31	55	P	P	01 34 40.5	+7.4
	comp=Z,11nm,0.9s,mb4.7						
PMRV	Marv??o	32.32	60	eP	P	01 34 38.1	+4.9
	comp=Z,17nm,1.9s,mb4.5						
PMRV				eLQ		01 40 53.1	
PMRV				eLR	LR	01 42 52.6	
	comp=Z,463nm,19.7s						
MTE	Manteigas	32.37	58	eP	P	01 34 40.3	+6.6
	comp=Z,22nm,1.2s,mb4.9						
MTE				eLR	LR	01 42 06.5	
	comp=Z,853nm,20.3s						
PBAR	Barrancos	32.41	62	eP	P	01 34 43.2	+9.2
	comp=Z,12nm,1.6s,mb4.5						
PBAR				eLQ		01 39 56.5	
PBAR				eLR	LR	01 42 55.6	
	comp=Z,825nm,18.2s						
EBAD	Badajoz	32.51	61	P	P	01 34 38.4	+3.5
	comp=Z,7.5nm,1.0s,mb4.6						
EMIN	Mina Concepcio	32.65	63	P	P	01 34 38.5	+2.3
	comp=Z,4.2nm,0.9s,mb4.4						
MVO	Moncorvo	32.91	57	eLQ		01 39 26.9	
MVO				eLR	LR	01 42 33.0	
	comp=Z,706nm,19.9s						
ERUA	La Rua	33.10	54	P	P	01 34 48.0	+8.0
ERUA				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
ERUA	La Rua	33.10	54	P	P	01 34 48.0	+8.0
	comp=Z,13nm,0.9s,mb4.9						
ESPR	Espera	33.21	65	P	P	01 34 45.0	+3.9
	comp=Z,7.1nm,0.7s,mb4.7						
ECAB	El Cabril	33.67	63	P	P	01 34 49.1	+4.0
	comp=Z,8.2nm,0.9s,mb4.7						
ACSO	Alum Creek Sta	34.25	301	eP	P	01 34 52.5	+2.4
	comp=Z,17nm,0.7s,mb5.1						
EADA	Adamuz	34.34	63	P	P	01 34 53.8	+2.9
	comp=Z,4.5nm,0.9s,mb4.4						
ELUQ	Luque	34.53	64	P	P	01 34 56.6	+4.0
ELUQ				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
ELUQ	Luque	34.53	64	P	P	01 34 56.6	+4.0
	comp=Z,9.1nm,1.1s,mb4.6						
GUD	Guadarrama	34.96	58	P	P	01 34 59.7	+3.5
GUD				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
GUD	Guadarrama	34.96	58	P	P	01 34 59.7	+3.4
	comp=Z,6.9nm,1.0s,mb4.5						
ESDC	Sonseca Array	34.98	60	P	P	01 34 57.2	+0.8
	comp=Z,2.6nm,0.9s,mb4.1,baz=255,slow=6.5,SNR=4.7						
ESDC				LR	LR	01 45 38.7	
	comp=Z,391nm,21.5s,MS4.1,baz=240,slow=30						
ESDC	Sonseca Array	34.98	60	P	P	01 34 59.6	+3.2
	comp=Z,3.2nm,1.0s,mb4.2						
EQES	Quesada	35.49	63	P	P	01 35 00.7	-0.2
	comp=Z,5.3nm,1.3s,mb4.3						
ELAN	Lanestosa	35.94	54	P	P	01 35 08.7	+4.1
	comp=Z,13nm,1.2s,mb4.7						
ETOR	Torete	36.56	58	P	P	01 35 13.7	+3.7
ETOR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
ETOR	Torete	36.56	58	P	P	01 35 13.7	+3.7
	comp=Z,5.7nm,0.7s,mb4.5						
WCI	Wyandotte Cave	36.60	297	eP	P	01 35 09.2	-1.1
WCI				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.9						
WCI	Wyandotte Cave	36.60	297	eP	P	01 35 09.2	-1.1
	comp=Z,17nm,0.8s,mb4.9						
ROSC	El Rosal	36.88	237	LR	LR	01 49 31.1	
	comp=Z,296nm,18.9s,MS4.1,baz=29,slow=35						
QUIF	Quistinic	37.30	47	eP	P	01 35 14.3	-1.8
	comp=Z,41nm,1.2s,mb4.8						
QUIF	Quistinic	37.30	47	eP	P	01 35 14.3	-1.8
QUIF				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.8						
QUIF	Quistinic	37.30	47	eP	P	01 35 14.3	-1.8
	comp=Z,20nm,1.2s,mb4.8						
ROSF	Rostrenen	37.36	46	eP	P	01 35 15.1	-1.5
	comp=Z,128nm,1.6s,mb5.2						
ROSF	Rostrenen	37.36	46	eP	P	01 35 15.1	-1.5
ROSF				pmax	pmax		
	comp=Z,64nm,1.6s,mb5.2						
ROSF	Rostrenen	37.36	46	eP	P	01 35 15.1	-1.5
	comp=Z,64nm,1.6s,mb5.2						
SJPF	Ste Jean	37.51	55	eP	P	01 35 16.2	-1.8
	comp=Z,50nm,1.5s,mb4.7						
SJPF	Ste Jean	37.51	55	eP	P	01 35 16.2	-1.8
SJPF				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.7						
SJPF	Ste Jean	37.51	55	eP	P	01 35 16.2	-1.8
	comp=Z,25nm,1.5s,mb4.7						
EBEN	Beniarda	37.78	62	P	P	01 35 27.2	+6.8
	comp=Z,10nm,0.8s,mb4.6						
SGMF	Saint Gilles	37.79	46	eP	P	01 35 19.0	-1.3
	comp=Z,81nm,1.4s,mb5.0						
SGMF	Saint Gilles	37.79	46	eP	P	01 35 19.0	-1.3
SGMF				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.0						
SGMF	Saint Gilles	37.79	46	eP	P	01 35 19.0	-1.3
	comp=Z,41nm,1.4s,mb5.0						
ESAC	San Caprasio	37.86	57	P	P	01 35 26.8	+5.8
	comp=Z,26nm,1.2s,mb4.8						
ETSF	Etsaut	37.96	55	eP	P	01 35 20.3	-1.5
	comp=Z,28nm,1.1s,mb4.6						
ETSF	Etsaut	37.96	55	eP	P	01 35 20.3	-1.5
ETSF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
ETSF	Etsaut	37.96	55	eP	P	01 35 20.3	-1.5
	comp=Z,14nm,1.1s,mb4.6						
PLAL	Pickwick Lake	37.99	292	eP	P	01 35 24.5	+2.3
	comp=Z,53nm,1.8s,mb5.0						
OLIL	Olney	38.04	298	eP	P	01 35 24.7	+2.1
	comp=Z,21nm,0.8s,mb4.9						
EBIE	Bielsa	38.44	56	P	P	01 35 28.1	+2.2
	comp=Z,8.6nm,0.8s,mb4.5						
EPF	Esparros	38.63	55	eP	P	01 35 26.1	-1.4
	comp=Z,58nm,1.5s,mb4.8						
EPF	Esparros	38.63	55	eP	P	01 35 26.1	-1.4
EPF				pmax	pmax		
	comp=Z,29nm,1.5s,mb4.8						
EPF	Esparros	38.63	55	eP	P	01 35 26.1	-1.4
	comp=Z,29nm,1.5s,mb4.8						
GRR	Gorron	38.91	47	eP	P	01 35 28.1	-1.6
	comp=Z,23nm,0.9s,mb4.6						
GRR	Gorron	38.91	47	eP	P	01 35 28.1	-1.6
GRR				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
GRR	Gorron	38.91	47	eP	P	01 35 28.1	-1.6
	comp=Z,11nm,0.9s,mb4.6						
MFF	Saint Martin d	38.94	49	eP	P	01 35 28.7	-1.3
	comp=Z,58nm,1.3s,mb4.9						
MFF	Saint Martin d	38.94	49	eP	P	01 35 28.7	-1.3
MFF				pmax	pmax		
	comp=Z,29nm,1.3s,mb4.8						
MFF	Saint Martin d	38.94	49	eP	P	01 35 28.7	-1.3
	comp=Z,29nm,1.3s,mb4.8						
EPOB	Poblet	38.98	58	P	P	01 35 34.9	+4.5
	comp=Z,7.4nm,0.8s,mb4.5						
EIBI	Ibiza	39.02	62	P	P	01 35 31.9	+1.1
	comp=Z,18nm,0.9s,mb4.8						
OXF	Oxford	39.11	291	eP	P	01 35 33.4	+1.8
OXF				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.9						
OXF	Oxford	39.11	291	eP	P	01 35 33.4	+1.8
	comp=Z,24nm,0.9s,mb4.9						
LFF	La Frestale	39.22	52	eP	P	01 35 30.5	-1.8
	comp=Z,34nm,0.9s,mb4.8						
LFF	La Frestale	39.22	52	eP	P	01 35 30.5	-1.8
LFF				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
LFF	La Frestale	39.22	52	eP	P	01 35 30.5	-1.8
	comp=Z,17nm,0.9s,mb4.8						
FLN	La Foliniere	39.26	46	eP	P	01 35 31.1	-1.5
	comp=Z,32nm,1.0s,mb4.7						
FLN				eMLR	MLR		
	comp=Z,759nm,20.0s,MS4.2						
FLN	La Foliniere	39.26	46	eP	P	01 35 31.1	-1.5
FLN				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
FLN				MLR	MLR		
	comp=Z,760nm,20.0s,MS4.5						
FLN	La Foliniere	39.26	46	eP	P	01 35 31.1	-1.5
	comp=Z,16nm,1.0s,mb4.7						
FLN				LR	LR		
	comp=Z,760nm,20.0s,MS4.5						
EMIR	Miracle	39.37	57	P	P	01 35 34.0	+0.4
	comp=Z,7.4nm,0.8s,mb4.5						
LDF	La Druitiere	39.44	46	eP	P	01 35 32.4	-1.7
	comp=Z,60nm,1.1s,mb4.9						
LDF	La Druitiere	39.44	46	eP	P	01 35 32.4	-1.7
LDF				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.9						
LDF	La Druitiere	39.44	46	eP	P	01 35 32.4	-1.7
	comp=Z,30nm,1.1s,mb4.9						
COWI	Conover	39.70	309	eP	P	01 35 36.1	-0.3
	comp=Z,8.6nm,0.8s,mb4.5						
RJF	Les Rejaudoux	39.82	52	eP	P	01 35 35.2	-2.2
RJF				eMLR	MLR		
	comp=Z,859nm,22.5s,MS4.2						
RJF	Les Rejaudoux	39.82	52	eP	P	01 35 35.2	-2.2
RJF				LR	LR		
	comp=Z,860nm,22.5s,MS4.5						
FVM	French Village	39.84	297	eP	P	01 35 37.8	+0.1
FVM				pmax	pmax		
	comp=Z,67nm,1.8s,mb5.1						
FVM	French Village	39.84	297	eP	P	01 35 37.8	+0.1
	comp=Z,67nm,1.8s,mb5.1						
JFWS	Jewell Farm	40.00	304	eP	P	01 35 38.7	-0.2
JFWS				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
JFWS	Jewell Farm	40.00	304	eP	P	01 35 38.7	-0.3
	comp=Z,12nm,0.7s,mb4.7						
CAF	Calviac	40.14	53	eP	P	01 35 38.1	-1.9
	comp=Z,20nm,1.2s,mb4.4						
CAF	Calviac	40.14	53	eP	P	01 35 38.1	-1.9
CAF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4						
CAF	Calviac	40.14	53	eP	P	01 35 38.1	-1.9
	comp=Z,9.9nm,1.2s,mb4.4						
ETOS	Mallorca	40.19	61	P	P	01 35 50.4	+10
TCF	Toulx Ste Croi	40.47	50	eP	P	01 35 41.1	-1.7
	comp=Z,16nm,1.0s,mb4.4						
TCF	Toulx Ste Croi	40.47	50	eP	P	01 35 41.1	-1.7
TCF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
TCF	Toulx Ste Croi	40.47	50	eP	P	01 35 41.1	-1.7
	comp=Z,7.8nm,1.0s,mb4.4						
CCM	Cathedral Cave	40.49	297	eP	P	01 35 42.3	-0.7
CCM				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
CCM	Cathedral Cave	40.49	297	eP	P	01 35 42.3	-0.7
	comp=Z,9.6nm,0.8s,mb4.6						
BGF	Bois d'Agland	40.95	50	eP	P	01 35 44.8	-1.9
	comp=Z,37nm,1.3s,mb4.6						
BGF	Bois d'Agland	40.95	50	eP	P	01 35 44.8	-1.9
BGF				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.5						
BGF	Bois d'Agland	40.95	50	eP	P	01 35 44.8	-1.9
	comp=Z,18nm,1.3s,mb4.5						
TEIG	Tepich	40.97	269	eP	P	01 35 46.9	-0.3
	comp=Z,11nm,1.0s,mb4.4						
LBL	Lubilhac	41.02	52	eP	P	01 35 47.2	-0.1
LASF	Ste Croix	41.30	54	eP	P	01 35 48.3	-1.3
	comp=Z,33nm,1.0s,mb4.6						
AVF	Avril sur Loir	41.34	50	eP	P	01 35 48.0	-1.9
	comp=Z,44nm,1.4s,mb4.6						
AVF	Avril sur Loir	41.34	50	eP	P	01 35 48.0	-1.9
AVF				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.6						
AVF	Avril sur Loir	41.34	50	eP	P	01 35 48.0	-1.9
	comp=Z,22nm,1.4s,mb4.6						
PLDF	La Plantade	41.39	51	eP	P	01 35 51.8	+1.5
SSF	Saint Saulge	41.49	50	eP	P	01 35 49.2	-1.9
	comp=Z,36nm,1.2s,mb4.6						
SSF	Saint Saulge	41.49	50	eP	P	01 35 49.2	-1.9
SSF				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.6						
SSF	Saint Saulge	41.49	50	eP	P	01 35 49.2	-1.9
	comp=Z,18nm,1.2s,mb4.6						
UALR	University of	41.50	292	eP	P	01 35 50.4	-1.0
	comp=Z,23nm,1.1s,mb4.7						
SMF	Signal de Mont	41.64	50	eP	P	01 35 50.8	-1.6
	comp=Z,52nm,1.0s,mb4.8						
SMF	Signal de Mont	41.64	50	eP	P	01 35 50.8	-1.6
SMF				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.8						
SMF	Signal de Mont	41.64	50	eP	P	01 35 50.8	-1.6
	comp=Z,26nm,1.0s,mb4.8						
LOR	Lormes	41.76	49	eP	P	01 35 51.5	-1.9
	comp=Z,31nm,1.1s,mb4.5						
LOR				eMLR	MLR		
	comp=Z,260nm,20.8s,MS3.8						
LOR	Lormes	41.76	49	eP	P	01 35 51.5	-1.9
LOR				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.5						
LOR				MLR	MLR		
	comp=Z,260nm,20.8s,MS4.1						
LOR	Lormes	41.76	49	eP	P	01 35 51.5	-1.9
	comp=Z,15nm,1.1s,mb4.5						
LOR				LR	LR		
	comp=Z,260nm,20.8s,MS4.1						
VIVF	Saint-Julien-l	41.97	53	eP	P	01 35 53.9	-1.2
SMRF	Simiane la Rot	42.52	54	eP	P	01 35 58.4	-1.2
	comp=Z,47nm,1.2s,mb4.8						
SMRF	Simiane la Rot	42.52	54	eP	P	01 35 58.4	-1.2
	comp=Z,47nm,1.2s,mb5.1						
MIAR	Mount Ida	42.53	292	eP	P	01 36 00.3	+0.5
MIAR				pmax	pmax		
	comp=Z,104nm,2.2s,mb5.2						
MIAR	Mount Ida	42.53	292	eP	P	01 36 00.3	+0.4
	comp=Z,104nm,2.2s,mb5.2						
BAIF	Baives	42.54	45	eP	P	01 35 57.8	-1.9
	comp=Z,48nm,1.3s,mb4.8						
BAIF	Baives	42.54	45	eP	P	01 35 57.8	-1.9
BAIF				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.8						
BAIF	Baives	42.54	45	eP	P	01 35 57.8	-1.9
	comp=Z,24nm,1.3s,mb4.8						
DBIC	Dimbokro	42.68	112	P	P	01 36 00.6	-0.6
	comp=Z,6.5nm,0.9s,mb4.3,baz=213,slow=4.5,SNR=4.3						
DBIC				LR	LR	01 51 13.5	
	comp=Z,1µm,19.4s,MS4.8,baz=270,slow=33						
MEZF	Maizieres J'vi	42.77	48	eP	P	01 35 59.8	-1.8
	comp=Z,50nm,1.1s,mb4.9						
MEZF	Maizieres J'vi	42.77	48	eP	P	01 35 59.8	-1.8
	comp=Z,50nm,1.1s,mb5.2						
LIC	Lamto	42.79	113	eP	P	01 36 05.5	+3.3
	comp=Z,34nm,1.1s,mb4.7						
LIC				eMLR	MLR		
	comp=Z,922nm,20.0s,MS4.4						
LIC	Lamto	42.79	113	eP	P	01 36 05.5	+3.3
	comp=Z,17nm,1.1s,mb4.7						
LIC				LR	LR		
	comp=Z,460nm,20.0s,MS4.4						
ORIF	Oris-en-Rattie	42.83	53	eP	P	01 36 01.3	-0.8
	comp=Z,16nm,1.1s,mb4.4						
ORIF				eMLR	MLR		
	comp=Z,348nm,20.2s,MS3.9						
ORIF	Oris-en-Rattie	42.83	53	eP	P	01 36 01.3	-0.8
ORIF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.4						
ORIF	Oris-en-Rattie	42.83	53	eP	P	01 36 01.3	-0.8
	comp=Z,8.1nm,1.1s,mb4.4						
GIVF	Givet	42.94	45	eP	P	01 36 01.0	-1.9
	comp=Z,64nm,1.3s,mb4.9						
GIVF	Givet	42.94	45	eP	P	01 36 01.0	-1.9
GIVF				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.9						
GIVF	Givet	42.94	45	eP	P	01 36 01.0	-1.9
	comp=Z,32nm,1.3s,mb4.9						
OTAV	Otavalo	43.02	236	eP	P	01 36 03.5	-0.4
	comp=Z,38nm,1.8s,mb4.8						
CABF	La Chapelle	43.17	51	eP	P	01 36 03.6	-1.2
	comp=Z,45nm,1.2s,mb4.8						
CABF	La Chapelle	43.17	51	eP	P	01 36 03.6	-1.2
CABF				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.8						
CABF	La Chapelle	43.17	51	eP	P	01 36 03.6	-1.2
	comp=Z,22nm,1.2s,mb4.8						
FRF	La Foret Royal	43.26	55	eP	P	01 36 04.4	-1.2
	comp=Z,86nm,1.5s,mb5.0						
FRF	La Foret Royal	43.26	55	eP	P	01 36 04.4	-1.2
FRF				pmax	pmax		
	comp=Z,43nm,1.5s,mb5.0						
FRF	La Foret Royal	43.26	55	eP	P	01 36 04.4	-1.2
	comp=Z,43nm,1.5s,mb5.0						
THEF	They Montfort	43.34	48	eP	P	01 36 02.9	-3.3
THEF	They Montfort	43.34	48	eP	P	01 36 03.7	-2.5
MBDF	Montbardon	43.44	53	eP	P	01 36 06.7	-0.4
	comp=Z,23nm,1.0s,mb4.5						
MBDF	Montbardon	43.44	53	eP	P	01 36 06.7	-0.4
MBDF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
MBDF	Montbardon	43.44	53	eP	P	01 36 06.7	-0.4
	comp=Z,12nm,1.0s,mb4.6						
LPL	La Plagne	43.49	52	eP	P	01 36 06.9	-0.5
	comp=Z,19nm,1.2s,mb4.4						
LPL	La Plagne	43.49	52	eP	P	01 36 06.9	-0.5
LPL				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4						
LPL	La Plagne	43.49	52	eP	P	01 36 06.9	-0.5
	comp=Z,9.5nm,1.2s,mb4.4						
LPG	La Plagne	43.50	52	eP	P	01 36 07.1	-0.4
BDFB	Brasilia	43.54	186	P	P	01 36 06.5	-1.6
	comp=Z,2.4nm,0.7s,mb4.1,baz=30,slow=15,SNR=3.0						
BDFB				LR	LR	01 52 59.1	
	comp=Z,289nm,19.9s,MS4.2,baz=182,slow=34						
HAU	Haudompre	43.54	49	eP	P	01 36 05.9	-1.9
	comp=Z,39nm,1.2s,mb4.7						
HAU				eMLR	MLR		
	comp=Z,308nm,22.2s,MS3.9						
HAU	Haudompre	43.54	49	eP	P	01 36 05.9	-1.9
HAU				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.7						
HAU				MLR	MLR		
	comp=Z,310nm,22.3s,MS4.2						
HAU	Haudompre	43.54	49	eP	P	01 36 05.9	-1.9
	comp=Z,20nm,1.2s,mb4.7						
HAU				LR	LR		
	comp=Z,310nm,22.3s,MS4.2						
HINF	Hinteralfeld	43.85	49	eP	P	01 36 08.2	-2.1
SBF	Sospel	43.85	55	eP	P	01 36 09.1	-1.3
ECH	Echery	44.11	48	eP	P	01 36 16.9	+4.5
CDF	Champ du Feu	44.22	48	eP	P	01 36 11.3	-1.9
	comp=Z,40nm,1.3s,mb4.7						
CDF	Champ du Feu	44.22	48	eP	P	01 36 11.3	-1.9
CDF				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.7						
CDF	Champ du Feu	44.22	48	eP	P	01 36 11.3	-1.9
	comp=Z,20nm,1.3s,mb4.7						
AGMN	Agassiz Refuge	44.59	312	eP	P	01 36 15.6	-0.6
	comp=Z,15nm,0.8s,mb4.9						
FELD	Feldberg im Sc	44.63	49	eP	P	01 36 11.3	-5.2
KSU1	Kansas State U	44.68	298	eP	P	01 36 17.4	+0.4
	comp=Z,43nm,1.2s,mb5.2						
ULM	Lac du Bonnet	44.89	314	P	P	01 36 16.1	-2.5
	comp=Z,6.9nm,0.6s,mb4.7,baz=88,slow=8.4,SNR=9.5						
ULM				LR	LR	01 54 49.4	
	comp=Z,261nm,18.1s,MS4.2,baz=308,slow=36						
TORD	Torodi Ar. Bea	44.99	100	P	P	01 36 17.6	-2.2
	comp=Z,5.6nm,1.0s,mb4.4,baz=300,slow=6.0,SNR=17						
TORD				LR	LR	01 53 26.4	
	comp=Z,1µm,20.3s,MS4.8,baz=295,slow=34						
HKT	Hockley	45.08	285	eP	P	01 36 20.2	-0.2
HKT				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6						
HKT	Hockley	45.08	285	eP	P	01 36 20.2	-0.2
	comp=Z,12nm,1.2s,mb4.6						
SPAK	Spaichingen-Ko	45.18	49	eP	P	01 36 19.1	-1.8
KEST	Kesra	45.50	66	P	P	01 36 22.4	-1.2
	comp=Z,1.7nm,0.9s,mb3.9,baz=152,slow=1.7,SNR=2.6						
KEST				LR	LR	01 52 39.6	
	comp=Z,163nm,20.8s,MS4.0,baz=223,slow=32						
DAVA	Damuels	45.83	50⇓	iP	P	01 36 27.6	+1.6
	comp=Z,24nm,0.9s,mb5.1						
DAVA	Damuels	45.83	50⇓	ipP	pP	01 36 27.6	-1.6
	comp=Z,24nm,0.9s						
FCC	Fort Churchill	46.04	326	eP	P	01 36 26.9	-0.7
FCC				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
FCC	Fort Churchill	46.04	326	eP	P	01 36 26.9	-0.7
	comp=Z,26nm,0.8s,mb5.2						
SIV	San Ignacio	46.74	203	P	P	01 36 29.2	-4.3
	comp=Z,3.8nm,0.7s,mb4.5,baz=27,slow=6.7,SNR=8.2						
WMOK	Wichita Mounta	46.78	293	eP	P	01 36 34.7	+1.0
WMOK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
WMOK	Wichita Mounta	46.78	293	eP	P	01 36 34.7	+1.0
	comp=Z,9.6nm,0.9s,mb4.7						
GRA1	Grafenberg Arr	46.95	47	eP	P	01 36 35.1	+0.2
	comp=Z,14nm,1.2s,mb4.8						
GRA1				LR	LR		
	comp=Z,400nm,19.3s,MS4.4						
GRF	Grafenberg Arr	46.95	47	eP	P	01 36 35.1	+0.2
GRF				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
GRF				MLR	MLR		
	comp=Z,400nm,19.3s,MS4.4						
GRF	Grafenberg Arr	46.95	47	eP	P	01 36 35.1	+0.2
GRF				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
GRF				MLR	MLR		
	comp=Z,400nm,19.3s,MS4.4						
GRF	Grafenberg Arr	46.95	47	eP	P	01 36 35.1	+0.2
	comp=Z,14nm,1.2s,mb4.8						
GRF				eL		01 53 12.8	
	comp=Z,401nm,19.3s						
MOX	Moxa	47.32	46	eP	P	01 36 41.2	+3.5
MOX							
	comp=Z,500nm,20.0s						
NKC	Novy Kostel	47.80	46	eP	P	01 36 43.5	+2.0
NKC				eS	S	01 43 47.0	+9.0
NKC				AMS	AMS	01 53 20.0	
	comp=Z,600nm,15.9s						
NKC	Novy Kostel	47.80	46	eP	P	01 36 43.5	+2.0
NKC				eS	S	01 43 47.0	+9.0
KONO	Kongsberg	48.04	33	eP	P	01 36 43.5	+0.4
CLL	Collm	48.26	45	eP	P	01 36 42.0	-3.0
CLL				i		01 36 47.9	
CLL				eS	S	01 43 53.0	+8.4
CLL				MLR	MLR		
	comp=Z,500nm,20.5s,MS4.5						
CLL	Collm	48.26	45	i P	P	01 36 47.9	+2.9
	comp=Z,16nm,1.4s,mb4.9						
CLL				i pP	pP	01 36 54.1	+5.9
	comp=Z,11nm,0.9s						
CLL				i x	x	01 37 00.8	
CLL				ePP	PP	01 38 41.0	+3.7
CLL				eS	S	01 43 53.0	+8.4
CLL	Collm	48.26	45	eP	P	01 36 42.0	-3.0
CLL				i		01 36 47.9	
CLL				i		01 36 54.1	
CLL				eS	S	01 43 53.0	+8.4
CLL				LR	LR		
	comp=Z,500nm,20.5s,MS4.5						
JCT	Junction City	48.34	287	eP	P	01 36 47.0	+1.1
JCT				pmax	pmax		

comp=Z,22nm,1.1s,mb5.1
JCT Junction City 48.34 287 *e*P P **01 36 47.0 +1.0**
comp=Z,22nm,1.1s,mb5.1
KHC Kasperske Hory 48.44 48 *e*P P **01 36 46.8 +0.4**
KHC *e*S S **01 43 49.8 +2.7**
KHC AMS AMS 01 52 00.0
comp=Z,300nm,26.3s
GERES GERESS Array B 48.50 48 P P **01 36 46.7 -0.2**
comp=Z,4.1nm,1.0s,mb4.4,baz=270,slow=6.1,SNR=16
GERES LR LR 01 56 48.5
comp=Z,177nm,18.7s,MS4.1,baz=279,slow=36
BRG Berggiesshubel 48.81 46 *e*P P **01 36 53.5 +4.3**
BRG *e* 01 36 58.8
BRG *e* 01 44 08.0
BRG pmax pmax
comp=Z,11nm,1.4s,mb4.7
BRG MLR MLR
comp=Z,400nm,18.8s,MS4.4
BRG Berggiesshubel 48.81 46 *e*P P **01 36 53.5 +4.3**
comp=Z,18nm,1.4s,mb4.9
BRG *e* 01 36 58.8
comp=Z,12nm,1.0s
BRG *e* 01 44 08.0
BRG
comp=Z,660nm,18.8s
BRG
comp=N,175nm,19.3s
BRG
comp=E,433nm,19.3s
BRG Berggiesshubel 48.81 46 *e*P P **01 36 53.5 +4.3**
comp=E,11nm,1.4s,mb4.7
BRG *e* 01 36 58.8
BRG *e* 01 44 08.0
BRG LR LR
comp=Z,400nm,18.8s,MS4.4
AMTX Amarillo 49.12 293 *e*P P **01 36 51.5 -0.4**
comp=Z,12nm,0.8s,mb5.0
PRU Pruhonice 49.12 47 *e*P P **01 36 54.5 +2.8**
PRU *ex* x 01 36 59.4
PRU *e*S S **01 44 03.0 +6.3**
PRU AMS AMS 01 54 30.0
comp=Z,400nm,17.0s
PVCC Panska Ves 49.18 46 AMS AMS 01 54 20.0
comp=Z,600nm,16.9s
NB2 NORSAR Subarra 49.21 32 P P **01 36 52.6 +0.5**
comp=Z,1.2nm,0.7s,mb4.0,baz=253,slow=8.6
NOA NORSAR Array B 49.21 32 P P **01 36 52.7 +0.6**
comp=Z,8.6nm,0.7s,mb4.9,baz=254,slow=7.8,SNR=24
NOA LR LR 01 53 42.1
comp=Z,222nm,22.0s,MS4.1,baz=220,slow=31
NOA NORSAR Array B 49.21 32 P P **01 36 52.7 +0.6**
NOA LR LR 01 53 42.1
TREC Trest 49.70 48 AMS AMS 01 52 40.0
comp=Z,300nm,23.0s
LPAZ La Paz 49.84 211 P P **01 36 53.8 -3.6**
comp=Z,2.1nm,0.6s,mb4.3,baz=28,slow=10,SNR=10.0
LPAZ LR LR 01 57 42.5
comp=Z,220nm,18.4s,MS4.2,baz=280,slow=36
RSSD Black Hills 50.06 306 *e*P P **01 37 00.1 +1.2**
RSSD pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
RSSD Black Hills 50.06 306 *e*P P **01 37 00.1 +1.2**
comp=Z,3.5nm,0.9s,mb4.4
UPC Upice 50.10 46 *e*P P **01 36 59.0 -0.1**
DPC Dobruska-Polom 50.29 46 *e*P P **01 36 59.9 -0.6**
DPC AMS AMS 01 55 20.0
comp=Z,400nm,16.8s
ZST Bratislava 50.74 49 *e*P P **01 36 59.1 -4.9**
ZST pmax pmax
comp=Z,20nm,1.4s,mb4.8
ZST Bratislava 50.74 49 *e*P P **01 36 59.1 -4.9**
comp=Z,20nm,1.4s,mb4.8
MODS Modra-Piesok 50.86 49 *e*P P **01 37 04.7 -0.2**
MORC Moravsky Berou 51.05 47⇓*i*P P **01 37 08.7 +2.4**
MORC Moravsky Berou 51.05 47⇓P P **01 37 08.7 +2.4**
OKC Ostrava-Krasne 51.45 47 *e*P P **01 37 10.0 +0.8**
OKC *e*S S **01 44 38.9 +10**
OKC AMS AMS 01 56 10.0
comp=Z,300nm,20.3s
OKC Ostrava-Krasne 51.45 47 *e*P P **01 37 03.4 -5.8**
OKC *e* 01 37 10.0
OKC *e*S S **01 44 38.9 +10**
ISCO Idaho Springs 51.57 300 *e*P P **01 37 12.2 +1.8**
ISCO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
ISCO Idaho Springs 51.57 300 *e*P P **01 37 12.2 +1.8**
comp=Z,5.5nm,0.9s,mb4.5
KOLL Kolacno 51.60 49 *e*P P **01 37 12.7 +2.2**
SDCO Great Sand Dun 51.75 297 *e*P P **01 37 12.4 +0.7**
comp=Z,4.2nm,1.0s,mb4.3
PKSM Moragy 51.82 52⇓*i*P P **01 37 11.7 -0.4**
PKSM Moragy 51.82 52⇓P P **01 37 11.7 -0.4**
TXAR Lajitas Array 51.87 287 P P **01 37 10.2 -2.6**
comp=Z,1.5nm,0.6s,mb4.1,baz=104,slow=10,SNR=14
TXAR LR LR 01 59 53.6
comp=Z,236nm,18.1s,MS4.3,baz=5.0,slow=37
TXAR Lajitas Array 51.87 287 P P **01 37 10.2 -2.6**
TXAR LR LR 01 59 53.6
VYHS Vyhne 51.89 49 *e*P P **01 37 12.2 -0.4**
VYHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
VYHS Vyhne 51.89 49 *e*P P **01 37 12.2 -0.4**
comp=Z,3.5nm,1.1s,mb4.2
BUD Budapest 52.04 50⇑*e*P P **01 37 17.1 +3.4**
OJC Ojcow 52.51 47 *e*P P **01 37 17.6 +0.4**
PSZ Piszkesteto 52.62 49⇑*e*pP pP 01 37 22.0 +0.8
NIE Niedzica 52.85 48 *e*P P **01 37 20.6 +0.9**
ANMO Albuquerque 52.98 294⇑*i*P P **01 37 20.9 0.0**
ANMO Albuquerque 52.98 294 *e*P P **01 37 21.0 +0.1**
comp=Z,9.7nm,1.1s,mb4.7
BNM Barren Site 53.27 293 *e*P P **01 37 25.6 +2.6**
STHS Stebnicka Huta 53.46 48 *e*P P **01 37 26.4 +2.2**
STHS pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
STHS Stebnicka Huta 53.46 48 *e*P P **01 37 26.4 +2.2**
comp=Z,8.2nm,1.1s,mb4.6
CRVS Cervenica-Dubn 53.62 48 *e*P P **01 37 26.5 +1.1**
LAZ Ladron 53.63 294 *e*P P **01 37 26.2 +0.5**
RLMT Red Lodge 53.73 307 *e*P P **01 37 28.6 +2.4**
comp=Z,12nm,1.0s,mb4.8
EGMT Eagleton 53.86 311 *e*P P **01 37 25.8 -1.3**
comp=Z,24nm,0.9s,mb5.1
BZS Buzias 53.93 52⇓*i*P P **01 37 28.4 +0.7**
BZS Buzias 53.93 52⇓P P **01 37 28.4 +0.6**
GCMT Greycliff 53.95 308 *e*P P **01 37 27.8 -0.1**
JAN Janina 54.07 60 *e*P P **01 37 34.0 +5.2**
PV01 Paradox Valley 54.09 298 *e*P P **01 37 29.6 +0.5**
VLS Valsamata 54.10 62 *e*P P **01 37 38.0 +8.9**
KOLS Kolonicke sedl 54.16 48 *e*P P **01 37 27.8 -1.5**
PDAR Pinedale Array 54.18 304 P P **01 37 28.2 -1.4**
comp=Z,7.1nm,0.7s,mb4.7,baz=93,slow=7.4,SNR=21
BW06 Boulder Array 54.18 304 *e*P P **01 37 28.1 -1.5**
comp=Z,16nm,0.9s,mb4.9
UZH Uzhgorod 54.19 49⇓*i*P P **01 37 30.0 +0.5**
UZH *i* pP 01 37 33.5 +0.8
MVCO Mesa Verde 54.19 297 *e*P P **01 37 32.4 +2.6**
comp=Z,57nm,1.8s,mb5.2
BIA Bitola 54.23 58 *i*P P **01 37 30.6 +0.6**
KWP Kalwaria 54.41 47⇑*i*P P **01 37 32.5 +1.4**
KWP Kalwaria 54.41 47⇑P P **01 37 32.5 +1.3**
DRGR 54.59 51⇓*i*P P **01 37 32.8 +0.3**
DRGR 54.59 51⇓P P **01 37 32.8 +0.3**
STIP Stip 54.78 57 *i*P P **01 37 32.3 +3.2**
LOHW Long Hollow 54.84 305 *e*P P **01 37 33.9 -0.5**
comp=Z,10nm,0.8s,mb4.9
FLWY Flagg Ranch 54.85 306 *e*P P **01 37 34.8 +0.4**
comp=Z,102nm,1.8s,mb5.5
EVR Evrytania 54.92 60 *e*P P **01 37 37.0 +2.0**
SNOW Snow King Moun 54.96 305 *e*P P **01 37 35.3 0.0**
comp=Z,15nm,0.8s,mb5.1
REDW Red Top Meadow 55.05 305 *e*P P **01 37 35.6 -0.2**
comp=Z,37nm,1.5s,mb5.2
TPAW Teton Pass 55.10 305 *e*P P **01 37 36.0 -0.3**
comp=Z,46nm,1.4s,mb5.3
VAY Valandovo 55.12 57 *i*P P **01 37 40.4 +3.9**
LVV L'vov 55.25 47 *e*P P **01 37 40.3 +3.0**
QLMT Earthquake Lak 55.28 307 *e*P P **01 37 39.7 +2.1**
ITM Ithomi 55.32 62 *e*P P **01 37 42.0 +4.1**
RRI2 Red Ridge 55.39 305 *e*P P **01 37 37.1 -1.3**
comp=Z,18nm,0.7s,mb5.2
SRU San Rafael 55.43 300 *e*P P **01 37 37.4 -1.3**
SRU pmax pmax
comp=Z,16nm,0.7s,mb5.2
SRU San Rafael 55.43 300 *e*P P **01 37 37.4 -1.4**
comp=Z,16nm,0.7s,mb5.2
CPUP Villa Florida 55.51 195 P P **01 37 37.9 -1.4**
comp=Z,1.8nm,0.9s,mb4.1,baz=354,slow=11,SNR=3.3
CPUP LR LR 01 59 39.5
comp=Z,40nm,21.4s,MS3.5,baz=201,slow=34
DAU Daniels Canyon 55.77 302 *e*P P **01 37 42.2 +1.1**
HWUT Hardware Ranch 55.81 303 *e*P P **01 37 41.2 -0.2**
comp=Z,14nm,1.1s,mb4.9
JLU Jordanelle 55.88 302 *e*P P **01 37 41.9 0.0**
TMUT Trail Mountain 55.92 300 *e*P P **01 37 44.7 +2.4**
DLMT Dillon 56.04 308 *e*P P **01 37 43.2 +0.2**
comp=Z,22nm,1.5s,mb5.0
MPU Maple Canyon 56.12 301 *e*P P **01 37 43.9 +0.2**
comp=Z,13nm,0.9s,mb5.0
VLI Velíai 56.20 63 *e*P P **01 37 50.0 +5.7**
BURAR Bucovina Array 56.22 50⇓*i*P P **01 37 45.6 +1.4**
MCMT McKenzie Canyo 56.29 307 *e*P P **01 37 45.2 +0.4**
CHMT Chamberlain Mo 56.31 310 *e*P P **01 37 46.7 +1.8**
VOIR 56.35 52⇑*i*P P **01 37 46.1 +0.9**
KBS Kingsbay 56.38 11 *e*P P **01 37 43.7 -1.2**
KBS pmax pmax
comp=Z,17nm,0.8s,mb5.1
KBS Kingsbay 56.38 11 *e*P P **01 37 43.6 -1.2**
comp=Z,17nm,0.8s,mb5.1
NAIG Nisos Aigina 56.43 61 *e*P P **01 37 50.5 +4.6**
NLU North Lily Min 56.47 301 *e*P P **01 37 45.1 -1.1**
KAF Kangasniemi 56.49 32 *e*p P **01 37 48.4 +2.5**
comp=Z,7.8nm,0.7s,mb4.8,baz=266,slow=6.9
KAF Kangasniemi 56.49 32 *e*P P **01 37 48.4 +2.5**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
SPUT South Promonto 56.52 303 *e*P P **01 37 45.7 -0.7**
WALA Waterton Lakes 56.54 312 *e*P P **01 37 45.8 -0.7**
comp=Z,13nm,1.1s,mb4.9
ATH Athens Observa 56.56 61 *e*P P **01 37 51.0 +4.2**
KVR Kavouri 56.63 61 *e*P P **01 37 47.0 -0.3**
YKA Yellowknife Ar 56.65 328 P P **01 37 44.4 -2.6**
comp=Z,2.3nm,0.8s,mb4.3,baz=84,slow=7.0,SNR=5.3
YKA LR LR 02 01 58.6
comp=Z,892nm,18.6s,MS4.9,baz=145,slow=36
PTL Penteli 56.66 61 *e*P P **01 37 48.5 +0.9**
HVU Hansel Valley 56.68 303 *e*P P **01 37 47.3 -0.3**
HVU pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
HVU Hansel Valley 56.68 303 *e*P P **01 37 47.3 -0.3**
comp=Z,6.9nm,0.9s,mb4.7
WUAZ Wupatki 56.80 296 *e*P P **01 37 48.9 +0.3**
comp=Z,15nm,1.0s,mb5.0
MSU Marysvale 56.81 300 *e*P P **01 37 48.4 -0.2**
ARCES ARCESS Array B 56.91 23 P P **01 37 46.9 -1.9**
comp=Z,11nm,0.9s,mb4.9,baz=36,slow=2.3,SNR=18
ARCES LR LR 01 55 35.7
comp=Z,106nm,21.1s,MS3.9,baz=9.7,slow=29
MLR Muntele Rosu 56.97 52⇑*i*P P **01 37 50.6 +1.0**
MLR Muntele Rosu 56.97 52⇑P P **01 37 50.6 +1.1**
DUG Dugway 56.98 302 *e*P P **01 37 48.6 -1.2**
DUG pmax pmax
comp=Z,19nm,0.9s,mb5.1
DUG Dugway 56.98 302 *e*P P **01 37 48.6 -1.2**
comp=Z,19nm,0.9s,mb5.1
BGU Big Grassy Mou 57.01 302 *e*P P **01 37 49.0 -1.0**
TUC Tucson 57.08 292 *e*P P **01 37 49.7 -0.9**
TUC pmax pmax
comp=Z,19nm,1.7s,mb4.8
TUC Tucson 57.08 292 *e*P P **01 37 49.7 -0.9**
comp=Z,19nm,1.7s,mb4.8
VRI Vrincioaia 57.46 51⇓*i*P P **01 37 53.6 +0.5**
VRI Vrincioaia 57.46 51⇓P P **01 37 53.6 +0.5**
KEV Kevo 57.47 23 *e*p P **01 37 55.5 +2.8**
comp=Z,7.2nm,0.8s,mb4.8
KEV Kevo 57.47 23 *e*P P **01 37 55.5 +2.8**
KEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
HLID Hailey 57.58 306 *e*P P **01 37 54.3 +0.4**
comp=Z,6.3nm,1.0s,mb4.6
HARR Harsova 58.48 53⇓*i*P P **01 37 59.6 -0.6**
HARR Harsova 58.48 53⇓P P **01 37 59.6 -0.6**
KIEV Kiev 58.49 46 *e*P P **01 37 59.7 -0.5**
KIEV pmax pmax
comp=Z,18nm,1.0s,mb5.1
KIEV Kiev 58.49 46 *e*P P **01 37 59.7 -0.5**
comp=Z,18nm,1.0s,mb5.0
AKASG Malin Array Be 58.49 46 P P **01 37 58.7 -1.6**
comp=Z,7.4nm,0.7s,mb4.8,baz=273,slow=6.2,SNR=15
AKASG LR LR 02 00 51.7
comp=Z,284nm,18.5s,MS4.4,baz=255,slow=34
AKASG Malin Array Be 58.49 46 P P **01 37 58.7 -1.6**
AKASG LR LR 02 00 51.7
ELK Elko 58.69 303 *e*P P **01 38 01.5 -0.3**
ELK pmax pmax
comp=Z,10.0nm,0.9s
ELK Elko 58.69 303 *e*P P **01 38 01.5 -0.3**
comp=Z,10.0nm,0.9s,mb4.8
NEW Newport 58.74 312 *e*P P **01 38 00.5 -1.5**
NEW pmax pmax
comp=Z,18nm,0.9s
NEW Newport 58.74 312 *e*P P **01 38 00.5 -1.5**
comp=Z,18nm,0.9s,mb5.1
JOF Joensuu 58.82 31 *e*p P **01 38 04.4 +2.1**
comp=Z,7.6nm,0.6s,mb4.9
BMO Blue Mountains 59.41 308 *e*P P **01 38 08.0 +1.3**
BMO pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BMO Blue Mountains 59.41 308 *e*P P **01 38 08.0 +1.2**
comp=Z,3.9nm,0.8s,mb4.5
APA Apatity 59.66 26⇓*i*P P **01 38 11.5 +3.4**
APA pmax pmax
comp=Z,14nm,0.8s,mb5.0
LNOR Lincton Mounta 59.91 309 *e*P P **01 38 09.8 -0.3**
DEMI Demirci 60.17 59 *i*P P **01 38 12.3 +0.3**
ULDT Uludag 60.24 58 *i*P P **01 38 15.6 +3.1**
TPNV Topopah Spring 60.30 299 *e*P P **01 38 13.2 +0.2**
TPNV pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
TPNV Topopah Spring 60.30 299 *e*P P **01 38 13.2 +0.2**
comp=Z,7.9nm,0.9s,mb4.7
H2OWA Water 60.59 310 P P **01 38 17.2 +2.4**
HAWA Hanford 60.67 310 *e*P P **01 38 13.9 -1.4**
comp=Z,15nm,0.9s,mb5.1
RSW Rattlesnake Hi 60.71 310 *e*P P **01 38 15.1 -0.4**
GDZ Gediz 60.74 59 *i*P P **01 38 18.8 +2.9**
WVOR Wild Horse Val 60.84 305 *e*P P **01 38 15.1 -1.4**
WVOR pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
WVOR Wild Horse Val 60.84 305 *e*P P **01 38 15.1 -1.4**
comp=Z,9.8nm,1.1s,mb4.8
KHAL Karahalli 60.92 60 *i*P P **01 38 17.1 0.0**
ETW Entiat 60.98 311 *e*P P **01 38 16.8 -0.6**
GOLH Golhisar 61.25 61 *i*P P **01 38 17.4 -2.0**
NVAR Mina Array Bea 61.52 301 P P **01 38 19.9 -1.3**
comp=Z,1.8nm,0.8s,mb4.3,baz=78,slow=6.8,SNR=15
RPW Rockport 61.60 312 *e*P P **01 38 22.2 +0.6**
VTHM Trough 61.62 309 P P **01 38 22.3 +0.5**
ESKT Eskisehir 61.66 58 *i*P P **01 38 22.5 +0.3**
VIPM Ingram Point 61.80 308 P P **01 38 26.3 +3.3**
JCW Jim Creek 61.92 312 *e*P P **01 38 23.9 +0.1**
CROR Criterion Ridg 61.95 308 P P **01 38 24.4 +0.4**
PAHR Pah Rah Range 62.02 302 *e*P P **01 38 23.5 -1.0**
comp=Z,23nm,0.9s,mb5.3
MOD Modoc 62.16 305 *e*P P **01 38 24.9 -0.6**
comp=Z,8.3nm,0.7s,mb5.0
OBN Obninsk 62.27 40 *e*P P **01 38 25.6 -0.4**
OBN pmax pmax
comp=Z,40nm,1.5s,mb5.3
ISA Isabella 62.37 298 *e*P P **01 38 27.5 +0.5**
ISA pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
ISA Isabella 62.37 298 *e*P P **01 38 27.5 +0.5**
comp=Z,8.5nm,0.9s,mb4.9
MOS Moscow 62.75 39 *e*P P **01 38 29.3 +0.1**
MOS pmax pmax
comp=Z,72nm,1.4s,mb5.6
KDHN Kadinhani 62.87 59 *i*P P **01 38 29.9 -0.4**
ANTO Ankara 63.03 57 *e*P P **01 38 31.3 0.0**
ANTO pmax pmax
comp=Z,14nm,0.9s,mb5.1
ANTO Ankara 63.03 57⇑*i*P P **01 38 31.6 +0.3**
ANTO Ankara 63.03 57 *e*P P **01 38 31.3 0.0**
comp=Z,14nm,0.9s,mb5.1
LASM Arnica Sink 63.16 305 P P **01 38 34.7 +2.5**
OSD Olympics--Snow 63.16 312 P P **01 38 32.1 0.0**
LBCM Butte Creek Ri 63.19 304 P P **01 38 31.1 -1.3**
CMB Columbia Colle 63.21 301 *e*P P **01 38 32.3 -0.2**
CMB pmax pmax
comp=Z,33nm,1.8s,mb5.2
CMB Columbia Colle 63.21 301 *e*P P **01 38 32.3 -0.3**
comp=Z,34nm,1.8s,mb5.2
LTIM Timbered Crate 63.21 304 P P **01 38 34.7 +2.2**
OBC Olympics--Boni 63.36 312 P P **01 38 36.4 +3.0**
NLWA Neilton Lookou 63.37 312 *e*P P **01 38 32.9 -0.5**
comp=Z,28nm,1.1s,mb5.3
LHEM Herd Peak 63.62 305 P P **01 38 35.5 +0.3**
OHCM Honcut 63.68 302 *e*P P **01 38 35.5 -0.2**
CDAG Cicekdag 64.27 57 *i*P P **01 38 39.5 0.0**
CTKT Corum 64.30 56 *i*P P **01 38 42.6 +2.9**
VOR Voronezh 64.49 43 *e*P P **01 38 43.0 +2.3**
VOR pmax pmax
comp=Z,100nm,2.0s,mb5.5
ANN Anapa 65.06 51 *e*P P **01 38 46.6 +2.0**
ANN *e*S S **01 47 29.2 +2.2**
ANN pmax pmax
comp=Z,49nm,1.3s,mb5.4
ANN MLR MLR
comp=Z,203nm,14.0s,MS4.5
COBT Iskenderun 66.60 60 *i*P P **01 38 58.1 +3.4**
YAYL Yayladag 66.64 60 *i*P P **01 38 57.8 +2.9**
SOC Sochi 66.98 52 *e*P P **01 38 58.2 +1.2**
SOC *e* 01 39 25.9
SOC *e*S S 01 47 51.4 +1.0
SOC *e*SS SS 01 52 08.9 +0.4
SOC pmax pmax
comp=Z,11nm,0.9s,mb4.9
GZT Gaziantep 67.33 59 *i*P P **01 38 59.1 -0.2**
DAWY Dawson 67.50 332 *e*P P **01 38 58.7 -1.2**
HYT Haines Junctio 67.64 328 *e*P P **01 39 01.0 +0.2**
MALT Malatya 67.67 57⇓*i*P P **01 39 00.5 -1.0**
MALT Malatya 67.67 57⇓P P **01 39 00.5 -0.9**
EGAK Eagle 68.00 333 *e*P P **01 39 02.0 -1.1**
comp=Z,7.2nm,1.1s,mb4.6
KOPT Kop Dagi 68.65 55 *i*P P **01 39 11.3 +3.8**
KIV Kislovodsk 68.91 51*c i*P P **01 39 10.2 +1.1**
KIV *i* 01 39 35.0
KIV pmax pmax
comp=Z,21nm,1.6s,mb4.8
HOMI Horasan 69.66 55 *i*P P **01 39 17.6 +3.8**
MARD Mardin 69.76 58 *i*P P **01 39 17.6 +3.1**
COLA College 70.63 334⇑*i*P P **01 39 19.0 -0.3**
COLA College 70.63 334 *e*P P **01 39 20.8 +1.5**
comp=Z,10.0nm,0.9s,mb4.8
GNI Garni 71.66 54⇑*i*P P **01 39 26.5 +0.5**
GNI pmax pmax
comp=Z,24nm,1.7s
GNI Garni 71.66 54 *e*P P **01 39 27.2 +1.2**
comp=Z,117nm,1.6s,mb5.6
HAKT HAKKARI 71.85 57 *i*P P **01 39 31.3 +4.1**
IMA2 Indian Mountai 72.26 336 *e*P P **01 39 28.4 -0.7**
PMR Palmer 72.57 331 *e*P P **01 39 30.6 -0.4**
PMR pmax pmax
comp=Z,12nm,0.9s,mb4.8
PMR Palmer 72.57 331 *e*P P **01 39 30.6 -0.4**
comp=Z,12nm,0.9s,mb4.8
PLCA Paso Flores 72.68 201 P P **01 39 28.7 -3.1**
comp=Z,4.0nm,0.7s,mb4.4,baz=5.0,slow=5.8,SNR=12
ARU Arti 73.66 34*d i*P P **01 39 37.1 -0.5**
ARU *e* 01 39 54.9
ARU *e* 01 42 18.0
ARU *e*S S 01 49 05.6 -2.4
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.8
SVE Sverdlovsk 74.51 34⇑*e*P P **01 39 43.4 +0.9**
SVE *e* 01 39 54.7
SVE *e*S S 01 49 16.3 -1.2
SVE pmax pmax
comp=Z,36nm,1.7s,mb5.0
SVW2 Sparrevohn 75.52 332 *e*P P **01 39 47.3 -1.0**
TSUM Tsumeb 75.81 121 *e*P P **01 39 51.9 +1.4**
comp=Z,7.0nm,1.1s,mb4.5
MIB Mutribah 77.71 63 *e*P P **01 40 00.9 -0.4**
baz=32
NAY Al-Naaiem 77.87 63 *e*P P **01 40 01.4 -0.8**
baz=33
RDF Al-Radifah 78.25 64 *e*P P **01 40 01.7 -2.6**
baz=33
TIXI Tiksi 80.51 2⇑*i*P P **01 40 15.7 -0.2**
TIXI pmax pmax
comp=Z,28nm,1.7s,mb4.9
BVAR Borovoye Array 81.29 34 P P **01 40 20.8 +0.5**
comp=Z,4.2nm,1.0s,mb4.3,baz=291,slow=4.5,SNR=11
LSZ Lusaka 82.02 112 *e*P P **01 40 27.1 +2.4**
LSZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
LSZ Lusaka 82.02 112 *e*P P **01 40 27.1 +2.3**
comp=Z,5.4nm,0.9s,mb4.5
NVS Novosibirsk 85.91 27 *e*P P **01 40 43.8 -0.2**
KURK Kurchatov 86.72 32 P P **01 40 47.9 -0.2**
comp=Z,0.5nm,0.3s,mb4.2,baz=309,slow=5.2,SNR=8.5
KURK Kurchatov 86.72 32*c i*P P **01 40 47.6 -0.5**
KURK pmax pmax
comp=Z,14µm,1.7s,mb7.9
KURK Kurchatov 86.72 32 P P **01 40 47.9 -0.2**
ZAL Zalesovo 87.20 27 P P **01 40 49.9 -0.5**
ZALV Zalesovo Beam 87.20 27 P P **01 40 49.9 -0.5**
comp=Z,0.7nm,0.3s,mb4.4,baz=276,slow=4.2,SNR=4.6
SEY Seymchan 88.45 353 *e*P P **01 40 57.8 +1.6**
MKAR Makanchi Array 91.17 34⇑*e*P P **01 41 08.9 -0.3**
comp=Z,2.6nm,1.0s,mb4.5,baz=300,slow=2.7,SNR=6.4
MKAR Makanchi Array 91.17 34⇑*e*P P **01 41 12.0 +2.8**
BOD Bodaibo 92.55 12 *e*P P **01 41 14.2 -1.2**
BOD pmax pmax
comp=Z,4.0nm,1.4s,mb4.7
WMQ Urumqi 95.95 33 *e*P P **01 41 31.5 +0.2**
WMQ AP pP 01 41 39.0 +4.4
WMQ LR LR
comp=N,89nm,20.6s,MS4.4
WMQ LR LR
comp=E,125nm,24.2s,MS4.4
WMQ LR LR
comp=Z,141nm,25.4s,MS4.3
CN2 Changchun 107.91 8 *e*PDIF Pdif 01 42 26.3 +1.8
CN2 PP PP 01 46 56.4 +4.1
CN2 PP PP
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,300nm,17.0s,MS4.9
LZH Lanzhou 109.43 27 *e*PDIF Pdif 01 42 27.0 -4.3
LZH PP PP 01 47 09.2 +5.5
LZH PP PP
comp=Z,110nm,5.2s
CD2 Chengdu 113.85 30 *e*PKP PKiKP 01 46 43.2 -0.3
CD2 PP PP 01 47 37.9 +2.4
CD2 PKS 01 50 18.5
CD2 SKS SKSdf 01 53 50.4 -5.5
CD2 PP PP
comp=Z,110nm,10.0s
NJ2 Nanjing 118.10 16 *e*PKP PKPdf 01 46 48.5 -3.1
KMI Kunming 118.25 34 PDIF Pdif 01 43 08.3 -2.2
GYA Guiyang 118.96 30 *e*PDIF Pdif 01 43 12.0 -1.7
GYA PKP PKPdf 01 46 53.9 +0.5
GYA PP PP 01 48 14.2 +2.9
GYA SKS SKSdf 01 54 04.2 -1.7
GYA SKKS SKKSac 01 55 06.8 -6.4
GYA PP PP
comp=Z,120nm,7.8s
GYA LR LR
comp=N,170nm,20.6s,MS4.8
GYA LR LR
comp=E,150nm,21.2s,MS4.8
GYA LR LR
comp=Z,160nm,20.4s,MS4.6
CMAR Chiang Mai Arr 121.53 42 PKP PKPdf 01 46 57.7 -0.8
comp=Z,2.3nm,0.8s,baz=297,slow=2.6,SNR=7.9
CMAR Chiang Mai Arr 121.53 42⇑*i*PKIKP PKPdf 01 46 59.5 +1.0
MIR Mirnyy 133.37 158 *e*PKIKP PKPdf 01 47 20.0 +0.5
MIR pmax pmax
comp=N,100µm,1.5s
WRA Warramunga Arr 171.85 11 PKP PKPdf 01 48 12.2 -1.3
comp=N,0.9nm,0.7s,baz=321,slow=1.4,SNR=4.4
WRA PKPab PKPab 01 49 33.2 -2.3
comp=N,0.6nm,0.5s,baz=353,slow=5.2,SNR=4.6
ASAR Alice Springs 175.30 24 PKP PKPdf 01 48 12.3 -2.4
comp=N,0.5nm,0.9s,baz=155,slow=4.6,SNR=3.7
ASAR PKPab PKPab 01 49 50.0 -0.9
comp=N,0.6nm,0.7s,baz=331,slow=3.6,SNR=6.6

*IDC **01** 01:33:07.0± 1.1, 2780N× 8771E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.7/22, mbtmp3.7/10, ML3.8/2, Error ellipse: s-maj=43.9km s-min=17.2km az=58.0*
*NDI **01** 01:33:13.0± 3.5, 2759N× 8780E, h73km, ML4.1,*

mb4.0(NEIC)
BJI ***01*** *01:33:14.6, 2790N×8790E, h73km, mB4.4, mb3.8*
DMN ***01*** *01:33:15.5±0.0, 2786N×8793E, h60km, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISCJB ***01*** *01:33:15.3±0.5, 2789N±006×8785E±004, h83km±7km, mb3.6/10, Error ellipse: s-maj=11.0km s-min=5.3km az=13.5*
NEIC ***01*** *01:33:16.1±0.4, 2785N×8787E, h73km±6km, mb4.0/1, Error ellipse: s-maj=8.7km s-min=6.1km az=199.0*
ISC 01 01:33:16.3±0.5**, 2793N**±006×**8785E**±004**, h71**km±8km**, n34,** σ**1s04**/50**, mb3.6**/10**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**0.59**	**192**	*e*Pg	**Pn**	**01 33 29.5**	**-0.6**
TAPN				*e*Sg	**Sn**	**01 33 39.6**	**-0.7**
	11µm,0.5s						
ODAN	**Odare**	**1.14**	**201**	*e*Pg	**Pn**	**01 33 36.5**	**-0.1**
ODAN				*e*Sg	**Sn**	**01 33 50.6**	**-1.2**
	2µm,0.1s						
RAMN	**Ramite**	**1.48**	**229**	*e*Pg	**Pn**	**01 33 40.6**	**-0.4**
RAMN				*e*Sg	**Sn**	**01 33 59.8**	**+0.1**
	742nm,0.4s						
JIRN	**Jiri**	**1.50**	**260**	*e*Pg	**Pn**	**01 33 42.1**	**+0.9**
GUN	**Gumba**	**1.75**	**270**	*e*Pg	**Pn**	**01 33 45.5**	**+1.0**
GUN				*e*Sg	**Sn**	**01 34 07.1**	**+1.2**
	651nm,0.3s						
PKI	**Pulchoki**	**2.19**	**261**	*e*Pn	**Pn**	**01 33 51.0**	**+0.5**
PKI				*e*Sn	**Sn**	**01 34 17.1**	**+0.4**
	872nm,0.5s						
PKIN	**Phulchoki**	**2.21**	**261**	*e*Pn	**Pn**	**01 33 51.1**	**+0.4**
PKIN				*e*Sn	**Sn**	**01 34 17.1**	**+0.1**
	742nm,0.3s						
KKN	**Kakani**	**2.28**	**267**	*e*Pn	**Pn**	**01 33 52.4**	**+0.7**
KKN				*e*Sn	**Sn**	**01 34 20.0**	**+1.2**
	795nm,0.4s						
DMN	**Daman**	**2.46**	**263**	*e*Pn	**Pn**	**01 33 54.4**	**+0.3**
DMN				*e*Sn	**Sn**	**01 34 23.7**	**+0.7**
	563nm,0.4s						
GKN	**Gorkha**	**2.84**	**272**	*e*Pn	**Pn**	**01 34 00.2**	**+0.8**
GKN				*e*Sn	**Sn**	**01 34 32.6**	**+0.1**
LSA	**Lhasa**	**3.39**	**58**	*e*Pn	**Pn**	**01 34 07.9**	**+1.2**
DANN	**Dangsing**	**3.64**	**278**	*e*Pn	**Pn**	**01 34 09.8**	**-0.4**
DANN				*e*Sn	**Sn**	**01 34 50.6**	**-1.3**
KOLN	**Koldanda**	**3.77**	**269**	*e*Pn	**Pn**	**01 34 11.5**	**-0.4**
KOLN				*e*Sn	**Sn**	**01 34 53.5**	**-1.6**
	279nm,0.3s						
SHL	**Shillong**	**4.30**	**122**	*e*x	**Pn**	**01 34 21.0**	**+1.7**
SHL				*e*S	**Sn**	**01 34 58.2**	**-10**
BOK	**Bokaro**	**4.48**	**204**	*i* P	**Pn**	**01 34 23.4**	**+1.7**
BOK				*i* S	**Sn**	**01 35 07.4**	**-5.2**
DDI	**Dehra Dun**	**8.89**	**288**	*e*S	**Sn**	**01 36 51.0**	**-10**
KLP	**Kalpa**	**9.09**	**296**	*e*P	**Pn**	**01 35 20.9**	**-3.7**
KLP				*e*S	**Sn**	**01 36 55.9**	**-9.4**
KLP				AML	AML	01 37 07.6	
	comp=N,75nm,0.6s						
KLP				AML	AML	01 37 10.8	
	comp=E,76nm,0.7s						
NDI	**New Delhi**	**9.40**	**277**	*e*x	x	01 35 21.0	
NDI				*e*x	x	01 37 00.0	
SONA	**Sohna**	**9.52**	**274**	*e*P	**Pn**	**01 35 26.9**	**-3.6**
SONA				*e*S	**Sn**	**01 37 04.0**	**-12**
SONA				AML	AML	01 37 15.9	
	comp=E,26nm,0.2s						
SONA				AML	AML	01 37 15.9	
	comp=N,23nm,0.2s						
SMLA	**Simla**	**9.84**	**291**	*i* P	**Pn**	**01 35 32.7**	**-2.1**
SMLA				*e*S	**Sn**	**01 37 14.3**	**-9.4**
SMLA				*e*x	x	01 37 24.8	
	comp=N,410nm,0.5s						
SMLA				*e*x	x	01 37 28.4	
	comp=E,332nm,0.3s						
KUDL	**Kundal**	**10.04**	**274**	*e*P	**Pn**	**01 35 34.3**	**-3.4**
KUDL				*e*S	**Sn**	**01 37 16.7**	**-12**
KUDL				AML	AML	01 37 35.8	
	comp=N,21nm,0.4s						
CMAR	**Chiang Mai Arr**	**13.88**	**130**	Pn	**Pn**	**01 36 26.8**	**-2.9**
	comp=N,0.2nm,0.3s,baz=312,slow=12,SNR=5.1						
XAN	**Xi'an**	**19.05**	**66**	P	**Pn**	**01 37 31.7**	**-2.5**
XAN				AMB	AMB		
	comp=Z,4.0nm,1.0s						
XAN				AMB	AMB		
	comp=Z,33nm,3.7s						
MKAR	**Makanchi Array**	**19.33**	**348**	P	**Pn**	**01 37 36.5**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=174,slow=12,SNR=6.9						
KURK	**Kurchatov**	**23.81**	**345**	P	**P**	**01 38 21.6**	**-0.8**
	comp=Z,2.4nm,0.6s,mb3.7,baz=164,slow=8.9,SNR=12						
SONM	**Songino Array**	**24.56**	**31**	P	**P**	**01 38 29.6**	**+0.3**
	comp=Z,2.3nm,0.5s,mb3.9,baz=223,slow=9.6,SNR=12						
ULN	**Ulaanbaatar**	**24.89**	**32**	*e*P	**P**	**01 38 33.4**	**+1.2**
	comp=Z,7.1nm,1.1s,mb4.0						
ZALV	**Zalesovo Beam**	**26.09**	**356**	P	**P**	**01 38 43.8**	**+0.8**
	comp=Z,0.4nm,0.3s,mb3.3,baz=163,slow=6.0,SNR=3.2						
BVAR	**Borovoye Array**	**28.22**	**337**	P	**P**	**01 39 02.1**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.5,baz=151,slow=10,SNR=6.9						
ARCES	**ARCESS Array B**	**54.51**	**338**	P	**P**	**01 42 36.8**	**+0.5**
	comp=Z,2.0nm,0.9s,mb4.1,baz=88,slow=11,SNR=4.9						
GERES	**GERESS Array B**	**59.37**	**312**	P	**P**	**01 43 11.2**	**+0.2**
	comp=Z,0.2nm,0.4s,mb3.5,baz=29,slow=6.1,SNR=3.7						
NOA	**NORSAR Array B**	**59.56**	**327**	P	**P**	**01 43 11.6**	**-0.5**
	comp=Z,1.0nm,0.9s,mb3.8,baz=71,slow=4.4,SNR=3.7						
WRA	**Warramunga Arr**	**65.47**	**131**	P	**P**	**01 43 52.2**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.4,baz=328,slow=6.3,SNR=2.9						
ASAR	**Alice Springs**	**67.85**	**135**	P	**P**	**01 44 07.4**	**+0.3**
	comp=Z,0.4nm,0.7s,mb3.3,baz=317,slow=7.1,SNR=4.3						

IDC ***01*** *01:56:46.9±0.5, 2780N×44.16W, h0km, mb4.6/23, mb1 4.7/23, mb1mx4.7/24, mbtmp4.6/23, MS4.7/34, Ms1 4.7/34, ms1mx4.6/36, Error ellipse: s-maj=13.9km s-min=12.3km az=160.0*
ISCJB ***01*** *01:56:47.4±0.2, 2781N±004×44.12W±002, h10km, mb5.3/306, MS4.9/180, Error ellipse: s-maj=5.7km s-min=2.0km az=172.6*
MOS ***01*** *01:56:47.6±0.8, 2788N×44.13W, h10km, mb5.7/118, MS4.8/53, Error ellipse: s-maj=5.8km s-min=2.9km az=137.4*
SZGRF ***01*** *01:56:48.7, 2703N×4374W, h25km, mb5.7, MS4.8, Northern Mid-Atlantic Ridge*
IGIL ***01*** *01:56:48.1, 2791N×44.17W, h10km, mb5.6*
GCMT ***01*** *01:56:49.1±0.2, 2782N×4407W, h12km, MW5.3/94, Moment Tensor Solution. s52,c72; s94,c185; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.25±.02; $M_{\theta\theta}$0.28±.02; $M_{\phi\phi}$0.97±.02; $M_{r\theta}$0.08±.07; $M_{\theta\phi}$0.40±.02; $M_{\phi r}$-0.01±.06; Best double couple: $M_0$1.20400×10^{17} NP1:ϕ_s21.00000°, δ44.00000°, λ-95.00000°. NP2: ϕ_s208.00000°, δ46.00000°, λ-86.00000°. Principal axes: T 1.1530, Plg1.0000°, Azm294.0000°; N 0.1050, Plg3.0000°, Azm25.0000°; P -1.2540, Plg87.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***01*** *01:56:49.1±0.1, 2780N×44.11W, h10km, mb5.4/221, MS5.0/135 Error ellipse: s-maj=4.3km s-min=1.6km az=172.0*
BJI ***01*** *01:56:49.1, 2780N×44.10W, h10km, mB5.7, mb5.5, Ms5.2, Msz4.9*
BGS ***01*** *01:57:22.4±2.1, 3098N×4138W, h10km±999km, mb5.6*
ISC 01 01:56:49.4±0.2**, 2782N**±004×**4411W**±002**, h10**km**, (h19**km±1.1km**:pP-P), n884,** σ**0s82**/854**, mb5.3**/306**, MS4.9**/180**, 26C-52D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDA	**Ponta Delgada**	**18.37**	**53**	*e*P	**Pn**	**02 01 05.0**	**+0.8**
PDA				*i* LQ		02 04 46.0	
PDA				*i* LR	LR	02 05 33.0	
CMLA	**Cha da Macela**	**18.48**	**53**	*e*P	**Pn**	**02 01 00.8**	**-4.7**
	112nm,1.2s						
CMLA				*e*S	**Sn**	**02 04 31.4**	**-0.6**
CMLA				*i* LQ		02 04 31.8	
CMLA				*i* LR	LR	02 05 05.0	
BBGH	**Gun Hill**	**20.52**	**228**	PFAKE		02 01 40.0	+12
BBGH				LR	LR		
	comp=Z,2µm,21.0s,MS4.4						
MTP	**Monte Pirata**	**21.96**	**248**	*e*P	**P**	**02 01 43.8**	**+0.4**
HUMP	**Col San Antoni**	**22.18**	**249**	*e*P	**P**	**02 01 47.5**	**+1.6**
	comp=Z,257nm,1.6s,mb5.4						
CPD	**Cerro la Pandu**	**22.29**	**249**	*e*P	**P**	**02 01 46.8**	**-0.1**
CPD				pmax	pmax		
	comp=Z,338nm,1.5s,mb5.5						
CPD	**Cerro la Pandu**	**22.29**	**249**	*e*P	**P**	**02 01 46.8**	**-0.2**
	comp=Z,338nm,1.5s,mb5.5						
SJG	**San Juan**	**22.45**	**249**	P	**P**	**02 01 50.7**	**+2.1**
	comp=Z,22nm,0.9s,mb4.6,baz=65,slow=9.8,SNR=3.3						
SJG				LR	LR	02 08 33.9	
	comp=Z,2µm,20.4s,MS4.6,baz=71,slow=32						
SJG	**San Juan**	**22.45**	**249**	*e*P	**P**	**02 01 48.2**	**-0.4**
SJG				pmax	pmax		
	comp=Z,14nm,0.8s						
SJG				MLR	MLR		
	comp=Z,2µm,19.0s						
SJG	**San Juan**	**22.45**	**249**	*e*P	**P**	**02 01 48.2**	**-0.4**
	comp=Z,14nm,0.8s,mb4.4						
SJG				LR	LR		
	comp=Z,2µm,19.0s,MS4.6						
GRGR	**Grenville**	**22.66**	**230**	*e*P	**P**	**02 01 52.2**	**+1.4**
	comp=Z,377nm,1.3s,mb5.7						
GRGR				LR	LR		
	comp=Z,672nm,21.0s,MS4.0						
AOPR	**Arecibo Observ**	**22.83**	**250**	*e*P	**P**	**02 01 53.0**	**+0.2**
	comp=Z,146nm,1.9s,mb5.1						
TBH	**Brigand Hill**	**23.48**	**226**	*e*P	**P**	**02 02 01.0**	**+1.4**
TRN	**Trinidad (W)**	**23.58**	**227**	*e*P	**P**	**02 02 01.8**	**+1.2**
PMAR	**Madeira**	**23.96**	**72**	*e*P	**P**	**02 02 04.0**	**+0.1**
	comp=Z,408nm,1.7s,mb5.6						
WES	**Weston**	**26.45**	**310**	PFAKE		02 02 40.0	+14
WES				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
PKME	**Peaks-Kenny Pk**	**26.53**	**318**	*e*P	**P**	**02 02 27.1**	**0.0**
	comp=Z,87nm,1.7s,mb5.0						
PKME				LR	LR		
	comp=Z,2µm,21.0s,MS4.6						
HRV	**Adam Dziewonsk**	**26.66**	**311**	PFAKE		02 02 40.0	+12
HRV				LR	LR		
	comp=Z,3µm,21.0s,MS4.8						
EFAM	**Famara**	**26.88**	**80**	P	**P**	**02 02 30.9**	**+0.5**
	comp=Z,61nm,1.6s,mb4.9						
LBNH	**Lisbon**	**27.65**	**314**	*e*P	**P**	**02 02 37.9**	**+0.7**
	comp=Z,204nm,1.8s,mb5.5						
LBNH				LR	LR		
	comp=Z,2µm,21.0s,MS4.7						
CPNY	**Central Park**	**27.70**	**306**	*e*P	**P**	**02 02 35.6**	**-2.1**
BBTS	**Babate**	**28.76**	**111**	P	**P**	**02 02 46.0**	**-1.5**
	comp=Z,19nm,1.0s,mb4.8,baz=44,slow=14,SNR=2.4						
BBTS				LR	LR	02 11 35.0	
	comp=Z,3µm,19.1s,MS4.9,baz=141,slow=31						
FRNY	**Flat Rock**	**28.98**	**314**	*e*P	**P**	**02 02 49.1**	**0.0**
	comp=Z,111nm,1.8s,mb5.3						
NCB	**Newcomb**	**29.03**	**312**	*e*P	**P**	**02 02 49.6**	**0.0**
	comp=Z,99nm,1.9s,mb5.2						
NCB				LR	LR		
	comp=Z,3µm,22.0s,MS4.8						
SDMD	**Soldier's Deli**	**29.45**	**302**	*e*P	**P**	**02 02 53.6**	**+0.3**
	comp=Z,30nm,1.3s,mb4.9						
LONY	**Lake Ozonia**	**29.53**	**313**	*e*P	**P**	**02 02 54.3**	**+0.3**
	comp=Z,130nm,1.8s,mb5.4						
LONY				LR	LR		
	comp=Z,2µm,22.0s,MS4.8						
BINY	**Binghamton**	**29.59**	**307**	*e*P	**P**	**02 02 54.9**	**+0.3**
	comp=Z,252nm,1.8s,mb5.7						
BINY				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
CNNC	**Cliffs of the**	**29.63**	**293**	PFAKE		02 03 10.0	+15
CNNC				LR	LR		
	comp=Z,3µm,22.0s,MS4.8						
URVA	**University of**	**29.63**	**298**	*e*P	**P**	**02 02 55.1**	**+0.1**
LIS	**Lisbon**	**31.02**	**60**	*e*P	**P**	**02 03 06.0**	**-1.2**
LIS				AMb	AMB	02 03 14.6	
	comp=Z,87nm,0.5s,mb5.8						
LIS				*e*S	**S**	**02 08 12.1**	**+0.1**
LIS	**Lisbon**	**31.02**	**60**	*e*P	**P**	**02 03 06.0**	**-1.2**
	comp=Z,87nm,0.5s,mb5.8						
LIS				*e*S	**S**	**02 08 12.1**	**+0.1**
PFVI	**Vila Bisbo**	**31.03**	**64**	*e*LQ		02 09 31.3	
PFVI				*e*LR	LR	02 10 57.4	
	comp=Z,2µm,20.0s						
PTEO	**Sao Teotonio**	**31.17**	**63**	*e*pP	pP	02 03 14.3	+2.7
MORF	**Marmelete**	**31.19**	**63**	*e*P	**P**	**02 03 02.9**	**-5.9**
	comp=Z,88nm,1.6s,mb5.3						
MORF				*e*pP	pP	02 03 14.0	+2.2
MORF				*i* P		02 11 03.6	
MORF				A		02 13 08.1	
	comp=Z,2µm,19.7s						
NHSC	**New Hope**	**31.43**	**289**	PFAKE		02 03 20.0	+9.1
NHSC				LR	LR		
	comp=Z,3µm,20.0s,MS5.0						
SCHQ	**Schefferville**	**31.65**	**335**	P	**P**	**02 03 09.9**	**-2.6**
	comp=Z,6.5nm,0.9s,mb4.4,baz=138,slow=8.2,SNR=10						
SCHQ				LR	LR	02 14 50.2	
	comp=Z,1µm,20.1s,MS4.5,baz=146,slow=34						
PBDV	**Barranco-do-Ve**	**31.76**	**64**	*e*P	**P**	**02 03 16.4**	**+2.7**
	comp=Z,147nm,1.7s,mb5.5						
PBDV				*e*pP	pP	02 03 19.9	+3.1
PBDV				*e*LQ		02 08 26.1	
PBDV				*e*LR	LR	02 10 29.4	
	comp=Z,2µm,19.8s						
BLA	**Blacksburg**	**31.86**	**296**	*e*P	**P**	**02 03 16.0**	**+1.4**
BLA				pmax	pmax		
	comp=Z,228nm,1.5s,mb5.8						
BLA				MLR	MLR		
	comp=Z,2µm,21.0s,MS4.8						
BLA	**Blacksburg**	**31.86**	**296**	*e*P	**P**	**02 03 16.0**	**+1.4**
	comp=Z,228nm,1.5s,mb5.8						
BLA				LR	LR		
	comp=Z,2µm,21.0s,MS4.8						
EVO	**Evora**	**31.86**	**61**	*e*P	**P**	**02 03 14.7**	**+0.1**
	comp=Z,28nm,1.5s,mb4.9						
PBEJ	**Beja**	**31.91**	**62**	*e*P	**P**	**02 03 15.3**	**+0.3**
	comp=Z,60nm,1.6s,mb5.2						
PBEJ				*e*pP	pP	02 03 20.8	+2.7
PVAQ	**Vaqueiros**	**31.94**	**63**	*e*P	**P**	**02 03 17.7**	**+2.3**
	comp=Z,94nm,1.6s,mb5.4						
PVAQ				*e*pP	pP	02 03 21.4	+3.0
PVAQ				*e*LQ		02 10 49.8	
PVAQ				*e*LR	LR	02 12 01.7	
	comp=Z,3µm,19.4s						
ELN	**Prospectdale**	**32.12**	**296**	*e*P	**P**	**02 03 17.6**	**+0.6**
EGRO	**El Granado**	**32.14**	**63**	P	**P**	**02 03 14.6**	**-2.5**
	comp=Z,13nm,1.4s,mb4.6						
PESTR	**Estremoz**	**32.24**	**61**	*e*P	**P**	**02 03 17.3**	**-0.7**
	comp=Z,34nm,2.0s,mb4.8						
PESTR				*e*LQ		02 10 27.9	
PESTR				*e*LR	LR	02 12 02.4	
	comp=Z,2µm,20.4s						
ALLY	**Alegheny Colle**	**32.42**	**305**	*e*P	**P**	**02 03 20.2**	**+0.7**
	comp=Z,217nm,1.5s,mb5.8						
ELOB	**Lobios**	**32.48**	**55**	P	**P**	**02 03 22.6**	**+2.6**
	comp=Z,17nm,1.0s,mb4.8						
PMRV	**Marv??o**	**32.48**	**60**	*e*P	**P**	**02 03 21.8**	**+1.7**
	comp=Z,57nm,1.6s,mb5.2						
PMRV				*e*pP	pP	02 03 25.4	+2.2
PMRV				*e*LQ		02 08 39.4	
PMRV				*e*LR	LR	02 11 17.4	
	comp=Z,1µm,20.2s						
PCBR	**Castelo Branco**	**32.49**	**59**	*e*pP	pP	02 03 25.5	+2.3
PCBR				A		02 03 28.6	
	comp=Z,41nm,1.9s						
MTE	**Manteigas**	**32.54**	**58**	*e*P	**P**	**02 03 22.5**	**+1.9**
	comp=Z,65nm,2.3s,mb5.2						
MTE				*e*pP	pP	02 03 26.3	+2.6
MTE				*e*P		02 08 42.3	
MTE				*i* P		02 11 18.3	
MTE				A		02 13 47.7	
	comp=Z,2µm,18.5s						
PBAR	**Barrancos**	**32.57**	**62**	*e*P	**P**	**02 03 21.4**	**+0.5**
	comp=Z,30nm,1.7s,mb5.0						
PBAR				*e*LQ		02 10 31.4	
PBAR				*e*LR	LR	02 11 43.9	
	comp=Z,2µm,20.3s						
EBAD	**Badajoz**	**32.67**	**61**	P	**P**	**02 03 21.3**	**-0.4**
	comp=Z,25nm,1.5s,mb4.9						
EMIN	**Mina Concepcio**	**32.81**	**63**	P	**P**	**02 03 22.1**	**-0.9**
	comp=Z,22nm,1.7s,mb4.8						
DWPF	**Disney**	**32.88**	**279**	PFAKE		02 03 40.0	+16
DWPF				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
MVO	**Moncorvo**	**33.08**	**57**	*e*pP	pP	02 03 30.0	+1.6
MVO				A		02 03 34.2	
	comp=Z,47nm,1.8s						
MVO				*e*LQ		02 11 00.3	
MVO				*e*LR	LR	02 12 03.1	
	comp=Z,2µm,19.7s						
ERUA	**La Rua**	**33.27**	**54**	P	**P**	**02 03 28.4**	**+1.5**
ERUA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
ERUA	**La Rua**	**33.27**	**54**	P	**P**	**02 03 28.4**	**+1.4**
	comp=Z,11nm,0.9s,mb4.8						
ESPR	**Espera**	**33.37**	**65**	P	**P**	**02 03 29.5**	**+1.6**
	comp=Z,24nm,1.3s,mb5.0						
ECAL	**Calabor**	**33.46**	**55**	P	**P**	**02 03 29.5**	**+0.9**
	comp=Z,16nm,1.3s,mb4.8						
EJIF	**Jimena Fronter**	**33.65**	**65**	P	**P**	**02 03 36.6**	**+6.3**
EJIF				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
EJIF	**Jimena Fronter**	**33.65**	**65**	P	**P**	**02 03 36.6**	**+6.2**
	comp=Z,13nm,1.3s,mb4.7						
ECAB	**El Cabril**	**33.83**	**62**	P	**P**	**02 03 31.8**	**0.0**
	comp=Z,18nm,1.2s,mb4.9						
GOGA	**Godfrey**	**34.18**	**289**	*e*P	**P**	**02 03 35.6**	**+0.6**
GOGA				pmax	pmax		
	comp=Z,105nm,1.7s,mb5.5						
GOGA				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.9						
GOGA	**Godfrey**	**34.18**	**289**	*e*P	**P**	**02 03 35.6**	**+0.6**
	comp=Z,104nm,1.7s,mb5.5						
GOGA				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
EMIJ	**Mijas**	**34.22**	**65**	P	**P**	**02 03 36.7**	**+1.5**
	comp=Z,9.3nm,0.9s,mb4.7						
ACSO	**Alum Creek Sta**	**34.25**	**301**	*e*P	**P**	**02 03 35.6**	**+0.1**
	comp=Z,40nm,0.9s,mb5.3						
ACSO				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
TZTN	**Tazewell**	**34.30**	**295**	*e*P	**P**	**02 03 36.6**	**+0.6**
	comp=Z,183nm,1.9s,mb5.7						
TZTN				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
MDT	**Midelt**	**34.32**	**72**	LR	LR	02 14 23.4	
	comp=Z,3µm,20.9s,MS5.0,baz=274,slow=31						
TKL	**Tuckaleechee C**	**34.45**	**293**	LR	LR	02 15 00.3	
	comp=Z,3µm,21.6s,MS5.0,baz=96,slow=32						
EADA	**Adamuz**	**34.50**	**62**	P	**P**	**02 03 37.5**	**-0.2**
	comp=Z,11nm,1.0s,mb4.8						
ELUQ	**Luque**	**34.69**	**63**	P	**P**	**02 03 44.0**	**+4.7**
ELUQ				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.8						
ELUQ	**Luque**	**34.69**	**63**	P	**P**	**02 03 44.0**	**+4.7**
	comp=Z,4.0nm,0.3s,mb4.8						
ELOJ	**Sierra Loja**	**34.75**	**64**	P	**P**	**02 03 41.3**	**+1.4**
ELOJ				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
ELOJ	**Sierra Loja**	**34.75**	**64**	P	**P**	**02 03 41.3**	**+1.4**
	comp=Z,9.5nm,1.3s,mb4.6						
PAB	**San Pablo**	**34.83**	**60**	*e*P	**P**	**02 03 41.0**	**+0.5**
PAB				pmax	pmax		
	comp=Z,44nm,1.4s,mb5.2						
PAB				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.6						
PAB	**San Pablo**	**34.83**	**60**	*e*P	**P**	**02 03 41.0**	**+0.5**
	comp=Z,44nm,1.4s,mb5.2						
PAB				LR	LR		
	comp=Z,1µm,21.0s,MS4.6						
ERON	**Agron**	**35.02**	**64**	P	**P**	**02 03 43.2**	**+1.0**
CPCT	**Cooper Cave**	**35.05**	**293**	*e*P	**P**	**02 03 43.1**	**+0.6**
EBAN	**Banos Encina**	**35.12**	**62**	P	**P**	**02 03 44.4**	**+1.4**
EBAN				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
EBAN	**Banos Encina**	**35.12**	**62**	P	**P**	**02 03 44.4**	**+1.4**
	comp=Z,6.5nm,1.3s,mb4.4						
GUD	**Guadarrama**	**35.13**	**58**	P	**P**	**02 03 42.8**	**-0.3**
GUD				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
GUD	**Guadarrama**	**35.13**	**58**	P	**P**	**02 03 42.8**	**-0.3**
	comp=Z,12nm,1.0s,mb4.8						
ESDC	**Sonseca Array**	**35.14**	**60**	P	**P**	**02 03 42.9**	**-0.3**
	comp=Z,4.1nm,1.0s,mb4.3,baz=263,slow=8.3,SNR=12						
ESDC				PcP	PcP	02 06 13.8	-0.7
	comp=Z,1.7nm,0.9s,baz=280,slow=3.4,SNR=5.0						
ESDC				LR	LR	02 14 22.4	
	comp=Z,903nm,21.1s,MS4.5,baz=245,slow=30						
ESDC	**Sonseca Array**	**35.14**	**60**	P	**P**	**02 03 42.2**	**-1.0**
	comp=Z,6.5nm,0.9s,mb4.6						
ECOG	**Cogollos-Vega**	**35.23**	**64**	P	**P**	**02 03 44.9**	**+0.9**
ECOG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
ECOG	**Cogollos-Vega**	**35.23**	**64**	P	**P**	**02 03 44.9**	**+0.9**
	comp=Z,7.7nm,1.0s,mb4.6						
EQES	**Quesada**	**35.66**	**63**	P	**P**	**02 03 44.6**	**-3.1**
	comp=Z,12nm,1.6s,mb4.6						
EBER	**Berja**	**35.75**	**65**	P	**P**	**02 03 50.9**	**+2.4**
	comp=Z,31nm,1.5s,mb5.0						
EHUE	**Huescar**	**36.03**	**63**	P	**P**	**02 03 54.6**	**+3.7**
EHUE				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
EHUE	**Huescar**	**36.03**	**63**	P	**P**	**02 03 54.6**	**+3.7**
	comp=Z,4.6nm,1.1s,mb4.3						
ELAN	**Lanestosa**	**36.12**	**54**	P	**P**	**02 03 50.9**	**-0.7**
	comp=Z,19nm,1.1s,mb4.9						
EVIA	**Vianos**	**36.16**	**62**	P	**P**	**02 03 55.0**	**+3.0**
EVIA				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
EVIA	**Vianos**	**36.16**	**62**	P	**P**	**02 03 55.0**	**+3.0**
	comp=Z,16nm,1.3s,mb4.8						
SWET	**Sewanee**	**36.20**	**292**	*e*P	**P**	**02 03 53.0**	**+0.6**
GLMI	**Grayling**	**36.35**	**309**	PFAKE		02 04 10.0	+16
GLMI				LR	LR		
	comp=Z,3µm,20.0s,MS5.0						
WCI	**Wyandotte Cave**	**36.59**	**297**	*e*P	**P**	**02 03 56.2**	**+0.6**
	comp=Z,38nm,0.9s,mb5.2						
WCI				LR	LR		
	comp=Z,2µm,22.0s,MS4.8						
ROSC	**El Rosal**	**36.71**	**237**	P	**P**	**02 03 56.4**	**-0.5**
	comp=Z,1.4nm,0.3s,mb4.2,baz=78,slow=20,SNR=3.8						
ROSC				LR	LR	02 18 16.2	
	comp=Z,578nm,20.1s,MS4.4,baz=18,slow=35						
ETOR	**Torete**	**36.73**	**58**	P	**P**	**02 03 58.1**	**+1.3**
ETOR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
ETOR	**Torete**	**36.73**	**58**	P	**P**	**02 03 58.1**	**+1.2**
	comp=Z,10nm,1.0s,mb4.6						
BLO	**Bloomington**	**36.84**	**299**	*e*P	**P**	**02 03 57.9**	**+0.2**
BLO				pmax	pmax		
	comp=Z,316nm,2.0s,mb5.8						
BLO	**Bloomington**	**36.84**	**299**	*e*P	**P**	**02 03 57.9**	**+0.2**
	comp=Z,316nm,2.0s,mb5.8						
ETOB	**Tobarra**	**36.91**	**62**	P	**P**	**02 03 56.5**	**-1.8**
	comp=Z,13nm,1.1s,mb4.7						
EMUR	**La Murta**	**37.10**	**63**	P	**P**	**02 03 59.1**	**-0.9**
	comp=Z,24nm,1.2s,mb4.9						
DCN	**Croghan**	**37.20**	**36**	*e*P	**P**	**02 04 00.2**	**-0.4**
BRAL	**Brewton**	**37.38**	**286**	PFAKE		02 04 10.0	+7.5
BRAL				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
ELIZ	**Elizondo**	**37.47**	**54**	P	**P**	**02 04 04.0**	**+0.9**
ELIZ				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb4.2						
ELIZ	**Elizondo**	**37.47**	**54**	P	**P**	**02 04 04.0**	**+0.9**
	comp=Z,8.4nm,1.8s,mb4.3						
QUIF	**Quistinic**	**37.48**	**46**	*e*P	**P**	**02 04 02.5**	**-0.6**
	comp=Z,386nm,1.8s,mb5.6						
QUIF	**Quistinic**	**37.48**	**46**	*e*P	**P**	**02 04 02.5**	**-0.6**
QUIF				pmax	pmax		
	comp=Z,193nm,1.8s,mb5.6						
QUIF	**Quistinic**	**37.48**	**46**	*e*P	**P**	**02 04 02.5**	**-0.6**
	comp=Z,193nm,1.8s,mb5.6						
EALK	**Alkurruntz**	**37.50**	**54**	P	**P**	**02 04 05.4**	**+2.1**
	comp=Z,14nm,1.2s,mb4.7						
ROSF	**Rostrenen**	**37.54**	**46**	*e*P	**P**	**02 04 03.1**	**-0.5**
	comp=Z,137nm,1.5s,mb5.2						
ROSF	**Rostrenen**	**37.54**	**46**	*e*P	**P**	**02 04 03.1**	**-0.5**
ROSF				pmax	pmax		
	comp=Z,69nm,1.5s,mb5.2						
ROSF	**Rostrenen**	**37.54**	**46**	*e*P	**P**	**02 04 03.1**	**-0.5**
	comp=Z,69nm,1.5s,mb5.2						
DLF	**Lyons Farm**	**37.57**	**37**	*e*P	**P**	**02 04 03.2**	**-0.5**
DMUB	**Kingscourt**	**37.66**	**36**	*e*P	**P**	**02 04 04.1**	**-0.4**
USIN	**University of**	**37.66**	**297**	*e*P	**P**	**02 04 05.3**	**+0.6**
	comp=Z,59nm,0.9s,mb5.3						
SJPF	**Ste Jean**	**37.69**	**55**	*e*P	**P**	**02 04 04.6**	**-0.3**
	comp=Z,183nm,1.6s,mb5.2						
SJPF	**Ste Jean**	**37.69**	**55**	*e*P	**P**	**02 04 04.6**	**-0.3**
SJPF				pmax	pmax		
	comp=Z,91nm,1.6s,mb5.2						
SJPF	**Ste Jean**	**37.69**	**55**	*e*P	**P**	**02 04 04.6**	**-0.3**
	comp=Z,91nm,1.6s,mb5.3						
LARF	**Larrau**	**37.84**	**55**	*e*P	**P**	**02 04 07.0**	**+0.8**
EMOS	**Mosqueruela**	**37.88**	**59**	P	**P**	**02 04 07.5**	**+1.0**
	comp=Z,13nm,1.0s,mb4.6						
EBEN	**Beniarda**	**37.95**	**62**	P	**P**	**02 04 11.2**	**+4.0**
	comp=Z,20nm,1.5s,mb4.6						
PLAL	**Pickwick Lake**	**37.96**	**292**	*e*P	**P**	**02 04 07.8**	**+0.4**
	comp=Z,185nm,1.8s,mb5.5						
PLAL				LR	LR		

comp=Z,3µm,22.0s,MS5.0
SGMF Saint Gilles 37.97 46 *e*P **P 02 04 07.0 -0.2**
comp=Z,375nm,1.6s,mb5.6
SGMF Saint Gilles 37.97 46 *e*P **P 02 04 07.0 -0.2**
SGMF pmax pmax
comp=Z,187nm,1.6s,mb5.6
SGMF Saint Gilles 37.97 46 *e*P **P 02 04 07.0 -0.2**
comp=Z,187nm,1.6s,mb5.6
OLIL Olney 38.03 298 *e*P **P 02 04 08.6 +0.7**
comp=Z,213nm,1.4s,mb5.7
ESAC San Caprasio 38.03 57 P **P 02 04 09.1 +1.3**
comp=Z,30nm,1.5s,mb4.8
ETSF Etsaut 38.13 55 *e*P **P 02 04 08.8 +0.1**
comp=Z,242nm,1.6s,mb5.4
ETSF Etsaut 38.13 55 *e*P **P 02 04 08.8 +0.1**
ETSF pmax pmax
comp=Z,121nm,1.6s,mb5.4
ETSF Etsaut 38.13 55 *e*P **P 02 04 08.8 +0.1**
comp=Z,121nm,1.6s,mb5.4
REYF Montagne du Re 38.28 55 *e*P **P 02 04 10.5 +0.6**
BCIP Isla Barro Col 38.42 248 *e*P **P 02 04 11.9 +0.4**
BCIP LR LR
comp=Z,360nm,22.0s,MS4.1
ERTA Horta de San J 38.55 58 P **P 02 04 13.7 +1.5**
comp=Z,22nm,1.0s,mb4.8
EBIE Bielsa 38.61 56 P **P 02 04 12.7 0.0**
comp=Z,18nm,1.0s,mb4.8
RESF Ens 38.77 55 *e*P **P 02 04 14.9 +0.9**
EPF Esparros 38.80 55 *e*P **P 02 04 14.3 0.0**
comp=Z,263nm,1.7s,mb5.4
EPF Esparros 38.80 55 *e*P **P 02 04 14.3 0.0**
EPF pmax pmax
comp=Z,132nm,1.7s,mb5.4
EPF Esparros 38.80 55 *e*P **P 02 04 14.3 0.0**
comp=Z,132nm,1.7s,mb5.4
WME Myndd Eilian 38.81 38 *e*P **P 02 04 13.7 -0.5**
SIUC Southern Illin 38.88 296 *e*P **P 02 04 15.8 +0.9**
comp=Z,228nm,1.6s,mb5.7
WIM Isle of Man 38.94 36 *e*P **P 02 04 14.5 -0.8**
WPM1 Penmaenmawr 38.97 38 *e*P **P 02 04 14.0 -1.5**
MCH1 Michaelchurch 38.97 40 *e*P **P 02 04 14.9 -0.7**
HALT Halls 38.97 294 *e*P **P 02 04 14.7 -1.1**
OXF Oxford 39.08 291 *e*P **P 02 04 16.4 -0.3**
OXF pmax pmax
comp=Z,35nm,1.0s,mb5.0
OXF MLR MLR
comp=Z,2µm,21.0s,MS4.9
OXF Oxford 39.08 291 *e*P **P 02 04 16.4 -0.4**
comp=Z,35nm,1.0s,mb5.0
OXF LR LR
comp=Z,2µm,21.0s,MS4.9
GRR Gorron 39.10 46 *e*P **P 02 04 16.3 -0.4**
comp=Z,333nm,1.5s,mb5.5
GRR Gorron 39.10 46 *e*P **P 02 04 16.3 -0.4**
GRR pmax pmax
comp=Z,166nm,1.5s,mb5.5
GRR Gorron 39.10 46 *e*P **P 02 04 16.3 -0.4**
comp=Z,166nm,1.5s,mb5.5
MFF Saint Martin d 39.12 49 *e*P **P 02 04 16.8 -0.1**
comp=Z,340nm,1.6s,mb5.5
MFF Saint Martin d 39.12 49 *e*P **P 02 04 16.8 -0.1**
MFF pmax pmax
comp=Z,170nm,1.6s,mb5.5
MFF Saint Martin d 39.12 49 *e*P **P 02 04 16.8 -0.1**
comp=Z,170nm,1.6s,mb5.5
EPOB Poblet 39.15 58 P **P 02 04 18.4 +1.2**
comp=Z,18nm,1.1s,mb4.7
EIBI Ibiza 39.19 61 P **P 02 04 15.4 -2.1**
comp=Z,46nm,1.2s,mb5.1
GAL1 Galloway 39.24 35 *e*P **P 02 04 17.1 -0.7**
GAL1 AMb AMB 02 04 25.7
comp=Z,140nm,1.4s,mb5.5
SALF Salau 39.39 56 *e*P **P 02 04 20.4 +1.2**
LFF La Frestale 39.40 52 *e*P **P 02 04 18.5 -0.7**
comp=Z,240nm,1.5s,mb5.4
LFF La Frestale 39.40 52 *e*P **P 02 04 18.5 -0.7**
LFF pmax pmax
comp=Z,120nm,1.5s,mb5.4
LFF La Frestale 39.40 52 *e*P **P 02 04 18.5 -0.7**
comp=Z,120nm,1.5s,mb5.4
SFJD Kangerlussuaq 39.40 356 LR LR 02 17 17.9
comp=Z,679nm,21.0s,MS4.5,baz=150,slow=31
SFJD Kangerlussuaq 39.40 356 PFAKE 02 04 30.0 +11
SFJD LR LR
comp=Z,809nm,21.0s,MS4.5
FLN La Foliniere 39.44 46 *e*P **P 02 04 19.1 -0.4**
comp=Z,211nm,1.6s,mb5.3
FLN *e*MLR MLR
comp=Z,2µm,18.2s,MS4.6
FLN La Foliniere 39.44 46 *e*P **P 02 04 19.1 -0.4**
FLN pmax pmax
comp=Z,106nm,1.6s,mb5.3
FLN MLR MLR
comp=Z,2µm,18.3s,MS4.9
FLN La Foliniere 39.44 46 *e*P **P 02 04 19.1 -0.4**
comp=Z,106nm,1.6s,mb5.3
FLN LR LR
comp=Z,2µm,18.3s,MS4.9
EMIR Miracle 39.54 57 P **P 02 04 17.9 -2.5**
comp=Z,18nm,1.0s,mb4.8
LDF La Druitiere 39.62 46 *e*P **P 02 04 20.6 -0.5**
comp=Z,298nm,1.5s,mb5.5
LDF La Druitiere 39.62 46 *e*P **P 02 04 20.6 -0.5**
LDF pmax pmax
comp=Z,149nm,1.5s,mb5.5
LDF La Druitiere 39.62 46 *e*P **P 02 04 20.6 -0.5**
comp=Z,149nm,1.5s,mb5.5
BORG Borgarnes 39.68 15 LR LR 02 16 37.2
comp=Z,535nm,18.9s,MS4.4,baz=85,slow=30
KAR1 Arisaig 39.69 32 *e*P **P 02 04 21.8 +0.2**
SLM Saint Louis 39.70 298 *e*P **P 02 04 22.1 +0.2**
SLM pmax pmax
comp=Z,20nm,0.6s,mb5.0
SLM Saint Louis 39.70 298 *e*P **P 02 04 22.1 +0.2**
comp=Z,20nm,0.6s,mb5.0
COWI Conover 39.74 310 *e*P **P 02 04 22.1 +0.1**
comp=Z,115nm,1.6s,mb5.4
COWI LR LR
comp=Z,2µm,19.0s,MS5.0
FVM French Village 39.84 297 P **P 02 04 22.9 -0.1**
FVM pmax pmax
comp=Z,140nm,1.7s,mb5.4
FVM French Village 39.84 297 *e*P **P 02 04 23.0 0.0**
comp=Z,135nm,1.8s,mb5.4
KPL Plockton 39.99 32 *e*P **P 02 04 23.2 -0.8**
KPL AMb AMB 02 04 32.2
comp=Z,207nm,1.6s,mb5.6
RJF Les Rejaudoux 40.00 52 *e*P **P 02 04 23.5 -0.8**
comp=Z,235nm,1.6s,mb5.4
RJF *e*MLR MLR
comp=Z,2µm,22.8s,MS4.6
RJF Les Rejaudoux 40.00 52 *e*P **P 02 04 23.5 -0.8**
RJF pmax pmax
comp=Z,117nm,1.6s,mb5.4
RJF MLR MLR
comp=Z,2µm,22.8s,MS4.9
RJF Les Rejaudoux 40.00 52 *e*P **P 02 04 23.5 -0.8**
comp=Z,117nm,1.6s,mb5.4
RJF LR LR
comp=Z,2µm,22.8s,MS4.9
JFWS Jewell Farm 40.02 305 *e*P **P 02 04 24.4 -0.1**
comp=Z,47nm,1.1s,mb5.1
JFWS LR LR
comp=Z,2µm,22.0s,MS4.9
KSB Sheil Bridge 40.03 32 *e*P **P 02 04 23.9 -0.5**
EAB Aberfoyle 40.05 34 *e*P **P 02 04 24.4 -0.1**
VBMS Vicksburg 40.19 288 PFAKE 02 04 40.0 +14
VBMS LR LR
comp=Z,3µm,20.0s,MS5.1
LHO Holmfirth 40.21 38 *e*P **P 02 04 25.9 0.0**
MTLF Montolieu 40.21 55 *e*P **P 02 04 25.2 -0.8**
comp=Z,125nm,1.5s,mb5.1
MTLF Montolieu 40.21 55 *e*P **P 02 04 25.2 -0.8**
MTLF pmax pmax
comp=Z,62nm,1.5s,mb5.1
MTLF Montolieu 40.21 55 *e*P **P 02 04 25.2 -0.8**
comp=Z,62nm,1.5s,mb5.1
ESK Eskdalemuir 40.22 35 *e*P **P 02 04 25.7 -0.2**
ESK AMb AMB 02 04 33.4
comp=Z,87nm,1.3s,mb5.3
KBI1 Birley Grange 40.28 39 *e*P **P 02 04 25.9 -0.5**
CAF Calviac 40.32 52 *e*P **P 02 04 26.2 -0.7**
comp=Z,130nm,1.6s,mb5.1
CAF Calviac 40.32 52 *e*P **P 02 04 26.2 -0.7**
CAF pmax pmax
comp=Z,65nm,1.6s,mb5.1
CAF Calviac 40.32 52 *e*P **P 02 04 26.2 -0.7**
comp=Z,65nm,1.6s,mb5.1
ETOS Mallorca 40.36 60 P **P 02 04 27.2 -0.1**
comp=Z,31nm,1.0s,mb5.0
CCM Cathedral Cave 40.48 297 *e*P **P 02 04 28.3 -0.1**
comp=Z,178nm,1.8s,mb5.5
CCM LR LR
comp=Z,2µm,21.0s,MS4.9
EBL Broad Law 40.51 35 *e*P **P 02 04 28.2 -0.1**
EJON La Jonquera 40.60 56 P **P 02 04 29.2 0.0**
comp=Z,14nm,1.0s,mb4.5
MDO Dochfour 40.65 32 *e*P **P 02 04 29.4 -0.1**
TCF Toulx Ste Croi 40.65 50 *e*P **P 02 04 29.3 -0.3**
comp=Z,193nm,1.6s,mb5.2
TCF Toulx Ste Croi 40.65 50 *e*P **P 02 04 29.3 -0.3**
TCF pmax pmax
comp=Z,97nm,1.6s,mb5.2
TCF Toulx Ste Croi 40.65 50 *e*P **P 02 04 29.3 -0.3**
comp=Z,97nm,1.6s,mb5.2
ESY Stoneypath 40.79 35 *e*P **P 02 04 30.5 -0.1**
TEIG Tepich 40.87 269 LR LR 02 18 41.8
comp=Z,2µm,21.9s,MS4.9,baz=224,slow=32
TEIG Tepich 40.87 269 *e*P **P 02 04 32.3 +0.5**
comp=Z,64nm,1.3s,mb5.1
TEIG LR LR
comp=Z,2µm,21.0s,MS4.9
PYM Petit Puy Mans 41.11 51 *e*P **P 02 04 34.1 +0.7**
BGF Bois d'Agland 41.13 50 *e*P **P 02 04 33.1 -0.5**
comp=Z,124nm,1.6s,mb5.0
BGF Bois d'Agland 41.13 50 *e*P **P 02 04 33.1 -0.5**
BGF pmax pmax
comp=Z,62nm,1.6s,mb5.0
BGF Bois d'Agland 41.13 50 *e*P **P 02 04 33.1 -0.5**
comp=Z,62nm,1.6s,mb5.0
LBL Lubilhac 41.20 52 *e*P **P 02 04 34.8 +0.7**
AGO Saint Agoulin 41.24 51 *e*P **P 02 04 34.8 +0.3**
MME1 Meikle Cairn 41.25 33 *e*P **P 02 04 34.0 -0.3**
LASF Ste Croix 41.48 54 *e*P **P 02 04 36.3 -0.2**
comp=Z,169nm,1.5s,mb5.2
UALR University of 41.48 292 *e*P **P 02 04 36.3 -0.3**
comp=Z,123nm,1.5s,mb5.3
AVF Avril sur Loir 41.52 50 *e*P **P 02 04 36.2 -0.6**
comp=Z,224nm,1.6s,mb5.2
AVF Avril sur Loir 41.52 50 *e*P **P 02 04 36.2 -0.6**
AVF pmax pmax
comp=Z,112nm,1.6s,mb5.2
AVF Avril sur Loir 41.52 50 *e*P **P 02 04 36.2 -0.6**
comp=Z,112nm,1.6s,mb5.2
COLF Collangettes 41.55 52 *e*P **P 02 04 37.8 +0.8**
PLDF La Plantade 41.57 51 *e*P **P 02 04 38.0 +0.8**
MENF Mencas 41.57 44 *e*P **P 02 04 37.5 +0.3**
SSF Saint Saulge 41.67 49 *e*P **P 02 04 37.4 -0.6**
comp=Z,207nm,1.5s,mb5.2
SSF Saint Saulge 41.67 49 *e*P **P 02 04 37.4 -0.6**
SSF pmax pmax
comp=Z,104nm,1.5s,mb5.2
SSF Saint Saulge 41.67 49 *e*P **P 02 04 37.4 -0.6**
comp=Z,104nm,1.5s,mb5.2
EYMN Ely 41.69 312 *e*P **P 02 04 37.8 -0.3**
comp=Z,127nm,1.8s,mb5.2
EYMN LR LR
comp=Z,3µm,20.0s,MS5.1
SMF Signal de Mont 41.83 50 *e*P **P 02 04 38.9 -0.4**
comp=Z,371nm,1.5s,mb5.5
SMF Signal de Mont 41.83 50 *e*P **P 02 04 38.9 -0.4**
SMF pmax pmax
comp=Z,186nm,1.5s,mb5.5
SMF Signal de Mont 41.83 50 *e*P **P 02 04 38.9 -0.4**
comp=Z,186nm,1.5s,mb5.5
LOR Lormes 41.94 49 *e*P **P 02 04 39.7 -0.5**
comp=Z,259nm,1.7s,mb5.3
LOR *e*MLR MLR
comp=Z,890nm,21.8s,MS4.3
LOR Lormes 41.94 49 *e*P **P 02 04 39.7 -0.5**
LOR pmax pmax
comp=Z,130nm,1.7s,mb5.3
LOR MLR MLR
comp=Z,890nm,21.8s,MS4.6
LOR Lormes 41.94 49 *e*P **P 02 04 39.7 -0.5**
comp=Z,130nm,1.7s,mb5.3
LOR LR LR
comp=Z,890nm,21.8s,MS4.6
SSB Saint Sauveur 42.11 52 *e*P **P 02 04 42.1 +0.5**
SCIA State Center 42.12 303 *e*P **P 02 04 41.9 +0.1**
comp=Z,76nm,1.1s,mb5.2
SCIA LR LR
comp=Z,2µm,21.0s,MS5.0
VIVF Saint-Julien-l 42.15 53 *e*P **P 02 04 42.1 +0.2**
comp=Z,155nm,1.6s,mb5.1
VIVF Saint-Julien-l 42.15 53 *e*P **P 02 04 42.1 +0.2**
VIVF pmax pmax
comp=Z,78nm,1.6s,mb5.1
VIVF Saint-Julien-l 42.15 53 *e*P **P 02 04 42.1 +0.2**
comp=Z,78nm,1.6s,mb5.1
TGUH Tegucigalpa,Un 42.36 260 PFAKE 02 05 00.0 +16
TGUH LR LR
comp=Z,754nm,21.0s,MS4.6
MIAR Mount Ida 42.51 292 *e*P **P 02 04 44.9 -0.1**
MIAR pmax pmax
comp=Z,236nm,2.0s,mb5.6
MIAR MLR MLR
comp=Z,2µm,21.0s,MS4.9
MIAR Mount Ida 42.51 292 *e*P **P 02 04 44.9 -0.1**
comp=Z,236nm,2.0s,mb5.6
MIAR LR LR
comp=Z,2µm,21.0s,MS4.9
OCF Saint Nazaire 42.56 53 *e*P **P 02 04 46.9 +1.6**
OG26 St.-Nazaire-De 42.56 53 *e*P **P 02 04 46.9 +1.6**
SMRF Simiane la Rot 42.70 54 *e*P **P 02 04 47.0 +0.6**
comp=Z,131nm,1.4s,mb5.2
SMRF Simiane la Rot 42.70 54 *e*P **P 02 04 47.0 +0.6**
comp=Z,131nm,1.4s,mb5.5
DBIC Dimbokro 42.70 112 P **P 02 04 46.8 -0.1**
comp=Z,6.6nm,1.0s,mb4.3,baz=90,slow=4.1,SNR=2.7
DBIC LR LR 02 19 57.8
comp=Z,3µm,19.3s,MS5.2,baz=268,slow=32
BAIF Baives 42.73 45 *e*P **P 02 04 45.9 -0.7**
comp=Z,141nm,1.4s,mb5.2
BAIF Baives 42.73 45 *e*P **P 02 04 45.9 -0.7**
BAIF pmax pmax
comp=Z,71nm,1.4s,mb5.2
BAIF Baives 42.73 45 *e*P **P 02 04 45.9 -0.7**
comp=Z,71nm,1.4s,mb5.2
OTAV Otavalo 42.84 236 *e*P **P 02 04 47.9 0.0**
comp=Z,74nm,1.5s,mb5.2
OTAV LR LR
comp=Z,843nm,21.0s,MS4.6
MEZF Maizieres J'vi 42.95 48 *e*P **P 02 04 48.0 -0.5**
comp=Z,524nm,1.6s,mb5.7
MEZF Maizieres J'vi 42.95 48 *e*P **P 02 04 48.0 -0.5**
comp=Z,524nm,1.6s,mb6.0
DOU Dourbes 42.98 45 P **P 02 04 48.6 0.0**
DOU XP sP 02 04 54.0 +1.0
comp=Z,20nm,1.6s
UCC Uccle 42.99 44 P **P 02 04 48.2 -0.6**
UCC XP sP 02 04 54.2 +1.1
comp=Z,99nm,1.9s
ORIF Oris-en-Rattie 43.01 53 *e*P **P 02 04 49.7 +0.8**
comp=Z,66nm,1.5s,mb4.8
ORIF *e*MLR MLR
comp=Z,1µm,21.8s,MS4.4
ORIF Oris-en-Rattie 43.01 53 *e*P **P 02 04 49.7 +0.8**
ORIF pmax pmax
comp=Z,33nm,1.5s,mb4.8
ORIF Oris-en-Rattie 43.01 53 *e*P **P 02 04 49.7 +0.8**
comp=Z,33nm,1.5s,mb4.8
GIVF Givet 43.12 45 *e*P **P 02 04 49.1 -0.7**
comp=Z,182nm,1.5s,mb5.3
GIVF Givet 43.12 45 *e*P **P 02 04 49.1 -0.7**
GIVF pmax pmax
comp=Z,91nm,1.5s,mb5.3
GIVF Givet 43.12 45 *e*P **P 02 04 49.1 -0.7**
comp=Z,91nm,1.5s,mb5.3
LMR La Mourre 43.32 55 *e*P **P 02 04 51.4 -0.1**
comp=Z,304nm,1.7s,mb5.4
LMR La Mourre 43.32 55 *e*P **P 02 04 51.4 -0.1**
LMR pmax pmax
comp=Z,152nm,1.7s,mb5.5
LMR La Mourre 43.32 55 *e*P **P 02 04 51.4 -0.1**
comp=Z,152nm,1.7s,mb5.5
CABF La Chapelle 43.35 50 *e*P **P 02 04 51.7 0.0**
comp=Z,299nm,1.6s,mb5.5
CABF La Chapelle 43.35 50 *e*P **P 02 04 51.7 0.0**
CABF pmax pmax
comp=Z,150nm,1.6s,mb5.5
CABF La Chapelle 43.35 50 *e*P **P 02 04 51.7 0.0**
comp=Z,150nm,1.6s,mb5.5
BDFB Brasilia 43.37 185 P **P 02 04 51.4 -0.6**
comp=Z,2.5nm,0.5s,mb4.2,baz=17,slow=9.5,SNR=3.1
BDFB LR LR 02 21 44.2
comp=Z,658nm,18.2s,MS4.6,baz=184,slow=34
FRF La Foret Royal 43.44 55 *e*P **P 02 04 52.2 -0.2**
comp=Z,241nm,1.6s,mb5.4
FRF La Foret Royal 43.44 55 *e*P **P 02 04 52.2 -0.2**
FRF pmax pmax
comp=Z,120nm,1.6s,mb5.4
FRF La Foret Royal 43.44 55 *e*P **P 02 04 52.2 -0.2**
comp=Z,120nm,1.6s,mb5.4
BCLA Clavier 43.49 45 P **P 02 04 52.5 -0.3**
BCLA XP sP 02 04 57.8 +0.7
comp=Z,44nm,2.0s
THEF They Montfort 43.52 48 *e*P **P 02 04 53.4 +0.4**
BNI Bardonecchia 43.58 53 P **P 02 04 55.0 +1.4**
MBDF Montbardon 43.62 53 *e*P **P 02 04 54.7 +0.8**
comp=Z,142nm,1.5s,mb5.2
MBDF Montbardon 43.62 53 *e*P **P 02 04 54.7 +0.8**
MBDF pmax pmax
comp=Z,71nm,1.5s,mb5.2
MBDF Montbardon 43.62 53 *e*P **P 02 04 54.7 +0.8**
comp=Z,71nm,1.5s,mb5.2
LPL La Plagne 43.67 52 *e*P **P 02 04 54.9 +0.6**
comp=Z,226nm,1.9s,mb5.3
LPL La Plagne 43.67 52 *e*P **P 02 04 54.9 +0.6**
LPL pmax pmax
comp=Z,113nm,1.9s,mb5.3
LPL La Plagne 43.67 52 *e*P **P 02 04 54.9 +0.6**
comp=Z,113nm,1.9s,mb5.3
LPG La Plagne 43.68 52 *e*P **P 02 04 55.3 +0.9**
comp=Z,138nm,1.6s,mb5.1
LPG La Plagne 43.68 52 *e*P **P 02 04 55.3 +0.9**
LPG pmax pmax
comp=Z,69nm,1.6s,mb5.1
LPG La Plagne 43.68 52 *e*P **P 02 04 55.3 +0.9**
comp=Z,69nm,1.6s,mb5.1
HAU Haudompre 43.73 49 *e*P **P 02 04 54.0 -0.7**
comp=Z,214nm,1.5s,mb5.4
HAU *e*MLR MLR
comp=Z,890nm,21.8s,MS4.3
HAU Haudompre 43.73 49 *e*P **P 02 04 54.0 -0.7**
HAU pmax pmax
comp=Z,107nm,1.5s,mb5.3
HAU MLR MLR
comp=Z,890nm,21.8s,MS4.6
HAU Haudompre 43.73 49 *e*P **P 02 04 54.0 -0.7**
comp=Z,107nm,1.5s,mb5.3
HAU LR LR
comp=Z,890nm,21.8s,MS4.6
NATX Nacogdoches 43.74 288 *e*P **P 02 04 56.0 +1.0**
comp=Z,303nm,1.7s,mb5.8
NATX LR LR
comp=Z,2µm,20.0s,MS5.1
BEBN Eben Emael 43.81 44 P **P 02 04 55.5 +0.2**
BEBN XP sP 02 05 01.7 +2.1
WLF Walferdange 43.88 46 P **P 02 04 54.9 -1.0**
WLF XP sP 02 05 01.6 +1.4
comp=Z,66nm,1.8s
DOI San Damiano 43.94 54 P **P 02 04 57.8 +1.3**
LSD Lago del Serru 43.94 52 P **P 02 04 58.3 +1.8**
LOMF Lomont 43.95 50 *e*P **P 02 04 56.6 +0.1**
HGN Heimansgroeve 43.96 45 *e*P **P 02 04 56.3 -0.2**
comp=Z,52nm,1.3s,mb5.1
HGN Heimansgroeve 43.96 45 *e*S **S 02 11 36.2 +8.1**
LUCF Luceram 43.97 55 *e*P **P 02 04 57.7 +1.0**
MEM Membach 43.97 45 P **P 02 04 56.3 -0.3**
MEM XP sP 02 05 01.8 +0.8
comp=Z,36nm,1.8s
RSP Reno Superiore 44.01 53 P **P 02 04 58.4 +1.4**
SBF Sospel 44.03 55 *e*P **P 02 04 57.1 -0.1**
comp=Z,207nm,1.5s,mb5.3
SBF Sospel 44.03 55 *e*P **P 02 04 57.1 -0.1**
SBF pmax pmax
comp=Z,103nm,1.5s,mb5.3
SBF Sospel 44.03 55 *e*P **P 02 04 57.1 -0.1**
comp=Z,103nm,1.5s,mb5.3
AUTN L'Aution 44.03 54 *e*P **P 02 04 58.4 +1.2**
HINF Hinteralfeld 44.03 49 *e*P **P 02 04 56.4 -0.8**
comp=Z,156nm,1.6s,mb5.2
HINF Hinteralfeld 44.03 49 *e*P **P 02 04 56.4 -0.8**
HINF pmax pmax
comp=Z,78nm,1.6s,mb5.2
HINF Hinteralfeld 44.03 49 *e*P **P 02 04 56.4 -0.8**
comp=Z,78nm,1.6s,mb5.2
SAOF Saorge 44.12 54 *e*P **P 02 04 58.5 +0.6**
MOF Molkenrain 44.23 49 *e*P **P 02 04 58.5 -0.2**
ECH Echery 44.29 48 *e*P **P 02 04 59.4 +0.2**
TRAV Traversella 44.38 52 P **P 02 05 00.6 +0.6**
CDF Champ du Feu 44.40 48 *e*P **P 02 04 59.5 -0.6**
comp=Z,250nm,1.6s,mb5.4
CDF Champ du Feu 44.40 48 *e*P **P 02 04 59.5 -0.6**
CDF pmax pmax
comp=Z,125nm,1.6s,mb5.4
CDF Champ du Feu 44.40 48 *e*P **P 02 04 59.5 -0.6**
comp=Z,125nm,1.6s,mb5.4
BBS Basel-Blauen 44.43 49 *e*P **P 02 05 00.5 +0.2**
RUP Ruppelstein 44.47 46 *e*P **P 02 05 01.1 +0.5**
ORO Oropa 44.55 52 P **P 02 05 01.9 +0.6**
AGMN Agassiz Refuge 44.63 312 *e*P **P 02 05 01.9 -0.1**
comp=Z,282nm,1.9s,mb5.8
AGMN LR LR
comp=Z,2µm,20.0s,MS5.1
KSU1 Kansas State U 44.67 299 *e*P **P 02 05 01.8 -0.7**
comp=Z,160nm,1.4s,mb5.7
KSU1 LR LR
comp=Z,2µm,19.0s,MS5.1
ECSD EROS,Sioux Fal 44.72 305 *e*P **P 02 05 02.0 -0.7**
comp=Z,34nm,1.4s,mb5.0
ECSD LR LR
comp=Z,1µm,22.0s,MS4.8
WTSB Winterswijk 44.74 43 *e*P **P 02 05 03.2 +0.4**
comp=Z,69nm,2.6s,mb5.0
STR Strasbourg 44.75 48 *e*P **P 02 05 03.3 +0.4**
FELD Feldberg im Sc 44.81 49 *e*P **P 02 05 03.1 -0.3**
LANF Langenberg 44.83 47 *e*P **P 02 05 03.7 +0.2**
BUG Bochum-Univer 44.92 44 *e*P **P 02 05 04.4 +0.2**
comp=Z,124nm,1.7s,mb5.5
ULM Lac du Bonnet 44.94 314 P **P 02 05 01.9 -2.5**
comp=Z,15nm,0.9s,mb4.8,baz=88,slow=6.9,SNR=18
ULM LR LR 02 24 17.0
comp=Z,508nm,18.2s,MS4.5,baz=81,slow=37
ULM Lac du Bonnet 44.94 314 P **P 02 05 01.9 -2.5**
ULM LR LR 02 24 17.0
HKT Hockley 45.03 286 *e*P **P 02 05 05.7 +0.3**
HKT pmax pmax
comp=Z,141nm,1.8s,mb5.5
HKT MLR MLR
comp=Z,1µm,21.0s,MS4.8
HKT Hockley 45.03 286 *e*P **P 02 05 05.7 +0.3**
comp=Z,141nm,1.8s,mb5.5
HKT LR LR
comp=Z,1µm,21.0s,MS4.8
TORD Torodi Ar. Bea 45.06 99 P **P 02 05 03.8 -2.0**
comp=Z,11nm,1.1s,mb4.6,baz=303,slow=8.7,SNR=23
TORD LR LR 02 22 30.3
comp=Z,2µm,19.4s,MS5.1,baz=300,slow=34
BFO Black Forest 45.09 48 P **P 02 05 05.1 -0.5**
comp=Z,282nm,1.3s,mb5.9,SNR=10
BFO Black Forest 45.09 48 *e*P **P 02 05 05.4 -0.2**
BFO *e*S **S 02 11 46.3 +1.7**
BFO pmax pmax
comp=Z,124nm,1.4s,mb5.5
BFO Black Forest 45.09 48 *e*P **P 02 05 05.4 -0.2**
comp=Z,124nm,1.4s,mb5.5
BFO *e*S **S 02 11 46.3 +1.7**
VAI Varese 45.12 52 P **P 02 05 06.5 +0.6**
SPAK Spaichingen-Ko 45.36 49 *e*P **P 02 05 08.5 +0.8**
IBBN Ibbenburen 45.39 43 *e*P **P 02 05 08.5 +0.6**
comp=Z,181nm,1.7s,mb5.6
TNS Taunus Mts 45.44 46 *e*P **P 02 05 08.9 +0.6**
TNS *e*S **S 02 11 52.9 +3.3**
TNS pmax pmax
comp=Z,116nm,1.5s,mb5.5
TNS Taunus Mts 45.44 46 *e*P **P 02 05 08.9 +0.6**
comp=Z,116nm,1.5s,mb5.5
TNS *e*S **S 02 11 52.9 +3.3**
BOB Bobbio (Coli) 45.52 53 P **P 02 05 10.9 +1.8**
TOD Tromm 45.57 47 *e*P **P 02 05 09.6 +0.2**
KEST Kesra 45.65 66 P **P 02 05 09.8 -0.5**
comp=Z,3.8nm,0.9s,mb4.3,baz=254,slow=2.1,SNR=6.8
KEST LR LR 02 21 23.6
comp=Z,364nm,20.8s,MS4.3,baz=13,slow=32
STU Stuttgart 45.71 48 *e*P **P 02 05 10.2 -0.3**
comp=Z,85nm,1.3s,mb5.5
DAVOX Davos/Dischmat 45.96 51 LR LR 02 20 54.9
comp=Z,1µm,20.2s,MS4.8,baz=262,slow=32

DAVA **Damuels** 46.01 50⇓*iP* P 02 05 13.5 +0.6
comp=Z,233nm,1.6s,mb5.9,SNR=12
FCC **Fort Churchill** 46.13 326 P P 02 05 14.3 +0.6
FCC pmax pmax
comp=Z,160nm,1.5s,mb5.7
FCC **Fort Churchill** 46.13 326 *e*P P 02 05 13.8 +0.2
comp=Z,69nm,1.0s,mb5.5
ERBM **Eremo** 46.20 54 P P 02 05 15.3 +0.9
PII **Pisa** 46.26 55 P P 02 05 15.3 +0.4
BRMO **Bormio** 46.28 51 P P 02 05 16.2 +1.2
GSCL **Gusciola** 46.32 54 P P 02 05 16.1 +0.7
MABI **Malga Bissina** 46.35 52 P P 02 05 15.4 -0.2
ASK **Askoy** 46.43 31 *e*P P 02 05 15.4 -0.6
ASK AMb AMB 02 05 22.1
comp=Z,243nm,1.6s,mb5.9
ASK **Askoy** 46.43 31 *e*P P 02 05 15.4 -0.6
comp=Z,243nm,1.6s,mb5.9
BER **Bergen** 46.45 31 *e*P P 02 05 13.6 -2.6
BER AMb AMB 02 05 23.2
comp=Z,192nm,1.3s,mb5.9
BER *e*S S 02 12 02.3 -1.7
BER **Bergen** 46.45 31 *e*P P 02 05 13.6 -2.6
BER *e* 02 12 03.4
BER pmax pmax
comp=Z,192nm,1.3s,mb5.9
BER **Bergen** 46.45 31 *e*P P 02 05 13.6 -2.6
comp=Z,192nm,1.3s,mb5.9
BER *e* 02 12 03.4
UBBA **Unterbreizbach** 46.51 45 *e*P P 02 05 17.0 +0.2
comp=Z,94nm,1.7s,mb5.4
UBBA *e*S S 02 12 07.3 +2.3
FETA **Feichten** 46.56 50⇓*iP* P 02 05 17.5 +0.3
comp=Z,226nm,2.5s,mb5.7,SNR=12
RETA **Reutte** 46.62 50⇓*iP* P 02 05 17.7 0.0
comp=Z,211nm,2.1s,mb5.7
FNVD **Fontana Vidola** 46.70 54 P P 02 05 18.6 +0.2
WMOK **Wichita Mounta** 46.76 293 *e*P P 02 05 18.4 -0.6
WMOK pmax pmax
comp=Z,74nm,1.5s,mb5.4
WMOK MLR MLR
comp=Z,2µm,20.0s,MS5.1
WMOK **Wichita Mounta** 46.76 293 *e*P P 02 05 18.4 -0.5
comp=Z,74nm,1.5s,mb5.4
WMOK LR LR
comp=Z,2µm,20.0s,MS5.1
CSNT **Castellina Chi** 46.81 55 P P 02 05 19.1 -0.2
APPI **Appiano** 46.87 51 P P 02 05 19.2 -0.5
ODD1 **Odda** 46.89 32 *e*P P 02 05 19.1 -0.5
ODD1 AMb AMB 02 05 22.1
comp=Z,120nm,2.0s,mb5.5
ODD1 **Odda** 46.89 32 *e*P P 02 05 19.1 -0.5
comp=Z,120nm,2.0s,mb5.5
CLZ **Clausthal** 46.90 44 *e*P P 02 05 19.8 0.0
CLZ *e*S S 02 12 12.1 +1.6
CLZ pmax pmax
comp=Z,92nm,1.5s,mb5.5
CLZ **Clausthal** 46.90 44 *e*P P 02 05 19.8 0.0
comp=Z,92nm,1.5s,mb5.5
CLZ *e*S S 02 12 12.1 +1.6
FUR **Furstenfeldbru** 47.02 49 *e*P P 02 05 21.0 +0.1
FUR pmax pmax
comp=Z,80nm,1.5s,mb5.4
FUR **Furstenfeldbru** 47.02 49 *e*P P 02 05 21.0 +0.1
comp=Z,80nm,1.5s,mb5.4
CBKS **Cedar Bluff** 47.12 298 *e*P P 02 05 21.3 -0.5
CBKS pmax pmax
comp=Z,175nm,1.6s,mb5.7
CBKS MLR MLR
comp=Z,2µm,20.0s,MS5.0
CBKS **Cedar Bluff** 47.12 298 *e*P P 02 05 21.2 -0.5
comp=Z,175nm,1.6s,mb5.7
CBKS LR LR
comp=Z,2µm,20.0s,MS5.0
HYA **Hoyanger** 47.13 31 *e*P P 02 05 22.6 +1.1
HYA AMb AMB 02 05 30.9
comp=Z,152nm,1.2s,mb5.8
HYA **Hoyanger** 47.13 31 *e*P P 02 05 22.6 +1.1
comp=Z,152nm,1.2s,mb5.8
CTI **Castel Tesino** 47.14 52 P P 02 05 21.7 -0.1
GRA1 **Grafenberg Arr** 47.14 47 *e*P P 02 05 21.3 -0.4
comp=Z,202nm,1.9s,mb5.7
GRA1 *ep*P pP 02 05 28.1 +3.2
GRA1 *e*PcP PcP 02 06 53.8 +0.5
GRA1 *ep*PcP 02 06 59.7
GRA1 LR LR
comp=Z,1µm,19.2s,MS4.8
GRF **Grafenberg Arr** 47.14 47 *e*P P 02 05 21.3 -0.4
GRF *e**PP pP 02 05 28.1 +3.2
GRF *e* 02 06 53.8
GRF pmax pmax
comp=Z,202nm,1.9s,mb5.7
GRF MLR MLR
comp=Z,1µm,19.2s,MS4.8
GRF **Grafenberg Arr** 47.14 47 *e*P P 02 05 21.3 -0.4
GRF *e**PP pP 02 05 28.1 +3.2
GRF *e* 02 06 53.8
GRF pmax pmax
comp=Z,202nm,1.9s,mb5.7
GRF MLR MLR
comp=Z,1µm,19.0s,MS4.8
GRF **Grafenberg Arr** 47.14 47 *e*P P 02 05 21.3 -0.4
comp=Z,202nm,1.9s,mb5.7
GRF *ep*P pP 02 05 28.1 +3.2
GRF *e*PcP PcP 02 06 53.8 +0.5
GRF *ep*PcP 02 06 59.7
GRF *e*L 02 21 56.6
comp=Z,995nm,19.2s
WATA **Walderalm** 47.16 50⇑*iP* P 02 05 22.3 +0.4
comp=Z,160nm,1.8s,mb5.6,SNR=6.8
WATA **Walderalm** 47.16 50⇑*iP* P 02 05 22.3 +0.4
WATA pmax pmax
comp=Z,160nm,1.8s,mb5.7
WTTA **Wattenberg** 47.20 50⇓*iP* P 02 05 22.4 +0.2
comp=Z,279nm,1.9s,mb5.9,SNR=16
WTTA **Wattenberg** 47.20 50⇓*iP* P 02 05 22.4 +0.2
WTTA pmax pmax
comp=Z,279nm,1.9s,mb5.9
BSEG **Bad Segeberg** 47.23 41 *e*P P 02 05 22.5 +0.1
comp=Z,296nm,1.3s,mb6.1
KVTX **Kingsville** 47.30 283 PFAKE
KVTX LR LR 02 05 30.0 +6.7
comp=Z,2µm,20.0s,MS5.0
MOX **Moxa** 47.50 46 *e*P P 02 05 24.5 0.0
MOX *e* 02 05 30.9
comp=Z,84nm,1.8s
MOX
comp=Z,1µm,19.0s
MOX **Moxa** 47.50 46 *e*P P 02 05 24.5 0.0
MOX *e* 02 05 30.9
MOX pmax pmax
comp=Z,84nm,1.8s,mb5.5
MOX MLR MLR
comp=Z,1µm,19.0s,MS4.9
MOX **Moxa** 47.50 46 *e*P P 02 05 24.3 -0.2
comp=Z,94nm,1.8s,mb5.5
MOX *e*S S 02 12 20.8 +1.6
MOX **Moxa** 47.50 46 *e*P P 02 05 24.5 0.0
comp=Z,84nm,1.8s,mb5.5
MOX *e* 02 05 30.9
MOX
comp=Z,1µm,19.0s,MS4.9
SEST **Monte Rota** 47.56 51 P P 02 05 25.2 +0.1
JMIC **Jan Mayen** 47.58 15 LR LR 02 20 24.1
comp=Z,395nm,19.0s,MS4.4,baz=226,slow=30
MANZ **Manzenberg** 47.74 46 *e*P P 02 05 26.3 -0.1
comp=Z,104nm,1.6s,mb5.6
ABTA **Abfaltersbach** 47.77 51⇓*iP* P 02 05 25.9 -0.7
comp=Z,157nm,1.7s,mb5.8,SNR=12
ROTZ **Rotzenmuhle** 47.78 47 *e*P P 02 05 26.5 -0.2
comp=Z,45nm,1.5s,mb5.3
ROTZ *e*S S 02 12 24.8 +1.6
FVI **Forni Avoltri** 47.95 51 P P 02 05 27.8 -0.2
NKC **Novy Kostel** 47.99 46 *e*P P 02 05 28.1 -0.2
NKC *ep*P pP 02 05 33.8 +2.4
NKC *e*S S 02 12 28.7 +2.6
NKC AMS AMS 02 22 20.0
comp=Z,1µm,19.1s
NKC **Novy Kostel** 47.99 46 *e*P P 02 05 28.1 -0.2
NKC *ep*P pP 02 05 33.8 +2.4
NKC *e*S S 02 12 28.7 +2.6
WET **Wettzell** 48.16 48 *e*P P 02 05 29.2 -0.5
WET *e*S S 02 12 28.3 -0.3
WET pmax pmax
comp=Z,88nm,1.6s,mb5.5
WET **Wettzell** 48.16 48 *e*P P 02 05 29.2 -0.5
comp=Z,88nm,1.6s,mb5.5
WET *e*S S 02 12 28.3 -0.3
KONO **Kongsberg** 48.23 33 *e*P P 02 05 29.1 -0.9
KONO *e*S S 02 12 32.1 +2.8
KONO **Kongsberg** 48.23 33 *d*iP P 02 05 30.2 +0.2
KONO **Kongsberg** 48.23 33 *i*P P 02 05 30.3 +0.3
MOL **Molde** 48.25 29 *e*P P 02 05 31.1 +1.0
JCT **Junction City** 48.30 287 *e*P P 02 05 30.5 -0.5
JCT pmax pmax
comp=Z,114nm,1.5s,mb5.7
JCT MLR MLR
comp=Z,946nm,20.0s,MS4.8
JCT **Junction City** 48.30 287 *e*P P 02 05 30.5 -0.5
comp=Z,114nm,1.5s,mb5.7
JCT LR LR
comp=Z,946nm,20.0s,MS4.8
CLL **Collm** 48.45 45⇓*iP* P 02 05 31.5 -0.4
CLL *i* 02 05 37.4
CLL *e*S S 02 12 42.0 +9.4
CLL pmax pmax
comp=Z,164nm,2.3s,mb5.7
CLL MLR MLR
comp=Z,1µm,21.0s,MS4.8
CLL **Collm** 48.45 45 *e*P P 02 05 31.5 -0.4
comp=Z,65nm,1.5s,mb5.4
CLL *e*S S 02 12 33.1 +0.5
CLL **Collm** 48.45 45⇓*iP* P 02 05 31.5 -0.4
comp=Z,164nm,2.3s,mb5.7
CLL *i* pP pP 02 05 37.4 +2.4
comp=Z,62nm,1.5s
CLL *i* x x 02 05 42.3
CLL *ex* x 02 07 04.0
CLL *e*S S 02 12 42.0 +9.4
CLL *e*SS SS 02 16 18.0 +16
CLL **Collm** 48.45 45⇓*iP* P 02 05 31.5 -0.4
comp=Z,164nm,2.3s,mb5.7
CLL *i* 02 05 37.4
CLL *e*S S 02 12 42.0 +9.4
CLL LR LR
comp=Z,1µm,21.0s,MS4.8
MYKA **Terra Mystica** 48.54 51⇓*iP* P 02 05 32.1 -0.5
comp=Z,500nm,1.9s,mb6.2
KHC **Kasperske Hory** 48.62 48 *e*P P 02 05 32.9 -0.3
KHC *ep*P pP 02 05 38.6 +2.2
KHC *e*S S 02 12 37.9 +2.8
KHC AMS AMS 02 20 40.0
comp=Z,700nm,25.1s
GEC2 **GERESS Array S** 48.68 48 *e*P P 02 05 33.3 -0.4
GEC2 *e*S S 02 12 36.9 +0.9
GEC2 pmax pmax
comp=Z,130nm,1.5s,mb5.7
GEC2 **GERESS Array S** 48.68 48 *e*P P 02 05 33.3 -0.4
comp=Z,130nm,1.5s,mb5.7
GEC2 *e*S S 02 12 36.9 +0.9
GERES **GERESS Array B** 48.68 48 P P 02 05 33.6 -0.1
comp=Z,4.4nm,0.9s,mb4.5,baz=269,slow=6.7,SNR=33
GERES LR LR 02 24 21.4
comp=Z,451nm,19.1s,MS4.5,baz=276,slow=34
VOY **Vojsko** 48.70 52 *e*P P 02 05 33.2 -0.7
VOY *e* 02 05 45.3
JAVS **Javornik** 48.82 52 *e*P P 02 05 34.8 0.0
BRG **Berggiesshubel** 49.00 45⇑*iP* P 02 05 36.3 +0.2
BRG *e* 02 05 41.8
BRG *e* 02 12 47.0
BRG pmax pmax
comp=Z,93nm,2.3s,mb5.4
BRG pmax pmax
comp=Z,79nm,2.0s,mb5.4
BRG MLR MLR
comp=Z,851nm,17.5s,MS4.8
BRG MLR MLR
comp=N,200nm,20.0s,MS4.6
BRG MLR MLR
comp=E,612nm,20.0s,MS4.6
BRG **Berggiesshubel** 49.00 45 *e*P P 02 05 35.9 -0.2
comp=Z,131nm,2.0s,mb5.6
BRG *e*S S 02 12 43.1 +2.8
BRG **Berggiesshubel** 49.00 45⇑*iP* P 02 05 36.3 +0.2
comp=Z,155nm,2.3s,mb5.6
BRG *e* 02 05 41.8
comp=Z,131nm,2.0s
BRG *e* 02 12 47.0
BRG
comp=Z,1µm,17.5s
BRG
comp=N,334nm,20.0s
BRG
comp=E,1µm,20.0s
BRG **Berggiesshubel** 49.00 45⇑*iP* P 02 05 36.3 +0.2
comp=E,93nm,2.3s,mb5.4
BRG *e* 02 05 41.8
BRG *e* 02 12 47.0
BRG LR LR
comp=Z,850nm,17.5s,MS4.8
MOA **Molln** 49.01 49⇓*iP* P 02 05 35.4 -0.9
comp=Z,154nm,1.9s,mb5.7,SNR=13
AMTX **Amarillo** 49.10 293 *e*P P 02 05 37.7 +0.6
comp=Z,180nm,1.6s,mb5.8
AMTX LR LR
comp=Z,2µm,21.0s,MS5.1
LJU **Ljubljana** 49.14 52 *e*P P 02 05 37.3 +0.1
LJU *e*S S 02 12 45.5 +3.0
OBKA **Obir** 49.16 51⇓*iP* P 02 05 36.8 -0.6
comp=Z,297nm,2.5s,mb5.9,SNR=9.7
VNDS **Vrh nad Dolski** 49.26 52 *e*P P 02 05 38.7 +0.5
PRU **Pruhonice** 49.31 47 *e*P P 02 05 38.3 -0.2
PRU *ep*P pP 02 05 44.5 +2.9
PRU *e*S S 02 12 48.6 +3.9
PRU AMS AMS 02 23 20.0
comp=Z,1µm,18.0s
FFC **Flin Flon** 49.35 320 P P 02 05 38.3 -0.4
comp=Z,185nm,1.1s,mb6.0,SNR=6.6
PVCC **Panska Ves** 49.36 46 *e*P P 02 05 38.2 -0.7
PVCC *ep*P pP 02 05 44.5 +2.5
PVCC AMS AMS 02 23 00.0
comp=Z,1µm,18.0s
NB2 **NORSAR Subarra** 49.40 32 P P 02 05 39.4 +0.4
comp=Z,2.6nm,0.8s,mb4.3,baz=253,slow=7.9
NOA **NORSAR Array B** 49.40 32 P P 02 05 38.6 -0.3
comp=Z,24nm,0.9s,mb5.2,baz=254,slow=7.7,SNR=54
NOA LR LR 02 22 50.3
comp=Z,436nm,21.7s,MS4.4,baz=265,slow=32
SOKA **Soboth** 49.50 51⇓*iP* P 02 05 38.6 -1.4
comp=Z,116nm,1.9s,mb5.6
VAE **Valguarnera** 49.52 63 LR LR 02 23 59.8
comp=Z,1µm,19.1s,MS5.0,baz=280,slow=33
PERS **Pernice** 49.56 51 *e*P P 02 05 38.5 -1.9
PERS *e* 02 05 45.5
PERS *e*S S 02 12 46.5 -1.7
LPAZ **La Paz** 49.64 211 P P 02 05 40.6 -0.7
comp=Z,6.1nm,1.0s,mb4.6,baz=26,slow=8.6,SNR=16
LPAZ LR LR 02 25 43.9
comp=Z,572nm,18.1s,MS4.6,baz=21,slow=35
CRES **Cresnjev** 49.79 52 *e*P P 02 05 42.2 0.0
ARSA **Arzberg** 49.84 50⇓*iP* P 02 05 41.5 -1.1
comp=Z,185nm,2.0s,mb5.8,SNR=12
TREC **Trest** 49.88 48 *e*P P 02 05 42.2 -0.6
TREC AMS AMS 02 21 30.0
comp=Z,600nm,22.3s
RSSD **Black Hills** 50.08 306 *e*P P 02 05 44.2 -0.3
RSSD pmax pmax
comp=Z,50nm,1.8s,mb5.2
RSSD MLR MLR
comp=Z,2µm,21.0s,MS5.1
RSSD **Black Hills** 50.08 306 *e*P P 02 05 44.1 -0.3
comp=Z,50nm,1.8s,mb5.2
RSSD LR LR
comp=Z,2µm,21.0s,MS5.1
CONA **Conrad Observa** 50.09 49⇓*iP* P 02 05 43.6 -0.8
comp=Z,124nm,2.3s,mb5.5,SNR=11
DGMT **Dagmar** 50.18 311 *e*P P 02 05 44.7 -0.4
comp=Z,261nm,1.9s,mb5.9
DGMT LR LR
comp=Z,2µm,19.0s,MS5.2
UPC **Upice** 50.28 46 *e*P P 02 05 45.5 -0.4
UPC *ep*P pP 02 05 52.0 +3.0
DPC **Dobruska-Polom** 50.47 46 *e*P P 02 05 47.0 -0.3
DPC *ep*P pP 02 05 52.6 +2.1
DPC *e*S S 02 13 03.7 +2.7
DPC AMS AMS 02 24 20.0
comp=Z,1µm,17.4s
KSP **Ksiaz** 50.48 46 *e*P P 02 05 47.3 -0.1
KSP LMZ 02 23 58.7
comp=Z,3µm,18.9s
KSP **Ksiaz** 50.48 46⇓*e*P P 02 05 47.2 -0.2
KSP *e**PP pP 02 05 53.2 +2.7
KSP *e*S S 02 13 01.0 0.0
KSP **Ksiaz** 50.48 46⇓*e*P P 02 05 47.2 -0.2
KSP *ep*P pP 02 05 53.2 +2.7
KSP *e*S S 02 13 01.0 0.0
KSP LR LR
comp=Z,3µm,18.9s,MS5.3
DAG **Danmarks Havn** 50.51 7⇑*e*P P 02 05 47.1 -0.2
DAG pmax pmax
comp=Z,19nm,1.2s,mb4.9
DAG **Danmarks Havn** 50.51 7⇑*i*P P 02 05 47.1 -0.2
comp=Z,19nm,1.2s,mb4.9
DAG **Danmarks Havn** 50.51 7⇑*e*P P 02 05 47.1 -0.2
comp=Z,19nm,1.2s,mb4.9
VRAC **Vranov** 50.61 48⇑*i*P P 02 05 48.2 -0.1
VRAC **Vranov** 50.61 48 P P 02 05 48.4 +0.1
NSS **Namsos** 50.78 28 *e*P P 02 05 48.3 -1.1
NSS AMb AMB 02 05 57.3
comp=Z,103nm,2.3s,mb5.3
NSS **Namsos** 50.78 28 *e*P P 02 05 48.3 -1.1
comp=Z,103nm,2.3s,mb5.3
ZST **Bratislava** 50.92 49 *e*P P 02 05 50.3 -0.4
comp=Z,105nm,1.6s,mb5.5
ZST LR LR
comp=Z,200nm,16.3s,MS4.2
MODS **Modra-Piesok** 51.04 49 *e*P P 02 05 51.4 -0.2
MODS *ep*P pP 02 05 56.7 +1.9
GKP **Gorka Klasztor** 51.23 43 *e*P P 02 05 53.1 +0.2
GKP **Gorka Klasztor** 51.23 43⇓*e*P P 02 05 53.1 +0.2
MORC **Moravsky Berou** 51.24 47⇓*i*P P 02 05 52.9 -0.2
MORC **Moravsky Berou** 51.24 47 P P 02 05 52.9 -0.2
PHWY **Pilot Hill** 51.30 302 *e*P P 02 05 54.1 +0.4
LAO **LASA Array** 51.55 309 *e*P P 02 05 55.0 -0.5
comp=Z,14nm,1.1s,mb4.8
LAO LR LR
comp=Z,2µm,20.0s,MS5.1
ISCO **Idaho Springs** 51.57 300 *e*P P 02 05 56.7 +0.9
ISCO pmax pmax
comp=Z,75nm,1.8s,mb5.3
ISCO MLR MLR
comp=Z,2µm,20.0s,MS5.2
ISCO **Idaho Springs** 51.57 300 *e*P P 02 05 56.7 +0.9
comp=Z,75nm,1.8s,mb5.3
ISCO LR LR
comp=Z,2µm,20.0s,MS5.2
OKC **Ostrava-Krasne** 51.63 47 *e*P P 02 05 55.7 -0.3
OKC *ep*P pP 02 06 01.7 +2.5
OKC *e*S S 02 13 21.2 +4.2
OKC AMS AMS 02 24 50.0
comp=Z,600nm,18.3s
OKC **Ostrava-Krasne** 51.63 47 *e*P P 02 05 55.7 -0.3
OKC *ep*P pP 02 06 01.7 +2.5
OKC *e*S S 02 13 21.2 +4.2
RAC **Raciborz** 51.66 47 *e*P P 02 05 56.3 0.0
RAC LR LR
comp=Z,1µm,19.0s,MS4.9
SDCO **Great Sand Dun** 51.75 298 *e*P P 02 05 57.7 +0.6
comp=Z,17nm,1.3s,mb4.8
SDCO LR LR
comp=Z,2µm,20.0s,MS5.2
STOK **Stokkvaagen** 51.77 26 *e*P P 02 05 57.1 +0.3
STOK AMb AMB 02 06 05.8
comp=Z,269nm,1.4s,mb6.0
STOK **Stokkvaagen** 51.77 26 *e*P P 02 05 57.1 +0.3
comp=Z,269nm,1.4s,mb6.0
KOLL **Kolacno** 51.79 49 *e*P P 02 05 56.9 -0.3
TXAR **Lajitas Array** 51.82 287 P P 02 05 57.0 -0.8
comp=Z,4.4nm,0.9s,mb4.4,baz=99,slow=7.7,SNR=36
TXAR LR LR 02 28 37.9
comp=Z,544nm,18.2s,MS4.6,baz=0.0,slow=37
PKSM **Moragy** 52.00 52⇓*iP* P 02 05 58.4 -0.5
PKSM **Moragy** 52.00 52 P P 02 05 58.8 -0.1
VYHS **Vyhne** 52.08 49 *e*P P 02 05 58.6 -0.8
VYHS *e* 02 06 04.4
VYHS pmax pmax
comp=Z,27nm,1.6s,mb4.9
VYHS **Vyhne** 52.08 49 *e*P P 02 05 58.6 -0.8
comp=Z,27nm,1.6s,mb4.9
VYHS *e* 02 06 04.4
BUD **Budapest** 52.22 50⇓*e*P P 02 05 59.9 -0.6
MOR8 **Moi Rana** 52.27 26 *e*P P 02 06 01.4 +0.9
MOR8 AMb AMB 02 06 10.2
comp=Z,66nm,1.4s,mb5.4
MOR8 **Moi Rana** 52.27 26 *e*P P 02 06 01.4 +0.9
comp=Z,66nm,1.4s,mb5.4
RWWY **Rawlins** 52.58 303 *e*P P 02 06 03.8 +0.6
comp=Z,284nm,1.9s,mb5.9
OJC **Ojcow** 52.70 46 *e*P P 02 06 04.0 0.0
OJC *e*S S 02 13 36.2 +4.6
OJC **Ojcow** 52.70 46 *e*P P 02 06 04.0 0.0
OJC *e*S S 02 13 36.2 +4.6
OJC LR LR
comp=Z,1µm,18.2s,MS4.9
PSZ **Piszkesteto** 52.80 49⇑*e*P P 02 06 05.2 +0.5
PSZ **Piszkesteto** 52.80 49⇑*i*P P 02 06 04.4 -0.3
PSZ **Piszkesteto** 52.80 49 P P 02 06 05.0 +0.3
ANMO **Albuquerque** 52.96 294 *d*iP P 02 06 07.1 +0.9
ANMO **Albuquerque** 52.96 294 *e*P P 02 06 07.0 +0.9
comp=Z,114nm,1.7s,mb5.5
ANMO LR LR
comp=Z,2µm,21.0s,MS5.1
NIE **Niedzica** 53.04 47 *e*P P 02 06 07.3 +0.8
DIVS **Divibare** 53.08 54 *e*P P 02 06 06.3 -0.6
KECS **Kecovo** 53.17 49 *e*P P 02 06 08.0 +0.5
KECS *e* 02 06 13.7
KECS pmax pmax
comp=Z,19nm,1.7s,mb4.8
KECS **Kecovo** 53.17 49 *e*P P 02 06 08.0 +0.5
comp=Z,19nm,1.7s,mb4.7
KECS *e* 02 06 13.7
LPM **Los Pinos Moun** 53.22 294 *e*P P 02 06 08.6 +0.5
BNM **Barren Site** 53.25 293 *e*P P 02 06 08.8 +0.5
RES **Resolute Bay** 53.39 345 *e*P P 02 06 08.8 +0.1
RES pmax pmax
comp=Z,2µm,1.1s
RES **Resolute Bay** 53.39 345 *e*P P 02 06 08.8 +0.1
comp=Z,2µm,1.1s
LENM **Lemitar** 53.53 293 *e*P P 02 06 11.3 +0.9
LAZ **Ladron** 53.62 294 *e*P P 02 06 12.1 +1.2
STHS **Stebnicka Huta** 53.65 47 *e*P P 02 06 12.1 +1.1
STHS *e* 02 06 18.5
STHS pmax pmax
comp=Z,31nm,1.2s,mb5.1
STHS **Stebnicka Huta** 53.65 47 *e*P P 02 06 12.1 +1.1
comp=Z,30nm,1.2s,mb5.1
STHS *e* 02 06 18.5
RLMT **Red Lodge** 53.75 307 *e*P P 02 06 12.0 +0.2
comp=Z,154nm,1.8s,mb5.6
RLMT LR LR
comp=Z,2µm,20.0s,MS5.1
CRVS **Cervenica-Dubn** 53.81 48 *e*P P 02 06 12.2 +0.1
IGT **Igoumenitsa** 53.85 60 *e*P P 02 06 13.1 +0.4
EGMT **Eagleton** 53.90 311 *e*P P 02 06 12.6 -0.2
comp=Z,204nm,1.5s,mb5.8
EGMT LR LR
comp=Z,2µm,19.0s,MS5.2
GCMT **Greycliff** 53.98 308 *e*P P 02 06 13.4 0.0
OHR **Ohrid** 53.99 58 *e*P P 02 06 14.3 +0.7
OHR **Ohrid** 53.99 58 *i*P P 02 06 13.3 -0.3
PV01 **Paradox Valley** 54.09 299 *e*P P 02 06 15.1 +0.7
BZS **Buzias** 54.11 52⇓*i*P P 02 06 14.5 +0.1
BZS **Buzias** 54.11 52 P P 02 06 14.8 +0.4
MVCO **Mesa Verde** 54.18 297 *e*P P 02 06 15.8 +0.7
comp=Z,111nm,1.5s,mb5.6
MVCO LR LR
comp=Z,2µm,20.0s,MS5.2
BW06 **Boulder Array** 54.19 304 *e*P P 02 06 14.8 -0.3
comp=Z,188nm,1.6s,mb5.8
BW06 LR LR
comp=Z,2µm,20.0s,MS5.2
PDAR **Pinedale Array** 54.19 304 P P 02 06 14.8 -0.3
comp=Z,220nm,1.0s,mb5.1,baz=87,slow=7.6,SNR=127
PDAR LR LR 02 27 27.5
comp=Z,2µm,21.6s,MS5.1,baz=89,slow=34
LKD **Levkas** 54.23 61 *e*P P 02 06 13.6 -1.8
VLS **Valsamata** 54.26 61 *e*P P 02 06 15.8 +0.2
VLS **Valsamata** 54.26 61 *e*P P 02 06 22.5 +6.8
KRUS **Krusevo** 54.30 57 *i*P P 02 06 16.2 +0.3
KOLS **Kolonicke sedl** 54.34 48 *e*P P 02 06 16.1 +0.1
SKO **Skopje** 54.36 57 *i*P P 02 06 16.7 +0.4
UZH **Uzhgorod** 54.37 48⇑*i*P P 02 06 16.0 -0.2
UZH *i* 02 06 22.3
UZH *e*S S 02 13 52.0 -2.3
UZH MLR MLR

comp=N,140nm,16.0s,MS4.3
UZH MLR MLR
comp=E,140nm,16.0s,MS4.3
UZH MLR MLR
comp=Z,110nm,16.0s,MS4.0
BIA Bitola 54.40 58 *e*P **P 02 06 16.5 -0.1**
BIA Bitola 54.40 58 *i* P **P 02 06 16.3 -0.3**
FNA Florina 54.47 58 *e*P **P 02 06 17.3 +0.2**
KWP Kalwaria 54.59 47 *e*P **P 02 06 18.5 +0.6**
KWP LMZ 02 24 20.8
comp=Z,500nm,28.4s
KWP Kalwaria 54.59 47⇓*i*P **P 02 06 18.7 +0.8**
KWP Kalwaria 54.59 47⇓*e*P **P 02 06 18.5 +0.6**
LKWY Lake 54.61 307 PFAKE 02 06 30.0 +12
LKWY LR LR
comp=Z,3μm,21.0s,MS5.3
DRGR 54.77 51⇓*i*P **P 02 06 19.1 -0.1**
DRGR 54.77 51 P **P 02 06 19.4 +0.1**
YNR Norris Junctio 54.79 307 *e*P **P 02 06 20.6 +1.2**
SUW Suwalki 54.79 42 *e*P **P 02 06 18.7 -0.5**
SUW LMZ 02 24 36.4
comp=Z,800nm,29.3s
SUW Suwalki 54.79 42 *e*P **P 02 06 18.7 -0.5**
LOHW Long Hollow 54.86 305 *e*P **P 02 06 19.8 -0.1**
comp=Z,152nm,1.8s,mb5.7
TRO Tromso 54.87 22 *e*P **P 02 06 19.9 +0.3**
TRO AMb AMB 02 06 28.6
comp=Z,233nm,1.2s,mb6.1
TRO *e*S **S 02 14 02.2 +1.7**
TRO Tromso 54.87 22 *e*P **P 02 06 19.9 +0.3**
TRO *e* 02 14 11.0
TRO pmax pmax
comp=Z,233nm,1.2s,mb6.1
TRO Tromso 54.87 22 *e*P **P 02 06 19.9 +0.3**
comp=Z,233nm,1.2s,mb6.1
TRO *e* 02 14 11.0
FLWY Flagg Ranch 54.87 306 *e*P **P 02 06 20.4 +0.4**
comp=Z,269nm,1.8s,mb6.0
YFT Old Faithful 54.93 306 *e*P **P 02 06 21.9 +1.5**
STIP Stip 54.95 57 *e*P **P 02 06 19.8 -0.8**
STIP Stip 54.95 57 *i* P **P 02 06 20.1 -0.5**
SNOW Snow King Moun 54.98 305 *e*P **P 02 06 21.3 +0.5**
comp=Z,206nm,1.6s,mb5.9
YMR Madison River 55.00 307 *e*P **P 02 06 22.1 +1.2**
comp=Z,227nm,1.7s,mb5.9
YMR LR LR
comp=Z,5μm,21.0s,MS5.5
IMW Indian Meadow 55.06 306 *e*P **P 02 06 21.7 +0.3**
comp=Z,159nm,1.6s,mb5.8
REDW Red Top Meadow 55.06 305 *e*P **P 02 06 21.4 0.0**
comp=Z,195nm,1.8s,mb5.8
EVR Evrytania 55.08 60 *e*P **P 02 06 23.5 +1.9**
TPAW Teton Pass 55.12 305 *e*P **P 02 06 21.9 +0.1**
comp=Z,70nm,1.1s,mb5.6
THL Klokotos Trika 55.14 59 *e*P **P 02 06 21.9 -0.1**
GRG Griva 55.22 58 *e*P **P 02 06 22.3 -0.2**
VAY Valandovo 55.29 57 *e*P **P 02 06 22.4 -0.7**
VAY Valandovo 55.29 57 *i* P **P 02 06 22.8 -0.3**
QLMT Earthquake Lak 55.31 307 *e*P **P 02 06 24.1 +1.0**
CPUP Villa Florida 55.32 194 P **P 02 06 22.1 -1.2**
comp=Z,5.2nm,0.8s,mb4.6,baz=0.2,slow=5.2,SNR=4.2
CPUP LR LR 02 29 12.7
comp=Z,170nm,19.3s,MS4.1,baz=200,slow=35
AHID Auburn Hatcher 55.32 304 *e*P **P 02 06 23.4 +0.2**
comp=Z,218nm,1.8s,mb5.9
AHID LR LR
comp=Z,2μm,22.0s,MS5.1
BOZ Bozeman (W) 55.36 308 *e*P **P 02 06 23.3 -0.2**
BOZ pmax pmax
comp=Z,61nm,1.7s,mb5.3
BOZ MLR MLR
comp=Z,1μm,19.0s,MS5.0
BOZ Bozeman (W) 55.36 308 *e*P **P 02 06 23.3 -0.2**
comp=Z,62nm,1.7s,mb5.4
BOZ LR LR
comp=Z,1μm,19.0s,MS5.0
RRI2 Red Ridge 55.41 305 *e*P **P 02 06 23.9 0.0**
comp=Z,240nm,1.7s,mb6.0
LIT Litokhoron 55.41 59 *e*P **P 02 06 23.5 -0.5**
SRU San Rafael 55.43 300 *e*P **P 02 06 24.2 +0.1**
SRU pmax pmax
comp=Z,43nm,1.2s,mb5.3
SRU San Rafael 55.43 300 *e*P **P 02 06 24.2 +0.1**
comp=Z,43nm,1.2s,mb5.3
LVV L'vov 55.44 47 *i* P **P 02 06 23.3 -0.7**
LVV *e*S S **02 14 00.0 -8.7**
LVV MLR MLR
comp=Z,360nm,16.5s,MS4.5
AGG Agios Georgios 55.47 60 *e*P **P 02 06 24.6 +0.3**
ITM Ithomi 55.48 62 *e*P **P 02 06 25.0 +0.5**
KNT Kendrikon 55.56 57 *e*P **P 02 06 24.6 -0.3**
LVC Limon Verde 55.56 208 *e*P **P 02 06 23.1 -2.0**
comp=Z,65nm,1.7s,mb5.4
KKB Krupnik 55.59 57 *e*P **P 02 06 25.6 +0.4**
THE Thessaloniki 55.69 58 *e*P **P 02 06 25.8 -0.1**
DAU Daniels Canyon 55.78 302 *e*P **P 02 06 26.7 +0.1**
HORT Hortiatis 55.79 58 *e*P **P 02 06 26.5 -0.2**
VLX Vlachokerasia 55.80 62 *e*P **P 02 06 27.7 +0.9**
HWUT Hardware Ranch 55.82 303 *e*P **P 02 06 26.7 -0.2**
comp=Z,103nm,1.5s,mb5.6
HWUT LR LR
comp=Z,2μm,21.0s,MS5.1
JLU Jordanelle 55.89 302 *e*P **P 02 06 27.8 +0.3**
TMUT Trail Mountain 55.93 300 *e*P **P 02 06 27.8 +0.1**
SOH Sokhos 55.95 58 *e*P **P 02 06 27.8 0.0**
EDM Edmonton 55.97 317 *e*P **P 02 06 27.5 -0.2**
LKR Lokris 56.05 60 *e*P **P 02 06 27.9 -0.6**
XOR Xorichti 56.07 60 *e*P **P 02 06 28.7 0.0**
DLMT Dillon 56.07 308 *e*P **P 02 06 28.6 0.0**
comp=Z,60nm,1.4s,mb5.4
PLG Polygyros 56.09 58 *e*P **P 02 06 26.6 -2.2**
PLG Polygyros 56.09 58 *e*P **P 02 06 30.0 +1.2**
MMB Musomiste 56.11 57 *e*P **P 02 06 29.4 +0.5**
MPU Maple Canyon 56.13 301 *e*P **P 02 06 29.4 +0.2**
comp=Z,122nm,1.5s,mb5.7
MPU LR LR
comp=Z,4μm,20.0s,MS5.5
LTK Loutraki 56.14 61 *e*P **P 02 06 29.4 +0.2**
KTK1 Kautokeino 56.22 24 *e*P **P 02 06 29.4 +0.1**
KTK1 AMb AMB 02 06 38.0
comp=Z,174nm,1.4s,mb5.9
KTK1 Kautokeino 56.22 24 *e*P **P 02 06 29.4 +0.1**
comp=Z,174nm,1.4s,mb5.9
MCMT McKenzie Canyo 56.31 307 *e*P **P 02 06 30.9 +0.5**
PAIG Paliouri 56.34 59 *e*P **P 02 06 29.9 -0.7**
CHMT Chamberlain Mo 56.35 310 *e*P **P 02 06 30.4 -0.2**
VLI Veliai 56.37 63 *e*P **P 02 06 32.0 +1.1**
NOQ North Oquirrh 56.39 302 *e*P **P 02 06 31.2 +0.2**
comp=Z,103nm,1.3s,mb5.7
BURAR Bucovina Array 56.40 49⇓*i*P **P 02 06 31.3 +0.4**
BURAR Bucovina Array 56.40 49⇓P **P 02 06 31.3 +0.4**
DID Didima 56.44 62 *e*P **P 02 06 29.9 -1.5**
NLU North Lily Min 56.47 301 *e*P **P 02 06 31.8 +0.2**
OUR Ouranopolis 56.50 58 *e*P **P 02 06 32.1 +0.4**
SPUT South Promonto 56.53 303 *e*P **P 02 06 31.7 -0.2**
VOIR 56.53 52⇓*i*P **P 02 06 32.2 +0.3**
VOIR 56.53 52 P **P 02 06 33.4 +1.5**
KYTH Kithira 56.53 63 *e*P **P 02 06 39.5 +7.5**
KBS Kingsbay 56.56 11 *e*P **P 02 06 29.8 -1.8**
KBS Kingsbay 56.56 11 *e*P **P 02 06 29.9 -1.7**
WALA Waterton Lakes 56.58 312 *e*P **P 02 06 31.3 -0.8**
comp=Z,98nm,1.5s,mb5.6
NAIG Nisos Aigina 56.59 61 *e*P **P 02 06 33.5 +1.1**
AOS Alonnisos 56.63 60 *e*P **P 02 06 38.7 +6.0**
KAF Kangasniemi 56.68 32 *e*p **P 02 06 31.0 -1.7**
comp=Z,11nm,0.8s,mb5.0,baz=267,slow=7.0
KAF Kangasniemi 56.68 32 *e*P **P 02 06 31.0 -1.7**
KAF pmax pmax
comp=Z,11nm,0.8s,mb4.9
HVU Hansel Valley 56.69 304 *e*P **P 02 06 32.7 -0.4**
HVU pmax pmax
comp=Z,89nm,1.6s,mb5.5
HVU Hansel Valley 56.69 304 *e*P **P 02 06 32.7 -0.4**
comp=Z,89nm,1.6s,mb5.5
YKA Yellowknife Ar 56.74 328 P **P 02 06 31.8 -1.2**
comp=Z,7.6nm,0.9s,mb4.7,baz=92,slow=7.5,SNR=36
YKA LR LR 02 30 33.3
comp=Z,2μm,19.0s,MS5.2,baz=140,slow=36
YKA Yellowknife Ar 56.74 328⇑*e*P **P 02 06 31.7 -1.4**
YKA Yellowknife Ar 56.74 328 P **P 02 06 31.8 -1.2**
YKA LR LR 02 30 33.3
PLD Plovdiv 56.75 56 *e*P **P 02 06 32.9 -0.6**
PLD Plovdiv 56.75 56 *e*P **P 02 06 33.8 +0.3**
WUAZ Wupatki 56.79 296 *e*P **P 02 06 34.8 +0.9**
comp=Z,132nm,1.5s,mb5.7
WUAZ LR LR
comp=Z,2μm,21.0s,MS5.2
KVR Kavouri 56.80 61 *e*P **P 02 06 34.5 +0.6**
MSU Marysvale 56.81 300 *e*P **P 02 06 34.5 +0.5**
PTL Penteli 56.83 61 *e*P **P 02 06 35.0 +0.9**
MSO Missoula 56.83 310 *e*P **P 02 06 33.1 -0.8**
comp=Z,72nm,1.9s,mb5.4
MSO LR LR
comp=Z,2μm,21.0s,MS5.1
MVU Marysvale 56.84 300 PFAKE 02 06 50.0 +16
MVU LR LR
comp=Z,1μm,19.0s,MS5.0
DUG Dugway 56.99 302 *e*P **P 02 06 35.1 -0.1**
DUG pmax pmax
comp=Z,103nm,1.4s,mb5.7
DUG MLR MLR
comp=Z,2μm,20.0s,MS5.2
DUG Dugway 56.99 302 *e*P **P 02 06 35.1 -0.2**
comp=Z,103nm,1.4s,mb5.7
DUG LR LR
comp=Z,2μm,20.0s,MS5.2
ZIMR 56.99 54⇓*i*P **P 02 06 35.2 0.0**
ZIMR 56.99 54⇓P **P 02 06 35.2 0.0**
BGU Big Grassy Mou 57.02 303 *e*P **P 02 06 35.1 -0.3**
TUC Tucson 57.05 292 *e*P **P 02 06 35.9 +0.1**
comp=Z,74nm,1.7s,mb5.4
TUC LR LR
comp=Z,1μm,21.0s,MS5.0
ARCES ARCESS Array B 57.11 23 P **P 02 06 35.1 -0.4**
comp=Z,19nm,0.9s,mb5.2,baz=270,slow=6.1,SNR=29
ARCES LR LR 02 25 30.8
comp=Z,166nm,18.3s,MS4.2,baz=191,slow=30
MLR Muntele Rosu 57.15 52⇓*i*P **P 02 06 37.1 +0.9**
MLR Muntele Rosu 57.15 52 P **P 02 06 36.5 +0.2**
KDZ Kurdzhali 57.35 56 *e*P **P 02 06 37.7 0.0**
LOS Limnos 57.40 59 *e*P **P 02 06 38.6 +0.4**
KARN Karanos 57.42 64 *e*P **P 02 06 38.7 +0.4**
MNK Minsk 57.51 41⇑*i*P **P 02 06 35.0 -3.6**
MNK pmax pmax
comp=Z,280nm,1.0s,mb6.2
PLOR Plostina 57.59 51⇑*i*P **P 02 06 39.2 -0.2**
HLID Hailey 57.60 306 *e*P **P 02 06 39.5 0.0**
comp=Z,46nm,1.5s,mb5.3
HLID LR LR
comp=Z,2μm,20.0s,MS5.2
VRI Vrincioaia 57.64 51⇓*i*P **P 02 06 38.8 -0.9**
VRI Vrincioaia 57.64 51 P **P 02 06 40.1 +0.4**
VAM Vamos 57.64 64 *e*P **P 02 06 40.5 +0.6**
KEV Kevo 57.66 23 *e*p **P 02 06 38.6 -0.9**
comp=Z,11nm,0.9s,mb4.9
KEV Kevo 57.66 23 *e*P **P 02 06 38.6 -0.9**
KEV pmax pmax
comp=Z,11nm,0.9s,mb4.9
GVD Gavdhos 57.68 65 *e*P **P 02 06 43.0 +2.8**
ODB Odobesti 57.88 51⇑*i*P **P 02 06 40.6 -0.8**
ODB Odobesti 57.88 51⇑P **P 02 06 40.6 -0.8**
ALN Alexandroupoli 57.95 57 *e*P **P 02 06 42.7 +0.8**
IAS Iasi 58.03 50⇑*i*P **P 02 06 41.9 -0.5**
IAS Iasi 58.03 50 P **P 02 06 41.9 -0.5**
BOZC Bozcaada 58.15 58 *i* P **P 02 06 43.4 0.0**
SIVA Sivas 58.22 64 *e*P **P 02 06 44.6 +0.6**
APE Apeiranthos 58.32 62 *e*P **P 02 06 44.7 0.0**
APE Apeiranthos 58.32 62 *e*P **P 02 06 45.0 +0.3**
APE Apeiranthos 58.32 62⇓*i*P **P 02 06 44.2 -0.5**
THR3 Thira Island, 58.37 63 *e*P **P 02 06 44.6 -0.4**
THR6 Thira Island, 58.38 63 *e*P **P 02 06 44.9 -0.2**
SANT Santorini 58.42 63 *e*P **P 02 06 44.4 -1.0**
THR1 Thera Island 58.42 63 *e*P **P 02 06 44.5 -0.9**
PRK Paraskevi 58.44 59 *e*P **P 02 06 44.9 -0.6**
PRK Paraskevi 58.44 59 *e*P **P 02 06 46.0 +0.6**
CHOS Chios island 58.45 60 *e*P **P 02 06 45.4 -0.2**
HARR Harsova 58.66 53⇓*i*P **P 02 06 45.9 -1.0**
HARR Harsova 58.66 53⇓P **P 02 06 45.9 -0.9**
KIEV Kiev 58.67 45 *e*P **P 02 06 45.7 -1.2**
KIEV pmax pmax
comp=Z,71nm,1.2s,mb5.6
KIEV MLR MLR
comp=Z,675nm,21.0s,MS4.7
KIEV Kiev 58.67 45 *e*P **P 02 06 45.7 -1.1**
comp=Z,71nm,1.2s,mb5.6
KIEV LR LR
comp=Z,675nm,21.0s,MS4.7
AKASG Malin Array Be 58.68 45 P **P 02 06 45.7 -1.2**
comp=Z,12nm,0.9s,mb5.0,baz=272,slow=6.3,SNR=22
AKASG LR LR 02 30 19.1
comp=Z,706nm,18.1s,MS4.8,baz=270,slow=34
AKASG Malin Array Be 58.68 45 *i* P **P 02 06 45.7 -1.2**
AKASG pmax pmax
comp=Z,12nm,0.9s
AKASG Malin Array Be 58.68 45 P **P 02 06 45.7 -1.2**
AKASG LR LR 02 30 19.1
AKBB Malin Array Si 58.68 45 *e*P **P 02 06 45.9 -1.0**
ELK Elko 58.70 303 *e*P **P 02 06 47.0 -0.3**
ELK pmax pmax
comp=Z,31nm,1.1s
ELK MLR MLR
comp=Z,1μm,21.0s
ELK Elko 58.70 303 *e*P **P 02 06 47.0 -0.2**
comp=Z,31nm,1.1s,mb5.2
ELK LR LR
comp=Z,1μm,21.0s,MS5.0
LAST Lasithi 58.72 64 *e*P **P 02 06 42.5 -5.0**
NEW Newport 58.78 312 *e*P **P 02 06 47.0 -0.7**
NEW pmax pmax
comp=Z,156nm,1.5s
NEW MLR MLR
comp=Z,2μm,19.0s
NEW Newport 58.78 312 *e*P **P 02 06 47.0 -0.7**
comp=Z,156nm,1.5s,mb5.8
NEW LR LR
comp=Z,2μm,19.0s,MS5.2
NPS Neapolis 58.80 64 *e*P **P 02 06 55.0 +7.0**
KIS Kishinev 58.91 50 *e*P **P 02 06 46.0 -2.6**
KIS *e* 02 06 54.0
KIS *e* 02 07 34.0
KIS *e* 02 09 08.0
KIS *e*S **S 02 14 53.0 -1.5**
KIS *e* 02 15 22.0
KIS pmax pmax
comp=Z,250nm,2.0s,mb5.9
KIS MLR MLR
comp=E,300nm,17.0s
KIS MLR MLR
comp=Z,400nm,17.0s,MS4.6
KIS MLR MLR
comp=Z,500nm,18.0s
KIS Kishinev 58.91 50 *e*P **P 02 06 46.0 -2.6**
comp=Z,300nm,2.0s,mb6.0
KIS Kishinev 58.91 50 *e*PcP PcP 02 07 34.0 -3.8
KIS Kishinev 58.91 50 *e*PP PP 02 09 08.0 +9.4
KIS *e*S **S 02 14 53.0 -1.5**
JOF Joensuu 59.02 31 *e*p **P 02 06 47.9 -1.2**
comp=Z,11nm,0.8s,mb5.0
JOF Joensuu 59.02 31 *e*P **P 02 06 47.9 -1.2**
JOF pmax pmax
comp=Z,11nm,0.8s,mb4.9
ZKR Zakros 59.32 64 *e*P **P 02 06 51.2 -0.4**
BALY Balya 59.35 58 *i* P **P 02 06 51.8 0.0**
BMO Blue Mountains 59.44 308 *e*P **P 02 06 51.4 -0.9**
BMO pmax pmax
comp=Z,43nm,1.5s,mb5.3
BMO MLR MLR
comp=Z,743nm,20.0s,MS4.8
BMO Blue Mountains 59.44 308 *e*P **P 02 06 51.4 -0.9**
comp=Z,42nm,1.5s,mb5.2
BMO LR LR
comp=Z,743nm,20.0s,MS4.8
AKHS Akhisar 59.69 59 *i* P **P 02 06 53.9 -0.2**
BDRM Kayabasi 59.82 61 *i* P **P 02 06 54.2 -0.8**
APA Apatity 59.86 26⇓*i*P **P 02 06 55.0 +0.2**
APA pmax pmax
comp=Z,54nm,1.2s,mb5.5
APA MLR MLR
comp=Z,500nm,9.0s
LDFC Landfair 59.86 296 *e*P **P 02 06 56.1 +0.7**
comp=Z,74nm,1.6s,mb5.5
LNOR Lincton Mounta 59.94 309 *e*P **P 02 06 55.2 -0.6**
KARP Karpathos 59.96 63 *e*P **P 02 06 55.0 -1.0**
OD2 Odessa Site #2 59.98 311 P **P 02 06 55.4 -0.5**
DURS Dursunbey 60.03 58 *i* P **P 02 06 55.9 -0.6**
GLA Glamis 60.16 294 *e*P **P 02 06 57.9 +0.5**
GLA pmax pmax
comp=Z,26nm,1.4s,mb5.1
GLA MLR MLR
comp=Z,1μm,19.0s,MS5.1
GLA Glamis 60.16 294 *e*P **P 02 06 57.9 +0.5**
comp=Z,26nm,1.4s,mb5.1
GLA LR LR
comp=Z,1μm,19.0s,MS5.1
BMN Battle Mountai 60.25 303 *e*P **P 02 06 57.8 -0.1**
BMN pmax pmax
comp=Z,40nm,1.4s,mb5.3
BMN MLR MLR
comp=Z,850nm,20.0s,MS4.9
BMN Battle Mountai 60.25 303 *e*P **P 02 06 57.8 -0.1**
comp=Z,40nm,1.4s,mb5.3
BMN LR LR
comp=Z,850nm,20.0s,MS4.9
TPNV Topopah Spring 60.30 299 *e*P **P 02 06 59.2 +0.8**
comp=Z,81nm,1.5s,mb5.5
TPNV LR LR
comp=Z,2μm,19.0s,MS5.2
DEMI Demirci 60.34 59 *i* P **P 02 06 58.4 -0.1**
ULDT Uludag 60.41 58 *i* P **P 02 06 58.4 -0.7**
ARG Arkhangelos 60.55 62 *e*P **P 02 06 51.0 -9.1**
H2OWA Water 60.63 310 P **P 02 07 00.6 +0.2**
HAWA Hanford 60.70 310 *e*P **P 02 07 00.3 -0.6**
comp=Z,41nm,1.1s,mb5.5
HAWA LR LR
comp=Z,2μm,21.0s,MS5.2
RSW Rattlesnake Hi 60.74 310 P **P 02 07 01.5 +0.3**
SNIWA Snively Ranch 60.78 310 P **P 02 07 01.8 +0.3**
TPH Tonopah 60.78 300 *e*P **P 02 07 01.6 0.0**
TPH pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
TPH MLR MLR
comp=Z,2μm,20.0s,MS5.2
TPH Tonopah 60.78 300 *e*P **P 02 07 01.6 0.0**
comp=Z,6.0nm,1.1s,mb4.6
TPH LR LR
comp=Z,2μm,20.0s,MS5.2
WVOR Wild Horse Val 60.86 305 *e*P **P 02 07 01.5 -0.6**
WVOR pmax pmax
comp=Z,127nm,1.8s,mb5.8
WVOR MLR MLR
comp=Z,2μm,22.0s,MS5.2
WVOR Wild Horse Val 60.86 305 *e*P **P 02 07 01.5 -0.5**
comp=Z,127nm,1.8s,mb5.8
WVOR LR LR
comp=Z,2μm,22.0s,MS5.2
GDZ Gediz 60.91 59 *i* P **P 02 07 02.2 -0.2**
ETW Entiat 61.02 311 *e*P **P 02 07 02.1 -1.0**
GSC Goldstone 61.15 297 *e*P **P 02 07 04.5 +0.3**
GSC pmax pmax
comp=Z,34nm,1.4s,mb5.3
GSC MLR MLR
comp=Z,2μm,22.0s,MS5.2
GSC Goldstone 61.15 297 *e*P **P 02 07 04.5 +0.3**
comp=Z,34nm,1.4s,mb5.3
GSC LR LR
comp=Z,2μm,22.0s,MS5.2
GOLH Golhisar 61.41 61 *i* P **P 02 07 06.3 +0.4**
DAC Darwin (Calif) 61.52 298 PFAKE 02 07 20.0 +13
DAC LR LR
comp=Z,1μm,21.0s,MS5.0
NVAR Mina Array Bea 61.52 301 P **P 02 07 06.1 -0.5**
comp=Z,6.7nm,1.0s,mb4.7,baz=82,slow=5.9,SNR=32
RPW Rockport 61.64 312 *e*P **P 02 07 05.9 -1.4**
AKAS Kas 61.70 62 *i* P **P 02 07 07.2 -0.7**
BAR Barrett 61.75 294 *e*P **P 02 07 08.5 +0.2**
comp=Z,14nm,1.4s,mb4.9
BAR LR LR
comp=Z,1μm,19.0s,MS5.1
TKTP Tekketepe 61.80 60 *i* P **P 02 07 09.3 +0.8**
ESKT Eskisehir 61.84 58 *i* P **P 02 07 08.9 +0.2**
JCW Jim Creek 61.97 312 *e*P **P 02 07 07.2 -2.2**
PAHR Pah Rah Range 62.03 302 *e*P **P 02 07 09.6 -0.5**
comp=Z,165nm,1.4s,mb6.0
LON Longmire 62.17 311 *e*P **P 02 07 09.4 -1.5**
LON pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
LON Longmire 62.17 311 *e*P **P 02 07 09.4 -1.5**
comp=Z,8.0nm,1.2s,mb4.7
MOD Modoc 62.18 305 *e*P **P 02 07 11.5 +0.5**
comp=Z,160nm,1.6s,mb5.9
MOD LR LR
comp=Z,2μm,22.0s,MS5.3
ISA Isabella 62.37 298 *e*P **P 02 07 13.5 +1.1**
ISA pmax pmax
comp=Z,76nm,1.6s,mb5.6
ISA MLR MLR
comp=Z,1μm,22.0s,MS5.0
ISA Isabella 62.37 298 *e*P **P 02 07 13.5 +1.2**
comp=Z,76nm,1.6s,mb5.6
ISA LR LR
comp=Z,1μm,22.0s,MS5.0
MWC Mount Wilson 62.43 296 PFAKE 02 07 30.0 +17
MWC LR LR
comp=Z,2μm,21.0s,MS5.2
OBN Obninsk 62.46 40 P **P 02 07 12.8 +0.2**
comp=Z,715nm,1.0s,SNR=11
OBN Obninsk 62.46 40*d* *i*P **P 02 07 12.5 -0.1**
OBN *i* 02 07 18.4
OBN *i* 02 07 49.6
OBN *i* S **S 02 15 41.2 +1.6**
OBN pmax pmax
comp=Z,169nm,1.6s,mb5.9
SGKT Sivrigoynuk 62.48 57 *i* P **P 02 07 13.4 +0.4**
SIM Simferopol' 62.92 51 *e*P **P 02 07 19.8 +3.9**
SIM *e*S **S 02 15 51.0 +5.2**
SIM pmax pmax
comp=Z,21nm,0.9s,mb5.3
SIM MLR MLR
comp=Z,400nm,16.0s,MS4.7
MOS Moscow 62.94 39 *e*P **P 02 07 12.5 -3.4**
MOS pmax pmax
comp=Z,153nm,1.6s,mb5.9
MOS pmax pmax
comp=Z,400μm,2.2s
KDHN Kadinhani 63.04 59 *i* P **P 02 07 16.5 -0.3**
ANTO Ankara 63.20 57 P **P 02 07 18.3 +0.5**
SNR=16
ANTO Ankara 63.20 57⇓*i*P **P 02 07 17.6 -0.3**
ANTO Ankara 63.20 57 *e*P **P 02 07 17.8 0.0**
comp=Z,54nm,1.3s,mb5.5
ANTO LR LR
comp=Z,383nm,22.0s,MS4.5
LBCM Butte Creek Ri 63.21 304 P **P 02 07 17.8 -0.1**
OSD Olympics--Snow 63.21 312 P **P 02 07 18.3 +0.6**
CMB Columbia Colle 63.21 301 *e*P **P 02 07 18.4 +0.4**
CMB pmax pmax
comp=Z,107nm,1.8s,mb5.7
CMB MLR MLR
comp=Z,1μm,19.0s,MS5.1
CMB Columbia Colle 63.21 301 *e*P **P 02 07 18.4 +0.4**
comp=Z,107nm,1.8s,mb5.7
CMB LR LR
comp=Z,1μm,19.0s,MS5.1
BALT Daday 63.22 55 *i* P **P 02 07 17.6 -0.4**
OBC Olympics--Boni 63.41 312 P **P 02 07 20.0 +0.9**
NLWA Neilton Lookou 63.41 312 *e*P **P 02 07 19.1 0.0**
comp=Z,210nm,1.6s,mb6.0
NLWA LR LR
comp=Z,1μm,20.0s,MS5.2
COR Corvallis 63.68 308 *e*P **P 02 07 21.2 +0.3**
COR pmax pmax
comp=Z,186nm,2.1s,mb5.8
COR MLR MLR
comp=Z,1μm,20.0s,MS5.2
COR Corvallis 63.68 308 *e*P **P 02 07 21.2 +0.2**
comp=Z,186nm,2.1s,mb5.8
COR LR LR
comp=Z,1μm,20.0s,MS5.2
OHCM Honcut 63.69 302 *e*P **P 02 07 21.1 0.0**
SNCC San Nicolas Is 63.88 295 PFAKE 02 07 30.0 +7.5
SNCC LR LR
comp=Z,872nm,22.0s,MS4.9
HUMO Hull Mountain 63.92 306 *e*P **P 02 07 20.5 -2.1**
comp=Z,39nm,1.6s,mb5.2
HUMO LR LR
comp=Z,992nm,20.0s,MS5.0
YBH Yreka Blue Hor 63.97 305 LR LR 02 34 42.8
comp=Z,1μm,18.9s,MS5.1,baz=80,slow=36
YBH Yreka Blue Hor 63.97 305 *e*P **P 02 07 21.3 -1.6**
YBH pmax pmax
comp=Z,34nm,1.6s
YBH MLR MLR
comp=Z,1μm,22.0s
YBH Yreka Blue Hor 63.97 305 *e*P **P 02 07 21.3 -1.6**

comp=Z,34nm,1.6s,mb5.1
YBH LR LR
comp=Z,1µm,22.0s,MS5.1
WDC Whiskeytown Da 64.15 304 *e*P **P 02 07 22.0 -2.1**
WDC pmax pmax
comp=Z,15nm,1.0s,mb5.0
WDC MLR MLR
comp=Z,957nm,21.0s,MS5.0
WDC Whiskeytown Da 64.15 304 *e*P **P 02 07 22.0 -2.1**
comp=Z,15nm,1.0s,mb5.0
WDC LR LR
comp=Z,957nm,21.0s,MS5.0
INK Inuvik 64.26 336 LR LR 02 35 22.9
comp=Z,778nm,19.5s,MS4.9,baz=80,slow=36
SAO San Andreas Ge 64.37 300 PFAKE 02 07 40.0 +14
SAO LR LR
comp=Z,2µm,20.0s,MS5.3
CDAG Cicekdag 64.44 57 *i*P **P 02 07 22.0 -4.1**
CTKT Corum 64.48 56 *i*P **P 02 07 26.2 0.0**
DLBC Dease Lake 64.66 325 *e*P **P 02 07 27.1 0.0**
VOR Voronezh 64.68 43⇑*i*P **P 02 07 26.5 -0.9**
VOR pmax pmax
comp=Z,200nm,2.0s,mb5.8
NSHM Saint Helena R 64.76 302 *e*P **P 02 07 28.5 +0.4**
VRSR Storozhevoye 64.79 44 *e*P **P 02 07 27.1 -1.0**
VRSR pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
VRSR pmax pmax
comp=N,4.0nm,1.2s
VRSR pmax pmax
comp=E,10.0nm,1.3s
HOPS Hopland 64.97 302 *e*P **P 02 07 30.6 +1.1**
comp=E,369nm,1.5s,mb6.2
HOPS LR LR
comp=Z,1µm,20.0s,MS5.0
CSS Prodhromos 64.97 62 *e*P **P 02 07 29.3 -0.3**
MCCM Marconi Confer 65.07 301 PFAKE 02 07 40.0 +10
MCCM LR LR
comp=Z,1µm,19.0s,MS5.2
KCPM Cahto Peak 65.16 303 *e*P **P 02 07 31.1 +0.4**
ANN Anapa 65.25 51 *e*P **P 02 07 29.8 -1.4**
ANN *e*S S 02 16 14.1 -0.5
ANN pmax pmax
comp=Z,148nm,1.7s,mb5.7
ANN MLR MLR
comp=Z,415nm,19.0s,MS4.7
ANN Anapa 65.25 51 *i*P **P 02 07 29.8 -1.4**
YURE YUREGIR 66.20 60 *i*P **P 02 07 36.8 -0.6**
PINB Pinarbasi 66.22 58 *i*P **P 02 07 37.5 -0.1**
VRHR Novokhopersk 66.31 43 *e*P **P 02 07 37.4 -0.5**
VRHR pmax pmax
comp=Z,80nm,1.7s,mb5.5
VRHR pmax pmax
comp=N,20nm,0.9s
VRHR pmax pmax
comp=E,40nm,1.3s
WRAK Wrangell Islan 66.36 323 PFAKE 02 07 50.0 +12
WRAK LR LR
comp=Z,723nm,20.0s,MS4.9
ANDN Andirin 66.51 59 *i*P **P 02 07 39.1 -0.3**
COBT Iskenderun 66.77 60 *i*P **P 02 07 41.4 +0.3**
YAYL Yayladag 66.80 60 *i*P **P 02 07 41.0 -0.4**
SKAG Skagway 67.08 326 *e*P **P 02 07 42.3 -0.4**
comp=Z,70nm,1.9s,mb5.4
SOC Sochi 67.16 52*d*/*i*P **P 02 07 43.5 0.0**
SOC *e**SP sP 02 07 47.3 -0.7
SOC *e* 02 08 12.1
SOC *e*S S 02 16 38.3 +0.3
SOC *e* 02 17 38.9
SOC pmax pmax
comp=Z,38nm,1.4s,mb5.2
SOC MLR MLR
comp=Z,98nm,17.0s,MS4.1
SOC Sochi 67.16 52 *i*P **P 02 07 44.8 +1.3**
GZT Gaziantep 67.50 59 *i*P **P 02 07 45.8 +0.1**
DAWY Dawson 67.60 332 *e*P **P 02 07 45.2 -0.7**
TRQA Tornquist 67.64 195 *e*P **P 02 07 43.2 -3.1**
comp=Z,13nm,1.4s,mb4.8
TRQA LR LR
comp=Z,455nm,19.0s,MS4.7
HYT Haines Junctio 67.73 328 *e*P **P 02 07 48.6 +1.9**
SIT Sitka 67.76 324 PFAKE 02 08 00.0 +13
SIT LR LR
comp=Z,1µm,22.0s,MS5.0
EGAK Eagle 68.11 333 *e*P **P 02 07 48.0 -1.1**
comp=Z,24nm,1.1s,mb5.2
EGAK LR LR
comp=Z,685nm,22.0s,MS4.8
KOPT Kop Dagi 68.82 55 *i*P **P 02 07 55.2 +1.2**
GOF Gofitskoye 68.97 49 *e*P **P 02 07 52.0 -2.9**
GOF pmax pmax
comp=Z,70nm,1.2s,mb5.5
KIV Kislovodsk 69.09 51 P **P 02 07 56.9 +1.3**
comp=Z,265nm,1.2s,mb6.0,SNR=11
KIV Kislovodsk 69.09 51 P **P 02 07 56.3 +0.7**
SNR=24
KIV Kislovodsk 69.09 51*d*/*i*P **P 02 07 56.0 +0.4**
KIV *i* 02 08 02.9
KIV *i* 02 08 19.9
KIV *e*S S 02 17 05.0 +4.0
KIV pmax pmax
comp=Z,63nm,1.6s,mb5.3
KIV MLR MLR
comp=Z,200nm,17.0s,MS4.4
KIV Kislovodsk 69.09 51⇓*i*P **P 02 07 56.3 +0.7**
KIV Kislovodsk 69.09 51⇓P **P 02 07 56.4 +0.7**
DIYA Diyarbakir 69.23 57 *i*P **P 02 07 57.1 +0.5**
ARTV Artvin 69.47 54 *i*P **P 02 07 56.7 -1.3**
ERZM Erzurum 69.49 55 *i*P **P 02 07 59.6 +1.5**
HOMI Horasan 69.83 55 *i*P **P 02 08 00.8 +0.5**
MARD Mardin 69.93 58 *i*P **P 02 08 01.1 +0.1**
ONI Oni 70.07 52 P **P 02 08 02.2 +0.5**
COLA College 70.74 334*d*/*i*P **P 02 08 05.1 -0.2**
COLA College 70.74 334 *e*P **P 02 08 05.2 -0.1**
comp=Z,38nm,1.1s,mb5.2
COLA LR LR
comp=Z,806nm,19.0s,MS5.0
GOR Gori 70.74 52 P **P 02 08 05.8 0.0**
TBLG Delisi 71.27 52 P **P 02 08 08.9 -0.1**
MTA Mtatsminda 71.32 52 P **P 02 08 09.4 +0.1**
EYAK Cordova Ski Ar 71.62 329 *e*P **P 02 08 11.1 +0.3**
comp=Z,25nm,1.2s,mb5.0
DGRG David-gareji 71.81 52 P **P 02 08 11.7 -0.6**
GNI Garni 71.83 54 P **P 02 08 13.3 +0.9**
SNR=45
GNI Garni 71.83 54*d*/*i*P **P 02 08 12.9 +0.4**
GNI pmax pmax
comp=Z,108nm,1.7s
GNI Garni 71.83 54 *e*P **P 02 08 13.5 +1.0**
comp=Z,254nm,1.5s,mb5.9
GNI LR LR
comp=Z,165nm,20.0s,MS4.3
MSL Mosul 72.00 58 *ex* x 02 08 15.0
MSL *ex* x 02 08 36.0
MSL *ex* x 02 17 40.0
HAKT HAKKARI 72.03 57 *i*P **P 02 08 14.0 +0.3**
IMA2 Indian Mountai 72.38 336 *e*P **P 02 08 15.3 +0.1**
PLCA Paso Flores 72.49 201 P **P 02 08 14.9 -1.2**
comp=Z,4.4nm,0.9s,mb4.4,baz=9.9,slow=6.9,SNR=10.0
PLCA LR LR 02 40 28.3
comp=Z,281nm,20.0s,MS4.5,baz=15,slow=36
PMR Palmer 72.67 331 *e*P **P 02 08 16.6 -0.4**
PMR pmax pmax
comp=Z,172nm,2.3s,mb5.6
PMR Palmer 72.67 331 *e*P **P 02 08 16.6 -0.4**
comp=Z,172nm,2.3s,mb5.6
MAK Makhachkala 72.73 50 *e*P **P 02 08 16.9 -0.8**
MAK *i* 02 08 36.1
MAK S S 02 17 43.7 +0.4
MAK pmax pmax
comp=Z,101nm,1.1s,mb5.7
MAK MLR MLR
comp=Z,498nm,19.0s,MS4.8
SLKM Skilak Lake 73.64 330 P **P 02 08 22.7 -0.1**
SLKM Skilak Lake 73.64 330 *e*P **P 02 08 21.8 -0.9**
ARU Arti 73.86 34 P **P 02 08 24.2 +0.1**
comp=Z,233nm,1.4s,mb5.9,SNR=15
ARU Arti 73.86 34*d*/*i*P **P 02 08 24.0 -0.1**
ARU *e* 02 11 04.9
ARU *e*PPP 02 12 52.9
ARU *e*S S 02 17 54.7 -0.9
ARU pmax pmax
comp=Z,96nm,1.7s,mb5.5
ARU Arti 73.86 34⇑*i*P **P 02 08 24.1 0.0**
SVE Sverdlovsk 74.70 33⇑*e*P **P 02 08 29.3 +0.2**
SVE *e*S S 02 18 12.3 +7.2
SVE pmax pmax
comp=Z,96nm,1.6s,mb5.5
SVW2 Sparrevohn 75.63 332 *e*P **P 02 08 33.5 -0.8**
TSUM Tsumeb 75.81 121 *e*P **P 02 08 35.6 -0.3**
comp=Z,36nm,1.4s,mb5.1
TSUM LR LR
comp=Z,503nm,20.0s,MS4.8
KDAK Kodiak Island 76.02 328 *e*P **P 02 08 36.3 -0.3**
comp=Z,122nm,2.0s,mb5.5
KDAK LR LR
comp=Z,810nm,19.0s,MS5.0
AKTK Aktyubinsk 76.24 40 P **P 02 08 37.4 -0.6**
AKTO Aktyubinsk 76.24 40 P **P 02 08 37.4 -0.6**
comp=Z,10nm,1.0s,mb4.7,baz=306,slow=5.2,SNR=38
AKTO Aktyubinsk 76.24 40 P **P 02 08 37.1 -0.9**
AKTO pmax pmax
comp=Z,14nm,1.5s,mb4.7
AB31 Akbulak array 77.89 41 P **P 02 08 47.1 -0.2**
AB31 pmax pmax
comp=Z,110nm,1.9s,mb5.5
AB31 Akbulak array 77.89 41⇑*e*P **P 02 08 47.2 -0.1**
TIXI Tiksi 80.69 2*d*/*i*P **P 02 09 02.1 -0.1**
TIXI *e*S S 02 19 10.4 +1.1
TIXI pmax pmax
comp=Z,81nm,1.8s,mb5.3
TIXI MLR MLR
comp=Z,106nm,15.0s,MS4.3
TIXI Tiksi 80.69 2 *e*P **P 02 09 02.2 0.0**
comp=Z,177nm,1.8s,mb5.7
TIXI LR LR
comp=Z,237nm,19.0s,MS4.6
BRVK Borovoye 81.41 34 P **P 02 09 06.4 0.0**
comp=Z,96nm,1.0s,mb5.7,SNR=8.8
BRVK Borovoye 81.41 34 P **P 02 09 07.0 +0.7**
SNR=22
BRVK Borovoye 81.41 34 *i*P **P 02 09 06.8 +0.4**
BVA0 Borovoye Array 81.48 34 *i*P **P 02 09 05.7 -1.1**
BVA0 pmax pmax
comp=Z,36nm,2.8s,mb4.8
BVAR Borovoye Array 81.48 34 LR LR 02 41 25.4
comp=Z,171nm,20.4s,MS4.4,baz=164,slow=33
LSZ Lusaka 82.05 112 *e*P **P 02 09 10.4 +0.1**
LSZ pmax pmax
comp=Z,58nm,1.5s,mb5.3
LSZ MLR MLR
comp=Z,772nm,22.0s,MS5.0
LSZ Lusaka 82.05 112 *e*P **P 02 09 10.4 +0.1**
comp=Z,58nm,1.5s,mb5.3
LSZ LR LR
comp=Z,772nm,22.0s,MS5.0
ABKT Ailbek 82.19 51 P **P 02 09 10.8 0.0**
comp=Z,180nm,1.3s,mb5.8,SNR=9.2
NVS Novosibirsk 86.11 27 *i*P **P 02 09 30.2 -0.2**
NVS *e* 02 14 43.9
NVS pmax pmax
comp=N,23nm,2.0s
NVS pmax pmax
comp=Z,78nm,2.0s,mb5.6
NVS pmax pmax
comp=E,16nm,1.9s
KURK Kurchatov 86.91 32 P **P 02 09 34.2 -0.2**
comp=E,118nm,1.4s,mb5.9,SNR=11
KURK Kurchatov 86.91 32 P **P 02 09 34.6 +0.2**
SNR=23
KURK Kurchatov 86.91 32*d*/*i*P **P 02 09 34.1 -0.3**
KURK pmax pmax
comp=Z,54nm,1.7s,mb5.5
KURK Kurchatov 86.91 32 *i*P **P 02 09 34.2 -0.2**
HATD Hatta, Dubai 87.09 64⇓P **P 02 09 35.9 0.0**
SNR=13
ASHO Ashiyiah 87.10 64 P **P 02 09 35.9 0.0**
SNR=7.7
ZAL Zalesovo 87.39 27 P **P 02 09 36.1 -0.6**
ZAL 02 12 59.3
ZALV Zalesovo Beam 87.39 27 P **P 02 09 36.1 -0.6**
comp=Z,7.7nm,1.0s,mb4.9,baz=310,slow=6.9,SNR=28
ZALV PP PP 02 12 59.3 -1.1
comp=Z,0.5nm,0.4s,baz=282,slow=7.2,SNR=3.2
ZALV LR LR 02 48 59.0
comp=Z,148nm,18.1s,MS4.4,baz=135,slow=36
SEY Seymchan 88.61 353*d*/*i*P **P 02 09 42.3 0.0**
SEY Seymchan 88.61 353 *i*P **P 02 09 42.3 0.0**
KRAR Krasnoyarsk 88.83 23*c*/*i*P **P 02 09 43.3 -0.2**
KRAR pmax pmax
comp=Z,108nm,1.7s,mb5.9
FRU Bishkek 89.92 40 *e*P **P 02 09 50.0 +1.1**
FRU pmax pmax
comp=Z,80nm,2.0s,mb5.7
YAK Yakutsk 90.33 3⇑*i*P **P 02 09 50.2 -0.2**
YAK pmax pmax
comp=Z,87nm,2.5s,mb5.6
YAK Yakutsk 90.33 3⇑*i*P **P 02 09 50.3 -0.1**
YAK LR LR
comp=Z,223nm,22.0s,MS4.5
MK31 Makanchi Array 91.37 34 *i*P **P 02 09 54.9 -0.6**
MK31 pmax pmax
comp=Z,45nm,1.6s,mb5.5
MKAR Makanchi Array 91.37 34 P **P 02 09 55.2 -0.3**
comp=Z,3.5nm,1.0s,mb4.6,baz=311,slow=4.0,SNR=22
MKAR LR LR 02 50 50.2
comp=Z,160nm,18.0s,MS4.5,baz=317,slow=36
MKAR Makanchi Array 91.37 34⇑*e*P **P 02 09 55.5 0.0**
BOD Bodaibo 92.73 12⇓*i*P **P 02 10 00.4 -1.2**
BOD pmax pmax
comp=Z,16nm,1.8s,mb5.2
KSH Kashi 92.82 42 *i*P **P 02 10 09.1 +6.7**
KSH *e*AP pP 02 10 13.1 +7.3
KSH *e*XP sP 02 10 16.1 +9.2
KSH LR LR
comp=N,501nm,4.8s
KSH LR LR
comp=E,334nm,4.9s
KSH LR LR
comp=Z,366nm,6.0s
SMY Shemya 93.14 338 PFAKE 02 10 10.0 +6.4
SMY LR LR
comp=Z,481nm,20.0s,MS5.0
IRK Irkutsk 95.61 19 *e*P **P 02 10 13.7 -1.2**
IRK pmax pmax
comp=Z,41nm,2.2s,mb5.5
TLY Talaya 95.92 20 *e*P **P 02 10 16.4 +0.1**
TLY pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
TLY MLR MLR
comp=Z,212nm,18.0s,MS4.7
TLY Talaya 95.92 20 *i*P **P 02 10 16.0 -0.3**
WMQ Urumqi 96.15 33 P **P 02 10 18.0 +0.5**
WMQ AP pP 02 10 23.0 +2.1
WMQ XP sP 02 10 26.4 +4.3
WMQ PP PP 02 14 13.0 +3.4
WMQ SKS 02 20 52.5
WMQ S S 02 21 33.0 -3.9
WMQ AMB AMB
comp=Z,15nm,1.2s,mb5.3
WMQ AMB AMB
comp=Z,148nm,4.8s
WMQ LR LR
comp=N,714nm,18.2s
WMQ LR LR
comp=E,453nm,24.0s
WMQ LR LR
comp=Z,674nm,25.6s
ZAK Zakamensk 96.95 20 *e*P **P 02 10 20.7 -0.4**
ZAK pmax pmax
comp=Z,3.0nm,1.9s,mb4.4
PET Petropavlovsk 97.09 346 PFAKE 02 10 30.0 +8.4
PET LR LR
comp=Z,360nm,20.0s,MS4.8
PETK Petropavlovsk- 97.21 347 LR LR 02 53 47.6
comp=Z,243nm,21.5s,MS4.7,baz=48,slow=35
POHA Pohakuloa 98.55 298 PFAKE 02 10 40.0 +11
POHA LR LR
comp=Z,799nm,19.0s,MS5.2
SONM Songino Array 100.16 20 P Pdif 02 10 35.3 -0.2
comp=Z,0.3nm,0.5s,baz=289,slow=4.5,SNR=4.1
SONM PP PP 02 14 39.0 -1.0
comp=Z,0.3nm,0.5s,baz=8.6,slow=5.6,SNR=3.1
ULN Ulaanbaatar 100.33 19 PFAKE 02 10 50.0 +14
ULN LR LR
comp=Z,193nm,19.0s,MS4.6
HIA Hailar 101.92 11 PFAKE 02 10 50.0 +6.7
HIA LR LR
comp=Z,243nm,20.0s,MS4.7
YSS Yuzh-Sakhalins 105.32 355 PFAKE 02 15 20.0 +7.7
YSS LR LR
comp=Z,92nm,19.0s,MS4.3
MDJ Mudanjiang 107.69 5 PFAKE 02 15 30.0 +13
MDJ LR LR
comp=Z,214nm,20.0s,MS4.7
HHC Hu-ho-hao-te 108.05 19 *e*PDIF Pdif 02 11 06.5 -4.0
HHC S Sdif 02 23 08.5 -8.1
HHC PP PP
comp=Z,83nm,7.2s
HHC LR LR
comp=N,171nm,17.4s,MS4.8
HHC LR LR
comp=E,186nm,18.4s,MS4.8
HHC LR LR
comp=Z,302nm,17.4s,MS4.9
CN2 Changchun 108.09 8 *e*PDIF Pdif 02 11 11.9 +1.2
CN2 PP PP 02 15 43.6 +4.6
CN2 LR LR
comp=N,200nm,15.0s,MS4.9
CN2 LR LR
comp=E,190nm,15.0s,MS4.9
CN2 LR LR
comp=Z,170nm,19.0s,MS4.6
LSA Lhasa 108.58 40 PFAKE 02 15 30.0 +11
LSA LR LR
comp=Z,257nm,21.0s,MS4.8
XMAS Kiritimati 109.52 283 PFAKE 02 15 30.0 +9.0
XMAS LR LR
comp=Z,551nm,20.0s,MS5.1
BJI Beijing 110.04 16 PDIF Pdif 02 11 19.8 +0.4
BJI PP PP
comp=Z,187nm,4.5s
BJI LR LR
comp=N,211nm,17.5s,MS4.8
BJI LR LR
comp=E,164nm,20.0s,MS4.8
BJI LR LR
comp=Z,204nm,18.1s,MS4.7
BJT Baijiatuan 110.06 16 PFAKE 02 15 30.0 +8.6
BJT LR LR
comp=Z,309nm,19.0s,MS4.9
CD2 Chengdu 114.04 30 *e*PKP PKiKP 02 15 27.6 -1.6
CD2 PP PP 02 16 25.9 +3.6
CD2 PKS 02 19 03.0
CD2 SKS SKSdf 02 22 34.8 -6.9
CD2 SKKS SKKSac 02 23 14.9 -11
CD2 PP PP
comp=Z,100nm,9.6s
CD2 LR LR
comp=N,330nm,13.2s
CD2 LR LR
comp=E,710nm,19.2s
CD2 LR LR
comp=Z,270nm,18.0s,MS4.9
INCN Inchon 114.47 8 PFAKE 02 15 40.0 +10
INCN LR LR
comp=Z,335nm,20.0s,MS4.9
MAJO Matsushiro 115.95 358 PFAKE 02 15 40.0 +7.3
MAJO LR LR
comp=Z,200nm,19.0s,MS4.8
NJ2 Nanjing 118.29 16 *e*PKP PKPdf 02 15 33.2 -4.2
KMI Kunming 118.44 34 PKP PKPdf 02 15 36.0 -1.8
SSE Sheshan 119.76 15 PKP PKPdf 02 15 35.0 -5.2
SSE PP PP 02 17 02.1 +0.2
SSE PP PP
comp=Z,21nm,3.8s
SSE LR LR
comp=N,55nm,15.4s,MS4.5
SSE LR LR
comp=E,75nm,15.3s,MS4.5
SSE LR LR
comp=Z,138nm,13.5s,MS4.8
CMAR Chiang Mai Arr 121.72 42 PKP PKPdf 02 15 43.4 -0.9
comp=Z,5.9nm,0.9s,baz=304,slow=2.9,SNR=17
CMAR PP PP 02 17 14.9 -1.1
comp=Z,1.7nm,0.3s,baz=300,slow=7.9,SNR=4.9
CMAR Chiang Mai Arr 121.72 42⇑*i*PKIKP PKPdf 02 15 43.4 -0.9
TATO Taipei 125.71 16 PFAKE 02 16 00.0 +8.2
TATO LR LR
comp=Z,438nm,22.0s,MS5.1
QIZ Qiongzhong 127.04 31 PFAKE 02 16 10.0 +16
QIZ LR LR
comp=Z,151nm,20.0s,MS4.7
CASY Casey 138.45 165 *e*PKPdf PKPdf 02 16 13.5 -0.9
CASY LR LR
comp=Z,680nm,20.0s,MS5.4
DAV Davao City (W) 143.91 18 PFAKE 02 16 40.0 +14
DAV LR LR
comp=Z,260nm,20.0s,MS5.0
HNR Honiara 150.88 304 PFAKE 02 16 50.0 +13
HNR LR LR
comp=Z,597nm,20.0s,MS5.4
PMG Port Moresby 158.83 328 PFAKE 02 17 00.0 +12
PMG LR LR
comp=Z,799nm,20.0s,MS5.6
FITZ Fitzroy Crossi 166.49 46 *e*P PKPab 02 17 55.9 -1.6
comp=Z,12nm,1.0s
CTAO Charters Tower 167.80 307 PFAKE 02 17 10.0 +13
CTAO LR LR
comp=Z,703nm,20.0s
WRA Warramunga Arr 172.03 11 PKP PKPdf 02 16 58.0 -1.0
comp=Z,0.5nm,0.8s,baz=90,slow=2.2,SNR=5.6
WRA PKPab PKPab 02 18 21.4 -0.4
comp=Z,6.1nm,1.0s,baz=352,slow=4.9,SNR=12
WRA PP PP 02 22 07.8 -3.8
comp=Z,0.9nm,1.0s,baz=4.0,slow=3.8,SNR=6.9
WB2 Warramunga Arr 172.03 11 *e*P PKPab 02 18 20.7 -1.0
ASAR Alice Springs 175.49 24 PKP PKPdf 02 16 58.9 -1.3
comp=Z,0.7nm,0.9s,baz=325,slow=1.5,SNR=6.1
ASAR PKPab PKPab 02 18 37.9 +0.8
comp=Z,1.4nm,0.9s,baz=342,slow=5.5,SNR=8.1
ASAR PP PP 02 22 26.9 -1.8
comp=Z,1.9nm,1.1s,baz=357,slow=3.1,SNR=7.7

IDC 01 02:07:04.7±2.3, 2748N×4408W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/22, mbtmpg3.9/4, MS4.0/2, Ms1 4.0/2, ms1mx3.4/28, Error ellipse: s-maj=67.3km s-min=31.4km az=11.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	**22.35**	**250**	LR	LR	02 18 29.1	
	comp=Z,283nm,19.7s,baz=270,slow=31						
MDT	**Midelt**	**34.40**	**71**	LR	LR	02 24 09.1	
	comp=Z,274nm,18.1s,baz=62,slow=30						
TORD	**Torodi Ar. Bea**	**44.98**	**99**	P	P	02 15 22.1	0.0
	0.7nm,1.0s,baz=297,slow=9.9,SNR=3.7						
NB2	**NORSAR Subarra**	**49.67**	**32**	P	P	02 15 58.6	+0.6
	comp=Z,13nm,1.4s,baz=253,slow=7.9						
NOA	**NORSAR Array B**	**49.67**	**32**	P	P	02 15 58.2	+0.3
	comp=Z,0.6nm,0.8s,baz=235,slow=8.7,SNR=4.6						
PDAR	**Pinedale Array**	**54.41**	**305**	P	P	02 16 33.8	+0.2
	comp=Z,1.4nm,0.7s,baz=83,slow=8.4,SNR=8.8						
AKASG	**Malin Array Be**	**58.90**	**45**	P	P	02 17 05.0	-0.3
	comp=Z,0.3nm,0.4s,baz=275,slow=5.6,SNR=6.5						

IDC 01 02:09:49.8±1.0, 2749N×4419W, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/22, mbtmpg3.8/5, Error ellipse: s-maj=31.0km s-min=23.5km az=164.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**45.07**	**99**	P	P	02 18 07.5	-0.3
	0.9nm,1.0s,baz=294,slow=10.0,SNR=3.8						
SIV	**San Ignacio**	**46.22**	**203**	P	P	02 18 17.0	+0.2
	1.2nm,0.7s,baz=358,slow=9.1,SNR=6.1						
GERES	**GERESS Array B**	**48.95**	**48**	P	P	02 18 37.9	+0.1
	0.5nm,0.8s,baz=187,slow=21,SNR=3.1						
NOA	**NORSAR Array B**	**49.71**	**32**	P	P	02 18 43.5	+0.1
	2.5nm,1.0s,baz=252,slow=7.8,SNR=4.1						
TXAR	**Lajitas Array**	**51.85**	**287**	P	P	02 18 59.5	-0.5
	0.2nm,0.6s,baz=91,slow=7.5,SNR=4.2						
PDAR	**Pinedale Array**	**54.32**	**305**	P	P	02 19 18.5	+0.5
	1.0nm,0.7s,baz=94,slow=7.9,SNR=7.1						

*ISCJB **01** 02:10:32.8±1.9, 15.30N±0.08×92.3W±0.1, h156km±13km, Error ellipse: s-maj=16.1km s-min=13.2km az=169.0*
*NEIC **01** 02:10:32.2, 15.31N×92.17W, h174km, MD4.2(MEX), After MEX.*
*MEX **01** 02:10:32.3±0.9, 15.32N×92.18W, h173km±9km, MD4.2*
ISC 01 02:10:33.1±1.9, 1531N±008×9228W±010, h158km±12km, n9, σ0s60/17, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.40**	**178**	*e*P	**Pn**	**02 10 53.8**	**-1.0**
THIG				*i* S	**Sn**	**02 11 12.3**	**+0.8**
CCIG	**Comitan**	**0.97**	**8**	*i* P	**Pn**	**02 10 58.1**	**-0.3**
CCIG				*i* S	**Sn**	**02 11 17.7**	**-0.1**
SCX	**San Cristobal**	**1.46**	**346**	*i* P	**Pn**	**02 11 03.7**	**+0.9**
SCX				*i* S	**Sn**	**02 11 25.5**	**-0.1**
TGIG		**1.67**	**331**	*i* P	**Pn**	**02 11 05.1**	**+0.1**
TGIG				*i* S	**Sn**	**02 11 29.1**	**-0.4**
HUIG	**Huatulco**	**3.72**	**278**	*i* P	**Pn**	**02 11 29.8**	**-0.1**
HUIG				*i* S	**Sn**	**02 12 14.5**	**+0.4**
HUIG	**Huatulco**	**3.72**	**278**	*i* P	**Pn**	**02 11 29.8**	**-0.1**
HUIG				*i* S	**Sn**	**02 12 12.3**	**-1.7**
VHO	**Vista Hermosa**	**4.62**	**293**	*i* P	**Pn**	**02 11 41.8**	**+0.1**
VHO				*i* S	**Sn**	**02 12 35.5**	**+0.4**
VHO	**Vista Hermosa**	**4.62**	**293**	*i* P	**Pn**	**02 11 41.5**	**-0.1**
VHO				*i* S	**Sn**	**02 12 35.9**	**+0.8**
UTMO	**Huajuapan**	**5.86**	**296**	*i* P	**Pn**	**02 11 58.2**	**+0.2**

ISCJB ***01*** *02:19:40.0±0.4, 4732N±006×15506E±006, h10km, mb4.3/45, Error ellipse: s-maj=9.6km s-min=4.6km az=154.8*
IDC ***01*** *02:19:40.0±0.7, 4733N×15503E, h0km, mb4.2/22, mb1 4.3/24, mb1mx4.3/28, mbtmp4.2/24, ML3.9/2, Error ellipse: s-maj=20.8km s-min=13.5km az=171.0*
BJI ***01*** *02:19:41.8, 4814N×15507E, h11km, mB4.5, mb4.4, Ms4.1, Msz3.7*
NEIC ***01*** *02:19:41.8±0.4, 4737N×15501E, h10km, mb4.5/13, Error ellipse: s-maj=11.5km s-min=6.4km az=163.0*
SZGRF ***01*** *02:19:44.8, 4790N×157.15E, h14km, mb4.6, East of Kuril Islands, Russia*
MOS ***01*** *02:19:45.1±1.1, 4723N×15499E, h53km, mb4.5/28, Error ellipse: s-maj=11.2km s-min=9.1km az=115.1*
ISC 01 02:19:42.6±0.4**, 4730N**±007×**15506E**±006**, h15**km**,** **h15**km±2.8km**:pP-P, n109,** $\sigma 1^{s}$**12**/111**, mb4.3**/45**, 6C-6D,** **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.46**	**11**	*e*PN	**Pn**	**02 20 32.5**	**-3.3**
SKR				MLR	MLR		
	comp=N,1μm,18.0s						
SKR				MLR	MLR		
	comp=E,2μm,18.0s						
KUR	**Kuril'sk**	**5.40**	**250**	*e*PN	**Pn**	**02 21 02.0**	**-0.5**
KUR				*e*S	**Sn**	**02 22 03.5**	**-0.8**
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax			
	comp=N,170nm,0.7s						
KUR				smax			
	comp=E,110nm,0.7s						
PETK	**Petropavlovsk-**	**6.05**	**15**	Pn	**Pn**	**02 21 10.2**	**-1.3**
	comp=E,2.3nm,0.3s,baz=181,slow=11,SNR=21						
PETK				Sn	**Sn**	**02 22 23.0**	**+2.5**
	baz=200,slow=12,SNR=2.0						
PET	**Petropavlovsk**	**6.17**	**21**	*e*PN	**Pn**	**02 21 09.6**	**-3.5**
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
PET	**Petropavlovsk**	**6.17**	**21**	*e*Pn	**Pn**	**02 21 10.2**	**-2.9**
YSS	**Yuzh-Sakhalins**	**8.40**	**272**	*e*PN	**Pn**	**02 21 47.0**	**+3.3**
YSS				*e*S	**Sn**	**02 23 21.0**	**+2.9**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				MLR	MLR		
	comp=Z,500nm,12.0s						
YSS	**Yuzh-Sakhalins**	**8.40**	**272**	*e*Pn	**Pn**	**02 21 44.0**	**+0.3**
	comp=Z,13nm,0.4s						
ASAJ	**Asahikawa**	**9.28**	**254**	Pn	**Pn**	**02 21 58.5**	**+2.7**
	comp=Z,1.0nm,0.3s,baz=96,slow=14,SNR=16						
ASAJ				Sn	**Sn**	**02 23 39.0**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=336,slow=24,SNR=1.4						
KLR	**Kul'dur**	**15.63**	**286**	*e*P	**Pn**	**02 23 24.3**	**+2.2**
KLR				MLR	MLR		
	comp=Z,500nm,12.0s						
SEY	**Seymchan**	**15.74**	**355**	*e*P	**Pn**	**02 23 30.7**	**+7.3**
MJAR	**Matsushiro Arr**	**16.48**	**235**	Pn	**Pn**	**02 23 32.4**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=24,slow=14,SNR=5.2						
MJAR	**Matsushiro Arr**	**16.48**	**235**	P	**Pn**	**02 23 32.4**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**16.48**	**235**	Pn	**Pn**	**02 23 32.4**	**-0.7**
KSRS	**Korea Array**	**22.23**	**254**	P	**P**	**02 24 38.8**	**+0.3**
	comp=Z,5.9nm,0.9s,mb4.0,baz=57,slow=10.0,SNR=12						
KSRS	**Korea Array**	**22.23**	**254**	P	**P**	**02 24 38.8**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
BOD	**Bodaibo**	**26.67**	**308**	*e*P	**P**	**02 25 18.5**	**-2.1**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.8						
ULN	**Ulaanbaatar**	**31.97**	**289**	*e*P	**P**	**02 26 05.5**	**-2.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
ULN	**Ulaanbaatar**	**31.97**	**289**	*e*P	**P**	**02 26 05.5**	**-2.2**
	comp=Z,1.7nm,0.7s,mb4.0						
SONM	**Songino Array**	**32.41**	**289**	P	**P**	**02 26 11.7**	**+0.2**
	comp=Z,1.3nm,0.7s,mb3.9,baz=66,slow=8.6,SNR=7.9						
SONM	**Songino Array**	**32.41**	**289**	P	**P**	**02 26 11.7**	**+0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
IMA2	**Indian Mountai**	**32.58**	**36**	*e*P	**P**	**02 26 12.3**	**-0.5**
TLY	**Talaya**	**33.11**	**297**	*e*P	**P**	**02 26 17.3**	**-0.4**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
ZAK	**Zakamensk**	**33.65**	**295**	*e*P	**P**	**02 26 19.0**	**-3.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
COLA	**College**	**34.88**	**39***d*	*i*P	**P**	**02 26 32.2**	**-0.6**
COLA	**College**	**34.88**	**39**	*e*P	**P**	**02 26 32.6**	**-0.2**
	comp=Z,5.0nm,1.1s,mb4.4						
XAN	**Xi'an**	**36.88**	**266**	P	**P**	**02 26 52.0**	**+1.6**
XAN				AP	pP	02 27 00.5	+5.5
XAN				XP	sP	02 27 04.4	+7.5
XAN				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.1						
XAN				AMB	AMB		
	comp=Z,19nm,4.0s						
EGAK	**Eagle**	**37.74**	**39**	*e*P	**P**	**02 26 56.4**	**-0.9**
	comp=Z,7.9nm,1.0s,mb4.4						
HYT	**Haines Junctio**	**39.95**	**45**	*e*P	**P**	**02 27 18.3**	**+2.5**
GTA	**Gaotai**	**40.19**	**280**	*e*P	**P**	**02 27 21.5**	**+3.3**
GTA				AP	pP	02 27 25.3	+2.5
GTA				XP	sP	02 27 28.3	+3.6
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
ZALV	**Zalesovo Beam**	**43.37**	**306**	P	**P**	**02 27 42.7**	**-1.2**
	comp=Z,2.4nm,0.4s,mb4.3,baz=59,slow=7.8,SNR=11						
ZALV	**Zalesovo Beam**	**43.37**	**306**	P	**P**	**02 27 42.7**	**-1.2**
ZAL	**Zalesovo**	**43.38**	**306**	P	**P**	**02 27 42.7**	**-1.3**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NVS	**Novosibirsk**	**43.91**	**308**	*e*P	**P**	**02 27 48.6**	**+0.3**
MKAR	**Makanchi Array**	**47.87**	**298**	P	**P**	**02 28 18.5**	**-1.1**
	comp=Z,2.6nm,0.7s,mb4.4,baz=104,slow=3.9,SNR=8.8						
MKAR	**Makanchi Array**	**47.87**	**298**⇑	*e*P	**P**	**02 28 20.5**	**+0.9**
KURK	**Kurchatov**	**48.16**	**304**	P	**P**	**02 28 21.7**	**-0.1**
	comp=Z,4.7nm,0.6s,mb4.7,baz=69,slow=8.5,SNR=13						
KURK	**Kurchatov**	**48.16**	**304***c*	*i*P	**P**	**02 28 21.4**	**-0.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
YKA	**Yellowknife Ar**	**49.68**	**38**	P	**P**	**02 28 33.3**	**0.0**
	comp=Z,2.0nm,0.7s,mb4.3,baz=294,slow=7.1,SNR=16						
YKA	**Yellowknife Ar**	**49.68**	**38**	P	**P**	**02 28 33.3**	**0.0**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	**Borovoye Array**	**51.53**	**310**	P	**P**	**02 28 47.6**	**+0.2**
	comp=Z,4.1nm,0.6s,mb4.5,baz=56,slow=8.2,SNR=25						
BVAR	**Borovoye Array**	**51.53**	**310**	P	**P**	**02 28 47.6**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SPITS	**Spitsbergen Ar**	**52.30**	**350**	P	**P**	**02 28 53.1**	**+0.3**
	comp=Z,4.8nm,0.8s,mb4.5,baz=6.9,slow=16,SNR=3.7						
SPITS	**Spitsbergen Ar**	**52.30**	**350**	P	**P**	**02 28 53.1**	**+0.3**
SPITS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	**Arti**	**55.50**	**318***c*	*i*P	**P**	**02 29 16.2**	**-0.2**
ARU				*e*		02 31 19.6	
ARU				*e*S	**S**	**02 36 56.9**	**-3.8**
ARU				*e*SS	SS	02 40 39.1	-5.7
ARU				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
YBH	**Yreka Blue Hor**	**56.31**	**63**	P	**P**	**02 29 22.8**	**+0.3**
	comp=Z,2.3nm,0.8s,mb4.3,baz=341,slow=4.7,SNR=5.4						
YBH	**Yreka Blue Hor**	**56.31**	**63**	P	**P**	**02 29 22.8**	**+0.3**
YBH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**57.76**	**341**	P	**P**	**02 29 30.6**	**-1.8**
	comp=Z,1.0nm,0.5s,mb4.1,baz=35,slow=6.9,SNR=7.8						
ARCES	**ARCESS Array B**	**57.76**	**341**	P	**P**	**02 29 30.6**	**-1.8**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WVOR	**Wild Horse Val**	**58.33**	**60**	*e*P	**P**	**02 29 36.4**	**-0.4**
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
WVOR	**Wild Horse Val**	**58.33**	**60**	*e*P	**P**	**02 29 36.4**	**-0.3**
	comp=Z,1.5nm,0.8s,mb4.1						
HLID	**Hailey**	**60.10**	**57**	*e*P	**P**	**02 29 49.1**	**+0.1**
	comp=Z,2.3nm,1.1s,mb4.1						
QLMT	**Earthquake Lak**	**60.98**	**54**	*e*P	**P**	**02 29 55.7**	**+0.8**
NVAR	**Mina Array Bea**	**61.00**	**64**	P	**P**	**02 29 55.0**	**-0.2**
	comp=Z,1.7nm,0.7s,mb4.3,baz=296,slow=7.5,SNR=12						
JOF	**Joensuu**	**61.42**	**334**	*e*p	**P**	**02 29 57.9**	**+0.2**
	comp=Z,3.2nm,0.6s,mb4.6						
JOF	**Joensuu**	**61.42**	**334**	*e*P	**P**	**02 29 57.9**	**+0.2**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
LAO	**LASA Array**	**62.59**	**50**	*e*P	**P**	**02 30 06.5**	**+0.7**
	comp=Z,2.8nm,0.6s,mb4.6						
PDAR	**Pinedale Array**	**63.34**	**55**	P	**P**	**02 30 10.8**	**0.0**
	comp=Z,3.6nm,0.9s,mb4.5,baz=321,slow=2.1,SNR=21						
KAF	**Kangasniemi**	**63.49**	**336**	*e*p	**P**	**02 30 13.3**	**+1.8**
	comp=Z,4.5nm,0.8s,mb4.7						
KAF	**Kangasniemi**	**63.49**	**336**	*e*P	**P**	**02 30 13.3**	**+1.8**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
ULM	**Lac du Bonnet**	**65.23**	**42**	P	**P**	**02 30 22.7**	**-0.3**
	comp=Z,1.7nm,0.5s,mb4.3,baz=53,slow=5.1,SNR=3.8						
RSSD	**Black Hills**	**65.45**	**51**	*e*P	**P**	**02 30 24.7**	**+0.1**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
RSSD	**Black Hills**	**65.45**	**51**	*e*P	**P**	**02 30 24.7**	**+0.1**
	comp=Z,3.7nm,0.5s,mb4.7						
OBN	**Obninsk**	**65.60**	**326***c*	*i*P	**P**	**02 30 25.3**	**-0.1**
OBN				*i*		02 30 37.9	
OBN				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.0						
PV10	**Paradox Valley**	**66.55**	**58**	*e*P	**P**	**02 30 33.0**	**+1.2**
NB2	**NORSAR Subarra**	**68.13**	**342**	P	**P**	**02 30 41.8**	**+0.4**
	comp=Z,8.6nm,1.0s,mb4.7,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**68.13**	**342**	P	**P**	**02 30 40.8**	**-0.6**
	comp=Z,1.3nm,0.5s,mb4.2,baz=26,slow=6.4,SNR=8.3						
NOA	**NORSAR Array B**	**68.13**	**342**	P	**P**	**02 30 40.8**	**-0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	**Hagfors**	**68.39**	**340**	P	**P**	**02 30 43.2**	**+0.1**
	comp=Z,2.7nm,0.5s,mb4.5,baz=66,slow=5.0,SNR=24						
HFS	**Hagfors**	**68.39**	**340**	P	**P**	**02 30 43.2**	**+0.1**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ANMO	**Albuquerque**	**70.41**	**60**⇓	*i*P	**P**	**02 30 56.4**	**+0.5**
ANMO	**Albuquerque**	**70.41**	**60**	*e*P	**P**	**02 30 56.3**	**+0.3**
	comp=Z,1.3nm,0.9s,mb3.9						
KIV	**Kislovodsk**	**71.36**	**315**⇑	*i*P	**P**	**02 31 00.9**	**-0.7**
KIV				*i*		02 31 17.8	
KIV				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
KIV				MLR	MLR		
	comp=Z,100nm,14.0s						
KIV	**Kislovodsk**	**71.36**	**315**⇑	*i*P	**P**	**02 31 04.2**	**+2.6**
AKASG	**Malin Array Be**	**71.82**	**327**	P	**P**	**02 31 02.6**	**-1.6**
	comp=Z,1.4nm,0.6s,mb4.1,baz=34,slow=6.2,SNR=8.1						
AKASG	**Malin Array Be**	**71.82**	**327**	*i* P	**P**	**02 31 03.5**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SCIA	**State Center**	**72.58**	**47**	*e*P	**P**	**02 31 08.5**	**-0.4**
	comp=Z,14nm,0.6s,mb5.1						
ASAR	**Alice Springs**	**73.17**	**200**	P	**P**	**02 31 12.6**	**+0.1**
	comp=Z,1.6nm,0.9s,mb4.0,baz=11,slow=6.5,SNR=4.9						
ASAR	**Alice Springs**	**73.17**	**200**	P	**P**	**02 31 12.6**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GNI	**Garni**	**73.18**	**311**	*e*P	**P**	**02 31 13.7**	**+1.2**
GNI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BURAR	**Bucovina Array**	**75.85**	**328**⇓	*i*P	**P**	**02 31 28.4**	**+0.5**
TXAR	**Lajitas Array**	**76.06**	**62**	P	**P**	**02 31 29.0**	**-0.4**
	comp=Z,1.9nm,0.5s,mb4.3,baz=302,slow=5.0,SNR=45						
TXAR	**Lajitas Array**	**76.06**	**62**	P	**P**	**02 31 29.0**	**-0.4**
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**76.11**	**347**	P	**P**	**02 31 30.1**	**+0.9**
	comp=Z,1.4nm,0.5s,mb4.1,baz=16,slow=4.9,SNR=14						
EKA	**Eskdalemuir Ar**	**76.11**	**347**	P	**P**	**02 31 30.2**	**+1.0**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CLL	**Collm**	**76.50**	**337**	*e*P	**P**	**02 31 36.0**	**+4.5**
CLL				*e*		02 31 46.0	
CLL	**Collm**	**76.50**	**337**⇓	*i*P	**P**	**02 31 32.4**	**+0.9**
	comp=Z,6.0nm,1.3s,mb4.4						
CLL				*i* sP	pP	02 31 36.0	-0.5
CLL				*e*PcP	PcP	02 31 43.0	-0.2
CLL				*e*pPcP		02 31 46.0	
MALT	**Malatya**	**77.74**	**314**⇓	*i*P	**P**	**02 31 40.9**	**+2.2**
KHC	**Kasperske Hory**	**78.31**	**335**	*e*P	**P**	**02 31 42.0**	**+0.3**
KHC				PCP	PcP	02 31 56.5	+5.5
KHC	**Kasperske Hory**	**78.31**	**335**	*e*P	**P**	**02 31 42.0**	**+0.3**
KHC				*e*		02 31 56.5	
GRA1	**Grafenberg Arr**	**78.45**	**337**	*e*P	**P**	**02 31 43.5**	**+1.1**
	comp=Z,4.0nm,0.8s,mb4.4						
GRA1				*e*pP	pP	02 31 47.5	+0.1
GRF	**Grafenberg Arr**	**78.45**	**337**	*e*P	**P**	**02 31 43.5**	**+1.1**
GRF				*e**PP	pP	02 31 47.5	+0.1
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
GRF	**Grafenberg Arr**	**78.45**	**337**	*e*P	**P**	**02 31 43.5**	**+1.1**
GRF				*e**PP	pP	02 31 47.5	+0.1
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
GRF	**Grafenberg Arr**	**78.45**	**337**	*e*P	**P**	**02 31 43.5**	**+1.1**
	comp=Z,4.0nm,0.8s,mb4.4						
GRF				*e*pP	pP	02 31 47.5	+0.1
GERES	**GERESS Array B**	**78.53**	**335**	P	**P**	**02 31 43.7**	**+0.8**
	comp=Z,0.4nm,0.5s,mb3.6,baz=45,slow=5.9,SNR=5.3						
BZS	**Buzias**	**78.85**	**329**⇓	*i*P	**P**	**02 31 45.4**	**+0.7**
CDF	**Champ du Feu**	**80.64**	**339**	*e*P	**P**	**02 31 53.3**	**-1.1**
MEZF	**Maizieres J'vi**	**81.08**	**340**	*e*P	**P**	**02 31 55.4**	**-1.3**
HAU	**Haudompre**	**81.24**	**339**	*e*P	**P**	**02 31 56.7**	**-0.9**
HINF	**Hinteralfeld**	**81.29**	**339**	*e*P	**P**	**02 31 56.8**	**-1.1**
AVF	**Avril sur Loir**	**83.08**	**341**	*e*P	**P**	**02 32 06.6**	**-0.7**
	comp=Z,40nm,1.5s,mb4.9						
LPL	**La Plagne**	**83.47**	**338**	*e*P	**P**	**02 32 08.7**	**-0.6**
LPG	**La Plagne**	**83.48**	**338**	*e*P	**P**	**02 32 08.9**	**-0.5**
	comp=Z,10nm,0.9s,mb4.6						
LPG	**La Plagne**	**83.48**	**338**	*e*P	**P**	**02 32 08.9**	**-0.5**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
LPG	**La Plagne**	**83.48**	**338**	*e*P	**P**	**02 32 08.9**	**-0.5**
	comp=Z,5.1nm,0.9s,mb4.5						
ESDC	**Sonseca Array**	**91.41**	**344**	P	**P**	**02 32 47.3**	**-0.5**
	comp=Z,0.4nm,0.5s,mb4.0,baz=9.9,slow=3.6,SNR=5.8						
KEST	**Kesra**	**91.81**	**333**	P	**P**	**02 32 50.8**	**+1.0**
	comp=Z,0.6nm,0.7s,mb4.0,baz=0.0,slow=10,SNR=2.8						
PLCA	**Paso Flores**	**146.93**	**96**	PKPbc	PKPbc	02 39 23.9	0.0
	comp=Z,1.2nm,0.8s,baz=3.7,slow=4.7,SNR=3.7						
PLCA	**Paso Flores**	**146.93**	**96**	PKP2	PKPbc	02 39 23.9	0.0
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PLCA	**Paso Flores**	**146.93**	**96**	PKPbc	PKPbc	02 39 23.9	0.0

ISCJB ***01*** *02:50:23.0±1.6, 1734N±003×11973E±004, h4km±11km, mb3.9/10, MS3.4/2, Error ellipse: s-maj=6.3km s-min=5.8km az=172.7*
MAN ***01*** *02:50:24, 1734N×11965E, h20km, mb4.8, ML3.8, MS3.8*
IDC ***01*** *02:50:33.1±5.5, 17.10N×120.16E, h98km±53km, mb3.6/10, mb1 3.8/10, mb1mx3.7/17, mbtmp3.6/10, MS3.5/3, Ms1 3.6/3, ms1mx2.9/22, Error ellipse: s-maj=25.4km s-min=15.4km az=72.0*
NEIC ***01*** *02:50:36.2±5.2, 1706N×120.11E, h129km±52km, Error ellipse: s-maj=20.7km s-min=12.5km az=65.0*
BJI ***01*** *02:50:40.5, 1770N×11971E, h129km, mB4.8, mb4.3*
ISC 01 02:50:23.8±0.9**, 1730N**±003×**11974E**±004**, h1**km±5km**, n26,** $\sigma 1^{s}$**22**/34**, mb4.0**/10**, MS3.4**/2**, 3C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.92**	**48**⇑	*i*P	**Pg**	**02 50 41.5**	**0.0**
SIPP				*i* S	**Sg**	**02 50 53.8**	**+0.4**
BOLP	**Bolinao**	**0.93**	**170**	*e*P	**Pg**	**02 50 42.1**	**+0.4**
ABRA	**Dolores**	**0.99**	**70**	*e*P	**Pg**	**02 50 42.6**	**-0.2**
ABRA				*e*S	**Sg**	**02 50 55.7**	**+0.1**
BCPH	**Baguio City Da**	**1.22**	**139**⇑	*i*P	**Pg**	**02 50 45.4**	**-1.9**
BCPH				*i* S	**Sg**	**02 51 04.0**	**+0.9**
SCZP	**Santa Cruz**	**1.53**	**174**	*e*P	**Pn**	**02 50 50.7**	**-1.5**
APYP	**Conner**	**1.54**	**69**	*e*P	**Pn**	**02 50 50.8**	**-1.5**
APYP				*e*S	**Sn**	**02 51 09.4**	**-3.6**
CAUP	**Cauayan**	**2.02**	**100**	*e*P	**Pn**	**02 51 00.3**	**+1.2**
CAUP				*e*S	**Sn**	**02 51 26.8**	**+1.8**
PCPH	**Palayan**	**2.17**	**143**⇑	*e*P	**Pn**	**02 50 59.8**	**-1.2**
PCPH				*i* S	**Sn**	**02 51 25.7**	**-2.8**
BALP	**Baler**	**2.35**	**131**	*e*P	**Pn**	**02 51 03.1**	**-0.5**
BALP				*e*S	**Sn**	**02 51 34.2**	**+1.2**
SGCP	**Mt. Cagua**	**2.39**	**67**	*e*P	**Pn**	**02 51 04.2**	**+0.2**
SGCP				*e*S	**Sn**	**02 51 33.3**	**-0.7**
PALP	**Palanan**	**2.58**	**95**	*e*P	**Pn**	**02 51 07.4**	**+0.7**
PALP				*e*S	**Sn**	**02 51 39.1**	**+0.4**
POLP	**Polilio Island**	**3.32**	**140**	*e*P	**Pn**	**02 51 17.3**	**+0.4**
LUBP	**Lubang**	**3.58**	**172**	*e*P	**Pn**	**02 51 22.6**	**+2.1**
DAV	**Davao City (W)**	**11.66**	**150**	LR	LR	02 59 12.1	
	comp=Z,247nm,18.3s,baz=66,slow=46						
CMAR	**Chiang Mai Arr**	**19.83**	**276**	P	**Pn**	**02 55 01.2**	**+3.6**
	1.4nm,0.4s,baz=80,slow=8.2,SNR=9.0						
KSRS	**Korea Array**	**21.33**	**18**	P	**P**	**02 55 11.8**	**-0.5**
	6.9nm,0.7s,mb4.1,baz=204,slow=11,SNR=21						
KSRS				LR	LR	03 04 36.7	
	comp=Z,68nm,18.7s,MS3.1,baz=45,slow=40						
MJAR	**Matsushiro Arr**	**25.18**	**37**	P	**P**	**02 55 49.6**	**-1.2**
	1.1nm,0.6s,mb3.8,baz=218,slow=8.9,SNR=3.1						
GTA	**Gaotai**	**28.03**	**326**	*e*P	**P**	**02 56 19.6**	**+3.1**
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.4						
SONM	**Songino Array**	**32.36**	**343**	P	**P**	**02 56 56.4**	**+1.7**
	comp=Z,1.8nm,0.8s,mb4.1,baz=162,slow=9.3,SNR=9.1						
WRA	**Warramunga Arr**	**39.69**	**158**	P	**P**	**02 57 52.9**	**-4.8**
	comp=Z,0.5nm,0.4s,mb3.5,baz=333,slow=10,SNR=4.9						
MKAR	**Makanchi Array**	**42.62**	**322**	P	**P**	**02 58 22.6**	**+1.0**
	comp=Z,0.7nm,0.7s,mb3.5,baz=111,slow=9.2,SNR=7.7						
MKAR				PcP	PcP	03 00 11.2	-2.6
	comp=Z,0.9nm,0.8s,baz=96,slow=4.9,SNR=3.6						
ASAR	**Alice Springs**	**43.01**	**161**	P	**P**	**02 58 20.1**	**-4.8**
	comp=Z,1.5nm,0.7s,mb3.8,baz=339,slow=6.8,SNR=13						
ZALV	**Zalesovo Beam**	**45.46**	**332**	P	**P**	**02 58 44.3**	**0.0**
	comp=Z,2.1nm,0.7s,mb4.2,baz=115,slow=8.0,SNR=5.7						
ARCES	**ARCESS Array B**	**75.41**	**339**	P	**P**	**03 02 08.6**	**-0.3**
	comp=Z,2.7nm,0.8s,mb4.3,baz=54,slow=11,SNR=3.1						
NB2	**NORSAR Subarra**	**83.66**	**332**	P	**P**	**03 02 52.4**	**-1.5**
	comp=Z,1.4nm,0.7s,mb4.3,baz=65,slow=5.1						
NOA	**NORSAR Array B**	**83.66**	**332**	P	**P**	**03 02 51.6**	**-2.3**
	comp=Z,1.6nm,0.7s,mb4.4,baz=65,slow=4.9,SNR=9.9						
NOA				LR	LR	03 43 13.0	
	comp=Z,41nm,19.8s,MS3.8,baz=10.0,slow=38						

ISCJB ***01*** *03:35:49.4±0.8, 3922N±002×9779E±003, h2km±5km, mb4.8/99, MS3.9/32, Error ellipse: s-maj=4.2km s-min=3.4km az=25.3*
BJI ***01*** *03:35:49.7, 3935N×9771E, h10km, mB4.8, mb4.7, ML4.7, Ms4.5, Msz4.3*
IDC ***01*** *03:35:50.2±0.4, 3922N×9783E, h0km, mb4.5/21, mb1 4.7/24, mb1mx4.6/27, mbtmp4.5/24, ML4.4/3, MS3.8/19, Ms1 3.8/19, ms1mx3.7/33, Error ellipse: s-maj=18.1km s-min=10.7km az=46.0*
NEIC ***01*** *03:35:52.3±0.2, 3922N×9783E, h10km, mb4.9/64, Error ellipse: s-maj=4.7km s-min=3.7km az=115.0*
LDG ***01*** *03:35:52.6±0.3, 3945N×9737E, h10km, Mb5.1/30, Ms3.8/8, Error ellipse: s-maj=13.7km s-min=7.1km az=137.0*
MOS ***01*** *03:35:53.6±0.9, 3920N×9774E, h30km, mb5.0/58, MS3.9/19, Error ellipse: s-maj=7.5km s-min=4.3km az=118.2*
SZGRF ***01*** *03:36:06.3, 3994N×96.19E, h33km, mb4.9, Gansu, China*
ISC 01 03:35:51.6±0.9**, 3922N**±002×**9782E**±003**, h5**km±6km**, n310,** $\sigma 0^{s}$**99**/322**, mb4.8**/99**, MS3.9**/32**, 32C-10D, Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	**Gaotai**	**1.56**	**82**	PG	**Pg**	**03 36 20.1**	**-1.4**
GTA				SG	**Sg**	**03 36 41.8**	**+0.1**
GTA				Smax			
	comp=N,13μm,1.0s						
GTA				Smax			
	comp=E,3μm,0.5s						
GTA				LR	LR		
	comp=N,20μm,9.9s						
GTA				LR	LR		
	comp=E,10μm,7.2s						
GTA				LR	LR		
	comp=Z,7μm,8.1s						
LZH	**Lanzhou**	**5.71**	**121**	P	**Pn**	**03 37 19.5**	**+2.4**
LZH				S	**Sn**	**03 38 29.1**	**+6.1**
LZH				Smax			
	comp=N,171nm,0.6s						
LZH				Smax			
	comp=E,381nm,1.0s						
LZH				LR	LR		
	comp=N,6μm,9.3s						
LZH				LR	LR		
	comp=Z,6μm,10.7s						
WMQ	**Urumqi**	**8.88**	**304**⇑	*i*P	**Pn**	**03 38 01.7**	**+1.2**
WMQ				S	**Sn**	**03 39 40.0**	**-0.9**
WMQ				Smax			
	comp=N,685nm,1.0s						
WMQ				Smax			
	comp=E,555nm,1.3s						
WMQ				LR	LR		
	comp=N,1μm,4.3s						
WMQ				LR	LR		
	comp=E,1μm,7.0s						
WMQ				LR	LR		
	comp=Z,1μm,3.9s						
BTO	**Baotou**	**9.48**	**78**	*e*P	**Pn**	**03 38 06.8**	**-2.0**
CD2	**Chengdu**	**9.61**	**148**	P	**Pn**	**03 38 13.1**	**+2.5**
CD2				XP		03 38 19.5	
CD2				S	**Sn**	**03 40 02.1**	**+3.2**
CD2				AMB	AMB		
	comp=Z,20nm,0.5s						
CD2				AMB	AMB		
	comp=Z,40nm,3.8s						
CD2				LR	LR		
	comp=N,3μm,7.6s						
CD2				LR	LR		
	comp=E,1μm,8.4s						
CD2				LR	LR		
	comp=Z,2μm,8.0s						
SONM	**Songino Array**	**10.62**	**33**	Pn	**Pn**	**03 38 25.5**	**+1.1**
	comp=Z,5.1nm,0.3s,baz=217,slow=15,SNR=75						
SONM				Lg		03 41 26.8	
	comp=Z,3.2nm,0.3s,baz=215,slow=31,SNR=6.5						
HHC	**Hu-ho-hao-te**	**10.67**	**77**	*e*P	**Pn**	**03 38 24.5**	**-0.5**
HHC				PP		03 38 33.0	
HHC				S	**Sn**	**03 40 23.1**	**-1.7**
HHC				SS		03 40 36.7	
HHC				AMB	AMB		
	comp=Z,14nm,0.4s						
HHC				AMB	AMB		
	comp=Z,144nm,4.8s						
HHC				LR	LR		
	comp=N,3μm,6.7s						
HHC				LR	LR		
	comp=E,1μm,5.1s						
HHC				LR	LR		
	comp=Z,998nm,4.9s						
ULN	**Ulaanbaatar**	**10.93**	**35***c*	*i*P	**Pn**	**03 38 29.7**	**+1.1**
ULN	**Ulaanbaatar**	**10.93**	**35**	*e*Pn	**Pn**	**03 38 28.9**	**+0.3**
	comp=Z,35nm,1.0s						
LSA	**Lhasa**	**10.97**	**212**	P	**Pn**	**03 38 32.2**	**+3.0**
LSA	**Lhasa**	**10.97**	**212**	*e*P	**Pn**	**03 38 32.0**	**+2.8**
LSA				pmax	pmax		
	comp=Z,13nm,0.8s						
LSA	**Lhasa**	**10.97**	**212**	*e*Pn	**Pn**	**03 38 32.0**	**+2.8**
	comp=Z,13nm,0.8s						
ZAK	**Zakamensk**	**11.81**	**17**	*e*P	**Pn**	**03 38 42.2**	**+1.5**
ZAK				*e*		03 40 53.8	
ZAK				smax			
	comp=E,581nm,1.2s						
MOY	**Mondy**	**12.65**	**9**	*e*P	**Pn**	**03 38 55.4**	**+3.4**
MOY				pmax	pmax		
	comp=Z,28nm,1.9s						

MK31 Makanchi Array 13.64 309 P **Pn** **03 39 04.9 -0.8**
MK31 pmax pmax
comp=Z,3.0nm,0.4s
MK31 pmax pmax
comp=Z,45nm,0.8s
MKAR Makanchi Array 13.64 309 Pn **Pn** **03 39 03.1 -2.6**
comp=Z,0.9nm,0.3s,baz=110,slow=14,SNR=12
MKAR Sn **Sn** **03 41 31.8 -5.8**
comp=Z,0.3nm,0.3s,baz=120,slow=29,SNR=3.1
MKAR Lg 03 43 06.8
comp=Z,0.6nm,0.3s,baz=130,slow=28,SNR=3.5
MKAR LR LR 03 44 34.8
comp=Z,211nm,18.9s,baz=108,slow=38
IRK Irkutsk 13.78 17 *eP* **Pn** **03 39 10.9 +3.4**
IRK pmax pmax
comp=Z,152nm,1.7s
BJI Beijing 14.17 81 P **Pn** **03 39 16.9 +3.9**
BJI AMB AMB
comp=Z,17nm,1.1s
SHL Shillong 14.50 202 *eP* **Pn** **03 39 15.5 -2.0**
TAPN Taplejung 14.53 218 *eP* **Pn** **03 39 19.3 +1.4**
comp=Z,32nm,0.9s
KMI Kunming 14.65 162 P **Pn** **03 39 21.2 +1.6**
KMI AP pP 03 39 23.7 -3.6
KMI XP sP 03 39 25.5 -2.4
KMI PP 03 39 33.2
KMI S **Sn** **03 42 02.1 -0.3**
KMI XS sS 03 42 09.3 -14
KMI SS 03 42 21.7
KMI AMB AMB
comp=Z,35nm,1.3s
KMI AMB AMB
comp=Z,151nm,16.3s
KMI LR LR
comp=N,319nm,7.4s
KMI LR LR
comp=E,432nm,9.2s
KMI LR LR
comp=Z,325nm,10.7s
GYA Guiyang 14.72 147 *i* P **Pn** **03 39 20.4 -0.1**
GYA PP 03 39 34.2
GYA S **Sn** **03 42 09.3 +5.2**
GYA PCP PcP 03 44 36.4 +3.6
GYA AMB AMB
comp=Z,10.0nm,1.0s
GYA AMB AMB
comp=Z,100nm,5.4s
GYA LR LR
comp=N,980nm,8.9s
GYA LR LR
comp=E,900nm,7.7s
GYA LR LR
comp=Z,130nm,8.9s
GUN Gumba 15.02 225 *eP* **Pn** **03 39 27.1 +2.5**
comp=Z,163nm,1.0s
ODAN Odare 15.10 218 *eP* **Pn** **03 39 25.4 -0.2**
comp=Z,86nm,1.0s
RAMN Ramite 15.41 221 *eP* **Pn** **03 39 28.7 -1.1**
comp=Z,94nm,1.2s
KKN Kakani 15.45 226 *eP* **Pn** **03 39 29.5 -0.8**
comp=Z,50nm,0.9s
KKN Kakani 15.45 226 *eP* **Pn** **03 39 29.5 -0.8**
KKN pmax pmax
comp=Z,51nm,0.9s
PKI Pulchoki 15.55 225 *eP* **Pn** **03 39 31.2 -0.3**
comp=Z,56nm,1.0s
PKI Pulchoki 15.55 225 *eP* **Pn** **03 39 31.2 -0.3**
PKI pmax pmax
comp=Z,56nm,1.0s
PKIN Phulchoki 15.55 225 *eP* **Pn** **03 39 31.0 -0.6**
comp=Z,177nm,1.8s
TIA Tai'an 15.57 95 *eP* **Pn** **03 39 32.5 +0.7**
TIA LR LR
comp=N,458nm,10.0s
TIA LR LR
comp=E,1μm,10.0s
GKN Gorkha 15.65 228 *eP* **Pn** **03 39 33.6 +0.7**
DMN Daman 15.69 226 *eP* **Pn** **03 39 32.9 -0.5**
comp=E,350nm,1.8s
DANN Dangsing 15.92 231 *eP* **Pn** **03 39 37.4 +1.0**
comp=E,81nm,1.2s
WHN Wuhan 16.07 118 P **Pn** **03 39 43.0 +4.7**
WHN LR LR
comp=N,680nm,10.0s
WHN LR LR
comp=E,906nm,8.0s
KOLN Koldanda 16.44 230 *eP* **Pn** **03 39 41.9 -1.2**
comp=E,26nm,0.8s
CIT Chita 16.83 35 *eP* **Pn** **03 39 51.1 +3.2**
TKM2 Tokmak 2 17.15 290 P **Pn** **03 39 50.1 -1.9**
TKM2 03 42 59.6
TKM2 pmax pmax
comp=Z,22nm,0.8s
TKM2 smax
comp=Z,16nm,1.2s
TKM2 Tokmak 2 17.15 290 P **Pn** **03 39 50.5 -1.5**
SNR=6.5
ZAL Zalesovo 17.19 333 P **Pn** **03 39 51.6 -0.7**
ZAL S **Sn** **03 43 10.3 +6.6**
ZAL pmax pmax
comp=Z,1.0nm,0.3s
ZAL MLR MLR
comp=Z,225nm,18.1s
ZALV Zalesovo Beam 17.19 333 P **Pn** **03 39 51.6 -0.8**
comp=Z,1.1nm,0.3s,baz=146,slow=11,SNR=28
ZALV S **Sn** **03 43 10.3 +6.6**
comp=Z,0.1nm,0.3s,baz=135,slow=16,SNR=2.1
ZALV Lg 03 44 50.5
comp=Z,0.0nm,0.3s,baz=31,slow=25,SNR=4.2
ZALV LR LR 03 46 28.8
comp=Z,225nm,18.1s,baz=325,slow=37
ZALV Zalesovo Beam 17.19 333 P **Pn** **03 39 51.6 -0.8**
ZALV S **Sn** **03 43 10.3 +6.6**
ZALV Lg 03 44 50.5
ZALV LR LR 03 46 28.8
KZA Kyzart 17.36 287 P **Pn** **03 39 60.0 +5.4**
SNR=6.2
KURK Kurchatov 17.74 317 P **Pn** **03 39 56.6 -2.6**
comp=Z,0.3nm,0.3s,baz=118,slow=12,SNR=87
KURK S **Sn** **03 43 23.8 +6.7**
baz=100,slow=27,SNR=2.9
KURK Lg 03 45 09.9
comp=Z,0.0nm,0.3s,baz=276,slow=26,SNR=4.1
KURK LR LR 03 47 06.3
comp=Z,387nm,18.3s,baz=125,slow=38
KURK Kurchatov 17.74 317⇑ *i* P **Pn** **03 39 58.6 -0.6**
KURK pmax pmax
comp=Z,76nm,1.7s
FRU Bishkek 17.86 289 *eP* **Pn** **03 40 00.0 -0.8**
FRU pmax pmax
comp=Z,40nm,1.6s
UCH Uchtor 17.91 287 P **Pn** **03 40 02.2 +0.8**
SNR=17
USP Ospenovka 17.98 291 P **Pn** **03 40 00.3 -2.0**
SNR=6.0
NVS Novosibirsk 18.46 333 *i* P **Pn** **03 40 06.5 -1.6**
NVS *eS* **Sn** **03 43 36.8 +2.3**
EKS2 Erkin-Say 18.47 288 P **Pn** **03 40 07.4 -0.9**
SNR=7.2
DDI Dehra Dun 18.48 247 *ex* **Pn** **03 40 08.0 -0.4**
DL2 Dalian 18.48 83 *i* P **Pn** **03 40 12.4 +3.9**
DL2 AMB AMB
comp=Z,10.0nm,0.9s
DL2 AMB AMB
comp=Z,180nm,4.5s
DL2 LR LR
comp=N,350nm,11.5s
DL2 LR LR
comp=E,330nm,12.7s
DL2 LR LR
comp=Z,290nm,13.3s
NJ2 Nanjing 18.51 106 *eP* **Pn** **03 40 08.3 -0.5**
NJ2 AP pP 03 40 11.9 +1.9
NJ2 XP sP 03 40 15.3 +4.7
NJ2 PP 03 40 23.7
NJ2 S **Sn** **03 43 29.0 -7.0**
NJ2 AMB AMB
comp=Z,200nm,0.5s
NJ2 AMB AMB
comp=Z,140nm,3.7s
NJ2 LR LR
comp=N,180nm,19.2s
NJ2 LR LR
comp=E,200nm,17.7s
NJ2 LR LR
comp=Z,200nm,17.7s

AML Almayashu 18.52 287 P **Pn** **03 40 11.3 +2.5**
SNR=22
SNY Shenyang 19.73 74 ⇓P **Pn** **03 40 22.7 -0.8**
SNY S **Sn** **03 44 09.3 +3.9**
SNY SS 03 44 30.3
SNY AMB AMB
comp=Z,19nm,1.0s
SNY LR LR
comp=E,462nm,14.3s
SNY LR LR
comp=Z,611nm,13.5s
NANT Nan 20.50 172 ⇑P **P** **03 40 31.0 +0.5**
comp=Z,265nm,0.9s
CMAR Chiang Mai Arr 20.71 177 P **P** **03 40 32.2 -0.6**
comp=Z,10nm,0.6s,baz=357,slow=9.8,SNR=23
CMAR PcP PcP 03 44 42.1 -0.6
comp=Z,1.5nm,0.3s,baz=319,slow=3.6,SNR=3.8
CMAR LR LR 03 49 05.5
CMAR Chiang Mai Arr 20.71 177 P **P** **03 40 32.3 -0.5**
CMAR 03 44 42.1
CMAR pmax pmax
comp=Z,10.0nm,0.6s
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR MLR MLR
comp=Z,208nm,19.0s
SSE Sheshan 20.71 106 P **P** **03 40 32.1 -0.7**
SSE AP 03 40 34.8
SSE S **S** **03 44 16.3 -8.3**
SSE AMB AMB
comp=Z,33nm,0.8s
SSE AMB AMB
comp=Z,51nm,3.7s
SSE LR LR
comp=N,447nm,14.8s,MS4.1
SSE LR LR
comp=E,321nm,14.8s,MS4.1
SSE LR LR
comp=Z,200nm,13.1s,MS3.7
CN2 Changchun 21.14 69 *eP* **P** **03 40 38.4 +1.0**
CN2 *eXP* *sP* 03 40 45.4 +6.1
CN2 *eS* **S** **03 44 27.1 -5.8**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.1
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1μm,14.0s,MS4.5
CN2 LR LR
comp=E,610nm,14.0s,MS4.5
CN2 LR LR
comp=Z,740nm,14.0s,MS4.2
BOD Bodaibo 21.38 24 *eP* **P** **03 40 40.2 +0.5**
BOD pmax pmax
comp=Z,21nm,1.4s,mb4.3
QZH Quanzhou 22.56 123 P **P** **03 40 54.0 +1.3**
QZH *eS* **S** **03 44 55.9 -4.9**
QZH LR LR
comp=N,2μm,15.8s,MS4.7
QZH LR LR
comp=E,2μm,15.5s,MS4.7
QZH LR LR
comp=Z,810nm,14.4s,MS4.3
QIZ Qiongzhong 22.65 149 P **P** **03 40 53.8 +0.1**
QIZ S **S** **03 45 01.3 -1.3**
QIZ AMB AMB
comp=Z,11nm,1.6s,mb4.0
QIZ LR LR
comp=N,528nm,10.1s
QIZ LR LR
comp=Z,924nm,11.3s,MS4.5
VOSK Vostochnaya 22.86 315 P **P** **03 40 55.0 -0.7**
VOSK pmax pmax
comp=Z,33nm,1.1s,mb4.7
BVA0 Borovoye Array 23.32 315 *i* P **P** **03 41 00.0 -0.5**
BVA0 pmax pmax
comp=Z,12nm,1.8s,mb4.0
BVAR Borovoye Array 23.32 315 P **P** **03 40 59.4 -1.0**
comp=Z,4.2nm,0.7s,mb4.0,baz=113,slow=9.8,SNR=19
BVAR PcP PcP 03 44 44.6 -2.8
comp=Z,0.7nm,0.5s,baz=126,slow=9.8,SNR=2.7
BVAR LR LR 03 50 21.5
comp=Z,312nm,18.8s,MS3.8,baz=115,slow=37
BVAR Borovoye Array 23.32 315 P **P** **03 40 59.4 -1.1**
BVAR 03 44 44.6
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR MLR MLR
comp=Z,313nm,18.8s
KSRS Korea Array 23.63 85 P **P** **03 41 03.3 -0.5**
comp=Z,25nm,0.9s,mb4.6,baz=279,slow=9.9,SNR=34
KSRS LR LR 03 50 22.1
comp=Z,143nm,20.6s,MS3.4,baz=107,slow=37
KSRS Korea Array 23.63 85 P **P** **03 41 03.3 -0.5**
KSRS pmax pmax
comp=Z,25nm,0.9s,mb4.6
KSRS MLR MLR
comp=Z,143nm,20.6s,MS3.4
MDJ Mudanjiang 24.16 67 P **P** **03 41 07.3 -1.2**
MDJ AP 03 41 10.6
MDJ XP sP 03 41 12.3 +1.8
MDJ S **S** **03 45 24.0 -2.9**
MDJ SCP ScP 03 48 27.6 -0.8
MDJ PCS PcS 03 48 29.3 +0.4
MDJ SCS ScS 03 52 14.9 -0.6
MDJ AMB AMB
comp=Z,8.0nm,1.4s,mb4.0
MDJ AMB AMB
comp=Z,98nm,4.5s
MDJ LR LR
comp=N,254nm,10.6s,MS4.2
MDJ LR LR
comp=E,329nm,10.2s,MS4.2
MDJ LR LR
comp=Z,308nm,7.6s
KLR Kul'dur 26.09 56 *eP* **P** **03 41 22.7 -3.4**
KLR MLR MLR
comp=N,1μm,11.0s,MS4.8
KLR MLR MLR
comp=E,800nm,11.0s,MS4.8
JOW Kunigami 28.23 107 LR LR 03 53 56.8
comp=E,169nm,18.1s,MS3.7,baz=301,slow=38
AB31 Akbulak array 28.66 303 P **P** **03 41 49.0 -0.2**
SVE Sverdlovsk 29.97 318⇓ *eP* **P** **03 41 57.3 -3.4**
SVE *eS* **S** **03 46 52.1 -6.6**
SVE pmax pmax
comp=Z,23nm,1.2s,mb4.8
SVE MLR MLR
comp=Z,254nm,17.0s,MS3.9
AKTO Aktyubinsk 30.03 305 LR LR 03 56 01.8
comp=Z,64nm,18.8s,MS3.3,baz=280,slow=40
ARU Arti 30.93 317 *c i* P **P** **03 42 09.2 0.0**
ARU *e* 03 43 05.0
ARU *eS* **S** **03 47 15.0 +1.2**
ARU pmax pmax
comp=Z,24nm,1.2s,mb4.9
MJAR Matsushiro Arr 31.81 82 P **P** **03 42 16.1 -1.0**
comp=Z,0.6nm,0.5s,mb3.7,baz=43,slow=38,SNR=4.1
MJAR LR LR 03 55 37.2
comp=Z,103nm,21.3s,MS3.5,baz=285,slow=37
MJAR Matsushiro Arr 31.81 82 P **P** **03 42 16.1 -1.0**
MJAR pmax pmax
comp=Z,1.0nm,0.5s
MJAR MLR MLR
comp=Z,103nm,21.3s
JHJ Hachijo jima 2 34.19 87 LR LR 03 57 23.9
comp=Z,153nm,18.4s,MS3.8,baz=299,slow=38
MAK Makhachkala 37.65 292 *eP* **P** **03 43 00.4 -7.1**
MAK MLR MLR
comp=Z,330nm,14.0s,MS4.3
CBIJ Chichi jima 38.70 95 LR LR 03 59 26.9
comp=Z,173nm,20.8s,MS3.9,baz=256,slow=37
SEY Seymchan 40.00 35 *eP* **P** **03 43 28.1 +1.1**
GNI Garni 40.35 289⇑ *i* P **P** **03 43 33.4 +3.2**
GNI pmax pmax
comp=Z,25nm,1.3s
GNI Garni 40.35 289 *eP* **P** **03 43 32.6 +2.4**
comp=Z,40nm,1.4s,mb5.0
GOF Gofitskoye 40.39 297 *eP* **P** **03 43 27.7 -2.7**
KIV Kislovodsk 40.86 295⇑ *i* P **P** **03 43 33.8 -0.6**
KIV *e* 03 45 07.4
KIV *i* 03 45 31.3
KIV pmax pmax
comp=Z,17nm,1.2s,mb4.5
KIV MLR MLR
comp=Z,100nm,16.0s,MS3.8
UMR Umm Al-Rimmam 42.00 273 *eP* **P** **03 43 44.5 +0.7**
baz=272
UMR AMb AMB 03 43 45.7
comp=Z,58nm,0.9s,mb5.2,baz=272
RDF Al-Radifah 42.42 272 *eP* **P** **03 43 47.9 +0.7**
baz=272
RDF AMb AMB 03 43 58.6
comp=Z,39nm,1.4s,mb4.8,baz=272
MOS Moscow 42.47 313 *eP* **P** **03 43 45.9 -1.4**
MOS pmax pmax
comp=Z,57nm,1.0s,mb5.2
PETK Petropavlovsk- 42.49 51 LR LR 04 01 52.4
comp=Z,89nm,18.7s,MS3.7,baz=89,slow=37
NAY Al-Naaiem 42.51 272 *eP* **P** **03 43 47.9 -0.1**
baz=272
NAY AMb AMB 03 43 49.3
comp=Z,30nm,0.9s,mb5.0,baz=272
OBN Obninsk 43.11 313 *eP* **P** **03 43 52.1 -0.4**
OBN *i* 03 45 41.8
OBN pmax pmax
comp=Z,27nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,100nm,15.0s,MS3.8
ANN Anapa 44.32 298 *eP* **P** **03 44 01.5 -0.9**
ANN *eS* **S** **03 50 34.9 -2.0**
ANN pmax pmax
comp=Z,101nm,1.8s,mb5.2
APA Apatity 44.75 331⇓ *i* P **P** **03 44 07.0 +1.5**
APA *i* 03 44 23.5
APA *i* S **S** **03 50 30.0 -13**
APA pmax pmax
comp=Z,16nm,1.0s,mb4.8
APA MLR MLR
comp=Z,700nm,4.0s
JOF Joensuu 45.45 324 *ep* **P** **03 44 10.7 -0.4**
comp=Z,9.0nm,0.7s,mb4.7
JOF Joensuu 45.45 324 *eP* **P** **03 44 10.7 -0.4**
JOF pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
KEV Kevo 47.22 333 *ep* **P** **03 44 25.3 +0.3**
comp=Z,3.5nm,0.6s,mb4.5
KEV Kevo 47.22 333 *eP* **P** **03 44 25.3 +0.3**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ARCES ARCESS Array B 47.74 333 P **P** **03 44 28.1 -0.9**
comp=Z,7.3nm,0.9s,mb4.7,baz=85,slow=8.0,SNR=17
ARCES LR LR 04 06 20.6
comp=Z,91nm,19.4s,MS3.8,baz=188,slow=38
ARCES ARCESS Array B 47.74 333 P **P** **03 44 28.2 -0.9**
ARCES pmax pmax
comp=Z,7.0nm,0.9s
ARCES MLR MLR
comp=Z,91nm,19.4s
KAF Kangasniemi 47.81 323 *ep* **P** **03 44 28.9 -0.8**
comp=Z,7.5nm,0.8s,mb4.8,baz=85,slow=7.7
KAF Kangasniemi 47.81 323 *eP* **P** **03 44 28.9 -0.8**
KAF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
AKASG Malin Array Be 48.22 307 P **P** **03 44 31.9 -1.2**
comp=Z,5.1nm,0.7s,mb4.6,baz=66,slow=7.6,SNR=13
AKASG Malin Array Be 48.22 307 *i* P **P** **03 44 32.5 -0.5**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
ASF Jabal al Asfar 49.17 282 P **P** **03 44 40.6 0.0**
comp=Z,5.0nm,0.8s,mb4.6
ASF Jabal al Asfar 49.17 282 P **P** **03 44 40.6 0.0**
ASF pmax pmax
comp=Z,5.0nm,0.8s
VRI Vrincioaia 51.22 302⇓ *i* P **P** **03 44 56.9 +1.0**
VRI Vrincioaia 51.22 302 ⇓P **P** **03 44 56.9 +0.9**
LVV L'vov 51.67 308 *eP* **P** **03 44 59.9 +0.7**
MLR Muntele Rosu 51.86 302⇑ *i* P **P** **03 45 04.3 +3.5**
MLR Muntele Rosu 51.86 302 ⇑P **P** **03 45 04.3 +3.5**
KWP Kalwaria 52.54 308⇓ *i* P **P** **03 45 06.1 +0.3**
KWP Kalwaria 52.54 308 ⇓P **P** **03 45 06.1 +0.4**
KOLS Kolonicke sedl 53.04 307 *eP* **P** **03 45 08.9 -0.6**
KOLS Kolonicke sedl 53.04 307 *eP* **P** **03 45 09.0 -0.5**
STHS Stebnicka Huta 53.51 308 *eP* **P** **03 45 13.5 +0.6**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
STHS Stebnicka Huta 53.51 308 *eP* **P** **03 45 13.5 +0.6**
comp=Z,2.5nm,0.9s,mb4.1
CRVS Cervenica-Dubn 53.56 307 *eP* **P** **03 45 16.0 +2.8**
OJC Ojcow 54.12 309 *eP* **P** **03 45 17.6 +0.3**
KECS Kecovo 54.31 307 *eP* **P** **03 45 17.6 -1.2**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KECS Kecovo 54.31 307 *eP* **P** **03 45 17.6 -1.2**
comp=Z,2.5nm,1.0s,mb4.1
NB2 NORSAR Subarra 55.08 324 P **P** **03 45 23.4 -0.7**
comp=Z,1.0nm,0.8s,mb4.9,baz=73,slow=7.4
NOA NORSAR Array B 55.08 324 P **P** **03 45 23.3 -0.8**
comp=Z,7.5nm,0.8s,mb4.8,baz=73,slow=7.4,SNR=22
NOA LR LR 04 10 22.4
comp=Z,100nm,18.3s,MS3.9,baz=55,slow=38
NOA NORSAR Array B 55.08 324 P **P** **03 45 23.3 -0.8**
NOA pmax pmax
comp=Z,8.0nm,0.8s
NOA MLR MLR
comp=Z,100nm,18.3s
VYHS Vyhne 55.33 307 *eP* **P** **03 45 26.7 +0.6**
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
VYHS Vyhne 55.33 307 *eP* **P** **03 45 26.7 +0.6**
comp=Z,4.1nm,1.3s,mb4.3
KOLL Kolacno 55.56 308 *eP* **P** **03 45 28.5 +0.7**
DPC Dobruska-Polom 56.15 310 *eP* **P** **03 45 32.1 +0.1**
DPC AMS AMS 04 10 00.0
comp=Z,200nm,23.7s
UPC Upice 56.27 311 *eP* **P** **03 45 32.9 0.0**
KONO Kongsberg 56.31 322 *eP* **P** **03 45 36.0 +3.0**
MODS Modra-Piesok 56.33 308 *eP* **P** **03 45 29.2 -4.1**
PKSM Moragy 56.33 305⇓ *i* P **P** **03 45 34.0 +0.6**
PKSM Moragy 56.33 305 ⇓P **P** **03 45 34.1 +0.8**
ZST Bratislava 56.51 308 *eP* **P** **03 45 34.4 -0.2**
ZST pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ZST Bratislava 56.51 308 *eP* **P** **03 45 34.4 -0.2**
comp=Z,5.5nm,0.8s,mb4.6
TREC Trest 57.05 309 AMS AMS 04 10 50.0
comp=Z,200nm,15.0s
PVCC Panska Ves 57.11 311 *eP* **P** **03 45 39.3 +0.5**
BRG Berggiesshubel 57.34 312 *eP* **P** **03 45 40.6 +0.2**
BRG pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
BRG Berggiesshubel 57.34 312 *eP* **P** **03 45 40.7 +0.3**
comp=Z,13nm,1.4s,mb4.8
BRG Berggiesshubel 57.34 312 *eP* **P** **03 45 40.6 +0.1**
comp=Z,10.0nm,1.2s,mb4.7
PRU Pruhonice 57.34 310 *eP* **P** **03 45 39.9 -0.6**
PRU AMS AMS 04 10 40.0
comp=Z,200nm,18.3s
CLL Collm 57.71 312 *eP* **P** **03 45 42.9 -0.1**
comp=Z,16nm,1.2s,mb4.9
CLL Collm 57.71 312 *i* P **P** **03 45 43.0 0.0**
comp=Z,11nm,1.1s,mb4.8
CLL *i* pP pP 03 45 45.9 +1.4
comp=Z,16nm,1.2s
BSEG Bad Segeberg 58.14 316 *eP* **P** **03 45 46.5 +0.5**
comp=Z,31nm,1.3s,mb5.2
KHC Kasperske Hory 58.27 310 *eP* **P** **03 45 47.4 +0.4**
KHC AMS AMS 04 11 20.0
comp=Z,200nm,17.3s
GEC2 GERESS Array S 58.31 309 *eP* **P** **03 45 47.3 0.0**
GEC2 pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
GEC2 GERESS Array S 58.31 309 *eP* **P** **03 45 47.3 0.0**
comp=Z,8.0nm,1.3s,mb4.6
GERES GERESS Array B 58.31 309 P **P** **03 45 47.5 +0.2**
comp=Z,3.1nm,1.1s,mb4.3,baz=64,slow=6.4,SNR=11
GERES LR LR 04 12 17.8
comp=Z,150nm,18.9s,MS4.1,baz=290,slow=38
GERES GERESS Array B 58.31 309 P **P** **03 45 47.5 +0.2**
GERES pmax pmax
comp=Z,3.0nm,1.1s
GERES MLR MLR
comp=Z,150nm,18.9s
NKC Novy Kostel 58.47 311 *eP* **P** **03 45 49.0 +0.6**
WET Wettzell 58.68 310 *eP* **P** **03 45 50.3 +0.4**
WET pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
WET Wettzell 58.68 310 *eP* **P** **03 45 50.3 +0.4**
comp=Z,10.0nm,1.2s,mb4.7

MOX Moxa 58.78 312 *e*P **P 03 45 51.1 +0.5**
comp=Z,10.0nm,1.4s,mb4.7
MOX Moxa 58.78 312 *e*P **P 03 45 51.1 +0.5**
MOX pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
MOX Moxa 58.78 312 *e*P **P 03 45 50.6 0.0**
comp=Z,10.0nm,1.4s,mb4.7
ROTZ Rotzenmuhle 58.81 311 *e*P **P 03 45 51.5 +0.7**
comp=Z,12nm,1.2s,mb4.8
NRDL Niedersach Rie 58.85 314 *e*P **P 03 45 51.8 +0.8**
comp=Z,31nm,1.2s,mb5.2
CLZ Clausthal 58.98 314 *e*P **P 03 45 52.5 +0.6**
CLZ pmax pmax
comp=Z,32nm,1.1s,mb5.3
CLZ Clausthal 58.98 314 *e*P **P 03 45 52.5 +0.6**
comp=Z,32nm,1.1s,mb5.3
GRA1 Grafenberg Arr 59.42 311 *e*P **P 03 45 55.8 +0.8**
comp=Z,14nm,0.9s,mb5.0
GRF Grafenberg Arr 59.42 311 *e*P **P 03 45 55.8 +0.8**
GRF pmax pmax
comp=Z,14nm,0.9s,mb5.0
GRF Grafenberg Arr 59.42 311 *e*P **P 03 45 55.8 +0.8**
GRF pmax pmax
comp=Z,14nm,0.9s,mb5.0
GRF Grafenberg Arr 59.42 311 *e*P **P 03 45 55.8 +0.8**
comp=Z,14nm,0.9s,mb5.0
FUR Furstenfeldbru 60.06 310 *e*P **P 03 46 00.3 +0.9**
BUG Bochum–Univer 60.89 314 *e*P **P 03 46 05.7 +0.6**
comp=Z,25nm,1.2s,mb5.2
IMA2 Indian Mountai 61.68 26 *e*P **P 03 46 09.8 -0.3**
BFO Black Forest 61.73 311 *e*P **P 03 46 10.7 -0.1**
BFO pmax pmax
comp=Z,12nm,1.2s,mb4.9
BFO Black Forest 61.73 311 *e*P **P 03 46 10.7 -0.1**
comp=Z,12nm,1.2s,mb4.9
MEM Membach 61.99 314 P **P 03 46 13.6 +1.1**
comp=Z,12nm,1.5s,mb4.8
CDF Champ du Feu 62.31 311 ⇑*i*P **P 03 46 14.4 -0.3**
WLF Walferdange 62.36 313 P **P 03 46 16.1 +1.1**
comp=Z,21nm,1.6s,mb5.2
WLF Walferdange 62.36 313 *e*P **P 03 46 16.2 +1.2**
comp=Z,30nm,1.2s,mb5.3
BCLA Clavier 62.47 314 P **P 03 46 15.4 -0.3**
FITZ Fitzroy Crossi 62.68 150 *e*P **P 03 46 17.1 -0.3**
comp=Z,8.0nm,0.8s,mb4.9
FITZ Fitzroy Crossi 62.68 150 P **P 03 46 16.8 -0.6**
comp=Z,4.6nm,0.7s,mb4.7,baz=110,slow=21,SNR=16
FITZ LR LR 04 16 09.6
comp=Z,69nm,20.0s,MS3.8,baz=2.7,slow=39
HINF Hinteralfeld 62.85 311 ⇑*i*P **P 03 46 17.9 -0.4**
comp=Z,13nm,1.0s,mb4.7
HINF Hinteralfeld 62.85 311 ⇑*i*P **P 03 46 17.9 -0.4**
HINF pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
HINF Hinteralfeld 62.85 311 ⇑*i*P **P 03 46 17.9 -0.4**
comp=Z,6.3nm,1.0s,mb4.7
GIVF Givet 62.90 314 ⇑*i*P **P 03 46 18.7 +0.1**
DOU Dourbes 63.03 314 P **P 03 46 20.5 +1.0**
comp=Z,4.3nm,1.1s,mb4.5
HAU Haudompre 63.05 311 *e*P **P 03 46 19.3 -0.3**
HAU *e*MLR MLR
comp=Z,172nm,21.2s,MS3.9
HAU Haudompre 63.05 311 *e*P **P 03 46 19.3 -0.3**
HAU LR LR
comp=Z,170nm,21.3s,MS4.2
BAIF Baives 63.26 314 *e*P **P 03 46 21.3 +0.3**
comp=Z,30nm,1.2s,mb5.0
BAIF Baives 63.26 314 *e*P **P 03 46 21.3 +0.3**
BAIF pmax pmax
comp=Z,15nm,1.2s,mb5.0
BAIF Baives 63.26 314 *e*P **P 03 46 21.3 +0.3**
comp=Z,15nm,1.2s,mb5.0
MEZF Maizieres J'vi 63.56 312 *e*P **P 03 46 23.1 +0.1**
comp=Z,22nm,1.0s,mb4.8
MEZF Maizieres J'vi 63.56 312 *e*P **P 03 46 23.1 +0.1**
comp=Z,22nm,1.0s,mb5.1
CABF La Chapelle 63.90 310 *e*P **P 03 46 26.0 +0.7**
comp=Z,20nm,1.1s,mb4.7
CABF La Chapelle 63.90 310 *e*P **P 03 46 26.0 +0.7**
CABF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
CABF La Chapelle 63.90 310 *e*P **P 03 46 26.0 +0.7**
comp=Z,9.8nm,1.1s,mb4.8
LPG La Plagne 64.06 309 ⇑*i*P **P 03 46 27.0 +0.6**
comp=Z,28nm,1.0s,mb5.0
LPG La Plagne 64.06 309 ⇑*i*P **P 03 46 27.0 +0.6**
LPG pmax pmax
comp=Z,14nm,1.0s,mb5.0
LPG La Plagne 64.06 309 ⇑*i*P **P 03 46 27.0 +0.6**
comp=Z,14nm,1.0s,mb4.9
LPL La Plagne 64.06 309 ⇑*i*P **P 03 46 26.9 +0.5**
comp=Z,40nm,1.1s,mb5.0
LPL La Plagne 64.06 309 ⇑*i*P **P 03 46 26.9 +0.5**
LPL pmax pmax
comp=Z,20nm,1.1s,mb5.1
LPL La Plagne 64.06 309 ⇑*i*P **P 03 46 26.9 +0.5**
comp=Z,20nm,1.1s,mb5.1
PGF Pioggiola 64.15 305 *e*P **P 03 46 27.4 +0.4**
COLA College 64.36 26µ*e*P **P 03 46 28.2 +0.2**
COLA College 64.36 26 *e*P **P 03 46 27.8 -0.2**
comp=Z,14nm,1.1s,mb4.9
MBDF Montbardon 64.44 308 *e*P **P 03 46 29.5 +0.7**
comp=Z,27nm,1.2s,mb4.9
MBDF Montbardon 64.44 308 *e*P **P 03 46 29.5 +0.7**
MBDF pmax pmax
comp=Z,14nm,1.2s,mb4.9
MBDF Montbardon 64.44 308 *e*P **P 03 46 29.5 +0.7**
comp=Z,14nm,1.2s,mb4.8
SBF Sospel 64.47 307 *e*P **P 03 46 28.8 -0.2**
comp=Z,26nm,0.8s,mb5.0
SBF Sospel 64.47 307 *e*P **P 03 46 28.8 -0.2**
SBF pmax pmax
comp=Z,13nm,0.8s,mb5.0
SBF Sospel 64.47 307 *e*P **P 03 46 28.8 -0.2**
comp=Z,13nm,0.8s,mb5.0
LOR Lormes 64.88 311 *e*P **P 03 46 31.9 +0.2**
comp=Z,35nm,1.5s,mb4.9
LOR *e*MLR MLR
comp=Z,148nm,22.2s,MS3.8
LOR Lormes 64.88 311 *e*P **P 03 46 31.9 +0.2**
LOR pmax pmax
comp=Z,17nm,1.5s,mb4.8
LOR MLR MLR
comp=Z,150nm,22.3s,MS4.1
LOR Lormes 64.88 311 *e*P **P 03 46 31.9 +0.2**
comp=Z,18nm,1.5s,mb4.9
LOR LR LR
comp=Z,150nm,22.3s,MS4.1
ORIF Oris-en-Rattie 64.89 308 *e*P **P 03 46 31.8 0.0**
comp=Z,33nm,1.3s,mb4.9
ORIF *e*MLR MLR
comp=Z,181nm,20.0s,MS4.0
ORIF Oris-en-Rattie 64.89 308 *e*P **P 03 46 31.8 0.0**
ORIF pmax pmax
comp=Z,16nm,1.3s,mb4.9
ORIF Oris-en-Rattie 64.89 308 *e*P **P 03 46 31.8 0.0**
comp=Z,16nm,1.3s,mb4.9
SSF Saint Saulge 65.19 311 *e*P **P 03 46 33.1 -0.6**
SMF Signal de Mont 65.21 311 ⇑*i*P **P 03 46 33.4 -0.5**
comp=Z,46nm,1.3s,mb5.0
SMF Signal de Mont 65.21 311 ⇑*i*P **P 03 46 33.4 -0.5**
SMF pmax pmax
comp=Z,23nm,1.3s,mb5.0
SMF Signal de Mont 65.21 311 ⇑*i*P **P 03 46 33.4 -0.5**
comp=Z,23nm,1.3s,mb5.0
AVF Avril sur Loir 65.42 311 ⇑*i*P **P 03 46 34.7 -0.5**
comp=Z,59nm,1.6s,mb5.1
AVF Avril sur Loir 65.42 311 ⇑*i*P **P 03 46 34.7 -0.5**
AVF pmax pmax
comp=Z,30nm,1.6s,mb5.1
AVF Avril sur Loir 65.42 311 ⇑*i*P **P 03 46 34.7 -0.5**
comp=Z,30nm,1.6s,mb5.1
BGF Bois d'Agland 65.84 311 *e*P **P 03 46 37.4 -0.5**
comp=Z,11nm,0.8s,mb4.6
BGF Bois d'Agland 65.84 311 *e*P **P 03 46 37.4 -0.5**
BGF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
BGF Bois d'Agland 65.84 311 *e*P **P 03 46 37.4 -0.5**
comp=Z,5.4nm,0.8s,mb4.6
TCF Toulx Ste Croi 66.36 311 *e*P **P 03 46 41.1 -0.2**
LDF La Druitiere 66.44 314 *e*P **P 03 46 41.2 -0.6**
FLN La Foliniere 66.55 314 *e*P **P 03 46 41.8 -0.7**
comp=Z,66nm,1.4s,mb5.2
FLN *e*MLR MLR
comp=Z,87nm,21.5s,MS3.6
FLN La Foliniere 66.55 314 *e*P **P 03 46 41.8 -0.7**
FLN pmax pmax
comp=Z,33nm,1.4s,mb5.2
FLN MLR MLR
comp=Z,90nm,21.5s,MS4.0
FLN La Foliniere 66.55 314 *e*P **P 03 46 41.8 -0.7**
comp=Z,33nm,1.4s,mb5.2
FLN LR LR
comp=Z,90nm,21.5s,MS4.0
LASF Ste Croix 66.56 308 *e*P **P 03 46 42.6 0.0**
comp=Z,34nm,1.1s,mb5.0
EGAK Eagle 66.58 24 *e*P **P 03 46 41.9 -0.4**
comp=Z,9.9nm,1.0s,mb4.8
GRR Gorron 66.97 314 *e*P **P 03 46 44.7 -0.4**
comp=Z,24nm,0.9s,mb4.9
GRR Gorron 66.97 314 *e*P **P 03 46 44.7 -0.4**
GRR pmax pmax
comp=Z,12nm,0.9s,mb4.9
GRR Gorron 66.97 314 *e*P **P 03 46 44.7 -0.4**
comp=Z,12nm,0.9s,mb4.9
CAF Calviac 67.18 310 *e*P **P 03 46 46.8 +0.3**
comp=Z,15nm,1.1s,mb4.6
CAF Calviac 67.18 310 *e*P **P 03 46 46.8 +0.3**
CAF pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
CAF Calviac 67.18 310 *e*P **P 03 46 46.8 +0.3**
comp=Z,7.5nm,1.1s,mb4.6
RJF Les Rejaudoux 67.30 311 *e*P **P 03 46 47.5 +0.2**
comp=Z,64nm,1.7s,mb5.1
RJF *e*MLR MLR
comp=Z,124nm,19.5s,MS3.8
RJF Les Rejaudoux 67.30 311 *e*P **P 03 46 47.5 +0.2**
RJF pmax pmax
comp=Z,32nm,1.7s,mb5.1
RJF MLR MLR
comp=Z,120nm,19.5s,MS4.1
RJF Les Rejaudoux 67.30 311 *e*P **P 03 46 47.5 +0.2**
comp=Z,32nm,1.7s,mb5.1
RJF LR LR
comp=Z,120nm,19.5s,MS4.1
KEST Kesra 67.48 298 P **P 03 46 48.9 +0.2**
comp=Z,1.9nm,1.0s,mb4.1,baz=267,slow=18,SNR=2.8
MFF Saint Martin d 67.55 312 ⇑*i*P **P 03 46 48.7 -0.1**
comp=Z,60nm,1.3s,mb5.2
MFF Saint Martin d 67.55 312 ⇑*i*P **P 03 46 48.7 -0.1**
MFF pmax pmax
comp=Z,30nm,1.3s,mb5.2
MFF Saint Martin d 67.55 312 ⇑*i*P **P 03 46 48.7 -0.1**
comp=Z,30nm,1.3s,mb5.2
DAWY Dawson 67.63 24 *e*P **P 03 46 48.9 -0.2**
MTLF Montolieu 67.96 308 *e*P **P 03 46 51.2 -0.3**
LFF La Frestale 67.96 311 *e*P **P 03 46 51.7 +0.3**
comp=Z,42nm,1.2s,mb5.0
LFF La Frestale 67.96 311 *e*P **P 03 46 51.7 +0.3**
LFF pmax pmax
comp=Z,21nm,1.2s,mb5.0
LFF La Frestale 67.96 311 *e*P **P 03 46 51.7 +0.3**
comp=Z,21nm,1.2s,mb5.0
SGMF Saint Gilles 67.98 315 ⇑*i*P **P 03 46 51.5 0.0**
comp=Z,81nm,1.3s,mb5.3
SGMF Saint Gilles 67.98 315 ⇑*i*P **P 03 46 51.5 0.0**
SGMF pmax pmax
comp=Z,41nm,1.3s,mb5.3
SGMF Saint Gilles 67.98 315 ⇑*i*P **P 03 46 51.5 0.0**
comp=Z,41nm,1.3s,mb5.3
WRA Warramunga Arr 68.05 143 P **P 03 46 51.3 -0.9**
comp=Z,7.0nm,0.8s,mb4.8,baz=340,slow=6.5,SNR=35
WRA Warramunga Arr 68.05 143 *i*P **P 03 46 50.5 -1.7**
WRA pmax pmax
comp=Z,7.0nm,0.8s
WB2 Warramunga Arr 68.05 143 *e*P **P 03 46 51.7 -0.5**
ROSF Rostrenen 68.33 315 *e*P **P 03 46 53.7 0.0**
comp=Z,123nm,1.5s,mb5.4
ROSF Rostrenen 68.33 315 *e*P **P 03 46 53.7 0.0**
ROSF pmax pmax
comp=Z,61nm,1.5s,mb5.4
ROSF Rostrenen 68.33 315 *e*P **P 03 46 53.7 0.0**
comp=Z,61nm,1.5s,mb5.4
QUIF Quistinic 68.51 315 *e*P **P 03 46 54.7 -0.1**
comp=Z,71nm,1.3s,mb5.1
QUIF Quistinic 68.51 315 *e*P **P 03 46 54.7 -0.1**
QUIF pmax pmax
comp=Z,36nm,1.3s,mb5.1
QUIF Quistinic 68.51 315 *e*P **P 03 46 54.7 -0.1**
comp=Z,36nm,1.3s,mb5.1
EPF Esparros 69.27 309 *e*P **P 03 46 59.0 -0.7**
ETSF Etsaut 69.89 309 *e*P **P 03 47 03.9 +0.4**
comp=Z,20nm,1.1s,mb4.7
ETSF Etsaut 69.89 309 *e*P **P 03 47 03.9 +0.4**
ETSF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
ETSF Etsaut 69.89 309 *e*P **P 03 47 03.9 +0.4**
comp=Z,9.8nm,1.1s,mb4.7
SJPF Ste Jean 70.16 310 *e*P **P 03 47 05.8 +0.6**
comp=Z,14nm,1.0s,mb4.5
SJPF Ste Jean 70.16 310 *e*P **P 03 47 05.8 +0.6**
SJPF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
SJPF Ste Jean 70.16 310 *e*P **P 03 47 05.8 +0.6**
comp=Z,8.8nm,1.0s,mb4.5
HYT Haines Junctio 70.59 25 *e*P **P 03 47 10.0 +2.5**
ASAR Alice Springs 71.08 145 P **P 03 47 10.8 -0.1**
comp=Z,8.6nm,0.8s,mb4.8,baz=333,slow=6.1,SNR=82
ASAR Alice Springs 71.08 145 P **P 03 47 10.8 0.0**
ASAR pmax pmax
comp=Z,9.0nm,0.8s
ESDC Sonseca Array 73.86 308 P **P 03 47 27.6 +0.1**
comp=Z,4.2nm,0.7s,mb4.5,baz=49,slow=5.9,SNR=29
ESDC LR LR 04 22 40.6
comp=Z,49nm,18.4s,MS3.8,baz=55,slow=38
CTA Charters Tower 74.37 133 P **P 03 47 29.3 -1.1**
comp=Z,3.4nm,0.8s,mb4.3,baz=331,slow=10,SNR=5.1
CTA Charters Tower 74.37 133 P **P 03 47 29.3 -1.2**
CTA pmax pmax
comp=Z,3.0nm,0.8s
HNR Honiara 75.18 116 P **P 03 47 35.6 +0.2**
comp=Z,56nm,0.3s,mb5.9,baz=315,slow=1.7,SNR=2.5
HNR Honiara 75.18 116 P **P 03 47 35.6 +0.3**
HNR pmax pmax
comp=Z,56nm,0.3s
YKA Yellowknife Ar 75.33 15 P **P 03 47 34.9 -0.6**
comp=Z,3.9nm,0.9s,mb4.3,baz=335,slow=5.8,SNR=11
YKA LR LR 04 19 51.0
comp=Z,51nm,21.2s,MS3.8,baz=155,slow=35
YKA Yellowknife Ar 75.33 15 P **P 03 47 34.9 -0.6**
YKA pmax pmax
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 75.33 15 P **P 03 47 34.9 -0.6**
YKA LR LR 04 19 51.0
EVO Evora 77.03 309 *e*P **P 03 47 46.2 +0.6**
comp=Z,34nm,1.3s,mb4.8
EVO *e*MLR MLR
comp=Z,64nm,19.2s,MS3.6
STKA Stephens Creek 81.59 143 *e*P **P 03 48 09.7 -0.6**
comp=Z,4.4nm,0.8s,mb4.4
STKA Stephens Creek 81.59 143 P **P 03 48 08.5 -1.8**
comp=Z,5.0nm,0.8s,mb4.5,baz=299,slow=3.7,SNR=7.6
LSZ Lusaka 84.49 245 *e*P **P 03 48 25.9 +0.2**
LSZ pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
LSZ Lusaka 84.49 245 *e*P **P 03 48 25.9 +0.2**
comp=Z,2.9nm,0.7s,mb4.5
SCHQ Schefferville 85.40 351 P **P 03 48 28.4 -1.4**
comp=Z,9.5nm,0.9s,mb4.9,baz=18,slow=4.6,SNR=7.9
JCW Jim Creek 86.08 25 *e*P **P 03 48 32.8 -0.5**
TORD Torodi Ar. Bea 86.47 284 P **P 03 48 34.6 -1.2**
comp=Z,2.3nm,0.8s,mb4.5,baz=44,slow=5.2,SNR=16
NEW Newport 87.54 23 *e*P **P 03 48 40.5 +0.1**
NEW pmax pmax
comp=Z,2.0nm,0.7s
NEW Newport 87.54 23 *e*P **P 03 48 40.5 +0.1**
comp=Z,2.2nm,0.7s,mb4.5
EGMT Eagleton 89.75 18 *e*P **P 03 48 50.0 -0.8**
comp=Z,11nm,1.3s,mb5.0
MSO Missoula 89.75 21 *e*P **P 03 48 51.1 +0.2**
comp=Z,4.5nm,1.0s,mb4.8
CHMT Chamberlain Mo 89.87 21 *e*P **P 03 48 50.9 -0.6**
DGMT Dagmar 90.53 14 *e*P **P 03 48 54.4 -0.1**
comp=Z,22nm,0.9s,mb5.5
DLMT Dillon 91.47 21 *e*P **P 03 48 59.4 +0.4**
comp=Z,11nm,1.4s,mb5.0
BOZ Bozeman (W) 91.47 20 *e*P **P 03 48 59.4 +0.4**
BOZ pmax pmax
comp=Z,3.0nm,1.2s,mb4.5
BOZ Bozeman (W) 91.47 20 *e*P **P 03 48 59.4 +0.4**
comp=Z,3.5nm,1.2s,mb4.6
GCMT Greycliff 91.85 19 *e*P **P 03 49 01.0 +0.3**
MOD Modoc 92.13 27 *e*P **P 03 49 03.3 +1.2**
comp=Z,4.0nm,1.0s,mb4.7
WVOR Wild Horse Val 92.25 26 *e*P **P 03 49 02.8 +0.2**
WVOR pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
WVOR Wild Horse Val 92.25 26 *e*P **P 03 49 02.8 +0.2**
comp=Z,2.5nm,1.0s,mb4.5
HLID Hailey 92.59 23 *e*P **P 03 49 04.3 +0.1**
comp=Z,0.9nm,0.7s,mb4.3
IMW Indian Meadow 93.28 20 *e*P **P 03 49 08.4 +1.1**
comp=Z,3.7nm,0.9s,mb4.8
PDAR Pinedale Array 94.70 20 P **P 03 49 12.0 -1.9**
comp=Z,0.5nm,0.9s,mb4.0,baz=336,slow=3.3,SNR=4.3
PDAR LR LR 04 35 26.6
comp=Z,58nm,20.6s,MS4.0,baz=212,slow=38
RSSD Black Hills 94.73 16 *e*P **P 03 49 14.3 +0.3**
RSSD pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
RSSD Black Hills 94.73 16 *e*P **P 03 49 14.3 +0.3**
comp=Z,5.9nm,1.0s,mb5.0
NVAR Mina Array Bea 95.92 28 P **P 03 49 19.4 -0.1**
comp=Z,1.3nm,0.9s,mb4.3,baz=302,slow=5.1,SNR=8.0
NVAR Mina Array Bea 95.92 28 P **P 03 49 19.4 -0.1**
BDFB Brasilia 142.00 299 PKP PKPdf 03 55 25.5 +0.4
comp=Z,2.0nm,0.5s,baz=64,slow=23,SNR=3.0
BDFB Brasilia 142.00 299 PKIKP PKPdf 03 55 25.5 +0.4
BDFB pmax pmax
comp=Z,2.0nm,0.5s
ATAH Atahualpa 147.75 353 PKPbc PKPbc 03 55 37.7 -0.3
comp=Z,19nm,0.9s,baz=25,slow=3.4,SNR=9.1
SIV San Ignacio 150.39 315 PKP PKPdf 03 55 38.8 -0.5
comp=Z,3.9nm,0.9s,baz=82,slow=2.9,SNR=12
SIV PKPbc PKPbc 03 55 43.7 -0.9
comp=Z,6.4nm,1.0s,baz=97,slow=5.1,SNR=12
CPUP Villa Florida 155.56 294 PKPab PKPab 03 56 10.9 -1.6
comp=Z,2.6nm,0.9s,baz=36,slow=4.6,SNR=3.7
CPUP Villa Florida 155.56 294 PKP2 PKPab 03 56 10.9 -1.6
CPUP pmax pmax
comp=Z,3.0nm,0.9s

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*IDC **01** 03:39:09.5±1.9, 4644N×15309E, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.7/22, mbtmp3.8/7, ML3.4/2, MS4.1/1, Ms1 4.1/1, ms1mx2.6/35, Error ellipse: s-maj=54.1km s-min=28.4km az=171.0*

*ISCJB **01** 03:39:12.0±5.6, 465N±03×1530E±03, h25km±37km, mb3.7/5, Error ellipse: s-maj=55.1km s-min=20.1km az=145.9*

ISC 01 03:39:16.0±2.6, 465N±03×1530E±03, h41km±19km, n7, σ0§91/7, mb3.7/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**7.26**	**23**	Pn		**Pn**	**03 40 59.2**	**-0.1**
	0.7nm,0.3s,baz=176,slow=12,SNR=8.8							
ASAJ	**Asahikawa**	**7.72**	**256**	Pn		**Pn**	**03 41 05.8**	**+0.1**
	0.6nm,0.3s,baz=94,slow=20,SNR=6.3							
PDAR	**Pinedale Array**	**64.94**	**54**	P		**P**	**03 49 51.7**	**+0.6**
	0.4nm,0.8s,mb3.5,baz=350,slow=4.6,SNR=4.2							
NOA	**NORSAR Array B**	**68.42**	**341**	P		**P**	**03 50 13.3**	**+0.4**
	0.4nm,0.5s,mb3.7,baz=28,slow=6.3,SNR=2.9							
AKASG	**Malin Array Be**	**71.69**	**326**	P		**P**	**03 50 32.0**	**-1.2**
	1.4nm,0.4s,mb4.2,baz=37,slow=5.2,SNR=4.9							
TXAR	**Lajitas Array**	**77.67**	**60**	P		**P**	**03 51 07.5**	**-0.6**
	0.3nm,0.5s,mb3.5,baz=288,slow=4.2,SNR=8.8							
GERES	**GERESS Array B**	**78.63**	**334**	P		**P**	**03 51 13.9**	**+0.8**
	0.3nm,0.5s,mb3.5,baz=35,slow=5.3,SNR=3.4							

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*IDC **01** 03:46:15.9±9.3, 3142N×8555E, h56km±87km, mb3.5/6, mb1 3.8/8, mb1mx3.4/22, mbtmp3.6/8, ML4.2/2, Error ellipse: s-maj=65.1km s-min=18.2km az=50.0*

*ISCJB **01** 03:46:16.9±6.0, 314N±02×856E±04, h82km±57km, mb3.5/6, Error ellipse: s-maj=63.1km s-min=17.6km az=149.0*

ISC 01 03:46:17.3±5.5, 314N±02×856E±04, h69km±54km, n8, σ0§62/8, mb3.5/6, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.69**	**134**	P		**Pn**	**03 50 19.1**	**+0.1**
	0.9nm,0.3s,baz=316,slow=12,SNR=17							
KURK	**Kurchatov**	**19.95**	**347**	P		**Pn**	**03 50 41.3**	**-4.5**
	0.0nm,0.3s,baz=166,slow=10,SNR=5.9							
ZALV	**Zalesovo Beam**	**22.50**	**359**	P		**P**	**03 51 10.5**	**-0.4**
	2.0nm,0.9s,mb3.5,baz=183,slow=9.9,SNR=3.9							
BVAR	**Borovoye Array**	**24.23**	**337**	P		**P**	**03 51 28.1**	**+0.7**
	1.0nm,0.7s,mb3.2,baz=134,slow=8.3,SNR=3.9							
NOA	**NORSAR Array B**	**55.56**	**325**	P		**P**	**03 55 45.4**	**+0.1**
	0.4nm,0.5s,mb3.7,baz=87,slow=7.2,SNR=2.7							
WRA	**Warramunga Arr**	**69.26**	**131**	P		**P**	**03 57 16.8**	**-0.4**
	0.4nm,0.5s,mb3.5,baz=325,slow=6.3,SNR=5.2							
ASAR	**Alice Springs**	**71.70**	**134**	P		**P**	**03 57 32.4**	**+0.4**
	1.6nm,0.7s,mb4.0,baz=317,slow=5.8,SNR=22							
TORD	**Torodi Ar. Bea**	**78.12**	**278**	P		**P**	**03 58 08.9**	**-0.4**
	0.5nm,0.7s,mb3.3,baz=53,slow=4.6,SNR=5.9							

IDC 01 03:46:36.0±24.0, 2071S×17582W, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/17, mbtmp4.1/5, ML4.3/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/24, Error ellipse: s-maj=442.6km s-min=54.1km az=66.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RAO	**Raoul Island**	**8.71**	**192**	LR		LR	03 51 03.2	
	comp=Z,124nm,21.1s,baz=18,slow=31							
URZ	**Urewera**	**18.53**	**198**	P		Pn	03 50 54.4	+0.3
	1.0nm,0.3s,baz=55,slow=12,SNR=5.8							
CTA	**Charters Tower**	**35.50**	**264**	P		P	03 53 36.5	+1.8
	2.2nm,0.4s,baz=90,slow=15,SNR=4.7							
CTA				LR		LR	04 06 30.1	
	comp=Z,116nm,20.5s,baz=230,slow=34							
STKA	**Stephens Creek**	**39.54**	**245**	P		P	03 54 07.1	-1.7
	1.0nm,0.4s,baz=82,slow=9.3,SNR=5.2							
ASAR	**Alice Springs**	**46.46**	**257**	P		P	03 55 04.6	-0.4
	0.6nm,0.4s,baz=92,slow=8.2,SNR=13							
WRA	**Warramunga Arr**	**46.59**	**262**	P		P	03 55 05.9	-0.2
	0.6nm,0.4s,baz=96,slow=7.8,SNR=10							

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*ISCJB **01** 03:51:29.4±0.6, 686N±007×7294W±007, h168km±6km, mb3.2/4, Error ellipse: s-maj=15.1km s-min=6.9km az=44.4*

*IDC **01** 03:51:30.0±0.7, 670N×7290W, h163km±9km, mb3.0/4, mb1 3.3/6, mb1mx3.1/20, mbtmp3.2/6, Error ellipse: s-maj=26.9km s-min=7.6km az=134.0*

*FUNV **01** 03:51:31.2, 695N×7306W, h172km, MW3.7*

ISC 01 03:51:30.4±0.6, 684N±007×7293W±007, h161km±6km, n21, σ1§00/31, mb3.2/4, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.19**	**31**	*e*P		**Pn**	**03 51 58.8**	**+0.9**
CAPV				*e*S		**Sn**	**03 52 19.6**	**+0.7**
ROSC	**El Rosal**	**2.41**	**215**	P		**Pn**	**03 52 10.7**	**-0.4**
	32nm,0.3s,baz=88,slow=22,SNR=96							
ROSC				S		**Sn**	**03 52 41.6**	**-0.9**
	27nm,0.3s,baz=87,slow=20,SNR=15							
SOCV	**Socops**	**2.51**	**55**	*e*P		**Pn**	**03 52 12.9**	**+0.7**
SOCV				*e*S		**Sn**	**03 52 44.6**	**+0.1**
VIGV	**El Vigia**	**2.52**	**38**	*e*P		**Pn**	**03 52 13.3**	**+0.9**
VIGV				*e*S		**Sn**	**03 52 43.5**	**-1.3**
SDV	**Santo Domingo**	**3.05**	**48**	P		**Pn**	**03 52 19.7**	**+0.8**
	18nm,0.3s,baz=24,slow=6.6,SNR=2.5							
SDV				S		**Sn**	**03 52 58.4**	**+1.9**
	30nm,0.3s,baz=269,slow=21,SNR=23							
ELOV	**Elorza**	**3.43**	**87**	*e*P		**Pn**	**03 52 25.2**	**+1.6**
VIRV	**Villa del Rosa**	**3.68**	**8**	*e*P		**Pn**	**03 52 25.8**	**-1.0**
VIRV				*e*S		**Sn**	**03 53 05.4**	**-5.3**
QARV	**Quebrada Arrib**	**4.11**	**35**	*e*P		**Pn**	**03 52 31.4**	**-0.9**
QARV				*e*S		**Sn**	**03 53 16.9**	**-3.7**
SANV	**Sanarito**	**4.28**	**52**	*e*P		**Pn**	**03 52 35.3**	**+0.8**
SANV				*e*S		**Sn**	**03 53 22.3**	**-2.2**
CURV	**Curarigua**	**4.31**	**43**	*e*P		**Pn**	**03 52 35.3**	**+0.3**
CURV				*e*S		**Sn**	**03 53 20.9**	**-4.4**
DABV	**Dabajuro**	**4.65**	**29**	*e*S		**Sn**	**03 53 28.4**	**-4.9**
TEPV	**Terepaima**	**4.83**	**50**	*e*P		**Pn**	**03 52 41.8**	**+0.1**
TEPV				*e*S		**Sn**	**03 53 33.9**	**-3.6**
SIQV	**Siquisique**	**4.88**	**39**	*e*P		**Pn**	**03 52 42.9**	**+0.4**
BAUV	**El Baul**	**5.27**	**66**	*e*P		**Pn**	**03 52 47.5**	**-0.1**
TURV	**Turiamo**	**6.18**	**54**	*e*P		**Pn**	**03 52 59.7**	**+0.1**
CAOV	**Caicara del Or**	**6.58**	**85**	*e*P		**Pn**	**03 53 04.5**	**-0.3**
CUPV	**Cœpira**	**7.75**	**65**	*e*P		**Pn**	**03 53 19.4**	**-1.1**
TXAR	**Lajitas Array**	**36.59**	**312**	P		**P**	**03 58 20.9**	**-0.1**
	0.1nm,0.5s,mb2.7,baz=116,slow=8.1,SNR=3.9							

SCHQ	**Schefferville**	**48.11**	**5**	P	**P**	**03 59 55.2**	**+1.6**
	2.8nm,0.8s,mb3.9,baz=201,slow=17,SNR=3.4						
YKA	**Yellowknife Ar**	**63.31**	**340**	P	**P**	**04 01 41.9**	**+0.1**
	0.3nm,0.6s,mb3.3,baz=133,slow=7.1,SNR=5.3						
TORD	**Torodi Ar. Bea**	**73.55**	**78**	P	**P**	**04 02 45.5**	**-0.8**
	0.1nm,0.5s,mb2.8,baz=285,slow=7.0,SNR=2.8						

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*ISCJB **01** 04:28:49.4±0.6, 3936N±003×2028E±006, h13km±4km, Error ellipse: s-maj=7.3km s-min=4.3km az=177.8*
*ATH **01** 04:28:50.1, 3931N×2027E, h27km±2km, MD3.3/5*
*NEIC **01** 04:28:50.3, 3930N×2028E, h25km, MD3.3(ATH), After ATH.*
*THE **01** 04:28:50.8, 3933N×2029E, h3km, ML2.8*
*CSEM **01** 04:28:50.8±0.2, 3932N×2030E, h10km, ML2.8, Error ellipse: s-maj=4.5km s-min=2.9km az=84.0*
ISC 01 04:28:50.9±0.5**, 3933N**±003×**2031E**±005**, h11**km±5km**, n19,** σ**0.**s**92**/31**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.20**	**5**	ePg	**Pg**	**04 28 54.5**	**-0.8**
IGT				eSg	**Sg**	**04 28 58.4**	**+0.1**
JAN	**Janina**	**0.53**	**52**	ePN	**Pg**	**04 29 01.4**	**+0.1**
JAN				eSN	**Sg**	**04 29 10.1**	**+1.8**
KEK	**Kerkira**	**0.55**	**314**	ePN	**Pg**	**04 29 01.1**	**-0.5**
KEK				eSN	**Sg**	**04 29 09.9**	**+1.0**
KEK	**Kerkira**	**0.55**	**314**	ePn	**Pg**	**04 29 01.1**	**-0.5**
KEK				eSn	**Sg**	**04 29 10.4**	**+1.5**
LKD	**Levkas**	**0.68**	**157**	ePg	**Pg**	**04 29 03.0**	**-1.0**
LKD				eSg	**Sg**	**04 29 13.8**	**+0.9**
LKD	**Levkas**	**0.68**	**157**	ePg	**Pg**	**04 29 03.0**	**-1.0**
LKD				eSg	**Sg**	**04 29 13.8**	**+0.9**
MEV	**Metsovon**	**0.84**	**57**	ePg	**Pg**	**04 29 06.8**	**-0.4**
MEV	**Metsovon**	**0.84**	**57**	ePg	**Pg**	**04 29 06.8**	**-0.4**
VLS	**Valsamata**	**1.17**	**169**	ePg	**Pg**	**04 29 12.3**	**-1.1**
VLS				eSg	**Sg**	**04 29 29.8**	**+1.1**
VLS	**Valsamata**	**1.17**	**169**	ePN	**Pn**	**04 29 12.6**	**-0.6**
VLS				eSN	**Sn**	**04 29 28.6**	**-0.5**
VLS	**Valsamata**	**1.17**	**169**	ePn	**Pn**	**04 29 12.6**	**-0.6**
VLS				eSn	**Sn**	**04 29 28.6**	**-0.5**
VLS				eSg	**Sg**	**04 29 29.8**	**+1.1**
EVR	**Evrytania**	**1.24**	**109**	ePN	**Pn**	**04 29 14.0**	**-0.1**
EVR	**Evrytania**	**1.24**	**109**	ePn	**Pn**	**04 29 14.6**	**+0.5**
KFL	**Anninata**	**1.27**	**163**	ePg	**Pg**	**04 29 14.8**	**-0.6**
KFL				eSg	**Sg**	**04 29 32.8**	**+0.8**
THL	**Klokotos Trika**	**1.34**	**79**	ePg	**Pg**	**04 29 15.2**	**-1.5**
THL				eSg	**Sg**	**04 29 34.6**	**+0.4**
THL	**Klokotos Trika**	**1.34**	**79**	ePN	**Pn**	**04 29 15.3**	**-0.2**
RLS	**Riolos of Patr**	**1.56**	**144**	ePn	**Pn**	**04 29 20.0**	**+1.5**
AGG	**Agios Georgios**	**1.60**	**100**	ePg	**Pg**	**04 29 20.1**	**-1.6**
DID	**Didima**	**2.93**	**127**	ePn	**Pn**	**04 29 38.1**	**+0.7**

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*NEIC **01** 04:30:05.9±1.8, 5144N×1616E, h5km, ML2.5(SZGRF), Error ellipse: s-maj=18.5km s-min=5.8km az=209.0*
*WAR **01** 04:30:06.6, 5145N×1618E, ML2.5, Mining Induced*
*CSEM **01** 04:30:06.0±0.2, 5144N×1616E, h1km, ML3.1/8, Error ellipse: s-maj=3.5km s-min=1.7km az=28.0*
*IPEC **01** 04:30:06.0±0.3, 5143N×1626E, h3km±1km, ML1.8/3, Error ellipse: s-maj=1.9km s-min=0.8km az=28.0*
*ISCJB **01** 04:30:06.0±0.7, 5131N±003×1611E±003, h0km, Error ellipse: s-maj=5.1km s-min=2.8km az=19.3*
*VIE **01** 04:30:07.7±0.4, 5125N×1628E, h0km, mb2.0/3, ML2.6/3, Error ellipse: s-maj=3.1km s-min=2.6km az=52.0 54 km WNW of Wroclaw Suspected Mining induced.*
*PRU **01** 04:30:08.2, 5134N×1612E, h0km*
ISC 01 04:30:06.3±0.7**, 5139N**±004×**1616E**±004**, h0**km**, n35,** σ**0.**s**93**/69**, 2C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.56**	**172**	ePg	**Pg**	**04 30 17.8**	**+0.9**
KSP				eSg	**Sg**	**04 30 25.7**	**+1.6**
KSP	**Ksiaz**	**0.56**	**172**	ePg	**Pg**	**04 30 17.6**	**+0.7**
KSP				eSg	**Sg**	**04 30 24.7**	**+0.6**
KSP	**Ksiaz**	**0.56**	**172**	⇓iPg	**Pg**	**04 30 17.8**	**+0.9**
KSP				eSg	**Sg**	**04 30 25.7**	**+1.6**
KSP				e		04 30 29.2	
UPC	**Upice**	**0.89**	**186**	ePg	**Pg**	**04 30 23.9**	**+0.6**
DPC	**Dobruska-Polom**	**1.05**	**174**	ePg	**Pg**	**04 30 26.5**	**+0.2**
DPC				Sg	**Sg**	**04 30 40.6**	**+0.7**
	24nm,0.3s						
DPC	**Dobruska-Polom**	**1.05**	**174**	ePG	**Pg**	**04 30 26.2**	**-0.1**
DPC				eSG	**Sg**	**04 30 40.6**	**+0.7**
	comp=Z,24nm,0.3s						
PVCC	**Panska Ves**	**1.33**	**230**	ePn	**Pn**	**04 30 32.1**	**+0.1**
PVCC				Sg	**Sg**	**04 30 50.6**	**+1.7**
	comp=Z,88nm,0.3s						
PVCC	**Panska Ves**	**1.33**	**230**	ePG	**Pg**	**04 30 31.7**	**0.0**
PVCC				eSG	**Sg**	**04 30 50.6**	**+1.7**
	comp=Z,88nm,0.3s						
BRG	**Berggiesshubel**	**1.49**	**250**	ePg	**Pg**	**04 30 34.2**	**-0.7**
BRG				eSg	**Sg**	**04 30 54.5**	**+0.3**
BRG	**Berggiesshubel**	**1.49**	**250**	Pg	**Pg**	**04 30 34.7**	**-0.2**
BRG				Sg	**Sg**	**04 30 55.2**	**+1.0**
BRG				SG	**Sg**	**04 30 55.2**	**+1.0**
	comp=Z,36nm,0.4s						
BRG	**Berggiesshubel**	**1.49**	**250**	PG	**Pg**	**04 30 34.7**	**-0.2**
PRU	**Pruhonice**	**1.74**	**217**	ePn	**Pn**	**04 30 37.7**	**0.0**
PRU	**Pruhonice**	**1.74**	**217**	Pg	**Pg**	**04 30 39.0**	**-0.7**
PRU				Sg	**Sg**	**04 31 02.6**	**+0.4**
	comp=Z,25nm,0.4s						
PRU	**Pruhonice**	**1.74**	**217**	ePG	**Pg**	**04 30 39.0**	**-0.7**
PRU				eSG	**Sg**	**04 31 02.6**	**+0.4**
	comp=Z,25nm,0.4s						
MORC	**Moravsky Berou**	**1.84**	**151**	ePn	**Pn**	**04 30 38.6**	**-0.5**
MORC				eSg	**Sg**	**04 31 02.9**	**-2.5**
CLL	**Collm**	**1.98**	**269**	i Pg	**Pg**	**04 30 43.4**	**-0.9**
CLL				i Sg	**Sg**	**04 31 10.2**	**+0.2**
CLL	**Collm**	**1.98**	**269**	ePn	**Pn**	**04 30 41.5**	**+0.4**
CLL	**Collm**	**1.98**	**269**	i Pg	**Pg**	**04 30 43.4**	**-0.9**
CLL				i Sg	**Sg**	**04 31 10.2**	**+0.2**
OKC	**Ostrava-Krasne**	**2.00**	**140**	ePG	**Pg**	**04 30 44.3**	**-0.4**
OKC				eSG	**Sg**	**04 31 09.3**	**-1.3**
VRAC	**Vranov**	**2.10**	**172**	ePn	**Pn**	**04 30 43.1**	**+0.4**
VRAC				eSg	**Sg**	**04 31 12.2**	**-1.6**
	comp=Z,6.3nm,0.2s						
KRUC	**Moravsky**	**2.34**	**176**	ePn	**Pn**	**04 30 46.4**	**+0.5**
KRUC				eSg	**Sg**	**04 31 21.3**	**0.0**
	comp=Z,3.7nm,0.3s						
NKC	**Novy Kostel**	**2.63**	**245**	ePN	**Pn**	**04 30 48.9**	**-1.0**
NKC				ePG	**Pg**	**04 30 55.9**	**-0.7**
NKC				eSG	**Sg**	**04 31 30.9**	**+0.3**
	comp=Z,21nm,0.4s						
KHC	**Kasperske Hory**	**2.81**	**217**	ePN	**Pn**	**04 30 52.7**	**+0.3**
KHC				ePG	**Pg**	**04 30 58.3**	**-1.7**
KHC				ex	x	04 31 28.0	
KHC				eSG	**Sg**	**04 31 35.3**	**-1.1**
	comp=Z,6.0nm,0.4s						
MOX	**Moxa**	**2.97**	**257**	ePG	**Pg**	**04 31 02.9**	**-0.2**
MOX				eSG	**Sg**	**04 31 43.3**	**+1.7**
MOX	**Moxa**	**2.97**	**257**	ePg	**Pg**	**04 31 02.1**	**-1.0**
MOX				eSg	**Sg**	**04 31 40.8**	**-0.8**
GEC2	**GERESS Array S**	**3.00**	**213**	ePn	**Pn**	**04 30 55.9**	**+0.9**
GEC2				eSg	**Sg**	**04 31 41.5**	**-1.2**
WET	**Wettzell**	**3.08**	**224**	ePn	**Pn**	**04 30 56.2**	**0.0**
WET				eSg	**Sg**	**04 31 44.2**	**-1.1**
WET	**Wettzell**	**3.08**	**224**	ePn	**Pn**	**04 30 56.4**	**+0.2**
WET				eSg	**Sg**	**04 31 44.2**	**-1.1**
MODS	**Modra-Piesok**	**3.11**	**166**	ePG	**Pg**	**04 31 06.2**	**+0.4**
MODS				eSG	**Sg**	**04 31 46.8**	**+0.8**
MODS	**Modra-Piesok**	**3.11**	**166**	ePg	**Pg**	**04 31 06.2**	**+0.4**
MODS				eSg	**Sg**	**04 31 46.8**	**+0.8**
MODS	**Modra-Piesok**	**3.11**	**166**	ePg	**Pg**	**04 31 06.2**	**+0.4**
MODS				eSg	**Sg**	**04 31 46.8**	**+0.8**
MOA	**Molln**	**3.75**	**200**	⇑iPn	**Pn**	**04 31 05.8**	**+0.4**
MOA				⇑iSg	**Sg**	**04 32 08.4**	**+1.6**
	comp=Z,4.0nm,0.3s						
STHS	**Stebnicka Huta**	**3.80**	**119**	ePG	**Pg**	**04 31 20.7**	**+1.6**
STHS				eSG	**Sg**	**04 32 12.7**	**+4.3**
STHS	**Stebnicka Huta**	**3.80**	**119**	ePg	**Pg**	**04 31 20.7**	**+1.6**
STHS				eSg	**Sg**	**04 32 12.7**	**+4.3**
STHS	**Stebnicka Huta**	**3.80**	**119**	ePg	**Pg**	**04 31 20.7**	**+1.6**
	comp=Z,3.9nm,0.8s						
STHS				eSg	**Sg**	**04 32 12.7**	**+4.3**

IDC 01 05:15:26.8±1.5**, 1822N**×**14353E, h0**km**, mb3.6**/3**, mb1 4.0**/4**, mb1mx3.6**/18**, mbtmp3.7**/4**, ML4.0**/1**, Error ellipse: s-maj=76.5km s-min=25.4km az=98.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.78**	**164**	Pn	Pn	05 16 41.0	+1.0
	5.8nm,0.3s,baz=358,slow=19,SNR=6.4						
GUMO				Sn	Sn	05 17 35.0	-1.2
	16nm,0.3s,baz=343,slow=19,SNR=5.0						
WRA	**Warramunga Arr**	**38.98**	**194**	P	P	05 22 54.2	-0.7
	0.4nm,0.5s,baz=14,slow=8.8,SNR=5.5						
ASAR	**Alice Springs**	**42.67**	**193**	P	P	05 23 26.1	+0.7
	0.2nm,0.4s,baz=18,slow=13,SNR=5.1						
YKA	**Yellowknife Ar**	**79.37**	**28**	P	P	05 27 34.3	-0.1
	1.0nm,0.8s,baz=289,slow=5.1,SNR=6.5						

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*ISCJB **01** 05:28:08.0±0.5, 39.14N±0.03×21.67E±0.03, h11km±6km, Error ellipse: s-maj=5.3km s-min=3.9km az=140.6*
*ATH **01** 05:28:07.8, 39.12N×21.77E, h27km±1km, MD3.2/4*
*NEIC **01** 05:28:07.9, 39.13N×21.77E, h26km, MD3.2(ATH), After ATH.*
*THE **01** 05:28:08.7, 39.15N×21.68E, h6km, ML2.7*
*CSEM **01** 05:28:08.9±0.1, 39.15N×21.73E, h20km, MD3.2, Error ellipse: s-maj=2.9km s-min=1.9km az=121.0*
ISC 01 05:28:08.7±0.4**, 3915N**±003×**2167E**±004**, h16**km±5km**, n16,** σ**0.**s**82**/26**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.26**	**155**	ePB	**Pg**	**05 28 13.5**	**-0.8**
EVR				eSB	**Sg**	**05 28 18.5**	**+0.4**
THL	**Klokotos Trika**	**0.49**	**33**	ePg	**Pg**	**05 28 17.7**	**-0.9**
THL				eSg	**Sg**	**05 28 25.4**	**+0.3**
THL	**Klokotos Trika**	**0.49**	**33**	ePb	**Pb**	**05 28 18.0**	**-0.9**
THL				eSg	**Sg**	**05 28 25.4**	**+0.2**
AGG	**Agios Georgios**	**0.53**	**104**	ePg	**Pg**	**05 28 18.6**	**-0.6**
AGG				eSg	**Sg**	**05 28 26.9**	**+0.6**
MEV	**Metsovon**	**0.72**	**332**	ePg	**Pg**	**05 28 21.8**	**-0.9**
MEV				eSg	**Sg**	**05 28 33.5**	**+1.2**
JAN	**Janina**	**0.81**	**309**	ePN	**Pn**	**05 28 25.0**	**-0.4**
LKD	**Levkas**	**0.91**	**241**	ePg	**Pg**	**05 28 25.7**	**-0.7**
LKD				eSg	**Sg**	**05 28 39.2**	**+0.9**
RLS	**Riolos of Patr**	**1.10**	**188**	ePn	**Pn**	**05 28 29.6**	**+0.2**
LIT	**Litokhoron**	**1.14**	**33**	ePg	**Pg**	**05 28 30.0**	**-0.8**
LIT				eSg	**Sg**	**05 28 46.7**	**+1.0**
XOR	**Xorichti**	**1.20**	**79**	ePg	**Pg**	**05 28 31.3**	**-0.5**
XOR				eSg	**Sg**	**05 28 48.6**	**+1.1**
VLS	**Valsamata**	**1.29**	**221**	ePg	**Pg**	**05 28 31.8**	**-1.7**
VLS				eSg	**Sg**	**05 28 51.3**	**+1.0**
VLS	**Valsamata**	**1.29**	**221**	ePn	**Pn**	**05 28 32.8**	**+0.9**
VLS				eSg	**Sg**	**05 28 51.3**	**+1.0**
AOS	**Alonnisos**	**1.72**	**89**	ePb	**Pn**	**05 28 37.5**	**-0.3**
AOS	**Alonnisos**	**1.72**	**89**	ePb	**Pn**	**05 28 37.5**	**-0.3**
PAIG	**Paliouri**	**1.74**	**63**	ePb	**Pn**	**05 28 38.0**	**-0.1**
HORT	**Hortiatis**	**1.82**	**37**	ePb	**Pn**	**05 28 40.2**	**+1.0**

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*NEIC **01** 05:50:11.7, 1535N×9348W, h87km, MD4.3(MEX), After MEX.*
MEX 01 05:50:12.6±0.8**, 1532N**×**9352W, h66**km±26km**, MD4.3, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.27**	**109**	i P	Pn	05 50 32.7	-1.7
THIG				i S	Sn	05 50 49.1	-1.6
TGIG		**1.50**	**15**	eP	Pn	05 50 36.3	-1.1
TGIG				i S	Sn	05 50 54.0	-2.1
CCIG	**Comitan**	**1.64**	**54**	eP	Pn	05 50 37.7	-1.5
CCIG				i S	Sn	05 50 58.3	-1.1
CCIG	**Comitan**	**1.64**	**54**	eP	Pn	05 50 37.7	-1.5
CCIG				i S	Sn	05 50 57.7	-1.7
SCX	**San Cristobal**	**1.64**	**31**	i P	Pn	05 50 40.3	+0.9
SCX				i S	Sn	05 50 59.3	-0.3
HUIG	**Huatulco**	**2.54**	**280**	i P	Pn	05 50 51.0	-0.5
HUIG				i S	Sn	05 51 19.1	-2.2
HUIG	**Huatulco**	**2.54**	**280**	i P	Pn	05 50 51.1	-0.4
HUIG				i S	Sn	05 51 19.2	-2.1
VHO	**Vista Hermosa**	**3.55**	**300**	i P	Pn	05 51 05.1	-0.2
VHO				i S	Sn	05 51 45.8	-0.3
VHO	**Vista Hermosa**	**3.55**	**300**	i P	Pn	05 51 07.5	+2.2
VHO				i S	Sn	05 51 45.8	-0.3
SCIG	**Sabancuy**	**4.26**	**31**	eP	Pn	05 51 12.8	-2.1
SCIG				i S	Sn	05 52 01.3	-2.1
UTMO	**Huajuapan**	**4.81**	**302**	i P	Pn	05 51 23.9	+1.3

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*CSEM **01** 06:06:09.3±0.2, 36.15N×2.70E, h5km, ML3.7, Error ellipse: s-maj=9.5km s-min=4.1km az=154.0*
*ISCJB **01** 06:06:10.7±0.7, 3622N±006×272E±007, h23km±10km, Error ellipse: s-maj=11.6km s-min=7.8km az=135.5*
*MDD **01** 06:06:10.5±0.8, 36.11N×2.73E, h5km±9km, mb3.6/1, Error ellipse: s-maj=9.8km s-min=7.2km az=151.0, PRIMO*
*CRAAG **01** 06:06:11.5, 3621N×301E, Ml3.7*
ISC 01 06:06:10.5±0.8**, 3618N**±006×**272E**±007**, h15**km±9km**, n16,** σ**0.**s**88**/21**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMHD	**Djebel Mahouad**	**0.19**	**85**	P	**Pg**	**06 06 14.0**	**-1.0**
ADJB	**Djebel Djouab**	**0.58**	**92**	P	**Pg**	**06 06 20.4**	**-1.5**
ABA	**Alger-Bouzarea**	**0.67**	**22**	P	**Pg**	**06 06 24.4**	**+0.8**
ABMS	**Boumerdes**	**0.83**	**47**	P	**Pg**	**06 06 27.4**	**+0.7**
EBNR	**Beni Rached**	**0.97**	**277**	P	**Pb**	**06 06 29.7**	**+0.8**
ECHA	**Ech Chlef**	**1.09**	**269**	P	**Pb**	**06 06 31.0**	**-0.1**
ECHF	**Ech Chlef**	**1.12**	**269**	P	**Pb**	**06 06 31.0**	**-0.5**
EANR	**'Ain N'Sour**	**1.33**	**260**	P	**Pn**	**06 06 34.8**	**+0.3**
ETRT	**Tiaret**	**1.40**	**236**	P	**Pn**	**06 06 35.0**	**-0.4**
AKF	**Akfadou**	**1.56**	**73**	P	**Pn**	**06 06 38.9**	**+1.3**
EIBI	**Ibiza**	**3.04**	**339**	P	**Pn**	**06 06 58.6**	**+0.6**
	3.6nm,0.3s,SNR=7.9						
EIBI				S	**Sn**	**06 07 33.8**	**-0.2**
	5.7nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.04**	**339**	P	**Pn**	**06 06 58.4**	**+0.4**
	4.7nm,0.3s,SNR=7.9						
EIBI				S	**Sn**	**06 07 33.2**	**-0.9**
	47nm,0.9s,SNR=7.9						
ETOS	**Mallorca**	**3.58**	**1**	P	**Pn**	**06 07 05.7**	**+0.3**
	0.2nm,0.1s,SNR=5.7						
ETOS				S	**Sn**	**06 07 46.6**	**-0.7**
	0.5nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**3.58**	**1**	P	**Pn**	**06 07 06.8**	**+1.4**
	0.6nm,0.4s,SNR=5.7						
ETOS				S	**Sn**	**06 07 46.3**	**-1.0**
	6.6nm,0.7s,SNR=7.9						
EMOS	**Mosqueruela**	**4.87**	**330**	P	**Pn**	**06 07 23.8**	**+0.7**
	0.0nm,0.0s,SNR=7.9						
EMOS				S	**Sn**	**06 08 17.9**	**-1.3**
	0.1nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**4.87**	**330**	P	**Pn**	**06 07 24.1**	**+1.0**
	0.3nm,0.4s,SNR=7.9						

IDC 01 06:08:15.2±5.3**, 1858N**×**11888E, h0**km**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/17**, mbtmp3.3**/3**, Error ellipse: s-maj=604.0km s-min=25.1km az=60.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**41.11**	**321**	P	P	06 16 00.8	0.0
	0.4nm,0.4s,baz=109,slow=9.2,SNR=10						
WRA	**Warramunga Arr**	**41.18**	**158**	P	P	06 16 00.5	-1.2
	0.5nm,0.4s,baz=336,slow=8.8,SNR=5.9						
ASAR	**Alice Springs**	**44.48**	**160**	P	P	06 16 29.4	+1.0
	0.1nm,0.3s,baz=330,slow=9.2,SNR=3.6						

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*NIED **01** 06:42:00, 4200N×14250E, h59km, Mw4.1 Best double couple: $M_0$1.36000×10^15 NP1:ϕ_s26.00000°, δ72.00000°, λ89.00000°. NP2:ϕ_s211.00000°, δ18.00000°, λ94.00000°.*
*MOS **01** 06:42:37.8±2.4, 42.13N×142.28E, h33km, mb4.3/12, Error ellipse: s-maj=15.7km s-min=10.3km az=89.2*
*JMA **01** 06:42:40.4±0.1, 4201N×14254E, h65km±2km, M3.8*
JMA Felt I J1.
*ISCJB **01** 06:42:40.1±0.3, 4202N±003×14251E±004, h69km±3km, mb3.9/15, Error ellipse: s-maj=6.2km s-min=3.8km az=138.2*
*NEIC **01** 06:42:43.5±1.0, 4205N×14240E, h85km±9km, MG4.0(JMA), Error ellipse: s-maj=13.1km s-min=9.7km az=128.0*
NEIC Recorded [1 JMA] in south-central and southwestern Hokkaido.
*IDC **01** 06:42:43.4±2.1, 4208N×14242E, h83km±15km, mb3.7/11, mb1 3.9/14, mb1mx3.7/22, mbtmp3.7/14, MS2.8/1, Ms1 2.8/1, ms1mx2.4/25, Error ellipse: s-maj=21.7km s-min=14.0km az=133.0*
ISC 01 06:42:41.2±0.3**, 4203N**±003×**14250E**±004**, h63**km±3km**, n53,** σ**0.**s**82**/70**, mb3.9**/15**, 9C-9D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.31**	**36**	⇑P	**Pn**	**06 42 50.9**	**-0.8**
JNBK				eS	**Sn**	**06 42 58.9**	**-0.5**
JEM	**Erimo**	**0.49**	**91**	⇑P	**Pn**	**06 42 52.6**	**-0.7**
JEM				eS	**Sn**	**06 43 01.6**	**-0.5**
JBT2	**Biratori 2**	**0.76**	**352**	⇓P	**Pn**	**06 42 55.8**	**-0.5**
JBT2				eS	**Sn**	**06 43 07.4**	**0.0**
JCH	**Churui**	**0.86**	**47**	⇑P	**Pn**	**06 42 57.0**	**-0.6**
JCH				eS	**Sn**	**06 43 09.4**	**-0.4**
JKB	**Kayabe**	**1.11**	**263**	⇓P	**Pn**	**06 43 00.2**	**-0.5**
JKB				eS	**Sn**	**06 43 14.8**	**-0.4**
JEW	**Eniwo**	**1.12**	**316**	⇓P	**Pn**	**06 43 00.8**	**-0.1**
JEW				eS	**Sn**	**06 43 16.3**	**+0.6**
JFR	**Furan**	**1.14**	**3**	⇓P	**Pn**	**06 43 00.6**	**-0.5**
JFR				eS	**Sn**	**06 43 15.9**	**0.0**
JNB	**Noboribetsu**	**1.17**	**292**	⇓P	**Pn**	**06 43 00.7**	**-0.9**
JNB				eS	**Sn**	**06 43 16.2**	**-0.6**
JOT	**Ohata**	**1.27**	**240**	⇓P	**Pn**	**06 43 02.3**	**-0.5**
JOT				eS	**Sn**	**06 43 18.5**	**-0.5**
JOB	**Onbets**	**1.32**	**48**	⇑P	**Pn**	**06 43 03.9**	**+0.4**
JOB				eS	**Sn**	**06 43 21.1**	**+0.9**
JAB	**Ashibetsu**	**1.49**	**352**	⇓P	**Pn**	**06 43 05.9**	**+0.1**
JAB				eS	**Sn**	**06 43 25.6**	**+1.3**
JAR	**Ashorobuto**	**1.57**	**36**	⇑P	**Pn**	**06 43 06.5**	**-0.4**
JAR				eS	**Sn**	**06 43 26.3**	**0.0**
JYM2	**Yakumo 2**	**1.59**	**274**	⇓P	**Pn**	**06 43 06.7**	**-0.4**
JTM	**Tenmabayashi**	**1.65**	**221**	⇓P	**Pn**	**06 43 08.0**	**+0.1**
JTM				eS	**Sn**	**06 43 28.9**	**+0.9**
ASAJ	**Asahikawa**	**2.09**	**2**	P	**Pn**	**06 43 14.3**	**+0.5**
	57nm,0.3s,baz=210,slow=10,SNR=145						
ASAJ				S	**Sn**	**06 43 41.4**	**+2.7**
	32nm,0.3s,baz=82,slow=24,SNR=26						
ASAJ	**Asahikawa**	**2.09**	**2**	PN	**Pn**	**06 43 14.4**	**+0.6**
ASAJ				S	**Sn**	**06 43 41.4**	**+2.7**
ASAJ				pmax	pmax		
	comp=Z,57nm,0.3s						
ASAJ				smax			
	comp=N,32nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.17**	**50**	⇑iPN	**Pn**	**06 43 29.4**	**+0.7**
YUK				i S	**Sn**	**06 44 04.5**	**-0.8**
YUK				pmax	pmax		
	comp=Z,310nm,0.4s						
YUK				smax			
	comp=N,380nm,0.5s						
YUK				smax			
	comp=E,570nm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.93**	**2**	⇑ePN	**Pn**	**06 43 54.0**	**+1.4**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.93**	**2**	ePn	**Pn**	**06 43 54.9**	**+2.3**
MAT	**Matsushiro**	**6.41**	**213**	P	**Pn**	**06 44 14.7**	**+1.7**
MAT				eS	**Sn**	**06 45 24.6**	**-0.1**
MJAR	**Matsushiro Arr**	**6.41**	**213**	P	**Pn**	**06 44 14.9**	**+1.9**
	comp=Z,0.7nm,0.3s,baz=12,slow=16,SNR=3.7						
MJAR	**Matsushiro Arr**	**6.41**	**213**	PN	**Pn**	**06 44 14.9**	**+1.9**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**12.12**	**253**	P	**Pn**	**06 45 33.6**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=64,slow=14,SNR=11						
KSRS				LR	LR	06 49 52.3	
	comp=Z,36nm,18.0s,baz=65,slow=35						
SONM	**Songino Array**	**26.05**	**295**	P	**P**	**06 48 08.4**	**+0.1**
	comp=Z,1.5nm,0.7s,mb3.6,baz=76,slow=8.7,SNR=7.5						
SONM	**Songino Array**	**26.05**	**295**	P	**P**	**06 48 08.4**	**+0.1**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZAK	**Zakamensk**	**28.12**	**301**	eP	**P**	**06 48 26.3**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.5						
ZALV	**Zalesovo Beam**	**39.34**	**308**	P	**P**	**06 50 03.8**	**-0.1**
	comp=Z,4.5nm,0.7s,mb4.3,baz=81,slow=9.2,SNR=16						
ZAL	**Zalesovo**	**39.35**	**308**	P	**P**	**06 50 03.8**	**-0.2**
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31	**Makanchi Array**	**42.36**	**298**	eP	**P**	**06 50 28.8**	**0.0**
MKAR	**Makanchi Array**	**42.36**	**298**	P	**P**	**06 50 28.8**	**-0.1**
	comp=Z,3.0nm,0.8s,mb4.0,baz=76,slow=10,SNR=19						
MKAR	**Makanchi Array**	**42.36**	**298**	i P	**P**	**06 50 28.7**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**42.36**	**298**	P	**P**	**06 50 28.8**	**-0.1**
KURK	**Kurchatov**	**43.66**	**304**c	iP	**P**	**06 50 38.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
ARU	**Arti**	**53.25**	**316**	⇑eP	**P**	**06 51 52.7**	**-0.2**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
YKA	**Yellowknife Ar**	**59.10**	**32**	P	**P**	**06 52 34.3**	**-0.1**
	comp=Z,0.6nm,0.8s,mb3.7,baz=307,slow=6.8,SNR=3.9						
YKA	**Yellowknife Ar**	**59.10**	**32**	P	**P**	**06 52 34.3**	**-0.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**59.64**	**339**	P	**P**	**06 52 37.4**	**-0.7**
	comp=Z,2.9nm,1.0s,mb4.3,baz=45,slow=9.0,SNR=3.5						
ARCES	**ARCESS Array B**	**59.64**	**339**	P	**P**	**06 52 37.4**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	**ARCESS Array B**	**59.64**	**339**	P	**P**	**06 52 37.4**	**-0.7**
FINES	**FINESS Array B**	**64.81**	**332**	eP	**P**	**06 53 11.1**	**-1.7**
NB2	**NORSAR Subarra**	**69.92**	**337**	P	**P**	**06 53 43.8**	**-1.2**
	comp=Z,1.5nm,0.7s,mb4.0,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**69.92**	**337**	P	**P**	**06 53 44.2**	**-0.8**
	comp=Z,2.1nm,0.7s,mb4.2,baz=37,slow=6.1,SNR=12						
NOA	**NORSAR Array B**	**69.92**	**337**	P	**P**	**06 53 44.3**	**-0.7**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**70.88**	**322**	P	**P**	**06 53 49.9**	**-1.2**
	comp=Z,1.1nm,0.4s,mb4.1,baz=46,slow=6.1,SNR=13						
AKASG	**Malin Array Be**	**70.88**	**322**	P	**P**	**06 53 49.9**	**-1.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**71.38**	**55**	P	**P**	**06 53 55.1**	**+0.8**
	comp=Z,0.2nm,0.6s,mb3.2,baz=290,slow=6.8,SNR=4.2						
PDAR	**Pinedale Array**	**73.60**	**47**	P	**P**	**06 54 08.1**	**+0.6**
	comp=Z,0.5nm,0.7s,mb3.6,baz=264,slow=3.0,SNR=4.4						
GERES	**GERESS Array B**	**78.91**	**328**	P	**P**	**06 54 37.5**	**+0.1**
	comp=Z,0.5nm,0.4s,mb3.8,baz=54,slow=6.8,SNR=4.3						
GERES	**GERESS Array B**	**78.91**	**328**	P	**P**	**06 54 37.5**	**0.0**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SMF	**Signal de Mont**	**84.37**	**333**	eP	**P**	**06 55 06.7**	**+0.4**
AVF	**Avril sur Loir**	**84.41**	**333**	eP	**P**	**06 55 06.2**	**-0.3**
	comp=Z,6.6nm,0.7s,mb4.6						
TXAR	**Lajitas Array**	**86.43**	**53**	P	**P**	**06 55 17.6**	**+0.8**
	comp=Z,0.5nm,0.8s,mb3.8,baz=281,slow=3.7,SNR=6.9						
TXAR	**Lajitas Array**	**86.43**	**53**	P	**P**	**06 55 17.6**	**+0.7**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

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*ISCJB **01** 06:44:08.4±7.1, 56S±02×1406E±03, h28km±60km, Error ellipse: s-maj=51.1km s-min=20.3km az=37.1*
*IDC **01** 06:44:08.6±3.4, 540S×13999E, h0km, mb3.5/1, mb1 4.0/4, mb1mx3.7/12, mbtmp3.8/4, ML3.9/3, Error ellipse: s-maj=101.2km s-min=29.9km az=95.0*
ISC 01 06:44:11.3±5.1**, 56S**±02×**1407E**±02**, h45**km±51km**, n7,** σ**1.**s**33**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**10.79**	**229**	eP	**Pn**	**06 46 43.8**	**+0.5**
	13nm,0.4s						
KAKA				eS	**Sn**	**06 48 43.0**	**+0.2**
WB2	**Warramunga Arr**	**15.52**	**203**	eP	**Pn**	**06 47 46.7**	**-0.5**
WRA	**Warramunga Arr**	**15.52**	**203**	Pn	**Pn**	**06 47 46.4**	**-0.9**
	0.3nm,0.3s,baz=19,slow=13,SNR=12						
ASAR	**Alice Springs**	**19.10**	**199**	P	**Pn**	**06 48 33.2**	**+1.6**
	0.7nm,0.3s,baz=29,slow=9.8,SNR=27						
FITZ	**Fitzroy Crossi**	**19.26**	**229**	eP	**Pn**	**06 48 33.2**	**-0.3**
	5.0nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.26**	**229**	P	**Pn**	**06 48 31.1**	**-2.5**
	0.3nm,0.3s,baz=59,slow=11,SNR=10						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MKAR	Makanchi Array	73.32	322	P	P	06 55 38.5	+0.2
	0.3nm,0.7s,baz=104,slow=6.1,SNR=3.2						

*CSEM **01** 06:53:07.9±0.5, 43.55N×17.16E, h8km±2km, ML2.6/10, Error ellipse: s-maj=7.2km s-min=4.5km az=110.0*
*ISCJB **01** 06:53:09.5±0.7, 43.45N±0.03×17.33E±0.05, h10km, Error ellipse: s-maj=5.9km s-min=3.5km az=138.2*
*BEO **01** 06:53:09.5±2.0, 43.49N×17.17E, h18km±2km, ML2.3/3*
*PDG **01** 06:53:13.4±0.1, 43.40N×17.49E, h3km, ML2.6/10, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*NEIC **01** 06:53:13.4, 43.40N×17.49E, h3km, ML2.6(PDG), After PDG.*
ISC 01 06:53:08.2±0.8, **43.46N**±0.03×**17.16E**±0.05, **h10km, n24,** σ1s**04**/43, **7C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TREB	Trebinje	1.15	130	ePn	Pn	06 53 30.0	-0.3
BRY	Bratogost	1.16	119⇑	iPg	Pg	06 53 30.1	-0.3
BRY				eSg	Sg	06 53 45.0	-0.4
BLY	Banja Luka	1.28	1	ePn	Pn	06 53 33.6	+1.4
BLY				eSn	Sn	06 53 52.1	+2.6
UPM	Unac-Piva	1.30	101⇓	iPg	Pg	06 53 32.6	-0.6
UPM				eSg	Sg	06 53 49.6	-0.4
HCY	Herceg Novi	1.41	136⇓	iPg	Pg	06 53 35.6	+0.3
HCY				eSg	Sg	06 53 54.7	+1.1
NKY	Niksic	1.49	115⇓	iPg	Pg	06 53 36.7	-0.1
NKY				eSg	Sg	06 53 56.0	-0.2
PLE	Pljevlja	1.63	94⇑	iPg	Pg	06 53 39.0	-0.5
PLE				eSg	Sg	06 54 01.0	+0.4
BBLS	Lazići	1.68	75	ePg	Pg	06 53 39.6	-0.7
BBLS				eSg	Sg	06 54 02.6	+0.6
BUM	Brajici-Budva	1.73	132⇓	iPg	Pg	06 53 41.3	0.0
BUM				eSg	Sg	06 54 05.0	+1.4
PDG	Podgorica	1.85	123⇑	iPn	Pg	06 53 43.4	-0.3
PDG				eSn	Sg	06 54 08.0	+0.2
TTG	Podgorica	1.85	123⇑	iPn	Pg	06 53 43.4	-0.3
TTG				eSn	Sg	06 54 08.0	+0.2
BEY	Berane	2.09	106⇑	iPn	Pg	06 53 46.8	-1.4
BEY				eSn	Sg	06 54 13.2	-2.0
IVA	Berane	2.09	106⇑	iPn	Pg	06 53 46.8	-1.4
IVA				eSn	Sg	06 54 13.2	-2.0
DIVS	Divibare	2.14	72	ePn	Pn	06 53 45.0	+1.0
DIVS				eSg	Sg	06 54 17.0	-0.1
DIVS	Divibare	2.14	72	ePn	Pn	06 53 44.2	+0.2
DIVS				eSn	Sn	06 54 11.4	+0.8
DIVS				eSg	Sg	06 54 17.0	-0.1
ULC	Ulcinj	2.15	134⇑	iPn	Pn	06 53 48.2	+4.2
ULC				eSn	Sn	06 54 15.7	+5.0
PVY	Plav	2.23	112⇓	iPn	Pn	06 53 49.2	+3.9
PVY				eSn	Sn	06 54 17.1	+4.2
BOJS	Bojanci	2.46	327	i Pn	Pg	06 53 53.4	-1.9
BOJS				i Sn	Sg	06 54 24.5	-2.6
FGSL	Fruska Gora	2.54	47	ePn	Pn	06 53 49.6	+0.1
FGSL	Fruska Gora	2.54	47	ePn	Pn	06 53 50.2	+0.7
CRES	Cresnjev	2.66	333	ePn	Pg	06 53 55.9	-3.2
PKSM	Moragy	2.94	20	ePn	Pn	06 53 54.8	-0.2
PKSM				eSg	Sg	06 54 42.3	-0.4
JAVS	Javornik	3.29	319	i Pn	Pn	06 54 04.8	+5.1
VOJS	Vojsko	3.47	319	i Pn	Pn	06 54 07.2	+4.9

CASC 01 07:39:36.1±1.9, **13.87N×89.66W, h2km**±3km, **MD4.0, ML3.7, 5C-4D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTR	El Retiro	0.03	20⇑	iP	x	07 39 37.9	
SBLS	San Blas	0.04	133	eP	x	07 39 38.1	
SNJE	San Jose	0.05	91⇑	iP	x	07 39 38.5	
SONS		0.14	205⇓	iP	x	07 39 39.2	
SONS				eS	x	07 39 41.7	
RBDL	Robledal	0.24	353⇓	iP	x	07 39 41.2	
BOQS	Boqueron	0.39	110	eP	x	07 39 44.9	
SNET	Serv Nac Est T	0.45	114⇑	eP	x	07 39 45.5	
SNET				eS	x	07 39 52.7	
LFU	La Fuente	0.54	103	eP	x	07 39 47.6	
MTO2	Montecristo 2	0.60	28⇑	iP	x	07 39 47.7	
LBRS	Las Brisas	0.61	102	eP	x	07 39 48.7	
LFRS	El Faro	0.63	113	eP	x	07 39 48.7	
SNVI	San Vicente	0.83	108	eP	x	07 39 53.1	
SNVI				eS	x	07 40 05.3	
NBG	Las Nubes	0.98	317⇓	eP	Pg	07 39 55.2	+0.3
NBG				eS	Sg	07 40 09.3	+1.7
PCG	Pacaya	1.06	300	eP	Pg	07 39 57.0	+0.6
FUG	Fuego 3	1.29	297⇑	eP	Pg	07 40 00.6	-0.2
FG6		1.37	300⇓	eP	Pn	07 40 02.4	+0.1
CAHU	Cacacuatique	1.41	94	eP	x	07 40 02.3	
TGUH	Tegucigalpa,Un	2.32	85	eP	Pn	07 40 14.9	-0.4
TGUH				eS	Sn	07 40 45.8	+1.4

*CSEM **01** 08:05:45.7±0.3, 38.92N×30.31W, h10km, MD3.5, Error ellipse: s-maj=8.3km s-min=2.6km az=17.0, After PDA*
PDA 01 08:05:45.7±0.3, **38.92N×30.31W, h10km, MD3.5, Error ellipse: s-maj=8.3km s-min=2.6km az=17.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	Caldeira	1.30	104	eP	Pn	08 06 05.4	-4.6
CALA				eS	Sb	08 06 20.2	-6.9
HOR	Horta	1.37	106	eP	Pn	08 06 06.1	-4.8
HOR				eS	Sb	08 06 21.6	-7.5
PICO	Pico	1.54	105	eP	Pn	08 06 08.5	-4.6
PICO				eS	Sn	08 06 25.6	-7.5
ROSA	Rosais	1.63	96	eP	Pn	08 06 09.8	-4.6
ROSA				eS	Sn	08 06 27.8	-7.7

*ISCJB **01** 08:06:19.7±1.6, 13.76S±0.07×76.9W±0.1, h41km±14km, mb4.1/16, MS3.6/3, Error ellipse: s-maj=23.8km s-min=6.6km az=152.5*
*NEIC **01** 08:06:20.2±0.5, 13.74S×76.93W, mb4.4/7, ML4.2(LIM), Error ellipse: s-maj=16.9km s-min=7.3km az=53.0*
NEIC Felt [II] at Pisco.
*IDC **01** 08:06:22.7±1.9, 13.66S×76.63W, h50km±16km, mb3.6/9, mb1 3.9/13, mb1mx3.8/19, mbtmp3.7/13, ML4.3/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/22, Error ellipse: s-maj=32.2km s-min=9.8km az=68.0*
ISC 01 08:06:21.9±1.3, **13.74S**±0.07×**76.8W**±0.1, **h42km**±11km, **h30km**±1.6km**:pP-P, n40,** σ1s**05**/35, **mb4.1**/16, **MS3.6**/3, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	1.74	359	P	Pn	08 06 48.8	-0.9
	292nm,0.3s,baz=178,slow=12,SNR=270						
NNA				S	Sn	08 07 10.1	-0.6
	648nm,0.3s,baz=230,slow=8.3,SNR=9.8						
ARE	Arequipa	5.82	118	eP	Pn	08 07 46.0	+0.3
ARE				eS	Sn	08 09 07.0	+16
ATAH	Atahualpa	6.87	347	P	Pn	08 08 00.7	+0.5
	6.3nm,0.3s,baz=160,slow=8.8,SNR=12						
ATAH				S	Sn	08 09 16.9	-0.2
	2.1nm,0.3s,baz=131,slow=20,SNR=1.8						
LPAZ	La Paz	8.77	108	P	Pn	08 08 28.5	+2.3
	0.7nm,0.3s,baz=306,slow=8.7,SNR=11						
LPAZ				LR	LR	08 12 21.8	
	comp=Z,226nm,18.4s,baz=173,slow=42						
LPAZ	La Paz	8.77	108	P	Pn	08 08 28.5	+2.2
LPAZ				LR	LR	08 12 21.8	
LVC	Limon Verde	11.59	141	P	Pn	08 09 04.3	-0.5
	1.9nm,0.3s,baz=305,slow=8.8,SNR=19						
LVC				S	Sn	08 11 11.1	-1.9
	0.9nm,0.3s,baz=84,slow=19,SNR=6.4						
OTAV	Otavalo	13.98	353	eP	Pn	08 09 42.6	+5.1
	5.6nm,0.8s						
SIV	San Ignacio	15.39	100	P	Pn	08 09 58.1	+1.9
	0.2nm,0.3s,baz=270,slow=19,SNR=4.0						
ROSC	El Rosal	18.64	8	P	Pn	08 10 36.0	-0.8
	baz=257,slow=19,SNR=1.7						
ROSC				LR	LR	08 19 06.8	
	comp=Z,460nm,18.9s,baz=28,slow=41						
CFAA	Coronel Fontan	19.45	158	P	Pn	08 10 46.4	0.0
	0.1nm,0.3s,baz=334,slow=12,SNR=16						
CFAA	Coronel Fontan	19.45	158	P	Pn	08 10 46.4	0.0
CPUP	Villa Florida	22.15	127	P	P	08 11 13.6	-0.7
	1.9nm,0.7s,mb3.6,baz=296,slow=8.6,SNR=4.3						
CPUP				LR	LR	08 21 39.0	
	comp=Z,98nm,18.3s,MS3.3,baz=293,slow=42						
BCIP	Isla Barro Col	22.95	352	eP	P	08 11 23.7	+0.9
	11nm,0.9s,mb4.3						
PLCA	Paso Flores	27.45	170	P	P	08 12 04.5	+0.6
	2.1nm,0.7s,mb3.8,baz=344,slow=11,SNR=7.9						
TXAR	Lajitas Array	50.05	329	P	P	08 15 12.1	-0.4
	0.5nm,0.8s,mb3.6,baz=151,slow=8.7,SNR=6.5						
SDCO	Great Sand Dun	57.86	333	eP	P	08 16 10.1	+0.7
	5.2nm,1.5s,mb4.3						
DAU	Daniels Canyon	62.64	331	eP	P	08 16 39.6	-2.4
DUG	Dugway	63.22	330	eP	P	08 16 47.4	+1.4
	11nm,1.5s,mb4.8						
DUG				epP	pP	08 16 56.0	-2.2
HWUT	Hardware Ranch	63.72	332	eP	P	08 16 49.6	+0.4
	2.4nm,0.8s,mb4.3						
HWUT				epP	pP	08 16 57.8	-3.7
PDAR	Pinedale Array	63.75	334	P	P	08 16 49.4	0.0
	0.7nm,0.9s,mb3.7,baz=108,slow=4.8,SNR=5.9						
AGMN	Agassiz Refuge	64.04	346	eP	P	08 16 50.6	-0.6
	2.3nm,0.6s,mb4.4						
AGMN				epP	pP	08 16 59.4	-4.1
MTUM	Tungsten Hills	64.20	324	eP	P	08 16 51.4	-1.0
MTUM				epP	pP	08 17 01.6	-3.1
NVAR	Mina Array Bea	64.80	325	P	P	08 16 58.4	+2.0
	0.8nm,0.8s,mb3.8,baz=156,slow=5.4,SNR=6.4						
LOHW	Long Hollow	64.88	334	eP	P	08 16 57.9	+1.1
	1.5nm,0.9s,mb4.0						
RRI2	Red Ridge	64.98	333	eP	P	08 16 58.2	+0.8
	3.3nm,0.8s,mb4.4						
RRI2				epP	pP	08 17 07.8	-2.0
ULM	Lac du Bonnet	65.87	347	P	P	08 17 02.0	-1.0
	2.7nm,0.4s,mb4.7,baz=173,slow=2.6,SNR=6.2						
SCHQ	Schefferville	68.83	6	LR	LR	08 50 09.8	
	comp=Z,32nm,18.2s,MS3.6,baz=27,slow=38						
EDM	Edmonton	73.68	338	eP	P	08 17 50.6	-0.4
DBIC	Dimbokro	74.24	79	LR	LR	08 49 34.6	
	comp=Z,56nm,18.4s,MS3.9,baz=173,slow=35						
YKA	Yellowknife Ar	81.51	343	P	P	08 18 34.2	-0.3
	0.9nm,0.8s,mb3.7,baz=136,slow=5.3,SNR=7.3						
YKA	Yellowknife Ar	81.51	343	P	P	08 18 34.2	-0.3
TORD	Torodi Ar. Bea	82.24	74	P	P	08 18 37.8	-1.6
	3.5nm,0.9s,mb4.3,baz=252,slow=4.1,SNR=13						
ESDC	Sonseca Array	85.93	48	P	P	08 18 58.0	+0.3
	0.2nm,0.3s,mb3.8,baz=94,slow=5.1,SNR=3.9						
ASAR	Alice Springs	132.20	219	PKP	PKPdf	08 25 32.3	+0.3
	0.7nm,0.7s,baz=134,slow=2.1,SNR=8.0						
WRA	Warramunga Arr	134.61	223	PKP	PKPdf	08 25 36.3	-0.3
	1.1nm,0.8s,baz=136,slow=1.9,SNR=6.8						
ZALV	Zalesovo Beam	137.35	16	PKP	PKPdf	08 25 38.5	-2.2
	0.9nm,0.7s,baz=338,slow=3.5,SNR=4.4						
MKAR	Makanchi Array	142.68	24	PKP	PKPdf	08 25 48.5	-2.1
	0.3nm,0.6s,baz=346,slow=3.0,SNR=2.8						
ULN	Ulaanbaatar	145.82	355	ePKPbc	PKPbc	08 25 57.6	+1.1
SONM	Songino Array	145.90	356	PKPbc	PKPbc	08 25 57.3	+0.5
	2.0nm,0.8s,baz=346,slow=3.3,SNR=9.4						
KSRS	Korea Array	147.69	321	PKPbc	PKPbc	08 25 59.3	-3.0
	0.5nm,0.3s,baz=288,slow=8.9,SNR=3.4						

*MAN **01** 09:01:53, 19.73N×120.75E, h1km, mb5.1, ML4.0, MS4.2*
*BJI **01** 09:02:00.2, 19.22N×120.90E, h18km, mB4.5, mb4.4, ML4.3, Ms3.7, Msz3.5*
*MOS **01** 09:02:00.9±1.3, 19.07N×120.96E, h33km, mb5.0/9, Error ellipse: s-maj=16.4km s-min=8.7km az=101.9*
*NEIC **01** 09:02:00.2±3.6, 19.07N×121.06E, h18km±23km, mb4.5/5, Error ellipse: s-maj=9.2km s-min=7.6km az=101.0*
*IDC **01** 09:02:02.3±6.3, 19.12N×121.11E, h33km±50km, mb4.0/15, mb1 4.2/17, mb1mx4.2/20, mbtmp4.1/17, ML4.4/2, MS3.5/10, Ms1 3.5/10, ms1mx3.2/31, Error ellipse: s-maj=23.2km s-min=12.5km az=75.0*
*ISCJB **01** 09:02:03.1±0.6, 19.30N±0.03×121.01E±0.06, h41km±7km, mb4.4/30, MS3.5/10, Error ellipse: s-maj=8.9km s-min=5.5km az=179.1*
ISC 01 09:02:04.4±0.5, **19.28N**±0.03×**121.05E**±0.05, **h40km**±6km, **n72,** σ1s**33**/83, **mb4.4**/30, **MS3.5**/10, **7C-6D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	1.40	137	eP	Pn	09 02 27.3	-0.2
APYP	Conner	1.43	172	eP	Pn	09 02 27.9	+0.1
APYP				eS	Sn	09 02 46.2	+0.9
SIPP	Brgy, Tapao	1.46	203⇓	iP	Pn	09 02 26.5	-1.8
SIPP				i S	Sn	09 02 51.2	+4.9
ABRA	Dolores	1.66	191	eP	Pn	09 02 28.8	-2.2
ABRA				eS	Sn	09 02 53.8	+2.8
CAUP	Cauayan	2.44	162	eP	Pn	09 02 44.8	+3.0
CAUP				eS	Sn	09 03 20.1	+10
PALP	Palanan	2.57	149	eP	Pn	09 02 45.6	+2.1
PALP				eS	Sn	09 03 22.5	+9.0
BCPH	Baguio City Da	2.92	189⇓	iP	Pn	09 02 47.1	-1.3
BCPH				i S	Sn	09 03 28.3	+6.1
BOLP	Bolinao	3.08	201	eP	Pn	09 02 48.8	-1.8
BALP	Baler	3.56	172	eP	Pn	09 02 57.5	+0.4
BALP				eS	Sn	09 03 40.4	+2.5
SCZP	Santa Cruz	3.65	197	eP	Pn	09 02 58.2	-0.2
PCPH	Palayan	3.70	179⇑	eP	Pn	09 03 00.0	+0.9
TATO	Taipei	5.68	4	ePn	Pn	09 03 27.2	+0.9
	111nm,0.6s						
TATO				eSn	Sn	09 04 30.3	0.0
QZH	Quanzhou	6.08	338	P	Pn	09 03 28.1	-3.6
QZH				Smax			
	comp=N,180nm,0.7s						
QZH				Smax			
	comp=E,240nm,0.5s						
QZH				LR	LR		
	comp=N,1μm,22.6s						
QZH				LR	LR		
	comp=E,940nm,16.1s						
QZH				LR	LR		
	comp=Z,960nm,21.1s						
JOW	Kunigami	10.03	40	Pn	Pn	09 04 24.4	-1.6
	comp=Z,6.3nm,0.3s,baz=230,slow=11,SNR=28						
JOW				LR	LR	09 07 17.3	
	comp=Z,69nm,20.8s,baz=197,slow=31						
QIZ	Qiongzhong	10.59	270	P	Pn	09 04 30.1	-3.6
QIZ				AMB	AMB		
	comp=Z,21nm,0.7s						
QIZ				LR	LR		
	comp=N,387nm,16.1s						
QIZ				LR	LR		
	comp=Z,341nm,17.4s						
QIZ	Qiongzhong	10.59	270	ePn	Pn	09 04 30.1	-3.7
	comp=Z,14nm,0.6s						
QIZ				eSn	Sn	09 06 23.1	-8.0
XAN	Xi'an	18.24	326	P	Pn	09 06 15.3	+0.8
XAN				AP	pP	09 06 23.2	-1.0
XAN				XP	sP	09 06 27.2	-2.1
XAN				S	S	09 09 34.7	-6.3
XAN				XS	sS	09 09 42.9	-14
XAN				SS		09 09 54.9	
XAN				AMB	AMB		
	comp=Z,5.0nm,1.1s						
XAN				AMB	AMB		
	comp=Z,61nm,5.2s						
XAN				LR	LR		
	comp=E,122nm,19.5s						
XAN				LR	LR		
	comp=Z,168nm,14.5s						
SBUM	Sibu	18.83	208	⇓P	Pn	09 06 20.9	-0.9
KSRS	Korea Array	19.08	17	P	Pn	09 06 23.2	-1.4
	comp=Z,1.9nm,0.3s,baz=195,slow=11,SNR=43						
KSRS				LR	LR	09 14 19.6	
	comp=Z,148nm,20.4s,baz=195,slow=38						
NANT	Nan	19.24	272	⇑P	Pn	09 06 26.0	-0.7
	comp=Z,112nm,0.9s						
CD2	Chengdu	19.44	310	P	Pn	09 06 28.8	-0.2
CD2				AMB	AMB		
	comp=Z,40nm,1.1s						
CHRT	Chiangrai	20.05	275	⇑P	P	09 06 35.5	+1.2
	comp=Z,105nm,1.1s						
KSM	Kuching	20.59	212	⇑P	P	09 06 43.4	+3.2
CMAR	Chiang Mai Arr	20.93	271	P	P	09 06 43.7	-0.2
	comp=Z,1.0nm,0.3s,baz=230,slow=31,SNR=5.1						
CMAR				LR	LR	09 15 17.2	
	comp=Z,100nm,18.4s,MS3.2,baz=85,slow=38						
BJT	Baijiatuau	21.09	350	eP	P	09 06 47.1	+1.7
BJT				pmax	pmax		
	comp=Z,42nm,1.0s						
BJT	Baijiatuau	21.09	350	eP	P	09 06 47.1	+1.7
	comp=Z,42nm,1.0s,mb4.7						
BJI	Beijing	21.11	350	P	P	09 06 48.2	+2.6
BJI				AMB	AMB		
	comp=Z,21nm,0.7s,mb4.6						
BJI				LR	LR		
	comp=Z,103nm,21.1s,MS3.2						
LZH	Lanzhou	22.57	321	eP	P	09 06 59.0	-2.3
LZH				AP		09 07 07.5	
LZH				XP	sP	09 07 10.0	-6.4
LZH				PP		09 07 32.5	
LZH				eS	S	09 11 08.2	+1.7
LZH				AMB	AMB		
	comp=Z,28nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,73nm,4.0s						
LZH				LR	LR		
	comp=E,166nm,12.4s						
LZH				LR	LR		
	comp=Z,246nm,13.9s,MS3.8						
MAJO	Matsushiro	22.86	38	eP	P	09 07 04.6	+0.3
MAJO				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.3						
MAJO	Matsushiro	22.86	38	eP	P	09 07 04.6	+0.3
	comp=Z,12nm,0.9s,mb4.3						
MAT	Matsushiro	22.86	38	P	P	09 07 02.5	-1.8
MJAR	Matsushiro Arr	22.86	38	P	P	09 07 04.3	0.0
	comp=Z,3.2nm,0.8s,mb3.8,baz=228,slow=9.4,SNR=8.3						
MJAR	Matsushiro Arr	22.86	38	P	P	09 07 04.3	0.0
KAPI	Kappang	24.18	183	LR	LR	09 19 06.7	
	comp=Z,65nm,18.7s,MS3.1,baz=160,slow=43						
GTA	Gaotai	27.17	322	P	P	09 07 45.4	+1.3
GTA				AP	pP	09 07 57.0	+2.0
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.1						
LSA	Lhasa	29.04	297	eP	P	09 08 01.4	+0.5
HIA	Hailar	29.93	358	i P	P	09 08 12.6	+4.0
ULN	Ulaanbaatar	30.70	341⇑	eP	P	09 08 16.6	+1.2
ULN	Ulaanbaatar	30.70	341	eP	P	09 08 15.9	+0.6
	comp=Z,4.4nm,0.8s,mb4.3						
SONM	Songino Array	30.88	341	P	P	09 08 17.9	+1.0
	comp=Z,2.0nm,0.7s,mb4.0,baz=157,slow=10,SNR=8.8						
SONM				LR	LR	09 21 30.7	
	comp=Z,133nm,20.2s,MS3.6,baz=198,slow=38						
YSS	Yuzh-Sakhalins	32.83	28⇓	eP	P	09 08 43.0	+8.9
YSS				pmax	pmax		
	comp=Z,29nm,1.9s,mb4.9						
ZAK	Zakamensk	34.10	340	eP	P	09 08 44.2	-0.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
FITZ	Fitzroy Crossi	37.42	173	P	P	09 09 11.2	-2.7
	comp=Z,1.5nm,0.6s,mb4.0,baz=12,slow=9.3,SNR=5.3						
WRAB	Tennant Creek	41.10	161⇑	eP	P	09 09 44.3	-0.2
WRA	Warramunga Arr	41.10	161	P	P	09 09 40.6	-4.0
	comp=Z,1.5nm,0.5s,mb3.8,baz=342,slow=9.1,SNR=19						
WB2	Warramunga Arr	41.10	161	eP	P	09 09 41.3	-3.3
MKAR	Makanchi Array	41.88	320	P	P	09 09 51.8	+1.1
	comp=Z,7.8nm,0.8s,mb4.4,baz=109,slow=10,SNR=38						
MKAR				LR	LR	09 28 05.5	
	comp=Z,66nm,21.1s,MS3.5,baz=359,slow=37						
YAK	Yakutsk	43.13	6⇑	eP	P	09 10 03.5	+2.8
YAK				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.0						
PETK	Petropavlovsk-	44.05	31	P	P	09 10 07.9	-0.3
	comp=Z,6.0nm,1.0s,mb4.3,baz=241,slow=4.6,SNR=5.1						
PETK				LR	LR	09 28 14.4	
	comp=Z,58nm,19.8s,MS3.5,baz=86,slow=36						
PETK	Petropavlovsk-	44.05	31	P	P	09 10 07.9	-0.3
PETK				LR	LR	09 28 14.4	
ZALV	Zalesovo Beam	44.34	330	P	P	09 10 10.4	-0.1
	comp=Z,5.3nm,0.7s,mb4.4,baz=113,slow=6.9,SNR=19						
ZALV				LR	LR	09 29 39.3	
	comp=Z,56nm,19.0s,MS3.5,baz=259,slow=37						
ZAL	Zalesovo	44.35	330	P	P	09 10 10.5	-0.1
ASAR	Alice Springs	44.49	163	P	P	09 10 10.1	-1.9
	comp=Z,1.2nm,0.4s,mb4.0,baz=340,slow=6.9,SNR=16						
KURK	Kurchatov	45.84	323d	iP	P	09 10 23.1	+0.6
KURK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
SEY	Seymchan	48.62	18	i P	P	09 10 45.5	+1.5
STKA	Stephens Creek	54.55	158	P	P	09 11 26.2	-2.3
	comp=Z,3.2nm,1.1s,mb4.2,baz=341,slow=6.0,SNR=2.1						
SVE	Sverdlovsk	57.95	326	eP	P	09 11 53.6	+1.0
SVE				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
ARU	Arti	58.98	325d	iP	P	09 11 59.7	-0.1
ARU				eS	S	09 20 04.5	+1.3
ARU				eSS	SS	09 23 54.9	-2.2
ARU				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
KIV	Kislovodsk	68.61	311	eP	P	09 13 04.3	+0.8
KIV				e		09 13 31.2	
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
TTA	Tatalina	69.82	29	eP	P	09 13 11.5	+1.0
KDAK	Kodiak Island	71.99	34	eP	P	09 13 22.8	-1.0
KDAK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KDAK	Kodiak Island	71.99	34	eP	P	09 13 22.8	-1.0
	comp=Z,3.9nm,0.6s,mb4.5						
ANN	Anapa	72.22	312	eP	P	09 13 23.6	-1.9
ANN				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.2						
ARCES	ARCESS Array B	74.03	339	P	P	09 13 35.5	-0.1
	comp=Z,5.4nm,0.9s,mb4.5,baz=64,slow=8.2,SNR=5.1						
EGAK	Eagle	76.01	26	eP	P	09 13 47.3	+0.1
	comp=Z,3.2nm,0.8s,mb4.3						
EGAK				ePcP	PcP	09 13 58.4	-0.9
AKASG	Malin Array Be	76.45	319	P	P	09 13 48.8	-1.2
	comp=Z,0.5nm,0.3s,mb4.0,baz=57,slow=7.0,SNR=9.2						
AKASG	Malin Array Be	76.45	319	i P	P	09 13 48.7	-1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
DAWY	Dawson	76.95	26	eP	P	09 13 52.6	+0.1
NB2	NORSAR Subarra	82.49	332	P	P	09 14 21.3	-1.3
	comp=Z,1.0nm,0.8s,mb3.8,baz=64,slow=5.1						
NOA	NORSAR Array B	82.49	332	P	P	09 14 20.6	-2.0
	comp=Z,1.3nm,0.8s,mb3.9,baz=66,slow=5.2,SNR=6.0						
NOA				LR	LR	09 54 00.9	
	comp=Z,56nm,18.9s,MS4.0,baz=45,slow=38						
GERES	GERESS Array B	86.54	321	P	P	09 14 42.6	-0.7
	comp=Z,0.4nm,0.5s,mb3.9,baz=57,slow=4.9,SNR=6.0						
GERES				LR	LR	09 57 16.9	
	comp=Z,29nm,18.1s,MS3.7,baz=108,slow=38						
YKA	Yellowknife Ar	87.52	23	P	P	09 14 47.9	+0.1
	comp=Z,3.1nm,0.7s,mb4.6,baz=309,slow=4.5,SNR=32						

*ISCJB **01** 09:41:35.7±1.3, 38.07N±0.05×20.27E±0.07, h4km±7km, Error ellipse: s-maj=10.5km s-min=7.0km az=138.5*
*CSEM **01** 09:41:35.9±0.4, 38.01N×20.27E, h0km±1km, ML3.3, Error ellipse: s-maj=6.2km s-min=3.1km az=31.0*
*NEIC **01** 09:41:36.5, 38.05N×20.32E, h11km, ML3.5(ATH), After ATH.*
*ATH **01** 09:41:36.4, 38.06N×20.30E, h4km, MD3.6/6*
*THE **01** 09:41:37.9, 38.07N×20.37E, h2km, ML3.3*
ISC 01 09:41:36.7±1.3, **38.06N**±0.05×**20.32E**±0.07, **h5km**±7km, **n19,** σ1s**01**/26, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.24	62	ePg	Pg	09 41 41.9	+0.5
VLS				eSg	Sg	09 41 45.4	+0.8
KFL	Anninata	0.37	83	ePg	Pg	09 41 44.0	+0.1
KFL				eSg	Sg	09 41 49.0	+0.3
KFL	Anninata	0.37	83	ePg	Pg	09 41 44.0	+0.1
KFL				eSg	Sg	09 41 49.0	+0.2
LKD	Levkas	0.69	22	ePg	Pg	09 41 50.5	+0.4
RLS	Riolos of Patr	0.91	90	ePB	Pb	09 41 53.6	-1.2
EVR	Evrytania	1.45	53	ePN	Pn	09 42 04.5	+1.0
IGT	Igoumenitsa	1.47	0	ePg	Pg	09 42 04.1	-0.7
IGT				eSg	Sg	09 42 24.9	+1.1
ITM	Ithomi	1.55	124	ePB	Pb	09 42 05.7	-0.1
KEK	Kerkira	1.70	346	ePG	Pg	09 42 07.9	-1.3
AGG	Agios Georgios	1.84	58	ePb	Pb	09 42 09.8	-1.1
AGG				eSb	Sb	09 42 33.1	-1.1
THL	Klokotos Trika	2.00	41	ePb	Pb	09 42 12.1	-1.4
THL				eSb	Sb	09 42 38.4	-0.3
THL	Klokotos Trika	2.00	41	ePn	Pn	09 42 13.2	+2.1
THL				eSb	Sb	09 42 38.4	-0.3
LTK	Loutraki	2.09	90	ePn	Pn	09 42 12.3	0.0
LKR	Lokris	2.19	74	ePn	Pn	09 42 14.1	+0.5
LKR	Lokris	2.19	74	ePb	Pb	09 42 13.9	-2.8
LKR	Lokris	2.19	74	ePn	Pn	09 42 14.1	+0.5
DID	Didima	2.38	103	ePn	Pn	09 42 17.5	+1.3
LIT	Litokhoron	2.64	39	ePn	Pn	09 42 20.7	+0.8
AOS	Alonnisos	3.00	67	ePn	Pn	09 42 25.0	+0.2

ISCJB ***01*** *10:18:26.9±1.3, 7.69S±0.09×128.63E±0.07, h180km±15km, mb3.8/7, Error ellipse: s-maj=15.9km s-min=9.2km az=31.8*
NEIC ***01*** *10:18:26.6±1.4, 7.55S×128.66E, h155km±16km, mb4.7/2, Error ellipse: s-maj=18.6km s-min=9.8km az=48.0*
IDC ***01*** *10:18:26.3±2.5, 7.55S×128.65E, h152km±22km, mb3.7/7, mb1 3.7/11, mb1mx3.6/17, mbtmp3.6/11, Error ellipse: s-maj=25.1km s-min=18.5km az=66.0*
ISC 01 10:18:26.3±1.6, 7.6S±0.1×128.70E±0.08, h153km±18km, n21, σ0ˢ92/23, mb3.8/7, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.62	242	P	Pn	10 19 49.0	+1.0
	93nm,0.3s,baz=132,slow=4.6,SNR=39						
BATI				S	Sn	10 20 51.2	-0.4
	46nm,0.3s,baz=97,slow=18,SNR=7.6						
KAKA	Kakadu	6.30	145	eP	Pn	10 19 58.4	+1.4
	17nm,0.3s						
KAKA				eS	Sn	10 21 06.2	-1.7
KAPI	Kappang	9.25	285	P	Pn	10 20 36.4	+0.1
	1.4nm,0.3s,baz=75,slow=13,SNR=4.2						
KAPI	Kappang	9.25	285	P	Pn	10 20 36.4	+0.1
FITZ	Fitzroy Crossi	10.88	196	⇑iP	Pn	10 20 56.7	-1.2
	7.2nm,0.4s						
FITZ				eS	Sx	10 22 50.9	
FITZ	Fitzroy Crossi	10.88	196	P	Pn	10 20 56.6	-1.4
	1.3nm,0.3s,baz=32,slow=11,SNR=39						
FITZ				S	Sn	10 22 53.0	-5.4
	5.0nm,0.3s,baz=305,slow=23,SNR=10						
WRA	Warramunga Arr	13.46	157	P	Pn	10 21 30.8	-0.5
	1.1nm,0.3s,baz=339,slow=10,SNR=52						
WRA				S	Sx	10 23 52.7	
	1.7nm,0.3s,baz=334,slow=23,SNR=9.4						
WB2	Warramunga Arr	13.47	157	eP	Pn	10 21 31.8	+0.4
WB2				eS	Sx	10 23 52.8	
MBWA	Marble Bar	16.05	212	ePn	Pn	10 22 04.7	+1.2
MBWA				eSn	Sx	10 24 52.5	
ASAR	Alice Springs	16.77	163	P	Pn	10 22 14.2	+2.0
	0.2nm,0.3s,baz=334,slow=9.2,SNR=30						
ASAR				S	Sx	10 25 10.4	
	0.5nm,0.3s,baz=335,slow=21,SNR=4.8						
ASAR				ScP	ScP	10 30 12.4	+0.3
	0.1nm,0.3s,baz=335,slow=1.6,SNR=5.2						
CMAR	Chiang Mai Arr	39.12	312	P	P	10 25 38.6	-0.5
	0.6nm,0.3s,mb3.6,baz=141,slow=5.8,SNR=2.7						
SONM	Songino Array	58.58	343	P	P	10 28 07.6	+0.7
	0.2nm,0.3s,mb3.4,baz=152,slow=6.7,SNR=4.9						
PETK	Petropavlovsk-	65.27	19	P	P	10 28 51.6	+0.2
	1.0nm,0.5s,mb3.9,baz=245,slow=3.0,SNR=2.3						
MK31	Makanchi Array	68.00	328	eP	P	10 29 09.0	+0.1
MKAR	Makanchi Array	68.00	328	P	P	10 29 09.0	+0.1
	1.4nm,0.5s,mb4.0,baz=108,slow=8.2,SNR=16						
ZALV	Zalesovo Beam	71.53	334	P	P	10 29 28.9	-1.4
	0.7nm,0.4s,mb3.8,baz=116,slow=3.4,SNR=4.6						
ZALV	Zalesovo Beam	71.53	334	P	P	10 29 28.9	-1.4
KURK	Kurchatov	72.33	329	P	P	10 29 35.3	+0.1
	2.0nm,0.5s,mb4.1,baz=126,slow=5.4,SNR=11						
AKTK	Aktyubinsk	83.73	323	P	P	10 30 37.6	-0.5
AKTO	Aktyubinsk	83.73	323	P	P	10 30 37.6	-0.5
	0.6nm,0.3s,mb3.8,baz=117,slow=8.5,SNR=3.7						
TORD	Torodi Ar. Bea	127.65	281	PKP	PKPdf	10 37 14.6	+0.2
	0.4nm,0.7s,baz=66,slow=2.7,SNR=2.3						

IDC ***01*** *10:26:50.9±1.5, 5.69S×154.27E, h0km, mb4.1/10, mb1 4.2/10, mb1mx4.0/16, mbtmp4.1/10, MS2.7/1, Ms1 2.7/1, ms1mx2.5/17, Error ellipse: s-maj=47.0km s-min=20.9km az=99.0*
ISCJB ***01*** *10:26:56.4±3.3, 5.7S±0.1×154.2E±0.1, h50km±29km, mb4.2/13, Error ellipse: s-maj=23.9km s-min=16.4km az=43.1*
NEIC ***01*** *10:26:59.6±2.3, 5.71S×154.11E, h63km±20km, mb4.3/2, Error ellipse: s-maj=20.1km s-min=13.6km az=136.0*
BJI ***01*** *10:27:05.6, 5.05S×153.32E, h63km, mB4.9, mb4.4*
ISC 01 10:26:59.6±2.8, 5.8S±0.1×154.1E±0.1, h60km±24km, n21, σ0ˢ97/20, mb4.2/13, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.80	242	ePn	Pn	10 28 50.8	+0.3
	36nm,0.6s						
PMG				eSn	Sn	10 30 22.6	+5.1
GUMO	Guam	21.32	334	LR	LR	10 38 40.8	
	comp=Z,19nm,20.5s,baz=254,slow=33						
KAKA	Kakadu	22.49	251	eP	P	10 31 52.7	-1.4
	8.8nm,0.5s,mb4.5						
WB2	Warramunga Arr	23.84	232	eP	P	10 32 07.7	+0.2
WRA	Warramunga Arr	23.85	232	P	P	10 32 07.9	+0.3
	1.9nm,0.6s,mb3.7,baz=56,slow=10,SNR=20						
WRA				PcP	PcP	10 35 49.9	+0.4
	1.0nm,0.5s,baz=49,slow=2.5,SNR=9.8						
ASAR	Alice Springs	26.38	226	P	P	10 32 31.2	+0.7
	1.3nm,0.8s,mb3.5,baz=56,slow=9.0,SNR=12						
ASAR				PcP	PcP	10 35 55.8	+0.8
	1.5nm,0.6s,baz=61,slow=2.5,SNR=18						
FITZ	Fitzroy Crossi	30.40	244	eP	P	10 33 05.4	-0.9
	9.0nm,1.6s,mb4.2						
FITZ	Fitzroy Crossi	30.40	244	P	P	10 33 05.9	-0.4
	2.0nm,0.6s,mb4.0,baz=180,slow=22,SNR=8.1						
JOW	Kunigami	40.95	324	P	P	10 34 36.3	-0.2
	5.9nm,0.7s,mb4.4,baz=186,slow=3.4,SNR=5.3						
KSRS	Korea Array	49.46	332	P	P	10 35 43.5	-0.2
	1.2nm,0.6s,mb4.1,baz=145,slow=6.7,SNR=5.2						
KHU	Kahuku	55.36	62	P	P	10 36 29.3	+1.5
POHA	Pohakuloa	55.62	61	P	P	10 36 27.9	-1.8
CMAR	Chiang Mai Arr	59.49	295	P	P	10 36 56.5	-0.5
	1.6nm,0.4s,mb4.4,baz=117,slow=5.3,SNR=9.5						
LZH	Lanzhou	62.84	316	eP	P	10 37 21.0	+1.6
LZH				AMB	AMB		
	comp=Z,15nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,68nm,4.3s						
GTA	Gaotai	67.26	317	eP	P	10 37 49.5	+1.5
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb4.2						
SONM	Songino Array	67.84	327	P	P	10 37 51.7	+0.2
	comp=Z,0.9nm,0.4s,mb4.1,baz=137,slow=7.2,SNR=4.9						
MKAR	Makanchi Array	81.92	319	P	P	10 39 12.7	-0.1
	comp=Z,0.6nm,0.4s,mb3.9,baz=88,slow=9.4,SNR=12						
ZALV	Zalesovo Beam	82.69	326	P	P	10 39 15.1	-1.5
	comp=Z,0.9nm,0.5s,mb4.0,baz=98,slow=6.1,SNR=3.9						
ZALV	Zalesovo Beam	82.69	326	P	P	10 39 15.1	-1.5
MAW	Mawson	85.20	203	P	P	10 39 29.3	+0.1
	comp=Z,0.8nm,0.6s,mb4.0,baz=104,slow=3.2,SNR=3.8						
TORD	Torodi Ar. Bea	151.86	287	PKPbc	PKPbc	10 46 48.5	-0.2
	comp=Z,1.4nm,0.5s,baz=77,slow=1.7,SNR=20						
TORD				PKPab	PKPab	10 46 58.0	-0.1
	comp=Z,2.1nm,0.6s,baz=76,slow=4.2,SNR=9.9						

ISCJB ***01*** *10:32:38.7±1.2, 51.20N±0.09×176.94W±0.06, h59km±10km, mb4.2/37, MS3.3/5, Error ellipse: s-maj=15.6km s-min=5.4km az=169.7*
BJI ***01*** *10:32:38.9, 51.20N×176.90W, h45km, mB5.0, mb4.7, Ms4.4, Msz4.2*
IDC ***01*** *10:32:39.0±0.8, 51.16N×176.83W, h46km±6km, mb3.8/19, mb1 4.0/21, mb1mx3.9/30, mbtmp3.9/21, MS3.3/6, Ms1 3.3/6, ms1mx3.0/27, Error ellipse: s-maj=18.2km s-min=11.6km az=170.0*
NEIC ***01*** *10:32:38.9±0.5, 51.17N×176.94W, mb4.3/15, Error ellipse: s-maj=12.3km s-min=5.7km az=180.0*
ISC 01 10:32:40.1±1.1, 51.21N±0.10×176.92W±0.06, h54km±9km, h50km±2.5km:pP-P, n61, σ0ˢ87/60, mb4.2/37, MS3.3/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	2.38	276	P	Pn	10 33 14.9	-1.6
AMKA				S	Sn	10 33 45.0	+0.5
CHGN	Chignik	12.07	58	ePn	Pn	10 35 29.1	0.0
SVW2	Sparrevohn	15.40	42	Pn	Pn	10 36 15.1	+1.6
KDAK	Kodiak Island	15.54	55	P	Pn	10 36 14.7	-0.6
	3.1nm,0.3s,baz=248,slow=5.4,SNR=1.9						
KDAK				S	S	10 39 08.3	-11
	0.7nm,0.3s,baz=238,slow=15,SNR=6.4						
PETK	Petropavlovsk-	15.67	287	P	Pn	10 36 16.9	-0.1
	0.1nm,0.3s,baz=89,slow=15,SNR=4.9						
PETK				LR	LR	10 41 56.1	
	comp=Z,52nm,20.4s,baz=284,slow=35						
PETK	Petropavlovsk-	15.67	287	P	Pn	10 36 16.9	-0.1
PETK				LR	LR	10 41 56.1	
TTA	Tatalina	16.24	36	ePn	Pn	10 36 25.4	+1.1
IMA2	Indian Mountai	19.00	30	ePn	Pn	10 36 57.1	-0.9
COLA	College	20.33	37	eP	P	10 37 11.1	-0.2
	6.1nm,0.7s						
EGAK	Eagle	22.91	40	eP	P	10 37 38.0	-0.8
	7.3nm,0.8s,mb4.2						
DAWY	Dawson	23.43	42	eP	P	10 37 43.1	-0.9
INK	Inuvik	26.93	34	P	P	10 38 14.6	-1.1
	1.6nm,0.7s,mb3.6,baz=236,slow=8.8,SNR=6.1						
INK	Inuvik	26.93	34	eP	P	10 38 15.2	-0.5
	18nm,0.4s,mb4.9						
YKA	Yellowknife Ar	34.49	47	P	P	10 39 20.4	-2.0
	0.3nm,0.4s,mb3.6,baz=281,slow=8.4,SNR=7.8						
YKA				PcP	PcP	10 41 56.9	+0.8
	0.5nm,0.6s,baz=286,slow=3.3,SNR=5.7						
YKA				LR	LR	10 56 01.2	
	comp=Z,43nm,18.8s,MS3.2,baz=170,slow=41						
YKA	Yellowknife Ar	34.49	47	P	P	10 39 20.4	-2.0
YKA				PcP	PcP	10 41 56.9	+0.8
YKA				LR	LR	10 56 01.2	
MJAR	Matsushiro Arr	34.93	263	LR	LR	10 52 08.8	
	comp=Z,89nm,19.5s,MS3.5,baz=45,slow=34						
RSW	Rattlesnake Hi	37.24	74	eP	P	10 39 46.3	+0.3
HAWA	Hanford	37.28	74	eP	P	10 39 46.9	+0.5
	4.4nm,0.7s,mb4.4						
OD2	Odessa Site #2	37.30	72	P	P	10 39 45.9	-0.6
YBH	Yreka Blue Hor	37.73	83	P	P	10 39 50.2	-0.1
	2.4nm,1.1s,mb3.8,baz=274,slow=4.1,SNR=2.4						
YBH				LR	LR	10 54 11.2	
	comp=Z,53nm,19.2s,MS3.4,baz=255,slow=34						
NEW	Newport	37.83	70	eP	P	10 39 51.0	0.0
	3.1nm,0.6s,mb4.2						
EDM	Edmonton	37.86	61	eP	P	10 39 51.7	+0.4
CN2	Changchun	38.74	282	eP	P	10 39 57.2	-1.5
WVOR	Wild Horse Val	39.88	79	P	P	10 40 07.6	-0.6
	6.6nm,1.2s,mb4.2						
MSO	Missoula	40.41	71	eP	P	10 40 12.2	-0.4
	1.0nm,0.4s,mb3.9						
KSRS	Korea Array	40.82	272	P	P	10 40 17.6	+1.5
	1.3nm,0.7s,mb3.6,baz=56,slow=6.9,SNR=3.5						
HLID	Hailey	41.85	75	eP	P	10 40 24.8	+0.4
	1.9nm,0.8s,mb3.8						
EGMT	Eagleton	42.27	67	eP	P	10 40 30.4	+2.7
	5.2nm,0.8s,mb4.2						
BOZ	Bozeman (W)	42.40	71	eP	P	10 40 29.1	+0.3
	3.0nm,0.7s,mb4.0						
NVAR	Mina Array Bea	42.40	84	P	P	10 40 29.3	+0.3
	0.4nm,0.8s,mb3.1,baz=270,slow=7.4,SNR=3.8						
NVAR	Mina Array Bea	42.40	84	P	P	10 40 29.3	+0.3
RLMT	Red Lodge	44.08	70	eP	P	10 40 43.3	+0.9
	8.6nm,0.9s,mb4.5						
TPNV	Topopah Spring	44.59	84	eP	P	10 40 46.8	+0.1
DUG	Dugway	44.75	78	eP	P	10 40 48.1	+0.3
	3.6nm,0.9s,mb4.2						
BW06	Boulder Array	45.23	73	eP	P	10 40 51.8	+0.2
	5.5nm,0.8s,mb4.4						
PDAR	Pinedale Array	45.23	73	P	P	10 40 51.7	+0.1
	2.0nm,0.5s,mb4.2,baz=330,slow=4.1,SNR=16						
PDAR				pP	pP	10 41 03.5	-2.3
	4.6nm,0.7s,baz=316,slow=3.8,SNR=14						
SRU	San Rafael	46.82	78	eP	P	10 41 04.3	+0.2
	2.8nm,0.8s,mb4.2						
SONM	Songino Array	47.77	298	P	P	10 41 12.0	+0.5
	1.4nm,0.7s,mb4.1,baz=55,slow=9.2,SNR=6.2						
SONM				pP	pP	10 41 25.6	-0.2
	1.8nm,0.8s,baz=52,slow=9.2,SNR=7.8						
PV01	Paradox Valley	48.62	78	eP	P	10 41 17.8	-0.3
NJ2	Nanjing	50.00	273	eP	P	10 41 29.5	+0.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
SPITS	Spitsbergen Ar	50.62	356	P	P	10 41 32.9	+0.1
	comp=Z,11nm,0.9s,mb4.8,baz=19,slow=19,SNR=3.4						
ZALV	Zalesovo Beam	55.00	314	PcP	PcP	10 43 07.1	+0.7
	comp=Z,0.8nm,0.4s,baz=46,slow=4.3,SNR=4.4						
ZALV				LR	LR	11 07 57.3	
	comp=Z,18nm,20.3s,MS3.1,baz=82,slow=38						
LZH	Lanzhou	56.56	288	eP	P	10 42 19.0	+2.2
LZH				AP	pP	10 42 32.0	+0.5
LZH				XP	sP	10 42 39.5	+1.8
LZH				PP	PP	10 44 27.0	+4.2
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,78nm,4.5s						
WMOK	Wichita Mounta	56.81	74	P	P	10 42 18.1	-0.5
	comp=Z,2.6nm,0.9s,mb4.3						
ARCES	ARCESS Array B	58.45	351	P	P	10 42 28.9	-0.7
	comp=Z,1.9nm,0.8s,mb4.2,baz=19,slow=9.0,SNR=4.9						
ARCES				PcP	PcP	10 43 19.8	+0.1
	comp=Z,2.3nm,0.9s,baz=12,slow=6.2,SNR=3.6						
KURK	Kurchatov	59.99	315	P	P	10 42 40.8	+0.3
	comp=Z,2.1nm,0.9s,mb4.2,baz=42,slow=6.9,SNR=5.2						
CD2	Chengdu	60.16	283	eP	P	10 42 40.9	-1.1
CD2				AP	pP	10 42 56.0	-0.8
CD2				XP	sP	10 43 03.2	+0.3
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CD2				AMB	AMB		
	comp=Z,20nm,5.2s						
MKAR	Makanchi Array	61.06	310	P	P	10 42 47.4	-0.5
	comp=Z,0.3nm,0.3s,mb3.9,baz=45,slow=7.4,SNR=8.1						
GYA	Guiyang	61.52	278	P	P	10 42 51.8	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.0						
BVAR	Borovoye Array	61.78	321	P	P	10 42 53.4	+0.8
	comp=Z,6.5nm,0.4s,mb5.1,baz=54,slow=6.3,SNR=31						
BVAR				pP	pP	10 43 05.9	-1.5
	comp=Z,3.0nm,0.5s,baz=52,slow=7.3,SNR=7.1						
KMI	Kunming	64.92	279	P	P	10 43 14.1	+0.3
KMI				AP	pP	10 43 30.0	+1.3
KMI				PCP	PcP	10 43 48.3	+1.7
KMI				PP	PP	10 45 38.6	+1.8
KMI				SCP		10 47 43.2	
KMI				S	S	10 51 49.1	-2.1
KMI				XS	sS	10 52 13.2	-3.1
KMI				AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.6						
KMI				AMB	AMB		
	comp=Z,134nm,12.4s						
KMI				LR	LR		
	comp=N,108nm,9.6s						
KMI				LR	LR		
	comp=E,107nm,8.0s						
KMI				LR	LR		
	comp=Z,94nm,9.9s						
NOA	NORSAR Array B	67.92	356	LR	LR	11 12 09.1	
	comp=Z,16nm,18.2s,MS3.3,baz=245,slow=35						
AKTO	Aktyubinsk	68.50	326	P	P	10 43 37.5	+1.3
	comp=Z,4.8nm,0.5s,mb4.8,baz=50,slow=7.3,SNR=29						
CMAR	Chiang Mai Arr	72.20	277	P	P	10 44 00.1	+0.9
	comp=Z,1.3nm,0.7s,mb4.0,baz=29,slow=6.5,SNR=5.2						
CMAR				pP	pP	10 44 12.2	-2.3
	comp=Z,1.1nm,0.8s,baz=31,slow=8.0,SNR=2.1						
EKA	Eskdalemuir Ar	73.70	4	P	P	10 44 07.1	-0.5
	comp=Z,0.4nm,0.5s,mb3.6,baz=337,slow=4.1,SNR=3.5						
AKASG	Malin Array Be	76.06	343	P	P	10 44 21.1	-0.2
	comp=Z,0.5nm,0.4s,mb3.8,baz=20,slow=5.7,SNR=2.0						
WRA	Warramunga Arr	82.72	225	P	P	10 44 56.3	-1.4
	comp=Z,1.3nm,0.4s,mb4.3,baz=32,slow=5.9,SNR=14						
FITZ	Fitzroy Crossi	85.30	234	eP	P	10 45 10.8	-0.1
	comp=Z,5.4nm,0.9s,mb4.7						
FITZ	Fitzroy Crossi	85.30	234	P	P	10 45 11.0	0.0
	comp=Z,3.1nm,0.8s,mb4.5,baz=64,slow=5.7,SNR=7.1						
ASAR	Alice Springs	86.17	224	P	P	10 45 14.6	-0.5
	comp=Z,1.1nm,0.6s,mb4.3,baz=28,slow=5.5,SNR=17						
MAW	Mawson	147.07	218	PKPbc	PKPbc	10 52 14.4	-0.9
	comp=Z,3.3nm,0.8s,baz=179,slow=2.7,SNR=9.8						

ISCJB ***01*** *11:17:33.7±1.0, 29.86N±0.05×36.23E±0.07, h0km, Error ellipse: s-maj=8.9km s-min=6.4km az=157.2*
CSEM ***01*** *11:17:35.9, 29.95N×36.10E, h6km, ML2.6, After SNSN*
SGS ***01*** *11:17:35.9, 29.95N×36.10E, h6km*
GII ***01*** *11:17:35.1±0.0, 29.92N×36.20E, h0km, ML1.7/3, EXPLOSION*
ISC 01 11:17:34.1±1.1, 29.86N±0.05×36.25E±0.07, h0km, n15, σ0ˢ72/18, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	Mount Harif	1.07	280	Pg	Pg	11 17 54.0	-0.6
EIL	Elat	1.15	261	Pg	Pg	11 17 56.4	+0.3
ZFRI	Zfri	1.16	307	Pg	Pg	11 17 56.4	0.0
MBRI	Mt Berech	1.17	267	Pg	Pg	11 17 56.0	-0.4
MBRI				Sg	Sg	11 18 13.7	+2.2
HQLS		1.18	242	P	Pg	11 17 56.0	-0.6
HQLS		1.18	242	P	Pg	11 17 56.0	-0.6
PRNI	Paran	1.19	295	Pg	Pg	11 17 56.6	-0.3
JLOS		1.30	211	P	Pg	11 17 58.7	-0.4
JLOS		1.30	211	P	Pg	11 17 58.7	-0.3
JLOS				S	Sg	11 18 16.1	+0.2
KRMI	Paran Flat	1.35	281	Pg	Pg	11 17 59.3	-0.7
KRMI				Sg	Sg	11 18 17.1	-0.4
RTMI	Retamim	1.80	312	Pn	Pn	11 18 07.4	+1.0
DSI	Dead Sea	1.86	336	Pn	Pn	11 18 07.5	+0.2
KZIT	Kziot	1.92	304	Pn	Pn	11 18 07.7	-0.2
RSHS		2.01	220	P	Pn	11 18 08.4	-0.8
BIDS	Bi'r al Bayda'	3.04	168	P	Pn	11 18 24.4	+0.9

MOS ***01*** *11:17:45.3±1.1, 55.32N×110.45E, h6km, mb4.3/1, Error ellipse: s-maj=99.9km s-min=32.5km az=135.4*
BYKL 01 11:17:45.1±0.2, 55.42N×110.39E, h8km±11km, 5C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.60	307	⇑iPg	Pg	11 17 56.3	-0.3
NIZ				eSg	Sg	11 18 05.0	+0.5
NIZ				Pmax			
	44nm,0.2s						
NIZ				Smax			
	878nm,0.1s						
KMO	Kumora	0.66	44	⇑iPg	Pg	11 17 56.6	-1.1
KMO				ePb	Pb	11 17 59.6	+0.8
KMO				eSg	Sg	11 18 05.8	-0.5
KMO				max			
	186nm,0.4s						
KMO				Smax			
	428nm,1.2s						
YLYR	Ulyunkhan	0.70	141	⇓iPg	Pg	11 17 57.5	-1.1
	39nm,0.5s						
YLYR				⇑iPg	Pg	11 17 57.5	-1.1
	33nm,0.5s						
YLYR				⇑iPg	Pg	11 17 57.5	-1.1
	45nm,0.5s						
YLYR				eSg	Sg	11 18 06.9	-0.8
YLYR				Pmax			
	38nm,0.3s						
YLYR				Smax			
	209nm,0.1s						
YOA	Uoyan	1.04	46	ePG	Pg	11 18 04.2	-0.8
YOA				i		11 18 19.2	
YOA				pmax	pmax		
	comp=Z,259nm,0.3s						
YOA				smax			
	comp=N,624nm,0.5s						
YOA	Uoyan	1.04	46	ePg	Pg	11 18 04.1	-0.9
YOA				eSg	Sg	11 18 18.4	-0.1
YOA				Pmax			
	comp=N,200nm,0.2s						
YOA				Smax			
	comp=N,551nm,0.4s						
SYVR	Suvo	1.78	188	ePn	Pn	11 18 16.4	+0.3
SYVR				i Pg	Pg	11 18 17.4	-1.8
SYVR				eSg	Sg	11 18 41.5	-0.7
SYVR				Pmax			
	comp=N,43nm,0.7s						
SYVR				Smax			
	comp=N,110nm,0.5s						
UKT	Uakit	1.84	87	ePN	Pn	11 18 17.6	+0.6
UKT				e		11 18 42.9	
UKT				pmax	pmax		
	comp=Z,35nm,0.3s						
UKT				smax			
	comp=N,263nm,0.3s						
UKT	Uakit	1.84	87	⇑iPg	Pg	11 18 17.6	-2.8
UKT				eSg	Sg	11 18 42.9	-1.4
UKT				Pmax			
	comp=N,42nm,0.7s						
UKT				Smax			
	comp=N,267nm,0.3s						
SVKR	Severomuysk	1.92	67	ePN	Pn	11 18 19.4	+1.4
SVKR				e		11 18 45.5	
SVKR				pmax	pmax		
	comp=Z,118nm,0.7s						
SVKR				smax			
	comp=E,548nm,0.7s						
SVKR	Severomuysk	1.92	67	ePg	Pg	11 18 19.6	-2.3
SVKR				eSg	Sg	11 18 45.7	-1.1
SVKR				Pmax			
	comp=E,118nm,0.4s						
SVKR				Smax			
	comp=E,561nm,0.3s						
MXMB	Maximikha	2.37	205	ePg	Pg	11 18 27.4	-3.0
MXMB				e		11 18 52.3	
MXMB				eSg	Sg	11 18 59.4	-1.6
MXMB				Pmax			
	comp=E,13nm,0.3s						
MXMB				Smax			
	comp=E,249nm,0.8s						
BOD	Bodaibo	3.13	38	ePn	Pn	11 18 34.9	+0.3
BOD				ePg	Pg	11 18 40.6	-4.3
BOD				e		11 19 12.7	
BOD				eSg	Sg	11 19 20.5	-4.9
BOD				Pmax			
	comp=E,10.0nm,0.2s						
BOD				Smax			
	comp=E,50nm,1.1s						
TRG	Tyrgan	3.57	223	e	Pn	11 18 44.1	+3.4
TRG				e		11 18 52.8	
TRG				eSg	Sg	11 19 34.9	-4.8
TRG				max			
	comp=E,5.0nm,0.6s						
TRG				Smax			
	comp=E,47nm,0.6s						
UUDB	Ulan-Yde	3.91	206	ePg	Pg	11 18 56.3	-3.7
UUDB				eSg	Sg	11 19 47.8	-2.8
UUDB				Pmax			
	comp=E,10.0nm,0.8s						
UUDB				Smax			
	comp=E,33nm,1.6s						
HRMR	Khuramsha	4.32	210	ePn	Pn	11 18 51.3	+0.4
HRMR				ePg	Pg	11 19 02.3	-5.4
HRMR				eSg	Sg	11 19 57.7	-5.9
HRMR				Pmax			
	comp=E,8.0nm,0.5s						
HRMR				Smax			
	comp=E,102nm,0.7s						
CRS	Chara	4.65	68	ePN	Pn	11 19 08.3	+13
CRS				e		11 20 08.4	
CRS				pmax	pmax		
	comp=Z,24nm,1.0s						
CRS				smax			
	comp=E,42nm,1.1s						
CRS	Chara	4.65	68	ePg	Pg	11 19 08.1	-5.9
CRS				eSg	Sg	11 20 08.0	-6.2
CRS				Pmax			
	comp=E,23nm,1.2s						
CRS				Smax			
	comp=E,43nm,1.5s						
IRK	Irkutsk	4.82	231	eSg	Sg	11 20 14.0	-5.8
IRK				Smax			
	comp=E,142nm,0.4s						
LSTR	Listvyanka	4.86	225	eSg	Sg	11 20 14.3	-6.6
LSTR				Smax			
	comp=E,35nm,1.1s						
TLY	Talaya	5.50	230	ePN	Pn	11 19 25.0	+18
TLY				e		11 20 33.2	
TLY				pmax	pmax		
	comp=Z,2.0nm,0.2s						
TLY				smax			
	comp=E,34nm,1.1s						
TUP	Tupik	5.61	96	e	Pn	11 19 08.9	+0.3
TUP				ePg	Pg	11 19 25.1	-7.3
TUP				e		11 20 09.6	
TUP				eSg	Sg	11 20 39.5	-5.4
TUP				Pmax			
	comp=E,4.0nm,0.6s						
TUP				Smax			
	comp=E,17nm,0.8s						
KPC	Khapcheranga	5.85	167	e	Pn	11 19 12.1	+0.1
KPC				e		11 19 31.8	
KPC				eSg	Sg	11 20 46.0	-6.9
KPC				max			
	comp=E,2.0nm,0.5s						
KPC				Smax			
	comp=E,15nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARS	Arshan	5.89	237	ePg	Pg	11 19 30.5	-7.3
ARS				e		11 20 19.3	
ARS				eSg	Sg	11 20 46.3	-7.8
ARS				Pmax			
	comp=E,8.0nm,0.4s						
ARS				Smax			
	comp=E,96nm,0.8s						
ORL	Orlik	6.88	250	ePN	Pn	11 19 28.4	+2.3
ORL				eS	Sn	11 20 43.2	-1.2
ORL				eS	Sn	11 21 18.3	+34
ORL				smax			
	comp=N,31nm,1.0s						
ORL	Orlik	6.88	250	ePn	Pn	11 19 27.5	+1.4
ORL				eSn	Sn	11 20 44.0	-0.4
ORL				eSg	Sg	11 21 17.8	-7.8
ORL				Smax			
	comp=N,21nm,0.5s						
IENR	Iengra	8.19	78	eSg	Sn	11 21 59.1	+42

IDC 01 11:32:22.7±2.9**, 569S×13209E, h0km, mb3.5**/1**, mb1 3.8**/4**, mb1mx3.6**/13**, mbtmp3.6**/4**, ML3.7**/3**, Error ellipse: s-maj=117.9km s-min=30.4km az=80.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.85	207	Pn	Pn	11 35 39.4	-1.0
	0.8nm,0.3s,baz=34,slow=13,SNR=49						
FITZ				Sn	Sn	11 38 02.9	-12
	0.4nm,0.3s,baz=195,slow=20,SNR=6.5						
WRA	Warramunga Arr	14.33	171	Pn	Pn	11 35 46.4	-0.6
	0.2nm,0.3s,baz=356,slow=13,SNR=30						
WRA				Sn	Sn	11 38 14.9	-12
	0.6nm,0.3s,baz=348,slow=24,SNR=11						
ASAR	Alice Springs	17.95	175	P	Pn	11 36 35.0	+1.1
	0.2nm,0.3s,baz=346,slow=8.2,SNR=4.7						
ASAR				S	Sn	11 39 43.1	-12
	0.1nm,0.3s,baz=358,slow=28,SNR=5.7						
MKAR	Makanchi Array	68.30	326	P	P	11 43 25.7	+0.1
	0.2nm,0.4s,baz=111,slow=7.6,SNR=4.1						

*MOS **01** 11:36:32.3±1.5, 4292N×4405E, h16km, mb4.3/1, Error ellipse: s-maj=11.7km s-min=6.6km az=101.9*
*TIF **01** 11:36:32.5, 4294N×4398E, h10km±2km*
*ISCJB **01** 11:36:33.2±0.3, 4292N±002×4402E±003, h9km±3km, Error ellipse: s-maj=3.6km s-min=2.7km az=162.7*
ISC 01 11:36:33.6±0.3**, 4293N**±002×**4401E**±003**, h12**km±3km**, n26, σ1§03**/49**, 10C-6D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KORR	Kora	0.17	14	⇑iPG	Pg	11 36 35.3	-2.0
ZEI	Tsey	0.18	209	⇑iPG	Pg	11 36 36.9	-0.6
ZEI				iS	Sg	11 36 40.1	-0.1
LACR	Lac	0.23	115	⇑iPG	Pg	11 36 37.5	-0.9
LACR				iS	Sg	11 36 41.5	-0.2
DIGR	Digorskoe uzhe	0.32	266	⇑iPG	Pg	11 36 39.4	-0.6
DIGR				iS	Sg	11 36 44.6	+0.3
ARNR	Ardon	0.33	36	⇑iPG	Pg	11 36 39.5	-0.7
ARNR				eS	Sg	11 36 45.0	+0.4
LSNR	Lesken	0.38	338	⇓iPG	Pg	11 36 40.5	-0.6
LSNR				eS	Sg	11 36 46.5	+0.3
KMSR	Komsomolskaya	0.49	25	ePG	Pg	11 36 42.5	-0.7
KMSR				eS	Sg	11 36 49.9	+0.2
ONI	Oni	0.54	230	P	Pg	11 36 43.9	-0.2
ONI				S	Sg	11 36 52.6	+1.4
BTKR	Batakoyurt	0.59	41	ePG	Pg	11 36 46.4	+1.3
BTKR				eS	Sg	11 36 55.2	+2.3
PRTR	Priterechnaya	0.85	13	ePG	Pg	11 36 49.9	-0.1
PRTR				eS	Sg	11 37 02.0	+0.9
GOR	Gori	0.94	176	P	Pg	11 36 50.1	-1.6
GOR				S	Sg	11 37 04.5	+0.5
KUBR	Kubataba	0.98	334c	iPG	Pg	11 36 52.1	-0.3
KUBR				iS	Sg	11 37 08.9	+3.7
KUBR				pmax	pmax		
	comp=Z,33nm,0.8s						
KUBR				smax			
	comp=N,794nm,0.2s						
KUBR				smax			
	comp=E,689nm,0.3s						
SHAR	Shatzhatmas	1.28	310d	iPG	Pn	11 36 56.4	-0.8
SHAR				iS	Sb	11 37 14.3	+0.4
SHAR				pmax	pmax		
	comp=Z,25nm,0.2s						
SHAR				smax			
	comp=N,2.0nm,0.2s						
PYA	Pyatigorsk	1.31	328	⇓ePG	Pn	11 36 57.4	-0.2
PYA				eS	Sb	11 37 15.5	+0.7
TBLG	Delisi	1.31	155	P	Pn	11 36 58.4	+0.8
TBLG				S	Sg	11 37 17.9	+2.2
MTA	Mtatsminda	1.36	155	P	Pg	11 36 59.7	0.0
MTA				S	Sg	11 37 18.2	+0.9
BEYR	Belyy Ugol+	1.39	322	⇓iPG	Pn	11 36 58.3	-0.5
BEYR				eS	Sn	11 37 17.5	+0.4
KIV0	Kislovodsk Arr	1.41	317	⇓ePG	Pn	11 36 58.7	-0.3
KIV0				eS	Sn	11 37 18.1	+0.6
KIV	Kislovodsk	1.41	317	⇑ePG	Pn	11 36 58.9	-0.2
KIV				eS	Sn	11 37 18.2	+0.6
BTLR	Botlikh	1.65	98	iPN	Pn	11 37 00.2	-2.1
BTLR				iS	Sn	11 37 23.5	+0.1
BTLR				pmax	pmax		
	comp=Z,67nm,0.5s						
DGRG	David-gareji	1.79	145	P	Pg	11 37 07.4	-0.5
DGRG				S	Sg	11 37 33.5	+2.5
GOF	Gofitskoye	2.25	342	⇑iPN	Pg	11 37 26.5	+10
GOF				pmax	pmax		
	comp=Z,120nm,1.0s						
GNI	Garni	2.83	169	⇓ePN	Pg	11 37 25.7	-2.0
GNI				iS	Sg	11 38 15.3	+11
ANN	Anapa	5.11	294	ePN	Pn	11 37 41.7	-8.2
ANN				pmax	pmax		
	comp=Z,42nm,1.6s						
AB31	Akbulak array	12.73	55	⇑Pn	Pn	11 39 31.3	-3.0
	comp=Z,0.8nm,0.7s,baz=245,slow=16,SNR=13						
AB31				⇑Sn	Sn	11 41 46.4	-9.4
	comp=Z,1.4nm,0.7s,baz=240,slow=24						
AB31	Akbulak array	12.73	55	Pn	Pn	11 39 31.3	-3.0
	comp=Z,0.8nm,0.7s,baz=245,SNR=13						
AB31				Sn	Sn	11 41 46.4	-9.4
	comp=Z,1.4nm,0.7s,baz=240						

*JMA **01** 11:47:05.7±0.6, 2259N×12296E, h13km*
TAP 01 11:47:06.6, 2250N×12273E, h72km±3km**, ML3.1, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	1.18	247	eP	Pn	11 47 27.0	-0.4
	baz=247						
LAY				eS	Sn	11 47 41.9	-1.1
	baz=247						
CHKT	Chengkung	1.39	296	eP	Pn	11 47 28.9	-1.2
	baz=296						
CHKT				eS	Sn	11 47 46.1	-1.7
	baz=296						
TWG	Pinlang	1.56	282	eP	Pn	11 47 32.4	+0.1
	baz=279						
TWG				eS	Sn	11 47 52.0	+0.1
	baz=279						
TWF1	Yuli	1.57	303	eP	Pn	11 47 31.8	-0.7
	baz=308						
TWF1				eS	Sn	11 47 51.8	-0.2
	baz=308						
EHY	Hungye	1.64	308	eP	Pn	11 47 32.7	-0.6
	baz=308						
ECL	Taimali	1.64	274	P	Pn	11 47 33.5	+0.1
	baz=283						
ECL				eS	Sn	11 47 53.6	-0.1
	baz=283						
ELDTW	Lidau	1.72	294	eP	Pn	11 47 34.7	+0.2
	baz=294						
EAST	Anshuo	1.74	267	P	Pn	11 47 35.0	+0.3
	baz=258						
EAST				eS	Sn	11 47 56.9	+0.7
	baz=258						
HATJ	Hateruma jima	1.84	32	P	Pn	11 47 34.7	-1.4
HATJ				S	Sn	11 47 56.7	-1.8
TWK1	Hengchun	1.86	253	eP	Pn	11 47 37.8	+1.4
	baz=261						
STYT	Tauyuan	1.93	290	eP	Pn	11 47 37.8	+0.5
	baz=294						
SSD	Sandimen	1.95	278	eP	Pn	11 47 39.5	+2.0
	baz=277						
SCZT	Fangliau	1.95	267	eP	Pn	11 47 38.6	+1.0
	baz=260						
YOJ	Yonaguni jima	1.97	8	P	Pn	11 47 38.2	+0.4
YOJ				eS	Sn	11 48 01.2	-0.4
ALS	Alishan	2.04	300	eP	Pn	11 47 41.0	+2.3
	baz=295						
IRIF	Iriomote-Funau	2.05	27	P	Pn	11 47 37.4	-1.5
IRIF				S	Sn	11 48 01.7	-1.8
WTP	Ta-pu	2.08	291	eP	Pn	11 47 41.4	+2.0
	baz=291						
JKRS	Kuro-shima	2.09	34	P	Pn	11 47 39.2	-0.3
JKRS				eS	Sn	11 48 02.2	-2.4
CHN1	Nanshi	2.14	289	eP	Pn	11 47 42.6	+2.5
	baz=289						
CHN1				eS	Sn	11 48 10.0	+4.3
	baz=289						
CHN5	Tsauling	2.18	300	eP	Pn	11 47 42.0	+1.4
	baz=306						
CHN5				eS	Sn	11 48 09.7	+3.0
	baz=306						
TWK	Hsinying	2.20	291	eP	Pn	11 47 42.4	+1.5
	baz=290						
TYC	Yuchr	2.21	309	eP	Pn	11 47 43.3	+2.2
	baz=315						
JIJ	Ishigaki jima	2.27	35	P	Pn	11 47 40.7	-1.1
JIJ				S	Sn	11 48 06.2	-2.6
JTJ	Tarama	2.80	40	P	Pn	11 47 48.2	-0.8
JTJ				S	Sn	11 48 19.7	-2.0

*NEIC **01** 12:07:23.9±0.6, 4072N×7761E, h10km, mb4.0/1, Error ellipse: s-maj=11.2km s-min=9.9km az=34.0*
*BJI **01** 12:07:23.6, 4099N×7782E, h9km, mB4.5, mb4.3, ML4.2, Ms3.6, Msz3.5*
*IDC **01** 12:07:27.6±5.2, 4072N×7783E, h34km±39km, mb3.6/7, mb1 3.9/12, mb1mx3.7/28, mbtmp3.8/12, ML3.6/5, MS3.2/9, Ms1 3.2/9, ms1mx3.0/35, Error ellipse: s-maj=32.7km s-min=17.4km az=17.0*
*ISCJB **01** 12:07:27.5±0.5, 4073N±003×7789E±006, h53km±8km, mb3.8/9, MS3.4/5, Error ellipse: s-maj=7.4km s-min=5.2km az=174.7*
*MOS **01** 12:07:27.3±2.7, 4081N×7782E, h38km, mb4.1/6, Error ellipse: s-maj=14.8km s-min=6.9km az=98.2*
*NNC **01** 12:07:30.0±2.0, 4124N×78.17E, h0km, mb4.3, mpv4.5, Error ellipse: s-maj=17.8km s-min=11.3km az=3.0*
ISC 01 12:07:29.1±0.4**, 4078N**±003×**7790E**±006**, h44**km±7km**, n73, σ1§19**/84**, mb3.8**/9**, MS3.4**/5**, 9C-12D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	1.93	320	P	Pn	12 07 59.0	-0.4
	SNR=547						
KSH	Kashi	1.94	230	⇑P	Pn	12 08 01.1	+1.5
KSH				S	Sn	12 08 28.3	+5.6
KSH				Smax			
	comp=N,6μm,0.6s						
KSH				Smax			
	comp=E,7μm,0.5s						
KZA	Kyzart	2.38	304	P	Pn	12 08 05.2	-0.4
	SNR=217						
KNDC	Almaty	2.54	344	⇓Pn	Pn	12 08 07.1	-0.6
	comp=E,562nm,0.5s						
KNDC				⇓Sn	Sn	12 08 36.9	-0.4
	comp=E,3μm,0.9s						
AAA	Alma-Ata	2.59	344	iPN	Pn	12 08 09.7	+1.2
AAA				iS	Sn	12 08 43.2	+4.5
AAA				pmax	pmax		
	comp=Z,2μm,0.6s						
AAA				smax			
	comp=E,2μm,0.8s						
TKM2	Tokmak 2	2.75	322	⇑Pn	Pn	12 08 11.7	+1.0
	comp=E,301nm,0.7s						
TKM2				⇓Sn	Sn	12 08 44.7	+2.1
	comp=E,923nm,1.1s						
TKM2	Tokmak 2	2.75	322	PN	Pn	12 08 11.6	+0.9
TKM2				S	Sn	12 08 49.2	+6.6
TKM2				pmax	pmax		
	comp=Z,202nm,0.5s						
TKM2				smax			
	comp=Z,923nm,1.1s						
TKM2	Tokmak 2	2.75	322	P	Pn	12 08 14.3	+3.6
	SNR=7.8						
KBK	Karagaybulak	2.90	311	P	Pn	12 08 17.0	+4.2
	SNR=413						
UCH	Uchtor	2.93	301	P	Pn	12 08 13.8	+0.7
	SNR=52						
AAK	Ala-Archa	3.15	307	P	Pn	12 08 20.5	+4.3
	SNR=84						
FRU	Bishkek	3.20	311	ePN	Pn	12 08 18.0	+1.1
FRU				i		12 09 02.0	
FRU				pmax	pmax		
	comp=Z,880nm,1.6s						
FRU				smax			
	comp=E,1μm,1.6s						
CHMS	Chumysh	3.23	314	P	Pn	12 08 21.8	+4.4
	SNR=538						
AML	Almayashu	3.44	295	P	Pn	12 08 21.0	+0.9
	SNR=16						
USP	Ospenovka	3.55	316	P	Pn	12 08 27.7	+6.0
	SNR=442						
EKS2	Erkin-Say	3.62	303	P	Pn	12 08 30.1	+7.5
	SNR=18						
KK02	Karatay Array	5.98	295	⇑Pn	Pn	12 09 01.4	+6.4
	comp=E,33nm,0.6s,baz=111,slow=16						
KK02				⇓Sn	Sn	12 10 12.1	+10
	comp=E,86nm,0.8s,baz=104,slow=27						
MK31	Makanchi Array	6.80	26	⇓Pn	Pn	12 09 06.5	+0.2
	comp=E,6.7nm,0.7s,baz=215,slow=14,SNR=9.4						
MK31				⇓Lg		12 10 44.9	
	comp=E,63nm,0.7s,baz=214,slow=26,SNR=4.7						
MK31	Makanchi Array	6.80	26	PN	Pn	12 09 06.3	+0.1
MK31				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MKAR	Makanchi Array	6.80	26	Pn	Pn	12 09 06.5	+0.2
	comp=Z,1.9nm,0.3s,baz=203,slow=14,SNR=36						
MKAR				Pg	Pn	12 09 28.7	+22
	comp=Z,2.1nm,0.3s,baz=218,slow=16,SNR=9.7						
MKAR				Lg		12 10 59.0	
	comp=Z,3.6nm,0.3s,baz=218,slow=33,SNR=4.9						
MKAR				LR	LR	12 12 19.0	
	comp=Z,112nm,21.2s,baz=103,slow=42						
MKAR	Makanchi Array	6.80	26	Pn	Pn	12 09 06.5	+0.2
MKAR				Pg	Pn	12 09 28.7	+22
MKAR				Lg		12 10 59.0	
MKAR				LR	LR	12 12 19.0	
WMQ	Urumqi	7.87	64	P	Pn	12 09 22.4	+1.5
WMQ				S	Sn	12 10 53.5	+4.9
WMQ				Smax			
	comp=N,73nm,1.0s						
WMQ				Smax			
	comp=E,83nm,1.0s						
DLH	Dalhousie	8.37	191	eP	Pn	12 09 28.0	+0.2
DLH				ex	x	12 11 00.0	
THN	Thein Dam	8.51	193	eP	Pn	12 09 29.6	-0.2
THN				ex	x	12 11 08.7	
KLP	Kalpa	9.23	178	eP	Pn	12 09 40.4	+0.8
KLP				eS	Sn	12 11 13.9	-8.2
KLP				AML	AML	12 11 35.8	
	comp=N,46nm,0.6s						
KLP				AML	AML	12 11 36.6	
	comp=E,54nm,0.8s						
SMLA	Simla	9.65	184	eP	Pn	12 09 44.8	-0.5
SMLA				eS	Sn	12 11 26.6	-5.8
SMLA				ex	x	12 11 33.2	
	comp=E,251nm,0.4s						
SMLA				ex	x	12 11 34.3	
	comp=N,229nm,0.4s						
KURBB	Kurchatov Arra	9.86	2	⇑Pn	Pn	12 09 47.2	-0.9
	comp=N,0.8nm,0.6s						
KURBB				⇓Lg		12 12 30.4	
	comp=N,23nm,0.9s						
KURK	Kurchatov	9.95	3	⇓Pn	Pn	12 09 47.9	-1.5
	comp=N,3.5nm,0.5s						
KURK				⇑Lg		12 12 33.7	
	comp=N,119nm,1.0s						
KURK	Kurchatov	9.95	3	Pn	Pn	12 09 47.4	-2.0
	comp=N,0.3nm,0.3s,baz=198,slow=11,SNR=8.2						
KURK				Lg		12 12 32.7	
	comp=N,0.5nm,0.3s,baz=314,slow=20,SNR=5.4						
KURK				LR	LR	12 13 48.9	
	comp=N,150nm,19.6s,baz=190,slow=38						
KURK	Kurchatov	9.95	3	Pn	Pn	12 09 47.4	-2.0
KURK				Lg		12 12 32.7	
KURK				LR	LR	12 13 48.9	
JOSI	Joshimath	10.29	172	eP	Pn	12 09 52.3	-1.8
JOSI				eS	Sn	12 11 38.8	-9.2
JOSI				AML	AML	12 12 11.8	
	comp=E,34nm,0.3s						
JOSI				AML	AML	12 12 14.3	
	comp=N,36nm,0.0s						
SONA	Sohna	12.52	183	eP	Pn	12 10 24.3	-0.3
SONA				eS	Sn	12 12 32.7	-10
SONA				AML	AML	12 12 51.8	
	comp=E,16nm,0.3s						
SONA				AML	AML	12 12 53.3	
	comp=N,7.9nm,0.3s						
KUDL	Kundal	12.66	186	eP	Pn	12 10 25.2	-1.3
KUDL				eS	Sn	12 12 37.0	-8.9
KUDL				AML	AML	12 12 44.3	
	comp=N,8.0nm,0.5s						
VOSK	Vostochnaya	12.85	341	⇑P	Pn	12 10 28.2	-0.8
	comp=N,4.3nm,1.0s						
VOSK	Vostochnaya	12.85	341	P	Pn	12 10 25.3	-3.6
VOSK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BVA0	Borovoye Array	13.27	340	⇓P	Pn	12 10 35.7	+0.9
	comp=Z,0.6nm,0.6s,baz=141,slow=16,SNR=14						
BVA0	Borovoye Array	13.27	340	iP	Pn	12 10 31.0	-3.7
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	Borovoye Array	13.27	340	Pn	Pn	12 10 32.1	-2.6
	comp=Z,0.6nm,0.3s,baz=154,slow=12,SNR=13						
BVAR				Lg		12 14 19.0	
	comp=Z,0.6nm,0.3s,baz=150,slow=27,SNR=5.4						
BVAR				LR	LR	12 15 42.5	
	comp=Z,125nm,18.4s,baz=66,slow=37						
BRVK	Borovoye	13.33	340	⇓P	Pn	12 10 34.3	-1.2
	comp=Z,5.8nm,0.6s						
ZAL	Zalesovo	13.96	17	P	Pn	12 10 42.5	-1.6
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL				MLR	MLR		
	comp=Z,59nm,21.1s						
ZALV	Zalesovo Beam	13.97	17	Pn	Pn	12 10 42.5	-1.8
	comp=Z,0.5nm,0.3s,baz=206,slow=14,SNR=13						
ZALV				Lg		12 14 50.2	
	comp=Z,0.2nm,0.3s,baz=196,slow=26,SNR=3.1						
ZALV				LR	LR	12 16 23.9	
	comp=Z,59nm,21.1s,baz=195,slow=38						
ZALV	Zalesovo Beam	13.97	17	Pn	Pn	12 10 42.5	-1.8
ZALV				Lg		12 14 50.2	
ZALV				LR	LR	12 16 23.9	
NVS	Novosibirsk	14.51	12	eP	Pn	12 10 56.4	+4.8
AB31	Akbulak array	15.24	310	⇓P	Pn	12 11 06.2	+5.0
	comp=Z,1.1nm,0.6s,baz=118,slow=14,SNR=11						
AB31	Akbulak array	15.24	310	eP	Pn	12 11 04.7	+3.6
GTA	Gaotai	16.82	88	eP	Pn	12 11 20.5	-0.9
GTA				AP	pP	12 11 26.2	-7.2
GTA				XP	sP	12 11 29.2	-10
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s						
GTA				AMB	AMB		
	comp=Z,47nm,5.1s						
GTA				LR	LR		
	comp=N,152nm,18.3s						
GTA				LR	LR		
	comp=E,157nm,16.8s						
GTA				LR	LR		
	comp=Z,156nm,16.2s						
AKTK	Aktyubinsk	16.89	312	Pn	Pn	12 11 18.9	-3.2
AKTK				Lg		12 16 22.1	
AKTK				LR	LR	12 18 32.0	
AKTO	Aktyubinsk	16.89	312	⇓P	Pn	12 11 25.4	+3.3
	comp=Z,1.6nm,1.1s						
AKTO	Aktyubinsk	16.89	312	Pn	Pn	12 11 18.9	-3.2
	comp=Z,0.0nm,0.3s,baz=94,slow=13,SNR=2.6						
AKTO				Lg		12 16 22.1	
	comp=Z,0.2nm,0.3s,baz=188,slow=14,SNR=3.0						
AKTO				LR	LR	12 18 32.0	
	comp=Z,37nm,21.5s,baz=204,slow=39						
AKTO	Aktyubinsk	16.89	312	P	Pn	12 11 20.6	-1.5
AKTO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ARU	Arti	20.11	328c	iP	P	12 11 58.6	-0.3
ARU				e		12 12 13.5	
ARU				eS	S	12 15 45.9	+3.7
ARU				eSS		12 16 00.1	
ARU				pmax	pmax		
	comp=Z,8.0nm,2.5s						
ZAK	Zakamensk	20.11	53	eP	P	12 11 59.9	+0.9
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH	Lanzhou	20.82	95	⇑P	P	12 12 09.0	+2.1
LZH				AP		12 12 16.8	
LZH				XP	sP	12 12 18.0	-4.9
LZH				AMB	AMB		
	comp=Z,21nm,1.2s						
LZH				AMB	AMB		
	comp=Z,85nm,4.3s						
SONM	Songino Array	21.50	61	P	P	12 12 15.0	+1.0
	comp=Z,5.2nm,0.8s,mb3.9,baz=262,slow=11,SNR=24						
SONM				LR	LR	12 21 30.6	
	comp=Z,129nm,18.9s,MS3.4,baz=54,slow=39						
SONM	Songino Array	21.50	61	P	P	12 12 15.0	+1.0
SONM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,129nm,18.9s						
ULN	Ulaanbaatar	21.94	61	⇑eP	P	12 12 23.8	+5.1
ULN	Ulaanbaatar	21.94	61	eP	P	12 12 21.6	+2.9
	comp=Z,4.9nm,0.8s,mb4.0						
XAN	Xi'an	25.45	95	P	P	12 12 54.5	+1.6
XAN				AP	pP	12 13 04.2	-0.3
XAN				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.1						
XAN				AMB	AMB		
	comp=Z,41nm,4.9s						
XAN				LR	LR		
	comp=E,93nm,16.7s						
XAN				LR	LR		
	comp=Z,122nm,16.7s,MS3.5						
KSRS	Korea Array	38.53	78	LR	LR	12 33 41.7	
	comp=Z,39nm,18.0s,MS3.3,baz=220,slow=41						
ARCES	ARCESS Array B	39.47	334	P	P	12 14 53.9	-0.7
	comp=Z,1.3nm,0.6s,mb3.8,baz=104,slow=8.9,SNR=7.6						
ARCES				LR	LR	12 31 49.6	
	comp=Z,44nm,19.4s,MS3.3,baz=122,slow=37						
ARCES	ARCESS Array B	39.47	334	P	P	12 14 53.9	-0.8
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES				MLR	MLR		
	comp=Z,44nm,19.4s						
ARCES	ARCESS Array B	39.47	334	P	P	12 14 53.9	-0.7
ARCES				LR	LR	12 31 49.6	
NB2	NORSAR Subarra	44.39	320	P	P	12 15 34.4	-0.5
	comp=Z,2.0nm,0.8s,mb3.9,baz=86,slow=7.4						
NOA	NORSAR Array B	44.39	320	P	P	12 15 34.0	-0.9
	comp=Z,1.1nm,0.7s,mb3.7,baz=87,slow=7.9,SNR=6.2						
NOA	NORSAR Array B	44.39	320	P	P	12 15 34.0	-0.9
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAJ	Asahikawa	46.76	63	LR	LR	12 36 00.2	
	comp=Z,41nm,20.8s,MS3.4,baz=186,slow=37						
IMA2	Indian Mountai	66.33	20	eP	P	12 18 12.8	+0.2
TORD	Torodi Ar. Bea	71.13	271	P	P	12 18 42.2	-1.1
	comp=Z,1.0nm,0.5s,mb4.0,baz=49,slow=6.2,SNR=12						
YKA	Yellowknife Ar	76.59	6	P	P	12 19 14.0	-0.5
	comp=Z,1.5nm,0.7s,mb4.0,baz=346,slow=5.9,SNR=11						
YKA	Yellowknife Ar	76.59	6	P	P	12 19 14.0	-0.5
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA	Yellowknife Ar	76.59	6	P	P	12 19 14.0	-0.5
WRA	Warramunga Arr	79.96	127	P	P	12 19 33.3	-0.3
	comp=Z,0.4nm,0.8s,mb3.4,baz=321,slow=4.7,SNR=3.6						
ASAR	Alice Springs	82.55	130	P	P	12 19 47.6	+0.3
	comp=Z,0.3nm,0.7s,mb3.4,baz=330,slow=5.4,SNR=3.5						

*ISCJB **01** 12:17:10.8±4.1, 139N±0.1×93.11E±008, h19km±32km, mb3.7/5, Error ellipse: s-maj=19.9km s-min=12.7km az=161.3*
*IDC **01** 12:17:10.3±1.4, 1389N×93.13E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/21, mbtmp3.6/6, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/31, Error ellipse: s-maj=42.8km s-min=20.7km az=72.0*

NEIC ***01*** *12:17:15.3±1.0, 1390N×93.16E, h35km, Error ellipse: s-maj=24.6km s-min=14.9km az=70.0*
ISC 01 12:17:14.3±4.3**, 139N**±01×**9309E**±008**, h28**km±33km**, n10, σ0s37**/12**, mb3.6**/5**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BDT	Bhumibol Dam	6.61	59	P	Pn	12 18 50.0	+0.3
CMAR	Chiang Mai Arr	7.24	50	Pn	Pn	12 18 57.8	-0.5
	0.4nm,0.3s,baz=240,slow=15,SNR=14						
CMAR				Sn	Sn	12 20 19.8	+0.2
	1.1nm,0.3s,baz=90,slow=21,SNR=4.6						
CMAR	Chiang Mai Arr	7.24	50	Pn	Pn	12 18 57.8	-0.5
CMAR				Sn	Sn	12 20 19.8	+0.2
VIS	Vishakhapatnam	10.15	293	eP	Pn	12 19 38.4	+0.1
VIS				eS	Sn	12 21 24.1	-7.1
VIS				AML	AML	12 21 28.1	
	comp=N,43nm,0.2s						
VIS				AML	AML	12 21 28.8	
	comp=E,39nm,0.1s						
MKAR	Makanchi Array	34.05	347	P	P	12 23 56.3	+0.3
	comp=E,0.8nm,0.5s,mb3.9,baz=167,slow=7.5,SNR=6.0						
JOW	Kunigami	35.29	63	LR	LR	12 39 30.4	
	comp=E,73nm,18.4s,baz=313,slow=38						
SONM	Songino Array	35.63	15	P	P	12 24 09.6	0.0
	comp=E,0.2nm,0.4s,mb3.4,baz=205,slow=6.4,SNR=2.2						
ZALV	Zalesovo Beam	40.52	352	P	P	12 24 50.3	-0.4
	comp=E,0.8nm,0.5s,mb3.6,baz=175,slow=8.9,SNR=3.7						
WRA	Warramunga Arr	52.68	129	P	P	12 26 26.0	-0.5
	comp=E,0.3nm,0.5s,mb3.5,baz=304,slow=10,SNR=5.9						
WRA				PcP	PcP	12 27 37.3	+1.1
	comp=E,0.4nm,0.6s,baz=319,slow=3.4,SNR=6.5						
ASAR	Alice Springs	54.62	133	P	P	12 26 41.2	+0.6
	comp=E,0.5nm,0.5s,mb3.8,baz=312,slow=6.8,SNR=13						

NEIC ***01*** *12:58:16.8, 1647N×9898W, h16km, MD3.8(MEX), After MEX.*
MEX 01 12:58:16.8±0.4**, 1648N**×**9898W, h18**km±122km**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.82	96	i P	Pb	12 58 29.9	-2.6
PNIG				i S	Sb	12 58 40.1	-3.1
PNIG	Pinotepa	0.82	96	i P	Pb	12 58 29.9	-2.6
PNIG				eS	Sb	12 58 39.7	-3.5
ACX	Acapulco	0.98	294	i P	Pb	12 58 31.8	-3.4
ACX				i S	Sb	12 58 44.3	-3.5
CAIG	El Cayaco	1.36	295	i P	Pn	12 58 37.4	-3.5
CAIG				eS	Sn	12 58 53.6	-4.8
MEIG	Mezcala	1.57	337	i P	Pn	12 58 41.1	-2.6
MEIG				eS	Sn	12 58 59.4	-4.1
UTMO	Huajuapan	1.75	40	eP	Pn	12 58 43.3	-3.0
UTMO				i S	Sn	12 59 03.5	-4.6
PLIG	Platanillo	1.97	345	i P	Pn	12 58 46.9	-2.3
PLIG				eS	Sn	12 59 09.2	-4.3
ZIIG	Zihuatanejo	2.63	296	i P	Pn	12 58 56.8	-1.6
ZIIG				i S	Sn	12 59 26.0	-3.8
ZIIG	Zihuatanejo	2.63	296	i P	Pn	12 58 52.2	-6.1
ZIIG				i S	Sn	12 59 24.5	-5.3

ISCJB ***01*** *13:16:25.2±2.1, 262N±009×1268E±02, h55km±21km, mb4.1/11, MS3.3/3, Error ellipse: s-maj=36.0km s-min=12.7km az=166.9*
NEIC ***01*** *13:16:25.1±0.6, 265N×12693E, h35km, mb3.9/1, Error ellipse: s-maj=29.6km s-min=9.9km az=75.0*
IDC ***01*** *13:16:27.7±7.4, 260N×12685E, h61km±73km, mb3.8/12, mb1 3.9/12, mb1mx3.8/17, mbtmp3.8/12, MS3.2/4, Ms1 3.2/4, ms1mx2.9/19, Error ellipse: s-maj=35.5km s-min=15.1km az=74.0*
ISC 01 13:16:26.4±2.1**, 261N**±009×**1269E**±02**, h49**km±22km**, n18, σ0s73**/15**, mb4.1**/11**, MS3.3**/3**, 1C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNE	Ternate	1.87	166	⇓eP	Pn	13 16 55.5	-0.6
DAV	Davao City (W)	4.62	343	LR	LR	13 19 13.4	
	comp=Z,92nm,21.6s,baz=93,slow=36						
FITZ	Fitzroy Crossi	20.62	183	eP	P	13 21 04.0	+2.2
	3.1nm,0.5s						
FITZ	Fitzroy Crossi	20.62	183	P	P	13 21 03.0	+1.2
	1.7nm,0.5s,baz=0.4,slow=11,SNR=15						
GUMO	Guam	20.84	57	LR	LR	13 27 41.9	
	comp=Z,97nm,20.7s,MS3.2,baz=263,slow=32						
WRA	Warramunga Arr	23.57	162	P	P	13 21 32.3	-0.5
	6.4nm,0.6s,mb4.2,baz=337,slow=11,SNR=74						
WB2	Warramunga Arr	23.58	162	⇑iP	P	13 21 32.3	-0.5
JOW	Kunigami	24.12	3	P	P	13 21 38.5	+0.8
	9.9nm,0.9s,mb4.2,baz=173,slow=9.7,SNR=5.3						
ASAR	Alice Springs	26.99	166	P	P	13 22 04.0	+0.2
	0.9nm,0.6s,mb3.5,baz=351,slow=7.6,SNR=15						
CMAR	Chiang Mai Arr	31.60	302	P	P	13 22 45.1	+0.3
	0.7nm,0.6s,mb3.6,baz=120,slow=7.0,SNR=5.5						
KSRS	Korea Array	34.69	1	P	P	13 23 11.4	0.0
	1.1nm,0.6s,mb4.0,baz=176,slow=9.9,SNR=5.2						
KSRS				LR	LR	13 37 03.1	
	comp=Z,35nm,21.1s,MS3.1,baz=185,slow=36						
MJAR	Matsushiro Arr	35.34	16	LR	LR	13 35 43.8	
	comp=Z,90nm,19.5s,MS3.5,baz=190,slow=33						
STKA	Stephens Creek	37.03	159	P	P	13 23 31.7	+0.1
	4.5nm,0.6s,mb4.5,baz=338,slow=7.4,SNR=14						
SONM	Songino Array	48.41	342	P	P	13 25 03.9	+0.4
	0.8nm,0.6s,mb3.9,baz=158,slow=10,SNR=5.4						
SONM				PcP	PcP	13 26 30.5	+1.2
	0.7nm,0.8s,baz=181,slow=4.8,SNR=3.4						
PETK	Petropavlovsk-	56.39	22	P	P	13 26 03.3	+0.6
	1.6nm,0.8s,mb4.1,baz=214,slow=9.6,SNR=2.5						
MKAR	Makanchi Array	58.57	326	P	P	13 26 17.9	-0.2
	1.4nm,0.6s,mb4.2,baz=116,slow=9.2,SNR=9.9						
ZALV	Zalesovo Beam	61.66	333	P	P	13 26 37.9	-1.2
	0.4nm,0.3s,mb4.0,baz=107,slow=7.7,SNR=2.4						
ARCES	ARCESS Array B	91.55	340	P	P	13 29 26.5	-1.0
	2.0nm,0.9s,mb4.4,baz=81,slow=6.5,SNR=4.8						

CSEM ***01*** *13:37:30.3, 3399N×2422E, h10km, MD3.4/4, After ATH*
ATH 01 13:37:30.3, 3399N×**2422E, h10**km**, MD3.5**/4**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.85	353	ePB	Pb	13 37 46.5	-0.7
VAM	Vamos	1.41	359	ePB	Pb	13 37 57.2	+0.4
NPS	Neapolis	1.71	42	ePN	Pn	13 38 01.8	+1.6
KARP	Karpathos	2.88	56	ePN	Pn	13 38 18.6	+2.4

ISCJB ***01*** *14:12:21.5±3.9, 1475S±009×769W±02, h10km±25km, mb4.1/6, MS3.2/2, Error ellipse: s-maj=29.5km s-min=10.1km az=157.0*
IDC ***01*** *14:12:22.9±1.3, 1460S×7647W, h0km, mb3.7/3, mb1 3.9/7, mb1mx3.8/18, mbtmp3.8/7, ML4.0/4, MS3.1/3, Ms1 3.1/3, ms1mx2.9/25, Error ellipse: s-maj=47.1km s-min=17.2km az=58.0*
NEIC ***01*** *14:12:28.9±0.9, 1446S×7635W, h35km, mb4.6/3, Error ellipse: s-maj=26.1km s-min=11.7km az=53.0*
ISC 01 14:12:26.9±3.7**, 1471S**±009×**768W**±02**, h32**km±26km**, n18, σ1s19**/19**, mb4.0**/6**, MS3.2**/2**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	Nana	2.70	359	Pn	Pn	14 13 07.6	-0.5
	44nm,0.3s,baz=177,slow=14,SNR=11						
NNA				Sn	Sn	14 13 40.5	+0.7
	76nm,0.3s,baz=180,slow=15,SNR=7.1						
ARE	Arequipa	5.40	110	eP	Pn	14 13 47.0	+1.8
ARE				eS	Sn	14 15 00.0	+14
ATAH	Atahualpa	7.82	348	Pn	Pn	14 14 17.2	-1.3
	0.5nm,0.3s,baz=131,slow=9.3,SNR=2.5						
ATAH				Sn	Sn	14 15 59.6	+14
	1.3nm,0.3s,baz=4.5,slow=18,SNR=2.2						
LPAZ	La Paz	8.49	102	Pn	Pn	14 14 27.6	-0.2
	0.9nm,0.3s,baz=286,slow=8.5,SNR=27						
LPAZ				LR	LR	14 17 25.7	
	comp=Z,45nm,21.5s,baz=56,slow=37						
LVC	Limon Verde	10.84	138	Pn	Pn	14 14 59.6	-0.3
	0.8nm,0.3s,baz=326,slow=12,SNR=4.8						
LVC				Sn	Sn	14 16 58.3	-1.8
	0.6nm,0.3s,baz=86,slow=22,SNR=6.5						
LVC				Lg		14 18 02.5	
	0.5nm,0.3s,baz=161,slow=20,SNR=6.1						
LVC	Limon Verde	10.84	138	ePn	Pn	14 15 00.0	+0.1
	3.4nm,0.6s						
LVC				eSn	Sn	14 16 57.4	-2.7
SIV	San Ignacio	15.21	97	Pn	Pn	14 15 54.1	-5.4
	0.2nm,0.3s,baz=281,slow=14,SNR=6.3						
CFAA	Coronel Fontan	18.55	156	P	Pn	14 16 48.3	+6.9
	0.0nm,0.3s,baz=326,slow=11,SNR=2.3						
CPUP	Villa Florida	21.55	126	P	P	14 17 13.2	-0.5
	0.6nm,0.4s,mb3.4,baz=329,slow=9.6,SNR=2.9						
CPUP				LR	LR	14 27 08.0	
	comp=Z,61nm,19.7s,MS3.0,baz=48,slow=41						
TRQA	Tornquist	26.70	153	eP	P	14 18 05.8	+2.6
	14nm,1.6s,mb4.2						
BDFB	Brasilia	27.78	96	LR	LR	14 30 05.1	
	comp=Z,114nm,19.0s,MS3.5,baz=89,slow=39						
SDMD	Soldier's Deli	53.83	360	P	P	14 21 48.0	+1.3
	4.5nm,0.6s,mb4.6						
LBNH	Lisbon	58.83	4	P	P	14 22 21.1	-1.0
	4.7nm,0.8s,mb4.6						
YKA	Yellowknife Ar	82.44	343	P	P	14 24 45.6	0.0
	0.2nm,0.6s,mb3.2,baz=145,slow=4.7,SNR=3.4						
TORD	Torodi Ar. Bea	82.46	74	P	P	14 24 45.8	-0.9
	2.6nm,0.8s,mb4.2,baz=257,slow=4.5,SNR=9.1						
ASAR	Alice Springs	131.47	219	PKP	PKPdf	14 31 37.7	+0.8
	0.2nm,0.9s,baz=158,slow=1.0,SNR=2.8						
WRA	Warramunga Arr	133.93	222	PKP	PKPdf	14 31 44.5	+2.8
	0.2nm,0.6s,baz=142,slow=1.4,SNR=4.6						
SONM	Songino Array	146.86	356	PKPbc	PKPbc	14 32 07.2	+1.3
	0.5nm,0.5s,baz=344,slow=2.7,SNR=5.3						

ISCJB ***01*** *14:20:43.5±0.8, 1050N±006×8673W±006, h10km, mb3.9/7, Error ellipse: s-maj=10.9km s-min=4.8km az=44.9*
CASC ***01*** *14:20:45.6±2.1, 1055N×8661W, h10km±22km, MD4.1, ML2.9, mb3.9(NEIC)*
IDC ***01*** *14:20:46.8±2.1, 1142N×8596W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/18, mbtmp3.9/3, Error ellipse: s-maj=66.6km s-min=44.2km az=111.0*
NEIC ***01*** *14:20:51.2±1.1, 1123N×8576W, h35km, mb3.9/4, Error ellipse: s-maj=31.2km s-min=15.5km az=48.0*
ISC 01 14:20:44.6±1.6**, 1056N**±006×**8665W**±007**, h7**km±10km**, n45, σ0s98**/41**, mb3.9**/7**, 9C-4D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SSN	San Juan del S	1.08	47	⇓eP	Pg	14 21 05.5	+0.2
VCR	Vista de Mar	1.09	113	⇓eP	Pg	14 21 04.5	-1.0
MADN	Villa Maderas	1.39	52	⇑eP	Pn	14 21 10.2	-0.2
2RIO	Dos Rios de Up	1.40	91	eP	Pn	14 21 05.8	-4.6
CONN	Concepcion	1.42	45	⇑eP	Pn	14 21 10.7	-0.1
CUI		1.46	86	⇑eP	Pn	14 21 10.6	-0.7
CUI				eS	Sn	14 21 30.5	-0.1
CRUN	El Crucero	1.46	14	eP	Pn	14 21 11.4	+0.1
APON	Apoyo	1.47	23	eP	Pn	14 21 11.7	+0.3
XAVN	Gruta Xavier	1.61	11	eP	Pn	14 21 13.3	-0.1
COPN	Copaltepe	1.61	2	⇓eP	Pn	14 21 13.2	-0.2
TISN	Laguna Tiscapa	1.62	13	eP	Pn	14 21 14.2	+0.6
MGAN	Managua	1.63	14	eP	Pn	14 21 13.6	-0.1
MGAN				AML	AML	14 21 36.5	
	comp=N,59nm,0.8s						
CSAN		1.63	8	eP	Pn	14 21 13.4	-0.3
WILN	Americas 2	1.66	16	eP	Pn	14 21 13.7	-0.4
WILN				AML	AML	14 22 07.5	
	comp=N,212nm,0.8s						
JCR	Jicaral	1.67	115	⇓eP	Pn	14 21 12.9	-1.3
APYN	Apoyeque	1.69	10	eP	Pn	14 21 14.9	+0.3
CAO	Cobano	1.75	119	⇑eP	Pn	14 21 13.6	-1.7
HUEN		1.83	15	eP	Pn	14 21 16.4	0.0
LEON	Leon	1.86	353	⇑eP	Pn	14 21 16.9	+0.1
TEL3	Telica 3	2.01	355	eP	Pn	14 21 19.4	+0.4
TELN	Telica	2.04	355	eP	Pn	14 21 20.0	+0.6
TELN				eP		14 21 20.0	
CGA2	Cerro Gallo 2	2.22	104	eP	Pn	14 21 21.8	0.0
PRS1	Puriscal	2.37	104	⇑eP	Pn	14 21 25.7	+1.8
LCR2	La Lucha 2	2.73	107	⇑eP	Pn	14 21 30.4	+1.6
URSC	Urasca	2.92	104	eP	Pn	14 21 32.4	+1.0
BUS	Buena Vista	3.02	109	⇑eP	Pn	14 21 33.5	+0.7
TGUH	Tegucigalpa,Un	3.53	350	eP	Pn	14 21 41.0	+1.1
TGUH	Tegucigalpa,Un	3.53	350	ePn	Pn	14 21 40.8	+1.0
CTCR	Cotoan	4.18	113	eP	Pn	14 21 49.7	+0.9
BCIP	Isla Barro Col	6.86	101	ePn	Pn	14 22 19.9	-5.7
	comp=N,6.1nm,0.5s						
LAPE	La Pedrera	15.18	100	⇑eP	Px	14 21 06.6	
BRAL	Brewton	20.36	359	P	P	14 25 16.3	-5.3
	comp=N,327nm,1.0s						
PLAL	Pickwick Lake	24.35	357	eP	P	14 26 01.5	-1.6
	comp=N,3.3nm,0.8s,mb3.8						
MIAR	Mount Ida	24.70	346	eP	P	14 26 04.8	-1.6
	comp=N,2.4nm,0.7s,mb3.8						
CPCT	Cooper Cave	24.86	4	eP	P	14 26 05.9	-1.8
WMOK	Wichita Mounta	26.50	337	eP	P	14 26 24.0	+1.4
	comp=N,5.3nm,0.9s,mb4.1						
REDW	Red Top Meadow	38.86	332	eP	P	14 28 10.0	-0.5
	comp=N,1.4nm,0.7s,mb3.8						
NVAR	Mina Array Bea	39.64	320	P	P	14 28 18.9	+1.9
	comp=N,0.6nm,0.8s,mb3.4,baz=138,slow=7.4,SNR=5.1						
NVAR				PcP	PcP	14 30 28.1	+4.0
	comp=N,0.7nm,0.7s,baz=147,slow=4.0,SNR=5.8						
NVAR	Mina Array Bea	39.64	320	P	P	14 28 18.9	+1.9
NVAR				PcP	PcP	14 30 28.1	+4.0
ULM	Lac du Bonnet	40.30	351	P	P	14 28 19.1	-3.2
	comp=N,1.7nm,0.5s,mb4.0,baz=191,slow=10,SNR=3.8						
SCHQ	Schefferville	46.87	16	P	P	14 29 10.9	-4.3
	comp=N,1.8nm,0.6s,mb4.2,baz=230,slow=7.9,SNR=4.0						
ASAR	Alice Springs	139.26	246	PKP	PKPdf	14 40 18.4	+5.1
	comp=N,0.3nm,0.7s,baz=116,slow=1.6,SNR=4.7						
WRA	Warramunga Arr	139.46	252	PKP	PKPdf	14 40 19.0	+5.3
	comp=N,0.6nm,0.7s,baz=88,slow=1.8,SNR=5.3						
BATI	Baumata	150.18	268	PKPab	PKPab	14 40 48.8	+5.4
	comp=N,32nm,0.6s,baz=63,slow=2.3,SNR=4.0						
CMAR	Chiang Mai Arr	150.65	349	PKPbc	PKPbc	14 40 38.6	+0.3
	comp=N,0.5nm,0.9s,baz=3.6,slow=3.0,SNR=4.9						

DJA ***01*** *14:27:29, 1130N×12827E, h0km, mb4.8/5*
MOS ***01*** *14:28:00.1±1.0, 690N×12689E, h33km, mb5.0/10, Error ellipse: s-maj=18.6km s-min=8.3km az=101.0*
ISCJB ***01*** *14:28:02.6±0.9, 691N±004×127.18E±006, h58km±8km, mb4.5/40, MS3.9/11, Error ellipse: s-maj=9.2km s-min=6.2km az=6.4*
NEIC ***01*** *14:28:04.8±1.3, 685N×12694E, h63km±12km, mb4.6/12, Error ellipse: s-maj=12.7km s-min=5.9km az=79.0*
IDC ***01*** *14:28:05.8±2.0, 688N×12696E, h70km±17km, mb4.1/24, mb1 4.2/25, mb1mx4.1/28, mbtmp4.1/25, MS3.9/11, Ms1 3.9/11, ms1mx3.7/27, Error ellipse: s-maj=20.6km s-min=10.0km az=77.0*
BJI ***01*** *14:28:05.4, 677N×12692E, h84km, mB5.3, mb4.4, Ms4.5, Msz4.2*
ISC 01 14:28:04.5±0.9**, 690N**±004×**12713E**±006**, h59**km±7km**, n94, σ1s11**/95**, mb4.5**/39**, MS3.9**/11**, 15C-10D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BIPH	Bislig	1.48	329	⇑iP	Pn	14 28 26.7	-2.3
BIPH				i S	Sn	14 28 39.9	-7.4
DAV	Davao City (W)	1.55	276	P	Pn	14 28 29.1	-0.7
	492nm,0.3s,baz=98,slow=0.9,SNR=65						
DAV				S	Sn	14 28 51.2	+2.4
	326nm,0.3s,baz=274,slow=21,SNR=16						
DAV	Davao City (W)	1.55	276	ePn	Pn	14 28 28.3	-1.5
DAV				eSn	Sn	14 28 50.6	+1.7
DMPH	Davao City--Mi	1.62	276	⇑iP	Pn	14 28 30.6	-0.1
DMPH				i S	Sn	14 28 50.8	+0.2
KCP	Kidapawan	2.03	273	⇑iP	Pn	14 28 35.0	-1.4
KCP				i S	Sn	14 28 59.3	-1.2
GSPH	General Santos	2.31	250	⇑eP	Pn	14 28 39.4	-0.8
GSPH				eS	Sn	14 29 06.4	-1.1
CTBH	Cotabato--PC H	2.88	276	⇓iP	Pn	14 28 47.6	-0.3
CTBH				i S	Sn	14 29 24.8	+3.4
SCPH	Surigao	3.29	331	⇑eP	Pn	14 28 52.7	-0.8
TBP	Tagbilaran	4.26	311	eP	Pn	14 29 06.2	-0.6
IPIL	Ipil	4.61	281	⇑eP	Pn	14 29 12.4	+0.8
TNE	Ternate	6.08	178	⇓eP	Pn	14 29 27.5	-4.4
RCP	Roxas	6.33	317	⇑eP	Pn	14 29 36.5	+1.2
PVCP	Virac	7.27	336	eP	Pn	14 29 48.5	+0.4
PVCP				eS	Sn	14 31 36.5	+27
MYLDM	Lahad Datu	8.75	259	⇑P	Pn	14 30 13.2	+4.8
TSM	Tawau	9.57	255	⇑P	Pn	14 30 22.0	+2.4
SDKM	Sandakan	9.95	263	⇓P	Pn	14 30 26.4	+1.5
KKM	Kota Kinabalu	10.88	266	⇓P	Pn	14 30 43.9	+6.3
BTM	Bintulu	14.46	256	⇑P	Pn	14 31 28.2	+2.0
SBUM	Sibu	15.50	254	⇓P	Pn	14 31 42.5	+2.9
KSM	Kuching	17.61	253	⇑P	Pn	14 32 07.7	+1.6
GUMO	Guam	18.67	68	LR	LR	14 38 17.6	
	comp=Z,279nm,20.2s,baz=238,slow=32						
JOW	Kunigami	19.85	3	P	Pn	14 32 32.9	+0.1
	1.9nm,0.3s,baz=222,slow=8.5,SNR=17						
KAKA	Kakadu	20.19	165	eP	P	14 32 33.1	-1.4
	23nm,0.9s						
QIZ	Qiongzhong	20.68	307	P	P	14 32 39.2	-0.7
QIZ				LR	LR		
	comp=N,378nm,17.5s,MS4.0						
QIZ				LR	LR		
	comp=E,494nm,16.4s,MS4.0						
QIZ				LR	LR		
	comp=Z,823nm,18.2s,MS4.1						
QIZ	Qiongzhong	20.68	307	ePn	P	14 32 39.4	-0.4
	comp=Z,35nm,1.2s						
KTGM	Kuala Trenggan	23.91	268	⇑P	P	14 33 13.4	+0.2
FITZ	Fitzroy Crossi	24.89	183	eP	P	14 33 22.4	+0.4
	comp=Z,7.0nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	24.89	183	P	P	14 33 22.8	+0.9
	comp=Z,2.8nm,0.4s,mb4.1,baz=21,slow=15,SNR=16						
WRAB	Tennant Creek	27.60	165	i P	P	14 33 47.5	+1.1
WRA	Warramunga Arr	27.60	165	P	P	14 33 45.9	-0.5
	comp=Z,3.3nm,0.5s,mb4.2,baz=339,slow=11,SNR=40						
WRA				PcP	PcP	14 37 03.4	+0.4
	comp=Z,0.6nm,0.7s,baz=328,slow=2.8,SNR=3.0						
WRA	Warramunga Arr	27.60	165	P	P	14 33 45.9	-0.5
WRA				PcP	PcP	14 37 03.4	+0.4
WB2	Warramunga Arr	27.61	165	eP	P	14 33 45.4	-1.1
CMAR	Chiang Mai Arr	29.75	295	P	P	14 34 05.0	-0.7
	comp=Z,0.9nm,0.7s,mb3.6,baz=127,slow=8.0,SNR=7.9						
CMAR				PcP	PcP	14 37 09.6	+1.2
	comp=Z,0.6nm,0.7s,baz=112,slow=3.4,SNR=3.2						
CMAR				LR	LR	14 46 17.2	
	comp=Z,462nm,18.7s,MS4.1,baz=163,slow=37						
CMAR	Chiang Mai Arr	29.75	295	P	P	14 34 05.0	-0.6
CMAR						14 37 09.6	
KSRS	Korea Array	30.42	1	P	P	14 34 11.7	+0.4
	comp=Z,0.8nm,0.7s,mb3.6,baz=187,slow=11,SNR=3.7						
KSRS				LR	LR	14 45 09.8	
	comp=Z,96nm,21.5s,MS3.4,baz=180,slow=34						
ASAR	Alice Springs	31.09	168	P	P	14 34 16.8	-0.6
	comp=Z,1.0nm,0.3s,mb4.1,baz=338,slow=7.2,SNR=63						
ASAR				PcP	PcP	14 37 12.3	+0.5
	comp=Z,0.7nm,0.5s,baz=345,slow=2.3,SNR=4.1						
MJAR	Matsushiro Arr	31.19	17	P	P	14 34 18.5	+0.4
	comp=Z,4.3nm,0.7s,mb4.4,baz=196,slow=9.2,SNR=16						
MAJO	Matsushiro	31.19	17	eP	P	14 34 17.5	-0.6
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
MAJO	Matsushiro	31.19	17	eP	P	14 34 17.5	-0.6
	comp=Z,9.7nm,0.8s,mb4.7						
MAT	Matsushiro	31.19	17	P	P	14 34 19.1	+1.0
CTA	Charters Tower	32.76	145	LR	LR	14 48 26.7	
	comp=Z,294nm,20.3s,MS4.0,baz=266,slow=37						
FORT	Forrest	37.48	179	eP	P	14 35 12.1	-0.4
	comp=Z,13nm,0.4s,mb5.1						
KLBR	Kellerberrin	39.31	193	eP	P	14 35 27.3	-0.6
	comp=Z,22nm,1.0s,mb4.8						
MUN	Mundaring	40.04	194	eP	P	14 35 33.7	-0.3
GTA	Gaotai	40.63	327	P	P	14 35 38.8	0.0
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.1						
NWAO	Narrogin (SRO)	40.71	193	P	P	14 35 39.9	+0.4
	comp=Z,6.3nm,0.7s,mb4.3,baz=19,slow=8.2,SNR=4.4						
STKA	Stephens Creek	40.96	161	eP	P	14 35 41.1	-0.5
	comp=Z,5.6nm,0.9s,mb4.2						
STKA	Stephens Creek	40.96	161	P	P	14 35 41.6	+0.1
	comp=Z,2.3nm,0.4s,mb4.2,baz=324,slow=7.8,SNR=11						
STKA				LR	LR	14 54 12.1	
	comp=Z,183nm,21.9s,MS3.9,baz=210,slow=38						
YSS	Yuzh-Sakhalins	42.10	16	eP	P	14 35 52.0	+1.3
YSS				e	pP	14 36 04.0	-1.8
YSS	Yuzh-Sakhalins	42.10	16	eP	P	14 35 52.1	+1.4
	comp=Z,10nm,0.6s,mb4.6						
ULN	Ulaanbaatar	44.26	341	⇑eP	P	14 36 07.7	-0.4
ULN	Ulaanbaatar	44.26	341	eP	P	14 36 07.3	-0.8
	comp=Z,9.0nm,1.3s,mb4.3						
SONM	Songino Array	44.45	340	P	P	14 36 09.4	-0.3
	comp=Z,0.6nm,0.6s,mb3.5,baz=159,slow=8.9,SNR=5.1						
SONM				LR	LR	14 57 28.3	
	comp=Z,213nm,18.8s,MS4.1,baz=170,slow=40						
BOD	Bodaibo	51.81	351	eP	P	14 37 04.9	-1.3
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
PETK	Petropavlovsk-	52.37	23	P	P	14 37 12.8	+2.4
	comp=Z,6.1nm,0.7s,mb4.7,baz=201,slow=2.9,SNR=22						
PETK				LR	LR	15 01 39.0	
	comp=Z,67nm,18.6s,MS3.7,baz=78,slow=38						
YAK	Yakutsk	55.05	1	⇓eP	P	14 37 31.3	+1.4
YAK				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.0						
MKAR	Makanchi Array	55.22	324	P	P	14 37 30.9	-0.5
	comp=Z,3.5nm,0.7s,mb4.5,baz=120,slow=8.1,SNR=50						
MKAR				PcP	PcP	14 38 31.3	-0.5
	comp=Z,1.6nm,0.7s,baz=90,slow=4.9,SNR=4.1						
MKAR	Makanchi Array	55.22	324	P	P	14 37 30.9	-0.5
MKAR				PcP	PcP	14 38 31.3	-0.5
ZALV	Zalesovo Beam	57.97	332	P	P	14 37 49.1	-1.8
	comp=Z,1.1nm,0.5s,mb4.1,baz=114,slow=6.7,SNR=5.4						
ZALV				PcP	PcP	14 38 41.4	-1.0
	comp=Z,1.5nm,0.7s,baz=116,slow=3.4,SNR=3.7						
ZALV				LR	LR	15 06 29.5	
	comp=Z,51nm,19.0s,MS3.7,baz=256,slow=40						
ZALV	Zalesovo Beam	57.97	332	P	P	14 37 49.1	-1.8
ZALV				PcP	PcP	14 38 41.4	-1.0
ZALV				LR	LR	15 06 29.5	
ZAL	Zalesovo	57.98	332	P	P	14 37 49.1	-1.8
ZAL						14 38 41.4	
SEY	Seymchan	58.87	13	⇓eP	P	14 37 59.9	+2.9
NVS	Novosibirsk	59.25	332	eP	P	14 37 58.7	-1.0
KURK	Kurchatov	59.31	326	P	P	14 37 59.6	-0.7
	comp=Z,2.9nm,0.6s,mb4.5,baz=124,slow=6.2,SNR=27						
KURK	Kurchatov	59.31	326	⇓eP	P	14 37 59.7	-0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
TIXI	Tiksi	64.69	1	i P	P	14 38 36.7	+0.8
TIXI				pmax	pmax		
	comp=Z,14nm,2.5s,mb4.5						
BVAR	Borovoye Array	64.91	326	P	P	14 38 37.1	-0.6
	comp=Z,1.7nm,0.7s,mb4.2,baz=106,slow=8.2,SNR=9.4						
BVAR				LR	LR	15 11 14.0	
	comp=Z,82nm,18.4s,MS4.0,baz=299,slow=40						
AKTK	Aktyubinsk	71.45	321	P	P	14 39 18.3	-0.4
AKTO	Aktyubinsk	71.45	321	P	P	14 39 18.3	-0.4
	comp=Z,5.4nm,0.7s,mb4.6,baz=101,slow=7.3,SNR=33						
SVE	Sverdlovsk	71.49	328	⇑eP	P	14 39 14.2	-4.6
SVE				eS	S	14 48 23.5	-9.5
SVE				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
ARU	Arti	72.49	327	c iP	P	14 39 23.7	-1.1
ARU				ePPP		14 43 49.9	
ARU				eS	S	14 48 45.9	+1.4
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
CASY	Casey	73.99	187	eP	P	14 39 33.6	+0.2
	comp=Z,3.8nm,0.7s,mb4.4						
KDAK	Kodiak Island	79.02	33	eP	P	14 40 03.9	+1.8
KDAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
KDAK	Kodiak Island	79.02	33	eP	P	14 40 03.9	+1.8
	comp=Z,7.2nm,0.8s,mb4.7						
GNI	Garni	79.78	309	P	P	14 40 07.2	+0.6
	comp=Z,3.0nm,0.3s,mb4.6,baz=15,slow=5.7,SNR=2.6						
GNI	Garni	79.78	309	⇓eP	P	14 40 07.3	+0.7
GNI				pmax	pmax		
	comp=Z,13nm,1.3s						
KIV	Kislovodsk	81.25	313	i P	P	14 40 15.4	+1.0
KIV				e		14 40 21.6	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
COLA	College	81.68	25	⇓eP	P	14 40 17.7	+1.5
EGAK	Eagle	84.54	25	eP	P	14 40 32.6	+1.6
	comp=Z,5.8nm,0.9s,mb4.7						
OBN	Obninsk	84.71	325	eP	P	14 40 31.8	-0.3
OBN				pmax	pmax		
	comp=Z,23nm,1.5s,mb5.1						
DAWY	Dawson	85.37	26	eP	P	14 40 34.4	-0.7
PPT	Papeete	85.71	108	LR	LR	15 15 33.4	
	comp=Z,142nm,18.5s,MS4.4,baz=228,slow=33						
ASF	Jabal al Asfar	86.57	302	P	P	14 40 41.8	0.0
	comp=Z,3.7nm,0.7s,mb4.7,baz=349,slow=4.0,SNR=8.4						
HYT	Haines Junctio	86.64	29	eP	P	14 40 45.9	+4.4
SPITS	Spitsbergen Ar	87.46	349	P	P	14 40 45.0	-0.2

	comp=Z,6.0nm,0.8s,mb4.9,baz=39,slow=5.4,SNR=4.1						
ARCES	ARCESS Array B	87.63	340	P	P	14 40 44.8	-1.3
	comp=Z,3.7nm,0.9s,mb4.6,baz=97,slow=6.0,SNR=7.4						
MMAI	Mount Meron Ar	87.73	303	P	P	14 40 47.7	+0.3
	comp=Z,1.7nm,0.7s,mb4.4,baz=81,slow=8.9,SNR=3.2						
AKASG	Malin Array Be	89.69	321	P	P	14 40 55.1	-1.1
	comp=Z,2.3nm,0.6s,mb4.7,baz=67,slow=5.3,SNR=15						
DLBC	Dease Lake	90.83	31	eP	P	14 41 08.3	+6.9
HFS	Hagfors	95.41	333	P	P	14 41 21.0	-1.4
	comp=Z,1.6nm,0.8s,mb4.5,baz=103,slow=5.0,SNR=3.2						
NOA	NORSAR Array B	96.14	334	LR	LR	15 29 30.2	
	comp=Z,40nm,18.8s,MS3.9,baz=25,slow=38						
YKA	Yellowknife Ar	96.46	24	P	P	14 41 28.1	+1.0
	comp=Z,0.6nm,0.6s,mb4.2,baz=304,slow=4.9,SNR=6.2						
GERES	GERESS Array B	99.85	322	P	Pdif	14 41 41.9	-0.6
	comp=Z,0.5nm,0.8s,baz=94,slow=5.4,SNR=5.8						
TORD	Torodi Ar. Bea	122.26	290	PKP	PKPdf	14 46 53.3	-0.6
	comp=Z,0.8nm,0.3s,baz=67,slow=1.7,SNR=19						

*MOS **01** 14:36:29.7±0.8,692N×12670E,h33km,mb5.0/9,Error ellipse: s-maj=22.1km s-min=9.0km az=100.0*
*ISCJB **01** 14:36:34.0±0.8,690N±004×12701E±006,h74km±7km, mb4.3/32,Error ellipse: s-maj=10.2km s-min=6.1km az=178.0*
*BJI **01** 14:36:35.9,690N×12680E,h77km,mB5.0,mb4.4,Ms3.8, Msz3.9*
*NEIC **01** 14:36:36.0±1.1,685N×12685E,h77km±9km,mb4.4/8, Error ellipse: s-maj=12.3km s-min=5.4km az=78.0*
*IDC **01** 14:36:36.0±1.9,686N×12687E,h78km±17km,mb4.0/20, mb1 4.1/21,mb1mx4.0/24,mbtmp4.0/21,MS3.7/2, Ms1 3.8/2,ms1mx3.0/27,Error ellipse: s-maj=21.5km s-min=10.0km az=77.0*
ISC 01 14:36:35.5±0.8,**688N**±004×**12698E**±006,**h72**km±7km,**n71**, σ**1§07**/74,**mb4.3**/31,**7C-9D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.40	278	P	Pn	14 36 58.4	-0.8
	451nm,0.3s,baz=80,slow=8.1,SNR=59						
DAV				S	Sn	14 37 21.5	+4.5
	373nm,0.3s,baz=267,slow=22,SNR=12						
BIPH	Bislig	1.43	335⇑	iP	Pn	14 36 56.8	-2.8
BIPH				iS	Sn	14 37 08.7	-9.0
DMPH	Davao City--Mi	1.47	278⇓	iP	Pn	14 36 59.7	-0.4
DMPH				iS	Sn	14 37 26.4	+7.7
KCP	Kidapawan	1.88	274⇓	eP	Pn	14 37 04.4	-1.1
KCP				iS	Sn	14 37 26.8	-1.5
GSPH	General Santos	2.16	249	eP	Pn	14 37 08.8	-0.6
GSPH				eS	Sn	14 37 36.1	+0.8
CTBH	Cotabato--PC H	2.73	277	eP	Pn	14 37 16.2	-0.9
CTBH				iS	Sn	14 37 51.2	+2.2
SCPH	Surigao	3.23	333⇓	eP	Pn	14 37 22.3	-1.6
TBP	Tagbilaran	4.16	312	eP	Pn	14 37 36.3	-0.2
IPIL	Ipil	4.46	282	eS	Pn	14 37 41.9	+1.2
LLP	Lapu-Lapu	4.53	319⇓	eP	Pn	14 37 41.6	0.0
LLP				eS	Sn	14 38 35.2	+2.2
PLP	Palo	4.69	335⇓	eP	Pn	14 37 45.1	+1.3
RCP	Roxas	6.25	318⇑	eP	Pn	14 38 06.0	+0.9
PVCP	Virac	7.22	338	eP	Pn	14 38 19.7	+1.2
BATI	Baumata	17.29	191	P	Pn	14 40 35.0	+2.6
	2.4nm,0.3s,baz=90,slow=8.1,SNR=2.6						
GUMO	Guam	18.82	68	LR	LR	14 47 08.4	
	comp=Z,141nm,19.3s,baz=130,slow=33						
JOW	Kunigami	19.88	3	P	Pn	14 41 02.4	-0.9
	2.6nm,0.3s,baz=221,slow=7.4,SNR=20						
KAKA	Kakadu	20.21	164	eP	P	14 41 03.5	-1.2
	7.6nm,0.5s						
QIZ	Qiongzhong	20.58	308	P	P	14 41 09.4	+0.7
QIZ				S	S	14 44 58.5	+3.5
QIZ				AMB	AMB		
	comp=Z,10.0nm,1.3s						
QIZ				LR	LR		
	comp=E,268nm,18.5s						
QIZ				LR	LR		
	comp=Z,409nm,18.5s						
FITZ	Fitzroy Crossi	24.86	183	eP	P	14 41 51.6	+0.1
	comp=Z,15nm,1.5s,mb4.2						
FITZ	Fitzroy Crossi	24.86	183	P	P	14 41 52.0	+0.5
	comp=Z,4.1nm,0.9s,mb3.9,baz=0.2,slow=8.6,SNR=12						
WRAB	Tennant Creek	27.62	165⇓	eP	P	14 42 18.5	+2.1
WRA	Warramunga Arr	27.62	165	P	P	14 42 16.1	-0.4
	comp=Z,0.9nm,0.3s,mb3.8,baz=333,slow=12,SNR=48						
WB2	Warramunga Arr	27.63	165	eP	P	14 42 17.4	+0.9
CMAR	Chiang Mai Arr	29.62	295	P	P	14 42 34.1	-0.1
	comp=Z,0.8nm,0.5s,mb3.6,baz=104,slow=7.9,SNR=8.0						
CMAR				LR	LR	14 55 15.1	
	comp=Z,174nm,19.1s,baz=130,slow=38						
CMAR	Chiang Mai Arr	29.62	295⇑	eP	P	14 42 35.7	+1.5
KSRS	Korea Array	30.44	1	P	P	14 42 42.5	+1.3
	comp=Z,0.8nm,0.7s,mb3.5,baz=180,slow=8.8,SNR=3.0						
ASAR	Alice Springs	31.11	168	P	P	14 42 47.2	0.0
	comp=Z,0.3nm,0.3s,mb3.5,baz=342,slow=7.2,SNR=22						
ASAR				PcP	PcP	14 45 41.7	+0.4
	comp=Z,0.7nm,0.6s,baz=346,slow=2.5,SNR=5.6						
MJAR	Matsushiro Arr	31.25	18	P	P	14 42 48.0	-0.5
	comp=Z,4.4nm,0.7s,mb4.3,baz=197,slow=9.0,SNR=13						
MAT	Matsushiro	31.26	18	P	P	14 42 48.9	+0.4
FORT	Forrest	37.46	178	eP	P	14 43 42.2	+0.1
	comp=Z,6.9nm,0.4s,mb4.9						
SHL	Shillong	38.29	303	eP	P	14 43 49.5	+0.2
MUN	Mundaring	39.98	194	eP	P	14 44 03.0	-0.2
GTA	Gaotai	40.57	327	eP	P	14 44 07.7	-0.3
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.1						
NWAO	Narrogin (SRO)	40.66	193	P	P	14 44 08.7	-0.1
	comp=Z,6.7nm,0.6s,mb4.6,baz=24,slow=10,SNR=4.4						
STKA	Stephens Creek	40.99	161	eP	P	14 44 10.8	-0.7
	comp=Z,5.8nm,0.9s,mb4.4						
STKA	Stephens Creek	40.99	161	P	P	14 44 10.2	-1.3
	comp=Z,4.1nm,0.8s,mb4.3,baz=316,slow=11,SNR=5.9						
YSS	Yuzh-Sakhalins	42.16	16	iP	P	14 44 21.5	+0.6
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
YSS	Yuzh-Sakhalins	42.16	16	eP	P	14 44 21.6	+0.7
	comp=Z,10nm,0.7s,mb4.7						
ULN	Ulaanbaatar	44.23	341⇓	eP	P	14 44 37.4	-0.2
ULN	Ulaanbaatar	44.23	341	eP	P	14 44 37.0	-0.6
	comp=Z,2.2nm,0.7s,mb4.0						
SONM	Songino Array	44.42	340	P	P	14 44 37.8	-1.3
	comp=Z,0.6nm,0.7s,mb3.5,baz=159,slow=7.9,SNR=6.2						
SONM				PcP	PcP	14 46 22.2	+0.4
	comp=Z,0.9nm,0.7s,baz=159,slow=3.9,SNR=4.9						
BOD	Bodaibo	51.80	351	eP	P	14 45 35.6	-0.3
BOD				pmax	pmax		
	comp=Z,3.0nm,1.9s,mb4.0						
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
PETK	Petropavlovsk-	52.44	23	P	P	14 45 42.0	+1.3
	comp=Z,5.5nm,0.6s,mb4.8,baz=204,slow=1.8,SNR=25						
YAK	Yakutsk	55.07	2⇑	eP	P	14 46 00.2	+0.5
YAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
MKAR	Makanchi Array	55.14	324	P	P	14 46 00.1	-0.4
	comp=Z,3.6nm,0.6s,mb4.5,baz=116,slow=8.2,SNR=42						
MKAR				PcP	PcP	14 47 01.1	+0.1
	comp=Z,1.5nm,0.7s,baz=108,slow=4.0,SNR=3.6						
ZALV	Zalesovo Beam	57.92	332	P	P	14 46 18.9	-1.2
	comp=Z,0.9nm,0.4s,mb4.2,baz=132,slow=6.3,SNR=6.2						
ZALV				PcP	PcP	14 47 10.2	-1.4
	comp=Z,1.4nm,0.8s,baz=116,slow=3.4,SNR=2.6						
ZALV	Zalesovo Beam	57.92	332	P	P	14 46 18.9	-1.2
ZALV				PcP	PcP	14 47 10.2	-1.4
ZAL	Zalesovo	57.92	332	P	P	14 46 18.9	-1.2
ZAL						14 47 10.2	
SEY	Seymchan	58.93	13⇓	eP	P	14 46 29.3	+2.3
KURK	Kurchatov	59.25	326	P	P	14 46 28.6	-0.8
	comp=Z,2.9nm,0.6s,mb4.5,baz=124,slow=6.3,SNR=30						
KURK	Kurchatov	59.25	326⇑	eP	P	14 46 28.5	-0.9
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
BVAR	Borovoye Array	64.84	326	P	P	14 47 06.3	-0.5
	comp=Z,1.3nm,0.6s,mb3.9,baz=119,slow=9.2,SNR=9.2						
AKTK	Aktyubinsk	71.37	321	P	P	14 47 47.6	-0.1
AKTO	Aktyubinsk	71.37	321	P	P	14 47 47.6	-0.1
	comp=Z,5.6nm,0.7s,mb4.5,baz=97,slow=8.1,SNR=29						
SVE	Sverdlovsk	71.43	328	eP	P	14 47 46.0	-2.0
SVE				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
ARU	Arti	72.43	327c	iP	P	14 47 52.8	-1.2
ARU				e	pP	14 48 07.6	-5.5
ARU				eS	S	14 57 14.2	+2.0
ARU				eSS	SS	15 01 45.4	-6.4
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
KDAK	Kodiak Island	79.11	33	eP	P	14 48 33.5	+1.4
KDAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
KDAK	Kodiak Island	79.11	33	eP	P	14 48 33.5	+1.3
	comp=Z,4.6nm,0.6s,mb4.5						
GNI	Garni	79.67	309	iP	P	14 48 40.4	+4.8
GNI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV	Kislovodsk	81.16	313⇓	eP	P	14 48 43.6	+0.2
KIV				e		14 48 50.6	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
COLA	College	81.76	25⇑	eP	P	14 48 46.5	+0.3
EGAK	Eagle	84.62	25	eP	P	14 49 01.8	+0.9
	comp=Z,4.7nm,1.0s,mb4.4						
OBN	Obninsk	84.64	325	eP	P	14 49 00.4	-0.8
OBN				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.9						
ASF	Jabal al Asfar	86.45	302	P	P	14 49 11.4	+0.6
	comp=Z,3.2nm,0.7s,mb4.4,baz=18,slow=4.3,SNR=8.2						
ARCES	ARCESS Array B	87.59	340	P	P	14 49 14.1	-1.3
	comp=Z,2.7nm,0.9s,mb4.3,baz=86,slow=4.0,SNR=5.6						
AKASG	Malin Array Be	89.61	321	P	P	14 49 24.5	-0.9
	comp=Z,2.7nm,0.6s,mb4.5,baz=67,slow=5.0,SNR=13						
YKA	Yellowknife Ar	96.54	24	P	P	14 49 57.6	+0.6
	comp=Z,1.1nm,0.7s,mb4.4,baz=297,slow=4.5,SNR=8.4						
GERES	GERESS Array B	99.78	322	P	Pdif	14 50 11.4	-0.2
	comp=Z,0.7nm,0.8s,baz=46,slow=5.8,SNR=5.6						
JCT	Junction City	121.80	48	ePKIKP	PKPdf	14 55 22.5	+0.4
TORD	Torodi Ar. Bea	122.12	290	PKP	PKPdf	14 55 22.6	-0.5
	comp=Z,1.1nm,0.7s,baz=63,slow=1.3,SNR=9.0						
CFAA	Coronel Fontan	151.59	152	PKPbc	PKPbc	14 56 21.5	-0.7
	comp=Z,0.3nm,0.6s,baz=255,slow=6.2,SNR=5.3						

IDC 01 14:41:54.1±2.0,**1925S**×**6964W**,**h107**km±20km,**mb3.3**/3, **mb1 3.5**/6,**mb1mx3.3**/17,**mbtmp3.2**/6,**Error ellipse: s-maj=33.4km s-min=15.5km az=96.0,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.28	26	P	Pn	14 42 45.5	+1.7
	1.4nm,0.3s,baz=206,slow=11,SNR=33						
LVC	Limon Verde	3.41	169	P	Pn	14 42 44.7	-0.9
	7.3nm,0.3s,baz=339,slow=10,SNR=35						
LVC				S	Sn	14 43 26.6	+1.3
	8.3nm,0.3s,baz=240,slow=20,SNR=12						
SIV	San Ignacio	8.79	70	P	Pn	14 43 56.7	-1.6
	0.6nm,0.3s,baz=266,slow=12,SNR=10						
NVAR	Mina Array Bea	73.31	322	P	P	14 53 14.3	+0.3
	0.4nm,0.8s,baz=121,slow=8.5,SNR=3.3						
TORD	Torodi Ar. Bea	77.27	71	P	P	14 53 37.5	+0.4
	0.3nm,0.5s,baz=269,slow=5.4,SNR=2.5						
YKA	Yellowknife Ar	88.85	341	P	P	14 54 35.3	-0.3
	0.4nm,0.6s,baz=133,slow=5.3,SNR=5.1						

*NEIC **01** 15:00:10.3,3109S×6732W,h150km,mb4.5/2,After GUC.*
GUC 01 15:00:10.3±0.6,**3109S**×**6732W**,**h150**km,**MD3.8**,**ML3.9**, **2C-2D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	Farellones	3.36	228	eP	Pn	15 01 03.5	+1.2
FCH				iS	Sn	15 01 44.4	+2.0
FCH				AML	AML	15 01 44.8	
	comp=E,141nm,0.6s						
PEL	Peldehue	3.51	234⇑	iP	Pn	15 01 05.3	+1.1
PEL				iS	Sn	15 01 46.7	+0.7
LCO	Las Campanas	3.59	304	ePn	Pn	15 01 12.7	+7.5
LCO				eSn	Sn	15 02 01.9	+14
CHNG	Los Chungos	3.66	256	iP	Pn	15 01 06.7	+0.7
CHNG				iS	Sn	15 01 49.3	+0.1
PCH	Pirque	3.69	226	iP	Pn	15 01 07.8	+1.2
PCH				iS	Sn	15 01 51.0	+0.8
TACH	Talagante	3.98	229⇓	iP	Pn	15 01 11.0	+0.7
TACH				iS	Sn	15 01 57.8	+0.8
CHCH	Chadas Angostu	3.99	224	iP	Pn	15 01 11.4	+1.1
CHCH				iS	Sn	15 01 57.9	+0.8
CACH	El Canelo	4.09	222⇑	iP	Pn	15 01 13.3	+1.6
CACH				iS	Sn	15 02 00.6	+1.1
SFDO	San Fernando	4.69	221⇓	iP	Pn	15 01 20.3	+0.7
SFDO				iS	Sn	15 02 13.7	+0.1
TRQA	Tornquist	8.22	149	ePn	Pn	15 02 11.9	+5.4
	comp=E,3.5nm,0.6s						
TRQA				eSn	Sn	15 03 37.3	-0.8
LVC	Limon Verde	8.56	350	ePn	Pn	15 02 21.8	+11
CPUP	Villa Florida	9.97	64	ePn	Pn	15 02 38.1	+8.2
	comp=E,9.0nm,0.3s						

*ISK **01** 15:04:42.6,3729N×2824E,h5km,MD2.7*
*CSEM **01** 15:04:43.2±0.2,3724N×2823E,h12km,MD2.7,Error ellipse: s-maj=6.7km s-min=4.4km az=27.0*
*ISCJB **01** 15:04:44.4±0.5,3724N±004×2822E±004,h9km±5km, Error ellipse: s-maj=7.0km s-min=4.2km az=25.3*
*DDA **01** 15:04:44.0,3722N×2823E,h7km±4km,Md2.8*
ISC 01 15:04:44.7±0.5,**3724N**±004×**2824E**±004,**h11**km±7km,**n13**, σ**1§12**/21,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.11	162	PG	Pg	15 04 46.6	-1.0
YER				eSG	Sg	15 04 49.1	-0.6
MLSB	Milas	0.37	278	ePG	Pg	15 04 50.8	-1.3
MLSB				eSG	Sg	15 04 57.0	-0.2
TURN	Turunc	0.47	142	iP	Pg	15 04 52.9	-1.0
TURN				iS	Sg	15 05 02.3	+2.2
AYDN	Tasoluk	0.51	326	iP	Pg	15 04 54.0	-0.7
AYDN				iS	Sg	15 05 03.4	+2.0
DALT	Dalyan (Mudla)	0.57	146	ePG	Pg	15 04 55.4	-0.4
DALT				eSG	Sg	15 05 05.0	+1.7
BDRM	Kayabasi	0.66	255	iP	Pg	15 04 56.2	-1.3
BDRM				iS	Sg	15 05 07.0	+0.9
BODT	Bodrum	0.76	257	ePG	Pg	15 04 58.7	-0.8
BODT				eSG	Sg	15 05 09.9	+0.5
DNZL	Cakiroluk	0.78	55	iP	Pg	15 04 59.6	-0.3
GCAM	G?zelcaml?	0.92	300	iP	Pg	15 05 02.8	+0.2
GCAM				iS	Sg	15 05 17.6	+3.1
GOLH	Golhisar	1.05	90	iP	Pb	15 05 05.1	+0.1
KULA	Kula-Manisa	1.31	15	ePN	Pn	15 05 07.6	-1.3
KHAL	Karahalli	1.50	41	iP	Pn	15 05 12.2	+0.7
KHAL	Karahalli	1.50	41	iP	Pn	15 05 12.2	+0.7

*NIED **01** 15:21:00,47.10N×14190E,h5km,Mw3.8 Best double couple: $M_0$4.94000×10^{14} NP1:ϕ_s204.00000°,δ68.00000°, λ72.00000°. NP2:ϕ_s66.00000°,δ28.00000°,λ128.00000°.*
*JMA **01** 15:21:26.5±0.4,47.10N×14192E,h27km,M4.1*
*SKHL **01** 15:21:27.6±0.5,4678N×14183E,h10km,mb4.6/5,Feli (III) at Kholmsk*
*ISCJB **01** 15:21:27.4±0.6,4689N±002×14182E±004,h3km±4km, mb3.7/11,Error ellipse: s-maj=5.0km s-min=3.6km az=177.6*
*MOS **01** 15:21:28.0±2.2,4679N×14189E,h11km,mb4.0/5,Error ellipse: s-maj=19.6km s-min=12.2km az=94.8*
MOS Felt (III) at Kholmsk.
*IDC **01** 15:21:28.5±0.8,4692N×14180E,h0km,mb3.8/9, mb1 3.9/12,mb1mx3.8/24,mbtmp3.7/12,ML3.5/3,Error ellipse: s-maj=20.8km s-min=18.4km az=166.0*
*NEIC **01** 15:21:30.2±0.6,4695N×14186E,h10km,mb4.2/1,Error ellipse: s-maj=14.3km s-min=9.0km az=169.0*
ISC 01 15:21:29.8±0.7,**4684N**±002×**14190E**±004,**h8**km±4km,**n50**, σ**1§16**/71,**mb3.7**/11,**1C-2D,Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.60	79⇓	ePN	Pg	15 21 40.0	-1.4
YSS				e		15 21 49.0	
YSS				pmax	pmax		
	comp=Z,270nm,0.2s						
YSS				smax			
	comp=E,3μm,0.2s						
YSS	Yuzh-Sakhalins	0.60	79⇓	ePg	Pg	15 21 40.0	-1.4
YSS				AMB	AMB	15 21 40.8	
	comp=E,270nm,0.2s						
YSS				eSg	Sg	15 21 49.7	+0.5
YSS				A		15 21 50.9	
	comp=E,3μm,0.2s						
YSS				AMS	AMS	15 22 01.0	
	comp=E,6μm,3.0s						
YSS	Yuzh-Sakhalins	0.60	79	eP	Pg	15 21 40.5	-0.9
YSS				eS	Sg	15 21 49.7	+0.5
JWK2	Keihoku	1.52	180	P	Pn	15 21 56.7	-0.5
JWK2				eS	Sn	15 22 19.3	+2.1
JRR	Rishiri	1.75	194	P	Pn	15 21 59.7	-0.6
JSE	Soyaes	1.94	165	P	Pn	15 22 02.0	-1.0
JSE				eS	Sn	15 22 29.5	+2.0
UGL	Uglegorsk	2.24	3	ePN	Pg	15 22 12.5	-0.2
UGL				eS	Sn	15 22 39.7	+4.8
UGL				pmax	pmax		
	comp=E,157nm,0.8s						
UGL				pmax	pmax		
	comp=Z,168nm,0.8s						
UGL				smax			
	comp=N,159nm,0.6s						
UGL				smax			
	comp=E,334nm,0.6s						
UGL	Uglegorsk	2.24	3	eP	Pn	15 22 06.8	-0.3
UGL				ePg	Pg	15 22 12.5	-0.2
UGL				AMB	AMB	15 22 15.0	
	comp=E,157nm,0.8s						
UGL				AMB	AMB	15 22 15.0	
	comp=E,168nm,0.8s						
UGL				eS	Sn	15 22 32.9	-2.0
UGL				eSg	Sg	15 22 44.8	+3.0
UGL				A		15 22 46.3	
	comp=E,159nm,0.6s						
UGL				A		15 22 46.3	
	comp=E,334nm,0.6s						
JYG	Yagishiri	2.44	188	P	Pn	15 22 10.2	+0.4
JSS	Shosan	2.44	181	P	Pn	15 22 09.8	0.0
ASAJ	Asahikawa	2.77	169	Pn	Pn	15 22 13.8	-0.5
	comp=E,12nm,0.3s,baz=8.6,slow=12,SNR=108						
ASAJ				Sn	Sn	15 22 52.9	+5.0
	comp=E,10nm,0.3s,baz=80,slow=33,SNR=3.8						
ASAJ	Asahikawa	2.77	169	P	Pn	15 22 14.0	-0.3
ASAJ	Asahikawa	2.77	169	PN	Pn	15 22 13.8	-0.5
ASAJ						15 22 52.9	
ASAJ				pmax	pmax		
	comp=Z,12nm,0.3s						
ASAJ				smax			
	comp=N,10.0nm,0.3s						
JMP	Maruseppu	3.02	159	P	Pn	15 22 16.3	-1.4
JKK2	Kamakawa 2	3.03	168	P	Pn	15 22 17.4	-0.5
JHR	Hokuryu	3.10	182	P	Pn	15 22 20.2	+1.3
JTKR	Abashiri--Toko	3.20	153	P	Pn	15 22 18.7	-1.6
YUK	Yuzh-Kuril'sk	3.96	134	eP	Pn	15 22 30.5	-0.2
YUK				AMB	AMB	15 22 32.0	
	comp=N,550nm,0.5s						
YUK				iS	Sn	15 23 16.2	-1.0
YUK				A		15 23 18.1	
	comp=N,140nm,0.7s						
TYV	Tymovskoe	4.06	7	eP	Pn	15 22 33.5	+1.5
TYV				ePg	Pg	15 22 47.9	+0.5
TYV				AMB	AMB	15 22 50.0	
	comp=N,48nm,0.6s						
TYV				eS	Sn	15 23 19.8	+0.1
TYV				eSg	Sg	15 23 46.0	+6.0
TYV				A		15 23 55.0	
	comp=N,183nm,0.7s						
TEY	Ternei	4.11	246	eP	Pn	15 22 31.5	-1.3
TEY				ePg	Pg	15 22 47.3	-1.1
TEY				AMB	AMB	15 22 47.8	
	comp=N,15nm,0.8s						
TEY				eS	Sn	15 23 17.0	-3.9
TEY				eSg	Sg	15 23 43.6	+2.0
TEY				A		15 23 55.0	
	comp=N,86nm,0.9s						
KUR	Kuril'sk	4.46	109	erx	rx	15 23 31.0	
GRNR	Gornyy	5.34	319	eP	Pn	15 22 44.0	-5.7
GRNR				ePg	Pg	15 23 07.0	-5.0
GRNR				AMB	AMB	15 23 15.0	
	comp=N,10.0nm,0.5s						
GRNR				AMB	AMB	15 23 15.0	
	comp=N,15nm,0.5s						
GRNR				AMB	AMB	15 23 15.0	
	comp=N,13nm,0.5s						
GRNR				eS	Sn	15 23 55.4	+4.1
GRNR				eSg	Sg	15 24 20.0	-1.1
GRNR				A		15 24 31.0	
	comp=N,34nm,0.5s						
NKL	Nikolayevsk	6.37	353	eP	Pn	15 23 03.0	-0.7
NKL				ePg	Pg	15 23 33.8	+2.2
NKL				AMB	AMB	15 23 35.5	
	comp=N,30nm,1.0s						
NKL				eS	Sn	15 24 17.0	+0.5
NKL				eSg	Sg	15 25 03.0	+9.1
NKL				A		15 25 14.0	
	comp=N,750nm,0.6s						
KLR	Kul'dur	7.21	293	erx	rx	15 23 55.0	
KLR				erx	rx	15 25 20.2	
EKMR	Ekimchan	8.49	321	ePg	Pn	15 23 31.5	-1.3
EKMR				AMB	AMB	15 23 36.6	
	comp=N,3.0nm,0.4s						
EKMR				eS	Sn	15 25 11.5	+2.8
EKMR				eSg	Sn	15 25 53.0	+44
EKMR				A		15 26 03.5	
	comp=N,11nm,0.8s						
EKMR				A		15 26 03.5	
	comp=N,6.0nm,0.8s						
EKMR				A		15 26 03.5	
	comp=N,5.0nm,0.8s						
MJAR	Matsushiro Arr	10.65	196	Pn	Pn	15 24 04.9	+2.4
	comp=N,0.1nm,0.3s,baz=50,slow=11,SNR=2.8						
PETK	Petropavlovsk-	11.94	53	Pn	Pn	15 24 22.1	+2.0
	comp=N,0.2nm,0.3s,baz=232,slow=6.7,SNR=9.5						
BOD	Bodaibo	20.12	313	eP	P	15 26 04.6	+0.8
SONM	Songino Array	23.95	285	P	P	15 26 43.5	-0.7
	comp=N,0.5nm,0.7s,mb3.1,baz=77,slow=8.5,SNR=6.0						
SONM	Songino Array	23.95	285	P	P	15 26 43.5	-0.7
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAK	Zakamensk	25.58	292	eP	P	15 26 58.6	-0.4
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb3.8						
RCP	Roxas	38.71	211⇑	eP	P	15 28 56.2	+2.1
MKAR	Makanchi Array	39.92	293	P	P	15 29 02.9	-1.0
	comp=Z,0.8nm,0.7s,mb3.6,baz=62,slow=9.9,SNR=4.6						
MKAR	Makanchi Array	39.92	293	P	P	15 29 02.9	-1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	39.92	293	P	P	15 29 02.9	-1.0
KURK	Kurchatov	40.75	300	P	P	15 29 11.1	+0.2
	comp=Z,0.4nm,0.3s,mb3.6,baz=69,slow=8.3,SNR=4.2						
EGAK	Eagle	43.66	37	eP	P	15 29 33.3	-1.0
	comp=Z,2.8nm,0.6s,mb4.2						
BVAR	Borovoye Array	44.68	305	P	P	15 29 42.1	-0.6
	comp=Z,0.5nm,0.7s,mb3.5,baz=42,slow=8.8,SNR=2.6						
BVAR				PcP	PcP	15 31 24.8	-0.2
	comp=Z,0.4nm,0.5s,baz=96,slow=5.1,SNR=3.5						
BVAR	Borovoye Array	44.68	305	P	P	15 29 42.1	-0.6
BVAR						15 31 24.8	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	Inuvik	45.65	31	P	P	15 29 49.7	-0.4
	comp=Z,0.6nm,0.3s,mb4.0,baz=288,slow=6.4,SNR=2.9						
INK	Inuvik	45.65	31	P	P	15 29 49.7	-0.4
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
INK	Inuvik	45.65	31	P	P	15 29 49.7	-0.4
YKA	Yellowknife Ar	55.28	33	P	P	15 31 02.4	-0.6
	comp=Z,0.4nm,0.5s,mb3.7,baz=307,slow=7.1,SNR=4.9						
YKA	Yellowknife Ar	55.28	33	P	P	15 31 02.4	-0.6
NB2	NORSAR Subarra	65.33	336	P	P	15 32 11.5	-0.3
	comp=Z,0.7nm,0.6s,mb3.9,baz=36,slow=6.5						
NOA	NORSAR Array B	65.33	336	P	P	15 32 11.0	-0.8
	comp=Z,1.0nm,0.6s,mb4.0,baz=36,slow=6.4,SNR=4.4						
NOA	NORSAR Array B	65.33	336	P	P	15 32 11.0	-0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	65.33	336	P	P	15 32 11.0	-0.8
NVAR	Mina Array Bea	69.00	56	P	P	15 32 36.0	+0.5
	comp=Z,1.0nm,0.7s,mb3.8,baz=289,slow=7.1,SNR=10						
PDAR	Pinedale Array	70.66	48	P	P	15 32 45.9	+0.2
	comp=Z,0.9nm,0.8s,mb3.8,baz=319,slow=5.9,SNR=5.0						

*NIED **01** 15:23:00,4330N×14700E,h20km,Mw4.0 Best double couple: $M_0$9.97000×10^{14} NP1:ϕ_s139.00000°,δ88.00000°, λ-10.00000°. NP2:ϕ_s229.00000°,δ80.00000°, λ-177.00000°.*
*NEIC **01** 15:23:22.0±0.7,4342N×14706E,h10km,Error ellipse: s-maj=15.8km s-min=9.8km az=152.0*

MOS 01 15:23:22.2±1.4, 4333N×14724E, h40km, mb4.1/4, Error ellipse: s-maj=21.0km s-min=14.9km az=93.1
ISCJB 01 15:23:23.3±0.7, 4340N±007×147.14E±006, h33km, mb3.7/7, Error ellipse: s-maj=10.1km s-min=5.4km az=152.9
SKHL 01 15:23:23.2±2.2, 4350N×14720E, h53km±14km, mb4.8/3
JMA 01 15:23:24.3±0.4, 4329N×14702E, h42km±5km, M4.0
IDC 01 15:23:26.7±3.6, 4327N×147.10E, h51km±40km, mb3.5/7, mb1 3.6/9, mb1mx3.5/22, mbtmp3.5/9, ML3.5/2, MS2.9/2, Ms1 2.9/2, ms1mx2.7/28, Error ellipse: s-maj=51.4km s-min=22.2km az=174.0
ISC 01 15:23:21.9±2.1**, 4345N**±006×**14712E**±010**, h8**km±12km**, n32,** σ**0s70**/36**, mb3.7**/7**, 2C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.00	266	P	Pg	15 23 41.2	0.0
NEM2				eS	Sg	15 23 53.9	-0.3
YUK	Yuzh-Kuril'sk	1.08	303	⇑iPN	Pn	15 23 43.5	+0.2
YUK				i S	Sg	15 23 57.1	+0.3
YUK				pmax	pmax		
	comp=N,380nm,0.5s						
YUK				pmax	pmax		
	comp=E,230nm,0.5s						
YUK				pmax	pmax		
	comp=Z,570nm,0.5s						
YUK				smax			
	comp=N,18µm,1.0s						
YUK				smax			
	comp=E,12µm,1.0s						
YUK				smax			
	comp=N,7µm,0.5s						
YUK				smax			
	comp=E,4µm,0.5s						
YUK	Yuzh-Kuril'sk	1.08	303	⇑iP	Pn	15 23 43.5	+0.2
YUK				AMB	AMB	15 23 44.0	
	comp=E,380nm,0.5s						
YUK				AMB	AMB	15 23 44.0	
	comp=E,230nm,0.5s						
YUK				AMB	AMB	15 23 44.0	
	comp=E,570nm,0.5s						
YUK				i S	Sg	15 23 57.1	+0.3
YUK				A		15 23 58.0	
	comp=E,18µm,1.0s						
YUK				A		15 23 58.0	
	comp=E,12µm,1.0s						
YUK				A		15 24 01.6	
	comp=E,7µm,0.5s						
YUK				A		15 24 01.6	
	comp=E,4µm,0.5s						
JRA	Rausu	1.53	289	P	Pn	15 23 49.8	+0.4
JNK	Nakash	1.75	275	P	Pn	15 23 51.9	-0.6
JAK	Akkeshi	1.83	257	P	Pn	15 23 52.5	-1.0
KUR	Kuril'sk	1.87	16	ePN	Pn	15 23 53.0	-1.1
KUR				i S	Sn	15 24 17.0	-0.8
KUR				pmax	pmax		
	comp=N,130nm,0.5s						
KUR				pmax	pmax		
	comp=E,150nm,0.5s						
KUR				pmax	pmax		
	comp=Z,290nm,0.5s						
KUR				smax			
	comp=N,2µm,0.8s						
KUR				smax			
	comp=E,2µm,0.8s						
KUR				smax			
	comp=N,1µm,0.5s						
KUR				smax			
	comp=E,680nm,0.5s						
KUR	Kuril'sk	1.87	16	eP	Pn	15 23 53.0	-1.1
KUR				AMB	AMB	15 24 07.4	
	comp=E,130nm,0.5s						
KUR				AMB	AMB	15 24 07.4	
	comp=E,150nm,0.5s						
KUR				AMB	AMB	15 24 07.4	
	comp=E,290nm,0.5s						
KUR				i S	Sn	15 24 17.0	-0.8
KUR				A		15 24 19.8	
	comp=E,2µm,0.8s						
KUR				A		15 24 20.2	
	comp=E,1µm,0.5s						
KUR				A		15 24 20.2	
	comp=E,680nm,0.5s						
JTKR	Abashiri--Toko	2.39	284	P	Pn	15 24 02.4	+1.2
JAR	Ashorobuto	2.45	268	P	Pn	15 24 02.2	+0.2
JOB	Onbets	2.46	258	P	Pn	15 24 02.1	-0.2
ASAJ	Asahikawa	3.34	283	P	Pn	15 24 17.6	+3.2
	comp=E,3.9nm,0.3s,baz=126,slow=9.3,SNR=3.2						
ASAJ	Asahikawa	3.34	283	PN	Pn	15 24 17.6	+3.2
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
JNBK	Urakawa-nobuka	3.41	252	P	Pn	15 24 15.5	+0.2
YSS	Yuzh-Sakhalins	4.67	320	ePN	Pn	15 24 32.1	-0.5
SKR	Severo-Kuril's	9.49	37	eP	Pn	15 25 39.0	+0.3
SKR				AMB	AMB	15 25 51.0	
	comp=Z,30nm,0.6s						
SKR				AMB	AMB	15 25 51.0	
	comp=Z,50nm,0.6s						
MJAR	Matsushiro Arr	9.70	228	P	Pn	15 25 40.8	-0.9
	comp=Z,0.3nm,0.3s,baz=27,slow=14,SNR=5.7						
MJAR				LR	LR	15 28 52.7	
	comp=Z,77nm,19.5s,baz=230,slow=34						
MJAR	Matsushiro Arr	9.70	228	P	Pn	15 25 40.8	-0.9
MJAR				LR	LR	15 28 52.7	
PETK	Petropavlovsk-	11.95	32	LR	LR	15 31 37.5	
	comp=Z,55nm,18.2s,baz=202,slow=41						
SONM	Songino Array	28.57	293	P	P	15 29 18.1	+0.1
	comp=Z,0.5nm,0.5s,mb3.5,baz=96,slow=10,SNR=2.4						
IMA2	Indian Mountai	38.94	34	eP	P	15 30 48.5	+0.7
KDAK	Kodiak Island	39.47	47	P	P	15 30 52.5	+0.2
	comp=Z,1.9nm,0.5s,mb4.1,baz=252,slow=6.4,SNR=2.7						
MKAR	Makanchi Array	44.71	298	P	P	15 31 35.4	+0.3
	comp=Z,0.3nm,0.5s,mb3.4,baz=76,slow=13,SNR=3.3						
INK	Inuvik	46.68	30	P	P	15 31 51.0	+0.5
	comp=Z,1.6nm,0.4s,mb4.3,baz=267,slow=4.1,SNR=10						
INK	Inuvik	46.68	30	P	P	15 31 51.0	+0.5
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
YKA	Yellowknife Ar	56.07	34	P	P	15 33 00.1	-0.8
	comp=Z,0.3nm,0.5s,mb3.6,baz=301,slow=6.8,SNR=4.3						
YKA	Yellowknife Ar	56.07	34	eP	P	15 33 06.6	+5.7
NVAR	Mina Array Bea	67.76	58	P	P	15 34 20.8	+0.9
	comp=Z,0.3nm,0.6s,mb3.5,baz=285,slow=7.4,SNR=3.7						
NB2	NORSAR Subarra	69.88	339	P	P	15 34 31.7	-1.0
	comp=Z,1.2nm,0.7s,mb3.9,baz=30,slow=6.2						
NOA	NORSAR Array B	69.88	339	P	P	15 34 32.2	-0.5
	comp=Z,0.9nm,0.7s,mb3.8,baz=34,slow=6.2,SNR=3.8						
NOA	NORSAR Array B	69.88	339	P	P	15 34 32.2	-0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	69.88	339	P	P	15 34 32.2	-0.5

ISCJB 01 15:25:27.6±1.1, 3985N±006×7827E±010, h33km, Error ellipse: s-maj=12.2km s-min=6.6km az=31.0
NNC 01 15:25:29.4±9.0, 4021N×7858E, h0km, mb3.2, mpv3.1, Error ellipse: s-maj=79.5km s-min=36.2km az=172.0
BJI 01 15:25:30.1, 4004N×7773E, h33km, ML3.3
ISC 01 15:25:30.3±1.1**, 3982N**±006×**782E**±01**, h35**km**, n15,** σ**1s37**/21**, 3C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.72	261	⇑PG	Pn	15 25 56.5	-1.2
KSH				SG	Sn	15 26 18.7	+0.3
KSH				Smax			
	comp=N,935nm,0.3s						
KSH				Smax			
	comp=E,1µm,0.7s						
ULHL	Ulahol	2.83	330	P	Pn	15 26 11.1	-1.8
	SNR=28						
KZA	Kyzart	3.16	317	P	Pn	15 26 19.0	+1.5
	SNR=13						
TKM2	Tokmak 2	3.66	329	⇓Pn	Pn	15 26 24.3	0.0
	comp=E,1.8nm,0.3s						
TKM2				⇑Sn	Sn	15 27 07.4	+1.3
	comp=E,18nm,0.6s						
TKM2	Tokmak 2	3.66	329	P	Pn	15 26 22.5	-1.7
	SNR=6.8						
UCH	Uchtor	3.67	312	P	Pn	15 26 22.2	-2.2
	SNR=6.4						
KBK	Karagaybulak	3.73	321	P	Pn	15 26 29.6	+4.2
	SNR=8.3						
AAK	Ala-Archa	3.95	317	P	Pn	15 26 33.0	+4.7
	SNR=9.0						
CHMS	Chumysh	4.09	322	P	Pn	15 26 34.2	+4.0
	SNR=6.3						
AML	Almayashu	4.10	306	P	Pn	15 26 29.3	-1.1
	SNR=10						
USP	Ospenovka	4.41	323	P	Pn	15 26 41.3	+6.6
	SNR=9.6						
KK08	Karatay Array	6.64	302	⇓Pn	Pn	15 27 11.5	+6.3
	comp=E,1.0nm,0.6s,baz=131,slow=14						
KK08				⇓Sn	Sn	15 28 28.7	+9.1
	comp=E,2.7nm,0.7s,baz=130,slow=24						
CHCP	Chirah Chowk	7.30	214	P	Pn	15 27 17.0	+2.7
MK31	Makanchi Array	7.59	22	Pn	Pn	15 27 18.1	-0.2
	comp=E,0.1nm,0.3s,baz=194,slow=14,SNR=4.6						
MK31				Pn	Pn	15 27 18.1	-0.2
	comp=E,0.1nm,0.3s,baz=194,slow=14,SNR=4.6						
MK31				⇑Sn	Sn	15 28 42.9	-0.2
	comp=E,1.1nm,0.6s,baz=191,slow=28						
CEP	Cherat	7.80	222	P	Pn	15 27 22.2	+0.9
CEP				S	Sn	15 28 47.0	-1.4

TIF 01 15:25:56.4, 4346N×4594E, h11km±4km
MOS 01 15:26:06.0±0.7, 4334N×4523E, h28km, mb4.0/1, Error ellipse: s-maj=21.3km s-min=10.0km az=0.2
ISC 01 15:25:55.3±1.4**, 4329N**±008×**461E**±01**, h4**km±8km**, n15,** σ**1s00**/26**, 4C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTKR	Batakoyurt	1.16	274	ePG	Pg	15 26 17.7	+0.1
KMSR	Komsomolskaya	1.35	274	ePG	Pg	15 26 20.1	-1.0
ARNR	Ardon	1.36	266	ePG	Pn	15 26 20.4	-0.6
LACR	Lac	1.43	251	⇓iPG	Pn	15 26 21.9	0.0
LACR				eS	Sb	15 26 41.2	+0.3
KORR	Kora	1.52	263	ePG	Pn	15 26 22.8	-0.5
KORR				eS	Sn	15 26 42.7	-0.8
LSNR	Lesken	1.69	270	ePG	Pn	15 26 25.4	-0.2
LSNR				eS	Sn	15 26 46.8	-0.9
ZEI	Tsey	1.72	253	ePG	Pn	15 26 25.7	-0.3
ZEI				eS	Sn	15 26 47.8	-0.5
DIGR	Digorskoe uzhe	1.91	259	ePG	Pn	15 26 27.9	-0.7
DIGR				eS	Sn	15 26 52.0	-1.0
DGRG	David-gareji	1.93	197	P	Pg	15 26 35.1	+2.9
DGRG				S	Sg	15 27 06.2	+9.0
KUBR	Kubataba	2.04	285	⇑ePG	Pn	15 26 30.5	+0.1
ONI	Oni	2.10	251	P	Pn	15 26 32.0	+0.9
ONI				S	Sn	15 27 02.8	+5.2
BEYR	Belyy Ugol+	2.51	288	ePN	Pn	15 26 37.4	+0.5
BEYR				eS	Sn	15 27 09.2	+1.3
SHAR	Shatzhatmas	2.56	281	⇑ePN	Pn	15 26 35.7	-1.8
SHAR				eS	Sn	15 27 11.7	+2.6
KIV0	Kislovodsk Arr	2.58	286	⇑ePN	Pn	15 26 37.3	-0.5
KIV0				eS	Sn	15 27 11.1	+1.5
KIV	Kislovodsk	2.59	286	⇑ePN	Pn	15 26 37.7	-0.2
KIV				eS	Sn	15 27 10.9	+1.1

IDC 01 15:26:23.7±0.4, 241N×127.18E, h0km, mb5.3/24, mb1 5.3/24, mb1mx5.3/24, mbtmp5.4/24, MS4.6/20, Ms1 4.6/20, ms1mx4.4/28, Error ellipse: s-maj=18.2km s-min=9.0km az=77.0
MOS 01 15:26:27.8±1.1, 257N×12707E, h33km, mb5.8/49, MS4.6/25, Error ellipse: s-maj=10.0km s-min=5.1km az=110.2
BJI 01 15:26:28.4, 221N×127.11E, h64km, mB5.5, mb5.4, Ms4.7, Msz4.6
GCMT 01 15:26:30.8±0.1, 237N×12728E, h58km±1km, MW5.3/84, Moment Tensor Solution. s78,c132; s84,c155; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.60±.03; $M_{\theta\theta}$0.42±.02; $M_{\phi\phi}$0.18±.03; $M_{r\theta}$-0.32±.01; $M_{\theta\phi}$0.67±.02; $M_{\phi r}$-0.85±.02; Best double couple: $M_0$1.24100×10^{17} NP1:ϕ_s261.00000°, δ30.00000°, λ-37.00000°. NP2:ϕ_s24.00000°, δ72.00000°, λ-115.00000°. Principal axes: T 1.3250, Plg24.0000°, Azm133.0000°; N -0.1680, Plg24.0000°, Azm32.0000°; P -1.1560, Plg56.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 01 15:26:30.8±0.8, 241N×12709E, h52km±7km, mb5.5/49, MS4.8/94 Error ellipse: s-maj=6.3km s-min=4.0km az=73.0
ISCJB 01 15:26:30.4±0.4, 245N±002×127.17E±003, h62km±3km, mb5.6/120, Error ellipse: s-maj=4.6km s-min=2.9km az=173.6
DJA 01 15:26:36, 259N×12709E, h53km, mb5.4/17
ISC 01 15:26:32.4±0.3**, 243N**±002×**12718E**±003**, h66**km±2km**, h69**km±2.9km**: pP-P, n534,** σ**1s11**/407**, mb5.5**/120**, 39C-49D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	Ternate	1.65	173	⇓eP	Pn	15 26 53.5	-5.8
TNE				eS	Sn	15 27 14.0	-5.6
MNI	Manado	2.53	247	P	Sn	15 27 42.1	+1.1
	0.0nm,0.0s						
MNI	Manado	2.53	247	⇓eP	Pn	15 27 11.5	+0.3
MNI				eS	Sn	15 27 45.5	+4.5
LBMI	Labuha	3.07	174	P	Sn	15 27 53.2	-0.9
	0.0nm,0.0s						
GSPH	General Santos	4.25	329	eP	Pn	15 27 35.0	+0.3
MATI	Mati	4.57	349	eP	Pn	15 27 39.5	+0.4
MATI				eS	Sn	15 28 31.6	+0.5
DAV	Davao City (W)	4.87	341	Pn	Pn	15 27 47.8	+4.5
	174nm,0.3s,baz=221,slow=12,SNR=7.6						
DAV				Sn	Sn	15 28 44.3	+5.9
	245nm,0.3s,baz=286,slow=16,SNR=4.4						
DAV				LR	LR	15 28 49.6	
	comp=Z,2µm,20.7s,baz=282,slow=30						
DAV	Davao City (W)	4.87	341	⇑eP	Pn	15 27 46.8	+3.5
DAV	Davao City (W)	4.87	341	eP	Pn	15 27 43.5	+0.3
DMPH	Davao City--Mi	4.91	340	⇑iP	Pn	15 27 44.1	+0.4
KCP	Kidapawan	5.00	336	⇓eP	Pn	15 27 44.6	-0.3
KCP				i S	Sn	15 28 43.1	+1.7
SWI	Sorong	5.24	129	P	Pn	15 27 47.9	-0.3
	0.0nm,0.0s						
CTBH	Cotabato--PC H	5.58	329	eP	Pn	15 27 51.4	-1.6
CTBH				i S	Sn	15 28 56.0	+0.3
BIPH	Bislig	5.77	352	⇑eP	Pn	15 27 54.0	-1.5
BIPH				i S	Sn	15 28 56.2	-4.2
BUKP	Musuan	5.80	339	eP	Pn	15 27 55.4	-0.5
AAI	Ambon	6.17	170	P	Pn	15 28 02.7	+1.8
	0.0nm,0.0s						
AAI	Ambon	6.17	170	⇓eP	Pn	15 28 02.0	+1.1
PAGZ	Pagadian	6.57	325	eP	Pn	15 28 05.0	-1.5
BUTP	Butuan	6.67	347	eP	Pn	15 28 08.6	+0.7
ZMPH	Zamboanga City	6.79	312	⇑eP	Pn	15 28 07.6	-1.9
IPIL	Ipil	7.02	319	eP	Pn	15 28 10.4	-2.3
SCPH	Surigao	7.49	347	⇑eP	Pn	15 28 19.7	+0.6
KDI	Kendari	7.81	216	P	Pn	15 28 21.6	-1.9
	0.0nm,0.0s						
TBP	Tagbilaran	7.93	336	eP	Pn	15 28 23.9	-1.2
MSLP	Maasin	7.99	343	eP	Pn	15 28 25.5	-0.4
PCI	Palu	8.05	246	P	Pn	15 28 27.2	+0.4
	0.0nm,0.0s						
LLP	Lapu-Lapu	8.46	338	⇓eP	Pn	15 28 31.7	-0.5
LLP				eS	Sn	15 30 03.8	-2.4
OCLP	Ormoc	8.93	344	eP	Pn	15 28 38.9	+0.1
PLP	Palo	8.94	346	⇓eP	Pn	15 28 38.8	-0.2
MYLDM	Lahad Datu	9.07	288	⇓P	Pn	15 28 40.0	-0.8
BBSI	Bau Bau	9.11	210	P	Pn	15 28 45.4	+4.1
	0.0nm,0.0s						
GUIM	Jordan	9.32	331	eP	Pn	15 28 47.7	+3.5
TSM	Tawau	9.47	281	⇓P	Pn	15 28 40.0	-6.2
CNP	Catarman	10.32	346	eP	Pn	15 28 58.5	+0.8
CUYO	Cuyo Island	10.36	324	eP	Pn	15 28 57.6	-0.6
SMKI	Samarinda	10.37	254	P	Pn	15 29 00.6	+2.2
	0.0nm,0.0s						
SDKM	Sandakan	10.45	288	⇓P	Pn	15 29 01.2	+1.7
KAPI	Kappang	10.47	225	Pn	Pn	15 28 59.0	-0.9
	3.9nm,0.3s,baz=69,slow=4.9,SNR=8.6						
KAPI				Sn	Sn	15 30 58.7	+3.0
	2.9nm,0.3s,baz=295,slow=19,SNR=2.3						
OTRP	Odiongan	11.11	333	eP	Pn	15 29 14.0	+5.5
KDM	Kudat	11.23	294	⇓P	Pn	15 29 14.1	+4.0
BATP	Bataraza	11.27	305	eP	Pn	15 29 12.9	+2.2
PVCP	Virac	11.48	345	⇑eP	Pn	15 29 09.9	-3.7
PVCP	Virac	11.48	345	eP	Pn	15 29 16.6	+2.9
KKM	Kota Kinabalu	11.50	289	⇓P	Pn	15 29 16.3	+2.3
SJMP	San Jose	11.63	329	eP	Pn	15 29 14.7	-0.9
BATI	Baumata	13.04	196	Pn	Pn	15 29 39.3	+4.5
	2.9nm,0.3s,baz=59,slow=5.9,SNR=4.7						
LUBP	Lubang	13.15	329	eP	Pn	15 29 38.4	+2.0
BBKI	Banjar Baru	13.65	245	P	Pn	15 29 44.1	+1.0
	0.0nm,0.0s						
BTM	Bintulu	14.10	273	⇓P	Pn	15 29 50.0	+1.0
BALP	Baler	14.33	338	eP	Pn	15 29 51.3	-0.6
JAY	Jayapura	14.39	110	P	Pn	15 29 54.2	+1.3
	0.0nm,0.0s						
SBUM	Sibu	14.94	270	⇓P	Pn	15 30 00.1	+0.1
SCZP	Santa Cruz	15.06	332	eP	Pn	15 30 06.0	+4.5
PALP	Palanan	15.27	342	eP	Pn	15 30 06.9	+2.7
CAUP	Cauayan	15.35	340	eP	Pn	15 30 03.0	-2.2
KHKI	Kahang-Kahang	15.75	227	P	Pn	15 30 14.8	+4.4
	0.0nm,0.0s						
STKI	Sintang	15.87	262	P	Pn	15 30 11.8	-0.1
	0.0nm,0.0s						
KAKA	Kakadu	15.93	161	eP	Pn	15 30 11.0	-1.6
	53nm,0.5s						
KMMI	Kalianget	16.20	234	P	Pn	15 30 18.9	+2.8
	0.0nm,0.0s						
DNP	Denpasar	16.25	227	P	Pn	15 30 21.7	+5.0
	0.0nm,0.0s						
IGBI	Denpasar	16.39	227	P	Pn	15 30 21.8	+3.4
	0.0nm,0.0s						
ABRA	Dolores	16.40	338	eP	Pn	15 30 18.2	-0.2
APYP	Conner	16.40	340	eP	Pn	15 30 16.8	-1.7
NBBI	Negara	16.49	229	P	Pn	15 30 21.5	+1.9
	0.0nm,0.0s						
KSM	Kuching	16.88	267	⇑P	Pn	15 30 27.3	+2.7
TRT	Tretes	17.66	235	⇓eP	Pn	15 30 32.0	-2.1
SJI	Sawahan	18.39	237	P	Pn	15 30 43.4	+0.4
	184nm,1.4s						
BJII	Banjamegara	19.95	241	P	Pn	15 30 59.9	-1.6
	148nm,1.9s						
TPI	Tanjungpandan	20.18	255	P	P	15 30 59.9	-2.0
	0.0nm,0.0s						
FITZ	Fitzroy Crossi	20.46	184	eP	P	15 31 03.1	-1.7
	69nm,0.6s						
FITZ				eS	S	15 34 47.2	-3.1
FITZ	Fitzroy Crossi	20.46	184	P	P	15 31 03.0	-1.7
	24nm,0.5s,baz=19,slow=11,SNR=35						
GUMO	Guam	20.71	57	P	P	15 31 06.5	-1.0
	187nm,1.0s,baz=172,slow=6.5,SNR=9.7						
GUMO				LR	LR	15 37 47.7	
	comp=Z,2µm,21.7s,baz=238,slow=33						
GUMO	Guam	20.71	57	eP	P	15 31 07.6	+0.1
GUMO				pmax	pmax		
	comp=Z,240nm,1.0s						
GUMO	Guam	20.71	57	eP	P	15 31 06.9	-0.6
	comp=Z,243nm,1.0s						
GUMO				LR	LR		
	comp=Z,2µm,22.0s						
PPBI	Pangkal Pinang	21.52	258	P	P	15 31 15.8	-0.5
	comp=Z,0.0nm,0.0s						
LEM	Lembang	21.58	245	P	P	15 31 17.8	+0.9
	comp=Z,0.0nm,0.0s						
DBJI	Dramaga	22.26	246	P	P	15 31 27.9	+3.8
	comp=Z,154nm,2.0s,mb5.0						
SBJI	Serang	22.67	248	P	P	15 31 32.0	+3.6
	comp=Z,453nm,1.5s,mb5.6						
TATO	Taipei	23.07	347	eP	P	15 31 31.2	-1.3
TATO				LR	LR		
	comp=Z,1µm,22.0s						
PMG	Port Moresby	23.13	121	eP	P	15 31 34.5	+1.3
	comp=Z,128nm,1.2s,mb5.1						
PMG				LR	LR		
	comp=Z,5µm,19.0s						
MYKOM	Kota Tinggi	23.32	269	⇑P	P	15 31 35.9	+0.9
WRAB	Tennant Creek	23.32	163	P	P	15 31 33.0	-1.8
	comp=Z,858nm,0.8s,mb6.1						
WRAB	Tennant Creek	23.32	163	i P	P	15 31 33.0	-1.8
WRA	Warramunga Arr	23.32	163	P	P	15 31 32.4	-2.5
	comp=Z,36nm,0.6s,mb4.9,baz=335,slow=11,SNR=315						
WRA				PcP	PcP	15 35 20.8	+0.4
	comp=Z,4.2nm,0.4s,baz=332,slow=2.3,SNR=4.7						
WRA				S	S	15 35 47.8	+5.3
	comp=Z,14nm,1.1s,baz=334,slow=17,SNR=5.5						
WRA	Warramunga Arr	23.32	163	i P	P	15 31 32.4	-2.5
WRA				pmax	pmax		
	comp=Z,36nm,0.6s						
WB2	Warramunga Arr	23.33	163	⇑iP	P	15 31 32.5	-2.4
WB2				eS	S	15 35 41.2	-1.4
WB2				eSCS	ScS	15 42 37.7	-1.6
QIZ	Qiongzhong	23.66	315	P	P	15 31 35.8	-2.2
QIZ				AP		15 31 50.2	
QIZ				XP	sP	15 32 00.8	-0.7
QIZ				S	S	15 35 42.3	-5.8
QIZ				AMB	AMB		
	comp=Z,114nm,1.3s,mb5.0						
QIZ				LR	LR		
	comp=N,2µm,19.2s						
QIZ				LR	LR		
	comp=E,1µm,20.1s						
QIZ				LR	LR		
	comp=Z,1µm,27.6s						
QIZ	Qiongzhong	23.66	315	eP	P	15 31 35.8	-2.3
	comp=Z,185nm,1.3s,mb5.2						
QZH	Quanzhou	23.86	340	⇑iP	P	15 31 34.0	-5.8
QZH				S	S	15 35 44.4	-6.8
QZH				AMB	AMB		
	comp=Z,170nm,0.8s,mb5.4						
QZH				AMB	AMB		
	comp=Z,960nm,5.3s						
QZH				LR	LR		
	comp=N,8µm,30.2s						
QZH				LR	LR		
	comp=E,5µm,26.0s						
QZH				LR	LR		
	comp=Z,4µm,24.0s						
KTGM	Kuala Trenggan	24.16	278	⇑P	P	15 31 43.2	+0.5
JOW	Kunigami	24.28	2	P	P	15 31 43.9	+0.2
	comp=Z,267nm,0.9s,mb5.5,baz=186,slow=8.4,SNR=76						
GZH	Guangzhou	24.52	328	P	P	15 31 45.9	+0.1
GZH				S	S	15 36 03.1	+1.2
GZH				LR	LR		
	comp=N,1µm,18.8s						
GZH				LR	LR		
	comp=E,468nm,20.4s						
GZH				LR	LR		
	comp=Z,2µm,20.7s						
MBWA	Marble Bar	24.55	197	eP	P	15 31 45.3	-0.9
	comp=Z,176nm,1.1s,mb5.4						
MBWA				LR	LR		
	comp=Z,1µm,20.0s						
FRIM	Kepong	25.53	272	⇑P	P	15 31 55.4	+0.3
IPM	Ipoh	26.18	275	⇓P	P	15 32 00.8	-0.2
KULM	Kulim	26.61	277	⇑P	P	15 32 03.5	-1.4
ASAR	Alice Springs	26.76	166	P	P	15 32 04.2	-1.9
	comp=Z,9.8nm,0.5s,mb4.6,baz=345,slow=7.5,SNR=384						
ASAR				PcP	PcP	15 35 28.2	+0.3
	comp=Z,12nm,0.6s,baz=349,slow=2.3,SNR=10						
ASAR				ScP	ScP	15 39 03.6	+1.2
	comp=Z,2.8nm,0.6s,baz=351,slow=3.0,SNR=6.8						
ASAR	Alice Springs	26.76	166	P	P	15 32 04.2	-1.9
ASAR						15 35 28.2	
ASAR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,13nm,0.6s						
ASAR				pmax	pmax		
	comp=N,3.0nm,0.6s						
KKTK	Khon Kaen	27.66	301	P	P	15 32 13.0	-1.3
	comp=N,617nm,0.6s,mb6.3						
PSI	Prapat	28.22	271	⇑eP	P	15 32 17.9	-1.5
CBIJ	Chichi jima	28.43	29	P	P	15 32 19.6	-1.4
	comp=N,128nm,0.8s,mb5.5,baz=288,slow=8.5,SNR=6.3						
CBIJ				LR	LR	15 42 42.6	
	comp=N,904nm,19.7s,baz=110,slow=34						
SSE	Sheshan	29.06	349	P	P	15 32 27.3	+0.7
SSE				AP	pP	15 32 45.7	+3.1
SSE				XP	sP	15 32 54.5	+4.1
SSE				S	S	15 37 13.1	-0.4
SSE				AMB	AMB		
	comp=Z,69nm,1.0s,mb5.2						
SSE				AMB	AMB		
	comp=Z,375nm,4.9s						
SSE				LR	LR		
	comp=N,299nm,21.7s						
SSE				LR	LR		
	comp=E,501nm,21.7s						
SSE				LR	LR		
	comp=Z,662nm,19.1s						
CTA	Charters Tower	29.18	141	eP	P	15 32 28.2	+0.5
	comp=Z,14nm,0.9s,mb4.6						
CTA	Charters Tower	29.18	141	P	P	15 32 27.5	-0.2

comp=Z,8.5nm,0.9s,mb4.3,baz=304,slow=11,SNR=5.7
CTA LR LR 15 45 38.9
comp=Z,4µm,18.6s,baz=323,slow=40
CTA Charters Tower 29.18 141 *eP* **P 15 32 28.2 +0.5**
CTA pmax pmax
comp=Z,14nm,0.9s
CTAO Charters Tower 29.18 141 PFAKE 15 32 40.0 +12
CTAO LR LR
comp=Z,4µm,19.0s
WHN Wuhan 30.48 338 P P **15 32 39.5 +0.4**
WHN S **S** **15 37 40.0 +4.2**
NJ2 Nanjing 30.48 346 *eP* **P 15 32 40.6 +1.5**
NJ2 AP pP 15 32 58.3 +3.1
NJ2 PP PP 15 33 42.6 -6.5
NJ2 S **S** **15 37 35.0 -0.8**
NJ2 XS sS 15 38 04.0 +0.8
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.0
NJ2 AMB AMB
comp=Z,180nm,6.2s
NJ2 LR LR
comp=N,830nm,18.2s
NJ2 LR LR
comp=E,840nm,21.1s
NJ2 LR LR
comp=Z,830nm,21.2s
NANT Nan 30.60 304 ⇑P **P 15 32 40.0 -0.4**
comp=Z,762nm,1.2s,mb6.3
GYA Guiyang 30.95 322 ⇑*iP* **P 15 32 44.8 +1.4**
GYA XP sP 15 33 04.2 -3.1
GYA PP PP 15 33 49.8 -4.6
GYA PCP PcP 15 35 40.8 +2.3
GYA S **S** **15 37 43.0 -0.3**
GYA SCP ScP 15 39 15.7 0.0
GYA PCS PcS 15 39 22.8 +0.2
GYA SS SS 15 39 33.5 -24
GYA SCS ScS 15 43 11.2 -1.6
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,940nm,5.2s
GYA LR LR
comp=N,870nm,17.4s
GYA LR LR
comp=E,690nm,17.0s
GYA LR LR
comp=Z,640nm,18.8s
BDT Bhumibol Dam 31.34 300 ⇑P **P 15 32 46.5 -0.4**
comp=Z,20nm,1.2s,mb4.7
CHRT Chiangrai 31.88 305 ⇑P **P 15 32 51.0 -0.6**
comp=Z,395nm,0.9s,mb6.1
CMAR Chiang Mai Arr 31.92 302 P **P 15 32 51.1 -0.8**
comp=Z,39nm,1.0s,mb5.1,baz=120,slow=6.7,SNR=155
CMAR PcP PcP 15 35 43.1 +1.9
comp=Z,7.2nm,0.9s,baz=177,slow=1.4,SNR=5.9
CMAR ScP ScP 15 39 27.4 +8.3
comp=Z,2.3nm,1.1s,baz=96,slow=0.9,SNR=4.5
CMAR LR LR 15 47 38.3
comp=Z,632nm,18.8s,baz=114,slow=40
CMAR Chiang Mai Arr 31.92 302⇑*eP* **P 15 32 51.2 -0.7**
CHG Chiang Mai 32.08 302 ⇓P **P 15 32 52.6 -0.7**
comp=Z,116nm,0.7s,mb5.7
ENH Enshi 32.37 331 PFAKE 15 33 10.0 +14
ENH LR LR
comp=Z,3.0nm,19.0s
KMI Kunming 32.61 316 P **P 15 32 58.0 +0.1**
KMI AP pP 15 33 15.6 +1.5
KMI XP sP 15 33 25.2 +3.4
KMI S **S** **15 38 06.9 -2.2**
KMI XS sS 15 38 38.2 +1.5
KMI SS SS 15 40 08.4 -23
KMI SCS ScS 15 43 14.9 -6.2
KMI AMB AMB
comp=Z,95nm,2.0s,mb5.3
KMI AMB AMB
comp=Z,325nm,3.7s
KMI LR LR
comp=N,305nm,16.6s
KMI LR LR
comp=E,517nm,17.4s
KMI LR LR
comp=Z,662nm,21.9s
FORT Forrest 33.04 179 *eP* **P 15 33 00.4 -1.2**
comp=Z,37nm,0.5s,mb5.5
FORT ePCP PcP 15 35 44.4 +0.4
HNR Honiara 34.71 110 PFAKE 15 33 30.0 +14
HNR LR LR
comp=Z,1µm,22.0s
KSRS Korea Array 34.86 1 P **P 15 33 17.4 +0.1**
comp=Z,38nm,0.9s,mb5.2,baz=179,slow=10,SNR=64
KSRS PcP PcP 15 35 50.6 +1.5
comp=Z,5.2nm,0.8s,baz=191,slow=2.6,SNR=6.0
KSRS Korea Array 34.86 1 P **P 15 33 17.4 +0.1**
KSRS 15 35 50.6
KSRS pmax pmax
comp=Z,38nm,0.9s,mb5.2
KSRS pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
TIA Tai'an 34.87 346 *eP* **P 15 33 17.3 -0.1**
TIA AMB AMB
comp=Z,124nm,1.1s,mb5.7
INCN Inchon 34.88 359 *eP* **P 15 33 17.6 +0.1**
INCN LR LR
comp=Z,849nm,21.0s
MAJO Matsushiro 35.44 15 *eP* **P 15 33 20.5 -1.8**
comp=Z,67nm,0.9s,mb5.5
MAJO LR LR
comp=Z,2µm,21.0s
MAT Matsushiro 35.44 15 P **P 15 33 20.3 -2.0**
MAT S **S** **15 38 58.0 +5.5**
MJAR Matsushiro Arr 35.44 15 P **P 15 33 20.6 -1.6**
comp=Z,21nm,0.8s,mb5.0,baz=194,slow=8.9,SNR=39
MJAR LR LR 15 45 54.2
comp=Z,2µm,21.9s,baz=195,slow=33
XAN Xi'an 35.77 334 P **P 15 33 23.7 -1.4**
XAN AP pP 15 33 41.9 +0.5
XAN XP sP 15 33 50.9 +1.7
XAN PP PP 15 34 45.7 -1.9
XAN PCP PcP 15 35 53.0 +1.2
XAN S **S** **15 38 52.9 -4.7**
XAN SCP ScP 15 39 29.9 -2.4
XAN PCS PcS 15 39 37.6 -1.6
XAN SCS ScS 15 43 31.5 -6.0
XAN AMB AMB
comp=Z,32nm,1.3s,mb5.1
XAN AMB AMB
comp=Z,105nm,12.1s
XAN LR LR
comp=N,164nm,30.7s
XAN LR LR
comp=E,341nm,29.3s
XAN LR LR
comp=Z,907nm,29.0s
MUN Mundaring 35.77 196 *eP* **P 15 33 24.8 -0.4**
CD2 Chengdu 35.95 324⇑*iP* **P 15 33 26.3 -0.4**
CD2 AP pP 15 33 44.2 +1.2
CD2 XP sP 15 33 54.0 +3.2
CD2 PP PP 15 34 49.8 +0.2
CD2 PCP PcP 15 35 51.7 -0.7
CD2 S **S** **15 38 58.4 -2.1**
CD2 XS sS 15 39 30.8 +2.5
CD2 SS SS 15 41 24.8 -15
CD2 SCS ScS 15 43 34.1 -4.5
CD2 AMB AMB
comp=Z,70nm,0.9s,mb5.6
CD2 AMB AMB
comp=Z,190nm,7.8s
CD2 LR LR
comp=N,590nm,12.2s
CD2 LR LR
comp=E,1µm,21.6s
CD2 LR LR
comp=Z,1µm,24.3s
NWAO Narrogin (SRO) 36.41 194 P **P 15 33 29.9 -0.7**
comp=Z,26nm,0.5s,mb5.4,baz=20,slow=7.8,SNR=24
NWAO Narrogin (SRO) 36.41 194 *eP* **P 15 33 29.9 -0.7**
NWAO pmax pmax
comp=Z,18nm,0.5s
NWAO Narrogin (SRO) 36.41 194 *eP* **P 15 33 29.9 -0.7**
comp=Z,18nm,0.5s,mb5.3
DL2 Dalian 36.65 353 P **P 15 33 33.2 +0.6**
DL2 AP pP 15 33 51.8 +2.9
DL2 S **S** **15 39 12.0 +1.0**
DL2 AMB AMB
comp=Z,90nm,1.1s,mb5.6
DL2 AMB AMB
comp=Z,190nm,4.9s
DL2 LR LR
comp=N,290nm,17.2s
DL2 LR LR
comp=E,350nm,16.6s
DL2 LR LR
comp=Z,400nm,15.2s
STKA Stephens Creek 36.77 159⇓*iP* **P 15 33 32.5 -1.2**
comp=Z,32nm,0.7s,mb5.4
STKA *eS* **S** **15 39 11.3 -1.7**
STKA Stephens Creek 36.77 159 P **P 15 33 32.9 -0.8**
comp=Z,29nm,0.7s,mb5.3,baz=342,slow=8.0,SNR=86
STKA LR LR 15 50 02.9
comp=Z,1µm,20.1s,baz=334,slow=39
TIY Taiyuan 37.63 341 *iP* **P 15 33 41.0 +0.1**
TIY S **S** **15 39 23.7 -2.2**
TIY PCS PcS 15 39 46.0 0.0
TIY LR LR
comp=N,860nm,21.1s
TIY LR LR
comp=E,525nm,20.5s
TIY LR LR
comp=Z,2µm,26.8s
BJT Baijiatuau 38.72 346⇓*iP* **P 15 33 50.2 +0.1**
BJT pmax pmax
comp=Z,257nm,0.9s
BJT MLR MLR
comp=Z,549nm,21.0s
BJT Baijiatuau 38.72 346⇓*iP* **P 15 33 50.2 +0.2**
comp=Z,256nm,0.9s,mb6.0
BJT LR LR
comp=Z,549nm,21.0s
BJI Beijing 38.74 346 P **P 15 33 50.6 +0.4**
BJI AP pP 15 34 08.2 +1.5
BJI XP sP 15 34 17.1 +2.7
BJI PCP PcP 15 36 01.2 +0.4
BJI S **S** **15 39 40.8 -1.9**
BJI PCS PcS 15 39 50.6 +0.5
BJI XS sS 15 40 14.9 +4.3
BJI AMB AMB
comp=Z,334nm,0.9s,mb6.2
BJI LR LR
comp=N,332nm,17.6s
BJI LR LR
comp=E,612nm,23.7s
BJI LR LR
comp=Z,797nm,26.4s
IMP Imphal 39.00 308 *eP* **P 15 33 50.0 -2.7**
IMP *ex* x 15 36 02.0
SNY Shenyang 39.35 356 ⇑P **P 15 33 56.1 +0.8**
SNY S **S** **15 39 53.8 +2.0**
SNY SS SS 15 42 45.5 -2.5
SNY AMB AMB
comp=Z,81nm,1.1s,mb5.5
SNY AMB AMB
comp=Z,370nm,3.7s
SNY LR LR
comp=N,491nm,17.1s
SNY LR LR
comp=Z,642nm,23.1s
LZH Lanzhou 39.84 330 ⇑P **P 15 34 00.4 +0.9**
LZH AP pP 15 34 20.2 +4.3
LZH PP PP 15 35 37.0 +4.8
LZH S **S** **15 39 58.3 -1.0**
LZH XS sS 15 40 31.3 +4.0
LZH SS SS 15 42 54.1 -3.8
LZH AMB AMB
comp=Z,80nm,1.2s,mb5.4
LZH AMB AMB
comp=Z,246nm,4.2s
LZH LR LR
comp=E,1µm,15.4s
LZH LR LR
comp=Z,1µm,16.4s
ARMA Armidale 40.15 146 *eP* **P 15 34 02.6 +0.5**
VLA Vladivostok 40.73 5 *eP* **P 15 34 06.0 -0.7**
VLA *e* pP 15 34 20.6 -2.6
VLA *eS* **S** **15 40 13.0 +0.7**
VLA pmax pmax
comp=Z,130nm,1.5s,mb5.5
VLA MLR MLR
comp=Z,600nm,20.0s
VLA Vladivostok 40.73 5⇑*iP* **P 15 34 07.3 +0.6**
HHC Hu-ho-hao-te 40.76 342 ⇓P **P 15 34 07.4 +0.4**
HHC AP pP 15 34 25.8 +2.3
HHC XP sP 15 34 34.8 +3.6
HHC PP PP 15 35 45.9 +3.8
HHC PCP PcP 15 36 07.8 +0.6
HHC SCP ScP 15 39 49.0 -2.2
HHC PCS PcS 15 39 57.1 -0.9
HHC S **S** **15 40 13.3 +0.5**
HHC XS sS 15 40 45.2 +4.2
HHC SS SS 15 43 12.7 -3.4
HHC SCS ScS 15 44 02.5 -3.5
HHC AMB AMB
comp=Z,82nm,1.0s,mb5.5
HHC AMB AMB
comp=Z,642nm,5.3s
HHC LR LR
comp=N,655nm,14.7s
HHC LR LR
comp=E,699nm,15.3s
HHC LR LR
comp=Z,1µm,15.8s
SHL Shillong 41.00 307⇓*iP* **P 15 34 08.5 -0.8**
comp=Z,34nm,1.0s,mb5.1
SHL *ex* x 15 40 08.0
BTO Baotou 41.04 340 *eP* **P 15 34 08.7 -0.6**
CN2 Changchun 41.22 358 *eP* **P 15 34 10.7 0.0**
CN2 eAP pP 15 34 29.1 +1.8
CN2 eXP sP 15 34 38.1 +3.1
CN2 *eS* **S** **15 40 19.8 +0.2**
CN2 SS SS 15 43 21.3 -3.8
CN2 AMB AMB
comp=Z,20nm,0.7s,mb5.1
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,350nm,19.0s
CN2 LR LR
comp=E,660nm,19.0s
CN2 LR LR
comp=Z,450nm,21.0s
MDJ Mudanjiang 42.06 3 P **P 15 34 17.9 +0.3**
MDJ AP pP 15 34 35.4 +1.2
MDJ XP sP 15 34 43.9 +2.1
MDJ PP PP 15 35 58.7 +2.6
MDJ PCP PcP 15 36 08.6 -2.8
MDJ SCP ScP 15 39 54.0 -2.3
MDJ PCS PcS 15 40 00.9 -2.1
MDJ S **S** **15 40 33.3 +1.3**
MDJ SCS ScS 15 44 13.6 -0.1
MDJ AMB AMB
comp=Z,115nm,1.1s,mb5.5
MDJ AMB AMB
comp=Z,176nm,5.1s
MDJ LR LR
comp=N,459nm,21.6s
MDJ LR LR
comp=E,144nm,19.0s
MDJ LR LR
comp=Z,622nm,20.9s
MDJ Mudanjiang 42.06 3⇓*iP* **P 15 34 17.7 +0.1**
comp=Z,135nm,1.1s,mb5.6
CNB Canberra Magne 42.92 153 *eP* **P 15 34 25.6 +0.9**
TOO Toolangi 43.28 159 *eP* **P 15 34 28.3 +0.8**
LSA Lhasa 43.63 312 P **P 15 34 31.0 +0.5**
LSA AP pP 15 34 43.4 -3.8
LSA XP sP 15 34 49.4 -5.5
LSA PP PP 15 36 12.5 -0.7
LSA PCP PcP 15 36 16.9 -0.1
LSA SCP ScP 15 40 04.0 +1.0
LSA PCS PcS 15 40 09.9 0.0
LSA S **S** **15 40 54.5 -1.0**
LSA XS sS 15 41 19.7 -4.1
LSA AMB AMB
comp=Z,100nm,1.0s,mb5.5
LSA LR LR
comp=N,350nm,28.4s
LSA LR LR
comp=E,460nm,29.6s
LSA LR LR
comp=Z,890nm,36.0s
LSA Lhasa 43.63 312⇓*iP* **P 15 34 30.8 +0.3**
LSA pmax pmax
comp=Z,65nm,0.8s,mb5.4
LSA Lhasa 43.63 312⇓*iP* **P 15 34 30.8 +0.2**
comp=Z,65nm,0.8s,mb5.4
GTA Gaotai 44.43 329 P **P 15 34 37.0 +0.2**
GTA AP pP 15 34 55.5 +2.0
GTA XP sP 15 35 04.4 +3.2
GTA PCP PcP 15 36 21.1 +1.6
GTA PP PP 15 36 22.5 +0.9
GTA S **S** **15 41 04.8 -2.1**
GTA XS sS 15 41 36.9 +1.7
GTA SS SS 15 44 15.6 -13
GTA AMB AMB
comp=Z,25nm,1.5s,mb4.7
GTA AMB AMB
comp=Z,273nm,6.9s
GTA LR LR
comp=N,583nm,23.1s
GTA LR LR
comp=E,584nm,21.6s
GTA LR LR
comp=Z,951nm,23.4s
YUK Yuzh-Kuril'sk 44.62 19 P **P 15 34 38.0 -0.2**
YUK *e* pP 15 34 53.0 -1.9
YUK pmax pmax
comp=Z,2µm,1.0s
TAPN Taplejung 45.14 307 *eP* **P 15 34 41.9 -0.8**
comp=Z,375nm,1.1s,mb6.0
ODAN Odare 45.18 306 *eP* **P 15 34 42.4 -0.6**
comp=Z,331nm,0.8s,mb6.1
RAMN Ramite 45.86 306 *eP* **P 15 34 47.9 -0.4**
comp=Z,402nm,0.9s,mb6.2
YSS Yuzh-Sakhalins 46.37 15⇑*iP* **P 15 34 51.0 -1.0**
YSS *eS* **S** **15 41 34.0 -0.5**
YSS *e*SS SS 15 44 51.0 -10
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.5
YSS MLR MLR
comp=Z,500nm,18.0s
YSS Yuzh-Sakhalins 46.37 15 *eP* **P 15 34 51.9 -0.1**
comp=Z,54nm,0.8s,mb5.3
JIRN Jiri 46.49 307 *eP* **P 15 34 52.9 -0.4**
comp=Z,333nm,0.8s,mb6.1
KLR Kul'dur 46.78 4 *eP* **P 15 34 49.2 -6.0**
KLR *eS* **S** **15 41 32.5 -7.9**
KLR *e* 15 44 41.0
KLR pmax pmax
comp=Z,110µm,1.4s
KLR pmax pmax
comp=E,33nm,1.4s
GUN Gumba 46.85 307 *eP* **P 15 34 55.6 -0.5**
comp=E,350nm,0.8s,mb6.1
PKI Pulchoki 47.08 306 *eP* **P 15 34 57.0 -0.9**
comp=E,213nm,1.1s,mb5.8
PKI Pulchoki 47.08 306 *eP* **P 15 34 57.3 -0.6**
PKI pmax pmax
comp=Z,150nm,1.1s,mb5.6
PKI Pulchoki 47.08 306 *eP* **P 15 34 57.3 -0.6**
comp=Z,150nm,1.1s,mb5.6
HIA Hailar 47.09 353*d iP* **P 15 34 58.0 +0.4**
HIA Hailar 47.09 353 *iP* **P 15 34 58.0 +0.4**
HIA LR LR
comp=Z,562nm,21.0s
PKIN Phulchoki 47.09 306 *eP* **P 15 34 57.3 -0.7**
comp=Z,150nm,1.1s,mb5.6
KKN Kakani 47.28 306 *eP* **P 15 34 58.6 -0.8**
comp=Z,240nm,0.9s,mb5.9
KKN Kakani 47.28 306 *eP* **P 15 34 58.6 -0.8**
KKN pmax pmax
comp=Z,240nm,0.9s,mb5.9
DMN Daman 47.34 306 *eP* **P 15 34 59.1 -0.8**
comp=Z,328nm,1.0s,mb6.0
GKN Gorkha 47.88 306 *eP* **P 15 35 03.4 -0.7**
ULN Ulaanbaatar 48.48 342 P **P 15 35 09.6 +1.2**
SNR=109
ULN Ulaanbaatar 48.48 342 *iP* **P 15 35 09.4 +1.0**
ULN Ulaanbaatar 48.48 342 *eP* **P 15 35 09.3 +1.0**
KOLN Koldanda 48.63 306 *eP* **P 15 35 09.3 -0.6**
comp=Z,268nm,0.7s,mb6.3
SONM Songino Array 48.66 341 P **P 15 35 10.4 +0.7**
comp=Z,78nm,0.8s,mb5.7,baz=155,slow=6.3,SNR=346
SONM PcP PcP 15 36 35.5 +1.3
comp=Z,23nm,0.9s,baz=173,slow=4.3,SNR=5.0
SONM LR LR 15 56 34.2
comp=Z,529nm,20.0s,baz=154,slow=37
SONM Songino Array 48.66 341 P **P 15 35 10.4 +0.7**
SONM 15 36 35.5
SONM pmax pmax
comp=Z,78nm,0.8s
SONM pmax pmax
comp=Z,23nm,0.9s
SONM MLR MLR
comp=Z,529nm,20.0s
DANN Dangsing 48.73 306 *eP* **P 15 35 09.8 -0.8**
comp=Z,378nm,0.7s,mb6.5
HYB Hyderabad 49.98 291 *iP* **P 15 35 20.5 +0.2**
HYB Hyderabad 49.98 291 *eP* **P 15 35 20.5 +0.2**
TRD Trivandrum 50.31 279⇑*eP* **P 15 35 22.0 -0.9**
TRD ⇓*ex* x 15 43 05.0
CIT Chita 50.71 349 *eP* **P 15 35 26.1 +0.8**
CIT *e* 15 35 35.7
CIT pmax pmax
comp=Z,332nm,1.4s,mb6.2
ZAK Zakamensk 51.89 341 *eP* **P 15 35 34.1 0.0**
ZAK *e* 15 36 42.0
ZAK *e* 15 42 55.3
ZAK pmax pmax
comp=Z,46nm,1.5s,mb5.3
TLY Talaya 52.89 342 P **P 15 35 43.0 +1.5**
comp=Z,354nm,1.1s,mb6.3,SNR=15
TLY Talaya 52.89 342 ⇓P **P 15 35 42.8 +1.3**
SNR=19
TLY Talaya 52.89 342*d iP* **P 15 35 42.1 +0.6**
TLY *eS* **S** **15 43 07.4 +1.9**
TLY *e* 15 43 14.1
TLY *e* 15 43 21.4
TLY *e* 15 45 27.1
TLY pmax pmax
comp=Z,101nm,1.2s,mb5.7
TLY Talaya 52.89 342 *iP* **P 15 35 42.5 +1.0**
FUNA Funafuti 52.99 102 PFAKE 15 36 00.0 +17
FUNA LR LR
comp=Z,6µm,19.0s
IRK Irkutsk 53.19 343⇓*iP* **P 15 35 44.2 +0.5**
IRK *e* 15 36 49.6
IRK pmax pmax
comp=Z,233nm,2.2s,mb5.8
MOY Mondy 53.74 340 *eP* **P 15 35 48.6 +0.9**
MOY pmax pmax
comp=Z,449nm,1.7s,mb6.2
SKR Severo-Kuril's 53.93 22 *eP* **P 15 35 48.0 -1.1**
SKR *e* 15 36 52.5
SKR pmax pmax
comp=E,90nm,1.0s
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.8
WMQ Urumqi 54.03 325⇑*iP* **P 15 35 50.8 +0.8**
WMQ AP pP 15 36 10.0 +2.8
WMQ PCP PcP 15 36 55.0 +0.7
WMQ SCP ScP 15 40 45.0 -1.8
WMQ S **S** **15 43 19.0 -2.3**
WMQ XS sS 15 43 52.0 +1.6
WMQ SCS ScS 15 45 29.3 -4.1
WMQ SS SS 15 47 01.0 -2.6
WMQ AMB AMB
comp=Z,45nm,1.4s,mb5.3
WMQ AMB AMB
comp=Z,417nm,4.1s
WMQ LR LR
comp=N,2µm,19.6s
WMQ LR LR
comp=E,1µm,24.0s
WMQ LR LR
comp=Z,1µm,26.2s
NDI New Delhi 54.20 304 *eP* **P 15 35 49.0 -2.6**
CLNS Chul'man 54.27 358 *eP* **P 15 35 51.1 -0.4**
CLNS pmax pmax
comp=N,21nm,1.2s
CLNS pmax pmax
comp=Z,35nm,1.1s,mb5.3
CLNS pmax pmax
comp=E,8.0nm,1.2s
CLNS MLR MLR
comp=Z,6µm,27.0s
CLNS MLR MLR

CLNS MLR MLR
comp=E,5µm,28.0s
SMLA Simla 55.09 307 *i* P **P** **15 35 57.2 -0.7**
SMLA *ex* x 15 36 10.5
comp=Z,80nm,0.3s
SMLA *i* S **S** **15 43 34.1 -1.8**
BOD Bodaibo 56.20 352 *eP* **P** **15 36 05.3 -0.1**
BOD pmax pmax
comp=Z,74nm,1.4s,mb5.5
DLH Dalhousie 56.55 308 *eP* **P** **15 36 07.0 -1.3**
THN Thein Dam 56.70 308 *ex* x 15 36 01.6
PET Petropavlovsk 56.75 22 *d* iP **P** **15 36 08.6 -0.7**
PET *eS* **S** **15 43 57.7 +0.6**
PET *e*PS 15 44 15.8
PET *e*SS SS 15 47 42.3 -3.7
PET pmax pmax
comp=Z,200nm,1.4s,mb6.0
PET pmax pmax
comp=Z,94nm,1.0s,mb5.8
PET pmax pmax
comp=Z,100nm,12.9s
PET smax
comp=N,300nm,13.3s
PET smax
comp=E,300nm,21.9s
PET smax
comp=N,300nm,22.8s
PET MLR MLR
comp=Z,300nm,17.0s
PET Petropavlovsk 56.75 22 *i* P **P** **15 36 09.3 0.0**
PET LR LR
comp=Z,357nm,19.0s
MK31 Makanchi Array 58.87 325 *i* P **P** **15 36 24.2 -0.1**
MKAR Makanchi Array 58.87 325 P **P** **15 36 24.1 -0.2**
comp=Z,47nm,0.8s,mb5.6,baz=113,slow=7.6,SNR=186
MKAR LR LR 16 05 37.6
comp=Z,368nm,20.8s,baz=115,slow=40
MKAR PKP2bc 16 06 07.5
comp=Z,0.7nm,1.0s,baz=289,slow=3.7,SNR=3.9
MKAR Makanchi Array 58.87 325 P **P** **15 36 24.2 -0.1**
MKAR pmax pmax
comp=Z,47nm,0.8s
MKAR MLR MLR
comp=Z,368nm,20.8s
MKAR pmax pmax
comp=Z,1.0nm,1.0s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 58.87 325 P **P** **15 36 24.1 -0.2**
MKAR LR LR 16 05 37.6
MKAR ⇑*e* 16 06 07.5
KSH Kashi 59.27 315 P **P** **15 36 26.5 -0.8**
KSH *e*AP pP 15 36 48.2 +3.5
KSH *e*PCP PcP 15 37 15.1 +0.2
KSH *e*PP PP 15 38 42.1 +3.2
KSH *e*SCP ScP 15 41 07.0 -3.0
KSH *e*PCS PcS 15 41 15.1 -1.8
KSH *e*S **S** **15 44 23.3 -7.3**
KSH *e*SCS ScS 15 46 08.0 -3.6
KSH *e*SS SS 15 48 29.0 +2.8
KSH AMB AMB
comp=Z,1µm,4.3s
KSH LR LR
comp=N,346nm,4.2s
KSH LR LR
comp=E,465nm,4.6s
KSH LR LR
comp=Z,274nm,5.5s
YAK Yakutsk 59.48 1 *d* iP **P** **15 36 27.8 -0.5**
YAK *e**PP pP 15 36 36.5 -9.2
YAK *e* 15 37 16.0
YAK *e* 15 38 39.0
YAK *i* S **S** **15 44 32.9 +0.4**
YAK *e* 15 46 10.8
YAK pmax pmax
comp=N,51nm,1.2s
YAK pmax pmax
comp=Z,135nm,1.0s,mb5.9
YAK pmax pmax
comp=E,20nm,1.1s
YAK pmax pmax
comp=Z,15nm,0.9s,mb5.0
YAK pmax pmax
comp=N,41nm,1.3s
YAK smax
comp=N,74µm,2.0s
YAK smax
comp=E,109µm,2.0s
YAK Yakutsk 59.48 1 *i* P **P** **15 36 27.7 -0.6**
KRAR Krasnoyarsk 60.10 339⇑*eP* **P** **15 36 32.8 +0.1**
KRAR pmax pmax
comp=Z,108nm,1.4s,mb5.7
ULHL Ulahol 60.28 318 P **P** **15 36 37.0 +2.9**
SNR=7.7
RPZ Rata Peaks 60.45 145 LR LR 16 00 43.9
comp=Z,933nm,21.6s,baz=243,slow=34
TKM2 Tokmak 2 61.01 319 P **P** **15 36 39.3 +0.2**
SNR=26
RAO Raoul Island 61.22 125 LR LR 16 00 13.2
comp=Z,208nm,18.7s,baz=190,slow=33
RAO Raoul Island 61.22 125 PFAKE 15 36 50.0 +9.2
RAO LR LR
comp=Z,1µm,20.0s
SNZO South Karori 61.28 141 PFAKE 15 36 50.0 +9.0
SNZO LR LR
comp=Z,1µm,22.0s
URZ Urewera 61.30 137 LR LR 16 05 05.7
comp=Z,2µm,18.1s,baz=11,slow=38
KBK Karagaybulak 61.32 318 P **P** **15 36 42.5 +1.3**
SNR=8.4
UCH Uchtor 61.42 318 P **P** **15 36 43.9 +1.9**
SNR=48
CHMS Chumysh 61.60 319 P **P** **15 36 43.2 +0.1**
SNR=8.7
FRU Bishkek 61.62 318 *eP* **P** **15 36 43.0 -0.2**
FRU *e* pP 15 36 56.0 -4.7
FRU pmax pmax
comp=Z,60nm,1.0s,mb5.6
USP Ospenovka 61.88 319 P **P** **15 36 44.8 -0.1**
SNR=34
AML Almayashu 61.94 317 P **P** **15 36 46.2 +0.8**
SNR=50
ZALV Zalesovo Beam 61.94 333 LR LR 16 05 45.4
comp=Z,122nm,19.8s,baz=121,slow=38
ZALV PKP2bc 16 06 00.2
comp=Z,1.0nm,0.6s,baz=302,slow=2.8,SNR=6.8
EKS2 Erkin-Say 62.10 318 P **P** **15 36 47.1 +0.6**
SNR=16
AFI Afiamalu 62.64 107 LR LR 15 59 19.0
comp=Z,605nm,19.2s,baz=153,slow=32
KURK Kurchatov 63.06 328 P **P** **15 36 53.7 +1.0**
comp=Z,2µm,1.1s,SNR=87
KURK Kurchatov 63.06 328 P **P** **15 36 52.9 +0.2**
SNR=196
KURK Kurchatov 63.06 328 P **P** **15 36 53.1 +0.4**
comp=Z,181nm,1.0s,mb6.0,baz=126,slow=4.7,SNR=121
KURK Kurchatov 63.06 328 *d* iP **P** **15 36 52.6 -0.1**
KURK pmax pmax
comp=Z,398nm,1.1s,mb6.3
SEY Seymchan 63.19 13 *d* iP **P** **15 36 53.9 +0.6**
SEY Seymchan 63.19 13 *i* P **P** **15 36 53.9 +0.6**
NVS Novosibirsk 63.22 333 ⇓*i* P **P** **15 36 53.1 -0.6**
NVS *i* S **S** **15 45 20.1 -0.1**
NVS pmax pmax
comp=Z,319nm,1.4s,mb6.1
NVS pmax pmax
comp=N,173nm,1.3s
NVS pmax pmax
comp=E,172nm,1.2s
NVS smax
comp=E,80nm,1.8s
NVS smax
comp=N,29nm,1.6s
SMY Shemya 63.35 30 *eP* **P** **15 36 55.1 +0.5**
SMY pmax pmax
comp=Z,170nm,1.2s,mb5.8
SMY Shemya 63.35 30 *eP* **P** **15 36 54.7 +0.1**
comp=Z,138nm,1.1s,mb5.8
SMY LR LR
comp=Z,345nm,21.0s
KK31 Karatay Array 64.48 317 P **P** **15 37 01.6 -0.6**
AMKA Amchitka 65.34 33 *eP* **P** **15 37 08.0 +0.4**
comp=Z,38nm,0.7s,mb5.3
VOSK Vostochnaya 68.19 327 P **P** **15 37 25.1 -0.6**
VOSK pmax pmax
comp=Z,200nm,1.0s,mb5.9
BVA0 Borovoye Array 68.64 327 *i* P **P** **15 37 28.2 -0.3**
BVA0 pmax pmax
comp=Z,93nm,1.3s,mb5.5
BVAR Borovoye Array 68.64 327 P **P** **15 37 28.7 +0.1**
comp=Z,143nm,0.9s,mb5.8,baz=124,slow=7.4,SNR=386
BVAR Borovoye Array 68.64 327 P **P** **15 37 28.7 +0.2**
BVAR pmax pmax
comp=Z,143nm,0.9s
BRVK Borovoye 68.71 327 P **P** **15 37 29.5 +0.5**
comp=Z,2µm,1.1s,SNR=90
BRVK Borovoye 68.71 327 P **P** **15 37 29.5 +0.5**
SNR=156
BRVK Borovoye 68.71 327 *i* P **P** **15 37 29.0 0.0**
WBK Wadi Bani Khal 68.97 293 ⇓P **P** **15 37 31.5 +0.3**
SNR=5.4
TIXI Tiksi 69.12 1 *eP* **P** **15 37 29.9 -1.3**
TIXI *e* 15 40 03.6
TIXI *e*S S 15 46 30.5 -0.8
TIXI *e**SS sS 15 47 05.9 +4.4
TIXI pmax pmax
comp=Z,61nm,1.1s,mb5.3
TIXI MLR MLR
comp=Z,509nm,20.0s
TIXI Tiksi 69.12 1 *i* P **P** **15 37 30.4 -0.8**
DRV Dumont d'Urvil 69.55 175 SS SS 15 51 12.0 +6.7
DRV R 16 00 00.0
CASY Casey 69.59 187 *eP* **P** **15 37 34.1 0.0**
comp=Z,18nm,0.9s,mb4.9
CASY LR LR
comp=Z,422nm,19.0s
JMDO Jabal Madar 69.74 293 P **P** **15 37 36.2 +0.3**
SNR=5.7
BIDO Bidbid 69.84 294 P **P** **15 37 37.0 +0.5**
SNR=8.4
HOQ Hoqain 70.59 294 P **P** **15 37 41.2 +0.1**
SNR=6.3
HATD Hatta, Dubai 71.79 295 ⇑P **P** **15 37 49.3 +1.0**
SNR=8.3
ASHO Ashiyiah 71.84 295 ⇑P **P** **15 37 49.7 +1.0**
SNR=6.0
ABKT Ailbek 72.05 309 P **P** **15 37 49.6 0.0**
comp=Z,614nm,1.0s,mb6.4,SNR=44
MIR Mirnyy 73.01 194 ⇑*i* P **P** **15 37 56.0 +1.3**
MIR pmax pmax
comp=Z,200nm,1.0s,mb5.9
AB31 Akbulak array 73.43 321 *i* P **P** **15 37 57.2 -0.4**
WHFO Wadi Hawf 73.47 288 ⇓P **P** **15 37 58.4 0.0**
SNR=10
AKUT Akutan 74.73 34 *eP* **P** **15 38 05.5 +0.5**
comp=Z,123nm,0.6s,mb5.8
AKTK Aktyubinsk 74.94 322 *i* P **P** **15 38 06.3 -0.1**
AKTO Aktyubinsk 74.94 322 LR LR 16 14 10.4
comp=Z,447nm,20.9s,baz=266,slow=38
AKTO Aktyubinsk 74.94 322 *i* P **P** **15 38 06.3 -0.1**
SVE Sverdlovsk 75.29 329⇑*eP* **P** **15 38 08.1 -0.1**
SVE *e* pP 15 38 22.8 -3.5
SVE *e*S S 15 47 49.4 +7.1
SVE *e*SS SS 15 52 33.8 +0.5
SVE pmax pmax
comp=Z,145nm,1.1s,mb5.6
SVE MLR MLR
comp=Z,410nm,21.0s
ARU Arti 76.26 328 P **P** **15 38 13.6 -0.2**
comp=Z,443nm,1.2s,mb6.1,SNR=20
ARU Arti 76.26 328 *d* iP **P** **15 38 13.0 -0.8**
ARU *e* 15 38 22.1
ARU *e* 15 41 07.4
ARU *e*PPP 15 42 56.1
ARU *e*S S 15 47 52.1 -0.9
ARU pmax pmax
comp=Z,114nm,1.2s,mb5.5
ARU Arti 76.26 328 *i* P **P** **15 38 13.2 -0.6**
SDPT Sand Point 78.02 34 ⇓*i* P **P** **15 38 23.4 -0.2**
comp=Z,145nm,0.7s,mb5.8
MAK Makhachkala 80.78 313 *eP* **P** **15 38 37.2 -1.8**
MAK *e**PP pP 15 38 52.3 -4.9
MAK *e* 15 41 43.3
MAK *e*PPP 15 43 32.9
MAK *e*S S 15 48 42.8 +0.8
MAK pmax pmax
comp=Z,260nm,1.7s,mb5.8
SVW2 Sparrevohn 81.72 29 *eP* **P** **15 38 45.0 +1.5**
TTA Tatalina 81.85 27 *eP* **P** **15 38 45.4 +1.2**
TTA pmax pmax
comp=Z,99nm,1.4s,mb5.5
TTA Tatalina 81.85 27 *eP* **P** **15 38 45.4 +1.3**
comp=Z,99nm,1.4s,mb5.5
DGRG David-gareji 82.25 311 P **P** **15 38 48.0 +1.2**
OHAK Old Harbor 82.29 33 *eP* **P** **15 38 47.7 +1.1**
comp=Z,84nm,0.9s,mb5.6
GNI Garni 82.65 310 P **P** **15 38 51.0 +2.1**
comp=Z,9.0nm,0.5s,mb4.9,baz=80,slow=7.2,SNR=14
GNI Garni 82.65 310 *d* iP **P** **15 38 49.8 +0.9**
GNI pmax pmax
comp=Z,87nm,1.5s
GNI Garni 82.65 310 P **P** **15 38 51.0 +2.1**
GNI LR LR
comp=Z,142nm,19.0s
MTA Mtatsminda 82.69 312 P **P** **15 38 49.6 +0.5**
MAW Mawson 82.70 200 *eP* **P** **15 38 48.9 +0.4**
comp=Z,16nm,0.9s,mb4.8
MAW Mawson 82.70 200 P **P** **15 38 48.7 +0.2**
comp=Z,16nm,0.7s,mb4.9,baz=62,slow=6.4,SNR=43
MAW Mawson 82.70 200 P **P** **15 38 48.7 +0.2**
MAW pmax pmax
comp=Z,16nm,0.7s
TBLG Delisi 82.74 312 P **P** **15 38 50.5 +1.2**
KDAK Kodiak Island 82.74 32 P **P** **15 38 50.0 +1.0**
comp=Z,529nm,0.8s,mb6.4,SNR=26
KDAK Kodiak Island 82.74 32 P **P** **15 38 50.2 +1.2**
comp=Z,58nm,0.7s,mb5.5,baz=253,slow=2.5,SNR=68
SBA Scott Base 83.00 172 *eP* **P** **15 38 51.1 +1.2**
SBA pmax pmax
comp=Z,15nm,1.0s,mb4.8
SBA MLR MLR
comp=Z,467nm,19.0s
SBA Scott Base 83.00 172 *eP* **P** **15 38 51.1 +1.2**
comp=Z,15nm,1.0s,mb4.8
SBA LR LR
comp=Z,467nm,19.0s
GOR Gori 83.22 312 P **P** **15 38 53.9 +2.1**
HAKT HAKKARI 83.34 307 *i* P **P** **15 38 53.3 +0.7**
IMA2 Indian Mountai 83.38 24 *eP* **P** **15 38 53.5 +1.4**
ONI Oni 83.74 312 P **P** **15 38 55.4 +0.9**
MSL Mosul 83.78 306 *ex* x 15 38 51.0
SLKM Skilak Lake 84.24 30 *eP* **P** **15 38 57.0 +0.4**
PPT Papeete 84.30 108 *eS* S 15 49 24.5 +5.8
comp=Z,363nm,26.2s
PPT *e*SS SS 15 54 58.8 +8.9
comp=Z,209nm,27.0s
PPT Papeete 84.30 108 *e*LR LR 16 05 42.4
comp=Z,2µm,30.8s
PPT Papeete 84.30 108 LR LR 16 12 32.9
comp=Z,473nm,18.2s,baz=304,slow=33
KIV Kislovodsk 84.35 314 P **P** **15 38 58.6 +1.1**
comp=Z,114nm,0.9s,mb5.7,SNR=11
KIV Kislovodsk 84.35 314 P **P** **15 38 58.4 +0.8**
SNR=13
KIV Kislovodsk 84.35 314 ⇓*i* P **P** **15 38 58.0 +0.5**
KIV *i* 15 42 14.0
KIV *i* S S 15 49 20.8 +2.5
KIV pmax pmax
comp=Z,39nm,1.6s,mb5.0
KIV Kislovodsk 84.35 314 *i* P **P** **15 38 57.5 0.0**
ARTV Artvin 84.83 311 *i* P **P** **15 39 01.5 +1.5**
PMR Palmer 84.86 29 *eP* **P** **15 38 59.9 +0.2**
PMR pmax pmax
comp=Z,141nm,1.2s,mb5.8
PMR MLR MLR
comp=Z,246nm,21.0s
PMR Palmer 84.86 29 *eP* **P** **15 38 59.9 +0.2**
comp=Z,141nm,1.2s,mb5.8
PMR LR LR
comp=Z,246nm,21.0s
VRHR Novokhopersk 85.32 321 *eP* **P** **15 39 01.9 -0.3**
VRHR pmax pmax
comp=Z,140nm,0.9s,mb5.9
VRHR pmax pmax
comp=N,50nm,1.3s
VRHR pmax pmax
comp=E,70nm,1.1s
COLA College 85.67 25 *i* P **P** **15 39 04.4 +0.7**
COLA LR LR
comp=Z,272nm,20.0s
KOPT Kop Dagi 85.90 310 *i* P **P** **15 39 06.8 +1.5**
EYAK Cordova Ski Ar 86.45 30 *eP* **P** **15 39 08.5 +0.9**
comp=Z,31nm,0.7s,mb5.3
SOC Sochi 86.49 313 *d* iP **P** **15 39 07.2 -1.0**
SOC *e* 15 42 33.3
SOC *e*PPP 15 44 24.1
SOC *e*S S 15 49 25.7 -14
SOC *e*SS SS 15 55 20.2 -0.7
SOC *e*SSS 15 58 47.5
SOC pmax pmax
comp=Z,14nm,0.8s,mb4.9
SOC MLR MLR
comp=Z,180nm,16.0s
SOC Sochi 86.49 313 *i* P **P** **15 39 09.1 +0.9**
VOR Voronezh 86.85 322 *eP* **P** **15 39 08.0 -1.7**
VOR pmax pmax
comp=Z,180nm,1.8s,mb5.7
VRSR Storozhevoye 86.85 321 *eP* **P** **15 39 08.9 -0.9**
VRSR pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
VRSR pmax pmax
comp=N,3.0nm,1.3s
VRSR pmax pmax
comp=E,4.0nm,0.6s
ELZG Elazig 87.08 308 *i* P **P** **15 39 13.3 +2.1**
MALT Malatya 87.52 308⇑*i* P **P** **15 39 15.2 +1.9**
GRSN GIRESUNGRSN 87.59 311 *i* P **P** **15 39 15.7 +2.1**
MOS Moscow 87.75 326 *eP* **P** **15 39 11.5 -2.5**
MOS *e* 15 49 48.2
MOS pmax pmax
comp=Z,89nm,1.2s,mb5.7
ANN Anapa 88.12 315 *eP* **P** **15 39 15.2 -0.8**
ANN *e**PP pP 15 39 28.6 -5.9
ANN *e* 15 49 36.1
ANN pmax pmax
comp=Z,112nm,1.4s,mb5.7
ANN MLR MLR
comp=Z,315nm,20.0s
GZT Gaziantep 88.23 307 *i* P **P** **15 39 17.9 +1.2**
OBN Obninsk 88.37 325 P **P** **15 39 16.3 -0.6**
comp=Z,402nm,0.9s,mb6.5,SNR=5.7
OBN Obninsk 88.37 325 *eP* **P** **15 39 15.9 -1.0**
OBN *i* pP 15 39 31.8 -3.6
OBN *i* 15 42 45.2
OBN *i* S S 15 49 46.8 -10
OBN *e*PS 15 51 13.6
OBN pmax pmax
comp=Z,93nm,1.2s,mb5.7
OBN Obninsk 88.37 325⇑*eP* **P** **15 39 15.0 -1.9**
EGAK Eagle 88.53 25 *eP* **P** **15 39 17.2 -0.3**
comp=Z,11nm,0.8s,mb4.9
EGAK LR LR
comp=Z,202nm,20.0s
LVZ Lovozero 88.72 338 ⇓*eP* **P** **15 39 17.8 -0.5**
LVZ pmax pmax
comp=Z,53nm,1.5s,mb5.3
LVZ Lovozero 88.72 338 ⇓*eP* **P** **15 39 17.9 -0.4**
ASF Jabal al Asfar 88.95 302 P **P** **15 39 22.1 +1.9**
comp=Z,33nm,1.1s,mb5.2,baz=345,slow=1.9,SNR=18
ASF Jabal al Asfar 88.95 302 P **P** **15 39 22.1 +1.9**
ASF pmax pmax
comp=Z,33nm,1.2s
PINB Pinarbasi 89.10 308 *i* P **P** **15 39 23.8 +3.0**
ANDN Andirin 89.19 307 *i* P **P** **15 39 24.6 +3.3**
APA Apatity 89.21 337⇑*i* P **P** **15 39 20.8 +0.2**
APA *i* pP 15 39 34.6 -4.6
APA pmax pmax
comp=Z,36nm,1.2s,mb5.3
APA MLR MLR
comp=Z,900nm,19.0s
COBT Iskenderun 89.31 306 *i* P **P** **15 39 23.7 +1.9**
DAWY Dawson 89.34 26 *eP* **P** **15 39 21.9 +0.6**
YAYL Yayladag 89.45 306 *i* P **P** **15 39 22.9 +0.5**
YURE YUREGIR 89.79 307 *i* P **P** **15 39 24.1 0.0**
KMBO Kilima Mbogo 89.97 269 P **P** **15 39 26.7 +1.3**
comp=Z,7.4nm,0.8s,mb4.9,baz=43,slow=9.5,SNR=7.0
KMBO Kilima Mbogo 89.97 269 P **P** **15 39 26.7 +1.3**
KMBO pmax pmax
comp=Z,7.0nm,0.8s
SIM Simferopol' 90.47 315 *eP* **P** **15 39 23.9 -3.1**
SIM *e*S S 15 50 15.0 -1.9
SIM pmax pmax
comp=Z,40nm,10.0s
SIM MLR MLR
comp=Z,400nm,24.0s
HYT Haines Junctio 90.49 29 *eP* **P** **15 39 29.6 +2.9**
JOF Joensuu 90.53 333 *ep* **P** **15 39 25.4 -1.5**
comp=Z,12nm,0.7s,mb5.2
JOF Joensuu 90.53 333 *eP* **P** **15 39 25.4 -1.5**
JOF pmax pmax
comp=Z,12nm,0.7s,mb5.1
CDAG Cicekdag 90.63 310 *i* P **P** **15 39 28.4 +0.5**
BR131 Keskin Array S 91.18 310 *eP* **P** **15 39 30.0 -0.5**
comp=Z,4.5nm,0.8s,mb4.7
INK Inuvik 91.20 22 P **P** **15 39 29.1 -0.8**
comp=Z,12nm,1.2s,mb4.9,baz=282,slow=5.0,SNR=7.9
INK LR LR 16 20 53.6
comp=Z,274nm,21.1s,baz=296,slow=36
INK Inuvik 91.20 22 P **P** **15 39 29.9 0.0**
INK pmax pmax
comp=Z,360nm,1.0s
BALT Daday 91.24 311 *i* P **P** **15 39 31.8 +1.1**
KEV Kevo 91.25 340 *eP* **P** **15 39 28.9 -1.2**
comp=Z,6.3nm,0.7s,mb4.8
KEV LR LR
comp=Z,266nm,22.0s
PUL Pulkovo 91.38 330 ⇓*eP* **P** **15 39 31.5 +0.6**
SYO Syowa Base 91.39 201 ⇓*eP* **P** **15 39 30.0 -0.7**
SYO Syowa Base 91.39 201 ⇓*epP* pP 15 39 48.4 -0.8
SKAG Skagway 91.74 30 *eP* **P** **15 39 33.7 +1.2**
comp=Z,13nm,0.6s,mb5.3
ARCES ARCESS Array B 91.81 340 P **P** **15 39 31.6 -1.2**
comp=Z,40nm,0.8s,mb5.7,baz=79,slow=4.7,SNR=59
ARCES LR LR 16 29 14.1
comp=Z,196nm,18.4s,baz=74,slow=41
ARCES ARCESS Array B 91.81 340 P **P** **15 39 31.6 -1.1**
ARCES pmax pmax
comp=Z,40nm,0.8s
ARCES MLR MLR
comp=Z,196nm,18.4s
ANTO Ankara 91.82 310 PFAKE 15 39 40.0 +6.6
ANTO LR LR
comp=Z,110nm,21.0s
SIT Sitka 92.06 33 PFAKE 15 39 50.0 +16
SIT LR LR
comp=Z,447nm,20.0s
KBS Kingsbay 92.35 350 PFAKE 15 39 50.0 +15
KBS LR LR
comp=Z,375nm,22.0s
KAF Kangasniemi 92.94 332 *ep* **P** **15 39 36.8 -1.3**
comp=Z,4.8nm,0.8s,mb4.9,baz=73,slow=4.2
KAF Kangasniemi 92.94 332 *eP* **P** **15 39 36.8 -1.3**
KAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
AKASG Malin Array Be 93.17 321 P **P** **15 39 38.1 -1.3**
comp=Z,1.2nm,0.3s,mb4.7,baz=73,slow=4.2,SNR=31
AKASG LR LR 16 25 42.1
comp=Z,129nm,22.0s,baz=55,slow=38
AKASG Malin Array Be 93.17 321 *i* P **P** **15 39 38.5 -0.9**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
KIEV Kiev 93.18 321 *eP* **P** **15 39 38.2 -1.2**
KIEV pmax pmax
comp=Z,14nm,1.1s,mb5.2
KIEV MLR MLR
comp=Z,211nm,20.0s
KIEV Kiev 93.18 321 *eP* **P** **15 39 38.2 -1.2**
comp=Z,14nm,1.1s,mb5.2
KIEV LR LR
comp=Z,211nm,20.0s
WRAK Wrangell Islan 93.78 33 *eP* **P** **15 39 43.4 +1.4**
comp=Z,20nm,0.4s,mb5.8
TKTP Tekketepe 93.92 308 *i* P pP 15 40 04.5 +2.9
ULDT Uludag 94.59 310 *i* P **P** **15 39 46.0 -0.1**
DLBC Dease Lake 94.62 31 *eP* **P** **15 39 47.2 +1.3**
VRI Vrincioaia 95.53 316⇑*i* P **P** **15 39 50.8 +0.5**
PLOR Plostina 95.59 316⇑*i* P **P** **15 39 50.7 +0.1**
MLR Muntele Rosu 96.14 316⇑*i* P **P** **15 39 53.2 +0.1**
SUW Suwalki 96.23 325 *eP* **P** **15 39 53.2 -0.1**
SUW Suwalki 96.23 325 *eP* **P** **15 39 53.2 -0.1**
LVV L'vov 96.61 321 *eP* **P** **15 40 03.3 +8.2**
BBB Bella Bella 97.06 37 LR LR 16 15 45.3
comp=Z,282nm,19.9s,baz=82,slow=30
KWP Kalwaria 97.48 321 *eP* **P** **15 39 59.1 +0.1**
KWP Kalwaria 97.48 321 *eP* **P** **15 39 59.2 +0.1**

KOLS **Kolonicke sedl** 97.92 320 *e*P P **15 40 00.2 -0.8**
UZH **Uzhgorod** 97.97 320 ‖ *i*P P **15 40 01.5 +0.2**
DRGR 98.09 318 ‖ *i*P P **15 40 02.0 +0.1**
RKT **Rikitea** 98.17 113 *e*LR LR 16 12 08.4
comp=Z,539nm,35.8s
CRVS **Cervenica-Dubn** 98.44 320 PDIF P **15 40 03.5 +0.1**
CRVS **Cervenica-Dubn** 98.44 320 *e*P P **15 40 03.5 +0.1**
STHS **Stebnicka Huta** 98.46 321 *e*P P **15 40 04.8 +1.3**
STHS pmax pmax
comp=Z,5.0nm,1.1s,mb5.0
STHS **Stebnicka Huta** 98.46 321 PDIF P **15 40 04.8 +1.3**
STHS **Stebnicka Huta** 98.46 321 *e*P P **15 40 04.8 +1.3**
comp=Z,5.1nm,1.1s,mb5.0
DAG **Danmarks Havn** 98.59 352 ‖ *i*P P **15 40 02.9 -0.6**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb5.4
DAG **Danmarks Havn** 98.59 352 ‖ *i*P P **15 40 02.9 -0.6**
comp=Z,9.7nm,0.8s,mb5.4
OJC **Ojcow** 99.17 322 *e*P P **15 40 06.4 -0.2**
OJC *e*S S 15 51 38.6 +5.9
OJC MLR MLR
comp=Z,200nm,22.2s
KECS **Kecovo** 99.17 320 *e*P P **15 40 06.8 +0.1**
KECS pmax pmax
comp=Z,4.0nm,1.1s,mb4.9
KECS **Kecovo** 99.17 320 PDIF P **15 40 06.8 +0.1**
KECS **Kecovo** 99.17 320 *e*P P **15 40 06.8 +0.1**
comp=Z,4.1nm,1.1s,mb4.9
LSZ **Lusaka** 99.30 255 PFAKE 15 40 20.0 +12
LSZ LR LR
comp=Z,172nm,19.0s
NOA **NORSAR Array B 100.14 334** P Pdif 15 40 09.2 -1.6
comp=Z,8.5nm,0.8s,baz=66,slow=4.6,SNR=19
NOA **NORSAR Array B 100.14 334** P Pdif 15 40 09.2 -1.6
NOA pmax pmax
comp=Z,9.0nm,0.9s
YKA **Yellowknife Ar** 100.49 25 P Pdif 15 40 12.5 +0.2
comp=Z,2.3nm,1.0s,baz=294,slow=4.9,SNR=11
YKA PP PP 15 44 20.6 +1.4
comp=Z,2.7nm,1.0s,baz=295,slow=7.4,SNR=6.0
YKA PKiKP PKiKP 15 44 38.9 +0.4
comp=Z,0.3nm,0.5s,baz=298,slow=1.7,SNR=3.9
YKA PKKPbc PKKPbc 15 56 27.3 -2.6
comp=Z,0.9nm,0.9s,baz=121,slow=1.8,SNR=5.7
YKA **Yellowknife Ar** 100.49 25 P Pdif 15 40 12.6 +0.2
YKA PP PP 15 44 20.6 +1.4
PGC **Sidney** 100.85 40 *e*Pdif Pdif 15 40 12.8 -1.1
comp=Z,25nm,1.1s
NLWA **Neilton Lookou** 100.93 41 *e*Pdif Pdif 15 40 15.1 +0.8
comp=Z,6.7nm,0.9s
DPC **Dobruska-Polom 101.27 322** *i* P Pdif 15 40 15.2 -0.7
DPC MLR MLR
comp=Z,200nm,24.6s
DPC **Dobruska-Polom 101.27 322** *e*PDIF Pdif 15 40 15.2 -0.7
DPC AMS AMS 16 22 50.0
comp=Z,200nm,24.6s
UPC **Upice** 101.41 323 *i* P Pdif 15 40 21.8 +5.3
UPC **Upice** 101.41 323 *e*pP Pdif 15 40 21.8 +5.3
JCW **Jim Creek** 101.95 40 *e*Pdif Pdif 15 40 19.8 +0.9
COR **Corvallis** 102.07 44 PFAKE 15 40 30.0 +11
COR LR LR
comp=Z,562nm,22.0s
PVCC **Panska Ves** 102.28 323 *i* P Pdif 15 40 21.2 +0.9
PVCC MLR MLR
comp=Z,400nm,30.5s
PVCC **Panska Ves** 102.28 323 *e*PDIF Pdif 15 40 21.2 +0.9
PVCC AMS AMS 16 24 00.0
comp=Z,400nm,30.5s
PRU **Pruhonice** 102.47 322 *i* P Pdif 15 40 25.2 +4.0
PRU MLR MLR
comp=Z,300nm,30.3s
PRU **Pruhonice** 102.47 322 *e*PDIF Pdif 15 40 25.2 +4.0
PRU AMS AMS 16 23 40.0
comp=Z,300nm,30.3s
BRG **Berggiesshubel** 102.54 323 *i* P Pdif 15 40 22.1 +0.6
BRG pmax pmax
comp=Z,5.0nm,1.0s
BRG pmax pmax
comp=Z,5.0nm,1.2s
BRG pmax pmax
comp=Z,7.0nm,1.5s
BRG pmax pmax
comp=Z,5.0nm,1.3s
BRG **Berggiesshubel** 102.54 323 *i* P Pdif 15 40 22.1 +0.6
comp=Z,8.2nm,1.0s
BRG *e* 15 40 26.6
comp=Z,9.0nm,1.2s
BRG *e* 15 40 40.6
comp=Z,11nm,1.5s
BRG *e* 15 44 09.0
comp=Z,8.9nm,1.2s
HUMO **Hull Mountain** 102.84 45 PFAKE 15 40 30.0 +7.2
HUMO LR LR
comp=Z,332nm,22.0s
CLL **Collm** 102.94 324 *e*P Pdif 15 40 23.0 -0.3
CLL *e*S Sdif 15 52 06.0 +2.1
CLL pmax pmax
comp=Z,8.0nm,1.3s
CLL MLR MLR
comp=Z,300nm,24.4s
CLL **Collm** 102.94 324 *e*Pdif Pdif 15 40 23.0 -0.3
comp=Z,8.0nm,1.3s
CLL *ex* x 15 43 58.0
CLL *e*(PP) 15 44 25.0
CLL *e*Sdif Sdif 15 52 06.0 +2.1
CLL *e*PS PS 15 53 57.0 +9.5
CLL *e*PPS 15 54 40.0
CLL *e*SS SS 15 59 43.0 +29
CLL *e*SSS 16 03 48.0
CLL *e*SSSS 16 06 00.0
CLL **Collm** 102.94 324 *e*Pdif Pdif 15 40 23.0 -0.3
comp=Z,8.0nm,1.3s
CLL *e*PP PP 15 44 25.0 -13
CLL *e*Sdif Sdif 15 52 06.0 +2.1
CLL LR LR
comp=Z,300nm,24.4s
YBH **Yreka Blue Hor** 103.25 46 PFAKE 15 40 40.0 +15
YBH LR LR
comp=Z,192nm,19.0s
KHC **Kasperske Hory** 103.35 322 *i* P Pdif 15 40 25.8 +0.7
KHC MLR MLR
comp=Z,200nm,21.7s
KHC **Kasperske Hory** 103.35 322 *e*PDIF Pdif 15 40 25.8 +0.7
KHC AMS AMS 16 27 20.0
comp=Z,200nm,21.7s
GERES **GERESS Array B 103.37 321** Pdiff Pdif 15 40 25.8 +0.7
comp=Z,1.3nm,0.9s,baz=69,slow=4.4,SNR=9.6
GERES PP PP 15 44 46.6 +5.4
comp=Z,0.5nm,0.6s,baz=57,slow=4.9,SNR=3.7
GERES **GERESS Array B 103.37 321** P Pdif 15 40 25.8 +0.6
GERES 15 44 46.6
GERES pmax pmax
comp=Z,1.0nm,0.9s
GERES pmax pmax
comp=Z,1.0nm,0.6s
WDC **Whiskeytown Da** 103.68 47 PFAKE 15 40 40.0 +13
WDC LR LR
comp=Z,426nm,22.0s
HOPS **Hopland** 103.69 49 PFAKE 15 40 40.0 +13
HOPS LR LR
comp=Z,484nm,22.0s
MCCM **Marconi Confer** 104.05 50 PFAKE 15 40 40.0 +12
MCCM LR LR
comp=Z,244nm,19.0s
HAWA **Hanford** 104.06 41 PFAKE 15 40 40.0 +12
HAWA LR LR
comp=Z,282nm,21.0s
GRA1 **Grafenberg Arr** 104.59 323 *e*Pdif Pdif 15 40 31.5 +0.9
GRF **Grafenberg Arr** 104.59 323 *e*Pdiff Pdif 15 40 31.5 +0.9
MOD **Modoc** 104.93 46 PFAKE 15 45 00.0 +13
MOD LR LR
comp=Z,198nm,20.0s
EDM **Edmonton** 105.18 33 *e*P Pdif 15 40 33.4 +0.2
SAO **San Andreas Ge** 105.50 51 PFAKE 15 45 00.0 +12
SAO LR LR
comp=Z,284nm,19.0s
CMB **Columbia Colle** 105.98 49 PFAKE 15 45 00.0 +11
CMB LR LR
comp=Z,283nm,19.0s
BMO **Blue Mountains** 106.05 42 PFAKE 15 45 00.0 +11
BMO LR LR
comp=Z,254nm,20.0s
NVAR **Mina Array Bea** 107.43 49 Pdiff Pdif 15 40 45.7 +2.5
comp=Z,1.2nm,0.9s,baz=271,slow=6.1,SNR=7.5
NVAR PKKPbc PKKPbc 15 56 08.9 +0.5
comp=Z,0.6nm,0.8s,baz=122,slow=3.8,SNR=4.7
CDF **Champ du Feu** 107.48 323 *e*PKiKP PKiKP 15 44 50.2 -1.5
MSO **Missoula** 107.50 39 *e*PKPdf PKiKP 15 44 52.6 +0.8
MSO LR LR
comp=Z,157nm,20.0s
BMN **Battle Mountai** 107.60 46 PFAKE 15 45 00.0 +7.8
BMN LR LR
comp=Z,268nm,20.0s
ISA **Isabella** 108.12 51 PFAKE 15 45 10.0 +17
ISA LR LR
comp=Z,375nm,19.0s
HLID **Hailey** 108.46 42 PFAKE 15 45 10.0 +16
HLID LR LR
comp=Z,267nm,22.0s
DAC **Darwin (Calif)** 108.62 50 PFAKE 15 45 10.0 +16
DAC LR LR
comp=Z,499nm,20.0s
MWC **Mount Wilson** 108.86 53 PFAKE 15 45 10.0 +15
MWC LR LR
comp=Z,333nm,19.0s
ELK **Elko** 108.91 45 *e*PKPdf PKiKP 15 44 56.2 +1.5
ELK LR LR
comp=Z,262nm,20.0s
TSUM **Tsumeb** 109.29 251 PFAKE 15 45 10.0 +14
TSUM LR LR
comp=Z,230nm,19.0s
MBDF **Montbardon** 109.32 319 *e*PKiKP PKiKP 15 44 55.6 +0.3
comp=Z,32nm,1.4s
TPNV **Topopah Spring** 109.44 49 PFAKE 15 45 10.0 +14
TPNV LR LR
comp=Z,276nm,20.0s
BOZ **Bozeman (W)** 109.45 40 PFAKE 15 45 10.0 +14
BOZ LR LR
comp=Z,174nm,20.0s
GSC **Goldstone** 109.53 51 PFAKE 15 45 10.0 +14
GSC LR LR
comp=Z,345nm,21.0s
EGMT **Eagleton** 109.56 37 PFAKE 15 45 10.0 +14
EGMT LR LR
comp=Z,258nm,20.0s
YMR **Madison River** 110.29 40 PFAKE 15 45 10.0 +13
YMR LR LR
comp=Z,1µm,21.0s
SMF **Signal de Mont** 110.34 322 *e*PKIKP PKiKP 15 44 56.4 -0.8
SSF **Saint Saulge** 110.36 323 *e*PKIKP PKiKP 15 44 57.6 +0.4
BAR **Barrett** 110.41 54 PFAKE 15 45 10.0 +12
BAR LR LR
comp=Z,401nm,21.0s
DUG **Dugway** 110.83 45 *e*PKIKP PKiKP 15 44 59.8 +1.5
DUG MLR MLR
comp=Z,187nm,20.0s
REDW **Red Top Meadow 110.92** 41 *e*PKPdf PKiKP 15 44 59.7 +1.3
AHID **Auburn Hatcher** 111.00 42 PFAKE 15 45 10.0 +11
AHID LR LR
comp=Z,234nm,22.0s
HWUT **Hardware Ranch 111.16** 43 PFAKE 15 45 10.0 +11
HWUT LR LR
comp=Z,243nm,21.0s
RLMT **Red Lodge** 111.17 39 PFAKE 15 45 10.0 +11
RLMT LR LR
comp=Z,223nm,20.0s
TCF **Toulx Ste Croi** 111.51 322 *e*PKIKP PKiKP 15 45 00.5 +1.1
comp=Z,8.2nm,0.9s
MPU **Maple Canyon** 111.74 45 PFAKE 15 45 10.0 +10
MPU LR LR
comp=Z,883nm,21.0s
GLA **Glamis** 111.78 53 PFAKE 15 45 10.0 +10
GLA LR LR
comp=Z,341nm,19.0s
DAU **Daniels Canyon** 111.85 44 *e*PKIKP PKiKP 15 45 01.8 +1.6
FLN **La Foliniere** 111.86 326 *e*PKIKP PKiKP 15 45 00.6 +0.6
comp=Z,41nm,1.3s
MVU **Marysvale** 111.90 47 PFAKE 15 45 10.0 +10
MVU LR LR
comp=Z,275nm,20.0s
MSU **Marysvale** 111.93 47 *e*PKIKP PKiKP 15 45 02.6 +2.2
BW06 **Boulder Array** 112.03 42 PFAKE 15 45 10.0 +10
BW06 LR LR
comp=Z,309nm,21.0s
PDAR **Pinedale Array** 112.03 42 PKiKP PKiKP 15 45 01.4 +0.9
comp=Z,0.5nm,0.5s,baz=197,slow=1.9,SNR=4.3
PDAR PKKPbc PKKPbc 15 55 53.5 -0.3
comp=Z,0.8nm,0.9s,baz=108,slow=4.8,SNR=4.8
CAF **Calviac** 112.24 321 *e*PKIKP PKiKP 15 45 01.7 +0.9
comp=Z,14nm,1.1s
LAO **LASA Array** 112.30 37 PFAKE 15 45 10.0 +9.1
LAO LR LR
comp=Z,309nm,22.0s
DGMT **Dagmar** 112.56 34 PFAKE 15 45 10.0 +8.7
DGMT LR LR
comp=Z,317nm,22.0s
MTLF **Montolieu** 112.88 320 *e*PKIKP PKiKP 15 45 02.5 +0.4
comp=Z,7.0nm,0.9s
WUAZ **Wupatki** 113.63 49 *e*PKPdf PKiKP 15 45 04.2 +0.4
EPF **Esparros** 114.24 320 *e*PKIKP PKiKP 15 45 04.9 +0.2
comp=Z,28nm,1.4s
PV01 **Paradox Valley** 114.68 46 *e*PKPdf PKiKP 15 45 06.8 +1.1
RSSD **Black Hills** 114.93 38 *e*PKIKP PKiKP 15 45 06.5 +0.5
ULM **Lac du Bonnet** 115.87 29 PKP PKPdf 15 45 07.5 -0.1
comp=Z,3.9nm,0.7s,baz=335,slow=3.7,SNR=4.2
ISCO **Idaho Springs** 116.02 43 *e*PKIKP PKPdf 15 45 09.3 +1.1
SDCO **Great Sand Dun** 117.03 45 *e*PKPdf PKPdf 15 45 11.7 +1.4
SDCO LR LR
comp=Z,208nm,20.0s
AGMN **Agassiz Refuge** 117.14 31 PFAKE 15 45 20.0 +10
AGMN LR LR
comp=Z,289nm,22.0s
ANMO **Albuquerque** 117.55 48 *c* *i*PKIKP PKPdf 15 45 12.9 +1.6
ANMO **Albuquerque** 117.55 48 *e*PKPdf PKPdf 15 45 13.0 +1.7
ANMO LR LR
comp=Z,213nm,20.0s
BNM **Barren Site** 117.76 49 *e*PKPdf PKPdf 15 45 13.3 +1.5
ESDC **Sonseca Array** 118.72 318 PKP PKPdf 15 45 14.4 +1.0
comp=Z,0.1nm,0.3s,baz=270,slow=3.4,SNR=3.8
EYMN **Ely** 119.55 29 PFAKE 15 45 30.0 +15
EYMN LR LR
comp=Z,202nm,21.0s
ECSD **EROS,Sioux Fal** 119.59 35 *e*PKPdf PKPdf 15 45 14.8 -0.2
ECSD LR LR
comp=Z,197nm,19.0s
CBKS **Cedar Bluff** 120.46 41 PFAKE 15 45 30.0 +13
CBKS LR LR
comp=Z,219nm,20.0s
AMTX **Amarillo** 121.09 46 PFAKE 15 45 30.0 +12
AMTX LR LR
comp=Z,356nm,22.0s
SCHQ **Schefferville** 121.77 9 PKP PKPdf 15 45 19.0 +0.2
comp=Z,7.4nm,0.8s,baz=356,slow=2.6,SNR=6.1
EVO **Evora** 121.99 319 *e*PKIKP PKPdf 15 45 19.0 -0.8
comp=Z,30nm,1.2s
COWI **Conover** 122.00 29 *e*PKPdf PKPdf 15 45 19.8 +0.2
COWI LR LR
comp=Z,245nm,22.0s
KSU1 **Kansas State U** 122.33 40 *e*PKPdf PKPdf 15 45 20.3 -0.1
KSU1 LR LR
comp=Z,232nm,19.0s
WMOK **Wichita Mounta** 123.24 45 *e*PKIKP PKPdf 15 45 22.4 +0.1
JFWS **Jewell Farm** 123.66 32 *e*PKIKP PKPdf 15 45 22.1 -0.7
TORD **Torodi Ar. Bea** 123.74 287 PKP PKPdf 15 45 23.3 -0.4
comp=Z,7.4nm,0.9s,baz=52,slow=2.1,SNR=30
TORD PKKPbc PKKPbc 15 55 10.4 -0.6
comp=Z,0.7nm,0.6s,baz=283,slow=3.4,SNR=5.7
JCT **Junction City** 124.56 50 *e*PKIKP PKPdf 15 45 25.8 +0.9
GLMI **Grayling** 125.08 27 PFAKE 15 45 40.0 +15
GLMI LR LR
comp=Z,226nm,20.0s
FVM **French Village** 126.84 37 *e*PKIKP PKPdf 15 45 28.4 -0.7
MIAR **Mount Ida** 126.94 42 *e*PKPdf PKPdf 15 45 30.3 +0.9
MIAR *e* 15 45 48.1
NATX **Nacogdoches** 127.73 46 PFAKE 15 45 40.0 +9.0
NATX LR LR
comp=Z,498nm,21.0s
HKT **Hockley** 127.82 49 *e*PKIKP PKPdf 15 45 31.6 +0.4
HKT *e* 15 45 47.2
HKT MLR MLR
comp=Z,341nm,19.0s
BLO **Bloomington** 128.29 33 *e*PKPdf PKPdf 15 45 32.5 +0.7
BLO *e* 15 45 50.1
USIN **University of** 128.48 35 *e*PKPdf PKPdf 15 45 32.9 +0.7
WCI **Wyandotte Cave** 129.08 34 *e*PKIKP PKPdf 15 45 31.3 -2.0
WCI MLR MLR
comp=Z,257nm,22.0s
ACSO **Alum Creek Sta** 129.36 30 *e*PKPdf PKPdf 15 45 34.6 +0.7
ACSO *e* 15 45 52.7
ACSO LR LR
comp=Z,212nm,22.0s
OXF **Oxford** 129.70 40 *e*PKPdf PKPdf 15 45 35.7 +1.1
OXF *e* 15 45 53.2
OXF LR LR
comp=Z,244nm,22.0s
NCB **Newcomb** 129.98 20 PFAKE 15 45 50.0 +15
NCB LR LR
comp=Z,314nm,20.0s
VBMS **Vicksburg** 130.37 43 PFAKE 15 45 50.0 +14
VBMS LR LR
comp=Z,283nm,19.0s
LBNH **Lisbon** 130.49 18 PFAKE 15 45 50.0 +14
LBNH LR LR
comp=Z,376nm,21.0s
BINY **Binghamton** 130.87 23 PFAKE 15 45 50.0 +13
BINY LR LR
comp=Z,220nm,19.0s
DBIC **Dimbokro** 131.27 281 PKP PKPdf 15 45 39.5 +1.4
comp=Z,4.2nm,0.8s,baz=156,slow=3.8,SNR=3.8
DBIC **Dimbokro** 131.27 281 PKIKP PKPdf 15 45 39.5 +1.3
DBIC pmax pmax
comp=Z,4.0nm,0.8s
LIC **Lamto** 131.51 280 *e*PKIKP PKPdf 15 45 37.4 -1.2
TZTN **Tazewell** 131.81 34 PFAKE 15 45 50.0 +11
TZTN LR LR
comp=Z,295nm,19.0s
CPCT **Cooper Cave** 132.04 35 *e*PKPdf PKPdf 15 45 40.7 +1.7
CPCT *e* 15 45 58.2
HRV **Adam Dziewonsk 132.16** 19 PFAKE 15 45 50.0 +11
HRV LR LR
comp=Z,236nm,19.0s
WES **Weston** 132.35 19 PFAKE 15 45 50.0 +11
WES LR LR
comp=Z,440nm,21.0s
BLA **Blacksburg** 132.96 30 PFAKE 15 45 50.0 +9.3
BLA LR LR
comp=Z,273nm,20.0s
BRAL **Brewton** 133.44 42 PFAKE 15 45 50.0 +8.2
BRAL LR LR
comp=Z,258nm,20.0s
GOGA **Godfrey** 134.10 36 PFAKE 15 45 50.0 +7.0
GOGA LR LR
comp=Z,191nm,20.0s
CNNC **Cliffs of the** 135.78 30 PFAKE 15 46 00.0 +14
CNNC LR LR
comp=Z,207nm,20.0s
NHSC **New Hope** 136.21 34 PFAKE 15 46 00.0 +13
NHSC LR LR
comp=Z,284nm,20.0s
TEIG **Tepich** 138.57 55 PFAKE 15 46 00.0 +8.4
TEIG LR LR
comp=Z,281nm,21.0s
PLCA **Paso Flores** 138.65 160 PKP PKPdf 15 45 52.9 +1.7
comp=Z,4.2nm,0.7s,baz=215,slow=3.3,SNR=13
PLCA **Paso Flores** 138.65 160 PKIKP PKPdf 15 45 52.9 +1.7
PLCA pmax pmax
comp=Z,4.0nm,0.7s
PLCA **Paso Flores** 138.65 160 PKP PKPdf 15 45 52.9 +1.7
DWPF **Disney** 139.03 40 PFAKE 15 46 00.0 +7.7
DWPF LR LR
comp=Z,309nm,21.0s
TRQA **Tornquist** 143.57 168 *e*PKPdf PKPdf 15 45 57.7 -2.4
CAO **Cobano** 145.66 69 *e*P PKPdf 15 46 06.7 +2.3
CTCR **Cotoan** 148.11 69 *e*P PKPbc 15 46 12.2 +0.4
LCO **Las Campanas** 148.56 149 *e*PKPbc PKPbc 15 46 12.6 0.0
BCIP **Isla Barro Col** 150.72 66 PKPdf PKPdf 15 46 15.2 +2.5
BCIP *e*PKPbc PKPbc 15 46 18.8 +0.5
BCIP LR LR
comp=Z,400nm,20.0s
OTAV **Otavalo** 154.25 84 *e*PKPdf PKPdf 15 46 18.0 +0.1
LVC **Limon Verde** 154.58 143 PKP PKPdf 15 46 18.3 +0.1
comp=Z,1.4nm,0.5s,baz=101,slow=0.6,SNR=2.0
LVC PKPbc PKPbc 15 46 29.0 +2.4
comp=Z,3.8nm,0.5s,baz=254,slow=1.7,SNR=4.3
LVC PKPab PKPab 15 46 43.7 +2.4
comp=Z,5.1nm,0.9s,baz=279,slow=3.2,SNR=3.5
SJG **San Juan** 155.73 32 PFAKE 15 46 30.0 +10
SJG LR LR
comp=Z,188nm,19.0s
CPUP **Villa Florida** 155.85 170 PKP PKPdf 15 46 21.0 +1.2
comp=Z,3.1nm,1.0s,baz=287,slow=2.4,SNR=4.4
CPUP PKPbc PKPdf 15 46 30.4 +11
comp=Z,5.4nm,0.9s,baz=82,slow=2.2,SNR=8.1
CPUP PKPab PKPab 15 46 47.1 +0.6
comp=Z,3.1nm,0.7s,baz=182,slow=3.3,SNR=4.3
CPUP **Villa Florida** 155.85 170 PKIKP PKPdf 15 46 21.0 +1.2
CPUP 15 46 30.4
CPUP 15 46 47.1
CPUP pmax pmax
comp=Z,3.0nm,1.0s
CPUP pmax pmax
comp=Z,5.0nm,0.9s
CPUP pmax pmax
comp=Z,3.0nm,0.7s
ROSC **El Rosal** 157.33 71 PKPab PKPab 15 46 56.0 +2.6
comp=Z,9.8nm,0.7s,baz=293,slow=5.1,SNR=5.0
LPAZ **La Paz** 159.59 133 PKP PKPdf 15 46 26.9 +2.2
comp=Z,3.0nm,0.9s,baz=26,slow=2.9,SNR=11
LPAZ PKPab PKPab 15 47 04.8 +1.7
comp=Z,4.1nm,0.9s,baz=74,slow=3.2,SNR=4.7
LPAZ **La Paz** 159.59 133 PKIKP PKPdf 15 46 26.9 +2.3
LPAZ 15 47 04.8
LPAZ pmax pmax
comp=Z,3.0nm,0.9s
LPAZ pmax pmax
comp=Z,4.0nm,1.0s
BDFB **Brasilia** 166.05 200 PKP PKPdf 15 46 31.3 +0.4
comp=Z,3.7nm,0.8s,baz=315,slow=0.8,SNR=4.3
BDFB **Brasilia** 166.05 200 PKIKP PKPdf 15 46 31.3 +0.4
BDFB pmax pmax
comp=Z,4.0nm,0.8s

DDA ***01*** *15:41:47.8, 3884N×4186E, h6km±4km, Md3.1*
CSEM ***01*** *15:41:47.5±0.5, 3893N×4195E, h0km±2km, MD3.1, Error ellipse: s-maj=6.3km s-min=3.5km az=166.0*
ISCJB ***01*** *15:41:49.0±0.4, 3884N±003×4192E±003, h10km, Error ellipse: s-maj=4.4km s-min=3.6km az=178.3*
ISK ***01*** *15:41:48.3, 3889N×4191E, h5km, MD3.1*
ISC 01 15:41:49.2±0.4**,3885N**±003×**4193E**±003**,h10**km**,n13,**
σ1s23/23,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TATV	**Tatvan**	**0.43**	**142**	*i* P	**Pg**	**15 41 56.3**	**-1.3**
TATV				*i* S	**Sg**	**15 42 03.3**	**0.0**
BNGL	**BINGOL**	**0.62**	**280**	*i* P	**Pg**	**15 41 59.2**	**-2.0**
BNGL				*i* S	**Sg**	**15 42 08.8**	**-0.5**
BEST	**Besiri**	**1.09**	**209**	*i* P	**Pb**	**15 42 08.2**	**-1.9**
BEST				*i* S	**Sg**	**15 42 23.0**	**-1.2**
AGRB	**Hanur-Agry**	**1.10**	**48**	*e*PN	**Pn**	**15 42 10.7**	**0.0**
AGRB				*e*SN	**Sn**	**15 42 26.3**	**+0.4**
ERZM	**Erzurum**	**1.14**	**338**	*i* P	**Pb**	**15 42 10.2**	**-0.8**
ERZM				*i* S	**Sb**	**15 42 25.1**	**-0.9**
EZM	**Erzurum**	**1.14**	**337**	*e*PN	**Pn**	**15 42 09.9**	**-1.4**
VANB	**Van**	**1.17**	**102**	*e*PN	**Pn**	**15 42 11.8**	**+0.2**
VANB				*e*SN	**Sn**	**15 42 29.8**	**+2.2**
CLDR	**Caldiran**	**1.57**	**79**	*e*PN	**Pg**	**15 42 19.2**	**-0.2**
DIYA	**Diyarbakir**	**1.70**	**238**	*i* P	**Pn**	**15 42 18.5**	**-0.4**
DIYA				*i* S	**Sn**	**15 42 42.2**	**+1.6**
MARD	**Mardin**	**1.78**	**211**	*i* P	**Pn**	**15 42 19.5**	**-0.5**
MARD				*i* S	**Sn**	**15 42 42.5**	**-0.2**
PTK	**Pertek**	**1.98**	**272**	*e*PN	**Pn**	**15 42 24.3**	**+1.5**
PTK				*e*SN	**Sn**	**15 42 50.1**	**+2.5**
SVRC	**Sivrice-ELAZID**	**2.11**	**258**	*e*PN	**Pn**	**15 42 26.5**	**+1.9**
ELZG	**Elazig**	**2.33**	**262**	*i* P	**Pn**	**15 42 29.4**	**+1.8**
ELZG				*i* S	**Sg**	**15 43 04.5**	**+0.3**

NEIC ***01*** *15:45:50.6±2.9, 17.16S×174.77W, h274km±20km, Error ellipse: s-maj=169.0km s-min=22.6km az=143.0*
IDC 01 15:45:50.3±9.1**,1696S×17499W,h257**km±249km**,**
mb3.3/3,mb1 3.5/4,mb1mx3.2/15,mbtmp3.3/4,ML2.1/1,
MS3.1/1,Ms1 3.1/1,ms1mx2.7/7,Error ellipse:
s-maj=288.0km s-min=95.9km az=97.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.33**	**46**	P	Pn	15 47 00.1	+1.8
	5.5nm,0.3s,baz=229,slow=11,SNR=16						
AFI				S	S	15 47 52.2	-0.3
	16nm,0.3s,baz=229,slow=19,SNR=11						
AFI	**Afiamalu**	**4.33**	**46**	*e*Pn	Pn	15 46 59.5	+1.1
AFI				*e*S	S	15 47 51.2	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	25.50	284	LR	LR	15 59 09.5	
	comp=Z,42nm,19.8s,slow=31						
STKA	Stephens Creek	41.95	241	P	P	15 53 15.9	-0.4
	0.8nm,0.7s,baz=81,slow=13,SNR=2.7						
WRA	Warramunga Arr	48.02	258	P	P	15 54 04.4	+0.3
	0.4nm,0.3s,baz=95,slow=8.4,SNR=28						
ASAR	Alice Springs	48.19	253	P	P	15 54 05.0	-0.3
	3.6nm,0.7s,baz=86,slow=8.8,SNR=81						

*CSEM **01** 15:46:33.8±0.1, 3461N×2537E, h12km, MD3.8, Error ellipse: s-maj=3.0km s-min=2.2km az=69.0*
*ISCJB **01** 15:46:34.3±0.7, 3463N±003×2526E±004, h30km±5km, mb3.6/8, Error ellipse: s-maj=5.7km s-min=4.6km az=138.3*
*IDC **01** 15:46:35.7±2.0, 3480N×2531E, h33km±13km, mb3.5/8, mb1 3.5/12, mb1mx3.5/26, mbtmp3.4/12, ML3.7/4, Error ellipse: s-maj=22.4km s-min=17.1km az=14.0*
*THE **01** 15:46:35.8, 3469N×2521E, h15km*
*ATH **01** 15:46:37.4, 3491N×25.19E, h38km±1km, MD3.8/11*
*NEIC **01** 15:46:37.4, 3488N×2520E, h35km, MD3.8(ATH), After ATH.*
*HLW **01** 15:46:45.3, 34.14N×2576E, h33km, Mb3.2*
ISC 01 15:46:35.9±0.7, **3469N**±003×**2524E**±004, **h26**km±5km, **n64**, σ**1.19**/74, **mb3.6**/8, **2C-3D, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.48	313	ePg	Pb	15 46 46.0	+0.2
SIVA				eSg	Sb	15 46 51.8	-0.7
NPS	Neapolis	0.65	28	ePB	Pb	15 46 47.6	-1.0
NPS				eSB	Sb	15 46 56.3	-1.0
IDI	Anoyia	0.66	335	Pg	Pb	15 46 47.7	-1.1
	44nm,0.3s,baz=152,slow=10.0,SNR=214						
IDI				Lg		15 46 56.8	
	158nm,0.3s,baz=53,slow=20,SNR=43						
ZKR	Zakros	0.91	62	ePg	Pn	15 46 52.2	-0.7
ZKR				eSg	Sb	15 47 06.3	+1.6
ZKR	Zakros	0.91	62	ePg	Pn	15 46 52.2	-0.8
ZKR				eSg	Sb	15 47 06.3	+1.6
GVD	Gavdhos	0.96	279	ePN	Pn	15 46 55.0	+1.4
VAM	Vamos	1.11	310	ePN	Pn	15 46 56.0	+0.3
VAM	Vamos	1.11	310	ePn	Pn	15 46 56.5	+0.8
THR6	Thira Island,	1.67	5	ePb	Pn	15 47 03.3	-0.1
THR1	Thera Island	1.69	6	ePb	Pn	15 47 03.0	-0.7
SANT	Santorini	1.69	6	ePb	Pn	15 47 03.2	-0.4
SANT				eSb	Sb	15 47 25.3	-1.7
SANT	Santorini	1.69	6	P	Pn	15 47 04.7	+1.0
SANT				eSb	Sb	15 47 25.3	-1.7
SANT	Santorini	1.69	6	P	Pn	15 47 04.7	+1.0
THR3	Thira Island,	1.72	4	ePb	Pn	15 47 04.3	+0.2
THR5	Thira Island,	1.73	3	ePb	Pn	15 47 04.5	+0.3
KARP	Karpathos	1.80	61	ePN	Pn	15 47 07.1	+2.0
KARP	Karpathos	1.80	61	ePb	Pn	15 47 07.8	+2.7
APE	Apeiranthos	2.39	6	ePn	Pn	15 47 13.1	-0.1
APE				eSn	Sn	15 47 42.7	+1.0
APE	Apeiranthos	2.39	6	ePN	Pn	15 47 13.4	+0.1
APE	Apeiranthos	2.39	6	ePb	Pn	15 47 14.4	+1.1
APE				eSn	Sn	15 47 42.7	+1.1
APE	Apeiranthos	2.39	6	ePb	Pn	15 47 14.4	+1.1
KYTH	Kithira	2.40	312	ePN	Pn	15 47 14.0	+0.6
KYTH	Kithira	2.40	312	ePn	Pn	15 47 15.0	+1.6
NISR	Nisiros	2.46	38	ePN	Pn	15 47 15.0	+0.7
VLI	Veliai	2.75	318	ePN	Pn	15 47 18.3	0.0
ARG	Arkhangelos	2.81	56	ePN	Pn	15 47 21.1	+2.0
BDRM	Kayabasi	2.97	36	i P	Pn	15 47 24.3	+2.9
SLUM		3.19	180	⇑P	Pn	15 47 26.0	+1.6
SLUM				S	Sn	15 47 55.5	-6.0
DID	Didima	3.24	331	ePn	Pn	15 47 24.4	-0.6
SMG	Samos	3.28	23	ePN	Pn	15 47 25.9	+0.4
GCAM	G?zelcaml?	3.41	28	i P	Pn	15 47 30.0	+2.6
TURN	Turunc	3.50	51	i P	Pn	15 47 27.1	-1.5
PTL	Penteli	3.53	342	ePN	Pn	15 47 28.5	-0.5
AYDN	Tasoluk	3.66	35	i P	Pn	15 47 31.9	+1.2
ITM	Ithomi	3.66	314	ePN	Pn	15 47 32.0	+1.3
CHOS	Chios island	3.75	10	ePn	Pn	15 47 32.6	+0.7
LTK	Loutraki	3.80	332	ePn	Pn	15 47 33.6	+1.0
AKAS	Kas	3.88	65	i P	Pn	15 47 33.6	-0.3
AKAS	Kas	3.88	65	i P	Pn	15 47 33.6	-0.3
AKAS				i S	Sn	15 48 18.9	+0.3
HMAT	Matruh	3.91	156	⇓P	Pn	15 47 33.7	-0.6
GOLH	Golhisar	4.33	53	i P	Pn	15 47 41.9	+1.9
LKR	Lokris	4.34	336	ePn	Pn	15 47 40.4	+0.3
KHAL	Karahalli	5.02	42	i P	Pn	15 47 49.6	+0.1
EVR	Evrytania	5.04	328	ePn	Pn	15 47 52.5	+2.8
HNAT	Natroun	6.80	136	P	Pn	15 48 13.4	-0.5
AYT	Al 'Ayyat	7.06	133	⇓P	Pn	15 48 18.1	+0.6
AWBH		7.08	153	P	Pn	15 48 18.3	+0.5
KOT	Kottamia	7.33	129	P	Pn	15 48 20.4	-0.8
GLL	Jalalah	7.49	131	⇓P	Pn	15 48 23.3	-0.1
SUZ		8.05	125	⇑P	Pn	15 48 30.6	-0.4
MMAI	Mount Meron Ar	8.62	98	Pn	Pn	15 48 36.9	-2.0
	1.6nm,0.3s,baz=299,slow=11,SNR=7.0						
MMAI				Sn	Sn	15 50 10.7	-4.6
	1.6nm,0.3s,baz=314,slow=23,SNR=3.6						
EIL	Elat	9.63	119	Pn	Pn	15 48 53.1	+0.3
	0.5nm,0.3s,baz=311,slow=9.3,SNR=11						
EIL				Sn	Sn	15 50 35.4	-4.8
	0.8nm,0.3s,baz=281,slow=19,SNR=6.3						
MSL	Mosul	14.64	79	ex	x	15 49 04.0	
AKASG	Malin Array Be	16.26	9	Pn	Pn	15 50 20.4	-2.0
	0.5nm,0.3s,baz=200,slow=11,SNR=3.3						
GERES	GERESS Array B	16.52	332	Pn	Pn	15 50 25.6	-0.1
	0.1nm,0.3s,baz=157,slow=13,SNR=3.1						
ESDC	Sonseca Array	23.73	291	P	P	15 51 44.9	-1.0
	0.2nm,0.4s,mb2.9,baz=80,slow=8.5,SNR=3.8						
TORD	Torodi Ar. Bea	30.24	231	P	P	15 52 45.2	+0.6
	0.6nm,0.4s,mb3.6,baz=33,slow=8.7,SNR=7.4						
ARCES	ARCESS Array B	34.90	0	P	P	15 53 22.6	-2.2
	1.9nm,0.8s,mb4.0,baz=169,slow=6.9,SNR=4.3						
MKAR	Makanchi Array	43.98	56	P	P	15 54 38.5	-2.3
	0.2nm,0.3s,mb3.3,baz=271,slow=8.3,SNR=6.3						
SONM	Songino Array	59.74	50	P	P	15 56 36.8	-1.5
	0.4nm,0.7s,mb3.6,baz=282,slow=6.9,SNR=3.3						
SCHQ	Schefferville	63.58	320	P	P	15 57 02.7	-1.3
	0.7nm,0.3s,mb4.1,baz=63,slow=9.0,SNR=3.4						
YKA	Yellowknife Ar	77.92	342	P	P	15 58 29.1	-2.0
	0.2nm,0.6s,mb3.3,baz=30,slow=5.5,SNR=3.0						
KSRS	Korea Array	78.52	52	P	P	15 58 33.4	-1.5
	0.8nm,0.6s,mb3.8,baz=302,slow=11,SNR=4.7						
ASAR	Alice Springs	117.90	101	PKP	PKPdf	16 05 16.9	-3.4
	0.2nm,0.8s,baz=324,slow=1.9,SNR=2.5						

*ISCJB **01** 16:10:21.4±0.8, 4370N±005×105.18W±008, h0km, Error ellipse: s-maj=8.2km s-min=6.4km az=164.9*
*IDC **01** 16:10:21.8±1.7, 4375N×10544W, h0km, mb3.9/1, mb1 3.7/4, mb1mx3.4/23, mbtmp3.5/4, ML2.5/2, Error ellipse: s-maj=50.9km s-min=9.5km az=151.0*
*NEIC **01** 16:10:22.3±0.7, 4368N×105.17W, h0km, ML2.9, Error ellipse: s-maj=13.0km s-min=8.7km az=147.0, Suspected Mining explosion.*
NEIC 75 km [45 miles] SSE of Gillette.
ISC 01 16:10:22.5±0.7, **4369N**±004×**10514W**±007, **h0**km, **n10**, σ**0.83**/14, **Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.91	61	eP	Pg	16 10 41.5	+1.6
PHWY	Pilot Hill	2.40	186	ePn	Pn	16 11 02.1	-0.9
PHWY				eSn	Sn	16 11 34.1	+1.1
RWWY	Rawlins	2.52	218	ePn	Pn	16 11 05.0	+0.5
RWWY				eSn	Sn	16 11 35.3	-0.6
RLMT	Red Lodge	3.29	297	ePn	Pn	16 11 15.0	-0.2
RLMT				eSn	Sn	16 11 55.3	+0.3
PDAR	Pinedale Array	3.36	256	Pn	Pn	16 11 15.9	-0.3
	4.4nm,0.3s,baz=82,slow=13,SNR=31						
PDAR				Lg		16 12 00.8	
	8.1nm,0.3s,baz=74,slow=32,SNR=17						
GCMT	Greycliff	3.85	305	ePn	Pn	16 11 22.5	-0.4
GCMT				eSn	Sn	16 12 09.7	+0.9
ULM	Lac du Bonnet	9.12	41	Pn	Pn	16 12 33.8	-1.4
	0.7nm,0.3s,baz=235,slow=12,SNR=5.5						
NVAR	Mina Array Bea	11.24	247	Pn	Pn	16 13 04.5	+0.2
	0.1nm,0.3s,baz=53,slow=14,SNR=2.5						
YKA	Yellowknife Ar	19.64	347	P	Pn	16 14 58.2	+4.6
	0.1nm,0.3s,baz=154,slow=9.0,SNR=3.8						
ARCES	ARCESS Array B	61.44	18	P	P	16 20 39.2	-0.8
	1.7nm,0.8s,baz=317,slow=6.5,SNR=4.2						

*GCG **01** 16:15:15.4, 1363N×9270W, h91km, MD4.2*
*INET **01** 16:15:37.0, 1152N×8734W, h50km*
*UCR **01** 16:15:40.4, 10.11N×8762W, h23km, MD4.2*
CASC 01 16:15:05.1±2.5, **1204N**×**8973W**, **h13**km±44km, **MD4.1**, **2C-3D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	2.63	336	⇓eP	Pn	16 15 48.1	+0.8
FG6		2.75	336	⇓eP	Pn	16 15 48.8	-0.1
FG6				eS	Sn	16 16 23.2	+1.3
LEON	Leon	2.79	82	⇑eP	Pn	16 15 53.7	+4.1
TEL3	Telica 3	2.86	79	eP	Pn	16 15 56.4	+5.9
JAT	Jato	2.93	321	eP	Pn	16 15 49.5	-1.9
COPN	Copaltepe	3.07	87	⇓iP	Pn	16 15 54.0	+0.7
CSAN		3.23	87	eP	Pn	16 15 55.9	+0.3
APYN	Apoyeque	3.31	86	⇑eP	Pn	16 15 57.1	+0.5
MGAN	Managua	3.40	88	eP	Pn	16 15 57.6	-0.3
HUEN		3.49	85	eP	Pn	16 15 59.4	+0.3
PRS1	Puriscal	5.70	111	eP	Pn	16 16 30.3	+0.8
LCR2	La Lucha 2	6.07	112	eP	Pn	16 16 34.8	+0.2
URSC	Urasca	6.24	110	eP	Pn	16 16 37.6	+0.7
BUS	Buena Vista	6.36	112	eP	Pn	16 16 39.3	+0.6
CHI2		17.43	114	eP		16 15 44.0	

*ISCJB **01** 16:51:13.4±1.2, 73S±0.1×1197E±02, h290km±9km, mb3.3/4, Error ellipse: s-maj=38.8km s-min=9.1km az=147.8*
*IDC **01** 16:51:13.7±2.2, 752S×11958E, h290km±15km, mb3.0/4, mb1 3.1/7, mb1mx3.0/17, mbtmp3.1/7, Error ellipse: s-maj=69.7km s-min=8.6km az=53.0*
*NEIC **01** 16:51:14.9±1.3, 728S×11972E, h295km±11km, mb3.9/2, Error ellipse: s-maj=46.7km s-min=10.5km az=58.0*
ISC 01 16:51:14.5±1.2, **74S**±01×**1197E**±02, **h291**km±9km, **n11**, σ**0.91**/17, **mb3.3**/4, **Flores Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	2.35	1	P	Pn	16 52 03.1	-0.5
	3.5nm,0.3s,baz=173,slow=9.9,SNR=8.4						
BATI	Baumata	4.81	126	P	Pn	16 52 29.9	+0.4
	10nm,0.3s,baz=294,slow=18,SNR=12						
BATI				S	S	16 53 28.7	-1.0
	12nm,0.3s,baz=156,slow=21,SNR=7.0						
FITZ	Fitzroy Crossi	12.12	152	eP	Pn	16 54 01.2	+2.4
	3.2nm,0.8s						
FITZ				eS	S	16 56 13.9	+0.2
FITZ	Fitzroy Crossi	12.12	152	P	Pn	16 54 00.1	+1.3
	0.3nm,0.3s,baz=332,slow=15,SNR=13						
FITZ				S	S	16 56 11.8	-1.9
	0.2nm,0.3s,baz=66,slow=20,SNR=2.6						
KAKA	Kakadu	13.61	114	eP	Pn	16 54 18.2	+1.4
	4.0nm,0.4s						
WRA	Warramunga Arr	18.90	133	P	P	16 55 14.8	+0.3
	0.3nm,0.3s,baz=304,slow=13,SNR=33						
WRA				S	S	16 58 33.4	-0.2
	0.1nm,0.3s,baz=298,slow=20,SNR=3.3						
WB2	Warramunga Arr	18.91	133	eP	P	16 55 14.7	+0.2
WB2				eS	S	16 58 53.1	+19
ASAR	Alice Springs	21.16	141	P	P	16 55 37.8	+0.1
	0.4nm,0.4s,mb3.1,baz=310,slow=8.9,SNR=28						
ASAR				S	S	16 59 12.2	-1.1
	0.2nm,0.8s,baz=315,slow=13,SNR=3.2						
SONM	Songino Array	56.22	349	P	P	17 00 25.5	+0.7
	0.3nm,0.5s,mb3.0,baz=162,slow=7.6,SNR=3.3						
MKAR	Makanchi Array	63.35	332	P	P	17 01 12.9	-0.2
	0.9nm,0.7s,mb3.5,baz=131,slow=7.8,SNR=11						
ZALV	Zalesovo Beam	67.79	339	P	P	17 01 39.9	-1.3
	0.5nm,0.4s,mb3.6,baz=146,slow=3.1,SNR=3.0						

*DJA **01** 17:09:40, 5.15N×9575E, h0km, ML4.1/2*
*ISCJB **01** 17:09:41.3±1.1, 5.1N±0.1×954E±02, h113km±8km, mb4.2/15, Error ellipse: s-maj=31.8km s-min=11.4km az=143.2*
*BJI **01** 17:09:44.5, 498N×95.17E, h159km, mB4.4, mb4.5*
*NEIC **01** 17:09:47.0±5.8, 505N×9523E, h158km±50km, mb4.2/5, Error ellipse: s-maj=46.7km s-min=14.3km az=59.0*
*IDC **01** 17:09:47.7±10.0, 5.17N×9538E, h154km±87km, mb3.8/7, mb1 4.0/8, mb1mx3.5/21, mbtmp3.8/8, Error ellipse: s-maj=72.9km s-min=14.2km az=58.0*
ISC 01 17:09:41.8±1.2, **50N**±01×**953E**±02, **h106**km±8km, **n26**, σ**0.96**/26, **mb4.2**/15, **1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	0.49	360	P	Pn	17 09 58.7	+0.5
	0.0nm,0.0s						
PSI	Prapat	4.23	121	⇓eP	Pn	17 10 42.7	-1.5
CMAR	Chiang Mai Arr	13.84	15	P	Pn	17 12 56.9	+3.4
	0.8nm,0.3s,baz=210,slow=12,SNR=40						
LSA	Lhasa	24.88	351	eP	P	17 14 54.2	-0.5
	3.1nm,0.5s,mb4.0						
XAN	Xi'an	31.54	22	P	P	17 15 53.5	-0.6
XAN				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.7						
XAN				AMB	AMB		
	comp=Z,45nm,6.6s						
GTA	Gaotai	34.49	6	eP	P	17 16 19.5	-0.2
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.3						
UCH	Uchtor	41.43	337	P	P	17 17 18.4	+0.4
	SNR=11						
TKM2	Tokmak 2	41.60	338	P	P	17 17 19.5	+0.1
	SNR=5.9						
KBK	Karagaybulak	41.62	337	P	P	17 17 20.4	+0.9
	SNR=7.4						
AML	Almayashu	41.68	336	P	P	17 17 20.5	+0.5
	SNR=10						
EKS2	Erkin-Say	42.09	336	P	P	17 17 23.7	+0.4
	SNR=5.4						
USP	Ospenovka	42.31	337	P	P	17 17 25.2	0.0
	SNR=8.8						
MKAR	Makanchi Array	43.12	347	P	P	17 17 30.9	-0.8
	comp=Z,3.2nm,0.5s,mb4.3,baz=149,slow=8.5,SNR=48						
MKAR				PcP	PcP	17 19 19.6	+0.1
	comp=Z,0.4nm,0.4s,baz=181,slow=3.6,SNR=4.1						
SONM	Songino Array	43.72	11	P	P	17 17 36.3	-0.1
	comp=Z,0.8nm,0.6s,mb3.7,baz=186,slow=8.8,SNR=7.5						
ULN	Ulaanbaatar	43.88	11	eP	P	17 17 34.8	-2.8
	comp=Z,1.3nm,0.5s,mb3.9						
WRA	Warramunga Arr	45.69	124	P	P	17 17 53.5	+1.1
	comp=Z,5.2nm,0.6s,mb4.4,baz=301,slow=9.7,SNR=70						
WB2	Warramunga Arr	45.70	124	eP	P	17 17 53.5	+1.0
ASAR	Alice Springs	47.22	129	P	P	17 18 05.4	+1.0
	comp=Z,0.9nm,0.4s,mb3.9,baz=299,slow=7.7,SNR=49						
ZALV	Zalesovo Beam	49.54	352	P	P	17 18 20.9	-0.7
	comp=Z,4.5nm,0.6s,mb4.6,baz=183,slow=7.4,SNR=24						
YSS	Yuzh-Sakhalins	58.36	36	eP	P	17 19 27.2	+1.2
	comp=Z,9.2nm,1.0s,mb4.8						
JOF	Joensuu	73.92	335	ep	P	17 21 04.8	-0.4
	comp=Z,0.8nm,0.3s,mb3.9						
KAF	Kangasniemi	75.86	333	ep	P	17 21 15.8	-0.5
	comp=Z,1.0nm,0.4s,mb3.9						
ARCES	ARCESS Array B	78.34	340	P	P	17 21 30.0	-0.1
	comp=Z,1.1nm,0.4s,mb3.9,baz=91,slow=5.4,SNR=22						
ARCES	ARCESS Array B	78.34	340	P	P	17 21 30.0	-0.1
GERES	GERESS Array B	80.72	319	P	P	17 21 43.9	+0.5
	comp=Z,1.6nm,0.7s,mb4.0,baz=108,slow=5.2,SNR=15						
SBA	Scott Base	91.01	168	P	P	17 22 30.8	-2.8
	comp=Z,22nm,2.0s,mb5.0						

*NIED **01** 17:10:00, 4330N×14700E, h32km, Mw3.4 Best double couple: M0 1.42000×10^14 NP1: φs130.00000°, δ82.00000°, λ-22.00000°. NP2: φs224.00000°, δ69.00000°, λ-171.00000°.*
JMA 01 17:10:23.3±0.3, **4330N**×**14702E**, **h38**km±4km, **M3.6**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.93	274	P	Pn	17 10 40.2	+0.3
NEM2				eS	Sn	17 10 52.8	+0.8
JRA	Rausu	1.52	295	P	Pn	17 10 48.8	+0.9
JRA				eS	Sn	17 11 07.1	+0.6
JNK	Nakash	1.70	280	P	Pn	17 10 51.0	+0.6
JAK	Akkeshi	1.73	261	P	Pn	17 10 52.0	+1.2
JAK				eS	Sn	17 11 13.3	+1.7
JTKR	Abashiri--Toko	2.36	288	P	Pn	17 11 01.1	+1.7
JOB	Onbets	2.37	261	P	Pn	17 11 01.0	+1.4
JAR	Ashorobuto	2.37	271	eS	Sn	17 11 30.3	+2.8
JMP	Maruseppu	2.75	286	P	Pn	17 11 07.7	+2.9
JCH	Churui	2.77	257	P	Pn	17 11 07.1	+2.0
JKK2	Kamakawa 2	3.16	282	P	Pn	17 11 13.6	+3.2

*ISCJB **01** 17:19:53.9±0.3, 40.18N±002×2154E±002, h10km±3km, Error ellipse: s-maj=3.5km s-min=2.8km az=42.7*
*ATH **01** 17:19:54.8, 40.14N×2162E, h18km±1km, ML4.0*
*CSEM **01** 17:19:55.7±0.1, 40.10N×2163E, h5km, ML4.0, Error ellipse: s-maj=2.0km s-min=1.4km az=145.0*
*THE **01** 17:19:55.2, 40.16N×2158E, h6km, ML4.0*
*NEIC **01** 17:19:57.0, 40.12N×2179E, h10km, ML3.0(ATH), After ATH.*
*PDG **01** 17:19:57.1±0.4, 4008N×2177E, h11km±2km, ML3.4/9, Error ellipse: s-maj=1.1km s-min=1.9km az=0.0*
ISC 01 17:19:54.7±0.3, **4017N**±002×**2154E**±002, **h9**km±3km, **n83**, σ**1.35**/119, **5C-7D, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KZN	Kozani	0.23	52	ePB	Pg	17 20 00.1	+0.8
KZN				eSB	Sg	17 20 03.8	+1.5
MEV	Metsovon	0.45	212	ePg	Pg	17 20 04.5	+1.0
MEV	Metsovon	0.45	212	ePg	Pg	17 20 04.4	+1.0
FNA	Florina	0.63	349	ePg	Pg	17 20 07.3	+0.5
FNA				eSg	Sg	17 20 16.6	+1.7
THL	Klokotos Trika	0.71	149	ePg	Pg	17 20 07.5	-0.7
THL				eSg	Sg	17 20 18.0	+0.5
THL	Klokotos Trika	0.71	149	ePn	Pg	17 20 07.8	-0.5
LIT	Litokhoron	0.73	95	ePg	Pg	17 20 08.2	-0.6
LIT				eSg	Sg	17 20 18.9	+0.6
LIT	Litokhoron	0.73	95	ePg	Pg	17 20 08.1	-0.7
LIT				eSg	Sg	17 20 18.9	+0.5
JAN	Janina	0.74	226	ePB	Pg	17 20 08.9	+0.1
JAN	Janina	0.74	226	ePb	Pg	17 20 08.7	-0.1
BIA	Bitola	0.86	349	ePg	Pg	17 20 11.2	-0.1
BIA				eSg	Sg	17 20 24.8	+2.3
BIA	Bitola	0.86	349	i Pg	Pg	17 20 11.2	-0.1
BIA				i Sg	Sg	17 20 25.6	+3.0
BIA	Bitola	0.86	349	i Sg	Sg	17 20 25.6	+3.0
GRG	Griva	1.02	40	ePg	Pg	17 20 14.2	-0.1
GRG				eSg	Sg	17 20 29.4	+1.7
GRG	Griva	1.02	40	ePg	Pg	17 20 14.2	-0.2
GRG				eSg	Sg	17 20 29.5	+1.8
OHR	Ohrid	1.10	329	ePg	Pg	17 20 15.9	+0.1
OHR				eSg	Sg	17 20 32.5	+2.6
OHR	Ohrid	1.10	329	i Pg	Pg	17 20 15.9	+0.1
OHR				i Sg	Sg	17 20 34.1	+4.1
OHR	Ohrid	1.10	329	i Sg	Sg	17 20 34.0	+4.0
IGT	Igoumenitsa	1.12	236	ePg	Pg	17 20 17.1	+0.8
THE	Thessaloniki	1.18	67	ePg	Pg	17 20 16.8	-0.6
THE				eSg	Sg	17 20 34.4	+1.6
KRUS	Krusevo	1.22	350	i Pg	Pg	17 20 18.2	+0.1
KRUS				i Sg	Sg	17 20 36.9	+3.1
HORT	Hortiatis	1.27	70	ePg	Pg	17 20 18.4	-0.6
HORT				eSg	Sg	17 20 36.4	+0.9
HORT	Hortiatis	1.27	70	ePg	Pg	17 20 18.4	-0.6
HORT				eSg	Sg	17 20 36.3	+0.9
EVR	Evrytania	1.27	170	ePN	Pn	17 20 17.8	-0.8
AGG	Agios Georgios	1.30	152	ePg	Pg	17 20 18.4	-1.2
AGG				eSg	Sg	17 20 37.4	+0.9
VAY	Valandovo	1.39	34	ePg	Pg	17 20 20.1	-1.3
VAY	Valandovo	1.39	34	i Pg	Pg	17 20 20.8	-0.6
VAY				eSn	Sg	17 20 41.7	+2.2
VAY	Valandovo	1.39	34	ePg	Pg	17 20 20.1	-1.3
VAY				eSn	Sg	17 20 41.6	+2.1
KEK	Kerkira	1.41	252	ePn	Pn	17 20 22.5	+2.0
KEK				P		17 20 26.0	
KNT	Kendrikon	1.43	46	ePg	Pg	17 20 20.8	-1.4
PLG	Polygyros	1.47	81	ePg	Pg	17 20 20.8	-2.2
PLG	Polygyros	1.47	81	ePn	Pn	17 20 21.3	-0.1
XOR	Xorichti	1.51	122	ePg	Pg	17 20 21.6	-1.9
SOH	Sokhos	1.53	64	ePg	Pg	17 20 22.3	-1.7
SOH				eSg	Sg	17 20 43.4	-0.4
NEO	Neokhori	1.56	123	ePN	Pn	17 20 22.3	-0.3
STIP	Stip	1.60	18	ePg	Pn	17 20 23.8	+0.7
STIP	Stip	1.60	18	ePn	Pg	17 20 25.9	+0.6
STIP	Stip	1.60	18	ePn	Pg	17 20 25.9	+0.5
PAIG	Paliouri	1.66	98	ePb	Pb	17 20 23.3	-2.1
PAIG				eSb	Sb	17 20 44.8	-1.6
PHP	Peshkopia	1.73	332	ePN	Pn	17 20 26.7	+1.8
TIR	Tirane	1.73	313	ePN	Pg	17 20 29.3	+1.4
TIR	Tirane	1.73	313	P	Pg	17 20 32.2	+4.3
SKO	Skopje	1.80	358	ePn	Pn	17 20 28.4	+2.5
SKO				eSn	Sn	17 20 55.5	+6.6
QSH	Qafa e Shtames	1.83	318	ePN	Pg	17 20 31.0	+1.2
OUR	Ouranopolis	1.88	84	ePb	Pn	17 20 26.5	-0.5
LKR	Lokris	1.89	143	ePb	Pn	17 20 27.1	0.0
LKR	Lokris	1.89	143	ePn	Pn	17 20 27.2	+0.1
AOS	Alonnisos	2.06	118	ePn	Pn	17 20 29.0	-0.5
VLS	Valsamata	2.12	201	ePN	Pn	17 20 32.0	+1.7
NVR	Nevrokopi	2.12	56	ePb	Pb	17 20 30.5	-2.8
LTK	Loutraki	2.42	152	ePn	Pn	17 20 34.2	-0.1
BCI	Bajram Curri	2.46	334	ePN	Pg	17 20 41.2	-0.6
ULC	Ulcinj	2.49	317	⇓iPn	Pg	17 20 40.9	-1.5
ULC				eSn	Sg	17 21 16.3	+1.6
PVY	Plav	2.69	335	⇓iPn	Pg	17 20 44.0	-2.3
PVY				eSn	Sg	17 21 19.7	-1.5
ATH	Athens Observa	2.77	142	ePN	Pn	17 20 40.0	+0.8
PTL	Penteli	2.79	139	ePN	Pn	17 20 40.0	+0.6
PDG	Podgorica	2.84	324	⇓iPn	Pg	17 20 45.9	-3.1
PDG				eSn	Sg	17 21 23.2	-2.5
TTG	Podgorica	2.84	324	⇓iPn	Pg	17 20 45.9	-3.1
TTG				eSn	Sg	17 21 23.2	-2.5
NAIG	Nisos Aigina	2.85	147	ePN	Pn	17 20 41.0	+0.7
NAIG	Nisos Aigina	2.85	147	ePn	Pn	17 20 40.0	-0.3
BUM	Brajici-Budva	2.91	318	⇓iPn	Pg	17 20 47.0	-3.5
BUM				eSn	Sg	17 21 25.5	-2.8
KVR	Kavouri	2.91	143	ePN	Pn	17 20 41.5	+0.3
BEY	Berane	2.97	336	⇑iPn	Pg	17 20 47.2	-4.3
BEY				eSn	Sg	17 21 26.6	-3.4
IVA	Berane	2.97	336	⇑iPn	Pg	17 20 47.2	-4.3
IVA				eSn	Sg	17 21 26.6	-3.4
DID	Didima	2.97	153	ePn	Pn	17 20 41.8	-0.2
RDO	Rodhopi	3.19	71	ePN	Pn	17 20 46.4	+1.4
HCY	Herceg Novi	3.23	316	⇑iPn	Pg	17 20 52.0	-4.5
HCY				eSn	Sg	17 21 33.5	-4.8
NKY	Niksic	3.26	325	⇑iPn	Pg	17 20 52.6	-4.5
NKY				eSn	Sg	17 21 34.1	-5.2
BRY	Bratogost	3.54	322	⇑iPn	Pg	17 20 56.4	-6.0
BRY				eSn	Sg	17 21 40.2	-8.0
UPM	Unac-Piva	3.61	328	⇓iPn	Pg	17 20 56.8	-7.1
UPM				eSn	Sg	17 21 41.5	-9.2
TIP	Timpagrande	3.82	257	P	Pn	17 20 57.3	+3.7
CUC	Castrocucco	4.39	270	P	Pn	17 21 07.4	+5.9
APE	Apeiranthos	4.40	133	⇓iP	Pn	17 21 02.4	+0.8
FGMS	Monte Sant'Ang	4.50	292	Pn	Pn	17 21 04.4	+1.4
FGMS				Sn	Sn	17 21 53.8	-1.6
RGNG	Rignano Grg	4.75	290	Pn	Pn	17 21 07.7	+1.3
RGNG				Sn	Sn	17 21 58.3	-3.3
SGO	Sicignano	4.78	277	Pn	Pn	17 21 10.6	+3.8
CSSN	Cassano Irpino	5.01	280	Pn	Pn	17 21 14.2	+4.2
SGG	Gregorio Mates	5.57	285	Pn	Pn	17 21 22.0	+4.3
KECS	Kecovo	8.35	355	ePN	Pn	17 21 54.9	-0.8
KECS	Kecovo	8.35	355	ePn	Pn	17 21 54.9	-0.8
VYHS	Vyhne	8.54	348	ePN	Pn	17 21 59.4	+0.9
VYHS				eSN	Sn	17 23 30.2	-4.7
VYHS	Vyhne	8.54	348	ePn	Pn	17 21 59.4	+0.9
VYHS				eSn	Sn	17 23 30.2	-4.7
NB2	NORSAR Subarra	21.85	346	P	P	17 24 45.7	-1.5
	comp=Z,2.0nm,0.7s,baz=160,slow=11						

*IDC **01** 17:19:58.1±3.2, 171N×9936E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/19, mbtmp3.8/5, MS3.1/1, Ms1 3.1/1, ms1mx2.7/30, Error ellipse: s-maj=144.9km s-min=20.5km az=58.0*
*ISCJB **01** 17:20:07.6±4.3, 17N±06×993E±09, h97km±16km, mb3.8/5, Error ellipse: s-maj=172.4km s-min=22.5km az=148.7*
*DJA **01** 17:20:23, 2.11N×9933E, h93km, ML3.4/2*
ISC 01 17:20:08.7±3.9, **17N**±06×**994E**±09, **h88**km±17km, **n7**, σ**0.40**/6, **mb3.8**/5, **1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	1.18	338	⇑eP	Sn	17 20 46.7	0.0
WRA	Warramunga Arr	40.48	124	P	P	17 27 39.2	+0.1
	2.1nm,0.6s,mb4.2,baz=302,slow=9.1,SNR=29						
ASAR	Alice Springs	41.99	129	P	P	17 27 51.4	-0.1

	0.2nm,0.5s,mb3.1,baz=299,slow=7.6,SNR=7.1						
KSRS	**Korea Array**	**44.22**	**33**	LR	LR	17 46 17.1	
	comp=Z,24nm,19.2s,baz=10.0,slow=36						
SONM	**Songino Array**	**46.35**	**7**	P	**P**	**17 28 25.9**	**+0.1**
	0.5nm,0.5s,mb3.5,baz=188,slow=10,SNR=5.0						
MKAR	**Makanchi Array**	**47.32**	**344**	P	**P**	**17 28 33.8**	**+0.4**
	1.4nm,0.5s,mb4.0,baz=160,slow=9.6,SNR=22						
ZALV	**Zalesovo Beam**	**53.44**	**349**	P	**P**	**17 29 19.0**	**-0.4**
	1.5nm,0.5s,mb4.3,baz=159,slow=5.8,SNR=8.2						

*ISCJB **01** 17:21:13.7±0.9, 4008N±005×2164E±008, h5^{km}±11^{km}, Error ellipse: s-maj=11.3km s-min=7.0km az=32.6*
*NEIC **01** 17:21:13.9, 40.13N×2167E, h15^{km}, MD3.3(ATH), After ATH.*
*CSEM **01** 17:21:13.9, 40.13N×2167E, h15^{km}, MD3.3/8, After ATH*
*ATH **01** 17:21:14.1, 40.13N×2166E, h14^{km}±1^{km}, MD3.3/7*
ISC 01 17:21:14.1±0.8**, 4009N**±005×**2166E**±008**, h8**^{km}±10^{km}**, n10,** σ**0^{s}90**/12**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.24**	**22**	*e*PG	**Pg**	**17 21 18.5**	**-0.3**
KZN				*e*SG	**Sg**	**17 21 22.3**	**+0.3**
THL	**Klokotos Trika**	**0.59**	**152**	*e*PB	**Pb**	**17 21 26.3**	**-0.3**
THL				*e*SB	**Sb**	**17 21 35.3**	**+0.2**
JAN	**Janina**	**0.75**	**235**	*e*PG	**Pg**	**17 21 28.4**	**-0.2**
JAN	**Janina**	**0.75**	**235**	*e*Pn	**Pn**	**17 21 28.1**	**-2.9**
EVR	**Evrytania**	**1.18**	**174**	*e*PG	**Pg**	**17 21 36.9**	**+0.3**
PLG	**Polygyros**	**1.40**	**78**	*e*PB	**Pb**	**17 21 39.6**	**-0.8**
PLG	**Polygyros**	**1.40**	**78**	*e*Pn	**Pn**	**17 21 39.0**	**-0.8**
KEK	**Kerkira**	**1.48**	**256**	*e*PB	**Pb**	**17 21 42.7**	**+1.0**
LKR	**Lokris**	**1.77**	**144**	*e*Pn	**Pn**	**17 21 45.8**	**+0.8**
NVR	**Nevrokopi**	**2.10**	**52**	*e*PN	**Pn**	**17 21 50.8**	**+1.3**

IDC 01 17:23:23.4±8.7**, 5034N**×**17793W, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/21**, mbtmp3.7**/3**, Error ellipse: s-maj=218.2km s-min=43.3km az=173.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**35.56**	**46**	P	P	17 30 21.8	-0.1
	0.8nm,0.7s,baz=281,slow=8.6,SNR=5.8						
ARCES	**ARCESS Array B**	**59.22**	**351**	P	P	17 33 25.7	0.0
	0.7nm,0.5s,baz=28,slow=8.2,SNR=3.7						
MKAR	**Makanchi Array**	**61.12**	**309**	P	P	17 33 39.1	0.0
	0.3nm,0.5s,baz=37,slow=6.6,SNR=4.1						

*ISCJB **01** 17:27:59.8±0.4, 3876N±002×2175E±003, h10^{km}, Error ellipse: s-maj=3.7km s-min=3.4km az=166.1*
*NEIC **01** 17:28:00.6, 3878N×2178E, h13^{km}, ML3.5(ATH), After ATH.*
*CSEM **01** 17:28:00.6±0.1, 3876N×2178E, h5^{km}, ML3.5, Error ellipse: s-maj=1.7km s-min=1.3km az=21.0*
*THE **01** 17:28:00.4, 3875N×2178E, h2^{km}, ML3.2*
*ATH **01** 17:28:01.0, 3879N×2176E, h11^{km}±1^{km}, MD3.3/12, ML3.5*
ISC 01 17:28:00.2±0.5**, 3876N**±002×**2176E**±003**, h7**^{km}±4^{km}**, n34,** σ**0^{s}90**/45**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.17**	**13**	*e*PG	**Pg**	**17 28 04.1**	**+0.4**
EVR				*e*SG	**Sg**	**17 28 06.9**	**+0.9**
AGG	**Agios Georgios**	**0.52**	**59**	*e*Pg	**Pg**	**17 28 10.1**	**-0.2**
AGG				*e*Sg	**Sg**	**17 28 18.1**	**+1.1**
RLS	**Riolos of Patr**	**0.73**	**198**	*e*PB	**Pb**	**17 28 16.0**	**+0.7**
THL	**Klokotos Trika**	**0.83**	**14**	*e*Pg	**Pg**	**17 28 15.9**	**-0.3**
THL				*e*Sg	**Sg**	**17 28 28.1**	**+1.1**
THL	**Klokotos Trika**	**0.83**	**14**	*e*PB	**Pb**	**17 28 16.3**	**-0.7**
THL				*e*SB	**Sb**	**17 28 26.9**	**-1.5**
THL	**Klokotos Trika**	**0.83**	**14**	*e*Pb	**Pb**	**17 28 16.3**	**-0.7**
THL				*e*Sb	**Sb**	**17 28 26.9**	**-1.5**
THL				*e*Sg	**Sg**	**17 28 28.1**	**+1.0**
LKD	**Levkas**	**0.87**	**267**	*e*Pg	**Pg**	**17 28 17.2**	**+0.3**
LKR	**Lokris**	**0.97**	**96**	*e*Pg	**Pg**	**17 28 18.1**	**-0.8**
LKR				*e*Sg	**Sg**	**17 28 32.0**	**+0.5**
LKR	**Lokris**	**0.97**	**96**	*e*Pg	**Pg**	**17 28 18.3**	**-0.6**
LKR				*e*Sg	**Sg**	**17 28 32.0**	**+0.4**
LKR	**Lokris**	**0.97**	**96**	*e*Pg	**Pg**	**17 28 18.3**	**-0.6**
LKR				*e*Sb	**Sb**	**17 28 31.9**	**-0.6**
VLS	**Valsamata**	**1.09**	**238**	*e*Pg	**Pg**	**17 28 20.7**	**-0.4**
VLS	**Valsamata**	**1.09**	**238**	*e*PN	**Pn**	**17 28 21.9**	**+0.1**
VLS	**Valsamata**	**1.09**	**238**	*e*Pg	**Pg**	**17 28 21.1**	**0.0**
MEV	**Metsovon**	**1.11**	**338**	*e*Pg	**Pg**	**17 28 21.0**	**-0.5**
JAN	**Janina**	**1.15**	**322**	*e*PG	**Pg**	**17 28 21.5**	**-0.7**
LTK	**Loutraki**	**1.20**	**127**	*e*Pg	**Pg**	**17 28 22.8**	**-0.4**
NEO	**Neokhori**	**1.27**	**64**	*e*PB	**Pb**	**17 28 24.8**	**+0.4**
XOR	**Xorichti**	**1.27**	**61**	*e*Pg	**Pg**	**17 28 24.0**	**-0.6**
IGT	**Igoumenitsa**	**1.36**	**305**	*e*Pg	**Pg**	**17 28 26.1**	**-0.1**
LIT	**Litokhoron**	**1.46**	**23**	*e*Pg	**Pg**	**17 28 26.9**	**-1.3**
LIT				*e*Sg	**Sg**	**17 28 47.8**	**+0.7**
KZN	**Kozani**	**1.55**	**0**	*e*PB	**Pb**	**17 28 30.0**	**+0.8**
ITM	**Ithomi**	**1.58**	**175**	*e*PG	**Pg**	**17 28 31.1**	**+0.6**
NAIG	**Nisos Aigina**	**1.69**	**126**	*e*PG	**Pg**	**17 28 32.5**	**0.0**
NAIG	**Nisos Aigina**	**1.69**	**126**	*e*Pb	**Pb**	**17 28 31.0**	**-0.5**
ATH	**Athens Observa**	**1.72**	**116**	*e*PN	**Pn**	**17 28 33.2**	**+2.6**
ATH	**Athens Observa**	**1.72**	**116**	*e*Pb	**Pb**	**17 28 31.0**	**-1.2**
PTL	**Penteli**	**1.80**	**112**	*e*PN	**Pn**	**17 28 33.5**	**+1.9**
KEK	**Kerkira**	**1.80**	**303**	*e*PG	**Pg**	**17 28 34.2**	**-0.5**
PAIG	**Paliouri**	**1.89**	**51**	*e*Pb	**Pb**	**17 28 32.0**	**-3.0**
PAIG	**Paliouri**	**1.89**	**51**	*e*Pb	**Pb**	**17 28 32.0**	**-3.1**
FNA	**Florina**	**2.05**	**352**	*e*Pn	**Pn**	**17 28 35.2**	**+0.1**
FNA				*e*Sn	**Sn**	**17 29 02.7**	**+1.8**
PLG	**Polygyros**	**2.08**	**38**	*e*Pn	**Pn**	**17 28 34.8**	**-0.6**
HORT	**Hortiatis**	**2.11**	**29**	*e*Pn	**Pn**	**17 28 35.6**	**-0.3**
OUR	**Ouranopolis**	**2.33**	**47**	*e*Pn	**Pn**	**17 28 38.6**	**-0.4**

*ISCJB **01** 17:34:47.8±2.6, 7.1S±0.4×125.1E±0.5, h489^{km}±34^{km}, Error ellipse: s-maj=93.5km s-min=23.9km az=142.7*
*IDC **01** 17:34:50.0±3.3, 7.39S×124.79E, h501^{km}±45^{km}, mb3.1/1, mb1 3.0/5, mb1mx2.7/16, mbtmp2.9/5, Error ellipse: s-maj=127.6km s-min=21.2km az=55.0*
ISC 01 17:34:48.1±2.5**, 71S**±04×**1253E**±04**, h474**^{km}±34^{km}**, n7,** σ**0^{s}52**/8**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.49**	**207**	P	**P**	**17 36 01.3**	**+0.7**
	28nm,0.3s,baz=23,slow=1.6,SNR=37						
BATI				S	**S**	**17 36 59.3**	**-0.4**
	6.3nm,0.3s,baz=246,slow=18,SNR=4.2						
FITZ	**Fitzroy Crossi**	**10.96**	**178**⇑	*i*P	**P**	**17 37 15.5**	**-0.1**
	4.8nm,1.1s						
FITZ	**Fitzroy Crossi**	**10.96**	**178**	P	**P**	**17 37 15.6**	**0.0**
	0.3nm,0.3s,baz=131,slow=1.2,SNR=20						
WRA	**Warramunga Arr**	**15.52**	**146**	P	**P**	**17 38 03.8**	**-0.4**
	0.3nm,0.3s,baz=303,slow=12,SNR=29						
WB2	**Warramunga Arr**	**15.52**	**146**	*e*P	**P**	**17 38 04.2**	**-0.1**
ASAR	**Alice Springs**	**18.46**	**154**	P	**P**	**17 38 34.4**	**+0.4**
	0.4nm,0.3s,baz=323,slow=8.1,SNR=70						
MKAR	**Makanchi Array**	**65.81**	**329**	P	**P**	**17 44 45.2**	**-0.2**
	0.6nm,0.5s,baz=128,slow=7.9,SNR=14						

*NIED **01** 17:43:00, 4650N×15330E, h14^{km}, Mw3.7 Best double couple: $M_0$4.03000×10^{14} NP1:ϕ_s149.00000°, δ76.00000°, λ-41.00000°. NP2:ϕ_s251.00000°, δ51.00000°, λ-162.00000°.*
*ISCJB **01** 17:43:49.9±1.9, 4631N±009×153.12E±0.10, h25^{km}±14^{km}, mb3.9/17, Error ellipse: s-maj=17.1km s-min=6.8km az=143.5*
*MOS **01** 17:43:52.9±2.3, 4637N×15288E, h33^{km}, mb4.1/8, Error ellipse: s-maj=12.8km s-min=10.9km az=137.3*
*BJI **01** 17:43:53.5, 4662N×15337E, h64^{km}, mB4.4, mb4.3*
*NEIC **01** 17:43:54.0±1.4, 4640N×15306E, h38^{km}±12^{km}, mb3.8/1, Error ellipse: s-maj=14.7km s-min=9.1km az=144.0*
*IDC **01** 17:43:54.6±2.8, 4637N×15301E, h43^{km}±26^{km}, mb3.6/14, mb1 3.7/17, mb1mx3.7/24, mbtmp3.6/17, ML3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.0/27, Error ellipse: s-maj=20.7km s-min=15.1km az=140.0*
ISC 01 17:43:53.8±0.9**, 4633N**±009×**1531E**±01**, h38**^{km}±8^{km}**, n62,** σ**1^{s}27**/62**, mb3.9**/17**, 2C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.80**	**255**⇓	*i*PN	**Pn**	**17 44 48.0**	**-1.7**
KUR				*e*S	**Sn**	**17 45 33.5**	**+0.3**
KUR				pmax	pmax		
	comp=N,80nm,0.6s						
KUR				pmax	pmax		
	comp=E,50nm,0.6s						
KUR				pmax	pmax		
	comp=Z,230nm,0.6s						
KUR				smax			
	comp=N,250nm,0.8s						
KUR				smax			
	comp=E,140nm,0.8s						
SKR	**Severo-Kuril's**	**4.80**	**24**	*e*PN	**Pn**	**17 45 04.5**	**+1.0**
SKR				pmax	pmax		
	comp=N,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.59**	**248**	*e*PN	**Pn**	**17 45 15.0**	**+0.7**
YUK				*e*S	**Sn**	**17 46 20.0**	**+2.8**
YUK				smax			
	comp=N,370nm,0.8s						
YUK				smax			
	comp=E,370nm,0.8s						
NEM2	**Nemuro 2**	**5.99**	**243**	P	**Pn**	**17 45 17.8**	**-2.0**
NEM2				*e*S	**Sn**	**17 46 24.0**	**-3.1**
JRA	**Rausu**	**6.11**	**250**	P	**Pn**	**17 45 22.2**	**+0.8**
JNK	**Nakash**	**6.53**	**248**	P	**Pn**	**17 45 27.2**	**0.0**
JAK	**Akkeshi**	**6.84**	**244**	P	**Pn**	**17 45 29.4**	**-2.0**
JAK				*e*S	**Sn**	**17 46 43.4**	**-4.5**
JTKR	**Abashiri--Toko**	**6.89**	**253**	P	**Pn**	**17 45 33.3**	**+1.1**
YSS	**Yuzh-Sakhalins**	**7.13**	**279**	*e*PN	**Pn**	**17 45 39.0**	**+3.6**
YSS	**Yuzh-Sakhalins**	**7.13**	**279**	*e*Pn	**Pn**	**17 45 35.1**	**-0.3**
	comp=E,12nm,0.9s						
JAR	**Ashorobuto**	**7.27**	**249**	P	**Pn**	**17 45 37.6**	**+0.2**
PETK	**Petropavlovsk-**	**7.42**	**22**	P	**Pn**	**17 45 38.5**	**-0.8**
	comp=E,0.3nm,0.3s,baz=295,slow=6.7,SNR=15						
JKK2	**Kamakawa 2**	**7.70**	**255**	P	**Pn**	**17 45 44.8**	**+1.5**
ASAJ	**Asahikawa**	**7.72**	**257**	P	**Pn**	**17 45 44.5**	**+1.0**
	comp=E,0.9nm,0.3s,baz=85,slow=16,SNR=11						
ASAJ				LR	LR	17 48 36.5	
	comp=E,83nm,20.4s,baz=18,slow=37						
ASAJ	**Asahikawa**	**7.72**	**257**	P	**Pn**	**17 45 45.8**	**+2.3**
ASAJ	**Asahikawa**	**7.72**	**257**	PN	**Pn**	**17 45 44.5**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,83nm,20.4s						
JCH	**Churui**	**7.87**	**245**	P	**Pn**	**17 45 44.2**	**-1.4**
JFR	**Furan**	**8.10**	**251**	P	**Pn**	**17 45 52.0**	**+3.3**
JNB	**Noboribetsu**	**9.44**	**250**	P	**Pn**	**17 46 06.3**	**-0.7**
JKB	**Kayabe**	**9.73**	**247**	P	**Pn**	**17 46 09.0**	**-2.0**
MAJO	**Matsushiro**	**14.80**	**234**	*e*P	**Pn**	**17 47 16.1**	**-4.3**
MJAR	**Matsushiro Arr**	**14.80**	**234**	P	**Pn**	**17 47 22.0**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=216,slow=32,SNR=3.5						
MAT	**Matsushiro**	**14.80**	**234**	P	**Pn**	**17 47 25.8**	**+5.4**
KSRS	**Korea Array**	**20.64**	**254**	P	**P**	**17 48 31.5**	**+1.5**
	comp=Z,1.7nm,0.7s,baz=57,slow=10,SNR=6.8						
KSRS	**Korea Array**	**20.64**	**254**	*e*P	**P**	**17 48 31.5**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YAK	**Yakutsk**	**20.66**	**328**	*i* P	**P**	**17 48 34.4**	**+4.5**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ULN	**Ulaanbaatar**	**31.01**	**290**⇑	*e*P	**P**	**17 50 11.1**	**+3.7**
ULN	**Ulaanbaatar**	**31.01**	**290**	P	**P**	**17 50 09.7**	**+2.2**
	comp=Z,2.1nm,1.1s,mb3.9						
SONM	**Songino Array**	**31.44**	**290**	P	**P**	**17 50 11.2**	**0.0**
	comp=Z,0.4nm,0.6s,mb3.4,baz=56,slow=7.7,SNR=3.0						
KRAR	**Krasnoyarsk**	**37.81**	**307**	*i* P	**P**	**17 51 06.5**	**+0.3**
KRAR				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
LZH	**Lanzhou**	**37.87**	**272**	*e*P	**P**	**17 51 05.5**	**-1.4**
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.6						
GTA	**Gaotai**	**39.01**	**280**	P	**P**	**17 51 18.5**	**+2.1**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.0						
ZALV	**Zalesovo Beam**	**42.83**	**306**	P	**P**	**17 51 45.9**	**-1.8**
	comp=Z,0.7nm,0.6s,mb3.5,baz=46,slow=4.3,SNR=3.9						
ZAL	**Zalesovo**	**42.85**	**306**	P	**P**	**17 51 45.9**	**-1.9**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**47.11**	**298**	P	**P**	**17 52 21.3**	**-0.5**
	comp=Z,1.8nm,0.8s,mb4.1,baz=72,slow=6.8,SNR=18						
MKAR	**Makanchi Array**	**47.11**	**298**	P	**P**	**17 52 21.3**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**47.11**	**298**	P	**P**	**17 52 21.3**	**-0.5**
KURK	**Kurchatov**	**47.57**	**304**⇑	*e*P	**P**	**17 52 24.5**	**-0.8**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURK				MLR	MLR		
	comp=Z,100nm,26.0s						
YKA	**Yellowknife Ar**	**51.28**	**36**	P	**P**	**17 52 54.2**	**+0.8**
	comp=Z,0.6nm,0.8s,mb3.5,baz=298,slow=6.7,SNR=4.0						
YKA	**Yellowknife Ar**	**51.28**	**36**	P	**P**	**17 52 54.2**	**+0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**52.24**	**257**	P	**P**	**17 53 02.6**	**+1.4**
	comp=Z,0.5nm,0.7s,mb3.6,baz=34,slow=7.4,SNR=4.8						
CMAR	**Chiang Mai Arr**	**52.24**	**257**	*e*P	**P**	**17 53 03.4**	**+2.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**58.24**	**341**	P	**P**	**17 53 43.8**	**+0.1**
	comp=Z,4.2nm,1.0s,mb4.4,baz=46,slow=8.7,SNR=4.2						
ARCES	**ARCESS Array B**	**58.24**	**341**	P	**P**	**17 53 43.8**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKTK	**Aktyubinsk**	**58.98**	**312**	P	**P**	**17 53 49.0**	**-0.2**
AKTO	**Aktyubinsk**	**58.98**	**312**	P	**P**	**17 53 49.0**	**-0.2**
	comp=Z,0.7nm,0.5s,mb3.9,baz=77,slow=8.7,SNR=4.4						
AKTO	**Aktyubinsk**	**58.98**	**312**	P	**P**	**17 53 49.0**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
NVAR	**Mina Array Bea**	**62.66**	**62**	P	**P**	**17 54 14.5**	**+0.2**
	comp=Z,0.5nm,0.6s,mb3.8,baz=286,slow=7.1,SNR=4.1						
PDAR	**Pinedale Array**	**65.02**	**54**	P	**P**	**17 54 30.4**	**+0.6**
	comp=Z,0.5nm,0.7s,mb3.7,baz=349,slow=3.0,SNR=4.6						
NB2	**NORSAR Subarra**	**68.61**	**341**	P	**P**	**17 54 52.2**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**68.61**	**341**	P	**P**	**17 54 52.4**	**0.0**
	comp=Z,1.1nm,0.6s,mb4.0,baz=28,slow=6.4,SNR=5.5						
NOA	**NORSAR Array B**	**68.61**	**341**	*e*P	**P**	**17 54 52.3**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**68.76**	**208**	P	**P**	**17 54 52.9**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.8,baz=120,slow=17,SNR=5.2						
ASAR	**Alice Springs**	**71.80**	**198**	P	**P**	**17 55 12.0**	**-0.2**
	comp=Z,0.4nm,0.8s,mb3.4,baz=9.5,slow=5.0,SNR=7.5						
ASAR	**Alice Springs**	**71.80**	**198**	*e*P	**P**	**17 55 12.0**	**-0.2**
AKASG	**Malin Array Be**	**71.88**	**326**	P	**P**	**17 55 12.1**	**-0.4**
	comp=Z,3.7nm,0.6s,mb4.5,baz=33,slow=6.2,SNR=12						
AKASG	**Malin Array Be**	**71.88**	**326**	*e*P	**P**	**17 55 12.0**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKASG	**Malin Array Be**	**71.88**	**326**	P	**P**	**17 55 12.1**	**-0.4**
PLCA	**Paso Flores**	**148.20**	**96**	PKPbc	PKPbc	18 03 35.8	+0.7
	comp=Z,0.7nm,0.6s,baz=291,slow=7.9,SNR=3.2						
PLCA	**Paso Flores**	**148.20**	**96**	PKP2	PKPbc	18 03 35.8	+0.7
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CPUP	**Villa Florida**	**148.70**	**61**	PKPbc	PKPbc	18 03 37.4	+0.6
	comp=Z,0.4nm,0.3s,baz=191,slow=1.9,SNR=6.1						
CPUP	**Villa Florida**	**148.70**	**61**	PKPbc	PKPbc	18 03 37.4	+0.6

*ISCJB **01** 17:46:40.3±0.9, 3678N±003×2623E±006, h13^{km}±7^{km}, Error ellipse: s-maj=7.9km s-min=5.5km az=6.8*
*ATH **01** 17:46:40.0, 3670N×26.16E, h30^{km}±2^{km}, MD3.1/4*
*CSEM **01** 17:46:40.6±0.1, 3674N×2629E, h15^{km}, MD3.1, Error ellipse: s-maj=1.9km s-min=1.8km az=146.0*
*NEIC **01** 17:46:40.0, 3670N×26.16E, h30^{km}, MD3.1(ATH), After ATH.*
*THE **01** 17:46:41.3, 3675N×26.18E, h0^{km}*
ISC 01 17:46:40.5±1.1**, 3675N**±003×**2628E**±006**, h9**^{km}±10^{km}**, n16,** σ**0^{s}83**/31**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APE	**Apeiranthos**	**0.68**	**298**	*e*Pg	**Pg**	**17 46 53.5**	**-0.2**
APE				*e*Sg	**Sg**	**17 47 03.0**	**+0.5**
APE	**Apeiranthos**	**0.68**	**298**	*e*PN	**Pn**	**17 46 53.3**	**-3.0**
APE				*e*SN	**Sg**	**17 47 02.3**	**-0.3**
APE	**Apeiranthos**	**0.68**	**298**	*e*Pn	**Pn**	**17 46 53.7**	**-2.6**
APE				*e*Sn	**Sg**	**17 47 02.3**	**-0.3**
APE				*e*Sg	**Sg**	**17 47 03.0**	**+0.4**
APE	**Apeiranthos**	**0.68**	**298**	*e*Pn	**Pn**	**17 46 53.7**	**-2.6**
APE				*e*Sn	**Sg**	**17 47 02.3**	**-0.3**
NISR	**Nisiros**	**0.69**	**101**	*e*PN	**Pg**	**17 46 55.5**	**+1.6**
SANT	**Santorini**	**0.76**	**241**	*e*Pg	**Pg**	**17 46 54.9**	**-0.3**
SANT				*e*Sg	**Sg**	**17 47 05.0**	**-0.1**
THR1	**Thera Island**	**0.76**	**241**	*e*Pg	**Pg**	**17 46 54.8**	**-0.4**
THR1				*e*Sg	**Sg**	**17 47 05.2**	**+0.1**
THR1	**Thera Island**	**0.76**	**241**	*e*Pg	**Pg**	**17 46 54.8**	**-0.4**
THR1				*e*Sg	**Sg**	**17 47 05.2**	**+0.1**
THR4	**Thira Island,**	**0.77**	**248**	*e*Pg	**Pg**	**17 46 55.4**	**+0.1**
THR4				*e*Sg	**Sg**	**17 47 06.2**	**+0.9**
THR3	**Thira Island,**	**0.79**	**245**	*e*Pg	**Pg**	**17 46 55.0**	**-0.6**
THR3				*e*Sg	**Sg**	**17 47 06.0**	**+0.2**
THR6	**Thira Island,**	**0.81**	**241**	*e*Pg	**Pg**	**17 46 55.6**	**-0.6**
THR6				*e*Sg	**Sg**	**17 47 07.2**	**+0.4**
THR5	**Thira Island,**	**0.82**	**247**	*e*Pg	**Pg**	**17 46 56.1**	**-0.2**
THR5				*e*Sg	**Sg**	**17 47 07.6**	**+0.6**
SMG	**Samos**	**1.05**	**25**	*e*PN	**Pn**	**17 47 01.1**	**-0.3**
SMG				*e*SN	**Sn**	**17 47 17.5**	**+1.3**
KARP	**Karpathos**	**1.39**	**149**	*e*PN	**Pn**	**17 47 05.4**	**-0.7**
ZKR	**Zakros**	**1.63**	**182**	*e*Pb	**Pb**	**17 47 09.8**	**-0.9**
ZKR				*e*Sb	**Sb**	**17 47 32.4**	**+1.0**
LAST	**Lasithi**	**1.71**	**203**	*e*Pb	**Pb**	**17 47 10.6**	**-1.5**
LAST				*e*Sb	**Sb**	**17 47 34.3**	**+0.6**

MAN 01 18:30:46, 1728N×12008E, h36^{km}, mb4.1, ML2.9, MS2.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.70**	**59**	*e*P	Pn	18 31 00.6	+1.1
ABRA				*e*S	Sn	18 31 11.5	+2.4
SIPP	**Brgy, Tapao**	**0.73**	**30**⇓	*e*P	Pn	18 31 01.5	+1.7
SIPP				*e*S	Sn	18 31 12.4	+2.6
BOLP	**Bolinao**	**0.91**	**190**	*e*P	Pn	18 31 03.5	+1.1
BOLP				*e*S	Sn	18 31 15.9	+1.6
APYP	**Conner**	**1.25**	**62**	*e*P	Pn	18 31 08.1	+1.1
APYP				*e*S	Sn	18 31 23.7	+1.1
SCZP	**Santa Cruz**	**1.51**	**186**	*e*P	Pn	18 31 11.6	+1.0
CAUP	**Cauayan**	**1.70**	**101**	*e*P	Pn	18 31 15.8	+2.7
CAUP				*e*S	Sn	18 31 39.3	+5.5
BALP	**Baler**	**2.10**	**137**	*e*P	Pn	18 31 19.6	+0.9
BALP				*e*S	Sn	18 31 45.2	+1.6

*IDC **01** 18:32:01.8±0.6, 4178N×11239W, h0^{km}, mb3.2/1, mb1 4.1/5, mb1mx3.7/25, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=29.9km s-min=4.6km az=152.0*
*ISCJB **01** 18:32:02.5±0.2, 4159N±001×11228W±002, h10^{km}, Error ellipse: s-maj=2.6km s-min=2.1km az=7.6*
*NEIC **01** 18:32:02.0, 4164N×11232W, h6^{km}, ML3.9(SLC), MW3.7(SLM), After SLC.*
NEIC Felt [IV] at Garland; [III] at Corinne, Plymouth and Tremonton. Also felt at Brigham City, Honeyville, Logan, Mendon, Providence, Salt Lake City and Sandy. Felt [III] at Pocatello, Idaho. Also felt at Malad City, Idaho.
ISC 01 18:32:03.6±0.2**, 4159N**±001×**11227W**±002**, h10**^{km}**, n85,** σ**1^{s}27**/126**, 1C, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HVU	**Hansel Valley**	**0.43**	**297**⇑	*i*Pg	**Pg**	**18 32 09.4**	**-2.5**
HWUT	**Hardware Ranch**	**0.53**	**87**	*e*Pg	**Pg**	**18 32 13.1**	**-0.8**
HWUT				*e*Sg	**Sg**	**18 32 20.2**	**-0.6**
BGU	**Big Grassy Mou**	**0.87**	**221**	*e*Pg	**Pg**	**18 32 18.8**	**-1.7**
BGU				*e*Sg	**Sg**	**18 32 31.6**	**-0.2**
NOQ	**North Oquirrh**	**0.94**	**173**	*e*Pg	**Pg**	**18 32 21.2**	**-0.5**
NOQ				*e*Sg	**Sg**	**18 32 34.3**	**+0.5**
CTU	**Camp Tracy**	**0.97**	**156**	*e*Pg	**Pg**	**18 32 21.8**	**-0.6**
CTU				*e*Sg	**Sg**	**18 32 35.0**	**0.0**
JLU	**Jordanelle**	**1.16**	**148**	*e*Pg	**Pg**	**18 32 25.2**	**-0.7**
JLU				*e*Sg	**Sg**	**18 32 40.8**	**-0.1**
DAU	**Daniels Canyon**	**1.40**	**146**	*e*Pn	**Pn**	**18 32 29.4**	**+0.2**
DAU				*e*Sn	**Sn**	**18 32 47.9**	**+0.2**
DUG	**Dugway**	**1.45**	**197**	*e*Pn	**Pn**	**18 32 28.7**	**-1.1**
AHID	**Auburn Hatcher**	**1.46**	**36**	*e*Pn	**Pn**	**18 32 28.3**	**-1.8**
AHID				*e*Sn	**Sn**	**18 32 48.3**	**-0.9**
NLU	**North Lily Min**	**1.64**	**175**	*e*Pn	**Pn**	**18 32 32.0**	**-0.4**
MPU	**Maple Canyon**	**1.64**	**163**	*e*Pn	**Pn**	**18 32 32.3**	**-0.2**
MPU				*e*Sn	**Sg**	**18 32 58.0**	**+1.7**
RRI2	**Red Ridge**	**1.90**	**21**	*e*Pn	**Pn**	**18 32 34.5**	**-1.4**
REDW	**Red Top Meadow**	**2.06**	**30**	*e*Pn	**Pn**	**18 32 36.9**	**-1.4**
REDW				*e*Sn	**Sg**	**18 33 06.7**	**-3.1**
TPAW	**Teton Pass**	**2.14**	**27**	*e*Pn	**Pn**	**18 32 38.3**	**-1.0**
TPAW				*e*Sn	**Sn**	**18 33 06.8**	**+0.9**
DCID1	**Drake Creek**	**2.16**	**21**	*e*Pn	**Pn**	**18 32 38.5**	**-1.1**
SNOW	**Snow King Moun**	**2.18**	**30**	*e*Pn	**Pn**	**18 32 39.1**	**-0.8**
BW06	**Boulder Array**	**2.33**	**59**	*e*Pn	**Pn**	**18 32 42.3**	**+0.3**
BW06				*e*Sn	**Sn**	**18 33 11.2**	**+0.4**
PDAR	**Pinedale Array**	**2.33**	**59**	Pn	**Pn**	**18 32 42.5**	**+0.4**
	57nm,0.3s,baz=234,slow=12,SNR=934						
PDAR				Pg	**Pg**	**18 32 45.8**	**-2.6**
	92nm,0.3s,baz=244,slow=15,SNR=291						
PDAR				Lg		18 33 14.8	
	180nm,0.3s,baz=227,slow=30,SNR=20						
LOHW	**Long Hollow**	**2.37**	**31**	*e*Pn	**Pn**	**18 32 41.6**	**-0.9**
ELK	**Elko**	**2.40**	**250**	Pn	**Pn**	**18 32 42.3**	**-0.6**
	14nm,0.3s,baz=65,slow=12,SNR=143						
ELK				Pg	**Pg**	**18 32 46.5**	**-3.0**
	54nm,0.3s,baz=44,slow=11,SNR=112						
ELK				Lg		18 33 14.8	
	116nm,0.3s,baz=182,slow=17,SNR=8.6						
ELK	**Elko**	**2.40**	**250**	*e*Pn	**Pn**	**18 32 42.6**	**-0.3**
ELK				*e*Sn	**Sb**	**18 33 15.1**	**-1.3**
TMUT	**Trail Mountain**	**2.42**	**160**	*e*Pn	**Pn**	**18 32 43.6**	**+0.3**
TMUT				*e*Sg	**Sg**	**18 33 20.7**	**-0.7**
MOOW	**Moose Ponds**	**2.44**	**27**	*e*Pn	**Pn**	**18 32 43.0**	**-0.5**
MOOW				*e*Sg	**Sn**	**18 33 15.5**	**+2.3**
IMW	**Indian Meadow**	**2.51**	**23**	*e*Pn	**Pn**	**18 32 43.5**	**-0.9**
HLID	**Hailey**	**2.53**	**322**	*e*Pn	**Pn**	**18 32 43.7**	**-1.0**
HLID				*e*Sn	**Sn**	**18 33 16.1**	**+0.4**
FLWY	**Flagg Ranch**	**2.75**	**24**	*e*Pn	**Pn**	**18 32 47.2**	**-0.5**
SRU	**San Rafael**	**2.81**	**151**	*e*Pn	**Pn**	**18 32 49.9**	**+1.4**
YFT	**Old Faithful**	**3.05**	**20**	*e*Pn	**Pn**	**18 32 53.1**	**+1.2**
MSU	**Marysvale**	**3.07**	**179**	*e*Pn	**Pn**	**18 32 52.5**	**+0.4**
YMR	**Madison River**	**3.23**	**17**	*e*Pn	**Pn**	**18 32 54.4**	**+0.1**
MCMT	**McKenzie Canyo**	**3.27**	**353**	*e*Pn	**Pn**	**18 32 55.1**	**+0.2**
LKWY	**Lake**	**3.28**	**24**	*e*Pn	**Pn**	**18 32 55.8**	**+0.8**
QLMT	**Earthquake Lak**	**3.30**	**10**	*e*Pn	**Pn**	**18 32 54.9**	**-0.4**
YNR	**Norris Junctio**	**3.34**	**20**	*e*Pn	**Pn**	**18 32 58.3**	**+2.5**
DLMT	**Dillon**	**3.78**	**356**	*e*Pn	**Pn**	**18 33 06.0**	**+4.0**
RWWY	**Rawlins**	**3.79**	**87**	*e*Pn	**Pn**	**18 33 02.8**	**+0.7**
BMN	**Battle Mountai**	**3.92**	**255**	*e*Pn	**Pn**	**18 33 03.2**	**-0.6**
PV10	**Paradox Valley**	**4.05**	**141**	*e*Pn	**Pn**	**18 33 07.5**	**+1.9**
PV10				*e*Pg	**Pg**	**18 33 18.6**	**-2.6**
PV10				*e*Sg	**Sg**	**18 34 10.5**	**-3.2**
BOZ	**Bozeman (W)**	**4.09**	**6**	*e*Pn	**Pn**	**18 33 08.4**	**+2.3**
CCUT	**Cedar City**	**4.12**	**192**	Pn	**Pn**	**18 33 12.7**	**+6.2**
RLMT	**Red Lodge**	**4.16**	**31**	*e*Pn	**Pn**	**18 33 07.4**	**+0.3**
LRM	**Limekiln Ridge**	**4.24**	**358**	*e*Pn	**Pn**	**18 33 11.6**	**+3.5**
LCCM	**Lewis and Clar**	**4.26**	**4**	P	**Pn**	**18 33 13.4**	**+5.0**
PV01	**Paradox Valley**	**4.47**	**139**	*e*Pn	**Pn**	**18 33 12.5**	**+1.1**
PV01				*e*Pg	**Pg**	**18 33 28.9**	**-0.3**
PV01				*e*Sg	**Sg**	**18 34 21.9**	**-5.1**
GCMT	**Greycliff**	**4.61**	**23**	Pn	**Pn**	**18 33 15.5**	**+2.3**
SMCO	**Snowmass**	**4.70**	**119**	*e*Sb	**Sb**	**18 34 28.8**	**+6.0**
WVOR	**Wild Horse Val**	**4.82**	**282**	*e*Pn	**Pn**	**18 33 16.7**	**+0.5**
WVOR				*e*Pb	**Pb**	**18 33 22.1**	**-6.1**
WVOR				*e*Sn	**Sb**	**18 34 27.0**	**+0.8**
BMO	**Blue Mountains**	**4.92**	**313**	*e*Pn	**Pn**	**18 33 17.7**	**+0.2**
PHWY	**Pilot Hill**	**5.13**	**91**	*e*Pn	**Pn**	**18 33 21.3**	**+1.0**
HRY	**Holter Researc**	**5.13**	**3**	*e*Pn	**Pn**	**18 33 12.8**	**-7.7**
ISCO	**Idaho Springs**	**5.36**	**107**	*e*Pn	**Pn**	**18 33 24.8**	**+1.1**
ISCO				*e*Pb	**Pb**	**18 33 37.7**	**+0.3**
ISCO				*e*Sg	**Sg**	**18 34 48.0**	**-7.8**
CHMT	**Chamberlain Mo**	**5.38**	**353**	*e*Pn	**Pn**	**18 33 24.3**	**+0.5**
MSO	**Missoula**	**5.38**	**348**	*e*Pn	**Pn**	**18 33 28.9**	**+5.1**
SHPR	**Sheep Range**	**5.55**	**205**	*e*Pn	**Pn**	**18 33 27.8**	**+1.6**
TPNV	**Topopah Spring**	**5.56**	**215**	*e*Pn	**Pn**	**18 33 27.9**	**+1.4**
TPNV				*e*Pg	**Pg**	**18 33 46.2**	**-4.0**
NVAR	**Mina Array Bea**	**5.60**	**238**	Pn	**Pn**	**18 33 28.9**	**+2.0**
	3.1nm,0.3s,baz=56,slow=11,SNR=64						
NVAR				Pg	**Pg**	**18 33 47.9**	**-3.0**
	7.0nm,0.3s,baz=53,slow=17,SNR=20						
NVAR				Sn	**Sn**	**18 34 33.7**	**+2.3**
	9.0nm,0.3s,baz=182,slow=12,SNR=7.4						
NVAR				Lg		18 34 57.7	

	11nm,0.3s,baz=112,slow=43,SNR=5.1						
NVAR	**Mina Array Bea**	**5.60**	**238**	Pn	**Pn**	**18 33 28.9**	**+2.0**
NVAR				Pg	**Pg**	**18 33 47.9**	**-3.0**
NVAR				Sn	**Sn**	**18 34 33.7**	**+2.3**
NVAR				Lg		18 34 57.7	
PAHR	**Pah Rah Range**	**5.73**	**253**	*e*Pn	**Pn**	**18 33 32.6**	**+4.0**
PAHR				*e*Pg	**Pg**	**18 33 50.8**	**-2.5**
PAHR				*e*Sg	**Sg**	**18 34 56.1**	**-11**
MOD	**Modoc**	**6.02**	**276**	*e*Pn	**Pn**	**18 33 32.5**	**-0.1**
LNOR	**Lincton Mounta**	**6.11**	**317**	*e*Pn	**Pn**	**18 33 35.8**	**+1.9**
WAKR	**Walker**	**6.30**	**243**	*e*Pn	**Pn**	**18 33 38.3**	**+1.8**
MTUM	**Tungsten Hills**	**6.45**	**231**	*e*Pb	**Pb**	**18 33 50.4**	**-5.4**
MTUM				*e*Pg	**Pg**	**18 34 00.8**	**-6.3**
SDCO	**Great Sand Dun**	**6.48**	**124**	Pn	**Pn**	**18 33 34.8**	**-4.2**
RSSD	**Black Hills**	**6.56**	**65**	*e*Pn	**Pn**	**18 33 38.6**	**-1.4**
RSSD				*e*Sn	**Sn**	**18 34 54.3**	**-0.5**
RSSD				*e*Sg	**Sg**	**18 35 26.5**	**-7.5**
EGMT	**Eagleton**	**6.68**	**15**	*e*Pn	**Pn**	**18 33 42.9**	**+1.2**
LAO	**LASA Array**	**6.70**	**38**	*e*Pn	**Pn**	**18 33 42.0**	**0.0**
LDFC	**Landfair**	**6.87**	**200**	*e*Pn	**Pn**	**18 33 44.4**	**+0.1**
HAWA	**Hanford**	**7.11**	**315**	*e*Pn	**Pn**	**18 33 50.8**	**+3.2**
	5.4nm,0.6s						
HAWA				*e*Sg	**Sg**	**18 35 43.5**	**-8.1**
RSW	**Rattlesnake Hi**	**7.14**	**315**	*e*Pn	**Pn**	**18 33 40.6**	**-7.4**
CMB	**Columbia Colle**	**7.18**	**243**	*e*Pn	**Pn**	**18 33 47.5**	**-1.1**
CMB				*e*Pg	**Pg**	**18 34 14.6**	**-6.5**
CMB				*e*Sg	**Sg**	**18 35 46.5**	**-7.6**
OD2	**Odessa Site #2**	**7.41**	**324**	Pn	**Pn**	**18 33 52.7**	**+1.0**
OD2				*e*Pg	**Pg**	**18 34 16.4**	**-8.9**
OD2				*e*Sg	**Sg**	**18 35 53.9**	**-7.3**
NEW	**Newport**	**7.51**	**334**	*e*Pn	**Pn**	**18 33 55.6**	**+2.5**
NEW				*e*Pg	**Pg**	**18 34 17.4**	**-10**
NEW				*e*Sg	**Sg**	**18 35 52.0**	**-13**
WALA	**Waterton Lakes**	**7.56**	**352**	Pn	**Pn**	**18 33 52.7**	**-1.1**
WALA				*e*Pg	**Pg**	**18 34 21.8**	**-6.5**
WALA				*e*Sg	**Sg**	**18 35 51.8**	**-14**
ISA	**Isabella**	**7.65**	**221**	*e*Pn	**Pn**	**18 33 58.8**	**+3.7**
YBH	**Yreka Blue Hor**	**7.82**	**275**	Pg	Px	18 34 19.2	
	0.3nm,0.3s,baz=62,slow=14,SNR=5.4						
YBH				Lg		18 36 09.4	
	0.3nm,0.3s,baz=141,slow=9.9,SNR=2.5						
YBH	**Yreka Blue Hor**	**7.82**	**275**	Pn	**Pn**	**18 34 03.0**	**+5.6**
HUMO	**Hull Mountain**	**8.02**	**281**	*e*Pn	**Pn**	**18 34 01.6**	**+1.6**
ANMO	**Albuquerque**	**8.04**	**144**	Pg	Px	18 34 31.6	
	0.4nm,0.3s,baz=344,slow=16,SNR=7.0						
ANMO				Lg		18 36 13.6	
	0.6nm,0.3s,baz=71,slow=22,SNR=5.0						
ANMO	**Albuquerque**	**8.04**	**144**	*e*Pg	Px	18 34 30.4	
LON	**Longmire**	**8.58**	**310**	*e*Pn	**Pn**	**18 34 06.4**	**-1.4**
DGMT	**Dagmar**	**8.94**	**37**	*e*Pn	**Pn**	**18 34 12.9**	**+0.1**
ULM	**Lac du Bonnet**	**14.30**	**47**	Pn	**Pn**	**18 35 21.9**	**-4.0**
	0.3nm,0.3s,baz=246,slow=10,SNR=3.5						
ULM				Lg		18 39 21.9	
	0.2nm,0.3s,baz=15,slow=12,SNR=3.7						
ULM	**Lac du Bonnet**	**14.30**	**47**	Pn	**Pn**	**18 35 21.9**	**-4.1**
ULM				Lg		18 39 21.9	
FVM	**French Village**	**17.16**	**95**	*e*Pn	**Pn**	**18 36 05.4**	**+2.0**
YKA	**Yellowknife Ar**	**20.99**	**357**	P	**P**	**18 36 45.5**	**-1.2**
	0.5nm,0.5s,baz=172,slow=10,SNR=5.9						

*ISCJB **01** 18:39:48.1±0.9, 178S±0.1×1787W±0.1, h534^{km}±14^{km}, mb4.2/16, Error ellipse: s-maj=20.8km s-min=10.3km az=143.5*

*NEIC **01** 18:39:48.6±0.9, 1775S×17864W, h531^{km}±12^{km}, mb4.5/9, Error ellipse: s-maj=16.3km s-min=8.9km az=146.0*

*IDC **01** 18:39:50.1±1.5, 1774S×17870W, h542^{km}±17^{km}, mb3.5/9, mb1 3.8/10, mb1mx3.5/17, mbtmp3.6/10, Error ellipse: s-maj=27.8km s-min=12.3km az=151.0*

ISC 01 18:39:48.7±0.9**, 178S**±01×**1787W**±01**, h527**^{km}±13^{km}**, n32,** σ**0^{s}92**/31**, mb4.2**/16**, 7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.66**	**61**	P	**P**	**18 41 43.6**	**+1.2**
	20nm,0.3s,baz=53,slow=5.4,SNR=21						
AFI	**Afiamalu**	**7.66**	**61**	*e*P	**P**	**18 41 43.0**	**+0.6**
AFI				*e*S	**S**	**18 43 15.2**	**-0.4**
RAO	**Raoul Island**	**11.45**	**177**	P	**P**	**18 42 19.4**	**-1.9**
	68nm,0.3s,baz=258,slow=22,SNR=4.1						
RPZ	**Rata Peaks**	**27.28**	**196**	P	**P**	**18 44 50.7**	**+0.1**
	13nm,0.9s,mb4.5,baz=42,slow=16,SNR=5.5						
ARMA	**Armidale**	**29.80**	**239⇓**	*i*P	**P**	**18 45 14.3**	**+1.5**
CTA	**Charters Tower**	**33.23**	**260**	*e*P	**P**	**18 45 42.4**	**+0.2**
	13nm,1.5s,mb4.2						
CTA	**Charters Tower**	**33.23**	**260**	P	**P**	**18 45 42.5**	**+0.3**
	7.1nm,0.6s,mb4.4,baz=94,slow=10,SNR=9.1						
CTAO	**Charters Tower**	**33.23**	**260**	*e*P	**P**	**18 45 41.9**	**-0.4**
	8.8nm,0.7s,mb4.4						
CNB	**Canberra Magne**	**33.32**	**232⇓**	*i*P	**P**	**18 45 44.2**	**+1.4**
TOO	**Toolangi**	**37.07**	**231⇓**	*i*P	**P**	**18 46 15.0**	**+1.0**
STKA	**Stephens Creek**	**38.48**	**241⇓**	*i*P	**P**	**18 46 26.7**	**+1.1**
	12nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**38.48**	**241**	P	**P**	**18 46 26.8**	**+1.1**
	12nm,0.4s,mb4.7,baz=89,slow=9.5,SNR=26						
WB2	**Warramunga Arr**	**44.41**	**259⇓**	*i*P	**P**	**18 47 11.8**	**-0.9**
WRA	**Warramunga Arr**	**44.42**	**259**	P	**P**	**18 47 11.9**	**-0.9**
	6.6nm,0.5s,mb4.4,baz=97,slow=6.9,SNR=130						
WRA				PcP	PcP	18 48 44.5	-0.7
	0.9nm,0.5s,baz=98,slow=3.4,SNR=4.8						
ASAR	**Alice Springs**	**44.60**	**254**	P	**P**	**18 47 14.2**	**+0.1**
	55nm,0.6s,mb5.3,baz=89,slow=8.1,SNR=939						
ASAR				PcP	PcP	18 48 45.4	-0.4
	1.2nm,0.4s,baz=101,slow=4.1,SNR=5.1						
ASAR				ScP	ScP	18 51 47.0	-0.8
	0.3nm,0.6s,baz=92,slow=3.9,SNR=4.0						
ASAR				S	**S**	**18 53 08.7**	**-3.0**
	0.9nm,0.9s,baz=96,slow=16,SNR=5.1						
KAKA	**Kakadu**	**47.35**	**269⇓**	*i*P	**P**	**18 47 34.5**	**-0.7**
	10nm,0.3s,mb4.8						
FORT	**Forrest**	**49.85**	**244⇓**	*i*P	**P**	**18 47 53.0**	**-0.5**
	25nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**52.81**	**260**	*e*P	**P**	**18 48 15.1**	**-0.1**
	3.6nm,0.4s,mb4.0						
FITZ	**Fitzroy Crossi**	**52.81**	**260**	P	**P**	**18 48 15.3**	**+0.1**
	1.9nm,0.4s,mb3.8,baz=103,slow=6.6,SNR=29						
MBWA	**Marble Bar**	**57.87**	**256**	*e*P	**P**	**18 48 49.5**	**-0.9**
	11nm,0.6s,mb4.3						
KLBR	**Kellerberrin**	**58.67**	**243**	*e*P	**P**	**18 48 54.7**	**-1.0**
	72nm,1.8s,mb4.6						
SBA	**Scott Base**	**60.54**	**184**	*e*P	**P**	**18 49 08.2**	**+0.9**
	1.0nm,0.6s,mb3.3						
CASY	**Casey**	**66.16**	**205**	*e*P	**P**	**18 49 43.2**	**-0.3**
	6.1nm,0.9s,mb4.1						
CMB	**Columbia Colle**	**77.91**	**43**	P	**P**	**18 50 52.5**	**+0.4**
NVAR	**Mina Array Bea**	**79.49**	**44**	P	**P**	**18 51 00.6**	**0.0**
	1.3nm,0.8s,mb3.3,baz=229,slow=9.9,SNR=7.8						
MAW	**Mawson**	**83.91**	**200**	P	**P**	**18 51 23.0**	**+0.3**
	1.4nm,0.5s,mb3.8,baz=171,slow=8.1,SNR=8.3						
ANMO	**Albuquerque**	**86.20**	**52**	P	**P**	**18 51 33.0**	**-1.3**
PDAR	**Pinedale Array**	**87.42**	**44**	P	**P**	**18 51 40.1**	**+0.2**
	0.8nm,0.6s,mb3.6,baz=212,slow=3.5,SNR=6.9						
CMAR	**Chiang Mai Arr**	**88.61**	**290**	P	**P**	**18 51 47.3**	**+1.3**
	0.9nm,0.8s,mb3.7,baz=105,slow=2.7,SNR=6.6						
MKAR	**Makanchi Array**	**108.87**	**314**	PKiKP	PKiKP	18 57 16.4	-1.6
	0.1nm,0.5s,baz=154,slow=1.1,SNR=4.0						
MMAI	**Mount Meron Ar**	**145.87**	**303**	PKPbc	PKPbc	18 58 29.2	-0.3
	1.6nm,0.5s,baz=67,slow=6.4,SNR=6.4						
GERES	**GERESS Array B**	**147.42**	**345**	PKPbc	PKPbc	18 58 32.2	-0.9
	0.2nm,0.4s,baz=15,slow=5.5,SNR=3.9						

IDC 01 18:49:26.2±2.1**, 223N**×**12702E, h0**^{km}**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/14**, mbtmp3.4**/3**, Error ellipse: s-maj=166.6km s-min=24.5km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.18**	**162**	P	P	18 54 34.4	-0.3
	0.4nm,0.4s,baz=340,slow=10,SNR=7.4						
ASAR	**Alice Springs**	**26.60**	**166**	P	P	18 55 06.5	+0.2
	0.5nm,0.6s,baz=353,slow=7.6,SNR=14						
MKAR	**Makanchi Array**	**58.95**	**326**	P	P	18 59 27.6	+0.2
	0.2nm,0.5s,baz=114,slow=8.9,SNR=4.0						

*IDC **01** 19:00:11.7±1.4, 3.18N×9388E, h0^{km}, mb3.9/9, mb1 4.1/10, mb1mx3.8/23, mbtmp3.9/10, ML3.9/1, Error ellipse: s-maj=57.1km s-min=18.7km az=56.0*

*ISCJB **01** 19:00:15.6±0.8, 33N±0.1×940E±02, h33^{km}, mb4.0/11, Error ellipse: s-maj=26.0km s-min=15.4km az=158.4*

*NEIC **01** 19:00:16.8±0.8, 323N×9401E, h30^{km}, mb4.3/2, Error ellipse: s-maj=24.0km s-min=14.7km az=71.0*

ISC 01 19:00:17.7±0.8**, 32N**±01×**940E**±02**, h35**^{km}**, n12,** σ**1^{s}01**/12**, mb4.0**/11**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.87**	**17**	Pn	**Pn**	**19 03 59.9**	**+1.3**
	0.2nm,0.3s,baz=214,slow=11,SNR=15						
LSA	**Lhasa**	**26.46**	**354**	*e*P	**P**	**19 05 53.5**	**+2.0**
	3.7nm,0.5s,mb4.2						
MKAR	**Makanchi Array**	**44.57**	**349**	P	**P**	**19 08 26.4**	**+0.2**
	2.2nm,0.6s,mb4.2,baz=166,slow=9.5,SNR=35						
SONM	**Songino Array**	**45.69**	**12**	P	**P**	**19 08 34.2**	**-0.9**
	0.8nm,0.6s,mb3.8,baz=196,slow=8.3,SNR=9.7						
WRA	**Warramunga Arr**	**45.80**	**122**	P	**P**	**19 08 36.5**	**+0.1**
	1.2nm,0.5s,mb4.0,baz=300,slow=8.9,SNR=10						
ASAR	**Alice Springs**	**47.15**	**127**	P	**P**	**19 08 46.7**	**-0.2**
	0.7nm,0.6s,mb3.8,baz=298,slow=8.1,SNR=14						
KURK	**Kurchatov**	**49.06**	**347**	P	**P**	**19 09 00.9**	**-0.4**
	1.3nm,0.5s,mb4.2,baz=170,slow=7.0,SNR=8.7						
ZALV	**Zalesovo Beam**	**51.11**	**353**	P	**P**	**19 09 15.9**	**-0.8**
	1.2nm,0.4s,mb4.2,baz=184,slow=9.2,SNR=7.9						
BVAR	**Borovoye Array**	**53.33**	**342**	P	**P**	**19 09 31.9**	**-1.4**
	0.7nm,0.6s,mb3.8,baz=149,slow=9.1,SNR=4.6						
TSUM	**Tsumeb**	**78.29**	**250**	P	**P**	**19 12 16.3**	**+1.5**
	3.5nm,1.0s,mb4.2						
ARCES	**ARCESS Array B**	**79.57**	**341**	P	**P**	**19 12 19.6**	**-1.1**
	2.3nm,0.9s,mb4.1,baz=54,slow=8.2,SNR=3.6						
GERES	**GERESS Array B**	**81.20**	**319**	P	**P**	**19 12 29.8**	**-0.1**
	0.2nm,0.5s,mb3.3,baz=92,slow=6.7,SNR=6.2						

*IDC **01** 19:10:26.5±1.0, 278N×12709E, h0^{km}, mb3.9/9, mb1 4.1/9, mb1mx3.9/18, mbtmp4.0/9, Error ellipse: s-maj=100.6km s-min=14.7km az=70.0*

*NEIC **01** 19:10:28.0±0.6, 273N×127.13E, h10^{km}, mb4.1/5, Error ellipse: s-maj=45.5km s-min=8.7km az=71.0*

*ISCJB **01** 19:10:31.3±2.5, 27N±02×1270E±04, h47^{km}±22^{km}, mb4.0/11, Error ellipse: s-maj=66.8km s-min=13.7km az=160.1*

ISC 01 19:10:31.9±2.8**, 27N**±02×**1272E**±04**, h37**^{km}±26^{km}**, n16,** σ**0^{s}76**/16**, mb4.0**/11**, 2D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNE	**Ternate**	**1.93**	**174⇓**	*e*P	**Pn**	**19 11 02.0**	**-0.2**
FITZ	**Fitzroy Crossi**	**20.74**	**184**	*e*P	**P**	**19 15 08.9**	**-0.6**
	5.6nm,1.4s						
FITZ	**Fitzroy Crossi**	**20.74**	**184**	P	**P**	**19 15 09.9**	**+0.4**
	0.9nm,0.5s,baz=48,slow=10,SNR=7.7						
WRA	**Warramunga Arr**	**23.59**	**163**	P	**P**	**19 15 39.6**	**0.0**
	6.2nm,0.5s,mb4.3,baz=343,slow=10,SNR=70						
WB2	**Warramunga Arr**	**23.60**	**163⇓**	*i*P	**P**	**19 15 39.1**	**-0.5**
ASAR	**Alice Springs**	**27.03**	**166**	P	**P**	**19 16 11.2**	**+0.4**
	0.6nm,0.5s,mb3.4,baz=347,slow=7.3,SNR=30						
ASAR				PcP	PcP	19 19 33.4	+1.6
	0.4nm,0.5s,baz=348,slow=2.5,SNR=6.3						
STKA	**Stephens Creek**	**37.03**	**159**	*e*P	**P**	**19 17 38.8**	**+0.5**
	4.0nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**37.03**	**159**	P	**P**	**19 17 38.9**	**+0.5**
	3.8nm,0.7s,mb4.4,baz=324,slow=7.8,SNR=12						
LSA	**Lhasa**	**43.43**	**312**	*e*P	**P**	**19 18 32.0**	**+0.6**
	2.0nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**48.21**	**342**	P	**P**	**19 19 09.9**	**+1.1**
	0.7nm,0.6s,mb3.9						
SONM	**Songino Array**	**48.39**	**341**	P	**P**	**19 19 11.1**	**+0.9**
	0.5nm,0.6s,mb3.8,baz=148,slow=9.2,SNR=5.2						
MKAR	**Makanchi Array**	**58.63**	**325**	P	**P**	**19 20 25.2**	**-0.1**
	0.9nm,0.6s,mb4.0,baz=130,slow=9.2,SNR=16						
KURK	**Kurchatov**	**62.82**	**328**	P	**P**	**19 20 52.7**	**-1.1**
	1.1nm,0.5s,mb4.2,baz=130,slow=6.4,SNR=12						
BVAR	**Borovoye Array**	**68.40**	**327**	P	**P**	**19 21 29.4**	**-0.4**
	0.8nm,0.6s,mb3.9,baz=130,slow=14,SNR=4.4						
CASY	**Casey**	**69.87**	**187**	P	**P**	**19 21 39.3**	**+0.7**
	3.9nm,1.0s,mb4.3						
ARCES	**ARCESS Array B**	**91.54**	**340**	P	**P**	**19 23 32.6**	**-1.8**
	1.0nm,0.6s,mb4.3,baz=69,slow=6.6,SNR=5.0						

*MEX **01** 19:14:20.2±0.3, 2491N×10997W, h2^{km}±6^{km}, MD6.3*

*IDC **01** 19:14:21.0±0.4, 2477N×10987W, h0^{km}, mb5.0/22, mb1 5.0/28, mb1mx5.0/28, mbtmp4.9/28, ML4.0/5, MS5.9/32, Ms1 5.9/32, ms1mx5.7/38, Error ellipse: s-maj=9.2km s-min=6.5km az=100.0*

*BJI **01** 19:14:21.4, 2538N×10873W, h11^{km}, mB6.0, mb5.5, Ms6.1, Msz5.8*

*MOS **01** 19:14:21.7±2.0, 2500N×10963W, h10^{km}, mb5.6/62, MS5.9/48, Error ellipse: s-maj=5.5km s-min=3.5km az=90.0*

*GCMT **01** 19:14:22.8±0.1, 2476N×10989W, h15^{km}, MW6.1/101, Moment Tensor Solution. s101,c235; s101,c381; Duration: 2^{s}8 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.25±.01; $M_{\theta\theta}$-1.38±.01; $M_{\phi\phi}$1.63±.01; $M_{r\theta}$-0.28±.02; $M_{\theta\phi}$-1.13±.01; $M_{\phi r}$0.07±.02; Best double couple: $M_0$1.90700×10^{18} NP1:ϕ_s26.00000°, δ81.00000°, λ-4.00000°. NP2:ϕ_s117.00000°, δ86.00000°, λ-171.00000°. Principal axes: T 2.0170, Plg4.0000°, Azm251.0000°; N -0.2210, Plg80.0000°, Azm138.0000°; P -1.7960, Plg9.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*ISCJB **01** 19:14:22.4±0.2, 2501N±002×10964W±002, h12^{km}, mb5.3/170, MS5.9/160 Error ellipse: s-maj=3.3km s-min=2.0km az=136.6*

*NEIC **01** 19:14:22.6±0.2, 2490N×10969W, h9^{km}, mb5.5/139, ME6.2, MS5.9/113, MD6.3(MEX), Error ellipse: s-maj=4.3km s-min=2.8km az=41.0 Broadband fault plane solution: P waves. NP1:ϕ_s115.00000°, δ85.00000°, λ-175.00000°. NP2:ϕ_s25.00000°, δ85.00000°, λ-5.00000°. Principal axes: T Plg0.0000°, Azm250.0000°; N Plg0.0000°, Azm0.0000°; P Plg7.0000°, Azm340.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at La Paz and [III] at Cabo San Lucas, San Jose del Cabo and Todos Santos, Mexico. Also felt at Constitucion and Los Mochis.

*DJA **01** 19:14:28, 2524N×10942W, h10^{km}, mb5.6/3*

*SZGRF **01** 19:14:30.6, 2486N×11040W, h33^{km}, mb5.4, MS6.1, Baja California, Mexico*

ISC 01 19:14:23.9±1.0**, 2499N**±002×**10966W**±002**, h10**^{km}±5^{km}**, h13**^{km}±1.0^{km}**:pP-P, n708,** σ**1^{s}41**/613**, mb5.3**/170**, MS5.9**/160**, 42C-81D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.06**	**214**	Pg	**Pg**	**19 14 34.2**	**-10**
	8µm,0.3s,baz=17,slow=5.9,SNR=468						
LPIG				Lg		19 14 48.2	
	110µm,0.3s,baz=340,slow=24,SNR=108						
LPIG	**La Paz**	**1.06**	**214**	*e*P	**Pg**	**19 14 35.2**	**-9.0**
LPIG				*i* S	**Sg**	**19 14 46.9**	**-11**
LPIG	**La Paz**	**1.06**	**214**	Pg	**Pg**	**19 14 34.2**	**-10**
LPIG				*e*P		19 14 35.2	
LPIG				*i* S	**Sg**	**19 14 46.9**	**-11**
LPIG				Lg		19 14 48.2	
MAIG	**Mazatlaan**	**3.46**	**121**	*i* P	**Pn**	**19 15 16.0**	**-1.9**
MAIG				*i* S	**Sn**	**19 15 59.1**	**+0.2**
MAIG	**Mazatlaan**	**3.46**	**121**	*i* P	**Pn**	**19 15 17.0**	**-0.9**
MAIG				*i* S	**Sn**	**19 15 59.1**	**+0.2**
HPIG		**4.09**	**61**	*e*P	**Pn**	**19 15 24.9**	**-1.6**
HPIG				*i* S	**Sn**	**19 16 15.5**	**+1.1**
HSIG		**4.18**	**344**	*e*P	**Pn**	**19 15 22.4**	**-5.3**
HSIG				*i* S	**Sn**	**19 16 11.9**	**-4.7**
CGIG		**5.56**	**15**	*e*P	**Pn**	**19 15 44.5**	**-2.2**
CGIG				*i* S	**Sn**	**19 16 49.6**	**-1.1**
ANIG	**Ahuacatlan**	**6.15**	**129**	*e*P	**Pn**	**19 15 53.1**	**-1.6**
ANIG				*i* S	**Sn**	**19 17 05.2**	**+0.1**
H06S		**6.34**	**191**	*e*P	**Pn**	**19 15 51.2**	**-6.3**
H06S				*i* S	**Sn**	**19 17 01.6**	**-8.5**
TUC	**Tucson**	**7.36**	**353**	*e*Pn	**Pn**	**19 16 10.4**	**-1.0**
TUC				*e*Sg	**Sg**	**19 18 19.6**	**-0.5**
SFJM	**Santa Fe**	**7.58**	**125**	*i* P	**Pn**	**19 16 18.5**	**+4.0**
R15V		**7.83**	**137**	*e*P	**Pn**	**19 16 14.7**	**-3.1**
R15V				*i* S	**Sn**	**19 17 45.6**	**-0.9**
EZ5V		**7.85**	**133**	*i* P	**Pn**	**19 16 16.6**	**-1.5**
COLM	**Colima**	**8.00**	**135**	*e*P	**Pn**	**19 16 18.3**	**-2.0**
COLM				*i* S	**Sn**	**19 17 49.1**	**-1.8**
COLM	**Colima**	**8.00**	**135**	*e*P	**Pn**	**19 16 20.9**	**+0.6**
COLM				*i* S	**Sn**	**19 17 53.7**	**+2.8**
GDL2	**Guadalupe Moun**	**8.56**	**32**	*e*Pn	**Pn**	**19 16 28.2**	**+0.3**
GLA	**Glamis**	**9.22**	**332⇓**	*e*P	**Pn**	**19 16 36.0**	**-0.9**
LENM	**Lemitar**	**9.44**	**14**	*e*Pn	**Pn**	**19 16 41.4**	**+1.4**
BNM	**Barren Site**	**9.50**	**15**	*e*Pn	**Pn**	**19 16 41.1**	**+0.3**
	169nm,1.1s						
LAZ	**Ladron**	**9.63**	**13**	*e*Pn	**Pn**	**19 16 43.3**	**+0.7**
	64nm,0.7s						
LPM	**Los Pinos Moun**	**9.66**	**15**	*e*Pn	**Pn**	**19 16 45.5**	**+2.6**
BAR	**Barrett**	**9.82**	**323⇓**	*e*Pn	**Pn**	**19 16 44.9**	**-0.2**
JCT	**Junction City**	**10.30**	**56⇑**	*e*P	**Pn**	**19 16 51.8**	**0.0**
ANMO	**Albuquerque**	**10.31**	**15**	Pn	**Pn**	**19 16 51.8**	**0.0**
	0.2nm,0.3s,baz=200,slow=13,SNR=85						
ANMO				Sn	**Sn**	**19 18 53.8**	**+6.3**
	0.3nm,0.3s,baz=187,slow=23,SNR=1.8						
ANMO				Lg		19 19 57.1	
	0.7nm,0.3s,baz=133,slow=20,SNR=3.4						
ANMO	**Albuquerque**	**10.31**	**15*d***	*i*P	**Pn**	**19 16 54.0**	**+2.1**
ANMO	**Albuquerque**	**10.31**	**15⇓**	*e*Pn	**Pn**	**19 16 54.0**	**+2.1**
PFO	**Pinyon Flat Ob**	**10.43**	**327**	Pn	**Pn**	**19 16 54.0**	**+0.4**
	1µm,1.3s,SNR=89						
WUAZ	**Wupatki**	**10.60**	**352⇓**	*e*Pn	**Pn**	**19 16 56.5**	**+0.7**
DEIG	**Demacu**	**10.87**	**113**	*e*P	**Pn**	**19 16 59.3**	**-0.3**
DEIG				*i* S	**Sn**	**19 19 02.3**	**+1.1**
LDFC	**Landfair**	**11.10**	**336⇓**	*e*Pn	**Pn**	**19 17 04.7**	**+2.0**
UNM	**Universidad Na**	**11.23**	**118**	*e*P	**Pn**	**19 17 05.5**	**+1.0**
UNM				*i* S	**Sn**	**19 19 11.2**	**+1.0**
UNM	**Universidad Na**	**11.23**	**118**	*e*P	**Pn**	**19 17 05.5**	**+1.0**
UNM				*i* S	**Sn**	**19 19 22.3**	**+12**
YAIG	**Yautepec**	**11.57**	**120**	*i* P	**Pn**	**19 17 09.4**	**+0.2**
YAIG	**Yautepec**	**11.57**	**120**	*i* P	**Pn**	**19 17 11.4**	**+2.2**
MEIG	**Mezcala**	**11.69**	**125**	*i* P	**Pn**	**19 17 12.6**	**+1.7**
MWC	**Mount Wilson**	**11.74**	**324**	*e*P	**Pn**	**19 17 11.3**	**-0.2**
CAIG	**El Cayaco**	**11.80**	**130**	*i* P	**Pn**	**19 17 15.0**	**+2.6**
CAIG				*i* S	**Sn**	**19 19 21.5**	**-2.7**
CAIG	**El Cayaco**	**11.80**	**130**	*i* P	**Pn**	**19 17 16.1**	**+3.7**
CAIG				*i* S	**Sn**	**19 19 21.5**	**-2.7**
PPM	**Popocatepetl**	**11.81**	**118**	*e*P	**Pn**	**19 17 16.0**	**+3.5**
GSC	**Goldstone**	**11.99**	**331⇑**	*e*P	**Pn**	**19 17 15.5**	**+0.7**
AMTX	**Amarillo**	**12.04**	**33**	*e*Pn	**Pn**	**19 17 17.4**	**+1.8**
MVCO	**Mesa Verde**	**12.22**	**4⇓**	*e*Pn	**Pn**	**19 17 19.6**	**+1.5**
OSI	**Osito Adit**	**12.40**	**323⇓**	*e*Pn	**Pn**	**19 17 20.6**	**+0.1**
	609nm,1.2s						
SHPR	**Sheep Range**	**12.41**	**339**	*e*Pn	**Pn**	**19 17 22.6**	**+2.0**
ISA	**Isabella**	**13.07**	**327⇓**	*e*P	**Pn**	**19 17 29.7**	**+0.1**
UTMO	**Huajuapan**	**13.14**	**121**	*e*P	**Pn**	**19 17 33.5**	**+2.8**
PV01	**Paradox Valley**	**13.14**	**4**	*e*Pn	**Pn**	**19 17 32.0**	**+1.5**
	222nm,0.8s						
TPIG	**Tehuac#an**	**13.17**	**117**	*i* P	**Pn**	**19 17 32.8**	**+1.8**
TPNV	**Topopah Spring**	**13.19**	**336⇓**	*i*P	**Pn**	**19 17 33.2**	**+2.0**
SDCO	**Great Sand Dun**	**13.20**	**15⇓**	*e*Pn	**Pn**	**19 17 33.7**	**+2.3**
HKT	**Hockley**	**13.23**	**65⇑**	*e*P	**Pn**	**19 17 30.2**	**-1.7**
HKT				pmax	pmax		
	comp=Z,372nm,1.7s						
HKT	**Hockley**	**13.23**	**65⇑**	*e*Pn	**Pn**	**19 17 30.2**	**-1.7**
	comp=Z,372nm,1.7s						
LVIG	**Laguna Verde**	**13.33**	**111**	*i* P	**Pn**	**19 17 32.0**	**-1.2**
PV10	**Paradox Valley**	**13.36**	**2**	*e*Pn	**Pn**	**19 17 34.2**	**+0.6**
	comp=Z,574nm,1.0s						
WMOK	**Wichita Mounta**	**13.54**	**42⇑**	*e*P	**Pn**	**19 17 34.7**	**-1.3**
MSU	**Marysvale**	**13.65**	**352**	*e*P	**Pn**	**19 17 39.7**	**+2.2**
PTRM	**Twissleman Ran**	**13.99**	**322**	*e*Pn	**Pn**	**19 17 42.2**	**+0.1**
SRU	**San Rafael**	**14.10**	**357⇓**	*i*P	**Pn**	**19 17 45.1**	**+1.4**
TMUT	**Trail Mountain**	**14.33**	**355⇓**	*e*Pn	**Pn**	**19 17 48.4**	**+1.7**
MTUM	**Tungsten Hills**	**14.48**	**330**	Pn	**Pn**	**19 17 50.6**	**+1.7**
NATX	**Nacogdoches**	**14.82**	**60⇑**	*e*Pn	**Pn**	**19 17 51.6**	**-2.0**
NLU	**North Lily Min**	**15.06**	**353⇓**	*e*Pn	**Pn**	**19 17 58.1**	**+1.3**
MPU	**Maple Canyon**	**15.08**	**354⇓**	*e*Pn	**Pn**	**19 17 58.0**	**+1.0**
ISCO	**Idaho Springs**	**15.16**	**12⇓**	*e*P	**Pn**	**19 17 59.8**	**+1.8**
ISCO				pmax	pmax		
	comp=Z,273nm,1.3s						
ISCO	**Idaho Springs**	**15.16**	**12⇓**	*e*Pn	**Pn**	**19 17 59.8**	**+1.7**
	comp=Z,273nm,1.3s						
NVAR	**Mina Array Bea**	**15.27**	**333**	Pn	**Pn**	**19 18 00.9**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=160,slow=11,SNR=49						
NVAR				Sn	**Sn**	**19 20 52.1**	**+3.3**
	baz=323,slow=35,SNR=2.0						
NVAR				Lg		19 22 26.9	
	baz=116,slow=18,SNR=1.7						
DUG	**Dugway**	**15.39**	**351⇓**	*e*P	**Pn**	**19 18 01.5**	**+0.4**
DAU	**Daniels Canyon**	**15.44**	**355**	*e*P	**Pn**	**19 18 03.4**	**+1.7**
SAO	**San Andreas Ge**	**15.48**	**322⇓**	*e*P	**Pn**	**19 17 59.8**	**-2.5**
JLU	**Jordanelle**	**15.64**	**355⇓**	*e*Pn	**Pn**	**19 18 05.2**	**+0.9**
HUIG	**Huatulco**	**15.66**	**123**	*e*P	**Pn**	**19 18 08.0**	**+3.3**
NOQ	**North Oquirrh**	**15.76**	**353⇓**	*e*Pn	**Pn**	**19 18 07.2**	**+1.4**
CTU	**Camp Tracy**	**15.76**	**354⇓**	*e*Pn	**Pn**	**19 18 07.0**	**+1.1**
TUIG	**Tuzandepetl**	**15.77**	**113**	*e*P	**Pn**	**19 18 08.6**	**+2.4**
WAKR	**Walker**	**15.82**	**331**	*e*Pn	**Pn**	**19 18 07.7**	**+1.0**
CMIG	**Matias Romero**	**15.87**	**117**	Pn	**Pn**	**19 18 08.1**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=301,slow=10,SNR=41						
CMIG				Sn	**Sn**	**19 21 07.5**	**+4.0**
	comp=Z,0.1nm,0.3s,baz=17,slow=20,SNR=1.6						
CMIG				Lg		19 22 47.7	
	comp=Z,0.1nm,0.3s,baz=146,slow=23,SNR=2.2						
CMIG				LR	LR	19 24 02.2	
	comp=Z,62µm,21.0s,baz=284,slow=36						
CMIG	**Matias Romero**	**15.87**	**117**	Pn	**Pn**	**19 18 08.1**	**+0.6**
CMIG				Sn	**Sn**	**19 21 07.5**	**+4.0**
CMIG				Lg		19 22 47.7	
CMIG				LR	LR	19 24 02.2	
CMB	**Columbia Colle**	**15.88**	**328⇓**	*e*P	**Pn**	**19 18 06.4**	**-1.1**
BGU	**Big Grassy Mou**	**16.14**	**351⇓**	*e*Pn	**Pn**	**19 18 11.9**	**+1.1**
	comp=Z,22nm,0.5s						
CBKS	**Cedar Bluff**	**16.14**	**29**	*e*P	**Pn**	**19 18 11.1**	**+0.3**
CBKS				pmax	pmax		
	comp=Z,725nm,1.0s						
CBKS	**Cedar Bluff**	**16.14**	**29**	*e*Pn	**Pn**	**19 18 11.1**	**+0.2**
	comp=Z,725nm,1.0s						
ELK	**Elko**	**16.39**	**345**	Pn	**Pn**	**19 18 15.0**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=171,slow=9.8,SNR=65						
ELK				Lg		19 23 00.7	
	comp=Z,0.0nm,0.3s,baz=65,slow=15,SNR=1.5						
ELK				LR	LR	19 24 35.1	
	comp=Z,37µm,20.0s,baz=172,slow=37						
ELK	**Elko**	**16.39**	**345⇓**	*e*Pn	**Pn**	**19 18 14.8**	**+0.8**
SAC	**San Andreas**	**16.60**	**322**	*e*P	**Pn**	**19 18 18.9**	**+2.1**
PHWY	**Pilot Hill**	**16.64**	**11⇓**	*e*Pn	**Pn**	**19 18 18.0**	**+0.7**
BMN	**Battle Mountai**	**16.65**	**339⇓**	*e*P	**Pn**	**19 18 17.7**	**+0.4**
BMN				pmax	pmax		
	comp=Z,429nm,1.2s						
BMN	**Battle Mountai**	**16.65**	**339⇓**	*e*Pn	**Pn**	**19 18 17.7**	**+0.4**
	comp=Z,428nm,1.2s						
HWUT	**Hardware Ranch**	**16.65**	**355⇓**	*e*Pn	**Pn**	**19 18 18.5**	**+1.2**
RWWY	**Rawlins**	**16.78**	**6⇓**	*e*Pn	**Pn**	**19 18 19.6**	**+0.6**
PAHR	**Pah Rah Range**	**16.80**	**333⇓**	*e*Pn	**Pn**	**19 18 19.9**	**+0.7**
MIAR	**Mount Ida**	**16.89**	**52**	*e*P	**Pn**	**19 18 20.4**	**0.0**
MIAR	**Mount Ida**	**16.89**	**52⇑**	*e*Pn	**Pn**	**19 18 18.2**	**-2.2**
HVU	**Hansel Valley**	**16.95**	**352⇓**	*e*P	**Pn**	**19 18 22.2**	**+1.2**
MCCM	**Marconi Confer**	**17.26**	**323⇓**	*e*Pn	**Pn**	**19 18 22.7**	**-2.4**
NSHM	**Saint Helena R**	**17.39**	**324**	*e*Pn	**Pn**	**19 18 25.6**	**-0.9**
OHCM	**Honcut**	**17.43**	**328**	*e*Pn	**Pn**	**19 18 27.1**	**0.0**
BW06	**Boulder Array**	**17.73**	**0⇑**	*e*Pn	**Pn**	**19 18 30.9**	**0.0**
PDAR	**Pinedale Array**	**17.73**	**0**	P	**Pn**	**19 18 30.9**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=168,slow=7.6,SNR=105						
PDAR				Lg		19 23 45.6	
	comp=Z,0.1nm,0.3s,baz=251,slow=37,SNR=2.3						
PDAR				LR	LR	19 25 54.9	
	comp=Z,32µm,18.5s,baz=194,slow=39						
AHID	**Auburn Hatcher**	**17.77**	**357⇓**	*e*Pn	**Pn**	**19 18 31.6**	**+0.3**
	comp=Z,874nm,1.6s						
KSU1	**Kansas State U**	**17.87**	**35⇑**	*e*Pn	**Pn**	**19 18 32.6**	**0.0**
	comp=Z,1µm,1.7s						
UALR	**University of**	**17.89**	**53⇑**	*e*Pn	**Pn**	**19 18 31.0**	**-1.8**
HOPS	**Hopland**	**17.98**	**324⇓**	*e*Pn	**Pn**	**19 18 32.6**	**-1.3**
SCIG	**Sabancuy**	**18.15**	**106**	*i* P	**Pn**	**19 18 34.5**	**-1.6**
VBMS	**Vicksburg**	**18.28**	**62⇑**	*e*Pn	**Pn**	**19 18 36.2**	**-1.5**
REDW	**Red Top Meadow**	**18.36**	**357⇓**	*e*Pn	**Pn**	**19 18 38.6**	**+0.1**
	comp=Z,501nm,1.4s						
RRI2	**Red Ridge**	**18.36**	**356⇓**	*e*Pn	**Pn**	**19 18 38.5**	**-0.1**
	comp=Z,573nm,1.4s						
SNOW	**Snow King Moun**	**18.45**	**357⇓**	*e*Pn	**Pn**	**19 18 39.7**	**+0.1**
TPAW	**Teton Pass**	**18.49**	**357⇓**	*e*Pn	**Pn**	**19 18 40.0**	**-0.2**
	comp=Z,465nm,1.3s						
CCIG	**Comitan**	**18.54**	**115**	*i* P	**Pn**	**19 18 39.5**	**-1.4**
LBCM	**Butte Creek Ri**	**18.57**	**331**	P	**Pn**	**19 18 42.0**	**+0.8**
LOHW	**Long Hollow**	**18.59**	**358⇓**	*i*Pn	**Pn**	**19 18 41.2**	**-0.2**
DCID1	**Drake Creek**	**18.60**	**357⇓**	*e*Pn	**Pn**	**19 18 41.8**	**+0.3**
MOOW	**Moose Ponds**	**18.74**	**358**	*e*P	**Pn**	**19 18 44.5**	**+1.4**
KCPM	**Cahto Peak**	**18.75**	**325⇓**	*e*P	**Pn**	**19 18 43.1**	**-0.3**
	comp=Z,416nm,1.3s						
KIPM	**Iron Peak**	**18.79**	**325⇓**	*e*P	**Pn**	**19 18 44.3**	**+0.4**
	comp=Z,514nm,1.3s						
IMW	**Indian Meadow**	**18.89**	**357⇓**	*e*P	**Pn**	**19 18 44.7**	**-0.4**
	comp=Z,444nm,1.1s						

WDC Whiskeytown Da 18.91 328 *eP* **Pn 19 18 43.6 -1.7**
WVOR Wild Horse Val 18.91 339⇓ *eP* **Pn 19 18 44.2 -1.1**
WVOR pmax pmax
comp=Z,703nm,1.6s
WVOR Wild Horse Val 18.91 339⇓ *eP* **Pn 19 18 44.2 -1.1**
comp=Z,703nm,1.6s
HLID Hailey 18.93 349⇓ *eP* **Pn 19 18 45.4 -0.1**
MOD Modoc 19.04 335⇑ *eP* **Pn 19 18 45.9 -0.9**
FLWY Flagg Ranch 19.07 358⇓ *eP* **Pn 19 18 46.8 -0.4**
comp=Z,307nm,1.0s
THIG 19.16 118 *i* P **Pn 19 18 49.5 +1.0**
YFT Old Faithful 19.44 357⇓ *eP* **Pn 19 18 52.2 +0.6**
HBAR Harrisburg 19.47 53⇑ *eP* **Pn 19 18 51.3 -0.8**
LKWY Lake 19.54 358⇓ *eP* **Pn 19 18 53.2 +0.4**
RSSD Black Hills 19.63 12⇓ *eP* **Pn 19 18 52.4 -1.5**
YMR Madison River 19.66 357⇓ *eP* **Pn 19 18 54.2 -0.1**
comp=Z,615nm,1.4s
YNR Norris Junctio 19.70 358⇓ *eP* **Pn 19 18 54.6 -0.1**
MET Memphis--Engin 19.81 55 P **Pn 19 18 55.0 -1.1**
comp=Z,2μm,1.5s
QLMT Earthquake Lak 19.85 356 *eP* **Pn 19 18 57.0 +0.5**
YBH Yreka Blue Hor 19.90 330 P **Pn 19 18 55.6 -1.5**
comp=Z,0.5nm,0.3s,baz=101,slow=7.6,SNR=10
YBH S **Sn 19 22 43.8 +3.0**
comp=Z,0.1nm,0.3s,baz=115,slow=10,SNR=1.9
YBH Lg 19 24 56.5
comp=Z,0.0nm,0.3s,baz=120,slow=12,SNR=1.9
YBH LR LR 19 26 33.6
comp=Z,17μm,20.6s,baz=149,slow=37
YBH Yreka Blue Hor 19.90 330 *eP* **Pn 19 18 53.7 -3.4**
YBH Yreka Blue Hor 19.90 330 *eP* **Pn 19 18 54.0 -3.2**
OXF Oxford 19.95 57⇑ *eP* **Pn 19 18 55.6 -2.2**
OXF pmax pmax
comp=Z,273nm,1.1s
OXF MLR MLR
comp=Z,63μm,20.0s
OXF Oxford 19.95 57⇑ *eP* **Pn 19 18 55.6 -2.2**
comp=Z,273nm,1.1s
OXF LR LR
comp=Z,63μm,20.0s
MCMT McKenzie Canyo 19.96 353 *eP* **Pn 19 18 58.0 +0.2**
comp=Z,3μm,1.8s
RLMT Red Lodge 20.09 1 *eP* **P 19 18 58.5 +1.0**
comp=Z,287nm,1.3s
RLMT LR LR
comp=Z,24μm,20.0s,MS5.5
GNAR Gosnell 20.12 52 *eP* **P 19 18 58.1 +0.1**
KRMB Red Mountain 20.30 328⇑ *eP* **P 19 18 59.5 -0.3**
comp=Z,372nm,1.5s
TEIG Tepich 20.30 99 P **P 19 18 59.5 -0.5**
comp=Z,96nm,1.0s,baz=282,slow=11,SNR=32
TEIG Lg 19 25 13.5
comp=Z,8.8nm,0.2s,baz=180,slow=2.6,SNR=6.1
TEIG LR LR 19 28 12.1
comp=Z,23μm,18.9s,MS5.6,baz=44,slow=41
TEIG Tepich 20.30 99 *eP* **P 19 18 59.8 -0.3**
TEIG Tepich 20.30 99⇑ *eP* **P 19 18 58.8 -1.3**
comp=Z,304nm,1.1s
TEIG LR LR
comp=Z,25μm,19.0s,MS5.6
DLMT Dillon 20.47 354⇓ *eP* **P 19 19 02.2 +0.6**
comp=Z,433nm,1.4s
HALT Halls 20.59 53⇑ *eP* **P 19 19 03.1 +0.1**
PARMO Parma 20.64 51 P **P 19 19 03.7 +0.1**
BOZ Bozeman (W) 20.67 356 *eP* **P 19 19 04.3 +0.4**
BOZ pmax pmax
comp=Z,340nm,1.4s
BOZ Bozeman (W) 20.67 356⇓ *eP* **P 19 19 04.0 +0.1**
comp=Z,343nm,1.4s
BOZ LR LR
comp=Z,16μm,20.0s,MS5.4
HUMO Hull Mountain 20.71 331⇓ *eP* **P 19 19 04.0 -0.3**
HUMO LR LR
comp=Z,32μm,20.0s,MS5.7
GCMT Greyclif 20.76 360 *eP* **P 19 19 04.8 0.0**
comp=Z,196nm,1.0s
BMO Blue Mountains 20.77 345 *eP* **P 19 19 04.0 -0.9**
BMO LR LR
comp=Z,27μm,20.0s,MS5.6
GLAT Glass 20.79 52 *eP* **P 19 19 05.3 +0.2**
BRAL Brewton 20.83 68⇑ *i* P **P 19 19 06.0 +0.2**
comp=Z,608nm,1.2s
BRAL LR LR
comp=Z,23μm,20.0s,MS5.6
FVM French Village 20.85 47 *eP* **P 19 19 05.3 -0.6**
FVM pmax pmax
comp=Z,980nm,2.1s
FVM French Village 20.85 47⇑ *eP* **P 19 19 05.0 -0.9**
comp=Z,1μm,2.1s
LCCM Lewis and Clar 20.88 356 P **P 19 19 07.1 +1.0**
LRM Limekiln Ridge 20.91 355 *eP* **P 19 19 07.0 +0.6**
KBO Bosley Butte 20.98 329 *eP* **P 19 19 06.1 -1.1**
UTMT University of 21.12 53 *eP* **P 19 19 09.2 +0.4**
PLAL Pickwick Lake 21.15 57⇑ *eP* **P 19 19 08.1 -1.0**
PLAL LR LR
comp=Z,62μm,21.0s,MS6.0
SLM Saint Louis 21.34 46 *eP* **P 19 19 10.2 -0.9**
SLM pmax pmax
comp=Z,787nm,1.7s,mb5.8
SLM Saint Louis 21.34 46 *eP* **P 19 19 10.2 -0.9**
comp=Z,787nm,1.7s,mb5.8
HBO Huckleberry Mo 21.47 334 P **P 19 19 12.1 -0.4**
SIUC Southern Illin 21.53 49 *eP* **P 19 19 12.4 -0.7**
comp=Z,260nm,0.9s,mb5.7
ECSD EROS,Sioux Fal 21.53 26 *eP* **P 19 19 13.2 0.0**
comp=Z,330nm,1.3s,mb5.6
ECSD LR LR
comp=Z,12μm,20.0s,MS5.3
KEBM Edson Butte 21.54 330 *eP* **P 19 19 11.7 -1.5**
BKCOR Black Crater 21.61 336 P **P 19 19 13.9 -0.1**
SCIA State Center 21.69 35 *eP* **P 19 19 15.7 +0.9**
SCIA LR LR
comp=Z,51μm,20.0s,MS5.9
HRY Holter Researc 21.75 356 *eP* **P 19 19 07.1 -8.3**
comp=Z,2μm,1.1s,mb6.5
LAO LASA Array 21.83 6⇓ *eP* **P 19 19 15.8 -0.5**
comp=Z,445nm,1.1s,mb5.8
LAO LR LR
comp=Z,16μm,20.0s,MS5.4
LNOR Lincton Mounta 21.96 344 *eP* **P 19 19 17.0 -0.7**
comp=Z,164nm,1.2s,mb5.3
MSO Missoula 22.06 352⇓ *eP* **P 19 19 18.2 -0.6**
comp=Z,207nm,1.3s,mb5.4
MSO LR LR
comp=Z,18μm,20.0s,MS5.5
CHMT Chamberlain Mo 22.07 353 *eP* **P 19 19 18.8 -0.1**
COR Corvallis 22.47 334 *eP* **P 19 19 23.1 -0.1**
COR LR LR
comp=Z,5μm,20.0s,MS5.0
USIN University of 22.72 50⇑ *eP* **P 19 19 25.1 -0.9**
HAWA Hanford 22.78 342⇓ *eP* **P 19 19 24.2 -2.2**
comp=Z,173nm,1.2s,mb5.4
HAWA LR LR
comp=Z,35μm,20.0s,MS5.8
RSW Rattlesnake Hi 22.80 342⇑ *eP* **P 19 19 25.4 -1.2**
comp=Z,285nm,1.3s,mb5.5
OLIL Olney 22.80 48⇑ *eP* **P 19 19 25.9 -0.8**
comp=Z,188nm,1.0s,mb5.5
SWET Sewanee 22.87 58⇑ *eP* **P 19 19 25.9 -1.6**
EGMT Eagleton 22.99 360⇓ *eP* **P 19 19 27.5 -1.2**
EGMT LR LR
comp=Z,26μm,20.0s,MS5.7
HEBO Mount Hebo 23.17 334⇓ *eP* **P 19 19 29.0 -1.7**
comp=Z,559nm,1.1s,mb5.9
OD2 Odessa Site #2 23.40 344 *eP* **P 19 19 31.6 -2.3**
comp=Z,188nm,1.4s,mb5.3
TGUH Tegucigalpa,Un 23.70 113⇓ *eP* **P 19 19 38.3 +2.0**
TGUH Tegucigalpa,Un 23.70 113⇑ *eP* **P 19 19 35.4 -0.8**
TGUH LR LR
comp=Z,49μm,20.0s,MS6.0
LON Longmire 23.79 339⇓ *eP* **P 19 19 34.8 -1.9**
WCI Wyandotte Cave 23.80 51⇑ *eP* **P 19 19 36.0 -1.0**
WCI MLR MLR
comp=Z,8μm,22.0s,MS5.1
DGMT Dagmar 23.83 9⇓ *eP* **P 19 19 35.6 -1.5**
DGMT LR LR
comp=Z,5μm,20.0s,MS5.0
NEW Newport 23.97 348⇓ *eP* **P 19 19 36.4 -1.9**
NEW MLR MLR
comp=Z,27μm,19.0s
JFWS Jewell Farm 23.97 37 *eP* **P 19 19 36.8 -1.6**
JFWS pmax pmax
comp=Z,204nm,0.9s,mb5.6
JFWS MLR MLR
comp=Z,12μm,21.0s,MS5.3
JFWS Jewell Farm 23.97 37 *eP* **P 19 19 36.8 -1.6**
comp=Z,204nm,0.9s,mb5.6
JFWS LR LR
comp=Z,12μm,21.0s,MS5.3
BMW Boistfort Moun 24.04 337 *eP* **P 19 19 38.9 -0.1**
CPCT Cooper Cave 24.04 58⇑ *eP* **P 19 19 37.9 -1.2**
BLO Bloomington 24.09 48 *eP* **P 19 19 39.3 -0.2**
BLO pmax pmax
comp=Z,480nm,1.7s,mb5.7
BLO Bloomington 24.09 48 *eP* **P 19 19 39.3 -0.3**
comp=Z,476nm,1.7s,mb5.7
ETW Entiat 24.11 342⇑ *eP* **P 19 19 39.1 -0.5**
comp=Z,112nm,0.9s,mb5.3
WALA Waterton Lakes 24.26 353⇓ *eP* **P 19 19 39.1 -1.8**
comp=Z,367nm,1.1s,mb5.7
GOGA Godfrey 24.31 64⇑ *eP* **P 19 19 39.7 -2.0**
GOGA pmax pmax
comp=Z,145nm,1.3s,mb5.2
GOGA MLR MLR
comp=Z,31μm,19.0s,MS5.8
GOGA Godfrey 24.31 64⇑ *eP* **P 19 19 39.7 -2.0**
comp=Z,145nm,1.3s,mb5.2
GOGA LR LR
comp=Z,31μm,19.0s,MS5.8
TKL Tuckaleechee C 24.68 58 P **P 19 19 45.0 0.0**
comp=Z,48nm,1.0s,mb5.0,baz=218,slow=8.7,SNR=27
TKL S **S 19 24 14.4 +7.7**
comp=Z,5.3nm,0.9s,baz=282,slow=18,SNR=2.8
TKL Lg 19 27 34.2
comp=Z,1.0nm,0.2s,baz=13,slow=21,SNR=2.4
TKL LR LR 19 30 25.7
comp=Z,44μm,18.2s,MS6.0,baz=254,slow=39
TELN Telica 24.83 116 *eP* **P 19 19 49.0 +2.5**
LEON Leon 24.88 116 *eP* **P 19 19 50.8 +3.8**
NLWA Neilton Lookou 25.05 337 *eP* **P 19 19 46.1 -2.1**
comp=Z,159nm,1.4s,mb5.4
NLWA LR LR
comp=Z,31μm,19.0s,MS5.8
JCW Jim Creek 25.10 340 *eP* **P 19 19 46.8 -1.9**
TZTN Tazewell 25.14 57 *eP* **P 19 19 48.2 -1.0**
TZTN LR LR
comp=Z,38μm,20.0s,MS5.9
RPW Rockport 25.21 341 *eP* **P 19 19 48.1 -1.6**
comp=Z,67nm,1.1s,mb5.1
COPN Copaltepe 25.26 116 *eP* **P 19 19 53.8 +3.4**
CSAN 25.39 116 *eP* **P 19 19 54.8 +3.2**
DWPF Disney 25.42 77 *eP* **P 19 19 51.5 -0.3**
comp=Z,147nm,1.0s,mb5.5
DWPF LR LR
comp=Z,4μm,20.0s,MS5.0
XAVN Gruta Xavier 25.49 116 *eP* **P 19 19 56.3 +3.8**
HUEN 25.51 115 *eP* **P 19 19 55.4 +2.7**
MGAN Managua 25.56 116 AMb AMB 19 20 05.4
comp=Z,136nm,1.7s,mb5.2
WILN Americas 2 25.60 116 AMb AMB 19 20 03.7
comp=Z,190nm,1.5s,mb5.4
CRUN El Crucero 25.60 116 *eP* **P 19 19 57.4 +3.8**
AGMN Agassiz Refuge 25.68 22 *eP* **P 19 19 52.7 -1.3**
comp=Z,71nm,0.9s,mb5.2
APON Apoyo 25.83 116 *eP* **P 19 19 59.2 +3.6**
PGC Sidney 25.99 339 *eP* **P 19 19 55.4 -1.3**
comp=Z,619nm,1.4s,mb6.0
JSC Jenkinsville 26.30 63 *eP* **P 19 19 57.7 -2.0**
CONN Concepcion 26.38 116 *eP* **P 19 20 03.8 +3.1**
MADN Villa Maderas 26.54 116 *eP* **P 19 20 04.4 +2.3**
COW Cow Castle Cre 26.57 65 P **P 19 20 04.1 +2.0**
COWI Conover 26.74 33 *eP* **P 19 20 02.5 -1.0**
comp=Z,171nm,1.2s,mb5.5
COWI LR LR
comp=Z,41μm,19.0s,MS6.0
NHSC New Hope 26.95 66 *eP* **P 19 20 07.2 +1.6**
comp=Z,278nm,1.4s,mb5.6
NHSC LR LR
comp=Z,28μm,20.0s,MS5.8
ACSO Alum Creek Sta 27.00 49 *eP* **P 19 20 05.1 -0.9**
comp=Z,132nm,1.3s,mb5.3
ACSO LR LR
comp=Z,28μm,22.0s,MS5.8
EYMN Ely 27.04 27 *eP* **P 19 20 04.8 -1.5**
comp=Z,168nm,1.1s,mb5.5
EYMN LR LR
comp=Z,39μm,19.0s,MS6.0
ULM Lac du Bonnet 27.39 19 P **P 19 20 08.6 -0.8**
comp=Z,45nm,1.2s,mb4.9,baz=209,slow=9.9,SNR=18
ULM Lg 19 28 52.2
comp=Z,6.8nm,1.1s,baz=315,slow=16,SNR=4.1
ULM LR LR 19 31 08.9
comp=Z,13μm,18.6s,MS5.5,baz=206,slow=36
ULM Lac du Bonnet 27.39 19 P **P 19 20 08.6 -0.8**
ULM Lg 19 28 52.2
ULM LR LR 19 31 08.8
ELN Prospectdale 27.49 57 *eP* **P 19 20 09.2 -1.1**
BLA Blacksburg 27.73 57 *eP* **P 19 20 10.7 -1.9**
BLA pmax pmax
comp=Z,103nm,1.1s,mb5.4
BLA MLR MLR
comp=Z,32μm,19.0s,MS5.9
BLA Blacksburg 27.73 57 *eP* **P 19 20 10.7 -1.9**
comp=Z,103nm,1.1s,mb5.4
BLA LR LR
comp=Z,32μm,19.0s,MS5.9
CNNC Cliffs of the 29.21 62 *eP* **P 19 20 27.2 +1.4**
comp=Z,72nm,0.8s,mb5.5
CNNC LR LR
comp=Z,42μm,19.0s,MS6.1
ALLY Alegheny Colle 29.55 48 *eP* **P 19 20 27.3 -1.3**
comp=Z,106nm,1.1s,mb5.5
URVA University of 30.04 58 *eP* **P 19 20 31.9 -1.1**
CTCR Cotoan 30.21 117 *eP* **P 19 20 35.9 +1.1**
SDMD Soldier's Deli 31.08 54 P **P 19 20 40.4 -1.9**
SADO Sadowa 31.60 44 P **P 19 20 49.2 +2.4**
baz=256,slow=12
SADO Sadowa 31.60 44 P **P 19 20 49.2 +2.4**
MVL Millersville 31.62 54 *eP* **P 19 20 40.7 -6.4**
BCIP Isla Barro Col 32.45 114 P **P 19 20 56.0 +1.4**
comp=Z,84nm,1.3s,mb5.4
BCIP LR LR
comp=Z,30μm,22.0s,MS5.9
BINY Binghamton 32.62 50 *eP* **P 19 20 54.8 -0.9**
comp=Z,94nm,1.1s,mb5.6
BINY LR LR
comp=Z,36μm,20.0s,MS6.1
CPNY Central Park 33.60 53 P **P 19 21 07.6 +3.2**
PAL Palisades 33.70 53 *eP* **P 19 21 08.7 +3.5**
NCB Newcomb 34.47 48 *eP* **P 19 21 09.9 -1.9**
comp=Z,71nm,1.0s,mb5.5
NCB LR LR
comp=Z,23μm,21.0s,MS5.9
LONY Lake Ozonia 34.47 46 *eP* **P 19 21 10.7 -1.2**
LONY LR LR
comp=Z,37μm,21.0s,MS6.1
ACCN Adirondack Com 34.63 49 P **P 19 21 13.5 +0.2**
comp=Z,117nm,1.8s,mb5.5
CRAG Craig 34.98 337 *eP* **P 19 21 14.1 -2.0**
MDV Middlebury 35.18 48 *eP* **P 19 21 17.8 -0.2**
QUA2 Belchertown 35.19 51 *eP* **P 19 21 17.2 -0.9**
comp=Z,286nm,1.4s,mb6.0
FRNY Flat Rock 35.21 47 *eP* **P 19 21 17.1 -1.1**
comp=Z,63nm,1.0s,mb5.5
WRAK Wrangell Islan 35.46 338 *eP* **P 19 21 22.0 +1.8**
comp=Z,85nm,1.0s,mb5.6
WRAK LR LR
comp=Z,18μm,20.0s,MS5.8
FCC Fort Churchill 35.50 14 P **P 19 21 19.2 -1.3**
FCC pmax pmax
comp=Z,127nm,1.0s,mb5.8
FCC Fort Churchill 35.50 14 P **P 19 21 19.2 -1.4**
comp=Z,127nm,1.0s,mb5.8
BRYW Bryant College 35.67 52 *eP* **P 19 21 20.3 -1.9**
comp=Z,173nm,1.2s,mb5.9
HNH Hanover 35.69 49 P **P 19 21 23.1 +0.7**
HRV Adam Dziewonsk 35.82 51 *eP* **P 19 21 26.9 +3.4**
HRV Adam Dziewonsk 35.82 51 *eP* **P 19 21 27.4 +3.9**
comp=Z,44nm,0.9s,mb5.4
HRV LR LR
comp=Z,24μm,20.0s,MS6.0
WES Weston 35.95 52 PFAKE 19 21 30.0 +5.3
WES LR LR
comp=Z,18μm,19.0s,MS5.9
LBNH Lisbon 36.11 48 *eP* **P 19 21 26.2 +0.2**
LBNH MLR MLR
comp=Z,17μm,19.0s,MS5.8
DLBC Dease Lake 36.41 342 P **P 19 21 26.9 -1.4**
DLBC Dease Lake 36.41 342 *eP* **P 19 21 28.7 +0.4**
SIT Sitka 36.99 337 P **P 19 21 31.2 -2.1**
SIT pmax pmax
comp=Z,173nm,1.7s,mb5.6
SIT MLR MLR
comp=Z,13μm,20.0s,MS5.7
SIT Sitka 36.99 337 P **P 19 21 31.2 -2.0**
comp=Z,136nm,1.7s,mb5.5
SIT LR LR
comp=Z,13μm,20.0s,MS5.7
YKA Yellowknife Ar 37.64 356 P **P 19 21 37.5 -1.2**
comp=Z,7.5nm,0.9s,mb4.4,baz=174,slow=7.9,SNR=36
YKA LR LR 19 39 56.3
comp=Z,23μm,18.7s,MS6.0,baz=175,slow=41
YKA Yellowknife Ar 37.64 356 P **P 19 21 37.5 -1.2**
YKA LR LR 19 39 56.3
PKME Peaks-Kenny Pk 38.22 48 PFAKE 19 21 50.0 +6.1
PKME LR LR
comp=Z,33μm,19.0s,MS6.2
SKAG Skagway 38.84 339 *eP* **P 19 21 47.7 -1.2**
OTAV Otavalo 38.94 124 *eP* **P 19 21 50.7 +0.4**
OTAV LR LR
comp=Z,7μm,19.0s,MS5.5
EMMW East Machias 39.30 49 *eP* **P 19 21 55.6 +2.6**
ROSC El Rosal 39.37 115 P **P 19 21 53.8 -0.1**
comp=Z,24nm,1.0s,mb4.9,baz=109,slow=20,SNR=16
ROSC LR LR 19 39 41.2
comp=Z,15μm,18.3s,MS5.9,baz=345,slow=38
BBSR BB Station 39.90 69 PFAKE 19 22 10.0 +12
BBSR LR LR
comp=Z,6μm,19.0s,MS5.4
AGPR Aguadilla, PR 39.94 91 P **P 19 22 04.3 +5.7**
comp=Z,363nm,1.6s,mb5.9
AOPR Arecibo Observ 40.30 91 P **P 19 22 06.6 +5.1**
comp=Z,27nm,0.8s,mb5.0
SDV Santo Domingo 40.44 106 *eP* **P 19 22 01.3 -1.5**
SDV LR LR
comp=Z,5μm,20.0s,MS5.4
HYT Haines Junctio 40.59 339 *eP* **P 19 22 05.4 +1.9**
SJG San Juan 40.91 91⇑ *eP* **P 19 22 04.4 -2.3**
SJG pmax pmax
comp=Z,100nm,1.0s
SJG MLR MLR
comp=Z,9μm,19.0s
SJG San Juan 40.91 91⇑ *eP* **P 19 22 04.4 -2.3**
comp=Z,100nm,1.0s,mb5.4
SJG LR LR
comp=Z,9μm,19.0s,MS5.6
CPD Cerro la Pandu 41.15 91 *eP* **P 19 22 07.4 -1.2**
HUMP Col San Antoni 41.18 91⇑ *eP* **P 19 22 09.4 +0.6**
MTP Monte Pirata 41.46 91 *eP* **P 19 22 10.4 -0.8**
POHA Pohakuloa 42.58 272 PFAKE 19 22 30.0 +10
POHA LR LR
comp=Z,22μm,20.0s,MS6.0
HKL Haleakala 42.99 274 *eP* **P 19 22 22.6 -1.1**
SCHQ Schefferville 43.31 35 P **P 19 22 27.4 +1.7**
comp=Z,28nm,1.1s,mb4.9,baz=242,slow=3.7,SNR=9.5
SCHQ S **S 19 28 55.9 +2.9**
comp=Z,2.9nm,0.8s,baz=16,slow=14,SNR=2.4
SCHQ Lg 19 37 08.1
comp=Z,3.7nm,0.8s,baz=164,slow=17,SNR=6.7
SCHQ LR LR 19 41 34.4
comp=Z,16μm,20.1s,MS5.9,baz=245,slow=38
SCHQ Schefferville 43.31 35 P **P 19 22 27.4 +1.7**
SCHQ S **S 19 28 55.9 +2.9**
SCHQ Lg 19 37 08.1
SCHQ LR LR 19 41 34.4
DAWY Dawson 43.63 342⇓ *eP* **P 19 22 26.9 -1.3**
ATAH Atahualpa 44.02 132 P **P 19 22 33.5 +1.5**
comp=Z,38nm,0.9s,mb5.2,baz=339,slow=5.2,SNR=19
KIP Kipapa 44.40 276 *eP* **P 19 22 32.8 -2.2**
KIP pmax pmax
comp=Z,175nm,1.0s,mb5.7
KIP MLR MLR
comp=Z,18μm,20.0s,MS6.0
KIP Kipapa 44.40 276 *eP* **P 19 22 32.8 -2.2**
comp=Z,175nm,1.0s,mb5.7
KIP LR LR
comp=Z,18μm,20.0s,MS6.0
HON Honolulu 44.41 276 *eP* **P 19 22 38.1 +3.0**
EGAK Eagle 44.67 341⇓ *eP* **P 19 22 35.2 -1.3**
EGAK LR LR
comp=Z,14μm,20.0s,MS5.9
KDAK Kodiak Island 44.70 329 P **P 19 22 39.3 +2.4**
comp=Z,508nm,1.5s,mb6.1,SNR=12
KDAK Kodiak Island 44.70 329 P **P 19 22 37.9 +1.0**
comp=Z,56nm,1.0s,mb5.3,baz=107,slow=5.5,SNR=16
KDAK LR LR 19 39 21.0
comp=Z,9μm,19.0s,MS5.7,baz=140,slow=34
KDAK Kodiak Island 44.70 329⇓ *eP* **P 19 22 35.4 -1.5**
comp=Z,266nm,1.5s,mb5.8
KDAK LR LR
comp=Z,2μm,21.0s,MS5.1
OHAK Old Harbor 44.78 328 *eP* **P 19 22 37.1 -0.4**
comp=Z,574nm,2.4s,mb6.0
TAOE Nuku Hiva Isla 44.88 225 *eP* **P 19 22 39.2 +0.4**
comp=Z,835nm,1.1s,mb6.5
TAOE *eS* **S 19 29 14.6 -2.2**
TAOE comp=Z,16μm,24.6s *eLQ* 19 33 12.9
TAOE comp=Z,155μm,26.2s *eLR* LR 19 35 00.2
comp=Z,149μm,26.4s,baz=44
TAOE Nuku Hiva Isla 44.88 225 *eP* **P 19 22 39.2 +0.4**
comp=Z,835nm,1.1s,mb6.5
TAOE *eS* **S 19 29 14.6 -2.2**
TAOE *eLQ* 19 33 12.9
SLKM Skilak Lake 45.07 333 *eP* **P 19 22 38.4 -1.4**
PMR Palmer 45.25 335 *eP* **P 19 22 40.8 -0.4**
comp=Z,165nm,1.6s,mb5.6
INK Inuvik 45.69 348 P **P 19 22 49.4 +4.8**
comp=Z,0.6nm,0.3s,baz=158,slow=22,SNR=5.5
COLA College 46.81 339⇓ *eP* **P 19 22 51.2 -2.2**
COLA pmax pmax
comp=Z,58nm,0.8s,mb5.6
COLA MLR MLR
comp=Z,8μm,19.0s,MS5.7
COLA College 46.81 339⇓ *eP* **P 19 22 51.2 -2.2**
comp=Z,58nm,0.8s,mb5.6
COLA LR LR
comp=Z,8μm,19.0s,MS5.7
CHGN Chignik 46.98 325 *eP* **P 19 22 56.5 +1.6**
GRGR Grenville 47.04 97 PFAKE 19 23 10.0 +14
GRGR LR LR
comp=Z,8μm,21.0s,MS5.6
SVW2 Sparrevohn 47.63 332 *eP* **P 19 22 58.4 -1.5**
SDPT Sand Point 47.75 323 *eP* **P 19 23 02.0 +1.1**
comp=Z,297nm,2.1s,mb6.0
BBGH Gun Hill 48.55 94 PFAKE 19 23 20.0 +12
BBGH LR LR
comp=Z,16μm,22.0s,MS6.0
TTA Tatalina 48.69 334 *eP* **P 19 23 06.8 -1.2**
IMA2 Indian Mountai 49.48 338 *eP* **P 19 23 12.3 -1.7**
RES Resolute Bay 50.34 5 *eP* **P 19 23 16.1 -4.4**
AKUT Akutan 50.40 321 *eP* **P 19 23 22.9 +1.7**
XMAS Kiritimati 51.37 251 *eP* **P 19 23 29.1 0.0**
comp=Z,227nm,1.3s,mb5.9
XMAS LR LR
comp=Z,30μm,20.0s,MS6.3
PTCN Pitcairn Islan 53.55 203 PFAKE 19 23 50.0 +5.0
PTCN LR LR
comp=Z,4μm,20.0s,MS5.5
RKT Rikitea 53.75 209 *eS* **S 19 31 20.2 -0.8**
comp=Z,4μm,27.2s
RKT *eLQ* 19 36 59.3
comp=Z,9μm,29.2s
RKT *eLR* LR 19 39 11.8
comp=Z,13μm,30.2s,baz=24
PMOR Pomariorio Ree 54.49 227 *eP* **P 19 23 53.1 +1.0**
comp=Z,405nm,1.2s,mb6.2
SFJD Kangerlussuaq 55.27 24 P **P 19 24 00.7 +3.7**
comp=Z,5.1nm,0.4s,mb4.9,baz=161,slow=1.9,SNR=3.5
SFJD Kangerlussuaq 55.27 24 P **P 19 23 56.7 -0.3**
SFJD pmax pmax
comp=Z,188nm,1.6s,mb5.9
SFJD MLR MLR
comp=Z,14μm,22.0s,MS6.0
SFJD Kangerlussuaq 55.27 24 *i* P **P 19 23 57.3 +0.3**
comp=Z,70nm,1.2s,mb5.6
SFJD Kangerlussuaq 55.27 24 P **P 19 23 56.7 -0.3**
comp=Z,188nm,1.6s,mb5.9
SFJD LR LR

comp=Z,14µm,22.0s,MS6.0
ARE Arequipa 55.51 134 *e*P **P 19 24 03.0 +3.6**
MEH Mehetia 56.69 225 *e*P **P 19 24 09.0 +1.1**
comp=Z,11µm,1.2s
TIAR Tiarei 57.30 226 *e*P **P 19 24 13.5 +1.4**
comp=Z,5µm,1.1s
TVO Taravao 57.40 226 *e*P **P 19 24 14.3 +1.5**
comp=Z,2µm,1.1s
TVO Taravao 57.40 226 *e*P **P 19 24 14.3 +1.5**
TVO pmax pmax
comp=Z,2µm,1.1s
PPT Papeete 57.45 227 *e*P **P 19 24 14.8 +1.6**
comp=Z,218nm,1.3s,mb6.0
PPT *e*S **S 19 32 09.5 -1.1**
comp=Z,19µm,25.5s
PPT *e*SS SS 19 35 56.5 -4.3
comp=Z,3µm,24.8s
PPT *e*LQ 19 38 31.1
comp=Z,8µm,21.5s
PPT *e*LR LR 19 40 48.5
comp=Z,51µm,27.2s,baz=30
PPT Papeete 57.45 227 LR LR 19 43 03.2
comp=Z,10µm,19.0s,MS6.0,baz=48,slow=30
PPT Papeete 57.45 227 *e*P **P 19 24 14.8 +1.6**
PPT *e*S **S 19 32 09.5 -1.1**
PPT *e*SS SS 19 35 56.5 -4.3
PPT pmax pmax
comp=Z,218nm,1.3s
PPT Papeete 57.45 227 *e*P **P 19 24 14.8 +1.6**
comp=Z,218nm,1.3s,mb6.0
PPT *e*S **S 19 32 09.5 -1.1**
PPT *e*SS SS 19 35 56.5 -4.3
PPT *e*LQ 19 38 31.1
PAE Paea 57.52 226 *e*P **P 19 24 15.1 +1.4**
comp=Z,1µm,1.1s
PAE Paea 57.52 226 *e*P **P 19 24 15.1 +1.4**
PAE pmax pmax
comp=Z,1µm,1.1s
LPAZ La Paz 57.64 131 P **P 19 24 12.8 -1.7**
comp=Z,7.2nm,0.9s,mb4.7,baz=330,slow=7.7,SNR=15
LPAZ LR LR 19 46 23.8
comp=Z,6µm,21.9s,MS5.6,baz=322,slow=33
LPAZ La Paz 57.64 131 P **P 19 24 12.8 -1.7**
LPAZ LR LR 19 46 23.8
AMKA Amchitka 59.19 316 *e*P **P 19 24 21.9 -3.1**
MIDW Midway 59.91 289 PFAKE 19 24 40.0 +10
MIDW LR LR
comp=Z,10µm,20.0s,MS6.0
CEN1 Los Morros 61.45 138⇑ *i*P **P 19 24 41.1 +0.3**
LVC Limon Verde 61.66 137 *e*P **P 19 24 43.1 +0.9**
LVC LR LR
comp=Z,3µm,20.0s,MS5.4
SMY Shemya 62.30 318 PFAKE 19 25 00.0 +14
SMY LR LR
comp=Z,4µm,19.0s,MS5.5
LCO Las Campanas 65.46 143 *e*P **P 19 25 08.4 +1.2**
comp=Z,38nm,0.9s,mb5.4
LCO LR LR
comp=Z,4µm,19.0s,MS5.6
DAG Danmarks Havn 66.10 15⇑ *i*P **P 19 25 07.9 -2.8**
DAG *i* 19 25 14.8
DAG pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
DAG Danmarks Havn 66.10 15⇑ *i*P **P 19 25 07.9 -2.8**
comp=Z,3.7nm,0.8s,mb4.5
DAG *i* 19 25 14.8
RAR Rarotonga 66.93 231 LR LR 19 46 42.7
comp=Z,14µm,19.4s,MS6.2,baz=90,slow=29
CFAA Coronel Fontan 68.81 143 P **P 19 25 26.6 -1.9**
comp=Z,1.2nm,0.8s,baz=314,slow=4.9,SNR=13
FCH Farellones 69.05 145 *i*P **P 19 25 32.6 +2.7**
PDA Ponta Delgada 70.65 57 *e*SS SS 19 39 21.5 -4.0
PDA *i*LR LR 19 47 51.0
CMLA Cha da Macela 70.75 57 *e*P **P 19 25 42.6 +2.1**
comp=Z,20nm,1.8s,mb4.7
CMLA *e*S S 19 34 57.1 +1.8
CMLA *e*LQ 19 42 25.0
KBS Kingsbay 71.32 10 *e*P **P 19 25 46.4 +3.2**
KBS *e*S S 19 35 02.1 +1.4
KBS *e*SS SS 19 39 37.7 +3.6
KBS AMS AMS 20 00 36.3
comp=Z,13µm,17.5s,MS6.2
KBS Kingsbay 71.32 10 *e*P **P 19 25 41.5 -1.8**
KBS *e*P pP 19 25 45.5 -1.0
PET Petropavlovsk 71.42 320 *e*P **P 19 25 40.8 -3.4**
PET *e* 19 25 59.0
PET *e*S S 19 34 55.7 -6.8
PET *e*PS 19 35 33.8
PET *e*SS SS 19 39 35.7 -0.7
PET pmax pmax
comp=Z,800nm,8.6s
PET pmax pmax
comp=Z,800nm,12.3s
PET pmax pmax
comp=Z,100nm,1.3s,mb5.6
PET pmax pmax
comp=Z,400nm,21.0s
PET smax
comp=N,500nm,9.0s
PET smax
comp=N,2µm,17.8s
PET smax
comp=E,1µm,8.6s
PET MLR MLR
comp=Z,2µm,12.0s,MS5.7
PET MLR MLR
comp=Z,2µm,16.0s
PET Petropavlovsk 71.42 320 *e*P **P 19 25 43.0 -1.2**
comp=Z,146nm,1.3s,mb5.8
PET LR LR
comp=Z,4µm,21.0s,MS5.7
SEY Seymchan 71.57 331 *de*P **P 19 25 42.7 -2.3**
CPUP Villa Florida 71.80 132 P **P 19 25 45.0 -1.9**
comp=Z,27nm,0.9s,mb5.2,baz=298,slow=6.2,SNR=20
CPUP LR LR 19 55 15.0
comp=Z,3µm,21.2s,MS5.5,baz=219,slow=34
AFI Afiamalu 71.83 245 LR LR 19 49 28.5
comp=Z,9µm,19.5s,MS6.0,baz=72,slow=29
PETK Petropavlovsk- 71.94 321 P **P 19 25 45.6 -1.8**
comp=Z,52nm,1.1s,mb5.4,baz=73,slow=10,SNR=31
PETK LR LR 19 51 22.9
comp=Z,2µm,19.7s,MS5.5,baz=270,slow=31
BDFB Brasilia 72.39 117 P **P 19 25 50.7 +0.1**
comp=Z,31nm,0.9s,mb5.2,baz=308,slow=7.1,SNR=12
BDFB LR LR 20 03 13.3
comp=Z,5µm,18.9s,MS5.8,baz=88,slow=40
SPITS Spitsbergen Ar 72.48 10 P **P 19 25 52.1 +1.9**
comp=Z,14nm,1.0s,mb4.8,baz=12,slow=9.9,SNR=3.3
SKR Severo-Kuril's 73.64 319 *e*P **P 19 25 55.0 -2.5**
SKR *e* 19 26 08.0
SKR *e* 19 28 50.0
SKR *e*S S 19 35 30.0 +2.0
SKR *e*PS 19 36 02.0
SKR pmax pmax
comp=E,1µm,14.0s
SKR pmax pmax
comp=Z,1µm,14.0s
SKR pmax pmax
comp=N,2µm,16.0s
SKR pmax pmax
comp=E,2µm,16.0s
SKR MLR MLR
comp=N,1µm,18.0s,MS5.7
SKR MLR MLR
comp=E,3µm,18.0s,MS5.7
SKR MLR MLR
comp=Z,2µm,18.0s,MS5.5
PLCA Paso Flores 74.81 150 P **P 19 26 02.8 -1.5**
comp=Z,13nm,0.9s,mb4.8,baz=346,slow=6.9,SNR=11
PLCA LR LR 19 53 02.1
comp=Z,7µm,18.2s,MS6.0,baz=327,slow=31
BJO Bjornoya 75.43 12 AMS AMS 20 00 15.0
comp=Z,10µm,19.2s,MS6.1
TIXI Tiksi 75.62 344 *di*P **P 19 26 08.0 -0.6**
TIXI *e*S S 19 35 44.3 -5.1
TIXI *e* 19 36 15.2
TIXI *e*SS SS 19 40 35.8 -3.8
TIXI pmax pmax
comp=Z,69nm,1.3s,mb5.4
TIXI MLR MLR
comp=Z,4µm,18.0s,MS5.8
TIXI Tiksi 75.62 344 *e*P **P 19 26 05.3 -3.3**
comp=Z,44nm,0.9s,mb5.4
TIXI *i*P pP 19 26 08.4 -3.5
TIXI LR LR
comp=Z,4µm,20.0s,MS5.8

FUNA Funafuti 76.80 254 PFAKE 19 26 20.0 +3.7
FUNA LR LR
comp=Z,10µm,19.0s,MS6.2
TRQA Tornquist 77.03 143 *e*P **P 19 26 15.7 -1.4**
comp=Z,96nm,1.4s,mb5.5
TRQA LR LR
comp=Z,2µm,21.0s,MS5.5
DMUB Kingscourt 77.29 36 *e*P **P 19 26 27.9 +9.5**
DLF Lyons Farm 77.75 37 *e*P **P 19 26 29.8 +8.8**
LOF Lofoten 78.27 19 *e*P **P 19 26 27.6 +4.0**
LOF AMb AMB 19 26 39.2
comp=Z,104nm,1.9s,mb5.4
TRO Tromso 78.74 16 *e*P **P 19 26 27.5 +1.3**
TRO AMb AMB 19 26 42.1
comp=Z,109nm,1.6s,mb5.5
TRO *e*S S 19 36 23.8 +0.5
TRO *e*SS SS 19 41 30.5 +3.9
TRO AMS AMS 20 01 56.4
comp=Z,3µm,19.8s,MS5.7
TRO Tromso 78.74 16 *e*P **P 19 26 27.5 +1.3**
TRO pmax pmax
comp=Z,109nm,1.6s,mb5.5
TRO MLR MLR
comp=Z,3µm,19.8s,MS5.7
TRO Tromso 78.74 16 *e*P **P 19 26 27.5 +1.3**
comp=Z,109nm,1.6s,mb5.5
TRO LR LR
comp=Z,3µm,19.8s,MS5.7
STOK Stokkvaagen 79.25 20 *e*P **P 19 26 31.1 +2.0**
STOK AMb AMB 19 26 43.1
comp=Z,93nm,2.5s,mb5.3
STOK Stokkvaagen 79.25 20 *e*P **P 19 26 31.1 +2.0**
comp=Z,93nm,2.5s,mb5.3
MOL Molde 79.62 25 AMS AMS 20 02 17.3
comp=Z,5µm,24.1s,MS5.8
BER Bergen 79.97 27 *e*P **P 19 26 36.5 +3.4**
BER *e*SS SS 19 41 46.1 +0.6
BER AMS AMS 20 01 52.5
comp=Z,7µm,14.4s,MS6.1
NSS Namsos 80.04 22 AMS AMS 20 02 14.6
comp=Z,7µm,17.5s,MS6.0
ARCES ARCESS Array B 80.39 15 P **P 19 26 35.0 -0.1**
comp=Z,8.8nm,0.8s,mb4.8,baz=329,slow=3.1,SNR=14
ARCES LR LR 20 06 01.7
comp=Z,7µm,20.8s,MS6.0,baz=326,slow=38
KEV Kevo 80.56 14 *e*P **P 19 26 36.2 +0.1**
KEV pmax pmax
comp=Z,48nm,1.1s,mb5.3
KEV MLR MLR
comp=Z,8µm,21.0s,MS6.0
KEV Kevo 80.56 14 *e*P **P 19 26 36.2 +0.1**
comp=Z,48nm,1.1s,mb5.3
KEV LR LR
comp=Z,8µm,21.0s,MS6.0
YAK Yakutsk 81.24 336 *e*P **P 19 26 39.7 -0.1**
YAK *e* pP 19 26 44.3 +1.2
YAK *e* 19 29 45.0
YAK *e*S S 19 36 46.2 -3.8
YAK *e* 19 36 58.6
YAK *e*SS SS 19 42 06.8 +2.5
YAK pmax pmax
comp=Z,79nm,1.2s,mb5.5
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=E,28nm,1.3s
YAK pmax pmax
comp=Z,111nm,3.0s
YAK pmax pmax
comp=N,42nm,2.0s
YAK smax
comp=N,70µm,2.9s
YAK smax
comp=E,20µm,2.0s
YAK MLR MLR
comp=Z,5µm,20.0s,MS5.9
YAK MLR MLR
comp=E,5µm,19.0s,MS6.0
YAK MLR MLR
comp=N,2µm,18.0s,MS6.0
YAK Yakutsk 81.24 336 *e*P **P 19 26 37.5 -2.3**
comp=N,126nm,1.0s,mb5.8
YAK LR LR
comp=Z,5µm,20.0s,MS5.9
ELOB Lobios 81.78 48 P **P 19 26 47.2 +4.1**
comp=Z,7.9nm,1.0s,mb4.6
ROSF Rostrenen 81.83 40 *e*P **P 19 26 37.8 -5.5**
comp=Z,113nm,1.3s,mb5.3
ROSF Rostrenen 81.83 40 *e*P **P 19 26 37.8 -5.5**
ROSF pmax pmax
comp=Z,57nm,1.3s,mb5.3
ROSF Rostrenen 81.83 40 *e*P **P 19 26 37.8 -5.5**
comp=Z,56nm,1.3s,mb5.3
PCAB Cabril 81.87 48 *e*P **P 19 26 47.0 +3.4**
comp=Z,54nm,2.0s,mb5.1
NB2 NORSAR Subarra 81.94 25 P **P 19 26 42.3 -1.2**
comp=Z,112nm,1.4s,mb5.6,baz=310,slow=5.1
NOA NORSAR Array B 81.94 25 P **P 19 26 42.8 -0.8**
comp=Z,9.4nm,1.1s,mb4.6,baz=308,slow=4.8,SNR=6.5
NOA LR LR 20 00 40.5
comp=Z,6µm,21.4s,MS5.9,baz=295,slow=34
QUIF Quistinic 82.10 41 *e*P **P 19 26 41.6 -3.1**
comp=Z,112nm,1.2s,mb5.4
QUIF Quistinic 82.10 41 *e*P **P 19 26 41.6 -3.1**
QUIF pmax pmax
comp=Z,56nm,1.2s,mb5.4
QUIF Quistinic 82.10 41 *e*P **P 19 26 41.6 -3.1**
comp=Z,56nm,1.2s,mb5.4
KONO Kongsberg 82.15 27 *e*P **P 19 26 48.0 +3.3**
KONO AMb AMB 19 27 01.5
comp=Z,224nm,1.4s,mb5.9
KONO *e*SKS 19 37 02.6
KONO *e*SS SS 19 42 20.4 +2.5
KONO AMS AMS 20 03 20.6
comp=Z,5µm,21.8s,MS5.8
KONO Kongsberg 82.15 27⇓ *e*P **P 19 26 44.5 -0.2**
KONO *e*P pP 19 26 48.0 0.0
KONO LR LR
comp=Z,5µm,21.8s,MS5.8
ERUA La Rua 82.16 47 P **P 19 26 46.4 +1.3**
ERUA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
ERUA La Rua 82.16 47 P **P 19 26 46.4 +1.3**
comp=Z,9.5nm,1.0s,mb4.7
SGMF Saint Gilles 82.29 40 *e*P **P 19 26 40.9 -4.8**
comp=Z,146nm,1.4s,mb5.4
SGMF Saint Gilles 82.29 40 *e*P **P 19 26 40.9 -4.8**
SGMF pmax pmax
comp=Z,73nm,1.4s,mb5.4
SGMF Saint Gilles 82.29 40 *e*P **P 19 26 40.9 -4.8**
comp=Z,73nm,1.4s,mb5.4
PVIS Viseu 82.40 49 *e*P **P 19 26 50.2 +3.8**
comp=Z,37nm,1.2s,mb5.2
PTOM Tomar 82.53 50 *e*P **P 19 26 51.0 +3.9**
comp=Z,78nm,1.4s,mb5.5
YUK Yuzh-Kuril'sk 82.68 315 P **P 19 26 47.0 -0.8**
YUK pmax pmax
comp=Z,3µm,1.5s
YUK MLR MLR
comp=Z,3µm,18.0s,MS5.7
MTE Manteigas 82.78 49 *e*P **P 19 26 50.8 +2.4**
comp=Z,63nm,1.0s,mb5.6
MTE Manteigas 82.78 49 *e*SKS S 19 37 10.5 +3.9
MTE *e*SS SS 19 43 07.8 +39
MTE *e*LQ 19 48 48.2
MTE *e*LR LR 19 53 57.4
comp=Z,9µm,22.0s
MVO Moncorvo 82.79 48 *e*P **P 19 26 52.3 +3.9**
comp=Z,59nm,1.9s,mb5.3
MVO Moncorvo 82.79 48 *e*SKS S 19 37 11.5 +4.8
MVO *e*SS SS 19 43 06.0 +38
MVO *e*LQ 19 48 48.2
MVO *e*LR LR 19 54 04.8
comp=Z,7µm,22.0s
CFTV Fuerteventura 83.04 62 P **P 19 26 55.9 +5.9**
comp=Z,13nm,0.8s,mb5.0
PCBR Castelo Branco 83.08 49 *e*P **P 19 26 53.3 +3.4**
comp=Z,40nm,1.6s,mb5.2
YSS Yuzh-Sakhalins 83.21 319⇓ *e*P **P 19 26 50.4 -0.1**
YSS *e* 19 26 59.0
YSS *e* 19 30 00.0
YSS *e*S S 19 37 08.0 -2.8
YSS *e*PS 19 38 00.0
YSS *e*PPS 19 38 18.0
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.6
YSS pmax pmax
comp=Z,600nm,8.0s
YSS MLR MLR
comp=E,2µm,20.0s
YSS MLR MLR
comp=Z,2µm,20.0s,MS5.4
YSS Yuzh-Sakhalins 83.21 319 *e*P **P 19 26 49.3 -1.2**
comp=Z,100nm,1.2s,mb5.7
YSS LR LR
comp=Z,1µm,21.0s,MS5.2
GRR Gorron 83.22 39 *e*P **P 19 26 47.3 -3.2**
comp=Z,148nm,1.3s,mb5.6
GRR Gorron 83.22 39 *e*P **P 19 26 47.3 -3.2**
GRR pmax pmax
comp=Z,74nm,1.3s,mb5.6
GRR Gorron 83.22 39 *e*P **P 19 26 47.3 -3.2**
comp=Z,74nm,1.3s,mb5.5
PTEO Sao Teotonio 83.22 52 *e*P **P 19 26 54.7 +4.0**
comp=Z,134nm,2.0s,mb5.6
FLN La Foliniere 83.24 39 *e*P **P 19 26 46.2 -4.4**
comp=Z,169nm,1.1s,mb5.7
FLN *e*MLR MLR
comp=Z,9µm,19.0s,MS5.9
FLN La Foliniere 83.24 39 *e*P **P 19 26 46.2 -4.4**
FLN pmax pmax
comp=Z,84nm,1.1s,mb5.7
FLN MLR MLR
comp=Z,9µm,19.0s,MS6.2
FLN La Foliniere 83.24 39 *e*P **P 19 26 46.2 -4.4**
comp=Z,84nm,1.1s,mb5.7
FLN LR LR
comp=Z,9µm,19.0s,MS6.2
EVO Evora 83.29 51 *e*P **P 19 26 47.6 -3.5**
comp=Z,102nm,1.3s,mb5.4
EVO *e*MLR MLR
comp=Z,18µm,22.2s,MS6.1
EVO Evora 83.29 51 *e*P **P 19 26 54.3 +3.2**
comp=Z,52nm,1.6s,mb5.3
PMRV Marv??o 83.32 50 *e*P **P 19 26 54.0 +2.8**
comp=Z,56nm,2.1s,mb5.2
PMRV Marv??o 83.32 50 *e*SKS S 19 37 12.4 +0.2
PMRV *e*SS SS 19 42 42.5 +6.0
PMRV *e*LQ 19 48 55.6
PMRV *e*LR LR 19 54 12.3
comp=Z,12µm,20.0s
PFVI Vila Bisbo 83.33 52 *e*SKS S 19 37 16.0 +3.6
PFVI *e*SS SS 19 42 52.6 +16
PFVI *e*LQ 19 48 40.7
PFVI *e*LR LR 19 54 23.4
comp=Z,10µm,20.0s
MORF Marmelete 83.38 52 *e*P **P 19 26 55.9 +4.3**
comp=Z,81nm,2.1s,mb5.4
MORF Marmelete 83.38 52 *e*SKS S 19 37 21.8 +8.9
MORF Marmelete 83.38 52 *e*LQ 19 49 03.1
MORF *e*LR LR 19 54 23.4
comp=Z,12µm,20.0s
PESTR Estremoz 83.43 50 *e*P **P 19 26 54.7 +2.9**
comp=Z,43nm,1.4s,mb5.3
PESTR Estremoz 83.43 50 *e*SKS S 19 37 16.6 +3.2
PESTR *e*SS SS 19 43 01.0 +23
PESTR *e*LQ 19 48 59.4
PESTR *e*LR LR 19 54 27.2
comp=Z,9µm,22.0s
LDF La Druitiere 83.53 39 *e*P **P 19 26 47.7 -4.4**
comp=Z,130nm,1.3s,mb5.6
LDF La Druitiere 83.53 39 *e*P **P 19 26 47.7 -4.4**
LDF pmax pmax
comp=Z,65nm,1.3s,mb5.6
LDF La Druitiere 83.53 39 *e*P **P 19 26 47.7 -4.4**
comp=Z,65nm,1.3s,mb5.6
LVZ Lovozero 83.69 13⇑ *e*P **P 19 26 54.2 +1.7**
LVZ pmax pmax
comp=Z,106nm,1.9s,mb5.7
LVZ MLR MLR
comp=Z,8µm,17.0s,MS6.1
LVZ Lovozero 83.69 13⇑ *e*P **P 19 26 54.3 +1.8**
APA Apatity 83.71 13⇓ *i*P **P 19 26 53.5 +0.9**
APA *i* 19 30 04.0
APA *i* PPP 19 32 00.0
APA *i*S S 19 37 18.0 +2.9
APA *i*PS 19 38 08.0
APA *i*SS SS 19 42 37.0 -3.7
APA *i*SSS 19 46 14.0
APA pmax pmax
comp=Z,141nm,1.5s,mb5.9
APA MLR MLR
comp=Z,9µm,21.0s,MS6.1
EBAD Badajoz 83.89 50 P **P 19 26 57.4 +3.2**
comp=Z,9.6nm,0.9s,mb4.9
MUD Monsted U'grnd 83.89 29 *e*P **P 19 26 59.3 +5.5**
MUD MLR MLR
comp=Z,6µm,19.0s,MS6.0
MUD Monsted U'grnd 83.89 29 *i*P **P 19 26 59.3 +5.5**
MUD *i*S S 19 37 32.1 +15
MUD
comp=Z,6µm,19.0s
MUD Monsted U'grnd 83.89 29 *e*P **P 19 26 59.3 +5.5**
MUD *i*S S 19 37 32.1 +15
PBDV Barranco-do-Ve 83.92 52 *e*P **P 19 26 56.1 +1.8**
comp=Z,76nm,1.4s,mb5.6
PBDV Barranco-do-Ve 83.92 52 *e*SKS S 19 37 17.2 -1.1
PBDV *e*SS SS 19 42 51.7 +6.2
PBDV *e*LQ 19 49 18.0
PBDV *e*LR LR 19 54 42.1
comp=Z,13µm,20.0s
PVAQ Vaqueiros 84.00 52 *e*P **P 19 26 58.5 +3.8**
comp=Z,52nm,1.6s,mb5.4
PVAQ Vaqueiros 84.00 52 *e*SKS S 19 37 20.2 +1.1
PVAQ *e*SS SS 19 43 02.6 +16
PVAQ *e*LQ 19 49 06.8
PVAQ *e*LR LR 19 54 38.4
comp=Z,13µm,20.0s
EGRO El Granado 84.11 51 P **P 19 26 58.9 +3.6**
comp=Z,19nm,1.0s,mb5.2
PBAR Barrancos 84.13 51 *e*P **P 19 26 58.9 +3.5**
comp=Z,52nm,1.4s,mb5.5
PBAR Barrancos 84.13 51 *e*SKS S 19 37 23.5 +3.1
PBAR *e*SS SS 19 42 51.7 +3.1
PBAR *e*LQ 19 49 14.3
PBAR *e*LR LR 19 54 57.0
comp=Z,10µm,22.0s
MFF Saint Martin d 84.54 41 *e*P **P 19 26 53.9 -3.4**
comp=Z,42nm,1.1s,mb5.2
MFF Saint Martin d 84.54 41 *e*P **P 19 26 53.9 -3.4**
MFF pmax pmax
comp=Z,21nm,1.1s,mb5.2
MFF Saint Martin d 84.54 41 *e*P **P 19 26 53.9 -3.4**
comp=Z,21nm,1.1s,mb5.2
EMIN Mina Concepcio 84.58 51 P **P 19 27 01.4 +3.7**
comp=Z,22nm,0.9s,mb5.3
ASAJ Asahikawa 84.71 316 P **P 19 26 58.5 +0.4**
comp=Z,68nm,1.0s,mb5.7,baz=15,slow=2.6,SNR=15
ASAJ Asahikawa 84.71 316 P **P 19 26 57.4 -0.8**
UCC Uccle 84.83 36 P **P 19 26 59.4 +0.8**
comp=Z,28nm,1.3s,mb5.2
RAO Raoul Island 84.86 235 LR LR 19 59 00.3
comp=Z,7µm,18.1s,MS6.1,baz=61,slow=32
RAO Raoul Island 84.86 235 PFAKE 19 27 10.0 +11
RAO LR LR
comp=Z,8µm,19.0s,MS6.1
GUD Guadarrama 84.96 47 P **P 19 27 02.4 +2.9**
GUD pmax pmax
comp=Z,11nm,0.9s,mb5.0
GUD Guadarrama 84.96 47 P **P 19 27 02.4 +2.9**
comp=Z,11nm,0.9s,mb5.0
ECRI Cripan 85.08 45 P **P 19 26 59.1 -1.0**
BAIF Baives 85.15 36 *e*P **P 19 26 55.8 -4.5**
comp=Z,31nm,1.0s,mb5.1
BAIF Baives 85.15 36 *e*P **P 19 26 55.8 -4.5**
BAIF pmax pmax
comp=Z,16nm,1.0s,mb5.1
BAIF Baives 85.15 36 *e*P **P 19 26 55.8 -4.5**
comp=Z,16nm,1.0s,mb5.1
DOU Dourbes 85.34 36 P **P 19 27 06.0 +4.7**
comp=Z,14nm,1.5s,mb4.9
PAB San Pablo 85.35 48 P **P 19 27 03.4 +1.9**
PAB pmax pmax
comp=Z,15nm,0.9s,mb5.1
PAB MLR MLR
comp=Z,8µm,22.0s,MS6.0
PAB San Pablo 85.35 48 P **P 19 27 03.4 +1.9**
comp=Z,15nm,0.9s,mb5.1
PAB LR LR
comp=Z,8µm,22.0s,MS6.0
JEM Erimo 85.39 314 P **P 19 27 02.6 +1.0**
WTSB Winterswijk 85.42 34 *e*P **P 19 27 06.1 +4.5**

comp=Z,4.3nm,0.4s,mb4.9
GIVF Givet 85.46 36 *e*P P **19 26 57.3 -4.5**
comp=Z,85nm,1.3s,mb5.4
GIVF Givet 85.46 36 *e*P P **19 26 57.3 -4.5**
GIVF pmax pmax
comp=Z,42nm,1.3s,mb5.4
GIVF Givet 85.46 36 *e*P P **19 26 57.3 -4.5**
comp=Z,42nm,1.3s,mb5.4
BEBN Eben Emael 85.52 35 P P **19 27 06.7 +4.6**
comp=Z,7.2nm,1.5s,mb4.7
BCLA Clavier 85.53 36 P P **19 27 05.3 +3.1**
comp=Z,14nm,1.7s,mb4.9
ESDC Sonseca Array 85.55 48 P P **19 27 03.1 +0.6**
comp=Z,3.9nm,0.9s,mb4.6,baz=310,slow=5.5,SNR=16
ESDC PP PP 19 30 22.4 +1.7
comp=Z,0.2nm,0.3s,baz=175,slow=17,SNR=4.0
ESDC LR LR 20 02 13.9
comp=Z,6µm,21.8s,MS6.0,baz=295,slow=34
ESDC Sonseca Array 85.55 48 P P **19 27 04.6 +2.1**
comp=Z,8.6nm,1.1s,mb4.9
ESPR Espera 85.57 51 P P **19 27 05.9 +3.2**
comp=Z,15nm,0.8s,mb5.3
HGN Heimansgroeve 85.67 35 *e*P P **19 27 07.0 +4.1**
comp=Z,24nm,1.6s,mb5.2
HGN Heimansgroeve 85.67 35 *e*S S 19 37 36.4 +1.2
HGN Heimansgroeve 85.67 35 *e*SS SS 19 43 14.5 +4.1
IBBN Ibbenburen 85.70 33 *e*S S 19 37 35.9 +0.5
MEM Membach 85.80 35 P P **19 27 05.1 +1.6**
comp=Z,15nm,1.7s,mb5.0
COP Copenhagen 85.81 29 *e*P P **19 27 03.9 +0.5**
COP *i* S S 19 37 41.8 +5.5
COP *i* 19 43 13.7
COP MLR MLR
comp=Z,2µm,20.0s,MS5.6
COP Copenhagen 85.81 29 *i* P P **19 27 03.9 +0.5**
COP *i* S S 19 37 41.8 +5.5
COP *i* 19 43 13.7
COP *i* 19 50 01.3
COP
comp=Z,3µm,20.0s
COP Copenhagen 85.81 29 *e*P P **19 27 03.9 +0.5**
COP *i* S S 19 37 41.8 +5.5
COP *i* 19 43 13.7
COP *i* 19 50 01.3
COP LR LR
comp=Z,3µm,20.0s,MS5.6
EADA Adamuz 85.85 50 P P **19 27 08.3 +4.3**
comp=Z,6.3nm,0.8s,mb4.9
LFF La Frestale 85.93 42 *e*P P **19 26 59.5 -4.8**
comp=Z,23nm,0.9s,mb5.1
LFF La Frestale 85.93 42 *e*P P **19 26 59.5 -4.8**
LFF pmax pmax
comp=Z,12nm,0.9s,mb5.1
LFF La Frestale 85.93 42 *e*P P **19 26 59.5 -4.8**
comp=Z,12nm,0.9s,mb5.1
BUG Bochum--Univer 85.97 34 *e*S S 19 37 39.2 +1.1
JEW Eniwo 86.07 316 P P **19 27 07.1 +2.1**
TCF Toulx Ste Croi 86.09 40 *e*P P **19 27 00.0 -5.0**
comp=Z,25nm,0.9s,mb5.2
TCF Toulx Ste Croi 86.09 40 *e*P P **19 27 00.0 -5.0**
TCF pmax pmax
comp=Z,12nm,0.9s,mb5.1
TCF Toulx Ste Croi 86.09 40 *e*P P **19 27 00.0 -5.0**
comp=Z,12nm,0.9s,mb5.1
ETSF Etsaut 86.18 44 *e*P P **19 27 01.0 -4.5**
comp=Z,23nm,1.1s,mb5.0
ETSF Etsaut 86.18 44 *e*P P **19 27 01.0 -4.5**
ETSF pmax pmax
comp=Z,12nm,1.1s,mb5.0
ETSF Etsaut 86.18 44 *e*P P **19 27 01.0 -4.5**
comp=Z,12nm,1.1s,mb5.0
RJF Les Rejaudoux 86.20 41 *e*P P **19 27 01.0 -4.6**
comp=Z,33nm,1.0s,mb5.2
RJF *e*MLR MLR
comp=Z,7µm,21.2s,MS5.7
RJF Les Rejaudoux 86.20 41 *e*P P **19 27 01.0 -4.6**
RJF pmax pmax
comp=Z,16nm,1.0s,mb5.2
RJF MLR MLR
comp=Z,7µm,21.3s,MS6.0
RJF Les Rejaudoux 86.20 41 *e*P P **19 27 01.0 -4.6**
comp=Z,16nm,1.0s,mb5.2
RJF LR LR
comp=Z,7µm,21.3s,MS6.0
ETOR Torete 86.26 46 P P **19 27 08.2 +2.2**
ETOR pmax pmax
comp=Z,11nm,0.9s,mb5.1
ETOR Torete 86.26 46 P P **19 27 08.2 +2.2**
comp=Z,11nm,0.9s,mb5.1
BGF Bois d'Agland 86.31 40 *e*P P **19 27 01.1 -5.0**
comp=Z,33nm,1.0s,mb5.2
BGF Bois d'Agland 86.31 40 *e*P P **19 27 01.1 -5.0**
BGF pmax pmax
comp=Z,17nm,1.0s,mb5.2
BGF Bois d'Agland 86.31 40 *e*P P **19 27 01.1 -5.0**
comp=Z,16nm,1.0s,mb5.2
KAF Kangasniemi 86.33 19 *e*p P **19 27 09.1 +3.2**
comp=Z,7.4nm,0.8s,mb5.0
KAF Kangasniemi 86.33 19 *e*P P **19 27 09.1 +3.2**
KAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
ELUQ Luque 86.36 50 P P **19 27 10.3 +3.8**
WLF Walferdange 86.42 36 P P **19 27 07.6 +1.0**
comp=Z,18nm,1.6s,mb5.1
SSF Saint Saulge 86.42 39 *e*P P **19 27 01.7 -4.9**
comp=Z,57nm,1.2s,mb5.4
SSF Saint Saulge 86.42 39 *e*P P **19 27 01.7 -4.9**
SSF pmax pmax
comp=Z,29nm,1.2s,mb5.4
SSF Saint Saulge 86.42 39 *e*P P **19 27 01.7 -4.9**
comp=Z,28nm,1.2s,mb5.4
AVF Avril sur Loir 86.48 39 *e*P P **19 27 01.7 -5.2**
comp=Z,40nm,1.2s,mb5.2
AVF Avril sur Loir 86.48 39 *e*P P **19 27 01.7 -5.2**
AVF pmax pmax
comp=Z,20nm,1.2s,mb5.2
AVF Avril sur Loir 86.48 39 *e*P P **19 27 01.7 -5.2**
comp=Z,20nm,1.2s,mb5.2
MEZF Maizieres J'vi 86.48 37 *e*P P **19 27 02.1 -4.8**
comp=Z,21nm,1.0s,mb5.0
MEZF Maizieres J'vi 86.48 37 *e*P P **19 27 02.1 -4.8**
comp=Z,21nm,1.0s,mb5.3
LOR Lormes 86.51 39 *e*P P **19 27 02.2 -4.9**
comp=Z,51nm,1.1s,mb5.3
LOR *e*MLR MLR
comp=Z,11µm,21.8s,MS5.9
LOR Lormes 86.51 39 *e*P P **19 27 02.2 -4.9**
LOR pmax pmax
comp=Z,25nm,1.1s,mb5.4
LOR MLR MLR
comp=Z,11µm,21.8s,MS6.2
LOR Lormes 86.51 39 *e*P P **19 27 02.2 -4.9**
comp=Z,25nm,1.1s,mb5.4
LOR LR LR
comp=Z,11µm,21.8s,MS6.2
ELOJ Sierra Loja 86.64 50 P P **19 27 12.3 +4.4**
ELOJ pmax pmax
comp=Z,16nm,1.0s,mb5.2
ELOJ Sierra Loja 86.64 50 P P **19 27 12.3 +4.3**
comp=Z,16nm,1.0s,mb5.2
EPF Esparros 86.67 44 *e*P P **19 27 03.4 -4.6**
comp=Z,32nm,1.2s,mb5.1
EPF Esparros 86.67 44 *e*P P **19 27 03.4 -4.6**
EPF pmax pmax
comp=Z,16nm,1.2s,mb5.1
EPF Esparros 86.67 44 *e*P P **19 27 03.4 -4.6**
comp=Z,16nm,1.2s,mb5.1
EBIE Bielsa 86.73 44 P P **19 27 12.6 +4.3**
NRDL Niedersach Rie 86.74 32 *e*P P **19 27 08.4 +0.3**
comp=Z,36nm,1.5s,mb5.4
NRDL *e*S S 19 37 49.3 +3.7
SMF Signal de Mont 86.84 39 *e*P P **19 27 03.3 -5.4**
comp=Z,32nm,1.2s,mb5.2
SMF Signal de Mont 86.84 39 *e*P P **19 27 03.3 -5.4**
SMF pmax pmax
comp=Z,16nm,1.2s,mb5.1
SMF Signal de Mont 86.84 39 *e*P P **19 27 03.3 -5.4**
comp=Z,16nm,1.2s,mb5.1
ECOG Cogollos-Vega 86.98 50 P P **19 27 13.3 +3.7**
EVIA Vianos 87.05 49 P P **19 27 14.5 +4.6**
EVIA pmax pmax
comp=Z,14nm,0.9s,mb5.2
EVIA Vianos 87.05 49 P P **19 27 14.5 +4.6**
comp=Z,14nm,0.9s,mb5.2
JSH Shimam 87.06 316 P P **19 27 09.9 0.0**
EQES Quesada 87.07 49 P P **19 27 13.3 +3.3**

JOF Joensuu 87.09 17 *e*p P **19 27 10.3 +0.7**
comp=Z,4.6nm,0.8s,mb4.8
JOF Joensuu 87.09 17 *e*P P **19 27 10.3 +0.7**
JOF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
CLZ Clausthal 87.27 33 *e*P P **19 27 10.7 0.0**
CLZ *e*S S 19 37 51.0 +0.3
CLZ pmax pmax
comp=Z,34nm,1.2s,mb5.5
CLZ Clausthal 87.27 33 *e*P P **19 27 10.7 0.0**
comp=Z,34nm,1.2s,mb5.5
CLZ *e*S S 19 37 51.0 +0.3
TNS Taunus Mts 87.29 35 *e*S S 19 37 54.3 +3.3
EHUE Huescar 87.39 49 P P **19 27 13.9 +2.3**
HAU Haudompre 87.48 37 *e*P P **19 27 07.2 -4.6**
comp=Z,34nm,1.2s,mb5.2
HAU *e*MLR MLR
comp=Z,15µm,19.2s,MS6.1
HAU Haudompre 87.48 37 *e*P P **19 27 07.2 -4.6**
HAU pmax pmax
comp=Z,17nm,1.2s,mb5.2
HAU MLR MLR
comp=Z,15µm,19.3s,MS6.4
HAU Haudompre 87.48 37 *e*P P **19 27 07.2 -4.6**
comp=Z,17nm,1.2s,mb5.2
HAU LR LR
comp=Z,15µm,19.3s,MS6.4
MTLF Montolieu 87.68 43 *e*P P **19 27 08.1 -4.7**
comp=Z,29nm,1.2s,mb5.1
MTLF Montolieu 87.68 43 *e*P P **19 27 08.1 -4.7**
MTLF pmax pmax
comp=Z,15nm,1.2s,mb5.1
MTLF Montolieu 87.68 43 *e*P P **19 27 08.1 -4.7**
comp=Z,14nm,1.2s,mb5.1
UBBA Unterbreizbach 87.72 33 *e*P P **19 27 11.9 -1.0**
comp=Z,37nm,1.6s,mb5.4
UBBA *e*S S 19 37 56.7 +1.6
CDF Champ du Feu 87.75 36 *e*P P **19 27 09.1 -4.0**
KLR Kul'dur 88.13 325 *e*P P **19 27 09.2 -5.7**
KLR *e* 19 27 09.5
KLR MLR MLR
comp=N,1µm,13.0s,MS5.8
KLR MLR MLR
comp=E,2µm,13.0s,MS5.8
LASF Ste Croix 88.27 41 *e*P P **19 27 11.2 -4.5**
comp=E,54nm,1.3s,mb5.3
VIVF Saint-Julien-l 88.32 40 *e*P P **19 27 11.2 -4.7**
comp=E,60nm,1.7s,mb5.2
VIVF Saint-Julien-l 88.32 40 *e*P P **19 27 11.2 -4.7**
VIVF pmax pmax
comp=Z,30nm,1.7s,mb5.2
VIVF Saint-Julien-l 88.32 40 *e*P P **19 27 11.2 -4.7**
comp=Z,30nm,1.7s,mb5.2
BFO Black Forest 88.36 36 *e*S S 19 38 01.1 -0.2
STU Stuttgart 88.55 35 *e*S S 19 38 04.1 +1.0
MOX Moxa 88.63 33 *e*P P **19 27 19.3 +2.1**
comp=Z,29nm,1.8s,mb5.3
MOX
comp=Z,7µm,21.0s
MOX Moxa 88.63 33 *e*P P **19 27 19.3 +2.1**
MOX pmax pmax
comp=Z,29nm,1.8s,mb5.3
MOX MLR MLR
comp=Z,7µm,21.0s,MS6.0
MOX Moxa 88.63 33 *e*S S 19 38 04.9 +1.2
CLL Collm 88.88 32 *i* P P **19 27 17.9 -0.5**
CLL *e* 19 27 27.0
CLL *e*S S 19 38 05.0 -1.1
CLL pmax pmax
comp=Z,44nm,2.3s,mb5.4
CLL MLR MLR
comp=Z,9µm,19.8s,MS6.2
CLL Collm 88.88 32 *e*P P **19 27 18.0 -0.4**
comp=Z,25nm,1.7s,mb5.3
CLL *e*S S 19 38 06.7 +0.6
CLL Collm 88.88 32 *i* P P **19 27 17.9 -0.5**
comp=Z,44nm,2.3s,mb5.4
CLL LmV 19 08 00.0
comp=Z,9µm,19.8s
CLL *ex* x 19 27 27.0
CLL *i* x x 19 27 33.9
CLL *e*PP PP 19 30 41.0 -6.0
CLL *e*S S 19 38 05.0 -1.1
CLL *e*PS 19 39 08.0
CLL *e*SS SS 19 43 50.0 -7.1
CLL *e*SSS 19 47 44.0
CLL *e*SSSS 19 51 01.0
CLL Collm 88.88 32 *i* P P **19 27 17.9 -0.5**
comp=Z,44nm,2.3s,mb5.4
CLL *e* 19 27 27.0
CLL *i* 19 27 33.9
CLL *e*S S 19 38 05.0 -1.1
CLL LR LR
comp=Z,9µm,19.8s,MS6.2
GRA1 Grafenberg Arr 89.03 34 *e*P P **19 27 19.5 +0.4**
comp=Z,28nm,1.2s,mb5.5
GRA1 *e*PP PP 19 30 51.2 +3.0
GRA1 *e*S S 19 38 11.2 +3.6
GRA1 LR LR
comp=Z,8µm,19.9s,MS6.1
GRF Grafenberg Arr 89.03 34 *e*P P **19 27 19.5 +0.4**
GRF *e* 19 30 51.2
GRF *e*S S 19 38 11.2 +3.6
GRF pmax pmax
comp=Z,28nm,1.2s,mb5.5
GRF MLR MLR
comp=Z,8µm,19.9s,MS6.1
GRF Grafenberg Arr 89.03 34 *e*P P **19 27 19.5 +0.4**
GRF *e* 19 30 51.2
GRF *e*S S 19 38 11.2 +3.6
GRF pmax pmax
comp=Z,28nm,1.2s,mb5.5
GRF MLR MLR
comp=Z,8µm,19.9s,MS6.1
GRF Grafenberg Arr 89.03 34 *e*P P **19 27 19.5 +0.4**
comp=Z,28nm,1.2s,mb5.5
GRF *e*PP PP 19 30 51.2 +3.0
GRF *e*S S 19 38 11.2 +3.6
GRF *e*L 20 05 46.2
comp=Z,8µm,19.9s
LPL La Plagne 89.14 39 *e*P P **19 27 15.3 -4.4**
LPG La Plagne 89.16 39 *e*P P **19 27 15.6 -4.2**
comp=Z,36nm,1.3s,mb5.2
LPG La Plagne 89.16 39 *e*P P **19 27 15.6 -4.2**
LPG pmax pmax
comp=Z,18nm,1.3s,mb5.2
LPG La Plagne 89.16 39 *e*P P **19 27 15.6 -4.2**
comp=Z,18nm,1.3s,mb5.2
MANZ Manzenberg 89.29 33 *e*S S 19 38 10.4 +0.4
MANZ *e*SP SP 19 39 12.6 -1.0
NKC Novy Kostel 89.30 33 *e*P P **19 27 20.1 -0.3**
NKC *e*S S 19 38 09.1 -1.0
NKC AMS AMS 20 08 00.0
comp=Z,8µm,18.2s
NKC Novy Kostel 89.30 33 *e*P P **19 27 20.1 -0.3**
NKC *e*S S 19 38 09.1 -1.0
JYA Atsumi 89.40 313 P P **19 27 21.1 0.0**
ROTZ Rotzenmuhle 89.48 33 *e*S S 19 38 11.5 -0.3
ROTZ *e*SP SP 19 39 15.7 0.0
GKP Gorka Klasztor 89.51 29 *e*P P **19 27 19.0 -2.2**
GKP *e*SKSac SKSac 19 38 12.5 +21
GKP LMZ 20 07 31.9
comp=Z,7µm,19.7s
GKP Gorka Klasztor 89.51 29 *e*P P **19 27 19.0 -2.3**
GKP *e*SKSac SKSac 19 38 12.5 +21
GKP LR LR
comp=Z,7µm,19.7s,MS6.1
BRG Berggiesshubel 89.61 32 *e*P P **19 27 23.0 +1.2**
BRG 19 31 00.0
BRG S S 19 38 15.0 +2.0
BRG PS PS 19 39 23.0 +4.2
BRG SS SS 19 44 14.0 +6.2
BRG pmax pmax
comp=Z,17nm,2.1s,mb5.0
BRG pmax pmax
comp=Z,13nm,1.7s,mb5.0
BRG MLR MLR
comp=Z,5µm,18.4s,MS6.0
BRG MLR MLR
comp=N,3µm,18.5s,MS5.8
BRG MLR MLR
comp=E,2µm,18.5s,MS5.8
BRG Berggiesshubel 89.61 32 *e*S S 19 38 12.2 -0.8
BRG Berggiesshubel 89.61 32 *e*P P **19 27 23.0 +1.2**
comp=E,28nm,2.1s,mb5.2
BRG *e* 19 27 36.3
comp=E,21nm,1.6s
BRG PP PP 19 31 00.0 +7.2
BRG S S 19 38 15.0 +2.0
BRG PS PS 19 39 23.0 +4.2
BRG SS SS 19 44 14.0 +6.2
BRG
comp=Z,9µm,18.4s
BRG
comp=N,5µm,18.5s
BRG
comp=E,3µm,18.5s
BRG Berggiesshubel 89.61 32 *e*P P **19 27 23.0 +1.2**
comp=E,17nm,2.1s,mb5.0
BRG *e* 19 27 36.3
BRG PP PP 19 31 00.0 +7.2
BRG S S 19 38 15.0 +2.0
BRG PS PS 19 39 23.0 +4.2
BRG SS SS 19 44 14.0 +6.2
BRG LR LR
comp=Z,5µm,18.4s,MS6.0
BOD Bodaibo 89.80 338 *e*P P **19 27 22.1 -0.4**
BOD *e* 19 30 53.5
BOD pmax pmax
comp=Z,33nm,2.0s,mb5.3
PVCC Panska Ves 90.14 32 *e*S S 19 38 16.7 -1.2
PVCC AMS AMS 20 09 20.0
comp=Z,8µm,17.5s
WET Wettzell 90.21 34 *e*S S 19 38 19.8 +1.2
WET *e*SP SP 19 39 27.1 +3.2
PRU Pruhonice 90.48 32 *e*P P **19 27 26.4 +0.5**
PRU *e*S S 19 38 19.8 -1.3
PRU AMS AMS 20 08 30.0
comp=Z,7µm,18.1s
KHC Kasperske Hory 90.57 33 *e*P P **19 27 27.4 +1.1**
KHC *e*S S 19 38 21.7 -0.2
KHC AMS AMS 20 06 20.0
comp=Z,11µm,20.5s
JSD Sado 90.66 313 P P **19 27 24.1 -2.9**
KSP Ksiaz 90.74 31 *e*P P **19 27 30.4 +3.4**
KSP *e*SKSac SKSac 19 38 21.5 +23
KSP *e*SP SP 19 39 35.0 +5.3
KSP *e*SS SS 19 44 30.6 +6.5
KSP LMZ 20 07 25.4
comp=Z,16µm,22.3s
KSP Ksiaz 90.74 31 *e*P P **19 27 24.5 -2.6**
KSP *e*PP PP 19 31 08.0 +6.2
KSP *e*S S 19 38 21.0 -2.4
KSP *e*SP SP 19 39 28.0 -1.7
KSP *e*SS SS 19 44 18.0 -6.1
KSP LR LR
comp=Z,18µm,22.3s,MS6.5
GEC2 GERESS Array S 90.82 33 *e*S S 19 38 25.1 +0.9
GERES GERESS Array B 90.82 33 P P **19 27 28.5 +1.0**
comp=Z,1.5nm,0.9s,baz=323,slow=3.3,SNR=10
GERES PP PP 19 31 05.1 +2.6
comp=Z,0.3nm,0.8s,baz=204,slow=2.9,SNR=3.4
GERES LR LR 20 07 12.5
comp=Z,10µm,21.5s,MS6.2,baz=309,slow=35
GERES GERESS Array B 90.82 33 P P **19 27 28.5 +1.0**
GERES 19 31 05.1
DPC Dobruska-Polom 91.09 31 *e*P P **19 27 30.3 +1.6**
DPC *e*S S 19 38 24.0 -2.6
DPC AMS AMS 20 09 00.0
comp=Z,7µm,17.2s
JRY Ryogami san 91.31 311 P P **19 27 30.4 +0.3**
TREC Trest 91.41 32 AMS AMS 20 07 00.0
comp=Z,10µm,21.0s
SUW Suwalki 91.44 26 *e*PP PP 19 31 05.9 -1.2
SUW *e*SKSac SKSac 19 38 07.8 +5.0
SUW *e*S S 19 38 21.2 -8.4
SUW *e*SS SS 19 44 28.6 -5.2
SUW LMZ 20 09 31.4
comp=Z,6µm,20.1s
SUW Suwalki 91.44 26 *e*PP PP 19 31 05.9 -1.3
SUW *e*SKSac SKSac 19 38 07.8 +5.0
SUW *e*S S 19 38 21.2 -8.4
SUW *e*SS SS 19 44 28.6 -5.3
MJAR Matsushiro Arr 91.50 312 P P **19 27 30.9 -0.1**
comp=Z,17nm,0.9s,mb5.3,baz=61,slow=3.5,SNR=22
MJAR PP PP 19 31 09.7 +1.3
comp=Z,1.0nm,0.9s,baz=174,slow=12,SNR=4.0
MJAR LR LR 20 02 09.2
comp=Z,4µm,20.3s,MS5.9,baz=70,slow=31
MJAR Matsushiro Arr 91.50 312 P P **19 27 30.9 0.0**
MJAR 19 31 09.7
MJAR Matsushiro Arr 91.50 312 P P **19 27 30.9 -0.1**
MJAR PP PP 19 31 09.7 +1.3
MJAR LR LR 20 02 09.2
MAJO Matsushiro 91.50 312 *e*P P **19 27 28.4 -2.5**
MAJO pmax pmax
comp=Z,75nm,1.1s,mb5.9
MAJO MLR MLR
comp=Z,5µm,21.0s,MS6.0
MAJO Matsushiro 91.50 312 *e*P P **19 27 28.4 -2.5**
comp=Z,75nm,1.1s,mb5.9
MAJO LR LR
comp=Z,5µm,21.0s,MS6.0
MAT Matsushiro 91.50 312 P P **19 27 31.8 +0.9**
MAT S S 19 38 27.0 -3.9
MAT Matsushiro 91.50 312 P P **19 27 28.1 -2.8**
JOD2 Odawara 2 91.59 310 P P **19 27 33.4 +2.1**
VLA Vladivostok 91.74 320 *e*P P **19 27 31.8 -0.1**
VLA *i* S SKSac 19 38 02.2 -2.7
VLA pmax pmax
comp=Z,56nm,1.8s,mb5.6
VLA MLR MLR
comp=Z,3µm,21.0s,MS5.8
VLA Vladivostok 91.74 320 *i* P P **19 27 34.6 +2.7**
MOA Molln 91.76 34 ǁ *i*P P **19 27 31.9 0.0**
comp=Z,8.2nm,1.0s,mb5.0
MOA Molln 91.76 34 ǁ *i*PcP PcP 19 27 31.9 -0.8
comp=Z,8.2nm,1.0s
MDJ Mudanjiang 92.14 322 P P **19 27 31.8 -1.9**
MDJ SKS SKSac 19 38 02.6 -4.5
MDJ S S 19 38 31.7 -4.6
MDJ SS SS 19 44 49.4 +4.8
MDJ AMB AMB
comp=Z,7.0nm,1.9s,mb4.7
MDJ AMB AMB
comp=Z,246nm,7.0s
MDJ LR LR
comp=N,4µm,36.2s
MDJ LR LR
comp=Z,3µm,23.9s
MDJ Mudanjiang 92.14 322 *e*P P **19 27 33.3 -0.4**
comp=Z,23nm,1.4s,mb5.3
MDJ LR LR
comp=Z,3µm,22.0s,MS5.7
OKC Ostrava-Krasne 92.30 31 *e*S S 19 38 32.0 -5.5
OKC AMS AMS 20 07 40.0
comp=Z,8µm,19.5s
JGF Kuroka 92.59 311 P P **19 27 34.4 -1.6**
URZ Urewera 93.03 229 LR LR 20 00 23.9
comp=Z,10µm,20.7s,MS6.3,baz=56,slow=30
HIA Hailar 93.98 330 *e*P P **19 27 42.1 0.0**
HIA pmax pmax
comp=Z,70nm,1.5s
HIA MLR MLR
comp=Z,3µm,19.0s
HIA Hailar 93.98 330 *e*P P **19 27 42.1 0.0**
comp=Z,70nm,1.5s,mb5.9
HIA LR LR
comp=Z,3µm,19.0s,MS5.8
JWT Wachi 94.10 312 P P **19 27 43.7 +0.8**
HNR Honiara 94.27 262 LR LR 20 00 44.8
comp=Z,13µm,21.9s,MS6.3,baz=360,slow=30
HNR Honiara 94.27 262 PFAKE 19 27 50.0 +6.0
HNR LR LR
comp=Z,13µm,22.0s,MS6.3
CIT Chita 94.50 335 *e*P P **19 27 44.8 +0.4**
KWP Kalwaria 94.50 29 *e*P P **19 27 45.6 +1.1**
KWP *e*SKSac SKSac 19 38 41.1 +21
KWP LMZ 20 09 30.7
comp=Z,5µm,23.0s
KWP Kalwaria 94.50 29 *e*P P **19 27 45.6 +1.1**
KWP *e*SKSac SKSac 19 38 41.1 +21
MOS Moscow 94.90 18 *e*P P **19 27 46.6 +0.5**
MOS MLR MLR
comp=Z,6µm,18.0s,MS6.1
LVV L'vov 94.94 28 *e*P P **19 27 54.5 +8.1**
LVV *e* 19 39 00.9
LVV *i* PS PS 19 40 22.1 +4.5
LVV MLR MLR

comp=N,2µm,18.0s,MS5.7
LVV MLR MLR
comp=E,1µm,18.0s,MS5.7
LVV MLR MLR
comp=Z,4µm,18.0s,MS5.9
CN2 Changchun 94.94 323 *e*P **P** **19 27 46.5 -0.1**
CN2 *e*XP sP 19 27 53.5 +2.4
CN2 PP PP 19 31 37.9 +3.0
CN2 *e*S S 19 38 57.4 -3.6
CN2 SS SS 19 45 26.6 +2.0
CN2 AMB AMB
comp=Z,20nm,1.6s,mb5.3
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,2µm,25.0s,MS5.7
CN2 LR LR
comp=E,3µm,25.0s,MS5.7
CN2 LR LR
comp=Z,3µm,25.0s,MS5.7
UZH Uzhgorod 95.06 30 *e*P **P** **19 27 56.0 +9.0**
UZH MLR MLR
comp=Z,2µm,18.0s,MS5.6
OBN Obninsk 95.14 19 *e*P **P** **19 27 48.0 +0.7**
OBN *e* 19 31 31.6
OBN *i* PS PS 19 40 16.6 -3.0
OBN *i* SS SS 19 45 27.5 +0.9
OBN pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
OBN Obninsk 95.14 19⇓ *e*P **P** **19 27 48.1 +0.8**
OBN LR LR
comp=Z,12µm,28.0s,MS6.2
JMN Monobe 96.02 311 P **P** **19 27 55.6 +3.9**
SNZO South Karori 96.12 227 PFAKE 19 28 00.0 +8.2
SNZO LR LR
comp=Z,10µm,20.0s,MS6.3
PMSA Palmer Station 96.17 162 PFAKE 19 28 00.0 +8.5
PMSA LR LR
comp=Z,5µm,20.0s,MS6.0
KIEV Kiev 96.35 25 PFAKE 19 28 00.0 +7.1
KIEV LR LR
comp=Z,8µm,20.0s,MS6.2
AKASG Malin Array Be 96.35 25 P **P** **19 27 53.5 +0.6**
comp=Z,2.1nm,0.8s,mb4.7,baz=304,slow=3.7,SNR=6.7
AKASG PP PP 19 31 54.7 +9.2
comp=Z,0.2nm,0.2s,baz=316,slow=6.1,SNR=4.3
AKASG LR LR 20 12 57.0
comp=Z,9µm,20.1s,MS6.2,baz=315,slow=36
AKASG Malin Array Be 96.35 25 P **P** **19 27 53.5 +0.6**
AKASG 19 31 54.7
AKASG Malin Array Be 96.35 25 P **P** **19 27 53.5 +0.6**
AKASG PP PP 19 31 54.7 +9.2
AKASG LR LR 20 12 57.0
KEST Kesra 96.54 46 PP PP 19 31 57.6 +10
comp=Z,2.4nm,0.9s,baz=220,slow=2.7,SNR=3.9
KEST LR LR 20 10 41.8
comp=Z,2µm,20.1s,MS5.7,baz=246,slow=35
KRAR Krasnoyarsk 97.07 347 *i* P **P** **19 27 56.0 0.0**
SNY Shenyang 97.28 323 ⇑P **P** **19 28 02.0 +4.7**
SNY S S 19 39 26.1 +4.7
SNY SS SS 19 45 58.7 +0.9
SNY AMB AMB
comp=Z,329nm,4.2s
SNY LR LR
comp=E,2µm,21.2s
SNY LR LR
comp=Z,3µm,22.1s,MS5.8
IRK Irkutsk 97.57 340 *e*P **P** **19 28 01.6 +3.3**
IRK pmax pmax
comp=N,65nm,2.2s
KSRS Korea Array 97.63 317 P **P** **19 27 56.9 -2.1**
comp=N,3.7nm,0.9s,mb4.9,baz=53,slow=4.2,SNR=6.9
KSRS LR LR 20 07 07.9
comp=N,2µm,20.9s,MS5.5,baz=48,slow=32
GUMO Guam 97.89 289 LR LR 20 07 52.7
comp=N,2µm,19.4s,MS5.7,baz=96,slow=33
GUMO Guam 97.89 289 PFAKE 19 28 10.0 +9.5
GUMO LR LR
comp=Z,2µm,20.0s,MS5.7
TLY Talaya 98.25 340 *e*P **P** **19 28 07.3 +5.9**
TLY *e* 19 32 05.7
TLY *e* 19 41 01.0
TLY MLR MLR
comp=Z,5µm,18.0s,MS6.0
ARU Arti 98.29 7 *d i*P **P** **19 28 00.4 -1.1**
ARU *e* 19 31 59.7
ARU *e*S SKSac 19 38 35.4 -4.0
ARU SP SP 19 40 51.2 -1.0
ARU *e*PS PS 19 40 58.3 +4.5
ARU *e*SSS 19 50 01.3
ARU pmax pmax
comp=Z,27nm,2.5s,mb5.3
ARU Arti 98.29 7 *i*P **P** **19 28 01.6 +0.1**
INCN Inchon 98.40 318 PFAKE 19 28 10.0 +7.6
INCN LR LR
comp=Z,3µm,19.0s,MS5.8
MOY Mondy 99.06 341 *e*P **P** **19 28 05.5 +0.4**
MOY *e* 19 32 10.9
MOY pmax pmax
comp=Z,41nm,3.1s
ZAK Zakamensk 99.49 339 *e*P **P** **19 28 07.4 +0.4**
ZAK pmax pmax
comp=Z,7.0nm,1.7s,mb4.9
RPZ Rata Peaks 99.61 226 LR LR 20 05 39.0
comp=Z,8µm,19.2s,MS6.2,baz=49,slow=31
NVS Novosibirsk 99.73 352 *e*P Pdif 19 28 07.6 -0.5
NVS *e* 19 32 12.6
NVS pmax pmax
comp=Z,20nm,2.0s,mb5.2
ULN Ulaanbaatar 100.33 336⇑ *e*P Pdif 19 28 12.2 +1.5
ULN Ulaanbaatar 100.33 336 *e*Pdif Pdif 19 28 11.9 +1.2
comp=Z,28nm,1.6s
ULN LR LR
comp=Z,4µm,21.0s,MS5.9
DL2 Dalian 100.37 322 P Pdif 19 28 14.0 +3.1
DL2 SKS 19 38 46.4
DL2 S Sdif 19 39 44.3 -2.8
DL2 SS SS 19 46 38.8 -2.4
DL2 AMB AMB
comp=Z,10.0nm,0.7s
DL2 AMB AMB
comp=Z,120nm,3.7s
DL2 LR LR
comp=N,850nm,20.4s,MS5.4
DL2 LR LR
comp=E,900nm,22.4s,MS5.4
DL2 LR LR
comp=Z,1µm,24.7s,MS5.4
ZALV Zalesovo Beam 100.40 351 P Pdif 19 28 11.1 0.0
comp=Z,2.2nm,1.0s,baz=15,slow=6.2,SNR=5.9
ZALV PP PP 19 32 17.6 +1.3
comp=Z,1.2nm,0.8s,baz=10,slow=9.0,SNR=3.7
ZALV PKiKP PKiKP 19 32 35.0 -2.8
comp=Z,1.5nm,0.8s,baz=354,slow=7.6,SNR=4.0
ZALV Zalesovo Beam 100.40 351 P Pdif 19 28 11.1 0.0
ZALV PP PP 19 32 17.6 +1.3
ZAL Zalesovo 100.42 351 P Pdif 19 28 11.1 0.0
ZAL 19 32 17.6
SONM Songino Array 100.59 336 P Pdif 19 28 11.7 -0.2
comp=Z,2.8nm,1.1s,baz=57,slow=3.0,SNR=13
SONM PP PP 19 32 24.7 +6.8
comp=Z,9.4nm,1.3s,baz=37,slow=6.5,SNR=9.1
SONM PKKPbc PKKPbc 19 44 30.9 +3.7
comp=Z,0.8nm,0.9s,baz=210,slow=2.6,SNR=4.6
SONM Songino Array 100.59 336 P Pdif 19 28 11.7 -0.2
SONM 19 32 24.7
BRVK Borovoye 102.29 0⇑ *e*P Pdif 19 28 19.9 +0.5
BVAR Borovoye Array 102.32 360 P Pdif 19 28 20.1 +0.5
comp=Z,1.0nm,0.6s,baz=0.0,slow=0.4,SNR=8.1
BVAR PKiKP PKiKP 19 32 38.4 -2.9
comp=Z,0.7nm,0.8s,baz=338,slow=3.5,SNR=3.8
BJT Baijiatuau 102.50 326 PFAKE 19 28 30.0 +10
BJT LR LR
comp=Z,5µm,21.0s,MS6.0
SIM Simferopol' 102.95 26 P Pdif 19 28 25.9 +3.5
SIM *e* 19 32 40.0
SIM pmax pmax
comp=Z,100nm,10.0s
TORD Torodi Ar. Bea 103.12 69 Pdiff Pdif 19 28 22.1 -1.0
comp=Z,2.4nm,1.1s,baz=307,slow=4.0,SNR=5.6
TORD PKiKP PKiKP 19 32 40.9 -2.8
comp=Z,2.5nm,1.1s,baz=318,slow=3.7,SNR=5.1
TORD PKKPbc PKKPbc 19 44 24.4 +5.4
comp=Z,1.2nm,1.1s,baz=251,slow=9.2,SNR=4.1
PMG Port Moresby 105.80 267 PFAKE 19 33 00.0 +11
PMG LR LR
comp=Z,9µm,20.0s,MS6.3
SSE Sheshan 106.00 316 PDIF Pdif 19 28 36.6 +0.7
SSE PP PP 19 33 02.4 +3.4
SSE S Sdif 19 40 31.7 -2.3
SSE PP PP
comp=Z,122nm,6.6s
SSE LR LR
comp=N,1µm,14.0s,MS6.0
SSE LR LR
comp=E,2µm,14.0s,MS6.0
SSE LR LR
comp=Z,2µm,14.2s,MS5.9
SSE Sheshan 106.00 316 Pdif Pdif 19 28 36.6 +0.7
comp=Z,0.1nm,6.6s
SSE PP PP 19 33 02.4 +3.4
SSE S Sdif 19 40 31.7 -2.3
SSE LR LR
comp=Z,2µm,14.2s,MS5.9
ANTO Ankara 106.59 29 PFAKE 19 33 00.0 +11
ANTO LR LR
comp=Z,4µm,22.0s,MS5.9
NJ2 Nanjing 106.77 318 *e*PDIF Pdif 19 28 34.7 -4.7
NJ2 PP PP 19 33 06.0 +1.3
NJ2 PP PP
comp=Z,200nm,5.3s
NJ2 LR LR
comp=N,870nm,22.3s,MS5.6
NJ2 LR LR
comp=E,2µm,22.2s,MS5.6
NJ2 LR LR
comp=Z,1µm,16.7s
KIV Kislovodsk 106.86 20 *e*P Pdif 19 28 44.6 +4.8
KIV *i* S SKSac 19 39 15.7 -4.6
KIV MLR MLR
comp=Z,3µm,18.0s,MS5.9
MKAR Makanchi Array 107.74 351 Pdiff Pdif 19 28 42.9 -0.8
comp=Z,0.2nm,0.5s,baz=73,slow=11,SNR=1.3
MKAR PKiKP PKiKP 19 32 55.4 +3.9
comp=Z,1.2nm,0.9s,baz=323,slow=1.8,SNR=4.2
MKAR PKKPbc PKKPbc 19 44 09.7 +3.8
comp=Z,2.2nm,1.0s,baz=126,slow=1.6,SNR=9.3
TATO Taipei 109.89 311 PFAKE 19 33 10.0 +14
TATO LR LR
comp=Z,3µm,21.0s,MS5.9
TRIS Tristan da Cun 110.18 122 PFAKE 19 33 00.0 +3.9
TRIS LR LR
comp=Z,5µm,22.0s,MS6.1
GTA Gaotai 110.27 336 *e*PKP PKiKP 19 32 53.7 -2.7
GTA PP PP 19 33 33.0 +3.4
GTA SKS SKSdf 19 40 05.0 -3.7
GTA SS SS 19 48 58.9 +3.1
GTA PP PP
comp=Z,381nm,7.8s
GTA LR LR
comp=N,3µm,21.6s,MS6.0
GTA LR LR
comp=E,3µm,20.4s,MS6.0
GTA LR LR
comp=Z,4µm,22.2s,MS5.9
CTAO Charters Tower 110.55 257 PFAKE 19 33 10.0 +13
CTAO LR LR
comp=Z,5µm,19.0s,MS6.1
GNI Garni 110.95 21 PFAKE 19 33 10.0 +12
GNI LR LR
comp=Z,4µm,20.0s,MS6.0
LZH Lanzhou 111.50 331 *e*PKP PKiKP 19 32 57.0 -1.8
LZH PP PP 19 33 44.0 +5.3
LZH PKS 19 36 32.0
LZH *e*SKS SKSdf 19 40 04.0 -7.2
LZH SKKS SKKSac 19 40 38.1 -4.7
LZH *e*SS SS 19 49 12.1 -0.5
LZH PP PP
comp=Z,446nm,8.3s
LZH LR LR
comp=E,4µm,19.5s
LZH LR LR
comp=Z,6µm,20.8s,MS6.2
LZH Lanzhou 111.50 331 *e*PKP PKiKP 19 32 57.0 -1.8
LZH sPKP 19 33 11.2
LZH PP PP 19 33 44.0 +5.3
LZH PKS 19 36 32.0
LZH *e*SKS SKSdf 19 40 04.0 -7.2
LZH SKKS SKKSac 19 40 38.1 -4.7
LZH *e*SS SS 19 49 12.1 -0.5
LZH LR LR
comp=Z,6µm,20.8s,MS6.2
SBA Scott Base 112.90 193 PFAKE 19 33 10.0 +10
SBA LR LR
comp=Z,3µm,20.0s,MS5.8
KSH Kashi 115.62 355 *e*PKP PKPdf 19 33 05.6 -1.0
KSH *e*PKS 19 36 40.6
KSH *e*SKS SKSdf 19 40 12.6 -6.4
KSH PP PP
comp=Z,966nm,4.4s
KSH LR LR
comp=N,6µm,14.5s,MS6.5
KSH LR LR
comp=E,5µm,14.4s,MS6.5
KSH LR LR
comp=Z,7µm,17.5s,MS6.3
CD2 Chengdu 115.87 328 *e*PKP PKPdf 19 33 04.3 -3.0
CD2 PP PP 19 34 11.3 +1.6
CD2 PKS 19 36 39.5
CD2 SKS SKSdf 19 40 11.5 -8.3
CD2 SKKS SKKSac 19 41 04.7 -7.8
CD2 SS SS 19 50 14.1 +3.7
CD2 PP PP
comp=Z,410nm,9.6s
CD2 LR LR
comp=N,2µm,18.0s,MS6.0
CD2 LR LR
comp=E,2µm,19.2s,MS6.0
CD2 LR LR
comp=Z,2µm,22.8s,MS5.8
DAV Davao City (W) 117.52 293 PFAKE 19 33 20.0 +9.1
DAV LR LR
comp=Z,8µm,22.0s,MS6.3
STKA Stephens Creek 117.96 246 *e*PKP PKPdf 19 33 09.7 -1.5
comp=Z,3.0nm,0.7s
STKA Stephens Creek 117.96 246 PKP PKPdf 19 33 10.1 -1.1
comp=Z,5.4nm,1.0s,baz=349,slow=5.0,SNR=7.3
GYA Guiyang 117.98 323 PDIF Pdif 19 29 28.2 -1.0
GYA PKP PKPdf 19 33 09.6 -1.9
GYA PP PP 19 34 27.8 +3.1
GYA PKS 19 36 44.7
GYA SKS SKSdf 19 40 19.5 -4.5
GYA SKKS SKKSac 19 41 18.6 -8.2
GYA SS SS 19 50 37.9 -0.5
GYA PP PP
comp=Z,2µm,7.6s
GYA LR LR
comp=N,3µm,20.4s,MS6.0
GYA LR LR
comp=E,2µm,21.0s,MS6.0
GYA LR LR
comp=Z,3µm,20.8s,MS5.8
DRV Dumont d'Urvil 120.72 206 SS SS 19 51 21.0 +7.1
DRV L 20 05 00.0
DRV R 20 12 00.0
WB2 Warramunga Arr 121.10 261 *e*PKP PKPdf 19 33 15.7 -1.8
WRA Warramunga Arr 121.11 261 PKP PKPdf 19 33 15.2 -2.3
comp=Z,8.5nm,0.8s,baz=69,slow=2.3,SNR=25
WRA PP PP 19 34 45.1 -2.5
comp=Z,5.2nm,1.1s,baz=66,slow=7.2,SNR=7.5
WRA PKKPbc PKKPbc 19 43 24.7 +5.3
comp=Z,1.4nm,1.1s,baz=266,slow=2.5,SNR=5.3
WRA Warramunga Arr 121.11 261 PKIKP PKPdf 19 33 15.2 -2.3
WRA 19 34 45.1
KMI Kunming 121.14 325 PKP PKPdf 19 33 17.0 -0.6
KMI Kunming 121.14 325 PKP PKPdf 19 33 17.6 0.0
KMI sPKP 19 33 19.3
KMI PP PP 19 34 46.7 +0.3
KMI PKS 19 36 51.8
KMI PPP 19 37 19.0
KMI SKS SKSdf 19 40 22.7 -7.4
KMI PS PS 19 44 38.7 -0.2
KMI SS SS 19 51 23.9 +4.9
KMI SSS 19 55 46.4
KMI LR LR
comp=Z,2µm,18.0s,MS5.8
QIZ Qiongzhong 121.75 315 PKP PKPdf 19 33 16.2 -2.7
QIZ PP PP 19 34 49.6 -1.3
QIZ SKS SKSdf 19 40 23.3 -8.1
QIZ SS SS 19 51 25.1 -2.3
QIZ PP PP
comp=Z,221nm,6.9s
QIZ LR LR
comp=N,2µm,17.0s,MS5.9
QIZ LR LR
comp=E,2µm,18.1s,MS5.9
QIZ LR LR
comp=Z,3µm,17.4s,MS6.0
QIZ Qiongzhong 121.75 315 PFAKE 19 33 30.0 +11
QIZ LR LR
comp=Z,2µm,19.0s,MS5.8
LSA Lhasa 122.07 339 PKP PKPdf 19 33 17.4 -1.9
LSA Lhasa 122.07 339 *e*PKPdf PKPdf 19 33 18.3 -1.0
LSA *e*PP PP 19 34 49.5 -2.8
LSA LR LR
comp=Z,3µm,22.0s,MS5.9
ASAR Alice Springs 122.55 257 PKP PKPdf 19 33 16.5 -3.7
comp=Z,3.0nm,0.8s,baz=69,slow=2.9,SNR=11
ASAR PP PP 19 34 59.0 +1.6
comp=Z,2.0nm,1.0s,baz=76,slow=5.8,SNR=4.3
ASAR PKKPbc PKKPbc 19 43 16.4 +2.5
comp=Z,1.2nm,0.9s,baz=266,slow=3.9,SNR=7.7
ASAR Alice Springs 122.55 257 PKIKP PKPdf 19 33 16.5 -3.7
ASAR 19 34 59.1
NANT Nan 127.39 323 P PKPdf 19 33 30.0 +0.3
comp=Z,100nm,1.0s
CHG Chiang Mai 128.32 325 ⇓P PKPdf 19 33 37.8 +6.3
comp=Z,20nm,0.8s
FITZ Fitzroy Crossi 128.39 266 *e*PKP PKPdf 19 33 34.1 +2.6
comp=Z,13nm,1.1s
FITZ Fitzroy Crossi 128.39 266 PKP PKPdf 19 33 30.3 -1.3
comp=Z,5.0nm,0.9s,baz=244,slow=22,SNR=2.4
FITZ PP PP 19 35 35.0 -1.5
comp=Z,2.9nm,1.1s,baz=113,slow=12,SNR=3.5
FITZ Fitzroy Crossi 128.39 266 PKP PKPdf 19 33 30.3 -1.3
FITZ *e*PKP PKPdf 19 33 34.1 +2.6
FITZ PP PP 19 35 35.0 -1.5
CMAR Chiang Mai Arr 128.61 324 PKP PKPdf 19 33 32.8 +0.8
comp=Z,6.2nm,1.0s,baz=334,slow=2.3,SNR=18
CMAR PP PP 19 35 35.8 -0.7
comp=Z,0.3nm,0.4s,baz=321,slow=24,SNR=4.3
BDT Bhumibol Dam 129.58 324 P PKPdf 19 33 37.0 +3.1
TSUM Tsumeb 131.03 94 PFAKE 19 33 50.0 +13
TSUM LR LR
comp=Z,2µm,22.0s,MS5.8
CASY Casey 131.65 200 *e*PKPdf PKPdf 19 33 35.7 -0.6
CASY LR LR
comp=Z,3µm,20.0s,MS6.0
SYO Syowa Base 132.29 166⇑ *e*pPKiKP PKPdf 19 33 39.0 +1.6
MBWA Marble Bar 134.59 264 PFAKE 19 33 50.0 +6.8
MBWA LR LR
comp=Z,8µm,21.0s,MS6.4
MAW Mawson 137.12 176 *e*PKP PKPdf 19 33 46.4 -0.1
comp=Z,7.7nm,1.1s
MAW Mawson 137.12 176 PKP PKPdf 19 33 46.7 +0.2
comp=Z,9.4nm,1.0s,baz=268,slow=3.9,SNR=12
NWAO Narrogin (SRO) 138.48 248 PFAKE 19 34 00.0 +10
NWAO LR LR
comp=Z,7µm,20.0s,MS6.4
LSZ Lusaka 139.41 84 *e*PKIKP PKPdf 19 33 49.7 -2.5
LSZ MLR MLR
comp=Z,3µm,20.0s,MS6.0
BOSA Boshof 139.78 105 PKP PKPdf 19 33 53.1 +0.5
comp=Z,5.9nm,0.9s,baz=275,slow=6.5,SNR=3.7
KMBO Kilima Mbogo 140.21 59 PKP PKPdf 19 33 54.1 +0.2
comp=Z,1.3nm,0.5s,baz=252,slow=23,SNR=3.3
KMBO Kilima Mbogo 140.21 59 *e*PKPdf PKPdf 19 33 53.5 -0.4
KMBO LR LR
comp=Z,3µm,20.0s,MS6.0

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*ISCJB **01** 19:35:48.1±1.4,2475N±004×10991W±005,h2^{km}±10^{km}, mb4.3/24, Error ellipse: s-maj=9.0km s-min=6.3km az=147.9*
*IDC **01** 19:35:49.3±0.6,2473N×11002W,h0^{km},mb4.3/11, mb1 4.4/17,mb1mx4.3/25,mbtmp4.2/17,ML3.5/5, Error ellipse: s-maj=17.3km s-min=7.4km az=107.0*
*NEIC **01** 19:35:50.6±0.3,2471N×10994W,h10^{km},mb4.3/40, Error ellipse: s-maj=6.1km s-min=4.6km az=58.0*
ISC 01 19:35:50.2±1.4,**2470N**±004×**10992W**±005,**h6**^{km}±10^{km}, **n109**,σ1^{s}**09**/105,**mb4.3**/24,**Gulf of California**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time h m s	ISC	Res ISC
LPIG	**La Paz**	**0.69**	**211**	Pg		**Pg**	**19 36 02.4**		**-1.1**
	970nm,0.3s,baz=223,slow=0.7,SNR=40								
LPIG				Lg			19 36 11.2		
	6µm,0.3s,baz=213,slow=22,SNR=59								
TUC	**Tucson**	**7.62**	**354**	Pn		**Pn**	**19 37 40.6**		**-1.1**
	1.3nm,0.9s								
GLA	**Glamis**	**9.36**	**334**	*e*Pn		**Pn**	**19 38 06.4**		**+0.7**
	8.3nm,0.9s								
LENM	**Lemitar**	**9.77**	**15**	*e*Pn		**Pn**	**19 38 11.4**		**+0.1**
BNM	**Barren Site**	**9.84**	**16**	*e*Pn		**Pn**	**19 38 13.3**		**+1.0**
BAR	**Barrett**	**9.91**	**325**	Pn		**Pn**	**19 38 14.3**		**+1.1**
	11nm,0.9s								
LAZ	**Ladron**	**9.97**	**13**	*e*Pn		**Pn**	**19 38 13.2**		**-0.7**
ANMO	**Albuquerque**	**10.65**	**16**	Pn		**Pn**	**19 38 24.4**		**+1.1**
	0.0nm,0.3s,baz=206,slow=11,SNR=7.9								
ANMO	**Albuquerque**	**10.65**	**16**	*e*Pn		**Pn**	**19 38 23.8**		**+0.5**
	22nm,1.5s								
WUAZ	**Wupatki**	**10.85**	**354**	*e*Pn		**Pn**	**19 38 25.3**		**-0.7**
	7.2nm,0.9s								
LDFC	**Landfair**	**11.28**	**338**	*e*Pn		**Pn**	**19 38 31.0**		**-0.8**
GSC	**Goldstone**	**12.13**	**332**	*e*Pn		**Pn**	**19 38 45.5**		**+2.0**
	26nm,1.3s								
MVCO	**Mesa Verde**	**12.53**	**5**	*e*Pn		**Pn**	**19 38 52.7**		**+3.7**
	22nm,1.2s								
ISA	**Isabella**	**13.18**	**328**	*e*Pn		**Pn**	**19 38 59.2**		**+1.2**
	21nm,1.4s								
TPNV	**Topopah Spring**	**13.36**	**338**	*e*Pn		**Pn**	**19 39 02.9**		**+2.6**
	57nm,1.8s								
PV01	**Paradox Valley**	**13.44**	**5**	*e*Pn		**Pn**	**19 39 01.6**		**+0.1**
SDCO	**Great Sand Dun**	**13.54**	**15**	*e*Pn		**Pn**	**19 39 10.2**		**+7.4**
	6.4nm,1.1s								
PV10	**Paradox Valley**	**13.65**	**3**	*e*Pn		**Pn**	**19 39 08.6**		**+4.2**
MSU	**Marysvale**	**13.90**	**353**	*e*Pn		**Pn**	**19 39 13.1**		**+5.4**
WMOK	**Wichita Mounta**	**13.91**	**41**	*e*Pn		**Pn**	**19 39 07.8**		**0.0**
	16nm,0.8s								
SRU	**San Rafael**	**14.38**	**358**	*e*Pn		**Pn**	**19 39 14.7**		**+0.4**
	5.0nm,0.9s								
TMUT	**Trail Mountain**	**14.59**	**356**	*e*Pn		**Pn**	**19 39 23.5**		**+6.4**
MPU	**Maple Canyon**	**15.34**	**355**	*e*Pn		**Pn**	**19 39 32.9**		**+5.7**
	22nm,1.1s								
NVAR	**Mina Array Bea**	**15.43**	**335**	Pn		**Pn**	**19 39 29.9**		**+1.6**
	0.1nm,0.3s,baz=158,slow=11,SNR=23								
ISCO	**Idaho Springs**	**15.49**	**13**	*e*Pn		**Pn**	**19 39 34.5**		**+5.4**
	23nm,1.4s								
DUG	**Dugway**	**15.64**	**352**	*e*Pn		**Pn**	**19 39 34.1**		**+2.9**
	23nm,1.0s								
DAU	**Daniels Canyon**	**15.71**	**356**	*e*Pn		**Pn**	**19 39 36.0**		**+4.0**
JLU	**Jordanelle**	**15.91**	**356**	*e*P		**Pn**	**19 39 37.6**		**+3.0**
CMIG	**Matias Romero**	**15.95**	**115**	Pn		**Pn**	**19 39 36.7**		**+1.4**
	0.1nm,0.3s,baz=324,slow=10,SNR=3.3								
CMIG	**Matias Romero**	**15.95**	**115**	Pn		**Pn**	**19 39 36.7**		**+1.4**
CMB	**Columbia Colle**	**16.00**	**329**	*e*Pn		**Pn**	**19 39 34.1**		**-1.7**
	18nm,1.5s								
NOQ	**North Oquirrh**	**16.01**	**354**	*e*P		**Pn**	**19 39 37.0**		**+1.0**
	24nm,1.2s								
BGU	**Big Grassy Mou**	**16.39**	**352**	*e*P		**Pn**	**19 39 41.6**		**+0.9**
ELK	**Elko**	**16.61**	**346**	Pn		**Pn**	**19 39 44.8**		**+1.2**
	0.1nm,0.3s,baz=187,slow=6.5,SNR=9.8								
ELK	**Elko**	**16.61**	**346**	*e*P		**Pn**	**19 39 44.1**		**+0.5**
	14nm,1.1s								
BMN	**Battle Mountai**	**16.84**	**340**	P		**Pn**	**19 39 46.5**		**-0.1**
	16nm,1.2s								
HWUT	**Hardware Ranch**	**16.92**	**356**	*e*P		**Pn**	**19 39 48.2**		**+0.8**
	54nm,1.4s								
PAHR	**Pah Rah Range**	**16.95**	**334**	*e*P		**Pn**	**19 39 49.7**		**+1.7**
	34nm,1.9s								
PHWY	**Pilot Hill**	**16.97**	**12**	*e*P		**Pn**	**19 39 50.0**		**+1.9**
HVU	**Hansel Valley**	**17.20**	**353**	*e*P		**Pn**	**19 39 51.8**		**+0.8**
	33nm,1.3s								
MIAR	**Mount Ida**	**17.25**	**52**	*e*P		**Pn**	**19 39 49.5**		**-2.2**
	9.6nm,1.0s								
PDAR	**Pinedale Array**	**18.02**	**1**	P		**Pn**	**19 40 00.8**		**-0.5**
	0.1nm,0.3s,baz=165,slow=8.5,SNR=29								
KSU1	**Kansas State U**	**18.24**	**35**	*e*P		**Pn**	**19 40 02.6**		**-1.3**
REDW	**Red Top Meadow**	**18.63**	**358**	*e*P		**Pn**	**19 40 08.4**		**-0.3**
	33nm,1.5s								
RRI2	**Red Ridge**	**18.64**	**357**	*e*P		**Pn**	**19 40 08.0**		**-0.7**
	33nm,1.3s								
SNOW	**Snow King Moun**	**18.73**	**358**	*e*P		**Pn**	**19 40 09.2**		**-0.6**
	27nm,1.1s								

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TPAW	Teton Pass	18.76	358	eP	Pn	19 40 09.7	-0.6
	24nm,1.1s						
LOHW	Long Hollow	18.87	358	eP	Pn	19 40 10.9	-0.7
	19nm,1.3s						
WVOR	Wild Horse Val	19.10	340	eP	Pn	19 40 13.2	-1.2
	26nm,1.5s						
IMW	Indian Meadow	19.17	358	eP	Pn	19 40 14.4	-0.8
	28nm,1.1s						
HLID	Hailey	19.17	350	eP	Pn	19 40 14.8	-0.4
	30nm,1.6s						
MOD	Modoc	19.20	336	eP	Pn	19 40 12.3	-3.2
	6.1nm,0.8s						
FLWY	Flagg Ranch	19.34	358	eP	Pn	19 40 17.5	+0.2
	23nm,1.0s						
YFT	Old Faithful	19.72	358	Pn	Pn	19 40 21.7	-0.1
RSSD	Black Hills	19.96	12	eP	Pn	19 40 24.6	-0.1
	7.3nm,1.0s						
YNR	Norris Junctio	19.98	358	eP	Pn	19 40 24.0	-0.9
YBH	Yreka Blue Hor	20.03	331	P	P	19 40 22.6	-1.3
	0.1nm,0.3s,baz=162,slow=10,SNR=4.1						
QLMT	Earthquake Lak	20.12	357	eP	P	19 40 25.5	+0.7
MCMT	McKenzie Canyo	20.22	354	eP	P	19 40 27.3	+1.5
RLMT	Red Lodge	20.38	1	eP	P	19 40 27.4	-0.2
	29nm,1.3s						
TEIG	Tepich	20.49	98	P	P	19 40 28.6	-0.4
	11nm,0.9s,baz=276,slow=12,SNR=8.9						
TEIG	Tepich	20.49	98	eP	P	19 40 28.4	-0.5
	15nm,1.0s						
DLMT	Dillon	20.73	355	eP	P	19 40 31.9	+0.6
	19nm,1.2s						
BMO	Blue Mountains	20.98	345	eP	P	19 40 33.8	-0.3
	12nm,1.1s						
GCMT	Greycliff	21.04	0	eP	P	19 40 34.2	-0.5
FVM	French Village	21.22	47	eP	P	19 40 35.5	-1.2
PLAL	Pickwick Lake	21.50	56	eP	P	19 40 38.7	-1.1
	14nm,1.0s,mb4.3						
ECSD	EROS,Sioux Fal	21.89	27	eP	P	19 40 43.4	-0.4
	12nm,0.9s,mb4.3						
SIUC	Southern Illin	21.89	49	eP	P	19 40 44.4	+0.5
	25nm,0.9s,mb4.6						
LNOR	Lincton Mounta	22.17	344	eP	P	19 40 46.0	-0.8
MSO	Missoula	22.32	353	eP	P	19 40 47.8	-0.5
	7.9nm,1.1s,mb4.1						
CHMT	Chamberlain Mo	22.33	354	eP	P	19 40 47.2	-1.3
HAWA	Hanford	22.98	343	eP	P	19 40 55.2	-0.2
	9.6nm,1.2s,mb4.1						
RSW	Rattlesnake Hi	23.00	343	eP	P	19 40 56.5	+0.9
OLIL	Olney	23.17	48	eP	P	19 40 57.2	-0.3
SWET	Sewanee	23.22	58	eP	P	19 40 58.8	+0.7
WCI	Wyandotte Cave	24.16	50	P	P	19 41 07.9	+0.7
	5.9nm,0.8s,mb4.1						
NEW	Newport	24.20	348	eP	P	19 41 06.1	-1.2
	17nm,1.3s,mb4.3						
ETW	Entiat	24.31	343	eP	P	19 41 07.5	-0.9
JFWS	Jewell Farm	24.34	37	eP	P	19 41 10.9	+2.3
	9.6nm,0.7s,mb4.3						
WALA	Waterton Lakes	24.51	354	eP	P	19 41 09.7	-0.5
	19nm,1.0s,mb4.6						
TKL	Tuckaleechee C	25.03	58	P	P	19 41 16.6	+1.5
	8.5nm,0.9s,mb4.3,baz=228,slow=11,SNR=8.2						
COWI	Conover	27.11	33	eP	P	19 41 33.8	0.0
	7.5nm,0.9s,mb4.2						
EYMN	Ely	27.40	28	eP	P	19 41 35.8	-0.6
	7.6nm,1.1s,mb4.1						
ULM	Lac du Bonnet	27.74	20	P	P	19 41 38.0	-1.3
	4.3nm,0.8s,mb4.1,baz=216,slow=10,SNR=3.1						
ELN	Prospectdale	27.84	56	eP	P	19 41 40.5	0.0
EDM	Edmonton	28.60	356	P	P	19 41 45.2	-1.8
YKA	Yellowknife Ar	37.91	356	P	P	19 43 06.6	-1.3
	3.8nm,1.1s,mb4.0,baz=172,slow=7.8,SNR=13						
YKA	Yellowknife Ar	37.91	356	P	P	19 43 06.6	-1.3
OTAV	Otavalo	38.97	124	eP	P	19 43 17.7	+0.3
	11nm,1.5s,mb4.4						
DAWY	Dawson	43.83	342	eP	P	19 43 56.2	-0.5
EGAK	Eagle	44.87	342	eP	P	19 44 04.1	-0.9
	8.2nm,0.9s,mb4.6						
COLA	College	46.99	339	P	P	19 44 20.8	-1.0
TTA	Tatalina	48.84	334	eP	P	19 44 34.9	-1.2
	11nm,1.1s,mb4.8						
IMA2	Indian Mountai	49.66	338	eP	P	19 44 41.1	-1.2
CPUP	Villa Florida	71.79	131	P	P	19 47 12.8	-0.9
	1.2nm,0.6s,mb4.0,baz=330,slow=7.3,SNR=6.3						
CPUP	Villa Florida	71.79	131	P	P	19 47 12.8	-1.0
PETK	Petropavlovsk-	72.01	321	P	P	19 47 15.1	+0.3
	5.8nm,0.9s,mb4.5,baz=73,slow=12,SNR=8.5						
BDFB	Brasilia	72.46	117	P	P	19 47 20.4	+2.4
	1.2nm,0.3s,mb4.2,baz=258,slow=7.8,SNR=3.4						
PLCA	Paso Flores	74.68	150	P	P	19 47 31.9	+1.4
	2.4nm,0.9s,mb4.1,baz=351,slow=4.9,SNR=5.8						
ARCES	ARCESS Array B	80.73	14	P	P	19 48 03.7	-0.2
	1.9nm,0.9s,mb4.0,baz=5.7,slow=2.4,SNR=4.3						
ARCES	ARCESS Array B	80.73	14	P	P	19 48 03.7	-0.3
ESDC	Sonseca Array	85.92	48	P	P	19 48 31.9	+0.6
	0.4nm,0.8s,mb3.7,baz=306,slow=5.4,SNR=4.2						
HGN	Heimansgroeve	86.04	35	ex	x	19 49 37.8	
MJAR	Matsushiro Arr	91.52	312	P	P	19 48 58.8	+0.9
	2.3nm,1.0s,mb4.5,baz=46,slow=3.5,SNR=6.2						
MAT	Matsushiro	91.52	312	P	P	19 48 59.8	+1.9
WRA	Warramunga Arr	120.83	261	PKP	PKPdf	19 54 43.9	0.0
	1.9nm,0.9s,baz=74,slow=1.7,SNR=12						
ASAR	Alice Springs	122.26	257	PKP	PKPdf	19 54 46.7	+0.1
	1.4nm,0.8s,baz=66,slow=2.0,SNR=11						
CMAR	Chiang Mai Arr	128.71	324	PKP	PKPdf	19 54 59.6	+0.5
	1.0nm,0.8s,baz=319,slow=1.6,SNR=5.4						

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*ISCJB **01** 19:36:38.9±0.7,3865N±002×2648E±004,h5^{km}±5^{km}, Error ellipse: s-maj=6.2km s-min=3.5km az=156.7*
*DDA **01** 19:36:38.3,3864N×2650E,h7^{km}±7^{km},Md3.0*
*ISK **01** 19:36:39.4,3869N×2655E,h8^{km},MD3.1*
*CSEM **01** 19:36:39.7±0.1,3865N×2656E,h15^{km},MD3.1,Error ellipse: s-maj=2.9km s-min=1.3km az=52.0*
*ATH **01** 19:36:39.3,3860N×2626E,h12^{km},MD3.4/3*
ISC 01 19:36:39.2±0.7,**3864N**±002×**2647E**±005,**h9**^{km}±4^{km},**n20, σ0^{s}80**/34,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLCB	Balcova	0.52	119	ePG	Pg	19 36 49.3	0.0
BLCB				eSG	Sg	19 36 56.3	+0.2
PRK	Paraskevi	0.62	346	ePG	Pg	19 36 51.4	+0.1
PRK				eSB	Sb	19 37 00.8	-0.3
IZM	Izmir	0.67	111	ePG	Pg	19 36 52.3	+0.1
KDAG	Bornova	0.67	111	i P	Pg	19 36 52.0	-0.2
KDAG				i S	Sg	19 37 01.9	+1.0
AYVA	Ayvalik	0.69	15	i P	Pg	19 36 51.2	-1.4
AYVA				i S	Sg	19 37 02.2	+0.7
SMG	Samos	0.98	163	ePB	Pb	19 36 58.3	+0.1
AKHS	Akhisar	1.08	77	i P	Pg	19 36 59.5	-0.5
AKHS				i S	Sg	19 37 14.2	+0.2
AKS	Akhisar	1.08	77	ePG	Pg	19 36 59.4	-0.6
AKS				eSG	Sg	19 37 13.8	-0.2
GCAM	G?zelcaml?	1.12	147	i P	Pb	19 36 59.6	-1.1
GCAM				eS	Sg	19 37 15.7	+0.5
GCAM	G?zelcaml?	1.12	147	i P	Pb	19 36 59.6	-1.1
GCAM				eS	Sg	19 37 15.6	+0.4
EZN	Ezine	1.19	355	ePN	Pn	19 37 01.4	-0.5
EZN				eSN	Sn	19 37 18.1	-0.1
BOZC	Bozcaada	1.24	345	i P	Pn	19 37 02.1	-0.5
BOZC				i S	Sb	19 37 19.2	+0.3
BALY	Balya	1.42	39	i P	Pn	19 37 04.0	-1.1
BALY				eS	Sn	19 37 24.2	+0.3
AYDN	Tasoluk	1.48	131	i P	Pn	19 37 05.7	-0.3
AYDN				i S	Sn	19 37 23.8	-1.6
BALB	Balikesir	1.48	47	ePN	Pn	19 37 05.9	-0.1
BALB				eSN	Sn	19 37 25.0	-0.5
GADA	Gvkgeada	1.61	344	ePN	Pn	19 37 08.8	+1.1
GADA				eSN	Sn	19 37 29.8	+1.2
MLSB	Milas	1.70	142	ePN	Pn	19 37 10.5	+1.5
BODT	Bodrum	1.71	157	ePN	Pn	19 37 11.1	+1.9
KULA	Kula-Manisa	1.72	94	ePN	Pn	19 37 10.4	+1.1
APE	Apeiranthos	1.74	206	ePB	Pb	19 37 10.1	-1.1

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*ISCJB **01** 19:38:16.2±1.3,2471N±004×10996W±005,h12^{km}±8^{km}, mb4.5/37,Error ellipse: s-maj=8.0km s-min=5.7km az=142.1*
*MOS **01** 19:38:16.8±1.5,2479N×10994W,h10^{km},mb4.8/11,Error ellipse: s-maj=9.6km s-min=4.8km az=96.1*
*IDC **01** 19:38:16.6±0.6,2475N×11003W,h0^{km},mb4.4/12, mb1 4.5/18,mb1mx4.3/27,mbtmp4.4/18,ML4.1/5,Error ellipse: s-maj=15.6km s-min=7.5km az=105.0*
*NEIC **01** 19:38:17.3±0.4,2470N×10994W,h10^{km},mb4.6/47,Error ellipse: s-maj=6.8km s-min=5.0km az=55.0*
ISC 01 19:38:18.3±1.2,**2467N**±004×**10998W**±005,**h17**^{km}±8^{km}, **n148,σ1^{s}22**/145,**mb4.5**/37,**4C-1D,Gulf of California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	La Paz	0.64	208	Pg	Pg	19 38 29.6	-1.3
	2µm,0.3s,baz=22,slow=5.2,SNR=35						
LPIG				Lg		19 38 40.2	
	7µm,0.3s,baz=135,slow=21,SNR=48						
TUC	Tucson	7.65	355	eP	Pn	19 40 06.5	-2.5
TUC				pmax	pmax		
	comp=Z,26nm,1.4s						
TUC	Tucson	7.65	355	ePn	Pn	19 40 06.5	-2.5
	comp=Z,26nm,1.4s						
GLA	Glamis	9.37	334	eP	Pn	19 40 32.8	+0.1
GLA				pmax	pmax		
	comp=Z,16nm,0.8s						
GLA	Glamis	9.37	334	ePn	Pn	19 40 32.8	+0.1
	comp=Z,16nm,0.8s						
LENM	Lemitar	9.82	15	ePn	Pn	19 40 39.5	+0.7
BNM	Barren Site	9.89	16	ePn	Pn	19 40 39.2	-0.6
BAR	Barrett	9.91	325	ePn	Pn	19 40 40.4	+0.3
LAZ	Ladron	10.01	14	ePn	Pn	19 40 40.6	-0.9
LPM	Los Pinos Moun	10.04	16	ePn	Pn	19 40 42.3	+0.4
ANMO	Albuquerque	10.69	16	Pn	Pn	19 40 51.3	+0.5
	comp=Z,0.1nm,0.3s,baz=205,slow=16,SNR=5.1						
ANMO	Albuquerque	10.69	16	⇑eP	Pn	19 40 51.2	+0.4
ANMO	Albuquerque	10.69	16	ePn	Pn	19 40 49.8	-1.0
	comp=Z,21nm,1.3s						
WUAZ	Wupatki	10.88	354	ePn	Pn	19 40 54.2	+0.9
	comp=Z,20nm,1.1s						
LDFC	Landfair	11.29	338	ePn	Pn	19 41 00.3	+1.4
	comp=Z,139nm,1.5s						
GSC	Goldstone	12.13	332	eP	Pn	19 41 12.8	+2.3
GSC				pmax	pmax		
	comp=Z,52nm,1.3s						
GSC	Goldstone	12.13	332	ePn	Pn	19 41 12.8	+2.3
	comp=Z,52nm,1.3s						
MVCO	Mesa Verde	12.57	5	ePn	Pn	19 41 19.6	+3.2
	comp=Z,6.9nm,0.4s						
ISA	Isabella	13.19	328	eP	Pn	19 41 26.3	+1.4
ISA				pmax	pmax		
	comp=Z,70nm,1.7s						
ISA	Isabella	13.19	328	ePn	Pn	19 41 26.3	+1.4
	comp=Z,70nm,1.7s						
TPNV	Topopah Spring	13.37	338	eP	Pn	19 41 29.9	+2.5
SDCO	Great Sand Dun	13.59	15	ePn	Pn	19 41 32.2	+1.9
	comp=Z,10nm,1.2s						
HKT	Hockley	13.63	64	eP	Pn	19 41 29.6	-1.3
HKT				pmax	pmax		
	comp=Z,30nm,1.6s						
HKT	Hockley	13.63	64	ePn	Pn	19 41 29.6	-1.3
	comp=Z,30nm,1.6s						
MSU	Marysvale	13.93	353	eP	Pn	19 41 36.1	+1.1
WMOK	Wichita Mounta	13.97	41	eP	Pn	19 41 35.0	-0.5
WMOK				pmax	pmax		
	comp=Z,20nm,0.8s						
WMOK	Wichita Mounta	13.97	41	ePn	Pn	19 41 35.0	-0.5
	comp=Z,20nm,0.8s						
SRU	San Rafael	14.41	358	eP	Pn	19 41 41.7	+0.2
SRU				pmax	pmax		
	comp=Z,13nm,1.1s						
SRU	San Rafael	14.41	358	ePn	Pn	19 41 41.7	+0.1
	comp=Z,13nm,1.1s						
TMUT	Trail Mountain	14.62	356	ePn	Pn	19 41 51.2	+6.7
NLU	North Lily Min	15.35	354	Pn	Pn	19 41 53.7	-0.4
MPU	Maple Canyon	15.37	355	ePn	Pn	19 41 59.4	+5.0
	comp=Z,67nm,1.4s						
NVAR	Mina Array Bea	15.44	335	Pn	Pn	19 41 57.4	+2.1
	comp=Z,0.5nm,0.3s,baz=166,slow=14,SNR=35						
ISCO	Idaho Springs	15.53	13	eP	Pn	19 42 00.8	+4.3
ISCO				pmax	pmax		
	comp=Z,34nm,1.4s						
ISCO	Idaho Springs	15.53	13	ePn	Pn	19 42 00.8	+4.2
	comp=Z,34nm,1.4s						
DUG	Dugway	15.67	352	eP	Pn	19 42 00.5	+2.2
DAU	Daniels Canyon	15.74	356	eP	Pn	19 42 00.6	+1.4
JLU	Jordanelle	15.94	356	eP	Pn	19 42 04.2	+2.4
CMIG	Matias Romero	15.98	115	Pn	Pn	19 42 04.0	+1.5
	comp=Z,0.1nm,0.3s,baz=300,slow=11,SNR=5.5						
CMB	Columbia Colle	16.00	329	eP	Pn	19 42 02.1	-0.6
CMB				pmax	pmax		
	comp=Z,25nm,1.4s						
CMB	Columbia Colle	16.00	329	ePn	Pn	19 42 02.1	-0.6
	comp=Z,25nm,1.4s						
NOQ	North Oquirrh	16.04	354	eP	Pn	19 42 04.5	+1.4
	comp=Z,104nm,1.5s						
BGU	Big Grassy Mou	16.41	352	eP	Pn	19 42 08.8	+0.9
ELK	Elko	16.63	346	Pn	Pn	19 42 11.8	+1.2
	comp=Z,0.1nm,0.3s,baz=177,slow=8.4,SNR=11						
ELK	Elko	16.63	346	eP	Pn	19 42 11.1	+0.5
ELK				pmax	pmax		
	comp=Z,66nm,1.5s						
ELK	Elko	16.63	346	eP	Pn	19 42 11.1	+0.4
	comp=Z,66nm,1.5s						
BMN	Battle Mountai	16.85	341	eP	Pn	19 42 14.5	+1.0
BMN				pmax	pmax		
	comp=Z,27nm,1.3s						
BMN	Battle Mountai	16.85	341	eP	Pn	19 42 14.5	+1.0
	comp=Z,28nm,1.3s						
HWUT	Hardware Ranch	16.95	356	ePn	Pn	19 42 15.3	+0.7
	comp=Z,118nm,1.5s						
PHWY	Pilot Hill	17.01	12	eP	Pn	19 42 14.1	-1.4
HVU	Hansel Valley	17.23	353	eP	Pn	19 42 19.0	+0.9
HVU				pmax	pmax		
	comp=Z,72nm,1.4s						
HVU	Hansel Valley	17.23	353	eP	Pn	19 42 19.0	+0.9
	comp=Z,72nm,1.4s						
MIAR	Mount Ida	17.31	52	eP	Pn	19 42 16.6	-2.7
MIAR				pmax	pmax		
	comp=Z,14nm,1.0s						
MIAR	Mount Ida	17.31	52	eP	Pn	19 42 16.6	-2.7
	comp=Z,14nm,1.0s						
PDAR	Pinedale Array	18.06	1	P	Pn	19 42 27.9	-0.5
	comp=Z,0.3nm,0.3s,baz=165,slow=9.1,SNR=27						
KSU1	Kansas State U	18.30	35	eP	Pn	19 42 30.3	-1.1
	comp=Z,63nm,1.1s						
REDW	Red Top Meadow	18.66	358	eP	Pn	19 42 34.1	-1.7
	comp=Z,37nm,1.3s						
RRI2	Red Ridge	18.67	357	eP	Pn	19 42 35.3	-0.6
	comp=Z,59nm,1.3s						
SNOW	Snow King Moun	18.76	358	eP	Pn	19 42 36.4	-0.6
	comp=Z,65nm,1.3s						
TPAW	Teton Pass	18.80	358	eP	Pn	19 42 36.3	-1.1
	comp=Z,86nm,1.6s						
LOHW	Long Hollow	18.91	359	eP	Pn	19 42 37.9	-0.9
	comp=Z,19nm,0.9s						
WVOR	Wild Horse Val	19.11	340	eP	Pn	19 42 40.1	-1.2
WVOR				pmax	pmax		
	comp=Z,21nm,1.0s						
WVOR	Wild Horse Val	19.11	340	eP	Pn	19 42 40.1	-1.2
	comp=Z,21nm,1.0s						
HLID	Hailey	19.20	350	eP	Pn	19 42 41.7	-0.6
	comp=Z,28nm,1.4s						
IMW	Indian Meadow	19.20	358	eP	Pn	19 42 41.5	-0.8
	comp=Z,39nm,1.1s						
YFT	Old Faithful	19.75	358	ePn	Pn	19 42 49.0	+0.1
RSSD	Black Hills	20.01	13	P	P	19 42 47.9	-2.2
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
RSSD	Black Hills	20.01	13	P	P	19 42 47.9	-2.2
	comp=Z,10nm,1.2s						
YNR	Norris Junctio	20.01	359	eP	P	19 42 53.1	+2.9
YBH	Yreka Blue Hor	20.04	331	P	P	19 42 50.4	-0.1
	comp=Z,0.3nm,0.3s,baz=113,slow=7.7,SNR=5.9						
QLMT	Earthquake Lak	20.15	357	eP	P	19 42 48.2	-3.5
MCMT	McKenzie Canyo	20.25	354	eP	P	19 42 54.4	+1.6
OXF	Oxford	20.37	56	eP	P	19 42 56.4	+2.2
OXF				pmax	pmax		
	comp=Z,41nm,1.2s						
OXF	Oxford	20.37	56	eP	P	19 42 56.4	+2.3
	comp=Z,41nm,1.2s						
RLMT	Red Lodge	20.42	1	eP	P	19 42 54.3	-0.3
	comp=Z,29nm,1.2s						
TEIG	Tepich	20.53	98	P	P	19 42 56.0	0.0
	comp=Z,11nm,0.8s,baz=282,slow=8.3,SNR=9.7						
TEIG	Tepich	20.53	98	eP	P	19 42 55.1	-1.0
	comp=Z,28nm,1.2s						
DLMT	Dillon	20.76	355	eP	P	19 42 58.9	+0.6
	comp=Z,25nm,1.1s						
BMO	Blue Mountains	21.00	345	eP	P	19 42 59.9	-1.1
GCMT	Greycliff	21.08	1	eP	P	19 43 01.7	-0.1
FVM	French Village	21.28	47	eP	P	19 43 05.1	+1.1
FVM				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.4						
FVM	French Village	21.28	47	eP	P	19 43 05.1	+1.1
	comp=Z,26nm,1.2s,mb4.4						
PLAL	Pickwick Lake	21.56	56	eP	P	19 43 05.4	-1.7
	comp=Z,18nm,1.0s,mb4.5						
ECSD	EROS,Sioux Fal	21.95	27	eP	P	19 43 09.4	-1.7
	comp=Z,27nm,1.0s,mb4.6						
SIUC	Southern Illin	21.95	49	eP	P	19 43 09.7	-1.6
	comp=Z,30nm,0.9s,mb4.7						
LNOR	Lincton Mounta	22.19	345	eP	P	19 43 13.8	+0.1
MSO	Missoula	22.34	353	eP	P	19 43 14.7	-0.5
	comp=Z,31nm,1.4s,mb4.5						
CHMT	Chamberlain Mo	22.36	354	eP	P	19 43 14.4	-1.1
COR	Corvallis	22.64	335	eP	P	19 43 17.7	-0.8
COR				pmax	pmax		
	comp=Z,59nm,1.1s,mb4.9						
COR	Corvallis	22.64	335	eP	P	19 43 17.6	-0.8
	comp=Z,59nm,1.1s,mb4.9						
HAWA	Hanford	23.00	343	eP	P	19 43 20.7	-1.5
	comp=Z,13nm,1.0s,mb4.3						
RSW	Rattlesnake Hi	23.02	343	eP	P	19 43 22.4	-0.1
OLIL	Olney	23.23	48	eP	P	19 43 24.1	-0.7
	comp=Z,24nm,0.9s,mb4.6						
SWET	Sewanee	23.28	58	eP	P	19 43 26.1	+0.7
EGMT	Eagleton	23.31	0	eP	P	19 43 24.5	-1.0
	comp=Z,69nm,1.3s,mb4.9						
TGUH	Tegucigalpa,Un	23.84	112	eP	P	19 43 27.7	-3.3
LON	Longmire	23.99	340	eP	P	19 43 31.5	-0.5
LON				pmax	pmax		
	comp=Z,31nm,1.2s,mb4.6						
LON	Longmire	23.99	340	eP	P	19 43 31.5	-0.5
	comp=Z,31nm,1.2s,mb4.6						
NEW	Newport	24.22	348	eP	P	19 43 32.6	-1.5
NEW				pmax	pmax		
	comp=Z,24nm,1.0s						
NEW	Newport	24.22	348	eP	P	19 43 32.6	-1.5
	comp=Z,24nm,1.0s,mb4.6						
WCI	Wyandotte Cave	24.23	50	eP	P	19 43 35.9	+1.6
WCI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						
WCI	Wyandotte Cave	24.23	50	eP	P	19 43 35.9	+1.6
	comp=Z,6.7nm,0.8s,mb4.1						
ETW	Entiat	24.33	343	eP	P	19 43 34.3	-0.8
JFWS	Jewell Farm	24.39	37	eP	P	19 43 35.5	-0.2
JFWS				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
JFWS	Jewell Farm	24.39	37	eP	P	19 43 35.5	-0.3
	comp=Z,12nm,0.8s,mb4.4						
BLO	Bloomington	24.51	48	P	P	19 43 38.2	+1.3
BLO				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.5						
BLO	Bloomington	24.51	48	P	P	19 43 38.1	+1.3
	comp=Z,12nm,0.7s,mb4.5						
WALA	Waterton Lakes	24.54	354	eP	P	19 43 36.5	-0.5
	comp=Z,47nm,1.1s,mb4.9						
GOGA	Godfrey	24.71	63	eP	P	19 43 38.5	-0.2
GOGA				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.4						
GOGA	Godfrey	24.71	63	eP	P	19 43 38.5	-0.3
	comp=Z,14nm,1.2s,mb4.4						
TKL	Tuckaleechee C	25.09	58	P	P	19 43 44.4	+2.2
	comp=Z,12nm,0.9s,mb4.4,baz=218,slow=11,SNR=8.0						
NLWA	Neilton Lookou	25.23	338	eP	P	19 43 42.7	-0.6
	comp=Z,12nm,1.2s,mb4.3						
AGMN	Agassiz Refuge	26.09	22	P	P	19 43 50.4	-0.7
	comp=Z,7.4nm,0.9s,mb4.2						
COWI	Conover	27.16	33	eP	P	19 43 53.8	-7.0
	comp=Z,23nm,1.3s,mb4.5						
EYMN	Ely	27.46	28	eP	P	19 43 59.9	-3.6
	comp=Z,20nm,1.2s,mb4.5						
ULM	Lac du Bonnet	27.79	20	P	P	19 44 08.6	+2.2
	comp=Z,10nm,1.0s,mb4.4,baz=205,slow=8.1,SNR=4.5						
ELN	Prospectdale	27.90	56	eP	P	19 44 07.3	-0.2
EDM	Edmonton	28.63	356	eP	P	19 44 11.8	-2.0
DLBC	Dease Lake	36.63	342	eP	P	19 45 23.4	-0.2
YKA	Yellowknife Ar	37.94	357	P	P	19 45 33.7	-1.0
	comp=Z,0.2nm,0.3s,baz=235,slow=24,SNR=4.5						
YKA	Yellowknife Ar	37.94	357	P	P	19 45 33.7	-1.0
OTAV	Otavalo	38.99	124	eP	P	19 45 45.7	+1.6
	comp=Z,18nm,1.4s,mb4.6						
ROSC	El Rosal	39.50	114	P	P	19 45 48.8	+0.4
	comp=Z,3.8nm,0.3s,mb4.5,baz=269,slow=23,SNR=5.0						
SDV	Santo Domingo	40.63	106	P	P	19 46 00.5	+2.8
	comp=Z,2.9nm,0.3s,mb4.3,baz=324,slow=5.7,SNR=3.9						
SDV	Santo Domingo	40.63	106	eP	P	19 45 59.6	+1.9
DAWY	Dawson	43.84	342	eP	P	19 46 23.6	+0.3
KDAK	Kodiak Island	44.83	329	P	P	19 46 31.6	+0.3
	comp=Z,4.1nm,0.7s,mb4.4,baz=140,slow=2.4,SNR=3.6						
EGAK	Eagle	44.89	342	eP	P	19 46 31.7	+0.1
	comp=Z,12nm,0.9s,mb4.7						
COLA	College	47.01	339	eP	P	19 46 49.0	+0.6
SVW2	Sparrevohn	47.78	332	eP	P	19 46 53.0	-1.5
TTA	Tatalina	48.85	334	eP	P	19 47 01.8	-0.9
TTA				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
TTA	Tatalina	48.85	334	eP	P	19 47 01.8	-0.9
	comp=Z,21nm,1.2s,mb5.0						
IMA2	Indian Mountai	49.67	338	eP	P	19 47 07.7	-1.2
SEY	Seymchan	71.72	331	⇑eP	P	19 49 38.5	-0.7
CPUP	Villa Florida	71.80	131	P	P	19 49 40.9	+0.6
	comp=Z,1.3nm,0.6s,mb4.1,baz=264,slow=5.5,SNR=6.2						
PETK	Petropavlovsk-	72.01	321	P	P	19 49 40.0	-1.1
	comp=Z,11nm,1.0s,mb4.7,baz=76,slow=12,SNR=6.6						
PLCA	Paso Flores	74.67	150	P	P	19 49 57.7	+0.9
	comp=Z,1.6nm,0.9s,mb4.0,baz=288,slow=12,SNR=3.6						
PLCA	Paso Flores	74.67	150	P	P	19 49 57.7	+0.9
TIXI	Tiksi	75.85	344	⇑eP	P	19 50 03.2	-0.1
TIXI				pmax	pmax		
	comp=Z,11nm,1.6s,mb4.5						
ARCES	ARCESS Array B	80.78	14	P	P	19 50 32.1	+1.5
	comp=Z,1.4nm,0.6s,mb4.1,baz=330,slow=4.3,SNR=6.8						
YAK	Yakutsk	81.41	336	d iP	P	19 50 36.4	+2.3
YAK				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
YSS	Yuzh-Sakhalins	83.26	319	⇑eP	P	19 50 45.0	+0.9
YSS				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
MJAR	Matsushiro Arr	91.50	312	P	P	19 51 23.5	-0.8
	comp=Z,4.2nm,1.1s,mb4.7,baz=63,slow=3.5,SNR=6.1						
MAJO	Matsushiro	91.50	312	eP	P	19 51 23.7	-0.6
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
MAJO	Matsushiro	91.50	312	eP	P	19 51 23.6	-0.6
	comp=Z,8.7nm,1.0s,mb5.0						
WRA	Warramunga Arr	120.77	261	PKP	PKPdf	19 57 12.3	+2.1
	comp=Z,2.4nm,0.9s,baz=73,slow=1.5,SNR=9.6						
ASAR	Alice Springs	122.20	257	PKP	PKPdf	19 57 14.7	+1.8
	comp=Z,1.4nm,0.9s,baz=86,slow=2.4,SNR=9.4						
CMAR	Chiang Mai Arr	128.71	324	PKP	PKPdf	19 57 27.8	+2.3
	comp=Z,1.3nm,0.9s,baz=344,slow=1.3,SNR=8.2						

IDC 01 19:38:56.4±89.0,**1444S**×**16532E**,**h0**^{km},**mb3.7**/3, **mb1 3.9**/3,**mb1mx3.6**/14,**mbtmp3.7**/3,**Error ellipse: s-maj=1494.0km s-min=108.2km az=63.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	27.78	227	P	P	19 44 47.1	0.0
	1.0nm,0.4s,baz=48,slow=10,SNR=6.6						
WRA	Warramunga Arr	30.07	255	P	P	19 45 07.8	+0.1
	0.2nm,0.3s,baz=83,slow=7.9,SNR=9.9						
ASAR	Alice Springs	31.03	248	P	P	19 45 16.1	+0.1
	0.3nm,0.5s,baz=74,slow=9.6,SNR=12						

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*ISK **01** 19:52:09.9,3838N×3833E,h5^{km},MD2.8*
*CSEM **01** 19:52:09.3±0.1,3837N×3833E,h10^{km},MD2.8,Error ellipse: s-maj=3.3km s-min=2.0km az=20.0*
*ISCJB **01** 19:52:10.6±0.5,3840N±004×3835E±003,h10^{km},Error ellipse: s-maj=5.3km s-min=3.6km az=171.9*
*DDA **01** 19:52:12.9,3823N×3851E,h7^{km}±2^{km},Md2.8*
ISC 01 19:52:11.1±0.5,**3839N**±004×**3833E**±003,**h3**^{km}±11^{km},**n11, σ0^{s}80**/18,**Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MYA	Malataya	0.10	133	ePG	Pg	19 52 12.3	-0.8
MALT	Malatya	0.11	137	ePG	Pg	19 52 12.5	-0.7
MALT				eSG	Sg	19 52 14.6	-0.1
AKCD	Akcadag	0.34	253	i P	Pg	19 52 17.1	-0.5
AKCD				i S	Sg	19 52 21.9	-0.1
AKCD	Akcadag	0.34	253	i P	Pg	19 52 17.0	-0.5
ELZG	Elazig	0.52	78	i P	Pg	19 52 20.5	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG				iS	Sg	19 52 29.1	+1.2
DARE	**Darende-Malaty**	**0.69**	**324**	ePG	**Pg**	**19 52 24.1**	**-0.3**
DARE				eSG	Sg	19 52 33.6	+0.2
SVRC	**Sivrice-ELAZID**	**0.77**	**91**	ePG	**Pg**	**19 52 24.7**	**-1.1**
SVRC				eSG	Sg	19 52 35.9	+0.3
PTK	**Pertek**	**0.97**	**59**	ePG	**Pg**	**19 52 28.9**	**-0.7**
PTK				eSG	Sg	19 52 43.4	+1.3
GZT	**Gaziantep**	**1.20**	**211**	iP	**Pg**	**19 52 35.0**	**+0.9**
GZT				iS	Sg	19 52 51.2	+1.6
KMRS	**Kahramanmaras**	**1.44**	**232**	ePN	**Pn**	**19 52 37.1**	**-0.9**
SVSK	**Karacayir**	**1.84**	**326**	ePN	**Pn**	**19 52 44.0**	**+0.4**

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*ISCJB **01** 19:52:59.3±1.1, 2473N±007×1101W±02, h10km, mb3.3/2, Error ellipse: s-maj=27.8km s-min=9.8km az=5.3*
*IDC **01** 19:53:00.3±1.5, 2472N×11024W, h0km, mb3.7/2, mb1 3.9/6, mb1mx3.7/21, mbtmp3.6/6, ML3.7/4, Error ellipse: s-maj=73.2km s-min=8.1km az=92.0*
*NEIC **01** 19:53:00.9±1.1, 2468N×110.18W, h10km, mb3.5/1, Error ellipse: s-maj=28.5km s-min=9.8km az=94.0*
ISC 01 19:53:01.0±0.9, **2468N**±006×**1102W**±02, **h10km, n18, σ1s16**/20, **mb3.3**/2, **Baja California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.57**	**187**	Pg	**Pg**	**19 53 11.6**	**-0.6**
	283nm,0.3s,baz=65,slow=1.0,SNR=50						
LPIG				Lg		19 53 21.2	
	643nm,0.3s,baz=306,slow=20,SNR=55						
TUC	**Tucson**	**7.62**	**356**	P	**Pn**	**19 54 51.4**	**-0.7**
GLA	**Glamis**	**9.26**	**335**	ePn	**Pn**	**19 55 13.7**	**-1.0**
ANMO	**Albuquerque**	**10.75**	**17**	Pn	**Pn**	**19 55 34.7**	**-0.3**
	0.1nm,0.3s,baz=221,slow=13,SNR=3.2						
ANMO	**Albuquerque**	**10.75**	**17**	Pn	**Pn**	**19 55 34.7**	**-0.3**
ANMO				ePn	**Pn**	**19 55 35.5**	**+0.5**
WUAZ	**Wupatki**	**10.85**	**355**	Pn	**Pn**	**19 55 35.9**	**-0.5**
MVCO	**Mesa Verde**	**12.58**	**6**	P	**Pn**	**19 56 05.0**	**+4.9**
	5.0nm,0.9s						
CCUT	**Cedar City**	**13.11**	**349**	P	**Pn**	**19 56 17.1**	**+10**
NVAR	**Mina Array Bea**	**15.33**	**335**	Pn	**Pn**	**19 56 38.7**	**+1.3**
	0.1nm,0.3s,baz=168,slow=11,SNR=7.2						
NVAR	**Mina Array Bea**	**15.33**	**335**	Pn	**Pn**	**19 56 38.7**	**+1.3**
ELK	**Elko**	**16.56**	**347**	Pn	**Pn**	**19 56 55.3**	**+2.0**
	0.3nm,0.3s,baz=182,slow=16,SNR=4.1						
ELK	**Elko**	**16.56**	**347**	ePn	**Pn**	**19 56 54.8**	**+1.5**
	3.8nm,1.0s						
ELK				Pn	**Pn**	**19 56 55.3**	**+2.0**
PAHR	**Pah Rah Range**	**16.85**	**335**	Pn	**Pn**	**19 56 55.5**	**-1.5**
OHCM	**Honcut**	**17.43**	**330**	P	**Pn**	**19 57 04.5**	**+0.3**
PDAR	**Pinedale Array**	**18.05**	**2**	P	**Pn**	**19 57 10.8**	**-1.1**
	0.1nm,0.3s,baz=164,slow=13,SNR=7.2						
YBH	**Yreka Blue Hor**	**19.92**	**332**	P	**Pn**	**19 57 33.3**	**-1.2**
YKA	**Yellowknife Ar**	**37.92**	**357**	P	**P**	**20 00 19.5**	**+1.3**
	0.1nm,0.3s,mb3.0,baz=175,slow=8.1,SNR=3.4						
PETK	**Petropavlovsk-**	**71.85**	**321**	P	**P**	**20 04 26.1**	**+2.1**
	0.4nm,0.4s,mb3.7,baz=198,slow=18,SNR=4.5						

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*ISCJB **01** 20:06:34.3±0.3, 1081N±003×12542E±005, h123km±3km, mb4.4/31, Error ellipse: s-maj=8.4km s-min=4.3km az=166.4*
*MAN **01** 20:06:34, 1086N×12540E, h114km, mb5.2, ML4.2, MS4.4*
*IDC **01** 20:06:35.4±0.5, 1080N×12543E, h116km±4km, mb4.1/17, mb1 4.2/19, mb1mx4.1/23, mbtmp4.1/19, Error ellipse: s-maj=19.9km s-min=8.8km az=74.0*
*NEIC **01** 20:06:36.6±1.3, 1073N×12537E, h130km±12km, mb4.4/13, Error ellipse: s-maj=14.4km s-min=6.4km az=73.0*
*MOS **01** 20:06:38.9±1.2, 1068N×12528E, h165km, mb4.4/7, Error ellipse: s-maj=23.0km s-min=10.2km az=111.7*
ISC 01 20:06:35.4±0.3, **1081N**±003×**12543E**±005, **h117km**±3km, **h115km**±2.7km**:pP-P, n87, σ0s95**/88, **mb4.4**/31, **7C-7D, Leyte**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.56**	**309**	⇓iP	**Pn**	**20 06 52.9**	**-0.6**
PLP				eS	**Sn**	**20 07 05.4**	**-1.7**
BESP	**Borongan**	**0.79**	**1**	eP	**Pn**	**20 06 55.6**	**+0.3**
BESP				eS	**Sn**	**20 07 10.4**	**+0.2**
OCLP	**Ormoc**	**0.84**	**287**	eP	**Pn**	**20 06 56.1**	**+0.5**
OCLP				eS	**Sn**	**20 07 11.9**	**+1.0**
MSLP	**Maasin**	**0.87**	**220**	eP	**Pn**	**20 06 56.3**	**+0.3**
MSLP				eS	**Sn**	**20 07 11.7**	**+0.1**
SCPH	**Surigao**	**1.02**	**176**	⇑eP	**Pn**	**20 06 57.4**	**-0.1**
SCPH				eS	**Sn**	**20 07 13.2**	**-0.9**
LLP	**Lapu-Lapu**	**1.52**	**251**	⇑iP	**Pn**	**20 07 02.6**	**-0.2**
LLP				eS	**Sn**	**20 07 21.6**	**-2.1**
BUTP	**Butuan**	**1.84**	**174**	eP	**Pn**	**20 07 08.0**	**+1.3**
BUTP				eS	**Sn**	**20 07 34.1**	**+3.4**
CNP	**Catarman**	**1.85**	**336**	eP	**Pn**	**20 07 07.3**	**+0.5**
TBP	**Tagbilaran**	**1.90**	**234**	eP	**Pn**	**20 07 07.6**	**+0.1**
TBP				eS	**Sn**	**20 07 31.0**	**-1.0**
RCP	**Roxas**	**2.73**	**286**	⇑iP	**Pn**	**20 07 18.7**	**+0.6**
GUIM	**Jordan**	**2.79**	**267**	eP	**Pn**	**20 07 18.6**	**-0.3**
BUKP	**Musuan**	**2.93**	**187**	eP	**Pn**	**20 07 22.1**	**+1.3**
PVCP	**Virac**	**3.04**	**336**	eP	**Pn**	**20 07 22.1**	**0.0**
PVCP				eS	**Sn**	**20 07 56.5**	**-1.6**
KALP	**Kalibo**	**3.15**	**286**	⇑eP	**Pn**	**20 07 23.8**	**+0.2**
PAGZ	**Pagadian**	**3.57**	**215**	eP	**Pn**	**20 07 22.9**	**-6.2**
OTRP	**Odiongan**	**3.67**	**295**	eP	**Pn**	**20 07 30.3**	**-0.2**
DAV	**Davao City (W)**	**3.72**	**178**	P	**Pn**	**20 07 31.2**	**+0.1**
	53nm,0.3s,baz=285,slow=2.5,SNR=6.0						
DAV	**Davao City (W)**	**3.72**	**178**	ePn	**Pn**	**20 07 30.7**	**-0.5**
DAV				P		20 07 31.2	
MATI	**Mati**	**3.93**	**168**	eP	**Pn**	**20 07 34.1**	**+0.2**
IPIL	**Ipil**	**4.12**	**223**	eP	**Pn**	**20 07 37.1**	**+0.6**
CUYO	**Cuyo Island**	**4.33**	**271**	eP	**Pn**	**20 07 39.7**	**+0.4**
SJMP	**San Jose**	**4.53**	**292**	eP	**Pn**	**20 07 44.1**	**+2.1**
POLP	**Polilio Island**	**5.17**	**319**	eP	**Pn**	**20 07 51.0**	**+0.3**
BUSP	**Coron**	**5.26**	**284**	eP	**Pn**	**20 07 53.1**	**+1.3**
LUBP	**Lubang**	**5.84**	**300**	eP	**Pn**	**20 08 01.4**	**+1.8**
BALP	**Baler**	**6.17**	**323**	eP	**Pn**	**20 08 02.8**	**-1.4**
PALP	**Palanan**	**6.86**	**335**	⇓eP	**Pn**	**20 08 12.5**	**-1.0**
PALP				eS	**Sn**	**20 09 23.1**	**-7.1**
CAUP	**Cauayan**	**7.03**	**331**	eP	**Pn**	**20 08 15.1**	**-0.6**
APYP	**Conner**	**8.10**	**330**	eP	**Pn**	**20 08 29.8**	**-0.4**
ABRA	**Dolores**	**8.19**	**327**	eP	**Pn**	**20 08 31.4**	**-0.1**
KAPI	**Kappang**	**16.70**	**200**	P	**Pn**	**20 10 24.0**	**+1.4**
	1.4nm,0.3s,baz=25,slow=8.7,SNR=4.4						
BATI	**Baumata**	**20.95**	**185**	P	**P**	**20 11 10.4**	**+1.3**
	41nm,0.6s,baz=289,slow=2.4,SNR=11						
KAKA	**Kakadu**	**24.38**	**163**	⇑iP	**P**	**20 11 42.3**	**-0.5**
	22nm,0.5s,mb4.8						
CMAR	**Chiang Mai Arr**	**26.70**	**290**	P	**P**	**20 12 04.7**	**+0.9**
	2.9nm,0.6s,mb4.0,baz=90,slow=8.1,SNR=24						
CMAR				pP	pP	20 12 31.1	+1.9
	1.2nm,0.8s,baz=96,slow=7.3,SNR=3.6						
FITZ	**Fitzroy Crossi**	**28.73**	**180**	eP	**P**	**20 12 20.9**	**-0.9**
	2.9nm,0.3s,mb4.4						
FITZ	**Fitzroy Crossi**	**28.73**	**180**	P	**P**	**20 12 21.1**	**-0.7**
	1.8nm,0.4s,mb4.1,baz=7.9,slow=11,SNR=26						
WRA	**Warramunga Arr**	**31.79**	**164**	P	**P**	**20 12 47.9**	**-0.9**
	1.2nm,0.5s,mb3.9,baz=331,slow=10.0,SNR=44						
WRA				pP	pP	20 13 14.8	+0.2
	0.7nm,0.6s,baz=343,slow=9.8,SNR=2.3						
WB2	**Warramunga Arr**	**31.80**	**164**	eP	**P**	**20 12 47.6**	**-1.3**
MBWA	**Marble Bar**	**32.26**	**190**	eP	**P**	**20 12 51.3**	**-1.6**
	4.4nm,0.7s,mb4.3						
ASAR	**Alice Springs**	**35.25**	**166**	P	**P**	**20 13 18.8**	**-0.1**
	8.6nm,0.4s,mb4.9,baz=353,slow=8.1,SNR=133						
ASAR				PcP	PcP	20 15 46.8	-0.4
	1.5nm,0.6s,baz=337,slow=1.9,SNR=7.6						
CTAO	**Charters Tower**	**36.92**	**146**	P	**P**	**20 13 33.8**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CTAO	**Charters Tower**	**36.92**	**146**	P	**P**	**20 13 33.8**	**+0.7**
	comp=Z,4.7nm,0.8s,mb4.5						
LSA	**Lhasa**	**37.04**	**306**	eP	**P**	**20 13 35.2**	**+1.1**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
LSA	**Lhasa**	**37.04**	**306**	eP	**P**	**20 13 35.2**	**+1.1**
	comp=Z,2.5nm,0.6s,mb4.3						
ULN	**Ulaanbaatar**	**40.04**	**341**	⇓eP	**P**	**20 14 01.6**	**+2.8**
ULN	**Ulaanbaatar**	**40.04**	**341**	eP	**P**	**20 13 59.9**	**+1.1**
	comp=Z,2.5nm,0.8s,mb4.1						
SONM	**Songino Array**	**40.23**	**340**	P	**P**	**20 14 01.7**	**+1.3**
	comp=Z,0.5nm,0.4s,mb3.7,baz=157,slow=10,SNR=10						
SONM				pP	pP	20 14 26.3	-0.7
	comp=Z,0.5nm,0.6s,baz=166,slow=10,SNR=2.5						
SONM				PcP	PcP	20 16 01.4	-0.8
	comp=Z,0.8nm,0.8s,baz=174,slow=4.7,SNR=4.2						
FORT	**Forrest**	**41.42**	**177**	⇓iP	**P**	**20 14 10.6**	**+0.2**
	comp=Z,25nm,0.5s,mb5.3						
KLBR	**Kellerberrin**	**42.79**	**190**	eP	**P**	**20 14 20.1**	**-1.4**
	comp=Z,54nm,1.6s,mb5.0						
NWAO	**Narrogin (SRO)**	**44.19**	**190**	eP	**P**	**20 14 31.7**	**-1.0**
NWAO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NWAO	**Narrogin (SRO)**	**44.19**	**190**	eP	**P**	**20 14 31.7**	**-1.0**
	comp=Z,8.1nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**45.18**	**160**	⇓iP	**P**	**20 14 41.2**	**+0.6**
	comp=Z,5.9nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**45.18**	**160**	P	**P**	**20 14 41.4**	**+0.8**
	comp=Z,8.7nm,0.5s,mb4.7,baz=338,slow=7.7,SNR=41						
PETK	**Petropavlovsk-**	**49.50**	**25**	P	**P**	**20 15 15.5**	**+1.7**
	comp=Z,1.6nm,0.6s,mb4.1,baz=208,slow=3.0,SNR=4.8						
PETK				pP	pP	20 15 42.1	+0.8
	comp=Z,1.8nm,0.7s,baz=197,slow=4.6,SNR=4.1						
MKAR	**Makanchi Array**	**51.10**	**323**	P	**P**	**20 15 26.6**	**+0.7**
	comp=Z,6.3nm,0.3s,mb5.2,baz=131,slow=8.7,SNR=176						
YAK	**Yakutsk**	**51.23**	**3**	⇑eP	**P**	**20 15 27.6**	**+1.0**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
YAK				MLR	MLR		
	comp=Z,1μm,21.0s						
YAK	**Yakutsk**	**51.23**	**3**	P	**P**	**20 15 27.4**	**+0.8**
	comp=Z,4.9nm,0.5s,mb4.8						
ZALV	**Zalesovo Beam**	**53.76**	**332**	P	**P**	**20 15 45.2**	**-0.2**
	comp=Z,2.0nm,0.4s,mb4.5,baz=118,slow=7.3,SNR=16						
ZALV				pP	pP	20 16 12.2	-1.0
	comp=Z,1.0nm,0.6s,baz=141,slow=7.6,SNR=2.2						
ZAL	**Zalesovo**	**53.76**	**331**	P	**P**	**20 15 45.3**	**-0.1**
KURK	**Kurchatov**	**55.16**	**326**	⇓eP	**P**	**20 15 55.9**	**+0.3**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
RPZ	**Rata Peaks**	**68.29**	**146**	P	**P**	**20 17 22.3**	**-1.4**
	comp=Z,18nm,0.8s,mb4.9,baz=26,slow=17,SNR=8.6						
ARU	**Arti**	**68.32**	**327c**	iP	**P**	**20 17 23.1**	**-0.7**
ARU				SS	SS	20 30 34.6	-6.0
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
KDAK	**Kodiak Island**	**76.66**	**33**	P	**P**	**20 18 13.7**	**+0.4**
	comp=Z,2.7nm,0.6s,mb4.2,baz=166,slow=12,SNR=3.4						
JOF	**Joensuu**	**82.33**	**333**	ep	**P**	**20 18 42.8**	**-1.0**
	comp=Z,1.0nm,0.3s,mb4.1						
KEV	**Kevo**	**82.84**	**340**	ep	**P**	**20 18 45.9**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.7						
KEV	**Kevo**	**82.84**	**340**	eP	**P**	**20 18 45.9**	**-0.4**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
ARCES	**ARCESS Array B**	**83.40**	**340**	P	**P**	**20 18 49.0**	**-0.2**
	comp=Z,1.7nm,0.4s,mb4.2,baz=82,slow=6.5,SNR=30						
ARCES				pP	pP	20 19 18.2	-1.1
	comp=Z,2.9nm,0.8s,baz=77,slow=5.5,SNR=2.6						
HYT	**Haines Junctio**	**84.08**	**29**	eP	**P**	**20 18 57.6**	**+4.8**
INK	**Inuvik**	**84.09**	**22**	P	**P**	**20 18 52.5**	**-0.3**
INK				pmax	pmax		
	comp=Z,145nm,1.2s						
INK	**Inuvik**	**84.09**	**22**	P	**P**	**20 18 52.5**	**-0.2**
	comp=Z,145nm,1.2s,mb5.7						
KAF	**Kangasniemi**	**84.77**	**332**	ep	**P**	**20 18 55.7**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.8						
KAF	**Kangasniemi**	**84.77**	**332**	eP	**P**	**20 18 55.7**	**-0.6**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
AKASG	**Malin Array Be**	**85.62**	**321**	P	**P**	**20 18 59.6**	**-1.2**
	comp=Z,2.2nm,0.5s,mb4.3,baz=65,slow=5.2,SNR=16						
AKASG	**Malin Array Be**	**85.62**	**321**	iP	**P**	**20 18 59.5**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA	**NORSAR Array B**	**91.91**	**334**	P	**P**	**20 19 28.9**	**-1.4**
	comp=Z,1.0nm,0.9s,mb4.1,baz=135,slow=19,SNR=3.2						
YKA	**Yellowknife Ar**	**93.60**	**24**	P	**P**	**20 19 39.0**	**+0.9**
	comp=Z,0.9nm,0.7s,mb4.2,baz=302,slow=4.4,SNR=6.7						
YKA				pP	pP	20 20 07.4	-1.1
	comp=Z,0.5nm,0.8s,baz=306,slow=5.1,SNR=2.7						
YKA	**Yellowknife Ar**	**93.60**	**24**	P	**P**	**20 19 39.0**	**+0.9**
YKA				pP	pP	20 20 07.5	-1.1
GERES	**GERESS Array B**	**95.76**	**322**	P	**P**	**20 19 48.0**	**-0.3**
	comp=Z,0.4nm,0.5s,mb4.1,baz=76,slow=5.6,SNR=6.2						
ANMO	**Albuquerque**	**113.07**	**45**	⇓iPKIKP	PKiKP	20 24 52.3	-7.1
SCHQ	**Schefferville**	**113.80**	**8**	PKiKP	PKiKP	20 24 59.5	-0.6
	comp=Z,2.2nm,0.7s,baz=90,slow=16,SNR=2.6						
TORD	**Torodi Ar. Bea**	**119.30**	**292**	PKP	PKPdf	20 25 10.9	-0.9
	comp=Z,0.7nm,0.6s,baz=68,slow=1.7,SNR=17						
SADO	**Sadowa**	**120.38**	**20**	PKP	PKPdf	20 25 12.7	-0.4
	baz=74,slow=7.4						
TKL	**Tuckaleechee C**	**126.18**	**29**	PKP	PKPdf	20 25 25.1	+0.6
	comp=Z,1.0nm,0.3s,baz=130,slow=3.4,SNR=4.6						
DBIC	**Dimbokro**	**127.55**	**287**	PKP	PKPdf	20 25 27.8	+0.1
	comp=Z,2.3nm,0.6s,baz=168,slow=9.3,SNR=2.3						
DBIC	**Dimbokro**	**127.55**	**287**	PKP	PKPdf	20 25 27.8	+0.1
PLCA	**Paso Flores**	**147.02**	**157**	PKPbc	PKPbc	20 26 05.6	+0.9
	comp=Z,3.1nm,0.8s,baz=199,slow=4.7,SNR=6.8						
PLCA				pPKPbc	pPKPbc	20 26 35.8	-0.3
	comp=Z,1.4nm,0.6s,baz=320,slow=1.0,SNR=2.6						
LPAZ	**La Paz**	**165.74**	**114**	PKP	PKPdf	20 26 29.5	+2.3
	comp=Z,1.0nm,0.8s,baz=348,slow=5.1,SNR=5.0						

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*IDC **01** 20:22:17.0±0.7, 2483N×110.16W, h0km, mb4.0/8, mb1 4.1/13, mb1mx4.0/26, mbtmp3.9/13, ML3.4/5, MS4.6/2, Ms1 4.6/2, ms1mx3.7/34, Error ellipse: s-maj=20.9km s-min=8.4km az=99.0*
*ISCJB **01** 20:22:17.3±0.5, 2477N±005×11003W±008, h10km, mb4.0/14, Error ellipse: s-maj=11.1km s-min=6.1km az=160.2*
*NEIC **01** 20:22:18.7±0.4, 2475N×11005W, h10km, mb4.3/18, Error ellipse: s-maj=9.4km s-min=5.6km az=73.0*
ISC 01 20:22:18.8±0.5, **2474N**±005×**11006W**±008, **h10km, n54, σ1s07**/53, **mb4.0**/14, **Baja California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.67**	**200**	Pg	**Pg**	**20 22 30.5**	**-1.3**
	571nm,0.3s,baz=15,slow=5.4,SNR=56						
LPIG				Lg		20 22 41.0	
	2μm,0.3s,baz=173,slow=21,SNR=37						
TUC	**Tucson**	**7.57**	**355**	ePn	**Pn**	**20 24 04.2**	**-5.0**
	6.1nm,0.8s						
BNM	**Barren Site**	**9.84**	**17**	ePn	**Pn**	**20 24 39.9**	**-0.5**
ANMO	**Albuquerque**	**10.64**	**16**	Pn	**Pn**	**20 24 49.5**	**-1.8**
	0.0nm,0.3s,baz=211,slow=14,SNR=5.2						
ANMO	**Albuquerque**	**10.64**	**16**	ePn	**Pn**	**20 24 49.3**	**-2.1**
	28nm,1.5s						
LDFC	**Landfair**	**11.19**	**338**	Pn	**Pn**	**20 24 59.8**	**+1.0**
MVCO	**Mesa Verde**	**12.50**	**6**	ePn	**Pn**	**20 25 21.1**	**+4.3**
	8.5nm,1.2s						
SDCO	**Great Sand Dun**	**13.54**	**16**	ePn	**Pn**	**20 25 30.8**	**-0.1**
	4.4nm,1.4s						
PV10	**Paradox Valley**	**13.62**	**3**	ePn	**Pn**	**20 25 34.1**	**+2.0**
MSU	**Marysvale**	**13.85**	**353**	ePn	**Pn**	**20 25 37.6**	**+2.5**
NLU	**North Lily Min**	**15.27**	**354**	ePn	**Pn**	**20 25 54.0**	**-0.3**
MPU	**Maple Canyon**	**15.29**	**355**	Pn	**Pn**	**20 25 53.2**	**-1.5**
	12nm,1.2s						
NVAR	**Mina Array Bea**	**15.34**	**335**	Pn	**Pn**	**20 25 57.4**	**+2.1**
	0.1nm,0.3s,baz=144,slow=12,SNR=4.9						
DUG	**Dugway**	**15.58**	**352**	ePn	**Pn**	**20 26 04.3**	**+5.8**
	45nm,1.4s						
DAU	**Daniels Canyon**	**15.66**	**357**	ePn	**Pn**	**20 26 04.0**	**+4.4**
CMIG	**Matias Romero**	**16.08**	**115**	Pn	**Pn**	**20 26 04.2**	**-0.9**
	0.1nm,0.3s,baz=13,slow=7.1,SNR=2.7						
CMIG				LR	LR	20 32 27.1	
	comp=Z,2μm,18.2s,baz=282,slow=38						
ELK	**Elko**	**16.54**	**346**	Pn	**Pn**	**20 26 09.6**	**-1.3**
	0.1nm,0.3s,baz=30,slow=20,SNR=4.3						
ELK	**Elko**	**16.54**	**346**	Pn	**Pn**	**20 26 09.6**	**-1.3**
ELK				ePn	**Pn**	**20 26 11.6**	**+0.8**
HWUT	**Hardware Ranch**	**16.87**	**356**	ePn	**Pn**	**20 26 16.4**	**+1.5**
	68nm,1.4s						
HVU	**Hansel Valley**	**17.14**	**353**	ePn	**Pn**	**20 26 19.0**	**+0.6**
	82nm,1.7s						
PDAR	**Pinedale Array**	**17.99**	**1**	P	**Pn**	**20 26 28.4**	**-0.4**
	0.1nm,0.3s,baz=163,slow=10.0,SNR=15						
AHID	**Auburn Hatcher**	**18.00**	**358**	Pn	**Pn**	**20 26 29.3**	**+0.2**
REDW	**Red Top Meadow**	**18.59**	**358**	eP	**Pn**	**20 26 34.5**	**-1.8**
	15nm,1.4s						
RRI2	**Red Ridge**	**18.59**	**357**	eP	**Pn**	**20 26 36.5**	**+0.2**
	57nm,1.5s						
LOHW	**Long Hollow**	**18.83**	**359**	eP	**Pn**	**20 26 38.7**	**-0.5**
	20nm,1.5s						
WVOR	**Wild Horse Val**	**19.02**	**340**	eP	**Pn**	**20 26 41.9**	**+0.4**
	6.7nm,1.1s						
MCMT	**McKenzie Canyo**	**20.17**	**354**	eP	**P**	**20 26 53.5**	**+0.2**
RLMT	**Red Lodge**	**20.35**	**2**	eP	**P**	**20 26 55.1**	**-0.1**
	10nm,1.3s						
TEIG	**Tepich**	**20.62**	**98**	P	**P**	**20 26 58.5**	**+0.2**
	10nm,1.0s,baz=276,slow=20,SNR=7.9						
TEIG	**Tepich**	**20.62**	**98**	P	**P**	**20 26 58.5**	**+0.2**
BOZ	**Bozeman (W)**	**20.90**	**357**	eP	**P**	**20 27 00.8**	**-0.4**
	33nm,1.5s						
BMO	**Blue Mountains**	**20.91**	**345**	eP	**P**	**20 27 01.5**	**+0.2**
	23nm,1.4s						
GCMT	**Greycliff**	**21.01**	**1**	eP	**P**	**20 27 02.2**	**-0.2**
PLAL	**Pickwick Lake**	**21.58**	**57**	eP	**P**	**20 27 08.2**	**-0.5**
	8.5nm,1.0s,mb4.1						
SIUC	**Southern Illin**	**21.96**	**49**	eP	**P**	**20 27 13.5**	**+0.8**
	15nm,0.9s,mb4.4						
LNOR	**Lincton Mounta**	**22.10**	**345**	eP	**P**	**20 27 14.6**	**+0.5**
LAO	**LASA Array**	**22.12**	**7**	eP	**P**	**20 27 15.1**	**+0.8**
	32nm,1.1s,mb4.7						
CHMT	**Chamberlain Mo**	**22.27**	**354**	eP	**P**	**20 27 15.7**	**-0.2**
RSW	**Rattlesnake Hi**	**22.92**	**343**	P	**P**	**20 27 21.9**	**-1.0**
EGMT	**Eagleton**	**23.24**	**1**	eP	**P**	**20 27 25.7**	**-0.5**
	9.1nm,1.0s,mb4.2						
NEW	**Newport**	**24.13**	**348**	eP	**P**	**20 27 33.6**	**-1.1**
	3.6nm,0.9s,mb3.8						
WCI	**Wyandotte Cave**	**24.24**	**51**	eP	**P**	**20 27 36.4**	**+0.5**
	3.7nm,0.7s,mb3.9						
WALA	**Waterton Lakes**	**24.46**	**354**	eP	**P**	**20 27 37.6**	**-0.1**
	16nm,1.2s,mb4.3						
TKL	**Tuckaleechee C**	**25.11**	**58**	P	**P**	**20 27 44.1**	**+0.3**
	5.8nm,0.9s,mb4.1,baz=204,slow=11,SNR=6.5						
ULM	**Lac du Bonnet**	**27.74**	**20**	P	**P**	**20 28 05.7**	**-1.7**
	4.6nm,0.9s,mb4.1,baz=243,slow=6.3,SNR=3.2						
YKA	**Yellowknife Ar**	**37.87**	**357**	P	**P**	**20 29 32.9**	**-2.6**
	1.1nm,0.9s,mb3.6,baz=172,slow=10.0,SNR=4.2						
YKA	**Yellowknife Ar**	**37.87**	**357**	P	**P**	**20 29 32.9**	**-2.6**
SDV	**Santo Domingo**	**40.72**	**106**	P	**P**	**20 30 01.1**	**+1.1**
	1.4nm,0.3s,mb4.0,baz=265,slow=19,SNR=2.4						
DAWY	**Dawson**	**43.75**	**342**	eP	**P**	**20 30 24.5**	**+0.5**
CFAA	**Coronel Fontan**	**68.83**	**142**	P	**P**	**20 33 26.1**	**+2.6**
	0.1nm,0.4s,mb3.1,baz=304,slow=3.3,SNR=4.0						
CPUP	**Villa Florida**	**71.91**	**131**	P	**P**	**20 33 42.0**	**-0.4**
	0.2nm,0.3s,mb3.5,baz=305,slow=16,SNR=2.4						
PLCA	**Paso Flores**	**74.77**	**150**	P	**P**	**20 34 00.6**	**+1.6**
	1.6nm,0.9s,mb3.9,baz=6.3,slow=9.2,SNR=2.8						
WRA	**Warramunga Arr**	**120.71**	**261**	PKP	PKPdf	20 41 12.4	+0.7
	1.1nm,0.9s,baz=62,slow=1.9,SNR=52						
ASAR	**Alice Springs**	**122.15**	**257**	PKP	PKPdf	20 41 14.9	+0.6
	0.9nm,1.0s,baz=143,slow=3.0,SNR=5.6						

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*ISCJB **01** 20:22:40.2±0.5, 2477N±005×11021W±007, h10km, mb4.5/24, Error ellipse: s-maj=9.2km s-min=6.8km az=152.7*
*NEIC **01** 20:22:41.5±0.5, 2477N×11023W, h10km, mb4.6/28, Error ellipse: s-maj=8.8km s-min=6.5km az=68.0*
*IDC **01** 20:22:42.2±0.6, 2468N×10997W, h0km, mb4.4/11, mb1 4.5/13, mb1mx4.3/24, mbtmp4.4/13, ML3.5/2, MS4.5/1, Ms1 4.4/1, ms1mx3.4/33, Error ellipse: s-maj=17.7km s-min=7.9km az=115.0*
ISC 01 20:22:41.7±0.5, **2475N**±005×**11022W**±007, **h10km, n65, σ1s10**/60, **mb4.5**/24, **Baja California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.65**	**187**	Pg	**Pg**	**20 22 53.5**	**-0.8**
	582nm,0.3s,baz=167,slow=22,SNR=4.3						
LPIG				Lg		20 23 04.1	
	6μm,0.3s,baz=313,slow=23,SNR=29						
LAZ	**Ladron**	**9.99**	**15**	ePn	**Pn**	**20 25 02.2**	**-3.0**
ANMO	**Albuquerque**	**10.68**	**17**	Lg		20 28 08.9	
	0.1nm,0.3s,baz=180,slow=20,SNR=2.9						
ANMO	**Albuquerque**	**10.68**	**17**	ePn	**Pn**	**20 25 14.1**	**-0.6**
	26nm,1.5s						
JCT	**Junction City**	**10.86**	**56**	ePn	**Pn**	**20 25 14.1**	**-3.1**
	3.4nm,0.7s						
MVCO	**Mesa Verde**	**12.51**	**6**	Pn	**Pn**	**20 25 37.9**	**-1.9**
	26nm,1.1s						
ISA	**Isabella**	**13.00**	**329**	ePn	**Pn**	**20 25 51.4**	**+5.0**
	8.5nm,0.9s						
SDCO	**Great Sand Dun**	**13.57**	**16**	ePn	**Pn**	**20 25 52.3**	**-1.9**
	10nm,1.3s						
PV10	**Paradox Valley**	**13.62**	**4**	Pn	**Pn**	**20 25 55.3**	**+0.3**
NVAR	**Mina Array Bea**	**15.27**	**335**	Pn	**Pn**	**20 26 22.9**	**+5.7**
	0.2nm,0.3s,baz=165,slow=13,SNR=12						
MPU	**Maple Canyon**	**15.27**	**356**	ePn	**Pn**	**20 26 21.8**	**+4.5**
	45nm,1.5s						
CMB	**Columbia Colle**	**15.82**	**329**	ePn	**Pn**	**20 26 32.0**	**+7.5**
	20nm,1.4s						
JLU	**Jordanelle**	**15.84**	**357**	ePn	**Pn**	**20 26 28.1**	**+3.4**
CMIG	**Matias Romero**	**16.22**	**115**	Pn	**Pn**	**20 26 29.6**	**-0.2**
	0.2nm,0.3s,baz=306,slow=11,SNR=4.5						
HWUT	**Hardware Ranch**	**16.85**	**357**	ePn	**Pn**	**20 26 38.7**	**+1.0**
	59nm,1.3s						
MIAR	**Mount Ida**	**17.44**	**52**	ePn	**Pn**	**20 26 46.2**	**+1.2**
	13nm,0.9s						
PDAR	**Pinedale Array**	**17.98**	**2**	P	**Pn**	**20 26 51.6**	**-0.1**
	0.1nm,0.3s,baz=164,slow=11,SNR=11						
KSU1	**Kansas State U**	**18.36**	**36**	ePn	**Pn**	**20 26 57.0**	**+0.6**
	16nm,0.6s						
UALR	**University of**	**18.44**	**53**	eP	**Pn**	**20 26 57.5**	**+0.1**
	8.5nm,0.8s						
SNOW	**Snow King Moun**	**18.67**	**359**	ePn	**Pn**	**20 27 01.1**	**+1.0**
	82nm,1.6s						
WVOR	**Wild Horse Val**	**18.96**	**341**	ePn	**Pn**	**20 27 02.9**	**-0.8**
	41nm,1.4s						
YBH	**Yreka Blue Hor**	**19.86**	**332**	P	**Pn**	**20 27 16.0**	**+1.5**
	1.7nm,0.7s,baz=96,slow=6.0,SNR=4.8						
RSSD	**Black Hills**	**19.97**	**13**	eP	**Pn**	**20 27 18.5**	**+2.7**
	9.2nm,1.1s						
RLMT	**Red Lodge**	**20.34**	**2**	eP	**P**	**20 27 17.4**	**-0.6**
	15nm,1.2s						
OXF	**Oxford**	**20.51**	**57**	eP	**P**	**20 27 21.1**	**+1.1**
	44nm,1.3s						
DLMT	**Dillon**	**20.66**	**355**	eP	**P**	**20 27 21.9**	**+0.4**
	45nm,1.8s						
TEIG	**Tepich**	**20.77**	**98**	P	**P**	**20 27 22.3**	**-0.6**
	14nm,0.8s,baz=277,slow=10,SNR=10						
TEIG	**Tepich**	**20.77**	**98**	P	**P**	**20 27 22.3**	**-0.6**
GCMT	**Greycliff**	**21.00**	**1**	eP	**P**	**20 27 24.8**	**-0.4**
FVM	**French Village**	**21.39**	**47**	eP	**P**	**20 27 29.7**	**+0.2**
	35nm,1.3s,mb4.5						
PLAL	**Pickwick Lake**	**21.70**	**57**	eP	**P**	**20 27 32.1**	**-0.8**
	22nm,0.9s,mb4.6						
SIUC	**Southern Illin**	**22.07**	**49**	eP	**P**	**20 27 36.9**	**+0.2**
	21nm,0.8s,mb4.6						
LAO	**LASA Array**	**22.13**	**7**	eP	**P**	**20 27 35.8**	**-1.5**
	113nm,1.4s,mb5.1						
MSO	**Missoula**	**22.23**	**353**	P	**P**	**20 27 37.9**	**-0.5**
	19nm,1.4s,mb4.3						
EGMT	**Eagleton**	**23.23**	**1**	eP	**P**	**20 27 48.4**	**-0.6**
	86nm,1.5s,mb5.0						
OLIL	**Olney**	**23.34**	**48**	eP	**P**	**20 27 50.1**	**-0.1**
	23nm,1.0s,mb4.6						
OD2	**Odessa Site #2**	**23.58**	**345**	P	**P**	**20 27 53.4**	**+0.7**
NEW	**Newport**	**24.09**	**349**	eP	**P**	**20 27 55.7**	**-1.5**
	12nm,1.0s,mb4.3						
ETW	**Entiat**	**24.18**	**343**	P	**P**	**20 27 56.2**	**-1.9**
WCI	**Wyandotte Cave**	**24.35**	**51**	eP	**P**	**20 28 00.3**	**+0.6**
	7.6nm,0.8s,mb4.2						
WALA	**Waterton Lakes**	**24.44**	**354**	eP	**P**	**20 27 59.8**	**-0.6**
	29nm,1.0s,mb4.7						
JFWS	**Jewell Farm**	**24.46**	**37**	P	**P**	**20 27 59.9**	**-0.8**
TKL	**Tuckaleechee C**	**25.24**	**58**	P	**P**	**20 28 08.3**	**+0.5**
	12nm,0.9s,mb4.4,baz=221,slow=12,SNR=8.2						
COWI	**Conover**	**27.21**	**33**	eP	**P**	**20 28 21.8**	**-3.9**
	19nm,1.1s,mb4.5						
ULM	**Lac du Bonnet**	**27.79**	**20**	P	**P**	**20 28 30.9**	**+0.2**
	15nm,1.2s,mb4.5,baz=222,slow=8.3,SNR=6.2						
EDM	**Edmonton**	**28.53**	**356**	eP	**P**	**20 28 38.1**	**+0.8**
YKA	**Yellowknife Ar**	**37.85**	**357**	P	**P**	**20 30 01.3**	**+3.1**
	6.2nm,1.2s,mb4.2,baz=171,slow=7.9,SNR=11						
SDV	**Santo Domingo**	**40.87**	**106**	P	**P**	**20 30 25.5**	**+1.4**
	1.4nm,0.4s,mb4.0,baz=321,slow=14,SNR=3.0						
SDV	**Santo Domingo**	**40.87**	**106**	P	**P**	**20 30 24.4**	**+0.2**
	4.1nm,0.8s,mb4.1						
SDV				P	pP	20 30 25.5	-1.7
DAWY	**Dawson**	**43.69**	**342**	eP	**P**	**20 30 46.9**	**+0.4**
SCHQ	**Schefferville**	**43.79**	**35**	P	**P**	**20 30 47.9**	**+0.4**
	6.7nm,0.9s,mb4.3,baz=259,slow=2.8,SNR=3.9						
KDAK	**Kodiak Island**	**44.65**	**329**	P	**P**	**20 30 58.6**	**+4.4**
	4.6nm,0.9s,mb4.3,baz=140,slow=4.8,SNR=4.6						
EGAK	**Eagle**	**44.74**	**342**	eP	**P**	**20 30 55.0**	**+0.2**
	11nm,1.1s,mb4.6						
COLA	**College**	**46.85**	**339**	eP	**P**	**20 31 11.8**	**+0.3**
	14nm,1.1s,mb4.8						
SVW2	**Sparrevohn**	**47.60**	**332**	eP	**P**	**20 31 17.0**	**-0.4**
IMA2	**Indian Mountai**	**49.51**	**338**	eP	**P**	**20 31 32.9**	**+0.8**
PLCA	**Paso Flores**	**74.86**	**150**	P	**P**	**20 34 22.6**	**+0.2**
	4.1nm,1.0s,mb4.3,baz=302,slow=5.7,SNR=4.3						
ARCES	**ARCESS Array B**	**80.75**	**14**	P	**P**	**20 34 56.9**	**+2.0**
	1.2nm,0.7s,mb3.9,baz=352,slow=4.3,SNR=5.3						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	83.05	319	eP	P	20 35 11.2	+3.8
	12nm,1.0s,mb4.9						
MAJO	Matsushiro	91.28	311	eP	P	20 35 46.0	-1.6
	5.9nm,0.9s,mb4.9						
MJAR	Matsushiro Arr	91.28	311	P	P	20 35 52.2	+4.5
	5.2nm,1.1s,mb4.8,baz=52,slow=3.2,SNR=9.6						
SONM	Songino Array	100.60	336	P	Pdif	20 36 33.8	+4.0
	0.6nm,0.9s,baz=347,slow=3.3,SNR=4.3						
WRA	Warramunga Arr	120.57	261	PKP	PKPdf	20 41 37.2	+2.9
	3.5nm,1.0s,baz=70,slow=2.4,SNR=4.8						
ASAR	Alice Springs	122.00	257	PKP	PKPdf	20 41 39.9	+2.9
	3.0nm,1.0s,baz=80,slow=2.2,SNR=11						
CMAR	Chiang Mai Arr	128.50	324	PKP	PKPdf	20 41 52.5	+2.9
	1.3nm,1.1s,baz=10,slow=1.4,SNR=5.1						

IDC 01 20:28:28.2±1.0**,009N**×**12304E,h0**km**,mb3.6**/6**,mb1 3.8**/7**, mb1mx3.6**/18**,mbtmp3.6**/7**,ML3.9**/1**,Error ellipse: s-maj=77.4km s-min=16.8km az=63.0,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.26	172	P	Pn	20 32 44.6	+1.4
	0.3nm,0.3s,baz=8.8,slow=12,SNR=11						
WRA	Warramunga Arr	22.78	152	P	P	20 33 32.3	-0.2
	1.5nm,0.5s,baz=332,slow=10,SNR=40						
WB2	Warramunga Arr	22.79	152	eP	P	20 33 32.1	-0.4
ASAR	Alice Springs	25.86	157	P	P	20 34 00.8	-0.9
	0.4nm,0.7s,baz=338,slow=12,SNR=9.1						
CTA	Charters Tower	30.31	133	P	P	20 34 42.3	+0.7
	7.7nm,1.2s,baz=140,slow=14,SNR=3.0						
SONM	Songino Array	49.71	345	P	P	20 37 23.6	+1.6
	0.3nm,0.8s,baz=158,slow=9.0,SNR=3.8						
MKAR	Makanchi Array	58.56	328	P	P	20 38 26.7	0.0
	0.2nm,0.4s,baz=114,slow=9.2,SNR=5.4						
KURK	Kurchatov	62.92	330	P	P	20 38 55.2	-1.1
	0.2nm,0.4s,baz=117,slow=5.9,SNR=5.0						

IDC 01 21:08:24.9±1.9**,221N**×**12607E,h0**km**,mb3.2**/4**,mb1 3.5**/4**, mb1mx3.3**/16**,mbtmp3.3**/4**,Error ellipse: s-maj=118.5km s-min=23.4km az=68.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.19	181	P	P	21 12 59.5	-1.8
	0.3nm,0.3s,baz=189,slow=21,SNR=6.6						
WRA	Warramunga Arr	23.46	160	P	P	21 13 36.5	+0.1
	0.9nm,0.4s,baz=341,slow=10,SNR=13						
ASAR	Alice Springs	26.83	164	P	P	21 14 08.2	+1.1
	0.1nm,0.4s,baz=339,slow=9.2,SNR=5.2						
MKAR	Makanchi Array	58.43	326	P	P	21 18 22.4	0.0
	0.1nm,0.6s,baz=101,slow=7.8,SNR=3.3						

*IDC **01** 21:19:24.8±1.2,247N×12777E,h0km,mb3.7/7,mb1 3.8/7, mb1mx3.6/16,mbtmp3.7/7,MS3.4/1,Ms1 3.4/1, ms1mx2.4/26,Error ellipse: s-maj=165.0km s-min=16.2km az=67.0*
*NEIC **01** 21:19:26.1±0.6,259N×128.12E,h10km,mb4.1/2,Error ellipse: s-maj=66.9km s-min=10.4km az=66.0*
*ISCJB **01** 21:19:27.5±0.8,25N±0.1×1279E±02,h33km,mb3.7/9, Error ellipse: s-maj=33.5km s-min=11.9km az=164.6*
ISC 01 21:19:29.9±0.8**,24N**±01×**1278E**±02**,h35**km**,n12,**σ**0^{s}66**/10**, mb3.7**/9**,1D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	Ternate	1.69	195⇓	eP	Pn	21 19 56.5	-0.5
DAV	Davao City (W)	5.12	334	LR	LR	21 22 36.3	
	comp=Z,434nm,21.1s,baz=185,slow=38						
WRA	Warramunga Arr	23.13	164	P	P	21 24 33.9	+0.7
	0.6nm,0.5s,mb3.3,baz=344,slow=11,SNR=11						
QIZ	Qiongzhong	24.12	314	eP	P	21 24 36.4	-6.3
	6.3nm,1.2s,mb3.9						
ASAR	Alice Springs	26.60	167	P	P	21 25 05.2	+0.2
	0.3nm,0.6s,mb3.0,baz=352,slow=8.2,SNR=5.6						
ASAR				PcP	PcP	21 28 28.8	-0.1
	0.2nm,0.4s,baz=350,slow=2.4,SNR=4.7						
CTAO	Charters Tower	28.77	142	eP	P	21 25 23.3	-1.3
	3.5nm,0.9s,mb4.1						
STKA	Stephens Creek	36.54	160	P	P	21 26 33.1	+0.9
	1.6nm,0.6s,mb4.0,baz=325,slow=12,SNR=8.6						
SONM	Songino Array	48.88	341	P	P	21 28 12.5	+0.4
	0.4nm,0.5s,mb3.7,baz=161,slow=7.5,SNR=4.7						
MKAR	Makanchi Array	59.24	325	P	P	21 29 28.1	+0.4
	1.8nm,0.6s,mb4.3,baz=111,slow=8.1,SNR=21						
KURK	Kurchatov	63.42	327	P	P	21 29 55.5	-0.5
	0.9nm,0.5s,mb4.1,baz=127,slow=6.0,SNR=9.9						
BVAR	Borovoye Array	69.00	327	P	P	21 30 31.3	-0.4
	0.1nm,0.3s,mb3.2,baz=133,slow=6.1,SNR=3.0						
LPAZ	La Paz	159.12	132	PKP	PKPdf	21 39 25.6	+0.2
	1.3nm,0.4s,baz=327,slow=2.6,SNR=10						

IDC 01 21:31:02.5±51.0**,2083S**×**17388W,h0**km**,mb3.5**/3**, mb1 3.7**/3**,mb1mx3.5**/15**,mbtmp3.5**/3**,Error ellipse: s-maj=974.0km s-min=176.4km az=85.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.13	245	P	P	21 38 46.9	-1.7
	0.6nm,0.4s,baz=230,slow=18,SNR=3.1						
ASAR	Alice Springs	48.20	256	P	P	21 39 47.0	+1.9
	0.4nm,0.8s,baz=89,slow=8.2,SNR=6.1						
WRA	Warramunga Arr	48.37	261	P	P	21 39 46.3	-0.2
	0.4nm,0.7s,baz=96,slow=7.0,SNR=6.0						

*CSEM **01** 22:10:31.7±0.3,4424N×1523E,h15km,MD3.1/1,Error ellipse: s-maj=7.4km s-min=5.3km az=117.0*
*ROM **01** 22:10:32.0±0.4,4432N×1556E,h10km,Md3.1/1,Ml2.8/4, Error ellipse: s-maj=4.8km s-min=3.4km az=62.0*
*ISCJB **01** 22:10:33.1±0.6,4437N±002×1544E±003,h10km±3km, Error ellipse: s-maj=3.7km s-min=3.3km az=158.4*
*VIE **01** 22:10:35.1±0.4,4446N×1558E,h10km,mb2.1/3,ML2.5/4, Error ellipse: s-maj=3.3km s-min=2.4km az=52.0*
*IPEC **01** 22:10:36.0±0.5,4449N×1570E,h14km±2km,ML1.7/1, Error ellipse: s-maj=3.1km s-min=2.2km az=84.0*
*BEO **01** 22:10:47.8±2.7,41.11N×20.18E,h14km±4km,ML2.4/1*
ISC 01 22:10:33.6±0.7**,4436N**±002×**1547E**±003**,h9**km±4km**,n37,** σ**1^{s}10**/69**,3C-8D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NVLJ	Novalja	0.47	296	ePg	Pg	22 10 42.0	-0.8
NVLJ				Sg	Sg	22 10 50.0	+1.0
BOJS	Bojanci	1.16	353	i Pg	Pn	22 10 55.1	-0.8
BOJS				eSg	Sn	22 11 11.1	-0.8
BOJS							
	comp=Z,57nm,0.4s						
SISC	Sisak	1.29	30	ePg	Pg	22 10 57.8	-0.5
SISC				Sg	Sg	22 11 15.6	+0.6
SISC	Sisak	1.29	30	ePg	Pn	22 10 57.8	+0.1
SISC				Sg	Sn	22 11 15.5	+0.5
BLY	Banja Luka	1.29	72	ePn	Pn	22 10 56.7	-1.0
BLY				eSn	Sn	22 11 13.5	-1.6
CRES	Cresnjev	1.47	360	ePn	Pn	22 11 00.9	+0.7
CRES				eSg	Sg	22 11 19.4	-1.4
VISS	Visnje	1.51	343	i Pn	Pn	22 11 01.5	+0.7
VISS				i Sn	Sn	22 11 22.8	+2.2
VISS							
	comp=Z,31nm,0.3s						
CEY	Cerknica	1.56	332	i Pn	Pn	22 11 02.0	+0.5
CEY				eSn	Sn	22 11 25.1	+3.2
CEY							
	comp=Z,20nm,0.2s						
CEY	Cerknica	1.56	332	ePn	Pn	22 11 01.9	+0.4
CEY				eSg	Sg	22 11 25.0	+1.1
SKDS	Skadanscina	1.57	320	i Pn	Pn	22 11 01.3	-0.3
LJU	Ljubljana	1.81	339	ePn	Pn	22 11 05.7	+0.7
LJU				eSn	Sn	22 11 32.0	+4.0
LJU	Ljubljana	1.81	339	ePn	Pn	22 11 06.0	+1.1
LJU				eSg	Sg	22 11 31.1	-0.7
VOJS	Vojsko	2.01	327	i Pn	Pn	22 11 07.9	+0.2
FSSB	Fossombrone	2.05	252	Pg	Pn	22 11 07.8	-0.4
FSSB				Sg	Sn	22 11 33.6	-0.2
	comp=Z,78nm,0.4s						
STON	Ston	2.20	132	ePn	Pn	22 11 10.2	0.0
STON				Sn	Sn	22 11 39.2	+1.7
OBKA	Obir	2.25	344⇓	ePn	Pn	22 11 12.0	+1.1
	SNR=12						
OBKA				⇓iSn	Sn	22 11 39.6	+0.9
OBKA	Obir	2.25	344	Pn	Pn	22 11 12.0	+1.1
	SNR=12						
OBKA				Sn	Sn	22 11 39.6	+0.9
OBKA				eSg	Sg	22 11 42.9	-2.9
NRCA	Norcia	2.29	229⇓	iPg	Pn	22 11 10.7	-0.8
NRCA				Sg	Sn	22 11 39.0	-0.7
	comp=Z,10.0nm,0.2s						
SOKA	Soboth	2.34	353⇓	iPn	Pn	22 11 12.7	+0.5
SOKA				⇓iSn	Sn	22 11 41.9	+0.9
LNSS	Leonessa	2.49	226	Pn	Pn	22 11 13.5	-0.7
LNSS				Sn	Sn	22 11 45.0	+0.3
	comp=Z,77nm,0.3s						
FAGN	Fagnano	2.50	214	Pg	Pn	22 11 13.5	-0.9
	comp=Z,41nm,0.4s						
TREB	Trebinje	2.66	127	ePn	Pb	22 11 22.9	+1.5
TREB				eSn	Sn	22 11 48.7	-0.2
RGNG	Rignano Grg	2.68	178	Pn	Pn	22 11 15.1	-1.8
BBLS	Lazići	2.88	98	ePn	Pg	22 11 33.3	+4.5
BBLS				eSg	Sg	22 12 16.4	+10
ARSA	Arzberg	2.89	1⇓	iPn	Pn	22 11 20.1	+0.3
ARSA				⇑iSn	Sn	22 11 54.2	-0.4
ARSA	Arzberg	2.89	1	ePn	Pn	22 11 20.0	+0.2
ARSA				Sn	Sn	22 11 54.2	-0.5
CTI	Castel Tesino	3.18	303	Pn	Pn	22 11 24.3	+0.5
CTI				Sn	Sn	22 12 01.4	-0.4
	comp=Z,4.0nm,0.6s						
DIVS	Divibare	3.26	93	ePn	Pb	22 11 34.1	+2.5
DIVS				eSg	Sg	22 12 23.6	+5.2
CONA	Conrad Observa	3.58	4⇓	iPn	Pn	22 11 29.3	0.0
	SNR=6.8						
CONA				⇑iSn	Sn	22 12 11.5	-0.1
CONA	Conrad Observa	3.58	4	Pn	Pn	22 11 29.3	+0.1
	comp=Z,6.0nm,8.0s						
CONA				Sn	Sn	22 12 11.5	-0.1
MOA	Molln	3.59	347⇓	iPn	Pn	22 11 29.8	+0.5
	SNR=7.5						
MOA				⇑iSn	Sn	22 12 12.6	+0.7
MOA	Molln	3.59	347	Pn	Pn	22 11 29.8	+0.4
	SNR=7.5						
MOA				eSn	Sn	22 12 13.5	+1.7
MODS	Modra-Piesok	4.21	17	eSG	Sn	22 12 22.7	-4.3
BZS	Buzias	4.54	72	ePn	Pb	22 11 56.8	+3.4
KOLL	Kolacno	4.68	25	ePG	Pn	22 11 44.0	-0.4
KOLL				eSG	Sn	22 12 36.1	-2.7
VYHS	Vyhne	4.75	28	ePG	Pn	22 11 44.6	-0.7
VYHS				eSG	Sn	22 12 37.2	-3.2
KRUC	Moravsky	4.75	7	ePn	Pn	22 11 45.2	-0.1
KRUC				eSn	Sn	22 12 37.8	-2.6

*JMA **01** 22:11:10.4±0.2,2185N×12165E,h70km*
TAP 01 22:11:07.9,2188N×**12143E,h30**km**,ML3.2,2C-1D,C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.20	35⇑	iP	Pb	22 11 14.2	0.0
	baz=41						
LAY				i S	Sb	22 11 18.7	+0.3
	baz=41						
TWK1	Hengchun	0.58	277⇑	iP	Pb	22 11 20.0	+0.3
	baz=284						
TWK1				S	Sb	22 11 28.1	+0.4
	baz=284						
HEN	Hengchun	0.66	281	P	Pb	22 11 21.0	+0.1
	baz=288						
HEN				eS	Sb	22 11 29.1	-0.7
	baz=288						
TAW	Tawu	0.69	314	eP	Pb	22 11 21.4	-0.1
	baz=314						
TAW				eS	Sb	22 11 30.3	-0.4
	baz=314						
EAST	Anshuo	0.74	313⇓	iP	Pn	22 11 21.9	-0.4
	baz=313						
EAST				i S	Sb	22 11 31.8	-0.3
	baz=313						
ECL	Taimali	0.84	328	P	Pn	22 11 23.2	-0.5
	baz=328						
ECL				S	Sb	22 11 34.6	-0.4
	baz=328						
SCZT	Fangliau	0.90	303	eP	Pn	22 11 25.6	+1.1
	baz=313						
TTN	Taitung	0.91	343	eP	Pn	22 11 24.8	+0.1
	baz=329						
TTN				eS	Sn	22 11 39.6	+2.9
	baz=329						
TWG	Pinlang	1.00	341	P	Pn	22 11 25.6	-0.3
	baz=340						
TWG				eS	Sn	22 11 38.7	-0.2
	baz=340						
SSD	Sandimen	1.14	320	eP	Pn	22 11 29.6	+1.9
	baz=326						
SSD				eS	Sn	22 11 42.4	+0.1
	baz=326						
CHKT	Chengkung	1.22	357	P	Pn	22 11 29.7	+0.8
	baz=6.0						
CHKT				S	Sn	22 11 44.3	-0.1
	baz=6.0						
TWM1	Shoushan	1.32	315	eP	Pn	22 11 33.6	+3.2
	baz=325						
STYT	Tauyuan	1.42	334	eP	Pn	22 11 32.8	+1.1
	baz=334						
STYT				eS	Sn	22 11 49.7	+0.3
	baz=334						
SGST	Jiashian	1.43	327	eP	Pn	22 11 34.5	+2.6
	baz=337						
TWF1	Yuli	1.47	355	eP	Pn	22 11 32.9	+0.5
	baz=343						
TWF1				eS	Sn	22 11 50.6	0.0
	baz=343						
CHN1	Nanshi	1.55	328	eP	Pn	22 11 36.8	+3.4
	baz=327						
CHN1				eS	Sn	22 11 54.1	+1.6
	baz=327						
WTP	Ta-pu	1.56	331	eP	Pn	22 11 36.3	+2.7
	baz=340						
WTP				eS	Sn	22 11 56.0	+3.3
	baz=340						
EHY	Hungye	1.62	356	eP	Pn	22 11 35.4	+1.0
	baz=345						
EHY				eS	Sn	22 11 54.4	0.0
	baz=345						
TWK	Hsinying	1.63	328	eP	Pn	22 11 36.2	+1.7
	baz=327						
TWK				eS	Sn	22 11 57.3	+2.7
	baz=327						
YUS	Yu-Shan	1.66	345	eP	Pn	22 11 38.5	+3.5
	baz=344						
ALS	Alishan	1.73	341	eP	Pn	22 11 39.0	+3.2
	baz=331						
CHN5	Tsauling	1.85	338	eP	Pn	22 11 39.6	+2.1
	baz=337						
ESL	Shilin	1.93	0	eP	Pn	22 11 39.3	+0.7
	baz=349						
ESL				eS	Sn	22 12 02.2	+0.3
	baz=349						
SMLT	Sun Moon Lake	2.06	346	eP	Pn	22 11 43.7	+3.3
	baz=345						
TYC	Yuchr	2.09	345	eP	Pn	22 11 43.6	+2.8
	baz=344						
TYC				eS	Sn	22 12 07.6	+1.9
	baz=344						
WHF	Hehuan Shan	2.26	356	eP	Pn	22 11 46.6	+3.4
	baz=354						
WHF				eS	Sn	22 12 10.7	+0.5
	baz=354						
NNS	Nan Shan	2.55	359	eP	Pn	22 11 48.2	+1.0
	baz=357						
NNS				eS	Sn	22 12 17.4	+0.1
	baz=357						
ENTT	Nioudou	2.75	3	eP	Pn	22 11 53.1	+3.1
	baz=353						
ENTT				eS	Sn	22 12 22.5	+0.3
	baz=353						
HATJ	Hateruma jima	3.08	45	P	Pn	22 11 56.1	+1.6
HATJ				eS	Sn	22 12 30.6	+0.3
IRIF	Iriomote-Funau	3.23	40	P	Pn	22 11 58.4	+1.8
JKRS	Kuro-shima	3.34	45	P	Pn	22 11 59.6	+1.5
JKRS				eS	Sn	22 12 37.1	+0.4
JIJ	Ishigaki jima	3.52	45	P	Pn	22 12 02.0	+1.5
JIJ				eS	Sn	22 12 41.1	+0.1
JTJ	Tarama	4.08	47	P	Pn	22 12 10.0	+1.8
JTJ				eS	Sn	22 12 55.4	+0.5

*IDC **01** 22:18:26.4±1.2,1436S×7603W,h0km,mb3.7/5,mb1 3.9/8, mb1mx3.8/18,mbtmp3.7/8,ML4.1/2,Error ellipse: s-maj=42.8km s-min=14.5km az=60.0*
*ISCJB **01** 22:18:29.8±1.8,145S±0.1×760W±02,h39km±15km, mb3.9/5,Error ellipse: s-maj=32.7km s-min=9.3km az=145.6*
*NEIC **01** 22:18:31.4±0.6,1452S×7601W,h35km,mb4.3/1,Error ellipse: s-maj=18.7km s-min=7.6km az=49.0*
ISC 01 22:18:31.8±1.5**,145S**±01×**760W**±02**,h36**km±13km**,n16,** σ**0^{s}94**/17**,mb3.9**/5**,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.61	341	Pg	Pn	22 19 12.3	+0.7
	16nm,0.3s,baz=157,slow=11,SNR=19						
NNA				Lg		22 19 42.5	
	35nm,0.3s,baz=204,slow=7.6,SNR=7.1						
ARE	Arequipa	4.76	115	eP	Pn	22 19 42.0	+1.0
ARE				eS	Sn	22 20 51.0	+16
LPAZ	La Paz	7.78	104	Pn	Pn	22 20 28.0	+5.4
	1.3nm,0.3s,baz=282,slow=7.9,SNR=48						
ATAH	Atahualpa	7.80	342	Pn	Pn	22 20 19.9	-3.0
	baz=327,slow=5.1,SNR=1.8						
ATAH				Sn	Sn	22 21 50.0	+0.1
	0.7nm,0.3s,baz=132,slow=16,SNR=2.5						
LVC	Limon Verde	10.51	141	Pn	Pn	22 21 00.5	+0.6
	0.5nm,0.3s,baz=310,slow=5.2,SNR=9.0						
LVC				Sn	Sn	22 22 52.1	-4.3
	0.3nm,0.3s,baz=120,slow=19,SNR=2.2						
LVC				Lg		22 23 52.4	
	baz=260,slow=22,SNR=3.6						
SIV	San Ignacio	14.47	98	Pn	Pn	22 21 53.1	-1.0
	0.1nm,0.3s,baz=267,slow=16,SNR=4.4						
CPUP	Villa Florida	21.05	127	P	P	22 23 11.6	-1.2
	0.4nm,0.4s,baz=297,slow=10,SNR=3.2						
SDV	Santo Domingo	23.81	13	P	P	22 23 41.5	0.0
	3.5nm,0.5s,mb4.0,baz=197,slow=12,SNR=6.1						
BBGH	Gun Hill	31.90	31	eP	P	22 24 54.8	+0.8
	264nm,1.1s						
AHID	Auburn Hatcher	65.45	332	eP	P	22 29 11.6	+0.6
	1.2nm,0.5s,mb4.2						
NVAR	Mina Array Bea	65.87	325	P	P	22 29 14.1	+0.2
	0.1nm,0.3s,mb3.4,baz=125,slow=7.8,SNR=2.2						
NVAR	Mina Array Bea	65.87	325	P	P	22 29 14.1	+0.2
TORD	Torodi Ar. Bea	81.65	74	P	P	22 30 47.5	+0.6
	2.2nm,0.6s,mb4.2,baz=260,slow=5.3,SNR=30						
YKA	Yellowknife Ar	82.45	343	P	P	22 30 48.8	-1.2
	0.3nm,0.5s,mb3.5,baz=142,slow=6.0,SNR=5.5						
WRA	Warramunga Arr	134.62	222	PKP	PKPdf	22 37 46.7	-0.6
	0.5nm,0.8s,baz=133,slow=2.0,SNR=3.9						
SONM	Songino Array	146.68	357	PKPbc	PKPbc	22 38 09.7	-0.1
	1.0nm,0.6s,baz=340,slow=2.0,SNR=9.2						

*ISCJB **01** 22:27:31.5±0.3,2765N±007×4426W±006,h10km, mb4.4/52,MS3.8/12,Error ellipse: s-maj=10.8km s-min=6.2km az=149.9*
*IDC **01** 22:27:31.2±0.5,2772N×4417W,h0km,mb4.0/18, mb1 4.2/18,mb1mx4.1/25,mbtmp4.0/18,MS3.9/10, Ms1 3.9/10,ms1mx3.5/32,Error ellipse: s-maj=21.1km s-min=12.7km az=118.0*
*NEIC **01** 22:27:33.3±0.2,2765N×4423W,h10km,mb4.6/35, MS3.7/2,Error ellipse: s-maj=7.0km s-min=4.0km az=150.0*
*SZGRF **01** 22:27:59.7,3043N×4255W,h21km,mb4.3,Northern Mid-Atlantic Ridge*
ISC 01 22:27:33.5±0.3**,2766N**±007×**4422W**±006**,h10**km**,n121,** σ**0^{s}71**/112**,mb4.4**/52**,MS3.8**/12**,3C-3D,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	Babate	28.79	111	LR	LR	22 42 09.0	
	comp=Z,272nm,19.3s,MS3.9,baz=20,slow=30						
SDV	Santo Domingo	31.14	238	LR	LR	22 43 43.6	
	comp=Z,102nm,20.5s,MS3.5,baz=328,slow=31						
SCHQ	Schefferville	31.75	335	LR	LR	22 45 35.1	
	comp=Z,129nm,21.7s,MS3.6,baz=35,slow=34						
MCWV	Mont Chateau	31.78	301	eP	P	22 33 58.6	+0.6
	8.2nm,0.9s,mb4.6						
ESDC	Sonseca Array	35.31	60	P	P	22 34 27.0	-1.8
	0.4nm,0.7s,mb3.5,baz=276,slow=11,SNR=3.9						
QUIF	Quistinic	37.66	46	eP	P	22 34 48.7	-0.1
ROSF	Rostrenen	37.72	46	eP	P	22 34 49.0	-0.3
	76nm,1.4s,mb4.9						
ROSF	Rostrenen	37.72	46	eP	P	22 34 49.0	-0.3
	38nm,1.4s,mb4.9						
SJPF	Ste Jean	37.86	54	eP	P	22 34 50.9	+0.4
	56nm,1.6s,mb4.8						
SJPF	Ste Jean	37.86	54	eP	P	22 34 50.9	+0.4
	28nm,1.6s,mb4.7						
SGMF	Saint Gilles	38.15	46	eP	P	22 34 52.8	-0.1
	24nm,1.1s,mb4.5						
SGMF	Saint Gilles	38.15	46	eP	P	22 34 52.8	-0.1
	12nm,1.1s,mb4.5						
ETSF	Etsaut	38.30	55	eP	P	22 34 54.8	+0.6
EPF	Esparros	38.98	55	eP	P	22 35 00.4	+0.5
	19nm,1.2s,mb4.4						
EPF	Esparros	38.98	55	eP	P	22 35 00.4	+0.5
	9.4nm,1.2s,mb4.4						
GRR	Gorron	39.28	46	eP	P	22 35 02.2	-0.1
	62nm,1.6s,mb4.8						
GRR	Gorron	39.28	46	eP	P	22 35 02.2	-0.1
	31nm,1.6s,mb4.8						
MFF	Saint Martin d	39.30	49	eP	P	22 35 02.8	+0.3
	29nm,1.3s,mb4.5						
MFF	Saint Martin d	39.30	49	eP	P	22 35 02.8	+0.3
	14nm,1.3s,mb4.5						
LFF	La Frestale	39.57	52	eP	P	22 35 04.7	-0.1
	27nm,1.2s,mb4.6						
LFF	La Frestale	39.57	52	eP	P	22 35 04.7	-0.1
	14nm,1.2s,mb4.5						
FLN	La Foliniere	39.62	46	eP	P	22 35 05.1	-0.1
FLN				eMLR	MLR		
	comp=Z,123nm,20.2s,MS3.4						
FLN	La Foliniere	39.62	46	eP	P	22 35 05.1	-0.1
FLN				LR	LR		
	comp=Z,120nm,20.3s,MS3.7						
LDF	La Druitiere	39.81	46	eP	P	22 35 06.5	-0.2
	comp=Z,52nm,1.3s,mb4.8						
LDF	La Druitiere	39.81	46	eP	P	22 35 06.5	-0.2
	comp=Z,26nm,1.3s,mb4.8						
RJF	Les Rejaudoux	40.18	52	eP	P	22 35 09.5	-0.3
RJF				eMLR	MLR		
	comp=Z,101nm,21.0s,MS3.3						
RJF	Les Rejaudoux	40.18	52	eP	P	22 35 09.5	-0.3
RJF				LR	LR		
	comp=Z,100nm,21.0s,MS3.6						
MTLF	Montolieu	40.38	55	eP	P	22 35 11.2	-0.4
	comp=Z,18nm,1.1s,mb4.4						
MTLF	Montolieu	40.38	55	eP	P	22 35 11.2	-0.4
	comp=Z,8.8nm,1.1s,mb4.4						
CAF	Calviac	40.50	52	eP	P	22 35 12.5	0.0
	comp=Z,16nm,1.3s,mb4.3						
CAF	Calviac	40.50	52	eP	P	22 35 12.5	0.0
	comp=Z,7.8nm,1.3s,mb4.3						
TEIG	Tepich	40.77	269	LR	LR	22 49 24.7	
	comp=Z,166nm,19.5s,MS3.9,baz=199,slow=32						
TCF	Toulx Ste Croi	40.83	50	eP	P	22 35 15.2	0.0
	comp=Z,52nm,1.8s,mb4.5						
TCF	Toulx Ste Croi	40.83	50	eP	P	22 35 15.2	0.0
	comp=Z,26nm,1.8s,mb4.6						
BGF	Bois d'Agland	41.31	50	eP	P	22 35 19.0	-0.2
LASF	Ste Croix	41.65	54	eP	P	22 35 22.5	+0.5
AVF	Avril sur Loir	41.70	50	eP	P	22 35 22.2	-0.2
	comp=Z,19nm,1.2s,mb4.3						
AVF	Avril sur Loir	41.70	50	eP	P	22 35 22.2	-0.2
	comp=Z,9.4nm,1.2s,mb4.3						
SSF	Saint Saulge	41.85	49	eP	P	22 35 23.4	-0.2
	comp=Z,24nm,1.2s,mb4.4						
SSF	Saint Saulge	41.85	49	eP	P	22 35 23.4	-0.2
	comp=Z,12nm,1.2s,mb4.4						
SMF	Signal de Mont	42.00	50	eP	P	22 35 25.0	+0.1
	comp=Z,52nm,1.3s,mb4.7						
SMF	Signal de Mont	42.00	50	eP	P	22 35 25.0	+0.1
	comp=Z,26nm,1.3s,mb4.7						
LOR	Lormes	42.12	49	eP	P	22 35 25.6	-0.2
	comp=Z,33nm,1.4s,mb4.5						
LOR	Lormes	42.12	49	eP	P	22 35 25.6	-0.2
	comp=Z,17nm,1.4s,mb4.5						
VIVF	Saint-Julien-l	42.32	53	eP	P	22 35 28.2	+0.7
DBIC	Dimbokro	42.73	112	LR	LR	22 50 11.6	
	comp=Z,225nm,20.3s,MS4.0,baz=252,slow=32						
SMRF	Simiane la Rot	42.87	54	eP	P	22 35 33.1	+1.1

comp=Z,97nm,1.6s,mb5.0
SMRF Simiane la Rot 42.87 54 *e*P **P 22 35 33.1 +1.1**
comp=Z,97nm,1.6s,mb5.3
BAIF Baives 42.91 45 *e*P **P 22 35 32.8 +0.6**
comp=Z,14nm,1.0s,mb4.3
BAIF Baives 42.91 45 *e*P **P 22 35 32.8 +0.6**
comp=Z,6.8nm,1.0s,mb4.3
MEZF Maizieres J'vi 43.13 47 *e*P **P 22 35 34.1 +0.1**
comp=Z,63nm,1.5s,mb4.8
MEZF Maizieres J'vi 43.13 47 *e*P **P 22 35 34.1 +0.1**
comp=Z,63nm,1.5s,mb5.1
BDFB Brasilia 43.20 185 P **P 22 35 34.9 +0.2**
comp=Z,1.2nm,0.6s,mb3.8,baz=154,slow=3.1,SNR=3.8
GIVF Givet 43.31 45 *e*P **P 22 35 34.9 -0.5**
LMR La Mourre 43.49 55 *e*P **P 22 35 37.3 +0.3**
comp=Z,31nm,1.4s,mb4.5
LMR La Mourre 43.49 55 *e*P **P 22 35 37.3 +0.3**
comp=Z,15nm,1.4s,mb4.5
CABF La Chapelle 43.53 50 *e*P **P 22 35 37.6 +0.3**
comp=Z,22nm,1.2s,mb4.5
CABF La Chapelle 43.53 50 *e*P **P 22 35 37.6 +0.3**
comp=Z,11nm,1.2s,mb4.5
FRF La Foret Royal 43.61 55 *e*P **P 22 35 38.4 +0.4**
MBDF Montbardon 43.79 53 *e*P **P 22 35 40.7 +1.3**
LPL La Plagne 43.84 52 *e*P **P 22 35 41.0 +1.2**
comp=Z,14nm,1.2s,mb4.3
LPL La Plagne 43.84 52 *e*P **P 22 35 41.0 +1.2**
comp=Z,6.9nm,1.2s,mb4.3
LPG La Plagne 43.85 52 *e*P **P 22 35 41.3 +1.4**
HAU Haudompre 43.91 48 *e*P **P 22 35 40.0 -0.3**
comp=Z,21nm,1.2s,mb4.5
HAU Haudompre 43.91 48 *e*P **P 22 35 40.0 -0.3**
comp=Z,11nm,1.2s,mb4.5
HINF Hinteralfeld 44.21 49 *e*P **P 22 35 42.4 -0.3**
CDF Champ du Feu 44.58 48 *e*P **P 22 35 45.6 -0.1**
comp=Z,19nm,1.3s,mb4.5
CDF Champ du Feu 44.58 48 *e*P **P 22 35 45.6 -0.1**
comp=Z,9.6nm,1.3s,mb4.5
ULM Lac du Bonnet 44.99 315 P **P 22 35 47.4 -1.5**
comp=Z,2.7nm,0.6s,mb4.2,baz=103,slow=8.0,SNR=4.0
ULM LR LR 22 54 01.4
comp=Z,99nm,18.3s,MS3.8,baz=14,slow=35
TORD Torodi Ar. Bea 45.13 99 P **P 22 35 49.0 -1.4**
comp=Z,1.8nm,0.9s,mb3.9,baz=304,slow=11,SNR=5.3
TORD LR LR 22 52 00.5
comp=Z,145nm,20.5s,MS3.9,baz=350,slow=33
PGF Pioggiola 45.29 56 *e*P **P 22 35 52.3 +0.9**
SIV San Ignacio 46.36 203 P **P 22 36 00.0 0.0**
comp=Z,3.1nm,0.8s,mb4.3,baz=29,slow=6.4,SNR=20
WMOK Wichita Mounta 46.73 293 *e*P **P 22 36 02.6 -0.2**
comp=Z,3.3nm,1.2s,mb4.1
GRA1 Grafenberg Arr 47.32 47 *e*P **P 22 36 06.5 -0.8**
comp=Z,8.0nm,1.2s,mb4.5
GRA1 *e*pP pP 22 36 12.1 +1.7
GRF Grafenberg Arr 47.32 47 *e*P **P 22 36 06.5 -0.8**
comp=Z,8.0nm,1.2s,mb4.5
GRF *e*pP pP 22 36 12.1 +1.7
NKC Novy Kostel 48.17 46 *e*PP **P 22 36 19.2 +5.4**
CLL Collm 48.63 45 *i* pP pP 22 36 22.7 +2.1
comp=Z,6.0nm,1.0s
KHC Kasperske Hory 48.80 48 *e*PP **P 22 36 19.3 +0.6**
GERES GERESS Array B 48.86 48 P **P 22 36 17.9 -1.3**
comp=Z,1.0nm,0.9s,mb3.8,baz=261,slow=7.8,SNR=7.2
BRG Berggiesshubel 49.18 45 *e*P **P 22 36 21.4 -0.2**
comp=Z,5.2nm,1.0s,mb4.5
LPAZ La Paz 49.45 211 P **P 22 36 24.1 0.0**
comp=Z,1.6nm,0.6s,mb4.2,baz=13,slow=4.9,SNR=7.8
PRU Pruhonice 49.49 47 *e*x **P 22 36 29.4 +5.4**
PRU Pruhonice 49.49 47 *e*PP **P 22 36 24.1 +0.1**
NB2 NORSAR Subarra 49.59 32 P **P 22 36 24.0 -0.6**
comp=Z,10.0nm,0.9s,mb4.8,baz=254,slow=7.9
NOA NORSAR Array B 49.59 32 P **P 22 36 24.7 +0.1**
comp=Z,3.9nm,0.9s,mb4.4,baz=254,slow=7.5,SNR=7.2
UPC Upice 50.46 46 *e*PP **P 22 36 31.9 +0.5**
DPC Dobruska-Polom 50.65 46 *e*x **P 22 36 38.3 +5.5**
DPC Dobruska-Polom 50.65 46 *e*PP **P 22 36 33.0 +0.2**
ZST Bratislava 51.10 49 *e*P **P 22 36 40.5 +4.3**
comp=Z,5.8nm,1.3s,mb4.3
MODS Modra-Piesok 51.22 49 *e*P **P 22 36 42.9 +5.8**
MORC Moravsky Berou 51.42 47⇑*i*P **P 22 36 44.1 +5.5**
KOLL Kolacno 51.97 48 *e*P **P 22 36 48.1 +5.4**
PKSM Moragy 52.18 51⇑*i*P **P 22 36 50.1 +5.8**
VYHS Vyhne 52.26 49 *e*P **P 22 36 49.8 +5.0**
STHS Stebnicka Huta 53.83 47 *e*P **P 22 37 00.6 +4.2**
STHS Stebnicka Huta 53.83 47 *e*P **P 22 37 00.6 +4.2**
comp=Z,5.1nm,1.1s,mb4.4
CRVS Cervenica-Dubn 53.99 48 *e*P **P 22 37 03.5 +5.9**
PDAR Pinedale Array 54.20 304 P **P 22 36 59.1 -0.1**
comp=Z,5.8nm,0.8s,mb4.5,baz=88,slow=8.2,SNR=44
PDAR LR LR 22 58 09.1
comp=Z,154nm,18.6s,MS4.1,baz=119,slow=34
BZS Buzias 54.28 52⇑*i*P **P 22 36 58.8 -1.0**
LOHW Long Hollow 54.87 306 *e*P **P 22 37 04.5 +0.3**
comp=Z,2.2nm,0.6s,mb4.4
DRGR 54.95 51⇓*i*P **P 22 37 05.5 +0.9**
IMW Indian Meadow 55.08 306 *e*P **P 22 37 06.4 +0.7**
comp=Z,5.7nm,0.9s,mb4.6
TPAW Teton Pass 55.14 305 *e*P **P 22 37 06.6 +0.5**
comp=Z,7.0nm,0.9s,mb4.7
CPUP Villa Florida 55.14 194 P **P 22 37 05.6 -0.5**
comp=Z,0.3nm,0.3s,mb3.8,baz=46,slow=2.5,SNR=3.4
LVC Limon Verde 55.38 208 P **P 22 37 08.6 +0.7**
comp=Z,3.8nm,0.8s,mb4.5,baz=14,slow=8.3,SNR=3.2
RRI2 Red Ridge 55.42 305 *e*P **P 22 37 08.8 +0.7**
comp=Z,6.2nm,0.7s,mb4.8
SRU San Rafael 55.43 300 *e*P **P 22 37 08.9 +0.7**
comp=Z,6.3nm,0.7s,mb4.8
BURAR Bucovina Array 56.58 49⇓*i*P **P 22 37 17.4 +1.1**
YKA Yellowknife Ar 56.83 328 P **P 22 37 16.5 -1.3**
comp=Z,1.2nm,0.9s,mb3.9,baz=92,slow=7.5,SNR=9.7
YKA LR LR 23 00 48.7
comp=Z,172nm,19.7s,MS4.2,baz=50,slow=35
ARCES ARCESS Array B 57.29 23 P **P 22 37 19.9 -1.1**
comp=Z,2.8nm,0.8s,mb4.3,baz=273,slow=8.4,SNR=5.2
ARCES ARCESS Array B 57.29 23 P **P 22 37 19.9 -1.1**
MLR Muntele Rosu 57.32 52⇓*i*P **P 22 37 21.8 +0.2**
AKASG Malin Array Be 58.86 45 P **P 22 37 30.7 -1.6**
comp=Z,1.8nm,0.7s,mb4.2,baz=275,slow=5.8,SNR=9.0
CFAA Coronel Fontan 63.22 203 P **P 22 38 02.0 0.0**
comp=Z,0.3nm,0.5s,mb3.6,baz=30,slow=6.7,SNR=7.1
PLCA Paso Flores 72.30 201 P **P 22 38 59.0 -0.1**
comp=Z,3.1nm,0.9s,mb4.2,baz=5.8,slow=11,SNR=6.5
KMBO Kilima Mbogo 82.96 95 LR LR 23 15 29.0
comp=Z,114nm,19.3s,MS4.3,baz=251,slow=35
ZALV Zalesovo Beam 87.58 27 P **P 22 40 20.5 -1.2**
comp=Z,1.0nm,0.7s,mb4.2,baz=316,slow=6.2,SNR=4.6
ZALV Zalesovo Beam 87.58 27 P **P 22 40 20.5 -1.2**
MKAR Makanchi Array 91.55 34 P **P 22 40 39.6 -0.9**
comp=Z,0.7nm,1.0s,mb3.9,baz=353,slow=7.3,SNR=3.0
CMAR Chiang Mai Arr 121.91 42 PKP PKPdf 22 46 28.0 -0.8
comp=Z,1.0nm,0.8s,baz=284,slow=2.8,SNR=5.2
ASAR Alice Springs 175.68 24 PKP PKPdf 22 47 43.0 -1.4
comp=Z,0.4nm,1.0s,baz=34,slow=9.1,SNR=2.7

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*ISCJB **01** 22:40:03.1±0.5, 35.54S±0.05×71.15W±0.10, h112^{km}±4^{km}, mb4.0/7, Error ellipse: s-maj=14.5km s-min=4.5km az=26.6*
*IDC **01** 22:40:03.9±2.3, 35.50S×71.10W, h103^{km}±21^{km}, mb3.7/6, mb1 3.6/10, mb1mx3.5/18, mbtmp3.5/10, Error ellipse: s-maj=32.4km s-min=13.7km az=95.0*
*GUC **01** 22:40:04.5±0.7, 35.45S×71.26W, h111^{km}±3^{km}, MD3.8, ML4.1*
*NEIC **01** 22:40:04.5, 35.45S×71.26W, h111^{km}, MG4.1(GUC), After GUC.*
ISC 01 22:40:04.2±0.5**, 35.54S**±0.05×**71.15W**±0.10**, h106**^{km}±4^{km}**, n34,** σ**0.53**/53**, mb4.0**/7**, 10C-8D, Central Chile**

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TALC Talca 0.42 289⇑*i*P **Pn 22 40 20.4 +0.3**
TALC *i* S **Sn 22 40 31.9 -0.1**
TALC AML AML 22 40 32.8
comp=E,39μm,0.1s
TALC Talca 0.42 289⇑*i*P **Pn 22 40 20.4 +0.3**
TALC *i* S **Sn 22 40 31.9 -0.1**
NICH Los Niches 0.54 353⇑*i*P **Pn 22 40 20.6 -0.3**
SFDO San Fernando 0.93 7⇓*i*P **Pn 22 40 23.9 -0.4**
SFDO *i* S **Sn 22 40 39.5 +0.1**
CNCO Chanco 1.15 260⇑*i*P **Pn 22 40 26.5 -0.1**
CNCO *i* S **Sn 22 40 43.4 -0.1**
CCHI Chillan 1.30 215⇓*i*P **Pn 22 40 28.2 -0.2**
CCHI *i* S **Sn 22 40 46.9 +0.1**
CCHI AML AML 22 40 47.2
comp=N,2μm,0.6s
CCHI Chillan 1.30 215⇓*i*P **Pn 22 40 28.2 -0.2**
CCHI *i* S **Sn 22 40 46.9 +0.1**
CACH El Canelo 1.49 18 *i* P **Pn 22 40 31.1 +0.5**
CACH *i* S **Sn 22 40 51.6 +1.0**
CHCH Chadas Angostu 1.65 14 *i* P **Pn 22 40 32.7 +0.1**
CHCH *i* S **Sn 22 40 54.0 -0.1**
TACH Talagante 1.89 5⇑*i*P **Pn 22 40 35.3 -0.2**
PCH Pirque 1.98 15⇑*i*P **Pn 22 40 36.8 0.0**
PCH *i* S **Sn 22 41 01.7 +0.1**
ANTU Antumapu 2.01 12⇑*i*P **Pn 22 40 37.5 +0.4**
ANTU *i* S **Sn 22 41 02.4 +0.2**
ANTU AML AML 22 41 05.1
comp=E,1μm,0.4s
ANTU Antumapu 2.01 12⇑*i*P **Pn 22 40 37.5 +0.4**
ANTU *i* S **Sn 22 41 02.4 +0.2**
RCDM Rinconada Maip 2.06 8 *e*P **Pn 22 40 37.6 -0.2**
RCDM *i* S **Sn 22 41 02.4 -1.0**
RCDM AML AML 22 41 03.5
comp=E,1μm,0.2s
RCDM Rinconada Maip 2.06 8 *e*P **Pn 22 40 37.6 -0.2**
RCDM *i* S **Sn 22 41 02.4 -1.0**
SAN Santiago 2.12 11⇓*i*P **Pn 22 40 38.5 +0.1**
SAN *i* S **Sn 22 41 04.2 -0.5**
SAN AML AML 22 41 07.1
comp=E,852nm,0.5s
SAN Santiago 2.12 11⇓*i*P **Pn 22 40 38.5 +0.1**
SAN *i* S **Sn 22 41 04.2 -0.5**
CLCH Cerro Calan 2.19 13⇓*i*P **Pn 22 40 40.4 +0.9**
CLCH *i* S **Sn 22 41 07.3 +0.8**
CLCH AML AML 22 41 11.0
comp=N,1μm,0.6s
CLCH Cerro Calan 2.19 13⇓*i*P **Pn 22 40 40.4 +0.9**
CLCH *i* S **Sn 22 41 07.3 +0.8**
FCH Farellones 2.31 18⇓*i*P **Pn 22 40 41.4 +0.3**
FCH *i* S **Sn 22 41 09.7 +0.5**
FCH AML AML 22 41 13.3
comp=N,1μm,0.2s
PEL Peldehue 2.42 9⇑*i*P **Pn 22 40 42.5 +0.1**
PEL *i* S **Sn 22 41 11.2 -0.5**
PEL AML AML 22 41 13.6
comp=N,2μm,0.4s
IHA Instituto Hidr 2.54 351⇑*i*P **Pn 22 40 43.5 -0.4**
CHNG Los Chungos 3.66 355 AML AML 22 41 43.2
comp=E,198nm,0.3s
CFAA Coronel Fontan 4.61 33 P **Pn 22 41 11.0 -0.7**
comp=E,0.9nm,0.3s,baz=196,slow=12,SNR=100
CFAA S **Sn 22 42 03.3 -0.9**
comp=E,0.8nm,0.3s,baz=85,slow=10,SNR=7.9
PLCA Paso Flores 5.21 175 P **Pn 22 41 19.1 -0.6**
comp=E,0.6nm,0.3s,baz=346,slow=12,SNR=12
LVC Limon Verde 13.02 9 P **Pn 22 43 04.9 -0.3**
comp=E,0.4nm,0.3s,baz=231,slow=6.5,SNR=3.2
LPAZ La Paz 19.36 9 P **P 22 44 22.6 +1.2**
comp=E,0.2nm,0.3s,baz=187,slow=9.1,SNR=13
SIV San Ignacio 21.45 27 P **P 22 44 43.7 -0.3**
comp=E,1.2nm,0.5s,mb3.5,baz=224,slow=10,SNR=9.4
PMSA Palmer Station 29.58 174 P **P 22 45 59.7 +1.1**
comp=E,21nm,0.7s,mb4.9,baz=109,slow=12,SNR=6.7
SDV Santo Domingo 44.18 1 P **P 22 48 01.4 -1.2**
comp=E,1.5nm,0.3s,mb4.2,baz=30,slow=16,SNR=3.1
TEIG Tepich 57.79 341 P **P 22 49 44.7 +0.4**
comp=E,5.5nm,0.6s,mb4.8,baz=143,slow=4.3,SNR=6.8
BOSA Boshof 78.72 117 P **P 22 51 54.6 -0.4**
comp=E,1.3nm,0.7s,mb3.9,baz=210,slow=8.1,SNR=3.6
TORD Torodi Ar. Bea 84.05 69 P **P 22 52 23.3 +0.1**
comp=E,0.7nm,1.0s,mb3.4,baz=227,slow=5.6,SNR=5.8
PDAR Pinedale Array 85.46 333 P **P 22 52 29.8 +0.2**
comp=E,0.4nm,0.7s,mb3.5,baz=136,slow=11,SNR=3.8

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*ISCJB **01** 23:27:51.7±3.5, 56.16S±0.06×27.1W±0.1, h97^{km}±33^{km}, mb5.0/35, Error ellipse: s-maj=12.2km s-min=9.0km az=44.4*
*IDC **01** 23:27:53.6±0.5, 56.20S×27.13W, h103^{km}±3^{km}, mb4.7/22, mb1 4.7/23, mb1mx4.6/26, mbtmp4.7/23, MS4.0/8, Ms1 4.0/8, ms1mx3.8/22, Error ellipse: s-maj=13.2km s-min=9.0km az=29.0*
*BJI **01** 23:27:53.0, 56.20S×27.10W, h97^{km}*
*GCMT **01** 23:27:53.0±0.3, 56.38S×26.74W, h112^{km}±3^{km}, MW5.1/66, Moment Tensor Solution. s39,c49; s66,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.57±.21; $M_{\theta\theta}$0.57±.32; $M_{\phi\phi}$-3.14±.27; $M_{r\theta}$-4.17±.15; $M_{\theta\phi}$3.07±.22; $M_{\phi r}$1.03±.15; Best double couple: $M_0$6.02200×10^{16} NP1:ϕ_s185.00000°,δ38.00000°,λ154.00000°. NP2: ϕ_s296.00000°,δ74.00000°,λ55.00000°. Principal axes: T 6.0050, Plg48.0000°, Azm168.0000°; N 0.0330, Plg34.0000°, Azm307.0000°; P -6.0400, Plg21.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **01** 23:27:53.0±0.2, 56.19S×27.10W, mb5.3/13 Error ellipse: s-maj=7.9km s-min=6.7km az=216.0*
ISC 01 23:27:55.6±3.3**, 56.22S**±0.07×**27.1W**±0.1**, h119**^{km}±31^{km}**, h100**^{km}±1.2^{km}**:pP-P, n96,** σ**0.82**/47**, mb5.0**/35**, 3D, South Sandwich Islands region**

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PMSA Palmer Station 19.81 229 P **P 23 32 17.4 +1.2**
10nm,0.3s,baz=62,slow=7.2,SNR=35
PMSA ScP ScP 23 39 52.4 -1.0
0.7nm,0.3s,baz=93,slow=16,SNR=4.2
MAIT Maitri 22.08 146⇓*i*P **P 23 32 39.4 -1.0**
USHA Ushuaia 23.17 256 P **P 23 32 52.1 +0.9**
8.2nm,0.8s,mb4.1,baz=114,slow=13,SNR=6.4
USHA PcP PcP 23 36 35.1 -0.3
10nm,0.9s,baz=321,slow=6.5,SNR=3.5
USHA ScP ScP 23 40 01.6 -0.4
8.0nm,0.8s,baz=40,slow=7.3,SNR=3.4
TRQA Tornquist 29.41 293 *e*P **P 23 33 46.6 -0.9**
25nm,1.1s,mb4.8
SYO Syowa Base 31.43 141⇓*i*P **P 23 34 02.9 -2.1**
SYO Syowa Base 31.43 141⇓*i*P **P 23 34 06.2 +1.2**
PLCA Paso Flores 32.06 280 P **P 23 34 08.7 -2.0**
1.9nm,0.9s,mb3.8,baz=144,slow=16,SNR=5.3
PLCA PcP PcP 23 36 57.3 0.0
6.6nm,0.8s,baz=138,slow=2.9,SNR=11
PLCA ScP ScP 23 40 28.2 -1.2
4.2nm,0.7s,baz=125,slow=2.7,SNR=13
PLCA LR LR 23 46 43.4
comp=Z,262nm,21.0s,baz=124,slow=35
QSPA South Pole Qui 34.03 180 P **P 23 34 28.2 +0.8**
97nm,0.6s,mb5.8,baz=201,slow=4.7,SNR=13
QSPA PcP PcP 23 37 02.6 +0.4
25nm,0.6s,baz=228,slow=6.0,SNR=6.5
QSPA ScP ScP 23 40 35.5 -0.1
16nm,0.9s,baz=308,slow=2.2,SNR=11
QSPA LR LR 23 47 24.7
comp=Z,192nm,18.3s,baz=15,slow=34
CPUP Villa Florida 36.95 311 P **P 23 34 52.2 -0.7**
8.2nm,0.9s,mb4.7,baz=143,slow=9.3,SNR=18
CPUP pP pP 23 35 14.7 -4.7
24nm,1.0s,baz=139,slow=7.3,SNR=11
CPUP PcP PcP 23 37 11.9 +0.3
4.2nm,0.5s,baz=141,slow=2.7,SNR=6.6
CPUP ScP ScP 23 40 45.4 -1.8
4.2nm,0.9s,baz=167,slow=3.9,SNR=6.6
CFAA Coronel Fontan 37.65 293 P **P 23 34 56.9 -1.9**
0.5nm,0.4s,mb3.7,baz=148,slow=9.9,SNR=14
CFAA pP pP 23 35 20.9 -4.5
2.2nm,0.8s,baz=147,slow=7.4,SNR=8.0
CFAA PcP PcP 23 37 13.7 0.0
2.0nm,0.5s,baz=147,slow=2.6,SNR=13
CFAA LR LR 23 47 14.5
comp=Z,28nm,21.5s,baz=143,slow=31
CFAA Coronel Fontan 37.65 293 P **P 23 34 56.9 -1.9**
CFAA pP pP 23 35 20.9 -4.5
CFAA PcP PcP 23 37 13.7 0.0
CFAA LR LR 23 47 14.5
MAW Mawson 39.99 143 P **P 23 35 18.2 +0.2**
52nm,0.6s,mb5.5,baz=233,slow=7.9,SNR=282
MAW PcP PcP 23 37 20.8 +0.4
6.3nm,0.8s,baz=262,slow=7.1,SNR=3.3
MAW ScP ScP 23 40 58.5 +0.4
8.5nm,1.1s,baz=263,slow=7.0,SNR=7.9
MAW LR LR 23 49 00.2
comp=Z,135nm,19.4s,baz=56,slow=32
SUR Sutherland 40.66 75 P **P 23 35 24.4 +0.5**
14nm,1.1s,mb4.7,baz=262,slow=7.1,SNR=3.6
SUR LR LR 23 48 53.1
comp=Z,264nm,18.5s,baz=246,slow=31
BDFB Brasilia 43.53 330 P **P 23 35 48.7 +1.5**
3.9nm,0.6s,mb4.3,baz=139,slow=5.4,SNR=7.7
BDFB pP pP 23 36 10.4 -4.0
5.4nm,0.8s,baz=141,slow=3.4,SNR=4.1
BDFB LR LR 23 52 43.9
comp=Z,147nm,19.9s,baz=32,slow=34
LVC Limon Verde 45.41 300 P **P 23 36 03.2 +1.1**
23nm,0.7s,mb5.0,baz=161,slow=5.4,SNR=16
LVC pP pP 23 36 26.2 -3.3
17nm,0.7s,baz=163,slow=5.7,SNR=4.6
LVC PcP PcP 23 37 40.5 +1.2
16nm,0.7s,baz=27,slow=1.2,SNR=3.9
LVC ScP ScP 23 41 19.7 -0.9
2.8nm,0.6s,baz=114,slow=0.4,SNR=3.8
LVC Limon Verde 45.41 300 P **P 23 36 03.2 +1.1**
LVC pP pP 23 36 26.2 -3.3
LVC PcP PcP 23 37 40.5 +1.2
LVC ScP ScP 23 41 19.7 -0.9
SBA Scott Base 45.91 184 *e*P **P 23 36 05.8 +0.3**
61nm,1.1s,mb5.2
BOSA Boshof 45.99 76 P **P 23 36 06.2 -0.4**
7.3nm,0.8s,mb4.4,baz=218,slow=5.4,SNR=12
BOSA ScP ScP 23 41 21.4 -1.6
3.8nm,1.0s,baz=213,slow=10,SNR=3.2
BOSA LR LR 23 52 36.1
comp=Z,327nm,18.1s,baz=62,slow=32
SIV San Ignacio 47.71 313 P **P 23 36 19.1 -1.1**
4.3nm,0.7s,mb4.4,baz=154,slow=8.0,SNR=27
SIV pP pP 23 36 43.0 -4.7
4.1nm,0.8s,baz=178,slow=6.2,SNR=6.0
SIV PcP PcP 23 37 48.2 +0.7
6.7nm,0.7s,baz=166,slow=6.7,SNR=7.2
SIV ScP ScP 23 41 29.9 -0.4
8.0nm,0.9s,baz=152,slow=4.9,SNR=16
TSUM Tsumeb 49.74 61 *e*P **P 23 36 35.6 -0.1**
21nm,1.4s,mb4.9
LPAZ La Paz 50.50 305 P **P 23 36 42.5 +1.2**
21nm,0.8s,mb5.1,baz=153,slow=6.1,SNR=96
LPAZ PcP PcP 23 37 59.1 +1.4
4.9nm,0.5s,baz=90,slow=3.0,SNR=2.6
LPAZ ScP ScP 23 41 41.8 -0.4
1.5nm,0.7s,baz=88,slow=7.5,SNR=4.3
CASY Casey 53.74 160 *e*P **P 23 37 04.9 +0.2**
51nm,1.1s,mb5.5
NNA Nana 58.35 299 P **P 23 37 37.3 -0.9**
6.4nm,0.4s,mb5.0,baz=195,slow=6.9,SNR=3.9
LSZ Lusaka 58.41 69 *e*P **P 23 37 38.7 +0.1**
16nm,0.8s,mb5.1
ATAH Atahualpa 63.42 300 P **P 23 38 12.6 +0.2**
28nm,1.1s,mb5.1,baz=134,slow=3.3,SNR=12
ATAH pP pP 23 38 38.1 -3.4
16nm,0.9s,baz=77,slow=4.4,SNR=3.6
LIC Lamto 64.84 24 *e*P **P 23 38 22.0 +0.4**
75nm,0.7s,mb5.6
KIC Kosan Boka 65.04 25 *e*P **P 23 38 23.1 +0.2**
92nm,0.8s,mb5.6
TIC Toumodi 65.25 24 *e*P **P 23 38 24.6 +0.3**
102nm,0.9s,mb5.7
DBIC Dimbokro 65.31 24 P **P 23 38 24.2 -0.5**
15nm,0.7s,mb4.9,baz=174,slow=8.6,SNR=20
DBIC LR LR 00 00 58.6
comp=Z,162nm,18.8s,baz=209,slow=30
DBIC Dimbokro 65.31 24 P **P 23 38 24.2 -0.5**
DBIC LR LR 00 00 58.6
OTAV Otavalo 69.77 304 *e*P **P 23 38 53.8 +1.0**
86nm,1.4s,mb5.4
ROSC El Rosal 72.03 310 P **P 23 39 07.4 +1.0**
3.6nm,0.3s,mb4.6,baz=86,slow=23,SNR=6.5
ROSC pP pP 23 39 32.8 -3.2
3.3nm,0.4s,baz=92,slow=23,SNR=1.6
TORD Torodi Ar. Bea 73.19 29 P **P 23 39 13.7 +0.6**
16nm,0.6s,mb5.0,baz=200,slow=6.7,SNR=214
TORD pP pP 23 39 39.1 -3.9
31nm,0.8s,baz=199,slow=5.3,SNR=14
SDV Santo Domingo 74.15 315 P **P 23 39 19.2 +0.4**
23nm,0.8s,mb5.0,baz=188,slow=4.6,SNR=28
SDV pP pP 23 39 44.5 -4.2
16nm,0.8s,baz=194,slow=3.8,SNR=5.0
KMBO Kilima Mbogo 75.08 69 LR LR 00 11 15.0
comp=Z,73nm,18.3s,baz=252,slow=35
SJG San Juan 81.00 323 P **P 23 39 55.5 -1.3**
18nm,0.9s,mb4.9,baz=317,slow=8.6,SNR=3.1
TGUH Tegucigalpa,Un 86.00 302 *e*P **P 23 40 22.5 +0.1**
14nm,0.6s,mb5.1
TOO Toolangi 86.36 174 *e*P **P 23 40 23.8 -0.2**
MUN Mundaring 86.77 149 *e*P **P 23 40 25.7 -0.4**
KLBR Kellerberrin 87.57 151 *e*P **P 23 40 29.6 -0.4**
23nm,0.8s,mb5.3
CNB Canberra Magne 88.77 177 *e*P **P 23 40 35.9 +0.3**
FORT Forrest 90.81 159 *e*P **P 23 40 45.3 +0.1**
12nm,0.5s,mb5.3
STKA Stephens Creek 91.73 170 *e*P **P 23 40 49.0 -0.4**
9.5nm,0.6s,mb5.2
STKA Stephens Creek 91.73 170 P **P 23 40 49.1 -0.3**
12nm,0.7s,mb5.3,baz=189,slow=5.0,SNR=32
TEIG Tepich 91.83 305 P **P 23 40 50.3 +0.5**
36nm,0.7s,mb5.7,baz=84,slow=0.8,SNR=19
TEIG pP pP 23 41 16.1 -4.5
8.1nm,0.7s,baz=239,slow=0.5,SNR=1.9
CMIG Matias Romero 92.29 298 P **P 23 40 51.7 -0.3**
8.7nm,0.8s,mb5.0,baz=347,slow=1.8,SNR=6.4
CMIG LR LR 00 15 15.9
comp=Z,4μm,20.1s,baz=110,slow=31
CMIG Matias Romero 92.29 298 P **P 23 40 51.7 -0.3**
CMIG LR LR 00 15 15.9
ASAR Alice Springs 98.82 162 P **P 23 41 21.1 -0.7**
7.6nm,0.8s,mb5.3,baz=187,slow=3.8,SNR=56
WRA Warramunga Arr 102.53 162 Pdiff Pdif 23 41 36.7 -1.7
1.3nm,0.6s,baz=193,slow=4.3,SNR=7.6
WB2 Warramunga Arr 102.54 162 *e*P Pdif 23 41 37.6 -0.8
CLL Collm 112.19 26 *e*PS PS 23 56 40.0 +3.1
CLL *e*PPS 23 57 40.0
SCHQ Schefferville 115.33 336 PKiKP PKiKP 23 46 19.4 -2.2
2.6nm,0.9s,baz=200,slow=15,SNR=2.9
SCHQ Schefferville 115.33 336 PKPdf PKPdf 23 46 19.4 -2.2
AKASG Malin Array Be 116.32 36 PKiKP PKiKP 23 46 21.9 -1.8
0.3nm,0.3s,baz=255,slow=0.2,SNR=4.8
AKASG Malin Array Be 116.32 36 PKPdf PKPdf 23 46 21.9 -1.8
MSU Marysvale 118.45 297 *e*P PKPdf 23 46 29.1 +0.9
TPNV Topopah Spring 119.31 293 *e*P PKPdf 23 46 30.5 +0.5
DUG Dugway 120.06 298 *e*PKPdf PKPdf 23 46 31.6 +0.3
ULM Lac du Bonnet 120.39 316 PKP PKPdf 23 46 29.6 -1.9
2.5nm,0.5s,baz=88,slow=8.7,SNR=5.8
HWUT Hardware Ranch 120.53 300 *e*PKPdf PKPdf 23 46 31.7 -0.4
NB2 NORSAR Subarra 120.76 21 PKPdf PKPdf 23 46 31.4 -0.5
comp=Z,1.0nm,0.8s,baz=202,slow=1.9
NB2 NORSAR Subarra 120.76 21 PKPdf PKPdf 23 46 31.3 -0.6
comp=Z,1.0nm,0.8s,baz=202,slow=1.9
NOA NORSAR Array B 120.76 21 PKP PKPdf 23 46 32.0 +0.1
comp=Z,1.9nm,0.8s,baz=205,slow=1.9,SNR=5.0
NVAR Mina Array Bea 121.49 293 PKP PKPdf 23 46 35.3 +1.2
comp=Z,2.7nm,0.7s,baz=146,slow=2.9,SNR=18
ELK Elko 121.68 297 PKP PKPdf 23 46 35.5 +1.1
comp=Z,3.4nm,0.8s,baz=222,slow=3.0,SNR=12
CMB Columbia Colle 122.27 291 *e*PKPdf PKPdf 23 46 35.4 -0.1
WVOR Wild Horse Val 124.64 296 *e*PKPdf PKPdf 23 46 40.8 +0.8
LBCM Butte Creek Ri 124.85 293 P PKPdf 23 46 41.3 +0.8
CMAR Chiang Mai Arr 124.98 111 PKP PKPdf 23 46 41.3 -0.1
comp=Z,2.9nm,0.7s,baz=233,slow=3.7,SNR=16
CMAR pPKP pPKPdf 23 47 08.2 -5.4
comp=Z,1.2nm,0.6s,baz=226,slow=4.3,SNR=1.7
KAF Kangasniemi 125.14 28 *e*p PKPdf 23 46 39.2 -1.1
comp=Z,2.5nm,0.4s
MSO Missoula 125.56 303 *e*PKPdf PKPdf 23 46 41.8 +0.2
YBH Yreka Blue Hor 126.20 293 PKP PKPdf 23 46 43.1 +0.1
comp=Z,3.3nm,0.8s,baz=102,slow=2.1,SNR=9.4
KTRM Thompson Ridge 126.67 292 P PKPdf 23 46 45.2 +1.3
HUMO Hull Mountain 126.96 293 *e*PKPdf PKPdf 23 46 44.9 +0.4
VIPM Ingram Point 127.14 296 P PKPdf 23 46 45.8 +1.1
JOF Joensuu 127.14 29 *e*p PKPdf 23 46 43.3 -0.8
comp=Z,2.3nm,0.4s
CROR Criterion Ridg 127.66 297 P PKPdf 23 46 46.5 +0.9
RNO Roman Nose 128.29 294 P PKPdf 23 46 48.4 +1.5
EPH Ephrata 128.64 300 P PKPdf 23 46 48.5 +1.1
BMW Boistfort Moun 129.82 297 *e*PKPdf PKPdf 23 46 50.0 +0.3
EDM Edmonton 129.83 309 *e*PKPdf PKPdf 23 46 49.1 -0.4
ARCES ARCESS Array B 131.09 22 PKP PKPdf 23 46 51.1 -0.3
comp=Z,5.4nm,0.6s,baz=186,slow=1.7,SNR=54
KEV Kevo 131.59 22 *e*p PKPdf 23 46 52.5 +0.1
comp=Z,0.7nm,0.4s
YKA Yellowknife Ar 136.32 318 PKP PKPdf 23 47 00.6 -0.8
comp=Z,5.1nm,0.6s,baz=128,slow=2.4,SNR=17
YKA pPKP pPKPdf 23 47 28.2 -5.4
comp=Z,1.0nm,0.6s,baz=124,slow=2.4,SNR=2.0
YKA PP PP 23 49 43.1 -1.5
comp=Z,1.3nm,0.8s,baz=118,slow=6.6,SNR=5.0
YKA Yellowknife Ar 136.32 318 PKP PKPdf 23 47 00.6 -0.8
YKA pPKP pPKPdf 23 47 28.2 -5.4
YKA PP PP 23 49 43.1 -1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MKAR	Makanchi Array	136.92	72	PKhKP		23 46 52.9	
	comp=Z,0.4nm,0.5s,baz=207,slow=5.2,SNR=5.2						
MKAR				PKP	PKPdf	23 47 01.6	-1.5
	comp=Z,1.3nm,0.8s,baz=224,slow=3.3,SNR=8.2						
MKAR	Makanchi Array	136.92	72	PKP	PKPdf	23 47 01.6	-1.5
GTA	Gaotai	141.69	93	*e*PKP	PKPdf	23 47 12.9	+0.9
ZALV	Zalesovo Beam	142.42	64	PKhKP		23 47 07.8	
	comp=Z,1.6nm,0.4s,baz=238,slow=4.0,SNR=12						
ZALV				PKP	PKPdf	23 47 14.6	+1.8
	comp=Z,5.3nm,0.5s,baz=197,slow=3.1,SNR=20						
XAN	Xi'an	142.76	108	PKP	PKPdf	23 47 10.1	-4.0
SONM	Songino Array	150.71	87	PKP	PKPdf	23 47 26.6	-0.3
	comp=Z,0.8nm,0.7s,baz=280,slow=1.2,SNR=6.8						
SONM				PKPbc	PKPbc	23 47 32.4	-0.1
	comp=Z,12nm,0.6s,baz=220,slow=3.6,SNR=69						
SONM				pPKPbc	pPKPbc	23 47 59.1	-5.5
	comp=Z,4.9nm,0.8s,baz=228,slow=2.7,SNR=3.1						
KDAK	Kodiak Island	150.92	296	PKPbc	PKPbc	23 47 32.9	+0.2
	comp=Z,53nm,0.6s,baz=122,slow=2.1,SNR=75						
BJI	Beijing	151.09	108	PKP	PKPbc	23 47 33.5	-0.2
KSRS	Korea Array	154.87	128	PKPbc	PKPbc	23 47 41.7	-0.4
	comp=Z,1.4nm,0.9s,baz=279,slow=31,SNR=4.7						
KSRS				PKPab	PKPab	23 47 57.3	-0.6
	comp=Z,3.8nm,0.8s,baz=215,slow=4.6,SNR=7.6						
MJAR	Matsushiro Arr	157.96	147	PKPab	PKPab	23 48 09.9	-1.3
	comp=Z,3.2nm,0.8s,baz=185,slow=4.3,SNR=5.7						
PETK	Petropavlovsk-	175.80	224	PKPab	PKPab	23 49 28.3	-1.2
	comp=Z,1.3nm,0.5s,baz=108,slow=9.5,SNR=3.7						

MOS ***01*** *23:35:24.7±1.0, 2457N×10987W, h10^{km}, mb4.9/10, Error ellipse: s-maj=9.2km s-min=4.5km az=96.2*

IDC ***01*** *23:35:24.9±0.5, 2468N×11006W, h0^{km}, mb4.2/18, mb1 4.3/24, mb1mx4.3/31, mbtmp4.2/24, ML3.7/5, MS4.3/16, Ms1 4.3/16, ms1mx4.1/36, Error ellipse: s-maj=13.4km s-min=7.3km az=103.0*

GCMT ***01*** *23:35:26.1±0.4, 2475N×10979W, h12^{km}, MW5.0/65, Moment Tensor Solution. s18,c21; s65,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.42±.12; M$_{\theta\theta}$-1.32±.11; M$_{\phi\phi}$1.74±.13; M$_{r\theta}$-0.23±.33; M$_{\theta\phi}$-2.88±.09; M$_{\phi r}$1.40±.35; Best double couple: M$_0$3.52100×10^{16} NP1:ϕ_s283.00000°,δ69.00000°,λ176.00000°. NP2: ϕ_s14.00000°,δ86.00000°,λ21.00000°. Principal axes: T 3.8800, Plg17.0000°, Azm240.0000°; N -0.7180, Plg69.0000°, Azm24.0000°; P -3.1610, Plg12.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***01*** *23:35:26.1±0.3, 2450N×10992W, h10^{km}, mb4.7/34 Error ellipse: s-maj=5.3km s-min=3.9km az=215.0*

NEIC Felt [IV] at La Paz, Mexico.

ISCJB ***01*** *23:35:26.2±0.8, 2456N±003×10990W±003, h21^{km}±6^{km}, mb4.5/38, MS4.3/14, Error ellipse: s-maj=5.4km s-min=4.5km az=145.2*

MEX ***01*** *23:35:26.5±0.5, 2458N×10981W, h20^{km}±9^{km}, MD4.5*

BJI ***01*** *23:35:26.0, 2450N×10990W, h10^{km}, mB5.4, mb5.1, Ms5.0, Msz4.7*

ISC 01 23:35:28.2±0.8, **2450N**±003×**10993W**±003, **h26**^{km}±6^{km}, **n199**, σ1ˢ**04**/195, **mb4.5**/38, **MS4.3**/14, **2C, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	0.52	221	Pg	Pb	23 35 37.0	-1.8
	6μm,0.3s,baz=28,slow=7.3,SNR=1483						
LPIG				Lg		23 35 45.0	
	7μm,0.3s,baz=139,slow=22,SNR=63						
LPIG	La Paz	0.52	221	*i* P	Pb	23 35 37.0	-1.8
LPIG				*i* S	Sb	23 35 45.8	-0.3
LPIG	La Paz	0.52	221	Pg	Pb	23 35 37.0	-1.8
LPIG				Lg		23 35 45.0	
LPIG				*i* S	Sb	23 35 45.8	-0.3
MAIG	Mazatlaan	3.47	111	*i* P	Pn	23 36 17.9	-2.6
MAIG				*i* S	Sn	23 36 53.7	-7.1
HPIG		4.55	57	*i* P	Pn	23 36 30.7	-4.7
HPIG				*i* S	Sn	23 37 19.7	-7.7
HSIG		4.59	349	*i* P	Pn	23 36 31.9	-4.1
HSIG				*i* S	Sn	23 37 24.0	-4.6
ANIG	Ahuacatlan	6.06	123	*i* P	Pn	23 36 55.1	-1.0
ANIG				*i* S	Sn	23 38 00.7	-3.9
CGIG		6.10	16	*i* P	Pn	23 36 53.3	-3.4
CGIG				*i* S	Sn	23 38 00.1	-5.5
TUC	Tucson	7.82	355	*e*P	Pn	23 37 17.5	-2.8
LNIG	Linares	9.53	85	*i* P	Pn	23 37 45.5	+1.8
GLA	Glamis	9.54	334	*e*P	Pn	23 37 43.9	0.0
BNM	Barren Site	10.04	16	*e*Pn	Pn	23 37 51.5	+0.8
BAR	Barrett	10.07	326	*e*Pn	Pn	23 37 51.3	+0.1
LAZ	Ladron	10.16	13	*e*Pn	Pn	23 37 52.6	+0.1
LPM	Los Pinos Moun	10.19	16	*e*Pn	Pn	23 37 53.5	+0.6
JCT	Junction City	10.78	54	*e*P	Pn	23 38 00.9	0.0
ANMO	Albuquerque	10.84	15	Pn	Pn	23 38 01.4	-0.3
	0.1nm,0.3s,baz=210,slow=12,SNR=14						
ANMO				LR	LR	23 41 26.6	
	comp=Z,707nm,21.2s,baz=182,slow=34						
ANMO	Albuquerque	10.84	15	*i* P	Pn	23 38 02.3	+0.6
ANMO	Albuquerque	10.84	15	*e*Pn	Pn	23 38 02.0	+0.3
WUAZ	Wupatki	11.05	354	*e*Pn	Pn	23 38 05.7	+1.1
LDFC	Landfair	11.46	338	*e*Pn	Pn	23 38 12.5	+2.3
MWC	Mount Wilson	12.00	326	*e*P	Pn	23 38 17.9	+0.3
GSC	Goldstone	12.30	333	*e*P	Pn	23 38 22.9	+1.2
AMTX	Amarillo	12.58	33	*e*Pn	Pn	23 38 25.3	-0.2
MVCO	Mesa Verde	12.73	5	*e*Pn	Pn	23 38 28.9	+1.3
SHPR	Sheep Range	12.78	341	*e*Pn	Pn	23 38 29.4	+1.1
ISA	Isabella	13.35	328	*e*P	Pn	23 38 36.7	+0.7
TPNV	Topopah Spring	13.54	338	*e*P	Pn	23 38 40.1	+1.5
PV01	Paradox Valley	13.64	5	*e*Pn	Pn	23 38 40.8	+0.8
HKT	Hockley	13.66	63	*e*P	Pn	23 38 40.3	0.0
HKT				pmax	pmax		
	comp=Z,67nm,1.7s						
HKT	Hockley	13.66	63	*e*Pn	Pn	23 38 40.2	-0.1
	comp=Z,67nm,1.7s						
SDCO	Great Sand Dun	13.74	15	*e*Pn	Pn	23 38 42.1	+0.8
PV10	Paradox Valley	13.86	3	*e*Pn	Pn	23 38 42.5	-0.4
WMOK	Wichita Mounta	14.06	41	*e*P	Pn	23 38 43.2	-2.6
MSU	Marysvale	14.10	353	*e*P	Pn	23 38 47.1	+0.9
SRU	San Rafael	14.58	358	*e*P	Pn	23 38 53.4	+0.7
MTUM	Tungsten Hills	14.79	332	*e*Pn	Pn	23 38 56.0	+0.4
TMUT	Trail Mountain	14.79	356	*e*Pn	Pn	23 38 56.8	+1.1
SMCO	Snowmass	14.85	9	*e*P	Pn	23 39 01.1	+4.7
NATX	Nacogdoches	15.28	58	*e*Pn	Pn	23 39 01.7	-0.5
	comp=Z,36nm,1.0s						
NLU	North Lily Min	15.52	354	*e*Pn	Pn	23 39 06.2	+1.0
MPU	Maple Canyon	15.54	355	*e*Pn	Pn	23 39 06.8	+1.3
NVAR	Mina Array Bea	15.61	335	Pn	Pn	23 39 07.0	+0.7
	comp=Z,0.2nm,0.3s,baz=165,slow=11,SNR=37						
ISCO	Idaho Springs	15.69	12	*e*P	Pn	23 39 09.8	+2.4
DUG	Dugway	15.84	352	*e*P	Pn	23 39 10.4	+1.0
DUG				pmax	pmax		
	comp=Z,68nm,1.3s						
DUG	Dugway	15.84	352	*e*Pn	Pn	23 39 10.4	+1.1
	comp=Z,68nm,1.3s						
CMIG	Matias Romero	15.88	115	Pn	Pn	23 39 13.6	+3.6
	comp=Z,0.1nm,0.3s,baz=288,slow=11,SNR=7.1						
CMIG				LR	LR	23 45 10.9	
	comp=Z,2μm,18.9s,baz=282,slow=36						
DAU	Daniels Canyon	15.91	356	*e*P	Pn	23 39 11.2	+0.9
JLU	Jordanelle	16.11	356	*e*P	Pn	23 39 16.9	+4.1
WAKR	Walker	16.13	332	*e*Pn	Pn	23 39 14.1	+1.0
CMB	Columbia Colle	16.17	329	*e*P	Pn	23 39 13.3	-0.3
NOQ	North Oquirrh	16.21	354	*e*Pn	Pn	23 39 14.8	+0.7
CTU	Camp Tracy	16.22	355	*e*Pn	Pn	23 39 15.1	+0.8
BGU	Big Grassy Mou	16.59	352	*e*Pn	Pn	23 39 19.1	+0.2
CBKS	Cedar Bluff	16.68	29	*e*P	Pn	23 39 19.9	-0.3
ELK	Elko	16.80	346	Pn	Pn	23 39 21.5	-0.1
	comp=Z,0.1nm,0.3s,baz=169,slow=8.5,SNR=17						
ELK				LR	LR	23 45 45.0	
	comp=Z,2μm,18.0s,baz=163,slow=37						
ELK	Elko	16.80	346	*e*Pn	Pn	23 39 22.0	+0.4
BMN	Battle Mountai	17.02	341	*e*P	Pn	23 39 24.8	+0.4
BMN				pmax	pmax		
	comp=Z,65nm,1.6s						
BMN	Battle Mountai	17.02	341	*e*Pn	Pn	23 39 24.8	+0.4
	comp=Z,65nm,1.6s						
HWUT	Hardware Ranch	17.12	356	*e*Pn	Pn	23 39 26.5	+0.9
PAHR	Pah Rah Range	17.13	335	*e*Pn	Pn	23 39 26.6	+0.8
PHWY	Pilot Hill	17.17	11	*e*Pn	Pn	23 39 27.3	+1.1
RWWY	Rawlins	17.29	7	*e*Pn	Pn	23 39 28.9	+1.2
MIAR	Mount Ida	17.38	51	*e*P	Pn	23 39 27.5	-1.5
HVU	Hansel Valley	17.40	353	*e*P	Pn	23 39 30.0	+0.9
NSHM	Saint Helena R	17.64	325	*e*Pn	Pn	23 39 31.2	-1.0
OHCM	Honcut	17.72	329	*e*Pn	Pn	23 39 32.9	-0.2
BW06	Boulder Array	18.22	1	*e*Pn	Pn	23 39 38.7	-0.5
PDAR	Pinedale Array	18.22	1	P	Pn	23 39 38.4	-0.8
	comp=Z,0.1nm,0.3s,baz=166,slow=26,SNR=4.9						
PDAR				LR	LR	23 46 48.7	
	comp=Z,1μm,18.5s,baz=190,slow=38						
AHID	Auburn Hatcher	18.25	357	*e*Pn	Pn	23 39 39.1	-0.4
	comp=Z,95nm,1.6s						
UALR	University of	18.38	52	*e*Pn	Pn	23 39 40.5	-0.7
	comp=Z,56nm,1.4s						
KSU1	Kansas State U	18.41	35	*e*Pn	Pn	23 39 41.4	-0.2
REDW	Red Top Meadow	18.83	358	*e*Pn	Pn	23 39 46.9	+0.2
	comp=Z,82nm,1.5s						
RRI2	Red Ridge	18.84	357	*e*Pn	Pn	23 39 47.1	+0.4
SNOW	Snow King Moun	18.93	358	*e*Pn	Pn	23 39 47.8	-0.1
	comp=Z,56nm,1.3s						
TPAW	Teton Pass	18.96	358	*e*P	Pn	23 39 47.5	-0.7
	comp=Z,72nm,1.4s						
KCPM	Cahto Peak	19.02	326	*e*P	Pn	23 39 48.9	0.0
LOHW	Long Hollow	19.07	359	*e*P	Pn	23 39 48.8	-0.8
	comp=Z,53nm,1.4s						
DCID1	Drake Creek	19.08	357	*e*Pn	Pn	23 39 51.2	+1.7
WDC	Whiskeytown Da	19.20	330	*e*P	Pn	23 39 50.8	-0.4
WVOR	Wild Horse Val	19.29	340	*e*P	Pn	23 39 51.2	-0.9
WVOR				pmax	pmax		
	comp=Z,45nm,1.3s						
WVOR	Wild Horse Val	19.29	340	*e*P	Pn	23 39 51.2	-0.9
	comp=Z,45nm,1.3s						
IMW	Indian Meadow	19.37	358	*e*P	Pn	23 39 52.4	-0.7
	comp=Z,57nm,1.4s						
HLID	Hailey	19.37	350	*e*P	Pn	23 39 52.7	-0.4
MOD	Modoc	19.38	336	*e*Pn	Pn	23 39 52.7	-0.5
FLWY	Flagg Ranch	19.55	358	*e*Pn	Pn	23 39 54.8	-0.4
YFT	Old Faithful	19.92	358	*e*Pn	Pn	23 39 59.2	-0.4
HBAR	Harrisburg	19.96	52	*e*P	Pn	23 39 58.3	-1.9
KHMM	Horse Mountain	20.00	328	*e*P	Pn	23 39 59.1	-1.5
RSSD	Black Hills	20.16	12	*e*P	P	23 40 02.0	+1.5
YNR	Norris Junctio	20.18	358	*e*Pn	P	23 40 01.6	+0.9
YBH	Yreka Blue Hor	20.21	331	P	P	23 39 58.8	-2.3
	comp=Z,0.1nm,0.3s,baz=156,slow=8.0,SNR=6.3						
YBH				LR	LR	23 48 27.9	
	comp=Z,772nm,18.9s,MS4.1,baz=149,slow=39						
YBH	Yreka Blue Hor	20.21	331	P	P	23 39 58.8	-2.2
YBH				*e*		23 40 03.6	
YBH	Yreka Blue Hor	20.21	331	P	P	23 39 58.8	-2.3
YBH				*e*Pn	P	23 40 03.6	+2.6
YBH				LR	LR	23 48 27.9	
QLMT	Earthquake Lak	20.32	357	*e*Pn	P	23 40 03.0	+0.7
MCMT	McKenzie Canyo	20.42	354	P	P	23 40 04.5	+1.2
OXF	Oxford	20.43	56	*e*P	P	23 40 02.7	-0.8
OXF				pmax	pmax		
	comp=Z,52nm,0.9s						
OXF	Oxford	20.43	56	*e*P	P	23 40 02.6	-0.8
	comp=Z,52nm,0.9s						
TEIG	Tepich	20.47	98	P	P	23 40 05.0	+0.9
	comp=Z,8.4nm,0.7s,baz=284,slow=9.9,SNR=8.5						
TEIG				LR	LR	23 48 28.4	
	comp=Z,415nm,20.7s,MS3.8,baz=332,slow=38						
TEIG	Tepich	20.47	98	*e*Pn	P	23 40 03.0	-1.1
	comp=Z,43nm,0.8s						
KRMB	Red Mountain	20.58	329	*e*P	P	23 40 04.5	-0.6
RLMT	Red Lodge	20.58	1	*e*P	P	23 40 05.1	0.0
DLMT	Dillon	20.93	355	*e*P	P	23 40 09.7	+0.9
	comp=Z,58nm,1.5s						
BOZ	Bozeman (W)	21.14	357	*e*P	P	23 40 11.2	+0.1
BOZ				pmax	pmax		
	comp=Z,81nm,1.9s,mb4.7						
BOZ	Bozeman (W)	21.14	357	*e*P	P	23 40 11.2	0.0
	comp=Z,81nm,1.9s,mb4.7						
BMO	Blue Mountains	21.17	345	*e*P	P	23 40 11.0	-0.5
	comp=Z,33nm,1.4s,mb4.5						
GCMT	Greycliff	21.25	1	*e*P	P	23 40 11.9	-0.4
LCCM	Lewis and Clar	21.35	356	P	P	23 40 14.0	+0.7
FVM	French Village	21.36	46	*e*P	P	23 40 13.2	-0.4
FVM				pmax	pmax		
	comp=Z,56nm,1.6s,mb4.6						
FVM	French Village	21.36	46	*e*P	P	23 40 13.2	-0.4
	comp=Z,56nm,1.6s,mb4.6						
LRM	Limekiln Ridge	21.37	355	*e*P	P	23 40 14.0	+0.4
PLAL	Pickwick Lake	21.62	56	*e*P	P	23 40 18.8	+2.4
	comp=Z,37nm,1.4s,mb4.6						
VIPM	Ingram Point	21.78	339	P	P	23 40 17.6	-0.4
KEBM	Edson Butte	21.84	331	*e*P	P	23 40 18.1	-0.5
SLM	Saint Louis	21.85	45	*e*P	P	23 40 18.4	-0.4
SLM				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.7						
SLM	Saint Louis	21.85	45	*e*P	P	23 40 18.4	-0.5
	comp=Z,24nm,0.8s,mb4.7						
IRO	Indian Ridge	21.92	336	P	P	23 40 18.8	-0.7
SIUC	Southern Illin	22.03	48	*e*P	P	23 40 19.4	-1.3
ECSD	EROS,Sioux Fal	22.07	26	*e*P	P	23 40 20.1	-1.0
	comp=Z,23nm,1.1s,mb4.5						
SCIA	State Center	22.23	35	*e*P	P	23 40 22.3	-0.5
CROR	Criterion Ridg	22.32	339	P	P	23 40 23.1	-0.7
LAO	LASA Array	22.34	7	*e*P	P	23 40 23.4	-0.5
VTHM	Trough	22.36	340	P	P	23 40 23.4	-0.8
LNOR	Lincton Mounta	22.36	345	*e*P	P	23 40 23.7	-0.5
RNO	Roman Nose	22.42	333	P	P	23 40 24.5	-0.3
CHMT	Chamberlain Mo	22.53	354	*e*P	P	23 40 25.6	-0.3
COR	Corvallis	22.81	335	*e*P	P	23 40 28.2	-0.7
HAWA	Hanford	23.17	343	*e*P	P	23 40 31.9	-0.8
RSW	Rattlesnake Hi	23.19	343	*e*P	P	23 40 31.7	-1.2
USIN	University of	23.22	49	*e*P	P	23 40 32.8	-0.6
	comp=Z,36nm,1.1s,mb4.7						
OLIL	Olney	23.31	47	*e*P	P	23 40 34.4	+0.1
	comp=Z,43nm,1.1s,mb4.8						
SWET	Sewanee	23.34	57	*e*P	P	23 40 33.8	-0.8
EGMT	Eagleton	23.48	0	*e*P	P	23 40 35.1	-0.8
	comp=Z,38nm,1.3s,mb4.7						
HEBO	Mount Hebo	23.51	335	*e*P	P	23 40 36.1	-0.1
	comp=Z,284nm,1.8s,mb5.4						
OD2	Odessa Site #2	23.89	345	*e*P	P	23 40 38.3	-1.4
LON	Longmire	24.16	340	*e*P	P	23 40 42.3	+0.2
DGMT	Dagmar	24.35	9	*e*P	P	23 40 44.5	+0.6
	comp=Z,127nm,0.4s,mb5.7						
NEW	Newport	24.39	348	*e*P	P	23 40 43.3	-0.9
NEW				pmax	pmax		
	comp=Z,18nm,1.0s						
NEW	Newport	24.39	348	*e*P	P	23 40 43.3	-0.9
	comp=Z,18nm,1.0s,mb4.4						
ETW	Entiat	24.50	343	*e*P	P	23 40 45.0	-0.2
CPCT	Cooper Cave	24.50	58	*e*P	P	23 40 44.8	-0.6
JFWS	Jewell Farm	24.50	37	*e*P	P	23 40 44.6	-0.7
JFWS				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.5						
JFWS	Jewell Farm	24.50	37	*e*P	P	23 40 44.6	-0.8
	comp=Z,17nm,1.1s,mb4.5						
WALA	Waterton Lakes	24.71	354	*e*P	P	23 40 46.6	-0.5
	comp=Z,17nm,0.9s,mb4.6						
TKL	Tuckaleechee C	25.14	58	P	P	23 40 50.6	-0.7
	comp=Z,7.8nm,0.9s,mb4.2,baz=213,slow=12,SNR=7.2						
TKL				LR	LR	23 51 29.7	
	comp=Z,2μm,19.8s,MS4.6,baz=259,slow=38						
NLWA	Neilton Lookou	25.40	338	*e*P	P	23 40 53.9	+0.4
	comp=Z,44nm,1.7s,mb4.7						
RPW	Rockport	25.59	342	*e*P	P	23 40 54.6	-0.6
TZTN	Tazewell	25.62	56	*e*P	P	23 40 55.1	-0.5
AGMN	Agassiz Refuge	26.23	22	*e*P	P	23 41 00.9	0.0
	comp=Z,12nm,1.2s,mb4.3						
ULM	Lac du Bonnet	27.93	19	P	P	23 41 14.3	-1.8
	comp=Z,3.5nm,0.8s,mb4.0,baz=234,slow=8.6,SNR=3.9						
ULM				LR	LR	23 52 59.8	
	comp=Z,582nm,21.3s,MS4.1,baz=209,slow=38						
EDM	Edmonton	28.80	356	*e*P	P	23 41 22.8	-1.1
YKA	Yellowknife Ar	38.11	356	P	P	23 42 42.7	-2.0
	comp=Z,1.2nm,0.8s,mb3.7,baz=175,slow=8.4,SNR=9.6						
YKA				LR	LR	23 58 53.5	
	comp=Z,583nm,18.4s,MS4.4,baz=170,slow=37						
YKA	Yellowknife Ar	38.11	356	P	P	23 42 42.7	-2.0
YKA				LR	LR	23 58 53.5	
ROSC	El Rosal	39.39	114	P	P	23 42 59.7	+3.7
	comp=Z,2.2nm,0.4s,mb4.3,baz=251,slow=22,SNR=6.6						
ROSC				LR	LR	00 00 41.1	
	comp=Z,288nm,20.0s,MS4.1,baz=45,slow=38						
SDV	Santo Domingo	40.54	106	P	P	23 43 07.8	+2.2
	comp=Z,12nm,0.9s,mb4.5,baz=360,slow=4.2,SNR=6.5						
HYT	Haines Junctio	40.96	340	*e*P	P	23 43 05.9	-2.5
SCHQ	Schefferville	43.84	35	LR	LR	00 01 33.3	
	comp=Z,593nm,20.5s,MS4.5,baz=244,slow=36						
ATAH	Atahualpa	43.88	131	P	P	23 43 37.2	+4.4
	comp=Z,1.4nm,0.3s,mb4.1,baz=211,slow=22,SNR=4.2						
DAWY	Dawson	44.02	342	*e*P	P	23 43 33.5	+0.2
TAOE	Nuku Hiva Isla	44.36	225	*e*S	S	23 50 11.8	+2.1
	comp=Z,426nm,25.7s						
TAOE				*e*LR	LR	23 55 56.6	
	comp=Z,3μm,26.3s						
KDAK	Kodiak Island	45.00	329	P	P	23 43 40.5	-0.7
	comp=Z,1.3nm,0.4s,mb4.1,baz=115,slow=8.3,SNR=4.4						
KDAK	Kodiak Island	45.00	329	*e*P	P	23 43 41.0	-0.2
KDAK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6						
KDAK	Kodiak Island	45.00	329	*e*P	P	23 43 41.0	-0.1
	comp=Z,12nm,1.2s,mb4.6						
EGAK	Eagle	45.06	342	*e*P	P	23 43 41.5	-0.1
	comp=Z,11nm,1.0s,mb4.6						
COLA	College	47.18	339*c*	*i*P	P	23 43 58.3	+0.1
COLA	College	47.18	339	*e*P	P	23 43 57.5	-0.7
	comp=Z,19nm,1.3s,mb4.9						
SVW2	Sparrevohn	47.95	332	*e*P	P	23 44 03.5	-0.8
TTA	Tatalina	49.02	334	*e*P	P	23 44 11.9	-0.6
TTA				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
TTA	Tatalina	49.02	334	*e*P	P	23 44 11.9	-0.6
	comp=Z,16nm,1.1s,mb5.0						
PPT	Papeete	56.94	227	*e*S	S	23 53 10.2	+6.0
	comp=Z,219nm,28.5s						
PPT				*e*SS	SS	23 56 58.2	+5.0
	comp=Z,73nm,25.5s						
PPT				*e*LR	LR	00 01 46.8	
	comp=Z,962nm,27.0s,baz=28						
PPT	Papeete	56.94	227	LR	LR	00 04 09.3	
	comp=Z,420nm,18.9s,MS4.6,baz=42,slow=30						
LPAZ	La Paz	57.50	131	P	P	23 45 17.6	+2.1
	comp=Z,1.3nm,1.0s,mb3.9,baz=356,slow=9.1,SNR=3.1						
LVC	Limon Verde	61.48	136	P	P	23 45 46.8	+3.9
	comp=Z,1.2nm,0.7s,mb4.2,baz=68,slow=11,SNR=2.0						
LVC	Limon Verde	61.48	136	P	P	23 45 46.8	+3.9
SIV	San Ignacio	62.38	125	P	P	23 45 50.8	+1.8
	comp=Z,8.5nm,1.0s,mb4.8,baz=313,slow=7.6,SNR=20						
CFAA	Coronel Fontan	68.57	142	P	P	23 46 31.5	+2.7
	comp=Z,0.5nm,0.8s,mb3.5,baz=327,slow=8.5,SNR=3.7						
CPUP	Villa Florida	71.66	131	P	P	23 46 48.5	+0.7
	comp=Z,3.8nm,0.8s,mb4.4,baz=308,slow=8.1,SNR=7.1						
SEY	Seymchan	71.88	332⇑	*e*P	P	23 46 48.4	-0.3
PETK	Petropavlovsk-	72.17	321	P	P	23 46 50.1	-0.4
	comp=Z,1.6nm,0.7s,mb4.1,baz=72,slow=14,SNR=5.0						
PETK				LR	LR	00 12 08.3	
	comp=Z,70nm,21.6s,MS3.9,baz=270,slow=31						
BDFB	Brasilia	72.38	117	P	P	23 46 54.6	+2.2
	comp=Z,6.1nm,1.1s,mb4.4,baz=359,slow=13,SNR=3.9						
PLCA	Paso Flores	74.51	150	P	P	23 47 06.9	+2.5
	comp=Z,4.9nm,1.2s,mb4.3,baz=337,slow=3.7,SNR=5.0						
TIXI	Tiksi	76.02	344	*e*P	P	23 47 14.4	+1.7
TIXI				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,156nm,19.0s,MS4.3						
TIXI	Tiksi	76.02	344	*e*P	P	23 47 11.9	-0.8
	comp=Z,8.8nm,1.0s,mb4.6						
ARCES	ARCESS Array B	80.92	14	P	P	23 47 39.0	-0.9
	comp=Z,4.1nm,1.0s,mb4.3,baz=263,slow=3.5,SNR=3.0						
ARCES				LR	LR	00 27 12.0	
	comp=Z,209nm,19.2s,MS4.5,baz=187,slow=38						
YAK	Yakutsk	81.58	336	*e*P	P	23 47 42.8	-0.7
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
NB2	NORSAR Subarra	82.48	25	P	P	23 47 51.3	+3.1
	comp=Z,4.3nm,1.0s,mb4.3,baz=309,slow=5.1						
NOA	NORSAR Array B	82.48	25	P	P	23 47 49.5	+1.3
	comp=Z,1.5nm,0.9s,mb3.9,baz=223,slow=26,SNR=2.4						
YSS	Yuzh-Sakhalins	83.42	319	*i* P	P	23 47 47.3	-6.0
USHA	Ushuaia	86.65	157	LR	LR	00 18 00.9	
	comp=Z,320nm,21.2s,MS4.7,baz=120,slow=29						
MJAR	Matsushiro Arr	91.65	312	LR	LR	00 23 08.4	
	comp=Z,154nm,20.7s,MS4.4,baz=75,slow=31						
CN2	Changchun	95.18	323	*e*P	P	23 48 48.2	-1.3
WHN	Wuhan	110.74	320	PKP	PKiKP	23 54 00.0	+0.8
CD2	Chengdu	116.15	328	*e*PKP	PKPdf	23 54 06.1	-3.5
GYA	Guiyang	118.23	323	*e*PDIF	Pdif	23 50 31.4	-0.7
GYA				PKP	PKPdf	23 54 12.6	-1.1
GYA				PP	PP	23 55 31.8	+3.5
GYA				PKS		23 57 47.6	
GYA				PP	PP		
	comp=Z,80nm,7.4s						
GYA				LR	LR		
	comp=N,150nm,21.4s,MS4.7						
GYA				LR	LR		
	comp=E,120nm,22.0s,MS4.7						
GYA				LR	LR		
	comp=Z,140nm,22.8s,MS4.5						
WRA	Warramunga Arr	120.79	261	PKP	PKPdf	23 54 18.6	0.0
	comp=Z,1.2nm,0.9s,baz=56,slow=2.2,SNR=4.5						
KMI	Kunming	121.40	325	PKP	PKPdf	23 54 17.0	-2.8
ASAR	Alice Springs	122.20	257	PKP	PKPdf	23 54 22.4	+1.1
	comp=Z,1.2nm,0.9s,baz=86,slow=1.8,SNR=8.2						
CMAR	Chiang Mai Arr	128.86	324	PKP	PKPdf	23 54 36.6	+2.4
	comp=Z,1.0nm,0.3s,baz=356,slow=2.1,SNR=11						
BOSA	Boshof	139.88	106	PKP	PKPdf	23 54 55.2	+0.7
	comp=Z,2.6nm,0.9s,baz=336,slow=16,SNR=3.8						

BJI ***01*** *23:39:59.0, 2440N×10980W, h10^{km}, Ms4.6, Msz4.4*

MEX ***01*** *23:39:59.8±0.5, 2480N×11039W, h10^{km}, MD4.7*

ISCJB ***01*** *23:40:00.1±0.7, 2444N±006×10979W±005, h10^{km}, mb3.9/3, Error ellipse: s-maj=9.5km s-min=5.3km az=151.3*

NEIC ***01*** *23:40:01.4±0.8, 2438N×10982W, h10^{km}, mb4.1/8, Error ellipse: s-maj=10.0km s-min=7.5km az=176.0*

ISC 01 23:40:01.8±0.7, **2440N**±006×**10981W**±005, **h10**^{km}, **n45**, σ1ˢ**01**/45, **mb3.9**/3, **Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	0.54	236	*i* P	Pg	23 40 12.0	-0.3
LPIG				*i* S	Sg	23 40 20.6	+1.1
HPIG		4.51	55	*i* P	Pn	23 41 10.1	0.0
HPIG				*i* S	Sn	23 42 03.6	+0.9
ANIG	Ahuacatlan	5.91	123	*i* P	Pb	23 41 35.8	-9.2
ANIG				*i* S	Sb	23 42 47.8	-8.1
CGIG		6.16	15	*i* P	Pn	23 41 26.8	-6.0
KVTX	Kingsville	11.17	71	*e*Pn	Pn	23 42 42.6	+1.1
	114nm,1.2s						
LDFC	Landfair	11.59	338	*e*Pn	Pn	23 42 48.0	+0.8
GSC	Goldstone	12.44	332	*e*Pn	Pn	23 42 58.0	-0.8
SHPR	Sheep Range	12.91	340	*e*Pn	Pn	23 43 05.8	+0.5
ISA	Isabella	13.49	328	*e*Pn	Pn	23 43 12.7	-0.5
	36nm,1.7s						
HKT	Hockley	13.61	63	*e*Pn	Pn	23 43 13.3	-1.6
	28nm,1.1s						
TPNV	Topopah Spring	13.67	338	*e*Pn	Pn	23 43 17.3	+1.7
NLU	North Lily Min	15.62	354	*e*Pn	Pn	23 43 42.4	+0.4
MPU	Maple Canyon	15.64	355	*e*Pn	Pn	23 43 44.0	+1.8
ISCO	Idaho Springs	15.75	12	*e*Pn	Pn	23 43 46.1	+2.4
DUG	Dugway	15.95	352	*e*Pn	Pn	23 43 46.9	+0.7
	14nm,1.1s						
DAU	Daniels Canyon	16.01	356	*e*Pn	Pn	23 43 49.3	+2.3
WAKR	Walker	16.26	332	*e*Pn	Pn	23 43 50.4	+0.1
CMB	Columbia Colle	16.30	329	*e*Pn	Pn	23 43 49.8	-1.1
BGU	Big Grassy Mou	16.69	351	*e*Pn	Pn	23 43 56.0	+0.2
ELK	Elko	16.92	346	*e*Pn	Pn	23 43 59.9	+1.3
HWUT	Hardware Ranch	17.22	356	*e*Pn	Pn	23 44 02.3	0.0
	42nm,1.5s						
PAHR	Pah Rah Range	17.26	334	*e*Pn	Pn	23 44 02.6	-0.3
BW06	Boulder Array	18.32	1	*e*Pn	Pn	23 44 14.5	-1.4
RRI2	Red Ridge	18.94	357	*e*Pn	Pn	23 44 23.8	+0.4
	13nm,1.1s						
LOHW	Long Hollow	19.17	358	*e*P	Pn	23 44 24.6	-1.6
WVOR	Wild Horse Val	19.41	340	*e*P	Pn	23 44 27.8	-1.4
	16nm,1.5s						
HLID	Hailey	19.48	350	*e*Pn	Pn	23 44 29.1	-0.9
MOD	Modoc	19.51	336	*e*Pn	Pn	23 44 29.2	-1.1
FLWY	Flagg Ranch	19.64	358	*e*P	Pn	23 44 31.4	-0.5
	18nm,1.0s						
QLMT	Earthquake Lak	20.42	357	*e*P	P	23 44 39.4	+0.4
MCMT	McKenzie Canyo	20.52	354	*e*P	P	23 44 40.4	+0.3
BOZ	Bozeman (W)	21.25	356	*e*P	P	23 44 48.4	+0.5
	9.1nm,1.5s,mb3.9						
BMO	Blue Mountains	21.29	345	*e*P	P	23 44 47.5	-1.0
GCMT	Greycliff	21.34	0	*e*P	P	23 44 48.2	-0.7
FVM	French Village	21.35	46	*e*P	P	23 44 48.8	-0.3
	3.4nm,0.8s,mb3.7						
LRM	Limekiln Ridge	21.48	355	*e*P	P	23 44 49.9	-0.5
ECSD	EROS,Sioux Fal	22.11	26	*e*P	P	23 44 55.9	-1.4
LAO	LASA Array	22.42	6	*e*P	P	23 45 00.1	-0.4
CHMT	Chamberlain Mo	22.63	354	*e*P	P	23 45 02.6	-0.1
CPCT	Cooper Cave	24.46	57	*e*P	P	23 45 21.6	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WALA	Waterton Lakes	24.82	354	eP	P	23 45 24.4	+0.4
	9.7nm,1.2s,mb4.2						
CN2	Changchun	95.32	323	eP	P	23 53 23.2	-3.0
LZH	Lanzhou	111.95	331	ePKP	PKiKP	23 58 31.2	-6.3
LZH				XPKP		23 58 38.1	
CD2	Chengdu	116.29	328	ePKP	PKPdf	23 58 42.3	-3.7
KMI	Kunming	121.54	325	PDIF	Pdif	23 55 21.0	-1.9

IDC 01 23:45:11.1±11.0**,331N×9349E,h0**km**,mb3.6**/3**,mb1 3.7**/3**, mb1mx3.4**/20**,mbtmp3.6**/3**,Error ellipse: s-maj=519.3km s-min=29.7km az=56.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	44.40	349	P	P	23 53 24.6	+1.1
	0.4nm,0.4s,baz=164,slow=9.7,SNR=5.3						
WRA	Warramunga Arr	46.28	122	P	P	23 53 38.9	0.0
	0.3nm,0.5s,baz=297,slow=8.6,SNR=5.0						
ZALV	Zalesovo Beam	50.98	353	P	P	23 54 13.2	-1.3
	0.4nm,0.3s,baz=182,slow=6.6,SNR=4.6						

*IDC **02** 00:07:23.3±0.6,1176N×8708W,h0km,mb4.3/19, mb1 4.5/20,mb1mx4.4/26,mbtmp4.4/20,ML4.7/1,MS4.6/24, Ms1 4.6/24,ms1mx4.4/45,Error ellipse: s-maj=22.3km s-min=10.9km az=59.0*

*CASC **02** 00:07:26.6±1.6,1148N×8747W,h39km±150km,MD4.6, ML4.2,mb4.9(NEIC)*

*NEIC **02** 00:07:28.0±0.5,1161N×8727W,h30km±3km,mb4.9/38, Error ellipse: s-maj=7.7km s-min=4.3km az=49.0*

*GCMT **02** 00:07:28.0±0.3,1124N×8771W,h12km±1km,MW5.2/66, Moment Tensor Solution. s50,c66; s66,c116; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.73±.21; $M_{\theta\theta}$-3.66±.15; $M_{\phi\phi}$-0.07±.18; $M_{r\theta}$4.18±.54; $M_{\theta\phi}$2.58±.11; $M_{\phi r}$-5.54±.74; Best double couple: $M_0$8.26600×10^{16} NP1:ϕ_s272.00000°,δ21.00000°,λ44.00000°. NP2: ϕ_s140.00000°,δ75.00000°,λ106.00000°. Principal axes: T 8.0480, Plg57.0000°, Azm70.0000°; N 0.4360, Plg15.0000°, Azm316.0000°; P -8.4850, Plg29.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **02** 00:07:28.5±0.6,1157N±004×8727W±005,h55km±5km, mb4.7/51,MS4.6/27 Error ellipse: s-maj=10.1km s-min=4.0km az=147.9*

*BJI **02** 00:07:28.0,1160N×8730W,h30km,mB5.2,Ms5.0,Msz4.7*

ISC 02 00:07:29.8±0.6**,1162N**±004×**8724W**±005**,h46**km±5km**, n209,**σ0^s**93**/154**,mb4.7**/51**,MS4.6**/27**,20C-5D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.84	49	⇑eP	Pn	00 07 45.6	+0.3
LEON	Leon	0.86	23	⇑eP	Pn	00 07 45.6	+0.1
CSAN		0.97	55	eP	Pn	00 07 48.0	+0.8
CRUN	El Crucero	0.99	69	eP	Pn	00 07 48.2	+1.0
TEL3	Telica 3	1.02	22	⇑eP	Pn	00 07 47.9	+0.2
CNGN	Cerro Negro	1.02	31	⇑eP	Pn	00 07 47.6	-0.2
XAVN	Gruta Xavier	1.03	60	⇑eP	Pn	00 07 48.7	+0.7
APYN	Apoyeque	1.06	55	eP	Pn	00 07 48.8	+0.5
TISN	Laguna Tiscapa	1.08	61	⇓eP	Pn	00 07 48.9	+0.4
CRIN	San Cristobal	1.08	10	⇑eP	Pn	00 07 48.4	-0.3
CRIN				AML	AML	00 08 27.5	
	comp=N,11µm,0.5s						
MGAN	Managua	1.10	62	⇑eP	Pn	00 07 49.0	+0.2
MGAN				AML	AML	00 08 18.3	
	comp=N,6µm,0.5s						
MASN	Masaya	1.12	71	⇑eP	Pn	00 07 48.6	-0.6
WILN	Americas 2	1.16	63	⇑eP	Pn	00 07 49.7	+0.1
APON	Apoyo	1.19	76	⇑eP	Pn	00 07 50.2	+0.2
HUEN		1.26	56	⇑eP	Pn	00 07 51.5	+0.5
SSN	San Juan del S	1.40	103	eP	Pn	00 07 52.3	-0.5
CONN	Concepcion	1.58	92	⇑eP	Pn	00 07 54.9	-0.5
MADN	Villa Maderas	1.69	97	⇑eP	Pn	00 07 56.0	-0.9
CNCH	Conchagua	1.74	341	eP	x	00 07 55.8	
BLLM	Bellamira	2.05	332	eP	x	00 07 59.0	
VSM	San Miguel	2.06	331	eP	x	00 07 59.6	
VCR	Vista de Mar	2.17	133	eP	Pn	00 08 00.0	-3.5
CUI		2.24	115	eP	Pn	00 08 03.8	-0.7
CUI				iS	Sn	00 08 32.8	+1.9
2RIO	Dos Rios de Up	2.25	119	eP	Pn	00 08 00.2	-4.4
CAHU	Cacacuatique	2.33	336	eP	x	00 08 04.3	
TGUH	Tegucigalpa,Un	2.42	359	⇑eP	Pn	00 08 06.5	-0.4
TGUH	Tegucigalpa,Un	2.42	359	ePn	Pn	00 08 06.7	-0.2
SNVI	San Vicente	2.52	322	eP	x	00 08 05.5	
LFRS	El Faro	2.67	318	eP	x	00 08 06.1	
JCR	Jicaral	2.73	130	⇑eP	Pn	00 08 08.4	-2.9
LBRS	Las Brisas	2.74	320	eP	x	00 08 08.7	
SNET	Serv Nac Est T	2.83	317	eP	x	00 08 08.5	
BOQS	Boqueron	2.89	317	eP	x	00 08 10.4	
CGA2	Cerro Gallo 2	3.16	120	eP	Pn	00 08 16.6	-0.5
SBLS	San Blas	3.20	314	eP	x	00 08 14.3	
SNJE	San Jose	3.21	314	eP	x	00 08 14.1	
RTR	El Retiro	3.26	314	eP	x	00 08 15.4	
PRS1	Puriscal	3.31	119	⇑eP	Pn	00 08 18.6	-0.5
RBDL	Robledal	3.44	316	eP	x	00 08 17.8	
SJS	Escuela Geolog	3.55	118	eP	Pn	00 08 22.1	-0.3
LCR2	La Lucha 2	3.69	120	⇓eP	Pn	00 08 24.8	+0.4
QCR	Quepos	3.73	126	⇓eP	Pn	00 08 23.8	-1.1
URSC	Urasca	3.84	117	⇑eP	Pn	00 08 26.7	+0.3
BUS	Buena Vista	3.99	121	⇓eP	Pn	00 08 28.9	+0.4
BUS				eS	Sn	00 09 16.1	+2.0
BAR1		4.53	121	eP	Pn	00 08 35.5	-0.4
ACR	Cerro Adams	4.98	126	⇑eP	Pn	00 08 41.8	-0.3
BCIP	Isla Barro Col	7.68	108	ePn	Pn	00 09 19.9	+0.7
TEIG	Tepich	8.61	353	Pn	Pn	00 09 34.1	+2.2
	comp=N,0.6nm,0.3s,baz=137,slow=11,SNR=6.6						
TEIG				LR	LR	00 13 17.8	
	comp=N,2µm,19.6s,baz=163,slow=42						
TEIG	Tepich	8.61	353	ePn	Pn	00 09 32.7	+0.8
CMIG	Matias Romero	9.19	307	Pn	Pn	00 09 37.2	-2.5
	comp=N,8.4nm,0.3s,baz=111,slow=9.8,SNR=64						
OTAV	Otavalo	14.29	142	AMS	AMS	00 12 30.3	
OTAV	Otavalo	14.29	142	ePn	Pn	00 10 49.1	-0.5
ROSC	El Rosal	14.43	117	Pn	Pn	00 10 59.9	+8.5
	comp=N,0.4nm,0.3s,baz=101,slow=8.9,SNR=14						
CHI2		15.05	116	⇑eP	Px	00 07 47.7	
SDV	Santo Domingo	16.57	98	Pn	Pn	00 11 19.6	+0.5
	comp=N,0.6nm,0.3s,baz=282,slow=5.6,SNR=14						
SDV	Santo Domingo	16.57	98	ePn	Pn	00 11 19.9	+0.9
KVTX	Kingsville	18.73	329	eP	Pn	00 11 46.0	+0.5
	comp=N,195nm,1.0s						
BRAL	Brewton	19.29	0	eP	Pn	00 11 52.6	+0.4
	comp=N,53nm,0.7s						
HKT	Hockley	19.91	338	eP	Pn	00 11 57.1	-2.5
	comp=N,140nm,1.8s						
ATAH	Atahualpa	20.49	154	P	P	00 12 04.8	+0.8
	comp=N,5.4nm,0.9s,baz=347,slow=15,SNR=2.3						
ATAH				LR	LR	00 18 49.8	
	comp=N,3µm,20.7s,MS4.6,baz=337,slow=33						
VBMS	Vicksburg	20.72	352	eP	P	00 12 06.9	+0.5
	comp=N,120nm,1.8s						
NATX	Nacogdoches	21.18	342	ePn	P	00 12 12.2	+0.9
	comp=N,52nm,0.8s,mb4.9						
SJG	San Juan	21.37	70	P	P	00 12 11.4	-2.2
	comp=N,23nm,0.2s,mb5.1,baz=308,slow=20,SNR=13						
SJG				LR	LR	00 20 53.6	
	comp=N,2µm,18.9s,MS4.6,baz=99,slow=38						
SJG	San Juan	21.37	70	eP	P	00 12 13.6	+0.1
MTP	Monte Pirata	21.91	70	eP	P	00 12 20.1	+0.7
GOGA	Godfrey	21.96	8	eP	P	00 12 20.5	+0.8
	comp=N,41nm,0.6s,mb5.0						
JCT	Junction City	22.09	330	eP	P	00 12 20.2	-0.9
PCRV	Puerto La Cruz	22.24	92	P	P	00 12 21.6	-1.3
	comp=N,18nm,0.6s,mb4.7,baz=293,slow=9.0,SNR=14						
OXF	Oxford	22.87	355	eP	P	00 12 28.4	-1.0
	comp=N,85nm,1.0s,mb5.1						
JSC	Jenkinsville	23.20	13	eP	P	00 12 33.5	+0.6
PLAL	Pickwick Lake	23.27	358	eP	P	00 12 31.8	-1.7
	comp=N,92nm,1.9s,mb4.9						
UALR	University of	23.51	349	eP	P	00 12 35.1	-0.7
	comp=N,30nm,0.9s,mb4.7						
SWET	Sewanee	23.52	3	eP	P	00 12 35.4	-0.4
MIAR	Mount Ida	23.54	347	eP	P	00 12 34.8	-1.2
	comp=N,30nm,0.8s,mb4.8						
HBAR	Harrisburg	24.02	353	eP	P	00 12 40.4	0.0
TKL	Tuckaleechee C	24.13	7	P	P	00 12 41.2	-0.2
	comp=N,31nm,0.6s,mb4.9,baz=174,slow=12,SNR=41						
TKL				LR	LR	00 25 05.0	
	comp=N,1µm,18.1s,MS4.4,baz=222,slow=44						
TZTN	Tazewell	25.03	7	eP	P	00 12 49.8	+0.1
	comp=N,20nm,0.6s,mb4.8						
LPIG	La Paz	25.17	303	LR	LR	00 24 16.0	
	comp=N,2µm,18.2s,MS4.6,baz=253,slow=40						
WMOK	Wichita Mounta	25.29	337	eP	P	00 12 51.5	-0.5
NNA	Nana	25.63	156	LR	LR	00 21 47.8	
	comp=N,684nm,19.8s,MS4.2,baz=237,slow=34						
SIUC	Southern Illin	26.04	356	eP	P	00 12 58.3	-0.4
	comp=N,27nm,0.7s,mb4.9						
ELN	Prospectdale	26.15	12	eP	P	00 13 00.6	+0.8
USIN	University of	26.23	359	eP	P	00 12 59.9	-0.6
	comp=N,12nm,0.5s,mb4.7						
WCI	Wyandotte Cave	26.51	2	eP	P	00 13 02.5	-0.5
	comp=N,61nm,1.6s,mb4.9						
AMTX	Amarillo	26.62	333	eP	P	00 13 04.8	+0.8
	comp=N,34nm,0.9s,mb4.9						
OLIL	Olney	27.01	359	eP	P	00 13 06.3	-1.1
	comp=N,16nm,0.7s,mb4.7						
BNM	Barren Site	28.56	325	eP	P	00 13 22.2	+0.8
ACSO	Alum Creek Sta	28.74	7	eP	P	00 13 23.1	+0.1
	comp=N,16nm,0.7s,mb4.9						
ANMO	Albuquerque	29.06	326	P	P	00 13 25.9	+0.1
	comp=N,0.5nm,0.5s,baz=193,slow=9.4,SNR=3.1						
ANMO	Albuquerque	29.06	326	eP	P	00 13 28.3	+2.5
	comp=N,52nm,2.5s,mb4.8						
SDMD	Soldier's Deli	29.17	17	eP	P	00 13 27.7	+0.9
TUC	Tucson	29.88	317	epP	pP	00 13 41.1	-4.2
SDCO	Great Sand Dun	30.73	331	eP	P	00 13 41.0	+0.4
	comp=N,50nm,2.5s,mb4.9						
JFWS	Jewell Farm	31.28	356	eP	P	00 13 43.4	-1.9
	comp=N,20nm,1.0s,mb4.9						
MVCO	Mesa Verde	31.84	327	eP	P	00 13 51.9	+1.5
BINY	Binghamton	32.01	16	eP	P	00 13 52.3	+0.6
ISCO	Idaho Springs	32.44	333	eP	P	00 13 57.3	+1.7
	comp=N,31nm,2.1s,mb4.8						
SMCO	Snowmass	32.57	331	epP	pP	00 14 06.1	-2.8
PV10	Paradox Valley	32.99	328	eP	P	00 13 58.9	-1.5
ECSD	EROS,Sioux Fal	33.00	347	eP	P	00 13 58.6	-1.8
	comp=N,19nm,0.8s,mb5.1						
LPAZ	La Paz	33.56	145	P	P	00 14 06.2	+0.6
	comp=N,1.0nm,0.5s,mb4.0,baz=297,slow=8.5,SNR=8.9						
LPAZ				LR	LR	00 27 51.3	
	comp=N,896nm,20.5s,MS4.5,baz=304,slow=37						
ACCN	Adirondack Com	33.76	18	eP	P	00 14 08.5	+1.4
NCB	Newcomb	34.13	17	eP	P	00 14 10.4	+0.1
SRU	San Rafael	34.31	327	eP	P	00 14 12.2	+0.2
COWI	Conover	34.40	358	eP	P	00 14 12.9	+0.4
	comp=N,12nm,0.8s,mb4.9						
MDV	Middlebury	34.46	18	eP	P	00 14 15.4	+2.3
FFD	Franklin Falls	34.48	20	eP	P	00 14 14.1	+0.8
	comp=N,18nm,0.8s,mb5.0						
LONY	Lake Ozonia	34.63	16	eP	P	00 14 14.0	-0.6
RWWY	Rawlins	34.68	333	eP	P	00 14 15.3	+0.3
	comp=N,11nm,0.9s,mb4.8						
MSU	Marysvale	34.80	325	eP	P	00 14 17.6	+1.4
FRNY	Flat Rock	35.11	17	eP	P	00 14 18.8	+0.1
	comp=N,23nm,1.2s,mb5.0						
RSSD	Black Hills	35.47	339	eP	P	00 14 22.6	+0.8
	comp=N,47nm,2.1s,mb5.0						
DAU	Daniels Canyon	35.65	328	eP	P	00 14 24.3	+0.9
JLU	Jordanelle	35.89	328	epP	pP	00 14 36.5	-1.3
TPNV	Topopah Spring	36.27	319	eP	P	00 14 29.9	+1.1
DUG	Dugway	36.33	326	eP	P	00 14 30.1	+0.8
	comp=N,49nm,2.6s,mb5.0						
EYMN	Ely	36.38	355	eP	P	00 14 28.1	-1.4
	comp=N,17nm,1.3s,mb4.8						
BW06	Boulder Array	36.59	332	eP	P	00 14 30.9	-0.5
PDAR	Pinedale Array	36.59	332	P	P	00 14 30.8	-0.7
	comp=N,1.8nm,0.6s,mb4.1,baz=128,slow=9.7,SNR=16						
PDAR				PcP	PcP	00 16 55.0	+1.0
	comp=N,1.2nm,0.6s,baz=149,slow=7.3,SNR=4.2						
HWUT	Hardware Ranch	36.68	329	eP	P	00 14 32.2	0.0
	comp=N,15nm,1.0s,mb4.8						
PKME	Peaks-Kenny Pk	36.87	21	eP	P	00 14 33.5	-0.3
BGU	Big Grassy Mou	36.96	327	eP	P	00 14 34.4	-0.2
AGMN	Agassiz Refuge	37.26	350	eP	P	00 14 35.9	-1.2
	comp=N,30nm,1.2s,mb5.0						
AHID	Auburn Hatcher	37.32	331	eP	P	00 14 37.9	+0.3
	comp=N,16nm,0.8s,mb4.9						
REDW	Red Top Meadow	37.66	331	eP	P	00 14 40.8	+0.3
SNOW	Snow King Moun	37.69	332	eP	P	00 14 40.9	+0.1
SIV	San Ignacio	37.73	136	P	P	00 14 41.2	-0.2
	comp=N,12nm,0.6s,mb4.8,baz=308,slow=8.4,SNR=48						
SIV				LR	LR	00 29 51.2	
	comp=N,1µm,20.7s,MS4.8,baz=337,slow=36						
LOHW	Long Hollow	37.73	332	eP	P	00 14 40.7	-0.4
TPAW	Teton Pass	37.80	331	eP	P	00 14 41.6	0.0
	comp=N,15nm,0.7s,mb4.8						
RRI2	Red Ridge	37.86	331	eP	P	00 14 42.4	+0.1
MTUM	Tungsten Hills	38.01	318	eP	P	00 14 47.4	+3.8
MTUM				epP	pP	00 14 53.8	-2.1
ELK	Elko	38.05	325	epP	pP	00 14 51.1	-5.1
IMW	Indian Meadow	38.11	332	eP	P	00 14 44.5	+0.3
FLWY	Flagg Ranch	38.14	332	eP	P	00 14 45.4	+0.8
RLMT	Red Lodge	38.34	335	eP	P	00 14 46.4	+0.2
	comp=N,34nm,1.9s,mb4.8						
NVAR	Mina Array Bea	38.46	319	P	P	00 14 47.9	+0.6
	comp=N,1.8nm,0.7s,mb3.9,baz=139,slow=6.7,SNR=15						
NVAR				PcP	PcP	00 17 01.3	+1.5
	comp=N,2.7nm,0.7s,baz=142,slow=3.4,SNR=7.4						
NVAR	Mina Array Bea	38.46	319	P	P	00 14 47.9	+0.6
NVAR				PcP	PcP	00 17 01.3	+1.5
LVC	Limon Verde	38.48	152	LR	LR	00 30 20.3	
	comp=N,741nm,20.9s,MS4.5,baz=317,slow=36						
GCMT	Greycliff	39.04	335	eP	P	00 14 52.0	0.0
QLMT	Earthquake Lak	39.05	332	eP	P	00 14 53.4	+1.2
ULM	Lac du Bonnet	39.16	351	P	P	00 14 51.2	-1.8
	comp=N,5.0nm,0.5s,mb4.5,baz=174,slow=8.2,SNR=8.1						
ULM				LR	LR	00 33 20.3	
	comp=N,532nm,20.0s,MS4.4,baz=62,slow=40						
ULM	Lac du Bonnet	39.16	351	P	P	00 14 51.2	-1.8
ULM				LR	LR	00 33 20.3	
HLID	Hailey	39.55	329	eP	P	00 14 57.1	+0.7
MCMT	McKenzie Canyo	39.70	331	eP	P	00 14 58.1	+0.5
BOZ	Bozeman (W)	39.77	333	eP	P	00 14 58.0	-0.2
	comp=N,62nm,2.5s,mb4.9						
DLMT	Dillon	39.99	332	eP	P	00 15 00.4	+0.4
LRM	Limekiln Ridge	40.27	333	eP	P	00 15 03.1	+0.8
EGMT	Eagleton	40.89	337	eP	P	00 15 07.6	+0.2
	comp=N,50nm,1.8s,mb4.8						
WVOR	Wild Horse Val	41.09	324	eP	P	00 15 08.7	-0.4
	comp=N,8.0nm,0.9s,mb4.3						
MSO	Missoula	41.71	332	eP	P	00 15 14.8	+0.7
BMO	Blue Mountains	41.94	328	eP	P	00 15 16.4	+0.4
YBH	Yreka Blue Hor	43.11	321	LR	LR	00 35 58.5	
	comp=N,1µm,19.6s,MS4.8,baz=135,slow=40						
LNOR	Lincton Mounta	43.14	328	eP	P	00 15 25.6	-0.1
HAWA	Hanford	44.13	328	eP	P	00 15 34.9	+1.1
OD2	Odessa Site #2	44.38	330	eP	P	00 15 35.3	-0.5
LON	Longmire	45.56	327	eP	P	00 15 44.3	-0.9
	comp=N,10.0nm,0.9s,mb4.8						
SCHQ	Schefferville	46.01	16	P	P	00 15 46.6	-1.8
	comp=N,12nm,0.8s,mb4.9,baz=219,slow=7.1,SNR=22						
SCHQ				LR	LR	00 36 47.8	
	comp=N,1µm,18.6s,MS4.9,baz=207,slow=38						
EDM	Edmonton	46.45	339	eP	P	00 15 51.4	-0.6
CFAA	Coronel Fontan	46.68	158	P	P	00 15 55.2	+1.2
	comp=N,0.2nm,0.4s,baz=306,slow=3.7,SNR=3.8						
BDFB	Brasilia	47.34	124	P	P	00 15 59.0	-0.5
	comp=N,11nm,0.5s,mb5.0,baz=277,slow=7.8,SNR=22						
BDFB				LR	LR	00 36 35.3	
	comp=N,1µm,21.2s,MS4.9,baz=294,slow=37						
CPUP	Villa Florida	47.64	143	P	P	00 16 01.2	-0.4
	comp=N,2.9nm,0.8s,mb4.4,baz=317,slow=8.6,SNR=11						
CPUP				LR	LR	00 38 30.1	
	comp=N,429nm,19.0s,MS4.4,baz=308,slow=39						
CPUP	Villa Florida	47.64	143	P	P	00 16 01.2	-0.4
CPUP				LR	LR	00 38 30.1	
BBB	Bella Bella	52.13	329	LR	LR	00 44 36.8	
	comp=N,442nm,18.2s,MS4.5,baz=138,slow=43						
PLCA	Paso Flores	54.33	164	P	P	00 16 51.4	-0.3
	comp=N,2.0nm,0.6s,mb4.2,baz=332,slow=10,SNR=6.6						
PLCA				LR	LR	00 34 04.1	
	comp=N,452nm,21.4s,MS4.5,baz=16,slow=29						
PLCA	Paso Flores	54.33	164	P	P	00 16 51.4	-0.3
PLCA				LR	LR	00 34 04.1	
YKA	Yellowknife Ar	54.46	345	P	P	00 16 50.6	-1.7
	comp=N,2.9nm,0.6s,mb4.4,baz=138,slow=7.6,SNR=42						
YKA				LR	LR	00 44 44.6	
	comp=N,319nm,18.9s,MS4.4,baz=165,slow=41						
TAOE	Nuku Hiva Isla	56.41	251	eS	S	00 24 56.7	+1.7
	comp=N,1µm,25.5s						
TAOE				eLR	LR	00 33 18.9	
	comp=N,2µm,24.6s						
RKT	Rikitea	58.10	233	eS	S	00 25 19.6	+2.6
	comp=N,611nm,25.2s						
RKT				eLR	LR	00 34 27.7	
	comp=N,692nm,25.8s,baz=52						
PPT	Papeete	68.05	246	eS	S	00 27 23.8	+2.2
	comp=N,213nm,25.8s						
PPT	Papeete	68.05	246	eLR	LR	00 38 48.4	
	comp=N,769nm,25.2s,baz=60						
PPT	Papeete	68.05	246	LR	LR	00 39 50.3	
	comp=N,547nm,18.1s,MS4.8,baz=67,slow=28						
BORG	Borgarnes	69.37	25	LR	LR	00 49 29.5	
	comp=N,430nm,19.1s,MS4.7,baz=261,slow=36						
SVW2	Sparrevohn	69.47	331	eP	P	00 18 32.4	-0.8
JMIC	Jan Mayen	75.41	19	LR	LR	00 50 34.6	
	comp=N,212nm,21.0s,MS4.4,baz=273,slow=34						
EKA	Eskdalemuir Ar	77.17	36	P	P	00 19 16.2	-2.4
	comp=N,2.6nm,0.9s,mb4.2,baz=265,slow=5.2,SNR=5.8						
ESDC	Sonseca Array	77.54	52	P	P	00 19 19.4	-1.7
	comp=N,1.3nm,0.7s,mb3.9,baz=285,slow=5.0,SNR=8.4						
ESDC				LR	LR	00 49 40.2	
	comp=N,307nm,20.5s,MS4.6,baz=260,slow=33						
ESDC	Sonseca Array	77.54	52	P	P	00 19 19.4	-1.7
ESDC				LR	LR	00 49 40.2	
MDT	Midelt	77.65	59	LR	LR	00 51 52.3	
	comp=N,766nm,18.5s,MS5.1,baz=13,slow=34						
DBIC	Dimbokro	81.25	85	LR	LR	00 54 19.4	
	comp=N,270nm,20.6s,MS4.6,baz=258,slow=35						
NOA	NORSAR Array B	83.99	29	LR	LR	00 54 19.4	
	comp=N,246nm,19.6s,MS4.6,baz=280,slow=34						
TRIS	Tristan da Cun	85.20	129	eP	P	00 20 01.3	-0.3
	comp=N,446nm,0.4s						
TORD	Torodi Ar. Bea	86.39	77	P	P	00 20 07.6	-0.4
	comp=N,0.7nm,1.1s,mb3.8,baz=289,slow=5.6,SNR=5.8						
ARCES	ARCESS Array B	86.89	19	P	P	00 20 09.3	-0.1
	comp=N,1.5nm,0.8s,mb4.2,baz=270,slow=3.6,SNR=4.0						
ARCES	ARCESS Array B	86.89	19	P	P	00 20 09.3	-0.1
KURK	Kurchatov	116.71	10	PKP	PKPdf	00 26 09.4	+0.3
	comp=N,0.6nm,0.2s,baz=338,slow=1.7,SNR=3.9						
CN2	Changchun	117.32	334	ePKP	PKPdf	00 26 10.5	0.0
SONM	Songino Array	119.58	349	PKP	PKPdf	00 26 15.3	+0.6
	comp=N,0.6nm,0.5s,baz=307,slow=0.6,SNR=5.8						
KSRS	Korea Array	121.08	328	PKP	PKPdf	00 26 19.4	+1.5
	comp=N,1.3nm,0.6s,baz=18,slow=2.1,SNR=4.8						
BJI	Beijing	124.19	338	PKP	PKPdf	00 26 23.0	-0.8
BJI				LR	LR		
	comp=Z,211nm,30.4s,MS4.6						
WMQ	Urumqi	124.63	4	ePKP	PKPdf	00 26 25.0	+0.5
HHC	Hu-ho-hao-te	124.97	343	ePKP	PKPdf	00 26 21.2	-4.1
HHC				PP	PP	00 28 12.8	0.0
HHC				PKS		00 29 56.5	
HHC				SKS	SKSdf	00 33 27.8	-5.8
HHC				PP	PP		
	comp=Z,110nm,9.0s						
HHC				LR	LR		
	comp=N,177nm,22.2s,MS4.8						
HHC				LR	LR		
	comp=E,128nm,21.3s,MS4.8						
HHC				LR	LR		
	comp=Z,186nm,22.7s,MS4.7						
GTA	Gaotai	128.81	353	ePKP	PKPdf	00 26 33.8	+1.1
GTA				XPKP		00 26 48.2	
NJ2	Nanjing	129.90	331	ePKP	PKPdf	00 26 35.4	+0.4
LZH	Lanzhou	131.41	348	ePKP	PKPdf	00 26 37.5	-0.2
LZH				XPKP		00 26 52.0	
CD2	Chengdu	136.41	346	ePKP	PKPdf	00 26 46.5	-0.7
CD2				XPKP		00 26 58.0	
CD2				PP	PP	00 29 29.7	+2.8
CD2				PKS		00 30 21.5	
CD2				SKS	SKSdf	00 33 52.0	-2.7
CD2				PP	PP		
	comp=Z,100nm,10.2s						
CD2				LR	LR		
	comp=N,160nm,21.4s						
CD2				LR	LR		
	comp=Z,180nm,22.4s,MS4.8						
ASAR	Alice Springs	139.15	247	PKhKP		00 26 45.4	
	comp=Z,0.8nm,0.7s,baz=99,slow=5.0,SNR=7.1						
WB2	Warramunga Arr	139.22	253	eP	PKPdf	00 26 52.0	-0.6
WRA	Warramunga Arr	139.23	253	PKhKP		00 26 44.4	
	comp=Z,0.2nm,0.3s,baz=7.6,slow=6.7,SNR=5.3						
WRA				PKP	PKPdf	00 26 52.6	-0.1
	comp=Z,1.8nm,0.6s,baz=83,slow=1.4,SNR=13						
WRA	Warramunga Arr	139.23	253	PKP	PKPdf	00 26 52.6	-0.1
GYA	Guiyang	139.81	341	ePDIF	Pdif	00 24 07.2	+0.3
GYA				PKP	PKPdf	00 26 54.2	+0.6
GYA				XPKP		00 27 07.4	
GYA				PP	PP	00 29 52.8	+4.7
GYA				PKS		00 30 29.5	
GYA				SKS	SKSdf	00 33 59.8	-0.8
GYA				PP	PP		
	comp=Z,110nm,7.9s						
GYA				LR	LR		
	comp=N,180nm,21.2s,MS4.9						
GYA				LR	LR		
	comp=E,140nm,22.5s,MS4.9						
GYA				LR	LR		
	comp=Z,170nm,22.6s,MS4.7						
FORT	Forrest	142.20	234	eP	PKPdf	00 27 00.5	+2.8
	comp=Z,10nm,0.7s						
KMI	Kunming	142.20	345	PKP	PKPdf	00 26 58.0	+0.1
FITZ	Fitzroy Crossi	147.61	255	eP	PKPdf	00 27 09.2	+1.8
	comp=Z,7.8nm,0.7s						
NANT	Nan	148.77	345	⇑P	PKPbc	00 27 12.0	-1.1
	comp=Z,156nm,1.0s						
CHG	Chiang Mai	149.15	349	⇓P	PKPbc	00 27 14.1	0.0
	comp=Z,20nm,1.0s						
CMAR	Chiang Mai Arr	149.49	348	PKPbc	PKPbc	00 27 14.0	-1.0
	comp=Z,6.3nm,0.8s,baz=341,slow=3.4,SNR=20						
KLBR	Kellerberrin	149.56	225	eP	PKPbc	00 27 16.0	+1.2
	comp=Z,50nm,1.7s						
MUN	Mundaring	150.39	223	eP	PKPbc	00 27 16.0	-0.8
KKTK	Khon Kaen	150.49	340	P	PKPbc	00 27 20.0	+2.6

*ISCJB **02** 00:14:38.3±0.5,2431S±003×6703W±005,h169km±4km, mb4.3/34,Error ellipse: s-maj=7.5km s-min=5.3km az=164.5*

*NEIC **02** 00:14:39.4±0.5,2426S×6697W,h164km±4km,mb4.4/25, Error ellipse: s-maj=6.9km s-min=5.8km az=68.0*

*IDC **02** 00:14:39.4±0.9,2424S×6698W,h166km±7km,mb4.1/12, mb1 4.2/18,mb1mx4.1/21,mbtmp4.1/18,Error ellipse: s-maj=13.9km s-min=9.3km az=60.0*

*BJI **02** 00:14:39.4,2430S×6700W,h164km,mB4.7*

*GUC **02** 00:14:41.9±0.8,2432S×6752W,h200km,ML4.8*

ISC 02 00:14:39.3±0.5**,2430S**±003×**6703W**±005**,h162**km±4km**, n107,**σ1^s**01**/96**,mb4.3**/34**,4C-2D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.41	314	P	Pn	00 15 22.1	+2.1
	167nm,0.3s,baz=134,slow=7.1,SNR=430						
LVC				S	Sn	00 15 52.7	+1.3
	255nm,0.3s,baz=264,slow=21,SNR=23						
LVC	Limon Verde	2.41	314	ePn	Pn	00 15 22.1	+2.1
CEN1	Los Morros	3.04	287	⇓iP	Pn	00 15 29.6	+1.9
CEN1				iS	Sn	00 16 05.4	+0.2
CEN1				AML	AML	00 16 08.9	
	comp=E,2µm,0.7s						
CPN1	Cerro Paranal	3.10	263	⇓iP	Pn	00 15 29.4	+1.1
CPN1				iS	Sn	00 16 05.5	-0.9
CPN1				AML	AML	00 16 08.8	
	comp=E,2µm,0.4s						
ANCH	Antofagasta	3.16	281	⇑iP	Pn	00 15 30.0	+0.9
ANCH				iS	Sn	00 16 06.1	-1.6
CDCH	Caldera	4.41	230	⇑iP	Pn	00 15 44.5	-0.6
CDCH				iS	Sn	00 16 34.1	-2.4
VACH	Vallenar	5.42	217	iS	Sn	00 16 57.9	-2.4
LCO	Las Campanas	5.73	214	ePn	Pn	00 16 02.5	-0.1
CFAA	Coronel Fontan	7.36	188	P	Pn	00 16 25.1	+1.1
	comp=E,0.3nm,0.3s,baz=13,slow=12,SNR=18						
CFAA				S	Sn	00 17 43.3	-3.2
	comp=E,0.6nm,0.3s,baz=114,slow=21,SNR=8.9						
LPAZ	La Paz	8.04	352	P	Pn	00 16 33.9	+0.7
	comp=E,5.7nm,0.3s,baz=158,slow=6.6,SNR=113						
LPAZ				S	Sn	00 18 01.4	-1.6
	comp=E,0.7nm,0.3s,baz=353,slow=21,SNR=6.1						
CPUP	Villa Florida	9.00	105	P	Pn	00 16 47.0	+1.1
	comp=E,1.5nm,0.3s,baz=261,slow=11,SNR=10						
SIV	San Ignacio	9.98	35	P	Pn	00 16 57.7	-1.1
	comp=E,3.4nm,0.3s,baz=229,slow=12,SNR=20						
TRQA	Tornquist	14.37	164	ePn	Pn	00 17 55.4	0.0
	comp=E,35nm,0.6s						
PLCA	Paso Flores	16.65	189	P	Pn	00 18 24.1	+0.8
	comp=E,0.3nm,0.3s,baz=6.9,slow=13,SNR=4.8						

VAO	**Valinhos**	**18.42**	**90**	⇑ iP	**P**	**00 18 42.3**	**-0.1**
BDFB	**Brasilia**	**19.82**	**68**	P	**P**	**00 18 57.5**	**-0.1**
	comp=E,4.1nm,0.3s,baz=233,slow=12,SNR=39						
SDV	**Santo Domingo**	**33.17**	**353**	P	**P**	**00 20 58.9**	**-1.7**
	comp=E,5.8nm,0.8s,mb4.3,baz=248,slow=9.8,SNR=4.4						
SDV	**Santo Domingo**	**33.17**	**353**	eP	**P**	**00 20 58.6**	**-2.0**
	comp=E,6.0nm,0.9s,mb4.3						
TRIS	**Tristan da Cun**	**48.15**	**119**	eP	**P**	**00 23 02.1**	**-1.0**
TEIG	**Tepich**	**48.86**	**333**	eP	**P**	**00 23 07.2**	**-1.4**
	comp=E,5.6nm,0.4s,mb4.5						
VNA1	**Neumayer--Stat**	**57.08**	**160**	eP	**P**	**00 24 09.5**	**+1.4**
VNA2	**Neumayer--Watz**	**57.45**	**160**	eP	**P**	**00 24 11.7**	**+1.0**
SNAA	**Sanae**	**59.08**	**161**	eP	**P**	**00 24 22.5**	**+0.5**
CPCT	**Cooper Cave**	**61.69**	**344**	eP	**P**	**00 24 39.2**	**-0.9**
TKL	**Tuckaleechee C**	**61.70**	**345**	P	**P**	**00 24 38.6**	**-1.6**
	comp=E,5.4nm,0.5s,mb4.7,baz=168,slow=7.5,SNR=15						
SWET	**Sewanee**	**61.84**	**342**	eP	**P**	**00 24 40.0**	**-1.2**
JCT	**Junction City**	**62.88**	**328**	eP	**P**	**00 24 47.7**	**-0.5**
	comp=E,12nm,0.8s,mb4.8						
MIAR	**Mount Ida**	**63.72**	**336**	eP	**P**	**00 24 52.4**	**-1.2**
WCI	**Wyandotte Cave**	**64.77**	**343**	eP	**P**	**00 24 58.3**	**-2.1**
FVM	**French Village**	**65.74**	**340**	eP	**P**	**00 25 04.9**	**-1.7**
WMOK	**Wichita Mounta**	**65.99**	**332**	eP	**P**	**00 25 06.8**	**-1.5**
DBIC	**Dimbokro**	**67.92**	**71**	P	**P**	**00 25 20.1**	**-0.8**
	comp=E,2.5nm,0.6s,mb4.1,baz=204,slow=10.0,SNR=7.0						
LPM	**Los Pinos Moun**	**69.37**	**326**	eP	**P**	**00 25 29.7**	**+0.2**
ANMO	**Albuquerque**	**69.78**	**326**	P	**P**	**00 25 32.4**	**+0.4**
	comp=E,6.0nm,0.8s,mb4.4,baz=130,slow=8.5,SNR=21						
ANMO	**Albuquerque**	**69.78**	**326**	eP	**P**	**00 25 32.5**	**+0.5**
	comp=E,8.4nm,0.9s,mb4.5						
TUC	**Tucson**	**70.10**	**321**	eP	**P**	**00 25 34.4**	**+0.4**
	comp=E,6.8nm,1.2s,mb4.2						
JFWS	**Jewell Farm**	**70.22**	**342**	eP	**P**	**00 25 33.0**	**-1.5**
	comp=E,18nm,0.6s,mb5.0						
SDCO	**Great Sand Dun**	**71.53**	**329**	eP	**P**	**00 25 42.9**	**+0.4**
	comp=E,3.2nm,0.7s,mb4.2						
MVCO	**Mesa Verde**	**72.58**	**326**	eP	**P**	**00 25 49.7**	**+0.9**
WUAZ	**Wupatki**	**72.81**	**323**	eP	**P**	**00 25 50.4**	**+0.2**
	comp=E,9.5nm,0.8s,mb4.6						
ECSD	**EROS,Sioux Fal**	**72.95**	**338**	eP	**P**	**00 25 49.6**	**-1.2**
	comp=E,16nm,1.3s,mb4.6						
ISCO	**Idaho Springs**	**73.23**	**330**	eP	**P**	**00 25 53.1**	**+0.6**
	comp=E,6.4nm,1.1s,mb4.3						
SYO	**Syowa Base**	**73.28**	**159**	⇑ eP	**P**	**00 25 51.5**	**-1.0**
PV01	**Paradox Valley**	**73.33**	**327**	eP	**P**	**00 25 53.8**	**+0.6**
SMCO	**Snowmass**	**73.37**	**329**	eP	**P**	**00 25 56.1**	**+2.8**
	comp=E,5.9nm,0.8s,mb4.4						
PV10	**Paradox Valley**	**73.75**	**327**	eP	**P**	**00 25 55.7**	**+0.1**
PHWY	**Pilot Hill**	**74.37**	**331**	eP	**P**	**00 25 59.9**	**+0.7**
SRU	**San Rafael**	**75.06**	**326**	eP	**P**	**00 26 03.3**	**+0.2**
	comp=E,6.0nm,0.7s,mb4.3						
MSU	**Marysvale**	**75.46**	**325**	eP	**P**	**00 26 06.5**	**+1.0**
RWWY	**Rawlins**	**75.47**	**330**	eP	**P**	**00 26 05.7**	**+0.2**
	comp=E,9.8nm,0.9s,mb4.4						
SHPR	**Sheep Range**	**75.63**	**322**	eP	**P**	**00 26 07.4**	**+0.9**
GSC	**Goldstone**	**75.73**	**320**	eP	**P**	**00 26 07.2**	**+0.1**
RSSD	**Black Hills**	**76.06**	**333**	eP	**P**	**00 26 09.2**	**+0.4**
DAU	**Daniels Canyon**	**76.41**	**327**	eP	**P**	**00 26 11.6**	**+0.8**
TPNV	**Topopah Spring**	**76.56**	**321**	eP	**P**	**00 26 12.3**	**+0.6**
	comp=E,6.6nm,0.9s,mb4.3						
TORD	**Torodi Ar. Bea**	**76.70**	**69**	P	**P**	**00 26 12.0**	**-1.0**
	comp=E,2.4nm,0.5s,mb4.1,baz=258,slow=5.6,SNR=66						
AGMN	**Agassiz Refuge**	**76.75**	**341**	eP	**P**	**00 26 11.8**	**-0.7**
	comp=E,6.8nm,0.8s,mb4.3						
DUG	**Dugway**	**77.04**	**326**	eP	**P**	**00 26 14.9**	**+0.6**
PDAR	**Pinedale Array**	**77.39**	**329**	P	**P**	**00 26 16.1**	**-0.2**
	comp=E,1.4nm,0.6s,mb3.8,baz=133,slow=7.4,SNR=12						
HWUT	**Hardware Ranch**	**77.47**	**327**	eP	**P**	**00 26 16.8**	**+0.2**
	comp=E,5.4nm,0.8s,mb4.2						
MTUM	**Tungsten Hills**	**78.17**	**320**	eP	**P**	**00 26 17.2**	**-3.5**
REDW	**Red Top Meadow**	**78.45**	**329**	eP	**P**	**00 26 22.4**	**+0.3**
	comp=E,5.9nm,0.8s,mb4.3						
ULM	**Lac du Bonnet**	**78.50**	**342**	P	**P**	**00 26 21.2**	**-1.0**
	comp=E,8.0nm,0.6s,mb4.5,baz=152,slow=6.7,SNR=11						
ULM	**Lac du Bonnet**	**78.50**	**342**	P	**P**	**00 26 21.2**	**-1.0**
LOHW	**Long Hollow**	**78.53**	**329**	eP	**P**	**00 26 23.0**	**+0.5**
	comp=E,5.3nm,0.8s,mb4.2						
TPAW	**Teton Pass**	**78.60**	**329**	eP	**P**	**00 26 23.8**	**+0.9**
RRI2	**Red Ridge**	**78.67**	**329**	eP	**P**	**00 26 24.1**	**+0.9**
ELK	**Elko**	**78.70**	**325**	eP	**P**	**00 26 24.2**	**+0.7**
NVAR	**Mina Array Bea**	**78.76**	**321**	P	**P**	**00 26 24.4**	**+0.6**
	comp=E,0.9nm,0.4s,mb3.7,baz=146,slow=4.4,SNR=5.5						
SCHQ	**Schefferville**	**78.81**	**0**	P	**P**	**00 26 22.3**	**-1.4**
	comp=E,1.5nm,0.5s,mb3.9,baz=216,slow=8.5,SNR=5.9						
IMW	**Indian Meadow**	**78.90**	**329**	eP	**P**	**00 26 25.4**	**+0.9**
	comp=E,9.3nm,0.9s,mb4.4						
LAO	**LASA Array**	**79.05**	**334**	eP	**P**	**00 26 25.5**	**+0.3**
WAKR	**Walker**	**79.46**	**321**	eP	**P**	**00 26 29.0**	**+1.4**
PAHR	**Pah Rah Range**	**80.24**	**322**	eP	**P**	**00 26 32.4**	**+0.5**
	comp=E,14nm,0.9s,mb4.6						
HLID	**Hailey**	**80.33**	**327**	eP	**P**	**00 26 33.1**	**+0.9**
MCMT	**McKenzie Canyo**	**80.50**	**329**	eP	**P**	**00 26 33.6**	**+0.5**
BOZ	**Bozeman (W)**	**80.56**	**330**	eP	**P**	**00 26 33.6**	**+0.2**
	comp=E,19nm,2.5s,mb4.3						
BOSA	**Boshof**	**80.62**	**117**	P	**P**	**00 26 34.5**	**+0.3**
	comp=E,4.3nm,0.5s,mb4.3,baz=249,slow=3.1,SNR=19						
DLMT	**Dillon**	**80.79**	**329**	eP	**P**	**00 26 35.2**	**+0.6**
	comp=E,11nm,1.3s,mb4.3						
LRM	**Limekiln Ridge**	**81.06**	**330**	eP	**P**	**00 26 36.8**	**+0.7**
MAW	**Mawson**	**81.16**	**163**	P	**P**	**00 26 36.9**	**+0.6**
	comp=E,3.3nm,0.6s,mb4.2,baz=212,slow=5.5,SNR=12						
BMO	**Blue Mountains**	**82.70**	**327**	eP	**P**	**00 26 44.9**	**+0.3**
HAWA	**Hanford**	**84.89**	**327**	eP	**P**	**00 26 56.1**	**+0.3**
	comp=E,5.5nm,0.9s,mb4.3						
RSW	**Rattlesnake Hi**	**84.92**	**327**	eP	**P**	**00 26 56.1**	**+0.3**
FCC	**Fort Churchill**	**85.74**	**346**	eP	**P**	**00 26 59.0**	**-0.6**
	comp=E,27nm,0.9s,mb5.0						
ETW	**Entiat**	**86.12**	**327**	eP	**P**	**00 27 01.6**	**-0.2**
BMW	**Boistfort Moun**	**86.85**	**325**	eP	**P**	**00 27 05.4**	**0.0**
EDM	**Edmonton**	**87.02**	**334**	eP	**P**	**00 27 04.7**	**-1.3**
YKA	**Yellowknife Ar**	**94.40**	**340**	P	**P**	**00 27 39.2**	**-0.9**
	comp=E,2.1nm,0.6s,mb4.5,baz=129,slow=4.7,SNR=43						
KIS	**Kishinev**	**111.22**	**47**	LRM		00 34 00.0	
	comp=E,300nm,18.0s						
ASAR	**Alice Springs**	**128.18**	**205**	PKP	PKPdf	00 33 26.2	-0.8
	comp=E,1.6nm,0.5s,baz=130,slow=1.8,SNR=28						
WB2	**Warramunga Arr**	**131.35**	**207**	eP	PKPdf	00 33 32.5	-0.6
WRA	**Warramunga Arr**	**131.35**	**207**	PKP	PKPdf	00 33 32.5	-0.5
	comp=E,1.8nm,0.4s,baz=162,slow=1.7,SNR=13						
PETK	**Petropavlovsk-**	**135.83**	**322**	PKP	PKPdf	00 33 40.5	+0.1
	comp=E,1.9nm,0.7s,baz=83,slow=5.2,SNR=5.3						
BVAR	**Borovoye Array**	**137.05**	**37**	PKP	PKPdf	00 33 43.1	+0.4
	comp=E,0.6nm,0.5s,baz=246,slow=2.9,SNR=5.5						
KURK	**Kurchatov**	**142.63**	**36**	PKP	PKPdf	00 33 51.9	-0.9
	comp=E,0.7nm,0.5s,baz=298,slow=2.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**143.67**	**28**	PKP	PKPdf	00 33 52.0	-2.6
	comp=E,4.3nm,0.5s,baz=296,slow=4.5,SNR=25						
MKAR	**Makanchi Array**	**146.77**	**40**	PKPbc	PKPbc	00 33 59.8	-2.3
	comp=E,5.9nm,0.5s,baz=318,slow=2.2,SNR=35						
ASAJ	**Asahikawa**	**148.78**	**317**	PKPbc	PKPbc	00 34 07.3	-0.2
	comp=E,9.6nm,0.9s,baz=94,slow=16,SNR=3.0						
MJAR	**Matsushiro Arr**	**155.13**	**305**	PKPab	PKPab	00 34 39.1	+0.3
	comp=E,3.7nm,0.9s,baz=93,slow=2.6,SNR=6.7						
MAT	**Matsushiro**	**155.13**	**305**	PKP2	PKPab	00 34 39.2	+0.4
SONM	**Songino Array**	**155.94**	**11**	PKPbc	PKPdf	00 34 23.3	+9.3
	comp=E,0.9nm,0.9s,baz=0.0,slow=1.5,SNR=4.0						
SONM				PKPab	PKPab	00 34 41.6	-0.1
	comp=E,1.0nm,0.7s,baz=315,slow=3.8,SNR=5.0						
CN2	**Changchun**	**158.02**	**335**	ePKP	PKPdf	00 34 14.2	-2.5
LZH	**Lanzhou**	**165.86**	**32**	ePKP	PKPdf	00 34 21.0	-4.0
LZH				APKP		00 35 02.5	
CD2	**Chengdu**	**169.51**	**49**	ePKP	PKPdf	00 34 24.2	-3.5
KMI	**Kunming**	**170.66**	**83**	PKP	PKPdf	00 34 26.0	-2.5
KMI				PP	PP	00 39 36.6	-1.7
KMI				SKS	SKSdf	00 41 12.5	-4.5
KMI				SKKS	SKKSac	00 46 07.2	-2.2
KMI				SS	SS	01 00 29.1	+0.9
KMI				PP	PP		
	comp=Z,93nm,10.3s						
KMI				LR	LR		
	comp=N,2µm,10.6s						
KMI				LR	LR		
	comp=E,2µm,8.9s						
KMI				LR	LR		
	comp=Z,3µm,9.6s						
GYA	**Guiyang**	**173.90**	**68**	ePKP	PKPdf	00 34 28.6	-1.3
GYA				APKP		00 35 09.6	
GYA				XPKP		00 35 25.2	
GYA				PKP2	PKPab	00 35 59.8	-1.7
GYA				PKS		00 37 59.0	
GYA				PP	PP	00 39 52.7	-1.3
GYA				PP	PP		
	comp=Z,70nm,8.9s						

*DDA **02** 00:21:11.5, 3749N×3874E, h7km±2km, Md2.8*
*CSEM **02** 00:21:11.4±0.1, 3750N×3872E, h8km, MD2.9, Error ellipse: s-maj=1.8km s-min=1.7km az=156.0*
*ISK **02** 00:21:11.7, 3751N×3872E, h9km, MD2.9*
*ISCJB **02** 00:21:12.2±0.6, 3751N±003×3870E±003, h5km±5km, Error ellipse: s-maj=5.7km s-min=4.3km az=157.0*
ISC 02 00:21:12.4±0.5**, 3750N**±003×**3872E**±003**, h9**km±4km**, n17, σ0s67**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.10**	**129**	ePG	**Pg**	**00 21 14.4**	**-0.5**
URFA				eSG	**Sg**	**00 21 16.9**	**+0.3**
ATAB	**Bozova**	**0.34**	**264**	iP	**Pg**	**00 21 19.0**	**-0.2**
ATAB				iS	**Sg**	**00 21 23.9**	**+0.2**
MALT	**Malatya**	**0.84**	**344**	ePG	**Pg**	**00 21 28.1**	**-0.6**
MALT				eSG	**Sg**	**00 21 40.5**	**+0.8**
MYA	**Malataya**	**0.85**	**344**	ePG	**Pg**	**00 21 28.4**	**-0.5**
GZT	**Gaziantep**	**0.94**	**261**	iP	**Pg**	**00 21 30.0**	**-0.4**
GZT				iS	**Sg**	**00 21 43.3**	**+0.7**
SVRC	**Sivrice-ELAZID**	**0.99**	**28**	ePG	**Pg**	**00 21 31.1**	**-0.3**
AKCD	**Akcadag**	**1.01**	**322**	eP	**Pg**	**00 21 31.3**	**-0.6**
AKCD				eS	**Sg**	**00 21 45.5**	**+0.4**
ELZG	**Elazig**	**1.01**	**12**	eP	**Pg**	**00 21 31.4**	**-0.5**
ELZG				eS	**Sg**	**00 21 46.0**	**+0.9**
DIYA	**Diyarbakir**	**1.18**	**69**	iP	**Pb**	**00 21 35.8**	**+0.8**
DIYA				eS	**Sb**	**00 21 50.7**	**+0.2**
GAZ	**Gaziantep**	**1.25**	**255**	ePN	**Pn**	**00 21 36.1**	**0.0**
GAZ				eSN	**Sn**	**00 21 53.6**	**+0.5**
KMRS	**Kahramanmaras**	**1.45**	**271**	ePN	**Pn**	**00 21 37.8**	**-1.1**
PTK	**Pertek**	**1.48**	**21**	ePN	**Pn**	**00 21 39.3**	**0.0**
DARE	**Darende-Malaty**	**1.62**	**334**	ePN	**Pn**	**00 21 37.9**	**-3.2**
ANDN	**Andirin**	**1.89**	**273**	eP	**Pn**	**00 21 44.4**	**-0.6**
ANDN				eS	**Sn**	**00 22 08.7**	**-0.2**
ANDN	**Andirin**	**1.89**	**273**	eP	**Pn**	**00 21 44.3**	**-0.6**
ANDN				eS	**Sn**	**00 22 08.7**	**-0.2**
KOZT	**Kozan**	**2.31**	**270**	ePN	**Pn**	**00 21 51.3**	**+0.7**
YAYL	**Yayladag**	**2.56**	**236**	eP	**Pn**	**00 21 55.1**	**+1.0**

*ISK **02** 00:25:45.7, 3837N×3903E, h2km, MD3.0*
*DDA **02** 00:25:46.7, 3838N×3912E, h7km±3km, Md3.1*
*CSEM **02** 00:25:46.1±0.1, 3838N×3903E, h5km, MD3.1, Error ellipse: s-maj=1.8km s-min=1.4km az=155.0*
*ISCJB **02** 00:25:47.6±0.4, 3840N±003×3901E±003, h10km, Error ellipse: s-maj=4.0km s-min=3.3km az=167.3*
ISC 02 00:25:47.7±0.4**, 3839N**±003×**3901E**±003**, h3**km±5km**, n19, σ0s87**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.11**	**351**	iP	**Pg**	**00 25 50.5**	**+0.5**
ELZG				iS	**Sg**	**00 25 52.9**	**+1.5**
SVRC	**Sivrice-ELAZID**	**0.23**	**92**	ePG	**Pg**	**00 25 51.1**	**-1.2**
SVRC				eSG	**Sg**	**00 25 54.5**	**-0.8**
MALT	**Malatya**	**0.46**	**261**	ePG	**Pg**	**00 25 55.6**	**-1.0**
MALT				eSG	**Sg**	**00 26 03.6**	**+1.0**
MYA	**Malataya**	**0.46**	**263**	ePG	**Pg**	**00 25 56.0**	**-0.5**
PTK	**Pertek**	**0.59**	**31**	ePG	**Pg**	**00 25 58.1**	**-0.9**
PTK				eSG	**Sg**	**00 26 07.3**	**+0.7**
AKCD	**Akcadag**	**0.86**	**264**	iP	**Pg**	**00 26 03.6**	**-0.6**
AKCD				iS	**Sg**	**00 26 15.9**	**+0.7**
URFA	**Urfa**	**0.96**	**189**	ePG	**Pg**	**00 26 04.9**	**-1.1**
URFA				eSG	**Sg**	**00 26 18.6**	**+0.2**
DIYA	**Diyarbakir**	**0.99**	**117**	iP	**Pg**	**00 26 06.5**	**-0.2**
DIYA				iS	**Sg**	**00 26 20.4**	**+0.8**
ATAB	**Bozova**	**1.07**	**212**	iP	**Pg**	**00 26 07.8**	**-0.5**
ATAB				iS	**Sg**	**00 26 24.2**	**+1.9**
DARE	**Darende-Malaty**	**1.10**	**301**	ePN	**Pn**	**00 26 09.4**	**-0.6**
MARD	**Mardin**	**1.77**	**127**	iP	**Pn**	**00 26 18.6**	**-0.5**
MARD				iS	**Sn**	**00 26 43.1**	**+1.1**
BEST	**Besiri**	**1.85**	**105**	iP	**Pn**	**00 26 22.4**	**+2.1**
BEST				iS	**Sn**	**00 26 48.6**	**+4.4**
GAZ	**Gaziantep**	**1.87**	**230**	ePN	**Pn**	**00 26 20.1**	**-0.5**
KMRS	**Kahramanmaras**	**1.88**	**243**	ePN	**Pn**	**00 26 20.2**	**-0.6**
GUMT	**Gumushane**	**2.10**	**10**	ePN	**Pn**	**00 26 23.6**	**-0.2**
SVSK	**Karacayir**	**2.19**	**315**	ePN	**Pn**	**00 26 24.1**	**-0.8**
ANDN	**Andirin**	**2.25**	**250**	iP	**Pn**	**00 26 25.7**	**-0.1**
ANDN				iS	**Sn**	**00 27 00.3**	**+6.2**
BNN	**Bunyan**	**2.52**	**282**	ePN	**Pn**	**00 26 29.3**	**-0.2**
KOZT	**Kozan**	**2.67**	**251**	ePN	**Pn**	**00 26 32.0**	**+0.4**

*NIED **02** 00:25:00, 2920N×13090E, h11km, Mw3.8 Best double couple: Mo5.52000×10^14 NP1:φs182.00000°, δ77.00000°, λ-99.00000°. NP2:φs36.00000°, δ16.00000°, λ-57.00000°.*
JMA 02 00:25:54.1±0.1**, 2916N**×**13088E, h56**km**, M3.7, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**1.11**	**308**	P	Pn	00 26 13.7	+0.3
JNN				eS	Sn	00 26 28.4	+0.6
JAM	**Amami Oshima**	**1.34**	**237**	P	Pn	00 26 16.9	+0.3
JAM				eS	Sn	00 26 34.1	+0.7
JKC	**Kuchinoerabu**	**1.43**	**336**	P	Pn	00 26 18.2	+0.5
JKC				eS	Sn	00 26 36.1	+0.7
JTN	**Tanegashima 3**	**1.49**	**3**	P	Pn	00 26 18.9	+0.3
JTN				eS	Sn	00 26 37.4	+0.4
JTSR	**Tashiro 2**	**2.00**	**1**	P	Pn	00 26 26.5	+1.0
JTSR				eS	Sn	00 26 49.8	+0.4
JTK	**Tokunoshima**	**2.18**	**232**	P	Pn	00 26 29.1	+1.1
JTK				eS	Sn	00 26 54.7	+0.9
JSU	**Suzuyama**	**2.37**	**351**	P	Pn	00 26 31.1	+0.6
JSU				eS	Sn	00 26 58.0	-0.4
JNAR	**Kushima--Naru**	**2.38**	**8**	P	Pn	00 26 32.0	+1.3
JNAR				eS	Sn	00 27 00.0	+1.3
JTZ	**Takazaki**	**2.74**	**4**	P	Pn	00 26 36.9	+1.3
JTZ				eS	Sn	00 27 08.7	+1.2
JOW	**Kunigami**	**3.27**	**225**	P	Pn	00 26 43.0	+0.1

NEIC 02 00:32:23.7±2.5**, 2461N**×**10925W, h10**km**, mb4.0**/17**, Error ellipse: s-maj=31.9km s-min=14.2km az=178.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUC	**Tucson**	**7.79**	**350**	P	Pn	00 34 16.3	-0.8
	6.8nm,1.0s						
GLA	**Glamis**	**9.72**	**331**	ePn	Pn	00 34 44.2	+0.5
	9.5nm,1.1s						
BNM	**Barren Site**	**9.78**	**13**	ePn	Pn	00 34 45.4	+1.0
LPM	**Los Pinos Moun**	**9.93**	**13**	ePn	Pn	00 34 47.9	+1.4
JCT	**Junction City**	**10.22**	**53**	ePn	Pn	00 35 00.6	+10
ANMO	**Albuquerque**	**10.58**	**13**	ePn	Pn	00 34 56.7	+1.3
	39nm,1.8s						
WUAZ	**Wupatki**	**11.02**	**351**	ePn	Pn	00 35 01.3	-0.2
	9.4nm,0.9s						
LDFC	**Landfair**	**11.60**	**335**	ePn	Pn	00 35 09.7	+0.3
	27nm,1.2s						
PV01	**Paradox Valley**	**13.49**	**2**	ePn	Pn	00 35 33.8	-1.4
WMOK	**Wichita Mounta**	**13.58**	**40**	ePn	Pn	00 35 37.1	+0.7
	4.5nm,0.9s						
TPNV	**Topopah Spring**	**13.68**	**336**	ePn	Pn	00 35 38.4	+0.6
	9.2nm,1.1s						
MSU	**Marysvale**	**14.08**	**351**	ePn	Pn	00 35 44.6	+1.4
DUG	**Dugway**	**15.82**	**350**	ePn	Pn	00 36 07.0	+0.4
	10nm,1.0s						
HWUT	**Hardware Ranch**	**17.06**	**354**	ePn	Pn	00 36 21.9	-0.4
	13nm,1.3s						
BMN	**Battle Mountai**	**17.13**	**339**	ePn	Pn	00 36 25.6	+2.3
	10.0nm,1.1s						
PAHR	**Pah Rah Range**	**17.30**	**333**	ePn	Pn	00 36 25.6	+0.2
	23nm,1.4s						
OHCM	**Honcut**	**17.95**	**328**	ePn	Pn	00 36 33.5	+0.1
REDW	**Red Top Meadow**	**18.75**	**356**	P	Pn	00 36 43.5	+0.4
	8.1nm,0.8s						
LOHW	**Long Hollow**	**18.99**	**357**	eP	Pn	00 36 44.2	-1.8
	18nm,1.6s						
IMW	**Indian Meadow**	**19.29**	**356**	eP	Pn	00 36 47.9	-1.8
	15nm,1.3s						
WVOR	**Wild Horse Val**	**19.40**	**339**	eP	Pn	00 36 49.5	-1.5
	6.3nm,1.0s						
QLMT	**Earthquake Lak**	**20.25**	**356**	eP	P	00 36 59.2	+0.1
MCMT	**McKenzie Canyo**	**20.38**	**353**	eP	P	00 37 00.4	-0.1
RLMT	**Red Lodge**	**20.46**	**360**	eP	P	00 37 01.3	-0.1
	9.5nm,1.4s						
DLMT	**Dillon**	**20.88**	**353**	eP	P	00 37 05.9	-0.1
	10nm,1.2s						
BOZ	**Bozeman (W)**	**21.08**	**355**	eP	P	00 37 06.9	-1.1
	8.4nm,1.4s						
BMO	**Blue Mountains**	**21.23**	**344**	eP	P	00 37 10.6	+0.9
	5.2nm,0.9s						
ECSD	**EROS,Sioux Fal**	**21.70**	**25**	eP	P	00 37 15.6	+0.8
	6.8nm,1.0s						
LNOR	**Lincton Mounta**	**22.43**	**343**	eP	P	00 37 23.6	+1.1
CHMT	**Chamberlain Mo**	**22.48**	**353**	eP	P	00 37 21.9	-1.2
MSO	**Missoula**	**22.49**	**352**	eP	P	00 37 21.5	-1.6
	5.2nm,1.1s						
LON	**Longmire**	**24.27**	**339**	eP	P	00 37 43.2	+2.3
	19nm,1.5s						
NEW	**Newport**	**24.41**	**347**	eP	P	00 37 43.3	+1.0
	6.2nm,0.9s						
WALA	**Waterton Lakes**	**24.68**	**353**	eP	P	00 37 43.3	-1.4
	14nm,0.8s						

*IDC **02** 01:02:36.0±1.1, 1189N×8703W, h0km, mb4.1/8, mb1 4.2/9, mb1mx3.9/21, mbtmp4.0/9, ML3.9/1, Error ellipse: s-maj=39.1km s-min=17.1km az=56.0*
*CASC **02** 01:02:38.8±1.4, 1156N×8748W, h36km±999km, MD3.9, ML3.2, mb4.1(NEIC)*
*ISCJB **02** 01:02:39.0±1.4, 1161N±009×875W±0.1, h52km±10km, mb4.0/12, Error ellipse: s-maj=20.8km s-min=9.8km az=138.0*
*NEIC **02** 01:02:41.4±1.6, 1174N×8737W, h51km±14km, mb4.1/4, Error ellipse: s-maj=21.1km s-min=12.6km az=60.0*
ISC 02 01:02:40.9±1.3**, 1168N**±009×**8736W**±010**, h50**km±9km**, n44, σ0s67**/35**, mb4.0**/12**, 8C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	**Leon**	**0.86**	**32**	eP	**Pn**	**01 02 57.0**	**+0.2**
COPN	**Copaltepe**	**0.90**	**56**	⇓ iP	**Pn**	**01 02 57.5**	**+0.2**
TEL3	**Telica 3**	**1.02**	**29**	⇑ eP	**Pn**	**01 02 59.1**	**+0.2**
CSAN		**1.04**	**61**	⇑ eP	**Pn**	**01 02 59.3**	**+0.1**
CSAN				eP		01 02 59.3	
TELN	**Telica**	**1.05**	**29**	⇑ eP	**Pn**	**01 02 59.9**	**+0.5**
CRUN	**El Crucero**	**1.08**	**74**	eP	**Pn**	**01 02 59.8**	**+0.2**
XAVN	**Gruta Xavier**	**1.11**	**65**	eP	**Pn**	**01 03 00.1**	**-0.1**
APYN	**Apoyeque**	**1.13**	**61**	⇓ eP	**Pn**	**01 03 00.5**	**+0.1**
APYN				AML	AML	01 03 30.6	
	comp=Z,2µm,0.4s						
TISN	**Laguna Tiscapa**	**1.16**	**66**	eP	**Pn**	**01 03 00.7**	**-0.1**
MGAN	**Managua**	**1.18**	**67**	⇑ eP	**Pn**	**01 03 00.7**	**-0.4**
WILN	**Americas 2**	**1.24**	**67**	eP	**Pn**	**01 03 01.7**	**-0.1**
HUEN		**1.33**	**60**	⇑ eP	**Pn**	**01 03 03.1**	**0.0**
HUEN				AML	AML	01 03 31.7	
	comp=Z,188nm,0.6s						
CNCH	**Conchagua**	**1.65**	**344**	⇑ eP	x	01 03 06.9	
CONN	**Concepcion**	**1.70**	**94**	eP	**Pn**	**01 03 07.3**	**-0.8**
CONN				AML	AML	01 03 47.3	
	comp=Z,89nm,0.5s						
MADN	**Villa Maderas**	**1.81**	**98**	eP	**Pn**	**01 03 09.8**	**+0.2**
BLLM	**Bellamira**	**1.95**	**334**	eP	x	01 03 10.3	
VSM	**San Miguel**	**1.96**	**333**	eP	x	01 03 10.7	
CAHU	**Cacacuatique**	**2.24**	**338**	eP	x	01 03 15.2	
CUI		**2.36**	**115**	iP	**Pn**	**01 03 16.9**	**-0.4**
TGUH	**Tegucigalpa,Un**	**2.37**	**2**	⇑ eP	**Pn**	**01 03 17.9**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.37**	**2**	ePn	**Pn**	**01 03 17.4**	**+0.2**
LFRS	**El Faro**	**2.55**	**319**	eP	x	01 03 18.1	
LFRS				eS	x	01 03 48.9	
SNJE	**San Jose**	**3.09**	**315**	eP	x	01 03 25.1	
RTR	**El Retiro**	**3.14**	**315**	eP	x	01 03 26.5	
CMIG	**Matias Romero**	**9.06**	**307**	Pn	**Pn**	**01 04 48.7**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=128,slow=9.8,SNR=12						
CMIG	**Matias Romero**	**9.06**	**307**	Pn	**Pn**	**01 04 48.7**	**-0.5**
CHI2		**15.18**	**116**	⇑ eP	Px	01 02 58.8	
CHI2				eS	Sx	01 03 11.2	
MIAR	**Mount Ida**	**23.46**	**347**	eP	**P**	**01 07 45.8**	**-0.2**
	comp=Z,7.3nm,0.9s,mb4.1						
SWET	**Sewanee**	**23.47**	**3**	eP	**P**	**01 07 45.0**	**-1.1**
CPCT	**Cooper Cave**	**23.80**	**6**	eP	**P**	**01 07 50.0**	**+0.8**
TKL	**Tuckaleechee C**	**24.09**	**7**	P	**P**	**01 07 52.5**	**+0.7**
	comp=Z,3.6nm,0.4s,mb4.1,baz=172,slow=13,SNR=10						
TZTN	**Tazewell**	**24.99**	**7**	eP	**P**	**01 08 00.7**	**+0.7**
	comp=Z,4.5nm,0.7s,mb4.1						
WMOK	**Wichita Mounta**	**25.20**	**337**	eP	**P**	**01 08 03.1**	**+1.2**
	comp=Z,3.3nm,1.0s,mb3.8						
ECSD	**EROS,Sioux Fal**	**32.93**	**348**	eP	**P**	**01 09 09.1**	**-1.4**
	comp=Z,2.4nm,0.8s,mb4.2						
SADO	**Sadowa**	**33.72**	**11**	P	**P**	**01 09 17.1**	**-0.4**
	baz=228,slow=9.8						
PDAR	**Pinedale Array**	**36.49**	**332**	P	**P**	**01 09 41.6**	**+0.3**
	comp=Z,0.7nm,0.7s,mb3.7,baz=113,slow=10,SNR=4.2						
SIV	**San Ignacio**	**37.84**	**136**	P	**P**	**01 09 54.8**	**+1.7**
	comp=Z,5.6nm,0.6s,mb4.5,baz=316,slow=8.7,SNR=41						
NVAR	**Mina Array Bea**	**38.34**	**319**	P	**P**	**01 10 00.8**	**+3.7**
	comp=Z,0.3nm,0.5s,mb3.3,baz=137,slow=9.8,SNR=2.3						
NVAR				PcP	PcP	01 12 14.1	+4.0
	comp=Z,0.6nm,0.8s,baz=142,slow=5.1,SNR=4.1						
ULM	**Lac du Bonnet**	**39.09**	**351**	P	**P**	**01 10 03.0**	**-0.2**
	comp=Z,1.7nm,0.6s,mb3.9,baz=169,slow=14,SNR=3.1						
ULM	**Lac du Bonnet**	**39.09**	**351**	P	**P**	**01 10 03.0**	**-0.2**
SCHQ	**Schefferville**	**45.99**	**16**	P	**P**	**01 10 58.3**	**-0.8**
	comp=Z,1.6nm,0.5s,mb4.2,baz=225,slow=11,SNR=7.7						
BDFB	**Brasilia**	**47.47**	**124**	P	**P**	**01 11 10.9**	**-0.3**
	comp=Z,4.4nm,0.5s,mb4.6,baz=283,slow=11,SNR=8.2						
YKA	**Yellowknife Ar**	**54.38**	**345**	P	**P**	**01 12 01.5**	**-0.9**
	comp=Z,0.4nm,0.6s,mb3.5,baz=143,slow=7.1,SNR=3.6						
CMAR	**Chiang Mai Arr**	**149.42**	**348**	PKPbc	PKPbc	01 22 27.1	+1.7
	comp=Z,3.7nm,0.9s,baz=355,slow=3.6,SNR=6.1						

*BGS **02** 01:05:02.8±5.8, 1161S×16576E, h33km, MS6.5*
*IDC **02** 01:05:12.2±0.3, 1160S×16603E, h0km, mb5.2/22, mb1 5.3/23, mb1mx5.3/23, mbtmp5.2/23, ML5.4/1, MS6.9/24, Ms1 6.9/24, ms1mx6.7/33, Error ellipse: s-maj=13.5km s-min=10.9km az=141.0*
*BJI **02** 01:05:16.6, 11.19S×16621E, h32km, mB6.8, mb5.7, Ms7.2, Msz7.0*
*ISCJB **02** 01:05:17.4±0.1, 1153S±003×16577E±003, h36km, mb5.8/155, MS7.2/223, Error ellipse: s-maj=4.7km s-min=3.5km az=168.3*
*MOS **02** 01:05:17.2±1.8, 1149S×16581E, h38km, mb5.9/52, MS7.1/61, Error ellipse: s-maj=6.5km s-min=6.3km az=90.7*
*GCMT **02** 01:05:18.1±0.1, 1174S×16568E, h18km, MW7.2/112, Moment Tensor Solution. s111,c282; s112,c541; Duration: 10s1 Moment tensor: Scale 10^20Nm; Mrr0.66±.00; Mθθ-0.16±.00; Mφφ-0.50±.00; Mrθ0.37±.02; Mθφ0.24±.00; Mφr-0.51±.02; Best double couple: Mo0.89900×10^20 NP1:φs338.00000°, δ23.00000°, λ101.00000°. NP2:φs147.00000°, δ67.00000°, λ86.00000°. Principal axes: T 0.9200, Plg67.0000°, Azm49.0000°; N -0.0430, Plg4.0000°, Azm149.0000°; P -0.8780, Plg22.0000°, Azm240.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*DJA **02** 01:05:18, 1196S×166.14E, h30km, Mwp7.3/41*
*NEIC **02** 01:05:18.1±0.1, 1161S×16576E, h35km, mb5.9/93, ME6.6, MS7.3/145, Error ellipse: s-maj=6.7km s-min=4.9km az=150.0 Broadband fault plane solution: P waves. NP1:φs325.00000°, δ20.00000°, λ90.00000°. NP2: φs145.00000°, δ70.00000°, λ90.00000°. Principal axes: T Plg65.0000°, Azm55.0000°; N Plg0.0000°, Azm0.0000°; P Plg25.0000°, Azm235.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
ISC 02 01:05:19.0±0.1**, 1159S**±003×**16582E**±002**, h38**km**, h38**km±1.4km**:pP-P, n1034, σ1s20**/397**, mb5.8**/155**, MS7.2**/223**, 70C-31D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.16**	**290**	Pn	**Pn**	**01 06 47.0**	**-0.5**
	84nm,0.3s,baz=313,slow=1.6,SNR=17						
HNR	**Honiara**	**6.16**	**290**	P	**Pn**	**01 06 47.0**	**-0.6**
HNR				pmax	pmax		
	comp=Z,84nm,0.3s						
HNR	**Honiara**	**6.16**	**290**	ePn	**Pn**	**01 06 48.5**	**+0.9**
	comp=Z,10µm,1.2s						
DZM	**Mont Dzumac**	**10.44**	**177**	eP	**Pn**	**01 07 42.7**	**-3.6**
FUNA	**Funafuti**	**13.52**	**78**	P	**Pn**	**01 08 30.1**	**+1.7**
TARA	**Tarawa**	**14.67**	**29**	P	**Pn**	**01 08 43.8**	**-0.3**
PMG	**Port Moresby**	**18.48**	**275**	eP	**Pn**	**01 09 34.3**	**+2.0**
PMG	**Port Moresby**	**18.48**	**275**	eP	**Pn**	**01 09 33.0**	**+0.7**
CTA	**Charters Tower**	**20.62**	**243**	eP	**P**	**01 09 54.4**	**-0.9**
	comp=Z,213nm,1.2s						

CTA e 01 12 39.0
CTA eS S 01 13 37.7 -6.2
CTA Charters Tower 20.62 243 P P 01 09 54.8 -0.5
comp=Z,188nm,1.0s,baz=69,slow=12,SNR=52
CTA S S 01 13 50.9 +7.0
comp=Z,25nm,0.9s,baz=275,slow=18,SNR=1.5
CTA LR LR 01 16 41.5
comp=Z,481µm,20.9s,MS6.8,baz=87,slow=33
CTAO Charters Tower 20.62 243 eP P 01 09 56.8 +1.6
CTAO LR LR
comp=Z,780µm,19.0s,MS7.1
AFI Afiamalu 21.97 98 P P 01 10 03.9 -6.0
comp=Z,16nm,0.5s,mb4.7,baz=317,slow=12,SNR=3.4
AFI S S 01 14 14.0 +3.5
comp=Z,67nm,1.1s,baz=336,slow=12,SNR=2.2
AFI LR LR 01 17 35.8
comp=Z,430µm,18.9s,MS6.9,baz=281,slow=34
AFI Afiamalu 21.97 98 P P 01 10 03.9 -6.0
AFI S S 01 14 14.0 +3.5
AFI pmax pmax
comp=Z,16nm,0.5s,mb4.7
AFI smax
comp=N,67nm,1.2s
AFI MLR MLR
comp=Z,430µm,18.9s,MS6.9
AFI Afiamalu 21.97 98 eP P 01 10 10.4 +0.6
comp=Z,387nm,1.1s,mb5.8
AFI S S 01 14 14.0 +3.5
AFI LR LR 01 17 35.9
ARMA Armidale 22.90 213 eP P 01 10 17.8 -1.8
ARMA e 01 10 28.1
ARMA e 01 12 37.6
ARMA eS S 01 14 30.2 +3.2
RAO Raoul Island 23.21 142 P P 01 10 22.8 -0.1
comp=Z,125nm,0.6s,mb5.5,baz=279,slow=19,SNR=1.6
RAO LR LR 01 16 23.5
comp=Z,86µm,19.0s,MS6.2,baz=66,slow=29
RIV Riverview 25.88 209 eP P 01 10 47.8 +0.4
RIV e 01 13 08.1
CNB Canberra Magne 27.95 210 eP P 01 11 05.6 -0.3
CNB e 01 11 20.0
HIZ Hauiti 28.00 165 P P 01 11 10.6 +4.2
CAN Canberra 28.13 210 P P 01 11 11.2 +3.6
URZ Urewera 28.41 161 P P 01 11 06.5 -3.6
comp=Z,15nm,1.0s,mb4.6,baz=316,slow=20,SNR=3.4
WPVZ Whakapapa 28.83 164 P P 01 11 15.9 +2.1
BKZ Black Stump Fm 29.06 163 P P 01 11 17.3 +1.5
QRZ Quartz Range 29.72 170 P P 01 11 26.1 +4.5
STKA Stephens Creek 30.10 224 eP P 01 11 23.8 -1.4
comp=Z,72nm,0.8s,mb5.5
STKA eS S 01 16 13.4 -8.0
STKA Stephens Creek 30.10 224 P P 01 11 24.8 -0.3
comp=Z,27nm,0.8s,mb5.1,baz=38,slow=7.8,SNR=32
STKA LR LR 01 23 39.2
comp=Z,555µm,18.4s,MS7.2,baz=52,slow=37
SNZO South Karori 30.62 167 PFAKE 01 11 40.0 +10
SNZO LR LR
comp=Z,230µm,19.0s,MS6.8
WRAB Tennant Creek 31.36 251⇓ eP P 01 11 35.8 -0.6
WRAB Tennant Creek 31.36 251 P P 01 11 35.6 -0.8
WB2 Warramunga Arr 31.36 251 eP P 01 11 33.5 -2.9
WB2 epP pP 01 11 44.3 -2.7
WB2 e 01 12 03.7
WB2 eS S 01 16 26.0 -15
WRA Warramunga Arr 31.37 251 P P 01 11 35.6 -0.9
comp=Z,31nm,0.8s,mb5.2,baz=83,slow=9.3,SNR=59
WRA LR LR 01 23 39.0
comp=Z,96µm,20.2s,MS6.5,baz=55,slow=35
WRA Warramunga Arr 31.37 251 P P 01 11 35.6 -0.9
WRA pmax pmax
comp=Z,31nm,0.8s
WRA MLR MLR
comp=Z,96µm,20.2s
KHZ Kahutara 31.44 169 P P 01 11 41.2 +4.4
TOO Toolangi 31.65 212 eP P 01 11 38.5 -0.2
TOO e pP 01 11 50.2 +0.9
TOO eS S 01 16 39.4 -6.1
RPZ Rata Peaks 32.33 173 P P 01 11 42.7 -1.9
comp=Z,209nm,0.8s,mb6.0,baz=44,slow=2.0,SNR=30
RPZ LR LR 01 23 06.1
comp=Z,138µm,21.5s,MS6.6,baz=344,slow=33
GUMO Guam 32.52 320 P P 01 11 45.7 -0.9
comp=Z,67nm,0.9s,mb5.5,baz=134,slow=15,SNR=6.2
GUMO Guam 32.52 320 P P 01 11 45.7 -0.9
GUMO pmax pmax
comp=Z,67nm,0.9s,mb5.6
GUMO Guam 32.52 320 eP P 01 11 47.6 +1.0
GUMO LR LR
comp=Z,335µm,19.0s,MS7.1
ASAR Alice Springs 32.62 244 P P 01 11 44.6 -2.8
comp=Z,26nm,0.7s,mb5.2,baz=73,slow=9.4,SNR=156
ASAR PcP PcP 01 14 34.0 +0.8
comp=Z,14nm,0.8s,baz=70,slow=3.5,SNR=5.5
ASAR Alice Springs 32.62 244 P P 01 11 44.7 -2.7
ASAR 01 14 34.0
ASAR pmax pmax
comp=Z,26nm,0.7s
KAKA Kakadu 32.64 265 eP P 01 11 46.6 -1.1
comp=Z,95nm,0.7s,mb5.8
ODZ Otahua Downs 33.59 174 P P 01 11 55.7 +0.1
RAR Rarotonga 34.30 111 LR LR 01 23 01.3
comp=Z,77µm,21.8s,MS6.4,baz=181,slow=31
TAU Tasmania Unive 35.10 204 P P 01 12 15.0 +6.3
SWI Sorong 35.92 285 P P 01 12 19.5 +3.4
AAI Ambon 38.07 279⇑ eP pP 01 12 46.5 +1.3
XMAS Kiritimati 38.95 72 PFAKE 01 12 50.0 +8.2
XMAS LR LR
comp=Z,333µm,20.0s,MS7.2
FITZ Fitzroy Crossi 39.31 256 eP P 01 12 42.7 -2.1
comp=Z,102nm,0.9s,mb5.5
FITZ e pP 01 12 55.8 +0.2
FITZ e 01 13 05.2
FITZ eS S 01 18 42.9 -0.7
FITZ Fitzroy Crossi 39.31 256 LR LR 01 27 33.6
comp=Z,305µm,22.0s,MS7.1,baz=75,slow=34
FORT Forrest 39.79 235 eP P 01 12 46.6 -2.1
comp=Z,199nm,1.3s,mb5.7
FORT eS S 01 18 51.0 +0.5
BATI Baumata 41.39 268 LR LR 01 31 05.3
comp=Z,325µm,18.6s,MS7.2,baz=120,slow=37
MNI Manado 42.73 285⇓ eP P 01 13 15.0 +2.0
MNI Manado 42.73 285 P P 01 13 15.7 +2.7
MIDW Midway 42.78 22 PFAKE 01 13 20.0 +6.8
MIDW LR LR
comp=Z,225µm,19.0s,MS7.1
KDI Kendari 43.42 277⇓ eP P 01 13 18.0 -0.6
KDI eS S 01 19 47.1 +2.4
PPT Papeete 43.50 103 eP P 01 13 19.9 +0.7
comp=Z,115nm,1.4s,mb5.4
PPT eS S 01 19 46.7 +1.0
comp=Z,155µm,31.0s
PPT eLQ 01 23 49.7
comp=Z,479µm,33.2s
PPT eLR LR 01 25 25.3
comp=Z,272µm,37.5s,baz=278
PPT Papeete 43.50 103 LR LR 01 29 04.4
comp=Z,318µm,18.5s,MS7.2,baz=276,slow=33
PPT Papeete 43.50 103 eP P 01 13 19.9 +0.7
PPT eS S 01 19 46.7 +1.0
PPT pmax pmax
comp=Z,115nm,1.4s
PPT Papeete 43.50 103 eP P 01 13 19.9 +0.7
comp=Z,115nm,1.4s,mb5.4
PPT eS S 01 19 46.7 +1.0
PPT eLQ 01 23 49.7
BIPH Bislig 43.89 295⇓ iP P 01 13 22.5 +0.2
DAV Davao City (W) 44.11 293 LR LR 01 32 12.0
comp=Z,86µm,18.4s,MS6.7,baz=283,slow=37
DAV Davao City (W) 44.11 293⇓ eP P 01 13 25.7 +1.6
DAV Davao City (W) 44.11 293 PFAKE 01 13 30.0 +5.8
DAV LR LR
comp=Z,86µm,21.0s,MS6.6
BUKP Musuan 44.92 294 eP P 01 13 32.1 +1.6
MBWA Marble Bar 45.09 252 eP P 01 13 31.4 -0.5
comp=Z,209nm,1.1s,mb5.9
MBWA LR LR
comp=Z,191µm,21.0s,MS7.0
PMOR Pomariorio Ree 45.11 100 eP P 01 13 33.3 +1.2
comp=Z,408nm,1.4s,mb6.1
SCPH Surigao 45.37 296 eP P 01 13 35.2 +1.0
KAPI Kappang 46.01 274 LR LR 01 33 30.7
comp=Z,69µm,18.9s,MS6.6,baz=108,slow=37
KAPI Kappang 46.01 274 P P 01 13 39.3 +0.1
PAGZ Pagadian 46.42 293 eP P 01 13 45.0 +2.6
PLP Palo 46.45 298⇓ eP P 01 13 42.2 -0.4

TBP Tagbilaran 46.76 295 eP P 01 13 44.3 -0.8
PCI Palu 46.85 280 P P 01 13 48.0 +2.1
IPIL Ipil 47.13 292 eP P 01 13 48.9 +0.9
GUIM Jordan 48.30 296 eP P 01 13 57.9 +0.9
KIP Kipapa 48.35 47 eP P 01 13 57.4 +0.1
KIP eS S 01 20 56.8 +1.6
KIP pmax pmax
comp=Z,198nm,1.1s,mb6.1
KIP MLR MLR
comp=Z,129µm,19.0s,MS6.9
KIP Kipapa 48.35 47 eP P 01 13 57.4 +0.1
comp=Z,198nm,1.1s,mb6.1
KIP eS S 01 20 56.8 +1.5
KIP LR LR
comp=Z,129µm,19.0s,MS6.9
KLBR Kellerberrin 48.48 238 eP P 01 13 57.3 -1.0
comp=Z,195nm,1.3s,mb6.0
RCP Roxas 48.57 297⇑ eP P 01 14 03.3 +4.2
POHA Pohakuloa 49.18 51 PFAKE 01 14 20.0 +16
POHA LR LR
comp=Z,308µm,19.0s,MS7.3
HKL Haleakala 49.20 49 eP P 01 14 09.8 +6.0
NWAO Narrogin (SRO) 49.22 236 P P 01 14 03.6 -0.3
comp=Z,62nm,0.8s,mb5.7,baz=89,slow=6.1,SNR=13
NWAO LR LR 01 34 15.9
comp=Z,437µm,21.1s,MS7.4,baz=85,slow=35
NWAO Narrogin (SRO) 49.22 236 eP P 01 14 02.1 -1.8
comp=Z,259nm,1.2s,mb6.1
NWAO LR LR
comp=Z,335µm,20.0s,MS7.3
MUN Mundaring 49.85 238 eP P 01 14 08.1 -0.7
MUN eS S 01 21 16.9 +0.7
MYLDM Lahad Datu 49.93 287⇓ P P 01 14 12.9 +3.3
SDKM Sandakan 51.31 287⇑ P P 01 14 21.2 +1.2
BALP Baler 51.53 301 eP P 01 14 24.7 +3.2
CAUP Cauayan 51.91 302 eP P 01 14 27.8 +3.4
KDM Kudat 52.08 288⇑ P P 01 14 26.3 +0.5
KKM Kota Kinabalu 52.36 287⇑ P P 01 14 26.3 -1.6
BCPH Baguio City Da 52.67 301⇑ eP P 01 14 35.1 +5.0
APYP Conner 52.85 303 eP P 01 14 37.3 +5.9
TAOE Nuku Hiva Isla 53.18 92 eP P 01 14 35.2 +1.3
comp=Z,134µm,28.4s
TAOE eS S 01 22 02.6 0.0
comp=Z,546µm,29.9s
TAOE eSS SS 01 25 44.2 +1.5
comp=Z,260µm,28.9s
TAOE eLQ 01 27 32.7
comp=Z,241µm,26.8s
TAOE eLR LR 01 29 39.3
comp=Z,620µm,31.2s,baz=266
TAOE Nuku Hiva Isla 53.18 92 eP P 01 14 35.2 +1.3
TAOE eS S 01 22 02.6 0.0
TAOE eSS SS 01 25 44.2 +1.5
TAOE eLQ 01 27 32.7
PIP Pasuquin 53.59 303⇓ iP P 01 14 40.4 +3.6
BTM Bintulu 54.46 282⇓ P P 01 14 43.6 +0.3
MJAR Matsushiro Arr 54.48 333 P P 01 14 41.3 -1.7
comp=Z,15nm,0.9s,mb4.9,baz=162,slow=8.3,SNR=18
MJAR Matsushiro Arr 54.48 333 P P 01 14 41.3 -1.7
MJAR pmax pmax
comp=Z,15nm,0.9s
MAJO Matsushiro 54.48 333⇑ iP P 01 14 42.1 -0.9
MAJO pmax pmax
comp=Z,361nm,1.7s,mb6.0
MAJO MLR MLR
comp=Z,116µm,20.0s,MS7.0
MAJO Matsushiro 54.48 333⇑ iP P 01 14 42.1 -0.9
comp=Z,361nm,1.7s,mb6.0
MAJO LR LR
comp=Z,116µm,20.0s,MS7.0
MAT Matsushiro 54.48 333 P P 01 14 41.9 -1.1
MAT S S 01 22 22.0 +2.6
SBUM Sibu 55.08 281⇓ P P 01 14 43.6 -4.2
TATO Taipei 56.47 310 eP P 01 14 57.6 +0.1
TATO LR LR
comp=Z,198µm,20.0s,MS7.2
RKT Rikitea 57.33 110 eP P 01 15 01.6 -2.1
comp=Z,30µm,29.0s
RKT eS S 01 22 58.0 +0.1
comp=Z,141µm,34.5s
RKT eSS SS 01 26 57.0 +9.2
comp=Z,71µm,33.8s
RKT eLQ 01 29 36.8
comp=Z,188µm,33.0s
RKT eLR LR 01 31 55.0
comp=Z,182µm,32.2s,baz=283
RKT Rikitea 57.33 110 eP P 01 15 01.6 -2.1
RKT eS S 01 22 58.0 +0.1
RKT Rikitea 57.33 110 eP P 01 15 01.6 -2.1
RKT eS S 01 22 58.0 +0.1
RKT eSS SS 01 26 57.0 +9.2
RKT eLQ 01 29 36.8
DRV Dumont d'Urvil 57.69 192 P pP 01 15 17.0 +0.3
DRV S S 01 23 21.0 +20
DRV SS SS 01 27 12.0 +20
DRV L 01 29 00.0
DRV R 01 32 00.0
YUK Yuzh-Kuril'sk 58.26 343 P P 01 15 05.0 -4.8
YUK i 01 15 54.0
YUK ePPP 01 18 41.0
YUK S S 01 23 32.0 +23
YUK eSS SS 01 27 03.0 +1.2
YUK pmax pmax
comp=N,9µm,6.0s
YUK pmax pmax
comp=Z,12µm,6.0s
YUK MLR MLR
comp=N,124µm,18.0s,MS7.1
YUK MLR MLR
comp=Z,141µm,18.0s,MS7.1
YUK MLR MLR
comp=E,38µm,14.0s,MS7.1
QZH Quanzhou 58.64 309 P P 01 15 12.5 -0.3
QZH S S 01 23 18.4 +3.5
QZH AMB AMB
comp=Z,880nm,1.6s,mb6.5
QZH AMB AMB
comp=Z,14µm,9.8s
QZH LR LR
comp=N,84µm,15.0s,MS7.1
QZH LR LR
comp=E,91µm,19.5s,MS7.1
QZH LR LR
comp=Z,253µm,30.4s
KUR Kuril'sk 58.84 345 eP P 01 15 11.5 -2.2
KUR eS S 01 23 12.0 -4.7
KUR pmax pmax
comp=Z,280nm,1.0s,mb6.2
KUR pmax pmax
comp=N,18µm,7.0s
KUR pmax pmax
comp=E,10µm,7.0s
KUR pmax pmax
comp=Z,18µm,7.0s
KUR smax
comp=N,84µm,24.0s
KUR smax
comp=E,46µm,24.0s
SSE Sheshan 60.29 316 P P 01 15 23.6 -0.5
SSE PCP PcP 01 16 05.8 -3.3
SSE S S 01 23 38.9 +2.9
SSE AMB AMB
comp=Z,98nm,1.0s,mb5.8
SSE AMB AMB
comp=Z,7µm,8.8s
SSE LR LR
comp=N,54µm,24.2s,MS6.8
SSE LR LR
comp=E,70µm,24.5s,MS6.8
SSE LR LR
comp=Z,1004µm,24.6s,MS7.9
KSRS Korea Array 60.36 326 P P 01 15 23.9 -0.5
comp=Z,15nm,0.9s,mb5.0,baz=143,slow=6.8,SNR=19
KSRS LR LR 01 38 28.8
comp=Z,65µm,21.9s,MS6.7,baz=134,slow=33
HKC Hong Kong Obse 60.80 304⇑ iP P 01 15 30.0 +2.3
INCN Inchon 61.10 325 eP P 01 15 29.8 +0.4
INCN LR LR
comp=Z,86µm,21.0s,MS6.9
PTCN Pitcairn Islan 61.80 112 PFAKE 01 15 50.0 +15
PTCN LR LR
comp=Z,153µm,19.0s,MS7.2
YSS Yuzh-Sakhalins 61.82 342⇑ ceP P 01 15 32.7 -1.4
YSS e 01 15 40.0
YSS e*SP sP 01 15 48.4 -1.3

YSS e 01 16 13.0
YSS eS S 01 23 53.0 -1.8
YSS ePS 01 24 06.0
YSS eSS SS 01 27 57.0 -0.6
YSS pmax pmax
comp=Z,170nm,1.4s,mb6.0
YSS MLR MLR
comp=Z,92µm,15.0s,MS7.1
YSS Yuzh-Sakhalins 61.82 342 eP P 01 15 33.7 -0.4
YSS LR LR
comp=Z,28µm,20.0s,MS6.4
GZH Guangzhou 61.85 304 P P 01 15 35.8 +1.0
GZH S S 01 24 01.1 +5.0
GZH AMB AMB
comp=Z,11µm,10.5s
GZH LR LR
comp=N,70µm,23.1s,MS6.8
GZH LR LR
comp=E,50µm,22.5s,MS6.8
GZH LR LR
comp=Z,107µm,26.2s,MS6.9
NJ2 Nanjing 62.46 316 eP P 01 15 39.8 +1.1
NJ2 AP pP 01 15 51.2 +1.2
NJ2 XP sP 01 15 55.2 +0.9
NJ2 S S 01 24 08.5 +5.1
NJ2 AMB AMB
comp=Z,80nm,1.0s,mb5.8
NJ2 AMB AMB
comp=Z,6µm,10.8s
NJ2 LR LR
comp=N,37µm,22.0s,MS6.8
NJ2 LR LR
comp=E,64µm,23.8s,MS6.8
NJ2 LR LR
comp=Z,64µm,25.8s,MS6.7
SKR Severo-Kuril's 62.58 353 eP P 01 15 38.0 -1.1
SKR e 01 16 14.0
SKR e 01 18 04.0
SKR eS S 01 24 04.0 -0.3
SKR pmax pmax
comp=N,980nm,2.0s
SKR pmax pmax
comp=Z,980nm,2.0s,mb6.6
SKR MLR MLR
comp=E,80µm,18.0s
SKR MLR MLR
comp=Z,117µm,18.0s,MS7.1
VLA Vladivostok 62.65 333 i P P 01 15 39.4 -0.4
VLA e*PP pP 01 15 50.4 -0.6
VLA e 01 16 18.8
VLA eS S 01 24 02.7 -2.7
VLA pmax pmax
comp=Z,246nm,2.0s,mb6.0
VLA MLR MLR
comp=Z,64µm,18.9s,MS6.8
VLA Vladivostok 62.65 333 i P P 01 15 39.0 -0.8
MYKOM Kota Tinggi 63.00 278⇓ P P 01 15 46.5 +3.8
QIZ Qiongzhong 63.00 298 P P 01 15 43.1 +0.5
QIZ AP pP 01 15 52.5 -1.4
QIZ XP sP 01 15 56.2 -2.0
QIZ S S 01 24 12.8 +2.1
QIZ XS sS 01 24 28.6 -0.7
QIZ AMB AMB
comp=Z,11µm,10.0s
QIZ LR LR
comp=E,80µm,24.2s
QIZ LR LR
comp=Z,176µm,25.3s,MS7.1
QIZ Qiongzhong 63.00 298 eP P 01 15 42.5 -0.1
comp=Z,373nm,1.7s,mb6.2
QIZ LR LR
comp=Z,128µm,22.0s,MS7.0
AMKA Amchitka 63.79 9 eP P 01 15 47.0 -0.1
SMY Shemya 64.45 6 eP P 01 15 51.4 0.0
SMY pmax pmax
comp=Z,182nm,1.4s,mb5.9
SMY Shemya 64.45 6 eP P 01 15 51.4 0.0
comp=Z,182nm,1.4s,mb5.9
KTGM Kuala Trenggan 64.58 282⇓ P P 01 15 46.5 -6.6
PET Petropavlovsk 64.64 355c iP P 01 15 50.1 -2.6
PET e 01 18 19.0
PET eS S 01 24 31.7 +1.9
PET pmax pmax
comp=N,4µm,13.1s
PET pmax pmax
comp=Z,9µm,12.5s
PET pmax pmax
comp=E,2µm,13.0s
PET pmax pmax
comp=Z,83nm,1.4s,mb5.6
PET pmax pmax
comp=N,42nm,1.4s
PET pmax pmax
comp=Z,6µm,15.5s
PET pmax pmax
comp=E,27nm,1.4s
PET smax
comp=E,18µm,14.7s
PET smax
comp=E,58µm,24.4s
PET MLR MLR
comp=Z,62µm,18.0s,MS6.8
PET MLR MLR
comp=Z,53µm,18.0s
PET Petropavlovsk 64.64 355 eP P 01 15 52.0 -0.7
comp=Z,256nm,1.5s,mb6.0
PET LR LR
comp=Z,115µm,21.0s,MS7.0
WHN Wuhan 64.81 312 P P 01 15 55.0 +0.8
WHN S S 01 24 36.0 +3.3
WHN LR LR
comp=N,100µm,16.0s,MS7.1
WHN LR LR
comp=E,37µm,17.0s,MS7.1
PETK Petropavlovsk- 64.81 355 P P 01 15 52.4 -1.4
comp=E,27nm,1.1s,mb5.2,baz=137,slow=7.6,SNR=21
PETK LR LR 01 39 09.1
comp=E,66µm,21.6s,MS6.8,baz=167,slow=31
MDJ Mudanjiang 64.86 332 P P 01 15 53.8 -0.5
MDJ AP pP 01 16 03.1 -2.5
MDJ XP sP 01 16 06.8 -3.2
MDJ PCP PcP 01 16 27.3 -0.1
MDJ PP PP 01 18 16.3 -1.2
MDJ S S 01 24 32.3 -0.5
MDJ XS sS 01 24 48.0 -3.6
MDJ SS SS 01 28 44.1 -1.1
MDJ AMB AMB
comp=Z,56nm,1.7s,mb5.3
MDJ AMB AMB
comp=Z,10µm,10.5s
MDJ LR LR
comp=N,57µm,18.9s,MS6.9
MDJ LR LR
comp=E,33µm,18.2s,MS6.9
MDJ LR LR
comp=Z,89µm,19.2s,MS7.0
MDJ Mudanjiang 64.86 332 eP P 01 15 53.0 -1.3
comp=Z,476nm,1.8s,mb6.2
MDJ LR LR
comp=Z,97µm,22.0s,MS7.0
DL2 Dalian 64.95 323⇑ iP P 01 15 54.9 -0.1
DL2 S S 01 24 33.4 -0.8
DL2 AMB AMB
comp=Z,130nm,1.2s,mb5.8
DL2 AMB AMB
comp=Z,8µm,8.2s
DL2 LR LR
comp=N,20µm,17.2s,MS6.6
DL2 LR LR
comp=E,30µm,17.2s,MS6.6
DL2 LR LR
comp=Z,45µm,16.2s,MS6.8
SNY Shenyang 65.82 327⇑ P P 01 16 01.0 +0.4
SNY S S 01 24 41.4 -3.4
SNY SS SS 01 28 57.0 -3.3
SNY AMB AMB
comp=Z,85nm,2.5s,mb5.3
SNY AMB AMB
comp=Z,10µm,10.1s
SNY LR LR
comp=N,89µm,22.7s,MS7.0
SNY LR LR
comp=E,47µm,22.7s,MS7.0
SNY LR LR
comp=Z,85µm,26.9s,MS6.8
CASY Casey 65.90 201 eP P 01 15 59.2 -1.5

	comp=Z,855nm,1.9s,mb6.5						
CASY				LR	LR		
	comp=Z,145µm,19.0s,MS7.2						
TIA	**Tai'an**	**66.07**	**318**	⇑P	**P**	**01 16 01.8**	**-0.5**
TIA				PP	PP	01 18 30.0	+1.8
TIA				S	S	01 24 47.4	-0.6
TIA				XS	sS	01 25 07.0	+0.3
TIA				AMB	AMB		
	comp=Z,4µm,5.0s						
TIA				LR	LR		
	comp=N,48µm,18.0s,MS6.9						
TIA				LR	LR		
	comp=E,49µm,16.0s,MS6.9						
CN2	**Changchun**	**66.24**	**329**	*e*P	**P**	**01 16 02.7**	**-0.5**
CN2				*e*AP	pP	01 16 13.0	-1.6
CN2				*e*XP	sP	01 16 16.9	-2.0
CN2				*e*S	S	01 24 39.1	-11
CN2				SS	SS	01 29 07.3	+0.6
CN2				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.2						
CN2				LR	LR		
	comp=N,79µm,19.0s,MS7.0						
CN2				LR	LR		
	comp=E,59µm,19.0s,MS7.0						
SBA	**Scott Base**	**66.26**	**180**	*e*P	**P**	**01 16 01.1**	**-1.8**
	comp=E,202nm,1.1s,mb6.1						
SBA				LR	LR		
	comp=Z,62µm,20.0s,MS6.8						
SNG	**Songkhla**	**67.48**	**283**	P	**P**	**01 16 14.0**	**+2.2**
	comp=Z,180nm,1.1s,mb6.0						
KLR	**Kul'dur**	**67.58**	**337**	⇓*i*P	**P**	**01 16 06.8**	**-4.8**
KLR				*e*		01 29 25.0	
KLR				pmax	pmax		
	comp=E,350nm,2.8s						
KLR				pmax	pmax		
	comp=Z,1µm,2.8s,mb6.4						
KLR				pmax	pmax		
	comp=N,6µm,10.0s						
KLR				pmax	pmax		
	comp=E,3µm,10.0s						
KLR				pmax	pmax		
	comp=Z,10µm,10.0s						
KKTK	**Khon Kaen**	**68.20**	**293**	P	**P**	**01 16 16.0**	**-0.2**
GYA	**Guiyang**	**68.78**	**304**	⇑*i*P	**P**	**01 16 20.1**	**+0.4**
GYA				AP	pP	01 16 33.4	+2.3
GYA				XP	sP	01 16 38.6	+3.2
GYA				PCP	PcP	01 16 46.7	+2.5
GYA				PP	PP	01 18 56.9	+4.8
GYA				SCP		01 20 46.2	
GYA				PCS		01 20 52.4	
GYA				S	S	01 25 24.5	+3.5
GYA				XS	sS	01 25 40.8	+1.0
GYA				SKS		01 26 15.4	
GYA				SS	SS	01 29 49.7	+3.0
GYA				AMB	AMB		
	comp=Z,140nm,1.0s,mb5.8						
GYA				AMB	AMB		
	comp=Z,9µm,9.9s						
GYA				LR	LR		
	comp=N,48µm,18.6s,MS6.9						
GYA				LR	LR		
	comp=E,44µm,18.2s,MS6.9						
GYA				LR	LR		
	comp=Z,46µm,18.5s,MS6.7						
BJT	**Baijiatuau**	**68.94**	**321**	*e*P	**P**	**01 16 20.0**	**-0.4**
BJT				pmax	pmax		
	comp=Z,150nm,1.1s						
BJT				MLR	MLR		
	comp=Z,111µm,20.0s						
BJT	**Baijiatuau**	**68.94**	**321**	*e*P	**P**	**01 16 20.0**	**-0.4**
	comp=Z,150nm,1.1s,mb5.8						
BJT				LR	LR		
	comp=Z,111µm,20.0s,MS7.1						
BJI	**Beijing**	**68.95**	**321**	P	**P**	**01 16 19.8**	**-0.6**
BJI				AP	pP	01 16 31.5	-0.3
BJI				XP	sP	01 16 35.3	-0.8
BJI				PP	PP	01 18 54.5	+1.3
BJI				S	S	01 25 25.6	+3.2
BJI				SS	SS	01 29 52.6	+3.8
BJI				AMB	AMB		
	comp=Z,75nm,1.5s,mb5.4						
BJI				LR	LR		
	comp=N,79µm,25.5s,MS6.9						
BJI				LR	LR		
	comp=E,65µm,26.7s,MS6.9						
BJI				LR	LR		
	comp=Z,135µm,25.5s,MS7.1						
GSI	**Gunungsitoli**	**68.99**	**276**	⇓*e*P	**P**	**01 16 21.0**	**-0.2**
TIY	**Taiyuan**	**70.01**	**317**	*i* P	**P**	**01 16 28.8**	**+1.8**
TIY				PCP	PcP	01 16 51.0	+1.9
TIY				LR	LR		
	comp=N,89µm,17.1s,MS7.1						
TIY				LR	LR		
	comp=E,48µm,20.6s,MS7.1						
TIY				LR	LR		
	comp=Z,105µm,24.8s,MS7.0						
NST	**Nakhon Sawan**	**70.42**	**291**	P	**P**	**01 16 32.0**	**+2.0**
XAN	**Xi'an**	**70.54**	**312**	P	**P**	**01 16 29.8**	**-0.5**
XAN				AP	pP	01 16 40.9	-0.9
XAN				XP	sP	01 16 45.0	-1.1
XAN				PCP	PcP	01 16 49.5	-1.9
XAN				PP	PP	01 19 08.5	+1.4
XAN				S	S	01 25 44.1	+2.8
XAN				SCS	ScS	01 26 29.1	-1.8
XAN				AMB	AMB		
	comp=Z,86nm,1.8s,mb5.4						
XAN				AMB	AMB		
	comp=Z,9µm,11.8s						
XAN				LR	LR		
	comp=N,13µm,21.9s,MS6.8						
XAN				LR	LR		
	comp=E,63µm,24.9s,MS6.8						
XAN				LR	LR		
	comp=Z,88µm,27.4s,MS6.9						
NANT	**Nan**	**70.94**	**295**	⇑P	**P**	**01 16 31.0**	**-2.1**
	comp=Z,459nm,1.0s,mb6.4						
KMI	**Kunming**	**71.47**	**302**	P	**P**	**01 16 37.6**	**+1.4**
KMI				AP	pP	01 16 49.4	+1.8
KMI				XP	sP	01 16 52.0	+0.1
KMI				PCP	PcP	01 16 58.3	+2.8
KMI				PP	PP	01 19 16.9	+1.7
KMI				S	S	01 25 53.6	+1.2
KMI				XS	sS	01 26 11.3	-0.1
KMI				SKS		01 26 37.5	
KMI				SS	SS	01 30 25.5	-2.6
KMI				AMB	AMB		
	comp=Z,152nm,2.0s,mb5.6						
KMI				LR	LR		
	comp=N,41µm,20.6s,MS6.8						
KMI				LR	LR		
	comp=E,49µm,23.0s,MS6.8						
KMI				LR	LR		
	comp=Z,95µm,26.6s,MS6.9						
BDT	**Bhumibol Dam**	**71.95**	**292**	⇑P	**P**	**01 16 43.0**	**+3.8**
	comp=Z,22nm,1.2s,mb5.0						
CHRT	**Chiangrai**	**72.11**	**295**	⇓P	**P**	**01 16 42.0**	**+1.9**
	comp=Z,526nm,0.9s,mb6.5						
HHC	**Hu-ho-hao-te**	**72.29**	**320**	⇑*i*P	**P**	**01 16 40.9**	**+0.1**
HHC				PCP	PcP	01 16 58.4	-0.3
HHC				PP	PP	01 19 25.7	+3.7
HHC				AMB	AMB		
	comp=Z,22nm,1.0s,mb5.0						
HHC				AMB	AMB		
	comp=Z,9µm,10.0s						
HHC				LR	LR		
	comp=N,82µm,17.8s,MS7.2						
HHC				LR	LR		
	comp=E,74µm,17.6s,MS7.2						
HHC				LR	LR		
	comp=Z,143µm,18.7s,MS7.3						
CMAR	**Chiang Mai Arr**	**72.40**	**294**	P	**P**	**01 16 43.5**	**+1.6**
	comp=Z,19nm,0.9s,mb5.0,baz=124,slow=4.5,SNR=53						
CMAR				PKPPKP		01 44 36.6	
	comp=Z,0.5nm,0.3s,baz=280,slow=3.5,SNR=4.2						
CMAR				LR	LR	01 48 29.6	
	comp=Z,36µm,20.4s,MS6.6,baz=251,slow=36						
SDPT	**Sand Point**	**72.44**	**19**	*e*P	**P**	**01 16 42.7**	**+1.4**
	comp=Z,110nm,1.1s,mb5.7						
CHG	**Chiang Mai**	**72.51**	**294**	⇑P	**P**	**01 16 43.6**	**+1.1**
	comp=Z,116nm,1.3s,mb5.7						
MIR	**Mirnyy**	**72.61**	**204**	α *i*P	**P**	**01 16 42.5**	**+0.2**
MIR				*i*		01 21 08.0	
MIR				*i* S	S	01 26 00.0	-4.2
MIR				*i* PS		01 26 48.0	
MIR				*i* SS	SS	01 30 48.0	+4.5
MIR				pmax	pmax		
	comp=Z,200nm,1.2s,mb5.9						
MIR				pmax	pmax		
	comp=Z,12µm,8.0s						
HIA	**Hailar**	**72.88**	**330**	*e*P	**P**	**01 16 43.7**	**-0.3**
HIA				pmax	pmax		
	comp=Z,159nm,1.1s						
HIA				MLR	MLR		
	comp=Z,80µm,19.0s						
HIA	**Hailar**	**72.88**	**330**	*e*P	**P**	**01 16 43.7**	**-0.3**
	comp=Z,159nm,1.1s,mb5.9						
HIA				LR	LR		
	comp=Z,80µm,19.0s,MS7.0						
CD2	**Chengdu**	**72.99**	**307**	⇑*i*P	**P**	**01 16 44.8**	**-0.3**
CD2				AP	pP	01 16 55.1	-1.5
CD2				XP	sP	01 16 59.1	-1.8
CD2				PP	PP	01 19 29.6	+1.4
CD2				S	S	01 26 08.2	-1.5
CD2				XS	sS	01 26 25.4	-3.3
CD2				SS	SS	01 30 51.6	+0.4
CD2				AMB	AMB		
	comp=Z,240nm,1.1s,mb6.0						
CD2				AMB	AMB		
	comp=Z,40µm,8.4s						
CD2				LR	LR		
	comp=N,84µm,22.8s,MS7.1						
CD2				LR	LR		
	comp=E,89µm,22.8s,MS7.1						
CD2				LR	LR		
	comp=Z,84µm,25.2s,MS6.9						
BTO	**Baotou**	**73.14**	**319**	*e*P	**P**	**01 16 45.6**	**-0.2**
BTO				S	S	01 26 06.6	-4.5
CHGN	**Chignik**	**73.89**	**20**	*e*P	**P**	**01 16 48.0**	**-1.9**
SEY	**Seymchan**	**75.02**	**354**	⇑*e*P	**P**	**01 16 54.2**	**-2.1**
LZH	**Lanzhou**	**75.17**	**312**	⇑P	**P**	**01 16 58.9**	**+1.1**
LZH				AP	pP	01 17 10.4	+1.1
LZH				XP	sP	01 17 14.2	+0.6
LZH				PP	PP	01 19 48.0	+1.4
LZH				S	S	01 26 31.3	-2.7
LZH				XS	sS	01 26 48.0	-5.1
LZH				AMB	AMB		
	comp=Z,1µm,1.5s,mb6.6						
LZH				AMB	AMB		
	comp=Z,11µm,7.8s						
LZH				LR	LR		
	comp=E,71µm,17.4s						
LZH				LR	LR		
	comp=Z,99µm,18.8s,MS7.1						
CLNS	**Chul'man**	**76.10**	**338**	*c* *i*P	**P**	**01 17 01.2**	**-1.4**
CLNS				*e**PP	pP	01 17 08.4	-5.8
CLNS				*e*	pP	01 17 14.1	-0.1
CLNS				*e*		01 19 49.2	
CLNS				*e*PPP		01 21 36.2	
CLNS				pmax	pmax		
	comp=Z,107nm,1.6s,mb5.5						
CLNS				pmax	pmax		
	comp=E,21nm,1.4s						
CLNS				pmax	pmax		
	comp=N,70nm,1.5s						
CLNS	**Chul'man**	**76.10**	**338**	*e*P	**P**	**01 17 01.2**	**-1.4**
OHAK	**Old Harbor**	**76.38**	**21**	*e*P	**P**	**01 17 01.5**	**-2.7**
	comp=N,122nm,1.6s,mb5.6						
KDAK	**Kodiak Island**	**77.05**	**21**	LR	LR	01 51 28.0	
	comp=N,128µm,18.1s,MS7.3,baz=228,slow=36						
KDAK	**Kodiak Island**	**77.05**	**21**	*e*P	**P**	**01 17 06.1**	**-1.9**
	comp=N,46nm,1.0s,mb5.4						
KDAK				LR	LR		
	comp=Z,60µm,20.0s,MS6.9						
CIT	**Chita**	**77.67**	**330**	*e*P	**P**	**01 17 07.1**	**-4.4**
CIT				*e*		01 17 14.1	
CIT				*e*		01 17 25.6	
CIT				*e*		01 20 10.0	
CIT				*e*		01 27 06.8	
QSPA	**South Pole Qui**	**78.42**	**180**	P	**P**	**01 17 13.1**	**-2.2**
	comp=Z,47nm,0.9s,mb5.4,baz=34,slow=1.5,SNR=74						
QSPA				LR	LR	01 46 40.6	
	comp=Z,61µm,19.4s,MS6.9,baz=216,slow=32						
SVW2	**Sparrevohn**	**78.60**	**18**	*e*P	**P**	**01 17 14.7**	**-1.8**
YAK	**Yakutsk**	**78.64**	**344**	*c* *i*P	**P**	**01 17 14.9**	**-1.8**
YAK				*e*	pP	01 17 24.1	-4.1
YAK				*e*		01 20 20.7	
YAK				*e*S	S	01 27 06.6	-4.1
YAK				*e*		01 27 56.9	
YAK				pmax	pmax		
	comp=N,81nm,1.9s						
YAK				pmax	pmax		
	comp=E,51nm,2.0s						
YAK				pmax	pmax		
	comp=Z,132nm,1.3s,mb5.7						
YAK				pmax	pmax		
	comp=N,3µm,7.8s						
YAK				pmax	pmax		
	comp=E,2µm,7.3s						
YAK				pmax	pmax		
	comp=Z,14µm,11.8s						
YAK				smax			
	comp=N,6793µm,18.4s						
YAK				MLR	MLR		
	comp=Z,122µm,22.0s,MS7.2						
YAK				MLR	MLR		
	comp=N,99µm,21.0s						
YAK	**Yakutsk**	**78.64**	**344**	*e*P	**P**	**01 17 13.9**	**-2.8**
	comp=N,297nm,1.2s,mb6.1						
YAK				LR	LR		
	comp=Z,74µm,19.0s,MS7.0						
ULN	**Ulaanbaatar**	**78.78**	**324**	*e*P	**P**	**01 17 17.7**	**-0.1**
	comp=Z,429nm,1.6s,mb6.1						
ULN				LR	LR		
	comp=Z,68µm,19.0s,MS7.0						
IMP	**Imphal**	**78.83**	**298**	*e*P	**P**	**01 17 19.0**	**+0.4**
IMP				*e*x	x	01 17 41.0	
SONM	**Songino Array**	**79.14**	**324**	P	**P**	**01 17 19.4**	**-0.4**
	comp=Z,15nm,1.0s,mb4.9,baz=138,slow=5.1,SNR=28						
SONM				LR	LR	01 48 12.9	
	comp=Z,67µm,21.3s,MS7.0,baz=120,slow=33						
SONM	**Songino Array**	**79.14**	**324**	P	**P**	**01 17 19.4**	**-0.4**
SONM				LR	LR	01 48 12.8	
GTA	**Gaotai**	**79.49**	**314**	P	**P**	**01 17 22.5**	**+0.6**
GTA				AP	pP	01 17 33.0	-0.5
GTA				XP	sP	01 17 36.9	-0.8
GTA				PP	PP	01 20 27.2	+4.4
GTA				S	S	01 27 23.5	+2.8
GTA				SKS		01 27 32.7	
GTA				XS	sS	01 27 40.8	+0.9
GTA				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
GTA				AMB	AMB		
	comp=Z,10µm,5.1s						
GTA				LR	LR		
	comp=N,53µm,20.4s,MS7.1						
GTA				LR	LR		
	comp=E,63µm,19.2s,MS7.1						
GTA				LR	LR		
	comp=Z,87µm,21.9s,MS7.0						
SLKM	**Skilak Lake**	**79.89**	**20**	*e*P	**P**	**01 17 21.8**	**-1.7**
TTA	**Tatalina**	**79.92**	**17**	*e*P	**P**	**01 17 23.3**	**-0.4**
TTA	**Tatalina**	**79.92**	**17**	*e*P	**P**	**01 17 25.2**	**+1.5**
SHL	**Shillong**	**80.84**	**298**	⇑*i*P	**P**	**01 17 31.0**	**+1.5**
SHL				*e*x	x	01 27 40.0	
PMR	**Palmer**	**81.04**	**20**	*e*P	**P**	**01 17 28.7**	**-1.0**
PMR				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
PMR	**Palmer**	**81.04**	**20**	*e*P	**P**	**01 17 28.7**	**-1.0**
	comp=Z,13nm,0.9s,mb4.8						
BOD	**Bodaibo**	**81.05**	**335**	*e*P	**P**	**01 17 28.6**	**-1.2**
BOD				pmax	pmax		
	comp=Z,103nm,1.9s,mb5.4						
EYAK	**Cordova Ski Ar**	**81.50**	**22**	*e*P	**P**	**01 17 32.3**	**+0.1**
	comp=Z,53nm,1.0s,mb5.4						
ZAK	**Zakamensk**	**82.19**	**325**	⇑*i*P	**P**	**01 17 35.3**	**-0.7**
ZAK				*e*		01 27 50.9	
ZAK				pmax	pmax		
	comp=Z,94nm,1.3s,mb5.6						
IRK	**Irkutsk**	**82.55**	**327**	⇓*i*P	**P**	**01 17 38.7**	**+0.8**
IRK				*e*		01 20 44.8	
IRK				*e*S	S	01 27 56.3	+4.3
IRK				pmax	pmax		
	comp=Z,779nm,3.7s						
TLY	**Talaya**	**82.61**	**326**	*c* *i*P	**P**	**01 17 36.2**	**-2.0**
TLY				*e*		01 20 41.6	
TLY				*e*S	S	01 27 49.4	-3.3
TLY				pmax	pmax		
	comp=Z,370nm,4.0s						
TLY	**Talaya**	**82.61**	**326**	⇑*i*P	**P**	**01 17 38.3**	**+0.1**
LSA	**Lhasa**	**82.70**	**302**	P	**P**	**01 17 40.6**	**+1.4**
LSA				S	S	01 27 59.1	+4.5
LSA				LR	LR		
	comp=N,45µm,23.0s,MS7.0						
LSA				LR	LR		
	comp=E,68µm,22.4s,MS7.0						
LSA				LR	LR		
	comp=Z,92µm,23.8s,MS7.1						
LSA	**Lhasa**	**82.70**	**302**	*e*P	**P**	**01 17 42.7**	**+3.5**
LSA				pmax	pmax		
	comp=Z,560nm,1.9s,mb6.3						
LSA				MLR	MLR		
	comp=Z,65µm,21.0s,MS7.0						
LSA	**Lhasa**	**82.70**	**302**	*e*P	**P**	**01 17 42.7**	**+3.5**
	comp=Z,560nm,1.9s,mb6.3						
LSA				LR	LR		
	comp=Z,65µm,21.0s,MS7.0						
MCCM	**Marconi Confer**	**82.82**	**49**	PFAKE		01 17 50.0	+10
MCCM				LR	LR		
	comp=Z,180µm,20.0s,MS7.4						
KCPM	**Cahto Peak**	**82.86**	**47**	*e*P	**P**	**01 17 42.4**	**+2.5**
KIPM	**Iron Peak**	**82.98**	**47**	*e*P	**P**	**01 17 40.8**	**+0.3**
HOPS	**Hopland**	**82.98**	**48**	*e*P	**P**	**01 17 40.6**	**+0.1**
	comp=Z,77nm,1.2s,mb5.6						
HOPS				LR	LR		
	comp=Z,115µm,20.0s,MS7.2						
IMA2	**Indian Mountai**	**83.01**	**15**	*e*P	**P**	**01 17 39.8**	**-0.2**
CAL	**Calcutta**	**83.10**	**295**	*e*P	**P**	**01 17 40.5**	**-0.9**
CAL				*e*x	x	01 27 07.7	
NSHM	**Saint Helena R**	**83.16**	**49**	*e*P	**P**	**01 17 41.5**	**+0.1**
KHMM	**Horse Mountain**	**83.19**	**46**	*e*P	**P**	**01 17 42.2**	**+0.7**
KRMB	**Red Mountain**	**83.31**	**45**	*e*P	**P**	**01 17 43.8**	**+1.7**
KBO	**Bosley Butte**	**83.34**	**45**	*e*P	**P**	**01 17 45.4**	**+3.2**
SAO	**San Andreas Ge**	**83.42**	**51**	*e*P	**P**	**01 17 39.5**	**-3.3**
SAO				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.4						
SAO				MLR	MLR		
	comp=Z,246µm,19.0s,MS7.6						
SAO	**San Andreas Ge**	**83.42**	**51**	*e*P	**P**	**01 17 39.5**	**-3.2**
	comp=Z,46nm,1.2s,mb5.4						
SAO				LR	LR		
	comp=Z,246µm,19.0s,MS7.6						
KEBM	**Edson Butte**	**83.52**	**44**	*e*P	**P**	**01 17 43.3**	**+0.2**
SIT	**Sitka**	**83.70**	**28**	*e*P	**P**	**01 17 42.5**	**-1.2**
SIT				pmax	pmax		
	comp=Z,59nm,2.0s,mb5.4						
SIT				MLR	MLR		
	comp=Z,94µm,20.0s,MS7.2						
SIT	**Sitka**	**83.70**	**28**	*e*P	**P**	**01 17 42.5**	**-1.2**
	comp=Z,58nm,2.0s,mb5.4						
SIT				LR	LR		
	comp=Z,94µm,20.0s,MS7.2						
COLA	**College**	**83.78**	**18**	*c* *i*P	**P**	**01 17 41.0**	**-2.9**
COLA	**College**	**83.78**	**18**	*e*P	**P**	**01 17 41.1**	**-2.8**
	comp=Z,82nm,0.8s,mb5.9						
COLA				LR	LR		
	comp=Z,80µm,20.0s,MS7.1						
MENT	**Mentasta**	**83.81**	**21**	*e*P	**P**	**01 17 43.8**	**-0.3**
CRAG	**Craig**	**83.92**	**30**	*e*P	**P**	**01 17 45.2**	**+0.3**
	comp=Z,73nm,1.7s,mb5.5						
WDC	**Whiskeytown Da**	**83.93**	**47**	*e*P	**P**	**01 17 45.2**	**-0.1**
WDC				pmax	pmax		
	comp=Z,110nm,1.6s,mb5.7						
WDC				MLR	MLR		
	comp=Z,120µm,19.0s,MS7.3						
WDC	**Whiskeytown Da**	**83.93**	**47**	*e*P	**P**	**01 17 45.2**	**-0.1**
	comp=Z,110nm,1.6s,mb5.7						
WDC				LR	LR		
	comp=Z,120µm,19.0s,MS7.3						
MOY	**Mondy**	**84.06**	**325**	*e*P	**P**	**01 17 47.2**	**+1.5**
MOY				pmax	pmax		
	comp=Z,1µm,3.6s						
YBH	**Yreka Blue Hor**	**84.22**	**46**	P	**P**	**01 17 46.8**	**+0.1**
	comp=Z,18nm,1.0s,mb5.1,baz=163,slow=3.1,SNR=12						
YBH	**Yreka Blue Hor**	**84.22**	**46**	*e*P	**P**	**01 17 46.1**	**-0.6**
	comp=Z,153nm,1.5s,mb5.9						
YBH				LR	LR		
	comp=Z,76µm,20.0s,MS7.1						
MAW	**Mawson**	**84.25**	**202**	*e*P	**P**	**01 17 45.9**	**-0.6**
	comp=Z,96nm,1.5s,mb5.7						
MAW	**Mawson**	**84.25**	**202**	P	**P**	**01 17 46.6**	**+0.2**
	comp=Z,68nm,1.1s,mb5.7,baz=96,slow=6.2,SNR=28						
MAW				LR	LR	01 51 04.8	
	comp=Z,54µm,21.6s,MS6.9,baz=102,slow=33						
OHCM	**Honcut**	**84.26**	**48**	*e*P	**P**	**01 17 46.1**	**-0.9**
HUMO	**Hull Mountain**	**84.36**	**45**	*e*P	**P**	**01 17 47.4**	**0.0**
	comp=Z,56nm,1.2s,mb5.6						
HUMO				LR	LR		
	comp=Z,131µm,19.0s,MS7.3						
CMB	**Columbia Colle**	**84.64**	**50**	*e*P	**P**	**01 17 48.3**	**-0.6**
	comp=Z,26nm,1.0s,mb5.3						
CMB				LR	LR		
	comp=Z,315µm,19.0s,MS7.7						
WRAK	**Wrangell Islan**	**84.77**	**29**	PFAKE		01 18 00.0	+11
WRAK				LR	LR		
	comp=Z,124µm,19.0s,MS7.3						
BWNR	**Bhubaneshwar**	**84.80**	**292**	*e*P	**P**	**01 17 48.0**	**-2.1**
HYT	**Haines Junctio**	**84.85**	**24**	*e*P	**P**	**01 17 49.5**	**0.0**
COR	**Corvallis**	**84.85**	**43**	*e*P	**P**	**01 17 50.4**	**+0.5**
COR				pmax	pmax		
	comp=Z,136nm,1.5s,mb5.9						
COR				MLR	MLR		
	comp=Z,23µm,19.0s,MS6.6						
COR	**Corvallis**	**84.85**	**43**	*e*P	**P**	**01 17 50.4**	**+0.5**
	comp=Z,136nm,1.5s,mb5.9						
COR				LR	LR		
	comp=Z,23µm,19.0s,MS6.6						
TAPN	**Taplejung**	**84.93**	**299**	*e*P	**P**	**01 17 52.2**	**+1.5**
	comp=Z,1µm,1.7s,mb6.7						
SKAG	**Skagway**	**85.00**	**26**	*e*P	**P**	**01 17 48.6**	**-1.6**
	comp=Z,51nm,1.9s,mb5.3						
ODAN	**Odare**	**85.07**	**299**	*e*P	**P**	**01 17 51.8**	**+0.4**
	comp=Z,691nm,1.4s,mb6.6						
MWC	**Mount Wilson**	**85.24**	**54**	*e*P	**P**	**01 17 53.6**	**+1.5**
MWC				pmax	pmax		
	comp=Z,202nm,1.8s,mb6.0						
MWC				MLR	MLR		
	comp=Z,266µm,19.0s,MS7.7						
MWC	**Mount Wilson**	**85.24**	**54**	*e*P	**P**	**01 17 53.6**	**+1.6**
	comp=Z,202nm,1.8s,mb6.0						
MWC				LR	LR		
	comp=Z,266µm,19.0s,MS7.7						
ISA	**Isabella**	**85.34**	**52**	*e*P	**P**	**01 17 52.2**	**-0.4**
ISA				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.3						
ISA				MLR	MLR		
	comp=Z,182µm,20.0s,MS7.5						
ISA	**Isabella**	**85.34**	**52**	*e*P	**P**	**01 17 52.1**	**-0.4**
	comp=Z,22nm,0.9s,mb5.3						
ISA				LR	LR		
	comp=Z,182µm,20.0s,MS7.5						
WAKR	**Walker**	**85.49**	**49**	*e*P	**P**	**01 17 53.2**	**0.0**
NLWA	**Neilton Lookou**	**85.53**	**40**	*e*P	**P**	**01 17 52.0**	**-1.2**
	comp=Z,522nm,2.7s,mb6.3						
NLWA				LR	LR		
	comp=Z,147µm,19.0s,MS7.4						
BOK	**Bokaro**	**85.60**	**295**	*e*P	**P**	**01 17 53.2**	**-0.8**
BOK				AMb	AMB	01 18 15.0	
	comp=Z,153nm,2.4s,mb5.8						
BMW	**Boistfort Moun**	**85.60**	**41**	*e*P	**P**	**01 17 54.5**	**+1.0**
RAMN	**Ramite**	**85.78**	**298**	*e*P	**P**	**01 17 56.5**	**+1.6**
	comp=Z,822nm,1.6s,mb6.7						
MTUM	**Tungsten Hills**	**85.79**	**51**	*e*P	**P**	**01 17 54.7**	**-0.1**
EGAK	**Eagle**	**85.86**	**20**	*e*P	**P**	**01 17 52.0**	**-2.4**
	comp=Z,95nm,0.8s,mb6.1						
EGAK				LR	LR		
	comp=Z,50µm,20.0s,MS6.9						
BAR	**Barrett**	**85.90**	**56**	*e*P	**P**	**01 17 54.5**	**-0.9**
	comp=Z,27nm,1.2s,mb5.4						
BAR				LR	LR		
	comp=Z,145µm,20.0s,MS7.4						
PAHR	**Pah Rah Range**	**85.91**	**48**	*e*P	**P**	**01 17 55.2**	**0.0**
	comp=Z,139nm,1.5s,mb6.0						
MOD	**Modoc**	**85.97**	**46**	*e*P	**P**	**01 17 54.4**	**-1.1**
	comp=Z,17nm,0.7s,mb5.4						
MOD				LR	LR		
	comp=Z,72µm,20.0s,MS7.1						
DAWY	**Dawson**	**86.03**	**21**	*e*P	**P**	**01 17 55.2**	**-0.1**
DAC	**Darwin (Calif)**	**86.21**	**52**	PFAKE		01 18 10.0	+13
DAC				LR	LR		
	comp=Z,205µm,20.0s,MS7.5						
PGC	**Sidney**	**86.27**	**39**	*e*P	**P**	**01 17 55.4**	**-1.4**
	comp=Z,235nm,1.4s,mb6.2						
JIRN	**Jiri**	**86.31**	**299**	*e*P	**P**	**01 17 59.6**	**+2.1**
	comp=Z,588nm,1.4s,mb6.6						
NVAR	**Mina Array Bea**	**86.32**	**50**	P	**P**	**01 17 56.8**	**-0.5**
	comp=Z,9.5nm,1.0s,mb5.0,baz=236,slow=7.0,SNR=18						
NVAR				PKKPbc	PKKPbc	01 35 58.5	+2.2

comp=Z,1.4nm,0.9s,baz=186,slow=0.9,SNR=4.3
NVAR PKPPKP 01 44 02.2
comp=Z,1.4nm,0.9s,baz=126,slow=2.0,SNR=3.8
VIS Vishakhapatnam 86.47 289 *e*P **P 01 17 57.3 -1.2**
VIS AMb AMB 01 18 25.6
comp=Z,155nm,1.6s,mb6.0
VIS *i* x x 01 28 24.4
GSC Goldstone 86.54 53 *e*P **P 01 17 58.7 +0.2**
comp=Z,28nm,1.2s,mb5.4
GSC LR LR
comp=Z,234µm,19.0s,MS7.6
LON Longmire 86.61 41 *e*P **P 01 17 57.4 -1.1**
LON pmax pmax
comp=Z,46nm,1.4s,mb5.5
LON Longmire 86.61 41 *e*P **P 01 17 57.4 -1.1**
comp=Z,46nm,1.4s,mb5.5
TIXI Tiksi 86.63 349*c i*P **P 01 17 55.6 -2.5**
TIXI *e*S S 01 28 18.5 -13
TIXI *e*SS SS 01 34 08.9 -5.0
TIXI *e*SSS 01 37 41.4
TIXI pmax pmax
comp=Z,232nm,1.8s,mb6.1
TIXI pmax pmax
comp=N,65nm,1.5s
TIXI pmax pmax
comp=E,117nm,1.6s
TIXI MLR MLR
comp=E,7µm,20.0s,MS6.7
TIXI MLR MLR
comp=Z,46µm,18.0s,MS6.9
TIXI MLR MLR
comp=N,27µm,17.0s,MS6.7
TIXI Tiksi 86.63 349 *e*P **P 01 17 56.3 -1.8**
comp=N,252nm,1.5s,mb6.2
GUN Gumba 86.64 299 *e*P **P 01 18 01.6 +2.4**
comp=N,304nm,1.1s,mb6.5
PKI Pulchoki 86.96 299 *e*P **P 01 18 01.6 +0.9**
PKIN Phulchoki 86.97 299 *e*P **P 01 18 01.3 +0.5**
comp=N,576nm,1.6s,mb6.6
JCW Jim Creek 87.05 40 *e*P **P 01 18 00.6 0.0**
KKN Kakani 87.13 299 *e*P **P 01 18 02.8 +1.3**
comp=N,921nm,1.8s,mb6.7
KKN Kakani 87.13 299 *e*P **P 01 18 02.8 +1.3**
KKN pmax pmax
comp=Z,921nm,1.8s,mb6.7
DMN Daman 87.23 299 *e*P **P 01 18 03.1 +1.1**
comp=Z,828nm,1.4s,mb6.8
WVOR Wild Horse Val 87.31 46 *e*P **P 01 18 01.1 -1.0**
WVOR pmax pmax
comp=Z,156nm,1.5s,mb6.0
WVOR MLR MLR
comp=Z,111µm,20.0s,MS7.3
WVOR Wild Horse Val 87.31 46 *e*P **P 01 18 01.1 -1.0**
comp=Z,156nm,1.5s,mb6.0
WVOR LR LR
comp=Z,111µm,20.0s,MS7.3
RPW Rockport 87.39 40 *e*P **P 01 18 02.8 +0.5**
TPNV Topopah Spring 87.44 52 *e*P **P 01 18 02.4 -0.4**
comp=Z,315nm,2.4s,mb6.1
TPNV LR LR
comp=Z,219µm,20.0s,MS7.6
GLA Glamis 87.50 56 *e*P **P 01 18 03.4 +0.3**
comp=Z,146nm,1.4s,mb6.0
GLA LR LR
comp=Z,130µm,20.0s,MS7.3
BMN Battle Mountai 87.72 48 *e*P **P 01 18 03.6 -0.5**
BMN pmax pmax
comp=Z,17nm,0.9s,mb5.3
BMN MLR MLR
comp=Z,96µm,20.0s,MS7.2
BMN Battle Mountai 87.72 48 *e*P **P 01 18 03.6 -0.4**
comp=Z,17nm,0.9s,mb5.3
BMN LR LR
comp=Z,96µm,20.0s,MS7.2
GKN Gorkha 87.73 299 *e*P **P 01 18 06.1 +1.7**
LDFC Landfair 87.81 54 *e*P **P 01 18 05.2 +0.5**
comp=Z,74nm,0.9s,mb5.9
ETW Entlat 87.85 41 *e*P **P 01 18 03.8 -0.7**
RSW Rattlesnake Hi 87.93 42 *e*P **P 01 18 04.8 -0.1**
HAWA Hanford 87.97 42 *e*P **P 01 18 04.8 -0.3**
comp=Z,33nm,1.1s,mb5.5
HAWA LR LR
comp=Z,79µm,20.0s,MS7.1
SHPR Sheep Range 88.16 52 *e*P **P 01 18 06.2 0.0**
MDRS Chennai 88.35 284 *e*P **P 01 18 06.8 -0.9**
MDRS AMb AMB 01 18 34.5
comp=Z,124nm,1.8s,mb5.8
KOLN Koldanda 88.57 299 *e*P **P 01 18 09.8 +1.4**
comp=Z,121nm,0.9s,mb6.2
DANN Dangsing 88.57 299 *e*P **P 01 18 09.5 +1.1**
LNOR Lincton Mounta 88.62 43 *e*P **P 01 18 07.6 -0.6**
OD2 Odessa Site #2 88.82 41 *e*P **P 01 18 08.7 -0.5**
BMO Blue Mountains 88.97 44 *e*P **P 01 18 08.3 -1.6**
BMO pmax pmax
comp=Z,92nm,1.5s,mb5.9
BMO MLR MLR
comp=Z,112µm,19.0s,MS7.3
BMO Blue Mountains 88.97 44 *e*P **P 01 18 08.2 -1.6**
comp=Z,92nm,1.5s,mb5.9
BMO LR LR
comp=Z,112µm,19.0s,MS7.3
ELK Elko 89.25 48 P **P 01 18 09.2 -2.1**
comp=Z,5.8nm,1.1s,mb4.8,baz=230,slow=5.8,SNR=2.8
ELK Elko 89.25 48 P **P 01 18 09.2 -2.1**
ELK pmax pmax
comp=Z,6.0nm,1.1s
ELK Elko 89.25 48 *e*P **P 01 18 11.1 -0.2**
comp=Z,90nm,1.6s,mb5.8
ELK LR LR
comp=Z,158µm,19.0s,MS7.5
WMQ Urumqi 89.53 315⇑*i*P **P 01 18 12.9 +0.4**
WMQ AP pP 01 18 23.5 -0.8
WMQ XP sP 01 18 27.5 -1.0
WMQ PP PP 01 21 47.0 +2.5
WMQ SKS 01 28 37.5
WMQ S S 01 28 59.0 -1.6
WMQ SS SS 01 34 58.0 +0.7
WMQ AMB AMB
comp=Z,119nm,1.4s,mb6.0
WMQ AMB AMB
comp=Z,15µm,9.5s
WMQ LR LR
comp=N,57µm,22.8s,MS7.0
WMQ LR LR
comp=E,35µm,18.0s,MS7.0
WMQ LR LR
comp=Z,75µm,26.4s
NEW Newport 90.11 41 *e*P **P 01 18 14.7 -0.4**
comp=Z,395nm,3.0s
NEW LR LR
comp=Z,83µm,19.0s,MS7.2
KRAR Krasnoyarsk 90.22 328 *i*P **P 01 18 13.8 -1.6**
KOD Kodaikanal 90.43 280 *ex* x 01 18 20.1
KOD AMb AMB 01 18 44.5
comp=Z,83nm,1.8s,mb5.8
TRD Trivandrum 90.58 279 *e*P **P 01 18 17.1 -1.0**
TRD AMb AMB 01 18 33.6
comp=Z,64nm,1.5s,mb5.7
HLID Hailey 90.60 46 *e*P **P 01 18 17.9 +0.3**
comp=Z,15nm,0.8s,mb5.4
HLID LR LR
comp=Z,90µm,19.0s,MS7.2
TUC Tucson 90.61 57 *e*P **P 01 18 18.1 +0.3**
comp=Z,121nm,1.9s,mb5.9
TUC LR LR
comp=Z,327µm,20.0s,MS7.8
JBP Jabalpur 90.72 293 *i*P **P 01 18 16.5 -2.1**
JBP *i*S S 01 28 47.0 -26
HYB Hyderabad 90.85 287 *i*P **P 01 18 22.0 +2.7**
HYB *es*P sP 01 18 36.0 +0.7
HYB *e*S S 01 29 12.0 -1.9
HYB LR LR 01 52 30.0
comp=Z,114nm,30.0s
HYB Hyderabad 90.85 287 *e*P **P 01 18 22.0 +2.7**
HYB *es*P sP 01 18 36.0 +0.7
HYB *e*S S 01 29 16.0 +2.1
WUAZ Wupatki 90.88 54 *e*P **P 01 18 19.2 +0.2**
comp=Z,102nm,1.5s,mb5.9
WUAZ LR LR
comp=Z,109µm,20.0s,MS7.3
DUG Dugway 90.90 49 *e*P **P 01 18 18.9 -0.1**
comp=Z,228nm,2.2s,mb6.1
DUG LR LR
comp=Z,221µm,19.0s,MS7.6
BGU Big Grassy Mou 90.92 48 *e*P **P 01 18 18.2 -0.8**
MVU Marysvale 90.94 51 PFAKE 01 18 30.0 +11
MVU LR LR
comp=Z,274µm,20.0s,MS7.7
MSU Marysvale 90.96 51 *e*P **P 01 18 19.9 +0.5**
NGP Nagpur 91.15 291 *ex* x 01 18 16.7
NGP AMb AMB 01 18 37.9
comp=Z,107nm,1.2s,mb6.1
NGP *es* S 01 28 46.7 -30
SYO Syowa Base 91.29 197⇑*e*P **P 01 18 16.8 -3.5**
SYO Syowa Base 91.29 197⇓*i*P **P 01 18 22.9 +2.6**
HVU Hansel Valley 91.31 48 *e*P **P 01 18 21.7 +0.8**
comp=Z,73nm,1.2s,mb5.9
NLU North Lily Min 91.39 50 *e*P **P 01 18 21.8 +0.5**
NOQ North Oquirrh 91.52 49 *e*P **P 01 18 21.4 -0.5**
comp=Z,30nm,1.0s,mb5.6
MPU Maple Canyon 91.73 50 *e*P **P 01 18 23.3 +0.4**
comp=Z,44nm,1.4s,mb5.6
MPU LR LR
comp=Z,391µm,19.0s,MS7.9
MSO Missoula 91.78 43 *e*P **P 01 18 23.8 +0.9**
MSO LR LR
comp=Z,55µm,20.0s,MS7.0
CTU Camp Tracy 91.80 49 *e*P **P 01 18 23.5 +0.3**
comp=Z,26nm,1.1s,mb5.5
TMUT Trail Mountain 91.88 50 *e*P **P 01 18 24.2 +0.6**
JLU Jordanelle 92.00 49 *e*P **P 01 18 25.1 +1.0**
MCMT McKenzie Canyo 92.01 45 *e*P **P 01 18 24.3 +0.2**
DAU Daniels Canyon 92.10 49 *e*P **P 01 18 25.0 +0.4**
HWUT Hardware Ranch 92.15 48 *e*P **P 01 18 26.9 +2.1**
comp=Z,180nm,2.3s,mb6.0
HWUT LR LR
comp=Z,146µm,19.0s,MS7.5
CHMT Chamberlain Mo 92.26 43 *e*P **P 01 18 24.1 -1.0**
DLMT Dillon 92.32 44 *e*P **P 01 18 25.6 +0.2**
comp=Z,81nm,1.1s,mb6.0
SRU San Rafael 92.36 51 *e*P **P 01 18 26.8 +1.0**
SRU pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
SRU San Rafael 92.36 51 *e*P **P 01 18 26.8 +0.9**
comp=Z,6.8nm,0.9s,mb5.0
WALA Waterton Lakes 92.37 40 *e*P **P 01 18 27.5 +1.9**
comp=Z,67nm,1.3s,mb5.8
LRM Limekiln Ridge 92.53 44 *e*P **P 01 18 26.9 +0.4**
RRI2 Red Ridge 92.73 46 *e*P **P 01 18 27.6 +0.2**
comp=Z,191nm,1.9s,mb6.2
AHID Auburn Hatcher 92.76 47 PFAKE 01 18 40.0 +12
AHID LR LR
comp=Z,48µm,19.0s,MS7.0
LATR Latur 92.91 288 *ex* x 01 18 35.7
LATR AMb AMB 01 18 40.6
comp=Z,133nm,1.2s,mb6.3
AKL Akola 92.92 290 *e*P **P 01 18 27.1 -1.7**
AKL *i*P 01 18 27.9
AKL AMb AMB 01 18 40.6
comp=Z,107nm,1.6s,mb6.0
AKL *i* x x 01 29 22.3
QLMT Earthquake Lak 93.00 45 *e*P **P 01 18 29.9 +1.3**
BOZ Bozeman (W) 93.05 44 *e*P **P 01 18 28.8 0.0**
comp=Z,178nm,2.2s,mb6.1
BOZ LR LR
comp=Z,62µm,19.0s,MS7.1
REDW Red Top Meadow 93.07 47 *e*P **P 01 18 28.9 -0.1**
comp=Z,73nm,1.4s,mb5.9
IMW Indian Meadow 93.13 46 *e*P **P 01 18 30.1 +0.9**
comp=Z,15nm,0.9s,mb5.4
HRY Holter Researc 93.16 43 *e*P **P 01 18 28.9 -0.4**
SNOW Snow King Moun 93.16 46 *e*P **P 01 18 30.1 +0.8**
comp=Z,259nm,2.0s,mb6.3
YMR Madison River 93.28 45 PFAKE 01 18 40.0 +10
YMR LR LR
comp=Z,153µm,19.0s,MS7.5
LOHW Long Hollow 93.30 46 *e*P **P 01 18 31.2 +1.1**
comp=Z,75nm,1.8s,mb5.8
YFT Old Faithful 93.32 45 *e*P **P 01 18 35.3 +5.2**
PV10 Paradox Valley 93.33 52 *e*P **P 01 18 29.6 -0.7**
FLWY Flagg Ranch 93.34 46 *e*P **P 01 18 30.6 +0.4**
comp=Z,10nm,0.9s,mb5.3
MNGI Mangalore 93.50 282 *ex* x 01 19 14.4
MNGI AMb AMB 01 19 26.8
comp=Z,52nm,1.0s,mb5.9
MVCO Mesa Verde 93.51 53 *e*P **P 01 18 32.2 +1.0**
comp=Z,82nm,1.8s,mb5.9
MVCO LR LR
comp=Z,140µm,19.0s,MS7.4
PV01 Paradox Valley 93.64 52 *e*P **P 01 18 32.6 +0.8**
LKWY Lake 93.65 45 PFAKE 01 18 40.0 +8.4
LKWY LR LR
comp=Z,98µm,19.0s,MS7.3
EDM Edmonton 93.76 37 *e*P **P 01 18 31.8 -0.1**
EDM Edmonton 93.76 37 *e*P **P 01 18 31.1 -0.8**
BW06 Boulder Array 93.86 47 *e*P **P 01 18 33.9 +1.2**
BW06 LR LR
comp=Z,82µm,19.0s,MS7.2
PDAR Pinedale Array 93.86 47 P **P 01 18 32.5 -0.2**
comp=Z,2.1nm,1.0s,mb4.5,baz=259,slow=1.5,SNR=11
PDAR PKKPbc PKKPbc 01 35 37.7 +0.2
comp=Z,1.1nm,1.0s,baz=76,slow=6.3,SNR=4.0
PDAR PKPPKP 01 43 54.2
comp=Z,1.0nm,0.9s,baz=108,slow=4.8,SNR=6.0
PDAR LR LR 01 56 26.7
comp=Z,70µm,19.3s,MS7.1,baz=82,slow=33
MK31 Makanchi Array 93.97 317 *i*P **P 01 18 34.0 +1.0**
MK31 pmax pmax
comp=Z,141nm,1.2s,mb6.3
MKAR Makanchi Array 93.97 317 P **P 01 18 32.2 -0.8**
comp=Z,34nm,0.9s,mb5.8,baz=114,slow=5.4,SNR=37
MKAR PKKPbc PKKPbc 01 35 36.5 -0.9
comp=Z,2.1nm,0.8s,baz=264,slow=3.7,SNR=3.9
MKAR LR LR 02 02 00.6
comp=Z,35µm,18.9s,MS6.8,baz=339,slow=36
MKAR Makanchi Array 93.97 317 P **P 01 18 32.2 -0.8**
MKAR PKKPbc PKKPbc 01 35 36.5 -0.9
MKAR LR LR 02 02 00.6
ZALV Zalesovo Beam 94.04 324 P **P 01 18 31.6 -1.5**
comp=Z,40nm,1.0s,mb5.8,baz=104,slow=4.7,SNR=29
ZALV LR LR 02 00 14.9
comp=Z,36µm,21.2s,MS6.8,baz=103,slow=35
ZAL Zalesovo 94.05 324 P **P 01 18 31.6 -1.6**
ZAL pmax pmax
comp=Z,40nm,1.0s
ZAL MLR MLR
comp=Z,36µm,21.2s
NDI New Delhi 94.26 298 *e*P **P 01 18 35.0 +0.2**
NDI *ex* x 01 30 00.0
BNM Barren Site 94.41 56 *e*P **P 01 18 35.1 -0.3**
GCMT Greycliff 94.42 44 *e*P **P 01 18 38.8 +3.7**
RLMT Red Lodge 94.56 45 PFAKE 01 18 50.0 +14
RLMT LR LR
comp=Z,122µm,19.0s,MS7.4
ANMO Albuquerque 94.69 55 P **P 01 18 35.6 -1.1**
comp=Z,0.3nm,0.3s,baz=80,slow=23,SNR=2.2
ANMO Albuquerque 94.69 55*c i*P **P 01 18 33.4 -3.2**
ANMO Albuquerque 94.69 55 *e*P **P 01 18 37.2 +0.6**
comp=Z,3.9nm,0.8s,mb4.9
ANMO LR LR
comp=Z,120µm,20.0s,MS7.4
SMLA Simla 94.76 301 *i* x x 01 18 41.4
SMLA AMb AMB 01 18 56.1
comp=Z,239nm,1.2s,mb6.5
EGMT Eagleton 94.82 42 *e*P **P 01 18 39.0 +2.1**
EGMT LR LR
comp=Z,58µm,20.0s,MS7.0
KAD Karad 94.92 287 *e*P **P 01 18 36.9 -1.1**
KAD AMb AMB 01 18 46.3
comp=Z,92nm,1.6s,mb6.0
GOA Goa 94.93 285⇓*ex* x 01 18 25.5
GOA AMb AMB 01 18 30.3
comp=Z,59nm,1.7s,mb5.7
GOA *i* x x 01 29 14.2
NVS Novosibirsk 95.14 325⇓*i*P **P 01 18 38.7 +0.5**
NVS pmax pmax
comp=E,408nm,2.8s
NVS pmax pmax
comp=Z,1µm,4.3s
PMSA Palmer Station 95.18 161 *e*P **P 01 18 38.8 +0.5**
comp=Z,117nm,1.2s,mb6.2
PMSA LR LR
comp=Z,38µm,19.0s,MS6.9
YKA Yellowknife Ar 95.42 27 P **P 01 18 36.2 -3.1**
comp=Z,1.8nm,0.7s,mb4.6,baz=255,slow=4.9,SNR=14
YKA PP PP 01 22 40.2 +10
comp=Z,0.3nm,0.5s,baz=242,slow=5.1,SNR=4.3
YKA PKKPbc PKKPbc 01 35 33.7 -0.5
comp=Z,0.7nm,0.7s,baz=51,slow=2.7,SNR=3.9
YKA PKPPKP 01 43 46.4
comp=Z,0.9nm,0.9s,baz=47,slow=2.5,SNR=5.4
YKA LR LR 01 58 58.6
comp=Z,48µm,19.4s,MS7.0,baz=260,slow=34
YKA Yellowknife Ar 95.42 27 P **P 01 18 36.2 -3.1**
YKA PP PP 01 22 40.2 +10
YKA PKKPbc PKKPbc 01 35 33.7 -0.5
YKA P'P' 01 43 46.4
YKA LR LR 01 58 58.6
POO Poona 95.45 288 *e*P **P 01 18 39.4 -1.1**
POO AMb AMB 01 18 52.2
comp=Z,113nm,1.5s,mb6.1
NVL N'lazarevskaya 95.94 188*c i*P **P 01 18 40.8 -0.9**
NVL *e*S SKSac 01 29 17.4 +2.5
NVL *e* 01 31 23.8
NVL *e*SS SS 01 36 38.6 +12
NVL *e*SSS 01 40 11.1
NVL pmax pmax
comp=Z,49nm,1.5s,mb5.7
NVL MLR MLR
comp=N,171µm,22.0s,MS7.5
NVL MLR MLR
comp=E,39µm,22.0s,MS7.5
NVL MLR MLR
comp=Z,210µm,22.0s,MS7.6
MAIT Maitri 95.95 188 *e*P **P 01 18 41.8 +0.1**
MAIT *e*PP PP 01 22 44.6 +11
MAIT *e*S SKSac 01 29 19.5 +4.6
MAIT *e*SS SS 01 36 25.8 -1.0
SDCO Great Sand Dun 95.95 53 PFAKE 01 18 50.0 +7.6
SDCO LR LR
comp=Z,85µm,20.0s,MS7.2
AJM Ajmer 96.12 296 *e*P **P 01 18 42.3 -1.1**
AJM AMb AMB 01 19 02.3
comp=Z,109nm,1.6s,mb6.0
THN Thein Dam 96.20 302 *e*P **P 01 18 44.2 +0.6**
ISCO Idaho Springs 96.22 51 *e*P **P 01 18 46.1 +2.6**
ISCO pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
ISCO MLR MLR
comp=Z,236µm,20.0s,MS7.7
ISCO Idaho Springs 96.22 51 *e*P **P 01 18 46.1 +2.6**
comp=Z,4.6nm,0.8s,mb5.0
ISCO LR LR
comp=Z,236µm,20.0s,MS7.7
BOM Bombay 96.48 288 *e*P **P 01 18 44.0 -1.2**
BOM *e*S SKSac 01 29 17.0 -2.6
SNAA Sanae 96.58 184 *e*P **P 01 18 45.2 +0.6**
SNAA *e* 01 18 48.1
SNAA *e* pP 01 18 56.7 +0.4
SNAA *e* 01 19 00.3
LAO LASA Array 96.93 44 PFAKE 01 19 00.0 +13
LAO LR LR
comp=Z,64µm,20.0s,MS7.1
AAA Alma-Ata 97.02 313 *e*P **P 01 18 40.8 -6.3**
AAA pmax pmax
comp=Z,11µm,18.4s
AAA Alma-Ata 97.02 313 *i*P **P 01 18 45.6 -1.5**
KURK Kurchatov 97.10 320 P **P 01 18 45.9 -1.3**
KURK pmax pmax
comp=Z,300nm,4.0s
KURK Kurchatov 97.10 320⇑*e*P **P 01 18 47.8 +0.6**
KSH Kashi 97.15 309⇑*i*P **P 01 18 48.1 +0.4**
KSH AP pP 01 18 58.0 -1.5
KSH XP sP 01 19 02.1 -1.7
KSH PP PP 01 22 46.0 +1.6
KSH SKS 01 29 21.2
KSH S S 01 30 02.5 -6.0
KSH XS sS 01 30 22.0 -6.2
KSH SS SS 01 36 45.3 -1.2
KSH AMB AMB
comp=Z,4µm,5.8s
KSH LR LR
comp=N,53µm,16.2s,MS7.5
KSH LR LR
comp=E,106µm,17.0s,MS7.5
KSH LR LR
comp=Z,107µm,18.5s,MS7.4
VNA2 Neumayer--Watz 97.55 182 *e*P **P 01 18 50.9 +1.9**
VNA2 *e* 01 18 53.8
VNA2 *e* pP 01 19 00.9 +0.2
VNA2 *e* 01 19 06.1
VNA1 Neumayer--Stat 97.86 182 *e*P **P 01 18 51.4 +1.1**
VNA1 *e* 01 18 54.0
VNA1 *e* 01 19 07.6
RSSD Black Hills 98.06 47 *e*P **P 01 18 52.6 +0.9**
RSSD pmax pmax
comp=Z,28nm,1.8s,mb5.5
RSSD MLR MLR
comp=Z,16µm,19.0s,MS6.5
RSSD Black Hills 98.06 47 *e*P **P 01 18 52.6 +0.9**
comp=Z,28nm,1.8s,mb5.5
RSSD LR LR
comp=Z,16µm,19.0s,MS6.5
AMTX Amarillo 98.56 56 *e*P **P 01 18 54.9 +0.7**
AMTX LR LR
comp=Z,226µm,19.0s,MS7.7
DGMT Dagmar 98.56 42 PFAKE 01 19 00.0 +6.2
DGMT LR LR
comp=Z,47µm,20.0s,MS7.0
FRU Bishkek 98.65 312 *e*P **P 01 18 54.0 -0.4**
FRU *e* 01 31 46.0
FRU pmax pmax
comp=Z,60nm,2.0s,mb5.8
JCT Junction City 99.52 61 PFAKE 01 19 10.0 +11
JCT LR LR
comp=Z,259µm,20.0s,MS7.7
BHJ Bhuj 100.09 292 *e*P Pdif 01 18 59.8 -0.8
BHJ AMb AMB 01 19 16.9
comp=Z,64nm,1.3s
CBKS Cedar Bluff 100.60 52 PFAKE 01 19 10.0 +7.1
CBKS LR LR
comp=Z,121µm,19.0s,MS7.4
KVTX Kingsville 100.78 64 PFAKE 01 19 20.0 +16
KVTX LR LR
comp=Z,58µm,19.0s,MS7.1
WMOK Wichita Mounta 100.90 57 PFAKE 01 19 20.0 +16
WMOK LR LR
comp=Z,319µm,19.0s,MS7.8
VOSK Vostochnaya 102.05 322 P Pdif 01 19 07.3 -2.0
VOSK pmax pmax
comp=Z,72nm,2.4s
CMIG Matias Romero 102.10 75 P Pdif 01 19 10.2 +0.7
comp=Z,0.3nm,0.3s,baz=225,slow=7.1,SNR=2.2
BVA0 Borovoye Array 102.42 322 *i*P Pdif 01 19 09.0 -2.0
BVA0 pmax pmax
comp=Z,100nm,4.0s
HKT Hockley 102.86 62 *e*P Pdif 01 19 13.2 +0.3
HKT MLR MLR
comp=Z,36µm,19.0s,MS6.9
KSU1 Kansas State U 103.05 52 PFAKE 01 19 30.0 +16
KSU1 LR LR
comp=Z,154µm,19.0s,MS7.5
ECSD EROS,Sioux Fal 103.36 48 PFAKE 01 19 30.0 +15
ECSD LR LR
comp=Z,136µm,19.0s,MS7.5
NATX Nacogdoches 104.04 60 PFAKE 01 19 30.0 +12
NATX LR LR
comp=Z,191µm,20.0s,MS7.6
AGMN Agassiz Refuge 104.08 43 PFAKE 01 19 30.0 +12
AGMN LR LR
comp=Z,69µm,19.0s,MS7.2
ULM Lac du Bonnet 104.12 41 Pdiff Pdif 01 19 15.5 -3.0
comp=Z,2.0nm,0.9s,baz=178,slow=9.8,SNR=1.6
MIAR Mount Ida 105.16 57 PFAKE 01 23 50.0 +12
MIAR LR LR
comp=Z,304µm,19.0s,MS7.9
SCIA State Center 105.78 50 PFAKE 01 23 50.0 +11
SCIA LR LR
comp=Z,238µm,19.0s,MS7.8
PLCA Paso Flores 106.42 139 PP PP 01 23 54.2 +0.7
comp=Z,1.6nm,0.8s,baz=177,slow=4.7,SNR=3.1
PLCA PKKPbc PKKPbc 01 35 03.8 +2.4
comp=Z,5.1nm,1.2s,baz=97,slow=3.5,SNR=3.4
EYMN Ely 107.00 43 PFAKE 01 23 50.0 +9.1
EYMN LR LR
comp=Z,102µm,20.0s,MS7.4
VBMS Vicksburg 107.58 60 PFAKE 01 23 50.0 +7.5
VBMS LR LR
comp=Z,127µm,20.0s,MS7.5
SVE Sverdlovsk 107.93 326 *i*P Pdif 01 19 35.8 +0.3
SVE *e*PS PS 01 33 16.0 -12
SVE *e*SS SS 01 39 10.3 -4.0
SVE *e*SSS 01 43 24.3
SVE pmax pmax
comp=Z,77nm,2.0s
SVE pmax pmax

comp=Z,10µm,15.9s
JFWS Jewell Farm 107.98 49 PFAKE 01 23 50.0 +7.1
JFWS LR LR
comp=Z,107µm,19.0s,MS7.4
OXF Oxford 108.59 57 PFAKE 01 24 00.0 +16
OXF LR LR
comp=Z,168µm,19.0s,MS7.6
COWI Conover 108.68 45 PFAKE 01 24 00.0 +16
COWI LR LR
comp=Z,90µm,20.0s,MS7.3
TEIG Tepich 108.71 72 PFAKE 01 24 00.0 +15
TEIG LR LR
comp=Z,57µm,19.0s,MS7.2
TGUH Tegucigalpa,Un 108.95 79 PFAKE 01 24 00.0 +15
TGUH LR LR
comp=Z,105µm,20.0s,MS7.4
AB31 Akbulak array 109.05 318 *i* P Pdif 01 19 40.6 +0.1
AB31 pmax pmax
comp=Z,4.0nm,1.4s
ARU Arti 109.11 326 P Pdif 01 19 36.8 -3.9
ARU *i* 01 24 10.4
ARU 01 26 27.9
PLAL Pickwick Lake 109.70 57 PFAKE 01 24 00.0 +14
PLAL LR LR
comp=Z,217µm,20.0s,MS7.7
AKTK Aktyubinsk 110.19 320 Pdif Pdif 01 19 47.0 +1.5
AKTK PKPdf PKiKP 01 23 47.6 +0.8
AKTO Aktyubinsk 110.19 320 Pdiff Pdif 01 19 47.0 +1.5
comp=Z,1.7nm,1.1s,baz=46,slow=5.6,SNR=4.6
AKTO PKiKP PKiKP 01 23 47.6 +0.8
comp=Z,3.1nm,0.8s,baz=66,slow=6.0,SNR=5.5
AKTO Aktyubinsk 110.19 320 P Pdif 01 19 45.9 +0.4
BRAL Brewton 110.49 61 PFAKE 01 24 00.0 +12
BRAL LR LR
comp=Z,93µm,20.0s,MS7.4
WCI Wyandotte Cave 111.10 53 PFAKE 01 24 00.0 +11
WCI LR LR
comp=Z,71µm,20.0s,MS7.2
KBS Kingsbay 111.46 355 *e* Pdif 01 19 49.8 -1.4
KBS *e*PP PP 01 24 29.1 -0.4
KBS Kingsbay 111.46 355 *e*P Pdif 01 19 49.8 -1.4
KBS LR LR
comp=Z,39µm,21.0s,MS7.0
GLMI Grayling 111.94 46 PFAKE 01 24 00.0 +10
GLMI LR LR
comp=Z,101µm,20.0s,MS7.4
LCO Las Campanas 112.16 128 PFAKE 01 24 00.0 +8.7
LCO LR LR
comp=Z,76µm,20.0s,MS7.3
OPO Ambohidratompo112.47 244 PKiKP PKiKP 01 23 55.4 +3.3
comp=Z,7.3nm,1.0s,baz=144,slow=2.3,SNR=5.2
CFAA Coronel Fontan 112.75 131 PKKPbc PKKPbc 01 34 42.1 +1.2
comp=Z,0.2nm,0.6s,baz=17,slow=6.5,SNR=4.5
TKL Tuckaleechee C 113.21 56 PKiKP PKiKP 01 24 00.2 +7.2
comp=Z,3.7nm,0.7s,baz=214,slow=7.6,SNR=3.5
TKL Tuckaleechee C 113.21 56 *i* PKiKP PKiKP 01 24 00.2 +7.2
TKL pmax pmax
comp=Z,4.0nm,0.7s
TKL Tuckaleechee C 113.21 56 PKPdf PKiKP 01 24 00.2 +7.2
TZTN Tazewell 113.35 55 PFAKE 01 24 00.0 +6.7
TZTN LR LR
comp=Z,175µm,20.0s,MS7.7
TRQA Tornquist 113.39 140 PFAKE 01 24 00.0 +6.6
TRQA LR LR
comp=Z,50µm,19.0s,MS7.1
GOGA Godfrey 113.53 59 PFAKE 01 24 10.0 +16
GOGA LR LR
comp=Z,173µm,20.0s,MS7.7
ACSO Alum Creek Sta 113.56 51 PFAKE 01 24 00.0 +6.5
ACSO LR LR
comp=Z,192µm,20.0s,MS7.7
BJO Bjornoya 114.35 351 *e* Pdif 01 20 03.9 -0.1
BJO *e*PP PP 01 24 49.5 -0.6
BJO1 Bjornoya 114.38 351 *e*P Pdif 01 20 03.9 -0.2
BJO1 *e* 01 20 09.6
OTAV Otavalo 115.23 95 PFAKE 01 24 10.0 +12
OTAV LR LR
comp=Z,52µm,20.0s,MS7.1
DWPF Disney 115.36 64 PFAKE 01 24 10.0 +13
DWPF LR LR
comp=Z,17µm,19.0s,MS6.7
LVZ Lovozero 115.39 342 *i* PKIKP PKPdf 01 23 58.3 +2.1
LVZ MLR MLR
comp=Z,57µm,21.0s,MS7.2
BCIP Isla Barro Col 115.49 85 PFAKE 01 24 10.0 +12
BCIP LR LR
comp=Z,37µm,19.0s,MS7.0
BLA Blacksburg 115.81 54 PFAKE 01 24 10.0 +12
BLA LR LR
comp=Z,190µm,20.0s,MS7.7
SADO Sadowa 115.82 46 PKP PKPdf 01 23 57.0 -0.7
baz=270,slow=11
APA Apatity 115.97 342 *i* PKIKP PKPdf 01 24 02.2 +4.8
APA *i* 01 25 10.0
APA pmax pmax
comp=Z,77nm,1.6s
APA MLR MLR
comp=Z,73µm,23.0s,MS7.2
MCWV Mont Chateau 116.01 52 PFAKE 01 24 10.0 +12
MCWV LR LR
comp=Z,154µm,20.0s,MS7.6
NHSC New Hope 116.30 59 PFAKE 01 24 10.0 +11
NHSC LR LR
comp=Z,146µm,20.0s,MS7.6
KEV Kevo 116.35 345 *ep* PKPdf 01 24 00.9 +2.9
comp=Z,1.4nm,0.4s
KEV Kevo 116.35 345 *e*P PKPdf 01 24 00.9 +2.9
KEV LR LR
comp=Z,36µm,19.0s,MS7.0
LVC Limon Verde 116.52 123 PKKPab PKKPab 01 34 34.6 +1.7
comp=Z,6.5nm,0.9s,baz=52,slow=7.5,SNR=5.1
LVC Limon Verde 116.52 123 PFAKE 01 24 10.0 +10
LVC LR LR
comp=Z,89µm,20.0s,MS7.4
MGV Manicaragua 116.56 71 *e*P PP 01 24 58.7 -8.8
ARCES ARCESS Array B 116.88 345 PKP PKPdf 01 23 57.0 -2.0
comp=Z,1.8nm,0.5s,baz=28,slow=8.2,SNR=32
ARCES PKKPab PKKPab 01 34 30.8 +2.0
comp=Z,2.1nm,0.8s,baz=254,slow=4.5,SNR=5.0
KTK1 Kautokeino 117.81 346 *e* PKPdf 01 24 00.4 -0.5
KTK1 AMb AMB 01 24 11.6
comp=Z,72nm,1.6s
KTK1 Kautokeino 117.81 346 *e*P PKPdf 01 23 59.0 -1.9
CNNC Cliffs of the 118.03 56 PFAKE 01 24 10.0 +7.7
CNNC LR LR
comp=Z,142µm,20.0s,MS7.6
TRO Tromso 118.32 347 *e* Pdif 01 20 18.3 -3.3
TRO *e*PP PP 01 25 17.3 -0.6
TRO *e*SS SS 01 41 30.1 -0.5
TRO Tromso 118.32 347 *e*P Pdif 01 20 18.3 -3.3
TRO *e* 01 20 23.3
MAK Makhachkala 118.47 313 *e*P Pdif 01 20 22.3 0.0
MAK *i* 01 24 01.9
MAK *e*PPP 01 27 58.7
MAK *e* 01 31 12.5
MAK *i* SP SP 01 35 01.5 -0.5
MAK *i* PS PS 01 35 07.2 0.0
MAK pmax pmax
comp=Z,133nm,1.1s
MAK MLR MLR
comp=Z,45µm,19.0s,MS7.1
MAK MLR MLR
comp=E,78µm,21.0s
BINY Binghamton 118.53 48 PFAKE 01 24 10.0 +7.0
BINY LR LR
comp=Z,145µm,19.0s,MS7.6
MVL Millersville 118.63 51 *e*PKPdf PKPdf 01 24 03.4 +0.1
LONY Lake Ozonia 119.03 45 PFAKE 01 24 20.0 +16
LONY LR LR
comp=Z,88µm,19.0s,MS7.4
NCB Newcomb 119.43 46 *e*PKPdf PKPdf 01 24 05.2 +0.5
NCB LR LR
comp=Z,43µm,20.0s,MS7.1
JOF Joensuu 119.46 338 *ep* PKPdf 01 24 02.1 -2.1
comp=Z,20nm,0.7s
JOF Joensuu 119.46 338 *e*PKIKP PKPdf 01 24 02.1 -2.1
JOF pmax pmax
comp=Z,20nm,0.7s
SFJD Kangerlussuaq 119.56 16 *i* P Pdif 01 20 20.2 -7.0
SFJD *i* 01 35 18.8
SFJD Kangerlussuaq 119.56 16 *i* P Pdif 01 20 20.2 -7.0
SFJD *i* 01 25 21.6
SFJD *e*S SKKSac 01 32 29.8 +6.2
SFJD *i* 01 35 18.8
SFJD *i* 01 42 38.2
SFJD *e* 01 55 04.7
SFJD Kangerlussuaq 119.56 16 PFAKE 01 24 20.0 +16
SFJD LR LR
comp=Z,100µm,19.0s,MS7.5
LPAZ La Paz 119.88 116 PKP PKPdf 01 24 06.2 -0.2
comp=Z,1.9nm,0.5s,baz=243,slow=1.6,SNR=9.8
LPAZ PKKPab PKKPab 01 34 19.4 +1.2
comp=Z,2.4nm,0.8s,baz=51,slow=9.7,SNR=7.9
LPAZ La Paz 119.88 116 PKP PKPdf 01 24 06.2 -0.2
LPAZ PKKPab PKKPab 01 34 19.4 +1.2
VRHR Novokhopersk 120.14 323 *e*P Pdif 01 20 28.5 -1.3
VRHR *e* 01 24 07.2
VRHR *e* 01 25 35.1
VRHR *i* PPP 01 28 01.3
VRHR *e* 01 31 11.6
VRHR *i* SP SP 01 35 26.1 +10
VRHR *e*SS SS 01 41 59.3 +3.8
VRHR pmax pmax
comp=Z,1µm,16.3s
VRHR pmax pmax
comp=N,370nm,10.2s
VRHR pmax pmax
comp=E,390nm,19.8s
VRHR pmax pmax
comp=Z,20nm,0.8s
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=E,8.0nm,0.5s
VRHR pmax pmax
comp=Z,7µm,11.7s
VRHR pmax pmax
comp=N,2µm,18.8s
VRHR pmax pmax
comp=E,4µm,13.9s
MDV Middlebury 120.16 46 *e*PKPdf PKPdf 01 24 07.1 +1.0
ROSC El Rosal 120.18 91 PKP PKPdf 01 24 07.1 0.0
comp=E,1.9nm,0.4s,baz=84,slow=20,SNR=2.3
RDF Al-Radifah 120.19 297 *e*P PKPdf 01 24 03.9 -2.7
baz=297
MIB Mutribah 120.32 298 *e*P PKPdf 01 24 04.3 -2.5
baz=298
DGRG David-gareji 120.33 311 P Pdif 01 20 34.0 +3.4
NAY Al-Naaiem 120.44 297 *e*P PKPdf 01 24 04.1 -3.0
baz=297
MOS Moscow 120.48 329 *e*P Pdif 01 20 32.3 +1.0
MOS *e* 01 24 07.0
MOS *e* 01 25 30.1
MOS *e*PS PS 01 35 20.5 -4.1
MOS *i* SS SS 01 42 04.7 +5.3
MOS pmax pmax
comp=Z,131nm,1.6s
JMIC Jan Mayen 120.54 358 *e* Pdif 01 20 31.4 -0.2
JMIC *e*PP PP 01 25 32.2 -0.8
JMIC Jan Mayen 120.54 358 *e*P Pdif 01 20 31.4 -0.2
JMIC *e* 01 20 36.3
RST Umm Al-Ruwaisa 120.64 297 *e*P PKPdf 01 24 04.2 -3.3
baz=297
MTA Mtatsminda 120.70 312 P Pdif 01 20 32.7 +0.5
LBNH Lisbon 120.97 45 PFAKE 01 24 20.0 +12
LBNH LR LR
comp=Z,106µm,20.0s,MS7.5
GNI Garni 121.06 310 PKP PKPdf 01 24 09.3 +1.3
comp=Z,3.4nm,0.3s,baz=359,slow=3.6,SNR=17
GNI Garni 121.06 310 ⇑*i*PKIKP PKPdf 01 24 09.8 +1.8
GNI MLR MLR
comp=Z,24µm,23.0s
GNI Garni 121.06 310 *e*PKPdf PKPdf 01 24 07.8 -0.1
GNI LR LR
comp=Z,29µm,19.0s,MS6.9
GOF Gofitskoye 121.12 316 *e*PKIKP PKPdf 01 23 59.4 -8.5
GOF pmax pmax
comp=Z,30nm,1.0s
OBN Obninsk 121.30 329 ⇓*i*PKIKP PKPdf 01 24 08.2 +0.2
OBN *e* 01 25 33.7
OBN *e* 01 31 11.9
OBN *e*PS PS 01 35 31.7 -0.3
OBN *e*SS SS 01 42 03.4 -6.5
OBN pmax pmax
comp=Z,48nm,1.1s
OBN MLR MLR
comp=Z,30µm,19.0s,MS7.0
OBN Obninsk 121.30 329 ⇓*e*PKP PKPdf 01 24 08.3 +0.3
OBN LR LR
comp=Z,30µm,19.0s,MS7.0
VOR Voronezh 121.32 324 *e*PKIKP PKPdf 01 24 08.0 -0.1
VOR pmax pmax
comp=Z,240nm,2.0s
ONI Oni 121.47 313 P Pdif 01 20 38.8 +3.1
VRSR Storozhevoye 121.53 324 *e*P Pdif 01 20 32.1 -3.8
VRSR *e* 01 24 09.8
VRSR *e* 01 25 38.1
VRSR *e*PPP 01 28 12.1
VRSR *e* 01 31 14.0
VRSR *i* SP SP 01 35 26.4 -2.2
VRSR pmax pmax
comp=Z,170nm,14.0s
VRSR pmax pmax
comp=N,70nm,18.4s
VRSR pmax pmax
comp=E,80nm,14.4s
VRSR pmax pmax
comp=Z,10.0nm,1.7s
VRSR pmax pmax
comp=N,5.0nm,0.9s
VRSR pmax pmax
comp=E,2.0nm,0.6s
VRSR pmax pmax
comp=Z,420nm,13.6s
VRSR pmax pmax
comp=E,1µm,16.0s
KIV Kislovodsk 121.66 315 ⇓*i*PKIKP PKPdf 01 24 09.8 +0.8
KIV *e* 01 25 37.8
KIV *e*PS PS 01 35 39.3 +3.6
KIV *e*SS SS 01 42 24.5 +9.1
KIV pmax pmax
comp=Z,24nm,1.1s
KIV MLR MLR
comp=Z,33µm,23.0s,MS6.9
KIV Kislovodsk 121.66 315 ⇑*i*P PKPdf 01 24 08.7 -0.3
KIV Kislovodsk 121.66 315 ⇑P PKPdf 01 24 08.7 -0.3
HRV Adam Dziewonsk121.67 47 PFAKE 01 24 20.0 +11
HRV LR LR
comp=Z,156µm,20.0s,MS7.7
PUL Pulkovo 121.73 335 ⇑*e*PKIKP PKPdf 01 24 09.3 +0.7
KAF Kangasniemi 121.77 339 *ep* PKPdf 01 24 08.2 -0.5
comp=Z,14nm,0.7s
KAF Kangasniemi 121.77 339 *e*PKIKP PKPdf 01 24 08.2 -0.5
KAF pmax pmax
comp=Z,14nm,0.7s
WES Weston 121.87 47 PFAKE 01 24 20.0 +11
WES LR LR
comp=Z,136µm,20.0s,MS7.6
MOR8 Moi Rana 122.13 347 *e* PKPdf 01 24 07.9 -1.4
MOR8 AMb AMB 01 24 23.4
comp=Z,56nm,2.0s
PKME Peaks-Kenny Pk 122.49 43 *e*PKPdf PKPdf 01 24 10.2 -0.3
PKME LR LR
comp=Z,82µm,20.0s,MS7.4
MSL Mosul 123.03 306 *ex* x 01 24 24.0
MSL *ex* x 01 31 21.0
CPUP Villa Florida 123.61 133 PKP PKPdf 01 24 14.3 +1.0
comp=Z,3.3nm,0.7s,baz=242,slow=1.7,SNR=6.5
CPUP PKKPbc PKKPbc 01 34 03.4 +1.7
comp=Z,1.1nm,0.7s,baz=58,slow=6.2,SNR=2.9
CPUP Villa Florida 123.61 133 PKP PKPdf 01 24 14.3 +1.0
CPUP PKKPbc PKKPbc 01 34 03.4 +1.7
SOC Sochi 123.83 315 *ei*P Pdif 01 20 50.9 +4.8
SOC *i* 01 24 13.1
SOC *e* 01 25 54.4
SOC *e*PPP 01 28 32.9
SOC *e*PS PS 01 35 49.5 -5.4
SOC *e* 01 42 44.0
SOC pmax pmax
comp=Z,47nm,1.5s
SOC MLR MLR
comp=Z,9µm,23.0s,MS6.4
NSS Namsos 124.08 347 *e*PP PP 01 25 56.5 -0.6
NSS *e*SS SS 01 42 45.1 +0.8
SDV Santo Domingo 124.45 87 *e*PKPdf PKPdf 01 24 15.6 +0.4
SDV LR LR
comp=Z,9µm,19.0s,MS6.5
SUR Sutherland 124.95 216 PKP PKPdf 01 24 16.1 +0.3
comp=Z,30nm,0.9s,baz=265,slow=2.2,SNR=7.9
SUR Sutherland 124.95 216 PKP PKPdf 01 24 16.1 +0.3
ANN Anapa 124.98 317 *i* PKIKP PKPdf 01 24 14.8 -0.6
ANN Anapa 124.98 317 *e*PKP PKPdf 01 24 14.8 -0.6
MNK Minsk 125.93 331 *e*P Pdif 01 21 08.0 +13
MNK *e* 01 24 12.0
MNK *e*PPP 01 28 57.0
MNK *e* 01 31 12.0
MNK *e*PS PS 01 36 08.0 -4.8
MNK MLR MLR
comp=E,113µm,25.0s,MS7.6
MNK MLR MLR
comp=Z,183µm,21.0s,MS7.7
MNK MLR MLR
comp=N,85µm,20.0s,MS7.6
SIV San Ignacio 126.11 120 SKKPbc 01 37 44.0
comp=N,2.4nm,1.0s,baz=81,slow=5.1,SNR=3.7
MALT Malatya 126.25 309 ⇑*i*P PKPdf 01 24 18.3 +0.3
MALT Malatya 126.25 309 ⇑P PKPdf 01 24 18.3 +0.3
MOL Molde 126.76 348 *e* PKPdf 01 24 12.6 -5.6
MOL *e*PP PP 01 26 18.6 +3.6
SIM Simferopol' 127.12 318 *e*P Pdif 01 20 59.7 -1.1
SIM *e* 01 24 17.4
SIM *e* 01 26 13.0
SIM *e*SS SS 01 43 23.0 -1.0
SIM pmax pmax
comp=Z,12µm,15.0s
NB2 NORSAR Subarra127.24 345 PKPdf PKPdf 01 24 18.3 -0.9
comp=Z,56nm,1.2s,baz=31,slow=1.9
NB2 NORSAR Subarra127.24 345 PKPdf PKPdf 01 24 18.3 -0.9
baz=31,slow=1.9
NOA NORSAR Array B127.24 345 PKP PKPdf 01 24 17.3 -1.9
comp=Z,22nm,1.1s,baz=32,slow=1.9,SNR=13
NOA NORSAR Array B127.24 345 PKIKP PKPdf 01 24 17.3 -1.9
NOA pmax pmax
comp=Z,22nm,1.1s
NOA NORSAR Array B127.24 345 PKP PKPdf 01 24 17.3 -1.9
HFS Hagfors 127.33 343 PKP PKPdf 01 24 18.2 -1.2
comp=Z,14nm,0.9s,baz=20,slow=4.7,SNR=8.4
HFS Hagfors 127.33 343 PKIKP PKPdf 01 24 18.2 -1.2
HFS pmax pmax
comp=Z,14nm,0.9s
AKASG Malin Array Be 127.36 327 PKP PKPdf 01 24 18.3 -1.4
comp=Z,16nm,0.9s,baz=58,slow=1.6,SNR=27
AKASG Malin Array Be 127.36 327 PKIKP PKPdf 01 24 18.3 -1.4
AKASG pmax pmax
comp=Z,16nm,0.9s
AKASG Malin Array Be 127.36 327 PKP PKPdf 01 24 18.3 -1.4
KMBO Kilima Mbogo 127.36 260 PKP PKPdf 01 24 19.4 -1.5
comp=Z,1.0nm,0.3s,baz=94,slow=13,SNR=2.1
KMBO PP PP 01 26 20.4 -0.7
comp=Z,2.3nm,0.8s,baz=72,slow=19,SNR=1.7
KMBO Kilima Mbogo 127.36 260 PKIKP PKPdf 01 24 19.4 -1.5
KMBO 01 26 20.4
KMBO pmax pmax
comp=Z,1.0nm,0.3s
KMBO pmax pmax
comp=Z,2.0nm,0.8s
KMBO Kilima Mbogo 127.36 260 PKP PKPdf 01 24 19.4 -1.5
KMBO *e*PKPdf PKPdf 01 24 23.9 +3.1
KMBO PP PP 01 26 20.4 -0.6
KMBO LR LR
comp=Z,51µm,22.0s,MS7.2
KIEV Kiev 127.37 327 *e*PKIKP PKPdf 01 24 17.8 -1.9
KIEV MLR MLR
comp=Z,47µm,20.0s,MS7.2
SUW Suwalki 128.37 333 *e*PKP PKPdf 01 24 21.8 +0.3
SUW *e*PP PP 01 26 26.6 +0.6
SUW *e*SP SP 01 36 34.4 +6.3
SUW *e*SS SS 01 43 41.6 +3.0
SUW LMZ 02 18 53.8
comp=Z,87µm,25.3s
SUW Suwalki 128.37 333 *e*PKP PKPdf 01 24 21.8 +0.3
SUW *e*PP PP 01 26 26.6 +0.6
SUW *e*SP SP 01 36 34.6 +6.3
SUW *e*SS SS 01 43 41.6 +3.0
KONO Kongsberg 128.85 345 *e* Pdif 01 21 11.2 +2.7
KONO *e*PP PP 01 26 27.9 -0.8
KONO Kongsberg 128.85 345 ⇑*i*PKIKP PKPdf 01 24 23.0 +0.7
ASF Jabal al Asfar 128.89 302 PKP PKPdf 01 24 21.3 -1.9
comp=Z,9.8nm,1.0s,baz=229,slow=0.7,SNR=12
ASF PP PP 01 26 31.2 +0.6
comp=Z,2.4nm,0.9s,baz=294,slow=6.8,SNR=1.8
ASF Jabal al Asfar 128.89 302 PKIKP PKPdf 01 24 21.3 -1.9
ASF 01 26 31.2
ASF pmax pmax
comp=Z,10.0nm,1.0s
ASF pmax pmax
comp=Z,2.0nm,0.9s
BER Bergen 129.20 348 *e* Pdif 01 21 19.6 +10
BER *e*PP PP 01 26 33.8 +2.8
BER Bergen 129.20 348 *e*P Pdif 01 21 19.6 +10
BER *e* 01 21 31.8
BBSR BB Station 129.32 58 PFAKE 01 24 40.0 +16
BBSR LR LR
comp=Z,97µm,19.0s,MS7.5
SJG San Juan 129.48 76 *e*PKIKP PKPdf 01 24 26.5 +1.8
KIS Kishinev 129.50 323 *e*P Pdif 01 21 10.0 -1.3
KIS *e* 01 24 03.8
KIS *e* 01 24 24.0
KIS *e*PPP 01 29 28.0
KIS *e* 01 31 32.0
KIS *e*SS SS 01 43 50.0 -3.1
KIS Kishinev 129.50 323 *e*P Pdif 01 21 10.0 -1.3
comp=Z,900nm,18.0s
KIS Kishinev 129.50 323 *e*PKP PKPdf 01 24 24.0 +0.1
KIS Kishinev 129.50 323 *e*PP PP 01 26 38.0 +4.3
comp=Z,12µm,14.0s
KIS Kishinev 129.50 323 *i* PKS 01 28 03.0
KIS *e*SKS SKSdf 01 31 32.0 -0.7
KIS *e*SKKS SKKSac 01 33 07.0 -21
KIS *e*SKSP 01 36 08.0
KIS Kishinev 129.50 323 *e*PS PS 01 36 56.0 +12
KIS *e*SSS 01 45 24.0
KIS LRM 02 33 28.0
comp=Z,45µm,18.0s
KIS Kishinev 129.50 323 *e*SS SS 01 43 50.0 -3.1
BHL Bhannes 129.53 305 ⇑*e*P PKPdf 01 24 23.5 -0.9
HUMP Col San Antoni 129.76 76 *e*PKPdf PKPdf 01 24 25.9 +0.7
MMAI Mount Meron Ar 129.94 303 PKP PKPdf 01 24 25.9 +0.7
comp=Z,14nm,0.9s,baz=54,slow=4.2,SNR=16
MMAI PP PP 01 26 37.3 0.0
comp=Z,1.1nm,0.6s,baz=74,slow=11,SNR=1.8
ANTO Ankara 129.94 313 *e*PKPdf PKPdf 01 24 25.4 +0.4
ANTO LR LR
comp=Z,22µm,19.0s,MS6.9
LSZ Lusaka 130.28 238 *e*PKPdf PKPdf 01 24 27.2 +0.9
LSZ LR LR
comp=Z,81µm,20.0s,MS7.4
WAR Warsaw 130.52 332 *e*PKP PKPdf 01 24 25.3 -0.4
WAR *e*PP PP 01 26 42.1 +2.1
WAR *i* PKS 01 27 52.9
WAR LMZ 02 19 14.8
comp=Z,67µm,25.1s
WAR Warsaw 130.52 332 *e*PKIKP PKPdf 01 24 25.3 -0.4
WAR *e* 01 26 42.1
WAR MLR MLR
comp=Z,67µm,25.1s,MS7.2
WAR Warsaw 130.52 332 *e*PKP PKPdf 01 24 25.3 -0.4
WAR *e*PP PP 01 26 42.1 +2.1
WAR *i* PKS 01 27 52.9
WAR LR LR
comp=Z,67µm,25.1s,MS7.2
LVV L'vov 130.60 328 ⇑*i*PKIKP PKPdf 01 24 25.9 0.0
LVV *i* 01 24 39.9
LVV *e* 01 26 40.7
LVV *e* 01 31 21.3
LVV *e* 01 36 39.9
LVV *i* SS SS 01 44 22.7 +16
LVV MLR MLR
comp=Z,36µm,23.0s,MS7.0
LVV MLR MLR
comp=N,292µm,21.0s,MS7.9
LVV MLR MLR
comp=E,24µm,24.0s,MS7.9
TIRR Tirgusor 130.99 320 ⇑*i*P PKPdf 01 24 26.7 -0.1
TIRR Tirgusor 130.99 320 ⇑P PKPdf 01 24 26.7 -0.1
EIL Elat 131.02 299 PKP PKPdf 01 24 25.4 -1.9
comp=E,17nm,0.8s,baz=321,slow=5.0,SNR=17
CSS Prodhromos 131.11 307 *e*P PKPdf 01 24 25.9 -1.5
BURAR Bucovina Array 131.25 325 ⇓*i*P PKPdf 01 24 29.2 +2.0
BURAR Bucovina Array 131.25 325 P PKPdf 01 24 30.2 +3.0
VRI Vrincioaia 131.32 322 ⇓*i*P PKPdf 01 24 26.3 -1.1
VRI Vrincioaia 131.32 322 ⇓P PKPdf 01 24 26.3 -1.1
COP Copenhagen 131.35 340 *i* P Pdif 01 21 20.1 +0.5

COP *i* 01 24 27.5
COP *i* 01 26 49.0
COP MLR MLR
comp=Z,22µm,23.0s,MS6.8
COP Copenhagen 131.35 340 *i* P Pdif 01 21 20.1 +0.5
COP *i* 01 24 27.5
COP *i* 01 26 49.0
COP *i* 01 44 06.5
COP
comp=Z,22µm,23.0s
KWP Kalwaria 131.40 329 *e*PKP PKPdf 01 24 26.0 -1.5
KWP *e*PP PP 01 26 48.0 +2.2
KWP *e*SS SS 01 44 27.6 +12
KWP LMZ 02 15 58.5
comp=Z,45µm,26.6s
KWP Kalwaria 131.40 329 *e*PKIKP PKPdf 01 24 26.0 -1.4
KWP *e* 01 26 48.0
KWP Kalwaria 131.40 329⇑ *i*P PKPdf 01 24 27.4 0.0
KWP Kalwaria 131.40 329 *e*PKP PKPdf 01 24 26.0 -1.4
KWP *e*PP PP 01 26 48.0 +2.2
KWP *e*SS SS 01 44 27.6 +12
GKP Gorka Klasztor 131.44 335 *e*PKPc PKPdf 01 24 27.8 +0.4
GKP *e*PP PP 01 26 47.8 +1.9
GKP *e*PKS 01 27 55.1
GKP *e*SS SS 01 44 40.9 +25
GKP LMZ 02 16 23.3
comp=Z,74µm,25.9s
GKP Gorka Klasztor 131.44 335⇑ *e*PKIKP PKPdf 01 24 27.8 +0.4
GKP *e* 01 26 47.8
GKP *e*SS SS 01 44 40.9 +25
GKP Gorka Klasztor 131.44 335⇑ *e*PKP PKPdf 01 24 27.8 +0.4
GKP *e*PP PP 01 26 47.8 +2.0
GKP *e*PKS 01 27 55.1
GKP *e*SS SS 01 44 40.9 +25
GKP LR LR
comp=Z,74µm,25.9s,MS7.3
PSN Preselentsi 131.50 319 P PKPdf 01 24 29.3 +1.5
TRIS Tristan da Cun 131.57 182 PFAKE 01 24 40.0 +12
TRIS LR LR
comp=Z,83µm,20.0s,MS7.4
MUD Monsted U'grnd 131.72 343 *e*PKIKP PKPdf 01 24 31.7 +3.9
MUD *i* 01 26 49.2
MUD *i* 01 44 28.7
MUD MLR MLR
comp=Z,29µm,21.0s,MS7.0
MUD Monsted U'grnd 131.72 343 *i* P PKPdf 01 24 31.7 +3.9
MUD *i* 01 26 49.2
MUD *i* 01 44 28.7
MUD
comp=Z,29µm,21.0s
MUD Monsted U'grnd 131.72 343 *e*P PKPdf 01 24 31.7 +3.9
MUD *i* 01 26 49.2
MUD *i* 01 44 28.7
MLR Muntele Rosu 131.98 322⇑ *i*P PKPdf 01 24 27.9 -0.8
MLR Muntele Rosu 131.98 322 ⇑P PKPdf 01 24 27.9 -0.8
MLR P 01 24 36.4
KOLS Kolonicke sedl 132.05 328 *e*PKIKP PKPdf 01 24 29.1 +0.4
KOLS *e* 01 26 55.8
KOLS Kolonicke sedl 132.05 328 *e*PKP PKPdf 01 24 29.1 +0.4
KOLS *e*PP PP 01 26 55.8 +5.8
KOLS *e*SKP 01 28 01.9
KOLS Kolonicke sedl 132.05 328 *e*P PKPdf 01 24 29.1 +0.4
KOLS *e*PP PP 01 26 55.8 +5.8
KOLS *e* 01 28 02.0
UZH Uzhgorod 132.23 328 *e*PKIKP PKPdf 01 24 30.0 +1.0
UZH MLR MLR
comp=Z,12µm,19.0s,MS6.6
PRD Provadia 132.23 319 P PKPdf 01 24 31.2 +2.0
STHS Stebnicka Huta 132.27 329 *e*PKP PKPdf 01 24 31.4 +2.3
STHS *e* 02 04 21.6
OJC Ojcow 132.45 331 *e*PKIKP PKPdf 01 24 28.9 -0.5
OJC *e* 01 26 51.2
OJC *e*PS PS 01 37 07.2 -2.3
OJC Ojcow 132.45 331 *e*PKPdf PKPdf 01 24 28.9 -0.5
OJC *ep*PKPdf pPKPdf 01 25 11.4 +30
OJC *e*PP PP 01 26 51.2 -1.3
OJC *e*PS PS 01 37 07.2 -2.3
OJC *e*SS SS 01 44 19.1 -10
OJC LR LR
comp=Z,48µm,19.1s,MS7.2
CRVS Cervenica-Dubn 132.49 329 *e*PKIKP PKPdf 01 24 28.6 -0.9
CRVS *e* 01 27 00.0
CRVS Cervenica-Dubn 132.49 329 *e*PKP PKPdf 01 24 28.6 -0.9
CRVS *e*PP PP 01 27 00.0 +7.2
CRVS *e*SKP 01 28 06.9
VOIR 132.54 323⇑PKIKP PKPdf 01 24 28.7 -1.0
VOIR 132.54 323⇑ *i*P PKPdf 01 24 28.6 -1.1
VOIR 132.54 323 P PKPdf 01 24 31.0 +1.3
NIE Niedzica 132.73 330 *e*PKPdf PKPdf 01 24 30.5 +0.5
JMB Yambol 133.11 319 *e*P PKPdf 01 24 31.2 +0.3
JMB Yambol 133.11 319 P PKPdf 01 24 31.5 +0.6
DRGR 133.12 326⇑ *i*P PKPdf 01 24 29.6 -1.2
DRGR 133.12 326 P PKPdf 01 24 32.3 +1.5
SZH Strazhica 133.13 320 P PKPdf 01 24 32.1 +1.2
KECS Kecovo 133.25 329 *e*PKIKP PKPdf 01 24 30.0 -1.0
KECS *e* 01 26 56.7
KECS Kecovo 133.25 329 *e*PKP PKPdf 01 24 30.0 -1.0
KECS *e*PP PP 01 26 56.7 -1.0
KECS *e*SKP 01 28 02.7
RAC Raciborz 133.30 332 *e*PKIKP PKPdf 01 24 26.1 -4.9
RAC MLR MLR
comp=E,60µm,22.0s
RAC MLR MLR
comp=Z,96µm,24.0s,MS7.4
RAC MLR MLR
comp=Z,57µm,22.0s
RAC Raciborz 133.30 332 *e*Pdif Pdif 01 21 30.5 +2.3
RAC *e*PKPdf PKPdf 01 24 26.1 -4.9
RAC *e*PP PP 01 26 50.1 -7.8
RAC LR LR
comp=Z,96µm,24.0s,MS7.4
BSEG Bad Segeberg 133.49 340 *e*PP PP 01 27 00.8 +2.0
OKC Ostrava-Krasne 133.49 331 *e*PKPdf PKPdf 01 24 30.1 -1.3
OKC AMS AMS 02 20 50.0
comp=Z,59µm,23.4s
GRGR Grenville 133.58 84 PFAKE 01 24 40.0 +7.4
GRGR LR LR
comp=Z,38µm,19.0s,MS7.1
KSP Ksiaz 133.61 334 *e*PKPc PKPdf 01 24 31.4 -0.2
KSP *e*SS SS 01 45 02.9 +20
KSP LMZ 02 19 09.6
comp=Z,90µm,30.8s
KSP Ksiaz 133.61 334⇑ *e*PKIKP PKPdf 01 24 31.0 -0.6
KSP *e* 01 24 39.9
KSP *e* 01 27 01.7
KSP *e*SS SS 01 44 43.0 +0.4
KSP MLR MLR
comp=Z,134µm,25.1s,MS7.6
KSP Ksiaz 133.61 334⇑ *e*PKP PKPdf 01 24 31.0 -0.6
KSP *ep*PKP pPKPdf 01 24 39.9 -3.8
KSP *e*PP PP 01 27 01.7 +1.9
KSP *e*PPS 01 39 06.0
KSP *e*SS SS 01 44 43.0 +0.4
KSP LR LR
comp=Z,134µm,25.1s,MS7.6
TRN Trinidad (W) 133.69 86 *e* SKPbc 01 27 44.9 -14
MORC Moravsky Berou 133.81 332 *i*P PKPdf 01 24 30.7 -1.3
MORC Moravsky Berou 133.81 332 P PKPdf 01 24 33.7 +1.7
KPL Plockton 133.88 354 *e*P PKPdf 01 24 17.2 -15
KPL AMb AMB 01 24 33.7
comp=Z,52nm,1.5s
KPL AMS AMS 01 28 59.0
comp=Z,12µm,18.3s,MS6.7
PSZ Piszkesteto 133.92 328⇑ *e*PKP PKPdf 01 24 30.6 -1.6
PSZ Piszkesteto 133.92 328⇑ *i*P PKPdf 01 24 30.9 -1.3
PSZ Piszkesteto 133.92 328 P PKPdf 01 24 31.8 -0.4
DPC Dobruska-Polom 133.96 333 *e*PKPpre 01 24 23.2
DPC *e*PKPdf PKPdf 01 24 32.1 -0.1
DPC *e*PP PP 01 27 00.3 -1.7
DPC *ex* x 01 45 13.4
DPC AMS AMS 02 22 00.0
comp=Z,52µm,23.8s
DPC Dobruska-Polom 133.96 333 *e*PKP PKPdf 01 24 23.2 -9.0
DPC *e* 01 24 32.1
DPC *e*PP PP 01 27 00.3 -1.7
DPC *e*SS SS 01 45 13.4 +27
DPC LR LR
comp=Z,52µm,23.8s,MS7.2
UPC Upice 133.98 333 *e*PKPdf PKPdf 01 24 32.7 +0.4
DIM Dimitrovgrad 134.00 319 P PKPdf 01 24 35.4 +2.8
VYHS Vyhne 134.07 330 *e*PKP PKPdf 01 24 23.6 -8.9
VYHS *e*PP PP 01 27 02.4 -0.5
VYHS *e* 02 04 24.1
VYHS Vyhne 134.07 330 *e*PKP PKPdf 01 24 23.6 -8.9
VYHS *e*PP PP 01 27 02.4 -0.5
VYHS LR LR
comp=Z,28µm,23.8s,MS6.9
ALN Alexandroupoli 134.21 317 *e*P PKPdf 01 24 32.2 -0.9
KOLL Kolacno 134.23 330 *e*PKIKP PKPdf 01 24 33.3 +0.5
KOLL *e* 01 27 04.2
KOLL Kolacno 134.23 330 *e*PKP PKPdf 01 24 33.3 +0.5
KOLL *e*PP PP 01 27 04.2 +0.3
KOLL *e*SKP 01 28 11.8
KDZ Kurdzhali 134.27 318 P PKPdf 01 24 34.4 +1.3
BZS Buzias 134.43 325⇓ *i*P PKPdf 01 24 32.1 -1.2
BZS Buzias 134.43 325⇓ P PKPdf 01 24 32.1 -1.1
BZS P 01 24 35.5
RDO Rodhopi 134.43 317 *e*P PKPdf 01 24 33.9 +0.5
PLD Plovdiv 134.50 319 *e*P PKPdf 01 24 33.3 -0.2
PLD Plovdiv 134.50 319 P PKPdf 01 24 34.4 +0.9
VRAC Vranov 134.58 332 PKP PKPdf 01 24 32.7 -0.8
comp=Z,14nm,1.1s,baz=45,slow=5.7,SNR=7.4
VRAC PP PP 01 27 07.0 +1.0
comp=Z,6.3nm,1.2s,baz=39,slow=6.5,SNR=3.5
VRAC Vranov 134.58 332⇑ *i*P PKPdf 01 24 32.6 -0.8
VRAC Vranov 134.58 332 P PKPdf 01 24 31.4 -2.0
BRG Berggiesshubel 134.59 335 P Pdif 01 21 34.0 0.0
BRG 01 24 34.0
BRG *e* 01 24 41.0
BRG 01 27 15.5
BRG SS SS 01 44 49.0 -5.3
BRG pmax pmax
comp=Z,22nm,2.2s
BRG pmax pmax
comp=Z,198nm,3.0s
BRG pmax pmax
comp=Z,100nm,2.3s
BRG pmax pmax
comp=N,104nm,2.0s
BRG MLR MLR
comp=Z,39µm,20.6s,MS7.1
BRG MLR MLR
comp=N,24µm,25.8s
BRG MLR MLR
comp=E,34µm,25.8s
BRG Berggiesshubel 134.59 335 *e*PP PP 01 27 08.7 +2.8
BRG Berggiesshubel 134.59 335 PDIF Pdif 01 21 34.0 +0.1
comp=E,36nm,2.2s
BRG Berggiesshubel 134.59 335 PKP PKPdf 01 24 34.0 +0.7
comp=E,331nm,3.0s
BRG *e* 01 24 41.0
comp=E,321nm,2.2s
BRG *e* 01 24 54.7
comp=E,321nm,2.0s
BRG *e* 01 25 06.0
BRG PP PP 01 27 15.5 +10
comp=E,166nm,2.3s
BRG SKP 01 28 12.5
comp=E,174nm,1.9s
BRG *e* 01 39 44.0
BRG SS SS 01 44 49.0 -5.3
BRG
comp=E,65µm,20.6s
BRG
comp=N,40µm,25.8s
BRG
comp=E,56µm,25.8s
BRG Berggiesshubel 134.59 335 Pdif Pdif 01 21 34.0 +0.1
BRG PKP PKPdf 01 24 34.0 +0.7
BRG *e* 01 24 41.0
BRG *e* 01 24 54.7
BRG *e* 01 25 06.0
BRG PP PP 01 27 15.5 +10
BRG SKP 01 28 12.5
BRG *e* 01 39 44.0
BRG SS SS 01 44 49.0 -5.3
BRG LR LR
comp=Z,39µm,20.6s,MS7.1
PVCC Panska Ves 134.59 334 *e*PKPpre 01 24 24.1
PVCC *e*PKPdf PKPdf 01 24 36.2 +2.8
PVCC *e*PP PP 01 27 07.1 +1.1
PVCC *e*SS SS 01 44 53.3 -1.0
PVCC AMS AMS 02 22 00.0
comp=Z,83µm,23.9s
PGB Panagyurishte 134.62 320 P PKPdf 01 24 33.7 0.0
CLL Collm 134.63 336 *e*PKIKP PKPdf 01 24 34.0 +0.5
CLL pmax pmax
comp=Z,122nm,1.8s
CLL MLR MLR
comp=Z,71µm,22.5s,MS7.3
CLL Collm 134.63 336 *e*Pdif Pdif 01 21 34.0 -0.2
CLL *e*Pdiff(2) 01 22 10.0
CLL LV 01 24 00.0
comp=Z,51µm,21.8s
CLL *e*PKPpre 01 24 27.0
CLL *e*PKPdf PKPdf 01 24 34.0 +0.5
CLL *ex* x 01 24 55.0
comp=Z,589nm,2.8s
CLL *e*PKPdf(2) 01 25 07.0
CLL *e*PP PP 01 27 10.0 +3.8
CLL *e*PP(2) 01 27 46.0
CLL *i* PKSdf 01 28 11.4
comp=Z,122nm,1.8s
CLL *e*SKPbc(2) 01 28 32.0
CLL *e*PKSdf(2) 01 28 44.0
CLL *ex* x 01 30 00.0
CLL *e*Sdif Sdif 01 35 32.0 +11
CLL *e*PS PS 01 37 35.0 +7.0
CLL *e*PPS 01 39 16.0
CLL *ex* x 01 40 25.0
CLL *e*SKKSdf SKKSdf 01 41 33.0 +2.8
CLL *e*SS SS 01 44 54.0 -0.7
CLL *ex* x 01 46 24.0
CLL *ex* x 01 47 30.0
CLL *e*SSS 01 50 03.0
CLL *e*SSSS 01 53 24.0
CLL Collm 134.63 336 *e*PKP PKPdf 01 24 34.0 +0.5
CLL *ep*PKP pPKPdf 01 25 13.0 +27
CLL *e*SKP 01 27 52.0
CLL *i* PKS 01 28 11.4
CLL *e* 01 35 38.0
CLL LR LR
comp=Z,71µm,22.5s,MS7.3
BUD Budapest 134.65 329⇑ *e*PKP PKPdf 01 24 32.3 -1.3
ARG Arkhangelos 134.71 310 *e*P PKPdf 01 24 31.1 -3.0
NRDL Niedersach Rie 134.75 339 *e*PP PP 01 27 07.6 +0.7
PRK Paraskevi 134.81 315 *e*P PKPdf 01 24 33.3 -0.9
PRK Paraskevi 134.81 315 *e*P PKPdf 01 24 29.2 -5.0
MODS Modra-Piesok 134.92 331 *e*PKIKP PKPdf 01 24 25.4 -8.7
MODS *e* 01 27 08.0
MODS Modra-Piesok 134.92 331 *e*PKP PKPdf 01 24 25.4 -8.7
MODS *e*PP PP 01 27 08.0 -0.2
MODS *e*SKP 01 28 13.2
EDI Edinburgh 134.94 351 *e*P PKPdf 01 24 15.0 -19
EDI AMb AMB 01 24 35.8
comp=Z,47nm,1.7s
EDI AMS AMS 01 29 04.6
comp=Z,11µm,17.3s,MS6.6
PRU Pruhonice 135.00 334 *e*PKIKP PKPdf 01 24 36.2 +2.0
PRU *e* 01 27 10.3
PRU MLR MLR
comp=Z,60µm,18.5s,MS7.3
PRU Pruhonice 135.00 334 *e*PKPdf PKPdf 01 24 36.2 +2.0
PRU *e*PP PP 01 27 10.3 +1.7
PRU *e*SS SS 01 45 10.4 +11
PRU AMS AMS 02 29 20.0
comp=Z,60µm,18.5s
SMG Samos 135.07 313 *e*P PKPdf 01 24 35.4 +0.7
TREC Trest 135.10 333 *e*PKPpre 01 24 24.4
TREC *e*PKPdf PKPdf 01 24 36.5 +2.1
TREC AMS AMS 02 24 00.0
comp=Z,58µm,21.8s
ZST Bratislava 135.12 331 *e*PKP PKPdf 01 24 35.5 +1.0
ZST *e*PP PP 01 27 10.7 +1.2
ZST Bratislava 135.12 331 *e*P PKPdf 01 24 35.5 +1.0
ZST *e*PP PP 01 27 10.7 +1.2
ZST LR LR
comp=Z,13µm,22.2s,MS6.6
PGBU Glenifferbraes 135.24 352 *e*P PKPdf 01 24 15.5 -19
PGBU AMb AMB 01 24 37.9
comp=Z,58nm,1.8s
PGBU AMS AMS 01 29 05.7
comp=Z,13µm,17.0s,MS6.7
CHOS Chios island 135.34 314 *e*P PKPdf 01 24 32.7 -2.5
MMB Musomiste 135.39 319 *e*P PKPdf 01 24 25.0 -10
EKA Eskdalemuir Ar 135.51 351 PKhKP 01 24 28.4
comp=Z,3.0nm,0.8s,baz=35,slow=2.6,SNR=4.7
EKA PKP PKPdf 01 24 34.8 -0.2
comp=Z,2.9nm,0.8s,baz=25,slow=3.1,SNR=4.7
EKA SKPbc SKPbc 01 28 07.6 +4.2
comp=Z,6.2nm,1.0s,baz=12,slow=4.3,SNR=3.9
ESK Eskdalemuir 135.53 351 *e*P PKPdf 01 24 18.8 -16
ESK AMb AMB 01 24 39.0
comp=Z,68nm,1.7s
ESK AMS AMS 01 29 06.9
comp=Z,12µm,16.9s,MS6.7
KKB Krupnik 135.66 320 P PKPdf 01 24 37.0 +1.3
PKSM Moragy 135.68 327⇑ *i*P PKPdf 01 24 33.9 -1.7
PKSM Moragy 135.68 327 P PKPdf 01 24 36.7 +1.1
KARP Karpathos 135.68 310 *e*P PKPdf 01 24 36.9 +1.0
NKC Novy Kostel 135.69 336 *e*PKHKP 01 24 26.0
NKC *e* 01 24 35.5
NKC *e* 01 27 14.7
NKC MLR MLR
comp=Z,62µm,23.5s,MS7.3
NKC Novy Kostel 135.69 336 *e*PKPpre 01 24 26.0
NKC *e*PKPdf PKPdf 01 24 35.5 0.0
NKC *e*PP PP 01 27 14.7 +1.8
NKC *e*SS SS 01 45 17.9 +10
NKC AMS AMS 02 23 40.0
comp=Z,62µm,23.5s
NKC Novy Kostel 135.69 336 *e*PKP 01 24 26.0
NKC *e* 01 24 35.5
NKC *e*PP PP 01 27 14.7 +1.8
NKC *e*SS SS 01 45 17.9 +10
BBGH Gun Hill 135.69 83 PFAKE 01 24 50.0 +14
BBGH LR LR
comp=Z,87µm,20.0s,MS7.5
MOX Moxa 135.69 337 *e*PKP PKPdf 01 24 34.7 -0.8
comp=Z,121nm,2.0s
MOX *e* 01 27 26.9
MOX
comp=Z,42µm,20.0s
SOH Sokhos 136.03 318 *e*P PKPdf 01 24 33.6 -2.8
KHC Kasperske Hory 136.06 334 *e*PKHKP 01 24 26.8
KHC *e* 01 24 34.3
KHC *e* 01 27 14.4
KHC *e*SS SS 01 45 18.2 +6.2
KHC MLR MLR
comp=Z,84µm,22.5s,MS7.4
KHC Kasperske Hory 136.06 334 *e*PKPpre 01 24 26.8
KHC *e*PKPdf PKPdf 01 24 34.3 -1.9
KHC *e*PP PP 01 27 14.4 -0.9
KHC *ex* x 01 27 26.0
KHC *e*SS SS 01 45 18.2 +6.2
KHC AMS AMS 02 23 00.0
comp=Z,84µm,22.5s
KNT Kendrikon 136.15 319 *e*P PKPdf 01 24 35.7 -0.9
GAL1 Galloway 136.19 352 *e*P PKPdf 01 24 21.4 -15
GAL1 AMb AMB 01 24 26.9
comp=Z,53nm,1.4s
GAL1 AMS AMS 01 29 09.4
comp=Z,11µm,16.7s,MS6.6
PLG Polygyros 136.19 318 *e*P PKPdf 01 24 36.0 -0.7
PLG Polygyros 136.19 318 *e*P PKPdf 01 24 38.6 +1.9
GERES GERESS Array B 136.22 333 PKhKP 01 24 26.6
comp=Z,2.0nm,0.8s,baz=47,slow=2.5,SNR=9.5
GERES PKP PKPdf 01 24 36.8 +0.3
comp=Z,14nm,0.9s,baz=43,slow=2.5,SNR=13
GERES SKP 01 28 12.5
comp=Z,5.5nm,1.0s,baz=64,slow=3.1,SNR=3.5
GERES GERESS Array B 136.22 333 PKHKP 01 24 26.6
GERES 01 24 36.8
GERES pmax pmax
comp=Z,2.0nm,0.8s
GERES pmax pmax
comp=Z,14nm,0.9s
GERES pmax pmax
comp=N,6.0nm,1.0s
TSUM Tsumeb 136.23 226 *e*PKPdf PKPdf 01 24 32.8 -4.7
TSUM LR LR
comp=Z,82µm,20.0s,MS7.5
PAIG Paliouri 136.26 317 *e*P PKPdf 01 24 35.8 -1.1
DIVS Divibare 136.26 324 *e*P PKPdf 01 24 34.7 -2.0
VAY Valandovo 136.28 319 *e*P PKPdf 01 24 34.2 -2.6
VAY Valandovo 136.28 319 *i* PKP PKPdf 01 24 37.3 +0.4
APE Apeiranthos 136.28 312 *e*P PKPdf 01 24 34.0 -3.1
APE Apeiranthos 136.28 312 *e*P PKPdf 01 24 34.8 -2.2
APE Apeiranthos 136.28 312⇑ *i*P PKPdf 01 24 34.3 -2.7
APE Apeiranthos 136.28 312⇑P PKPdf 01 24 34.3 -2.7
WTSB Winterswijk 136.29 341 *e*Pdif Pdif 01 21 52.9 +11
WTSB Winterswijk 136.29 341 PKP PKPdf 01 24 34.0 -2.5
HORT Hortiatis 136.31 318 *e*P PKPdf 01 24 34.9 -2.1
STIP Stip 136.32 320 *e*P PKPdf 01 24 36.3 -0.6
WET Wettzell 136.35 334 *e*PP PP 01 27 22.6 +5.5
THE Thessaloniki 136.38 318 *e*P PKPdf 01 24 35.7 -1.3
ARSA Arzberg 136.55 331 P PKPdf 01 24 39.6 +2.4
ZKR Zakros 136.56 309 *e*P PKPdf 01 24 36.7 -0.9
HPK Haverah Park 136.57 349 AMb AMB 01 24 19.9
comp=Z,32nm,1.3s
HPK Haverah Park 136.57 349 AMb AMB 01 24 19.9
comp=Z,32nm,1.3s
HPK *e*P 01 24 21.4
GRG Griva 136.58 319 *e*P PKPdf 01 24 35.2 -2.2
BUG Bochum-Univer 136.59 341 *e*PP PP 01 27 19.9 +1.5
GRA1 Grafenberg Arr 136.60 336 *e*PKPdf PKPdf 01 24 29.5 -7.7
GRA1 *e*PP PP 01 27 18.7 +0.1
GRA1 *e*Sdif Sdif 01 35 45.0 +7.6
GRA1 *e*SP SP 01 37 32.2 -6.6
GRA1 *e*SS SS 01 45 26.4 +8.0
GRA1 LR LR
comp=Z,35µm,19.4s,MS7.1
GRF Grafenberg Arr 136.60 336 *e*PKIKP PKPdf 01 24 29.5 -7.7
GRF *e* 01 27 18.7
GRF *e*SP SP 01 37 32.2 -6.6
GRF MLR MLR
comp=Z,35µm,19.4s,MS7.1
GRF Grafenberg Arr 136.60 336 *e*PKIKP PKPdf 01 24 29.5 -7.7
GRF *e* 01 27 18.7
GRF *e*SP SP 01 37 32.2 -6.6
GRF MLR MLR
comp=Z,35µm,19.4s,MS7.1
GRF Grafenberg Arr 136.60 336 *e*PKPdf PKPdf 01 24 29.5 -7.7
GRF *e*PP PP 01 27 18.7 +0.1
GRF *e*Sdiff Sdif 01 35 45.0 +7.6
GRF *e*SP SP 01 37 32.2 -6.6
GRF *e*SS SS 01 45 26.4 +8.0
GRF *e*L 02 29 17.4
comp=Z,35µm,19.4s
GRFO Grafenberg 136.60 336 PKIKP PKPdf 01 24 40.9 +3.7
SANT Santorini 136.62 311 *e*P PKPdf 01 24 34.2 -3.5
THR1 Thera Island 136.62 311 *e*P PKPdf 01 24 34.8 -2.8
SKO Skopje 136.63 321 *e*P PKPdf 01 24 37.9 +0.4
SKO Skopje 136.63 321 *i* PKP PKPdf 01 24 38.2 +0.7
MOA Molln 136.71 332 P PKPdf 01 24 40.2 +2.8
NEO Neokhori 136.87 316 *e*P PKPdf 01 24 39.2 +1.2
BDFB Brasilia 136.94 128 PKP PKPdf 01 24 37.0 -1.8
comp=Z,1.6nm,0.7s,baz=214,slow=3.6,SNR=2.4
BDFB SKP 01 28 14.2
comp=Z,25nm,1.2s,baz=318,slow=1.3,SNR=5.3
BDFB Brasilia 136.94 128 PKIKP PKPdf 01 24 37.0 -1.8
BDFB pmax pmax
comp=Z,2.0nm,0.7s
BDFB pmax pmax
comp=N,25nm,1.2s
NPS Neapolis 136.96 310 *e*P PKPdf 01 24 32.0 -6.3
LIT Litokhoron 136.96 318 *e*P PKPdf 01 24 35.7 -2.5
KRUS Krusevo 137.09 320 *i* PKP PKPdf 01 24 36.5 -1.9
LAST Lasithi 137.10 310 *e*P PKPdf 01 24 37.6 -0.9
ATH Athens Observa 137.17 314 *e*P PKPdf 01 24 22.7 -16
PERS Pernice 137.18 330 *e* PKPdf 01 24 36.3 -2.0
PERS *e* 01 25 03.7
PERS *e*PP PP 01 27 45.8 +23
TNS Taunus Mts 137.22 339 *e*PP PP 01 27 24.4 +2.0
BIA Bitola 137.23 320 *e*P PKPdf 01 24 37.9 -0.8
BIA Bitola 137.23 320 *i* PKP PKPdf 01 24 37.8 -0.8
FNA Florina 137.32 319 *e*P PKPdf 01 24 36.6 -2.2
KZN Kozani 137.33 319 *e*P PKPdf 01 24 35.8 -3.0
LKR Lokris 137.35 316 *e*P PKPdf 01 24 38.6 -0.3
LKR Lokris 137.35 316 *e*P PKPdf 01 24 39.0 +0.1
DMUB Kingscourt 137.40 354 *e*P PKPdf 01 24 43.0 +4.5
IDI Anoyia 137.49 310 PKP PKPdf 01 24 38.7 -0.6
comp=N,29nm,1.1s,baz=85,slow=3.6,SNR=12
STNC Stoke 137.50 349 *e*P PKPdf 01 24 21.7 -17
STNC AMb AMB 01 24 29.8
comp=Z,114nm,1.7s
STNC AMS AMS 01 28 53.3
comp=Z,5µm,17.1s,MS6.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
OHR	**Ohrid**	**137.51**	**320**	*e*P	PKPdf	01 24 38.0	-1.2
OHR	**Ohrid**	**137.51**	**320**	*i* PKP	PKPdf	01 24 40.8	+1.6
THL	**Klokotos Trika**	**137.55**	**317**	*e*P	PKPdf	01 24 37.1	-2.2
THL	**Klokotos Trika**	**137.55**	**317**	*e*P	PKPdf	01 24 41.2	+1.9
HGN	**Heimansgroeve**	**137.61**	**341**	*e*Pdif	Pdif	01 22 00.3	+13
HGN	**Heimansgroeve**	**137.61**	**341**	*e*PKP	PKPdf	01 24 36.5	-2.5
HGN	**Heimansgroeve**	**137.61**	**341**	*e*PP	PP	01 27 25.9	+1.2
AGG	**Agios Georgios**	**137.62**	**317**	*e*P	PKPdf	01 24 36.8	-2.6
SIVA	**Sivas**	**137.66**	**310**	*e*P	PKPdf	01 24 39.8	+0.2
CWF	**Charnwood Fore**	**137.67**	**348**	*e*P	PKPdf	01 24 24.7	-14
CWF				AMb	AMB	01 24 27.7	
	comp=Z,19nm,1.6s						
CWF				AMS	AMS	01 28 45.9	
	comp=Z,5µm,17.6s,MS6.3						
LTK	**Loutraki**	**137.67**	**315**	*e*P	PKPdf	01 24 37.9	-1.7
WLF1	**Llynfaes**	**137.68**	**351**	*e*P	PKPdf	01 24 23.8	-15
WLF1				AMb	AMB	01 24 30.1	
	comp=Z,64nm,1.6s						
MEM	**Membach**	**137.72**	**341**	PKP	PKPdf	01 24 35.5	-3.7
DID	**Didima**	**137.72**	**314**	*e*P	PKPdf	01 24 35.4	-4.2
FUR	**Furstenfeldbru**	**137.78**	**335**	*e*PP	PP	01 27 30.1	+4.1
LJU	**Ljubljana**	**137.89**	**330**	*e*PKHKP		01 24 30.1	
LJU				*e*		01 24 39.0	
LJU	**Ljubljana**	**137.89**	**330**	*e*PKPdf	PKPdf	01 24 30.1	-10
LJU				*e*		01 24 39.0	
LJU				*e*		01 25 04.8	
LJU				*e*PP	PP	01 27 50.6	+24
LJU				*e*		01 40 22.1	
HDH	**Heidenheim-Cha**	**137.89**	**336**	P	PKPdf	01 24 42.1	+2.5
BOJS	**Bojanci**	**137.91**	**329**	*e*PKPdf	PKPdf	01 24 28.9	-11
BOJS				*e*		01 24 38.9	
BOJS				*e*		01 25 05.9	
BOJS				*e*PP	PP	01 27 48.4	+21
BOJS				*e*		01 40 33.4	
BOJS				*e*		01 45 48.3	
BOJS				*e*		02 03 20.0	
BOJS	**Bojanci**	**137.91**	**329**	*e*PKPdf	PKPdf	01 24 28.9	-11
BOJS				*e*		01 24 38.9	
BOJS				*e*		01 25 05.9	
BOJS				*e*PP	PP	01 27 48.4	+21
BOJS				*e*		01 40 33.4	
BOJS				*e*		01 45 48.3	
DLF	**Lyons Farm**	**137.95**	**353**	*e*P	PKPdf	01 24 41.0	+1.4
MEV	**Metsovon**	**137.96**	**318**	*e*P	PKPdf	01 24 42.0	+2.0
VAM	**Vamos**	**137.96**	**311**	*e*P	PKPdf	01 24 39.5	-0.7
TIR	**Tirane**	**137.96**	**321**	*e*P	PKPdf	01 24 39.0	-0.9
DCN	**Croghan**	**137.99**	**354**	*e*P	PKPdf	01 24 41.0	+1.4
EVR	**Evrytania**	**138.02**	**317**	*e*P	PKPdf	01 24 41.7	+1.5
UCC	**Uccle**	**138.06**	**342**	PKP	PKPdf	01 24 37.2	-2.6
BCLA	**Clavier**	**138.10**	**341**	PKP	PKPdf	01 24 39.3	-0.6
STU	**Stuttgart**	**138.14**	**337**	*e*PP	PP	01 27 30.2	+2.1
RUP	**Ruppelstein**	**138.14**	**339**	PKIKP	PKPdf	01 24 33.5	-6.5
RUP						01 24 41.5	
KARN	**Karanos**	**138.17**	**311**	*e*P	PKPdf	01 24 39.8	-0.7
PTCC	**Patocco-Chiusa**	**138.19**	**331**	P	PKPdf	01 24 42.6	+2.4
VOY	**Vojsko**	**138.21**	**331**	*e*PKPdf	PKPdf	01 24 32.3	-8.0
VOY				*e*		01 24 36.0	
VOY				*e*		01 24 40.9	
VOY				*e*		01 24 52.7	
VOY				*e*		01 25 16.7	
JAVS	**Javornik**	**138.22**	**330**	*e*PKPdf	PKPdf	01 24 28.6	-12
JAVS				*e*		01 24 39.7	
JAVS				*e*		01 25 05.5	
JAVS				*e*PP	PP	01 27 51.7	+23
JAN	**Janina**	**138.27**	**318**	*e*P	PKPdf	01 24 33.9	-6.7
VLI	**Veliai**	**138.30**	**313**	*e*P	PKPdf	01 24 42.7	+1.9
WTTA	**Wattenberg**	**138.32**	**334**	⇑*i*P	PKPdf	01 24 30.6	-10
	comp=Z,109nm,1.2s						
WTTA	**Wattenberg**	**138.32**	**334**	⇑*i*PKPdf	PKPdf	01 24 32.4	-8.1
	comp=Z,109nm,1.2s						
STON	**Ston**	**138.33**	**324**	P	PKPdf	01 24 28.8	-12
GMNA	**Gemona**	**138.34**	**331**	P	PKPdf	01 24 41.3	+0.8
VLX	**Vlachokerasia**	**138.39**	**314**	*e*P	PKPdf	01 24 39.7	-1.2
SEST	**Monte Rota**	**138.46**	**333**	PKP	PKPdf	01 24 37.8	-2.9
WLF	**Walferdange**	**138.48**	**340**	PKP	PKPdf	01 24 34.5	-6.1
MOTA	**Moosalm**	**138.49**	**334**	⇓*i*P	PKPdf	01 24 30.9	-10
	comp=Z,66nm,1.1s						
MOTA	**Moosalm**	**138.49**	**334**	⇓*i*PKPdf	PKPdf	01 24 33.6	-7.1
	comp=Z,66nm,1.1s						
DOU	**Dourbes**	**138.61**	**342**	PKP	PKPdf	01 24 36.5	-4.3
TFO1	**Folkestone**	**138.65**	**345**	*e*P	PKPdf	01 24 26.9	-14
TFO1				AMb	AMB	01 24 41.3	
	comp=Z,192nm,1.7s						
TFO1				AMS	AMS	01 28 51.2	
	comp=Z,7µm,18.5s,MS6.4						
RLS	**Riolos of Patr**	**138.69**	**316**	*e*P	PKPdf	01 24 43.3	+1.9
MCH1	**Michaelchurch**	**138.69**	**350**	*e*P	PKPdf	01 24 24.1	-17
MCH1				AMb	AMB	01 24 27.5	
	comp=Z,56nm,1.7s						
MCH1				AMS	AMS	01 29 01.3	
	comp=Z,7µm,20.8s,MS6.4						
GUT	**Gutenstein**	**138.74**	**336**	P	PKPdf	01 24 43.6	+2.4
ITM	**Ithomi**	**138.80**	**314**	*e*P	PKPdf	01 24 31.1	-11
BFO	**Black Forest**	**138.83**	**337**	*e*PP	PP	01 27 33.5	+1.1
SPAK	**Spaichingen-Ko**	**138.84**	**337**	PKP	PKPdf	01 24 34.3	-7.1
LKD	**Levkas**	**138.90**	**317**	*e*P	PKPdf	01 24 39.7	-2.1
FETA	**Feichten**	**138.91**	**334**	⇑*i*P	PKPdf	01 24 31.0	-11
	comp=Z,81nm,1.1s						
FETA	**Feichten**	**138.91**	**334**	⇓*i*PKPdf	PKPdf	01 24 33.7	-7.8
	comp=Z,81nm,1.1s						
KEK	**Kerkira**	**138.92**	**319**	*e*P	PKPdf	01 24 41.6	-0.2
SWN1	**Swindon**	**138.93**	**348**	*e*P	PKPdf	01 24 25.4	-16
SWN1				AMb	AMB	01 24 38.7	
	comp=Z,132nm,2.2s						
SWN1				AMS	AMS	01 29 02.1	
	comp=Z,8µm,20.4s,MS6.4						
WOL	**Wolverton**	**139.00**	**348**	*e*P	PKPdf	01 24 27.0	-15
WOL				AMb	AMB	01 24 27.9	
	comp=Z,118nm,1.8s						
WOL				AMS	AMS	01 29 02.2	
	comp=Z,6µm,21.6s,MS6.3						
DAVA	**Damuels**	**139.06**	**335**	⇓*i*P	PKPdf	01 24 35.6	-6.2
	comp=Z,62nm,1.1s						
DAVA	**Damuels**	**139.06**	**335**	⇑*i*PKPdf	PKPdf	01 24 34.1	-7.7
	comp=Z,62nm,1.1s						
APPI	**Appiano**	**139.11**	**333**	PKP	PKPdf	01 24 41.3	-0.6
CDF	**Champ du Feu**	**139.15**	**338**	*e*PKP1	PKPdf	01 24 35.8	-6.1
	comp=Z,268nm,1.7s						
VLS	**Valsamata**	**139.22**	**317**	*e*P	PKPdf	01 24 40.9	-1.5
VLS	**Valsamata**	**139.22**	**317**	*e*P	PKPdf	01 24 39.5	-2.9
CTI	**Castel Tesino**	**139.25**	**332**	PKIKP	PKPdf	01 24 38.1	-4.1
FELD	**Feldberg im Sc**	**139.33**	**337**	PKP	PKPdf	01 24 36.7	-5.6
ECH	**Echery**	**139.36**	**338**	PKP	PKPdf	01 24 35.8	-6.5
DAVOS	**Davos**	**139.44**	**335**	PKHKP		01 24 34.6	
DAVOX	**Davos/Dischmat**	**139.46**	**334**	PKhKP		01 24 34.6	
	comp=Z,7.4nm,0.6s,baz=249,slow=5.7,SNR=9.3						
BRMO	**Bormio**	**139.48**	**334**	P	PKPdf	01 24 41.5	-1.1
MOF	**Molkenrain**	**139.67**	**338**	PKP	PKPdf	01 24 36.1	-6.8
THEF	**They Montfort**	**139.77**	**339**	PKP	PKPdf	01 24 35.8	-7.3
HINF	**Hinteralfeld**	**139.81**	**338**	*e*PKP1	PKPdf	01 24 36.9	-6.2
HAU	**Haudompre**	**139.83**	**339**	*e*PKP1	PKPdf	01 24 37.4	-5.8
HAU				*e*MLR	MLR		
	comp=Z,58µm,21.0s,MS7.0						
HAU	**Haudompre**	**139.83**	**339**	*e*PKP	PKPdf	01 24 37.4	-5.8
HAU				LR	LR		
	comp=Z,58µm,21.0s,MS7.3						
MEZF	**Maizieres J'vi**	**139.85**	**340**	*e*PKP1	PKPdf	01 24 39.6	-3.6
	comp=Z,457nm,1.5s						
HTL	**Hartland**	**139.91**	**350**	*e*P	PKPdf	01 24 25.9	-17
HTL				AMb	AMB	01 24 31.1	
	comp=Z,62nm,1.5s						
HTL				AMS	AMS	01 29 17.6	
	comp=Z,10µm,19.1s,MS6.6						
DYA	**Yadsworthy**	**140.36**	**350**	*e*P	PKPdf	01 24 28.4	-16
DYA				AMb	AMB	01 24 37.8	
	comp=Z,52nm,1.6s						
DYA				AMS	AMS	01 29 20.0	
	comp=Z,9µm,18.2s,MS6.5						
CING	**Cingoli**	**140.45**	**328**	P	PKPdf	01 24 47.0	+2.5
SNTG	**Esanatoglia**	**140.67**	**328**	P	PKPdf	01 24 40.7	-4.2
SFI	**Santa Sofia**	**140.75**	**330**	PKIKP	PKPdf	01 24 41.7	-3.3
VMG	**Vicchio**	**140.85**	**330**	P	PKPdf	01 24 41.3	-3.9
NRCA	**Norcia**	**140.88**	**328**	P	PKPdf	01 24 41.2	-4.0
CDCA	**Citt' di Caste**	**140.88**	**329**	P	PKPdf	01 24 41.7	-3.5
FNVD	**Fontana Vidola**	**140.91**	**331**	P	PKPdf	01 24 42.7	-2.6
ASS	**Assisi**	**140.95**	**328**	PKIKP	PKPdf	01 24 42.3	-3.1
ERBM	**Eremo**	**141.05**	**332**	PKP	PKPdf	01 24 40.5	-5.0
AQU	**L'Aquila**	**141.06**	**327**	PKIKP	PKPdf	01 24 47.2	+1.6
CABF	**La Chapelle**	**141.10**	**338**	*e*PKP1	PKPdf	01 24 40.8	-4.7
	comp=Z,406nm,1.5s						
CSSN	**Cassano Irpino**	**141.15**	**324**	P	PKPdf	01 24 43.0	-2.8
SGO	**Sicignano**	**141.18**	**323**	PKIKP	PKPdf	01 24 42.3	-3.6
JSA	**Saint Aubin**	**141.21**	**347**	*e*P	PKPdf	01 24 29.4	-16
BOB	**Bobbio (Coli)**	**141.22**	**333**	PKIKP	PKPdf	01 24 42.8	-3.0
FLN	**La Foliniere**	**141.22**	**346**	*e*PKP1	PKPdf	01 24 43.0	-2.7
	comp=Z,282nm,1.4s						
FLN				*e*MLR	MLR		
	comp=Z,69µm,22.0s,MS7.1						
FLN	**La Foliniere**	**141.22**	**346**	*e*PKP	PKPdf	01 24 43.0	-2.7
FLN				LR	LR		
	comp=Z,69µm,22.0s,MS7.4						
BDI	**Bagni Di Lucca**	**141.23**	**331**	PKIKP	PKPdf	01 24 44.4	-1.4
SDI	**San Donato**	**141.28**	**326**	PKIKP	PKPdf	01 24 42.8	-3.2
PTQR	**Pietraquaria**	**141.29**	**327**	P	PKPdf	01 24 42.0	-4.0
LDF	**La Druitiere**	**141.29**	**345**	*e*PKP1	PKPdf	01 24 43.8	-2.0
LOR	**Lormes**	**141.32**	**340**	*e*PKP1	PKPdf	01 24 40.9	-5.0
	comp=Z,181nm,1.3s						
LOR				*e*MLR	MLR		
	comp=Z,45µm,21.5s,MS6.9						
LOR	**Lormes**	**141.32**	**340**	*e*PKP	PKPdf	01 24 40.9	-5.0
LOR				LR	LR		
	comp=Z,45µm,21.5s,MS7.2						
CSNT	**Castellina Chi**	**141.34**	**330**	P	PKPdf	01 24 48.0	+1.9
GRI	**Girifalco**	**141.58**	**320**	PKIKP	PKPdf	01 24 42.4	-4.2
GRI						01 24 48.3	
SSF	**Saint Saulge**	**141.62**	**340**	*e*PKP1	PKPdf	01 24 41.9	-4.5
	comp=Z,198nm,1.3s						
GRR	**Gorron**	**141.66**	**346**	*e*PKP1	PKPdf	01 24 43.8	-2.7
LPL	**La Plagne**	**141.77**	**336**	*e*PKP1	PKPdf	01 24 42.2	-4.6
	comp=Z,252nm,1.5s						
LPG	**La Plagne**	**141.78**	**336**	*e*PKP1	PKPdf	01 24 42.4	-4.4
	comp=Z,86nm,0.9s						
RDP	**Rocca di Papa**	**141.84**	**327**	PKIKP	PKPdf	01 24 42.9	-4.1
SMF	**Signal de Mont**	**141.87**	**340**	*e*PKP1	PKPdf	01 24 42.3	-4.6
	comp=Z,327nm,1.7s						
AVF	**Avril sur Loir**	**141.91**	**340**	*e*PKP1	PKPdf	01 24 41.8	-5.2
QLNO	**Quiliano**	**142.06**	**333**	P	PKPdf	01 24 51.0	+3.7
SGMF	**Saint Gilles**	**142.18**	**347**	*e*PKP1	PKPdf	01 24 44.6	-2.8
	comp=Z,227nm,1.2s						
CEL	**Celeste**	**142.25**	**320**	P	PKPdf	01 24 45.9	-1.9
ROSF	**Rostrenen**	**142.25**	**348**	*e*PKP1	PKPdf	01 24 44.8	-2.7
OG22	**Abries**	**142.25**	**335**	PKP	PKPdf	01 24 43.5	-4.1
SOI	**Samo**	**142.25**	**320**	PKIKP	PKPdf	01 24 43.2	-4.7
SOI						01 24 49.0	
GDM	**Grand'Maison**	**142.27**	**336**	PKP	PKPdf	01 24 44.2	-3.5
BGF	**Bois d'Agland**	**142.28**	**341**	*e*PKP1	PKPdf	01 24 45.4	-2.2
GRN	**Grenoble**	**142.38**	**337**	PKP	PKPdf	01 24 44.5	-3.4
DOI	**San Damiano**	**142.38**	**335**	PKIKP	PKPdf	01 24 43.7	-4.2
MBDF	**Montbardon**	**142.40**	**335**	*e*PKP1	PKPdf	01 24 41.9	-6.0
PLDF	**La Plantade**	**142.54**	**339**	PKP	PKPdf	01 24 45.3	-2.8
STV	**Sant Anna di V**	**142.56**	**334**	PKIKP	PKPdf	01 24 44.7	-3.5
SURF	**Saint Ours**	**142.59**	**335**	PKP	PKPdf	01 24 45.5	-2.7
ORIF	**Oris-en-Rattie**	**142.60**	**336**	*e*PKP1	PKPdf	01 24 43.1	-5.2
	comp=Z,243nm,0.9s						
ORIF				*e*MLR	MLR		
	comp=Z,50µm,23.0s,MS6.9						
QUIF	**Quistinic**	**142.63**	**348**	*e*PKP1	PKPdf	01 24 45.1	-3.1
AGO	**Saint Agoulin**	**142.63**	**340**	PKP	PKPdf	01 24 45.3	-3.0
SAOF	**Saorge**	**142.67**	**334**	PKP	PKPdf	01 24 43.1	-5.3
AUTN	**L'Aution**	**142.72**	**334**	PKP	PKPdf	01 24 43.4	-5.1
TCF	**Toulx Ste Croi**	**142.72**	**341**	*e*PKP1	PKPdf	01 24 44.2	-4.2
	comp=Z,381nm,1.6s						
TOUF	**Mont Tournerai**	**142.78**	**334**	PKP	PKPdf	01 24 43.4	-5.2
SSB	**Saint Sauveur**	**142.81**	**338**	PKP	PKPdf	01 24 45.6	-3.0
SBF	**Sospel**	**142.82**	**334**	*e*PKP1	PKPdf	01 24 43.1	-5.6
	comp=Z,264nm,0.9s						
LUCF	**Luceram**	**142.84**	**334**	PKP	PKPdf	01 24 42.6	-6.1
COLF	**Collangettes**	**142.90**	**339**	PKP	PKPdf	01 24 46.0	-2.8
MVIF	**Mont Vial**	**142.92**	**334**	PKP	PKPdf	01 24 43.1	-5.8
PYM	**Petit Puy Mans**	**142.94**	**340**	PKP	PKPdf	01 24 46.5	-2.3
REVF	**Revere**	**142.95**	**334**	PKP	PKPdf	01 24 43.8	-5.1
OCF	**Saint Nazaire**	**143.11**	**337**	PKP	PKPdf	01 24 47.1	-2.1
OG26	**St.-Nazaire-De**	**143.11**	**337**	PKP	PKPdf	01 24 47.1	-2.1
VERF	**Verneugheol**	**143.11**	**340**	PKP	PKPdf	01 24 45.5	-3.6
VIVF	**Saint-Julien-l**	**143.12**	**337**	*e*PKP1	PKPdf	01 24 45.5	-3.7
MFF	**Saint Martin d**	**143.13**	**344**	*e*PKP1	PKPdf	01 24 44.6	-4.5
PGF	**Pioggiola**	**143.14**	**331**	*e*PKP1	PKPdf	01 24 44.1	-5.2
MNO	**Monte Soro**	**143.19**	**320**	PKIKP	PKPdf	01 24 47.5	-2.0
CORF	**Corte**	**143.26**	**331**	PKP	PKPdf	01 24 46.6	-2.9
AGST	**Augusta-Monte**	**143.27**	**319**	PKP	PKPdf	01 24 47.1	-2.6
LBL	**Lubilhac**	**143.31**	**339**	PKP	PKPdf	01 24 48.3	-1.2
FRF	**La Foret Royal**	**143.40**	**334**	*e*PKP1	PKPdf	01 24 45.0	-4.7
	comp=Z,296nm,1.1s						
FRNF	**Fournols**	**143.41**	**340**	PKP	PKPdf	01 24 47.7	-2.0
SSY	**Sortino**	**143.43**	**319**	PKP	PKPdf	01 24 44.9	-5.1
SSY				P		01 24 48.7	
SMRF	**Simiane la Rot**	**143.50**	**336**	*e*PKP1	PKPdf	01 24 46.0	-3.9
HAVL	**Avola**	**143.51**	**319**	P	PKPdf	01 24 48.9	-1.2
USI	**Ustica**	**143.63**	**323**	PKP	PKPdf	01 24 45.2	-5.1
USI				P		01 24 48.8	
HVZN	**Vizzini**	**143.64**	**319**	P	PKPdf	01 24 47.0	-3.4
LMR	**La Mourre**	**143.65**	**334**	*e*PKP1	PKPdf	01 24 45.8	-4.4
VAE	**Valguarnera**	**143.65**	**320**	PKP	PKPdf	01 24 50.3	0.0
	comp=Z,69nm,0.9s,baz=299,slow=5.4,SNR=7.4						
OSPF	**L'Ospedale**	**143.72**	**330**	PKP	PKPdf	01 24 46.9	-3.4
HMDC	**Modica**	**143.73**	**319**	P	PKPdf	01 24 48.2	-2.3
RJF	**Les Rejaudoux**	**143.82**	**341**	*e*PKP1	PKPdf	01 24 46.7	-3.7
RJF				*e*MLR	MLR		
	comp=Z,52µm,20.5s,MS7.0						
RJF	**Les Rejaudoux**	**143.82**	**341**	*e*PKP	PKPdf	01 24 46.7	-3.7
RJF				LR	LR		
	comp=Z,52µm,20.5s,MS7.3						
RAFF	**Raffo Rosso**	**143.84**	**320**	P	PKPdf	01 24 50.2	-0.5
CAF	**Calviac**	**143.98**	**340**	*e*PKP1	PKPdf	01 24 47.6	-3.1
	comp=Z,487nm,1.4s						
MCT	**Mte Cammarata**	**144.04**	**321**	P	PKPdf	01 24 53.3	+2.3
LASF	**Ste Croix**	**144.09**	**338**	*e*PKP1	PKPdf	01 24 48.0	-2.9
	comp=Z,1µm,1.3s						
FAVR	**Favara**	**144.25**	**320**	P	PKPdf	01 24 53.4	+2.0
LFF	**La Frestale**	**144.39**	**342**	*e*PKP1	PKPdf	01 24 48.5	-2.9
	comp=Z,1µm,1.3s						
ERC	**Erice**	**144.42**	**322**	P	PKPdf	01 24 52.9	+1.2
DGI	**Dorgali Grotta**	**144.51**	**328**	PKP	PKPdf	01 24 48.8	-3.0
DGI				P		01 24 53.4	
MTLF	**Montolieu**	**145.32**	**339**	*e*PKP1	PKPbc	01 24 51.2	-1.7
PTS	**Pantelleria**	**145.57**	**321**	PKIKP	PKPbc	01 24 56.4	+2.5
SJAF	**Saint Jean de**	**145.82**	**337**	PKP	PKPdf	01 24 52.6	-1.3
EJON	**La Jonquera**	**145.84**	**337**	PKP	PKPdf	01 24 55.6	+1.6
FILF	**Fillols**	**145.87**	**338**	PKP	PKPdf	01 24 54.2	+0.2
CARF	**Carcanieres**	**145.90**	**338**	PKP	PKPdf	01 24 54.3	+0.2
MLS	**Moulis**	**146.05**	**340**	PKP	PKPdf	01 24 54.5	+0.2
SALF	**Salau**	**146.19**	**339**	PKP	PKPdf	01 24 54.9	+0.3
VALF	**Valcebollere**	**146.21**	**338**	PKP	PKPdf	01 24 54.9	+0.3
EPF	**Esparros**	**146.23**	**341**	*e*PKP1	PKPbc	01 24 54.2	-1.5
MELF	**Melles**	**146.23**	**340**	PKP	PKPdf	01 24 54.9	+0.3
LABF	**Labassere**	**146.30**	**341**	PKP	PKPdf	01 24 54.2	-0.6
REYF	**Montagne du Re**	**146.43**	**342**	PKP	PKPdf	01 24 55.5	+0.5
VIEF	**Viey**	**146.47**	**341**	PKP	PKPdf	01 24 56.2	+1.2
OSSF	**Osses**	**146.52**	**343**	PKP	PKPdf	01 24 56.1	+1.0
EBIE	**Bielsa**	**146.60**	**341**	PKP	PKPdf	01 24 56.3	+1.0
EALK	**Alkurruntz**	**146.62**	**343**	PKP	PKPbc	01 24 57.6	+0.7
ETSF	**Etsaut**	**146.63**	**342**	*e*PKP1	PKPbc	01 24 56.0	-0.9
LARF	**Larrau**	**146.64**	**342**	PKP	PKPdf	01 24 55.9	+0.6
SJPF	**Ste Jean**	**146.64**	**343**	*e*PKP1	PKPbc	01 24 55.6	-1.3
ELIZ	**Elizondo**	**146.68**	**343**	PKP2	PKPab	01 24 58.9	+0.8
EMIR	**Miracle**	**146.81**	**338**	PKP	PKPbc	01 24 59.0	+1.5
ELAN	**Lanestosa**	**147.12**	**345**	PKP	PKPbc	01 24 58.7	+0.4
EARI	**Arriondas**	**147.46**	**348**	PKP	PKPbc	01 24 59.3	+0.1
ECRI	**Cripan**	**147.47**	**344**	PKP2	PKPbc	01 24 59.2	-0.1
EPOB	**Poblet**	**147.47**	**338**	PKP	PKPbc	01 24 59.0	-0.3
ESAC	**San Caprasio**	**147.67**	**341**	PKP	PKPbc	01 24 59.4	-0.4
EPON	**Pontenova**	**147.80**	**350**	PKP	PKPdf	01 24 58.6	+1.3
KEST	**Kesra**	**147.89**	**322**	PKPbc	PKPbc	01 24 59.0	-1.7
	comp=Z,36nm,0.9s,baz=300,slow=2.6,SNR=32						
KEST				PKKPab		01 32 28.2	
	comp=Z,7.4nm,1.0s,baz=289,slow=0.9,SNR=5.8						
ERTA	**Horta de San J**	**148.08**	**339**	PKP	PKPbc	01 25 01.7	+0.8
ETOS	**Mallorca**	**148.15**	**335**	PKP	PKPbc	01 25 02.8	+1.6
EMAZ	**Mazaricos**	**148.43**	**353**	PKP	PKPbc	01 25 02.9	+1.1
STS	**Santiago**	**148.44**	**352**	PKP2	PKPab	01 25 03.5	-1.6
ERUA	**La Rua**	**148.70**	**350**	PKP2	PKPbc	01 25 01.2	-1.3
EMOS	**Mosqueruela**	**148.89**	**339**	PKP	PKPbc	01 25 03.2	+0.1
ETOR	**Torete**	**148.99**	**342**	PKP2	PKPbc	01 25 02.6	-0.7
ECAL	**Calabor**	**149.07**	**349**	PKP	PKPbc	01 25 04.2	+0.8
CASM	**Ain Smara**	**149.15**	**326**	P	PKPbc	01 25 05.0	+1.1
PBRG	**Braganca**	**149.20**	**349**	*e*PKPdf	PKPdf	01 25 00.6	+1.0
DFRA	**Djebel Bou Aff**	**149.27**	**327**	P	PKPbc	01 25 04.0	-0.2
ELOB	**Lobios**	**149.37**	**351**	PKP	PKPab	01 25 07.3	-1.6
EIBI	**Ibiza**	**149.38**	**336**	PKP	PKPbc	01 25 05.4	+1.1
PCAB	**Cabril**	**149.51**	**351**	*e*PKPdf	PKPdf	01 25 01.6	+1.5
GUD	**Guadarrama**	**149.74**	**345**	PKHKP		01 25 02.9	
SET	**Setif**	**149.78**	**327**	P	PKPbc	01 25 04.0	-1.4
MVO	**Moncorvo**	**149.88**	**349**	*e*PKPdf	PKPdf	01 25 00.1	-0.6
MVO	**Moncorvo**	**149.88**	**349**	*e*LQ		02 07 10.4	
MVO	**Moncorvo**	**149.88**	**349**	*e*LR	LR	02 23 50.1	
	comp=Z,89µm,20.0s						
AKF	**Akfadou**	**149.88**	**329**	P	PKPab	01 25 09.3	-1.9
EBEN	**Beniarda**	**150.27**	**338**	PKP	PKPbc	01 25 05.9	-0.7
PVIS	**Viseu**	**150.46**	**350**	*e*PKPdf	PKPdf	01 25 02.5	+0.9
ABA	**Alger-Bouzarea**	**150.50**	**331**	P	PKPab	01 25 14.9	+1.2
ESDC	**Sonseca Array**	**150.60**	**344**	PKP	PKPdf	01 25 01.9	+0.1
	comp=Z,19nm,0.9s,baz=6.1,slow=2.0,SNR=19						
ESDC	**Sonseca Array**	**150.60**	**344**	PKP	PKPdf	01 25 00.2	-1.6
AKET	**Djebel Ketaf**	**150.68**	**329**	P	PKPbc	01 25 09.7	+2.1
MTE	**Manteigas**	**150.71**	**350**	*e*PKPdf	PKPdf	01 25 00.8	-1.2
MTE	**Manteigas**	**150.71**	**350**	*e*LQ		02 07 43.1	
MTE	**Manteigas**	**150.71**	**350**	*e*LR	LR	02 20 41.8	
	comp=Z,83µm,18.0s						
ETOB	**Tobarra**	**150.80**	**339**	PKP	PKPdf	01 25 05.6	+3.4
ADJB	**Djebel Djouab**	**150.81**	**330**	P	PKPbc	01 25 10.7	+2.8
PAB	**San Pablo**	**150.82**	**344**	*e*PKPdf	PKPdf	01 25 03.7	+1.5
PAB				*e*PKPbc	PKPbc	01 25 08.5	+0.6
PAB				*e*PKPab	PKPab	01 25 14.9	-0.1
PAB				LR	LR		
	comp=Z,78µm,19.0s,MS7.5						
EMHD	**Djebel Mahouad**	**151.02**	**331**	P	PKPdf	01 25 03.7	+1.1
EVIA	**Vianos**	**151.12**	**341**	PKIKP	PKPdf	01 25 05.7	+3.0
PCBR	**Castelo Branco**	**151.24**	**349**	*e*PKPdf	PKPdf	01 25 04.0	+1.1
EMUR	**La Murta**	**151.40**	**338**	PKP	PKPbc	01 25 09.9	+0.6
EBNR	**Beni Rached**	**151.61**	**333**	P	PKPbc	01 25 08.0	-1.8
PTOM	**Tomar**	**151.62**	**351**	*e*PKPdf	PKPdf	01 25 04.0	+0.6
PMRV	**Marv??o**	**151.63**	**349**	*e*PKPdf	PKPdf	01 25 02.5	-0.9
PMRV	**Marv??o**	**151.63**	**349**	*e*LQ		02 08 03.6	
PMRV				*e*LR	LR	02 14 55.1	
	comp=Z,60µm,20.0s						
ECHA	**Ech Chlef**	**151.80**	**333**	P	PKPdf	01 25 07.5	+3.7
EHUE	**Huescar**	**151.90**	**340**	PKIKP	PKPbc	01 25 10.0	-0.4
EBAN	**Banos Encina**	**151.95**	**342**	PKIKP	PKPbc	01 25 09.6	-0.9
PDA	**Ponta Delgada**	**151.99**	**20**	*e*PKP	PKPdf	01 25 01.5	-2.6
PDA	**Ponta Delgada**	**151.99**	**20**	*e*PP	PP	01 28 56.0	+5.4
PDA	**Ponta Delgada**	**151.99**	**20**	*e*SS	SS	01 48 22.0	+7.4
PDA	**Ponta Delgada**	**151.99**	**20**	*e*LQ		02 08 07.0	
CMLA	**Cha da Macela**	**152.02**	**19**	*e*PKP	PKPdf	01 25 00.0	-4.1
CMLA	**Cha da Macela**	**152.02**	**19**	*e*PP	PP	01 28 45.8	-4.9
CMLA	**Cha da Macela**	**152.02**	**19**	*e*SS		01 49 24.9	
CMLA	**Cha da Macela**	**152.02**	**19**	*e*LQ		02 05 21.2	
CMLA				*e*LR	LR	02 15 01.6	
EQES	**Quesada**	**152.06**	**341**	PKP	PKPbc	01 25 10.7	0.0
EANR	**'Ain N'Sour**	**152.08**	**333**	P	PKPdf	01 25 07.3	+3.1
ALMR	**Almeirim**	**152.10**	**351**	*e*P	PKPdf	01 25 04.9	+0.7
EADA	**Adamuz**	**152.18**	**344**	PKP	PKPdf	01 25 05.6	+1.3
EBAD	**Badajoz**	**152.20**	**348**	PKP	PKPbc	01 25 10.5	-0.5
PESTR	**Estremoz**	**152.21**	**349**	*e*PKPdf	PKPdf	01 25 02.5	-1.8
PESTR	**Estremoz**	**152.21**	**349**	*e*LQ		02 08 21.8	
PESTR	**Estremoz**	**152.21**	**349**	*e*LR	LR	02 23 51.0	
	comp=Z,74µm,18.0s						
ETRT	**Tiaret**	**152.46**	**332**	P	PKPdf	01 25 06.6	+1.8
ECAB	**El Cabril**	**152.48**	**345**	PKP	PKPbc	01 25 09.3	-2.4
ENIJ	**Nijar**	**152.53**	**339**	PKIKP	PKPdf	01 25 08.1	+3.2
EVO	**Evora**	**152.61**	**349**	*e*PKIKP	PKPdf	01 25 05.2	+0.3
	comp=Z,675nm,1.6s						
EVO				*e*MLR	MLR		
	comp=Z,91µm,21.0s,MS7.3						
EVO	**Evora**	**152.61**	**349**	*e*PKPdf	PKPdf	01 25 02.8	-2.1
LIS	**Lisbon**	**152.62**	**351**	*e*P	PKPdf	01 25 05.1	+0.1
ELUQ	**Luque**	**152.65**	**343**	PKIKP	PKPdf	01 25 05.1	+0.1
ECOG	**Cogollos-Vega**	**152.70**	**341**	PKIKP	PKPdf	01 25 08.5	+3.4
PBAR	**Barrancos**	**152.77**	**348**	*e*PKPdf	PKPdf	01 25 04.1	-1.1
PBAR	**Barrancos**	**152.77**	**348**	*e*LQ		02 08 28.1	
PBAR	**Barrancos**	**152.77**	**348**	*e*LR	LR	02 22 59.2	
	comp=Z,68µm,18.0s						
ELOJ	**Sierra Loja**	**153.00**	**342**	PKIKP	PKPdf	01 25 07.5	+1.9
ERON	**Agron**	**153.01**	**341**	PKP	PKPdf	01 25 09.9	+4.3
PBEJ	**Beja**	**153.07**	**349**	*e*PKPdf	PKPdf	01 25 05.7	+0.1
EMIN	**Mina Concepcio**	**153.08**	**347**	PKP	PKPdf	01 25 06.8	+1.1
EGRO	**El Granado**	**153.47**	**348**	PKP	PKPdf	01 25 09.5	+3.2
PVAQ	**Vaqueiros**	**153.65**	**348**	*e*PKPdf	PKPdf	01 25 06.4	-0.1
PVAQ	**Vaqueiros**	**153.65**	**348**	*e*LR	LR	02 20 34.1	
	comp=Z,60µm,20.0s						
PTEO	**Sao Teotonio**	**153.69**	**350**	*e*PKPdf	PKPdf	01 25 08.1	+1.6
EMIJ	**Mijas**	**153.72**	**343**	PKP	PKPbc	01 25 13.2	-1.3
ESPR	**Espera**	**153.74**	**345**	PKP	PKPdf	01 25 08.2	+1.5
PBDV	**Barranco-do-Ve**	**153.85**	**349**	*e*PKPdf	PKPdf	01 25 05.6	-1.2
PBDV	**Barranco-do-Ve**	**153.85**	**349**	*e*LQ		02 08 38.8	
PBDV	**Barranco-do-Ve**	**153.85**	**349**	*e*LR	LR	02 21 12.7	
	comp=Z,47µm,18.0s						
MORF	**Marmelete**	**153.91**	**350**	*e*PKPdf	PKPdf	01 25 05.8	-1.1
MORF	**Marmelete**	**153.91**	**350**	*e*LQ		02 11 22.5	
MORF	**Marmelete**	**153.91**	**350**	*e*LR	LR	02 24 18.6	
	comp=Z,55µm,18.0s						
EJIF	**Jimena Fronter**	**154.03**	**344**	PKIKP	PKPbc	01 25 13.4	-1.7
PFVI	**Vila Bisbo**	**154.11**	**350**	*e*PKPdf	PKPdf	01 25 07.2	0.0
PFVI	**Vila Bisbo**	**154.11**	**350**	*e*LQ		02 08 46.2	
PFVI	**Vila Bisbo**	**154.11**	**350**	*e*LR	LR	02 20 14.9	
	comp=Z,71µm,20.0s						
MDT	**Midelt**	**157.12**	**339**	PKP	PKPdf	01 25 11.7	+0.4
	comp=Z,19nm,1.1s,baz=60,slow=1.7,SNR=11						
PMPS	**Porto Santo**	**158.54**	**5**	*e*PKPdf	PKPdf	01 25 12.4	-0.7
TORD	**Torodi Ar. Bea**	**164.41**	**277**	PKP	PKPdf	01 25 17.4	-2.2
	comp=Z,18nm,1.0s,baz=24,slow=2.2,SNR=22						
KIC	**Kosan Boka**	**169.33**	**242**	*e*P	PKPdf	01 25 19.3	-4.2
	comp=Z,525nm,1.3s						
LIC	**Lamto**	**169.51**	**240**	*e*PKIKP	PKPdf	01 25 22.5	-1.1
	comp=Z,340nm,1.6s						
LIC				*e*MLR	MLR		
	comp=Z,170µm,18.8s						
LIC	**Lamto**	**169.51**	**240**	*e*P	PKPdf	01 25 20.7	-2.9
	comp=Z,789nm,2.4s						
LIC	**Lamto**	**169.51**	**240**	*e*PKPdf	PKPdf	01 25 22.5	-1.1
LIC				LR	LR		
	comp=Z,85µm,18.8s						
DBIC	**Dimbokro**	**169.58**	**243**	PKP	PKPdf	01 25 23.7	+0.1
	comp=Z,52nm,1.2s,baz=100,slow=4.0,SNR=8.6						
DBIC				PKPab	PKPab	01 26 37.1	0.0
	comp=Z,19nm,1.1s,baz=86,slow=6.3,SNR=3.1						
DBIC	**Dimbokro**	**169.58**	**243**	PKIKP	PKPdf	01 25 23.7	+0.1
DBIC						01 26 37.2	
DBIC				pmax	pmax		
	comp=Z,52nm,1.2s						
DBIC				pmax	pmax		
	comp=Z,19nm,1.1s						
TIC	**Toumodi**	**169.71**	**242**	*e*P	PKPdf	01 25 20.6	-3.1
	comp=Z,3µm,2.4s						
BBTS	**Babate**	**176.18**	**37**	PKP	PKPdf	01 25 24.8	-1.4
	comp=Z,34nm,1.1s,baz=282,slow=2.8,SNR=3.4						

*IDC **02** 01:12:34.9±2.6, 1228S×16651E, h0km, mb4.5/7, mb1 4.6/7, mb1mx4.4/16, mbtmp4.5/7, Error ellipse: s-maj=88.1km s-min=27.8km az=136.0*

*NEIC **02** 01:12:42.8±1.2, 1177S×16605E, h35km, mb4.6/1, Error ellipse: s-maj=27.2km s-min=19.6km az=123.0*

ISC 02 01:12:48.8±6.1**, 117S**±02×**1656E**±04**, h64**km±37km**, n22, σ0^{s}90**/11**, mb4.4**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.00**	**292**	Pn	**Pn**	**01 14 14.9**	**-0.2**
CTA	**Charters Tower**	**20.35**	**244**	P	**P**	**01 17 21.4**	**+1.2**
	17nm,0.9s,baz=72,slow=9.6,SNR=3.4						
ARMA	**Armidale**	**22.66**	**213**	*e*P	**P**	**01 17 44.9**	**+0.2**
ARMA				*e*		01 17 59.7	
WRA	**Warramunga Arr**	**31.11**	**251**	P	**P**	**01 19 01.0**	**-0.4**
	11nm,1.1s,mb4.6,baz=80,slow=9.0,SNR=4.1						
ASAR	**Alice Springs**	**32.35**	**244**	P	**P**	**01 19 11.2**	**-1.2**
	4.4nm,0.7s,mb4.4,baz=72,slow=9.2,SNR=8.3						
FITZ	**Fitzroy Crossi**	**39.06**	**256**	P	**P**	**01 20 09.2**	**-0.7**
	2.4nm,0.6s,mb4.1,baz=93,slow=11,SNR=2.7						
MBWA	**Marble Bar**	**44.83**	**252**	P	**P**	**01 20 57.1**	**+0.2**
	8.0nm,0.9s,mb4.5						
CMAR	**Chiang Mai Arr**	**72.25**	**294**	P	**P**	**01 24 09.6**	**+1.8**
	1.1nm,0.3s,mb4.2,baz=108,slow=2.9,SNR=3.5						
CMAR	**Chiang Mai Arr**	**72.25**	**294**	P	**P**	**01 24 09.6**	**+1.8**
SONM	**Songino Array**	**79.13**	**324**	P	**P**	**01 24 46.9**	**+0.4**
	1.8nm,0.7s,mb4.1,baz=157,slow=7.8,SNR=4.2						
MKAR	**Makanchi Array**	**93.92**	**317**	P	**P**	**01 25 58.4**	**-1.1**
	4.5nm,0.7s,mb5.0,baz=101,slow=6.3,SNR=6.0						
ARCES	**ARCESS Array B**	**116.96**	**345**	PKP	PKPdf	01 31 22.0	-3.7
	1.5nm,0.6s,baz=102,slow=4.0,SNR=5.1						
ARCES	**ARCESS Array B**	**116.96**	**345**	PKP	PKPdf	01 31 22.0	-3.7
TRN	**Trinidad (W)**	**133.93**	**86**	*e*	PKPdf	01 31 59.2	-0.5
SSF	**Saint Saulge**	**141.68**	**340**	*e*PKP1	PKPdf	01 32 07.2	-5.9
	5.3nm,0.9s						
ORIF	**Oris-en-Rattie**	**142.64**	**336**	*e*PKP1	PKPdf	01 32 08.5	-6.4
	17nm,1.1s						
FRF	**La Foret Royal**	**143.44**	**334**	*e*PKP1	PKPdf	01 32 10.4	-5.9
LMR	**La Mourre**	**143.68**	**334**	*e*PKP1	PKPdf	01 32 10.8	-5.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LASF	Ste Croix	144.14	337	ePKP1	PKPdf	01 32 13.3	-4.2
MTLF	Montolieu	145.37	338	ePKP1	PKPbc	01 32 16.6	-3.0
	5.9nm,0.7s						
ETSF	Etsaut	146.70	341	ePKP1	PKPbc	01 32 21.4	-2.3
ESDC	Sonseca Array	150.68	343	PKPbc	PKPbc	01 32 31.8	-2.2
	1.1nm,0.9s,baz=347,slow=4.9,SNR=4.1						

*IDC **02** 01:14:19.6±1.6, 1191S×166.16E, h0^{km}, mb4.7/8, mb1 4.8/8, mb1mx4.5/15, mbtmp4.6/8, Error ellipse: s-maj=66.6km s-min=25.0km az=147.0*
*ISCJB **02** 01:14:25.0±0.7, 114S±0.1×1658E±0.1, h33^{km}, mb4.7/15, Error ellipse: s-maj=25.0km s-min=13.1km az=138.7*
*NEIC **02** 01:14:26.5±0.6, 1146S×16589E, h35^{km}, mb4.8/7, Error ellipse: s-maj=24.2km s-min=12.2km az=138.0*
ISC 02 01:14:26.6±0.7**, 115S**±01×**1659E**±01**, h35^{km}, n40, σ1^{s}04**/22**, mb4.7**/15**, 4C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RIV	Riverview	26.02	209	eP	P	01 19 58.5	+2.0
WRA	Warramunga Arr	31.46	251	P	P	01 20 44.2	-0.9
	14nm,1.1s,mb4.7,baz=82,slow=9.0,SNR=3.6						
ASAR	Alice Springs	32.72	244	P	P	01 20 53.8	-2.4
	11nm,1.1s,mb4.7,baz=71,slow=9.7,SNR=4.5						
FITZ	Fitzroy Crossi	39.40	255	P	P	01 21 53.2	-0.2
	19nm,1.1s,mb4.8,baz=252,slow=19,SNR=4.2						
MAJO	Matsushiro	54.40	333	eP	P	01 23 49.2	-1.1
	11nm,1.2s,mb4.7						
SMY	Shemya	64.32	6	eP	P	01 24 59.2	+0.7
MDJ	Mudanjiang	64.78	332	eP	P	01 25 02.1	+0.5
	4.3nm,0.6s,mb4.7						
CMAR	Chiang Mai Arr	72.40	294	P	P	01 25 51.8	+2.0
	1.2nm,0.3s,mb4.3,baz=123,slow=4.5,SNR=4.4						
OHAK	Old Harbor	76.24	21	eP	P	01 26 10.5	-0.8
	9.7nm,0.9s,mb4.7						
SVW2	Sparrevohn	78.47	18	eP	P	01 26 23.5	-0.2
ULN	Ulaanbaatar	78.71	324	eP	P	01 26 26.2	+0.9
	7.1nm,0.9s,mb4.6						
SONM	Songino Array	79.08	324	P	P	01 26 28.9	+1.5
	3.3nm,0.9s,mb4.2,baz=144,slow=7.3,SNR=4.9						
TTA	Tatalina	79.78	17	eP	P	01 26 30.5	-0.3
COLA	College	83.64	18	eP	P	01 26 50.5	-0.6
	8.7nm,0.8s,mb4.9						
YBH	Yreka Blue Hor	84.09	45	eP	P	01 26 54.9	+0.9
EGAK	Eagle	85.72	20	eP	P	01 27 02.5	+0.8
	7.8nm,0.8s,mb5.0						
DAWY	Dawson	85.89	21	eP	P	01 27 02.7	+0.2
NVAR	Mina Array Bea	86.19	50	P	P	01 27 03.1	-1.5
	0.4nm,0.5s,mb3.9,baz=238,slow=8.4,SNR=3.4						
ELK	Elko	89.13	48	eP	P	01 27 18.2	-0.4
NEW	Newport	89.97	41	eP	P	01 27 22.5	+0.1
	1.4nm,0.4s,mb4.6						
MKAR	Makanchi Array	93.91	317	P	P	01 27 40.3	-0.3
	5.1nm,0.8s,mb5.0,baz=116,slow=5.5,SNR=7.3						
ZALV	Zalesovo Beam	93.97	324	P	P	01 27 39.9	-0.9
	5.3nm,1.0s,mb4.9,baz=104,slow=4.6,SNR=3.8						
ARCES	ARCESS Array B	116.77	345	PKP	PKPdf	01 33 06.3	-0.4
	2.0nm,0.8s,baz=71,slow=1.2,SNR=6.1						
ARCES	ARCESS Array B	116.77	345	PKP	PKPdf	01 33 06.3	-0.4
GERES	GERESS Array B	136.13	334	PKP	PKPdf	01 33 43.9	-0.4
	2.0nm,1.1s,baz=42,slow=2.2,SNR=4.0						
HAU	Haudompre	139.73	339	ePKP1	PKPdf	01 33 53.2	+2.3
	15nm,1.1s						
MEZF	Maizieres J'vi	139.75	340	ePKP1	PKPdf	01 33 53.7	+2.8
	28nm,1.2s						
ORIF	Oris-en-Rattie	142.51	336	⇑iPKP1	PKPdf	01 33 53.2	-2.8
	18nm,1.0s						
TCF	Toulx Ste Croi	142.62	341	ePKP1	PKPdf	01 33 59.4	+3.2
	19nm,1.2s						
VIVF	Saint-Julien-l	143.02	338	⇑iPKP1	PKPdf	01 33 54.1	-2.8
	37nm,1.3s						
FRF	La Foret Royal	143.31	334	ePKP1	PKPdf	01 33 54.4	-3.1
	27nm,1.1s						
LMR	La Mourre	143.56	334	ePKP1	PKPdf	01 33 55.3	-2.6
	30nm,1.1s						
CAF	Calviac	143.88	340	ePKP1	PKPdf	01 33 57.1	-1.3
	13nm,1.1s						
LASF	Ste Croix	143.99	338	ePKP1	PKPdf	01 33 57.5	-1.2
	73nm,1.2s						
LFF	La Frestale	144.29	342	ePKP1	PKPdf	01 33 58.2	-0.9
MTLF	Montolieu	145.22	339	⇑iPKP1	PKPbc	01 34 01.7	+1.2
	75nm,1.2s						
EPF	Esparros	146.13	341	ePKP1	PKPbc	01 34 04.6	+1.3
	19nm,1.1s						
ETSF	Etsaut	146.53	342	⇑iPKP1	PKPbc	01 34 05.9	+1.4
	49nm,1.2s						
KEST	Kesra	147.82	323	PKPbc	PKPbc	01 34 09.6	+1.2
	4.8nm,0.8s,baz=232,slow=0.8,SNR=6.1						
ESDC	Sonseca Array	150.49	344	PKPbc	PKPbc	01 34 16.0	+1.0
	3.2nm,0.8s,baz=22,slow=2.6,SNR=9.6						

*ISK **02** 01:20:13.4, 3834N×3883E, h10^{km}, MD2.9*
*CSEM **02** 01:20:13.3±0.1, 3834N×3884E, h5^{km}, MD2.9, Error ellipse: s-maj=2.3km s-min=1.5km az=159.0*
*ISCJB **02** 01:20:14.1±0.5, 3835N±004×3882E±004, h0^{km}±8^{km}, Error ellipse: s-maj=7.9km s-min=4.2km az=155.8*
*DDA **02** 01:20:14.8, 3832N×3893E, h7^{km}±4^{km}, Md2.8*
ISC 02 01:20:14.7±0.5**, 3836N**±004×**3882E**±004**, h7^{km}**±6^{km}**, n12, σ0^{s}86**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.19	44	i P	Pg	01 20 18.8	+0.3
ELZG				i S	Sg	01 20 22.3	+1.3
MALT	Malatya	0.31	261	ePG	Pg	01 20 20.2	-0.6
MALT				eSG	Sg	01 20 25.2	+0.3
MYA	Malataya	0.31	263	ePG	Pg	01 20 20.2	-0.6
SVRC	Sivrice-ELAZID	0.38	88	ePG	Pg	01 20 21.5	-0.6
SVRC				eSG	Sg	01 20 26.9	-0.2
PTK	Pertek	0.69	40	ePG	Pg	01 20 27.4	-0.6
PTK				eSG	Sg	01 20 37.5	+0.5
AKCD	Akcadag	0.71	265	i P	Pg	01 20 27.6	-0.7
AKCD				i S	Sg	01 20 37.8	+0.2
URFA	Urfa	0.92	180	ePG	Pg	01 20 31.0	-1.3
ATAB	Bozova	0.98	205	eP	Pg	01 20 33.7	+0.2
ATAB				eS	Sg	01 20 48.0	+1.7
DARE	Darende-Malaty	0.99	307	ePN	Pn	01 20 34.6	-0.3
GZT	Gaziantep	1.41	225	eP	Pn	01 20 40.1	-0.7
GZT				eS	Sn	01 21 01.8	+2.2
KMRS	Kahramanmaras	1.74	241	ePN	Pn	01 20 44.4	-0.9
SVSK	Karacayir	2.10	318	ePN	Pn	01 20 50.8	+0.5

*IDC **02** 01:20:13.8±0.8, 1164S×16601E, h0^{km}, mb4.5/10, mb1 4.6/11, mb1mx4.4/17, mbtmp4.5/11, ML5.0/1, MS5.7/1, Ms1 5.7/1, ms1mx5.4/26, Error ellipse: s-maj=29.7km s-min=22.1km az=145.0*
*NEIC **02** 01:20:19.2±0.4, 1157S×16595E, h35^{km}, mb4.7/8, Error ellipse: s-maj=12.9km s-min=7.6km az=138.0*
*ISCJB **02** 01:20:20.2±3.6, 116S±0.1×1658E±0.1, h55^{km}±29^{km}, mb4.6/16, Error ellipse: s-maj=26.3km s-min=14.3km az=26.6*
ISC 02 01:20:21.6±3.0**, 116S**±01×**1659E**±01**, h54^{km}**±24^{km}**, n47, σ0^{s}78**/29**, mb4.6**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.19	289	Pn	Pn	01 21 50.6	+0.2
	36nm,0.3s,baz=256,slow=3.0,SNR=5.3						
HNR				LR	LR	01 23 16.1	
	comp=Z,57µm,18.1s,baz=86,slow=29						
HNR	Honiara	6.19	289	ePn	Pn	01 21 50.2	-0.2
HNR				LR	LR	01 23 16.1	
CTA	Charters Tower	20.66	243	eP	P	01 24 58.2	+1.1
	13nm,0.2s						
CTA	Charters Tower	20.66	243	P	P	01 24 58.3	+1.3
	17nm,0.9s,baz=74,slow=14,SNR=5.9						
CTAO	Charters Tower	20.66	243	eP	P	01 24 57.6	+0.6
	28nm,1.0s						
ARMA	Armidale	22.95	213	eP	P	01 25 21.5	+0.2
WB2	Warramunga Arr	31.40	251	eP	P	01 26 37.4	-0.4
WRA	Warramunga Arr	31.41	251	P	P	01 26 37.3	-0.5
	4.7nm,0.6s,mb4.5,baz=80,slow=8.8,SNR=5.1						
ASAR	Alice Springs	32.66	244	P	P	01 26 47.9	-0.9
	7.9nm,0.7s,mb4.8,baz=70,slow=9.5,SNR=38						
KAKA	Kakadu	32.68	264	eP	P	01 26 48.6	-0.4
	178nm,1.4s,mb5.8						
FORT	Forrest	39.84	235	eP	P	01 27 49.9	-0.1
	19nm,1.9s,mb4.5						
MBWA	Marble Bar	45.14	252	eP	P	01 28 33.4	+0.2
	13nm,0.9s,mb4.8						
KLBR	Kellerberrin	48.53	238	eP	P	01 28 59.0	-0.5
NWAO	Narrogin (SRO)	49.27	236	eP	P	01 29 04.8	-0.4
	33nm,1.3s,mb5.2						
SBA	Scott Base	66.29	180	eP	P	01 31 04.6	+0.8
	5.2nm,0.8s,mb4.6						
CMAR	Chiang Mai Arr	72.42	294	P	P	01 31 43.4	+0.7
	0.5nm,0.4s,mb3.8,baz=117,slow=3.8,SNR=3.0						
QSPA	South Pole Qui	78.45	180	P	P	01 32 16.0	-0.2
	13nm,1.0s,mb4.8,baz=18,slow=3.9,SNR=13						
ULN	Ulaanbaatar	78.78	324	eP	P	01 32 19.5	+1.0
	490nm,3.5s						
SONM	Songino Array	79.14	324	P	P	01 32 20.2	-0.2
	0.9nm,0.5s,mb3.9,baz=143,slow=6.0,SNR=4.3						
COLA	College	83.74	18	eP	P	01 32 43.5	-0.9
	4.7nm,0.8s,mb4.7						
HYT	Haines Junctio	84.81	24	eP	P	01 32 50.1	+0.2
EGAK	Eagle	85.82	20	eP	P	01 32 54.3	-0.6
	5.7nm,0.8s,mb4.8						
DAWY	Dawson	85.99	21	eP	P	01 32 55.2	-0.6
NVAR	Mina Array Bea	86.27	50	P	P	01 32 59.4	+1.7
	0.8nm,0.7s,mb4.0,baz=239,slow=7.5,SNR=5.1						
MKAR	Makanchi Array	93.97	317	P	P	01 33 34.9	+1.3
	3.2nm,0.7s,mb4.9,baz=115,slow=5.8,SNR=14						
MKAR	Makanchi Array	93.97	317	P	P	01 33 34.9	+1.3
ZALV	Zalesovo Beam	94.04	324	P	P	01 33 34.2	+0.5
	1.5nm,0.5s,mb4.7,baz=100,slow=8.1,SNR=5.9						
ZALV	Zalesovo Beam	94.04	324	P	P	01 33 34.2	+0.4
YKA	Yellowknife Ar	95.38	27	P	P	01 33 37.8	-1.9
	0.2nm,0.6s,mb3.8,baz=258,slow=5.1,SNR=3.9						
ARCES	ARCESS Array B	116.86	345	PKP	PKPdf	01 38 58.9	-0.7
	2.3nm,0.6s,baz=81,slow=1.9,SNR=11						
KIS	Kishinev	129.50	323	ePPS	PKPdf	01 39 20.0	-4.4
EIL	Elat	131.04	299	PKP	PKPdf	01 39 29.3	+1.4
	2.0nm,0.6s,baz=0.4,slow=9.9,SNR=4.3						
GERES	GERESS Array B	136.21	334	PKP	PKPdf	01 39 37.4	+0.4
	0.6nm,0.7s,baz=45,slow=0.8,SNR=4.3						
SSF	Saint Saulge	141.61	341	ePKP1	PKPdf	01 39 44.4	-2.5
ORIF	Oris-en-Rattie	142.59	336	ePKP1	PKPdf	01 39 45.1	-3.7
SBF	Sospel	142.81	334	ePKP1	PKPdf	01 39 45.2	-4.0
	19nm,0.9s						
FRF	La Foret Royal	143.40	334	ePKP1	PKPdf	01 39 47.3	-2.9
LMR	La Mourre	143.64	334	ePKP1	PKPdf	01 39 48.4	-2.3
	38nm,1.2s						
CAF	Calviac	143.97	340	ePKP1	PKPdf	01 39 49.8	-1.4
LASF	Ste Croix	144.08	338	ePKP1	PKPdf	01 39 50.3	-1.1
	6.3nm,0.8s						
LFF	La Frestale	144.38	342	ePKP1	PKPdf	01 39 50.9	-1.0
	12nm,0.9s						
MTLF	Montolieu	145.31	339	ePKP1	PKPbc	01 39 53.6	+0.2
	10nm,0.7s						
EPF	Esparros	146.22	341	ePKP1	PKPbc	01 39 57.3	+1.1
ETSF	Etsaut	146.62	342	ePKP1	PKPbc	01 39 58.6	+1.2
KEST	Kesra	147.89	322	PKPbc	PKPbc	01 40 02.2	+1.1
	4.5nm,1.0s,baz=54,slow=3.4,SNR=7.1						
ESDC	Sonseca Array	150.58	344	PKPbc	PKPbc	01 40 08.2	+0.4
	1.6nm,0.8s,baz=17,slow=2.8,SNR=8.8						
TORD	Torodi Ar. Bea	164.45	277	PKP	PKPdf	01 40 20.7	+0.5
	1.4nm,1.0s,baz=15,slow=1.7,SNR=3.5						

*IDC **02** 01:31:20.2±0.7, 1174S×16585E, h0^{km}, mb4.7/15, mb1 4.8/15, mb1mx4.6/20, mbtmp4.7/15, Error ellipse: s-maj=28.2km s-min=16.8km az=143.0*
*MOS **02** 01:31:23.2±2.0, 1161S×16590E, h33^{km}, mb5.0/7, Error ellipse: s-maj=15.5km s-min=11.5km az=150.3*
*NEIC **02** 01:31:25.5±0.4, 1163S×16586E, h35^{km}, mb5.0/16, Error ellipse: s-maj=15.4km s-min=8.6km az=138.0*
*ISCJB **02** 01:31:26.1±3.0, 1166S±008×1657E±0.1, h50^{km}±25^{km}, mb4.8/26, Error ellipse: s-maj=19.3km s-min=11.6km az=28.5*
ISC 02 01:31:28.2±2.5**, 1163S**±008×**1657E**±01**, h55^{km}**±22^{km}**, n75, σ0^{s}98**/52**, mb4.8**/26**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.09	290	eP	Pn	01 32 55.4	-0.3
CTA	Charters Tower	20.52	243	eP	P	01 36 03.5	+1.4
	84nm,1.3s						
CTA	Charters Tower	20.52	243	P	P	01 36 02.8	+0.7
	32nm,0.9s,baz=67,slow=13,SNR=10.0						
CTA	Charters Tower	20.52	243	eP	P	01 36 03.5	+1.4
CTA				pmax	pmax		
	comp=Z,84nm,1.3s						
CTAO	Charters Tower	20.52	243	eP	P	01 36 03.0	+0.9
CTAO				pmax	pmax		
	comp=Z,62nm,1.1s						
CTAO	Charters Tower	20.52	243	eP	P	01 36 03.0	+0.9
	comp=Z,62nm,1.1s						
ARMA	Armidale	22.82	213	eP	P	01 36 26.8	+0.2
RIV	Riverview	25.80	209	eP	P	01 36 56.1	+1.9
STKA	Stephens Creek	30.01	224	eP	P	01 37 31.9	0.0
	comp=Z,55nm,1.5s,mb5.1						
STKA	Stephens Creek	30.01	224	P	P	01 37 31.7	-0.2
	comp=Z,5.2nm,0.7s,mb4.4,baz=31,slow=4.2,SNR=8.8						
WB2	Warramunga Arr	31.26	251	eP	P	01 37 42.9	-0.2
WRA	Warramunga Arr	31.27	251	P	P	01 37 43.1	-0.1
	comp=Z,13nm,1.1s,mb4.7,baz=83,slow=9.0,SNR=11						
TOO	Toolangi	31.57	212	eP	P	01 37 45.9	+0.3
ASAR	Alice Springs	32.52	244	P	P	01 37 53.2	-0.8
	comp=Z,11nm,0.7s,mb4.9,baz=71,slow=9.4,SNR=94						
ASAR				PcP	PcP	01 40 40.0	+0.1
	comp=Z,1.3nm,0.8s,baz=69,slow=2.8,SNR=5.3						
KAKA	Kakadu	32.55	265	eP	P	01 37 53.8	-0.6
	comp=Z,21nm,0.6s,mb5.2						
FITZ	Fitzroy Crossi	39.22	256	P	P	01 38 51.3	-0.2
	comp=Z,13nm,0.5s,mb4.9,baz=71,slow=0.9,SNR=5.6						
FORT	Forrest	39.70	235	eP	P	01 38 55.3	0.0
	comp=Z,50nm,1.6s,mb5.0						
BATI	Baumata	41.30	268	P	P	01 39 08.0	-0.8
	comp=Z,23nm,0.4s,mb5.2,baz=87,slow=8.6,SNR=4.7						
MBWA	Marble Bar	45.00	252	eP	P	01 39 38.9	+0.3
	comp=Z,34nm,1.3s,mb5.0						
KAPI	Kappang	45.92	274	P	P	01 39 45.6	-0.4
	comp=Z,18nm,0.7s,mb5.1,baz=98,slow=12,SNR=8.4						
KLBR	Kellerberrin	48.38	238	eP	P	01 40 04.5	-0.4
	comp=Z,506nm,1.9s						
NWAO	Narrogin (SRO)	49.13	236	P	P	01 40 10.3	-0.3
	comp=Z,8.7nm,0.7s,mb4.9,baz=86,slow=8.0,SNR=6.5						
NWAO	Narrogin (SRO)	49.13	236	eP	P	01 40 10.6	0.0
NWAO				pmax	pmax		
	comp=Z,16nm,0.7s						
NWAO	Narrogin (SRO)	49.13	236	eP	P	01 40 10.6	0.0
	comp=Z,16nm,0.7s,mb5.2						
CASY	Casey	65.83	201	eP	P	01 42 06.7	-0.9
CASY	Casey	65.83	201	eP	P	01 42 06.6	-1.0
	comp=Z,21nm,1.3s,mb5.0						
SBA	Scott Base	66.22	180	eP	P	01 42 09.8	-0.1
SBA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
SBA	Scott Base	66.22	180	eP	P	01 42 09.8	-0.2
	comp=Z,9.3nm,0.8s,mb4.9						
CMAR	Chiang Mai Arr	72.33	294	P	P	01 42 50.2	+1.6
	comp=Z,1.3nm,0.7s,mb4.0,baz=116,slow=4.8,SNR=6.1						
QSPA	South Pole Qui	78.38	180	P	P	01 43 21.5	-0.9
	comp=Z,12nm,1.1s,mb4.7,baz=7.3,slow=2.8,SNR=15						
ULN	Ulaanbaatar	78.76	324	eP	P	01 43 26.5	+1.6
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
ULN	Ulaanbaatar	78.76	324	eP	P	01 43 26.5	+1.7
	comp=Z,5.7nm,1.0s,mb4.5						
SONM	Songino Array	79.12	324	P	P	01 43 29.3	+2.4
	comp=Z,1.0nm,0.5s,mb4.0,baz=136,slow=6.4,SNR=5.7						
TTA	Tatalina	79.98	17	eP	P	01 43 30.1	-1.1
COLA	College	83.84	18	eP	P	01 43 47.4	-4.0
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
COLA	College	83.84	18	eP	P	01 43 47.4	-4.1
	comp=Z,5.4nm,0.8s,mb4.7						
YBH	Yreka Blue Hor	84.31	46	P	P	01 43 55.7	+1.3
	comp=Z,2.5nm,0.7s,mb4.4,baz=85,slow=1.5,SNR=10						
HYT	Haines Junctio	84.92	24	eP	P	01 43 56.9	-0.1
NLWA	Neilton Lookou	85.62	40	eP	P	01 44 01.5	+0.7
	comp=Z,20nm,1.6s,mb5.1						
EGAK	Eagle	85.92	20	eP	P	01 43 59.8	-2.1
	comp=Z,4.4nm,0.6s,mb4.9						
DAWY	Dawson	86.10	21	eP	P	01 43 56.8	-6.0
NVAR	Mina Array Bea	86.41	50	P	P	01 44 06.3	+1.4
	comp=Z,2.2nm,0.8s,mb4.5,baz=233,slow=7.3,SNR=12						
JCW	Jim Creek	87.13	40	eP	P	01 44 07.9	-0.3
RSW	Rattlesnake Hi	88.02	42	eP	P	01 44 09.8	-2.7
HAWA	Hanford	88.05	42	eP	P	01 44 03.9	-8.7
	comp=Z,14nm,1.4s,mb5.0						
NEW	Newport	90.19	41	eP	P	01 44 23.7	+1.0
NEW				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NEW	Newport	90.19	41	eP	P	01 44 23.7	+1.1
	comp=Z,1.9nm,0.6s,mb4.6						
HLID	Hailey	90.69	46	eP	P	01 44 25.2	+0.1
	comp=Z,1.3nm,0.7s,mb4.4						
MKAR	Makanchi Array	93.93	317	P	P	01 44 39.6	-0.4
	comp=Z,2.9nm,0.8s,mb4.8,baz=107,slow=6.5,SNR=9.9						
ZALV	Zalesovo Beam	94.01	324	P	P	01 44 40.0	-0.2
	comp=Z,3.7nm,1.0s,mb4.8,baz=129,slow=4.2,SNR=6.6						
ZAL	Zalesovo	94.02	324	P	P	01 44 40.0	-0.2
YKA	Yellowknife Ar	95.49	27	P	P	01 44 42.9	-3.9
	comp=Z,0.4nm,0.6s,baz=254,slow=4.3,SNR=4.8						
ARCES	ARCESS Array B	116.89	345	PKP	PKPdf	01 50 04.7	-1.4
	comp=Z,1.3nm,0.6s,baz=107,slow=1.3,SNR=11						
ARCES	ARCESS Array B	116.89	345	PKP	PKPdf	01 50 04.7	-1.4
GERES	GERESS Array B	136.21	333	PKP	PKPdf	01 50 42.3	-1.3
	comp=Z,0.5nm,0.8s,baz=48,slow=2.0,SNR=5.0						
LPL	La Plagne	141.76	336	ePKP1	PKPdf	01 50 49.9	-3.9
LPG	La Plagne	141.77	336	ePKP1	PKPdf	01 50 50.0	-3.8
ORIF	Oris-en-Rattie	142.60	336	ePKP1	PKPdf	01 50 50.6	-4.7
	comp=Z,7.1nm,0.9s						
TCF	Toulx Ste Croi	142.73	341	ePKP1	PKPdf	01 50 51.6	-3.9
SBF	Sospel	142.81	334	ePKP1	PKPdf	01 50 50.7	-5.0
PGF	Pioggiola	143.13	331	ePKP1	PKPdf	01 50 52.0	-4.3
MFF	Saint Martin d	143.14	344	ePKP1	PKPdf	01 50 52.7	-3.5
FRF	La Foret Royal	143.40	334	ePKP1	PKPdf	01 50 52.9	-3.9
	comp=Z,15nm,0.9s						
SMRF	Simiane la Rot	143.50	336	ePKP1	PKPdf	01 50 53.6	-3.3
LMR	La Mourre	143.64	334	ePKP1	PKPdf	01 50 53.8	-3.4
	comp=Z,10nm,0.8s						
CAF	Calviac	143.98	340	ePKP1	PKPdf	01 50 55.3	-2.4
LASF	Ste Croix	144.09	338	ePKP1	PKPdf	01 50 55.8	-2.1
	comp=Z,7.8nm,0.8s						
LFF	La Frestale	144.40	342	ePKP1	PKPdf	01 50 56.3	-2.2
	comp=Z,9.0nm,0.7s						
MTLF	Montolieu	145.32	339	ePKP1	PKPbc	01 50 59.7	-0.3
	comp=Z,11nm,0.7s						
EPF	Esparros	146.24	341	ePKP1	PKPbc	01 51 01.9	-0.9
	comp=Z,3.9nm,0.8s						
ETSF	Etsaut	146.64	342	ePKP1	PKPbc	01 51 04.1	+0.1
SJPF	Ste Jean	146.65	343	ePKP1	PKPbc	01 51 04.2	+0.2
KEST	Kesra	147.86	322	PKPbc	PKPbc	01 51 08.1	+0.4
	comp=Z,4.0nm,0.8s,baz=313,slow=2.5,SNR=13						
ESDC	Sonseca Array	150.61	344	PKPbc	PKPbc	01 51 12.6	-1.8
	comp=Z,1.0nm,0.7s,baz=2.6,slow=4.7,SNR=17						
TORD	Torodi Ar. Bea	164.33	277	PKP	PKPdf	01 51 25.4	-1.2
	comp=Z,1.5nm,1.0s,baz=264,slow=1.3,SNR=6.2						

*IDC **02** 01:34:17.3±1.1, 1169S×166.11E, h0^{km}, mb4.5/10, mb1 4.6/10, mb1mx4.4/17, mbtmp4.5/10, Error ellipse: s-maj=37.2km s-min=24.7km az=125.0*
*ISCJB **02** 01:34:21.7±0.6, 1155S±0.10×1658E±0.1, h33^{km}, mb4.5/15, Error ellipse: s-maj=16.3km s-min=12.0km az=44.2*
*NEIC **02** 01:34:21.2±7.1, 1152S×16597E, h22^{km}±47^{km}, mb4.7/8, Error ellipse: s-maj=22.6km s-min=13.8km az=100.0*
ISC 02 01:34:18.4±10.0**, 115S**±01×**1660E**±02**, h3^{km}**±63^{km}**, n37, σ0^{s}97**/26**, mb4.5**/15**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.28	289	ePn	Pn	01 35 51.8	-0.2
CTA	Charters Tower	20.77	243	eP	P	01 39 02.0	+1.3
	47nm,0.8s						
CTA	Charters Tower	20.77	243	P	P	01 39 02.1	+1.4
	21nm,1.0s,baz=74,slow=15,SNR=5.0						
CTAO	Charters Tower	20.77	243	eP	P	01 39 01.8	+1.0
	27nm,1.0s						
ARMA	Armidale	23.03	213	eP	P	01 39 25.3	+0.5
STKA	Stephens Creek	30.24	224	eP	P	01 40 32.4	+1.8
STKA	Stephens Creek	30.24	224	P	P	01 40 30.5	-0.1
	3.0nm,0.8s,mb4.1,baz=49,slow=7.3,SNR=3.0						
WB2	Warramunga Arr	31.52	251	eP	P	01 40 39.5	-2.5
WRA	Warramunga Arr	31.53	251	P	P	01 40 41.7	-0.4
	6.2nm,0.8s,mb4.5,baz=81,slow=9.2,SNR=5.8						
ASAR	Alice Springs	32.77	244	P	P	01 40 51.8	-1.2
	7.7nm,0.7s,mb4.7,baz=71,slow=9.4,SNR=16						
FORT	Forrest	39.95	235	eP	P	01 41 54.1	-0.1
	81nm,2.0s,mb5.1						
KAPI	Kappang	46.15	274	P	P	01 42 44.8	+0.1
	8.5nm,0.4s,mb5.0,baz=90,slow=10,SNR=5.8						
KAPI	Kappang	46.15	274	P	P	01 42 44.8	+0.1
KLBR	Kellerberrin	48.63	238	eP	P	01 42 58.1	-5.7
NWAO	Narrogin (SRO)	49.38	236	eP	P	01 43 08.8	-0.7
	5.8nm,0.6s,mb4.8						
SBA	Scott Base	66.31	180	eP	P	01 45 09.0	+1.2
	66nm,1.6s,mb5.4						
CMAR	Chiang Mai Arr	72.51	294	P	P	01 45 47.5	+0.4
	0.9nm,0.5s,mb4.0,baz=132,slow=5.2,SNR=5.0						
QSPA	South Pole Qui	78.47	180	P	P	01 46 19.7	-0.6
	4.5nm,1.0s,mb4.4,baz=316,slow=3.5,SNR=4.1						
ULN	Ulaanbaatar	78.82	324	eP	P	01 46 23.3	+0.6
	2.1nm,0.6s,mb4.2						
SONM	Songino Array	79.19	324	P	P	01 46 26.7	+2.0
	0.8nm,0.5s,mb3.9,baz=149,slow=5.6,SNR=3.8						
EGAK	Eagle	85.76	20	eP	P	01 46 57.9	-0.7
	4.5nm,1.0s,mb4.7						
DAWY	Dawson	85.93	21	eP	P	01 46 59.7	+0.2
HLID	Hailey	90.46	46	eP	P	01 47 22.1	+0.4
	0.6nm,0.6s,mb4.1						
MVCO	Mesa Verde	93.36	53	eP	P	01 47 33.6	-1.6
MKAR	Makanchi Array	94.03	317	P	P	01 47 38.6	+0.6
	1.4nm,0.6s,mb4.6,baz=110,slow=5.8,SNR=8.1						
ZALV	Zalesovo Beam	94.08	324	P	P	01 47 37.6	-0.5
	0.5nm,0.4s,mb4.3,baz=127,slow=3.9,SNR=4.0						
ARCES	ARCESS Array B	116.86	345	PKP	PKPdf	01 53 02.7	-1.2
	1.1nm,0.6s,baz=31,slow=2.8,SNR=8.1						
ARCES	ARCESS Array B	116.86	345	PKP	PKPdf	01 53 02.7	-1.2
ORIF	Oris-en-Rattie	142.61	337	ePKP1	PKPdf	01 53 49.3	-3.9
	3.1nm,0.6s						
MFF	Saint Martin d	143.12	344	ePKP1	PKPdf	01 53 51.1	-2.9
LMR	La Mourre	143.66	334	ePKP1	PKPdf	01 53 52.4	-2.7
LFF	La Frestale	144.38	342	ePKP1	PKPdf	01 53 54.6	-1.7
MTLF	Montolieu	145.32	339	ePKP1	PKPbc	01 53 57.8	+0.1
	3.8nm,0.5s						
ETSF	Etsaut	146.63	342	ePKP1	PKPbc	01 54 02.2	+0.5
	4.4nm,0.7s						
KEST	Kesra	147.94	323	PKPbc	PKPbc	01 54 05.3	-0.3
	0.9nm,0.5s,baz=28,slow=2.3,SNR=6.3						
ESDC	Sonseca Array	150.59	344	PKPbc	PKPbc	01 54 11.5	-0.7
	0.2nm,0.5s,baz=14,slow=4.0,SNR=3.5						
TORD	Torodi Ar. Bea	164.55	278	PKP	PKPdf	01 54 23.1	-1.6
	0.4nm,0.8s,baz=16,slow=2.1,SNR=3.9						

CASC 02 01:38:17.6±2.6**, 1140N×8883W, h0^{km}**±109^{km}**, MD4.0, ML3.3, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LEON	Leon	2.15	62	eP	Pn	01 38 55.0	+0.3
TEL3	Telica 3	2.27	59	eP	Pn	01 38 57.0	+0.6
TELN	Telica	2.30	58	eP	Pn	01 38 58.0	+1.3
COPN	Copaltepe	2.33	70	eP	Pn	01 38 55.1	-2.0
CSAN		2.48	71	eS	Sn	01 39 31.9	+1.5
MGAN	Managua	2.64	73	eP	Pn	01 39 01.8	+0.3
APON	Apoyo	2.76	79	AML	AML	01 39 22.6	
	comp=Z,86nm,0.2s						
HUEN		2.77	70	eP	Pn	01 39 01.2	-2.0
PRS1	Puriscal	4.66	107	eP	Pn	01 39 30.7	+1.4
LCR2	La Lucha 2	5.02	109	eP	Pn	01 39 34.7	+0.4
URSC	Urasca	5.20	107	eP	Pn	01 39 37.6	+0.9
BUS	Buena Vista	5.31	110	eP	Pn	01 39 38.8	+0.5
ACR	Cerro Adams	6.21	116	eP	Pn	01 39 51.5	+0.9
CHI2		16.37	113	AML	AML	01 39 16.9	
	comp=Z,530nm,0.5s						

*ISCJB **02** 01:41:26.8±7.9, 1163S±007×1659E±0.1, h8^{km}±48^{km}, mb4.8/36, Error ellipse: s-maj=18.0km s-min=11.3km az=8.7*
*IDC **02** 01:41:27.3±0.7, 1164S×16592E, h0^{km}, mb4.7/19, mb1 4.8/19, mb1mx4.7/21, mbtmp4.7/19, Error ellipse: s-maj=22.5km s-min=15.2km az=125.0*
*MOS **02** 01:41:30.5±1.6, 1153S×16594E, h37^{km}, mb5.2/9, Error ellipse: s-maj=14.2km s-min=11.8km az=159.2*
*BJI **02** 01:41:30.2, 1160S×166.10E, h35^{km}, mB5.3, mb5.0*
*NEIC **02** 01:41:31.2±0.4, 1156S×16606E, h35^{km}, mb5.0/16, Error ellipse: s-maj=14.9km s-min=9.0km az=128.0*
*DJA **02** 01:41:35, 1178S×16590E, h40^{km}, mb5.4/13*
ISC 02 01:41:32.1±6.0**, 1164S**±007×**1659E**±01**, h30^{km}**±41^{km}**, h23^{km}**±3.7^{km}**:pP-P, n84, σ1^{s}18**/62**, mb4.8**/36**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.25	290	eP	Pn	01 43 02.4	+0.1
HNR				pmax	pmax		
	comp=Z,363nm,0.6s						
HNR	Honiara	6.25	290	ePn	Pn	01 43 02.4	+0.1
	comp=Z,362nm,0.6s						
CTA	Charters Tower	20.67	244	eP	P	01 46 11.0	+1.4
	comp=Z,41nm,1.2s						
CTA	Charters Tower	20.67	244	P	P	01 46 10.4	+0.8
	comp=Z,44nm,1.1s,baz=72,slow=12,SNR=11						
CTA	Charters Tower	20.67	244	eP	P	01 46 11.0	+1.4
CTA				pmax	pmax		
	comp=Z,41nm,1.2s						
CTAO	Charters Tower	20.67	244	eP	P	01 46 10.9	+1.3
CTAO				pmax	pmax		
	comp=Z,3μm,3.1s						
CTAO	Charters Tower	20.67	244	eP	P	01 46 10.9	+1.3
	comp=Z,3μm,3.1s						
ARMA	Armidale	22.91	213	eP	P	01 46 34.4	+0.9
ARMA				e		01 46 46.3	
RIV	Riverview	25.88	209	eP	P	01 47 03.9	+2.7
CNB	Canberra Magne	27.94	210	eP	P	01 47 19.1	-0.7
STKA	Stephens Creek	30.12	224	eP	P	01 47 39.6	+0.4
	comp=Z,18nm,1.8s,mb4.5						
STKA	Stephens Creek	30.12	224	P	P	01 47 39.0	-0.2
	comp=Z,7.5nm,1.0s,mb4.4,baz=24,slow=1.6,SNR=5.4						
WB2	Warramunga Arr	31.42	251	eP	P	01 47 49.9	-0.9
WRA	Warramunga Arr	31.43	251	P	P	01 47 50.2	-0.7
	comp=Z,26nm,1.1s,mb5.0,baz=81,slow=9.0,SNR=16						
RPZ	Rata Peaks	32.27	173	P	P	01 47 57.7	-0.3
	comp=Z,28nm,0.9s,mb5.1,baz=16,slow=10,SNR=6.2						
RPZ	Rata Peaks	32.27	173	P	P	01 47 57.7	-0.3
ASAR	Alice Springs	32.67	244	P	P	01 48 00.8	-1.0
	comp=Z,12nm,0.8s,mb4.8,baz=69,slow=9.7,SNR=52						
ASAR				PcP	PcP	01 50 47.4	0.0
	comp=Z,2.7nm,0.7s,baz=66,slow=2.7,SNR=7.6						
KAKA	Kakadu	32.72	265	eP	P	01 48 01.6	-0.7
	comp=Z,12nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	39.38	256	P	P	01 48 59.1	-0.2
	comp=Z,9.4nm,0.6s,mb4.7,baz=43,slow=4.6,SNR=7.5						
FORT	Forrest	39.83	236	eP	P	01 49 02.8	-0.1
	comp=Z,20nm,0.9s,mb4.8						
BATI	Baumata	41.47	268	P	P	01 49 16.2	-0.4
	comp=Z,20nm,0.5s,mb5.0,baz=196,slow=4.5,SNR=5.2						
MBWA	Marble Bar	45.16	252	eP	P	01 49 46.2	-0.1
	comp=Z,31nm,1.0s,mb5.1						
KAPI	Kappang	46.09	274	P	P	01 49 53.8	-0.1
	comp=Z,49nm,1.0s,mb5.4,baz=90,slow=5.8,SNR=13						
KLBR	Kellerberrin	48.52	238	eP	P	01 50 11.9	-0.6
	comp=Z,66nm,1.0s,mb5.6						
NWAO	Narrogin (SRO)	49.26	236	P	P	01 50 17.8	-0.4
	comp=Z,9.5nm,0.7s,mb4.9,baz=113,slow=6.4,SNR=3.7						
NWAO	Narrogin (SRO)	49.26	236	eP	P	01 50 17.9	-0.3
NWAO				pmax	pmax		
	comp=Z,25nm,1.1s						
NWAO	Narrogin (SRO)	49.26	236	eP	P	01 50 17.9	-0.3
	comp=Z,25nm,1.1s,mb5.2						
MJAR	Matsushiro Arr	54.56	333	P	P	01 50 56.2	-1.3
	comp=Z,2.1nm,0.8s,mb4.2,baz=173,slow=3.8,SNR=5.3						
ASAJ	Asahikawa	59.40	341	P	P	01 51 31.9	+0.3
	comp=Z,5.5nm,0.6s,mb4.8,baz=34,slow=26,SNR=6.3						
KSRS	Korea Array	60.45	326	P	P	01 51 39.4	+0.4
	comp=Z,2.1nm,0.7s,mb4.2,baz=136,slow=7.0,SNR=5.5						
PETK	Petropavlovsk-	64.87	355	P	P	01 52 06.7	-1.4
	comp=Z,2.7nm,0.8s,mb4.3,baz=147,slow=6.9,SNR=3.9						
CASY	Casey	65.89	201	eP	P	01 52 12.2	-2.4
SBA	Scott Base	66.21	180	eP	P	01 52 17.0	+0.4
SBA				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
SBA	Scott Base	66.21	180	eP	P	01 52 17.0	+0.4
	comp=Z,14nm,0.9s,mb5.0						
KLR	Kul'dur	67.66	337	eP	P	01 52 21.0	-5.1
XAN	Xi'an	70.63	312	P	P	01 52 45.5	+0.6
XAN				AP	pP	01 52 54.0	-0.3
XAN				XP	sP	01 52 58.3	+0.4
XAN				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
CMAR	Chiang Mai Arr	72.49	294	P	P	01 52 58.0	+1.6
	comp=Z,4.7nm,0.8s,mb4.5,baz=120,slow=4.6,SNR=19						
LZH	Lanzhou	75.27	312	eP	P	01 53 14.8	+2.5
LZH				AP	pP	01 53 22.1	+0.3
LZH				XP	sP	01 53 25.4	+0.1
LZH				AMB	AMB		
	comp=Z,46nm,1.2s,mb5.3						
LZH				AMB	AMB		
	comp=Z,208nm,5.0s						
OHAK	Old Harbor	76.40	21	eP	P	01 53 15.1	-3.2
	comp=Z,5.0nm,0.8s,mb4.5						
YAK	Yakutsk	78.70	343	eP	P	01 53 30.3	-0.8
YAK				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
YAK	Yakutsk	78.70	343	eP	P	01 53 30.3	-0.8
	comp=Z,23nm,0.8s,mb5.2						
ULN	Ulaanbaatar	78.87	324	eP	P	01 53 32.9	+0.6
ULN				pmax	pmax		
	comp=Z,85nm,2.0s,mb5.3						
ULN	Ulaanbaatar	78.87	324	eP	P	01 53 32.9	+0.6
	comp=Z,85nm,2.0s,mb5.3						
SONM	Songino Array	79.23	324	P	P	01 53 35.3	+1.0
	comp=Z,2.1nm,0.6s,mb4.3,baz=138,slow=6.2,SNR=13						
GTA	Gaotai	79.58	314	eP	P	01 53 38.4	+2.0
GTA				AP	pP	01 53 42.7	-3.2
GTA				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.9						
TTA	Tatalina	79.95	17	eP	P	01 53 36.6	-1.2
TTA				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
TTA	Tatalina	79.95	17	eP	P	01 53 36.6	-1.2
	comp=Z,13nm,1.1s,mb4.8						
ZAK	Zakamensk	82.27	325	eP	P	01 53 50.0	-0.5
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.4						
COLA	College	83.80	18	eP	P	01 54 00.3	+2.2
COLA				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
COLA	College	83.80	18	eP	P	01 54 00.3	+2.2
	comp=Z,11nm,0.8s,mb5.0						
YBH	Yreka Blue Hor	84.20	45	P	P	01 54 01.8	+1.2
	comp=Z,2.7nm,0.8s,mb4.4,baz=260,slow=3.6,SNR=6.9						
MAW	Mawson	84.23	202	P	P	01 54 00.8	+0.4
	comp=Z,3.5nm,0.9s,mb4.5,baz=96,slow=8.1,SNR=6.1						
HYT	Haines Junctio	84.86	24	eP	P	01 54 04.2	+0.6
EGAK	Eagle	85.88	20	eP	P	01 54 06.8	-1.7
	comp=Z,6.3nm,0.8s,mb4.9						
DAWY	Dawson	86.05	21	eP	P	01 54 07.7	-1.7
NVAR	Mina Array Bea	86.29	50	P	P	01 54 12.7	+1.5
	comp=Z,0.8nm,0.6s,mb4.2,baz=236,slow=8.1,SNR=6.5						
LDFC	Landfair	87.78	54	eP	P	01 54 21.4	+2.9
	comp=Z,11nm,1.0s,mb5.0						
HLID	Hailey	90.58	46	eP	P	01 54 30.8	-0.6
	comp=Z,1.9nm,0.8s,mb4.5						
MKAR	Makanchi Array	94.06	317	P	P	01 54 47.7	+0.2
	comp=Z,9.0nm,0.7s,mb5.3,baz=113,slow=5.9,SNR=67						
MKAR	Makanchi Array	94.06	317	P	P	01 54 47.7	+0.2
YKA	Yellowknife Ar	95.43	27	P	P	01 54 50.4	-2.9
	comp=Z,0.2nm,0.6s,mb3.8,baz=255,slow=4.9,SNR=3.4						
YKA	Yellowknife Ar	95.43	27	P	P	01 54 50.4	-2.9
ARCES	ARCESS Array B	116.94	345	PKP	PKPdf	02 00 11.7	-1.5
	comp=Z,1.1nm,0.4s,baz=80,slow=2.1,SNR=25						
AKASG	Malin Array Be	127.44	327	PKP	PKPdf	02 00 31.1	-2.8
	comp=Z,0.1nm,0.2s,baz=52,slow=2.6,SNR=4.9						
GERES	GERESS Array B	136.30	334	PKP	PKPdf	02 00 50.2	-0.5
	comp=Z,1.3nm,0.9s,baz=45,slow=2.6,SNR=7.4						
LPL	La Plagne	141.84	336	ePKP1	PKPdf	02 00 58.1	-2.9
LPG	La Plagne	141.85	336	ePKP1	PKPdf	02 00 57.3	-3.7
AVF	Avril sur Loir	141.98	340	ePKP1	PKPdf	02 00 56.5	-4.7
MBDF	Montbardon	142.48	335	ePKP1	PKPdf	02 00 56.4	-5.7
	comp=Z,3.4nm,0.7s						
ORIF	Oris-en-Rattie	142.68	336	ePKP1	PKPdf	02 00 58.6	-3.9
TCF	Toulx Ste Croi	142.79	341	ePKP1	PKPdf	02 00 59.7	-2.9
SBF	Sospel	142.90	334	ePKP1	PKPdf	02 00 57.9	-5.0
	comp=Z,22nm,1.0s						
MFF	Saint Martin d	143.20	344	ePKP1	PKPdf	02 01 00.0	-3.3
PGF	Pioggiola	143.22	331	ePKP1	PKPdf	02 00 59.0	-4.5
	comp=Z,26nm,1.1s						
FRF	La Foret Royal	143.48	334	ePKP1	PKPdf	02 01 00.0	-3.9
	comp=Z,17nm,0.9s						
LMR	La Mourre	143.72	334	ePKP1	PKPdf	02 01 00.9	-3.5
	comp=Z,24nm,1.0s						
CAF	Calviac	144.05	340	ePKP1	PKPdf	02 01 02.5	-2.4
LASF	Ste Croix	144.16	338	ePKP1	PKPdf	02 01 02.9	-2.2
	comp=Z,35nm,1.1s						
LFF	La Frestale	144.46	342	ePKP1	PKPdf	02 01 03.4	-2.2
	comp=Z,15nm,0.9s						
MTLF	Montolieu	145.39	339	ePKP1	PKPbc	02 01 07.0	-0.2
SJPF	Ste Jean	146.71	343	ePKP1	PKPbc	02 01 09.9	-1.3
KEST	Kesra	147.98	322	PKPbc	PKPbc	02 01 15.1	+0.2
	comp=Z,10nm,1.0s,baz=291,slow=1.3,SNR=12						
ESDC	Sonseca Array	150.67	344	PKPbc	PKPbc	02 01 20.5	-1.0
	comp=Z,0.5nm,0.5s,baz=28,slow=2.2,SNR=11						
TORD	Torodi Ar. Bea	164.50	277	PKP	PKPdf	02 01 32.8	-1.1
	comp=Z,2.8nm,1.0s,baz=280,slow=0.8,SNR=8.7						

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*IDC **02** 01:43:10.1±1.4, 1186S×16582E, h0^{km}, mb4.4/9, mb1 4.5/9, mb1mx4.3/15, mbtmp4.4/9, Error ellipse: s-maj=49.1km s-min=24.7km az=121.0*
*ISCJB **02** 01:43:15.8±1.4, 118S±0.1×1654E±02, h33^{km}, mb4.5/11, Error ellipse: s-maj=35.6km s-min=17.0km az=22.3*
*NEIC **02** 01:43:16.0±0.9, 1178S×16568E, h35^{km}, mb4.6/6, Error ellipse: s-maj=27.3km s-min=13.1km az=122.0*
ISC 02 01:43:17.0±1.4**, 118S**±01×**1655E**±02**, h35^{km}, n35, σ$0^{s}84$**/17**, mb4.5**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.27	244	eP	P	01 47 50.8	+1.1
	14nm,0.8s						
CTA	Charters Tower	20.27	244	P	P	01 47 50.5	+0.8
	9.0nm,0.6s,baz=74,slow=14,SNR=3.5						
CTAO	Charters Tower	20.27	244	eP	P	01 47 50.8	+1.2
	11nm,0.7s						
ARMA	Armidale	22.59	213	eP	P	01 48 15.6	+1.2
STKA	Stephens Creek	29.77	224	eP	P	01 49 20.5	+0.2
	9.4nm,0.6s,mb4.7						
STKA	Stephens Creek	29.77	224	P	P	01 49 20.5	+0.1
	6.9nm,0.7s,mb4.5,baz=56,slow=10,SNR=6.5						
WB2	Warramunga Arr	31.02	251	eP	P	01 49 31.1	-0.5
WRA	Warramunga Arr	31.04	251	P	P	01 49 30.7	-1.0
	3.9nm,0.6s,mb4.4,baz=82,slow=9.0,SNR=6.4						
ASAR	Alice Springs	32.28	244	P	P	01 49 41.9	-0.7
	3.8nm,0.7s,mb4.3,baz=72,slow=9.4,SNR=4.1						
KAKA	Kakadu	32.34	265	eP	P	01 49 42.7	-0.5
	19nm,0.7s,mb5.0						
MBWA	Marble Bar	44.76	252	eP	P	01 51 27.0	-0.4
	6.4nm,0.8s,mb4.5						
CMAR	Chiang Mai Arr	72.21	294	P	P	01 54 40.9	+1.9
	2.4nm,0.6s,mb4.3,baz=122,slow=5.1,SNR=4.3						
ULN	Ulaanbaatar	78.76	324	eP	P	01 55 16.2	+0.3
	5.0nm,0.8s,mb4.5						
SONM	Songino Array	79.12	324	P	P	01 55 18.3	+0.4
	1.6nm,0.7s,mb4.0,baz=141,slow=5.4,SNR=3.9						
MAW	Mawson	83.97	202	P	P	01 55 42.4	-0.8
	3.0nm,0.8s,mb4.5,baz=107,slow=6.4,SNR=5.1						
MKAR	Makanchi Array	93.90	317	P	P	01 56 31.0	+0.1
	1.5nm,0.8s,mb4.5,baz=95,slow=4.7,SNR=4.0						
ZALV	Zalesovo Beam	94.02	324	P	P	01 56 30.3	-1.0
	0.6nm,0.6s,mb4.2,baz=116,slow=6.6,SNR=2.4						
ARCES	ARCESS Array B	116.98	345	PKP	PKPdf	02 01 55.8	-1.7
	2.9nm,0.7s,baz=55,slow=2.9,SNR=5.6						
FLN	La Foliniere	141.33	345	ePKP1	PKPdf	02 02 39.9	-4.2
	7.6nm,0.8s						
LOR	Lormes	141.40	340	ePKP1	PKPdf	02 02 37.5	-6.8
GRR	Gorron	141.77	345	ePKP1	PKPdf	02 02 41.0	-3.9
	31nm,1.3s						
LPL	La Plagne	141.82	336	ePKP1	PKPdf	02 02 38.6	-6.5
ORIF	Oris-en-Rattie	142.65	336	ePKP1	PKPdf	02 02 40.9	-5.7
	17nm,0.8s						
TCF	Toulx Ste Croi	142.80	341	ePKP1	PKPdf	02 02 41.0	-5.8
	6.3nm,1.0s						
VIVF	Saint-Julien-l	143.18	337	ePKP1	PKPdf	02 02 43.1	-4.4
SMRF	Simiane la Rot	143.55	335	ePKP1	PKPdf	02 02 42.8	-5.4
	92nm,1.6s						
RJF	Les Rejaudoux	143.90	341	ePKP1	PKPdf	02 02 44.1	-4.7
	40nm,1.4s						
CAF	Calviac	144.05	340	ePKP1	PKPdf	02 02 44.8	-4.2
	16nm,0.9s						
LASF	Ste Croix	144.15	337	ePKP1	PKPdf	02 02 45.3	-3.9
	27nm,0.8s						
LFF	La Frestale	144.47	341	ePKP1	PKPdf	02 02 45.5	-4.3
	22nm,0.8s						
MTLF	Montolieu	145.38	338	ePKP1	PKPbc	02 02 49.3	-2.0
	22nm,0.7s						
ETSF	Etsaut	146.72	341	ePKP1	PKPbc	02 02 52.7	-2.6
	12nm,0.7s						
SJPF	Ste Jean	146.73	342	ePKP1	PKPbc	02 02 52.9	-2.5
KEST	Kesra	147.86	322	PKPbc	PKPbc	02 02 58.0	-0.8
	1.7nm,0.7s,baz=90,slow=2.0,SNR=4.0						
ESDC	Sonseca Array	150.69	343	PKPbc	PKPbc	02 03 04.2	-1.5
	1.1nm,0.6s,baz=21,slow=3.2,SNR=5.1						

IDC 02 01:45:45.9±8.4**, 1196S**×**16628E, h0^{km}, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.9**/14**, mbtmp4.2**/3**, Error ellipse: s-maj=254.1km s-min=52.5km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.68	251	P	P	01 52 11.5	+0.1
	1.5nm,0.5s,baz=83,slow=9.1,SNR=6.3						
ASAR	Alice Springs	32.87	245	P	P	01 52 21.8	0.0
	2.3nm,0.6s,baz=66,slow=10.0,SNR=11						
MKAR	Makanchi Array	94.55	317	P	P	01 59 08.4	0.0
	0.4nm,0.5s,baz=113,slow=4.0,SNR=4.5						

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*ISCJB **02** 01:51:16.2±0.2, 4625N±002×1338E±001, h14^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=1.6km az=19.6*
*VIE **02** 01:51:16.1±0.1, 4622N×1335E, h10^{km}±1^{km}, mb1.9/9, ML2.6/11, Error ellipse: s-maj=0.7km s-min=0.4km az=25.0 15 km NNW of Cividale*
*LJU **02** 01:51:16.4, 4624N×1337E, h14^{km}, ML2.2*
*CSEM **02** 01:51:16.2±0.1, 4622N×1335E, h17^{km}, ML3.1/12, Error ellipse: s-maj=1.0km s-min=0.6km az=12.0*
*NEIC **02** 01:51:17.3±0.4, 4620N×1337E, h10^{km}, ML2.3(LJU), ML2.3(ROM), ML2.8(SZGRF), Error ellipse: s-maj=6.6km s-min=3.1km az=210.0*
*ROM **02** 01:51:18.1±0.4, 4634N×1330E, h2^{km}, Md2.5/2, Ml2.3/3, Error ellipse: s-maj=3.8km s-min=2.6km az=131.0*
*PRU **02** 01:51:18.3, 4627N×1337E, h0^{km}*
*SZGRF **02** 01:51:20.5, 4638N×1345E, h10^{km}, mb2.8, Austria*
ISC 02 01:51:17.2±0.2**, 4625N**±001×**1338E**±001**, h8^{km}**±2^{km}**, n93, σ$0^{s}98$**/167**, 16C-17D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAD	Bernadia	0.09	262	⇑iPg	Pg	01 51 19.2	-0.3
BAD				i Sg	Sg	01 51 20.8	-0.3
GMNA	Gemona	0.10	285	Pg	Pg	01 51 20.6	+1.0
GMNA				Sg	Sg	01 51 23.2	+1.9
	613nm,0.3s						
COLI	Coloredo	0.12	179	⇓iPg	Pg	01 51 19.7	-0.2
COLI				i Sg	Sg	01 51 21.8	+0.1
PTCC	Patocco-Chiusa	0.16	354	Pg	Pg	01 51 20.5	0.0
BUA	Buia	0.18	260	⇓iPg	Pg	01 51 20.5	-0.4
BUA				i Sg	Sg	01 51 23.5	+0.1
DRE	Drenchia	0.20	112	⇑iPg	Pg	01 51 21.1	-0.2
DRE				i Sg	Sg	01 51 24.6	+0.6
BOO	Bordano	0.20	290	⇑iPg	Pg	01 51 21.0	-0.3
LSR	Lussari	0.25	25	⇓iPg	Pg	01 51 22.2	0.0
LSR				i Sg	Sg	01 51 26.5	+0.9
MPRI	Monte Prat	0.27	268	⇑iPg	Pg	01 51 22.1	-0.4
MPRI				i Sg	Sg	01 51 27.1	+0.9
MPRI	Monte Prat	0.27	268	i Pg	Pg	01 51 22.1	-0.4
MPRI				i Sg	Sg	01 51 27.0	+0.8
PLRO	Paularo	0.34	332	⇑iPg	Pg	01 51 23.8	-0.1
PLRO				i Sg	Sg	01 51 29.3	+0.9
TLI	Talmassons	0.38	210	⇓iPg	Pg	01 51 24.0	-0.6
VOJS	Vojsko	0.41	122	i Pg	Pg	01 51 24.9	-0.3
VOJS				i Sg	Sg	01 51 31.9	+1.2
ZOU	Zoufplan	0.41	318	⇑iPg	Pg	01 51 25.0	-0.3
ZOU				Sg	Sg	01 51 31.9	+1.1
MYKA	Terra Mystica	0.42	26	⇓iPg	Pg	01 51 25.4	0.0
MYKA				⇓iSg	Sg	01 51 31.8	+0.8
	30nm,0.1s						
GORS	Gorjuse	0.43	81	i Pg	Pg	01 51 25.3	-0.4
GORS				i Sg	Sg	01 51 32.1	+0.7
GORS							
	comp=Z,146nm,0.1s						
GORS	Gorjuse	0.43	81	i Pg	Pg	01 51 25.3	-0.4
GORS				i Sg	Sg	01 51 32.1	+0.7
GORS	Gorjuse	0.43	81	i Pg	Pg	01 51 25.3	-0.4
GORS				i Sg	Sg	01 51 32.1	+0.7
FVI	Forni Avoltri	0.54	310	Pg	Pg	01 51 27.1	-0.5
FVI				Sg	Sg	01 51 35.1	+0.4
	comp=Z,190nm,0.3s						
MLNI	Malnisio	0.54	260	⇓iPg	Pg	01 51 27.1	-0.5
MLNI				i Sg	Sg	01 51 35.5	+0.8
MLNI	Malnisio	0.54	260	i Pg	Pg	01 51 27.1	-0.6
MLNI				i Sg	Sg	01 51 35.5	+0.8
CSMI	Casera Mimoias	0.57	298	⇓iPg	Pg	01 51 27.4	-0.8
CSMI				i Sg	Sg	01 51 36.0	+0.4
JAVS	Javornik	0.60	126	i Pg	Pg	01 51 28.0	-0.8
JAVS				i Sg	Sg	01 51 37.5	+0.9
JAVS							
	comp=Z,44nm,0.1s						
JAVS	Javornik	0.60	126	i Pg	Pg	01 51 28.0	-0.7
JAVS				i Sg	Sg	01 51 37.5	+1.0
JAVS	Javornik	0.60	126	i Pg	Pg	01 51 28.0	-0.8
JAVS				i Sg	Sg	01 51 37.5	+0.9
CAE	Caneva	0.70	250	ePg	Pg	01 51 30.0	-0.6
CAE				eSg	Sg	01 51 40.8	+1.1
CSO	Casso	0.73	272	⇑iPg	Pg	01 51 30.0	-1.2
CSO				i Sg	Sg	01 51 41.0	+0.2
ABTA	Abfaltersbach	0.78	310	⇓ePg	Pg	01 51 31.3	-0.9
	SNR=13						
ABTA				⇓iSg	Sg	01 51 42.6	+0.3
	comp=Z,42nm,0.3s						
LJU	Ljubljana	0.83	104	i Pg	Pg	01 51 32.7	-0.4
LJU				i Sg	Sg	01 51 45.8	+1.9
LJU							
	comp=Z,63nm,0.1s						
LJU	Ljubljana	0.83	104	i Pg	Pg	01 51 32.7	-0.4
LJU				i Sg	Sg	01 51 45.8	+2.0
LJU	Ljubljana	0.83	104	i Pg	Pg	01 51 32.7	-0.4
LJU				i Sg	Sg	01 51 45.8	+1.9
KBA	Koelnbreinsper	0.83	359	⇓ePg	Pg	01 51 33.0	-0.2
	SNR=9.6						
KBA				⇑iSg	Sg	01 51 45.1	+1.1
	comp=Z,28nm,0.2s						
KBA	Koelnbreinsper	0.83	359	ePg	Pg	01 51 33.8	+0.6
KBA				eSg	Sg	01 51 43.0	-1.0
KBA	Koelnbreinsper	0.83	359	Pg	Pg	01 51 33.0	-0.2
	comp=Z,9.0nm,6.0s						
KBA				Sg	Sg	01 51 45.1	+1.1
	comp=Z,28nm,0.2s						
SKDS	Skadanscina	0.83	147	i Pg	Pg	01 51 31.6	-1.6
SKDS				i Sg	Sg	01 51 44.6	+0.6
OBKA	Obir	0.85	72	ePg	Pg	01 51 33.3	-0.3
	SNR=13						
OBKA				⇑iSg	Sg	01 51 45.7	+1.0
	comp=Z,39nm,0.2s						
OBKA	Obir	0.85	72	Pg	Pg	01 51 33.3	-0.3
	comp=Z,12nm,9.0s						
OBKA				Sg	Sg	01 51 45.7	+1.0
	comp=Z,39nm,0.2s						
CEY	Cerknica	0.89	125	i Pg	Pg	01 51 33.0	-1.3
CEY				i Sg	Sg	01 51 47.3	+1.3
CEY							
	comp=Z,26nm,0.1s						
CEY	Cerknica	0.89	125	i Pg	Pg	01 51 33.0	-1.4
CEY				i Sg	Sg	01 51 47.3	+1.3
CEY	Cerknica	0.89	125	i Pg	Pg	01 51 33.0	-1.3
CEY				i Sg	Sg	01 51 47.3	+1.3
VNDS	Vrh nad Dolski	0.93	99	i Pg	Pg	01 51 34.6	-0.5
VNDS				i Sg	Sg	01 51 49.3	+2.0
SEST	Monte Rota	0.94	302	Pg	Pg	01 51 34.4	-0.9
SEST				Sg	Sg	01 51 47.9	+0.3
	comp=Z,57nm,0.8s						
MTLO	Montello	0.99	244	ePg	Pg	01 51 35.3	-0.9
KNDS	Knezji Dol	1.01	135	i Pg	Pg	01 51 34.7	-1.8
KNDS				i Sg	Sg	01 51 52.0	+2.4
KNDS							
	comp=Z,33nm,0.1s						
KNDS	Knezji Dol	1.01	135	i Pg	Pg	01 51 34.7	-1.8
KNDS				i Sg	Sg	01 51 52.0	+2.4
KNDS	Knezji Dol	1.01	135	i Pg	Pg	01 51 34.7	-1.8
KNDS				i Sg	Sg	01 51 52.0	+2.4
VISS	Visnje	1.11	113	i Pg	Pg	01 51 38.0	-0.5
VISS				i Sg	Sg	01 51 55.1	+2.1
VISS							
	comp=Z,28nm,0.1s						
VISS	Visnje	1.11	113	i Pg	Pg	01 51 38.0	-0.6
VISS				i Sg	Sg	01 51 55.1	+2.1
VISS	Visnje	1.11	113	i Pg	Pg	01 51 38.0	-0.5
VISS				i Sg	Sg	01 51 55.1	+2.1
CGRP	Cima Grappa	1.16	252	⇓ePg	Pg	01 51 39.9	+0.5
CTI	Castel Tesino	1.22	261	Pg	Pg	01 51 40.7	+0.2
CTI				Sg	Sg	01 51 57.2	+0.9
	comp=Z,119nm,0.5s						
SOKA	Soboth	1.22	69	⇑iPn	Pn	01 51 39.7	-0.9
SOKA				⇓iPg	Pg	01 51 40.2	-0.5
PERS	Pernice	1.26	72	i Pg	Pg	01 51 40.6	-0.8
PERS				i Sg	Sg	01 51 57.9	0.0
LEGS	Legarje	1.38	102	i Pg	Pg	01 51 43.0	-0.8
LEGS				i Sg	Sg	01 52 02.2	+0.5
DOBS	Dobrina	1.46	93	i Pg	Pg	01 51 44.1	-1.0
GROS	Grobnik	1.49	81	i Pg	Pg	01 51 44.8	-0.9
GROS				i Sg	Sg	01 52 05.9	+0.9
APPI	Appiano	1.50	280	Pg	Pg	01 51 45.6	-0.5
APPI				Sg	Sg	01 52 06.3	+0.7
	comp=Z,116nm,0.4s						
BOJS	Bojanci	1.51	119	i Pg	Pg	01 51 45.0	-1.1
BOJS				i Sg	Sg	01 52 06.2	+0.5
BOJS							
	comp=Z,18nm,0.2s						
BOJS	Bojanci	1.51	119	i Pg	Pg	01 51 45.0	-1.1
BOJS				i Sg	Sg	01 52 06.2	+0.5
BOJS	Bojanci	1.51	119	i Pg	Pg	01 51 45.0	-1.1
BOJS				i Sg	Sg	01 52 06.2	+0.5
CRES	Cresnjev	1.51	106	i Pg	Pg	01 51 45.4	-0.8
CRES				i Sg	Sg	01 52 05.6	-0.1
WTTA	Wattenberg	1.57	311	⇑ePg	Pg	01 51 46.6	-0.7
	SNR=24						
WTTA				⇓iSg	Sg	01 52 08.4	+0.8
	comp=Z,18nm,0.3s						
WTTA	Wattenberg	1.57	311	ePg	Pg	01 51 47.1	-0.2
WTTA				eSg	Sg	01 52 08.6	+1.0
WTTA	Wattenberg	1.57	311	Pg	Pg	01 51 46.6	-0.7
	comp=Z,23nm,6.0s						
WTTA				Sg	Sg	01 52 08.4	+0.8
	comp=Z,18nm,0.3s						
GOLS	Golise	1.58	98	i Pg	Pg	01 51 45.7	-1.8
GOLS							
	comp=Z,13nm,0.2s						
GCIS	Gornji Cirnik	1.61	103	i Pg	Pg	01 51 47.1	-1.1
GCIS							
	comp=Z,7.0nm,0.1s						
WATA	Walderalm	1.65	312	⇓ePn	Pn	01 51 45.4	-0.9
	SNR=9.4						
WATA				⇑iPg	Pg	01 51 48.1	-0.7
WATA				⇓iSg	Sg	01 52 10.8	+0.7
	comp=Z,4.8nm,0.2s						
WATA	Walderalm	1.65	312	Pn	Pn	01 51 45.4	-0.9
	comp=Z,9.0nm,4.0s						
MOA	Molln	1.71	20	ePg	Pg	01 51 49.7	-0.3
	SNR=12						
MOA				⇑iSg	Sg	01 52 13.9	+1.6
MOA	Molln	1.71	20	ePg	Pg	01 51 49.2	-0.8
MOA	Molln	1.71	20	Pg	Pg	01 51 49.7	-0.3
	comp=Z,12nm,3.0s						
MOA				Sg	Sg	01 52 13.9	+1.7
ARSA	Arzberg	1.78	55	ePg	Pg	01 51 49.4	-2.0
ARSA				eSg	Sg	01 52 13.8	-0.7
MOTA	Moosalm	1.91	306	⇓ePg	Pg	01 51 52.4	-1.4
	SNR=13						
MOTA				⇑iSg	Sg	01 52 19.6	+1.1
	comp=Z,13nm,0.4s						
MOTA	Moosalm	1.91	306	Pg	Pg	01 51 52.4	-1.4
	comp=Z,13nm,3.0s						
MOTA				Sg	Sg	01 52 19.6	+1.1
	comp=Z,13nm,0.4s						
FETA	Feichten	1.98	294	⇑iPg	Pg	01 51 53.7	-1.5
FETA				⇑iSg	Sg	01 52 20.6	-0.3
	comp=Z,3.2nm,0.3s						
GEC2	GERESS Array S	2.61	5	ePn	Pn	01 52 00.6	+1.1
KHC	Kasperske Hory	2.89	3	ePN	Pn	01 52 05.0	+1.6
KHC				ePG	Pg	01 52 10.5	-2.0
KHC				eSN	Sn	01 52 40.0	+1.8
KHC				eSG	Sg	01 52 49.2	-0.7
	comp=Z,8.6nm,0.4s						
WET	Wettzell	2.92	354	ePn	Pn	01 52 04.5	+0.7
ROTZ	Rotzenmuhle	3.61	348	ePn	Pn	01 52 14.2	+0.9
ROTZ				eSn	Sn	01 52 55.6	-0.4
PRU	Pruhonice	3.82	11	ePN	Pn	01 52 18.5	+2.3
PRU				ePG	Pg	01 52 27.7	-2.7
PRU				eSG	Sg	01 53 20.2	+0.3
	comp=Z,12nm,0.5s						
MANZ	Manzenberg	3.83	348	eSn	Sn	01 53 00.6	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NKC	Novy Kostel	4.03	352	eSG	Sg	01 53 25.6	-1.1
NKC	Novy Kostel	4.03	352	eSg	Sg	01 53 25.6	-1.1
WERN	Wernitzgruen	4.10	351	ePn	Pn	01 52 20.9	+0.9
GUNZ	Gunzen	4.18	351	ePn	Pn	01 52 22.6	+1.5
WERD	Werda	4.26	351	ePn	Pn	01 52 23.5	+1.2
PVCC	Panska Ves	4.36	10	eSG	Sg	01 53 36.0	-1.0
	comp=Z,10nm,0.5s						
DPC	Dobruska-Polom	4.55	25	eSG	Sg	01 53 41.8	-1.4
DPC	Dobruska-Polom	4.55	25	eSg	Sg	01 53 41.8	-1.4
MOX	Moxa	4.55	346	eSn	Sn	01 53 18.6	-0.7
BRG	Berggiesshubel	4.64	4	SN	Sn	01 53 21.5	0.0
BRG				SG	Sg	01 53 47.3	+1.1
	comp=Z,3.7nm,0.6s						
CLL	Collm	5.07	357	ePn	Pn	01 52 38.0	+4.6
CLL				eSg	Sg	01 53 59.0	-0.8
CLL	Collm	5.07	357	eSg	Sg	01 53 59.0	-0.8

IDC 02 01:52:41.2±25.0**,2320S**×**17271W,h0**^{km}**,mb4.5**/4**, mb1 4.7**/4**,mb1mx4.1**/16**,mbtmp4.5**/4**,Error ellipse: s-maj=466.6km s-min=143.8km az=78.0,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	38.18	267	eP	P	02 00 03.2	+0.5
	8.6nm,0.5s						
CTA	Charters Tower	38.18	267	P	P	02 00 03.4	+0.6
	11nm,0.5s,baz=98,slow=12,SNR=20						
STKA	Stephens Creek	41.18	248	eP	P	02 00 26.3	-1.3
	1.3nm,0.4s						
STKA	Stephens Creek	41.18	248	P	P	02 00 25.8	-1.8
	1.8nm,0.5s,baz=110,slow=14,SNR=5.6						
ASAR	Alice Springs	48.73	258	P	P	02 01 27.9	0.0
	2.2nm,0.4s,baz=87,slow=7.4,SNR=54						
WB2	Warramunga Arr	49.12	263	eP	P	02 01 31.2	+0.3
WRA	Warramunga Arr	49.13	263	P	P	02 01 31.6	+0.6
	3.5nm,0.5s,baz=101,slow=8.1,SNR=64						
KAKA	Kakadu	52.95	271	eP	P	02 02 03.1	+3.3
	13nm,1.3s						

IDC 02 02:00:05.0±7.9**,1142S**×**16548E,h0**^{km}**,mb4.1**/3**, mb1 4.2**/3**,mb1mx3.7**/14**,mbtmp4.0**/3**,Error ellipse: s-maj=237.9km s-min=51.6km az=124.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.11	250	P	P	02 06 25.9	+0.4
	0.8nm,0.6s,baz=81,slow=9.1,SNR=5.2						
ASAR	Alice Springs	32.40	244	P	P	02 06 36.5	-0.2
	1.7nm,0.7s,baz=70,slow=9.6,SNR=19						
MKAR	Makanchi Array	93.61	317	P	P	02 13 23.3	0.0
	0.6nm,0.6s,baz=104,slow=6.1,SNR=4.7						

*IDC **02** 02:01:02.9±0.6, 1157S×16595E, h0^{km}, mb4.5/19, mb1 4.6/19, mb1mx4.6/20, mbtmp4.5/19, Error ellipse: s-maj=22.4km s-min=14.8km az=131.0*
*ISCJB **02** 02:01:06.3±0.4, 1159S±007×16590E±008, h33^{km}, mb4.7/38, Error ellipse: s-maj=13.1km s-min=8.2km az=36.2*
*MOS **02** 02:01:06.4±1.4, 1151S×16592E, h33^{km}, mb5.0/10, Error ellipse: s-maj=12.3km s-min=11.3km az=74.3*
*NEIC **02** 02:01:07.9±0.3, 1157S×16596E, h35^{km}, mb4.8/14, Error ellipse: s-maj=14.8km s-min=9.0km az=132.0*
*BJI **02** 02:01:11.1, 1087S×16568E, h35^{km}, mB5.1, mb5.0*
ISC 02 02:01:08.3±0.4**,1159S**±007×**16595E**±008**,h35**^{km}**, (h37**^{km}±.5^{km}**:pP-P),n93,**σ**0**^{s}**93**/64**,mb4.7**/38**,8C-2D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.73	244	eP	P	02 05 48.4	+2.5
	18nm,1.0s						
CTA	Charters Tower	20.73	244	P	P	02 05 47.4	+1.5
	9.4nm,1.0s,baz=74,slow=16,SNR=3.2						
CTA	Charters Tower	20.73	244	eP	P	02 05 48.4	+2.5
CTA				pmax	pmax		
	comp=Z,18nm,1.0s						
CTAO	Charters Tower	20.73	244	eP	P	02 05 48.4	+2.5
CTAO				pmax	pmax		
	comp=Z,32nm,1.0s						
CTAO	Charters Tower	20.73	244	eP	P	02 05 48.4	+2.5
	comp=Z,32nm,1.0s						
ARMA	Armidale	22.97	213	eP	P	02 06 10.4	+0.6
STKA	Stephens Creek	30.19	224	eP	P	02 07 19.6	+4.2
	comp=Z,3.7nm,0.6s,mb4.3						
STKA	Stephens Creek	30.19	224	P	P	02 07 16.8	+1.4
	comp=Z,3.9nm,1.0s,mb4.1,baz=38,slow=12,SNR=5.0						
STKA				PcP	PcP	02 10 16.1	+0.1
	comp=Z,7.0nm,1.0s,baz=108,slow=2.8,SNR=4.4						
WB2	Warramunga Arr	31.48	251	eP	P	02 07 26.1	-0.8
WRAB	Tennant Creek	31.48	251⇓	eP	P	02 07 26.6	-0.3
WRA	Warramunga Arr	31.49	251	P	P	02 07 26.6	-0.4
	comp=Z,6.1nm,1.0s,mb4.4,baz=83,slow=9.2,SNR=11						
WRA				PcP	PcP	02 10 20.3	+0.7
	comp=Z,2.4nm,0.8s,baz=80,slow=3.2,SNR=7.6						
RPZ	Rata Peaks	32.31	173	P	P	02 07 33.7	-0.2
	comp=Z,29nm,0.8s,mb5.2,baz=24,slow=5.7,SNR=6.8						
ASAR	Alice Springs	32.73	244	P	P	02 07 36.5	-1.3
	comp=Z,3.1nm,0.7s,mb4.4,baz=70,slow=9.5,SNR=18						
ASAR				PcP	PcP	02 10 23.6	+0.6
	comp=Z,3.7nm,0.8s,baz=82,slow=2.5,SNR=18						
KAKA	Kakadu	32.76	265	eP	P	02 07 37.5	-0.8
	comp=Z,7.8nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	39.44	256	P	P	02 08 33.9	-1.4
	comp=Z,2.6nm,0.8s,mb4.0,baz=135,slow=6.0,SNR=2.1						
MBWA	Marble Bar	45.21	252	eP	P	02 09 22.6	+0.3
	comp=Z,14nm,1.1s,mb4.7						
KAPI	Kappang	46.13	274	P	P	02 09 28.7	-1.0
	comp=Z,19nm,0.9s,mb5.0,baz=96,slow=3.3,SNR=5.1						
NWAO	Narrogin (SRO)	49.33	236	P	P	02 09 54.1	-0.1
	comp=Z,21nm,1.1s,mb5.1,baz=158,slow=4.9,SNR=3.9						
MJAR	Matsushiro Arr	54.54	333	P	P	02 10 31.8	-1.1
	comp=Z,5.4nm,1.0s,mb4.5,baz=167,slow=6.8,SNR=8.7						
MAJO	Matsushiro	54.55	333	eP	P	02 10 32.0	-0.9
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
MAJO	Matsushiro	54.55	333	eP	P	02 10 32.0	-1.0
	comp=Z,4.0nm,0.7s,mb4.6						
KSRS	Korea Array	60.44	326	P	P	02 11 14.5	+0.1
	comp=Z,1.0nm,0.8s,mb3.9,baz=153,slow=6.6,SNR=4.3						
KSRS				PcP	PcP	02 11 59.1	0.0
	comp=Z,0.8nm,0.4s,baz=134,slow=5.2,SNR=4.9						
YSS	Yuzh-Sakhalins	61.86	342⇑	eP	P	02 11 23.9	0.0
YSS				pmax	pmax		
	comp=Z,16nm,1.2s,mb5.0						
NJ2	Nanjing	62.55	315	eP	P	02 11 30.1	+1.3
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.2						
PETK	Petropavlovsk-	64.83	355	P	P	02 11 43.3	-0.1
	comp=Z,4.0nm,0.9s,mb4.5,baz=157,slow=7.8,SNR=7.9						
CASY	Casey	65.94	201	eP	P	02 11 49.6	-0.9
	comp=Z,11nm,0.9s,mb4.9						
SBA	Scott Base	66.26	180	eP	P	02 11 52.8	+0.4
SBA				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
SBA	Scott Base	66.26	180	eP	P	02 11 52.8	+0.4
	comp=Z,12nm,0.8s,mb5.0						
KLR	Kul'dur	67.63	337	eP	P	02 11 57.7	-3.8
XAN	Xi'an	70.63	312	P	P	02 12 21.2	+0.8
XAN				AP	pP	02 12 31.6	+0.3
XAN				XP	sP	02 12 36.7	+1.3
XAN				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
XAN				AMB	AMB		
	comp=Z,2µm,12.7s						
HHC	Hu-ho-hao-te	72.37	320	eP	P	02 12 37.0	+6.2
HHC				AMB	AMB		
	comp=Z,19nm,0.7s,mb5.1						
CMAR	Chiang Mai Arr	72.51	294	P	P	02 12 33.1	+1.1
	comp=Z,2.5nm,0.7s,mb4.3,baz=127,slow=4.7,SNR=9.9						
HIA	Hailar	72.94	330	iP	P	02 12 34.2	+0.3
CD2	Chengdu	73.09	307⇑	iP	P	02 12 36.1	+0.8
CD2				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
SEY	Seymchan	75.03	354⇑	eP	P	02 12 45.5	-0.4
LZH	Lanzhou	75.27	312	eP	P	02 12 50.1	+2.2
LZH				AP	pP	02 13 00.8	+2.0
LZH				XP	sP	02 13 05.0	+2.2
LZH				AMB	AMB		
	comp=Z,34nm,1.2s,mb5.2						
LZH				AMB	AMB		
	comp=Z,128nm,4.3s						
SVW2	Sparrevohn	78.57	18	eP	P	02 13 05.1	-0.7
YAK	Yakutsk	78.67	343	eP	P	02 13 05.7	-0.7
YAK				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.2s						
YAK	Yakutsk	78.67	343	eP	P	02 13 06.2	-0.2
	comp=E,16nm,0.6s,mb5.1						
ULN	Ulaanbaatar	78.86	324⇑	eP	P	02 13 09.1	+1.4
ULN	Ulaanbaatar	78.86	324	eP	P	02 13 08.5	+0.7
	comp=E,27nm,1.4s,mb5.0						
SONM	Songino Array	79.22	324	P	P	02 13 11.0	+1.3
	comp=E,5.9nm,1.0s,mb4.5,baz=136,slow=5.4,SNR=29						
GTA	Gaotai	79.58	314	P	P	02 13 13.8	+1.9
GTA				AP	pP	02 13 24.8	+1.9
GTA				XP	sP	02 13 29.2	+2.3
GTA				AMB	AMB		
	comp=Z,28nm,1.2s,mb5.1						
TTA	Tatalina	79.89	17	eP	P	02 13 12.2	-0.8
TTA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
TTA	Tatalina	79.89	17	eP	P	02 13 12.2	-0.9
	comp=Z,3.9nm,0.6s,mb4.5						
BOD	Bodaibo	81.11	335	eP	P	02 13 18.7	-1.0
ZAK	Zakamensk	82.26	325⇓	iP	P	02 13 26.0	+0.1
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
COLA	College	83.74	18⇑	eP	P	02 13 32.4	-0.9
COLA	College	83.74	18	eP	P	02 13 31.6	-1.7
	comp=Z,7.5nm,0.6s,mb5.0						
YBH	Yreka Blue Hor	84.13	45	P	P	02 13 37.1	+1.2
	comp=Z,3.1nm,0.8s,mb4.5,baz=169,slow=2.0,SNR=11						
EGAK	Eagle	85.82	20	eP	P	02 13 43.0	-0.7
	comp=Z,8.3nm,0.8s,mb5.0						
NVAR	Mina Array Bea	86.22	50	P	P	02 13 45.7	-0.7
	comp=Z,1.0nm,0.7s,mb4.2,baz=239,slow=8.4,SNR=8.0						
NVAR	Mina Array Bea	86.22	50	P	P	02 13 45.7	-0.7
WVOR	Wild Horse Val	87.22	46	eP	P	02 13 51.5	+0.3
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.7						
WVOR	Wild Horse Val	87.22	46	eP	P	02 13 51.5	+0.3
	comp=Z,5.8nm,1.2s,mb4.7						
MSU	Marysvale	90.87	51	eP	P	02 14 08.3	-0.1
PDAR	Pinedale Array	93.78	47	P	P	02 14 22.8	+1.0
	comp=Z,0.4nm,0.6s,mb4.0,baz=222,slow=1.1,SNR=3.4						
MK31	Makanchi Array	94.05	317	eP	P	02 14 23.2	+0.2
MKAR	Makanchi Array	94.05	317	P	P	02 14 23.5	+0.5
	comp=Z,11nm,0.8s,mb5.4,baz=114,slow=6.0,SNR=63						
ZALV	Zalesovo Beam	94.11	324	P	P	02 14 22.6	-0.5
	comp=Z,8.2nm,0.9s,mb5.2,baz=103,slow=4.7,SNR=26						
ZAL	Zalesovo	94.12	324	P	P	02 14 22.6	-0.5
NVS	Novosibirsk	95.22	325	eP	P	02 14 27.0	-1.1
YKA	Yellowknife Ar	95.36	27	P	P	02 14 29.8	+1.2
	comp=Z,0.4nm,0.7s,mb4.0,baz=262,slow=5.1,SNR=4.1						
KURK	Kurchatov	97.18	320⇑	eP	P	02 14 36.7	-0.4
KURK				pmax	pmax		
	comp=Z,12nm,2.0s,mb5.0						
ARCES	ARCESS Array B	116.91	345	PKP	PKPdf	02 19 47.8	-0.9
	comp=Z,1.6nm,0.6s,baz=60,slow=2.0,SNR=8.9						
GNI	Garni	121.16	310	i PKIKP	PKPdf	02 19 58.8	+1.1
OBN	Obninsk	121.37	329	i PKIKP	PKPdf	02 19 57.6	0.0
OBN				e		02 21 27.3	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LBTB	Lobatse	126.91	226	PKP	PKPdf	02 20 09.2	0.0
	comp=Z,6.2nm,0.9s,baz=153,slow=3.8,SNR=7.4						
NOA	NORSAR Array B	127.28	345	PKP	PKPdf	02 20 08.5	-0.3
	comp=Z,2.0nm,0.8s,baz=30,slow=1.9,SNR=3.8						
AKASG	Malin Array Be	127.43	327	PKP	PKPdf	02 20 08.3	-1.1
	comp=Z,0.1nm,0.3s,baz=52,slow=2.1,SNR=7.1						
LSZ	Lusaka	130.38	238	PKP	PKPdf	02 20 16.5	+0.5
	comp=Z,1.8nm,0.6s,baz=143,slow=4.0,SNR=5.2						
GERES	GERESS Array B	136.28	334	PKP	PKPdf	02 20 23.8	-2.4
	comp=Z,0.7nm,0.7s,baz=39,slow=3.8,SNR=6.9						
LPG	La Plagne	141.83	336	ePKP1	PKPdf	02 20 32.5	-3.9
	comp=Z,3.1nm,0.7s						
ORIF	Oris-en-Rattie	142.65	336	ePKP1	PKPdf	02 20 33.9	-4.0
	comp=Z,9.9nm,0.9s						
TCF	Toulx Ste Croi	142.76	341	ePKP1	PKPdf	02 20 34.7	-3.4
SBF	Sospel	142.88	334	ePKP1	PKPdf	02 20 33.9	-4.4
	comp=Z,18nm,0.8s						
VIVF	Saint-Julien-l	143.17	338	ePKP1	PKPdf	02 20 35.7	-3.1
MFF	Saint Martin d	143.17	344	ePKP1	PKPdf	02 20 35.3	-3.5
	comp=Z,13nm,1.1s						
PGF	Pioggiola	143.21	331	ePKP1	PKPdf	02 20 35.3	-3.7
	comp=Z,22nm,1.0s						
FRF	La Foret Royal	143.46	334	ePKP1	PKPdf	02 20 36.1	-3.3
	comp=Z,15nm,0.8s						
SMRF	Simiane la Rot	143.56	336	ePKP1	PKPdf	02 20 37.1	-2.4
LMR	La Mourre	143.70	334	ePKP1	PKPdf	02 20 37.0	-2.8
	comp=Z,42nm,1.1s						
RJF	Les Rejaudoux	143.86	341	ePKP1	PKPdf	02 20 37.6	-2.4
CAF	Calviac	144.02	340	ePKP1	PKPdf	02 20 38.5	-1.8
	comp=Z,6.1nm,0.8s						
LASF	Ste Croix	144.14	338	ePKP1	PKPdf	02 20 39.1	-1.4
	comp=Z,16nm,0.9s						
LFF	La Frestale	144.43	342⇑	iPKP1	PKPdf	02 20 39.6	-1.4
	comp=Z,19nm,0.9s						
MTLF	Montolieu	145.37	339⇑	iPKP1	PKPbc	02 20 43.0	+0.4
	comp=Z,17nm,0.8s						
EPF	Esparros	146.28	341	ePKP1	PKPbc	02 20 45.7	+0.3
	comp=Z,10nm,1.0s						
ETSF	Etsaut	146.68	342	ePKP1	PKPbc	02 20 47.0	+0.4
	comp=Z,11nm,0.9s						
SJPF	Ste Jean	146.68	343	ePKP1	PKPbc	02 20 46.4	-0.2
	comp=Z,7.1nm,0.7s						
KEST	Kesra	147.97	322	PKPbc	PKPbc	02 20 51.0	+0.6
	comp=Z,11nm,1.1s,baz=2.8,slow=1.0,SNR=9.7						
ESDC	Sonseca Array	150.63	344	PKP	PKPdf	02 20 52.0	+0.6
	comp=Z,0.4nm,0.8s,baz=201,slow=32,SNR=3.2						
ESDC				PKPbc	PKPbc	02 20 56.6	-0.3
	comp=Z,2.3nm,0.8s,baz=20,slow=2.8,SNR=15						
TORD	Torodi Ar. Bea	164.54	277	PKP	PKPdf	02 21 08.7	-0.6
	comp=Z,2.9nm,0.9s,baz=16,slow=2.2,SNR=12						

IDC 02 02:06:49.1±3.5**,1105S**×**16556E,h0**^{km}**,mb3.7**/2**, mb1 4.0**/2**,mb1mx3.6**/13**,mbtmp3.7**/2**,Error ellipse: s-maj=185.1km s-min=51.3km az=143.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.31	250	P	P	02 13 11.9	+0.6
	0.6nm,0.7s,baz=80,slow=9.3,SNR=5.6						
ASAR	Alice Springs	32.62	243	P	P	02 13 22.4	-0.4
	1.1nm,0.6s,baz=71,slow=9.7,SNR=15						
ARCES	ARCESS Array B	116.29	345	PKP	PKPdf	02 25 33.9	-0.1
	1.0nm,0.8s,baz=72,slow=2.9,SNR=3.7						

*IDC **02** 02:08:32.4±2.1, 1138S×16561E, h0^{km}, mb4.2/7, mb1 4.3/7, mb1mx4.1/15, mbtmp4.2/7, Error ellipse: s-maj=75.5km s-min=25.4km az=125.0*
*ISCJB **02** 02:08:34.1±1.0, 117S±02×1660E±02, h33^{km}, mb4.3/11, Error ellipse: s-maj=41.8km s-min=13.5km az=138.2*
*NEIC **02** 02:08:36.2±0.8, 1160S×16598E, h35^{km}, mb4.4/7, Error ellipse: s-maj=34.0km s-min=10.6km az=139.0*
ISC 02 02:08:36.1±1.0**,116S**±02×**1660E**±02**,h35**^{km}**,n20,** σ**0**^{s}**88**/17**,mb4.3**/11**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.75	244	eP	P	02 13 14.0	+0.1
	6.5nm,0.9s						
CTA	Charters Tower	20.75	244	P	P	02 13 12.8	-1.2
	9.3nm,0.9s,baz=82,slow=10,SNR=6.0						
CTAO	Charters Tower	20.75	244	eP	P	02 13 13.9	-0.1
	18nm,1.2s						
STKA	Stephens Creek	30.19	224	P	P	02 14 44.2	+1.0
	3.0nm,1.0s,mb4.0,baz=18,slow=9.6,SNR=2.6						
STKA	Stephens Creek	30.19	224	P	P	02 14 44.2	+1.0
WRA	Warramunga Arr	31.52	251	P	P	02 14 54.5	-0.6
	2.5nm,1.0s,mb4.0,baz=83,slow=9.1,SNR=3.9						
ASAR	Alice Springs	32.76	244	P	P	02 15 04.5	-1.4
	1.4nm,0.9s,mb3.9,baz=67,slow=9.1,SNR=4.2						
KAKA	Kakadu	32.81	265	eP	P	02 15 08.7	+2.2
	23nm,1.5s,mb4.9						
ULN	Ulaanbaatar	78.92	324	eP	P	02 20 36.0	+0.1
	14nm,1.7s,mb4.6						
SONM	Songino Array	79.29	324	P	P	02 20 38.0	+0.1
	1.5nm,1.0s,mb3.9,baz=138,slow=6.3,SNR=7.8						
EYAK	Cordova Ski Ar	81.48	22	eP	P	02 20 50.3	+0.9
COLA	College	83.77	18	eP	P	02 21 00.6	-0.6
	2.6nm,0.9s,mb4.4						
EGAK	Eagle	85.84	20	eP	P	02 21 11.8	+0.2
	3.4nm,0.9s,mb4.6						
DAWY	Dawson	86.02	21	eP	P	02 21 12.6	+0.1
DUG	Dugway	90.80	49	eP	P	02 21 35.6	-0.2
	1.3nm,0.9s,mb4.3						
MKAR	Makanchi Array	94.12	317	P	P	02 21 51.3	+0.3
	2.9nm,0.9s,mb4.7,baz=112,slow=5.9,SNR=12						
ZALV	Zalesovo Beam	94.18	324	P	P	02 21 49.9	-1.3
	0.7nm,0.6s,mb4.3,baz=91,slow=7.4,SNR=4.2						
KEST	Kesra	148.03	322	PKPbc	PKPbc	02 28 19.5	+1.2
	3.2nm,0.9s,baz=306,slow=1.8,SNR=5.8						
ESDC	Sonseca Array	150.69	344	PKPbc	PKPbc	02 28 25.1	+0.2
	0.1nm,0.3s,baz=350,slow=1.2,SNR=6.0						
TORD	Torodi Ar. Bea	164.59	277	PKP	PKPdf	02 28 38.7	+1.6
	0.8nm,0.9s,baz=0.0,slow=1.4,SNR=3.0						

*IDC **02** 02:11:02.4±1.2, 1182S×16591E, h0^{km}, mb4.2/6, mb1 4.2/6, mb1mx4.0/15, mbtmp4.1/6, Error ellipse: s-maj=43.5km s-min=31.8km az=93.0*
*ISCJB **02** 02:11:06.1±1.2, 118S±02×1658E±02, h33^{km}, mb4.1/8, Error ellipse: s-maj=37.6km s-min=23.4km az=29.8*
*NEIC **02** 02:11:07.5±0.8, 1183S×16594E, h35^{km}, mb4.1/2, Error ellipse: s-maj=27.2km s-min=17.8km az=121.0*
ISC 02 02:11:07.8±1.1**,118S**±02×**1659E**±02**,h35**^{km}**,n11,**σ**0**^{s}**60**/9**, mb4.1**/8**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.38	251	P	P	02 17 25.1	-0.5
	0.4nm,0.5s,mb3.5,baz=84,slow=9.1,SNR=4.5						
ASAR	Alice Springs	32.60	244	P	P	02 17 36.0	-0.2
	0.7nm,0.7s,mb3.7,baz=68,slow=9.3,SNR=7.6						
ASAR				PcP	PcP	02 20 22.6	+0.4
	0.9nm,0.8s,baz=82,slow=2.9,SNR=6.0						
QSPA	South Pole Qui	78.20	180	P	P	02 23 03.7	+0.5
	3.5nm,0.9s,mb4.3,baz=351,slow=3.2,SNR=13						
QSPA	South Pole Qui	78.20	180	P	P	02 23 03.7	+0.5
ULN	Ulaanbaatar	79.01	324	eP	P	02 23 08.7	+0.6
	1.3nm,0.5s,mb4.1						
SONM	Songino Array	79.37	324	P	P	02 23 10.8	+0.7
	1.0nm,0.9s,mb3.8,baz=150,slow=6.0,SNR=5.1						
EGAK	Eagle	86.03	20	eP	P	02 23 43.3	-1.1
	0.8nm,0.6s,mb4.1						
MKAR	Makanchi Array	94.18	317	P	P	02 24 23.5	+0.4
	1.7nm,0.5s,mb4.7,baz=111,slow=5.7,SNR=8.9						
ZALV	Zalesovo Beam	94.26	324	P	P	02 24 22.8	-0.5
	3.0nm,0.9s,mb4.7,baz=106,slow=5.3,SNR=5.1						
KEST	Kesra	148.11	322	PKPbc	PKPbc	02 30 50.0	-0.3
	1.7nm,0.8s,baz=278,slow=1.3,SNR=5.0						
TORD	Torodi Ar. Bea	164.53	277	PKP	PKPdf	02 31 08.8	0.0
	0.6nm,0.9s,baz=90,slow=1.4,SNR=3.1						

*IDC **02** 02:14:53.9±1.6, 1173S×16594E, h0^{km}, mb4.3/6, mb1 4.3/6, mb1mx4.1/16, mbtmp4.2/6, Error ellipse: s-maj=45.5km s-min=32.7km az=96.0*
*ISCJB **02** 02:14:58.3±1.5, 117S±02×1658E±03, h33^{km}, mb4.1/6, Error ellipse: s-maj=41.3km s-min=28.3km az=27.2*
ISC 02 02:14:59.9±1.5**,117S**±02×**1658E**±03**,h35**^{km}**,n7,**σ**0**^{s}**44**/7**, mb4.1**/6**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WB2	Warramunga Arr	31.34	251	eP	P	02 21 17.8	+0.5
WRA	Warramunga Arr	31.36	251	P	P	02 21 17.1	-0.3
	2.3nm,0.8s,mb4.0,baz=84,slow=8.7,SNR=12						
ASAR	Alice Springs	32.59	244	P	P	02 21 28.1	-0.1
	3.2nm,0.8s,mb4.3,baz=71,slow=9.6,SNR=27						
QSPA	South Pole Qui	78.31	180	P	P	02 26 56.0	+0.1
	8.6nm,1.2s,mb4.5,baz=217,slow=0.6,SNR=7.2						
SONM	Songino Array	79.24	324	P	P	02 27 02.1	+0.6
	0.3nm,0.5s,mb3.5,baz=134,slow=6.2,SNR=2.3						
MKAR	Makanchi Array	94.06	317	P	P	02 28 14.7	+0.1
	0.5nm,0.6s,mb4.1,baz=193,slow=31,SNR=3.8						
KURK	Kurchatov	97.20	320	P	P	02 28 28.0	-0.8
	0.4nm,0.3s,mb4.3,baz=183,slow=25,SNR=3.1						

*IDC **02** 02:14:59.5±0.7, 1175S×16598E, h0^{km}, mb4.6/18, mb1 4.6/18, mb1mx4.6/18, mbtmp4.5/18, Error ellipse: s-maj=24.1km s-min=15.6km az=95.0*
*ISCJB **02** 02:15:04.4±0.4, 1182S±007×16565E±007, h35^{km}, mb4.5/35, Error ellipse: s-maj=10.9km s-min=9.4km az=44.0*
*BJI **02** 02:15:05.6, 1180S×16570E, h35^{km}, mB5.0, mb4.9*
*NEIC **02** 02:15:05.7±2.4, 1180S×16574E, h35^{km}±20^{km}, mb4.6/13, Error ellipse: s-maj=14.3km s-min=9.8km az=106.0*
ISC 02 02:15:06.1±0.4**,1181S**±007×**16572E**±007**,h35**^{km}**,n73,** σ**1**^{s}**04**/51**,mb4.5**/35**,6C,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.15	292	ePn	Pn	02 16 33.1	-1.3
CTA	Charters Tower	20.43	244	eP	P	02 19 36.5	-3.9
	13nm,0.9s						
CTA	Charters Tower	20.43	244	P	P	02 19 41.0	+0.5
	15nm,0.9s,baz=64,slow=8.2,SNR=8.0						
CTAO	Charters Tower	20.43	244	eP	P	02 19 41.4	+1.0
	43nm,1.4s						
ARMA	Armidale	22.66	213	eP	P	02 20 02.6	-1.7
STKA	Stephens Creek	29.87	224	eP	P	02 21 05.4	-5.0
	6.2nm,0.9s,mb4.3						
STKA	Stephens Creek	29.87	224	P	P	02 21 11.6	+1.3
	3.4nm,0.9s,mb4.1,baz=62,slow=12,SNR=6.9						
WRA	Warramunga Arr	31.20	251	P	P	02 21 22.9	+0.7
	3.7nm,0.8s,mb4.3,baz=84,slow=9.2,SNR=12						
WRA				PcP	PcP	02 24 16.6	-0.1
	1.4nm,0.9s,baz=84,slow=4.5,SNR=5.2						
WRA	Warramunga Arr	31.20	251	P	P	02 21 22.9	+0.7
WRA				PcP	PcP	02 24 16.6	-0.1
RPZ	Rata Peaks	32.12	173	P	P	02 21 29.2	-0.8
	12nm,0.5s,mb5.0,baz=127,slow=3.9,SNR=8.5						
ASAR	Alice Springs	32.43	244	P	P	02 21 33.4	+0.3
	4.2nm,0.6s,mb4.4,baz=69,slow=9.5,SNR=26						
ASAR				PcP	PcP	02 24 19.6	-0.3
	1.1nm,0.6s,baz=64,slow=3.0,SNR=5.8						
ASAR				ScP	ScP	02 28 04.7	+3.4
	1.3nm,1.1s,baz=92,slow=3.8,SNR=4.5						
ASAR	Alice Springs	32.43	244	P	P	02 21 33.4	+0.3
ASAR				PcP	PcP	02 24 19.6	-0.3
ASAR				ScP	ScP	02 28 04.7	+3.4
KAKA	Kakadu	32.52	265	eP	P	02 21 34.5	+0.6
	7.1nm,0.6s,mb4.8						
KAPI	Kappang	45.92	274	P	P	02 23 26.2	+0.3
	11nm,0.6s,mb5.0,baz=268,slow=19,SNR=5.6						
JOW	Kunigami	52.89	317	P	P	02 24 18.1	-0.6
	8.9nm,0.8s,mb4.7,baz=139,slow=7.2,SNR=5.1						
MJAR	Matsushiro Arr	54.64	333	P	P	02 24 29.4	-2.0
	2.8nm,0.9s,mb4.3,baz=170,slow=8.7,SNR=5.8						
MAJO	Matsushiro	54.64	333	eP	P	02 24 32.6	+1.3
	4.8nm,0.8s,mb4.6						
KSRS	Korea Array	60.49	326	P	P	02 25 12.1	-0.5
	1.6nm,0.7s,mb4.2,baz=151,slow=7.2,SNR=5.4						
KSRS				PcP	PcP	02 25 57.6	+0.6
	2.0nm,0.6s,baz=124,slow=3.9,SNR=4.3						
PETK	Petropavlovsk-	65.03	355	P	P	02 25 41.0	-1.5
	3.0nm,0.8s,mb4.4,baz=130,slow=7.1,SNR=5.5						
CASY	Casey	65.66	201	eP	P	02 25 46.8	+0.4
	17nm,1.3s,mb4.9						
SBA	Scott Base	66.04	180	eP	P	02 25 48.5	-0.2
XAN	Xi'an	70.62	313	P	P	02 26 18.2	+0.1
XAN				AP	pP	02 26 28.7	-0.3
XAN				XP	sP	02 26 32.4	-0.7
XAN				AMB	AMB		
	comp=Z,8.0nm,1.7s,mb4.4						
XAN				AMB	AMB		
	comp=Z,7µm,13.4s						
CMAR	Chiang Mai Arr	72.39	294	P	P	02 26 31.0	+1.9
	comp=Z,0.7nm,0.3s,mb4.1,baz=126,slow=4.0,SNR=4.5						
CD2	Chengdu	73.04	308	eP	P	02 26 33.1	+0.3
CD2				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
LZH	Lanzhou	75.25	312	eP	P	02 26 47.0	+1.5
LZH				AP	pP	02 26 57.5	+1.0
LZH				XP	sP	02 27 01.2	+0.6
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,108nm,5.3s						
QSPA	South Pole Qui	78.19	180	P	P	02 27 01.1	-0.3

	comp=Z,20nm,1.1s,mb5.0,baz=22,slow=0.5,SNR=21						
QSPA	South Pole Qui	78.19	180	P	P	02 27 01.1	-0.3
ULN	Ulaanbaatar	78.90	324	eP	P	02 27 06.0	+0.3
	comp=Z,29nm,1.4s,mb5.0						
SONM	Songino Array	79.27	324	P	P	02 27 07.7	-0.1
	comp=Z,3.9nm,1.0s,mb4.3,baz=137,slow=5.1,SNR=22						
SONM	Songino Array	79.27	324	P	P	02 27 07.7	-0.1
GTA	Gaotai	79.57	314	P	P	02 27 11.0	+1.4
GTA				AMB	AMB		
	comp=Z,17nm,1.6s,mb4.7						
MAW	Mawson	84.00	202	P	P	02 27 32.2	-0.3
	comp=Z,3.3nm,1.0s,mb4.4,baz=67,slow=8.7,SNR=5.9						
COLA	College	84.02	18	eP	P	02 27 33.4	+0.9
	comp=Z,3.5nm,0.6s,mb4.7						
YBH	Yreka Blue Hor	84.45	46	P	P	02 27 36.2	+1.1
	comp=Z,2.6nm,0.8s,mb4.4,baz=228,slow=1.1,SNR=3.0						
EGAK	Eagle	86.10	20	eP	P	02 27 38.3	-4.6
	comp=Z,4.5nm,0.7s,mb4.8						
DAWY	Dawson	86.28	21	eP	P	02 27 41.9	-1.8
NVAR	Mina Array Bea	86.54	50	P	P	02 27 47.0	+1.3
	comp=Z,1.8nm,0.8s,mb4.4,baz=235,slow=9.0,SNR=5.3						
ETW	Entiat	88.09	41	eP	P	02 27 53.5	+0.6
NEW	Newport	90.34	41	eP	P	02 28 02.5	-1.0
	comp=Z,1.4nm,0.7s,mb4.4						
WUAZ	Wupatki	91.09	54	eP	P	02 28 06.7	-0.6
	comp=Z,1.6nm,0.7s,mb4.5						
DUG	Dugway	91.12	49	eP	P	02 28 08.2	+0.8
	comp=Z,1.4nm,0.8s,mb4.3						
MVCO	Mesa Verde	93.73	53	eP	P	02 28 19.5	0.0
	comp=Z,0.9nm,0.5s,mb4.5						
MKAR	Makanchi Array	94.06	317	P	P	02 28 20.8	0.0
	comp=Z,5.3nm,0.7s,mb5.1,baz=106,slow=6.4,SNR=25						
MKAR	Makanchi Array	94.06	317	P	P	02 28 20.8	0.0
PDAR	Pinedale Array	94.09	47	P	P	02 28 23.2	+2.2
	comp=Z,0.5nm,0.6s,mb4.1,baz=257,slow=3.5,SNR=3.7						
PDAR	Pinedale Array	94.09	47	P	P	02 28 23.2	+2.2
ZALV	Zalesovo Beam	94.16	324	P	P	02 28 19.4	-1.7
	comp=Z,6.6nm,0.9s,mb5.1,baz=108,slow=4.8,SNR=20						
ANMO	Albuquerque	94.90	55	eP	P	02 28 24.5	-0.4
	comp=Z,0.7nm,0.7s,mb4.2						
YKA	Yellowknife Ar	95.67	27	P	P	02 28 26.5	-1.2
	comp=Z,0.3nm,0.6s,mb3.9,baz=261,slow=4.3,SNR=5.1						
KURK	Kurchatov	97.21	320	P	P	02 28 33.8	-1.2
	comp=Z,0.5nm,0.4s,mb4.3,baz=93,slow=4.0,SNR=4.5						
KURK	Kurchatov	97.21	320	P	P	02 28 33.8	-1.2
BVAR	Borovoye Array	102.53	322	P	Pdif	02 28 57.6	-1.2
	comp=Z,0.6nm,0.6s,baz=123,slow=5.5,SNR=5.4						
ARCES	ARCESS Array B	117.07	345	PKP	PKPdf	02 33 45.1	-1.6
	comp=Z,1.2nm,0.7s,baz=57,slow=3.3,SNR=5.3						
LBTB	Lobatse	126.59	226	PKP	PKPdf	02 34 04.2	-2.2
	comp=Z,6.9nm,1.1s,baz=102,slow=2.3,SNR=4.5						
AKASG	Malin Array Be	127.49	327	PKP	PKPdf	02 34 05.8	-1.5
	comp=Z,0.2nm,0.3s,baz=63,slow=1.6,SNR=7.1						
LSZ	Lusaka	130.07	238	PKP	PKPdf	02 34 12.0	-1.2
	comp=Z,1.5nm,0.6s,baz=131,slow=4.0,SNR=6.3						
GERES	GERESS Array B	136.38	333	PKP	PKPdf	02 34 23.8	-0.3
	comp=Z,0.7nm,0.7s,baz=43,slow=2.4,SNR=6.6						
CABF	La Chapelle	141.27	337	ePKP1	PKPdf	02 34 29.3	-3.8
MBDF	Montbardon	142.56	335	⇑iPKP1	PKPdf	02 34 31.0	-4.5
ORIF	Oris-en-Rattie	142.76	336	ePKP1	PKPdf	02 34 31.1	-4.8
	comp=Z,5.5nm,0.7s						
SBF	Sospel	142.98	334	⇑iPKP1	PKPdf	02 34 31.1	-5.2
	comp=Z,21nm,0.9s						
PGF	Pioggiola	143.29	331	ePKP1	PKPdf	02 34 32.7	-4.2
FRF	La Foret Royal	143.56	334	⇑iPKP1	PKPdf	02 34 33.3	-4.0
LMR	La Mourre	143.80	334	⇑iPKP1	PKPdf	02 34 34.3	-3.4
RJF	Les Rejaudoux	144.00	341	ePKP1	PKPdf	02 34 35.6	-2.4
CAF	Calviac	144.15	340	ePKP1	PKPdf	02 34 36.5	-1.8
	comp=Z,18nm,1.2s						
LASF	Ste Croix	144.25	337	ePKP1	PKPdf	02 34 36.9	-1.6
LFF	La Frestale	144.57	341	⇑iPKP1	PKPdf	02 34 36.9	-2.1
	comp=Z,15nm,0.8s						
MTLF	Montolieu	145.49	339	⇑iPKP1	PKPbc	02 34 40.2	-0.5
	comp=Z,12nm,0.8s						
ETSF	Etsaut	146.81	341	ePKP1	PKPbc	02 34 45.2	+0.5
KEST	Kesra	148.00	322	PKPbc	PKPbc	02 34 48.1	-0.1
	comp=Z,4.6nm,0.8s,baz=257,slow=3.3,SNR=14						
ESDC	Sonseca Array	150.78	344	PKPbc	PKPbc	02 34 54.1	-0.9
	comp=Z,1.1nm,0.7s,baz=20,slow=2.1,SNR=8.1						
TORD	Torodi Ar. Bea	164.34	277	PKP	PKPdf	02 35 05.5	-1.4
	comp=Z,2.2nm,1.0s,baz=225,slow=1.0,SNR=7.5						

*ISCJB **02** 02:16:52.9±0.7, 529S±0.1×214E±02, h10^{km}, mb4.0/8, Error ellipse: s-maj=21.0km s-min=13.8km az=161.7*
*IDC **02** 02:16:53.0±0.7, 5298S×2147E, h0^{km}, mb4.1/8, mb1 4.2/8, mb1mx4.0/17, mbtmp4.1/8, Error ellipse: s-maj=31.1km s-min=19.4km az=58.0*
*NEIC **02** 02:16:54.5±0.3, 5296S×2143E, h10^{km}, mb4.1/1, Error ellipse: s-maj=14.1km s-min=8.5km az=57.0*
ISC 02 02:16:54.8±0.6, **5293S**±010×**215E**±02, **h10**^{km}, **n23**, σ**0**^{s}**82**/11, **mb4.0**/8, **South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	20.54	358	P	P	02 21 33.7	+0.5
	17nm,0.8s,baz=166,slow=11,SNR=5.7						
SNAA	Sanae	21.64	201	e	P	02 21 44.6	-0.3
SNAA				e		02 21 48.1	
VNA1	Neumayer--Stat	22.25	206	e	P	02 21 54.1	+2.7
VNA1				e		02 21 57.2	
MAW	Mawson	24.59	143	P	P	02 22 14.6	0.0
	1.5nm,0.8s,mb3.6,baz=263,slow=16,SNR=3.4						
QSPA	South Pole Qui	37.30	180	P	P	02 24 06.4	0.0
	9.7nm,0.8s,mb4.7,baz=250,slow=3.3,SNR=25						
CASY	Casey	42.94	144	eP	P	02 24 53.2	0.0
	2.7nm,0.8s,mb4.0						
CPUP	Villa Florida	62.87	262	P	P	02 27 19.7	-1.1
	0.2nm,0.3s,mb3.7,baz=28,slow=9.3,SNR=3.4						
BDFB	Brasilia	65.35	277	P	P	02 27 36.6	-0.6
	1.1nm,0.5s,mb4.1,baz=126,slow=7.8,SNR=3.0						
TORD	Torodi Ar. Bea	67.98	339	P	P	02 27 54.7	+0.8
	0.8nm,1.0s,mb3.7,baz=151,slow=6.3,SNR=2.9						
ASAR	Alice Springs	83.89	121	P	P	02 29 24.4	-0.3
	0.8nm,0.8s,mb3.9,baz=212,slow=4.2,SNR=7.2						
WRA	Warramunga Arr	87.19	120	P	P	02 29 40.7	-0.5
	1.6nm,1.1s,mb4.2,baz=214,slow=4.3,SNR=3.8						
SONM	Songino Array	123.48	54	PKP	PKPdf	02 35 50.8	-0.4
	0.5nm,0.6s,baz=243,slow=2.9,SNR=3.1						
MSU	Marysvale	145.26	264	ePKPbc	PKPbc	02 36 32.3	+0.5
DAU	Daniels Canyon	145.89	268	ePKPbc	PKPbc	02 36 34.1	+0.5
PDAR	Pinedale Array	146.25	273	PKPbc	PKPbc	02 36 34.0	-0.8
	3.1nm,1.0s,baz=120,slow=5.3,SNR=13						
DUG	Dugway	146.70	266	ePKPbc	PKPbc	02 36 36.1	0.0
RLMT	Red Lodge	147.37	276	ePKPbc	PKPbc	02 36 37.6	-0.2
NVAR	Mina Array Bea	148.87	259	PKPbc	PKPbc	02 36 42.1	+0.1
	1.6nm,0.8s,baz=143,slow=3.5,SNR=11						
EGMT	Eagleton	149.10	281	ePKPbc	PKPbc	02 36 40.9	-1.4
HLID	Hailey	149.64	270	ePKPbc	PKPbc	02 36 43.6	-0.2
CHMT	Chamberlain Mo	150.67	277	ePKPbc	PKPbc	02 36 45.5	-0.6
CHMT				ePKPab	PKPab	02 36 52.2	-1.0
YKA	Yellowknife Ar	155.17	310	PKPab	PKPab	02 37 11.5	-0.2
	1.1nm,0.8s,baz=90,slow=5.0,SNR=8.2						
YKA	Yellowknife Ar	155.17	310	PKPab	PKPab	02 37 11.5	-0.2

KRSC 02 02:18:57.4±0.4, **5107N**×**15790E**, **h44**^{km}±43^{km}, **ML3.7**, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	1.40	330	eP	Pn	02 19 22.2	+1.8
MIPR				i S	Sn	02 19 40.6	+2.9
RUS	Russkaya	1.42	15	eP	Pn	02 19 21.3	+0.6
RUS				i S	Sn	02 19 39.0	+0.9
ALID	Alaid	1.50	263	eP	Pn	02 19 22.2	+0.4
ALID				i S	Sn	02 19 40.5	+0.4
PET	Petropavlovsk	2.01	13	P	Pn	02 19 30.5	+1.7
PET				i S	Sn	02 19 55.2	+2.5
AVH	Avacha	2.26	13	P	Pn	02 19 35.2	+3.0
AVH				i S	Sn	02 20 03.0	+4.2
NLC	Nalytchevo	2.29	22	P	Pn	02 19 35.0	+2.5
NLC				i S	Sn	02 20 01.7	+2.3
SPN	Mys Shipunski	2.42	32	P	Pn	02 19 36.1	+1.7
SPN				i S	Sn	02 20 05.1	+2.4
GNL	Ganaly	2.63	1	P	Pn	02 19 39.8	+2.5
GNL				i S	Sn	02 20 11.0	+3.1
MKZ	Mys Kozlova	4.19	32	P	Pn	02 20 01.8	+3.1
MKZ				i S	Sn	02 20 48.8	+2.4
KBTR	Krutoberegovo	5.92	28	P	Pn	02 20 26.0	+3.6

CASC 02 02:23:38.0±2.4, **1218N**×**8693W**, **h76**^{km}±8^{km}, **MD3.8**, **ML3.0**, **11C-9D**, **Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	Leon	0.24	9	⇑eP	Pn	02 23 49.4	-0.1
LEON				eS	Sn	02 23 57.2	-0.8
LEON				AML	AML	02 24 00.5	
	comp=Z,7μm,0.4s						
COPN	Copaltepe	0.33	89	⇑eP	Pn	02 23 50.3	+0.2
COPN				eS	Sn	02 23 59.5	+0.6
CNGN	Cerro Negro	0.39	35	⇑eP	Pn	02 23 50.5	0.0
CNGN				eP		02 23 50.8	
CNGN				eS	Sn	02 24 00.6	+0.8
TEL3	Telica 3	0.40	12	⇑eP	Pn	02 23 51.0	+0.4
TEL3				eS	Sn	02 24 00.4	+0.5
CSAN		0.50	89	⇓eP	Pn	02 23 51.9	+0.5
CSAN				eS	Sn	02 24 02.0	+0.7
CRIN	San Cristobal	0.53	348	⇑eP	Pn	02 23 52.0	+0.3
CRIN				eS	Sn	02 24 00.9	-0.9
APYN	Apoyeque	0.57	84	⇓eP	Pn	02 23 52.3	+0.2
XAVN	Gruta Xavier	0.59	93	⇓eP	Pn	02 23 52.6	+0.4
XAVN				eS	Sn	02 24 04.3	+1.5
XAVN				AML	AML	02 24 06.2	
	comp=Z,2μm,0.2s						
CRUN	El Crucero	0.65	107	eP	Pn	02 23 53.5	+0.7
CRUN				AML	AML	02 24 20.2	
	comp=Z,210nm,0.4s						
TISN	Laguna Tiscapa	0.65	93	⇑eP	Pn	02 23 53.1	+0.3
TISN				eS	Sn	02 24 04.1	+0.3
MGAN	Managua	0.67	92	⇓eP	Pn	02 23 53.2	+0.2
MGAN				eS	Sn	02 24 04.7	+0.5
WILN	Americas 2	0.73	91	eP	Pn	02 23 53.8	+0.2
WILN				AML	AML	02 24 12.9	
	comp=Z,188nm,0.3s						
HUEN		0.76	78	⇓eP	Pn	02 23 54.2	+0.2
HUEN				eS	Sn	02 24 06.8	+0.9
HUEN				AML	AML	02 24 07.9	
	comp=Z,55nm,0.2s						
MASN	Masaya	0.79	104	⇑eP	Pn	02 23 54.6	+0.3
APON	Apoyo	0.89	107	AML	AML	02 24 12.7	
	comp=Z,76nm,0.2s						
CNCH	Conchagua	1.40	321	eP	x	02 24 01.8	
CONN	Concepcion	1.42	115	⇓eP	Pn	02 24 02.5	+0.4
CONN				AML	AML	02 24 27.3	
	comp=Z,46nm,0.5s						
MADN	Villa Maderas	1.57	119	⇓eP	Pn	02 24 03.9	-0.2
BLLM	Bellamira	1.79	315	eP	x	02 24 07.2	
BLLM				eS	x	02 24 32.1	
VSM	San Miguel	1.81	314	eP	x	02 24 07.7	
VSM				eS	x	02 24 32.6	
TGUH	Tegucigalpa,Un	1.90	350	eP	Pn	02 24 09.2	+0.8
CAHU	Cacacuatique	2.02	322	⇑eP	x	02 24 10.1	
CAHU				eS	x	02 24 34.6	
CUI		2.29	131	⇓eP	Pn	02 24 14.2	+0.5
CUI				eS	Sn	02 24 44.1	+3.2
2RIO	Dos Rios de Up	2.34	134	eP	Pn	02 24 09.4	-5.0
SNVI	San Vicente	2.34	308	⇑eP	x	02 24 14.9	
SNVI				eS	x	02 24 40.9	
LFRS	El Faro	2.53	305	⇓eP	x	02 24 17.1	
LFRS				eS	x	02 24 47.5	
BOQS	Boqueron	2.76	304	eP	x	02 24 20.7	
SBLS	San Blas	3.10	303	eP	x	02 24 26.0	
SNJE	San Jose	3.10	303	eP	x	02 24 25.5	
RBDL	Robledal	3.30	306	⇑eP	x	02 24 28.1	
RBDL				eS	x	02 25 09.8	
CHI2		15.04	119	⇑eP		02 23 51.4	
CHI2				eS		02 24 02.5	
CHI2				AML	AML	02 24 03.2	
	comp=Z,2μm,0.4s						
LAPE	La Pedrera	15.81	105	eP		02 24 09.9	

*IDC **02** 02:30:13.6±3.3, 1159S×16591E, h0^{km}, mb4.3/8, mb1 4.4/8, mb1mx4.1/16, mbtmp4.3/8, Error ellipse: s-maj=98.2km s-min=29.1km az=126.0*
*ISCJB **02** 02:30:17.2±0.8, 115S±0.1×1657E±0.1, h33^{km}, mb4.2/12, Error ellipse: s-maj=20.9km s-min=15.0km az=140.2*
*NEIC **02** 02:30:18.7±0.8, 1156S×16578E, h35^{km}, mb4.3/6, Error ellipse: s-maj=20.3km s-min=13.5km az=136.0*
ISC 02 02:30:18.8±0.8, **115S**±01×**1658E**±01, **h35**^{km}, **n19**, σ**1**^{s}**05**/19, **mb4.2**/12, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.10	290	ePn	Pn	02 31 45.7	-0.9
CTA	Charters Tower	20.60	243	eP	P	02 34 55.8	+0.7
	8.5nm,1.0s						
CTA	Charters Tower	20.60	243	P	P	02 34 57.3	+2.2
	10nm,0.9s,baz=85,slow=14,SNR=3.5						
CTAO	Charters Tower	20.60	243	eP	P	02 34 54.4	-0.7
	14nm,1.0s						
COEN	Coen	22.18	261	eP	P	02 35 11.0	-1.1
	4.2nm,0.8s,mb3.9						
ARMA	Armidale	22.92	213	eP	P	02 35 20.8	+1.0
ARMA	Armidale	22.92	213	eP	P	02 35 20.5	+0.7
	0.6nm,1.1s,mb2.9						
WB2	Warramunga Arr	31.34	251	eP	P	02 36 33.5	-2.7
WRA	Warramunga Arr	31.35	251	P	P	02 36 36.6	+0.2
	4.5nm,0.9s,mb4.3,baz=80,slow=9.3,SNR=18						
ASAR	Alice Springs	32.60	244	P	P	02 36 47.1	-0.2
	3.9nm,0.8s,mb4.4,baz=66,slow=9.5,SNR=5.5						
ASAR				PcP	PcP	02 39 34.1	+0.9
	0.8nm,0.8s,baz=90,slow=2.0,SNR=5.1						
KAKA	Kakadu	32.60	264	eP	P	02 36 47.6	+0.2
	7.8nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	39.29	256	P	P	02 37 45.6	+1.0
	1.6nm,0.7s,mb3.9,baz=72,slow=2.5,SNR=3.2						
CASY	Casey	65.93	201	eP	P	02 41 00.2	-0.8
	4.7nm,0.9s,mb4.5						
CMAR	Chiang Mai Arr	72.34	294	P	P	02 41 42.5	+0.9
	0.8nm,0.3s,mb4.1,baz=173,slow=1.2,SNR=7.1						
SONM	Songino Array	79.08	324	P	P	02 42 21.5	+1.9
	0.5nm,0.5s,mb3.7,baz=138,slow=7.2,SNR=3.3						
EGAK	Eagle	85.83	20	eP	P	02 42 53.5	-0.8
	1.0nm,0.7s,mb4.2						
HLID	Hailey	90.60	46	eP	P	02 43 16.7	-0.9
MKAR	Makanchi Array	93.90	317	P	P	02 43 33.8	+1.0
	2.7nm,0.8s,mb4.7,baz=101,slow=6.3,SNR=16						
ZALV	Zalesovo Beam	93.97	324	P	P	02 43 32.8	-0.2
	0.7nm,0.5s,mb4.3,baz=131,slow=5.9,SNR=2.8						

*IDC **02** 02:30:35.0±3.3, 1190S×166.13E, h0^{km}, mb4.4/8, mb1 4.5/8, mb1mx4.2/16, mbtmp4.3/8, Error ellipse: s-maj=100.3km s-min=30.4km az=127.0*
*ISCJB **02** 02:30:38.2±1.0, 118S±02×1662E±02, h33^{km}, mb4.1/10, Error ellipse: s-maj=33.2km s-min=16.5km az=41.3*
*NEIC **02** 02:30:39.9±0.9, 1175S×16622E, h35^{km}, mb4.1/4, Error ellipse: s-maj=31.2km s-min=15.3km az=128.0*
ISC 02 02:30:40.1±0.9, **117S**±02×**1662E**±02, **h35**^{km}, **n15**, σ**1**^{s}**04**/15, **mb4.1**/10, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.86	244	eP	P	02 35 20.2	+1.0
	10nm,0.9s						
CTA	Charters Tower	20.86	244	P	P	02 35 18.4	-0.9
	15nm,1.0s,baz=74,slow=14,SNR=4.9						
ARMA	Armidale	22.97	214	eP	P	02 35 43.0	+1.4
ARMA	Armidale	22.97	214	eP	P	02 35 42.9	+1.3
	0.7nm,1.0s,mb3.0						
WRA	Warramunga Arr	31.65	251	P	P	02 36 59.1	-1.2
	4.9nm,0.9s,mb4.3,baz=80,slow=9.5,SNR=7.9						
ASAR	Alice Springs	32.87	244	P	P	02 37 09.8	-1.2
	4.8nm,0.8s,mb4.5,baz=74,slow=9.5,SNR=15						
ASAR				PcP	PcP	02 39 56.0	+0.7
	1.0nm,0.8s,baz=66,slow=3.8,SNR=4.9						
FITZ	Fitzroy Crossi	39.62	256	P	P	02 38 07.7	-1.0
	4.3nm,0.9s,mb4.2,baz=46,slow=10,SNR=4.9						
CASY	Casey	65.89	201	eP	P	02 41 22.4	+0.4
	1.2nm,0.7s,mb4.0						
CMAR	Chiang Mai Arr	72.78	294	P	P	02 42 06.8	+1.3
	0.7nm,0.4s,mb4.0,baz=120,slow=4.3,SNR=5.9						
SONM	Songino Array	79.48	324	P	P	02 42 44.7	+1.7
	0.8nm,0.8s,mb3.7,baz=134,slow=6.4,SNR=4.2						
EGAK	Eagle	85.88	20	eP	P	02 43 15.1	-0.8
	0.6nm,0.6s,mb4.0						
HLID	Hailey	90.46	46	eP	P	02 43 37.4	-0.9
MKAR	Makanchi Array	94.32	317	P	P	02 43 56.7	+0.7
	2.5nm,0.7s,mb4.8,baz=114,slow=5.4,SNR=11						
MKAR	Makanchi Array	94.32	317	P	P	02 43 56.7	+0.7
ZALV	Zalesovo Beam	94.37	324	P	P	02 43 55.7	-0.3
	0.8nm,0.5s,mb4.4,baz=124,slow=7.4,SNR=3.5						

*NNC **02** 02:32:00.9±1.0, 4407N×7486E, h0^{km}, mb3.7, mpv3.8, Error ellipse: s-maj=10.8km s-min=6.3km az=63.0*
*ISCJB **02** 02:32:01.1±0.4, 44.18N±002×7477E±005, h10^{km}, Error ellipse: s-maj=5.2km s-min=3.3km az=178.5*
*KNET **02** 02:32:04.7±0.5, 4391N×7490E, h16^{km}±2^{km}, Error ellipse: s-maj=2.9km s-min=2.0km az=166.0*
ISC 02 02:32:02.9±0.4, **4409N**±002×**7478E**±005, **h10**^{km}, **n18**, σ**1**^{s}**50**/34, **23C-16D**, **Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USP	Ospenovka	0.85	194	⇓P	Pg	02 32 18.1	-1.2
	60nm,0.1s,SNR=82						
USP				⇑S	Sg	02 32 29.2	-1.2
	648nm,0.2s						
CHMS	Chumysh	1.09	181	⇓P	Pb	02 32 22.1	-1.8
	58nm,0.2s,SNR=98						
CHMS				⇑S	Sg	02 32 35.8	-2.4
	236nm,0.3s						
TKM2	Tokmak 2	1.31	153	⇓P	Pn	02 32 25.2	-2.0
	35nm,0.3s						
TKM2				⇑S	Sb	02 32 41.7	-2.8
	88nm,0.3s						
TKM2	Tokmak 2	1.31	153	⇓P	Pn	02 32 25.4	-1.9
	101nm,0.2s,SNR=104						
TKM2				⇑S	Sb	02 32 41.9	-2.6
	270nm,0.1s						
KBK	Karagaybulak	1.44	175	⇓P	Pn	02 32 28.8	-0.3
	134nm,0.1s,SNR=34						
KBK				⇓S	Sn	02 32 47.0	-1.0
	1μm,0.4s						
AAK	Ala-Archa	1.47	188	⇑P	Pn	02 32 29.7	+0.3
	45nm,0.2s,SNR=30						
AAK				⇓S	Sn	02 32 48.3	-0.5
	442nm,0.3s						
EKS2	Erkin-Say	1.61	207	⇑P	Pn	02 32 32.3	+1.0
	25nm,0.1s,SNR=149						
EKS2				⇓S	Sn	02 32 53.8	+1.7
	228nm,0.2s						
KNDC	Almaty	1.81	118	⇑P	Pn	02 32 33.6	-0.5
	67nm,0.3s						
KNDC				⇑S	Sn	02 32 58.2	+1.1
	838nm,0.7s						
UCH	Uchtor	1.88	186	P	Pn	02 32 36.7	+1.8
	25nm,0.1s,SNR=66						
UCH				⇓S	Sn	02 33 00.7	+2.0
	218nm,0.3s						
AML	Almayashu	2.12	202	⇑P	Pn	02 32 41.1	+2.8
	44nm,0.3s,SNR=52						
AML				⇑S	Sn	02 33 08.7	+4.1
	693nm,0.6s						
ULHL	Ulahol	2.13	149	⇓P	Pn	02 32 40.3	+1.7
	67nm,0.2s,SNR=34						
ULHL				⇑S	Sn	02 33 06.3	+1.3
	197nm,0.4s						
KK02	Karatay Array	3.25	254	⇑Pn	Pn	02 32 55.5	+1.5
	1.3nm,0.3s,baz=72,slow=14						
KK02				⇑Pg	Pg	02 33 03.1	-2.2
	16nm,0.3s,baz=70,slow=16						
KK02				⇑Lg		02 33 46.1	
	26nm,0.3s,baz=73,slow=26						
MK31	Makanchi Array	5.93	60	⇑Pn	Pn	02 33 30.4	-0.3
	4.8nm,0.5s,baz=239,slow=14,SNR=40						
MK31				⇓Sn	Sn	02 34 40.3	+1.6
	2.5nm,0.4s,baz=243,slow=25,SNR=5.1						
MK31				⇑Lg		02 35 11.3	
	9.1nm,0.5s,baz=241,slow=30						
KURBB	Kurchatov Arra	7.01	20	⇓Sn	Sn	02 35 02.8	-2.4
	1.3nm,0.6s						
KURBB				⇑Lg		02 35 39.4	
	6.8nm,0.7s						
KURK	Kurchatov	7.12	20	⇓Sn	Sn	02 35 04.1	-3.7
	5.5nm,0.6s						
KURK				⇑Lg		02 35 44.8	
	71nm,1.4s						
VOSK	Vostochnaya	9.00	345	⇓Pn	Pn	02 34 13.6	+0.8
	0.8nm,0.4s						
VOSK				⇑Sn	Sn	02 35 53.1	-1.0
	1.4nm,0.5s						
BVA0	Borovoye Array	9.40	344	⇓Pn	Pn	02 34 18.6	+0.4
	0.2nm,0.5s,baz=148,slow=13,SNR=16						
BVA0				⇑Sn	Sn	02 35 59.9	-3.9
	0.5nm,1.0s,baz=150,slow=23,SNR=5.4						
BVA0				⇑Lg		02 36 57.6	
	1.9nm,0.8s,baz=154,slow=24,SNR=5.5						
AB31	Akbulak array	11.42	302	⇓Pn	Pn	02 34 48.4	+2.4
	0.2nm,0.3s						
AB31				⇑Sn	Sn	02 36 53.1	-0.4
	1.0nm,0.7s						
AB31				⇑Lg		02 38 09.4	
	3.0nm,0.8s						

*IDC **02** 02:31:59.0±1.3, 1158S×16593E, h0^{km}, mb4.3/4, mb1 4.4/4, mb1mx3.9/15, mbtmp4.3/4, Error ellipse: s-maj=58.8km s-min=26.8km az=172.0*
*ISCJB **02** 02:32:02.6±0.8, 116S±02×1660E±0.1, h33^{km}, mb4.2/5, Error ellipse: s-maj=27.9km s-min=16.6km az=157.5*
*NEIC **02** 02:32:04.2±0.7, 1154S×16602E, h35^{km}, mb4.4/1, Error ellipse: s-maj=25.4km s-min=14.4km az=155.0*
ISC 02 02:32:04.4±0.8, **116S**±02×**1660E**±01, **h35**^{km}, **n12**, σ**0**^{s}**89**/9, **mb4.2**/5, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.77	244	eP	P	02 36 47.8	+5.3
	5.3nm,0.8s						
CTA	Charters Tower	20.77	244	P	P	02 36 44.6	+2.1
	6.3nm,0.8s,baz=90,slow=18,SNR=3.1						
AFI	Afiamalu	21.80	98	P	P	02 36 53.8	+0.1
	30nm,0.9s,mb4.7,baz=45,slow=9.2,SNR=2.4						
ARMA	Armidale	23.00	213	eP	P	02 37 06.7	+0.5
WRA	Warramunga Arr	31.53	251	P	P	02 38 22.8	-0.8
	1.4nm,0.7s,mb3.9,baz=80,slow=8.7,SNR=5.2						
ASAR	Alice Springs	32.77	244	P	P	02 38 33.2	-1.3
	2.6nm,0.8s,mb4.2,baz=72,slow=9.3,SNR=6.7						
ULN	Ulaanbaatar	78.88	324	eP	P	02 44 04.2	+0.2
	1.9nm,0.5s,mb4.3						
HAWA	Hanford	87.85	42	eP	P	02 44 49.5	-0.7
MKAR	Makanchi Array	94.08	317	P	P	02 45 20.3	+1.1
	0.4nm,0.6s,mb4.0,baz=108,slow=3.2,SNR=3.2						
ARCES	ARCESS Array B	116.92	345	PKP	PKPdf	02 50 44.0	-0.9
	1.2nm,0.8s,baz=92,slow=1.7,SNR=6.2						
ARCES	ARCESS Array B	116.92	345	PKP	PKPdf	02 50 44.0	-0.9
AKASG	Malin Array Be	127.45	327	PKP	PKPdf	02 51 04.3	-1.3
	0.8nm,0.4s,baz=184,slow=37,SNR=11						

*ISCJB **02** 02:33:13.5±1.5, 126S±02×664E±02, h10^{km}, mb4.0/12, Error ellipse: s-maj=42.7km s-min=13.8km az=143.2*
*NEIC **02** 02:33:14.5±0.8, 1270S×6653E, h10^{km}, mb4.4/3, Error ellipse: s-maj=24.3km s-min=12.9km az=156.0*
*IDC **02** 02:33:14.5±2.0, 1230S×6620E, h0^{km}, mb3.9/9, mb1 4.0/10, mb1mx4.0/21, mbtmp3.9/10, ML3.6/1, Error ellipse: s-maj=63.2km s-min=24.3km az=152.0*
ISC 02 02:33:15.2±1.5, **127S**±02×**664E**±02, **h10**^{km}, **n31**, σ**0**^{s}**98**/28, **mb4.0**/12, **8C-5D**, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	Ambohidratompo	19.44	250	P	Pn	02 37 43.3	0.0
	0.2nm,0.3s,baz=25,slow=6.6,SNR=3.2						
LSZ	Lusaka	37.18	261	eP	P	02 40 26.0	-0.8
	3.7nm,1.1s,mb4.1						
CMAR	Chiang Mai Arr	44.53	47	P	P	02 41 28.5	+1.1
	0.5nm,0.4s,mb3.7,baz=241,slow=11,SNR=3.2						
TSUM	Tsumeb	47.31	256	eP	P	02 41 51.1	+1.8
	5.6nm,1.1s,mb4.4						
GNI	Garni	56.26	340	eP	P	02 42 57.4	+1.6
	1.4nm,0.3s,mb4.5						
MKAR	Makanchi Array	60.85	12	P	P	02 43 27.1	-0.6
	0.4nm,0.6s,mb3.8,baz=190,slow=7.3,SNR=3.8						
MKAR	Makanchi Array	60.85	12	P	P	02 43 27.1	-0.6
BVAR	Borovoye Array	65.49	3	P	P	02 43 58.0	-0.4
	0.7nm,0.8s,mb3.7,baz=178,slow=7.3,SNR=4.0						
ZALV	Zalesovo Beam	68.16	12	P	P	02 44 13.7	-1.6
	0.9nm,0.5s,mb4.0,baz=205,slow=6.6,SNR=3.0						
VRI	Vrincioaia	68.34	331	⇓iP	P	02 44 17.6	+0.9
VRI	Vrincioaia	68.34	331	⇓P	P	02 44 17.6	+0.9
PLOR	Plostina	68.37	331	⇓iP	P	02 44 18.1	+1.2
TORD	Torodi Ar. Bea	69.11	289	P	P	02 44 20.6	-1.6
	1.4nm,1.1s,mb3.8,baz=115,slow=2.5,SNR=4.3						
SONM	Songino Array	69.92	27	P	P	02 44 26.2	-0.2
	1.2nm,0.8s,mb3.9,baz=224,slow=6.2,SNR=4.2						
BURAR	Bucovina Array	70.33	332	⇑iP	P	02 44 29.7	+0.7

BURAR	Bucovina Array	70.33	332	⇑P	P	02 44 29.7	+0.7
BZS	Buzias	70.67	328	⇑iP	P	02 44 31.4	+0.3
BZS	Buzias	70.67	328	⇑P	P	02 44 31.4	+0.3
DRGR		70.94	330	⇓iP	P	02 44 33.1	+0.4
DRGR		70.94	330	⇓P	P	02 44 33.1	+0.4
AKASG	Malin Array Be	70.95	336	P	P	02 44 31.4	-1.2
	2.0nm,0.7s,mb4.2,baz=138,slow=5.3,SNR=12						
AKASG	Malin Array Be	70.95	336	P	P	02 44 31.4	-1.2
PKSM	Moragy	72.62	327	⇑iP	P	02 44 42.6	-0.2
PKSM	Moragy	72.62	327	⇑P	P	02 44 42.6	-0.2
KWP	Kalwaria	72.94	332	⇑iP	P	02 44 45.1	+0.4
KWP	Kalwaria	72.94	332	⇑P	P	02 44 45.1	+0.4
GERES	GERESS Array B	76.88	327	P	P	02 45 06.3	-1.2
	0.6nm,0.8s,mb3.5,baz=118,slow=7.9,SNR=5.1						
ESDC	Sonseca Array	83.43	313	P	P	02 45 42.3	-0.7
	1.0nm,0.7s,mb3.9,baz=91,slow=3.6,SNR=7.1						
PDAR	Pinedale Array	149.79	354	PKPbc	PKPbc	02 53 03.5	-2.2
	1.7nm,0.8s,baz=66,slow=1.8,SNR=4.4						
NVAR	Mina Array Bea	153.98	9	PKP	PKPdf	02 53 08.6	+1.2
	0.5nm,0.9s,baz=227,slow=2.2,SNR=2.6						
NVAR	Mina Array Bea	153.98	9	PKP	PKPdf	02 53 08.6	+1.2

*IDC **02** 02:34:05.9±0.4, 1180S×16593E, h0km, mb5.4/25, mb1 5.4/25, mb1mx5.4/25, mbtmp5.4/25, MS6.3/1, Ms1 6.3/1, ms1mx5.0/33, Error ellipse: s-maj=13.5km s-min=12.6km az=112.0*

*ISCJB **02** 02:34:07.3±2.8, 1183S±004×16576E±004, h11km±17km, mb5.4/92, MS5.8/14, Error ellipse: s-maj=7.4km s-min=6.6km az=173.0*

*MOS **02** 02:34:10.3±1.9, 1172S×16578E, h33km, mb5.5/43, Error ellipse: s-maj=8.4km s-min=7.4km az=132.6*

*BJI **02** 02:34:10.3, 1142S×16596E, h23km, mB6.1, mb5.4, Ms6.1, Msz5.9*

*NEIC **02** 02:34:12.3±0.2, 1181S×16576E, h35km, mb5.4/43, Error ellipse: s-maj=9.0km s-min=6.2km az=145.0*

ISC 02 02:34:11.7±2.5**, 1183S**±004×**16580E**±004**, h29**km±17km**, h41**km±.9km**:pP-P, n407, σ1**§**13**/205**, mb5.4**/92**, MS5.8**/14**, 33C-22D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.23	292	eP	Pn	02 35 41.8	+0.1
HNR				pmax	pmax		
	comp=Z,3μm,0.7s						
HNR	Honiara	6.23	292	ePn	Pn	02 35 41.8	+0.1
	comp=Z,3μm,0.7s						
DZM	Mont Dzumac	10.20	177	eP	Pn	02 36 36.0	-0.2
PMG	Port Moresby	18.48	276	eP	Pn	02 38 26.3	+0.5
PMG				pmax	pmax		
	comp=Z,247nm,1.1s						
PMG	Port Moresby	18.48	276	eP	Pn	02 38 26.2	+0.5
	comp=Z,247nm,1.1s						
CTA	Charters Tower	20.49	244	eP	P	02 38 48.1	+0.6
	comp=Z,168nm,0.9s						
CTA	Charters Tower	20.49	244	P	P	02 38 48.4	+0.9
	comp=Z,202nm,0.9s,baz=75,slow=12,SNR=74						
CTA	Charters Tower	20.49	244	eP	P	02 38 48.1	+0.6
CTA				pmax	pmax		
	comp=Z,168nm,0.9s						
CTAO	Charters Tower	20.49	244	eP	P	02 38 48.3	+0.8
CTAO				pmax	pmax		
	comp=Z,248nm,0.9s						
CTAO	Charters Tower	20.49	244	eP	P	02 38 48.3	+0.9
	comp=Z,248nm,0.9s						
AFI	Afiamalu	21.96	98	P	P	02 39 00.2	-3.1
	comp=Z,192nm,1.1s,mb5.4,baz=249,slow=17,SNR=2.6						
AFI	Afiamalu	21.96	98	P	P	02 39 00.2	-3.1
AFI				pmax	pmax		
	comp=Z,192nm,1.2s,mb5.4						
AFI	Afiamalu	21.96	98	eP	P	02 39 04.6	+1.3
	comp=Z,205nm,1.0s,mb5.5						
COEN	Coen	22.15	262	eP	P	02 39 05.6	+0.2
	comp=Z,107nm,0.9s,mb5.3						
ARMA	Armidale	22.69	213	eP	P	02 39 11.0	+0.1
RIV	Riverview	25.66	209	eP	P	02 39 41.3	+2.3
CNB	Canberra Magne	27.72	210	eP	P	02 39 59.3	+1.7
URZ	Urewera	28.19	161	P	P	02 40 01.4	-0.4
	comp=Z,19nm,0.5s,mb5.0,baz=240,slow=0.7,SNR=15						
STKA	Stephens Creek	29.91	224	eP	P	02 40 17.8	+0.6
	comp=Z,30nm,0.8s,mb5.1						
STKA	Stephens Creek	29.91	224	P	P	02 40 16.5	-0.7
	comp=Z,33nm,0.8s,mb5.1,baz=36,slow=7.9,SNR=35						
STKA				PcP	PcP	02 43 19.9	+0.2
	comp=Z,19nm,1.0s,baz=32,slow=11,SNR=2.3						
WB2	Warramunga Arr	31.26	251	eP	P	02 40 27.7	-1.5
WRAB	Tennant Creek	31.26	251	P	P	02 40 28.7	-0.5
	comp=Z,638nm,0.9s,mb6.5,SNR=7.8						
WRAB	Tennant Creek	31.26	251	⇑eP	P	02 40 28.6	-0.6
WRA	Warramunga Arr	31.27	251	P	P	02 40 28.0	-1.3
	comp=Z,70nm,0.8s,mb5.5,baz=84,slow=9.1,SNR=73						
WRA				PcP	PcP	02 43 23.9	+0.5
	comp=Z,12nm,1.1s,baz=80,slow=2.8,SNR=4.0						
WRA				ScP	ScP	02 47 06.4	+1.8
	comp=Z,6.2nm,1.1s,baz=83,slow=3.9,SNR=7.5						
WRA				PKiKP	PKiKP	02 50 51.2	-2.2
	comp=Z,0.7nm,0.5s,baz=7.9,slow=0.6,SNR=9.9						
WRA	Warramunga Arr	31.27	251	i P	P	02 40 28.0	-1.3
WRA				pmax	pmax		
	comp=Z,70nm,0.8s						
WRA	Warramunga Arr	31.27	251	P	P	02 40 28.0	-1.3
WRA				PcP	PcP	02 43 23.9	+0.5
WRA				ScP	ScP	02 47 06.4	+1.8
TOO	Toolangi	31.43	212	eP	P	02 40 32.0	+1.5
RPZ	Rata Peaks	32.09	173	P	P	02 40 35.2	-1.0
	comp=Z,150nm,0.9s,mb5.8,baz=302,slow=4.4,SNR=30						
ASAR	Alice Springs	32.49	244	P	P	02 40 38.8	-1.3
	comp=Z,78nm,0.8s,mb5.6,baz=73,slow=9.3,SNR=134						
ASAR				PcP	PcP	02 43 27.3	+0.6
	comp=Z,12nm,0.9s,baz=76,slow=2.3,SNR=6.7						
ASAR				ScP	ScP	02 47 10.4	+1.8
	comp=Z,18nm,1.2s,baz=86,slow=2.9,SNR=8.0						
ASAR				PKiKP	PKiKP	02 50 52.2	-1.9
	comp=Z,0.4nm,0.5s,baz=106,slow=1.2,SNR=4.2						
ASAR	Alice Springs	32.49	244	P	P	02 40 38.8	-1.2
ASAR						02 43 27.3	
ASAR				pmax	pmax		
	comp=Z,78nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,12nm,0.9s						
ASAR				pmax	pmax		
	comp=N,18nm,1.2s						
ASAR	Alice Springs	32.49	244	P	P	02 40 38.8	-1.3
ASAR				PcP	PcP	02 43 27.3	+0.6
ASAR				ScP	ScP	02 47 10.4	+1.8
KAKA	Kakadu	32.60	265	eP	P	02 40 39.4	-1.6
	comp=N,81nm,0.9s,mb5.7						
GUMO	Guam	32.69	320	P	P	02 40 40.9	-0.8
	comp=N,42nm,0.6s,mb5.5,baz=186,slow=10,SNR=4.5						
GUMO	Guam	32.69	320	P	P	02 40 40.9	-0.9
GUMO				pmax	pmax		
	comp=Z,42nm,0.6s,mb5.5						
FITZ	Fitzroy Crossi	39.23	256	eP	P	02 41 36.5	-1.4
	comp=Z,113nm,0.9s,mb5.6						
FITZ	Fitzroy Crossi	39.23	256	P	P	02 41 37.2	-0.6
	comp=Z,54nm,0.9s,mb5.3,baz=92,slow=9.6,SNR=55						
FORT	Forrest	39.64	236	eP	P	02 41 39.5	-1.6
	comp=Z,144nm,0.8s,mb5.8						
BATI	Baumata	41.36	268	P	P	02 41 55.2	-0.3
	comp=Z,188nm,0.8s,mb5.8,baz=200,slow=1.5,SNR=22						
PPT	Papeete	43.46	103	eLQ		02 52 39.6	
	comp=Z,27μm,30.8s						
PPT				eLR	LR	02 54 23.7	
	comp=Z,19μm,27.8s						
CBIJ	Chichi jima	44.98	330	P	P	02 42 25.1	+0.7
	comp=Z,107nm,0.8s,mb5.8,baz=277,slow=20,SNR=3.3						
MBWA	Marble Bar	45.00	252	eP	P	02 42 24.4	-0.5
	comp=Z,198nm,1.1s,mb5.9						
PMOR	Pomariorio Ree	45.09	99	eP	P	02 42 27.9	+2.2
	comp=Z,132nm,1.3s,mb5.6						
KAPI	Kappang	46.00	274	P	P	02 42 32.5	-0.4
	comp=Z,1μm,1.0s,mb6.8,SNR=8.7						
KAPI	Kappang	46.00	274	P	P	02 42 31.8	-1.1
	comp=Z,171nm,0.9s,mb6.0,baz=124,slow=5.9,SNR=32						
PCI	Palu	46.87	280	⇑eP	P	02 42 41.0	+1.3
	comp=Z,12nm,1.4s,mb4.6						
KLBR	Kellerberrin	48.34	238	eP	P	02 42 49.8	-1.1
	comp=Z,89nm,0.8s,mb5.8						
NWAO	Narrogin (SRO)	49.07	237	P	P	02 42 55.1	-1.4
	comp=Z,97nm,0.9s,mb5.8,baz=79,slow=7.3,SNR=31						
NWAO	Narrogin (SRO)	49.07	237	eP	P	02 42 54.3	-2.2
NWAO				pmax	pmax		
	comp=Z,115nm,1.0s						
NWAO	Narrogin (SRO)	49.07	237	eP	P	02 42 54.3	-2.2
	comp=Z,115nm,1.0s,mb5.9						
MUN	Mundaring	49.70	238	eP	P	02 43 01.2	-0.2
MYLDM	Lahad Datu	49.98	287	⇑P	P	02 43 05.6	+1.9
TSM	Tawau	50.28	286	⇓P	P	02 43 06.5	+0.6
SDKM	Sandakan	51.36	287	⇓P	P	02 43 14.8	+0.7
KDM	Kudat	52.14	288	⇓P	P	02 43 20.6	+0.7
KKM	Kota Kinabalu	52.41	287	⇓P	P	02 43 22.6	+0.6
JOW	Kunigami	52.96	317	P	P	02 43 25.7	-0.1
	comp=Z,50nm,0.9s,mb5.5,baz=146,slow=7.3,SNR=22						
TAOE	Nuku Hiva Isla	53.19	92	eLR	LR	02 59 06.6	
	comp=Z,66μm,24.5s						
BTM	Bintulu	54.49	283	⇓P	P	02 43 37.9	+0.7
MJAR	Matsushiro Arr	54.69	333	P	P	02 43 35.9	-2.3
	comp=Z,16nm,0.8s,mb5.1,baz=168,slow=7.5,SNR=32						
MJAR	Matsushiro Arr	54.69	333	P	P	02 43 35.9	-2.3
MJAR				pmax	pmax		
	comp=Z,16nm,0.8s						
MJAR	Matsushiro Arr	54.69	333	P	P	02 43 35.9	-2.3
MAJO	Matsushiro	54.69	333	eP	P	02 43 37.2	-1.0
MAJO				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
MAJO	Matsushiro	54.69	333	eP	P	02 43 37.2	-1.1
	comp=Z,24nm,0.9s,mb5.2						
MAT	Matsushiro	54.69	333	P	P	02 43 38.6	+0.4
SBUM	Sibu	55.10	281	⇓P	P	02 43 42.4	+0.7
KSM	Kuching	56.68	280	⇑P	P	02 43 53.3	+0.3
RKT	Rikitea	57.27	110	eLR	LR	03 00 51.6	
	comp=Z,22μm,24.5s						
QZH	Quanzhou	58.78	309	P	P	02 44 08.7	+1.2
QZH				AMB	AMB		
	comp=Z,110nm,0.9s,mb5.9						
XMIS	Christmas Isla	58.93	265	eP	P	02 44 08.3	-0.4
SSE	Sheshan	60.45	316	P	P	02 44 19.8	+0.9
SSE				AMB	AMB		
	comp=Z,76nm,0.7s,mb5.8						
SSE				AMB	AMB		
	comp=Z,4μm,15.1s						
KSRS	Korea Array	60.55	326	P	P	02 44 17.8	-1.7
	comp=Z,10nm,0.8s,mb5.0,baz=137,slow=6.9,SNR=26						
KSRS				PcP	PcP	02 45 04.5	+0.7
	comp=Z,33nm,1.2s,baz=138,slow=5.6,SNR=8.4						
KSRS	Korea Array	60.55	326	P	P	02 44 17.8	-1.7
KSRS						02 45 04.6	
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
KSRS				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.3						
YSS	Yuzh-Sakhalins	62.05	342	eP	P	02 44 29.3	-0.1
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.7						
YSS	Yuzh-Sakhalins	62.05	342	eP	P	02 44 28.5	-0.9
	comp=Z,37nm,1.1s,mb5.4						
NJ2	Nanjing	62.62	316	eP	P	02 44 34.0	+0.5
NJ2				AP	pP	02 44 44.3	+1.7
NJ2				XP	sP	02 44 49.0	+2.9
NJ2				S	S	02 53 00.0	+0.1
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,3μm,9.8s						
NJ2				LR	LR		
	comp=N,17μm,20.0s						
NJ2				LR	LR		
	comp=E,14μm,27.8s						
NJ2				LR	LR		
	comp=Z,14μm,28.8s						
VLA	Vladivostok	62.86	333	eP	P	02 44 32.1	-2.8
VLA				pmax	pmax		
	comp=Z,38nm,1.4s,mb5.3						
MYKOM	Kota Tinggi	63.01	278	⇑P	P	02 44 37.0	+0.5
QIZ	Qiongzhong	63.10	298	P	P	02 44 37.5	+0.5
QIZ	Qiongzhong	63.10	298	eP	P	02 44 37.8	+0.8
	comp=Z,56nm,1.1s,mb5.6						
KGM	Kluang	63.58	278	⇑P	P	02 44 41.0	+0.7
PET	Petropavlovsk	64.89	355	⇓eP	P	02 44 47.3	-0.7
PET	Petropavlovsk	64.89	355	⇓eP	P	02 44 47.4	-0.6
WHN	Wuhan	64.95	312	⇑P	P	02 44 49.7	+0.7
PETK	Petropavlovsk-	65.05	355	P	P	02 44 46.8	-2.3
	comp=Z,4.0nm,0.8s,mb4.5,baz=124,slow=7.4,SNR=6.8						
MDJ	Mudanjiang	65.07	332	P	P	02 44 50.0	+0.6
MDJ				AP	pP	02 45 01.9	+3.4
MDJ				XP	sP	02 45 06.7	+4.7
MDJ				PCP	PcP	02 45 22.3	+0.3
MDJ				PP	PP	02 47 13.3	+0.4
MDJ				S	S	02 53 30.1	+0.2
MDJ				SCS	ScS	02 54 40.8	-1.5
MDJ				SS	SS	02 57 43.5	+0.8
MDJ				LR	LR		
	comp=N,3μm,14.7s,MS5.8						
MDJ				LR	LR		
	comp=E,4μm,15.1s,MS5.8						
MDJ				LR	LR		
	comp=Z,6μm,14.7s,MS5.9						
MDJ	Mudanjiang	65.07	332	eP	P	02 44 49.5	+0.2
	comp=Z,22nm,0.9s,mb5.2						
DL2	Dalian	65.14	323	P	P	02 44 50.8	+0.8
DL2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.5						
FRIM	Kepong	65.52	279	⇓P	P	02 44 53.9	+0.9
CASY	Casey	65.67	201	eP	P	02 44 51.7	-1.3
SNY	Shenyang	66.02	327	⇑P	P	02 44 56.0	+0.4
SNY				AMB	AMB		
	comp=Z,43nm,1.2s,mb5.3						
SBA	Scott Base	66.02	180	eP	P	02 44 54.5	-0.6
SBA				pmax	pmax		
	comp=Z,89nm,1.0s,mb5.8						
SBA	Scott Base	66.02	180	eP	P	02 44 54.5	-0.7
	comp=Z,89nm,1.0s,mb5.8						
TIA	Tai'an	66.23	318	eP	P	02 44 56.5	-0.6
TIA				AMB	AMB		
	comp=Z,31nm,1.1s,mb5.2						
IPM	Ipoh	66.41	280	⇓P	P	02 44 58.7	-0.1
CN2	Changchun	66.44	329	eP	P	02 45 00.4	+2.1
CN2				eS	S	02 53 42.7	-4.0
CN2				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.6						
CN2				AMB	AMB		
	comp=Z,500nm,10.0s						
CN2				LR	LR		
	comp=N,6μm,17.0s,MS6.0						
CN2				LR	LR		
	comp=E,5μm,17.0s,MS6.0						
CN2				LR	LR		
	comp=Z,9μm,19.0s,MS6.0						
KULM	Kulim	66.98	281	⇓P	P	02 45 02.4	0.0
KLR	Kul'dur	67.80	337	eP	P	02 45 03.2	-3.5
KLR				pmax	pmax		
	comp=Z,62nm,1.6s,mb5.4						
KKTK	Khon Kaen	68.28	293	P	P	02 45 12.0	+1.6
GYA	Guiyang	68.90	304	⇑iP	P	02 45 17.2	+3.0
GYA				AP	pP	02 45 29.4	+6.0
GYA				PCP	PcP	02 45 41.6	+3.1
GYA				PP	PP	02 47 52.4	+5.6
GYA				SCP		02 49 41.3	
GYA				S	S	02 54 17.6	+0.7
GYA				SKS		02 55 10.0	
GYA				SS	SS	02 58 44.3	+1.4
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
GYA				AMB	AMB		
	comp=Z,290nm,9.5s						
GYA				LR	LR		
	comp=N,890nm,18.9s,MS5.1						
GYA				LR	LR		
	comp=E,680nm,18.4s,MS5.1						
GYA				LR	LR		
	comp=Z,680nm,18.7s,MS4.9						
BJT	Baijiatuau	69.11	321	eP	P	02 45 15.9	+0.7
BJT				pmax	pmax		
	comp=Z,102nm,1.3s						
BJT	Baijiatuau	69.11	321	eP	P	02 45 15.9	+0.7
	comp=Z,102nm,1.3s,mb5.6						
BJI	Beijing	69.12	321	P	P	02 45 16.0	+0.7
BJI				AMB	AMB		
	comp=Z,69nm,0.9s,mb5.6						
BJI				LR	LR		
	comp=Z,8μm,22.9s,MS5.9						
NST	Nakhon Sawan	70.49	291	P	P	02 45 26.0	+1.8
XAN	Xi'an	70.69	313	P	P	02 45 24.1	-0.9
XAN				AP	pP	02 45 35.8	+1.5
XAN				XP	sP	02 45 41.7	+4.0
XAN				AMB	AMB		
	comp=Z,62nm,1.5s,mb5.3						
XAN				AMB	AMB		
	comp=Z,5μm,14.7s						
KMI	Kunming	71.58	302	P	P	02 45 31.7	+1.1
KMI				AP	pP	02 45 45.1	+5.3
KMI				PP	PP	02 48 13.0	+3.2
KMI				S	S	02 54 46.7	-1.5
KMI				XS	sS	02 55 08.6	+5.1
KMI				AMB	AMB		
	comp=Z,82nm,2.0s,mb5.3						
KMI				LR	LR		
	comp=N,4μm,16.8s,MS5.8						
KMI				LR	LR		
	comp=E,2μm,16.2s,MS5.8						
KMI				LR	LR		
	comp=Z,4μm,17.2s,MS5.8						
CHRT	Chiangrai	72.20	295	⇑P	P	02 45 35.0	+0.6
	comp=Z,395nm,0.9s,mb6.3						
MIR	Mirnyy	72.38	204	⇓iP	P	02 45 36.0	+1.3
MIR				i		02 45 48.0	
MIR				pmax	pmax		
	comp=Z,400nm,2.0s,mb6.0						
HHC	Hu-ho-hao-te	72.46	320	eP	P	02 45 36.9	+1.3
HHC				S	S	02 54 57.2	-0.6
HHC				AMB	AMB		
	comp=Z,36nm,0.9s,mb5.3						
HHC				AMB	AMB		
	comp=Z,2μm,8.8s						
HHC				LR	LR		
	comp=N,4μm,21.7s,MS5.9						
HHC				LR	LR		
	comp=E,5μm,19.5s,MS5.9						
HHC				LR	LR		
	comp=Z,5μm,20.1s,MS5.7						
CMAR	Chiang Mai Arr	72.47	294	P	P	02 45 36.5	+0.4
	comp=Z,29nm,0.7s,mb5.3,baz=123,slow=4.5,SNR=88						
CMAR	Chiang Mai Arr	72.47	294	i P	P	02 45 36.5	+0.4
CMAR				pmax	pmax		
	comp=Z,29nm,0.7s						
CHG	Chiang Mai	72.59	294	⇑P	P	02 45 36.9	+0.1
	comp=Z,47nm,0.8s,mb5.5						
HIA	Hailar	73.08	330	⇑iP	P	02 45 39.0	0.0
HIA	Hailar	73.08	330	eP	P	02 45 39.3	+0.3
	comp=Z,74nm,1.2s,mb5.5						
CD2	Chengdu	73.12	307	⇑iP	P	02 45 39.6	-0.1
CD2				AP	pP	02 45 52.7	+3.7
CD2				XP	sP	02 45 58.0	+5.6
CD2				PP	PP	02 48 25.5	+2.5
CD2				S	S	02 55 03.0	-2.7
CD2				XS	sS	02 55 25.1	+4.1
CD2				SS	SS	02 59 47.5	-0.1
CD2				AMB	AMB		
	comp=Z,90nm,1.2s,mb5.6						
CD2				LR	LR		
	comp=N,8μm,19.2s,MS6.1						
CD2				LR	LR		
	comp=E,6μm,18.0s,MS6.1						
CD2				LR	LR		
	comp=Z,5μm,21.6s,MS5.8						
BTO	Baotou	73.31	319	eP	P	02 45 39.6	-1.0
SEY	Seymchan	75.26	354	⇑eP	P	02 45 52.7	+1.3
LZH	Lanzhou	75.32	312	⇓P	P	02 45 54.2	+1.8
LZH				AP	pP	02 46 06.6	+4.9
LZH				PP	PP	02 48 46.0	+4.4
LZH				eS	S	02 55 29.5	-0.7
LZH				AMB	AMB		
	comp=Z,147nm,1.2s,mb5.8						
LZH				AMB	AMB		
	comp=Z,761nm,7.0s						
LZH				LR	LR		
	comp=E,3μm,16.7s						
LZH				LR	LR		
	comp=Z,4μm,17.9s,MS5.8						
CLNS	Chul'man	76.32	338	eP	P	02 45 58.0	+0.4
CLNS				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.1						
CLNS				pmax	pmax		
	comp=N,11nm,1.1s						
CLNS				pmax	pmax		
	comp=E,13nm,1.0s						
OHAK	Old Harbor	76.61	21	eP	P	02 45 58.7	-0.6
	comp=E,55nm,1.0s,mb5.4						
KDAK	Kodiak Island	77.29	21	P	P	02 46 03.1	0.0
	comp=E,7.7nm,0.9s,mb4.6,baz=197,slow=3.5,SNR=8.0						
CIT	Chita	77.86	330	eP	P	02 46 05.8	-0.6
CIT				e		02 46 12.0	
CIT				e		02 46 20.0	
CIT				e		02 49 06.7	
CIT				pmax	pmax		
	comp=Z,307nm,1.5s,mb6.0						
SVW2	Sparrevohn	78.84	18	eP	P	02 46 10.3	-1.3
YAK	Yakutsk	78.86	344	eP	P	02 46 10.7	-1.0
YAK				e*PP	pP	02 46 22.2	+1.1
YAK				e		02 46 23.9	
YAK				eS	S	02 56 03.9	-3.8
YAK				eSS	SS	03 01 17.7	+4.4
YAK				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.3						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,16nm,1.1s						
YAK				pmax	pmax		
	comp=Z,84nm,1.0s,mb5.6						
YAK				pmax	pmax		
	comp=N,44nm,1.0s						
YAK				pmax	pmax		
	comp=E,57nm,2.3s						
YAK				smax			
	comp=N,61μm,3.0s						
YAK				smax			
	comp=E,147μm,2.7s						
YAK				MLR	MLR		
	comp=Z,13μm,20.0s,MS6.2						
YAK				MLR	MLR		
	comp=N,6μm,20.0s,MS6.0						
YAK				MLR	MLR		
	comp=E,4μm,22.0s,MS6.0						
YAK	Yakutsk	78.86	344	eP	P	02 46 11.5	-0.2
	comp=E,38nm,0.6s,mb5.5						
IMP	Imphal	78.93	298	eP	P	02 46 13.0	+0.1
IMP				ePP	pP	02 46 24.0	+1.7
ULN	Ulaanbaatar	78.97	324	⇓eP	P	02 46 12.0	-0.6
ULN	Ulaanbaatar	78.97	324	eP	P	02 46 12.1	-0.6
	comp=E,214nm,1.8s,mb5.8						
SONM	Songino Array	79.33	324	P	P	02 46 14.1	-0.5
	comp=E,26nm,0.9s,mb5.2,baz=136,slow=4.0,SNR=83						
SONM	Songino Array	79.33	324	P	P	02 46 14.1	-0.5
SONM				pmax	pmax		
	comp=Z,26nm,0.9s						
GTA	Gaotai	79.64	314	P	P	02 46 17.1	+0.6
GTA				AP	pP	02 46 29.4	+3.5
GTA				XP	sP	02 46 33.9	+4.6
GTA				S	S	02 56 17.2	+0.3
GTA				XS	sS	02 56 36.4	+4.1
GTA				AMB	AMB		
	comp=Z,69nm,1.7s,mb5.3						
GTA				AMB	AMB		
	comp=Z,3μm,8.1s						
GTA				LR	LR		
	comp=N,6μm,18.3s,MS6.1						
GTA				LR	LR		
	comp=E,5μm,19.2s,MS6.1						
GTA				LR	LR		
	comp=Z,8μm,19.8s,MS6.1						
TTA	Tatalina	80.16	17	eP	P	02 46 17.5	-1.3
TTA				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
TTA	Tatalina	80.16	17	eP	P	02 46 17.5	-1.2
	comp=Z,26nm,1.0s,mb5.1						
SHL	Shillong	80.94	298	⇑iP	P	02 46 24.0	+0.2
SHL				eS	S	02 56 54.0	+23
BOD	Bodaibo	81.26	335	eP	P	02 46 23.1	-1.7
BOD				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
ZAK	Zakamensk	82.37	325	eP	P	02 46 29.4	-1.4
ZAK				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
IRK	Irkutsk	82.74	327	eP	P	02 46 30.7	-2.0
IRK				e		02 46 43.4	
IRK				pmax	pmax		
	comp=Z,101nm,1.9s,mb5.5						
TLY	Talaya	82.80	326	P	P	02 46 33.1	+0.1
	comp=Z,322nm,0.8s,mb6.4,SNR=6.0						
TLY	Talaya	82.80	326	eP	P	02 46 33.5	+0.5
TLY				e		02 46 45.3	
TLY				pmax	pmax		
	comp=Z,121nm,1.8s,mb5.6						

LSA Lhasa 82.81 302 *e*P P 02 46 34.9 +1.3
LSA pmax pmax
comp=Z,49nm,1.2s,mb5.4
LSA Lhasa 82.81 302 *e*P P 02 46 34.9 +1.3
comp=Z,49nm,1.2s,mb5.4
KIPM Iron Peak 83.16 47 *e*P P 02 46 37.5 +2.3
COLA College 84.01 18 *e*P P 02 46 35.4 -3.5
COLA pmax pmax
comp=Z,21nm,0.8s,mb5.3
COLA College 84.01 18 *e*P P 02 46 35.4 -3.5
comp=Z,21nm,0.8s,mb5.3
MAW Mawson 84.02 202 *e*P P 02 46 38.3 -0.8
comp=Z,23nm,1.1s,mb5.2
MAW Mawson 84.02 202 P P 02 46 38.6 -0.5
comp=Z,15nm,1.0s,mb5.1,baz=94,slow=5.7,SNR=21
MAW Mawson 84.02 202 *e*P P 02 46 38.3 -0.8
MAW pmax pmax
comp=Z,23nm,1.1s
MOY Mondy 84.25 326 *e*P P 02 46 41.1 +0.6
MOY pmax pmax
comp=Z,206nm,3.8s
OHCM Honcut 84.44 48 *e*P P 02 46 39.9 -1.8
WRAK Wrangell Islan 85.00 29 *e*P P 02 46 43.6 -0.5
comp=Z,14nm,0.9s,mb5.1
HYT Haines Junctio 85.08 24 *e*P P 02 46 45.8 +1.4
MTUM Tungsten Hills 85.96 51 *e*P P 02 46 48.7 -0.7
EGAK Eagle 86.09 20 *e*P P 02 46 46.6 -2.8
comp=Z,20nm,0.8s,mb5.4
DAWY Dawson 86.27 21 *e*P P 02 46 49.8 -0.4
NVAR Mina Array Bea 86.49 50 P P 02 46 49.7 -2.3
comp=Z,3.0nm,0.7s,mb4.7,baz=236,slow=9.8,SNR=6.5
JCW Jim Creek 87.25 40 *e*P P 02 46 55.3 -0.1
RPW Rockport 87.59 40 *e*P P 02 46 57.9 +0.8
ETW Entiat 88.05 41 *e*P P 02 47 00.7 +1.4
RSW Rattlesnake Hi 88.12 42 *e*P P 02 47 01.0 +1.3
HAWA Hanford 88.16 42 *e*P P 02 47 00.1 +0.2
comp=Z,5.4nm,0.7s,mb4.9
OD2 Odessa Site #2 89.02 41 *e*P P 02 47 04.0 +0.1
ELK Elko 89.43 48 *e*P P 02 47 04.4 -1.6
ELK pmax pmax
comp=Z,15nm,1.3s
ELK Elko 89.43 48 *e*P P 02 47 04.4 -1.5
comp=Z,15nm,1.3s,mb5.2
WMQ Urumqi 89.69 315⇑ *i*P P 02 47 07.8 +0.7
WMQ AP pP 02 47 20.0 +3.5
WMQ XP sP 02 47 23.5 +3.6
WMQ PP PP 02 50 42.0 +2.5
WMQ SKS 02 57 33.5
WMQ S S 02 57 54.5 -2.2
WMQ AMB AMB
comp=Z,57nm,1.6s,mb5.7
WMQ LR LR
comp=N,4μm,20.4s,MS5.9
WMQ LR LR
comp=E,2μm,18.6s,MS5.9
WMQ LR LR
comp=Z,3μm,20.5s,MS5.7
NEW Newport 90.30 41 *e*P P 02 47 09.3 -0.5
NEW pmax pmax
comp=Z,4.0nm,0.7s
NEW Newport 90.30 41 *e*P P 02 47 09.3 -0.5
comp=Z,4.4nm,0.7s,mb4.9
KRAR Krasnoyarsk 90.41 328⇓ *e*P P 02 47 09.6 -0.5
KRAR pmax pmax
comp=Z,25nm,0.5s,mb5.8
TUC Tucson 90.76 57 *e*P P 02 47 12.7 +0.3
TUC pmax pmax
comp=Z,93nm,2.3s,mb5.7
TUC Tucson 90.76 57 *e*P P 02 47 12.7 +0.3
comp=Z,93nm,2.3s,mb5.7
HLID Hailey 90.79 46 *e*P P 02 47 12.8 +0.6
comp=Z,5.9nm,0.8s,mb5.0
HYB Hyderabad 90.90 287 *i*P P 02 47 13.5 +0.2
HYB Hyderabad 90.90 287 *e*P P 02 47 13.5 +0.2
WUAZ Wupatki 91.04 54 *e*P P 02 47 13.6 0.0
comp=Z,56nm,1.7s,mb5.6
SYO Syowa Base 91.05 197⇑ *e*P P 02 47 10.6 -2.4
SYO Syowa Base 91.05 197⇑ *e*P P 02 47 13.0 0.0
DUG Dugway 91.07 49 *e*P P 02 47 11.6 -2.0
DUG pmax pmax
comp=Z,26nm,1.4s,mb5.4
DUG Dugway 91.07 49 *e*P P 02 47 11.6 -2.0
comp=Z,26nm,1.4s,mb5.4
MSU Marysvale 91.13 51 *e*P P 02 47 13.1 -0.9
MCMT McKenzie Canyo 92.20 45 *e*P P 02 47 20.7 +1.9
HWUT Hardware Ranch 92.33 48 *e*P P 02 47 19.4 0.0
comp=Z,8.4nm,1.1s,mb5.0
CHMT Chamberlain Mo 92.45 43 *e*P P 02 47 18.9 -0.9
QLMT Earthquake Lak 93.18 45 *e*P P 02 47 26.6 +3.4
TPAW Teton Pass 93.21 46 *e*P P 02 47 24.7 +1.3
comp=Z,4.1nm,0.7s,mb5.0
BOZ Bozeman (W) 93.23 44 *e*P P 02 47 24.6 +1.1
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
BOZ Bozeman (W) 93.23 44 *e*P P 02 47 24.6 +1.1
comp=Z,3.4nm,0.8s,mb4.8
PV10 Paradox Valley 93.50 52 *e*P P 02 47 26.4 +1.4
MVCO Mesa Verde 93.68 53 *e*P P 02 47 27.6 +1.8
comp=Z,3.3nm,0.7s,mb4.7
PV01 Paradox Valley 93.81 52 *e*P P 02 47 27.1 +0.7
BW06 Boulder Array 94.04 47 *e*P P 02 47 28.1 +0.8
comp=Z,2.1nm,0.9s,mb4.6
PDAR Pinedale Array 94.04 47 P P 02 47 27.6 +0.3
comp=Z,2.3nm,0.8s,mb4.7,baz=219,slow=2.2,SNR=12
PDAR PKKPbc PKKPbc 03 04 29.6 -1.3
comp=Z,0.4nm,0.6s,baz=17,slow=0.9,SNR=2.8
MKAR Makanchi Array 94.13 317 P P 02 47 26.6 -1.0
comp=Z,54nm,0.9s,mb6.0,baz=109,slow=4.9,SNR=116
MKAR PKiKP PKiKP 02 52 12.3 +0.6
comp=Z,1.7nm,0.8s,baz=217,slow=0.7,SNR=4.1
MKAR Makanchi Array 94.13 317⇑ *e*P P 02 47 26.6 -1.0
ZALV Zalesovo Beam 94.22 324 P P 02 47 25.6 -2.2
comp=Z,39nm,0.9s,mb5.8,baz=108,slow=4.8,SNR=68
ZAL Zalesovo 94.23 324 P P 02 47 25.6 -2.3
ZAL pmax pmax
comp=Z,39nm,1.0s
ANMO Albuquerque 94.85 55 LR LR 03 25 41.6
comp=Z,14μm,20.5s,MS6.4,baz=263,slow=33
ANMO Albuquerque 94.85 55 *e*P P 02 47 32.2 +1.0
ANMO pmax pmax
comp=Z,1.0nm,0.7s
ANMO Albuquerque 94.85 55 *e*P P 02 47 32.2 +1.0
comp=Z,1.2nm,0.7s,mb4.4
NVS Novosibirsk 95.33 325 *e*P P 02 47 31.7 -1.2
NVS *i* 02 47 44.4
NVS *e* 02 58 07.7
NVS pmax pmax
comp=Z,51nm,1.3s,mb5.8
NVS pmax pmax
comp=E,42nm,1.5s
YKA Yellowknife Ar 95.64 27 P P 02 47 32.2 -1.9
comp=E,0.9nm,0.7s,mb4.3,baz=255,slow=4.6,SNR=5.9
YKA Yellowknife Ar 95.64 27 P P 02 47 32.2 -1.9
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 95.64 27 P P 02 47 32.2 -1.9
SNAA Sanae 96.34 184 *e*P P 02 47 37.2 -0.1
SNAA *e* 02 47 49.5
ISCO Idaho Springs 96.39 51 *e*P P 02 47 40.3 +2.2
ISCO pmax pmax
comp=Z,1.0nm,0.6s,mb4.4
ISCO Idaho Springs 96.39 51 *e*P P 02 47 40.3 +2.2
comp=Z,1.5nm,0.6s,mb4.6
KURK Kurchatov 97.28 320 P P 02 47 41.0 -0.8
comp=Z,62nm,1.6s,mb5.8,SNR=10
KURK Kurchatov 97.28 320⇑ *i*P P 02 47 40.0 -1.8
KSH Kashi 97.29 309 *e*P P 02 47 42.0 -0.2
KSH *e*AP pP 02 47 55.3 +3.7
KSH *e*XP sP 02 48 00.5 +5.5
KSH *e*PP PP 02 51 40.0 +0.9
KSH *e*SKS 02 58 14.1
KSH *e*S S 02 58 56.8 -7.5
KSH *e*XS sS 02 59 21.2 +1.1
KSH *e*SS SS 03 05 40.2 -2.7
KSH LR LR
comp=Z,20μm,17.7s,MS6.7
VNA2 Neumayer--Watz 97.31 182 *e*P P 02 47 41.9 +0.2
VNA2 *e* 02 47 53.6
VNA1 Neumayer--Stat 97.61 182 *e*P P 02 47 43.2 +0.1
VNA1 *e* 02 47 55.4
BVAR Borovoye Array 102.60 322 P Pdif 02 48 03.8 -1.8
comp=Z,5.9nm,0.9s,baz=93,slow=5.9,SNR=24
BVAR Borovoye Array 102.60 322 P Pdif 02 48 03.8 -1.8
BVAR pmax pmax
comp=Z,6.0nm,0.9s
comp=Z,9.0nm,1.0s
CLL Collm 134.84 336 *e*(PKPdf) PKPdf 02 53 30.0 +2.3
comp=Z,9.0nm,1.0s
CLL *ex* x 02 53 41.0
CLL *i* SKPdf SKPdf 02 57 00.0 -0.9
comp=Z,111nm,2.3s
CLL *e*PKSdf 02 57 04.0
CLL Collm 134.84 336 *e*PKP PKPdf 02 53 30.0 +2.3
CLL *i* SKP 02 57 00.0
BUD Budapest 134.85 328 *e*PKP/Dc PKPdf 02 53 30.4 +2.6
MODS Modra-Piesok 135.12 330 *e*PKP PKPdf 02 53 28.9 +0.6
PRU Pruhonice 135.21 334 *e*PKPdf PKPdf 02 53 28.5 +0.1
PRU *e*SKP 02 57 03.3
TREC Trest 135.30 333 *e*PKPdf PKPdf 02 53 28.1 -0.5
TREC *e*SKP 02 57 06.0
ZST Bratislava 135.32 330 *e*PKP PKPdf 02 53 27.9 -0.8
ZST LR LR
comp=Z,100nm,22.7s,MS4.5
PKSM Moragy 135.87 327⇓ *i*P PKPdf 02 53 28.7 -1.1
NKC Novy Kostel 135.90 336 *e*SKP 02 57 02.6
MOX Moxa 135.91 337 *e*PKP PKPdf 02 53 25.8 -3.9
comp=Z,19nm,2.0s
MOX *e* 02 57 05.0
TSUM Tsumeb 136.04 226 *e*PKPdf PKPdf 02 53 30.5 -0.5
CONA Conrad Observa 136.11 331⇓ *i*P PKPdf 02 53 31.3 +1.1
comp=Z,14nm,1.4s
CONA Conrad Observa 136.11 331⇑ *i*PKPdf PKPdf 02 53 29.4 -0.8
comp=Z,14nm,1.4s
KHC Kasperske Hory 136.27 334 *e*PKPdf PKPdf 02 53 31.5 +1.1
KHC *e*SKP 02 57 04.2
GERES GERESS Array B 136.43 333 PKhKP 02 53 19.6
comp=Z,1.7nm,0.9s,baz=54,slow=2.0,SNR=9.7
GERES PKP PKPdf 02 53 31.6 +0.9
comp=Z,2.9nm,0.7s,baz=36,slow=2.4,SNR=11
GERES SKP 02 57 05.6
comp=Z,4.6nm,0.9s,baz=58,slow=3.3,SNR=5.2
GERES GERESS Array B 136.43 333 PKHKP 02 53 19.6
GERES 02 53 31.6
GERES pmax pmax
comp=Z,2.0nm,1.0s
GERES pmax pmax
comp=Z,3.0nm,0.7s
GERES pmax pmax
comp=N,5.0nm,0.9s
BDFB Brasilia 136.81 128 PKP PKPdf 02 53 31.4 -1.1
comp=N,1.4nm,0.6s,baz=248,slow=11,SNR=2.9
BDFB Brasilia 136.81 128 PKIKP PKPdf 02 53 31.4 -1.0
BDFB pmax pmax
comp=Z,1.0nm,0.6s
GRA1 Grafenberg Arr 136.82 336 *e*PKPdf PKPdf 02 53 31.5 +0.1
GRA1 *e* 02 54 40.0
GRA1 *e*SKP 02 57 04.8
GRA1 *e* 02 58 17.2
GRF Grafenberg Arr 136.82 336 *e*PKPdf PKPdf 02 53 31.5 +0.1
GRF *e* 02 54 40.0
GRF *e*SKP 02 57 04.8
GRF *e* 02 58 17.2
PERS Pernice 137.38 330 *i*PKPdf PKPdf 02 53 36.1 +3.5
MEM Membach 137.94 341 PKP PKPdf 02 53 33.8 +0.3
VISS Visnje 138.10 329 *i*PKPdf PKPdf 02 53 35.4 +1.4
VISS *i* 02 54 46.6
BOJS Bojanci 138.10 329 *i*PKPdf PKPdf 02 53 35.7 +1.7
BOJS *e* 02 54 44.9
RUP Ruppelstein 138.36 339 PKHKP 02 53 22.9
JAVS Javornik 138.42 330 *i*PKPdf PKPdf 02 53 36.9 +2.4
DOU Dourbes 138.83 342 PKP PKPdf 02 53 35.1 -0.1
FETA Feichten 139.11 334⇑ *i*P PKPdf 02 53 35.6 -0.1
comp=Z,20nm,1.2s
FETA Feichten 139.11 334⇑ *i*PKPdf PKPdf 02 53 27.9 -7.9
comp=Z,20nm,1.2s
CDF Champ du Feu 139.37 338 *e*PKP1 PKPdf 02 53 28.7 -7.5
comp=Z,8.3nm,0.9s
ECH Echery 139.58 338 PKIKP PKPdf 02 53 29.8 -6.8
HINF Hinteralfeld 140.02 338 *e*PKP1 PKPdf 02 53 30.3 -7.1
HAU Haudompre 140.05 338 *e*PKP1 PKPdf 02 53 31.1 -6.3
MEZF Maizieres J'vi 140.07 340 *e*PKP1 PKPdf 02 53 33.6 -3.9
comp=Z,18nm,0.8s
CABF La Chapelle 141.32 338 *e*PKP1 PKPdf 02 53 34.8 -5.0
comp=Z,28nm,1.0s
FLN La Foliniere 141.45 345 *e*PKP1 PKPdf 02 53 36.7 -3.2
comp=Z,10nm,0.7s
LDF La Drutiere 141.52 345 *e*PKP1 PKPdf 02 53 37.7 -2.4
comp=Z,17nm,1.0s
LOR Lormes 141.54 340 *e*PKP1 PKPdf 02 53 34.6 -5.6
comp=Z,26nm,1.1s
SSF Saint Saulge 141.84 340 *e*PKP1 PKPdf 02 53 35.7 -5.0
comp=Z,44nm,1.3s
GRR Gorron 141.89 346 *e*PKP1 PKPdf 02 53 37.6 -3.1
comp=Z,10nm,0.6s
LPL La Plagne 141.98 336 *e*PKP1 PKPdf 02 53 36.2 -4.8
LPG La Plagne 141.99 336 *e*PKP1 PKPdf 02 53 36.4 -4.6
SMF Signal de Mont 142.09 340 *e*PKP1 PKPdf 02 53 36.2 -5.0
comp=Z,26nm,1.1s
AVF Avril sur Loir 142.13 340 *e*PKP1 PKPdf 02 53 35.5 -5.7
comp=Z,8.2nm,0.9s
SGMF Saint Gilles 142.41 347 *e*PKP1 PKPdf 02 53 37.8 -3.9
comp=Z,24nm,0.9s
BGF Bois d'Agland 142.50 341 *e*PKP1 PKPdf 02 53 38.8 -3.1
comp=Z,19nm,0.8s
MBDF Montbardon 142.61 335 *e*PKP1 PKPdf 02 53 35.7 -6.4
comp=Z,15nm,0.8s
PLDF La Plantade 142.76 339 PKIKP PKPdf 02 53 41.4 -1.0
ORIF Oris-en-Rattie 142.81 336 *e*PKP1 PKPdf 02 53 36.9 -5.6
comp=Z,56nm,0.9s
QUIF Quistinic 142.86 348 *e*PKP1 PKPdf 02 53 38.9 -3.6
SAOF Saorge 142.88 334 PKP PKPdf 02 53 39.1 -3.5
SAOF Saorge 142.88 334 PKP PKPdf 02 53 38.4 -4.2
TCF Toulx Ste Croi 142.94 341 *e*PKP1 PKPdf 02 53 37.8 -4.9
comp=Z,35nm,1.1s
TOUF Mont Tournerai 142.99 334 PKP PKPdf 02 53 39.4 -3.4
SBF Sospel 143.03 334 *e*PKP1 PKPdf 02 53 36.9 -6.0
comp=Z,76nm,0.8s
LUCF Luceram 143.04 334 PKP PKPdf 02 53 39.4 -3.5
MVIF Mont Vial 143.12 334 PKP PKPdf 02 53 38.4 -4.7
PYM Petit Puy Mans 143.16 340 PKP PKPdf 02 53 40.9 -2.2
REVF Revere 143.16 334 PKP PKPdf 02 53 39.9 -3.2
OCF Saint Nazaire 143.32 336 PKP PKPdf 02 53 39.8 -3.6
VIVF Saint-Julien-l 143.33 337 *e*PKP1 PKPdf 02 53 39.4 -4.0
comp=Z,63nm,1.2s
PGF Pioggiola 143.34 331 *e*PKP1 PKPdf 02 53 38.3 -5.2
comp=Z,55nm,0.9s
MFF Saint Martin d 143.36 344 *e*PKP1 PKPdf 02 53 38.3 -5.1
comp=Z,15nm,0.7s
CORF Corte 143.46 330 PKP PKPdf 02 53 41.4 -2.3
LBL Lubilhac 143.53 339 PKP PKPdf 02 53 42.1 -1.6
LBL Lubilhac 143.53 339 PKP PKPdf 02 53 41.4 -2.3
FRF La Foret Royal 143.61 334 *e*PKP1 PKPdf 02 53 38.5 -5.5
comp=Z,85nm,1.0s
SMRF Simiane la Rot 143.72 336 *e*PKP1 PKPdf 02 53 40.0 -4.1
comp=Z,46nm,1.1s
LMR La Mourre 143.85 334 *e*PKP1 PKPdf 02 53 39.5 -4.9
comp=Z,137nm,1.1s
OSPF L'Ospedale 143.92 330 PKP PKPdf 02 53 41.0 -3.6
OSPF L'Ospedale 143.92 330 PKP PKPdf 02 53 40.7 -3.9
RJF Les Rejaudoux 144.04 341 *e*PKP1 PKPdf 02 53 40.6 -4.0
comp=Z,87nm,1.2s
CAF Calviac 144.20 340 *e*PKP1 PKPdf 02 53 41.4 -3.5
comp=Z,50nm,1.0s
LASF Ste Croix 144.30 337 *e*PKP1 PKPdf 02 53 41.8 -3.3
comp=Z,147nm,1.1s
LFF La Frestale 144.61 342 *e*PKP1 PKPdf 02 53 42.6 -3.1
MTLF Montolieu 145.54 339 *e*PKP1 PKPbc 02 53 45.9 -1.5
comp=Z,82nm,0.9s
FILF Fillols 146.09 338 PKP PKPdf 02 53 47.1 -1.2
FILF Fillols 146.09 338 PKP PKPdf 02 53 45.6 -2.7
MLS Moulis 146.27 340 PKP PKPdf 02 53 46.2 -2.4
VALF Valcebollere 146.43 338 PKP PKPdf 02 53 46.4 -2.4
EPF Esparros 146.45 341 *e*PKP1 PKPbc 02 53 48.1 -2.1
LABF Labassere 146.52 341 PKP PKPdf 02 53 49.8 +0.8
LABF Labassere 146.52 341 PKP PKPdf 02 53 48.9 -0.1
REYF Montagne du Re 146.65 341 PKP PKPdf 02 53 48.5 -0.7
RESF Ens 146.65 340 PKP PKPdf 02 53 48.7 -0.5
RESF Ens 146.65 340 PKP PKPdf 02 53 47.6 -1.6
VIEF Viey 146.69 341 PKP PKPdf 02 53 46.9 -2.4
ETSF Etsaut 146.86 342 *e*PKP1 PKPbc 02 53 49.9 -1.5
SJPF Ste Jean 146.86 342 *e*PKP1 PKPbc 02 53 49.5 -1.9
comp=Z,14nm,0.7s
KEST Kesra 148.07 322 PKPbc PKPbc 02 53 54.3 -0.7
comp=Z,31nm,0.9s,baz=318,slow=2.5,SNR=43
CKFL Kef-Lekhel 149.11 326 P PKPab 02 54 05.0 +3.1
CASM Ain Smara 149.34 326 P PKPab 02 54 03.0 +0.2
DFRA Djebel Bou Aff 149.46 327 P PKPab 02 54 03.5 +0.2
PCAB Cabril 149.75 351 *e*PKPbc PKPbc 02 53 56.0 -3.0
SET Setif 149.97 327 P PKPbc 02 54 00.0 +0.2

BRVK Borovoye 102.67 322⇑ *e*P Pdif 02 48 05.5 -0.4
KEV Kevo 116.58 345 *e*P PKPdf 02 52 51.6 -0.7
comp=Z,0.9nm,0.4s
KEV Kevo 116.58 345 *e*PKIKP PKPdf 02 52 51.6 -0.7
KEV pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 117.11 345 PKP PKPdf 02 52 50.8 -2.6
comp=Z,5.5nm,0.8s,baz=73,slow=1.8,SNR=36
ARCES PKKPbc PKKPbc 03 03 16.4 -4.2
comp=Z,2.3nm,0.7s,baz=213,slow=3.0,SNR=6.6
ARCES ARCESS Array B 117.11 345 PKIKP PKPdf 02 52 50.8 -2.6
ARCES pmax pmax
comp=Z,6.0nm,0.8s
ARCES pmax pmax
comp=Z,2.0nm,0.7s
JOF Joensuu 119.68 338 *e*p PKPdf 02 52 58.5 0.0
comp=Z,5.4nm,0.6s
JOF Joensuu 119.68 338 *e*PKIKP PKPdf 02 52 58.5 0.0
JOF pmax pmax
comp=Z,5.0nm,0.6s
LPAZ La Paz 119.79 117 PKP PKPdf 02 52 59.4 -0.7
comp=Z,0.5nm,0.5s,baz=198,slow=9.7,SNR=3.3
LPAZ PKKPab PKKPab 03 03 11.6 -0.8
comp=Z,0.9nm,0.8s,baz=57,slow=9.8,SNR=4.3
LPAZ La Paz 119.79 117 PKIKP PKPdf 02 52 59.4 -0.7
LPAZ pmax pmax
comp=Z,1.0nm,0.5s
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
RDF Al-Radifah 120.28 297 *e*P PKPdf 02 52 58.1 -2.6
baz=297
RDF AMb AMB 02 53 03.2
comp=Z,56nm,1.3s,baz=297
VRHR Novokhopersk 120.33 323 *e*PKIKP PKPdf 02 52 58.1 -2.0
VRHR pmax pmax
comp=Z,20nm,0.9s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
MIB Mutribah 120.42 298 *e*P PKPdf 02 52 58.3 -2.6
baz=298
MIB AMb AMB 02 53 03.0
comp=Z,56nm,1.2s,baz=298
NAY Al-Naaiem 120.53 297 *e*P PKPdf 02 52 59.1 -2.1
baz=297
NAY AMb AMB 02 53 03.1
comp=Z,24nm,1.2s,baz=297
RST Umm Al-Ruwaisa 120.73 297 *e*P PKPdf 02 52 59.1 -2.4
baz=297
RST AMb AMB 02 53 14.2
comp=Z,2.0nm,1.3s,baz=297
TBLG Delisi 120.88 312 P PKPdf 02 53 00.9 -0.5
GNI Garni 121.20 310 PKP PKPdf 02 53 01.7 -0.4
comp=Z,6.0nm,0.7s,baz=167,slow=17,SNR=7.2
GNI Garni 121.20 310⇓ *i*PKIKP PKPdf 02 53 01.3 -0.8
GNI Garni 121.20 310 *e*PKPdf PKPdf 02 53 01.5 -0.6
OBN Obninsk 121.50 329⇑ *i*PKIKP PKPdf 02 53 03.1 +0.9
OBN *e* 02 54 30.6
OBN *e*PS PS 03 04 19.9 -7.5
OBN pmax pmax
comp=Z,10.0nm,1.2s
OBN Obninsk 121.50 329⇑ *e*PKP PKPdf 02 53 03.2 +1.0
ONI Oni 121.62 313 P PKPdf 02 53 02.8 0.0
VRSR Storozhevoye 121.71 324 *e*PKIKP PKPdf 02 53 01.5 -1.2
VRSR pmax pmax
comp=N,1.0nm,0.7s
VRSR pmax pmax
comp=Z,4.0nm,0.7s
VRSR pmax pmax
comp=E,2.0nm,1.2s
KIV Kislovodsk 121.82 315⇑ *i*PKIKP PKPdf 02 53 04.3 +1.1
KIV *e* 02 54 37.6
KIV *e*PS PS 03 04 26.3 -4.4
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV Kislovodsk 121.82 315⇑ *e*PKP PKPdf 02 53 04.3 +1.1
KAF Kangasniemi 121.99 339 *e*p PKPdf 02 53 00.9 -2.0
comp=Z,1.1nm,0.4s
KAF Kangasniemi 121.99 339 *e*PKIKP PKPdf 02 53 00.9 -2.0
KAF pmax pmax
comp=Z,1.0nm,0.4s
CPUP Villa Florida 123.46 133 PKP PKPdf 02 53 04.1 -2.8
comp=Z,0.3nm,0.4s,baz=1.3,slow=15,SNR=2.1
SOC Sochi 123.98 315 *i*PKIKP PKPdf 02 53 06.8 -0.5
SOC *e*PPP 02 57 24.8
SOC *e*PS PS 03 04 44.3 -5.6
SOC Sochi 123.98 315 *i*PKP PKPdf 02 53 09.3 +2.0
SDV Santo Domingo 124.48 87 PKP PKPdf 02 53 07.7 -1.4
comp=Z,4.7nm,0.7s,baz=92,slow=13,SNR=5.8
SDV Santo Domingo 124.48 87 *e*PKPdf PKPdf 02 53 08.4 -0.8
SIV San Ignacio 126.01 120 PKP PKPdf 02 53 09.1 -2.9
comp=Z,1.4nm,0.6s,baz=209,slow=9.4,SNR=4.8
MALT Malatya 126.39 309⇑ PKP PKPdf 02 53 12.0 -0.1
KMBO Kilima Mbogo 127.30 259 PKP PKPdf 02 53 13.7 -0.9
comp=Z,4.9nm,1.0s,baz=65,slow=23,SNR=6.2
KMBO Kilima Mbogo 127.30 259 PKIKP PKPdf 02 53 13.7 -0.9
KMBO pmax pmax
comp=Z,5.0nm,1.0s
KMBO Kilima Mbogo 127.30 259 *e*PKPdf PKPdf 02 53 15.5 +0.9
NB2 NORSAR Subarra 127.47 345 PKPdf PKPdf 02 53 12.3 -1.2
comp=Z,2.6nm,0.8s,baz=31,slow=1.9
NOA NORSAR Array B 127.47 345 PKP PKPdf 02 53 12.5 -1.0
comp=Z,3.7nm,0.9s,baz=34,slow=1.9,SNR=7.6
NOA NORSAR Array B 127.47 345 PKIKP PKPdf 02 53 12.5 -1.0
NOA pmax pmax
comp=Z,4.0nm,0.9s
AKASG Malin Array Be 127.55 327 PKP PKPdf 02 53 12.8 -1.2
comp=Z,8.0nm,1.0s,baz=63,slow=1.9,SNR=16
AKASG Malin Array Be 127.55 327 PKIKP PKPdf 02 53 12.8 -1.1
AKASG pmax pmax
comp=Z,8.0nm,1.0s
ASF Jabal al Asfar 129.00 302 PKP PKPdf 02 53 18.0 +0.7
comp=Z,5.7nm,1.0s,baz=269,slow=3.4,SNR=14
ASF Jabal al Asfar 129.00 302 PKIKP PKPdf 02 53 18.0 +0.7
ASF pmax pmax
comp=Z,6.0nm,1.0s
ANTO Ankara 130.09 313⇓ *i*P PKPdf 02 53 19.7 +0.6
LSZ Lusaka 130.13 238 *e*PKIKP PKPdf 02 53 20.7 +0.8
EIL Elat 131.12 299 PKP PKPdf 02 53 20.5 -0.9
comp=Z,11nm,0.9s,baz=64,slow=3.5,SNR=10
BURAR Bucovina Array 131.43 325⇑ *i*P PKPdf 02 53 22.7 +1.3
KWP Kalwaria 131.59 329⇑ *i*P PKPdf 02 53 21.6 -0.1
MLR Muntele Rosu 132.16 322 PKP PKPdf 02 53 22.2 -0.6
comp=Z,3.7nm,0.8s,baz=133,slow=22,SNR=3.9
MLR Muntele Rosu 132.16 322 PKIKP PKPdf 02 53 22.2 -0.7
MLR pmax pmax
comp=Z,4.0nm,0.8s
MLR Muntele Rosu 132.16 322⇓ *i*P PKPdf 02 53 25.4 +2.5
KOLS Kolonicke sedl 132.25 328 *e*PKP PKPdf 02 53 23.4 +0.5
UZH Uzhgorod 132.42 328 *e*PKIKP PKPdf 02 53 24.5 +1.2
UZH *e* 02 53 31.7
STHS Stebnicka Huta 132.47 329 *e*PKP PKPdf 02 53 26.2 +2.9
CRVS Cervenica-Dubn 132.69 328 *e*PKP PKPdf 02 53 25.4 +1.7
CRVS Cervenica-Dubn 132.69 328 *e*PKP PKPdf 02 53 25.5 +1.8
DRGR 133.31 325⇓ *i*P PKPdf 02 53 24.6 -0.4
KECS Kecovo 133.45 329 *e*PKP PKPdf 02 53 25.5 +0.3
OKC Ostrava-Krasne 133.69 331 *e*PKPdf PKPdf 02 53 26.9 +1.3
MORC Moravsky Berou 134.02 332⇑ *i*P PKPdf 02 53 28.6 +2.4
PSZ Piszkesteto 134.12 328 *e*PKP PKPdf 02 53 30.2 +3.7
PSZ Piszkesteto 134.12 328⇑ *i*P PKPdf 02 53 28.9 +2.4
DPC Dobruska-Polom 134.16 333 *e*PKPdf PKPdf 02 53 27.6 +1.1
DPC *e*SKP 02 56 58.9
UPC Upice 134.19 333 *e*PKPdf PKPdf 02 53 28.4 +1.9
UPC *e*SKP 02 56 58.9
VYHS Vyhne 134.27 330 *e*PKP PKPdf 02 53 28.0 +1.3
KOLL Kolacno 134.43 330 *e*PKP PKPdf 02 53 26.8 -0.2
BZS Buzias 134.61 325⇓ *i*P PKPdf 02 53 26.9 -0.6
PVCC Panska Ves 134.79 334 *e*PKPdf PKPdf 02 53 28.2 +0.5
PVCC *e*SKP 02 57 00.9
BRG Berggiesshubel 134.80 335 *e*PKIKP PKPdf 02 53 29.9 +2.3
BRG pmax pmax
comp=Z,2.0nm,0.7s
BRG pmax pmax
comp=N,8.0nm,1.3s
BRG pmax pmax
comp=N,54nm,2.3s
BRG Berggiesshubel 134.80 335 *e*PKP PKPdf 02 53 29.9 +2.2
comp=N,3.8nm,0.7s
BRG *e* 02 54 38.4
comp=N,12nm,1.2s
BRG SKP 02 57 00.3
comp=N,90nm,2.3s
CLL Collm 134.84 336 *e*PKIKP PKPdf 02 53 30.0 +2.3
CLL pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MVO	**Moncorvo**	**150.11**	**349**	*e*PKPdf	PKPdf	02 53 52.9	-2.0
MVO	**Moncorvo**	**150.11**	**349**	*e*PKPbc	PKPbc	02 53 58.8	-1.1
PVIS	**Viseu**	**150.70**	**350**	*e*PKPbc	PKPbc	02 54 00.4	-1.0
ESDC	**Sonseca Array**	**150.82**	**344**	PKPbc	PKPbc	02 53 58.3	-3.4
	comp=Z,5.8nm,0.9s,baz=21,slow=2.5,SNR=16						
MTE	**Manteigas**	**150.95**	**349**	*e*PKPdf	PKPdf	02 53 57.2	+1.0
PAB	**San Pablo**	**151.05**	**344**	*e*PKIKP	PKPdf	02 53 59.8	+3.4
EMHD	**Djebel Mahouad**	**151.22**	**330**	P	PKPbc	02 54 03.0	+0.3
PCBR	**Castelo Branco**	**151.48**	**349**	*e*PKPdf	PKPdf	02 53 56.7	-0.4
PCBR	**Castelo Branco**	**151.48**	**349**	*e*PKPbc	PKPbc	02 54 00.6	-2.6
PTOM	**Tomar**	**151.85**	**350**	*e*PKPdf	PKPdf	02 53 58.5	+0.9
PTOM	**Tomar**	**151.85**	**350**	*e*PKPbc	PKPbc	02 54 02.8	-1.3
PMRV	**Marv??o**	**151.86**	**349**	*e*PKPdf	PKPdf	02 53 57.0	-0.7
PMRV	**Marv??o**	**151.86**	**349**	*e*PKPbc	PKPbc	02 54 02.4	-1.7
ECHA	**Ech Chlef**	**152.00**	**332**	P	PKPbc	02 54 06.0	+1.5
EANR	**'Ain N'Sour**	**152.29**	**333**	P	PKPbc	02 54 05.0	-0.2
PESTR	**Estremoz**	**152.44**	**349**	*e*PKPbc	PKPbc	02 54 06.5	+1.1
ETRT	**Tiaret**	**152.66**	**332**	P	PKPbc	02 54 08.0	+2.0
EVO	**Evora**	**152.84**	**349**	*e*PKIKP	PKPdf	02 54 00.3	+1.1
	comp=Z,53nm,1.2s						
EVO	**Evora**	**152.84**	**349**	*e*PKPdf	PKPdf	02 53 59.5	+0.3
PBAR	**Barrancos**	**153.00**	**348**	*e*PKPdf	PKPdf	02 53 58.3	-1.1
PBAR	**Barrancos**	**153.00**	**348**	*e*PKPbc	PKPbc	02 54 03.6	-3.1
PBEJ	**Beja**	**153.31**	**349**	*e*PKPdf	PKPdf	02 53 59.2	-0.6
PBEJ	**Beja**	**153.31**	**349**	*e*PKPbc	PKPbc	02 54 04.4	-3.0
MORF	**Marmelete**	**154.15**	**350**	*e*PKPbc	PKPbc	02 54 09.8	+0.6
TORD	**Torodi Ar. Bea**	**164.42**	**276**	PKP	PKPdf	02 54 11.2	-2.4
	comp=Z,3.9nm,0.8s,baz=46,slow=0.5,SNR=36						
KIC	**Kosan Boka**	**169.19**	**241**	*e*P	PKPdf	02 54 16.8	-0.4
	comp=Z,147nm,1.3s						
LIC	**Lamto**	**169.37**	**239**	*e*P	PKPdf	02 54 13.9	-3.4
	comp=Z,74nm,1.5s						
DBIC	**Dimbokro**	**169.45**	**242**	PKP	PKPdf	02 54 15.2	-2.2
	comp=Z,9.9nm,1.1s,baz=129,slow=4.0,SNR=4.3						
DBIC	**Dimbokro**	**169.45**	**242**	PKIKP	PKPdf	02 54 15.2	-2.2
DBIC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TIC	**Toumodi**	**169.58**	**241**	*e*P	PKPdf	02 54 17.4	-0.1
	comp=Z,108nm,1.3s						
BBTS	**Babate**	**176.39**	**39**	PKP	PKPdf	02 54 17.6	-2.6
	comp=Z,16nm,1.1s						

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*IDC **02** 02:35:18.2±0.5, 11.77S×165.79E, h0km, mb5.2/19, mb1 5.2/19, mb1mx5.2/20, mbtmp5.2/19, MS5.8/8, Ms1 5.8/8, ms1mx5.5/33, Error ellipse: s-maj=18.7km s-min=15.9km az=142.0*

*ISCJB **02** 02:35:19.5±3.3, 11.81S±0.06×165.68E±0.05, h15km±20km, mb5.2/57, MS5.7/8, Error ellipse: s-maj=10.9km s-min=8.3km az=157.4*

*MOS **02** 02:35:21.5±1.5, 11.74S×165.70E, h33km, mb5.4/37, Error ellipse: s-maj=11.6km s-min=9.6km az=130.9*

*BJI **02** 02:35:22.2, 11.00S×166.02E, h10km, mb5.3*

*GCMT **02** 02:35:23.6±0.4, 11.86S×165.78E, h32km±1km, MW6.3/65, Moment Tensor Solution. s41,c50; s65,c88; Duration: 3s3 Moment tensor: Scale 10^{18}Nm; M_{rr}2.75±.16; $M_{\theta\theta}$-0.46±.09; $M_{\phi\phi}$-2.29±.10; $M_{r\theta}$1.23±.16; $M_{\theta\phi}$0.82±.07; $M_{\phi r}$-1.14±.13; Best double couple: $M_0$3.15200×10^{18} NP1:ϕ_s350.00000°,δ31.00000°,λ110.00000°. NP2: ϕ_s146.00000°,δ61.00000°,λ78.00000°. Principal axes: T 3.2940, Plg72.0000°, Azm29.0000°; N -0.2800, Plg10.0000°, Azm152.0000°; P -3.0090, Plg15.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **02** 02:35:23.6±1.7, 11.77S×165.70E, h37km±14km, mb5.2/29 Error ellipse: s-maj=10.5km s-min=8.0km az=151.0*

ISC 02 02:35:23.4±3.0**, 11.83S**±0.06×**165.73E**±0.05**, h33**km±21km**, n202,** σ1s**12**/111**, mb5.2**/57**, MS5.7**/8**, 7C-5D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.16**	**292**	*e*P	**Pn**	**02 36 51.1**	**-1.1**
CTA	**Charters Tower**	**20.43**	**244**	LR	LR	02 47 00.6	
	comp=Z,35µm,18.2s,MS5.8,baz=344,slow=34						
CTA	**Charters Tower**	**20.43**	**244**	*e*S	**S**	**02 43 53.3**	**+8.0**
CTAO	**Charters Tower**	**20.43**	**244**	*e*P	**P**	**02 39 57.6**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,102nm,1.1s						
CTAO	**Charters Tower**	**20.43**	**244**	*e*P	**P**	**02 39 57.5**	**-0.5**
	comp=Z,102nm,1.1s						
AFI	**Afiamalu**	**22.02**	**98**	P	**P**	**02 40 14.7**	**-0.6**
	comp=Z,147nm,1.1s,mb5.3,baz=287,slow=14,SNR=2.8						
AFI				LR	LR	02 46 50.7	
	comp=Z,57µm,18.0s,MS6.0,baz=268,slow=32						
COEN	**Coen**	**22.09**	**262**	*e*P	**P**	**02 40 18.0**	**+2.1**
	comp=Z,145nm,1.4s,mb5.2						
STKA	**Stephens Creek**	**29.87**	**224**	LR	LR	02 53 18.5	
	comp=Z,33µm,18.0s,MS6.0,baz=42,slow=36						
WRA	**Warramunga Arr**	**31.21**	**251**	P	**P**	**02 41 39.7**	**-0.3**
	comp=Z,11nm,0.6s,mb4.9,baz=84,slow=9.0,SNR=2.6						
WRA				PcP	PcP	02 44 35.2	+0.9
	comp=Z,4.7nm,0.8s,baz=77,slow=3.4,SNR=2.9						
WRA				ScP	ScP	02 48 19.8	+4.7
	comp=Z,6.3nm,1.0s,baz=74,slow=3.8,SNR=6.6						
WRA				LR	LR	02 53 41.2	
	comp=Z,18µm,18.2s,MS5.8,baz=70,slow=35						
WRA	**Warramunga Arr**	**31.21**	**251**	P	**P**	**02 41 39.7**	**-0.3**
WRA						02 44 35.2	
WRA				pmax	pmax		
	comp=Z,11nm,0.6s						
WRA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA				pmax	pmax		
	comp=N,6.0nm,1.0s						
WRA				MLR	MLR		
	comp=Z,18µm,18.2s						
RPZ	**Rata Peaks**	**32.11**	**173**	P	**P**	**02 41 46.4**	**-1.1**
	comp=Z,92nm,0.9s,mb5.6,baz=169,slow=6.1,SNR=3.2						
ASAR	**Alice Springs**	**32.44**	**244**	P	**P**	**02 41 52.4**	**+1.7**
	comp=Z,17nm,0.7s,mb5.0,baz=69,slow=9.3,SNR=5.2						
ASAR				PcP	PcP	02 44 38.8	+1.1
	comp=Z,3.4nm,0.9s,baz=83,slow=2.7,SNR=2.6						
ASAR				ScP	ScP	02 48 23.4	+4.2
	comp=Z,15nm,1.2s,baz=90,slow=3.3,SNR=8.6						
ASAR	**Alice Springs**	**32.44**	**244**	P	**P**	**02 41 52.4**	**+1.7**
ASAR						02 44 38.8	
ASAR				pmax	pmax		
	comp=Z,17nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ASAR				pmax	pmax		
	comp=N,15nm,1.2s						
GUMO	**Guam**	**32.64**	**320**	LR	LR	02 53 41.4	
	comp=N,23µm,21.2s,MS5.8,baz=135,slow=34						
RAR	**Rarotonga**	**34.30**	**110**	LR	LR	02 53 41.7	
	comp=N,18µm,18.4s,MS5.8,baz=354,slow=32						
FITZ	**Fitzroy Crossi**	**39.17**	**256**	P	**P**	**02 42 49.8**	**+1.3**
	comp=N,14nm,0.8s,mb4.8,baz=102,slow=6.1,SNR=2.4						
FITZ				LR	LR	02 58 52.6	
	comp=N,23µm,18.4s,MS6.0,baz=266,slow=36						
FITZ	**Fitzroy Crossi**	**39.17**	**256**	*e*P	**P**	**02 42 50.4**	**+1.8**
	comp=N,203nm,1.5s,mb5.6						
FITZ				LR	LR	02 58 52.6	
FITZ	**Fitzroy Crossi**	**39.17**	**256**	*e*S	**S**	**02 48 45.5**	**-1.2**
FORT	**Forrest**	**39.59**	**236**	*e*P	**P**	**02 42 53.3**	**+1.4**
	comp=N,65nm,0.7s,mb5.5						
FORT	**Forrest**	**39.59**	**236**	*e*P	**P**	**02 42 52.8**	**+1.0**
	comp=N,13nm,0.9s,mb4.7						
BATI	**Baumata**	**41.30**	**268**	P	**P**	**02 43 07.5**	**+1.3**
	comp=N,44nm,0.7s,mb5.2,baz=250,slow=23,SNR=1.6						
MBWA	**Marble Bar**	**44.94**	**252**	*e*P	**P**	**02 43 35.9**	**+0.3**
	comp=N,62nm,1.0s,mb5.4						
KAPI	**Kappang**	**45.94**	**274**	P	**P**	**02 43 42.2**	**-1.4**
	comp=N,22nm,0.7s,mb5.2,baz=335,slow=2.4,SNR=1.9						
NWAO	**Narrogin (SRO)**	**49.02**	**237**	P	**P**	**02 44 06.5**	**-0.8**
	comp=N,35nm,0.8s,mb5.4,baz=91,slow=6.4,SNR=3.2						
NWAO	**Narrogin (SRO)**	**49.02**	**237**	P	**P**	**02 44 06.5**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,35nm,0.9s						
NWAO	**Narrogin (SRO)**	**49.02**	**237**	P	**P**	**02 44 06.5**	**-0.8**
JOW	**Kunigami**	**52.91**	**317**	P	**P**	**02 44 36.4**	**-0.2**
	comp=Z,47nm,0.8s,mb5.4,baz=122,slow=2.7,SNR=5.8						
JOW				LR	LR	03 02 17.9	
	comp=Z,385nm,21.4s,MS4.4,baz=209,slow=31						
MJAR	**Matsushiro Arr**	**54.65**	**333**	P	**P**	**02 44 47.8**	**-1.4**
	comp=Z,27nm,1.1s,mb5.2,baz=156,slow=5.6,SNR=7.2						
MJAR	**Matsushiro Arr**	**54.65**	**333**	P	**P**	**02 44 47.8**	**-1.3**
MJAR				pmax	pmax		
	comp=Z,27nm,1.1s						
MAJO	**Matsushiro**	**54.65**	**333**	*e*P	**P**	**02 44 48.0**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.4						
MAJO	**Matsushiro**	**54.65**	**333**	*e*P	**P**	**02 44 48.0**	**-1.1**
	comp=Z,41nm,1.1s,mb5.4						
XMIS	**Christmas Isla**	**58.86**	**265**	*e*P	**P**	**02 45 19.4**	**-0.1**
KSRS	**Korea Array**	**60.51**	**326**	P	**P**	**02 45 30.5**	**+0.2**
	comp=Z,10.0nm,1.1s,mb4.9,baz=146,slow=6.5,SNR=3.0						
KSRS	**Korea Array**	**60.51**	**326**	P	**P**	**02 45 30.5**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
YSS	**Yuzh-Sakhalins**	**62.02**	**342**	⇓*e*P	**P**	**02 45 40.0**	**-0.4**
YSS				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.5						
QIZ	**Qiongzhong**	**63.03**	**299**	*e*P	**P**	**02 45 46.3**	**-1.4**
	comp=Z,83nm,1.5s,mb5.6						
PET	**Petropavlovsk**	**64.87**	**355**	⇑*e*P	**P**	**02 45 58.3**	**-0.8**
PET				pmax	pmax		
	comp=Z,45nm,1.9s,mb5.2						
PET	**Petropavlovsk**	**64.87**	**355**	⇑*e*P	**P**	**02 45 58.4**	**-0.7**
MDJ	**Mudanjiang**	**65.03**	**332**	*e*P	**P**	**02 46 00.2**	**-0.1**
	comp=Z,32nm,1.1s,mb5.3						
PETK	**Petropavlovsk-**	**65.04**	**355**	P	**P**	**02 45 58.4**	**-1.8**
	comp=Z,22nm,1.1s,mb5.1,baz=134,slow=6.4,SNR=6.2						
DL2	**Dalian**	**65.09**	**323**	P	**P**	**02 46 02.3**	**+1.5**
DL2				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.2						
SBA	**Scott Base**	**66.03**	**180**	*e*P	**P**	**02 46 06.0**	**-0.3**
SBA				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.8						
SBA	**Scott Base**	**66.03**	**180**	*e*P	**P**	**02 46 06.0**	**-0.3**
	comp=Z,90nm,1.0s,mb5.8						
BJT	**Baijiatuau**	**69.07**	**321**	*e*P	**P**	**02 46 26.5**	**+0.4**
BJT				pmax	pmax		
	comp=Z,35nm,1.0s						
BJT	**Baijiatuau**	**69.07**	**321**	*e*P	**P**	**02 46 26.5**	**+0.4**
	comp=Z,35nm,1.0s,mb5.2						
BJI	**Beijing**	**69.08**	**321**	P	**P**	**02 46 27.0**	**+0.9**
BJI				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.3						
XAN	**Xi'an**	**70.63**	**313**	P	**P**	**02 46 37.3**	**+1.4**
XAN				AP	pP	02 46 45.0	-1.1
XAN				XP	sP	02 46 48.2	-1.8
XAN				AMB	AMB		
	comp=Z,41nm,1.0s,mb5.3						
XAN				AMB	AMB		
	comp=Z,9µm,15.0s						
CMAR	**Chiang Mai Arr**	**72.41**	**294**	P	**P**	**02 46 50.0**	**+3.2**
	comp=Z,1.3nm,0.3s,mb4.3,baz=280,slow=13,SNR=3.1						
CMAR	**Chiang Mai Arr**	**72.41**	**294**	P	**P**	**02 46 50.1**	**+3.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HIA	**Hailar**	**73.04**	**330**	*e*P	**P**	**02 46 48.4**	**-1.5**
HIA				pmax	pmax		
	comp=Z,71nm,1.1s						
HIA	**Hailar**	**73.04**	**330**	*e*P	**P**	**02 46 48.4**	**-1.5**
	comp=Z,71nm,1.1s,mb5.5						
SEY	**Seymchan**	**75.24**	**354**	⇓*e*P	**P**	**02 46 59.7**	**-2.8**
YAK	**Yakutsk**	**78.83**	**344**	⇑*e*P	**P**	**02 47 21.8**	**-0.9**
YAK				pmax	pmax		
	comp=Z,95nm,1.0s,mb5.7						
YAK	**Yakutsk**	**78.83**	**344**	*e*P	**P**	**02 47 22.2**	**-0.6**
	comp=Z,46nm,0.4s,mb5.8						
IMP	**Imphal**	**78.86**	**298**	*e*S	**P**	**02 47 26.0**	**+2.2**
ULN	**Ulaanbaatar**	**78.92**	**324**	*de*P	**P**	**02 47 24.3**	**+0.8**
ULN	**Ulaanbaatar**	**78.92**	**324**	*e*P	**P**	**02 47 23.2**	**-0.4**
	comp=Z,101nm,1.1s,mb5.7						
SONM	**Songino Array**	**79.28**	**324**	P	**P**	**02 47 26.7**	**+1.2**
	comp=Z,40nm,1.1s,mb5.3,baz=133,slow=4.5,SNR=9.9						
SONM	**Songino Array**	**79.28**	**324**	P	**P**	**02 47 26.7**	**+1.2**
SONM				pmax	pmax		
	comp=Z,40nm,1.1s						
TTA	**Tatalina**	**80.17**	**17**	*e*P	**P**	**02 47 28.1**	**-1.9**
BOD	**Bodaibo**	**81.22**	**335**	*e*P	**P**	**02 47 34.2**	**-1.5**
BOD				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.2						
ZAK	**Zakamensk**	**82.33**	**325**	⇓*i*P	**P**	**02 47 42.1**	**+0.4**
ZAK				*e*		02 57 59.3	
ZAK				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.3						
IRK	**Irkutsk**	**82.70**	**327**	*e*P	**P**	**02 47 42.8**	**-0.8**
IRK				*e*		02 48 01.2	
IRK				pmax	pmax		
	comp=Z,78nm,1.1s,mb5.7						
LSA	**Lhasa**	**82.75**	**302**	*e*P	**P**	**02 47 44.9**	**+0.5**
LSA				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
LSA	**Lhasa**	**82.75**	**302**	*e*P	**P**	**02 47 44.9**	**+0.5**
	comp=Z,21nm,0.9s,mb5.2						
TLY	**Talaya**	**82.76**	**326**	*e*P	**P**	**02 47 44.5**	**+0.6**
TLY				*e*	pP	02 47 52.7	-1.7
TLY				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.5						
TLY	**Talaya**	**82.76**	**326**	⇓*e*P	**P**	**02 47 43.0**	**-0.9**
MAW	**Mawson**	**84.00**	**202**	P	**P**	**02 47 50.8**	**+0.7**
	comp=Z,20nm,1.1s,mb5.2,baz=58,slow=6.2,SNR=2.1						
MAW	**Mawson**	**84.00**	**202**	P	**P**	**02 47 50.8**	**+0.7**
MAW				pmax	pmax		
	comp=Z,20nm,1.1s						
COLA	**College**	**84.03**	**18**	*i* P	**P**	**02 47 50.5**	**+0.3**
COLA	**College**	**84.03**	**18**	*e*P	**P**	**02 47 49.2**	**-0.9**
	comp=Z,24nm,0.8s,mb5.4						
NLWA	**Neilton Lookou**	**85.77**	**40**	*e*P	**P**	**02 48 00.3**	**+1.0**
	comp=Z,8.6nm,1.1s,mb4.9						
MTUM	**Tungsten Hills**	**86.01**	**51**	*e*P	**P**	**02 48 01.0**	**+0.2**
EGAK	**Eagle**	**86.11**	**20**	*e*P	**P**	**02 48 01.4**	**+0.8**
	comp=Z,21nm,0.7s,mb5.5						
DAWY	**Dawson**	**86.28**	**21**	*e*P	**P**	**02 48 01.3**	**-0.2**
NVAR	**Mina Array Bea**	**86.53**	**50**	P	**P**	**02 48 04.0**	**+0.7**
	comp=Z,2.1nm,0.6s,mb4.6,baz=298,slow=24,SNR=11						
JCW	**Jim Creek**	**87.28**	**40**	*e*P	**P**	**02 48 06.4**	**-0.3**
RPW	**Rockport**	**87.63**	**40**	*e*P	**P**	**02 48 07.7**	**-0.7**
ETW	**Entiat**	**88.08**	**41**	*e*P	**P**	**02 48 09.9**	**-0.7**
OD2	**Odessa Site #2**	**89.05**	**41**	*e*P	**P**	**02 48 15.0**	**-0.1**
ELK	**Elko**	**89.47**	**48**	*e*P	**P**	**02 48 17.5**	**+0.2**
ELK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ELK	**Elko**	**89.47**	**48**	*e*P	**P**	**02 48 17.5**	**+0.2**
	comp=Z,6.1nm,0.8s,mb5.0						
NEW	**Newport**	**90.34**	**41**	*e*P	**P**	**02 48 21.0**	**-0.2**
NEW				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NEW	**Newport**	**90.34**	**41**	*e*P	**P**	**02 48 20.9**	**-0.2**
	comp=Z,5.1nm,0.6s,mb5.0						
INK	**Inuvik**	**90.64**	**19**	*e*P	**P**	**02 48 12.9**	**-9.2**
TUC	**Tucson**	**90.82**	**57**	*e*P	**P**	**02 48 23.0**	**-0.8**
TUC				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.9						
TUC	**Tucson**	**90.82**	**57**	*e*P	**P**	**02 48 23.0**	**-0.8**
	comp=Z,4.3nm,0.6s,mb5.0						
HLID	**Hailey**	**90.83**	**46**	*e*P	**P**	**02 48 24.9**	**+1.4**
	comp=Z,4.8nm,0.6s,mb5.0						
HYB	**Hyderabad**	**90.83**	**288**	*i* P	**P**	**02 48 26.0**	**+1.8**
HYB	**Hyderabad**	**90.83**	**288**	*e*P	**P**	**02 48 26.0**	**+1.8**
WUAZ	**Wupatki**	**91.09**	**54**	*e*P	**P**	**02 48 26.8**	**+1.9**
	comp=Z,7.2nm,0.7s,mb5.1						
DUG	**Dugway**	**91.11**	**49**	*e*P	**P**	**02 48 25.2**	**+0.2**
DUG				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.1						
DUG	**Dugway**	**91.11**	**49**	*e*P	**P**	**02 48 25.1**	**+0.2**
	comp=Z,6.9nm,0.7s,mb5.1						
HWUT	**Hardware Ranch**	**92.38**	**48**	*e*P	**P**	**02 48 30.8**	**0.0**
	comp=Z,4.7nm,0.7s,mb4.9						
TPAW	**Teton Pass**	**93.25**	**46**	*e*P	**P**	**02 48 35.9**	**+1.1**
	comp=Z,3.7nm,0.7s,mb4.9						
BOZ	**Bozeman (W)**	**93.27**	**44**	*e*P	**P**	**02 48 35.3**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
BOZ	**Bozeman (W)**	**93.27**	**44**	*e*P	**P**	**02 48 35.3**	**+0.5**
	comp=Z,2.9nm,0.8s,mb4.8						
MVCO	**Mesa Verde**	**93.72**	**53**	*e*P	**P**	**02 48 38.4**	**+1.3**
	comp=Z,3.1nm,0.6s,mb4.9						
PV01	**Paradox Valley**	**93.86**	**52**	*e*P	**P**	**02 48 39.7**	**+2.0**
MKAR	**Makanchi Array**	**94.08**	**317**	P	**P**	**02 48 39.0**	**+0.5**
	comp=Z,59nm,0.9s,mb6.0,baz=107,slow=4.2,SNR=11						
MKAR	**Makanchi Array**	**94.08**	**317**	P	**P**	**02 48 39.0**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,59nm,0.9s						
BW06	**Boulder Array**	**94.09**	**47**	*e*P	**P**	**02 48 37.9**	**-0.8**
	comp=Z,2.4nm,0.7s,mb4.7						
PDAR	**Pinedale Array**	**94.09**	**47**	P	**P**	**02 48 40.5**	**+1.9**
	comp=Z,2.1nm,0.7s,mb4.7,baz=223,slow=3.3,SNR=5.6						
ZALV	**Zalesovo Beam**	**94.17**	**324**	P	**P**	**02 48 38.0**	**-0.8**
	comp=Z,68nm,1.1s,mb6.0,baz=106,slow=4.8,SNR=15						
ZAL	**Zalesovo**	**94.18**	**324**	P	**P**	**02 48 38.0**	**-0.8**
ZAL				pmax	pmax		
	comp=Z,68nm,1.1s						
ANMO	**Albuquerque**	**94.90**	**55**	*e*P	**P**	**02 48 43.5**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	**Albuquerque**	**94.90**	**55**	*e*P	**P**	**02 48 43.5**	**+1.0**
	comp=Z,2.3nm,0.8s,mb4.7						
YKA	**Yellowknife Ar**	**95.67**	**27**	P	**P**	**02 48 46.2**	**+0.9**
	comp=Z,1.2nm,0.5s,mb4.5,baz=257,slow=4.6,SNR=8.5						
YKA	**Yellowknife Ar**	**95.67**	**27**	P	**P**	**02 48 46.2**	**+0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**95.67**	**27**	P	**P**	**02 48 46.2**	**+0.8**
MAIT	**Maitri**	**95.70**	**188**	*e*P	**P**	**02 48 43.6**	**-1.9**
SNAA	**Sanae**	**96.34**	**184**	*e*P	**P**	**02 48 46.7**	**-1.7**
SNAA				*e*		02 48 49.9	
KURK	**Kurchatov**	**97.23**	**320**	⇑*e*P	**P**	**02 48 51.3**	**-1.4**
KURK				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.5						
VNA2	**Neumayer--Watz**	**97.31**	**182**	*e*P	**P**	**02 48 51.7**	**-1.1**
VNA2				*e*		02 48 55.2	
VNA1	**Neumayer--Stat**	**97.62**	**182**	*e*P	**P**	**02 48 53.2**	**-1.0**
VNA1				*e*		02 48 56.6	
ARCES	**ARCESS Array B**	**117.08**	**345**	PKP	PKPdf	02 54 03.5	-0.9
	comp=Z,5.6nm,0.9s,baz=83,slow=3.8,SNR=3.8						
ARCES	**ARCESS Array B**	**117.08**	**345**	PKIKP	PKPdf	02 54 03.5	-0.9
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JOF	**Joensuu**	**119.65**	**338**	*e*p	PKPdf	02 54 14.7	+5.2
	comp=Z,6.3nm,0.6s						
JOF	**Joensuu**	**119.65**	**338**	*e*PKIKP	PKPdf	02 54 14.7	+5.2
JOF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VRHR	**Novokhopersk**	**120.28**	**323**	*e*PKIKP	PKPdf	02 54 09.7	-1.4
VRHR				pmax	pmax		
	comp=Z,20nm,0.9s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,20nm,1.1s						
MOS	**Moscow**	**120.64**	**329**	*e*PKIKP	PKPdf	02 54 16.0	+4.4
MOS				*e*		02 54 27.7	
GNI	**Garni**	**121.14**	**310**	PKP	PKPdf	02 54 13.7	+0.6
	comp=E,4.8nm,0.5s,baz=209,slow=23,SNR=5.0						
GNI	**Garni**	**121.14**	**310**	⇑*i*PKIKP	PKPdf	02 54 14.8	+1.7
OBN	**Obninsk**	**121.46**	**329**	⇑*e*PKIKP	PKPdf	02 54 13.4	+0.2
OBN				pmax	pmax		
	comp=Z,25nm,1.4s						
VRSR	**Storozhevoye**	**121.66**	**324**	*e*PKIKP	PKPdf	02 54 11.7	-2.1
VRSR				pmax	pmax		
	comp=Z,8.0nm,1.5s						
VRSR				pmax	pmax		
	comp=N,3.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,2.0nm,1.2s						
KIV	**Kislovodsk**	**121.76**	**315**	⇑*e*PKIKP	PKPdf	02 54 14.1	-0.1
KIV				pmax	pmax		
	comp=Z,17nm,1.2s						
KAF	**Kangasniemi**	**121.96**	**339**	*e*p	PKPdf	02 54 18.3	+4.3
	comp=Z,4.9nm,0.6s						
KAF	**Kangasniemi**	**121.96**	**339**	*e*PKIKP	PKPdf	02 54 18.3	+4.3
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SOC	**Sochi**	**123.93**	**315**	*i* PKIKP	PKPdf	02 54 20.0	+1.6
KMBO	**Kilima Mbogo**	**127.24**	**259**	PKP	PKPdf	02 54 26.5	+0.9
	comp=Z,6.7nm,1.1s,baz=261,slow=24,SNR=4.7						
KMBO	**Kilima Mbogo**	**127.24**	**259**	PKIKP	PKPdf	02 54 26.5	+0.9
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NB2	**NORSAR Subarra**	**127.45**	**345**	PKPdf	PKPdf	02 54 30.8	+6.3
	comp=Z,6.2nm,1.1s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**127.45**	**345**	PKP	PKPdf	02 54 22.6	-1.9
	comp=Z,5.7nm,1.0s,baz=33,slow=1.7,SNR=2.9						
NOA	**NORSAR Array B**	**127.45**	**345**	PKIKP	PKPdf	02 54 22.6	-1.9
NOA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AKASG	**Malin Array Be**	**127.50**	**327**	PKP	PKPdf	02 54 23.8	-1.2
	comp=Z,16nm,1.1s,baz=62,slow=1.7,SNR=10						
AKASG	**Malin Array Be**	**127.50**	**327**	PKIKP	PKPdf	02 54 23.8	-1.2
AKASG				pmax	pmax		
	comp=Z,16nm,1.1s						
ASF	**Jabal al Asfar**	**128.94**	**302**	PKP	PKPdf	02 54 28.4	+0.1
	comp=Z,12nm,1.0s,baz=25,slow=2.8,SNR=9.6						
ASF	**Jabal al Asfar**	**128.94**	**302**	PKIKP	PKPdf	02 54 28.4	+0.1
ASF				pmax	pmax		
	comp=Z,12nm,1.0s						
EIL	**Elat**	**131.06**	**299**	PKP	PKPdf	02 54 32.1	-0.3
MLR	**Muntele Rosu**	**132.12**	**322**	PKP	PKPdf	02 54 34.7	+0.8
	comp=Z,6.6nm,0.9s,baz=179,slow=2.9,SNR=3.2						
MLR	**Muntele Rosu**	**132.12**	**322**	PKIKP	PKPdf	02 54 34.7	+0.8
MLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KOLS	**Kolonicke sedl**	**132.20**	**328**	*e*PKP	PKPdf	02 54 34.9	+0.9
KOLS				*e*SKP		02 58 03.3	
KOLS				*e*		02 58 03.3	
KOLS	**Kolonicke sedl**	**132.20**	**328**	*e*	PKPdf	02 54 34.9	+0.9
STHS	**Stebnicka Huta**	**132.43**	**329**	*e*PKP	PKPdf	02 54 36.6	+2.2
STHS				*e*PP	PP	02 56 53.7	-3.6
STHS				*e*SKP		02 58 09.7	
STHS				*e*		02 56 53.7	
STHS				*e*		02 58 09.7	
STHS	**Stebnicka Huta**	**132.43**	**329**	*e*	PKPdf	02 54 36.6	+2.2
CRVS	**Cervenica-Dubn**	**132.64**	**328**	*e*PKP	PKPdf	02 54 35.0	+0.2
CRVS				*e*PP	PP	02 56 53.1	-5.6
CRVS				*e*SKP		02 58 04.7	
CRVS				*e*		02 56 53.1	
CRVS				*e*		02 58 04.7	
CRVS	**Cervenica-Dubn**	**132.64**	**328**	*e*	PKPdf	02 54 35.0	+0.2
KECS	**Kecovo**	**133.41**	**329**	*e*PKP	PKPdf	02 54 36.0	-0.2
KECS				*e*PP	PP	02 56 57.5	-6.1
KECS				*e*SKP		02 58 07.2	
KECS				*e*		02 56 57.5	
KECS				*e*		02 58 07.2	
KECS	**Kecovo**	**133.41**	**329**	*e*	PKPdf	02 54 36.0	-0.2
OKC	**Ostrava-Krasne**	**133.66**	**331**	*e*PKPdf	PKPdf	02 54 36.8	+0.1
OKC				*e*SKP		02 58 10.9	
DPC	**Dobruska-Polom**	**134.13**	**333**	*e*PKPdf	PKPdf	02 54 35.8	-1.7
DPC				*e*SKP		02 58 10.4	
UPC	**Upice**	**134.15**	**333**	*e*PKIKP	PKPdf	02 54 32.0	-5.6
UPC	**Upice**	**134.15**	**333**	*e*SKP		02 58 13.5	
VYHS	**Vyhne**	**134.23**	**330**	*e*PKP	PKPdf	02 54 36.6	-1.2
VYHS				*e*PP	PP	02 56 59.8	-9.0
VYHS				*e*		02 56 59.8	
VYHS	**Vyhne**	**134.23**	**330**	*e*	PKPdf	02 54 36.6	-1.2
KOLL				*e*SKP		02 58 15.7	
KOLL	**Kolacno**	**134.39**	**330**	*e*PP	PP	02 57 00.2	-10
PVCC	**Panska Ves**	**134.76**	**334**	*e*PKPdf	PKPdf	02 54 35.2	-3.5
CLL	**Collm**	**134.81**	**336**	*i* PKIKP	PKPdf	02 54 38.3	-0.5
CLL				*i*		02 54 48.5	
CLL				pmax	pmax		
	comp=Z,14nm,1.1s						
CLL				pmax	pmax		
	comp=Z,37nm,1.8s						
CLL	**Collm**	**134.81**	**336**	*i* PKPdf	PKPdf	02 54 38.3	-0.5
	comp=Z,14nm,1.1s						
CLL				*i* pPKPdf	pPKPdf	02 54 48.5	-1.1
CLL				*e*SKPdf	SKPdf	02 58 10.0	-1.6
	comp=Z,24nm,1.5s						
CLL				*i* pSKPbc		02 58 19.9	
	comp=Z,37nm,1.8s						
CLL				*i* x	x	02 58 22.4	
CLL	**Collm**	**134.81**	**336**	*i* PKP	PKPdf	02 54 38.3	-0.5
CLL				*i* pPKP	pPKPdf	02 54 48.5	-1.1
CLL				*e*SKP		02 58 10.0	
CLL				*i* PKS		02 58 19.9	
MODS	**Modra-Piesok**	**135.08**	**330**	*e*PKP	PKPdf	02 54 39.4	0.0
MODS				*e*PP	PP	02 57 01.5	-13
MODS				*e*SKP		02 58 12.1	
MODS				*e*		02 57 01.5	
MODS				*e*		02 58 12.1	
MODS	**Modra-Piesok**	**135.08**	**330**	*e*	PKPdf	02 54 39.4	0.0
PRU	**Pruhonice**	**135.17**	**334**	*e*PKPdf	PKPdf	02 54 39.0	-0.5
TREC	**Trest**	**135.26**	**333**	*e*PKPdf	PKPdf	02 54 39.3	-0.4
TREC				*e*SKP		02 58 13.3	
ZST	**Bratislava**	**135.28**	**330**	*e*PKP	PKPdf	02 54 39.0	-0.8
ZST	**Bratislava**	**135.28**	**330**	*e*	PKPdf	02 54 39.0	-0.8
KHC	**Kasperske Hory**	**136.23**	**334**	*e*PKPdf	PKPdf	02 54 40.7	-0.8
KHC				*e*SKP		02 58 16.6	
GERES	**GERESS Array B**	**136.39**	**333**	PKP	PKPdf	02 54 41.4	-0.4
	comp=Z,6.8nm,1.0s,baz=52,slow=2.2,SNR=8.7						
GERES	**GERESS Array B**	**136.39**	**333**	PKIKP	PKPdf	02 54 41.4	-0.4
GERES				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CDF	**Champ du Feu**	**139.34**	**338**	*e*PKP1	PKPdf	02 54 41.3	-6.0
HINF	**Hinteralfeld**	**139.99**	**338**	*e*PKP1	PKPdf	02 54 42.5	-6.0
HAU	**Haudompre**	**140.02**	**338**	*e*PKP1	PKPdf	02 54 42.8	-5.7

CABF	La Chapelle	141.29	337	ePKP1	PKPdf	02 54 46.6	-4.2
	comp=Z,103nm,1.4s						
LOR	Lormes	141.51	340	ePKP1	PKPdf	02 54 46.8	-4.4
	comp=Z,59nm,1.4s						
SSF	Saint Saulge	141.81	340	ePKP1	PKPdf	02 54 47.8	-4.0
	comp=Z,28nm,1.0s						
LPL	La Plagne	141.95	336	ePKP1	PKPdf	02 54 47.4	-4.7
	comp=Z,39nm,1.2s						
LPG	La Plagne	141.95	336	ePKP1	PKPdf	02 54 47.9	-4.2
SMF	Signal de Mont	142.06	340	ePKP1	PKPdf	02 54 47.8	-4.4
AVF	Avril sur Loir	142.10	340	ePKP1	PKPdf	02 54 47.7	-4.6
BGF	Bois d'Agland	142.47	341	ePKP1	PKPdf	02 54 50.9	-2.1
	comp=Z,33nm,1.1s						
MBDF	Montbardon	142.58	335	ePKP1	PKPdf	02 54 47.4	-5.8
	comp=Z,22nm,0.9s						
ORIF	Oris-en-Rattie	142.78	336	ePKP1	PKPdf	02 54 47.8	-5.8
TCF	Toulx Ste Croi	142.91	341	ePKP1	PKPdf	02 54 49.9	-3.9
	comp=Z,51nm,1.2s						
SBF	Sospel	142.99	334	ePKP1	PKPdf	02 54 48.5	-5.5
	comp=Z,159nm,1.3s						
VIVF	Saint-Julien-l	143.30	337	ePKP1	PKPdf	02 54 50.5	-4.0
	comp=Z,51nm,1.2s						
PGF	Pioggiola	143.30	331	ePKP1	PKPdf	02 54 50.3	-4.3
	comp=Z,74nm,1.1s						
MFF	Saint Martin d	143.33	344	ePKP1	PKPdf	02 54 50.9	-3.6
FRF	La Foret Royal	143.58	334	ePKP1	PKPdf	02 54 50.8	-4.2
	comp=Z,130nm,1.4s						
SMRF	Simiane la Rot	143.68	336	ePKP1	PKPdf	02 54 51.0	-4.2
LMR	La Mourre	143.82	334	ePKP1	PKPdf	02 54 51.9	-3.5
	comp=Z,246nm,1.4s						
CAF	Calviac	144.17	340	ePKP1	PKPdf	02 54 53.4	-2.6
LASF	Ste Croix	144.27	337	ePKP1	PKPdf	02 54 53.0	-3.2
LFF	La Frestale	144.58	341	ePKP1	PKPdf	02 54 54.4	-2.3
	comp=Z,142nm,1.2s						
MTLF	Montolieu	145.50	339	ePKP1	PKPbc	02 54 56.9	-1.5
	comp=Z,108nm,1.2s						
SJPF	Ste Jean	146.84	342	ePKP1	PKPbc	02 55 01.1	-1.3
	comp=Z,70nm,1.3s						
KEST	Kesra	148.02	322	PKPbc	PKPbc	02 55 06.0	0.0
	comp=Z,32nm,1.0s,baz=358,slow=2.6,SNR=5.6						
ESDC	Sonseca Array	150.80	344	PKPbc	PKPbc	02 55 11.1	-1.6
	comp=Z,9.6nm,1.0s,baz=26,slow=2.1,SNR=4.9						
EVO	Evora	152.82	349	ePKIKP	PKPdf	02 55 11.2	+1.0
	comp=Z,68nm,1.3s						
TORD	Torodi Ar. Bea	164.36	277	PKP	PKPdf	02 55 23.1	-1.5
	comp=Z,11nm,1.0s,baz=95,slow=3.8,SNR=3.6						
LIC	Lamto	169.31	239	ePKIKP	PKPdf	02 55 26.4	-2.0
	comp=Z,129nm,1.0s						
DBIC	Dimbokro	169.39	242	PKP	PKPdf	02 55 26.9	-1.5
	comp=Z,32nm,1.1s,baz=76,slow=5.7,SNR=7.8						
DBIC	Dimbokro	169.39	242	PKIKP	PKPdf	02 55 27.0	-1.5
DBIC				pmax	pmax		
	comp=Z,32nm,1.1s						

KRSC 02 02:36:44.8±1.0, 5320N×16080E, h42^{km}±41^{km}, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.48	258	eP	Pn	02 36 56.0	+0.7
SPN				iS	Sn	02 37 03.9	+1.2
NLC	Nalytchevo	0.88	269	eP	Pn	02 37 01.2	+0.6
NLC				eS	Sn	02 37 13.1	+0.9
KII	Karymskiy	1.16	317	eP	Pn	02 37 04.9	+0.4
KII				eS	Sn	02 37 19.5	+0.3
AVH	Avacha	1.24	274	eP	Pn	02 37 07.0	+1.4
AVH				iS	Sn	02 37 23.3	+2.2
PET	Petropavlovsk	1.31	263	eP	Pn	02 37 07.3	+0.8
PET				iS	Sn	02 37 23.7	+1.0
MKZ	Mys Kozlova	1.47	22	eP	Pn	02 37 08.7	0.0
MKZ				iS	Sn	02 37 26.6	-0.1
RUS	Russkaya	1.59	242	eP	Pn	02 37 11.3	+0.9
RUS				iS	Sn	02 37 30.5	+0.9
GNL	Ganaly	1.78	287	eP	Pn	02 37 14.7	+1.7
GNL				iS	Sn	02 37 36.6	+2.2
TUMR	Tumrok	2.12	350	P	Pn	02 37 19.4	+1.7
TUMR				iS	Sn	02 37 44.7	+1.9
KMNR	Kamenistaya	2.58	353	P	Pn	02 37 26.6	+2.6
BZMR	Bezymyannaya	2.75	356	P	Pn	02 37 28.6	+2.3
KIRR	Kirishev	2.77	355	P	Pn	02 37 28.7	+2.1
ZLN	Zelenaya	2.82	0	P	Pn	02 37 29.7	+2.4
CIRR	Tsirk	2.92	359	P	Pn	02 37 30.7	+2.0
KBTR	Krutoberegovo	3.23	20	P	Pn	02 37 33.9	+0.9

*IDC **02** 02:49:57.2±0.5, 1173S×16574E, h0^{km}, mb4.7/23, mb1 4.8/23, mb1mx4.8/23, mbtmp4.7/23, Error ellipse: s-maj=15.5km s-min=13.6km az=130.0*
*MOS **02** 02:50:00.5±1.5, 1165S×16580E, h33^{km}, mb5.0/14, Error ellipse: s-maj=10.6km s-min=9.0km az=169.3*
*BJI **02** 02:50:01.2, 1149S×16642E, h53^{km}, mB5.4, mb4.8, Ms5.1, Msz5.0*
*ISCJB **02** 02:50:01.4±2.2, 1173S±005×16585E±006, h44^{km}±19^{km}, mb4.8/55, Error ellipse: s-maj=10.5km s-min=8.6km az=6.9*
*NEIC **02** 02:50:01.6±0.3, 1163S×16594E, h35^{km}, mb4.7/20, Error ellipse: s-maj=10.3km s-min=7.1km az=142.0*
*DJA **02** 02:50:46, 1333S×16466E, h364^{km}, mb4.8/13*
ISC 02 02:50:04.0±1.8, 1173S±005×16586E±006, h52^{km}±16^{km}, h37^{km}±1.2^{km}:pP-P, n143, $\sigma 1^{s}10$/99, mb4.8/55, 19C-11D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.25	291	eP	Pn	02 51 33.6	-0.1
PMG	Port Moresby	18.53	275	eP	Pn	02 54 15.1	-2.0
PMG				pmax	pmax		
	comp=Z,66nm,1.1s						
PMG	Port Moresby	18.53	275	eP	Pn	02 54 15.1	-2.0
	comp=Z,66nm,1.1s						
CTA	Charters Tower	20.59	244	eP	P	02 54 40.0	+1.1
	comp=Z,27nm,0.9s						
CTA				e		02 54 55.2	
CTA	Charters Tower	20.59	244	P	P	02 54 40.0	+1.1
	comp=Z,34nm,0.9s,baz=68,slow=12,SNR=20						
CTA	Charters Tower	20.59	244	eP	P	02 54 40.0	+1.1
CTA				e		02 54 55.2	
CTA				pmax	pmax		
	comp=Z,27nm,0.9s						
CTAO	Charters Tower	20.59	244	eP	P	02 54 39.9	+1.0
AFI	Afiamalu	21.91	98	P	P	02 54 53.7	+0.5
	comp=Z,73nm,1.0s,mb5.1,baz=5.7,slow=21,SNR=3.7						
COEN	Coen	22.23	262	eP	P	02 54 57.9	+1.4
	comp=Z,29nm,1.4s,mb4.5						
ARMA	Armidale	22.80	213	eP	P	02 55 02.9	+0.4
CNB	Canberra Magne	27.84	210	eP	P	02 55 49.4	+0.7
URZ	Urewera	28.27	161	P	P	02 55 52.3	-0.1
	comp=Z,9.5nm,0.9s,mb4.4,baz=277,slow=12,SNR=3.4						
STKA	Stephens Creek	30.03	224	eP	P	02 56 08.8	+0.6
	comp=Z,5.0nm,0.8s,mb4.3						
STKA	Stephens Creek	30.03	224	P	P	02 56 08.1	-0.1
	comp=Z,4.2nm,0.6s,mb4.3,baz=45,slow=9.2,SNR=7.8						
WB2	Warramunga Arr	31.35	251	eP	P	02 56 19.0	-1.0
WRAB	Tennant Creek	31.35	251	iP	P	02 56 19.3	-0.7
WRA	Warramunga Arr	31.36	251	P	P	02 56 19.5	-0.6
	comp=Z,6.7nm,0.7s,mb4.6,baz=83,slow=9.3,SNR=49						
WRA				PcP	PcP	02 59 13.3	+0.2
	comp=Z,2.2nm,1.0s,baz=73,slow=2.3,SNR=3.6						
WRA				ScP	ScP	03 02 58.1	+6.1
	comp=Z,2.0nm,1.0s,baz=85,slow=3.7,SNR=5.8						
WRA	Warramunga Arr	31.36	251	P	P	02 56 19.5	-0.6
WRA						02 59 13.3	
TOO	Toolangi	31.55	212	eP	P	02 56 22.3	+0.8
RPZ	Rata Peaks	32.18	173	P	P	02 56 27.1	+0.2
	comp=Z,53nm,0.9s,mb5.3,baz=29,slow=7.6,SNR=12						
ASAR	Alice Springs	32.59	244	P	P	02 56 29.9	-0.9
	comp=Z,12nm,0.7s,mb4.9,baz=70,slow=9.5,SNR=100						
ASAR				PcP	PcP	02 59 16.4	0.0
	comp=Z,2.3nm,0.7s,baz=75,slow=2.9,SNR=7.8						
ASAR				ScP	ScP	03 03 01.8	+5.6
	comp=Z,3.3nm,1.2s,baz=52,slow=4.7,SNR=6.4						
ASAR	Alice Springs	32.59	244	P	P	02 56 29.9	-0.9
ASAR						02 59 16.4	
KAKA	Kakadu	32.67	265	eP	P	02 56 31.0	-0.6
	comp=Z,13nm,0.8s,mb4.9						
FITZ	Fitzroy Crossi	39.32	256	eP	P	02 57 28.6	+0.1
	comp=Z,8.8nm,0.5s,mb4.8						
FITZ	Fitzroy Crossi	39.32	256	P	P	02 57 28.1	-0.4
	comp=Z,4.8nm,0.7s,mb4.3,baz=81,slow=8.3,SNR=10						
FORT	Forrest	39.75	236	eP	P	02 57 31.7	-0.2
	comp=Z,25nm,0.7s,mb5.0						
BATI	Baumata	41.43	268	P	P	02 57 45.8	-0.1
	comp=Z,17nm,0.6s,mb4.8,baz=137,slow=1.5,SNR=3.0						
MBWA	Marble Bar	45.09	252	eP	P	02 58 16.1	+0.6
	comp=Z,28nm,1.0s,mb5.0						
KAPI	Kappang	46.05	274	P	P	02 58 23.3	+0.1
	comp=Z,17nm,0.7s,mb5.1,baz=121,slow=8.0,SNR=6.2						
KLBR	Kellerberrin	48.44	238	eP	P	02 58 41.3	-0.2
	comp=Z,17nm,0.8s,mb5.1						
NWAO	Narrogin (SRO)	49.18	237	P	P	02 58 47.0	-0.2
	comp=Z,13nm,0.8s,mb5.0,baz=102,slow=6.3,SNR=5.6						
NWAO	Narrogin (SRO)	49.18	237	P	P	02 58 47.0	-0.2
MUN	Mundaring	49.81	238	eP	P	02 58 52.3	+0.3
MJAR	Matsushiro Arr	54.63	333	P	P	02 59 26.2	-1.3
	comp=Z,4.4nm,1.1s,mb4.4,baz=160,slow=5.2,SNR=8.6						
KSRS	Korea Array	60.50	326	P	P	03 00 08.2	-0.7
	comp=Z,1.5nm,0.7s,mb4.2,baz=131,slow=6.6,SNR=5.2						
KSRS				PcP	PcP	03 00 54.2	+1.1
	comp=Z,3.8nm,1.0s,baz=125,slow=5.9,SNR=4.1						
YSS	Yuzh-Sakhalins	61.97	342	⇓eP	P	03 00 18.9	+0.3
YSS				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.2						
NJ2	Nanjing	62.58	316	eP	P	03 00 24.1	+1.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
PETK	Petropavlovsk-	64.96	355	P	P	03 00 37.9	-0.2
	comp=Z,3.4nm,0.9s,mb4.4,baz=133,slow=8.3,SNR=6.3						
PETK	Petropavlovsk-	64.96	355	P	P	03 00 37.9	-0.2
MDJ	Mudanjiang	65.00	332	P	P	03 00 38.4	-0.3
MDJ				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,3μm,13.4s						
CASY	Casey	65.78	201	eP	P	03 00 43.1	-0.4
	comp=Z,31nm,1.3s,mb5.2						
SBA	Scott Base	66.12	180	eP	P	03 00 45.6	+0.2
SBA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
SBA	Scott Base	66.12	180	eP	P	03 00 45.6	+0.1
	comp=Z,30nm,1.0s,mb5.3						
CN2	Changchun	66.38	329	eP	P	03 00 47.4	-0.2
CN2				eAP	pP	03 00 57.7	-4.3
CN2				eS	S	03 09 34.8	+1.0
CN2				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.7						
CN2				AMB	AMB		
	comp=Z,300nm,6.0s						
KLR	Kul'dur	67.73	337	eP	P	03 00 50.8	-5.2
GYA	Guiyang	68.89	304	⇑iP	P	03 01 05.8	+2.0
GYA				AP	pP	03 01 17.9	-0.4
GYA				XP	sP	03 01 22.4	-1.7
GYA				PCP	PcP	03 01 30.6	+2.6
GYA				PP	PP	03 03 41.7	+5.0
GYA				S	S	03 10 08.4	+3.9
GYA				XS	sS	03 10 25.6	-3.3
GYA				SKS		03 10 59.7	
GYA				SS	SS	03 14 36.2	+5.2
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
GYA				LR	LR		
	comp=N,490nm,18.7s						
GYA				LR	LR		
	comp=E,450nm,18.8s						
GYA				LR	LR		
	comp=Z,470nm,18.9s						
BJI	Beijing	69.08	321	P	P	03 01 04.6	-0.1
BJI				AMB	AMB		
	comp=Z,12nm,1.5s,mb4.6						
XAN	Xi'an	70.66	312	P	P	03 01 15.3	+0.8
XAN				AMB	AMB		
	comp=Z,12nm,1.4s,mb4.6						
XAN				AMB	AMB		
	comp=Z,3μm,14.8s						
KMI	Kunming	71.57	302	P	P	03 01 22.6	+2.4
KMI				AP	pP	03 01 33.9	-0.9
KMI				XP	sP	03 01 36.5	-4.1
KMI				PCP	PcP	03 01 42.1	+2.8
KMI				PP	PP	03 04 00.6	+0.8
KMI				S	S	03 10 39.0	+3.1
KMI				SKS		03 11 17.6	
KMI				AMB	AMB		
	comp=Z,20nm,2.0s,mb4.7						
HHC	Hu-ho-hao-te	72.42	320	eP	P	03 01 25.8	+0.8
HHC				S	S	03 10 47.0	+1.9
HHC				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
HHC				AMB	AMB		
	comp=Z,4μm,8.8s						
HHC				LR	LR		
	comp=N,2μm,20.0s						
HHC				LR	LR		
	comp=E,2μm,21.2s						
HHC				LR	LR		
	comp=Z,3μm,22.0s						
CMAR	Chiang Mai Arr	72.49	294	P	P	03 01 27.1	+1.3
	comp=Z,1.6nm,0.3s,mb4.4,baz=147,slow=24,SNR=6.9						
HIA	Hailar	73.02	330	⇓eP	P	03 01 28.6	+0.3
CD2	Chengdu	73.11	307	⇓iP	P	03 01 30.4	+1.1
CD2				AP	pP	03 01 40.7	-3.2
CD2				XP	sP	03 01 45.2	-4.5
CD2				PP	PP	03 04 16.1	+3.3
CD2				S	S	03 10 55.4	+2.2
CD2				SS	SS	03 15 40.9	+5.3
CD2				AMB	AMB		
	comp=Z,30nm,1.4s,mb5.0						
SEY	Seymchan	75.16	354	⇓eP	P	03 01 39.5	-1.0
LZH	Lanzhou	75.30	312	eP	P	03 01 43.5	+1.6
LZH				AP	pP	03 01 54.0	-2.6
LZH				XP	sP	03 01 58.0	-4.4
LZH				PP	PP	03 04 35.5	+4.2
LZH				AMB	AMB		
	comp=Z,23nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,108nm,5.2s						
QSPA	South Pole Qui	78.28	180	P	P	03 01 57.8	-0.1
QSPA	South Pole Qui	78.28	180	P	P	03 01 57.8	-0.2
SVW2	Sparrevohn	78.73	18	eP	P	03 01 59.1	-1.5
YAK	Yakutsk	78.78	344	⇓eP	P	03 02 00.4	-0.5
YAK				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.2						
ULN	Ulaanbaatar	78.92	324	⇑eP	P	03 02 02.0	0.0
ULN	Ulaanbaatar	78.92	324	eP	P	03 02 02.5	+0.6
	comp=Z,46nm,1.5s,mb5.2						
SONM	Songino Array	79.28	324	P	P	03 02 04.2	+0.2
	comp=Z,2.4nm,0.6s,mb4.3,baz=139,slow=5.1,SNR=27						
GTA	Gaotai	79.61	314	P	P	03 02 07.4	+1.4
GTA				AP	pP	03 02 17.8	-2.9
GTA				XP	sP	03 02 21.8	-4.7
GTA				S	S	03 12 08.1	+3.9
GTA				XS	sS	03 12 24.8	-4.3
GTA				AMB	AMB		
	comp=Z,16nm,1.5s,mb4.7						
TTA	Tatalina	80.05	17	eP	P	03 02 05.6	-2.2
BOD	Bodaibo	81.19	335	eP	P	03 02 13.3	-0.7
BOD				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
ZAK	Zakamensk	82.32	325	eP	P	03 02 19.6	-0.5
ZAK				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
COLA	College	83.90	18	eP	P	03 02 25.6	-2.3
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
COLA	College	83.90	18	eP	P	03 02 25.6	-2.3
	comp=Z,4.0nm,0.8s,mb4.6						
MAW	Mawson	84.13	202	P	P	03 02 29.1	-0.2
	comp=Z,6.1nm,1.1s,mb4.6,baz=79,slow=9.9,SNR=7.3						
YBH	Yreka Blue Hor	84.29	45	P	P	03 02 33.6	+3.2
	comp=Z,3.9nm,0.8s,mb4.6,baz=150,slow=2.8,SNR=8.7						
MTUM	Tungsten Hills	85.85	51	eP	P	03 02 39.7	+1.3
EGAK	Eagle	85.98	20	eP	P	03 02 36.9	-1.5
	comp=Z,6.4nm,0.7s,mb5.0						
NVAR	Mina Array Bea	86.38	50	P	P	03 02 43.8	+2.9
	comp=Z,6.3nm,1.1s,mb4.8,baz=234,slow=9.5,SNR=18						
WVOR	Wild Horse Val	87.38	46	eP	P	03 02 45.9	+0.1
WVOR				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.6						
WVOR	Wild Horse Val	87.38	46	eP	P	03 02 45.9	+0.1
	comp=Z,4.2nm,1.1s,mb4.6						
ELK	Elko	89.32	48	P	P	03 02 58.2	+3.2
	comp=Z,1.5nm,0.6s,mb4.5,baz=238,slow=2.9,SNR=7.9						
ELK	Elko	89.32	48	eP	P	03 02 57.8	+2.8
ELK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ELK	Elko	89.32	48	eP	P	03 02 57.8	+2.8
	comp=Z,2.4nm,0.8s,mb4.6						
WMQ	Urumqi	89.66	315	P	P	03 02 57.2	+0.7
WMQ				AMB	AMB		
	comp=Z,11nm,1.3s,mb5.0						
NEW	Newport	90.19	41	eP	P	03 02 59.8	+1.0
NEW				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NEW	Newport	90.19	41	eP	P	03 02 59.8	+1.0
	comp=Z,1.7nm,0.7s,mb4.5						
HLID	Hailey	90.67	46	eP	P	03 02 59.5	-1.7
	comp=Z,1.6nm,0.7s,mb4.5						
WUAZ	Wupatki	90.93	54	eP	P	03 03 06.2	+3.5
	comp=Z,1.3nm,0.6s,mb4.4						
DUG	Dugway	90.96	49	eP	P	03 03 01.2	-1.4
DUG				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5						
DUG	Dugway	90.96	49	eP	P	03 03 01.2	-1.5
	comp=Z,2.0nm,0.8s,mb4.5						
MSU	Marysvale	91.02	51	eP	P	03 03 02.0	-1.0
SYO	Syowa Base	91.17	197	⇓eP	P	03 03 00.4	-2.7
SYO	Syowa Base	91.17	197	⇓ePcP	PcP	03 03 03.0	-1.0
MCMT	McKenzie Canyo	92.09	45	eP	P	03 03 08.9	+1.2
CHMT	Chamberlain Mo	92.33	43	eP	P	03 03 08.2	-0.7
PDAR	Pinedale Array	93.93	47	P	P	03 03 19.2	+2.9
	comp=Z,0.9nm,1.0s,mb4.2,baz=151,slow=3.4,SNR=4.5						
MKAR	Makanchi Array	94.10	317	P	P	03 03 17.0	+0.1
	comp=Z,5.2nm,0.6s,mb5.2,baz=100,slow=5.1,SNR=38						
MKAR	Makanchi Array	94.10	317	P	P	03 03 17.0	+0.1
ZALV	Zalesovo Beam	94.17	324	P	P	03 03 16.4	-0.7
	comp=Z,12nm,1.0s,mb5.3,baz=114,slow=3.6,SNR=18						
ZAL	Zalesovo	94.18	324	P	P	03 03 16.5	-0.7
NVS	Novosibirsk	95.28	325	eP	P	03 03 21.5	-0.7
YKA	Yellowknife Ar	95.53	27	P	P	03 03 25.2	+2.1
	comp=Z,0.5nm,0.5s,mb4.2,baz=255,slow=4.6,SNR=6.7						
SNAA	Sanae	96.44	184	eP	P	03 03 25.3	-2.0
KURK	Kurchatov	97.24	320	⇑eP	P	03 03 29.9	-1.3
KURK				pmax	pmax		
	comp=Z,19nm,2.6s,mb5.1						
VNA1	Neumayer--Stat	97.72	182	eP	P	03 03 32.6	-0.5
ARCES	ARCESS Array B	117.02	345	PKhKP		03 08 36.5	
	comp=Z,2.8nm,0.9s,baz=52,slow=26,SNR=2.5						
ARCES				PKP	PKPdf	03 08 41.5	-1.1
	comp=Z,0.7nm,0.4s,baz=77,slow=2.4,SNR=16						
GNI	Garni	121.18	310	⇑iPKIKP	PKPdf	03 08 52.8	+1.3
OBN	Obninsk	121.44	329	ePKIKP	PKPdf	03 08 51.6	+0.1
OBN				e		03 15 59.9	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	Kislovodsk	121.79	315	ePKIKP	PKPdf	03 08 52.1	-0.4
KIV				e		03 16 02.0	
KIV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MALT	Malatya	126.37	309	⇓iP	PKPdf	03 09 02.3	+0.8
MALT	Malatya	126.37	309	⇓P	PKPdf	03 09 02.3	+0.8
NOA	NORSAR Array B	127.39	345	PKP	PKPdf	03 09 01.7	-1.0
	comp=Z,0.9nm,0.7s,baz=4.2,slow=4.6,SNR=3.3						
AKASG	Malin Array Be	127.50	327	PKP	PKPdf	03 09 02.0	-1.2
	comp=Z,0.6nm,0.5s,baz=53,slow=1.8,SNR=9.9						
LSZ	Lusaka	130.23	238	ePKIKP	PKPdf	03 09 10.6	+1.1
KWP	Kalwaria	131.54	329	⇑iP	PKPdf	03 09 12.6	+1.6
DRGR		133.26	326	⇑iP	PKPdf	03 09 14.4	+0.1
DRGR		133.26	326	⇑P	PKPdf	03 09 14.4	+0.1
MORC	Moravsky Berou	133.96	332	⇑iP	PKPdf	03 09 15.9	+0.4
MORC	Moravsky Berou	133.96	332	⇑P	PKPdf	03 09 15.9	+0.4
BZS	Buzias	134.56	325	⇓iP	PKPdf	03 09 17.4	+0.6
BZS	Buzias	134.56	325	⇓P	PKPdf	03 09 17.4	+0.6
CLL	Collm	134.78	336	ePKP	PKPdf	03 09 16.0	-1.0
CLL				e		03 10 17.0	
CLL				eSKP		03 12 50.0	
PKSM	Moragy	135.82	327	⇑iP	PKPdf	03 09 19.4	+0.3
PKSM	Moragy	135.82	327	⇑P	PKPdf	03 09 19.4	+0.3
GERES	GERESS Array B	136.37	333	PKhKP		03 09 17.4	
	comp=Z,2.1nm,1.1s,baz=354,slow=5.4,SNR=8.8						
CDF	Champ du Feu	139.30	338	ePKP1	PKPdf	03 09 20.2	-5.3
FLN	La Foliniere	141.37	346	ePKP1	PKPdf	03 09 28.1	-1.1
	comp=Z,57nm,1.4s						
SSF	Saint Saulge	141.77	340	ePKP1	PKPdf	03 09 26.7	-3.3
LPL	La Plagne	141.91	336	⇑iPKP1	PKPdf	03 09 27.6	-2.7
LPG	La Plagne	141.92	336	⇑iPKP1	PKPdf	03 09 27.7	-2.6
ORIF	Oris-en-Rattie	142.75	336	ePKP1	PKPdf	03 09 27.6	-4.2
	comp=Z,4.5nm,0.6s						
QUIF	Quistinic	142.77	348	ePKP1	PKPdf	03 09 30.1	-1.6
SBF	Sospel	142.97	334	⇑iPKP1	PKPdf	03 09 27.3	-4.9
	comp=Z,47nm,1.2s						
MFF	Saint Martin d	143.28	344	ePKP1	PKPdf	03 09 28.9	-3.8
	comp=Z,9.2nm,0.8s						
PGF	Pioggiola	143.28	331	⇑iPKP1	PKPdf	03 09 28.8	-4.0
	comp=Z,26nm,1.1s						
FRF	La Foret Royal	143.55	334	⇑iPKP1	PKPdf	03 09 29.6	-3.6
	comp=Z,51nm,1.3s						
SMRF	Simiane la Rot	143.65	336	ePKP1	PKPdf	03 09 30.6	-2.8
LMR	La Mourre	143.79	334	⇑iPKP1	PKPdf	03 09 30.7	-3.0
	comp=Z,41nm,1.0s						
CAF	Calviac	144.12	340	ePKP1	PKPdf	03 09 32.1	-2.1
	comp=Z,23nm,1.1s						
LASF	Ste Croix	144.23	338	⇑iPKP1	PKPdf	03 09 32.7	-1.7
	comp=Z,35nm,1.0s						
LFF	La Frestale	144.53	342	ePKP1	PKPdf	03 09 33.1	-1.8
	comp=Z,34nm,1.2s						
MTLF	Montolieu	145.47	339	⇑iPKP1	PKPbc	03 09 36.6	0.0
	comp=Z,57nm,1.3s						
ETSF	Etsaut	146.78	342	ePKP1	PKPbc	03 09 40.6	0.0
SJPF	Ste Jean	146.79	343	ePKP1	PKPbc	03 09 40.0	-0.6
KEST	Kesra	148.03	322	PKPbc	PKPbc	03 09 44.7	+0.4
	comp=Z,12nm,1.1s,baz=278,slow=3.3,SNR=15						
ESDC	Sonseca Array	150.74	344	PKPbc	PKPbc	03 09 49.2	-1.7
	comp=Z,2.1nm,0.8s,baz=17,slow=1.5,SNR=12						
EVO	Evora	152.76	349	ePKIKP	PKPdf	03 09 50.7	+2.3
	comp=Z,32nm,1.5s						
TORD	Torodi Ar. Bea	164.47	277	PKP	PKPdf	03 10 02.4	-0.6
	comp=Z,4.1nm,1.0s,baz=14,slow=1.0,SNR=14						

IDC 02 02:56:02.2±8.3, 1151S×16554E, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.8/14, mbtmp4.0/3, Error ellipse: s-maj=249.9km s-min=51.7km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.14	250	P	P	03 02 23.1	+0.1
	1.5nm,0.8s,baz=84,slow=9.1,SNR=8.3						
ASAR	Alice Springs	32.41	244	P	P	03 02 34.1	+0.1
	1.6nm,0.7s,baz=67,slow=9.8,SNR=9.9						
MKAR	Makanchi Array	93.72	317	P	P	03 09 20.8	-0.1
	0.5nm,0.6s,baz=96,slow=3.8,SNR=3.6						

*IDC **02** 03:00:01.7±1.5, 1173S×16550E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.8/15, mbtmp3.9/6, Error ellipse: s-maj=79.8km s-min=26.1km az=146.0*
*ISCJB **02** 03:00:05.3±0.8, 118S±02×1655E±02, h33^{km}, mb3.9/10, Error ellipse: s-maj=28.9km s-min=15.3km az=136.2*
*NEIC **02** 03:00:06.9±0.6, 1177S×16553E, h35^{km}, mb4.1/4, Error ellipse: s-maj=22.3km s-min=11.9km az=137.0*
ISC 02 03:00:07.2±0.8, 118S±02×1655E±02, h35^{km}, n13, $\sigma 0^{s}63$/12, mb3.9/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	Coen	21.88	262	eP	P	03 04 57.5	+0.3
	8.3nm,1.0s,mb4.1						
ARMA	Armidale	22.58	213	eP	P	03 05 05.1	+0.5
	0.3nm,1.0s						
STKA	Stephens Creek	29.76	224	P	P	03 06 11.1	+0.6
	2.0nm,0.8s,mb3.9,baz=12,slow=9.3,SNR=3.0						
STKA	Stephens Creek	29.76	224	P	P	03 06 11.1	+0.6
WRA	Warramunga Arr	31.02	251	P	P	03 06 22.1	+0.3
	1.1nm,0.8s,mb3.8,baz=84,slow=9.3,SNR=8.0						
ASAR	Alice Springs	32.26	244	P	P	03 06 32.0	-0.6
	1.1nm,0.7s,mb3.8,baz=66,slow=9.7,SNR=12						
FITZ	Fitzroy Crossi	38.97	256	P	P	03 07 29.0	-1.3
	0.9nm,0.4s,mb3.8,baz=56,slow=3.6,SNR=2.6						
SBA	Scott Base	66.08	180	eP	P	03 10 49.6	-0.6
	1.3nm,0.8s,mb4.0						
COLA	College	84.04	18	eP	P	03 12 33.1	-0.6
	1.0nm,0.4s,mb4.3						
EGAK	Eagle	86.13	20	eP	P	03 12 44.4	+0.2
	0.8nm,0.6s,mb4.1						
NVAR	Mina Array Bea	86.67	50	P	P	03 12 47.7	+0.3
	0.2nm,0.7s,mb3.5,baz=224,slow=6.3,SNR=3.6						
MKAR	Makanchi Array	93.89	317	P	P	03 13 21.9	+0.8
	0.5nm,0.7s,mb4.1,baz=97,slow=5.0,SNR=4.6						
TORD	Torodi Ar. Bea	164.13	277	PKP	PKPdf	03 20 06.7	-1.2
	0.6nm,1.1s,baz=106,slow=1.5,SNR=2.2						

*IDC **02** 03:05:12.2±0.7, 1158S×16564E, h0^{km}, mb4.4/14,*

mb1 4.5/14, mb1mx4.5/15, mbtmp4.4/14, Error ellipse: s-maj=25.6km s-min=18.0km az=131.0
*BJI **02** 03:05:14.8, 11.16S×166.18E, h22km, mB5.2, mb4.9*
*ISCJB **02** 03:05:16.1±2.5, 11.73S±0.08×165.69E±0.08, h36km±22km, mb4.6/28, Error ellipse: s-maj=14.5km s-min=12.6km az=43.1*
*NEIC **02** 03:05:17.4±0.4, 11.68S×165.75E, h35km, mb4.6/10, Error ellipse: s-maj=12.2km s-min=8.2km az=148.0*
ISC 02 03:05:18.2±2.0**, 11.71S**±0.08×**165.73E**±0.08**, h41**km±18km**, h20**km±4.9km**:pP-P, n48, σ1s02**/41**, mb4.6**/28**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.12**	**291**	*e*Pn	**Pn**	**03 06 46.0**	**-0.1**
CTA	**Charters Tower**	**20.48**	**244**	*e*P	**P**	**03 09 55.6**	**+2.9**
	16nm,1.5s						
CTA	**Charters Tower**	**20.48**	**244**	P	**P**	**03 09 55.2**	**+2.5**
	14nm,1.0s,baz=82,slow=16,SNR=4.3						
CTAO	**Charters Tower**	**20.48**	**244**	*e*P	**P**	**03 09 53.0**	**+0.3**
	52nm,1.3s						
AFI	**Afiamalu**	**22.04**	**98**	*e*P	**P**	**03 10 09.4**	**-0.2**
	72nm,1.1s,mb5.0						
COEN	**Coen**	**22.10**	**262**	*e*P	**P**	**03 10 09.2**	**-0.9**
	22nm,1.4s,mb4.4						
ARMA	**Armidale**	**22.75**	**213**	*e*P	**P**	**03 10 17.0**	**+0.1**
STKA	**Stephens Creek**	**29.95**	**224**	*e*P	**P**	**03 11 23.6**	**+0.9**
	5.2nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**29.95**	**224**	P	**P**	**03 11 22.7**	**+0.1**
	2.8nm,0.6s,mb4.2,baz=58,slow=8.9,SNR=6.0						
WB2	**Warramunga Arr**	**31.23**	**251**	*e*P	**P**	**03 11 34.3**	**+0.2**
WRA	**Warramunga Arr**	**31.24**	**251**	P	**P**	**03 11 34.5**	**+0.3**
	2.8nm,0.4s,mb4.4,baz=84,slow=9.5,SNR=50						
WRA				ScP	ScP	03 18 11.2	+3.0
	4.2nm,1.2s,baz=85,slow=3.1,SNR=6.0						
RPZ	**Rata Peaks**	**32.22**	**173**	P	**P**	**03 11 42.7**	**+0.3**
	12nm,0.7s,mb4.8,baz=73,slow=4.2,SNR=5.4						
ASAR	**Alice Springs**	**32.48**	**244**	P	**P**	**03 11 44.6**	**-0.5**
	2.7nm,0.6s,mb4.2,baz=69,slow=9.7,SNR=38						
ASAR				ScP	ScP	03 18 14.8	+2.5
	2.9nm,1.0s,baz=70,slow=3.0,SNR=10						
KAKA	**Kakadu**	**32.54**	**265**	*e*P	**P**	**03 11 46.3**	**+0.6**
	6.9nm,0.6s,mb4.8						
KLBR	**Kellerberrin**	**48.34**	**238**	*e*P	**P**	**03 14 03.6**	**+7.6**
MUN	**Mundaring**	**49.71**	**238**	*e*P	**P**	**03 14 07.1**	**+0.6**
MJAR	**Matsushiro Arr**	**54.55**	**333**	P	**P**	**03 14 39.7**	**-2.6**
	2.3nm,0.8s,mb4.3,baz=168,slow=7.6,SNR=6.0						
MAJO	**Matsushiro**	**54.55**	**333**	*e*P	**P**	**03 14 41.4**	**-0.9**
	4.1nm,0.8s,mb4.5						
KSRS	**Korea Array**	**60.41**	**326**	P	**P**	**03 15 22.1**	**-1.5**
	1.2nm,0.7s,mb4.0,baz=136,slow=7.5,SNR=3.7						
CASY	**Casey**	**65.76**	**201**	*e*P	**P**	**03 15 56.2**	**-2.4**
XAN	**Xi'an**	**70.55**	**313**	P	**P**	**03 16 29.6**	**+0.4**
XAN				AP	pP	03 16 35.8	-5.6
XAN				XP	sP	03 16 39.5	-6.6
XAN				AMB	AMB		
	comp=Z,9.0nm,1.5s,mb4.5						
XAN				AMB	AMB		
	comp=Z,5μm,14.8s						
HHC	**Hu-ho-hao-te**	**72.33**	**320**	*e*P	**P**	**03 16 40.5**	**+0.8**
HHC				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.9						
CMAR	**Chiang Mai Arr**	**72.36**	**294**	P	**P**	**03 16 45.3**	**+4.9**
	comp=Z,1.4nm,0.4s,mb4.3,baz=115,slow=4.7,SNR=6.1						
LZH	**Lanzhou**	**75.19**	**312**	⇑P	**P**	**03 16 58.4**	**+1.7**
LZH				AP	pP	03 17 07.5	-1.4
LZH				XP	sP	03 17 11.3	-2.3
LZH				AMB	AMB		
	comp=Z,32nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,150nm,5.1s						
ULN	**Ulaanbaatar**	**78.83**	**324**	*e*P	**P**	**03 17 17.2**	**+0.4**
	comp=Z,26nm,1.3s,mb5.0						
SONM	**Songino Array**	**79.19**	**324**	P	**P**	**03 17 19.4**	**+0.6**
	comp=Z,3.0nm,0.6s,mb4.4,baz=127,slow=3.8,SNR=29						
GTA	**Gaotai**	**79.50**	**314**	P	**P**	**03 17 21.9**	**+1.2**
GTA				AP	pP	03 17 27.0	-6.1
GTA				XP	sP	03 17 30.3	-7.4
GTA				AMB	AMB		
	comp=Z,23nm,1.6s,mb4.9						
MAW	**Mawson**	**84.10**	**202**	P	**P**	**03 17 42.7**	**-1.7**
	comp=Z,2.2nm,0.2s,mb4.9,baz=266,slow=5.7,SNR=11						
YBH	**Yreka Blue Hor**	**84.37**	**46**	P	**P**	**03 17 47.4**	**+1.1**
	comp=Z,1.0nm,0.5s,mb4.2,baz=302,slow=4.7,SNR=6.4						
EGAK	**Eagle**	**86.00**	**20**	*e*P	**P**	**03 17 54.8**	**+0.9**
	comp=Z,3.3nm,0.5s,mb4.8						
DAWY	**Dawson**	**86.18**	**21**	*e*P	**P**	**03 17 54.1**	**-0.7**
NVAR	**Mina Array Bea**	**86.46**	**50**	P	**P**	**03 17 57.5**	**+0.7**
	comp=Z,0.7nm,0.5s,mb4.1,baz=300,slow=27,SNR=13						
NVAR	**Mina Array Bea**	**86.46**	**50**	P	**P**	**03 17 57.5**	**+0.7**
JCW	**Jim Creek**	**87.20**	**40**	*e*P	**P**	**03 18 00.1**	**0.0**
ELK	**Elko**	**89.40**	**48**	P	**P**	**03 18 10.8**	**0.0**
	comp=Z,0.8nm,0.5s,mb4.3,baz=271,slow=4.3,SNR=5.1						
WMQ	**Urumqi**	**89.55**	**315**	P	**P**	**03 18 11.6**	**+0.2**
WMQ				AMB	AMB		
	comp=Z,18nm,1.2s,mb5.3						
DUG	**Dugway**	**91.04**	**49**	*e*P	**P**	**03 18 18.1**	**-0.3**
	comp=Z,1.2nm,0.5s,mb4.5						
MKAR	**Makanchi Array**	**93.99**	**317**	P	**P**	**03 18 31.5**	**-0.4**
	comp=Z,8.7nm,0.8s,mb5.2,baz=100,slow=5.0,SNR=56						
PDAR	**Pinedale Array**	**94.01**	**47**	P	**P**	**03 18 34.0**	**+1.9**
	comp=Z,0.3nm,0.5s,mb4.0,baz=216,slow=3.7,SNR=3.4						
ZALV	**Zalesovo Beam**	**94.08**	**324**	P	**P**	**03 18 30.6**	**-1.5**
	comp=Z,4.2nm,0.9s,mb4.8,baz=103,slow=4.7,SNR=14						
YKA	**Yellowknife Ar**	**95.57**	**27**	P	**P**	**03 18 37.4**	**-1.4**
	comp=Z,0.5nm,0.6s,mb4.1,baz=253,slow=4.6,SNR=6.0						
ARCES	**ARCESS Array B**	**116.97**	**345**	PKP	PKPdf	03 23 58.8	+0.8
	comp=Z,1.3nm,0.5s,baz=89,slow=1.9,SNR=18						
GERES	**GERESS Array B**	**136.29**	**333**	PKP	PKPdf	03 24 39.3	+3.9
	comp=Z,0.3nm,0.6s,baz=51,slow=0.9,SNR=4.5						
FRF	**La Foret Royal**	**143.47**	**334**	*e*PKP1	PKPdf	03 24 45.1	-3.5
	comp=Z,9.2nm,0.9s						
MTLF	**Montolieu**	**145.40**	**339**	*e*PKP1	PKPbc	03 24 51.5	-0.4
KEST	**Kesra**	**147.93**	**322**	PKPbc	PKPbc	03 24 59.1	-0.4
	comp=Z,2.4nm,0.9s,baz=206,slow=5.5,SNR=8.9						
ESDC	**Sonseca Array**	**150.69**	**344**	PKPbc	PKPbc	03 25 06.6	+0.3
	comp=Z,0.2nm,0.5s,baz=353,slow=3.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**164.34**	**277**	PKP	PKPdf	03 25 17.5	-0.9
	comp=Z,1.8nm,1.2s,baz=319,slow=2.3,SNR=4.2						
TORD				PKPab	PKPab	03 26 13.0	+0.3
	comp=Z,0.3nm,0.8s,baz=94,slow=2.7,SNR=4.4						

*IDC **02** 03:06:52.9±0.9, 11.76S×165.91E, h0km, mb4.6/12, mb1 4.7/12, mb1mx4.5/17, mbtmp4.6/12, Error ellipse: s-maj=26.9km s-min=18.9km az=114.0*
*BJI **02** 03:06:54.4, 11.04S×166.50E, h6km, mB5.3, mb4.9*
*NEIC **02** 03:06:56.5±0.6, 11.80S×166.17E, h35km, mb4.7/13, Error ellipse: s-maj=14.8km s-min=10.1km az=124.0*
*ISCJB **02** 03:06:58.0±3.2, 11.88S±0.08×165.9E±0.1, h50km±25km, mb4.8/25, Error ellipse: s-maj=21.7km s-min=13.3km az=12.2*
ISC 02 03:07:00.3±2.7**, 11.85S**±0.08×**165.9E**±0.1**, h55**km±22km**, h20**km±5.6km**:pP-P, n45, σ1s06**/36**, mb4.8**/25**, 2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.35**	**292**	*e*Pn	**Pn**	**03 08 31.3**	**-0.1**
CTA	**Charters Tower**	**20.59**	**244**	*e*P	**P**	**03 11 36.3**	**+1.4**
	22nm,1.0s						
CTA	**Charters Tower**	**20.59**	**244**	P	**P**	**03 11 35.3**	**+0.4**
	25nm,0.9s,baz=75,slow=13,SNR=7.6						
CTAO	**Charters Tower**	**20.59**	**244**	*e*P	**P**	**03 11 36.1**	**+1.2**
	33nm,1.0s						
COEN	**Coen**	**22.27**	**262**	*e*P	**P**	**03 11 54.6**	**+1.7**
	13nm,0.9s,mb4.4						
ARMA	**Armidale**	**22.74**	**213**	*e*P	**P**	**03 11 57.7**	**0.0**
STKA	**Stephens Creek**	**29.98**	**225**	*e*P	**P**	**03 13 04.4**	**+0.7**
	3.6nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**29.98**	**225**	P	**P**	**03 13 04.3**	**+0.6**
	3.7nm,0.7s,mb4.2,baz=48,slow=10,SNR=3.7						
STKA				PcP	PcP	03 16 06.2	+1.2
	2.3nm,0.7s,baz=112,slow=1.8,SNR=3.3						
WB2	**Warramunga Arr**	**31.37**	**251**	*e*P	**P**	**03 13 15.5**	**-0.5**
WRA	**Warramunga Arr**	**31.38**	**251**	P	**P**	**03 13 15.8**	**-0.3**
	5.9nm,0.5s,mb4.6,baz=84,slow=9.2,SNR=15						
WRA				PcP	PcP	03 16 09.3	+0.4
	0.6nm,0.5s,baz=74,slow=3.0,SNR=4.9						
RPZ	**Rata Peaks**	**32.05**	**173**	P	**P**	**03 13 21.6**	**-0.2**
	25nm,0.8s,mb5.1,baz=112,slow=3.5,SNR=11						
ASAR	**Alice Springs**	**32.60**	**244**	P	**P**	**03 13 26.0**	**-0.8**
	7.5nm,0.7s,mb4.7,baz=73,slow=9.3,SNR=10.0						
ASAR				PcP	PcP	03 16 12.4	+0.2
	1.5nm,0.6s,baz=81,slow=2.1,SNR=7.5						
KAKA	**Kakadu**	**32.72**	**265**	⇓*i*P	**P**	**03 13 27.4**	**-0.5**
	11nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**39.35**	**256**	⇑*i*P	**P**	**03 14 24.7**	**+0.1**
	8.0nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**39.35**	**256**	P	**P**	**03 14 24.8**	**+0.2**
	3.2nm,0.7s,mb4.2,baz=102,slow=10,SNR=4.0						
FORT	**Forrest**	**39.73**	**236**	*e*P	**P**	**03 14 27.3**	**-0.3**
	14nm,0.7s,mb4.8						
KAPI	**Kappang**	**46.13**	**274**	P	**P**	**03 15 19.2**	**-0.5**
	6.9nm,0.7s,mb4.7,baz=214,slow=16,SNR=4.0						
KLBR	**Kellerberrin**	**48.43**	**238**	*e*P	**P**	**03 15 35.3**	**-2.0**
	50nm,1.5s,mb5.3						
MJAR	**Matsushiro Arr**	**54.76**	**333**	P	**P**	**03 16 22.3**	**-2.1**
	3.2nm,0.7s,mb4.4,baz=173,slow=7.9,SNR=8.9						
MAJO	**Matsushiro**	**54.77**	**333**	*e*P	**P**	**03 16 22.3**	**-2.1**
	8.3nm,0.9s,mb4.8						
KSRS	**Korea Array**	**60.64**	**326**	P	**P**	**03 17 05.6**	**0.0**
	2.5nm,0.8s,mb4.4,baz=141,slow=7.0,SNR=5.7						
CASY	**Casey**	**65.69**	**201**	*e*P	**P**	**03 17 38.4**	**-0.3**
	6.6nm,0.6s,mb4.8						
XAN	**Xi'an**	**70.79**	**312**	P	**P**	**03 18 11.8**	**+0.7**
XAN				AP	pP	03 18 17.9	-8.7
XAN				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.6						
HIA	**Hailar**	**73.16**	**330**	*e*P	**P**	**03 18 24.7**	**-0.2**
LZH	**Lanzhou**	**75.43**	**312**	*e*P	**P**	**03 18 40.5**	**+2.0**
LZH				AP	pP	03 18 50.2	-3.8
LZH				XP	sP	03 18 54.3	-5.9
LZH				AMB	AMB		
	comp=Z,25nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,124nm,4.3s						
ULN	**Ulaanbaatar**	**79.05**	**324**	*e*P	**P**	**03 18 58.9**	**+0.4**
	comp=Z,32nm,1.3s,mb5.1						
SONM	**Songino Array**	**79.42**	**324**	P	**P**	**03 19 01.5**	**+1.0**
	comp=Z,4.5nm,0.6s,mb4.5,baz=142,slow=5.5,SNR=12						
GTA	**Gaotai**	**79.74**	**314**	P	**P**	**03 19 04.3**	**+1.8**
GTA				AP	pP	03 19 09.5	-8.6
GTA				XP	sP	03 19 12.5	-12
GTA				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.7						
YBH	**Yreka Blue Hor**	**84.33**	**45**	P	**P**	**03 19 28.5**	**+2.0**
	comp=Z,2.6nm,0.8s,mb4.4,baz=268,slow=4.6,SNR=5.8						
EGAK	**Eagle**	**86.07**	**20**	*e*P	**P**	**03 19 33.2**	**-1.4**
	comp=Z,2.4nm,0.6s,mb4.6						
DAWY	**Dawson**	**86.24**	**21**	*e*P	**P**	**03 19 33.9**	**-1.6**
WMQ	**Urumqi**	**89.79**	**315**	P	**P**	**03 19 53.0**	**+0.1**
WMQ				AMB	AMB		
	comp=Z,14nm,0.7s,mb5.4						
NEW	**Newport**	**90.24**	**41**	*e*P	**P**	**03 19 55.9**	**+1.0**
	comp=Z,1.4nm,0.6s,mb4.5						
TUC	**Tucson**	**90.67**	**57**	*e*P	**P**	**03 20 03.5**	**+6.2**
	comp=Z,481nm,3.4s						
MKAR	**Makanchi Array**	**94.23**	**317**	P	**P**	**03 20 13.7**	**+0.3**
	comp=Z,18nm,0.6s,mb5.7,baz=102,slow=5.5,SNR=52						
ZALV	**Zalesovo Beam**	**94.31**	**324**	P	**P**	**03 20 13.1**	**-0.5**
	comp=Z,4.6nm,0.7s,mb5.0,baz=116,slow=2.6,SNR=16						
ARCES	**ARCESS Array B**	**117.16**	**345**	PKP	PKPdf	03 25 37.3	-1.3
	comp=Z,1.4nm,0.8s,baz=89,slow=2.3,SNR=6.3						
ORIF	**Oris-en-Rattie**	**142.88**	**336**	*e*PKP1	PKPdf	03 26 23.4	-4.4
PGF	**Pioggiola**	**143.42**	**331**	*e*PKP1	PKPdf	03 26 24.9	-3.9
FRF	**La Foret Royal**	**143.68**	**334**	*e*PKP1	PKPdf	03 26 25.6	-3.7
	comp=Z,12nm,0.9s						
LMR	**La Mourre**	**143.93**	**334**	*e*PKP1	PKPdf	03 26 26.6	-3.1
LASF	**Ste Croix**	**144.37**	**338**	*e*PKP1	PKPdf	03 26 29.2	-1.2
MTLF	**Montolieu**	**145.60**	**339**	⇑*i*PKP1	PKPbc	03 26 32.5	-0.3
	comp=Z,8.0nm,0.9s						
KEST	**Kesra**	**148.16**	**322**	PKPbc	PKPbc	03 26 40.6	+0.2
	comp=Z,2.6nm,0.7s,baz=48,slow=3.8,SNR=7.3						
TORD	**Torodi Ar. Bea**	**164.55**	**276**	PKPab	PKPab	03 27 55.7	+1.7
	comp=Z,0.9nm,1.1s,baz=94,slow=3.8,SNR=4.9						

IDC 02 03:13:17.4±8.0**, 11.40S**×**165.41E, h0**km**, mb4.2**/3**, mb1 4.3**/3**, mb1mx3.8**/14**, mbtmp4.1**/3**, Error ellipse: s-maj=241.4km s-min=51.6km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.05**	**250**	P	P	03 19 37.7	+0.3
	3.2nm,1.1s,baz=80,slow=9.2,SNR=6.9						
ASAR	**Alice Springs**	**32.34**	**244**	P	P	03 19 48.5	-0.2
	2.1nm,0.9s,baz=77,slow=9.4,SNR=11						
MKAR	**Makanchi Array**	**93.56**	**317**	P	P	03 26 35.4	0.0
	0.9nm,0.7s,baz=117,slow=5.3,SNR=6.5						

*ISCJB **02** 03:18:13.9±0.5, 24.71N±0.05×110.0W±0.1, h10km, mb3.8/5, Error ellipse: s-maj=15.1km s-min=6.5km az=14.9*
*IDC **02** 03:18:14.9±0.8, 24.56N×110.29W, h0km, mb3.8/5, mb1 4.0/9, mb1mx3.8/23, mbtmp3.8/9, ML3.1/4, Error ellipse: s-maj=25.8km s-min=10.6km az=92.0*
*NEIC **02** 03:18:16.7±0.8, 24.83N×109.81W, h10km, mb3.8/6, Error ellipse: s-maj=13.1km s-min=11.6km az=75.0*
ISC 02 03:18:16.4±0.6**, 24.79N**±0.05×**110.05W**±0.10**, h10**km**, n30, σ1s44**/29**, mb3.8**/5**, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.73**	**199**	Pn	**Pn**	**03 18 28.2**	**-4.5**
	378nm,0.3s,baz=336,slow=0.5,SNR=105						
LPIG				Sn	**Sg**	**03 18 39.3**	**-0.6**
	2μm,0.3s,baz=128,slow=19,SNR=122						
LAZ	**Ladron**	**9.90**	**14**	*e*Pn	**Pn**	**03 20 38.0**	**-0.9**
ANMO	**Albuquerque**	**10.59**	**16**	Pn	**Pn**	**03 20 52.3**	**+4.0**
	0.1nm,0.3s,baz=204,slow=14,SNR=5.9						
ANMO	**Albuquerque**	**10.59**	**16**	*e*Pn	**Pn**	**03 20 47.6**	**-0.7**
HKT	**Hockley**	**13.63**	**65**	*e*Pn	**Pn**	**03 21 26.3**	**-3.7**
	2.0nm,1.0s						
WMOK	**Wichita Mounta**	**13.92**	**42**	*e*P	**Pn**	**03 21 33.2**	**-0.6**
	4.8nm,1.0s						
NVAR	**Mina Array Bea**	**15.29**	**335**	Pn	**Pn**	**03 21 56.2**	**+3.8**
	0.1nm,0.3s,baz=166,slow=13,SNR=11						
NVAR	**Mina Array Bea**	**15.29**	**335**	Pn	**Pn**	**03 21 56.2**	**+3.8**
ISCO	**Idaho Springs**	**15.42**	**13**	*e*Pn	**Pn**	**03 21 54.1**	**+0.1**
	4.3nm,1.1s						
DUG	**Dugway**	**15.53**	**352**	*e*P	**Pn**	**03 21 59.9**	**+4.4**
	11nm,1.0s						
DAU	**Daniels Canyon**	**15.61**	**357**	*e*Pn	**Pn**	**03 21 58.6**	**+2.1**
CMIG	**Matias Romero**	**16.10**	**116**	Pn	**Pn**	**03 22 05.5**	**+2.6**
	0.1nm,0.3s,baz=302,slow=7.1,SNR=4.5						
ELK	**Elko**	**16.49**	**346**	Pn	**Pn**	**03 22 12.8**	**+4.9**
	0.1nm,0.3s,baz=179,slow=8.4,SNR=7.0						
ELK	**Elko**	**16.49**	**346**	*e*Pn	**Pn**	**03 22 09.5**	**+1.6**
MIAR	**Mount Ida**	**17.29**	**52**	*e*Pn	**Pn**	**03 22 15.2**	**-2.7**
	9.6nm,1.1s						
PDAR	**Pinedale Array**	**17.93**	**1**	P	**Pn**	**03 22 24.9**	**-1.0**
	0.1nm,0.3s,baz=161,slow=9.4,SNR=8.5						
HLID	**Hailey**	**19.06**	**350**	*e*P	**Pn**	**03 22 38.7**	**-0.9**
	1.9nm,0.9s						
TEIG	**Tepich**	**20.62**	**98**	P	**P**	**03 22 58.5**	**+2.5**
	2.8nm,0.8s,baz=280,slow=17,SNR=2.4						
BMO	**Blue Mountains**	**20.86**	**345**	*e*P	**P**	**03 22 57.6**	**-0.9**
	2.1nm,0.8s						
GCMT	**Greycliff**	**20.95**	**1**	*e*P	**P**	**03 22 58.1**	**-1.3**
CHMT	**Chamberlain Mo**	**22.22**	**354**	*e*P	**P**	**03 23 12.6**	**-0.5**
NEW	**Newport**	**24.08**	**348**	*e*P	**P**	**03 23 33.3**	**+1.4**
	4.5nm,0.8s,mb4.0						
TKL	**Tuckaleechee C**	**25.08**	**58**	P	**P**	**03 23 44.5**	**+3.3**
	2.4nm,0.8s,mb3.8,baz=207,slow=9.0,SNR=3.7						
TKL	**Tuckaleechee C**	**25.08**	**58**	P	**P**	**03 23 44.5**	**+3.3**
YKA	**Yellowknife Ar**	**37.81**	**357**	P	**P**	**03 25 34.1**	**+1.4**
	0.6nm,0.8s,mb3.4,baz=173,slow=9.0,SNR=3.1						
CPUP	**Villa Florida**	**71.94**	**131**	P	**P**	**03 29 39.2**	**-1.0**
	0.9nm,0.6s,mb3.9,baz=93,slow=1.8,SNR=3.5						
CPUP	**Villa Florida**	**71.94**	**131**	P	**P**	**03 29 39.2**	**-1.0**
ARCES	**ARCESS Array B**	**80.67**	**14**	P	**P**	**03 30 29.6**	**+0.3**
	1.8nm,0.9s,mb4.0,baz=322,slow=6.8,SNR=3.5						
WRA	**Warramunga Arr**	**120.73**	**261**	PKP	PKPdf	03 37 10.6	+1.2
	0.5nm,0.8s,baz=60,slow=1.7,SNR=7.3						
ASAR	**Alice Springs**	**122.17**	**257**	PKP	PKPdf	03 37 12.7	+0.7
	0.3nm,0.6s,baz=75,slow=2.1,SNR=4.8						

*IDC **02** 04:01:24.1±1.7, 2.06N×84.26W, h0km, mb4.0/4, mb1 4.1/8, mb1mx3.9/21, mbtmp4.0/8, ML3.6/2, Error ellipse: s-maj=38.5km s-min=24.6km az=86.0*
*ISCJB **02** 04:01:27.1±1.0, 2.13N±0.10×84.3W±0.1, h33km, mb3.9/4, Error ellipse: s-maj=18.9km s-min=13.8km az=162.4*
ISC 02 04:01:27.7±5.1**, 2.2N**±0.1×**84.3W**±0.1**, h23**km±40km**, n8, σ1s25**/8**, mb3.9**/4**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**10.30**	**75**	Pn	**Pn**	**04 03 53.5**	**-0.7**
	0.5nm,0.3s,baz=283,slow=15,SNR=5.0						
ATAH	**Atahualpa**	**10.83**	**147**	Pn	**Pn**	**04 04 02.4**	**+1.0**
	0.4nm,0.3s,baz=332,slow=8.9,SNR=5.9						
SDV	**Santo Domingo**	**15.15**	**63**	Pn	**Pn**	**04 05 00.8**	**+0.5**
	0.3nm,0.3s,baz=243,slow=13,SNR=7.6						
CMIG	**Matias Romero**	**18.13**	**326**	P	**Pn**	**04 05 38.0**	**-0.1**
	0.3nm,0.3s,baz=147,slow=8.3,SNR=6.4						
SJG	**San Juan**	**23.84**	**47**	P	**P**	**04 06 39.0**	**-0.4**
	10nm,0.8s,mb4.3,baz=236,slow=3.6,SNR=2.3						
LPAZ	**La Paz**	**24.30**	**139**	P	**P**	**04 06 42.2**	**-1.4**
	7.5nm,1.1s,mb4.0,baz=325,slow=11,SNR=11						
PLCA	**Paso Flores**	**44.48**	**165**	P	**P**	**04 09 36.8**	**-0.4**
	0.8nm,0.7s,mb3.6,baz=354,slow=7.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**85.61**	**77**	P	**P**	**04 14 06.7**	**+1.6**
	0.2nm,0.6s,mb3.5,baz=265,slow=5.8,SNR=4.4						

*IDC **02** 04:42:46.3±0.9, 11.48S×165.76E, h0km, mb4.3/9, mb1 4.4/9, mb1mx4.2/15, mbtmp4.2/9, Error ellipse: s-maj=44.1km s-min=21.5km az=140.0*
*ISCJB **02** 04:42:50.3±0.8, 11.6S±0.2×165.7E±0.2, h33km, mb4.3/10, Error ellipse: s-maj=28.3km s-min=15.0km az=136.4*
*NEIC **02** 04:42:51.5±0.7, 11.58S×165.88E, h35km, mb4.3/3, Error ellipse: s-maj=26.5km s-min=13.4km az=136.0*
ISC 02 04:42:51.9±0.8**, 11.6S**±0.2×**165.8E**±0.2**, h35**km**, n20, σ0s99**/19**, mb4.3**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.61**	**243**	*e*P	**P**	**04 47 30.2**	**+1.9**
	12nm,1.3s						
CTA	**Charters Tower**	**20.61**	**243**	P	**P**	**04 47 30.3**	**+2.1**
	8.0nm,0.7s,baz=67,slow=14,SNR=6.5						
CTAO	**Charters Tower**	**20.61**	**243**	*e*P	**P**	**04 47 29.9**	**+1.6**
	9.7nm,0.8s						
ARMA	**Armidale**	**22.90**	**213**	*e*P	**P**	**04 47 52.2**	**-0.4**
STKA	**Stephens Creek**	**30.10**	**224**	*e*P	**P**	**04 49 04.3**	**+6.1**
	3.4nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**30.10**	**224**	P	**P**	**04 48 58.8**	**+0.6**
	1.4nm,0.7s,mb3.8,baz=8.1,slow=7.1,SNR=4.4						
STKA				PcP	PcP	04 51 57.4	-2.0
	5.3nm,1.0s,baz=56,slow=2.8,SNR=3.6						
STKA	**Stephens Creek**	**30.10**	**224**	P	**P**	**04 48 58.8**	**+0.6**
STKA				PcP	PcP	04 51 57.4	-2.0
WB2	**Warramunga Arr**	**31.35**	**251**	*e*P	**P**	**04 49 09.3**	**-0.1**
WRA	**Warramunga Arr**	**31.36**	**251**	P	**P**	**04 49 09.0**	**-0.6**
	2.1nm,0.6s,mb4.2,baz=84,slow=9.1,SNR=20						
WRA				PcP	PcP	04 52 02.3	-0.6
	0.6nm,0.8s,baz=87,slow=2.6,SNR=4.7						
ASAR	**Alice Springs**	**32.61**	**244**	P	**P**	**04 49 19.8**	**-0.7**
	1.9nm,0.5s,mb4.2,baz=69,slow=9.6,SNR=54						
ASAR				PcP	PcP	04 52 05.5	-0.8
	1.9nm,0.9s,baz=55,slow=2.6,SNR=5.4						
FITZ	**Fitzroy Crossi**	**39.31**	**256**	*e*P	**P**	**04 50 18.3**	**+0.4**
	6.1nm,0.6s,mb4.5						
CASY	**Casey**	**65.90**	**201**	*e*P	**P**	**04 53 32.2**	**-1.6**
CMAR	**Chiang Mai Arr**	**72.39**	**294**	P	**P**	**04 54 16.1**	**+1.1**
	0.9nm,0.3s,mb4.2,baz=123,slow=4.1,SNR=4.1						
YBH	**Yreka Blue Hor**	**84.22**	**46**	P	**P**	**04 55 20.6**	**+0.6**
	1.0nm,0.8s,mb4.0,baz=183,slow=8.0,SNR=3.3						
MAW	**Mawson**	**84.24**	**202**	P	**P**	**04 55 20.6**	**+1.1**
	2.6nm,1.0s,mb4.3,baz=22,slow=2.8,SNR=4.3						
DAWY	**Dawson**	**86.04**	**21**	*e*P	**P**	**04 55 24.0**	**-4.5**
NVAR	**Mina Array Bea**	**86.32**	**50**	P	**P**	**04 55 31.1**	**+0.6**
	0.4nm,0.6s,mb3.8,baz=248,slow=9.6,SNR=3.3						
MKAR	**Makanchi Array**	**93.97**	**317**	P	**P**	**04 56 05.0**	**-1.2**
	4.4nm,0.8s,mb4.9,baz=101,slow=6.3,SNR=11						
ZALV	**Zalesovo Beam**	**94.04**	**324**	P	**P**	**04 56 05.1**	**-1.2**
	1.5nm,0.6s,mb4.6,baz=114,slow=7.3,SNR=4.6						
ESDC	**Sonseca Array**	**150.60**	**344**	PKPbc	PKPbc	05 02 38.9	-1.6
	0.1nm,0.4s,baz=84,slow=2.4,SNR=4.7						

*ISCJB **02** 04:49:37.2±0.3, 55.39N±0.02×110.54E±0.04, h10km, mb3.9/2, Error ellipse: s-maj=4.0km s-min=2.2km az=138.8*
*MOS **02** 04:49:38.4±0.9, 55.46N×110.42E, h14km, mb4.9/1, Error ellipse: s-maj=10.9km s-min=6.3km az=64.1*
*BYKL **02** 04:49:38.9±0.2, 55.46N×110.46E, h8km±12km*
*NEIC **02** 04:49:39.5±0.7, 55.49N×110.61E, h10km, Error ellipse: s-maj=9.7km s-min=8.5km az=136.0*
*IDC **02** 04:49:41.3±3.2, 55.42N×110.17E, h0km, mb3.8/2, mb1 4.0/6, mb1mx3.6/26, mbtmp4.0/6, ML3.7/4, Error ellipse: s-maj=43.5km s-min=25.6km az=83.0*
ISC 02 04:49:39.1±0.3**, 55.40N**±0.02×**110.56E**±0.03**, h10**km**, n72, σ1s43**/126**, mb3.9**/2**, 17C-19D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	**Kumora**	**0.60**	**36**	*e*PG	**Pg**	**04 49 49.6**	**-1.2**
KMO				*e*		04 49 56.6	
KMO				pmax	pmax		
	comp=Z,2μm,0.4s						
KMO				smax			
	comp=N,640nm,1.2s						
KMO	**Kumora**	**0.60**	**36**	⇓*i*Pg	**Pg**	**04 49 49.6**	**-1.2**
	comp=N,230nm,0.7s						
KMO				⇓*i*Pg	**Pg**	**04 49 49.6**	**-1.2**
	comp=N,620nm,0.7s						
KMO				⇓*i*Pg	**Pg**	**04 49 49.6**	**-1.2**
	comp=N,2μm,0.7s						
KMO				Pmax		04 49 50.0	
	comp=N,3μm,0.6s						
KMO				*e*Sg	**Sg**	**04 49 57.7**	**-1.1**
KMO				Smax		04 50 01.8	
	comp=N,11μm,1.2s						
KMO	**Kumora**	**0.60**	**36**	*e*Pg	**Pg**	**04 49 49.6**	**-1.2**
KMO				*e*Sg	**Sg**	**04 49 56.6**	**-2.2**
YLYR	**Ulyunkhan**	**0.63**	**147**	⇑*i*PG	**Pg**	**04 49 51.8**	**+0.5**
YLYR				*e*		04 50 00.9	
YLYR				pmax	pmax		
	comp=Z,840nm,0.2s						
YLYR				smax			
	comp=N,4μm,0.3s						
YLYR	**Ulyunkhan**	**0.63**	**147**	⇓*i*Pg	**Pg**	**04 49 51.8**	**+0.5**
	comp=N,1μm,0.8s						
YLYR				⇑*i*Pg	**Pg**	**04 49 51.8**	**+0.5**
	comp=N,630nm,0.8s						
YLYR				⇑*i*Pg	**Pg**	**04 49 51.8**	**+0.5**
	comp=N,1μm,0.8s						
YLYR				Pmax		04 49 56.8	
	comp=N,1μm,0.8s						
YLYR				*e*Sg	**Sg**	**04 50 01.4**	**+1.9**
YLYR				Smax		04 50 01.9	
	comp=N,3μm,0.2s						
YLYR				*e*		04 50 02.2	
YLYR	**Ulyunkhan**	**0.63**	**147**	⇑*i*Pg	**Pg**	**04 49 51.8**	**+0.5**
YLYR				*e*Sg	**Sg**	**04 50 00.9**	**+1.4**
NIZ	**Nizh Angarsk**	**0.69**	**303**	⇑*i*PG	**Pg**	**04 49 50.0**	**-2.5**
NIZ				*e*		04 49 58.7	
NIZ				pmax	pmax		
	comp=Z,1μm,0.6s						
NIZ				smax			
	comp=E,3μm,0.9s						
NIZ	**Nizh Angarsk**	**0.69**	**303**	⇑*i*Pg	**Pg**	**04 49 50.1**	**-2.4**
NIZ				*e*		04 49 50.8	
NIZ				max		04 49 53.0	
	comp=E,1μm,0.6s						
NIZ				*e*Sg	**Sg**	**04 49 58.7**	**-2.8**
NIZ				Smax		04 49 59.6	
	comp=E,3μm,0.9s						
NIZ	**Nizh Angarsk**	**0.69**	**303**	⇑*i*Pg	**Pg**	**04 49 50.0**	**-2.5**
NIZ				*e*Sg	**Sg**	**04 49 58.7**	**-2.8**
YOA	**Uoyan**	**0.98**	**41**	⇑*i*PG	**Pg**	**04 49 56.8**	**-1.2**
YOA				*i*		04 50 10.7	
YOA				pmax	pmax		
	comp=Z,2μm,0.3s						
YOA				smax			
	comp=N,2μm,0.4s						
YOA	**Uoyan**	**0.98**	**41**	⇑*i*Pg	**Pg**	**04 49 56.7**	**-1.3**
YOA				Pmax		04 49 57.9	
	comp=N,1μm,0.7s						
YOA				*e*Pb	**Pb**	**04 50 00.2**	**+2.0**
YOA				*i* Sg	**Sg**	**04 50 10.7**	**-0.1**
YOA				Smax		04 50 24.2	
	comp=N,11μm,1.3s						
YOA	**Uoyan**	**0.98**	**41**	⇑*i*Pg	**Pg**	**04 49 56.8**	**-1.2**
YOA				*i* Sg	**Sg**	**04 50 10.7**	**-0.1**
UKT	**Uakit**	**1.75**	**86**	*e*PN	**Pn**	**04 50 10.9**	**+1.5**
UKT				*e*		04 50 34.9	
UKT				pmax	pmax		

comp=Z,1μm,0.6s
UKT smax
comp=N,2μm,0.3s
UKT Uakit 1.75 86 ⇑*i*Pg **Pg 04 50 11.0 -1.6**
UKT Pmax 04 50 12.5
comp=N,1μm,1.2s
UKT *i* Sg **Sg 04 50 35.0 -0.2**
UKT Smax 04 50 37.7
comp=N,4μm,1.7s
SYVR Suvo 1.78 191 *e*PN **Pn 04 50 11.8 +1.9**
SYVR *e* 04 50 36.7
SYVR pmax pmax
comp=Z,878nm,1.0s
SYVR smax
comp=E,5μm,1.1s
SYVR Suvo 1.78 191 ⇓*i*Pg **Pg 04 50 11.9 -1.3**
SYVR *e* 04 50 15.4
SYVR max 04 50 15.7
comp=E,610nm,0.9s
SYVR *e*Sg **Sg 04 50 36.9 +0.6**
SYVR *e* 04 50 38.6
SYVR max 04 50 39.8
comp=E,5μm,1.4s
SVKR Severomuysk 1.84 66 *e*PN **Pn 04 50 12.7 +2.0**
SVKR *e* 04 50 37.7
SVKR pmax pmax
comp=Z,673nm,1.0s
SVKR smax
comp=N,1μm,1.8s
SVKR Severomuysk 1.84 66 *e*Pg **Pg 04 50 12.5 -1.8**
SVKR Pmax 04 50 15.6
comp=N,607nm,0.8s
SVKR *e* 04 50 22.0
SVKR *i* Sg **Sg 04 50 38.3 +0.1**
SVKR Smax 04 50 39.5
comp=N,10μm,1.1s
SVKR *e* 04 50 41.4
MXMB Maximikha 2.39 207 *e*Pn **Pn 04 50 19.5 +1.2**
MXMB ⇓*i*Pg **Pg 04 50 22.1 -2.9**
MXMB Pmax 04 50 22.7
comp=N,576nm,1.4s
MXMB *i* Sg **Sg 04 50 55.4 -0.6**
MXMB Smax 04 50 57.2
comp=N,3μm,1.0s
MXMB *e* 04 51 00.3
OGRR Ongureny 2.47 226 *e*PN **Pn 04 50 20.9 +1.5**
OGRR *e* 04 50 24.4
OGRR *e* 04 50 55.7
OGRR pmax pmax
comp=Z,222nm,0.3s
OGRR smax
comp=N,2μm,1.5s
OGRR Ongureny 2.47 226 ⇓*i*Pn **Pn 04 50 20.9 +1.5**
OGRR ⇓*i*Pg **Pg 04 50 23.2 -3.2**
OGRR Pmax 04 50 25.5
comp=N,239nm,0.8s
OGRR *e* 04 50 54.0
OGRR *e*Sg **Sg 04 50 55.8 -2.6**
OGRR Smax 04 50 59.5
comp=N,2μm,1.4s
BOD Bodaibo 3.08 37 *e*PN **Pn 04 50 28.6 +0.9**
BOD *e* 04 50 33.1
BOD *e* 04 51 12.3
BOD pmax pmax
comp=Z,122nm,0.6s
BOD smax
comp=E,934nm,1.0s
BOD Bodaibo 3.08 37 ⇓*i*Pn **Pn 04 50 28.6 +0.9**
BOD *e*Pg **Pg 04 50 33.1 -5.0**
BOD Pmax 04 50 33.8
comp=E,123nm,0.6s
BOD *e*Sn **Sn 04 51 05.8 +1.2**
BOD *i* Sg **Sg 04 51 13.3 -4.6**
BOD Smax 04 51 14.9
comp=E,732nm,0.7s
BOD *e* 04 51 15.7
TRG Tyrgan 3.63 225 *e*PN **Pn 04 50 35.6 +0.3**
TRG *e* 04 50 44.2
TRG *e*S **Sn 04 51 18.7 +0.5**
TRG *e* 04 51 31.1
TRG pmax pmax
comp=Z,164nm,0.8s
TRG smax
comp=E,671nm,0.8s
TRG Tyrgan 3.63 225 *e*Pn **Pn 04 50 36.2 +0.9**
TRG *e* 04 50 38.2
TRG *e*Pg **Pg 04 50 43.2 -5.4**
TRG Pmax 04 50 49.1
comp=E,165nm,1.3s
TRG *e* 04 50 20.3
TRG *e*Sg **Sg 04 51 31.1 -4.5**
TRG Smax 04 51 38.5
comp=E,674nm,1.3s
CIT Chita 3.83 151 *e*PN **Pn 04 50 47.9 +10**
CIT *e* 04 51 38.1
CIT pmax pmax
comp=Z,281nm,1.3s
CIT smax
comp=E,2μm,1.2s
CIT Chita 3.83 151 *e*Pg **Pg 04 50 47.1 -5.3**
CIT Pmax 04 50 48.8
comp=E,87nm,0.2s
CIT *e* 04 51 22.6
CIT *e*Sg **Sg 04 51 38.7 -3.2**
CIT Smax 04 51 43.7
comp=E,2μm,1.6s
UUDB Ulan-Yde 3.94 207 ⇓*i*Pn **Pn 04 50 41.0 +1.4**
UUDB *e*Pg **Pg 04 50 49.8 -4.8**
UUDB Pmax 04 50 52.0
comp=E,293nm,1.0s
UUDB *e* 04 51 15.6
UUDB *e*Sg **Sg 04 51 43.2 -2.4**
UUDB Smax 04 51 50.8
comp=E,1μm,1.8s
KAB Kabansk 4.08 216 *e* **Pg 04 50 56.2 -1.1**
KAB max 04 51 06.3
comp=E,472nm,1.0s
KAB *e*Sg **Sg 04 51 44.7 -5.5**
KAB Smax 04 52 10.6
comp=E,2μm,1.2s
HRMR Khuramsha 4.35 211 ⇓*i*Pn **Pn 04 50 46.6 +1.4**
HRMR *e*Pg **Pg 04 50 56.9 -5.5**
HRMR Pmax 04 50 58.9
comp=E,233nm,0.8s
HRMR *e* 04 51 28.5
HRMR *e*Sg **Sg 04 51 54.8 -4.0**
HRMR *e* 04 51 58.2
HRMR max 04 52 02.9
comp=E,2μm,0.9s
CRS Chara 4.56 68 *e*PN **Pn 04 50 51.0 +2.9**
CRS *e* 04 51 02.3
CRS *e* 04 52 01.9
CRS pmax pmax
comp=Z,171nm,1.0s
CRS smax
comp=E,1μm,1.9s
CRS Chara 4.56 68 *e*Pn **Pn 04 50 49.5 +1.4**
CRS *e*Pg **Pg 04 51 01.9 -4.5**
CRS Pmax 04 51 06.2
comp=E,173nm,1.2s
CRS *e* 04 51 12.0
CRS *e* 04 51 31.1
CRS *e*Sn **Sn 04 51 38.7 -2.4**
CRS *e*Sg **Sg 04 52 02.2 -3.3**
CRS Smax 04 52 09.6
comp=E,1μm,1.7s
IRK Irkutsk 4.89 232 *e*PN **Pn 04 50 52.7 +0.1**
IRK *e* 04 51 06.6
IRK *e*S **Sn 04 51 47.5 -1.7**
IRK *e* 04 52 09.5
IRK pmax pmax
comp=Z,223nm,0.2s
IRK smax
comp=N,2μm,0.9s
IRK Irkutsk 4.89 232 *e*Pg **Pg 04 51 06.8 -5.9**
IRK Pmax 04 51 08.9
comp=N,205nm,0.9s
IRK *e*Sn **Sn 04 51 50.0 +0.8**
IRK *e*Sg **Sg 04 52 09.3 -6.7**
IRK Smax 04 52 11.6
comp=N,2μm,1.0s
LSTR Listvyanka 4.92 226 *e*Pn **Pn 04 50 52.7 -0.3**
LSTR *e* 04 51 03.3
LSTR *e*Pg **Pg 04 51 07.1 -6.1**
LSTR Pmax 04 51 08.8
comp=N,59nm,1.3s
LSTR *e* 04 51 36.6
LSTR *e*Sn **Sn 04 51 50.5 +0.7**
LSTR *e*Sg **Sg 04 52 09.9 -6.9**
LSTR Smax 04 52 16.4
comp=N,579nm,1.5s
KHNR Khani 5.48 70 *e*Pg **Pg 04 51 16.8 -7.1**
KHNR *e*Sg **Sg 04 52 30.2 -4.6**
TUP Tupik 5.50 96 *e*PN **Pg 04 51 19.2 -5.3**
TUP *e* 04 52 32.8
TUP pmax pmax
comp=Z,43nm,0.8s
TUP smax
comp=N,739nm,1.2s
TUP Tupik 5.50 96 ⇑*i*Pn **Pn 04 51 02.1 +1.0**
TUP *e* 04 51 10.7
TUP *e*Pg **Pg 04 51 17.9 -6.6**
TUP Pmax 04 51 19.4
comp=N,48nm,1.3s
TUP *e* 04 52 03.2
TUP *i* Sg **Sg 04 52 30.9 -4.8**
TUP Smax 04 52 38.9
comp=N,800nm,1.6s
TLY Talaya 5.56 231 *e*PN **Pn 04 51 02.0 +0.2**
TLY *e* 04 51 18.2
TLY Talaya 5.56 231 *e*Pn **Pn 04 51 01.7 -0.1**
TLY *e*Sn **Sn 04 52 06.6 +0.9**
TLY *e*Sg **Sg 04 52 29.9 -7.6**
TLY Smax 04 52 35.2
comp=N,466nm,1.0s
TLY max 05 51 21.3
comp=N,135nm,1.0s
KPC Khapcheranga 5.81 168 *e*PN **Pn 04 51 06.0 +0.7**
KPC *e* 04 51 25.2
KPC *e*S **Sn 04 52 10.6 -1.4**
KPC *e* 04 52 41.4
KPC pmax pmax
comp=Z,40nm,1.0s
KPC smax
comp=E,541nm,1.3s
KPC Khapcheranga 5.81 168 ⇓*i*Pn **Pn 04 51 05.9 +0.6**
KPC *e*Pg **Pg 04 51 25.5 -4.9**
KPC Pmax 04 51 41.6
comp=E,37nm,1.1s
KPC *i* Sn **Sn 04 52 10.7 -1.3**
KPC *e* 04 52 25.5
KPC *e*Sg **Sg 04 52 41.2 -4.5**
KPC Smax 04 52 46.8
comp=E,543nm,1.3s
ARS Arshan 5.96 238 *e*PN **Pn 04 51 08.1 +0.7**
ARS *e* 04 51 23.6
ARS *e* 04 52 41.3
ARS pmax pmax
comp=Z,168nm,0.6s
ARS smax
comp=E,2μm,0.9s
ZAK Zakamensk 6.69 224 ⇑*i*PN **Pn 04 51 18.8 +1.5**
ZAK *e* 04 51 41.1
ZAK *e* 04 53 06.3
ZAK pmax pmax
comp=Z,21nm,1.1s
ZAK smax
comp=E,362nm,1.1s
ZAK Zakamensk 6.69 224 ⇑*i*Pn **Pn 04 51 18.8 +1.5**
ZAK ⇑*i*Pg **Pg 04 51 39.3 -7.7**
ZAK Pmax 04 51 49.2
comp=E,21nm,1.2s
ZAK *e* 04 52 42.4
ZAK *i* Sg **Sg 04 53 06.7 -6.8**
ZAK Smax 04 53 11.4
comp=E,362nm,1.2s
MOY Mondy 6.82 241 ⇑*i*PN **Pn 04 51 20.6 +1.5**
MOY *e* 04 51 42.8
MOY *e*S **Sn 04 52 35.6 -1.2**
MOY *e* 04 53 09.8
MOY pmax pmax
comp=Z,39nm,0.8s
MOY pmax pmax
comp=E,773nm,1.8s
MOY Mondy 6.82 241 ⇓*i*Pn **Pn 04 51 20.2 +1.1**
MOY max 04 51 25.4
comp=E,121nm,1.4s
MOY *e*Sn **Sn 04 52 36.5 -0.3**
MOY *e*Sg **Sg 04 53 10.1 -7.8**
MOY *e* 04 53 13.2
MOY max 04 53 24.1
comp=E,771nm,1.8s
ORL Orlik 6.96 250 *e*PN **Pn 04 51 22.0 +0.9**
ORL *e* 04 51 44.1
ORL *e* 04 53 12.8
ORL pmax pmax
comp=Z,61nm,0.7s
ORL smax
comp=N,929nm,1.7s
ORL Orlik 6.96 250 ⇓*i*Pn **Pn 04 51 21.6 +0.5**
comp=N,107nm,1.5s
ORL ⇓*i*Pn **Pn 04 51 21.6 +0.5**
comp=N,103nm,1.5s
ORL ⇑*i*Pn **Pn 04 51 21.6 +0.5**
comp=N,87nm,1.5s
ORL max 04 51 23.4
comp=N,99nm,1.4s
ORL *e*Sn **Sn 04 52 37.7 -2.5**
ORL *e* 04 52 53.5
ORL *i* Sg **Sg 04 53 13.0 -9.4**
ORL Smax 04 53 16.3
comp=N,930nm,1.6s
ULN Ulaanbaatar 7.86 198 *e*PN **Pn 04 51 35.1 +1.7**
ULN pmax pmax
comp=Z,14nm,0.8s
ULN Ulaanbaatar 7.86 198 *e*Sg Sx 04 53 45.0
ULN Ulaanbaatar 7.86 198 *e*Pn **Pn 04 51 35.1 +1.8**
comp=Z,14nm,0.8s
ULN *e*Lg 04 53 47.9
SONM Songino Array 8.01 201 Pn **Pn 04 51 37.5 +2.1**
comp=Z,0.5nm,0.3s,baz=13,slow=13,SNR=28
SONM Pg Pn 04 52 06.1 +31
comp=Z,1.5nn,0.3s,baz=9.4,slow=15,SNR=9.5
SONM Lg 04 53 54.4
comp=Z,3.7nm,0.3s,baz=16,slow=26,SNR=17
SONM Songino Array 8.01 201 PN **Pn 04 51 37.5 +2.1**
SONM 04 52 06.1
SONM pmax pmax
comp=Z,1.0nm,0.3s
SONM pmax pmax
comp=Z,2.0nm,0.3s
TNDR Tynda 8.09 86 *e*Sg Sx 04 53 51.7
HIA Hailar 8.32 134 *e*Sg Sx 04 53 57.6
ALDR Aldan 8.71 62 *e*Sg Sx 04 54 10.2
TDJR Todzha 9.05 257 *i* Sg Sx 04 54 16.5
KRAR Krasnoyarsk 10.01 281 *i* P **Pn 04 52 02.1 -0.6**
KZLR Kyzyl 10.27 256 ⇓*e*P **Pn 04 52 07.3 +0.9**
BLRR Bol'shaya Rech 10.88 265 ⇓*e*P **Pn 04 52 18.0 +3.3**
HVS Khovu-Aksy 10.96 254 ⇓P **Pn 04 52 24.5 +8.7**
HVS 04 54 22.0
ZALV Zalesovo Beam 14.94 275 Pn **Pn 04 53 10.1 0.0**
comp=Z,0.1nm,0.3s,baz=81,slow=9.2,SNR=23
ZALV Lg 04 57 25.9
comp=Z,0.3nm,0.3s,baz=71,slow=27,SNR=6.9
ZAL Zalesovo 14.95 275 P **Pn 04 53 10.1 -0.2**
NVS Novosibirsk 15.61 279 *e*P **Pn 04 53 17.7 -1.2**
NVS pmax pmax
comp=Z,20nm,1.9s
MKAR Makanchi Array 19.62 256 P **Pn 04 54 09.3 +0.5**
comp=Z,0.7nm,0.3s,baz=46,slow=10,SNR=10
MKAR Lg 05 00 00.3
comp=Z,0.1nm,0.3s,baz=54,slow=32,SNR=3.1
MKAR Makanchi Array 19.62 256 P **Pn 04 54 09.3 +0.5**
MKAR Lg 05 00 00.3
KURK Kurchatov 19.66 270 P **Pn 04 54 08.6 -0.6**
comp=Z,0.1nm,0.3s,baz=70,slow=12,SNR=19
SEY Seymchan 22.35 53 ⇓*e*P **P 04 54 41.6 +4.8**
BVAR Borovoye Array 23.39 281 P **P 04 54 50.3 +2.5**
comp=Z,4.8nm,0.8s,mb4.0,baz=60,slow=9.2,SNR=11
AKASG Malin Array Be 46.49 300 P **P 04 58 07.5 +1.6**
comp=Z,0.4nm,0.3s,mb3.8,baz=46,slow=8.9,SNR=4.4
AKASG Malin Array Be 46.49 300 *i* P **P 04 58 07.5 +1.5**

*ISCJB **02** 04:49:49.6±1.4,245N±0.1×1095W±0.1,h10km,mb3.8/5, Error ellipse: s-maj=24.1km s-min=11.0km az=44.2*
*IDC **02** 04:49:52.3±1.8,2464N×10986W,h0km,mb3.9/2, mb1 4.0/6,mb1mx3.8/21,mbtmp3.7/6,ML3.5/4,Error ellipse: s-maj=53.4km s-min=8.9km az=117.0*
*NEIC **02** 04:49:52.4±1.1,2453N×10968W,h10km,mb3.9/6,Error ellipse: s-maj=23.2km s-min=10.1km az=121.0*

ISC 02 04:49:50.8±1.5,244N±01×1095W±01,h10km,n22,
σ1°21/20,mb3.8/5,Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.75**	**250**	Pg		**Pg**		**04 50 04.6**	**-0.7**
	602nm,0.3s,baz=203,slow=3.1,SNR=130								
LPIG				Lg				04 50 14.9	
	1μm,0.3s,baz=22,slow=19,SNR=64								
TUC	**Tucson**	**7.99**	**352**	*e*Pn		**Pn**		**04 51 47.2**	**+0.2**
ANMO	**Albuquerque**	**10.88**	**13**	Pn		**Pn**		**04 52 25.8**	**-0.8**
	0.1nm,0.3s,baz=230,slow=17,SNR=2.2								
ANMO	**Albuquerque**	**10.88**	**13**	Pn		**Pn**		**04 52 25.8**	**-0.8**
NVAR	**Mina Array Bea**	**15.88**	**334**	Pn		**Pn**		**04 53 36.5**	**+2.1**
	0.1nm,0.3s,baz=168,slow=12,SNR=9.8								
DUG	**Dugway**	**16.03**	**351**	*e*P		**Pn**		**04 53 39.1**	**+2.9**
	9.8nm,1.3s								
ELK	**Elko**	**17.02**	**345**	Pn		**Pn**		**04 53 49.5**	**+0.6**
	0.1nm,0.3s,baz=185,slow=17,SNR=4.7								
MIAR	**Mount Ida**	**17.19**	**50**	*e*Pn		**Pn**		**04 53 51.3**	**+0.3**
PDAR	**Pinedale Array**	**18.36**	**360**	P		**Pn**		**04 54 03.9**	**-1.5**
	0.1nm,0.3s,baz=163,slow=10,SNR=11								
HLID	**Hailey**	**19.57**	**349**	*e*P		**Pn**		**04 54 19.0**	**-1.0**
	16nm,1.9s								
MCMT	**McKenzie Canyo**	**20.59**	**353**	*e*P		**P**		**04 54 29.9**	**0.0**
RLMT	**Red Lodge**	**20.71**	**1**	*e*P		**P**		**04 54 31.6**	**+0.4**
	7.9nm,1.3s								
DLMT	**Dillon**	**21.10**	**354**	*e*P		**P**		**04 54 34.2**	**-1.1**
	9.8nm,1.3s,mb4.0								
BOZ	**Bozeman (W)**	**21.30**	**356**	*e*P		**P**		**04 54 39.2**	**+1.7**
	3.3nm,1.1s,mb3.6								
GCMT	**Greycliff**	**21.38**	**360**	*e*P		**P**		**04 54 37.2**	**-1.2**
LNOR	**Lincton Mounta**	**22.59**	**344**	*e*P		**P**		**04 54 49.3**	**-2.0**
NEW	**Newport**	**24.60**	**348**	*e*P		**P**		**04 55 10.4**	**-0.5**
	3.5nm,0.9s,mb3.9								
YKA	**Yellowknife Ar**	**38.27**	**356**	P		**P**		**04 57 11.7**	**+0.8**
	0.9nm,1.0s,mb3.5,baz=174,slow=8.4,SNR=4.6								
YKA	**Yellowknife Ar**	**38.27**	**356**	P		**P**		**04 57 11.7**	**+0.8**
MJAR	**Matsushiro Arr**	**92.01**	**312**	P		**P**		**05 03 01.8**	**+1.7**
	0.5nm,0.4s,mb4.2,baz=49,slow=12,SNR=4.3								
WRA	**Warramunga Arr**	**121.12**	**261**	PKP		PKPdf		05 08 47.9	+3.5
	0.8nm,0.9s,baz=87,slow=4.4,SNR=4.8								
ASAR	**Alice Springs**	**122.52**	**257**	PKP		PKPdf		05 08 49.7	+2.6
	0.7nm,1.0s,baz=54,slow=6.4,SNR=4.3								

*BJI **02** 05:07:08.7,2503N×10909W,h8km,mB5.4,mb4.9,Ms4.8, Msz4.9*
*IDC **02** 05:07:12.2±0.6,2484N×110.16W,h0km,mb4.2/10, mb1 4.2/16,mb1mx4.1/25,mbtmp4.0/16,ML3.5/6,MS4.5/7, Ms1 4.5/7,ms1mx3.8/38,Error ellipse: s-maj=19.0km s-min=7.8km az=96.0*
*ISCJB **02** 05:07:12.6±0.3,2470N±003×10987W±004,h10km, mb4.4/24,MS4.5/4,Error ellipse: s-maj=5.1km s-min=4.2km az=6.4*
*MEX **02** 05:07:13.5±0.5,2481N×10989W,h11km±7km,MD4.6*
*NEIC **02** 05:07:13.6±0.4,2461N×10991W,h10km,mb4.5/36, MD4.6(MEX),Error ellipse: s-maj=6.5km s-min=5.1km az=223.0*
NEIC Felt at La Paz, Mexico.
*MOS **02** 05:07:13.4±1.8,2474N×10989W,h13km,mb4.9/9,Error ellipse: s-maj=9.9km s-min=4.6km az=98.2*

ISC 02 05:07:14.0±0.3,2465N±003×10988W±004,h10km,n155,
σ1°26/152,mb4.4/26,MS4.5/4,1D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.67**	**216**	Pg		**Pg**		**05 07 26.9**	**0.0**
	1μm,0.3s,baz=37,slow=1.4,SNR=451								
LPIG				Lg				05 07 37.1	
	4μm,0.3s,baz=294,slow=20,SNR=99								
LPIG	**La Paz**	**0.67**	**216**	*i* P		**Pg**		**05 07 26.9**	**0.0**
LPIG				*e*S		**Sg**		**05 07 37.2**	**+1.6**
MAIG	**Mazatlaan**	**3.48**	**114**	*i* P		**Pn**		**05 08 04.8**	**-3.5**
MAIG				*i* S		**Sn**		**05 08 45.7**	**-3.8**
HPIG		**4.43**	**58**	*i* P		**Pn**		**05 08 17.4**	**-3.9**
HPIG				*e*S		**Sn**		**05 09 07.8**	**-5.2**
HSIG		**4.46**	**348**	*i* P		**Pn**		**05 08 16.6**	**-5.1**
HSIG				*e*S		**Sn**		**05 09 05.2**	**-8.5**
TUC	**Tucson**	**7.68**	**354**	*e*Pn		**Pn**		**05 09 03.2**	**-2.7**
TUC				*e*Sn		Sn		05 11 06.1	+33
GLA	**Glamis**	**9.43**	**334**	*e*P		**Pn**		**05 09 29.7**	**-0.2**
LENM	**Lemitar**	**9.82**	**14**	*e*Pn		**Pn**		**05 09 35.8**	**+0.5**
BNM	**Barren Site**	**9.89**	**16**	*e*Pn		**Pn**		**05 09 37.0**	**+0.8**
BNM				*e*Sn		Sn		05 12 18.8	+52
BAR	**Barrett**	**9.98**	**325**	*e*Pn		**Pn**		**05 09 37.7**	**+0.2**
LAZ	**Ladron**	**10.01**	**13**	*e*Pn		**Pn**		**05 09 37.6**	**-0.3**
LPM	**Los Pinos Moun**	**10.04**	**16**	*e*Pn		**Pn**		**05 09 38.3**	**0.0**
JCT	**Junction City**	**10.66**	**55**	*e*Pn		**Pn**		**05 09 47.0**	**+0.1**
JCT				*e*Sn		Sn		05 12 45.8	+59
ANMO	**Albuquerque**	**10.69**	**15**	Pn		**Pn**		**05 09 45.7**	**-1.5**
	0.0nm,0.3s,baz=199,slow=14,SNR=13								
ANMO				LR		LR		05 14 18.3	
	comp=Z,2μm,18.5s,baz=10.0,slow=40								
ANMO	**Albuquerque**	**10.69**	**15**	⇓*i*P		**Pn**		**05 09 46.5**	**-0.7**
ANMO	**Albuquerque**	**10.69**	**15**	*e*Pn		**Pn**		**05 09 47.4**	**+0.2**
WUAZ	**Wupatki**	**10.91**	**354**	*e*Pn		**Pn**		**05 09 51.4**	**+1.1**
LDFC	**Landfair**	**11.34**	**338**	*e*Pn		**Pn**		**05 09 58.0**	**+1.9**
MWC	**Mount Wilson**	**11.90**	**325**	*e*P		**Pn**		**05 10 05.4**	**+1.6**
GSC	**Goldstone**	**12.19**	**332**	*e*P		**Pn**		**05 10 09.1**	**+1.4**
AMTX	**Amarillo**	**12.44**	**33**	*e*Pn		**Pn**		**05 10 12.6**	**+1.5**
OSI	**Osito Adit**	**12.55**	**324**	*e*Pn		**Pn**		**05 10 14.1**	**+1.4**
	24nm,1.0s								
MVCO	**Mesa Verde**	**12.58**	**5**	*e*Pn		**Pn**		**05 10 14.6**	**+1.6**
SHPR	**Sheep Range**	**12.66**	**340**	*e*Pn		**Pn**		**05 10 15.2**	**+1.1**
ISA	**Isabella**	**13.25**	**328**	*e*P		**Pn**		**05 10 23.0**	**+0.8**
TPNV	**Topopah Spring**	**13.42**	**338**	*e*P		**Pn**		**05 10 26.5**	**+2.0**
PV01	**Paradox Valley**	**13.49**	**4**	*e*Pn		**Pn**		**05 10 27.3**	**+1.8**
SDCO	**Great Sand Dun**	**13.58**	**15**	*e*Pn		**Pn**		**05 10 29.1**	**+2.3**
WMOK	**Velchita Mounta**	**13.93**	**41**	*e*P		**Pn**		**05 10 32.5**	**+1.1**
MSU	**Marysvale**	**13.96**	**353**	*e*P		**Pn**		**05 10 35.0**	**+3.1**
SRU	**San Rafael**	**14.43**	**358**	*e*P		**Pn**		**05 10 39.1**	**+0.8**
TMUT	**Trail Mountain**	**14.65**	**356**	*e*Pn		**Pn**		**05 10 42.9**	**+1.6**
MTUM	**Tungsten Hills**	**14.68**	**332**	*e*Pn		**Pn**		**05 10 43.2**	**+1.5**
SMCO	**Snowmass**	**14.70**	**9**	*e*Pn		**Pn**		**05 10 46.1**	**+4.2**
NLU	**North Lily Min**	**15.38**	**354**	*e*Pn		**Pn**		**05 10 52.0**	**+1.0**
MPU	**Maple Canyon**	**15.40**	**355**	*e*Pn		**Pn**		**05 10 53.0**	**+1.8**
	23nm,1.1s								
NVAR	**Mina Array Bea**	**15.49**	**334**	Pn		**Pn**		**05 10 51.9**	**-0.7**
	0.2nm,0.3s,baz=157,slow=8.0,SNR=20								
ISCO	**Idaho Springs**	**15.53**	**12**	*e*P		**Pn**		**05 10 53.0**	**-0.1**
DUG	**Dugway**	**15.70**	**352**	*e*P		**Pn**		**05 10 57.0**	**+1.8**
DUG				pmax	pmax				
	comp=Z,36nm,1.3s								
DUG	**Dugway**	**15.70**	**352**	*e*Pn		**Pn**		**05 10 57.0**	**+1.8**
	comp=Z,36nm,1.3s								
DAU	**Daniels Canyon**	**15.76**	**356**	*e*P		**Pn**		**05 10 57.0**	**+0.9**
CMIG	**Matias Romero**	**15.90**	**115**	Pn		**Pn**		**05 10 59.8**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=263,slow=7.6,SNR=4.6								
JLU	**Jordanelle**	**15.97**	**356**	*e*Pn		**Pn**		**05 11 00.8**	**+2.1**
WAKR	**Walker**	**16.02**	**332**	*e*Pn		**Pn**		**05 11 00.6**	**+1.1**
CMB	**Columbia Colle**	**16.07**	**329**	*e*P		**Pn**		**05 11 00.3**	**+0.3**
NOQ	**North Oquirrh**	**16.07**	**354**	*e*Pn		**Pn**		**05 11 00.9**	**+0.9**
	comp=Z,88nm,1.7s								
BGU	**Big Grassy Mou**	**16.45**	**352**	*e*Pn		**Pn**		**05 11 05.3**	**+0.5**
CBKS	**Cedar Bluff**	**16.54**	**29**	*e*P		**Pn**		**05 11 07.9**	**+1.9**
CBKS				pmax	pmax				
	comp=Z,59nm,1.0s								
CBKS	**Cedar Bluff**	**16.54**	**29**	*e*Pn		**Pn**		**05 11 07.8**	**+1.9**
	comp=Z,59nm,1.0s								
ELK	**Elko**	**16.67**	**346**	Pn		**Pn**		**05 11 07.4**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=165,slow=10,SNR=9.7								
ELK				LR		LR		05 17 22.3	
	comp=Z,1μm,18.7s,baz=166,slow=37								
ELK	**Elko**	**16.67**	**346**	*e*P		**Pn**		**05 11 06.9**	**-0.8**
ELK				pmax	pmax				
	comp=Z,101nm,2.0s								
ELK	**Elko**	**16.67**	**346**	*e*Pn		**Pn**		**05 11 06.9**	**-0.8**
	comp=Z,101nm,2.0s								
BMN	**Battle Mountai**	**16.90**	**340**	*e*P		**Pn**		**05 11 10.9**	**+0.3**
BMN				pmax	pmax				
	comp=Z,37nm,1.4s								
BMN	**Battle Mountai**	**16.90**	**340**	*e*Pn		**Pn**		**05 11 10.9**	**+0.3**
	comp=Z,37nm,1.4s								
HWUT	**Hardware Ranch**	**16.97**	**356**	*e*Pn		**Pn**		**05 11 11.8**	**+0.3**
	comp=Z,56nm,1.4s								
PAHR	**Pah Rah Range**	**17.02**	**334**	*e*Pn		**Pn**		**05 11 12.5**	**+0.4**
	comp=Z,74nm,1.5s								

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
RWWY	Rawlins	17.14	7	ePn	Pn	05 11 13.6	-0.1
	comp=Z,27nm,1.3s						
HVU	Hansel Valley	17.26	353	eP	Pn	05 11 15.4	+0.3
HVU				pmax	pmax		
	comp=Z,55nm,1.5s						
HVU	Hansel Valley	17.26	353	ePn	Pn	05 11 15.4	+0.3
	comp=Z,55nm,1.5s						
MIAR	Mount Ida	17.26	51	eP	Pn	05 11 15.9	+0.8
MIAR				pmax	pmax		
	comp=Z,19nm,1.3s						
MIAR	Mount Ida	17.26	51	ePn	Pn	05 11 15.9	+0.8
	comp=Z,19nm,1.3s						
OHCM	Honcut	17.62	329	ePn	Pn	05 11 21.0	+1.4
BW06	Boulder Array	18.08	1	ePn	Pn	05 11 24.0	-1.2
PDAR	Pinedale Array	18.08	1	P	Pn	05 11 23.2	-2.0
	comp=Z,0.1nm,0.3s,baz=165,slow=11,SNR=19						
PDAR				LR	LR	05 17 36.2	
	comp=Z,958nm,21.8s,baz=207,slow=35						
REDW	Red Top Meadow	18.69	358	eP	Pn	05 11 32.0	-0.6
	comp=Z,82nm,1.8s						
RRI2	Red Ridge	18.69	357	eP	Pn	05 11 32.1	-0.6
	comp=Z,41nm,1.4s						
SNOW	Snow King Moun	18.78	358	eP	Pn	05 11 33.2	-0.6
	comp=Z,79nm,1.6s						
TPAW	Teton Pass	18.82	358	eP	Pn	05 11 33.5	-0.7
	comp=Z,52nm,1.4s						
LOHW	Long Hollow	18.93	358	eP	Pn	05 11 34.3	-1.3
	comp=Z,50nm,1.7s						
DCID1	Drake Creek	18.93	357	eP	Pn	05 11 35.4	-0.2
WDC	Whiskeytown Da	19.10	329	eP	Pn	05 11 36.5	-1.2
WVOR	Wild Horse Val	19.16	340	eP	Pn	05 11 38.2	-0.2
WVOR				pmax	pmax		
	comp=Z,27nm,1.4s						
WVOR	Wild Horse Val	19.16	340	eP	Pn	05 11 38.2	-0.3
	comp=Z,27nm,1.4s						
IMW	Indian Meadow	19.22	358	eP	Pn	05 11 38.0	-1.1
HLID	Hailey	19.23	350	eP	Pn	05 11 38.4	-0.8
MOD	Modoc	19.26	336	eP	Pn	05 11 38.6	-1.0
FLWY	Flagg Ranch	19.40	358	eP	Pn	05 11 40.4	-0.9
LKWY	Lake	19.88	359	eP	Pn	05 11 45.9	-1.0
LKWY				pmax	pmax		
	comp=Z,26nm,1.3s						
LKWY	Lake	19.88	359	eP	Pn	05 11 45.9	-1.1
	comp=Z,26nm,1.3s						
KHMM	Horse Mountain	19.90	328	eP	Pn	05 11 46.1	-1.1
YMR	Madison River	20.00	358	eP	P	05 11 48.0	+1.4
	comp=Z,29nm,1.3s						
YBH	Yreka Blue Hor	20.10	331	P	P	05 11 44.6	-3.2
	comp=Z,0.0nm,0.3s,baz=117,slow=6.4,SNR=2.9						
QLMT	Earthquake Lak	20.18	357	eP	P	05 11 48.1	-0.5
MCMT	McKenzie Canyo	20.28	354	eP	P	05 11 50.5	+0.8
OXF	Oxford	20.31	56	eP	P	05 11 48.6	-1.5
OXF				pmax	pmax		
	comp=Z,29nm,1.2s						
OXF	Oxford	20.31	56	eP	P	05 11 48.6	-1.5
	comp=Z,29nm,1.2s						
RLMT	Red Lodge	20.44	1	eP	P	05 11 51.0	-0.4
	comp=Z,56nm,2.1s						
TEIG	Tepich	20.45	98	P	P	05 11 53.5	+1.8
	comp=Z,11nm,0.8s,baz=286,slow=12,SNR=6.1						
TEIG				LR	LR	05 20 59.4	
	comp=Z,827nm,18.1s,MS4.1,baz=122,slow=40						
DLMT	Dillon	20.79	355	eP	P	05 11 54.5	-0.7
	comp=Z,39nm,1.4s						
BOZ	Bozeman (W)	21.00	357	eP	P	05 11 56.8	-0.7
BOZ				pmax	pmax		
	comp=Z,36nm,1.8s,mb4.4						
BOZ	Bozeman (W)	21.00	357	eP	P	05 11 56.8	-0.8
	comp=Z,36nm,1.8s,mb4.4						
BMO	Blue Mountains	21.04	345	eP	P	05 11 58.3	+0.3
	comp=Z,23nm,1.4s,mb4.3						
GCMT	Greycliff	21.10	0	eP	P	05 11 57.8	-0.8
LCCM	Lewis and Clar	21.21	356	P	P	05 11 59.8	0.0
FVM	French Village	21.23	47	eP	P	05 11 59.5	-0.6
FVM				pmax	pmax		
	comp=Z,25nm,1.4s,mb4.3						
FVM	French Village	21.23	47	eP	P	05 11 59.5	-0.6
	comp=Z,25nm,1.4s,mb4.4						
LRM	Limekiln Ridge	21.23	355	eP	P	05 11 59.9	-0.1
PLAL	Pickwick Lake	21.50	56	eP	P	05 12 01.0	-2.0
KEBM	Edson Butte	21.73	330	eP	P	05 12 04.0	-1.4
IRO	Indian Ridge	21.80	335	P	P	05 12 06.1	-0.1
SIUC	Southern Illin	21.90	49	eP	P	05 12 06.2	-1.1
	comp=Z,32nm,1.2s,mb4.6						
ECSD	EROS,Sioux Fal	21.93	26	eP	P	05 12 06.7	-0.8
	comp=Z,22nm,1.1s,mb4.5						
LAO	LASA Array	22.19	7	eP	P	05 12 09.6	-0.7
	comp=Z,63nm,1.4s,mb4.8						
CROR	Criterion Ridg	22.20	339	P	P	05 12 10.1	-0.3
LNOR	Lincton Mounta	22.24	344	eP	P	05 12 10.6	-0.2
MSO	Missoula	22.37	353	eP	P	05 12 11.4	-0.8
	comp=Z,28nm,1.4s,mb4.5						
CHMT	Chamberlain Mo	22.39	354	eP	P	05 12 11.7	-0.7
HAWA	Hanford	23.04	343	eP	P	05 12 18.3	-1.0
RSW	Rattlesnake Hi	23.06	343	eP	P	05 12 19.6	+0.1
OLIL	Olney	23.18	48	eP	P	05 12 20.9	+0.1
	comp=Z,37nm,1.4s,mb4.6						
EGMT	Eagleton	23.33	0	P	P	05 12 18.1	-4.2
	comp=Z,92nm,1.6s,mb5.0						
KMOR	Kings Mountain	23.65	336	P	P	05 12 24.6	-1.0
OD2	Odessa Site #2	23.76	345	eP	P	05 12 25.2	-1.4
DGMT	Dagmar	24.20	9	eP	P	05 12 28.8	-1.7
	comp=Z,40nm,1.4s,mb4.7						
NEW	Newport	24.26	348	eP	P	05 12 29.3	-1.8
WTV	Waterville	24.36	343	P	P	05 12 30.6	-1.5
ETW	Entiat	24.37	343	eP	P	05 12 31.5	-0.7
CPCT	Cooper Cave	24.39	58	eP	P	05 12 32.3	-0.1
TKL	Tuckaleechee C	25.03	58	P	P	05 12 39.0	+0.7
	comp=Z,7.6nm,0.9s,mb4.2,baz=241,slow=7.6,SNR=6.0						
TKL				LR	LR	05 23 04.0	
	comp=Z,1µm,20.6s,MS4.4,baz=204,slow=38						
EDM	Edmonton	28.66	356	eP	P	05 13 12.0	+1.3
YKA	Yellowknife Ar	37.97	356	P	P	05 14 28.4	-3.2
	comp=Z,1.0nm,0.8s,mb3.6,baz=175,slow=7.9,SNR=7.6						
YKA				LR	LR	05 30 44.5	
	comp=Z,920nm,18.8s,MS4.6,baz=185,slow=37						
HKL	Haleakala	42.82	274	eP	P	05 15 09.8	-2.6
DAWY	Dawson	43.89	342	eP	P	05 15 20.2	-0.2
KDAK	Kodiak Island	44.89	329	eP	P	05 15 26.3	-2.2
KDAK				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.6						
KDAK	Kodiak Island	44.89	329	eP	P	05 15 26.3	-2.2
	comp=Z,12nm,1.3s,mb4.6						
EGAK	Eagle	44.93	342	eP	P	05 15 27.8	-0.9
	comp=Z,6.9nm,1.0s,mb4.4						
PMR	Palmer	45.48	335	eP	P	05 15 33.2	+0.1
PMR				pmax	pmax		
	comp=Z,17nm,1.6s,mb4.6						
PMR	Palmer	45.48	335	eP	P	05 15 33.2	+0.1
	comp=Z,17nm,1.6s,mb4.6						
COLA	College	47.06	339	eP	P	05 15 44.7	-0.8
COLA				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
COLA	College	47.06	339	eP	P	05 15 44.7	-0.7
	comp=Z,13nm,1.4s,mb4.7						
CHGN	Chignik	47.14	325	eP	P	05 15 50.6	+4.4
SVW2	Sparrevohn	47.84	332	eP	P	05 15 49.7	-1.9
TTA	Tatalina	48.91	334	eP	P	05 15 58.5	-1.3
IMA2	Indian Mountai	49.72	338	eP	P	05 16 05.8	-0.3
LPAZ	La Paz	57.56	131	P	P	05 17 06.1	+1.9
	comp=Z,0.8nm,1.0s,mb3.7,baz=339,slow=8.8,SNR=4.3						
LPAZ	La Paz	57.56	131	P	P	05 17 06.1	+1.9
PET	Petropavlovsk	71.55	320	eP	P	05 18 39.0	+3.8
PET				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
CPUP	Villa Florida	71.72	131	P	P	05 18 38.0	+1.5
	comp=Z,5.4nm,0.9s,mb4.5,baz=303,slow=5.7,SNR=15						
SEY	Seymchan	71.78	331	eP	P	05 18 38.9	+2.6
PETK	Petropavlovsk-	72.08	321	P	P	05 18 36.4	-2.0
	comp=Z,0.9nm,0.6s,mb3.9,baz=67,slow=16,SNR=2.9						
BDFB	Brasilia	72.41	117	P	P	05 18 43.8	+3.0
	comp=Z,2.7nm,0.9s,mb4.2,baz=298,slow=8.0,SNR=4.4						
PLCA	Paso Flores	74.61	150	P	P	05 18 55.4	+2.1
	comp=Z,3.6nm,0.9s,mb4.3,baz=312,slow=7.1,SNR=6.9						
ARCES	ARCESS Array B	80.77	14	P	P	05 19 28.2	+0.9
	comp=Z,1.1nm,0.8s,mb3.8,baz=18,slow=4.3,SNR=4.7						
YAK	Yakutsk	81.47	336	eP	P	05 19 34.1	+2.9
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
YSS	Yuzh-Sakhalins	83.33	319	eP	P	05 19 44.6	+3.4
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
MJAR	Matsushiro Arr	91.58	312	P	P	05 20 19.0	-2.4
	comp=Z,0.3nm,0.4s,mb3.9,baz=35,slow=4.5,SNR=2.8						
MJAR	Matsushiro Arr	91.58	312	P	P	05 20 19.0	-2.4
CN2	Changchun	95.09	323	eP	P	05 20 35.2	-2.2
CN2				eS	S	05 31 46.9	-5.6
KEST	Kesra	96.92	46	LR	LR	06 03 18.7	
	comp=Z,318nm,19.3s,MS4.8,baz=87,slow=35						
LZH	Lanzhou	111.71	331	ePKP	PKiKP	05 25 43.5	-5.8
CD2	Chengdu	116.05	328	ePKP	PKPdf	05 25 53.1	-4.7
GYA	Guiyang	118.14	323	ePDIF	Pdif	05 22 18.4	-1.6
GYA				PKP	PKPdf	05 25 59.6	-2.3
GYA				PP	PP	05 27 18.7	+2.8
GYA				PP	PP		
	comp=Z,80nm,7.6s						
WRA	Warramunga Arr	120.86	261	PKP	PKPdf	05 26 05.2	-1.9
	comp=Z,1.4nm,1.1s,baz=68,slow=2.0,SNR=3.5						
KMI	Kunming	121.31	325	PKP	PKPdf	05 26 04.0	-4.0
ASAR	Alice Springs	122.28	257	PKP	PKPdf	05 26 07.8	-2.0
	comp=Z,1.3nm,1.0s,baz=72,slow=3.0,SNR=3.8						

IDC 02 05:08:36.6±7.1, 1143S×16519E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/15, mbtmp3.8/4, Error ellipse: s-maj=211.8km s-min=46.5km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
CTA	Charters Tower	20.14	242	P	P	05 13 13.3	+0.9
	3.2nm,0.7s,baz=90,slow=10,SNR=2.9						
WRA	Warramunga Arr	30.84	250	P	P	05 14 55.1	+0.4
	0.8nm,0.8s,baz=80,slow=8.0,SNR=6.3						
ASAR	Alice Springs	32.13	244	P	P	05 15 05.0	-1.0
	0.9nm,0.8s,baz=69,slow=9.7,SNR=7.6						
MKAR	Makanchi Array	93.43	317	P	P	05 21 54.3	+0.3
	0.4nm,0.5s,baz=108,slow=4.7,SNR=3.0						

*MOS **02** 05:08:58.1±1.6, 5559N×11037E, h13km, mb4.3/1, Error ellipse: s-maj=28.8km s-min=11.5km az=53.2*

BYKL 02 05:08:58.0±0.2, 5546N×11043E, h14km±22km, 9C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.59	302	⇑iPg	Pg	05 09 09.3	-0.3
NIZ				e		05 09 16.2	
NIZ				eSg	Sg	05 09 18.0	+0.5
NIZ				Pmax			
	51nm,0.2s						
NIZ				Smax			
	401nm,0.4s						
KMO	Kumora	0.61	45	ePG	Pg	05 09 08.9	-1.0
KMO				e		05 09 16.5	
KMO				pmax	pmax		
	comp=Z,110nm,0.3s						
KMO				smax			
	comp=N,976nm,1.0s						
KMO	Kumora	0.61	45	⇑iPg	Pg	05 09 08.9	-1.0
KMO				eSg	Sg	05 09 17.1	-0.9
KMO				Pmax			
	comp=N,111nm,0.3s						
KMO				Smax			
	comp=N,968nm,1.0s						
YLYR	Ulyunkhan	0.72	144	⇓iPg	Pg	05 09 11.0	-1.0
	comp=N,107nm,0.4s						
YLYR				⇑iPg	Pg	05 09 11.0	-1.0
	comp=N,77nm,0.4s						
YLYR				⇑iPg	Pg	05 09 11.0	-1.0
	comp=N,100nm,0.4s						
YLYR				eSg	Sg	05 09 20.5	-0.9
YLYR				Pmax			
	comp=N,111nm,0.3s						
YLYR				Smax			
	comp=N,253nm,0.3s						
YOA	Uoyan	0.99	47	⇑iPG	Pg	05 09 16.4	-0.8
YOA				i		05 09 30.1	
YOA				pmax	pmax		
	comp=Z,141nm,0.2s						
YOA				smax			
	comp=E,921nm,0.5s						
YOA	Uoyan	0.99	47	ePg	Pg	05 09 16.3	-0.9
YOA				eSg	Sg	05 09 30.0	-0.2
YOA				Pmax			
	comp=E,103nm,0.2s						
YOA				Smax			
	comp=E,750nm,0.6s						
UKT	Uakit	1.82	88	ePN	Pn	05 09 30.2	+1.4
UKT				e		05 09 53.8	
UKT				pmax	pmax		
	comp=Z,161nm,0.5s						
UKT				smax			
	comp=N,232nm,0.4s						
UKT	Uakit	1.82	88	⇑iPg	Pg	05 09 30.2	-2.7
UKT				eSg	Sg	05 09 54.4	-2.1
UKT				Pmax			
	comp=N,161nm,0.7s						
UKT				Smax			
	comp=N,255nm,0.6s						
SYVR	Suvo	1.82	188	ePN	Pn	05 09 30.8	+1.9
SYVR				e		05 09 55.8	
SYVR				pmax	pmax		
	comp=Z,72nm,0.7s						
SYVR				smax			
	comp=E,309nm,0.7s						
SYVR	Suvo	1.82	188	⇓iPg	Pg	05 09 30.8	-2.2
SYVR				eSg	Sg	05 09 55.6	-1.0
SYVR				Pmax			
	comp=E,70nm,0.7s						
SYVR				Smax			
	comp=E,305nm,1.0s						
SVKR	Severomuysk	1.89	68	ePN	Pn	05 09 31.9	+2.2
SVKR				e		05 09 57.1	
SVKR				pmax	pmax		
	comp=Z,182nm,0.7s						
SVKR				smax			
	comp=N,506nm,1.7s						
SVKR	Severomuysk	1.89	68	⇑iPg	Pg	05 09 31.9	-2.2
SVKR				eSg	Sg	05 09 57.3	-1.3
SVKR				Pmax			
	comp=N,180nm,0.4s						
SVKR				Smax			
	comp=N,484nm,0.5s						
MXMB	Maximikha	2.41	205	e	Pn	05 09 38.9	+1.9
MXMB				⇑iPg	Pg	05 09 41.5	-2.7
MXMB				eSg	Sg	05 10 13.5	-1.9
MXMB				Pmax			
	comp=N,50nm,0.1s						
MXMB				Smax			
	comp=N,486nm,0.6s						
OGRR	Ongureny	2.46	223	ePN	Pn	05 09 43.6	+6.0
OGRR				e		05 10 14.4	
OGRR				pmax	pmax		
	comp=Z,32nm,0.6s						
OGRR				smax			
	comp=E,195nm,0.8s						
OGRR	Ongureny	2.46	223	e	Pn	05 09 40.5	+2.9
OGRR				ePg	Pg	05 09 42.3	-2.8
OGRR				e		05 10 12.4	
OGRR				eSg	Sg	05 10 14.1	-2.8
OGRR				Pmax			
	comp=E,32nm,0.6s						
OGRR				Smax			
	comp=E,151nm,0.3s						
BOD	Bodaibo	3.08	38	e	Pn	05 09 47.6	+1.5
BOD				e		05 09 59.3	
BOD				e		05 10 25.0	
BOD				eSg	Sg	05 10 32.2	-4.6
BOD				max			
	comp=E,10.0nm,0.3s						
BOD				Smax			
	comp=E,65nm,0.8s						
TRG	Tyrgan	3.62	223	ePn	Pn	05 09 53.6	+0.1
TRG				ePg	Pg	05 10 02.6	-4.6
TRG				e		05 10 33.4	
TRG				eSg	Sg	05 10 49.5	-4.6
TRG				Pmax			
	comp=E,11nm,0.5s						
TRG				Smax			
	comp=E,101nm,1.4s						
CIT	Chita	3.91	150	eSg	Sg	05 10 59.9	-3.6
CIT				Smax			
	comp=E,151nm,0.3s						
HRMR	Khuramsha	4.36	210	ePg	Pg	05 10 16.3	-5.2
HRMR				eSg	Sg	05 11 12.8	-5.1
HRMR				Pmax			
	comp=E,31nm,0.5s						
HRMR				Smax			
	comp=E,263nm,0.7s						
CRS	Chara	4.61	69	ePN	Pn	05 10 09.9	+2.7
CRS				e		05 10 19.9	
CRS				e		05 11 20.5	
CRS				pmax	pmax		
	comp=Z,41nm,1.1s						
CRS				smax			
	comp=E,78nm,1.0s						
CRS	Chara	4.61	69	e	Pn	05 10 09.8	+2.6
CRS				ePg	Pg	05 10 21.4	-4.8
CRS				eSg	Sg	05 11 21.4	-4.5
CRS				Pmax			
	comp=E,41nm,1.0s						
CRS				Smax			
	comp=E,78nm,1.4s						
IRK	Irkutsk	4.87	231	eSg	Sg	05 11 28.9	-5.2
IRK				Smax			
	comp=E,222nm,0.4s						
LSTR	Listvyanka	4.90	225	e	Sn	05 11 10.3	+2.7
LSTR				eSg	Sg	05 11 28.7	-6.5
LSTR				Smax			
	comp=E,62nm,1.7s						
TLY	Talaya	5.54	230	ePN	Pn	05 10 22.1	+2.2
TLY				e		05 10 38.2	
TLY				eS	Sn	05 11 23.4	+0.1
TLY				e		05 11 47.5	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TLY				smax			
	comp=N,56nm,0.8s						
TUP	Tupik	5.59	97	ePn	Pn	05 10 21.8	+1.2
TUP				eSg	Sg	05 11 51.8	-5.4
TUP				max			
	comp=N,8.0nm,0.4s						
TUP				Smax			
	comp=N,31nm,1.0s						
KPC	Khapcheranga	5.89	168	e	Pn	05 10 36.1	+11
KPC				ePg	Pg	05 10 43.5	-7.1
KPC				eSn	Sn	05 11 32.6	+0.7
KPC				eSg	Sg	05 11 58.6	-8.2
KPC				Pmax			
	comp=N,8.0nm,1.5s						
KPC				Smax			
	comp=N,28nm,1.4s						
ARS	Arshan	5.93	237	e	Pn	05 10 29.0	+3.7
ARS				ePg	Pg	05 10 44.4	-7.1
ARS				eSn	Sn	05 11 32.5	-0.5
ARS				eSg	Sg	05 11 59.9	-8.3
ARS				Pmax			
	comp=N,15nm,0.5s						
ARS				Smax			
	comp=N,120nm,0.9s						
MOY	Mondy	6.78	240	⇑iPN	Pn	05 10 40.0	+3.0
MOY				e		05 11 01.4	
MOY				e		05 12 27.7	
MOY				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MOY				smax			
	comp=E,53nm,1.5s						
ORL	Orlik	6.91	249	ePN	Pn	05 10 41.3	+2.6
ORL				e		05 11 03.1	
ORL				e		05 12 31.0	
ORL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ORL				smax			
	comp=N,67nm,1.8s						
ORL	Orlik	6.91	249	ePn	Pn	05 10 39.5	+0.8
ORL				e		05 10 48.7	
ORL				eSg	Sg	05 12 31.1	-8.4
ORL				Smax			
	comp=N,67nm,1.2s						
TDJR	Todzha	8.99	256	e	Sn	05 12 58.5	+10
TDJR				eSg	Sn	05 13 35.7	+48

IDC 02 05:11:19.6±3.6, 1192S×16566E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.6/14, mbtmp3.8/3, Error ellipse: s-maj=144.5km s-min=42.4km az=136.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.11	251	P	P	05 17 40.4	+0.4
	0.5nm,0.7s,baz=83,slow=8.7,SNR=6.6						
ASAR	Alice Springs	32.33	244	P	P	05 17 50.5	-0.2
	0.7nm,0.7s,baz=65,slow=10,SNR=8.0						
MKAR	Makanchi Array	94.10	317	P	P	05 24 39.9	-0.1
	0.3nm,0.4s,baz=104,slow=6.1,SNR=3.0						
ARCES	ARCESS Array B	117.16	345	PKP	PKPdf	05 30 06.2	0.0
	0.9nm,0.7s,baz=66,slow=3.0,SNR=5.1						

*NEIC **02** 05:19:21.8, 1800N×6862W, h163km, MD3.8(RSPR), After RSPR.*

RSPR 02 05:19:21.8, 1800N×6862W, h163km±1km, MD3.8/12, MD3.8/12, 16C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
IMO	Isla Mona	0.69	80	⇑eP	Pn	05 19 45.5	-0.1
IMO				eS	Sn	05 20 03.8	-0.1
MPR	Mayaguez	1.43	81	⇑eP	Pn	05 19 52.0	+0.4
CRPR	Cabo Rojo, PR	1.44	89	⇑eP	Pn	05 19 51.8	0.0
CRPR				eS	Sn	05 20 15.4	+0.7
LSP	Las Mesas	1.47	83	⇑eP	Pn	05 19 52.8	+0.6
AGPR	Aguadilla, PR	1.51	72	⇑eP	Pn	05 19 52.9	+0.4
AGPR	Aguadilla, PR	1.51	72	eS	Sn	05 20 16.6	+0.6
AGPR	Aguadilla, PR	1.51	72	ePn	Pn	05 19 52.7	+0.2
AGPR				eSn	Sn	05 20 16.6	+0.5
GBPR	Guanica, Bosqu	1.66	90	⇑eP	Pn	05 19 54.9	+0.8
GBPR	Guanica, Bosqu	1.66	90	eS	Sn	05 20 19.2	+0.5
LRS	Lares	1.71	80	⇑eP	Pn	05 19 54.6	0.0
LRS				eS	Sn	05 20 20.9	+1.1
AOPR	Arecibo Observ	1.81	79	⇑eP	Pn	05 19 55.7	0.0
AOPR				eS	Sn	05 20 21.9	+0.2
OBIP	Obispado Ponce	1.92	88	⇑eP	Pn	05 19 57.2	+0.3
OBIP				eS	Sn	05 20 24.2	+0.4
CELP	Cerrillos	1.94	87	⇑eP	Pn	05 19 57.3	+0.2
CELP				eS	Sn	05 20 24.8	+0.4
ICM	Isla Caja Muer	2.00	93	⇑eP	Pn	05 19 58.2	+0.4
ICM				eS	Sn	05 20 25.8	+0.4
SJG	San Juan	2.35	87	⇑eP	Pn	05 20 01.7	-0.1
SJG				eS	Sn	05 20 33.9	+1.2
CPD	Cerro la Pandu	2.58	89	⇑eP	Pn	05 20 04.7	+0.1
CPD				eS	Sn	05 20 38.6	+1.1
HUMP	Col San Antoni	2.64	86	⇑eP	Pn	05 20 05.3	0.0
HUMP				eS	Sn	05 20 39.4	+0.5
MTP	Monte Pirata	2.92	88	⇑eP	Pn	05 20 09.1	+0.3
MTP				eS	Sn	05 20 46.3	+1.2
TBVI	Tortola	3.83	83	⇑eP	Pn	05 20 20.3	0.0

*ISCJB **02** 05:25:52.7±0.3, 5539N±003×11049E±004, h10km, Error ellipse: s-maj=4.0km s-min=2.4km az=145.5*

*MOS **02** 05:25:54.3±1.1, 5545N×11046E, h11km, mb4.4/1, Error ellipse: s-maj=12.6km s-min=7.0km az=64.7*

*BYKL **02** 05:25:54.5±0.3, 5545N×11042E, h8km±10km*

*NEIC **02** 05:25:55.0, 5545N×11044E, h4km, After BYKL.*

*IDC **02** 05:25:58.5±8.9, 5532N×11009E, h0km, mb1 3.5/4, mb1mx3.2/25, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=117.6km s-min=35.0km az=78.0*

ISC 02 05:25:54.8±0.3, 5543N±002×11052E±003, h10km, n51, σ1§53/95, 9C-3D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
KMO	Kumora	0.60	40	ePG	**Pg**	**05 26 05.6**	**-0.9**
KMO				e		05 26 13.1	
KMO				pmax	pmax		
	comp=Z,197nm,0.3s						
KMO				smax			
	comp=N,2µm,1.1s						
KMO	Kumora	0.60	40	⇑iPg	**Pg**	**05 26 05.7**	**-0.8**
KMO				eSg	**Sg**	**05 26 13.7**	**-0.7**
KMO				Pmax			
	comp=N,199nm,0.4s						
KMO				Smax			
	comp=N,2µm,1.0s						
KMO	Kumora	0.60	40	ePg	**Pg**	**05 26 05.6**	**-0.9**
KMO				eSg	**Sg**	**05 26 13.1**	**-1.3**
NIZ	Nizh Angarsk	0.66	303	ePG	**Pg**	**05 26 06.0**	**-1.5**
NIZ				e		05 26 14.6	

NIZ pmax pmax
comp=Z,149nm,0.4s
NIZ smax
comp=N,667nm,0.3s
NIZ Nizh Angarsk 0.66 303 ⇑iPg Pg 05 26 06.1 -1.4
NIZ eSg Sg 05 26 14.7 -1.3
NIZ Pmax
comp=N,136nm,0.2s
NIZ Smax
comp=N,669nm,0.4s
NIZ Nizh Angarsk 0.66 303 ePg Pg 05 26 06.0 -1.5
NIZ eSg Sg 05 26 13.1 -2.9
YLYR Ulyunkhan 0.66 146 ⇑iPG Pg 05 26 07.7 +0.1
YLYR e 05 26 16.6
YLYR pmax pmax
comp=Z,217nm,0.1s
YLYR smax
comp=N,507nm,0.2s
YLYR Ulyunkhan 0.66 146 ⇓iPg Pg 05 26 07.7 +0.1
comp=N,227nm,0.4s
YLYR ⇑iPg Pg 05 26 07.7 +0.1
comp=N,131nm,0.4s
YLYR ⇑iPg Pg 05 26 07.7 +0.1
comp=N,204nm,0.4s
YLYR eSg Sg 05 26 17.3 +1.0
YLYR Pmax
comp=N,107nm,0.2s
YLYR Smax
comp=N,468nm,0.3s
YLYR Ulyunkhan 0.66 146 ⇑iPg Pg 05 26 07.7 +0.1
YLYR eSg Sg 05 26 16.6 +0.3
YOA Uoyan 0.98 43 ⇑iPG Pg 05 26 13.1 -0.6
YOA e 05 26 26.9
YOA pmax pmax
comp=Z,349nm,0.2s
YOA smax
comp=E,2µm,0.4s
YOA Uoyan 0.98 43 ePg Pg 05 26 12.8 -0.9
YOA eSg Sg 05 26 26.4 -0.1
YOA Pmax
comp=E,340nm,0.2s
YOA Smax
comp=E,1µm,0.7s
YOA Uoyan 0.98 43 ⇑iPg Pg 05 26 13.1 -0.6
YOA eSg Sg 05 26 26.9 +0.4
UKT Uakit 1.77 87 ePN Pg 05 26 27.0 -1.8
UKT e 05 26 51.4
UKT pmax pmax
comp=Z,302nm,0.6s
UKT smax
comp=N,354nm,0.3s
UKT Uakit 1.77 87 ⇑iPg Pg 05 26 27.3 -1.5
UKT eSg Sg 05 26 51.7 0.0
UKT Pmax
comp=N,306nm,0.7s
UKT Smax
comp=N,349nm,0.6s
UKT Uakit 1.77 87 ePg Pg 05 26 27.0 -1.8
UKT eSg Sg 05 26 51.4 -0.3
SYVR Suvo 1.80 190 ePN Pn 05 26 27.6 +1.8
SYVR e 05 26 52.7
SYVR pmax pmax
comp=Z,148nm,0.5s
SYVR smax
comp=E,641nm,1.0s
SYVR Suvo 1.80 190 ⇓iPg Pg 05 26 27.5 -1.8
SYVR eSg Sg 05 26 52.5 0.0
SYVR Pmax
comp=E,161nm,0.5s
SYVR Smax
comp=E,624nm,1.0s
SVKR Severomuysk 1.85 67 ePN Pn 05 26 28.6 +2.0
SVKR e 05 26 53.6
SVKR pmax pmax
comp=Z,334nm,0.7s
SVKR smax
comp=N,1µm,0.9s
SVKR Severomuysk 1.85 67 ⇓iPg Pg 05 26 28.7 -1.6
SVKR eSg Sg 05 26 52.9 -1.4
SVKR Pmax
comp=N,327nm,0.4s
SVKR Smax
comp=N,908nm,0.8s
OGRR Ongureny 2.47 225 ePN Pn 05 26 36.5 +1.5
OGRR e 05 26 40.1
OGRR e 05 27 11.4
OGRR pmax pmax
comp=Z,64nm,0.5s
OGRR smax
comp=E,378nm,0.9s
OGRR Ongureny 2.47 225 e Pn 05 26 36.7 +1.7
OGRR ePg Pg 05 26 38.6 -3.5
OGRR e 05 27 08.9
OGRR eSg Sg 05 27 10.9 -3.1
OGRR Pmax
comp=E,64nm,0.4s
OGRR Smax
comp=E,301nm,0.4s
BOD Bodaibo 3.08 37 ePn Pn 05 26 44.1 +0.7
BOD ePg Pg 05 26 49.4 -4.3
BOD e 05 27 21.9
BOD eSg Sg 05 27 28.4 -5.1
BOD Pmax
comp=E,13nm,0.3s
BOD Smax
comp=E,119nm,1.4s
TRG Tyrgan 3.63 224 ePN Pn 05 26 52.4 +1.4
TRG e 05 26 59.9
TRG eS Sn 05 27 33.7 -0.1
TRG e 05 27 46.1
TRG pmax pmax
comp=Z,20nm,0.2s
TRG smax
comp=E,167nm,0.3s
TRG Tyrgan 3.63 224 e Pn 05 26 53.7 +2.7
TRG ePg Pg 05 26 59.4 -4.9
TRG eSg Sg 05 27 46.1 -5.1
TRG Pmax
comp=E,18nm,0.4s
TRG Smax
comp=E,169nm,0.4s
CIT Chita 3.86 151 eSg Sg 05 27 54.7 -3.9
CIT Smax
comp=E,169nm,0.3s
CRS Chara 4.58 68 ePN Pn 05 27 06.6 +2.6
CRS e 05 27 17.0
CRS e 05 28 17.0
CRS pmax pmax
comp=Z,59nm,0.7s
CRS smax
comp=E,119nm,1.1s
CRS Chara 4.58 68 ePg Pg 05 27 17.8 -4.6
CRS eSg Sg 05 28 17.8 -3.9
CRS Pmax
comp=E,59nm,1.0s
CRS Smax
comp=E,119nm,1.3s
IRK Irkutsk 4.88 232 ePN Pn 05 27 09.7 +1.5
IRK e 05 27 22.5
IRK eS Sn 05 28 03.4 -1.3
IRK e 05 28 24.1
IRK pmax pmax
comp=Z,110nm,0.2s
IRK smax
comp=N,396nm,0.5s
IRK Irkutsk 4.88 232 e Sn 05 28 07.0 +2.3
IRK eSg Sg 05 28 25.2 -6.3
IRK Smax
comp=N,297nm,0.6s
LSTR Listvyanka 4.91 226 e Pn 05 27 11.6 +3.0
LSTR ePg Pg 05 27 22.0 -6.8
LSTR e 05 28 06.5
LSTR eSg Sg 05 28 24.6 -7.8
LSTR Pmax
comp=N,9.0nm,0.5s
LSTR Smax
comp=N,125nm,1.4s
KHNR Khani 5.50 70 e Sb 05 28 40.2 +3.6
KHNR eSg Sg 05 28 46.4 -4.6
TUP Tupik 5.53 97 ePN Pn 05 27 18.4 +1.3
TUP e 05 27 34.6
TUP eS Sn 05 28 20.8 +0.1
TUP e 05 28 47.8
TUP pmax pmax
comp=Z,18nm,0.5s
TUP smax
comp=N,57nm,1.0s
TUP Tupik 5.53 97 ePn Pn 05 27 18.3 +1.2
TUP ePg Pg 05 27 35.0 -5.7
TUP eSn Sn 05 28 22.1 +1.4
TUP eSg Sg 05 28 48.7 -3.6
TUP Pmax
comp=N,12nm,0.6s
TUP Smax
comp=N,57nm,1.0s
TLY Talaya 5.55 230 ePN Pn 05 27 19.3 +1.9
TLY e 05 27 35.3
TLY eS Sn 05 28 20.7 -0.6
TLY e 05 28 44.3
TLY pmax pmax
comp=Z,14nm,0.4s
TLY smax
comp=N,103nm,0.9s
TLY Talaya 5.55 230 e Pb 05 27 34.1 +2.3
TLY eSg Sg 05 28 44.5 -8.5
TLY max
comp=N,11nm,0.4s
TLY Smax
comp=N,104nm,1.0s
KPC Khapcheranga 5.84 168 ePN Pn 05 27 22.0 +0.6
KPC e 05 27 41.7
KPC eS Sn 05 28 26.8 -1.6
KPC e 05 28 57.2
KPC pmax pmax
comp=Z,7.0nm,0.5s
KPC smax
comp=E,62nm,1.0s
KPC Khapcheranga 5.84 168 ePn Pn 05 27 22.0 +0.6
KPC e 05 27 31.2
KPC eSn Sn 05 28 27.3 -1.1
KPC eSg Sg 05 28 55.4 -6.9
KPC max
comp=E,5.0nm,0.5s
KPC Smax
comp=E,62nm,1.0s
ARS Arshan 5.96 237 ePN Pn 05 27 25.7 +2.8
ARS e 05 27 43.0
ARS eS Sn 05 28 29.3 -1.8
ARS e 05 28 57.3
ARS pmax pmax
comp=Z,28nm,0.5s
ARS smax
comp=E,226nm,0.8s
ARS Arshan 5.96 237 e Pn 05 27 24.4 +1.5
ARS ePg Pg 05 27 40.5 -8.3
ARS e 05 28 29.2
ARS eSg Sg 05 28 56.5 -9.3
ARS Pmax
comp=E,27nm,0.5s
ARS Smax
comp=E,226nm,1.0s
ZAK Zakamensk 6.68 224 ePN Pn 05 27 32.3 -0.6
ZAK eS Sn 05 28 47.1 -1.9
ZAK Zakamensk 6.68 224 e Pg 05 28 00.6 -2.1
ZAK eSg Sg 05 29 22.2 -7.0
ZAK max
comp=E,3.0nm,0.6s
ZAK Smax
comp=E,47nm,1.0s
MOY Mondy 6.81 240 ePN Pn 05 27 36.8 +2.2
MOY e 05 27 58.2
MOY e 05 29 24.7
MOY pmax pmax
comp=Z,13nm,0.9s
MOY smax
comp=E,102nm,1.3s
MOY Mondy 6.81 240 e Pn 05 27 36.2 +1.6
MOY e 05 28 53.9
MOY eSg Sg 05 29 24.0 -9.2
MOY max
comp=E,25nm,1.4s
MOY Smax
comp=E,102nm,1.5s
ORL Orlik 6.95 250 ePN Pn 05 27 38.1 +1.6
ORL e 05 27 59.9
ORL e 05 29 28.1
ORL pmax pmax
comp=Z,7.0nm,0.6s
ORL smax
comp=N,122nm,1.1s
ORL Orlik 6.95 250 ePn Pn 05 27 36.9 +0.4
ORL eSn Sn 05 28 54.2 -1.3
ORL eSg Sg 05 29 28.3 -9.2
ORL max
comp=N,18nm,1.2s
ORL Smax
comp=N,121nm,1.1s
SONM Songino Array 8.02 200 Pn Pn 05 27 53.5 +2.2
comp=N,0.2nm,0.3s,baz=12,slow=13,SNR=6.1
SONM Lg 05 30 07.7
comp=N,1.4nm,0.3s,baz=17,slow=22,SNR=13
ZALV Zalesovo Beam 14.91 275 Pn Pn 05 29 26.5 +1.2
comp=N,0.3nm,0.3s,baz=80,slow=11,SNR=7.2
ZALV Zalesovo Beam 14.91 275 Pn Pn 05 29 26.5 +1.2
ZAL Zalesovo 14.92 275 P Pn 05 29 26.5 +0.9
MKAR Makanchi Array 19.60 256 P Pn 05 30 25.5 +1.3
baz=48,slow=9.9,SNR=3.8
KURK Kurchatov 19.63 269 P Pn 05 30 26.6 +2.0
comp=N,0.1nm,0.3s,baz=68,slow=11,SNR=3.7

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*CSEM **02** 05:29:56.8±0.2, 38.64N×30.18E, h5km±1km, MD2.9, Error ellipse: s-maj=2.5km s-min=2.0km az=172.0*
*ISK **02** 05:29:57.3, 38.63N×30.19E, h10km, MD2.9*
*ISCJB **02** 05:29:58.1±0.5, 38.64N±0.03×30.18E±0.03, h3km±6km, Error ellipse: s-maj=4.7km s-min=4.4km az=135.6*
*DDA **02** 05:29:58.1, 38.63N×30.16E, h7km±2km, Md3.0*
ISC 02 05:29:58.6±0.5**, 38.64N**±0.03×**30.19E**±0.04**, h8**km±5km**, n12,** σ**0.99**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUT	Suhut-Afyon	0.30	108	ePG	Pg	05 30 03.7	-0.8
SHUT				eSG	Sg	05 30 08.1	-0.4
ALT	Altintas	0.41	352	ePG	Pg	05 30 05.7	-1.0
ALT				eSG	Sg	05 30 12.4	+0.2
KHAL	Karahalli	0.61	244	i P	Pg	05 30 10.0	-0.4
KHAL				i S	Sg	05 30 18.2	-0.1
KHL	Karahalli	0.61	239	ePG	Pg	05 30 09.6	-0.8
KHL				eSG	Sg	05 30 18.4	0.0
TKTP	Tekketepe	0.61	170	i P	Pg	05 30 09.7	-0.7
TKTP				i S	Sg	05 30 20.5	+2.1
GDZ	Gediz	0.71	309	i P	Pg	05 30 11.3	-0.9
GDZ				i S	Sg	05 30 23.3	+1.9
ESKT	Eskisehir	1.02	30	i P	Pg	05 30 18.2	+0.1
ESKT				i S	Sg	05 30 33.2	+1.9
SEYT	Eskypehyr	1.02	30	i P	Pg	05 30 18.2	+0.1
SEYT				i S	Sg	05 30 33.2	+1.9
KULA	Kula-Manisa	1.20	264	ePN	Pn	05 30 20.5	-1.2
KULA				eSN	Sn	05 30 37.8	-0.3
KIZT	Kizilcal	1.34	79	ePN	Pn	05 30 23.1	-0.5
GOLH	Golhisar	1.49	200	i P	Pn	05 30 25.7	+0.1
GOLH				i S	Sn	05 30 47.1	+1.9
KONT	Konya--Tatoy	1.85	112	ePN	Pn	05 30 30.1	-0.4

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*ISCJB **02** 05:40:56.3±0.3, 55.39N±0.02×110.50E±0.04, h10km, Error ellipse: s-maj=3.7km s-min=2.3km az=139.8*
*MOS **02** 05:40:57.7±1.0, 55.48N×110.41E, h15km, mb4.6/1, Error ellipse: s-maj=13.2km s-min=6.7km az=67.3*
*NEIC **02** 05:40:58.0±0.6, 55.47N×110.57E, h10km, Error ellipse: s-maj=8.0km s-min=6.9km az=148.0*
*BYKL **02** 05:40:58.0±0.3, 55.45N×110.42E, h1km±15km*
*IDC **02** 05:40:59.3±8.0, 55.46N×110.07E, h0km, mb3.3/1, mb1 3.6/5, mb1mx3.4/26, mbtmp3.6/5, ML3.1/2, Error ellipse: s-maj=110.0km s-min=31.3km az=79.0*
ISC 02 05:40:58.4±0.3**, 55.43N**±0.02×**110.51E**±0.03**, h10**km**, n60,** σ**1.32**/115**, 13C-2D, Lake Baykal region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KMO Kumora 0.60 40 ePG Pg 05 41 09.1 -1.0
KMO e 05 41 16.3
KMO pmax pmax
comp=Z,269nm,0.3s
KMO smax
comp=N,3µm,1.1s
KMO Kumora 0.60 40 ⇑iPg Pg 05 41 09.2 -0.9
comp=N,29nm,0.4s
KMO ⇑iPg Pg 05 41 09.2 -0.9
comp=N,29nm,0.4s
KMO ⇑iPg Pg 05 41 09.2 -0.9
comp=N,290nm,0.4s
KMO Pmax 05 41 11.3
comp=N,340nm,0.3s
KMO eSg Sg 05 41 17.2 -0.8
KMO Smax 05 41 21.3
comp=N,3µm,1.0s
KMO Kumora 0.60 40 ePg Pg 05 41 09.1 -1.0
KMO eSg Sg 05 41 16.3 -1.7
NIZ Nizh Angarsk 0.65 303 ePG Pg 05 41 09.6 -1.3
NIZ e 05 41 18.0
NIZ pmax pmax
comp=Z,242nm,0.4s
NIZ smax
comp=N,1µm,0.5s
NIZ Nizh Angarsk 0.65 303 ⇑iPg Pg 05 41 09.6 -1.3
NIZ Pmax 05 41 10.4
comp=N,192nm,0.2s
NIZ e 05 41 15.1
NIZ eSg Sg 05 41 18.0 -1.4
NIZ Smax 05 41 19.6
comp=N,1µm,0.4s
NIZ Nizh Angarsk 0.65 303 ePg Pg 05 41 09.6 -1.3
NIZ eSg Sg 05 41 18.0 -1.4
YLYR Ulyunkhan 0.67 146 ⇑iPG Pg 05 41 11.3 0.0
YLYR e 05 41 20.2
YLYR pmax pmax
comp=Z,533nm,0.2s
YLYR smax
comp=E,691nm,0.3s
YLYR Ulyunkhan 0.67 146 ⇓iPg Pg 05 41 11.3 0.0
comp=E,481nm,0.4s
YLYR ⇑iPg Pg 05 41 11.3 0.0
comp=E,275nm,0.4s
YLYR ⇑iPg Pg 05 41 11.3 0.0
comp=E,453nm,0.4s
YLYR Pmax 05 41 11.5
comp=E,481nm,0.3s
YLYR eSg Sg 05 41 20.9 +0.8
YLYR Smax 05 41 31.5
comp=E,725nm,0.3s
YLYR Ulyunkhan 0.67 146 ⇑iPg Pg 05 41 11.3 0.0
YLYR eSg Sg 05 41 20.2 +0.1
YOA Uoyan 0.98 44 ⇑iPG Pg 05 41 16.7 -0.6
YOA e 05 41 30.5
YOA pmax pmax
comp=Z,399nm,0.2s
YOA smax
comp=E,3µm,0.6s
YOA Uoyan 0.98 44 ePg Pg 05 41 16.6 -0.7
YOA Pmax 05 41 19.9
comp=E,387nm,0.2s
YOA eSg Sg 05 41 30.2 +0.1
YOA Smax 05 41 31.0
comp=E,3µm,0.5s
YOA Uoyan 0.98 44 ⇑iPg Pg 05 41 16.7 -0.6
YOA eSg Sg 05 41 30.5 +0.4
UKT Uakit 1.78 87 ePN Pn 05 41 30.4 +1.3
UKT e 05 41 54.6
UKT pmax pmax
comp=Z,628nm,0.5s
UKT smax
comp=N,716nm,0.2s
UKT Uakit 1.78 87 ⇑iPg Pg 05 41 30.5 -2.0
UKT Pmax 05 41 31.7
comp=N,629nm,0.7s
UKT eSg Sg 05 41 54.9 -0.6
UKT Smax 05 41 58.7
comp=N,747nm,0.7s
UKT Uakit 1.78 87 ePg Pn 05 41 30.4 +1.3
UKT eSg Sg 05 41 54.6 -0.9
SYVR Suvo 1.80 190 ePN Pg 05 41 31.3 -1.6
SYVR e 05 41 56.3
SYVR pmax pmax
comp=Z,294nm,0.8s
SYVR smax
comp=E,1µm,0.7s
SYVR Suvo 1.80 190 ⇓iPg Pg 05 41 31.1 -1.8
SYVR Pmax 05 41 34.9
comp=E,292nm,1.0s
SYVR eSg Sg 05 41 56.0 -0.2
SYVR Smax 05 41 59.1
comp=E,1µm,0.4s
SYVR Suvo 1.80 190 ePg Pg 05 41 31.3 -1.6
SYVR eSg Sg 05 41 56.3 +0.1
SVKR Severomuysk 1.86 67 ePN Pn 05 41 32.0 +1.8
SVKR e 05 41 57.1
SVKR pmax pmax
comp=Z,649nm,0.7s
SVKR smax
comp=N,2µm,1.6s
SVKR Severomuysk 1.86 67 ⇑iPg Pg 05 41 32.2 -1.8
SVKR Pmax 05 41 35.9
comp=N,654nm,0.4s
SVKR eSg Sg 05 41 56.6 -1.4
SVKR Smax 05 42 01.8
comp=N,2µm,0.5s
MXMB Maximikha 2.40 206 e Pn 05 41 39.4 +1.7
MXMB ePg Pg 05 41 41.5 -2.9
MXMB Pmax 05 41 46.8
comp=N,211nm,0.8s
MXMB eSg Sg 05 42 14.0 -1.6
MXMB Smax 05 42 16.6
comp=N,2µm,0.5s
OGRR Ongureny 2.47 225 ePN Pn 05 41 40.0 +1.4
OGRR e 05 41 43.6
OGRR e 05 42 15.0
OGRR pmax pmax
comp=Z,133nm,0.8s
OGRR smax
comp=E,778nm,1.1s
OGRR Ongureny 2.47 225 e Pn 05 41 40.4 +1.8
OGRR ePg Pg 05 41 42.1 -3.5
OGRR Pmax 05 41 43.7
comp=E,125nm,0.5s
OGRR eSg Sg 05 42 13.6 -4.0
OGRR Smax 05 42 16.4
comp=E,635nm,0.4s
BOD Bodaibo 3.08 37 ePN Pn 05 41 47.3 +0.3
BOD e 05 41 52.8
BOD eS Sn 05 42 24.8 +1.0
BOD e 05 42 32.4
BOD pmax pmax
comp=Z,36nm,0.7s
BOD smax
comp=N,237nm,0.5s
BOD Bodaibo 3.08 37 ePn Pn 05 41 47.6 +0.6
BOD ePg Pg 05 41 52.6 -4.7
BOD Pmax 05 41 53.1
comp=N,24nm,0.5s
BOD eSn Sn 05 42 24.1 +0.3
BOD eSg Sg 05 42 32.0 -5.2
BOD Smax 05 42 33.8
comp=N,253nm,1.5s
TRG Tyrgan 3.63 224 ePN Pn 05 41 56.1 +1.6
TRG e 05 42 04.3
TRG eS Sn 05 42 37.4 +0.1
TRG e 05 42 50.3
TRG pmax pmax
comp=Z,32nm,0.4s
TRG smax
comp=E,360nm,0.3s
TRG Tyrgan 3.63 224 e Pn 05 41 57.2 +2.7
TRG ePg Pg 05 42 02.5 -5.3
TRG Pmax 05 42 06.8
comp=E,31nm,0.6s
TRG eSg Sg 05 42 49.0 -5.8
TRG Smax 05 42 54.6
comp=E,362nm,0.4s
CIT Chita 3.87 151 ePN Pn 05 42 06.6 +8.8
CIT eS Sn 05 42 41.8 -1.4
CIT e 05 42 56.8
CIT pmax pmax
comp=Z,121nm,0.5s
CIT smax
comp=E,518nm,1.0s
CIT Chita 3.87 151 ePg Pg 05 42 07.9 -4.5
CIT Pmax 05 42 10.8
comp=E,61nm,0.1s
CIT e 05 42 41.9

CIT				eSg	Sg	05 42 57.7	-4.7
CIT				Smax		05 43 03.7	
	comp=E,521nm,0.9s						
HRMR	Khuramsha	4.36	211	ePn	Pn	05 42 05.7	+1.1
HRMR				ePg	Pg	05 42 16.3	-5.5
HRMR				Pmax		05 42 21.6	
	comp=E,115nm,0.6s						
HRMR				eSg	Sg	05 43 12.6	-5.6
HRMR				Smax		05 43 23.2	
	comp=E,1μm,0.7s						
CRS	Chara	4.58	68	ePN	Pb	05 42 21.3	+2.5
CRS				e		05 43 21.0	
CRS				pmax	pmax		
	comp=Z,125nm,1.0s						
CRS				smax			
	comp=E,251nm,1.1s						
CRS	Chara	4.58	68	ePn	Pn	05 42 09.3	+1.6
CRS				ePg	Pg	05 42 21.5	-4.6
CRS				Pmax		05 42 25.5	
	comp=E,125nm,1.0s						
CRS				eSg	Sg	05 43 21.2	-4.2
CRS				Smax		05 43 33.6	
	comp=E,251nm,1.1s						
IRK	Irkutsk	4.88	232	ePN	Pn	05 42 12.4	+0.6
IRK				e		05 42 26.8	
IRK				eS	Sn	05 43 06.9	-1.4
IRK				e		05 43 27.6	
IRK				pmax	pmax		
	comp=Z,79nm,0.3s						
IRK				smax			
	comp=N,708nm,0.5s						
IRK	Irkutsk	4.88	232	e	Sn	05 43 08.3	+0.1
IRK				eSg	Sg	05 43 28.3	-6.7
IRK				Smax		05 43 31.2	
	comp=N,737nm,0.6s						
LSTR	Listvyanka	4.91	226	e	Pn	05 42 13.5	+1.3
LSTR				ePg	Pg	05 42 25.1	-7.3
LSTR				Pmax		05 42 28.0	
	comp=N,14nm,1.0s						
LSTR				e		05 43 10.3	
LSTR				eSg	Sg	05 43 27.3	-8.7
LSTR				Smax		05 43 34.7	
	comp=N,246nm,1.7s						
KHNR	Khani	5.50	70	eSg	Sg	05 43 49.2	-5.6
TUP	Tupik	5.54	97	ePN	Pb	05 42 38.3	+3.2
TUP				e		05 43 52.3	
TUP				pmax	pmax		
	comp=Z,37nm,0.4s						
TUP				smax			
	comp=N,132nm,1.0s						
TUP	Tupik	5.54	97	ePn	Pn	05 42 21.9	+1.1
TUP				ePg	Pg	05 42 38.5	-5.9
TUP				Pmax		05 42 40.4	
	comp=N,29nm,0.7s						
TUP				e		05 43 26.2	
TUP				eSg	Sg	05 43 51.8	-4.3
TUP				Smax		05 44 10.4	
	comp=N,132nm,1.0s						
TLY	Talaya	5.55	230	ePN	Pn	05 42 21.6	+0.6
TLY				e		05 42 38.6	
TLY				eS	Sn	05 43 24.0	-0.8
TLY				e		05 43 48.1	
TLY				pmax	pmax		
	comp=Z,33nm,0.6s						
TLY				smax			
	comp=E,206nm,1.0s						
TLY	Talaya	5.55	230	e	Pb	05 42 38.7	+3.4
TLY				max		05 42 40.2	
	comp=E,33nm,0.7s						
TLY				e		05 43 25.1	
TLY				eSg	Sg	05 43 47.5	-9.0
TLY				Smax		05 43 53.0	
	comp=E,205nm,0.9s						
KPC	Khapcheranga	5.85	168	ePN	Pn	05 42 25.7	+0.6
KPC				e		05 42 44.1	
KPC				eS	Sn	05 43 30.3	-1.8
KPC				e		05 44 00.9	
KPC				pmax	pmax		
	comp=Z,19nm,0.9s						
KPC				smax			
	comp=E,123nm,1.0s						
KPC	Khapcheranga	5.85	168	ePn	Pn	05 42 25.4	+0.3
KPC				ePg	Pg	05 42 43.0	-7.3
KPC				Pmax		05 43 00.8	
	comp=E,15nm,1.0s						
KPC				eSn	Sn	05 43 30.6	-1.5
KPC				eSg	Sg	05 43 58.8	-7.2
KPC				Smax		05 44 01.8	
	comp=E,124nm,1.0s						
ARS	Arshan	5.95	237	ePN	Pn	05 42 26.6	+0.1
ARS				e		05 42 46.0	
ARS				eS	Sn	05 43 32.5	-2.1
ARS				e		05 44 01.6	
ARS				pmax	pmax		
	comp=Z,55nm,0.5s						
ARS				smax			
	comp=E,426nm,0.9s						
ARS	Arshan	5.95	237	ePn	Pn	05 42 27.4	+0.9
ARS				ePg	Pg	05 42 44.5	-7.8
ARS				Pmax		05 42 52.4	
	comp=E,55nm,0.5s						
ARS				eSn	Sn	05 43 33.0	-1.6
ARS				eSg	Sg	05 44 00.3	-9.0
ARS				Smax		05 44 09.6	
	comp=E,409nm,0.9s						
ZAK	Zakamensk	6.68	224	ePN	Pn	05 42 37.6	+1.1
ZAK				e		05 42 58.3	
ZAK				eS	Sn	05 43 51.4	-1.2
ZAK				e		05 44 23.9	
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZAK				smax			
	comp=E,91nm,1.1s						
ZAK	Zakamensk	6.68	224	ePg	Pg	05 42 57.4	-8.8
ZAK				Pmax		05 43 12.3	
	comp=E,8.0nm,0.8s						
ZAK				e		05 44 03.6	
ZAK				eSg	Sg	05 44 25.0	-7.7
ZAK				Smax		05 44 30.7	
	comp=E,91nm,1.1s						
MOY	Mondy	6.81	240	⇑iPN	Pn	05 42 40.3	+2.1
MOY				e		05 43 02.3	
MOY				eS	Sn	05 43 56.1	+0.5
MOY				e		05 44 29.3	
MOY				pmax	pmax		
	comp=Z,24nm,0.5s						
MOY				pmax	pmax		
	comp=E,226nm,1.4s						
MOY	Mondy	6.81	240	ePn	Pn	05 42 39.4	+1.2
MOY				max		05 42 41.3	
	comp=E,46nm,1.0s						
MOY				eSn	Sn	05 43 55.6	0.0
MOY				eSg	Sg	05 44 28.6	-8.1
MOY				Smax		05 44 43.6	
	comp=E,226nm,1.6s						
ORL	Orlik	6.94	250	ePN	Pn	05 42 41.5	+1.5
ORL				e		05 43 03.4	
ORL				e		05 44 31.4	
ORL				pmax	pmax		
	comp=Z,19nm,0.6s						
ORL				smax			
	comp=N,271nm,1.5s						
ORL	Orlik	6.94	250	i Pn	Pn	05 42 41.8	+1.8
ORL				max		05 42 43.6	
	comp=N,38nm,1.2s						
ORL				eSn	Sn	05 43 58.3	-0.6
ORL				eSg	Sg	05 44 31.7	-9.3
ORL				Smax		05 44 38.4	
	comp=N,270nm,1.4s						
ULN	Ulaanbaatar	7.87	197	PN	Pn	05 42 54.0	+1.2
ULN				e		05 45 07.5	
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ULN	Ulaanbaatar	7.87	197	Pn	Pn	05 42 54.0	+1.2
	comp=Z,4.1nm,0.7s						
ULN				eSg	Sn	05 45 07.5	+46
SONM	Songino Array	8.02	200	Pn	Pn	05 42 57.1	+2.2
	comp=Z,0.4nm,0.3s,baz=13,slow=14,SNR=15						
SONM				Lg		05 45 10.9	
	comp=Z,2.9nm,0.3s,baz=15,slow=23,SNR=15						
TNDR	Tynda	8.12	86	eSg	Sx	05 45 12.7	
HIA	Hailar	8.37	134	eSg	Sx	05 45 17.5	
ZALV	Zalesovo Beam	14.90	275	Pn	Pn	05 44 29.5	+0.6
	comp=Z,0.0nm,0.3s,baz=76,slow=9.7,SNR=18						
ZAL	Zalesovo	14.92	275	P	Pn	05 44 29.5	+0.4
MKAR	Makanchi Array	19.59	256	P	Pn	05 45 27.3	-0.5
	comp=Z,0.1nm,0.3s,baz=56,slow=9.2,SNR=8.4						
KURK	Kurchatov	19.62	269	P	Pn	05 45 27.3	-0.8
	comp=Z,0.1nm,0.3s,baz=67,slow=12,SNR=6.7						
BVAR	Borovoye Array	23.35	281	P	P	05 46 05.4	-1.2
	comp=Z,0.3nm,0.3s,baz=57,slow=10,SNR=2.9						

KRSC 02 05:41:48.4±0.2, 5269N×16053E, h14km±16km, ML4.0, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.51	323	eP	Pg	05 41 59.3	+0.8
SPN				i S	Sg	05 42 06.4	+1.1
NLC	Nalytchevo	0.86	304	eP	Pg	05 42 04.9	-0.2
NLC				i S	Sg	05 42 16.8	+0.4
PET	Petropavlovsk	1.19	287	eP	Pn	05 42 10.4	-0.1
PET				i S	Sb	05 42 26.5	+0.7
AVH	Avacha	1.23	299	eP	Pn	05 42 11.2	+0.1
RUS	Russkaya	1.26	259	eP	Pn	05 42 11.8	+0.3
RUS				i S	Sb	05 42 29.2	+1.3
KII	Karymskiy	1.50	335	eP	Pn	05 42 14.9	+0.1
KII				i S	Sn	05 42 34.9	+0.8
GNL	Ganaly	1.85	304	eP	Pn	05 42 21.2	+1.5
GNL				i S	Sn	05 42 45.0	+2.1
MKZ	Mys Kozlova	2.00	20	eP	Pn	05 42 20.3	-1.4
MKZ				i S	Sn	05 42 43.5	-3.0
MIPR	Malaya Ipel'ka	2.34	261	P	Pn	05 42 29.8	+3.4
TUMR	Tumrok	2.61	355	P	Pn	05 42 31.0	+0.9
KMNR	Kamenistaya	3.08	357	P	Pn	05 42 39.7	+3.2
KMNR				i S	Sn	05 43 17.1	+4.0
BZMR	Bezymyannaya	3.25	360	P	Pn	05 42 41.6	+2.7
BZGR	Bezymyannyi-Gr	3.26	2	P	Pn	05 42 40.6	+1.6
BZWR	Bezymyannyi-We	3.28	360	P	Pn	05 42 42.6	+3.3
KPT	Kopyto	3.29	357	P	Pn	05 42 40.9	+1.5
ZLN	Zelenaya	3.34	3	P	Pn	05 42 42.1	+2.0
CIRR	Tsirk	3.44	2	P	Pn	05 42 44.3	+2.9
SRDR	Sredinnyy	3.67	353	P	Pn	05 42 46.2	+1.6
KBTR	Krutoberegovo	3.77	20	P	Pn	05 42 50.3	+4.3

IDC 02 05:43:05.5±10.0, 1115S×16521E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.6/14, mbtmp3.7/3, Error ellipse: s-maj=317.8km s-min=56.8km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.95	250	P	P	05 49 25.3	+0.8
	1.1nm,0.9s,baz=79,slow=9.2,SNR=4.8						
ASAR	Alice Springs	32.27	243	P	P	05 49 35.5	-0.6
	0.6nm,0.7s,baz=69,slow=9.5,SNR=6.2						
MKAR	Makanchi Array	93.24	317	P	P	05 56 22.1	0.0
	0.2nm,0.6s,baz=103,slow=5.5,SNR=3.9						

IDC 02 05:53:03.1±7.9, 1177S×16614E, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.8/14, mbtmp4.0/4, Error ellipse: s-maj=231.8km s-min=39.1km az=123.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.61	251	P	P	05 59 27.9	0.0
	1.2nm,0.6s,baz=83,slow=9.2,SNR=5.0						
ASAR	Alice Springs	32.82	244	P	P	05 59 38.7	+0.1
	0.9nm,0.6s,baz=70,slow=9.5,SNR=11						
SONM	Songino Array	79.47	324	P	P	06 05 11.4	0.0
	0.3nm,0.5s,baz=119,slow=5.1,SNR=4.8						
MKAR	Makanchi Array	94.31	317	P	P	06 06 24.9	+0.3
	2.0nm,0.8s,baz=102,slow=5.3,SNR=13						

IDC 02 05:54:17.0±1.5, 588S×15425E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.9/15, mbtmp4.0/7, Error ellipse: s-maj=47.7km s-min=24.4km az=101.0
ISCJB 02 05:54:21.8±6.9, 59S±0.1×154.1E±0.4, h42km±46km, mb4.2/11, Error ellipse: s-maj=71.1km s-min=21.9km az=7.5
BJI 02 05:54:25.6, 600S×15400E, h75km, mB5.0, mb4.7
NEIC 02 05:54:27.7±5.7, 600S×15397E, h75km±38km, mb4.8/1, Error ellipse: s-maj=56.9km s-min=26.4km az=89.0
ISC 02 05:54:25.4±5.9, 60S±01×1541E±04, h56km±38km, n15, σ0.76s/13, mb4.2/11, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.69	243	ePn	Pn	05 56 15.2	+0.4
	118nm,0.8s						
KAKA	Kakadu	22.40	251	eP	P	05 59 18.4	-0.9
	29nm,0.7s,mb4.8						
WRA	Warramunga Arr	23.71	232	P	P	05 59 32.4	0.0
	2.2nm,0.7s,mb3.7,baz=58,slow=9.0,SNR=18						
WRA				PcP	PcP	06 03 15.9	+0.6
	1.3nm,0.7s,baz=55,slow=2.6,SNR=6.4						
ASAR	Alice Springs	26.23	226	P	P	05 59 55.0	-0.2
	2.2nm,0.8s,mb3.7,baz=61,slow=8.7,SNR=12						
ASAR				PcP	PcP	06 03 21.7	+0.8
	2.0nm,0.7s,baz=62,slow=2.8,SNR=13						
FITZ	Fitzroy Crossi	30.29	244	P	P	06 00 31.6	+0.1
	2.0nm,0.8s,mb3.9,baz=81,slow=11,SNR=7.2						
KSRS	Korea Array	49.62	333	P	P	06 03 09.3	-1.9
	1.9nm,0.8s,mb4.2,baz=153,slow=11,SNR=4.8						
XAN	Xi'an	58.36	316	P	P	06 04 14.9	-0.1
XAN				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.8						
XAN				AMB	AMB		
	comp=Z,216nm,15.1s						
CMAR	Chiang Mai Arr	59.55	295	P	P	06 04 23.9	+0.4
	comp=Z,2.2nm,0.8s,mb4.2,baz=114,slow=5.4,SNR=11						
LZH	Lanzhou	62.97	316	eP	P	06 04 48.0	+1.7
LZH				AMB	AMB		
	comp=Z,18nm,1.1s,mb5.1						
LZH				AMB	AMB		
	comp=Z,89nm,4.7s						
GTA	Gaotai	67.39	317	eP	P	06 05 15.1	+0.2
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.3						
SONM	Songino Array	68.00	327	P	P	06 05 18.7	+0.2
	comp=Z,1.0nm,0.8s,mb3.9,baz=125,slow=9.0,SNR=4.2						
SONM	Songino Array	68.00	327	P	P	06 05 18.7	+0.2
MAW	Mawson	85.01	203	P	P	06 06 54.5	+0.1
	comp=Z,0.9nm,0.7s,mb4.0,baz=94,slow=9.3,SNR=3.7						
TORD	Torodi Ar. Bea	151.90	287	PKPbc	PKPbc	06 14 14.3	-0.8
	comp=Z,1.9nm,0.7s,baz=71,slow=2.3,SNR=10						
TORD				PKPab	PKPab	06 14 24.2	-0.2
	comp=Z,4.3nm,0.9s,baz=54,slow=3.2,SNR=12						
TORD	Torodi Ar. Bea	151.90	287	PKPbc	PKPbc	06 14 14.3	-0.8
TORD				PKPab	PKPab	06 14 24.2	-0.2

NNC 02 06:02:47.4±3.0, 3743N×6853E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=25.2km s-min=22.7km az=50.0
ISC 02 06:02:49.5±2.1, 373N±01×685E±01, h35km, n12, σ1.00s/16, 7C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.03	14	Pn	Pn	06 04 16.9	+0.8
	0.7nm,0.3s,baz=202,slow=15,SNR=41						
KK31				⇑Pg	Pn	06 04 34.8	+19
	3.8nm,0.6s,baz=184,slow=11,SNR=5.9						
KK31				⇑Sn	Sn	06 05 25.0	+1.1
	9.9nm,0.7s						
KK31				⇓Lg		06 05 53.4	
	50nm,0.9s,baz=197,slow=26,SNR=8.6						
AML	Almayashu	6.30	38	P	Pn	06 04 19.5	-0.4
	SNR=9.7						
EKS2	Erkin-Say	6.75	35	P	Pn	06 04 27.0	+1.0
	SNR=12						
UCH	Uchtor	6.79	41	P	Pn	06 04 26.1	-0.4
	SNR=30						
KBK	Karagaybulak	7.32	41	P	Pn	06 04 34.0	+0.2
	SNR=27						
CHMS	Chumysh	7.47	38	P	Pn	06 04 34.8	-1.1
	SNR=6.8						
TKM2	Tokmak 2	7.85	42	⇑Pn	Pn	06 04 39.4	-1.7
	7.2nm,0.5s						
TKM2	Tokmak 2	7.85	42	P	Pn	06 04 40.1	-0.9
	SNR=18						
AB31	Akbulak array	13.49	335	⇑P	Pn	06 05 58.4	+0.2
	4.7nm,0.8s,baz=153,slow=13,SNR=43						
AB31				⇑S	Sn	06 08 24.6	-2.2
	1.2nm,0.5s,baz=155,slow=23,SNR=4.4						
MK31	Makanchi Array	13.98	43	P	Pn	06 06 04.5	-0.3
	1.2nm,0.7s,baz=224,slow=13,SNR=9.8						
AKTO	Aktyubinsk	15.15	334	⇓P	Pn	06 06 21.8	+1.1
	0.7nm,0.8s						
AKTO				⇑S	S	06 09 08.8	-15
	0.3nm,0.7s						
BVA0	Borovoye Array	15.82	4	⇑P	Pn	06 06 30.5	+1.3
	0.7nm,1.1s,baz=171,slow=11,SNR=6.3						

IDC 02 06:04:02.6±9.9, 1156S×16581E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.6/14, mbtmp3.6/3, Error ellipse: s-maj=300.7km s-min=56.2km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.37	251	P	P	06 10 26.0	+0.6
	0.3nm,0.6s,baz=84,slow=9.2,SNR=3.9						
ASAR	Alice Springs	32.63	244	P	P	06 10 35.8	-0.6
	0.4nm,0.7s,baz=64,slow=9.8,SNR=4.9						
MKAR	Makanchi Array	93.94	317	P	P	06 17 22.2	-0.1
	0.6nm,0.8s,baz=110,slow=5.3,SNR=4.5						

DJA 02 06:04:26, 932S×10673E, h0km, ML4.3/5
IDC 02 06:04:21.7±2.7, 934S×10832E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.7/17, mbtmp3.7/5, Error ellipse: s-maj=119.5km s-min=22.1km az=49.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.25	116	P	P	06 10 06.3	-1.5
	0.6nm,0.8s,baz=287,slow=11,SNR=2.9						
ASAR	Alice Springs	28.29	123	P	P	06 10 18.8	+1.7
	0.5nm,0.9s,baz=299,slow=9.5,SNR=5.3						
SONM	Songino Array	56.94	358	P	P	06 14 09.9	+1.3
	1.2nm,0.6s,baz=173,slow=8.1,SNR=13						
MKAR	Makanchi Array	60.51	340	P	P	06 14 33.5	-0.1
	0.8nm,0.6s,baz=141,slow=8.2,SNR=8.8						
BVAR	Borovoye Array	70.02	337	P	P	06 15 33.9	-1.1
	0.6nm,0.5s,baz=156,slow=7.3,SNR=3.7						

IDC 02 06:04:29.4±7.7, 1179S×16597E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.6/14, mbtmp3.7/3, Error ellipse: s-maj=225.3km s-min=55.8km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.45	251	P	P	06 10 53.8	+1.0
	0.8nm,0.7s,baz=82,slow=8.8,SNR=4.8						
ASAR	Alice Springs	32.67	244	P	P	06 11 02.6	-0.9
	0.5nm,0.9s,baz=71,slow=9.8,SNR=2.9						
MKAR	Makanchi Array	94.21	317	P	P	06 17 50.4	+0.1
	0.6nm,0.8s,baz=92,slow=6.1,SNR=4.5						

IDC 02 06:11:26.0±2.1, 1189S×16581E, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.0/15, mbtmp4.0/8, MS3.7/1, Ms1 3.7/1, ms1mx2.6/29, Error ellipse: s-maj=72.7km s-min=26.4km az=128.0
NEIC 02 06:11:31.7±1.5, 1187S×16573E, h35km, Error ellipse: s-maj=51.1km s-min=17.7km az=127.0
ISC 02 06:11:32.1±3.0, 119S±03×1657E±05, h35km, n13, σ0.80s/9, mb4.0/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.37	244	P	P	06 16 06.1	+0.2
	2.9nm,0.6s,baz=70,slow=14,SNR=4.4						
CTA	Charters Tower	20.37	244	P	P	06 16 06.1	+0.2
AFI	Afiamalu	22.07	98	LR	LR	06 22 60.0	
	comp=Z,209nm,19.1s,baz=136,slow=32						
STKA	Stephens Creek	29.82	224	P	P	06 17 36.6	+0.7
	0.9nm,0.5s,mb3.8,baz=71,slow=9.3,SNR=3.0						
WRA	Warramunga Arr	31.15	251	P	P	06 17 47.2	-0.6
	1.2nm,0.6s,mb3.9,baz=83,slow=9.2,SNR=8.5						
ASAR	Alice Springs	32.38	244	P	P	06 17 57.9	-0.7
	1.5nm,0.7s,mb4.0,baz=68,slow=9.4,SNR=23						
CMAR	Chiang Mai Arr	72.37	294	P	P	06 22 56.1	+1.1
	1.0nm,0.5s,mb4.0,baz=126,slow=6.3,SNR=5.7						
SONM	Songino Array	79.27	324	P	P	06 23 34.6	+0.8
	0.3nm,0.3s,mb3.7,baz=139,slow=8.1,SNR=3.7						
MKAR	Makanchi Array	94.06	317	P	P	06 24 46.5	-0.2
	0.3nm,0.5s,mb4.0,baz=104,slow=5.1,SNR=5.1						
ZALV	Zalesovo Beam	94.17	324	P	P	06 24 45.8	-1.3
	0.6nm,0.3s,mb4.5,baz=98,slow=6.0,SNR=3.7						
ARCES	ARCESS Array B	117.09	345	PKP	PKPdf	06 30 11.5	-1.3
	1.3nm,0.7s,baz=68,slow=2.7,SNR=14						
ARCES	ARCESS Array B	117.09	345	PKP	PKPdf	06 30 11.5	-1.3
ESDC	Sonseca Array	150.81	343	PKPbc	PKPbc	06 31 21.9	+0.7
	0.4nm,0.5s,baz=3.7,slow=3.2,SNR=4.4						

IDC 02 06:15:06.1±1.1, 1128S×16531E, h0km, mb4.1/12, mb1 4.3/12, mb1mx4.1/17, mbtmp4.1/12, Error ellipse: s-maj=45.6km s-min=18.4km az=143.0
ISCJB 02 06:15:09.6±0.9, 114S±02×1653E±02, h33km, mb4.1/12, Error ellipse: s-maj=38.9km s-min=14.1km az=141.9
NEIC 02 06:15:11.3±0.8, 1129S×16531E, h35km, mb4.6/1, Error ellipse: s-maj=34.4km s-min=12.4km az=142.0
ISC 02 06:15:11.5±0.9, 113S±02×1653E±02, h35km, n15, σ0.93s/15, mb4.1/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.29	242	P	P	06 19 45.4	+1.1
	8.0nm,0.8s,baz=70,slow=14,SNR=4.5						
CTA	Charters Tower	20.29	242	P	P	06 19 45.4	+1.1
STKA	Stephens Creek	29.96	223	P	P	06 21 15.5	-1.1
	2.0nm,0.6s,mb4.0,baz=27,slow=9.0,SNR=2.1						
WRA	Warramunga Arr	30.98	250	P	P	06 21 25.6	-0.1
	1.8nm,0.8s,mb3.9,baz=79,slow=8.9,SNR=9.7						
ASAR	Alice Springs	32.28	243	P	P	06 21 37.1	-0.1
	1.4nm,0.7s,mb3.9,baz=68,slow=9.5,SNR=15						
FITZ	Fitzroy Crossi	38.88	255	P	P	06 22 33.9	0.0
	4.0nm,0.8s,mb4.2,baz=89,slow=10,SNR=7.9						
CMAR	Chiang Mai Arr	71.80	294	P	P	06 26 31.4	+0.4
	0.9nm,0.5s,mb3.9,baz=135,slow=4.5,SNR=3.5						
SONM	Songino Array	78.59	324	P	P	06 27 10.0	+0.5
	0.9nm,0.7s,mb3.8,baz=140,slow=5.3,SNR=5.2						
YBH	Yreka Blue Hor	84.38	46	P	P	06 27 39.4	-0.9
	1.2nm,1.0s,mb4.0,baz=172,slow=7.6,SNR=3.3						
EGAK	Eagle	85.76	20	eP	P	06 27 44.6	-2.1
	4.7nm,1.1s,mb4.6						
NVAR	Mina Array Bea	86.52	50	P	P	06 27 52.5	+1.4
	0.6nm,0.7s,mb3.9,baz=232,slow=8.7,SNR=4.8						
MKAR	Makanchi Array	93.39	317	P	P	06 28 22.9	-0.2
	1.5nm,0.8s,mb4.5,baz=112,slow=5.4,SNR=8.3						
ZALV	Zalesovo Beam	93.49	324	P	P	06 28 22.9	-0.5
	0.7nm,0.6s,mb4.3,baz=108,slow=4.8,SNR=3.9						
ZALV	Zalesovo Beam	93.49	324	P	P	06 28 22.9	-0.5
PDAR	Pinedale Array	94.05	47	P	P	06 28 27.6	+1.4
	0.3nm,0.7s,mb3.9,baz=243,slow=8.0,SNR=2.8						

ISCJB 02 06:18:13.2±0.7, 2638S±0.03×2738E±0.05, h16km±7km, mb3.5/2, Error ellipse: s-maj=7.7km s-min=4.3km az=34.1
PRE 02 06:18:13.2±0.9, 2638S×2734E, h2km, ML3.6
NEIC 02 06:18:14.9±1.7, 2634S×2750E, h5km, Error ellipse: s-maj=34.3km s-min=13.9km az=110.0
IDC 02 06:18:15.1±4.0, 2639S×2733E, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.5/21, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=97.3km s-min=19.2km az=116.0
ISC 02 06:18:14.3±0.7, 2640S±003×2739E±004, h8km±5km, n21, σ1.15s/37, mb3.5/2, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLOF	Kloof	0.20	75	eP	Pg	06 18 17.7	-0.7
KLOF				eS	Sg	06 18 20.9	-0.3
KLOF				AML	AML	06 18 26.7	
	comp=Z,2μm,0.4s						
PRYS	Parys	0.52	183	eP	Pg	06 18 23.5	-1.0
PRYS				eS	Sg	06 18 31.4	0.0
PRYS				AML	AML	06 18 41.6	
	comp=Z,350nm,0.1s						
SLR	Silverton	1.04	51	eP	Pg	06 18 33.2	-1.1
SLR				eS	Sg	06 18 49.1	+1.4
SLR				AML	AML	06 18 60.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,259nm,0.3s						
SEK	Senekal	1.93	174	eP	Pn	06 18 48.5	+1.1
SEK				eS	Sn	06 19 13.3	+1.5
SEK				AML	AML	06 19 17.2	
	comp=Z,441nm,0.2s						
SWZ	Schweizer	2.00	247	eP	Pn	06 18 48.1	-0.3
SWZ				eS	Sn	06 19 13.4	-0.2
SWZ				AML	AML	06 19 30.1	
	comp=Z,349nm,0.3s						
BOSA	Boshof	2.91	220	Pn	Pn	06 19 03.2	+2.2
	comp=Z,7.3nm,0.3s,baz=44,slow=13,SNR=284						
BOSA				Lg		06 19 46.2	
	comp=Z,30nm,0.3s,baz=319,slow=17,SNR=15						
BOSA	Boshof	2.91	220	Pn	Pn	06 19 03.2	+2.2
BOSA				Lg		06 19 46.2	
KSD	Kokstad	4.49	157	eP	Pn	06 19 23.7	+1.0
KSD				eS	Sn	06 20 14.3	-0.9
KSD				AML	AML	06 20 38.6	
	comp=Z,149nm,0.6s						
HVD	Gariep Dam	4.51	201	eP	Pn	06 19 23.9	+1.0
HVD				eS	Sn	06 20 14.3	-1.2
HVD				AML	AML	06 20 46.6	
	comp=Z,49nm,0.6s						
MOPA	Mopani	4.63	53	eP	Pn	06 19 24.8	+0.2
MOPA				eS	Sn	06 20 18.1	-0.6
MOPA				AML	AML	06 20 37.1	
	comp=Z,222nm,0.5s						
MSNA	Messina	4.70	31	eP	Pn	06 19 24.8	-0.7
MSNA				eS	Sn	06 20 17.2	-3.0
MSNA				AML	AML	06 20 41.8	
	comp=Z,54nm,0.5s						
PKA	Prieska	5.23	230	eP	Pn	06 19 32.5	-0.4
PKA				eS	Sn	06 20 31.7	-1.7
PKA				AML	AML	06 21 06.5	
	comp=Z,95nm,0.6s						
UPI	Upington	5.80	249	eP	Pn	06 19 40.4	-0.3
UPI				eS	Sn	06 20 44.0	-3.3
UPI				AML	AML	06 21 19.9	
	comp=Z,40nm,0.5s						
SUR	Sutherland	8.27	222	eP	Pn	06 20 14.4	-0.2
SUR				eS	Sn	06 21 44.4	-3.9
KOMG	Komaggas	9.38	247	eP	Pn	06 20 30.4	+0.6
KOMG				eS	Sn	06 22 09.7	-5.8
KOMG				AML	AML	06 22 22.0	
	comp=Z,4.8nm,0.6s						
ELIM	Elim	10.49	217	eP	Pn	06 20 45.8	+0.8
ELIM				eS	Sn	06 22 36.9	-5.9
ELIM				AML	AML	06 23 23.4	
	comp=Z,9.4nm,0.7s						
LSZ	Lusaka	11.09	4	ePn	Pn	06 20 52.8	-0.5
LSZ				eSn	Sn	06 22 52.1	-5.5
TSUM	Tsumeb	11.54	306	ePn	Pn	06 21 01.0	+1.6
	comp=Z,5.5nm,2.3s						
TSUM				Sn	Sn	06 22 55.0	-13
TORD	Torodi Ar. Bea	46.58	324	P	P	06 26 44.5	+1.5
	comp=Z,0.7nm,0.6s,mb3.8,baz=149,slow=7.1,SNR=10.0						
TORD	Torodi Ar. Bea	46.58	324	P	P	06 26 44.5	+1.5
ESDC	Sonseca Array	71.95	335	P	P	06 29 40.2	+2.1
	comp=Z,0.1nm,0.3s,mb3.2,baz=163,slow=6.4,SNR=4.2						

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*ISCJB **02** 06:28:47.4±0.6, 11.79S±0.09×165.6E±0.1, h33^{km}, mb4.4/16, Error ellipse: s-maj=18.2km s-min=11.8km az=22.1*
*NEIC **02** 06:28:48.4±0.5, 11.77S×165.82E, h35^{km}, mb4.5/4, Error ellipse: s-maj=17.3km s-min=11.2km az=116.0*
*IDC **02** 06:28:49.2±0.9, 11.81S×165.70E, h36^{km}±5^{km}, mb4.2/14, mb1 4.3/14, mb1mx4.2/17, mbtmp4.2/14, MS4.0/2, Ms1 4.0/2, ms1mx3.4/26, Error ellipse: s-maj=23.1km s-min=16.8km az=117.0*
ISC 02 06:28:49.4±0.6**, 11.78S**±0.09×**165.7E**±0.1**, h35**^{km}**, (h38**^{km}±.5^{km}**:pP-P), n41,** σ0^{s}**98**/24**, mb4.4**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.41	244	eP	P	06 33 25.3	+1.8
	9.1nm,0.9s						
CTA	Charters Tower	20.41	244	P	P	06 33 24.9	+1.3
	11nm,0.8s,baz=83,slow=10,SNR=6.3						
CTA				LR	LR	06 39 43.4	
	comp=Z,343nm,20.8s,baz=51,slow=32						
ARMA	Armidale	22.67	213	eP	P	06 33 48.0	+0.3
STKA	Stephens Creek	29.87	224	P	P	06 34 53.6	-0.1
	3.5nm,0.7s,mb4.2,baz=48,slow=12,SNR=5.0						
STKA				pPcP		06 38 07.2	
	2.3nm,1.0s,baz=36,slow=6.0,SNR=3.6						
STKA	Stephens Creek	29.87	224	P	P	06 34 53.6	-0.1
STKA				pPcP		06 38 07.2	
WB2	Warramunga Arr	31.17	251	eP	P	06 35 04.8	-0.5
WRA	Warramunga Arr	31.18	251	P	P	06 35 04.6	-0.8
	4.7nm,0.8s,mb4.4,baz=83,slow=8.9,SNR=18						
WRA				PcP	PcP	06 37 59.7	-0.2
	1.8nm,0.9s,baz=84,slow=3.1,SNR=6.6						
WRA				pPcP		06 38 11.3	
	0.8nm,0.7s,baz=77,slow=3.1,SNR=5.9						
RPZ	Rata Peaks	32.16	173	P	P	06 35 13.0	-0.7
	14nm,0.8s,mb4.8,baz=340,slow=3.2,SNR=6.2						
ASAR	Alice Springs	32.41	244	P	P	06 35 15.2	-1.0
	5.0nm,0.7s,mb4.4,baz=74,slow=9.4,SNR=49						
ASAR				PcP	PcP	06 38 02.8	-0.5
	2.1nm,0.9s,baz=76,slow=2.8,SNR=10.0						
ASAR				pPcP		06 38 14.3	
	1.5nm,0.6s,baz=68,slow=2.3,SNR=13						
FITZ	Fitzroy Crossi	39.14	256	P	P	06 36 14.3	+0.4
	baz=78,slow=15						
KAPI	Kappang	45.88	274	LR	LR	06 55 27.4	
	comp=Z,268nm,21.0s,baz=76,slow=35						
JOW	Kunigami	52.84	317	P	P	06 38 01.7	0.0
	6.1nm,0.8s,mb4.6,baz=104,slow=9.8,SNR=6.1						
MJAR	Matsushiro Arr	54.59	333	P	P	06 38 12.8	-1.5
	3.2nm,1.1s,mb4.3,baz=170,slow=7.4,SNR=5.8						
KSRS	Korea Array	60.44	326	P	P	06 38 55.2	-0.3
	1.4nm,0.8s,mb4.1,baz=130,slow=7.4,SNR=4.2						
SBA	Scott Base	66.07	180	eP	P	06 39 32.1	-0.2
	9.6nm,0.8s,mb4.9						
SBA				epP	pP	06 39 43.2	+0.1
CMAR	Chiang Mai Arr	72.35	294	P	P	06 40 13.7	+1.5
	3.1nm,0.6s,mb4.4,baz=117,slow=4.2,SNR=13						
CMAR				pP	pP	06 40 24.7	+1.7
	2.2nm,0.5s,baz=128,slow=4.4,SNR=3.1						
ULN	Ulaanbaatar	78.85	324	eP	P	06 40 49.5	+0.7
	6.7nm,1.0s,mb4.5						
SONM	Songino Array	79.22	324	P	P	06 40 51.5	+0.7
	2.0nm,0.7s,mb4.2,baz=136,slow=5.8,SNR=12						
EGAK	Eagle	86.08	20	eP	P	06 41 24.2	-1.9
	2.1nm,0.7s,mb4.5						
NVAR	Mina Array Bea	86.54	50	P	P	06 41 31.0	+2.0
	0.3nm,0.6s,mb3.7,baz=239,slow=8.3,SNR=3.4						
MKAR	Makanchi Array	94.01	317	P	P	06 42 04.0	+0.2
	3.4nm,0.8s,mb4.8,baz=101,slow=6.3,SNR=22						
MKAR				pP	pP	06 42 15.1	+0.1
	6.3nm,0.7s,baz=96,slow=6.7,SNR=16						
MKAR	Makanchi Array	94.01	317	P	P	06 42 04.0	+0.2
MKAR				pP	pP	06 42 15.1	+0.1
ZALV	Zalesovo Beam	94.11	324	P	P	06 42 03.0	-1.1
	1.9nm,0.5s,mb4.8,baz=108,slow=4.8,SNR=14						
ZALV				pP	pP	06 42 14.7	-0.6
	3.0nm,0.8s,baz=108,slow=3.8,SNR=3.8						
YKA	Yellowknife Ar	95.65	27	P	P	06 42 11.7	+0.8
	0.2nm,0.6s,mb3.8,baz=258,slow=4.8,SNR=5.2						
YKA	Yellowknife Ar	95.65	27	P	P	06 42 11.7	+0.8
ARCES	ARCESS Array B	117.02	345	PKP	PKPdf	06 47 28.6	-1.4
	0.7nm,0.5s,baz=198,slow=1.2,SNR=9.0						
BOSA	Boshof	124.54	223	PKP	PKPdf	06 47 45.2	-0.5
	1.9nm,0.8s,baz=82,slow=14,SNR=4.4						
BOSA				pPKP	pPKPdf	06 47 55.7	-1.4
	3.5nm,0.6s,baz=124,slow=20,SNR=3.3						
BOSA	Boshof	124.54	223	PKP	PKPdf	06 47 45.2	-0.5
BOSA				pPKP	pPKPdf	06 47 55.7	-1.4
AKASG	Malin Array Be	127.44	327	PKP	PKPdf	06 47 48.8	-1.7
	0.2nm,0.3s,baz=62,slow=1.4,SNR=4.5						
GERES	GERESS Array B	136.33	333	PKP	PKPdf	06 48 07.1	-0.2
	0.9nm,1.0s,baz=49,slow=1.8,SNR=5.6						
MBDF	Montbardon	142.51	335	ePKP1	PKPdf	06 48 12.7	-6.0
ORIF	Oris-en-Rattie	142.72	336	ePKP1	PKPdf	06 48 14.3	-4.8
	4.5nm,0.8s						
SBF	Sospel	142.93	334	ePKP1	PKPdf	06 48 14.7	-4.8
	36nm,1.1s						
VIVF	Saint-Julien-l	143.24	337	ePKP1	PKPdf	06 48 16.4	-3.6
PGF	Pioggiola	143.24	331	ePKP1	PKPdf	06 48 15.2	-4.9
	41nm,1.3s						
FRF	La Foret Royal	143.51	334	ePKP1	PKPdf	06 48 16.2	-4.3
	15nm,1.0s						
LMR	La Mourre	143.75	334	ePKP1	PKPdf	06 48 16.5	-4.5
	24nm,1.1s						
MTLF	Montolieu	145.44	339	ePKP1	PKPbc	06 48 22.9	-1.0
	7.2nm,0.7s						
KEST	Kesra	147.95	322	PKPbc	PKPbc	06 48 30.4	-1.0
	5.5nm,0.8s,baz=303,slow=2.9,SNR=11						
ESDC	Sonseca Array	150.74	344	PKPbc	PKPbc	06 48 36.6	-1.6
	0.8nm,0.8s,baz=38,slow=1.9,SNR=5.5						
TORD	Torodi Ar. Bea	164.30	277	PKP	PKPdf	06 48 49.7	-0.5
	1.2nm,0.9s,baz=354,slow=1.2,SNR=5.3						

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*NIED **02** 06:39:00, 33.10N×137.10E, h14^{km}, Mw3.8 Best double couple: M$_0$6.13000×10^{14} NP1:φ$_s$242.00000°, δ47.00000°, λ88.00000°. NP2:φ$_s$64.00000°, δ43.00000°, λ92.00000°.*
*IDC **02** 06:39:56.6±1.8, 33.22N×137.28E, h0^{km}, mb3.2/1, mb1 3.4/5, mb1mx3.3/24, mbtmp3.6/5, ML3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.6/18, Error ellipse: s-maj=31.9km s-min=20.3km az=2.0*
*JMA **02** 06:39:57.2±0.2, 33.15N×137.11E, h26^{km}±3^{km}, M3.9*
*NEIC **02** 06:39:57.2, 33.15N×137.11E, h26^{km}, MG3.9(JMA), After JMA.*
*ISCJB **02** 06:39:58.2±0.9, 33.18N±0.04×137.11E±0.03, h33^{km}±7^{km}, Error ellipse: s-maj=6.1km s-min=4.0km az=174.7*
ISC 02 06:39:58.0±1.0**, 33.18N**±0.04×**137.09E**±0.03**, h26**^{km}±7^{km}**, n23,** σ1^{s}**08**/43**, 12D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK01	Tokai 1	0.72	35	P	Pb	06 40 10.7	-1.2
TK01				S	Sb	06 40 21.6	+0.3
TK02	Tokai 2	0.94	36	⇓P	Pn	06 40 15.2	-0.4
TK02				eS	Sb	06 40 25.9	-1.9
JWZ	Kozaga	1.21	287	⇓P	Pn	06 40 18.6	-0.6
JWZ				eS	Sn	06 40 33.0	-1.7
TK03	Tokai 3	1.22	36	⇓P	Pn	06 40 19.2	-0.2
TK03				eS	Sn	06 40 34.8	-0.3
JIE	Ise	1.25	345	⇓P	Pn	06 40 20.1	+0.3
JIE				eS	Sn	06 40 36.4	+0.6
JKN2	Miekihoku	1.26	327	⇓P	Pn	06 40 19.9	0.0
JKN2				eS	Sn	06 40 34.4	-1.6
TK04	Tokai 4	1.37	28	⇓P	Pn	06 40 21.5	+0.1
TK04				eS	Sn	06 40 38.6	-0.1
JWM	Minabe	1.60	295	⇓P	Pn	06 40 24.5	-0.1
JWM				eS	Sn	06 40 43.0	-1.4
JWY	Kouya	1.62	310	⇓P	Pn	06 40 25.6	+0.6
JWY				S	Sn	06 40 44.7	-0.4
TSUJ	Tsu 2	1.63	340	⇓P	Pn	06 40 25.2	+0.2
TSUJ				eS	Sn	06 40 44.5	-0.6
JHE	Heguri	1.88	322	⇓P	Pn	06 40 29.0	+0.5
JHE				eS	Sn	06 40 51.1	-0.3
SHZ3	Shizuoka 3	2.10	26	P	Pn	06 40 31.4	-0.1
SHZ3				eS	Sn	06 40 54.9	-1.8
JHJ	Hachijo jima 2	2.26	91	Pn	Pn	06 40 34.2	+0.6
	52nm,0.3s,baz=65,slow=18,SNR=10						
JHJ				LR	LR	06 40 59.4	
	comp=Z,386nm,20.9s,baz=100,slow=29						
JHJ				Sn	Sn	06 40 59.8	-0.9
	44nm,0.3s,baz=241,slow=23,SNR=6.9						
JHJ2	Mitsune	2.29	91	P	Pn	06 40 34.1	0.0
JHJ2				eS	Sn	06 40 59.5	-1.9
JAI	Aioi	2.29	286	P	Pn	06 40 34.4	+0.3
JAI				eS	Sn	06 40 59.7	-1.8
JWT	Wachi	2.52	327	⇓P	Pn	06 40 38.2	+0.9
JWT				eS	Sn	06 41 07.5	+0.3
JGM	Miyama	2.53	353	⇓P	Pn	06 40 38.3	+0.8
JGM				eS	Sn	06 41 08.1	+0.6
MAJO	Matsushiro	3.48	15	ePn	Pn	06 40 52.1	+1.6
MAJO				eSn	Sn	06 41 31.5	+0.8
MAT	Matsushiro	3.48	15	P	Pn	06 40 52.8	+2.4
MAT				S	Sn	06 41 31.8	+1.0
MJAR	Matsushiro Arr	3.48	15	Pn	Pn	06 40 52.1	+1.6
	6.1nm,0.3s,baz=197,slow=16,SNR=54						
MJAR				Sn	Sn	06 41 31.1	+0.3
	20nm,0.3s,baz=190,slow=27,SNR=16						
KSRS	Korea Array	8.62	302	Pn	Pn	06 42 04.1	+3.0
	0.4nm,0.3s,baz=114,slow=14,SNR=4.9						
JOW	Kunigami	9.92	233	Pn	Pn	06 42 22.4	+3.4
	0.6nm,0.3s,baz=66,slow=20,SNR=5.3						
MKAR	Makanchi Array	43.29	305	P	P	06 48 00.4	+3.0
	0.3nm,0.8s,baz=91,slow=9.2,SNR=3.2						

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*ISCJB **02** 06:42:35.6±3.9, 11.75S±0.09×165.6E±0.2, h47^{km}±31^{km}, mb4.2/14, Error ellipse: s-maj=26.0km s-min=15.0km az=0.9*
*NEIC **02** 06:42:35.5±0.6, 11.74S×165.75E, h35^{km}, mb4.3/5, Error ellipse: s-maj=16.1km s-min=11.3km az=123.0*
*IDC **02** 06:42:37.1±1.3, 11.63S×165.55E, h43^{km}±7^{km}, mb4.0/13, mb1 4.1/13, mb1mx4.0/17, mbtmp4.0/13, MS3.7/1, Ms1 3.6/1, ms1mx3.2/23, Error ellipse: s-maj=33.4km s-min=16.9km az=124.0*
ISC 02 06:42:37.7±3.4**, 11.76S**±0.09×**165.6E**±0.2**, h51**^{km}±27^{km}**, h42**^{km}±2.4^{km}**:pP-P, n49,** σ0^{s}**98**/24**, mb4.2**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.04	292	ePn	Pn	06 44 04.6	+0.1
	181nm,0.7s						
HNR				eSn	Sn	06 45 12.6	+0.2
CTA	Charters Tower	20.37	244	eP	P	06 47 11.6	+1.4
	9.0nm,0.8s						
CTA	Charters Tower	20.37	244	P	P	06 47 11.0	+0.8
	10nm,0.8s,baz=64,slow=11,SNR=7.8						
CTAO	Charters Tower	20.37	244	eP	P	06 47 11.5	+1.3
	8.7nm,0.8s						
ARMA	Armidale	22.66	213	eP	P	06 47 34.1	-0.5
STKA	Stephens Creek	29.85	224	eP	P	06 48 40.0	-0.3
	3.7nm,0.8s,mb4.2						
STKA	Stephens Creek	29.85	224	P	P	06 48 39.6	-0.7
	4.7nm,0.8s,mb4.3,baz=24,slow=9.0,SNR=6.8						
STKA				LR	LR	06 58 59.9	
	comp=Z,126nm,18.4s,baz=109,slow=33						
WRA	Warramunga Arr	31.13	251	P	P	06 48 51.4	-0.4
	1.5nm,0.6s,mb4.0,baz=83,slow=8.9,SNR=10						
WRA				pP	pP	06 49 04.9	0.0
	2.3nm,0.7s,baz=79,slow=8.9,SNR=8.0						
ASAR	Alice Springs	32.37	244	P	P	06 49 01.9	-0.8
	5.2nm,0.7s,mb4.5,baz=71,slow=9.5,SNR=34						
ASAR				PcP	PcP	06 51 49.8	+0.2
	0.9nm,0.9s,baz=63,slow=2.3,SNR=3.7						
ASAR				pPcP		06 52 01.8	
	2.7nm,0.8s,baz=86,slow=2.9,SNR=12						
FITZ	Fitzroy Crossi	39.09	256	P	P	06 50 00.1	-0.1
	1.7nm,0.7s,mb3.9,baz=110,slow=12,SNR=4.3						
JOW	Kunigami	52.79	317	P	P	06 51 47.9	-0.1
	4.1nm,0.7s,mb4.5,baz=107,slow=11,SNR=2.8						
MJAR	Matsushiro Arr	54.55	333	P	P	06 51 59.4	-1.3
	1.9nm,1.0s,mb4.1,baz=162,slow=7.5,SNR=5.5						
PETK	Petropavlovsk-	64.96	355	P	P	06 53 10.6	-1.4
	1.9nm,0.9s,mb4.1,baz=138,slow=9.1,SNR=3.7						
PETK	Petropavlovsk-	64.96	355	P	P	06 53 10.6	-1.4
SBA	Scott Base	66.09	180	eP	P	06 53 18.1	-0.9
	12nm,0.9s,mb4.9						
SBA				epP	pP	06 53 29.5	-3.8
ULN	Ulaanbaatar	78.80	324	eP	P	06 54 37.2	+2.1
	3.5nm,0.8s,mb4.3						
ULN				epP	pP	06 54 49.0	-0.7
SONM	Songino Array	79.17	324	P	P	06 54 36.8	-0.2
	0.7nm,0.7s,mb3.7,baz=128,slow=6.4,SNR=6.2						
MAW	Mawson	84.02	202	P	P	06 55 04.4	+2.0
	1.9nm,0.9s,mb4.2,baz=66,slow=4.2,SNR=3.7						
NVAR	Mina Array Bea	86.57	50	P	P	06 55 16.9	+1.2
	0.5nm,0.9s,mb3.8,baz=237,slow=10,SNR=3.6						
MKAR	Makanchi Array	93.96	317	P	P	06 55 50.9	+0.9
	0.4nm,0.4s,mb4.2,baz=87,slow=6.2,SNR=15						
MKAR				pP	pP	06 56 02.7	-2.2
	4.0nm,0.8s,baz=96,slow=5.6,SNR=14						
MKAR	Makanchi Array	93.96	317	P	P	06 55 51.0	+0.9
MKAR				pP	pP	06 56 02.7	-2.2
ZALV	Zalesovo Beam	94.06	324	P	P	06 55 49.6	-0.8
	4.4nm,0.9s,mb4.9,baz=108,slow=4.8,SNR=11						
ZALV				pP	pP	06 56 01.9	-3.3
	1.8nm,0.6s,baz=81,slow=4.7,SNR=4.2						
ZALV	Zalesovo Beam	94.06	324	P	P	06 55 49.6	-0.8
ZALV				pP	pP	06 56 01.9	-3.3
ARCES	ARCESS Array B	116.99	345	PKP	PKPdf	07 01 15.2	-1.1
	2.2nm,0.9s,baz=90,slow=1.3,SNR=5.8						
NOA	NORSAR Array B	127.35	345	PKP	PKPdf	07 01 37.9	+1.4
	1.2nm,0.8s,baz=57,slow=3.5,SNR=3.3						
AKASG	Malin Array Be	127.39	326	PKP	PKPdf	07 01 35.6	-1.2
	0.1nm,0.2s,baz=71,slow=1.8,SNR=5.4						
DEMI	Demirci	133.15	313	i P	PKPdf	07 01 45.6	-2.5
BALY	Balya	133.64	315	i P	PKPdf	07 01 39.8	-9.2
AYDN	Tasoluk	134.30	312	i P	PKPdf	07 01 52.5	+2.2
AYVA	Ayvalik	134.47	314	i P	PKPdf	07 01 40.7	-10
GCAM	G?zelcaml?	134.75	312	eP	PKPdf	07 01 55.1	+3.9
GERES	GERESS Array B	136.28	333	PKP	PKPdf	07 01 53.2	-0.5
	0.6nm,0.7s,baz=35,slow=4.9,SNR=5.6						
FLN	La Foliniere	141.34	345	ePKP1	PKPdf	07 02 01.8	-1.1
	65nm,1.4s						
ORIF	Oris-en-Rattie	142.68	336	ePKP1	PKPdf	07 02 01.7	-3.7
	9.0nm,0.8s						
QUIF	Quistinic	142.75	348	ePKP1	PKPdf	07 02 04.2	-1.2
SBF	Sospel	142.89	334	ePKP1	PKPdf	07 02 02.6	-3.2
PGF	Pioggiola	143.19	331	ePKP1	PKPdf	07 02 02.2	-4.2
	14nm,0.8s						
MFF	Saint Martin d	143.24	344	ePKP1	PKPdf	07 02 03.0	-3.4
FRF	La Foret Royal	143.47	334	ePKP1	PKPdf	07 02 03.8	-3.1
	20nm,1.0s						
SMRF	Simiane la Rot	143.58	335	ePKP1	PKPdf	07 02 04.8	-2.2
	30nm,1.2s						
LMR	La Mourre	143.71	334	ePKP1	PKPdf	07 02 04.8	-2.5
	37nm,1.1s						
CAF	Calviac	144.07	340	ePKP1	PKPdf	07 02 06.3	-1.6
LASF	Ste Croix	144.17	337	ePKP1	PKPdf	07 02 06.8	-1.3
	30nm,1.1s						
LFF	La Frestale	144.49	341	ePKP1	PKPdf	07 02 07.4	-1.2
	19nm,0.9s						
MTLF	Montolieu	145.41	338	ePKP1	PKPbc	07 02 10.6	+0.4
	18nm,1.1s						
KEST	Kesra	147.90	322	PKPbc	PKPbc	07 02 18.3	+0.6
	2.9nm,0.7s,baz=340,slow=8.5,SNR=6.9						
ESDC	Sonseca Array	150.70	343	PKPbc	PKPbc	07 02 24.0	-0.6
	0.9nm,0.8s,baz=0.8,slow=1.8,SNR=7.6						
TORD	Torodi Ar. Bea	164.25	277	PKP	PKPdf	07 02 35.9	-0.6
	2.2nm,1.0s,baz=59,slow=1.3,SNR=7.6						
TORD	Torodi Ar. Bea	164.25	277	PKP	PKPdf	07 02 35.9	-0.6

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*IDC **02** 06:46:45.1±0.6, 2.67N×126.93E, h0^{km}, mb4.5/18, mb1 4.5/18, mb1mx4.5/20, mbtmp4.5/18, MS3.9/3, Ms1 3.9/3, ms1mx3.4/29, Error ellipse: s-maj=28.4km s-min=12.4km az=78.0*
*MOS **02** 06:46:48.3±1.0, 2.68N×126.94E, h33^{km}, mb5.2/12, Error ellipse: s-maj=21.5km s-min=8.4km az=110.6*
*BJI **02** 06:46:52.1, 2.16N×126.97E, h110^{km}, mB4.9, mb4.8*
*NEIC **02** 06:46:54.9±2.1, 2.67N×126.92E, h79^{km}±21^{km}, mb5.1/13, Error ellipse: s-maj=11.5km s-min=6.0km az=68.0*
*ISCJB **02** 06:46:54.7±1.3, 2.65N±0.05×126.92E±0.08, h92^{km}±12^{km}, mb4.7/45, Error ellipse: s-maj=13.4km s-min=7.8km az=160.1*
*DJA **02** 06:46:56, 2.69N×127.03E, h47^{km}, ML4.6/4*
ISC 02 06:46:56.0±1.2**, 2.63N**±0.05×**126.91E**±0.08**, h88**^{km}±12^{km}**, n76,** σ0^{s}**81**/71**, mb4.7**/44**, 2C-3D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNE	Ternate	1.89	166	⇓eP	Pn	06 47 20.0	-6.7
TNE	Ternate	1.89	166	⇓eP	Pn	06 47 20.0	-6.7
MNI	Manado	2.38	240	P	Pn	06 47 32.6	-0.6
	0.0nm,0.0s						
MNI	Manado	2.38	240	⇓eP	Pn	06 47 32.0	-1.2
LBMI	Labuha	3.30	170	P	Pn	06 47 46.8	+1.3
	0.0nm,0.0s						
SWI	Sorong	5.56	129	P	Pn	06 48 24.0	+7.7
	48nm,1.2s						
KAKA	Kakadu	16.20	160	eP	Pn	06 50 41.1	+2.7
	43nm,1.4s						
KAKA	Kakadu	16.20	160	eP	Pn	06 50 38.9	+0.4
FITZ	Fitzroy Crossi	20.64	183	eP	P	06 51 29.2	+0.6
	5.5nm,0.6s						
FITZ	Fitzroy Crossi	20.64	183	P	P	06 51 27.9	-0.7
	2.1nm,0.4s,baz=11,slow=15,SNR=9.9						
WRAB	Tennant Creek	23.58	162	eP	P	06 51 57.6	-1.2
WRA	Warramunga Arr	23.59	162	P	P	06 51 57.8	-1.1
	22nm,0.6s,mb4.6,baz=343,slow=11,SNR=79						
WB2	Warramunga Arr	23.59	162	eP	P	06 51 57.7	-1.2
JOW	Kunigami	24.10	3	P	P	06 52 02.8	-0.7
	15nm,0.9s,mb4.3,baz=187,slow=10.0,SNR=7.1						
ASAR	Alice Springs	27.01	166	P	P	06 52 29.4	-0.4
	2.4nm,0.6s,mb3.9,baz=350,slow=7.6,SNR=32						
ASAR				PcP	PcP	06 55 51.8	+2.3
	1.1nm,0.6s,baz=338,slow=2.4,SNR=7.4						
CBIJ	Chichi jima	28.39	30	LR	LR	07 01 39.6	
	comp=Z,222nm,19.5s,baz=121,slow=32						
CMAR	Chiang Mai Arr	31.59	302	P	P	06 53 10.7	+0.1
	1.0nm,0.3s,mb4.0,baz=114,slow=7.2,SNR=8.1						
CMAR	Chiang Mai Arr	31.59	302	i P	P	06 53 12.0	+1.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FORT	Forrest	33.24	178	eP	P	06 53 25.0	+0.2
	comp=Z,9.9nm,0.6s,mb4.8						
KSRS	Korea Array	34.67	1	P	P	06 53 37.0	-0.2
	comp=Z,3.7nm,0.7s,mb4.3,baz=177,slow=9.8,SNR=14						
KSRS				PcP	PcP	06 56 11.1	+1.6
	comp=Z,1.6nm,0.7s,baz=180,slow=2.7,SNR=4.1						
KLBR	Kellerberrin	35.13	194	eP	P	06 53 42.1	+1.0
	comp=Z,53nm,1.7s,mb5.1						
MJAR	Matsushiro Arr	35.32	16	P	P	06 53 40.8	-2.0
	comp=Z,1.7nm,0.5s,mb4.1,baz=180,slow=11,SNR=6.8						
MJAR				LR	LR	07 06 07.1	
	comp=Z,253nm,20.7s,baz=235,slow=33						
XAN	Xi’an	35.48	334	P	P	06 53 41.2	-2.9
XAN				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.8						
XAN				AMB	AMB		
	comp=Z,93nm,10.6s						
XAN				LR	LR		
	comp=E,99nm,24.1s						
XAN				LR	LR		
	comp=Z,181nm,22.5s						
MUN	Mundaring	35.89	196	eP	P	06 53 51.6	+4.0
DL2	Dalian	36.43	353	P	P	06 53 52.7	+0.5
DL2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
STKA	Stephens Creek	37.04	159	eP	P	06 53 57.6	+0.1
	comp=Z,14nm,0.8s,mb4.9						
STKA	Stephens Creek	37.04	159	P	P	06 53 56.7	-0.8
	comp=Z,16nm,0.7s,mb5.0,baz=330,slow=8.3,SNR=26						
BJT	Baijiatuau	38.47	347	eP	P	06 54 09.0	-0.4
BJT				pmax	pmax		
	comp=Z,18nm,0.8s						
BJT	Baijiatuau	38.47	347	eP	P	06 54 09.0	-0.4
	comp=Z,18nm,0.8s,mb5.0						
BJI	Beijing	38.49	347	P	P	06 54 09.7	+0.1
BJI				AMB	AMB		
	comp=Z,32nm,1.0s,mb5.1						
LZH	Lanzhou	39.54	330	eP	P	06 54 18.8	+0.4
LZH				AMB	AMB		
	comp=Z,21nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,85nm,4.3s						
VLA	Vladivostok	40.56	6	eP	P	06 54 27.0	+0.3
VLA				pmax	pmax		
	comp=Z,38nm,0.6s,mb5.4						
SHL	Shillong	40.68	307	eP	P	06 54 28.0	0.0
MDJ	Mudanjiang	41.88	3	P	P	06 54 37.9	+0.4
MDJ				AMB	AMB		
	comp=Z,13nm,0.6s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,79nm,3.8s						
MDJ	Mudanjiang	41.88	3	eP	P	06 54 38.0	+0.5
	comp=Z,14nm,0.9s,mb4.7						
LSA	Lhasa	43.30	312	eP	P	06 54 50.6	+1.3
LSA				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8						
LSA	Lhasa	43.30	312	eP	P	06 54 50.6	+1.3
	comp=Z,13nm,0.7s,mb4.8						
ASAJ	Asahikawa	43.59	16	P	P	06 54 50.6	-0.7
	comp=Z,9.1nm,0.8s,mb4.6,baz=280,slow=18,SNR=4.9						
ASAJ				LR	LR	07 09 59.8	
	comp=Z,111nm,20.4s,baz=345,slow=32						
ODAN	Odare	44.86	306	eP	P	06 55 01.9	+0.1
	comp=Z,21nm,0.6s,mb5.0						
RAMN	Ramite	45.53	306	eP	P	06 55 07.6	+0.4
	comp=Z,21nm,0.7s,mb5.0						
JIRN	Jiri	46.17	307	eP	P	06 55 11.4	-0.7
	comp=Z,21nm,0.6s,mb5.0						
YSS	Yuzh-Sakhalins	46.25	15	eP	P	06 55 12.0	-0.4
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.4						
GUN	Gumba	46.52	307	eP	P	06 55 15.1	+0.2
	comp=Z,28nm,0.6s,mb5.2						
KLR	Kul’dur	46.61	4	eP	P	06 55 10.0	-5.2
PKI	Pulchoki	46.76	306	eP	P	06 55 16.2	-0.5
KKN	Kakani	46.95	306	eP	P	06 55 17.6	-0.7
DMN	Daman	47.02	306	eP	P	06 55 18.3	-0.5

	comp=Z,14nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**48.22**	**342**	*e*P	**P**	**06 55 28.1**	**+0.4**
KOLN	**Koldanda**	**48.30**	**306**	*e*P	**P**	**06 55 29.0**	**+0.3**
	comp=Z,30nm,0.6s,mb5.3						
SONM	**Songino Array**	**48.39**	**342**	P	**P**	**06 55 29.1**	**+0.1**
	comp=Z,2.6nm,0.7s,mb4.2,baz=159,slow=9.5,SNR=8.0						
SONM				PcP	PcP	06 56 55.9	+1.6
	comp=Z,2.3nm,0.7s,baz=157,slow=4.2,SNR=5.3						
DANN	**Dangsing**	**48.41**	**306**	*e*P	**P**	**06 55 29.5**	**0.0**
	comp=Z,44nm,0.6s,mb5.5						
MOY	**Mondy**	**53.47**	**340**	*e*P	**P**	**06 56 08.2**	**+1.1**
MOY				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
BOD	**Bodaibo**	**55.97**	**352**	*e*P	**P**	**06 56 24.9**	**-0.1**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.4						
PETK	**Petropavlovsk-**	**56.38**	**22**	P	**P**	**06 56 27.9**	**0.0**
	comp=Z,3.2nm,0.7s,mb4.5,baz=206,slow=3.0,SNR=8.8						
PETK	**Petropavlovsk-**	**56.38**	**22**	P	**P**	**06 56 27.9**	**0.0**
PET	**Petropavlovsk**	**56.67**	**22**	*e*P	**P**	**06 56 31.8**	**+1.8**
PET				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
MKAR	**Makanchi Array**	**58.56**	**326**	P	**P**	**06 56 43.6**	**+0.1**
	comp=Z,4.8nm,0.6s,mb4.7,baz=121,slow=8.3,SNR=28						
MKAR				PcP	PcP	06 57 32.8	-0.1
	comp=Z,3.0nm,0.7s,baz=106,slow=5.2,SNR=4.0						
YAK	**Yakutsk**	**59.30**	**2**	*e*P	**P**	**06 56 48.0**	**-0.2**
YAK				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
ZALV	**Zalesovo Beam**	**61.65**	**333**	P	**P**	**06 57 03.9**	**-0.5**
	comp=Z,1.3nm,0.6s,mb4.1,baz=129,slow=4.0,SNR=4.1						
ZAL	**Zalesovo**	**61.65**	**333**	P	**P**	**06 57 03.9**	**-0.5**
KURK	**Kurchatov**	**62.76**	**328**	P	**P**	**06 57 11.6**	**-0.3**
	comp=Z,7.9nm,0.7s,mb4.8,baz=128,slow=6.4,SNR=34						
KURK	**Kurchatov**	**62.76**	**328***c*	*i*P	**P**	**06 57 11.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
NVS	**Novosibirsk**	**62.93**	**333**	*e*P	**P**	**06 57 11.7**	**-1.2**
NVS				*e*	pP	06 57 29.8	-5.4
NVS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
NVS				pmax	pmax		
	comp=N,6.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.2s						
SEY	**Seymchan**	**63.06**	**13**	*i*P	**P**	**06 57 15.2**	**+1.6**
SVE	**Sverdlovsk**	**74.99**	**329**	*e*P	**P**	**06 58 28.3**	**+0.7**
SVE				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.9						
ARU	**Arti**	**75.96**	**328***c*	*i*P	**P**	**06 58 33.1**	**-0.1**
ARU				*e*		07 01 21.4	
ARU				*e*S	S	07 08 13.7	+4.7
ARU				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
KDAK	**Kodiak Island**	**82.72**	**32**	P	**P**	**06 59 10.5**	**+0.6**
	comp=Z,3.0nm,0.7s,mb4.2,baz=279,slow=8.7,SNR=4.9						
KIV	**Kislovodsk**	**84.03**	**314**	*e*P	**P**	**06 59 17.9**	**+1.0**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
ANN	**Anapa**	**87.80**	**315**	*e*P	**P**	**06 59 36.2**	**+0.7**
ANN				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
OBN	**Obninsk**	**88.06**	**325**	*e*P	**P**	**06 59 36.8**	**+0.3**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
ARCES	**ARCESS Array B**	**91.54**	**340**	P	**P**	**06 59 52.1**	**-0.3**
	comp=Z,3.1nm,0.7s,mb4.7,baz=81,slow=6.4,SNR=16						
AKASG	**Malin Array Be**	**92.86**	**321**	P	**P**	**06 59 59.0**	**+0.1**
	comp=Z,0.2nm,0.2s,mb4.1,baz=69,slow=4.6,SNR=4.3						
NOA	**NORSAR Array B**	**99.85**	**334**	P	Pdif	07 00 29.3	-1.3
	comp=Z,0.9nm,0.7s,baz=67,slow=4.5,SNR=3.1						
KONO	**Kongsberg**	**101.16**	**333**	*e*P	Pdif	07 00 37.1	+0.7
TORD	**Torodi Ar. Bea**	**123.43**	**288**	PKP	PKPdf	07 05 45.0	+1.0
	comp=Z,0.7nm,0.7s,baz=57,slow=2.7,SNR=3.7						
BCIP	**Isla Barro Col**	**150.88**	**66**	*e*PKPbc	PKPbc	07 06 41.0	+1.4

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*IDC **02** 06:50:40.5±0.9, 264N×12686E, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.0/17, mbtmp4.1/8, Error ellipse: s-maj=59.0km s-min=15.6km az=74.0*

*ISCJB **02** 06:50:43.6±0.7, 277N±008×1273E±01, h33km, mb4.2/9, Error ellipse: s-maj=19.6km s-min=10.9km az=170.5*

*NEIC **02** 06:50:45.9±0.6, 273N×127.15E, h35km, mb4.6/3, Error ellipse: s-maj=37.9km s-min=11.1km az=79.0*

ISC 02 06:50:45.9±0.7**, 271N**±008×**1273E**±01**, h35**km**, n16, σ1^{s}02**/17**, mb4.2**/9**, 3D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	**Ternate**	**1.92**	**177**⇓	*e*P	**Pn**	**06 51 15.0**	**-1.1**
TNE	**Ternate**	**1.92**	**177**⇓	*e*P	**Pn**	**06 51 15.0**	**-1.1**
MNI	**Manado**	**2.73**	**243**⇓	*e*P	**Pn**	**06 51 28.0**	**+0.7**
MNI				*e*S	**Sn**	**06 52 10.0**	**+11**
FITZ	**Fitzroy Crossi**	**20.75**	**184**	*e*P	**P**	**06 55 24.6**	**+0.9**
	4.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.75**	**184**	P	**P**	**06 55 22.6**	**-1.1**
	2.1nm,0.5s,baz=220,slow=21,SNR=9.8						
WRA	**Warramunga Arr**	**23.56**	**163**	P	**P**	**06 55 53.0**	**-0.5**
	8.2nm,0.7s,mb4.3,baz=342,slow=11,SNR=22						
WB2	**Warramunga Arr**	**23.56**	**163**	*e*P	**P**	**06 55 53.0**	**-0.5**
ASAR	**Alice Springs**	**27.00**	**167**	P	**P**	**06 56 25.1**	**+0.5**
	0.9nm,0.4s,mb3.6,baz=344,slow=8.2,SNR=12						
FORT	**Forrest**	**33.31**	**179**	*e*P	**P**	**06 57 21.1**	**+0.7**
	11nm,0.7s,mb4.9						
KLBR	**Kellerberrin**	**35.29**	**194**	*e*P	**P**	**06 57 38.5**	**+0.9**
	9.1nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**36.99**	**160**	P	**P**	**06 57 52.2**	**+0.1**
	4.3nm,0.8s,mb4.3,baz=358,slow=10,SNR=6.8						
SONM	**Songino Array**	**48.43**	**341**	P	**P**	**06 59 25.9**	**+1.2**
	0.4nm,0.4s,mb3.8,baz=164,slow=8.5,SNR=3.7						
PETK	**Petropavlovsk-**	**56.17**	**22**	P	**P**	**07 00 23.3**	**+1.3**
	2.4nm,1.0s,mb4.2,baz=221,slow=7.7,SNR=3.6						
PETK	**Petropavlovsk-**	**56.17**	**22**	P	**P**	**07 00 23.3**	**+1.3**
MKAR	**Makanchi Array**	**58.69**	**325**	P	**P**	**07 00 38.2**	**-1.7**
	0.9nm,0.7s,mb3.9,baz=116,slow=8.1,SNR=9.5						
KURK	**Kurchatov**	**62.88**	**328**	P	**P**	**07 01 06.5**	**-1.9**
	1.4nm,0.7s,mb4.2,baz=129,slow=5.9,SNR=6.1						

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*IDC **02** 06:52:52.7±0.8, 264N×12690E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/17, mbtmp3.9/8, MS3.2/1, Ms1 3.2/1, ms1mx2.0/29, Error ellipse: s-maj=55.1km s-min=15.9km az=75.0*

*ISCJB **02** 06:52:57.3±2.5, 27N±01×1269E±03, h49km±23km, mb4.0/7, Error ellipse: s-maj=54.5km s-min=16.0km az=165.3*

*NEIC **02** 06:52:57.8±0.5, 266N×12702E, h35km, mb3.9/1, Error ellipse: s-maj=35.4km s-min=9.5km az=76.0*

ISC 02 06:52:58.6±2.6**, 26N**±01×**1270E**±03**, h42**km±25km**, n14, σ0^{s}37**/13**, mb4.0**/7**, 2D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	**Ternate**	**1.87**	**168**⇓	*e*P	**Pn**	**06 53 28.0**	**-0.1**
TNE	**Ternate**	**1.87**	**168**⇓	*e*P	**Pn**	**06 53 28.0**	**-0.1**
DAV	**Davao City (W)**	**4.62**	**343**	LR	LR	06 55 34.9	
	comp=Z,256nm,18.6s,baz=74,slow=35						
FITZ	**Fitzroy Crossi**	**20.64**	**184**	*e*P	**P**	**06 57 36.0**	**+1.4**
	2.1nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.64**	**184**	P	**P**	**06 57 34.8**	**+0.1**
	0.8nm,0.4s,baz=19,slow=6.0,SNR=3.3						
WRA	**Warramunga Arr**	**23.57**	**162**	P	**P**	**06 58 05.4**	**-0.1**
	3.1nm,0.4s,mb4.1,baz=342,slow=11,SNR=9.6						
WB2	**Warramunga Arr**	**23.57**	**162**	*e*P	**P**	**06 58 05.2**	**-0.3**
ASAR	**Alice Springs**	**26.99**	**166**	P	**P**	**06 58 36.5**	**0.0**
	0.5nm,0.3s,mb3.5,baz=344,slow=11,SNR=6.2						
ASAR				PcP	PcP	07 01 58.4	+0.8
	0.3nm,0.8s,baz=349,slow=2.0,SNR=3.2						
STKA	**Stephens Creek**	**37.02**	**159**	P	**P**	**07 00 04.2**	**-0.1**
	1.6nm,0.4s,mb4.2,baz=338,slow=8.8,SNR=7.0						
SONM	**Songino Array**	**48.41**	**342**	P	**P**	**07 01 36.6**	**+0.1**
	0.6nm,0.8s,mb3.6,baz=153,slow=13,SNR=3.0						
PETK	**Petropavlovsk-**	**56.36**	**22**	P	**P**	**07 02 35.7**	**+0.4**
	1.3nm,0.7s,mb4.1,baz=186,slow=2.9,SNR=4.0						
PETK	**Petropavlovsk-**	**56.36**	**22**	P	**P**	**07 02 35.7**	**+0.4**
MKAR	**Makanchi Array**	**58.59**	**326**	P	**P**	**07 02 50.9**	**-0.2**
	0.8nm,0.5s,mb4.0,baz=119,slow=8.6,SNR=7.0						
KURK	**Kurchatov**	**62.79**	**328**	P	**P**	**07 03 19.4**	**-0.3**
	0.9nm,0.5s,mb4.1,baz=130,slow=6.4,SNR=6.1						

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*IDC **02** 07:14:46.2±0.6, 1160S×16604E, h0km, mb4.4/16, mb1 4.5/16, mb1mx4.5/16, mbtmp4.4/16, MS4.4/11, Ms1 4.4/11, ms1mx4.1/27, Error ellipse: s-maj=23.3km s-min=16.5km az=114.0*

*ISCJB **02** 07:14:49.7±0.4, 1158S±007×16595E±007, h33km, mb4.5/32, MS4.4/14, Error ellipse: s-maj=12.2km s-min=8.0km az=135.0*

*NEIC **02** 07:14:51.5±0.3, 1158S×16602E, h35km, mb4.6/18, Error ellipse: s-maj=11.7km s-min=7.0km az=136.0*

*BJI **02** 07:14:54.8, 1071S×16594E, h35km, mB5.2, mb4.8, Ms4.5, Msz4.4*

*DJA **02** 07:14:54, 13.12S×166.17E, h0km, mb5.0/9*

ISC 02 07:14:51.7±0.4**, 1155S**±007×**16593E**±006**, h35**km**, n83, σ1^{s}11**/51**, mb4.5**/32**, MS4.4**/14**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.25**	**289**	*e*Pn	**Pn**	**07 16 21.3**	**-0.2**
	328nm,1.0s						
HNR				*e*Sn	**Sn**	**07 17 28.9**	**-2.9**
CTA	**Charters Tower**	**20.73**	**243**	*e*P	**P**	**07 19 30.5**	**+1.1**
	20nm,0.9s						
CTA	**Charters Tower**	**20.73**	**243**	P	**P**	**07 19 30.1**	**+0.7**
	20nm,0.9s,baz=73,slow=13,SNR=10						
CTA				LR	LR	07 25 54.0	
	comp=Z,1μm,21.7s,MS4.3,baz=71,slow=32						
CTAO	**Charters Tower**	**20.73**	**243**	*e*P	**P**	**07 19 30.2**	**+0.8**
	36nm,1.0s						
COEN	**Coen**	**22.32**	**261**	*e*P	**P**	**07 19 47.1**	**+0.6**
	14nm,1.1s,mb4.3						
ARMA	**Armidale**	**23.00**	**213**	*e*P	**P**	**07 19 53.8**	**+0.3**
STKA	**Stephens Creek**	**30.21**	**224**	*e*P	**P**	**07 20 59.0**	**0.0**
	5.2nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**30.21**	**224**	P	**P**	**07 20 58.4**	**-0.6**
	3.8nm,0.8s,mb4.2,baz=27,slow=11,SNR=5.0						
WB2	**Warramunga Arr**	**31.48**	**251**	*e*P	**P**	**07 21 10.2**	**-0.2**
WRA	**Warramunga Arr**	**31.49**	**251**	P	**P**	**07 21 09.9**	**-0.6**
	5.1nm,0.9s,mb4.3,baz=83,slow=9.0,SNR=19						
WRA				PcP	PcP	07 24 04.1	+0.9
	3.0nm,1.0s,baz=78,slow=3.0,SNR=4.7						
WRA				ScP	ScP	07 27 47.5	+3.7
	2.6nm,1.0s,baz=85,slow=3.6,SNR=6.1						
RPZ	**Rata Peaks**	**32.36**	**173**	P	**P**	**07 21 17.3**	**-0.5**
	32nm,0.8s,mb5.2,baz=247,slow=2.2,SNR=11						
RPZ	**Rata Peaks**	**32.36**	**173**	P	**P**	**07 21 17.3**	**-0.5**
GUMO	**Guam**	**32.56**	**320**	LR	LR	07 33 07.7	
	comp=Z,709nm,21.7s,MS4.3,baz=277,slow=34						
ASAR	**Alice Springs**	**32.73**	**244**	P	**P**	**07 21 20.5**	**-0.9**
	5.1nm,0.8s,mb4.5,baz=70,slow=9.6,SNR=50						
ASAR				PcP	PcP	07 24 07.0	+0.5
	3.3nm,0.9s,baz=83,slow=4.1,SNR=8.0						
ASAR				ScP	ScP	07 27 52.0	+4.0
	1.2nm,0.9s,baz=68,slow=2.7,SNR=5.0						
RAR	**Rarotonga**	**34.21**	**111**	LR	LR	07 32 39.2	
	comp=Z,835nm,19.3s,MS4.5,baz=268,slow=32						
FITZ	**Fitzroy Crossi**	**39.43**	**256**	LR	LR	07 37 50.2	
	comp=Z,767nm,19.9s,MS4.5,baz=6.0,slow=35						
FITZ	**Fitzroy Crossi**	**39.43**	**256**	*e*P	**P**	**07 22 18.9**	**+0.2**
	27nm,1.1s,mb4.9						
BATI	**Baumata**	**41.50**	**268**	LR	LR	07 39 40.5	
	comp=Z,930nm,20.1s,MS4.7,baz=132,slow=36						
PPT	**Papeete**	**43.40**	**103**	*e*S	**S**	**07 29 30.8**	**+13**
	535nm,26.8s						
PPT				*e*LQ		07 33 24.7	
	1μm,27.2s						
PPT				*e*LR	LR	07 35 15.8	
	1μm,26.2s,baz=283						
PPT	**Papeete**	**43.40**	**103**	LR	LR	07 38 15.6	
	comp=Z,838nm,18.2s,MS4.7,baz=90,slow=33						
DAV	**Davao City (W)**	**44.20**	**293**	LR	LR	07 39 25.9	
	comp=Z,188nm,18.9s,MS4.0,baz=91,slow=33						
MBWA	**Marble Bar**	**45.21**	**252**	*e*P	**P**	**07 23 06.2**	**+0.4**
	40nm,1.3s,mb5.1						
KLBR	**Kellerberrin**	**48.60**	**238**	*e*P	**P**	**07 23 31.8**	**-0.3**
	52nm,1.5s,mb5.3						
MJAR	**Matsushiro Arr**	**54.49**	**333**	P	**P**	**07 24 15.8**	**-0.2**
	2.7nm,0.9s,mb4.2,baz=166,slow=6.2,SNR=6.1						
RKT	**Rikitea**	**57.24**	**110**	*e*LR	LR	07 41 29.2	
	909nm,25.8s,baz=282						
KSRS	**Korea Array**	**60.39**	**326**	P	**P**	**07 24 57.5**	**0.0**
	2.0nm,0.9s,mb4.1,baz=132,slow=6.9,SNR=3.4						
PETK	**Petropavlovsk-**	**64.78**	**355**	P	**P**	**07 25 27.2**	**+0.7**
	1.8nm,0.7s,mb4.2,baz=147,slow=8.5,SNR=4.3						
PETK				LR	LR	07 48 36.0	
	comp=Z,191nm,20.6s,MS4.3,baz=178,slow=31						
CASY	**Casey**	**65.98**	**201**	*e*P	**P**	**07 25 34.3**	**+0.1**
CASY	**Casey**	**65.98**	**201**	*e*P	**P**	**07 25 33.1**	**-1.2**
	7.0nm,0.8s,mb4.7						
SBA	**Scott Base**	**66.30**	**180**	*e*P	**P**	**07 25 36.6**	**+0.4**
	14nm,0.9s,mb5.0						
XAN	**Xi'an**	**70.59**	**312**	P	**P**	**07 26 04.5**	**+0.9**
XAN				AP	pP	07 26 11.8	-2.7
XAN				XP	sP	07 26 15.4	-3.2
XAN				S	S	07 35 10.5	-4.6
XAN				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.7						
XAN				AMB	AMB		
	comp=Z,34nm,3.4s						
XAN				LR	LR		
	comp=E,99nm,24.1s						
XAN				LR	LR		
	comp=Z,181nm,22.5s,MS4.3						
CMAR	**Chiang Mai Arr**	**72.48**	**294**	P	**P**	**07 26 17.6**	**+2.3**
	comp=Z,1.2nm,0.3s,mb4.3,baz=126,slow=5.7,SNR=7.3						
CMAR				LR	LR	07 55 53.8	
	comp=Z,74nm,21.9s,MS3.9,baz=85,slow=34						
LZH	**Lanzhou**	**75.23**	**312**	*e*P	**P**	**07 26 34.6**	**+3.5**
LZH				AP	pP	07 26 40.3	-1.7
LZH				XP	sP	07 26 43.5	-2.6
LZH				AMB	AMB		
	comp=Z,23nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,85nm,4.3s						
LZH				LR	LR		
	comp=N,1μm,15.6s						
LZH				LR	LR		
	comp=Z,1μm,16.4s,MS5.3						
OHAK	**Old Harbor**	**76.30**	**21**	*e*P	**P**	**07 26 35.1**	**-1.6**
	comp=Z,3.7nm,0.8s,mb4.4						
KDAK	**Kodiak Island**	**76.97**	**21**	*e*P	**P**	**07 26 39.5**	**-1.0**
	comp=Z,6.7nm,1.3s,mb4.4						
SVW2	**Sparrevohn**	**78.53**	**18**	*e*P	**P**	**07 26 49.7**	**+0.6**
ULN	**Ulaanbaatar**	**78.81**	**324**	*e*P	**P**	**07 26 52.8**	**+1.8**
	comp=Z,4.7nm,0.7s,mb4.5						
SONM	**Songino Array**	**79.17**	**324**	P	**P**	**07 26 54.5**	**+1.6**
	comp=Z,3.2nm,0.7s,mb4.4,baz=135,slow=5.7,SNR=16						
TTA	**Tatalina**	**79.85**	**17**	*e*P	**P**	**07 26 56.8**	**+0.5**
PMR	**Palmer**	**80.96**	**20**	*e*P	**P**	**07 27 00.1**	**-2.2**
	comp=Z,1.9nm,0.6s,mb4.2						
COLA	**College**	**83.70**	**18**	*e*P	**P**	**07 27 14.8**	**-1.7**
	comp=Z,2.9nm,0.7s,mb4.5						
YBH	**Yreka Blue Hor**	**84.11**	**45**	*e*P	**P**	**07 27 17.6**	**-1.5**
	comp=Z,2.8nm,1.0s,mb4.3						
MAW	**Mawson**	**84.33**	**202**	*e*P	**P**	**07 27 18.3**	**-1.6**
	comp=Z,2.8nm,0.8s,mb4.4						
MAW	**Mawson**	**84.33**	**202**	P	**P**	**07 27 19.9**	**0.0**
	comp=Z,3.0nm,1.0s,mb4.4,baz=62,slow=7.6,SNR=5.0						
HYT	**Haines Junctio**	**84.77**	**24**	*e*P	**P**	**07 27 23.1**	**+1.1**
MTUM	**Tungsten Hills**	**85.68**	**51**	*e*P	**P**	**07 27 30.4**	**+3.3**
EGAK	**Eagle**	**85.78**	**20**	*e*P	**P**	**07 27 26.5**	**-0.5**
	comp=Z,4.8nm,0.6s,mb4.9						
NVAR	**Mina Array Bea**	**86.20**	**50**	P	**P**	**07 27 29.3**	**-0.4**
	comp=Z,1.2nm,0.7s,mb4.2,baz=232,slow=11,SNR=3.8						
BMO	**Blue Mountains**	**88.86**	**44**	*e*P	**P**	**07 27 43.9**	**+1.5**
WMQ	**Urumqi**	**89.58**	**315**	P	**P**	**07 27 46.5**	**+0.8**
WMQ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,132nm,4.4s						
WMQ				LR	LR		
	comp=Z,120nm,19.6s,MS4.3						
HLID	**Hailey**	**90.49**	**46**	*e*P	**P**	**07 27 54.4**	**+4.3**
	comp=Z,0.8nm,0.6s,mb4.2						
CHMT	**Chamberlain Mo**	**92.15**	**43**	*e*P	**P**	**07 27 56.8**	**-0.8**
PDAR	**Pinedale Array**	**93.75**	**47**	P	**P**	**07 28 06.2**	**+1.0**
	comp=Z,0.2nm,0.5s,mb3.9,baz=259,slow=2.4,SNR=2.6						
MKAR	**Makanchi Array**	**94.01**	**317**	P	**P**	**07 28 07.1**	**+0.9**
	comp=Z,7.5nm,0.7s,mb5.2,baz=100,slow=6.3,SNR=47						
ZALV	**Zalesovo Beam**	**94.07**	**324**	P	**P**	**07 28 05.9**	**-0.4**
	comp=Z,4.6nm,0.8s,mb4.9,baz=114,slow=4.2,SNR=13						
YKA	**Yellowknife Ar**	**95.33**	**27**	P	**P**	**07 28 09.9**	**-1.9**
	comp=Z,0.3nm,0.6s,mb3.9,baz=256,slow=4.7,SNR=8.0						
YKA				LR	LR	08 09 14.6	
	comp=Z,96nm,18.1s,MS4.3,baz=230,slow=34						
YKA	**Yellowknife Ar**	**95.33**	**27**	P	**P**	**07 28 09.9**	**-1.9**
YKA				LR	LR	08 09 14.6	
KURK	**Kurchatov**	**97.14**	**320**	LR	LR	08 15 29.8	
	comp=Z,103nm,19.7s,MS4.3,baz=130,slow=38						
ARCES	**ARCESS Array B**	**116.86**	**345**	PKP	PKPdf	07 33 32.0	0.0
	comp=Z,1.5nm,0.6s,baz=78,slow=2.0,SNR=14						
LPAZ	**La Paz**	**119.80**	**116**	PKP	PKPdf	07 33 39.1	-0.1
	comp=Z,1.0nm,1.0s,baz=161,slow=9.8,SNR=4.8						
BOSA	**Boshof**	**124.88**	**223**	PKP	PKPdf	07 33 48.5	-0.2
	comp=Z,3.9nm,0.6s,baz=208,slow=2.3,SNR=14						
NOA	**NORSAR Array B**	**127.23**	**345**	PKP	PKPdf	07 33 51.4	-0.8
	comp=Z,0.9nm,0.7s,baz=32,slow=2.0,SNR=3.9						
ASF	**Jabal al Asfar**	**128.96**	**302**	PKP	PKPdf	07 33 58.0	+1.6
	comp=Z,0.9nm,0.3s,baz=136,slow=0.7,SNR=3.4						
LSZ	**Lusaka**	**130.39**	**238**	PKP	PKPdf	07 34 01.5	+2.0
	comp=Z,2.7nm,0.5s,baz=81,slow=2.2,SNR=6.1						
EIL	**Elat**	**131.09**	**299**	PKP	PKPdf	07 34 01.4	+0.9
	comp=Z,2.9nm,0.6s,baz=351,slow=6.7,SNR=4.2						
GERES	**GERESS Array B**	**136.23**	**334**	PKP	PKPdf	07 34 10.7	+1.1
	comp=Z,0.5nm,0.7s,baz=22,slow=1.4,SNR=4.8						
GERES				SKPbc	SKPbc	07 37 44.2	+5.1
	comp=Z,1.3nm,1.1s,baz=28,slow=4.4,SNR=3.8						
BAIF	**Baives**	**138.75**	**342**	*e*PKP1	PKPdf	07 34 10.5	-3.6
LDF	**La Druitiere**	**141.28**	**345**	*e*PKP1	PKPdf	07 34 15.4	-3.4
LPL	**La Plagne**	**141.77**	**336**	*e*PKP1	PKPdf	07 34 16.7	-3.1
SMF	**Signal de Mont**	**141.87**	**340**	*e*PKP1	PKPdf	07 34 15.9	-4.0
ROSF	**Rostrenen**	**142.23**	**348**	*e*PKP1	PKPdf	07 34 16.6	-3.9
	comp=Z,20nm,0.9s						
ORIF	**Oris-en-Rattie**	**142.60**	**336**	*e*PKP1	PKPdf	07 34 17.5	-3.8
	comp=Z,6.0nm,0.6s						
TCF	**Toulx Ste Croi**	**142.72**	**341**	*e*PKP1	PKPdf	07 34 17.8	-3.6
	comp=Z,7.0nm,0.9s						
SBF	**Sospel**	**142.83**	**334**	*e*PKP1	PKPdf	07 34 18.2	-3.5
PGF	**Pioggiola**	**143.16**	**331**	*e*PKP1	PKPdf	07 34 18.9	-3.4
FRF	**La Foret Royal**	**143.41**	**334**	*e*PKP1	PKPdf	07 34 19.6	-3.1
	comp=Z,10.0nm,0.8s						
LMR	**La Mourre**	**143.65**	**334**	*e*PKP1	PKPdf	07 34 20.5	-2.7
	comp=Z,15nm,0.8s						
LFF	**La Frestale**	**144.38**	**342**	*e*PKP1	PKPdf	07 34 23.2	-1.2
	comp=Z,23nm,0.9s						
MTLF	**Montolieu**	**145.32**	**339**	*e*PKP1	PKPbc	07 34 26.5	+0.6
	comp=Z,11nm,0.6s						
KEST	**Kesra**	**147.92**	**322**	PKPbc	PKPbc	07 34 32.9	-0.9
	comp=Z,3.4nm,0.8s,baz=22,slow=1.0,SNR=7.0						
ESDC	**Sonseca Array**	**150.59**	**344**	PKPbc	PKPbc	07 34 40.4	+0.1
	comp=Z,2.2nm,0.4s,baz=7.1,slow=2.9,SNR=26						
TORD	**Torodi Ar. Bea**	**164.52**	**278**	PKP	PKPdf	07 34 52.9	+0.1
	comp=Z,1.8nm,0.9s,baz=304,slow=1.3,SNR=7.1						
TORD	**Torodi Ar. Bea**	**164.52**	**278**	PKP	PKPdf	07 34 52.9	+0.1

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*IDC **02** 07:23:06.7±1.0, 1172S×16604E, h0km, mb4.4/10, mb1 4.6/10, mb1mx4.4/15, mbtmp4.4/10, MS4.3/1, Ms1 4.3/1, ms1mx3.3/21, Error ellipse: s-maj=42.2km s-min=20.1km az=140.0*

*ISCJB **02** 07:23:12.2±2.7, 1149S±010×16567E±010, h42km±23km, mb4.5/20, Error ellipse: s-maj=18.2km s-min=14.0km az=138.2*

*NEIC **02** 07:23:12.9±0.4, 1145S×16576E, h35km, mb4.8/14, Error ellipse: s-maj=13.4km s-min=8.9km az=150.0*

*DJA **02** 07:23:17, 1181S×16566E, h50km, mb5.1/11*

ISC 02 07:23:14.3±2.1**, 1146S**±010×**16570E**±009**, h46**km±19km**, n44, σ0^{s}94**/31**, mb4.5**/20**, 3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.01**	**289**	*e*Pn	**Pn**	**07 24 40.2**	**-0.5**
	263nm,0.8s						
CTA	**Charters Tower**	**20.57**	**243**⇓	*i*P	**P**	**07 27 50.6**	**+1.2**
	31nm,0.8s						
CTA	**Charters Tower**	**20.57**	**243**	P	**P**	**07 27 49.9**	**+0.5**
	41nm,0.8s,baz=70,slow=12,SNR=29						
CTAO	**Charters Tower**	**20.57**	**243**	*e*P	**P**	**07 27 50.4**	**+1.0**
	43nm,0.8s						
AFI	**Afiamalu**	**22.10**	**99**	P	**P**	**07 28 07.0**	**+1.2**
ARMA	**Armidale**	**22.95**	**213**⇓	*i*P	**P**	**07 28 15.1**	**+0.4**
STKA	**Stephens Creek**	**30.12**	**224**	*e*P	**P**	**07 29 20.1**	**+0.4**
	7.0nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**30.12**	**224**	P	**P**	**07 29 18.8**	**-0.9**
	7.8nm,0.9s,mb4.4,baz=40,slow=4.4,SNR=10						
WB2	**Warramunga Arr**	**31.29**	**250**	*e*P	**P**	**07 29 29.6**	**-0.6**
WRA	**Warramunga Arr**	**31.30**	**250**	P	**P**	**07 29 30.0**	**-0.4**
	5.5nm,0.7s,mb4.5,baz=83,slow=8.6,SNR=24						
KAKA	**Kakadu**	**32.54**	**264**	*e*P	**P**	**07 29 40.7**	**-0.5**
	8.6nm,0.7s,mb4.8						
ASAR	**Alice Springs**	**32.57**	**244**	P	**P**	**07 29 40.9**	**-0.6**
	8.8nm,0.8s,mb4.7,baz=75,slow=9.4,SNR=50						
FITZ	**Fitzroy Crossi**	**39.24**	**255**⇓	*i*P	**P**	**07 30 38.3**	**-0.2**
	28nm,0.8s,mb5.0						
FORT	**Forrest**	**39.77**	**235**	*e*P	**P**	**07 30 43.1**	**+0.2**
	24nm,0.9s,mb4.9						
PPT	**Papeete**	**43.64**	**103**	LR	LR	07 47 02.5	
	comp=Z,318nm,18.5s,baz=155,slow=33						
MBWA	**Marble Bar**	**45.03**	**252**	*e*P	**P**	**07 31 25.8**	**+0.1**
	11nm,0.8s,mb4.8						
KLBR	**Kellerberrin**	**48.45**	**238**	*e*P	**P**	**07 31 51.7**	**-0.7**
	23nm,1.0s,mb5.2						
CASY	**Casey**	**65.98**	**201**	*e*P	**P**	**07 33 55.5**	**0.0**
	12nm,1.3s,mb4.8						
SBA	**Scott Base**	**66.39**	**180**	*e*P	**P**	**07 33 57.8**	**-0.2**
	3.6nm,0.9s,mb4.4						
CMAR	**Chiang Mai Arr**	**72.24**	**294**	P	**P**	**07 34 37.5**	**+2.4**
	3.1nm,0.8s,mb4.3,baz=120,slow=4.7,SNR=12						
ULN	**Ulaanbaatar**	**78.61**	**324**	*e*P	**P**	**07 35 12.6**	**+1.5**
	3.0nm,0.8s,mb4.3						
SONM	**Songino Array**	**78.97**	**324**	P	**P**	**07 35 14.5**	**+1.4**
	1.0nm,0.7s,mb3.9,baz=140,slow=5.8,SNR=5.7						
COLA	**College**	**83.69**	**18**	*e*P	**P**	**07 35 36.6**	**-1.1**
	5.5nm,0.9s,mb4.7						
YBH	**Yreka Blue Hor**	**84.21**	**46**	*e*P	**P**	**07 35 46.5**	**+5.6**
	4.4nm,1.2s,mb4.5						
EGAK	**Eagle**	**85.77**	**20**	*e*P	**P**	**07 35 47.5**	**-0.7**
	6.9nm,0.8s,mb4.9						
NVAR	**Mina Array Bea**	**86.32**	**50**	P	**P**	**07 35 50.9**	**-0.6**
	0.5nm,0.8s,mb3.8,baz=229,slow=8.5,SNR=3.8						
MSU	**Marysvale**	**90.97**	**51**	*e*P	**P**	**07 36 18.1**	**+4.5**
MKAR	**Makanchi Array**	**93.79**	**317**	P	**P**	**07 36 27.4**	**+1.0**
	2.3nm,0.7s,mb4.7,baz=89,slow=6.7,SNR=14						
ZALV	**Zalesovo Beam**	**93.86**	**324**	P	**P**	**07 36 26.2**	**-0.4**
	0.7nm,0.4s,mb4.5,baz=106,slow=4.8,SNR=6.2						
ZALV	**Zalesovo Beam**	**93.86**	**324**	P	**P**	**07 36 26.2**	**-0.4**
YKA	**Yellowknife Ar**	**95.36**	**27**	P	**P**	**07 36 30.9**	**-2.3**
	0.2nm,0.5s,mb3.8,baz=256,slow=5.1,SNR=4.0						
YKA	**Yellowknife Ar**	**95.36**	**27**	P	**P**	**07 36 30.9**	**-2.3**
ARCES	**ARCESS Array B**	**116.72**	**345**	PKP	PKPdf	07 41 53.1	+0.2
	1.3nm,0.6s,baz=36,slow=1.2,SNR=12						
SIV	**San Ignacio**	**126.28**	**120**	PKP	PKPdf	07 42 10.9	-2.0
	0.5nm,0.3s,baz=209,slow=18,SNR=4.2						
GERES	**GERESS Array B**	**136.05**	**333**	PKP	PKPdf	07 42 31.6	+1.2
	0.3nm,0.6s,baz=35,slow=4.9,SNR=4.0						
ORIF	**Oris-en-Rattie**	**142.43**	**336**	*e*PKP1	PKPdf	07 42 39.1	-3.0
SBF	**Sospel**	**142.65**	**334**	*e*PKP1	PKPdf	07 42 39.9	-2.6
FRF	**La Foret Royal**	**143.23**	**334**	*e*PKP1	PKPdf	07 42 41.4	-2.2
	9.3nm,0.8s						
LMR	**La Mourre**	**143.48**	**334**	*e*PKP1	PKPdf	07 42 42.2	-1.8
	19nm,1.0s						
LASF	**Ste Croix**	**143.92**	**338**	*e*PKP1	PKPdf	07 42 44.3	-0.5
	14nm,1.0s						
MTLF	**Montolieu**	**145.15**	**339**	*e*PKP1	PKPbc	07 42 47.7	+1.2
	11nm,0.7s						
KEST	**Kesra**	**147.72**	**322**	PKPbc	PKPbc	07 42 55.7	+1.3
	3.2nm,0.8s,baz=198,slow=4.2,SNR=5.5						
ESDC	**Sonseca Array**	**150.44**	**344**	PKPbc	PKPbc	07 43 02.0	+1.0
	0.9nm,0.6s,baz=15,slow=2.9,SNR=8.2						
TORD	**Torodi Ar. Bea**	**164.28**	**278**	PKP	PKPdf	07 43 14.2	+0.5
	1.0nm,0.9s,baz=119,slow=1.2,SNR=3.9						

IDC 02 07:38:02.6±13.0**, 067N**×**9729E, h0**km**, mb4.1**/2**, mb1 4.1**/3**, mb1mx3.6**/20**, mbtmp4.0**/3**, ML3.9**/1**, MS4.2**/1**, Ms1 4.2**/1**, ms1mx2.7**/32**, 1C, Error ellipse: s-maj=383.8km s-min=117.8km az=116.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.69**	**24**⇑	*e*P	Pg	07 38 18.0	+2.1
CMAR	**Chiang Mai Arr**	**17.75**	**5**	P	Pn	07 42 11.7	+0.3
	0.1nm,0.3s,baz=194,slow=12,SNR=5.8						
MKAR	**Makanchi Array**	**47.77**	**346**	P	P	07 46 41.8	+0.2
	0.9nm,0.5s,baz=162,slow=9.7,SNR=9.6						
ZALV	**Zalesovo Beam**	**54.09**	**351**	P	P	07 47 28.8	-0.3
	1.9nm,0.4s,baz=178,slow=6.6,SNR=7.7						
BVAR	**Borovoye Array**	**56.78**	**341**	LR	LR	08 15 00.7	
	comp=Z,189nm,19.6s,baz=89,slow=39						

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*ISCJB **02** 07:39:46.5±0.6, 3168S±002×7183W±008, h45km±5km, mb4.3/11, MS4.2/3, Error ellipse: s-maj=11.9km s-min=3.7km az=178.9*

*IDC **02** 07:39:46.4±0.7, 3167S×7161W, h29km±4km, mb4.3/11, mb1 4.3/16, mb1mx4.2/21, mbtmp4.1/16, ML4.2/5, MS3.9/6, Ms1 3.9/6, ms1mx3.5/26, Error ellipse: s-maj=23.7km s-min=17.0km az=105.0*
*GUC **02** 07:39:46.6±0.8, 3169S×7163W, h34km±2km, ML4.8*
*NEIC **02** 07:39:46.6, 3169S×7163W, h34km, ML4.8(GUC), After GUC.*
ISC 02 07:39:47.1±0.8**, 3167S**±002×**7168W**±007**, h28**km±5km**, h30**km±1.4km**:pP-P, n58,** σ**0.97**/72**, mb4.4**/10**, MS4.2**/3**, 12C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.26**	**145**	⇑iP	**Pb**	**07 39 53.5**	**-0.4**
CHNG				i S	**Sb**	**07 39 58.1**	**-0.3**
IHA	**Instituto Hidr**	**1.35**	**179**	⇑iP	**Pn**	**07 40 09.3**	**-0.8**
IHA				i S	**Sn**	**07 40 27.5**	**+0.4**
JACH	**Jahuel**	**1.37**	**138**	⇑iP	**Pn**	**07 40 10.1**	**-0.2**
TLL	**Tololo Astrono**	**1.67**	**27**	eP	**Pn**	**07 40 15.4**	**+0.9**
TLL				i S	**Sn**	**07 40 36.8**	**+1.8**
TLL				AML	AML	07 40 42.7	
	comp=N,6μm,0.4s						
TLL	**Tololo Astrono**	**1.67**	**27**	eP	**Pn**	**07 40 15.4**	**+0.9**
TLL				i S	**Sn**	**07 40 36.8**	**+1.8**
PEL	**Peldehue**	**1.69**	**151**	⇑iP	**Pn**	**07 40 14.8**	**0.0**
PEL				i S	**Sn**	**07 40 35.9**	**+0.4**
PEL				AML	AML	07 40 38.3	
	comp=E,17μm,0.3s						
LSCH	**La Serena**	**1.79**	**12**	eP	**Pn**	**07 40 16.5**	**+0.3**
LSCH				i S	**Sn**	**07 40 39.2**	**+1.2**
RCDM	**Rinconada Maip**	**1.96**	**158**	⇓iP	**Pn**	**07 40 18.4**	**-0.1**
RCDM				i S	**Sn**	**07 40 42.4**	**+0.3**
RCDM				AML	AML	07 40 52.0	
	comp=E,10μm,0.5s						
RCDM	**Rinconada Maip**	**1.96**	**158**	⇓iP	**Pn**	**07 40 18.4**	**-0.1**
RCDM				i S	**Sn**	**07 40 42.4**	**+0.3**
CLCH	**Cerro Calan**	**1.97**	**151**	⇑iP	**Pn**	**07 40 19.8**	**+1.1**
CLCH				i S	**Sn**	**07 40 43.6**	**+1.1**
CLCH				AML	AML	07 40 53.9	
	comp=E,21μm,0.6s						
CLCH	**Cerro Calan**	**1.97**	**151**	⇑iP	**Pn**	**07 40 19.8**	**+1.1**
CLCH				i S	**Sn**	**07 40 43.6**	**+1.1**
SAN	**Santiago**	**1.98**	**155**	eP	**Pn**	**07 40 19.0**	**+0.3**
SAN				i S	**Sn**	**07 40 42.6**	**+0.2**
SAN				AML	AML	07 40 54.6	
	comp=E,9μm,0.4s						
SAN	**Santiago**	**1.98**	**155**	eP	**Pn**	**07 40 19.0**	**+0.3**
SAN				i S	**Sn**	**07 40 42.6**	**+0.2**
FCH	**Farellones**	**2.03**	**145**	⇑iP	**Pn**	**07 40 20.3**	**+0.9**
FCH				i S	**Sn**	**07 40 45.6**	**+1.8**
FCH				AML	AML	07 40 50.9	
	comp=E,6μm,0.6s						
TACH	**Talagante**	**2.08**	**163**	⇑iP	**Pn**	**07 40 20.1**	**+0.1**
ANTU	**Antumapu**	**2.09**	**155**	eP	**Pn**	**07 40 20.2**	**0.0**
ANTU				i S	**Sn**	**07 40 45.9**	**+0.6**
ANTU				AML	AML	07 40 56.0	
	comp=E,10μm,0.4s						
ANTU	**Antumapu**	**2.09**	**155**	eP	**Pn**	**07 40 20.2**	**0.0**
ANTU				i S	**Sn**	**07 40 45.9**	**+0.6**
PCH	**Pirque**	**2.18**	**154**	eP	**Pn**	**07 40 21.7**	**+0.2**
CHCH	**Chadas Angostu**	**2.42**	**159**	eP	**Pn**	**07 40 25.1**	**+0.4**
CACH	**El Canelo**	**2.60**	**160**	eP	**Pn**	**07 40 28.3**	**+1.0**
LCO	**Las Campanas**	**2.78**	**18**	ePn	**Pn**	**07 40 30.1**	**+0.4**
LCO				eSn	**Sn**	**07 41 07.0**	**+4.7**
CFAA	**Coronel Fontan**	**2.93**	**90**	Pn	**Pn**	**07 40 34.6**	**+2.8**
	comp=E,15nm,0.3s,baz=262,slow=11,SNR=533						
CFAA				Sn	**Sn**	**07 41 12.8**	**+6.6**
	comp=E,20nm,0.3s,baz=52,slow=17,SNR=3.9						
SFDO	**San Fernando**	**2.99**	**169**	⇑iP	**Pn**	**07 40 32.7**	**+0.1**
VACH	**Vallenar**	**3.18**	**15**	⇑iP	**Pn**	**07 40 35.7**	**+0.4**
VACH				i S	**Sn**	**07 41 13.3**	**+1.0**
VACH				AML	AML	07 41 29.0	
	comp=E,10μm,0.7s						
VACH	**Vallenar**	**3.18**	**15**	⇑iP	**Pn**	**07 40 35.7**	**+0.4**
VACH				i S	**Sn**	**07 41 13.3**	**+1.0**
TALC	**Talca**	**3.72**	**179**	eP	**Pn**	**07 40 43.0**	**+0.4**
LNCH	**Linares**	**4.17**	**179**	⇑iP	**Pn**	**07 40 48.5**	**-0.3**
CCHI	**Chillan**	**4.93**	**184**	eP	**Pn**	**07 40 58.9**	**-0.4**
PLCA	**Paso Flores**	**9.09**	**175**	Pn	**Pn**	**07 41 56.4**	**0.0**
	comp=E,0.6nm,0.3s,baz=337,slow=12,SNR=14						
PLCA				LR	LR	07 45 26.3	
	comp=E,308nm,18.2s,baz=350,slow=37						
LVC	**Limon Verde**	**9.35**	**16**	Pn	**Pn**	**07 41 58.4**	**-1.5**
	comp=E,0.4nm,0.3s,baz=232,slow=19,SNR=7.5						
LVC				LR	LR	07 45 22.2	
	comp=E,224nm,21.1s,baz=24,slow=36						
LVC	**Limon Verde**	**9.35**	**16**	eP	**Pn**	**07 41 57.3**	**-2.6**
	comp=E,21nm,0.8s						
TRQA	**Tornquist**	**10.20**	**131**	ePn	**Pn**	**07 42 10.4**	**-1.2**
	comp=E,15nm,0.6s						
TRQA				eSn	**Sn**	**07 44 02.1**	**-2.8**
CPUP	**Villa Florida**	**13.63**	**71**	Pn	**Pn**	**07 42 57.5**	**-1.1**
	comp=E,1.0nm,0.3s,baz=230,slow=11,SNR=11						
CPUP				Sn	**Sn**	**07 45 27.2**	**-1.9**
	comp=E,0.9nm,0.3s,baz=208,slow=17,SNR=2.6						
CPUP				LR	LR	07 48 48.1	
	comp=E,429nm,18.9s,baz=256,slow=40						
CPUP	**Villa Florida**	**13.63**	**71**	ePn	**Pn**	**07 42 56.6**	**-1.9**
CPUP				eSn	**Sn**	**07 45 25.9**	**-3.2**
CPUP				Sn	**Sn**	**07 45 27.2**	**-1.9**
LPAZ	**La Paz**	**15.65**	**13**	Pn	**Pn**	**07 43 26.6**	**+0.9**
	comp=E,0.1nm,0.3s,baz=185,slow=9.4,SNR=13						
SIV	**San Ignacio**	**18.35**	**34**	P	**Pn**	**07 43 58.7**	**-0.9**
	comp=E,0.5nm,0.3s,baz=205,slow=11,SNR=11						
USHA	**Ushuaia**	**23.27**	**175**	P	**P**	**07 44 52.2**	**-0.1**
	comp=E,9.7nm,0.9s,mb4.2,baz=258,slow=4.4,SNR=3.8						
USHA				LR	LR	07 54 20.7	
	comp=E,323nm,20.2s,MS3.8,baz=339,slow=38						
BDFB	**Brasilia**	**26.82**	**59**	P	**P**	**07 45 23.6**	**-1.5**
	comp=E,14nm,1.0s,mb4.4,baz=215,slow=7.2,SNR=11						
BDFB				LR	LR	07 57 36.8	
	comp=E,306nm,19.0s,MS3.9,baz=202,slow=40						
VNA2	**Neumayer--Watz**	**52.05**	**158**	e	**P**	**07 49 03.5**	**+10**
VNA2				e	pP	07 49 11.3	+8.9
SNAA	**Sanae**	**53.63**	**159**	e	**P**	**07 49 04.6**	**-0.8**
SNAA				e	pP	07 49 13.6	-0.5
SNAA				e		07 49 19.9	
DBIC	**Dimbokro**	**74.15**	**72**	P	**P**	**07 51 20.2**	**-1.2**
	comp=E,8.0nm,0.5s,mb4.9,baz=212,slow=7.4,SNR=20						
DBIC	**Dimbokro**	**74.15**	**72**	P	**P**	**07 51 20.2**	**-1.2**
MAW	**Mawson**	**75.33**	**164**	P	**P**	**07 51 26.6**	**-0.7**
	comp=E,1.8nm,0.6s,mb4.2,baz=251,slow=5.2,SNR=11						
TSUM	**Tsumeb**	**79.56**	**106**	P	**P**	**07 51 50.8**	**-1.0**
	comp=E,0.8nm,0.4s,mb4.0,baz=219,slow=11,SNR=3.6						
BOSA	**Boshof**	**80.89**	**118**	P	**P**	**07 51 58.3**	**-0.6**
	comp=E,4.9nm,0.8s,mb4.5,baz=235,slow=3.7,SNR=6.8						
NVAR	**Mina Array Bea**	**82.15**	**325**	P	**P**	**07 52 05.9**	**+0.8**
	comp=E,0.8nm,0.7s,mb3.8,baz=160,slow=6.5,SNR=8.5						
LBTB	**Lobatse**	**83.01**	**115**	P	**P**	**07 52 08.5**	**-1.6**
	comp=E,5.5nm,0.7s,mb4.7,baz=270,slow=5.3,SNR=9.1						
TORD	**Torodi Ar. Bea**	**83.13**	**70**	P	**P**	**07 52 09.4**	**-1.3**
	comp=E,4.1nm,0.8s,mb4.5,baz=259,slow=5.0,SNR=18						
TORD				pP	pP	07 52 19.2	-0.5
	comp=E,3.8nm,0.9s,baz=265,slow=5.0,SNR=9.4						
RPZ	**Rata Peaks**	**85.61**	**220**	LR	LR	08 22 45.3	
	comp=E,600nm,19.1s,MS5.0,baz=215,slow=30						
LSZ	**Lusaka**	**90.24**	**108**	P	**P**	**07 52 45.4**	**-0.2**
	comp=E,1.8nm,0.7s,mb4.5,baz=211,slow=4.0,SNR=4.9						
YKA	**Yellowknife Ar**	**99.95**	**341**	P	Pdif	07 53 27.0	-2.4
	comp=E,0.1nm,0.5s,baz=142,slow=4.7,SNR=5.4						
CLL	**Collm**	**110.92**	**42**	e(PKiKP)		07 58 19.0	
CLL				Lm		07 27 00.0	
	comp=Z,200nm,19.4s						
ASAR	**Alice Springs**	**119.78**	**207**	PKP	PKPdf	07 58 33.1	-1.9
	comp=Z,0.5nm,0.8s,baz=125,slow=2.0,SNR=6.2						
WRA	**Warramunga Arr**	**122.94**	**209**	PKP	PKPdf	07 58 39.5	-1.8
	comp=Z,0.7nm,0.4s,baz=157,slow=1.8,SNR=12						
WRA				pPKP	pPKPdf	07 58 49.0	-1.6
	comp=Z,0.7nm,0.7s,baz=161,slow=1.5,SNR=4.5						
ZALV	**Zalesovo Beam**	**152.08**	**30**	PKPbc	PKPbc	07 59 38.2	-0.9
	comp=Z,7.7nm,0.6s,baz=299,slow=2.8,SNR=34						
ZALV				pPKPbc	pPKPbc	07 59 48.0	-0.6
	comp=Z,9.8nm,0.8s,baz=298,slow=3.2,SNR=11						
ZALV	**Zalesovo Beam**	**152.08**	**30**	PKPbc	PKPbc	07 59 38.2	-0.9
ZALV				pPKPbc	pPKPbc	07 59 48.0	-0.6
MKAR	**Makanchi Array**	**154.96**	**45**	PKPbc	PKPbc	07 59 43.8	-1.9
	comp=Z,0.7nm,0.7s,baz=336,slow=2.7,SNR=5.4						
MKAR				pPKPbc	pPKPbc	07 59 54.2	-0.8
	comp=Z,1.3nm,0.8s,baz=309,slow=2.3,SNR=4.9						
MKAR				PKPab	PKPab	08 00 00.9	-0.3
	comp=Z,1.3nm,0.8s,baz=20,slow=3.9,SNR=6.5						
MKAR				pPKPab	pPKPab	08 00 10.3	0.0
	comp=Z,2.0nm,0.8s,baz=290,slow=4.6,SNR=6.6						
MKAR	**Makanchi Array**	**154.96**	**45**	PKPbc	PKPbc	07 59 43.8	-1.9
MKAR				pPKPbc	pPKPbc	07 59 54.2	-0.8
MKAR				PKPab	PKPab	08 00 00.9	-0.3
MKAR				pPKPab	pPKPab	08 00 10.3	0.0

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*IDC **02** 07:39:52.6±1.7, 738S×12832E, h0km, mb3.8/2, mb1 4.1/6, mb1mx3.9/15, mbtmp4.0/6, ML4.1/4, Error ellipse: s-maj=45.1km s-min=25.6km az=67.0*
*ISCJB **02** 07:39:56.0±1.4, 77S±0.1×12794E±006, h33km, mb3.6/2, Error ellipse: s-maj=16.6km s-min=8.0km az=15.6*
*NEIC **02** 07:39:58.1±1.1, 763S×12773E, h35km, mb4.0/1, Error ellipse: s-maj=22.9km s-min=15.4km az=63.0*
ISC 02 07:39:58.1±1.3**, 76S**±01×**12792E**±007**, h35**km**, n14,** σ**0.54**/18**, mb3.6**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.92**	**238**	Pn	**Pn**	**07 41 16.4**	**+6.8**
	24nm,0.3s,baz=89,slow=3.0,SNR=19						
BATI				Sn	**Sn**	**07 42 05.2**	**-0.1**
	28nm,0.3s,baz=99,slow=19,SNR=4.7						
KAKA	**Kakadu**	**6.72**	**139**	eP	**Pn**	**07 41 39.3**	**+5.0**
	17nm,0.5s						
KAKA				eS	**Sn**	**07 42 49.1**	**-0.6**
KAKA	**Kakadu**	**6.72**	**139**	ePn	**Pn**	**07 41 38.9**	**+4.7**
KAKA				eSn	**Sn**	**07 42 49.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**10.63**	**192**	eP	**Pn**	**07 42 28.7**	**+0.7**
	16nm,0.7s						
FITZ				eS	**Sn**	**07 44 18.2**	**-7.7**
FITZ	**Fitzroy Crossi**	**10.63**	**192**	Pn	**Pn**	**07 42 28.7**	**+0.7**
	2.3nm,0.3s,baz=29,slow=14,SNR=55						
FITZ				Sn	**Sn**	**07 44 19.8**	**-6.1**
	2.5nm,0.3s,baz=291,slow=24,SNR=8.0						
WRA	**Warramunga Arr**	**13.72**	**154**	Pn	**Pn**	**07 43 09.9**	**-0.3**
	0.5nm,0.3s,baz=324,slow=13,SNR=22						
WRA				Sn	Sx	07 45 30.8	
	1.8nm,0.3s,baz=331,slow=22,SNR=10						
WB2	**Warramunga Arr**	**13.73**	**154**	eP	**Pn**	**07 43 10.4**	**+0.1**
WB2				eS	Sx	07 45 30.3	
MBWA	**Marble Bar**	**15.60**	**210**	ePn	**Pn**	**07 43 34.6**	**-0.7**
ASAR	**Alice Springs**	**16.94**	**161**	P	**Pn**	**07 43 53.1**	**+0.7**
	0.3nm,0.3s,baz=329,slow=9.8,SNR=18						
ASAR				S	Sx	07 46 49.5	
	0.3nm,0.3s,baz=313,slow=17,SNR=4.4						
STKA	**Stephens Creek**	**27.27**	**154**	eP	**P**	**07 45 40.1**	**+0.9**
	4.4nm,1.3s,mb3.8						
STKA	**Stephens Creek**	**27.27**	**154**	P	**P**	**07 45 39.5**	**+0.2**
	1.1nm,0.4s,mb3.7,baz=325,slow=11,SNR=5.9						
MKAR	**Makanchi Array**	**67.65**	**328**	P	**P**	**07 50 51.2**	**-0.3**
	0.3nm,0.6s,mb3.5,baz=119,slow=7.9,SNR=4.4						
MKAR	**Makanchi Array**	**67.65**	**328**	P	**P**	**07 50 51.2**	**-0.3**
GLA	**Glamis**	**116.93**	**57**	ePKPdf	PKPdf	07 58 39.9	+0.2

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*ATH **02** 07:57:05.9, 37.12N×2150E, h6km±1km, MD3.6/9, ML3.4*
*NEIC **02** 07:57:06.4, 37.13N×2153E, h9km, ML3.4(ATH), After ATH.*
*ISCJB **02** 07:57:07.8±0.9, 3721N±005×2160E±006, h10km, Error ellipse: s-maj=8.6km s-min=3.8km az=42.1*
*THE **02** 07:57:07.8, 3709N×2167E, h5km*
*CSEM **02** 07:57:08.5±0.3, 3723N×2164E, h0km±1km, ML3.4, Error ellipse: s-maj=5.5km s-min=1.9km az=42.0*
ISC 02 07:57:06.2±1.5**, 3712N**±006×**2153E**±006**, h2**km±8km**, n21,** σ**0.94**/30**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.32**	**80**	ePB	**Pg**	**07 57 12.9**	**+0.6**
ITM				eSB	**Sg**	**07 57 17.4**	**+0.9**
VLX	**Vlachokerasia**	**0.72**	**70**	ePg	**Pg**	**07 57 19.9**	**-0.1**
VLX				eSg	**Sg**	**07 57 28.9**	**-0.4**
RLS	**Riolos of Patr**	**0.93**	**357**	ePB	**Pg**	**07 57 24.0**	**-0.1**
RLS				eSB	**Sg**	**07 57 36.3**	**0.0**
VLI	**Veliai**	**1.20**	**109**	ePB	**Pb**	**07 57 28.9**	**-0.7**
VLI				eSB	**Sb**	**07 57 45.8**	**+0.3**
VLI	**Veliai**	**1.20**	**109**	ePb	**Pb**	**07 57 30.2**	**+0.6**
VLI				eSb	**Sb**	**07 57 45.8**	**+0.3**
VLS	**Valsamata**	**1.29**	**325**	ePn	**Pn**	**07 57 29.8**	**-1.5**
VLS				eSb	**Sb**	**07 57 49.4**	**+1.1**
DID	**Didima**	**1.41**	**74**	ePg	**Pn**	**07 57 32.4**	**-0.6**
DID				eSg	**Sn**	**07 57 50.5**	**-1.5**
DID	**Didima**	**1.41**	**74**	ePg	**Pn**	**07 57 32.3**	**-0.6**
DID				eSg	**Sn**	**07 57 50.5**	**-1.6**
LTK	**Loutraki**	**1.45**	**51**	ePg	**Pn**	**07 57 32.5**	**-0.9**
KYTH	**Kithira**	**1.47**	**124**	ePB	**Pb**	**07 57 34.0**	**-0.3**
LKD	**Levkas**	**1.73**	**336**	ePb	**Pb**	**07 57 37.8**	**-0.9**
EVR	**Evrytania**	**1.80**	**7**	ePN	**Pg**	**07 57 39.9**	**-0.9**
EVR				eSN	**Sg**	**07 58 04.3**	**+0.1**
LKR	**Lokris**	**1.92**	**37**	ePb	**Pb**	**07 57 40.2**	**-1.6**
LKR	**Lokris**	**1.92**	**37**	ePn	**Pn**	**07 57 40.5**	**+0.7**
LKR	**Lokris**	**1.92**	**37**	ePn	**Pn**	**07 57 40.5**	**+0.7**
ATH	**Athens Observa**	**1.93**	**63**	ePN	**Pn**	**07 57 41.5**	**+1.4**
AGG	**Agios Georgios**	**2.00**	**18**	ePn	**Pn**	**07 57 42.6**	**+1.6**
PTL	**Penteli**	**2.07**	**63**	ePN	**Pn**	**07 57 42.8**	**+0.8**
PTL	**Penteli**	**2.07**	**63**	ePn	**Pn**	**07 57 42.5**	**+0.5**
THL	**Klokotos Trika**	**2.47**	**9**	ePn	**Pn**	**07 57 48.7**	**+1.3**
THL	**Klokotos Trika**	**2.47**	**9**	ePN	**Pn**	**07 57 48.9**	**+1.5**

JMA 02 07:59:17.7±0.3**, 2509N**×**14084E, h116**km**, M4.3, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**1.95**	**38**	eS	Sn	08 00 15.3	0.0
CBIJ	**Chichi jima**	**2.33**	**31**	P	Pn	07 59 55.9	+0.7
CBIJ				S	Sn	08 00 24.8	+0.8
BSO1	**Boso 1**	**9.53**	**1**	P	Pn	08 01 30.8	-1.1
BSO3	**Boso 3**	**9.68**	**358**	P	Pn	08 01 32.3	-1.7
JRY	**Ryogami san**	**11.02**	**352**	P	Pn	08 01 51.2	-0.6
JHO	**Hitachi**	**11.49**	**359**	P	Pn	08 01 55.2	-2.8
JHO				eS	Sn	08 04 00.9	-3.5

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*IDC **02** 08:04:52.3±0.6, 1152S×16603E, h0km, mb4.5/19, mb1 4.5/19, mb1mx4.5/19, mbtmp4.4/19, MS4.4/19, Ms1 4.4/19, ms1mx4.3/27, Error ellipse: s-maj=21.7km s-min=15.8km az=118.0*
*ISCJB **02** 08:04:55.4±0.4, 1155S±007×16602E±007, h31km, mb4.7/38, MS4.5/23, Error ellipse: s-maj=11.3km s-min=8.0km az=135.1*
*NEIC **02** 08:04:57.6±0.3, 1146S×16604E, h35km, mb4.7/16, Error ellipse: s-maj=11.1km s-min=6.9km az=136.0*
*BJI **02** 08:05:00.9, 1070S×16576E, h35km, mB5.2, mb5.0, Ms4.8, Msz4.6*
*DJA **02** 08:05:02, 1181S×16632E, h57km, mb5.2/15*
ISC 02 08:04:57.4±5.8**, 1155S**±007×**16607E**±010**, h32**km±40km**, h32**km±2.1km**:pP-P, n81,** σ**1.13**/58**, mb4.7**/38**, MS4.5**/23**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.38**	**289**	ePn	**Pn**	**08 06 29.2**	**+0.1**
	337nm,0.8s						
CTA	**Charters Tower**	**20.85**	**244**	eP	**P**	**08 09 38.0**	**+1.3**
	21nm,0.9s						
CTA	**Charters Tower**	**20.85**	**244**	P	**P**	**08 09 37.6**	**+1.0**
	23nm,1.0s,baz=70,slow=13,SNR=9.4						
CTA				LR	LR	08 16 46.9	
	comp=Z,2μm,18.1s,MS4.5,baz=50,slow=34						
CTAO	**Charters Tower**	**20.85**	**244**	eP	**P**	**08 09 37.0**	**+0.4**
	44nm,1.1s						
AFI	**Afiamalu**	**21.74**	**99**	LR	LR	08 16 21.5	
	comp=Z,1μm,19.0s,MS4.4,baz=275,slow=32						
COEN	**Coen**	**22.45**	**261**	eP	**P**	**08 09 54.9**	**+0.9**
	13nm,0.9s,mb4.3						
ARMA	**Armidale**	**23.06**	**213**	eP	**P**	**08 10 01.5**	**+1.3**
RAO	**Raoul Island**	**23.09**	**142**	LR	LR	08 17 27.7	
	comp=Z,1μm,19.6s,MS4.3,baz=147,slow=33						
CNB	**Canberra Magne**	**28.10**	**210**	eP	**P**	**08 10 49.7**	**+3.5**
STKA	**Stephens Creek**	**30.30**	**224**	eP	**P**	**08 11 06.2**	**+0.4**
	5.0nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**30.30**	**224**	P	**P**	**08 11 06.5**	**+0.7**
	2.9nm,0.9s,mb4.0,baz=39,slow=11,SNR=3.2						
STKA				PcP	PcP	08 14 06.0	+0.2
	4.7nm,0.9s,baz=9.4,slow=10,SNR=3.4						
STKA				LR	LR	08 22 47.6	
	comp=Z,2μm,19.6s,MS4.7,baz=34,slow=36						
WB2	**Warramunga Arr**	**31.60**	**251**	eP	**P**	**08 11 16.6**	**-0.9**
WRA	**Warramunga Arr**	**31.61**	**251**	P	**P**	**08 11 16.3**	**-1.2**
	5.4nm,0.8s,mb4.4,baz=80,slow=9.1,SNR=26						
WRA				PcP	PcP	08 14 09.4	-0.1
	1.6nm,0.8s,baz=72,slow=3.2,SNR=5.8						
WRA				LR	LR	08 22 55.9	
	comp=Z,548nm,19.2s,MS4.2,baz=75,slow=34						
WRA	**Warramunga Arr**	**31.61**	**251**	P	**P**	**08 11 16.3**	**-1.2**
WRA				PcP	PcP	08 14 09.4	-0.1
WRA				LR	LR	08 22 55.9	
RPZ	**Rata Peaks**	**32.34**	**173**	P	**P**	**08 11 23.5**	**-0.1**
	14nm,0.6s,mb5.0,baz=17,slow=16,SNR=8.8						
GUMO	**Guam**	**32.65**	**319**	LR	LR	08 23 12.7	
	comp=Z,794nm,20.5s,MS4.4,baz=280,slow=34						
ASAR	**Alice Springs**	**32.85**	**244**	P	**P**	**08 11 26.8**	**-1.6**
	5.7nm,0.7s,mb4.6,baz=71,slow=9.0,SNR=54						
ASAR				PcP	PcP	08 14 12.8	-0.1
	2.6nm,0.7s,baz=66,slow=2.3,SNR=11						
ASAR				ScP	ScP	08 17 59.0	+4.2
	1.1nm,0.9s,baz=84,slow=3.2,SNR=5.7						
KAKA	**Kakadu**	**32.88**	**264**	eP	**P**	**08 11 27.5**	**-1.3**
	8.0nm,0.7s,mb4.8						
KAKA	**Kakadu**	**32.88**	**264**	eP	**P**	**08 11 27.8**	**-1.0**
RAR	**Rarotonga**	**34.09**	**111**	LR	LR	08 22 43.0	
	comp=Z,1μm,20.4s,MS4.6,baz=268,slow=31						
FITZ	**Fitzroy Crossi**	**39.56**	**256**	eP	**P**	**08 12 25.1**	**-0.7**
	12nm,1.1s,mb4.5						
FITZ	**Fitzroy Crossi**	**39.56**	**256**	P	**P**	**08 12 24.5**	**-1.3**
	3.9nm,0.9s,mb4.2,baz=86,slow=8.0,SNR=9.1						
BATI	**Baumata**	**41.64**	**268**	LR	LR	08 29 49.7	
	comp=Z,821nm,20.2s,MS4.6,baz=129,slow=36						
PPT	**Papeete**	**43.27**	**103**	eS	**S**	**08 19 27.3**	**+5.5**
	474nm,26.0s						
PPT				eLQ		08 23 16.1	
	2μm,28.5s						
PPT				eLR	LR	08 25 02.7	
	651nm,23.2s,baz=287						
PPT	**Papeete**	**43.27**	**103**	LR	LR	08 29 31.8	
	comp=Z,579nm,18.1s,MS4.5,baz=283,slow=34						
DAV	**Davao City (W)**	**44.32**	**293**	LR	LR	08 29 33.9	
	comp=Z,160nm,20.3s,MS3.9,baz=177,slow=34						
MBWA	**Marble Bar**	**45.33**	**252**	eP	**P**	**08 13 12.2**	**-0.6**
	46nm,1.5s,mb5.1						
KAPI	**Kappang**	**46.24**	**274**	P	**P**	**08 13 18.7**	**-1.4**
	31nm,0.9s,mb5.2,baz=69,slow=21,SNR=5.9						
KLBR	**Kellerberrin**	**48.70**	**238**	eP	**P**	**08 13 38.8**	**-0.2**
	26nm,1.3s,mb5.1						
JOW	**Kunigami**	**52.94**	**317**	P	**P**	**08 14 11.1**	**+0.2**
	15nm,0.9s,mb4.9,baz=133,slow=8.2,SNR=10						
MJAR	**Matsushiro Arr**	**54.56**	**332**	P	**P**	**08 14 20.3**	**-2.3**
	3.8nm,1.0s,mb4.4,baz=164,slow=7.0,SNR=5.8						
RKT	**Rikitea**	**57.12**	**110**	eLR	LR	08 31 26.5	
	881nm,25.8s,baz=282						
KSRS	**Korea Array**	**60.47**	**326**	P	**P**	**08 15 04.8**	**+0.6**
	2.4nm,0.9s,mb4.2,baz=124,slow=6.3,SNR=3.7						
KSRS				LR	LR	08 36 04.6	
	comp=Z,222nm,21.5s,MS4.3,baz=139,slow=31						
PETK	**Petropavlovsk-**	**64.80**	**354**	P	**P**	**08 15 32.4**	**-0.3**
	2.6nm,0.8s,mb4.3,baz=116,slow=6.8,SNR=6.5						
PETK				LR	LR	08 38 38.1	
	comp=Z,279nm,20.1s,MS4.5,baz=186,slow=31						
CASY	**Casey**	**66.02**	**201**	eP	**P**	**08 15 39.1**	**-1.5**
	11nm,0.7s,mb5.0						
SBA	**Scott Base**	**66.30**	**180**	eP	**P**	**08 15 42.7**	**+0.6**
	21nm,1.0s,mb5.1						
CN2	**Changchun**	**66.33**	**329**	eP	**P**	**08 15 43.1**	**+0.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
BJI	**Beijing**	**69.07**	**321**	P	**P**	**08 16 01.2**	**+1.0**
BJI				AMB	AMB		
	comp=Z,13nm,1.3s,mb4.7						
BJI				LR	LR		
	comp=N,268nm,22.1s,MS4.6						
BJI				LR	LR		
	comp=E,273nm,21.5s,MS4.6						
BJI				LR	LR		
	comp=Z,406nm,28.5s						
XAN	**Xi'an**	**70.69**	**312**	P	**P**	**08 16 11.0**	**+0.7**
XAN				AP	pP	08 16 19.1	-1.3
XAN				XP	sP	08 16 23.6	-0.6
XAN				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
XAN				AMB	AMB		
	comp=Z,179nm,15.0s						
XAN				LR	LR		
	comp=N,95nm,22.5s,MS4.3						
XAN				LR	LR		
	comp=E,166nm,20.0s,MS4.3						
XAN				LR	LR		
	comp=Z,337nm,22.0s,MS4.6						
HHC	**Hu-ho-hao-te**	**72.42**	**320**	eP	**P**	**08 16 22.3**	**+1.7**
HHC				AMB	AMB		
	comp=Z,18nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,185nm,6.6s						
CMAR	**Chiang Mai Arr**	**72.60**	**294**	P	**P**	**08 16 22.1**	**0.0**
	comp=Z,1.8nm,0.4s,mb4.4,baz=119,slow=3.5,SNR=6.4						
CMAR				LR	LR	08 48 13.1	
	comp=Z,107nm,19.0s,MS4.1,baz=110,slow=36						
CD2	**Chengdu**	**73.16**	**307**	eP	**P**	**08 16 25.4**	**+0.2**
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
LZH	**Lanzhou**	**75.33**	**312**	eP	**P**	**08 16 39.8**	**+2.1**
LZH				AP	pP	08 16 50.2	+2.3
LZH				XP	sP	08 16 54.0	+2.4
LZH				PP	PP	08 19 30.0	+3.1
LZH				eS	S	08 26 03.0	-12
LZH				AMB	AMB		
	comp=Z,35nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,183nm,6.3s						
LZH				LR	LR		
	comp=E,332nm,17.1s						
LZH				LR	LR		
	comp=Z,683nm,18.8s,MS5.0						
KDAK	**Kodiak Island**	**76.93**	**21**	P	**P**	**08 16 45.1**	**-1.2**
	comp=Z,14nm,1.7s,mb4.6						
SVW2	**Sparrevohn**	**78.50**	**18**	eP	**P**	**08 16 52.5**	**-2.4**
ULN	**Ulaanbaatar**	**78.89**	**324**	eP	**P**	**08 16 57.6**	**+0.1**
	comp=Z,26nm,1.3s,mb5.0						
SONM	**Songino Array**	**79.26**	**324**	P	**P**	**08 16 59.7**	**+0.3**
	comp=Z,2.9nm,0.8s,mb4.3,baz=132,slow=5.0,SNR=26						
SONM				LR	LR	08 48 21.7	
	comp=Z,186nm,21.3s,MS4.4,baz=191,slow=33						
GTA	**Gaotai**	**79.63**	**314**	P	**P**	**08 17 03.6**	**+1.9**
GTA				AP	pP	08 17 14.0	+2.1
GTA				XP	sP	08 17 18.0	+2.3
GTA				S	S	08 27 04.1	+2.3
GTA				XS	sS	08 27 21.1	+2.4
GTA				AMB	AMB		
	comp=Z,25nm,1.3s,mb5.0						
GTA				AMB	AMB		
	comp=Z,270nm,6.9s						
GTA				LR	LR		
	comp=N,156nm,18.6s,MS4.6						
GTA				LR	LR		
	comp=E,194nm,21.0s,MS4.6						
GTA				LR	LR		
	comp=Z,330nm,21.9s,MS4.6						
TTA	**Tatalina**	**79.82**	**17**	eP	**P**	**08 17 02.0**	**-0.1**
SHL	**Shillong**	**81.03**	**298**	⇓iP	**P**	**08 17 12.0**	**+2.4**
COLA	**College**	**83.67**	**18**	eP	**P**	**08 17 21.7**	**-0.7**
	comp=Z,4.2nm,0.7s,mb4.7						
YBH	**Yreka Blue Hor**	**84.02**	**45**	eP	**P**	**08 17 25.3**	**+0.5**
	comp=Z,5.5nm,1.1s,mb4.6						
HUMO	**Hull Mountain**	**84.17**	**45**	eP	**P**	**08 17 26.3**	**+0.8**
	comp=Z,5.9nm,1.1s,mb4.6						
MAW	**Mawson**	**84.37**	**202**	P	**P**	**08 17 26.3**	**+0.2**
	comp=Z,3.2nm,1.1s,mb4.4,baz=109,slow=7.2,SNR=6.8						
EGAK	**Eagle**	**85.74**	**20**	eP	**P**	**08 17 32.1**	**-0.7**
	comp=Z,7.1nm,0.9s,mb4.9						
DAWY	**Dawson**	**85.91**	**21**	eP	**P**	**08 17 32.8**	**-0.9**
NVAR	**Mina Array Bea**	**86.11**	**50**	P	**P**	**08 17 36.6**	**+1.3**
	comp=Z,0.8nm,0.7s,mb4.0,baz=237,slow=7.9,SNR=6.2						
WVOR	**Wild Horse Val**	**87.11**	**46**	eP	**P**	**08 17 38.6**	**-1.5**
	comp=Z,4.2nm,1.0s,mb4.6						
ELK	**Elko**	**89.05**	**48**	LR	LR	08 50 23.4	
	comp=Z,308nm,20.4s,MS4.7,baz=249,slow=31						
MSU	**Marysvale**	**90.75**	**51**	eP	**P**	**08 17 59.2**	**+1.8**
MCMT	**McKenzie Canyo**	**91.82**	**45**	eP	**P**	**08 18 06.6**	**+4.4**
PDAR	**Pinedale Array**	**93.66**	**47**	P	**P**	**08 18 12.0**	**+1.2**
	comp=Z,0.2nm,0.7s,mb3.6,baz=291,slow=2.5,SNR=1.9						
PDAR				LR	LR	08 55 57.2	
	comp=Z,192nm,18.5s,MS4.6,baz=190,slow=33						
MKAR	**Makanchi Array**	**94.10**	**317**	P	**P**	**08 18 12.8**	**+0.1**
	comp=Z,6.9nm,0.9s,mb5.1,baz=98,slow=6.2,SNR=47						
MKAR				LR	LR	08 59 01.8	
	comp=Z,128nm,20.9s,MS4.4,baz=141,slow=35						
MKAR	**Makanchi Array**	**94.10**	**317**	P	**P**	**08 18 12.8**	**+0.1**
MKAR				LR	LR	08 59 01.8	

ZALV	Zalesovo Beam	94.15	324	P	P	08 18 12.1	-0.7
	comp=Z,3.1nm,0.8s,mb4.8,baz=107,slow=4.8						
ZALV				LR	LR	08 58 33.4	
	comp=Z,132nm,21.0s,MS4.4,baz=234,slow=34						
YKA	Yellowknife Ar	95.28	27	P	P	08 18 15.7	-2.0
	comp=Z,0.2nm,0.6s,mb3.7,baz=254,slow=4.3,SNR=4.9						
YKA	Yellowknife Ar	95.28	27	P	P	08 18 15.7	-2.0
KURK	Kurchatov	97.23	320	LR	LR	09 05 02.8	
	comp=Z,174nm,18.6s,MS4.6,baz=90,slow=37						
BVAR	Borovoye Array	102.54	322	P	Pdif	08 18 50.6	+0.1
	comp=Z,0.2nm,0.4s,baz=76,slow=6.3,SNR=4.2						
ARCES	ARCESS Array B	116.90	345	PKP	PKPdf	08 23 37.0	-1.2
	comp=Z,1.3nm,0.5s,baz=78,slow=0.7,SNR=20						
BOSA	Boshof	124.96	223	PKP	PKPdf	08 23 54.7	-0.2
	comp=Z,4.3nm,0.7s,baz=310,slow=2.4,SNR=10						
BOSA	Boshof	124.96	223	PKP	PKPdf	08 23 54.7	-0.3
NOA	NORSAR Array B	127.27	345	PKP	PKPdf	08 23 57.7	-0.6
	baz=30,slow=2.0						
GERES	GERESS Array B	136.30	334	PKP	PKPdf	08 24 16.5	+0.7
	comp=Z,0.3nm,0.4s,baz=58,slow=3.7,SNR=5.3						
ORIF	Oris-en-Rattie	142.66	337	ePKP1	PKPdf	08 24 23.4	-4.1
	comp=Z,7.0nm,0.7s						
FRF	La Foret Royal	143.47	335	ePKP1	PKPdf	08 24 25.8	-3.1
LASF	Ste Croix	144.14	338	ePKP1	PKPdf	08 24 28.8	-1.3
MTLF	Montolieu	145.37	339	ePKP1	PKPbc	08 24 31.6	-0.5
	comp=Z,35nm,1.2s						
KEST	Kesra	148.01	323	PKPbc	PKPbc	08 24 40.2	+0.2
	comp=Z,10nm,1.1s,baz=195,slow=0.9,SNR=7.2						
ESDC	Sonseca Array	150.63	344	PKPbc	PKPbc	08 24 46.1	-0.3
	comp=Z,1.6nm,0.8s,baz=47,slow=2.5,SNR=9.0						
TORD	Torodi Ar. Bea	164.65	278	PKP	PKPdf	08 24 58.6	-0.4
	comp=Z,2.1nm,1.0s,baz=340,slow=1.0,SNR=7.8						

KRSC 02 08:08:54.0±0.4,5440N×16334E,h32km±32km,ML3.5,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.95	280	eP	Pn	08 09 12.0	+0.9
MKZ				eS	Sn	08 09 24.8	+1.2
KBTR	Krutoberegovo	1.84	351	eP	Pn	08 09 24.0	+0.8
KBTR				eS	Sn	08 09 45.6	+0.2
TUMR	Tumrok	2.05	297	eP	Pn	08 09 28.6	+2.4
TUMR				S	Sn	08 09 53.7	+3.1
BZGR	Bezymyannyi-Gr	2.16	317	eP	Pn	08 09 29.9	+2.2
BZGR				eS	Sn	08 09 57.0	+3.6
ZLN	Zelenaya	2.18	319	eP	Pn	08 09 31.0	+3.1
ZLN				S	Sn	08 09 58.0	+4.3
KMNR	Kamenistaya	2.24	309	P	Pn	08 09 31.7	+2.9
KMNR				S	Sn	08 09 59.2	+3.8
BZMR	Bezymyannaya	2.25	314	P	Pn	08 09 31.2	+2.3
BZWR	Bezymyannyi-We	2.26	315	P	Pn	08 09 31.9	+2.8
CIRR	Tsirk	2.27	320	S	Sn	08 09 59.6	+3.5
KIRR	Kirishev	2.32	313	P	Pn	08 09 32.1	+2.2
KIRR				S	Sn	08 10 00.6	+3.4
SPN	Mys Shipunski	2.36	238	eP	Pn	08 09 31.0	+0.5
KPT	Kopyto	2.38	313	P	Pn	08 09 32.9	+2.2
KRSR	Krestovskiy	2.42	320	P	Pn	08 09 33.6	+2.4
KRSR				S	Sn	08 10 02.2	+2.6
KLY	Klyuchi	2.46	322	S	Sn	08 10 02.2	+1.6
KOZ	Kozyrevsk	2.59	311	S	Sn	08 10 07.1	+3.2
NLC	Nalytchevo	2.67	244	P	Pn	08 09 36.2	+1.5
SRDR	Sredinnyy	2.82	314	P	Pn	08 09 39.6	+2.8
SRDR				S	Sn	08 10 12.5	+2.8
AVH	Avacha	2.96	249	eP	Pn	08 09 41.4	+2.8
AVH				eS	Sn	08 10 15.0	+2.1
GNL	Ganaly	3.26	260	eP	Pn	08 09 45.6	+2.8
GNL				eS	Sn	08 10 23.0	+2.6
RUS	Russkaya	3.50	238	P	Pn	08 09 47.9	+1.9

*IDC **02** 08:11:43.2±1.7, 22.14S×17382W, h0km, mb4.1/5, mb1 4.4/6, mb1mx4.1/16, mbtmp4.1/6, ML4.6/1, Error ellipse: s-maj=101.4km s-min=22.8km az=160.0*
*ISCJB **02** 08:11:45.9±1.0, 226S±04×1737W±01, h33km, mb4.2/7, Error ellipse: s-maj=57.4km s-min=15.4km az=169.2*
*NEIC **02** 08:11:48.0±0.8, 2234S×17374W, h35km, mb4.4/2, Error ellipse: s-maj=47.3km s-min=13.4km az=170.0*
ISC 02 08:11:48.2±1.0,225S±04×1737W±01,h35km,n10,σ0^{s}61/9, mb4.2/7,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	13.00	87	Pn	Pn	08 14 50.6	+0.1
	3.5nm,0.3s,baz=270,slow=19,SNR=6.2						
ASAR	Alice Springs	47.99	258	P	P	08 20 24.3	+0.4
	2.6nm,0.9s,mb4.3,baz=88,slow=8.3,SNR=19						
WRA	Warramunga Arr	48.31	263	P	P	08 20 25.3	-1.1
	1.5nm,0.9s,mb4.0,baz=98,slow=6.8,SNR=10						
NVAR	Mina Array Bea	79.78	41	P	P	08 23 53.0	+0.3
	1.5nm,0.8s,mb4.0,baz=226,slow=9.4,SNR=11						
NVAR	Mina Array Bea	79.78	41	P	P	08 23 53.0	+0.3
BMO	Blue Mountains	84.42	37	eP	P	08 24 16.4	-0.5
	7.3nm,1.7s,mb4.5						
HLID	Hailey	85.26	39	eP	P	08 24 21.0	-0.2
	1.6nm,0.9s,mb4.2						
HLID				e	pP	08 24 32.2	0.0
PDAR	Pinedale Array	87.70	42	P	P	08 24 33.1	-0.1
	0.5nm,0.8s,mb3.8,baz=212,slow=8.5,SNR=3.7						
CMAR	Chiang Mai Arr	94.52	288	P	P	08 25 06.7	+1.2
	0.5nm,0.3s,mb4.4,baz=135,slow=4.5,SNR=5.1						
AKASG	Malin Array Be	146.60	333	PKPbc	PKPbc	08 31 23.9	-1.9
	0.7nm,0.5s,baz=38,slow=4.1,SNR=7.8						

IGQ 02 08:21:27.6,201S×8011W,h12km±4km,Mb4.0,Ms3.8, 3C-3D,Error ellipse: s-maj=5.3km s-min=1.6km az=111.2,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	1.13	327	⇑P	Pb	08 21 49.2	+0.1
CHIS	Cerro-Chispas-	1.13	327	⇑S	Sb	08 22 04.0	+0.2
PORT	Chimborazo Vol	1.45	68	P	Pn	08 21 55.3	+1.7
IGUA	Igualata	1.56	71	⇓P	Pn	08 21 57.4	+2.2
IGUA	Igualata	1.56	71	⇓S	Sn	08 22 18.1	+2.7
QIL2	Quilotoa	1.65	47	⇓P	Pn	08 21 56.8	+0.4
JAMA	Jama	1.74	357	P	Pn	08 21 58.7	+1.1
JAMA	Jama	1.74	357	S	Sn	08 22 20.2	+0.5
JUI6	Juive	1.74	71	P	Pn	08 22 00.2	+2.5
JUI6	Juive	1.74	71	S	Sn	08 22 24.1	+4.3
RUN5	Runtun	1.79	71	P	Pn	08 22 00.9	+2.5
RUN5	Runtun	1.79	71	S	Sn	08 22 24.2	+3.2
ULBA	Ulba	1.79	72	P	Pn	08 22 01.0	+2.6
PISA	Pisayambo	1.97	61	P	Pn	08 22 03.9	+3.1
PISA	Pisayambo	1.97	61	S	Sn	08 22 30.3	+4.9
CAMI	Rancho Maria	2.08	51	P	Pn	08 22 05.1	+2.8
CAMI	Rancho Maria	2.08	51	S	Sn	08 22 30.6	+2.3
TAMB	Tambo	2.18	53	P	Pn	08 22 06.8	+3.1
VC1	Cotopaxi 1	2.18	52	P	Pn	08 22 06.9	+3.2
JUA2	San Juan 2	2.33	40	P	Pn	08 22 07.9	+2.0
JUA2	San Juan 2	2.33	40	S	Sn	08 22 38.7	+4.2
ANTI	Antisana	2.49	52	⇑P	Pn	08 22 11.3	+3.3

IDC 02 08:24:38.0±7.9,1225S×16673E,h0km,mb3.9/4, mb1 3.9/4,mb1mx3.7/14,mbtmp3.8/4,Error ellipse: s-maj=232.6km s-min=38.5km az=124.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.00	252	P	P	08 31 06.4	+0.2
	0.7nm,0.6s,baz=84,slow=9.0,SNR=9.0						
ASAR	Alice Springs	33.14	245	P	P	08 31 16.2	0.0
	0.5nm,0.7s,baz=70,slow=9.9,SNR=9.4						
SONM	Songino Array	80.20	324	P	P	08 36 50.7	+0.5
	0.2nm,0.3s,baz=140,slow=4.2,SNR=2.7						
MKAR	Makanchi Array	95.05	317	P	P	08 38 02.5	-0.3
	1.1nm,0.6s,baz=92,slow=6.0,SNR=14						

*ISCJB **02** 08:29:58.9±1.5, 2464N±005×10975W±006, h7km±11km, mb4.0/10, MS4.1/2, Error ellipse: s-maj=11.0km s-min=6.4km az=36.9*
*NEIC **02** 08:29:59.9±1.1, 2451N×10973W, h10km, mb4.1/13, Error ellipse: s-maj=15.7km s-min=10.1km az=140.0*
*MEX **02** 08:30:01.5±0.3, 2475N×10995W, h8km±6km, MD4.4*
*IDC **02** 08:30:01.7±0.9, 2473N×110.14W, h0km, mb4.1/4, mb1 4.1/9, mb1mx3.9/23, mbtmp3.9/9, ML3.4/4, MS3.9/3, Ms1 3.9/3, ms1mx2.9/35, Error ellipse: s-maj=33.6km s-min=7.5km az=100.0*
ISC 02 08:30:01.1±1.5,2453N±005×10975W±006,h17km±11km, n61,σ1^{s}21/65,mb4.0/10,MS4.1/2,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	0.67	230	Pg	Pg	08 30 13.3	-0.9
	343nm,0.3s,baz=46,slow=1.5,SNR=121						
LPIG				Lg		08 30 23.8	
	704nm,0.3s,baz=148,slow=21,SNR=53						
LPIG				LR	LR	08 30 26.4	
	comp=Z,2µm,20.8s,baz=0.0,slow=38						
LPIG	La Paz	0.67	230	iP	Pb	08 30 14.0	-0.3
LPIG				iS	Sb	08 30 23.6	+0.5
LPIG	La Paz	0.67	230	Pg	Pg	08 30 13.3	-0.9
LPIG				iP		08 30 14.0	
LPIG				iS	Sb	08 30 23.6	+0.5
LPIG				Lg		08 30 23.8	
LPIG				LR	LR	08 30 26.4	
HPIG		4.39	56	iP	Pn	08 31 06.7	-0.3
HPIG				iS	Sn	08 31 58.1	+0.3
HSIG		4.60	347	iP	Pn	08 31 08.7	-1.2
HSIG				iS	Sn	08 31 55.4	-7.5
CGIG		6.02	15	iP	Pn	08 31 25.8	-3.6
CGIG				iS	Sn	08 32 34.2	-3.7
TUC	Tucson	7.80	354	ePn	Pn	08 31 53.6	-0.3
BNM	Barren Site	9.96	15	ePn	Pn	08 32 23.4	-0.1
LAZ	Ladron	10.10	12	ePn	Pn	08 32 24.8	-0.5
ANMO	Albuquerque	10.77	15	Pn	Pn	08 32 35.0	+0.5
	0.1nm,0.3s,baz=203,slow=12,SNR=4.2						
ANMO	Albuquerque	10.77	15	ePn	Pn	08 32 34.3	-0.2
LDFC	Landfair	11.49	337	ePn	Pn	08 32 45.9	+1.5
GSC	Goldstone	12.35	332	ePn	Pn	08 32 57.3	+1.1
MVCO	Mesa Verde	12.69	5	ePn	Pn	08 33 01.5	+0.8
	7.9nm,1.3s						
OSI	Osito Adit	12.72	324	ePn	Pn	08 33 02.7	+1.5
	7.4nm,0.8s						
SHPR	Sheep Range	12.81	340	ePn	Pn	08 33 03.5	+1.1
TPNV	Topopah Spring	13.58	337	ePn	Pn	08 33 14.1	+1.3
SDCO	Great Sand Dun	13.66	14	ePn	Pn	08 33 15.1	+1.1
	1.5nm,1.0s						
WMOK	Wichita Mounta	13.93	41	ePn	Pn	08 33 18.7	+1.0
	7.1nm,0.8s						
MSU	Marysvale	14.09	352	ePn	Pn	08 33 20.9	+1.0
NVAR	Mina Array Bea	15.65	334	Pn	Pn	08 33 40.8	0.0
	0.0nm,0.3s,baz=165,slow=11,SNR=13						
DUG	Dugway	15.83	351	ePn	Pn	08 33 44.8	+1.7
	15nm,1.1s						
DAU	Daniels Canyon	15.89	356	ePn	Pn	08 33 46.2	+2.3
WAKR	Walker	16.18	332	ePn	Pn	08 33 50.5	+2.8
ELK	Elko	16.81	345	Pn	Pn	08 33 58.0	+2.4
	0.1nm,0.3s,baz=198,slow=6.8,SNR=7.4						
ELK				LR	LR	08 39 35.6	
	comp=Z,136nm,19.6s,baz=335,slow=35						
HWUT	Hardware Ranch	17.10	355	ePn	Pn	08 33 59.6	+0.4
	17nm,1.4s						
HVU	Hansel Valley	17.39	352	ePn	Pn	08 34 00.8	-2.1
BW06	Boulder Array	18.19	0	ePn	Pn	08 34 12.0	-0.8
PDAR	Pinedale Array	18.19	0	P	Pn	08 34 12.2	-0.5
	0.1nm,0.3s,baz=170,slow=9.0,SNR=12						
RRI2	Red Ridge	18.82	356	ePn	Pn	08 34 19.3	-1.0
	17nm,1.5s						
SNOW	Snow King Moun	18.90	358	ePn	Pn	08 34 21.1	-0.3
TPAW	Teton Pass	18.94	357	ePn	Pn	08 34 20.8	-1.1
LOHW	Long Hollow	19.05	358	ePn	Pn	08 34 22.2	-0.9
	22nm,1.8s						
WVOR	Wild Horse Val	19.31	340	eP	Pn	08 34 25.6	-0.8
	3.0nm,0.9s						
IMW	Indian Meadow	19.34	357	ePn	Pn	08 34 25.1	-1.6
	14nm,1.4s						
HLID	Hailey	19.37	350	ePn	Pn	08 34 26.1	-0.9
MOD	Modoc	19.42	336	ePn	Pn	08 34 28.5	+0.9
YBH	Yreka Blue Hor	20.26	331	P	P	08 34 33.1	-2.6
	baz=119,slow=8.4,SNR=3.3						
MCMT	McKenzie Canyo	20.41	354	eP	P	08 34 38.0	+0.8
RLMT	Red Lodge	20.55	1	ePn	P	08 34 38.6	-0.1
	13nm,1.4s						
BOZ	Bozeman (W)	21.12	356	eP	P	08 34 43.1	-1.8
BMO	Blue Mountains	21.19	345	eP	P	08 34 45.1	-0.5
	16nm,1.9s,mb4.0						
GCMT	Greycliff	21.21	0	eP	P	08 34 45.5	-0.4
LRM	Limekiln Ridge	21.36	355	eP	P	08 34 47.7	+0.3
PLAL	Pickwick Lake	21.46	56	eP	P	08 34 55.0	+6.3
	8.4nm,1.1s,mb4.0						
ECSD	EROS,Sioux Fal	21.97	26	eP	P	08 34 54.9	+0.8
	8.8nm,1.0s,mb4.1						
LAO	LASA Array	22.29	6	eP	P	08 34 57.2	-0.3
LNOR	Lincton Mounta	22.38	344	eP	P	08 34 57.6	-0.8
CHMT	Chamberlain Mo	22.51	354	eP	P	08 34 59.3	-0.5
EGMT	Eagleton	23.45	360	eP	P	08 35 08.6	-1.0
NEW	Newport	24.40	348	eP	P	08 35 16.9	-1.5
	4.5nm,1.0s,mb3.9						
BLO	Bloomington	24.45	48	eP	P	08 35 20.4	+1.5
	8.5nm,0.9s,mb4.2						
ETW	Entiat	24.52	343	eP	P	08 35 17.7	-1.8
WALA	Waterton Lakes	24.70	353	eP	P	08 35 19.8	-1.4
TKL	Tuckaleechee C	24.99	58	P	P	08 35 28.7	+4.8
	4.1nm,1.0s,mb3.9,baz=214,slow=15,SNR=4.0						
TKL				LR	LR	08 46 01.2	
	comp=Z,156nm,18.2s,MS3.5,baz=44,slow=38						
ULM	Lac du Bonnet	27.85	19	P	P	08 35 52.5	+3.0
	2.0nm,0.7s,mb3.8,baz=219,slow=9.5,SNR=3.0						
YKA	Yellowknife Ar	38.09	356	P	P	08 37 20.6	+1.9
	1.8nm,1.1s,mb3.7,baz=178,slow=7.9,SNR=7.1						
YKA	Yellowknife Ar	38.09	356	P	P	08 37 20.6	+1.9
EGAK	Eagle	45.08	342	eP	P	08 38 15.2	-0.7
	2.2nm,0.9s,mb4.0						
PETK	Petropavlovsk-	72.25	321	P	P	08 41 28.0	+2.7
	2.9nm,0.9s,mb4.2,baz=54,slow=7.3,SNR=5.9						
GERES	GERESS Array B	91.24	33	LR	LR	09 26 46.4	
	comp=Z,213nm,21.0s,MS4.6,baz=342,slow=37						

*ISCJB **02** 08:39:09.0±1.1, 152S±02×1749W±02, h248km±14km, mb3.8/10, Error ellipse: s-maj=35.7km s-min=13.9km az=140.2*
*NEIC **02** 08:39:09.1±0.9, 1522S×17491W, h235km±12km, mb3.9/3, Error ellipse: s-maj=21.9km s-min=9.3km az=137.0*
*IDC **02** 08:39:10.0±1.2, 1523S×17488W, h244km±15km, mb3.6/9, mb1 3.8/10, mb1mx3.6/18, mbtmp3.6/10, Error ellipse: s-maj=30.4km s-min=12.0km az=140.0*
ISC 02 08:39:09.9±1.0,152S±02×1749W±02,h242km±14km,n20, σ0^{s}49/21,mb3.8/10,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.31	67	P	Pn	08 40 04.2	-1.2
	52nm,0.3s,baz=51,slow=2.7,SNR=68						
AFI				S	S	08 40 50.0	+0.9
	32nm,0.3s,baz=132,slow=15,SNR=3.5						
AFI	Afiamalu	3.31	67	P	Pn	08 40 04.2	-1.2
AFI				S	S	08 40 50.0	+0.9
URZ	Urewera	24.00	196	P	P	08 44 02.4	-0.3
	5.1nm,0.6s,mb4.4,baz=344,slow=4.7,SNR=7.8						
CTA	Charters Tower	37.26	257	eP	P	08 45 59.5	+0.6
	4.3nm,0.9s,mb4.0						
CTA	Charters Tower	37.26	257	P	P	08 45 59.5	+0.6
	4.2nm,0.5s,mb4.2,baz=94,slow=11,SNR=6.0						
CNB	Canberra Magne	37.71	231	eP	P	08 46 02.8	+0.3
TOO	Toolangi	41.45	230	eP	P	08 46 33.3	0.0
STKA	Stephens Creek	42.86	239	eP	P	08 46 44.8	+0.1
	4.4nm,1.0s,mb3.8						
STKA	Stephens Creek	42.86	239	P	P	08 46 45.3	+0.6
	2.6nm,0.5s,mb3.9,baz=66,slow=8.6,SNR=18						
WB2	Warramunga Arr	48.45	257	eP	P	08 47 28.2	-0.3
WRA	Warramunga Arr	48.46	257	P	P	08 47 28.0	-0.6
	5.8nm,0.7s,mb4.0,baz=95,slow=7.1,SNR=70						
ASAR	Alice Springs	48.78	252	P	P	08 47 31.1	+0.1
	61nm,0.5s,baz=87,slow=8.0,SNR=957						
KAKA	Kakadu	51.05	266	eP	P	08 47 48.4	+0.2
	3.9nm,0.4s,mb4.2						
FITZ	Fitzroy Crossi	56.82	258	eP	P	08 48 29.5	-0.2
	3.2nm,1.0s,mb3.9						
FITZ	Fitzroy Crossi	56.82	258	P	P	08 48 30.1	+0.4
	0.5nm,0.3s,mb3.5,baz=63,slow=9.0,SNR=4.2						
PETK	Petropavlovsk-	72.03	343	P	P	08 50 07.0	-0.3
	2.4nm,0.7s,mb4.0,baz=122,slow=8.3,SNR=8.1						
YBH	Yreka Blue Hor	74.35	38	P	P	08 50 21.1	0.0
	0.3nm,0.4s,mb3.2,baz=202,slow=3.5,SNR=3.7						
NVAR	Mina Array Bea	75.19	43	P	P	08 50 26.5	+0.5
	0.4nm,0.8s,mb3.1,baz=228,slow=12,SNR=4.3						
PDAR	Pinedale Array	83.12	42	P	P	08 51 08.4	-0.3
	0.5nm,0.4s,mb3.6,baz=235,slow=3.2,SNR=4.9						
GERES	GERESS Array B	145.74	350	PKPbc	PKPbc	08 58 20.2	-0.3
	0.2nm,0.4s,baz=99,slow=6.1,SNR=3.5						

*IDC **02** 08:47:38.7±3.0, 4.11N×9579E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.7/21, mbtmp3.9/6, MS3.3/1, Ms1 3.5/1, ms1mx2.5/35, Error ellipse: s-maj=111.8km s-min=20.6km az=63.0*
*ISCJB **02** 08:47:39.6±1.6, 4.1N±0.1×954E±02, h33km, mb3.9/5, Error ellipse: s-maj=34.6km s-min=9.1km az=158.7*
*NEIC **02** 08:47:44.6±1.8, 425N×9603E, h35km, Error ellipse: s-maj=59.1km s-min=13.4km az=70.0*
*DJA **02** 08:47:46, 570N×9667E, h0km, ML4.6/4*
ISC 02 08:47:42.5±1.6,42N±01×955E±02,h35km,n10,σ1^{s}49/11, mb3.8/5,2C,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSI	Banda Aceh	1.32	352	⇑eP	Pn	08 48 01.0	-3.5
BSI				eS	Sn	08 48 20.0	-0.9
TSI	Tuntungan	3.15	102	eP	Pn	08 48 31.0	+1.4
GSI	Gunungsitoli	3.54	144	⇑eP	Pn	08 48 42.0	+7.0
CMAR	Chiang Mai Arr	14.59	13	Pn	Pn	08 51 05.8	-0.8
	baz=208,slow=13,SNR=4.5						
CMAR				LR	LR	08 57 01.7	
	comp=Z,120nm,18.2s,baz=190,slow=39						
SHL	Shillong	21.55	351	eP	P	08 52 33.5	+4.6
FITZ	Fitzroy Crossi	37.07	128	P	P	08 54 47.4	-2.2
	2.2nm,0.7s,mb4.1,baz=314,slow=9.5,SNR=8.9						
MKAR	Makanchi Array	43.96	347	P	P	08 55 48.4	+2.2
	0.3nm,0.3s,mb3.5,baz=152,slow=7.8,SNR=3.4						
SONM	Songino Array	44.49	10	P	P	08 55 52.3	+1.9
	0.7nm,0.8s,mb3.5,baz=178,slow=9.9,SNR=3.6						
WRA	Warramunga Arr	45.08	124	P	P	08 55 54.7	-0.8
	2.2nm,0.6s,mb4.2,baz=301,slow=9.2,SNR=17						
ASAR	Alice Springs	46.56	128	P	P	08 56 06.9	-0.3
	1.2nm,0.6s,mb4.0,baz=302,slow=7.6,SNR=26						

IDC 02 08:54:45.4±1.9,792S×11999E,h0km,mb3.2/2,mb1 3.2/4, mb1mx3.2/16,mbtmp3.1/4,ML2.8/2,MS3.2/2,Ms1 3.2/2, ms1mx2.2/17,Error ellipse: s-maj=83.7km s-min=22.0km az=64.0,Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	2.89	355	Pn	Pn	08 55 31.3	-1.4
	0.8nm,0.3s,baz=193,slow=5.2,SNR=9.9						
KAPI				Sn	Sn	08 56 10.6	+2.4
	5.9nm,0.3s,baz=128,slow=2.8,SNR=4.8						
BATI	Baumata	4.28	122	LR	LR	08 58 02.4	
	comp=Z,134nm,18.5s,baz=288,slow=46						
FITZ	Fitzroy Crossi	11.52	152	Sn	Sn	08 59 48.9	+8.2
	0.1nm,0.3s,baz=237,slow=22,SNR=3.1						
WRA	Warramunga Arr	18.33	132	P	Pn	08 59 01.4	+0.2
	0.1nm,0.3s,baz=304,slow=12,SNR=4.0						
ASAR	Alice Springs	20.57	141	P	P	08 59 25.8	-0.1
	0.4nm,0.6s,baz=312,slow=8.9,SNR=6.7						
KSRS	Korea Array	45.74	9	LR	LR	09 24 52.9	
	comp=Z,45nm,19.3s,baz=170,slow=40						
MKAR	Makanchi Array	63.95	332	P	P	09 05 20.7	+0.4
	0.2nm,0.4s,baz=151,slow=6.6,SNR=2.5						

*IDC **02** 08:54:41.0±1.1, 1177N×87.16W, h0km, mb3.8/6, mb1 4.1/7, mb1mx3.8/21, mbtmp3.9/7, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/36, Error ellipse: s-maj=51.4km s-min=19.5km az=54.0*
*ISCJB **02** 08:54:43.8±0.9, 1151N±005×8754W±007, h34km±9km, mb3.9/9, Error ellipse: s-maj=12.9km s-min=6.2km az=145.3*
*CASC **02** 08:54:44.1±2.5, 1155N×8749W, h22km±9km, MD4.3, ML3.2, mb4.4(NEIC)*
*NEIC **02** 08:54:46.7±0.8, 1179N×8731W, h35km, mb4.4/4, Error ellipse: s-maj=18.5km s-min=9.3km az=217.0*
ISC 02 08:54:46.3±0.8,1161N±005×8740W±006,h37km±9km,n61, σ0^{s}96/46,mb3.9/9,9C-5D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	Leon	0.95	32	⇑eP	Pn	08 55 02.9	-0.2
COPN	Copaltepe	0.98	54	⇓eP	Pn	08 55 03.2	-0.3
TEL3	Telica 3	1.10	30	⇓eP	Pn	08 55 05.3	+0.1
TEL3				AML	AML	08 55 32.5	
	comp=Z,428nm,0.7s						
CSAN		1.12	59	eP	Pn	08 55 05.7	+0.3
CNGN	Cerro Negro	1.12	38	⇑eP	Pn	08 55 05.1	-0.4
TELN	Telica	1.14	29	⇑eP	Pn	08 55 06.7	+1.0
TELN				AML	AML	08 55 33.4	
	comp=Z,64nm,0.6s						
CRUN	El Crucero	1.14	71	eP	Pn	08 55 08.7	+2.9
MOMN	Momotombo	1.16	47	⇓eP	Pn	08 55 06.3	+0.2
XAVN	Gruta Xavier	1.18	63	eP	Pn	08 55 06.0	-0.3
XAVN				AML	AML	08 55 41.0	
	comp=Z,1µm,0.5s						
APYN	Apoyeque	1.20	59	eP	Pn	08 55 06.5	-0.1
TISN	Laguna Tiscapa	1.23	64	eP	Pn	08 55 06.5	-0.5
MGAN	Managua	1.25	64	⇑eP	Pn	08 55 06.6	-0.7
MGAN				AML	AML	08 55 38.8	
	comp=Z,771nm,0.5s						
MASN	Masaya	1.28	73	eP	Pn	08 55 07.0	-0.7
WILN	Americas 2	1.31	65	eP	Pn	08 55 09.7	+1.6
APON	Apoyo	1.34	77	eP	Pn	08 55 08.4	-0.1
HUEN		1.41	59	eP	Pn	08 55 09.7	+0.2
CNCH	Conchagua	1.71	346	⇓eP	x	08 55 13.1	
CONN	Concepcion	1.74	91	eP	Pn	08 55 13.3	-0.7
CONN				AML	AML	08 55 49.0	
	comp=Z,130nm,0.6s						
MADN	Villa Maderas	1.84	96	⇑eP	Pn	08 55 14.1	-1.3
BLLM	Bellamira	2.00	336	⇑eP	x	08 55 16.7	
VSM	San Miguel	2.00	335	eP	x	08 55 17.4	
VCR	Vista de Mar	2.28	130	eP	Pn	08 55 18.9	-2.5
CAHU	Cacacuatique	2.29	340	⇑eP	x	08 55 21.4	
CAHU				eP	x	08 55 21.8	
2RIO	Dos Rios de Up	2.38	117	eP	Pn	08 55 20.6	-2.3
SNVI	San Vicente	2.44	325	eS	x	08 55 53.1	
TGUH	Tegucigalpa,Un	2.44	3	⇑eP	Pn	08 55 24.0	+0.4
TGUH	Tegucigalpa,Un	2.44	3	ePn	Pn	08 55 20.2	-3.4
LFRS	El Faro	2.58	321	eP	x	08 55 23.3	
LFRS				eS	x	08 55 57.5	
LBRS	Las Brisas	2.66	323	eP	x	08 55 26.4	
LBRS				⇓eP	x	08 55 26.5	
SNET	Serv Nac Est T	2.73	319	eP	x	08 55 27.2	
SNET				eS	x	08 55 59.1	
SNET				i		08 56 10.2	
	comp=Z,326nm,0.4s						
BOQS	Boqueron	2.80	319	eP	x	08 55 27.9	
JCR	Jicaral	2.85	128	eP	Pn	08 55 27.5	-1.8
SBLS	San Blas	3.10	316	eP	x	08 55 32.7	
SNJE	San Jose	3.11	317	eP	x	08 55 32.3	
RTR	El Retiro	3.16	316	⇑eP	x	08 55 33.3	
RTR				eS	x	08 56 08.9	
CGA2	Cerro Gallo 2	3.29	118	eP	Pn	08 55 36.3	+0.9
RBDL	Robledal	3.34	318	eP	x	08 55 36.2	
RBDL				eS	x	08 56 15.7	
MTO2	Montecristo 2	3.37	326	eP	x	08 55 37.4	
MTO2				eS	x	08 56 15.7	
PRS1	Puriscal	3.44	118	eP	Pn	08 55 37.5	+0.1
LCR2	La Lucha 2	3.82	119	eP	Pn	08 55 43.9	+1.2
URSC	Urasca	3.97	116	eP	Pn	08 55 46.8	+2.0
BUS	Buena Vista	4.12	119	eP	Pn	08 55 48.2	+1.4
ACR	Cerro Adams	5.10	125	eP	Pn	08 56 00.5	+0.3
CMIG	Matias Romero	9.07	308	Pn	Pn	08 56 54.9	+0.1
	comp=Z,0.9nm,0.3s,baz=139,slow=9.6,SNR=25						
CMIG				Sn	Sn	08 58 35.5	-0.1
	comp=Z,0.3nm,0.3s,baz=156,slow=20,SNR=2.3						
LAPE	La Pedrera	16.11	103	eP	Px	08 55 17.8	
LAPE				eS	Sx	08 55 46.5	
SDV	Santo Domingo	16.72	98	Pn	Pn	08 58 38.8	+0.9
	comp=Z,0.5nm,0.3s,baz=317,slow=11,SNR=3.9						
ATAH	Atahualpa	20.54	154	P	P	08 59 21.9	+0.1
	comp=Z,5.3nm,0.8s,baz=333,slow=3.1,SNR=3.9						
ATAH				LR	LR	09 05 31.6	
	comp=Z,136nm,19.3s,baz=203,slow=31						
SWET	Sewanee	23.54	3	eP	P	08 59 53.1	-0.2
CPCT	Cooper Cave	23.88	6	eP	P	08 59 56.1	-0.3
TKL	Tuckaleechee C	24.17	7	P	P	08 59 57.1	-1.9
	comp=Z,5.4nm,0.7s,mb4.1,baz=176,slow=12,SNR=8.4						
WMOK	Wichita Mounta	25.25	338	eP	P	09 00 08.6	-0.3
	comp=Z,16nm,1.6s,mb4.3						
PDAR	Pinedale Array	36.53	332	P	P	09 01 48.5	+0.2
	comp=Z,0.6nm,0.6s,mb3.6,baz=117,slow=8.1,SNR=5.8						
REDW	Red Top Meadow	37.59	332	eP	P	09 01 57.5	+0.2
	comp=Z,4.1nm,0.6s,mb4.3						
SNOW	Snow King Moun	37.63	332	eP	P	09 01 58.1	+0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,4.1nm,0.7s,mb4.3						
TPAW	Teton Pass	37.74	332	eP	P	09 01 59.1	+0.6
	comp=Z,2.3nm,0.6s,mb4.1						
NVAR	Mina Array Bea	38.37	319	P	P	09 02 04.0	+0.1
	comp=Z,0.2nm,0.6s,mb3.0,baz=147,slow=7.2,SNR=3.0						
NVAR				PcP	PcP	09 04 19.2	+2.2
	comp=Z,0.3nm,0.7s,baz=116,slow=2.1,SNR=4.2						
MCMT	McKenzie Canyo	39.64	331	eP	P	09 02 15.5	+1.0
BDFB	Brasilia	47.47	124	P	P	09 03 18.0	+0.1
	comp=Z,4.2nm,0.6s,mb4.5,baz=290,slow=9.6,SNR=7.9						
YKA	Yellowknife Ar	54.43	345	P	P	09 04 08.5	-1.0
	comp=Z,0.1nm,0.5s,mb3.0,baz=140,slow=6.9,SNR=6.8						
YKA	Yellowknife Ar	54.43	345	P	P	09 04 08.5	-1.0
CMAR	Chiang Mai Arr	149.48	348	PKPbc	PKPbc	09 14 31.9	-0.6
	comp=Z,1.7nm,0.6s,baz=359,slow=3.6,SNR=7.0						

*IDC **02** 09:02:47.5±0.6, 1185S×16599E, h0^{km}, mb4.7/22, mb1 4.7/22, mb1mx4.7/23, mbtmp4.6/22, MS4.1/7, Ms1 4.1/7, ms1mx3.6/26, Error ellipse: s-maj=18.8km s-min=14.8km az=102.0*
*BJI **02** 09:02:50.5, 1099S×16626E, h6^{km}, mB5.0, mb4.9*
*ISCJB **02** 09:02:51.2±0.5, 1187S±007×16586E±008, h33^{km}, mb4.7/32, MS4.0/7, Error ellipse: s-maj=11.7km s-min=9.6km az=12.1*
*NEIC **02** 09:02:52.7±0.4, 1184S×16592E, h35^{km}, mb4.8/10, Error ellipse: s-maj=10.7km s-min=8.9km az=116.0*
*DJA **02** 09:02:58, 1208S×16595E, h69^{km}, mb5.1/15*
ISC 02 09:02:49.7±8.0**, 1186S**±007×**1659E**±01**, h12**^{km}±48^{km}**, n67,** σ**0**^{s}**98**/44**, mb4.7**/32**, MS4.0**/7**, 2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.36	292	eP	Pn	09 04 23.6	+0.3
	188nm,0.7s						
CTA	Charters Tower	20.60	244	⇓iP	P	09 07 30.4	+1.5
	25nm,0.9s						
CTA	Charters Tower	20.60	244	P	P	09 07 30.0	+1.1
	31nm,0.9s,baz=70,slow=12,SNR=16						
CTAO	Charters Tower	20.60	244	eP	P	09 07 30.3	+1.5
	45nm,1.0s						
AFI	Afiamalu	21.82	98	LR	LR	09 14 57.9	
	comp=Z,628nm,18.4s,MS4.1,baz=287,slow=34						
COEN	Coen	22.28	262	eP	P	09 07 44.6	-2.4
	28nm,1.2s,mb4.6						
ARMA	Armidale	22.74	214	⇓iP	P	09 07 52.7	+0.9
URZ	Urewera	28.13	161	P	P	09 08 40.9	-0.7
	6.5nm,0.9s,mb4.2,baz=307,slow=10,SNR=2.2						
URZ				LR	LR	09 18 15.8	
	comp=Z,411nm,18.1s,MS4.1,baz=203,slow=33						
STKA	Stephens Creek	29.99	225	P	P	09 08 58.6	+0.3
	5.0nm,0.8s,mb4.3,baz=351,slow=14,SNR=7.5						
STKA				LR	LR	09 20 48.5	
	comp=Z,337nm,18.6s,MS4.0,baz=22,slow=36						
WB2	Warramunga Arr	31.38	251	eP	P	09 09 10.1	-0.6
WRA	Warramunga Arr	31.39	251	P	P	09 09 10.2	-0.5
	11nm,1.0s,mb4.7,baz=83,slow=9.0,SNR=41						
WRA				PcP	PcP	09 12 04.4	-0.1
	1.8nm,0.9s,baz=329,slow=1.5,SNR=5.8						
WRA				LR	LR	09 20 54.6	
	comp=Z,171nm,21.2s,MS3.7,baz=55,slow=35						
RPZ	Rata Peaks	32.05	173	P	P	09 09 16.9	+0.6
	25nm,0.7s,mb5.2,baz=30,slow=2.5,SNR=15						
ASAR	Alice Springs	32.60	244	P	P	09 09 20.5	-0.9
	8.9nm,0.9s,mb4.7,baz=76,slow=9.5,SNR=51						
ASAR				PcP	PcP	09 12 07.2	-0.6
	1.3nm,0.7s,baz=66,slow=2.5,SNR=6.5						
KAKA	Kakadu	32.73	265	eP	P	09 09 21.5	-1.1
	18nm,1.1s,mb4.9						
KAKA	Kakadu	32.73	265	eP	P	09 09 21.4	-1.1
RAR	Rarotonga	34.10	110	LR	LR	09 20 28.3	
	comp=Z,368nm,19.1s,MS4.1,baz=274,slow=31						
FITZ	Fitzroy Crossi	39.35	256	eP	P	09 10 18.9	-0.5
	11nm,0.9s,mb4.6						
FITZ	Fitzroy Crossi	39.35	256	P	P	09 10 19.3	0.0
	6.0nm,0.8s,mb4.3,baz=84,slow=9.8,SNR=11						
FITZ	Fitzroy Crossi	39.35	256	eP	P	09 10 19.0	-0.3
	31nm,0.9s,mb5.0						
BATI	Baumata	41.49	268	P	P	09 10 38.2	+1.1
	60nm,1.0s,mb5.2,baz=311,slow=5.9,SNR=4.2						
PPT	Papeete	43.33	103	eLQ		09 21 21.1	
	506nm,26.2s						
PPT				eLR	LR	09 23 14.4	
	310nm,25.8s,baz=277						
PPT	Papeete	43.33	103	LR	LR	09 27 15.0	
	comp=Z,391nm,18.2s,MS4.3,baz=133,slow=34						
MBWA	Marble Bar	45.12	252	eP	P	09 11 06.5	+0.2
	31nm,1.1s,mb5.0						
KAPI	Kappang	46.13	274	P	P	09 11 14.8	+0.4
	24nm,0.9s,mb5.1,baz=151,slow=7.3,SNR=4.8						
NWAO	Narrogin (SRO)	49.17	237	P	P	09 11 37.9	+0.1
	25nm,1.0s,mb5.2,baz=99,slow=6.5,SNR=3.1						
JOW	Kunigami	53.07	317	P	P	09 12 08.2	+1.0
	14nm,0.9s,mb4.9,baz=139,slow=10.0,SNR=10						
MJAR	Matsushiro Arr	54.77	333	P	P	09 12 18.0	-1.4
	1.6nm,0.6s,mb4.2,baz=167,slow=7.1,SNR=10						
MAJO	Matsushiro	54.77	333	eP	P	09 12 18.4	-1.0
	6.3nm,0.8s,mb4.7						
RKT	Rikitea	57.14	110	eLR	LR	09 29 37.5	
	385nm,25.8s						
KSRS	Korea Array	60.64	326	P	P	09 13 00.9	+0.2
	2.4nm,0.7s,mb4.4,baz=141,slow=8.7,SNR=7.1						
PETK	Petropavlovsk-	65.08	355	P	P	09 13 28.8	-1.2
	1.8nm,0.9s,mb4.1,baz=121,slow=7.1,SNR=3.9						
PETK	Petropavlovsk-	65.08	355	P	P	09 13 28.8	-1.2
CASY	Casey	65.70	201	eP	P	09 13 30.9	-2.9
	14nm,1.0s,mb4.9						
SBA	Scott Base	65.99	180	eP	P	09 13 36.0	+0.4
	13nm,0.9s,mb5.0						
BJI	Beijing	69.22	321	P	P	09 13 56.9	+0.4
BJI				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.8						
CMAR	Chiang Mai Arr	72.60	294	P	P	09 14 18.9	+1.3
	comp=Z,2.1nm,0.4s,mb4.4,baz=113,slow=4.5,SNR=13						
CMAR				LR	LR	09 44 05.2	
	comp=Z,47nm,18.9s,MS3.8,baz=190,slow=34						
LZH	Lanzhou	75.43	312	eP	P	09 14 35.0	+1.3
LZH				AP	pP	09 14 42.3	+4.7
LZH				XP	sP	09 14 45.0	+6.0
LZH				AMB	AMB		
	comp=Z,23nm,1.4s,mb4.9						
LZH				AMB	AMB		
	comp=Z,84nm,4.3s						
ULN	Ulaanbaatar	79.06	324	eP	P	09 14 54.5	+0.7
	comp=Z,21nm,1.0s,mb5.0						
SONM	Songino Array	79.42	324	P	P	09 14 56.1	+0.3
	comp=Z,6.5nm,0.9s,mb4.5,baz=134,slow=5.7,SNR=30						
GTA	Gaotai	79.75	314	P	P	09 14 59.4	+1.6
GTA				AP	pP	09 15 04.0	+2.4
GTA				XP	sP	09 15 06.4	+3.4
GTA				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.8						
MAW	Mawson	84.05	202	P	P	09 15 19.6	-0.3
	comp=Z,3.1nm,1.0s,mb4.4,baz=94,slow=8.5,SNR=6.3						
EGAK	Eagle	86.07	20	P	P	09 15 28.8	-1.2
	comp=Z,2.5nm,1.0s,mb4.4						
NVAR	Mina Array Bea	86.40	50	P	P	09 15 33.1	+0.8
	comp=Z,0.9nm,0.8s,mb4.0,baz=235,slow=7.8,SNR=5.4						
PDAR	Pinedale Array	93.96	47	P	P	09 16 08.7	+1.0
	comp=Z,0.4nm,0.8s,mb3.9,baz=228,slow=1.1,SNR=3.4						
PDAR	Pinedale Array	93.96	47	P	P	09 16 08.7	+1.0
MKAR	Makanchi Array	94.23	317	P	P	09 16 09.0	+0.2
	comp=Z,13nm,0.8s,mb5.4,baz=101,slow=6.0,SNR=110						
ZALV	Zalesovo Beam	94.31	324	P	P	09 16 07.8	-1.2
	comp=Z,6.1nm,0.8s,mb5.1,baz=108,slow=4.8,SNR=18						
KURK	Kurchatov	97.38	320	P	P	09 16 21.9	-1.1
	comp=Z,1.0nm,0.6s,mb4.4,baz=100,slow=3.5,SNR=5.6						
KURK	Kurchatov	97.38	320	P	P	09 16 21.9	-1.1
BVAR	Borovoye Array	102.70	322	P	Pdif	09 16 45.2	-1.6
	comp=Z,1.3nm,0.7s,baz=104,slow=6.3,SNR=6.1						
ARCES	ARCESS Array B	117.16	345	PKP	PKPdf	09 21 32.5	-1.7
	comp=Z,0.6nm,0.5s,baz=72,slow=5.8,SNR=6.0						
BOSA	Boshof	124.65	223	PKP	PKPdf	09 21 47.8	-2.2
	comp=Z,4.8nm,0.8s,baz=212,slow=1.9,SNR=8.1						
GERES	GERESS Array B	136.51	333	PKP	PKPdf	09 22 11.0	-0.7
	comp=Z,0.4nm,0.6s,baz=132,slow=2.0,SNR=4.0						
LPL	La Plagne	142.05	336	ePKP1	PKPdf	09 22 18.3	-3.6
SMF	Signal de Mont	142.16	340	ePKP1	PKPdf	09 22 18.6	-3.5
MBDF	Montbardon	142.69	335	ePKP1	PKPdf	09 22 18.3	-4.8
VIVF	Saint-Julien-l	143.40	337	ePKP1	PKPdf	09 22 22.1	-2.2
MFF	Saint Martin d	143.42	344	ePKP1	PKPdf	09 22 21.0	-3.3
LMR	La Mourre	143.93	334	ePKP1	PKPdf	09 22 22.4	-2.9
RJF	Les Rejaudoux	144.10	341	ePKP1	PKPdf	09 22 22.9	-2.7
CAF	Calviac	144.26	340	ePKP1	PKPdf	09 22 23.6	-2.3
LASF	Ste Croix	144.37	338	ePKP1	PKPdf	09 22 24.6	-1.5
	comp=Z,23nm,1.0s						
LFF	La Frestale	144.67	342	ePKP1	PKPdf	09 22 24.7	-1.9
MTLF	Montolieu	145.60	339	ePKP1	PKPbc	09 22 27.8	-0.6
	comp=Z,13nm,0.9s						
KEST	Kesra	148.17	322	PKPbc	PKPbc	09 22 35.3	-0.7
	comp=Z,4.1nm,1.0s,baz=332,slow=7.2,SNR=5.3						
ESDC	Sonseca Array	150.88	344	PKPbc	PKPbc	09 22 43.1	+0.5
	comp=Z,0.9nm,0.8s,baz=347,slow=2.0,SNR=4.1						
TORD	Torodi Ar. Bea	164.56	276	PKP	PKPdf	09 22 54.4	-0.1
	comp=Z,0.8nm,0.8s,baz=159,slow=1.6,SNR=3.9						

BJI 02 09:04:43.9, 2429N×9669E, h15^{km}, mb4.4, ML3.4, Ms3.4, Msz3.3, 1C-1D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHRT	Chiangrai	5.25	146	⇑P	Sb	09 07 19.5	+1.2
	105nm,1.0s						
KMI	Kunming	5.56	80	PG	Pg	09 06 21.5	-9.0
KMI				Smax			
	comp=N,29nm,0.6s						
KMI				Smax			
	comp=E,33nm,0.7s						
KMI				LR	LR		
	comp=N,115nm,4.4s						
KMI				LR	LR		
	comp=E,183nm,5.7s						
KMI				LR	LR		
	comp=Z,124nm,7.9s						
CHG	Chiang Mai	5.84	159	⇓P	Sb	09 07 38.7	+3.5
	comp=Z,16nm,0.7s						
CD2	Chengdu	9.10	42	eP	Pn	09 06 56.5	+1.8
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s						

*BJI **02** 09:06:24.2, 2373N×10607E, h15^{km}, mB4.7, mb4.6, ML3.7*
*ISCJB **02** 09:06:30.7±0.7, 2387N±004×10509E±007, h10^{km}, Error ellipse: s-maj=9.5km s-min=4.3km az=160.1*
*PLV **02** 09:06:35.1±0.9, 2377N×10518E, h3^{km}±6^{km}, MD3.9*
ISC 02 09:06:32.9±0.5**, 2393N**±003×**10525E**±006**, h10**^{km}**, n9,** σ**1**^{s}**17**/22**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	Kunming	2.58	298	P	Pn	09 07 15.8	+1.1
KMI				PG	Pg	09 07 20.6	-1.7
KMI				Smax			
	comp=N,39nm,0.7s						
KMI				Smax			
	comp=E,36nm,0.7s						
MTZV	Met	2.58	157	ePn	Pn	09 07 15.9	+1.2
MTZV				ePg	Pg	09 07 22.8	+0.4
MTZV				eSg	Sg	09 07 55.0	-0.8
BGV	Bac-Giang	2.78	161	ePn	Pn	09 07 18.8	+1.3
BGV				ePg	Pg	09 07 25.8	-0.4
BGV				eSg	Sg	09 08 01.2	-1.0
HNV	Hanoi	2.92	170	ePn	Pn	09 07 21.3	+1.9
HNV				ePg	Pg	09 07 29.8	+1.0
HNV				eSg	Sg	09 08 07.5	+0.8
PLV	Phu-Lien	3.36	157	ePn	Pn	09 07 26.5	+0.9
PLV				ePg	Pg	09 07 37.5	+0.1
PLV				eSg	Sg	09 08 18.8	-2.2
DSV	Doi Son	3.40	168	ePn	Pn	09 07 27.3	+1.3
DSV				ePg	Pg	09 07 37.5	-0.6
DSV				eSg	Sg	09 08 19.6	-2.4
NANT	Nan	6.64	221	P	Sg	09 10 06.0	-0.1
CD2	Chengdu	7.08	350	eP	Pn	09 08 16.3	-0.3
CD2				S	Sn	09 09 37.4	+0.3
CD2				SG	Sg	09 10 18.5	-1.6
CD2				Smax			
	comp=N,30nm,1.1s						
CD2				Smax			
	comp=E,40nm,1.1s						
LZH	Lanzhou	12.17	355	eP	Pn	09 09 22.0	-4.4
LZH				AMB	AMB		
	comp=Z,17nm,1.3s						
LZH				AMB	AMB		
	comp=Z,85nm,5.0s						

*ISCJB **02** 09:10:39.9±0.5, 2439S±004×6705W±007, h165^{km}±8^{km}, mb3.8/5, Error ellipse: s-maj=9.8km s-min=5.9km az=5.0*
*IDC **02** 09:10:41.1±0.9, 2432S×6699W, h160^{km}±9^{km}, mb3.8/5, mb1 3.9/11, mb1mx3.7/18, mbtmp3.7/11, MS3.6/1, Ms1 3.6/1, ms1mx2.8/24, Error ellipse: s-maj=14.4km s-min=11.1km az=68.0*
*NEIC **02** 09:10:41.1±0.5, 2434S×6699W, h162^{km}±6^{km}, mb4.6/1, Error ellipse: s-maj=9.8km s-min=7.5km az=103.0*
*GUC **02** 09:10:43.3±0.7, 2452S×6757W, h200^{km}, ML4.3*
ISC 02 09:10:40.9±0.5**, 2439S**±004×**6704W**±006**, h156**^{km}±8^{km}**, n33,** σ**1**^{s}**21**/38**, mb3.8**/5**, 1C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.46	315	P	Pn	09 11 23.7	+1.7
	42nm,0.3s,baz=144,slow=6.4,SNR=468						
LVC				S	Sn	09 11 54.5	+0.9
	110nm,0.3s,baz=15,slow=23,SNR=94						
LVC	Limon Verde	2.46	315	ePn	Pn	09 11 23.3	+1.4
LVC				eSn	Sn	09 11 54.3	+0.7
CEN1	Los Morros	3.06	288	⇓iP	Pn	09 11 31.0	+1.7
CEN1				iS	Sn	09 12 07.0	+0.3
CEN1				AML	AML	09 12 08.0	
	comp=N,920nm,0.5s						
CPN1	Cerro Paranal	3.07	265	eP	Pn	09 11 30.4	+0.9
CPN1				iS	Sn	09 12 06.2	-0.8
CPN1				AML	AML	09 12 08.1	
	comp=E,541nm,0.5s						
ANCH	Antofagasta	3.16	282	⇑iP	Pn	09 11 32.4	+1.8
ANCH				iS	Sn	09 12 08.1	-0.9
CDCH	Caldera	4.34	231	eP	Pn	09 11 45.6	-0.1
CDCH				iS	Sn	09 12 33.7	-2.6
VACH	Vallenar	5.34	218	iS	Sn	09 12 58.3	-1.5
LCO	Las Campanas	5.65	215	ePn	Pn	09 12 02.7	-0.3
	comp=E,69nm,0.4s						
LCO				eSn	Sn	09 12 58.7	-8.6
CFAA	Coronel Fontan	7.27	188	P	Pn	09 12 26.1	+1.6
	comp=E,0.1nm,0.3s,baz=2.7,slow=12,SNR=25						
CFAA				S	Sn	09 13 44.4	-1.5
	comp=E,0.5nm,0.3s,baz=265,slow=18,SNR=9.5						
LPAZ	La Paz	8.12	353	P	Pn	09 12 36.4	+0.4
	comp=E,2.3nm,0.3s,baz=158,slow=6.1,SNR=95						
LPAZ				S	Sn	09 14 04.2	-2.4
	comp=E,0.5nm,0.3s,baz=339,slow=20,SNR=8.5						
ARE	Arequipa	8.92	331	P	Pn	09 12 53.0	+6.4
ARE				eS	Sn	09 14 17.0	-8.8
CPUP	Villa Florida	8.99	104	P	Pn	09 12 48.0	+0.6
	comp=E,0.6nm,0.3s,baz=265,slow=11,SNR=12						
SIV	San Ignacio	10.06	35	P	Pn	09 12 59.6	-2.0
	comp=E,1.4nm,0.3s,baz=218,slow=14,SNR=66						
SIV				S	Sn	09 14 40.2	-13
	comp=E,0.2nm,0.3s,baz=222,slow=14,SNR=5.6						
TRQA	Tornquist	14.29	164	ePn	Pn	09 13 55.7	-0.5
	comp=E,17nm,0.6s						
TRQA				eP		09 13 60.0	
PLCA	Paso Flores	16.56	189	P	Pn	09 14 25.5	+1.5
	comp=E,0.2nm,0.3s,baz=2.4,slow=14,SNR=6.6						
PLCA	Paso Flores	16.56	189	P	Pn	09 14 25.5	+1.5
VAO	Valinhos	18.44	90	eP	P	09 14 44.8	+0.3
VAO				i		09 14 46.4	
BDFB	Brasilia	19.86	68	P	P	09 14 59.8	-0.2
	comp=E,3.0nm,0.3s,baz=230,slow=11,SNR=47						
BDFB				LR	LR	09 23 34.3	
	comp=E,202nm,20.9s,baz=250,slow=39						
VNA2	Neumayer--Watz	57.37	160	e	P	09 20 13.8	+1.5
SNAA	Sanae	59.00	161	e	P	09 20 24.5	+0.8
DBIC	Dimbokro	67.96	71	P	P	09 21 22.1	-1.3
	comp=E,5.9nm,1.0s,mb4.3,baz=194,slow=13,SNR=3.6						
TORD	Torodi Ar. Bea	76.74	69	P	P	09 22 14.3	-1.1
	comp=E,2.0nm,0.5s,mb4.0,baz=258,slow=5.5,SNR=40						
TORD	Torodi Ar. Bea	76.74	69	P	P	09 22 14.3	-1.1
NVAR	Mina Array Bea	78.82	321	P	P	09 22 26.5	+0.1
	comp=E,0.4nm,0.8s,mb3.1,baz=141,slow=4.4,SNR=3.1						
MAW	Mawson	81.08	163	P	P	09 22 39.3	+1.1
	comp=E,2.2nm,0.6s,mb4.0,baz=204,slow=7.1,SNR=14						
YKA	Yellowknife Ar	94.47	340	P	P	09 23 41.7	-1.0
	comp=E,0.2nm,0.5s,mb3.5,baz=143,slow=4.1,SNR=7.0						
YKA	Yellowknife Ar	94.47	340	P	P	09 23 41.7	-1.0
ASAR	Alice Springs	128.09	205	PKP	PKPdf	09 29 28.5	-0.6
	comp=E,0.5nm,0.5s,baz=144,slow=1.5,SNR=9.8						
WRA	Warramunga Arr	131.27	207	PKP	PKPdf	09 29 35.0	-0.2
	comp=E,0.5nm,0.4s,baz=163,slow=1.7,SNR=12						
WRA				SKPbc	SKPbc	09 32 43.2	-2.5
	comp=E,0.4nm,0.6s,baz=151,slow=3.5,SNR=7.4						
ZALV	Zalesovo Beam	143.75	28	PKP	PKPdf	09 29 55.4	-1.6
	comp=E,0.6nm,0.5s,baz=338,slow=3.1,SNR=2.8						
ZALV	Zalesovo Beam	143.75	28	PKP	PKPdf	09 29 55.4	-1.6
MKAR	Makanchi Array	146.84	40	PKPbc	PKPbc	09 30 04.6	0.0
	comp=E,0.7nm,0.6s,baz=298,slow=3.3,SNR=7.7						
MKAR	Makanchi Array	146.84	40	PKPbc	PKPbc	09 30 04.6	0.0

IDC 02 09:16:09.5±7.3**, 1178S**×**16564E, h0**^{km}**, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.7**/14**, mbtmp3.9**/4**, MS4.6**/1**, Ms1 4.6**/1**, ms1mx3.1**/33**, Error ellipse: s-maj=212.0km s-min=37.0km az=123.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.14	251	P	P	09 22 30.3	+0.2
	0.7nm,0.5s,baz=82,slow=9.2,SNR=13						
ASAR	Alice Springs	32.37	244	P	P	09 22 40.9	-0.1
	0.8nm,0.7s,baz=69,slow=9.4,SNR=12						
RAR	Rarotonga	34.40	110	LR	LR	09 33 29.0	
	comp=Z,1µm,19.3s,baz=91,slow=30						
SONM	Songino Array	79.20	324	P	P	09 28 16.6	+0.3
	0.5nm,0.7s,baz=104,slow=4.6,SNR=2.7						
MKAR	Makanchi Array	93.99	317	P	P	09 29 29.4	0.0
	1.0nm,0.7s,baz=98,slow=5.0,SNR=12						

IDC 02 09:21:21.5±11.0**, 1153S**×**16600E, h0**^{km}**, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.6**/14**, mbtmp3.6**/3**, Error ellipse: s-maj=352.4km s-min=52.7km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.56	251	P	P	09 27 46.0	+0.1
	1.0nm,0.8s,baz=82,slow=8.9,SNR=7.0						
ASAR	Alice Springs	32.80	244	P	P	09 27 56.8	0.0
	0.4nm,0.9s,baz=72,slow=11,SNR=3.0						
MKAR	Makanchi Array	94.04	317	P	P	09 34 41.7	0.0
	0.4nm,0.8s,baz=102,slow=6.5,SNR=3.2						

IDC 02 09:22:10.9±8.0**, 1211S**×**16664E, h0**^{km}**, mb4.2**/3**, mb1 4.3**/3**, mb1mx3.8**/14**, mbtmp4.1**/3**, Error ellipse: s-maj=241.2km s-min=51.9km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.97	252	P	P	09 28 38.8	-0.1
	1.2nm,0.7s,baz=84,slow=9.4,SNR=7.7						
ASAR	Alice Springs	33.12	245	P	P	09 28 49.2	+0.2
	1.9nm,0.7s,baz=70,slow=9.4,SNR=21						
MKAR	Makanchi Array	94.89	317	P	P	09 35 34.9	-0.1
	1.0nm,0.7s,baz=100,slow=5.4,SNR=8.6						

*ISCJB **02** 09:34:45.8±1.2, 117S±02×1653E±02, h33^{km}, mb3.9/6, MS3.6/4, Error ellipse: s-maj=35.2km s-min=24.8km az=44.4*
*IDC **02** 09:34:45.3±6.4, 1139S×16483E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.8/15, mbtmp3.9/5, MS3.7/4, Ms1 3.7/4, ms1mx3.2/31, Error ellipse: s-maj=165.6km s-min=43.5km az=120.0*
*NEIC **02** 09:34:47.7±1.1, 1157S×16528E, h35^{km}, mb4.4/1, Error ellipse: s-maj=31.9km s-min=22.6km az=134.0*
ISC 02 09:34:47.7±1.2**, 116S**±02×**1653E**±02**, h35**^{km}**, n11,** σ**0**^{s}**74**/8**, mb3.9**/6**, MS3.6**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	22.50	98	LR	LR	09 47 52.0	
	comp=Z,114nm,18.4s,MS3.3,baz=251,slow=34						
WRA	Warramunga Arr	30.87	250	P	P	09 41 00.8	-0.1
	1.1nm,0.6s,mb3.9,baz=80,slow=9.0,SNR=11						
ASAR	Alice Springs	32.14	244	P	P	09 41 11.1	-1.0
	0.7nm,0.8s,mb3.5,baz=66,slow=10,SNR=7.6						
RAR	Rarotonga	34.80	111	LR	LR	09 52 22.1	
	comp=Z,54nm,20.1s,MS3.3,baz=265,slow=30						
FITZ	Fitzroy Crossi	38.80	256	P	P	09 42 09.3	-0.2
	1.2nm,0.7s,mb3.8,baz=98,slow=9.6,SNR=4.9						
FITZ				LR	LR	09 57 16.8	
	comp=Z,125nm,21.0s,MS3.7,baz=148,slow=35						
FITZ	Fitzroy Crossi	38.80	256	eP	P	09 42 09.6	+0.2
FITZ				LR	LR	09 57 16.9	
PPT	Papeete	44.02	103	LR	LR	09 58 37.8	
	comp=Z,190nm,20.5s,MS4.0,baz=150,slow=32						
SBA	Scott Base	66.27	180	eP	P	09 45 32.5	+0.6
CMAR	Chiang Mai Arr	71.90	294	P	P	09 46 08.9	+1.1
	0.5nm,0.4s,mb3.8,baz=123,slow=4.8,SNR=3.8						
EGAK	Eagle	86.03	20	eP	P	09 47 23.2	-1.0
	1.8nm,0.7s,mb4.4						
MKAR	Makanchi Array	93.59	317	P	P	09 48 00.7	+0.4
	0.6nm,0.7s,mb4.1,baz=91,slow=6.1,SNR=6.1						

*IDC **02** 09:35:40.3±1.9, 1129S×16556E, h0^{km}, mb4.0/7, mb1 4.1/7, mb1mx3.9/14, mbtmp4.0/7, MS3.7/1, Ms1 3.7/1, ms1mx2.6/28, Error ellipse: s-maj=67.4km s-min=28.9km az=144.0*
*ISCJB **02** 09:35:44.0±1.7, 114S±03×1655E±03, h33^{km}, mb4.0/8, Error ellipse: s-maj=57.1km s-min=24.2km az=140.1*
*NEIC **02** 09:35:45.6±1.3, 1132S×16553E, h35^{km}, mb4.2/1, Error ellipse: s-maj=43.2km s-min=18.5km az=140.0*
ISC 02 09:35:45.9±1.7**, 113S**±03×**1655E**±03**, h35**^{km}**, n8,** σ**0**^{s}**48**/8**, mb4.0**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.17	250	P	P	09 42 01.0	-0.8
	2.8nm,1.0s,mb4.0,baz=82,slow=8.9,SNR=6.5						
WRA				LR	LR	09 51 55.5	
	comp=Z,145nm,21.0s,baz=195,slow=31						
ASAR	Alice Springs	32.46	244	P	P	09 42 13.8	+0.7
	0.7nm,1.0s,mb3.5,baz=68,slow=10,SNR=3.3						
CMAR	Chiang Mai Arr	72.01	294	P	P	09 47 07.1	+0.4
	0.5nm,0.3s,mb3.9,baz=130,slow=2.8,SNR=4.8						
ULN	Ulaanbaatar	78.38	324	eP	P	09 47 42.6	-0.1
	2.1nm,0.8s,mb4.1						
SONM	Songino Array	78.75	324	P	P	09 47 45.2	+0.5
	1.0nm,0.7s,mb3.8,baz=134,slow=6.9,SNR=6.1						
NVAR	Mina Array Bea	86.38	50	P	P	09 48 24.8	0.0
	0.6nm,0.9s,mb3.8,baz=253,slow=9.2,SNR=2.7						
MKAR	Makanchi Array	93.56	317	P	P	09 48 58.1	-0.2
	1.2nm,0.8s,mb4.4,baz=97,slow=6.3,SNR=11						
ZALV	Zalesovo Beam	93.64	324	P	P	09 48 58.0	-0.5
	0.5nm,0.3s,mb4.4,baz=97,slow=3.4,SNR=4.4						

*IDC **02** 09:37:43.8±1.6, 1132S×16543E, h0^{km}, mb4.1/9, mb1 4.3/9, mb1mx4.1/16, mbtmp4.1/9, Error ellipse: s-maj=55.1km s-min=23.7km az=137.0*
*ISCJB **02** 09:37:48.1±1.1, 113S±02×1652E±02, h33^{km}, mb3.9/8, Error ellipse: s-maj=26.9km s-min=19.1km az=141.5*
*NEIC **02** 09:37:49.7±1.0, 1124S×16527E, h35^{km}, mb4.3/1, Error ellipse: s-maj=23.6km s-min=15.2km az=138.0*
ISC 02 09:37:49.9±1.1**, 112S**±02×**1653E**±02**, h35**^{km}**, n11,** σ**0**^{s}**83**/11**, mb3.9**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.52	288	P	Pn	09 39 08.9	-0.8
CTA	Charters Tower	20.29	242	P	P	09 42 24.4	+1.6
	14nm,1.0s,baz=67,slow=8.6,SNR=5.9						
CTAO	Charters Tower	20.29	242	ePn	P	09 42 24.3	+1.5
	14nm,0.9s						
STKA	Stephens Creek	29.98	223	P	P	09 43 54.8	-0.4
	2.9nm,0.6s,mb4.2,baz=40,slow=5.7,SNR=5.7						
WRA	Warramunga Arr	30.97	250	P	P	09 44 03.9	-0.2
	6.7nm,0.8s,mb4.5,baz=80,slow=9.0,SNR=20						
ASAR	Alice Springs	32.28	243	P	P	09 44 14.6	-1.0
	1.4nm,0.8s,mb3.8,baz=74,slow=9.5,SNR=7.6						
FITZ	Fitzroy Crossi	38.87	255	P	P	09 45 12.2	-0.1
	1.1nm,0.7s,mb3.7,baz=39,slow=4.2,SNR=4.2						
CMAR	Chiang Mai Arr	71.75	294	P	P	09 49 10.1	+0.9
	1.7nm,0.9s,mb4.0,baz=127,slow=4.1,SNR=5.9						
SONM	Songino Array	78.53	324	P	P	09 49 48.7	+1.1
	0.6nm,0.7s,mb3.6,baz=121,slow=5.6,SNR=3.3						
NVAR	Mina Array Bea	86.51	50	P	P	09 50 28.9	-0.5
	0.1nm,0.4s,mb3.4,baz=238,slow=6.1,SNR=2.7						
MKAR	Makanchi Array	93.33	317	P	P	09 51 00.6	-0.6

0.6nm,0.6s,mb4.2,baz=97,slow=6.0,SNR=5.8

IDC 02 09:38:57.0±9.2**, 1135S**×**16554E, h0km, mb4.0**/5**, mb1 4.2**/5**, mb1mx3.8**/16**, mbtmp4.0**/5**, MS4.2**/1**, Ms1 4.2**/1**, ms1mx2.9**/28**, Error ellipse: s-maj=276.1km s-min=48.2km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.48**	**243**	P	P	09 43 38.6	+2.0
	7.9nm,0.8s,baz=54,slow=13,SNR=4.1						
WRA	**Warramunga Arr**	**31.20**	**250**	P	P	09 45 17.5	-0.7
	2.2nm,0.9s,baz=81,slow=9.0,SNR=4.6						
ASAR	**Alice Springs**	**32.48**	**244**	P	P	09 45 28.8	-0.7
	0.6nm,0.7s,baz=68,slow=10,SNR=3.5						
FITZ	**Fitzroy Crossi**	**39.11**	**255**	P	P	09 46 26.5	0.0
	2.4nm,0.7s,baz=140,slow=5.3,SNR=5.4						
DAV	**Davao City (W)**	**43.77**	**293**	LR	LR	10 04 12.0	
	comp=Z,304nm,19.5s,baz=118,slow=35						
MKAR	**Makanchi Array**	**93.60**	**317**	P	P	09 52 15.5	+0.3
	0.8nm,0.7s,baz=88,slow=6.4,SNR=6.0						

IDC 02 09:50:22.1±8.6**, 1217S**×**16621E, h0km, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.7**/14**, mbtmp3.7**/4**, Error ellipse: s-maj=249.4km s-min=39.5km az=123.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.54**	**252**	P	P	09 56 46.4	0.0
	0.7nm,0.7s,baz=82,slow=9.4,SNR=5.8						
ASAR	**Alice Springs**	**32.71**	**245**	P	P	09 56 56.7	0.0
	0.7nm,0.7s,baz=74,slow=9.1,SNR=11						
SONM	**Songino Array**	**79.83**	**324**	P	P	10 02 32.8	+0.4
	0.4nm,0.7s,baz=107,slow=4.8,SNR=2.3						
MKAR	**Makanchi Array**	**94.65**	**317**	P	P	10 03 45.0	-0.2
	0.3nm,0.7s,baz=102,slow=6.0,SNR=3.7						

*BJI **02** 09:58:18.8, 270N×12700E, h10km, mB5.1, mb4.7, Ms4.0, Msz3.7*
*IDC **02** 09:58:19.3±0.5, 272N×12693E, h0km, mb4.5/22, mb1 4.6/22, mb1mx4.6/24, mbtmp4.6/22, MS3.9/7, Ms1 3.9/7, ms1mx3.3/29, Error ellipse: s-maj=22.4km s-min=11.1km az=82.0*
*NEIC **02** 09:58:20.8±0.3, 274N×12697E, h10km, mb4.9/8, Error ellipse: s-maj=12.7km s-min=5.8km az=84.0*
*MOS **02** 09:58:22.5±1.0, 276N×12701E, h36km, mb5.1/11, Error ellipse: s-maj=17.0km s-min=8.1km az=103.1*
*ISCJB **02** 09:58:27.8±1.0, 269N±004×127.11E±005, h86km±9km, mb4.6/37, Error ellipse: s-maj=9.6km s-min=6.5km az=154.1*
*DJA **02** 09:58:28, 291N×12698E, h62km, mb4.5/4*
ISC 02 09:58:29.5±0.8**, 267N**±004×**12711E**±006**, h85km**±8km**, n81, σ0.96**/77**, mb4.6**/36**, 7C-6D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNE	**Ternate**	**1.89**	**172**⇓	eP	**Pn**	**09 58 53.0**	**-7.1**
TNE				eS	**Sn**	**09 59 17.0**	**-6.3**
MNI	**Manado**	**2.57**	**242**	P	**Pn**	**09 59 06.1**	**-3.1**
	0.0nm,0.0s						
MNI	**Manado**	**2.57**	**242**⇓	eP	**Pn**	**09 59 06.0**	**-3.2**
MNI	**Manado**	**2.57**	**242**⇓	eP	**Pn**	**09 59 12.0**	**+2.8**
MNI				eS	**Sn**	**09 59 39.0**	**-0.6**
LBMI	**Labuha**	**3.31**	**173**	P	**Pn**	**09 59 18.7**	**-0.4**
	0.0nm,0.0s						
SWI	**Sorong**	**5.43**	**130**	P	**Pn**	**09 59 48.3**	**+0.3**
	0.0nm,0.0s						
MYLDM	**Lahad Datu**	**8.94**	**286**	⇑P	**Pn**	**10 00 37.9**	**+2.0**
TSM	**Tawau**	**9.36**	**280**	⇑P	**Pn**	**10 00 42.1**	**+0.5**
SDKM	**Sandakan**	**10.32**	**287**	⇑P	**Pn**	**10 00 55.3**	**+0.7**
SBUM	**Sibu**	**14.88**	**270**	⇓P	**Pn**	**10 01 56.2**	**+0.8**
KAKA	**Kakadu**	**16.17**	**161**	eP	**Pn**	**10 02 12.7**	**+1.0**
	14nm,0.6s						
KAKA	**Kakadu**	**16.17**	**161**	ePn	**Pn**	**10 02 09.5**	**-2.2**
KAKA				eP		10 02 12.7	
GUMO	**Guam**	**20.64**	**57**	P	**P**	**10 03 01.2**	**-1.1**
	27nm,0.8s,baz=336,slow=20,SNR=2.6						
GUMO				LR	LR	10 10 02.9	
	comp=Z,211nm,21.2s,baz=268,slow=34						
FITZ	**Fitzroy Crossi**	**20.69**	**184**	eP	**P**	**10 03 02.1**	**-0.7**
	9.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.69**	**184**	P	**P**	**10 03 02.0**	**-0.8**
	4.0nm,0.5s,baz=29,slow=9.0,SNR=28						
FITZ	**Fitzroy Crossi**	**20.69**	**184**	eP	**P**	**10 03 02.0**	**-0.8**
WRAB	**Tennant Creek**	**23.56**	**163**c	iP	**P**	**10 03 31.6**	**-0.7**
WRA	**Warramunga Arr**	**23.56**	**163**	P	**P**	**10 03 31.6**	**-0.8**
	25nm,0.6s,mb4.7,baz=341,slow=11,SNR=191						
WRA				S	**S**	**10 07 44.0**	**+3.7**
	1.5nm,0.7s,baz=340,slow=20,SNR=5.5						
WB2	**Warramunga Arr**	**23.57**	**163**⇑	iP	**P**	**10 03 31.6**	**-0.8**
JOW	**Kunigami**	**24.05**	**3**	P	**P**	**10 03 37.1**	**+0.3**
	20nm,0.8s,mb4.5,baz=189,slow=8.8,SNR=16						
MBWA	**Marble Bar**	**24.76**	**197**	eP	**P**	**10 03 42.7**	**-0.5**
	11nm,1.0s,mb4.2						
ASAR	**Alice Springs**	**27.00**	**166**	P	**P**	**10 04 03.3**	**-0.2**
	2.1nm,0.4s,mb4.0,baz=352,slow=7.7,SNR=32						
ASAR				PcP	PcP	10 07 25.4	+2.1
	0.7nm,0.4s,baz=358,slow=2.1,SNR=4.5						
CBIJ	**Chichi jima**	**28.26**	**29**	LR	LR	10 13 16.9	
	comp=Z,212nm,20.9s,baz=195,slow=32						
CMAR	**Chiang Mai Arr**	**31.74**	**302**	P	**P**	**10 04 43.8**	**-1.8**
	2.6nm,0.8s,mb4.0,baz=117,slow=7.0,SNR=8.8						
CMAR				LR	LR	10 17 36.2	
	comp=Z,125nm,20.6s,baz=307,slow=37						
JHJ	**Hachijo jima 2**	**32.54**	**20**	LR	LR	10 17 02.3	
	comp=Z,171nm,18.9s,baz=226,slow=34						
FORT	**Forrest**	**33.27**	**179**	eP	**P**	**10 04 58.9**	**+0.1**
	20nm,0.6s,mb5.1						
KSRS	**Korea Array**	**34.63**	**1**	P	**P**	**10 05 10.6**	**+0.1**
	3.9nm,0.6s,mb4.4,baz=176,slow=9.6,SNR=18						
KLBR	**Kellerberrin**	**35.21**	**194**	eP	**P**	**10 05 15.7**	**+0.1**
	47nm,1.5s,mb5.1						
MAT	**Matsushiro**	**35.23**	**16**	P	**P**	**10 05 15.3**	**-0.4**
MJAR	**Matsushiro Arr**	**35.23**	**16**	P	**P**	**10 05 14.3**	**-1.4**
	2.6nm,0.6s,mb4.3,baz=193,slow=9.3,SNR=13						
MJAR				LR	LR	10 18 02.7	
	comp=Z,264nm,18.4s,baz=185,slow=34						
XAN	**Xi'an**	**35.53**	**334**	P	**P**	**10 05 16.6**	**-1.7**
XAN				AP	pP	10 05 23.6	-15
XAN				XP	sP	10 05 27.0	-21
XAN				S	**S**	**10 10 53.7**	**+6.0**
XAN				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.8						
XAN				AMB	AMB		
	comp=Z,83nm,10.2s						
XAN				LR	LR		
	comp=E,74nm,20.0s						
XAN				LR	LR		
	comp=Z,147nm,23.1s						
MUN	**Mundaring**	**35.98**	**196**	eP	**P**	**10 05 23.1**	**+1.0**
NWAO	**Narrogin (SRO)**	**36.61**	**194**	P	**P**	**10 05 29.2**	**+1.7**
	comp=Z,3.9nm,0.6s,mb4.5,baz=10,slow=12,SNR=4.9						
STKA	**Stephens Creek**	**37.01**	**159**⇓	iP	**P**	**10 05 31.4**	**+0.5**
	comp=Z,12nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**37.01**	**159**	P	**P**	**10 05 31.4**	**+0.5**
	comp=Z,15nm,0.7s,mb5.0,baz=339,slow=8.8,SNR=40						
BJT	**Baijiatuau**	**38.48**	**346**	eP	**P**	**10 05 43.3**	**+0.1**
BJT				pmax	pmax		
	comp=Z,14nm,0.5s						
BJT	**Baijiatuau**	**38.48**	**346**	eP	**P**	**10 05 43.3**	**+0.1**
	comp=Z,14nm,0.5s,mb5.0						
BJI	**Beijing**	**38.50**	**346**	P	**P**	**10 05 43.4**	**0.0**
BJI				AMB	AMB		
	comp=Z,24nm,1.1s,mb4.9						
BJI				LR	LR		
	comp=Z,89nm,28.4s						
LZH	**Lanzhou**	**39.60**	**330**	eP	**P**	**10 05 53.0**	**+0.3**
LZH				AP	pP	10 05 58.5	-14
LZH				XP	sP	10 06 01.8	-21
LZH				AMB	AMB		
	comp=Z,16nm,1.2s,mb4.7						
LZH				AMB	AMB		
	comp=Z,65nm,4.3s						
LZH				LR	LR		
	comp=E,295nm,14.6s						
LZH				LR	LR		
	comp=Z,347nm,15.8s						
LSA	**Lhasa**	**43.42**	**312**	P	**P**	**10 06 24.4**	**+0.4**
LSA	**Lhasa**	**43.42**	**312**	eP	**P**	**10 06 22.7**	**-1.3**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
LSA	**Lhasa**	**43.42**	**312**	eP	**P**	**10 06 22.6**	**-1.4**
	comp=Z,8.5nm,0.6s,mb4.7						
ASAJ	**Asahikawa**	**43.49**	**16**	P	**P**	**10 06 25.5**	**+1.2**
	comp=Z,14nm,1.0s,mb4.7,baz=237,slow=23,SNR=4.8						
ASAJ				LR	LR	10 23 15.9	
	comp=Z,142nm,21.6s,baz=338,slow=34						
HIA	**Hailar**	**46.85**	**353**	eP	**P**	**10 06 51.0**	**+0.2**
ULN	**Ulaanbaatar**	**48.24**	**342**c	iP	**P**	**10 07 01.7**	**+0.1**
ULN	**Ulaanbaatar**	**48.24**	**342**	eP	**P**	**10 07 00.5**	**-1.1**
	comp=Z,9.4nm,1.1s,mb4.5						
SONM	**Songino Array**	**48.42**	**341**	P	**P**	**10 07 03.3**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.1,baz=152,slow=8.9,SNR=8.7						
SONM				PcP	PcP	10 08 30.0	+1.9
	comp=Z,2.1nm,0.8s,baz=149,slow=4.6,SNR=3.8						
ZAK	**Zakamensk**	**51.65**	**341**	eP	**P**	**10 07 26.8**	**-0.5**
ZAK				e		10 08 41.2	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.1						
MOY	**Mondy**	**53.50**	**340**	eP	**P**	**10 07 42.7**	**+1.7**
BOD	**Bodaibo**	**55.96**	**352**	eP	**P**	**10 07 58.3**	**-0.4**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
PETK	**Petropavlovsk-**	**56.27**	**22**	P	**P**	**10 08 02.2**	**+1.3**
	comp=Z,5.4nm,0.7s,mb4.7,baz=179,slow=3.7,SNR=20						
MKAR	**Makanchi Array**	**58.64**	**325**	P	**P**	**10 08 17.1**	**-0.6**
	comp=Z,5.2nm,0.6s,mb4.8,baz=122,slow=8.5,SNR=70						
YAK	**Yakutsk**	**59.25**	**1**	eP	**P**	**10 08 20.8**	**-0.9**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
ZALV	**Zalesovo Beam**	**61.70**	**333**	P	**P**	**10 08 37.6**	**-0.9**
	comp=N,1.3nm,0.6s,mb4.2,baz=107,slow=5.1,SNR=5.8						
ZAL	**Zalesovo**	**61.70**	**333**	P	**P**	**10 08 37.6**	**-0.9**
KURK	**Kurchatov**	**62.83**	**328**	P	**P**	**10 08 45.7**	**-0.5**
	comp=N,5.6nm,0.6s,mb4.7,baz=129,slow=6.4,SNR=47						
KURK	**Kurchatov**	**62.83**	**328**c	iP	**P**	**10 08 45.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
KURK	**Kurchatov**	**62.83**	**328**	P	**P**	**10 08 45.7**	**-0.5**
SEY	**Seymchan**	**62.98**	**13**	eP	**P**	**10 08 47.0**	**+0.1**
BVAR	**Borovoye Array**	**68.41**	**327**	P	**P**	**10 09 21.4**	**-0.6**
	comp=Z,3.3nm,0.7s,mb4.3,baz=134,slow=8.6,SNR=18						
AKTK	**Aktyubinsk**	**74.72**	**322**	P	**P**	**10 10 00.4**	**+0.4**
AKTO	**Aktyubinsk**	**74.72**	**322**	P	**P**	**10 10 00.4**	**+0.4**
	comp=Z,10nm,0.6s,mb4.7,baz=102,slow=8.7,SNR=40						
SVE	**Sverdlovsk**	**75.06**	**329**	eP	**P**	**10 10 02.3**	**+0.5**
SVE				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
ARU	**Arti**	**76.03**	**328**d	iP	**P**	**10 10 07.4**	**+0.1**
ARU				e		10 12 52.3	
ARU				ePPP		10 14 46.5	
ARU				eS	S	10 19 49.1	+5.4
ARU				eSS	SS	10 24 37.1	-1.1
ARU				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
OHAK	**Old Harbor**	**82.14**	**33**	eP	**P**	**10 10 41.5**	**+0.9**
GNI	**Garni**	**82.45**	**310**	eP	**P**	**10 10 41.2**	**-1.5**
GNI				pmax	pmax		
	comp=Z,15nm,2.1s						
KDAK	**Kodiak Island**	**82.58**	**32**	P	**P**	**10 10 44.8**	**+1.8**
	comp=Z,3.4nm,0.6s,mb4.3,baz=255,slow=4.9,SNR=6.2						
KDAK				LR	LR	10 41 22.5	
	comp=Z,122nm,20.6s,baz=241,slow=31						
MAW	**Mawson**	**82.89**	**200**	P	**P**	**10 10 46.2**	**+1.9**
	comp=Z,0.8nm,0.6s,mb3.7,baz=134,slow=3.2,SNR=6.2						
IMA2	**Indian Mountai**	**83.19**	**24**	eP	**P**	**10 10 47.2**	**+1.3**
SBA	**Scott Base**	**83.24**	**172**	eP	**P**	**10 10 50.3**	**+4.3**
KIV	**Kislovodsk**	**84.14**	**314**	eP	**P**	**10 10 51.2**	**-0.1**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.5						
PMR	**Palmer**	**84.69**	**29**	eP	**P**	**10 10 54.7**	**+1.0**
PMR				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
PMR	**Palmer**	**84.69**	**29**	eP	**P**	**10 10 54.7**	**+1.0**
	comp=Z,8.1nm,1.1s,mb4.6						
OBN	**Obninsk**	**88.14**	**325**	eP	**P**	**10 11 09.9**	**-0.8**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
ARCES	**ARCESS Array B**	**91.57**	**340**	P	**P**	**10 11 25.9**	**-0.5**
	comp=Z,3.3nm,0.7s,mb4.7,baz=79,slow=6.5,SNR=14						
NOA	**NORSAR Array B**	**99.90**	**334**	P	Pdif	10 12 03.5	-1.0
	comp=Z,1.1nm,0.8s,baz=69,slow=4.9,SNR=2.7						
YKA	**Yellowknife Ar**	**100.30**	**25**	P	Pdif	10 12 05.9	-0.4
	comp=Z,0.3nm,0.7s,baz=295,slow=4.3,SNR=4.0						
TORD	**Torodi Ar. Bea**	**123.60**	**288**	PKP	PKPdf	10 17 18.9	+0.8
	comp=Z,0.5nm,0.7s,baz=110,slow=1.6,SNR=4.5						
TORD	**Torodi Ar. Bea**	**123.60**	**288**	PKP	PKPdf	10 17 18.9	+0.8
JCT	**Junction City**	**124.46**	**50**	ePKIKP	PKPdf	10 17 22.0	+2.6
TKL	**Tuckaleechee C**	**132.17**	**34**	PKP	PKPdf	10 17 36.7	+2.7
	comp=Z,2.9nm,0.9s,baz=74,slow=4.0,SNR=4.7						

*IDC **02** 10:03:04.7±1.2, 1171N×8726W, h0km, mb4.0/7, mb1 4.2/8, mb1mx3.9/20, mbtmp4.0/8, ML3.9/1, MS3.6/3, Ms1 3.5/3, ms1mx3.0/32, Error ellipse: s-maj=43.7km s-min=22.0km az=51.0*
*ISCJB **02** 10:03:08.3±0.8, 1150N±005×8748W±006, h48km±8km, mb4.0/12, MS3.5/2, Error ellipse: s-maj=11.8km s-min=5.0km az=142.4*
*CASC **02** 10:03:08.4±2.7, 1146N×8753W, h36km±999km, MD4.2, ML3.2, mb4.1(NEIC)*
*NEIC **02** 10:03:11.2±1.1, 1165N×8736W, h51km±9km, mb4.1/6, Error ellipse: s-maj=14.8km s-min=7.0km az=223.0*
ISC 02 10:03:10.5±0.7**, 1159N**±005×**8740W**±006**, h48km**±7km**, n64, σ0.81**/53**, mb4.0**/12**, MS3.5**/2**, 17C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	**Leon**	**0.95**	**31**⇑	iP	**Pn**	**10 03 27.4**	**-0.1**
LEON				eS	**Sn**	**10 03 45.5**	**+5.5**
COPN	**Copaltepe**	**0.98**	**53**⇓	iP	**Pn**	**10 03 27.9**	**0.0**
COPN				eS	**Sn**	**10 03 42.2**	**+1.5**
TEL3	**Telica 3**	**1.11**	**29**⇑	eP	**Pn**	**10 03 29.6**	**-0.1**
CSAN		**1.12**	**58**⇓	eP	**Pn**	**10 03 29.2**	**-0.6**
CNGN	**Cerro Negro**	**1.13**	**37**⇑	iP	**Pn**	**10 03 29.6**	**-0.3**
CRUN	**El Crucero**	**1.14**	**70**	eP	**Pn**	**10 03 30.7**	**+0.7**
TELN	**Telica**	**1.15**	**29**	eP	**Pn**	**10 03 30.5**	**+0.3**
TELN				AML	AML	10 03 51.6	
	comp=Z,72nm,0.3s						
MOMN	**Momotombo**	**1.17**	**46**⇑	eP	**Pn**	**10 03 30.5**	**+0.1**
XAVN	**Gruta Xavier**	**1.18**	**62**⇓	eP	**Pn**	**10 03 30.4**	**-0.2**
APYN	**Apoyeque**	**1.21**	**58**⇓	eP	**Pn**	**10 03 30.9**	**-0.1**
APYN				AML	AML	10 03 49.3	
	comp=Z,1μm,0.3s						
TISN	**Laguna Tiscapa**	**1.23**	**64**⇓	eP	**Pn**	**10 03 30.8**	**-0.5**
MGAN	**Managua**	**1.25**	**64**⇑	eP	**Pn**	**10 03 31.2**	**-0.4**
WILN	**Americas 2**	**1.31**	**64**⇑	eP	**Pn**	**10 03 31.8**	**-0.6**
APON	**Apoyo**	**1.34**	**76**⇑	eP	**Pn**	**10 03 32.5**	**-0.3**
HUEN		**1.41**	**58**⇑	iP	**Pn**	**10 03 33.6**	**-0.1**
HUEN				eS	**Sn**	**10 03 57.5**	**+6.3**
CNCH	**Conchagua**	**1.73**	**346**⇑	eP	x	10 03 37.4	
CNCH				eS	x	10 04 00.7	
CONN	**Concepcion**	**1.74**	**91**⇑	eP	**Pn**	**10 03 37.3**	**-0.9**
CONN				AML	AML	10 04 13.1	
	comp=Z,91nm,0.4s						
MADN	**Villa Maderas**	**1.84**	**96**⇑	eP	**Pn**	**10 03 38.2**	**-1.3**
BLLM	**Bellamira**	**2.01**	**336**	eP	x	10 03 40.9	
BLLM				⇑eP	x	10 03 41.7	
VSM	**San Miguel**	**2.01**	**335**	eP	x	10 03 41.2	
VSM				⇑eP	x	10 03 41.2	
VCR	**Vista de Mar**	**2.27**	**130**	eP	**Pn**	**10 03 43.5**	**-2.0**
CAHU	**Cacacuatique**	**2.31**	**340**⇑	iP	x	10 03 45.5	
CAHU				eP	x	10 03 45.9	
2RIO	**Dos Rios de Up**	**2.37**	**116**	i P	**Pn**	**10 03 42.9**	**-4.0**
SNVI	**San Vicente**	**2.45**	**325**	eP	x	10 03 47.6	
SNVI				eS	x	10 04 17.2	
TGUH	**Tegucigalpa,Un**	**2.45**	**3**⇑	iP	**Pn**	**10 03 48.3**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.45**	**3**	eP	**Pn**	**10 03 48.2**	**+0.2**
LBRS	**Las Brisas**	**2.67**	**323**	eP	x	10 03 50.2	
BOQS	**Boqueron**	**2.81**	**319**⇑	eP	x	10 03 52.1	
JCR	**Jicaral**	**2.84**	**127**	eP	**Pn**	**10 03 51.7**	**-1.6**
SBLS	**San Blas**	**3.11**	**316**	eP	x	10 03 54.4	
SBLS				eS	x	10 04 32.7	
SNJE	**San Jose**	**3.12**	**317**	eP	x	10 03 56.4	
SNJE				eS	x	10 04 31.9	
RTR	**El Retiro**	**3.17**	**316**	eP	x	10 03 57.4	
RTR				eS	x	10 04 33.0	
CGA2	**Cerro Gallo 2**	**3.28**	**118**	eP	**Pn**	**10 04 00.3**	**+0.9**
CGA2				eS	**Sn**	**10 04 36.6**	**-0.6**
RBDL	**Robledal**	**3.35**	**319**	eP	x	10 04 00.3	
RBDL				eS	x	10 04 40.0	
PRS1	**Puriscal**	**3.43**	**118**	eP	**Pn**	**10 04 01.8**	**+0.3**
LCR2	**La Lucha 2**	**3.81**	**119**	eP	**Pn**	**10 04 08.3**	**+1.6**
LCR2				eS	**Sn**	**10 04 49.6**	**-0.6**
URSC	**Urasca**	**3.96**	**116**	eP	**Pn**	**10 04 11.3**	**+2.5**
BUS	**Buena Vista**	**4.11**	**119**	eP	**Pn**	**10 04 11.9**	**+1.1**
BUS				eS	**Sn**	**10 04 58.3**	**+0.6**
ACR	**Cerro Adams**	**5.09**	**125**	eP	**Pn**	**10 04 24.8**	**+0.6**
BCIP	**Isla Barro Col**	**7.82**	**107**	eP	**Pn**	**10 05 01.3**	**-0.4**
TEIG	**Tepich**	**8.62**	**354**	LR	LR	10 09 14.2	
	comp=Z,323nm,18.5s,baz=58,slow=43						
CMIG	**Matias Romero**	**9.08**	**308**	Pn	**Pn**	**10 05 19.5**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=110,slow=10,SNR=24						
CMIG				Sn	**Sn**	**10 06 59.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=356,slow=19,SNR=1.9						
CHI2		**15.17**	**116**⇑	eP	Px	10 03 29.3	
CHI2				AML	AML	10 03 54.4	
	comp=Z,3μm,0.4s						
LAPE	**La Pedrera**	**16.11**	**103**	i P	Px	10 03 42.8	
SDV	**Santo Domingo**	**16.71**	**98**	P	**Pn**	**10 07 02.9**	**+1.4**
	comp=Z,12nm,1.2s						
ATAH	**Atahualpa**	**20.53**	**154**	LR	LR	10 14 55.2	
	comp=Z,117nm,18.1s,MS3.3,baz=222,slow=34						
JCT	**Junction City**	**22.04**	**330**	eP	**P**	**10 08 02.4**	**+1.3**
	comp=Z,3.8nm,0.8s,mb3.9						
OXF	**Oxford**	**22.89**	**356**	eP	**P**	**10 08 09.7**	**-0.4**
	comp=Z,15nm,0.8s,mb4.5						
MIAR	**Mount Ida**	**23.53**	**347**	eP	**P**	**10 08 16.3**	**-0.1**
	comp=Z,6.3nm,0.7s,mb4.2						
SWET	**Sewanee**	**23.55**	**3**	eP	**P**	**10 08 15.9**	**-0.8**
CPCT	**Cooper Cave**	**23.89**	**6**	eP	**P**	**10 08 20.2**	**+0.4**
TKL	**Tuckaleechee C**	**24.18**	**7**	P	**P**	**10 08 23.2**	**+0.8**
	comp=Z,7.1nm,0.8s,mb4.2,baz=180,slow=9.0,SNR=11						
WMOK	**Wichita Mounta**	**25.26**	**338**	eP	**P**	**10 08 32.5**	**+0.2**
	comp=Z,6.1nm,1.1s,mb4.0						
SIUC	**Southern Illin**	**26.06**	**357**	eP	**P**	**10 08 39.4**	**-0.1**
	comp=Z,6.5nm,0.6s,mb4.3						
PDAR	**Pinedale Array**	**36.55**	**332**	P	**P**	**10 10 11.8**	**+0.2**
	comp=Z,0.6nm,0.6s,mb3.6,baz=127,slow=11,SNR=8.0						
NVAR	**Mina Array Bea**	**38.38**	**319**	P	**P**	**10 10 27.1**	**-0.1**
	comp=Z,0.5nm,0.8s,mb3.3,baz=134,slow=7.9,SNR=4.5						
NVAR				PcP	PcP	10 12 43.2	+3.2
	comp=Z,0.7nm,0.7s,baz=129,slow=2.4,SNR=6.3						
ULM	**Lac du Bonnet**	**39.17**	**351**	P	**P**	**10 10 33.4**	**-0.2**
	comp=Z,3.2nm,0.7s,mb4.2,baz=315,slow=10,SNR=4.6						
SCHQ	**Schefferville**	**46.08**	**16**	P	**P**	**10 11 28.3**	**-1.2**
	comp=Z,1.3nm,0.4s,mb4.2,baz=243,slow=9.0,SNR=4.1						
SCHQ				LR	LR	10 30 38.1	
	comp=Z,81nm,19.6s,MS3.7,baz=74,slow=36						
BDFB	**Brasilia**	**47.45**	**124**	P	**P**	**10 11 41.3**	**+0.4**
	comp=Z,6.8nm,0.8s,mb4.7,baz=273,slow=7.8,SNR=13						
YKA	**Yellowknife Ar**	**54.45**	**345**	P	**P**	**10 12 31.8**	**-0.9**
	comp=Z,0.3nm,0.6s,mb3.4,baz=138,slow=7.0,SNR=7.6						
YKA	**Yellowknife Ar**	**54.45**	**345**	P	**P**	**10 12 31.8**	**-0.9**
ASAR	**Alice Springs**	**139.00**	**247**	PKP	PKPdf	10 22 34.3	+1.7
	comp=Z,0.3nm,0.6s,baz=107,slow=2.2,SNR=3.9						
WRA	**Warramunga Arr**	**139.08**	**253**	PKP	PKPdf	10 22 32.7	-0.1
	comp=Z,0.3nm,0.8s,baz=94,slow=3.1,SNR=3.2						
CMAR	**Chiang Mai Arr**	**149.49**	**348**	PKPbc	PKPbc	10 22 56.0	+0.6
	comp=Z,2.3nm,0.7s,baz=345,slow=3.4,SNR=13						

*IDC **02** 10:13:40.5±0.8, 794S×10784E, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.8/19, mbtmp3.8/10, Error ellipse: s-maj=39.2km s-min=15.8km az=56.0*
*NEIC **02** 10:13:42.0±0.5, 800S×10781E, h10km, Error ellipse: s-maj=15.0km s-min=9.5km az=58.0*
*ISCJB **02** 10:13:46.6±1.2, 821S±008×10767E±008, h71km±12km, mb3.8/9, Error ellipse: s-maj=14.3km s-min=12.1km az=143.4*
*DJA **02** 10:13:49, 8.10S×10776E, h57km, ML4.1/6*
ISC 02 10:13:47.7±1.2**, 820S**±008×**10768E**±008**, h61km**±12km**, n16, σ0.86**/16**, mb3.8**/9**, 1C, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**2.19**	**67**⇑	eP	**Pn**	**10 14 22.8**	**+1.1**
BJII				eS	**Sn**	**10 14 47.4**	**-0.4**
XMIS	**Christmas Isla**	**3.02**	**221**	ePn	**Pn**	**10 14 33.1**	**-0.1**
MBWA	**Marble Bar**	**17.36**	**139**	ePn	**Pn**	**10 17 43.9**	**-2.0**
	1.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.05**	**121**	P	**P**	**10 18 16.4**	**+0.4**
	2.9nm,0.7s,baz=203,slow=6.2,SNR=7.4						
WRA	**Warramunga Arr**	**28.32**	**117**	P	**P**	**10 19 35.8**	**-0.1**
	0.8nm,0.5s,mb3.6,baz=287,slow=12,SNR=9.3						
ASAR	**Alice Springs**	**29.46**	**125**	P	**P**	**10 19 45.8**	**-0.2**
	0.3nm,0.7s,mb3.1,baz=302,slow=8.1,SNR=5.6						
STKA	**Stephens Creek**	**39.35**	**132**	P	**P**	**10 21 12.3**	**+1.1**
	1.4nm,0.4s,mb4.0,baz=293,slow=10,SNR=6.8						
SONM	**Songino Array**	**55.80**	**359**	P	**P**	**10 23 18.6**	**+0.1**
	0.4nm,0.4s,mb3.8,baz=171,slow=10,SNR=3.4						
MK31	**Makanchi Array**	**59.23**	**340**	eP	**P**	**10 23 42.6**	**0.0**
MKAR	**Makanchi Array**	**59.23**	**340**	P	**P**	**10 23 41.6**	**-1.0**
	0.7nm,0.5s,mb3.9,baz=149,slow=8.5,SNR=9.4						
KURK	**Kurchatov**	**63.85**	**340**	P	**P**	**10 24 13.6**	**-0.1**
	0.4nm,0.5s,mb3.7,baz=159,slow=5.7,SNR=2.9						
KURK	**Kurchatov**	**63.85**	**340**	P	**P**	**10 24 13.6**	**-0.1**
MAW	**Mawson**	**66.42**	**197**	P	**P**	**10 24 33.4**	**+3.2**
	1.1nm,0.6s,mb4.1,baz=43,slow=6.3,SNR=7.3						
BVAR	**Borovoye Array**	**68.72**	**337**	P	**P**	**10 24 45.1**	**+0.3**
	0.6nm,0.4s,mb3.9,baz=142,slow=7.5,SNR=5.1						
ARCES	**ARCESS Array B**	**94.89**	**340**	P	**P**	**10 27 02.2**	**-0.5**
	0.9nm,0.8s,mb4.2,baz=94,slow=5.5,SNR=2.3						
JCT	**Junction City**	**146.06**	**46**	ePKP	PKPdf	10 33 23.6	+3.1

*CSEM **02** 10:19:44.7, 35.11N×2335E, h16km, MD3.5/5, After ATH*
*NEIC **02** 10:19:44.7, 35.11N×2335E, h16km, MD3.5(ATH), After ATH.*
ATH 02 10:19:44.6, 3512N×2332E, h15km±1km**, MD3.5**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.69**	**114**	ePN	Pn	10 19 58.0	-1.8
VAM	**Vamos**	**0.78**	**68**	ePN	Pn	10 19 59.2	-1.8
VAM				eSN	Sn	10 20 10.6	-1.7
VAM	**Vamos**	**0.78**	**68**	ePb	Pb	10 19 58.7	-1.1
VAM				eSn	Sn	10 20 10.6	-1.7
KYTH	**Kithira**	**1.18**	**349**	ePN	Pn	10 20 07.0	+0.4
VLI	**Veliai**	**1.62**	**349**	ePN	Pn	10 20 14.8	+2.1
VLI				eSN	Sn	10 20 37.0	+3.7
VLI	**Veliai**	**1.62**	**349**	ePn	Pn	10 20 15.8	+3.1
VLI				eSn	Sn	10 20 37.0	+3.7
NPS	**Neapolis**	**1.88**	**85**	ePN	Pn	10 20 17.9	+1.7
NPS	**Neapolis**	**1.88**	**85**	ePb	Pb	10 20 16.9	-1.8

*ISCJB **02** 10:27:15.6±1.7, 758S±009×12891E±008, h151km±18km, mb3.7/4, Error ellipse: s-maj=17.6km s-min=9.5km az=33.6*
*IDC **02** 10:27:15.3±5.8, 752S×12902E, h131km±64km, mb3.6/4, mb1 3.7/8, mb1mx3.5/16, mbtmp3.6/8, Error ellipse: s-maj=57.2km s-min=28.9km az=40.0*
*NEIC **02** 10:27:16.3±3.2, 756S×12885E, h138km±37km, mb3.5/1, Error ellipse: s-maj=27.6km s-min=22.3km az=147.0*
*DJA **02** 10:27:22, 8.10S×12875E, h147km, ML4.9/1*
ISC 02 10:27:19.5±1.2**, 786S**±009×**12885E**±008**, h181km**±12km**, n13, σ0.96**/19**, mb3.7**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.63**	**245**	P	**Pn**	**10 28 41.9**	**+0.2**
	24nm,0.3s,baz=98,slow=5.2,SNR=24						
BATI				S	**Sn**	**10 29 45.4**	**-0.9**
	25nm,0.3s,baz=111,slow=20,SNR=11						
KAKA	**Kakadu**	**5.97**	**144**	ePn	**Pn**	**10 28 46.6**	**+0.4**
	168nm,0.6s						
KAKA				eSn	**Sn**	**10 29 53.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**10.65**	**197**	P	**Pn**	**10 29 47.7**	**+0.3**
	0.3nm,0.3s,baz=46,slow=10,SNR=20						
FITZ				S	**Sn**	**10 31 41.3**	**-4.6**
	1.6nm,0.3s,baz=114,slow=19,SNR=15						
FITZ	**Fitzroy Crossi**	**10.65**	**197**	ePn	**Pn**	**10 29 47.5**	**+0.1**
FITZ				S	**Sn**	**10 31 41.3**	**-4.6**
WRA	**Warramunga Arr**	**13.13**	**157**	P	**Pn**	**10 30 19.9**	**+0.5**
	1.1nm,0.3s,baz=327,slow=14,SNR=69						
WRA				S	**Sn**	**10 32 39.0**	**-6.5**
	1.6nm,0.3s,baz=334,slow=22,SNR=8.7						
MBWA	**Marble Bar**	**15.88**	**213**	ePn	**Pn**	**10 30 56.3**	**+2.9**
	1.3nm,0.5s						

ASAR	**Alice Springs**	**16.45**	**163**	P	**Pn**	**10 31 03.5**	**+3.4**
	0.3nm,0.3s,baz=351,slow=12,SNR=19						
ASAR				S	**S**	**10 34 01.8**	**-0.7**
	0.6nm,0.3s,baz=345,slow=25,SNR=8.1						
PETK	**Petropavlovsk-**	**65.50**	**19**	P	**P**	**10 37 41.9**	**-1.1**
	1.1nm,0.7s,mb3.8,baz=201,slow=7.7,SNR=4.1						
PETK	**Petropavlovsk-**	**65.50**	**19**	P	**P**	**10 37 41.9**	**-1.1**
MK31	**Makanchi Array**	**68.33**	**328**	eP	**P**	**10 38 01.4**	**+0.3**
MKAR	**Makanchi Array**	**68.33**	**328**	P	**P**	**10 38 01.3**	**+0.2**
	0.8nm,0.4s,mb3.8,baz=121,slow=8.1,SNR=9.3						
ZALV	**Zalesovo Beam**	**71.85**	**334**	P	**P**	**10 38 21.5**	**-0.9**
	0.5nm,0.5s,mb3.5,baz=121,slow=6.9,SNR=2.2						
KURK	**Kurchatov**	**72.66**	**329**	P	**P**	**10 38 28.1**	**+0.8**
	0.9nm,0.5s,mb3.8,baz=125,slow=5.0,SNR=5.6						

*IDC **02** 10:36:37.5±0.5, 2.71N×126.92E, h0km, mb4.4/20, mb1 4.4/20, mb1mx4.4/22, mbtmp4.4/20, MS3.8/10, Ms1 3.8/10, ms1mx3.4/33, Error ellipse: s-maj=25.4km s-min=10.9km az=80.0*

*MOS **02** 10:36:40.8±1.1, 2.75N×126.97E, h33km, mb5.0/17, Error ellipse: s-maj=20.7km s-min=8.3km az=107.6*

*BJI **02** 10:36:41.9, 2.81N×126.86E, h35km, mB4.8, mb4.7, Ms3.9, Msz3.9*

*NEIC **02** 10:36:43.6±2.1, 2.73N×126.94E, h44km±20km, mb5.0/11, Error ellipse: s-maj=11.7km s-min=5.5km az=71.0*

*ISCJB **02** 10:36:44.2±0.9, 2.70N±0.04×127.03E±0.06, h68km±9km, mb4.6/44, Error ellipse: s-maj=10.5km s-min=6.0km az=153.1*

*DJA **02** 10:36:47, 2.88N×127.10E, h55km, ML4.9/4*

ISC 02 10:36:46.3±0.8**, 2.68N**±0.04×**127.04E**±0.06**, h71**km±8km**, h27**km±2.6km**:pP-P, n98,** σ**0.97**/93**, mb4.6**/44**, 6C-6D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	**Ternate**	**1.91**	**170**	⇓eP	**Pn**	**10 37 12.0**	**-4.8**
TNE				eS	**Sn**	**10 37 37.0**	**-3.0**
MNI	**Manado**	**2.52**	**241**	P	**Pn**	**10 37 24.8**	**-0.1**
	0.0nm,0.0s						
MNI	**Manado**	**2.52**	**241**	⇓eP	**Pn**	**10 37 24.0**	**-0.9**
MNI				eS	**Sn**	**10 37 51.0**	**-3.6**
MNI	**Manado**	**2.52**	**241**	⇓eP	**Pn**	**10 37 25.0**	**+0.1**
MNI				eS	**Sn**	**10 38 05.0**	**+10**
LBMI	**Labuha**	**3.33**	**172**	P	**Pn**	**10 37 36.5**	**+0.5**
	0.0nm,0.0s						
SWI	**Sorong**	**5.50**	**130**	P	**Pn**	**10 38 05.3**	**-0.4**
	0.0nm,0.0s						
MYLDM	**Lahad Datu**	**8.87**	**287**	⇑P	**Pn**	**10 38 58.6**	**+6.8**
TSM	**Tawau**	**9.29**	**280**	⇑P	**Pn**	**10 38 58.4**	**+0.9**
SDKM	**Sandakan**	**10.24**	**287**	⇑P	**Pn**	**10 39 12.6**	**+2.0**
SBUM	**Sibu**	**14.80**	**269**	⇓P	**Pn**	**10 40 18.5**	**+6.6**
STKI	**Sintang**	**15.77**	**261**	P	**Pn**	**10 40 28.6**	**+4.4**
	0.0nm,0.0s						
KAKA	**Kakadu**	**16.21**	**161**	eP	**Pn**	**10 40 30.9**	**+1.2**
	24nm,0.8s						
KAKA	**Kakadu**	**16.21**	**161**	eP	**Pn**	**10 40 30.7**	**+1.0**
GUMO	**Guam**	**20.69**	**57**	LR	LR	10 48 20.3	
	comp=Z,324nm,21.3s,baz=231,slow=34						
FITZ	**Fitzroy Crossi**	**20.70**	**184**	eP	**P**	**10 41 20.1**	**-0.7**
	6.5nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.70**	**184**	P	**P**	**10 41 19.5**	**-1.3**
	2.6nm,0.5s,baz=357,slow=8.1,SNR=22						
FITZ	**Fitzroy Crossi**	**20.70**	**184**	eP	**P**	**10 41 20.6**	**-0.2**
QIZ	**Qiongzhong**	**23.39**	**315**	eP	**P**	**10 41 45.1**	**-3.9**
QIZ				S	**S**	**10 45 55.9**	**-0.9**
QIZ				LR	LR		
	comp=E,149nm,11.8s						
QIZ				LR	LR		
	comp=Z,211nm,21.4s						
WRAB	**Tennant Creek**	**23.59**	**163**	c iP	**P**	**10 41 49.7**	**-1.1**
WRA	**Warramunga Arr**	**23.60**	**163**	P	**P**	**10 41 50.1**	**-0.8**
	comp=Z,43nm,0.7s,mb4.9,baz=341,slow=10,SNR=251						
WRA	**Warramunga Arr**	**23.60**	**163**	i P	**P**	**10 41 49.7**	**-1.1**
WRA				pmax	pmax		
	comp=Z,43nm,0.7s						
WB2	**Warramunga Arr**	**23.60**	**163**	⇑iP	**P**	**10 41 49.8**	**-1.1**
JOW	**Kunigami**	**24.04**	**3**	P	**P**	**10 41 53.6**	**-1.3**
	comp=Z,19nm,0.9s,mb4.4,baz=190,slow=8.6,SNR=13						
MBWA	**Marble Bar**	**24.75**	**196**	eP	**P**	**10 42 01.8**	**+0.4**
	comp=Z,44nm,1.4s,mb4.7						
ASAR	**Alice Springs**	**27.03**	**166**	P	**P**	**10 42 21.7**	**-0.2**
	comp=Z,2.5nm,0.7s,mb3.9,baz=23,slow=5.4,SNR=4.3						
ASAR				PcP	PcP	10 45 43.6	+1.8
	comp=Z,0.9nm,0.6s,baz=356,slow=2.2,SNR=4.6						
CBIJ	**Chichi jima**	**28.28**	**29**	LR	LR	10 51 34.1	
	comp=Z,325nm,21.0s,baz=229,slow=32						
CMAR	**Chiang Mai Arr**	**31.67**	**302**	P	**P**	**10 43 02.4**	**-0.8**
	comp=Z,2.4nm,0.7s,mb4.0,baz=117,slow=6.9,SNR=10.0						
CMAR				LR	LR	10 55 29.4	
	comp=Z,112nm,21.2s,baz=127,slow=36						
CMAR	**Chiang Mai Arr**	**31.67**	**302**	i P	**P**	**10 43 02.4**	**-0.8**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JHJ	**Hachijo jima 2**	**32.55**	**20**	LR	LR	10 53 48.3	
	comp=Z,193nm,19.5s,baz=256,slow=32						
FORT	**Forrest**	**33.29**	**178**	eP	**P**	**10 43 16.1**	**-1.0**
	comp=Z,19nm,0.7s,mb5.0						
KSRS	**Korea Array**	**34.61**	**1**	P	**P**	**10 43 28.9**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.0,baz=178,slow=9.8,SNR=7.4						
KSRS				LR	LR	10 57 08.3	
	comp=Z,111nm,21.1s,baz=185,slow=36						
KLBR	**Kellerberrin**	**35.21**	**194**	eP	**P**	**10 43 34.3**	**+0.5**
	comp=Z,2.8nm,0.3s,mb4.6						
MJAR	**Matsushiro Arr**	**35.24**	**16**	P	**P**	**10 43 32.4**	**-1.6**
	comp=Z,1.5nm,0.6s,mb4.0,baz=195,slow=8.7,SNR=5.9						
XAN	**Xi'an**	**35.48**	**334**	P	**P**	**10 43 35.8**	**-0.3**
XAN				AP	pP	10 43 43.2	-10
XAN				XP	sP	10 43 46.4	-15
XAN				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.3						
XAN				AMB	AMB		
	comp=Z,45nm,5.5s						
XAN				LR	LR		
	comp=E,122nm,18.4s						
XAN				LR	LR		
	comp=Z,244nm,25.6s						
MUN	**Mundaring**	**35.97**	**196**	eP	**P**	**10 43 42.2**	**+1.9**
NWAO	**Narrogin (SRO)**	**36.61**	**194**	P	**P**	**10 43 46.4**	**+0.6**
	comp=Z,5.3nm,0.5s,mb4.7,baz=353,slow=9.0,SNR=7.6						
STKA	**Stephens Creek**	**37.05**	**159**	⇓iP	**P**	**10 43 49.6**	**+0.1**
	comp=Z,18nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**37.05**	**159**	P	**P**	**10 43 49.7**	**+0.2**
	comp=Z,24nm,0.7s,mb5.2,baz=332,slow=8.7,SNR=44						
STKA				PcP	PcP	10 46 10.2	+1.2
	comp=Z,2.8nm,0.8s,baz=342,slow=9.3,SNR=2.8						
BJT	**Baijiatuau**	**38.45**	**347**	eP	**P**	**10 44 01.6**	**+0.4**
BJT				pmax	pmax		
	comp=Z,32nm,0.9s						
BJT	**Baijiatuau**	**38.45**	**347**	eP	**P**	**10 44 01.6**	**+0.4**
	comp=Z,32nm,0.9s,mb5.1						
BJI	**Beijing**	**38.47**	**347**	P	**P**	**10 44 01.0**	**-0.4**
BJI				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.8						
BJI				AMB	AMB		
	comp=Z,131nm,3.4s						
BJI				LR	LR		
	comp=N,140nm,15.5s						
BJI				LR	LR		
	comp=E,113nm,18.6s						
BJI				LR	LR		
	comp=Z,138nm,27.9s						
LZH	**Lanzhou**	**39.56**	**330**	eP	**P**	**10 44 11.0**	**+0.5**
LZH				AP	pP	10 44 19.5	-8.4
LZH				XP	sP	10 44 23.1	-13
LZH				AMB	AMB		
	comp=Z,17nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,69nm,4.3s						
LZH				LR	LR		
	comp=E,130nm,13.5s						
LZH				LR	LR		
	comp=Z,432nm,14.8s						
SHL	**Shillong**	**40.74**	**307**	eP	**P**	**10 44 20.0**	**-0.5**
LSA	**Lhasa**	**43.36**	**312**	P	**P**	**10 44 42.0**	**+0.2**
ASAJ	**Asahikawa**	**43.50**	**16**	P	**P**	**10 44 43.3**	**+0.6**
	comp=Z,21nm,1.1s,mb4.8,baz=235,slow=13,SNR=3.8						
GTA	**Gaotai**	**44.15**	**329**	eP	**P**	**10 44 48.8**	**+0.9**
GTA				AP	pP	10 44 57.6	-8.0
GTA				XP	sP	10 45 01.3	-12
GTA				AMB	AMB		
	comp=Z,2.0nm,1.1s,mb3.8						
ODAN	**Odare**	**44.93**	**306**	eP	**P**	**10 44 53.3**	**-1.1**
RAMN	**Ramite**	**45.60**	**306**	eP	**P**	**10 44 59.6**	**-0.1**
	comp=Z,17nm,0.7s,mb4.9						
YSS	**Yuzh-Sakhalins**	**46.17**	**15**	eP	**P**	**10 45 03.9**	**+0.1**
YSS				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.7						
JIRN	**Jiri**	**46.23**	**307**	eP	**P**	**10 45 04.5**	**-0.2**
KLR	**Kul'dur**	**46.55**	**4**	eP	**P**	**10 45 00.0**	**-6.8**
GUN	**Gumba**	**46.59**	**307**	eP	**P**	**10 45 07.5**	**0.0**
PKI	**Pulchoki**	**46.83**	**306**	eP	**P**	**10 45 08.2**	**-1.1**
HIA	**Hailar**	**46.83**	**353**	eP	**P**	**10 45 09.8**	**+0.9**
KKN	**Kakani**	**47.02**	**306**	eP	**P**	**10 45 09.8**	**-1.0**
	comp=Z,9.0nm,0.5s,mb4.7						
KKN	**Kakani**	**47.02**	**306**	eP	**P**	**10 45 09.8**	**-1.0**
KKN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.8						
DMN	**Daman**	**47.09**	**306**	eP	**P**	**10 45 11.2**	**-0.1**
ULN	**Ulaanbaatar**	**48.20**	**342**	eP	**P**	**10 45 20.3**	**+0.7**
ULN				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
ULN	**Ulaanbaatar**	**48.20**	**342**	eP	**P**	**10 45 20.3**	**+0.7**
	comp=Z,14nm,1.0s,mb4.7						
KOLN	**Koldanda**	**48.37**	**305**	eP	**P**	**10 45 20.7**	**-0.6**
	comp=Z,22nm,0.6s,mb5.2						
SONM	**Songino Array**	**48.38**	**341**	P	**P**	**10 45 21.5**	**+0.5**
	comp=Z,1.5nm,0.8s,mb3.9,baz=160,slow=8.7,SNR=7.7						
SONM				PcP	PcP	10 46 48.1	+1.6
	comp=Z,2.0nm,0.8s,baz=147,slow=3.0,SNR=4.1						
SONM				LR	LR	11 07 18.0	
	comp=Z,111nm,21.3s,baz=155,slow=38						
SONM	**Songino Array**	**48.38**	**341**	P	**P**	**10 45 21.5**	**+0.5**
SONM						10 46 48.1	
DANN	**Dangsing**	**48.47**	**306**	eP	**P**	**10 45 21.4**	**-0.7**
	comp=Z,33nm,0.6s,mb5.4						
ZAK	**Zakamensk**	**51.61**	**341**	eP	**P**	**10 45 46.1**	**+0.7**
ZAK				e		10 46 59.7	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.9s,mb4.0						
TLY	**Talaya**	**52.61**	**342**	eP	**P**	**10 45 54.5**	**+1.7**
TLY				e		10 55 33.5	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
TLY				MLR	MLR		
	comp=Z,81nm,22.0s						
BOD	**Bodaibo**	**55.94**	**352**	eP	**P**	**10 46 16.0**	**-0.9**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
PETK	**Petropavlovsk-**	**56.28**	**22**	P	**P**	**10 46 20.5**	**+1.1**
	comp=Z,11nm,0.9s,mb4.9,baz=212,slow=4.3,SNR=18						
PETK				LR	LR	11 06 00.8	
	comp=Z,69nm,20.9s,baz=26,slow=31						
PETK	**Petropavlovsk-**	**56.28**	**22**	P	**P**	**10 46 20.5**	**+1.1**
PETK				LR	LR	11 06 00.8	
PET	**Petropavlovsk**	**56.57**	**22**	eP	**P**	**10 46 22.3**	**+0.8**
PET				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
MK31	**Makanchi Array**	**58.59**	**325**	eP	**P**	**10 46 35.0**	**-0.7**
MKAR	**Makanchi Array**	**58.59**	**325**	P	**P**	**10 46 35.5**	**-0.2**
	comp=Z,3.7nm,0.7s,mb4.6,baz=121,slow=8.2,SNR=41						
MKAR	**Makanchi Array**	**58.59**	**325**	i P	**P**	**10 46 35.5**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YAK	**Yakutsk**	**59.24**	**1**	eP	**P**	**10 46 37.6**	**-2.4**
YAK				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.5s						
RPZ	**Rata Peaks**	**60.73**	**145**	P	**P**	**10 46 51.0**	**+0.5**
	comp=E,12nm,0.9s,mb5.0,baz=23,slow=13,SNR=3.5						
RAO	**Raoul Island**	**61.48**	**125**	LR	LR	11 08 45.9	
	comp=E,144nm,19.8s,baz=293,slow=31						
ZALV	**Zalesovo Beam**	**61.66**	**333**	P	**P**	**10 46 55.5**	**-1.1**
	comp=E,1.7nm,0.5s,mb4.3,baz=126,slow=7.5,SNR=6.2						
ZAL	**Zalesovo**	**61.66**	**333**	P	**P**	**10 46 55.5**	**-1.1**
KURK	**Kurchatov**	**62.78**	**328**	P	**P**	**10 47 03.6**	**-0.6**
	comp=E,4.1nm,0.7s,mb4.5,baz=130,slow=6.5,SNR=26						
KURK	**Kurchatov**	**62.78**	**328**	d iP	**P**	**10 47 04.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
NVS	**Novosibirsk**	**62.94**	**333**	eP	**P**	**10 47 01.6**	**-3.6**
NVS				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
NVS				pmax	pmax		
	comp=N,9.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,3.0nm,1.0s						
BVAR	**Borovoye Array**	**68.36**	**327**	P	**P**	**10 47 40.0**	**-0.1**
	comp=E,2.3nm,0.6s,mb4.2,baz=140,slow=7.8,SNR=17						
CASY	**Casey**	**69.82**	**187**	eP	**P**	**10 47 50.1**	**+1.3**
AKTO	**Aktyubinsk**	**74.67**	**322**	LR	LR	11 23 28.9	
	comp=E,121nm,22.0s,baz=84,slow=38						
SVE	**Sverdlovsk**	**75.01**	**329**	eP	**P**	**10 48 19.9**	**-0.1**
SVE				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
ARU	**Arti**	**75.98**	**328**	c iP	**P**	**10 48 26.0**	**+0.5**
ARU				e		10 51 15.1	
ARU				eS	S	10 58 07.5	+4.6
ARU				eSS	SS	11 02 54.2	-2.6
ARU				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
GNI	**Garni**	**82.39**	**310**	LR	LR	11 27 56.8	
	comp=Z,35nm,19.1s,baz=271,slow=37						
KDAK	**Kodiak Island**	**82.61**	**32**	P	**P**	**10 49 03.4**	**+1.8**
	comp=Z,2.9nm,0.7s,mb4.2,baz=268,slow=2.4,SNR=4.6						
MAW	**Mawson**	**82.88**	**200**	eP	**P**	**10 49 04.4**	**+1.6**
	comp=Z,2.3nm,0.7s,mb4.1						
MAW	**Mawson**	**82.88**	**200**	P	**P**	**10 49 04.4**	**+1.7**
	comp=Z,1.4nm,0.6s,mb4.0,baz=42,slow=2.8,SNR=7.1						
MAW	**Mawson**	**82.88**	**200**	eP	**P**	**10 49 04.4**	**+1.6**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KIV	**Kislovodsk**	**84.08**	**314**	eP	**P**	**10 49 11.5**	**+2.0**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
OBN	**Obninsk**	**88.09**	**325**	eP	**P**	**10 49 29.3**	**+0.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
DAWY	**Dawson**	**89.18**	**26**	eP	**P**	**10 49 34.7**	**+0.8**
ARCES	**ARCESS Array B**	**91.53**	**340**	P	**P**	**10 49 44.5**	**-0.2**
	comp=Z,6.0nm,1.1s,mb4.7,baz=79,slow=7.5,SNR=10						
AKASG	**Malin Array Be**	**92.89**	**321**	P	**P**	**10 49 50.7**	**-0.8**
	comp=Z,0.3nm,0.5s,mb3.9,baz=75,slow=4.0,SNR=3.1						
TORD	**Torodi Ar. Bea**	**123.53**	**288**	PKP	PKPdf	10 55 37.2	+0.6
	comp=Z,1.0nm,0.8s,baz=106,slow=0.7,SNR=5.3						
JCT	**Junction City**	**124.50**	**50**	ePKIKP	PKPdf	10 55 39.7	+1.6
LCO	**Las Campanas**	**148.85**	**149**	ePKPbc	PKPbc	10 56 28.7	+2.1

*IDC **02** 10:40:06.4±3.2, 11.97S×166.23E, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.9/15, mbtmp4.1/5, Error ellipse: s-maj=114.5km s-min=30.8km az=133.0*

*ISCJB **02** 10:40:09.0±3.2, 12.2S±0.6×166.3E±0.6, h33km, mb4.0/4, Error ellipse: s-maj=115.7km s-min=22.7km az=44.9*

*NEIC **02** 10:40:11.2±1.9, 12.04S×166.30E, h35km, Error ellipse: s-maj=76.8km s-min=17.4km az=137.0*

ISC 02 10:40:10.7±3.2**, 12.2S**±0.6×**166.4E**±0.6**, h35**km**, n8,** σ**0.83**/6**, mb4.0**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.90**	**245**	P	**P**	**10 44 51.2**	**+1.1**
	6.7nm,0.8s,baz=85,slow=11,SNR=5.3						
WRA	**Warramunga Arr**	**31.74**	**252**	P	**P**	**10 46 31.3**	**-0.4**
	1.8nm,0.7s,mb4.0,baz=80,slow=9.3,SNR=6.0						
ASAR	**Alice Springs**	**32.91**	**245**	P	**P**	**10 46 41.1**	**-0.7**
	3.5nm,0.8s,mb4.4,baz=74,slow=9.4,SNR=14						
SONM	**Songino Array**	**79.93**	**324**	P	**P**	**10 52 16.2**	**+0.2**
	0.2nm,0.3s,mb3.5,baz=137,slow=7.3,SNR=2.7						
EGAK	**Eagle**	**86.18**	**20**	eP	**P**	**10 52 48.2**	**+0.3**
MKAR	**Makanchi Array**	**94.77**	**317**	P	**P**	**10 53 28.2**	**-0.4**
	0.8nm,0.8s,mb4.2,baz=104,slow=5.1,SNR=6.1						
ARCES	**ARCESS Array B**	**117.56**	**346**	PKP	PKPdf	10 58 53.0	+0.7
	1.5nm,0.9s,baz=64,slow=2.1,SNR=5.5						
KEST	**Kesra**	**148.68**	**322**	PKPbc	PKPbc	10 59 55.8	+1.1
	1.2nm,0.9s,baz=316,slow=9.8,SNR=3.9						

IDC 02 10:42:23.4±2.1**, 6.94S**×**127.52E, h0**km**, mb3.6**/1**, mb1 4.0**/4**, mb1mx3.7**/14**, mbtmp3.8**/4**, ML3.8**/3**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx2.2**/25**, Error ellipse: s-maj=107.5km s-min=27.5km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.00**	**229**	Sn	Sn	10 44 42.5	+4.0
	5.5nm,0.3s,baz=86,slow=14,SNR=4.4						
FITZ	**Fitzroy Crossi**	**11.24**	**189**	Pn	Pn	10 45 06.0	+0.5
	0.5nm,0.3s,baz=26,slow=12,SNR=16						
FITZ				Sn	Sn	10 46 59.8	-12
	0.2nm,0.3s,baz=323,slow=20,SNR=3.9						
WRA	**Warramunga Arr**	**14.52**	**154**	Pn	Pn	10 45 50.2	0.0
	0.6nm,0.3s,baz=322,slow=14,SNR=10.0						
WRA				Sn	Sn	10 48 17.3	-15
	0.5nm,0.3s,baz=336,slow=22,SNR=8.2						
ASAR	**Alice Springs**	**17.73**	**160**	P	Pn	10 46 30.9	-0.8
	0.3nm,0.3s,baz=334,slow=11,SNR=8.2						
URZ	**Urewera**	**54.51**	**133**	LR	LR	11 15 35.2	
	comp=Z,168nm,19.4s,baz=213,slow=36						
MKAR	**Makanchi Array**	**66.85**	**328**	P	P	10 53 17.3	+0.2
	0.5nm,0.7s,baz=120,slow=5.7,SNR=5.6						

*IDC **02** 10:42:36.3±0.7, 11.73S×165.84E, h0km, mb4.3/12, mb1 4.3/12, mb1mx4.1/19, mbtmp4.2/12, MS3.8/1, Ms1 3.8/1, ms1mx2.6/33, Error ellipse: s-maj=27.0km s-min=21.5km az=97.0*

*NEIC **02** 10:42:41.4±0.6, 11.75S×165.95E, h35km, mb4.1/1, Error ellipse: s-maj=17.4km s-min=16.5km az=197.0*

*ISCJB **02** 10:42:44.2±3.4, 11.8S±0.1×165.7E±0.2, h69km±28km, mb4.0/13, Error ellipse: s-maj=27.4km s-min=19.9km az=174.7*

ISC 02 10:42:45.9±2.9**, 11.8S**±0.1×**165.8E**±0.2**, h70**km±25km**, n24,** σ**0.90**/17**, mb4.0**/13**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.16**	**292**	eP	**Pn**	**10 44 14.3**	**-0.1**
AFI	**Afiamalu**	**22.01**	**98**	LR	LR	10 54 56.9	
	comp=Z,209nm,18.1s,baz=211,slow=34						
WRA	**Warramunga Arr**	**31.25**	**251**	P	**P**	**10 48 59.3**	**+0.1**
	1.2nm,0.8s,mb3.7,baz=81,slow=9.0,SNR=4.4						
RPZ	**Rata Peaks**	**32.16**	**173**	P	**P**	**10 49 06.4**	**-0.5**
	10.0nm,0.7s,mb4.7,baz=212,slow=17,SNR=5.1						
ASAR	**Alice Springs**	**32.48**	**244**	P	**P**	**10 49 10.7**	**+0.6**
	1.7nm,0.7s,mb3.9,baz=73,slow=9.5,SNR=10						
ASAR				PcP	PcP	10 51 55.7	0.0
	0.8nm,0.8s,baz=72,slow=3.0,SNR=3.7						
JOW	**Kunigami**	**52.88**	**317**	P	**P**	**10 51 55.3**	**+0.4**
	7.3nm,0.9s,mb4.7,baz=135,slow=8.3,SNR=4.3						
QSPA	**South Pole Qui**	**78.24**	**180**	P	**P**	**10 54 37.6**	**0.0**
	7.8nm,0.9s,mb4.4,baz=45,slow=2.3,SNR=14						
QSPA	**South Pole Qui**	**78.24**	**180**	P	**P**	**10 54 37.6**	**0.0**
ULN	**Ulaanbaatar**	**78.89**	**324**	eP	**P**	**10 54 42.0**	**+0.5**
	2.4nm,1.0s,mb4.0						
SONM	**Songino Array**	**79.25**	**324**	P	**P**	**10 54 43.6**	**+0.1**
	0.8nm,0.5s,mb3.8,baz=137,slow=4.6,SNR=6.5						
YBH	**Yreka Blue Hor**	**84.39**	**46**	P	**P**	**10 55 12.1**	**+1.4**
	0.5nm,0.6s,mb3.5,baz=225,slow=1.4,SNR=3.5						
EGAK	**Eagle**	**86.04**	**20**	eP	**P**	**10 55 15.8**	**-2.7**
NVAR	**Mina Array Bea**	**86.48**	**50**	P	**P**	**10 55 21.1**	**-0.1**
	0.4nm,0.7s,mb3.5,baz=229,slow=9.4,SNR=4.8						
MKAR	**Makanchi Array**	**94.05**	**317**	P	**P**	**10 55 57.0**	**+0.5**
	3.6nm,0.8s,mb4.8,baz=100,slow=5.8,SNR=27						
ZALV	**Zalesovo Beam**	**94.14**	**324**	P	**P**	**10 55 55.1**	**-1.6**
	1.6nm,0.7s,mb4.5,baz=119,slow=5.4,SNR=6.6						
YKA	**Yellowknife Ar**	**95.60**	**27**	P	**P**	**10 56 04.2**	**+1.0**
	0.1nm,0.5s,mb3.5,baz=260,slow=4.9,SNR=4.1						
KURK	**Kurchatov**	**97.20**	**320**	P	**P**	**10 56 09.8**	**-0.9**
	0.1nm,0.3s,mb3.7,baz=108,slow=3.5,SNR=2.4						
KURK	**Kurchatov**	**97.20**	**320**	P	**P**	**10 56 09.8**	**-0.9**
BVAR	**Borovoye Array**	**102.52**	**322**	P	Pdif	10 56 33.6	-0.8
	0.4nm,0.5s,baz=107,slow=1.5,SNR=2.8						
ARCES	**ARCESS Array B**	**117.03**	**345**	PKP	PKPdf	11 01 20.6	-1.6
	1.4nm,0.9s,baz=207,slow=0.6,SNR=3.8						
BOSA	**Boshof**	**124.60**	**223**	PKP	PKPdf	11 01 38.8	+0.7
	3.8nm,0.9s,baz=73,slow=3.3,SNR=6.4						
KEST	**Kesra**	**147.99**	**322**	PKPbc	PKPbc	11 02 23.8	0.0
	1.5nm,0.8s,baz=358,slow=2.3,SNR=4.0						
TORD	**Torodi Ar. Bea**	**164.37**	**277**	PKP	PKPdf	11 02 42.2	-0.3
	1.1nm,0.9s,baz=346,slow=1.2,SNR=4.7						
TORD	**Torodi Ar. Bea**	**164.37**	**277**	PKP	PKPdf	11 02 42.2	-0.3

*IDC **02** 10:55:15.2±1.1, 11.85S×166.04E, h0km, mb4.2/7, mb1 4.2/7, mb1mx4.0/17, mbtmp4.2/7, MS3.6/2, Ms1 3.6/2, ms1mx3.1/30, Error ellipse: s-maj=39.9km s-min=26.3km az=77.0*

*NEIC **02** 10:55:20.7±0.8, 11.88S×166.05E, h35km, mb4.5/1, Error ellipse: s-maj=22.2km s-min=15.4km az=56.0*

*ISCJB **02** 10:55:22.1±4.7, 12.0S±0.2×165.8E±0.3, h54km±35km, mb4.1/8, MS3.5/2, Error ellipse: s-maj=48.5km s-min=22.9km az=163.5*

ISC 02 10:55:24.1±4.0**, 11.9S**±0.2×**165.8E**±0.3**, h57**km±30km**, n12,** σ**0.47**/9**, mb4.1**/8**, MS3.5**/2**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.30**	**293**	eP	**Pn**	**10 56 54.3**	**-0.1**
STKA	**Stephens Creek**	**29.88**	**225**	LR	LR	11 12 20.0	
	comp=Z,205nm,21.3s,MS3.7,baz=198,slow=34						
WRA	**Warramunga Arr**	**31.28**	**251**	P	**P**	**11 01 39.1**	**+0.3**
	0.4nm,0.4s,mb3.6,baz=84,slow=9.2,SNR=7.3						
RPZ	**Rata Peaks**	**32.00**	**173**	P	**P**	**11 01 45.3**	**+0.4**
	7.5nm,0.8s,mb4.6,baz=349,slow=5.2,SNR=3.7						
ASAR	**Alice Springs**	**32.49**	**245**	P	**P**	**11 01 49.4**	**-0.1**
	0.8nm,0.7s,mb3.6,baz=67,slow=10,SNR=6.2						
ASAR				PcP	PcP	11 04 35.6	+0.2
	0.3nm,0.6s,baz=82,slow=2.1,SNR=4.3						
GUMO	**Guam**	**32.78**	**320**	LR	LR	11 13 40.0	
	comp=Z,60nm,18.6s,MS3.3,baz=272,slow=34						
QSPA	**South Pole Qui**	**78.09**	**180**	P	**P**	**11 07 15.8**	**-0.6**
	1.6nm,0.7s,mb4.1,baz=22,slow=1.7,SNR=15						
ULN	**Ulaanbaatar**	**79.06**	**324**	eP	**P**	**11 07 22.7**	**+0.6**
	5.7nm,1.1s,mb4.4						
SONM	**Songino Array**	**79.42**	**324**	P	**P**	**11 07 24.5**	**+0.4**
	1.2nm,0.7s,mb3.9,baz=139,slow=6.3,SNR=7.4						
MKAR	**Makanchi Array**	**94.22**	**317**	P	**P**	**11 08 37.0**	**+0.1**
	3.3nm,0.7s,mb4.9,baz=95,slow=6.3,SNR=40						
KURK	**Kurchatov**	**97.37**	**320**	P	**P**	**11 08 50.2**	**-1.0**
	0.3nm,0.5s,mb3.9,baz=106,slow=3.6,SNR=2.6						
ARCES	**ARCESS Array B**	**117.20**	**345**	PKP	PKPdf	11 14 00.6	-1.6
	1.5nm,1.0s,baz=72,slow=2.9,SNR=4.3						

*ISCJB **02** 11:01:01.9±1.9, 4.2N±0.1×95.4E±0.2, h33km, mb3.9/3, Error ellipse: s-maj=37.9km s-min=9.1km az=155.7*

*IDC **02** 11:01:05.9±10.0, 3.82N×96.17E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.6/20, mbtmp3.9/4, ML4.3/1, Error ellipse: s-maj=267.0km s-min=46.2km az=78.0*

ISC 02 11:01:03.9±1.9**, 4.3N**±0.1×**95.5E**±0.3**, h35**km**, n7,** σ**0.84**/8**, mb3.9**/3**, 1C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**1.23**	**352**	⇓eP	**Pn**	**11 01 23.0**	**-1.6**
BSI				eS	**Sn**	**11 01 41.0**	**+1.0**
TSI	**Tuntungan**	**3.19**	**104**	eP	**Pn**	**11 01 51.0**	**-0.5**
PSI	**Prapat**	**3.75**	**113**	⇑eP	**Pn**	**11 01 59.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**14.50**	**13**	Pn	**Pn**	**11 04 36.8**	**+10**
	0.4nm,0.3s,baz=203,slow=12,SNR=11						
FITZ	**Fitzroy Crossi**	**37.14**	**128**	P	**P**	**11 08 11.5**	**-0.1**
	1.1nm,0.7s,mb3.8,baz=280,slow=6.1,SNR=5.3						
WRA	**Warramunga Arr**	**45.14**	**124**	P	**P**	**11 09 17.3**	**-0.1**
	1.5nm,0.5s,mb4.0,baz=302,slow=9.2,SNR=18						
ASAR	**Alice Springs**	**46.63**	**128**	P	**P**	**11 09 30.2**	**+1.1**
	1.6nm,0.9s,mb4.0,baz=302,slow=7.8,SNR=18						

*ISCJB **02** 11:01:27.0±0.5, 40.8S±0.1×77.4E±0.1, h10km, mb4.2/17, Error ellipse: s-maj=15.7km s-min=14.9km az=141.3*

*IDC **02** 11:01:27.0±0.6, 40.73S×77.33E, h0km, mb4.2/17, mb1 4.3/17, mb1mx4.2/21, mbtmp4.2/17, MS3.8/1, Ms1 3.7/1, ms1mx3.1/24, Error ellipse: s-maj=19.4km s-min=18.0km az=170.0*

*NEIC **02** 11:01:28.7±0.4, 40.74S×77.34E, h10km, mb4.6/1, Error ellipse: s-maj=13.8km s-min=12.8km az=143.0*

ISC 02 11:01:28.7±0.5**, 40.7S**±0.1×**77.3E**±0.1**, h10**km**, n24,** σ**0.82**/21**, mb4.2**/17**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**28.07**	**192**	P	**P**	**11 07 20.0**	**+0.2**
	0.9nm,0.7s,mb3.5,baz=0.8,slow=13,SNR=4.6						
MAW				LR	LR	11 16 01.9	
	comp=Z,166nm,18.1s,baz=152,slow=31						
BOSA	**Boshof**	**43.93**	**269**	P	**P**	**11 09 34.5**	**-1.2**
	3.4nm,0.9s,mb4.1,baz=103,slow=11,SNR=3.4						
QSPA	**South Pole Qui**	**49.42**	**180**	P	**P**	**11 10 19.3**	**+1.3**

	10.0nm,0.7s,mb5.0,baz=287,slow=2.8,SNR=65						
QSPA				PcP	PcP	11 11 39.4	-0.7
	1.9nm,0.9s,baz=352,slow=6.1,SNR=2.4						
QSPA	South Pole Qui	49.42	180	P	P	11 10 19.3	+1.3
QSPA				PcP	PcP	11 11 39.4	-0.7
LSZ	Lusaka	49.47	286	P	P	11 10 18.6	-0.6
	4.0nm,0.9s,mb4.5,baz=134,slow=8.6,SNR=5.7						
LSZ	Lusaka	49.47	286	*e*P	P	11 10 19.9	+0.6
	7.3nm,1.2s,mb4.6						
ASAR	Alice Springs	49.95	88	P	P	11 10 21.8	-1.1
	1.2nm,0.8s,mb4.0,baz=240,slow=6.6,SNR=9.2						
ASAR				PcP	PcP	11 11 42.6	-0.3
	2.0nm,0.7s,baz=233,slow=3.2,SNR=14						
STKA	Stephens Creek	51.50	102	P	P	11 10 34.4	0.0
	5.4nm,0.8s,mb4.6,baz=227,slow=3.6,SNR=10						
WRA	Warramunga Arr	52.43	85	P	P	11 10 41.5	+0.1
	3.1nm,0.8s,mb4.3,baz=232,slow=7.3,SNR=21						
WRA				PcP	PcP	11 11 51.5	-0.7
	1.1nm,0.7s,baz=236,slow=3.1,SNR=8.8						
CMAR	Chiang Mai Arr	62.22	23	P	P	11 11 51.3	+0.8
	0.5nm,0.3s,mb4.1,baz=208,slow=7.1,SNR=3.1						
MKAR	Makanchi Array	87.26	3	P	P	11 14 14.3	-0.5
	1.4nm,0.9s,mb4.2,baz=165,slow=5.8,SNR=11						
TORD	Torodi Ar. Bea	87.91	289	P	P	11 14 18.9	+0.2
	1.2nm,0.7s,mb4.2,baz=109,slow=4.1,SNR=6.7						
TORD	Torodi Ar. Bea	87.91	289	P	P	11 14 18.9	+0.2
KURK	Kurchatov	91.08	1	P	P	11 14 32.4	-0.3
	1.0nm,0.9s,mb4.2,baz=189,slow=4.7,SNR=6.6						
SONM	Songino Array	91.88	19	P	P	11 14 37.8	+1.3
	0.3nm,0.5s,mb3.9,baz=308,slow=7.3,SNR=3.6						
AKTK	Aktyubinsk	92.36	348	P	P	11 14 39.1	+0.4
AKTO	Aktyubinsk	92.36	348	P	P	11 14 39.1	+0.4
	0.5nm,0.6s,mb4.1,baz=13,slow=5.6,SNR=3.8						
BVAR	Borovoye Array	93.58	356	P	P	11 14 45.4	+1.2
	0.4nm,0.6s,mb4.1,baz=165,slow=6.0,SNR=2.8						
PLCA	Paso Flores	93.82	204	P	P	11 14 45.3	-0.7
	0.6nm,0.8s,mb4.1,baz=237,slow=3.2,SNR=3.1						
ZALV	Zalesovo Beam	94.53	4	P	P	11 14 47.6	-1.0
	0.4nm,0.3s,mb4.3,baz=263,slow=1.2,SNR=3.6						
MJAR	Matsushiro Arr	95.02	45	P	P	11 14 50.0	-1.2
	1.0nm,0.9s,mb4.3,baz=203,slow=5.3,SNR=3.0						
EGAK	Eagle	147.37	30	*e*PKPbc	PKPbc	11 21 11.9	+0.5
NVAR	Mina Array Bea	167.71	96	PKP	PKPdf	11 21 36.7	+1.9
	0.5nm,0.9s,baz=222,slow=2.0,SNR=3.7						
NVAR				PKPab	PKPab	11 22 41.4	-0.1
	0.5nm,0.8s,baz=235,slow=7.7,SNR=6.9						
PDAR	Pinedale Array	174.46	66	PKPab	PKPab	11 23 11.6	+0.4
	0.5nm,0.9s,baz=256,slow=2.4,SNR=4.0						

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*BJI **02** 11:04:44.0, 2424N×11030W, h3km, mB5.5, mb5.1, Ms5.1, Msz4.7*

*IDC **02** 11:04:45.7±0.5, 2481N×11001W, h0km, mb4.4/14, mb1 4.6/20, mb1mx4.5/24, mbtmp4.4/20, ML4.2/5, MS4.4/27, Ms1 4.4/27, ms1mx4.3/36, Error ellipse: s-maj=14.7km s-min=7.6km az=104.0*

*MOS **02** 11:04:45.4±1.0, 2468N×10981W, h10km, mb5.1/16, Error ellipse: s-maj=9.5km s-min=4.5km az=98.4*

*ISCJB **02** 11:04:46.2±1.1, 2471N±003×10977W±003, h14km±7km, mb4.8/47, MS4.4/28, Error ellipse: s-maj=4.8km s-min=3.9km az=34.6*

*NEIC **02** 11:04:46.5±0.3, 2462N×10982W, h10km, mb4.9/45, Error ellipse: s-maj=4.9km s-min=3.5km az=210.0*

NEIC Felt [II] at La Paz, Mexico. Also felt at Cabo San Lucas.

*GCMT **02** 11:04:46.5±0.3, 2478N×10982W, h16km±1km, MW5.2/76, Moment Tensor Solution. s28,c33; s76,c130; Duration: 1.0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.71±.21; $M_{\theta\theta}$-5.38±.18; $M_{\phi\phi}$6.09±.21; $M_{r\theta}$-3.66±.64; $M_{\theta\phi}$-3.12±.16; $M_{\phi r}$1.66±.56; Best double couple: $M_0$7.69100×10^{16} NP1:ϕ_s29.00000°, δ58.00000°, λ-6.00000°. NP2: ϕ_s122.00000°, δ85.00000°, λ-148.00000°. Principal axes: T 7.7030, Plg18.0000°, Azm252.0000°; N -0.0200, Plg58.0000°, Azm130.0000°; P -7.6790, Plg26.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MEX **02** 11:04:48.3±0.9, 2477N×10985W, h13km±16km, MD4.8*

ISC 02 11:04:47.8±1.1**, 2464N**±003×**10981W**±003**, h17**km±7km**, n238,** σ1.06/225**, mb4.8**/48**, MS4.4**/28**, 1C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	0.70	221	Pg	Pg	11 05 00.4	-1.2
	3µm,0.3s,baz=23,slow=5.2,SNR=814						
LPIG				Lg		11 05 10.8	
	9µm,0.3s,baz=154,slow=22,SNR=80						
LPIG				LR	LR	11 05 14.5	
	comp=Z,26µm,20.9s,baz=0.0,slow=38						
LPIG	La Paz	0.70	221	*i* P	Pb	11 05 00.7	-0.9
LPIG				*e*S	Sb	11 05 11.4	+0.5
LPIG	La Paz	0.70	221	Pg	Pg	11 05 00.4	-1.2
LPIG				*i* P		11 05 00.7	
LPIG				Lg		11 05 10.8	
LPIG				*e*S	Sb	11 05 11.4	+0.5
LPIG				LR	LR	11 05 14.5	
MAIG	Mazatlaan	3.42	114	*i* P	Pn	11 05 40.1	-0.2
MAIG				*i* S	Sn	11 06 21.4	+1.0
HPIG		4.38	58	*i* P	Pn	11 05 51.9	-1.7
HPIG				*i* S	Sn	11 06 40.9	-3.3
CGIG		5.93	16	*i* P	Pn	11 06 14.0	-0.8
CGIG				*i* S	Sn	11 07 17.3	-5.1
ANIG	Ahuacatlan	6.04	125	*i* P	Pn	11 06 15.1	-1.3
TUC	Tucson	7.69	354	*e*P	Pn	11 06 35.0	-4.0
LNIG	Linares	9.40	86	*i* P	Pn	11 07 01.6	-1.0
LNIG				*i* S	Sn	11 08 49.0	+1.1
GLA	Glamis	9.46	333	*e*P	Pn	11 07 02.4	-0.9
BNM	Barren Site	9.88	16	*e*Pn	Pn	11 07 10.6	+1.7
LAZ	Ladron	10.00	13	*e*Pn	Pn	11 07 09.2	-1.5
BAR	Barrett	10.02	325	*e*Pn	Pn	11 07 11.4	+0.5
LPM	Los Pinos Moun	10.03	15	Pn	Pn	11 07 11.0	0.0
JCT	Junction City	10.61	55	*e*P	Pn	11 07 16.0	-3.1
ANMO	Albuquerque	10.68	15	Pn	Pn	11 07 20.7	+0.7
	0.1nm,0.3s,baz=206,slow=12,SNR=27						
ANMO				LR	LR	11 11 38.2	
	comp=Z,3µm,20.6s,baz=23,slow=39						
ANMO	Albuquerque	10.68	15	*e*Pn	Pn	11 07 20.7	+0.8
WUAZ	Wupatki	10.93	353	*e*Pn	Pn	11 07 22.8	-0.6
LDFC	Landfair	11.37	337	*e*Pn	Pn	11 07 32.1	+2.6
MWC	Mount Wilson	11.95	325	*e*P	Pn	11 07 37.2	-0.1
GSC	Goldstone	12.23	332	*e*P	Pn	11 07 42.1	+0.9
AMTX	Amarillo	12.41	33	*e*Pn	Pn	11 07 41.7	-1.9
MVCO	Mesa Verde	12.58	5	*e*Pn	Pn	11 07 46.4	+0.5
SHPR	Sheep Range	12.69	340	*e*Pn	Pn	11 07 49.4	+2.0
ISA	Isabella	13.29	328	*e*P	Pn	11 07 56.4	+0.7
TPNV	Topopah Spring	13.46	337	*e*P	Pn	11 08 00.0	+2.1
PV01	Paradox Valley	13.50	4	Pn	Pn	11 07 55.6	-2.8
HKT	Hockley	13.50	64	*e*P	Pn	11 07 54.5	-4.1
HKT				pmax	pmax		
	comp=Z,73nm,1.6s						
HKT	Hockley	13.50	64	*e*Pn	Pn	11 07 54.5	-4.1
	comp=Z,73nm,1.6s						
SDCO	Great Sand Dun	13.57	15	*e*Pn	Pn	11 07 59.1	-0.4
PV10	Paradox Valley	13.71	3	*e*Pn	Pn	11 08 01.3	-0.1
WMOK	Wichita Mounta	13.89	41	*e*P	Pn	11 08 01.1	-2.7
MSU	Marysvale	13.98	352	*e*P	Pn	11 08 07.4	+2.4
PTRM	Twissleman Ran	14.18	323	*e*Pn	Pn	11 08 08.4	+0.5
SRU	San Rafael	14.44	358	*e*P	Pn	11 08 11.9	+0.5
TMUT	Trail Mountain	14.66	356	*e*Pn	Pn	11 08 15.9	+1.6
MTUM	Tungsten Hills	14.72	331	*e*Pn	Pn	11 08 16.4	+1.2
NATX	Nacogdoches	15.11	59	*e*Pn	Pn	11 08 21.8	+1.2
NLU	North Lily Min	15.39	353	*e*Pn	Pn	11 08 23.7	-0.4
MPU	Maple Canyon	15.41	355	*e*Pn	Pn	11 08 24.7	+0.4
MPU				*e*P		11 08 30.5	
ISCO	Idaho Springs	15.53	12	*e*P	Pn	11 08 26.3	+0.5
NVAR	Mina Array Bea	15.53	334	Pn	Pn	11 08 27.1	+1.2
	comp=Z,0.7nm,0.3s,baz=160,slow=12,SNR=49						
SAO	San Andreas Ge	15.68	323	Pn	Pn	11 08 27.2	-0.6
SAO				*e*P		11 08 32.5	
DUG	Dugway	15.72	351	*e*P	Pn	11 08 29.4	+1.1
DUG				pmax	pmax		
	comp=Z,75nm,1.0s						
DUG	Dugway	15.72	351	*e*Pn	Pn	11 08 29.4	+1.1
	comp=Z,75nm,1.0s						
DUG				*e*P		11 08 34.1	
DAU	Daniels Canyon	15.78	356	*e*Pn	Pn	11 08 30.3	+1.2
DAU				*e*P		11 08 34.7	
CMIG	Matias Romero	15.83	115	Pn	Pn	11 08 33.4	+3.4
	comp=Z,0.1nm,0.3s,baz=309,slow=12,SNR=10						
CMIG				LR	LR	11 15 30.4	
	comp=Z,722nm,20.6s,baz=283,slow=40						
JLU	Jordanelle	15.98	355	*e*Pn	Pn	11 08 32.2	+0.5
JLU				*e*P		11 08 36.5	
WAKR	Walker	16.06	332	*e*Pn	Pn	11 08 34.8	+2.0
NOQ	North Oquirrh	16.09	354	*e*Pn	Pn	11 08 34.3	+1.2
CTU	Camp Tracy	16.09	355	*e*Pn	Pn	11 08 34.5	+1.3
CMB	Columbia Colle	16.11	329	*e*Pn	Pn	11 08 33.1	-0.3
CMB				*e*P		11 08 39.3	
BGU	Big Grassy Mou	16.46	351	*e*Pn	Pn	11 08 38.9	+1.0
CBKS	Cedar Bluff	16.51	29	*e*P	Pn	11 08 38.5	0.0
CBKS				pmax	pmax		
	comp=Z,101nm,1.1s						
CBKS	Cedar Bluff	16.51	29	*e*Pn	Pn	11 08 38.5	0.0
	comp=Z,101nm,1.1s						
ELK	Elko	16.69	346	Pn	Pn	11 08 41.1	+0.3
	comp=Z,0.1nm,0.3s,baz=174,slow=9.6,SNR=37						
ELK				LR	LR	11 14 56.3	
	comp=Z,2µm,19.6s,baz=174,slow=37						
ELK	Elko	16.69	346	*e*Pn	Pn	11 08 41.5	+0.6
SPUT	South Promonto	16.77	353	*e*Pn	Pn	11 08 42.6	+0.8
BMN	Battle Mountai	16.93	340	*e*P	Pn	11 08 44.6	+0.8
HWUT	Hardware Ranch	16.99	355	*e*Pn	Pn	11 08 45.3	+0.8
	comp=Z,89nm,1.3s						
PHWY	Pilot Hill	17.01	11	Pn	Pn	11 08 45.4	+0.6
PAHR	Pah Rah Range	17.05	334	*e*Pn	Pn	11 08 44.5	-0.9
	comp=Z,91nm,1.5s						
RWWY	Rawlins	17.14	7	*e*Pn	Pn	11 08 46.7	+0.2
MIAR	Mount Ida	17.21	51	*e*P	Pn	11 08 47.1	-0.3
MIAR				pmax	pmax		
	comp=Z,132nm,1.9s						
MIAR	Mount Ida	17.21	51	*e*Pn	Pn	11 08 47.1	-0.3
	comp=Z,132nm,1.9s						
HVU	Hansel Valley	17.27	353	*e*P	Pn	11 08 49.4	+1.3
NSHM	Saint Helena R	17.59	325	*e*Pn	Pn	11 08 51.1	-1.0
OHCM	Honcut	17.66	329	*e*P	Pn	11 08 54.0	+1.0
BW06	Boulder Array	18.08	1	*e*P	Pn	11 08 57.8	-0.3
PDAR	Pinedale Array	18.08	1	P	Pn	11 08 57.9	-0.3
	comp=Z,0.5nm,0.3s,baz=166,slow=8.5,SNR=126						
PDAR				LR	LR	11 15 58.6	
	comp=Z,2µm,18.1s,baz=190,slow=38						
AHID	Auburn Hatcher	18.11	357	*e*P	Pn	11 08 58.4	-0.1
	comp=Z,104nm,1.5s						
UALR	University of	18.20	52	*e*P	Pn	11 08 58.7	-1.0
KSU1	Kansas State U	18.23	35	*e*P	Pn	11 08 59.8	-0.2
VBMS	Vicksburg	18.56	62	*e*P	Pn	11 09 03.6	-0.4
REDW	Red Top Meadow	18.70	358	*e*P	Pn	11 09 05.2	-0.4
RRI2	Red Ridge	18.70	357	*e*P	Pn	11 09 05.8	+0.1
	comp=Z,60nm,1.1s						
SNOW	Snow King Moun	18.79	358	*e*P	Pn	11 09 06.7	-0.1
LBCM	Butte Creek Ri	18.82	332	P	Pn	11 09 07.9	+0.9
TPAW	Teton Pass	18.83	357	*e*P	Pn	11 09 07.0	-0.2
	comp=Z,99nm,1.3s						
LOHW	Long Hollow	18.94	358	*e*P	Pn	11 09 08.0	-0.5
	comp=Z,118nm,1.5s						
DCID1	Drake Creek	18.94	357	*e*P	Pn	11 09 08.9	+0.3
KCPM	Cahto Peak	18.97	326	*e*P	Pn	11 09 08.5	-0.4
KIPM	Iron Peak	19.00	326	*e*P	Pn	11 09 09.7	+0.3
WDC	Whiskeytown Da	19.14	329	*e*P	Pn	11 09 08.4	-2.6
WVOR	Wild Horse Val	19.19	340	*e*P	Pn	11 09 10.4	-1.2
WVOR				pmax	pmax		
	comp=Z,68nm,1.3s						
WVOR	Wild Horse Val	19.19	340	*e*P	Pn	11 09 10.4	-1.2
	comp=Z,68nm,1.3s						
IMW	Indian Meadow	19.23	358	*e*P	Pn	11 09 11.4	-0.7
	comp=Z,110nm,1.3s						
MOD	Modoc	19.30	336	*e*P	Pn	11 09 12.0	-0.9
FLWY	Flagg Ranch	19.41	358	*e*Pn	Pn	11 09 13.2	-0.9
YFT	Old Faithful	19.78	358	*e*P	Pn	11 09 19.7	+1.1
LKWY	Lake	19.89	359	*e*P	Pn	11 09 19.3	-0.5
LKWY				pmax	pmax		
	comp=Z,49nm,1.1s						
LKWY	Lake	19.89	359	*e*P	Pn	11 09 19.3	-0.6
	comp=Z,50nm,1.1s						
RSSD	Black Hills	20.00	12	*e*P	Pn	11 09 20.6	-0.6
YMR	Madison River	20.00	358	*e*P	Pn	11 09 20.5	-0.7
	comp=Z,41nm,0.3s						
YNR	Norris Junctio	20.04	358	P	P	11 09 21.1	+1.2
YBH	Yreka Blue Hor	20.14	331	P	P	11 09 18.6	-2.3
	comp=Z,0.1nm,0.3s,baz=106,slow=6.1,SNR=13						
YBH				LR	LR	11 16 56.0	
	comp=Z,684nm,21.1s,MS4.0,baz=348,slow=37						
YBH	Yreka Blue Hor	20.14	331	*e*P	P	11 09 18.9	-2.0
QLMT	Earthquake Lak	20.19	357	*e*P	P	11 09 22.8	+1.4
OXF	Oxford	20.25	56	*e*P	P	11 09 22.4	+0.1
OXF				pmax	pmax		
	comp=Z,47nm,1.2s						
OXF	Oxford	20.25	56	*e*P	P	11 09 22.4	+0.1
	comp=Z,47nm,1.2s						
MCMT	McKenzie Canyo	20.29	354	*e*P	P	11 09 24.2	+1.6
TEIG	Tepich	20.38	98	P	P	11 09 26.0	+2.2
	comp=Z,27nm,0.9s,baz=264,slow=16,SNR=15						
TEIG				LR	LR	11 18 34.5	
	comp=Z,962nm,18.6s,MS4.2,baz=347,slow=40						
TEIG	Tepich	20.38	98	*e*P	P	11 09 25.7	+2.0
	comp=Z,48nm,0.9s						
GNAR	Gosnell	20.44	52	*e*P	P	11 09 25.3	+1.0
RLMT	Red Lodge	20.44	1	*e*P	P	11 09 24.6	+0.4
	comp=Z,35nm,1.0s						
DLMT	Dillon	20.80	354	*e*P	P	11 09 29.2	+1.1
	comp=Z,81nm,1.3s						
HALT	Halls	20.90	53	*e*P	P	11 09 30.5	+1.2
HUMO	Hull Mountain	20.95	332	*e*P	P	11 09 29.4	-0.4
PARMO	Parma	20.96	50	*e*P	P	11 09 30.1	+0.1
BOZ	Bozeman (W)	21.01	356	*e*P	P	11 09 31.2	+0.8
BOZ				pmax	pmax		
	comp=Z,80nm,1.6s,mb4.8						
BOZ	Bozeman (W)	21.01	356	*e*P	P	11 09 31.2	+0.8
	comp=Z,80nm,1.6s,mb4.8						
BMO	Blue Mountains	21.07	345	*e*P	P	11 09 31.2	+0.2
BRAL	Brewton	21.08	67	P	P	11 09 32.2	+0.9
GCMT	Greycliff	21.11	0	*e*P	P	11 09 31.9	+0.5
FVM	French Village	21.19	47	*e*P	P	11 09 32.2	-0.2
FVM				pmax	pmax		
	comp=Z,50nm,1.4s,mb4.7						
FVM	French Village	21.19	47	*e*P	P	11 09 32.2	-0.2
	comp=Z,50nm,1.4s,mb4.7						
KBO	Bosley Butte	21.21	329	*e*P	P	11 09 32.1	-0.4
LCCM	Lewis and Clar	21.22	356	P	P	11 09 33.9	+1.3
LRM	Limekiln Ridge	21.24	355	*e*P	P	11 09 33.7	+0.8
UTMT	University of	21.44	52	*e*P	P	11 09 35.8	+0.7
PLAL	Pickwick Lake	21.45	56	*e*P	P	11 09 34.3	-0.9
	comp=Z,108nm,1.9s,mb4.9						
SLM	Saint Louis	21.67	45	*e*P	P	11 09 37.3	-0.3
SLM				pmax	pmax		
	comp=Z,80nm,1.4s,mb5.0						
SLM	Saint Louis	21.67	45	*e*P	P	11 09 37.3	-0.3
	comp=Z,80nm,1.4s,mb5.0						
KEBM	Edson Butte	21.77	330	*e*P	P	11 09 38.5	-0.1
SIUC	Southern Illin	21.86	49	*e*P	P	11 09 39.2	-0.3
	comp=Z,39nm,1.0s,mb4.8						
ECSD	EROS,Sioux Fal	21.90	26	*e*P	P	11 09 39.2	-0.8
	comp=Z,56nm,1.1s,mb4.9						
SCIA	State Center	22.05	35	*e*P	P	11 09 42.4	+0.9
HRY	Holter Researc	22.09	356	*e*P	P	11 09 42.4	+0.4
LAO	LASA Array	22.19	7	*e*P	P	11 09 42.2	-0.8
LNOR	Lincton Mounta	22.26	344	*e*P	P	11 09 42.9	-0.9
MSO	Missoula	22.39	353	*e*P	P	11 09 45.1	-0.1
CHMT	Chamberlain Mo	22.40	354	*e*P	P	11 09 45.4	+0.1
COR	Corvallis	22.73	334	*e*P	P	11 09 49.4	+0.6
USIN	University of	23.05	50	*e*P	P	11 09 51.8	-0.5
HAWA	Hanford	23.07	343	*e*P	P	11 09 49.9	-2.5
RSW	Rattlesnake Hi	23.09	343	*e*P	P	11 09 51.1	-1.5
OLIL	Olney	23.13	47	*e*P	P	11 09 53.2	+0.1
	comp=Z,56nm,1.1s,mb4.9						
SWET	Sewanee	23.17	57	*e*P	P	11 09 53.4	-0.2
EGMT	Eagleton	23.34	0	*e*P	P	11 09 54.8	-0.4
HEBO	Mount Hebo	23.43	335	*e*P	P	11 09 56.2	+0.1
	comp=Z,88nm,1.1s,mb5.1						
TGUH	Tegucigalpa,Un	23.69	112	P	P	11 10 00.5	+1.6
	comp=Z,43nm,1.1s,mb4.8						
OD2	Odessa Site #2	23.79	345	*e*P	P	11 09 57.6	-1.8
LON	Longmire	24.07	339	*e*P	P	11 10 01.3	-0.7
LON				pmax	pmax		
	comp=Z,42nm,1.2s,mb4.7						
LON	Longmire	24.07	339	*e*P	P	11 10 01.3	-0.8
	comp=Z,42nm,1.2s,mb4.8						
WCI	Wyandotte Cave	24.13	50	*e*P	P	11 10 00.7	-2.0
WCI				pmax	pmax		
	comp=Z,36nm,1.2s,mb4.7						
WCI	Wyandotte Cave	24.13	50	*e*P	P	11 10 00.7	-2.0
	comp=Z,36nm,1.2s,mb4.7						
DGMT	Dagmar	24.20	9	*e*P	P	11 10 03.4	+0.2
NEW	Newport	24.28	348	*e*P	P	11 10 03.0	-1.0
BMW	Boistfort Moun	24.30	337	*e*P	P	11 10 04.0	-0.2
JFWS	Jewell Farm	24.32	37	*e*P	P	11 10 04.1	-0.4
JFWS				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.6						
JFWS	Jewell Farm	24.32	37	*e*P	P	11 10 04.1	-0.4
	comp=Z,22nm,0.8s,mb4.6						
CPCT	Cooper Cave	24.33	58	*e*P	P	11 10 04.6	0.0
ETW	Entiat	24.40	343	*e*P	P	11 10 04.5	-0.6
BLO	Bloomington	24.42	48	*e*P	P	11 10 05.5	+0.1
BLO				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.6						
BLO	Bloomington	24.42	48	*e*P	P	11 10 05.5	+0.1
	comp=Z,28nm,1.1s,mb4.6						
GOGA	Godfrey	24.59	63	P	P	11 10 06.8	-0.2
GOGA				pmax	pmax		
	comp=Z,42nm,1.6s,mb4.7						
GOGA	Godfrey	24.59	63	P	P	11 10 06.8	-0.2
	comp=Z,42nm,1.6s,mb4.7						
TKL	Tuckaleechee C	24.98	58	P	P	11 10 10.6	+0.1
	comp=Z,14nm,1.0s,mb4.4,baz=169,slow=8.4,SNR=10						
TKL				LR	LR	11 20 48.0	
	comp=Z,3µm,18.5s,MS4.8,baz=256,slow=38						
NLWA	Neilton Lookou	25.32	337	*e*P	P	11 10 12.0	-1.4
JCW	Jim Creek	25.39	341	P	P	11 10 11.8	-2.3
TZTN	Tazewell	25.45	56	*e*P	P	11 10 13.6	-1.2
	comp=Z,32nm,1.2s,mb4.7						
RPW	Rockport	25.50	342	*e*P	P	11 10 13.6	-1.4
AGMN	Agassiz Refuge	26.06	21	*e*P	P	11 10 20.2	+0.1
COWI	Conover	27.10	33	*e*P	P	11 10 28.8	-0.8
EYMN	Ely	27.41	27	*e*P	P	11 10 31.8	-0.6
	comp=Z,31nm,1.1s,mb4.8						
ULM	Lac du Bonnet	27.76	19	P	P	11 10 34.6	-0.8
	comp=Z,16nm,1.1s,mb4.6,baz=232,slow=8.2,SNR=6.5						
ULM				LR	LR	11 21 16.0	
	comp=Z,332nm,19.1s,MS3.9,baz=35,slow=36						
GLMI	Grayling	28.69	39	*e*P	P	11 10 43.0	-0.8
	comp=Z,54nm,1.1s,mb5.2						
LONY	Lake Ozonia	34.81	46	*e*P	P	11 11 42.4	+4.8
	comp=Z,14nm,1.3s,mb4.7						
FRNY	Flat Rock	35.54	46	P	P	11 11 42.5	-1.4
	comp=Z,8.3nm,0.8s,mb4.7						
WRAK	Wrangell Islan	35.73	339	*e*P	P	11 11 45.8	+0.4
	comp=Z,28nm,1.2s,mb5.1						
YKA	Yellowknife Ar	37.98	356	P	P	11 12 02.6	-1.8
	comp=Z,8.9nm,1.1s,mb4.4,baz=176,slow=8.1,SNR=18						
YKA				LR	LR	11 27 16.6	
	comp=Z,308nm,19.4s,MS4.1,baz=175,slow=36						
OTAV	Otavalo	38.85	124	P	P	11 12 15.7	+3.4
SKAG	Skagway	39.12	340	*e*P	P	11 12 20.6	+6.6
ROSC	El Rosal	39.35	114	P	P	11 12 20.1	+3.6
	comp=Z,2.6nm,0.4s,mb4.4,baz=90,slow=21,SNR=4.4						
ROSC				LR	LR	11 29 54.5	
	comp=Z,333nm,20.4s,MS4.2,baz=358,slow=38						
SDV	Santo Domingo	40.47	106	P	P	11 12 27.9	+2.1
	comp=Z,2.1nm,0.5s,mb4.2,baz=188,slow=1.0,SNR=4.4						
SDV				LR	LR	11 30 54.7	
	comp=Z,664nm,19.4s,MS4.5,baz=122,slow=39						
SDV	Santo Domingo	40.47	106	*e*P	P	11 12 27.3	+1.4
	comp=Z,14nm,1.0s,mb4.7						
EYAK	Cordova Ski Ar	43.57	335	P	P	11 12 49.2	-1.4
	comp=Z,17nm,0.7s,mb4.9						
SCHQ	Schefferville	43.67	35	P	P	11 12 51.9	+0.5
	comp=Z,10nm,1.1s,mb4.5,baz=308,slow=1.8,SNR=3.6						
SCHQ				LR	LR	11 32 04.0	
	comp=Z,882nm,20.0s,MS4.7,baz=66,slow=38						
ATAH	Atahualpa	43.89	132	LR	LR	11 29 35.1	
	comp=Z,157nm,20.9s,MS3.9,baz=198,slow=34						
KDAK	Kodiak Island	44.94	329	P	P	11 13 01.2	-0.2
	comp=Z,12nm,0.9s,mb4.7,baz=105,slow=7.3,SNR=5.9						
KDAK	Kodiak Island	44.94	329	*e*P	P	11 13 02.0	+0.5
EGAK	Eagle	44.96	342	*e*P	P	11 13 02.0	+0.4
	comp=Z,28nm,1.3s,mb4.9						
OHAK	Old Harbor	45.00	328	*e*P	P	11 13 02.6	+0.6
	comp=Z,28nm,0.8s,mb5.2						
PCRV	Puerto La Cruz	45.22	100	LR	LR	11 35 55.6	
	comp=Z,287nm,19.0s,MS4.2,baz=125,slow=41						
PMR	Palmer	45.51	335	*e*P	P	11 13 06.3	+0.3
COLA	College	47.09	339	*e*P	P	11 13 18.0	-0.4
COLA	College	47.09	339	*e*P	P	11 13 18.3	-0.1
	comp=Z,46nm,1.4s,mb5.2						
CHGN	Chignik	47.19	325	*e*P	P	11 13 18.5	-0.8
SVW2	Sparrevohn	47.88	332	*e*P	P	11 13 24.1	-0.4
NNA	Nana	48.59	135	LR	LR	11 32 55.7	
	comp=Z,97nm,19.2s,MS3.8,baz=343,slow=35						
TTA	Tatalina	48.94	334	*e*P	P	11 13 31.7	-1.1
IMA2	Indian Mountai	49.75	338	*e*P	P	11 13 38.4	-0.5
PPT	Papeete	57.12	227	*e*S	S	11 22 24.5	-3.7
	comp=Z,490nm,25.2s						
PPT				*e*LQ		11 29 01.2	
	comp=Z,349nm,21.8s						
PPT				*e*LR	LR	11 31 10.0	
	comp=Z,1µm,27.0s,baz=32						
PPT	Papeete	57.12	227	LR	LR	11 32 58.8	
	comp=Z,499nm,18.1s,MS4.7,baz=30,slow=30						
LPAZ	La Paz	57.51	131	P	P	11 14 39.3	+2.9
	comp=Z,0.8nm,0.7s,mb3.9,baz=322,slow=6.0,SNR=3.6						
LPAZ				LR	LR	11 37 04.0	
	comp=Z,160nm,21.5s,MS4.1,baz=167,slow=34						
CFAA	Coronel Fontan	68.61	143	LR	LR	11 39 15.8	
	comp=Z,14nm,21.9s,MS3.1,baz=177,slow=30						
PET	Petropavlovsk	71.60	320	*e*P	P	11 16 08.4	+0.3
PET				*e*S	S	11 25 25.7	-0.8
PET				*e*SS	SS	11 30 03.8	+2.5
PET				*e*SSS		11 33 05.7	
PET				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
PET				smax			
	comp=N,200nm,16.0s						
PET	Petropavlovsk	71.60	320	*e*P	P	11 16 08.3	+0.3
CPUP	Villa Florida	71.67	131	P	P	11 16 12.1	+3.3
	comp=N,3.2nm,0.7s,mb4.4,baz=296,slow=7.2,SNR=14						
CPUP				LR	LR	11 43 26.9	
	comp=N,135nm,21.5s,MS4.2,baz=219,slow=32						
PETK	Petropavlovsk-	72.13	321	P	P	11 16 10.6	-0.7
	comp=N,5.4nm,0.9s,mb4.5,baz=79,slow=9.7,SNR=10.0						
PETK				LR	LR	11 41 36.2	
	comp=N,97nm,21.4s,MS4.0,baz=268,slow=31						
BDFB	Brasilia	72.34	117	P	P	11 16 12.7	-0.3
	comp=N,3.8nm,0.8s,mb4.4,baz=302,slow=4.9,SNR=3.7						
BDFB				LR	LR	11 53 36.0	
	comp=N,250nm,19.7s,MS4.5,baz=73,slow=40						
PLCA	Paso Flores	74.57	150	P	P	11 16 30.2	+4.5
	comp=N,6.1nm,1.0s,mb4.5,baz=311,slow=9.4,SNR=7.5						
PLCA				LR	LR	11 42 12.0	
	comp=N,282nm,20.4s,MS4.5,baz=105,slow=30						
PLCA	Paso Flores	74.57	150	P	P	11 16 30.2	+4.5
PLCA				LR	LR	11 42 12.0	
ARCES	ARCESS Array B	80.76	15	P	P	11 16 59.1	-0.7
	comp=N,7.2nm,1.1s,mb4.5,baz=318,slow=6.1,SNR=3.5						
ARCES				LR	LR	11 57 05.3	
	comp=N,324nm,19.1s,MS4.7,baz=321,slow=39						
YAK	Yakutsk	81.50	336	*e*P	P	11 17 06.7	+2.8
YAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,11nm,1.2s						
YAK	Yakutsk	81.50	336	*e*P	P	11 17 02.7	-1.2
	comp=E,75nm,1.4s,mb5.4						
NOA	NORSAR Array B	82.31	25	P	P	11 17 11.4	+3.2
	baz=308,slow=5.3						
NOA				LR	LR	11 51 03.0	
	comp=E,487nm,20.4s,MS4.9,baz=305,slow=34						
KONO	Kongsberg	82.52	26	*e*P	P	11 17 08.0	-1.3
YSS	Yuzh-Sakhalins	83.38	319	*e*P	P	11 17 15.1	+1.0
YSS				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.1						
GRR	Gorron	83.57	39	*e*P	P	11 17 19.8	+4.8
	comp=Z,33nm,1.1s,mb5.1						
GRR	Gorron	83.57	39	*e*P	P	11 17 19.8	+4.8
GRR				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.1						
GRR	Gorron	83.57	39	*e*P	P	11 17 19.8	+4.8
	comp=Z,17nm,1.1s,mb5.1						
FLN	La Foliniere	83.60	39	*e*P	P	11 17 20.1	+5.0
	comp=Z,52nm,1.2s,mb5.2						
FLN	La Foliniere	83.60	39	*e*P	P	11 17 20.1	+5.0
FLN				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.2						
FLN	La Foliniere	83.60	39	*e*P	P	11 17 20.1	+5.0
	comp=Z,26nm,1.2s,mb5.2						
HFS	Hagfors	83.83	25	P	P	11 17 19.4	+3.3
	comp=Z,4.9nm,0.8s,mb4.7,baz=319,slow=5.9,SNR=4.1						
ESDC	Sonseca Array	85.88	48	P	P	11 17 29.3	+2.4
	comp=Z,0.9nm,0.8s,mb4.1,baz=308,slow=5.5,SNR=5.3						
ESDC				LR	LR	11 52 45.7	
	comp=Z,321nm,20.5s,MS4.7,baz=260,slow=34						
BOD	Bodaibo	90.07	338	*e*P	P	11 17 46.2	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GERES	GERESS Array B	91.18	33	LR	LR	11 57 33.6	
	comp=Z,541nm,20.3s,MS5.0,baz=199,slow=35						
MJAR	Matsushiro Arr	91.64	312	P	P	11 17 53.6	-0.7
	comp=Z,5.3nm,1.1s,mb4.8,baz=80,slow=2.8,SNR=9.1						
MAT	Matsushiro	91.64	312	P	P	11 17 58.5	+4.3
MAT				eS	S	11 28 48.8	-5.2
HIA	Hailar	94.22	330	eP	P	11 18 06.3	+0.5
CN2	Changchun	95.14	323	eP	P	11 18 10.3	+0.1
CN2				eXP	sP	11 18 17.3	-0.8
CN2				eS	S	11 29 21.2	-3.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.4						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
OBN	Obninsk	95.51	19	eP	P	11 18 10.8	-0.8
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb5.0						
AKASG	Malin Array Be	96.72	25	LR	LR	12 03 18.1	
	comp=Z,465nm,18.8s,MS5.0,baz=275,slow=36						
KEST	Kesra	96.87	46	LR	LR	12 01 04.0	
	comp=Z,129nm,20.3s,MS4.4,baz=231,slow=35						
ARU	Arti	98.65	7	d iP	P	11 18 24.3	-1.5
ARU				e		11 22 25.1	
ARU				eS	SKSac	11 28 59.6	-3.5
ARU				SP	SP	11 31 17.9	-0.1
ARU				pmax	pmax		
	comp=Z,7.0nm,2.5s,mb4.8						
BJI	Beijing	102.70	326	P	Pdif	11 18 49.4	+5.5
BJI				S	Sdif	11 30 25.5	-2.8
BJI				LR	LR		
	comp=N,92nm,18.1s,MS4.6						
BJI				LR	LR		
	comp=E,119nm,17.1s,MS4.6						
BJI				LR	LR		
	comp=Z,172nm,24.2s						
KURK	Kurchatov	104.61	354	PP	PP	11 23 09.5	-1.1
	comp=Z,0.4nm,0.9s,baz=7.1,slow=6.5,SNR=2.6						
LZH	Lanzhou	111.75	331	ePKP	PKiKP	11 23 18.0	-3.9
LZH				LR	LR		
	comp=N,266nm,18.6s						
LZH				LR	LR		
	comp=Z,378nm,19.4s,MS5.0						
CD2	Chengdu	116.09	328	ePKP	PKPdf	11 23 29.7	-0.7
CD2				PP	PP	11 24 39.1	+5.0
CD2				PKS		11 27 04.9	
CD2				SKS	SKSdf	11 30 36.9	-5.1
CD2				SKKS	SKKSac	11 31 28.1	-7.7
CD2				SS	SS	11 40 35.1	-0.3
CD2				PP	PP		
	comp=Z,90nm,10.2s						
CD2				LR	LR		
	comp=N,150nm,18.4s						
CD2				LR	LR		
	comp=Z,130nm,16.8s,MS4.6						
GYA	Guiyang	118.18	323	ePDIF	Pdif	11 19 53.4	+0.6
GYA				PP	PP	11 24 53.2	+4.4
GYA				PKS		11 27 10.0	
GYA				SKS	SKSdf	11 30 43.5	-2.7
GYA				SS	SS	11 41 03.2	+0.3
GYA				PP	PP		
	comp=Z,80nm,7.8s						
GYA				LR	LR		
	comp=N,120nm,20.7s,MS4.6						
GYA				LR	LR		
	comp=E,100nm,21.8s,MS4.6						
GYA				LR	LR		
	comp=Z,110nm,20.9s,MS4.5						
WB2	Warramunga Arr	120.91	261	⇑iP	Pdif	11 20 06.3	+1.4
WRA	Warramunga Arr	120.92	261	PKP	PKPdf	11 23 39.6	-0.2
	comp=Z,2.9nm,0.8s,baz=68,slow=1.8,SNR=13						
KMI	Kunming	121.35	325	PKP	PKPdf	11 23 40.0	-0.7
ASAR	Alice Springs	122.34	257	PKP	PKPdf	11 23 42.5	0.0
	comp=Z,2.5nm,0.9s,baz=96,slow=2.5,SNR=11						
ASAR				PKKPbc	PKKPbc	11 33 42.0	+4.6
	comp=Z,0.4nm,0.7s,baz=246,slow=3.6,SNR=6.0						
CMAR	Chiang Mai Arr	128.82	324	PKP	PKPdf	11 23 54.7	-0.4
	comp=Z,0.3nm,0.3s,baz=336,slow=2.0,SNR=2.8						
MAW	Mawson	136.79	176	PKP	PKPdf	11 24 08.3	-0.2
	comp=Z,0.7nm,0.8s,baz=265,slow=8.5,SNR=2.0						

*ISCJB **02** 11:10:18.8±0.7, 2455N±007×10962W±009, h10^{km}, mb3.8/4, Error ellipse: s-maj=11.4km s-min=9.5km az=3.1*
*IDC **02** 11:10:18.8±1.0, 2471N×10976W, h0^{km}, mb3.8/6, mb1 4.1/9, mb1mx3.9/22, mbtmp3.9/9, ML3.7/2, Error ellipse: s-maj=22.2km s-min=8.9km az=123.0*
*NEIC **02** 11:10:20.4±0.8, 2457N×10969W, h10^{km}, mb4.0/6, Error ellipse: s-maj=13.9km s-min=11.6km az=98.0*
ISC 02 11:10:20.7±0.7, **2455N**±006×**10973W**±009, **h10**^{km}, **n33**, σ**1^{s}43**/33, **mb3.8**/4, **Gulf of California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	La Paz	0.69	230	Pg	Pg	11 10 35.0	+0.9
	945nm,0.3s,baz=21,slow=3.2,SNR=84						
LPIG				Lg		11 10 44.7	
	5μm,0.3s,baz=360,slow=2.1,SNR=83						
TUC	Tucson	7.78	353	ePn	Pn	11 12 11.8	-2.3
GSC	Goldstone	12.34	332	eP	Pn	11 13 19.2	+2.7
TPNV	Topopah Spring	13.56	337	Pn	Pn	11 13 30.8	-2.3
	224nm,1.2s						
NVAR	Mina Array Bea	15.63	334	Pn	Pn	11 14 02.1	+1.0
	0.0nm,0.3s,baz=137,slow=20,SNR=4.2						
ELK	Elko	16.79	345	Pn	Pn	11 14 16.1	+0.2
	0.1nm,0.3s,baz=152,slow=17,SNR=3.2						
ELK	Elko	16.79	345	eP	Pn	11 14 16.6	+0.7
MIAR	Mount Ida	17.20	51	eP	Pn	11 14 17.6	-3.5
HVU	Hansel Valley	17.37	352	eP	Pn	11 14 24.1	+1.0
BW06	Boulder Array	18.17	0	eP	Pn	11 14 34.5	+1.6
	26nm,1.8s						
PDAR	Pinedale Array	18.17	0	P	Pn	11 14 32.6	-0.3
	0.1nm,0.3s,baz=160,slow=9.5,SNR=8.7						
RRI2	Red Ridge	18.79	356	eP	Pn	11 14 41.1	+0.5
	18nm,1.3s						
SNOW	Snow King Moun	18.88	358	eP	Pn	11 14 42.4	+0.7
TPAW	Teton Pass	18.92	357	eP	Pn	11 14 43.2	+1.1
LOHW	Long Hollow	19.03	358	eP	Pn	11 14 40.9	-2.5
DCID1	Drake Creek	19.03	357	eP	Pn	11 14 45.3	+1.8
WVOR	Wild Horse Val	19.30	340	eP	Pn	11 14 46.0	-0.7
	10nm,1.5s						
IMW	Indian Meadow	19.32	357	eP	Pn	11 14 46.9	-0.1
HLID	Hailey	19.35	350	eP	Pn	11 14 47.3	0.0
	108nm,2.0s						
MOD	Modoc	19.40	336	eP	Pn	11 14 46.6	-1.4
	7.8nm,1.2s						
YBH	Yreka Blue Hor	20.25	331	P	P	11 14 54.3	-1.8
	0.7nm,0.8s,baz=150,slow=8.1,SNR=2.6						
QLMT	Earthquake Lak	20.28	357	eP	P	11 14 54.2	-2.2
TEIG	Tepich	20.29	98	P	P	11 14 57.1	+0.3
	11nm,1.0s,baz=65,slow=3.6,SNR=3.6						
TEIG	Tepich	20.29	98	P	P	11 14 57.1	+0.3
MCMT	McKenzie Canyo	20.39	354	eP	P	11 15 00.0	+2.5
RLMT	Red Lodge	20.52	1	eP	P	11 14 59.8	+0.8
	11nm,1.6s						
DLMT	Dillon	20.89	354	P	P	11 15 04.9	+1.9
GCMT	Greycliff	21.19	0	eP	P	11 15 07.0	+0.8
TKL	Tuckaleechee C	24.96	58	P	P	11 15 44.5	+0.2
	4.4nm,0.9s,mb4.0,baz=221,slow=13,SNR=4.2						
YKA	Yellowknife Ar	38.07	356	P	P	11 17 37.3	-1.8
	0.9nm,0.9s,mb3.5,baz=180,slow=7.5,SNR=5.2						
YKA	Yellowknife Ar	38.07	356	P	P	11 17 37.3	-1.8
PETK	Petropavlovsk-	72.24	321	P	P	11 21 43.4	-2.6
	1.3nm,1.0s,mb3.8,baz=70,slow=6.3,SNR=3.0						
PLCA	Paso Flores	74.46	150	P	P	11 21 58.6	-0.4
	1.9nm,1.1s,mb3.9,baz=326,slow=3.6,SNR=1.8						

*IDC **02** 11:14:53.2±0.7, 278N×12708E, h0^{km}, mb4.1/15, mb1 4.1/15, mb1mx4.1/19, mbtmp4.1/15, MS3.4/2, Ms1 3.4/2, ms1mx3.0/26, Error ellipse: s-maj=35.6km s-min=12.9km az=73.0*
*NEIC **02** 11:14:54.6±0.4, 283N×127.18E, h10^{km}, mb4.3/1, Error ellipse: s-maj=21.9km s-min=7.7km az=78.0*
*ISCJB **02** 11:14:57.0±2.3, 278N±008×127.1E±02, h39^{km}±23^{km}, mb4.1/14, MS3.3/2, Error ellipse: s-maj=31.8km s-min=12.8km az=169.4*
*DJA **02** 11:15:03, 278N×12706E, h83^{km}, ML4.2/2*
ISC 02 11:14:57.1±6.9, **279N**±009×**1271E**±02, **h25**^{km}±51^{km}, **n23**, σ**0^{s}73**/21, **mb4.1**/14, **MS3.3**/2, **1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNE	Ternate	2.00	173	⇓eP	Pn	11 15 29.0	-0.3
GUMO	Guam	20.55	58	LR	LR	11 26 27.2	
	comp=Z,94nm,20.2s,MS3.1,baz=91,slow=34						
FITZ	Fitzroy Crossi	20.81	184	eP	P	11 19 37.4	+0.6
	7.7nm,1.5s						
FITZ	Fitzroy Crossi	20.81	184	P	P	11 19 36.9	+0.2
	1.5nm,0.5s,baz=41,slow=9.9,SNR=10						
FITZ	Fitzroy Crossi	20.81	184	eP	P	11 19 37.2	+0.4
WRA	Warramunga Arr	23.67	163	P	P	11 20 06.4	-0.6
	7.2nm,0.5s,mb4.3,baz=342,slow=10,SNR=78						
JOW	Kunigami	23.93	2	P	P	11 20 09.4	+0.1
	6.5nm,0.9s,mb4.1,baz=228,slow=8.8,SNR=5.3						
MBWA	Marble Bar	24.88	197	eP	P	11 20 19.0	+1.0
ASAR	Alice Springs	27.10	166	P	P	11 20 37.6	-0.5
	0.9nm,0.3s,mb3.7,baz=343,slow=8.0,SNR=18						
CBIJ	Chichi jima	28.14	29	LR	LR	11 32 15.1	
	comp=Z,90nm,18.2s,MS3.4,baz=219,slow=37						
CMAR	Chiang Mai Arr	31.70	301	P	P	11 21 18.6	-0.5
	0.4nm,0.4s,mb3.6,baz=116,slow=10,SNR=3.0						
KSRS	Korea Array	34.51	1	P	P	11 21 45.0	+1.7
	1.1nm,0.6s,mb4.0,baz=177,slow=9.5,SNR=4.5						
STKA	Stephens Creek	37.11	159	eP	P	11 22 05.8	+0.2
	3.8nm,0.6s,mb4.4						
STKA	Stephens Creek	37.11	159	P	P	11 22 05.8	+0.1
	5.3nm,0.7s,mb4.5,baz=330,slow=5.7,SNR=11						
SONM	Songino Array	48.32	341	P	P	11 23 34.6	-1.8
	0.4nm,0.5s,mb3.7,baz=150,slow=6.0,SNR=2.0						
PETK	Petropavlovsk-	56.15	22	P	P	11 24 34.5	+0.1
	1.6nm,0.7s,mb4.2,baz=185,slow=1.4,SNR=7.9						
MKAR	Makanchi Array	58.56	325	P	P	11 24 51.8	+0.2
	1.4nm,0.6s,mb4.2,baz=120,slow=8.7,SNR=21						
ZALV	Zalesovo Beam	61.61	333	P	P	11 25 11.7	-0.7
	0.8nm,0.4s,mb4.2,baz=130,slow=4.5,SNR=2.7						
KURK	Kurchatov	62.75	328	P	P	11 25 20.2	+0.1
	2.0nm,0.6s,mb4.4,baz=128,slow=6.8,SNR=18						
BVAR	Borovoye Array	68.33	327	P	P	11 25 56.3	+0.2
	0.9nm,0.6s,mb4.0,baz=138,slow=9.6,SNR=4.9						
AKTK	Aktyubinsk	74.65	322	P	P	11 26 34.9	+0.6
AKTO	Aktyubinsk	74.65	322	P	P	11 26 34.9	+0.6
	3.6nm,0.6s,mb4.5,baz=101,slow=8.5,SNR=14						
ARCES	ARCESS Array B	91.47	340	P	P	11 28 00.1	-0.8
	1.1nm,0.8s,mb4.2,baz=79,slow=6.3,SNR=5.9						

*CSEM **02** 11:15:16.9±0.1, 4026N×4206E, h10^{km}, MD2.8, Error ellipse: s-maj=2.0km s-min=1.9km az=56.0*
*ISCJB **02** 11:15:17.7±0.7, 4026N±005×4207E±004, h5^{km}±9^{km}, Error ellipse: s-maj=8.6km s-min=4.5km az=155.6*
*ISK **02** 11:15:17.3, 4028N×4206E, h10^{km}, MD3.0*
*DDA **02** 11:15:22.7, 4025N×4171E, h7^{km}±3^{km}, Md2.8*
ISC 02 11:15:18.4±0.5, **4026N**±003×**4206E**±004, **h11**^{km}±6^{km}, **n10**, σ**0^{s}77**/18, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HOMI	Horasan	0.24	210	iP	Pg	11 15 23.6	+0.1
HOMI				iS	Sg	11 15 32.2	+5.3
ERZM	Erzurum	0.64	237	iP	Pg	11 15 30.8	0.0
ERZM				iS	Sg	11 15 38.1	-1.1
EZM	Erzurum	0.64	237	PG	Pg	11 15 30.8	0.0
EZM				eSG	Sg	11 15 39.5	+0.2
KARS	Kars	0.86	65	ePG	Pg	11 15 34.0	-1.1
KARS				eSG	Sg	11 15 47.0	+0.6
ARTV	Artvin	0.93	354	iP	Pg	11 15 35.8	-0.7
ARTV				iS	Sg	11 15 49.9	+1.3
AGRB	Hanur-Agry	0.99	133	ePG	Pg	11 15 36.4	-1.1
AGRB				eSG	Sg	11 15 51.6	+1.4
KOPT	Kop Dagi	1.22	259	iP	Pn	11 15 41.4	0.0
KOPT				iS	Sb	11 15 58.6	+1.3
BCA	Borcka	1.23	344	ePN	Pn	11 15 40.9	-0.7
BCA				eSN	Sn	11 15 57.9	-0.3
GNI	Garni	2.06	92	ePN	Pn	11 15 52.8	-0.1
PTK	Pertek	2.47	237	ePN	Pn	11 15 58.6	0.0

*GII **02** 11:25:54.5±1.1, 2984N×3623E, h0^{km}, ML2.0/3, EXPLOSION*
*SGS **02** 11:25:55.9, 2994N×36.18E, h5^{km}*
*CSEM **02** 11:25:55.9, 2994N×36.18E, h5^{km}, ML2.7, After SNSN*
ISC 02 11:25:53.5±1.3, **2983N**±004×**3636E**±007, **h0**^{km}, **n13**, σ**0^{s}60**/19, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HRFI	Mount Harif	1.17	281	Pg	Pg	11 26 15.5	-0.4
EIL	Elat	1.23	263	Pg	Pg	11 26 17.1	-0.1
EIL				Sg	Sg	11 26 33.7	+0.6
HQLS		1.25	245	P	Pg	11 26 16.8	-0.6
HQLS		1.25	245	P	Pg	11 26 16.8	-0.6
HQLS				S	Sg	11 26 32.8	-0.7
ZFRI	Zfri	1.25	306	Pg	Pg	11 26 17.4	-0.2
MBRI	Mt Berech	1.26	269	Pg	Pg	11 26 17.0	-0.6
MBRI				Sg	Sg	11 26 34.5	+0.6
PRNI	Paran	1.28	294	Pg	Pg	11 26 17.4	-0.8
PRNI				Sg	Sg	11 26 35.1	+0.3
JLOS		1.32	215	P	Pg	11 26 19.4	+0.5
JLOS		1.32	215	P	Pg	11 26 19.4	+0.5
JLOS				S	Sg	11 26 36.9	+0.8
KRMI	Paran Flat	1.45	282	Pn	Pn	11 26 20.1	-0.9
MZDA	Masada	1.71	330	Pn	Pn	11 26 25.4	+0.9
MZDA				Sn	Sn	11 26 47.7	+0.6
RSHS		2.05	222	P	Pn	11 26 29.1	0.0
RSHS		2.05	222	P	Pn	11 26 29.1	-0.1

*ISCJB **02** 11:27:13.1±0.7, 1946S±005×690W±0.1, h133^{km}±9^{km}, mb3.6/4, Error ellipse: s-maj=19.0km s-min=7.6km az=5.7*
*IDC **02** 11:27:13.5±1.1, 1946S×6902W, h125^{km}±9^{km}, mb3.6/5, mb1 3.7/8, mb1mx3.5/18, mbtmp3.6/8, Error ellipse: s-maj=28.5km s-min=8.1km az=98.0*
*NEIC **02** 11:27:14.0±0.7, 1941S×6900W, h128^{km}±8^{km}, mb3.7/1, Error ellipse: s-maj=13.9km s-min=8.5km az=94.0*
ISC 02 11:27:14.2±0.7, **1946S**±005×**690W**±01, **h128**^{km}±8^{km}, **n15**, σ**0^{s}95**/18, **mb3.6**/4, **Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	3.14	178	P	Pn	11 28 02.4	-0.2
	6.1nm,0.3s,baz=340,slow=8.5,SNR=52						
LVC				S	Sn	11 28 39.0	-1.0
	50nm,0.3s,baz=130,slow=19,SNR=34						
LVC	Limon Verde	3.14	178	ePn	Pn	11 28 02.4	-0.2
LVC				S	Sn	11 28 39.0	-1.0
LPAZ	La Paz	3.26	15	P	Pn	11 28 04.8	+0.5
	2.3nm,0.3s,baz=195,slow=5.9,SNR=82						
LPAZ				S	Sn	11 28 43.6	+0.7
	1.2nm,0.3s,baz=289,slow=25,SNR=10.0						
ARE	Arequipa	3.80	321	eP	Pn	11 28 11.0	-0.4
ARE				eS	Sn	11 28 49.0	-6.7
SIV	San Ignacio	8.31	67	P	Pn	11 29 10.3	-1.6
	2.7nm,0.3s,baz=260,slow=11,SNR=42						
LCO	Las Campanas	9.63	189	ePn	Pn	11 29 23.2	-6.5
CFAA	Coronel Fontan	12.12	177	P	Pn	11 30 03.7	+1.1
	0.0nm,0.3s,baz=322,slow=8.5,SNR=3.8						
TRQA	Tornquist	19.52	163	eP	P	11 31 31.6	+0.2
	2.6nm,0.7s						
BDFB	Brasilia	20.37	83	P	P	11 31 42.2	+1.4
	2.2nm,0.4s,baz=242,slow=10.0,SNR=5.2						
PLCA	Paso Flores	21.25	183	P	P	11 31 51.5	+1.5
	1.3nm,0.8s,mb3.3,baz=46,slow=9.0,SNR=4.1						
PLCA	Paso Flores	21.25	183	P	P	11 31 51.5	+1.5
DBIC	Dimbokro	68.26	74	P	P	11 38 00.9	-0.8
	1.6nm,0.6s,mb3.9,baz=190,slow=4.2,SNR=5.4						
TORD	Torodi Ar. Bea	76.77	71	P	P	11 38 51.6	-0.5
	1.0nm,0.6s,mb3.6,baz=258,slow=5.3,SNR=15						
YKA	Yellowknife Ar	89.24	341	P	P	11 39 54.1	-1.1
	0.6nm,0.5s,mb3.8,baz=130,slow=4.8,SNR=12						
SONM	Songino Array	151.45	6	PKPbc	PKPbc	11 46 53.0	+0.1
	0.6nm,0.5s,baz=333,slow=1.6,SNR=4.3						

*IDC **02** 11:42:27.7±0.6, 1163S×166.17E, h0^{km}, mb4.6/21, mb1 4.7/21, mb1mx4.7/21, mbtmp4.6/21, MS4.4/19, Ms1 4.4/19, ms1mx4.3/24, Error ellipse: s-maj=18.8km s-min=14.3km az=114.0*
*ISCJB **02** 11:42:28.9±2.1, 1173S±005×16589E±004, h7^{km}±13^{km}, mb4.7/53, MS4.5/27, Error ellipse: s-maj=9.1km s-min=7.2km az=176.6*
*DJA **02** 11:42:31, 1242S×16676E, h10^{km}, mb5.2/18*
*MOS **02** 11:42:32.1±1.3, 1166S×16588E, h33^{km}, mb4.9/15, Error ellipse: s-maj=11.6km s-min=10.1km az=174.6*
*BJI **02** 11:42:32.6, 1126S×166.15E, h23^{km}, mB5.2, mb4.9, Ms4.8, Msz4.5*
*GCMT **02** 11:42:34.4±0.3, 1188S×166.10E, h28^{km}, MW5.2/52, Moment Tensor Solution. s50,c66; s52,c77; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.72±.03; $M_{\theta\theta}$-0.10±.02; $M_{\phi\phi}$-0.61±.02; $M_{r\theta}$0.19±.05; $M_{\theta\phi}$0.29±.02; $M_{\phi r}$-0.36±.04; Best double couple: $M_0$0.83500×10^{17} NP1:ϕ_s337.00000°, δ31.00000°, λ93.00000°. NP2: ϕ_s154.00000°, δ59.00000°, λ88.00000°. Principal axes: T 0.8220, Plg76.0000°, Azm59.0000°; N 0.0260, Plg1.0000°, Azm155.0000°; P -0.8480, Plg14.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **02** 11:42:34.4±0.3, 1169S×16591E, h35^{km}, mb4.7/24 Error ellipse: s-maj=12.2km s-min=7.7km az=144.0*
ISC 02 11:42:32.6±2.4, **1173S**±005×**16593E**±004, **h20**^{km}±14^{km}, **h30**^{km}±2.5^{km}**:pP-P, n128**, σ**1^{s}25**/103, **mb4.7**/53, **MS4.5**/27, **8C-4D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.31	291	eP	Pn	11 44 07.3	+2.7
HNR				eS	Sn	11 45 16.9	+0.7
HNR				pmax	pmax		
	comp=Z,601nm,0.9s						
HNR	Honiara	6.31	291	ePn	Pn	11 44 07.3	+2.7
	comp=Z,601nm,0.9s						
HNR				eS	Sn	11 45 16.9	+0.8
CTA	Charters Tower	20.65	244	eP	P	11 47 11.0	-0.2
	comp=Z,32nm,1.1s						
CTA	Charters Tower	20.65	244	P	P	11 47 10.7	-0.5
	comp=Z,45nm,1.0s,baz=61,slow=14,SNR=15						
CTA	Charters Tower	20.65	244	eP	P	11 47 11.0	-0.2
CTA				pmax	pmax		
	comp=Z,32nm,1.1s						
CTAO	Charters Tower	20.65	244	eP	P	11 47 11.2	0.0
CTAO				pmax	pmax		
	comp=Z,59nm,1.1s						
CTAO	Charters Tower	20.65	244	eP	P	11 47 11.2	0.0
	comp=Z,59nm,1.1s						
AFI	Afiamalu	21.84	98	LR	LR	11 54 26.4	
	comp=Z,1μm,18.0s,MS4.3,baz=280,slow=33						
AFI	Afiamalu	21.84	98	P	P	11 47 25.6	+1.5
ARMA	Armidale	22.85	213	⇓iP	P	11 47 35.8	+1.2
RAO	Raoul Island	23.03	142	LR	LR	11 55 00.7	
	comp=Z,1μm,19.8s,MS4.3,baz=323,slow=33						
CNB	Canberra Magne	27.88	210	eP	P	11 48 21.1	0.0
URZ	Urewera	28.25	161	P	P	11 48 22.7	-1.7
	comp=Z,19nm,1.1s,mb4.6,baz=7.6,slow=12,SNR=3.7						
STKA	Stephens Creek	30.08	224	eP	P	11 48 41.7	+1.0
	comp=Z,6.4nm,0.8s,mb4.4						
STKA				e		11 51 41.5	
STKA	Stephens Creek	30.08	224	P	P	11 48 41.6	+0.9
	comp=Z,3.5nm,0.6s,mb4.2,baz=27,slow=10,SNR=7.5						
STKA				PcP	PcP	11 51 41.4	-1.0
	comp=Z,6.1nm,0.8s,baz=6.1,slow=6.4,SNR=3.8						
STKA				LR	LR	12 00 12.8	
	comp=Z,2μm,18.1s,MS4.8,baz=32,slow=35						
WB2	Warramunga Arr	31.42	251	eP	P	11 48 52.2	-0.5
WRAB	Tennant Creek	31.42	251	eP	P	11 48 50.6	-2.1
WRA	Warramunga Arr	31.43	251	P	P	11 48 53.1	+0.3
	comp=Z,6.4nm,0.7s,mb4.5,baz=84,slow=9.1,SNR=57						
WRA				PcP	PcP	11 51 46.1	-0.1
	comp=Z,2.9nm,0.9s,baz=78,slow=3.2,SNR=6.3						
WRA				LR	LR	12 01 03.2	
	comp=Z,718nm,19.0s,MS4.4,baz=75,slow=35						
WRA	Warramunga Arr	31.43	251	P	P	11 48 53.1	+0.3
WRA						11 51 46.1	
RPZ	Rata Peaks	32.18	173	P	P	11 48 58.2	-0.9
	comp=Z,27nm,0.7s,mb5.2,baz=62,slow=2.2,SNR=13						
RPZ				LR	LR	11 59 45.7	
	comp=Z,794nm,21.9s,MS4.4,baz=348,slow=32						
ASAR	Alice Springs	32.66	244	P	P	11 49 03.3	-0.3
	comp=Z,9.6nm,0.8s,mb4.8,baz=68,slow=9.5,SNR=78						
ASAR				PcP	PcP	11 51 48.6	-0.8
	comp=Z,5.3nm,0.9s,baz=77,slow=3.5,SNR=11						
GUMO	Guam	32.70	320	LR	LR	12 00 54.3	
	comp=Z,829nm,21.1s,MS4.4,baz=274,slow=34						
KAKA	Kakadu	32.74	265	eP	P	11 49 04.7	+0.4
	comp=Z,8.9nm,0.6s,mb4.9						
RAR	Rarotonga	34.15	111	LR	LR	12 00 16.9	
	comp=Z,954nm,18.0s,MS4.6,baz=270,slow=32						
FITZ	Fitzroy Crossi	39.39	256	eP	P	11 50 01.4	+0.1
	comp=Z,12nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	39.39	256	P	P	11 50 01.7	+0.4
	comp=Z,7.8nm,1.1s,mb4.4,baz=90,slow=9.4,SNR=14						
FITZ				PcP	PcP	11 52 09.7	+0.2
	comp=Z,2.9nm,0.9s,baz=129,slow=0.6,SNR=5.6						
FITZ				LR	LR	12 04 42.7	
	comp=Z,487nm,18.8s,MS4.4,baz=69,slow=34						
FORT	Forrest	39.81	236	eP	P	11 50 05.1	+0.5
	comp=Z,20nm,0.9s,mb4.9						
BATI	Baumata	41.50	268	P	P	11 50 19.8	+1.0
	comp=Z,29nm,0.7s,mb5.0,baz=132,slow=4.6,SNR=3.8						
PPT	Papeete	43.36	103	eS	S	11 57 01.1	+0.1
	comp=Z,436nm,26.2s						
PPT				eLQ		12 00 49.7	
	comp=Z,2μm,28.8s						
PPT				eLR	LR	12 02 36.1	
	comp=Z,727nm,22.8s,baz=283						
PPT	Papeete	43.36	103	LR	LR	12 06 08.0	
	comp=Z,472nm,18.4s,MS4.4,baz=273,slow=33						
DAV	Davao City (W)	44.27	293	LR	LR	12 06 51.3	
	comp=Z,436nm,21.0s,MS4.3,baz=106,slow=33						
MBWA	Marble Bar	45.16	252	eP	P	11 50 49.5	+1.2
	comp=Z,17nm,1.0s,mb4.8						
KAPI	Kappang	46.12	274	P	P	11 50 54.1	-1.9
	comp=Z,7.2nm,0.5s,mb4.8,baz=139,slow=2.5,SNR=7.0						
KLBR	Kellerberrin	48.50	238	eP	P	11 51 14.4	+0.1
	comp=Z,17nm,0.9s,mb5.1						
NWAO	Narrogin (SRO)	49.24	237	P	P	11 51 19.4	-0.5
	comp=Z,8.3nm,0.8s,mb4.8,baz=98,slow=11,SNR=3.8						
MUN	Mundaring	49.87	238	eP	P	11 51 25.0	+0.2
MJAR	Matsushiro Arr	54.66	333	P	P	11 51 57.9	-2.3
	comp=Z,4.4nm,0.7s,mb4.6,baz=167,slow=6.9,SNR=17						
RKT	Rikitea	57.18	110	eS	S	12 00 14.1	+0.6
	comp=Z,286nm,31.0s						
RKT				eSS	SS	12 04 00.4	-2.3
	comp=Z,111nm,33.2s						
RKT				eLQ		12 06 38.8	
	comp=Z,474nm,31.2s						
RKT				eLR	LR	12 08 59.6	
	comp=Z,1μm,25.2s,baz=279						
KSRS	Korea Array	60.54	326	P	P	11 52 41.3	-0.3
	comp=Z,2.5nm,0.7s,mb4.4,baz=133,slow=7.4,SNR=7.8						
KSRS				LR	LR	12 15 54.1	
	comp=Z,205nm,19.1s,MS4.3,baz=130,slow=33						
YSS	Yuzh-Sakhalins	61.99	342	eP	P	11 52 50.0	-1.2
YSS				e		11 53 02.5	
QIZ	Qiongzhong	63.16	298	P	P	11 53 00.2	+0.6
QIZ				AP	pP	11 53 08.2	+2.1
QIZ				S	S	12 01 31.0	+0.7
QIZ				XS	sS	12 01 46.1	+5.2
QIZ				AMB	AMB		
	comp=Z,13nm,1.7s,mb4.8						
QIZ				LR	LR		
	comp=N,158nm,19.4s,MS4.4						
QIZ				LR	LR		
	comp=E,179nm,18.7s,MS4.4						
QIZ				LR	LR		
	comp=Z,281nm,22.4s,MS4.4						
PETK	Petropavlovsk-	64.96	355	P	P	11 53 08.8	-1.9
	comp=Z,3.4nm,0.8s,mb4.4,baz=141,slow=7.5,SNR=11						
PETK				LR	LR	12 16 09.0	
	comp=Z,239nm,20.8s,MS4.4,baz=176,slow=31						
CASY	Casey	65.81	201	⇑iP	P	11 53 15.3	-0.9
SBA	Scott Base	66.12	180	eP	P	11 53 17.9	-0.1
SBA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
SBA	Scott Base	66.12	180	eP	P	11 53 17.9	-0.1
	comp=Z,18nm,0.9s,mb5.1						
CN2	Changchun	66.42	329	eP	P	11 53 20.2	-0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
BJI	Beijing	69.12	321	P	P	11 53 37.6	+0.1
BJI				AMB	AMB		
	comp=Z,16nm,0.9s,mb5.0						
BJI				AMB	AMB		
	comp=Z,222nm,7.6s						
BJI				LR	LR		
	comp=N,180nm,21.8s,MS4.5						
BJI				LR	LR		
	comp=E,252nm,19.8s,MS4.5						
BJI				LR	LR		
	comp=Z,411nm,24.0s,MS4.6						
XAN	Xi'an	70.71	312	P	P	11 53 47.8	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XAN				AP	pP	11 53 53.0	-1.0
XAN				AMB	AMB		
	comp=Z,17nm,1.1s,mb4.9						
XAN				AMB	AMB		
	comp=Z,111nm,6.6s						
XAN				LR	LR		
	comp=E,130nm,21.8s						
XAN				LR	LR		
	comp=Z,266nm,21.1s,MS4.5						
KMI	**Kunming**	**71.63**	**302**	P	**P**	**11 53 55.7**	**+2.5**
KMI				AP	pP	11 54 05.5	+5.8
KMI				XP	sP	11 54 09.7	+7.6
KMI				PP	PP	11 56 37.2	+4.7
KMI				XS	sS	12 03 29.9	+7.1
KMI				SS	SS	12 07 51.5	+3.6
KMI				AMB	AMB		
	comp=Z,16nm,0.9s,mb5.0						
KMI				AMB	AMB		
	comp=Z,80nm,4.5s						
KMI				LR	LR		
	comp=N,165nm,18.0s,MS4.5						
KMI				LR	LR		
	comp=E,210nm,20.0s,MS4.5						
KMI				LR	LR		
	comp=Z,241nm,18.0s,MS4.5						
CHRT	**Chiangrai**	**72.27**	**295**	⇓P	**P**	**11 53 59.0**	**+1.9**
HHC	**Hu-ho-hao-te**	**72.47**	**320**	*e*P	**P**	**11 53 59.0**	**+1.2**
HHC				AP	pP	11 54 09.9	+5.5
HHC				XP	sP	11 54 13.7	+6.9
HHC				PCP	PcP	11 54 16.2	+0.7
HHC				PP	PP	11 56 42.2	+2.9
HHC				S	S	12 03 20.1	-0.9
HHC				XS	sS	12 03 38.8	+7.0
HHC				SKS		12 03 57.4	
HHC				SCS	ScS	12 04 00.4	-3.4
HHC				SS	SS	12 08 02.7	+2.5
HHC				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,90nm,7.2s						
HHC				LR	LR		
	comp=N,247nm,18.2s,MS4.7						
HHC				LR	LR		
	comp=E,231nm,18.2s,MS4.7						
HHC				LR	LR		
	comp=Z,314nm,18.7s,MS4.6						
CMAR	**Chiang Mai Arr**	**72.55**	**294**	P	**P**	**11 53 59.5**	**+0.7**
	comp=Z,2.0nm,0.7s,mb4.2,baz=118,slow=4.6,SNR=12						
CMAR				LR	LR	12 25 53.4	
	comp=Z,98nm,18.4s,MS4.1,baz=80,slow=36						
CHG	**Chiang Mai**	**72.67**	**294**	P	**P**	**11 54 09.3**	**+10**
HIA	**Hailar**	**73.05**	**330***c*	*i*P	**P**	**11 54 00.9**	**-0.2**
CD2	**Chengdu**	**73.16**	**307**	*e*P	**P**	**11 54 03.2**	**+1.0**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
LZH	**Lanzhou**	**75.35**	**312**	*e*P	**P**	**11 54 16.2**	**+1.4**
LZH				AP	pP	11 54 23.0	+1.6
LZH				XP	sP	11 54 25.7	+1.9
LZH				AMB	AMB		
	comp=Z,26nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,125nm,4.3s						
OHAK	**Old Harbor**	**76.47**	**21**	*e*P	**P**	**11 54 18.2**	**-2.6**
YAK	**Yakutsk**	**78.80**	**343**	*e*P	**P**	**11 54 32.1**	**-1.5**
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
ULN	**Ulaanbaatar**	**78.96**	**324**	*e*P	**P**	**11 54 35.3**	**+0.5**
ULN				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
ULN	**Ulaanbaatar**	**78.96**	**324**	*e*P	**P**	**11 54 35.3**	**+0.5**
	comp=Z,19nm,0.9s,mb5.0						
SONM	**Songino Array**	**79.32**	**324**	P	**P**	**11 54 35.6**	**-1.2**
	comp=Z,4.6nm,0.8s,mb4.5,baz=142,slow=5.7,SNR=25						
SONM				LR	LR	12 26 01.0	
	comp=Z,204nm,20.3s,MS4.5,baz=108,slow=33						
GTA	**Gaotai**	**79.66**	**314**	P	**P**	**11 54 40.2**	**+1.3**
GTA				AP	pP	11 54 50.4	+4.9
GTA				XP	sP	11 54 54.5	+6.6
GTA				S	S	12 04 41.8	+1.5
GTA				XS	sS	12 04 58.5	+7.3
GTA				AMB	AMB		
	comp=Z,22nm,1.1s,mb5.0						
GTA				AMB	AMB		
	comp=Z,151nm,5.1s						
GTA				LR	LR		
	comp=N,171nm,18.1s,MS4.6						
GTA				LR	LR		
	comp=E,219nm,21.1s,MS4.6						
GTA				LR	LR		
	comp=Z,291nm,20.8s,MS4.6						
TTA	**Tatalina**	**80.02**	**17**	*e*P	**P**	**11 54 41.4**	**+1.1**
TTA				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
TTA	**Tatalina**	**80.02**	**17**	*e*P	**P**	**11 54 41.4**	**+1.1**
	comp=Z,14nm,1.3s,mb4.7						
PMR	**Palmer**	**81.13**	**20**	*e*P	**P**	**11 54 43.3**	**-3.0**
PMR				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
PMR	**Palmer**	**81.13**	**20**	*e*P	**P**	**11 54 43.3**	**-2.9**
	comp=Z,2.2nm,0.8s,mb4.1						
BOD	**Bodaibo**	**81.22**	**335**	*e*P	**P**	**11 54 45.0**	**-1.8**
ZAK	**Zakamensk**	**82.36**	**325**	⇓*i*P	**P**	**11 54 52.2**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
TLY	**Talaya**	**82.79**	**326**	*e*P	**P**	**11 54 54.6**	**-0.6**
TLY				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
TLY				MLR	MLR		
	comp=Z,124nm,19.0s,MS4.3						
COLA	**College**	**83.87**	**18**	*e*P	**P**	**11 54 57.3**	**-3.2**
COLA	**College**	**83.87**	**18**	*e*P	**P**	**11 54 57.5**	**-3.0**
	comp=Z,6.5nm,0.8s,mb4.8						
MAW	**Mawson**	**84.16**	**202**	⇑*i*P	**P**	**11 55 01.4**	**-0.7**
	comp=Z,2.5nm,0.9s,mb4.3						
MAW	**Mawson**	**84.16**	**202**	P	**P**	**11 55 01.6**	**-0.5**
	comp=Z,3.8nm,0.8s,mb4.6,baz=80,slow=7.8,SNR=9.0						
MAW				LR	LR	12 25 57.4	
	comp=Z,255nm,21.9s,MS4.6,baz=311,slow=31						
MAW	**Mawson**	**84.16**	**202**	⇑*i*P	**P**	**11 55 01.4**	**-0.7**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YBH	**Yreka Blue Hor**	**84.24**	**45**	*e*P	**P**	**11 55 04.4**	**+1.5**
YBH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YBH	**Yreka Blue Hor**	**84.24**	**45**	*e*P	**P**	**11 55 04.4**	**+1.5**
	comp=Z,3.8nm,0.9s,mb4.5						
MOY	**Mondy**	**84.24**	**325**	*e*P	**P**	**11 55 02.3**	**-0.4**
HUMO	**Hull Mountain**	**84.38**	**45**	*e*P	**P**	**11 55 04.0**	**+0.4**
	comp=Z,3.6nm,0.9s,mb4.5						
MTUM	**Tungsten Hills**	**85.79**	**51**	*e*P	**P**	**11 55 12.0**	**+1.1**
PAHR	**Pah Rah Range**	**85.92**	**48**	*e*P	**P**	**11 55 12.5**	**+1.0**
	comp=Z,2.9nm,0.9s,mb4.5						
EGAK	**Eagle**	**85.95**	**20**	*e*P	**P**	**11 55 09.2**	**-1.8**
	comp=Z,6.0nm,0.7s,mb4.9						
MOD	**Modoc**	**85.98**	**46**	*e*P	**P**	**11 55 12.5**	**+0.8**
	comp=Z,4.4nm,1.0s,mb4.6						
NVAR	**Mina Array Bea**	**86.32**	**50**	P	**P**	**11 55 11.2**	**-2.2**
	comp=Z,2.9nm,0.8s,mb4.6,baz=233,slow=8.8,SNR=17						
LDFC	**Landfair**	**87.81**	**54**	*e*P	**P**	**11 55 20.7**	**0.0**
	comp=Z,10nm,0.9s,mb5.0						
ELK	**Elko**	**89.26**	**48**	*e*P	**P**	**11 55 29.0**	**+1.6**
ELK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ELK	**Elko**	**89.26**	**48**	*e*P	**P**	**11 55 29.0**	**+1.5**
	comp=Z,1.9nm,0.8s,mb4.5						
WMQ	**Urumqi**	**89.70**	**315**	*e*P	**P**	**11 55 28.8**	**-0.6**
WMQ				AP	pP	11 55 39.0	+2.9
WMQ				XP	sP	11 55 43.0	+4.5
WMQ				PP	PP	11 59 02.0	+0.2
WMQ				SKS		12 05 54.0	
WMQ				S	S	12 06 13.5	-6.5
WMQ				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,124nm,4.6s						
WMQ				LR	LR		
	comp=N,670nm,13.8s,MS5.3						
WMQ				LR	LR		
	comp=E,392nm,14.6s,MS5.3						
WMQ				LR	LR		
	comp=Z,448nm,23.2s						
WUAZ	**Wupatki**	**90.87**	**54**	*e*P	**P**	**11 55 36.4**	**+1.3**
	comp=Z,3.2nm,0.9s,mb4.7						
DUG	**Dugway**	**90.90**	**49**	*e*P	**P**	**11 55 35.2**	**+0.1**
DUG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
DUG	**Dugway**	**90.90**	**49**	*e*P	**P**	**11 55 35.2**	**+0.1**
	comp=Z,2.7nm,0.8s,mb4.6						
BGU	**Big Grassy Mou**	**90.93**	**48**	*e*P	**P**	**11 55 36.3**	**+1.1**
MSU	**Marysvale**	**90.97**	**51**	*e*P	**P**	**11 55 37.6**	**+2.1**
SYO	**Syowa Base**	**91.19**	**197**	⇑*e*P	**P**	**11 55 33.0**	**-2.9**
SYO	**Syowa Base**	**91.19**	**197**	⇓*e*sP	sP	11 55 50.8	+5.8
MCMT	**McKenzie Canyo**	**92.03**	**45**	*e*P	**P**	**11 55 41.7**	**+1.4**
DLMT	**Dillon**	**92.34**	**44**	*e*P	**P**	**11 55 43.1**	**+1.4**
	comp=Z,3.1nm,0.9s,mb4.6						
PV10	**Paradox Valley**	**93.33**	**52**	*e*P	**P**	**11 55 47.8**	**+1.4**
PV01	**Paradox Valley**	**93.64**	**52**	*e*P	**P**	**11 55 48.5**	**+0.6**
PDAR	**Pinedale Array**	**93.88**	**47**	P	**P**	**11 55 46.8**	**-2.0**
	comp=Z,0.7nm,0.8s,mb4.1,baz=274,slow=4.1,SNR=2.8						
PDAR				PKKPbc	PKKPbc	12 12 51.5	-2.1
	comp=Z,0.6nm,0.8s,baz=110,slow=3.5,SNR=5.4						
PDAR				LR	LR	12 31 28.3	
	comp=Z,224nm,18.7s,MS4.7,baz=84,slow=31						
MKAR	**Makanchi Array**	**94.14**	**317**	P	**P**	**11 55 49.7**	**-0.2**
	comp=Z,22nm,0.7s,mb5.7,baz=97,slow=6.2,SNR=109						
MKAR				LR	LR	12 36 54.1	
	comp=Z,128nm,20.6s,MS4.4,baz=123,slow=35						
MKAR	**Makanchi Array**	**94.14**	**317**	P	**P**	**11 55 49.7**	**-0.2**
MKAR				LR	LR	12 36 54.1	
ZALV	**Zalesovo Beam**	**94.21**	**324**	P	**P**	**11 55 48.4**	**-1.7**
	comp=Z,7.0nm,0.7s,mb5.2,baz=109,slow=4.5,SNR=16						
ZALV				LR	LR	12 36 14.9	
	comp=Z,129nm,21.3s,MS4.4,baz=248,slow=34						
ZAL	**Zalesovo**	**94.22**	**324**	P	**P**	**11 55 48.4**	**-1.7**
YKA	**Yellowknife Ar**	**95.49**	**27**	P	**P**	**11 55 52.0**	**-3.7**
	comp=Z,0.5nm,0.8s,mb4.0,baz=250,slow=4.7,SNR=3.1						
YKA				LR	LR	12 31 29.5	
	comp=Z,109nm,20.3s,MS4.3,baz=220,slow=31						
YKA	**Yellowknife Ar**	**95.49**	**27**	P	**P**	**11 55 52.0**	**-3.7**
YKA				LR	LR	12 31 29.5	
KURK	**Kurchatov**	**97.28**	**320**	P	**P**	**11 56 02.1**	**-2.0**
	comp=Z,1.4nm,0.7s,mb4.5,baz=101,slow=3.7,SNR=6.5						
KURK	**Kurchatov**	**97.28**	**320**	*e*P	**P**	**11 56 01.7**	**-2.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.6						
BVAR	**Borovoye Array**	**102.60**	**322**	P	Pdif	11 56 25.8	-2.0
	comp=Z,2.2nm,0.8s,baz=113,slow=3.4,SNR=8.1						
ARCES	**ARCESS Array B**	**117.04**	**345**	PKP	PKPdf	12 01 11.5	-4.0
	comp=Z,1.8nm,0.8s,baz=91,slow=1.9,SNR=10.0						
ARCES	**ARCESS Array B**	**117.04**	**345**	PKP	PKPdf	12 01 11.5	-4.0
LPAZ	**La Paz**	**119.72**	**116**	PKKPbc	PKKPbc	12 11 32.7	+0.4
	comp=Z,1.3nm,0.9s,baz=105,slow=4.0,SNR=6.8						
OBN	**Obninsk**	**121.48**	**329**	*e*PKIKP	PKPdf	12 01 20.9	-3.6
OBN				*e*		12 02 56.9	
OBN				*e*		12 08 24.5	
OBN				*e*PS	PS	12 12 51.9	+2.6
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BOSA	**Boshof**	**124.74**	**223**	PKP	PKPdf	12 01 29.5	-2.2
	comp=Z,6.6nm,0.7s,baz=276,slow=6.3,SNR=16						
AKASG	**Malin Array Be**	**127.53**	**327**	PKP	PKPdf	12 01 34.2	-2.0
	comp=Z,0.2nm,0.3s,baz=68,slow=1.7,SNR=2.7						
KIS	**Kishinev**	**129.67**	**323**	*e*L		11 58 20.0	
KIS				LRM		12 05 52.0	
	comp=Z,300nm,16.0s						
CLL	**Collm**	**134.80**	**336**	*e*PKSbc		12 05 20.0	
CLL				Lm		12 07 00.0	
	comp=Z,200nm,19.4s						
GERES	**GERESS Array B**	**136.39**	**333**	PKP	PKPdf	12 01 50.6	-2.5
	comp=Z,0.6nm,0.7s,baz=64,slow=3.4,SNR=5.9						
GERES				SKP		12 05 28.8	
	comp=Z,1.5nm,0.8s,baz=31,slow=3.1,SNR=8.0						
ORIF	**Oris-en-Rattie**	**142.77**	**336**	⇑*i*PKP1	PKPdf	12 01 59.6	-5.1
	comp=Z,8.6nm,0.8s						
SBF	**Sospel**	**142.99**	**334**	*e*PKP1	PKPdf	12 01 59.5	-5.7
VIVF	**Saint-Julien-l**	**143.28**	**338**	*e*PKP1	PKPdf	12 02 01.4	-4.3
PGF	**Pioggiola**	**143.32**	**331**	*e*PKP1	PKPdf	12 02 01.0	-4.8
	comp=Z,21nm,0.9s						
CAF	**Calviac**	**144.14**	**340**	*e*PKP1	PKPdf	12 02 04.1	-3.1
	comp=Z,25nm,1.1s						
LASF	**Ste Croix**	**144.25**	**338**	⇑*i*PKP1	PKPdf	12 02 04.6	-2.8
	comp=Z,13nm,0.8s						
LFF	**La Frestale**	**144.55**	**342**	*e*PKP1	PKPdf	12 02 05.3	-2.6
	comp=Z,11nm,0.7s						
MTLF	**Montolieu**	**145.49**	**339**	⇑*i*PKP1	PKPbc	12 02 08.6	-1.0
	comp=Z,13nm,0.8s						
KEST	**Kesra**	**148.06**	**322**	PKPbc	PKPbc	12 02 15.3	-1.9
	comp=Z,3.7nm,1.0s,baz=295,slow=5.1,SNR=9.3						
ESDC	**Sonseca Array**	**150.76**	**344**	PKPbc	PKPbc	12 02 22.4	-1.5
	comp=Z,0.3nm,0.3s,baz=21,slow=2.7,SNR=7.8						
TORD	**Torodi Ar. Bea**	**164.54**	**277**	PKP	PKPdf	12 02 33.3	-2.7
	comp=Z,2.2nm,0.9s,baz=10,slow=0.8,SNR=8.4						

GUC 02 11:43:23.3±0.7, 3276S×7170W, h15km±3km, MD3.6, ML2.4, 7C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.27**	**169**	⇑*i*P	Pg	11 43 29.2	+0.1
IHA				*i* S	Sg	11 43 33.5	+0.6
CHNG	**Los Chungos**	**0.90**	**11**	⇑*i*P	Pb	11 43 39.2	-1.3
CHNG				*i* S	Sb	11 43 51.2	-1.0
PEL	**Peldehue**	**0.94**	**114**	⇑*i*P	Pb	11 43 40.2	-1.0
PEL				*i* S	Sb	11 43 53.3	-0.1
PEL				AML	AML	11 43 55.2	
	comp=E,440nm,0.2s						
RCDM	**Rinconada Maip**	**1.04**	**134**	*i* P	Pb	11 43 41.5	-1.5
RCDM				*i* S	Sb	11 43 55.2	-1.4
RCDM				AML	AML	11 43 55.6	
	comp=E,194nm,0.2s						
TACH	**Talagante**	**1.09**	**144**	⇑*i*P	Pb	11 43 42.3	-1.6
TACH				*i* S	Sb	11 43 56.0	-2.0
ANTU	**Antumapu**	**1.21**	**132**	⇑*i*P	Pn	11 43 44.6	-1.0
ANTU				*i* S	Sb	11 44 00.3	-0.8
ANTU				AML	AML	11 44 05.4	
	comp=E,141nm,0.5s						
FCH	**Farellones**	**1.31**	**116**	⇓*i*P	Pn	11 43 46.4	-0.7
FCH				*i* S	Sb	11 44 04.3	0.0
FCH				AML	AML	11 44 04.9	
	comp=E,120nm,0.2s						
PCH	**Pirque**	**1.31**	**131**	*e*P	Pn	11 43 46.2	-0.9
PCH				*i* S	Sb	11 44 03.9	-0.4
CHCH	**Chadas Angostu**	**1.46**	**143**	⇑*i*P	Pn	11 43 48.8	-0.3
CHCH				*i* S	Sn	11 44 07.4	-0.6
CACH	**El Canelo**	**1.64**	**146**	*e*P	Pn	11 43 52.4	+0.9
CACH				*i* S	Sn	11 44 13.8	+1.5
SFDO	**San Fernando**	**1.93**	**163**	⇑*i*P	Pn	11 43 56.4	+0.8
SFDO				*i* S	Sn	11 44 20.6	+1.0

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*IDC **02** 11:44:57.6±10.0, 264N×9628E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.5/20, mbtmp3.7/5, ML4.0/1, Error ellipse: s-maj=205.5km s-min=109.7km az=148.0*

*ISCJB **02** 11:45:02.2±1.4, 29N±0.1×962E±02, h33km, mb3.9/4, Error ellipse: s-maj=32.2km s-min=9.6km az=146.3*

ISC 02 11:45:04.1±1.4**, 29N**±01×**963E**±02**, h35**km**, n8,** σ1^s**10**/9**, mb3.9**/4**, 1C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**2.05**	**141**	⇓*e*P	**Pn**	**11 45 35.0**	**-1.1**
PSI	**Prapat**	**2.64**	**92**	⇓*e*P	**Pn**	**11 45 43.6**	**-0.6**
BSI	**Banda Aceh**	**2.75**	**339**	⇑*e*P	**Pn**	**11 45 38.0**	**-7.7**
BSI				*e*S	**Sn**	**11 46 15.0**	**-2.8**
CMAR	**Chiang Mai Arr**	**15.67**	**9**	Pn	**Pn**	**11 48 43.3**	**+1.0**
	0.2nm,0.3s,baz=195,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	**45.37**	**347**	P	**P**	**11 53 19.7**	**+0.7**
	1.2nm,0.6s,mb3.9,baz=161,slow=8.2,SNR=16						
SONM	**Songino Array**	**45.59**	**10**	P	**P**	**11 53 21.9**	**+1.2**
	0.6nm,0.6s,mb3.7,baz=195,slow=9.4,SNR=4.2						
KURK	**Kurchatov**	**49.91**	**345**	P	**P**	**11 53 54.7**	**+0.5**
	0.5nm,0.7s,mb3.6,baz=170,slow=7.2,SNR=3.7						
ZALV	**Zalesovo Beam**	**51.74**	**351**	P	**P**	**11 54 08.1**	**+0.3**
	1.4nm,0.4s,mb4.3,baz=170,slow=6.6,SNR=5.5						

IDC 02 11:46:09.5±2.7**, 239N**×**9611E, h0**km**, mb3.8**/5**, mb1 3.9**/6**, mb1mx3.7**/21**, mbtmp3.8**/6**, ML3.8**/1**, Error ellipse: s-maj=114.5km s-min=25.7km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.21**	**10**	Pn	Pn	11 49 59.8	+1.1
	0.1nm,0.3s,baz=196,slow=11,SNR=9.1						
WRA	**Warramunga Arr**	**43.59**	**122**	P	P	11 54 15.7	0.0
	0.3nm,0.5s,baz=303,slow=9.1,SNR=5.3						
MKAR	**Makanchi Array**	**45.83**	**347**	P	P	11 54 33.3	+0.1
	2.3nm,0.7s,baz=164,slow=8.0,SNR=18						
KURK	**Kurchatov**	**50.37**	**346**	P	P	11 55 07.7	-0.6
	0.8nm,0.8s,baz=169,slow=7.2,SNR=4.6						
ZALV	**Zalesovo Beam**	**52.22**	**352**	P	P	11 55 22.1	+0.1
	3.0nm,0.8s,baz=152,slow=6.6,SNR=8.0						
BVAR	**Borovoye Array**	**54.77**	**341**	P	P	11 55 40.3	-0.5
	0.8nm,0.6s,baz=143,slow=13,SNR=4.2						

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*IDC **02** 11:48:45.8±1.1, 1179S×16602E, h0km, mb4.0/8, mb1 4.1/8, mb1mx4.0/13, mbtmp3.9/8, MS4.1/1, Ms1 4.1/1, ms1mx2.9/29, Error ellipse: s-maj=38.8km s-min=26.6km az=125.0*

*NEIC **02** 11:48:51.1±0.6, 1181S×16609E, h35km, mb4.4/2, Error ellipse: s-maj=18.7km s-min=17.2km az=223.0*

*ISCJB **02** 11:48:54.7±4.1, 118S±0.1×1658E±02, h73km±32km, mb4.0/11, Error ellipse: s-maj=30.0km s-min=22.4km az=167.4*

ISC 02 11:48:56.3±3.6**, 118S**±01×**1658E**±02**, h73**km±28km**, n16,** σ0^s**67**/13**, mb4.0**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.24**	**291**	*e*Pn	**Pn**	**11 50 25.8**	**+0.1**
HNR				Sn	**Sn**	**11 51 35.7**	**+0.1**
WRA	**Warramunga Arr**	**31.31**	**251**	P	**P**	**11 55 09.8**	**-0.1**
	1.0nm,0.5s,mb3.8,baz=84,slow=9.3,SNR=12						
ASAR	**Alice Springs**	**32.54**	**244**	P	**P**	**11 55 20.3**	**-0.3**
	1.4nm,0.6s,mb4.0,baz=72,slow=9.2,SNR=19						
ASAR				PcP	PcP	11 58 05.5	-0.3
	0.7nm,0.8s,baz=84,slow=2.8,SNR=4.1						
JOW	**Kunigami**	**52.95**	**317**	LR	LR	12 17 17.4	
	comp=Z,165nm,19.1s,baz=154,slow=32						
MJAR	**Matsushiro Arr**	**54.66**	**333**	P	**P**	**11 58 16.4**	**-1.4**
	0.9nm,0.6s,mb4.0,baz=164,slow=11,SNR=4.0						
SBA	**Scott Base**	**66.06**	**180**	*e*P	**P**	**11 59 35.1**	**+0.1**
	4.4nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**72.48**	**294**	P	**P**	**12 00 17.1**	**+1.4**
	0.4nm,0.5s,mb3.5,baz=122,slow=5.2,SNR=4.2						
ULN	**Ulaanbaatar**	**78.94**	**324**	*e*P	**P**	**12 00 52.5**	**+0.6**
	2.1nm,0.8s,mb4.0						
SONM	**Songino Array**	**79.31**	**324**	P	**P**	**12 00 54.2**	**+0.3**
	0.7nm,0.5s,mb3.8,baz=152,slow=5.5,SNR=5.4						
MAW	**Mawson**	**84.07**	**202**	P	**P**	**12 01 18.3**	**-0.4**
	1.2nm,0.8s,mb3.8,baz=69,slow=8.0,SNR=5.0						
NVAR	**Mina Array Bea**	**86.44**	**50**	P	**P**	**12 01 31.5**	**+0.5**
	0.3nm,0.7s,mb3.3,baz=234,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**94.11**	**317**	P	**P**	**12 02 07.0**	**+0.2**
	4.4nm,0.7s,mb4.9,baz=97,slow=6.4,SNR=29						
ZALV	**Zalesovo Beam**	**94.20**	**324**	P	**P**	**12 02 05.9**	**-1.1**
	1.1nm,0.6s,mb4.4,baz=107,slow=5.1,SNR=5.1						
ARCES	**ARCESS Array B**	**117.07**	**345**	PKP	PKPdf	12 07 31.1	-1.2
	1.3nm,0.9s,baz=81,slow=3.8,SNR=4.3						
BOSA	**Boshof**	**124.63**	**223**	PKP	PKPdf	12 07 47.8	-0.4
	3.1nm,1.0s,baz=189,slow=7.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**164.45**	**277**	PKP	PKPdf	12 08 52.0	-0.6
	0.6nm,0.9s,baz=351,slow=1.9,SNR=2.9						

IDC 02 11:59:37.1±7.6**, 1218S**×**16660E, h0**km**, mb4.1**/4**, mb1 4.1**/4**, mb1mx3.7**/14**, mbtmp4.0**/4**, Error ellipse: s-maj=238.7km s-min=41.5km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.90**	**252**	P	P	12 06 04.3	-0.1
	0.5nm,0.7s,baz=84,slow=8.7,SNR=7.1						
ASAR	**Alice Springs**	**33.05**	**245**	P	P	12 06 14.7	+0.2
	0.7nm,0.8s,baz=70,slow=9.6,SNR=12						
MKAR	**Makanchi Array**	**94.92**	**317**	P	P	12 13 01.4	+0.1
	1.4nm,0.7s,baz=101,slow=6.3,SNR=8.8						
ZALV	**Zalesovo Beam**	**94.96**	**324**	P	P	12 13 01.1	-0.2
	0.7nm,0.5s,baz=103,slow=3.1,SNR=2.5						

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*JMA **02** 12:09:12.5±0.2, 2495N×12230E, h34km*

TAP 02 12:09:13.2, 2483N×**12223E, h12**km**, ML2.9, 1C-1D, C, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EGS		**0.27**	**273**	⇑*i*P	Pg	12 09 19.8	+1.0
	baz=263						
EGS				S	Sg	12 09 24.5	+1.9
	baz=263						
TWB1	**Santiao Chiao**	**0.28**	**309**	⇓*i*P	Pg	12 09 20.0	+1.0
	baz=299						
TWB1				*i* S	Sg	12 09 24.3	+1.4
	baz=299						
TWC	**Suao**	**0.41**	**238**	P	Pg	12 09 21.4	0.0
	baz=242						
TWC				S	Sg	12 09 27.9	+1.0
	baz=242						
ILA	**Ilan**	**0.44**	**262**	*e*P	Pg	12 09 23.3	+1.4
	baz=261						
ILA				*e*S	Sg	12 09 29.8	+1.9
	baz=261						
NWF	**Wu-fen Shan**	**0.47**	**301**	*e*P	Pg	12 09 24.1	+1.6
	baz=310						
NWF				S	Sg	12 09 31.1	+2.3
	baz=310						
TWE	**Neicheng**	**0.52**	**258**	P	Pg	12 09 23.8	+0.3
	baz=258						
TWE				*e*S	Sg	12 09 32.2	+1.8
	baz=258						
ENA	**Nanau**	**0.60**	**228**	*e*P	Pg	12 09 24.8	0.0
	baz=221						
ENA				*e*S	Sg	12 09 33.6	+0.8
	baz=221						
TWA	**Mucha**	**0.60**	**284**	*e*P	Pg	12 09 26.0	+1.0
	baz=284						
TWA				*e*S	Sg	12 09 35.5	+2.5
	baz=284						
ENTT	**Nioudou**	**0.63**	**253**	*e*P	Pg	12 09 26.2	+0.7
	baz=253						
ENTT				*e*S	Sg	12 09 35.4	+1.6
	baz=253						
TWY	**Chenhua**	**0.72**	**308**	P	Pg	12 09 28.7	+1.4
	baz=307						
TWY				S	Sg	12 09 39.6	+2.8
	baz=307						
TWS1	**Kuangyinshan**	**0.78**	**290**	*e*P	Pg	12 09 29.0	+0.6
	baz=289						
TWS1				*e*S	Sg	12 09 41.3	+2.6
	baz=289						
YOJ	**Yonaguni jima**	**0.80**	**117**	P	Pg	12 09 27.5	-1.2
YOJ				S	Sg	12 09 38.1	-1.1
NSK	**Sanguang**	**0.81**	**259**	P	Pg	12 09 29.1	+0.3
	baz=268						
NSK				*e*S	Sg	12 09 40.9	+1.5
	baz=268						
PCYT	**Pengchaiyu**	**0.81**	**350**	P	Pg	12 09 29.3	+0.4
	baz=349						
PCYT				S	Sg	12 09 41.4	+2.0
	baz=349						
NNS	**Nan Shan**	**0.87**	**244**	*e*P	Pg	12 09 30.3	+0.3
	baz=236						
NNS				*e*S	Sg	12 09 42.3	+0.9
	baz=236						
TWD	**Chiawan**	**0.94**	**218**	*e*P	Pg	12 09 30.8	-0.6
	baz=227						
TWD				*e*S	Sg	12 09 43.7	0.0
	baz=227						
WHF	**Hehuan Shan**	**1.11**	**232**	P	Pb	12 09 34.5	+0.1
	baz=233						
WHF				*e*S	Sb	12 09 49.0	+0.3
	baz=233						
TWT	**Tachien**	**1.12**	**239**	*e*P	Pb	12 09 35.8	+1.4
	baz=240						
TWT				*e*S	Sb	12 09 50.0	+1.1
	baz=240						
NSTT	**Nanjuang**	**1.13**	**260**	*e*P	Pb	12 09 34.8	+0.1
	baz=245						
NSTT				*e*S	Sb	12 09 50.7	+1.3
	baz=245						
ESL	**Shilin**	**1.25**	**216**	*e*P	Pn	12 09 35.6	-0.8
	baz=224						
ESL				*e*S	Sb	12 09 52.3	-0.3
	baz=224						
TWQ1	**Liyutan**	**1.41**	**250**	*e*P	Pn	12 09 39.4	+0.7
	baz=249						
TWQ1				*e*S	Sn	12 10 00.3	+3.2
	baz=249						
IRIF	**Iriomote-Funau**	**1.45**	**110**	P	Pn	12 09 36.7	-2.5
IRIF				S	Sn	12 09 55.4	-2.8
SMLT	**Sun Moon Lake**	**1.54**	**232**	*e*P	Pn	12 09 41.1	+0.7
	baz=233						
SMLT				*e*S	Sn	12 10 01.9	+1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=233						
TYC	Yuchr	1.56	234	eP	Pn	12 09 42.6	+2.0
	baz=235						
TYC				eS	Sn	12 10 01.7	+1.0
	baz=235						
HATJ	Hateruma jima	1.63	118	P	Pn	12 09 39.8	-1.9
TWF1	Yuli	1.70	210	eP	Pn	12 09 42.9	+0.3
	baz=215						
TWF1				eS	Sn	12 10 03.4	-0.9
	baz=215						
JKRS	Kuro-shima	1.73	110	P	Pn	12 09 41.1	-1.9
YUS	Yu-Shan	1.77	221	eP	Pn	12 09 46.0	+2.3
	baz=225						
JIJ	Ishigaki jima	1.80	105	P	Pn	12 09 41.8	-2.3
JIJ				S	Sn	12 10 04.4	-2.4
ALS	Alishan	1.85	225	eP	Pn	12 09 47.1	+2.4
	baz=227						
ALS				eS	Sn	12 10 12.3	+4.3
	baz=227						
CHN5	Tsauling	1.88	229	eP	Pn	12 09 46.7	+1.7
	baz=220						
CHN5				eS	Sn	12 10 14.2	+5.6
	baz=220						
STYT	Tauyuan	2.14	219	eP	Pn	12 09 51.0	+2.4
	baz=208						
STYT				eS	Sn	12 10 17.8	+2.7
	baz=208						
WTP	Ta-pu	2.16	223	eP	Pn	12 09 51.6	+2.6
	baz=212						
WTP				eS	Sn	12 10 21.1	+5.5
	baz=212						
TWK	Hsinying	2.23	226	eP	Pn	12 09 52.8	+2.9
	baz=213						
TWK				eS	Sn	12 10 21.4	+4.1
	baz=213						
CHN1	Nanshi	2.26	224	eP	Pn	12 09 53.0	+2.7
	baz=212						
CHN1				eS	Sn	12 10 22.5	+4.4
	baz=212						

*IDC **02** 12:13:04.7±2.1, 11.62S×165.48E, h0^{km}, mb4.0/6, mb1 4.2/6, mb1mx3.9/15, mbtmp4.0/6, MS3.9/1, Ms1 3.9/1, ms1mx2.8/25, Error ellipse: s-maj=119.8km s-min=25.6km az=147.0*
*ISCJB **02** 12:13:07.8±1.8, 11.8S±.06×165.5E±.04, h33^{km}, mb4.0/7, Error ellipse: s-maj=96.8km s-min=19.1km az=146.7*
*NEIC **02** 12:13:09.9±1.6, 11.68S×165.47E, h35^{km}, mb4.5/1, Error ellipse: s-maj=89.7km s-min=17.9km az=147.0*
ISC 02 12:13:09.9±1.7**, 11.7S**±.05×**165.5E**±.04**, h35^{km}, n9, σ0^{s}73**/7**, mb4.0**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.01	251	P	P	12 19 24.0	-0.4
	2.8nm,1.0s,mb4.1,baz=78,slow=9.2,SNR=10						
ASAR	Alice Springs	32.27	244	P	P	12 19 35.8	+0.4
	1.0nm,0.9s,mb3.7,baz=69,slow=10,SNR=7.3						
RPZ	Rata Peaks	32.32	172	LR	LR	12 29 58.5	
	comp=Z,180nm,18.6s,baz=176,slow=31						
FITZ	Fitzroy Crossi	38.95	256	P	P	12 20 32.8	-0.1
	3.0nm,0.9s,mb4.0,baz=101,slow=11,SNR=5.3						
EGAK	Eagle	86.04	20	eP	P	12 25 47.2	+0.8
	2.6nm,0.8s,mb4.5						
NVAR	Mina Array Bea	86.63	50	P	P	12 25 50.4	+0.5
	0.3nm,0.6s,mb3.7,baz=238,slow=5.2,SNR=3.4						
MKAR	Makanchi Array	93.76	317	P	P	12 26 23.5	+0.3
	1.2nm,0.9s,mb4.3,baz=98,slow=5.3,SNR=7.1						
YKA	Yellowknife Ar	95.64	27	P	P	12 26 29.8	-1.6
	0.3nm,0.7s,mb3.8,baz=255,slow=4.4,SNR=2.8						
ESDC	Sonseca Array	150.55	343	PKPbc	PKPbc	12 33 00.4	+2.1
	0.3nm,0.6s,baz=43,slow=2.8,SNR=4.0						

*ISCJB **02** 12:17:58.1±1.1, 35.28N±.004×141.32E±.009, h34^{km}±11^{km}, mb3.5/4, Error ellipse: s-maj=12.8km s-min=6.6km az=1.7*
*JMA **02** 12:17:59.0±0.1, 35.28N×141.22E, h39^{km}±2^{km}, M3.1*
*IDC **02** 12:18:01.4±2.9, 35.38N×141.35E, h45^{km}±25^{km}, mb3.3/4, mb1 3.5/7, mb1mx3.3/21, mbtmp3.4/7, ML3.5/2, Error ellipse: s-maj=47.4km s-min=20.2km az=80.0*
ISC 02 12:17:58.8±1.2**, 35.28N**±.004×**141.27E**±.008**, h21^{km}**±8^{km}**, n18, σ0^{s}97**/24**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.54	322	P	Pb	12 18 09.8	+0.3
CHOJ				eS	Sb	12 18 17.7	+0.9
BSO1	Boso 1	0.67	201	P	Pb	12 18 11.7	-0.1
BSO1				eS	Sb	12 18 20.9	+0.3
BSO2	Boso 2	0.68	219	eS	Sb	12 18 21.3	+0.5
BSO3	Boso 3	0.79	233	P	Pb	12 18 13.3	-0.4
BSO3				eS	Sb	12 18 25.0	+1.1
KTR	Katsuura	0.79	261	P	Pb	12 18 13.2	-0.6
KTR				eS	Sb	12 18 22.9	-1.2
BSO4	Boso 4	0.82	249	P	Pb	12 18 14.0	-0.3
BSO4				eS	Sb	12 18 24.7	-0.1
JCN	Nagara	0.88	279	P	Pb	12 18 15.5	+0.1
JYT	Yasato	1.29	318	P	Pn	12 18 20.5	-1.0
JIM2	Oshima 3	1.61	250	P	Pn	12 18 23.7	-2.2
JOD2	Odawara 2	1.78	270	P	Pn	12 18 26.9	-1.4
JHJ	Hachijo jima 2	2.48	210	P	Pn	12 18 41.1	+3.2
	18nm,0.3s,baz=73,slow=19,SNR=5.3						
MJAR	Matsushiro Arr	2.78	298	P	Pn	12 18 42.9	+0.8
	2.8nm,0.3s,baz=114,slow=8.4,SNR=31						
MAT	Matsushiro	2.79	298	P	Pn	12 18 44.6	+2.5
MAT				S	Sn	12 19 15.8	+0.8
ASAJ	Asahikawa	8.88	6	P	Pn	12 20 05.2	-0.6
	0.8nm,0.3s,baz=164,slow=4.8,SNR=8.1						
ZALV	Zalesovo Beam	43.02	314	P	P	12 25 56.1	-0.4
	0.6nm,0.4s,mb3.6,baz=98,slow=8.9,SNR=3.1						
MKAR	Makanchi Array	44.97	304	P	P	12 26 12.2	0.0
	0.2nm,0.5s,mb3.2,baz=90,slow=7.9,SNR=3.1						
WRA	Warramunga Arr	55.31	188	P	P	12 27 30.3	-0.4
	0.4nm,0.4s,mb3.8,baz=1.9,slow=7.4,SNR=15						
ASAR	Alice Springs	59.04	188	P	P	12 27 58.0	+1.0
	0.3nm,0.7s,mb3.5,baz=18,slow=10,SNR=5.9						

*ISCJB **02** 12:25:50.4±0.3, 23.99N±.002×121.79E±.002, h27^{km}±2^{km}, Error ellipse: s-maj=3.5km s-min=2.0km az=42.5*
*JMA **02** 12:25:50.5±0.4, 24.15N×121.72E, h58^{km}, M2.5*
*TAP **02** 12:25:50.8, 24.03N×121.72E, h38^{km}, ML3.3, C*
ISC 02 12:25:50.6±0.3**, 23.99N**±.002×**121.78E**±.002**, h25^{km}**±3^{km}**, n56, σ0^{s}73**/101**, 4C-6D, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWD	Chiawan	0.19	297	⇓iP	Pb	12 25 57.3	+1.2
	baz=294						
TWD				eS	Sb	12 26 01.7	+1.9
	baz=294						
ESL	Shilin	0.36	241	⇑iP	Pb	12 25 59.1	+0.6
	baz=240						
ESL				eS	Sb	12 26 05.1	+1.1
	baz=240						
ENA	Nanau	0.43	355	eP	Pb	12 26 00.0	+0.3
	baz=3.0						
ENA				S	Sb	12 26 06.8	+0.8
	baz=3.0						
WHF	Hehuan Shan	0.49	288	⇓iP	Pb	12 26 00.8	+0.1
	baz=282						
WHF				i S	Sb	12 26 07.9	+0.3
	baz=282						
NNS	Nan Shan	0.58	320	⇓iP	Pb	12 26 01.9	-0.2
	baz=322						
NNS				S	Sb	12 26 09.7	-0.3
	baz=322						
TWT	Tachien	0.61	295	⇓iP	Pb	12 26 02.8	+0.2
	baz=286						
TWT				S	Sb	12 26 10.8	-0.1
	baz=286						
TWC	Suao	0.62	6	⇓iP	Pb	12 26 03.2	+0.4
	baz=9.0						
TWC				S	Sb	12 26 12.1	+1.0
	baz=9.0						
EHY	Hungye	0.64	221	⇑P	Pb	12 26 02.5	-0.6
	baz=225						
EHY				eS	Sb	12 26 11.4	-0.3
	baz=225						
ENTT	Nioudou	0.67	343	P	Pb	12 26 03.4	-0.3
	baz=348						
ENTT				eS	Sb	12 26 12.6	-0.1
	baz=348						
TWE	Neicheng	0.73	352	eP	Pb	12 26 04.5	-0.2
	baz=347						
TWE				eS	Sb	12 26 14.3	-0.1
	baz=347						
ILA	Ilan	0.77	358	eP	Pb	12 26 02.6	-2.7
	baz=355						
TWF1	Yuli	0.78	215	⇑iP	Pb	12 26 04.5	-0.9
	baz=218						
TWF1				eS	Sb	12 26 15.1	-0.5
	baz=218						
NSK	Sanguang	0.78	331	⇓iP	Pb	12 26 05.0	-0.6
	baz=323						
SMLT	Sun Moon Lake	0.81	262	eP	Pb	12 26 05.9	-0.2
	baz=255						
SMLT				S	Sb	12 26 16.3	-0.3
	baz=255						
TYC	Yuchr	0.85	264	P	Pb	12 26 06.2	-0.5
	baz=257						
TYC				S	Sb	12 26 16.8	-0.9
	baz=257						
EGS		0.86	9	eP	Pb	12 26 07.1	+0.2
	baz=14						
EGS				eS	Sb	12 26 18.7	+0.7
	baz=14						
YUS	Yu-Shan	0.91	237	⇑iP	Pb	12 26 07.8	+0.1
	baz=224						
YUS				S	Sb	12 26 19.5	+0.1
	baz=224						
NSTT	Nanjuang	0.95	312	P	Pn	12 26 08.2	-0.2
	baz=316						
NSTT				S	Sb	12 26 19.4	-1.2
	baz=316						
CHKT	Chengkung	0.97	203	eP	Pn	12 26 08.4	-0.2
	baz=187						
CHKT				eS	Sb	12 26 19.3	-1.8
	baz=187						
TWQ1	Liyutan	0.98	291	eP	Pn	12 26 08.2	-0.6
	baz=291						
TWQ1				eS	Sb	12 26 21.1	-0.5
	baz=291						
TWA	Mucha	1.00	350	eP	Pn	12 26 08.7	-0.3
	baz=342						
TWA				S	Sb	12 26 21.4	-0.6
	baz=342						
WNT	Mingjian	1.01	264	eP	Pn	12 26 08.7	-0.5
	baz=261						
WNT				eS	Sb	12 26 22.5	+0.3
	baz=261						
ALS	Alishan	1.01	242	eP	Pn	12 26 09.2	-0.1
	baz=231						
ALS				eS	Sb	12 26 22.1	-0.3
	baz=231						
NSY	Sanyi	1.02	295	eP	Pn	12 26 08.0	-1.3
	baz=294						
NSY				eS	Sb	12 26 22.4	-0.2
	baz=294						
TCU	Taichung	1.02	279	eP	Pn	12 26 09.2	-0.2
	baz=277						
TCU				eS	Sb	12 26 22.9	+0.4
	baz=277						
TWB1	Santiao Chiao	1.03	11	i P	Pn	12 26 09.5	+0.1
	baz=31						
TWB1				S	Sb	12 26 23.2	+0.3
	baz=31						
ELDTW	Lidau	1.06	221	eP	Pn	12 26 09.2	-0.7
	baz=217						
ELDTW				eS	Sb	12 26 23.0	-0.8
	baz=217						
NWF	Wu-fen Shan	1.07	0	eP	Pn	12 26 10.5	+0.4
	baz=348						
NWF				eS	Sb	12 26 24.0	-0.1
	baz=348						
CHN5	Tsauling	1.08	249	eP	Pn	12 26 10.3	+0.1
	baz=235						
CHN5				eS	Sb	12 26 24.6	+0.3
	baz=235						
NCU	National Centr	1.11	331	eP	Pn	12 26 09.4	-1.2
	baz=334						
TWS1	Kuangyinshan	1.15	343	eP	Pn	12 26 10.8	-0.3
	baz=347						
TWS1				eS	Sn	12 26 25.2	-0.9
	baz=347						
WGK	Gukeng	1.16	255	eP	Pn	12 26 10.9	-0.3
	baz=240						
WGK				eS	Sn	12 26 26.9	+0.7
	baz=240						
YOJ	Yonaguni jima	1.22	67	P	Pn	12 26 11.6	-0.4
YOJ				S	Sn	12 26 27.7	0.0
STYT	Tauyuan	1.25	229	eP	Pn	12 26 12.7	+0.2
	baz=226						
STYT				eS	Sn	12 26 28.6	0.0
	baz=226						
TWY	Chenhua	1.29	353	eP	Pn	12 26 13.9	+0.9
	baz=344						
WTP	Ta-pu	1.30	235	eP	Pn	12 26 13.5	+0.3
	baz=227						
WTP				eS	Sn	12 26 30.6	+0.8
	baz=227						
TWG	Pinlang	1.34	209	eP	Pn	12 26 11.9	-1.8
	baz=194						
TWG				eS	Sn	12 26 29.9	-0.8
	baz=194						
CHY	Chiayi	1.34	249	eP	Pn	12 26 13.5	-0.1
	baz=246						
CHY				eS	Sn	12 26 30.7	+0.1
	baz=246						
WTCT	Ta-ch'eng	1.38	265	eP	Pn	12 26 14.6	+0.3
	baz=262						
TWK	Hsinying	1.39	239	eP	Pn	12 26 14.7	+0.3
	baz=236						
TWK				eS	Sn	12 26 32.3	+0.4
	baz=236						
CHN1	Nanshi	1.40	235	eP	Pn	12 26 14.8	+0.2
	baz=233						
CHN1				eS	Sn	12 26 33.0	+0.7
	baz=233						
SGST	Jiashian	1.43	231	eP	Pn	12 26 15.5	+0.6
	baz=228						
SGST				eS	Sn	12 26 34.5	+1.7
	baz=228						
WSF	Szhu	1.47	256	eP	Pn	12 26 16.0	+0.5
	baz=266						
WSF				eS	Sn	12 26 35.7	+1.8
	baz=266						
CHN8	Yiju	1.58	246	eP	Pn	12 26 17.1	+0.1
	baz=242						
ECL	Taimali	1.58	209	eP	Pn	12 26 16.6	-0.5
	baz=196						
SSD	Sandimen	1.63	221	eP	Pn	12 26 18.5	+0.8
	baz=219						
SSD				eS	Sn	12 26 38.3	+0.4
	baz=219						
TWM1	Shoushan	1.71	227	eP	Pn	12 26 19.3	+0.5
	baz=209						
IRIF	Iriomote-Funau	1.81	79	S	Sn	12 26 42.4	0.0
EAST	Anshuo	1.82	208	eP	Pn	12 26 20.8	+0.5
	baz=197						
EAST				eS	Sn	12 26 42.8	+0.3
	baz=197						
HATJ	Hateruma jima	1.85	88	P	Pn	12 26 21.2	+0.4
HATJ				S	Sn	12 26 44.0	+0.6
SCZT	Fangliau	1.94	214	eP	Pn	12 26 22.6	+0.7
	baz=202						
SCZT				eS	Sn	12 26 46.6	+1.2
	baz=202						
LAY	Lan-yu	1.96	186	eP	Pn	12 26 20.2	-2.0
	baz=185						
JKRS	Kuro-shima	2.05	83	P	Pn	12 26 24.6	+1.1
JKRS				S	Sn	12 26 48.7	+0.4
PNG	Penghu	2.08	259	eP	Pn	12 26 22.4	-1.5
	baz=255						
JIJ	Ishigaki jima	2.19	80	P	Pn	12 26 25.5	+0.1
JIJ				S	Sn	12 26 50.8	-0.9
JTJ	Tarama	2.74	76	P	Pn	12 26 33.7	+0.7
JTJ				S	Sn	12 27 05.2	-0.2

*ISCJB **02** 12:32:24.3±1.6, 11.48S±.005×165.66E±.004, h1^{km}±9^{km}, mb4.8/55, MS4.6/33, Error ellipse: s-maj=8.7km s-min=6.9km az=154.5*
*IDC **02** 12:32:25.7±0.5, 11.53S×165.68E, h0^{km}, mb4.6/18, mb1 4.7/18, mb1mx4.7/18, mbtmp4.6/18, MS4.5/21, Ms1 4.5/21, ms1mx4.4/29, Error ellipse: s-maj=19.0km s-min=14.6km az=91.0*
*MOS **02** 12:32:29.4±1.3, 11.36S×165.58E, h33^{km}, mb5.1/19, Error ellipse: s-maj=10.2km s-min=9.0km az=147.6*
*NEIC **02** 12:32:31.0±0.2, 11.40S×165.63E, h35^{km}, mb4.9/21, MS4.9/1, Error ellipse: s-maj=8.2km s-min=4.7km az=142.0*
*GCMT **02** 12:32:31.0±0.2, 11.43S×165.41E, h12^{km}, MW5.2/77, Moment Tensor Solution. s58,c82; s77,c137; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.61±.01; $M_{\theta\theta}$0.07±.01; $M_{\phi\phi}$-0.67±.01; $M_{r\theta}$0.28±.04; $M_{\theta\phi}$0.14±.01; $M_{\phi r}$-0.38±.04; Best double couple: $M_0$0.80700×10^{17} NP1:ϕ_s6.00000°, δ31.00000°, λ118.00000°. NP2: ϕ_s154.00000°, δ63.00000°, λ74.00000°. Principal axes: T 0.7850, Plg68.0000°, Azm33.0000°; N 0.0440, Plg14.0000°, Azm161.0000°; P -0.8290, Plg17.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **02** 12:32:35.2, 10.68S×165.16E, h35^{km}, mB5.2, mb4.8, Ms5.0, Msz4.7*
*DJA **02** 12:32:42, 12.01S×165.64E, h122^{km}, mb5.0/17*
ISC 02 12:32:27.8±1.8**, 11.49S**±.005×**165.70E**±.004**, h13^{km}**±11^{km}**, h35^{km}**±.6^{km}**:pP-P, n190, σ1^{s}02**/131**, mb4.8**/55**, MS4.6**/33**, 3C-6D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.02	289	eP	Pn	12 33 55.8	-0.8
HNR				pmax	pmax		
	comp=Z,607nm,1.0s						
HNR	Honiara	6.02	289	ePn	Pn	12 33 55.8	-0.8
	comp=Z,607nm,1.0s						
PMG	Port Moresby	18.35	275	eP	Pn	12 36 43.4	+1.1
CTA	Charters Tower	20.56	243	⇓iP	P	12 37 07.1	+0.7
	comp=Z,27nm,0.8s						
CTA	Charters Tower	20.56	243	P	P	12 37 06.5	+0.1
	comp=Z,28nm,0.7s,baz=73,slow=12,SNR=21						
CTA				LR	LR	12 43 50.8	
	comp=Z,2μm,18.1s,MS4.6,baz=67,slow=33						
CTA	Charters Tower	20.56	243	⇓iP	P	12 37 07.1	+0.7
CTA				pmax	pmax		
	comp=Z,27nm,0.8s						
CTAO	Charters Tower	20.56	243	eP	P	12 37 07.0	+0.6
COEN	Coen	22.11	261	eP	P	12 37 23.5	+0.4
	comp=Z,36nm,1.5s,mb4.6						
ARMA	Armidale	22.93	213	eP	P	12 37 31.8	+0.1
RIV	Riverview	25.91	209	eP	P	12 38 02.3	+2.6
CNB	Canberra Magne	27.98	209	eP	P	12 38 19.8	+1.5
URZ	Urewera	28.55	161	P	P	12 38 24.0	+0.7
	comp=Z,6.5nm,0.6s,mb4.5,baz=173,slow=20,SNR=7.5						
STKA	Stephens Creek	30.09	224	eP	P	12 38 37.3	+0.2
	comp=Z,7.6nm,0.7s,mb4.5						
STKA	Stephens Creek	30.09	224	P	P	12 38 36.3	-0.9
	comp=Z,7.9nm,0.7s,mb4.6,baz=40,slow=9.4,SNR=22						
STKA				LR	LR	12 49 32.4	
	comp=Z,2μm,18.8s,MS4.7,baz=50,slow=34						
WRAB	Tennant Creek	31.28	251	eP	P	12 38 46.3	-1.5
WB2	Warramunga Arr	31.28	250	⇓iP	P	12 38 46.7	-1.1
WRA	Warramunga Arr	31.29	250	P	P	12 38 46.8	-1.1
	comp=Z,9.2nm,0.8s,mb4.7,baz=78,slow=9.5,SNR=57						
WRA				LR	LR	12 50 10.1	
	comp=Z,1μm,18.7s,MS4.5,baz=70,slow=34						
WRA	Warramunga Arr	31.29	250	i P	P	12 38 46.7	-1.2
WRA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TOO	Toolangi	31.68	212	eP	P	12 38 51.0	0.0
GUMO	Guam	32.37	320	LR	LR	12 51 39.9	
	comp=Z,846nm,18.1s,MS4.5,baz=135,slow=36						
RPZ	Rata Peaks	32.44	173	P	P	12 38 55.6	-2.1
	comp=Z,17nm,0.8s,mb4.9,baz=17,slow=17,SNR=2.3						
KAKA	Kakadu	32.53	264	eP	P	12 38 57.4	-1.5
	comp=Z,13nm,0.6s,mb5.0						
ASAR	Alice Springs	32.56	244	P	P	12 38 57.4	-1.6
	comp=Z,5.5nm,0.9s,mb4.5,baz=63,slow=9.8,SNR=47						
ASAR				PcP	PcP	12 41 46.0	+0.4
	comp=Z,2.2nm,0.7s,baz=74,slow=2.2,SNR=7.5						
ASAR				ScP	ScP	12 45 31.8	+2.3
	comp=Z,1.1nm,0.9s,baz=94,slow=2.8,SNR=5.2						
ASAR	Alice Springs	32.56	244	P	P	12 38 57.4	-1.6
ASAR						12 41 46.0	
RAR	Rarotonga	34.44	111	LR	LR	12 50 55.2	
	comp=Z,387nm,19.9s,MS4.1,baz=272,slow=32						
FITZ	Fitzroy Crossi	39.23	255	⇓iP	P	12 39 55.1	-1.1
	comp=Z,23nm,0.7s,mb5.0						
FITZ	Fitzroy Crossi	39.23	255	LR	LR	12 55 03.0	
	comp=Z,1μm,18.5s,MS4.8,baz=88,slow=35						
FORT	Forrest	39.76	235	eP	P	12 40 00.0	-0.5
	comp=Z,21nm,0.8s,mb4.9						
BATI	Baumata	41.28	268	LR	LR	12 57 03.7	
	comp=Z,1μm,20.8s,MS4.8,baz=119,slow=36						
PPT	Papeete	43.63	103	eS	S	12 47 01.5	-0.6
	comp=Z,592nm,24.2s						
PPT				eLQ		12 50 59.6	
	comp=Z,2μm,26.8s						
PPT				eLR	LR	12 52 48.7	
	comp=Z,2μm,30.0s,baz=276						
PPT	Papeete	43.63	103	LR	LR	12 53 44.7	
	comp=Z,730nm,20.0s,MS4.6,baz=282,slow=29						
DAV	Davao City (W)	43.97	293	LR	LR	12 59 26.6	
	comp=Z,452nm,18.3s,MS4.4,baz=119,slow=37						
CBIJ	Chichi jima	44.63	330	LR	LR	12 56 25.2	
	comp=Z,380nm,19.0s,MS4.3,baz=136,slow=32						
MBWA	Marble Bar	45.02	252	eP	P	12 40 42.8	-0.6
	comp=Z,20nm,1.0s,mb4.9						
KLBR	Kellerberrin	48.44	238	eP	P	12 41 09.3	-0.8
	comp=Z,13nm,0.8s,mb5.0						
NWAO	Narrogin (SRO)	49.18	236	LR	LR	13 01 47.3	
	comp=Z,2μm,19.0s,MS5.2,baz=76,slow=36						
MUN	Mundaring	49.81	238	eP	P	12 41 20.9	+0.3
JOW	Kunigami	52.65	317	P	P	12 41 42.1	+0.2
	comp=Z,12nm,0.9s,mb4.8,baz=163,slow=9.3,SNR=10						
MJAR	Matsushiro Arr	54.34	333	P	P	12 41 53.1	-1.1
	comp=Z,2.4nm,0.7s,mb4.2,baz=168,slow=9.2,SNR=10						
MAT	Matsushiro	54.34	333	P	P	12 41 54.7	+0.5
MAT				S	S	12 49 34.0	+2.0
RKT	Rikitea	57.48	110	eLQ		12 56 43.9	
	comp=Z,580nm,35.8s						
RKT				eLR	LR	12 59 10.8	
	comp=Z,1μm,30.8s,baz=278						
ASAJ	Asahikawa	59.19	341	P	P	12 42 28.8	+0.3
	comp=Z,17nm,0.9s,mb5.1,baz=230,slow=8.1,SNR=4.3						
KSRS	Korea Array	60.22	326	P	P	12 42 36.1	+0.4
	comp=Z,2.5nm,0.8s,mb4.3,baz=137,slow=7.7,SNR=7.9						
KSRS				LR	LR	13 05 35.5	
	comp=Z,242nm,18.1s,MS4.4,baz=135,slow=33						
YSS	Yuzh-Sakhalins	61.69	342	eP	P	12 42 44.6	-0.9
YSS				eS	S	12 51 08.0	+0.2
YSS				ePS		12 51 24.0	
NJ2	Nanjing	62.30	316	eP	P	12 42 51.6	+1.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.1						
QIZ	Qiongzhong	62.85	298	P	P	12 42 53.1	-0.8
QIZ				AP	pP	12 43 02.7	+4.7
QIZ				XP	sP	12 43 06.8	+7.3
QIZ				S	S	12 51 21.6	-1.9
QIZ				XS	sS	12 51 35.9	+5.7
QIZ				AMB	AMB		
	comp=Z,154nm,10.6s						
QIZ				LR	LR		
	comp=E,318nm,23.2s						
WHN	Wuhan	64.65	312	P	P	12 43 05.2	-0.4
WHN				S	S	12 51 45.0	-0.5
WHN				LR	LR		
	comp=E,259nm,8.0s						
PETK	Petropavlovsk-	64.70	355	P	P	12 43 05.0	-0.4
	comp=E,3.7nm,0.9s,mb4.4,baz=142,slow=7.5,SNR=7.1						
PETK				LR	LR	13 05 19.4	
	comp=E,299nm,21.4s,MS4.5,baz=58,slow=30						
PETK	Petropavlovsk-	64.70	355	P	P	12 43 05.0	-0.4
PETK				LR	LR	13 05 19.4	
MDJ	Mudanjiang	64.72	332	P	P	12 43 06.6	+0.9
MDJ				AP	pP	12 43 16.3	+6.5
MDJ				XP	sP	12 43 19.2	+7.9
MDJ				PP	PP	12 45 28.9	+0.6
MDJ				S	S	12 51 46.1	+0.3
MDJ				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,132nm,3.7s						
MDJ				LR	LR		
	comp=N,352nm,13.2s,MS4.9						
MDJ				LR	LR		
	comp=E,413nm,13.2s,MS4.9						
MDJ				LR	LR		
	comp=Z,497nm,13.2s,MS4.9						
CASY	Casey	65.95	201	eP	P	12 43 13.4	0.0
CN2	Changchun	66.10	329	eP	P	12 43 15.0	+0.4
CN2				eAP	pP	12 43 25.3	+6.6

CN2 eXP sP 12 43 29.2 +9.0
CN2 eS S 12 52 00.1 -2.6
CN2 AMB AMB
comp=Z,20nm,0.8s,mb5.2
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,450nm,17.0s,MS4.8
CN2 LR LR
comp=E,360nm,17.0s,MS4.8
CN2 LR LR
comp=Z,390nm,15.0s,MS4.7
SBA Scott Base 66.36 180 eP **P 12 43 17.9 +2.0**
SBA pmax pmax
comp=Z,13nm,1.1s,mb4.9
SBA Scott Base 66.36 180 eP **P 12 43 17.9 +2.0**
comp=Z,13nm,1.1s,mb4.9
KLR Kul'dur 67.44 337 eP **P 12 43 19.3 -3.8**
GYA Guiyang 68.63 304 P **P 12 43 31.8 +0.7**
GYA AP pP 12 43 43.7 +8.5
GYA XP sP 12 43 48.2 +11
GYA PCP PcP 12 43 57.6 +1.6
GYA PP PP 12 46 06.5 +3.7
GYA SCP 12 47 56.2
GYA S S 12 52 30.6 -3.3
GYA XS sS 12 52 48.9 +8.2
GYA SKS 12 53 24.4
GYA AMB AMB
comp=Z,20nm,0.9s,mb5.0
GYA AMB AMB
comp=Z,120nm,5.2s
GYA LR LR
comp=N,480nm,19.9s,MS4.9
GYA LR LR
comp=E,460nm,18.7s,MS4.9
GYA LR LR
comp=Z,490nm,19.6s,MS4.8
BJT Baijiatuau 68.79 321 P **P 12 43 32.1 +0.3**
BJI Beijing 68.80 321 P **P 12 43 32.4 +0.6**
BJI PP PP 12 46 04.5 +0.5
BJI S S 12 52 30.7 -4.6
BJI AMB AMB
comp=Z,13nm,1.5s,mb4.6
BJI AMB AMB
comp=Z,179nm,6.5s
BJI LR LR
comp=N,258nm,18.6s,MS4.7
BJI LR LR
comp=E,295nm,17.6s,MS4.7
BJI LR LR
comp=Z,237nm,21.7s,MS4.4
XAN Xi'an 70.39 312 P **P 12 43 42.5 +0.7**
XAN AP pP 12 43 52.7 +6.8
XAN XP sP 12 43 56.2 +8.8
XAN PCP PcP 12 44 03.6 +0.4
XAN S S 12 52 53.0 -1.3
XAN SKS 12 53 36.7
XAN SCS ScS 12 53 40.9 -3.9
XAN AMB AMB
comp=Z,13nm,1.1s,mb4.8
XAN AMB AMB
comp=Z,129nm,9.0s
XAN LR LR
comp=N,80nm,23.7s,MS4.4
XAN LR LR
comp=E,228nm,23.7s,MS4.4
XAN LR LR
comp=Z,365nm,19.8s,MS4.6
NANT Nan 70.79 295 P **P 12 43 42.5 -2.0**
KMI Kunming 71.31 302 P **P 12 43 49.6 +2.0**
KMI AP pP 12 44 00.0 +8.3
KMI XP sP 12 44 04.1 +11
KMI PP PP 12 46 28.0 +2.0
KMI S S 12 53 00.7 -4.7
KMI XS sS 12 53 19.8 +7.5
KMI SCS ScS 12 53 49.4 -3.1
KMI AMB AMB
comp=Z,12nm,2.0s,mb4.5
KMI AMB AMB
comp=Z,155nm,8.5s
KMI LR LR
comp=N,258nm,10.8s,MS4.8
KMI LR LR
comp=E,185nm,15.7s,MS4.8
KMI LR LR
comp=Z,154nm,9.3s
CHRT Chiangrai 71.97 295 ⇑P **P 12 43 53.0 +1.4**
HHC Hu-ho-hao-te 72.14 320 eP **P 12 43 53.2 +1.0**
HHC AP pP 12 44 03.9 +7.5
HHC XP sP 12 44 08.3 +10
HHC PCP PcP 12 44 11.6 +1.1
HHC PP PP 12 46 35.4 +2.6
HHC S S 12 53 11.9 -2.4
HHC XS sS 12 53 29.3 +8.1
HHC SKS 12 53 50.3
HHC SCS ScS 12 53 53.4 -5.0
HHC AMB AMB
comp=Z,15nm,0.6s,mb5.1
HHC AMB AMB
comp=Z,102nm,6.3s
HHC LR LR
comp=N,390nm,18.2s,MS4.8
HHC LR LR
comp=E,253nm,18.6s,MS4.8
HHC LR LR
comp=Z,493nm,18.7s,MS4.8
CMAR Chiang Mai Arr 72.25 294 P **P 12 43 54.2 +0.9**
comp=Z,6.0nm,0.8s,mb4.6,baz=130,slow=4.6,SNR=23
CMAR LR LR 13 13 14.5
comp=Z,218nm,21.1s,MS4.4,baz=293,slow=34
CMAR Chiang Mai Arr 72.25 294 *i* P **P 12 43 54.7 +1.4**
CMAR pmax pmax
comp=Z,6.0nm,0.8s
CD2 Chengdu 72.83 307 eP **P 12 43 57.7 +1.1**
CD2 AP pP 12 44 08.0 +7.3
CD2 XP sP 12 44 12.5 +10
CD2 PP PP 12 46 41.9 +3.0
CD2 S S 12 53 20.0 -2.7
CD2 XS sS 12 53 37.2 +7.7
CD2 AMB AMB
comp=Z,10.0nm,1.6s,mb4.5
CD2 AMB AMB
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,480nm,15.6s,MS5.1
CD2 LR LR
comp=E,620nm,15.6s,MS5.1
CD2 LR LR
comp=Z,300nm,18.0s,MS4.6
LZH Lanzhou 75.02 312 eP **P 12 44 10.5 +1.2**
LZH AP pP 12 44 20.5 +7.1
LZH XP sP 12 44 25.0 +10
LZH XS sS 12 54 02.0 +8.0
LZH AMB AMB
comp=Z,21nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,147nm,4.9s
LZH LR LR
comp=N,290nm,14.2s
LZH LR LR
comp=Z,552nm,17.7s,MS4.9
CLNS Chul'man 75.97 338 eP **P 12 44 15.0 +0.8**
CLNS pmax pmax
comp=Z,11nm,1.0s,mb4.7
CLNS pmax pmax
comp=N,12nm,0.9s
CLNS pmax pmax
comp=E,8.0nm,1.0s
CLNS MLR MLR
comp=Z,312nm,15.0s,MS4.7
CLNS MLR MLR
comp=N,235nm,14.0s
KDAK Kodiak Island 77.00 21 eP **P 12 44 19.2 -0.9**
YAK Yakutsk 78.50 344 *c i* P **P 12 44 28.3 -0.1**
YAK pmax pmax
comp=Z,25nm,1.6s,mb4.9
SVW2 Sparrevohn 78.54 18 eP **P 12 44 28.1 -0.5**
ULN Ulaanbaatar 78.63 324 eP **P 12 44 29.4 0.0**
ULN pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ULN Ulaanbaatar 78.63 324 eP **P 12 44 29.4 0.0**
comp=Z,10nm,0.9s,mb4.8
SONM Songino Array 78.99 324 P **P 12 44 32.4 +1.0**
comp=Z,4.4nm,0.8s,mb4.4,baz=140,slow=6.1,SNR=17
SONM LR LR 13 16 30.1
comp=Z,275nm,18.7s,MS4.6,baz=112,slow=34
GTA Gaotai 79.33 314 P **P 12 44 35.3 +1.9**
GTA AP pP 12 44 45.7 +8.1
GTA XP sP 12 44 49.7 +11
GTA AMB AMB
comp=Z,11nm,1.5s,mb4.6
GTA AMB AMB
comp=Z,156nm,6.6s
GTA LR LR
comp=N,354nm,18.3s,MS4.8
GTA LR LR
comp=E,216nm,20.4s,MS4.8
GTA LR LR
comp=Z,340nm,19.2s,MS4.7
SLKM Skilak Lake 79.83 20 eP **P 12 44 33.7 -2.0**
TTA Tatalina 79.86 17 eP **P 12 44 36.2 +0.4**
SHL Shillong 80.69 298 eP **P 12 44 44.5 +3.4**
BOD Bodaibo 80.91 335 eP **P 12 44 40.4 -1.1**
PMR Palmer 80.98 20 eP **P 12 44 39.3 -2.5**
ZAK Zakamensk 82.04 325 eP **P 12 44 46.4 -1.3**
ZAK pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
TLY Talaya 82.46 326 eP **P 12 44 49.1 -0.8**
TLY ePPP 12 49 47.0
TLY eSS SS 13 00 23.4 -4.2
TLY pmax pmax
comp=Z,13nm,1.6s,mb4.6
LSA Lhasa 82.55 302 P **P 12 44 51.4 +0.5**
LSA Lhasa 82.55 302 eP **P 12 44 51.0 +0.1**
IMA2 Indian Mountai 82.94 16 eP **P 12 44 52.1 +0.1**
COLA College 83.72 18 *c i* P **P 12 44 54.9 -1.2**
COLA College 83.72 18 eP **P 12 44 55.2 -0.8**
comp=Z,12nm,0.8s,mb5.1
MOY Mondy 83.91 326 eP **P 12 44 58.8 +1.4**
MOY pmax pmax
comp=Z,35nm,2.9s,mb5.0
MAW Mawson 84.30 202 eP **P 12 45 00.1 +0.9**
comp=Z,8.5nm,1.3s,mb4.7
MAW Mawson 84.30 202 P **P 12 44 59.1 0.0**
comp=Z,3.5nm,0.7s,mb4.6,baz=112,slow=8.6,SNR=13
MAW LR LR 13 22 15.5
comp=Z,403nm,18.1s,MS4.8,baz=231,slow=36
MAW Mawson 84.30 202 eP **P 12 45 00.1 +0.9**
MAW pmax pmax
comp=Z,9.0nm,1.3s
HUMO Hull Mountain 84.37 45 eP **P 12 45 00.1 +0.2**
CMB Columbia Colle 84.66 50 eP **P 12 45 00.9 -0.6**
CMB pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
CMB Columbia Colle 84.66 50 eP **P 12 45 00.8 -0.6**
comp=Z,6.3nm,1.0s,mb4.7
WRAK Wrangell Islan 84.74 30 eP **P 12 45 01.2 -0.3**
comp=Z,5.9nm,0.8s,mb4.8
HYT Haines Junctio 84.80 24 eP **P 12 45 03.5 +1.8**
BBB Bella Bella 84.96 34 LR LR 13 12 48.4
comp=Z,169nm,21.7s,MS4.4,baz=251,slow=28
ISA Isabella 85.37 52 eP **P 12 45 04.8 -0.3**
ISA pmax pmax
comp=Z,16nm,1.6s,mb4.9
ISA Isabella 85.37 52 eP **P 12 45 04.8 -0.4**
comp=Z,16nm,1.6s,mb4.9
WAKR Walker 85.52 49 eP **P 12 45 06.1 +0.4**
EGAK Eagle 85.80 20 eP **P 12 45 06.3 -0.3**
comp=Z,14nm,0.8s,mb5.2
MTUM Tungsten Hills 85.82 51 eP **P 12 45 06.9 -0.4**
PAHR Pah Rah Range 85.93 48 eP **P 12 45 08.2 +0.4**
MOD Modoc 85.98 46 eP **P 12 45 08.5 +0.5**
DAWY Dawson 85.98 21 eP **P 12 45 07.1 -0.4**
PGC Sidney 86.26 39 eP **P 12 45 09.0 -0.2**
NVAR Mina Array Bea 86.34 50 P **P 12 45 09.9 0.0**
comp=Z,2.8nm,0.9s,mb4.5,baz=236,slow=8.0,SNR=12
WVOR Wild Horse Val 87.32 46 eP **P 12 45 14.5 -0.1**
WVOR pmax pmax
comp=Z,10.0nm,1.3s,mb4.9
WVOR Wild Horse Val 87.32 46 eP **P 12 45 14.5 -0.1**
comp=Z,10nm,1.3s,mb4.9
RPW Rockport 87.39 40 eP **P 12 45 14.2 -0.5**
LDFC Landfair 87.84 54 eP **P 12 45 17.7 +0.4**
HAWA Hanford 87.97 42 eP **P 12 45 17.3 -0.2**
comp=Z,7.2nm,1.1s,mb4.8
SHPR Sheep Range 88.19 52 eP **P 12 45 19.9 +1.1**
BMO Blue Mountains 88.98 44 eP **P 12 45 22.0 -0.4**
BMO pmax pmax
comp=Z,20nm,1.9s,mb5.1
BMO Blue Mountains 88.98 44 eP **P 12 45 22.0 -0.3**
comp=Z,20nm,1.9s,mb5.1
ELK Elko 89.27 48 P **P 12 45 24.1 +0.2**
comp=Z,0.9nm,0.7s,mb4.2,baz=229,slow=6.0,SNR=2.6
WMQ Urumqi 89.37 315 eP **P 12 45 24.6 +0.3**
WMQ AP pP 12 45 35.1 +6.6
WMQ XP sP 12 45 39.0 +9.0
WMQ SKS 12 55 51.0
WMQ S S 12 56 11.0 -3.2
WMQ AMB AMB
comp=Z,9.0nm,1.4s,mb4.9
WMQ AMB AMB
comp=Z,140nm,4.4s
WMQ LR LR
comp=N,312nm,17.0s,MS5.1
WMQ LR LR
comp=E,496nm,14.0s,MS5.1
WMQ LR LR
comp=Z,384nm,24.8s
HLID Hailey 90.61 46 eP **P 12 45 29.9 -0.2**
WUAZ Wupatki 90.91 54 eP **P 12 45 31.9 +0.3**
comp=Z,12nm,1.4s,mb5.0
DUG Dugway 90.92 49 P **P 12 45 30.9 -0.7**
DUG pmax pmax
comp=Z,20nm,1.8s,mb5.2
DUG Dugway 90.92 49 P **P 12 45 30.9 -0.6**
comp=Z,20nm,1.8s,mb5.1
MSU Marysvale 90.99 51 eP **P 12 45 32.9 +1.0**
HVU Hansel Valley 91.33 48 eP **P 12 45 33.8 +0.3**
SYO Syowa Base 91.35 197‖ eP **P 12 45 33.8 +0.7**
SYO Syowa Base 91.35 197‖ eS P sP 12 45 46.4 +7.6
MCMT McKenzie Canyo 92.02 45 eP **P 12 45 38.6 +2.0**
JLU Jordanelle 92.03 49 eP **P 12 45 39.7 +3.0**
CHMT Chamberlain Mo 92.26 43 eP **P 12 45 37.2 -0.5**
DLMT Dillon 92.33 44 eP **P 12 45 38.3 +0.3**
WALA Waterton Lakes 92.37 40 eP **P 12 45 37.8 -0.3**
MKAR Makanchi Array 93.81 317 P **P 12 45 44.0 -0.8**
comp=Z,3.2nm,0.7s,mb4.9,baz=96,slow=6.0,SNR=31
MKAR LR LR 13 27 11.0
comp=Z,137nm,18.7s,MS4.4,baz=179,slow=35
MKAR Makanchi Array 93.81 317 *i* P **P 12 45 45.2 +0.4**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
PDAR Pinedale Array 93.88 47 P **P 12 45 43.0 -2.2**
comp=Z,0.3nm,0.7s,mb3.8,baz=274,slow=2.5,SNR=3.3
PDAR LR LR 13 21 29.0
comp=Z,89nm,21.3s,MS4.2,baz=246,slow=31
ZALV Zalesovo Beam 93.89 324 P **P 12 45 43.5 -1.4**
comp=Z,1.6nm,0.6s,mb4.7,baz=108,slow=4.8,SNR=8.9
ZALV LR LR 13 27 10.2
comp=Z,138nm,18.5s,MS4.5,baz=108,slow=35
ZAL Zalesovo 93.89 324 P **P 12 45 43.5 -1.5**
NVS Novosibirsk 95.00 325 eP **P 12 45 49.7 -0.3**
NVS eS SKSac 12 56 26.1 +0.8
NVS pmax pmax
comp=Z,12nm,1.4s,mb5.1
NVS smax
comp=N,8.0nm,2.2s
NVS smax
comp=E,28nm,2.2s
YKA Yellowknife Ar 95.38 27 P **P 12 45 49.3 -2.3**
comp=E,1.2nm,0.7s,mb4.5,baz=258,slow=4.6,SNR=14
YKA LR LR 13 26 24.6
comp=E,155nm,18.3s,MS4.5,baz=215,slow=34
ARCES ARCESS Array B 116.75 345 PKP PKPdf 12 51 11.7 +0.2
comp=E,1.4nm,0.6s,baz=71,slow=1.9,SNR=17
LPAZ La Paz 120.03 116 PKP PKPdf 12 51 20.1 +0.8
comp=E,3.2nm,1.0s,baz=272,slow=1.7,SNR=8.6
KIV Kislovodsk 121.51 315 ePKIKP PKPdf 12 51 20.8 -0.5
KIV e 12 58 26.1
KIV pmax pmax
comp=Z,3.0nm,0.7s
CPUP Villa Florida 123.76 133 PKP PKPdf 12 51 26.4 +0.1
comp=Z,3.7nm,0.9s,baz=92,slow=0.4,SNR=9.8
SDV Santo Domingo 124.56 87 ePKPdf PKPdf 12 51 28.0 0.0
SIV San Ignacio 126.27 120 PKP PKPdf 12 51 30.7 -0.5
baz=236,slow=5.9
CLL Collm 134.49 336 e(PKPdf) PKPdf 12 51 50.0 +4.2
CLL e(PKSdf) 12 55 24.0
CLL Lm 13 51 00.0
comp=N,200nm,18.6s
CLL Lm 13 51 00.0
comp=E,100nm,19.0s
CLL Lm 13 51 00.0
comp=Z,200nm,20.0s
CLL LmV 13 54 00.0
comp=Z,200nm,18.7s
GERES GERESS Array B 136.08 333 PKhKP 12 51 45.5
comp=Z,0.6nm,0.7s,baz=90,slow=1.3,SNR=5.1
GRA1 Grafenberg Arr 136.46 336 ePKP PKPdf 12 51 52.1 +2.6
GRF Grafenberg Arr 136.46 336 ePKPdf PKPdf 12 51 52.1 +2.6
BDFB Brasilia 137.10 128 PKP PKPdf 12 51 52.0 +0.3
comp=Z,4.1nm,0.7s,baz=228,slow=3.6,SNR=6.7
LOR Lormes 141.19 340 ePKP1 PKPdf 12 51 53.9 -4.4
SSF Saint Saulge 141.49 340 ePKP1 PKPdf 12 51 55.2 -3.6
MBDF Montbardon 142.26 335 ePKP1 PKPdf 12 51 54.9 -5.4
comp=Z,6.5nm,0.8s
ORIF Oris-en-Rattie 142.46 336 ePKP1 PKPdf 12 51 57.1 -3.5
comp=Z,23nm,1.2s
VIVF Saint-Julien-l 142.98 337 ePKP1 PKPdf 12 51 58.2 -3.3
comp=Z,69nm,1.6s
PGF Pioggiola 143.00 331 ePKP1 PKPdf 12 52 00.8 -0.8
comp=Z,60nm,1.3s
LBL Lubilhac 143.17 339 PKP PKPdf 12 51 59.9 -2.0
FRF La Foret Royal 143.26 334 ePKP1 PKPdf 12 51 59.4 -2.7
comp=Z,62nm,1.5s
CAF Calviac 143.84 340 ePKP1 PKPdf 12 52 01.2 -1.8
LASF Ste Croix 143.95 338 ePKP1 PKPdf 12 52 01.5 -1.8
comp=Z,88nm,1.4s
LFF La Frestale 144.26 342 ePKP1 PKPdf 12 52 02.3 -1.5
comp=Z,66nm,1.3s
MTLF Montolieu 145.18 339 ePKP1 PKPbc 12 52 05.7 +0.7
comp=Z,155nm,1.4s
FILF Fillols 145.73 338 PKP PKPdf 12 52 07.1 +0.7
MLS Moulis 145.91 340 PKP PKPdf 12 52 07.3 +0.6
VALF Valcebollere 146.07 338 PKP PKPdf 12 52 08.8 +1.8
EPF Esparros 146.10 341 ePKP1 PKPbc 12 52 08.6 +0.7
RESF Ens 146.30 340 PKP PKPbc 12 52 09.9 +1.4
VIEF Viey 146.33 341 PKP PKPbc 12 52 09.9 +1.3
ETSF Etsaut 146.50 342 ePKP1 PKPbc 12 52 09.9 +0.8
comp=Z,64nm,1.1s
SJPF Ste Jean 146.51 343 ePKP1 PKPbc 12 52 08.6 -0.5
comp=Z,26nm,1.1s
KEST Kesra 147.74 322 PKPbc PKPbc 12 52 13.9 +1.1
comp=Z,3.6nm,0.8s,baz=160,slow=2.2,SNR=12
CMAH Djebel Manchou 148.22 326 P PKPab 12 52 17.5 +0.5
DFRA Djebel Bou Aff 149.12 327 P PKPab 12 52 19.6 -1.0
SET Setif 149.63 327 P PKPab 12 52 25.0 +2.3
MVO Moncorvo 149.75 349 ePKPdf PKPdf 12 52 12.7 -0.4
MVO Moncorvo 149.75 349 ePKPbc PKPbc 12 52 18.5 +0.7
PVIS Viseu 150.34 350 ePKPbc PKPbc 12 52 20.3 +1.1
ESDC Sonseca Array 150.47 344 PKPbc PKPbc 12 52 20.1 +0.6
comp=Z,3.2nm,0.8s,baz=12,slow=2.3,SNR=15
ATAF Djebel Tarf 150.47 328 P PKPbc 12 52 20.8 +1.1
MTE Manteigas 150.59 349 ePKPdf PKPdf 12 52 13.8 -0.6
MTE Manteigas 150.59 349 ePKPbc PKPbc 12 52 20.8 +1.0
ADJB Djebel Djouab 150.67 330 P PKPbc 12 52 22.0 +1.8
PAB San Pablo 150.69 344 ePKIKP PKPdf 12 52 13.5 -1.1
PCBR Castelo Branco 151.12 349 ePKPbc PKPbc 12 52 22.3 +1.2
PTOM Tomar 151.50 350 ePKPbc PKPbc 12 52 22.9 +0.9
PMRV Marv??o 151.50 349 ePKPdf PKPdf 12 52 17.2 +1.3
PMRV Marv??o 151.50 349 ePKPbc PKPab 12 52 27.0 -3.2
PESTR Estremoz 152.09 349 ePKPdf PKPdf 12 52 17.1 +0.3
PESTR Estremoz 152.09 349 ePKPbc PKPbc 12 52 26.1 +2.8
EVO Evora 152.49 349 ePKIKP PKPdf 12 52 18.6 +1.2
comp=Z,21nm,1.1s
TORD Torodi Ar. Bea 164.29 278 PKP PKPdf 12 52 32.2 0.0
comp=Z,0.8nm,0.7s,baz=61,slow=1.0,SNR=4.4
TORD Torodi Ar. Bea 164.29 278 PKP PKPdf 12 52 32.2 0.0

ISCJB ***02*** *12:44:19.3±0.3, 6095N±002×80.12W±005, h10km, mb3.5/4, Error ellipse: s-maj=3.9km s-min=3.0km az=145.0*
IDC ***02*** *12:44:24.7±0.9, 6084N×7998W, h0km, mb3.5/3, mb1 3.9/6, mb1mx3.6/22, mbtmp3.8/6, ML3.1/3, Error ellipse: s-maj=18.8km s-min=10.3km az=25.0*
NEIC ***02*** *12:44:25.5±0.7, 6086N×7988W, h10km, mb3.9/1, MN3.7(OTT), Error ellipse: s-maj=14.5km s-min=9.8km az=183.0*
OTT ***02*** *12:44:26.6±0.2, 6094N×7979W, h18km, MN3.8/12, 88km west from Akulivik, Qc Boothia Ungava Seismic Zone.*
ISC 02 12:44:22.3±0.3, 6096N±002×8007W±005, h10km, n52, σ1§74/80, mb3.5/4, Hudson Bay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKVQ	**Akulivik**	**0.93**	**99**	PG	**Pg**	**12 44 41.0**	**+0.8**
AKVQ				SG	**Sg**	**12 44 51.7**	**-0.7**
AKVQ				Trac		12 44 52.7	
	comp=Z,205nm,0.1s						
IVKQ	**Ivujivik**	**1.79**	**34**	PG	**Pg**	**12 44 57.7**	**+1.1**
IVKQ				SG	**Sg**	**12 45 21.1**	**+1.3**
IVKQ				Trac		12 45 23.1	
	comp=Z,110nm,0.1s						
INUQ	**Inukjuak**	**2.70**	**158**	PN	**Pn**	**12 45 08.3**	**+2.6**
INUQ				SN	**Sn**	**12 45 39.3**	**+0.8**
INUQ				Trac		12 45 42.5	
	comp=Z,225nm,0.2s						
SNQN	**Sanikiluaq**	**4.45**	**174**	PN	**Pn**	**12 45 31.8**	**+2.0**
SNQN				SN	**Sn**	**12 46 21.1**	**-0.5**
SNQN				SG	**Sg**	**12 46 37.1**	**-8.1**
SNQN				Trac		12 46 42.5	
	comp=Z,62nm,0.2s						
SEDN	**First Sedna Si**	**5.71**	**299**	SN	**Sn**	**12 46 52.1**	**-0.4**
SEDN				SG	**Sg**	**12 47 23.9**	**-1.5**
SEDN				Trac		12 47 29.3	
	comp=Z,28nm,0.3s						
JOSN	**Second Sedna S**	**5.83**	**297**	PN	**Pn**	**12 45 54.4**	**+5.7**
JOSN				PG	**Pg**	**12 46 11.5**	**-2.3**
JOSN				SN	**Sn**	**12 46 56.8**	**+1.4**
JOSN				SG	**Sg**	**12 47 25.1**	**-4.1**
JOSN				Trac		12 47 31.2	
	comp=Z,31nm,0.3s						
YRTN	**Rankin Inlet**	**5.99**	**293**	SN	**Sn**	**12 47 01.8**	**+2.5**
YRTN				SG	Sx	12 47 31.9	
YRTN				Trac		12 47 36.3	
	comp=Z,42nm,0.3s						
FRB	**Frobisher Bay**	**6.05**	**57**	PN	**Pn**	**12 45 55.0**	**+3.4**
FRB				SN	**Sn**	**12 46 59.7**	**-1.1**
FRB				SG	**Sg**	**12 47 26.1**	**-10**
FRB				Trac		12 47 32.4	
	comp=Z,93nm,0.5s						
QILN	**Qililugaq Expl**	**6.36**	**337**	PN	**Pn**	**12 45 59.0**	**+3.1**
QILN				PG	**Pg**	**12 46 07.1**	**-17**
QILN				SN	**Sn**	**12 47 08.0**	**-0.4**
QILN				SG	Sx	12 47 42.7	
QILN				Trac		12 47 51.9	
	comp=Z,36nm,0.4s						
QILN	**Qililugaq Expl**	**6.36**	**337**	Pn	**Pn**	**12 45 59.0**	**+3.1**
QILN				Pg	**Pg**	**12 46 07.1**	**-17**
QILN				Sn	**Sn**	**12 47 08.0**	**-0.4**
QILN				Sg	Sx	12 47 42.7	
WAGN	**Wager Bay**	**6.48**	**324**	PN	**Pn**	**12 46 00.2**	**+2.6**
WAGN				SN	**Sn**	**12 47 11.7**	**+0.2**
WAGN				SG	Sx	12 47 47.4	
WAGN				Trac		12 47 59.4	
	comp=Z,46nm,0.2s						
KUQ	**Kuujjuuaa**	**6.58**	**111**	PN	**Pn**	**12 46 00.2**	**+1.2**
KUQ				SN	**Sn**	**12 47 11.4**	**-2.6**
KUQ				SG	Sx	12 47 42.9	
KUQ				Trac		12 47 53.7	
	comp=Z,47nm,0.4s						
KUQ	**Kuujjuuaa**	**6.58**	**111**	Pn	**Pn**	**12 46 00.2**	**+1.2**
KUQ				Sn	**Sn**	**12 47 11.4**	**-2.6**
KUQ				Sg	Sx	12 47 42.7	
ARVN	**Arviat, NU**	**6.80**	**277**	Pn	**Pn**	**12 46 05.5**	**+3.5**
ARVN				Lg		12 47 56.4	
SILO	**Sutton Inlier**	**6.99**	**204**	PN	**Pn**	**12 46 07.0**	**+2.4**
SILO				SN	**Sn**	**12 47 19.6**	**-4.5**
SILO				LG		12 47 54.1	
SILO				Trac		12 48 07.1	
	comp=Z,33nm,0.4s						
FCC	**Fort Churchill**	**7.39**	**259**	PN	**Pn**	**12 46 13.9**	**+3.8**
FCC				SN	**Sn**	**12 47 33.5**	**-0.4**
FCC				LG		12 48 12.2	
FCC				Trac		12 48 15.6	
	comp=Z,54nm,0.3s						
FCC	**Fort Churchill**	**7.39**	**259**	ePn	**Pn**	**12 46 14.4**	**+4.3**
FCC				eSn	**Sn**	**12 47 34.8**	**+0.9**
SRLN	**Sarcpa Lake, N**	**7.75**	**351**	PN	**Pn**	**12 46 18.8**	**+3.9**
SRLN				SN	**Sn**	**12 47 40.4**	**-2.2**
SRLN				LG		12 48 24.6	
SRLN				Trac		12 48 34.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,29nm,0.5s						
BULN	**Bullion Camp,**	**7.95**	**319**	PN	**Pn**	**12 46 19.6**	**+1.9**
BULN				SN	**Sn**	**12 47 47.6**	**0.0**
BULN				LG		12 48 32.5	
BULN				Trac		12 48 40.8	
	comp=Z,24nm,0.6s						
LG4Q	**La Grande 4**	**8.03**	**154**	PN	**Pn**	**12 46 19.5**	**+0.6**
LG4Q				SN	**Sn**	**12 47 44.3**	**-5.2**
LG4Q				LG		12 48 22.8	
LG4Q				Trac		12 48 29.7	
	comp=Z,58nm,0.4s						
YBKN	**Baker Lake, Hu**	**8.07**	**302**	PN	**Pn**	**12 46 20.2**	**+0.8**
YBKN				SN	**Sn**	**12 47 47.7**	**-2.8**
YBKN				LG		12 48 37.6	
LAIN	**Lailor River,**	**8.31**	**351**	PN	**Pn**	**12 46 25.8**	**+3.1**
LAIN				SN	**Sn**	**12 47 55.2**	**-1.2**
LAIN				LG		12 48 40.2	
LAIN				Trac		12 48 47.4	
	comp=Z,17nm,0.4s						
VIMO	**Victor Mine**	**8.41**	**195**	PN	**Pn**	**12 46 26.2**	**+2.2**
VIMO				SN	**Sn**	**12 47 53.5**	**-5.3**
VIMO				LG		12 48 34.1	
VIMO				Trac		12 48 43.4	
	comp=Z,35nm,0.5s						
ILON	**Igloolik, Nuna**	**8.48**	**356**	PN	**Pn**	**12 46 28.1**	**+3.1**
ILON				SN	**Sn**	**12 47 58.1**	**-2.4**
ILON				LG		12 48 47.3	
ILON				Trac		12 48 58.0	
	comp=Z,43nm,0.6s						
STLN	**Stellar Camp,**	**8.50**	**324**	PN	**Pn**	**12 46 27.8**	**+2.5**
STLN				SN	**Sn**	**12 47 59.1**	**-1.9**
STLN				LG		12 48 48.0	
STLN				Trac		12 49 02.8	
	comp=Z,25nm,0.6s						
AP3N	**Apex site 3 Nu**	**8.73**	**350**	PN	**Pn**	**12 46 31.1**	**+2.7**
AP3N				SN	**Sn**	**12 48 02.5**	**-4.2**
AP3N				LG		12 48 55.0	
AP3N				Trac		12 49 01.8	
	comp=Z,16nm,0.4s						
GIFN	**Gifford Fjord,**	**9.10**	**357**	PN	**Pn**	**12 46 35.6**	**+2.2**
GIFN				SN	**Sn**	**12 48 12.6**	**-3.2**
GIFN				LG		12 49 05.7	
GIFN				Trac		12 49 17.1	
	comp=Z,15nm,0.4s						
SCHQ	**Schefferville**	**9.34**	**125**	Pn	**Pn**	**12 46 36.7**	**0.0**
	1.4nm,0.3s,baz=310,slow=10,SNR=12						
SCHQ				Sn	**Sn**	**12 48 14.7**	**-7.0**
	1.4nm,0.3s,baz=224,slow=9.1,SNR=3.2						
SCHQ				Lg		12 49 05.3	
	1.7nm,0.3s,baz=248,slow=15,SNR=5.2						
SCHQ	**Schefferville**	**9.34**	**125**	PN	**Pn**	**12 46 36.6**	**-0.1**
SCHQ				SN	**Sn**	**12 48 15.4**	**-6.3**
SCHQ				LG		12 49 06.2	
SCHQ	**Schefferville**	**9.34**	**125**	Pn	**Pn**	**12 46 36.7**	**0.0**
SCHQ				Sn	**Sn**	**12 48 14.7**	**-7.0**
SCHQ				Lg		12 49 05.3	
MALO	**McAlpine Lake**	**10.96**	**179**	PN	**Pn**	**12 46 57.7**	**-1.3**
MALO				SN	Sx	12 48 49.7	
MALO				LG		12 49 53.6	
PKLO	**Pickle Lake**	**11.06**	**216**	PN	**Pn**	**12 47 01.4**	**+1.0**
PKLO				SN	Sx	12 48 56.6	
PKLO				LG		12 49 58.0	
PKLO				Trac		12 50 09.7	
	comp=Z,17nm,0.5s						
NANO	**Nakina Ontario**	**11.31**	**203**	PN	**Pn**	**12 47 04.0**	**+0.2**
NANO				SN	Sx	12 49 01.9	
NANO				LG		12 50 05.2	
NANO				Trac		12 50 21.1	
	comp=Z,14nm,0.6s						
KAPO	**Kapuskasing**	**11.62**	**188**	PN	**Pn**	**12 47 07.2**	**-0.7**
KAPO				SN	Sx	12 49 07.5	
KAPO				LG		12 50 19.2	
KAPO				Trac		12 50 25.5	
	comp=Z,70nm,1.1s						
GTO	**Geraldton**	**11.89**	**202**	PN	**Pn**	**12 47 07.1**	**-4.6**
GTO				SN	Sx	12 49 16.1	
MNQ	**Manicouagan**	**12.21**	**144**	PN	**Pn**	**12 47 13.8**	**-2.3**
MNQ				SN	Sx	12 49 22.8	
MNQ				LG		12 50 31.4	
MNQ				Trac		12 50 42.6	
	comp=Z,12nm,0.4s						
KILO	**Kirkland Lake**	**12.49**	**179**	SN	Sx	12 49 27.2	
KILO				LG		12 50 39.9	
TIMO	**Timmins Ontari**	**12.54**	**184**	LG		12 50 44.8	
VLDQ	**Val d'Or**	**12.96**	**172**	PN	**Pn**	**12 47 22.6**	**-3.8**
VLDQ				SN	Sx	12 49 31.4	
VLDQ				LG		12 50 56.5	
BELQ	**Belleterre**	**13.61**	**176**	PN	**Pn**	**12 47 32.5**	**-2.7**
BELQ				SN	Sx	12 49 53.7	
BELQ				LG		12 51 11.2	
ULM	**Lac du Bonnet**	**13.91**	**227**	Pn	**Pn**	**12 47 37.6**	**-1.7**
	1.0nm,0.3s,baz=31,slow=13,SNR=12						
ULM				Sn	Sx	12 50 00.2	
	0.6nm,0.3s,baz=112,slow=17,SNR=3.9						
ULM				Lg		12 51 31.3	
	0.8nm,0.3s,baz=301,slow=21,SNR=4.9						
ULM	**Lac du Bonnet**	**13.91**	**227**	LG		12 51 29.9	
ULM	**Lac du Bonnet**	**13.91**	**227**	Pn	**Pn**	**12 47 37.6**	**-1.7**
ULM				Sn	Sx	12 50 00.2	
ULM				Lg		12 51 31.3	
DAQ	**Lac Daran**	**13.98**	**155**	LG		12 51 28.9	
RES	**Resolute Bay**	**14.79**	**345**	LG		12 52 02.6	
YKW3	**Yellowknife Ar**	**16.31**	**291**	LG		12 52 38.6	
YKW3				LG		12 52 48.2	
YKA	**Yellowknife Ar**	**16.32**	**290**	Pn	**Pn**	**12 48 09.3**	**-1.9**
	0.2nm,0.3s,baz=79,slow=12,SNR=34						
YKA				Sn	Sx	12 51 01.1	
	0.2nm,0.3s,baz=87,slow=26,SNR=4.8						
YKA				Lg		12 52 48.1	
	0.2nm,0.3s,baz=78,slow=29,SNR=7.2						
LONY	**Lake Ozonia**	**16.69**	**166**	*e*Pn	**Pn**	**12 48 12.3**	**-3.7**
PDAR	**Pinedale Array**	**25.40**	**238**	P	**P**	**12 49 53.9**	**+4.3**
	0.9nm,0.8s,mb3.3,baz=52,slow=12,SNR=5.3						
BW06	**Boulder Array**	**25.40**	**238**	P	**P**	**12 49 54.5**	**+4.9**
	3.2nm,1.3s,mb3.7						
ZALV	**Zalesovo Beam**	**64.81**	**10**	P	**P**	**12 55 05.4**	**+4.8**
	0.4nm,0.4s,mb3.8,baz=358,slow=4.3,SNR=2.5						
MKAR	**Makanchi Array**	**71.66**	**13**	P	**P**	**12 55 48.8**	**+5.1**
	0.3nm,0.7s,mb3.3,baz=6.5,slow=4.0,SNR=3.6						

*NEIC **02** 12:44:35.2±0.8, 2103S×33.12E, h10km, Error ellipse: s-maj=13.2km s-min=10.2km az=150.0*
*PRE **02** 12:44:36.5±0.9, 2129S×33.18E, h5km, ML5.0*
*IDC **02** 12:44:37.0±1.9, 2103S×3277E, h0km, mb3.8/1, mb1 4.3/6, mb1mx3.8/25, mbtmp4.3/6, ML4.3/4, MS3.6/4, Ms1 3.6/4, ms1mx3.4/28, Error ellipse: s-maj=33.1km s-min=20.9km az=112.0*
ISC 02 12:44:35.6±0.9**, 2119S**±006×**3296E**±009**, h10**km**, n22,** σ**1§91**/38**, Mozambique**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SLR	**Silverton**	**6.24**	**223**	*e*P	**Pn**	**12 46 11.6**	**+3.9**
SLR				*e*S	**Sn**	**12 47 20.9**	**+1.8**
SLR				AML	AML	12 48 05.0	
	comp=Z,258nm,0.5s						
LSZ	**Lusaka**	**7.42**	**322**	Pn	**Pn**	**12 46 23.4**	**-0.6**
	comp=Z,7.0nm,0.3s,baz=152,slow=14,SNR=42						
LSZ				Sn	**Sn**	**12 47 44.6**	**-3.7**
	comp=Z,13nm,0.3s,baz=106,slow=6.0,SNR=8.2						
LSZ				Lg		12 48 25.3	
	comp=Z,20nm,0.3s,baz=61,slow=21,SNR=6.0						
LSZ	**Lusaka**	**7.42**	**322**	*e*Pn	**Pn**	**12 46 23.2**	**-0.8**
	comp=Z,2.1nm,0.8s						
LSZ				*e*Sn	**Sn**	**12 47 42.7**	**-5.7**
LSZ				Sn	**Sn**	**12 47 44.6**	**-3.7**
LSZ				Lg		12 48 25.3	
LSZ				*e*Sg	**Sg**	**12 48 25.9**	**-8.0**
PRYS	**Parys**	**7.67**	**221**	*e*P	**Pn**	**12 46 30.6**	**+3.2**
PRYS				*e*S	**Sn**	**12 47 53.7**	**-0.6**
PRYS				AML	AML	12 48 49.0	
	comp=Z,90nm,0.7s						
LBTB	**Lobatse**	**7.77**	**239**	Pn	**Pn**	**12 46 32.0**	**+3.2**
	comp=Z,2.9nm,0.3s,baz=64,slow=13,SNR=39						
LBTB				Sn	**Sn**	**12 48 01.8**	**+4.8**
	comp=Z,4.3nm,0.3s,baz=358,slow=17,SNR=8.0						
LBTB				Lg		12 48 41.6	
	comp=Z,7.8nm,0.3s,baz=354,slow=18,SNR=6.0						
LBTB				LR	LR	12 49 57.0	
	comp=Z,241nm,21.4s,baz=86,slow=42						
SEK	**Senekal**	**8.60**	**213**	*e*P	**Pn**	**12 46 43.7**	**+3.5**
SEK				*e*S	**Sn**	**12 48 15.1**	**-2.1**
SEK				AML	AML	12 48 21.4	
	comp=Z,42nm,0.9s						
SWZ	**Schweizer**	**9.17**	**228**	*e*P	**Pn**	**12 46 51.7**	**+3.8**
SWZ				*e*S	**Sn**	**12 48 31.1**	**-0.1**
SWZ				AML	AML	12 49 36.8	
	comp=Z,135nm,0.6s						
KSD	**Kokstad**	**9.84**	**198**	*e*P	**Pn**	**12 46 59.7**	**+2.5**
KSD				*e*S	**Sn**	**12 48 44.0**	**-3.8**
KSD				AML	AML	12 49 12.0	
	comp=Z,45nm,0.5s						
BOSA	**Boshof**	**10.17**	**222**	Pn	**Pn**	**12 47 04.2**	**+2.5**
	comp=Z,1.6nm,0.3s,baz=50,slow=14,SNR=31						
BOSA				Sn	**Sn**	**12 48 55.8**	**-0.1**
	comp=Z,2.3nm,0.3s,baz=333,slow=15,SNR=6.9						
BOSA				Lg		12 49 54.3	
	comp=Z,2.4nm,0.3s,baz=306,slow=19,SNR=3.8						
BOSA				LR	LR	12 51 20.1	
	comp=Z,395nm,18.6s,baz=59,slow=40						
BOSA	**Boshof**	**10.17**	**222**	Pn	**Pn**	**12 47 04.2**	**+2.5**
BOSA				Sn	**Sn**	**12 48 55.8**	**-0.1**
BOSA				Lg		12 49 54.3	
BOSA				LR	LR	12 51 20.1	
HVD	**Gariep Dam**	**11.53**	**214**	*e*P	**Pn**	**12 47 23.9**	**+3.6**
HVD				*e*S	**Sn**	**12 49 25.9**	**-3.3**
HVD				AML	AML	12 50 06.0	
	comp=Z,15nm,0.6s						
PKA	**Prieska**	**12.49**	**225**	*e*P	**Pn**	**12 47 37.5**	**+4.0**
PKA				*e*S	**Sn**	**12 49 50.6**	**-2.2**
PKA				AML	AML	12 50 18.3	
	comp=Z,12nm,0.4s						
UPI	**Upington**	**12.80**	**234**	*e*P	**Pn**	**12 47 42.6**	**+4.9**
UPI				*e*S	**Sn**	**12 49 58.2**	**-2.2**
UPI				AML	AML	12 50 40.5	
	comp=Z,10nm,0.5s						
OPO	**Ambohidratompo**	**13.64**	**81**	Pn	**Pn**	**12 47 46.4**	**-2.7**
	comp=Z,0.7nm,0.3s,baz=267,slow=12,SNR=6.0						
OPO				Sn	**Sn**	**12 50 06.0**	**-15**
	comp=Z,1.3nm,0.3s,baz=131,slow=20,SNR=5.8						
TSUM	**Tsumeb**	**14.57**	**275**	Pn	**Pn**	**12 48 01.6**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=92,slow=12,SNR=5.8						
TSUM				Lg		12 52 23.4	
	comp=Z,0.5nm,0.3s,baz=67,slow=22,SNR=4.7						
TSUM				LR	LR	12 53 49.0	
	comp=Z,407nm,20.1s,baz=141,slow=38						
TSUM	**Tsumeb**	**14.57**	**275**	*e*Pn	**Pn**	**12 48 02.8**	**+0.9**
TSUM				Lg		12 52 23.4	
TSUM				LR	LR	12 53 49.0	
SUR	**Sutherland**	**15.54**	**222**	Pn	**Pn**	**12 48 17.3**	**+2.5**
	comp=Z,1.5nm,0.3s,baz=49,slow=14,SNR=9.3						
SUR				Sn	**Sn**	**12 51 06.6**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=23,slow=14,SNR=3.6						
SUR				Lg		12 52 47.6	
	comp=Z,0.9nm,0.3s,baz=125,slow=17,SNR=4.3						
SUR				LR	LR	12 54 53.6	
	comp=Z,273nm,20.2s,baz=58,slow=40						
SUR	**Sutherland**	**15.54**	**222**	*e*P	**Pn**	**12 48 19.4**	**+4.6**
SUR				*e*S	**Sn**	**12 51 03.1**	**-3.9**
TORD	**Torodi Ar. Bea**	**45.90**	**315**	P	**P**	**12 52 59.5**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=126,slow=7.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**45.90**	**315**	P	**P**	**12 52 59.5**	**+0.8**
NVAR	**Mina Array Bea**	**149.89**	**311**	PKP	PKPdf	13 04 25.2	+3.7
	comp=Z,0.1nm,0.5s,baz=59,slow=2.3,SNR=2.9						
NVAR				PKPbc	PKPbc	13 04 28.2	+1.9
	comp=Z,0.7nm,0.7s,baz=82,slow=2.9,SNR=6.0						
NVAR	**Mina Array Bea**	**149.89**	**311**	PKP	PKPdf	13 04 25.2	+3.7
NVAR				PKPbc	PKPbc	13 04 28.2	+1.9

IDC 02 12:44:36.8±8.3**, 1215S**×**16637E, h0**km**, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.5**/14**, mbtmp3.7**/3**, Error ellipse: s-maj=247.1km s-min=57.3km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.70**	**252**	P	P	12 51 02.4	0.0
	0.3nm,0.5s,baz=83,slow=9.1,SNR=3.8						
ASAR	**Alice Springs**	**32.87**	**245**	P	P	12 51 12.8	+0.1
	0.6nm,0.6s,baz=71,slow=9.4,SNR=12						
MKAR	**Makanchi Array**	**94.74**	**317**	P	P	12 58 00.2	0.0
	0.4nm,0.6s,baz=93,slow=6.5,SNR=3.8						

*IDC **02** 12:47:32.4±0.5, 1155S×16605E, h0km, mb4.5/18, mb1 4.5/18, mb1mx4.5/19, mbtmp4.4/18, MS4.2/4, Ms1 4.2/4, ms1mx3.5/26, Error ellipse: s-maj=20.8km s-min=15.1km az=94.0*
*ISCJB **02** 12:47:36.2±0.4, 1155S±007×16593E±008, h33km, mb4.5/25, MS4.1/4, Error ellipse: s-maj=11.4km s-min=9.6km az=21.1*
*NEIC **02** 12:47:37.5±4.1, 1151S×16599E, h33km±28km, mb4.5/9, Error ellipse: s-maj=12.0km s-min=8.1km az=85.0*
*BJI **02** 12:47:37.5, 1150S×16600E, h33km, mB5.0, mb4.8*
ISC 02 12:47:38.1±0.4**, 1153S**±007×**16598E**±008**, h35**km**, n78,** σ**0§96**/36**, mb4.5**/25**, MS4.1**/4**, 4C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.29**	**289**	*e*Pn	**Pn**	**12 49 07.2**	**-1.2**
	113nm,0.6s						
CTA	**Charters Tower**	**20.78**	**243**	*e*P	**P**	**12 52 16.7**	**+0.4**
	14nm,0.9s						
CTA	**Charters Tower**	**20.78**	**243**	P	**P**	**12 52 16.7**	**+0.4**
	16nm,0.8s,baz=74,slow=12,SNR=11						
CTAO	**Charters Tower**	**20.78**	**243**	*e*P	**P**	**12 52 16.8**	**+0.5**
	17nm,0.9s						
AFI	**Afiamalu**	**21.83**	**99**	LR	LR	12 58 44.9	
	comp=Z,389nm,18.1s,MS3.9,baz=268,slow=31						
ARMA	**Armidale**	**23.03**	**213**	*e*P	**P**	**12 52 40.6**	**+0.3**
ARMA	**Armidale**	**23.03**	**213**	*e*P	**P**	**12 52 40.3**	**0.0**
URZ	**Urewera**	**28.42**	**161**	P	**P**	**12 53 29.5**	**0.0**
	4.8nm,0.6s,mb4.3,baz=30,slow=20,SNR=4.4						
STKA	**Stephens Creek**	**30.25**	**224**	*e*P	**P**	**12 53 45.5**	**-0.3**
	5.5nm,1.0s,mb4.2						
STKA	**Stephens Creek**	**30.25**	**224**	P	**P**	**12 53 45.6**	**-0.2**
	4.7nm,0.9s,mb4.2,baz=33,slow=5.0,SNR=5.1						
WRA	**Warramunga Arr**	**31.53**	**251**	P	**P**	**12 53 55.9**	**-1.3**
	4.4nm,0.8s,mb4.3,baz=80,slow=9.2,SNR=26						
RPZ	**Rata Peaks**	**32.37**	**173**	P	**P**	**12 54 04.4**	**+0.1**
	22nm,0.8s,mb5.0,baz=203,slow=0.9,SNR=9.4						
ASAR	**Alice Springs**	**32.78**	**244**	P	**P**	**12 54 06.9**	**-1.3**
	6.8nm,0.7s,mb4.7,baz=72,slow=9.4,SNR=67						
ASAR				PcP	PcP	12 56 53.5	+0.5
	2.1nm,1.0s,baz=66,slow=3.3,SNR=7.0						
KAKA	**Kakadu**	**32.80**	**264**	*e*P	**P**	**12 54 08.3**	**-0.2**
RAR	**Rarotonga**	**34.18**	**111**	LR	LR	13 05 19.7	
	comp=Z,252nm,18.2s,MS4.0,baz=275,slow=31						
FITZ	**Fitzroy Crossi**	**39.48**	**256**	*e*P	**P**	**12 55 05.6**	**+0.1**
BATI	**Baumata**	**41.55**	**268**	LR	LR	13 11 00.7	
	comp=Z,524nm,19.7s,MS4.4,baz=87,slow=34						
PPT	**Papeete**	**43.36**	**103**	LR	LR	13 09 35.0	
	comp=Z,303nm,19.2s,MS4.2,baz=181,slow=30						
JOW	**Kunigami**	**52.86**	**317**	P	**P**	**12 56 51.9**	**+1.2**
	11nm,0.8s,mb4.8,baz=143,slow=7.4,SNR=8.6						
MJAR	**Matsushiro Arr**	**54.50**	**333**	P	**P**	**12 57 01.2**	**-1.2**
	2.3nm,0.9s,mb4.2,baz=147,slow=2.4,SNR=6.4						
PETK	**Petropavlovsk-**	**64.77**	**354**	P	**P**	**12 58 13.0**	**+0.1**
	2.6nm,0.8s,mb4.3,baz=146,slow=8.2,SNR=6.0						
CASY	**Casey**	**66.01**	**201**	*e*P	**P**	**12 58 20.9**	**+0.1**
	15nm,1.3s,mb4.9						
SBA	**Scott Base**	**66.31**	**180**	*e*P	**P**	**12 58 23.8**	**+1.2**
CMAR	**Chiang Mai Arr**	**72.51**	**294**	P	**P**	**12 59 03.0**	**+1.1**
	1.4nm,0.9s,mb3.9,baz=123,slow=5.3,SNR=7.8						
LZH	**Lanzhou**	**75.25**	**312**	*e*P	**P**	**12 59 20.0**	**+2.4**
LZH				AP	pP	12 59 25.6	-2.9
LZH				AMB	AMB		
	comp=Z,21nm,1.4s,mb4.9						
LZH				AMB	AMB		
	comp=Z,87nm,4.7s						
QSPA	**South Pole Qui**	**78.48**	**180**	P	**P**	**12 59 35.3**	**+0.2**
	comp=Z,11nm,1.0s,mb4.7,baz=2.4,slow=1.9,SNR=20						
ULN	**Ulaanbaatar**	**78.82**	**324**	*e*P	**P**	**12 59 38.1**	**+0.7**
	comp=Z,4.8nm,0.8s,mb4.5						
SONM	**Songino Array**	**79.19**	**324**	P	**P**	**12 59 40.0**	**+0.5**
	comp=Z,2.2nm,0.7s,mb4.2,baz=138,slow=6.1,SNR=16						
GTA	**Gaotai**	**79.56**	**314**	P	**P**	**12 59 43.8**	**+2.2**
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
COLA	**College**	**83.67**	**18**	*e*P	**P**	**13 00 01.7**	**-1.1**
	comp=Z,5.3nm,0.8s,mb4.7						
YBH	**Yreka Blue Hor**	**84.07**	**45**	*e*P	**P**	**13 00 05.5**	**+0.1**
	comp=Z,2.0nm,0.9s,mb4.2						
HUMO	**Hull Mountain**	**84.22**	**45**	*e*P	**P**	**13 00 06.5**	**+0.4**
	comp=Z,1.6nm,0.8s,mb4.2						
MAW	**Mawson**	**84.36**	**202**	P	**P**	**13 00 05.7**	**-0.7**
	comp=Z,1.6nm,0.7s,mb4.2,baz=94,slow=5.4,SNR=5.3						
EGAK	**Eagle**	**85.75**	**20**	*e*P	**P**	**13 00 13.0**	**-0.2**
	comp=Z,6.3nm,0.8s,mb4.9						
NVAR	**Mina Array Bea**	**86.16**	**50**	P	**P**	**13 00 16.3**	**+0.4**
	comp=Z,0.8nm,0.8s,mb4.0,baz=249,slow=7.5,SNR=3.3						
PDAR	**Pinedale Array**	**93.72**	**47**	P	**P**	**13 00 50.0**	**-1.4**
	comp=Z,0.1nm,0.3s,mb3.7,baz=319,slow=2.6,SNR=2.3						
MKAR	**Makanchi Array**	**94.03**	**317**	P	**P**	**13 00 53.3**	**+0.6**
	comp=Z,6.7nm,0.8s,mb5.1,baz=101,slow=6.3,SNR=29						
MKAR				PKiKP	PKiKP	13 05 37.0	0.0
	comp=Z,0.5nm,0.7s,baz=70,slow=1.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**94.08**	**324**	P	**P**	**13 00 52.1**	**-0.6**
	comp=Z,2.6nm,0.8s,mb4.7,baz=102,slow=5.1,SNR=10						
YKA	**Yellowknife Ar**	**95.30**	**27**	P	**P**	**13 00 55.9**	**-2.2**
	comp=Z,0.5nm,0.6s,mb4.1,baz=251,slow=4.8,SNR=6.0						
YKA	**Yellowknife Ar**	**95.30**	**27**	P	**P**	**13 00 55.9**	**-2.2**
ARCES	**ARCESS Array B**	**116.86**	**345**	PKP	PKPdf	13 06 18.3	-0.1
	comp=Z,3.6nm,0.6s,baz=87,slow=1.5,SNR=36						
JOF	**Joensuu**	**119.47**	**338**	*e*p	PKPdf	13 06 23.1	-0.5
	comp=Z,0.4nm,0.3s						
KAF	**Kangasniemi**	**121.78**	**339**	*e*p	PKPdf	13 06 27.5	-0.6
	comp=Z,0.6nm,0.3s						
CPUP	**Villa Florida**	**123.53**	**132**	PKP	PKPdf	13 06 31.8	-0.8
	comp=Z,0.3nm,0.4s,baz=79,slow=4.2,SNR=3.5						
BOSA	**Boshof**	**124.92**	**223**	PKP	PKPdf	13 06 33.5	-1.8
	comp=Z,3.4nm,0.9s,baz=101,slow=1.7,SNR=2.8						
NB2	**NORSAR Subarra**	**127.23**	**345**	PKPdf	PKPdf	13 06 38.7	+0.1
	comp=Z,1.2nm,0.6s,baz=32,slow=1.8						
NOA	**NORSAR Array B**	**127.23**	**345**	PKP	PKPdf	13 06 38.8	+0.2
	comp=Z,1.4nm,0.6s,baz=35,slow=2.0,SNR=5.1						
AKASG	**Malin Array Be**	**127.39**	**327**	PKP	PKPdf	13 06 39.5	+0.4
	comp=Z,0.8nm,0.5s,baz=53,slow=1.5,SNR=4.5						
GERES	**GERESS Array B**	**136.24**	**334**	PKP	PKPdf	13 06 54.8	-1.2
	comp=Z,1.0nm,0.7s,baz=59,slow=0.8,SNR=8.1						
LPL	**La Plagne**	**141.78**	**336**	*e*PKP1	PKPdf	13 07 04.3	-1.9
LPG	**La Plagne**	**141.78**	**336**	*e*PKP1	PKPdf	13 07 04.5	-1.7
ROSF	**Rostrenen**	**142.22**	**348**	*e*PKP1	PKPdf	13 07 10.0	+3.1
MBDF	**Montbardon**	**142.41**	**335**	*e*PKP1	PKPdf	13 07 03.0	-4.3
	comp=Z,6.4nm,0.8s						
ORIF	**Oris-en-Rattie**	**142.61**	**337**	*e*PKP1	PKPdf	13 07 04.3	-3.4
	comp=Z,9.1nm,0.6s						
TCF	**Toulx Ste Croi**	**142.72**	**341**	*e*PKP1	PKPdf	13 07 10.9	+3.1
	comp=Z,5.0nm,0.7s						
SBF	**Sospel**	**142.84**	**334**	*e*PKP1	PKPdf	13 07 04.2	-3.9
	comp=Z,24nm,0.8s						
VIVF	**Saint-Julien-l**	**143.12**	**338**	*e*PKP1	PKPdf	13 07 06.0	-2.6
	comp=Z,12nm,0.9s						
PGF	**Pioggiola**	**143.17**	**331**	*e*PKP1	PKPdf	13 07 05.6	-3.1
	comp=Z,16nm,0.8s						
FRF	**La Foret Royal**	**143.42**	**334**	⇑*i*PKP1	PKPdf	13 07 06.4	-2.8
	comp=Z,17nm,0.8s						
SMRF	**Simiane la Rot**	**143.51**	**336**	⇑*i*PKP1	PKPdf	13 07 07.5	-1.8
	comp=Z,10nm,0.7s						
LMR	**La Mourre**	**143.66**	**334**	*e*PKP1	PKPdf	13 07 07.3	-2.3
	comp=Z,32nm,1.0s						
CAF	**Calviac**	**143.97**	**340**	*e*PKP1	PKPdf	13 07 08.9	-1.2
	comp=Z,14nm,1.1s						
LASF	**Ste Croix**	**144.09**	**338**	⇑*i*PKP1	PKPdf	13 07 09.4	-0.9
	comp=Z,25nm,0.9s						
LFF	**La Frestale**	**144.38**	**342**	*e*PKP1	PKPdf	13 07 10.1	-0.7
	comp=Z,17nm,0.7s						
MTLF	**Montolieu**	**145.32**	**339**	⇑*i*PKP1	PKPbc	13 07 13.4	+1.1
	comp=Z,22nm,0.8s						
EPF	**Esparros**	**146.23**	**341**	*e*PKP1	PKPbc	13 07 15.6	+0.5
ETSF	**Etsaut**	**146.63**	**342**	*e*PKP1	PKPbc	13 07 17.4	+1.1
SJPF	**Ste Jean**	**146.63**	**343**	*e*PKP1	PKPbc	13 07 17.9	+1.6
KEST	**Kesra**	**147.94**	**323**	PKPbc	PKPbc	13 07 21.4	+1.2
	comp=Z,9.6nm,0.8s,baz=339,slow=0.7,SNR=32						
MVO	**Moncorvo**	**149.85**	**349**	*e*PKP	PKPbc	13 07 25.7	+0.9
ESDC	**Sonseca Array**	**150.59**	**344**	PKPbc	PKPbc	13 07 26.8	+0.2
	comp=Z,2.3nm,0.7s,baz=15,slow=2.6,SNR=20						
MTE	**Manteigas**	**150.68**	**350**	*e*PKP	PKPbc	13 07 28.2	+1.3
PCBR	**Castelo Branco**	**151.22**	**349**	*e*PKP	PKPbc	13 07 28.4	+0.3
PTOM	**Tomar**	**151.59**	**351**	*e*PKP	PKPbc	13 07 29.8	+0.8
PMRV	**Marv??o**	**151.60**	**349**	*e*PKP	PKPbc	13 07 29.8	+0.8
PESTR	**Estremoz**	**152.18**	**349**	*e*PKP	PKPbc	13 07 28.8	-1.6
PBEJ	**Beja**	**153.05**	**349**	*e*PKP	PKPbc	13 07 33.4	+1.1
TORD	**Torodi Ar. Bea**	**164.56**	**278**	PKP	PKPdf	13 07 38.5	-0.7
	comp=Z,2.7nm,0.9s,baz=347,slow=1.3,SNR=11						

*IDC **02** 12:50:04.5±1.0, 269N×127.12E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/15, mbtmp3.9/7, Error ellipse: s-maj=62.9km s-min=17.0km az=77.0*
*ISCJB **02** 12:50:07.4±0.8, 269N±0.10×1270E±03, h33km, mb3.9/7, Error ellipse: s-maj=39.9km s-min=12.9km az=170.7*
*NEIC **02** 12:50:09.6±0.7, 267N×12705E, h35km, mb4.0/2, Error ellipse: s-maj=37.3km s-min=12.0km az=81.0*
ISC 02 12:50:09.6±0.8**, 27N**±01×**1270E**±03**, h35**km**, n10,** σ**0§77**/10**, mb3.9**/7**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.67**	**184**	*e*P	**P**	**12 54 48.7**	**+2.1**
	4.8nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.67**	**184**	P	**P**	**12 54 48.1**	**+1.6**
	0.9nm,0.5s,baz=138,slow=18,SNR=6.1						
WRA	**Warramunga Arr**	**23.57**	**163**	P	**P**	**12 55 17.3**	**+0.1**
	3.6nm,0.4s,mb4.2,baz=333,slow=12,SNR=37						
WB2	**Warramunga Arr**	**23.57**	**163**	*e*P	**P**	**12 55 17.6**	**+0.3**
MBWA	**Marble Bar**	**24.72**	**196**	P	**P**	**12 55 26.7**	**-1.0**
	6.9nm,1.1s,mb4.1						
ASAR	**Alice Springs**	**27.00**	**166**	P	**P**	**12 55 47.9**	**-0.5**
	0.8nm,0.4s,mb3.6,baz=343,slow=8.1,SNR=15						
STKA	**Stephens Creek**	**37.02**	**159**	P	**P**	**12 57 15.3**	**-0.8**
	3.1nm,0.7s,mb4.2,baz=337,slow=10,SNR=4.8						
SONM	**Songino Array**	**48.41**	**341**	P	**P**	**12 58 48.0**	**-0.3**
	0.2nm,0.5s,mb3.4,baz=160,slow=9.0,SNR=2.6						
PETK	**Petropavlovsk-**	**56.31**	**22**	P	**P**	**12 59 47.1**	**+0.4**
	1.7nm,0.9s,mb4.1,baz=188,slow=2.9,SNR=4.2						
MKAR	**Makanchi Array**	**58.61**	**325**	P	**P**	**13 00 03.3**	**+0.2**
	0.4nm,0.4s,mb3.9,baz=118,slow=8.7,SNR=6.2						

*CSEM **02** 13:06:42.7, 3678N×3673E, h7km, MD3.1, After ERD*
DDA 02 13:06:42.7, 3678N×3673E, h7km±6km**, Md3.1, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COBT	**Iskenderun**	**0.46**	**236**	*i* P	Pg	13 06 51.5	-0.1
COBT				*i* S	Sg	13 06 59.8	+2.2
GZT	**Gaziantep**	**0.89**	**49**	*i* P	Pg	13 07 00.1	+0.4
GZT				*i* S	Sg	13 07 15.6	+4.4
AKCD	**Akcadag**	**1.79**	**32**	*i* P	Pn	13 07 18.4	+4.4
AKCD				*i* S	Sn	13 07 35.2	-1.8

PRE 02 13:11:10.6±0.9**, 2107S**×**3362E, h5**km**, ML4.4, Mozambique**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.57**	**249**	*e*P	Pn	13 12 08.0	+1.3
MSNA				*e*S	Sn	13 12 49.4	0.0
MSNA				AML	AML	13 13 03.2	
	comp=Z,262nm,0.3s						
POGA	**Pongola**	**6.53**	**196**	*e*P	Pn	13 12 47.4	0.0
POGA				*e*S	Sn	13 13 58.0	-4.3
POGA				AML	AML	13 14 11.4	
	comp=Z,14nm,0.5s						
SLR	**Silverton**	**6.75**	**226**	*e*P	Pn	13 12 51.9	+1.5
SLR				*e*S	Sn	13 14 04.9	-2.8
SLR				AML	AML	13 14 47.3	
	comp=Z,57nm,0.5s						
PRYS	**Parys**	**8.17**	**223**	*e*P	Pn	13 13 11.4	+1.6
PRYS				*e*S	Sn	13 14 39.3	-3.2
PRYS				AML	AML	13 15 19.0	
	comp=Z,10nm,0.7s						
SEK	**Senekal**	**9.04**	**216**	*e*P	Pn	13 13 23.3	+1.4
SEK				*e*S	Sn	13 15 00.2	-3.9
SEK				AML	AML	13 16 04.8	
	comp=Z,22nm,0.6s						
SWZ	**Schweizer**	**9.71**	**230**	*e*P	Pn	13 13 31.4	+0.5
SWZ				*e*S	Sn	13 15 15.7	-4.7
SWZ				AML	AML	13 16 17.1	
	comp=Z,28nm,0.6s						
KSD	**Kokstad**	**10.16**	**201**	*e*P	Pn	13 13 38.5	+1.3
KSD				*e*S	Sn	13 15 26.2	-5.3
KSD				AML	AML	13 15 50.8	
	comp=Z,17nm,0.6s						
PKA	**Prieska**	**13.02**	**227**	*e*P	Pn	13 14 17.8	+1.5
PKA				*e*S	Sn	13 16 34.6	-7.0
PKA				AML	AML	13 16 36.2	
	comp=Z,9.9nm,0.6s						

*CSEM **02** 13:19:41.2±0.1, 3796N×3097E, h5km, MD2.9, Error ellipse: s-maj=1.8km s-min=1.6km az=162.0*
*ISCJB **02** 13:19:42.3±0.8, 3796N±003×3092E±003, h3km±6km, Error ellipse: s-maj=4.7km s-min=4.4km az=29.3*
*ISK **02** 13:19:42.0, 3795N×3095E, h9km, MD3.1*
*DDA **02** 13:19:42.1, 3798N×3088E, h7km±4km, Md2.9*
ISC 02 13:19:43.1±0.6**, 3797N**±003×**3092E**±003**, h9**km±4km**, n23, σ1ˢ27**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TKTP	**Tekketepe**	**0.48**	**279**	*i* P	**Pg**	**13 19 50.8**	**-1.6**
TKTP				*i* S	**Sg**	**13 19 58.8**	**0.0**
BCK	**Bucak**	**0.57**	**208**	*e*PG	**Pg**	**13 19 53.1**	**-1.0**
BCK				*e*SG	**Sg**	**13 20 01.8**	**+0.2**
SHUT	**Suhut-Afyon**	**0.65**	**334**	*e*PG	**Pg**	**13 19 55.8**	**0.0**
SHUT				*e*SG	**Sg**	**13 20 05.8**	**+1.5**
KDHN	**Kadinhani**	**1.09**	**59**	*i* P	**Pg**	**13 20 02.7**	**-1.4**
KDHN				*i* S	**Sg**	**13 20 20.2**	**+1.8**
KONT	**Konya--Tatoy**	**1.14**	**91**	*e*PN	**Pn**	**13 20 03.7**	**-1.6**
KHL	**Karahalli**	**1.16**	**288**	*e*PN	**Pn**	**13 20 04.8**	**-0.7**
KHL				*e*SN	**Sn**	**13 20 22.2**	**+0.7**
LADK	**Ladik-KONYA**	**1.16**	**78**	*e*PN	**Pn**	**13 20 04.2**	**-1.4**
KIZT	**Kizilcal**	**1.18**	**39**	*e*PN	**Pn**	**13 20 04.9**	**-0.9**
KHAL	**Karahalli**	**1.20**	**290**	*i* P	**Pb**	**13 20 03.8**	**-2.2**
KHAL				*i* S	**Sg**	**13 20 24.1**	**+2.4**
KHAL	**Karahalli**	**1.20**	**290**	*i* P	**Pb**	**13 20 03.8**	**-2.1**
KHAL				*i* S	**Sg**	**13 20 24.0**	**+2.4**
ALT	**Altintas**	**1.26**	**330**	*e*PN	**Pn**	**13 20 06.2**	**-0.6**
GOLH	**Golhisar**	**1.30**	**236**	*i* P	**Pn**	**13 20 06.8**	**-0.7**
GOLH				*i* S	**Sb**	**13 20 28.2**	**+3.6**
DENT	**Denizli**	**1.51**	**262**	*e*PN	**Pn**	**13 20 11.0**	**+0.7**
ESKT	**Eskisehir**	**1.55**	**358**	*i* P	**Pn**	**13 20 10.7**	**-0.2**
ESKT				*i* S	**Sn**	**13 20 33.1**	**+1.9**
SEYT	**Eskypehyr**	**1.55**	**358**	*i* P	**Pn**	**13 20 10.7**	**-0.2**
SEYT				*i* S	**Sn**	**13 20 33.1**	**+1.9**
GDZ	**Gediz**	**1.59**	**315**	*i* P	**Pn**	**13 20 11.2**	**-0.3**
GDZ				*i* S	**Sn**	**13 20 29.9**	**-2.2**
HDMB	**Hadim**	**1.60**	**128**	*e*PN	**Pn**	**13 20 10.8**	**-0.7**
KULA	**Kula-Manisa**	**1.86**	**288**	*e*PN	**Pn**	**13 20 15.0**	**-0.2**
AKAS	**Kas**	**2.02**	**212**	*i* P	**Pn**	**13 20 19.0**	**+1.6**
AKAS				*i* S	**Sn**	**13 20 43.1**	**+0.3**
ERMK	**Ermenek**	**2.07**	**129**	*i* P	**Pn**	**13 20 20.6**	**+2.6**
ERMK				*i* S	**Sn**	**13 20 49.4**	**+5.5**
IKL	**Isikli**	**2.80**	**127**	*e*PN	**Pn**	**13 20 28.4**	**+0.2**
MEST	**Erdemli**	**2.92**	**117**	*i* P	**Pn**	**13 20 31.7**	**+2.0**
MEST				*i* S	**Sn**	**13 21 10.4**	**+5.5**
MERS	**Mersin**	**3.07**	**110**	*e*PN	**Pn**	**13 20 32.0**	**+0.2**

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*NEIC **02** 13:29:16.0±1.0, 1140S×16578E, h35km, mb4.5/3, Error ellipse: s-maj=22.0km s-min=14.1km az=125.0*
*IDC **02** 13:29:16.6±1.0, 1061S×16469E, h0km, mb4.2/7, mb1 4.4/7, mb1mx4.0/17, mbtmp4.3/7, MS4.1/4, Ms1 4.1/4, ms1mx3.5/28, Error ellipse: s-maj=38.4km s-min=21.9km az=158.0*
*ISCJB **02** 13:29:20.7±0.9, 108S±02×1646E±01, h33km, mb4.3/7, MS4.1/4, Error ellipse: s-maj=32.9km s-min=16.4km az=165.4*
ISC 02 13:29:22.4±0.9**, 108S**±02×**1647E**±01**, h35**km**, n20, σ0ˢ83**/14**, mb4.2**/7**, MS4.1**/4**, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.86**	**285**	*e*Pn	**Pn**	**13 30 43.1**	**+10**
CTA	**Charters Tower**	**20.04**	**240**	P	**P**	**13 33 53.7**	**+1.1**
	9.2nm,0.8s,baz=72,slow=12,SNR=7.3						
CTAO	**Charters Tower**	**20.04**	**240**	*e*P	**P**	**13 33 53.9**	**+1.3**
	34nm,1.4s						
ARMA	**Armidale**	**23.03**	**210**	*e*P	**P**	**13 34 18.6**	**-6.0**
	0.6nm,1.3s						
AFI	**Afiamalu**	**23.19**	**100**	P	**P**	**13 34 26.5**	**+0.1**
	12nm,0.3s,mb4.8,baz=248,slow=22,SNR=7.7						
AFI				LR	LR	13 42 31.6	
	comp=Z,244nm,18.3s,MS3.7,baz=93,slow=34						
STKA	**Stephens Creek**	**29.95**	**222**	LR	LR	13 46 00.8	
	comp=Z,342nm,21.7s,MS4.0,baz=24,slow=33						
WB2	**Warramunga Arr**	**30.61**	**249**	*e*P	**P**	**13 35 34.1**	**+0.7**
WRA	**Warramunga Arr**	**30.62**	**249**	P	**P**	**13 35 32.9**	**-0.6**
	2.4nm,0.9s,mb4.0,baz=79,slow=8.1,SNR=11						
WRA				LR	LR	13 46 29.7	
	comp=Z,228nm,18.5s,MS3.9,baz=145,slow=34						
ASAR	**Alice Springs**	**32.01**	**242**	P	**P**	**13 35 43.9**	**-1.8**
	2.0nm,1.0s,mb3.9,baz=81,slow=9.6,SNR=9.9						
FITZ	**Fitzroy Crossi**	**38.47**	**254**	*e*P	**P**	**13 36 41.5**	**+0.1**
	5.4nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**38.47**	**254**	P	**P**	**13 36 41.7**	**+0.4**
	5.3nm,1.1s,mb4.2,baz=96,slow=8.6,SNR=6.6						
PPT	**Papeete**	**44.76**	**104**	*e*LQ		13 47 34.9	
	151nm,23.8s						
PPT				*e*LR	LR	13 49 28.5	
	135nm,25.2s						
RKT	**Rikitea**	**58.65**	**111**	*e*LR	LR	13 55 55.8	
	186nm,31.2s						
SONM	**Songino Array**	**77.83**	**324**	P	**P**	**13 41 16.4**	**+0.2**
	0.7nm,0.8s,mb3.6,baz=133,slow=6.5,SNR=4.5						
EGAK	**Eagle**	**85.47**	**20**	*e*P	**P**	**13 41 50.6**	**-5.6**
	3.1nm,0.7s,mb4.5						
MKAR	**Makanchi Array**	**92.61**	**317**	P	**P**	**13 42 30.4**	**-0.1**
	1.6nm,0.8s,mb4.5,baz=95,slow=6.2,SNR=16						
MKAR	**Makanchi Array**	**92.61**	**317**	P	**P**	**13 42 30.4**	**-0.1**
PMSA	**Palmer Station**	**96.32**	**161**	LR	LR	14 24 54.7	
	comp=Z,276nm,18.9s,MS4.8,baz=273,slow=35						
KEST	**Kesra**	**146.56**	**322**	PKPbc	PKPbc	13 48 59.0	-1.6
	1.2nm,1.0s,baz=122,slow=2.1,SNR=5.6						
ESDC	**Sonseca Array**	**149.49**	**343**	PKPbc	PKPbc	13 49 05.2	-3.1
	0.7nm,0.7s,baz=44,slow=2.0,SNR=5.6						
ESDC				PKPab	PKPab	13 49 11.8	-1.4
	0.6nm,0.7s,baz=3.7,slow=4.8,SNR=4.1						

IDC 02 13:41:45.5±8.7**, 1153S**×**16571E, h0**km**, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.6**/14**, mbtmp3.8**/3**, Error ellipse: s-maj=263.2km s-min=53.6km az=124.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.29**	**251**	P	P	13 48 08.3	+0.7
	0.5nm,0.7s,baz=84,slow=9.2,SNR=5.5						
ASAR	**Alice Springs**	**32.55**	**244**	P	P	13 48 18.2	-0.4
	0.6nm,0.7s,baz=67,slow=9.8,SNR=11						
MKAR	**Makanchi Array**	**93.85**	**317**	P	P	13 55 04.8	-0.1
	0.6nm,0.7s,baz=116,slow=4.2,SNR=6.0						

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*IDC **02** 13:45:41.9±2.4, 1124S×16552E, h0km, mb4.1/7, mb1 4.3/7, mb1mx4.0/16, mbtmp4.1/7, MS3.7/1, Ms1 3.7/1, ms1mx2.9/29, Error ellipse: s-maj=79.9km s-min=27.1km az=128.0*
*ISCJB **02** 13:45:44.2±7.2, 114S±02×1657E±04, h35km±50km, mb4.1/7, Error ellipse: s-maj=69.4km s-min=25.8km az=26.1*
*NEIC **02** 13:45:46.6±1.1, 1134S×16572E, h35km, mb4.5/1, Error ellipse: s-maj=27.0km s-min=16.6km az=137.0*
ISC 02 13:45:46.6±6.1**, 113S**±02×**1657E**±04**, h42**km±43km**, n16, σ0ˢ55**/12**, mb4.1**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.97**	**288**	*e*P	**Pn**	**13 47 12.5**	**-0.1**
	185nm,0.8s						
CTA	**Charters Tower**	**20.64**	**243**	P	**P**	**13 50 23.9**	**+1.1**
	9.7nm,0.9s,baz=59,slow=11,SNR=6.3						
CTAO	**Charters Tower**	**20.64**	**243**	P	**P**	**13 50 23.5**	**+0.7**
AFI	**Afiamalu**	**22.12**	**99**	LR	LR	13 56 57.3	
	comp=Z,213nm,20.9s,baz=281,slow=30						
STKA	**Stephens Creek**	**30.22**	**224**	P	**P**	**13 51 53.6**	**+0.3**
	4.1nm,0.8s,mb4.2,baz=311,slow=16,SNR=5.6						
WRA	**Warramunga Arr**	**31.36**	**250**	P	**P**	**13 52 03.3**	**-0.2**
	4.8nm,0.8s,mb4.4,baz=80,slow=9.1,SNR=27						
ASAR	**Alice Springs**	**32.64**	**244**	P	**P**	**13 52 13.8**	**-0.9**
	1.4nm,0.9s,mb3.9,baz=76,slow=9.3,SNR=11						
FITZ	**Fitzroy Crossi**	**39.28**	**255**	P	**P**	**13 53 11.2**	**-0.4**
	3.3nm,0.8s,mb4.1,baz=102,slow=3.3,SNR=8.2						
FITZ	**Fitzroy Crossi**	**39.28**	**255**	*e*P	**P**	**13 53 10.9**	**-0.7**
PPT	**Papeete**	**43.66**	**104**	*e*LQ		14 04 26.7	
	152nm,23.5s						
PPT				*e*LR	LR	14 06 03.9	
	128nm,23.8s						
RKT	**Rikitea**	**57.52**	**110**	*e*LR	LR	14 12 43.3	
	201nm,25.5s						
CMAR	**Chiang Mai Arr**	**72.19**	**294**	P	**P**	**13 57 08.4**	**+0.7**
	0.9nm,0.9s,mb3.7,baz=137,slow=3.5,SNR=5.3						
EGAK	**Eagle**	**85.65**	**20**	*e*P	**P**	**13 58 20.2**	**-0.2**
	2.7nm,0.9s,mb4.5						
MKAR	**Makanchi Array**	**93.70**	**317**	P	**P**	**13 58 59.0**	**+0.1**
	0.6nm,0.8s,mb4.1,baz=99,slow=6.3,SNR=5.5						
MKAR	**Makanchi Array**	**93.70**	**317**	P	**P**	**13 58 59.0**	**+0.1**
ESDC	**Sonseca Array**	**150.31**	**344**	PKPbc	PKPbc	14 05 35.6	+2.0
	0.1nm,0.3s,baz=139,slow=22,SNR=2.7						
ESDC				PKPab	PKPab	14 05 40.4	+0.5
	0.1nm,0.4s,baz=359,slow=5.6,SNR=4.1						

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*ISCJB **02** 13:47:51.4±0.6, 21.11S±005×3301E±008, h10km, mb3.9/9, Error ellipse: s-maj=11.1km s-min=6.3km az=29.3*
*IDC **02** 13:47:52.5±0.7, 2085S×3349E, h0km, mb4.0/9, mb1 4.2/11, mb1mx4.0/22, mbtmp4.0/11, ML4.3/2, MS3.5/4, Ms1 3.5/4, ms1mx3.2/34, Error ellipse: s-maj=27.5km s-min=20.7km az=40.0*
*NEIC **02** 13:47:54.2±0.6, 2085S×3355E, h10km, Error ellipse: s-maj=21.2km s-min=14.6km az=188.0*
*PRE **02** 13:47:55.4±1.0, 2129S×3287E, h5km, ML4.8*
ISC 02 13:47:53.3±0.6**, 2108S**±006×**3308E**±008**, h10**km**, n35, σ0ˢ87**/52**, mb3.9**/9**, Mozambique**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**2.89**	**212**	*e*P	**Pn**	**13 48 39.7**	**+0.4**
MOPA				*e*S	**Sn**	**13 49 10.2**	**-3.9**
MOPA				AML	AML	13 49 32.5	
	comp=Z,4µm,0.4s						
SLR	**Silverton**	**6.40**	**223**	*e*P	**Pn**	**13 49 27.5**	**-0.1**
SLR				*e*S	**Sn**	**13 50 34.0**	**-6.7**
SLR				AML	AML	13 51 18.0	
	comp=Z,140nm,0.5s						
POGA	**Pongola**	**6.41**	**192**	*e*P	**Pn**	**13 49 27.5**	**-0.2**
POGA				*e*S	**Sn**	**13 50 34.3**	**-6.6**
POGA				AML	AML	13 50 57.5	
	comp=Z,67nm,0.4s						
LSZ	**Lusaka**	**7.41**	**320**	Pn	**Pn**	**13 49 42.1**	**+0.6**
	comp=Z,17nm,0.3s,baz=149,slow=13,SNR=36						
LSZ				Sn	**Sn**	**13 50 57.8**	**-7.9**
	comp=Z,6.9nm,0.3s,baz=143,slow=15,SNR=3.5						
LSZ				Lg		13 51 40.0	
	comp=Z,37nm,0.3s,baz=238,slow=12,SNR=9.9						
LSZ	**Lusaka**	**7.41**	**320**	*e*Pn	**Pn**	**13 49 40.6**	**-1.0**
LSZ				*e*Sn	**Sn**	**13 50 57.9**	**-7.9**
LSZ				Lg		13 51 40.0	
LSZ				*e*Sg	**Sg**	**13 51 40.3**	**-11**
PRYS	**Parys**	**7.83**	**221**	*e*P	**Pn**	**13 49 46.9**	**-0.3**
PRYS				*e*S	**Sn**	**13 51 09.2**	**-6.7**
PRYS				AML	AML	13 52 20.8	
	comp=Z,82nm,0.7s						
LBTB	**Lobatse**	**7.93**	**239**	Pn	**Pn**	**13 49 49.5**	**+0.9**
	comp=Z,4.2nm,0.3s,baz=68,slow=14,SNR=32						
LBTB				Sn	**Sn**	**13 51 18.6**	**+0.2**
	comp=Z,6.4nm,0.3s,baz=359,slow=22,SNR=4.0						
LBTB				Lg		13 51 59.1	
	comp=Z,10nm,0.3s,baz=160,slow=19,SNR=4.5						
LBTB				LR	LR	13 52 25.9	
	comp=Z,171nm,19.3s,baz=64,slow=33						
SEK	**Senekal**	**8.75**	**213**	*e*P	**Pn**	**13 50 00.2**	**+0.3**
SEK				*e*S	**Sn**	**13 51 31.4**	**-7.3**
SEK				AML	AML	13 52 11.5	
	comp=Z,36nm,0.5s						
KSD	**Kokstad**	**9.98**	**199**	*e*P	**Pn**	**13 50 16.3**	**-0.5**
KSD				*e*S	**Sn**	**13 52 00.7**	**-8.3**
KSD				AML	AML	13 52 36.2	
	comp=Z,40nm,0.4s						
BOSA	**Boshof**	**10.33**	**222**	Pn	**Pn**	**13 50 21.2**	**-0.4**
	comp=Z,1.6nm,0.3s,baz=52,slow=13,SNR=24						
BOSA				Sn	**Sn**	**13 52 16.1**	**-1.4**
	comp=Z,4.6nm,0.3s,baz=60,slow=6.3,SNR=5.4						
BOSA				Lg		13 53 11.7	
	comp=Z,4.5nm,0.3s,baz=325,slow=20,SNR=3.6						
BOSA				LR	LR	13 54 38.9	
	comp=Z,244nm,20.4s,baz=39,slow=38						
BOSA	**Boshof**	**10.33**	**222**	*e*Pn	**Pn**	**13 50 21.2**	**-0.4**
BOSA				*e*Sn	**Sn**	**13 52 09.6**	**-7.9**
BOSA				Lg		13 53 11.7	
BOSA				LR	LR	13 54 38.9	
HVD	**Gariep Dam**	**11.69**	**214**	*e*P	**Pn**	**13 50 40.4**	**+0.2**
HVD				*e*S	**Sn**	**13 52 40.5**	**-10**
HVD				AML	AML	13 53 33.4	
	comp=Z,17nm,0.7s						
PKA	**Prieska**	**12.65**	**225**	*e*P	**Pn**	**13 50 53.8**	**+0.5**
PKA				*e*S	**Sn**	**13 53 04.3**	**-10**
PKA				AML	AML	13 53 40.8	
	comp=Z,16nm,0.5s						
UPI	**Upington**	**12.96**	**234**	*e*P	**Pn**	**13 50 57.5**	**-0.1**
UPI				*e*S	**Sn**	**13 53 11.6**	**-10**
UPI				AML	AML	13 53 24.8	
	comp=Z,23nm,0.6s						
OPO	**Ambohidratompo**	**13.51**	**82**	Pn	**Pn**	**13 50 59.3**	**-5.7**
	comp=Z,0.4nm,0.3s,baz=83,slow=21,SNR=3.3						
TSUM	**Tsumeb**	**14.68**	**275**	Pn	**Pn**	**13 51 20.4**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=104,slow=13,SNR=10						
TSUM				Sn	**Sn**	**13 54 09.6**	**+5.8**
	comp=Z,0.5nm,0.3s,baz=204,slow=19,SNR=3.1						
TSUM				Lg		13 55 33.2	
	comp=Z,1.2nm,0.3s,baz=152,slow=16,SNR=4.4						
TSUM				LR	LR	13 56 38.1	
	comp=Z,294nm,19.6s,baz=141,slow=35						
TSUM	**Tsumeb**	**14.68**	**275**	*e*Pn	**Pn**	**13 51 19.2**	**-1.8**
TSUM				Sn	**Sn**	**13 54 09.7**	**+5.8**
TSUM				Lg		13 55 33.2	
TSUM				LR	LR	13 56 38.1	
SUR	**Sutherland**	**15.70**	**222**	Pn	**Pn**	**13 51 35.0**	**+0.4**
	comp=Z,1.5nm,0.3s,baz=51,slow=14,SNR=12						
SUR				Sn	**Sn**	**13 54 40.2**	**+12**
	comp=Z,1.3nm,0.3s,baz=233,slow=1.8,SNR=7.2						
SUR				Lg		13 56 09.3	
	comp=Z,0.5nm,0.3s,baz=131,slow=20,SNR=7.8						
SUR				LR	LR	13 57 17.7	
	comp=Z,226nm,21.8s,baz=66,slow=35						
SUR	**Sutherland**	**15.70**	**222**	Pn	**Pn**	**13 51 35.0**	**+0.4**
SUR				Sn	**Sn**	**13 54 40.2**	**+12**
SUR				Lg		13 56 09.3	
SUR				LR	LR	13 57 17.7	
SUR	**Sutherland**	**15.70**	**222**	*e*P	**Pn**	**13 51 36.1**	**+1.6**
SUR				*e*S	**Sn**	**13 54 16.5**	**-12**
TORD	**Torodi Ar. Bea**	**45.91**	**315**	P	**P**	**13 56 16.2**	**-0.2**
	comp=Z,1.2nm,0.5s,mb4.1,baz=119,slow=6.3,SNR=21						
MAW	**Mawson**	**50.15**	**166**	P	**P**	**13 56 48.9**	**+0.4**
	comp=Z,2.3nm,0.7s,mb4.3,baz=305,slow=11,SNR=11						
VNA1	**Neumayer--Stat**	**55.19**	**196**	*e*	**P**	**13 57 30.0**	**+4.2**
VNA3	**Neumayer Olymp**	**55.93**	**195**	*e*	**P**	**13 57 34.4**	**+3.3**
ESDC	**Sonseca Array**	**69.64**	**330**	P	**P**	**13 59 04.7**	**+1.9**
	comp=Z,0.3nm,0.6s,mb3.4,baz=151,slow=5.2,SNR=4.5						
GERES	**GERESS Array B**	**71.73**	**347**	P	**P**	**13 59 15.3**	**0.0**
	comp=Z,0.4nm,0.8s,mb3.4,baz=270,slow=1.3,SNR=3.7						
CMAR	**Chiang Mai Arr**	**75.52**	**63**	P	**P**	**13 59 36.9**	**-1.4**
	comp=Z,0.3nm,0.3s,mb3.7,baz=258,slow=6.9,SNR=4.6						
BDFB	**Brasilia**	**76.41**	**258**	P	**P**	**13 59 47.9**	**+4.4**
	comp=Z,3.6nm,0.6s,mb4.5,baz=107,slow=3.5,SNR=7.1						
MKAR	**Makanchi Array**	**80.83**	**32**	P	**P**	**14 00 06.3**	**-0.8**
	comp=Z,0.5nm,0.7s,mb3.5,baz=231,slow=5.8,SNR=4.2						
MKAR	**Makanchi Array**	**80.83**	**32**	P	**P**	**14 00 06.3**	**-0.8**
ASAR	**Alice Springs**	**91.03**	**116**	P	**P**	**14 00 58.5**	**+0.1**
	comp=Z,0.7nm,0.9s,mb4.0,baz=237,slow=3.7,SNR=6.2						
LPAZ	**La Paz**	**94.29**	**251**	P	**P**	**14 01 17.8**	**+4.3**
	comp=Z,1.8nm,1.0s,mb4.5,baz=108,slow=3.2,SNR=5.7						
MSU	**Marysvale**	**145.46**	**308**	*e*PKP	PKPdf	14 07 34.1	+2.3
ELK	**Elko**	**146.75**	**313**	PKPbc	PKPbc	14 07 38.6	+2.9
	comp=Z,0.7nm,0.7s,baz=125,slow=7.3,SNR=4.0						
NVAR	**Mina Array Bea**	**149.91**	**311**	PKPbc	PKPbc	14 07 45.8	+1.7
	comp=Z,1.0nm,0.7s,baz=95,slow=3.4,SNR=9.3						
NVAR				PKPab	PKPab	14 07 49.9	+0.3
	comp=Z,0.2nm,0.5s,baz=124,slow=13,SNR=3.8						

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*IDC **02** 13:58:38.2±0.7, 1167S×16603E, h0km, mb4.5/17, mb1 4.6/17, mb1mx4.5/19, mbtmp4.4/17, Error ellipse: s-maj=24.3km s-min=15.4km az=127.0*
*NEIC **02** 13:58:43.6±0.4, 1160S×16599E, h35km, mb4.8/9, Error ellipse: s-maj=13.0km s-min=8.4km az=128.0*
*BJI **02** 13:58:43.6, 1160S×16600E, h35km, mB5.0, mb4.8, Ms4.9, Msz4.7*
*DJA **02** 13:58:44, 1189S×16633E, h43km, mb5.0/11*
*ISCJB **02** 13:58:45.8±1.9, 1172S±007×16585E±007, h61km±17km, mb4.6/30, Error ellipse: s-maj=13.0km s-min=10.0km az=44.1*
ISC 02 13:58:47.7±1.6**, 1170S**±007×**16586E**±007**, h62**km±14km**, h36**km±.7km**: pP-P, n55, σ1ˢ05**/47**, mb4.6**/30**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.24**	**291**	*e*Pn	**Pn**	**14 00 15.2**	**-2.0**
	134nm,0.5s						
FUNA	**Funafuti**	**13.50**	**78**	*e*Pn	**Pn**	**14 01 57.4**	**+0.9**
CTA	**Charters Tower**	**20.60**	**244**	⇓*i*P	**P**	**14 03 22.8**	**+0.9**
	16nm,0.6s						
CTA	**Charters Tower**	**20.60**	**244**	P	**P**	**14 03 22.9**	**+1.0**
	23nm,0.7s,baz=68,slow=13,SNR=22						
CTAO	**Charters Tower**	**20.60**	**244**	*e*P	**P**	**14 03 23.0**	**+1.1**
	79nm,1.3s						
COEN	**Coen**	**22.23**	**262**	*e*P	**P**	**14 03 39.4**	**0.0**
ARMA	**Armidale**	**22.83**	**213**	*e*P	**P**	**14 03 46.3**	**+0.7**
CNB	**Canberra Magne**	**27.87**	**210**	*e*P	**P**	**14 04 32.4**	**+0.8**
STKA	**Stephens Creek**	**30.05**	**224**	*e*P	**P**	**14 04 51.0**	**0.0**
	6.0nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**30.05**	**224**	P	**P**	**14 04 51.1**	**+0.1**
	7.0nm,0.9s,mb4.4,baz=23,slow=9.5,SNR=8.5						
WB2	**Warramunga Arr**	**31.36**	**251**	*e*P	**P**	**14 05 01.9**	**-0.8**
WRA	**Warramunga Arr**	**31.37**	**251**	P	**P**	**14 05 02.0**	**-0.8**
	16nm,1.0s,mb4.8,baz=82,slow=9.2,SNR=53						
WRA				PcP	PcP	14 07 53.1	-2.3
	1.6nm,0.9s,baz=76,slow=3.1,SNR=5.8						
TOO	**Toolangi**	**31.58**	**212**	*e*P	**P**	**14 05 05.1**	**+0.7**
RPZ	**Rata Peaks**	**32.21**	**173**	P	**P**	**14 05 09.8**	**0.0**
	9.4nm,0.5s,mb4.9,baz=326,slow=13,SNR=7.5						
ASAR	**Alice Springs**	**32.61**	**244**	P	**P**	**14 05 12.4**	**-1.2**
	15nm,0.8s,mb5.0,baz=70,slow=9.6,SNR=171						
ASAR				PcP	PcP	14 07 58.4	-0.4
	2.3nm,0.8s,baz=79,slow=3.4,SNR=9.3						
FITZ	**Fitzroy Crossi**	**39.33**	**256**	*e*P	**P**	**14 06 10.8**	**-0.3**
	4.4nm,0.5s,mb4.4						
FITZ	**Fitzroy Crossi**	**39.33**	**256**	P	**P**	**14 06 10.8**	**-0.3**
	3.8nm,0.6s,mb4.3,baz=132,slow=8.9,SNR=6.6						
BATI	**Baumata**	**41.43**	**268**	P	**P**	**14 06 30.0**	**+1.4**
	17nm,0.7s,mb4.8,baz=113,slow=5.5,SNR=3.6						
PPT	**Papeete**	**43.43**	**103**	*e*LQ		14 17 14.1	
	431nm,28.2s						
PPT				*e*LR	LR	14 19 11.0	
	1µm,25.2s						
MBWA	**Marble Bar**	**45.10**	**252**	*e*P	**P**	**14 06 58.0**	**-0.1**
	16nm,0.8s,mb4.9						
KLBR	**Kellerberrin**	**48.46**	**238**	*e*P	**P**	**14 07 23.8**	**-0.4**
	8.7nm,0.6s,mb5.0						
NWAO	**Narrogin (SRO)**	**49.20**	**236**	P	**P**	**14 07 29.9**	**0.0**
	9.5nm,0.8s,mb4.8,baz=80,slow=5.4,SNR=4.6						
MJAR	**Matsushiro Arr**	**54.60**	**333**	P	**P**	**14 08 09.6**	**-0.2**
	2.1nm,1.1s,mb4.1,baz=116,slow=2.9,SNR=3.3						
RKT	**Rikitea**	**57.26**	**110**	*e*LR	LR	14 25 35.7	
	509nm,25.2s						
QIZ	**Qiongzhong**	**63.09**	**298**	*e*P	**P**	**14 09 09.6**	**+0.5**
QIZ				LR	LR		
	comp=E,178nm,17.6s						
QIZ				LR	LR		
	comp=Z,282nm,23.1s						
PETK	**Petropavlovsk-**	**64.92**	**355**	P	**P**	**14 09 21.2**	**+0.8**
	comp=Z,0.2nm,0.4s,mb3.5,baz=196,slow=37,SNR=2.8						
CASY	**Casey**	**65.81**	**201**	*e*P	**P**	**14 09 25.4**	**-0.7**
	comp=Z,8.0nm,0.7s,mb4.9						
SBA	**Scott Base**	**66.15**	**180**	*e*P	**P**	**14 09 28.0**	**-0.1**
CN2	**Changchun**	**66.36**	**329**	*e*P	**P**	**14 09 32.8**	**+2.9**
CN2				*e*XP	sP	14 09 47.0	-6.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,290nm,16.0s						
CN2				LR	LR		
	comp=E,390nm,16.0s						
CN2				LR	LR		
	comp=Z,390nm,19.0s						
GYA	**Guiyang**	**68.88**	**304**	P	**P**	**14 09 48.6**	**+2.4**
GYA				AP	pP	14 09 59.6	-3.5
GYA				XP	sP	14 10 03.5	-6.5
GYA				PCP	PcP	14 10 12.4	+2.1
GYA				PP	PP	14 12 23.6	+4.4
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=N,510nm,20.9s						
GYA				LR	LR		
	comp=E,470nm,19.7s						
GYA				LR	LR		
	comp=Z,500nm,19.8s						
KMI	**Kunming**	**71.56**	**302**	P	**P**	**14 10 04.0**	**+1.4**
KMI				AP	pP	14 10 14.5	-5.1
KMI				XP	sP	14 10 17.8	-8.7
KMI				PCP	PcP	14 10 23.6	+1.9
KMI				PP	PP	14 12 43.5	+1.2
KMI				AMB	AMB		
	comp=Z,7.0nm,2.0s,mb4.2						
KMI				AMB	AMB		
	comp=Z,92nm,5.8s						
KMI				LR	LR		
	comp=N,127nm,19.8s						
KMI				LR	LR		
	comp=E,107nm,16.7s						
KMI				LR	LR		
	comp=Z,266nm,21.6s						
HHC	**Hu-ho-hao-te**	**72.40**	**320**	*e*P	**P**	**14 10 08.2**	**+0.9**
HHC				AP	pP	14 10 19.5	-4.8
HHC				XP	sP	14 10 23.1	-8.1
HHC				PCP	PcP	14 10 26.2	+1.3
HHC				PP	PP	14 12 51.4	+2.2
HHC				AMB	AMB		
	comp=Z,16nm,0.5s,mb5.2						
HHC				AMB	AMB		
	comp=Z,100nm,6.6s						
HHC				LR	LR		
	comp=N,394nm,20.7s						
HHC				LR	LR		
	comp=E,450nm,19.5s						
HHC				LR	LR		
	comp=Z,787nm,19.7s						
CMAR	**Chiang Mai Arr**	**72.48**	**294**	P	**P**	**14 10 09.1**	**+0.8**
	comp=Z,3.0nm,0.7s,mb4.3,baz=119,slow=4.6,SNR=21						
CD2	**Chengdu**	**73.09**	**307**	*e*P	**P**	**14 10 12.3**	**+0.7**
CD2				AP	pP	14 10 22.6	-6.1
CD2				XP	sP	14 10 26.8	-8.8
CD2				PP	PP	14 12 57.1	+1.8
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,6.2s						
LZH	**Lanzhou**	**75.28**	**312**	*e*P	**P**	**14 10 28.0**	**+3.7**
LZH				AP	pP	14 10 38.5	-2.9
LZH				XP	sP	14 10 42.3	-6.0
LZH				PP	PP	14 13 19.5	+5.7
LZH				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,65nm,4.3s						
ULN	**Ulaanbaatar**	**78.89**	**324**	*e*P	**P**	**14 10 42.6**	**-1.6**
SONM	**Songino Array**	**79.26**	**324**	P	**P**	**14 10 45.3**	**-0.9**
	comp=Z,0.7nm,0.5s,mb3.9,baz=137,slow=5.1,SNR=6.8						
GTA	**Gaotai**	**79.59**	**314**	*e*P	**P**	**14 10 48.3**	**0.0**
GTA				AP	pP	14 10 58.7	-6.8
GTA				XP	sP	14 11 02.7	-10
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.2						
GTA				AMB	AMB		
	comp=Z,109nm,5.7s						
GTA				LR	LR		
	comp=N,230nm,19.8s						
GTA				LR	LR		
	comp=E,215nm,20.4s						
GTA				LR	LR		
	comp=Z,290nm,19.8s						
PMR	**Palmer**	**81.13**	**20**	*e*P	**P**	**14 10 55.7**	**-0.3**
COLA	**College**	**83.87**	**18**	*e*P	**P**	**14 11 09.5**	**-0.7**
	comp=Z,4.3nm,0.8s,mb4.6						
MAW	**Mawson**	**84.16**	**202**	P	**P**	**14 11 10.4**	**-1.4**
	comp=Z,1.5nm,1.0s,mb4.1,baz=212,slow=4.3,SNR=4.0						
YBH	**Yreka Blue Hor**	**84.27**	**45**	P	**P**	**14 11 12.4**	**-0.4**
	comp=Z,2.3nm,0.9s,mb4.3,baz=290,slow=4.2,SNR=10						
HUMO	**Hull Mountain**	**84.41**	**45**	*e*P	**P**	**14 11 13.3**	**-0.2**
EGAK	**Eagle**	**85.95**	**20**	*e*P	**P**	**14 11 16.9**	**-3.8**
	comp=Z,5.4nm,0.8s,mb4.8						

NVAR Mina Array Bea 86.36 50 P P 14 11 22.9 -0.4
comp=Z,1.3nm,0.8s,mb4.2,baz=232,slow=9.3,SNR=9.7
WMQ Urumqi 89.64 315 eP P 14 11 40.5 +1.7
WMQ AMB AMB
comp=Z,6.0nm,0.8s,mb5.0
MKAR Makanchi Array 94.07 317 P P 14 11 57.8 -1.5
comp=Z,1.7nm,0.6s,mb4.7,baz=89,slow=6.4,SNR=22
ZALV Zalesovo Beam 94.15 324 P P 14 11 57.4 -2.1
comp=Z,0.8nm,0.5s,mb4.4,baz=108,slow=3.3,SNR=4.5
YKA Yellowknife Ar 95.50 27 P P 14 12 01.2 -4.2
comp=Z,0.2nm,0.6s,mb3.8,baz=258,slow=4.8,SNR=3.8
ARCES ARCESS Array B 116.99 345 PKP PKPdf 14 17 22.3 -2.6
comp=Z,0.8nm,0.6s,baz=81,slow=2.0,SNR=9.5
ORIF Oris-en-Rattie 142.72 336 ePKP1 PKPdf 14 18 12.6 -1.5
LASF Ste Croix 144.20 338 ePKP1 PKPdf 14 18 15.7 -1.0
comp=Z,18nm,1.1s
MTLF Montolieu 145.44 339 ePKP1 PKPbc 14 18 16.4 -2.5
comp=Z,9.1nm,0.9s
KEST Kesra 148.00 322 PKPbc PKPbc 14 18 25.7 -0.9
comp=Z,2.1nm,0.9s,baz=335,slow=4.5,SNR=5.2
ESDC Sonseca Array 150.72 344 PKPbc PKPbc 14 18 30.7 -2.5
comp=Z,0.3nm,0.5s,baz=26,slow=2.9,SNR=6.1
ESDC PKPab PKPab 14 18 39.2 -1.0
comp=Z,0.6nm,0.5s,baz=8.4,slow=4.7,SNR=5.8

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*IDC **02** 14:01:09.8±1.9, 11.85S×165.88E, h0km, mb4.3/8, mb1 4.4/8, mb1mx4.1/15, mbtmp4.2/8, Error ellipse: s-maj=67.8km s-min=26.8km az=142.0*
*ISCJB **02** 14:01:15.8±4.3, 12.0S±.02×165.7E±.02, h51km±33km, mb4.2/10, Error ellipse: s-maj=35.7km s-min=23.1km az=21.5*
*NEIC **02** 14:01:15.3±0.6, 11.90S×165.89E, h35km, mb4.3/4, Error ellipse: s-maj=17.7km s-min=12.4km az=145.0*
ISC 02 14:01:18.0±3.7, **11.9S**±.02×**165.8E**±.02, **h56**km±29km, **n15**, σ**0.69**/14, **mb4.2**/10, **Santa Cruz Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
HNR Honiara 6.22 293 ePn Pn 14 02 47.1 -0.2
CTA Charters Tower 20.43 244 P P 14 05 51.6 +0.9
7.0nm,1.0s,baz=47,slow=10,SNR=3.5
CTAO Charters Tower 20.43 244 eP P 14 05 51.6 +0.8
9.9nm,0.9s
WRA Warramunga Arr 31.22 251 P P 14 07 32.0 -0.3
1.8nm,0.5s,mb4.2,baz=84,slow=9.3,SNR=6.4
ASAR Alice Springs 32.44 244 P P 14 07 42.2 -0.8
2.5nm,0.7s,mb4.1,baz=73,slow=9.9,SNR=5.8
SBA Scott Base 65.95 180 eP P 14 11 57.7 0.0
2.0nm,0.7s,mb4.3
CMAR Chiang Mai Arr 72.47 294 P P 14 12 40.5 +1.3
1.1nm,0.7s,mb3.9,baz=117,slow=4.3,SNR=5.2
ULN Ulaanbaatar 79.00 324 eP P 14 13 16.0 +0.2
4.8nm,0.9s,mb4.4
SONM Songino Array 79.36 324 P P 14 13 18.2 +0.4
1.7nm,0.8s,mb4.1,baz=142,slow=5.4,SNR=7.1
EGAK Eagle 86.17 20 eP P 14 13 53.4 +0.7
1.0nm,0.6s,mb4.2
NVAR Mina Array Bea 86.56 50 P P 14 13 55.1 -0.2
0.6nm,0.8s,mb3.9,baz=228,slow=8.8,SNR=4.0
MK31 Makanchi Array 94.16 317 eP P 14 14 30.2 -0.4
MKAR Makanchi Array 94.16 317 P P 14 14 30.4 -0.2
4.3nm,0.9s,mb4.9,baz=99,slow=5.8,SNR=18
ZALV Zalesovo Beam 94.26 324 P P 14 14 29.4 -1.5
1.6nm,0.7s,mb4.6,baz=113,slow=3.9,SNR=6.6
ARCES ARCESS Array B 117.16 345 PKP PKPdf 14 19 56.9 +0.7
1.0nm,0.6s,baz=48,slow=1.8,SNR=5.0

IDC 02 14:02:49.7±5.5, **7.28S**×**128.08E**, **h278**km±60km, **mb3.2**/1, **mb1 3.2**/5, **mb1mx3.0**/15, **mbtmp3.1**/5, **Error ellipse: s-maj=65.5km s-min=19.9km az=51.0, Banda Sea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
BATI Baumata 5.24 236 P Pn 14 04 09.8 +0.4
11nm,0.3s,baz=131,slow=3.7,SNR=14
BATI S S 14 05 13.2 0.0
4.4nm,0.3s,baz=65,slow=4.3,SNR=2.7
FITZ Fitzroy Crossi 11.02 192 P Pn 14 05 20.7 +0.1
1.0nm,0.3s,baz=26,slow=12,SNR=36
FITZ S S 14 07 24.5 +0.5
0.4nm,0.3s,baz=251,slow=18,SNR=3.6
WRA Warramunga Arr 13.98 155 P Pn 14 05 56.2 -0.5
0.2nm,0.3s,baz=324,slow=14,SNR=5.5
WRA S S 14 08 26.4 -4.7
0.5nm,0.3s,baz=338,slow=22,SNR=5.8
ASAR Alice Springs 17.23 162 P P 14 06 33.3 +1.0
0.2nm,0.3s,baz=338,slow=10.0,SNR=8.6
MKAR Makanchi Array 67.43 328 P P 14 13 15.6 0.0
0.6nm,0.6s,baz=123,slow=8.1,SNR=5.0

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*ISCJB **02** 14:04:30.5±1.5, 11.53S±.004×166.03E±.003, h23km±10km, mb5.1/89, MS4.7/42, Error ellipse: s-maj=7.3km s-min=5.0km az=165.1*
*MOS **02** 14:04:32.2±1.4, 11.45S×165.98E, h33km, mb5.2/28, MS4.6/4, Error ellipse: s-maj=8.9km s-min=7.4km az=150.3*
*BJI **02** 14:04:32.0, 11.14S×166.09E, h21km, mB5.3, mb5.1, Ms5.0, Msz4.7*
*GCMT **02** 14:04:33.7±0.1, 11.63S×165.91E, h30km, MW5.4/92, Moment Tensor Solution. s92,c165; s84,c136; Duration: 1.2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.40±.03; $M_{\theta\theta}$-0.13±.02; $M_{\phi\phi}$-1.27±.02; $M_{r\theta}$0.54±.04; $M_{\theta\phi}$0.48±.02; $M_{\phi r}$-0.42±.03; Best double couple: $M_0$1.57700×10^{17} NP1:ϕ_s353.00000°, δ35.00000°, λ111.00000°. NP2:ϕ_s147.00000°, δ57.00000°, λ76.00000°. Principal axes: T 1.5930, Plg73.0000°, Azm19.0000°; N -0.0330, Plg12.0000°, Azm155.0000°; P -1.5600, Plg11.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **02** 14:04:33.3±2.5, 11.50S×165.96E, h29km±16km, mb4.7/25, mb1 4.8/25, mb1mx4.8/25, mbtmp4.7/25, MS4.6/23, Ms1 4.6/23, ms1mx4.6/25 Error ellipse: s-maj=14.3km s-min=11.1km az=137.0*
*NEIC **02** 14:04:33.7±0.2, 11.46S×166.05E, h35km, mb5.1/43, MS5.0/1, Error ellipse: s-maj=7.7km s-min=4.4km az=150.0*
*DJA **02** 14:04:34, 11.78S×166.18E, h21km, mb5.3/24*
ISC 02 14:04:34.7±0.9, **11.54S**±.004×**166.06E**±.003, **h41**km±7km, **h36**km±1.1km**:pP-P**, **n307**, σ**1.17**/224, **mb5.1**/89, **MS4.7**/42, **12C-1D, Santa Cruz Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
HNR Honiara 6.36 289 eP Pn 14 06 05.9 -0.1
HNR eS Sn 14 07 18.1 +0.6
HNR pmax pmax
comp=Z,117nm,0.6s
HNR Honiara 6.36 289 ePn Pn 14 06 05.9 -0.1
comp=Z,116nm,0.6s
HNR eS Sn 14 07 18.1 +0.7
FUNA Funafuti 13.28 78 eP Pn 14 07 40.2 -0.6
comp=Z,228nm,1.4s
PMG Port Moresby 18.70 275 P Pn 14 08 48.5 -2.0
EIDS Eidsvold 19.74 224 ePn Pn 14 09 07.6 +4.8
CTA Charters Tower 20.84 243 eP P 14 09 13.0 -0.1
comp=Z,27nm,0.8s
CTA eS S 14 13 08.7 +5.2
CTA Charters Tower 20.84 243 P P 14 09 13.6 +0.5
comp=Z,33nm,0.9s,baz=69,slow=12,SNR=25
CTA LR LR 14 16 36.3
comp=Z,3μm,18.3s,MS4.8,baz=42,slow=35
CTA Charters Tower 20.84 243 eP P 14 09 13.0 -0.1
CTA eS S 14 13 08.7 +5.2
CTA pmax pmax
comp=Z,27nm,0.8s
CTAO Charters Tower 20.84 243 eP P 14 09 13.5 +0.4
AFI Afiamalu 21.75 99 P P 14 09 25.4 +2.5
comp=Z,60nm,0.8s,mb5.1,baz=94,slow=12,SNR=5.9
AFI LR LR 14 16 06.6
comp=Z,3μm,20.3s,MS4.6,baz=271,slow=32
AFI Afiamalu 21.75 99 P P 14 09 24.5 +1.7
COEN Coen 22.44 261 eP P 14 09 30.1 -0.2
comp=Z,49nm,1.4s,mb4.8
ARMA Armidale 23.07 213 eP P 14 09 36.9 +0.2
ARMA ePCP PcP 14 13 27.0 +2.0
ARMA eS S 14 13 50.8 +6.1
RAO Raoul Island 23.10 142 LR LR 14 16 54.5
comp=Z,2μm,18.9s,MS4.5,baz=139,slow=32
RIV Riverview 26.03 209 eP P 14 10 04.2 +0.2
CNB Canberra Magne 28.10 210 eP P 14 10 23.2 +0.6
CNB ePCP PcP 14 13 37.3 +1.0
URZ Urewera 28.38 161 P P 14 10 26.5 +1.4
comp=Z,20nm,1.0s,mb4.7,baz=2.7,slow=11,SNR=6.2
URZ LR LR 14 19 46.8
comp=Z,2μm,21.2s,MS4.7,baz=179,slow=32
STKA Stephens Creek 30.30 224 eP P 14 10 42.5 +0.3
comp=Z,8.6nm,0.8s,mb4.5
STKA ePCP PcP 14 13 42.3 +0.4
STKA ePCS PcS 14 17 24.9 -0.7
STKA Stephens Creek 30.30 224 P P 14 10 42.5 +0.4
comp=Z,9.3nm,0.9s,mb4.5,baz=27,slow=5.7,SNR=5.8
STKA PcP PcP 14 13 42.4 +0.4
comp=Z,21nm,0.9s,baz=36,slow=5.2,SNR=9.1
STKA LR LR 14 22 16.9
comp=Z,3μm,18.0s,MS5.0,baz=39,slow=35
WRAB Tennant Creek 31.59 251 P P 14 10 53.0 -0.7
comp=Z,157nm,1.5s,mb5.6,SNR=8.1
WRAB Tennant Creek 31.59 251 eP P 14 10 53.0 -0.7
WB2 Warramunga Arr 31.59 251 eP P 14 10 52.8 -0.9
WB2 ePCP PcP 14 13 45.8 +0.2
WB2 eS S 14 15 58.1 -1.9
WRA Warramunga Arr 31.60 251 P P 14 10 53.0 -0.9
comp=Z,12nm,0.8s,mb4.8,baz=82,slow=9.1,SNR=27
WRA PcP PcP 14 13 45.8 +0.2
comp=Z,17nm,1.0s,baz=78,slow=2.7,SNR=16
WRA S S 14 15 58.3 -1.9
comp=Z,1.2nm,1.2s,baz=76,slow=20,SNR=4.5
WRA ScP ScP 14 17 29.1 +3.3
comp=Z,3.5nm,0.9s,baz=80,slow=4.0,SNR=9.0
WRA PKiKP PKiKP 14 21 14.8 -0.1
comp=Z,0.7nm,0.8s,baz=299,slow=0.6,SNR=5.2
WRA LR LR 14 22 36.3
comp=Z,1μm,20.4s,MS4.5,baz=70,slow=34
WRA Warramunga Arr 31.60 251 i P P 14 10 53.0 -0.8
WRA pmax pmax
comp=Z,13nm,0.8s
WRA Warramunga Arr 31.60 251 P P 14 10 53.0 -0.9
WRA PcP PcP 14 13 45.8 +0.2
WRA S S 14 15 58.3 -1.9
WRA ScP ScP 14 17 29.1 +3.4
TOO Toolangi 31.81 212 eP P 14 10 56.0 +0.6
TOO e 14 11 15.3
RPZ Rata Peaks 32.35 173 P P 14 11 00.6 +0.6
comp=Z,52nm,0.8s,mb5.4,baz=298,slow=1.8,SNR=12
RPZ LR LR 14 22 13.9
comp=Z,993nm,21.5s,MS4.5,baz=229,slow=33
RPZ Rata Peaks 32.35 173 P P 14 11 00.6 +0.6
RPZ LR LR 14 22 13.9
GUMO Guam 32.63 319 LR LR 14 22 50.1
comp=Z,934nm,21.6s,MS4.5,baz=270,slow=34
ASAR Alice Springs 32.85 244 P P 14 11 03.5 -1.2
comp=Z,13nm,0.7s,mb5.0,baz=73,slow=9.4,SNR=77
ASAR PcP PcP 14 13 49.2 +0.2
comp=Z,12nm,0.9s,baz=80,slow=2.7,SNR=18
ASAR ScP ScP 14 17 33.1 +3.2
comp=Z,1.1nm,0.7s,baz=81,slow=4.0,SNR=5.8
ASAR Alice Springs 32.85 244 P P 14 11 03.5 -1.2
ASAR 14 13 49.2
KAKA Kakadu 32.88 264 eP P 14 11 03.9 -1.1
comp=Z,11nm,0.6s,mb5.0
RAR Rarotonga 34.10 111 LR LR 14 22 07.0
comp=Z,2μm,21.3s,MS4.8,baz=275,slow=31
FITZ Fitzroy Crossi 39.55 256 eP P 14 12 01.2 -0.9
comp=Z,27nm,1.1s,mb4.9
FITZ epP pP 14 12 12.4 -1.2
FITZ ePCP PcP 14 14 10.8 +1.7
FITZ Fitzroy Crossi 39.55 256 P P 14 12 01.1 -1.0
comp=Z,22nm,1.1s,mb4.8,baz=91,slow=8.9,SNR=14
FITZ PcP PcP 14 14 10.0 +0.9
comp=Z,8.5nm,0.9s,baz=350,slow=4.8,SNR=3.9
FORT Forrest 40.01 235 eP P 14 12 05.5 -0.2
comp=Z,32nm,0.9s,mb5.1
PPT Papeete 43.28 103 eLQ 14 22 50.7
comp=Z,3μm,29.8s
PPT eLR LR 14 24 41.2
comp=Z,1μm,24.2s,baz=285
PPT Papeete 43.28 103 LR LR 14 28 42.9
comp=Z,1μm,18.4s,MS4.8,baz=272,slow=33
DAV Davao City (W) 44.31 293 LR LR 14 29 01.8
comp=Z,406nm,20.8s,MS4.3,baz=122,slow=33
CBIJ Chichi jima 44.86 329 LR LR 14 28 18.3
comp=Z,909nm,20.8s,MS4.7,baz=164,slow=32
MBWA Marble Bar 45.33 252 eP P 14 12 49.2 +0.1
comp=Z,37nm,1.0s,mb5.2
KAPI Kappang 46.23 274 P P 14 12 55.0 -1.3
comp=Z,36nm,1.1s,mb5.2,baz=98,slow=4.9,SNR=5.5
KIP Kipapa 48.15 47 eP P 14 13 13.1 +2.1
KLBR Kellerberrin 48.70 238 eP P 14 13 14.6 -0.6
comp=Z,52nm,1.5s,mb5.3
NWAO Narrogin (SRO) 49.44 236 P P 14 13 20.2 -0.7
comp=Z,15nm,0.9s,mb5.0,baz=89,slow=5.9,SNR=4.7
NWAO Narrogin (SRO) 49.44 236 eP P 14 13 20.5 -0.4
MUN Mundaring 50.07 238 eP P 14 13 25.6 -0.1
MJAR Matsushiro Arr 54.55 332 P P 14 13 57.6 -1.1
comp=Z,2.1nm,0.5s,mb4.4,baz=167,slow=7.4,SNR=9.5
MAT Matsushiro 54.55 332 P P 14 13 58.7 0.0
MAT S S 14 21 33.0 -2.2
RKT Rikitea 57.13 110 eSS SS 14 26 02.5 +2.9
comp=Z,509nm,25.2s
RKT eLQ 14 28 40.4
comp=Z,776nm,35.2s
RKT eLR LR 14 31 07.6
comp=Z,2μm,23.5s,baz=279
DRV Dumont d'Urvil 57.78 192 P P 14 14 22.0 +0.6
DRV SS SS 14 26 24.0 +16
DRV L 14 29 00.0
DRV R 14 32 00.0
QZH Quanzhou 58.80 309 ⇑ iP P 14 14 29.7 +0.6
QZH S S 14 22 35.0 +3.2
QZH AMB AMB
comp=Z,70nm,1.1s,mb5.6
QZH LR LR
comp=Z,590nm,19.6s,MS4.7
ASAJ Asahikawa 59.36 341 P P 14 14 33.1 +0.5
comp=Z,7.7nm,0.5s,mb5.0,baz=248,slow=5.8,SNR=14
SSE Sheshan 60.42 316 P P 14 14 40.1 -0.1
SSE S S 14 22 54.9 +2.4
SSE AMB AMB
comp=Z,25nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,99nm,3.9s
SSE LR LR
comp=N,176nm,23.6s,MS4.4
SSE LR LR
comp=E,262nm,23.9s,MS4.4
SSE LR LR
comp=Z,368nm,24.2s,MS4.4
KSRS Korea Array 60.46 326 P P 14 14 40.2 -0.1
comp=Z,1.3nm,0.6s,mb4.1,baz=167,slow=7.4,SNR=5.8
KSRS PcP PcP 14 15 26.3 +1.5
comp=Z,4.5nm,1.0s,baz=142,slow=4.8,SNR=5.4
KSRS LR LR 14 38 12.2
comp=Z,259nm,21.5s,MS4.3,baz=137,slow=33
YSS Yuzh-Sakhalins 61.85 342 eP P 14 14 48.6 -0.9
YSS Yuzh-Sakhalins 61.85 342 eP P 14 14 50.1 +0.5
NJ2 Nanjing 62.59 315 eP P 14 14 55.9 +1.1
NJ2 AP pP 14 15 06.3 -0.6
NJ2 XP sP 14 15 10.1 -1.6
NJ2 S S 14 23 19.0 -1.0
NJ2 XS sS 14 23 37.0 -3.1
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.4
NJ2 AMB AMB
comp=Z,100nm,6.0s
NJ2 LR LR
comp=N,330nm,20.4s,MS4.7
NJ2 LR LR
comp=E,460nm,24.3s,MS4.7
NJ2 LR LR
comp=Z,450nm,24.2s,MS4.5
QIZ Qiongzhong 63.18 298 P P 14 14 59.4 +0.4
QIZ AP pP 14 15 08.4 -2.8
QIZ XP sP 14 15 12.7 -3.2
QIZ S S 14 23 28.2 +0.3
QIZ XS sS 14 23 43.2 -4.8
QIZ AMB AMB
comp=Z,22nm,1.3s,mb5.1
QIZ AMB AMB
comp=Z,233nm,3.9s
QIZ LR LR
comp=E,288nm,20.8s
QIZ LR LR
comp=Z,458nm,21.6s,MS4.6
PET Petropavlovsk 64.62 355 eP P 14 15 09.1 +1.4
PET eS S 14 24 02.5 +18
PET pmax pmax
comp=Z,200nm,9.4s
PET pmax pmax
comp=Z,300nm,6.6s
PET MLR MLR
comp=Z,400nm,16.0s,MS4.7
PET MLR MLR
comp=Z,300nm,19.0s
PETK Petropavlovsk- 64.79 354 P P 14 15 08.0 -0.9
comp=Z,11nm,1.1s,mb4.8,baz=142,slow=5.0,SNR=14
PETK LR LR 14 37 51.9
comp=Z,457nm,21.6s,MS4.6,baz=178,slow=31
MDJ Mudanjiang 64.93 332 P P 14 15 09.9 -0.1
MDJ AP pP 14 15 19.2 -2.9
MDJ XP sP 14 15 23.1 -3.8
MDJ PP PP 14 17 32.6 -0.8
MDJ S S 14 23 49.2 +0.6
MDJ SS SS 14 28 01.8 +0.6
MDJ AMB AMB
comp=Z,14nm,1.4s,mb4.8
MDJ AMB AMB
comp=Z,176nm,5.1s
MDJ LR LR
comp=N,204nm,15.2s,MS4.6
MDJ LR LR
comp=E,263nm,16.7s,MS4.6
MDJ LR LR
comp=Z,352nm,17.2s,MS4.6
WHN Wuhan 64.95 312 P P 14 15 11.0 +0.6
CASY Casey 66.03 201 eP P 14 15 16.3 -0.5
SBA Scott Base 66.30 180 eP P 14 15 19.0 +0.6
CN2 Changchun 66.32 329 eP P 14 15 18.8 -0.2
CN2 eXP sP 14 15 33.0 -2.9
CN2 eS S 14 24 05.0 -0.6
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,310nm,18.0s,MS4.7
CN2 LR LR
comp=E,260nm,18.0s,MS4.7
CN2 LR LR
comp=Z,560nm,19.0s,MS4.8
KLR Kul'dur 67.63 336 eP P 14 15 23.1 -4.1
KLR pmax pmax
comp=Z,36nm,1.4s,mb5.2
GYA Guiyang 68.95 304 P P 14 15 37.9 +2.0
GYA AP pP 14 15 48.8 +0.6
GYA XP sP 14 15 52.9 0.0
GYA PCP PcP 14 16 02.0 +1.9
GYA PP PP 14 18 12.8 +4.0
GYA SCP 14 20 02.4
GYA S S 14 24 38.9 +1.1
GYA XS sS 14 24 56.0 -2.2
GYA SKS 14 25 31.0
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.1
GYA AMB AMB
comp=Z,120nm,4.8s
GYA LR LR
comp=N,510nm,20.9s,MS4.9
GYA LR LR
comp=E,470nm,19.7s,MS4.9
GYA LR LR
comp=Z,500nm,19.8s,MS4.8
BJI Beijing 69.06 321 P P 14 15 36.5 +0.2
BJI S S 14 24 39.2 +0.6
BJI AMB AMB
comp=Z,19nm,1.3s,mb4.9
BJI AMB AMB
comp=Z,377nm,4.2s
BJI LR LR
comp=N,306nm,19.8s,MS4.8
BJI LR LR
comp=E,481nm,19.8s,MS4.8
BJI LR LR
comp=Z,583nm,26.5s
NST Nakhon Sawan 70.62 291 P P 14 15 47.0 +0.6
XAN Xi'an 70.68 312 P P 14 15 46.6 +0.2
XAN AP pP 14 15 56.9 -1.8
XAN XP sP 14 16 01.2 -2.3
XAN PCP PcP 14 16 07.4 +0.2
XAN PP PP 14 18 25.7 +2.1
XAN S S 14 24 55.5 -2.4
XAN SKS 14 25 41.6
XAN SCS ScS 14 25 44.0 -2.9
XAN SS SS 14 29 32.0 +1.3
XAN AMB AMB
comp=Z,24nm,1.6s,mb4.9
XAN AMB AMB
comp=Z,188nm,12.5s
XAN LR LR
comp=N,90nm,18.2s,MS4.5
XAN LR LR
comp=E,239nm,21.4s,MS4.5
XAN LR LR
comp=Z,494nm,22.4s,MS4.7
NANT Nan 71.13 295 P P 14 15 47.0 -2.5
KMI Kunming 71.64 301 P P 14 15 54.1 +1.7
KMI AP pP 14 16 04.8 +0.1
KMI XP sP 14 16 09.0 -0.5
KMI PP PP 14 18 34.6 +2.6
KMI S S 14 25 08.5 -0.8
KMI XS sS 14 25 27.7 -2.1
KMI SCS ScS 14 25 52.4 -2.4
KMI SS SS 14 29 47.7 +2.0
KMI AMB AMB
comp=Z,51nm,2.0s,mb5.1
KMI AMB AMB
comp=Z,263nm,7.1s
KMI LR LR
comp=N,188nm,17.2s
KMI LR LR
comp=E,195nm,29.0s
KMI LR LR
comp=Z,276nm,22.0s,MS4.5
CHRT Chiangrai 72.30 295 ⇑P P 14 15 58.0 +1.5
comp=Z,132nm,1.0s,mb5.8
HHC Hu-ho-hao-te 72.41 320 eP P 14 15 57.0 +0.3
HHC AP pP 14 16 08.1 -0.9
HHC XP sP 14 16 12.0 -1.7
HHC PCP PcP 14 16 15.0 +0.6
HHC PP PP 14 18 40.4 +2.2
HHC S S 14 25 18.0 +0.5
HHC XS sS 14 25 35.2 -2.8
HHC SKS 14 25 54.4
HHC SCS ScS 14 25 58.8 -1.5
HHC SS SS 14 29 58.5 +1.6
HHC AMB AMB
comp=Z,13nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,197nm,6.8s
HHC LR LR
comp=N,402nm,17.9s,MS4.8
HHC LR LR
comp=E,247nm,17.3s,MS4.8
HHC LR LR
comp=Z,411nm,20.4s,MS4.7
CMAR Chiang Mai Arr 72.59 294 P P 14 15 59.5 +1.2
comp=Z,15nm,0.9s,mb4.9,baz=114,slow=4.2,SNR=56
CMAR Chiang Mai Arr 72.59 294 i P P 14 15 59.5 +1.3
CMAR pmax pmax
comp=Z,15nm,0.9s
CHG Chiang Mai 72.70 294 ⇑P P 14 15 59.8 +0.9
comp=Z,30nm,1.0s,mb5.2
MIR Mirnyy 72.75 204 ⇑ iP P 14 15 59.0 +0.7
MIR i 14 16 06.5
MIR pmax pmax
comp=Z,200nm,1.0s,mb6.0
HIA Hailar 72.95 330 c iP P 14 15 59.7 0.0
HIA Hailar 72.95 330 eP P 14 15 59.8 +0.1
comp=Z,7.5nm,0.6s,mb4.8
CD2 Chengdu 73.14 307 ⇑ iP P 14 16 02.2 +0.9
CD2 AP pP 14 16 13.2 -0.4
CD2 XP sP 14 16 17.1 -1.3
CD2 PP PP 14 18 47.4 +2.6
CD2 S S 14 25 26.7 +0.4
CD2 XS sS 14 25 43.6 -3.3
CD2 SS SS 14 30 11.0 +2.4
CD2 AMB AMB
comp=Z,60nm,1.2s,mb5.4
CD2 LR LR
comp=N,260nm,19.2s,MS4.8

CD2 LR LR
comp=E,410nm,20.4s,MS4.8
CD2 LR LR
comp=Z,330nm,24.0s,MS4.5
BTO Baotou 73.26 319 *eP* **P 14 16 02.0 +0.2**
LZH Lanzhou 75.31 312 *eP* **P 14 16 15.0 +1.2**
LZH AP pP 14 16 24.0 -2.2
LZH XP sP 14 16 29.0 -1.9
LZH *e*S S 14 25 52.0 +1.5
LZH *e*SS SS 14 30 46.0 +4.6
LZH AMB AMB
comp=Z,50nm,1.0s,mb5.4
LZH AMB AMB
comp=Z,312nm,6.1s
LZH LR LR
comp=N,1µm,15.8s
LZH LR LR
comp=Z,1µm,17.5s,MS5.3
CLNS Chul'man 76.15 338 *eP* **P 14 16 18.1 0.0**
CLNS *e* pP 14 16 29.2 -1.3
CLNS *e* 14 19 07.6
CLNS *e*S S 14 25 59.3 +0.5
CLNS *e* 14 26 52.0
CLNS pmax pmax
comp=Z,13nm,1.2s,mb4.7
CLNS pmax pmax
comp=E,4.0nm,1.1s
CLNS pmax pmax
comp=N,8.0nm,1.3s
CLNS smax
comp=N,109µm,12.3s
CLNS smax
comp=E,159µm,12.3s
CLNS MLR MLR
comp=Z,155nm,17.0s,MS4.4
CLNS MLR MLR
comp=N,126nm,17.0s,MS4.4
CLNS MLR MLR
comp=E,115nm,16.0s,MS4.4
KDAK Kodiak Island 76.93 21 P **P 14 16 24.1 +1.6**
comp=E,9.2nm,0.9s,mb4.7,baz=110,slow=4.8,SNR=9.3
KDAK LR LR 14 44 18.5
comp=E,767nm,20.9s,MS5.0,baz=222,slow=31
KDAK Kodiak Island 76.93 21 *eP* **P 14 16 21.4 -1.1**
comp=E,8.9nm,0.9s,mb4.7
SVW2 Sparrevohn 78.49 18 *eP* **P 14 16 29.8 -1.3**
YAK Yakutsk 78.66 343 *eP* **P 14 16 29.8 -2.2**
YAK *e* pP 14 16 38.9 -5.6
YAK pmax pmax
comp=Z,27nm,1.4s,mb5.0
YAK pmax pmax
comp=N,12nm,1.3s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK Yakutsk 78.66 343 *eP* **P 14 16 31.2 -0.8**
ULN Ulaanbaatar 78.88 324 *c iP* **P 14 16 34.3 +0.7**
ULN Ulaanbaatar 78.88 324 *eP* **P 14 16 33.9 +0.3**
comp=E,32nm,1.3s,mb5.1
IMP Imphal 79.01 298 *ex* x 14 16 34.0
SONM Songino Array 79.25 324 P **P 14 16 35.4 -0.2**
comp=E,4.0nm,0.6s,mb4.5,baz=138,slow=5.7,SNR=32
SONM LR LR 14 52 08.9
comp=E,216nm,19.0s,MS4.5,baz=111,slow=36
GTA Gaotai 79.62 314 ⇑P **P 14 16 39.1 +1.3**
GTA AP pP 14 16 49.5 -0.8
GTA XP sP 14 16 53.5 -1.5
GTA S S 14 26 40.7 +3.7
GTA AMB AMB
comp=Z,35nm,1.6s,mb5.0
GTA AMB AMB
comp=Z,314nm,7.5s
GTA LR LR
comp=N,230nm,22.2s,MS4.7
GTA LR LR
comp=E,352nm,21.6s,MS4.7
GTA LR LR
comp=Z,470nm,20.7s,MS4.8
SLKM Skilak Lake 79.76 20 *eP* **P 14 16 37.1 -1.0**
TTA Tatalina 79.81 17 *eP* **P 14 16 38.0 -0.3**
PMR Palmer 80.92 20 *eP* **P 14 16 43.1 -1.2**
SHL Shillong 81.02 298 ⇑ *iP* **P 14 16 47.5 +1.8**
BOD Bodaibo 81.11 335 *eP* **P 14 16 43.7 -1.7**
BOD pmax pmax
comp=Z,12nm,1.5s,mb4.6
ZAK Zakamensk 82.28 325 *eP* **P 14 16 51.5 -0.2**
ZAK pmax pmax
comp=Z,12nm,1.3s,mb4.7
KCPM Cahto Peak 82.66 47 *eP* **P 14 16 52.8 -1.2**
TLY Talaya 82.70 326 *eP* **P 14 16 53.7 -0.2**
TLY *e*S S 14 27 05.6 -2.9
TLY *e*PS 14 28 13.5
TLY pmax pmax
comp=Z,18nm,1.2s,mb5.0
TLY MLR MLR
comp=Z,230nm,19.0s,MS4.6
LSA Lhasa 82.88 302 *eP* **P 14 16 56.9 +1.6**
LSA pmax pmax
comp=Z,19nm,1.1s,mb5.0
LSA Lhasa 82.88 302 *eP* **P 14 16 56.9 +1.6**
comp=Z,19nm,1.1s,mb5.0
IMA2 Indian Mountai 82.90 15 *eP* **P 14 16 51.4 -3.3**
COLA College 83.66 18 *eP* **P 14 16 56.2 -2.4**
COLA College 83.66 18 *eP* **P 14 16 55.7 -2.9**
comp=Z,28nm,0.8s,mb5.4
WDC Whiskeytown Da 83.73 47 *eP* **P 14 16 59.0 -0.5**
YBH Yreka Blue Hor 84.02 45 P **P 14 17 00.7 -0.2**
comp=Z,14nm,0.8s,mb5.1,baz=217,slow=2.0,SNR=11
YBH LR LR 14 47 51.8
comp=Z,418nm,20.8s,MS4.8,baz=228,slow=31
YBH Yreka Blue Hor 84.02 45 *eP* **P 14 17 00.4 -0.5**
YBH pmax pmax
comp=Z,13nm,0.8s
YBH Yreka Blue Hor 84.02 45 *eP* **P 14 17 00.4 -0.5**
comp=Z,13nm,0.8s,mb5.1
OHCM Honcut 84.06 48 *eP* **P 14 16 59.2 -2.0**
MOY Mondy 84.16 325 *eP* **P 14 17 01.4 0.0**
HUMO Hull Mountain 84.17 45 *eP* **P 14 17 01.3 -0.3**
comp=Z,14nm,0.9s,mb5.1
MAW Mawson 84.38 202 *eP* **P 14 17 02.0 -0.3**
comp=Z,13nm,1.1s,mb5.0
MAW Mawson 84.38 202 P **P 14 17 02.2 -0.1**
comp=Z,16nm,1.1s,mb5.1,baz=104,slow=6.5,SNR=25
MAW LR LR 14 48 25.3
comp=Z,234nm,21.5s,MS4.5,baz=80,slow=31
MAW Mawson 84.38 202 *eP* **P 14 17 02.0 -0.3**
MAW pmax pmax
comp=Z,13nm,1.1s
CMB Columbia Colle 84.43 50 *eP* **P 14 17 01.6 -1.5**
CMB pmax pmax
comp=Z,11nm,0.8s,mb5.0
CMB Columbia Colle 84.43 50 *eP* **P 14 17 01.6 -1.5**
comp=Z,11nm,0.8s,mb5.0
WRAK Wrangell Islan 84.62 29 *eP* **P 14 17 02.7 -0.9**
comp=Z,22nm,1.2s,mb5.2
LBCM Butte Creek Ri 84.67 47 P **P 14 17 06.5 +2.3**
LTIM Timbered Crate 84.69 46 P **P 14 17 06.6 +2.3**
HYT Haines Junctio 84.71 24 *eP* **P 14 17 05.9 +1.9**
SKAG Skagway 84.85 26 *eP* **P 14 17 04.3 -0.4**
MWC Mount Wilson 85.03 54 *eP* **P 14 17 03.3 -2.9**
MWC pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
MWC Mount Wilson 85.03 54 *eP* **P 14 17 03.3 -2.9**
comp=Z,10nm,1.0s,mb4.9
TAPN Taplejung 85.11 299 *eP* **P 14 17 07.8 +1.0**
comp=Z,59nm,1.1s,mb5.6
ISA Isabella 85.13 52 *eP* **P 14 17 05.9 -0.8**
IRO Indian Ridge 85.15 43 P **P 14 17 08.9 +2.4**
ODAN Odare 85.25 298 *eP* **P 14 17 08.3 +0.8**
WAKR Walker 85.29 49 *eP* **P 14 17 07.4 0.0**
MTUM Tungsten Hills 85.58 51 *eP* **P 14 17 10.8 +1.9**
BKCOR Black Crater 85.63 43 P **P 14 17 11.8 +2.9**
PAHR Pah Rah Range 85.71 48 *eP* **P 14 17 07.6 -1.8**
comp=Z,12nm,0.9s,mb5.1
EGAK Eagle 85.74 20 *eP* **P 14 17 07.4 -1.6**
comp=Z,27nm,0.9s,mb5.5
MOD Modoc 85.77 46 *eP* **P 14 17 08.8 -0.9**
DAWY Dawson 85.91 21 *eP* **P 14 17 09.3 -0.6**
RAMN Ramite 85.96 298 *eP* **P 14 17 11.6 +0.6**
PGC Sidney 86.09 39 *eP* **P 14 17 09.2 -1.9**
comp=Z,12nm,0.8s,mb5.2
NVAR Mina Array Bea 86.11 50 P **P 14 17 10.7 -0.8**
comp=Z,8.1nm,0.8s,mb5.0,baz=232,slow=9.3,SNR=54
NVAR PKKPbc PKKPbc 14 35 12.4 +0.4
comp=Z,0.4nm,0.7s,baz=93,slow=2.1,SNR=4.0
GSC Goldstone 86.33 53 *eP* **P 14 17 12.6 0.0**
LON Longmire 86.42 41 P **P 14 17 13.2 +0.4**
LON pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
LON Longmire 86.42 41 P **P 14 17 13.2 +0.3**
comp=Z,2.0nm,0.7s,mb4.5
JIRN Jiri 86.50 299 *eP* **P 14 17 14.7 +1.1**
comp=Z,158nm,1.2s,mb6.1
GUN Gumba 86.82 299 *eP* **P 14 17 16.2 +1.0**
CMW Cultus Mountai 86.83 39 P **P 14 17 17.4 +2.7**
WVOR Wild Horse Val 87.11 46 P **P 14 17 15.0 -1.3**
WVOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
WVOR Wild Horse Val 87.11 46 P **P 14 17 15.0 -1.3**
comp=Z,7.8nm,1.0s,mb4.9
PKI Pulchoki 87.14 299 *eP* **P 14 17 17.4 +0.6**
comp=Z,104nm,1.0s,mb6.0
PKI Pulchoki 87.14 299 *eP* **P 14 17 17.4 +0.6**
PKI pmax pmax
comp=Z,104nm,1.0s,mb6.0
PKIN Phulchoki 87.16 299 *eP* **P 14 17 17.4 +0.5**
RPW Rockport 87.21 39 P **P 14 17 19.3 +2.6**
TPNV Topopah Spring 87.23 52 *eP* **P 14 17 16.4 -0.6**
TPNV pmax pmax
comp=Z,35nm,2.1s,mb5.2
TPNV Topopah Spring 87.23 52 *eP* **P 14 17 16.4 -0.7**
comp=Z,35nm,2.1s,mb5.2
EBG Ellensburg 87.28 41 P **P 14 17 19.8 +2.8**
GLA Glamis 87.28 56 *eP* **P 14 17 16.5 -0.8**
GLA pmax pmax
comp=Z,12nm,0.8s,mb5.2
GLA Glamis 87.28 56 *eP* **P 14 17 16.5 -0.8**
comp=Z,12nm,0.8s,mb5.2
KKN Kakani 87.31 299 *eP* **P 14 17 18.2 +0.6**
comp=Z,44nm,1.0s,mb5.7
KKN Kakani 87.31 299 *eP* **P 14 17 18.2 +0.6**
KKN pmax pmax
comp=Z,44nm,1.0s,mb5.6
DMN Daman 87.41 299 *eP* **P 14 17 18.8 +0.7**
comp=Z,206nm,1.2s,mb6.2
LDFC Landfair 87.60 54 *eP* **P 14 17 18.0 -0.8**
ETW Entiat 87.67 41 *eP* **P 14 17 18.2 -0.6**
RSW Rattlesnake Hi 87.74 42 *eP* **P 14 17 18.6 -0.6**
HAWA Hanford 87.78 42 P **P 14 17 17.9 -1.4**
comp=Z,6.7nm,0.8s,mb4.9
GKN Gorkha 87.91 299 *eP* **P 14 17 21.5 +1.0**
SHPR Sheep Range 87.95 52 *eP* **P 14 17 19.5 -0.9**
OD2 Odessa Site #2 88.63 41 *eP* **P 14 17 22.5 -1.0**
DANN Dangsing 88.75 299 *eP* **P 14 17 24.3 -0.1**
comp=Z,44nm,0.7s,mb5.9
KOLN Koldanda 88.75 299 *eP* **P 14 17 24.1 -0.3**
comp=Z,20nm,0.6s,mb5.6
BMO Blue Mountains 88.78 44 *eP* **P 14 17 22.4 -1.8**
BMO pmax pmax
comp=Z,33nm,2.3s,mb5.3
BMO Blue Mountains 88.78 44 *eP* **P 14 17 22.4 -1.8**
comp=Z,33nm,2.3s,mb5.2
LPIG La Paz 88.94 65 LR LR 14 49 02.3
comp=Z,274nm,21.0s,MS4.7,baz=196,slow=30
ELK Elko 89.05 48 P **P 14 17 25.4 -0.1**
comp=Z,1.4nm,0.5s,mb4.5,baz=260,slow=5.0,SNR=9.0
ELK Elko 89.05 48 P **P 14 17 24.7 -0.9**
WMQ Urumqi 89.66 315 P **P 14 17 29.2 +0.9**
WMQ AP pP 14 17 39.5 -1.5
WMQ XP sP 14 17 43.9 -1.8
WMQ PP PP 14 21 03.5 +2.7
WMQ SKS 14 27 55.0
WMQ S S 14 28 15.5 -1.2
WMQ AMB AMB
comp=Z,19nm,1.4s,mb5.2
WMQ AMB AMB
comp=Z,250nm,4.7s
WMQ LR LR
comp=N,575nm,25.8s,MS5.0
WMQ LR LR
comp=E,447nm,23.2s,MS5.0
WMQ LR LR
comp=Z,547nm,21.6s,MS4.9
NEW Newport 89.92 41 *eP* **P 14 17 27.8 -1.6**
TUC Tucson 90.40 57 *eP* **P 14 17 34.6 +2.5**
HLID Hailey 90.40 46 *eP* **P 14 17 31.7 -0.2**
comp=Z,6.3nm,0.8s,mb5.0
WUAZ Wupatki 90.66 54 *eP* **P 14 17 32.6 -0.6**
comp=Z,5.8nm,0.8s,mb5.0
DUG Dugway 90.69 49 *eP* **P 14 17 34.6 +1.4**
DUG pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
DUG Dugway 90.69 49 *eP* **P 14 17 34.6 +1.4**
comp=Z,5.3nm,0.8s,mb4.9
BGU Big Grassy Mou 90.71 48 *eP* **P 14 17 32.1 -1.2**
MSU Marysvale 90.75 51 *eP* **P 14 17 34.5 +0.9**
HYB Hyderabad 91.05 287 *i* P **P 14 17 36.0 +0.6**
HYB Hyderabad 91.05 287 *eP* **P 14 17 34.5 -0.9**
HVU Hansel Valley 91.11 48 *eP* **P 14 17 34.3 -0.9**
NLU North Lily Min 91.18 50 *eP* **P 14 17 33.6 -2.0**
SYO Syowa Base 91.40 197 ‖ *eP* **P 14 17 34.0 -2.0**
SYO Syowa Base 91.40 197 ‖ *ePcP* PcP 14 17 38.8 +1.9
SYO Syowa Base 91.40 197 ‖ *epP* pP 14 17 48.6 -0.1
MSO Missoula 91.59 43 *eP* **P 14 17 39.2 +2.0**
comp=Z,42nm,3.0s
TMUT Trail Mountain 91.68 50 *eP* **P 14 17 39.9 +2.0**
JLU Jordanelle 91.80 49 *eP* **P 14 17 41.5 +3.2**
MCMT McKenzie Canyo 91.82 45 *eP* **P 14 17 37.7 -0.6**
HWUT Hardware Ranch 91.95 48 P **P 14 17 38.7 -0.4**
comp=Z,4.6nm,1.0s,mb4.8
CHMT Chamberlain Mo 92.07 43 P **P 14 17 36.2 -3.3**
DLMT Dillon 92.12 44 *eP* **P 14 17 38.7 -1.1**
comp=Z,11nm,0.8s,mb5.2
SRU San Rafael 92.15 51 *eP* **P 14 17 41.6 +1.6**
LRM Limekiln Ridge 92.33 44 *eP* **P 14 17 40.8 +0.1**
RRI2 Red Ridge 92.53 46 *eP* **P 14 17 42.1 +0.4**
comp=Z,4.4nm,0.7s,mb5.0
TPAW Teton Pass 92.83 46 *eP* **P 14 17 45.2 +2.2**
comp=Z,3.8nm,0.8s,mb4.9
BOZ Bozeman (W) 92.85 44 *eP* **P 14 17 43.0 -0.1**
BOZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
BOZ Bozeman (W) 92.85 44 *eP* **P 14 17 43.0 -0.1**
comp=Z,4.1nm,0.9s,mb4.9
REDW Red Top Meadow 92.87 46 *eP* **P 14 17 44.4 +1.1**
IMW Indian Meadow 92.93 46 *eP* **P 14 17 44.0 +0.4**
comp=Z,4.3nm,0.8s,mb4.9
PV10 Paradox Valley 93.12 52 *eP* **P 14 17 46.3 +1.7**
PV01 Paradox Valley 93.44 52 *eP* **P 14 17 47.0 +1.0**
BW06 Boulder Array 93.66 47 *eP* **P 14 17 48.7 +1.8**
PDAR Pinedale Array 93.66 47 P **P 14 17 47.5 +0.6**
comp=Z,2.3nm,0.8s,mb4.7,baz=318,slow=2.0,SNR=11
PDAR PKKP PKKPbc 14 34 52.9 -0.3
comp=Z,1.5nm,0.8s,baz=90,slow=4.7,SNR=8.0
PDAR LR LR 14 55 51.0
comp=Z,364nm,19.3s,MS4.8,baz=234,slow=33
DDI Dehra Dun 94.03 300 *ex* x 14 17 44.8
MKAR Makanchi Array 94.09 317 P **P 14 17 48.6 -0.1**
comp=Z,6.2nm,0.6s,mb5.2,baz=92,slow=6.1,SNR=21
MKAR LR LR 15 03 13.9
comp=Z,197nm,19.8s,MS4.6,baz=99,slow=38
ZALV Zalesovo Beam 94.14 324 P **P 14 17 47.9 -0.9**
comp=Z,7.1nm,0.8s,mb5.1,baz=106,slow=4.8,SNR=26
ZALV LR LR 15 03 44.8
comp=Z,168nm,18.2s,MS4.5,baz=258,slow=38
ZAL Zalesovo 94.14 324 P **P 14 17 47.9 -1.0**
EGMT Eagleton 94.63 42 *eP* **P 14 17 52.4 +1.2**
NVS Novosibirsk 95.24 325 *eP* **P 14 17 51.6 -2.3**
NVS pmax pmax
comp=N,9.0nm,1.4s
NVS pmax pmax
comp=E,14nm,1.4s
NVS pmax pmax
comp=Z,19nm,1.4s,mb5.3
YKA Yellowknife Ar 95.27 27 P **P 14 17 51.6 -2.2**
comp=Z,1.7nm,0.7s,mb4.6,baz=258,slow=4.6,SNR=11
YKA LR LR 14 53 12.6
comp=Z,230nm,21.7s,MS4.6,baz=210,slow=31
SNAA Sanae 96.64 184 *eP* **P 14 17 59.5 -0.5**
SNAA *e* pP 14 18 10.9 -1.8
KURK Kurchatov 97.22 320 P **P 14 18 01.1 -1.8**
comp=Z,0.6nm,0.6s,mb4.2,baz=101,slow=4.0,SNR=8.1
KURK Kurchatov 97.22 320 *eP* **P 14 18 01.9 -1.0**
KURK pmax pmax
comp=Z,6.0nm,1.3s,mb4.9
VNA3 Neumayer Olymp 97.36 181 *eP* **P 14 18 03.4 +0.1**
VNA3 *e* 14 18 09.6
VNA3 *e* pP 14 18 16.6 +0.6
VNA2 Neumayer--Watz 97.61 182 *eP* **P 14 18 04.0 -0.4**
VNA2 *e* 14 18 10.4
BVAR Borovoye Array 102.53 322 P Pdif 14 18 24.4 -2.2
comp=Z,1.1nm,0.8s,baz=48,slow=2.2,SNR=6.2
KEV Kevo 116.36 345 *ep* PKPdf 14 23 11.6 -1.6
comp=Z,0.4nm,0.4s
ARCES ARCESS Array B 116.89 345 PKP PKPdf 14 23 13.1 -1.2
comp=Z,3.2nm,0.6s,baz=66,slow=1.3,SNR=28
JOF Joensuu 119.51 338 *ep* PKPdf 14 23 18.3 -1.2
comp=Z,0.5nm,0.4s
JOF Joensuu 119.51 338 *e*PKIKP PKPdf 14 23 18.3 -1.2
JOF pmax pmax
comp=Z,1.0nm,0.4s
LPAZ La Paz 119.69 116 PKP PKPdf 14 23 21.4 +0.2
comp=Z,1.0nm,0.6s,baz=348,slow=1.2,SNR=6.4
LPAZ PKKPab PKKPab 14 33 32.1 -2.0
comp=Z,0.8nm,0.9s,baz=63,slow=17,SNR=4.0
RDF Al-Radifah 120.38 297 *eP* PKPdf 14 23 21.6 -0.6
baz=297
RDF AMb AMB 14 23 23.4
comp=Z,28nm,0.8s,baz=297
MIB Mutribah 120.50 298 *eP* PKPdf 14 23 21.6 -0.8
baz=298
MIB AMb AMB 14 23 23.8
comp=Z,26nm,1.0s,baz=298
NAY Al-Naaiem 120.63 297 *eP* PKPdf 14 23 21.9 -0.7
baz=297
NAY AMb AMB 14 23 23.9
comp=Z,13nm,1.4s,baz=297
RST Umm Al-Ruwaisa 120.82 297 *eP* PKPdf 14 23 22.8 -0.3
baz=297
RST AMb AMB 14 23 23.7
comp=Z,1.0nm,1.0s,baz=297
OBN Obninsk 121.39 329 *e*PKIKP PKPdf 14 23 22.2 -1.1
OBN *e* 14 30 23.3
OBN *e*PS PS 14 34 48.7 +0.7
OBN *e*SS SS 14 41 31.3 +5.4
OBN pmax pmax
comp=Z,6.0nm,0.8s
KIV Kislovodsk 121.79 315 *e*PKIKP PKPdf 14 23 22.7 -1.7
KIV *e* 14 30 29.2
KIV pmax pmax
comp=Z,4.0nm,0.9s
KAF Kangasniemi 121.81 339 *ep* PKPdf 14 23 22.4 -1.5
comp=Z,0.8nm,0.4s
KAF Kangasniemi 121.81 339 *e*PKIKP PKPdf 14 23 22.4 -1.5
KAF pmax pmax
comp=Z,1.0nm,0.4s
CPUP Villa Florida 123.47 132 PKP PKPdf 14 23 27.2 -1.0
comp=Z,0.2nm,0.4s,baz=184,slow=7.9,SNR=2.3
SDV Santo Domingo 124.22 87 PKP PKPdf 14 23 29.2 -0.8
comp=Z,1.9nm,0.3s,baz=317,slow=3.4,SNR=5.4
BOSA Boshof 124.96 223 PKP PKPdf 14 23 30.6 -0.5
comp=Z,22nm,0.8s,baz=127,slow=2.7,SNR=25
NB2 NORSAR Subarra 127.26 345 PKPdf PKPdf 14 23 34.1 -0.3
comp=Z,4.2nm,1.1s,baz=31,slow=1.9
NOA NORSAR Array B 127.26 345 PKP PKPdf 14 23 32.8 -1.6
comp=Z,3.1nm,0.8s,baz=35,slow=2.1,SNR=5.4
AKASG Malin Array Be 127.44 327 PKP PKPdf 14 23 33.0 -2.0
comp=Z,2.9nm,0.9s,baz=63,slow=1.6,SNR=8.9
KMBO Kilima Mbogo 127.60 260 PKP PKPdf 14 23 37.9 +1.4
comp=Z,6.8nm,0.9s,baz=43,slow=5.7,SNR=7.0
KMBO Kilima Mbogo 127.60 260 *e*PKPdf PKPdf 14 23 37.6 +1.1
ASF Jabal al Asfar 129.06 302 PKP PKPdf 14 23 39.6 +0.9
comp=Z,0.9nm,0.3s,baz=303,slow=3.6,SNR=3.5
MMAI Mount Meron Ar 130.11 304 PKP PKPdf 14 23 41.6 +0.9
comp=Z,0.6nm,0.3s,baz=113,slow=8.6,SNR=4.6
LSZ Lusaka 130.50 238 *e*PKIKP PKPdf 14 23 43.0 +1.1
EIL Elat 131.20 299 PKP PKPdf 14 23 43.9 +1.0
comp=Z,4.9nm,0.8s,baz=306,slow=6.3,SNR=5.1
STHS Stebnicka Huta 132.35 329 *e*PKP PKPdf 14 23 40.3 -4.1
STHS *e*SKP 14 27 12.1
STHS *e* 14 27 20.3
CRVS Cervenica-Dubn 132.57 329 *e*PKP PKPdf 14 23 43.7 -1.1
KECS Kecovo 133.33 329 *e*PKP PKPdf 14 23 44.1 -2.2
DPC Dobruska-Polom 134.02 333 *e*PKPdf PKPdf 14 23 48.2 +0.7
UPC Upice 134.04 334 *e*PKPdf PKPdf 14 23 49.1 +1.5
VYHS Vyhne 134.15 330 *e*PKP PKPdf 14 23 46.1 -1.7
VYHS *e*SKP 14 27 18.5
VYHS *e* 14 27 30.1
BRG Berggiesshubel 134.64 335 *e*PKIKP PKPdf 14 23 49.4 +0.7
BRG *e* 14 23 57.6
BRG pmax pmax
comp=Z,5.0nm,1.3s
BRG pmax pmax
comp=Z,2.0nm,0.9s
BRG Berggiesshubel 134.64 335 *e*PKP PKPdf 14 23 49.4 +0.7
comp=Z,8.2nm,1.3s
BRG *e* 14 23 57.6
comp=Z,3.7nm,0.9s
CLL Collm 134.68 336 *e*PKIKP PKPdf 14 23 50.0 +1.3
CLL pmax pmax
comp=Z,15nm,1.5s
CLL MLR MLR
comp=Z,300nm,19.8s,MS5.0
CLL Collm 134.68 336 *e*PKPdf PKPdf 14 23 50.0 +1.3
comp=Z,15nm,1.5s
CLL *e*PKSdf 14 27 24.0
MODS Modra-Piesok 134.99 331 *e*PKP PKPdf 14 23 50.0 +0.6
MODS *e* 14 24 01.8
PRU Pruhonice 135.06 334 *e*PKPdf PKPdf 14 23 50.0 +0.5
KHC Kasperske Hory 136.12 334 *e*PKPdf PKPdf 14 23 51.9 +0.4
KHC *ex* x 14 27 28.5
GERES GERESS Array B 136.28 334 PKP PKPdf 14 23 52.2 +0.4
comp=Z,3.5nm,1.0s,baz=23,slow=4.4,SNR=14
TSUM Tsumeb 136.43 226 *e*PKPdf PKPdf 14 23 54.7 +1.7
GRA1 Grafenberg Arr 136.66 336 *e*PKP PKPdf 14 23 52.3 -0.2
GRF Grafenberg Arr 136.66 336 *e*PKPdf PKPdf 14 23 52.3 -0.2
PERS Pernice 137.25 330 *e*PKPdf PKPdf 14 23 53.8 +0.1
MEM Membach 137.75 341 PKP PKPdf 14 23 54.0 -0.5
BOJS Bojanci 137.99 329 *i* PKPdf PKPdf 14 23 55.8 +0.8
WLF Walferdange 138.52 340 PKP PKPdf 14 23 52.4 -3.5
MBDF Montbardon 142.46 336 *e*PKP1 PKPdf 14 23 58.3 -4.9
ORIF Oris-en-Rattie 142.65 337 *e*PKP1 PKPdf 14 23 59.6 -3.9
comp=Z,15nm,0.9s
SAOF Saorge 142.73 334 PKP PKPdf 14 23 58.6 -5.1
AUTN L'Aution 142.78 334 PKP PKPdf 14 23 58.5 -5.3
TOUF Mont Tournerai 142.84 334 PKP PKPdf 14 23 58.3 -5.6
SBF Sospel 142.88 334 *e*PKP1 PKPdf 14 23 58.8 -5.2
comp=Z,46nm,1.0s
MFF Saint Martin d 143.15 344 *e*PKP1 PKPdf 14 24 01.3 -3.1
comp=Z,35nm,1.2s
VIVF Saint-Julien-l 143.16 338 *e*PKP1 PKPdf 14 24 00.5 -3.9
comp=Z,34nm,1.3s
PGF Pioggiola 143.21 331 *e*PKP1 PKPdf 14 24 00.2 -4.4
LBL Lubilhac 143.35 340 PKP PKPdf 14 24 02.0 -2.8
FRF La Foret Royal 143.46 335 *e*PKP1 PKPdf 14 24 01.0 -4.0
comp=Z,55nm,1.2s
SMRF Simiane la Rot 143.56 336 *e*PKP1 PKPdf 14 24 02.0 -3.2
comp=Z,21nm,1.0s
LMR La Mourre 143.70 334 *e*PKP1 PKPdf 14 24 02.0 -3.4
comp=Z,94nm,1.3s
OSPF L'Ospedale 143.80 330 PKP PKPdf 14 24 02.5 -3.2
RJF Les Rejaudoux 143.85 341 *e*PKP1 PKPdf 14 24 02.6 -3.0
CAF Calviac 144.01 341 *e*PKP1 PKPdf 14 24 03.5 -2.4
LASF Ste Croix 144.13 338 *e*PKP1 PKPdf 14 24 03.9 -2.3
comp=Z,87nm,1.3s
LFF La Frestale 144.42 342 *e*PKP1 PKPdf 14 24 04.5 -2.1
comp=Z,73nm,1.3s
MTLF Montolieu 145.36 339 ⇑ *i*PKP1 PKPbc 14 24 08.0 -0.2
comp=Z,40nm,1.0s
FILF Fillols 145.92 338 PKP PKPdf 14 24 08.7 -0.6
MLS Moulis 146.08 340 PKP PKPdf 14 24 09.3 -0.3
VALF Valcebollere 146.25 338 PKP PKPdf 14 24 09.1 -0.8
EPF Esparros 146.26 341 *e*PKP1 PKPbc 14 24 10.5 -0.5
RESF Ens 146.47 341 PKP PKPdf 14 24 11.3 +1.1
ETSF Etsaut 146.66 342 *e*PKP1 PKPbc 14 24 12.0 -0.2
comp=Z,12nm,0.6s
SJPF Ste Jean 146.66 343 *e*PKP1 PKPbc 14 24 11.5 -0.7
KEST Kesra 147.99 323 PKPbc PKPbc 14 24 16.8 +0.6
comp=Z,13nm,1.0s,baz=294,slow=1.9,SNR=24
MVO Moncorvo 149.87 350 *e*PKPbc PKPbc 14 24 20.0 -0.7
PVIS Viseu 150.46 351 *e*PKPbc PKPbc 14 24 22.9 +0.8
ESDC Sonseca Array 150.62 344 PKP PKPdf 14 24 16.6 -0.4
comp=Z,0.7nm,0.8s,baz=4.2,slow=3.1,SNR=4.5
ESDC PKPbc PKPbc 14 24 22.5 0.0
comp=Z,3.7nm,0.8s,baz=19,slow=2.4,SNR=22
MTE Manteigas 150.71 350 *e*PKPbc PKPbc 14 24 23.7 +1.0
PCBR Castelo Branco 151.24 350 *e*PKPbc PKPbc 14 24 24.6 +0.6
PTOM Tomar 151.61 351 *e*PKPbc PKPbc 14 24 24.9 +0.1
PMRV Marv??o 151.62 349 *e*PKPbc PKPbc 14 24 25.6 +0.7
EVO Evora 152.61 350 *e*PKIKP PKPdf 14 24 20.9 +0.8
comp=Z,30nm,1.1s
TORD Torodi Ar. Bea 164.64 278 PKP PKPdf 14 24 34.8 -0.2
comp=Z,6.0nm,1.0s,baz=121,slow=1.3,SNR=16
TORD PKPab PKPab 14 25 30.9 +0.4
comp=Z,3.8nm,1.1s,baz=53,slow=3.1,SNR=8.2
TORD Torodi Ar. Bea 164.64 278 PKP PKPdf 14 24 34.8 -0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TORD				PKPab	PKPab	14 25 30.9	+0.4
DBIC	**Dimbokro**	**169.81**	**242**	PKPab	PKPab	14 25 52.9	-0.4
	comp=Z,12nm,1.1s,baz=110,slow=7.5,SNR=4.1						

*IDC **02** 14:20:20.6±1.3, 1158S×16579E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.9/15, mbtmp3.9/7, Error ellipse: s-maj=55.5km s-min=25.6km az=148.0*
*ISCJB **02** 14:20:24.0±1.3, 116S±03×1657E±02, h33^{km}, mb3.9/8, Error ellipse: s-maj=54.7km s-min=19.6km az=149.1*
*NEIC **02** 14:20:26.2±1.1, 1153S×16573E, h35^{km}, mb4.4/1, Error ellipse: s-maj=48.0km s-min=17.5km az=149.0*
ISC 02 14:20:26.0±1.3**, 116S**±03×**1658E**±02**, h35**^{km}**, n10, σ0^{s}46**/9**, mb3.9**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.32**	**251**	P	**P**	**14 26 43.3**	**+0.1**
	1.5nm,1.0s,mb3.8,baz=83,slow=8.9,SNR=6.0						
WRA				PcP	PcP	14 29 37.1	+0.2
	0.8nm,0.9s,baz=87,slow=2.7,SNR=4.8						
ASAR	**Alice Springs**	**32.58**	**244**	P	**P**	**14 26 54.3**	**+0.1**
	2.0nm,0.8s,mb4.1,baz=74,slow=8.9,SNR=13						
ASAR				PcP	PcP	14 29 39.6	-0.6
	0.9nm,0.8s,baz=110,slow=1.8,SNR=6.9						
CMAR	**Chiang Mai Arr**	**72.33**	**294**	P	**P**	**14 31 48.6**	**0.0**
	1.7nm,0.9s,mb4.0,baz=113,slow=4.3,SNR=7.9						
SONM	**Songino Array**	**79.08**	**324**	P	**P**	**14 32 27.7**	**+1.0**
	0.5nm,0.9s,mb3.4,baz=145,slow=5.3,SNR=2.9						
YBH	**Yreka Blue Hor**	**84.24**	**46**	P	**P**	**14 32 54.0**	**0.0**
	0.3nm,0.3s,mb3.9,baz=272,slow=5.0,SNR=3.7						
EGAK	**Eagle**	**85.85**	**20**	*e*P	**P**	**14 33 01.6**	**0.0**
	2.9nm,1.0s,mb4.5						
NVAR	**Mina Array Bea**	**86.34**	**50**	P	**P**	**14 33 04.8**	**+0.1**
	0.2nm,0.5s,mb3.6,baz=235,slow=7.6,SNR=4.3						
MK31	**Makanchi Array**	**93.90**	**317**	*e*P	**P**	**14 33 39.3**	**-0.6**
MKAR	**Makanchi Array**	**93.90**	**317**	P	**P**	**14 33 39.3**	**-0.7**
	1.1nm,0.8s,mb4.3,baz=111,slow=5.8,SNR=9.7						
ESDC	**Sonseca Array**	**150.55**	**344**	PKPbc	PKPbc	14 40 16.9	+2.5
	0.6nm,0.9s,baz=5.7,slow=4.5,SNR=4.4						

*BJI **02** 14:31:39.1, 3644N×7040E, h155^{km}, mB4.7, mb4.6*
*MOS **02** 14:31:43.6±0.9, 3644N×7098E, h138^{km}, mb4.4/13, Error ellipse: s-maj=13.0km s-min=7.6km az=98.2*
*ISCJB **02** 14:31:45.3±0.4, 3648N±002×7111E±005, h154^{km}±5^{km}, mb4.1/21, Error ellipse: s-maj=6.5km s-min=3.1km az=164.3*
*IDC **02** 14:31:46.9±0.9, 3624N×7080E, h160^{km}±7^{km}, mb3.9/12, mb1 4.1/13, mb1mx3.7/24, mbtmp3.9/13, Error ellipse: s-maj=13.4km s-min=11.9km az=45.0*
*NEIC **02** 14:31:46.6±0.4, 3639N×7096E, mb4.3/5, Error ellipse: s-maj=14.6km s-min=6.4km az=225.0*
*NNC **02** 14:31:53.6±2.6, 3705N×7100E, h198^{km}±19^{km}, mb3.2, mpv4.8, Error ellipse: s-maj=22.9km s-min=16.5km az=33.0*
ISC 02 14:31:46.2±0.4**, 3645N**±002×**7110E**±005**, h151**^{km}±5^{km}**, h160**^{km}±4.2^{km}**: pP-P, n111, σ1^{s}24**/135**, mb4.1**/21**, 8C-9D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.70**	**166**	⇓P	**Pn**	**14 32 31.8**	**+2.0**
CEP				S	**Sn**	**14 33 06.0**	**+2.6**
CHCP	**Chirah Chowk**	**3.30**	**147**	P	**Pn**	**14 32 39.1**	**+1.8**
SARP	**Sargodha**	**4.70**	**163**	P	**Pn**	**14 32 57.3**	**+1.7**
JMU	**Jammu**	**4.86**	**139**	*e*S	**Sn**	**14 33 51.0**	**-2.6**
KSH	**Kashi**	**4.92**	**50**	⇑*i*P	**Pn**	**14 33 01.2**	**+2.8**
KSH				S	**Sn**	**14 33 56.9**	**+2.1**
KSH				Smax			
	comp=N,1μm,0.4s						
KSH				Smax			
	comp=E,2μm,0.4s						
THN	**Thein Dam**	**5.53**	**135**	*e*P	**Pn**	**14 33 06.9**	**+0.3**
THN				*e*S	**Sn**	**14 34 09.0**	**-0.4**
DLH	**Dalhousie**	**5.59**	**133**	*e*P	**Pn**	**14 33 09.0**	**+1.5**
DLH				*e*S	**Sn**	**14 34 11.0**	**0.0**
AML	**Almayashu**	**6.02**	**19**	P	**Pn**	**14 33 13.3**	**+0.2**
	SNR=619						
UCH	**Uchtor**	**6.35**	**24**	P	**Pn**	**14 33 17.6**	**+0.1**
	SNR=223						
KZA	**Kyzart**	**6.48**	**28**	P	**Pn**	**14 33 19.1**	**0.0**
	SNR=62						
EKS2	**Erkin-Say**	**6.54**	**18**	P	**Pn**	**14 33 20.2**	**+0.2**
	SNR=73						
KK31	**Karatay Array**	**6.67**	**356**	P	**Pn**	**14 33 21.3**	**-0.3**
	comp=E,27nm,0.3s,baz=179,slow=12,SNR=862						
KK31				⇑S	**Sn**	**14 34 32.0**	**-4.5**
	comp=E,320nm,0.9s,baz=187,slow=22,SNR=26						
AAK	**Ala-Archa**	**6.71**	**22**	P	**Pn**	**14 33 22.6**	**+0.4**
	SNR=78						
KBK	**Karagaybulak**	**6.88**	**24**	P	**Pn**	**14 33 24.9**	**+0.5**
	SNR=42						
FRU	**Bishkek**	**6.93**	**22**	*e*PN	**Pn**	**14 33 25.0**	**-0.2**
SDNR	**Sundarnagar**	**6.93**	**134**	*e*P	**Pn**	**14 33 25.0**	**-0.3**
SDNR				*e*S	**Sn**	**14 34 39.0**	**-4.0**
ULHL	**Ulahol**	**7.03**	**33**	P	**Pn**	**14 33 27.0**	**+0.5**
	SNR=14						
CHMS	**Chumysh**	**7.12**	**22**	P	**Pn**	**14 33 27.4**	**-0.3**
	SNR=66						
USP	**Ospenovka**	**7.30**	**20**	P	**Pn**	**14 33 29.4**	**-0.7**
	SNR=33						
SMLA	**Simla**	**7.32**	**135**	*i* P	**Pn**	**14 33 30.4**	**0.0**
SMLA				*i* S	**Sn**	**14 34 49.5**	**-2.8**
TKM2	**Tokmak 2**	**7.34**	**27**	⇑P	**Pn**	**14 33 31.0**	**+0.4**
	comp=E,38nm,0.6s						
TKM2				⇓S	**Sn**	**14 34 51.3**	**-1.3**
	comp=E,65nm,0.8s						
TKM2	**Tokmak 2**	**7.34**	**27**	P	**Pn**	**14 33 30.7**	**+0.1**
	SNR=80						
KLP	**Kalpa**	**7.70**	**127**	*e*P	**Pn**	**14 33 35.9**	**+0.4**
KLP				*e*S	**Sn**	**14 34 59.2**	**-2.1**
KLP				AML	AML	14 35 00.7	
	comp=N,278nm,0.3s						
KLP				AML	AML	14 35 05.3	
	comp=E,577nm,0.3s						
DDI	**Dehra Dun**	**8.43**	**134**	*e*x	**Pn**	**14 33 42.6**	**-2.7**
DDI				*e*S	**Sn**	**14 35 13.0**	**-6.0**
JOSI	**Joshimath**	**9.18**	**127**	*e*x	**Pn**	**14 33 53.3**	**-2.0**
JOSI				*e*S	**Sn**	**14 35 33.4**	**-3.7**
JOSI				AML	AML	14 35 36.9	
	comp=E,427nm,1.4s						
JOSI				AML	AML	14 35 37.8	
	comp=N,463nm,0.7s						
NDI	**New Delhi**	**9.30**	**145**	*e*P	**Pn**	**14 33 57.0**	**+0.1**
NDI				*e*S	**Sn**	**14 35 33.0**	**-7.0**
JASL	**Jaisalmer**	**9.49**	**181**	*e*P	**Pn**	**14 33 58.9**	**-0.6**
SONA	**Sohna**	**9.61**	**147**	*e*P	**Pn**	**14 34 00.8**	**-0.1**
SONA				*e*S	**Sn**	**14 35 40.8**	**-6.6**
SONA				AML	AML	14 35 42.8	
	comp=N,22nm,0.3s						
SONA				AML	AML	14 35 47.4	
	comp=E,57nm,0.7s						
AJM	**Ajmer**	**10.38**	**162**	*e*P	**Pn**	**14 34 11.0**	**-0.3**
AJM				*e*S	**Sn**	**14 35 56.1**	**-10**
AJM				AML	AML	14 36 03.8	
	comp=N,38nm,0.2s						
AJM				AML	AML	14 36 04.0	
	comp=E,60nm,0.3s						
MK31	**Makanchi Array**	**13.29**	**35**	⇓P	**Pn**	**14 34 48.8**	**0.0**
	comp=E,3.6nm,0.6s,baz=214,slow=8.8,SNR=38						
MK31	**Makanchi Array**	**13.29**	**35**	*e*Pn	**Pn**	**14 34 48.4**	**-0.4**
MKAR	**Makanchi Array**	**13.29**	**35**	P	**Pn**	**14 34 47.2**	**-1.6**
	comp=E,0.4nm,0.3s,baz=221,slow=14,SNR=20						
MKAR	**Makanchi Array**	**13.29**	**35**	P	**Pn**	**14 34 47.2**	**-1.6**
DANN	**Dangsing**	**13.39**	**123**	*e*P	**Pn**	**14 34 49.3**	**-1.0**
	comp=E,43nm,0.3s						
KOLN	**Koldanda**	**13.66**	**126**	*e*P	**Pn**	**14 34 53.0**	**-0.8**
GKN	**Gorkha**	**14.20**	**123**	*e*P	**Pn**	**14 34 59.8**	**-0.8**
WMQ	**Urumqi**	**14.66**	**55**	*e*P	**Pn**	**14 35 04.2**	**-2.0**
WMQ				AMB	AMB		
	comp=Z,14nm,0.9s						
WMQ				AMB	AMB		
	comp=Z,121nm,3.9s						
DMN	**Daman**	**14.78**	**123**	*e*P	**Pn**	**14 35 08.1**	**+0.4**
	comp=Z,38nm,0.4s						
KKN	**Kakani**	**14.78**	**122**	*e*P	**Pn**	**14 35 07.2**	**-0.6**
	comp=Z,166nm,0.7s						
KKN	**Kakani**	**14.78**	**122**	*e*P	**Pn**	**14 35 07.2**	**-0.6**
KKN				pmax	pmax		
	comp=Z,166nm,0.7s						
PKIN	**Phulchoki**	**14.99**	**122**	*e*P	**Pn**	**14 35 11.4**	**+0.9**
	comp=Z,117nm,0.6s						
PKI	**Pulchoki**	**15.01**	**122**	*e*P	**Pn**	**14 35 11.4**	**+0.8**
	comp=Z,176nm,0.6s						
PKI	**Pulchoki**	**15.01**	**122**	*e*P	**Pn**	**14 35 11.4**	**+0.8**
PKI				pmax	pmax		
	comp=Z,176nm,0.6s						
GUN	**Gumba**	**15.12**	**120**	*e*P	**Pn**	**14 35 13.1**	**+1.1**
	comp=Z,73nm,0.6s						
KURBB	**Kurchatov Arra**	**15.15**	**18**	⇑P	**Pn**	**14 35 09.9**	**-2.2**
	comp=Z,1.8nm,0.7s						
AB31	**Akbulak array**	**15.17**	**331**	⇑P	**Pn**	**14 35 11.7**	**-0.7**
	comp=Z,2.7nm,0.4s,baz=145,slow=12,SNR=106						
AB31				⇓S	**S**	**14 37 50.3**	**-16**
	comp=Z,12nm,0.6s						
KURK	**Kurchatov**	**15.26**	**18**	⇓P	**Pn**	**14 35 10.9**	**-2.5**
	comp=Z,6.3nm,0.7s						
KURK	**Kurchatov**	**15.26**	**18**	P	**Pn**	**14 35 09.3**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=206,slow=12,SNR=20						
KURK				S	S	14 38 30.4	+27
	comp=Z,0.0nm,0.3s,baz=320,slow=14,SNR=3.6						
KURK	**Kurchatov**	**15.26**	**18**	*e*P	**Pn**	**14 35 11.0**	**-2.5**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURK	**Kurchatov**	**15.26**	**18**	P	**Pn**	**14 35 09.3**	**-4.2**
KURK				S	S	14 38 30.4	+27
JIRN	**Jiri**	**15.49**	**120**	*e*P	**Pn**	**14 35 18.1**	**+1.5**
	comp=Z,86nm,0.4s						
RAMN	**Ramite**	**16.22**	**121**	*e*P	**Pn**	**14 35 25.4**	**-0.1**
	comp=Z,40nm,0.5s						
VOSK	**Vostochnaya**	**16.28**	**360**	⇓P	**Pn**	**14 35 24.2**	**-1.8**
	comp=Z,6.9nm,1.1s						
VOSK				⇓S	**S**	**14 38 17.6**	**-9.3**
	comp=Z,9.9nm,0.9s						
AKL	**Akola**	**16.52**	**160**	*e*P	**Pn**	**14 35 29.2**	**0.0**
AKL				*ex*	x	14 38 22.5	
BVA0	**Borovoye Array**	**16.59**	**358**	⇑P	**Pn**	**14 35 29.6**	**-0.2**
	comp=Z,1.4nm,1.0s,baz=168,slow=11,SNR=4.6						
BVA0				S	**S**	**14 38 25.7**	**-8.4**
	comp=Z,1.1nm,0.7s,baz=177,slow=20,SNR=10						
BVAR	**Borovoye Array**	**16.59**	**358**	P	**Pn**	**14 35 28.3**	**-1.4**
	comp=Z,1.4nm,0.3s,baz=155,slow=11,SNR=26						
BVAR				S	**S**	**14 38 28.6**	**-5.4**
	comp=Z,0.7nm,0.3s,baz=167,slow=23,SNR=11						
BVAR	**Borovoye Array**	**16.59**	**358**	P	**Pn**	**14 35 28.3**	**-1.4**
BVAR				S	**S**	**14 38 28.6**	**-5.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
TAPN	**Taplejung**	**16.75**	**118**	*e*P	**Pn**	**14 35 34.2**	**+2.3**
ODAN	**Odare**	**16.82**	**120**	*e*P	**Pn**	**14 35 33.9**	**+1.1**
	comp=N,44nm,0.5s						
AKTK	**Aktyubinsk**	**16.87**	**330**	P	**Pn**	**14 35 31.5**	**-1.6**
AKTK				S	**S**	**14 38 34.6**	**-5.9**
AKTO	**Aktyubinsk**	**16.87**	**330**	⇓P	**Pn**	**14 35 33.0**	**-0.1**
	comp=N,1.6nm,0.8s						
AKTO				⇓S	**S**	**14 38 30.8**	**-10**
	comp=N,4.4nm,1.1s						
AKTO	**Aktyubinsk**	**16.87**	**330**	P	**Pn**	**14 35 31.5**	**-1.6**
	comp=N,0.5nm,0.3s,baz=134,slow=9.3,SNR=32						
AKTO				S	**S**	**14 38 34.6**	**-5.9**
	comp=N,1.0nm,0.3s,baz=116,slow=23,SNR=6.4						
AKTO	**Aktyubinsk**	**16.87**	**330**	P	**Pn**	**14 35 31.5**	**-1.7**
AKTO				S	**S**	**14 38 34.7**	**-5.8**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
LSA	**Lhasa**	**18.08**	**106**	P	**P**	**14 35 52.0**	**+5.8**
LSA	**Lhasa**	**18.08**	**106**	*e*P	**P**	**14 35 51.7**	**+5.5**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LSA	**Lhasa**	**18.08**	**106**	*e*P	**P**	**14 35 51.7**	**+5.4**
	comp=Z,9.4nm,0.7s						
LATR	**Latur**	**18.59**	**164**	*e*S	**S**	**14 39 14.2**	**-1.7**
ZAL	**Zalesovo**	**19.91**	**24**	P	**P**	**14 36 07.4**	**+1.6**
ZAL				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZALV	**Zalesovo Beam**	**19.93**	**24**	P	**P**	**14 36 07.4**	**+1.4**
	comp=Z,10nm,0.5s,baz=221,slow=11,SNR=37						
ZALV				S	**S**	**14 39 48.8**	**+7.0**
	comp=Z,2.2nm,0.8s,baz=213,slow=19,SNR=3.5						
HYB	**Hyderabad**	**20.07**	**159**	*i* P	**P**	**14 36 10.0**	**+2.2**
HYB	**Hyderabad**	**20.07**	**159**	*e*P	**P**	**14 36 10.0**	**+2.2**
NVS	**Novosibirsk**	**20.20**	**21**	⇑*i*P	**P**	**14 36 09.5**	**+0.6**
NVS				*e*S	**S**	**14 39 46.8**	**-0.3**
NVS				pmax	pmax		
	comp=N,18nm,0.8s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,21nm,0.8s						
NVS				smax			
	comp=N,18nm,1.8s						
MIB	**Mutribah**	**20.95**	**258**	*e*P	**P**	**14 36 19.4**	**+2.2**
	baz=305						
MIB				AMb	AMB	14 36 20.6	
	comp=Z,27nm,0.8s,baz=305						
RDF	**Al-Radifah**	**21.16**	**256**	*e*P	**P**	**14 36 19.7**	**+0.3**
	baz=305						
RDF				AMb	AMB	14 36 21.7	
	comp=Z,32nm,0.9s,mb4.7,baz=305						
NAY	**Al-Naaiem**	**21.26**	**257**	*e*P	**P**	**14 36 20.0**	**-0.4**
	baz=305						
NAY				AMb	AMB	14 36 22.6	
	comp=Z,12nm,0.7s,mb4.3,baz=305						
RST	**Umm Al-Ruwaisa**	**21.34**	**258**	*e*P	**P**	**14 36 20.4**	**-1.0**
	baz=305						
RST				AMb	AMB	14 36 26.5	
	comp=Z,0.7nm,1.1s,mb2.9,baz=305						
ARU	**Arti**	**21.71**	**341**	*c i*P	**P**	**14 36 27.5**	**+2.6**
ARU				*e*		14 36 51.4	
ARU				*e*S	**S**	**14 40 23.5**	**+8.2**
ARU				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.2						
KIV	**Kislovodsk**	**22.89**	**298**	P	**P**	**14 36 34.8**	**-1.8**
KIV				*e*		14 37 01.4	
KIV				*e*		14 40 18.9	
KIV				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
LZH	**Lanzhou**	**26.34**	**81**	*e*P	**P**	**14 37 03.5**	**-4.5**
LZH				AP	pP	14 37 45.0	+5.6
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,89nm,5.1s						
SONM	**Songino Array**	**28.30**	**55**	P	**P**	**14 37 28.0**	**+2.6**
	comp=Z,0.4nm,0.4s,mb3.5,baz=266,slow=9.3,SNR=4.2						
SONM				pP	pP	14 38 03.3	+6.3
	comp=Z,1.1nm,0.8s,baz=248,slow=7.8,SNR=3.8						
OBN	**Obninsk**	**30.03**	**319**	*e*P	**P**	**14 37 41.2**	**+0.6**
OBN				*e*		14 38 40.9	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
CMAR	**Chiang Mai Arr**	**30.36**	**119**	P	**P**	**14 37 45.7**	**+1.9**
	comp=Z,3.1nm,0.7s,mb4.1,baz=299,slow=8.3,SNR=22						
CMAR	**Chiang Mai Arr**	**30.36**	**119**	P	**P**	**14 37 45.7**	**+1.9**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**33.04**	**309**	P	**P**	**14 38 07.2**	**+0.2**
	comp=Z,4.9nm,0.7s,mb4.4,baz=80,slow=7.2,SNR=30						
AKASG				pP	pP	14 38 39.9	+0.8
	comp=Z,3.4nm,0.7s,baz=80,slow=7.3,SNR=6.0						
AKASG	**Malin Array Be**	**33.04**	**309**	P	**P**	**14 38 07.2**	**+0.2**
AKASG				*PP	pP	14 38 39.9	+0.8
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
JOF	**Joensuu**	**35.96**	**330**	*e*p	**P**	**14 38 32.1**	**+0.2**
	comp=Z,2.7nm,0.4s,mb4.2						
JOF	**Joensuu**	**35.96**	**330**	*e*P	**P**	**14 38 32.1**	**+0.2**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.3						
FINES	**FINESS Array B**	**37.58**	**326**	*e*P	**P**	**14 38 46.0**	**+0.4**
KEV	**Kevo**	**40.88**	**338**	*e*p	**P**	**14 39 13.5**	**+0.6**
	comp=Z,0.4nm,0.3s,mb3.5						
ARCES	**ARCESS Array B**	**41.23**	**338**	P	**P**	**14 39 16.9**	**+1.2**
	comp=Z,2.7nm,0.6s,mb4.0,baz=112,slow=8.0,SNR=24						
ARCES				pP	pP	14 39 51.8	+2.9
	comp=Z,2.8nm,0.8s,baz=118,slow=7.2,SNR=3.3						
ARCES	**ARCESS Array B**	**41.23**	**338**	P	**P**	**14 39 16.9**	**+1.2**
ARCES				*PP	pP	14 39 51.8	+3.0
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRG	**Berggiesshubel**	**42.72**	**308**	*e*P	**P**	**14 39 28.7**	**+0.6**
BRG				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.8						
BRG	**Berggiesshubel**	**42.72**	**308**	*e*P	**P**	**14 39 28.7**	**+0.6**
	comp=Z,4.7nm,1.1s,mb4.0						
NB2	**NORSAR Subarra**	**44.47**	**323**	P	**P**	**14 39 41.7**	**-0.2**
	comp=Z,6.7nm,0.7s,mb4.4,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.47**	**323**	P	**P**	**14 39 42.0**	**+0.1**
	comp=Z,6.8nm,0.7s,mb4.4,baz=97,slow=7.8,SNR=19						
NOA	**NORSAR Array B**	**44.47**	**323**	P	**P**	**14 39 42.0**	**+0.1**
NOA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.80**	**269**	P	**P**	**14 42 12.8**	**-2.7**
	comp=Z,3.0nm,0.7s,mb4.3,baz=42,slow=5.4,SNR=21						
COLA	**College**	**74.51**	**16**	*e*P	**P**	**14 43 08.3**	**+0.7**
BOSA	**Boshof**	**77.76**	**220**	P	**P**	**14 43 25.2**	**-1.3**
	comp=Z,3.9nm,0.9s,mb4.0,baz=102,slow=3.3,SNR=6.6						
BOSA	**Boshof**	**77.76**	**220**	P	**P**	**14 43 25.2**	**-1.2**
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
BOSA	**Boshof**	**77.76**	**220**	P	**P**	**14 43 25.2**	**-1.3**
YKA	**Yellowknife Ar**	**81.30**	**3**	P	**P**	**14 43 45.6**	**+0.4**
	comp=Z,0.5nm,0.4s,mb3.5,baz=351,slow=5.4,SNR=17						
YKA				pP	pP	14 44 24.2	+1.6
	comp=Z,0.7nm,0.6s,baz=350,slow=5.6,SNR=3.2						
YKA	**Yellowknife Ar**	**81.30**	**3**	P	**P**	**14 43 45.6**	**+0.4**
YKA				*PP	pP	14 44 24.2	+1.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**81.89**	**122**	P	**P**	**14 43 48.5**	**-0.3**
	comp=Z,3.5nm,0.5s,mb4.2,baz=324,slow=4.9,SNR=90						
WRA	**Warramunga Arr**	**81.89**	**122**	P	**P**	**14 43 48.5**	**-0.4**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ASAR	**Alice Springs**	**84.16**	**125**	P	**P**	**14 44 00.4**	**0.0**
	comp=Z,3.9nm,0.6s,mb4.3,baz=309,slow=5.0,SNR=83						
ASAR	**Alice Springs**	**84.16**	**125**	P	**P**	**14 44 00.4**	**0.0**
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CTA	**Charters Tower**	**90.44**	**115**	P	**P**	**14 44 30.8**	**0.0**
	comp=Z,3.1nm,0.7s,mb4.4,baz=298,slow=12,SNR=4.0						
CTA	**Charters Tower**	**90.44**	**115**	P	**P**	**14 44 30.8**	**0.0**
CTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PLCA	**Paso Flores**	**149.88**	**250**	PKPbc	PKPbc	14 51 18.6	+0.4
	comp=Z,1.5nm,0.9s,baz=183,slow=11,SNR=3.2						
PLCA	**Paso Flores**	**149.88**	**250**	PKP2	PKPbc	14 51 18.6	+0.4
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.9s						

*CSEM **02** 14:40:37.4±0.7, 3683N×2784E, h30^{km}, MD2.6, Error ellipse: s-maj=19.3km s-min=10.6km az=7.0*
*ISCJB **02** 14:40:38.5±1.4, 3683N±008×2788E±005, h8^{km}±11^{km}, Error ellipse: s-maj=14.2km s-min=5.9km az=15.2*
*DDA **02** 14:40:38.3, 3679N×2793E, h7^{km}±4^{km}, Md2.7*
*ISK **02** 14:40:41.1, 3694N×2777E, h5^{km}, MD2.6*
ISC 02 14:40:39.2±1.8**, 3684N**±008×**2780E**±006**, h26**^{km}±37^{km}**, n6, σ1^{s}04**/12**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.36**	**308**	*i* P	**Pb**	**14 40 47.3**	**+0.2**
BDRM				*i* S	**Sb**	**14 40 52.0**	**-0.6**
BODT	**Bodrum**	**0.45**	**300**	*e*PG	**Pb**	**14 40 49.1**	**+0.5**
BODT				*e*SG	**Sb**	**14 40 55.1**	**+0.2**
MLSB	**Milas**	**0.45**	**358**	*e*PG	**Pb**	**14 40 48.7**	**0.0**
MLSB				*e*SG	**Sb**	**14 40 53.9**	**-1.2**
YER	**Yerkesik**	**0.49**	**53**	*e*PG	**Pb**	**14 40 50.7**	**+1.5**
YER				*e*SG	**Sb**	**14 40 57.4**	**+1.3**
TURN	**Turunc**	**0.65**	**87**	*i* P	**Pb**	**14 40 49.8**	**-2.1**
TURN				*i* S	**Sb**	**14 40 56.8**	**-3.8**
AYDN	**Tasoluk**	**0.82**	**5**	*i* P	**Pb**	**14 40 55.5**	**+0.7**
AYDN				*i* S	**Sb**	**14 41 04.8**	**-0.6**

*ISCJB **02** 14:44:00.8±2.9, 3058S±009×1777W±04, h0^{km}±14^{km}, mb4.0/4, Error ellipse: s-maj=61.2km s-min=10.9km az=10.1*
*IDC **02** 14:44:04.9±3.7, 3029S×17784W, h0^{km}, mb4.1/4, mb1 4.2/4, mb1mx3.9/13, mbtmp4.1/4, Error ellipse: s-maj=79.9km s-min=19.9km az=114.0*
*NEIC **02** 14:44:05.5±2.5, 3036S×17772W, h10^{km}, Error ellipse: s-maj=52.5km s-min=13.9km az=107.0*
ISC 02 14:44:02.9±3.0**, 3050S**±008×**1777W**±04**, h3**^{km}±14^{km}**, n7, σ1^{s}17**/10**, mb4.0**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.26**	**349**	Pn	**Pn**	**14 44 27.3**	**-0.1**
	1μm,0.3s,baz=69,slow=20,SNR=112						
RAO				Sn	**Sn**	**14 44 43.0**	**-1.9**
	961nm,0.3s,baz=83,slow=14,SNR=6.2						
RAO	**Raoul Island**	**1.26**	**349**	*e*Pg	**Pg**	**14 44 27.0**	**-0.1**
RAO				*e*Sn	**Sn**	**14 44 41.3**	**-3.6**
URZ	**Urewera**	**8.87**	**208**	Pn	**Pn**	**14 46 10.5**	**-1.4**
	0.3nm,0.3s,baz=137,slow=22,SNR=3.0						
URZ				Sn	**Sn**	**14 47 51.1**	**-1.2**
	2.0nm,0.3s,baz=123,slow=23,SNR=8.3						
STKA	**Stephens Creek**	**34.75**	**257**	P	**P**	**14 50 56.2**	**+1.8**
	1.4nm,0.3s,mb4.4,baz=90,slow=5.1,SNR=1.9						
ASAR	**Alice Springs**	**43.40**	**267**	P	**P**	**14 52 08.2**	**+1.3**
	0.4nm,0.3s,mb3.6,baz=106,slow=7.1,SNR=21						
WRA	**Warramunga Arr**	**44.40**	**272**	P	**P**	**14 52 15.7**	**+0.7**
	1.3nm,0.4s,mb4.0,baz=110,slow=8.0,SNR=40						
PETK	**Petropavlovsk-**	**85.98**	**345**	P	**P**	**14 56 44.9**	**+0.8**
	0.9nm,0.8s,mb4.1,baz=112,slow=8.2,SNR=4.7						

*NIED **02** 14:54:00, 28.10N×130.40E, h8^{km}, Mw4.1 Best double couple: $M_0$1.41000×10^{15} NP1:ϕ_s59.00000°, δ69.00000°, λ103.00000°. NP2:ϕ_s207.00000°, δ25.00000°, λ60.00000°.*
*ISCJB **02** 14:54:22.0±1.0, 28.10N±003×13033E±005, h24^{km}±7^{km}, mb3.6/7, Error ellipse: s-maj=8.5km s-min=4.5km az=29.6*
*JMA **02** 14:54:21.5, 28.12N×13038E, h23^{km}±1^{km}, M3.6*
JMA Felt II J1.
*IDC **02** 14:54:26.1±7.0, 28.16N×13006E, h32^{km}±51^{km}, mb3.4/6, mb1 3.6/8, mb1mx3.5/21, mbtmp3.5/8, ML3.2/2, MS3.5/2, Ms1 3.5/2, ms1mx2.9/28, Error ellipse: s-maj=36.7km s-min=19.1km az=85.0*
*NEIC **02** 14:54:26.6±0.6, 28.13N×13003E, h35^{km}, mb4.2/1, Error ellipse: s-maj=17.4km s-min=12.0km az=103.0*
ISC 02 14:54:22.6±1.1**, 2810N**±004×**13031E**±005**, h17**^{km}±6^{km}**, n25, σ0^{s}88**/34**, mb3.6**/7**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.36**	**305**	P	**Pg**	**14 54 30.0**	**-0.2**
JZK				S	**Sg**	**14 54 36.0**	**+0.7**
JAM	**Amami Oshima**	**0.69**	**296**	P	**Pg**	**14 54 35.5**	**-0.7**
JAM				S	**Sg**	**14 54 45.2**	**-0.2**
JTK	**Tokunoshima**	**1.24**	**256**	P	**Pn**	**14 54 45.0**	**-0.2**
JNN	**Nakanoshima**	**1.77**	**348**	P	**Pn**	**14 54 51.6**	**-0.9**
JOW	**Kunigami**	**2.21**	**235**	Pn	**Pn**	**14 54 58.0**	**-0.5**
	18nm,0.3s,baz=77,slow=10,SNR=105						
JOW				Sn	**Sn**	**14 55 23.3**	**-2.1**
	34nm,0.3s,baz=102,slow=19,SNR=6.7						
JOW	**Kunigami**	**2.21**	**235**	P	**Pn**	**14 54 58.5**	**0.0**
JOW				*e*S	**Sn**	**14 55 25.9**	**+0.5**
JIH	**Iheya**	**2.34**	**243**	P	**Pn**	**14 55 00.1**	**-0.1**
JIH				*e*S	**Sn**	**14 55 28.0**	**-0.5**
JKC	**Kuchinoerabu**	**2.35**	**358**	P	**Pn**	**14 54 59.9**	**-0.5**
JMZ	**Minamidaito 2**	**2.42**	**160**	P	**Pn**	**14 55 00.3**	**-1.0**
JMZ				*e*S	**Sn**	**14 55 28.5**	**-2.0**
JTN	**Tanegashima 3**	**2.61**	**13**	P	**Pn**	**14 55 03.7**	**-0.3**
JTN				*e*S	**Sn**	**14 55 34.8**	**-0.4**
NAH1	**Naha**	**3.00**	**232**	P	**Pn**	**14 55 09.9**	**+0.5**
NAH1				*e*S	**Sn**	**14 55 45.6**	**+0.5**
JJT2	**Tamagusuku 2**	**3.01**	**230**	P	**Pn**	**14 55 10.1**	**+0.7**
JJT2				*e*S	**Sn**	**14 55 45.7**	**+0.6**
JTSR	**Tashiro 2**	**3.10**	**10**	P	**Pn**	**14 55 10.4**	**-0.3**
JTSR				*e*S	**Sn**	**14 55 46.5**	**-0.8**
JAGN	**Aguni-jima**	**3.12**	**242**	P	**Pn**	**14 55 10.9**	**-0.1**
JAGN				*e*S	**Sn**	**14 55 47.1**	**-0.7**
JKE	**Kume jima 2**	**3.60**	**241**	P	**Pn**	**14 55 17.2**	**-0.4**
KSRS	**Korea Array**	**9.54**	**348**	Pn	**Pn**	**14 56 40.1**	**+1.0**
	0.1nm,0.3s,baz=158,slow=14,SNR=6.1						
CBIJ	**Chichi jima**	**10.58**	**93**	LR	LR	15 01 00.4	
	comp=Z,299nm,18.7s,baz=238,slow=36						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ASAJ	**Asahikawa**	**18.78**	**28**	LR	LR	15 06 25.0	
	comp=Z,134nm,19.3s,baz=341,slow=38						
SONM	**Songino Array**	**27.08**	**323**	P	**P**	**15 00 04.3**	**+0.1**
	0.4nm,0.5s,mb3.2,baz=117,slow=13,SNR=3.2						
CMAR	**Chiang Mai Arr**	**30.30**	**258**	P	**P**	**15 00 33.1**	**0.0**
	0.6nm,0.7s,mb3.4,baz=49,slow=8.4,SNR=5.6						
WRA	**Warramunga Arr**	**47.92**	**175**	P	**P**	**15 03 02.0**	**+1.9**
	0.6nm,0.8s,mb3.7,baz=355,slow=8.0,SNR=5.5						
ASAR	**Alice Springs**	**51.59**	**176**	P	**P**	**15 03 29.9**	**+2.0**
	0.3nm,0.7s,mb3.3,baz=7.3,slow=13,SNR=6.3						
COLA	**College**	**61.49**	**29**	*e*P	**P**	**15 04 40.1**	**+2.1**
	1.0nm,0.5s,mb4.2						
AKASG	**Malin Array Be**	**75.31**	**320**	P	**P**	**15 06 04.4**	**-0.3**
	1.2nm,0.5s,mb4.0,baz=58,slow=6.3,SNR=5.6						
GERES	**GERESS Array B**	**84.81**	**324**	P	**P**	**15 06 57.1**	**+1.0**
	0.5nm,0.8s,mb3.7,baz=46,slow=5.8,SNR=5.1						

*ISCJB **02** 15:00:52.6±0.5, 2427N±003×12188E±002, h69^{km}±5^{km}, Error ellipse: s-maj=5.1km s-min=2.9km az=145.1*
*JMA **02** 15:00:52.9±0.3, 2448N×12194E, h84^{km}, M2.5*
*TAP **02** 15:00:52.7, 2428N×12187E, h68^{km}, ML3.0, D*
ISC 02 15:00:53.1±0.5, **2428N**±003×**12188E**±002, **h68**^{km}±5^{km}, **n41**, σ**0^{s}65**/76, **1C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.20**	**319**	*e*P	**Pn**	**15 01 03.3**	**-0.1**
	baz=322						
ENA				*e*S	**Sn**	**15 01 11.0**	**+0.1**
	baz=322						
TWC	**Suao**	**0.33**	**355**	P	**Pn**	**15 01 04.2**	**0.0**
	baz=357						
TWC				S	**Sn**	**15 01 12.9**	**+0.5**
	baz=357						
TWD	**Chiawan**	**0.33**	**233**	*i* P	**Pn**	**15 01 03.9**	**-0.4**
	baz=231						
TWD				S	**Sn**	**15 01 12.0**	**-0.3**
	baz=231						
ENTT	**Nioudou**	**0.46**	**321**	*e*P	**Pn**	**15 01 05.3**	**0.0**
	baz=322						
ENTT				*e*S	**Sn**	**15 01 14.4**	**+0.1**
	baz=322						
TWE	**Neicheng**	**0.48**	**336**	⇓*i*P	**Pn**	**15 01 05.6**	**0.0**
	baz=337						
TWE				S	**Sn**	**15 01 15.2**	**+0.5**
	baz=337						
NNS	**Nan Shan**	**0.49**	**289**	P	**Pn**	**15 01 05.4**	**-0.2**
	baz=289						
NNS				*e*S	**Sn**	**15 01 14.8**	**0.0**
	baz=289						
ILA	**Ilan**	**0.50**	**346**	*e*P	**Pn**	**15 01 06.1**	**+0.3**
	baz=347						
ILA				*e*S	**Sn**	**15 01 16.8**	**+1.8**
	baz=347						
WHF	**Hehuan Shan**	**0.58**	**257**	⇑*i*P	**Pn**	**15 01 06.6**	**0.0**
	baz=256						
WHF				S	**Sn**	**15 01 16.6**	**+0.2**
	baz=256						
NSK	**Sanguang**	**0.62**	**310**	*e*P	**Pn**	**15 01 06.4**	**-0.6**
	baz=310						
NSK				*e*S	**Sn**	**15 01 16.2**	**-1.0**
	baz=310						
ESL	**Shilin**	**0.62**	**222**	*e*P	**Pn**	**15 01 05.6**	**-1.3**
	baz=220						
ESL				*e*S	**Sn**	**15 01 15.6**	**-1.6**
	baz=220						
TWT	**Tachien**	**0.65**	**268**	*e*P	**Pn**	**15 01 07.3**	**0.0**
	baz=267						
TWT				*e*S	**Sn**	**15 01 17.9**	**+0.3**
	baz=267						
TWB1	**Santiao Chiao**	**0.73**	**8**	P	**Pn**	**15 01 08.0**	**-0.2**
	baz=8.0						
TWB1				S	**Sn**	**15 01 19.0**	**-0.3**
	baz=8.0						
NWF	**Wu-fen Shan**	**0.79**	**353**	⇓*i*P	**Pn**	**15 01 09.3**	**+0.4**
	baz=354						
NWF				*e*S	**Sn**	**15 01 21.2**	**+0.6**
	baz=354						
NSTT	**Nanjuang**	**0.88**	**294**	*e*P	**Pn**	**15 01 09.6**	**-0.3**
	baz=293						
NSTT				*e*S	**Sn**	**15 01 21.7**	**-0.7**
	baz=293						
TWS1	**Kuangyinshan**	**0.92**	**333**	*e*P	**Pn**	**15 01 09.9**	**-0.6**
	baz=333						
TWS1				*e*S	**Sn**	**15 01 22.7**	**-0.7**
	baz=333						
EHY	**Hungye**	**0.93**	**214**	*e*P	**Pn**	**15 01 10.4**	**-0.2**
	baz=212						
EHY				*e*S	**Sn**	**15 01 21.8**	**-1.6**
	baz=212						
SMLT	**Sun Moon Lake**	**0.98**	**246**	*e*P	**Pn**	**15 01 11.8**	**+0.6**
	baz=246						
SMLT				*e*S	**Sn**	**15 01 25.2**	**+0.5**
	baz=246						
TYC	**Yuchr**	**1.01**	**248**	*e*P	**Pn**	**15 01 11.8**	**+0.2**
	baz=248						
TYC				*e*S	**Sn**	**15 01 25.9**	**+0.5**
	baz=248						
TWQ1	**Liyutan**	**1.01**	**274**	*e*P	**Pn**	**15 01 10.9**	**-0.8**
	baz=273						
TWQ1				*e*S	**Sn**	**15 01 24.8**	**-0.6**
	baz=273						
TWY	**Chenhua**	**1.02**	**346**	*e*P	**Pn**	**15 01 11.7**	**-0.1**
	baz=346						
TWY				*e*S	**Sn**	**15 01 25.3**	**-0.4**
	baz=346						
YOJ	**Yonaguni jima**	**1.04**	**80**	P	**Pn**	**15 01 12.1**	**+0.1**
YOJ				S	**Sn**	**15 01 26.6**	**+0.4**
TWF1	**Yuli**	**1.07**	**210**	*e*P	**Pn**	**15 01 11.0**	**-1.3**
	baz=209						
TCU	**Taichung**	**1.11**	**263**	*e*P	**Pn**	**15 01 12.6**	**-0.2**
	baz=263						
TCU				*e*S	**Sn**	**15 01 27.9**	**+0.2**
	baz=263						
YUS	**Yu-Shan**	**1.16**	**227**	*e*P	**Pn**	**15 01 13.8**	**+0.3**
	baz=226						
YUS				*e*S	**Sn**	**15 01 29.5**	**+0.7**
	baz=226						
WNT	**Mingjian**	**1.17**	**250**	*e*P	**Pn**	**15 01 13.6**	**0.0**
	baz=249						
WNT				*e*S	**Sn**	**15 01 29.9**	**+1.0**
	baz=249						
ALS	**Alishan**	**1.25**	**232**	*e*P	**Pn**	**15 01 15.3**	**+0.7**
	baz=231						
ALS				*e*S	**Sn**	**15 01 31.9**	**+1.1**
	baz=231						
CHN5	**Tsauling**	**1.29**	**239**	P	**Pn**	**15 01 15.6**	**+0.3**
	baz=238						
CHN5				*e*S	**Sn**	**15 01 32.8**	**+0.9**
	baz=238						
ELDTW	**Lidau**	**1.34**	**216**	*e*P	**Pn**	**15 01 15.2**	**-0.8**
	baz=215						
ELDTW				*e*S	**Sn**	**15 01 32.4**	**-0.7**
	baz=215						
STYT	**Tauyuan**	**1.52**	**223**	*e*P	**Pn**	**15 01 18.5**	**+0.2**
	baz=222						
STYT				*e*S	**Sn**	**15 01 37.9**	**+0.8**
	baz=222						
WTP	**Ta-pu**	**1.55**	**229**	*e*P	**Pn**	**15 01 19.4**	**+0.7**
	baz=228						
WTP				*e*S	**Sn**	**15 01 38.6**	**+0.6**
	baz=228						
TWK	**Hsinying**	**1.63**	**232**	*e*P	**Pn**	**15 01 19.5**	**-0.2**
	baz=231						
TWG	**Pinlang**	**1.63**	**207**	*e*P	**Pn**	**15 01 18.7**	**-1.1**
	baz=206						
CHN1	**Nanshi**	**1.65**	**229**	*e*P	**Pn**	**15 01 20.7**	**+0.6**
	baz=228						
CHN1				*e*S	**Sn**	**15 01 40.7**	**+0.3**
	baz=228						
IRIF	**Iriomote-Funau**	**1.69**	**88**	P	**Pn**	**15 01 20.3**	**-0.2**
IRIF				S	**Sn**	**15 01 41.0**	**-0.2**
HATJ	**Hateruma jima**	**1.77**	**97**	P	**Pn**	**15 01 22.2**	**+0.6**
HATJ				S	**Sn**	**15 01 44.2**	**+1.0**
ECL	**Taimali**	**1.88**	**207**	*e*P	**Pn**	**15 01 21.6**	**-1.5**
	baz=206						
SSD	**Sandimen**	**1.91**	**217**	*e*P	**Pn**	**15 01 24.0**	**+0.5**
	baz=216						
JKRS	**Kuro-shima**	**1.94**	**91**	P	**Pn**	**15 01 24.4**	**+0.5**
JKRS				S	**Sn**	**15 01 47.7**	**+0.3**
JIJ	**Ishigaki jima**	**2.06**	**87**	P	**Pn**	**15 01 25.3**	**-0.3**
JIJ				S	**Sn**	**15 01 49.4**	**-0.9**
EAST	**Anshuo**	**2.11**	**207**	*e*P	**Pn**	**15 01 26.2**	**-0.1**
	baz=206						
EAST				*e*S	**Sn**	**15 01 52.1**	**+0.6**
	baz=206						
JTJ	**Tarama**	**2.59**	**81**	P	**Pn**	**15 01 33.1**	**+0.3**

*CSEM **02** 15:06:18.7±0.1, 37.15N×2823E, h17^{km}±1^{km}, MD2.9, Error ellipse: s-maj=3.9km s-min=2.2km az=3.0*
*ISCJB **02** 15:06:19.8±0.5, 3724N±004×2825E±004, h11^{km}±5^{km}, Error ellipse: s-maj=6.6km s-min=4.2km az=26.8*
*ISK **02** 15:06:19.4, 3725N×2823E, h9^{km}, MD2.9*
*DDA **02** 15:06:19.6, 3723N×2825E, h7^{km}±4^{km}, Md2.9*
ISC 02 15:06:20.0±0.5, **3723N**±004×**2826E**±004, **h12**^{km}±5^{km}, **n13**, σ**0^{s}96**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**167**	PG	**Pg**	**15 06 22.5**	**-0.4**
YER				*e*SG	**Sg**	**15 06 25.1**	**+0.2**
MLSB	**Milas**	**0.39**	**279**	*e*PG	**Pg**	**15 06 26.9**	**-0.9**
MLSB				*e*SG	**Sg**	**15 06 32.9**	**-0.1**
TURN	**Turunc**	**0.46**	**142**	*i* P	**Pg**	**15 06 28.2**	**-0.8**
TURN				*i* S	**Sg**	**15 06 36.2**	**+1.1**
AYDN	**Tasoluk**	**0.52**	**325**	*i* P	**Pg**	**15 06 29.8**	**-0.5**
AYDN				*i* S	**Sg**	**15 06 37.9**	**+0.7**
BDRM	**Kayabasi**	**0.67**	**256**	*i* P	**Pg**	**15 06 31.8**	**-1.2**
BDRM				*i* S	**Sg**	**15 06 42.7**	**+0.9**
BODT	**Bodrum**	**0.77**	**258**	*e*PG	**Pg**	**15 06 34.1**	**-0.9**
BODT				*e*SG	**Sg**	**15 06 46.0**	**+0.9**
DENT	**Denizli**	**0.81**	**50**	*e*PG	**Pg**	**15 06 35.9**	**+0.2**
GOLH	**Golhisar**	**1.04**	**89**	*i* P	**Pb**	**15 06 39.2**	**-0.8**
GOLH				*i* S	**Sb**	**15 07 01.1**	**+7.5**
KULA	**Kula-Manisa**	**1.32**	**14**	*e*PN	**Pn**	**15 06 44.4**	**+0.2**
IZM	**Izmir**	**1.40**	**326**	*e*PN	**Pn**	**15 06 45.5**	**+0.1**
ELL	**Elmali**	**1.41**	**110**	*e*PN	**Pn**	**15 06 46.5**	**+1.0**
AKAS	**Kas**	**1.47**	**132**	*i* P	**Pn**	**15 06 48.8**	**+2.5**
AKAS				*i* S	**Sn**	**15 07 03.0**	**-2.5**
KHL	**Karahalli**	**1.48**	**42**	*e*PN	**Pn**	**15 06 46.5**	**0.0**

*NIED **02** 15:16:00, 4400N×14800E, h44^{km}, Mw3.9 Best double couple: M0 8.81000×10^{14} NP1: φs 4.00000°, δ71.00000°, λ83.00000°. NP2: φs 203.00000°, δ20.00000°, λ108.00000°.*
*MOS **02** 15:16:19.0±1.2, 4442N×14827E, h52^{km}, mb4.1/7, Error ellipse: s-maj=14.2km s-min=10.9km az=59.5*
*ISCJB **02** 15:16:20.6±0.8, 4432N±006×14820E±007, h64^{km}±8^{km}, mb3.8/13, Error ellipse: s-maj=11.0km s-min=6.4km az=138.3*
*JMA **02** 15:16:20.8±0.3, 4404N×14795E, h0^{km}, M4.9*
*SKHL **02** 15:16:21.0±1.7, 4470N×14800E, h45^{km}±8^{km}, mb4.9/3*
*NEIC **02** 15:16:22.6±1.0, 4440N×14808E, h64^{km}±9^{km}, mb4.0/2, Error ellipse: s-maj=14.2km s-min=8.3km az=128.0*
*IDC **02** 15:16:24.9±2.8, 4454N×14808E, h81^{km}±24^{km}, mb3.5/11, mb1 3.6/14, mb1mx3.6/21, mbtmp3.4/14, MS2.9/3, Ms1 2.9/3, ms1mx2.2/27, Error ellipse: s-maj=22.2km s-min=16.3km az=130.0*
ISC 02 15:16:22.2±0.8, **4431N**±006×**14819E**±007, **h60**^{km}±7^{km}, **n55**, σ**1^{s}14**/68, **mb3.8**/13, **4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.95**	**346**	*i* PN	**Pn**	**15 16 34.0**	**-5.6**
KUR				*i* S	**Sn**	**15 16 45.0**	**-7.5**
KUR				pmax	pmax		
	comp=N,230nm,0.5s						
KUR				pmax	pmax		
	comp=E,230nm,0.5s						
KUR				pmax	pmax		
	comp=Z,460nm,0.5s						
KUR				pmax	pmax		
	comp=Z,2µm,1.0s						
KUR				smax			
	comp=N,4µm,0.5s						
KUR				smax			
	comp=E,4µm,0.5s						
KUR				smax			
	comp=N,8µm,1.0s						
KUR				smax			
	comp=E,8µm,1.0s						
KUR	**Kuril'sk**	**0.95**	**346**	⇓*i*P	**Pn**	**15 16 34.0**	**-5.6**
KUR				AMB	AMB	15 16 35.0	
	comp=E,2µm,1.0s						
KUR				AMB	AMB	15 16 36.0	
	comp=E,228nm,0.5s						
KUR				AMB	AMB	15 16 36.0	
	comp=E,456nm,0.5s						
KUR				*i* S	**Sn**	**15 16 45.0**	**-7.5**
KUR				A		15 16 46.2	
	comp=E,8µm,1.0s						
KUR				A		15 16 46.2	
	comp=E,4µm,0.5s						
KUR				A		15 16 46.2	
	comp=E,4µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.70**	**262**	⇓*i*PN	**Pn**	**15 16 48.5**	**-1.0**
YUK				*i* S	**Sn**	**15 17 07.9**	**-2.3**
YUK				pmax	pmax		
	comp=Z,2µm,0.3s						
YUK				pmax	pmax		
	comp=N,520nm,0.3s						
YUK				pmax	pmax		
	comp=E,850nm,0.3s						
YUK				pmax	pmax		
	comp=Z,4µm,0.4s						
YUK				smax			
	comp=N,4µm,0.4s						
YUK				smax			
	comp=E,4µm,0.4s						
YUK				smax			
	comp=N,5µm,0.8s						
YUK				smax			
	comp=E,6µm,0.8s						
YUK	**Yuzh-Kuril'sk**	**1.70**	**262**	⇓*i*P	**Pn**	**15 16 48.5**	**-1.0**
YUK				AMB	AMB	15 16 50.2	
	comp=E,520nm,0.2s						
YUK				AMB	AMB	15 16 50.2	
	comp=E,850nm,0.2s						
YUK				AMB	AMB	15 16 50.2	
	comp=E,2µm,0.3s						
YUK				AMB	AMB	15 16 50.5	
	comp=E,4µm,0.4s						
YUK				*i* S	**Sn**	**15 17 07.9**	**-2.3**
YUK				A		15 17 13.0	
	comp=E,4µm,0.4s						
YUK				A		15 17 13.0	
	comp=E,4µm,0.4s						
YUK				A		15 17 15.0	
	comp=E,5µm,0.8s						
YUK				A		15 17 15.0	
	comp=E,6µm,0.8s						
NEM2	**Nemuro 2**	**2.00**	**243**	P	**Pn**	**15 16 52.5**	**-1.2**
NEM2				*e*S	**Sn**	**15 17 15.3**	**-2.4**
JRA	**Rausu**	**2.24**	**262**	P	**Pn**	**15 16 57.2**	**+0.3**
JRA				*e*S	**Sn**	**15 17 23.9**	**+0.6**
JNK	**Nakash**	**2.61**	**255**	P	**Pn**	**15 17 02.0**	**+0.1**
JNK				*e*S	**Sn**	**15 17 31.4**	**-1.0**
JAK	**Akkeshi**	**2.85**	**244**	P	**Pn**	**15 17 04.6**	**-0.6**
JAK				*e*S	**Sn**	**15 17 36.5**	**-1.9**
JTKR	**Abashiri--Toko**	**3.10**	**265**	P	**Pn**	**15 17 08.9**	**+0.3**
JAR	**Ashorobuto**	**3.35**	**254**	P	**Pn**	**15 17 12.9**	**+0.8**
JAR				*e*S	**Sn**	**15 17 51.2**	**+0.5**
JOB	**Onbets**	**3.46**	**248**	P	**Pn**	**15 17 13.8**	**+0.3**
JOB				*e*S	**Sn**	**15 17 52.8**	**-0.4**
JMP	**Maruseppu**	**3.49**	**267**	P	**Pn**	**15 17 14.5**	**+0.6**
JCH	**Churui**	**3.90**	**246**	P	**Pn**	**15 17 19.4**	**-0.2**
JCH				*e*S	**Sn**	**15 18 02.8**	**-1.2**
JKK2	**Kamakawa 2**	**3.94**	**266**	P	**Pn**	**15 17 22.0**	**+1.9**
ASAJ	**Asahikawa**	**4.02**	**269**	P	**Pn**	**15 17 22.8**	**+1.5**
	comp=E,4.5nm,0.3s,baz=50,slow=18,SNR=27						
ASAJ				LR	LR	15 18 59.2	
	comp=E,212nm,19.4s,baz=159,slow=39						
ASAJ	**Asahikawa**	**4.02**	**269**	PN	**Pn**	**15 17 22.8**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,212nm,19.4s						
JSE	**Soyaes**	**4.05**	**281**	P	**Pn**	**15 17 22.1**	**+0.5**
JFR	**Furan**	**4.21**	**256**	P	**Pn**	**15 17 25.7**	**+1.9**
JFR				*e*S	**Sn**	**15 18 13.5**	**+1.8**
JNBK	**Urakawa-nobuka**	**4.46**	**245**	P	**Pn**	**15 17 27.0**	**-0.2**
JWK2	**Keihoku**	**4.59**	**285**	P	**Pn**	**15 17 30.7**	**+1.7**
YSS	**Yuzh-Sakhalins**	**4.64**	**307**	⇓*e*P	**Pn**	**15 17 28.2**	**-1.4**
YSS				AMB	AMB	15 17 29.0	
	comp=Z,50nm,0.5s						
YSS				*e*S	**Sn**	**15 18 22.8**	**+0.7**
YSS				A		15 18 26.2	
	comp=Z,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**4.64**	**307**	*e*P	**Pn**	**15 17 29.4**	**-0.2**
JHR	**Hokuryu**	**4.70**	**265**	P	**Pn**	**15 17 33.3**	**+2.9**
JKB	**Kayabe**	**5.77**	**248**	P	**Pn**	**15 17 45.9**	**+0.7**
JKB				*e*S	**Sn**	**15 18 48.9**	**-1.0**
SKR	**Severo-Kuril's**	**8.33**	**37**	*e*P	**Pn**	**15 18 18.5**	**-1.6**
PETK	**Petropavlovsk-**	**10.81**	**32**	P	**Pn**	**15 18 54.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=185,slow=8.5,SNR=3.4						
PETK				LR	LR	15 22 30.9	
	comp=Z,46nm,19.3s,baz=102,slow=34						
MAJO	**Matsushiro**	**10.86**	**228**	*e*PN	**Pn**	**15 18 54.3**	**-0.4**
MJAR	**Matsushiro Arr**	**10.86**	**228**	P	**Pn**	**15 18 54.5**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=28,slow=14,SNR=7.2						
KLR	**Kul'dur**	**12.29**	**299**	*e*PN	**Pn**	**15 19 22.2**	**+8.0**
KSRS	**Korea Array**	**16.76**	**253**	P	**Pn**	**15 20 14.2**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=62,slow=8.4,SNR=3.0						
KSRS				LR	LR	15 25 32.1	
	comp=Z,40nm,21.3s,baz=70,slow=33						
KSRS	**Korea Array**	**16.76**	**253**	P	**Pn**	**15 20 14.2**	**+1.4**
KSRS				MLR	MLR		
	comp=Z,40nm,21.3s						
SONM	**Songino Array**	**28.95**	**292**	P	**P**	**15 22 16.1**	**+0.5**
	comp=Z,0.4nm,0.5s,mb3.4,baz=78,slow=9.9,SNR=4.1						
COLA	**College**	**40.18**	**36**	*e*P	**P**	**15 23 51.5**	**-0.5**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
COLA	**College**	**40.18**	**36**	*e*P	**P**	**15 23 51.5**	**-0.5**
	comp=Z,2.9nm,1.0s,mb4.0						
EGAK	**Eagle**	**43.04**	**36**	*e*P	**P**	**15 24 15.3**	**-0.1**
	comp=Z,1.0nm,0.5s,mb3.8						
MKAR	**Makanchi Array**	**44.99**	**297**	P	**P**	**15 24 30.9**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.8,baz=77,slow=8.4,SNR=14						
MKAR	**Makanchi Array**	**44.99**	**297**	P	**P**	**15 24 30.9**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**44.99**	**297**	P	**P**	**15 24 30.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**48.40**	**254**	P	**P**	**15 24 59.0**	**+0.8**
	comp=Z,0.9nm,0.8s,mb3.9,baz=38,slow=6.4,SNR=6.5						
CMAR	**Chiang Mai Arr**	**48.40**	**254**	P	**P**	**15 24 59.1**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**54.92**	**34**	P	**P**	**15 25 46.1**	**-0.1**
	comp=Z,1.1nm,0.6s,mb4.1,baz=303,slow=7.5,SNR=11						
YKA	**Yellowknife Ar**	**54.92**	**34**	P	**P**	**15 25 46.1**	**-0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**58.98**	**340**	P	**P**	**15 26 12.8**	**-2.0**
	comp=Z,3.2nm,1.0s,mb4.3,baz=44,slow=6.8,SNR=5.8						
ARCES	**ARCESS Array B**	**58.98**	**340**	P	**P**	**15 26 12.9**	**-2.0**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	**Warramunga Arr**	**65.18**	**194**	P	**P**	**15 26 58.4**	**+1.5**
	comp=Z,0.4nm,0.8s,mb3.5,baz=17,slow=7.0,SNR=4.7						
NVAR	**Mina Array Bea**	**66.65**	**59**	P	**P**	**15 27 07.2**	**+0.9**
	comp=Z,0.3nm,0.6s,mb3.5,baz=298,slow=8.5,SNR=3.6						
NVAR	**Mina Array Bea**	**66.65**	**59**	P	**P**	**15 27 07.2**	**+0.9**
ASAR	**Alice Springs**	**68.90**	**194**	P	**P**	**15 27 22.1**	**+1.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=11,slow=6.8,SNR=7.0						
ASAR	**Alice Springs**	**68.90**	**194**	P	**P**	**15 27 22.1**	**+1.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**69.35**	**339**	P	**P**	**15 27 21.8**	**-1.0**
	comp=Z,0.4nm,0.4s,mb3.7,baz=33,slow=7.3,SNR=2.7						
AKASG	**Malin Array Be**	**71.57**	**324**	P	**P**	**15 27 35.0**	**-1.5**
	comp=Z,0.5nm,0.4s,mb3.8,baz=41,slow=6.3,SNR=5.4						
AKASG	**Malin Array Be**	**71.57**	**324**	P	**P**	**15 27 35.0**	**-1.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CLL	**Collm**	**77.16**	**333**	*e*P	**P**	**15 28 08.0**	**-1.0**
GERES	**GERESS Array B**	**79.03**	**331**	P	**P**	**15 28 18.6**	**-0.8**
	comp=Z,0.3nm,0.5s,mb3.5,baz=43,slow=6.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**115.20**	**324**	PKP	PKiKP	15 34 55.9	-1.1
	comp=Z,0.5nm,0.9s,baz=14,slow=3.8,SNR=4.2						

*BGS **02** 15:30:32.9±1.4, 4403N×79.16E, h33^{km}, mb5.1*
*IDC **02** 15:30:33.8±0.4, 4453N×7831E, h0^{km}, mb4.9/26, mb1 5.0/32, mb1mx5.0/33, mbtmp4.9/32, ML4.8/6, MS4.1/18, Ms1 4.1/18, ms1mx3.8/44, Error ellipse: s-maj=9.4km s-min=8.1km az=166.0*
*LDG **02** 15:30:33.1±0.2, 4448N×7828E, h10^{km}, Mb5.1/38, Ms3.9/7, Error ellipse: s-maj=10.0km s-min=6.1km az=35.0*
*ISCJB **02** 15:30:36.4±0.1, 4464N±002×7832E±002, h25^{km}, mb5.0/178, MS4.2/52, Error ellipse: s-maj=2.4km s-min=1.9km az=21.7*
*NNC **02** 15:30:36.5±0.7, 4476N×7807E, h0^{km}, mb5.5, mpv5.3, Error ellipse: s-maj=10.8km s-min=4.1km az=109.0*
*BJI **02** 15:30:36.9, 4473N×7852E, h23^{km}, mB5.0, mb4.9, ML5.3, Ms4.5, Msz4.4*
*MOS **02** 15:30:37.0±0.9, 4468N×7832E, h28^{km}, mb5.3/83, MS4.2/42, Error ellipse: s-maj=5.4km s-min=3.5km az=129.7*
MOS Felt (III) at Almaty.
*NEIC **02** 15:30:37.9±0.1, 4458N×7834E, mb5.1/86, MS4.3/11, Error ellipse: s-maj=2.8km s-min=2.0km az=203.0*
NEIC Felt [III] at Almaty. Also felt at Boralday.
*SZGRF **02** 15:30:38.7, 4466N×7821E, h28^{km}, mb5.0, Eastern Kazakhstan*
*DJA **02** 15:30:38, 4423N×7848E, h10^{km}, mb5.2/11*
ISC 02 15:30:38.3±0.1, **4463N**±002×**7834E**±002, **h26**^{km}, **h26**^{km}±.5^{km}**:pP-P**, **n698**, σ**0^{s}81**/709, **mb5.0**/178, **MS4.2**/52, **65C-62D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDC	**Almaty**	**1.72**	**216**	⇑P	**Pn**	**15 31 07.9**	**+1.3**
	30µm,0.7s						
KNDC				⇑S	**Sn**	**15 31 30.4**	**+2.7**
	60µm,0.7s						
TKM2	**Tokmak 2**	**2.62**	**230**	⇑Pn	**Pn**	**15 31 19.9**	**+1.0**
	3µm,0.6s						
TKM2				⇑Sn	**Sn**	**15 31 54.4**	**+4.6**
	17µm,0.7s						
TKM2	**Tokmak 2**	**2.62**	**230**	P	**Pn**	**15 31 19.0**	**+0.1**
	SNR=540						
ULHL	**Ulahol**	**2.83**	**213**	P	**Pn**	**15 31 22.0**	**+0.3**
	SNR=396						
CHMS	**Chumysh**	**3.06**	**239**	P	**Pn**	**15 31 26.3**	**+1.3**
	SNR=185						
USP	**Ospenovka**	**3.09**	**245**	P	**Pn**	**15 31 26.2**	**+0.8**
	SNR=146						
KBK	**Karagaybulak**	**3.15**	**233**	P	**Pn**	**15 31 26.9**	**+0.7**
	SNR=812						
FRU	**Bishkek**	**3.24**	**238**	⇓*i*PN	**Pn**	**15 31 28.0**	**+0.6**
FRU				*e*		15 31 37.0	
FRU				*i*		15 32 14.0	
FRU				pmax	pmax		
	comp=Z,2µm,1.6s						
FRU				smax			
	comp=N,16µm,1.8s						
KZA	**Kyzart**	**3.40**	**223**	P	**Pn**	**15 31 31.5**	**+1.8**
	SNR=215						
AAK	**Ala-Archa**	**3.43**	**236**	P	**Pn**	**15 31 30.4**	**+0.4**
	SNR=707						
MKAR	**Makanchi Array**	**3.52**	**51**	Pn	**Pn**	**15 31 32.3**	**+1.1**
	comp=N,129nm,0.3s,baz=223,slow=12,SNR=2555						
MKAR				Sn	**Sn**	**15 32 15.4**	**+3.5**
	comp=N,780nm,0.3s,baz=227,slow=24,SNR=10.0						
MKAR				Lg		15 32 26.7	
	comp=N,1µm,0.3s,baz=230,slow=30,SNR=13						
MKAR	**Makanchi Array**	**3.52**	**51**	PN	**Pn**	**15 31 32.3**	**+1.1**
MKAR						15 32 15.4	
MKAR				pmax	pmax		
	comp=Z,129nm,0.3s						
MKAR				smax			
	comp=N,780nm,0.3s						
MK31	**Makanchi Array**	**3.52**	**51**	⇑Pn	**Pn**	**15 31 33.5**	**+2.3**
	comp=N,750nm,0.5s,baz=225,slow=13						
MK31				⇑Lg		15 32 28.2	
	comp=N,5µm,0.5s,baz=231,slow=30,SNR=10						
UCH	**Uchtor**	**3.68**	**231**	P	**Pn**	**15 31 34.8**	**+1.4**
	SNR=208						
EKS2	**Erkin-Say**	**3.85**	**241**	P	**Pn**	**15 31 37.1**	**+1.3**
	SNR=55						
AML	**Almayashu**	**4.21**	**235**	P	**Pn**	**15 31 42.3**	**+1.6**
	SNR=238						
KSH	**Kashi**	**5.40**	**200**	*i* PNR	**Pn**	**15 32 01.0**	**+3.9**
KSH				S	**Sn**	**15 33 05.4**	**+7.0**
KSH				LR	LR		
	comp=N,70µm,3.6s						
KK31	**Karatay Array**	**5.86**	**258**	⇑Pn	**Pn**	**15 32 03.5**	**+0.1**
	comp=N,42nm,0.5s,baz=68,slow=14						
KK31				⇓Pg	Pn	15 32 24.1	+21

comp=N,253nm,0.5s,baz=66,slow=17
KK31 ⇑Lg 15 33 37.0
comp=N,1μm,0.5s,baz=70,slow=28
KK31 Karatay Array 5.86 258 P* Pb 15 32 28.6 +8.9
KK31 15 33 35.4
KK31 pmax pmax
comp=Z,413nm,0.4s
KK31 pmax pmax
comp=Z,61nm,0.2s
KURBB Kurchatov Arra 6.00 1 ⇓Pn **Pn 15 32 06.9 +1.6**
comp=Z,13nm,0.5s,baz=190,slow=14
KURBB ⇑Sn **Sn 15 33 13.7 +0.6**
comp=Z,155nm,0.7s,baz=24,slow=6.3
KURBB ⇓Lg 15 33 44.6
comp=Z,3μm,0.7s
KURK Kurchatov 6.10 2 Pn **Pn 15 32 06.8 +0.2**
comp=Z,2μm,0.4s
KURK Kurchatov 6.10 2 ⇑Pn **Pn 15 32 07.5 +0.8**
comp=Z,90nm,0.4s
KURK ⇑Sn **Sn 15 33 14.4 -1.0**
comp=Z,653nm,0.6s
KURK ⇓Lg 15 33 47.2
comp=Z,6μm,0.6s
KURK Kurchatov 6.10 2 P **Pn 15 32 06.8 +0.2**
SNR=67
KURK Kurchatov 6.10 2 Pn **Pn 15 32 05.1 -1.5**
comp=Z,2.1nm,0.3s,baz=129,slow=29,SNR=26
KURK Lg 15 33 46.1
comp=Z,131nm,0.3s,baz=184,slow=29,SNR=15
KURK LR LR 15 34 45.5
comp=Z,2μm,21.0s,baz=180,slow=41
WMQ Urumqi 6.77 94⇑*i*P **Pn 15 32 16.7 +0.8**
WMQ S **Sn 15 33 33.0 +0.9**
WMQ Smax
comp=N,2μm,1.0s
WMQ Smax
comp=E,1μm,1.3s
WMQ LR LR
comp=N,3μm,3.3s
WMQ LR LR
comp=E,6μm,3.0s
WMQ LR LR
comp=Z,4μm,3.7s
VOSK Vostochnaya 9.45 332 ⇑Pn **Pn 15 32 51.5 -1.1**
comp=Z,30nm,0.4s
VOSK ⇑Sn **Sn 15 34 33.8 -4.0**
comp=Z,109nm,0.6s
VOSK ⇓Lg 15 35 30.6
comp=Z,2μm,0.8s
BVA0 Borovoye Array 9.90 331 Pn **Pn 15 32 58.3 -0.5**
comp=Z,6.4nm,0.4s,baz=145,slow=15,SNR=328
BVA0 ⇑Lg 15 35 44.7
comp=Z,375nm,0.9s,baz=146,slow=23
BVA0 Borovoye Array 9.90 331 *e*P **Pn 15 32 58.2 -0.6**
BVA0 pmax pmax
comp=Z,12nm,0.4s
BVAR Borovoye Array 9.90 331 Pn **Pn 15 32 57.8 -0.9**
comp=Z,11nm,0.3s,baz=146,slow=13,SNR=154
BVAR Sn **Sn 15 34 43.6 -5.3**
comp=Z,15nm,0.3s,baz=132,slow=22,SNR=4.5
BVAR Lg 15 35 45.9
comp=Z,75nm,0.3s,baz=131,slow=30,SNR=11
BVAR LR LR 15 36 55.1
comp=Z,2μm,19.2s,baz=258,slow=38
BVAR Borovoye Array 9.90 331 P **Pn 15 32 57.8 -1.0**
BVAR 15 34 43.6
BVAR pmax pmax
comp=Z,11nm,0.3s
BVAR smax
comp=N,15nm,0.3s
BVAR MLR MLR
comp=Z,2μm,19.2s
BRVK Borovoye 9.96 331 Pn **Pn 15 32 58.2 -1.4**
comp=Z,640nm,0.5s,SNR=15
BRVK Borovoye 9.96 331 ⇓P **Pn 15 32 59.2 -0.4**
SNR=20
ZAL Zalesovo 10.22 22 P **Pn 15 33 02.9 -0.3**
ZAL 15 34 55.5
ZAL pmax pmax
comp=Z,12nm,0.3s
ZAL smax
comp=N,53nm,0.3s
ZAL MLR MLR
comp=Z,1μm,20.4s
ZALV Zalesovo Beam 10.24 22 Pn **Pn 15 33 02.9 -0.5**
comp=Z,12nm,0.3s,baz=212,slow=12,SNR=142
ZALV Sn **Sn 15 34 55.5 -1.8**
comp=Z,53nm,0.3s,baz=222,slow=25,SNR=6.0
ZALV Lg 15 36 00.3
comp=Z,56nm,0.3s,baz=198,slow=28,SNR=7.8
ZALV LR LR 15 37 21.1
comp=Z,1μm,20.4s,baz=209,slow=39
ZALV Zalesovo Beam 10.24 22 Pn **Pn 15 33 02.9 -0.5**
ZALV Sn **Sn 15 34 55.5 -1.8**
ZALV Lg 15 36 00.3
ZALV LR LR 15 37 21.1
NVS Novosibirsk 10.70 15 *e*P **Pn 15 33 08.8 -0.9**
NVS *e*S **Sn 15 35 02.9 -5.6**
NVS pmax pmax
comp=N,216nm,0.6s
NVS pmax pmax
comp=E,122nm,0.6s
NVS pmax pmax
comp=Z,179nm,0.6s
NVS smax
comp=N,375nm,0.9s
NVS smax
comp=E,811nm,0.9s
CHCP Chirah Chowk 11.64 201 P **Pn 15 33 23.6 +1.0**
CEP Cherat 11.88 207 P **Pn 15 33 25.1 -0.8**
HVS Khovu-Aksy 12.19 52⇓*e*P **Pn 15 33 37.1 +7.1**
THN Thein Dam 12.35 190 *e*P **Pn 15 33 32.1 -0.2**
THN *ex* x 15 36 13.2
BLRR Bol'shaya Rech 12.51 43⇓*e*P **Pn 15 33 34.8 +0.3**
PONG Pong 12.79 189 *ex* x 15 35 20.0
KZLR Kyzyl 12.86 51⇓*e*P **Pn 15 33 39.2 -0.1**
KLP Kalpa 13.07 180 *e*P **Pn 15 33 40.5 -1.7**
KLP AMb AMB 15 33 55.0
comp=Z,106nm,0.9s
SDNR Sundarnagar 13.15 185 *e*P **Pn 15 33 41.0 -2.3**
SDNR *ex* x 15 36 39.0
AB31 Akbulak array 13.39 297 Pn **Pn 15 33 43.0 -3.5**
comp=Z,46nm,0.6s,baz=104,slow=13,SNR=706
AB31 ⇓Sn **Sn 15 36 10.3 -3.9**
comp=Z,39nm,0.6s,baz=92,slow=23
AB31 Akbulak array 13.39 297 *e*P **Pn 15 33 42.9 -3.5**
AB31 pmax pmax
comp=Z,29nm,0.4s
SMLA Simla 13.51 184 *i* P **Pn 15 33 47.3 -0.9**
JOSI Joshimath 14.08 176 *e*P **Pn 15 33 56.4 +0.4**
DDI Dehra Dun 14.28 181 *e*P **Pn 15 33 55.1 -3.6**
DDI *ex* x 15 36 41.4
KRAR Krasnoyarsk 14.66 34 *e*P **Pn 15 34 03.6 -0.2**
KRAR pmax pmax
comp=Z,42nm,1.2s
KRAR MLR MLR
comp=Z,1μm,16.0s
KKR Kurukshetra 14.69 185 *e*P **Pn 15 34 01.8 -2.5**
AKTK Aktyubinsk 14.89 300 Pn **Pn 15 34 03.8 -3.1**
AKTK LR LR 15 40 13.5
AKTO Aktyubinsk 14.89 300 ⇓Pn **Pn 15 34 04.0 -2.9**
comp=Z,19nm,0.6s
AKTO ⇑Sn **Sn 15 36 48.8 -2.0**
comp=Z,22nm,1.1s
AKTO Aktyubinsk 14.89 300 Pn **Pn 15 34 03.8 -3.1**
comp=Z,7.7nm,0.3s,baz=105,slow=13,SNR=111
AKTO LR LR 15 40 13.5
comp=Z,877nm,20.5s,baz=311,slow=39
AKTO Aktyubinsk 14.89 300 P **Pn 15 34 03.9 -3.0**
AKTO pmax pmax
comp=Z,15nm,0.6s
SONA Sohna 16.37 184 *e*P **Pn 15 34 24.7 -1.6**
SONA AMb AMB 15 34 29.5
comp=Z,65nm,1.1s
SVE Sverdlovsk 16.51 324 *e*P **Pn 15 34 24.0 -3.8**
SVE *e*S **Sn 15 37 36.9 +6.8**
SVE pmax pmax
comp=Z,67nm,0.9s
SVE MLR MLR
comp=Z,958nm,11.0s
KUDL Kundal 16.52 186 *e*P **Pn 15 34 26.0 -2.0**
KUDL AMb AMB 15 34 36.9
comp=Z,141nm,1.4s
MOY Mondy 16.64 57 *e*P **Pn 15 34 31.1 +1.6**
MOY pmax pmax
comp=Z,157nm,2.2s
GTA Gaotai 16.77 101 P **Pn 15 34 28.7 -2.6**
GTA AP pP 15 34 32.5 -7.8
GTA S **Sn 15 37 33.5 -3.2**
GTA SS 15 37 53.6
GTA AMB AMB
comp=Z,130nm,5.7s
GTA LR LR
comp=N,647nm,14.7s
GTA LR LR
comp=E,1μm,16.2s
GTA LR LR
comp=Z,1μm,14.7s
DANN Dangsing 16.81 163 *e*P **Pn 15 34 31.4 -0.4**
ARU Arti 17.18 320 Pn **Pn 15 34 34.1 -2.1**
comp=Z,830nm,0.8s,SNR=7.1
ARU Arti 17.18 320*d i*P **Pn 15 34 34.3 -1.9**
ARU *e*S **Sn 15 37 43.1 -3.2**
ARU pmax pmax
comp=Z,36nm,0.7s
ARU MLR MLR
comp=Z,1μm,18.0s
GKN Gorkha 17.34 161 *e*P **Pn 15 34 36.5 -1.9**
KOLN Koldanda 17.34 164 *e*P **Pn 15 34 37.2 -1.2**
KKN Kakani 17.70 159 *e*P **Pn 15 34 41.6 -1.3**
GUN Gumba 17.74 158 *e*P **Pn 15 34 42.3 -1.1**
ZAK Zakamensk 17.76 62 *e*P **Pn 15 34 44.0 +0.5**
ZAK pmax pmax
comp=Z,59nm,1.4s
DMN Daman 17.83 160 *e*P **Pn 15 34 43.5 -1.0**
PKIN Phulchoki 17.93 159 *e*P **Pn 15 34 45.0 -0.7**
PKI Pulchoki 17.94 159 *e*P **Pn 15 34 44.5 -1.3**
PKI Pulchoki 17.94 159 *e*P **Pn 15 34 45.0 -0.8**
LSA Lhasa 18.03 141 P **Pn 15 34 50.4 +3.5**
LSA AP pP 15 34 58.2 +4.0
LSA XP sP 15 35 02.6 +5.0
LSA S **Sn 15 38 03.0 -4.2**
LSA PCP PcP 15 39 27.5 +6.7
LSA LR LR
comp=N,380nm,13.5s
LSA LR LR
comp=E,490nm,12.2s
LSA LR LR
comp=Z,650nm,17.1s
LSA Lhasa 18.03 141 *e*P **Pn 15 34 49.5 +2.6**
LSA pmax pmax
comp=Z,31nm,0.9s
LSA Lhasa 18.03 141 *e*P **Pn 15 34 49.5 +2.6**
comp=Z,31nm,0.9s
JIRN Jiri 18.06 157 *e*P **Pn 15 34 46.9 -0.4**
TLY Talaya 18.24 58 P **Pn 15 34 50.8 +1.4**
SNR=11
TLY Talaya 18.24 58*c i*P **Pn 15 34 49.9 +0.6**
TLY pmax pmax
comp=Z,19nm,0.9s
TLY MLR MLR
comp=Z,1μm,20.0s
AJM Ajmer 18.35 191 *e*P **Pn 15 34 49.5 -1.4**
AJM AMb AMB 15 35 02.1
comp=Z,86nm,0.6s
JASL Jaisalmer 18.65 201 *ex* x 15 34 50.3
IRK Irkutsk 18.75 57⇑*i*P **Pn 15 34 55.9 +0.4**
IRK *e* 15 38 20.8
IRK pmax pmax
comp=Z,83nm,3.3s
IRK smax
comp=N,750nm,0.2s
TAPN Taplejung 18.81 153 *e*P **Pn 15 34 55.5 -0.9**
RAMN Ramite 18.85 157 *e*P **Pn 15 34 55.4 -1.5**
ODAN Odare 19.17 155 *e*P **Pn 15 34 59.5 -1.2**
SONM Songino Array 19.63 71 P **Pn 15 35 05.6 -0.5**
comp=N,1.7nm,0.3s,baz=275,slow=10,SNR=59
SONM Lg 15 40 58.2
comp=N,0.1nm,0.3s,baz=281,slow=32,SNR=4.7
SONM LR LR 15 42 54.6
comp=N,812nm,19.4s,baz=275,slow=38
SOKR Solikamsk 19.84 327*c i*P **Pn 15 35 08.8 +0.3**
SOKR pmax pmax
comp=Z,70nm,1.0s
SOKR MLR MLR
comp=Z,910nm,19.0s
ULN Ulaanbaatar 20.07 71 P **P 15 35 10.4 +1.0**
SNR=21
ULN Ulaanbaatar 20.07 71 *e*P **P 15 35 09.8 +0.3**
ULN pmax pmax
comp=Z,18nm,0.7s
ULN MLR MLR
comp=Z,982nm,22.0s,MS4.1
ULN Ulaanbaatar 20.07 71 *e*Pn **P 15 35 09.8 +0.4**
comp=Z,18nm,0.7s
ULN LR LR
comp=Z,982nm,22.0s,MS4.1
LZH Lanzhou 21.16 105 ⇑P **P 15 35 22.2 +0.8**
LZH AP 15 35 29.8
LZH XP sP 15 35 32.4 +0.6
LZH PP 15 35 47.0
LZH *e*S **S 15 39 14.0 -1.3**
LZH XS sS 15 39 27.0 +0.3
LZH AMB AMB
comp=Z,180nm,1.3s,mb5.2
LZH AMB AMB
comp=Z,361nm,4.3s
LZH LR LR
comp=E,2μm,12.3s
LZH LR LR
comp=Z,2μm,13.6s,MS4.7
JBP Jabalpur 21.45 176 *ex* x 15 36 13.0
BOK Bokaro 21.68 161 *e*P **P 15 35 28.3 +1.3**
BOK AMb AMB 15 35 41.8
comp=Z,46nm,0.6s,mb5.1
SHL Shillong 21.95 146 *e*P **P 15 35 31.0 +1.1**
comp=Z,12nm,0.8s,mb4.4
SHL *ex* x 15 35 41.0
SHL *e*S **S 15 39 31.0 +0.1**
BHJ Bhuj 22.48 201 *e*P **P 15 35 36.1 +0.6**
BHJ AMb AMB 15 35 38.6
comp=Z,65nm,2.0s,mb4.7
NGP Nagpur 23.42 178 *e*P **P 15 35 46.1 +0.7**
NGP AMb AMB 15 35 52.0
comp=Z,142nm,1.3s,mb5.2
IMP Imphal 23.51 142 *e*P **P 15 35 47.0 +0.7**
BTO Baotou 23.58 89 *e*P **P 15 35 46.6 -0.2**
AKL Akola 23.88 183 *e*P **P 15 35 50.0 +0.3**
AKL AMb AMB 15 35 58.5
comp=Z,75nm,1.4s,mb4.9
CD2 Chengdu 24.19 116 *e*P **P 15 35 52.2 -0.3**
CD2 AP 15 35 56.4
CD2 XP sP 15 35 59.9 -3.5
CD2 PCP PcP 15 39 34.1 +1.4
CD2 S **S 15 40 07.0 -2.2**
CD2 XS sS 15 40 14.0 -7.8
CD2 SS 15 40 59.5
CD2 AMB AMB
comp=Z,50nm,0.7s,mb5.0
CD2 AMB AMB
comp=Z,160nm,10.8s
CD2 LR LR
comp=N,480nm,12.0s,MS4.5
CD2 LR LR
comp=E,780nm,13.2s,MS4.5
CD2 LR LR
comp=Z,480nm,12.0s,MS4.2
DGRG David-gareji 24.21 274 P **P 15 35 53.5 +0.9**
CIT Chita 24.37 60 *e*P **P 15 35 53.5 -0.4**
CIT *e* 15 36 01.1
CIT *e* 15 40 16.1
CIT pmax pmax
comp=Z,147nm,1.4s,mb5.2
MTA Mtatsminda 24.55 275 P **P 15 35 56.5 +0.8**
TBLG Delisi 24.57 275 P **P 15 35 56.9 +0.9**
HHC Hu-ho-hao-te 24.59 87 *e*P **P 15 35 56.1 0.0**
HHC AP 15 36 03.1
HHC XP sP 15 36 06.7 -0.3
HHC PP 15 36 32.2
HHC PCP PcP 15 39 35.6 +2.2
HHC S **S 15 40 13.2 -2.3**
HHC XS sS 15 40 24.0 -4.1
HHC SS 15 41 08.9
HHC SCP ScP 15 43 10.6 +0.4
HHC PCS PcS 15 43 14.0 +0.7
HHC AMB AMB
comp=Z,25nm,0.7s,mb4.8
HHC AMB AMB
comp=Z,203nm,7.4s
HHC LR LR
comp=N,434nm,11.9s,MS4.5
HHC LR LR
comp=E,796nm,12.3s,MS4.5
HHC LR LR
comp=Z,992nm,12.3s,MS4.5
GOR Gori 24.94 276 P **P 15 36 00.8 +1.5**
GNI Garni 25.11 272 ⇓P **P 15 36 02.4 +1.7**
SNR=14
GNI Garni 25.11 272 P **P 15 36 02.1 +1.3**
comp=Z,14nm,0.6s,mb4.7,baz=338,slow=20,SNR=10
GNI LR LR 15 47 27.0
comp=Z,219nm,18.5s,MS3.7,baz=194,slow=40
GNI Garni 25.11 272 *e*P **P 15 36 02.2 +1.4**
GNI pmax pmax
comp=Z,46nm,1.1s
GNI MLR MLR
comp=Z,400nm,17.0s
GNI Garni 25.11 272 *e*P **P 15 36 02.3 +1.5**
comp=Z,116nm,1.1s,mb5.3
ONI Oni 25.24 278 P **P 15 36 03.0 +1.0**
VRHR Novokhopersk 25.27 298 *e*P **P 15 36 10.5 +8.3**
VRHR *e**SP sP 15 36 18.8 +5.8
VRHR pmax pmax
comp=Z,50nm,0.7s,mb5.2
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=E,50nm,0.6s
VRHR MLR MLR
comp=Z,1μm,16.0s,MS4.5
VRHR MLR MLR
comp=N,160nm,10.0s
VRHR MLR MLR
comp=E,160nm,19.0s
KIV Kislovodsk 25.41 281 *i* P **P 15 36 04.2 +0.7**
KIV *e* 15 36 20.0
KIV *e* 15 39 33.0
KIV *eS* **S 15 40 28.5 0.0**
KIV *eSS* 15 41 24.4
KIV pmax pmax
comp=Z,34nm,1.5s,mb4.7
KIV MLR MLR
comp=Z,1μm,20.0s,MS4.3
KIV Kislovodsk 25.41 281⇑*i*P **P 15 36 04.8 +1.3**
KIV Kislovodsk 25.41 281 ⇑P **P 15 36 04.8 +1.4**
BOD Bodaibo 25.60 46 *e*P **P 15 36 04.9 -0.1**
BOD pmax pmax
comp=Z,128nm,1.0s,mb5.4
XAN Xi'an 25.77 104 P **P 15 36 06.7 -0.1**
XAN AP pP 15 36 10.8 -3.7
XAN XP sP 15 36 13.7 -4.0
XAN PP 15 36 46.3
XAN PCP PcP 15 39 38.1 +2.0
XAN S **S 15 40 31.2 -3.2**
XAN SS 15 41 34.9
XAN SCP ScP 15 43 15.7 +2.0
XAN SCS ScS 15 47 03.6 +0.6
XAN AMB AMB
comp=Z,49nm,1.0s,mb5.0
XAN AMB AMB
comp=Z,93nm,10.3s
XAN LR LR
comp=N,83nm,10.6s,MS4.2
XAN LR LR
comp=E,391nm,14.2s,MS4.2
XAN LR LR
comp=Z,429nm,13.6s,MS4.1
LATR Latur 26.17 184 *e*P **P 15 36 10.3 -0.3**
LATR AMb AMB 15 36 18.9
comp=Z,53nm,1.6s,mb4.8
POO Poona 26.29 190 *e*P **P 15 36 10.5 -1.1**
POO AMb AMB 15 36 23.7
comp=Z,28nm,0.6s,mb5.0
VOR Voronezh 26.79 299 P **P 15 36 15.0 -0.9**
VOR pmax pmax
comp=Z,100nm,1.0s,mb5.3
VRSR Storozhevoye 26.80 298 *e*P **P 15 36 15.2 -0.8**
VRSR *e**SP sP 15 36 25.5 -1.4
VRSR pmax pmax
comp=Z,5.0nm,1.1s,mb4.0
VRSR pmax pmax
comp=N,2.0nm,0.7s
VRSR pmax pmax
comp=E,2.0nm,0.8s
VRSR MLR MLR
comp=Z,60nm,15.0s,MS3.3
VRSR MLR MLR
comp=N,100nm,23.0s
VRSR MLR MLR
comp=E,60nm,14.0s
HYB Hyderabad 27.13 180 *i* P **P 15 36 20.0 +0.8**
HYB Hyderabad 27.13 180 *e*P **P 15 36 26.0 +6.8**
SMDO Samad 27.19 224 ⇑P **P 15 36 22.7 +3.0**
SNR=8.6
KAD Karad 27.46 189 *e*P **P 15 36 23.0 +0.8**
KAD AMb AMB 15 36 31.2
comp=Z,42nm,1.2s,mb4.8
SOC Sochi 27.58 282 *e*P **P 15 36 22.5 -0.6**
SOC *e**PP pP 15 36 32.1 +1.3
SOC *e* 15 37 07.8
SOC *e* 15 39 35.5
SOC *eS* **S 15 41 00.7 -2.1**
SOC *eSS* 15 42 21.8
SOC pmax pmax
comp=Z,20nm,0.7s,mb4.9
SOC MLR MLR
comp=Z,171nm,15.0s,MS3.8
KMI Kunming 27.74 126 P **P 15 36 25.5 +0.9**
KMI AP pP 15 36 29.1 -3.2
KMI PP 15 37 14.5
KMI PCP PcP 15 39 43.7 +2.8
KMI S **S 15 41 06.8 +1.3**
KMI SS 15 42 25.1
KMI AMB AMB
comp=Z,12nm,1.6s,mb4.3
KMI AMB AMB
comp=Z,115nm,12.0s
KMI LR LR
comp=N,254nm,24.2s
KMI LR LR
comp=E,366nm,13.8s
KMI LR LR
comp=Z,358nm,20.7s,MS3.9
MOS Moscow 27.94 308 *e*P **P 15 36 24.6 -1.5**
MOS *e*SS 15 42 26.3
MOS pmax pmax
comp=Z,87nm,0.8s,mb5.4
BJI Beijing 28.17 86 P **P 15 36 29.4 +1.0**
BJI S **S 15 41 08.4 -3.7**
BJI AMB AMB
comp=Z,26nm,0.7s,mb5.0
BJI LR LR
comp=N,318nm,19.6s,MS4.2
BJI LR LR
comp=E,485nm,20.5s,MS4.2
BJI LR LR
comp=Z,532nm,19.5s,MS4.1
BJT Baijiatuau 28.17 86 *e*P **P 15 36 29.8 +1.4**
BJT pmax pmax
comp=Z,20nm,0.6s
BJT Baijiatuau 28.17 86 *e*P **P 15 36 29.8 +1.4**
comp=Z,20nm,0.6s,mb4.9
HIA Hailar 28.38 66 *e*P **P 15 36 30.7 +0.6**
HIA pmax pmax
comp=Z,6.0nm,0.8s
HIA Hailar 28.38 66 *e*P **P 15 36 30.7 +0.5**
comp=Z,6.1nm,0.8s,mb4.3
OBN Obninsk 28.48 307*c i*P **P 15 36 30.4 -0.6**
OBN *e* pP 15 36 38.3 -0.4
OBN *e* 15 39 43.6
OBN *eSS* SS 15 42 35.3 -42
OBN pmax pmax
comp=Z,31nm,1.1s,mb4.8
OBN MLR MLR
comp=Z,500nm,18.0s,MS4.2
UMR Umm Al-Rimmam 28.48 249 *e*P **P 15 36 32.9 +1.7**
baz=298
UMR AMb AMB 15 36 47.0
comp=Z,34nm,0.9s,mb5.0,baz=298
ANN Anapa 28.86 285 *e*P **P 15 36 34.4 0.0**
ANN *e**PP pP 15 36 44.1 +2.0
ANN *e* 15 37 26.3
ANN *eS* **S 15 41 23.7 +0.9**
ANN pmax pmax
comp=Z,40nm,1.1s,mb5.1

ANN MLR MLR
comp=Z,332nm,15.0s,MS4.1
NAY Al-Naaiem 29.00 249 *e*P **P 15 36 35.5 -0.3**
baz=297
NAY AMb AMB 15 36 43.4
comp=Z,19nm,0.6s,mb5.0,baz=297
RDF Al-Radifah 29.00 248 *e*P **P 15 36 34.3 -1.6**
baz=297
RDF AMb AMB 15 36 55.0
comp=Z,31nm,0.7s,mb5.2,baz=297
GYA Guiyang 29.11 119⇑ *i*P **P 15 36 38.2 +1.4**
GYA PP PP 15 37 32.8 -10
GYA PCP PcP 15 39 47.4 +3.2
GYA S **S** **15 41 28.9 +1.9**
GYA SS SS 15 42 57.2 -34
GYA SCP ScP 15 43 27.0 +3.1
GYA SCS ScS 15 47 20.4 +2.3
GYA AMB AMB
comp=Z,30nm,0.8s,mb5.1
GYA AMB AMB
comp=Z,640nm,4.6s
GYA LR LR
comp=N,910nm,16.9s,MS4.6
GYA LR LR
comp=E,770nm,17.7s,MS4.6
GYA LR LR
comp=Z,800nm,17.8s,MS4.4
MALT Malatya 30.34 272⇑ *i*P **P 15 36 49.8 +2.2**
CHRT Chiangrai 30.45 137⇓ *i*P **P 15 36 49.5 +0.8**
CHG Chiang Mai 30.96 140⇑ *i*P **P 15 36 54.0 +0.8**
comp=Z,13nm,0.7s,mb4.9
SIM Simferopol' 31.10 286 *e*P **P 15 36 53.4 -0.8**
CMAR Chiang Mai Arr 31.27 140 P **P 15 36 55.9 -0.1**
comp=Z,7.3nm,0.8s,mb4.6,baz=316,slow=8.8,SNR=52
CMAR LR LR 15 51 24.9
comp=Z,221nm,18.3s,MS3.9,baz=295,slow=40
CMAR Chiang Mai Arr 31.27 140 P **P 15 36 55.9 -0.1**
CMAR pmax pmax
comp=Z,7.0nm,0.8s
CMAR MLR MLR
comp=Z,221nm,18.3s
CLNS Chul'man 31.27 50 *e*P **P 15 36 55.0 -0.6**
CLNS *e**PP pP 15 37 01.8 -1.5
CLNS *e* 15 37 55.3
CLNS *e*PPP 15 38 08.1
CLNS *e* 15 39 49.2
CLNS *e*S **S** **15 42 00.4 0.0**
CLNS *e*SS SS 15 44 09.5 -4.8
CLNS pmax pmax
comp=Z,22nm,0.9s,mb5.0
CLNS pmax pmax
comp=E,20nm,1.0s
CLNS pmax pmax
comp=N,11nm,0.8s
CLNS smax
comp=N,283μm,13.5s
CLNS smax
comp=E,343μm,15.5s
CLNS MLR MLR
comp=N,335nm,13.0s,MS4.8
CLNS MLR MLR
comp=E,1μm,13.0s,MS4.8
CLNS MLR MLR
comp=Z,1μm,12.0s,MS4.9
WHN Wuhan 31.53 104⇓ P **P 15 36 59.0 +0.8**
WHN AP pP 15 37 06.4 +0.4
WHN XP sP 15 37 11.8 +2.6
WHN AMB AMB
comp=Z,29nm,0.7s,mb5.2
WHN LR LR
comp=N,382nm,13.0s
WHN LR LR
comp=E,258nm,9.0s
NANT Nan 31.81 137⇑ P **P 15 36 59.0 -1.7**
comp=E,138nm,1.0s,mb5.7
JOF Joensuu 32.30 321 *e*p **P 15 37 03.3 -1.3**
comp=E,23nm,0.7s,mb5.1
JOF Joensuu 32.30 321 *e*P **P 15 37 03.3 -1.3**
JOF pmax pmax
comp=Z,23nm,0.7s,mb5.1
DL2 Dalian 32.49 85 P **P 15 37 07.5 +0.9**
DL2 *e*S **S** **15 42 22.3 +2.4**
DL2 AMB AMB
comp=Z,20nm,0.6s,mb5.1
DL2 LR LR
comp=N,180nm,16.5s,MS4.0
DL2 LR LR
comp=E,140nm,15.0s,MS4.0
DL2 LR LR
comp=Z,200nm,16.6s,MS3.9
LVZ Lovozero 32.50 331 P **P 15 37 06.3 0.0**
comp=Z,426nm,0.8s,mb6.3,SNR=24
LVZ Lovozero 32.50 331 *c i*P **P 15 37 06.1 -0.2**
LVZ pmax pmax
comp=Z,102nm,1.4s,mb5.5
LVZ MLR MLR
comp=Z,500nm,19.0s,MS4.2
SNY Shenyang 32.76 79⇑ P **P 15 37 09.1 +0.2**
SNY S **S** **15 42 27.6 +3.6**
SNY AMB AMB
comp=Z,10.0nm,1.2s,mb4.6
SNY AMB AMB
comp=Z,174nm,3.5s
SNY LR LR
comp=E,525nm,15.1s
SNY LR LR
comp=Z,619nm,18.2s,MS4.3
APA Apatity 32.81 330⇓ *i*P **P 15 37 09.2 +0.2**
APA *i* 15 38 19.0
APA *i* S **S** **15 42 13.0 -11**
APA pmax pmax
comp=Z,24nm,0.5s,mb5.4
APA MLR MLR
comp=Z,600nm,14.0s,MS4.5
AKASG Malin Array Be 33.12 298 P **P 15 37 11.3 -0.6**
comp=Z,20nm,0.6s,mb5.2,baz=70,slow=8.5,SNR=56
AKASG PcP PcP 15 39 53.1 -1.4
comp=Z,3.8nm,0.7s,baz=74,slow=3.1,SNR=4.3
AKASG Malin Array Be 33.12 298 P **P 15 37 11.3 -0.6**
AKASG 15 39 53.2
AKASG pmax pmax
comp=Z,20nm,0.6s
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKASG Malin Array Be 33.12 298 P **P 15 37 11.3 -0.6**
AKASG PcP PcP 15 39 53.1 -1.4
KIEV Kiev 33.13 298 *e*P **P 15 37 11.3 -0.7**
KIEV pmax pmax
comp=Z,30nm,0.8s,mb5.3
KIEV Kiev 33.13 298 *e*P **P 15 37 11.2 -0.8**
comp=Z,30nm,0.8s,mb5.3
CN2 Changchun 33.41 74 *e*P **P 15 37 15.0 +0.5**
CN2 *e*XP sP 15 37 22.0 -3.5
CN2 *e*S **S** **15 42 34.6 +0.6**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,680nm,15.0s,MS4.7
CN2 LR LR
comp=E,820nm,15.0s,MS4.7
CN2 LR LR
comp=Z,1μm,16.0s,MS4.6
ANTO Ankara 33.71 278 *e*P **P 15 37 17.5 +0.3**
ANTO pmax pmax
comp=Z,41nm,1.1s,mb5.3
ANTO Ankara 33.71 278 *e*P **P 15 37 17.5 +0.3**
comp=Z,41nm,1.1s,mb5.3
NJ2 Nanjing 33.83 98 *e*P **P 15 37 16.0 -2.3**
NJ2 AP pP 15 37 28.1 +2.0
NJ2 XP sP 15 37 34.4 +5.2
NJ2 PP PP 15 38 30.0 -5.0
NJ2 S **S** **15 42 35.5 -5.2**
NJ2 XS sS 15 42 57.0 +3.5
NJ2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
NJ2 AMB AMB
comp=Z,30nm,7.0s
NJ2 LR LR
comp=N,120nm,16.7s,MS4.2
NJ2 LR LR
comp=E,400nm,17.4s,MS4.2
NJ2 LR LR
comp=Z,400nm,17.4s,MS4.2
YAK Yakutsk 34.14 41 *e*P **P 15 37 19.9 -0.7**
YAK *e**PP pP 15 37 30.7 +2.3
YAK *e* 15 38 32.5
YAK *e*PPP 15 38 48.2
YAK *e* 15 39 56.5
YAK *e*S **S** **15 42 47.2 +2.3**
YAK *e*SS SS 15 44 56.8 -16
YAK *e* 15 47 38.8
YAK pmax pmax
comp=Z,102nm,1.1s,mb5.7
YAK pmax pmax
comp=E,50nm,1.1s
YAK pmax pmax
comp=N,10.0nm,1.5s
YAK pmax pmax
comp=E,5.0nm,0.6s
YAK pmax pmax
comp=Z,26nm,0.9s,mb5.2
YAK pmax pmax
comp=N,11nm,0.9s
YAK smax
comp=N,55μm,2.2s
YAK smax
comp=E,24μm,1.5s
YAK MLR MLR
comp=Z,533nm,10.0s,MS4.6
YAK MLR MLR
comp=E,444nm,11.0s,MS4.5
YAK MLR MLR
comp=N,130nm,10.0s,MS4.5
YAK Yakutsk 34.14 41 *e*P **P 15 37 19.5 -1.2**
comp=N,200nm,1.2s,mb5.9
KIS Kishinev 34.14 292 *e*P **P 15 37 20.0 -0.9**
KIS LRM 15 52 28.0
comp=N,300nm,18.0s
KOD Kodaikanal 34.27 182 *ex* x 15 37 29.8
KOD AMb AMB 15 37 31.1
comp=Z,46nm,0.9s,mb5.4
ASF Jabal al Asfar 34.42 263 P **P 15 37 22.5 -0.9**
comp=Z,1.8nm,0.7s,mb4.1,baz=79,slow=6.4,SNR=3.2
ASF Jabal al Asfar 34.42 263 P **P 15 37 22.5 -0.9**
ASF pmax pmax
comp=Z,2.0nm,0.7s
KAF Kangasniemi 34.47 319 *ep* **P 15 37 23.0 -0.5**
comp=Z,5.2nm,0.7s,mb4.6,baz=97,slow=8.7
KAF Kangasniemi 34.47 319 *e*P **P 15 37 23.0 -0.5**
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TLCR 34.64 289 P **P 15 37 25.2 0.0**
HARR Harsova 35.39 288 P **P 15 37 23.1 -8.5**
KEV Kevo 35.75 332 *ep* **P 15 37 34.0 -0.4**
comp=Z,26nm,0.7s,mb5.3
KEV Kevo 35.75 332 *e*P **P 15 37 34.0 -0.4**
KEV pmax pmax
comp=Z,26nm,0.7s,mb5.3
VRI Vrincioaia 35.84 291⇓ *i*P **P 15 37 36.1 +0.6**
VRI Vrincioaia 35.84 291⇓ P **P 15 37 36.1 +0.6**
PLOR Plostina 35.90 291⇓ *i*P **P 15 37 36.9 +0.9**
MDJ Mudanjiang 35.98 71 P **P 15 37 36.2 -0.5**
MDJ AP pP 15 37 42.2 -2.3
MDJ XP sP 15 37 45.1 -2.6
MDJ PP PP 15 38 57.9 -0.7
MDJ S **S** **15 43 13.6 0.0**
MDJ AMB AMB
comp=Z,9.0nm,1.2s,mb4.6
MDJ AMB AMB
comp=Z,117nm,3.5s
MDJ LR LR
comp=E,185nm,19.8s
MDJ LR LR
comp=Z,257nm,15.2s,MS4.1
TIXI Tiksi 36.12 25 *e*P **P 15 37 36.9 -0.7**
TIXI pmax pmax
comp=Z,16nm,0.8s,mb5.0
TIXI MLR MLR
comp=Z,1μm,20.0s,MS4.7
TIXI Tiksi 36.12 25 *e*P **P 15 37 36.9 -0.7**
comp=Z,16nm,0.8s,mb5.0
TIXI LR LR
comp=Z,1μm,20.0s,MS4.7
KLR Kul'dur 36.13 63 *e*P **P 15 37 34.4 -3.5**
KLR pmax pmax
comp=Z,34nm,1.6s,mb5.0
ARCES ARCESS Array B 36.19 332 P **P 15 37 37.9 -0.3**
comp=Z,52nm,0.6s,mb5.7,baz=97,slow=8.5,SNR=417
ARCES ARCESS Array B 36.19 332 P **P 15 37 37.9 -0.3**
ARCES pmax pmax
comp=Z,52nm,0.6s
BURAR Bucovina Array 36.35 294⇑ *i*P **P 15 37 40.3 +0.5**
BURAR Bucovina Array 36.35 294⇑ P **P 15 37 40.3 +0.4**
MLR Muntele Rosu 36.48 290⇑ *i*P **P 15 37 41.8 +0.8**
MLR Muntele Rosu 36.48 290 P **P 15 37 42.0 +1.0**
LVV L'vov 36.56 298⇓ *i*P **P 15 37 41.5 -0.1**
LVV *e* 15 39 03.3
LVV *e* 15 39 22.9
LVV *e* 15 40 04.7
QIZ Qiongzhong 36.60 124 P **P 15 37 43.0 +0.8**
QIZ AP pP 15 37 49.0 -1.0
QIZ S **S** **15 43 23.3 -0.1**
QIZ LR LR
comp=E,335nm,17.1s
QIZ LR LR
comp=Z,268nm,21.6s,MS4.0
INCN Inchon 36.66 84 *e*P **P 15 37 42.9 +0.3**
comp=Z,54nm,0.8s,mb5.4
INCN *e* pP 15 37 51.2 +0.7
SNX Sinaia 36.81 290⇓ *i*P **P 15 37 44.2 +0.4**
SNX Sinaia 36.81 290⇓ P **P 15 37 44.2 +0.5**
KTK1 Kautokeino 36.85 330⇑ *i*P **P 15 37 43.8 0.0**
KTK1 AMb AMB 15 37 44.7
comp=Z,65nm,0.6s,mb5.7
KTK1 *ep*P pP 15 37 51.7 0.0
KTK1 Kautokeino 36.85 330⇑ *i*P **P 15 37 43.8 0.0**
comp=Z,65nm,0.6s,mb5.6
VOIR 37.09 291 P **P 15 37 46.7 +0.5**
EIL Elat 37.21 261 LR LR 15 53 47.9
comp=Z,85nm,19.1s,MS3.5,baz=284,slow=38
KWP Kalwaria 37.44 298 *e*P **P 15 37 49.6 +0.5**
KWP Kalwaria 37.44 298⇑ *i*P **P 15 37 49.2 +0.1**
KWP Kalwaria 37.44 298 *e*P **P 15 37 49.6 +0.5**
KSRS Korea Array 37.59 83 P **P 15 37 50.9 +0.3**
comp=Z,15nm,0.9s,mb4.7,baz=282,slow=7.7,SNR=32
KSRS LR LR 15 54 35.2
comp=Z,234nm,19.7s,MS4.0,baz=300,slow=38
KSRS Korea Array 37.59 83 P **P 15 37 50.9 +0.4**
KSRS pmax pmax
comp=Z,15nm,0.9s,mb4.7
KSRS MLR MLR
comp=Z,235nm,19.7s,MS4.0
KOLS Kolonicke sedl 37.89 297 *e*P **P 15 37 53.3 +0.4**
KOLS *e*PP PP 15 39 23.5 +4.0
UZH Uzhgorod 37.96 297 *e*P **P 15 37 53.0 -0.5**
UZH *i* pP 15 37 58.4 -2.9
UZH *e* 15 39 38.0
UZH *e* 15 40 11.0
UZH *e*S **S** **15 43 41.0 -2.7**
UZH *e* 15 43 54.0
UZH *e* 15 46 54.0
UZH MLR MLR
comp=Z,300nm,14.0s,MS4.2
DRGR 38.22 294⇑ *i*P **P 15 37 56.5 +0.8**
DRGR 38.22 294 P **P 15 37 56.9 +1.2**
CRVS Cervenica-Dubn 38.42 297 *e*P **P 15 37 57.1 -0.3**
CRVS *e*PP PP 15 39 25.0 -0.3
STHS Stebnicka Huta 38.42 298 *e*P **P 15 37 57.3 -0.1**
STHS pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
STHS Stebnicka Huta 38.42 298 *e*P **P 15 37 57.3 -0.1**
comp=Z,8.7nm,0.8s,mb4.5
STHS *e*PP PP 15 39 27.0 +1.7
TRO Tromso 38.47 331 *e*P **P 15 37 57.8 +0.3**
NIE Niedzica 39.00 298 *i* P **P 15 38 03.3 +1.0**
OJC Ojcow 39.11 300⇑ *i*P **P 15 38 03.3 +0.1**
OJC *e**PP pP 15 38 11.6 +0.6
OJC MLR MLR
comp=Z,400nm,16.8s,MS4.3
OJC Ojcow 39.11 300⇑ *i*P **P 15 38 03.3 +0.1**
OJC *ep*P pP 15 38 11.6 +0.6
OJC *e*SS SS 15 47 05.5 +12
OJC LR LR
comp=Z,400nm,16.8s,MS4.3
KECS Kecovo 39.16 297 *i* P **P 15 38 04.1 +0.6**
KECS pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
KECS Kecovo 39.16 297 *i* P **P 15 38 04.1 +0.6**
comp=Z,10nm,0.7s,mb4.7
BZS Buzias 39.32 292⇑ *i*P **P 15 38 05.5 +0.6**
BZS Buzias 39.32 292 P **P 15 38 05.3 +0.4**
PSZ Piszkesteto 39.70 296⇓ *e*P **P 15 38 09.3 +1.2**
PSZ Piszkesteto 39.70 296⇑ *i*P **P 15 38 08.6 +0.5**
PSZ Piszkesteto 39.70 296⇑ P **P 15 38 08.6 +0.5**
MOR8 Moi Rana 39.89 325⇑ *i*P **P 15 38 08.2 -1.2**
MOR8 AMb AMB 15 38 09.1
comp=Z,46nm,0.8s,mb5.3
MOR8 Moi Rana 39.89 325⇑ *i*P **P 15 38 08.2 -1.2**
comp=Z,46nm,0.8s,mb5.3
GKP Gorka Klasztor 39.92 305 *e*P **P 15 38 10.4 +0.6**
GKP Gorka Klasztor 39.92 305 *e*P **P 15 38 10.4 +0.6**
APE Apeiranthos 40.05 278⇑ *i*P **P 15 38 11.4 +0.2**
APE Apeiranthos 40.05 278⇑ P **P 15 38 11.4 +0.3**
VYHS Vyhne 40.20 297 *i* P **P 15 38 13.0 +0.8**
VYHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
VYHS Vyhne 40.20 297 *i* P **P 15 38 13.0 +0.8**
comp=Z,2.3nm,0.7s,mb4.0
VYHS *e* 15 52 24.5
OKC Ostrava-Krasne 40.24 300 *e*P **P 15 38 12.4 -0.1**
OKC *ep*P pP 15 38 20.7 +0.3
OKC AMS AMS 15 55 00.0
comp=Z,300nm,12.4s
OKC Ostrava-Krasne 40.24 300 *e*P **P 15 38 12.4 -0.1**
OKC *e* pP 15 38 20.7 +0.3
VAY Valandovo 40.27 286 *i* P **P 15 38 12.8 0.0**
LOF Lofoten 40.27 328 *e*P **P 15 38 14.0 +1.4**
LOF AMb AMB 15 38 14.8
comp=Z,78nm,0.9s,mb5.4
LOF *es*P sP 15 38 23.7 +0.1
LOF Lofoten 40.27 328 *e*P **P 15 38 14.0 +1.4**
comp=Z,78nm,0.9s,mb5.4
STIP Stip 40.38 286 *i* P **P 15 38 14.2 +0.4**
BUD Budapest 40.40 296⇓ *e*P **P 15 38 14.9 +1.0**
KOLL Kolacno 40.45 298 *e*P **P 15 38 15.2 +0.9**
STOK Stokkvaagen 40.46 326 *e*P **P 15 38 14.2 0.0**
STOK *ep*P pP 15 38 22.2 +0.2
MORC Moravsky Berou 40.63 300⇓ *i*P **P 15 38 15.8 0.0**
MORC Moravsky Berou 40.63 300⇓ P **P 15 38 15.8 0.0**
SKO Skopje 40.78 287 *i* P **P 15 38 12.0 -5.1**
PKSM Moragy 41.07 294⇓ *i*P **P 15 38 19.3 -0.1**
PKSM Moragy 41.07 294⇓ P **P 15 38 19.2 -0.2**
KSP Ksiaz 41.10 302 *e*P **P 15 38 20.1 +0.5**
KSP Ksiaz 41.10 302 *e*P **P 15 38 20.0 +0.4**
KSP *ep*P pP 15 38 27.2 -0.3
KRUS Krusevo 41.16 286 *i* P **P 15 38 21.5 +1.3**
DPC Dobruska-Polom 41.22 301 *e*P **P 15 38 21.2 +0.6**
DPC *ep*P pP 15 38 28.4 -0.1
DPC AMS AMS 15 55 40.0
comp=Z,300nm,12.0s
MODS Modra-Piesok 41.23 298 *e*P **P 15 38 21.7 +1.0**
MODS *e* pP 15 38 28.6 0.0
MODS *e* 15 40 15.0
MODS pmax pmax
comp=Z,10.0nm,1.2s,mb4.3
MODS Modra-Piesok 41.23 298 *e*P **P 15 38 21.7 +1.0**
comp=Z,9.5nm,1.2s,mb4.3
MODS *e* pP 15 38 28.6 0.0
MODS *e* 15 40 15.0
BIA Bitola 41.25 286 *i* P **P 15 38 21.3 +0.3**
UPC Upice 41.36 301 *e*P **P 15 38 22.5 +0.7**
UPC *ep*P pP 15 38 29.8 +0.1
IDI Anoyia 41.37 276 LR LR 15 59 40.2
comp=Z,157nm,19.0s,MS3.9,baz=191,slow=42
ZST Bratislava 41.39 297 *e*P **P 15 38 23.0 +0.9**
ZST *e* pP 15 38 30.4 +0.5
ZST pmax pmax
comp=Z,13nm,0.8s,mb4.6
ZST Bratislava 41.39 297 *e*P **P 15 38 23.0 +0.9**
comp=Z,13nm,0.8s,mb4.6
ZST *e* pP 15 38 30.4 +0.5
OHR Ohrid 41.57 286 *i* P **P 15 38 24.2 +0.6**
NB2 NORSAR Subarra 41.70 318 P **P 15 38 24.2 -0.2**
comp=Z,30nm,0.6s,mb5.1,baz=83,slow=8.6
NOA NORSAR Array B 41.70 318 P **P 15 38 24.2 -0.2**
comp=Z,29nm,0.6s,mb5.1,baz=82,slow=8.1,SNR=72
NOA LR LR 15 56 28.3
comp=Z,469nm,18.7s,MS4.4,baz=80,slow=37
NOA NORSAR Array B 41.70 318 P **P 15 38 24.2 -0.2**
NOA pmax pmax
comp=Z,29nm,0.6s
NOA MLR MLR
comp=Z,469nm,18.7s
NOA NORSAR Array B 41.70 318 P **P 15 38 24.2 -0.2**
NOA LR LR 15 56 28.3
TREC Trest 42.06 300 *e*P **P 15 38 27.8 +0.3**
TREC *ep*P pP 15 38 35.3 -0.1
TREC AMS AMS 15 56 10.0
comp=Z,300nm,12.8s
PVCC Panska Ves 42.24 302 *e*P **P 15 38 29.7 +0.8**
PVCC *ep*P pP 15 38 36.9 +0.1
PVCC AMS AMS 15 56 20.0
comp=Z,400nm,14.6s
CONA Conrad Observa 42.27 298⇓ *i*P **P 15 38 29.9 +0.7**
comp=Z,42nm,1.4s,mb4.9
CSNA Conrad Observa 42.27 298⇓ *i*P **P 15 38 30.0 +0.7**
comp=Z,38nm,1.4s,mb4.8
PRU Pruhonice 42.42 301 *e*P **P 15 38 30.9 +0.5**
PRU *ep*P pP 15 38 38.4 +0.1
PRU AMS AMS 15 56 30.0
comp=Z,300nm,15.2s
BRG Berggiesshubel 42.51 302⇑ *i*P **P 15 38 31.5 +0.3**
BRG *i* pP 15 38 39.0 -0.1
BRG pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
BRG pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
BRG pmax pmax
comp=Z,5.0nm,1.1s,mb4.2
BRG Berggiesshubel 42.51 302 *e*P **P 15 38 31.1 -0.1**
comp=Z,14nm,0.7s,mb4.8
BRG Berggiesshubel 42.51 302⇑ *i*P **P 15 38 31.5 +0.3**
comp=Z,14nm,0.7s,mb4.8
BRG *i* pP 15 38 39.0 0.0
comp=Z,11nm,0.9s
BRG *e* 15 40 34.4
comp=Z,8.2nm,1.1s
DOMB Dombas 42.56 319 *e*P **P 15 38 31.5 0.0**
DOMB *ep*P pP 15 38 39.0 -0.3
ARSA Arzberg 42.72 297⇑ *i*P **P 15 38 32.9 0.0**
SNR=8.3
KONO Kongsberg 42.73 316⇑ *e*P **P 15 38 33.6 +0.8**
CLL Collm 42.95 303⇑ *i*P **P 15 38 34.8 +0.1**
CLL *i* *PP pP 15 38 42.2 -0.4
CLL *i* *SP sP 15 38 45.9 +0.2
CLL pmax pmax
comp=Z,40nm,0.7s,mb5.3
CLL MLR MLR
comp=Z,300nm,19.1s,MS4.2
CLL Collm 42.95 303 *e*P **P 15 38 34.3 -0.4**
comp=Z,40nm,0.7s,mb5.3
CLL Collm 42.95 303⇑ *i*P **P 15 38 34.8 +0.1**
comp=Z,40nm,0.7s,mb5.3
CLL *i* pP pP 15 38 42.2 -0.4
comp=Z,51nm,1.1s
CLL *i* sP sP 15 38 45.9 +0.2
CLL *e*(PP) 15 40 23.0
CLL *e*PPP 15 48 12.0 +2.3
CLL *e*SS SS 15 47 05.5 +12
CLL LmV 15 57 00.0
comp=Z,300nm,19.1s
CLL Collm 42.95 303⇑ *i*P **P 15 38 34.8 +0.1**
comp=Z,40nm,0.7s,mb5.3
CLL *i* pP pP 15 38 42.2 -0.4
CLL *i* sP sP 15 38 45.9 +0.2
CLL LR LR
comp=Z,300nm,19.1s,MS4.2
GROS Grobnik 43.01 296 *i* P **P 15 38 35.0 -0.3**
PERS Pernice 43.20 296 *i* P **P 15 38 36.2 -0.6**
PERS *i* PcP pP 15 38 44.0 -0.6
SOKA Soboth 43.23 296⇑ *i*P **P 15 38 37.0 -0.1**
comp=Z,29nm,1.4s,mb4.8
KHC Kasperske Hory 43.29 300 *e*P **P 15 38 37.7 +0.2**
KHC *ep*P pP 15 38 45.3 -0.1
KHC AMS AMS 15 57 00.0
comp=Z,300nm,13.4s
MOA Molln 43.30 298⇑ *i*P **P 15 38 37.9 +0.2**
comp=Z,8.6nm,1.2s,mb4.4
GEC2 GERESS Array S 43.31 300 *e*P **P 15 38 37.9 +0.2**
GEC2 pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
GEC2 GERESS Array S 43.31 300 *e*P **P 15 38 37.9 +0.2**

comp=Z,7,0nm,0.7s,mb4.5
GERES GERESS Array B 43.31 300 P **P** **15 38 38.2 +0.5**
comp=Z,4,4nm,0.6s,mb4.4,baz=64,slow=8.0,SNR=61
GERES LR LR 16 00 10.8
comp=Z,288nm,19.6s,MS4.2,baz=352,slow=41
GERES GERESS Array B 43.31 300 P **P** **15 38 38.2 +0.5**
GERES pmax pmax
comp=Z,4,0nm,0.6s
GERES MLR MLR
comp=Z,288nm,19.6s
BOJS Bojanci 43.53 294 *i* P **P** **15 38 39.4 -0.1**
BOJS *i* PcP pP 15 38 46.5 -0.9
JOW Kunigami 43.53 97 P **P** **15 38 39.5 -0.2**
comp=Z,24nm,0.6s,mb5.1,baz=306,slow=5.5,SNR=36
OBKA Obir 43.61 296 ǁ*i*P **P** **15 38 40.1 0.0**
comp=Z,31nm,1.1s,mb4.9
NKC Novy Kostel 43.62 302 *e*P **P** **15 38 39.0 -1.1**
NKC *e*pP pP 15 38 47.0 -1.0
VNDS Vrh nad Dolski 43.66 295 *i* P **P** **15 38 40.5 0.0**
WET Wettzell 43.72 300 *e*P **P** **15 38 41.2 +0.2**
WET pmax pmax
comp=Z,18nm,1.2s,mb4.7
WET Wettzell 43.72 300 *e*P **P** **15 38 41.2 +0.2**
comp=Z,18nm,1.2s,mb4.7
BSEG Bad Segeberg 43.73 308 *e*P **P** **15 38 41.6 +0.6**
comp=Z,37nm,1.0s,mb5.1
LJU Ljubljana 43.80 295 *i* P **P** **15 38 41.5 -0.1**
LJU *i* PcP pP 15 38 48.5 -1.0
YSS Yuzh-Sakhalins 43.84 63 *e*P **P** **15 38 42.3 +0.3**
YSS pmax pmax
comp=Z,12nm,1.0s,mb4.6
YSS MLR MLR
comp=Z,200nm,20.0s,MS4.0
MANZ Manzenberg 43.91 302 *e*P **P** **15 38 42.7 +0.2**
comp=Z,8.0nm,1.0s,mb4.4
ROTZ Rotzenmuhle 43.92 301 *e*P **P** **15 38 43.1 +0.5**
comp=Z,17nm,1.5s,mb4.5
MOX Moxa 43.99 303 *e*P **P** **15 38 43.3 +0.2**
comp=Z,38nm,1.2s,mb5.0
MOX *e* pP 15 38 50.6 -0.4
MOX
comp=Z,200nm,19.0s
MOX Moxa 43.99 303 *e*P **P** **15 38 43.3 +0.2**
MOX *e* pP 15 38 50.6 -0.4
MOX pmax pmax
comp=Z,38nm,1.2s,mb5.0
MOX MLR MLR
comp=Z,200nm,19.0s,MS4.0
MOX Moxa 43.99 303 *e*P **P** **15 38 43.2 +0.1**
comp=Z,41nm,1.4s,mb5.0
JAVS Javornik 44.15 295 *i* P **P** **15 38 43.6 -0.9**
KBA Koelnbreinsper 44.16 297 *i* P **P** **15 38 44.8 +0.3**
comp=Z,28nm,1.6s,mb4.7,SNR=6.8
KBA Koelnbreinsper 44.16 297 *i* P **P** **15 38 44.8 +0.2**
KBA pmax pmax
comp=Z,28nm,1.6s,mb4.7
NRDL Niedersach Rie 44.28 306 *e*P **P** **15 38 46.0 +0.6**
comp=Z,49nm,1.1s,mb5.2
CLZ Clausthal 44.34 305 *e*P **P** **15 38 46.0 +0.1**
CLZ pmax pmax
comp=Z,13nm,0.7s,mb4.8
CLZ Clausthal 44.34 305 *e*P **P** **15 38 46.0 +0.1**
comp=Z,13nm,0.7s,mb4.8
GRA1 Grafenberg Arr 44.55 301 *e*P **P** **15 38 48.4 +0.8**
comp=Z,44nm,0.8s,mb5.3
GRA1 *e*pP pP 15 38 56.0 +0.5
GRF Grafenberg Arr 44.55 301 *e*P **P** **15 38 48.4 +0.8**
GRF *e**PP pP 15 38 56.0 +0.5
GRF pmax pmax
comp=Z,44nm,0.8s,mb5.3
GRF Grafenberg Arr 44.55 301 *e*P **P** **15 38 48.4 +0.8**
GRF *e**PP pP 15 38 56.0 +0.5
GRF pmax pmax
comp=Z,44nm,0.8s,mb5.3
GRF Grafenberg Arr 44.55 301 *e*P **P** **15 38 48.4 +0.8**
comp=Z,44nm,0.8s,mb5.3
GRF *e*pP pP 15 38 56.0 +0.5
SEY Seymchan 44.58 39 *e*P **P** **15 38 47.9 +0.3**
ABTA Abfaltersbach 44.82 297ǁ*i*P **P** **15 38 48.9 -0.9**
comp=Z,7,0nm,1.3s,mb4.3,SNR=6.6
UBBA Unterbreizbach 44.90 303 *e*P **P** **15 38 50.5 +0.2**
comp=Z,7,0nm,0.9s,mb4.5
FUR Furstenfeldbru 45.06 299 *e*P **P** **15 38 52.5 +0.8**
FUR pmax pmax
comp=Z,52nm,1.0s,mb5.3
FUR Furstenfeldbru 45.06 299 *e*P **P** **15 38 52.5 +0.8**
comp=Z,52nm,1.0s,mb5.3
WTTA Wattenberg 45.18 298 *i* P **P** **15 38 52.9 +0.3**
comp=Z,51nm,1.1s,mb5.3,SNR=31
WTTA Wattenberg 45.18 298 *i* P **P** **15 38 52.9 +0.3**
WTTA pmax pmax
comp=Z,51nm,1.1s,mb5.3
WATA Walderalm 45.19 298ǁ*i*P **P** **15 38 52.1 -0.6**
comp=Z,22nm,1.0s,mb5.0,SNR=7.8
WATA Walderalm 45.19 298ǁ*i*P **P** **15 38 52.1 -0.6**
WATA pmax pmax
comp=Z,23nm,1.0s,mb5.0
WATA Walderalm 45.19 298ǁ*i*P **P** **15 38 52.1 -0.6**
comp=Z,22nm,1.0s,mb5.0
MAT Matsushiro 45.27 79 P **P** **15 38 53.1 -0.4**
MAT *e*S **S** **15 45 35.0 +2.8**
MJAR Matsushiro Arr 45.28 79 P **P** **15 38 53.2 -0.3**
comp=Z,6.1nm,1.0s,mb4.4,baz=288,slow=6.4,SNR=11
MJAR LR LR 15 58 34.7
comp=Z,502nm,20.0s,MS4.5,baz=310,slow=37
MJAR Matsushiro Arr 45.28 79 P **P** **15 38 53.2 -0.4**
MJAR pmax pmax
comp=Z,6.0nm,1.0s
MJAR MLR MLR
comp=Z,503nm,20.0s
MJAR Matsushiro Arr 45.28 79 P **P** **15 38 53.2 -0.3**
MJAR LR LR 15 58 34.7
MOTA Moosalm 45.48 298ǁ*i*P **P** **15 38 55.2 +0.1**
comp=Z,36nm,1.0s,mb5.2,SNR=20
MOTA Moosalm 45.48 298ǁ*i*P **P** **15 38 55.2 +0.2**
MOTA pmax pmax
comp=Z,36nm,1.0s,mb5.2
PSB1 Pescosannita 45.60 289 P **P** **15 38 56.3 +0.3**
RETA Reutte 45.64 299ǁ*i*P **P** **15 38 56.4 +0.2**
comp=Z,36nm,1.1s,mb5.2,SNR=14
CTI Castel Tesino 45.64 297 P **P** **15 38 55.9 -0.4**
IBBN Ibbenburen 45.71 306 *e*P **P** **15 38 56.8 +0.1**
comp=Z,28nm,0.7s,mb5.3
SGG Gregorio Mates 45.82 289 P **P** **15 38 57.4 -0.4**
FETA Feichten 45.84 298ǁ*i*P **P** **15 38 57.7 -0.2**
comp=Z,33nm,1.2s,mb5.2,SNR=23
SNTG Esanatoglia 45.96 292 P **P** **15 38 58.8 -0.1**
NRCA Norcia 46.02 292 P **P** **15 38 59.6 +0.2**
TNS Taunus Mts 46.03 303 *e*P **P** **15 38 59.5 +0.1**
TNS pmax pmax
comp=Z,11nm,0.8s,mb4.8
TNS Taunus Mts 46.03 303 *e*P **P** **15 38 59.5 +0.1**
comp=Z,11nm,0.8s,mb4.8
SDI San Donato 46.05 290 P **P** **15 38 59.8 +0.2**
STU Stuttgart 46.12 301 *e*P **P** **15 39 00.0 -0.1**
comp=Z,23nm,0.6s,mb5.3
PTQR Pietraquaria 46.19 291 P **P** **15 39 01.6 +0.9**
DAVA Damuels 46.27 299 *i* P **P** **15 39 01.4 +0.2**
comp=Z,21nm,0.9s,mb5.0,SNR=22
BRMO Bormio 46.28 298 P **P** **15 39 00.8 -0.6**
BUG Bochum--Univer 46.29 305 *e*P **P** **15 39 01.6 +0.2**
comp=Z,22nm,1.3s,mb4.9
MTTG Motta San Giov 46.49 285 P **P** **15 39 03.7 +0.6**
VMG Vicchio 46.57 294 P **P** **15 39 04.9 +1.2**
SPAK Spaichingen-Ko 46.63 300 *e*P **P** **15 39 03.6 -0.5**
SEI Scarperia 46.65 294 P **P** **15 39 05.8 +1.5**
BFO Black Forest 46.82 301 P **P** **15 39 05.9 +0.3**
comp=Z,116nm,0.8s,mb5.9,SNR=7.1
BFO Black Forest 46.82 301 *e*P **P** **15 39 05.3 -0.3**
BFO pmax pmax
comp=Z,13nm,0.7s,mb5.0
BFO Black Forest 46.82 301 *e*P **P** **15 39 05.3 -0.3**
comp=Z,13nm,0.7s,mb5.0
GSCL Gusciola 47.03 295 P **P** **15 39 08.2 +1.0**
RUP Ruppelstein 47.06 303 *e*P **P** **15 39 07.3 -0.1**
FELD Feldberg im Sc 47.20 300 *e*P **P** **15 39 07.8 -0.7**
VLC Villacollemand 47.24 295 P **P** **15 39 09.6 +0.7**
GRFL Gerfalco 47.30 293 P **P** **15 39 09.3 -0.1**
MEM Membach 47.34 304 P **P** **15 39 09.6 0.0**
comp=Z,6.4nm,1.6s,mb4.3
PII Pisa 47.34 294 P **P** **15 39 09.5 -0.2**
CDF Champ du Feu 47.43 301 *e*P **P** **15 39 10.3 0.0**
comp=Z,21nm,0.9s,mb4.8
CDF Champ du Feu 47.43 301 *e*P **P** **15 39 10.3 0.0**
CDF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CDF Champ du Feu 47.43 301 *e*P **P** **15 39 10.3 0.0**
comp=Z,10nm,0.9s,mb4.8
VAI Varese 47.55 297 P **P** **15 39 10.1 -1.2**
ECH Echery 47.58 301 *e*P **P** **15 39 10.9 -0.6**
JMIC Jan Mayen 47.60 334 LR LR 15 59 11.3
comp=Z,71nm,20.2s,MS3.6,slow=36
WLF Walferdange 47.62 303 P **P** **15 39 12.4 +0.7**
comp=Z,14nm,1.3s,mb4.8
WLF Walferdange 47.62 303 *e*P **P** **15 39 12.2 +0.5**
comp=Z,20nm,1.1s,mb5.1
BBS Basel-Blauen 47.67 300 *e*P **P** **15 39 11.6 -0.6**
MOF Molkenrain 47.75 301 *e*P **P** **15 39 12.5 -0.3**
BCLA Clavier 47.83 304 P **P** **15 39 13.7 +0.3**
comp=Z,13nm,2.0s,mb4.6
HINF Hinteralfeld 47.93 301 *e*P **P** **15 39 14.2 0.0**
comp=Z,30nm,0.9s,mb5.0
HINF Hinteralfeld 47.93 301 *e*P **P** **15 39 14.2 0.0**
HINF pmax pmax
comp=Z,15nm,0.9s,mb5.0
HINF Hinteralfeld 47.93 301 *e*P **P** **15 39 14.2 0.0**
comp=Z,15nm,0.9s,mb5.0
LOMF Lomont 48.14 300 *e*P **P** **15 39 14.9 -0.9**
HAU Haudompre 48.17 301 *e*P **P** **15 39 15.9 -0.1**
comp=Z,31nm,0.7s,mb5.2
HAU *e*MLR MLR
comp=Z,269nm,19.8s,MS3.9
HAU Haudompre 48.17 301 *e*P **P** **15 39 15.9 -0.1**
HAU pmax pmax
comp=Z,15nm,0.7s,mb5.1
HAU MLR MLR
comp=Z,270nm,19.8s,MS4.2
HAU Haudompre 48.17 301 *e*P **P** **15 39 15.9 -0.1**
comp=Z,15nm,0.7s,mb5.1
HAU LR LR
comp=Z,270nm,19.8s,MS4.2
GIVF Givet 48.24 304 *e*P **P** **15 39 17.0 +0.5**
comp=Z,30nm,0.8s,mb5.1
GIVF Givet 48.24 304 *e*P **P** **15 39 17.0 +0.5**
GIVF pmax pmax
comp=Z,15nm,0.8s,mb5.1
GIVF Givet 48.24 304 *e*P **P** **15 39 17.0 +0.5**
comp=Z,15nm,0.8s,mb5.1
PCP Piancastagn 48.26 296 P **P** **15 39 15.9 -0.9**
THEF They Montfort 48.30 301 *e*P **P** **15 39 16.1 -0.9**
DOU Dourbes 48.37 304 P **P** **15 39 17.9 +0.3**
DAG Danmarks Havn 48.61 342ǁ*e*P **P** **15 39 19.1 +0.1**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
DAG Danmarks Havn 48.61 342ǁ*i*P **P** **15 39 19.1 +0.1**
comp=Z,10nm,0.8s,mb4.9
DAG Danmarks Havn 48.61 342ǁ*e*P **P** **15 39 19.1 +0.1**
comp=Z,10nm,0.8s,mb4.9
BAIF Baives 48.62 304 *e*P **P** **15 39 19.9 +0.4**
comp=Z,14nm,0.7s,mb4.8
BAIF Baives 48.62 304 *e*P **P** **15 39 19.9 +0.4**
BAIF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
BAIF Baives 48.62 304 *e*P **P** **15 39 19.9 +0.4**
comp=Z,7.3nm,0.6s,mb4.9
MEZF Maizieres J'vi 48.75 302 *e*P **P** **15 39 21.0 +0.5**
comp=Z,71nm,1.0s,mb5.3
MEZF Maizieres J'vi 48.75 302 *e*P **P** **15 39 21.0 +0.5**
comp=Z,71nm,1.0s,mb5.7
LSD Lago del Serru 48.76 298 P **P** **15 39 20.3 -0.3**
PGF Pioggiola 48.87 293 *e*P **P** **15 39 21.5 0.0**
comp=Z,95nm,1.3s,mb5.4
PGF Pioggiola 48.87 293 *e*P **P** **15 39 21.5 0.0**
PGF pmax pmax
comp=Z,47nm,1.3s,mb5.4
PGF Pioggiola 48.87 293 *e*P **P** **15 39 21.5 0.0**
comp=Z,47nm,1.3s,mb5.4
CABF La Chapelle 48.91 299 *e*P **P** **15 39 21.6 -0.2**
comp=Z,32nm,1.0s,mb5.0
CABF La Chapelle 48.91 299 *e*P **P** **15 39 21.6 -0.2**
CABF pmax pmax
comp=Z,16nm,1.0s,mb5.0
CABF La Chapelle 48.91 299 *e*P **P** **15 39 21.6 -0.2**
comp=Z,16nm,1.0s,mb5.0
LPG La Plagne 48.98 298 *e*P **P** **15 39 23.1 +0.8**
comp=Z,77nm,0.8s,mb5.5
LPG La Plagne 48.98 298 *e*P **P** **15 39 23.1 +0.8**
LPG pmax pmax
comp=Z,38nm,0.8s,mb5.5
LPG La Plagne 48.98 298 *e*P **P** **15 39 23.1 +0.8**
comp=Z,38nm,0.8s,mb5.5
LPL La Plagne 48.99 298 *e*P **P** **15 39 23.0 +0.6**
comp=Z,90nm,0.8s,mb5.5
LPL La Plagne 48.99 298 *e*P **P** **15 39 23.0 +0.6**
LPL pmax pmax
comp=Z,45nm,0.8s,mb5.5
LPL La Plagne 48.99 298 *e*P **P** **15 39 23.0 +0.6**
comp=Z,45nm,0.8s,mb5.5
SAOF Saorge 49.15 296 *e*P **P** **15 39 23.5 -0.1**
BNI Bardonecchia 49.23 297 P **P** **15 39 24.0 -0.2**
SBF Sospel 49.28 296 *e*P **P** **15 39 24.7 +0.1**
comp=Z,32nm,0.6s,mb5.2
SBF Sospel 49.28 296 *e*P **P** **15 39 24.7 +0.1**
SBF pmax pmax
comp=Z,16nm,0.6s,mb5.2
SBF Sospel 49.28 296 *e*P **P** **15 39 24.7 +0.1**
comp=Z,16nm,0.6s,mb5.2
MBDF Montbardon 49.31 297 *e*P **P** **15 39 24.5 -0.4**
LUCF Luceram 49.32 296 *e*P **P** **15 39 24.7 -0.3**
TOUF Mont Tournerai 49.33 296 *e*P **P** **15 39 24.9 -0.1**
MVIF Mont Vial 49.45 296 *e*P **P** **15 39 25.4 -0.5**
MLA1 Latheron 49.54 317ǁ*i*P **P** **15 39 26.6 +0.3**
OG05 Jujurieux 49.56 299 *e*P **P** **15 39 26.4 -0.3**
CALN Calern 49.68 296 *e*P **P** **15 39 26.8 -0.9**
MME1 Meikle Cairn 49.71 315ǁ*e*P **P** **15 39 27.6 -0.1**
MCD Coleburn Disti 49.76 316 *i* P **P** **15 39 27.4 -0.7**
ORIF Oris-en-Rattie 49.79 297 *e*P **P** **15 39 28.2 -0.3**
comp=Z,30nm,0.8s,mb5.1
ORIF *e*MLR MLR
comp=Z,191nm,21.2s,MS3.8
ORIF Oris-en-Rattie 49.79 297 *e*P **P** **15 39 28.2 -0.3**
ORIF pmax pmax
comp=Z,15nm,0.8s,mb5.1
ORIF Oris-en-Rattie 49.79 297 *e*P **P** **15 39 28.2 -0.3**
comp=Z,15nm,0.8s,mb5.1
FRF La Foret Royal 49.93 296 *e*P **P** **15 39 29.3 -0.3**
comp=Z,61nm,1.0s,mb5.3
FRF La Foret Royal 49.93 296 *e*P **P** **15 39 29.3 -0.3**
FRF pmax pmax
comp=Z,30nm,1.0s,mb5.3
FRF La Foret Royal 49.93 296 *e*P **P** **15 39 29.3 -0.3**
comp=Z,30nm,1.0s,mb5.3
LOR Lormes 50.00 301 *e*P **P** **15 39 29.3 -0.8**
comp=Z,18nm,0.7s,mb4.9
LOR *e*MLR MLR
comp=Z,175nm,18.8s,MS3.8
LOR Lormes 50.00 301 *e*P **P** **15 39 29.3 -0.8**
LOR pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
LOR MLR MLR
comp=Z,180nm,18.8s,MS4.1
LOR Lormes 50.00 301 *e*P **P** **15 39 29.3 -0.8**
comp=Z,8.9nm,0.7s,mb4.9
LOR LR LR
comp=Z,180nm,18.8s,MS4.1
XSO Sourhope Farm 50.05 313ǁ*i*P **P** **15 39 30.3 -0.1**
MVH1 Achvaich 50.08 316ǁ*i*P **P** **15 39 30.4 -0.1**
LMR La Mourre 50.12 295 *e*P **P** **15 39 30.8 -0.2**
comp=Z,57nm,1.1s,mb5.2
LMR La Mourre 50.12 295 *e*P **P** **15 39 30.8 -0.2**
LMR pmax pmax
comp=Z,28nm,1.1s,mb5.2
LMR La Mourre 50.12 295 *e*P **P** **15 39 30.8 -0.2**
comp=Z,28nm,1.1s,mb5.2
XAL Allendale 50.29 312ǁ*i*P **P** **15 39 32.1 0.0**
SMF Signal de Mont 50.29 300 *e*P **P** **15 39 31.8 -0.5**
comp=Z,18nm,0.6s,mb4.9
SMF Signal de Mont 50.29 300 *e*P **P** **15 39 31.8 -0.5**
SMF pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
SMF Signal de Mont 50.29 300 *e*P **P** **15 39 31.8 -0.5**
comp=Z,8.8nm,0.6s,mb5.0
SSF Saint Saulge 50.31 301 *e*P **P** **15 39 31.7 -0.7**
OCF Saint Nazaire 50.31 297 *e*P **P** **15 39 32.7 +0.2**
OG26 St.-Nazaire-De 50.31 297 *e*P **P** **15 39 32.7 +0.2**
HPK Haverah Park 50.34 311ǁ*i*P **P** **15 39 32.5 0.0**
HPK AMb AMb 15 39 39.7
comp=Z,105nm,1.5s,mb5.6
EBL Broad Law 50.35 313ǁ*i*P **P** **15 39 32.6 -0.1**
PETK Petropavlovsk- 50.35 50 P **P** **15 39 32.5 -0.2**
comp=Z,27nm,0.9s,mb5.3,baz=308,slow=5.3,SNR=49
PETK LR LR 16 02 20.9
comp=Z,265nm,20.0s,MS4.2,baz=292,slow=38
MDO Dochfour 50.36 316ǁ*i*P **P** **15 39 32.5 -0.1**
EDI Edinburgh 50.37 314ǁ*i*P **P** **15 39 32.4 -0.3**
EDI AMb AMb 15 39 36.3
comp=Z,80nm,1.7s,mb5.5
EBH Black Hill 50.40 314ǁ*i*P **P** **15 39 32.7 -0.2**
SMRF Simiane la Rot 50.42 297 *e*P **P** **15 39 33.3 0.0**
comp=Z,44nm,1.0s,mb5.1
SMRF Simiane la Rot 50.42 297 *e*P **P** **15 39 33.3 0.0**
comp=Z,44nm,1.0s,mb5.5
SSB Saint Sauveur 50.47 298 *e*P **P** **15 39 33.1 -0.6**
AVF Avril sur Loir 50.53 301 *e*P **P** **15 39 33.8 -0.3**
comp=Z,54nm,0.9s,mb5.2
AVF Avril sur Loir 50.53 301 *e*P **P** **15 39 33.8 -0.3**
AVF pmax pmax
comp=Z,27nm,0.9s,mb5.2
AVF Avril sur Loir 50.53 301 *e*P **P** **15 39 33.8 -0.3**
comp=Z,27nm,0.9s,mb5.2
EAU Auchinoon 50.53 314 *e*P **P** **15 39 34.0 +0.1**
PUYF Puyloubier 50.55 296 *e*P **P** **15 39 34.2 -0.1**
KBI1 Birley Grange 50.57 310 *e*P **P** **15 39 34.0 -0.4**
VIVF Saint-Julien-l 50.59 298 *e*P **P** **15 39 34.5 0.0**
comp=Z,40nm,0.8s,mb5.1
VIVF Saint-Julien-l 50.59 298 *e*P **P** **15 39 34.5 0.0**
VIVF pmax pmax
comp=Z,20nm,0.8s,mb5.1
VIVF Saint-Julien-l 50.59 298 *e*P **P** **15 39 34.5 0.0**
comp=Z,20nm,0.8s,mb5.1
ESK Eskdalemuir 50.62 313 P **P** **15 39 34.1 -0.5**
comp=Z,126nm,0.6s,mb6.0,SNR=8.5
ESK Eskdalemuir 50.62 313 *e*P **P** **15 39 33.8 -0.8**
ESK AMb AMb 15 39 34.6
comp=Z,39nm,1.9s,mb5.0
LHO Holmfirth 50.63 310 *e*P **P** **15 39 35.0 +0.3**
ECK Cauldkaine Hil 50.64 313 *e*P **P** **15 39 34.4 -0.4**
BERF Bertagne 50.66 296 *e*P **P** **15 39 34.7 -0.4**
CWF Charnwood Fore 50.67 309ǁ*e*P **P** **15 39 34.7 -0.3**
CWF AMb AMb 15 39 39.5
comp=Z,29nm,1.6s,mb5.0
PLDF La Plantade 50.73 300 *e*P **P** **15 39 35.1 -0.5**
KAC Achnashellach 50.80 316ǁ*i*P **P** **15 39 35.8 -0.1**
KWE Weaver Farm 50.85 310ǁ*i*P **P** **15 39 36.4 0.0**
EAB Aberfoyle 50.85 314 *e*P **P** **15 39 36.3 -0.1**
COLF Collangettes 50.89 299 *e*P **P** **15 39 36.3 -0.5**
PET Petropavlovsk 50.91 50 *e*P **P** **15 39 32.1 -4.8**
PET pmax pmax
comp=Z,42nm,0.8s,mb5.4
PET MLR MLR
comp=Z,400nm,23.0s,MS4.4
PET Petropavlovsk 50.91 50 *e*P **P** **15 39 35.7 -1.2**
comp=Z,51nm,1.1s,mb5.4
BGF Bois d'Agland 50.94 301 *e*P **P** **15 39 36.9 -0.3**
KSB Sheil Bridge 50.98 316 *e*P **P** **15 39 37.0 -0.3**
AGO Saint Agoulin 51.00 300 *e*P **P** **15 39 37.0 -0.6**
KPL Plockton 51.04 316ǁ*e*P **P** **15 39 37.5 -0.3**
KPL AMb AMb 15 39 45.9
comp=Z,56nm,1.3s,mb5.3
PGBU Glenifferbraes 51.08 314ǁ*e*P **P** **15 39 38.0 -0.1**
PGBU AMb AMb 15 39 45.7
comp=Z,82nm,1.8s,mb5.4
PYM Petit Puy Mans 51.21 300 *e*P **P** **15 39 39.4 +0.2**
WOL Wolverton 51.23 308ǁ*e*P **P** **15 39 38.9 -0.4**
WOL AMb AMb 15 39 39.8
comp=Z,132nm,1.1s,mb5.8
LBL Lubilhac 51.30 299 *e*P **P** **15 39 39.4 -0.5**
TCF Toulx Ste Croi 51.46 301 *e*P **P** **15 39 41.0 -0.1**
comp=Z,43nm,0.9s,mb5.1
TCF Toulx Ste Croi 51.46 301 *e*P **P** **15 39 41.0 -0.1**
TCF pmax pmax
comp=Z,22nm,0.9s,mb5.1
TCF Toulx Ste Croi 51.46 301 *e*P **P** **15 39 41.0 -0.1**
comp=Z,22nm,0.9s,mb5.1
LASF Ste Croix 51.47 297 *e*P **P** **15 39 41.4 +0.2**
comp=Z,58nm,1.1s,mb5.1
VERF Verneugheol 51.54 300 *e*P **P** **15 39 41.3 -0.4**
GAL1 Galloway 51.60 313ǁ*e*P **P** **15 39 42.0 +0.1**
GAL1 AMb AMb 15 39 44.3
comp=Z,50nm,1.7s,mb5.2
HLM1 Long Mynd 51.63 310ǁ*e*P **P** **15 39 42.3 0.0**
HAE Alders End 51.66 309ǁ*e*P **P** **15 39 42.4 -0.1**
SBD1 Bryn Du 51.67 310ǁ*i*P **P** **15 39 42.5 0.0**
LDF La Druitiere 51.80 304 *e*P **P** **15 39 43.2 -0.4**
comp=Z,39nm,0.9s,mb5.0
LDF La Druitiere 51.80 304 *e*P **P** **15 39 43.2 -0.4**
LDF pmax pmax
comp=Z,20nm,0.9s,mb5.0
LDF La Druitiere 51.80 304 *e*P **P** **15 39 43.2 -0.4**
comp=Z,20nm,0.9s,mb5.0
MCH1 Michaelchurch 51.92 309ǁ*e*P **P** **15 39 44.2 -0.2**
MCH1 AMb AMb 15 39 45.4
comp=Z,82nm,1.1s,mb5.6
FLN La Foliniere 51.94 304 *e*P **P** **15 39 44.0 -0.6**
comp=Z,20nm,0.7s,mb4.8
FLN *e*MLR MLR
comp=Z,217nm,19.2s,MS3.9
FLN La Foliniere 51.94 304 *e*P **P** **15 39 44.0 -0.6**
FLN pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
FLN MLR MLR
comp=Z,220nm,19.3s,MS4.2
FLN La Foliniere 51.94 304 *e*P **P** **15 39 44.0 -0.6**
comp=Z,9.9nm,0.7s,mb4.8
FLN LR LR
comp=Z,220nm,19.3s,MS4.2
HGH Gray Hill 51.98 309ǁ*i*P **P** **15 39 44.7 -0.1**
KEST Kesra 52.03 286 P **P** **15 39 45.2 -0.3**
comp=Z,1.2nm,0.7s,mb3.9,baz=267,slow=1.3,SNR=3.9
HTR Trewern Hill 52.04 309ǁ*i*P **P** **15 39 45.4 +0.1**
CAF Calviac 52.19 299 *e*P **P** **15 39 46.8 +0.3**
GRR Gorron 52.33 304 *e*P **P** **15 39 47.0 -0.6**
comp=Z,52nm,0.9s,mb5.2
GRR Gorron 52.33 304 *e*P **P** **15 39 47.0 -0.6**
GRR pmax pmax
comp=Z,26nm,0.9s,mb5.2
GRR Gorron 52.33 304 *e*P **P** **15 39 47.0 -0.6**
comp=Z,26nm,0.9s,mb5.2
RJF Les Rejaudoux 52.35 300 *e*P **P** **15 39 48.1 +0.4**
comp=Z,60nm,0.8s,mb5.2
RJF *e*MLR MLR
comp=Z,258nm,20.5s,MS4.0
RJF Les Rejaudoux 52.35 300 *e*P **P** **15 39 48.1 +0.4**
RJF pmax pmax
comp=Z,30nm,0.8s,mb5.3
RJF MLR MLR
comp=Z,260nm,20.5s,MS4.3
RJF Les Rejaudoux 52.35 300 *e*P **P** **15 39 48.1 +0.4**
comp=Z,30nm,0.8s,mb5.3
RJF LR LR
comp=Z,260nm,20.5s,MS4.3
JSA Saint Aubin 52.73 306ǁ*e*P **P** **15 39 49.7 -0.8**
MFF Saint Martin d 52.75 302 *e*P **P** **15 39 50.0 -0.6**
comp=Z,7.2nm,0.6s,mb4.5
MFF Saint Martin d 52.75 302 *e*P **P** **15 39 50.0 -0.6**
MFF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
MFF Saint Martin d 52.75 302 *e*P **P** **15 39 50.0 -0.6**
comp=Z,3.6nm,0.6s,mb4.5
MTLF Montolieu 52.86 297 *e*P **P** **15 39 51.6 0.0**
comp=Z,32nm,1.0s,mb4.9
MTLF Montolieu 52.86 297 *e*P **P** **15 39 51.6 0.0**
MTLF pmax pmax
comp=Z,16nm,1.0s,mb4.9
MTLF Montolieu 52.86 297 *e*P **P** **15 39 51.6 0.0**
comp=Z,16nm,1.0s,mb4.9
LFF La Frestale 53.01 300 *e*P **P** **15 39 52.9 +0.3**
comp=Z,55nm,0.8s,mb5.3
LFF La Frestale 53.01 300 *e*P **P** **15 39 52.9 +0.3**
LFF pmax pmax
comp=Z,28nm,0.8s,mb5.2
LFF La Frestale 53.01 300 *e*P **P** **15 39 52.9 +0.3**
comp=Z,28nm,0.8s,mb5.2
FILF Fillols 53.03 296 *e*P **P** **15 39 52.7 -0.1**
DMUB Kingscourt 53.18 313 *e*P pP 15 40 01.2 -0.6
DMUB Kingscourt 53.18 313 *e*P **P** **15 39 53.7 0.0**
DMUB *e*P pP 15 40 01.2 -0.6
DLF Lyons Farm 53.26 312 *e*P **P** **15 39 50.3 -4.0**
SGMF Saint Gilles 53.40 305 *e*P **P** **15 39 55.1 -0.3**
comp=Z,42nm,0.9s,mb5.1
SGMF Saint Gilles 53.40 305 *e*P **P** **15 39 55.1 -0.3**
SGMF pmax pmax
comp=Z,21nm,0.9s,mb5.1
SGMF Saint Gilles 53.40 305 *e*P **P** **15 39 55.1 -0.3**
comp=Z,21nm,0.9s,mb5.1
VALF Valcebollere 53.46 296 *e*P **P** **15 39 55.7 -0.3**

DCN	Croghan	53.63	312	eP	pP	15 40 04.6	-0.5
DCN	Croghan	53.63	312	eP	P	15 39 57.2	+0.2
DCN				eP	pP	15 40 04.6	-0.5
MLS	Moulis	53.77	297	eP	P	15 39 57.4	-0.8
ROSF	Rostrenen	53.78	305	eP	P	15 39 57.9	-0.3
	comp=Z,51nm,0.9s,mb5.2						
ROSF	Rostrenen	53.78	305	eP	P	15 39 57.9	-0.3
ROSF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
ROSF	Rostrenen	53.78	305	eP	P	15 39 57.9	-0.3
	comp=Z,26nm,0.9s,mb5.2						
QUIF	Quistinic	53.92	305	eP	P	15 39 58.9	-0.3
	comp=Z,36nm,0.8s,mb5.1						
QUIF	Quistinic	53.92	305	eP	P	15 39 58.9	-0.3
QUIF				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
QUIF	Quistinic	53.92	305	eP	P	15 39 58.9	-0.3
	comp=Z,18nm,0.8s,mb5.0						
EPF	Esparros	54.21	298	eP	P	15 40 00.6	-0.8
	comp=Z,23nm,0.9s,mb4.8						
EPF	Esparros	54.21	298	eP	P	15 40 00.6	-0.8
EPF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
EPF	Esparros	54.21	298	eP	P	15 40 00.6	-0.8
	comp=Z,11nm,0.9s,mb4.8						
RESF	Ens	54.32	298	eP	P	15 40 02.2	0.0
VIEF	Viey	54.48	298	eP	P	15 40 03.3	-0.1
ETSF	Etsaut	54.84	298	eP	P	15 40 06.3	+0.3
	comp=Z,17nm,0.7s,mb4.9						
ETSF	Etsaut	54.84	298	eP	P	15 40 06.3	+0.3
ETSF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
ETSF	Etsaut	54.84	298	eP	P	15 40 06.3	+0.3
	comp=Z,8.6nm,0.6s,mb5.0						
SJPF	Ste Jean	55.15	299	eP	P	15 40 07.8	-0.4
	comp=Z,14nm,0.9s,mb4.7						
SJPF	Ste Jean	55.15	299	eP	P	15 40 07.8	-0.4
SJPF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
SJPF	Ste Jean	55.15	299	eP	P	15 40 07.8	-0.4
	comp=Z,7.3nm,0.9s,mb4.7						
KMBO	Kilima Mbogo	58.37	231	P	P	15 40 31.1	-0.3
	comp=Z,4.9nm,0.9s,mb4.5,baz=12,slow=10,SNR=4.7						
KMBO	Kilima Mbogo	58.37	231	eP	P	15 40 31.1	-0.3
KMBO				e	pP	15 40 37.9	-1.6
ESDC	Sonseca Array	58.74	297	P	P	15 40 33.5	-0.2
	comp=Z,8.9nm,0.8s,mb4.8,baz=52,slow=7.1,SNR=44						
PAB	San Pablo	59.05	297	eP	P	15 40 35.4	-0.5
PAB				e	pP	15 40 42.9	-1.2
PAB				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
PAB	San Pablo	59.05	297	eP	P	15 40 35.4	-0.5
	comp=Z,14nm,0.6s,mb5.2						
PAB				e	pP	15 40 42.9	-1.2
MVO	Moncorvo	59.83	299	eP	P	15 40 41.7	+0.5
MVO				epP	pP	15 40 48.9	-0.5
MTE	Manteigas	60.59	299	eP	P	15 40 47.2	+0.8
MTE				epP	pP	15 40 54.4	-0.2
PVIS	Viseu	60.62	299	eP	P	15 40 47.3	+0.6
PVIS				epP	pP	15 40 54.5	-0.3
PCBR	Castelo Branco	60.87	298	eP	P	15 40 49.3	+0.9
PCBR				epP	pP	15 40 56.4	-0.1
PMRV	Marv??o	61.05	298	eP	P	15 40 49.9	+0.3
PMRV				epP	pP	15 40 57.3	-0.5
PESTR	Estremoz	61.51	298	eP	P	15 40 51.9	-0.8
PESTR				epP	pP	15 40 59.5	-1.4
PBAR	Barrancos	61.56	297	eP	P	15 40 52.9	-0.2
PBAR				epP	pP	15 41 00.6	-0.7
EVO	Evora	61.97	298	eP	P	15 40 55.7	-0.1
EVO				eMLR	MLR		
	comp=Z,139nm,18.8s,MS3.9						
SFJD	Kangerlussuaq	62.14	340	i P	P	15 40 56.4	-0.1
SFJD				e	pP	15 41 04.9	+0.2
SFJD				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
SFJD	Kangerlussuaq	62.14	340	i P	P	15 40 56.4	-0.1
	comp=Z,19nm,1.0s,mb5.2						
SFJD				e	pP	15 41 04.9	+0.2
SFJD				i		15 42 17.0	
SFJD	Kangerlussuaq	62.14	340	eP	P	15 40 56.0	-0.6
	comp=Z,25nm,1.1s,mb5.3						
PBEJ	Beja	62.17	297	eP	P	15 40 57.8	+0.6
PBEJ				epP	pP	15 41 05.1	-0.3
PVAQ	Vaqueiros	62.45	296	eP	P	15 40 59.1	0.0
PVAQ				epP	pP	15 41 06.8	-0.4
IMA2	Indian Mountai	62.62	21	⇑iP	P	15 40 59.9	+0.1
PBDV	Barranco-do-Ve	62.68	296	epP	pP	15 41 08.6	-0.2
PTEO	Sao Teotonio	63.01	297	epP	pP	15 41 10.6	-0.4
TTA	Tatalina	64.40	24	eP	P	15 41 11.7	+0.2
COLA	College	65.04	20c	iP	P	15 41 16.0	+0.3
COLA	College	65.04	20	eP	P	15 41 16.1	+0.5
	comp=Z,69nm,0.7s,mb5.8						
COLA				LR	LR		
	comp=Z,328nm,19.0s,MS4.5						
SVW2	Sparrevohn	65.95	25	eP	P	15 41 22.6	+1.0
EGAK	Eagle	66.64	17	eP	P	15 41 25.8	-0.2
PMR	Palmer	67.42	22	eP	P	15 41 30.2	-0.8
DAWY	Dawson	67.64	17	eP	P	15 41 32.3	0.0
SLKM	Skilak Lake	68.01	24	eP	P	15 41 33.8	-0.9
SLKM				e		15 41 44.3	
CHGN	Chignik	68.72	30	eP	P	15 41 38.8	-0.4
EYAK	Cordova Ski Ar	69.20	22	eP	P	15 41 42.6	+0.5
	comp=Z,22nm,0.9s,mb5.1						
KDAK	Kodiak Island	69.51	26	P	P	15 41 44.0	-0.1
	comp=Z,443nm,0.6s,mb6.6,SNR=21						
KDAK	Kodiak Island	69.51	26	eP	P	15 41 43.6	-0.5
	comp=Z,40nm,0.6s,mb5.5						
OHAK	Old Harbor	69.74	27	eP	P	15 41 45.7	+0.2
	comp=Z,48nm,0.7s,mb5.5						
HYT	Haines Junctio	70.94	18	eP	P	15 41 55.1	+2.4
TORD	Torodi Ar. Bea	71.40	270	P	P	15 41 54.5	-1.8
	comp=Z,6.2nm,0.5s,mb4.8,baz=44,slow=5.4,SNR=82						
SKAG	Skagway	72.64	17	eP	P	15 42 03.5	+0.5
YKW3	Yellowknife Ar	72.66	6	eP	P	15 42 02.7	-0.4
YKA	Yellowknife Ar	72.73	6	P	P	15 42 03.3	-0.2
	comp=Z,32nm,0.8s,mb5.3,baz=348,slow=6.0,SNR=188						
YKA				LR	LR	16 14 47.1	
	comp=Z,61nm,21.8s,MS3.8,baz=0.0,slow=36						
DLBC	Dease Lake	74.64	15	eP	P	15 42 15.8	+1.0
SIT	Sitka	74.83	18	eP	P	15 42 17.4	+1.5
LSZ	Lusaka	75.03	230	eP	P	15 42 17.0	-0.6
LSZ				e	pP	15 42 25.0	-0.9
KAKA	Kakadu	75.19	125	eP	P	15 42 18.1	-0.4
	comp=Z,10nm,0.5s,mb5.0						
KAKA				e	pP	15 42 25.4	-1.5
FITZ	Fitzroy Crossi	75.85	134	eP	P	15 42 21.9	-0.3
	comp=Z,12nm,0.8s,mb4.9						
FITZ				e	pP	15 42 29.7	-0.9
FITZ	Fitzroy Crossi	75.85	134	P	P	15 42 22.1	-0.2
	comp=Z,5.8nm,0.8s,mb4.6,baz=324,slow=5.4,SNR=12						
SCHQ	Schefferville	76.59	340	P	P	15 42 26.0	-0.1
	comp=Z,14nm,1.1s,mb4.8,baz=45,slow=2.9,SNR=5.5						
DBIC	Dimbokro	80.51	270	P	P	15 42 47.1	-1.2
	comp=Z,5.5nm,0.9s,mb4.5,baz=174,slow=18,SNR=5.7						
DBIC	Dimbokro	80.51	270	P	P	15 42 47.1	-1.2
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
EDM	Edmonton	82.02	7	eP	P	15 42 55.3	-0.3
WRAB	Tennant Creek	82.05	128	P	P	15 42 55.6	-0.6
	comp=Z,139nm,0.7s,mb6.0,SNR=8.9						
WRA	Warramunga Arr	82.05	128	P	P	15 42 55.5	-0.6
	comp=Z,12nm,0.7s,mb4.9,baz=330,slow=5.0,SNR=123						
WRA	Warramunga Arr	82.05	128	P	P	15 42 55.5	-0.7
WRA				pmax	pmax		
	comp=Z,12nm,0.7s						
WB2	Warramunga Arr	82.06	128	eP	P	15 42 55.6	-0.6
WB2				e	pP	15 43 03.5	-1.1
COEN	Coen	82.70	118	eP	P	15 42 59.2	-0.5
ASAR	Alice Springs	84.79	131	P	P	15 43 09.3	-0.9
	comp=Z,7.9nm,0.7s,mb5.0,baz=322,slow=4.8,SNR=121						
ASAR	Alice Springs	84.79	131	P	P	15 43 09.3	-0.9
ASAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SNB	Saturna Island	85.09	14	P	P	15 43 12.2	+0.6
PNT	Penticton	85.13	12	P	P	15 43 11.5	-0.2
PGC	Sidney	85.17	14	eP	P	15 43 12.3	+0.4
ULM	Lac du Bonnet	85.37	356	P	P	15 43 11.8	-1.1
	comp=Z,9.8nm,0.8s,mb5.0,baz=336,slow=5.5,SNR=6.9						
ULM				LR	LR	16 25 50.0	
	comp=Z,207nm,18.5s,MS4.6,baz=337,slow=39						
ULM	Lac du Bonnet	85.37	356	P	P	15 43 11.8	-1.1
ULM				LR	LR	16 25 50.0	
RPW	Rockport	85.69	13	eP	P	15 43 13.7	-0.8
JCW	Jim Creek	85.87	13	eP	P	15 43 15.2	-0.2
PKME	Peaks-Kenny Pk	86.00	338	eP	P	15 43 15.8	-0.4
WALA	Waterton Lakes	86.09	8	eP	P	15 43 15.3	-1.1
NLWA	Neilton Lookou	86.30	15	eP	P	15 43 18.1	+0.6
NEW	Newport	86.50	10	eP	P	15 43 17.9	-0.6
NEW				MLR	MLR		
	comp=Z,226nm,19.0s						
WTV	Waterville	86.66	12	P	P	15 43 19.3	0.0
ETW	Entiat	86.70	13	eP	P	15 43 18.9	-0.6
OD2	Odessa Site #2	87.15	12	eP	P	15 43 21.3	-0.4
DGMT	Dagmar	87.26	2	eP	P	15 43 22.3	+0.1
DGMT				e	pP	15 43 30.3	-0.4
LON	Longmire	87.29	14	eP	P	15 43 22.3	-0.1
LON				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.5						
LON	Longmire	87.29	14	eP	P	15 43 22.3	-0.1
	comp=Z,23nm,0.7s,mb5.5						
AGMN	Agassiz Refuge	87.32	356	eP	P	15 43 21.7	-0.8
EBG	Ellensburg	87.34	13	P	P	15 43 22.5	-0.1
EYMN	Ely	87.38	353	eP	P	15 43 22.8	0.0
EGMT	Eagleton	87.46	5	eP	P	15 43 22.5	-0.7
	comp=Z,16nm,0.5s,mb5.5						
BOSA	Boshof	87.50	225	P	P	15 43 22.2	-1.2
	comp=Z,6.7nm,0.8s,mb4.9,baz=23,slow=2.1,SNR=12						
BOSA	Boshof	87.50	225	P	P	15 43 22.3	-1.2
BOSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
FORT	Forrest	87.66	139	eP	P	15 43 23.5	-0.7
	comp=Z,12nm,0.7s,mb5.2						
FORT				e	pP	15 43 30.9	-1.7
LONY	Lake Ozonia	87.94	341	eP	P	15 43 25.2	-0.3
LONY				e	pP	15 43 33.1	-0.9
RSW	Rattlesnake Hi	87.99	12	eP	P	15 43 25.7	0.0
HAWA	Hanford	88.00	12	eP	P	15 43 25.4	-0.4
MDV	Middlebury	88.19	340	eP	P	15 43 26.7	-0.1
CHMT	Chamberlain Mo	88.27	8	eP	P	15 43 26.6	-0.5
MSO	Missoula	88.29	8	eP	P	15 43 26.0	-1.1
HRY	Holter Researc	88.61	7	P	P	15 43 28.8	+0.1
LNOR	Lincton Mounta	88.69	12	eP	P	15 43 28.5	-0.6
COR	Corvallis	89.11	15	eP	P	15 43 32.5	+1.4
CTA	Charters Tower	89.24	119	P	P	15 43 31.0	-0.8
	comp=Z,15nm,1.2s,mb5.2,baz=315,slow=3.4,SNR=4.5						
CTA	Charters Tower	89.24	119	P	P	15 43 31.0	-0.9
CTA				pmax	pmax		
	comp=Z,15nm,1.2s						
CTA	Charters Tower	89.24	119	P	P	15 43 31.0	-0.8
LRM	Limekiln Ridge	89.43	8	eP	P	15 43 32.9	+0.3
BOZ	Bozeman (W)	89.68	7	eP	P	15 43 33.4	-0.3
GCMT	Greycliff	89.69	6	eP	P	15 43 34.0	+0.2
BMO	Blue Mountains	89.83	11	eP	P	15 43 33.3	-1.1
DLMT	Dillon	89.87	8	eP	P	15 43 34.2	-0.5
MCMT	McKenzie Canyo	90.38	8	eP	P	15 43 37.1	+0.1
RLMT	Red Lodge	90.38	5	eP	P	15 43 37.2	+0.2
RLMT				e		15 43 48.4	
QLMT	Earthquake Lak	90.51	7	eP	P	15 43 38.4	+0.8
QLMT				e	pP	15 43 46.1	0.0
BINY	Binghamton	90.56	341	eP	P	15 43 36.7	-1.2
KEBM	Edson Butte	90.56	16	eP	P	15 43 38.6	+0.8
YFT	Old Faithful	90.93	7	eP	P	15 43 42.4	+2.8
HUMO	Hull Mountain	91.09	16	eP	P	15 43 40.9	+0.5
FLWY	Flagg Ranch	91.31	7	eP	P	15 43 42.6	+1.2
HLID	Hailey	91.46	9	eP	P	15 43 41.0	-1.1
IMW	Indian Meadow	91.48	7	eP	P	15 43 43.1	+1.0
RSSD	Black Hills	91.61	2	eP	P	15 43 43.0	+0.2
LOHW	Long Hollow	91.79	6	eP	P	15 43 43.8	+0.3
TPAW	Teton Pass	91.88	7	eP	P	15 43 45.3	+1.3
ECSD	EROS,Sioux Fal	91.91	356	eP	P	15 43 44.3	+0.1
SNOW	Snow King Moun	91.92	7	eP	P	15 43 46.2	+2.0
YBH	Yreka Blue Hor	91.98	16	P	P	15 43 44.5	0.0
	comp=Z,5.0nm,0.9s,mb4.8,baz=43,slow=3.7,SNR=17						
YBH	Yreka Blue Hor	91.98	16	eP	P	15 43 44.3	-0.2
WVOR	Wild Horse Val	92.00	12	eP	P	15 43 44.8	+0.2
WVOR				e	pP	15 43 52.8	-0.3
WVOR				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.3						
WVOR	Wild Horse Val	92.00	12	eP	P	15 43 44.8	+0.2
	comp=Z,14nm,0.9s,mb5.3						
WVOR				e	pP	15 43 52.8	-0.2
REDW	Red Top Meadow	92.01	7	eP	P	15 43 44.5	-0.1
MOD	Modoc	92.25	14	eP	P	15 43 46.5	+0.7
KHMM	Horse Mountain	92.61	17	eP	P	15 43 48.6	+1.2
BW06	Boulder Array	92.71	6	eP	P	15 43 48.0	+0.2
BW06				LR	LR		
	comp=Z,239nm,21.0s,MS4.6						
PDAR	Pinedale Array	92.71	6	P	P	15 43 47.9	0.0
	comp=Z,2.1nm,0.8s,mb4.6,baz=29,slow=3.4,SNR=12						
PDAR				LR	LR	16 31 45.5	
	comp=Z,197nm,18.5s,MS4.6,baz=68,slow=40						
WDC	Whiskeytown Da	93.13	16	eP	P	15 43 49.4	-0.4
HVU	Hansel Valley	93.40	8	eP	P	15 43 52.0	+0.9
HWUT	Hardware Ranch	93.69	7	eP	P	15 43 53.3	+0.9
HWUT				e	pP	15 44 01.0	+0.2
SPUT	South Promonto	93.90	8	eP	P	15 43 53.6	+0.2
RWWY	Rawlins	93.93	4	eP	P	15 43 52.9	-0.5
ELK	Elko	94.14	10	eP	P	15 43 55.2	+0.7
ELK				pmax	pmax		
	comp=Z,13nm,0.9s						
ELK	Elko	94.14	10	eP	P	15 43 55.2	+0.8
	comp=Z,13nm,0.9s,mb5.4						
BGU	Big Grassy Mou	94.22	9	eP	P	15 43 55.1	+0.3
PHWY	Pilot Hill	94.39	3	eP	P	15 43 56.2	+0.6
OHCM	Honcut	94.53	15	eP	P	15 43 55.4	-0.9
JLU	Jordanelle	94.70	7	eP	P	15 43 57.0	0.0
DAU	Daniels Canyon	94.91	7	eP	P	15 43 59.1	+1.1
DUG	Dugway	94.97	9	eP	P	15 43 58.5	+0.2
WAKR	Walker	95.71	14	eP	P	15 44 02.4	+0.7
NVAR	Mina Array Bea	95.97	13	P	P	15 44 03.7	+0.8
	comp=Z,6.9nm,0.7s,mb5.2,baz=341,slow=3.5,SNR=64						
NVAR	Mina Array Bea	95.97	13	P	P	15 44 03.7	+0.8
TMUT	Trail Mountain	96.02	7	eP	P	15 44 04.2	+1.1
MSU	Marysvale	96.70	8	eP	P	15 44 07.2	+1.0
PV10	Paradox Valley	97.11	6	eP	P	15 44 09.3	+1.2
PV01	Paradox Valley	97.38	5	eP	P	15 44 09.7	+0.4
TPNV	Topopah Spring	97.74	12	eP	P	15 44 10.3	-0.6
SDCO	Great Sand Dun	97.94	3	eP	P	15 44 11.6	-0.2
WUAZ	Wupatki	99.75	8	ePdif	Pdif	15 44 21.0	+1.0
ANMO	Albuquerque	100.68	4	eP	Pdif	15 44 26.1	+2.0
WMOK	Wichita Mounta	100.97	358	eP	Pdif	15 44 25.6	+0.2
SYO	Syowa Base	116.90	195	⇓eP	PKPdf	15 49 15.4	-3.7
SYO	Syowa Base	116.90	195	⇓eP	PKPdf	15 49 16.7	-2.4
SYO	Syowa Base	116.90	195	⇓eP	PKPdf	15 49 25.0	+5.9
SNAA	Sanae	129.01	204	e	PKPdf	15 49 49.8	+7.6
VNA2	Neumayer--Watz	130.07	205	e	PKPdf	15 49 45.5	+1.2
VNA2				e		15 49 52.6	
VNA3	Neumayer Olymp	130.87	205	e	PKPdf	15 49 47.5	+1.7
VNA3				e		15 49 53.8	
LPAZ	La Paz	140.07	304	PKP	PKPdf	15 50 03.5	-1.1
	comp=Z,2.2nm,1.1s,baz=34,slow=6.4,SNR=4.7						
LPAZ	La Paz	140.07	304	PKIKP	PKPdf	15 50 03.5	-1.1
LPAZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
CPUP	Villa Florida	140.11	282	PKP	PKPdf	15 50 02.2	-2.1
	comp=Z,1.6nm,0.6s,baz=55,slow=2.9,SNR=8.4						
CPUP	Villa Florida	140.11	282	PKIKP	PKPdf	15 50 02.3	-2.1
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LVC	Limon Verde	145.34	298	ePKP	PKPdf	15 50 14.1	+0.4
LVC				e		15 50 22.3	
TRQA	Tornquist	149.72	269	ePKPbc	PKPbc	15 50 24.6	-0.7
TRQA				e		15 50 32.6	
LCO	Las Campanas	150.94	292	ePKPbc	PKPbc	15 50 28.2	-0.3
LCO				e		15 50 36.3	
PLCA	Paso Flores	156.88	269	PKP	PKPdf	15 50 30.6	-0.1
	comp=Z,4.5nm,1.0s,baz=106,slow=6.1,SNR=4.7						
PLCA	Paso Flores	156.88	269	PKIKP	PKPdf	15 50 30.7	-0.1
PLCA				pmax	pmax		
	comp=Z,5.0nm,1.0s						

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*IDC **02** 15:37:41.6±2.4, 1224S×16654E, h0km, mb4.1/6, mb1 4.1/6, mb1mx3.9/14, mbtmp4.0/6, MS3.8/2, Ms1 3.8/2, ms1mx3.2/23, Error ellipse: s-maj=81.3km s-min=33.5km az=120.0*

*NEIC **02** 15:37:48.4±1.0, 1207S×166.17E, h35km, mb4.2/1, Error ellipse: s-maj=25.0km s-min=17.4km az=106.0*

ISC 02 15:37:51.5±4.7**, 120S**±01×**1659E**±03**, h47**km±35km**, n14, σ0.98**/10**, mb3.8**/8**, MS3.7**/2**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.35	293	eP	Pn	15 39 23.0	+0.4
HNR				eSn	Sn	15 40 33.4	-0.5
CTA	Charters Tower	20.45	244	LR	LR	15 49 50.8	
	comp=Z,210nm,18.2s,MS3.5,baz=124,slow=35						
ARMA	Armidale	22.55	214	eP	P	15 42 47.5	-0.1
	0.3nm,0.8s,mb2.8						
STKA	Stephens Creek	29.80	225	P	P	15 43 52.9	-1.2
	2.2nm,0.8s,mb3.9,baz=11,slow=8.3,SNR=3.7						
ASAR	Alice Springs	32.45	245	P	P	15 44 18.9	+1.3
	1.4nm,0.8s,mb3.8,baz=69,slow=9.8,SNR=5.0						
PPT	Papeete	43.37	103	LR	LR	15 58 42.4	
	comp=Z,126nm,19.4s,MS3.8,baz=287,slow=30						
CMAR	Chiang Mai Arr	72.60	294	P	P	15 49 15.6	+1.1
	0.5nm,0.4s,mb3.8,baz=119,slow=4.3,SNR=5.2						
ULN	Ulaanbaatar	79.16	324	eP	P	15 49 51.1	-0.2
	2.7nm,1.1s,mb4.1						
SONM	Songino Array	79.52	324	P	P	15 49 54.0	+0.7
	0.6nm,0.5s,mb3.8,baz=153,slow=9.7,SNR=3.9						
MKAR	Makanchi Array	94.31	317	P	P	15 51 06.2	+0.2
	0.4nm,0.4s,mb4.2,baz=96,slow=6.6,SNR=4.7						
ZALV	Zalesovo Beam	94.41	324	P	P	15 51 03.9	-2.4
	0.4nm,0.4s,mb4.2,baz=116,slow=6.7,SNR=3.4						
ARCES	ARCESS Array B	117.31	345	PKP	PKPdf	15 56 28.7	-2.5
	1.3nm,0.9s,baz=48,slow=1.8,SNR=5.2						
ARCES	ARCESS Array B	117.31	345	PKP	PKPdf	15 56 28.7	-2.5
ESDC	Sonseca Array	151.03	344	PKPbc	PKPbc	15 57 38.8	-0.8
	0.1nm,0.3s,baz=111,slow=21,SNR=1.8						

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*IDC **02** 15:52:34.7±6.5, 3802N×7298E, h81km±60km, mb3.6/4, mb1 3.9/9, mb1mx3.5/27, mbtmp3.8/9, ML4.2/5, Error ellipse: s-maj=47.0km s-min=23.1km az=23.0*

*NEIC **02** 15:52:34.1±1.4, 3796N×7287E, h78km±16km, mb4.5/3, Error ellipse: s-maj=19.2km s-min=6.4km az=61.0*

*BJI **02** 15:52:36.5, 38.18N×7276E, h92km*

*ISCJB **02** 15:52:38.1±0.4, 38.15N±003×73.13E±007, h175km±9km, mb3.6/4, Error ellipse: s-maj=9.8km s-min=4.3km az=164.7*

*NNC **02** 15:52:46.9±3.9, 3886N×7297E, h188km±27km, mb3.2, mpv4.3, Error ellipse: s-maj=46.2km s-min=15.9km az=24.0*

ISC 02 15:52:38.7±0.6**, 3809N**±004×**7311E**±009**, h151**km±9km**, n54, σ1.16**/63**, mb3.6**/4**, 4C-6D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.65	57	P	Pn	15 53 23.3	+1.7
KSH				S	Sn	15 53 55.4	+0.6
KSH				Smax			
	comp=N,1μm,0.2s						
KSH				Smax			
	comp=E,1μm,0.3s						
AML	Almayashu	4.07	6	P	Pn	15 53 39.4	-0.3
	SNR=573						
UCH	Uchtor	4.27	14	P	Pn	15 53 42.6	+0.3
	SNR=176						
KZA	Kyzart	4.31	22	P	Pn	15 53 42.7	-0.2
	SNR=38						
CEP	Cherat	4.36	193	⇓P	Pn	15 53 45.8	+2.1
CHCP	Chirah Chowk	4.42	178	⇓P	Pn	15 53 47.1	+2.7
EKS2	Erkin-Say	4.60	6	P	Pn	15 53 46.6	0.0
	SNR=32						
AAK	Ala-Archa	4.66	13	P	Pn	15 53 47.8	+0.3
	SNR=57						
KBK	Karagaybulak	4.78	16	P	Pn	15 53 49.4	+0.4
	SNR=15						
CHMS	Chumysh	5.06	14	P	Pn	15 53 52.8	0.0
	SNR=41						
TKM2	Tokmak 2	5.19	21	⇑Pn	Pn	15 53 54.2	-0.2
	comp=E,9.5nm,0.5s						
TKM2	Tokmak 2	5.19	21	P	Pn	15 53 54.6	+0.1
	SNR=34						
USP	Ospenovka	5.28	11	P	Pn	15 53 55.4	-0.3
	SNR=51						
KK31	Karatay Array	5.39	339	⇓Pn	Pn	15 53 56.1	-1.0
	comp=E,60nm,0.3s,baz=151,slow=11,SNR=1911						
KK31				Sn	Sn	15 54 51.9	-6.6
	comp=E,69nm,0.4s,baz=153,slow=23,SNR=27						
DLH	Dalhousie	6.00	156	eP	Pn	15 54 07.0	+1.6
DLH				ex	x	15 55 12.0	
THN	Thein Dam	6.03	159	eP	Pn	15 54 07.2	+1.5
THN				ex	x	15 55 11.5	
SARP	Sargodha	6.16	184	P	Pn	15 54 09.7	+2.2
SDNR	Sundarnagar	7.29	153	eP	Pn	15 54 22.0	-0.6
SDNR				eS	Sn	15 55 38.4	-5.8
SMLA	Simla	7.70	153	i P	Pn	15 54 28.9	+0.9
SMLA				i S	Sn	15 55 47.9	-6.1
SMLA				i S	Sn	15 55 48.6	-5.4
SMLA				ex	x	15 55 54.9	
	comp=N,747nm,0.3s						
SMLA				ex	x	15 55 55.7	
	comp=E,873nm,0.3s						
KLP	Kalpa	7.78	146	eP	Pn	15 54 31.2	+2.1
KLP				eS	Sn	15 55 52.1	-3.8
KLP				AML	AML	15 55 58.7	
	comp=E,186nm,0.4s						
KLP				AML	AML	15 55 58.7	
	comp=N,160nm,0.4s						
NDI	New Delhi	9.98	159	ex	x	15 56 44.0	
KUDL	Kundal	10.31	163	eP	Pn	15 55 02.0	-0.7
KUDL				eS	Sn	15 56 47.5	-9.4
SONA	Sohna	10.36	160	eP	Pn	15 55 03.3	0.0
SONA				eS	Sn	15 56 47.4	-11
MK31	Makanchi Array	11.02	35	⇓P	Pn	15 55 12.5	+0.5
	comp=N,3.4nm,0.8s,baz=207,slow=15,SNR=12						
MKAR	Makanchi Array	11.02	35	P	Pn	15 55 12.6	+0.6
	comp=N,0.3nm,0.3s,baz=205,slow=14,SNR=17						
MKAR	Makanchi Array	11.02	35	P	Pn	15 55 12.6	+0.6
DANN	Dangsing	13.17	134	eP	Pn	15 55 38.6	-1.4
	comp=N,16nm,0.2s						
KURK	Kurchatov	13.22	15	P	Pn	15 55 36.9	-3.5
	comp=N,0.2nm,0.3s,baz=207,slow=12,SNR=6.3						
KOLN	Koldanda	13.53	136	eP	Pn	15 55 43.5	-1.1
	comp=N,7.6nm,0.2s						
KKN	Kakani	14.47	132	eP	Pn	15 55 55.3	-1.1
DMN	Daman	14.50	133	eP	Pn	15 55 55.5	-1.3
AB31	Akbulak array	14.65	324	⇓P	Pn	15 55 56.2	-2.3
	comp=N,1.9nm,0.4s,baz=132,slow=13,SNR=50						
AB31				S	Sn	15 58 28.0	-13
	comp=N,6.3nm,0.6s,baz=135,slow=23,SNR=12						
PKIN	Phulchoki	14.70	132	eP	Pn	15 55 59.2	0.0
PKI	Pulchoki	14.71	132	eP	Pn	15 55 58.6	-0.8
PKI	Pulchoki	14.71	132	eP	Pn	15 55 59.2	-0.2
VOSK	Vostochnaya	14.71	355	⇑P	Pn	15 55 57.1	-2.1
	comp=N,5.6nm,1.3s						
GUN	Gumba	14.74	130	eP	Pn	15 55 59.9	+0.1
	comp=N,17nm,0.3s						
BVA0	Borovoye Array	15.06	354	⇓P	Pn	15 56 02.5	-1.0
	comp=N,1.6nm,0.7s,baz=157,slow=17,SNR=41						
BVAR	Borovoye Array	15.06	354	P	Pn	15 56 02.5	-1.0
	comp=N,0.8nm,0.3s,baz=162,slow=12,SNR=33						
JIRN	Jiri	15.11	130	eP	Pn	15 56 04.3	-0.1
	comp=N,25nm,0.3s						
RAMN	Ramite	15.88	130	eP	Pn	15 56 13.3	-0.5
AKTK	Aktyubinsk	16.37	324	P	Pn	15 56 19.6	0.0
AKTO	Aktyubinsk	16.37	324	⇑P	Pn	15 56 19.7	0.0
	comp=N,3.9nm,0.9s						
AKTO				⇑S	S	15 59 11.3	-10
	comp=N,0.8nm,0.7s						
AKTO	Aktyubinsk	16.37	324	P	Pn	15 56 19.6	0.0
	comp=N,2.8nm,0.3s,baz=126,slow=11,SNR=27						
ODAN	Odare	16.42	129	eP	Pn	15 56 21.0	+0.5
	comp=N,16nm,0.6s						
LSA	Lhasa	17.13	114	P	Pn	15 56 36.4	+7.4
LSA	Lhasa	17.13	114	eP	Pn	15 56 32.9	+3.9
	comp=N,9.7nm,0.6s						
ZALV	Zalesovo Beam	17.79	23	P	Pn	15 56 36.9	+0.3
	comp=N,2.2nm,0.3s,baz=207,slow=10,SNR=30						
ARCES	ARCESS Array B	40.35	336	P	P	16 00 04.3	+3.4
	comp=N,1.2nm,0.7s,mb3.7,baz=111,slow=9.2,SNR=8.9						
ARCES	ARCESS Array B	40.35	336	P	P	16 00 04.3	+3.4
TORD	Torodi Ar. Bea	67.43	269	P	P	16 03 21.2	+2.9
	comp=N,1.5nm,0.6s,mb4.0,baz=47,slow=5.4,SNR=20						
TORD	Torodi Ar. Bea	67.43	269	P	P	16 03 21.2	+2.9
WRA	Warramunga Arr	81.43	123	P	P	16 04 43.1	+4.2
	comp=N,1.1nm,0.6s,mb3.6,baz=322,slow=4.9,SNR=7.8						
ASAR	Alice Springs	83.81	126	P	P	16 04 55.5	+4.4
	comp=N,0.3nm,0.6s,mb3.2,baz=312,slow=5.3,SNR=3.7						

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*MOS **02** 15:53:14.6±0.7, 130N×12257E, h33km, mb4.7/7, Error ellipse: s-maj=36.1km s-min=10.0km az=116.3*

*ISCJB **02** 15:53:15.2±0.6, 139N±003×12267E±004, h33km±6km, mb4.3/26, MS3.8/7, Error ellipse: s-maj=6.4km s-min=4.7km az=143.9*

DJA ***02*** *15:53:15, 1.38N×122.68E, h4km, ML5.1/10*
BJI ***02*** *15:53:19.5, 1.86N×122.35E, h23km, mB5.1, mb4.7, Ms4.2, Msz4.0*
NEIC ***02*** *15:53:19.1±1.2, 1.26N×122.62E, h55km±12km, mb4.4/3, Error ellipse: s-maj=14.7km s-min=7.0km az=69.0*
IDC ***02*** *15:53:30.4±2.6, 0.69N×121.68E, h155km±26km, mb3.7/13, mb1 3.8/16, mb1mx3.8/21, mbtmp3.7/16, MS3.8/7, Ms1 3.8/7, ms1mx3.4/27, Error ellipse: s-maj=22.7km s-min=10.8km az=71.0*
ISC 02 15:53:17.5±0.5**, 1.33N**±0.03×**122.68E**±0.04**, h39**km±6km**, n78, σ1s14**/80**, mb4.3**/26**, MS3.8**/7**, 12C-7D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	**Manado**	**2.16**	**87**	P	**Pn**	**15 53 49.9**	**-1.1**
	0.0nm,0.0s						
MNI	**Manado**	**2.16**	**87**	⇓eP	**Pn**	**15 53 50.0**	**-1.0**
MNI				eS	**Sn**	**15 54 15.0**	**-1.6**
PCI	**Palu**	**3.60**	**232**	P	**Pn**	**15 54 09.3**	**-1.6**
	0.0nm,0.0s						
PCI	**Palu**	**3.60**	**232**	⇑eP	**Pn**	**15 54 09.6**	**-1.3**
LBMI	**Labuha**	**5.20**	**112**	P	**Pn**	**15 54 33.7**	**+0.9**
	0.0nm,0.0s						
KDI	**Kendari**	**5.25**	**181**	P	**Pn**	**15 54 35.5**	**+2.0**
	0.0nm,0.0s						
KDI	**Kendari**	**5.25**	**181**	⇑eP	**Pn**	**15 54 35.4**	**+1.9**
KDI				eS	**Sn**	**15 55 34.1**	**+1.3**
ZMPH	**Zamboanga City**	**5.62**	**354**	⇓eP	**Pn**	**15 54 36.4**	**-2.3**
TSM	**Tawau**	**5.63**	**302**	⇑P	**Pn**	**15 54 36.3**	**-2.5**
MYLDM	**Lahad Datu**	**5.66**	**313**	⇑P	**Pn**	**15 54 39.4**	**+0.2**
SMKI	**Samarinda**	**5.75**	**252**	P	**Pn**	**15 54 40.9**	**+0.5**
	500nm,0.9s						
DAV	**Davao City (W)**	**6.40**	**27**	eP	**Pn**	**15 54 52.0**	**+2.7**
	183nm,0.4s						
KAPI	**Kappang**	**6.94**	**205**	P	**Pn**	**15 54 58.0**	**+1.2**
	3.4nm,0.3s,baz=27,slow=9.9,SNR=13						
KAPI				S	**Sn**	**15 56 19.6**	**+5.1**
	baz=34,slow=19,SNR=2.1						
SDKM	**Sandakan**	**6.95**	**308**	⇑P	**Pn**	**15 54 56.2**	**-0.7**
AAI	**Ambon**	**7.43**	**132**	P	**Pn**	**15 55 07.1**	**+3.7**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**7.97**	**306**	⇓P	**Pn**	**15 55 10.3**	**-0.7**
KDM	**Kudat**	**8.05**	**314**	⇑P	**Pn**	**15 55 15.2**	**+3.2**
BTM	**Bintulu**	**9.77**	**281**	⇑P	**Pn**	**15 55 35.9**	**+0.4**
SBUM	**Sibu**	**10.51**	**276**	⇑P	**Pn**	**15 55 45.5**	**-0.3**
BATI	**Baumata**	**11.50**	**175**	P	**Pn**	**15 56 03.7**	**+4.4**
	0.7nm,0.3s,baz=323,slow=5.1,SNR=2.9						
KAKA	**Kakadu**	**16.98**	**145**	eP	**Pn**	**15 57 11.4**	**-0.8**
	28nm,0.6s						
KAKA	**Kakadu**	**16.98**	**145**	eP	**Pn**	**15 57 11.2**	**-1.0**
MYKOM	**Kota Tinggi**	**18.83**	**272**	⇓P	**Pn**	**15 57 34.3**	**-0.7**
KGM	**Kluang**	**19.36**	**272**	⇓P	**Pn**	**15 57 40.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**19.52**	**172**	eP	**Pn**	**15 57 41.8**	**-1.4**
	17nm,0.6s						
FITZ				eS	**S**	**16 01 18.7**	**-1.6**
FITZ	**Fitzroy Crossi**	**19.52**	**172**	P	**Pn**	**15 57 41.5**	**-1.7**
	0.8nm,0.3s,baz=4.6,slow=8.5,SNR=24						
FITZ	**Fitzroy Crossi**	**19.52**	**172**	eP	**Pn**	**15 57 41.0**	**-2.2**
FITZ				eS	**S**	**16 01 18.7**	**-1.6**
KTGM	**Kuala Trenggan**	**19.91**	**282**	⇑P	**Pn**	**15 57 46.7**	**-1.2**
FRIM	**Kepong**	**21.12**	**276**	⇑P	**P**	**15 57 59.7**	**+0.5**
QIZ	**Qiongzhong**	**21.63**	**325**	eP	**P**	**15 58 04.9**	**+0.3**
IPM	**Ipoh**	**21.85**	**279**	⇑P	**P**	**15 58 07.5**	**+0.5**
KULM	**Kulim**	**22.34**	**281**	⇓P	**P**	**15 58 13.5**	**+1.3**
MBWA	**Marble Bar**	**22.53**	**187**	eP	**P**	**15 58 04.9**	**-9.3**
	6.9nm,0.8s,mb4.1						
WRAB	**Tennant Creek**	**24.03**	**152**	d iP	**P**	**15 58 28.5**	**-0.5**
WRA	**Warramunga Arr**	**24.03**	**152**	P	**P**	**15 58 28.1**	**-0.9**
	16nm,0.6s,mb4.6,baz=335,slow=9.6,SNR=174						
WB2	**Warramunga Arr**	**24.04**	**152**	eP	**P**	**15 58 27.8**	**-1.3**
KKTK	**Khon Kaen**	**24.60**	**308**	P	**P**	**15 58 44.0**	**+10**
GUMO	**Guam**	**25.11**	**60**	LR	LR	16 09 11.2	
	comp=Z,106nm,18.4s,MS3.4,baz=72,slow=36						
PMG	**Port Moresby**	**26.61**	**114**	P	**P**	**15 58 52.6**	**0.0**
ASAR	**Alice Springs**	**27.13**	**157**	P	**P**	**15 58 56.8**	**-0.4**
	2.3nm,0.8s,mb3.8,baz=340,slow=9.0,SNR=34						
NANT	**Nan**	**27.68**	**310**	P	**P**	**15 59 01.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**28.85**	**308**	P	**P**	**15 59 10.9**	**-1.6**
	0.2nm,0.3s,mb3.4,baz=126,slow=6.6,SNR=3.3						
CMAR				LR	LR	16 11 07.6	
	comp=Z,175nm,21.0s,MS3.6,baz=253,slow=37						
CD2	**Chengdu**	**34.45**	**330**	eP	**P**	**16 00 01.2**	**-0.4**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
KSRS	**Korea Array**	**36.27**	**7**	P	**P**	**16 00 24.3**	**+7.1**
	comp=Z,1.9nm,1.0s,mb4.0,baz=176,slow=10,SNR=3.2						
KSRS				LR	LR	16 17 26.8	
	comp=Z,103nm,19.3s,MS3.6,baz=358,slow=39						
STKA	**Stephens Creek**	**37.58**	**153**	eP	**P**	**16 00 28.8**	**+0.5**
	comp=Z,10nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**37.58**	**153**	P	**P**	**16 00 28.9**	**+0.5**
	comp=Z,15nm,0.8s,mb4.8,baz=323,slow=8.7,SNR=25						
MAT	**Matsushiro**	**37.88**	**21**	P	**P**	**16 00 42.2**	**+11**
MJAR	**Matsushiro Arr**	**37.88**	**21**	P	**P**	**16 00 41.1**	**+10**
	comp=Z,4.5nm,0.9s,mb4.2,baz=191,slow=9.2,SNR=7.2						
MJAR				LR	LR	16 13 33.8	
	comp=Z,235nm,21.3s,MS4.0,baz=95,slow=31						
LSA	**Lhasa**	**41.17**	**316**	P	**P**	**16 01 00.2**	**+1.8**
GTA	**Gaotai**	**43.27**	**334**	eP	**P**	**16 01 16.8**	**+1.5**
GTA				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.2						
CNB	**Canberra Magne**	**44.17**	**148**	eP	**P**	**16 01 24.8**	**+2.2**
HIA	**Hailar**	**47.83**	**357**	eP	**P**	**16 01 50.4**	**-0.8**
ULN	**Ulaanbaatar**	**48.30**	**346**	eP	**P**	**16 01 55.0**	**+0.2**
ULN	**Ulaanbaatar**	**48.30**	**346**	eP	**P**	**16 01 55.4**	**+0.6**
	comp=Z,3.1nm,0.8s,mb4.4						
KLR	**Kul'dur**	**48.35**	**8**	eP	**P**	**16 02 00.0**	**+4.7**
SONM	**Songino Array**	**48.43**	**345**	P	**P**	**16 01 56.4**	**+0.5**
	comp=Z,2.4nm,0.9s,mb4.2,baz=158,slow=8.2,SNR=14						
ZAK	**Zakamensk**	**51.58**	**344**	eP	**P**	**16 02 19.9**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
TLY	**Talaya**	**52.67**	**345**	eP	**P**	**16 02 27.8**	**0.0**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
MOY	**Mondy**	**53.38**	**343**	eP	**P**	**16 02 34.9**	**+1.9**
BOD	**Bodaibo**	**56.75**	**354**	eP	**P**	**16 02 56.7**	**-0.6**
BOD				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.7						
MKAR	**Makanchi Array**	**57.33**	**328**	P	**P**	**16 03 02.2**	**+0.6**
	comp=Z,2.7nm,0.8s,mb4.4,baz=129,slow=8.8,SNR=19						
MKAR				LR	LR	16 28 39.8	
	comp=Z,85nm,19.5s,MS3.9,baz=134,slow=37						
MKAR	**Makanchi Array**	**57.33**	**328**	P	**P**	**16 03 02.2**	**+0.6**
MKAR				LR	LR	16 28 39.8	
PETK	**Petropavlovsk-**	**59.21**	**24**	P	**P**	**16 03 22.9**	**+8.3**
	comp=Z,4.5nm,0.8s,mb4.5,baz=234,slow=5.0,SNR=5.8						
YAK	**Yakutsk**	**60.78**	**4**	eP	**P**	**16 03 37.6**	**+12**
YAK				e		16 03 52.8	
YAK				e		16 04 06.9	
YAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
YAK				pmax	pmax		
	comp=N,1.0nm,0.9s						
ZAL	**Zalesovo**	**60.98**	**335**	P	**P**	**16 03 27.4**	**+0.7**
ZALV	**Zalesovo Beam**	**60.98**	**335**	P	**P**	**16 03 27.4**	**+0.6**
	comp=N,1.2nm,0.7s,mb4.1,baz=125,slow=7.4,SNR=5.4						
ZALV				LR	LR	16 31 17.3	
	comp=N,72nm,19.2s,MS3.8,baz=207,slow=37						
KURK	**Kurchatov**	**61.68**	**330**	P	**P**	**16 03 31.5**	**0.0**
	comp=N,1.1nm,0.7s,mb4.1,baz=137,slow=5.8,SNR=6.6						
KURK	**Kurchatov**	**61.68**	**330**	eP	**P**	**16 03 30.6**	**-0.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
RPZ	**Rata Peaks**	**62.24**	**142**	P	**P**	**16 03 36.6**	**+1.2**
	comp=Z,14nm,0.7s,mb5.2,baz=241,slow=4.7,SNR=5.2						
NVS	**Novosibirsk**	**62.27**	**335**	eP	**P**	**16 03 50.0**	**+15**
NVS				pmax	pmax		
	comp=N,3.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
NVS				pmax	pmax		
	comp=E,3.0nm,0.8s						
BVAR	**Borovoye Array**	**67.19**	**329**	P	**P**	**16 04 07.9**	**+0.4**
	comp=E,0.8nm,0.6s,mb3.9,baz=141,slow=9.6,SNR=4.4						
AKTK	**Aktyubinsk**	**73.07**	**323**	P	**P**	**16 04 43.8**	**+0.2**
AKTO	**Aktyubinsk**	**73.07**	**323**	P	**P**	**16 04 43.8**	**+0.2**
	comp=E,1.6nm,0.7s,mb4.0,baz=109,slow=5.7,SNR=6.7						
SVE	**Sverdlovsk**	**73.93**	**330**	eP	**P**	**16 04 48.0**	**-0.5**
SVE				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
ARU	**Arti**	**74.84**	**329**	c iP	**P**	**16 04 52.4**	**-1.4**
ARU				eS	S	16 14 26.1	-1.8
ARU				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
MAW	**Mawson**	**80.13**	**200**	P	**P**	**16 05 18.3**	**-4.9**
	comp=Z,0.9nm,0.9s,mb3.7,baz=21,slow=14,SNR=2.4						
NOA	**NORSAR Array B**	**99.09**	**333**	LR	LR	16 57 17.6	
	comp=Z,54nm,19.1s,MS4.1,baz=60,slow=39						
TORD	**Torodi Ar. Bea**	**119.75**	**286**	PKP	PKPdf	16 12 02.8	-1.8
	comp=Z,0.8nm,0.7s,baz=50,slow=1.0,SNR=6.0						

SZGRF ***02*** *16:01:26.6, 19.58S×177.18W, h33km, Fiji Islands region*
ISCJB ***02*** *16:02:32.6±1.1, 18.0S±0.1×178.58W±0.07, h588km±14km, mb4.1/38, Error ellipse: s-maj=17.6km s-min=7.6km az=150.6*
IDC ***02*** *16:02:33.8±1.5, 18.11S×178.49W, h598km±18km, mb3.5/14, mb1 3.7/15, mb1mx3.7/17, mbtmp3.5/15, Error ellipse: s-maj=18.9km s-min=9.8km az=146.0*
NEIC ***02*** *16:02:33.3±0.8, 18.00S×178.49W, h586km±9km, mb4.2/25, Error ellipse: s-maj=15.2km s-min=6.0km az=148.0*
BJI ***02*** *16:02:33.3, 18.00S×178.50W, h585km, mB4.7, mb4.5*
ISC 02 16:02:33.5±1.1**, 18.00S**±0.10×**178.53W**±0.07**, h586**km±13km**, n188, σ0s77**/70**, mb4.1**/38**, 38C-12D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.66**	**59**	P	**P**	**16 04 28.4**	**-0.8**
	2.3nm,0.3s,baz=277,slow=9.3,SNR=5.0						
URZ	**Urewera**	**20.54**	**190**	P	**P**	**16 06 30.3**	**-2.3**
	6.3nm,0.8s,baz=1.1,slow=8.3,SNR=5.0						
CNB	**Canberra Magne**	**33.28**	**232**	eP	**P**	**16 08 25.4**	**+1.6**
CTA	**Charters Tower**	**33.32**	**261**	eP	**P**	**16 08 25.1**	**+0.8**
	6.1nm,0.8s,mb4.3						
CTA	**Charters Tower**	**33.32**	**261**	P	**P**	**16 08 24.6**	**+0.3**
	7.0nm,0.7s,mb4.4,baz=118,slow=7.0,SNR=10						
CTAO	**Charters Tower**	**33.32**	**261**	eP	**P**	**16 08 24.5**	**+0.2**
	5.7nm,0.6s,mb4.4						
TOO	**Toolangi**	**37.02**	**231**	eP	**P**	**16 08 56.1**	**+1.4**
STKA	**Stephens Creek**	**38.48**	**241**	eP	**P**	**16 09 07.8**	**+1.1**
	4.8nm,1.1s,mb3.9						
STKA	**Stephens Creek**	**38.48**	**241**	P	**P**	**16 09 06.4**	**-0.3**
	5.2nm,0.9s,mb4.1,baz=74,slow=10.0,SNR=9.0						
WB2	**Warramunga Arr**	**44.49**	**260**	eP	**P**	**16 09 53.9**	**-0.2**
WRA	**Warramunga Arr**	**44.50**	**260**	P	**P**	**16 09 53.5**	**-0.7**
	1.9nm,0.7s,mb3.8,baz=95,slow=7.1,SNR=14						
WRA				PcP	PcP	16 11 24.3	-0.3
	1.3nm,0.5s,baz=89,slow=3.6,SNR=8.4						
WRA				S	**S**	**16 15 45.9**	**-2.1**
	1.2nm,0.8s,baz=95,slow=13,SNR=3.0						
ASAR	**Alice Springs**	**44.65**	**254**	P	**P**	**16 09 55.7**	**+0.3**
	9.1nm,0.6s,mb4.5,baz=87,slow=9.0,SNR=183						
ASAR				PcP	PcP	16 11 24.7	-0.4
	2.6nm,0.6s,baz=96,slow=4.4,SNR=13						
ASAR				S	**S**	**16 15 48.2**	**-1.9**
	2.9nm,0.9s,baz=91,slow=15,SNR=10						
KAKA	**Kakadu**	**47.47**	**269**	eP	**P**	**16 10 17.3**	**+0.6**
	4.1nm,0.6s,mb4.1						
FITZ	**Fitzroy Crossi**	**52.90**	**261**	eP	**P**	**16 10 56.8**	**+0.5**
	3.3nm,1.3s,mb3.5						
MJAR	**Matsushiro Arr**	**67.91**	**323**	P	**P**	**16 12 34.0**	**-0.7**
	4.0nm,0.6s,mb4.0,baz=156,slow=5.1,SNR=15						
MAT	**Matsushiro**	**67.91**	**323**	P	**P**	**16 12 35.0**	**+0.3**
PETK	**Petropavlovsk-**	**73.74**	**345**	P	**P**	**16 13 08.0**	**-0.4**
	6.4nm,0.6s,mb4.3,baz=121,slow=7.3,SNR=20						
PETK	**Petropavlovsk-**	**73.74**	**345**	P	**P**	**16 13 08.0**	**-0.4**
KSRS	**Korea Array**	**74.69**	**318**	P	**P**	**16 13 15.0**	**+0.8**
	0.9nm,0.7s,mb3.4,baz=128,slow=5.7,SNR=5.6						
ISA	**Isabella**	**77.96**	**46**	eP	**P**	**16 13 31.8**	**-0.4**
	7.7nm,0.9s,mb4.1						
MDJ	**Mudanjiang**	**78.19**	**325**	eP	**P**	**16 13 33.5**	**+0.3**
	5.2nm,0.8s,mb4.0						
KDAK	**Kodiak Island**	**78.52**	**14**	eP	**P**	**16 13 33.8**	**-0.8**
	18nm,1.3s,mb4.2						
YBH	**Yreka Blue Hor**	**78.67**	**39**	eP	**P**	**16 13 36.1**	**+0.3**
	13nm,1.3s,mb4.1						
MTUM	**Tungsten Hills**	**78.81**	**45**	eP	**P**	**16 13 37.4**	**+0.7**
LBCM	**Butte Creek Ri**	**78.97**	**41**	P	**P**	**16 13 37.7**	**+0.3**
HUMO	**Hull Mountain**	**79.05**	**38**	eP	**P**	**16 13 38.2**	**+0.4**
	5.8nm,0.9s,mb3.9						
NVAR	**Mina Array Bea**	**79.57**	**44**	P	**P**	**16 13 40.9**	**+0.2**
	4.1nm,0.7s,mb3.8,baz=226,slow=9.8,SNR=34						
LDFC	**Landfair**	**80.01**	**48**	eP	**P**	**16 13 43.7**	**+0.7**
	32nm,0.6s,mb4.8						
TPNV	**Topopah Spring**	**80.17**	**46**	eP	**P**	**16 13 43.8**	**0.0**
	5.4nm,1.2s,mb3.8						
SLKM	**Skilak Lake**	**81.51**	**14**	eP	**P**	**16 13 49.2**	**-0.9**
VIPM	**Ingram Point**	**81.54**	**38**	P	**P**	**16 13 50.8**	**+0.2**
FL2	**Flat Top 2**	**81.55**	**36**	P	**P**	**16 13 51.4**	**+0.7**
WVOR	**Wild Horse Val**	**81.55**	**40**	eP	**P**	**16 13 50.8**	**+0.1**
	9.9nm,1.0s,mb4.3						
TDL	**Tradedollar La**	**81.72**	**36**	P	**P**	**16 13 52.1**	**+0.6**
TUC	**Tucson**	**81.85**	**52**	eP	**P**	**16 13 52.8**	**+0.3**
	7.2nm,1.2s,mb4.1						
HDW	**Hoodsport**	**82.05**	**34**	P	**P**	**16 13 53.7**	**+0.6**
GSM	**Grass Mountain**	**82.46**	**35**	P	**P**	**16 13 55.5**	**+0.3**
RMW	**Rattlesnake Mo**	**82.61**	**35**	P	**P**	**16 13 56.0**	**0.0**
PMR	**Palmer**	**82.72**	**14**	eP	**P**	**16 13 54.5**	**-1.7**
	4.2nm,0.6s,mb4.2						
ELK	**Elko**	**82.80**	**43**	eP	**P**	**16 13 57.0**	**-0.1**
	5.2nm,1.1s,mb4.0						
WUAZ	**Wupatki**	**82.89**	**49**	eP	**P**	**16 13 58.3**	**+0.6**
	5.6nm,1.0s,mb4.0						
RSW	**Rattlesnake Hi**	**83.22**	**37**	eP	**P**	**16 13 59.4**	**+0.4**
HAWA	**Hanford**	**83.25**	**37**	eP	**P**	**16 13 59.1**	**-0.1**
	18nm,1.4s,mb4.4						
ETW	**Entiat**	**83.50**	**35**	P	**P**	**16 14 00.5**	**0.0**
MAW	**Mawson**	**83.73**	**200**	P	**P**	**16 14 01.5**	**+0.2**
	1.7nm,0.7s,mb3.7,baz=121,slow=8.4,SNR=5.3						
MSU	**Marysvale**	**83.74**	**46**	eP	**P**	**16 14 02.8**	**+0.9**
EPH	**Ephrata**	**83.76**	**36**	P	**P**	**16 14 01.6**	**-0.2**
OD2	**Odessa Site #2**	**84.28**	**36**	eP	**P**	**16 14 03.6**	**-0.7**
HLID	**Hailey**	**84.77**	**41**	eP	**P**	**16 14 07.1**	**+0.3**
	3.6nm,0.8s,mb4.0						
COLA	**College**	**85.89**	**13**	eP	**P**	**16 14 09.5**	**-2.1**
	3.3nm,0.6s,mb4.1						
XAN	**Xi'an**	**86.22**	**307**	P	**P**	**16 14 14.8**	**+0.8**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
XAN				AMB	AMB		
	comp=Z,160nm,14.9s						
MCMT	**McKenzie Canyo**	**86.38**	**41**	eP	**P**	**16 14 14.7**	**+0.2**
RRI2	**Red Ridge**	**86.63**	**42**	eP	**P**	**16 14 16.0**	**+0.3**
	comp=Z,12nm,0.8s,mb4.7						
REDW	**Red Top Meadow**	**86.93**	**43**	eP	**P**	**16 14 17.1**	**+0.1**
	comp=Z,11nm,1.1s,mb4.5						
IMW	**Indian Meadow**	**87.13**	**42**	eP	**P**	**16 14 18.3**	**+0.3**
	comp=Z,14nm,1.1s,mb4.6						
DAWY	**Dawson**	**87.21**	**16**	eP	**P**	**16 14 16.9**	**-0.9**
LOHW	**Long Hollow**	**87.21**	**42**	eP	**P**	**16 14 18.2**	**-0.1**
	comp=Z,1.6nm,0.6s,mb3.9						
HHC	**Hu-ho-hao-te**	**87.25**	**314**	eP	**P**	**16 14 16.9**	**-1.7**
HHC				AP	pP	16 16 27.2	+2.3
HHC				XP	sP	16 17 26.4	+2.8
HHC				PP	PP	16 17 53.8	-0.4
HHC				S	S	16 24 05.7	-4.5
HHC				AMB	AMB		
	comp=Z,15nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,91nm,6.5s						
QLMT	**Earthquake Lak**	**87.27**	**41**	eP	**P**	**16 14 19.5**	**+0.9**
BW06	**Boulder Array**	**87.50**	**43**	eP	**P**	**16 14 19.2**	**-0.6**
	comp=Z,2.0nm,0.6s,mb4.0						
PDAR	**Pinedale Array**	**87.50**	**43**	P	**P**	**16 14 19.8**	**0.0**
	comp=Z,3.4nm,0.6s,mb4.2,baz=209,slow=2.7,SNR=19						
KMI	**Kunming**	**87.77**	**297**	P	**P**	**16 14 22.0**	**+0.6**
KMI				AP	pP	16 16 30.7	+2.8
KMI				XP	sP	16 17 27.0	+0.4
KMI				PP	PP	16 18 00.8	+2.2
KMI				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb3.9						
KMI				AMB	AMB		
	comp=Z,78nm,4.9s						
CMAR	**Chiang Mai Arr**	**88.81**	**290**	P	**P**	**16 14 27.3**	**+0.9**
	comp=Z,2.3nm,0.9s,mb4.0,baz=104,slow=2.8,SNR=17						
SNAA	**Sanae**	**90.51**	**179**	e	**P**	**16 14 32.3**	**-1.0**
VNA3	**Neumayer Olymp**	**90.66**	**176**	e	**P**	**16 14 33.6**	**-0.3**
SONM	**Songino Array**	**93.54**	**319**	P	**P**	**16 14 47.5**	**-0.1**
	comp=Z,0.5nm,0.6s,mb3.8,baz=150,slow=4.6,SNR=4.3						
YKA	**Yellowknife Ar**	**94.46**	**25**	P	**P**	**16 14 50.2**	**-1.1**
	comp=Z,0.9nm,0.6s,mb4.1,baz=238,slow=4.5,SNR=11						
YKA	**Yellowknife Ar**	**94.46**	**25**	P	**P**	**16 14 50.2**	**-1.1**
ZALV	**Zalesovo Beam**	**108.23**	**322**	PKiKP	PKiKP	16 19 54.0	-1.5
	comp=Z,0.6nm,0.5s,baz=108,slow=0.2,SNR=4.0						
ZALV	**Zalesovo Beam**	**108.23**	**322**	PKPdf	PKiKP	16 19 54.0	-1.5
MKAR	**Makanchi Array**	**109.11**	**314**	PKiKP	PKiKP	16 19 55.7	-1.7
	comp=Z,0.8nm,0.5s,baz=204,slow=1.0,SNR=14						
ARCES	**ARCESS Array B**	**126.38**	**350**	PKP	PKPdf	16 20 28.6	-1.3
	comp=Z,4.1nm,0.8s,baz=44,slow=1.8,SNR=16						
JOF	**Joensuu**	**130.61**	**343**	ep	PKPdf	16 20 36.5	-1.5
	comp=Z,1.2nm,0.4s						
KAF	**Kangasniemi**	**132.62**	**344**	ep	PKPdf	16 20 40.9	-0.9
	comp=Z,0.8nm,0.4s						
AKASG	**Malin Array Be**	**140.59**	**332**	PKhKP		16 20 49.5	
	comp=Z,0.5nm,0.3s,baz=42,slow=4.0,SNR=4.9						
AKASG				PKP	PKPdf	16 20 57.9	+1.0
	comp=Z,1.6nm,0.6s,baz=56,slow=1.5,SNR=5.0						
BSEG	**Bad Segeberg**	**143.49**	**351**	ePKPbc	PKPdf	16 20 59.9	-2.0
TLCR		**144.58**	**326**	⇑iP	PKPdf	16 21 04.4	+0.3
TLCR		**144.58**	**326**	⇑P	PKPdf	16 21 04.4	+0.3
BURAR	**Bucovina Array**	**144.64**	**332**	⇑iP	PKPdf	16 21 04.8	+0.7
BURAR	**Bucovina Array**	**144.64**	**332**	⇑P	PKPdf	16 21 04.8	+0.7
OJC	**Ojcow**	**144.66**	**340**	eP	PKPdf	16 21 03.8	-0.2
STHS	**Stebnicka Huta**	**144.83**	**337**	ePKP	PKPdf	16 21 04.9	+0.5
KOLS	**Kolonicke sedl**	**144.84**	**336**	ePKP	PKPdf	16 21 06.7	+2.3
NRDL	**Niedersach Rie**	**144.91**	**351**	ePKPbc	PKPdf	16 21 04.4	0.0
NIE	**Niedzica**	**145.16**	**338**	ePX	PKPdf	16 21 06.0	+1.1
KSP	**Ksiaz**	**145.16**	**344**	eP	PKPdf	16 21 05.8	+0.9
CRVS	**Cervenica-Dubn**	**145.17**	**337**	ePKP	PKPdf	16 21 05.8	+0.8
VRI	**Vrincioaia**	**145.19**	**329**	⇓iP	PKPdf	16 21 05.2	+0.1
VRI	**Vrincioaia**	**145.19**	**329**	⇓P	PKPdf	16 21 05.2	+0.1
ANTO	**Ankara**	**145.26**	**315**	⇓iP	PKPdf	16 21 06.5	+1.1
ANTO	**Ankara**	**145.26**	**315**	⇓P	PKPdf	16 21 06.5	+1.0
CLZ	**Clausthal**	**145.51**	**350**	ePKPbc	PKPbc	16 21 06.4	-0.5
OKC	**Ostrava-Krasne**	**145.52**	**341**	ePKP	PKPdf	16 21 06.5	+1.0
CLL	**Collm**	**145.53**	**347**	ePKPbc	PKPbc	16 21 06.2	-0.8
CLL	**Collm**	**145.53**	**347**	⇑iPKPbc	PKPbc	16 21 06.1	-0.9
	comp=Z,25nm,0.8s						
CLL	**Collm**	**145.53**	**347**	⇑iPKP	PKPdf	16 21 06.1	+0.6
UPC	**Upice**	**145.54**	**344**	ePKP	PKPdf	16 21 06.7	+1.2
DPC	**Dobruska-Polom**	**145.60**	**343**	ePKP	PKPdf	16 21 06.7	+1.0
DPC	**Dobruska-Polom**	**145.60**	**343**	ePKP	PKPdf	16 21 06.7	+1.0
BRG	**Berggiesshubel**	**145.73**	**346**	ePKPbc	PKPbc	16 21 06.8	-0.8
BRG	**Berggiesshubel**	**145.73**	**346**	⇑iP	PKPdf	16 21 06.9	+1.0
	comp=Z,10.0nm,0.7s						
MORC	**Moravsky Berou**	**145.76**	**341**	⇑iP	PKPdf	16 21 07.3	+1.4
MORC	**Moravsky Berou**	**145.76**	**341**	⇑P	PKPdf	16 21 07.2	+1.3
FBE	**Freiberg**	**145.81**	**347**	ePKPbc	PKPbc	16 21 07.3	-0.5
MLR	**Muntele Rosu**	**145.85**	**329**	⇑iP	PKPdf	16 21 07.8	+1.6
MLR	**Muntele Rosu**	**145.85**	**329**	⇑P	PKPdf	16 21 07.8	+1.5
NEUB	**Neuenburg**	**145.87**	**348**	ePKPbc	PKPbc	16 21 07.3	-0.6
KECS	**Kecovo**	**145.88**	**337**	i PKP	PKPdf	16 21 07.7	+1.5
PVCC	**Panska Ves**	**145.90**	**345**	ePKP	PKPdf	16 21 06.2	+0.1
VOIR		**146.32**	**329**	⇓iP	PKPbc	16 21 09.7	+0.3
VOIR		**146.32**	**329**	⇓P	PKPbc	16 21 09.7	+0.3
DRGR		**146.37**	**333**	⇓iP	PKPbc	16 21 09.4	-0.1
DRGR		**146.37**	**333**	⇓P	PKPbc	16 21 09.4	-0.1
PRU	**Pruhonice**	**146.40**	**345**	ePKP	PKPdf	16 21 08.6	+1.6
PRU				ex	x	16 21 11.3	
MOX	**Moxa**	**146.44**	**348**	ePKPbc	PKPbc	16 21 08.7	-0.8
VRAC	**Vranov**	**146.46**	**342**	⇑iP	PKPbc	16 21 09.3	-0.3
VRAC	**Vranov**	**146.46**	**342**	⇑P	PKPbc	16 21 09.3	-0.3
VYHS	**Vyhne**	**146.46**	**339**	ePKP	PKPbc	16 21 09.5	-0.2
WERD	**Werda**	**146.49**	**347**	ePKPbc	PKPbc	16 21 09.1	-0.6
KOLL	**Kolacno**	**146.53**	**339**	i PKP	PKPbc	16 21 09.5	-0.4
GUNZ	**Gunzen**	**146.56**	**347**	ePKPbc	PKPbc	16 21 09.3	-0.6
PSZ	**Piszkesteto**	**146.57**	**337**	⇑iP	PKPbc	16 21 09.5	-0.5
WERN	**Wernitzgruen**	**146.62**	**347**	ePKPbc	PKPbc	16 21 09.9	-0.1
NKC	**Novy Kostel**	**146.66**	**347**	ePKP	PKPbc	16 21 09.4	-0.7
NKC				ex	x	16 21 12.3	
TREC	**Trest**	**146.79**	**343**	ePKP	PKPbc	16 21 09.8	-0.7
MANZ	**Manzenberg**	**146.96**	**347**	ePKPbc	PKPbc	16 21 10.4	-0.6
MODS	**Modra-Piesok**	**147.08**	**340**	ePKP	PKPdf	16 21 10.0	+1.8
BEBN	**Eben Emael**	**147.11**	**355**	PKPbc	PKPbc	16 21 10.4	-0.9
ROTZ	**Rotzenmuhle**	**147.15**	**347**	ePKPbc	PKPbc	16 21 11.0	-0.5
UCC	**Uccle**	**147.20**	**357**	PKPbc	PKPbc	16 21 11.0	-0.6
MEM	**Membach**	**147.26**	**355**	PKPbc	PKPbc	16 21 11.0	-0.8
ZST	**Bratislava**	**147.29**	**341**	ePKP	PKPbc	16 21 10.9	-1.0
TNS	**Taunus Mts**	**147.37**	**352**	ePKPbc	PKPbc	16 21 11.5	-0.5
GRA1	**Grafenberg Arr**	**147.42**	**348**	ePKPbc	PKPbc	16 21 11.7	-0.5
GRF	**Grafenberg Arr**	**147.42**	**348**	ePKPbc	PKPbc	16 21 11.7	-0.5
KHC	**Kasperske Hory**	**147.43**	**345**	ePKP	PKPbc	16 21 11.6	-0.6
KHC				ex	x	16 21 15.0	
WET	**Wettzell**	**147.59**	**346**	ePKPbc	PKPbc	16 21 12.0	-0.6
GEC2	**GERESS Array S**	**147.67**	**345**	ePKPbc	PKPbc	16 21 12.3	-0.5
GERES	**GERESS Array B**	**147.67**	**345**	PKPbc	PKPbc	16 21 12.6	-0.2
	comp=Z,7.2nm,0.7s,baz=356,slow=4.1,SNR=3.9						
BZS	**Buzias**	**147.76**	**333**	⇑iP	PKPbc	16 21 12.5	-0.7
BZS	**Buzias**	**147.76**	**333**	⇑P	PKPbc	16 21 12.5	-0.7
GIVF	**Givet**	**147.86**	**356**	⇑iPKP1	PKPbc	16 21 12.6	-0.7
	comp=Z,22nm,0.7s						
DOU	**Dourbes**	**147.88**	**356**	PKPbc	PKPbc	16 21 12.5	-0.8
CONA	**Conrad Observa**	**147.91**	**342**	⇑iP	PKPbc	16 21 13.2	-0.2
	comp=Z,17nm,1.5s						
CSNA	**Conrad Observa**	**147.91**	**342**	⇓iP	PKPbc	16 21 13.3	-0.1
	comp=Z,18nm,1.6s						
BAIF	**Baives**	**147.94**	**357**	⇑iPKP1	PKPbc	16 21 13.0	-0.5
	comp=Z,16nm,0.7s						
WLF	**Walferdange**	**148.19**	**354**	PKPbc	PKPbc	16 21 14.2	+0.1
PKSM	**Moragy**	**148.47**	**337**	⇓iP	PKPbc	16 21 13.9	-1.0
PKSM	**Moragy**	**148.47**	**337**	⇓P	PKPbc	16 21 13.9	-1.0
FUR	**Furstenfeldbru**	**148.87**	**347**	ePKPbc	PKPbc	16 21 15.2	-0.6
BFO	**Black Forest**	**149.24**	**351**	ePKPbc	PKPbc	16 21 15.7	-1.0
FLN	**La Foliniere**	**149.27**	**3**	⇑iPKP1	PKPbc	16 21 15.8	-1.0
	comp=Z,20nm,0.7s						
SOKA	**Soboth**	**149.28**	**342**	⇑iP	PKPbc	16 21 15.7	-1.2
	comp=Z,9.5nm,1.0s						
CDF	**Champ du Feu**	**149.30**	**352**	⇑iPKP1	PKPbc	16 21 16.3	-0.6
	comp=Z,20nm,0.9s						
MEZF	**Maizieres J'vi**	**149.44**	**355**	⇑iPKP1	PKPbc	16 21 16.8	-0.4
LDF	**La Druitiere**	**149.46**	**2**	⇑iPKP1	PKPbc	16 21 16.1	-1.1
	comp=Z,11nm,0.6s						
ROSF	**Rostrenen**	**149.50**	**6**	ePKP1	PKPbc	16 21 15.3	-2.0
WATA	**Walderalm**	**149.59**	**346**	⇑iP	PKPbc	16 21 17.0	-0.6
	comp=Z,6.1nm,0.6s						
RETA	**Reutte**	**149.62**	**347**	⇑iP	PKPbc	16 21 16.8	-0.8
	comp=Z,3.9nm,0.6s						
GRR	**Gorron**	**149.63**	**3**	⇑iPKP1	PKPbc	16 21 16.8	-0.9
	comp=Z,10nm,0.5s						
WTTA	**Wattenberg**	**149.64**	**346**	⇑iP	PKPbc	16 21 16.8	-0.9
	comp=Z,17nm,0.6s						
SGMF	**Saint Gilles**	**149.65**	**5**	ePKP1	PKPbc	16 21 16.5	-1.2
	comp=Z,32nm,1.1s						
MOTA	**Moosalm**	**149.68**	**347**	⇓iP	PKPbc	16 21 17.2	-0.6
	comp=Z,10nm,0.9s						
HAU	**Haudompre**	**149.81**	**353**	⇑iPKP1	PKPbc	16 21 17.3	-0.8
	comp=Z,17nm,0.7s						
QUIF	**Quistinic**	**149.92**	**6**	ePKP1	PKPbc	16 21 17.3	-1.1
HINF	**Hinteralfeld**	**149.94**	**353**	⇑iPKP1	PKPbc	16 21 17.4	-1.0
	comp=Z,12nm,0.8s						
DAVA	**Damuels**	**149.98**	**349**	⇑iP	PKPbc	16 21 17.7	-0.8
	comp=Z,13nm,0.8s						
DAVA	**Damuels**	**149.98**	**349**	⇑iP	PKPbc	16 21 17.7	-0.8
FETA	**Feichten**	**150.07**	**347**	⇑iP	PKPbc	16 21 18.3	-0.5
	comp=Z,14nm,1.0s						
LOR	**Lormes**	**150.74**	**357**	⇑iPKP1	PKPbc	16 21 19.6	-0.7
	comp=Z,22nm,0.8s						
SSF	**Saint Saulge**	**150.97**	**357**	⇑iPKP1	PKPbc	16 21 20.2	-0.6
	comp=Z,19nm,0.9s						
CABF	**La Chapelle**	**151.21**	**353**	ePKP1	PKPbc	16 21 21.3	-0.1
	comp=Z,51nm,1.2s						
AVF	**Avril sur Loir**	**151.25**	**357**	ePKP1	PKPbc	16 21 20.3	-1.1
	comp=Z,16nm,1.1s						
SMF	**Signal de Mont**	**151.37**	**357**	ePKP1	PKPbc	16 21 20.8	-0.9
	comp=Z,20nm,1.2s						
MFF	**Saint Martin d**	**151.45**	**2**	⇑iPKP1	PKPbc	16 21 20.9	-1.0
	comp=Z,24nm,0.9s						
BGF	**Bois d'Agland**	**151.50**	**358**	ePKP1	PKPbc	16 21 21.3	-0.7
	comp=Z,12nm,0.7s						
TCF	**Toulx Ste Croi**	**151.78**	**359**	⇑iPKP1	PKPbc	16 21 21.7	-0.9
	comp=Z,18nm,1.0s						
LPL	**La Plagne**	**152.21**	**352**	⇑iPKP1	PKPbc	16 21 23.7	+0.1
	comp=Z,9.6nm,1.0s						
LPG	**La Plagne**	**152.23**	**352**	ePKP1	PKPbc	16 21 23.8	+0.1
RJF	**Les Rejaudoux**	**152.78**	**360**	ePKP1	PKPbc	16 21 24.0	-0.8
	comp=Z,5.6nm,0.7s						
ORIF	**Oris-en-Rattie**	**152.91**	**353**	ePKP1	PKPbc	16 21 24.7	-0.4
	comp=Z,3.0nm,0.6s						
MBDF	**Montbardon**	**152.98**	**352**	ePKP1	PKPbc	16 21 24.8	-0.5
	comp=Z,12nm,0.8s						
VIVF	**Saint-Julien-l**	**153.09**	**355**	ePKP1	PKPbc	16 21 25.1	-0.4
CAF	**Calviac**	**153.15**	**359**	ePKP1	PKPbc	16 21 25.0	-0.7
ESDC	**Sonseca Array**	**157.89**	**11**	PKPab	PKPab	16 21 59.8	-1.1
	comp=Z,0.8nm,0.6s,baz=334,slow=4.2,SNR=7.1						
DBIC	**Dimbokro**	**167.16**	**151**	PKP	PKPdf	16 21 31.2	-2.6
	comp=Z,3.6nm,0.7s,baz=188,slow=6.8,SNR=4.1						
DBIC	**Dimbokro**	**167.16**	**151**	PKP	PKPdf	16 21 31.2	-2.7
TORD	**Torodi Ar. Bea**	**175.17**	**183**	PKP	PKPdf	16 21 35.1	-2.6
	comp=Z,1.2nm,0.9s,baz=46,slow=2.1,SNR=5.1						

IDC 02 16:08:03.6±0.8, 8.62S×157.05E, h0km, mb4.4/12, mb1 4.5/12, mb1mx4.4/15, mbtmp4.3/12, MS3.9/4, Ms1 3.9/4, ms1mx3.2/27, Error ellipse: s-maj=30.1km s-min=18.2km az=119.0
NEIC 02 16:08:04.4±0.5, 8.73S×157.20E, h10km, mb4.9/2, Error ellipse: s-maj=15.3km s-min=12.4km az=153.0
BJI 02 16:08:04.4, 8.70S×157.20E, h10km, mB5.0, mb4.6
ISCJB 02 16:08:06.4±0.6, 8.8S±0.1×157.2E±0.1, h33km, mb4.3/16, MS3.8/4, Error ellipse: s-maj=16.5km s-min=12.9km az=140.1
ISC 02 16:08:08.2±0.6, 8.8S±0.1×157.2E±0.1, h35km, n23, σ1s.15/21, mb4.3/16, MS3.8/4, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.76	103	ePn	Pn	16 08 48.2	-1.8
HNR				ePg	Pn	16 08 54.7	+4.6
WB2	Warramunga Arr	24.73	241	eP	P	16 13 26.1	-0.4
WRA	Warramunga Arr	24.74	241	P	P	16 13 26.3	-0.3
	14nm,0.9s,mb4.5,baz=65,slow=9.3,SNR=40						
WRA				PcP	PcP	16 17 04.0	+0.9
	1.8nm,0.9s,baz=57,slow=2.0,SNR=7.6						
WRA				LR	LR	16 22 37.0	
	comp=Z,261nm,21.1s,MS3.7,baz=70,slow=35						
ASAR	Alice Springs	26.76	234	P	P	16 13 44.0	-1.0
	5.7nm,0.9s,mb4.1,baz=62,slow=9.3,SNR=20						
ASAR				PcP	PcP	16 17 09.9	+2.3
	0.7nm,1.1s,baz=151,slow=5.4,SNR=4.0						
STKA	Stephens Creek	27.17	210	P	P	16 13 50.2	+1.8
	5.4nm,1.1s,mb4.0,baz=350,slow=14,SNR=4.1						
AFI	Afiamalu	30.80	102	LR	LR	16 24 22.8	
	comp=Z,211nm,19.4s,MS3.8,baz=76,slow=32						
FITZ	Fitzroy Crossi	32.03	250	eP	P	16 14 31.7	-0.1
	3.3nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	32.03	250	P	P	16 14 31.3	-0.5
	1.9nm,0.6s,mb4.1,baz=41,slow=3.8,SNR=11						
FITZ				LR	LR	16 26 51.6	
	comp=Z,183nm,18.7s,MS3.8,baz=65,slow=35						
FITZ	Fitzroy Crossi	32.03	250	eP	P	16 14 31.3	-0.5
BATI	Baumata	33.12	265	LR	LR	16 28 40.0	
	comp=Z,308nm,21.6s,MS4.0,baz=95,slow=38						
PETK	Petropavlovsk-	61.66	0	P	P	16 18 20.5	-1.9
	3.5nm,1.1s,mb4.4,baz=138,slow=11,SNR=3.9						
CMAR	Chiang Mai Arr	63.55	296	P	P	16 18 36.5	+0.9
	3.5nm,0.9s,mb4.4,baz=119,slow=4.9,SNR=22						
CASY	Casey	65.59	199	eP	P	16 18 47.7	-0.5
	8.0nm,1.2s,mb4.6						
LZH	Lanzhou	67.14	315	eP	P	16 19 03.0	+4.4
LZH				AP	pP	16 19 08.3	-1.1
LZH				XP	sP	16 19 10.0	-3.5
LZH				AMB	AMB		
	comp=Z,17nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,86nm,5.0s						
GTA	Gaotai	71.56	317	eP	P	16 19 27.3	+1.4
GTA				AP	pP	16 19 30.9	-5.9
GTA				XP	sP	16 19 32.3	-8.5
GTA				AMB	AMB		
	comp=Z,4.0nm,1.6s,mb4.1						
ULN	Ulaanbaatar	71.70	327	P	P	16 19 27.1	+0.5
	comp=Z,35nm,2.4s,mb4.9						
SONM	Songino Array	72.04	327	P	P	16 19 29.0	+0.4
	comp=Z,2.2nm,1.0s,mb4.1,baz=138,slow=5.0,SNR=11						
MAW	Mawson	83.59	203	P	P	16 20 33.0	+0.4
	comp=Z,5.8nm,0.9s,mb4.7,baz=64,slow=6.4,SNR=13						
MKAR	Makanchi Array	86.21	318	P	P	16 20 45.0	-1.0
	comp=Z,3.4nm,0.9s,mb4.6,baz=97,slow=5.0,SNR=18						
ZALV	Zalesovo Beam	86.90	326	P	P	16 20 47.5	-1.8
	comp=Z,0.6nm,0.4s,mb4.2,baz=117,slow=5.2,SNR=5.0						
NVAR	Mina Array Bea	91.11	51	P	P	16 21 11.9	+2.4
	comp=Z,0.3nm,0.5s,mb3.9,baz=258,slow=8.2,SNR=5.7						
YKA	Yellowknife Ar	96.89	28	P	P	16 21 35.9	+0.4
	comp=Z,0.6nm,1.0s,mb4.0,baz=261,slow=5.0,SNR=4.1						
BDFB	Brasilia	145.15	134	PKPbc	PKPbc	16 27 44.4	+1.7
	comp=Z,3.3nm,0.8s,baz=228,slow=5.5,SNR=4.2						

DJA 02 16:22:41, 0.93N×126.35E, h14km, ML3.5/2, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNE	Ternate	1.03	98	⇓eP	Pb	16 22 54.5	-6.1
TNE				eS	Sb	16 23 12.0	-2.0
MNI	Manado	1.59	289	P	Pn	16 23 09.3	+0.5
	0.0nm,0.0s						
LBMI	Labuha	1.94	144	P	Sn	16 23 38.8	+1.1
	0.0nm,0.0s						
GTOI	Gorontalo	3.35	265	P	Pn	16 23 32.7	-0.3
	0.0nm,0.0s						

IDC 02 16:23:42.2±7.2, 12.23S×166.42E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.8/14, mbtmp3.9/5, Error ellipse: s-maj=206.5km s-min=41.8km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.72	252	P	P	16 30 07.3	-0.7
	0.5nm,0.9s,baz=80,slow=9.3,SNR=5.3						
ASAR	Alice Springs	32.87	245	P	P	16 30 18.4	+0.3
	1.0nm,0.8s,baz=72,slow=9.4,SNR=11						
CMAR	Chiang Mai Arr	73.18	294	P	P	16 35 16.3	+0.9
	0.3nm,0.4s,baz=157,slow=3.5,SNR=3.4						
MKAR	Makanchi Array	94.83	317	P	P	16 37 05.9	-0.1
	0.4nm,0.4s,baz=92,slow=7.3,SNR=9.0						
ZALV	Zalesovo Beam	94.89	324	P	P	16 37 05.3	-0.8
	0.4nm,0.5s,baz=103,slow=4.7,SNR=4.1						

ISCJB 02 16:30:50.0±1.2, 18.9S±0.2×177.6W±0.2, h621km±25km, mb4.3/7, Error ellipse: s-maj=31.1km s-min=19.1km az=138.4
IDC 02 16:30:50.8±1.8, 18.87S×177.54W, h612km±28km, mb3.4/6, mb1 3.5/8, mb1mx3.2/18, mbtmp3.4/8, Error ellipse: s-maj=29.2km s-min=18.6km az=147.0
NEIC 02 16:30:50.6±0.8, 18.81S×177.55W, h611km±17km, mb4.3/5, Error ellipse: s-maj=20.6km s-min=13.5km az=141.0
ISC 02 16:30:50.8±1.2, 18.8S±0.2×177.6W±0.2, h612km±24km, n20, σ0s.59/20, mb4.3/7, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.40	49	P	P	16 32 45.5	+0.4
	3.7nm,0.3s,baz=298,slow=20,SNR=6.0						
AFI	Afiamalu	7.40	49	eP	P	16 32 44.6	-0.5
URZ	Urewera	19.91	192	P	P	16 34 42.4	-0.6
	0.7nm,0.3s,baz=338,slow=5.4,SNR=8.2						
CNB	Canberra Magne	33.52	234	eP	P	16 36 42.2	+0.6
CTA	Charters Tower	34.10	262	eP	P	16 36 46.7	0.0
	2.8nm,0.3s,mb4.4						
CTA	Charters Tower	34.10	262	P	P	16 36 46.9	+0.2
	4.4nm,0.4s,mb4.4,baz=98,slow=12,SNR=11						
CTAO	Charters Tower	34.10	262	eP	P	16 36 46.8	+0.1
	6.6nm,0.7s,mb4.4						
PMG	Port Moresby	35.41	280	eP	P	16 36 58.2	+0.5
TOO	Toolangi	37.23	232	eP	P	16 37 13.4	+1.2
STKA	Stephens Creek	38.90	242	eP	P	16 37 26.5	+0.7
	2.1nm,0.3s,mb4.2						
STKA	Stephens Creek	38.90	242	P	P	16 37 26.5	+0.7
	2.8nm,0.3s,mb4.3,baz=74,slow=6.0,SNR=20						
WB2	Warramunga Arr	45.25	260	eP	P	16 38 15.0	-0.6
WRA	Warramunga Arr	45.26	260	P	P	16 38 15.1	-0.6
	4.0nm,0.3s,mb4.4,baz=97,slow=6.8,SNR=330						
ASAR	Alice Springs	45.32	255	P	P	16 38 15.9	-0.1
	7.7nm,0.7s,mb4.3,baz=87,slow=8.3,SNR=237						
ASAR				PcP	PcP	16 39 42.6	+0.2
	0.7nm,0.5s,baz=101,slow=4.0,SNR=5.4						
KAKA	Kakadu	48.37	270	⇑iP	P	16 38 38.6	-0.4
	4.1nm,0.3s,mb4.4						
KAKA	Kakadu	48.37	270	eP	P	16 38 38.5	-0.6
FORT	Forrest	50.35	245	eP	P	16 38 52.4	-0.9
	12nm,0.9s,mb4.3						
FITZ	Fitzroy Crossi	53.67	261	eP	P	16 39 17.1	-0.1
	1.7nm,0.3s,mb3.9						
FITZ	Fitzroy Crossi	53.67	261	P	P	16 39 17.2	0.0
	1.0nm,0.3s,mb3.6,baz=133,slow=6.2,SNR=15						
NVAR	Mina Array Bea	79.53	43	P	P	16 41 55.9	+0.3
	0.4nm,0.7s,baz=234,slow=6.1,SNR=3.7						

BJI 02 16:33:44.4, 11.72S×166.75E, h35km, mB5.0, mb4.7, Ms4.9, Msz4.6
IDC 02 16:33:45.6±0.5, 11.30S×165.88E, h0km, mb4.5/20, mb1 4.6/20, mb1mx4.6/21, mbtmp4.5/20, MS4.3/11, Ms1 4.3/11, ms1mx3.9/32, Error ellipse: s-maj=18.5km s-min=14.1km az=121.0
ISCJB 02 16:33:46.4±2.4, 11.36S±0.07×165.85E±0.06, h15km±15km, mb4.7/39, MS4.4/21, Error ellipse: s-maj=11.7km s-min=8.7km az=158.4
GCMT 02 16:33:50.9±0.4, 11.32S×165.58E, h27km±1km, MW5.1/48, Moment Tensor Solution. s32,c40; s48,c63; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.83±.24; Mθθ-0.03±.23; Mφφ-3.81±.20; Mrθ0.77±.40; Mθφ2.47±.15; Mφr-1.72±.30; Best double couple: M0 4.81400×10^16 NP1:φs332.00000°, δ34.00000°, λ88.00000°. NP2: φs155.00000°, δ57.00000°, λ92.00000°. Principal axes: T 4.2150, Plg78.0000°, Azm70.0000°; N 1.1920, Plg1.0000°, Azm334.0000°; P -5.4130, Plg12.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 02 16:33:50.9±0.2, 11.31S×165.83E, h35km, mb4.7/15 Error ellipse: s-maj=8.0km s-min=5.1km az=143.0
DJA 02 16:33:57, 11.65S×166.10E, h77km, mb5.0/14
ISC 02 16:33:50.3±2.5, 11.36S±0.07×165.87E±0.06, h30km±17km, h35km±.6km:pP-P, n115, σ0s.97/75, mb4.7/39, MS4.4/21, 6C-2D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.13	288	ePn	Pn	16 35 18.1	-0.8
	435nm,1.0s						
HNR				eSn	Sn	16 36 22.5	-5.5
PMG	Port Moresby	18.50	274	P	Pn	16 38 03.7	-0.9
CTA	Charters Tower	20.76	243	⇓iP	P	16 38 29.2	+0.3
	32nm,1.0s						
CTA	Charters Tower	20.76	243	P	P	16 38 29.4	+0.6
	36nm,0.9s,baz=69,slow=12,SNR=17						
CTA				LR	LR	16 45 33.0	
	comp=Z,1μm,18.2s,MS4.3,baz=74,slow=34						
CTAO	Charters Tower	20.76	243	eP	P	16 38 29.3	+0.5
	69nm,1.1s						
AFI	Afiamalu	21.96	99	LR	LR	16 45 33.0	
	comp=Z,979nm,19.3s,MS4.2,baz=28,slow=32						
COEN	Coen	22.29	261	eP	P	16 38 45.5	+0.2
	20nm,1.1s,mb4.5						
ARMA	Armidale	23.11	213	eP	P	16 38 54.2	+0.3
URZ	Urewera	28.61	161	P	P	16 39 45.0	+1.0
	4.3nm,0.5s,mb4.5,baz=94,slow=21,SNR=5.8						
STKA	Stephens Creek	30.29	224	eP	P	16 39 59.3	+0.3
	5.0nm,0.7s,mb4.3						
STKA	Stephens Creek	30.29	224	P	P	16 39 59.4	+0.4
	6.1nm,0.8s,mb4.4,baz=32,slow=9.8,SNR=9.9						
STKA				LR	LR	16 51 16.2	
	comp=Z,742nm,20.9s,MS4.3,baz=26,slow=35						
WB2	Warramunga Arr	31.48	250	eP	P	16 40 08.3	-1.3
WRA	Warramunga Arr	31.49	250	P	P	16 40 08.5	-1.2
	11nm,0.8s,mb4.7,baz=81,slow=9.2,SNR=52						
WRA				LR	LR	16 51 19.3	
	comp=Z,448nm,19.7s,MS4.1,baz=85,slow=33						
GUMO	Guam	32.38	319	LR	LR	16 52 46.5	
	comp=Z,292nm,18.8s,MS4.0,baz=298,slow=35						
RPZ	Rata Peaks	32.55	173	P	P	16 40 19.7	+1.0
	13nm,0.7s,mb5.0,baz=342,slow=3.2,SNR=4.6						
ASAR	Alice Springs	32.76	244	P	P	16 40 19.1	-1.7
	2.3nm,0.7s,mb4.2,baz=72,slow=9.3,SNR=14						
ASAR				ScP	ScP	16 46 51.3	+3.3
	1.9nm,1.1s,baz=67,slow=3.1,SNR=4.9						
RAR	Rarotonga	34.34	111	LR	LR	16 51 44.7	
	comp=Z,519nm,18.5s,MS4.3,baz=274,slow=31						
FITZ	Fitzroy Crossi	39.41	255	eP	P	16 41 17.0	-0.8
	15nm,0.8s,mb4.8						
FITZ	Fitzroy Crossi	39.41	255	P	P	16 41 16.8	-1.0
	8.3nm,0.8s,mb4.5,baz=85,slow=8.2,SNR=18						
PPT	Papeete	43.51	104	eS	S	16 48 24.3	+5.6
	247nm,25.2s						
PPT				eLQ		16 52 14.7	
	658nm,30.8s						
PPT				eLR	LR	16 54 17.6	
	460nm,22.0s,baz=277						
PPT	Papeete	43.51	104	LR	LR	16 58 01.6	
	comp=Z,550nm,18.2s,MS4.5,baz=82,slow=34						
DAV	Davao City (W)	44.07	293	LR	LR	16 58 15.6	
	comp=Z,133nm,18.8s,MS3.9,baz=217,slow=33						
MBWA	Marble Bar	45.21	251	eP	P	16 42 05.0	0.0
NWAO	Narrogin (SRO)	49.38	236	LR	LR	17 03 39.7	
	comp=Z,1μm,18.4s,MS5.0,baz=146,slow=36						
JOW	Kunigami	52.67	317	P	P	16 43 02.8	+0.7
	7.8nm,0.8s,mb4.7,baz=131,slow=5.2,SNR=5.5						
MJAR	Matsushiro Arr	54.30	333	P	P	16 43 13.1	-0.9
	2.5nm,1.0s,mb4.1,baz=158,slow=4.7,SNR=5.1						
MAT	Matsushiro	54.31	333	P	P	16 43 14.0	+0.1
MAT				eS	S	16 50 55.0	+5.1
RKT	Rikitea	57.37	110	eLR	LR	17 00 25.9	
	689nm,24.5s,baz=279						
QZH	Quanzhou	58.54	309	i P	P	16 43 48.5	+4.2
QZH				S	S	16 51 45.0	-1.4
QZH				AMB	AMB		
	comp=Z,460nm,6.4s						
ASAJ	Asahikawa	59.13	341	LR	LR	17 07 08.2	
	comp=Z,182nm,18.7s,MS4.2,baz=174,slow=34						
NJ2	Nanjing	62.33	315	eP	P	16 44 15.8	+5.7
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.4						
QIZ	Qiongzhong	62.93	298	P	P	16 44 14.8	+0.4
QIZ				S	S	16 52 42.7	-0.1
QIZ				LR	LR		
	comp=E,146nm,16.3s						
QIZ				LR	LR		
	comp=Z,230nm,20.4s,MS4.3						
PETK	Petropavlovsk-	64.59	355	P	P	16 44 24.5	-0.1
	comp=Z,4.4nm,0.9s,mb4.5,baz=142,slow=7.3,SNR=9.0						
PETK				LR	LR	17 07 02.3	
	comp=Z,117nm,20.3s,MS4.1,baz=164,slow=31						
CN2	Changchun	66.07	329	eP	P	16 44 37.6	+3.2
CN2				eAP	pP	16 44 47.9	+4.2
CN2				eS	S	16 53 22.7	+2.0
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CASY	Casey	66.13	201	eP	P	16 44 33.2	-1.3
GYA	Guiyang	68.69	304	P	P	16 44 53.8	+2.4
GYA				AP	pP	16 45 04.2	+3.4
GYA				PCP	PcP	16 45 18.4	+2.3
GYA				PP	PP	16 47 27.6	+4.1
GYA				S	S	16 53 52.0	-0.9
GYA				XS	sS	16 54 11.7	+3.4
GYA				SKS		16 54 45.8	
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,530nm,20.2s,MS4.9						
GYA				LR	LR		
	comp=E,480nm,19.9s,MS4.9						
GYA				LR	LR		
	comp=Z,490nm,19.0s,MS4.8						
BJI	Beijing	68.80	321	P	P	16 44 52.6	+0.8
BJI				S	S	16 53 55.6	+2.0
BJI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
BJI				LR	LR		
	comp=N,147nm,16.7s,MS4.4						
BJI				LR	LR		
	comp=E,134nm,18.4s,MS4.4						
BJI				LR	LR		
	comp=Z,215nm,30.9s						
XAN	Xi'an	70.42	312	P	P	16 45 01.8	-0.1
XAN				AP	pP	16 45 12.2	+0.9
XAN				XP	sP	16 45 16.1	+1.3
XAN				PCP	PcP	16 45 23.5	+0.3
XAN				PP	PP	16 47 39.7	+1.4
XAN				S	S	16 54 10.6	-2.3
XAN				SKS		16 54 56.4	
XAN				SCS	ScS	16 54 58.4	-4.6
XAN				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.7						
XAN				AMB	AMB		
	comp=Z,99nm,10.3s						
XAN				LR	LR		
	comp=N,73nm,17.9s,MS4.2						
XAN				LR	LR		
	comp=E,99nm,16.1s,MS4.2						
XAN				LR	LR		
	comp=Z,341nm,20.6s,MS4.6						
KMI	Kunming	71.39	301	P	P	16 45 09.5	+1.5
KMI				AP	pP	16 45 20.3	+2.9
KMI				XP	sP	16 45 24.4	+3.5
KMI				PP	PP	16 47 48.9	+2.2
KMI				S	S	16 54 23.8	-0.7
KMI				SCS	ScS	16 55 09.2	-1.9
KMI				AMB	AMB		
	comp=Z,8.0nm,1.8s,mb4.3						
KMI				AMB	AMB		
	comp=Z,111nm,5.4s						
KMI				LR	LR		
	comp=N,121nm,20.0s,MS4.3						
KMI				LR	LR		
	comp=E,137nm,18.8s,MS4.3						
KMI				LR	LR		
	comp=Z,154nm,17.0s,MS4.3						
HHC	Hu-ho-hao-te	72.15	320	eP	P	16 45 14.8	+2.6
HHC				AP	pP	16 45 26.1	+4.5
HHC				XP	sP	16 45 29.8	+4.7
HHC				PCP	PcP	16 45 32.9	+2.5
HHC				PP	PP	16 47 57.7	+4.8
HHC				S	S	16 54 34.9	+2.2
HHC				XS	sS	16 54 51.9	+3.7
HHC				SCS	ScS	16 55 12.0	-4.4
HHC				SS	SS	16 59 14.6	+3.8
HHC				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.6						
HHC				AMB	AMB		
	comp=Z,90nm,5.9s						
HHC				LR	LR		
	comp=N,199nm,17.0s,MS4.6						
HHC				LR	LR		
	comp=E,219nm,17.6s,MS4.6						
HHC				LR	LR		
	comp=Z,140nm,17.1s,MS4.3						
CMAR	Chiang Mai Arr	72.35	294	P	P	16 45 14.8	+1.0
	comp=Z,4.6nm,1.0s,mb4.4,baz=109,slow=4.0,SNR=18						
CD2	Chengdu	72.89	307	⇓iP	P	16 45 17.4	+0.6
CD2				AP	pP	16 45 27.7	+1.4
CD2				XP	sP	16 45 31.8	+2.0
CD2				PP	PP	16 48 02.2	+2.7
CD2				S	S	16 54 40.5	-1.0
CD2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
CD2				AMB	AMB		
	comp=Z,40nm,6.8s						
CD2				LR	LR		
	comp=N,260nm,13.2s,MS4.8						
CD2				LR	LR		
	comp=E,260nm,14.4s,MS4.8						
CD2				LR	LR		
	comp=Z,150nm,14.4s,MS4.4						
LZH	Lanzhou	75.06	312	eP	P	16 45 30.8	+1.4
LZH				AP	pP	16 45 41.1	+2.2
LZH				XP	sP	16 45 45.0	+2.6
LZH				PP	PP	16 48 24.0	+6.2
LZH				eS	S	16 55 04.0	-1.7
LZH				AMB	AMB		
	comp=Z,19nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,107nm,6.5s						
LZH				LR	LR		
	comp=N,130nm,16.8s						
LZH				LR	LR		
	comp=Z,248nm,17.4s,MS4.6						
KDAK	Kodiak Island	76.83	21	P	P	16 45 38.2	-0.8
	comp=Z,7.0nm,0.8s,mb4.6,baz=115,slow=2.8,SNR=6.8						
KDAK	Kodiak Island	76.83	21	eP	P	16 45 38.4	-0.6
SVW2	Sparrevohn	78.38	18	eP	P	16 45 47.2	-0.4
YAK	Yakutsk	78.43	343	eP	P	16 45 47.1	-0.7
	comp=Z,16nm,0.9s,mb5.0						
ULN	Ulaanbaatar	78.62	324	eP	P	16 45 49.5	+0.2
	comp=Z,6.4nm,0.9s,mb4.5						
SONM	Songino Array	78.99	324	P	P	16 45 51.8	+0.6
	comp=Z,2.9nm,1.0s,mb4.2,baz=130,slow=5.8,SNR=15						
GTA	Gaotai	79.36	314	P	P	16 45 54.6	+1.1
GTA				AP	pP	16 46 05.0	+2.0
GTA				XP	sP	16 46 09.1	+2.6
GTA				S	S	16 55 55.2	+2.8
GTA				XS	sS	16 56 11.9	+3.8
GTA				SS	SS	17 01 08.5	+8.2
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
GTA				AMB	AMB		
	comp=Z,55nm,6.3s						
GTA				LR	LR		
	comp=N,226nm,17.4s,MS4.6						
GTA				LR	LR		
	comp=E,146nm,17.7s,MS4.6						
GTA				LR	LR		
	comp=Z,174nm,17.4s,MS4.5						
TTA	Tatalina	79.69	17	eP	P	16 45 55.0	+0.3
SHL	Shillong	80.77	298	eP	P	16 46 03.5	+2.1
PMR	Palmer	80.81	20	eP	P	16 46 00.3	-0.5
IMA2	Indian Mountai	82.78	15	eP	P	16 46 10.8	-0.3
COLA	College	83.55	18	eP	P	16 46 13.3	-1.8
	comp=Z,14nm,0.9s,mb5.1						
YBH	Yreka Blue Hor	84.03	46	P	P	16 46 18.3	+0.2
	comp=Z,4.5nm,1.0s,mb4.6,baz=191,slow=1.4,SNR=11						
YBH	Yreka Blue Hor	84.03	46	eP	P	16 46 17.9	-0.2
	comp=Z,3.6nm,0.9s,mb4.5						
OHCM	Honcut	84.08	48	eP	P	16 46 17.5	-0.9
HUMO	Hull Mountain	84.17	45	eP	P	16 46 18.5	-0.3
	comp=Z,5.2nm,1.0s,mb4.6						
MAW	Mawson	84.47	202	eP	P	16 46 20.6	+0.7
	comp=Z,4.9nm,1.3s,mb4.5						
MAW	Mawson	84.47	202	P	P	16 46 19.4	-0.5
	comp=Z,6.1nm,1.1s,mb4.6,baz=94,slow=6.3,SNR=9.9						
HYT	Haines Junctio	84.63	24	eP	P	16 46 22.3	+1.7
WAKR	Walker	85.31	49	eP	P	16 46 25.2	+0.5
EGAK	Eagle	85.63	20	eP	P	16 46 25.0	-0.6
	comp=Z,20nm,1.1s,mb5.2						
PAHR	Pah Rah Range	85.73	48	eP	P	16 46 27.6	+0.9
DAWY	Dawson	85.81	21	eP	P	16 46 25.5	-1.0
NVAR	Mina Array Bea	86.14	50	P	P	16 46 28.9	+0.2
	comp=Z,5.7nm,1.2s,mb4.7,baz=233,slow=7.8,SNR=14						
WVOR	Wild Horse Val	87.12	46	eP	P	16 46 33.8	+0.3
	comp=Z,5.9nm,1.2s,mb4.7						
LDFC	Landfair	87.64	54	eP	P	16 46 35.9	-0.3
HAWA	Hanford	87.77	42	eP	P	16 46 35.9	-0.6
	comp=Z,5.4nm,1.2s,mb4.7						
WMQ	Urumqi	89.40	315	eP	P	16 46 44.0	-0.2
WMQ				AP	pP	16 46 53.5	-0.4
WMQ				XP	sP	16 46 57.5	+0.2
WMQ				SKS		16 57 09.5	
WMQ				S	S	16 57 29.0	-3.5
WMQ				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,112nm,4.2s						
WMQ				LR	LR		
	comp=N,185nm,25.8s,MS4.5						
WMQ				LR	LR		
	comp=E,136nm,22.5s,MS4.5						
WMQ				LR	LR		
	comp=Z,122nm,20.9s,MS4.3						
MSU	Marysvale	90.79	51	eP	P	16 46 51.5	+0.6
MCMT	McKenzie Canyo	91.82	45	eP	P	16 46 55.3	-0.2
DLMT	Dillon	92.13	44	eP	P	16 46 56.3	-0.6
	comp=Z,5.5nm,1.0s,mb4.8						
PDAR	Pinedale Array	93.68	47	P	P	16 47 03.7	-0.4
	comp=Z,0.3nm,0.3s,mb4.2,baz=289,slow=4.5,SNR=4.8						
MKAR	Makanchi Array	93.83	317	P	P	16 47 04.3	-0.4
	comp=Z,4.5nm,0.9s,mb4.9,baz=99,slow=6.3,SNR=31						
MKAR				PKKPbc	PKKPbc	17 04 07.5	-2.7
	comp=Z,0.9nm,0.9s,baz=270,slow=2.9,SNR=6.1						
ZALV	Zalesovo Beam	93.88	324	P	P	16 47 03.7	-1.1
	comp=Z,1.1nm,0.5s,mb4.6,baz=107,slow=5.0,SNR=10						
ZALV	Zalesovo Beam	93.88	324	P	P	16 47 03.7	-1.1
YKA	Yellowknife Ar	95.20	27	P	P	16 47 08.3	-2.3
	comp=Z,1.1nm,0.8s,mb4.3,baz=259,slow=5.0,SNR=6.2						
ARCES	ARCESS Array B	116.67	345	PKP	PKPdf	16 52 30.5	-0.5
	comp=Z,1.9nm,0.8s,baz=45,slow=2.2,SNR=6.9						
CPUP	Villa Florida	123.73	132	PKP	PKPdf	16 52 45.6	-0.3
	comp=Z,2.4nm,0.8s,baz=313,slow=1.1,SNR=8.1						
BOSA	Boshof	124.97	223	PKP	PKPdf	16 52 50.1	+1.9
	comp=Z,2.3nm,0.7s,baz=71,slow=8.9,SNR=5.6						
NOA	NORSAR Array B	127.04	345	PKP	PKPdf	16 52 50.4	-0.8
	comp=Z,2.1nm,0.8s,baz=37,slow=1.9,SNR=4.6						
AKASG	Malin Array Be	127.19	327	PKP	PKPdf	16 52 50.9	-0.8
	comp=Z,0.3nm,0.2s,baz=48,slow=1.5,SNR=5.8						
AKASG	Malin Array Be	127.19	327	PKP	PKPdf	16 52 50.9	-0.8

GERES	GERESS Array B	136.04	334	PKP	PKPdf	16 53 08.8	+0.3
	comp=Z,1.8nm,1.0s,baz=20,slow=1.6,SNR=10						
BDFB	Brasilia	137.05	128	PKP	PKPdf	16 53 11.9	+0.5
	comp=Z,3.9nm,0.9s,baz=90,slow=5.1,SNR=4.7						
ORIF	Oris-en-Rattie	142.41	337⇑	*i*PKP1	PKPdf	16 53 15.6	-4.7
	comp=Z,12nm,1.0s						
VIVF	Saint-Julien-l	142.93	338⇑	*i*PKP1	PKPdf	16 53 18.4	-2.8
	comp=Z,12nm,1.1s						
MFF	Saint Martin d	142.93	344	*e*PKP1	PKPdf	16 53 17.0	-4.1
	comp=Z,36nm,1.5s						
RJF	Les Rejaudoux	143.62	341⇑	*i*PKP1	PKPdf	16 53 19.5	-2.9
CAF	Calviac	143.78	340	*e*PKP1	PKPdf	16 53 20.4	-2.3
	comp=Z,11nm,1.0s						
LASF	Ste Croix	143.90	338⇑	*i*PKP1	PKPdf	16 53 20.7	-2.2
	comp=Z,42nm,1.2s						
LFF	La Frestale	144.19	342	*e*PKP1	PKPdf	16 53 21.4	-2.0
MTLF	Montolieu	145.13	339⇑	*i*PKP1	PKPbc	16 53 24.9	+0.3
	comp=Z,74nm,1.2s						
MLS	Moulis	145.85	340	PKP	PKPdf	16 53 27.5	+1.2
MLS	Moulis	145.85	340	PKP	PKPdf	16 53 26.8	+0.5
VALF	Valcebollere	146.02	338	PKP	PKPdf	16 53 28.3	+1.6
VALF	Valcebollere	146.02	338	PKP	PKPdf	16 53 27.8	+1.1
EPF	Esparros	146.03	341⇑	*i*PKP1	PKPbc	16 53 27.2	-0.3
	comp=Z,9.6nm,1.0s						
ETSF	Etsaut	146.44	342	*e*PKP1	PKPbc	16 53 27.8	-0.9
	comp=Z,34nm,1.0s						
KEST	Kesra	147.74	323	PKPbc	PKPbc	16 53 33.1	+0.5
	comp=Z,6.9nm,0.9s,baz=315,slow=2.3,SNR=18						
CMAH	Djebel Manchou	148.21	326	P	PKPbc	16 53 34.2	+0.4
DFRA	Djebel Bou Aff	149.10	328	P	PKPbc	16 53 36.5	+0.4
SET	Setif	149.62	328	P	PKPbc	16 53 39.0	+1.6
MVO	Moncorvo	149.66	349	*e*PKPbc	PKPbc	16 53 38.0	+0.7
ESDC	Sonseca Array	150.39	344	PKPbc	PKPbc	16 53 38.5	-0.6
	comp=Z,3.6nm,0.9s,baz=13,slow=2.8,SNR=16						
MTE	Manteigas	150.50	350	*e*PKPbc	PKPbc	16 53 39.8	+0.4
ADJB	Djebel Djouab	150.64	330	P	PKPbc	16 53 41.3	+1.4
PCBR	Castelo Branco	151.03	349	*e*PKPbc	PKPbc	16 53 41.0	+0.3
PTOM	Tomar	151.41	351	*e*PKPbc	PKPbc	16 53 41.9	+0.4
PMRV	Marv??o	151.41	349	*e*PKPbc	PKPbc	16 53 41.8	+0.2
EVO	Evora	152.40	350	*e*PKIKP	PKPdf	16 53 38.0	+1.0
	comp=Z,36nm,1.4s						
PBEJ	Beja	152.86	349	*e*PKPbc	PKPbc	16 53 45.6	+0.7
TORD	Torodi Ar. Bea	164.43	278	PKP	PKPdf	16 53 52.4	+0.3
	comp=Z,2.0nm,1.0s,baz=337,slow=1.6,SNR=8.1						
TORD				PKPab	PKPab	16 54 48.5	+1.7
	comp=Z,0.8nm,1.0s,baz=45,slow=4.3,SNR=2.4						

IDC 02 16:36:25.1±2.0**, 1131S×16572E, h0km, mb4.1**/5**, mb1 4.4**/5**, mb1mx3.9**/14**, mbtmp4.1**/5**, MS4.5**/1**, Ms1 4.5**/1**, ms1mx3.2**/32**, Error ellipse: s-maj=78.5km s-min=32.1km az=146.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.37	250	P	P	16 42 47.8	0.0
	0.8nm,0.5s,baz=79,slow=9.0,SNR=5.5						
ASAR	Alice Springs	32.65	244	P	P	16 42 58.4	-0.7
	3.7nm,0.8s,baz=68,slow=9.7,SNR=9.7						
FITZ	Fitzroy Crossi	39.29	255	LR	LR	16 58 45.8	
	comp=Z,643nm,19.5s,baz=282,slow=34						
CMAR	Chiang Mai Arr	72.20	294	P	P	16 47 54.0	+1.6
	0.8nm,0.5s,baz=114,slow=4.6,SNR=4.5						
NVAR	Mina Array Bea	86.21	50	P	P	16 49 08.8	+0.1
	0.5nm,0.7s,baz=226,slow=8.7,SNR=4.0						
MKAR	Makanchi Array	93.70	317	P	P	16 49 42.9	-0.8
	0.8nm,0.7s,baz=81,slow=6.2,SNR=4.2						

*IDC **02** 16:54:42.9±0.5, 1189S×16579E, h0km, mb4.6/24, mb1 4.7/24, mb1mx4.7/25, mbtmp4.6/24, MS4.6/17, Ms1 4.6/17, ms1mx4.2/34, Error ellipse: s-maj=17.3km s-min=13.9km az=118.0*

*BJI **02** 16:54:46.3, 1163S×16604E, h33km, mB5.1, mb4.8, Ms4.9, Msz4.6*

*ISCJB **02** 16:54:47.4±1.9, 1197S±006×16578E±007, h42km±16km, mb4.7/46, MS4.6/27, Error ellipse: s-maj=11.4km s-min=9.0km az=164.1*

*NEIC **02** 16:54:48.2±0.3, 1192S×16584E, h35km, mb4.8/15, Error ellipse: s-maj=10.3km s-min=7.6km az=139.0*

*DJA **02** 16:54:50, 12.14S×166.15E, h61km, mb5.3/19*

ISC 02 16:54:46.0±2.4**, 1197S**±006×**16588E**±005**, h20**km±14km**, h35**km±2.0km**:pP-P, n87,** $\sigma 1^{s}10$/70**, mb4.8**/46**, MS4.6**/27**, 3C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.35	293	*e*Pn	Pn	16 56 19.6	+1.0
	486nm,0.8s						
HNR				Sn	Sn	16 57 31.1	+0.4
PMG	Port Moresby	18.57	276	*e*P	Pn	16 59 04.1	+1.9
	92nm,1.3s						
CTA	Charters Tower	20.50	244	*e*P	P	16 59 24.8	+1.7
	30nm,0.9s						
CTA	Charters Tower	20.50	244	P	P	16 59 23.4	+0.4
	32nm,0.9s,baz=75,slow=9.8,SNR=19						
CTA				LR	LR	17 06 19.1	
	comp=Z,2µm,19.6s,MS4.5,baz=65,slow=34						
CTAO	Charters Tower	20.50	244	*e*P	P	16 59 25.1	+2.0
	55nm,1.0s						
AFI	Afiamalu	21.86	98	LR	LR	17 06 14.4	
	comp=Z,1µm,21.1s,MS4.4,baz=286,slow=32						
COEN	Coen	22.21	262	P	P	16 59 41.5	0.0
	30nm,1.1s,mb4.6						
ARMA	Armidale	22.62	214⇑	*i*P	P	16 59 47.5	+1.8
URZ	Urewera	28.04	161	P	P	17 00 35.4	-0.6
	13nm,1.1s,mb4.5,baz=297,slow=3.2,SNR=3.3						
URZ				LR	LR	17 10 10.3	
	comp=Z,960nm,18.1s,MS4.4,baz=12,slow=33						
STKA	Stephens Creek	29.87	225	*e*P	P	17 00 53.1	+0.7
	3.0nm,0.6s,mb4.2						
STKA	Stephens Creek	29.87	225	P	P	17 00 53.0	+0.6
	6.6nm,0.8s,mb4.4,baz=42,slow=11,SNR=5.3						
STKA				LR	LR	17 12 17.7	
	comp=Z,1µm,18.6s,MS4.6,baz=29,slow=35						
WB2	Warramunga Arr	31.29	251	*e*P	P	17 01 04.7	-0.4
WRA	Warramunga Arr	31.30	251	P	P	17 01 04.6	-0.6
	11nm,0.9s,mb4.7,baz=82,slow=9.0,SNR=65						
WRA				PcP	PcP	17 03 59.6	+0.3
	1.4nm,0.7s,baz=85,slow=3.0,SNR=4.9						
WRA				ScP	ScP	17 07 42.7	+1.2
	3.6nm,1.3s,baz=78,slow=5.2,SNR=6.1						
RPZ	Rata Peaks	31.95	173	P	P	17 01 11.2	+0.7
	18nm,0.6s,mb5.1,baz=325,slow=2.7,SNR=18						
ASAR	Alice Springs	32.51	245	P	P	17 01 14.8	-0.9
	8.4nm,0.7s,mb4.8,baz=70,slow=9.4,SNR=98						
ASAR				PcP	PcP	17 04 01.9	-0.5
	1.9nm,0.7s,baz=68,slow=2.6,SNR=9.7						
ASAR				ScP	ScP	17 07 46.8	+1.3
	3.1nm,1.2s,baz=92,slow=3.3,SNR=8.2						
RAR	Rarotonga	34.11	110	LR	LR	17 12 12.2	
	comp=Z,1µm,19.4s,MS4.6,baz=276,slow=31						
FITZ	Fitzroy Crossi	39.28	256	*e*P	P	17 02 13.5	-0.3
	14nm,0.9s,mb4.7						
FITZ	Fitzroy Crossi	39.28	256	P	P	17 02 13.3	-0.5
	6.7nm,0.8s,mb4.4,baz=97,slow=8.6,SNR=14						
FITZ				LR	LR	17 17 54.6	
	comp=Z,1µm,21.2s,MS4.6,baz=62,slow=36						
FORT	Forrest	39.63	236	*e*P	P	17 02 16.6	0.0
	16nm,0.7s,mb4.9						
BATI	Baumata	41.44	268	P	P	17 02 31.4	-0.4
	38nm,0.8s,mb5.1,baz=290,slow=8.0,SNR=6.8						
BATI				LR	LR	17 19 54.3	
	comp=Z,1µm,18.9s,MS4.7,baz=78,slow=37						
PPT	Papeete	43.35	103	*e*S	S	17 09 14.2	-0.2
	222nm,26.8s						
PPT				*e*LQ		17 13 06.5	
	606nm,25.8s						
PPT				*e*LR	LR	17 15 09.4	
	1µm,25.2s,baz=279						
PPT	Papeete	43.35	103	LR	LR	17 17 58.6	
	comp=Z,698nm,18.1s,MS4.6,baz=276,slow=32						
MBWA	Marble Bar	45.03	252	*e*P	P	17 03 01.1	+0.3
	27nm,1.0s,mb5.0						
KAPI	Kappang	46.09	275	P	P	17 03 07.9	-1.4
	40nm,1.1s,mb5.3,baz=138,slow=4.8,SNR=7.8						
KAPI				LR	LR	17 19 57.3	
	comp=Z,273nm,20.6s,MS4.2,baz=46,slow=33						
KLBR	Kellerberrin	48.33	238	*e*P	P	17 03 25.9	-0.6
	25nm,1.0s,mb5.2						
NWAO	Narrogin (SRO)	49.06	237	P	P	17 03 31.8	-0.3
	17nm,1.0s,mb5.0,baz=61,slow=8.3,SNR=4.7						
NWAO				LR	LR	17 24 33.3	
	comp=Z,1µm,19.0s,MS5.0,baz=248,slow=36						
NWAO	Narrogin (SRO)	49.06	237	P	P	17 03 31.8	-0.3
NWAO				LR	LR	17 24 33.2	
JOW	Kunigami	53.12	317	P	P	17 04 01.6	-0.9
	11nm,0.9s,mb4.8,baz=148,slow=8.2,SNR=8.3						
MJAR	Matsushiro Arr	54.84	333	P	P	17 04 13.1	-1.9
	2.8nm,0.7s,mb4.4,baz=168,slow=7.8,SNR=12						
MAT	Matsushiro	54.85	333	P	P	17 04 14.1	-0.9
MAT				*e*S	S	17 11 57.6	+2.4
RKT	Rikitea	57.15	110	*e*LR	LR	17 21 18.8	
	1µm,25.0s,baz=284						
KSRS	Korea Array	60.71	326	P	P	17 04 55.9	-0.4
	2.2nm,0.7s,mb4.4,baz=134,slow=6.8,SNR=8.8						
NJ2	Nanjing	62.77	316	*e*P	P	17 05 12.1	+1.9
NJ2				AP	pP	17 05 25.1	+8.5
NJ2				PP	PP	17 07 32.1	+3.5
NJ2				S	S	17 13 35.0	-3.4
NJ2				XS	sS	17 13 55.5	+6.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,110nm,8.9s						
NJ2				LR	LR		
	comp=N,960nm,23.6s,MS5.0						
NJ2				LR	LR		
	comp=E,950nm,25.3s,MS5.0						
NJ2				LR	LR		
	comp=Z,950nm,25.3s,MS4.9						
QIZ	Qiongzhong	63.23	298	P	P	17 05 14.9	+1.4
QIZ				S	S	17 13 45.8	+1.2
QIZ				LR	LR		
	comp=E,214nm,17.6s						
QIZ				LR	LR		
	comp=Z,298nm,21.4s,MS4.4						
PETK	Petropavlovsk-	65.19	355	P	P	17 05 23.9	-1.8
	comp=Z,1.4nm,0.9s,mb4.0,baz=134,slow=4.2,SNR=3.5						
CASY	Casey	65.57	201	*e*P	P	17 05 27.4	-0.7
	comp=Z,13nm,1.1s,mb4.9						
SBA	Scott Base	65.88	180	*e*P	P	17 05 30.6	+0.7
CN2	Changchun	66.60	329	*e*P	P	17 05 34.0	-0.9
CN2				*e*XP	sP	17 05 48.2	+4.4
CN2				*e*S	S	17 14 22.5	-2.6
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
GYA	Guiyang	69.04	304	P	P	17 05 54.2	+3.4
GYA				AP	pP	17 06 04.6	+7.4
GYA				XP	sP	17 06 09.2	+10
GYA				PCP	PcP	17 06 18.6	+3.8
GYA				PP	PP	17 08 28.4	+4.8
GYA				SCP		17 10 17.0	
GYA				S	S	17 14 55.9	+0.7
GYA				XS	sS	17 15 14.2	+8.4
GYA				SKS		17 15 46.3	
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,510nm,20.0s,MS4.9						
GYA				LR	LR		
	comp=E,490nm,19.7s,MS4.9						
GYA				LR	LR		
	comp=Z,470nm,19.2s,MS4.7						
BJI	Beijing	69.28	321	P	P	17 05 51.5	-0.4
BJI				AMB	AMB		
	comp=Z,14nm,0.9s,mb4.9						
BJI				LR	LR		
	comp=N,262nm,23.2s,MS4.5						
BJI				LR	LR		
	comp=E,123nm,18.6s,MS4.5						
BJI				LR	LR		
	comp=Z,244nm,25.6s						
XAN	Xi'an	70.84	313	P	P	17 06 00.6	-1.0
XAN				AP	pP	17 06 10.9	+2.8
XAN				XP	sP	17 06 14.9	+4.4
XAN				PCP	PcP	17 06 21.4	-0.8
XAN				PP	PP	17 08 39.9	+1.0
XAN				S	S	17 15 12.0	-3.9
XAN				SKS		17 15 56.0	
XAN				SCS	ScS	17 15 58.2	-6.4
XAN				SS	SS	17 19 46.0	-2.9
XAN				AMB	AMB		
	comp=Z,13nm,1.8s,mb4.6						
XAN				AMB	AMB		
	comp=Z,96nm,8.6s						
XAN				LR	LR		
	comp=N,73nm,17.9s,MS4.3						
XAN				LR	LR		
	comp=E,134nm,20.0s,MS4.3						
XAN				LR	LR		
	comp=Z,341nm,20.6s,MS4.6						
KMI	Kunming	71.71	302	P	P	17 06 08.2	+1.1
KMI				AP	pP	17 06 20.3	+6.7
KMI				XP	sP	17 06 24.7	+8.7
KMI				PP	PP	17 08 49.8	+3.2
KMI				S	S	17 15 26.3	-0.1
KMI				XS	sS	17 15 45.4	+8.3
KMI				SCS	ScS	17 16 10.7	-1.2
KMI				SS	SS	17 20 04.6	+1.9
KMI				AMB	AMB		
	comp=Z,16nm,2.0s,mb4.6						
KMI				AMB	AMB		
	comp=Z,163nm,9.1s						
KMI				LR	LR		
	comp=N,142nm,7.8s						
KMI				LR	LR		
	comp=E,161nm,17.6s						
KMI				LR	LR		
	comp=Z,216nm,22.9s						
CMAR	Chiang Mai Arr	72.60	294	P	P	17 06 13.1	+0.5
	comp=Z,5.2nm,0.9s,mb4.5,baz=112,slow=4.3,SNR=24						
CMAR				LR	LR	17 37 06.5	
	comp=Z,120nm,20.0s,MS4.2,baz=300,slow=35						
HHC	Hu-ho-hao-te	72.62	320	*e*P	P	17 06 12.3	+0.1
HHC				AP	pP	17 06 23.6	+4.9
HHC				XP	sP	17 06 27.2	+6.2
HHC				PCP	PcP	17 06 29.8	+0.2
HHC				PP	PP	17 08 56.1	+2.1
HHC				S	S	17 15 34.0	-2.2
HHC				XS	sS	17 15 51.4	+4.6
HHC				SKS		17 16 10.3	
HHC				SCS	ScS	17 16 13.5	-4.9
HHC				SS	SS	17 20 15.5	-0.4
HHC				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,74nm,6.8s						
HHC				LR	LR		
	comp=N,266nm,18.7s,MS4.6						
HHC				LR	LR		
	comp=E,186nm,17.9s,MS4.6						
HHC				LR	LR		
	comp=Z,313nm,18.9s,MS4.6						
HIA	Hailar	73.23	330	*e*P	P	17 06 15.4	-0.2
	comp=Z,5.6nm,0.8s,mb4.5						
CD2	Chengdu	73.27	308⇑	*i*P	P	17 06 16.2	-0.1
CD2				AP	pP	17 06 26.5	+3.8
CD2				XP	sP	17 06 30.8	+5.7
CD2				PP	PP	17 09 01.9	+2.1
CD2				S	S	17 15 41.8	-2.2
CD2				XS	sS	17 15 58.9	+4.3
CD2				SS	SS	17 20 26.7	+0.5
CD2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
CD2				AMB	AMB		
	comp=Z,50nm,5.4s						
CD2				LR	LR		
	comp=N,270nm,15.6s						
CD2				LR	LR		
	comp=E,310nm,23.8s						
CD2				LR	LR		
	comp=Z,250nm,19.2s,MS4.5						
LZH	Lanzhou	75.47	312	*e*P	P	17 06 29.0	0.0
LZH				AP	pP	17 06 39.5	+4.0
LZH				XP	sP	17 06 43.4	+5.5
LZH				PP	PP	17 09 20.6	+2.2
LZH				S	S	17 16 07.1	-1.4
LZH				XS	sS	17 16 22.0	+2.8
LZH				*e*SS	SS	17 21 01.2	+1.5
LZH				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
LZH				AMB	AMB		
	comp=Z,134nm,4.5s						
LZH				LR	LR		
	comp=E,298nm,17.4s						
LZH				LR	LR		
	comp=Z,354nm,18.5s,MS4.7						
KDAK	Kodiak Island	77.38	21	LR	LR	17 35 24.0	
	comp=Z,312nm,19.1s,MS4.7,baz=216,slow=32						
ULN	Ulaanbaatar	79.12	324	*e*P	P	17 06 48.7	-0.5
	comp=Z,34nm,1.4s,mb5.1						
SONM	Songino Array	79.48	324	P	P	17 06 50.7	-0.5
	comp=Z,2.9nm,0.6s,mb4.4,baz=135,slow=5.6,SNR=32						
GTA	Gaotai	79.79	314	P	P	17 06 53.1	+0.1
GTA				AP	pP	17 07 03.5	+3.9
GTA				XP	sP	17 07 07.5	+5.6
GTA				S	S	17 16 53.6	-1.5
GTA				XS	sS	17 17 10.4	+4.5
GTA				SS	SS	17 22 06.3	+1.6
GTA				AMB	AMB		
	comp=Z,14nm,1.6s,mb4.6						
GTA				AMB	AMB		
	comp=Z,129nm,5.7s						
GTA				LR	LR		
	comp=N,178nm,18.6s,MS4.6						
GTA				LR	LR		
	comp=E,221nm,18.9s,MS4.6						
GTA				LR	LR		
	comp=Z,270nm,18.9s,MS4.6						
LSA	Lhasa	82.95	302	*e*P	P	17 07 10.9	+0.8
	comp=Z,9.4nm,1.4s,mb4.6						
MAW	Mawson	83.92	202	P	P	17 07 14.1	-0.2
	comp=Z,1.5nm,0.8s,mb4.2,baz=134,slow=10,SNR=3.6						
COLA	College	84.12	18	*e*P	P	17 07 15.8	+0.6
YBH	Yreka Blue Hor	84.44	45	P	P	17 07 18.7	+1.4
	comp=Z,2.3nm,0.7s,mb4.4,baz=99,slow=0.7,SNR=9.7						
HUMO	Hull Mountain	84.59	45	*e*P	P	17 07 19.7	+1.6
	comp=Z,44nm,2.6s,mb5.1						
CMB	Columbia Colle	84.83	50	*e*P	P	17 07 20.6	+1.1
	comp=Z,25nm,2.1s,mb5.0						
BBB	Bella Bella	85.26	34	LR	LR	17 44 25.2	
	comp=Z,486nm,18.1s,MS4.9,baz=44,slow=35						
MOD	Modoc	86.19	46	*e*P	P	17 07 26.9	+0.8
EGAK	Eagle	86.19	20	*e*P	P	17 07 23.8	-1.8
	comp=Z,5.8nm,0.6s,mb5.0						
NVAR	Mina Array Bea	86.51	50	P	P	17 07 28.9	+1.1
	comp=Z,1.1nm,0.6s,mb4.3,baz=239,slow=8.5,SNR=11						
LPIG	La Paz	89.27	65	LR	LR	17 37 10.0	
	comp=Z,200nm,20.5s,MS4.5,baz=186,slow=28						
ELK	Elko	89.46	48	P	P	17 07 44.2	+2.4
	comp=Z,0.9nm,0.5s,mb4.3,baz=218,slow=6.3,SNR=5.3						
ELK				LR	LR	17 43 40.9	
	comp=Z,399nm,18.3s,MS4.9,baz=198,slow=33						
WMQ	Urumqi	89.84	315	P	P	17 07 42.9	-0.6
WMQ				AP	pP	17 07 53.0	+2.9
WMQ				XP	sP	17 07 57.0	+4.5
WMQ				SKS		17 18 09.0	
WMQ				S	S	17 18 30.3	-4.5
WMQ				AMB	AMB		
	comp=Z,12nm,1.0s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,150nm,4.2s						
WMQ				LR	LR		
	comp=N,137nm,19.4s,MS4.5						
WMQ				LR	LR		
	comp=E,146nm,20.6s,MS4.5						
WMQ				LR	LR		
	comp=Z,214nm,21.8s,MS4.5						
HLID	Hailey	90.82	46	*e*P	P	17 07 49.8	+1.7
	comp=Z,2.3nm,0.8s,mb4.6						
SYO	Syowa Base	90.95	197⇑	*e*P	P	17 07 48.7	+0.4
MKAR	Makanchi Array	94.28	317	P	P	17 08 03.2	-0.8
	comp=Z,6.3nm,0.7s,mb5.1,baz=86,slow=5.9,SNR=51						
MKAR				LR	LR	17 48 52.1	
	comp=Z,111nm,20.6s,MS4.3,baz=102,slow=34						
MKAR	Makanchi Array	94.28	317	P	P	17 08 03.2	-0.8
MKAR				LR	LR	17 48 52.1	
ZALV	Zalesovo Beam	94.38	324	P	P	17 08 02.3	-2.0
	comp=Z,4.4nm,0.6s,mb5.0,baz=115,slow=4.1,SNR=27						
ANMO	Albuquerque	94.86	55	LR	LR	17 42 15.5	
	comp=Z,363nm,19.8s,MS4.8,baz=197,slow=30						
YKA	Yellowknife Ar	95.73	27	P	P	17 08 09.8	-0.5
	comp=Z,0.3nm,0.5s,mb4.0,baz=259,slow=5.0,SNR=6.1						
SNAA	Sanae	96.21	184	*e*P	P	17 08 10.4	-2.0
SNAA				*e*	pP	17 08 16.9	-2.2
VNA3	Neumayer Olymp	96.93	181	*e*P	P	17 08 13.4	-2.3
VNA3				*e*	pP	17 08 19.5	-2.8
KURK	Kurchatov	97.43	320	P	P	17 08 16.9	-1.3
	comp=Z,0.8nm,0.4s,mb4.5,baz=100,slow=3.5,SNR=3.9						
ARCES	ARCESS Array B	117.25	345	PKP	PKPdf	17 13 29.5	+0.1
	comp=Z,0.9nm,0.6s,baz=92,slow=2.7,SNR=6.9						
BOSA	Boshof	124.53	223	PKP	PKPdf	17 13 44.1	-0.6
	comp=Z,3.3nm,0.6s,baz=145,slow=2.6,SNR=14						
GERES	GERESS Array B	136.59	333	PKhKP		17 14 02.1	
	comp=Z,0.2nm,0.7s,baz=83,slow=8.0,SNR=2.3						
ORIF	Oris-en-Rattie	142.97	336	*e*PKP1	PKPdf	17 14 10.3	-8.3
	comp=Z,11nm,0.8s						
FRF	La Foret Royal	143.77	334	*e*PKP1	PKPdf	17 14 12.5	-7.5
	comp=Z,28nm,1.1s						
SMRF	Simiane la Rot	143.87	336	*e*PKP1	PKPdf	17 14 13.2	-7.0
	comp=Z,22nm,1.3s						
LMR	La Mourre	144.01	334	*e*PKP1	PKPdf	17 14 12.6	-7.8
	comp=Z,47nm,1.2s						
LASF	Ste Croix	144.46	338	*e*PKP1	PKPdf	17 14 15.5	-5.7
	comp=Z,30nm,1.1s						
MTLF	Montolieu	145.69	339	*e*PKP1	PKPdf	17 14 18.4	-4.9
	comp=Z,12nm,0.8s						
ETSF	Etsaut	147.01	342	*e*PKP1	PKPdf	17 14 23.4	-2.2
	comp=Z,22nm,1.1s						
KEST	Kesra	148.22	322	PKPbc	PKPbc	17 14 31.2	+0.1
	comp=Z,3.2nm,0.7s,baz=267,slow=3.0,SNR=9.3						
ESDC	Sonseca Array	150.97	344	PKPbc	PKPbc	17 14 38.8	+1.0
	comp=Z,0.8nm,0.8s,baz=16,slow=2.6,SNR=4.9						
TORD	Torodi Ar. Bea	164.52	276	PKP	PKPdf	17 14 48.4	-1.0
	comp=Z,1.3nm,1.0s,baz=330,slow=2.0,SNR=5.0						

*IDC **02** 16:59:32.9±1.0, 261N×12694E, h0km, mb4.0/6, mb1 4.2/6, mb1mx3.9/16, mbtmp4.0/6, MS4.1/1, Ms1 4.1/1, ms1mx2.1/28, Error ellipse: s-maj=47.3km s-min=18.4km az=68.0*

*ISCJB **02** 16:59:35.9±0.8, 26N±0.1×1269E±02, h33km, mb4.0/6, Error ellipse: s-maj=36.2km s-min=13.7km az=160.9*

*NEIC **02** 16:59:38.2±0.6, 259N×12692E, h35km, mb4.3/1, Error ellipse: s-maj=29.0km s-min=11.1km az=71.0*

ISC 02 16:59:38.2±0.8**, 26N**±01×**1269E**±02**, h35km, n10,** $\sigma 0^{s}58$/10**, mb4.0**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.60	183	*e*P	P	17 04 14.8	+0.4
WRA	Warramunga Arr	23.54	162	P	P	17 04 45.2	-0.4
	7.9nm,0.6s,mb4.3,baz=343,slow=10,SNR=35						
WB2	Warramunga Arr	23.54	162	*e*P	P	17 04 45.2	-0.4
ASAR	Alice Springs	26.96	166	P	P	17 05 17.1	+0.4
	0.8nm,0.5s,mb3.5,baz=344,slow=7.2,SNR=14						
CMAR	Chiang Mai Arr	31.63	302	P	P	17 05 58.7	+0.4
	0.6nm,0.9s,mb3.4,baz=120,slow=7.4,SNR=5.3						
STKA	Stephens Creek	37.00	159	*e*P	P	17 06 45.1	+0.6
	4.1nm,0.8s,mb4.3						
STKA	Stephens Creek	37.00	159	P	P	17 06 43.8	-0.7
	4.6nm,0.8s,mb4.4,baz=337,slow=5.7,SNR=8.8						
PETK	Petropavlovsk-	56.41	22	P	P	17 09 16.7	+0.6
	2.0nm,0.9s,mb4.1,baz=216,slow=4.7,SNR=4.2						
KURK	Kurchatov	62.81	328	P	P	17 09 59.2	-1.0
	0.7nm,0.5s,mb4.0,baz=129,slow=6.5,SNR=5.3						
KURK	Kurchatov	62.81	328	P	P	17 09 59.2	-1.0

*IDC **02** 17:03:23.7±0.9, 12.12N×14404E, h0km, mb3.7/8, mb1 4.0/8, mb1mx3.8/18, mbtmp3.7/8, Error ellipse: s-maj=29.6km s-min=17.0km az=112.0*

*ISCJB **02** 17:03:25.7±5.6, 12.1N±0.1×1440E±02, h23km±41km, mb3.8/8, Error ellipse: s-maj=30.1km s-min=12.6km az=29.0*

*NEIC **02** 17:03:28.9±0.7, 12.12N×14406E, h35km, Error ellipse: s-maj=23.1km s-min=13.1km az=112.0*

ISC 02 17:03:26.9±6.7**, 121N**±01×**1440E**±02**, h20**km±42km**, n10,** $\sigma 0^{s}82$/14**, mb3.8**/8**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.67	29	Pn	Pn	17 03 55.1	0.0
	239nm,0.3s,baz=208,slow=3.5,SNR=205						
GUMO				Sn	Sn	17 04 16.4	+0.5
	85nm,0.3s,baz=165,slow=22,SNR=6.8						
GUMO	Guam	1.67	29	*e*Pn	Pn	17 03 54.9	-0.2
GUMO				Pn	Pn	17 03 55.1	0.0
GUMO				*e*Sn	Sn	17 04 14.4	-1.5

GUMO				Sn	**Sn**	**17 04 16.4**	**+0.5**
WRA	**Warramunga Arr**	**33.26**	**197**	P	**P**	**17 10 02.5**	**-0.6**
	1.2nm,0.6s,mb4.0,baz=20,slow=9.5,SNR=14						
ASAR	**Alice Springs**	**36.92**	**196**	P	**P**	**17 10 34.5**	**-0.1**
	0.4nm,0.7s,mb3.4,baz=18,slow=13,SNR=6.1						
CMAR	**Chiang Mai Arr**	**43.87**	**284**	P	**P**	**17 11 33.6**	**+1.2**
	0.3nm,0.7s,mb3.2,baz=92,slow=7.2,SNR=3.5						
SONM	**Songino Array**	**47.48**	**326**	P	**P**	**17 12 00.5**	**0.0**
	0.6nm,0.9s,mb3.5,baz=120,slow=5.2,SNR=3.0						
MKAR	**Makanchi Array**	**61.99**	**317**	P	**P**	**17 13 45.0**	**-0.8**
	0.2nm,0.5s,mb3.5,baz=89,slow=8.5,SNR=3.0						
YKA	**Yellowknife Ar**	**84.53**	**27**	P	**P**	**17 15 58.1**	**-0.2**
	0.7nm,0.4s,mb4.2,baz=286,slow=5.1,SNR=18						
ARCES	**ARCESS Array B**	**88.23**	**342**	P	**P**	**17 16 15.5**	**-0.9**
	1.6nm,0.9s,mb4.2,baz=76,slow=7.5,SNR=5.2						
NVAR	**Mina Array Bea**	**88.46**	**51**	P	**P**	**17 16 19.8**	**+1.6**
	0.7nm,0.6s,mb4.0,baz=279,slow=5.9,SNR=6.2						

*ISCJB **02** 17:06:08.7±1.1, 2466N±003×10989W±004, h10^{km}±8^{km}, mb4.3/18, MS4.0/8, Error ellipse: s-maj=6.5km s-min=5.1km az=177.1*
*MOS **02** 17:06:08.8±1.4, 2460N×10998W, h10^{km}, mb4.8/5, Error ellipse: s-maj=10.9km s-min=5.1km az=94.6*
*IDC **02** 17:06:08.3±0.6, 2453N×11005W, h0^{km}, mb4.4/10, mb1 4.5/14, mb1mx4.3/23, mbtmp4.3/14, ML3.6/4, MS4.0/11, Ms1 4.0/11, ms1mx3.7/35, Error ellipse: s-maj=17.7km s-min=10.4km az=107.0*
*BJI **02** 17:06:10.3, 2460N×10990W, h10^{km}, mB4.9, Msz4.5*
*MEX **02** 17:06:10.2±0.6, 2466N×10979W, h10^{km}, MD4.4*
*NEIC **02** 17:06:10.3±0.5, 2462N×10994W, h10^{km}, mb4.3/23, Error ellipse: s-maj=7.7km s-min=5.6km az=50.0*
ISC 02 17:06:10.8±1.0**, 2463N**±004×**10992W**±005**, h13**^{km}±8^{km}**, n142,** σ1s**22**/140**, mb4.3**/18**, MS4.0**/8**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.64**	**214**	Pn	**Pn**	**17 06 22.2**	**-3.4**
	911nm,0.3s,baz=219,slow=0.5,SNR=127						
LPIG				Sn	**Sg**	**17 06 31.8**	**+0.2**
	5µm,0.3s,baz=163,slow=19,SNR=80						
LPIG	**La Paz**	**0.64**	**214**	*i* P	**Pg**	**17 06 22.2**	**-1.0**
LPIG				*i* S	**Sg**	**17 06 32.6**	**+1.0**
LPIG	**La Paz**	**0.64**	**214**	Pn	**Pn**	**17 06 22.2**	**-3.4**
LPIG				Sn	**Sg**	**17 06 31.8**	**+0.2**
LPIG				*i* S	**Sg**	**17 06 32.6**	**+1.0**
MAIG	**Mazatlaan**	**3.51**	**113**	*i* P	**Pn**	**17 07 02.1**	**-3.0**
HPIG		**4.47**	**58**	*i* P	**Pn**	**17 07 14.0**	**-4.3**
HPIG				*i* S	**Sn**	**17 08 05.2**	**-5.0**
CGIG		**5.97**	**16**	*i* P	**Pn**	**17 07 36.6**	**-2.3**
CGIG				*i* S	**Sn**	**17 08 44.2**	**-2.9**
TUC	**Tucson**	**7.69**	**355**	*e*P	**Pn**	**17 08 00.0**	**-2.5**
LENM	**Lemitar**	**9.84**	**14**	*e*Pn	**Pn**	**17 08 31.8**	**-0.2**
BNM	**Barren Site**	**9.91**	**16**	*e*Pn	**Pn**	**17 08 32.0**	**-1.0**
BAR	**Barrett**	**9.97**	**325**	*e*Pn	**Pn**	**17 08 34.8**	**+1.0**
LAZ	**Ladron**	**10.03**	**13**	*e*Pn	**Pn**	**17 08 34.3**	**-0.4**
LPM	**Los Pinos Moun**	**10.06**	**16**	*e*Pn	**Pn**	**17 08 34.1**	**-1.0**
ANMO	**Albuquerque**	**10.71**	**15**	Pn	**Pn**	**17 08 44.4**	**+0.4**
	0.0nm,0.3s,baz=204,slow=12,SNR=9.1						
ANMO				LR	LR	17 12 58.9	
	comp=Z,675nm,19.3s,baz=349,slow=38						
ANMO	**Albuquerque**	**10.71**	**15**	*e*Pn	**Pn**	**17 08 44.2**	**+0.2**
WUAZ	**Wupatki**	**10.92**	**354**	*e*Pn	**Pn**	**17 08 47.0**	**+0.1**
LDFC	**Landfair**	**11.34**	**338**	*e*Pn	**Pn**	**17 08 55.4**	**+2.8**
GSC	**Goldstone**	**12.19**	**332**	*e*P	**Pn**	**17 09 05.8**	**+1.6**
MVCO	**Mesa Verde**	**12.60**	**5**	*e*Pn	**Pn**	**17 09 09.6**	**-0.1**
	28nm,1.2s						
SHPR	**Sheep Range**	**12.66**	**340**	*e*Pn	**Pn**	**17 09 12.3**	**+1.7**
ISA	**Isabella**	**13.24**	**328**	*e*P	**Pn**	**17 09 19.4**	**+0.8**
TPNV	**Topopah Spring**	**13.42**	**338**	*e*P	**Pn**	**17 09 23.1**	**+2.1**
PV01	**Paradox Valley**	**13.51**	**5**	*e*Pn	**Pn**	**17 09 26.6**	**+4.4**
SDCO	**Great Sand Dun**	**13.61**	**15**	*e*Pn	**Pn**	**17 09 28.1**	**+4.6**
WMOK	**Wichita Mounta**	**13.96**	**41**	*e*P	**Pn**	**17 09 28.7**	**+0.3**
MSU	**Marysvale**	**13.97**	**353**	*e*P	**Pn**	**17 09 31.7**	**+3.2**
SRU	**San Rafael**	**14.45**	**358**	*e*P	**Pn**	**17 09 35.0**	**0.0**
MTUM	**Tungsten Hills**	**14.68**	**332**	*e*Pn	**Pn**	**17 09 39.6**	**+1.5**
NLU	**North Lily Min**	**15.39**	**354**	*e*Pn	**Pn**	**17 09 46.6**	**-1.1**
MPU	**Maple Canyon**	**15.41**	**355**	*e*P	**Pn**	**17 09 52.3**	**+4.4**
NVAR	**Mina Array Bea**	**15.49**	**335**	Pn	**Pn**	**17 09 50.2**	**+1.2**
	0.1nm,0.3s,baz=165,slow=10,SNR=27						
ISCO	**Idaho Springs**	**15.55**	**12**	*e*P	**Pn**	**17 09 53.0**	**+3.2**
ISCO				pmax	pmax		
	comp=Z,15nm,1.1s						
ISCO	**Idaho Springs**	**15.55**	**12**	*e*P	**Pn**	**17 09 53.0**	**+3.2**
	comp=Z,15nm,1.1s						
DUG	**Dugway**	**15.71**	**352**	*e*P	**Pn**	**17 09 53.2**	**+1.4**
DUG				pmax	pmax		
	comp=Z,22nm,1.0s						
DUG	**Dugway**	**15.71**	**352**	*e*Pn	**Pn**	**17 09 53.2**	**+1.4**
	comp=Z,22nm,1.0s						
DAU	**Daniels Canyon**	**15.78**	**356**	*e*P	**Pn**	**17 09 57.2**	**+4.5**
CMIG	**Matias Romero**	**15.92**	**115**	Pn	**Pn**	**17 09 54.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=315,slow=14,SNR=3.2						
CMIG				LR	LR	17 16 03.5	
	comp=Z,433nm,19.0s,baz=283,slow=37						
CMIG	**Matias Romero**	**15.92**	**115**	Pn	**Pn**	**17 09 54.9**	**+0.2**
CMIG				LR	LR	17 16 03.5	
JLU	**Jordanelle**	**15.98**	**356**	*e*P	**Pn**	**17 09 59.3**	**+4.0**
WAKR	**Walker**	**16.02**	**332**	*e*Pn	**Pn**	**17 09 57.1**	**+1.2**
CMB	**Columbia Colle**	**16.06**	**329**	*e*P	**Pn**	**17 09 55.8**	**-0.6**
BGU	**Big Grassy Mou**	**16.46**	**352**	*e*Pn	**Pn**	**17 10 00.0**	**-1.4**
ELK	**Elko**	**16.67**	**346**	Pn	**Pn**	**17 10 04.0**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=190,slow=7.2,SNR=15						
ELK				LR	LR	17 16 16.7	
	comp=Z,372nm,18.9s,baz=191,slow=36						
ELK	**Elko**	**16.67**	**346**	*e*Pn	**Pn**	**17 10 04.5**	**+0.3**
SPUT	**South Promonto**	**16.77**	**353**	*e*Pn	**Pn**	**17 10 05.0**	**-0.3**
BMN	**Battle Mountai**	**16.90**	**341**	*e*P	**Pn**	**17 10 07.8**	**+0.7**
BMN				pmax	pmax		
	comp=Z,25nm,1.4s						
BMN	**Battle Mountai**	**16.90**	**341**	*e*Pn	**Pn**	**17 10 07.8**	**+0.7**
	comp=Z,25nm,1.4s						
HWUT	**Hardware Ranch**	**16.98**	**356**	*e*Pn	**Pn**	**17 10 08.5**	**+0.4**
	comp=Z,58nm,1.5s						
PAHR	**Pah Rah Range**	**17.02**	**334**	*e*Pn	**Pn**	**17 10 09.2**	**+0.7**
HVU	**Hansel Valley**	**17.27**	**353**	*e*P	**Pn**	**17 10 11.8**	**+0.2**
MIAR	**Mount Ida**	**17.29**	**51**	*e*P	**Pn**	**17 10 10.8**	**-1.2**
OHCM	**Honcut**	**17.61**	**329**	*e*Pn	**Pn**	**17 10 14.2**	**-1.8**
BW06	**Boulder Array**	**18.09**	**1**	*e*Pn	**Pn**	**17 10 21.3**	**-0.5**
PDAR	**Pinedale Array**	**18.09**	**1**	P	**Pn**	**17 10 21.4**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=163,slow=11,SNR=16						
PDAR				LR	LR	17 17 20.1	
	comp=Z,483nm,18.2s,baz=182,slow=37						
REDW	**Red Top Meadow**	**18.70**	**358**	*e*P	**Pn**	**17 10 27.3**	**-2.0**
	comp=Z,19nm,1.4s						
RRI2	**Red Ridge**	**18.70**	**357**	*e*P	**Pn**	**17 10 29.0**	**-0.3**
	comp=Z,33nm,1.3s						
LBCM	**Butte Creek Ri**	**18.77**	**332**	P	**Pn**	**17 10 30.9**	**+0.7**
SNOW	**Snow King Moun**	**18.80**	**358**	*e*Pn	**Pn**	**17 10 28.1**	**-2.4**
	comp=Z,24nm,1.1s						
TPAW	**Teton Pass**	**18.83**	**358**	*e*Pn	**Pn**	**17 10 28.7**	**-2.2**
	comp=Z,38nm,1.4s						
LOHW	**Long Hollow**	**18.94**	**358**	*e*P	**Pn**	**17 10 27.9**	**-4.3**
	comp=Z,26nm,1.4s						
DCID1	**Drake Creek**	**18.95**	**357**	*e*Pn	**Pn**	**17 10 30.3**	**-1.9**
WDC	**Whiskeytown Da**	**19.10**	**329**	*e*P	**Pn**	**17 10 33.2**	**-0.9**
LTIM	**Timbered Crate**	**19.11**	**332**	P	**Pn**	**17 10 34.4**	**+0.1**
WVOR	**Wild Horse Val**	**19.16**	**340**	*e*P	**Pn**	**17 10 34.3**	**-0.6**
WVOR				pmax	pmax		
	comp=Z,12nm,1.1s						
WVOR	**Wild Horse Val**	**19.16**	**340**	*e*P	**Pn**	**17 10 34.3**	**-0.6**
	comp=Z,12nm,1.1s						
IMW	**Indian Meadow**	**19.24**	**358**	*e*Pn	**Pn**	**17 10 35.3**	**-0.4**
	comp=Z,26nm,1.0s						
HLID	**Hailey**	**19.24**	**350**	*e*P	**Pn**	**17 10 35.0**	**-0.8**
MOD	**Modoc**	**19.26**	**336**	*e*P	**Pn**	**17 10 35.2**	**-0.8**
FLWY	**Flagg Ranch**	**19.41**	**358**	*e*Pn	**Pn**	**17 10 38.2**	**+0.3**
	comp=Z,29nm,1.1s						
LKWY	**Lake**	**19.89**	**359**	*e*P	**Pn**	**17 10 47.8**	**+4.3**
LKWY				pmax	pmax		
	comp=Z,38nm,1.5s						
LKWY	**Lake**	**19.89**	**359**	*e*Pn	**Pn**	**17 10 47.8**	**+4.3**
	comp=Z,38nm,1.5s						
RSSD	**Black Hills**	**20.03**	**12**	*e*P	**P**	**17 10 47.8**	**+4.4**
YNR	**Norris Junctio**	**20.05**	**358**	*e*P	**P**	**17 10 45.4**	**+1.8**
YBH	**Yreka Blue Hor**	**20.10**	**331**	P	**P**	**17 10 44.4**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=130,slow=6.6,SNR=4.8						
YBH				LR	LR	17 18 09.4	
	comp=Z,156nm,21.1s,MS3.3,baz=155,slow=36						
YBH	**Yreka Blue Hor**	**20.10**	**331**	P	**P**	**17 10 44.4**	**+0.2**
YBH				LR	LR	17 18 09.3	
QLMT	**Earthquake Lak**	**20.19**	**357**	*e*Pn	**P**	**17 10 48.6**	**+3.5**
MCMT	**McKenzie Canyo**	**20.29**	**354**	P	**P**	**17 10 47.2**	**+0.9**
OXF	**Oxford**	**20.34**	**56**	*e*P	**P**	**17 10 46.3**	**-0.6**
OXF				pmax	pmax		
	comp=Z,55nm,1.4s						
OXF	**Oxford**	**20.34**	**56**	*e*P	**P**	**17 10 46.3**	**-0.6**
	comp=Z,55nm,1.4s						
RLMT	**Red Lodge**	**20.45**	**1**	*e*P	**P**	**17 10 47.9**	**-0.1**
	comp=Z,28nm,1.3s						
TEIG	**Tepich**	**20.48**	**98**	P	**P**	**17 10 47.6**	**-0.9**
	comp=Z,12nm,0.9s,baz=276,slow=6.7,SNR=4.2						
TEIG				LR	LR	17 19 56.0	
	comp=Z,130nm,20.3s,MS3.3,baz=195,slow=40						
TEIG	**Tepich**	**20.48**	**98**	*e*P	**P**	**17 10 50.9**	**+2.4**
KRMB	**Red Mountain**	**20.48**	**329**	*e*P	**P**	**17 10 48.1**	**-0.2**
DLMT	**Dillon**	**20.80**	**355**	*e*P	**P**	**17 10 52.0**	**+0.3**
	comp=Z,17nm,1.1s						
HALT	**Halls**	**20.99**	**53**	P	**P**	**17 10 54.1**	**+0.2**
BOZ	**Bozeman (W)**	**21.01**	**357**	*e*P	**P**	**17 10 53.9**	**-0.2**
BMO	**Blue Mountains**	**21.05**	**345**	*e*P	**P**	**17 10 53.8**	**-0.7**
	comp=Z,11nm,1.1s,mb4.1						
GCMT	**Greycliff**	**21.11**	**0**	*e*P	**P**	**17 10 54.4**	**-0.7**
LCCM	**Lewis and Clar**	**21.22**	**356**	P	**P**	**17 10 56.4**	**+0.1**
LRM	**Limekiln Ridge**	**21.24**	**355**	*e*P	**P**	**17 10 56.6**	**+0.1**
FVM	**French Village**	**21.27**	**47**	*e*P	**P**	**17 10 58.0**	**+1.1**
FVM				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.2						
FVM	**French Village**	**21.27**	**47**	*e*P	**P**	**17 10 58.0**	**+1.1**
	comp=Z,15nm,1.2s,mb4.2						
PLAL	**Pickwick Lake**	**21.54**	**56**	*e*P	**P**	**17 11 01.3**	**+1.5**
KEBM	**Edson Butte**	**21.73**	**330**	*e*P	**P**	**17 11 02.0**	**+0.2**
SIUC	**Southern Illin**	**21.93**	**49**	*e*P	**P**	**17 11 05.0**	**+0.9**
ECSD	**EROS,Sioux Fal**	**21.95**	**27**	*e*P	**P**	**17 11 02.8**	**-1.4**
	comp=Z,13nm,0.9s,mb4.4						
HRY	**Holter Researc**	**22.09**	**356**	*e*P	**P**	**17 11 09.3**	**+3.7**
LNOR	**Lincton Mounta**	**22.24**	**344**	*e*P	**P**	**17 11 05.9**	**-1.3**
MSO	**Missoula**	**22.38**	**353**	*e*P	**P**	**17 11 08.4**	**-0.3**
	comp=Z,9.8nm,1.3s,mb4.1						
CHMT	**Chamberlain Mo**	**22.39**	**354**	*e*P	**P**	**17 11 08.8**	**-0.1**
HAWA	**Hanford**	**23.05**	**343**	*e*P	**P**	**17 11 16.7**	**+0.9**
RSW	**Rattlesnake Hi**	**23.06**	**343**	*e*P	**P**	**17 11 14.9**	**-1.1**
EGMT	**Eagleton**	**23.35**	**0**	*e*P	**P**	**17 11 21.5**	**+2.6**
LON	**Longmire**	**24.04**	**340**	*e*P	**P**	**17 11 24.8**	**-0.7**
LON				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.2						
LON	**Longmire**	**24.04**	**340**	*e*P	**P**	**17 11 24.8**	**-0.7**
	comp=Z,1.4nm,0.9s,mb3.4						
WCI	**Wyandotte Cave**	**24.21**	**50**	*e*P	**P**	**17 11 28.5**	**+1.3**
DGMT	**Dagmar**	**24.22**	**9**	*e*P	**P**	**17 11 29.6**	**+2.5**
NEW	**Newport**	**24.27**	**348**	*e*P	**P**	**17 11 26.7**	**-0.9**
ETW	**Entiat**	**24.38**	**343**	*e*P	**P**	**17 11 26.9**	**-1.6**
JFWS	**Jewell Farm**	**24.39**	**37**	*e*P	**P**	**17 11 30.9**	**+2.1**
JFWS				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
JFWS	**Jewell Farm**	**24.39**	**37**	*e*P	**P**	**17 11 30.9**	**+2.1**
	comp=Z,12nm,0.8s,mb4.4						
CPCT	**Cooper Cave**	**24.42**	**58**	*e*P	**P**	**17 11 28.9**	**-0.2**
BLO	**Bloomington**	**24.50**	**48**	*e*P	**P**	**17 11 32.0**	**+2.2**
WALA	**Waterton Lakes**	**24.58**	**354**	*e*P	**P**	**17 11 30.4**	**0.0**
TKL	**Tuckaleechee C**	**25.06**	**58**	P	**P**	**17 11 36.0**	**+1.0**
	comp=Z,8.7nm,0.9s,mb4.3,baz=224,slow=12,SNR=6.9						
TKL				LR	LR	17 22 10.6	
	comp=Z,642nm,18.1s,MS4.2,baz=91,slow=38						
AGMN	**Agassiz Refuge**	**26.10**	**22**	*e*P	**P**	**17 11 46.4**	**+2.2**
ULM	**Lac du Bonnet**	**27.80**	**20**	P	**P**	**17 12 00.2**	**+0.7**
	comp=Z,4.9nm,0.9s,mb4.1,baz=215,slow=11,SNR=3.1						
ULM	**Lac du Bonnet**	**27.80**	**20**	P	**P**	**17 12 00.2**	**+0.7**
EDM	**Edmonton**	**28.67**	**356**	*e*P	**P**	**17 12 08.8**	**+1.6**
DLBC	**Dease Lake**	**36.68**	**342**	*e*P	**P**	**17 13 19.1**	**+1.9**
YKA	**Yellowknife Ar**	**37.98**	**356**	P	**P**	**17 13 26.4**	**-1.7**
	comp=Z,4.1nm,1.1s,mb4.1,baz=172,slow=7.7,SNR=14						
YKA				LR	LR	17 29 33.4	
	comp=Z,289nm,18.3s,MS4.1,baz=15,slow=37						
DAWY	**Dawson**	**43.89**	**342**	*e*P	**P**	**17 14 15.9**	**-0.9**
EGAK	**Eagle**	**44.94**	**342**	*e*P	**P**	**17 14 24.3**	**-0.8**
	comp=Z,9.6nm,0.9s,mb4.6						
COLA	**College**	**47.06**	**339**	*e*P	**P**	**17 14 41.2**	**-0.7**
IMA2	**Indian Mountai**	**49.72**	**338**	*e*P	**P**	**17 14 59.7**	**-2.7**
CPUP	**Villa Florida**	**71.74**	**131**	P	**P**	**17 17 32.0**	**-1.0**
	comp=Z,1.9nm,0.7s,mb4.2,baz=311,slow=6.8,SNR=8.3						
SEY	**Seymchan**	**71.77**	**331**	*e*P	**P**	**17 17 32.0**	**-0.7**
PETK	**Petropavlovsk-**	**72.07**	**321**	P	**P**	**17 17 35.6**	**+1.0**
	comp=Z,5.8nm,0.9s,mb4.5,baz=82,slow=10,SNR=10						
BDFB	**Brasilia**	**72.43**	**117**	P	**P**	**17 17 38.8**	**+1.4**
	comp=Z,3.5nm,1.0s,mb4.3,baz=237,slow=3.2,SNR=3.5						
PLCA	**Paso Flores**	**74.62**	**150**	P	**P**	**17 17 49.6**	**-0.1**
	comp=Z,3.7nm,1.0s,mb4.3,baz=5.7,slow=4.8,SNR=4.9						
ARCES	**ARCESS Array B**	**80.79**	**14**	P	**P**	**17 18 23.9**	**+0.1**
	comp=Z,2.8nm,0.8s,mb4.3,baz=341,slow=6.8,SNR=5.8						
ARCES				LR	LR	17 58 05.2	
	comp=Z,98nm,21.0s,MS4.1,baz=264,slow=38						
YAK	**Yakutsk**	**81.47**	**336**	*e*P	**P**	**17 18 27.0**	**-0.5**
YAK				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
NOA	**NORSAR Array B**	**82.35**	**25**	LR	LR	17 53 05.3	
	comp=Z,56nm,19.6s,MS3.9,baz=295,slow=34						
MJAR	**Matsushiro Arr**	**91.57**	**312**	P	**P**	**17 19 17.1**	**-0.6**
	comp=Z,2.4nm,1.0s,mb4.5,baz=63,slow=4.0,SNR=5.1						
MJAR				LR	LR	17 52 53.5	
	comp=Z,312nm,19.8s,MS4.8,baz=185,slow=31						
CN2	**Changchun**	**95.08**	**323**	*e*P	**P**	**17 19 34.4**	**+0.7**
OBN	**Obninsk**	**95.55**	**19**	P	**P**	**17 19 34.6**	**-1.0**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.7						
BJI	**Beijing**	**102.65**	**325**	P	Pdif	17 20 07.3	-0.2
BJI				LR	LR		
	comp=Z,194nm,19.0s,MS4.7						
LZH	**Lanzhou**	**111.70**	**331**	*e*PKP	PKiKP	17 24 42.0	-3.7
CD2	**Chengdu**	**116.05**	**328**	*e*PKP	PKPdf	17 24 53.5	-0.6
WRA	**Warramunga Arr**	**120.82**	**261**	PKP	PKPdf	17 25 03.0	-0.5
	comp=Z,2.6nm,0.9s,baz=61,slow=2.1,SNR=14						
KMI	**Kunming**	**121.30**	**325**	PDIF	Pdif	17 21 31.2	+0.8
ASAR	**Alice Springs**	**122.25**	**257**	PKP	PKPdf	17 25 05.3	-0.8
	comp=Z,1.7nm,0.8s,baz=82,slow=1.9,SNR=13						
CMAR	**Chiang Mai Arr**	**128.76**	**324**	PKP	PKPdf	17 25 20.4	+1.6
	comp=Z,1.1nm,0.8s,baz=337,slow=1.8,SNR=9.6						

*IDC **02** 17:06:48.0±2.3, 876S×15723E, h0^{km}, mb4.1/7, mb1 4.2/7, mb1mx4.0/14, mbtmp4.1/7, Error ellipse: s-maj=66.1km s-min=28.0km az=105.0*
*NEIC **02** 17:06:51.1±0.7, 866S×15693E, h10^{km}, Error ellipse: s-maj=21.1km s-min=14.5km az=181.0*
*ISCJB **02** 17:06:52.9±0.8, 87S±02×1570E±01, h33^{km}, mb4.0/7, Error ellipse: s-maj=22.7km s-min=15.1km az=179.4*
ISC 02 17:06:54.6±0.8**, 87S**±02×**1570E**±01**, h35**^{km}**, n10,** σ**0**s**78**/11**, mb4.0**/7**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.02**	**104**	*e*Pn	**Pn**	**17 07 40.2**	**+0.2**
HNR				*e*Sn	**Sn**	**17 08 26.4**	**+11**
WB2	**Warramunga Arr**	**24.56**	**241**	*e*P	**P**	**17 12 11.7**	**+0.3**
WRA	**Warramunga Arr**	**24.57**	**241**	P	**P**	**17 12 11.6**	**+0.1**
	5.5nm,0.8s,mb4.1,baz=65,slow=9.2,SNR=23						
ASAR	**Alice Springs**	**26.62**	**233**	P	**P**	**17 12 29.2**	**-0.8**
	2.4nm,1.0s,mb3.7,baz=62,slow=9.1,SNR=14						
CMAR	**Chiang Mai Arr**	**63.29**	**296**	P	**P**	**17 17 22.1**	**+1.7**
	1.2nm,0.9s,mb4.0,baz=123,slow=5.3,SNR=9.0						
SONM	**Songino Array**	**71.83**	**327**	P	**P**	**17 18 14.1**	**+0.3**
	0.8nm,0.8s,mb3.7,baz=132,slow=5.9,SNR=5.2						
MAW	**Mawson**	**83.58**	**203**	P	**P**	**17 19 19.0**	**+0.1**
	3.6nm,1.0s,mb4.5,baz=93,slow=4.5,SNR=5.9						
MKAR	**Makanchi Array**	**85.98**	**318**	P	**P**	**17 19 30.4**	**-0.9**
	1.9nm,1.0s,mb4.3,baz=100,slow=6.4,SNR=11						
MKAR	**Makanchi Array**	**85.98**	**318**	P	**P**	**17 19 30.4**	**-1.0**
ZALV	**Zalesovo Beam**	**86.69**	**326**	P	**P**	**17 19 33.8**	**-0.9**
	0.4nm,0.3s,mb4.1,baz=103,slow=6.5,SNR=4.2						

IDC 02 17:09:54.9±3.8**, 3119S**×**13926E, h0**^{km}**, mb1 3.3**/3**, mb1mx3.2**/13**, mbtmp3.0**/3**, ML2.9**/2**, Error ellipse: s-maj=80.4km s-min=21.5km az=39.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**2.11**	**110**	Pn	Pn	17 10 31.9	+0.4
	1.5nm,0.3s,baz=287,slow=14,SNR=38						
STKA				Sn	Sn	17 10 58.5	+0.1
	4.5nm,0.3s,baz=189,slow=23,SNR=12						
ASAR	**Alice Springs**	**8.87**	**326**	Pn	Pn	17 12 04.2	-0.2
	0.1nm,0.3s,baz=146,slow=13,SNR=4.5						
ASAR				Sn	Sn	17 13 44.0	-1.2
	0.2nm,0.3s,baz=148,slow=22,SNR=7.6						
WRA	**Warramunga Arr**	**12.04**	**337**	Pn	Pn	17 12 48.7	+0.9
	0.1nm,0.3s,baz=153,slow=13,SNR=12						
WRA				Sn	Sn	17 14 59.0	-4.0
	0.1nm,0.3s,baz=162,slow=24,SNR=3.6						

*TEH **02** 17:13:22.4, 3339N×5030E, h12^{km}, ML3.5*
*ISCJB **02** 17:14:32.7±0.3, 3331N±003×5034E±004, h10^{km}, Error ellipse: s-maj=5.3km s-min=4.0km az=25.9*
*CSEM **02** 17:14:33.2±0.1, 3336N×5030E, h20^{km}, ML3.5, Error ellipse: s-maj=3.1km s-min=1.9km az=119.0*
*THR **02** 17:14:33.8±0.7, 3339N×5057E, h14^{km}±7^{km}, ML3.4*
ISC 02 17:14:34.1±0.4**, 3333N**±003×**5036E**±004**, h10**^{km}**, n44,** σ1s**06**/52**, 2D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIR	**Pirpir**	**0.78**	**145**⇓	*e*Pg	**Pg**	**17 14 46.5**	**-2.6**
IPIR				*e*		17 14 58.4	
IKLH	**Kolahrood**	**1.02**	**90**⇓	*e*Pg	**Pg**	**17 14 49.3**	**-4.4**
IKLH				*e*		17 15 07.4	
GHVR	**GHOM**	**1.39**	**34**	*e*Pg	**Pg**	**17 14 56.4**	**-4.3**
GHVR				*e*Sg	**Sg**	**17 15 13.3**	**-5.4**
IGAR	**Gharneh**	**1.69**	**123**	*e*Pn	**Pn**	**17 15 01.3**	**-2.3**
IGAR				*e*		17 15 29.1	
IZEF	**Zefreh**	**1.71**	**104**	*e*Pn	**Pn**	**17 15 01.8**	**-2.1**
IZEF				*e*		17 15 27.1	
ISFB	**Sefidab**	**1.87**	**56**	*e*Pn	**Pn**	**17 15 04.5**	**-1.6**
ISFB				*e*Sn	**Sn**	**17 15 29.7**	**0.0**
ISFB	**Sefidab**	**1.87**	**56**	*e*Pn	**Pn**	**17 15 04.5**	**-1.6**
ISFB				*e*Sn	**Sn**	**17 15 29.7**	**0.0**
ISFB				*e*		17 15 31.6	
IVRN	**Varamin**	**2.01**	**34**	*e*Pn	**Pn**	**17 15 07.1**	**-1.0**
IVRN				*e*		17 15 08.7	
IVRN				*e*Sn	**Sn**	**17 15 33.2**	**-0.1**
IRAZ	**Razeghan**	**2.10**	**350**	*e*Pn	**Pn**	**17 15 08.0**	**-1.3**
IRAZ				*e*		17 15 49.5	
NASN	**Na'in**	**2.12**	**104**	*e*Pg	**Pg**	**17 15 09.9**	**-4.8**
NASN				*e*Sg	**Sg**	**17 15 36.4**	**-5.9**
NASN				AML	AML	17 15 40.9	
	comp=E,263nm,0.4s						
NASN				AML	AML	17 15 41.8	
	comp=N,340nm,0.4s						
IR3	**Iran Long-Peri**	**2.21**	**14**	*e*Pn	**Pn**	**17 15 09.6**	**-1.2**
IMHD	**Mahdasht**	**2.37**	**6**	*e*Pn	**Pn**	**17 15 12.7**	**-0.2**
IMHD				*e*		17 15 43.9	
IKOM	**Komasi**	**2.52**	**290**	*e*Pn	**Pn**	**17 15 15.5**	**+0.5**
IKOM				*e*		17 16 11.5	
THKV	**Tehran--Karaj**	**2.62**	**9**	*e*Pn	**Pn**	**17 15 17.3**	**+0.9**
THKV				*e*Sg	**Sg**	**17 15 53.3**	**-4.9**
IDMV	**Damavand**	**2.63**	**31**	*e*Pn	**Pn**	**17 15 17.0**	**+0.4**
IDMV				*e*		17 16 07.7	
CHTH	**Charan**	**2.65**	**14**	*e*Pn	**Pn**	**17 15 17.0**	**+0.2**
DAMV	**Damavand**	**2.65**	**30**	*e*Pn	**Pn**	**17 15 16.4**	**-0.4**
DAMV				*e*Sg	**Sg**	**17 15 52.9**	**-6.5**
DAMV				AML	AML	17 15 54.1	
	comp=E,132nm,0.9s						
DAMV	**Damavand**	**2.65**	**30**	*e*Pn	**Pn**	**17 15 16.4**	**-0.5**
	SNR=52						
DAMV				*e*Sg	**Sg**	**17 15 52.8**	**-6.5**
	SNR=90						
IAFJ	**Afjeh**	**2.76**	**23**	*e*Pn	**Pn**	**17 15 18.0**	**-0.3**
ILAS	**Lasjerd**	**2.97**	**46**	*e*Pn	**Pn**	**17 15 21.2**	**0.0**
ILAS				*e*		17 16 22.9	
IFIR	**Firoozkooh**	**3.04**	**40**	*e*Pn	**Pn**	**17 15 22.5**	**+0.3**
IFIR				*e*		17 15 38.2	
SNGE	**Sanandaj**	**3.06**	**306**	*e*Pn	**Pn**	**17 15 25.2**	**+2.8**
IVIS	**Veis**	**3.15**	**293**	*e*Pn	**Pn**	**17 15 20.6**	**-3.2**
IVIS				*e*		17 16 17.7	
ILIN	**Lien**	**3.23**	**300**	*e*Pn	**Pn**	**17 15 29.6**	**+4.7**
ILIN				*e*		17 16 33.4	
IGHG	**Ghaleghazi**	**3.31**	**289**	*e*Pn	**Pn**	**17 15 25.3**	**-0.6**
IGHG				*e*		17 16 25.9	
IPRN	**Peran**	**3.33**	**29**	*e*Pn	**Pn**	**17 15 27.4**	**+1.2**
IPRN				*e*		17 16 28.4	
IALA	**Alasht**	**3.41**	**36**	*e*Pn	**Pn**	**17 15 27.1**	**-0.2**
IALA				*e*		17 15 39.2	
ISHM	**Shahmirzad**	**3.46**	**44**	*e*Pn	**Pn**	**17 15 28.1**	**+0.2**
ISHM				*e*		17 15 29.3	
ICHK	**Chekchek**	**3.58**	**106**	*e*Pn	**Pn**	**17 15 30.8**	**+1.2**
ICHK				*e*		17 15 38.6	
IANJ	**Anjilo**	**3.63**	**53**	*e*Pn	**Pn**	**17 15 30.2**	**-0.1**
IANJ				*e*		17 16 38.6	
IKIA	**Kiasar**	**3.97**	**43**	*e*Pn	**Pn**	**17 15 35.6**	**+0.7**
IKIA				*e*		17 16 54.3	
IMEH	**Mehriz**	**4.08**	**117**	*e*Pn	**Pn**	**17 15 37.4**	**+0.8**
IMEH				*e*		17 15 48.2	
IPAR	**Pars**	**4.16**	**146**	*e*Pn	**Pn**	**17 15 39.0**	**+1.4**
IPAR				*e*		17 17 00.8	
IGLO	**Ghaloghah**	**4.26**	**41**	*e*Pn	**Pn**	**17 15 39.8**	**+0.8**
IGLO				*e*		17 16 58.8	
MIB	**Mutribah**	**4.36**	**217**	*e*P	**Pn**	**17 15 40.6**	**+0.3**
	baz=216						
MIB				AML	AML	17 16 29.9	
	comp=Z,16nm,0.5s,baz=216						
UMR	**Umm Al-Rimmam**	**4.39**	**212**	*e*P	**Pn**	**17 15 40.2**	**-0.6**
ISRV	**Sarvestan**	**4.58**	**148**	*e*Pn	**Pn**	**17 15 43.9**	**+0.5**
ISRV				*e*		17 16 49.8	
IMOK	**Mouk**	**4.72**	**154**	*e*Pn	**Pn**	**17 15 48.6**	**+3.3**
IMOK				*e*		17 16 49.5	
IBAF	**Bafgh**	**4.73**	**110**	*e*Pn	**Pn**	**17 15 46.6**	**+1.2**
IBAF				*e*		17 16 00.2	
RST	**Umm Al-Ruwaisa**	**4.78**	**218**	*e*P	**Pn**	**17 15 45.8**	**-0.3**
	baz=217						
RST				AML	AML	17 16 42.2	
	comp=Z,0.3nm,0.4s,baz=217						
NAY	**Al-Naaiem**	**4.86**	**214**	*e*P	**Pn**	**17 15 47.0**	**-0.3**
	baz=213						
NAY				AML	AML	17 16 43.7	
	comp=Z,6.0nm,0.6s,baz=213						
RDF	**Al-Radifah**	**5.01**	**210**	*e*P	**Pn**	**17 15 49.8**	**+0.6**
	baz=209						
RDF				AML	AML	17 16 46.7	
	comp=Z,9.0nm,0.6s,baz=209						
IBST	**Bostanabad**	**5.20**	**328**	*e*Pn	**Pn**	**17 15 51.7**	**-0.1**
IBST				*e*		17 16 07.9	
ISFR	**Sfrayin**	**7.28**	**57**	*e*Pn	**Pn**	**17 16 21.6**	**+1.2**

IDC 02 17:14:54.9±7.9**, 1188S**×**16648E, h0**^{km}**, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/14**, mbtmp4.0**/3**, Error ellipse: s-maj=235.5km s-min=53.3km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.89**	**251**	P	P	17 21 22.0	-0.2
	1.1nm,0.8s,baz=84,slow=9.2,SNR=8.3						
ASAR	**Alice Springs**	**33.08**	**245**	P	P	17 21 33.0	+0.3
	1.6nm,0.7s,baz=70,slow=9.5,SNR=14						
MKAR	**Makanchi Array**	**94.62**	**317**	P	P	17 28 17.7	-0.1
	0.8nm,0.7s,baz=102,slow=6.2,SNR=6.2						

*IDC **02** 17:22:38.7±0.5, 1154S×16587E, h0^{km}, mb4.6/21, mb1 4.7/21, mb1mx4.7/21, mbtmp4.6/21, MS4.3/13, Ms1 4.3/13, ms1mx4.1/20, Error ellipse: s-maj=18.4km s-min=13.9km az=109.0*
*DJA **02** 17:22:40, 1177S×166.14E, h2^{km}, mb5.7/3*
*BJI **02** 17:22:42.0, 1129S×16609E, h32^{km}, mB5.2, mb4.6, Ms4.9, Msz4.7*
*MOS **02** 17:22:42.2±1.4, 1141S×16585E, h33^{km}, mb5.0/12, Error ellipse: s-maj=11.9km s-min=10.1km az=145.7*
*NEIC **02** 17:22:44.1±0.3, 1150S×16592E, h35^{km}, mb4.8/15, Error ellipse: s-maj=12.1km s-min=7.9km az=129.0*
*GCMT **02** 17:22:44.1±0.3, 1167S×16589E, h31^{km}±1^{km}, MW5.1/58, Moment Tensor Solution. s45,c53; s58,c79; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.69±.19; $M_{\theta\theta}$-0.96±.13; $M_{\phi\phi}$-2.73±.14; $M_{r\theta}$2.14±.21; $M_{\theta\phi}$2.14±.10; $M_{\phi r}$-1.81±.18; Best double couple: $M_0$4.83100×10^{16} NP1:ϕ_s337.00000°, δ29.00000°, λ109.00000°. NP2: ϕ_s136.00000°, δ63.00000°, λ80.00000°. Principal axes: T 4.6560, Plg70.0000°, Azm25.0000°; N 0.3480, Plg9.0000°, Azm141.0000°; P -5.0070, Plg17.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **02** 17:22:45.0±2.5, 1154S±005×16584E±008, h55^{km}±21^{km}, mb4.7/39, MS4.3/15 Error ellipse: s-maj=13.7km s-min=8.8km az=1.2*
ISC 02 17:22:47.7±2.1**, 1153S**±005×**16585E**±008**, h64**^{km}±18^{km}**, h29**^{km}±5.1^{km}**:pP-P, n107,** σ1s**08**/81**, mb4.7**/39**, 1C-1D,**

Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.17**	**289**	*e*P	**Pn**	**17 24 14.5**	**-1.6**
HNR				*e*		17 25 27.3	
HNR				pmax	pmax		
	comp=Z,329nm,0.8s						
HNR	**Honiara**	**6.17**	**289**	*e*Pn	**Pn**	**17 24 14.5**	**-1.6**
	comp=Z,330nm,0.8s						
HNR				*e*Sn	**Sn**	**17 25 27.3**	**+2.0**
CTA	**Charters Tower**	**20.66**	**243**	*e*P	**P**	**17 27 23.6**	**+1.2**
	comp=Z,16nm,0.6s						
CTA	**Charters Tower**	**20.66**	**243**	P	**P**	**17 27 23.2**	**+0.8**
	comp=Z,31nm,0.9s,baz=71,slow=12,SNR=17						
CTA				LR	LR	17 34 23.3	
	comp=Z,1μm,20.0s,baz=64,slow=34						
CTA	**Charters Tower**	**20.66**	**243**	*e*P	**P**	**17 27 23.6**	**+1.2**
CTA				pmax	pmax		
	comp=Z,16nm,0.6s						
CTAO	**Charters Tower**	**20.66**	**243**	*e*P	**P**	**17 27 23.3**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,130nm,1.4s						
CTAO	**Charters Tower**	**20.66**	**243**	*e*P	**P**	**17 27 23.3**	**+0.9**
	comp=Z,130nm,1.4s						
AFI	**Afiamalu**	**21.95**	**99**	LR	LR	17 34 08.9	
	comp=Z,1μm,20.8s,baz=262,slow=32						
COEN	**Coen**	**22.24**	**261**	*e*P	**P**	**17 27 39.6**	**+0.4**
	comp=Z,49nm,1.8s,mb4.6						
ARMA	**Armidale**	**22.96**	**213**	*e*P	**P**	**17 27 46.3**	**-0.4**
RAO	**Raoul Island**	**23.24**	**142**	LR	LR	17 35 24.3	
	comp=Z,476nm,20.2s,baz=294,slow=33						
RIV	**Riverview**	**25.94**	**209**	*e*P	**P**	**17 28 14.7**	**+0.7**
CNB	**Canberra Magne**	**28.00**	**210**	*e*P	**P**	**17 28 33.2**	**+0.6**
URZ	**Urewera**	**28.46**	**161**	P	**P**	**17 28 35.1**	**-1.5**
	comp=Z,6.8nm,0.8s,mb4.3,baz=260,slow=5.5,SNR=5.0						
URZ				LR	LR	17 38 38.0	
	comp=Z,437nm,18.9s,baz=1.8,slow=34						
STKA	**Stephens Creek**	**30.16**	**224**	*e*P	**P**	**17 28 52.0**	**+0.3**
	comp=Z,8.5nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**30.16**	**224**	P	**P**	**17 28 50.9**	**-0.8**
	comp=Z,7.1nm,0.8s,mb4.5,baz=31,slow=4.4,SNR=11						
STKA				PcP	PcP	17 31 52.4	+0.6
	comp=Z,4.3nm,0.6s,baz=358,slow=8.1,SNR=5.7						
STKA				LR	LR	17 40 23.7	
	comp=Z,935nm,19.2s,baz=20,slow=35						
WRAB	**Tennant Creek**	**31.40**	**251**	*e*P	**P**	**17 29 02.5**	**-0.3**
WB2	**Warramunga Arr**	**31.40**	**251**	*e*P	**P**	**17 29 02.4**	**-0.4**
WRA	**Warramunga Arr**	**31.41**	**251**	P	**P**	**17 29 02.7**	**-0.3**
	comp=Z,14nm,1.0s,mb4.8,baz=82,slow=9.1,SNR=34						
WRA				PcP	PcP	17 31 56.1	+0.8
	comp=Z,3.5nm,1.1s,baz=80,slow=2.9,SNR=5.4						
WRA				ScP	ScP	17 35 39.1	+6.0
	comp=Z,4.0nm,1.1s,baz=79,slow=3.8,SNR=8.0						
WRA				LR	LR	17 40 41.9	
	comp=Z,474nm,19.2s,baz=60,slow=34						
WRA	**Warramunga Arr**	**31.41**	**251**	P	**P**	**17 29 02.7**	**-0.2**
WRA						17 31 56.1	
TOO	**Toolangi**	**31.71**	**212**	*e*P	**P**	**17 29 06.3**	**+1.0**
RPZ	**Rata Peaks**	**32.38**	**173**	P	**P**	**17 29 10.2**	**-0.9**
	comp=Z,17nm,0.5s,mb5.1,baz=334,slow=3.6,SNR=17						
RPZ				LR	LR	17 40 32.4	
	comp=Z,485nm,20.4s,baz=360,slow=33						
ASAR	**Alice Springs**	**32.66**	**244**	P	**P**	**17 29 13.2**	**-0.7**
	comp=Z,17nm,0.8s,mb5.0,baz=73,slow=9.5,SNR=99						
ASAR				PcP	PcP	17 31 59.2	+0.5
	comp=Z,2.3nm,0.7s,baz=71,slow=2.7,SNR=8.6						
FITZ	**Fitzroy Crossi**	**39.35**	**256**	*e*P	**P**	**17 30 11.0**	**-0.1**
	comp=Z,16nm,1.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**39.35**	**256**	P	**P**	**17 30 11.1**	**-0.1**
	comp=Z,10nm,1.2s,mb4.4,baz=78,slow=11,SNR=8.4						
FORT	**Forrest**	**39.84**	**235**	*e*P	**P**	**17 30 15.4**	**+0.3**
	comp=Z,26nm,0.9s,mb5.0						
BATI	**Baumata**	**41.42**	**268**	P	**P**	**17 30 31.0**	**+2.7**
	comp=Z,9.9nm,0.6s,mb4.6,baz=149,slow=5.9,SNR=3.9						
PPT	**Papeete**	**43.49**	**103**	*e*S	**S**	**17 37 02.3**	**-7.1**
	comp=Z,282nm,25.5s						
PPT				*e*LQ		17 41 00.1	
	comp=Z,1μm,30.0s						
PPT				*e*LR	LR	17 42 42.3	
	comp=Z,634nm,25.0s,baz=286						
CBIJ	**Chichi jima**	**44.74**	**329**	LR	LR	17 45 33.1	
	comp=Z,417nm,21.5s,baz=189,slow=31						
MBWA	**Marble Bar**	**45.13**	**252**	*e*P	**P**	**17 30 58.8**	**+0.6**
	comp=Z,9.4nm,0.6s,mb4.8						
KLBR	**Kellerberrin**	**48.53**	**238**	*e*P	**P**	**17 31 24.4**	**-0.1**
	comp=Z,60nm,1.6s,mb5.4						
NWAO	**Narrogin (SRO)**	**49.27**	**236**	P	**P**	**17 31 29.2**	**-1.0**
	comp=Z,9.7nm,0.8s,mb4.9,baz=83,slow=3.0,SNR=4.6						
MUN	**Mundaring**	**49.90**	**238**	*e*P	**P**	**17 31 36.1**	**+1.1**
JOW	**Kunigami**	**52.78**	**317**	P	**P**	**17 31 56.5**	**0.0**
	comp=Z,10nm,0.8s,mb4.8,baz=146,slow=10,SNR=6.9						
MJAR	**Matsushiro Arr**	**54.45**	**333**	P	**P**	**17 32 06.8**	**-1.7**
	comp=Z,2.6nm,0.9s,mb4.2,baz=160,slow=7.7,SNR=6.3						
MJAR	**Matsushiro Arr**	**54.45**	**333**	P	**P**	**17 32 06.8**	**-1.7**
MAT	**Matsushiro**	**54.45**	**333**	P	**P**	**17 32 07.7**	**-0.8**
RKT	**Rikitea**	**57.33**	**110**	*e*LQ		17 46 51.6	
	comp=Z,367nm,31.8s						
RKT				*e*LR	LR	17 48 56.2	
	comp=Z,714nm,24.5s,baz=282						
ASAJ	**Asahikawa**	**59.28**	**341**	LR	LR	17 56 10.5	
	comp=Z,271nm,19.0s,baz=171,slow=34						
KSRS	**Korea Array**	**60.33**	**326**	P	**P**	**17 32 50.0**	**0.0**
	comp=Z,0.8nm,0.7s,mb3.9,baz=128,slow=8.1,SNR=3.2						
QIZ	**Qiongzhong**	**63.00**	**298**	*e*P	**P**	**17 33 06.7**	**-1.6**
QIZ				S	**S**	**17 41 42.1**	**+7.9**
QIZ				LR	LR		
	comp=N,133nm,20.9s						
QIZ				LR	LR		
	comp=Z,205nm,21.9s						
PETK	**Petropavlovsk-**	**64.76**	**355**	P	**P**	**17 33 17.8**	**-1.3**
	comp=Z,2.7nm,0.9s,mb4.3,baz=133,slow=5.3,SNR=7.0						
PETK				LR	LR	17 55 28.1	
	comp=Z,219nm,21.1s,baz=161,slow=30						
CASY	**Casey**	**65.96**	**201**	*e*P	**P**	**17 33 26.3**	**-0.5**
CASY	**Casey**	**65.96**	**201**	*e*P	**P**	**17 33 26.2**	**-0.6**
SBA	**Scott Base**	**66.31**	**180**	*e*P	**P**	**17 33 29.1**	**+0.2**
SBA				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
SBA	**Scott Base**	**66.31**	**180**	*e*P	**P**	**17 33 29.1**	**+0.1**
	comp=Z,16nm,1.0s,mb5.0						
KLR	**Kul'dur**	**67.54**	**337**	*e*P	**P**	**17 33 32.8**	**-4.3**
XAN	**Xi'an**	**70.52**	**312**	P	**P**	**17 33 56.3**	**+0.4**
XAN				AP	pP	17 34 02.4	-11
XAN				XP	sP	17 34 05.4	-15
XAN				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.5						
CMAR	**Chiang Mai Arr**	**72.40**	**294**	P	**P**	**17 34 08.3**	**+0.8**
	comp=Z,3.1nm,0.7s,mb4.3,baz=124,slow=4.5,SNR=19						
HIA	**Hailar**	**72.84**	**330**	*e*P	**P**	**17 34 09.0**	**-0.5**
CD2	**Chengdu**	**72.97**	**307**	*e*P	**P**	**17 34 11.2**	**+0.5**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
LZH	**Lanzhou**	**75.16**	**312**	*e*P	**P**	**17 34 25.0**	**+1.7**
LZH				AP	pP	17 34 35.3	-5.5
LZH				XP	sP	17 34 39.5	-8.4
LZH				PP	PP	17 37 16.6	+4.1
LZH				*e*S	S	17 44 02.5	+5.3
LZH				XS	sS	17 44 20.0	-6.8
LZH				AMB	AMB		
	comp=Z,29nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,158nm,5.3s						
LZH				LR	LR		
	comp=E,518nm,16.1s						
LZH				LR	LR		
	comp=Z,850nm,18.5s						
KDAK	**Kodiak Island**	**76.99**	**21**	P	**P**	**17 34 33.8**	**+0.5**
	comp=Z,4.8nm,0.6s,mb4.6,baz=98,slow=4.0,SNR=7.7						
KDAK	**Kodiak Island**	**76.99**	**21**	*e*P	**P**	**17 34 34.0**	**+0.7**
KDAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
KDAK	**Kodiak Island**	**76.99**	**21**	*e*P	**P**	**17 34 34.0**	**+0.7**
	comp=Z,7.9nm,1.0s,mb4.6						
CIT	**Chita**	**77.63**	**330**	*e*P	**P**	**17 34 36.2**	**-0.7**
SVW2	**Sparrevohn**	**78.54**	**18**	*e*P	**P**	**17 34 42.6**	**+0.8**
YAK	**Yakutsk**	**78.59**	**344**	*e*P	**P**	**17 34 40.1**	**-1.9**
YAK				pmax	pmax		
	comp=N,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
ULN	**Ulaanbaatar**	**78.75**	**324**	*e*P	**P**	**17 34 43.2**	**0.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
ULN	**Ulaanbaatar**	**78.75**	**324**	*e*P	**P**	**17 34 43.2**	**-0.1**
	comp=Z,6.3nm,1.0s,mb4.5						
SONM	**Songino Array**	**79.11**	**324**	P	**P**	**17 34 45.9**	**+0.6**
	comp=Z,1.8nm,0.8s,mb4.1,baz=134,slow=5.3,SNR=16						
GTA	**Gaotai**	**79.47**	**314**	P	**P**	**17 34 48.7**	**+1.3**
GTA				AP	pP	17 34 59.0	-6.0
GTA				XP	sP	17 35 03.3	-8.7
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
ZAK	**Zakamensk**	**82.16**	**325**	⇓*i*P	**P**	**17 35 00.7**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
TLY	**Talaya**	**82.58**	**326**	*e*P	**P**	**17 35 02.1**	**-1.5**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
COLA	**College**	**83.72**	**18**	*e*P	**P**	**17 35 06.5**	**-2.7**
COLA	**College**	**83.72**	**18**	*e*P	**P**	**17 35 05.4**	**-3.8**
	comp=Z,17nm,0.8s,mb5.2						
YBH	**Yreka Blue Hor**	**84.16**	**46**	P	**P**	**17 35 13.2**	**+1.2**
	comp=Z,8.8nm,0.9s,mb4.9,baz=199,slow=2.2,SNR=5.2						
MAW	**Mawson**	**84.31**	**202**	*e*P	**P**	**17 35 11.8**	**-0.5**
	comp=Z,1.7nm,0.7s,mb4.3						
MAW	**Mawson**	**84.31**	**202**	P	**P**	**17 35 11.4**	**-0.9**
	comp=Z,2.3nm,0.9s,mb4.3,baz=84,slow=12,SNR=9.5						
MAW	**Mawson**	**84.31**	**202**	*e*P	**P**	**17 35 11.8**	**-0.5**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HYT	**Haines Junctio**	**84.79**	**24**	*e*P	**P**	**17 35 18.1**	**+3.4**
EGAK	**Eagle**	**85.80**	**20**	*e*P	**P**	**17 35 17.9**	**-1.8**
	comp=Z,17nm,0.6s,mb5.4						
DAWY	**Dawson**	**85.97**	**21**	*e*P	**P**	**17 35 21.5**	**+1.0**
NVAR	**Mina Array Bea**	**86.26**	**50**	P	**P**	**17 35 24.1**	**+1.5**
	comp=Z,4.2nm,0.7s,mb4.8,baz=238,slow=8.4,SNR=6.5						
OD2	**Odessa Site #2**	**88.76**	**41**	*e*P	**P**	**17 35 35.5**	**+1.1**
DLMT	**Dillon**	**92.26**	**44**	*e*P	**P**	**17 35 52.5**	**+1.8**
BOZ	**Bozeman (W)**	**92.99**	**44**	*e*P	**P**	**17 35 55.4**	**+1.3**
BOZ				pmax	pmax		
	comp=Z,27nm,2.0s,mb5.3						
BOZ	**Bozeman (W)**	**92.99**	**44**	*e*P	**P**	**17 35 55.4**	**+1.3**
	comp=Z,27nm,2.0s,mb5.3						
PDAR	**Pinedale Array**	**93.81**	**47**	P	**P**	**17 35 59.0**	**+1.1**
	comp=Z,0.8nm,0.5s,mb4.4,baz=213,slow=4.3,SNR=2.5						
PDAR				LR	LR	18 12 07.4	
	comp=Z,199nm,18.4s,baz=250,slow=32						
MKAR	**Makanchi Array**	**93.94**	**317**	P	**P**	**17 35 58.5**	**+0.1**
	comp=Z,4.6nm,0.8s,mb5.0,baz=98,slow=6.2,SNR=40						
ZALV	**Zalesovo Beam**	**94.01**	**324**	P	**P**	**17 35 57.5**	**-1.0**
	comp=Z,2.1nm,0.7s,mb4.7,baz=101,slow=4.7,SNR=13						
ZALV				LR	LR	18 15 33.5	
	comp=Z,90nm,21.0s,baz=242,slow=34						
ZAL	**Zalesovo**	**94.02**	**324**	P	**P**	**17 35 57.5**	**-1.1**
YKA	**Yellowknife Ar**	**95.36**	**27**	P	**P**	**17 36 04.7**	**+0.1**
	comp=Z,1.3nm,0.6s,mb4.5,baz=259,slow=4.5,SNR=15						
YKA				LR	LR	18 11 55.1	
	comp=Z,100nm,20.8s,baz=210,slow=31						
KURK	**Kurchatov**	**97.08**	**320**	*e*P	**P**	**17 36 11.0**	**-1.6**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.7						
ARCES	**ARCESS Array B**	**116.83**	**345**	PKP	PKPdf	17 41 22.8	-1.6
	comp=Z,1.5nm,0.5s,baz=89,slow=1.5,SNR=12						
LPAZ	**La Paz**	**119.88**	**116**	PKP	PKPdf	17 41 33.5	+1.7
	comp=Z,0.7nm,0.5s,baz=264,slow=6.9,SNR=5.2						
OBN	**Obninsk**	**121.27**	**329**	*e*PKIKP	PKPdf	17 41 28.6	-4.7
OBN				*e*		17 52 53.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BOSA	**Boshof**	**124.83**	**223**	PKP	PKPdf	17 41 39.9	-1.1
	comp=Z,3.5nm,0.6s,baz=156,slow=6.7,SNR=9.3						
BOSA	**Boshof**	**124.83**	**223**	PKP	PKPdf	17 41 39.9	-1.1
NOA	**NORSAR Array B**	**127.20**	**345**	PKP	PKPdf	17 41 43.3	-1.1
	comp=Z,1.1nm,0.7s,baz=35,slow=2.1,SNR=3.2						
GERES	**GERESS Array B**	**136.18**	**334**	PKP	PKPdf	17 41 59.9	-1.9
	comp=Z,0.5nm,0.8s,baz=61,slow=4.7,SNR=4.0						
CDF	**Champ du Feu**	**139.11**	**338**	*e*PKP1	PKPdf	17 42 01.8	-5.4
LPL	**La Plagne**	**141.73**	**336**	*e*PKP1	PKPdf	17 42 07.7	-4.3
ORIF	**Oris-en-Rattie**	**142.56**	**336**	*e*PKP1	PKPdf	17 42 08.6	-4.9
	comp=Z,4.9nm,0.6s						
VIVF	**Saint-Julien-l**	**143.07**	**338**	*e*PKP1	PKPdf	17 42 11.8	-2.7
FRF	**La Foret Royal**	**143.36**	**334**	*e*PKP1	PKPdf	17 42 10.7	-4.3
LMR	**La Mourre**	**143.61**	**334**	*e*PKP1	PKPdf	17 42 11.7	-3.7
CAF	**Calviac**	**143.93**	**340**	*e*PKP1	PKPdf	17 42 13.2	-2.8
	comp=Z,8.3nm,1.0s						
LASF	**Ste Croix**	**144.04**	**338**	*e*PKP1	PKPdf	17 42 13.6	-2.6
	comp=Z,23nm,1.1s						
LFF	**La Frestale**	**144.34**	**342**	*e*PKP1	PKPdf	17 42 14.2	-2.5
MTLF	**Montolieu**	**145.28**	**339**	⇑*i*PKP1	PKPbc	17 42 17.7	-0.5
	comp=Z,8.4nm,0.5s						
ETSF	**Etsaut**	**146.59**	**342**	*e*PKP1	PKPbc	17 42 21.9	-0.3
	comp=Z,26nm,1.2s						
SJPF	**Ste Jean**	**146.59**	**343**	*e*PKP1	PKPbc	17 42 21.6	-0.6
KEST	**Kesra**	**147.86**	**322**	PKPbc	PKPbc	17 42 26.1	+0.2
	comp=Z,5.5nm,1.0s,baz=348,slow=5.9,SNR=5.5						
ESDC	**Sonseca Array**	**150.55**	**344**	PKPbc	PKPbc	17 42 31.9	-0.7
	comp=Z,1.4nm,0.8s,baz=20,slow=2.4,SNR=7.6						
TORD	**Torodi Ar. Bea**	**164.43**	**278**	PKP	PKPdf	17 42 46.3	+1.3
	comp=Z,1.0nm,0.9s,baz=90,slow=3.0,SNR=5.0						
TORD	**Torodi Ar. Bea**	**164.43**	**278**	PKP	PKPdf	17 42 46.3	+1.3

DJA 02 17:26:43,132N×12294E,h350km,ML4.6/2,3D,
Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	**Manado**	**1.90**	**86**	⇓*e*P	Pn	17 27 34.0	+0.4
MNI				*e*S	S	17 27 50.0	-24
PCI	**Palu**	**3.81**	**235**	⇓*e*P	Pn	17 27 41.5	-8.6
KDI	**Kendari**	**5.25**	**183**	⇓*e*P	Pn	17 28 10.9	+5.5
KDI				*e*S	S	17 29 12.9	+0.8

*ISCJB **02** 17:29:12.9±0.4,3359N±003×11763W±004,h10km, mb4.4/16,Error ellipse: s-maj=5.8km s-min=3.3km az=36.6*

*IDC **02** 17:29:12.7±0.9,3362N×11752W,h0km,mb4.1/6, mb1 4.2/11,mb1mx4.0/26,mbtmp4.1/11,ML4.0/5,MS3.2/2, Ms1 3.2/2,ms1mx2.7/33,Error ellipse: s-maj=16.5km s-min=12.6km az=91.0*

*BJI **02** 17:29:12.0,3370N×11750W,h2km,mB5.3,mb4.8,Msz4.6*

*NEIC **02** 17:29:14.0,3373N×11747W,h2km,mb4.8/10,MS4.2/1, ML4.7(PAS),After PAS.*

NEIC San Marcos, Santa Ana, Santa Fe Springs, Santa Monica, Seal Beach, Sherman Oaks, Solana Beach, South Gate, Stanton, Studio City, Sunland, Tarzana, Torrance, Tujunga, Upland, Valley Center, Valley Village, Van Nuys, Villa Park, Vista, Walnut, West Covina, West Hollywood, Westminster, Whittier, Wilmington and Yorba Linda. Felt from Palmdale to San Diego and as far east as La Quinta. Felt [V] at Corona; [IV] at Anaheim, Brea, Colton, Covina, Fontana, Homeland, Lake Elsinore, Menifee, Mira Loma, Mission Viejo, Norco, Perris, Rancho Santa Margarita, Silverado, Sun City, Temecula, Trabuco Canyon, Tustin, Wildomar and Winchester; [III] at Alhambra, Aliso Viejo, Alpine, Anza, Arcadia, Azusa, Banning, Beaumont, Bellflower, Beverly Hills, Bloomington, Bonsall, Buena Park, Burbank, Calabasas, Camp Pendleton, Capistrano Beach, Carlsbad, Cathedral City, Cerritos, Chino, Chino Hills, Claremont, Compton, Corona del Mar, Costa Mesa, Cypress, Dana Point, Diamond Bar, Downey, Duarte, El Cajon, El Monte, Encinitas, Encino, Escondido, Fallbrook, Foothill Ranch, Fountain Valley, Fullerton, Gardena, Garden Grove, Glendale, Glendora, Grand Terrace, Hemet, Hesperia, Highland, Huntington Beach, Idyllwild, Indian Wells, Indio, Irvine, La Crescenta, Ladera Ranch, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, La Habra, La Jolla, Lake Elsinore, Lake Forest, Lakewood, La Mesa, La Mirada, La Palma, La Verne, Loma Linda, Long Beach, Los Alamitos, Los Angeles, Midway City, Montclair, Montebello, Monterey Park, Moreno Valley, Murrieta, Newhall, Newport Beach, Newport Coast, North Hollywood, Northridge, Norwalk, Nuevo, Oceanside, Ontario, Orange, Pala, Palm Desert, Palm Springs, Paramount, Pasadena, Pico Rivera, Placentia, Pomona, Rancho Cucamonga, Redlands, Reseda, Rialto, Rowland Heights, San Bernardino, San Clemente, San Diego, San Dimas, San Jacinto, San Juan Capistrano.

ISC 02 17:29:12.3±1.4**,3342N**±005×**11774W**±004**,h3**km±8km**,**
n133,σ1s**40**/137**,mb4.4**/16**,3C-1D,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWC	**Mount Wilson**	**0.84**	**341**	⇓*i*P	**Pg**	**17 29 27.3**	**-1.1**
MWC				*e*Sg	**Sg**	**17 29 36.7**	**-2.7**
BAR	**Barrett**	**1.16**	**129**	*e*Pn	**Pn**	**17 29 35.8**	**+0.4**
BAR				*e*Sb	**Sb**	**17 29 52.1**	**+1.7**
OSI	**Osito Adit**	**1.45**	**326**	⇑*i*P	**Pn**	**17 29 38.2**	**-1.1**
GSC	**Goldstone**	**2.03**	**22**	⇑*i*Pn	**Pn**	**17 29 43.5**	**-3.8**
GSC				*e*Sn	**Sn**	**17 30 05.3**	**-7.8**
ISA	**Isabella**	**2.32**	**345**	*e*Pn	**Pn**	**17 29 49.2**	**-2.1**
ISA				*e*Sn	**Sn**	**17 30 19.4**	**-0.9**
GLA	**Glamis**	**2.46**	**98**	*e*Pn	**Pn**	**17 29 51.8**	**-1.6**
GLA				*e*Sn	**Sn**	**17 30 24.2**	**+0.3**
LDFC	**Landfair**	**2.73**	**52**	*e*Pn	**Pn**	**17 29 52.0**	**-5.1**
LDFC				*e*Sn	**Sn**	**17 30 25.1**	**-5.4**
LDFC				*e*Sn	**Sn**	**17 30 29.1**	**-1.4**
PTRM	**Twissleman Ran**	**3.02**	**318**	*e*Pn	**Pn**	**17 30 00.4**	**-0.7**
PTRM				*e*Sn	**Sn**	**17 30 35.0**	**-2.8**
TPNV	**Topopah Spring**	**3.72**	**19**	*e*Pn	**Pn**	**17 30 08.0**	**-2.7**
SHPR	**Sheep Range**	**3.73**	**34**	*e*Pn	**Pn**	**17 30 07.5**	**-3.3**
MTUM	**Tungsten Hills**	**3.98**	**350**	*e*Pn	**Pn**	**17 30 13.3**	**-0.8**
SAO	**San Andreas Ge**	**4.51**	**319**	*e*Pn	**Pn**	**17 30 20.5**	**-1.0**
NVAR	**Mina Array Bea**	**5.02**	**355**	Pn	**Pn**	**17 30 27.2**	**-1.2**
	3.0nm,0.3s,baz=302,slow=13,SNR=82						
NVAR				Lg		17 31 45.6	
	7.8nm,0.3s,baz=149,slow=39,SNR=2.1						
CMB	**Columbia Colle**	**5.08**	**336**	*e*Pn	**Pn**	**17 30 28.2**	**-1.1**
WAKR	**Walker**	**5.25**	**345**	*e*Pn	**Pn**	**17 30 33.5**	**+1.8**
CCUT	**Cedar City**	**5.45**	**40**	*e*Pn	**Pn**	**17 30 39.3**	**+5.0**
SAC	**San Andreas**	**5.64**	**319**	*e*Pn	**Pn**	**17 30 36.6**	**-0.4**
WUAZ	**Wupatki**	**5.65**	**67**	⇑*e*Pn	**Pn**	**17 30 35.4**	**-1.8**
TUC	**Tucson**	**5.95**	**99**	*e*Pn	**Pn**	**17 30 39.2**	**-2.1**
MCCM	**Marconi Confer**	**6.30**	**320**	*e*Pn	**Pn**	**17 30 45.0**	**-1.1**
PAHR	**Pah Rah Range**	**6.41**	**349**	*e*Pn	**Pn**	**17 30 49.8**	**+2.3**
NSHM	**Saint Helena R**	**6.44**	**324**	*e*Pn	**Pn**	**17 30 46.2**	**-1.7**
OHCM	**Honcut**	**6.63**	**334**	*e*Pn	**Pn**	**17 30 51.2**	**+0.6**
MSU	**Marysvale**	**6.79**	**40**	*e*Pn	**Pn**	**17 30 51.5**	**-1.3**
BMN	**Battle Mountai**	**7.01**	**3**	*e*Pn	**Pn**	**17 30 54.6**	**-1.1**
ELK	**Elko**	**7.58**	**15**	Pn	**Pn**	**17 31 02.4**	**-1.2**
	2.0nm,0.3s,baz=209,slow=12,SNR=34						
ELK				Lg		17 33 04.6	
	3.1nm,0.3s,baz=305,slow=20,SNR=7.1						
ELK				LR	LR	17 34 24.6	
	comp=Z,240nm,19.1s,baz=192,slow=42						
ELK	**Elko**	**7.58**	**15**	*e*Pn	**Pn**	**17 31 02.4**	**-1.1**
DUG	**Dugway**	**7.83**	**29**	*e*Pn	**Pn**	**17 31 05.2**	**-1.8**
KIPM	**Iron Peak**	**7.87**	**326**	*e*Pn	**Pn**	**17 31 11.9**	**+4.3**
TMUT	**Trail Mountain**	**7.88**	**40**	*e*Pn	**Pn**	**17 31 07.1**	**-0.6**
NLU	**North Lily Min**	**7.95**	**33**	*e*Pn	**Pn**	**17 31 09.6**	**+1.0**
WDC	**Whiskeytown Da**	**8.11**	**333**	*e*Pn	**Pn**	**17 31 11.6**	**+0.7**
SRU	**San Rafael**	**8.13**	**44**	*e*Pn	**Pn**	**17 31 12.2**	**+1.0**
MPU	**Maple Canyon**	**8.20**	**35**	*e*Pn	**Pn**	**17 31 12.8**	**+0.7**
MPU				*e*Sn	**Sb**	**17 33 19.8**	**+6.8**
BGU	**Big Grassy Mou**	**8.38**	**25**	*e*Pn	**Pn**	**17 31 12.5**	**-2.1**
BGU				*e*Sg	**Sb**	**17 33 24.4**	**+6.5**
MVCO	**Mesa Verde**	**8.44**	**61**	*e*Pn	**Pn**	**17 31 14.7**	**-0.8**
NOQ	**North Oquirrh**	**8.50**	**30**	*e*Pn	**Pn**	**17 31 17.4**	**+1.2**
PV10	**Paradox Valley**	**8.61**	**53**	*e*Pn	**Pn**	**17 31 15.7**	**-2.1**
CTU	**Camp Tracy**	**8.69**	**32**	*e*P	**Pn**	**17 31 19.0**	**+0.2**
	15nm,0.6s						
DAU	**Daniels Canyon**	**8.69**	**35**	*e*Pn	**Pn**	**17 31 19.9**	**+1.1**
MOD	**Modoc**	**8.71**	**347**	*e*Pn	**Pn**	**17 31 20.2**	**+1.1**
JLU	**Jordanelle**	**8.75**	**33**	*e*Pn	**Pn**	**17 31 20.7**	**+1.0**
PV01	**Paradox Valley**	**8.80**	**55**	*e*Pn	**Pn**	**17 31 19.6**	**-0.9**
PV01				*e*S	Sn	17 33 28.7	+29
SPUT	**South Promonto**	**8.92**	**27**	*e*Pn	**Pn**	**17 31 21.6**	**-0.5**
YBH	**Yreka Blue Hor**	**9.18**	**336**	Pn	**Pn**	**17 31 27.4**	**+1.8**
	0.2nm,0.3s,baz=148,slow=7.3,SNR=32						
YBH				Lg		17 33 56.8	
	0.1nm,0.3s,baz=89,slow=20,SNR=3.5						
YBH				LR	LR	17 35 05.2	
	comp=Z,107nm,21.2s,baz=169,slow=39						
YBH	**Yreka Blue Hor**	**9.18**	**336**	*e*Pn	**Pn**	**17 31 28.1**	**+2.4**
HVU	**Hansel Valley**	**9.22**	**24**	*e*Pn	**Pn**	**17 31 25.1**	**-1.1**
BNM	**Barren Site**	**9.27**	**82**	*e*Pn	**Pn**	**17 31 26.5**	**-0.4**
BNM				*e*S	Sn	17 33 58.4	+47
ANMO	**Albuquerque**	**9.46**	**78**	Pn	**Pn**	**17 31 28.8**	**-0.7**
	0.3nm,0.3s,baz=286,slow=12,SNR=9.3						
ANMO				Lg		17 34 04.7	
	0.3nm,0.3s,baz=183,slow=22,SNR=5.1						
ANMO	**Albuquerque**	**9.46**	**78**	*e*Pn	**Pn**	**17 31 29.0**	**-0.5**
HWUT	**Hardware Ranch**	**9.52**	**29**	*e*Pn	**Pn**	**17 31 31.3**	**+1.0**
HUMO	**Hull Mountain**	**10.05**	**337**	*e*Pn	**Pn**	**17 31 40.7**	**+3.2**
HLID	**Hailey**	**10.45**	**13**	*e*Pn	**Pn**	**17 31 45.3**	**+2.3**
KEBM	**Edson Butte**	**10.77**	**333**	*e*Pn	**Pn**	**17 31 50.5**	**+3.2**
SDCO	**Great Sand Dun**	**10.85**	**63**	*e*Pn	**Pn**	**17 31 52.1**	**+3.6**
RRI2	**Red Ridge**	**11.11**	**25**	*e*Pn	**Pn**	**17 31 53.9**	**+1.9**
REDW	**Red Top Meadow**	**11.29**	**27**	*e*Pn	**Pn**	**17 31 58.1**	**+3.6**
VIPM	**Ingram Point**	**11.29**	**349**	P	**Pn**	**17 31 59.5**	**+5.0**
BW06	**Boulder Array**	**11.33**	**32**	*e*Pn	**Pn**	**17 31 56.0**	**+1.0**
PDAR	**Pinedale Array**	**11.33**	**32**	Pn	**Pn**	**17 31 55.2**	**+0.2**
	0.3nm,0.3s,baz=212,slow=14,SNR=14						
PDAR				Lg		17 34 54.0	
	0.1nm,0.3s,baz=218,slow=40,SNR=2.2						
TPAW	**Teton Pass**	**11.37**	**26**	*e*Pn	**Pn**	**17 31 57.6**	**+2.1**
DCID1	**Drake Creek**	**11.37**	**25**	*e*Pn	**Pn**	**17 32 01.2**	**+5.6**
SNOW	**Snow King Moun**	**11.41**	**27**	*e*Pn	**Pn**	**17 31 59.0**	**+2.8**
BMO	**Blue Mountains**	**11.42**	**2**	*e*Pn	**Pn**	**17 32 02.1**	**+5.8**
LOHW	**Long Hollow**	**11.60**	**27**	*e*Pn	**Pn**	**17 31 59.9**	**+1.2**
ISCO	**Idaho Springs**	**11.63**	**53**	*e*Pn	**Pn**	**17 31 54.4**	**-4.7**
	4.2nm,0.9s						
IMW	**Indian Meadow**	**11.72**	**25**	*e*Pn	**Pn**	**17 32 02.6**	**+2.2**
VTHM	**Trough**	**11.94**	**350**	P	**Pn**	**17 32 08.2**	**+4.9**
FLWY	**Flagg Ranch**	**11.97**	**25**	*e*Pn	**Pn**	**17 32 06.3**	**+2.6**
LNOR	**Lincton Mounta**	**12.44**	**358**	P	**Pn**	**17 32 16.6**	**+6.5**
DLMT	**Dillon**	**12.56**	**17**	*e*Pn	**Pn**	**17 32 16.9**	**+5.0**
HAWA	**Hanford**	**13.03**	**354**	*e*Pn	**Pn**	**17 32 23.1**	**+4.9**
LRM	**Limekiln Ridge**	**13.03**	**17**	*e*Pn	**Pn**	**17 32 24.9**	**+6.6**
RSW	**Rattlesnake Hi**	**13.03**	**354**	*e*Pn	**Pn**	**17 32 22.8**	**+4.5**
BOZ	**Bozeman (W)**	**13.08**	**19**	*e*Pn	**Pn**	**17 32 26.2**	**+7.3**
RLMT	**Red Lodge**	**13.39**	**27**	*e*Pn	**Pn**	**17 32 27.2**	**+4.1**
MSO	**Missoula**	**13.70**	**11**	*e*Pn	**Pn**	**17 32 32.0**	**+4.6**
CHMT	**Chamberlain Mo**	**13.90**	**13**	*e*Pn	**Pn**	**17 32 35.8**	**+5.7**
OD2	**Odessa Site #2**	**13.97**	**357**	*e*Pn	**Pn**	**17 32 33.7**	**+2.6**
ETW	**Entiat**	**14.30**	**353**	*e*Pn	**Pn**	**17 32 42.4**	**+6.8**
NEW	**Newport**	**14.83**	**2**	*e*Pn	**Pn**	**17 32 47.1**	**+4.3**
RSSD	**Black Hills**	**15.09**	**41**	*e*Pn	**Pn**	**17 32 44.2**	**-2.1**
	4.2nm,0.8s						
JCW	**Jim Creek**	**15.09**	**349**	*e*Pn	**Pn**	**17 32 55.4**	**+9.1**
RPW	**Rockport**	**15.28**	**350**	*e*Pn	**Pn**	**17 32 56.4**	**+7.6**
JCT	**Junction City**	**15.50**	**96**	*e*Pn	**Pn**	**17 32 57.1**	**+5.3**
EGMT	**Eagleton**	**15.78**	**20**	*e*P	**Pn**	**17 33 00.9**	**+5.6**
PGC	**Sidney**	**15.80**	**346**	*e*Pn	**Pn**	**17 32 58.4**	**+2.8**
	28nm,0.8s						
WALA	**Waterton Lakes**	**15.88**	**9**	*e*Pn	**Pn**	**17 32 60.0**	**+3.3**
	121nm,2.0s						
ECSD	**EROS,Sioux Fal**	**19.41**	**52**	*e*P	**Pn**	**17 33 38.4**	**-2.1**
EDM	**Edmonton**	**20.04**	**8**	*e*P	**P**	**17 33 45.8**	**-0.5**
MIAR	**Mount Ida**	**20.06**	**80**	*e*P	**P**	**17 33 46.9**	**+0.2**
AGMN	**Agassiz Refuge**	**22.13**	**41**	*e*P	**P**	**17 34 06.9**	**-2.0**
	18nm,0.9s,mb4.5						
FVM	**French Village**	**22.60**	**71**	*e*P	**P**	**17 34 18.1**	**+4.1**
ULM	**Lac du Bonnet**	**23.27**	**37**	P	**P**	**17 34 17.4**	**-3.5**
	6.3nm,0.8s,mb4.1,baz=212,slow=6.9,SNR=4.8						
CMIG	**Matias Romero**	**26.21**	**123**	P	**P**	**17 34 51.6**	**+3.2**
	3.7nm,0.9s,mb3.9,baz=350,slow=14,SNR=2.8						
DLBC	**Dease Lake**	**26.35**	**345**	P	**P**	**17 34 48.2**	**-1.1**
	baz=166,slow=6.9						
DLBC	**Dease Lake**	**26.35**	**345**	P	**P**	**17 34 48.2**	**-1.1**
YKA	**Yellowknife Ar**	**29.16**	**3**	P	**P**	**17 35 12.7**	**-1.6**
	1.1nm,0.8s,mb3.6,baz=179,slow=8.9,SNR=8.3						
YKA	**Yellowknife Ar**	**29.16**	**3**	P	**P**	**17 35 12.7**	**-1.6**
ELN	**Prospectdale**	**30.29**	**72**	*e*P	**P**	**17 35 22.8**	**-1.9**
PETK	**Petropavlovsk-**	**60.98**	**317**	P	**P**	**17 39 27.6**	**+1.0**
	3.9nm,0.7s,mb4.7,baz=74,slow=12,SNR=9.4						
MJAR	**Matsushiro Arr**	**80.71**	**308**	P	**P**	**17 41 27.6**	**+0.6**
	1.2nm,0.8s,mb3.9,baz=43,slow=5.4,SNR=4.4						
MFF	**Saint Martin d**	**82.53**	**38**	*e*P	**P**	**17 41 36.4**	**0.0**
TCF	**Toulx Ste Croi**	**83.94**	**37**	*e*P	**P**	**17 41 43.6**	**-0.1**
	17nm,1.3s,mb4.7						
TCF	**Toulx Ste Croi**	**83.94**	**37**	*e*P	**P**	**17 41 43.6**	**-0.1**
	8.4nm,1.3s,mb4.7						
CN2	**Changchun**	**83.98**	**319**	*e*P	**P**	**17 41 45.5**	**+1.6**
CN2				*e*S	S	17 52 07.4	-1.3
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.1						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
SSF	**Saint Saulge**	**84.06**	**36**	*e*P	**P**	**17 41 44.2**	**0.0**
BGF	**Bois d'Agland**	**84.08**	**37**	*e*P	**P**	**17 41 44.2**	**-0.2**
LOR	**Lormes**	**84.08**	**36**	*e*P	**P**	**17 41 44.4**	**0.0**
	comp=Z,15nm,1.0s,mb4.8						
LOR	**Lormes**	**84.08**	**36**	*e*P	**P**	**17 41 44.4**	**0.0**
	comp=Z,7.3nm,1.0s,mb4.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LFF	La Frestale	84.10	39	eP	P	17 41 44.8	+0.3
AVF	Avril sur Loir	84.17	36	eP	P	17 41 44.5	-0.3
	comp=Z,11nm,0.9s,mb4.7						
AVF	Avril sur Loir	84.17	36	eP	P	17 41 44.5	-0.3
	comp=Z,5.3nm,0.9s,mb4.7						
SMF	Signal de Mont	84.51	36	eP	P	17 41 46.2	-0.4
	comp=Z,17nm,1.1s,mb4.8						
SMF	Signal de Mont	84.51	36	eP	P	17 41 46.2	-0.4
	comp=Z,8.6nm,1.1s,mb4.8						
HAU	Haudompre	84.75	34	eP	P	17 41 47.6	-0.1
CAF	Calviac	84.80	38	eP	P	17 41 47.9	-0.2
	comp=Z,10.0nm,0.8s,mb4.7						
CAF	Calviac	84.80	38	eP	P	17 41 47.9	-0.2
	comp=Z,5.0nm,0.8s,mb4.7						
ESDC	Sonseca Array	84.93	45	P	P	17 41 48.5	-0.3
	comp=Z,0.6nm,0.8s,mb3.8,baz=306,slow=4.9,SNR=6.0						
HINF	Hinteralfeld	85.12	34	eP	P	17 41 49.3	-0.3
	comp=Z,14nm,1.3s,mb4.6						
HINF	Hinteralfeld	85.12	34	eP	P	17 41 49.3	-0.3
	comp=Z,6.9nm,1.3s,mb4.6						
CLL	Collm	85.17	29	ePKIKP	P	17 41 51.0	+1.2
CLL				e		17 41 56.0	
CLL				MLR	MLR		
	comp=Z,100nm,18.6s						
BRG	Berggiesshubel	85.88	28	eP	P	17 41 53.7	+0.3
	comp=Z,8.3nm,1.3s,mb4.8						
LASF	Ste Croix	86.32	38	eP	P	17 41 55.7	+0.1
MBDF	Montbardon	87.32	36	ePKP1	P	17 42 07.7	+7.2
ZALV	Zalesovo Beam	90.82	347	P	P	17 42 16.4	-0.4
	comp=Z,0.9nm,0.6s,mb4.3,baz=12,slow=3.7,SNR=4.4						
ZALV	Zalesovo Beam	90.82	347	P	P	17 42 16.4	-0.4
GYA	Guiyang	107.02	319	ePDIF	Pdif	17 43 31.2	+1.1
GYA				PKP	PKiKP	17 47 38.9	-1.1
GYA				PP	PP	17 47 58.6	+2.7
GYA				PP	PP		
	comp=Z,90nm,6.9s						
KMI	Kunming	110.20	321	PKP	PKiKP	17 47 44.0	-2.0
WRA	Warramunga Arr	115.34	262	PKP	PKPdf	17 47 56.8	+1.0
	comp=Z,0.3nm,0.7s,baz=58,slow=2.1,SNR=5.0						
ASAR	Alice Springs	117.41	259	PKP	PKPdf	17 48 00.4	+0.7
	comp=Z,0.4nm,0.7s,baz=94,slow=2.3,SNR=6.0						
KMBO	Kilima Mbogo	140.22	41	PKP	PKPdf	17 48 42.0	-1.3
	comp=Z,2.2nm,0.4s,baz=252,slow=23,SNR=8.0						
MAW	Mawson	145.78	180	PKPbc	PKPbc	17 48 53.8	+2.0
	comp=Z,3.3nm,0.8s,baz=236,slow=2.3,SNR=9.9						

BJI ***02*** *17:57:27.7, 4290N×13784E, h289km, mB4.2, mb4.3*
IDC ***02*** *17:57:28.8±1.0, 4289N×13771E, h263km±11km, mb3.3/11, mb1 3.4/16, mb1mx3.3/25, mbtmp3.3/16, Error ellipse: s-maj=12.6km s-min=10.5km az=134.0*
ISCJB ***02*** *17:57:28.4±0.3, 4285N±004×13783E±007, h282km±5km, mb3.6/13, Error ellipse: s-maj=9.5km s-min=6.1km az=30.3*
MOS ***02*** *17:57:28.3±0.8, 4289N×13777E, h282km, mb3.8/9, Error ellipse: s-maj=18.6km s-min=11.6km az=92.8*
NEIC ***02*** *17:57:28.8±0.7, 4289N×13766E, h264km±8km, mb4.3/2, Error ellipse: s-maj=10.8km s-min=7.0km az=110.0*
JMA ***02*** *17:57:29.1±0.3, 4281N×13780E, h278km±4km, M3.5*
ISC 02 17:57:29.2±0.3**, 4284N**±004×**13782E**±008**, h274**km±6km**, n60, σ0§95**/67**, mb3.6**/13**, 1C, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOSM	Okushiri--Mats	1.44	121	P	Pn	17 58 09.8	+0.4
JSK	Shakotan	2.02	74	P	Pn	17 58 14.2	+0.5
JSK				eS	S	17 58 49.0	0.0
JYM2	Yakumo 2	2.02	110	P	Pn	17 58 14.6	+0.8
JKB	Kayabe	2.56	111	P	Pn	17 58 19.2	+0.4
JEW	Eniwo	2.67	89	eS	S	17 59 01.6	+1.6
JOT	Ohata	2.81	120	P	Pn	17 58 21.2	0.0
JHR	Hokuryu	2.99	71	P	Pn	17 58 24.1	+1.1
JHR				eS	S	17 59 06.7	+0.9
JYG	Yagishiri	3.06	58	P	Pn	17 58 24.3	+0.6
JFR	Furan	3.52	83	P	Pn	17 58 29.1	+0.5
JFR				eS	S	17 59 14.6	-1.4
JNBK	Urakawa-nobuka	3.69	97	P	Pn	17 58 30.3	-0.2
JNBK				eS	S	17 59 17.8	-1.6
ASAJ	Asahikawa	3.71	68	P	Pn	17 58 31.4	+0.7
	11nm,0.3s,baz=249,slow=11,SNR=102						
ASAJ				S	S	17 59 19.3	-0.4
	1.4nm,0.3s,baz=60,slow=24,SNR=7.0						
ASAJ	Asahikawa	3.71	68	P	Pn	17 58 31.4	+0.7
ASAJ				S	S	17 59 19.3	-0.4
ASAJ				pmax	pmax		
	comp=Z,11nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
JANG	Nango	3.71	130	P	Pn	17 58 29.5	-1.3
JKK2	Kamakawa 2	3.74	72	P	Pn	17 58 31.9	+0.8
JKK2				eS	S	17 59 19.7	-0.7
JWK2	Keihoku	3.85	48	P	Pn	17 58 34.0	+1.8
JSE	Soyaes	4.05	57	P	Pn	17 58 35.6	+1.1
JCH	Churui	4.09	91	P	Pn	17 58 34.1	-1.0
JCH				eS	S	17 59 23.7	-3.9
JTKR	Abashiri--Toko	4.58	74	P	Pn	17 58 40.9	+0.2
JTKR				eS	S	17 59 36.2	-1.7
JMK	Ichinoseki	4.66	145	P	Pn	17 58 40.5	-1.2
YSS	Yuzh-Sakhalins	5.41	39⇑	iP	Pn	17 58 50.4	-0.1
YSS				pmax	pmax		
	comp=Z,160nm,1.0s						
YSS	Yuzh-Sakhalins	5.41	39	ePn	Pn	17 58 50.6	+0.1
	comp=Z,72nm,0.6s						
NEM2	Nemuro 2	5.83	82	P	Pn	17 58 53.9	-1.7
NEM2				eS	S	17 59 58.3	-6.7
MDJ	Mudanjiang	6.22	289	P	Pn	17 58 59.5	-0.9
MDJ				AMB	AMB		
	comp=Z,25nm,0.6s						
MDJ				AMB	AMB		
	comp=Z,118nm,4.3s						
MAJO	Matsushiro	6.29	177	eP	Pn	17 59 01.1	-0.4
MAT	Matsushiro	6.29	177	P	Pn	17 59 02.6	+1.1
MAT				eS	S	18 00 15.1	-0.5
MJAR	Matsushiro Arr	6.29	177	P	Pn	17 59 01.9	+0.4
	comp=Z,1.5nm,0.3s,baz=345,slow=13,SNR=20						
MJAR	Matsushiro Arr	6.29	177	P	Pn	17 59 01.9	+0.4
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS	Korea Array	9.29	238	P	Pn	17 59 39.0	+0.4
	comp=Z,0.4nm,0.3s,baz=56,slow=12,SNR=18						
PETK	Petropavlovsk-	16.76	45	P	P	18 01 07.0	+0.3
	comp=Z,0.1nm,0.3s,baz=225,slow=5.5,SNR=5.0						
JOW	Kunigami	17.76	209	P	P	18 01 18.0	+0.2
	comp=Z,0.4nm,0.3s,baz=288,slow=17,SNR=2.7						
BOD	Bodaibo	21.19	323	eP	P	18 01 51.6	-1.9
SONM	Songino Array	22.55	294	P	P	18 02 05.2	-0.9
	comp=Z,1.4nm,0.5s,mb3.5,baz=86,slow=8.4,SNR=13						
SONM	Songino Array	22.55	294	P	P	18 02 05.2	-0.9
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	36.09	307	P	P	18 04 04.2	-0.7
	comp=Z,2.4nm,0.5s,mb4.0,baz=84,slow=8.2,SNR=14						
ZALV				PcP	PcP	18 06 24.4	+0.2
	comp=Z,1.1nm,0.6s,baz=112,slow=3.5,SNR=4.8						
ZALV	Zalesovo Beam	36.09	307	P	P	18 04 04.2	-0.7
ZALV				PcP	PcP	18 06 24.4	+0.2
ZAL	Zalesovo	36.10	307	P	P	18 04 04.2	-0.8
ZAL						18 06 24.4	
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	38.90	296	P	P	18 04 27.8	-0.7
	comp=Z,2.3nm,0.6s,mb3.8,baz=95,slow=10,SNR=31						
MKAR	Makanchi Array	38.90	296	P	P	18 04 27.8	-0.6
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	40.82	246	P	P	18 04 46.1	+1.6
	comp=Z,1.2nm,0.7s,mb3.2,baz=39,slow=6.2,SNR=13						
CMAR	Chiang Mai Arr	40.82	246	P	P	18 04 46.2	+1.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	57.59	337	P	P	18 06 50.3	+0.1
	comp=Z,3.2nm,1.1s,mb3.7,baz=51,slow=9.6,SNR=5.3						
ARCES	ARCESS Array B	57.59	337	P	P	18 06 50.3	+0.1
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
JOF	Joensuu	59.56	329	ep	P	18 07 03.4	-0.3
	comp=Z,0.8nm,0.4s,mb3.6						
JOF	Joensuu	59.56	329	eP	P	18 07 03.4	-0.3
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
KAF	Kangasniemi	61.90	330	ep	P	18 07 19.0	-0.4
	comp=Z,0.9nm,0.4s,mb3.8						
KAF	Kangasniemi	61.90	330	eP	P	18 07 19.0	-0.4
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
WRA	Warramunga Arr	62.55	184	P	P	18 07 23.9	-0.3
	comp=Z,0.3nm,0.5s,mb3.2,baz=1.2,slow=7.3,SNR=16						
ASAR	Alice Springs	66.27	184	P	P	18 07 49.0	+0.9
	comp=Z,0.3nm,0.7s,mb3.1,baz=0.3,slow=6.3,SNR=6.1						
NOA	NORSAR Array B	67.77	335	P	P	18 07 57.3	+0.1
	comp=Z,0.8nm,0.6s,mb3.7,baz=40,slow=6.2,SNR=2.9						
NOA	NORSAR Array B	67.77	335	P	P	18 07 57.3	+0.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	67.77	335	P	P	18 07 57.3	+0.1
AKASG	Malin Array Be	68.06	319	P	P	18 07 58.7	-0.5
	comp=Z,0.9nm,0.4s,mb3.8,baz=45,slow=6.8,SNR=6.8						
AKASG	Malin Array Be	68.06	319	P	P	18 07 58.7	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	68.06	319	P	P	18 07 58.7	-0.5
NVAR	Mina Array Bea	73.70	53	P	P	18 08 35.0	+1.9
	comp=Z,0.6nm,0.7s,mb3.3,baz=299,slow=6.6,SNR=4.6						
PDAR	Pinedale Array	75.53	45	P	P	18 08 44.9	+1.4
	comp=Z,0.6nm,0.4s,mb3.6,baz=74,slow=0.5,SNR=7.6						
LPAZ	La Paz	145.49	48	PKPbc	PKPbc	18 16 37.1	+1.6
	comp=Z,0.8nm,0.4s,baz=349,slow=5.2,SNR=5.9						
LPAZ	La Paz	145.49	48	PKP2	PKPab	18 16 37.1	+1.0
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BDFB	Brasilia	152.44	12	PKPbc	PKPbc	18 16 54.9	+1.8
	comp=Z,1.5nm,0.5s,baz=61,slow=4.8,SNR=3.1						
BDFB	Brasilia	152.44	12	PKIKP	PKPbc	18 16 54.9	+1.8
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.5s						

ISCJB ***02*** *18:23:03.9±1.1, 2305S±007×179.17E±0.10, h535km±15km, mb4.2/15, Error ellipse: s-maj=14.6km s-min=11.0km az=21.7*
IDC ***02*** *18:23:04.8±1.5, 2299S×17922E, h535km±17km, mb3.6/13, mb1 3.8/16, mb1mx3.7/21, mbtmp3.7/16, Error ellipse: s-maj=14.9km s-min=13.3km az=114.0*
NEIC ***02*** *18:23:04.6±0.9, 2302S×17925E, h537km±13km, mb4.6/7, Error ellipse: s-maj=15.4km s-min=10.1km az=139.0*
ISC 02 18:23:04.7±1.0**, 2312S**±009×**1793E**±01**, h534**km±14km**, n42, σ1§07**/36**, mb4.2**/15**, 9C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	6.62	158	P	P	18 24 48.7	+0.4
	43nm,0.3s,baz=17,slow=19,SNR=3.0						
AFI	Afiamalu	12.50	44	P	P	18 25 47.8	-0.7
	7.0nm,0.3s,baz=86,slow=5.1,SNR=8.8						
AFI	Afiamalu	12.50	44	P	P	18 25 47.8	-0.7
URZ	Urewera	15.21	186	P	P	18 26 15.6	-0.7
	2.3nm,0.3s,baz=24,slow=2.5,SNR=18						
URZ				S	S	18 28 50.9	-3.3
	2.0nm,0.3s,baz=68,slow=19,SNR=13						
RPZ	Rata Peaks	21.63	196	P	P	18 27 18.4	+2.2
	13nm,0.6s,mb4.7,baz=358,slow=5.2,SNR=12						
ARMA	Armidale	25.67	248⇑	iP	P	18 27 54.3	+2.1
CNB	Canberra Magne	28.66	238⇑	iP	P	18 28 20.0	+1.6
CTA	Charters Tower	30.79	269⇑	iP	P	18 28 37.7	+0.7
	16nm,0.4s,mb4.9						
CTA	Charters Tower	30.79	269	P	P	18 28 37.9	+0.8
	20nm,0.5s,mb5.0,baz=95,slow=11,SNR=49						
CTAO	Charters Tower	30.79	269	eP	P	18 28 37.7	+0.6
	53nm,1.1s,mb5.0						
TOO	Toolangi	32.30	236⇑	iP	P	18 28 50.9	+1.1
STKA	Stephens Creek	34.38	247⇑	iP	P	18 29 08.2	+0.8
	8.0nm,0.4s,mb4.6						
STKA	Stephens Creek	34.38	247	P	P	18 29 08.2	+0.8
	9.8nm,0.5s,mb4.6,baz=88,slow=9.0,SNR=43						
ASAR	Alice Springs	41.49	260	P	P	18 30 05.2	-0.2
	12nm,0.8s,mb4.5,baz=88,slow=6.1,SNR=132						
ASAR				ScP	ScP	18 34 49.2	-0.6
	1.3nm,0.7s,baz=111,slow=3.5,SNR=8.9						
ASAR				S	S	18 35 38.3	-4.1
	0.9nm,0.9s,baz=100,slow=14,SNR=5.2						
WB2	Warramunga Arr	41.76	266⇑	iP	P	18 30 06.7	-0.9
WRA	Warramunga Arr	41.77	266	P	P	18 30 06.8	-0.8
	6.0nm,0.6s,mb4.3,baz=95,slow=8.1,SNR=143						
WRA				S	S	18 35 39.5	-7.2
	0.6nm,0.8s,baz=101,slow=16,SNR=5.2						
FORT	Forrest	45.94	249⇑	iP	P	18 30 39.0	-0.8
	48nm,0.6s,mb5.2						
GUMO	Guam	49.63	314	P	P	18 31 05.1	-2.5
	9.0nm,0.4s,mb4.5,baz=176,slow=19,SNR=3.2						
FITZ	Fitzroy Crossi	50.20	265⇑	iP	P	18 31 11.3	-0.5
	6.0nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	50.20	265	P	P	18 31 11.7	-0.1
	2.7nm,0.5s,mb3.9,baz=140,slow=7.8,SNR=22						
KLBR	Kellerberrin	54.66	247	eP	P	18 31 42.5	-1.1
	7.1nm,0.7s,mb4.0						
MUN	Mundaring	55.91	246	eP	P	18 31 51.7	-0.6
CASY	Casey	60.51	206	eP	P	18 32 22.1	-0.7
MJAR	Matsushiro Arr	70.86	326	P	P	18 33 27.3	-0.5
	2.2nm,0.8s,mb3.7,baz=164,slow=5.2,SNR=7.2						
KSRS	Korea Array	77.20	320	P	P	18 34 04.6	+0.9
	0.6nm,0.6s,mb3.2,baz=128,slow=4.0,SNR=4.1						
PETK	Petropavlovsk-	78.18	347	P	P	18 34 08.6	0.0
	2.9nm,0.7s,mb3.7,baz=116,slow=6.5,SNR=4.3						
PETK	Petropavlovsk-	78.18	347	P	P	18 34 08.6	0.0
MAW	Mawson	78.24	201⇑	iP	P	18 34 09.3	+0.5
	3.4nm,0.7s,mb3.8						
MAW	Mawson	78.24	201	P	P	18 34 09.4	+0.6
	4.0nm,0.7s,mb3.9,baz=129,slow=6.4,SNR=18						
NVAR	Mina Array Bea	84.67	44	P	P	18 34 43.2	+1.0
	0.6nm,0.5s,mb3.4,baz=224,slow=10,SNR=5.3						
SNAA	Sanae	85.46	179	e	P	18 34 44.7	-0.8
SNAA				e		18 34 46.3	
VNA3	Neumayer Olymp	85.69	177	e	P	18 34 46.3	-0.4
VNA3				e		18 34 48.1	
PDAR	Pinedale Array	92.61	44	P	P	18 35 20.3	+1.1
	0.3nm,0.6s,mb3.5,baz=207,slow=3.7,SNR=2.8						
MKAR	Makanchi Array	111.11	313	PKiKP	PKiKP	18 40 36.2	-1.3
	0.2nm,0.8s,baz=54,slow=3.6,SNR=3.0						
MKAR	Makanchi Array	111.11	313	PKPdf	PKiKP	18 40 36.2	-1.3
ARCES	ARCESS Array B	130.98	348	PKP	PKPdf	18 41 13.9	-1.0
	1.7nm,0.8s,baz=62,slow=2.1,SNR=11						
NOA	NORSAR Array B	141.20	351	PKhKP		18 41 28.5	
	0.5nm,0.6s,baz=27,slow=1.7,SNR=3.3						
AKASG	Malin Array Be	143.94	327	PKP	PKPdf	18 41 37.0	-2.1
	2.0nm,0.4s,baz=44,slow=3.9,SNR=15						
CLL	Collm	149.91	343⇓	iPKPbc	PKPbc	18 41 54.1	-0.4
	comp=Z,7.0nm,0.7s						
BRG	Berggiesshubel	150.03	341	i P	PKPbc	18 41 54.6	-0.1
	comp=Z,4.5nm,0.6s						
GERES	GERESS Array B	151.88	340	PKPbc	PKPbc	18 41 57.6	-1.5
	comp=Z,0.7nm,0.6s,baz=5.7,slow=1.3,SNR=7.3						
GERES				PKPab	PKPab	18 42 10.4	-0.3
	comp=Z,0.4nm,0.6s,baz=20,slow=4.3,SNR=4.9						
TORD	Torodi Ar. Bea	169.82	194	PKPab	PKPab	18 43 29.4	-0.4
	comp=Z,0.4nm,0.6s,baz=183,slow=2.8,SNR=6.2						

KRSC 02 18:31:09.7±0.2**, 5502N**×**16178E, h42**km±42km**, ML3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.47	184	eP	Pn	18 31 19.7	-0.3
MKZ				i S	Sn	18 31 27.6	+0.3
TUMR	Tumrok	0.97	286	P	Pn	18 31 28.5	+1.6
TUMR				i S	Sn	18 31 42.7	+3.2
BZGR	Bezymyannyi-Gr	1.11	327	eP	Pn	18 31 29.9	+1.2
BZGR				i S	Sn	18 31 45.0	+2.2
ZLN	Zelenaya	1.14	331	eP	Pn	18 31 30.4	+1.2
ZLN				i S	Sn	18 31 46.5	+2.9
KMNR	Kamenistaya	1.15	311	eP	Pn	18 31 30.9	+1.6
KMNR				i S	Sn	18 31 46.5	+2.8
BZMR	Bezymyannaya	1.18	322	eP	Pn	18 31 30.7	+1.1
BZMR				i S	Sn	18 31 47.4	+3.0
BZWR	Bezymyannyi-We	1.20	323	eP	Pn	18 31 31.2	+1.3
BZWR				i S	Sn	18 31 46.8	+1.9
KIRR	Kirishev	1.24	319	eP	Pn	18 31 32.2	+1.7
KIRR				i S	Sn	18 31 49.6	+3.5
CIRR	Tsirk	1.25	332	eP	Pn	18 31 32.0	+1.4
CIRR				i S	Sn	18 31 48.9	+2.8
KPT	Kopyto	1.30	318	eP	Pn	18 31 32.9	+1.6
KPT				i S	Sn	18 31 50.6	+3.2
KBTR	Krutoberegovo	1.33	26	eP	Pn	18 31 32.5	+0.8
KBTR				i S	Sn	18 31 49.9	+1.7
KRSR	Krestovskiy	1.38	331	eP	Pn	18 31 33.7	+1.2
KRSR				i S	Sn	18 31 51.3	+1.8
KLY	Klyuchi	1.45	334	eP	Pn	18 31 33.6	+0.3
KLY				i S	Sn	18 31 51.8	+0.8
KOZ	Kozyrevsk	1.50	315	eP	Pn	18 31 36.8	+2.7
KOZ				i S	Sn	18 31 57.1	+4.7
SRKR	Sorokina	1.67	348	P	Pn	18 31 37.5	+1.0
SRKR				i S	Sn	18 31 58.1	+1.4
KII	Karymskiy	1.68	235	eP	Pn	18 31 38.4	+1.9
SRDR	Sredinnyy	1.75	319	eP	Pn	18 31 38.9	+1.4
SRDR				i S	Sn	18 31 59.7	+1.2
SPN	Mys Shipunski	2.19	209	eP	Pn	18 31 44.1	+0.6
SPN				i S	Sn	18 32 09.2	-0.1
NLC	Nalytchevo	2.34	219	eP	Pn	18 31 47.3	+1.7
NLC				i S	Sn	18 32 15.0	+1.9
AVH	Avacha	2.51	227	eP	Pn	18 31 50.4	+2.5
AVH				eS	Sn	18 32 19.1	+1.9
GNL	Ganaly	2.61	241	eP	Pn	18 31 51.9	+2.6
PET	Petropavlovsk	2.72	224	eP	Pn	18 31 53.0	+2.2
PET				i S	Sn	18 32 24.7	+2.3
RUS	Russkaya	3.24	218	eP	Pn	18 31 59.6	+1.7
RUS				i S	Sn	18 32 35.4	+0.2
MIPR	Malaya Ipel'ka	4.06	229	P	Pn	18 32 12.7	+3.5

IDC 02 18:31:43.3±26.0**, 1212S**×**16538E, h294**km±206km**, mb3.4**/3**, mb1 3.5**/4**, mb1mx3.1**/16**, mbtmp3.3**/4**, Error ellipse: s-maj=223.5km s-min=99.9km az=109.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	20.00	244	P	P	18 35 54.8	+0.1
	0.2nm,0.3s,baz=86,slow=9.9,SNR=3.5						
WRA	Warramunga Arr	30.79	251	P	P	18 37 32.5	+0.1
	0.3nm,0.6s,baz=82,slow=9.0,SNR=8.9						
ASAR	Alice Springs	32.00	245	P	P	18 37 42.8	-0.1
	1.7nm,0.7s,baz=71,slow=9.6,SNR=20						
MKAR	Makanchi Array	94.05	317	P	P	18 44 28.4	0.0
	0.7nm,1.0s,baz=101,slow=6.0,SNR=3.6						

IDC ***02*** *18:38:46.8±0.8, 1180S×16609E, h0km, mb4.3/13, mb1 4.4/13, mb1mx4.3/17, mbtmp4.3/13, MS3.9/12, Ms1 3.9/12, ms1mx3.7/27, Error ellipse: s-maj=25.8km s-min=18.5km az=105.0*
ISCJB ***02*** *18:38:50.9±0.6, 1182S±008×16595E±008, h33km, mb4.5/16, MS3.9/12, Error ellipse: s-maj=13.2km s-min=9.9km az=39.3*
BJI ***02*** *18:38:50.1, 11.15S×16669E, h27km, mB5.1, mb4.7*
NEIC ***02*** *18:38:52.3±0.6, 1179S×16600E, h35km, mb4.5/5, Error ellipse: s-maj=14.9km s-min=12.6km az=112.0*
ISC 02 18:38:50.1±6.0**, 1180S**±009×**16604E**±008**, h16**km±37km**, n38, σ0§85**/26**, mb4.5**/16**, MS3.9**/12**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.43	291	ePn	Pn	18 40 24.7	+0.6
	320nm,0.9s						
HNR				eSn	Sn	18 41 37.6	+0.3
CTA	Charters Tower	20.72	244	eP	P	18 43 30.0	+0.1
	14nm,1.0s						
CTA	Charters Tower	20.72	244	P	P	18 43 30.7	+0.8
	20nm,1.0s,baz=75,slow=11,SNR=8.0						
CTA				LR	LR	18 50 18.4	
	comp=Z,351nm,21.6s,MS3.7,baz=74,slow=33						
CTAO	Charters Tower	20.72	244	ePn	P	18 43 30.0	+0.1
	16nm,1.0s						
AFI	Afiamalu	21.73	98	LR	LR	18 50 53.4	
	comp=Z,449nm,18.4s,MS3.9,baz=251,slow=34						
ARMA	Armidale	22.84	214	eP	P	18 43 53.6	+1.0
RAO	Raoul Island	22.91	142	LR	LR	18 51 05.4	
	comp=Z,236nm,19.1s,MS3.6,baz=143,slow=32						
STKA	Stephens Creek	30.10	225	P	P	18 44 59.8	+0.8
	2.8nm,0.7s,mb4.1,baz=35,slow=12,SNR=3.0						
STKA				PcP	PcP	18 47 59.9	-0.6
	3.3nm,0.8s,baz=334,slow=5.2,SNR=2.8						
STKA				LR	LR	18 54 13.6	
	comp=Z,243nm,21.3s,MS3.8,baz=24,slow=31						
WB2	Warramunga Arr	31.49	251	eP	P	18 45 10.2	-1.2
WRA	Warramunga Arr	31.50	251	P	P	18 45 10.4	-1.1
	2.3nm,0.7s,mb4.1,baz=84,slow=9.3,SNR=19						
RPZ	Rata Peaks	32.09	173	P	P	18 45 15.6	-0.8
	14nm,0.6s,mb5.0,baz=263,slow=2.6,SNR=9.7						
ASAR	Alice Springs	32.72	244	P	P	18 45 20.7	-1.4
	2.0nm,0.7s,mb4.1,baz=68,slow=9.5,SNR=26						
ASAR				PcP	PcP	18 48 07.0	-0.7
	1.2nm,0.8s,baz=87,slow=2.2,SNR=7.0						
ASAR				ScP	ScP	18 51 50.5	-0.7
	1.2nm,0.9s,baz=95,slow=3.1,SNR=6.6						
GUMO	Guam	32.82	320	LR	LR	18 57 12.4	
	comp=Z,270nm,21.1s,MS3.9,baz=270,slow=34						
FITZ	Fitzroy Crossi	39.47	256	eP	P	18 46 20.0	0.0
	4.6nm,0.7s,mb4.3						
FITZ	Fitzroy Crossi	39.47	256	P	P	18 46 19.3	-0.7
	1.2nm,0.6s,mb3.8,baz=93,slow=14,SNR=6.4						
FITZ				PcP	PcP	18 48 27.2	-0.7
	2.2nm,0.8s,baz=56,slow=3.6,SNR=3.5						
FITZ				LR	LR	19 02 24.1	
	comp=Z,250nm,19.3s,MS4.1,baz=56,slow=36						
PPT	Papeete	43.24	103	eS	S	18 53 33.1	+15
	129nm,24.0s						
PPT				eLQ		18 57 11.7	
	417nm,27.0s						
PPT				eLR	LR	18 58 57.5	
	172nm,22.5s						
PPT	Papeete	43.24	103	LR	LR	19 01 34.8	
	comp=Z,174nm,20.6s,MS3.9,baz=33,slow=32						
MJAR	Matsushiro Arr	54.77	333	P	P	18 48 17.5	-1.5
	4.6nm,1.1s,mb4.4,baz=165,slow=7.4,SNR=6.9						
RKT	Rikitea	57.06	110	eLR	LR	19 05 17.2	
	186nm,23.0s						
KSRS	Korea Array	60.66	326	P	P	18 49 00.5	0.0
	1.2nm,0.6s,mb4.2,baz=135,slow=7.8,SNR=5.3						
PETK	Petropavlovsk-	65.04	354	LR	LR	19 12 39.2	
	comp=Z,61nm,20.1s,MS3.8,baz=192,slow=31						
SBA	Scott Base	66.05	180	eP	P	18 49 35.9	+0.4
	58nm,1.8s,mb5.3						
CMAR	Chiang Mai Arr	72.68	294	P	P	18 50 18.6	+1.0
	1.1nm,0.6s,mb3.9,baz=122,slow=4.6,SNR=11						
CMAR				LR	LR	19 22 01.2	
	comp=Z,38nm,20.5s,MS3.6,baz=195,slow=36						
LZH	Lanzhou	75.47	312	eP	P	18 50 35.0	+1.4
LZH				AP	pP	18 50 44.2	+5.2
LZH				XP	sP	18 50 48.5	+7.6
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,89nm,4.6s						
ULN	Ulaanbaatar	79.08	324	eP	P	18 50 53.4	-0.1
	comp=Z,21nm,1.3s,mb4.9						
SONM	Songino Array	79.44	324	P	P	18 50 55.9	+0.4
	comp=Z,4.5nm,0.9s,mb4.4,baz=136,slow=2.8,SNR=27						
SONM				LR	LR	19 22 41.7	
	comp=Z,64nm,19.0s,MS4.0,baz=124,slow=33						
MAW	Mawson	84.14	202	P	P	18 51 20.7	+0.7
	comp=Z,2.9nm,1.0s,mb4.4,baz=357,slow=2.0,SNR=4.2						
NVAR	Mina Array Bea	86.29	50	P	P	18 51 32.0	+0.7
	comp=Z,0.3nm,0.5s,mb3.8,baz=232,slow=7.3,SNR=3.8						
MKAR	Makanchi Array	94.27	317	P	P	18 52 08.3	-0.3
	comp=Z,8.5nm,0.7s,mb5.3,baz=108,slow=6.5,SNR=85						
MKAR				LR	LR	19 33 35.0	
	comp=Z,56nm,19.3s,MS4.0,baz=274,slow=35						
MKAR	Makanchi Array	94.27	317	P	P	18 52 08.3	-0.3
MKAR				LR	LR	19 33 35.0	
ZALV	Zalesovo Beam	94.33	324	P	P	18 52 07.6	-1.1
	comp=Z,3.4nm,0.7s,mb4.9,baz=106,slow=3.4,SNR=18						
ZALV				LR	LR	19 32 44.0	
	comp=Z,41nm,20.5s,MS3.9,baz=79,slow=34						
ARCES	ARCESS Array B	117.13	345	PKP	PKPdf	18 57 31.8	-2.0
	comp=Z,0.9nm,0.8s,baz=181,slow=38,SNR=3.7						
BOSA	Boshof	124.76	223	PKP	PKPdf	18 57 49.3	-0.4
	comp=Z,1.3nm,0.5s,baz=312,slow=4.2,SNR=8.4						
ORIF	Oris-en-Rattie	142.88	336	ePKP1	PKPdf	18 58 18.3	-4.7
SMRF	Simiane la Rot	143.78	336	ePKP1	PKPdf	18 58 21.5	-3.1
	comp=Z,7.7nm,1.0s						
MTLF	Montolieu	145.59	339	ePKP1	PKPbc	18 58 26.7	-1.3
	comp=Z,11nm,1.0s						
KEST	Kesra	148.19	322	PKPbc	PKPbc	18 58 34.9	-0.7
	comp=Z,2.5nm,0.9s,baz=314,slow=7.4,SNR=5.7						
TORD	Torodi Ar. Bea	164.65	277	PKP	PKPdf	18 58 51.4	-2.8
	comp=Z,0.5nm,0.8s,baz=101,slow=1.4,SNR=3.2						
TORD				PKPab	PKPab	18 59 49.9	+0.3
	comp=Z,0.4nm,0.9s,baz=50,slow=3.4,SNR=3.3						

*IDC **02** 18:40:41.6±8.0, 1186S×16596E, h0km, mb4.1/5, mb1 4.1/5, mb1mx3.8/15, mbtmp4.1/5, Error ellipse: s-maj=241.2km s-min=37.9km az=124.0*
*NEIC **02** 18:40:47.6±7.5, 1188S×16578E, h35km, mb4.2/1, Error ellipse: s-maj=228.0km s-min=19.2km az=126.0*
ISC 02 18:40:47.4±9.4**, 12S**±1×**166E**±**, h35km, n8, σ0^{s}61**/8**, mb4.0**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	**Charters Tower**	**20.48**	**244**	*e*P	**P**	**18 45 21.5**	**-0.9**
	14nm,1.2s						
WRA	**Warramunga Arr**	**31.28**	**251**	P	**P**	**18 47 04.5**	**+0.3**
	0.5nm,0.4s,mb3.7,baz=84,slow=8.9,SNR=4.8						
ASAR	**Alice Springs**	**32.49**	**245**	P	**P**	**18 47 15.6**	**+0.8**
	0.6nm,0.7s,mb3.5,baz=65,slow=9.2,SNR=4.1						
ULN	**Ulaanbaatar**	**79.08**	**324**	*e*P	**P**	**18 52 48.4**	**+0.3**
SONM	**Songino Array**	**79.45**	**324**	P	**P**	**18 52 50.4**	**+0.4**
	0.8nm,0.6s,mb3.8,baz=139,slow=5.9,SNR=4.1						
MKAR	**Makanchi Array**	**94.24**	**317**	P	**P**	**18 54 02.9**	**0.0**
	2.8nm,0.6s,mb4.8,baz=107,slow=6.5,SNR=12						
ZALV	**Zalesovo Beam**	**94.34**	**324**	P	**P**	**18 54 02.2**	**-0.9**
	1.1nm,0.7s,mb4.4,baz=108,slow=3.8,SNR=4.2						
ZALV	**Zalesovo Beam**	**94.34**	**324**	P	**P**	**18 54 02.2**	**-0.9**

IDC 02 18:43:22.9±8.4**, 1228S×16667E, h0km, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.5**/15**, mbtmp3.7**/3**, Error ellipse: s-maj=254.4km s-min=55.0km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.93**	**252**	P	P	18 49 50.6	0.0
	0.5nm,0.9s,baz=84,slow=9.3,SNR=5.1						
ASAR	**Alice Springs**	**33.07**	**245**	P	P	18 50 00.8	+0.2
	0.4nm,0.7s,baz=70,slow=10.0,SNR=4.1						
MKAR	**Makanchi Array**	**95.04**	**317**	P	P	18 56 47.5	-0.1
	0.9nm,0.7s,baz=88,slow=6.6,SNR=7.4						

IDC 02 18:54:11.9±62.0**, 1104S×16641E, h0km, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.5**/15**, mbtmp3.8**/3**, Error ellipse: s-maj=1054.0km s-min=119.3km az=59.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.90**	**224**	P	P	19 00 30.6	+0.3
	2.3nm,0.8s,baz=40,slow=7.9,SNR=3.4						
WRA	**Warramunga Arr**	**32.10**	**250**	P	P	19 00 41.4	+0.4
	0.8nm,0.7s,baz=81,slow=8.7,SNR=12						
ASAR	**Alice Springs**	**33.38**	**244**	P	P	19 00 51.7	-0.5
	0.8nm,0.7s,baz=70,slow=9.6,SNR=13						

IDC 02 18:56:29.0±8.9**, 287S×13842E, h0km, mb3.2**/2**, mb1 3.5**/3**, mb1mx3.3**/12**, mbtmp3.3**/3**, ML3.2**/1**, Error ellipse: s-maj=384.0km s-min=31.7km az=85.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.43**	**193**	P	Pn	19 00 34.1	+0.4
	0.1nm,0.3s,baz=14,slow=12,SNR=9.8						
ASAR	**Alice Springs**	**21.13**	**192**	P	P	19 01 15.5	-0.1
	0.2nm,0.3s,baz=9.0,slow=11,SNR=12						
MKAR	**Makanchi Array**	**69.74**	**323**	P	P	19 07 41.0	+0.1
	0.4nm,0.6s,baz=104,slow=4.6,SNR=3.7						

*CSEM **02** 18:58:10.5±0.1, 3906N×2859E, h8km, MD2.8, Error ellipse: s-maj=2.5km s-min=1.7km az=52.0*
*ISK **02** 18:58:10.4, 3907N×2858E, h4km, MD2.8*
*ISCJB **02** 18:58:11.1±0.7, 3904N±004×2856E±006, h1km±10km, Error ellipse: s-maj=8.7km s-min=5.8km az=42.3*
*DDA **02** 18:58:12.1, 39.10N×2863E, h7km±1km, Md2.8*
ISC 02 18:58:11.5±0.7**, 3905N**±005×**2859E**±007**, h10km**±6km**, n8, σ0^{s}57**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.10**	**91**	*i* P	**Pg**	**18 58 14.4**	**+0.4**
DEMI				*i* S	**Sg**	**18 58 16.3**	**+0.6**
KULA	**Kula-Manisa**	**0.53**	**174**	PG	**Pg**	**18 58 21.7**	**-0.1**
DST	**Dursunbey**	**0.56**	**3**	*e*PG	**Pg**	**18 58 21.4**	**-1.0**
DST				*e*SG	**Sg**	**18 58 29.6**	**-0.1**
AKS	**Akhisar**	**0.63**	**255**	*e*PG	**Pg**	**18 58 23.1**	**-0.5**
BALB	**Balikesir**	**0.81**	**317**	*e*PG	**Pg**	**18 58 26.4**	**-0.8**
BALB				*e*SG	**Sg**	**18 58 37.9**	**+0.2**
KHL	**Karahalli**	**1.02**	**134**	*e*PG	**Pg**	**18 58 31.1**	**0.0**
BALY	**Balya**	**1.03**	**313**	*i* P	**Pb**	**18 58 31.7**	**+0.4**
BALY				*i* S	**Sb**	**18 58 46.0**	**+1.1**
ALT	**Altintas**	**1.18**	**89**	*e*PN	**Pn**	**18 58 33.8**	**-0.2**

*IDC **02** 19:03:56.1±0.8, 120S×28.18E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.9/23, mbtmp3.9/14, ML3.5/1, MS3.8/1, Ms1 3.8/1, ms1mx2.9/33, Error ellipse: s-maj=20.5km s-min=16.7km az=95.0*
*NEIC **02** 19:03:57.3±0.6, 120S×2828E, h10km, Error ellipse: s-maj=15.0km s-min=12.5km az=105.0*
*ISCJB **02** 19:03:58.6±3.3, 123S±005×28.16E±008, h33km±33km, mb4.1/18, Error ellipse: s-maj=13.7km s-min=8.6km az=10.1*
ISC 02 19:04:01.4±2.4**, 120S**±007×**2811E**±008**, h35km**±27km**, n28, σ0^{s}84**/31**, mb4.1**/18**, 1C, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**9.14**	**90**	Pn	**Pn**	**19 06 09.0**	**-1.9**
	0.5nm,0.3s,baz=245,slow=21,SNR=3.0						
KMBO				Sn	**Sn**	**19 07 53.3**	**+0.8**
	0.5nm,0.3s,baz=235,slow=18,SNR=2.7						
KMBO				Lg		19 08 33.6	
	0.5nm,0.3s,baz=243,slow=18,SNR=4.3						
KMBO	**Kilima Mbogo**	**9.14**	**90**	*e*Pn	**Pn**	**19 06 06.0**	**-4.8**
	5.0nm,0.9s						
LSZ	**Lusaka**	**13.99**	**180**	Pn	**Pn**	**19 07 20.9**	**+3.7**
	0.2nm,0.3s,baz=355,slow=15,SNR=6.4						
LSZ				Sn	**Sn**	**19 09 50.2**	**-1.1**
	0.4nm,0.3s,baz=297,slow=23,SNR=2.4						
LSZ				Lg		19 11 12.6	
	0.3nm,0.3s,baz=99,slow=24,SNR=4.5						
TSUM	**Tsumeb**	**20.65**	**209**	P	**P**	**19 08 38.4**	**+0.2**
	1.2nm,0.4s,baz=41,slow=17,SNR=2.1						
TSUM				S	**S**	**19 12 20.7**	**-6.5**
	4.5nm,1.0s,baz=271,slow=19,SNR=2.9						
TSUM				Lg		19 14 41.6	
	6.5nm,0.9s,baz=88,slow=14,SNR=3.0						
LBTB	**Lobatse**	**23.80**	**186**	P	**P**	**19 09 10.7**	**-0.4**
	2.1nm,0.7s,mb3.7,baz=90,slow=10,SNR=3.3						
LBTB				Lg		19 16 24.4	
	2.4nm,0.8s,baz=14,slow=15,SNR=2.0						
LBTB				LR	LR	19 18 46.5	
	comp=Z,206nm,18.2s,baz=174,slow=37						
BOSA	**Boshof**	**27.40**	**185**	P	**P**	**19 09 43.1**	**-0.5**
	1.4nm,0.7s,mb3.6,baz=116,slow=12,SNR=2.8						
TORD	**Torodi Ar. Bea**	**29.83**	**299**	P	**P**	**19 10 05.6**	**+0.1**
	5.5nm,0.8s,mb4.3,baz=110,slow=7.8,SNR=60						
TORD				Lg		19 19 32.1	
	0.6nm,1.0s,baz=275,slow=18,SNR=3.6						
KIC	**Kosan Boka**	**33.65**	**283**	*e*P	**P**	**19 10 39.6**	**+0.5**
	130nm,1.4s						
DBIC	**Dimbokro**	**33.82**	**284**	P	**P**	**19 10 41.2**	**+0.5**
	5.4nm,0.8s,mb4.5,baz=107,slow=11,SNR=17						
LIC	**Lamto**	**33.90**	**283**	⇑*i*P	**P**	**19 10 41.7**	**+0.4**
	6.7nm,0.3s,mb4.7						
LIC	**Lamto**	**33.90**	**283**	*e*P	**P**	**19 10 40.8**	**-0.5**
	12nm,0.3s,mb5.3						
TIC	**Toumodi**	**33.98**	**284**	*e*P	**P**	**19 10 42.4**	**+0.4**
	22nm,0.3s						
KEST	**Kesra**	**40.70**	**336**	P	**P**	**19 11 39.4**	**+0.7**
	0.8nm,0.6s,mb3.5,baz=18,slow=2.2,SNR=4.2						
LMR	**La Mourre**	**48.39**	**339**	*e*P	**P**	**19 12 38.9**	**-1.0**
FRF	**La Foret Royal**	**48.54**	**339**	*e*P	**P**	**19 12 39.7**	**-1.4**
	21nm,1.2s,mb4.7						
MBDF	**Montbardon**	**49.52**	**340**	*e*P	**P**	**19 12 48.7**	**+0.2**
	7.3nm,0.9s,mb4.4						
ESDC	**Sonseca Array**	**50.16**	**328**	P	**P**	**19 12 54.3**	**+0.8**
	0.4nm,0.6s,mb3.6,baz=142,slow=13,SNR=4.0						
VIVF	**Saint-Julien-l**	**50.37**	**338**	*e*P	**P**	**19 12 54.5**	**-0.5**
	25nm,1.4s,mb4.7						
ETSF	**Etsaut**	**50.91**	**333**	*e*P	**P**	**19 12 59.1**	**0.0**
	14nm,1.1s,mb4.5						
GERES	**GERESS Array B**	**51.39**	**348**	P	**P**	**19 13 02.0**	**-0.6**
	0.4nm,0.7s,mb3.5,baz=169,slow=9.1,SNR=4.3						
HINF	**Hinteralfeld**	**52.22**	**342**	*e*P	**P**	**19 13 08.5**	**-0.3**
	9.8nm,1.1s,mb4.3						
TCF	**Toulx Ste Croi**	**52.51**	**338**	*e*P	**P**	**19 13 10.7**	**-0.3**
NOA	**NORSAR Array B**	**63.42**	**351**	P	**P**	**19 14 26.6**	**-0.6**
	1.5nm,0.8s,mb4.2,baz=160,slow=6.7,SNR=3.3						
MKAR	**Makanchi Array**	**67.24**	**37**	P	**P**	**19 14 52.2**	**0.0**
	0.3nm,0.4s,mb3.7,baz=233,slow=6.0,SNR=3.6						
MKAR	**Makanchi Array**	**67.24**	**37**	P	**P**	**19 14 52.2**	**0.0**
ARCES	**ARCESS Array B**	**70.62**	**359**	P	**P**	**19 15 11.8**	**-1.0**
	1.6nm,0.9s,mb3.9,baz=159,slow=5.3,SNR=4.2						
BDFB	**Brasilia**	**76.32**	**254**	P	**P**	**19 15 48.9**	**+1.5**
	2.4nm,0.6s,mb4.3,baz=80,slow=10.0,SNR=4.8						
SONM	**Songino Array**	**83.02**	**42**	P	**P**	**19 16 25.3**	**+2.1**
	0.3nm,0.8s,mb3.4,baz=250,slow=2.9,SNR=3.8						

*ISCJB **02** 19:07:28.0±2.8, 1174S±007×16593E±009, h36km±23km, mb4.5/27, MS3.8/9, Error ellipse: s-maj=14.8km s-min=11.3km az=10.8*
*NEIC **02** 19:07:29.3±0.4, 1170S×16600E, h35km, mb4.7/12, Error ellipse: s-maj=11.8km s-min=8.3km az=140.0*
*IDC **02** 19:07:35.7±5.5, 1185S×16593E, h89km±48km, mb4.2/20, mb1 4.3/20, mb1mx4.2/23, mbtmp4.2/20, MS3.8/9, Ms1 3.8/9, ms1mx3.5/28, Error ellipse: s-maj=19.2km s-min=15.5km az=77.0*
ISC 02 19:07:30.9±2.3**, 1173S**±007×**16594E**±009**, h47km**±20km**, n60, σ1^{s}03**/44**, mb4.5**/27**, MS3.8**/9**, 2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.32**	**291**	*e*Pn	**Pn**	**19 09 00.6**	**-1.0**
	166nm,0.8s						
HNR				*e*Sn	**Sn**	**19 10 12.4**	**0.0**
PMG	**Port Moresby**	**18.61**	**275**	*e*P	**Pn**	**19 11 45.0**	**-0.2**
	54nm,1.2s						
CTA	**Charters Tower**	**20.66**	**244**	*e*P	**P**	**19 12 08.6**	**+1.8**
	17nm,0.6s						
CTA	**Charters Tower**	**20.66**	**244**	P	**P**	**19 12 08.8**	**+1.9**
	21nm,0.6s,baz=72,slow=10,SNR=17						
CTAO	**Charters Tower**	**20.66**	**244**	*e*P	**P**	**19 12 08.6**	**+1.7**
	24nm,0.8s						
AFI	**Afiamalu**	**21.84**	**98**	LR	LR	19 18 30.5	
	comp=Z,262nm,21.4s,MS3.6,baz=76,slow=30						
ARMA	**Armidale**	**22.85**	**213**	*e*P	**P**	**19 12 31.5**	**+1.4**
URZ	**Urewera**	**28.24**	**161**	P	**P**	**19 13 18.3**	**-1.2**
	2.8nm,0.5s,mb4.2,baz=104,slow=15,SNR=6.2						
STKA	**Stephens Creek**	**30.08**	**224**	*e*P	**P**	**19 13 37.1**	**+1.2**
	5.8nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**30.08**	**224**	P	**P**	**19 13 36.2**	**+0.3**
	4.8nm,0.8s,mb4.3,baz=32,slow=8.0,SNR=8.8						
STKA				PcP	PcP	19 16 37.0	+0.1
	2.5nm,0.8s,baz=315,slow=12,SNR=2.9						
STKA				LR	LR	19 25 35.8	
	comp=Z,239nm,19.0s,MS3.9,baz=25,slow=36						
WB2	**Warramunga Arr**	**31.42**	**251**	⇓*i*P	**P**	**19 13 47.5**	**-0.4**
WRA	**Warramunga Arr**	**31.43**	**251**	P	**P**	**19 13 47.7**	**-0.3**
	8.2nm,0.7s,mb4.7,baz=84,slow=9.0,SNR=72						
WRA				PcP	PcP	19 16 40.6	-0.1
	1.7nm,0.8s,baz=83,slow=3.2,SNR=7.4						
WRA				LR	LR	19 25 26.0	
	comp=Z,193nm,20.3s,MS3.8,baz=85,slow=34						
RPZ	**Rata Peaks**	**32.17**	**173**	P	**P**	**19 13 55.1**	**+0.9**
	13nm,0.6s,mb5.0,baz=228,slow=5.6,SNR=11						
RPZ	**Rata Peaks**	**32.17**	**173**	P	**P**	**19 13 55.1**	**+0.9**
ASAR	**Alice Springs**	**32.66**	**244**	P	**P**	**19 13 58.1**	**-0.6**
	13nm,0.7s,mb5.0,baz=69,slow=9.6,SNR=218						
ASAR				PcP	PcP	19 16 43.8	-0.2
	2.1nm,0.7s,baz=70,slow=2.8,SNR=12						
GUMO	**Guam**	**32.70**	**320**	LR	LR	19 25 02.6	
	comp=Z,92nm,18.8s,MS3.5,baz=284,slow=32						
KAKA	**Kakadu**	**32.74**	**265**	*e*P	**P**	**19 13 58.4**	**-1.1**
	9.9nm,0.6s,mb4.9						
KAKA	**Kakadu**	**32.74**	**265**	*e*P	**P**	**19 13 58.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**39.39**	**256**	*e*P	**P**	**19 14 55.9**	**-0.5**
	7.1nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**39.39**	**256**	P	**P**	**19 14 56.3**	**-0.1**
	3.3nm,0.6s,mb4.3,baz=138,slow=7.9,SNR=26						
BATI	**Baumata**	**41.50**	**268**	P	**P**	**19 15 15.0**	**+1.1**
	17nm,0.8s,mb4.7,baz=85,slow=5.5,SNR=4.5						
PPT	**Papeete**	**43.35**	**103**	*e*LR	LR	19 27 32.1	
	218nm,27.5s						
PPT	**Papeete**	**43.35**	**103**	LR	LR	19 31 28.6	
	comp=Z,146nm,18.1s,MS3.9,baz=81,slow=33						
MBWA	**Marble Bar**	**45.16**	**252**	*e*P	**P**	**19 15 43.5**	**+0.2**
	12nm,0.9s,mb4.7						
KAPI	**Kappang**	**46.13**	**274**	P	**P**	**19 15 50.6**	**-0.5**
	7.7nm,0.9s,mb4.6,baz=90,slow=7.8,SNR=4.0						
KLBR	**Kellerberrin**	**48.51**	**238**	*e*P	**P**	**19 16 09.3**	**0.0**
	19nm,1.2s,mb5.0						
JOW	**Kunigami**	**52.98**	**317**	LR	LR	19 34 27.3	
	comp=Z,80nm,21.6s,MS3.7,baz=158,slow=30						
MJAR	**Matsushiro Arr**	**54.66**	**333**	P	**P**	**19 16 56.1**	**+0.9**
	1.2nm,0.8s,mb4.0,baz=166,slow=8.4,SNR=4.1						
RKT	**Rikitea**	**57.18**	**110**	*e*LR	LR	19 33 36.6	
	350nm,37.5s						
ASAJ	**Asahikawa**	**59.50**	**341**	P	**P**	**19 17 31.5**	**+2.3**
	6.1nm,0.8s,mb4.7,baz=170,slow=12,SNR=2.7						
PETK	**Petropavlovsk-**	**64.96**	**355**	P	**P**	**19 18 07.2**	**+1.7**
	1.6nm,0.7s,mb4.2,baz=137,slow=7.7,SNR=4.4						
PETK	**Petropavlovsk-**	**64.96**	**355**	P	**P**	**19 18 07.2**	**+1.7**
CASY	**Casey**	**65.81**	**201**	⇓*i*P	**P**	**19 18 10.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**72.56**	**294**	P	**P**	**19 18 54.1**	**+0.5**
	4.3nm,0.7s,mb4.5,baz=122,slow=4.6,SNR=32						
KDAK	**Kodiak Island**	**77.14**	**21**	P	**P**	**19 19 19.6**	**+0.4**
	2.2nm,0.6s,mb4.3,baz=162,slow=6.4,SNR=3.8						
ULN	**Ulaanbaatar**	**78.96**	**324**	*e*P	**P**	**19 19 27.8**	**-1.8**
	1.7nm,0.8s,mb4.0						
SONM	**Songino Array**	**79.33**	**324**	P	**P**	**19 19 32.1**	**+0.5**
	0.4nm,0.5s,mb3.6,baz=140,slow=5.8,SNR=4.6						
TTA	**Tatalina**	**80.02**	**17**	*e*P	**P**	**19 19 35.5**	**+0.6**
	6.0nm,0.8s,mb4.6						
KIPM	**Iron Peak**	**82.99**	**47**	*e*P	**P**	**19 19 50.3**	**-0.9**
COLA	**College**	**83.87**	**18**	*e*P	**P**	**19 19 54.4**	**-0.8**
	10nm,0.8s,mb5.0						
MAW	**Mawson**	**84.16**	**202**	P	**P**	**19 19 55.3**	**-1.4**
	1.0nm,0.7s,mb4.0,baz=48,slow=7.2,SNR=4.2						
HUMO	**Hull Mountain**	**84.38**	**45**	*e*P	**P**	**19 19 58.5**	**+0.2**
	3.3nm,0.9s,mb4.5						
HYT	**Haines Junctio**	**84.93**	**24**	*e*P	**P**	**19 20 03.0**	**+2.3**
MTUM	**Tungsten Hills**	**85.79**	**51**	*e*P	**P**	**19 20 05.5**	**0.0**
EGAK	**Eagle**	**85.95**	**20**	*e*P	**P**	**19 20 02.9**	**-2.8**
	8.3nm,0.7s,mb5.1						
NVAR	**Mina Array Bea**	**86.32**	**50**	P	**P**	**19 20 08.5**	**+0.4**
	2.4nm,0.7s,mb4.5,baz=236,slow=9.0,SNR=20						
PFO	**Pinyon Flat Ob**	**86.32**	**55**	LR	LR	19 49 38.5	
	comp=Z,92nm,19.5s,MS4.2,baz=126,slow=29						
LPIG	**La Paz**	**89.12**	**65**	LR	LR	19 53 24.2	
	comp=Z,41nm,20.7s,MS3.8,baz=271,slow=31						
MKAR	**Makanchi Array**	**94.15**	**317**	P	**P**	**19 20 44.0**	**-0.6**
	3.0nm,0.8s,mb4.8,baz=106,slow=4.3,SNR=15						
ZALV	**Zalesovo Beam**	**94.22**	**324**	P	**P**	**19 20 43.4**	**-1.3**
	0.6nm,0.4s,mb4.3,baz=79,slow=3.1,SNR=3.0						
YKA	**Yellowknife Ar**	**95.49**	**27**	P	**P**	**19 20 49.5**	**-0.8**
	0.6nm,0.7s,mb4.2,baz=255,slow=4.8,SNR=5.2						
KURK	**Kurchatov**	**97.28**	**320**	LR	LR	20 01 39.4	
	comp=Z,50nm,20.7s,MS4.0,baz=205,slow=33						
ARCES	**ARCESS Array B**	**117.04**	**345**	PKP	PKPdf	19 26 07.6	-2.4
	0.9nm,0.6s,baz=72,slow=0.9,SNR=10						
LPAZ	**La Paz**	**119.71**	**116**	PKP	PKPdf	19 26 17.6	+0.8
	0.6nm,0.7s,baz=179,slow=5.5,SNR=4.0						
BOSA	**Boshof**	**124.75**	**223**	PKP	PKPdf	19 26 26.1	-0.1
	1.8nm,0.8s,baz=116,slow=5.2,SNR=4.1						
LPG	**La Plagne**	**141.95**	**336**	*e*PKP1	PKPdf	19 26 56.0	-1.8
MTLF	**Montolieu**	**145.49**	**339**	*e*PKP1	PKPbc	19 27 01.7	-2.4
	7.2nm,0.8s						
KEST	**Kesra**	**148.07**	**322**	PKPbc	PKPbc	19 27 10.8	-1.0
	1.3nm,0.9s,baz=61,slow=23,SNR=5.4						
ESDC	**Sonseca Array**	**150.76**	**344**	PKPbc	PKPbc	19 27 18.7	+0.3
	0.5nm,0.6s,baz=13,slow=2.2,SNR=7.1						
TORD	**Torodi Ar. Bea**	**164.55**	**277**	PKP	PKPdf	19 27 29.7	-0.8
	0.4nm,0.8s,baz=116,slow=3.6,SNR=2.6						

IDC 02 19:13:06.0±1.9**, 215N×12582E, h0km, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/16**, mbtmp3.5**/3**, Error ellipse: s-maj=177.1km s-min=24.5km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.50**	**160**	P	P	19 18 17.0	-0.8
	0.8nm,0.4s,baz=338,slow=11,SNR=22						
ASAR	**Alice Springs**	**26.84**	**163**	P	P	19 18 49.3	+0.9
	0.2nm,0.3s,baz=342,slow=10,SNR=7.1						
MKAR	**Makanchi Array**	**58.34**	**326**	P	P	19 23 02.8	-0.1
	0.3nm,0.3s,baz=111,slow=8.2,SNR=4.2						

*IDC **02** 19:14:01.5±2.6, 1197S×16532E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.9/15, mbtmp3.8/7, Error ellipse: s-maj=82.4km s-min=27.8km az=120.0*
*NEIC **02** 19:14:06.6±2.3, 1195S×16529E, h35km, mb3.8/1, Error ellipse: s-maj=72.8km s-min=23.6km az=119.0*
ISC 02 19:14:03.2±3.4**, 122S**±03×**1659E**±06**, h35km, n10, σ0^{s}59**/9**, mb3.8**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.73**	**225**	P	**P**	**19 20 06.4**	**+0.1**
	2.8nm,1.0s,mb3.9,baz=59,slow=5.9,SNR=2.8						
WRA	**Warramunga Arr**	**31.26**	**252**	P	**P**	**19 20 19.9**	**-0.1**
	0.4nm,0.6s,mb3.4,baz=84,slow=9.0,SNR=3.5						
ASAR	**Alice Springs**	**32.44**	**245**	P	**P**	**19 20 30.0**	**-0.3**
	0.9nm,0.7s,mb3.7,baz=69,slow=9.2,SNR=12						
CMAR	**Chiang Mai Arr**	**72.74**	**294**	P	**P**	**19 25 29.1**	**+0.7**
	0.3nm,0.5s,mb3.5,baz=127,slow=4.5,SNR=4.7						
ULN	**Ulaanbaatar**	**79.35**	**324**	*e*P	**P**	**19 26 04.1**	**-1.3**
	1.0nm,1.0s,mb3.7						
SONM	**Songino Array**	**79.71**	**324**	P	**P**	**19 26 08.0**	**+0.6**
	0.6nm,0.8s,mb3.6,baz=116,slow=3.4,SNR=4.0						
MKAR	**Makanchi Array**	**94.49**	**317**	P	**P**	**19 27 19.8**	**-0.1**
	0.3nm,0.2s,mb4.3,baz=83,slow=6.0,SNR=3.9						
ZALV	**Zalesovo Beam**	**94.61**	**324**	P	**P**	**19 27 20.5**	**+0.3**
	0.2nm,0.3s,mb4.0,baz=108,slow=4.7,SNR=2.6						
ZALV	**Zalesovo Beam**	**94.61**	**324**	P	**P**	**19 27 20.5**	**+0.3**
ESDC	**Sonseca Array**	**151.23**	**344**	PKPbc	PKPbc	19 33 57.6	+4.4
	0.1nm,0.3s,baz=223,slow=28,SNR=2.9						

IDC 02 19:19:06.6±71.0**, 1954S×17882E, h0km, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/14**, mbtmp3.7**/3**, Error ellipse: s-maj=1269.0km s-min=151.8km az=80.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.55**	**242**	P	P	19 26 05.5	-0.1
	1.0nm,0.5s,baz=80,slow=13,SNR=6.2						
WRA	**Warramunga Arr**	**41.77**	**262**	P	P	19 26 58.1	0.0
	0.1nm,0.3s,baz=94,slow=8.4,SNR=6.9						
ASAR	**Alice Springs**	**41.84**	**256**	P	P	19 26 58.5	-0.1
	1.1nm,0.8s,baz=95,slow=8.7,SNR=14						

*ISCJB **02** 19:36:22.8±0.7, 242N±007×974E±02, h10km, mb3.7/6, Error ellipse: s-maj=22.9km s-min=6.5km az=160.9*
*IDC **02** 19:36:25.2±3.0, 276N×9803E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/20, mbtmp3.7/6, Error ellipse: s-maj=138.8km s-min=20.1km az=58.0*
ISC 02 19:36:24.6±0.7**, 240N**±007×**974E**±02**, h10km, n8, σ0^{s}72**/9**, mb3.7**/6**, 1C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.10**	**171**	⇑*e*P	**Sg**	**19 37 00.0**	**-0.2**
BSI	**Banda Aceh**	**3.73**	**326**	⇓*e*P	**Pn**	**19 37 23.5**	**+1.3**
BSI				*e*S	**Sn**	**19 38 05.0**	**-1.2**
WRA	**Warramunga Arr**	**42.50**	**123**	P	**P**	**19 44 20.0**	**-0.4**
	0.3nm,0.4s,mb3.4,baz=302,slow=9.1,SNR=8.2						
ASAR	**Alice Springs**	**43.96**	**128**	P	**P**	**19 44 32.3**	**+0.1**
	0.5nm,1.1s,mb3.2,baz=308,slow=7.9,SNR=3.1						
SONM	**Songino Array**	**45.92**	**8**	P	**P**	**19 44 46.6**	**-0.8**
	0.2nm,0.3s,mb3.5,baz=184,slow=8.8,SNR=4.2						
MKAR	**Makanchi Array**	**46.13**	**346**	P	**P**	**19 44 49.8**	**+0.7**
	0.6nm,0.4s,mb3.9,baz=156,slow=9.7,SNR=6.9						
KURK	**Kurchatov**	**50.69**	**345**	P	**P**	**19 45 24.7**	**+0.4**
	0.9nm,0.5s,mb4.0,baz=161,slow=6.8,SNR=6.3						
ZALV	**Zalesovo Beam**	**52.41**	**351**	P	**P**	**19 45 37.1**	**+0.1**
	1.7nm,0.3s,mb4.5,baz=176,slow=7.3,SNR=15						

IDC 02 19:38:45.0±2.1**, 537N×12569E, h0km, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/18**, mbtmp3.5**/4**, Error ellipse: s-maj=244.4km s-min=22.0km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.55**	**162**	P	P	19 44 24.5	-0.3
	0.3nm,0.6s,baz=336,slow=11,SNR=10						
ASAR	**Alice Springs**	**29.95**	**165**	P	P	19 44 56.2	+1.1
	0.3nm,0.9s,baz=349,slow=7.7,SNR=4.7						
ASAR				PcP	PcP	19 47 56.8	-1.2
	0.1nm,0.5s,baz=357,slow=2.4,SNR=4.4						
MKAR	**Makanchi Array**	**55.62**	**325**	P	P	19 48 23.2	+0.5
	0.2nm,0.2s,baz=120,slow=8.7,SNR=3.2						
KURK	**Kurchatov**	**59.81**	**327**	P	P	19 48 51.7	-0.4
	0.7nm,0.7s,baz=134,slow=5.6,SNR=4.9						

IDC 02 19:38:47.0±7.1**, 1191S×16633E, h0km, mb4.0**/4**, mb1 4.1**/4**, mb1mx3.7**/15**, mbtmp3.9**/4**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.9**/26**, Error ellipse: s-maj=190.9km s-min=46.5km az=121.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.74**	**251**	P	P	19 45 12.9	-0.1
	1.0nm,0.8s,baz=81,slow=8.9,SNR=5.4						
ASAR	**Alice Springs**	**32.93**	**245**	P	P	19 45 23.4	0.0
	1.6nm,0.7s,baz=72,slow=9.3,SNR=22						
FITZ	**Fitzroy Crossi**	**39.72**	**256**	LR	LR	20 00 15.2	
	comp=Z,75nm,20.1s,baz=346,slow=32						
CMAR	**Chiang Mai Arr**	**72.98**	**294**	P	P	19 50 19.2	+0.3
	0.5nm,0.8s,baz=131,slow=4.4,SNR=3.6						
MKAR	**Makanchi Array**	**94.53**	**317**	P	P	19 52 09.3	-0.1
	0.3nm,0.2s,baz=90,slow=4.3,SNR=3.6						

IDC 02 19:41:17.3±52.0**, 1570S×17245W, h0km, mb4.3**/3**, mb1 4.5**/3**, mb1mx3.9**/17**, mbtmp4.3**/3**, Error ellipse: s-maj=1007.0km s-min=185.7km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**44.68**	**240**	P	P	19 49 32.6	+0.5
	2.4nm,0.7s,baz=91,slow=10.0,SNR=3.7						
WRA	**Warramunga Arr**	**50.67**	**257**	P	P	19 50 18.4	-0.4
	1.0nm,0.7s,baz=95,slow=7.0,SNR=33						
ASAR	**Alice Springs**	**50.89**	**252**	P	P	19 50 20.4	-0.1
	9.9nm,0.6s,baz=89,slow=7.9,SNR=288						

IDC 02 20:06:35.7±2.5**, 1183S×16587E, h0km, mb3.9**/5**, mb1 3.9**/5**, mb1mx3.7**/15**, mbtmp3.8**/5**, Error ellipse: s-maj=83.7km s-min=36.9km az=122.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.33**	**251**	P	P	20 12 58.3	+0.2
	0.4nm,0.8s,baz=82,slow=8.5,SNR=5.0						
WRA				PcP	PcP	20 15 52.0	-0.4
	0.6nm,1.0s,baz=77,slow=3.4,SNR=2.7						
ASAR	**Alice Springs**	**32.55**	**244**	P	P	20 13 08.8	0.0
	0.3nm,0.6s,baz=65,slow=9.9,SNR=7.7						
ASAR				PcP	PcP	20 15 54.9	-0.8
	0.9nm,0.7s,baz=76,slow=2.3,SNR=12						
SONM	**Songino Array**	**79.37**	**324**	P	P	20 18 44.3	+0.8
	0.7nm,0.6s,baz=137,slow=5.5,SNR=6.7						
MKAR	**Makanchi Array**	**94.17**	**317**	P	P	20 19 57.0	+0.5
	1.0nm,0.4s,baz=115,slow=6.5,SNR=15						
ZALV	**Zalesovo Beam**	**94.26**	**324**	P	P	20 19 55.9	-0.9
	0.3nm,0.3s,baz=90,slow=2.9,SNR=3.7						

IDC 02 20:09:47.6±8.9**, 1226S×16648E, h0km, mb3.8**/4**, mb1 3.8**/4**, mb1mx3.5**/15**, mbtmp3.7**/4**, Error ellipse: s-maj=284.0km s-min=44.8km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.77**	**252**	P	P	20 16 13.7	-0.1
	0.3nm,0.5s,baz=84,slow=9.1,SNR=4.9						
ASAR	**Alice Springs**	**32.91**	**245**	P	P	20 16 24.1	+0.2
	0.5nm,1.1s,baz=68,slow=8.3,SNR=4.3						
MKAR	**Makanchi Array**	**94.89**	**317**	P	P	20 23 11.6	-0.1
	0.3nm,0.2s,baz=113,slow=5.9,SNR=3.8						
ZALV	**Zalesovo Beam**	**94.95**	**324**	P	P	20 23 11.7	0.0
	0.2nm,0.3s,baz=132,slow=2.1,SNR=2.4						

IDC 02 20:13:46.3±7.3, 1247S×16696E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.8/17, mbtmp3.8/6, Error ellipse: s-maj=209.0km s-min=34.4km az=126.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.26	246	P	P	20 18 36.3	+1.9
	6.0nm,0.8s,baz=79,slow=10,SNR=3.5						
WRA	Warramunga Arr	32.16	252	P	P	20 20 15.5	-0.5
	1.2nm,0.9s,baz=84,slow=9.1,SNR=8.7						
ASAR	Alice Springs	33.26	246	P	P	20 20 25.9	+0.3
	1.4nm,0.7s,baz=72,slow=9.6,SNR=22						
FITZ	Fitzroy Crossi	40.19	257	P	P	20 21 23.8	-1.0
	1.1nm,0.9s,baz=49,slow=9.3,SNR=3.2						
SONM	Songino Array	80.51	323	P	P	20 26 01.1	+0.8
	0.1nm,0.5s,baz=81,slow=9.3,SNR=2.3						
MKAR	Makanchi Array	95.37	317	P	P	20 27 12.1	-0.6
	0.2nm,0.2s,baz=99,slow=6.5,SNR=3.8						

IDC 02 20:17:42.7±1.0, 141S×11972E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.8/17, mbtmp3.8/7, ML3.7/1, MS3.8/2, Ms1 3.7/2, ms1mx2.7/26, Error ellipse: s-maj=58.2km s-min=16.0km az=66.0
ISCJB 02 20:17:43.2±2.1, 132S±006×1198E±02, h15km±17km, mb3.8/6, Error ellipse: s-maj=31.7km s-min=9.0km az=170.1
NEIC 02 20:17:47.2±0.8, 144S×11987E, h35km, Error ellipse: s-maj=41.9km s-min=12.6km az=65.0
ISC 02 20:17:43.7±2.4, 134S±008×1197E±02, h7km±17km, n15, σ1.06/15, mb3.8/6, 1C-1D, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**0.44**	**15**	⇑*i*P	**Pg**	**20 17 51.5**	**-0.8**
KAPI	**Kappang**	**3.66**	**180**	Pn	**Pn**	**20 18 40.7**	**-0.1**
	6.5nm,0.3s,baz=345,slow=12,SNR=23						
KAPI				Sn	**Sn**	**20 19 24.0**	**-0.2**
	4.4nm,0.3s,baz=182,slow=22,SNR=3.7						
KDI	**Kendari**	**3.89**	**132**	⇓*e*P	**Pn**	**20 18 35.3**	**-8.7**
KDI				*e*S	**Sg**	**20 19 49.9**	**+1.1**
BATI	**Baumata**	**9.64**	**156**	LR	LR	20 24 22.8	
	comp=Z,259nm,20.8s,baz=205,slow=42						
FITZ	**Fitzroy Crossi**	**17.64**	**161**	P	**Pn**	**20 21 51.9**	**+1.7**
	0.1nm,0.3s,baz=343,slow=13,SNR=3.8						
WRA	**Warramunga Arr**	**23.37**	**143**	P	**P**	**20 22 52.4**	**-1.0**
	3.1nm,0.6s,mb3.9,baz=321,slow=11,SNR=32						
WB2	**Warramunga Arr**	**23.38**	**143**	*e*P	**P**	**20 22 51.1**	**-2.3**
ASAR	**Alice Springs**	**26.11**	**149**	P	**P**	**20 23 17.6**	**-0.9**
	1.2nm,0.8s,mb3.5,baz=339,slow=13,SNR=10						
CMAR	**Chiang Mai Arr**	**28.37**	**315**	P	**P**	**20 23 38.5**	**-0.4**
	0.4nm,0.6s,mb3.2,baz=141,slow=8.4,SNR=4.0						
SONM	**Songino Array**	**50.33**	**348**	P	**P**	**20 26 42.5**	**+1.3**
	1.7nm,0.7s,mb4.2,baz=168,slow=7.0,SNR=5.0						
MKAR	**Makanchi Array**	**58.09**	**331**	P	**P**	**20 27 38.5**	**+0.7**
	0.5nm,0.4s,mb3.9,baz=137,slow=7.8,SNR=5.7						
MKAR	**Makanchi Array**	**58.09**	**331**	P	**P**	**20 27 38.5**	**+0.7**
ZALV	**Zalesovo Beam**	**62.23**	**338**	P	**P**	**20 28 06.8**	**+0.8**
	0.4nm,0.4s,mb3.9,baz=121,slow=7.4,SNR=4.8						
ZALV	**Zalesovo Beam**	**62.23**	**338**	P	**P**	**20 28 06.8**	**+0.8**
BOSA	**Boshof**	**93.29**	**241**	LR	LR	21 07 56.0	
	comp=Z,82nm,18.5s,baz=303,slow=32						

IDC 02 20:18:33.6±1.4, 1132S×16580E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/15, mbtmp3.9/6, Error ellipse: s-maj=59.0km s-min=26.0km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	20.72	243	P	P	20 23 21.7	+5.9
	4.9nm,0.8s,baz=57,slow=7.0,SNR=3.7						
STKA	Stephens Creek	30.28	224	P	P	20 24 46.9	+0.3
	2.1nm,0.9s,baz=297,slow=23,SNR=2.6						
WRA	Warramunga Arr	31.44	250	P	P	20 24 57.1	+0.2
	0.8nm,0.8s,baz=82,slow=9.1,SNR=6.0						
ASAR	Alice Springs	32.71	244	P	P	20 25 07.8	-0.3
	1.9nm,0.7s,baz=73,slow=9.4,SNR=18						
CMAR	Chiang Mai Arr	72.27	294	P	P	20 30 01.5	+0.1
	0.3nm,0.5s,baz=103,slow=4.0,SNR=3.5						
NVAR	Mina Array Bea	86.16	50	P	P	20 31 17.4	+0.5
	0.3nm,0.6s,baz=216,slow=2.9,SNR=2.6						
MKAR	Makanchi Array	93.75	317	P	P	20 31 52.8	+0.3
	0.3nm,0.2s,baz=94,slow=5.8,SNR=2.2						
NOA	NORSAR Array B	126.98	345	PKP	PKPdf	20 37 38.5	-0.8
	1.1nm,0.8s,baz=45,slow=2.3,SNR=3.5						

DDA 02 20:24:52.0, 3884N×2676E, h7km±3km, Md3.0
CSEM 02 20:24:51.5±0.1, 3883N×2676E, h12km, MD3.0, Error ellipse: s-maj=2.0km s-min=1.0km az=74.0
ISK 02 20:24:51.7, 3884N×2673E, h14km, MD3.4
ISCJB 02 20:24:52.0±0.5, 3884N±002×2675E±004, h10km±4km, Error ellipse: s-maj=5.6km s-min=2.8km az=163.3
ATH 02 20:24:53.4, 3880N×2647E, h32km±1km, MD3.6/5
NEIC 02 20:24:53.3, 3880N×2650E, h32km, MD3.3(ISK), MD3.6(ATH), After ATH.
ISC 02 20:24:52.5±0.5, 3883N±002×2673E±004, h12km±4km, n44, σ0.62/55, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.48**	**356**	*i* P	**Pg**	**20 25 01.4**	**-0.5**
AYVA				*i* S	**Sg**	**20 25 08.6**	**+0.2**
BLCB	**Balcova**	**0.51**	**151**	PG	**Pg**	**20 25 02.5**	**+0.1**
BLCB				SG	**Sg**	**20 25 09.8**	**+0.6**
PRK	**Paraskevi**	**0.55**	**319**	*e*PB	**Pb**	**20 25 04.0**	**-0.1**
PRK				*e*SB	**Sb**	**20 25 11.6**	**-0.3**
KDAG	**Bornova**	**0.60**	**135**	*i* P	**Pg**	**20 25 03.9**	**-0.2**
KDAG				*i* S	**Sg**	**20 25 12.6**	**+0.5**
IZM	**Izmir**	**0.60**	**136**	PG	**Pg**	**20 25 04.1**	**-0.1**
AKS	**Akhisar**	**0.84**	**86**	*e*PG	**Pg**	**20 25 08.1**	**-0.8**
EZN	**Ezine**	**1.04**	**343**	*e*PG	**Pg**	**20 25 12.2**	**-0.4**
EZN				*e*SG	**Sg**	**20 25 26.2**	**0.0**
SMG	**Samos**	**1.12**	**176**	*e*PB	**Pb**	**20 25 13.9**	**0.0**
SMG				*e*SN	**Sn**	**20 25 30.0**	**+0.6**
BALY	**Balya**	**1.14**	**37**	*i* P	**Pb**	**20 25 13.0**	**-1.1**
BALY				*i* S	**Sb**	**20 25 29.4**	**+0.5**
GCAM	**G?zelcaml?**	**1.20**	**161**	*i* P	**Pn**	**20 25 15.1**	**+0.1**
GCAM				*i* S	**Sb**	**20 25 30.6**	**+0.1**
BALB	**Balikesir**	**1.20**	**47**	*e*PN	**Pn**	**20 25 14.3**	**-0.9**
BALB				*e*SN	**Sn**	**20 25 30.8**	**-0.6**
AYDN	**Tasoluk**	**1.48**	**142**	*i* P	**Pn**	**20 25 18.3**	**-0.6**
AYDN				*i* S	**Sn**	**20 25 37.1**	**-1.0**
GADA	**Gvkgeada**	**1.50**	**335**	*e*PN	**Pn**	**20 25 18.7**	**-0.6**
LPK	**Lapseki**	**1.54**	**1**	*e*PN	**Pn**	**20 25 19.2**	**-0.5**
KULA	**Kula-Manisa**	**1.54**	**101**	*e*PN	**Pn**	**20 25 19.5**	**-0.3**
DEMI	**Demirci**	**1.56**	**82**	*i* P	**Pn**	**20 25 19.4**	**-0.6**
DEMI				*i* S	**Sn**	**20 25 39.6**	**-0.6**
DST	**Dursunbey**	**1.66**	**62**	*e*PN	**Pn**	**20 25 21.0**	**-0.4**
MLSB	**Milas**	**1.74**	**151**	*e*PN	**Pn**	**20 25 22.1**	**-0.5**
EDC	**Edincik**	**1.75**	**30**	*e*PN	**Pn**	**20 25 22.4**	**-0.3**
BODT	**Bodrum**	**1.82**	**165**	*e*PN	**Pn**	**20 25 23.0**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.89**	**10**	*e*PN	**Pn**	**20 25 24.4**	**-0.1**
MRMT	**Marmara Adasi**	**1.89**	**20**	*e*PN	**Pn**	**20 25 25.1**	**+0.5**
KCT	**Karacabey**	**1.91**	**41**	*e*PN	**Pn**	**20 25 24.2**	**-0.6**
ENEZ	**Enez**	**1.96**	**347**	*e*PN	**Pn**	**20 25 25.6**	**+0.1**
APE	**Apeiranthos**	**2.00**	**209**	*e*PN	**Pn**	**20 25 25.4**	**-0.7**
MFT	**Murefte**	**2.00**	**12**	*e*PN	**Pn**	**20 25 25.9**	**-0.2**
YER	**Yerkesik**	**2.09**	**144**	*e*PN	**Pn**	**20 25 26.8**	**-0.5**
DENT	**Denizli**	**2.10**	**120**	*e*PN	**Pn**	**20 25 27.2**	**-0.4**
KHL	**Karahalli**	**2.25**	**102**	*e*PN	**Pn**	**20 25 29.4**	**-0.1**
GEMT	**Gemlik**	**2.48**	**49**	*e*PN	**Pn**	**20 25 33.6**	**+0.9**
RDO	**Rodhopi**	**2.49**	**339**	*e*PN	**Pn**	**20 25 33.5**	**+0.7**
DALT	**Dalyan (Mudla)**	**2.55**	**143**	*e*PN	**Pn**	**20 25 33.5**	**-0.1**
ALT	**Altintas**	**2.64**	**84**	*e*PN	**Pn**	**20 25 35.1**	**+0.2**
SLVT	**Silivri**	**2.65**	**25**	*e*PN	**Pn**	**20 25 35.7**	**+0.6**
CTT	**Catalca**	**2.66**	**29**	*e*PN	**Pn**	**20 25 35.4**	**+0.3**
YLV	**Yalova**	**2.67**	**49**	*e*PN	**Pn**	**20 25 36.3**	**+0.9**
BGKT	**Bogazkoy**	**2.82**	**33**	*e*PN	**Pn**	**20 25 38.1**	**+0.7**
ISK	**Istanbul-Kandi**	**2.86**	**38**	*e*PN	**Pn**	**20 25 39.1**	**+1.1**
KLYT	**Kilyos**	**3.00**	**35**	*e*PN	**Pn**	**20 25 40.9**	**+1.0**
EDRB	**Edirne**	**3.01**	**0**	*e*PN	**Pn**	**20 25 40.9**	**+0.9**
ELL	**Elmali**	**3.26**	**129**	*e*PN	**Pn**	**20 25 44.1**	**+0.7**
KARP	**Karpathos**	**3.29**	**174**	*e*PN	**Pn**	**20 25 45.3**	**+1.4**
KARP	**Karpathos**	**3.29**	**174**	*e*Pn	**Pn**	**20 25 44.3**	**+0.4**
HDMB	**Hadim**	**4.92**	**110**	*e*PN	**Pn**	**20 26 08.0**	**+1.8**

NIED 02 20:24:00, 3980N×14200E, h89km, Mw4.0 Best double couple: Mo1.19000×10^15 NP1:φs38.00000°, δ52.00000°, λ98.00000°. NP2:φs204.00000°, δ38.00000°, λ79.00000°.
MOS 02 20:24:52.7±1.5, 3989N×14220E, h61km, mb4.1/7, Error ellipse: s-maj=17.2km s-min=11.8km az=80.7
ISCJB 02 20:24:54.3±0.5, 3981N±003×14204E±008, h74km±3km, mb3.8/15, Error ellipse: s-maj=9.7km s-min=5.1km az=6.4
NEIC 02 20:24:56.0, 3977N×14197E, h68km, mb4.4/1, After JMA.
NEIC Recorded [2 JMA] in Aomori and Iwate; [1 JMA] in Akita and Miyagi Prefectures.
JMA 02 20:24:55.9, 3977N×14197E, h67km±1km, M4.0
JMA Felt II J1.
IDC 02 20:24:57.6±3.8, 3973N×14189E, h90km±35km, mb3.6/12, mb1 3.7/13, mb1mx3.7/20, mbtmp3.6/13, MS4.3/1, Ms1 4.3/1, ms1mx2.0/34, Error ellipse: s-maj=21.1km s-min=16.6km az=77.0
ISC 02 20:24:55.6±0.5, 3980N±003×14201E±007, h68km±3km, n46, σ0.78/57, mb3.8/15, 9C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.18**	**321**	⇑P	**Pn**	**20 25 06.3**	**+0.4**
JTH				S	**Sn**	**20 25 13.9**	**+0.5**
MIYJ	**Miyakonagasawa**	**0.27**	**213**	⇑P	**Pn**	**20 25 06.5**	**+0.1**
MIYJ				S	**Sn**	**20 25 14.1**	**-0.1**
JKZ	**Kuzumaki**	**0.55**	**290**	⇑P	**Pn**	**20 25 09.1**	**+0.3**
JKZ				S	**Sn**	**20 25 18.4**	**0.0**
JOM	**Ohasama**	**0.64**	**240**	⇑P	**Pn**	**20 25 09.5**	**-0.2**
JOM				S	**Sn**	**20 25 19.7**	**-0.4**
JANG	**Nango**	**0.69**	**327**	⇑P	**Pn**	**20 25 10.4**	**+0.2**
JANG				S	**Sn**	**20 25 21.0**	**0.0**
OFUJ	**Ofunato**	**0.77**	**200**	⇑P	**Pn**	**20 25 11.0**	**-0.1**
OFUJ				S	**Sn**	**20 25 21.8**	**-0.8**
JMK	**Ichinoseki**	**1.04**	**216**	⇑P	**Pn**	**20 25 14.2**	**-0.3**
JMK				S	**Sn**	**20 25 28.0**	**-0.6**
JAH	**Hinai**	**1.12**	**291**	⇓P	**Pn**	**20 25 15.7**	**+0.2**
JAH				S	**Sn**	**20 25 30.8**	**+0.4**
JTM	**Tenmabayashi**	**1.22**	**324**	⇓P	**Pn**	**20 25 17.0**	**+0.2**
JTM				*e*S	**Sn**	**20 25 32.8**	**+0.2**
JIO	**Ouri**	**1.44**	**201**	⇑P	**Pn**	**20 25 19.2**	**-0.5**
JYK	**Kaneyama**	**1.55**	**236**	⇑P	**Pn**	**20 25 21.1**	**-0.1**
JYK				S	**Sn**	**20 25 40.0**	**-0.5**
ASAJ	**Asahikawa**	**4.33**	**6**	P	**Pn**	**20 25 57.6**	**-1.3**
	2.7nm,0.3s,baz=216,slow=12,SNR=22						
ASAJ				S	**Sn**	**20 26 47.8**	**-0.4**
	1.6nm,0.3s,baz=211,slow=25,SNR=2.4						
ASAJ	**Asahikawa**	**4.33**	**6**	P	**Pn**	**20 25 57.6**	**-1.3**
ASAJ				S	**Sn**	**20 26 47.8**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
MJAR	**Matsushiro Arr**	**4.42**	**224**	P	**Pn**	**20 26 01.2**	**+1.1**
	comp=N,1.7nm,0.3s,baz=31,slow=13,SNR=30						
MJAR	**Matsushiro Arr**	**4.42**	**224**	P	**Pn**	**20 26 01.3**	**+1.2**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	**Matsushiro**	**4.42**	**224**	*e*P	**Pn**	**20 26 00.4**	**+0.3**
MAT	**Matsushiro**	**4.42**	**224**	P	**Pn**	**20 26 02.1**	**+2.0**
MAT				*e*S	**Sn**	**20 26 54.9**	**+4.6**
KSRS	**Korea Array**	**11.27**	**262**	P	**Pn**	**20 27 38.7**	**+5.1**
	comp=Z,0.5nm,0.3s,baz=72,slow=14,SNR=5.2						
KSRS	**Korea Array**	**11.27**	**262**	P	**Pn**	**20 27 38.7**	**+5.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BOD	**Bodaibo**	**25.50**	**324**	*e*P	**P**	**20 30 15.8**	**-1.4**
GUMO	**Guam**	**26.23**	**174**	P	**P**	**20 30 24.6**	**+0.4**
GUMO				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.3						
GUMO	**Guam**	**26.23**	**174**	P	**P**	**20 30 24.6**	**+0.4**
	comp=Z,7.1nm,0.5s,mb4.3						
SONM	**Songino Array**	**26.73**	**299**	P	**P**	**20 30 28.1**	**-0.3**
	comp=Z,0.5nm,0.4s,mb3.4,baz=102,slow=9.0,SNR=7.7						
SONM	**Songino Array**	**26.73**	**299**	P	**P**	**20 30 28.1**	**-0.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAK	**Zakamensk**	**29.01**	**304**	*e*P	**P**	**20 30 44.4**	**-4.3**
ZAK				*e*		20 31 57.5	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.5						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.6						
ZALV	**Zalesovo Beam**	**40.45**	**310**	P	**P**	**20 32 26.8**	**-0.2**
	comp=Z,3.9nm,0.4s,mb4.6,baz=91,slow=8.4,SNR=21						
ZAL	**Zalesovo**	**40.46**	**310**	P	**P**	**20 32 26.8**	**-0.3**
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**42.70**	**253**	P	**P**	**20 32 48.3**	**+2.5**
	comp=Z,0.3nm,0.5s,mb3.3,baz=42,slow=8.7,SNR=3.0						
MKAR	**Makanchi Array**	**43.10**	**300**	P	**P**	**20 32 48.5**	**-0.3**
	comp=Z,2.0nm,0.4s,mb4.2,baz=93,slow=10,SNR=16						
MKAR	**Makanchi Array**	**43.10**	**300**	P	**P**	**20 32 48.5**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	**Makanchi Array**	**43.10**	**300**	P	**P**	**20 32 48.5**	**-0.3**
KDAK	**Kodiak Island**	**44.76**	**44**	P	**P**	**20 33 01.0**	**-0.9**
	comp=Z,1.8nm,0.5s,mb4.0,baz=312,slow=5.4,SNR=4.3						
CTA	**Charters Tower**	**59.71**	**175**	LR	LR	20 58 21.0	
	comp=Z,296nm,22.0s,baz=130,slow=34						
WRA	**Warramunga Arr**	**59.86**	**188**	P	**P**	**20 34 52.7**	**-1.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=7.3,slow=7.0,SNR=13						
WRA	**Warramunga Arr**	**59.86**	**188**	P	**P**	**20 34 52.7**	**-1.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**61.19**	**31**	P	**P**	**20 35 03.4**	**+0.8**
	comp=Z,0.5nm,0.6s,mb3.7,baz=298,slow=6.4,SNR=3.2						
ARCES	**ARCESS Array B**	**61.58**	**339**	P	**P**	**20 35 04.5**	**-0.7**
	comp=Z,1.6nm,0.9s,mb4.0,baz=64,slow=3.1,SNR=3.0						
ARCES	**ARCESS Array B**	**61.58**	**339**	P	**P**	**20 35 04.5**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR	**Alice Springs**	**63.59**	**188**	P	**P**	**20 35 18.5**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.6,baz=3.6,slow=7.3,SNR=9.4						
NOA	**NORSAR Array B**	**71.82**	**337**	P	**P**	**20 36 10.4**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.6,baz=31,slow=2.7,SNR=2.8						
NOA	**NORSAR Array B**	**71.82**	**337**	P	**P**	**20 36 10.4**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**72.40**	**322**	P	**P**	**20 36 13.9**	**-0.2**
	comp=Z,0.5nm,0.4s,mb3.7,baz=45,slow=6.2,SNR=6.4						
AKASG	**Malin Array Be**	**72.40**	**322**	P	**P**	**20 36 13.9**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**72.97**	**54**	P	**P**	**20 36 19.9**	**+2.1**
	comp=Z,0.1nm,0.3s,mb3.2,baz=297,slow=4.8,SNR=3.5						
PDAR	**Pinedale Array**	**75.41**	**46**	P	**P**	**20 36 32.9**	**+1.0**
	comp=Z,0.6nm,0.5s,mb3.6,baz=355,slow=1.0,SNR=4.8						
RKT	**Rikitea**	**99.36**	**112**	*e*T		20 43 18.8	
	comp=Z,7.5nm,0.3s						

IDC 02 20:37:49.0±1.6, 1220S×16599E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.9/15, mbtmp3.9/6, Error ellipse: s-maj=62.2km s-min=31.4km az=136.0
NEIC 02 20:37:53.1±2.0, 1252S×16618E, h35km, Error ellipse: s-maj=35.9km s-min=28.9km az=87.0
ISC 02 20:37:49.5±6.7, 125S±02×1663E±01, h16km±41km, n19, σ0.42/8, mb3.9/6, 5C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.97**	**296**	*e*Pn	**Pn**	**20 39 31.1**	**0.0**
	187nm,1.0s						
HNR				Sn	**Sn**	**20 40 50.1**	**0.0**
WRA	**Warramunga Arr**	**31.54**	**252**	P	**P**	**20 44 10.9**	**-0.4**
	0.7nm,0.5s,mb3.8,baz=84,slow=9.0,SNR=14						
WRA				PcP	PcP	20 47 06.2	+2.2
	0.4nm,0.9s,baz=79,slow=2.7,SNR=3.7						
ASAR	**Alice Springs**	**32.66**	**246**	P	**P**	**20 44 21.3**	**+0.2**
	1.2nm,0.7s,mb4.0,baz=71,slow=9.5,SNR=23						
ASAR				PcP	PcP	20 47 09.1	+2.1
	0.2nm,0.7s,baz=90,slow=2.8,SNR=3.0						
CMAR	**Chiang Mai Arr**	**73.22**	**294**	P	**P**	**20 49 20.8**	**+0.5**
	0.8nm,0.9s,mb3.6,baz=133,slow=5.0,SNR=5.4						
SONM	**Songino Array**	**80.19**	**324**	P	**P**	**20 49 59.2**	**+0.2**
	0.8nm,0.9s,mb3.6,baz=137,slow=5.9,SNR=4.7						
MKAR	**Makanchi Array**	**94.98**	**317**	P	**P**	**20 51 10.9**	**-0.4**
	0.3nm,0.2s,mb4.3,baz=105,slow=9.2,SNR=5.7						
ZALV	**Zalesovo Beam**	**95.08**	**324**	P	**P**	**20 51 11.4**	**-0.2**
	0.3nm,0.4s,mb4.1,baz=86,slow=7.7,SNR=3.8						
ARCES	**ARCESS Array B**	**117.91**	**345**	PKP	PKPdf	20 56 35.5	+0.8
	0.4nm,0.5s,baz=94,slow=2.9,SNR=8.3						
LPL	**La Plagne**	**142.82**	**336**	*e*PKP1	PKPdf	20 57 21.5	-0.8
MBDF	**Montbardon**	**143.46**	**335**	⇑*i*PKP1	PKPdf	20 57 20.7	-2.8
	3.7nm,0.8s						
SBF	**Sospel**	**143.88**	**334**	*e*PKP1	PKPdf	20 57 22.5	-1.7
PGF	**Pioggiola**	**144.20**	**331**	⇑*i*PKP1	PKPdf	20 57 23.1	-1.8
	7.1nm,0.8s						
FRF	**La Foret Royal**	**144.46**	**334**	⇑*i*PKP1	PKPdf	20 57 23.9	-1.4
	17nm,1.0s						
LMR	**La Mourre**	**144.70**	**334**	⇑*i*PKP1	PKPdf	20 57 24.9	-0.8
	16nm,1.0s						
LASF	**Ste Croix**	**145.14**	**338**	*e*PKP1	PKPbc	20 57 26.8	+0.9
	29nm,1.3s						
MTLF	**Montolieu**	**146.37**	**339**	⇑*i*PKP1	PKPbc	20 57 30.8	+1.0
	9.8nm,0.9s						
KEST	**Kesra**	**148.93**	**322**	PKPbc	PKPbc	20 57 38.8	+1.8
	1.1nm,0.9s,baz=78,slow=6.2,SNR=3.1						
ESDC	**Sonseca Array**	**151.63**	**344**	PKPbc	PKPbc	20 57 42.7	-0.7
	0.1nm,0.3s,baz=290,slow=29,SNR=3.3						
TORD	**Torodi Ar. Bea**	**165.00**	**274**	PKP	PKPdf	20 57 56.5	+2.6
	0.5nm,0.9s,baz=105,slow=2.3,SNR=2.8						
TORD				PKPab	PKPab	20 58 47.6	-2.9
	0.5nm,0.9s,baz=86,slow=2.6,SNR=5.3						

IDC 02 20:45:25.4±0.6, 1122S×16574E, h0km, mb4.3/14, mb1 4.4/14, mb1mx4.3/18, mbtmp4.2/14, MS3.7/6, Ms1 3.7/6, ms1mx3.3/25, Error ellipse: s-maj=24.7km s-min=17.5km az=137.0
ISCJB 02 20:45:28.9±0.5, 113S±0.1×1656E±0.1, h33km, mb4.3/16, MS3.7/6, Error ellipse: s-maj=19.8km s-min=10.8km az=140.9
NEIC 02 20:45:30.6±0.4, 1126S×16563E, h35km, mb4.4/6, Error ellipse: s-maj=16.2km s-min=8.7km az=142.0
ISC 02 20:45:30.8±0.5, 112S±01×1656E±01, h35km, n42, σ0.93/26, mb4.3/16, MS3.7/6, 1C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.61**	**242**	*e*P	**P**	**20 50 07.7**	**+0.6**
	12nm,0.9s						
CTA	**Charters Tower**	**20.61**	**242**	P	**P**	**20 50 08.0**	**+0.9**
	16nm,1.0s,baz=80,slow=12,SNR=7.1						
CTAO	**Charters Tower**	**20.61**	**242**	*e*P	**P**	**20 50 05.4**	**-1.7**
	18nm,1.0s						
AFI	**Afiamalu**	**22.21**	**99**	LR	LR	20 57 16.3	
	comp=Z,220nm,20.5s,MS3.6,baz=80,slow=32						
URZ	**Urewera**	**28.80**	**161**	P	**P**	**20 51 25.9**	**+0.4**
	3.3nm,0.6s,mb4.3,baz=280,slow=13,SNR=1.7						
STKA	**Stephens Creek**	**30.22**	**224**	⇑*i*P	**P**	**20 51 38.5**	**+0.3**
	4.4nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**30.22**	**224**	P	**P**	**20 51 38.8**	**+0.6**
	5.1nm,0.8s,mb4.3,baz=29,slow=8.3,SNR=9.7						
STKA				LR	LR	21 02 52.4	
	comp=Z,264nm,18.9s,MS3.9,baz=24,slow=34						
WB2	**Warramunga Arr**	**31.30**	**250**	*e*P	**P**	**20 51 47.1**	**-0.7**
WRA	**Warramunga Arr**	**31.31**	**250**	P	**P**	**20 51 47.5**	**-0.4**
	9.4nm,0.7s,mb4.7,baz=82,slow=9.1,SNR=52						
GUMO	**Guam**	**32.13**	**320**	LR	LR	21 02 35.1	
	comp=Z,79nm,18.2s,MS3.4,baz=141,slow=32						
KAKA	**Kakadu**	**32.49**	**264**	*e*P	**P**	**20 51 57.3**	**-1.0**
ASAR	**Alice Springs**	**32.60**	**243**	P	**P**	**20 51 58.5**	**-0.8**
	2.6nm,0.7s,mb4.2,baz=66,slow=9.7,SNR=21						
ASAR				PcP	PcP	20 54 46.3	+1.2
	0.7nm,0.9s,baz=76,slow=4.1,SNR=2.7						
FITZ	**Fitzroy Crossi**	**39.22**	**255**	*e*P	**P**	**20 52 55.8**	**-0.2**
	7.2nm,0.9s,mb4.4						
PPT	**Papeete**	**43.76**	**104**	*e*S	**S**	**21 00 14.9**	**+13**
	59nm,28.8s						
PPT				*e*LR	LR	21 05 59.4	
	104nm,21.8s						
PPT	**Papeete**	**43.76**	**104**	LR	LR	21 10 02.4	
	comp=Z,177nm,18.6s,MS4.0,baz=270,slow=34						
RKT	**Rikitea**	**57.63**	**110**	*e*LR	LR	21 12 29.7	
	174nm,24.0s						
PETK	**Petropavlovsk-**	**64.45**	**355**	LR	LR	21 22 10.9	
	comp=Z,26nm,18.4s,MS3.5,baz=160,slow=34						
CMAR	**Chiang Mai Arr**	**72.08**	**294**	P	**P**	**20 56 53.6**	**+1.6**
	2.2nm,0.9s,mb4.1,baz=111,slow=4.1,SNR=11						
SONM	**Songino Array**	**78.75**	**324**	P	**P**	**20 57 31.6**	**+1.9**
	0.5nm,0.7s,mb3.5,baz=145,slow=5.4,SNR=5.5						
COLA	**College**	**83.51**	**18**	*e*P	**P**	**20 57 53.4**	**-1.2**
	3.9nm,0.8s,mb4.6						
YBH	**Yreka Blue Hor**	**84.11**	**46**	P	**P**	**20 57 57.9**	**-0.3**
	1.5nm,0.9s,mb4.1,baz=264,slow=2.8,SNR=5.7						
MAW	**Mawson**	**84.50**	**202**	P	**P**	**20 58 00.9**	**+1.1**
	7.1nm,1.1s,mb4.7,baz=97,slow=3.7,SNR=7.1						
HYT	**Haines Junctio**	**84.61**	**24**	*e*P	**P**	**20 58 01.9**	**+1.6**
EGAK	**Eagle**	**85.60**	**20**	*e*P	**P**	**20 58 04.9**	**-0.3**
	7.1nm,0.9s,mb4.9						
DAWY	**Dawson**	**85.78**	**21**	*e*P	**P**	**20 58 05.5**	**-0.6**
NVAR	**Mina Array Bea**	**86.24**	**50**	P	**P**	**20 58 08.8**	**-0.2**
	1.1nm,0.9s,mb4.1,baz=246,slow=7.7,SNR=5.8						
NVAR	**Mina Array Bea**	**86.24**	**50**	P	**P**	**20 58 08.8**	**-0.2**
MKAR	**Makanchi Array**	**93.58**	**317**	P	**P**	**20 58 43.8**	**+0.5**
	0.7nm,0.7s,mb4.2,baz=112,slow=6.2,SNR=6.9						
ZALV	**Zalesovo Beam**	**93.64**	**324**	P	**P**	**20 58 44.0**	**+0.5**
	0.3nm,0.3s,mb4.2,baz=48,slow=2.2,SNR=3.6						
PDAR	**Pinedale Array**	**93.77**	**47**	P	**P**	**20 58 43.9**	**-0.4**
	0.6nm,0.8s,mb4.1,baz=158,slow=0.8,SNR=4.9						
YKA	**Yellowknife Ar**	**95.20**	**27**	P	**P**	**20 58 48.8**	**-1.5**
	0.4nm,0.7s,mb4.0,baz=264,slow=6.1,SNR=3.1						
KURK	**Kurchatov**	**96.72**	**320**	LR	LR	21 39 40.1	
	comp=Z,31nm,19.2s,MS3.8,baz=145,slow=34						
ARCES	**ARCESS Array B**	**116.49**	**345**	PKP	PKPdf	21 04 09.7	-0.7
	1.9nm,1.0s,baz=345,slow=1.9,SNR=3.9						
LPAZ	**La Paz**	**120.20**	**116**	PKP	PKPdf	21 04 19.7	+0.6
	0.4nm,0.6s,baz=261,slow=6.2,SNR=4.1						
LPAZ	**La Paz**	**120.20**	**116**	PKP	PKPdf	21 04 19.7	+0.6
SIV	**San Ignacio**	**126.45**	**120**	PKP	PKPdf	21 04 30.1	-0.9
	0.2nm,0.4s,baz=168,slow=8.9,SNR=3.9						
VIVF	**Saint-Julien-l**	**142.72**	**337**	*e*PKP1	PKPdf	21 05 00.2	-0.3
MTLF	**Montolieu**	**144.93**	**339**	*e*PKP1	PKPdf	21 05 04.2	-0.3
	14nm,1.1s						
KEST	**Kesra**	**147.50**	**322**	PKPbc	PKPbc	21 05 11.9	+0.3
	1.2nm,1.0s,baz=97,slow=9.8,SNR=3.5						
ESDC	**Sonseca Array**	**150.21**	**344**	PKPbc	PKPbc	21 05 18.5	0.0
	0.1nm,0.2s,baz=296,slow=24,SNR=3.9						
ESDC	**Sonseca Array**	**150.21**	**344**	PKPbc	PKPbc	21 05 18.4	0.0
TORD	**Torodi Ar. Bea**	**164.18**	**279**	PKP	PKPdf	21 05 33.3	+1.7
	0.4nm,1.0s,baz=326,slow=3.6,SNR=3.0						

IDC 02 20:52:48.3±2.6, 1198S×16660E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.7/15, mbtmp3.8/4, Error ellipse: s-maj=89.2km s-min=39.5km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.97	252	P	P	20 59 17.4	+1.2
	0.4nm,1.0s,baz=85,slow=9.1,SNR=3.8						
WRA				PcP	PcP	21 02 06.7	0.0
	0.6nm,1.0s,baz=76,slow=3.2,SNR=3.3						
ASAR	Alice Springs	33.14	245	P	P	20 59 25.4	-1.1
	0.9nm,0.7s,baz=68,slow=9.4,SNR=3.8						
ASAR				PcP	PcP	21 02 09.4	-0.4
	0.5nm,0.8s,baz=62,slow=2.6,SNR=5.5						
SONM	Songino Array	79.91	324	P	P	21 04 58.9	-0.1
	0.5nm,0.6s,baz=140,slow=5.7,SNR=5.5						
MKAR	Makanchi Array	94.77	317	P	P	21 06 12.2	+0.4
	1.5nm,0.7s,baz=111,slow=6.1,SNR=15						

IDC 02 20:56:37.3±2.4, 5553S×2756W, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.6/15, mbtmp3.7/2, Error ellipse: s-maj=90.7km s-min=45.9km az=11.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	49.90	305	P	P	21 05 33.1	+0.6
	0.6nm,0.5s,baz=150,slow=7.3,SNR=5.8						
TORD	Torodi Ar. Bea	72.70	30	P	P	21 08 07.0	+0.1
	0.6nm,1.0s,baz=202,slow=6.5,SNR=6.4						
SONM	Songino Array	150.90	86	PKPbc	PKPbc	21 16 30.7	0.0
	0.7nm,0.7s,baz=220,slow=2.9,SNR=6.5						

MOS 02 21:00:46.7±0.8, 5031N×15551E, h131km, mb4.5/47, Error ellipse: s-maj=11.1km s-min=6.0km az=95.0
BJI 02 21:00:48.7, 5049N×15578E, h164km, mB4.8, mb4.5
ISCJB 02 21:00:48.4±0.6, 5034N±006×15561E±008, h146km±3km, mb4.4/78, Error ellipse: s-maj=11.3km s-min=5.4km az=144.2
KRSC 02 21:00:48.4±0.7, 5020N×15690E, h5km±5km, ML4.6

IDC ***02*** *21:00:49.6±1.4, 50.44N×155.54E, h144km±11km, mb3.9/23, mb1 4.0/26, mb1mx3.9/29, mbtmp3.9/26, Error ellipse: s-maj=14.6km s-min=9.3km az=144.0*

NEIC ***02*** *21:00:49.9±0.7, 50.34N×155.55E, h148km±5km, mb4.5/40, Error ellipse: s-maj=7.9km s-min=4.8km az=148.0*

ISC 02 21:00:50.0±0.6**, 50.38N**±0.06×**155.61E**±0.08**, h146**km±3km**, n221,** σ0.80/229**, mb4.4**/78**, 79C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.44**	**47**	⇓*i*PN	**Pn**	**21 01 07.0**	**-3.5**
SKR				*i* S	**Sn**	**21 01 22.0**	**-4.1**
SKR				pmax	pmax		
	comp=Z,1µm,0.5s						
SKR				pmax	pmax		
	comp=N,410nm,0.4s						
SKR				pmax	pmax		
	comp=E,160nm,0.4s						
SKR				pmax	pmax		
	comp=N,1.0nm,2.0s						
SKR				pmax	pmax		
	comp=E,1.0nm,2.0s						
SKR				pmax	pmax		
	comp=Z,2.0nm,2.0s						
SKR				smax			
	comp=N,11µm,1.0s						
SKR				smax			
	comp=E,13µm,2.0s						
ALID	**Alaid**	**0.49**	**356**	*e*P	**Pn**	**21 01 10.3**	**-0.4**
ALID				*i* S	**Sn**	**21 01 26.9**	**+0.4**
MIPR	**Malaya Ipel'ka**	**2.03**	**20**	*e*P	**Pn**	**21 01 25.6**	**+0.5**
MIPR				*i* S	**Sn**	**21 01 53.3**	**+1.2**
RUS	**Russkaya**	**2.74**	**40**	*e*P	**Pn**	**21 01 32.9**	**-0.9**
RUS				*i* S	**Sn**	**21 02 04.9**	**-2.8**
PEA0B	**Petropavlovsk-**	**3.02**	**25**	*e*Pn	**Pn**	**21 01 38.4**	**+1.0**
PEA0B				*e*Sn	**Sn**	**21 02 12.4**	**-1.6**
PETK	**Petropavlovsk-**	**3.02**	**25**	P	**Pn**	**21 01 38.4**	**+1.0**
	comp=E,16nm,0.3s,baz=178,slow=11,SNR=316						
PETK				S	**Sn**	**21 02 12.3**	**-1.7**
	comp=E,6.0nm,0.3s,baz=120,slow=26,SNR=6.5						
PET	**Petropavlovsk**	**3.25**	**34**	P	**Pn**	**21 01 40.3**	**0.0**
PET				*i* S	**Sn**	**21 02 18.3**	**-1.0**
GNL	**Ganaly**	**3.62**	**23**	*e*P	**Pn**	**21 01 46.3**	**+1.3**
NLC	**Nalytchevo**	**3.63**	**38**	*e*P	**Pn**	**21 01 43.6**	**-1.6**
NLC				*i* S	**Sn**	**21 02 23.3**	**-4.7**
SPN	**Mys Shipunski**	**3.86**	**44**	*e*P	**Pn**	**21 01 46.8**	**-1.4**
SPN				*i* S	**Sn**	**21 02 28.3**	**-5.1**
MKZ	**Mys Kozlova**	**5.61**	**39**	*e*P	**Pn**	**21 02 09.3**	**-1.9**
MKZ				*i* S	**Sn**	**21 03 09.0**	**-5.7**
TUMR	**Tumrok**	**5.63**	**27**	P	**Pn**	**21 02 12.5**	**+1.0**
KMNR	**Kamenistaya**	**6.06**	**26**	P	**Pn**	**21 02 18.4**	**+1.1**
KIRR	**Kirishev**	**6.26**	**25**	P	**Pn**	**21 02 20.5**	**+0.5**
BZMR	**Bezymyannaya**	**6.29**	**26**	P	**Pn**	**21 02 21.4**	**+1.1**
BZWR	**Bezymyannyi-We**	**6.32**	**26**	P	**Pn**	**21 02 21.9**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**6.35**	**27**	P	**Pn**	**21 02 22.6**	**+1.5**
SRDR	**Sredinnyy**	**6.43**	**21**	P	**Pn**	**21 02 24.0**	**+1.8**
ZLN	**Zelenaya**	**6.45**	**27**	P	**Pn**	**21 02 23.5**	**+1.1**
CIRR	**Tsirk**	**6.52**	**26**	P	**Pn**	**21 02 24.2**	**+0.8**
KRSR	**Krestovskiy**	**6.56**	**25**	P	**Pn**	**21 02 24.8**	**+0.9**
KBTR	**Krutoberegovo**	**7.26**	**34**	P	**Pn**	**21 02 32.1**	**-1.2**
ASAJ	**Asahikawa**	**10.83**	**240**	P	**Pn**	**21 03 21.0**	**+0.1**
	comp=E,0.8nm,0.3s,baz=322,slow=33,SNR=5.4						
ASAJ	**Asahikawa**	**10.83**	**240**	PN	**Pn**	**21 03 21.0**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SEY	**Seymchan**	**12.71**	**353**	*e*PN	**Pn**	**21 03 45.1**	**-0.1**
KLR	**Kul'dur**	**15.44**	**275**	*e*P	**Pn**	**21 04 21.3**	**+1.6**
YAK	**Yakutsk**	**18.39**	**319**	*e*P	**P**	**21 04 53.4**	**0.0**
YAK				pmax	pmax		
	comp=Z,31nm,0.7s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,26nm,1.2s						
YAK	**Yakutsk**	**18.39**	**319**	*e*P	**P**	**21 04 52.7**	**-0.7**
	comp=E,65nm,0.6s						
MJAR	**Matsushiro Arr**	**18.67**	**229**	P	**P**	**21 04 55.3**	**-1.4**
	comp=E,0.5nm,0.3s,baz=32,slow=8.2,SNR=7.0						
MJAR	**Matsushiro Arr**	**18.67**	**229**	*e*P	**P**	**21 04 58.3**	**+1.7**
CLNS	**Chul'man**	**19.22**	**301**	*e*P	**P**	**21 05 03.1**	**+0.7**
CLNS				pmax	pmax		
	comp=Z,14nm,0.8s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.9s						
CLNS				pmax	pmax		
	comp=N,7.0nm,1.0s						
HIA	**Hailar**	**23.03**	**281**	*e*P	**P**	**21 05 40.8**	**-1.3**
KSRS	**Korea Array**	**23.60**	**247**	P	**P**	**21 05 48.7**	**+1.3**
	comp=N,3.1nm,0.7s,mb4.0,baz=45,slow=9.7,SNR=12						
KSRS	**Korea Array**	**23.60**	**247**	*e*P	**P**	**21 05 48.7**	**+1.3**
BOD	**Bodaibo**	**25.16**	**303**	*e*P	**P**	**21 06 00.7**	**-0.6**
IMA2	**Indian Mountai**	**29.91**	**39**	*e*P	**P**	**21 06 43.7**	**+0.2**
ULN	**Ulaanbaatar**	**31.43**	**285**	*e*P	**P**	**21 06 56.6**	**-0.5**
SONM	**Songino Array**	**31.85**	**285**	P	**P**	**21 07 00.3**	**-0.4**
	comp=N,1.2nm,0.3s,mb4.0,baz=68,slow=7.9,SNR=29						
SONM				PcP	PcP	21 09 46.8	-1.0
	comp=N,0.4nm,0.4s,baz=34,slow=1.7,SNR=3.9						
SONM	**Songino Array**	**31.85**	**285**	P	**P**	**21 07 00.3**	**-0.5**
SONM						21 09 46.8	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TLY	**Talaya**	**32.14**	**293**	*e*P	**P**	**21 07 03.2**	**-0.1**
TLY				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
COLA	**College**	**32.29**	**42**	*e*P	**P**	**21 07 05.4**	**+1.0**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
COLA	**College**	**32.29**	**42**	*e*P	**P**	**21 07 05.4**	**+1.0**
	comp=Z,4.1nm,0.7s,mb4.3						
ZAK	**Zakamensk**	**32.80**	**291**	⇑*i*P	**P**	**21 07 09.5**	**+0.5**
ZAK				*e*	pP	21 07 42.2	+2.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
MOY	**Mondy**	**33.70**	**294**	*e*P	**P**	**21 07 18.1**	**+1.2**
MOY				pmax	pmax		
	comp=Z,14nm,2.8s,mb4.2						
EGAK	**Eagle**	**35.15**	**42**	*e*P	**P**	**21 07 28.9**	**-0.2**
	comp=Z,2.9nm,0.7s,mb4.0						
KRAR	**Krasnoyarsk**	**36.84**	**304**	*e*P	**P**	**21 07 43.0**	**-0.6**
KRAR				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
LZH	**Lanzhou**	**39.52**	**269**	*e*P	**P**	**21 08 06.1**	**-0.2**
LZH				AMB	AMB		
	comp=Z,19nm,1.6s,mb4.5						
LZH				AMB	AMB		
	comp=Z,81nm,4.3s						
GTA	**Gaotai**	**40.13**	**276**	*e*P	**P**	**21 08 11.6**	**+0.3**
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.1						
ZALV	**Zalesovo Beam**	**41.91**	**303**	P	**P**	**21 08 25.0**	**-0.6**
	comp=Z,3.8nm,0.3s,mb4.5,baz=59,slow=6.5,SNR=30						
ZALV				PcP	PcP	21 10 18.0	-0.3
	comp=Z,0.6nm,0.4s,baz=38,slow=2.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**41.91**	**303**	P	**P**	**21 08 25.0**	**-0.6**
ZALV				PcP	PcP	21 10 18.0	-0.3
ZAL	**Zalesovo**	**41.93**	**303**	P	**P**	**21 08 25.0**	**-0.8**
ZAL						21 10 18.0	
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVS	**Novosibirsk**	**42.37**	**305**	⇑*i*P	**P**	**21 08 29.0**	**-0.4**
NVS				pmax	pmax		
	comp=N,6.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,11nm,0.8s						
NVS				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
KURK	**Kurchatov**	**46.80**	**302**	P	**P**	**21 09 03.9**	**-0.6**
	comp=Z,7.7nm,0.5s,mb4.6,baz=62,slow=7.9,SNR=47						
KURK				PcP	PcP	21 10 35.5	+0.4
	comp=Z,0.3nm,0.4s,baz=60,slow=3.6,SNR=5.4						
KURK	**Kurchatov**	**46.80**	**302**	P	**P**	**21 09 03.9**	**-0.5**
KURK						21 10 35.5	
KURK				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.6						
MKAR	**Makanchi Array**	**46.81**	**295**	P	**P**	**21 09 04.2**	**-0.4**
	comp=Z,2.8nm,0.3s,mb4.3,baz=52,slow=4.9,SNR=104						
MKAR	**Makanchi Array**	**46.81**	**295**	P	**P**	**21 09 04.2**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MKAR	**Makanchi Array**	**46.81**	**295**	P	**P**	**21 09 04.2**	**-0.4**
YKA	**Yellowknife Ar**	**47.04**	**39**	P	**P**	**21 09 06.5**	**+0.4**
	comp=Z,1.8nm,0.8s,mb3.8,baz=301,slow=7.6,SNR=8.3						
YKA	**Yellowknife Ar**	**47.04**	**39**	⇑*e*P	**P**	**21 09 06.5**	**+0.3**
LSA	**Lhasa**	**51.77**	**272**	*e*P	**P**	**21 09 41.4**	**-1.1**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
LSA	**Lhasa**	**51.77**	**272**	*e*P	**P**	**21 09 41.4**	**-1.1**
	comp=Z,2.2nm,0.6s,mb4.0						
SVE	**Sverdlovsk**	**52.32**	**316**	*e*P	**P**	**21 09 46.1**	**-0.1**
SVE				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.5						
ARU	**Arti**	**53.48**	**317**	*c i*P	**P**	**21 09 53.5**	**-1.2**
ARU				*e**PP	pP	21 10 28.2	0.0
ARU				*e*		21 10 57.9	
ARU				*e*S	**S**	**21 17 16.4**	**+0.8**
ARU				*e*SS	SS	21 20 58.6	+1.6
ARU				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.6						
KEV	**Kevo**	**54.47**	**340**	*e*p	**P**	**21 10 00.6**	**-1.1**
	comp=Z,0.6nm,0.3s,mb3.8						
KEV	**Kevo**	**54.47**	**340**	*e*P	**P**	**21 10 00.6**	**-1.1**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
YBH	**Yreka Blue Hor**	**54.64**	**65**	P	**P**	**21 10 03.9**	**+0.7**
	comp=Z,1.2nm,0.6s,mb3.8,baz=12,slow=5.1,SNR=6.8						
YBH	**Yreka Blue Hor**	**54.64**	**65**	P	**P**	**21 10 03.9**	**+0.6**
YBH				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**54.85**	**256**	P	**P**	**21 10 06.0**	**+0.9**
	comp=Z,5.1nm,0.8s,mb4.3,baz=31,slow=7.3,SNR=28						
CMAR	**Chiang Mai Arr**	**54.85**	**256**	P	**P**	**21 10 06.1**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARCES	**ARCESS Array B**	**54.97**	**341**	P	**P**	**21 10 04.1**	**-1.1**
	comp=Z,1.1nm,0.3s,mb4.0,baz=44,slow=7.9,SNR=42						
ARCES	**ARCESS Array B**	**54.97**	**341**	P	**P**	**21 10 04.1**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RAMN	**Ramite**	**56.56**	**273**	*e*P	**P**	**21 10 17.3**	**+0.1**
KKN	**Kakani**	**56.82**	**275**	*e*P	**P**	**21 10 19.2**	**+0.1**
	comp=Z,22nm,0.5s,mb5.3						
KKN	**Kakani**	**56.82**	**275**	*e*P	**P**	**21 10 19.2**	**+0.1**
KKN				pmax	pmax		
	comp=Z,22nm,0.5s,mb5.2						
DMN	**Daman**	**57.06**	**275**	*e*P	**P**	**21 10 21.1**	**+0.4**
	comp=Z,15nm,0.5s,mb5.0						
GKN	**Gorkha**	**57.09**	**275**	*e*P	**P**	**21 10 21.1**	**+0.2**
DANN	**Dangsing**	**57.41**	**276**	*e*P	**P**	**21 10 23.6**	**+0.5**
KOLN	**Koldanda**	**57.91**	**276**	*e*P	**P**	**21 10 26.9**	**+0.2**
	comp=Z,8.9nm,0.4s,mb5.0						
JOF	**Joensuu**	**58.81**	**334**	*e*p	**P**	**21 10 31.7**	**-0.7**
	comp=Z,1.2nm,0.3s,mb4.2						
JOF	**Joensuu**	**58.81**	**334**	*e*P	**P**	**21 10 31.7**	**-0.7**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
NVAR	**Mina Array Bea**	**59.35**	**66**	P	**P**	**21 10 37.3**	**+0.9**
	comp=Z,1.7nm,0.7s,mb4.0,baz=289,slow=8.6,SNR=11						
SFJD	**Kangerlussuaq**	**61.27**	**11**	P	**P**	**21 10 48.2**	**-0.8**
	comp=Z,9.2nm,0.4s,mb5.0,baz=318,slow=6.8,SNR=11						
SFJD	**Kangerlussuaq**	**61.27**	**11**	P	**P**	**21 10 48.2**	**-0.9**
SFJD				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.0						
PDAR	**Pinedale Array**	**61.31**	**57**	P	**P**	**21 10 50.6**	**+0.8**
	comp=Z,1.1nm,0.8s,mb3.8,baz=338,slow=1.7,SNR=6.2						
BORG	**Borgarnes**	**65.19**	**359**	P	**P**	**21 11 13.8**	**-1.1**
	comp=Z,8.1nm,0.8s,mb4.6,baz=63,slow=7.5,SNR=3.5						
NB2	**NORSAR Subarra**	**65.31**	**342**	P	**P**	**21 11 14.5**	**-1.2**
	comp=Z,1.8nm,0.7s,mb4.0,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**65.31**	**342**	P	**P**	**21 11 15.0**	**-0.7**
	comp=Z,2.0nm,0.6s,mb4.1,baz=25,slow=6.5,SNR=6.0						
NOA	**NORSAR Array B**	**65.31**	**342**	P	**P**	**21 11 15.0**	**-0.7**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**65.31**	**342**	P	**P**	**21 11 15.0**	**-0.7**
HFS	**Hagfors**	**65.62**	**340**	P	**P**	**21 11 17.3**	**-0.4**
	comp=Z,1.1nm,0.4s,mb4.1,baz=41,slow=4.7,SNR=9.1						
HFS	**Hagfors**	**65.62**	**340**	P	**P**	**21 11 17.3**	**-0.4**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ANMO	**Albuquerque**	**68.56**	**61**	*e*P	**P**	**21 11 37.5**	**+0.8**
SCHQ	**Schefferville**	**69.32**	**25**	P	**P**	**21 11 40.9**	**-0.1**
	comp=Z,2.9nm,0.4s,mb4.3,baz=337,slow=5.3,SNR=17						
AKASG	**Malin Array Be**	**69.43**	**327**	P	**P**	**21 11 40.4**	**-1.4**
	comp=Z,2.7nm,0.4s,mb4.3,baz=32,slow=6.3,SNR=12						
AKASG	**Malin Array Be**	**69.43**	**327**	*i* P	**P**	**21 11 40.4**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KIV	**Kislovodsk**	**69.44**	**315**	*e*P	**P**	**21 11 42.6**	**+0.7**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**72.49**	**201**	P	**P**	**21 11 58.8**	**-1.7**
	comp=Z,0.4nm,0.6s,mb3.3,baz=17,slow=6.2,SNR=8.2						
KWP	**Kalwaria**	**72.53**	**330**	⇑*i*P	**P**	**21 12 00.4**	**-0.1**
EKA	**Eskdalemuir Ar**	**73.17**	**348**	P	**P**	**21 12 03.0**	**-1.2**
	comp=Z,2.0nm,0.5s,mb4.1,baz=17,slow=4.8,SNR=20						
EKA	**Eskdalemuir Ar**	**73.17**	**348**	P	**P**	**21 12 03.0**	**-1.2**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BUR08	**Bucovina Ar. S**	**73.42**	**328**	*e*P	**P**	**21 12 05.3**	**-0.5**
BURAR	**Bucovina Array**	**73.44**	**327**	⇑*i*P	**P**	**21 12 05.2**	**-0.7**
CLL	**Collm**	**73.82**	**337**	*e*P	**P**	**21 12 08.0**	**0.0**
DRGR		**75.01**	**329**	⇑*i*P	**P**	**21 12 14.7**	**-0.3**
MLR	**Muntele Rosu**	**75.02**	**326**	⇓*i*P	**P**	**21 12 15.1**	**+0.1**
VOIR		**75.38**	**326**	⇑*i*P	**P**	**21 12 17.9**	**+0.8**
GERES	**GERESS Array B**	**75.89**	**335**	P	**P**	**21 12 19.6**	**-0.3**
	comp=Z,1.4nm,0.5s,mb3.8,baz=33,slow=5.1,SNR=20						
GERES	**GERESS Array B**	**75.89**	**335**	P	**P**	**21 12 19.6**	**-0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**76.19**	**200**	P	**P**	**21 12 21.0**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=11,slow=4.9,SNR=5.5						
BZS	**Buzias**	**76.40**	**329**	⇑*i*P	**P**	**21 12 23.0**	**+0.1**
BAIF	**Baives**	**77.00**	**342**	*e*P	**P**	**21 12 26.1**	**-0.1**
CDF	**Champ du Feu**	**77.89**	**339**	*e*P	**P**	**21 12 31.1**	**-0.1**
	comp=Z,6.6nm,0.7s,mb4.1						
CDF	**Champ du Feu**	**77.89**	**339**	*e*P	**P**	**21 12 31.1**	**-0.1**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
CDF	**Champ du Feu**	**77.89**	**339**	*e*P	**P**	**21 12 31.1**	**-0.1**
	comp=Z,3.3nm,0.7s,mb4.1						
UMR	**Umm Al-Rimmam**	**78.14**	**302**	*e*P	**P**	**21 12 32.2**	**-0.6**
	baz=302						
UMR				AMb	AMB	21 12 33.1	
	comp=Z,24nm,0.7s,mb4.9,baz=302						
MIB	**Mutribah**	**78.14**	**303**	*e*P	**P**	**21 12 32.2**	**-0.7**
	baz=302						
MIB				AMb	AMB	21 12 33.2	
	comp=Z,48nm,0.5s,mb5.4,baz=302						
MEZF	**Maizieres J'vi**	**78.30**	**340**	*e*P	**P**	**21 12 33.5**	**+0.1**
	comp=Z,5.2nm,0.5s,mb4.1						
MEZF	**Maizieres J'vi**	**78.30**	**340**	*e*P	**P**	**21 12 33.5**	**+0.1**
	comp=Z,5.2nm,0.5s,mb4.4						
KBD	**Kabd**	**78.44**	**302**	*e*P	**P**	**21 12 34.1**	**-0.4**
	baz=302						
KBD				AMb	AMB	21 12 35.0	
	comp=Z,24nm,0.4s,mb5.2,baz=302						
HAU	**Haudompre**	**78.48**	**339**	⇑*i*P	**P**	**21 12 34.2**	**-0.2**
	comp=Z,3.8nm,0.6s,mb3.9						
HAU	**Haudompre**	**78.48**	**339**	⇑*i*P	**P**	**21 12 34.2**	**-0.2**
HAU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
HAU	**Haudompre**	**78.48**	**339**	⇑*i*P	**P**	**21 12 34.2**	**-0.2**
	comp=Z,1.9nm,0.6s,mb3.9						
HINF	**Hinteralfeld**	**78.55**	**339**	*e*P	**P**	**21 12 34.3**	**-0.5**
	comp=Z,3.3nm,0.7s,mb3.8						
HINF	**Hinteralfeld**	**78.55**	**339**	*e*P	**P**	**21 12 34.3**	**-0.5**
HINF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
HINF	**Hinteralfeld**	**78.55**	**339**	*e*P	**P**	**21 12 34.3**	**-0.5**
	comp=Z,1.6nm,0.7s,mb3.8						
NAY	**Al-Naaiem**	**78.63**	**302**	*e*P	**P**	**21 12 35.0**	**-0.6**
	baz=302						
NAY				AMb	AMB	21 12 36.7	
	comp=Z,15nm,0.6s,mb4.8,baz=302						
RDF	**Al-Radifah**	**78.72**	**302**	*e*P	**P**	**21 12 35.9**	**-0.2**
	baz=302						
RDF				AMb	AMB	21 12 37.6	
	comp=Z,46nm,0.8s,mb5.2,baz=302						
FLN	**La Foliniere**	**79.12**	**344**	⇑*i*P	**P**	**21 12 37.7**	**-0.2**
	comp=Z,33nm,0.8s,mb4.7						
FLN	**La Foliniere**	**79.12**	**344**	⇑*i*P	**P**	**21 12 37.7**	**-0.2**
FLN				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
FLN	**La Foliniere**	**79.12**	**344**	⇑*i*P	**P**	**21 12 37.7**	**-0.2**
	comp=Z,16nm,0.8s,mb4.7						
LDF	**La Druitiere**	**79.22**	**344**	⇑*i*P	**P**	**21 12 38.2**	**-0.3**
	comp=Z,15nm,0.4s,mb4.7						
LDF	**La Druitiere**	**79.22**	**344**	⇑*i*P	**P**	**21 12 38.2**	**-0.3**
LDF				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.7						
LDF	**La Druitiere**	**79.22**	**344**	⇑*i*P	**P**	**21 12 38.2**	**-0.3**
	comp=Z,7.7nm,0.4s,mb4.7						
GRR	**Gorron**	**79.55**	**344**	⇑*i*P	**P**	**21 12 40.2**	**0.0**
	comp=Z,45nm,0.7s,mb4.9						
GRR	**Gorron**	**79.55**	**344**	⇑*i*P	**P**	**21 12 40.2**	**0.0**
GRR				pmax	pmax		
	comp=Z,22nm,0.7s,mb4.9						
GRR	**Gorron**	**79.55**	**344**	⇑*i*P	**P**	**21 12 40.2**	**0.0**
	comp=Z,22nm,0.7s,mb4.9						
LOR	**Lormes**	**79.72**	**341**	*e*P	**P**	**21 12 41.0**	**-0.2**
	comp=Z,8.6nm,0.5s,mb4.3						
LOR	**Lormes**	**79.72**	**341**	*e*P	**P**	**21 12 41.0**	**-0.2**
LOR				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
LOR	**Lormes**	**79.72**	**341**	*e*P	**P**	**21 12 41.0**	**-0.2**
	comp=Z,4.3nm,0.5s,mb4.3						
CABF	**La Chapelle**	**79.86**	**339**	*e*P	**P**	**21 12 42.1**	**+0.2**
SGMF	**Saint Gilles**	**79.97**	**345**	⇑*i*P	**P**	**21 12 42.6**	**+0.1**
	comp=Z,26nm,0.6s,mb4.8						
SGMF	**Saint Gilles**	**79.97**	**345**	⇑*i*P	**P**	**21 12 42.6**	**+0.1**
SGMF				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.7						
SGMF	**Saint Gilles**	**79.97**	**345**	⇑*i*P	**P**	**21 12 42.6**	**+0.1**
	comp=Z,13nm,0.6s,mb4.7						
SSF	**Saint Saulge**	**79.99**	**341**	⇑*i*P	**P**	**21 12 42.5**	**-0.1**
	comp=Z,11nm,0.8s,mb4.2						
SSF	**Saint Saulge**	**79.99**	**341**	⇑*i*P	**P**	**21 12 42.5**	**-0.1**
SSF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
SSF	**Saint Saulge**	**79.99**	**341**	⇑*i*P	**P**	**21 12 42.5**	**-0.1**
	comp=Z,5.4nm,0.8s,mb4.2						
ROSF	**Rostrenen**	**80.00**	**346**	⇑*i*P	**P**	**21 12 42.8**	**+0.1**
	comp=Z,22nm,0.7s,mb4.6						
ROSF	**Rostrenen**	**80.00**	**346**	⇑*i*P	**P**	**21 12 42.8**	**+0.1**
ROSF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.6						
ROSF	**Rostrenen**	**80.00**	**346**	⇑*i*P	**P**	**21 12 42.8**	**+0.1**
	comp=Z,11nm,0.7s,mb4.6						
AVF	**Avril sur Loir**	**80.28**	**341**	⇑*i*P	**P**	**21 12 44.2**	**0.0**
	comp=Z,13nm,0.6s,mb4.4						
AVF	**Avril sur Loir**	**80.28**	**341**	⇑*i*P	**P**	**21 12 44.2**	**0.0**
AVF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
AVF	**Avril sur Loir**	**80.28**	**341**	⇑*i*P	**P**	**21 12 44.2**	**0.0**
	comp=Z,6.4nm,0.6s,mb4.4						
SMF	**Signal de Mont**	**80.32**	**341**	*e*P	**P**	**21 12 44.4**	**0.0**
	comp=Z,4.7nm,0.5s,mb4.1						
SMF	**Signal de Mont**	**80.32**	**341**	*e*P	**P**	**21 12 44.4**	**0.0**
SMF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
SMF	**Signal de Mont**	**80.32**	**341**	*e*P	**P**	**21 12 44.4**	**0.0**
	comp=Z,2.3nm,0.5s,mb4.1						
QUIF	**Quistinic**	**80.39**	**346**	⇑*i*P	**P**	**21 12 44.7**	**-0.1**
	comp=Z,7.3nm,0.5s,mb4.3						
QUIF	**Quistinic**	**80.39**	**346**	⇑*i*P	**P**	**21 12 44.7**	**-0.1**
QUIF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
QUIF	**Quistinic**	**80.39**	**346**	⇑*i*P	**P**	**21 12 44.7**	**-0.1**
	comp=Z,3.7nm,0.5s,mb4.3						
TRAV	**Traversella**	**80.50**	**338**	P	**P**	**21 12 45.3**	**-0.1**
BGF	**Bois d'Agland**	**80.61**	**341**	⇑*i*P	**P**	**21 12 46.4**	**+0.5**
	comp=Z,13nm,0.6s,mb4.4						
BGF	**Bois d'Agland**	**80.61**	**341**	⇑*i*P	**P**	**21 12 46.4**	**+0.5**
BGF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
BGF	**Bois d'Agland**	**80.61**	**341**	⇑*i*P	**P**	**21 12 46.4**	**+0.5**
	comp=Z,6.4nm,0.6s,mb4.4						
LPL	**La Plagne**	**80.74**	**338**	⇑*i*P	**P**	**21 12 47.6**	**+0.9**
	comp=Z,22nm,0.6s,mb4.7						
LPL	**La Plagne**	**80.74**	**338**	⇑*i*P	**P**	**21 12 47.6**	**+0.9**
LPL				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.7						
LPL	**La Plagne**	**80.74**	**338**	⇑*i*P	**P**	**21 12 47.6**	**+0.9**
	comp=Z,11nm,0.6s,mb4.7						
LPG	**La Plagne**	**80.75**	**338**	⇑*i*P	**P**	**21 12 47.8**	**+1.1**
	comp=Z,25nm,0.6s,mb4.8						
LPG	**La Plagne**	**80.75**	**338**	⇑*i*P	**P**	**21 12 47.8**	**+1.1**
LPG				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.7						
LPG	**La Plagne**	**80.75**	**338**	⇑*i*P	**P**	**21 12 47.8**	**+1.1**
	comp=Z,13nm,0.6s,mb4.7						
FSSB	**Fossombrone**	**80.87**	**334**	P	**P**	**21 12 47.8**	**+0.4**
TCF	**Toulx Ste Croi**	**81.00**	**342**	*e*P	**P**	**21 12 48.2**	**+0.2**
	comp=Z,13nm,0.8s,mb4.3						
TCF	**Toulx Ste Croi**	**81.00**	**342**	*e*P	**P**	**21 12 48.2**	**+0.2**
TCF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.3						
TCF	**Toulx Ste Croi**	**81.00**	**342**	*e*P	**P**	**21 12 48.2**	**+0.2**
	comp=Z,6.5nm,0.8s,mb4.3						
MFF	**Saint Martin d**	**81.15**	**343**	⇑*i*P	**P**	**21 12 49.2**	**+0.4**
	comp=Z,14nm,0.7s,mb4.4						
MFF	**Saint Martin d**	**81.15**	**343**	⇑*i*P	**P**	**21 12 49.2**	**+0.4**
MFF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
MFF	**Saint Martin d**	**81.15**	**343**	⇑*i*P	**P**	**21 12 49.2**	**+0.4**
	comp=Z,7.2nm,0.7s,mb4.4						
MBDF	**Montbardon**	**81.47**	**338**	*e*P	**P**	**21 12 50.8**	**+0.2**
	comp=Z,5.3nm,0.5s,mb4.2						
MBDF	**Montbardon**	**81.47**	**338**	*e*P	**P**	**21 12 50.8**	**+0.2**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
MBDF	**Montbardon**	**81.47**	**338**	*e*P	**P**	**21 12 50.8**	**+0.2**
	comp=Z,2.7nm,0.5s,mb4.1						
ORIF	**Oris-en-Rattie**	**81.50**	**339**	⇑*i*P	**P**	**21 12 51.4**	**+0.7**
	comp=Z,11nm,0.6s,mb4.4						
ORIF	**Oris-en-Rattie**	**81.50**	**339**	⇑*i*P	**P**	**21 12 51.4**	**+0.7**
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
ORIF	**Oris-en-Rattie**	**81.50**	**339**	⇑*i*P	**P**	**21 12 51.4**	**+0.7**
	comp=Z,5.6nm,0.6s,mb4.4						
VIVF	**Saint-Julien-l**	**81.84**	**340**	*e*P	**P**	**21 12 52.9**	**+0.4**
	comp=Z,16nm,0.8s,mb4.4						
VIVF	**Saint-Julien-l**	**81.84**	**340**	*e*P	**P**	**21 12 52.9**	**+0.4**
VIVF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
VIVF	**Saint-Julien-l**	**81.84**	**340**	*e*P	**P**	**21 12 52.9**	**+0.4**
	comp=Z,8.1nm,0.8s,mb4.4						
RJF	**Les Rejaudoux**	**82.08**	**342**	⇑*i*P	**P**	**21 12 53.8**	**+0.1**
	comp=Z,10nm,0.7s,mb4.3						
RJF	**Les Rejaudoux**	**82.08**	**342**	⇑*i*P	**P**	**21 12 53.8**	**+0.1**
RJF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
RJF	**Les Rejaudoux**	**82.08**	**342**	⇑*i*P	**P**	**21 12 53.8**	**+0.1**
	comp=Z,5.3nm,0.7s,mb4.3						
SBF	**Sospel**	**82.13**	**337**	⇑*i*P	**P**	**21 12 53.7**	**-0.3**
CAF	**Calviac**	**82.33**	**341**	⇑*i*P	**P**	**21 12 55.7**	**+0.7**
	comp=Z,13nm,0.5s,mb4.5						
CAF	**Calviac**	**82.33**	**341**	⇑*i*P	**P**	**21 12 55.7**	**+0.7**
CAF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.5						
CAF	**Calviac**	**82.33**	**341**	⇑*i*P	**P**	**21 12 55.7**	**+0.7**
	comp=Z,6.4nm,0.5s,mb4.5						
SMRF	**Simiane la Rot**	**82.47**	**339**	*e*P	**P**	**21 12 56.6**	**+0.8**
	comp=Z,7.8nm,0.8s,mb4.1						
SMRF	**Simiane la Rot**	**82.47**	**339**	*e*P	**P**	**21 12 56.6**	**+0.8**
	comp=Z,7.8nm,0.8s,mb4.4						
LFF	**La Frestale**	**82.58**	**342**	⇑*i*P	**P**	**21 12 56.8**	**+0.5**
	comp=Z,21nm,0.7s,mb4.7						
LFF	**La Frestale**	**82.58**	**342**	⇑*i*P	**P**	**21 12 56.8**	**+0.5**
LFF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
LFF	**La Frestale**	**82.58**	**342**	⇑*i*P	**P**	**21 12 56.8**	**+0.5**
	comp=Z,11nm,0.7s,mb4.7						
FRF	**La Foret Royal**	**82.60**	**338**	⇑*i*P	**P**	**21 12 56.1**	**-0.4**
	comp=Z,5.0nm,0.6s,mb4.1						
FRF	**La Foret Royal**	**82.60**	**338**	⇑*i*P	**P**	**21 12 56.1**	**-0.4**
FRF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
FRF	**La Foret Royal**	**82.60**	**338**	⇑*i*P	**P**	**21 12 56.1**	**-0.4**
	comp=Z,2.5nm,0.6s,mb4.1						
LASF	**Ste Croix**	**82.76**	**340**	*e*P	**P**	**21 12 57.9**	**+0.6**
	comp=Z,14nm,1.1s,mb4.3						
LMR	**La Mourre**	**82.85**	**338**	⇑*i*P	**P**	**21 12 57.7**	**-0.1**
	comp=Z,11nm,0.6s,mb4.4						
LMR	**La Mourre**	**82.85**	**338**	⇑*i*P	**P**	**21 12 57.7**	**-0.1**
LMR				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
LMR	**La Mourre**	**82.85**	**338**	⇑*i*P	**P**	**21 12 57.7**	**-0.1**
	comp=Z,5.6nm,0.6s,mb4.5						
PGF	**Pioggiola**	**82.96**	**336**	⇑*i*P	**P**	**21 12 58.2**	**-0.1**
	comp=Z,17nm,0.7s,mb4.6						
PGF	**Pioggiola**	**82.96**	**336**	⇑*i*P	**P**	**21 12 58.2**	**-0.1**
PGF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
PGF	**Pioggiola**	**82.96**	**336**	⇑*i*P	**P**	**21 12 58.2**	**-0.1**
	comp=Z,8.7nm,0.7s,mb4.6						

MTLF	Montolieu	83.81	341⇑	iP	P	21 13 03.2	+0.5
	comp=Z,9.6nm,0.8s,mb4.3						
MTLF	Montolieu	83.81	341⇑	iP	P	21 13 03.2	+0.5
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
MTLF	Montolieu	83.81	341⇑	iP	P	21 13 03.2	+0.5
	comp=Z,4.8nm,0.8s,mb4.3						
EPF	Esparros	84.50	342⇑	iP	P	21 13 06.8	+0.7
	comp=Z,6.9nm,0.6s,mb4.3						
EPF	Esparros	84.50	342⇑	iP	P	21 13 06.8	+0.7
EPF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
EPF	Esparros	84.50	342⇑	iP	P	21 13 06.8	+0.7
	comp=Z,3.5nm,0.6s,mb4.3						
SJPF	Ste Jean	84.72	343	eP	P	21 13 08.0	+0.8
ETSF	Etsaut	84.80	343⇑	iP	P	21 13 08.3	+0.6
	comp=Z,6.2nm,0.7s,mb4.2						
ETSF	Etsaut	84.80	343⇑	iP	P	21 13 08.3	+0.6
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
ETSF	Etsaut	84.80	343⇑	iP	P	21 13 08.3	+0.6
	comp=Z,3.1nm,0.7s,mb4.2						
ESDC	Sonseca Array	88.54	344	P	P	21 13 25.1	-0.8
	comp=Z,0.5nm,0.4s,mb3.8,baz=358,slow=4.1,SNR=12						
KEST	Kesra	89.23	333	P	P	21 13 29.4	+0.2
	comp=Z,0.7nm,0.5s,mb3.9,baz=185,slow=0.9,SNR=9.0						
PLCA	Paso Flores	146.75	91	PKPbc	PKPbc	21 20 12.6	-1.5
	comp=Z,2.2nm,0.8s,baz=260,slow=10,SNR=5.1						
PLCA	Paso Flores	146.75	91	PKP2	PKPbc	21 20 12.6	-1.5
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PLCA	Paso Flores	146.75	91	PKPbc	PKPbc	21 20 12.6	-1.5

*NEIC **02** 21:28:23.9,3171S×7060W,h3km,ML2.6(GUC),After GUC.*

GUC 02 21:28:23.9±0.6,3171S×7060W,h3km±3km,MD3.6,ML2.6,4C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.79	257⇑	iP	Pg	21 28 39.5	+0.4
CHNG				iS	Sg	21 28 51.3	+2.0
TLL	Tololo Astrono	1.54	353	eP	Pn	21 28 52.0	-0.3
TLL				iS	Sn	21 29 13.4	+0.6
TLL				AML	AML	21 29 20.2	
	comp=N,147nm,0.6s						
TLL	Tololo Astrono	1.54	353	eP	Pn	21 28 52.0	-0.3
TLL				iS	Sn	21 29 13.4	+0.6
FCH	Farellones	1.64	171	eP	Pn	21 28 52.6	-0.9
FCH				iS	Sn	21 29 14.8	-0.3
FCH				AML	AML	21 29 16.5	
	comp=E,74nm,0.2s						
RCDM	Rinconada Maip	1.79	186	iP	Pn	21 28 55.5	-0.1
RCDM				iS	Sn	21 29 19.8	+1.0
RCDM				AML	AML	21 29 22.1	
	comp=E,221nm,0.1s						
RCDM	Rinconada Maip	1.79	186	iP	Pn	21 28 55.5	-0.1
RCDM				iS	Sn	21 29 19.8	+1.0
ANTU	Antumapu	1.86	181	eP	Pn	21 28 56.6	0.0
ANTU				iS	Sn	21 29 21.2	+0.7
ANTU				AML	AML	21 29 25.2	
	comp=N,87nm,0.1s						
ANTU	Antumapu	1.86	181	eP	Pn	21 28 56.6	0.0
ANTU				iS	Sn	21 29 21.2	+0.7
PCH	Pirque	1.91	178⇑	iP	Pn	21 28 57.5	+0.1
PCH				iS	Sn	21 29 23.1	+1.3
TACH	Talagante	1.96	188⇑	iP	Pn	21 28 58.1	+0.1
TACH				iS	Sn	21 29 24.4	+1.3
CHCH	Chadas Angostu	2.22	181	eP	Pn	21 29 02.5	+0.9
CHCH				iS	Sn	21 29 31.9	+2.3
LNV	Longovilo	2.35	197⇑	iP	Pn	21 29 04.3	+1.0
LNV				iS	Sn	21 29 34.8	+2.2
CACH	El Canelo	2.40	180	eP	Pn	21 29 05.5	+1.4
LCO	Las Campanas	2.69	358	ePn	Pn	21 29 10.2	+2.2
LCO				eSn	Sn	21 29 39.2	-1.8
SFDO	San Fernando	2.92	187	eP	Pn	21 29 12.5	+1.3
SFDO				iS	Sn	21 29 49.6	+2.8

*ISCJB **02** 21:31:42.9±2.1,305S±005×13630E±008,h55km±21km, mb3.9/7,MS3.7/5,Error ellipse: s-maj=13.6km s-min=9.0km az=1.4*

*IDC **02** 21:31:43.4±4.3,301S×13592E,h33km±31km,mb3.8/7, mb1 4.1/11,mb1mx3.9/20,mbtmp4.0/11,ML4.3/4,MS3.6/6, Ms1 3.6/6,ms1mx3.4/18,Error ellipse: s-maj=24.2km s-min=10.2km az=96.0*

*NEIC **02** 21:31:43.2±2.4,289S×13627E,h35km±22km,mb4.2/3, Error ellipse: s-maj=21.4km s-min=15.9km az=65.0*

ISC 02 21:31:47.7±2.4,324S±009×13616E±009,h86km±25km, n28,σ1s18/26,mb3.7/7,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	10.11	201	eP	Pn	21 34 11.5	+1.5
	77nm,0.5s						
KAKA				eS	Sn	21 36 08.0	+6.3
COEN	Coen	12.71	147	ePn	Pn	21 34 44.4	-0.9
	6.8nm,0.3s						
COEN				eSn	Sn	21 37 04.1	-0.9
BATI	Baumata	14.20	240	Pn	Pn	21 35 02.9	-2.0
	1.8nm,0.3s,baz=291,slow=11,SNR=3.2						
WB2	Warramunga Arr	16.70	186	eP	Pn	21 35 36.6	+0.1
WB2				eS	S	21 38 41.6	-5.9
WRA	Warramunga Arr	16.70	186	Pn	Pn	21 35 36.7	+0.3
	1.2nm,0.3s,baz=4.5,slow=13,SNR=42						
WRA				Sn	Sn	21 38 41.1	-0.6
	1.0nm,0.3s,baz=7.8,slow=22,SNR=9.1						
FITZ	Fitzroy Crossi	18.01	214	eP	Pn	21 35 55.1	+2.6
	7.3nm,0.4s						
FITZ				eS	S	21 39 11.9	-1.9
FITZ	Fitzroy Crossi	18.01	214	P	Pn	21 35 53.7	+1.2
	0.9nm,0.3s,baz=26,slow=11,SNR=20						
FITZ				S	S	21 39 12.0	-1.7
	0.9nm,0.3s,baz=204,slow=18,SNR=6.3						
GUMO	Guam	18.82	27	LR	LR	21 41 16.4	
	comp=Z,68nm,21.5s,baz=120,slow=31						
CTA	Charters Tower	19.43	150	P	Pn	21 36 10.1	+0.6
	0.4nm,0.3s,baz=328,slow=14,SNR=3.1						
ASAR	Alice Springs	20.43	186	P	P	21 36 21.8	+3.7
	23nm,0.6s,baz=10,slow=11,SNR=139						
ASAR				S	S	21 40 10.8	+8.5
	3.0nm,0.8s,baz=10.0,slow=27,SNR=4.8						
MBWA	Marble Bar	23.93	221	eP	P	21 36 57.7	+3.7
	11nm,0.8s,mb4.2						
STKA	Stephens Creek	28.95	170	eP	P	21 37 43.9	+4.9
	1.2nm,0.4s,mb3.9						
STKA	Stephens Creek	28.95	170	P	P	21 37 41.5	+2.5
	0.6nm,0.3s,mb3.7,baz=4.4,slow=10,SNR=5.0						
NWAO	Narrogin (SRO)	34.45	209	LR	LR	21 54 00.6	
	comp=Z,182nm,21.9s,baz=205,slow=39						
KSRS	Korea Array	41.20	350	LR	LR	21 55 47.0	
	comp=Z,42nm,18.3s,baz=180,slow=35						
SONM	Songino Array	57.14	337	P	P	21 41 25.7	+0.3
	0.6nm,0.9s,mb3.6,baz=145,slow=3.6,SNR=3.7						
SONM				LR	LR	22 06 49.6	
	comp=Z,82nm,18.2s,baz=185,slow=37						
MKAR	Makanchi Array	68.67	323	P	P	21 42 42.9	+1.0
	0.6nm,0.5s,mb3.7,baz=120,slow=8.7,SNR=6.6						
MKAR	Makanchi Array	68.67	323	P	P	21 42 42.9	+1.0
ZALV	Zalesovo Beam	71.12	331	LR	LR	22 12 47.9	
	comp=Z,16nm,19.9s,baz=248,slow=35						
KURK	Kurchatov	72.70	326	P	P	21 43 06.0	-0.3
	0.4nm,0.6s,mb3.5,baz=130,slow=4.0,SNR=3.6						
PPT	Papeete	74.03	107	LR	LR	22 13 29.6	
	comp=Z,128nm,19.5s,baz=228,slow=34						
BVAR	Borovoye Array	78.30	326	P	P	21 43 37.7	-0.6
	0.8nm,0.8s,mb3.5,baz=122,slow=7.5,SNR=3.5						
AKTK	Aktyubinsk	84.94	321	P	P	21 44 12.4	-1.0
AKTO	Aktyubinsk	84.94	321	P	P	21 44 12.4	-1.0
	0.6nm,0.4s,mb3.9,baz=94,slow=9.3,SNR=2.9						
GERES	GERESS Array B	113.33	323	Pdiff	Pdif	21 46 25.5	+3.1
	0.2nm,0.4s,baz=45,slow=40,SNR=2.4						
TORD	Torodi Ar. Bea	133.94	285	PKP	PKPdf	21 50 57.8	+1.7
	0.4nm,0.7s,baz=109,slow=1.4,SNR=4.1						
CPUP	Villa Florida	147.84	157	PKPbc	PKPbc	21 51 24.4	+0.7
	1.4nm,0.7s,baz=253,slow=6.6,SNR=4.1						
LPAZ	La Paz	149.13	130	PKPbc	PKPbc	21 51 30.6	+3.3
	1.3nm,0.9s,baz=292,slow=1.4,SNR=4.8						

*IDC **02** 21:35:05.1±1.8,1562S×17365W,h0km,mb3.9/6, mb1 4.0/7,mb1mx3.9/19,mbtmp3.9/7,ML1.4/1,Error ellipse: s-maj=88.3km s-min=17.0km az=146.0*

*ISCJB **02** 21:35:07.9±1.4,156S±04×1737W±03,h33km,mb3.9/7, Error ellipse: s-maj=71.6km s-min=9.0km az=144.1*

*NEIC **02** 21:35:09.9±1.5,1569S×17358W,h35km,mb4.2/1,Error ellipse: s-maj=80.1km s-min=14.2km az=146.0*

ISC 02 21:35:09.9±1.4,157S±04×1736W±03,h35km,n13, σ0s98/14,mb3.9/7,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.49	45	Pn	Pn	21 35 46.0	-1.9
	4.2nm,0.3s,baz=39,slow=14,SNR=2.9						
AFI				Sn	Sn	21 36 17.3	+0.1
	30nm,0.3s,baz=36,slow=23,SNR=8.3						
AFI	Afiamalu	2.49	45	Pn	Pn	21 35 46.0	-1.9
AFI				Sn	Sn	21 36 17.3	+0.1
STKA	Stephens Creek	43.73	240	P	P	21 43 10.6	-1.4
	3.4nm,1.0s,mb4.0,baz=235,slow=21,SNR=3.7						
WRA	Warramunga Arr	49.59	257	P	P	21 43 58.1	0.0
	0.5nm,0.6s,mb3.7,baz=94,slow=6.5,SNR=4.7						
WRA	Warramunga Arr	49.59	257	P	P	21 43 58.1	0.0
ASAR	Alice Springs	49.84	252	P	P	21 44 00.5	+0.6
	2.7nm,0.7s,mb4.4,baz=85,slow=8.2,SNR=8.3						
DAV	Davao City (W)	64.32	286	P	P	21 45 42.4	-0.1
	176nm,0.4s,baz=257,slow=5.1,SNR=3.7						
YBH	Yreka Blue Hor	73.93	37	P	P	21 46 43.6	+2.0
	0.3nm,0.3s,mb3.6,baz=189,slow=12,SNR=3.6						
NVAR	Mina Array Bea	74.66	42	P	P	21 46 46.5	+0.6
	0.4nm,0.7s,mb3.5,baz=253,slow=9.1,SNR=2.9						
NVAR	Mina Array Bea	74.66	42	P	P	21 46 46.5	+0.6
KDAK	Kodiak Island	75.22	11	P	P	21 46 48.5	-0.2
	1.6nm,0.6s,mb4.1,baz=190,slow=18,SNR=3.9						
BMO	Blue Mountains	78.96	37	eP	P	21 47 10.2	+0.2
	2.3nm,0.8s,mb4.2						
GERES	GERESS Array B	146.38	351	PKPbc	PKPbc	21 54 49.1	+2.1
	0.8nm,0.8s,baz=27,slow=3.3,SNR=7.1						

*DMN **02** 21:36:58.7±13.0,3292N×8259E,h10km,Mb5.1/3,Error ellipse: s-maj=319.3km s-min=27.4km az=155.0*

*IDC **02** 21:37:05.3±0.8,3211N×8292E,h0km,mb3.6/9, mb1 3.8/12,mb1mx3.7/27,mbtmp3.7/12,ML3.7/3,MS3.1/1, Ms1 3.1/1,ms1mx2.4/36,Error ellipse: s-maj=28.5km s-min=16.2km az=56.0*

*ISCJB **02** 21:37:12.0±0.9,3226N±006×8299E±004,h56km±11km, mb3.8/12,Error ellipse: s-maj=9.7km s-min=6.1km az=8.1*

*NEIC **02** 21:37:13.1±0.9,3229N×8293E,h58km±12km,Error ellipse: s-maj=17.1km s-min=7.9km az=73.0*

*NDI **02** 21:37:18.3±1.9,3250N×8291E,h58km,ML3.2*

ISC 02 21:37:13.1±0.8,3234N±005×8307E±004,h44km±10km, n39,σ1s16/40,mb3.8/12,3C,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSI	Joshimath	3.49	240	eP	Pn	21 38 09.4	+4.6
JOSI				eS	Sn	21 38 47.3	+2.4
JOSI				AML	AML	21 38 57.6	
	comp=E,230nm,0.8s						
JOSI				AML	AML	21 38 58.6	
	comp=N,192nm,0.5s						
DANN	Dangsing	4.02	171	eP	Pn	21 38 11.1	-1.1
	comp=N,24nm,0.4s						
KLP	Kalpa	4.17	260	eP	Pn	21 38 18.7	+4.4
KLP				eS	Sn	21 39 01.4	-0.3
KLP				AML	AML	21 39 22.3	
	comp=N,94nm,0.7s						
KLP				AML	AML	21 39 25.7	
	comp=E,150nm,0.7s						
GKN	Gorkha	4.53	162	eP	Pn	21 38 19.7	+0.5
KOLN	Koldanda	4.58	174	eP	Pn	21 38 18.9	-0.9
	comp=E,36nm,0.5s						
DDI	Dehra Dun	4.74	246	ex	x	21 38 33.3	
KKN	Kakani	4.92	157	eP	Pn	21 38 25.0	+0.4
DMN	Daman	5.04	159	eP	Pn	21 38 26.4	+0.3
PKIN	Phulchoki	5.16	156	eP	Pn	21 38 27.9	+0.1
PKI	Pulchoki	5.17	156	eP	Pn	21 38 27.6	-0.3
PKI	Pulchoki	5.17	156	eP	Pn	21 38 27.9	0.0
SMLA	Simla	5.17	258	ix	x	21 38 25.0	
SMLA				iS	Sn	21 39 24.6	-1.7
SMLA				ex	x	21 39 26.1	
	comp=E,81nm,0.5s						
SMLA				ex	x	21 39 26.9	
	comp=N,107nm,0.3s						
JIRN	Jiri	5.39	149	eP	Pn	21 38 32.1	+1.1
	comp=N,18nm,0.4s						
RAMN	Ramite	6.19	149	eP	Pn	21 38 42.2	+0.3
TAPN	Taplejung	6.40	140	eP	Pn	21 38 46.4	+1.5
SONA	Sohna	6.59	233	eP	Pn	21 38 51.5	+4.1
SONA				eS	Sn	21 40 01.3	+0.1
SONA				AML	AML	21 40 20.2	
	comp=E,6.4nm,0.2s						
SONA				AML	AML	21 40 20.3	
	comp=N,3.1nm,0.1s						
ODAN	Odare	6.63	144	eP	Pn	21 38 48.1	+0.1
	comp=N,35nm,0.6s						
KUDL	Kundal	7.06	235	eS	Sn	21 40 10.2	-2.7
KUDL				AML	AML	21 40 35.4	
	comp=N,4.0nm,0.8s						
LSA	Lhasa	7.42	109	ePn	Pn	21 39 02.6	+3.8
	comp=N,3.0nm,0.5s						
MK31	Makanchi Array	14.45	358	eP	Pn	21 40 34.9	+0.2
MKAR	Makanchi Array	14.45	358	Pn	Pn	21 40 33.2	-1.5
	comp=N,0.2nm,0.3s,baz=176,slow=14,SNR=7.6						
KURK	Kurchatov	18.65	351	P	Pn	21 41 24.1	-3.6
	comp=N,0.1nm,0.3s,baz=174,slow=10,SNR=20						
CMAR	Chiang Mai Arr	19.88	130	P	Pn	21 41 39.5	-3.2
	comp=N,0.2nm,0.3s,baz=311,slow=10,SNR=9.0						
ZALV	Zalesovo Beam	21.63	3	P	P	21 41 59.1	-0.2
	comp=N,1.6nm,0.6s,mb3.6,baz=190,slow=11,SNR=8.5						
BVAR	Borovoye Array	22.61	340	P	P	21 42 09.8	+0.1
	comp=N,1.1nm,0.9s,mb3.3,baz=142,slow=10,SNR=4.0						
SONM	Songino Array	23.49	42	P	P	21 42 18.1	-0.7
	comp=N,0.1nm,0.3s,mb2.7,baz=42,slow=35,SNR=2.3						
AKTK	Aktyubinsk	25.88	322	P	P	21 42 40.6	0.0
AKTO	Aktyubinsk	25.88	322	P	P	21 42 40.6	0.0
	comp=N,2.1nm,0.6s,mb3.8,baz=123,slow=10,SNR=9.4						
EIL	Elat	41.06	279	LR	LR	22 03 33.5	
	comp=N,24nm,18.8s,baz=284,slow=39						
ARCES	ARCESS Array B	48.85	337	P	P	21 45 53.5	-0.2
	comp=N,0.8nm,0.6s,mb3.9,baz=86,slow=5.3,SNR=9.0						
HINF	Hinteralfeld	58.05	310	eP	P	21 47 02.4	+0.9
LPG	La Plagne	58.72	307⇑	iP	P	21 47 07.9	+1.7
	comp=N,4.2nm,0.7s,mb4.3						
LPL	La Plagne	58.72	307⇑	iP	P	21 47 07.8	+1.5
	comp=N,11nm,0.9s,mb4.6						
SMF	Signal de Mont	60.34	309	eP	P	21 47 18.1	+0.7
TCF	Toulx Ste Croi	61.52	309⇑	iP	P	21 47 26.5	+1.1
	comp=N,3.5nm,0.8s,mb4.2						
EKA	Eskdalemuir Ar	62.05	320	P	P	21 47 29.6	+0.8
	comp=N,2.1nm,1.0s,mb4.2,baz=68,slow=6.2,SNR=4.9						
WRA	Warramunga Arr	71.47	129	P	P	21 48 27.2	-2.0
	comp=N,0.9nm,0.9s,mb3.7,baz=329,slow=5.8,SNR=5.5						
ASAR	Alice Springs	73.88	132	P	P	21 48 42.2	-1.3
	comp=N,0.6nm,0.9s,mb3.5,baz=332,slow=5.7,SNR=2.9						
TORD	Torodi Ar. Bea	75.88	277	P	P	21 48 52.1	-3.2
	comp=N,0.4nm,0.4s,mb3.7,baz=50,slow=4.8,SNR=21						

*IDC **02** 21:49:40.6±1.4,639S×10375E,h0km,mb4.0/10, mb1 4.1/11,mb1mx3.9/21,mbtmp4.1/11,ML3.9/1,MS3.3/1, Ms1 3.3/1,ms1mx2.8/25,Error ellipse: s-maj=52.1km s-min=15.2km az=52.0*

*ISCJB **02** 21:49:43.5±1.2,64S±02×1038E±02,h33km,mb4.0/9, Error ellipse: s-maj=33.6km s-min=11.6km az=137.2*

*NEIC **02** 21:49:46.1±0.8,631S×10390E,h35km,Error ellipse: s-maj=26.7km s-min=8.8km az=47.0*

ISC 02 21:49:46.2±1.1,63S±02×1039E±02,h35km,n13,σ0s47/12, mb4.0/9,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	15.80	86	Pn	Pn	21 53 26.4	+0.1
	0.4nm,0.3s,baz=93,slow=19,SNR=2.5						
BATI	Baumata	19.91	103	P	Pn	21 54 16.1	-0.8
	23nm,0.4s,baz=282,slow=5.9,SNR=9.3						
CMAR	Chiang Mai Arr	25.10	349	P	P	21 55 07.6	-0.3
	0.5nm,0.5s,mb3.3,baz=184,slow=9.6,SNR=4.7						
WRA	Warramunga Arr	32.49	118	P	P	21 56 13.5	-0.3
	1.7nm,0.6s,mb4.1,baz=286,slow=13,SNR=21						
WRA				PcP	PcP	21 59 01.1	+0.7
	0.2nm,0.3s,baz=304,slow=2.1,SNR=8.1						
WB2	Warramunga Arr	32.50	118	eP	P	21 56 13.9	0.0
ASAR	Alice Springs	33.58	124	P	P	21 56 23.9	+0.6
	0.9nm,0.6s,mb3.9,baz=305,slow=7.5,SNR=12						
STKA	Stephens Creek	43.38	131	P	P	21 57 45.8	+0.3
	1.9nm,0.6s,mb4.0,baz=92,slow=23,SNR=6.9						
GUMO	Guam	45.21	64	LR	LR	22 17 14.4	
	comp=Z,33nm,18.1s,baz=268,slow=36						
KSRS	Korea Array	48.97	25	P	P	21 58 29.8	+0.5
	1.5nm,1.0s,mb4.0,baz=160,slow=33,SNR=5.1						
SONM	Songino Array	53.96	2	P	P	21 59 07.3	+0.8
	1.6nm,0.7s,mb4.0,baz=177,slow=8.3,SNR=14						
MKAR	Makanchi Array	56.26	342	P	P	21 59 22.9	-0.1
	0.7nm,0.5s,mb3.9,baz=152,slow=9.8,SNR=15						
ZALV	Zalesovo Beam	62.16	347	P	P	22 00 03.3	-0.5
	1.4nm,0.4s,mb4.4,baz=144,slow=5.3,SNR=8.6						
BVAR	Borovoye Array	65.58	338	P	P	22 00 26.0	-0.3
	0.8nm,0.4s,mb4.1,baz=141,slow=8.9,SNR=11						

*NEIC **02** 21:57:11.7±1.9,1164N×8723W,h41km±16km,mb4.2/3, Error ellipse: s-maj=26.7km s-min=17.4km az=63.0*

*ISCJB **02** 21:57:13.0±0.9,1185N±005×8733W±007,h50km±9km, mb4.1/9,Error ellipse: s-maj=12.2km s-min=5.5km az=148.0*

*IDC **02** 21:57:13.8±5.9,1171N×8739W,h54km±65km,mb3.7/6, mb1 3.9/7,mb1mx3.5/23,mbtmp3.7/7,ML3.5/1,Error ellipse: s-maj=77.0km s-min=17.0km az=64.0*

*CASC **02** 21:57:13.6±2.3,1184N×8729W,h29km±5km,MD4.0, ML3.8,mb4.2(NEIC)*

ISC 02 21:57:14.5±0.8,1191N±005×8728W±006,h45km±9km,n44, σ0s94/48,mb4.1/9,5C-12D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	Leon	0.63	37⇓	iP	Pn	21 57 26.9	-0.4
LEON				eS	Sn	21 57 36.9	+0.5
COPN	Copaltepe	0.73	68⇑	iP	Pn	21 57 27.9	-0.5
COPN				eS	Sn	21 57 38.9	+0.4
TEL3	Telica 3	0.79	33⇓	eP	Pn	21 57 29.0	-0.3
TEL3				eS	Sn	21 57 39.9	-0.1
CNGN	Cerro Negro	0.82	44⇓	eP	Pn	21 57 28.4	-1.3
CNGN				AML	AML	21 57 48.6	
	comp=N,2μm,0.5s						
CRIN	San Cristobal	0.82	16⇓	iP	Pn	21 57 29.8	0.0
TELN	Telica	0.82	32⇓	eP	Pn	21 57 29.8	0.0
TELN				eS	Sn	21 57 45.6	+4.9
MOMN	Momotombo	0.88	55⇓	iP	Pn	21 57 30.4	-0.1
MOMN				eS	Sn	21 57 46.6	+4.4
CSAN		0.88	72⇓	eP	Pn	21 57 30.1	-0.5
CRUN	El Crucero	0.96	85⇑	eP	Pn	21 57 31.3	-0.3
XAVN	Gruta Xavier	0.96	75⇓	eP	Pn	21 57 31.0	-0.6
APYN	Apoyeque	0.97	70⇑	eP	Pn	21 57 31.1	-0.6
APYN				eS	Sn	21 57 45.6	+1.3
TISN	Laguna Tiscapa	1.02	77	eP	Pn	21 57 31.7	-0.7
MGAN	Managua	1.04	77⇓	eP	Pn	21 57 32.0	-0.7
MGAN				eS	Sn	21 57 46.2	+0.1
MGAN				AML	AML	21 57 50.5	
	comp=N,3μm,0.3s						
WILN	Americas 2	1.10	77⇓	eP	Pn	21 57 31.9	-1.6
WILN				eS	Sn	21 57 48.0	+0.5
HUEN		1.17	68⇑	eP	Pn	21 57 34.2	-0.2
APON	Apoyo	1.19	89⇓	eP	Pn	21 57 34.1	-0.6
CNCH	Conchagua	1.47	338	eP	x	21 57 38.9	
CNCH				eS	x	21 57 58.8	
CONN	Concepcion	1.66	102⇑	eP	Pn	21 57 40.4	-0.7
MADN	Villa Maderas	1.78	106⇓	eP	Pn	21 57 41.1	-1.7
MADN				eS	Sn	21 58 04.3	0.0
VSM	San Miguel	1.80	327	eP	x	21 57 44.5	
VSM				eS	x	21 58 08.4	
CAHU	Cacacuatique	2.06	334	eP	x	21 57 48.0	
CAHU				eS	x	21 58 13.9	
TGUH	Tegucigalpa,Un	2.14	0	eP	Pn	21 57 48.9	+1.1
TGUH				eS	Sn	21 58 15.5	+2.4
TGUH	Tegucigalpa,Un	2.14	0	ePn	Pn	21 57 48.7	+1.0
TGUH				eSn	Sn	21 58 16.6	+3.5
LFRS	El Faro	2.44	315	eP	x	21 57 52.0	
LFRS				eS	x	21 58 21.8	
LBRS	Las Brisas	2.50	317	eP	x	21 57 52.9	
LBRS				eS	x	21 58 24.4	
BOQS	Boqueron	2.67	313	eP	x	21 57 55.6	
BOQS				eS	x	21 58 28.0	
JCR	Jicaral	2.95	134	eP	Pn	21 57 58.4	-0.5
RBDL	Robledal	3.21	313	eP	x	21 58 03.6	
LCR2	La Lucha 2	3.87	123	eP	Pn	21 58 12.3	+0.7
URSC	Urasca	4.01	121	eP	Pn	21 58 14.9	+1.5
BUS	Buena Vista	4.17	124	eP	Pn	21 58 18.1	+2.4
BUS				eS	Sn	21 59 04.3	+1.0
ACR	Cerro Adams	5.18	128	eP	Pn	21 58 31.1	+1.6
CMIG	Matias Romero	8.99	306	P	Pn	21 59 21.6	-0.1
	comp=N,0.5nm,0.3s,baz=119,slow=4.0,SNR=5.1						
CHI2		15.21	117	eP	Px	21 57 28.7	
TKL	Tuckaleechee C	23.86	7	P	P	22 02 24.3	+0.6
	comp=N,15nm,1.4s,mb4.2,baz=164,slow=11,SNR=4.0						
SRU	San Rafael	34.06	327	P	P	22 03 53.4	-1.1
	comp=N,0.4nm,0.4s,mb3.7						
PDAR	Pinedale Array	36.33	332	P	P	22 04 15.1	+1.1
	comp=N,0.7nm,0.6s,mb3.8,baz=120,slow=11,SNR=7.1						
REDW	Red Top Meadow	37.39	331	eP	P	22 04 24.2	+1.2
	comp=N,6.5nm,0.4s,mb4.8						
RRI2	Red Ridge	37.60	331	eP	P	22 04 25.8	+1.0
	comp=N,1.8nm,0.5s,mb4.1						
SIV	San Ignacio	37.96	136	P	P	22 04 27.5	-0.6
	comp=N,2.4nm,0.7s,mb4.0,baz=315,slow=9.6,SNR=15						
LVC	Limon Verde	38.74	152	P	P	22 04 30.4	-4.2
	comp=N,2.5nm,0.7s,mb4.1,baz=301,slow=18,SNR=6.2						
ULM	Lac du Bonnet	38.88	351	P	P	22 04 33.9	-1.5
	comp=N,1.9nm,0.4s,mb4.2,baz=172,slow=8.5,SNR=5.7						
YKA	Yellowknife Ar	54.18	345	P	P	22 06 34.0	-1.0
	comp=N,0.9nm,0.7s,mb3.8,baz=139,slow=7.4,SNR=4.5						
YKA	Yellowknife Ar	54.18	345	P	P	22 06 34.0	-1.0

*IDC **02** 22:03:49.0±1.1,279N×12719E,h0km,mb3.9/7,mb1 4.0/7, mb1mx3.8/17,mbtmp3.9/7,MS3.3/1,Ms1 3.3/1, ms1mx2.7/25,Error ellipse: s-maj=105.8km s-min=17.0km az=72.0*

*ISCJB **02** 22:03:52.1±0.9,27N±02×1269E±05,h33km,mb3.9/6, Error ellipse: s-maj=77.9km s-min=13.4km az=162.4*

*NEIC **02** 22:03:53.9±0.7,277N×12721E,h35km,mb4.3/1,Error ellipse: s-maj=58.1km s-min=10.6km az=73.0*

ISC 02 22:03:54.0±0.9,28N±02×1272E±05,h35km,n9,σ0s47/9, mb3.9/6,1C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.79	184	P	P	22 08 32.4	+0.1
	0.7nm,0.5s,baz=108,slow=19,SNR=4.7						
WRA	Warramunga Arr	23.63	163	P	P	22 09 02.0	-0.2
	4.5nm,0.6s,mb4.1,baz=342,slow=10,SNR=38						
WB2	Warramunga Arr	23.63	163⇑	iP	P	22 09 01.9	-0.3
ASAR	Alice Springs	27.07	166	P	P	22 09 33.3	-0.1
	0.6nm,0.6s,mb3.3,baz=349,slow=7.5,SNR=7.5						
ASAR				PcP	PcP	22 12 55.9	+1.8
	0.3nm,0.6s,baz=359,slow=2.5,SNR=4.1						
STKA	Stephens Creek	37.06	159	eP	P	22 11 01.5	+0.7
	3.3nm,0.8s,mb4.2						
STKA	Stephens Creek	37.06	159	P	P	22 11 01.4	+0.5
	2.7nm,0.6s,mb4.2,baz=322,slow=10,SNR=5.5						
SONM	Songino Array	48.36	341	P	P	22 12 32.9	+0.7
	0.3nm,0.6s,mb3.5,baz=159,slow=8.6,SNR=3.3						
SONM				LR	LR	22 34 44.8	
	comp=Z,32nm,19.8s,baz=176,slow=38						
MKAR	Makanchi Array	58.62	325	P	P	22 13 47.6	+0.1
	0.7nm,0.5s,mb4.0,baz=129,slow=8.6,SNR=12						
ARCES	ARCESS Array B	91.51	340	P	P	22 16 55.6	-0.9
	1.4nm,0.9s,mb4.3,baz=93,slow=6.1,SNR=5.5						

*ISCJB **02** 22:29:53.7±0.2,4845N±001×898E±002,h9km±2km,Error ellipse: s-maj=2.1km s-min=1.9km az=6.2*

*NEIC **02** 22:29:54.7,4845N×896E,h10km,ML2.3(STR), ML2.6(LDG),After STR.*

*PRU **02** 22:29:54.1,4838N×917E,h0km*

*BGR **02** 22:29:54.1±0.7,4845N×905E,h10km,ML2.0/1,Error ellipse: s-maj=6.7km s-min=3.3km az=165.0*

*STR **02** 22:29:54.7±0.3,4845N×896E,h10km,Ml2.3,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*CSEM **02** 22:29:54.1±0.1,4843N×905E,h12km,ML2.5/19,Error ellipse: s-maj=1.4km s-min=0.8km az=147.0*

*LEDBW **02** 22:29:55.1±0.1,48443N±0003×9032E±0004,h8km±2km, ML2.1,Error ellipse: s-maj=1.2km s-min=0.8km az=87.0*

*LDG **02** 22:29:55.0±0.1,4844N×899E,h10km,Md2.6/2,Ml2.6/16, Error ellipse: s-maj=1.2km s-min=1.1km az=145.0*

ISC 02 22:29:53.8±0.2**, 4845N**±001×**900E**±002**, h15**^{km}±2^{km}**, n114, σ1**^{s}**19**/201**, 7C-14D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUBL	Tuebingen-Lenn	0.09	37	⇑iP*	Pg	22 29 57.6	+0.6
TUBL				iS*	Sg	22 29 59.2	+0.2
TUBL	Tuebingen-Lenn	0.09	37	⇑iPx	Px	22 29 57.8	
TUBL				x	x	22 29 59.3	
TUBL	Tuebingen-Lenn	0.09	37	⇑iPg	Pg	22 29 57.6	+0.6
TUBL				x	x	22 29 59.2	
JUND	Jungingen	0.12	169	⇓iPg	Pg	22 29 57.1	-0.3
JUND				Sg	Sg	22 29 59.1	-0.5
JUND	Jungingen	0.12	169	⇓ePg	Pg	22 29 57.8	+0.5
JUND				Sg	Sg	22 29 59.9	+0.3
BHBD	Braunhartsberg	0.20	180	⇓iPg	Pg	22 29 58.5	0.0
BHBD				iSg	Sg	22 30 01.6	-0.1
BHBD	Braunhartsberg	0.20	180	⇓iPg	Pg	22 29 59.3	+0.8
BHBD				iSg	Sg	22 30 02.4	+0.7
BUCH	Bad Urach	0.23	90	⇑iP*	Pg	22 29 59.5	+0.5
BUCH				iS*	Sg	22 30 02.8	+0.3
BUCH	Bad Urach	0.23	90	⇑iPg	Pg	22 29 58.7	-0.3
BUCH				Sg	Sg	22 30 02.0	-0.5
BUCH	Bad Urach	0.23	90	⇑iPg	Pg	22 29 59.5	+0.5
BUCH				iSg	Sg	22 30 02.8	+0.3
LBG	Lerchenberg	0.25	327	⇓iP*	Pg	22 30 00.5	+1.2
LBG				iS*	Sg	22 30 04.4	+1.4
LBG	Lerchenberg	0.25	327	⇓iPg	Pg	22 29 59.8	+0.4
LBG				Sg	Sg	22 30 03.7	+0.6
LBG	Lerchenberg	0.25	327	⇓iPg	Pg	22 30 00.5	+1.2
LBG				iSg	Sg	22 30 04.4	+1.4
MSS	Messtetten	0.28	186	⇓ePg	Pg	22 29 59.8	+0.2
MSS				iSg	Sg	22 30 03.8	+0.1
MSS	Messtetten	0.28	186	⇓iPg	Pg	22 30 00.6	+0.9
MSS				iSg	Sg	22 30 04.5	+0.9
STU	Stuttgart	0.34	22	ePg	Pg	22 30 01.7	+0.7
STU				eSg	Sg	22 30 05.7	0.0
	SNR=9.6						
STU	Stuttgart	0.34	22	ePg	Pg	22 30 01.7	+0.8
STU				eSg	Sg	22 30 05.7	0.0
SPAK	Spaichingen-Ko	0.38	203	⇑P*	Pg	22 30 02.7	+1.1
SPAK				S*	Sg	22 30 08.3	+1.6
SPAK	Spaichingen-Ko	0.38	203	Pg	Pg	22 30 01.8	+0.3
SPAK	Spaichingen-Ko	0.38	203	⇑Pg	Pg	22 30 02.7	+1.1
SPAK				Sg	Sg	22 30 08.3	+1.6
SPAK	Spaichingen-Ko	0.38	203	Pg	Pg	22 30 01.7	+0.2
SPAK				Sg	Sg	22 30 07.1	+0.4
GUT	Gutenstein	0.39	169	⇓iP*	Pg	22 30 02.4	+0.7
GUT				S*	Sg	22 30 07.6	+0.6
GUT	Gutenstein	0.39	169	⇓iPg	Pg	22 30 01.7	0.0
GUT				Sg	Sg	22 30 06.8	-0.1
GUT	Gutenstein	0.39	169	⇓iPg	Pg	22 30 02.4	+0.7
GUT				Sg	Sg	22 30 07.6	+0.6
BFO	Black Forest	0.47	255	⇑iP*	Pb	22 30 04.4	+0.6
BFO				S*	Sb	22 30 12.0	+1.6
BFO				SmS		22 30 14.1	
BFO	Black Forest	0.47	255	⇑iPg	Pg	22 30 04.4	+1.3
BFO				Sg	Sg	22 30 12.0	+2.7
BFO				SmS		22 30 14.1	
BFO	Black Forest	0.47	255	ePg	Pg	22 30 03.4	+0.3
BFO				eSg	Sg	22 30 10.6	+1.2
SISB	Singen-Schiene	0.77	182	P*	Pb	22 30 09.8	+1.0
SISB				S*	Sb	22 30 20.1	+1.0
SISB	Singen-Schiene	0.77	182	Pg	Pg	22 30 09.5	+0.8
SISB				Sg	Sg	22 30 19.2	+0.4
SISB	Singen-Schiene	0.77	182	Pg	Pg	22 30 09.8	+1.1
SISB				Sg	Sg	22 30 20.1	+1.3
HDH	Heidenheim-Cha	0.81	80	⇑P*	Pb	22 30 10.4	+0.8
HDH				SmS		22 30 22.3	
HDH	Heidenheim-Cha	0.81	80	Pg	Pg	22 30 09.6	0.0
HDH				Sg	Sg	22 30 20.5	+0.3
HDH	Heidenheim-Cha	0.81	80	⇑Pg	Pg	22 30 10.4	+0.8
HDH				SmS		22 30 22.3	
KIZ	Kirchzarten	0.88	236	P*	Pb	22 30 12.3	+1.5
KIZ				Sg	Sg	22 30 25.0	+2.6
KIZ	Kirchzarten	0.88	236	Pn	Pn	22 30 11.0	-0.6
KIZ				Sx	Sx	22 30 22.9	
KIZ	Kirchzarten	0.88	236	Pg	Pg	22 30 12.3	+1.4
KIZ				S	Sb	22 30 25.0	+2.7
FELD	Feldberg im Sc	0.88	230	P*	Pb	22 30 12.2	+1.3
FELD	Feldberg im Sc	0.88	230	Pn	Pn	22 30 11.0	-0.7
FELD	Feldberg im Sc	0.88	230	Pg	Pg	22 30 12.2	+1.2
FELD	Feldberg im Sc	0.88	230	Pg	Pg	22 30 10.9	0.0
FELD				Sg	Sg	22 30 23.4	+0.9
LANF	Langenberg	0.95	304	Pg	Pg	22 30 13.0	+0.7
LANF				Sg	Sg	22 30 25.8	+1.0
LANF	Langenberg	0.95	304	P	Pb	22 30 13.2	+1.2
LANF	Langenberg	0.95	304	Pn	Pn	22 30 13.2	+0.6
SIND	Sindeldorf	0.98	24	P	Pb	22 30 13.1	+0.5
SIND				Sg	Sg	22 30 26.7	+1.1
SIND	Sindeldorf	0.98	24	P	Pb	22 30 13.0	+0.5
SIND				S	Sb	22 30 25.5	+0.2
SIND	Sindeldorf	0.98	24	Pn	Pn	22 30 13.1	0.0
SIND				S	Sb	22 30 26.7	+1.4
SWS	Schriesheim-Wi	1.05	349	Pg	Pg	22 30 15.5	+1.4
SWS				Sg	Sg	22 30 29.5	+1.6
SWS	Schriesheim-Wi	1.05	349	Pn	Pn	22 30 14.3	+0.3
SWS				Sx	Sx	22 30 28.3	
SWS	Schriesheim-Wi	1.05	349	P	Pb	22 30 15.5	+1.8
SWS				S	Sb	22 30 29.5	+2.1
UBR	Ueberruh	1.07	136	P*	Pb	22 30 15.6	+1.6
UBR				S*	Sb	22 30 29.9	+2.1
UBR	Ueberruh	1.07	136	Pn	Pn	22 30 14.8	+0.5
UBR				Sn	Sn	22 30 29.1	+0.2
UBR	Ueberruh	1.07	136	Pg	Pg	22 30 15.6	+1.1
UBR				Sg	Sg	22 30 29.9	+1.4
ENDD	Endenburg	1.12	229	P	Pb	22 30 15.8	+0.9
ENDD	Endenburg	1.12	229	P	Pb	22 30 16.6	+1.7
CDF	Champ du Feu	1.15	269	ePg	Pg	22 30 16.3	+0.3
CDF				eSg	Sg	22 30 31.8	+0.8
	33nm,0.2s						
CDF	Champ du Feu	1.15	269	ePg	Pg	22 30 16.3	+0.3
CDF				eSg	Sg	22 30 31.8	+0.8
	16nm,0.2s						
CDF	Champ du Feu	1.15	269	ePn	Pn	22 30 15.6	+0.2
CDF				ePg	Pg	22 30 16.3	+0.3
CDF				eSg	Sg	22 30 31.8	+0.8
TOD	Tromm	1.16	354	Pg	Pg	22 30 17.1	+0.8
TOD				Sg	Sg	22 30 32.3	+0.9
ECH	Echery	1.25	260	Pg	Pg	22 30 18.3	+0.3
ECH				Sg	Sg	22 30 34.4	+0.1
ECH	Echery	1.25	260	P	Pn	22 30 18.5	+1.7
DAVA	Damuels	1.31	153	⇓iPg	Pg	22 30 17.8	-1.2
DAVA				⇓iSg	Sg	22 30 36.0	0.0
	6.2nm,0.2s						
MOF	Molkenrain	1.39	245	Pg	Pg	22 30 21.3	+0.7
BBS	Basel-Blauen	1.41	226	Pg	Pg	22 30 21.2	+0.3
BBS				Sg	Sg	22 30 39.8	+0.6
HINF	Hinteralfeld	1.57	247	ePg	Pg	22 30 24.0	-0.1
HINF				eSn	Sn	22 30 39.6	-1.7
HINF				eSg	Sg	22 30 44.6	+0.1
	11nm,0.3s						
HINF	Hinteralfeld	1.57	247	ePg	Pg	22 30 24.0	-0.1
HINF				eSg	Sg	22 30 44.6	+0.1
	5.4nm,0.3s						
HINF	Hinteralfeld	1.57	247	ePn	Pn	22 30 20.1	-1.1
HINF				ePg	Pg	22 30 24.0	-0.1
HINF				eSn	Sn	22 30 39.6	-1.7
HINF				eSg	Sg	22 30 44.6	+0.1
TNS	Taunus Mts	1.81	349	ePg	Pg	22 30 29.2	+0.6
TNS				Sg	Sg	22 30 52.7	+0.7
TNS	Taunus Mts	1.81	349	Sx	Sx	22 30 52.7	
TNS	Taunus Mts	1.81	349	eSg	Sg	22 30 52.4	+0.4
TNS	Taunus Mts	1.81	349	ePg	Pg	22 30 29.2	+0.6
TNS				eSg	Sg	22 30 52.4	+0.4
HAU	Haudompre	1.83	257	ePg	Pg	22 30 28.7	-0.3
HAU				eSg	Sg	22 30 52.4	-0.3
	18nm,0.3s						
HAU	Haudompre	1.83	257	ePg	Pg	22 30 28.7	-0.3
HAU				eSg	Sg	22 30 52.4	-0.3
	9.1nm,0.3s						
LOMF	Lomont	1.83	234	Pg	Pg	22 30 29.3	+0.3
FETA	Feichten	1.84	140	⇑iPn	Pn	22 30 24.6	-0.3
FETA				⇑iSg	Sg	22 30 53.1	-0.1
	1.1nm,0.1s						
GRA1	Grafenberg Arr	1.92	49	ePg	Pg	22 30 30.1	-0.5
GRA1				eSg	Sg	22 30 54.5	-0.9
GRF	Grafenberg Arr	1.92	49	ePg	Pg	22 30 30.2	-0.4
	SNR=2.4						
GRF				eSg	Sg	22 30 54.3	-1.1
	SNR=4.0						
GRF	Grafenberg Arr	1.92	49	ePg	Pg	22 30 30.1	-0.5
GRF				eSg	Sg	22 30 54.5	-0.9
THEF	They Montfort	2.03	265	Pg	Pg	22 30 31.2	-1.5
THEF				Sg	Sg	22 30 59.2	+0.2
WLF	Walferdange	2.23	304	eSg	Sg	22 31 05.9	+0.2
	SNR=2.4						
RFYF	Reffroy	2.35	276	eSg	Sg	22 31 09.1	-0.3
	6.6nm,0.2s						
RFYF	Reffroy	2.35	276	eSg	Sg	22 31 09.1	-0.3
	3.3nm,0.2s						
UBBA	Unterbreizbach	2.46	15	eSg	Sg	22 31 11.3	-1.4
	SNR=2.0						
MEZF	Maizieres J'vi	2.63	273	ePg	Pg	22 30 43.2	-1.0
MEZF				eSg	Sg	22 31 16.5	-1.8
	7.6nm,0.3s						
MEZF	Maizieres J'vi	2.63	273	ePg	Pg	22 30 43.2	-1.0
MEZF				eSg	Sg	22 31 16.5	-1.8
	3.8nm,0.3s						
WET	Wettzell	2.65	73	eSg	Sg	22 31 17.1	-1.9
	SNR=5.2						
SFTF	Sexfontaines	2.66	266	ePg	Pg	22 30 44.0	-0.8
SFTF				eSg	Sg	22 31 18.5	-0.7
	4.2nm,0.2s						
SFTF	Sexfontaines	2.66	266	ePg	Pg	22 30 44.0	-0.8
SFTF				eSg	Sg	22 31 18.5	-0.7
	2.1nm,0.2s						
CABF	La Chapelle	2.70	228	ePg	Pg	22 30 44.8	-0.8
CABF				eSg	Sg	22 31 18.4	-2.2
	2.6nm,0.3s						
CABF	La Chapelle	2.70	228	ePg	Pg	22 30 44.8	-0.8
CABF				eSg	Sg	22 31 18.4	-2.2
	1.3nm,0.3s						
CABF	La Chapelle	2.70	228	ePn	Pn	22 30 35.3	-1.4
CABF				ePg	Pg	22 30 44.8	-0.8
CABF				eSg	Sg	22 31 18.4	-2.2
MOX	Moxa	2.78	37	eSg	Sg	22 31 21.7	-1.3
	SNR=4.3						
MOX	Moxa	2.78	37	eSG	Sg	22 31 21.9	-1.1
NKC	Novy Kostel	2.87	50	ePG	Pg	22 30 47.8	-1.1
NKC				eSG	Sg	22 31 24.0	-2.1
	comp=Z,8.7nm,0.4s						
GUNZ	Gunzen	2.90	47	eSg	Sg	22 31 25.3	-1.5
	SNR=3.3						
KHC	Kasperske Hory	3.10	76	ePN	Pn	22 30 42.9	+0.7
KHC				ePG	Pg	22 30 51.3	-1.9
KHC				eSN	Sn	22 31 17.7	-1.2
KHC				eSG	Sg	22 31 29.4	-4.0
	comp=Z,3.1nm,0.4s						
LPL	La Plagne	3.32	209	ePg	Pg	22 30 56.1	-1.4
LPL				eSg	Sg	22 31 39.2	-1.3
	comp=Z,0.7nm,0.2s						
LPL	La Plagne	3.32	209	ePg	Pg	22 30 56.1	-1.4
LPL				eSg	Sg	22 31 39.2	-1.3
	comp=Z,0.3nm,0.2s						
LOR	Lormes	3.66	253	ePg	Pg	22 31 02.8	-1.1
LOR				eSg	Sg	22 31 48.7	-2.6
	comp=Z,1.9nm,0.2s						
LOR	Lormes	3.66	253	ePg	Pg	22 31 02.8	-1.1
LOR				eSg	Sg	22 31 48.7	-2.6
	comp=Z,0.9nm,0.2s						
CLL	Collm	3.85	41	eSg	Sg	22 31 55.0	-2.5
CLL				ix	x	22 32 01.8	
SMF	Signal de Mont	3.94	245	ePg	Pg	22 31 07.8	-1.4
SMF				eSg	Sg	22 31 57.3	-2.9
	comp=Z,1.8nm,0.2s						
SMF	Signal de Mont	3.94	245	ePg	Pg	22 31 07.8	-1.4
SMF				eSg	Sg	22 31 57.3	-2.9
	comp=Z,0.9nm,0.2s						
PRU	Pruhonice	3.94	65	eSG	Sg	22 31 57.1	-3.2
	comp=Z,2.4nm,0.5s						
SSF	Saint Saulge	3.96	251	ePg	Pg	22 31 08.0	-1.7
SSF				eSg	Sg	22 31 59.4	-1.6
	comp=Z,1.3nm,0.3s						
SSF	Saint Saulge	3.96	251	ePg	Pg	22 31 08.0	-1.7
SSF				eSg	Sg	22 31 59.4	-1.6
	comp=Z,0.6nm,0.3s						
BRG	Berggiesshubel	4.02	51	SG	Sg	22 32 01.2	-1.6
	comp=Z,3.3nm,0.9s						
ORIF	Oris-en-Rattie	4.14	212	ePg	Pg	22 31 10.8	-2.2
ORIF				eSg	Sg	22 32 03.9	-2.7
	comp=Z,0.9nm,0.3s						
ORIF	Oris-en-Rattie	4.14	212	ePg	Pg	22 31 10.8	-2.2
ORIF				eSg	Sg	22 32 03.9	-2.7
	comp=Z,0.4nm,0.3s						
AVF	Avril sur Loir	4.17	249	ePg	Pg	22 31 12.1	-1.5
AVF				eSg	Sg	22 32 05.1	-2.5
	comp=Z,0.4nm,0.2s						
AVF	Avril sur Loir	4.17	249	ePg	Pg	22 31 12.1	-1.5
AVF				eSg	Sg	22 32 05.1	-2.5
	comp=Z,0.2nm,0.2s						
TREC	Trest	4.36	76	eSG	Sg	22 32 09.6	-4.2
HYF	Humbligny	4.45	257	ePg	Pg	22 31 17.9	-1.0
BGF	Bois d'Agland	4.58	248	ePg	Pg	22 31 19.2	-2.4
BGF				eSg	Sg	22 32 18.7	-2.2
	comp=Z,2.4nm,0.3s						
BGF	Bois d'Agland	4.58	248	ePg	Pg	22 31 19.2	-2.4
BGF				eSg	Sg	22 32 18.7	-2.2
	comp=Z,1.2nm,0.3s						

*IDC **02** 23:02:46.5±2.0, 1191S×16631E, h0^{km}, mb4.1/8, mb1 4.2/8, mb1mx4.0/15, mbtmp4.1/8, MS3.6/3, Ms1 3.6/3, ms1mx3.0/31, Error ellipse: s-maj=61.0km s-min=24.8km az=116.0*

*BJI **02** 23:02:52.5, 1128S×16702E, h49^{km}, mB5.1, mb4.6*

*NEIC **02** 23:02:52.9±2.6, 1188S×166.10E, h35^{km}, mb4.8/1, Error ellipse: s-maj=75.9km s-min=17.9km az=119.0*

ISC 02 23:02:53.1±2.9**, 120S**±03×**1661E**±05**, h35**^{km}**, n19, σ0**^{s}**95**/14**, mb4.3**/11**, MS3.6**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.73	245	P	P	23 07 30.7	-0.1
	6.0nm,0.8s,baz=76,slow=15,SNR=5.0						
CTA	Charters Tower	20.73	245	P	P	23 07 30.7	-0.1
STKA	Stephens Creek	30.06	225	P	P	23 08 59.9	+0.8
	1.6nm,0.9s,mb3.8,baz=90,slow=7.1,SNR=2.5						
WRA	Warramunga Arr	31.54	251	P	P	23 09 12.4	+0.1
	1.4nm,0.9s,mb3.8,baz=82,slow=8.7,SNR=6.6						
WRA				PcP	PcP	23 12 04.3	-0.3
	2.6nm,0.9s,baz=77,slow=2.9,SNR=10						
ASAR	Alice Springs	32.73	245	P	P	23 09 21.4	-1.3
	0.2nm,0.6s,mb3.2,baz=116,slow=14,SNR=4.1						
ASAR				PcP	PcP	23 12 07.1	-0.7
	2.9nm,0.9s,baz=68,slow=2.8,SNR=18						
GUMO	Guam	32.99	320	LR	LR	23 21 16.9	
	comp=Z,118nm,19.3s,MS3.6,baz=94,slow=34						
ASAJ	Asahikawa	59.77	341	LR	LR	23 37 03.4	
	comp=Z,59nm,18.2s,MS3.8,baz=157,slow=34						
KSRS	Korea Array	60.83	326	P	P	23 13 01.2	-0.7
	1.8nm,0.7s,mb4.3,baz=136,slow=6.7,SNR=6.8						
KSRS				LR	LR	23 36 27.5	
	comp=Z,27nm,18.0s,MS3.4,baz=140,slow=33						
CMAR	Chiang Mai Arr	72.81	294	P	P	23 14 18.9	+0.2
	1.2nm,0.7s,mb4.0,baz=122,slow=4.8,SNR=7.6						
LZH	Lanzhou	75.64	312	eP	P	23 14 36.8	+2.0
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,72nm,4.0s						
ULN	Ulaanbaatar	79.25	324	eP	P	23 14 54.5	-0.2
	comp=Z,9.3nm,0.8s,mb4.8						
SONM	Songino Array	79.61	324	P	P	23 14 56.9	+0.3
	comp=Z,3.8nm,0.9s,mb4.3,baz=137,slow=5.0,SNR=20						
GTA	Gaotai	79.95	314	P	P	23 14 59.7	+1.0
GTA				AP	pP	23 15 08.6	-1.1
GTA				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.6						
MKAR	Makanchi Array	94.43	317	P	P	23 16 09.3	-0.1
	comp=Z,7.8nm,0.7s,mb5.2,baz=109,slow=6.6,SNR=76						
ZALV	Zalesovo Beam	94.50	324	P	P	23 16 07.7	-1.9
	comp=Z,0.9nm,0.7s,mb4.3,baz=107,slow=5.0,SNR=7.0						
ZALV	Zalesovo Beam	94.50	324	P	P	23 16 07.7	-1.9
ORIF	Oris-en-Rattie	143.05	336	ePKP1	PKPdf	23 22 20.7	-2.7
	comp=Z,6.0nm,0.9s						
FRF	La Foret Royal	143.86	334	ePKP1	PKPdf	23 22 20.2	-4.7
KEST	Kesra	148.36	322	PKPbc	PKPbc	23 22 34.0	-2.2
	comp=Z,1.6nm,1.0s,baz=250,slow=9.2,SNR=4.3						

KRSC 02 23:03:10.0±1.3**, 5080N**×**16029E, h10**^{km}±10^{km}**, ML3.6, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	1.98	327	eP	Pn	23 03 44.2	+0.7
RUS				eS	Sn	23 04 09.2	+1.0
SPN	Mys Shipunski	2.31	356	P	Pn	23 03 49.5	+1.5
SPN				S	Sn	23 04 18.2	+1.8
NLC	Nalytchevo	2.45	347	P	Pn	23 03 51.8	+1.9
NLC				S	Sn	23 04 22.0	+2.2
PET	Petropavlovsk	2.45	336	S	Sn	23 04 20.9	+1.0
AVH	Avacha	2.65	339	P	Pn	23 03 55.2	+2.5
AVH				S	Sn	23 04 27.7	+2.9
GNL	Ganaly	3.24	334	P	Pn	23 04 03.3	+2.5
MKZ	Mys Kozlova	3.86	13	eP	Pn	23 04 11.0	+1.6
MKZ				eS	Sn	23 04 55.7	+0.9
KBTR	Krutoberegovo	5.62	15	P	Pn	23 04 35.9	+2.3

*ISCJB **02** 23:05:30.3±0.5, 2441N±002×12200E±002, h5^{km}±3^{km}, Error ellipse: s-maj=3.5km s-min=2.8km az=33.6*

*TAP **02** 23:05:31.3, 2444N×12190E, h18^{km}, ML3.3, B*

*JMA **02** 23:05:31.2±0.3, 2468N×12192E, h42^{km}, M2.6*

ISC 02 23:05:30.8±0.4**, 2441N**±002×**12198E**±002**, h7**^{km}±4^{km}**, n43, σ0**^{s}**83**/69**, 3C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.22	276	⇑iP	Pg	23 05 35.6	+0.4
	baz=266						
ENA				S	Sg	23 05 38.2	0.0
	baz=266						
TWC	Suao	0.24	329	⇓iP	Pg	23 05 36.2	+0.6
	baz=345						
TWC				iS	Sg	23 05 39.0	+0.3
	baz=345						
EHP	Heping Village	0.24	247	P	Pg	23 05 36.0	+0.4
	baz=235						
EHP				S	Sg	23 05 39.8	+0.9
	baz=235						
ILA	Ilan	0.42	329	iP	Pg	23 05 39.4	+0.5
	baz=330						
ILA				iS	Sg	23 05 45.0	+0.6
	baz=330						
TWE	Neicheng	0.43	317	⇓iP	Pg	23 05 39.2	+0.1
	baz=323						
TWE				iS	Sg	23 05 44.2	-0.5
	baz=323						
ENTT	Nioudou	0.45	302	⇓iP	Pg	23 05 39.4	0.0
	baz=304						
ENTT				S	Sg	23 05 44.5	-0.8
	baz=304						
TWD	Chiawan	0.48	228	iP	Pg	23 05 40.2	+0.1
	baz=222						
TWD				eS	Sg	23 05 46.2	-0.2
	baz=222						
NNS	Nan Shan	0.56	274	⇑iP	Pg	23 05 41.2	-0.4
	baz=274						
NNS				eS	Sg	23 05 47.5	-1.4
	baz=274						
TWB1	Santiao Chiao	0.60	0	iP	Pg	23 05 42.9	+0.5
	baz=360						
TWB1				S	Sg	23 05 49.5	-0.8
	baz=360						
TWA	Mucha	0.68	328	eP	Pg	23 05 43.9	0.0
	baz=324						
TWA				eS	Sg	23 05 52.6	-0.1
	baz=324						
NWF	Wu-fen Shan	0.69	344	eP	Pg	23 05 44.6	+0.5
	baz=343						
NWF				S	Sg	23 05 53.1	+0.1
	baz=343						
WHF	Hehuan Shan	0.71	248	⇑iP	Pg	23 05 44.0	-0.4
	baz=244						
WHF				S	Sg	23 05 53.2	-0.4
	baz=244						
TWT	Tachien	0.75	258	eP	Pg	23 05 44.6	-0.7
	baz=258						
TWT				eS	Sg	23 05 54.2	-0.9
	baz=258						
TAP1	Taipei	0.76	326	P	Pg	23 05 46.1	+0.8
	baz=324						
TAP1				S	Sg	23 05 55.5	+0.2
	baz=324						
ESL	Shilin	0.78	221	eP	Pg	23 05 45.5	-0.2
	baz=221						
TWS1	Kuangyinshan	0.86	323	P	Pg	23 05 48.0	+0.6
	baz=326						
TWS1				eS	Sg	23 05 59.0	+0.4
	baz=326						
NCU	National Centr	0.92	308	eP	Pg	23 05 48.7	+0.3
	baz=310						
NCU				eS	Sg	23 06 00.6	+0.2
	baz=310						
NSTT	Nanjuang	0.92	284	eP	Pg	23 05 48.0	-0.5
	baz=277						
NSTT				eS	Sg	23 05 58.9	-1.7
	baz=277						
TWY	Chenhua	0.93	338	P	Pg	23 05 49.1	+0.3
	baz=342						
TWY				eS	Sg	23 06 01.1	+0.2
	baz=342						
YOJ	Yonaguni jima	0.94	86	P	Pg	23 05 49.3	+0.5
YOJ				S	Sg	23 06 02.5	+1.5
YOJ	Yonaguni jima	0.94	86	⇓iP	Pg	23 05 49.3	+0.5
	baz=74						
YOJ				eS	Sg	23 06 02.8	+1.8
	baz=74						
HSN	Hsinchu	1.00	293	eP	Pg	23 05 50.3	+0.2
	baz=293						
EHY	Hungye	1.08	214	eP	Pg	23 05 50.9	-0.7
	baz=223						
TWQ1	Liyutan	1.11	267	eP	Pg	23 05 52.2	+0.1
	baz=265						
SMLT	Sun Moon Lake	1.12	242	eP	Pg	23 05 51.6	-0.6
	baz=230						
TYC	Yuchr	1.14	244	eP	Pg	23 05 51.7	-1.1
	baz=247						
PCYT	Pengchaiyu	1.22	4	eP	Pb	23 05 52.5	-1.7
	baz=6.0						
TCU	Taichung	1.22	258	eP	Pb	23 05 54.8	+0.6
	baz=257						
TCU				eS	Sb	23 06 12.1	+1.9
	baz=257						
TWF1	Yuli	1.22	211	eP	Pn	23 05 52.7	-1.6
	baz=222						
YUS	Yu-Shan	1.31	226	eP	Pn	23 05 55.3	-0.3
	baz=224						
ALS	Alishan	1.40	231	eP	Pn	23 05 56.7	0.0
	baz=216						
CHN5	Tsauling	1.44	236	eP	Pn	23 05 58.1	+0.8
	baz=237						
CHN5				eS	Sn	23 06 18.1	+1.7
	baz=237						
STYT	Tauyuan	1.67	222	eP	Pn	23 05 59.7	-0.8
	baz=221						
HATJ	Hateruma jima	1.70	101	P	Pn	23 06 01.1	+0.3
WTP	Ta-pu	1.71	228	eP	Pn	23 06 02.0	+1.1
	baz=216						
WTP				eS	Sn	23 06 26.3	+3.4
	baz=216						
TWK	Hsinying	1.78	231	eP	Pn	23 06 02.2	+0.3
	baz=230						
SGST	Jiashian	1.84	225	eP	Pn	23 06 03.6	+0.8
	baz=224						
JKRS	Kuro-shima	1.85	95	P	Pn	23 06 03.0	0.0
JKRS				S	Sn	23 06 26.2	-0.5
JIJ	Ishigaki jima	1.97	91	P	Pn	23 06 03.8	-0.8
JIJ				S	Sn	23 06 27.7	-1.8
SSD	Sandimen	2.07	217	eP	Pn	23 06 07.1	+1.2
	baz=206						
EAST	Anshuo	2.27	208	eP	Pn	23 06 10.2	+1.5
	baz=196						
PNG	Penghu	2.37	250	eP	Pn	23 06 08.4	-1.7
	baz=249						
JTJ	Tarama	2.49	84	P	Pn	23 06 12.1	+0.4
JTJ				S	Sn	23 06 41.1	-1.2

IDC 02 23:09:19.2±9.0**, 1275S**×**16695E, h0**^{km}**, mb3.9**/5**, mb1 3.9**/5**, mb1mx3.7**/15**, mbtmp3.8**/5**, MS3.6**/3**, Ms1 3.6**/3**, ms1mx3.1**/28**, Error ellipse: s-maj=272.8km s-min=39.1km az=126.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	20.73	96	LR	LR	23 19 25.9	
	comp=Z,137nm,20.9s,baz=59,slow=29						
CTA	Charters Tower	21.14	247	LR	LR	23 20 46.3	
	comp=Z,82nm,18.9s,baz=51,slow=32						

WRA	**Warramunga Arr**	**32.06**	**253**	P	P	23 15 48.5	+0.4
	0.8nm,1.0s,baz=85,slow=9.1,SNR=13						
ASAR	**Alice Springs**	**33.14**	**246**	P	P	23 15 57.0	-0.4
	0.8nm,0.8s,baz=71,slow=9.7,SNR=4.8						
PPT	**Papeete**	**42.16**	**102**	LR	LR	23 29 56.7	
	comp=Z,194nm,18.8s,baz=349,slow=29						
SONM	**Songino Array**	**80.73**	**324**	P	P	23 21 34.2	-0.2
	0.4nm,0.7s,baz=132,slow=4.1,SNR=5.2						
MKAR	**Makanchi Array**	**95.56**	**317**	P	P	23 22 47.3	+0.9
	0.3nm,0.5s,baz=86,slow=4.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**95.62**	**324**	P	P	23 22 46.1	-0.3
	0.3nm,0.3s,baz=131,slow=4.4,SNR=5.2						

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*IDC **02** 23:53:25.2±1.2, 31.86S×67.70W, h0^{km}, mb4.1/1, mb1 3.8/6, mb1mx3.7/18, mbtmp3.7/6, ML3.7/5, MS2.8/3, Ms1 2.8/3, ms1mx2.7/27, Error ellipse: s-maj=19.3km s-min=9.4km az=21.0*

*GUC **02** 23:53:26.5±0.8, 31.99S×67.49W, h3^{km}±31^{km}, ML3.9*

*ISCJB **02** 23:53:28.3±0.5, 31.83S±0.04×67.38W±0.04, h33^{km}, mb4.8/3, Error ellipse: s-maj=6.0km s-min=4.9km az=142.3*

*NEIC **02** 23:53:30.4±0.5, 31.87S×67.47W, h35^{km}, mb4.9/1, Error ellipse: s-maj=9.2km s-min=6.9km az=119.0*

ISC 02 23:53:30.7±0.5**, 31.82S**±0.04×**67.44W**±0.05**, h35^{km}, n25, σ1^{s}08**/36**, mb4.8**/3**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.71**	**288**	Pg	**Pn**	**23 53 34.9**	**-9.4**
	6.4nm,0.3s,baz=122,slow=15,SNR=1196						
CFAA				Lg		23 53 43.0	
	31nm,0.3s,baz=273,slow=13,SNR=43						
JACH	**Jahuel**	**2.81**	**251**	*e*P	**Pn**	**23 54 12.7**	**-0.3**
JACH				*i* S	**Sn**	**23 54 47.2**	**+1.6**
JACH	**Jahuel**	**2.81**	**251**	*e*P	**Pn**	**23 54 12.8**	**-0.2**
JACH				*i* S	**Sn**	**23 54 47.2**	**+1.6**
FCH	**Farellones**	**2.84**	**237**	*e*P	**Pn**	**23 54 12.8**	**-0.7**
FCH				*i* S	**Sn**	**23 54 48.0**	**+1.7**
FCH				AML	AML	23 54 59.9	
	comp=N,305nm,0.5s						
PEL	**Peldehue**	**3.04**	**244**	*e*P	**Pn**	**23 54 14.9**	**-1.4**
PEL				*i* S	**Sn**	**23 54 52.2**	**+0.7**
PEL				AML	AML	23 55 00.3	
	comp=E,472nm,0.6s						
PCH	**Pirque**	**3.15**	**235**	*e*P	**Pn**	**23 54 17.0**	**-0.8**
RCDM	**Rinconada Maip**	**3.29**	**239**	*e*P	**Pn**	**23 54 19.2**	**-0.5**
RCDM				*e*S	**Sn**	**23 54 58.4**	**+0.8**
RCDM				AML	AML	23 55 04.1	
	comp=N,160nm,0.5s						
RCDM	**Rinconada Maip**	**3.29**	**239**	*e*P	**Pn**	**23 54 19.2**	**-0.5**
RCDM				*e*S	**Sn**	**23 54 58.0**	**+0.4**
TLL	**Tololo Astrono**	**3.33**	**299**	*e*P	**Pn**	**23 54 21.8**	**+1.5**
TLL				*i* S	**Sn**	**23 55 03.9**	**+5.3**
TLL				AML	AML	23 55 08.4	
	comp=N,482nm,0.4s						
TLL	**Tololo Astrono**	**3.33**	**299**	*e*P	**Pn**	**23 54 22.2**	**+2.0**
TLL				*i* S	**Sn**	**23 55 03.9**	**+5.3**
TACH	**Talagante**	**3.47**	**237**	*e*P	**Pn**	**23 54 20.4**	**-1.7**
TACH	**Talagante**	**3.47**	**237**	*e*P	**Pn**	**23 54 20.3**	**-1.9**
LCO	**Las Campanas**	**3.98**	**314**	*e*Pn	**Pn**	**23 54 28.9**	**-0.2**
LCO				*e*Sn	**Sn**	**23 55 14.6**	**0.0**
SFDO	**San Fernando**	**4.09**	**226**	*e*P	**Pn**	**23 54 29.9**	**-0.8**
TRQA	**Tornquist**	**7.66**	**146**	*e*Pn	**Pn**	**23 55 19.7**	**-0.1**
	comp=N,57nm,1.1s						
TRQA				*e*Sn	**Sn**	**23 56 46.8**	**+1.4**
PLCA	**Paso Flores**	**9.24**	**195**	Pn	**Pn**	**23 55 39.0**	**-2.3**
	comp=N,0.1nm,0.3s,baz=322,slow=18,SNR=2.1						
PLCA				Lg		23 58 16.6	
	comp=N,0.4nm,0.3s,baz=336,slow=22,SNR=3.9						
PLCA				LR	LR	23 59 37.9	
	comp=N,56nm,20.8s,baz=96,slow=41						
LVC	**Limon Verde**	**9.27**	**352**	Pn	**Pn**	**23 55 40.4**	**-1.4**
	comp=N,0.5nm,0.3s,baz=165,slow=12,SNR=5.5						
LVC				Lg		23 58 20.1	
	comp=N,0.6nm,0.3s,baz=114,slow=20,SNR=2.7						
CPUP	**Villa Florida**	**10.40**	**61**	Pn	**Pn**	**23 55 58.0**	**+0.7**
	comp=N,0.8nm,0.3s,baz=228,slow=11,SNR=5.1						
CPUP				Sn	**Sn**	**23 57 58.6**	**+6.0**
	comp=N,1.9nm,0.3s,baz=294,slow=12,SNR=3.0						
CPUP				Lg		23 59 04.2	
	comp=N,2.6nm,0.3s,baz=130,slow=19,SNR=3.2						
CPUP				LR	LR	23 59 38.2	
	comp=N,36nm,21.8s,baz=224,slow=35						
CPUP	**Villa Florida**	**10.40**	**61**	Pn	**Pn**	**23 55 58.0**	**+0.7**
CPUP				Sn	**Sn**	**23 57 58.6**	**+6.0**
CPUP				Lg		23 59 04.2	
CPUP				LR	LR	23 59 38.2	
LPAZ	**La Paz**	**15.48**	**358**	Pn	**Pn**	**23 57 07.6**	**+1.2**
	comp=N,0.1nm,0.3s,baz=189,slow=17,SNR=1.8						
LPAZ				LR	LR	00 03 20.8	
	comp=N,60nm,21.8s,baz=208,slow=38						
SIV	**San Ignacio**	**16.79**	**22**	Pn	**Pn**	**23 57 23.0**	**-0.2**
	comp=N,0.1nm,0.3s,baz=209,slow=13,SNR=7.1						
TEIG	**Tepich**	**55.48**	**336**	*e*P	**P**	**00 03 01.8**	**-0.3**
	comp=N,15nm,1.2s,mb4.9						
BRAL	**Brewton**	**65.20**	**341**	*e*P	**P**	**00 04 07.8**	**-0.5**
	comp=N,35nm,0.7s,mb5.5						
TORD	**Torodi Ar. Bea**	**79.82**	**68**	P	**P**	**00 05 37.0**	**+1.2**
	comp=N,1.5nm,0.8s,mb4.0,baz=255,slow=3.9,SNR=8.4						
ZALV	**Zalesovo Beam**	**150.30**	**34**	PKPbc	PKPbc	00 13 18.0	+0.4
	comp=N,1.0nm,0.4s,baz=323,slow=2.5,SNR=8.9						

IDC 02 23:55:34.0±12.0**, 8.52S**×**128.06E, h151^{km}**±144^{km}**, mb3.2**/1**, mb1 3.0**/4**, mb1mx2.9**/15**, mbtmp2.9**/4**, ML3.2**/2**, Error ellipse: s-maj=92.1km s-min=47.3km az=14.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.81**	**194**	P	Pn	23 57 51.9	+0.4
	0.2nm,0.3s,baz=34,slow=16,SNR=6.6						
FITZ				S	Sn	23 59 40.2	-0.1
	0.1nm,0.3s,baz=42,slow=23,SNR=2.0						
WRA	**Warramunga Arr**	**12.89**	**152**	P	Pn	23 58 30.5	-1.2
	0.1nm,0.3s,baz=322,slow=14,SNR=4.3						
WRA				S	Sn	00 00 53.8	-0.5
	0.3nm,0.3s,baz=333,slow=22,SNR=4.0						
ASAR	**Alice Springs**	**16.07**	**160**	P	Pn	23 59 13.6	+2.0
	0.1nm,0.3s,baz=344,slow=11,SNR=11						
MKAR	**Makanchi Array**	**68.46**	**328**	P	P	00 06 19.6	0.0
	0.5nm,0.7s,baz=132,slow=6.7,SNR=5.0						

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*ISCJB **03** 00:13:55.9±0.3, 59.78N±0.03×152.67W±0.07, h108^{km}±3^{km}, mb4.0/14, Error ellipse: s-maj=6.3km s-min=4.6km az=38.0*

*IDC **03** 00:13:56.2±1.6, 59.83N×152.71W, h88^{km}±19^{km}, mb3.8/14, mb1 3.9/17, mb1mx3.7/28, mbtmp3.8/17, Error ellipse: s-maj=19.3km s-min=15.0km az=109.0*

*NEIC **03** 00:13:58.4, 59.78N×152.66W, h91^{km}, MG3.6(AEIC), After AEIC.*

ISC 03 00:13:57.1±0.3**, 59.77N**±0.03×**152.67W**±0.07**, h100^{km}**±3^{km}**, n60, σ0^{s}73**/67**, mb4.0**/14**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.55**	**225**	P	**Pn**	**00 14 13.7**	**+0.4**
AUL				S	**Sn**	**00 14 26.6**	**+1.2**
SLKM	**Skilak Lake**	**1.43**	**58**	P	**Pn**	**00 14 22.7**	**+0.2**
SEW	**Seward**	**1.66**	**77**	P	**Pn**	**00 14 25.7**	**+0.5**
SEW				S	**Sn**	**00 14 45.9**	**-0.7**
FIB	**Fire Island**	**1.86**	**40**	P	**Pn**	**00 14 29.3**	**+1.4**
FIB				S	**Sn**	**00 14 52.9**	**+1.6**
SVW2	**Sparrevohn**	**1.96**	**314**	P	**Pn**	**00 14 28.4**	**-0.7**
RC01	**Rabbit Creek A**	**1.96**	**47**	P	**Pn**	**00 14 29.5**	**+0.3**
RC01				S	**Sn**	**00 14 53.9**	**+0.2**
KDAK	**Kodiak Island**	**2.00**	**179**	P	**Pn**	**00 14 29.6**	**-0.1**
	34nm,0.3s,baz=32,slow=13,SNR=137						
KDAK				S	**Sn**	**00 14 54.2**	**-0.2**
	167nm,0.3s,baz=307,slow=20,SNR=34						
KDAK	**Kodiak Island**	**2.00**	**179**	P	**Pn**	**00 14 29.3**	**-0.3**
KDAK				S	**Sn**	**00 14 53.5**	**-0.9**
PMR	**Palmer**	**2.52**	**42**	P	**Pn**	**00 14 36.0**	**-0.5**
OHAK	**Old Harbor**	**2.58**	**187**	P	**Pn**	**00 14 36.6**	**-0.6**
OHAK				S	**Sn**	**00 15 06.8**	**-1.2**
GHO	**Glory Hole Cre**	**2.72**	**41**	P	**Pn**	**00 14 38.9**	**-0.2**
PPLA	**Purkeypile**	**3.14**	**4**	P	**Pn**	**00 14 45.5**	**+0.8**
MID	**Middleton Isla**	**3.24**	**93**	P	**Pn**	**00 14 46.2**	**+0.2**
TT01	**Tatalina**	**3.53**	**334**	P	**Pn**	**00 14 49.3**	**-0.6**
EYAK	**Cordova Ski Ar**	**3.55**	**74**	P	**Pn**	**00 14 49.4**	**-0.6**
TTA	**Tatalina**	**3.55**	**335**	P	**Pn**	**00 14 49.6**	**-0.6**
DIV	**Divide**	**3.68**	**65**	P	**Pn**	**00 14 51.4**	**-0.5**
TRF	**Thorofare Moun**	**3.86**	**16**	P	**Pn**	**00 14 54.0**	**-0.3**
KTH	**Kantishna Hill**	**3.88**	**12**	P	**Pn**	**00 14 54.3**	**-0.3**
RAGM	**Ragged Mountai**	**4.05**	**78**	P	**Pn**	**00 14 56.7**	**-0.2**
BMRM	**Bremner River**	**4.18**	**70**	P	**Pn**	**00 14 58.4**	**-0.2**
MCK	**McKinley**	**4.35**	**22**	P	**Pn**	**00 15 01.5**	**+0.6**
BPAW	**Bear Paw Mtn.**	**4.42**	**10**	P	**Pn**	**00 15 00.8**	**-0.9**
HARP	**HAARP**	**4.50**	**51**	P	**Pn**	**00 15 03.0**	**0.0**
CHGN	**Chignik**	**4.63**	**224**	*e*P	**Pn**	**00 15 06.0**	**+1.3**
MENT	**Mentasta**	**5.35**	**50**	*e*P	**Pn**	**00 15 15.0**	**+0.6**
COLA	**College**	**5.59**	**22**	P	**Pn**	**00 15 17.1**	**-0.5**
IL1	**Eielson Array**	**5.70**	**26**	P	**Pn**	**00 15 18.3**	**-0.8**
BCA3	**Beaver Creek A**	**6.18**	**53**	P	**Pn**	**00 15 25.5**	**-0.2**
IM3	**Indian Mountai**	**6.25**	**356**	P	**Pn**	**00 15 26.4**	**-0.2**
IMA2	**Indian Mountai**	**6.34**	**356**	*e*P	**Pn**	**00 15 28.0**	**+0.2**
EGAK	**Eagle**	**7.34**	**42**	*e*Pn	**Pn**	**00 15 40.8**	**-0.7**
	8.6nm,0.6s						
DAWY	**Dawson**	**7.60**	**50**	*e*Pn	**Pn**	**00 15 45.3**	**+0.4**
HYT	**Haines Junctio**	**7.61**	**76**	*e*Pn	**Pn**	**00 15 49.1**	**+4.1**
BM3	**Burnt Mountain**	**8.46**	**22**	P	**Pn**	**00 15 55.3**	**-1.4**
SKAG	**Skagway**	**8.80**	**85**	*e*Pn	**Pn**	**00 16 02.5**	**+1.3**
DLBC	**Dease Lake**	**11.70**	**87**	P	**Pn**	**00 16 43.9**	**+3.3**
	baz=232,slow=8.4						
DLBC				S	**Sn**	**00 18 48.4**	**-0.6**
	baz=330,slow=20						
DLBC	**Dease Lake**	**11.70**	**87**	*e*Pn	**Pn**	**00 16 41.0**	**+0.5**
DLBC				S	**Sn**	**00 18 48.4**	**-0.6**
INK	**Inuvik**	**11.92**	**36**	P	**Pn**	**00 16 42.0**	**-1.4**
	0.5nm,0.3s,baz=194,slow=12,SNR=9.6						
YKA	**Yellowknife Ar**	**18.40**	**65**	P	**P**	**00 18 05.2**	**+1.4**
	0.6nm,0.3s,baz=276,slow=10.0,SNR=24						
YKA	**Yellowknife Ar**	**18.40**	**65**	P	**P**	**00 18 05.2**	**+1.4**
PETK	**Petropavlovsk-**	**27.66**	**278**	P	**P**	**00 19 34.9**	**-0.2**
	1.6nm,0.4s,mb3.9,baz=67,slow=13,SNR=6.1						
SPITS	**Spitsbergen Ar**	**42.13**	**3**	P	**P**	**00 21 39.4**	**+0.7**
	13nm,1.0s,mb4.6,baz=38,slow=9.8,SNR=8.0						
ARCES	**ARCESS Array B**	**50.98**	**1**	P	**P**	**00 22 46.3**	**-1.4**
	1.6nm,0.9s,mb4.0,baz=2.3,slow=6.1,SNR=4.5						
KSRS	**Korea Array**	**53.39**	**283**	P	**P**	**00 23 06.8**	**+0.7**
	1.2nm,0.4s,mb4.3,baz=36,slow=7.1,SNR=5.8						
SONM	**Songino Array**	**55.06**	**306**	P	**P**	**00 23 19.0**	**+1.0**
	1.7nm,0.6s,mb4.3,baz=42,slow=7.5,SNR=14						
ZAA0	**Zalesovo Array**	**57.66**	**324**	*e*P	**P**	**00 23 36.3**	**0.0**
ZALV	**Zalesovo Beam**	**57.66**	**324**	P	**P**	**00 23 36.3**	**0.0**
	3.7nm,0.5s,mb4.7,baz=26,slow=6.8,SNR=18						
KURK	**Kurchatov**	**62.31**	**326**	P	**P**	**00 24 08.5**	**+0.4**
	2.2nm,0.6s,mb4.4,baz=29,slow=6.6,SNR=9.1						
KURK	**Kurchatov**	**62.31**	**326**	P	**P**	**00 24 08.5**	**+0.3**
BVAR	**Borovoye Array**	**62.35**	**332**	P	**P**	**00 24 08.3**	**0.0**
	2.7nm,0.6s,mb4.5,baz=33,slow=6.0,SNR=20						
EKA	**Eskdalemuir Ar**	**62.69**	**19**	P	**P**	**00 24 10.6**	**-0.1**
	0.9nm,0.6s,mb3.9,baz=333,slow=4.9,SNR=5.3						
MKAR	**Makanchi Array**	**64.71**	**322**	P	**P**	**00 24 23.4**	**-0.6**
	1.7nm,0.6s,mb4.0,baz=39,slow=4.8,SNR=14						
AKTK	**Aktyubinsk**	**67.36**	**339**	P	**P**	**00 24 41.0**	**0.0**
AKTO	**Aktyubinsk**	**67.36**	**339**	P	**P**	**00 24 41.0**	**0.0**
	1.0nm,0.4s,mb4.0,baz=45,slow=11,SNR=2.8						
GERES	**GERESS Array B**	**71.17**	**9**	P	**P**	**00 25 04.9**	**+0.4**
	0.2nm,0.5s,mb3.2,baz=347,slow=4.0,SNR=3.8						
ESDC	**Sonseca Array**	**77.60**	**24**	P	**P**	**00 25 42.3**	**+0.5**
	0.4nm,0.5s,mb3.4,baz=350,slow=6.0,SNR=4.7						
KEST	**Kesra**	**83.69**	**15**	P	**P**	**00 26 14.3**	**0.0**
	0.5nm,0.5s,mb3.6,baz=283,slow=6.0,SNR=5.6						
BOSA	**Boshof**	**148.81**	**4**	PKPbc	PKPbc	00 33 31.8	-0.6
	2.9nm,0.5s,baz=308,slow=1.7,SNR=12						
QSPA	**South Pole Qui**	**149.57**	**180**	PKPbc	PKPbc	00 33 33.4	+0.7
	0.6nm,0.5s,baz=91,slow=0.7,SNR=4.9						
QSPA				PKPab	PKPab	00 33 39.4	+1.2
	0.7nm,0.5s,baz=36,slow=0.7,SNR=5.9						

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*ISCJB **03** 00:14:08.2±0.7, 6.97S±0.05×131.12E±0.07, h102^{km}±12^{km}, mb3.5/2, Error ellipse: s-maj=11.1km s-min=8.4km az=13.1*

*IDC **03** 00:14:10.5±13.0, 7.09S×130.73E, h100^{km}±144^{km}, mb3.4/2, mb1 3.7/5, mb1mx3.4/15, mbtmp3.5/5, ML4.1/3, Error ellipse: s-maj=86.5km s-min=58.7km az=7.0*

ISC 03 00:14:08.9±0.7**, 7.11S**±0.05×**131.25E**±0.07**, h98^{km}**±12^{km}**, n10, σ1^{s}12**/18**, mb3.5**/2**, 1C, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	**Tual**	**2.08**	**45**	⇑*e*P	**Pn**	**00 14 42.5**	**0.0**
TLE				*e*S	**Sn**	**00 15 07.6**	**-0.5**
KAKA	**Kakadu**	**5.69**	**168**	*e*P	**Pn**	**00 15 36.1**	**+5.1**
	4.1nm,0.2s						
KAKA				*e*S	**Sn**	**00 16 40.0**	**+5.0**
BATI	**Baumata**	**8.11**	**247**	P	**Pn**	**00 16 05.3**	**+1.4**
	9.2nm,0.3s,baz=83,slow=4.5,SNR=4.2						
BATI				S	**Sn**	**00 17 33.0**	**-1.0**
	7.1nm,0.3s,baz=108,slow=20,SNR=4.3						
FITZ	**Fitzroy Crossi**	**12.22**	**206**	*e*P	**Pn**	**00 16 59.4**	**-0.2**
	11nm,0.4s						
FITZ				*e*S	**Sn**	**00 19 10.1**	**-3.8**
FITZ	**Fitzroy Crossi**	**12.22**	**206**	P	**Pn**	**00 16 59.5**	**-0.1**
	1.8nm,0.3s,baz=32,slow=14,SNR=45						
FITZ				S	**Sn**	**00 19 09.8**	**-4.2**
	1.4nm,0.3s,baz=189,slow=17,SNR=9.4						
WRA	**Warramunga Arr**	**13.10**	**167**	P	**Pn**	**00 17 13.1**	**+1.8**
	0.8nm,0.3s,baz=348,slow=13,SNR=21						
WRA				S	**Sn**	**00 19 34.4**	**-1.0**
	1.1nm,0.3s,baz=340,slow=22,SNR=8.9						
WB2	**Warramunga Arr**	**13.11**	**167**	*e*P	**Pn**	**00 17 13.0**	**+1.7**
WB2				*e*S	**Sn**	**00 19 34.3**	**-1.2**
ASAR	**Alice Springs**	**16.66**	**171**	P	**Pn**	**00 18 00.3**	**+3.9**
	0.3nm,0.3s,baz=344,slow=9.6,SNR=15						
ASAR				S	**S**	**00 21 01.8**	**-4.5**
	0.3nm,0.3s,baz=358,slow=26,SNR=6.0						
MKAR	**Makanchi Array**	**69.00**	**326**	P	**P**	**00 25 03.6**	**-0.2**
	0.7nm,0.7s,mb3.6,baz=140,slow=7.8,SNR=6.0						
KURK	**Kurchatov**	**73.26**	**328**	P	**P**	**00 25 28.7**	**-0.7**
	0.3nm,0.5s,mb3.4,baz=130,slow=4.4,SNR=2.3						

IDC 03 00:14:14.7±5.8**, 11.94S**×**165.98E, h0^{km}, mb4.0**/4**, mb1 4.0**/4**, mb1mx3.8**/15**, mbtmp3.9**/4**, Error ellipse: s-maj=209.6km s-min=39.7km az=131.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.40**	**251**	P	P	00 20 37.5	-0.1
	0.9nm,0.6s,baz=85,slow=9.4,SNR=3.1						
ASAR	**Alice Springs**	**32.60**	**245**	P	P	00 20 48.4	+0.2
	1.0nm,0.7s,baz=75,slow=9.2,SNR=8.3						
MKAR	**Makanchi Array**	**94.33**	**317**	P	P	00 27 36.9	+0.8
	0.5nm,0.8s,baz=92,slow=6.7,SNR=4.8						
ZALV	**Zalesovo Beam**	**94.41**	**324**	P	P	00 27 34.7	-1.7
	0.2nm,0.4s,baz=108,slow=4.8,SNR=3.6						
KEST	**Kesra**	**148.26**	**322**	PKPbc	PKPbc	00 34 03.3	+0.1
	0.9nm,0.7s,baz=43,slow=4.9,SNR=5.0						

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*IDC **03** 00:17:33.0±0.6, 11.96S×166.36E, h0^{km}, mb4.4/15, mb1 4.5/15, mb1mx4.4/17, mbtmp4.4/15, MS4.0/5, Ms1 4.0/5, ms1mx3.5/27, Error ellipse: s-maj=23.3km s-min=15.6km az=86.0*

*ISCJB **03** 00:17:35.5±0.5, 12.01S±0.08×166.3E±0.1, h24^{km}, mb4.4/23, MS3.9/6, Error ellipse: s-maj=17.1km s-min=10.7km az=169.6*

*BJI **03** 00:17:37.1, 11.48S×166.76E, h31^{km}, mB5.0, mb4.8, Msz4.1*

*NEIC **03** 00:17:38.7±0.8, 11.93S×166.33E, h35^{km}, mb4.3/3, Error ellipse: s-maj=20.0km s-min=14.8km az=83.0*

ISC 03 00:17:41.1±6.1**, 12.03S**±0.10×**166.3E**±0.1**, h54^{km}**±53^{km}**, h24^{km}**±6.2^{km}**:pP-P, n50, σ1^{s}10**/34**, mb4.4**/23**, MS3.9**/6**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.86**	**245**	P	**P**	**00 22 18.1**	**-0.6**
	11nm,0.9s,baz=70,slow=12,SNR=5.8						
CTA				LR	LR	00 29 09.2	
	comp=Z,247nm,20.1s,MS3.6,baz=51,slow=33						
CTA	**Charters Tower**	**20.86**	**245**	P	**P**	**00 22 18.1**	**-0.5**
CTA				LR	LR	00 29 09.2	
CTAO	**Charters Tower**	**20.86**	**245**	*e*P	**P**	**00 22 18.0**	**-0.6**
	7.1nm,1.0s						
URZ	**Urewera**	**27.85**	**162**	P	**P**	**00 23 25.0**	**-0.4**
	1.7nm,0.4s,mb4.0,baz=0.0,slow=11,SNR=3.8						
STKA	**Stephens Creek**	**30.13**	**225**	P	**P**	**00 23 48.6**	**+2.8**
	3.1nm,0.7s,mb4.2,baz=32,slow=11,SNR=8.0						
STKA				LR	LR	00 35 12.4	
	comp=Z,390nm,18.8s,MS4.1,baz=28,slow=35						
STKA	**Stephens Creek**	**30.13**	**225**	P	**P**	**00 23 48.6**	**+2.8**
STKA				LR	LR	00 35 12.4	
WRA	**Warramunga Arr**	**31.68**	**252**	P	**P**	**00 24 00.4**	**+0.7**
	2.7nm,0.8s,mb4.1,baz=83,slow=8.9,SNR=8.4						
WRA				PcP	PcP	00 26 50.8	+0.1
	6.1nm,1.0s,baz=79,slow=2.8,SNR=16						
WRA				LR	LR	00 36 26.0	
	comp=Z,163nm,18.4s,MS3.7,baz=125,slow=36						
WRA	**Warramunga Arr**	**31.68**	**252**	P	**P**	**00 24 00.4**	**+0.7**
WRA				PcP	PcP	00 26 50.8	+0.1
WRA				LR	LR	00 36 26.0	
RPZ	**Rata Peaks**	**31.84**	**173**	P	**P**	**00 24 01.6**	**+0.9**
	6.7nm,0.5s,mb4.8,baz=0.0,slow=6.1,SNR=4.4						
ASAR	**Alice Springs**	**32.87**	**245**	P	**P**	**00 24 07.6**	**-2.4**
	6.4nm,0.6s,mb4.7,baz=71,slow=9.6,SNR=15						
ASAR				PcP	PcP	00 26 53.8	-0.1
	6.2nm,0.9s,baz=79,slow=2.7,SNR=26						
ASAR				ScP	ScP	00 30 38.2	+4.7
	0.5nm,0.8s,baz=79,slow=4.6,SNR=4.5						
GUMO	**Guam**	**33.16**	**319**	LR	LR	00 35 40.3	
	comp=Z,230nm,18.8s,MS3.9,baz=93,slow=33						
PPT	**Papeete**	**42.93**	**103**	*e*S	Sx	00 32 15.4	
	70nm,24.5s						
PPT				*e*LR	LR	00 38 10.4	
	127nm,21.8s						
PPT	**Papeete**	**42.93**	**103**	LR	LR	00 39 41.4	
	comp=Z,227nm,20.6s,MS4.0,baz=291,slow=31						
MJAR	**Matsushiro Arr**	**55.09**	**332**	P	**P**	**00 27 05.5**	**-2.1**
	0.8nm,0.3s,mb4.2,baz=166,slow=9.2,SNR=5.6						
KSRS	**Korea Array**	**60.99**	**326**	P	**P**	**00 27 48.6**	**-0.3**
	2.9nm,0.7s,mb4.5,baz=138,slow=7.4,SNR=11						
PETK	**Petropavlovsk-**	**65.29**	**354**	P	**P**	**00 28 16.6**	**-0.5**
	1.3nm,0.8s,mb4.0,baz=108,slow=4.7,SNR=4.0						
SBA	**Scott Base**	**65.82**	**180**	*e*P	**P**	**00 28 21.0**	**+0.7**
	2.7nm,0.9s,mb4.3						
XAN	**Xi'an**	**71.19**	**312**	P	**P**	**00 28 53.9**	**-0.5**
XAN				AP	pP	00 29 01.9	-7.7
XAN				XP	sP	00 29 06.9	-8.8
XAN				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.3						
XAN				AMB	AMB		
	comp=Z,53nm,9.2s						
KMI	**Kunming**	**72.10**	**301**	P	**P**	**00 29 01.2**	**+1.1**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
KMI				LR	LR		
	comp=Z,62nm,18.9s,MS3.9						
HHC	**Hu-ho-hao-te**	**72.94**	**320**	*e*P	**P**	**00 29 05.8**	**+1.1**
HHC				AMB	AMB		
	comp=Z,110nm,5.6s						
CMAR	**Chiang Mai Arr**	**73.01**	**294**	P	**P**	**00 29 06.2**	**+0.6**
	comp=Z,1.8nm,0.7s,mb4.1,baz=126,slow=4.7,SNR=7.3						
LZH	**Lanzhou**	**75.82**	**312**	⇑P	**P**	**00 29 23.5**	**+1.9**
LZH				AP	pP	00 29 28.3	-8.6
LZH				AMB	AMB		
	comp=Z,83nm,4.5s						
QSPA	**South Pole Qui**	**77.98**	**180**	P	**P**	**00 29 33.1**	**0.0**
	comp=Z,6.7nm,0.9s,mb4.6,baz=352,slow=2.9,SNR=34						
QSPA	**South Pole Qui**	**77.98**	**180**	P	**P**	**00 29 33.1**	**0.0**
ULN	**Ulaanbaatar**	**79.42**	**324**	*e*P	**P**	**00 29 41.7**	**+0.3**
	comp=Z,5.2nm,0.8s,mb4.5						
SONM	**Songino Array**	**79.78**	**324**	P	**P**	**00 29 43.6**	**+0.2**
	comp=Z,5.4nm,0.7s,mb4.6,baz=133,slow=5.1,SNR=34						
GTA	**Gaotai**	**80.14**	**314**	P	**P**	**00 29 46.6**	**+1.1**
GTA				AP	pP	00 29 57.0	-3.9
GTA				XP	sP	00 30 01.0	-5.9
GTA				AMB	AMB		
	comp=Z,19nm,1.2s,mb4.9						
MAW	**Mawson**	**84.03**	**202**	P	**P**	**00 30 05.3**	**-0.1**
	comp=Z,2.2nm,0.7s,mb4.4,baz=107,slow=6.5,SNR=6.4						
YBH	**Yreka Blue Hor**	**84.18**	**45**	P	**P**	**00 30 11.4**	**+4.8**
	comp=Z,0.4nm,0.4s,mb3.9,baz=228,slow=8.3,SNR=3.8						
NVAR	**Mina Array Bea**	**86.23**	**50**	P	**P**	**00 30 16.7**	**-0.3**
	comp=Z,0.4nm,0.8s,mb3.7,baz=285,slow=7.4,SNR=2.5						
WMQ	**Urumqi**	**90.18**	**315**	*e*P	**P**	**00 30 34.6**	**-1.0**
WMQ				AMB	AMB		
	comp=Z,92nm,3.6s						
MKAR	**Makanchi Array**	**94.61**	**317**	P	**P**	**00 30 56.0**	**-0.1**
	comp=Z,15nm,0.7s,mb5.6,baz=111,slow=6.0,SNR=132						
ZALV	**Zalesovo Beam**	**94.67**	**324**	P	**P**	**00 30 54.8**	**-1.3**
	comp=Z,2.4nm,0.8s,mb4.7,baz=116,slow=5.1,SNR=10.0						
YKA	**Yellowknife Ar**	**95.58**	**27**	P	**P**	**00 31 02.2**	**+2.1**
	comp=Z,0.5nm,0.4s,mb4.3,baz=257,slow=4.9,SNR=4.6						
SNAA	**Sanae**	**96.18**	**183**	*e*	**P**	**00 31 01.4**	**-1.4**
SNAA				*e*		00 31 09.2	
VNA2	**Neumayer--Watz**	**97.13**	**182**	*e*	**P**	**00 31 06.0**	**-1.1**
VNA2				*e*		00 31 13.1	
KURK	**Kurchatov**	**97.75**	**320**	P	**P**	**00 31 09.2**	**-0.9**
	comp=Z,0.8nm,0.7s,mb4.4,baz=102,slow=3.7,SNR=3.8						
BVAR	**Borovoye Array**	**103.06**	**322**	Pdiff	Pdif	00 31 32.6	-1.2
	comp=Z,0.6nm,0.6s,baz=96,slow=7.6,SNR=5.1						
ARCES	**ARCESS Array B**	**117.42**	**346**	PKP	PKPdf	00 36 18.9	-1.2
	comp=Z,1.3nm,0.6s,baz=82,slow=2.3,SNR=12						
BOSA	**Boshof**	**124.78**	**222**	PKP	PKPdf	00 36 34.8	-0.7
	comp=Z,2.6nm,0.7s,baz=87,slow=6.5,SNR=7.9						
GERES	**GERESS Array B**	**136.83**	**334**	PKP	PKPdf	00 36 58.6	+1.1
	comp=Z,0.1nm,0.3s,baz=108,slow=4.3,SNR=3.8						
GERES				SKP		00 40 33.6	
	comp=Z,0.7nm,0.8s,baz=41,slow=4.3,SNR=5.3						
ORIF	**Oris-en-Rattie**	**143.19**	**337**	*e*PKP1	PKPdf	00 37 06.1	-3.1
	comp=Z,3.6nm,0.6s						
VIVF	**Saint-Julien-l**	**143.70**	**338**	*e*PKP1	PKPdf	00 37 09.2	-0.9
FRF	**La Foret Royal**	**144.00**	**335**	*e*PKP1	PKPdf	00 37 08.7	-2.0
	comp=Z,9.1nm,0.9s						
SMRF	**Simiane la Rot**	**144.10**	**336**	*e*PKP1	PKPdf	00 37 09.8	-1.1
	comp=Z,11nm,1.0s						
LMR	**La Mourre**	**144.25**	**334**	*e*PKP1	PKPdf	00 37 07.8	-3.3
	comp=Z,4.3nm,0.6s						
MTLF	**Montolieu**	**145.90**	**339**	*e*PKP1	PKPbc	00 37 14.2	-0.5
KEST	**Kesra**	**148.53**	**322**	PKPbc	PKPbc	00 37 21.9	-0.4
	comp=Z,2.5nm,0.9s,baz=262,slow=7.7,SNR=7.8						
ESDC	**Sonseca Array**	**151.15**	**344**	PKPbc	PKPbc	00 37 28.1	-0.4
	comp=Z,0.3nm,0.6s,baz=359,slow=2.1,SNR=4.3						
ESDC				PKPab	PKPab	00 37 35.9	-0.4
	comp=Z,0.2nm,0.4s,baz=8.9,slow=4.1,SNR=5.9						
TORD	**Torodi Ar. Bea**	**164.94**	**276**	PKP	PKPdf	00 37 38.9	-1.2
	comp=Z,1.6nm,1.1s,baz=60,slow=1.2,SNR=5.6						
TORD				PKPab	PKPab	00 38 36.6	-0.1
	comp=Z,1.7nm,0.9s,baz=96,slow=4.3,SNR=5.8						

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*ISCJB **03** 01:01:49.7±0.9, 57.10N±0.03×154.84W±0.03, h0^{km}±5^{km}, mb5.0/189, MS4.3/140, Error ellipse: s-maj=4.5km s-min=3.0km az=19.7*

*MOS **03** 01:01:50.9±0.9, 57.07N×154.89W, h10^{km}, mb5.1/80, MS4.2/35, Error ellipse: s-maj=8.3km s-min=4.2km az=89.5*

*IDC **03** 01:01:50.6±0.5, 57.03N×154.87W, h0^{km}, mb4.6/29, mb1 4.7/29, mb1mx4.7/31, mbtmp4.6/29, MS4.2/22, Ms1 4.2/22, ms1mx3.9/44, Error ellipse: s-maj=15.1km s-min=9.0km az=177.0*

*SZGRF **03** 01:01:51.0, 56.38N×156.06W, h33^{km}, mb5.1, Alaska Peninsula, United States*

*BJI **03** 01:01:51.8, 57.47N×155.14W, h5^{km}, mB5.0, mb4.9, Ms4.9, Msz4.6*

*GCMT **03** 01:01:52.7±0.3, 56.93N×154.90W, h25^{km}±1^{km}, MW5.0/70, Moment Tensor Solution. s28,c36; s70,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.21±.15; $M_{\theta\theta}$-0.54±.17; $M_{\phi\phi}$0.74±.13; $M_{r\theta}$-1.05±.30; $M_{\theta\phi}$-3.99±.11; $M_{\phi r}$-0.53±.26; Best double couple: $M_0$4.21200×10^{16} NP1:ϕ_s4.00000°, δ76.00000°, λ-9.00000°. NP2: ϕ_s96.00000°, δ82.00000°, λ-166.00000°. Principal axes: T 4.1640, Plg4.0000°, Azm229.0000°; N 0.0950, Plg74.0000°, Azm126.0000°; P -4.2590, Plg16.0000°, Azm320.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **03** 01:01:52.7, 56.96N×154.78W, h1^{km}, mb5.0/110, MS4.2/98, ML4.8(AEIC), After AEIC.*

ISC 03 01:01:52.4±0.9**, 57.08N**±0.03×**154.85W**±0.03**, h7^{km}**±5^{km}**, h15^{km}**±2.0^{km}**:pP-P, n567, σ1^{s}03**/508**, mb4.8**/188**, MS4.3**/140**, 17C-14D, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.86**	**80**	P	**Pg**	**01 02 07.7**	**-1.3**
OHAK				S	**Sg**	**01 02 23.1**	**+2.9**
KDAK	**Kodiak Island**	**1.42**	**59**	Pg	**Pg**	**01 02 18.0**	**-1.5**
	baz=223,slow=12						
KDAK				Lg		01 02 38.6	
	590nm,0.3s,baz=127,slow=20,SNR=6.5						
KDAK	**Kodiak Island**	**1.42**	**59**	P	**Pn**	**01 02 17.9**	**-0.6**
CHGN	**Chignik**	**2.11**	**250**	P	**Pn**	**01 02 26.8**	**-1.4**
CHGN				S	**Sn**	**01 02 55.0**	**+0.3**

SDPT Sand Point 3.59 243 P **Pn** **01 02 48.1 -0.3**
SVW2 Sparrevohn 4.05 355 P **Pn** **01 02 56.6 +1.9**
SEW Seward 4.14 41 P **Pn** **01 02 56.0 0.0**
SLKM Skilak Lake 4.20 33 P **Pn** **01 02 57.5 +0.7**
FIB Fire Island 4.75 29 P **Pn** **01 03 06.7 +2.3**
RC01 Rabbit Creek A 4.81 31 P **Pn** **01 03 05.7 +0.6**
MID Middleton Isla 5.08 59 P **Pn** **01 03 08.0 -0.8**
FALS False Pass 5.30 249 P **Pn** **01 03 10.4 -1.5**
PMR Palmer 5.39 31 P **Pn** **01 03 13.1 0.0**
EYAK Cordova Ski Ar 5.87 50 P **Pn** **01 03 18.7 -1.0**
TTA Tatalina 5.90 355 *eP* **Pn** **01 03 22.2 +2.1**
PPLA Purkeypile 5.99 12 P **Pn** **01 03 22.1 +0.8**
DIV Divide 6.19 45 P **Pn** **01 03 23.6 -0.5**
RAGM Ragged Mountai 6.25 54 P **Pn** **01 03 24.1 -0.9**
BMRM Bremner River 6.57 49 P **Pn** **01 03 28.3 -1.0**
AKUT Akutan 6.85 249 *eP* **Pn** **01 03 33.7 +0.5**
HARP HAARP 7.24 38 P **Pn** **01 03 38.8 +0.2**
GCSA Galena City Sc 7.75 354 P **Pn** **01 03 45.6 +0.1**
MENT Mentasta 8.09 39 *eP* **Pn** **01 03 51.9 +1.7**
SPIA Saint Paul Isl 8.38 277 P **Pn** **01 03 54.3 +0.2**
COLA College 8.52 21 *c iP* **Pn** **01 03 56.1 0.0**
COLA College 8.52 21 P **Pn** **01 03 56.0 -0.1**
PNL Peninsula 8.53 66 P **Pn** **01 03 53.6 -2.6**
IL1 Eielson Array 8.63 23 P **Pn** **01 03 58.0 +0.5**
BCA3 Beaver Creek A 8.86 42 P **Pn** **01 04 00.6 -0.1**
IMA2 Indian Mountai 9.04 3 *eP* **Pn** **01 04 05.5 +2.4**
HYT Haines Junctio 9.71 60 *ePn* **Pn** **01 04 13.3 +1.0**
EGAK Eagle 10.17 35 *ePn* **Pn** **01 04 18.8 +0.1**
DAWY Dawson 10.31 41 *ePn* **Pn** **01 04 21.4 +0.8**
SKAG Skagway 10.55 69 *eP* **Pn** **01 04 22.3 -1.5**
47nm,0.6s
SIT Sitka 10.63 82 *eP* **Pn** **01 04 24.8 -0.1**
WRAK Wrangell Islan 12.36 84 *ePn* **Pn** **01 04 50.0 +1.4**
12nm,0.6s
DLBC Dease Lake 13.30 74 Pn **Pn** **01 05 00.5 -0.9**
baz=270,slow=14
DLBC Sn **Sn** **01 07 25.8 -3.6**
baz=128,slow=19
DLBC Dease Lake 13.30 74 *ePn* **Pn** **01 05 01.9 +0.5**
ADK Adak 13.69 257 *eP* **Pn** **01 05 06.9 +0.2**
BBB Bella Bella 16.18 96 LR LR 01 10 56.7
comp=Z,485nm,19.2s,baz=128,slow=34
YKW3 Yellowknife Ar 20.68 58 *eP* **P** **01 06 32.4 -0.2**
YKA Yellowknife Ar 20.69 58 P **P** **01 06 32.1 -0.6**
42nm,0.8s,baz=271,slow=10,SNR=45
YKA LR LR 01 15 19.4
comp=Z,688nm,19.4s,MS4.0,baz=295,slow=39
NLWA Neilton Lookou 21.13 104 PFAKE 01 06 50.0 +12
NLWA LR LR
comp=Z,612nm,20.0s,MS4.0
JCW Jim Creek 21.68 100 P **P** **01 06 43.9 +0.5**
RPW Rockport 21.75 99 P **P** **01 06 43.9 -0.3**
BMW Boistfort Moun 22.05 105 *eP* **P** **01 06 48.7 +1.2**
HEBO Mount Hebo 22.62 108 *eP* **P** **01 06 54.1 +0.6**
comp=Z,2.7nm,0.6s,mb3.9
LON Longmire 22.63 103 *eP* **P** **01 06 54.6 +1.0**
LON pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
LON Longmire 22.63 103 *eP* **P** **01 06 54.6 +1.0**
comp=Z,10nm,0.8s,mb4.3
FL2 Flat Top 2 22.70 105 P **P** **01 06 55.8 +1.4**
TWW Teanaway 22.89 101 P **P** **01 06 59.9 +3.5**
ETW Entiat 22.89 100 *eP* **P** **01 06 56.9 +0.5**
EBG Ellensburg 23.19 101 P **P** **01 06 59.7 +0.2**
SSOR Sweet Springs 23.53 107 P **P** **01 07 03.6 +0.4**
EDM Edmonton 23.75 82 *eP* **P** **01 07 04.8 -0.3**
OD2 Odessa Site #2 23.90 98 *eP* **P** **01 07 06.5 0.0**
BROR Big Rock Looko 23.94 108 P **P** **01 07 07.5 +0.6**
RSW Rattlesnake Hi 24.04 101 *eP* **P** **01 07 08.0 +0.2**
HAWA Hanford 24.07 101 *eP* **P** **01 07 07.5 -0.6**
comp=Z,78nm,1.8s,mb4.8
HAWA LR LR
comp=Z,526nm,21.0s,MS4.0
NEW Newport 24.24 95 *eP* **P** **01 07 09.4 -0.2**
NEW pmax pmax
comp=Z,16nm,0.9s
NEW MLR MLR
comp=Z,308nm,19.0s
NEW Newport 24.24 95 *eP* **P** **01 07 09.4 -0.2**
comp=Z,16nm,0.9s,mb4.4
NEW LR LR
comp=Z,308nm,19.0s,MS3.8
VIPM Ingram Point 24.73 106 P **P** **01 07 14.4 +0.3**
HUMO Hull Mountain 24.86 112 *eP* **P** **01 07 15.9 +0.5**
comp=Z,20nm,1.4s,mb4.5
HUMO LR LR
comp=Z,425nm,19.0s,MS4.0
LNOR Lincton Mounta 25.07 101 *eP* **P** **01 07 17.6 +0.4**
WALA Waterton Lakes 25.54 91 *eP* **P** **01 07 21.9 +0.5**
YBH Yreka Blue Hor 25.63 113 P **P** **01 07 23.1 +0.8**
comp=Z,4.3nm,0.6s,mb4.1,baz=342,slow=3.6,SNR=22
YBH LR LR 01 15 04.4
comp=Z,357nm,20.8s,MS3.9,baz=317,slow=31
YBH Yreka Blue Hor 25.63 113 *eP* **P** **01 07 23.2 +0.9**
YBH pmax pmax
comp=Z,20nm,1.3s
YBH MLR MLR
comp=Z,435nm,21.0s
YBH Yreka Blue Hor 25.63 113 *eP* **P** **01 07 23.2 +0.9**
comp=Z,20nm,1.3s,mb4.5
YBH LR LR
comp=Z,435nm,21.0s,MS4.0
LHEM Herd Peak 25.95 113 P **P** **01 07 25.9 +0.7**
BMO Blue Mountains 26.26 102 *eP* **P** **01 07 28.6 +0.6**
comp=Z,7.8nm,0.8s,mb4.3
BMO LR LR
comp=Z,226nm,19.0s,MS3.7
SEY Seymchan 26.35 305 *eP* **P** **01 07 28.3 -0.3**
PET Petropavlovsk 26.53 281 *eP* **P** **01 07 31.1 +0.8**
PET *eS* **S** **01 12 02.5 -2.1**
PET pmax pmax
comp=Z,48nm,0.7s,mb5.1
PET MLR MLR
comp=Z,800nm,19.0s,MS4.3
PET MLR MLR
comp=Z,800nm,18.0s
PET Petropavlovsk 26.53 281 *eP* **P** **01 07 31.7 +1.4**
comp=Z,26nm,0.6s,mb4.9
PET LR LR
comp=Z,792nm,20.0s,MS4.3
WDC Whiskeytown Da 26.58 114 *eP* **P** **01 07 32.3 +1.4**
WDC pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
WDC Whiskeytown Da 26.58 114 *eP* **P** **01 07 32.3 +1.5**
comp=Z,6.4nm,0.9s,mb4.2
KIPM Iron Peak 26.70 117 *eP* **P** **01 07 33.3 +1.2**
MOD Modoc 26.73 110 *eP* **P** **01 07 32.9 +0.7**
comp=Z,8.9nm,0.8s,mb4.3
MOD LR LR
comp=Z,531nm,22.0s,MS4.0
MSO Missoula 26.82 95 *eP* **P** **01 07 33.7 +0.7**
MSO LR LR
comp=Z,188nm,20.0s,MS3.6
PEA0B Petropavlovsk- 27.00 282 *eP* **P** **01 07 35.9 +1.3**
PETK Petropavlovsk- 27.00 282 P **P** **01 07 33.7 -0.9**
comp=Z,13nm,0.5s,mb4.7,baz=70,slow=12,SNR=28
PETK LR LR 01 18 11.9
comp=Z,431nm,20.1s,MS4.0,baz=76,slow=36
CHMT Chamberlain Mo 27.15 94 *eP* **P** **01 07 35.6 -0.4**
WVOR Wild Horse Val 27.21 107 *eP* **P** **01 07 36.5 -0.1**
WVOR pmax pmax
comp=Z,18nm,1.0s,mb4.6
WVOR MLR MLR
comp=Z,187nm,19.0s,MS3.7
WVOR Wild Horse Val 27.21 107 *eP* **P** **01 07 36.5 -0.1**
comp=Z,18nm,1.0s,mb4.6
WVOR LR LR
comp=Z,187nm,19.0s,MS3.7
HOPS Hopland 27.54 117 PFAKE 01 07 50.0 +10
HOPS LR LR
comp=Z,481nm,20.0s,MS4.1
NSHM Saint Helena R 28.13 117 *eP* **P** **01 07 43.5 -1.4**
NSHM *ep* pP pP 01 07 53.4 +6.5
LRM Limekiln Ridge 28.26 95 *eP* **P** **01 07 45.9 0.0**
EGMT Eagleton 28.40 89 *eP* **P** **01 07 46.6 -0.5**
EGMT LR LR
comp=Z,798nm,19.0s,MS4.3
DLMT Dillon 28.47 96 *eP* **P** **01 07 47.9 +0.1**
HLID Hailey 28.67 101 *eP* **P** **01 07 49.8 +0.2**
HLID LR LR
comp=Z,197nm,20.0s,MS3.7
MCMT McKenzie Canyo 28.68 97 *eP* **P** **01 07 49.7 +0.1**
BOZ Bozeman (W) 28.82 95 *eP* **P** **01 07 51.0 +0.1**
BOZ pmax pmax
comp=Z,20nm,1.8s,mb4.5
BOZ MLR MLR
comp=Z,268nm,19.0s,MS3.9
BOZ Bozeman (W) 28.82 95 *eP* **P** **01 07 51.0 +0.1**
comp=Z,20nm,1.8s,mb4.5
BOZ LR LR
comp=Z,268nm,19.0s,MS3.9
PAHR Pah Rah Range 28.82 112 *eP* **P** **01 07 51.3 +0.4**
SKR Severo-Kuril's 29.06 279 *eP* **P** **01 07 50.5 -2.5**
SKR pmax pmax
comp=E,20nm,0.5s
SKR pmax pmax
comp=Z,40nm,0.5s,mb5.4
BMN Battle Mountai 29.39 108 PFAKE 01 08 10.0 +14
BMN LR LR
comp=Z,313nm,21.0s,MS3.9
QLMT Earthquake Lak 29.45 96 *eP* **P** **01 07 57.0 +0.5**
CMB Columbia Colle 29.60 115 PFAKE 01 08 10.0 +12
CMB LR LR
comp=Z,638nm,22.0s,MS4.2
WAKR Walker 29.71 113 *eP* **P** **01 07 59.1 +0.2**
GCMT Greycliff 29.80 93 *eP* **P** **01 08 00.8 +1.3**
YMR Madison River 29.80 96 *eP* **P** **01 08 00.2 +0.6**
comp=Z,59nm,1.3s,mb5.2
YMR LR LR
comp=Z,2μm,20.0s,MS4.8
YNR Norris Junctio 29.93 95 *eP* **P** **01 08 01.5 +0.8**
YFT Old Faithful 30.02 96 *eP* **P** **01 08 03.0 +1.5**
SAO San Andreas Ge 30.08 118 PFAKE 01 08 10.0 +7.8
SAO LR LR
comp=Z,324nm,19.0s,MS4.0
ELK Elko 30.20 106 *eP* **P** **01 08 04.0 +0.8**
ELK MLR MLR
comp=Z,277nm,20.0s
IMW Indian Meadow 30.32 97 *eP* **P** **01 08 04.7 +0.5**
comp=Z,21nm,1.2s,mb4.7
FLWY Flagg Ranch 30.33 96 *eP* **P** **01 08 05.5 +1.2**
NVAR Mina Array Bea 30.34 112 P **P** **01 08 04.1 -0.3**
comp=Z,5.9nm,0.8s,mb4.4,baz=303,slow=9.0,SNR=30
NVAR PcP PcP 01 11 03.6 -0.6
comp=Z,1.1nm,0.7s,baz=270,slow=2.7,SNR=2.5
RLMT Red Lodge 30.44 93 *eP* **P** **01 08 06.0 +0.8**
comp=Z,14nm,1.1s,mb4.6
RLMT LR LR
comp=Z,450nm,22.0s,MS4.1
RRI2 Red Ridge 30.48 98 *eP* **P** **01 08 06.1 +0.4**
TPAW Teton Pass 30.59 97 *eP* **P** **01 08 07.8 +1.3**
comp=Z,18nm,1.1s,mb4.8
LOHW Long Hollow 30.69 97 *eP* **P** **01 08 07.8 +0.3**
comp=Z,15nm,1.1s,mb4.7
SNOW Snow King Moun 30.71 97 *eP* **P** **01 08 09.1 +1.5**
comp=Z,37nm,1.5s,mb5.0
REDW Red Top Meadow 30.73 97 *eP* **P** **01 08 07.3 -0.4**
comp=Z,32nm,1.5s,mb4.9
HVU Hansel Valley 30.77 102 *eP* **P** **01 08 09.6 +1.4**
HVU pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
HVU Hansel Valley 30.77 102 *eP* **P** **01 08 09.6 +1.3**
comp=Z,7.4nm,1.1s,mb4.4
AHID Auburn Hatcher 30.99 99 PFAKE 01 08 20.0 +10
AHID LR LR
comp=Z,240nm,21.0s,MS3.8
MTUM Tungsten Hills 31.04 114 *eP* **P** **01 08 11.5 +0.9**
LAO LASA Array 31.12 88 *eP* **P** **01 08 11.7 +0.5**
LAO LR LR
comp=Z,936nm,19.0s,MS4.5
DGMT Dagmar 31.17 84 *eP* **P** **01 08 15.5 +3.8**
comp=Z,17nm,0.9s,mb4.9
DGMT LR LR
comp=Z,279nm,19.0s,MS4.0
SPUT South Promonto 31.28 102 *eP* **P** **01 08 13.2 +0.5**
HWUT Hardware Ranch 31.54 101 *eP* **P** **01 08 17.1 +2.1**
comp=Z,17nm,1.4s,mb4.7
HWUT LR LR
comp=Z,189nm,19.0s,MS3.8
BW06 Boulder Array 31.83 97 *eP* **P** **01 08 17.4 -0.1**
comp=Z,7.2nm,0.8s,mb4.5
BW06 LR LR
comp=Z,268nm,22.0s,MS3.9
PDAR Pinedale Array 31.83 97 P **P** **01 08 17.1 -0.4**
comp=Z,7.0nm,0.7s,mb4.6,baz=322,slow=4.7,SNR=44
DUG Dugway 31.88 104 *eP* **P** **01 08 18.4 +0.4**
DUG pmax pmax
comp=Z,12nm,1.2s,mb4.6
DUG MLR MLR
comp=Z,248nm,20.0s,MS3.9
DUG Dugway 31.88 104 *eP* **P** **01 08 18.4 +0.5**
comp=Z,12nm,1.2s,mb4.6
DUG LR LR
comp=Z,248nm,20.0s,MS3.9
JLU Jordanelle 32.31 102 *eP* **P** **01 08 23.6 +1.8**
DAC Darwin (Calif) 32.36 114 PFAKE 01 08 40.0 +18
DAC LR LR
comp=Z,415nm,20.0s,MS4.1
NLU North Lily Min 32.44 103 *eP* **P** **01 08 23.2 +0.3**
TPNV Topopah Spring 32.52 112 *eP* **P** **01 08 24.0 +0.4**
TPNV pmax pmax
comp=Z,12nm,1.0s,mb4.8
TPNV MLR MLR
comp=Z,276nm,22.0s,MS3.9
TPNV Topopah Spring 32.52 112 *eP* **P** **01 08 24.0 +0.4**
comp=Z,12nm,1.0s,mb4.8
TPNV LR LR
comp=Z,276nm,22.0s,MS3.9
TIXI Tiksi 33.32 326 PFAKE 01 08 40.0 +10
TIXI LR LR
comp=Z,344nm,20.0s,MS4.1
SHPR Sheep Range 33.41 111 *eP* **P** **01 08 31.6 +0.2**
MVU Marysvale 33.43 105 PFAKE 01 08 40.0 +8.4
MVU LR LR
comp=Z,356nm,20.0s,MS4.1
MSU Marysvale 33.44 105 *eP* **P** **01 08 32.4 +0.7**
GSC Goldstone 33.52 114 *eP* **P** **01 08 32.3 -0.1**
GSC MLR MLR
comp=Z,336nm,20.0s,MS4.1
MWC Mount Wilson 33.77 117 PFAKE 01 08 50.0 +15
MWC LR LR
comp=Z,448nm,19.0s,MS4.2
RWWY Rawlins 33.84 96 *eP* **P** **01 08 35.1 0.0**
SRU San Rafael 33.88 103 *eP* **P** **01 08 36.1 +0.6**
RSSD Black Hills 33.94 90 *eP* **P** **01 08 35.8 -0.1**
LDFC Landfair 34.55 112 *eP* **P** **01 08 41.2 -0.1**
ULM Lac du Bonnet 34.62 76 P **P** **01 08 40.9 -0.8**
comp=Z,7.9nm,0.6s,mb4.8,baz=315,slow=8.2,SNR=12
ULM LR LR 01 22 58.7
comp=Z,603nm,19.4s,MS4.3,baz=313,slow=37
ULM Lac du Bonnet 34.62 76 P **P** **01 08 40.9 -0.8**
ULM LR LR 01 22 58.7
PFO Pinyon Flat Ob 35.05 115 P **P** **01 08 43.3 -2.3**
comp=Z,2.5nm,0.9s,mb4.2,baz=330,slow=8.1,SNR=2.6
PFO LR LR 01 21 18.6
comp=Z,390nm,18.3s,MS4.2,baz=325,slow=33
PHWY Pilot Hill 35.06 95 *eP* **P** **01 08 45.4 -0.2**
comp=Z,6.5nm,0.9s,mb4.6
PV10 Paradox Valley 35.21 102 *eP* **P** **01 08 48.0 +1.0**
PV01 Paradox Valley 35.63 102 *eP* **P** **01 08 51.2 +0.5**
BAR Barrett 35.69 117 PFAKE 01 09 00.0 +8.8
BAR LR LR
comp=Z,295nm,19.0s,MS4.1
SMCO Snowmass 35.73 99 *eP* **P** **01 08 51.2 -0.3**
AGMN Agassiz Refuge 35.76 78 *eP* **P** **01 08 51.0 -0.6**
comp=Z,15nm,0.7s,mb5.0
AGMN LR LR
comp=Z,620nm,19.0s,MS4.4
ISCO Idaho Springs 36.02 97 *eP* **P** **01 08 54.9 +0.9**
ISCO MLR MLR
comp=Z,162nm,20.0s,MS3.8
WUAZ Wupatki 36.12 108 *eP* **P** **01 08 55.4 +0.6**
comp=Z,13nm,1.1s,mb4.8
WUAZ LR LR
comp=Z,271nm,21.0s,MS4.0
GLA Glamis 36.30 114 *eP* **P** **01 08 56.3 -0.1**
GLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
GLA Glamis 36.30 114 *eP* **P** **01 08 56.3 -0.1**
comp=Z,7.7nm,0.8s,mb4.7
MVCO Mesa Verde 36.36 103 *eP* **P** **01 08 56.8 -0.1**
comp=Z,25nm,1.4s,mb5.0
MVCO LR LR
comp=Z,149nm,19.0s,MS3.8
YAK Yakutsk 36.54 310 *eP* **P** **01 08 59.0 +0.8**
YAK pmax pmax
comp=Z,36nm,0.8s,mb5.2
YAK Yakutsk 36.54 310 PFAKE 01 09 10.0 +12
YAK LR LR
comp=Z,596nm,19.0s,MS4.4
SDCO Great Sand Dun 37.57 99 *eP* **P** **01 09 07.7 +0.5**
comp=Z,14nm,1.1s,mb4.6
SDCO LR LR
comp=Z,188nm,19.0s,MS3.9
ECSD EROS,Sioux Fal 38.24 85 *eP* **P** **01 09 11.0 -1.7**
ECSD LR LR
comp=Z,831nm,19.0s,MS4.6
EYMN Ely 38.30 76 *eP* **P** **01 09 12.8 -0.4**
comp=Z,26nm,0.6s,mb5.1
EYMN LR LR
comp=Z,745nm,19.0s,MS4.5
TUC Tucson 38.94 110 *eP* **P** **01 09 18.1 -0.6**
TUC pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
TUC MLR MLR
comp=Z,299nm,19.0s,MS4.1
TUC Tucson 38.94 110 *eP* **P** **01 09 18.1 -0.6**
comp=Z,3.6nm,0.7s,mb4.2
TUC LR LR
comp=Z,299nm,19.0s,MS4.1
ANMO Albuquerque 39.14 103 *eP* **P** **01 09 21.4 +1.0**
ANMO Albuquerque 39.14 103 *eP* **P** **01 09 21.9 +1.5**
comp=Z,9.0nm,1.0s,mb4.5
ANMO LR LR
comp=Z,198nm,20.0s,MS3.9
LAZ Ladron 39.20 105 *eP* **P** **01 09 21.4 +0.5**
LENM Lemitar 39.47 105 *eP* **P** **01 09 23.9 +0.8**
LPM Los Pinos Moun 39.54 104 *eP* **P** **01 09 23.9 +0.1**
BNM Barren Site 39.66 104 *eP* **P** **01 09 25.1 +0.4**
CBKS Cedar Bluff 39.92 93 PFAKE 01 09 40.0 +13
CBKS LR LR
comp=Z,320nm,19.0s,MS4.2
ASAJ Asahikawa 40.32 279 P **P** **01 09 29.9 -0.2**
comp=Z,23nm,0.8s,mb4.9,baz=308,slow=9.0,SNR=6.5
ASAJ LR LR 01 25 08.8
comp=Z,398nm,21.4s,MS4.2,baz=199,slow=35
COWI Conover 40.72 76 *eP* **P** **01 09 32.6 -0.8**
COWI LR LR
comp=Z,602nm,20.0s,MS4.5
SCIA State Center 41.31 84 PFAKE 01 09 50.0 +12
SCIA LR LR
comp=Z,284nm,19.0s,MS4.2
KSU1 Kansas State U 41.42 90 PFAKE 01 09 50.0 +11
KSU1 LR LR
comp=Z,428nm,19.0s,MS4.3
AMTX Amarillo 41.75 99 *eP* **P** **01 09 41.8 -0.2**
AMTX LR LR
comp=Z,286nm,20.0s,MS4.2
JFWS Jewell Farm 42.23 81 *eP* **P** **01 09 44.1 -1.8**
JFWS MLR MLR
comp=Z,269nm,19.0s,MS4.2
GDL2 Guadalupe Moun 42.37 104 *eP* **P** **01 09 48.6 +1.5**
KLR Kul'dur 42.70 292 *eP* **P** **01 09 44.0 -5.6**
KLR *e* pP 01 09 44.5 -7.1
KLR *e* 01 19 16.0
KLR pmax pmax
comp=E,50nm,1.8s
KLR pmax pmax
comp=Z,110nm,1.8s,mb5.3
KLR MLR MLR
comp=N,1μm,17.0s,MS5.0
KLR MLR MLR
comp=E,600nm,17.0s,MS5.0
WMOK Wichita Mounta 43.43 96 *eP* **P** **01 09 54.7 -1.0**
WMOK pmax pmax
comp=Z,16nm,1.1s,mb4.7
WMOK MLR MLR
comp=Z,189nm,22.0s,MS4.0
WMOK Wichita Mounta 43.43 96 *eP* **P** **01 09 54.7 -0.9**
comp=Z,16nm,1.1s,mb4.7
WMOK LR LR
comp=Z,189nm,22.0s,MS4.0
DAG Danmarks Havn 43.57 13 ⇓ *iP* **P** **01 09 56.0 -0.3**
DAG pmax pmax
comp=Z,13nm,0.8s,mb4.7
DAG Danmarks Havn 43.57 13 ⇓ *iP* **P** **01 09 56.0 -0.3**
comp=Z,13nm,0.8s,mb4.7
GLMI Grayling 43.95 75 PFAKE 01 10 10.0 +10
GLMI LR LR
comp=Z,503nm,19.0s,MS4.5
KBS Kingsbay 44.01 4 PFAKE 01 10 10.0 +10
KBS LR LR
comp=Z,333nm,19.0s,MS4.3
SFJD Kangerlussuaq 44.15 33 *i* P **P** **01 10 01.2 +0.2**
SFJD pmax pmax
comp=Z,15nm,0.9s,mb4.7
SFJD Kangerlussuaq 44.15 33 *i* P **P** **01 10 01.2 +0.2**
comp=Z,15nm,0.9s,mb4.7
SPITS Spitsbergen Ar 44.89 3 P **P** **01 10 06.6 -0.3**
comp=Z,9.8nm,0.6s,mb4.8,baz=359,slow=14,SNR=11
BOD Bodaibo 45.42 311 *eP* **P** **01 10 08.7 -2.6**
BOD pmax pmax
comp=Z,14nm,0.9s,mb4.8
FVM French Village 45.60 86 *eP* **P** **01 10 11.1 -1.8**
SCHQ Schefferville 46.03 53 P **P** **01 10 15.2 -0.9**
comp=Z,7.9nm,0.6s,mb4.8,baz=302,slow=9.0,SNR=16
SCHQ LR LR 01 30 24.1
comp=Z,422nm,19.0s,MS4.4,baz=297,slow=37
JCT Junction City 46.14 101 *eP* **P** **01 10 16.4 -0.9**
JCT pmax pmax
comp=Z,26nm,0.7s,mb5.3
JCT MLR MLR
comp=Z,344nm,20.0s,MS4.3
JCT Junction City 46.14 101 *eP* **P** **01 10 16.4 -1.0**
comp=Z,26nm,0.7s,mb5.3
JCT LR LR
comp=Z,344nm,20.0s,MS4.3
OLIL Olney 46.32 84 *eP* **P** **01 10 17.0 -1.7**
comp=Z,55nm,1.0s,mb5.4
MIAR Mount Ida 46.41 92 *eP* **P** **01 10 17.6 -1.8**
MIAR pmax pmax
comp=Z,29nm,1.4s,mb5.0
MIAR MLR MLR
comp=Z,253nm,20.0s,MS4.2
MIAR Mount Ida 46.41 92 *eP* **P** **01 10 17.6 -1.8**
comp=Z,29nm,1.4s,mb5.0
MIAR LR LR
comp=Z,253nm,20.0s,MS4.2
SIUC Southern Illin 46.45 85 *eP* **P** **01 10 17.6 -2.0**
BLO Bloomington 46.86 82 *eP* **P** **01 10 21.3 -1.6**
MDJ Mudanjiang 46.87 289 P **P** **01 10 24.3 +1.5**
MDJ PP PP 01 12 11.8 -0.9
MDJ S S **01 17 15.5 +2.0**
MDJ AMB AMB
comp=Z,13nm,1.1s,mb4.8
MDJ AMB AMB
comp=Z,121nm,3.5s
MDJ LR LR
comp=N,585nm,25.2s
MDJ LR LR
comp=Z,294nm,21.9s,MS4.2
MDJ Mudanjiang 46.87 289 PFAKE 01 10 40.0 +17
MDJ LR LR
comp=Z,491nm,21.0s,MS4.4
PARMO Parma 46.93 87 *eP* **P** **01 10 22.1 -1.3**
USIN University of 47.11 84 *eP* **P** **01 10 23.6 -1.3**
GNAR Gosnell 47.30 88 *eP* **P** **01 10 24.4 -1.9**
comp=Z,600nm,0.4s
WCI Wyandotte Cave 47.67 83 PFAKE 01 10 40.0 +11
WCI LR LR
comp=Z,626nm,19.0s,MS4.6
ACSO Alum Creek Sta 48.01 78 *eP* **P** **01 10 30.1 -1.6**
comp=Z,15nm,0.8s,mb5.1
ACSO LR LR
comp=Z,360nm,19.0s,MS4.4
MAJO Matsushiro 48.02 275 *eP* **P** **01 10 31.5 -0.4**
MAJO pmax pmax
comp=Z,18nm,0.9s,mb5.1
MAJO MLR MLR
comp=Z,330nm,19.0s,MS4.3
MAJO Matsushiro 48.02 275 *eP* **P** **01 10 31.5 -0.4**
comp=Z,18nm,0.9s,mb5.1
MAJO LR LR
comp=Z,330nm,19.0s,MS4.3
MAT Matsushiro 48.02 275 P **P** **01 10 29.9 -2.0**
MJAR Matsushiro Arr 48.02 275 P **P** **01 10 31.8 -0.1**
comp=Z,2.3nm,0.6s,mb4.4,baz=5.1,slow=9.6,SNR=6.4
ALLY Alegheny Colle 48.50 75 *eP* **P** **01 10 34.3 -1.3**
HIA Hailar 48.57 299 *eP* **P** **01 10 36.2 +0.2**
HIA Hailar 48.57 299 PFAKE 01 10 50.0 +14
HIA LR LR
comp=Z,460nm,20.0s,MS4.5
HKT Hockley 48.70 98 *eP* **P** **01 10 38.0 +0.8**
HKT pmax pmax
comp=Z,33nm,1.4s,mb5.2
HKT MLR MLR

comp=Z,266nm,20.0s,MS4.2
HKT Hockley 48.70 98 *e*P **P 01 10 38.0 +0.8**
comp=Z,33nm,1.4s,mb5.2
HKT LR LR
comp=Z,266nm,20.0s,MS4.2
OXF Oxford 48.71 88 *e*P **P 01 10 35.7 -1.5**
OXF pmax pmax
comp=Z,103nm,1.2s,mb5.7
OXF MLR MLR
comp=Z,479nm,19.0s,MS4.5
OXF Oxford 48.71 88 *e*P **P 01 10 35.7 -1.6**
comp=Z,103nm,1.2s,mb5.7
OXF LR LR
comp=Z,479nm,19.0s,MS4.5
PLAL Pickwick Lake 49.09 87 *e*P **P 01 10 38.6 -1.5**
comp=Z,34nm,0.6s,mb5.5
PLAL LR LR
comp=Z,530nm,19.0s,MS4.5
LONY Lake Ozonia 49.28 68 *e*P **P 01 10 39.8 -1.7**
comp=Z,13nm,1.1s,mb4.9
LONY LR LR
comp=Z,423nm,19.0s,MS4.5
KVTX Kingsville 49.48 102 PFAKE 01 11 00.0 +17
KVTX LR LR
comp=Z,255nm,21.0s,MS4.2
CN2 Changchun 49.57 291 *e*P **P 01 10 42.0 -1.7**
CN2 *e*PP PP 01 12 36.8 -0.9
CN2 *e*S **S 01 17 48.7 -3.0**
CN2 *e*SS SS 01 21 16.5 -6.7
CN2 AMB AMB
comp=Z,50nm,0.9s,mb5.5
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,580nm,21.0s,MS4.7
CN2 LR LR
comp=E,420nm,21.0s,MS4.7
CN2 LR LR
comp=Z,350nm,17.0s,MS4.4
FRNY Flat Rock 49.63 67 *e*P **P 01 10 42.4 -1.8**
VBMS Vicksburg 49.84 91 PFAKE 01 11 00.0 +14
VBMS LR LR
comp=Z,293nm,19.0s,MS4.3
NCB Newcomb 49.92 69 *e*P **P 01 10 44.9 -1.6**
comp=Z,9.7nm,0.9s,mb4.8
NCB LR LR
comp=Z,139nm,22.0s,MS3.9
MCWV Mont Chateau 50.09 76 *e*P **P 01 10 46.0 -1.8**
comp=Z,11nm,0.6s,mb5.0
MCWV LR LR
comp=Z,959nm,19.0s,MS4.8
BINY Binghamton 50.28 71 *e*P **P 01 10 48.4 -0.8**
comp=Z,20nm,1.0s,mb5.1
BINY LR LR
comp=Z,333nm,19.0s,MS4.4
TZTN Tazewell 50.39 82 *e*P **P 01 10 48.6 -1.4**
comp=Z,32nm,1.1s,mb5.3
TZTN LR LR
comp=Z,189nm,20.0s,MS4.1
ACCN Adirondack Com 50.62 69 *e*P **P 01 10 49.9 -1.8**
comp=Z,22nm,1.3s,mb4.9
CPCT Cooper Cave 50.67 84 *e*P **P 01 10 50.2 -1.9**
LBNH Lisbon 50.89 67 PFAKE 01 11 10.0 +16
LBNH LR LR
comp=Z,466nm,22.0s,MS4.5
ELN Prospectdale 51.39 79 *e*P **P 01 10 55.4 -2.1**
PKME Peaks-Kenny Pk 51.47 64 *e*P **P 01 10 57.9 -0.1**
comp=Z,18nm,1.1s,mb4.9
PKME LR LR
comp=Z,170nm,21.0s,MS4.0
BLA Blacksburg 51.58 79 *e*P **P 01 10 57.9 -1.1**
BLA pmax pmax
comp=Z,12nm,0.6s,mb5.0
BLA MLR MLR
comp=Z,293nm,19.0s,MS4.3
BLA Blacksburg 51.58 79 *e*P **P 01 10 57.9 -1.1**
comp=Z,12nm,0.6s,mb5.0
BLA LR LR
comp=Z,293nm,19.0s,MS4.3
HRV Adam Dziewonsk 52.33 68 PFAKE 01 11 20.0 +16
HRV LR LR
comp=Z,358nm,19.0s,MS4.4
WES Weston 52.54 68 *e*P **P 01 11 05.0 -1.0**
WES pmax pmax
comp=Z,74nm,1.2s,mb5.5
WES MLR MLR
comp=Z,464nm,21.0s,MS4.5
WES Weston 52.54 68 *e*P **P 01 11 05.0 -1.1**
comp=Z,74nm,1.2s,mb5.5
WES LR LR
comp=Z,464nm,21.0s,MS4.5
BRAL Brewton 52.65 89 PFAKE 01 11 20.0 +13
BRAL LR LR
comp=Z,324nm,21.0s,MS4.3
BRYW Bryant College 52.77 69 P **P 01 11 06.7 -1.1**
comp=Z,41nm,1.0s,mb5.3
GOGA Godfrey 52.78 85 *e*P **P 01 11 06.0 -1.9**
GOGA pmax pmax
comp=Z,13nm,1.0s,mb4.8
GOGA MLR MLR
comp=Z,498nm,20.0s,MS4.6
GOGA Godfrey 52.78 85 *e*P **P 01 11 06.0 -1.9**
comp=Z,13nm,1.0s,mb4.8
GOGA LR LR
comp=Z,498nm,20.0s,MS4.6
KSRS Korea Array 52.89 283 P **P 01 11 09.0 +0.3**
comp=Z,6.4nm,0.7s,mb4.6,baz=48,slow=6.7,SNR=17
KSRS LR LR 01 32 06.9
comp=Z,305nm,22.0s,MS4.3,baz=47,slow=34
CBIJ Chichi jima 53.07 263 LR LR 01 32 14.2
comp=Z,258nm,18.7s,MS4.3,baz=146,slow=34
JSC Jenkinsville 53.31 82 *e*P **P 01 11 07.5 -4.4**
KEV Kevo 53.46 359 *e*p **P 01 11 11.6 -0.8**
comp=Z,1.1nm,0.4s,mb4.1
KEV Kevo 53.46 359 *e*P **P 01 11 11.6 -0.8**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KEV Kevo 53.46 359 PFAKE 01 11 30.0 +18
KEV LR LR
comp=Z,267nm,19.0s,MS4.3
INCN Inchon 53.55 284 PFAKE 01 11 30.0 +16
INCN LR LR
comp=Z,350nm,22.0s,MS4.4
ARCES ARCESS Array B 53.69 360 P **P 01 11 13.4 -0.7**
comp=Z,1.7nm,0.4s,mb4.3,baz=16,slow=6.8,SNR=16
ARCES LR LR 01 34 07.9
comp=Z,221nm,20.0s,MS4.2,baz=356,slow=36
TLY Talaya 54.00 311 *e*P **P 01 11 17.7 +1.0**
TLY *e*S **S 01 18 59.8 +7.4**
TLY pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
COW Cow Castle Cre 54.30 82 *e*P **P 01 11 18.8 -0.3**
CNNC Cliffs of the 54.41 79 PFAKE 01 11 30.0 +10
CNNC LR LR
comp=Z,841nm,19.0s,MS4.8
KRAR Krasnoyarsk 54.77 320 *e*P **P 01 11 22.1 -0.1**
KRAR pmax pmax
comp=Z,16nm,1.1s,mb5.0
NHSC New Hope 54.79 82 PFAKE 01 11 40.0 +17
NHSC LR LR
comp=Z,613nm,19.0s,MS4.7
ZAK Zakamensk 55.13 310 *e*P **P 01 11 24.4 -0.5**
ZAK pmax pmax
comp=Z,3.0nm,1.8s,mb4.0
LVZ Lovozero 55.13 356 *e*P **P 01 11 24.1 -0.6**
LVZ pmax pmax
comp=Z,21nm,1.0s,mb5.1
ULN Ulaanbaatar 55.42 306 *e*P **P 01 11 26.3 -0.7**
ULN pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
ULN MLR MLR
comp=Z,622nm,19.0s,MS4.7
ULN Ulaanbaatar 55.42 306 *e*P **P 01 11 26.3 -0.6**
comp=Z,5.5nm,0.9s,mb4.6
ULN LR LR
comp=Z,622nm,19.0s,MS4.7
APA Apatity 55.51 356⇑ *i*P **P 01 11 29.0 +1.6**
APA pmax pmax
comp=Z,11nm,0.6s,mb5.1
APA MLR MLR
comp=Z,400nm,18.0s,MS4.5
SONM Songino Array 55.73 306 P **P 01 11 28.9 -0.3**
comp=Z,5.9nm,0.7s,mb4.7,baz=47,slow=6.4,SNR=17
SONM LR LR 01 37 01.0
comp=Z,479nm,18.8s,MS4.6,baz=41,slow=38
BJI Beijing 57.02 294 P **P 01 11 39.6 +1.0**
BJI S **S 01 19 34.8 +1.7**
BJI AMB AMB
comp=Z,13nm,0.9s,mb5.0
BJI AMB AMB
comp=Z,131nm,4.7s
BJI LR LR
comp=N,644nm,21.6s,MS4.8
BJI LR LR
comp=E,463nm,20.3s,MS4.8
BJI LR LR
comp=Z,195nm,22.7s,MS4.2
BJT Baijiatuan 57.04 294 PFAKE 01 11 50.0 +11
BJT LR LR
comp=Z,384nm,19.0s,MS4.5
DWPF Disney 57.98 87 PFAKE 01 12 00.0 +15
DWPF LR LR
comp=Z,394nm,19.0s,MS4.5
NVS Novosibirsk 58.91 325 *e*P **P 01 11 49.4 -2.2**
NVS *e*S **S 01 19 58.6 +1.2**
NVS pmax pmax
comp=Z,19nm,1.5s,mb4.9
NVS pmax pmax
comp=N,15nm,1.6s
NVS pmax pmax
comp=E,14nm,1.5s
NVS smax
comp=N,13nm,1.6s
NVS smax
comp=E,14nm,1.6s
ZALV Zalesovo Beam 59.15 324 P **P 01 11 52.7 -0.6**
comp=E,6.4nm,0.6s,mb4.8,baz=38,slow=7.5,SNR=33
ZALV LR LR 01 39 55.0
comp=E,409nm,18.0s,MS4.6,baz=39,slow=39
ZALV Zalesovo Beam 59.15 324 P **P 01 11 52.7 -0.6**
ZALV LR LR 01 39 55.0
ZAL Zalesovo 59.17 324 P **P 01 11 52.7 -0.7**
JOF Joensuu 60.24 357 *e*p **P 01 12 00.4 -0.2**
comp=E,1.7nm,0.3s,mb4.5
JOF Joensuu 60.24 357 *e*P **P 01 12 00.4 -0.2**
JOF pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
JOW Kunigami 60.86 275 P **P 01 12 05.0 -0.3**
comp=Z,5.7nm,0.5s,mb4.9,baz=0.0,slow=0.0,SNR=3.2
SOKR Solikamsk 61.02 342⇓ *i*P **P 01 12 05.5 -0.5**
SOKR pmax pmax
comp=Z,50nm,1.5s,mb5.4
SOKR MLR MLR
comp=Z,320nm,24.0s,MS4.4
KAF Kangasniemi 61.14 359 *e*p **P 01 12 06.5 -0.3**
comp=Z,3.8nm,0.4s,mb4.9,baz=358,slow=6.5
KAF Kangasniemi 61.14 359 *e*P **P 01 12 06.5 -0.3**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
NB2 NORSAR Subarra 61.71 8 P **P 01 12 10.3 -0.3**
comp=Z,5.8nm,0.8s,mb4.8,baz=353,slow=6.9
NOA NORSAR Array B 61.71 8 P **P 01 12 10.1 -0.6**
comp=Z,6.7nm,0.8s,mb4.8,baz=353,slow=6.8,SNR=18
NOA LR LR 01 38 55.1
comp=Z,82nm,18.7s,MS3.9,baz=335,slow=36
NOA NORSAR Array B 61.71 8 P **P 01 12 10.1 -0.6**
NOA LR LR 01 38 55.1
NJ2 Nanjing 61.81 286 *e*P **P 01 12 15.2 +3.5**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.5
GUMO Guam 62.69 252 PFAKE 01 12 30.0 +12
GUMO LR LR
comp=Z,782nm,19.0s,MS4.9
SVE Sverdlovsk 62.91 339⇑ *e*P **P 01 12 18.3 -0.4**
SVE pmax pmax
comp=Z,24nm,1.2s,mb5.2
SVE MLR MLR
comp=Z,275nm,19.0s,MS4.5
ARU Arti 63.68 340 *c i*P **P 01 12 23.6 -0.2**
ARU *e* 01 12 55.5
ARU *e* 01 14 40.2
ARU *e*S **S 01 20 56.8 -1.1**
ARU *e*SS SS 01 25 02.3 -2.1
ARU pmax pmax
comp=Z,20nm,1.0s,mb5.1
KURK Kurchatov 63.89 325 P **P 01 12 25.8 +0.5**
comp=Z,8.8nm,0.8s,mb4.8,baz=27,slow=6.2,SNR=12
KURK Kurchatov 63.89 325 *c i*P **P 01 12 24.3 -1.0**
KURK pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
BVAR Borovoye Array 64.19 332 P **P 01 12 26.6 -0.6**
comp=Z,14nm,0.6s,mb5.2,baz=33,slow=6.7,SNR=91
BVAR LR LR 01 46 14.3
comp=Z,428nm,18.3s,MS4.7,baz=277,slow=42
GTA Gaotai 65.30 305 *e*P **P 01 12 34.6 -0.1**
GTA AP pP 01 12 38.8 +1.9
GTA XP sP 01 12 41.3 +3.6
GTA PP PP 01 14 59.9 +2.1
GTA S S 01 21 16.5 -2.0
GTA XS sS 01 21 23.1 +1.1
GTA SS SS 01 25 30.5 +0.1
GTA AMB AMB
comp=Z,4.0nm,1.2s,mb4.3
GTA AMB AMB
comp=Z,48nm,4.8s
GTA LR LR
comp=N,399nm,19.8s,MS4.8
GTA LR LR
comp=E,435nm,19.2s,MS4.8
GTA LR LR
comp=Z,341nm,21.0s,MS4.5
XAN Xi'an 65.32 295 P **P 01 12 35.7 +0.8**
XAN XP sP 01 12 44.0 +6.2
XAN PCP PcP 01 13 10.0 +2.9
XAN PP PP 01 15 01.8 +3.7
XAN S S 01 21 17.0 -1.8
XAN SKS 01 22 28.8
XAN SS SS 01 25 30.4 -0.6
XAN AMB AMB
comp=Z,16nm,1.3s,mb4.9
XAN AMB AMB
comp=Z,84nm,13.1s
XAN LR LR
comp=N,124nm,21.3s,MS4.6
XAN LR LR
comp=E,369nm,16.9s,MS4.6
XAN LR LR
comp=Z,388nm,16.9s,MS4.7
WHN Wuhan 65.35 288 P **P 01 12 34.5 -0.7**
TATO Taipei 66.01 279 PFAKE 01 12 50.0 +10
TATO LR LR
comp=Z,196nm,20.0s,MS4.3
MKAR Makanchi Array 66.10 321 P **P 01 12 38.7 -1.0**
comp=Z,3.3nm,0.6s,mb4.5,baz=54,slow=6.2,SNR=16
MKAR LR LR 01 47 26.8
comp=Z,222nm,19.0s,MS4.4,baz=199,slow=41
MKAR Makanchi Array 66.10 321⇑ *e*P **P 01 12 38.7 -1.0**
MKAR Makanchi Array 66.10 321 P **P 01 12 38.7 -1.0**
MKAR LR LR 01 47 26.9
LZH Lanzhou 66.13 300 *e*P **P 01 12 43.0 +2.9**
LZH AP pP 01 12 48.8 +6.5
LZH XP sP 01 12 50.0 +6.9
LZH *e*S S 01 21 28.1 -0.7
LZH XS sS 01 21 37.3 +5.0
LZH *e*SS SS 01 25 44.3 +0.7
LZH AMB AMB
comp=Z,50nm,1.2s,mb5.4
LZH AMB AMB
comp=Z,266nm,4.7s
LZH Lanzhou 66.13 300 *e*P **P 01 12 43.0 +2.9**
LZH *PP pP 01 12 48.8 +6.5
LZH *SP sP 01 12 50.0 +6.9
LZH *e*S S 01 21 28.1 -0.7
LZH *e*SS SS 01 25 44.3 +0.7
LZH Lanzhou 66.13 300 *e*P **P 01 12 43.0 +2.9**
LZH pP pP 01 12 48.8 +6.5
LZH sP sP 01 12 50.0 +6.9
LZH *e*S S 01 21 28.1 -0.7
LZH sS sS 01 21 37.3 +5.0
LZH *e*SS SS 01 25 44.3 +0.7
TGUH Tegucigalpa,Un 66.15 101 PFAKE 01 12 50.0 +10
TGUH LR LR
comp=Z,173nm,20.0s,MS4.3
WMQ Urumqi 66.68 316 *e*P **P 01 12 43.8 +0.3**
WMQ AP pP 01 12 54.0 +8.3
WMQ PP PP 01 15 12.0 +2.2
WMQ *e*S S 01 21 31.0 -4.2
WMQ AMB AMB
comp=Z,9.0nm,1.3s,mb4.6
WMQ AMB AMB
comp=Z,102nm,5.3s
WMQ LR LR
comp=Z,376nm,23.0s,MS4.5
TAOE Nuku Hiva Isla 66.81 164 *e*LR LR 01 32 45.0
comp=Z,814nm,27.8s
OBN Obninsk 67.78 353 *e*P **P 01 12 49.9 -0.4**
OBN *i* 01 13 16.1
OBN *i* 01 15 24.4
OBN pmax pmax
comp=Z,14nm,0.9s,mb5.0
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.0
AKTK Aktyubinsk 69.47 338 P **P 01 13 00.4 -0.5**
AKTO Aktyubinsk 69.47 338 P **P 01 13 00.4 -0.5**
comp=Z,11nm,0.8s,mb4.9,baz=20,slow=5.0,SNR=24
NRDL Niedersach Rie 70.09 10 *e*P **P 01 13 05.8 +1.1**
comp=Z,36nm,1.1s,mb5.2
CD2 Chengdu 70.39 297 *e*P **P 01 13 06.2 -0.7**
CD2 AP pP 01 13 16.1 +7.0
CD2 XP sP 01 13 19.5 +10
CD2 PP PP 01 15 43.1 +0.8
CD2 S S 01 22 13.8 -5.9
CD2 XS sS 01 22 28.9 +5.6
CD2 SS SS 01 26 44.8 -4.8
CD2 AMB AMB
comp=Z,20nm,1.0s,mb5.0
CD2 AMB AMB
comp=Z,40nm,5.8s
CD2 LR LR
comp=N,450nm,20.4s,MS4.9
CD2 LR LR
comp=E,420nm,19.2s,MS4.9
CD2 LR LR
comp=Z,280nm,19.2s,MS4.5
CLZ Clausthal 70.76 10 *e*P **P 01 13 09.1 +0.3**
CLZ pmax pmax
comp=Z,32nm,1.1s,mb5.2
CLZ Clausthal 70.76 10 *e*P **P 01 13 09.1 +0.3**
comp=Z,32nm,1.1s,mb5.2
BUG Bochum--Univer 70.84 12 *e*P **P 01 13 09.0 -0.3**
comp=Z,83nm,1.8s,mb5.4
VRHR Novokhopersk 71.33 349 *e*P **P 01 13 10.9 -1.4**
VRHR pmax pmax
comp=N,7.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VRSR Storozhevoye 71.45 351 *e*P **P 01 13 11.8 -1.2**
VRSR pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
VRSR pmax pmax
comp=N,3.0nm,0.5s
VRSR pmax pmax
comp=E,2.0nm,0.6s
CLL Collm 71.51 8 *e*P **P 01 13 13.0 -0.4**
CLL *i* *PP pP 01 13 18.1 +2.6
CLL *i* 01 13 32.3
CLL pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
CLL MLR MLR
comp=Z,200nm,20.3s,MS4.4
CLL Collm 71.51 8 *e*P **P 01 13 12.9 -0.5**
comp=Z,17nm,1.2s,mb4.8
CLL Collm 71.51 8 *e*P **P 01 13 13.0 -0.4**
CLL *i* pP pP 01 13 18.1 +2.6
comp=Z,17nm,1.2s
CLL *i* x x 01 13 22.8
CLL *i* PcP PcP 01 13 32.3 -0.5
comp=Z,8.0nm,1.0s
CLL Lm 01 47 00.0
comp=Z,200nm,20.3s
CLL Collm 71.51 8 *e*P **P 01 13 13.0 -0.4**
comp=Z,8.0nm,1.0s,mb4.6
CLL *i* pP pP 01 13 18.1 +2.6
CLL *i* PcP PcP 01 13 32.3 -0.5
CLL LR LR
comp=Z,200nm,20.3s,MS4.4
MEM Membach 71.52 13 P **P 01 13 16.6 +3.2**
comp=Z,11nm,1.3s,mb4.6
UBBA Unterbreizbach 71.74 10 *e*P **P 01 13 14.5 -0.3**
comp=Z,15nm,1.5s,mb4.7
TKM2 Tokmak 2 71.76 323 P **P 01 13 16.1 +1.1**
SNR=13
USP Ospenovka 71.80 324 P **P 01 13 16.3 +1.1**
SNR=13
BAIF Baives 71.83 14 *e*P **P 01 13 15.3 0.0**
comp=Z,38nm,1.1s,mb5.0
BAIF Baives 71.83 14 *e*P **P 01 13 15.3 0.0**
BAIF pmax pmax
comp=Z,19nm,1.1s,mb4.9
BAIF Baives 71.83 14 *e*P **P 01 13 15.3 0.0**
comp=Z,19nm,1.1s,mb4.9
GIVF Givet 71.87 14 *e*P **P 01 13 15.4 -0.1**
CHMS Chumysh 71.96 324 P **P 01 13 17.1 +0.9**
SNR=14
BRG Berggiesshubel 72.01 7 *e*P **P 01 13 16.0 -0.4**
BRG *i* 01 13 20.8
BRG pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
BRG pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
BRG Berggiesshubel 72.01 7 *e*P **P 01 13 15.9 -0.5**
comp=Z,15nm,1.0s,mb4.9
BRG Berggiesshubel 72.01 7 *e*P **P 01 13 16.0 -0.4**
comp=Z,9.2nm,1.3s,mb4.6
BRG *i* 01 13 20.8
comp=Z,15nm,1.0s
MOX Moxa 72.06 9 *e*P **P 01 13 16.7 0.0**
MOX *e* 01 13 21.9
comp=Z,52nm,1.4s
MOX Moxa 72.06 9 *e*P **P 01 13 16.7 0.0**
MOX *e* 01 13 21.9
MOX pmax pmax
comp=Z,52nm,1.4s,mb5.3
MOX Moxa 72.06 9 *e*P **P 01 13 16.4 -0.3**
comp=Z,26nm,1.0s,mb5.1
MOX Moxa 72.06 9 *e*P **P 01 13 16.7 0.0**
comp=Z,52nm,1.4s,mb5.3
MOX *e* 01 13 21.9
AFI Afiamalu 72.11 197 PFAKE 01 13 30.0 +13
AFI LR LR
comp=Z,884nm,19.0s,MS5.0
FRU Bishkek 72.15 324 *e*P **P 01 13 14.0 -3.4**
FRU pmax pmax
comp=Z,80nm,2.0s,mb5.3
TNS Taunus Mts 72.17 11 *e*P **P 01 13 17.5 +0.1**
TNS pmax pmax
comp=Z,14nm,0.8s,mb4.9
TNS Taunus Mts 72.17 11 *e*P **P 01 13 17.5 +0.1**
comp=Z,14nm,0.8s,mb4.9
ROSF Rostrenen 72.33 19 *e*P **P 01 13 18.5 +0.2**
comp=Z,96nm,1.5s,mb5.2
ROSF Rostrenen 72.33 19 *e*P **P 01 13 18.5 +0.2**
ROSF pmax pmax
comp=Z,48nm,1.5s,mb5.2
ROSF Rostrenen 72.33 19 *e*P **P 01 13 18.5 +0.2**
comp=Z,48nm,1.5s,mb5.2
AAK Ala-Archa 72.37 324 P **P 01 13 19.0 +0.3**
SNR=7.7
FLN La Foliniere 72.40 17 *e*P **P 01 13 18.1 -0.6**
comp=Z,43nm,1.1s,mb5.0
FLN *e*MLR MLR
comp=Z,419nm,20.2s,MS4.4
FLN La Foliniere 72.40 17 *e*P **P 01 13 18.1 -0.6**
FLN pmax pmax
comp=Z,21nm,1.1s,mb5.0
FLN MLR MLR
comp=Z,420nm,20.3s,MS4.7
FLN La Foliniere 72.40 17 *e*P **P 01 13 18.1 -0.6**
comp=Z,21nm,1.1s,mb5.0
FLN LR LR
comp=Z,420nm,20.3s,MS4.7
WLF Walferdange 72.46 13 *e*P **P 01 13 19.4 +0.3**
comp=Z,16nm,1.0s,mb4.9
UPC Upice 72.51 6 *e*P **P 01 13 19.4 0.0**
AKASG Malin Array Be 72.53 357 P **P 01 13 18.1 -1.4**
comp=Z,6.5nm,0.5s,mb4.8,baz=5.0,slow=5.9,SNR=22
AKASG LR LR 01 47 28.4
comp=Z,175nm,21.7s,MS4.3,baz=350,slow=38
AKASG Malin Array Be 72.53 357 *i* P **P 01 13 18.2 -1.3**
AKASG pmax pmax
comp=Z,7.0nm,0.5s
SGMF Saint Gilles 72.54 19 *e*P **P 01 13 19.4 -0.2**
comp=Z,28nm,0.9s,mb4.9
SGMF Saint Gilles 72.54 19 *e*P **P 01 13 19.4 -0.2**
SGMF pmax pmax
comp=Z,14nm,0.9s,mb4.9

SGMF Saint Gilles 72.54 19 *e*P **P 01 13 19.4 -0.2**
comp=Z,14nm,0.9s,mb4.9
KIEV Kiev 72.54 357 *e*P **P 01 13 18.1 -1.4**
KIEV pmax pmax
comp=Z,13nm,0.6s,mb5.0
KIEV MLR MLR
comp=Z,197nm,21.0s,MS4.4
KIEV Kiev 72.54 357 *e*P **P 01 13 18.1 -1.4**
comp=Z,13nm,0.6s,mb5.0
KIEV LR LR
comp=Z,197nm,21.0s,MS4.4
NKC Novy Kostel 72.54 9 *e*P **P 01 13 22.8 +3.3**
EKS2 Erkin-Say 72.58 325 P **P 01 13 21.1 +1.2**
SNR=20
GYA Guiyang 72.60 292 P **P 01 13 24.5 +4.2**
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
LDF La Druitiere 72.62 17 *e*P **P 01 13 19.8 -0.3**
DPC Dobruska-Polom 72.69 6 *e*P **P 01 13 20.5 +0.1**
DPC *ep*P pP 01 13 25.2 +2.6
DPC AMS AMS 01 42 40.0
comp=Z,100nm,19.7s
GRR Gorron 72.70 18 *e*P **P 01 13 20.3 -0.2**
UCH Uchtor 72.73 324 P **P 01 13 19.9 -0.9**
SNR=9.5
QUIF Quistinic 72.75 20 *e*P **P 01 13 20.7 -0.2**
comp=Z,85nm,1.6s,mb5.1
QUIF Quistinic 72.75 20 *e*P **P 01 13 20.7 -0.2**
QUIF pmax pmax
comp=Z,42nm,1.6s,mb5.1
QUIF Quistinic 72.75 20 *e*P **P 01 13 20.7 -0.2**
comp=Z,42nm,1.6s,mb5.1
MANZ Manzenberg 72.75 9 *e*P **P 01 13 20.6 -0.2**
comp=Z,10.0nm,1.2s,mb4.6
PRU Pruhonice 72.94 7 *e*P **P 01 13 21.7 -0.2**
PRU *ep*P pP 01 13 25.3 +1.2
GRA1 Grafenberg Arr 72.97 9 *e*P **P 01 13 22.4 +0.3**
comp=Z,16nm,1.0s,mb4.9
GRF Grafenberg Arr 72.97 9 *e*P **P 01 13 22.4 +0.3**
GRF pmax pmax
comp=Z,16nm,1.0s,mb4.9
GRF Grafenberg Arr 72.97 9 *e*P **P 01 13 22.4 +0.3**
GRF pmax pmax
comp=Z,16nm,1.0s,mb4.9
GRF Grafenberg Arr 72.97 9 *e*P **P 01 13 22.4 +0.3**
comp=Z,16nm,1.0s,mb4.9
ROTZ Rotzenmuhle 72.98 9 *e*P **P 01 13 22.3 +0.1**
comp=Z,10.0nm,0.9s,mb4.8
AML Almayashu 73.08 324 P **P 01 13 24.2 +1.3**
SNR=20
OKC Ostrava-Krasne 73.29 5 *e*P **P 01 13 23.9 -0.1**
OKC *ep*P pP 01 13 28.4 +2.2
MEZF Maizieres J'vi 73.47 14 *e*P **P 01 13 25.1 0.0**
KWP Kalwaria 73.64 2⇑*i*P **P 01 13 25.7 -0.3**
KWP Kalwaria 73.64 2⇑P **P 01 13 25.7 -0.3**
WET Wettzell 73.65 8 *e*P **P 01 13 26.7 +0.5**
WET pmax pmax
comp=Z,20nm,1.4s,mb4.8
WET Wettzell 73.65 8 *e*P **P 01 13 26.7 +0.5**
comp=Z,20nm,1.4s,mb4.8
TREC Trest 73.69 7 *e*P **P 01 13 26.1 -0.3**
TREC *ex* x 01 13 30.7
KHC Kasperske Hory 73.72 8 *e*P **P 01 13 26.7 +0.1**
KHC *ep*P pP 01 13 31.1 +2.4
KHC AMS AMS 01 44 40.0
comp=Z,200nm,27.0s
VRAC Vranov 73.74 6⇑*i*P **P 01 13 26.6 -0.1**
VRAC Vranov 73.74 6⇑P **P 01 13 26.6 0.0**
STHS Stebnicka Huta 73.82 3 *e*P **P 01 13 27.7 +0.6**
STHS *e* pP 01 13 31.0 +1.7
STHS pmax pmax
comp=Z,11nm,0.8s,mb4.8
STHS Stebnicka Huta 73.82 3 *e*P **P 01 13 27.7 +0.6**
STHS *e* pP 01 13 31.0 +1.7
STHS Stebnicka Huta 73.82 3 *e*P **P 01 13 27.7 +0.6**
comp=Z,11nm,0.8s,mb4.8
STHS *e* pP 01 13 31.0 +1.7
CDF Champ du Feu 73.83 12 *e*P **P 01 13 27.3 +0.1**
comp=Z,39nm,1.3s,mb4.9
CDF Champ du Feu 73.83 12 *e*P **P 01 13 27.3 +0.1**
CDF pmax pmax
comp=Z,19nm,1.3s,mb4.9
CDF Champ du Feu 73.83 12 *e*P **P 01 13 27.3 +0.1**
comp=Z,19nm,1.3s,mb4.9
ECH Echery 74.01 12 *e*P **P 01 13 31.9 +3.6**
GEC2 GERESS Array S 74.02 8 *e*P **P 01 13 28.0 -0.3**
GEC2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
GEC2 GERESS Array S 74.02 8 *e*P **P 01 13 28.0 -0.3**
comp=Z,8.0nm,0.8s,mb4.7
GERES GERESS Array B 74.02 8 P **P 01 13 28.4 +0.2**
comp=Z,2.3nm,0.6s,mb4.3,baz=350,slow=4.3,SNR=21
BFO Black Forest 74.03 12 *e*P **P 01 13 28.1 -0.3**
BFO pmax pmax
comp=Z,35nm,1.9s,mb5.0
BFO Black Forest 74.03 12 *e*P **P 01 13 28.1 -0.3**
comp=Z,35nm,1.9s,mb5.0
HAU Haudompre 74.12 13 *e*P **P 01 13 28.7 -0.2**
comp=Z,25nm,0.8s,mb4.9
HAU *e*MLR MLR
comp=Z,167nm,18.2s,MS4.1
HAU Haudompre 74.12 13 *e*P **P 01 13 28.7 -0.2**
HAU pmax pmax
comp=Z,13nm,0.8s,mb4.9
HAU MLR MLR
comp=Z,170nm,18.3s,MS4.4
HAU Haudompre 74.12 13 *e*P **P 01 13 28.7 -0.2**
comp=Z,13nm,0.8s,mb4.9
HAU LR LR
comp=Z,170nm,18.3s,MS4.4
KOLS Kolonicke sedl 74.33 2 *e*P **P 01 13 30.7 +0.6**
KOLS *e* pP 01 13 34.4 +2.1
CRVS Cervenica-Dubn 74.34 3 *e*P **P 01 13 31.2 +1.0**
CRVS *e* 01 13 38.5
MOF Molkenrain 74.37 12 *e*P **P 01 13 33.0 +2.7**
HINF Hinteralfeld 74.37 13 *e*P **P 01 13 30.0 -0.4**
FELD Feldberg im Sc 74.44 12 *e*P **P 01 13 33.0 +2.2**
PPT Papeete 74.49 175 *e*LR LR 01 36 10.4
comp=Z,355nm,26.5s,baz=352
LOR Lormes 74.52 15 *e*P **P 01 13 31.1 -0.1**
comp=Z,37nm,1.3s,mb4.9
LOR *e*MLR MLR
comp=Z,185nm,19.0s,MS4.1
LOR Lormes 74.52 15 *e*P **P 01 13 31.1 -0.1**
LOR pmax pmax
comp=Z,19nm,1.3s,mb4.9
LOR MLR MLR
comp=Z,180nm,19.0s,MS4.4
LOR Lormes 74.52 15 *e*P **P 01 13 31.1 -0.1**
comp=Z,19nm,1.3s,mb4.9
LOR LR LR
comp=Z,180nm,19.0s,MS4.4
MFF Saint Martin d 74.55 18 *e*P **P 01 13 31.4 0.0**
comp=Z,25nm,1.0s,mb4.8
MFF Saint Martin d 74.55 18 *e*P **P 01 13 31.4 0.0**
MFF pmax pmax
comp=Z,13nm,1.0s,mb4.8
MFF Saint Martin d 74.55 18 *e*P **P 01 13 31.4 0.0**
comp=Z,13nm,1.0s,mb4.8
KOLL Kolacno 74.56 5 *e*P **P 01 13 36.5 +5.0**
KOLL Kolacno 74.56 5 *e* **P 01 13 36.5 +5.0**
UZH Uzhgorod 74.63 2⇓*i*P **P 01 13 36.5 +4.6**
UZH *e* 01 13 42.7
VYHS Vyhne 74.66 4 *e*P **P 01 13 32.7 +0.6**
VYHS *e* 01 13 36.8
SSF Saint Saulge 74.67 15 *e*P **P 01 13 32.0 -0.1**
comp=Z,32nm,1.0s,mb4.9
SSF Saint Saulge 74.67 15 *e*P **P 01 13 32.0 -0.1**
SSF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SSF Saint Saulge 74.67 15 *e*P **P 01 13 32.0 -0.1**
comp=Z,16nm,1.0s,mb4.9
MODS Modra-Piesok 74.71 5 *e*P **P 01 13 34.7 +2.4**
MODS *e* pP 01 13 37.8 +3.3
KECS Kecovo 74.73 3 *e*P **P 01 13 33.7 +1.2**
KECS *e* 01 13 37.7
KECS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KECS Kecovo 74.73 3 *e*P **P 01 13 33.7 +1.2**
comp=Z,4.8nm,0.8s,mb4.5
KECS *e* 01 13 37.7
ZST Bratislava 74.88 6 *e*P **P 01 13 38.1 +4.8**
ZST pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ZST Bratislava 74.88 6 *e*P **P 01 13 38.1 +4.8**
comp=Z,9.7nm,0.9s,mb4.7
AVF Avril sur Loir 74.91 15 *e*P **P 01 13 33.1 -0.4**
comp=Z,20nm,0.9s,mb4.8
AVF Avril sur Loir 74.91 15 *e*P **P 01 13 33.1 -0.4**
AVF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
AVF Avril sur Loir 74.91 15 *e*P **P 01 13 33.1 -0.4**
comp=Z,10nm,0.9s,mb4.8
BGF Bois d'Agland 75.06 16 *e*P **P 01 13 34.1 -0.3**
comp=Z,25nm,0.9s,mb4.8
BGF Bois d'Agland 75.06 16 *e*P **P 01 13 34.1 -0.3**
BGF pmax pmax
comp=Z,13nm,0.9s,mb4.9
BGF Bois d'Agland 75.06 16 *e*P **P 01 13 34.1 -0.3**
comp=Z,13nm,0.9s,mb4.8
CONA Conrad Observa 75.07 6⇓*i*P **P 01 13 32.4 -2.1**
comp=Z,11nm,1.2s,mb4.7
CSNA Conrad Observa 75.07 6⇓*i*P **P 01 13 32.3 -2.1**
comp=Z,12nm,1.2s,mb4.7
SMF Signal de Mont 75.12 15 *e*P **P 01 13 34.5 -0.3**
comp=Z,26nm,1.0s,mb4.8
SMF Signal de Mont 75.12 15 *e*P **P 01 13 34.5 -0.3**
SMF pmax pmax
comp=Z,13nm,1.0s,mb4.8
SMF Signal de Mont 75.12 15 *e*P **P 01 13 34.5 -0.3**
comp=Z,13nm,1.0s,mb4.8
TCF Toulx Ste Croi 75.23 16 *e*P **P 01 13 35.0 -0.4**
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.23 16 *e*P **P 01 13 35.0 -0.4**
TCF pmax pmax
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.23 16 *e*P **P 01 13 35.0 -0.4**
comp=Z,11nm,1.1s,mb4.7
PSZ Piszkesteto 75.28 4 *ep*P pP 01 13 40.8 +3.0
PSZ Piszkesteto 75.28 4⇓*i*P **P 01 13 33.4 -2.2**
CABF La Chapelle 75.46 13 *e*P **P 01 13 36.8 +0.1**
comp=Z,17nm,0.8s,mb4.7
CABF La Chapelle 75.46 13 *e*P **P 01 13 36.8 +0.1**
CABF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CABF La Chapelle 75.46 13 *e*P **P 01 13 36.8 +0.1**
comp=Z,8.6nm,0.8s,mb4.7
FETA Feichten 75.57 10⇓*i*P **P 01 13 37.6 +0.2**
comp=Z,9.8nm,0.8s,mb4.8
AGO Saint Agoulin 75.60 16 *e*P **P 01 13 37.0 -0.5**
BURAR Bucovina Array 75.67 360⇓*i*P **P 01 13 37.2 -0.7**
KMI Kunming 75.68 294 P **P 01 13 41.8 +3.5**
KMI AP pP 01 13 47.6 +7.1
KMI XP sP 01 13 49.9 +8.6
KMI PP PP 01 16 31.0 +3.6
KMI S S 01 23 24.4 +4.5
KMI AMB AMB
comp=Z,11nm,1.2s,mb4.7
KMI AMB AMB
comp=Z,119nm,4.2s
KMI LR LR
comp=N,357nm,20.9s,MS4.8
KMI LR LR
comp=E,345nm,20.9s,MS4.8
KMI LR LR
comp=Z,264nm,18.5s,MS4.6
KMI Kunming 75.68 294 P **P 01 13 41.8 +3.5**
KMI *PP pP 01 13 47.6 +7.1
KMI *SP sP 01 13 49.9 +8.6
KMI 01 16 31.0
KMI PPP 01 18 18.8
KMI S S 01 23 24.4 +4.5
KMI SS SS 01 28 18.6 +8.2
KMI SSS 01 31 28.8
KMI Kunming 75.68 294 P **P 01 13 41.8 +3.5**
KMI pP pP 01 13 47.6 +7.1
KMI sP sP 01 13 49.9 +8.6
KMI PP PP 01 16 31.0 +3.6
KMI PPP 01 18 18.8
KMI S S 01 23 24.4 +4.5
KMI sS sS 01 23 35.4 +12
KMI SS SS 01 28 18.6 +8.2
KMI SSS 01 31 28.8
PYM Petit Puy Mans 75.88 16 *e*P **P 01 13 39.4 +0.3**
RJF Les Rejaudoux 76.08 17 *e*P **P 01 13 39.8 -0.5**
comp=Z,20nm,1.0s,mb4.7
RJF *e*MLR MLR
comp=Z,528nm,21.5s,MS4.5
RJF Les Rejaudoux 76.08 17 *e*P **P 01 13 39.8 -0.5**
RJF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
RJF MLR MLR
comp=Z,530nm,21.5s,MS4.8
RJF Les Rejaudoux 76.08 17 *e*P **P 01 13 39.8 -0.5**
comp=Z,9.8nm,1.0s,mb4.7
RJF LR LR
comp=Z,530nm,21.5s,MS4.8
APPI Appiano 76.16 10 P **P 01 13 42.7 +2.0**
comp=Z,21nm,1.5s,mb4.8
PERS Pernice 76.31 7 *i* P **P 01 13 42.2 +0.6**
LFF La Frestale 76.31 18 *e*P **P 01 13 41.5 -0.1**
comp=Z,20nm,0.7s,mb4.9
LFF La Frestale 76.31 18 *e*P **P 01 13 41.5 -0.1**
LFF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
LFF La Frestale 76.31 18 *e*P **P 01 13 41.5 -0.1**
comp=Z,10.0nm,0.7s,mb4.8
OBKA Obir 76.40 8⇓*i*P **P 01 13 42.1 0.0**
comp=Z,26nm,0.7s,mb5.2
DRGR 76.48 2⇑*i*P **P 01 13 41.4 -1.1**
DRGR 76.48 2 ⇑P **P 01 13 41.4 -1.1**
VAI Varese 76.51 12 P **P 01 13 42.6 -0.1**
GROS Grobnik 76.51 7 *e*P **P 01 13 42.2 -0.4**
CAF Calviac 76.54 17 *e*P **P 01 13 42.7 -0.2**
comp=Z,22nm,1.2s,mb4.7
CAF Calviac 76.54 17 *e*P **P 01 13 42.7 -0.2**
CAF pmax pmax
comp=Z,11nm,1.2s,mb4.7
CAF Calviac 76.54 17 *e*P **P 01 13 42.7 -0.2**
comp=Z,11nm,1.2s,mb4.7
ROBS Robic 76.58 8 *e*P **P 01 13 41.8 -1.3**
LPL La Plagne 76.62 13 *e*P **P 01 13 44.2 +0.9**
LPG La Plagne 76.64 13 *e*P **P 01 13 44.3 +0.9**
TRAV Traversella 76.74 12 P **P 01 13 47.7 +3.7**
PKSM Moragy 76.93 5⇑*i*P **P 01 13 44.4 -0.7**
PKSM Moragy 76.93 5 ⇑P **P 01 13 44.4 -0.6**
VIVF Saint-Julien-l 76.99 15 *e*P **P 01 13 45.3 -0.1**
comp=Z,15nm,0.9s,mb4.6
VIVF Saint-Julien-l 76.99 15 *e*P **P 01 13 45.3 -0.1**
VIVF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
VIVF Saint-Julien-l 76.99 15 *e*P **P 01 13 45.3 -0.1**
comp=Z,7.4nm,0.9s,mb4.6
QIZ Qiongzhong 77.07 285 PFAKE 01 14 00.0 +14
QIZ LR LR
comp=Z,205nm,21.0s,MS4.4
ORIF Oris-en-Rattie 77.10 14 *e*P **P 01 13 46.2 +0.2**
comp=Z,19nm,1.1s,mb4.7
ORIF *e*MLR MLR
comp=Z,180nm,21.0s,MS4.1
ORIF Oris-en-Rattie 77.10 14 *e*P **P 01 13 46.2 +0.2**
ORIF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
ORIF Oris-en-Rattie 77.10 14 *e*P **P 01 13 46.2 +0.2**
comp=Z,9.4nm,1.1s,mb4.6
LSA Lhasa 77.31 305 P **P 01 13 49.0 +1.6**
LSA AMB AMB
comp=Z,20nm,0.9s,mb5.0
LSA Lhasa 77.31 305 PFAKE 01 14 00.0 +13
LSA LR LR
comp=Z,611nm,19.0s,MS4.9
MBDF Montbardon 77.40 13 *e*P **P 01 13 48.5 +0.8**
comp=Z,14nm,0.7s,mb4.7
MBDF Montbardon 77.40 13 *e*P **P 01 13 48.5 +0.8**
MBDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
MBDF Montbardon 77.40 13 *e*P **P 01 13 48.5 +0.8**
comp=Z,6.9nm,0.7s,mb4.7
VRI Vrincioaia 77.41 359⇑*i*P **P 01 13 47.1 -0.7**
VRI Vrincioaia 77.41 359 ⇑P **P 01 13 47.1 -0.7**
LASF Ste Croix 77.64 16 *e*P **P 01 13 49.3 +0.2**
comp=Z,10nm,0.9s,mb4.4
BOB Bobbio (Coli) 77.67 11 P **P 01 13 51.9 +2.7**
SJPF Ste Jean 77.75 19 *e*P **P 01 13 49.9 +0.2**
comp=Z,39nm,1.4s,mb4.8
SJPF Ste Jean 77.75 19 *e*P **P 01 13 49.9 +0.2**
SJPF pmax pmax
comp=Z,19nm,1.4s,mb4.8
SJPF Ste Jean 77.75 19 *e*P **P 01 13 49.9 +0.2**
comp=Z,19nm,1.4s,mb4.8
MLR Muntele Rosu 77.80 359⇓*i*P **P 01 13 50.5 +0.6**
MLR Muntele Rosu 77.80 359 ⇓P **P 01 13 50.5 +0.6**
PBRG Braganca 77.89 24 *e*P **P 01 13 53.5 +3.0**
comp=Z,23nm,2.1s,mb4.7
SMRF Simiane la Rot 77.98 14 *e*P **P 01 13 51.6 +0.6**
comp=Z,15nm,0.9s,mb4.7
SMRF Simiane la Rot 77.98 14 *e*P **P 01 13 51.6 +0.6**
comp=Z,15nm,0.9s,mb4.9
SIM Simferopol' 78.06 354 *e*P **P 01 13 49.7 -1.7**
SIM pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SIM MLR MLR
comp=Z,190nm,18.4s,MS4.5
ETSF Etsaut 78.07 19 *e*P **P 01 13 52.0 +0.5**
comp=Z,25nm,0.8s,mb4.9
ETSF Etsaut 78.07 19 *e*P **P 01 13 52.0 +0.5**
ETSF pmax pmax
comp=Z,12nm,0.8s,mb4.9
ETSF Etsaut 78.07 19 *e*P **P 01 13 52.0 +0.5**
comp=Z,12nm,0.8s,mb4.9
MTLF Montolieu 78.11 17 *e*P **P 01 13 51.5 -0.2**
comp=Z,26nm,1.3s,mb4.7
MTLF Montolieu 78.11 17 *e*P **P 01 13 51.5 -0.2**
MTLF pmax pmax
comp=Z,13nm,1.3s,mb4.7
MTLF Montolieu 78.11 17 *e*P **P 01 13 51.5 -0.2**
comp=Z,13nm,1.3s,mb4.7
TOUF Mont Tournerai 78.16 13 *e*P **P 01 13 52.0 0.0**
AUTN L'Aution 78.20 13 *e*P **P 01 13 52.5 +0.3**
SAOF Saorge 78.22 13 *e*P **P 01 13 52.4 +0.1**
KIV Kislovodsk 78.26 347 *e*P **P 01 13 52.7 +0.2**
KIV *i* 01 14 02.2
KIV pmax pmax
comp=Z,23nm,0.9s,mb5.1
KIV MLR MLR
comp=Z,100nm,19.0s,MS4.2
KIV Kislovodsk 78.26 347⇓*i*P **P 01 13 50.1 -2.4**
KIV Kislovodsk 78.26 347 ⇓P **P 01 13 50.1 -2.4**
MVIF Mont Vial 78.26 13 *e*P **P 01 13 52.3 -0.2**
LUCF Luceram 78.29 13 *e*P **P 01 13 52.3 -0.4**
SBF Sospel 78.33 13 *e*P **P 01 13 52.8 -0.1**
comp=Z,37nm,0.8s,mb5.1
SBF Sospel 78.33 13 *e*P **P 01 13 52.8 -0.1**
SBF pmax pmax
comp=Z,19nm,0.8s,mb5.1
SBF Sospel 78.33 13 *e*P **P 01 13 52.8 -0.1**
comp=Z,19nm,0.8s,mb5.1
DAV Davao City (W) 78.43 265 PFAKE 01 14 10.0 +16
DAV LR LR
comp=Z,330nm,20.0s,MS4.7
MVO Moncorvo 78.44 24 *e*LR LR 01 40 27.7
comp=Z,186nm,24.6s
FRF La Foret Royal 78.53 14 *e*P **P 01 13 53.8 -0.2**
comp=Z,16nm,0.9s,mb4.6
FRF La Foret Royal 78.53 14 *e*P **P 01 13 53.8 -0.2**
FRF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
FRF La Foret Royal 78.53 14 *e*P **P 01 13 53.8 -0.2**
comp=Z,8.1nm,0.9s,mb4.7
SEI Scarperia 78.57 10 P **P 01 13 55.6 +1.4**
comp=Z,112nm,0.7s,mb5.9
PVIS Viseu 78.67 25 *e*P **P 01 13 57.7 +2.8**
comp=Z,18nm,1.3s,mb4.8
LMR La Mourre 78.74 14 *e*P **P 01 13 55.0 -0.2**
SFI Santa Sofia 78.77 10 P **P 01 13 57.2 +1.9**
PII Pisa 78.82 11 P **P 01 13 55.0 -0.6**
MTE Manteigas 79.05 25 *e*P **P 01 14 00.1 +3.1**
comp=Z,32nm,2.1s,mb4.9
MTE *e*SKS 01 23 53.9
MTE Manteigas 79.05 25 *e*LQ 01 34 25.7
MTE *e*LR LR 01 40 07.1
comp=Z,161nm,15.7s
SDV Santo Domingo 79.46 90 PFAKE 01 14 10.0 +10
SDV LR LR
comp=Z,75nm,20.0s,MS4.0
PCBR Castelo Branco 79.60 25 *e*P **P 01 14 03.4 +3.4**
comp=Z,16nm,1.1s,mb4.9
PGF Pioggiola 79.81 12 *e*P **P 01 14 00.8 -0.3**
comp=Z,41nm,1.2s,mb4.9
PGF Pioggiola 79.81 12 *e*P **P 01 14 00.8 -0.3**
PGF pmax pmax
comp=Z,20nm,1.2s,mb4.9
PGF Pioggiola 79.81 12 *e*P **P 01 14 00.8 -0.3**
comp=Z,20nm,1.2s,mb4.9
PMRV Marv??o 80.01 25 *e*LR LR 01 41 04.5
comp=Z,144nm,36.2s
FIAM Fiamignano 80.50 9 P **P 01 14 07.7 +2.9**
comp=Z,17nm,0.7s,mb5.1
PESTR Estremoz 80.50 25 *e*SKS 01 24 15.3
PESTR Estremoz 80.50 25 *e*LQ 01 34 55.8
PESTR *e*LR LR 01 41 21.5
comp=Z,165nm,30.7s
ESDC Sonseca Array 80.53 22 P **P 01 14 04.9 -0.1**
comp=Z,2.2nm,0.7s,mb4.2,baz=342,slow=4.8,SNR=13
ESDC LR LR 01 51 14.7
comp=Z,108nm,19.6s,MS4.2,baz=295,slow=37
PAB San Pablo 80.57 23 PFAKE 01 14 20.0 +15
PAB LR LR
comp=Z,215nm,21.0s,MS4.5
ROSC El Rosal 80.79 95 LR LR 01 48 40.4
comp=Z,53nm,21.8s,MS3.9,baz=30,slow=35
TAPN Taplejung 80.85 307 *e*P **P 01 14 07.5 +0.6**
comp=Z,69nm,1.0s,mb5.5
GUN Gumba 81.15 309 *e*P **P 01 14 10.7 +2.2**
comp=Z,42nm,0.8s,mb5.4
JIRN Jiri 81.24 308 *e*P **P 01 14 09.8 +0.9**
comp=Z,38nm,0.6s,mb5.5
SKO Skopje 81.27 3 *i* P **P 01 14 12.7 +3.9**
PBAR Barrancos 81.29 25 *e*P **P 01 14 10.8 +1.7**
comp=Z,29nm,1.6s,mb5.0
PBAR Barrancos 81.29 25 *e*SKS 01 24 22.6
PBAR Barrancos 81.29 25 *e*LQ 01 35 56.1
PBAR *e*LR LR 01 41 05.9
comp=Z,167nm,21.7s
PMG Port Moresby 81.40 238 PFAKE 01 14 20.0 +10
PMG LR LR
comp=Z,2µm,21.0s,MS5.4
ODAN Odare 81.41 307 *e*P **P 01 14 09.9 0.0**
KKN Kakani 81.51 309 *e*P **P 01 14 10.7 +0.3**
STIP Stip 81.56 2 *i* P **P 01 14 13.2 +2.8**
GKN Gorkha 81.59 310 *e*P **P 01 14 10.4 -0.4**
comp=Z,13nm,0.8s,mb4.9
RKT Rikitea 81.62 162 *e*LR LR 01 39 34.8
comp=Z,235nm,29.5s,baz=347
PKI Pulchoki 81.65 309 *e*P **P 01 14 11.3 +0.2**
comp=Z,15nm,0.7s,mb5.0
PKI Pulchoki 81.65 309 *e*P **P 01 14 11.3 +0.2**
PKI pmax pmax
comp=Z,15nm,0.7s,mb5.0
DANN Dangsing 81.66 310 *e*P **P 01 14 12.3 +1.1**
comp=Z,163nm,0.9s,mb6.0
RAMN Ramite 81.68 308 *e*P **P 01 14 10.4 -0.9**
comp=Z,47nm,0.8s,mb5.5
GNI Garni 81.73 345 P **P 01 14 11.5 +0.1**
comp=Z,2.1nm,0.6s,mb4.3,baz=309,slow=6.5,SNR=3.7
GNI LR LR 01 55 48.8
comp=Z,153nm,19.2s,MS4.4,baz=200,slow=40
GNI Garni 81.73 345 *e*P **P 01 14 12.1 +0.7**
GNI pmax pmax
comp=Z,9.0nm,1.1s
DMN Daman 81.74 309 *e*P **P 01 14 11.3 -0.3**
comp=Z,16nm,0.5s,mb5.2
PFVI Vila Bisbo 81.86 27 *e*LR LR 01 42 38.2
comp=Z,148nm,31.5s
KRUS Krusevo 81.86 3 *i* P **P 01 14 14.9 +2.9**
PVAQ Vaqueiros 81.87 26 *e*P **P 01 14 15.6 +3.5**
comp=Z,21nm,1.7s,mb4.8
PVAQ Vaqueiros 81.87 26 *e*SKS 01 24 35.0
PVAQ Vaqueiros 81.87 26 *e*LQ 01 36 57.0
PVAQ *e*LR LR 01 42 05.2
comp=Z,218nm,23.4s
PBDV Barranco-do-Ve 81.97 26 *e*LR LR 01 42 05.3
comp=Z,213nm,25.2s
BIA Bitola 82.21 3 *i* P **P 01 14 15.1 +1.2**
KOLN Koldanda 82.23 310 *e*P **P 01 14 12.8 -1.4**
comp=Z,25nm,0.8s,mb5.2
CMAR Chiang Mai Arr 83.17 293 P **P 01 14 18.4 -0.8**
comp=Z,4.7nm,0.6s,mb4.7,baz=11,slow=5.7,SNR=22
CMAR Chiang Mai Arr 83.17 293⇑*e*P **P 01 14 18.7 -0.5**
ANTO Ankara 83.20 354 *e*P **P 01 14 18.1 -0.9**
ANTO pmax pmax
comp=Z,17nm,0.9s,mb5.1
ANTO MLR MLR
comp=Z,111nm,19.0s,MS4.2
ANTO Ankara 83.20 354 *e*P **P 01 14 18.1 -0.9**
comp=Z,17nm,0.9s,mb5.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ANTO				LR	LR		
	comp=Z,111nm,19.0s,MS4.2						
PTCN	**Pitcairn Islan**	**84.45**	**158**	PFAKE		01 14 40.0	+15
PTCN				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
KEST	**Kesra**	**86.58**	**13**	P	**P**	**01 14 36.4**	**+0.3**
	comp=Z,3.1nm,1.0s,mb4.5,baz=311,slow=2.6,SNR=5.6						
KEST				LR	LR	01 56 53.5	
	comp=Z,76nm,18.4s,MS4.1,baz=298,slow=38						
IDI	**Anoyia**	**87.99**	**0**	LR	LR	01 57 30.2	
	comp=Z,70nm,18.7s,MS4.1,baz=196,slow=38						
CTAO	**Charters Tower**	**91.20**	**234**	PFAKE		01 15 10.0	+12
CTAO				LR	LR		
	comp=Z,375nm,19.0s,MS4.8						
WRA	**Warramunga Arr**	**96.61**	**243**	P	**P**	**01 15 21.8**	**-1.0**
	comp=Z,0.6nm,0.7s,mb4.2,baz=33,slow=5.6,SNR=3.0						
ASAR	**Alice Springs**	**99.99**	**242**	P	Pdif	01 15 35.7	-2.5
	comp=Z,0.1nm,0.3s,baz=35,slow=8.3,SNR=2.3						
NWAO	**Narrogin (SRO)**	**115.88**	**249**	PFAKE		01 20 50.0	+15
NWAO				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
KMBO	**Kilima Mbogo**	**123.38**	**345**	PFAKE		01 21 00.0	+10
KMBO				LR	LR		
	comp=Z,118nm,20.0s,MS4.5						
SBA	**Scott Base**	**136.73**	**191**	PFAKE		01 21 30.0	+16
SBA				LR	LR		
	comp=Z,282nm,19.0s,MS5.0						
CASY	**Casey**	**141.62**	**221**	PFAKE		01 21 40.0	+17
CASY				LR	LR		
	comp=Z,352nm,20.0s,MS5.1						
QSPA	**South Pole Qui**	**146.87**	**180**	PKPbc	PKPbc	01 21 31.6	-1.9
	comp=Z,4.1nm,0.5s,baz=23,slow=1.1,SNR=32						
BOSA	**Boshof**	**151.55**	**360**	PKPbc	PKPbc	01 21 47.7	+0.9
	comp=Z,3.1nm,0.8s,baz=20,slow=5.3,SNR=7.3						

*NEIC **03** 01:05:15.5, 3471S×7231W, h26km, ML3.1(GUC), After GUC.*

GUC 03 01:05:15.5±0.7**, 3471S×7231W, h26**km±4km**, MD3.8, ML3.1, 7C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.88**	**141**	⇑iP	Pb	01 05 31.6	-0.6
TALC				iS	Sb	01 05 43.6	+0.2
TALC				AML	AML	01 05 48.1	
	comp=N,2μm,0.1s						
TALC	**Talca**	**0.88**	**141**	⇑iP	Pb	01 05 31.6	-0.6
TALC				iS	Sb	01 05 43.6	+0.2
NICH	**Los Niches**	**0.93**	**108**	⇑iP	Pn	01 05 32.0	-0.8
NICH				iS	Sb	01 05 45.5	+0.5
CNCO	**Chanco**	**1.04**	**190**	iS	Sn	01 05 47.5	-0.4
LNV	**Longovilo**	**1.06**	**45**	⇑iP	Pn	01 05 34.3	-0.3
LNV				iS	Sn	01 05 48.3	-0.2
SFDO	**San Fernando**	**1.07**	**85**	⇓iP	Pn	01 05 34.4	-0.4
SFDO				iS	Sn	01 05 48.8	0.0
LNCH	**Linares**	**1.27**	**153**	⇑iP	Pn	01 05 37.2	-0.3
LNCH				iS	Sn	01 05 54.0	+0.2
LNCH				AML	AML	01 05 56.9	
	comp=E,882nm,0.2s						
LNCH	**Linares**	**1.27**	**153**	⇑iP	Pn	01 05 37.2	-0.3
LNCH				iS	Sn	01 05 54.0	+0.2
CACH	**El Canelo**	**1.53**	**68**	⇑iP	Pn	01 05 42.4	+1.3
CACH				iS	Sn	01 06 02.5	+2.4
TACH	**Talagante**	**1.55**	**47**	⇓iP	Pn	01 05 41.8	+0.4
TACH				iS	Sn	01 06 02.2	+1.5
CHCH	**Chadas Angostu**	**1.57**	**61**	⇓iP	Pn	01 05 42.8	+1.1
CHCH				iS	Sn	01 06 02.8	+1.6
ANTU	**Antumapu**	**1.80**	**51**	iS	Sn	01 06 08.8	+2.2
ANTU				AML	AML	01 06 18.2	
	comp=E,245nm,0.4s						
PCH	**Pirque**	**1.84**	**54**	⇓iP	Pn	01 05 47.0	+1.6
PCH				iS	Sn	01 06 10.7	+2.9
CCHI	**Chillan**	**1.90**	**174**	eP	Pn	01 05 47.7	+1.6
CCHI				iS	Sn	01 06 11.3	+2.2
CCHI				AML	AML	01 06 22.1	
	comp=N,197nm,0.6s						
CCHI	**Chillan**	**1.90**	**174**	eP	Pn	01 05 47.7	+1.6
CCHI				iS	Sn	01 06 11.3	+2.2
FCH	**Farellones**	**2.17**	**51**	eP	Pn	01 05 49.9	0.0
FCH				iS	Sn	01 06 17.2	+1.3
FCH				AML	AML	01 06 26.1	
	comp=N,171nm,0.3s						

TAP 03 01:13:17.7, 2183N×12061E, h40km, ML3.5, 2C-2D, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEN	**Hengchun**	**0.21**	**35**	⇓iP	Pn	01 13 25.3	+0.3
	baz=34						
HEN				iS	Sn	01 13 30.8	+0.6
	baz=34						
TWK1	**Hengchun**	**0.21**	**59**	⇓iP	Pn	01 13 25.4	+0.4
	baz=58						
TWK1				iS	Sn	01 13 31.1	+0.9
	baz=58						
SCZT	**Fangliau**	**0.54**	**1**	⇑iP	Pn	01 13 29.4	+0.5
SCZT				S	Sn	01 13 37.6	+0.8
TAW	**Tawu**	**0.58**	**27**	iP	Pn	01 13 30.4	+0.8
	baz=26						
TAW				iS	Sn	01 13 39.1	+1.1
	baz=26						
EAST	**Anshuo**	**0.59**	**22**	P	Pn	01 13 30.4	+0.8
	baz=21						
EAST				S	Sn	01 13 40.2	+2.1
	baz=21						
ECL	**Taimali**	**0.82**	**23**	P	Pn	01 13 33.5	+0.7
	baz=22						
ECL				S	Sn	01 13 45.3	+1.5
	baz=22						
LAY	**Lan-yu**	**0.90**	**77**	P	Pn	01 13 34.3	+0.5
	baz=76						
LAY				S	Sn	01 13 46.5	+0.9
	baz=76						
SSD	**Sandimen**	**0.91**	**1**	⇑iP	Pn	01 13 34.4	+0.4
	baz=1.0						
SSD				eS	Sn	01 13 47.4	+1.5
	baz=1.0						
TWM1	**Shoushan**	**1.00**	**350**	eP	Pn	01 13 36.9	+1.7
	baz=349						
TWM1				eS	Sn	01 13 49.6	+1.5
	baz=349						
TTN	**Taitung**	**1.04**	**28**	eP	Pn	01 13 37.1	+1.3
	baz=28						
TTN				eS	Sn	01 13 50.7	+1.5
	baz=28						
TWG	**Pinlang**	**1.07**	**23**	P	Pn	01 13 37.0	+0.8
	baz=23						
TWG				eS	Sn	01 13 51.2	+1.4
	baz=23						
SGST	**Jiashian**	**1.24**	**359**	eP	Pn	01 13 39.6	+1.1
	baz=358						
SGST				eS	Sn	01 13 55.5	+1.4
	baz=358						
STYT	**Tauyuan**	**1.33**	**6**	eP	Pn	01 13 40.8	+1.0
	baz=5.0						
STYT				eS	Sn	01 13 57.5	+1.2
	baz=5.0						
CHN1	**Nanshi**	**1.35**	**357**	eP	Pn	01 13 40.7	+0.7
	baz=356						
CHN1				eS	Sn	01 13 58.1	+1.4
	baz=356						
SCLT	**Jiali**	**1.39**	**344**	eP	Pn	01 13 42.7	+2.1
	baz=343						
SCLT				eS	Sn	01 13 58.6	+0.9
	baz=343						
ELDTW	**Lidau**	**1.40**	**15**	eP	Pn	01 13 41.7	+1.0
	baz=15						
ELDTW				eS	Sn	01 13 59.5	+1.6
	baz=15						
WTP	**Ta-pu**	**1.41**	**0**	eP	Pn	01 13 41.5	+0.7
WTP				eS	Sn	01 14 00.6	+2.5
TWK	**Hsinying**	**1.43**	**355**	eP	Pn	01 13 42.3	+1.1
	baz=355						
TWK				eS	Sn	01 14 00.5	+1.7
	baz=355						
CHKT	**Chengkung**	**1.44**	**29**	eP	Pn	01 13 42.4	+1.1
	baz=28						
CHKT				eS	Sn	01 14 00.2	+1.2
	baz=28						
TWF1	**Yuli**	**1.64**	**23**	eP	Pn	01 13 46.5	+2.5
	baz=22						
TWF1				eS	Sn	01 14 07.1	+3.2
	baz=22						
YUS	**Yu-Shan**	**1.68**	**11**	eP	Pn	01 13 46.2	+1.7
	baz=10.0						
YUS				eS	Sn	01 14 06.1	+1.3
	baz=10.0						
ALS	**Alishan**	**1.68**	**6**	eP	Pn	01 13 45.9	+1.4
	baz=6.0						
ALS				eS	Sn	01 14 06.6	+1.7
	baz=6.0						
CHN5	**Tsauling**	**1.76**	**2**	eP	Pn	01 13 46.5	+0.9
	baz=2.0						
CHN5				eS	Sn	01 14 07.7	+1.0
	baz=2.0						
EHY	**Hungye**	**1.79**	**21**	eP	Pn	01 13 47.5	+1.4
	baz=21						
EHY				eS	Sn	01 14 08.7	+1.1
	baz=21						
SMLT	**Sun Moon Lake**	**2.06**	**7**	eP	Pn	01 13 51.0	+1.2
	baz=7.0						
SMLT				eS	Sn	01 14 15.4	+1.2
	baz=7.0						
TYC	**Yuchr**	**2.07**	**6**	eP	Pn	01 13 50.7	+0.8
	baz=6.0						
TYC				eS	Sn	01 14 15.3	+0.7
	baz=6.0						
WHF	**Hehuan Shan**	**2.38**	**15**	eP	Pn	01 13 56.0	+1.9
	baz=14						
WHF				eS	Sn	01 14 22.8	+0.7
	baz=14						
NNS	**Nan Shan**	**2.69**	**15**	eP	Pn	01 13 59.1	+0.7
	baz=15						
ENA	**Nanau**	**2.78**	**22**	eP	Pn	01 14 02.3	+2.5
	baz=21						
NSK	**Sanguang**	**2.91**	**14**	eP	Pn	01 14 02.8	+1.3
	baz=13						
ENTT	**Nioudou**	**2.93**	**17**	eP	Pn	01 14 02.6	+0.8
	baz=17						
ENTT				eS	Sn	01 14 35.7	+0.1
	baz=17						

IDC 03 01:19:55.2±1.7**, 000N×12553E, h0km, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.7**/16**, mbtmp3.8**/5**, ML3.5**/1**, Error ellipse: s-maj=108.0km s-min=24.8km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**17.99**	**180**	P	Pn	01 24 08.8	+1.9
	0.1nm,0.3s,baz=20,slow=14,SNR=4.0						
WRA	**Warramunga Arr**	**21.62**	**157**	P	P	01 24 46.4	-0.7
	1.4nm,0.4s,baz=332,slow=11,SNR=12						
ASAR	**Alice Springs**	**24.89**	**162**	P	P	01 25 19.9	0.0
	1.1nm,0.6s,baz=346,slow=7.1,SNR=12						
STKA	**Stephens Creek**	**35.16**	**156**	P	P	01 26 50.9	0.0
	2.7nm,0.9s,baz=332,slow=8.2,SNR=5.0						
MKAR	**Makanchi Array**	**59.96**	**327**	P	P	01 30 03.4	0.0
	0.5nm,0.4s,baz=125,slow=6.9,SNR=4.2						

*IDC **03** 01:28:18.4±0.8, 1198S×16621E, h0km, mb4.7/17, mb1 4.7/17, mb1mx4.6/19, mbtmp4.6/17, MS4.3/18, Ms1 4.3/18, ms1mx4.1/29, Error ellipse: s-maj=25.6km s-min=16.6km az=111.0*

*ISCJB **03** 01:28:20.1±6.0, 1201S±006×1662E±0.1, h20km±39km, mb4.9/47, MS4.4/27, Error ellipse: s-maj=22.5km s-min=10.2km az=176.8*

*MOS **03** 01:28:21.4±1.3, 1198S×16622E, h33km, mb5.6/7, Error ellipse: s-maj=12.7km s-min=9.9km az=38.6*

*BJI **03** 01:28:23.6, 1150S×16644E, h36km, mB5.3, mb5.0, Ms4.7, Msz4.4*

*DJA **03** 01:28:24, 1242S×16629E, h16km, mb5.2/18*

*NEIC **03** 01:28:24.3±3.6, 1194S×16630E, h51km±28km, mb4.9/11, Error ellipse: s-maj=24.4km s-min=13.2km az=94.0*

*GCMT **03** 01:28:24.3±0.3, 12.11S×16599E, h27km, MW5.1/55, Moment Tensor Solution. s55,c78; s55,c79; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.46±.19; $M_{\theta\theta}$-0.37±.14; $M_{\phi\phi}$-5.09±.15; $M_{r\theta}$1.84±.28; $M_{\theta\phi}$1.21±.11; $M_{\phi r}$-1.73±.23; Best double couple: $M_0$5.97300×10^{16} NP1:ϕ_s358.00000°, δ36.00000°, λ110.00000°. NP2: ϕ_s154.00000°, δ57.00000°, λ76.00000°. Principal axes: T 6.1540, Plg74.0000°, Azm26.0000°; N -0.3620, Plg12.0000°, Azm161.0000°; P -5.7910, Plg11.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 03 01:28:26.1±2.5**, 1203S**±006**×1660E**±01**, h49**km±20km**, n125, σ1§03**/82**, mb4.9**/47**, MS4.4**/27**, 7C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.52**	**293**	eP	**Pn**	**01 29 59.2**	**-0.4**
HNR				pmax	pmax		
	comp=Z,1μm,0.9s						
HNR	**Honiara**	**6.52**	**293**	ePn	**Pn**	**01 29 59.2**	**-0.4**
	comp=Z,1μm,0.9s						
CTA	**Charters Tower**	**20.62**	**245**	eP	**P**	**01 33 03.0**	**+1.5**
	comp=Z,39nm,1.1s						
CTA	**Charters Tower**	**20.62**	**245**	P	**P**	**01 33 02.3**	**+0.8**
	comp=Z,25nm,0.9s,baz=67,slow=12,SNR=11						
CTA				LR	LR	01 40 12.3	
	comp=Z,994nm,18.0s,MS4.2,baz=65,slow=34						
CTA	**Charters Tower**	**20.62**	**245**	eP	**P**	**01 33 03.0**	**+1.5**
CTA				pmax	pmax		
	comp=Z,39nm,1.1s						
CTAO	**Charters Tower**	**20.62**	**245**	eP	**P**	**01 33 02.6**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,62nm,1.0s						
CTAO	**Charters Tower**	**20.62**	**245**	eP	**P**	**01 33 02.5**	**+1.1**
	comp=Z,62nm,1.0s						
AFI	**Afiamalu**	**21.69**	**97**	LR	LR	01 40 06.4	
	comp=Z,967nm,19.1s,MS4.2,baz=264,slow=33						
COEN	**Coen**	**22.36**	**263**	eP	**P**	**01 33 18.9**	**-1.3**
	comp=Z,47nm,1.4s,mb4.7						
ARMA	**Armidale**	**22.65**	**214**	eP	**P**	**01 33 23.9**	**+0.7**
RAO	**Raoul Island**	**22.73**	**141**	LR	LR	01 40 12.6	
	comp=Z,627nm,19.1s,MS4.1,baz=352,slow=32						
STKA	**Stephens Creek**	**29.94**	**225**	eP	**P**	**01 34 29.9**	**+0.2**
	comp=Z,8.7nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**29.94**	**225**	P	**P**	**01 34 30.1**	**+0.4**
	comp=Z,13nm,1.0s,mb4.6,baz=67,slow=9.3,SNR=4.6						
STKA				LR	LR	01 45 58.5	
	comp=Z,1μm,20.4s,MS4.5,baz=34,slow=35						
TOO	**Toolangi**	**31.39**	**212**	eP	**P**	**01 34 49.0**	**+6.6**
WB2	**Warramunga Arr**	**31.42**	**251**	eP	**P**	**01 34 41.6**	**-1.3**
WRAB	**Tennant Creek**	**31.42**	**251**	eP	**P**	**01 34 43.0**	**+0.1**
WRA	**Warramunga Arr**	**31.43**	**251**	P	**P**	**01 34 42.5**	**-0.5**
	comp=Z,5.0nm,0.9s,mb4.3,baz=84,slow=8.9,SNR=13						
WRA				PcP	PcP	01 37 36.0	+0.4
	comp=Z,7.9nm,1.1s,baz=82,slow=3.2,SNR=10						
WRA				LR	LR	01 46 51.8	
	comp=Z,488nm,18.6s,MS4.2,baz=85,slow=35						
WRA	**Warramunga Arr**	**31.43**	**251**	P	**P**	**01 34 42.5**	**-0.5**
WRA						01 37 36.0	
RPZ	**Rata Peaks**	**31.86**	**173**	P	**P**	**01 34 46.5**	**0.0**
	comp=Z,16nm,0.7s,mb5.0,baz=256,slow=4.2,SNR=4.7						
RPZ				LR	LR	01 45 26.7	
	comp=Z,771nm,18.7s,MS4.4,baz=134,slow=32						
ASAR	**Alice Springs**	**32.62**	**245**	P	**P**	**01 34 52.5**	**-0.9**
	comp=Z,4.1nm,0.6s,mb4.6,baz=70,slow=9.7,SNR=35						
ASAR				PcP	PcP	01 37 38.7	-0.1
	comp=Z,6.2nm,0.8s,baz=80,slow=3.0,SNR=14						
KAKA	**Kakadu**	**32.82**	**265**	eP	**P**	**01 34 55.0**	**-0.2**
GUMO	**Guam**	**33.00**	**320**	LR	LR	01 47 00.5	
	comp=Z,616nm,21.7s,MS4.3,baz=266,slow=34						
RAR	**Rarotonga**	**33.94**	**110**	LR	LR	01 46 25.0	
	comp=Z,450nm,18.5s,MS4.2,baz=268,slow=32						
FITZ	**Fitzroy Crossi**	**39.42**	**256**	eP	**P**	**01 35 51.9**	**+0.3**
	comp=Z,16nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**39.42**	**256**	P	**P**	**01 35 52.1**	**+0.5**
	comp=Z,5.6nm,0.9s,mb4.3,baz=43,slow=10,SNR=5.8						
FITZ				LR	LR	01 51 27.6	
	comp=Z,409nm,21.3s,MS4.2,baz=262,slow=35						
FORT	**Forrest**	**39.73**	**236**	eP	**P**	**01 35 57.0**	**+3.0**
	comp=Z,16nm,0.7s,mb4.9						
BATI	**Baumata**	**41.60**	**268**	P	**P**	**01 36 10.0**	**+0.3**
	comp=Z,22nm,0.3s,mb5.2,baz=162,slow=6.4,SNR=2.7						
PPT	**Papeete**	**43.19**	**103**	LR	LR	01 50 36.0	
	comp=Z,595nm,18.6s,MS4.5,baz=230,slow=31						
MBWA	**Marble Bar**	**45.16**	**252**	eP	**P**	**01 36 39.0**	**+0.6**
KLBR	**Kellerberrin**	**48.43**	**238**	eP	**P**	**01 37 09.0**	**+5.2**
	comp=Z,25nm,1.2s,mb5.1						
JOW	**Kunigami**	**53.27**	**317**	P	**P**	**01 37 40.7**	**+0.5**
	comp=Z,15nm,0.8s,mb5.0,baz=141,slow=14,SNR=4.5						
JOW				LR	LR	02 00 21.7	
	comp=Z,358nm,18.7s,MS4.5,baz=173,slow=36						
MJAR	**Matsushiro Arr**	**54.98**	**333**	P	**P**	**01 37 51.0**	**-1.4**
	comp=Z,3.0nm,0.7s,mb4.4,baz=169,slow=6.5,SNR=5.7						
MAT	**Matsushiro**	**54.98**	**333**	P	**P**	**01 37 52.1**	**-0.3**
MAT				S	S	01 45 06.0	-25
ASAJ	**Asahikawa**	**59.82**	**341**	LR	LR	01 59 51.7	
	comp=Z,425nm,20.0s,MS4.6,baz=170,slow=32						
KSRS	**Korea Array**	**60.85**	**326**	P	**P**	**01 38 33.4**	**-0.2**
	comp=Z,5.3nm,0.8s,mb4.7,baz=138,slow=6.8,SNR=17						
KSRS				LR	LR	02 00 04.7	
	comp=Z,191nm,21.7s,MS4.2,baz=236,slow=31						
YSS	**Yuzh-Sakhalins**	**62.31**	**342**	⇑eP	**P**	**01 38 43.7**	**+0.5**
NJ2	**Nanjing**	**62.92**	**316**	eP	**P**	**01 38 47.2**	**-0.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
PETK	**Petropavlovsk-**	**65.27**	**354**	P	**P**	**01 39 01.7**	**-0.9**
	comp=Z,1.0nm,0.5s,mb4.1,baz=162,slow=15,SNR=3.7						
PETK				LR	LR	02 01 32.6	
	comp=Z,154nm,20.1s,MS4.2,baz=188,slow=31						
MDJ	**Mudanjiang**	**65.35**	**332**	P	**P**	**01 39 02.9**	**-0.4**
MDJ				AMB	AMB		
	comp=Z,15nm,1.8s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,114nm,4.9s						
MDJ				LR	LR		
	comp=N,104nm,25.2s,MS4.0						
MDJ				LR	LR		
	comp=E,81nm,26.2s,MS4.0						
MDJ				LR	LR		
	comp=Z,107nm,32.5s						
DL2	**Dalian**	**65.44**	**323**	P	**P**	**01 39 04.6**	**+0.6**
DL2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.3						
SBA	**Scott Base**	**65.82**	**180**	eP	**P**	**01 39 06.5**	**+0.6**
SBA				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2						
SBA	**Scott Base**	**65.82**	**180**	eP	**P**	**01 39 06.5**	**+0.6**
	comp=Z,31nm,1.1s,mb5.2						
CN2	**Changchun**	**66.73**	**329**	eP	**P**	**01 39 11.7**	**-0.5**
CN2				ePP	PP	01 41 38.9	-0.9
CN2				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.2						
CN2				AMB	AMB		
	comp=Z,190nm,6.0s						
CN2				LR	LR		
	comp=N,180nm,20.0s,MS4.4						
CN2				LR	LR		
	comp=E,160nm,20.0s,MS4.4						
CN2				LR	LR		
	comp=Z,220nm,23.0s,MS4.3						
KLR	**Kul'dur**	**68.07**	**337**	eP	**P**	**01 39 16.2**	**-4.3**
GYA	**Guiyang**	**69.21**	**304**	⇓iP	**P**	**01 39 28.6**	**+0.5**
GYA				PCP	PcP	01 39 55.9	+4.2
GYA				PP	PP	01 41 59.7	-2.0
GYA				PCS		01 43 59.6	
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,120nm,5.2s						
BJT	**Baijiatuau**	**69.42**	**321**	eP	**P**	**01 39 28.4**	**-0.7**
BJT				pmax	pmax		
	comp=Z,77nm,1.5s						
BJT	**Baijiatuau**	**69.42**	**321**	eP	**P**	**01 39 28.4**	**-0.7**
	comp=Z,78nm,1.5s,mb5.4						
BJI	**Beijing**	**69.43**	**321**	P	**P**	**01 39 29.5**	**+0.3**
BJI				AMB	AMB		
	comp=Z,31nm,1.3s,mb5.1						
BJI				AMB	AMB		
	comp=Z,426nm,9.8s						
XAN	**Xi'an**	**71.00**	**312**	P	**P**	**01 39 39.6**	**+0.7**
XAN				XP	sP	01 39 53.0	-5.4
XAN				AMB	AMB		
	comp=Z,12nm,1.9s,mb4.5						
XAN				AMB	AMB		
	comp=Z,195nm,19.0s						
XAN				LR	LR		
	comp=E,113nm,18.7s						
XAN				LR	LR		
	comp=Z,170nm,18.7s,MS4.3						
KMI	**Kunming**	**71.88**	**302**	P	**P**	**01 39 46.2**	**+1.8**
KMI				PP	PP	01 42 22.6	-2.2
KMI				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.8						
KMI				AMB	AMB		
	comp=Z,100nm,5.1s						
KMI				LR	LR		
	comp=N,126nm,20.2s,MS4.5						
KMI				LR	LR		
	comp=E,213nm,18.3s,MS4.5						
KMI				LR	LR		
	comp=Z,219nm,19.5s,MS4.4						
MIR	**Mirnyy**	**72.30**	**204**	⇓iP	**P**	**01 39 47.0**	**+0.8**
MIR				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.6						
HHC	**Hu-ho-hao-te**	**72.77**	**320**	⇑P	**P**	**01 39 50.2**	**+0.8**
HHC				PCP	PcP	01 40 10.7	+4.3
HHC				PP	PP	01 42 31.2	-0.8
HHC				AMB	AMB		
	comp=Z,32nm,0.9s,mb5.2						
HHC				AMB	AMB		
	comp=Z,282nm,7.2s						
HHC				LR	LR		
	comp=N,164nm,17.8s,MS4.5						
HHC				LR	LR		
	comp=E,201nm,18.7s,MS4.5						
HHC				LR	LR		
	comp=Z,292nm,18.0s,MS4.6						
CMAR	**Chiang Mai Arr**	**72.77**	**294**	P	**P**	**01 39 50.2**	**+0.3**
	comp=Z,2.9nm,0.7s,mb4.3,baz=117,slow=4.2,SNR=13						
HIA	**Hailar**	**73.37**	**330**	c iP	**P**	**01 39 51.1**	**-1.6**
HIA	**Hailar**	**73.37**	**330**	eP	**P**	**01 39 53.0**	**+0.2**
	comp=Z,9.5nm,0.8s,mb4.8						
CD2	**Chengdu**	**73.43**	**307**	eP	**P**	**01 39 53.2**	**-0.3**
CD2				PP	PP	01 42 36.0	-1.9
CD2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
BTO	**Baotou**	**73.62**	**319**	eP	**P**	**01 39 54.8**	**+0.4**
LZH	**Lanzhou**	**75.63**	**312**	eP	**P**	**01 40 07.8**	**+1.6**
LZH				PP	PP	01 42 55.0	-1.5
LZH				AMB	AMB		
	comp=Z,45nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,176nm,5.6s						
CIT	**Chita**	**78.16**	**330**	eP	**P**	**01 40 20.2**	**+0.2**
CIT				e		01 40 27.5	
CIT				e	pP	01 40 31.1	-3.1
CIT				pmax	pmax		
	comp=Z,135nm,1.4s,mb5.7						
YAK	**Yakutsk**	**79.12**	**343**	eP	**P**	**01 40 33.5**	**+8.4**
YAK				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
ULN	**Ulaanbaatar**	**79.27**	**324**	⇑eP	**P**	**01 40 24.4**	**-1.8**
ULN	**Ulaanbaatar**	**79.27**	**324**	eP	**P**	**01 40 27.0**	**+0.8**
	comp=Z,50nm,1.1s,mb5.4						
SONM	**Songino Array**	**79.63**	**324**	P	**P**	**01 40 28.6**	**+0.4**
	comp=Z,14nm,1.0s,mb4.9,baz=135,slow=5.2,SNR=64						
GTA	**Gaotai**	**79.95**	**314**	⇑P	**P**	**01 40 31.6**	**+1.5**
GTA				PP	PP	01 43 32.8	+0.2
GTA				AMB	AMB		
	comp=Z,36nm,1.3s,mb5.1						
GTA				AMB	AMB		
	comp=Z,181nm,6.9s						
GTA				LR	LR		
	comp=N,107nm,17.4s,MS4.5						
GTA				LR	LR		
	comp=E,202nm,21.0s,MS4.5						
GTA				LR	LR		
	comp=Z,221nm,19.5s,MS4.5						
SHL	**Shillong**	**81.24**	**298**	eP	**P**	**01 40 39.0**	**+1.6**
BOD	**Bodaibo**	**81.54**	**335**	eP	**P**	**01 40 37.2**	**-1.0**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.4						
ZAK	**Zakamensk**	**82.67**	**325**	⇑iP	**P**	**01 40 44.1**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.9						
TLY	**Talaya**	**83.10**	**326**	P	**P**	**01 40 46.5**	**0.0**
	comp=Z,114nm,1.8s,mb5.6,SNR=5.0						
TLY	**Talaya**	**83.10**	**326**	eP	**P**	**01 40 46.0**	**-0.5**
TLY				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
LSA	**Lhasa**	**83.12**	**302**	P	**P**	**01 40 48.0**	**+0.9**
MAW	**Mawson**	**83.92**	**202**	P	**P**	**01 40 50.3**	**-0.2**
	comp=Z,4.2nm,1.0s,mb4.5,baz=90,slow=6.3,SNR=7.6						
YBH	**Yreka Blue Hor**	**84.37**	**45**	P	**P**	**01 40 56.2**	**+3.0**
	comp=Z,1.4nm,0.9s,mb4.1,baz=192,slow=9.3,SNR=2.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOY	**Mondy**	**84.55**	**325**	*e*P	**P**	**01 40 54.0**	**+0.1**
MOY				pmax	pmax		
	comp=Z,36nm,1.9s,mb5.2						
NVAR	**Mina Array Bea**	**86.43**	**50**	P	**P**	**01 41 06.6**	**+3.0**
	comp=Z,0.5nm,0.7s,mb3.8,baz=237,slow=7.4,SNR=3.5						
WMQ	**Urumqi**	**89.99**	**315**	⇓*i*P	**P**	**01 41 21.2**	**+0.8**
WMQ				PP	PP	01 44 51.0	-3.1
WMQ				AMB	AMB		
	comp=Z,17nm,1.2s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,194nm,5.1s						
SYO	**Syowa Base**	**90.93**	**197**	⇑*e*P	**P**	**01 41 22.0**	**-2.4**
PDAR	**Pinedale Array**	**94.00**	**47**	LR	LR	02 19 19.7	
	comp=Z,194nm,18.7s,MS4.6,baz=86,slow=33						
MKAR	**Makanchi Array**	**94.44**	**317**	P	**P**	**01 41 40.9**	**0.0**
	comp=Z,20nm,0.8s,mb5.6,baz=109,slow=6.6,SNR=101						
MKAR				PP	PP	01 45 33.1	+4.1
	comp=Z,1.5nm,1.1s,baz=107,slow=7.8,SNR=3.5						
MKAR				LR	LR	02 24 06.1	
	comp=Z,110nm,19.4s,MS4.3,baz=117,slow=35						
MKAR	**Makanchi Array**	**94.44**	**317**	P	**P**	**01 41 40.9**	**0.0**
MKAR						01 45 33.2	
ZAA0	**Zalesovo Array**	**94.52**	**324**	*e*P	**P**	**01 41 40.1**	**-1.0**
ZALV	**Zalesovo Beam**	**94.52**	**324**	P	**P**	**01 41 40.0**	**-1.1**
	comp=Z,12nm,1.2s,mb5.2,baz=104,slow=4.7,SNR=16						
ZALV				PP	PP	01 45 24.3	-5.2
	comp=Z,0.8nm,0.4s,baz=80,slow=11,SNR=4.5						
ZALV				LR	LR	02 21 59.4	
	comp=Z,108nm,20.5s,MS4.3,baz=235,slow=34						
ZAL	**Zalesovo**	**94.53**	**324**	P	**P**	**01 41 40.1**	**-1.0**
ZAL						01 45 24.3	
NVS	**Novosibirsk**	**95.63**	**325**	*e*P	**P**	**01 41 44.3**	**-1.9**
NVS				pmax	pmax		
	comp=N,14nm,1.8s						
NVS				pmax	pmax		
	comp=Z,16nm,1.8s,mb5.2						
YKA	**Yellowknife Ar**	**95.71**	**27**	P	**P**	**01 41 46.9**	**+0.6**
	comp=Z,0.4nm,0.4s,mb4.2,baz=257,slow=4.8,SNR=7.2						
YKA				LR	LR	02 17 03.3	
	comp=Z,94nm,20.1s,MS4.3,baz=220,slow=31						
YKA	**Yellowknife Ar**	**95.71**	**27**	P	**P**	**01 41 46.9**	**+0.6**
YKA				LR	LR	02 17 03.3	
SNAA	**Sanae**	**96.16**	**184**	*e*P	**P**	**01 41 45.9**	**-2.5**
SNAA				*e*		01 41 52.1	
VNA2	**Neumayer--Watz**	**97.12**	**182**	*e*P	**P**	**01 41 50.4**	**-2.3**
VNA2				*e*		01 41 56.2	
KURK	**Kurchatov**	**97.58**	**320**	P	**P**	**01 41 54.1**	**-1.0**
	comp=Z,1.0nm,0.8s,mb4.4,baz=96,slow=3.7,SNR=5.4						
KURK				PP	PP	01 45 56.7	+3.5
	comp=Z,2.0nm,1.2s,baz=130,slow=2.5,SNR=4.4						
KURK	**Kurchatov**	**97.58**	**320**	P	**P**	**01 41 54.1**	**-1.0**
KURK				PP	PP	01 45 56.7	+3.5
BVAR	**Borovoye Array**	**102.90**	**322**	P	Pdif	01 42 17.8	-1.0
	comp=Z,1.0nm,0.8s,baz=124,slow=4.3,SNR=5.6						
ARCES	**ARCESS Array B**	**117.36**	**345**	PKP	PKPdf	01 47 03.7	-1.9
	comp=Z,0.8nm,0.4s,baz=82,slow=1.9,SNR=6.8						
AKASG	**Malin Array Be**	**127.84**	**327**	PKP	PKPdf	01 47 25.6	-0.6
	comp=Z,0.1nm,0.2s,baz=60,slow=1.6,SNR=5.9						
LSZ	**Lusaka**	**130.23**	**238**	*e*PKIKP	PKPdf	01 47 32.5	+0.6
GERES	**GERESS Array B**	**136.71**	**333**	PKP	PKPdf	01 47 42.8	-0.2
	comp=Z,1.5nm,1.1s,baz=123,slow=4.9,SNR=6.9						
CDF	**Champ du Feu**	**139.64**	**338**	*e*PKP1	PKPdf	01 47 43.3	-5.2
HINF	**Hinteralfeld**	**140.30**	**338**	*e*PKP1	PKPdf	01 47 44.5	-5.2
HAU	**Haudompre**	**140.32**	**339**	*e*PKP1	PKPdf	01 47 45.3	-4.4
HAU				*e*MLR	MLR		
	comp=Z,148nm,20.2s,MS4.4						
HAU	**Haudompre**	**140.32**	**339**	*e*PKP	PKPdf	01 47 45.3	-4.4
HAU				LR	LR		
	comp=Z,150nm,20.3s,MS4.7						
LOR	**Lormes**	**141.81**	**340**	*e*PKP1	PKPdf	01 47 48.8	-3.6
LOR				*e*MLR	MLR		
	comp=Z,186nm,19.5s,MS4.5						
LOR	**Lormes**	**141.81**	**340**	*e*PKP	PKPdf	01 47 48.8	-3.6
LOR				LR	LR		
	comp=Z,190nm,19.5s,MS4.9						
SSF	**Saint Saulge**	**142.11**	**340**	*e*PKP1	PKPdf	01 47 49.9	-3.1
LPL	**La Plagne**	**142.26**	**336**	*e*PKP1	PKPdf	01 47 50.0	-3.3
LPG	**La Plagne**	**142.27**	**336**	*e*PKP1	PKPdf	01 47 50.3	-3.0
SMF	**Signal de Mont**	**142.36**	**340**	*e*PKP1	PKPdf	01 47 50.2	-3.2
AVF	**Avril sur Loir**	**142.40**	**340**	*e*PKP1	PKPdf	01 47 49.5	-4.0
MBDF	**Montbardon**	**142.89**	**335**	*e*PKP1	PKPdf	01 47 50.1	-4.3
	comp=Z,12nm,1.1s						
ORIF	**Oris-en-Rattie**	**143.09**	**336**	*e*PKP1	PKPdf	01 47 51.0	-3.8
	comp=Z,6.6nm,0.7s						
ORIF				*e*MLR	MLR		
	comp=Z,184nm,19.8s,MS4.5						
TCF	**Toulx Ste Croi**	**143.21**	**341**	*e*PKP1	PKPdf	01 47 52.1	-2.8
SBF	**Sospel**	**143.31**	**334**	*e*PKP1	PKPdf	01 47 51.3	-3.9
	comp=Z,35nm,0.9s						
VIVF	**Saint-Julien-l**	**143.61**	**337**	*e*PKP1	PKPdf	01 47 53.6	-2.1
	comp=Z,42nm,1.5s						
MFF	**Saint Martin d**	**143.62**	**344**	*e*PKP1	PKPdf	01 47 52.5	-3.1
	comp=Z,17nm,1.1s						
PGF	**Pioggiola**	**143.63**	**331**	*e*PKP1	PKPdf	01 47 52.0	-3.8
	comp=Z,21nm,1.0s						
FRF	**La Foret Royal**	**143.90**	**334**	*e*PKP1	PKPdf	01 47 52.9	-3.3
	comp=Z,32nm,1.3s						
SMRF	**Simiane la Rot**	**144.00**	**336**	*e*PKP1	PKPdf	01 47 54.0	-2.4
	comp=Z,9.9nm,0.9s						
LMR	**La Mourre**	**144.14**	**334**	*e*PKP1	PKPdf	01 47 53.6	-3.1
	comp=Z,21nm,0.9s						
CAF	**Calviac**	**144.47**	**340**	*e*PKP1	PKPdf	01 47 55.3	-1.9
	comp=Z,24nm,1.1s						
LASF	**Ste Croix**	**144.58**	**338**	*e*PKP1	PKPdf	01 47 55.9	-1.5
	comp=Z,36nm,1.2s						
LFF	**La Frestale**	**144.88**	**342**	*e*PKP1	PKPdf	01 47 56.9	-1.0
	comp=Z,9.0nm,0.6s						
MTLF	**Montolieu**	**145.81**	**339**	*e*PKP1	PKPbc	01 47 59.0	-1.1
	comp=Z,18nm,1.0s						
EPF	**Esparros**	**146.72**	**341**	*e*PKP1	PKPbc	01 48 02.0	-0.8
ETSF	**Etsaut**	**147.12**	**342**	*e*PKP1	PKPbc	01 48 03.6	-0.4
	comp=Z,23nm,1.2s						
SJPF	**Ste Jean**	**147.12**	**343**	*e*PKP1	PKPbc	01 48 03.2	-0.8
KEST	**Kesra**	**148.37**	**322**	PKPbc	PKPbc	01 48 07.2	-0.4
	comp=Z,5.6nm,0.9s,baz=358,slow=0.9,SNR=10						
ESDC	**Sonseca Array**	**151.08**	**344**	PKPbc	PKPbc	01 48 12.5	-1.6
	comp=Z,0.3nm,0.5s,baz=0.3,slow=2.6,SNR=5.7						
ESDC				PKPab	PKPab	01 48 19.7	-2.0
	comp=Z,1.1nm,0.7s,baz=9.3,slow=2.1,SNR=7.5						
TORD	**Torodi Ar. Bea**	**164.68**	**276**	PKP	PKPdf	01 48 23.9	-1.7
	comp=Z,4.3nm,1.2s,baz=8.7,slow=1.4,SNR=11						
TORD				PKPab	PKPab	01 49 21.4	+0.2
	comp=Z,4.5nm,1.1s,baz=101,slow=3.0,SNR=6.5						

*IDC **03** 01:30:31.6±0.5, 15.13S×17269W, h0^{km}, mb4.4/12, mb1 4.6/12, mb1mx4.4/19, mbtmp4.4/12, MS4.3/2, Ms1 4.2/2, ms1mx2.7/31, Error ellipse: s-maj=26.7km s-min=14.9km az=132.0*

*NEIC **03** 01:30:32.5±0.3, 1523S×17253W, h10^{km}, mb4.5/1, Error ellipse: s-maj=15.8km s-min=11.9km az=133.0*

*ISCJB **03** 01:30:35.2±0.5, 150S±01×1727W±01, h33^{km}, mb4.3/13, MS4.3/2, Error ellipse: s-maj=22.1km s-min=8.2km az=39.0*

ISC 03 01:30:37.5±0.6**, 1516S**±007×**1722W**±01**, h35**^{km}**, n129, σ1.23**/22**, mb4.3**/13**, MS4.3**/2**, 17C-8D, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.31**	**19**	Pn	**Pn**	**01 30 58.3**	**-0.9**
	825nm,0.3s,baz=333,slow=4.5,SNR=819						
AFI				Sn	**Sn**	**01 31 14.3**	**-1.2**
	2µm,0.3s,baz=246,slow=20,SNR=24						
AFI	**Afiamalu**	**1.31**	**19**	Pn	**Pn**	**01 30 58.3**	**-0.9**
AFI				Sn	**Sn**	**01 31 14.3**	**-1.2**
RAR	**Rarotonga**	**13.26**	**119**	Pn	**Pn**	**01 33 41.6**	**-1.8**
	2.0nm,0.3s,baz=270,slow=5.1,SNR=3.9						
RAR				Sn	**Sn**	**01 36 02.8**	**-6.8**
	1.2nm,0.3s,baz=90,slow=7.4,SNR=4.0						
URZ	**Urewera**	**24.87**	**200**	P	**P**	**01 35 56.0**	**-0.9**
	23nm,0.5s,mb4.9,baz=13,slow=3.4,SNR=15						
STKA	**Stephens Creek**	**45.15**	**240**	P	**P**	**01 38 46.6**	**-4.3**
	3.4nm,0.8s,mb4.2,baz=106,slow=15,SNR=2.6						
WRA	**Warramunga Arr**	**51.02**	**256**	P	**P**	**01 39 31.4**	**-5.1**
	2.2nm,0.8s,mb4.2,baz=91,slow=7.3,SNR=6.9						
WRA				PcP	PcP	01 40 50.4	-1.9
	1.6nm,0.8s,baz=84,slow=3.8,SNR=4.7						
ASAR	**Alice Springs**	**51.28**	**252**	P	**P**	**01 39 33.5**	**-4.9**
	8.6nm,0.8s,mb4.7,baz=88,slow=7.6,SNR=30						
FITZ	**Fitzroy Crossi**	**59.38**	**258**	LR	LR	02 00 56.8	
	comp=Z,274nm,19.0s,MS4.4,baz=147,slow=31						
YBH	**Yreka Blue Hor**	**72.72**	**37**	P	**P**	**01 42 04.1**	**+2.2**
	1.5nm,0.6s,mb4.1,baz=211,slow=5.9,SNR=3.3						
PETK	**Petropavlovsk-**	**72.75**	**342**	P	**P**	**01 42 01.2**	**-0.7**
	5.5nm,0.8s,mb4.5,baz=114,slow=8.9,SNR=7.4						
PETK	**Petropavlovsk-**	**72.75**	**342**	P	**P**	**01 42 01.2**	**-0.7**
NVAR	**Mina Array Bea**	**73.38**	**41**	P	**P**	**01 42 08.5**	**+2.5**
	1.4nm,0.8s,mb4.0,baz=229,slow=8.1,SNR=4.6						
KSRS	**Korea Array**	**76.79**	**315**	P	**P**	**01 42 25.4**	**-0.3**
	2.2nm,0.8s,mb4.1,baz=128,slow=6.3,SNR=6.0						
PDAR	**Pinedale Array**	**81.32**	**41**	P	**P**	**01 42 51.9**	**+1.6**
	0.7nm,0.8s,mb3.6,baz=207,slow=3.0,SNR=3.9						
RLMT	**Red Lodge**	**82.67**	**39**	*e*P	**P**	**01 42 57.6**	**+0.2**
	4.0nm,1.3s,mb4.3						
MAW	**Mawson**	**88.39**	**198**	P	**P**	**01 43 24.8**	**-0.7**
	9.1nm,0.9s,mb5.0,baz=115,slow=6.0,SNR=12						
PLCA	**Paso Flores**	**88.82**	**132**	P	**P**	**01 43 29.8**	**+1.7**
	2.1nm,0.8s,mb4.5,baz=244,slow=5.0,SNR=4.6						
YKA	**Yellowknife Ar**	**89.42**	**23**	P	**P**	**01 43 30.9**	**+0.6**
	1.8nm,0.9s,mb4.4,baz=233,slow=4.6,SNR=3.8						
ULM	**Lac du Bonnet**	**93.02**	**39**	LR	LR	02 18 34.1	
	comp=Z,107nm,20.9s,MS4.3,baz=243,slow=31						
VNA2	**Neumayer--Watz**	**93.50**	**175**	*e*P	**P**	**01 43 48.5**	**-0.7**
VNA2				*e*		01 44 06.9	
VNA1	**Neumayer--Stat**	**93.69**	**175**	*e*P	**P**	**01 43 50.4**	**+0.3**
VNA1				*e*		01 44 08.8	
MKAR	**Makanchi Array**	**111.47**	**315**	PKiKP	PKiKP	01 49 05.9	-2.1
	0.4nm,0.5s,baz=236,slow=1.6,SNR=2.7						
KURK	**Kurchatov**	**113.71**	**319**	PKiKP	PKiKP	01 49 10.6	-1.6
	0.7nm,0.6s,baz=80,slow=2.0,SNR=5.1						
BVAR	**Borovoye Array**	**118.39**	**322**	PKP	PKPdf	01 49 19.6	-1.5
	0.9nm,0.7s,baz=128,slow=2.4,SNR=5.8						
ARCES	**ARCESS Array B**	**124.52**	**353**	PKP	PKPdf	01 49 31.1	-1.4
	3.0nm,0.8s,baz=353,slow=1.8,SNR=11						
AKTK	**Aktyubinsk**	**126.50**	**322**	PKP	PKPdf	01 49 34.7	-2.0
AKTO	**Aktyubinsk**	**126.50**	**322**	PKP	PKPdf	01 49 34.7	-2.0
	0.9nm,0.7s,baz=40,slow=1.4,SNR=4.5						
AKASG	**Malin Array Be**	**140.54**	**339**	PKhKP		01 49 56.4	
	0.2nm,0.4s,baz=3.0,slow=3.8,SNR=3.4						
KWP	**Kalwaria**	**143.53**	**344**	⇓*i*P	PKPdf	01 50 03.9	-4.5
KWP	**Kalwaria**	**143.53**	**344**	⇓P	PKPdf	01 50 03.9	-4.5
STHS	**Stebnicka Huta**	**144.10**	**345**	*e*PKP	PKPdf	01 50 05.1	-4.3
UPC	**Upice**	**144.12**	**351**	*e*PKP	PKPdf	01 50 06.9	-2.5
DPC	**Dobruska-Polom**	**144.22**	**351**	*e*PKP	PKPdf	01 50 06.4	-3.2
NIE	**Niedzica**	**144.33**	**346**	*e*PX	PKPdf	01 50 08.3	-1.5
OKC	**Ostrava-Krasne**	**144.40**	**348**	*e*PKP	PKPdf	01 50 08.1	-1.8
MALT	**Malatya**	**144.49**	**316**	⇑*i*P	PKPdf	01 50 09.3	-1.2
MALT	**Malatya**	**144.49**	**316**	⇑P	PKPdf	01 50 09.3	-1.2
CRVS	**Cervenica-Dubn**	**144.52**	**344**	*e*PKP	PKPdf	01 50 08.1	-2.1
BURAR	**Bucovina Array**	**144.55**	**340**	⇓*i*P	PKPdf	01 50 08.5	-1.8
BURAR	**Bucovina Array**	**144.55**	**340**	⇓P	PKPdf	01 50 08.5	-1.8
MORC	**Moravsky Berou**	**144.57**	**349**	⇓*i*P	PKPdf	01 50 08.8	-1.4
MORC	**Moravsky Berou**	**144.57**	**349**	⇓P	PKPdf	01 50 08.8	-1.5
NKC	**Novy Kostel**	**144.81**	**355**	*e*PKP	PKPdf	01 50 09.7	-0.9
PRU	**Pruhonice**	**144.83**	**352**	*e*PKP	PKPdf	01 50 09.5	-1.2
GIVF	**Givet**	**145.06**	**3**	*e*PKP1	PKPbc	01 50 10.1	-0.4
BAIF	**Baives**	**145.07**	**4**	*e*PKP1	PKPbc	01 50 10.4	-0.1
	52nm,1.2s						
KECS	**Kecovo**	**145.16**	**345**	*e*PKP	PKPdf	01 50 10.7	-0.6
KECS				*e*		01 50 20.6	
VRAC	**Vranov**	**145.19**	**350**	⇑*i*P	PKPbc	01 50 10.7	-0.2
VRAC	**Vranov**	**145.19**	**350**	⇑P	PKPbc	01 50 10.7	-0.3
TLCR		**145.20**	**334**	⇑*i*P	PKPbc	01 50 10.5	-0.6
TLCR		**145.20**	**334**	⇑P	PKPbc	01 50 10.5	-0.7
TREC	**Trest**	**145.38**	**351**	*e*PKP	PKPdf	01 50 11.0	-0.7
GRA1	**Grafenberg Arr**	**145.44**	**356**	*e*PKP	PKPdf	01 50 12.2	+0.4
VRI	**Vrincioaia**	**145.50**	**336**	⇑*i*P	PKPdf	01 50 10.4	-1.6
VRI	**Vrincioaia**	**145.50**	**336**	⇑P	PKPdf	01 50 10.4	-1.6
VYHS	**Vyhne**	**145.53**	**347**	*e*PKP	PKPdf	01 50 12.7	+0.8
KOLL	**Kolacno**	**145.54**	**348**	*e*PKP	PKPdf	01 50 12.3	+0.3
ROSF	**Rostrenen**	**145.68**	**13**	*e*PKP1	PKPbc	01 50 12.3	-0.2
KHC	**Kasperske Hory**	**145.79**	**353**	*e*PKP	PKPdf	01 50 12.7	+0.3
KHC				pPKP	pPKPdf	01 50 19.0	-4.8
KHC	**Kasperske Hory**	**145.79**	**353**	*e*PKP	PKPdf	01 50 12.7	+0.3
KHC				*e*		01 50 19.0	
FLN	**La Foliniere**	**145.80**	**10**	*e*PKP1	PKPbc	01 50 12.2	-0.7
	55nm,1.0s						
PSZ	**Piszkesteto**	**145.83**	**345**	⇑*e*PKP	PKPdf	01 50 12.6	+0.1
SGMF	**Saint Gilles**	**145.91**	**12**	*e*PKP1	PKPbc	01 50 12.7	-0.5
	24nm,0.9s						
MODS	**Modra-Piesok**	**145.96**	**349**	*e*PKP	PKPdf	01 50 13.9	+1.2
MODS				*e*		01 50 22.7	
LDF	**La Druitiere**	**146.03**	**9**	*e*PKP1	PKPbc	01 50 13.3	-0.3
	32nm,1.0s						
GERES	**GERESS Array B**	**146.05**	**353**	PKPbc	PKPbc	01 50 13.6	0.0
	3.8nm,0.8s,baz=33,slow=3.2,SNR=24						
DRGR		**146.09**	**342**	⇑*i*P	PKPdf	01 50 11.9	-1.1
DRGR		**146.09**	**342**	⇑P	PKPdf	01 50 11.9	-1.1
QUIF	**Quistinic**	**146.10**	**13**	*e*PKP1	PKPbc	01 50 13.2	-0.6
	18nm,0.8s						
GRR	**Gorron**	**146.10**	**10**	*e*PKP1	PKPbc	01 50 13.4	-0.4
	18nm,0.8s						
MLR	**Muntele Rosu**	**146.11**	**337**	⇓*i*P	PKPdf	01 50 12.1	-0.9
MLR	**Muntele Rosu**	**146.11**	**337**	⇓P	PKPdf	01 50 12.1	-1.0
ZST	**Bratislava**	**146.17**	**349**	*e*PKP	PKPdf	01 50 14.4	+1.4
CONA	**Conrad Observa**	**146.65**	**350**	⇑*i*P	PKPdf	01 50 12.8	-1.1
	comp=Z,11nm,1.1s						
MEZF	**Maizieres J'vi**	**146.67**	**3**	*e*PKP1	PKPbc	01 50 15.4	-0.1
	15nm,1.0s						
KMBO	**Kilima Mbogo**	**146.67**	**244**	PKPbc	PKPbc	01 50 16.4	-0.2
	3.1nm,0.7s,baz=85,slow=4.1,SNR=4.0						
CDF	**Champ du Feu**	**146.84**	**1**	*e*PKP1	PKPbc	01 50 15.8	-0.2
	32nm,1.1s						
MOA	**Molln**	**146.96**	**352**	⇑*i*P	PKPdf	01 50 15.7	+1.3
	comp=Z,14nm,1.5s						
HAU	**Haudompre**	**147.22**	**2**	*e*PKP1	PKPbc	01 50 16.8	-0.3
	16nm,0.9s						
HINF	**Hinteralfeld**	**147.42**	**1**	*e*PKP1	PKPbc	01 50 17.1	-0.6
BZS	**Buzias**	**147.48**	**342**	⇑*i*P	PKPdf	01 50 15.2	-0.1
BZS	**Buzias**	**147.48**	**342**	⇑P	PKPdf	01 50 15.2	-0.2
LOR	**Lormes**	**147.81**	**5**	*e*PKP1	PKPbc	01 50 17.6	-1.1
	14nm,0.8s						
WTTA	**Wattenberg**	**147.83**	**355**	⇑*i*P	PKPbc	01 50 18.3	-0.5
	comp=Z,7.4nm,0.8s						
MFF	**Saint Martin d**	**147.95**	**10**	*e*PKP1	PKPbc	01 50 18.7	-0.4
	16nm,1.0s						
SSF	**Saint Saulge**	**147.99**	**6**	*e*PKP1	PKPbc	01 50 19.0	-0.2
	19nm,1.1s						
SOKA	**Soboth**	**147.99**	**351**	⇑*i*P	PKPbc	01 50 18.3	-1.0
AVF	**Avril sur Loir**	**148.24**	**6**	*e*PKP1	PKPbc	01 50 19.2	-0.7
	12nm,1.0s						
BGF	**Bois d'Agland**	**148.42**	**7**	*e*PKP1	PKPbc	01 50 20.0	-0.4
	13nm,0.8s						
SMF	**Signal de Mont**	**148.43**	**5**	*e*PKP1	PKPbc	01 50 19.9	-0.5
	27nm,1.3s						
CABF	**La Chapelle**	**148.61**	**2**	*e*PKP1	PKPbc	01 50 21.1	+0.3
	49nm,1.3s						
TCF	**Toulx Ste Croi**	**148.61**	**7**	*e*PKP1	PKPbc	01 50 21.3	+0.4
	13nm,1.2s						
RJF	**Les Rejaudoux**	**149.48**	**9**	*e*PKP1	PKPbc	01 50 22.9	-0.2
LFF	**La Frestale**	**149.72**	**10**	*e*PKP1	PKPbc	01 50 23.3	-0.4
LPL	**La Plagne**	**149.72**	**1**	*e*PKP1	PKPbc	01 50 24.4	+0.7
	7.5nm,0.9s						
LPG	**La Plagne**	**149.74**	**1**	*e*PKP1	PKPbc	01 50 24.6	+0.9
	24nm,1.3s						
CAF	**Calviac**	**149.93**	**8**	*e*PKP1	PKPbc	01 50 24.2	0.0
PCAB	**Cabril**	**150.21**	**24**	*e*PKPbc	PKPbc	01 50 26.0	+1.0
VIVF	**Saint-Julien-l**	**150.28**	**4**	*e*PKP1	PKPbc	01 50 25.2	+0.2
	14nm,1.1s						
ORIF	**Oris-en-Rattie**	**150.29**	**3**	*e*PKP1	PKPbc	01 50 25.3	+0.2
	11nm,1.1s						
MBDF	**Montbardon**	**150.51**	**1**	*e*PKP1	PKPbc	01 50 25.8	+0.2
	11nm,0.9s						
LASF	**Ste Croix**	**150.98**	**6**	*e*PKP1	PKPbc	01 50 27.0	+0.3
	16nm,0.9s						
MVO	**Moncorvo**	**151.07**	**24**	*e*PKPbc	PKPbc	01 50 27.5	+0.5
MVO	**Moncorvo**	**151.07**	**24**	*e*LQ		02 42 41.0	
MVO				*e*LR	LR	02 49 58.5	
	151nm,12.2s						
SJPF	**Ste Jean**	**151.09**	**14**	*e*PKP1	PKPbc	01 50 27.0	0.0
	7.3nm,0.8s						
PVIS	**Viseu**	**151.10**	**25**	*e*PKPbc	PKPbc	01 50 28.0	+0.9
SMRF	**Simiane la Rot**	**151.21**	**3**	*e*PKP1	PKPbc	01 50 27.8	+0.5
	18nm,1.0s						
SBF	**Sospel**	**151.39**	**1**	*e*PKP1	PKPbc	01 50 27.5	-0.2
ETSF	**Etsaut**	**151.44**	**13**	*e*PKP1	PKPbc	01 50 28.1	+0.3
	16nm,1.0s						
EPF	**Esparros**	**151.49**	**11**	*e*PKP1	PKPbc	01 50 28.0	0.0
MTLF	**Montolieu**	**151.51**	**9**	*e*PKP1	PKPbc	01 50 27.9	-0.1
MTE	**Manteigas**	**151.51**	**25**	*e*PKPbc	PKPbc	01 50 28.8	+0.7
MTE	**Manteigas**	**151.51**	**25**	*e*LR	LR	02 45 47.7	
MTE				A		02 54 40.4	
	116nm,7.2s						
PMAR	**Madeira**	**151.56**	**48**	*e*PKPbc	PKPbc	01 50 30.0	+1.5
FRF	**La Foret Royal**	**151.67**	**2**	*e*PKP1	PKPbc	01 50 27.8	-0.6
	5.2nm,0.7s						
PTOM	**Tomar**	**151.80**	**27**	*e*PKPbc	PKPbc	01 50 29.3	+0.5
LMR	**La Mourre**	**151.90**	**2**	*e*PKP1	PKPbc	01 50 28.5	-0.4
	6.2nm,0.8s						
PCBR	**Castelo Branco**	**152.01**	**26**	*e*PKPbc	PKPbc	01 50 29.6	+0.3
PMRV	**Marv??o**	**152.39**	**26**	*e*PKPbc	PKPbc	01 50 30.7	+0.6
PMRV	**Marv??o**	**152.39**	**26**	*e*LR	LR	02 49 47.3	
	139nm,20.3s						
PESTR	**Estremoz**	**152.78**	**27**	*e*LR	LR	02 49 54.1	
	162nm,10.6s						
PBEJ	**Beja**	**153.34**	**28**	*e*PKPbc	PKPbc	01 50 33.1	+0.8
ESDC	**Sonseca Array**	**153.49**	**21**	PKPbc	PKPbc	01 50 32.8	+0.2
	1.3nm,0.7s,baz=328,slow=3.3,SNR=7.4						
PBAR	**Barrancos**	**153.59**	**27**	*e*PKPbc	PKPbc	01 50 33.4	+0.6
PBAR	**Barrancos**	**153.59**	**27**	*e*LR	LR	02 50 24.6	
	214nm,13.5s						
PVAQ	**Vaqueiros**	**153.92**	**29**	*e*LR	LR	02 51 32.4	
	205nm,23.0s						
PBDV	**Barranco-do-Ve**	**153.94**	**29**	*e*LQ		02 44 35.8	
PBDV				*e*LR	LR	02 50 47.4	
	151nm,19.7s						
KEST	**Kesra**	**159.46**	**356**	PKPab	PKPab	01 51 08.0	-2.5
	1.1nm,0.9s,baz=338,slow=5.4,SNR=3.4						
TORD	**Torodi Ar. Bea**	**173.76**	**108**	PKP	PKPdf	01 50 42.7	-1.5
	2.2nm,1.1s,baz=241,slow=3.3,SNR=2.8						
TORD				PKPab	PKPab	01 52 14.5	+0.2
	1.1nm,0.9s,baz=245,slow=4.9,SNR=3.7						

KRSC 03 01:31:58.6±0.3**, 5621N**×**16321E, h5**^{km}±5^{km}**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.22**	**270**	*e*P	Pg	01 32 03.7	+0.8
KBTR				*i* S	Sg	01 32 07.0	+1.3
BDR	**Baidarnaya**	**1.17**	**289**	*e*P	Pg	01 32 21.3	+0.3
BDR				*i* S	Sg	01 32 37.2	+1.0
ZLN	**Zelenaya**	**1.36**	**263**	*e*P	Pn	01 32 24.7	+0.5
ZLN				*i* S	Sb	01 32 43.4	+1.2
CIRR	**Tsirk**	**1.38**	**267**	*e*P	Pn	01 32 24.7	+0.2
CIRR				*i* S	Sb	01 32 43.9	+1.2
KLY	**Klyuchi**	**1.43**	**275**	*e*P	Pn	01 32 23.4	-1.8
KLY				*i* S	Sb	01 32 41.2	-3.0
BZGR	**Bezymyannyi-Gr**	**1.44**	**260**	*e*P	Pn	01 32 25.5	+0.3
BZGR				*i* S	Sb	01 32 45.2	+0.9
KRSR	**Krestovskiy**	**1.48**	**271**	*e*P	Pn	01 32 25.6	-0.2
KRSR				*i* S	Sn	01 32 45.9	+0.4
BZWR	**Bezymyannyi-We**	**1.54**	**262**	*e*P	Pn	01 32 27.2	+0.5
BZMR	**Bezymyannaya**	**1.55**	**261**	*e*P	Pn	01 32 27.4	+0.6
BZMR				*i* S	Sn	01 32 48.1	+0.9
KIRR	**Kirishev**	**1.63**	**262**	*e*P	Pn	01 32 28.4	+0.5
KIRR				*i* S	Sn	01 32 50.4	+1.2
KPT	**Kopyto**	**1.69**	**263**	*e*P	Pn	01 32 29.8	+1.0
KMNR	**Kamenistaya**	**1.73**	**256**	*e*P	Pn	01 32 30.6	+1.3
MKZ	**Mys Kozlova**	**1.86**	**208**	*e*P	Pn	01 32 31.6	+0.5
MKZ				*i* S	Sn	01 32 56.2	+1.3
KOZ	**Kozyrevsk**	**1.87**	**267**	*e*P	Pn	01 32 32.2	+1.0
KOZ				*i* S	Sn	01 32 57.1	+1.9
SRDR	**Sredinnyy**	**1.95**	**275**	*e*P	Pn	01 32 33.7	+1.4
SRDR				*i* S	Sn	01 32 59.1	+1.9
TUMR	**Tumrok**	**1.97**	**243**	*e*P	Pn	01 32 34.1	+1.6
SPN	**Mys Shipunski**	**3.63**	**212**	*e*P	Pn	01 32 57.5	+2.2
SPN				*i* S	Sn	01 33 39.2	+0.8
NLC	**Nalytchevo**	**3.78**	**218**	*e*P	Pn	01 32 59.3	+1.8
NLC				*i* S	Sn	01 33 42.9	+0.6
AVH	**Avacha**	**3.93**	**223**	*e*P	Pn	01 33 02.2	+2.7
GNL	**Ganaly**	**3.95**	**232**	*e*P	Pn	01 33 02.0	+2.3

*IDC **03** 01:38:44.8±1.2, 3305S×179.19W, h0^{km}, mb4.2/5, mb1 4.4/7, mb1mx4.1/19, mbtmp4.3/7, ML4.3/2, Error ellipse: s-maj=28.7km s-min=23.1km az=93.0*

*ISCJB **03** 01:38:45.1±4.0, 33.18S±008×1792W±02, h15^{km}±24^{km}, mb4.2/6, Error ellipse: s-maj=24.3km s-min=8.2km az=25.3*

*NEIC **03** 01:38:45.5±0.6, 33.14S×179.13W, h10^{km}, mb4.4/1, Error ellipse: s-maj=20.7km s-min=12.4km az=126.0*

ISC 03 01:38:45.5±4.8**, 3316S**±008×**1792W**±02**, h7**^{km}±29^{km}**, n16, σ0.77**/12**, mb4.2**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.05**	**16**	Pn	**Pn**	**01 39 47.0**	**-0.9**
	36nm,0.3s,baz=108,slow=20,SNR=3.3						
RAO				Sn	**Sn**	**01 40 35.0**	**-0.5**
	52nm,0.3s,baz=108,slow=19,SNR=2.5						
URZ	**Urewera**	**5.91**	**210**	Pn	**Pn**	**01 40 13.1**	**-0.4**
	3.8nm,0.3s,baz=335,slow=2.3,SNR=28						
URZ				Sn	**Sn**	**01 41 20.2**	**-1.2**
	5.7nm,0.3s,baz=153,slow=18,SNR=4.6						
CTA	**Charters Tower**	**33.37**	**284**	P	**P**	**01 45 25.5**	**+1.0**
	2.2nm,0.4s,mb4.4,baz=102,slow=12,SNR=4.1						
ASAR	**Alice Springs**	**42.03**	**271**	P	**P**	**01 46 38.1**	**+0.3**
	2.2nm,0.8s,mb3.9,baz=109,slow=7.7,SNR=19						
WRA	**Warramunga Arr**	**43.28**	**276**	P	**P**	**01 46 48.1**	**+0.2**
	2.5nm,0.3s,mb4.3,baz=115,slow=8.1,SNR=43						
FITZ	**Fitzroy Crossi**	**51.41**	**273**	P	**P**	**01 47 51.2**	**-0.1**
	0.6nm,0.2s,mb4.1,baz=132,slow=9.3,SNR=13						
QSPA	**South Pole Qui**	**56.95**	**180**	P	**P**	**01 48 32.2**	**+1.3**
	1.5nm,0.7s,mb4.2,baz=72,slow=2.2,SNR=6.4						
BAR	**Barrett**	**88.06**	**48**	*e*P	**P**	**01 51 37.5**	**+1.0**
	1.4nm,0.7s,mb4.3						
DAC	**Darwin (Calif)**	**89.90**	**45**	*e*P	**P**	**01 51 45.3**	**+0.2**
	2µm,0.5s						
MSU	**Marysvale**	**94.62**	**46**	*e*P	**P**	**01 52 06.1**	**-0.8**
ARCES	**ARCESS Array B**	**141.05**	**346**	PKhKP		01 58 11.1	
	2.2nm,0.9s,baz=90,slow=1.8,SNR=3.3						
JOF	**Joensuu**	**144.57**	**336**	*e*p	PKPdf	01 58 18.9	-3.0
	0.5nm,0.3s						
KAF	**Kangasniemi**	**146.77**	**338**	*e*p	PKPdf	01 58 24.9	-0.8
	0.8nm,0.3s						
NB2	**NORSAR Subarra**	**151.30**	**349**	PKPdf	PKPdf	01 58 36.9	+3.9
	comp=Z,0.4nm,0.5s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**151.30**	**349**	PKPbc	PKPbc	01 58 37.4	-1.6
	comp=Z,0.8nm,0.5s,baz=16,slow=4.5,SNR=3.5						
TORD	**Torodi Ar. Bea**	**160.06**	**183**	PKPab	PKPab	01 59 27.8	+2.2
	comp=Z,0.3nm,0.4s,baz=162,slow=5.7,SNR=9.5						

*NEIC **03** 01:41:18.8, 1706N×10074W, h10^{km}, MD3.8(MEX), After MEX.*

MEX 03 01:41:18.8±0.6**, 1706N**×**10074W, h10**^{km}±68^{km}**, MD3.9, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.45**	**92**	*e*P	Pg	01 41 27.2	-0.4
CAIG				*i* S	Sg	01 41 34.1	+0.5
ACX	**Acapulco**	**0.81**	**104**	*i* P	Pg	01 41 38.3	+3.9
MEIG	**Mezcala**	**1.37**	**51**	*i* P	Pn	01 41 40.1	-3.9
MEIG				*i* S	Sb	01 41 58.2	-3.9
PLIG	**Platanillo**	**1.77**	**42**	*i* P	Pn	01 41 45.6	-3.9
PLIG				*i* S	Sn	01 42 07.1	-5.0
PNIG	**Pinotepa**	**2.59**	**105**	*e*P	Pn	01 41 58.2	-2.5
PNIG				*i* S	Sn	01 42 27.8	-4.5

*IDC **03** 01:48:08.3±13.0, 6792N×16073W, h0^{km}, mb3.6/2, mb1 4.0/4, mb1mx3.5/23, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=218.6km s-min=40.6km az=107.0*

*NEIC **03** 01:48:16.7, 6737N×15940W, h17^{km}, ML3.6(AEIC), After AEIC.*

ISC 03 01:48:16.4±2.1**, 6747N**±008×**1597W**±03**, h31**^{km}±25^{km}**, n24, σ0.74**/30**, mb3.5**/2**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMA2	**Indian Mountai**	**2.77**	**118**	*e*P	**Pn**	**01 48 58.6**	**0.0**
IM3	**Indian Mountai**	**2.80**	**119**	P	**Pn**	**01 48 59.0**	**0.0**
GCSA	**Galena City Sc**	**2.97**	**156**	P	**Pn**	**01 49 00.7**	**-0.6**
GCSA				S	**Sn**	**01 49 35.2**	**-0.5**
CHUM	**Lake Minchumin**	**4.72**	**136**	P	**Pn**	**01 49 25.8**	**+0.4**
CHUM				S	**Sn**	**01 50 18.0**	**-1.0**
TTA	**Tatalina**	**4.82**	**159**	*e*Pn	**Pn**	**01 49 26.1**	**-0.6**
TT01	**Tatalina**	**4.84**	**160**	P	**Pn**	**01 49 26.4**	**-0.6**
BPAW	**Bear Paw Mtn.**	**4.93**	**129**	P	**Pn**	**01 49 28.5**	**+0.3**
BPAW				S	**Sn**	**01 50 23.4**	**-0.7**
KTH	**Kantishna Hill**	**5.37**	**133**	P	**Pn**	**01 49 34.6**	**+0.4**
KTH				S	**Sn**	**01 50 34.6**	**-0.2**
COLA	**College**	**5.47**	**113**	P	**Pn**	**01 49 35.5**	**-0.1**
PPLA	**Purkeypile**	**5.58**	**142**	P	**Pn**	**01 49 37.7**	**+0.7**
PPLA				S	**Sn**	**01 50 43.3**	**+3.3**
TRF	**Thorofare Moun**	**5.63**	**131**	P	**Pn**	**01 49 38.4**	**+0.6**
TRF				S	**Sn**	**01 50 42.5**	**+1.2**
BM3	**Burnt Mountain**	**5.81**	**84**	P	**Pn**	**01 49 40.6**	**+0.3**
MCK	**McKinley**	**5.83**	**125**	P	**Pn**	**01 49 41.0**	**+0.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IL1	**Eielson Array**	**5.87**	**111**	P	**Pn**	**01 49 41.1**	**0.0**
SVW2	**Sparrevohn**	**6.65**	**162**	P	**Pn**	**01 49 51.6**	**-0.1**
PMR	**Palmer**	**7.45**	**137**	*e*Pn	**Pn**	**01 50 02.6**	**-0.2**
	11nm,0.6s						
EGAK	**Eagle**	**7.99**	**101**	*e*Pn	**Pn**	**01 50 09.4**	**-0.6**
	4.4nm,0.6s						
MENT	**Mentasta**	**8.10**	**117**	*e*P	**Pn**	**01 50 12.4**	**+0.7**
BCA3	**Beaver Creek A**	**8.70**	**112**	P	**Pn**	**01 50 19.5**	**-0.4**
KDAK	**Kodiak Island**	**10.25**	**158**	Pn	**Pn**	**01 50 41.4**	**+0.3**
	0.7nm,0.3s,baz=46,slow=7.0,SNR=8.9						
YKA	**Yellowknife Ar**	**19.34**	**83**	P	**Pn**	**01 52 37.5**	**-2.5**
	0.2nm,0.3s,baz=300,slow=9.5,SNR=5.4						
YKA	**Yellowknife Ar**	**19.34**	**83**	P	**Pn**	**01 52 37.5**	**-2.5**
PDAR	**Pinedale Array**	**36.28**	**107**	P	**P**	**01 55 16.6**	**+0.1**
	0.5nm,0.8s,mb3.5,baz=348,slow=6.5,SNR=4.2						
NVAR	**Mina Array Bea**	**37.05**	**120**	P	**P**	**01 55 24.2**	**+1.1**
	0.4nm,0.6s,mb3.4,baz=324,slow=9.0,SNR=3.3						

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*NEIC **03** 01:50:50.5±1.4, 1638S×17288W, h45^{km}, mb3.9/1, Error ellipse: s-maj=35.5km s-min=16.7km az=123.0*
*ISCJB **03** 01:50:52.6±2.1, 163S±02×1727W±02, h99^{km}±23^{km}, mb3.8/5, Error ellipse: s-maj=34.6km s-min=23.1km az=31.4*
*IDC **03** 01:50:52.6±3.8, 1645S×17249W, h77^{km}±38^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.6/19, mbtmp3.6/5, ML1.4/1, Error ellipse: s-maj=42.2km s-min=22.4km az=139.0*
ISC 03 01:50:52.5±2.4**, 164S**±02×**1726W**±02**, h83**^{km}±25^{km}**, n10,** σ**1^{s}34**/11**, mb3.8**/5**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.61**	**18**	P	**Pn**	**01 51 31.2**	**-1.5**
	4.1nm,0.3s,baz=282,slow=13,SNR=4.3						
AFI				S	**Sn**	**01 52 04.8**	**+1.3**
	9.6nm,0.3s,baz=12,slow=17,SNR=5.7						
AFI	**Afiamalu**	**2.61**	**18**	P	**Pn**	**01 51 31.2**	**-1.5**
AFI				S	**Sn**	**01 52 04.8**	**+1.4**
URZ	**Urewera**	**23.57**	**201**	P	**P**	**01 55 56.0**	**+0.5**
	3.3nm,0.4s,mb4.0,baz=8.1,slow=11,SNR=3.4						
HNR	**Honiara**	**27.61**	**281**	*e*P	**P**	**01 56 30.9**	**-1.4**
	12nm,0.3s						
CTAO	**Charters Tower**	**39.16**	**258**	*e*P	**P**	**01 58 10.6**	**-2.0**
	2.1nm,1.0s,mb3.9						
WRA	**Warramunga Arr**	**50.36**	**258**	P	**P**	**01 59 43.1**	**+1.6**
	0.9nm,0.9s,mb3.7,baz=93,slow=8.6,SNR=5.0						
ASAR	**Alice Springs**	**50.52**	**253**	P	**P**	**01 59 44.5**	**+1.8**
	3.3nm,0.8s,mb4.4,baz=86,slow=8.4,SNR=29						
GUMO	**Guam**	**51.51**	**303**	*e*P	**P**	**01 59 50.4**	**+0.3**
	26nm,1.4s						
NVAR	**Mina Array Bea**	**74.57**	**41**	P	**P**	**02 02 21.7**	**-0.8**
	0.2nm,0.6s,mb3.0,baz=252,slow=8.4,SNR=2.4						
TORD	**Torodi Ar. Bea**	**173.61**	**120**	PKPab	PKPab	02 12 24.6	+1.6
	0.4nm,0.6s,baz=254,slow=4.5,SNR=5.0						

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*KRSC **03** 02:00:13.9±0.6, 5138N×15392E, h511^{km}±30^{km}, ML4.7*
*ISCJB **03** 02:00:17.5±0.4, 5207N±008×1529E±02, h446^{km}±7^{km}, mb3.5/15, Error ellipse: s-maj=17.4km s-min=8.4km az=37.8*
*MOS **03** 02:00:17.0±0.7, 5222N×15288E, h441^{km}, mb3.6/6, Error ellipse: s-maj=17.6km s-min=12.6km az=67.3*
*NEIC **03** 02:00:18.3±0.7, 5214N×15286E, h441^{km}±11^{km}, Error ellipse: s-maj=18.9km s-min=14.0km az=101.0*
*IDC **03** 02:00:18.3±0.9, 5217N×15292E, h442^{km}±13^{km}, mb3.1/9, mb1 3.2/12, mb1mx3.0/24, mbtmp3.1/12, Error ellipse: s-maj=19.7km s-min=15.2km az=100.0*
ISC 03 02:00:18.4±0.4**, 5206N**±008×**1529E**±02**, h444**^{km}±8^{km}**, n57,** σ**1^{s}08**/67**, mb3.5**/15**, 3C-1D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALID	**Alaid**	**2.03**	**125**	P	**P**	**02 01 18.6**	**+0.1**
MIPR	**Malaya Ipel'ka**	**2.37**	**83**	P	**P**	**02 01 20.5**	**+0.1**
SKR	**Severo-Kuril's**	**2.43**	**123**	*e*PN	**P**	**02 01 20.0**	**-0.9**
SKR				*e*		02 02 13.9	
SKR				pmax	pmax		
	comp=N,30nm,0.6s						
SKR				pmax	pmax		
	comp=E,40nm,0.6s						
SKR				pmax	pmax		
	comp=Z,90nm,0.6s						
PETK	**Petropavlovsk-**	**3.09**	**68**	P	**P**	**02 01 25.3**	**-0.2**
	comp=Z,2.1nm,0.3s,baz=229,slow=3.6,SNR=25						
PETK				S	**S**	**02 02 19.4**	**-0.7**
	baz=292,slow=12,SNR=2.7						
PETK	**Petropavlovsk-**	**3.09**	**68**	P	**P**	**02 01 25.3**	**-0.2**
PETK				S	**S**	**02 02 19.4**	**-0.7**
GNL	**Ganaly**	**3.45**	**60**	P	**P**	**02 01 28.2**	**-0.1**
RUS	**Russkaya**	**3.45**	**82**	*e*P	**P**	**02 01 27.8**	**-0.6**
RUS				*e*S	**S**	**02 02 21.3**	**-4.0**
PET	**Petropavlovsk**	**3.62**	**72**	P	**P**	**02 01 29.8**	**0.0**
PET				S	**S**	**02 02 25.6**	**-2.3**
PET	**Petropavlovsk**	**3.62**	**72**	*e*P	**P**	**02 01 29.7**	**-0.1**
AVH	**Avacha**	**3.73**	**69**	P	**P**	**02 01 31.1**	**+0.4**
AVH				S	**S**	**02 02 27.8**	**-1.8**
NLC	**Nalytchevo**	**4.06**	**72**	*e*P	**P**	**02 01 33.2**	**-0.4**
NLC				*e*S	**S**	**02 02 31.6**	**-3.2**
SPN	**Mys Shipunski**	**4.45**	**74**	*e*P	**P**	**02 01 36.2**	**-0.9**
SPN				*e*S	**S**	**02 02 34.2**	**-7.0**
TUMR	**Tumrok**	**5.37**	**50**	P	**P**	**02 01 47.0**	**+1.2**
TUMR				S	**S**	**02 02 57.2**	**-0.1**
KMNR	**Kamenistaya**	**5.69**	**47**	P	**P**	**02 01 50.3**	**+1.3**
KPT	**Kopyto**	**5.81**	**45**	P	**P**	**02 01 50.7**	**+0.4**
SRDR	**Sredinnyy**	**5.83**	**40**	P	**P**	**02 01 52.0**	**+1.5**
MKZ	**Mys Kozlova**	**5.83**	**61**	*e*P	**P**	**02 01 49.4**	**-1.2**
MKZ				*e*S	**S**	**02 02 58.1**	**-7.9**
KIRR	**Kirishev**	**5.85**	**45**	P	**P**	**02 01 52.2**	**+1.5**
BZMR	**Bezymyannaya**	**5.91**	**46**	P	**P**	**02 01 53.1**	**+1.8**
BZWR	**Bezymyannyi-We**	**5.93**	**46**	P	**P**	**02 01 53.0**	**+1.5**
BZGR	**Bezymyannyi-Gr**	**6.00**	**47**	P	**P**	**02 01 54.4**	**+2.1**
ZLN	**Zelenaya**	**6.10**	**46**	P	**P**	**02 01 55.2**	**+1.9**
KRSR	**Krestovskiy**	**6.12**	**44**	P	**P**	**02 01 54.4**	**+0.9**
CIRR	**Tsirk**	**6.13**	**45**	P	**P**	**02 01 55.6**	**+2.0**
KBTR	**Krutoberegovo**	**7.14**	**51**	P	**P**	**02 02 02.5**	**-1.7**
YSS	**Yuzh-Sakhalins**	**8.36**	**236**⇑	*i*PN	**P**	**02 02 19.0**	**+1.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
ASAJ	**Asahikawa**	**10.53**	**225**	P	**P**	**02 02 42.0**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=53,slow=10,SNR=5.0						
ASAJ	**Asahikawa**	**10.53**	**225**	PN	**P**	**02 02 42.0**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**18.70**	**220**	P	**P**	**02 04 07.7**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=31,slow=5.9,SNR=3.9						
MJAR	**Matsushiro Arr**	**18.70**	**220**	P	**P**	**02 04 07.7**	**-0.5**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HIA	**Hailar**	**21.12**	**276**	*e*P	**P**	**02 04 28.6**	**-1.5**
TIXI	**Tiksi**	**22.37**	**340**	*e*P	**P**	**02 04 40.2**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.1						
ZALV	**Zalesovo Beam**	**39.59**	**301**	P	**P**	**02 07 09.0**	**-0.5**
	comp=Z,0.6nm,0.3s,mb3.4,baz=76,slow=3.9,SNR=3.3						
ZAL	**Zalesovo**	**39.61**	**301**	P	**P**	**02 07 09.0**	**-0.6**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	**Kurchatov**	**44.49**	**299**	P	**P**	**02 07 49.0**	**+0.7**
	comp=Z,1.4nm,0.5s,mb3.5,baz=62,slow=7.7,SNR=18						
KURK				PcP	PcP	02 09 20.6	-1.8
	comp=Z,0.2nm,0.6s,baz=63,slow=3.0,SNR=3.3						
KURK	**Kurchatov**	**44.49**	**299**	P	**P**	**02 07 49.0**	**+0.7**
KURK						02 09 20.6	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
KURK	**Kurchatov**	**44.49**	**299**	P	**P**	**02 07 49.0**	**+0.7**
KURK				PcP	PcP	02 09 20.6	-1.8
MKAR	**Makanchi Array**	**44.59**	**293**	P	**P**	**02 07 49.1**	**0.0**
	comp=Z,0.9nm,0.4s,mb3.5,baz=69,slow=6.7,SNR=10						
MKAR	**Makanchi Array**	**44.59**	**293**	*e*P	**P**	**02 07 49.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	**Yellowknife Ar**	**46.81**	**40**	P	**P**	**02 08 06.1**	**+0.1**
	comp=Z,0.4nm,0.4s,mb3.1,baz=303,slow=6.9,SNR=4.1						
YKA	**Yellowknife Ar**	**46.81**	**40**	P	**P**	**02 08 06.1**	**+0.1**
ARU	**Arti**	**51.10**	**315***d*	*i*P	**P**	**02 08 37.3**	**-0.7**
ARU				*e*		02 10 36.2	
ARU				*e*S	**S**	**02 15 18.1**	**-3.0**
ARU				*e*SS	SS	02 18 57.3	-5.3
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb3.7						
ARCES	**ARCESS Array B**	**52.81**	**339**	P	**P**	**02 08 49.2**	**-1.0**
	comp=Z,1.0nm,0.6s,mb3.2,baz=36,slow=8.2,SNR=8.1						
ARCES	**ARCESS Array B**	**52.81**	**339**	P	**P**	**02 08 49.2**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**52.81**	**339**	P	**P**	**02 08 49.2**	**-1.0**
AKASG	**Malin Array Be**	**67.09**	**325**	P	**P**	**02 10 24.6**	**-1.4**
	comp=Z,0.7nm,0.4s,mb3.7,baz=32,slow=6.2,SNR=5.6						
AKASG	**Malin Array Be**	**67.09**	**325**	*i*P	**P**	**02 10 24.6**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**73.52**	**198**	P	**P**	**02 11 05.3**	**+0.7**
	comp=Z,0.3nm,0.4s,mb3.3,baz=15,slow=6.0,SNR=3.7						
GERES	**GERESS Array B**	**73.64**	**333**	P	**P**	**02 11 04.5**	**-0.5**
	comp=Z,0.6nm,0.5s,mb3.5,baz=38,slow=6.2,SNR=7.0						
GERES	**GERESS Array B**	**73.64**	**333**	P	**P**	**02 11 04.5**	**-0.5**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CDF	**Champ du Feu**	**75.70**	**337**	*e*P	**P**	**02 11 15.8**	**-0.9**
	comp=Z,2.5nm,0.6s,mb3.7						
ASAR	**Alice Springs**	**77.22**	**198**	P	**P**	**02 11 26.5**	**+1.2**
	comp=Z,0.2nm,0.4s,mb3.1,baz=8.1,slow=5.5,SNR=4.5						
AVF	**Avril sur Loir**	**78.13**	**339**	*e*P	**P**	**02 11 29.9**	**-0.1**
LPL	**La Plagne**	**78.54**	**336**⇑	*i*P	**P**	**02 11 32.4**	**+0.1**
	comp=Z,3.0nm,0.6s,mb3.8						
LPG	**La Plagne**	**78.55**	**336**⇑	*i*P	**P**	**02 11 32.6**	**+0.2**
	comp=Z,3.6nm,0.6s,mb3.9						
TCF	**Toulx Ste Croi**	**78.85**	**340**	*e*P	**P**	**02 11 33.9**	**-0.1**
ORIF	**Oris-en-Rattie**	**79.31**	**337**	*e*P	**P**	**02 11 36.9**	**+0.5**
	comp=Z,3.0nm,0.7s,mb3.8						

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*IDC **03** 02:00:50.8±1.8, 1020S×15303E, h0^{km}, mb4.0/8, mb1 4.3/9, mb1mx4.1/15, mbtmp4.1/9, ML4.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/22, Error ellipse: s-maj=55.8km s-min=20.3km az=113.0*
*ISCJB **03** 02:00:56.1±1.0, 10.1S±0.1×1527E±02, h33^{km}, mb4.0/8, Error ellipse: s-maj=30.1km s-min=12.4km az=22.2*
*NEIC **03** 02:00:57.0±0.8, 10.17S×15276E, h30^{km}, mb4.3/1, Error ellipse: s-maj=23.2km s-min=8.6km az=112.0*
ISC 03 02:00:57.9±1.0**, 102S**±01×**1527E**±02**, h35**^{km}**, n14,** σ**0^{s}67**/13**, mb4.0**/8**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**11.68**	**212**	Pn	**Pn**	**02 03 41.2**	**-0.9**
	1.1nm,0.3s,baz=36,slow=15,SNR=5.8						
CTA				LR	LR	02 06 20.1	
	comp=Z,67nm,21.7s,baz=54,slow=28						
CTA	**Charters Tower**	**11.68**	**212**	Pn	**Pn**	**02 03 41.2**	**-0.9**
CTAO	**Charters Tower**	**11.68**	**212**	*e*Pn	**Pn**	**02 03 41.7**	**-0.4**
CTAO				*e*pPn		02 03 48.4	
WRA	**Warramunga Arr**	**20.23**	**239**	P	**P**	**02 05 30.0**	**-0.1**
	7.4nm,0.7s,baz=62,slow=10,SNR=23						
WRA				LR	LR	02 12 25.2	
	comp=Z,108nm,18.5s,baz=60,slow=34						
ASAR	**Alice Springs**	**22.43**	**231**	P	**P**	**02 05 54.2**	**+0.5**
	4.0nm,0.9s,mb3.9,baz=63,slow=9.6,SNR=25						
STKA	**Stephens Creek**	**23.94**	**204**	P	**P**	**02 06 09.4**	**+0.5**
	5.6nm,0.8s,mb4.1,baz=9.5,slow=11,SNR=6.1						
GUMO	**Guam**	**24.85**	**342**	*e*P	**P**	**02 06 16.7**	**-0.5**
	7.9nm,0.9s,mb4.2						
FITZ	**Fitzroy Crossi**	**27.40**	**250**	P	**P**	**02 06 39.7**	**-0.7**
	1.1nm,0.6s,mb3.6,baz=92,slow=10.0,SNR=5.1						
CMAR	**Chiang Mai Arr**	**60.20**	**298**	P	**P**	**02 11 04.4**	**+1.6**
	1.5nm,0.4s,mb4.4,baz=127,slow=5.0,SNR=5.9						
PETK	**Petropavlovsk-**	**63.16**	**3**	P	**P**	**02 11 21.4**	**-0.7**
	3.7nm,1.0s,mb4.5,baz=114,slow=7.2,SNR=4.7						
SONM	**Songino Array**	**70.83**	**329**	P	**P**	**02 12 11.1**	**+0.2**
	0.9nm,0.7s,mb3.8,baz=133,slow=6.3,SNR=4.4						
MKAR	**Makanchi Array**	**84.31**	**319**	P	**P**	**02 13 26.0**	**-0.3**
	0.8nm,0.8s,mb3.9,baz=104,slow=4.8,SNR=3.1						
DAC	**Darwin (Calif)**	**95.67**	**54**	*e*P	**P**	**02 14 20.6**	**+0.3**
TORD	**Torodi Ar. Bea**	**151.49**	**279**	PKPbc	PKPbc	02 20 46.3	-3.0
	0.4nm,0.6s,baz=53,slow=2.7,SNR=8.2						
TORD				PKPab	PKPab	02 20 55.0	-2.7
	1.0nm,0.8s,baz=43,slow=1.8,SNR=7.9						

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*NEIC **03** 02:15:36.1, 1594N×9690W, h20^{km}, MD3.9(MEX), After MEX.*
MEX 03 02:15:35.9±0.6**, 1594N**×**9690W, h14**^{km}±7^{km}**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.78**	**102**	*e*P	Pg	02 15 48.5	-2.6
HUIG				*i* S	Sg	02 15 58.5	-3.0
VHO	**Vista Hermosa**	**1.14**	**8**	*e*P	Pb	02 15 53.6	-3.8
VHO				*i* S	Sb	02 16 08.0	-4.1
OXX	**Oaxaca**	**1.15**	**9**	*i* P	Pb	02 15 54.8	-2.8
OXX				*i* S	Sb	02 16 09.3	-3.1
PNIG	**Pinotepa**	**1.26**	**291**	*e*P	Pn	02 15 55.8	-3.3
PNIG				*i* S	Sb	02 16 10.2	-5.3
CMIG	**Matias Romero**	**2.25**	**59**	*e*P	Pn	02 16 08.8	-3.9
CMIG				*i* S	Sn	02 16 36.5	-3.8
CMIG	**Matias Romero**	**2.25**	**59**	*e*P	Pn	02 16 08.8	-3.9
CMIG				*i* S	Sn	02 16 36.2	-4.1
TPIG	**Tehuac#an**	**2.51**	**350**	*i* P	Pn	02 16 14.8	-1.4
TPIG				*i* S	Sn	02 16 43.0	-3.6
TGIG		**3.73**	**77**	*i* P	Pn	02 16 28.4	-4.6

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*IDC **03** 02:36:49.5±1.8, 072N×12547E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.6/15, mbtmp3.7/4, Error ellipse: s-maj=207.2km s-min=23.1km az=64.0*
*ISCJB **03** 02:36:51.0±1.0, 1.1N±02×126.17E±0.10, h33^{km}, mb3.7/4, Error ellipse: s-maj=28.3km s-min=8.9km az=24.4*
ISC 03 02:36:52.3±1.1**, 12N**±02×**1262E**±01**, h35**^{km}**, n6,** σ**1^{s}30**/7**, mb3.7**/4**, 2D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNE	**Ternate**	**1.26**	**107**⇓	*e*P	**Pn**	**02 37 11.5**	**-2.0**
MNI	**Manado**	**1.35**	**282**⇓	*e*P	**Pn**	**02 37 13.5**	**-1.2**
MNI				*e*S	**Sn**	**02 37 31.0**	**-0.4**
WRA	**Warramunga Arr**	**22.45**	**159**	P	**P**	**02 41 48.0**	**-0.4**
	1.5nm,0.5s,mb3.7,baz=336,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**25.80**	**164**	P	**P**	**02 42 21.1**	**+0.8**
	0.6nm,0.4s,mb3.5,baz=346,slow=11,SNR=10						
STKA	**Stephens Creek**	**35.97**	**157**	P	**P**	**02 43 50.9**	**+1.1**
	0.8nm,0.5s,mb3.9,baz=315,slow=8.6,SNR=2.5						
MKAR	**Makanchi Array**	**59.35**	**326**	P	**P**	**02 46 53.3**	**+2.4**
	0.3nm,0.4s,mb3.7,baz=123,slow=6.9,SNR=3.9						

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*IDC **03** 02:56:13.6±1.2, 1429S×7639W, h0^{km}, mb4.0/4, mb1 3.8/9, mb1mx3.7/20, mbtmp3.7/9, ML3.2/4, Error ellipse: s-maj=38.9km s-min=17.8km az=70.0*
*ISCJB **03** 02:56:16.6±0.8, 1439S±007×765W±0.1, h33^{km}, mb4.0/3, Error ellipse: s-maj=20.8km s-min=6.4km az=158.1*
*NEIC **03** 02:56:17.8±0.8, 1426S×7651W, h35^{km}, mb4.0/1, Error ellipse: s-maj=19.4km s-min=8.9km az=67.0*
ISC 03 02:56:18.6±0.8**, 1435S**±007×**765W**±01**, h35**^{km}**, n17,** σ**1^{s}39**/19**, mb4.1**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**2.38**	**351**	Pn	**Pn**	**02 56 52.4**	**-2.7**
	9.8nm,0.3s,baz=177,slow=9.5,SNR=14						
NNA				Sn	**Sn**	**02 57 25.5**	**+2.5**
	62nm,0.3s,baz=237,slow=18,SNR=14						
ARE	**Arequipa**	**5.23**	**114**	*e*P	**Pn**	**02 57 39.0**	**+4.7**
ATAH	**Atahualpa**	**7.55**	**345**	Pn	**Pn**	**02 58 05.1**	**-1.0**
	0.7nm,0.3s,baz=8.9,slow=20,SNR=4.1						
ATAH				Sn	**Sn**	**02 59 36.0**	**+5.5**
	0.8nm,0.3s,baz=270,slow=20,SNR=2.2						
LPAZ	**La Paz**	**8.26**	**105**	Pn	**Pn**	**02 58 18.7**	**+2.7**
	0.5nm,0.3s,baz=286,slow=7.3,SNR=8.2						
LPAZ	**La Paz**	**8.26**	**105**	Pn	**Pn**	**02 58 18.7**	**+2.7**
LVC	**Limon Verde**	**10.90**	**140**	Pn	**Pn**	**02 58 51.1**	**-0.9**
	0.4nm,0.3s,baz=345,slow=7.7,SNR=2.7						
LVC				Sn	**Sn**	**03 00 48.5**	**-4.3**
	0.2nm,0.3s,baz=72,slow=17,SNR=2.6						
LVC	**Limon Verde**	**10.90**	**140**	Pn	**Pn**	**02 58 51.1**	**-1.0**
OTAV	**Otavalo**	**14.63**	**352**	*e*Pn	**Pn**	**02 59 41.3**	**-1.8**
	6.3nm,1.2s						
OTAV				*e*pP	pP	02 59 53.8	-4.3
SIV	**San Ignacio**	**14.94**	**98**	Pn	**Pn**	**02 59 46.8**	**-0.5**
	0.1nm,0.3s,baz=285,slow=18,SNR=2.0						
LCO	**Las Campanas**	**15.54**	**161**	*e*Pn	**Pn**	**02 59 56.0**	**+1.0**
	15nm,1.4s						
CFAA	**Coronel Fontan**	**18.75**	**158**	P	**Pn**	**03 00 34.8**	**-0.5**
	0.0nm,0.3s,baz=0.0,slow=15,SNR=4.2						
CPUP	**Villa Florida**	**21.50**	**127**	P	**P**	**03 01 04.0**	**-0.5**
	2.2nm,0.9s,mb3.6,baz=288,slow=11,SNR=4.2						
CPUP	**Villa Florida**	**21.50**	**127**	P	**P**	**03 01 04.0**	**-0.5**
DBIC	**Dimbokro**	**74.01**	**79**	P	**P**	**03 07 51.2**	**-0.1**
	2.7nm,0.7s,mb4.3,baz=235,slow=5.1,SNR=7.9						
QSPA	**South Pole Qui**	**75.80**	**180**	P	**P**	**03 08 02.1**	**+1.6**
	0.4nm,0.7s,baz=138,slow=5.3,SNR=2.4						
TORD	**Torodi Ar. Bea**	**82.06**	**74**	P	**P**	**03 08 36.1**	**+0.2**
	2.9nm,0.7s,mb4.3,baz=268,slow=5.5,SNR=33						
SONM	**Songino Array**	**146.53**	**357**	PKPbc	PKPbc	03 15 55.5	-0.8
	0.4nm,0.6s,baz=329,slow=5.0,SNR=2.8						

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*BJI **03** 03:05:38.9, 2430N×11000W, h10^{km}, Ms4.3, Msz4.1*
*MEX **03** 03:05:40.5±0.4, 2513N×11028W, h15^{km}±7^{km}, MD4.4*
*IDC **03** 03:05:41.0±0.9, 2464N×11003W, h0^{km}, mb3.9/5, mb1 4.0/11, mb1mx3.9/26, mbtmp3.8/11, ML2.9/5, MS4.2/25, Ms1 4.2/25, ms1mx4.0/36, Error ellipse: s-maj=26.5km s-min=11.0km az=104.0*
*NEIC **03** 03:05:42.0±1.2, 2428N×10997W, h10^{km}, mb4.2/18, Error ellipse: s-maj=15.7km s-min=9.3km az=201.0*
*GCMT **03** 03:05:42.0±0.4, 2488N×10983W, h19^{km}±1^{km}, MW4.9/61, Moment Tensor Solution. s18,c21; s61,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.29±.11; $M_{\theta\theta}$-1.36±.10; $M_{\phi\phi}$1.65±.11; $M_{r\theta}$-0.28±.22; $M_{\theta\phi}$-2.24±.09; $M_{\phi r}$1.41±.25; Best double couple: $M_0$3.00300×10^{16} NP1:ϕ_s285.00000°, δ67.00000°, λ173.00000°. NP2: ϕ_s17.00000°, δ84.00000°, λ23.00000°. Principal axes: T 3.3670, Plg21.0000°, Azm243.0000°; N -0.7250, Plg66.0000°, Azm32.0000°; P -2.6390, Plg12.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **03** 03:05:42.3±0.4, 2451N±004×10980W±004, h10^{km}, mb4.1/8, MS4.2/21 Error ellipse: s-maj=5.2km s-min=4.9km az=10.4*
ISC 03 03:05:43.7±0.6**, 2443N**±005×**10987W**±004**, h10**^{km}**, n113,** σ**1^{s}46**/96**, mb4.1**/9**, MS4.2**/21**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.52**	**231**	Pn	**Pg**	**03 05 56.2**	**+2.4**
	1μm,0.3s,baz=23,slow=7.0,SNR=348						
LPIG				Sn	**Sg**	**03 06 08.0**	**+7.5**
	4μm,0.3s,baz=287,slow=19,SNR=75						
LPIG	**La Paz**	**0.52**	**231**	*i* P	**Pg**	**03 05 56.6**	**+2.9**
LPIG				*i* S	**Sg**	**03 06 08.9**	**+8.4**
MAIG	**Mazatlaan**	**3.39**	**111**	*i* P	**Pn**	**03 06 32.1**	**-4.5**
MAIG				*i* S	**Sn**	**03 07 16.5**	**-0.3**
HPIG		**4.54**	**56**	*i* P	**Pn**	**03 06 46.3**	**-6.2**
HPIG				*i* S	**Sn**	**03 07 37.6**	**-7.7**
ANIG	**Ahuacatlan**	**5.97**	**123**	*i* P	**Pn**	**03 07 18.1**	**+6.0**
ANIG				*i* S	**Sn**	**03 08 32.9**	**+12**
TUC	**Tucson**	**7.89**	**354**	*e*Pn	**Pn**	**03 07 31.9**	**-6.6**
LNIG	**Linares**	**9.47**	**85**	*i* P	**Pn**	**03 07 59.3**	**-0.9**
LNIG				*i* S	**Sn**	**03 09 47.1**	**+0.3**
GLA	**Glamis**	**9.63**	**334**	*e*Pn	**Pn**	**03 08 03.7**	**+1.4**
LENM	**Lemitar**	**10.03**	**14**	*e*Pn	**Pn**	**03 08 08.8**	**+1.0**
BNM	**Barren Site**	**10.09**	**16**	*e*Pn	**Pn**	**03 08 09.9**	**+1.2**
BAR	**Barrett**	**10.16**	**326**	*e*Pn	**Pn**	**03 08 10.3**	**+0.6**
LAZ	**Ladron**	**10.22**	**13**	*e*Pn	**Pn**	**03 08 09.4**	**-1.0**
LPM	**Los Pinos Moun**	**10.24**	**15**	*e*Pn	**Pn**	**03 08 10.9**	**+0.1**
JCT	**Junction City**	**10.78**	**54**	*e*Pn	**Pn**	**03 08 18.8**	**+0.7**
PFO	**Pinyon Flat Ob**	**10.81**	**329**	Pn	**Pn**	**03 08 14.4**	**-4.0**
	0.1nm,0.3s,baz=140,slow=12,SNR=5.1						
PFO				LR	LR	03 11 46.1	
	comp=Z,1μm,21.6s,baz=172,slow=35						
ANMO	**Albuquerque**	**10.89**	**15**	Pn	**Pn**	**03 08 16.3**	**-3.3**
	0.1nm,0.3s,baz=225,slow=14,SNR=3.8						
ANMO	**Albuquerque**	**10.89**	**15**	*e*Pn	**Pn**	**03 08 20.6**	**+0.9**
WUAZ	**Wupatki**	**11.13**	**354**	*e*Pn	**Pn**	**03 08 24.1**	**+1.3**
LDFC	**Landfair**	**11.55**	**338**	*e*Pn	**Pn**	**03 08 29.6**	**+1.0**
GSC	**Goldstone**	**12.39**	**333**	*e*Pn	**Pn**	**03 08 40.3**	**+0.2**
AMTX	**Amarillo**	**12.61**	**32**	*e*Pn	**Pn**	**03 08 42.8**	**-0.3**
MVCO	**Mesa Verde**	**12.79**	**5**	*e*Pn	**Pn**	**03 08 47.9**	**+2.3**
SHPR	**Sheep Range**	**12.87**	**341**	*e*Pn	**Pn**	**03 08 47.3**	**+0.6**
CCUT	**Cedar City**	**13.42**	**348**	*e*Pn	**Pn**	**03 08 59.3**	**+5.2**
TPNV	**Topopah Spring**	**13.63**	**338**	*e*Pn	**Pn**	**03 08 56.8**	**-0.2**
PV01	**Paradox Valley**	**13.71**	**4**	*e*Pn	**Pn**	**03 08 59.7**	**+1.6**
SDCO	**Great Sand Dun**	**13.79**	**15**	*e*Pn	**Pn**	**03 09 00.9**	**+1.7**
	4.8nm,1.2s						
WMOK	**Wichita Mounta**	**14.08**	**41**	*e*Pn	**Pn**	**03 09 00.8**	**-2.4**
MSU	**Marysvale**	**14.18**	**353**	*e*Pn	**Pn**	**03 09 05.3**	**+0.8**
SRU	**San Rafael**	**14.65**	**358**	*e*Pn	**Pn**	**03 09 12.5**	**+1.6**
SMCO	**Snowmass**	**14.91**	**9**	*e*Pn	**Pn**	**03 09 16.1**	**+1.6**
NLU	**North Lily Min**	**15.59**	**354**	*e*Pn	**Pn**	**03 09 25.0**	**+1.5**
MPU	**Maple Canyon**	**15.61**	**355**	*e*Pn	**Pn**	**03 09 26.0**	**+2.2**
NVAR	**Mina Array Bea**	**15.69**	**335**	Pn	**Pn**	**03 09 22.2**	**-2.6**
	0.1nm,0.3s,baz=163,slow=7.2,SNR=6.3						
ISCO	**Idaho Springs**	**15.74**	**12**	*e*Pn	**Pn**	**03 09 25.9**	**+0.4**
CMIG	**Matias Romero**	**15.79**	**115**	Pn	**Pn**	**03 09 27.7**	**+1.5**
	0.1nm,0.3s,baz=297,slow=16,SNR=2.3						
CMIG				LR	LR	03 15 38.9	
	comp=Z,1μm,19.0s,baz=282,slow=37						
DUG	**Dugway**	**15.91**	**352**	*e*Pn	**Pn**	**03 09 30.1**	**+2.4**
	21nm,1.1s						
DAU	**Daniels Canyon**	**15.98**	**356**	*e*Pn	**Pn**	**03 09 30.4**	**+1.8**
JLU	**Jordanelle**	**16.18**	**356**	*e*Pn	**Pn**	**03 09 33.1**	**+2.0**
WAKR	**Walker**	**16.22**	**332**	*e*Pn	**Pn**	**03 09 32.1**	**+0.5**
ELK	**Elko**	**16.88**	**346**	Pn	**Pn**	**03 09 37.5**	**-2.5**
	0.1nm,0.3s,baz=160,slow=7.4,SNR=9.6						
ELK				LR	LR	03 15 49.7	
	comp=Z,858nm,19.6s,baz=166,slow=37						
ELK	**Elko**	**16.88**	**346**	*e*Pn	**Pn**	**03 09 38.2**	**-1.8**
HWUT	**Hardware Ranch**	**17.19**	**356**	*e*Pn	**Pn**	**03 09 42.9**	**-1.0**
	21nm,1.3s						
PAHR	**Pah Rah Range**	**17.22**	**334**	*e*Pn	**Pn**	**03 09 44.0**	**-0.3**
	46nm,1.9s						
RWWY	**Rawlins**	**17.36**	**7**	*e*P	**Pn**	**03 09 47.5**	**+1.6**
HVU	**Hansel Valley**	**17.47**	**353**	*e*Pn	**Pn**	**03 09 48.0**	**+0.6**
OHCM	**Honcut**	**17.81**	**329**	*e*Pn	**Pn**	**03 09 52.0**	**+0.3**
BW06	**Boulder Array**	**18.29**	**1**	*e*Pn	**Pn**	**03 09 58.0**	**+0.5**
PDAR	**Pinedale Array**	**18.29**	**1**	P	**Pn**	**03 09 53.5**	**-4.0**
	baz=161,slow=10,SNR=6.6						
PDAR				LR	LR	03 17 01.4	
	comp=Z,1μm,18.2s,baz=189,slow=38						
REDW	**Red Top Meadow**	**18.90**	**358**	*e*Pn	**Pn**	**03 10 05.0**	**0.0**
	28nm,1.8s						
RRI2	**Red Ridge**	**18.91**	**357**	*e*Pn	**Pn**	**03 10 05.0**	**0.0**
	23nm,1.4s						
SNOW	**Snow King Moun**	**19.00**	**358**	*e*Pn	**Pn**	**03 10 05.3**	**-0.8**
	19nm,1.3s						
TPAW	**Teton Pass**	**19.04**	**358**	*e*P	**Pn**	**03 10 04.8**	**-1.7**
	16nm,1.3s						
LOHW	**Long Hollow**	**19.15**	**358**	*e*P	**Pn**	**03 10 06.5**	**-1.3**
	29nm,1.8s						
WVOR	**Wild Horse Val**	**19.37**	**340**	*e*P	**Pn**	**03 10 07.4**	**-3.1**
	8.6nm,1.1s						
IMW	**Indian Meadow**	**19.44**	**358**	*e*P	**Pn**	**03 10 09.8**	**-1.6**
HLID	**Hailey**	**19.45**	**350**	*e*P	**Pn**	**03 10 09.7**	**-1.8**
	26nm,2.0s						
MOD	**Modoc**	**19.46**	**336**	*e*P	**Pn**	**03 10 09.8**	**-1.9**
	5.5nm,0.9s						
FLWY	**Flagg Ranch**	**19.62**	**358**	*e*P	**Pn**	**03 10 12.5**	**-1.0**
	21nm,1.4s						
LKWY	**Lake**	**20.09**	**359**	*e*P	**P**	**03 10 21.6**	**+4.3**
	14nm,1.1s						
YBH	**Yreka Blue Hor**	**20.30**	**331**	P	**P**	**03 10 16.1**	**-3.5**
	0.4nm,0.4s,baz=148,slow=13,SNR=2.3						
YBH				LR	LR	03 18 35.6	
	comp=Z,289nm,20.1s,MS3.6,baz=150,slow=39						
TEIG	**Tepich**	**20.40**	**98**	LR	LR	03 20 02.5	
	comp=Z,470nm,18.2s,MS3.9,baz=336,slow=42						
RLMT	**Red Lodge**	**20.65**	**1**	*e*Pn	**P**	**03 10 26.8**	**+3.4**
KRMB	**Red Mountain**	**20.67**	**329**	*e*P	**P**	**03 10 24.8**	**+1.2**
DLMT	**Dillon**	**21.00**	**355**	*e*Pn	**P**	**03 10 27.5**	**+0.3**
	14nm,1.3s,mb4.1						
BOZ	**Bozeman (W)**	**21.22**	**357**	*e*P	**P**	**03 10 28.5**	**-1.1**
BMO	**Blue Mountains**	**21.26**	**345**	*e*P	**P**	**03 10 27.5**	**-2.5**
	15nm,1.5s,mb4.1						
GCMT	**Greycliff**	**21.32**	**0**	*e*P	**P**	**03 10 27.6**	**-2.9**
FVM	**French Village**	**21.37**	**46**	*e*P	**P**	**03 10 31.0**	**-0.2**
LRM	**Limekiln Ridge**	**21.45**	**355**	*e*P	**P**	**03 10 30.4**	**-1.6**
ECSD	**EROS,Sioux Fal**	**22.11**	**26**	*e*P	**P**	**03 10 41.0**	**+1.9**
LAO	**LASA Array**	**22.40**	**7**	*e*P	**P**	**03 10 43.2**	**+1.0**
LNOR	**Lincton Mounta**	**22.45**	**344**	*e*P	**P**	**03 10 41.1**	**-1.5**
MSO	**Missoula**	**22.59**	**353**	*e*P	**P**	**03 10 46.1**	**+1.9**
	29nm,2.0s,mb4.4						
CHMT	**Chamberlain Mo**	**22.60**	**354**	*e*P	**P**	**03 10 42.5**	**-1.8**
EGMT	**Eagleton**	**23.55**	**0**	*e*P	**P**	**03 10 55.6**	**+1.3**
LON	**Longmire**	**24.24**	**340**	*e*P	**P**	**03 10 58.9**	**-1.8**
	13nm,1.3s,mb4.2						

DGMT	Dagmar	24.41	9	eP	P	03 11 04.0	+1.9
NEW	Newport	24.47	348	eP	P	03 11 00.2	-2.5
ETW	Entiat	24.58	343	eP	P	03 11 02.3	-1.4
TKL	Tuckaleechee C	25.13	57	P	P	03 11 07.8	-1.2
	5.0nm,1.1s,mb4.0,baz=222,slow=14,SNR=2.7						
TKL				LR	LR	03 21 42.1	
	comp=Z,2µm,18.2s,MS4.5,baz=243,slow=38						
ULM	Lac du Bonnet	27.98	19	P	P	03 11 30.6	-3.8
	3.9nm,0.9s,mb4.0,baz=243,slow=6.8,SNR=2.7						
ULM				LR	LR	03 22 05.2	
	comp=Z,157nm,22.0s,MS3.6,baz=213,slow=35						
ULM	Lac du Bonnet	27.98	19	P	P	03 11 30.6	-3.8
ULM				LR	LR	03 22 05.2	
YKA	Yellowknife Ar	38.19	356	P	P	03 13 01.4	-1.7
	2.8nm,1.1s,mb3.9,baz=180,slow=8.0,SNR=3.5						
YKA				LR	LR	03 29 06.2	
	comp=Z,433nm,18.5s,MS4.3,baz=210,slow=37						
ROSC	El Rosal	39.31	114	LR	LR	03 31 09.1	
	comp=Z,180nm,21.1s,MS3.9,baz=16,slow=39						
SCHQ	Schefferville	43.87	35	LR	LR	03 31 45.6	
	comp=Z,418nm,19.8s,MS4.3,baz=240,slow=36						
DAWY	Dawson	44.10	342	eP	P	03 13 50.4	-1.4
TAOE	Nuku Hiva Isla	44.35	225	eLR	LR	03 26 08.1	
	2µm,26.2s						
KDAK	Kodiak Island	45.09	329	LR	LR	03 29 34.2	
	comp=Z,211nm,19.4s,MS4.1,baz=129,slow=32						
EGAK	Eagle	45.14	342	eP	P	03 13 58.4	-1.7
	5.0nm,1.1s,mb4.3						
IMA2	Indian Mountai	49.93	338	eP	P	03 14 36.1	-1.2
RKT	Rikitea	53.18	209	eS	S	03 22 38.4	+5.4
	383nm,37.8s						
RKT				eLR	LR	03 30 32.0	
	287nm,29.8s,baz=28						
PPT	Papeete	56.94	227	eS	S	03 23 27.6	+4.0
	108nm,28.5s						
PPT				eLR	LR	03 31 57.3	
	559nm,24.2s,baz=28						
LPAZ	La Paz	57.41	131	LR	LR	03 37 31.1	
	comp=Z,98nm,21.8s,MS3.9,baz=89,slow=33						
AFI	Afiamalu	71.42	245	LR	LR	03 39 05.7	
	comp=Z,496nm,20.1s,MS4.8,baz=73,slow=28						
CPUP	Villa Florida	71.57	131	LR	LR	03 51 21.0	
	comp=Z,67nm,18.3s,MS3.9,baz=65,slow=38						
PETK	Petropavlovsk-	72.26	321	P	P	03 17 07.5	-1.6
	3.8nm,0.9s,mb4.3,baz=80,slow=11,SNR=6.9						
PLCA	Paso Flores	74.42	150	LR	LR	03 45 53.9	
	comp=Z,157nm,18.3s,MS4.3,baz=105,slow=32						
ARCES	ARCESS Array B	80.98	14	LR	LR	03 57 58.5	
	comp=Z,110nm,18.3s,MS4.2,baz=193,slow=39						
NOA	NORSAR Array B	82.52	25	LR	LR	03 54 56.2	
	comp=Z,161nm,18.8s,MS4.4,baz=305,slow=36						
ESDC	Sonseca Array	86.06	48	LR	LR	03 54 35.0	
	comp=Z,112nm,19.9s,MS4.3,baz=290,slow=34						
GERES	GERESS Array B	91.39	33	LR	LR	03 58 28.1	
	comp=Z,209nm,20.9s,MS4.5,baz=300,slow=35						
MJAR	Matsushiro Arr	91.74	312	LR	LR	03 53 04.7	
	comp=Z,134nm,19.5s,MS4.4,baz=70,slow=31						
MDJ	Mudanjiang	92.46	322	P	P	03 18 51.2	-3.8
MDJ				LR	LR		
	comp=N,46nm,33.7s						
MDJ				LR	LR		
	comp=Z,51nm,25.5s						
URZ	Urewera	92.53	229	LR	LR	03 50 49.4	
	comp=Z,278nm,21.1s,MS4.7,baz=293,slow=29						
AKASG	Malin Array Be	96.93	25	LR	LR	04 04 12.9	
	comp=Z,181nm,19.2s,MS4.6,baz=335,slow=36						
KEST	Kesra	97.06	46	LR	LR	04 00 09.4	
	comp=Z,62nm,20.1s,MS4.1,baz=249,slow=34						
KSRS	Korea Array	97.91	317	LR	LR	03 57 54.7	
	comp=Z,29nm,18.7s,MS3.8,baz=90,slow=32						
BJI	Beijing	102.84	325	P	Pdif	03 19 37.5	-4.2
LZH	Lanzhou	111.90	331	ePKP	PKiKP	03 24 10.0	-9.4
CD2	Chengdu	116.24	328	ePKP	PKPdf	03 24 22.5	-5.3
WRA	Warramunga Arr	120.83	261	PKP	PKPdf	03 24 36.1	-0.7
	comp=Z,0.8nm,0.8s,baz=68,slow=2.0,SNR=2.7						
ASAR	Alice Springs	122.24	257	PKP	PKPdf	03 24 38.7	-0.7
	comp=Z,0.4nm,0.7s,baz=96,slow=1.9,SNR=3.2						

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*ISCJB **03** 03:07:17.0±0.4, 36.10N±0.02×8.49W±0.04, h73km±9km, Error ellipse: s-maj=4.9km s-min=3.1km az=161.7*
*CSEM **03** 03:07:17.1±0.2, 36.01N×8.21W, h10km, ML3.5/10, Error ellipse: s-maj=4.8km s-min=2.2km az=71.0*
*CNRM **03** 03:07:17.1, 36.11N×8.69W, h30km, MD3.2*
*MDD **03** 03:07:18.7±0.7, 36.08N×8.63W, h43km±46km, mb4.7/9, Error ellipse: s-maj=7.1km s-min=4.3km az=74.0, PRIMO*
*INMG **03** 03:07:19.4±1.0, 36.20N×8.60W, h14km±5km, ML2.3, Error ellipse: s-maj=6.3km s-min=2.1km az=55.0*
*LDG **03** 03:07:20.6±0.3, 36.19N×8.53W, h20km, Ml3.0/3, Error ellipse: s-maj=6.0km s-min=3.9km az=37.0*
ISC 03 03:07:18.5±0.4, **36.12N**±0.02×**8.50W**±0.03, **h54**km±17km, **n89**, σ**1.18s**/167, **4C-1D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.05	346	iP	Pn	03 07 36.5	-0.5
PFVI				eS	Sn	03 07 49.3	-1.3
PFVI				A		03 07 51.1	
	79nm,0.1s						
MORF	Marmelete	1.19	354	eP	Pn	03 07 38.7	-0.2
MORF				eS	Sn	03 07 53.4	-0.7
MORF				A		03 07 55.2	
	74nm,0.1s						
MORF	Marmelete	1.19	354	eP	Pn	03 07 38.7	-0.2
MORF				eS	Sn	03 07 53.4	-0.7
	74nm,0.1s						
PBDV	Barranco-do-Ve	1.21	22	iP	Pn	03 07 40.0	+0.8
PBDV				eS	Sn	03 07 55.3	+0.7
PBDV				eS5		03 07 55.4	
PBDV				A		03 07 59.6	
	15nm,0.1s						
PBDV	Barranco-do-Ve	1.21	22	⇑P	Pn	03 07 40.0	+0.8
PBDV				S	Sn	03 07 55.3	+0.7
PVAQ	Vaqueiros	1.43	26	eP	Pn	03 07 42.8	+0.7
PVAQ				eS	Sn	03 08 00.7	+0.9
PVAQ				A		03 08 04.6	
	14nm,0.2s						
PVAQ	Vaqueiros	1.43	26	eP	Pn	03 07 42.8	+0.7
PVAQ				eS	Sn	03 08 00.7	+0.9
	14nm,0.2s						
PTEO	Sao Teotonio	1.44	353	eP	Pn	03 07 42.1	-0.1
PTEO				eS	Sn	03 07 59.2	-0.8
PTEO				A		03 08 00.1	
	34nm,0.6s						
PTEO	Sao Teotonio	1.44	353	eP	Pn	03 07 42.1	-0.1
PTEO				eS	Sn	03 07 59.2	-0.8
	34nm,0.6s						
EGRO	El Granado	1.63	30	⇑P	Pn	03 07 45.9	+1.1
	29nm,0.1s,SNR=18						
EGRO				S	Sn	03 08 05.3	+0.6
	11nm,0.1s,SNR=6.7						
EGRO	El Granado	1.63	30	P	Pn	03 07 45.9	+1.0
	29nm,0.1s,SNR=18						
EGRO				S	Sn	03 08 05.5	+0.8
	11nm,0.1s,SNR=6.7						
PBEJ	Beja	1.97	15	ePn	Pn	03 07 50.0	+0.5
PBEJ				eSn	Sn	03 08 12.9	-0.1
PBEJ				A		03 08 14.7	
	12nm,0.2s						
PBEJ	Beja	1.97	15	ePn	Pn	03 07 50.0	+0.5
PBEJ				eSn	Sn	03 08 12.9	-0.1
	12nm,0.2s						
EMIN	Mina Concepcio	2.20	41	⇑P	Pn	03 07 53.5	+0.8
	5.3nm,0.1s,SNR=18						
EMIN				S	Sn	03 08 18.5	-0.2
	3.6nm,0.1s,SNR=6.0						
EMIN	Mina Concepcio	2.20	41	P	Pn	03 07 53.5	+0.9
	5.3nm,0.1s,SNR=18						
EMIN				S	Sn	03 08 18.5	-0.2
	3.6nm,0.1s,SNR=6.0						
ESPR	Espera	2.26	70	P	Pn	03 07 54.7	+1.3
	4.4nm,0.1s,SNR=18						
ESPR				S	Sn	03 08 19.9	-0.2
	52nm,0.3s						
ESPR	Espera	2.26	70	P	Pn	03 07 54.7	+1.3
	4.4nm,0.1s,SNR=18						
ESPR				S	Sn	03 08 21.0	+1.0
	30nm,0.2s						
PBAR	Barrancos	2.36	29	ePn	Pn	03 07 55.6	+0.8
PBAR				eSn	Sn	03 08 23.0	+0.4
MOE	Montemor	2.40	3	ePn	Pn	03 07 56.0	+0.6
MOE				eSn	Sn	03 08 23.1	-0.5
EVOP	Sao Brissos	2.42	7	ePn	Pn	03 07 55.5	-0.2
EVO	Evora	2.44	9	ePn	Pn	03 07 55.5	-0.4
EVO				eSn	Sn	03 08 22.3	-2.2
	18nm,0.2s						
EVO	Evora	2.44	9	ePn	Pn	03 07 56.1	+0.2
EVO				eSn	Sn	03 08 24.6	+0.1
EVO				A		03 08 25.1	
	24nm,0.1s						
EVO	Evora	2.44	9	ePn	Pn	03 07 56.1	+0.2
EVO				eSn	Sn	03 08 24.6	+0.1
	24nm,0.1s						
EJIF	Jimena Fronter	2.47	81	P	Pn	03 07 58.4	+2.1
	0.7nm,0.2s,SNR=7.9						
EJIF				S	Sn	03 08 25.1	-0.2
	1.3nm,0.1s,SNR=7.9						
ECEU	Ceuta	2.54	94	P	Pn	03 07 58.8	+1.6
	0.6nm,0.0s,SNR=4.7						
ECEU				S	Sn	03 08 26.8	-0.2
	1.3nm,0.1s,SNR=7.9						
ECEU	Ceuta	2.54	94	P	Pn	03 07 58.8	+1.5
	1.2nm,0.1s,SNR=4.7						
ECEU				S	Sn	03 08 27.6	+0.6
	1.3nm,0.1s,SNR=7.9						
PESTR	Estremoz	2.84	14	ePn	Pn	03 08 01.7	+0.4
PESTR				eSn	Sn	03 08 33.4	-0.9
PESTR				A		03 08 35.9	
	6.0nm,0.3s						
PESTR	Estremoz	2.84	14	ePn	Pn	03 08 01.7	+0.4
PESTR				eSn	Sn	03 08 33.4	-0.9
	6.0nm,0.3s						
EBAD	Badajoz	2.89	24	⇓P	Pn	03 08 02.5	+0.5
	3.5nm,0.1s,SNR=18						
EBAD				S	Sn	03 08 34.1	-1.4
	3.9nm,0.1s,SNR=7.9						
EBAD	Badajoz	2.89	24	P	Pn	03 08 02.5	+0.5
	3.5nm,0.1s,SNR=18						
EBAD				S	Sn	03 08 34.8	-0.7
	5.5nm,0.1s,SNR=7.9						
EMIJ	Mijas	3.04	80	P	Pn	03 08 04.6	+0.5
	0.6nm,0.1s,SNR=6.1						
EMIJ				S	Sn	03 08 38.8	-0.5
	1.4nm,0.2s,SNR=5.0						
ECAB	El Cabril	3.14	51	P	Pn	03 08 06.6	+1.1
	6.5nm,0.1s,SNR=55						
ECAB				S	Sn	03 08 40.4	-1.4
	3.8nm,0.1s,SNR=6.8						
ECAB	El Cabril	3.14	51	P	Pn	03 08 06.7	+1.2
	6.3nm,0.2s,SNR=55						
ECAB				S	Sn	03 08 40.5	-1.3
	3.8nm,0.3s,SNR=6.8						
PMRV	Marv??o	3.42	15	ePn	Pn	03 08 09.8	+0.5
PMRV				eSn	Sn	03 08 47.6	-1.0
PMRV				A		03 08 49.0	
	6.3nm,0.3s						
PMRV	Marv??o	3.42	15	ePn	Pn	03 08 09.8	+0.5
PMRV				eSn	Sn	03 08 47.6	-1.0
	6.3nm,0.3s						
PTOM	Tomar	3.50	1	ePn	Pn	03 08 10.7	+0.4
PTOM				eSn	Sn	03 08 48.3	-2.1
PTOM				A		03 08 51.8	
	13nm,0.1s						
PTOM	Tomar	3.50	1	ePn	Pn	03 08 10.7	+0.4
PTOM				eSn	Sn	03 08 48.3	-2.1
	13nm,0.1s						
ELOJ	Sierra Loja	3.64	72	P	Pn	03 08 14.3	+1.9
	0.6nm,0.2s,SNR=7.9						
ELOJ				S	Sn	03 08 53.6	-0.5
	0.8nm,0.1s,SNR=7.9						
EADA	Adamuz	3.74	56	⇑P	Pn	03 08 15.0	+1.3
	4.9nm,0.2s,SNR=18						
EADA				S	Sn	03 08 54.9	-1.6
	5.3nm,0.1s						
EADA	Adamuz	3.74	56	P	Pn	03 08 15.0	+1.3
	6.5nm,0.2s,SNR=18						
PCBR	Castelo Branco	3.80	12	ePn	Pn	03 08 15.0	+0.5
PCBR				eSn	Sn	03 08 56.3	-1.7
PCBR				A		03 08 58.3	
	25nm,0.3s						
PCBR	Castelo Branco	3.80	12	ePn	Pn	03 08 15.0	+0.5
PCBR				eSn	Sn	03 08 56.3	-1.7
	25nm,0.3s						
MIF	Mishlifen	3.81	134	iP	Pn	03 08 15.0	+0.3
MIF				iS	Sn	03 08 57.5	-0.8
EGUA	Guajares	4.04	78	P	Pn	03 08 19.7	+1.9
	1.9nm,0.3s,SNR=7.9						
EGUA				S	Sn	03 09 02.6	-1.3
	3.4nm,0.2s,SNR=7.9						
EGUA	Guajares	4.04	78	P	Pn	03 08 19.7	+1.9
	1.9nm,0.3s,SNR=7.9						
EGUA				S	Sn	03 09 05.9	+2.1
	7.3nm,0.5s,SNR=7.9						
TZK	Tazeka	4.08	119	iP	Pn	03 08 17.5	-0.8
TZK				iS	Sn	03 09 03.0	-1.7
KIB	El Ksiba	4.08	149	iP	Pn	03 08 18.0	-0.3
KIB				iS	Sn	03 09 03.0	-1.8
ECOG	Cogollos-Vega	4.13	72	P	Pn	03 08 20.8	+1.7
	1.0nm,0.2s,SNR=5.1						
ECOG				S	Sn	03 09 05.3	-0.8
	1.8nm,0.2s,SNR=26						
CZD	Col de Zad	4.20	136	iP	Pn	03 08 20.0	+0.1
CZD				iS	Sn	03 09 06.0	-1.7
EQUE	Quentar	4.21	74	P	Pn	03 08 22.6	+2.5
	0.3nm,0.1s,SNR=8.5						
EQUE				S	Sn	03 09 08.2	+0.2
	3.5nm,0.2s,SNR=6.5						
EQUE	Quentar	4.21	74	P	Pn	03 08 22.7	+2.6
	0.4nm,0.1s,SNR=8.5						
EQUE				S	Sn	03 09 08.2	+0.2
	1.0nm,0.2s,SNR=6.5						
EBAN	Banos Encina	4.28	60	P	Pn	03 08 22.3	+1.2
	2.0nm,0.1s,SNR=8.7						
EBAN				S	Sn	03 09 07.3	-2.5
	2.0nm,0.1s						
EBAN	Banos Encina	4.28	60	P	Pn	03 08 22.4	+1.3
	2.0nm,0.1s,SNR=8.7						
EBAN				S	Sn	03 09 08.8	-1.0
	2.0nm,0.1s						
TZC	Tazercounte	4.30	157	eP	Pn	03 08 21.0	-0.3
TZC				iS	Sn	03 09 08.0	-2.1
MTE	Manteigas	4.34	10	ePn	Pn	03 08 22.5	+0.6
MTE				eSn	Sn	03 09 09.6	-1.6
MTE				A		03 09 12.2	
	6.5nm,0.3s						
MTE	Manteigas	4.34	10	ePn	Pn	03 08 22.5	+0.6
MTE				eSn	Sn	03 09 09.6	-1.6
	6.5nm,0.3s						
CIA	Chichaoua	4.55	183	eP	Pn	03 08 24.0	-0.8
CIA				iS	Sn	03 09 11.5	-4.8
PVIS	Viseu	4.62	6	ePn	Pn	03 08 25.9	+0.2
PVIS				eSn	Sn	03 09 15.6	-2.3
EQES	Quesada	4.66	67	P	Pn	03 08 28.0	+1.7
	0.3nm,0.1s,SNR=9.6						
EQES				S	Sn	03 09 19.2	+0.2
	1.0nm,0.1s						
EQES	Quesada	4.66	67	P	Pn	03 08 28.0	+1.7
	0.3nm,0.1s,SNR=9.6						
EQES				S	Sn	03 09 19.2	+0.1
	1.0nm,0.1s						
OUK	Oukaimeden	4.92	174	eP	Pn	03 08 28.0	-2.0
OUK				iS	Sn	03 09 20.5	-5.1
EHUE	Huescar	5.02	69	P	Pn	03 08 32.4	+1.1
	0.3nm,0.1s,SNR=7.9						
EHUE				S	Sn	03 09 27.9	-0.1
	1.0nm,0.2s,SNR=7.9						
EHUE	Huescar	5.02	69	P	Pn	03 08 32.5	+1.2
	0.3nm,0.1s,SNR=7.9						
EHUE				S	Sn	03 09 27.9	-0.1
	1.0nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	5.05	44	P	Pn	03 08 32.6	+1.0
	10nm,0.1s,baz=229,slow=13,SNR=28						
ESDC				S	Sn	03 09 25.1	-3.5
	0.6nm,0.3s,baz=228,slow=24,SNR=4.9						
ESDC	Sonseca Array	5.05	44	P	Pn	03 08 32.6	+1.0
	10nm,0.1s,SNR=28						
MVO	Moncorvo	5.17	12	ePn	Pn	03 08 33.7	+0.4
MVO				eSn	Sn	03 09 28.6	-2.9
MVO				A		03 09 32.2	
	3.4nm,0.1s						
MVO	Moncorvo	5.17	12	ePn	Pn	03 08 33.7	+0.4
MVO				eSn	Sn	03 09 28.6	-2.9
	3.4nm,0.1s						
ZFT	Errachidia	5.33	139	P	Pn	03 08 36.0	+0.5
ZFT				S	Sn	03 09 34.0	-1.6
ZFT	Errachidia	5.33	139	iP	Pn	03 08 36.0	+0.5
EVIA	Vianos	5.40	60	P	Pn	03 08 36.2	-0.2
	0.9nm,0.1s,SNR=7.9						
EVIA				S	Sn	03 09 34.7	-2.5
	1.0nm,0.1s,SNR=7.9						
PCAB	Cabril	5.60	4	ePn	Pn	03 08 39.3	+0.2
PCAB				eSn	Sn	03 09 37.9	-4.1
PCAB				A		03 09 42.3	
	2.7nm,0.1s						
PCAB	Cabril	5.60	4	ePn	Pn	03 08 39.3	+0.2
PCAB				eSn	Sn	03 09 37.9	-4.1
	2.7nm,0.1s						
GUD	Guadarrama	5.66	36	P	Pn	03 08 41.3	+1.3
	1.1nm,0.2s,SNR=17						
ELOB	Lobios	5.75	3	P	Pn	03 08 41.9	+0.6
	1.1nm,0.1s,SNR=13						
ELOB				S	Sn	03 09 42.2	-3.7
	1.7nm,0.1s						
ELOB	Lobios	5.75	3	P	Pn	03 08 42.1	+0.9
	1.1nm,0.1s,SNR=13						
PBRG	Braganca	5.84	13	ePn	Pn	03 08 42.6	+0.1
PBRG				eSn	Sn	03 09 44.8	-3.3
PBRG				A		03 09 48.5	
	1.9nm,0.2s						
PBRG	Braganca	5.84	13	ePn	Pn	03 08 42.6	+0.1
PBRG				eSn	Sn	03 09 44.8	-3.3
	1.9nm,0.2s						
ECAL	Calabor	5.97	13	P	Pn	03 08 45.3	+1.0
	0.6nm,0.1s,SNR=7.6						
ECAL				S	Sn	03 09 49.1	-2.2
	1.1nm,0.2s						
ECAL	Calabor	5.97	13	P	Pn	03 08 45.3	+1.0
	0.6nm,0.1s,SNR=7.6						
ETOB	Tobarra	6.08	63	P	Pn	03 08 46.3	+0.5
	0.7nm,0.1s,SNR=16						
ETOB				S	Sn	03 09 50.7	-3.4
	1.3nm,0.1s,SNR=7.9						
ETOB	Tobarra	6.08	63	P	Pn	03 08 46.3	+0.5
	0.7nm,0.1s,SNR=16						
ETOR	Torete	6.90	45	P	Pn	03 08 58.5	+1.6
	7.4nm,0.2s,SNR=20						
ETOR				S	Sn	03 10 10.0	-4.0
	3.2nm,0.2s,SNR=6.4						
SJPF	Ste Jean	8.96	37	ePn	Pn	03 09 27.2	+2.1
SJPF				eSn	Sn	03 10 59.6	-4.9
	0.4nm,0.3s						
SJPF	Ste Jean	8.96	37	ePn	Pn	03 09 27.2	+2.1
SJPF				eSn	Sn	03 10 59.6	-4.9
	0.2nm,0.3s						
ETSF	Etsaut	9.13	40	ePn	Pn	03 09 28.9	+1.3
EPF	Esparros	9.70	42	ePn	Pn	03 09 36.9	+1.6
EPF				eSn	Sn	03 11 17.1	-5.7
	0.6nm,0.3s						
EPF	Esparros	9.70	42	ePn	Pn	03 09 36.9	+1.6
EPF				eSn	Sn	03 11 17.1	-5.7
	0.3nm,0.3s						
LFF	La Frestale	11.27	36	eP	Pn	03 10 02.8	+6.1
CAF	Calviac	11.91	39	ePn	Pn	03 10 05.2	-0.2

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*ISCJB **03** 03:08:58.0±3.2, 2.71S±0.08×129.7E±0.2, h2km±20km, mb3.9/5, MS3.2/2, Error ellipse: s-maj=28.1km s-min=10.8km az=160.4*
*IDC **03** 03:09:00.8±1.4, 2.91S×129.01E, h0km, mb4.0/5, mb1 4.1/7, mb1mx3.9/18, mbtmp4.0/7, ML3.9/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/26, Error ellipse: s-maj=104.7km s-min=19.2km az=70.0*
*NEIC **03** 03:09:01.3±0.8, 2.69S×129.69E, h10km, mb3.8/1, Error ellipse: s-maj=42.5km s-min=9.9km az=72.0*
*DJA **03** 03:09:05, 2.65S×129.42E, h29km, ML4.0/4*
ISC 03 03:09:04.5±4.1, **2.8S**±0.1×**129.5E**±0.2, **h30**km±29km, **n13**, σ**1.04s**/15, **mb3.9**/5, **MS3.2**/2, **1D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	1.54	235	⇓eP	Pn	03 09 30.0	+0.1
KAKA	Kakadu	10.27	163	eP	Pn	03 11 29.7	-0.2
	4.4nm,0.2s						
KAKA				eS	Sn	03 13 27.2	+3.1
FITZ	Fitzroy Crossi	15.65	194	eP	Pn	03 12 44.6	+1.5
	6.3nm,1.0s						
FITZ	Fitzroy Crossi	15.65	194	Pn	Pn	03 12 42.0	-1.1
	0.1nm,0.3s,baz=21,slow=16,SNR=3.1						
FITZ				LR	LR	03 18 22.9	
	comp=Z,61nm,20.3s,baz=250,slow=36						
WRA	Warramunga Arr	17.68	165	P	Pn	03 13 08.1	-0.6
	1.0nm,0.3s,baz=345,slow=13,SNR=13						
WRA				S	Sn	03 16 17.4	-7.5
	0.3nm,0.3s,baz=334,slow=24,SNR=3.1						
WB2	Warramunga Arr	17.68	165	eP	Pn	03 13 07.3	-1.4
WB2				eS	Sn	03 16 18.5	-6.5
ASAR	Alice Springs	21.17	169	P	P	03 13 48.0	+0.4
	7.4nm,0.7s,mb4.2,baz=340,slow=8.9,SNR=68						
ASAR				S	S	03 17 39.8	-1.8
	0.7nm,0.7s,baz=348,slow=18,SNR=4.4						
JOW	Kunigami	29.49	358	LR	LR	03 25 15.7	
	comp=Z,71nm,18.8s,MS3.3,baz=71,slow=33						
STKA	Stephens Creek	31.09	160	P	P	03 15 21.8	+1.6
	1.0nm,0.5s,mb3.9,baz=345,slow=7.5,SNR=3.0						
KSRS	Korea Array	40.08	358	LR	LR	03 34 07.1	
	comp=Z,25nm,18.4s,MS3.1,baz=205,slow=38						
MKAR	Makanchi Array	64.46	326	P	P	03 19 38.3	+0.1
	0.3nm,0.4s,mb3.6,baz=120,slow=8.7,SNR=3.3						
KURK	Kurchatov	68.69	328	P	P	03 20 05.0	-0.2
	0.5nm,0.2s,mb4.0,baz=128,slow=5.5,SNR=3.6						
BVAR	Borovoye Array	74.26	327	P	P	03 20 38.7	0.0
	1.0nm,0.9s,mb3.8,baz=111,slow=7.9,SNR=3.4						

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*IDC **03** 03:12:02.3±1.5, 11.19S×165.73E, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.1/19, mbtmp4.2/8, MS4.1/1, Ms1 4.1/1, ms1mx2.7/23, Error ellipse: s-maj=35.8km s-min=28.2km az=21.0*
*ISCJB **03** 03:12:06.8±1.6, 11.4S±0.2×165.6E±0.2, h33km, mb4.1/7, Error ellipse: s-maj=34.7km s-min=23.8km az=25.3*
*NEIC **03** 03:12:07.9±1.1, 11.21S×165.68E, h35km, mb4.3/1, Error ellipse: s-maj=24.6km s-min=19.9km az=179.0*
ISC 03 03:12:08.5±1.6, **11.3S**±0.2×**165.6E**±0.2, **h35**km, **n10**, σ**0.83s**/9, **mb4.1**/7, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	20.60	242	P	P	03 16 46.0	+1.3
	10nm,0.9s,baz=76,slow=9.2,SNR=5.9						
CTAO	Charters Tower	20.60	242	eP	P	03 16 44.7	0.0
	14nm,1.0s						
URZ	Urewera	28.79	161	P	P	03 18 04.1	+0.9
	2.5nm,0.7s,mb4.1,baz=264,slow=9.2,SNR=2.4						
STKA	Stephens Creek	30.21	224	P	P	03 18 16.2	+0.4
	2.6nm,0.6s,mb4.1,baz=30,slow=9.9,SNR=5.8						
WRA	Warramunga Arr	31.30	250	P	P	03 18 25.2	-0.4
	2.7nm,0.9s,mb4.1,baz=81,slow=9.7,SNR=7.6						
ASAR	Alice Springs	32.59	243	P	P	03 18 36.5	-0.4
	2.2nm,0.8s,mb4.1,baz=74,slow=9.7,SNR=12						
FITZ	Fitzroy Crossi	39.21	255	P	P	03 19 33.4	-0.2
	3.2nm,0.8s,mb4.1,baz=61,slow=9.3,SNR=7.1						
QSPA	South Pole Qui	78.75	180	P	P	03 24 05.2	-1.8
	2.6nm,1.0s,mb4.1,baz=352,slow=3.5,SNR=6.8						
MKAR	Makanchi Array	93.59	317	P	P	03 25 21.6	+0.6
	0.9nm,0.7s,mb4.3,baz=112,slow=4.4,SNR=5.5						
ARCES	ARCESS Array B	116.50	345	PKP	PKPdf	03 30 47.2	-0.9
	1.5nm,0.9s,baz=63,slow=3.3,SNR=4.3						

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*TAP **03** 03:24:34.4, 23.44N×120.88E, h7km, ML3.6, B*
*ISCJB **03** 03:24:35.3±0.2, 23.42N±0.01×120.93E±0.01, h6km±2km, Error ellipse: s-maj=2.3km s-min=1.8km az=19.4*
*JMA **03** 03:24:36.4±0.6, 23.60N×121.01E, h0km, M3.2*
ISC 03 03:24:35.7±0.2, **23.42N**±0.01×**120.93E**±0.01, **h4**km±2km, **n63**, σ**1.02s**/112, **7C-12D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUS	Yu-Shan	0.07	19	⇓iP	Pg	03 24 37.4	+0.2
	baz=64						
YUS				eS	Sg	03 24 38.9	+0.7
	baz=64						
ALS	Alishan	0.14	308	⇑iP	Pg	03 24 37.4	-1.1
	baz=316						
ALS				iS	Sg	03 24 39.4	-1.1
	baz=316						
ELDTW	Lidau	0.25	160	⇑iP	Pg	03 24 40.5	0.0
	baz=145						
ELDTW				iS	Sg	03 24 44.1	+0.4
	baz=145						
CHN5	Tsauling	0.29	307	⇑iP	Pg	03 24 40.3	-0.9
	baz=310						
CHN5				eS	Sg	03 24 44.0	-1.0
	baz=310						
STYT	Tauyuan	0.30	211	⇓iP	Pg	03 24 41.0	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=202						
STYT				S	Sg	03 24 45.1	-0.4
	baz=202						
WTP	**Ta-pu**	**0.34**	**239**	⇓*i*P	**Pg**	**03 24 41.6**	**-0.5**
	baz=231						
WTP				*e*S	**Sg**	**03 24 46.3**	**-0.3**
	baz=231						
TWF1	**Yuli**	**0.35**	**102**	⇑*i*P	**Pg**	**03 24 42.7**	**+0.3**
	baz=103						
TWF1				S	**Sg**	**03 24 47.8**	**+0.9**
	baz=103						
EHY	**Hungye**	**0.37**	**77**	⇑*i*P	**Pg**	**03 24 43.1**	**+0.2**
	baz=85						
EHY				*i* S	**Sg**	**03 24 48.4**	**+0.7**
	baz=85						
WGK	**Gukeng**	**0.42**	**308**	⇑*i*P	**Pg**	**03 24 43.7**	**-0.2**
	baz=310						
WGK				S	**Sg**	**03 24 50.2**	**+0.8**
	baz=310						
TWK	**Hsinying**	**0.43**	**249**	⇓*i*P	**Pg**	**03 24 43.7**	**-0.3**
	baz=236						
TWK				S	**Sg**	**03 24 49.7**	**+0.1**
	baz=236						
CHN1	**Nanshi**	**0.44**	**237**	⇓*i*P	**Pg**	**03 24 44.0**	**-0.1**
	baz=231						
CHN1				*i* S	**Sg**	**03 24 50.3**	**+0.5**
	baz=231						
SMLT	**Sun Moon Lake**	**0.46**	**357**	⇓*i*P	**Pg**	**03 24 43.7**	**-0.8**
	baz=10.0						
SMLT				S	**Sg**	**03 24 51.1**	**+0.5**
	baz=10.0						
SGST	**Jiashian**	**0.46**	**223**	⇓*i*P	**Pg**	**03 24 44.5**	**-0.1**
	baz=210						
SGST				S	**Sg**	**03 24 51.4**	**+0.8**
	baz=210						
CHY	**Chiayi**	**0.47**	**279**	P	**Pg**	**03 24 44.5**	**-0.2**
	baz=277						
CHY				*e*S	**Sg**	**03 24 51.6**	**+0.8**
	baz=277						
TYC	**Yuchr**	**0.48**	**352**	⇓*i*P	**Pg**	**03 24 44.2**	**-0.8**
	baz=4.0						
TYC				S	**Sg**	**03 24 52.1**	**+0.8**
	baz=4.0						
WNT	**Mingjian**	**0.51**	**334**	P	**Pg**	**03 24 45.5**	**+0.1**
	baz=338						
WNT				S	**Sg**	**03 24 53.2**	**+1.3**
	baz=338						
CHKT	**Chengkung**	**0.52**	**128**	P	**Pg**	**03 24 46.8**	**+1.1**
	baz=127						
CHKT				S	**Sg**	**03 24 55.1**	**+2.8**
	baz=127						
ESL	**Shilin**	**0.61**	**50**	*e*P	**Pg**	**03 24 46.9**	**-0.5**
	baz=54						
ESL				*e*S	**Sg**	**03 24 54.6**	**-0.6**
	baz=54						
TWG	**Pinlang**	**0.61**	**167**	⇓*i*P	**Pg**	**03 24 47.4**	**-0.1**
	baz=161						
TWG				S	**Sg**	**03 24 56.1**	**+0.7**
	baz=161						
CHN8	**Yiju**	**0.66**	**264**	P	**Pg**	**03 24 48.3**	**-0.1**
	baz=260						
CHN8				S	**Sg**	**03 24 58.5**	**+1.5**
	baz=260						
WSF	**Szhu**	**0.68**	**288**	*e*P	**Pg**	**03 24 48.2**	**-0.6**
	baz=287						
WSF				*e*S	**Sg**	**03 24 59.3**	**+1.6**
	baz=287						
TTN	**Taitung**	**0.70**	**163**	*e*P	**Pg**	**03 24 49.6**	**+0.6**
	baz=151						
SCLT	**Jiali**	**0.72**	**250**	*e*P	**Pg**	**03 24 50.3**	**+0.9**
	baz=246						
SCLT				*e*S	**Sg**	**03 25 01.4**	**+2.6**
	baz=246						
SSD	**Sandimen**	**0.73**	**202**	⇓*i*P	**Pg**	**03 24 49.0**	**-0.6**
	baz=189						
WTCT	**Ta-ch'eng**	**0.74**	**307**	*e*P	**Pg**	**03 24 48.8**	**-1.0**
	baz=308						
WTCT				*e*S	**Sg**	**03 24 60.0**	**+0.5**
	baz=308						
TAI1	**Yung-k'ang**	**0.75**	**239**	*e*P	**Pg**	**03 24 49.2**	**-0.8**
	baz=235						
TWM1	**Shoushan**	**0.76**	**218**	*e*P	**Pg**	**03 24 51.3**	**+1.1**
	baz=214						
TWM1				*e*S	**Sg**	**03 25 03.9**	**+3.9**
	baz=214						
TCU	**Taichung**	**0.76**	**342**	P	**Pg**	**03 24 50.2**	**0.0**
	baz=346						
TCU				S	**Sg**	**03 25 00.7**	**+0.6**
	baz=346						
WHF	**Hehuan Shan**	**0.78**	**23**	⇓*i*P	**Pg**	**03 24 49.4**	**-1.3**
	baz=27						
WHF				*e*S	**Sg**	**03 25 01.8**	**+0.9**
	baz=27						
ECL	**Taimali**	**0.82**	**178**	⇓*i*P	**Pg**	**03 24 50.5**	**-0.9**
	baz=167						
ECL				S	**Sg**	**03 25 01.8**	**-0.3**
	baz=167						
HWA	**Hwalien**	**0.83**	**48**	*i* P	**Pg**	**03 24 51.4**	**-0.2**
	baz=51						
HWA				*e*S	**Sg**	**03 25 02.5**	**0.0**
	baz=51						
TWT	**Tachien**	**0.86**	**15**	*e*P	**Pg**	**03 24 50.4**	**-1.8**
	baz=25						
TWD	**Chiawan**	**0.90**	**43**	*e*P	**Pg**	**03 24 52.3**	**-0.6**
	baz=55						
TWD				*e*S	**Sg**	**03 25 04.0**	**-0.6**
	baz=55						
TWQ1	**Liyutan**	**0.93**	**351**	P	**Pg**	**03 24 53.4**	**-0.2**
	baz=354						
TWQ1				*e*S	**Sg**	**03 25 06.5**	**+0.9**
	baz=354						
NSY	**Sanyi**	**1.00**	**351**	*e*P	**Pg**	**03 24 54.8**	**-0.1**
	baz=354						
NSY				S	**Sg**	**03 25 09.3**	**+1.4**
	baz=354						
KAU	**Kaohsiung**	**1.02**	**214**	*e*P	**Pg**	**03 24 56.2**	**+0.8**
	baz=211						
EAST	**Anshuo**	**1.04**	**184**	*e*P	**Pg**	**03 24 54.7**	**-0.9**
	baz=174						
EAST				*e*S	**Sg**	**03 25 09.6**	**+0.6**
	baz=174						
TAW	**Tawu**	**1.06**	**182**	*e*P	**Pg**	**03 24 54.9**	**-1.1**
	baz=172						
SCZT	**Fangliau**	**1.08**	**195**	*e*P	**Pg**	**03 24 55.5**	**-1.0**
	baz=192						
SCZT				*e*S	**Sg**	**03 25 11.9**	**+1.4**
	baz=192						
NNS	**Nan Shan**	**1.09**	**22**	*e*P	**Pg**	**03 24 54.7**	**-2.0**
	baz=25						
NNS				*e*S	**Sg**	**03 25 11.6**	**+0.8**
	baz=25						
NSTT	**Nanjuang**	**1.21**	**3**	P	**Pg**	**03 24 58.4**	**-0.4**
	baz=6.0						
NSTT				S	**Sg**	**03 25 14.8**	**+0.3**
	baz=6.0						
ENA	**Nanau**	**1.25**	**37**	*e*P	**Pg**	**03 24 57.7**	**-1.9**
	baz=52						
PNG	**Penghu**	**1.27**	**277**	⇑*i*P	**Pg**	**03 24 57.2**	**-2.8**
	baz=275						
PNG				*e*S	**Sg**	**03 25 13.9**	**-2.5**
	baz=275						
NSK	**Sanguang**	**1.31**	**17**	*e*P	**Pn**	**03 24 58.6**	**-2.2**
	baz=20						
ENTT	**Nioudou**	**1.34**	**26**	*e*P	**Pn**	**03 24 59.4**	**-1.9**
	baz=28						
ENTT				*e*S	**Sg**	**03 25 19.5**	**+0.6**
	baz=28						
HEN	**Hengchun**	**1.42**	**187**	*e*P	**Pn**	**03 25 01.2**	**-1.1**
	baz=185						
TWC	**Suao**	**1.45**	**35**	*e*P	**Pn**	**03 25 01.9**	**-0.8**
	baz=38						
TWC				S	**Sb**	**03 25 21.6**	**-0.5**
	baz=38						
TWE	**Neicheng**	**1.46**	**27**	*e*P	**Pn**	**03 25 02.5**	**-0.4**
	baz=30						
TWE				*e*S	**Sb**	**03 25 23.3**	**+0.9**
	baz=30						
TWK1	**Hengchun**	**1.48**	**184**	*e*P	**Pn**	**03 25 02.8**	**-0.2**
	baz=192						
TWK1				*e*S	**Sn**	**03 25 25.5**	**+2.7**
	baz=192						
LAY	**Lan-yu**	**1.49**	**157**	*e*P	**Pn**	**03 25 01.8**	**-1.5**
	baz=145						
TWA	**Mucha**	**1.66**	**21**	*e*P	**Pn**	**03 25 06.4**	**+0.8**
	baz=6.0						
TWA				*e*S	**Sn**	**03 25 28.8**	**+1.3**
	baz=6.0						
TAP1	**Taipei**	**1.70**	**19**	*e*P	**Pn**	**03 25 07.7**	**+1.5**
	baz=19						
TWS1	**Kuangyinshan**	**1.73**	**15**	*e*P	**Pn**	**03 25 06.8**	**+0.2**
	baz=359						
NWF	**Wu-fen Shan**	**1.82**	**25**	*e*P	**Pn**	**03 25 08.8**	**+1.1**
	baz=12						
NWF				*e*S	**Sn**	**03 25 33.1**	**+1.8**
	baz=12						
TWB1	**Santiao Chiao**	**1.85**	**31**	*e*P	**Pn**	**03 25 09.0**	**+0.7**
	baz=33						
TWB1				*e*S	**Sn**	**03 25 34.6**	**+2.5**
	baz=33						
TWY	**Chenhua**	**1.94**	**18**	*e*P	**Pn**	**03 25 10.3**	**+0.8**
	baz=1.0						
YOJ	**Yonaguni jima**	**2.17**	**61**	P	**Pn**	**03 25 12.2**	**-0.4**
YOJ				S	**Sn**	**03 25 39.1**	**-0.8**
YOJ	**Yonaguni jima**	**2.17**	**61**	*e*P	**Pn**	**03 25 12.1**	**-0.5**
	baz=62						
YOJ				*e*S	**Sn**	**03 25 39.0**	**-1.0**
	baz=62						
KNM	**Kinmen**	**2.49**	**294**	*e*P	**Pn**	**03 25 14.6**	**-2.4**
	baz=292						
HATJ	**Hateruma jima**	**2.71**	**76**	P	**Pn**	**03 25 20.9**	**+0.8**
HATJ				*e*S	**Sn**	**03 25 52.1**	**-1.2**
IRIF	**Iriomote-Funau**	**2.72**	**70**	P	**Pn**	**03 25 20.8**	**+0.6**
IRIF				S	**Sn**	**03 25 53.2**	**-0.4**
JIJ	**Ishigaki jima**	**3.09**	**72**	P	**Pn**	**03 25 25.6**	**+0.3**
JIJ				S	**Sn**	**03 25 59.9**	**-2.8**
JTJ	**Tarama**	**3.66**	**70**	P	**Pn**	**03 25 33.3**	**+0.2**
JTJ				*e*S	**Sn**	**03 26 16.8**	**+0.1**

*IDC **03** 03:46:12.9±0.7, 4.72S×139.88E, h0km, mb4.3/6, mb1 4.5/10, mb1mx4.3/15, mbtmp4.4/10, ML4.5/4, MS3.4/2, Ms1 3.4/2, ms1mx2.9/15, Error ellipse: s-maj=26.7km s-min=14.9km az=79.0*

*NEIC **03** 03:46:13.9±0.6, 4.74S×139.88E, h10km, mb4.8/2, Error ellipse: s-maj=18.5km s-min=10.6km az=88.0*

*BJI **03** 03:46:13.9, 4.70S×139.90E, h10km, mB4.9, mb4.9, Ms4.2, Msz4.0*

*ISCJB **03** 03:46:17.1±0.6, 4.94S±0.05×139.55E±0.07, h33km, mb4.5/10, Error ellipse: s-maj=10.5km s-min=6.9km az=16.5*

ISC 03 03:46:19.2±0.6**, 5.01S**±0.05×**139.54E**±0.07**, h35**km**, (h34**km±1.9km**:pP-P), n28,** σ1s37/25**, mb4.5**/10**, 1C-1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**10.38**	**222**	⇓*i*P	**Pn**	**03 48 49.5**	**+3.9**
	54nm,0.4s						
KAKA				*e*S	**Sn**	**03 50 41.7**	**+1.0**
WB2	**Warramunga Arr**	**15.68**	**198**	*e*P	**Pn**	**03 49 58.1**	**+0.6**
WB2				*e*S	**Sn**	**03 52 44.3**	**-5.9**
WRA	**Warramunga Arr**	**15.68**	**198**	Pn	**Pn**	**03 49 58.5**	**+0.9**
	1.3nm,0.3s,baz=17,slow=13,SNR=25						
WRA				Sn	**Sn**	**03 52 47.2**	**-3.0**
	1.4nm,0.3s,baz=12,slow=22,SNR=5.5						
WRA				Lg		03 54 41.3	
	baz=26,slow=28,SNR=4.2						
CTA	**Charters Tower**	**16.34**	**157**	Pn	**Pn**	**03 50 06.8**	**+0.7**
	0.5nm,0.3s,baz=318,slow=16,SNR=3.3						
CTA				Lg		03 55 00.4	
	0.8nm,0.3s,baz=331,slow=19,SNR=2.8						
CTA				LR	LR	03 57 06.0	
	comp=Z,85nm,19.3s,baz=221,slow=40						
BATI	**Baumata**	**16.56**	**251**	Pn	**Pn**	**03 50 16.8**	**+8.0**
	12nm,0.3s,baz=143,slow=5.1,SNR=6.3						
BATI				Sn	**Sn**	**03 53 10.7**	**-1.0**
	4.8nm,0.3s,baz=3.6,slow=19,SNR=2.8						
BATI				Lg		03 55 09.0	
	5.4nm,0.3s,baz=110,slow=5.9,SNR=3.6						
FITZ	**Fitzroy Crossi**	**18.81**	**225**	*e*P	**Pn**	**03 50 39.0**	**+2.4**
	15nm,0.5s						
FITZ				*e*S	**S**	**03 54 01.4**	**-6.8**
FITZ	**Fitzroy Crossi**	**18.81**	**225**	P	**Pn**	**03 50 39.1**	**+2.5**
	1.0nm,0.3s,baz=44,slow=13,SNR=27						
FITZ				S	**S**	**03 54 02.3**	**-5.9**
	1.5nm,0.3s,baz=194,slow=19,SNR=7.3						
FITZ				Lg		03 56 25.9	
	0.2nm,0.3s,baz=266,slow=14,SNR=3.4						
FITZ				LR	LR	03 58 54.7	
	comp=Z,134nm,18.6s,baz=251,slow=40						
ASAR	**Alice Springs**	**19.32**	**196**	P	**Pn**	**03 50 45.9**	**+3.2**
	6.2nm,0.3s,baz=30,slow=9.9,SNR=306						
ASAR				S	**S**	**03 54 14.9**	**-3.5**
	0.5nm,0.3s,baz=17,slow=27,SNR=4.0						
ASAR				Lg		03 56 36.7	
	baz=13,slow=30,SNR=3.2						
MBWA	**Marble Bar**	**25.04**	**228**	*e*P	**P**	**03 51 43.3**	**+3.0**
	36nm,0.7s,mb5.0						
STKA	**Stephens Creek**	**26.79**	**176**	P	**P**	**03 51 55.6**	**-0.4**
	1.8nm,0.6s,mb3.8,baz=54,slow=6.3,SNR=5.3						
CMAR	**Chiang Mai Arr**	**46.32**	**301**	P	**P**	**03 54 42.9**	**+0.9**
	0.7nm,0.3s,mb4.0,baz=131,slow=6.1,SNR=6.2						
URZ	**Urewera**	**47.53**	**139**	P	**P**	**03 54 50.8**	**-0.4**
	1.8nm,0.3s,mb4.5,baz=191,slow=20,SNR=6.6						
XAN	**Xi'an**	**48.43**	**326**	P	**P**	**03 54 57.4**	**-0.8**
XAN				AP	pP	03 55 06.3	-2.3
XAN				XP	sP	03 55 10.7	-2.0
XAN				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
XAN				AMB	AMB		
	comp=Z,49nm,10.2s						
LZH	**Lanzhou**	**52.81**	**324**	*e*P	**P**	**03 55 32.0**	**+0.8**
LZH				AP	pP	03 55 41.5	-0.2
LZH				XP	sP	03 55 45.0	-0.9
LZH				AMB	AMB		
	comp=Z,17nm,1.2s,mb4.8						
LZH				AMB	AMB		
	comp=Z,86nm,5.0s						
GTA	**Gaotai**	**57.41**	**324**	⇑P	**P**	**03 56 04.8**	**+0.5**
GTA				AP	pP	03 56 15.5	+0.6
GTA				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.9						
SONM	**Songino Array**	**60.14**	**335**	P	**P**	**03 56 21.5**	**-1.6**
	comp=Z,0.8nm,0.6s,mb3.9,baz=162,slow=8.1,SNR=6.1						
MKAR	**Makanchi Array**	**72.11**	**323**	P	**P**	**03 57 40.1**	**+0.1**
	comp=Z,6.5nm,0.7s,mb4.7,baz=112,slow=8.1,SNR=42						
ZALV	**Zalesovo Beam**	**74.33**	**330**	P	**P**	**03 57 51.0**	**-1.9**
	comp=Z,1.5nm,0.4s,mb4.2,baz=104,slow=6.3,SNR=7.0						
ARCES	**ARCESS Array B**	**102.94**	**341**	P	Pdif	04 00 10.0	-3.7
	comp=Z,0.6nm,0.7s,baz=76,slow=5.1,SNR=4.2						
GERES	**GERESS Array B**	**116.78**	**323**	PKP	PKPdf	04 04 58.7	-1.2
	comp=Z,0.3nm,0.4s,baz=122,slow=1.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	**137.65**	**284**	PKP	PKPdf	04 05 38.8	-1.8
	comp=Z,0.6nm,0.8s,baz=53,slow=2.0,SNR=3.9						
KIC	**Kosan Boka**	**144.44**	**274**	*e*PKP1	PKPdf	04 05 51.0	-1.9
	comp=Z,97nm,1.0s						
DBIC	**Dimbokro**	**144.55**	**274**	PKP	PKPdf	04 05 51.5	-1.6
	comp=Z,12nm,0.6s,baz=79,slow=3.4,SNR=33						
TIC	**Toumodi**	**144.71**	**274**	*e*PKP1	PKPdf	04 05 51.8	-1.6
	comp=Z,29nm,0.6s						
LIC	**Lamto**	**144.72**	**274**	*e*PKP1	PKPdf	04 05 51.8	-1.6
	comp=Z,55nm,1.1s						
CPUP	**Villa Florida**	**144.81**	**153**	PKP	PKPdf	04 05 51.6	-1.7
	comp=Z,3.1nm,0.7s,baz=206,slow=3.2,SNR=9.7						
LPAZ	**La Paz**	**145.40**	**128**	PKPbc	PKPbc	04 05 55.0	+0.6
	comp=Z,7.9nm,0.8s,baz=255,slow=2.5,SNR=35						
SJG	**San Juan**	**151.72**	**60**	PKPbc	PKPbc	04 06 08.6	-2.4
	comp=Z,7.2nm,0.3s,baz=24,slow=6.6,SNR=8.4						

*BJI **03** 03:52:24.9, 24.58N×109.39W, h20km, mB5.3, mb4.7, Ms4.7, Msz4.5*

*IDC **03** 03:52:25.3±0.7, 24.46N×110.12W, h0km, mb4.2/8, mb1 4.5/13, mb1mx4.2/25, mbtmp4.3/13, ML3.7/5, MS4.1/23, Ms1 4.1/23, ms1mx4.0/34, Error ellipse: s-maj=19.8km s-min=9.6km az=105.0*

*NEIC **03** 03:52:26.3±0.5, 24.27N×109.88W, h10km, mb4.4/24, MD4.5(MEX), Error ellipse: s-maj=7.3km s-min=4.3km az=14.0*

*ISCJB **03** 03:52:27.4±0.8, 24.42N±0.03×109.83W±0.03, h22km±6km, mb4.4/18, MS4.2/20, Error ellipse: s-maj=4.7km s-min=4.1km az=24.8*

*MEX **03** 03:52:28.4±0.4, 24.50N×109.88W, h10km, MD4.5*

ISC 03 03:52:29.3±0.8**, 24.37N**±0.03×**109.85W**±0.03**, h25**km±6km**, n150,** σ1s16/146**, mb4.4**/18**, MS4.2**/20**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.50**	**237**	Pn	**Pb**	**03 52 38.5**	**-0.9**
	3µm,0.3s,baz=36,slow=14,SNR=301						
LPIG				Sn	**Sb**	**03 52 46.7**	**+0.4**
	9µm,0.3s,baz=266,slow=19,SNR=48						
LPIG	**La Paz**	**0.50**	**237**	*i* P	**Pb**	**03 52 38.0**	**-1.4**
LPIG				*e*S	**Sb**	**03 52 46.2**	**-0.1**
LPIG	**La Paz**	**0.50**	**237**	*i* P	**Pb**	**03 52 38.0**	**-1.4**
LPIG				Pn	**Pn**	**03 52 38.5**	**-2.3**
LPIG				*e*S	**Sb**	**03 52 46.2**	**-0.1**
LPIG				Sn	**Sb**	**03 52 46.7**	**+0.4**
MAIG	**Mazatlaan**	**3.35**	**110**	*i* P	**Pn**	**03 53 19.0**	**-1.1**
MAIG				*i* S	**Sn**	**03 53 59.1**	**-0.1**
HPIG		**4.56**	**55**	*i* P	**Pn**	**03 53 34.6**	**-2.1**
HPIG				*i* S	**Sn**	**03 54 26.5**	**-2.4**
HSIG		**4.73**	**348**	*i* P	**Pn**	**03 53 34.2**	**-4.8**
HSIG				*i* S	**Sn**	**03 54 29.8**	**-3.3**
ANIG	**Ahuacatlan**	**5.93**	**123**	*i* P	**Pn**	**03 53 57.3**	**+1.8**
ANIG				*i* S	**Sn**	**03 55 05.3**	**+2.6**
CGIG		**6.20**	**15**	*i* P	**Pn**	**03 53 57.2**	**-1.9**
CGIG				*e*S	**Sn**	**03 55 06.5**	**-2.7**
TUC	**Tucson**	**7.95**	**354**	*e*Pn	**Pn**	**03 54 20.5**	**-2.7**
GDL2	**Guadalupe Moun**	**9.17**	**31**	*e*Pn	**Pn**	**03 54 38.6**	**-1.4**
LNIG	**Linares**	**9.46**	**85**	*i* P	**Pn**	**03 54 41.6**	**-2.4**
LNIG				*i* S	**Sn**	**03 56 28.5**	**-1.1**
GLA	**Glamis**	**9.69**	**334**	*e*Pn	**Pn**	**03 54 46.7**	**-0.3**
LENM	**Lemitar**	**10.07**	**14**	*e*Pn	**Pn**	**03 54 51.1**	**-1.2**
BNM	**Barren Site**	**10.14**	**15**	*e*Pn	**Pn**	**03 54 53.5**	**+0.2**
BAR	**Barrett**	**10.22**	**326**	*e*Pn	**Pn**	**03 54 53.4**	**-0.9**
LAZ	**Ladron**	**10.27**	**13**	*e*Pn	**Pn**	**03 54 55.9**	**+0.9**
LPM	**Los Pinos Moun**	**10.29**	**15**	*e*Pn	**Pn**	**03 54 55.5**	**+0.2**
JCT	**Junction City**	**10.80**	**54**	*e*Pn	**Pn**	**03 55 03.3**	**+1.0**
PFO	**Pinyon Flat Ob**	**10.86**	**329**	Pn	**Pn**	**03 55 01.3**	**-1.8**
	0.2nm,0.3s,baz=154,slow=12,SNR=27						
PFO				Sn	**Sn**	**03 57 07.2**	**+3.2**
	0.1nm,0.3s,baz=198,slow=18,SNR=2.0						
PFO				LR	LR	03 58 34.9	
	comp=Z,788nm,21.7s,baz=165,slow=35						
PFO	**Pinyon Flat Ob**	**10.86**	**329**	Pn	**Pn**	**03 55 01.3**	**-1.8**
PFO				Sn	**Sn**	**03 57 07.2**	**+3.2**
PFO				LR	LR	03 58 34.9	
ANMO	**Albuquerque**	**10.94**	**15**	Pn	**Pn**	**03 55 04.4**	**+0.1**
	0.1nm,0.3s,baz=210,slow=14,SNR=10						
ANMO	**Albuquerque**	**10.94**	**15**	*e*Pn	**Pn**	**03 55 04.8**	**+0.5**
WUAZ	**Wupatki**	**11.18**	**354**	*e*Pn	**Pn**	**03 55 09.0**	**+1.4**
LDFC	**Landfair**	**11.60**	**338**	*e*Pn	**Pn**	**03 55 14.8**	**+1.5**
MWC	**Mount Wilson**	**12.14**	**326**	*e*Pn	**Pn**	**03 55 20.2**	**-0.5**
GSC	**Goldstone**	**12.45**	**333**	*e*Pn	**Pn**	**03 55 25.4**	**+0.6**
AMTX	**Amarillo**	**12.65**	**32**	*e*Pn	**Pn**	**03 55 26.2**	**-1.4**
OSI	**Osito Adit**	**12.79**	**325**	*e*Pn	**Pn**	**03 55 29.2**	**-0.4**
	60nm,0.9s						
SHPR	**Sheep Range**	**12.93**	**341**	*e*Pn	**Pn**	**03 55 31.9**	**+0.6**
ISA	**Isabella**	**13.49**	**328**	*e*Pn	**Pn**	**03 55 38.9**	**-0.2**
HKT	**Hockley**	**13.65**	**63**	*e*Pn	**Pn**	**03 55 42.1**	**+0.7**
	17nm,1.4s						
TPNV	**Topopah Spring**	**13.68**	**338**	*e*Pn	**Pn**	**03 55 43.0**	**+1.3**
PV01	**Paradox Valley**	**13.76**	**4**	*e*Pn	**Pn**	**03 55 44.6**	**+1.9**
SDCO	**Great Sand Dun**	**13.84**	**15**	*e*Pn	**Pn**	**03 55 45.5**	**+1.7**
PV10	**Paradox Valley**	**13.98**	**3**	*e*Pn	**Pn**	**03 55 46.8**	**+1.1**
WMOK	**Wichita Mounta**	**14.11**	**40**	*e*Pn	**Pn**	**03 55 44.7**	**-2.9**
MSU	**Marysvale**	**14.23**	**353**	*e*Pn	**Pn**	**03 55 51.0**	**+1.8**
SRU	**San Rafael**	**14.70**	**358**	*e*Pn	**Pn**	**03 55 56.5**	**+0.9**
TMUT	**Trail Mountain**	**14.92**	**356**	*e*Pn	**Pn**	**03 55 59.8**	**+1.2**
MTUM	**Tungsten Hills**	**14.93**	**332**	*e*Pn	**Pn**	**03 55 59.3**	**+0.6**
NATX	**Nacogdoches**	**15.29**	**58**	*e*Pn	**Pn**	**03 56 04.1**	**+0.7**
	40nm,1.1s						
NLU	**North Lily Min**	**15.65**	**354**	*e*Pn	**Pn**	**03 56 08.6**	**+0.6**
MPU	**Maple Canyon**	**15.67**	**355**	*e*Pn	**Pn**	**03 56 10.6**	**+2.3**
NVAR	**Mina Array Bea**	**15.75**	**335**	Pn	**Pn**	**03 56 09.6**	**+0.2**
	0.5nm,0.3s,baz=167,slow=12,SNR=62						
CMIG	**Matias Romero**	**15.76**	**115**	Pn	**Pn**	**03 56 15.9**	**+6.3**
	0.1nm,0.3s,baz=293,slow=9.7,SNR=5.7						
CMIG				LR	LR	04 02 12.0	
	comp=Z,1µm,18.4s,baz=284,slow=37						
ISCO	**Idaho Springs**	**15.79**	**12**	*e*Pn	**Pn**	**03 56 11.0**	**+1.1**
	25nm,1.2s						
DUG	**Dugway**	**15.97**	**352**	*e*Pn	**Pn**	**03 56 13.5**	**+1.2**
	24nm,1.0s						
DAU	**Daniels Canyon**	**16.04**	**356**	*e*Pn	**Pn**	**03 56 13.9**	**+0.8**
JLU	**Jordanelle**	**16.24**	**356**	*e*P	**Pn**	**03 56 18.5**	**+2.9**
WAKR	**Walker**	**16.27**	**332**	*e*Pn	**Pn**	**03 56 17.6**	**+1.5**
CMB	**Columbia Colle**	**16.31**	**329**	*e*Pn	**Pn**	**03 56 16.0**	**-0.6**
BGU	**Big Grassy Mou**	**16.72**	**352**	*e*Pn	**Pn**	**03 56 22.0**	**+0.3**
CBKS	**Cedar Bluff**	**16.76**	**28**	*e*Pn	**Pn**	**03 56 22.5**	**+0.2**
ELK	**Elko**	**16.94**	**346**	Pn	**Pn**	**03 56 23.9**	**-0.6**
	0.1nm,0.3s,baz=167,slow=6.9,SNR=8.1						
ELK				LR	LR	04 02 39.6	
	comp=Z,600nm,18.8s,baz=162,slow=37						
ELK	**Elko**	**16.94**	**346**	*e*Pn	**Pn**	**03 56 23.6**	**-0.9**
SPUT	**South Promonto**	**17.03**	**353**	*e*Pn	**Pn**	**03 56 25.8**	**+0.2**
BMN	**Battle Mountai**	**17.17**	**341**	*e*P	**Pn**	**03 56 29.8**	**+2.4**
HWUT	**Hardware Ranch**	**17.25**	**356**	*e*Pn	**Pn**	**03 56 28.9**	**+0.6**
PAHR	**Pah Rah Range**	**17.27**	**335**	*e*Pn	**Pn**	**03 56 28.8**	**+0.1**
PHWY	**Pilot Hill**	**17.27**	**11**	*e*Pn	**Pn**	**03 56 29.8**	**+1.1**
MIAR	**Mount Ida**	**17.41**	**51**	*e*Pn	**Pn**	**03 56 29.9**	**-0.5**
	21nm,1.1s						
RWWY	**Rawlins**	**17.41**	**7**	*e*Pn	**Pn**	**03 56 31.9**	**+1.5**
HVU	**Hansel Valley**	**17.53**	**353**	*e*P	**Pn**	**03 56 33.0**	**+1.1**
OHCM	**Honcut**	**17.87**	**329**	*e*Pn	**Pn**	**03 56 36.0**	**-0.1**
BW06	**Boulder Array**	**18.35**	**1**	*e*P	**Pn**	**03 56 41.4**	**-0.5**
	26nm,1.2s						
PDAR	**Pinedale Array**	**18.35**	**1**	P	**Pn**	**03 56 41.4**	**-0.6**
	0.1nm,0.3s,baz=163,slow=11,SNR=64						
UALR	**University of**	**18.39**	**52**	*e*Pn	**Pn**	**03 56 41.6**	**-1.0**
KSU1	**Kansas State U**	**18.47**	**34**	*e*Pn	**Pn**	**03 56 43.4**	**-0.1**
REDW	**Red Top Meadow**	**18.96**	**358**	*e*P	**Pn**	**03 56 48.9**	**-0.4**
	66nm,1.8s						
RRI2	**Red Ridge**	**18.96**	**357**	*e*P	**Pn**	**03 56 48.8**	**-0.6**
	31nm,1.4s						
SNOW	**Snow King Moun**	**19.05**	**358**	*e*Pn	**Pn**	**03 56 50.2**	**-0.2**
	25nm,1.3s						
LOHW	**Long Hollow**	**19.20**	**358**	*e*P	**Pn**	**03 56 51.2**	**-1.0**
DCID1	**Drake Creek**	**19.20**	**357**	*e*Pn	**Pn**	**03 56 52.8**	**+0.5**
WDC	**Whiskeytown Da**	**19.35**	**330**	*e*Pn	**Pn**	**03 56 53.2**	**-0.8**
LTIM	**Timbered Crate**	**19.37**	**333**	P	**Pn**	**03 56 53.4**	**-0.9**
WVOR	**Wild Horse Val**	**19.43**	**340**	*e*P	**Pn**	**03 56 53.5**	**-1.4**
	14nm,1.0s						
IMW	**Indian Meadow**	**19.50**	**358**	*e*P	**Pn**	**03 56 54.7**	**-1.1**
	16nm,1.2s						
HLID	**Hailey**	**19.50**	**350**	*e*P	**Pn**	**03 56 54.8**	**-1.0**
MOD	**Modoc**	**19.52**	**336**	*e*Pn	**Pn**	**03 56 54.9**	**-1.2**
HBAR	**Harrisburg**	**19.98**	**52**	*e*P	**Pn**	**03 57 00.1**	**-1.6**
KHMM	**Horse Mountain**	**20.14**	**328**	*e*Pn	**P**	**03 57 01.5**	**0.0**
LKWY	**Lake**	**20.15**	**359**	*e*P	**P**	**03 57 03.8**	**+2.2**
	31nm,1.4s						
RSSD	**Black Hills**	**20.27**	**12**	*e*P	**P**	**03 57 03.8**	**+1.0**
	3.0nm,0.8s						
YBH	**Yreka Blue Hor**	**20.35**	**331**	P	**P**	**03 57 01.9**	**-1.9**
	2.7nm,0.7s,baz=134,slow=6.4,SNR=11						
YBH				LR	LR	04 05 31.2	
	comp=Z,309nm,19.7s,MS3.7,baz=150,slow=39						
YBH	**Yreka Blue Hor**	**20.35**	**331**	P	**P**	**03 57 01.9**	**-1.9**
YBH				*e*Pn	**P**	**03 57 05.8**	**+2.0**
YBH				LR	LR	04 05 31.2	
TEIG	**Tepich**	**20.38**	**97**	P	**P**	**03 57 07.0**	**+2.7**
	7.4nm,0.7s,baz=279,slow=7.5,SNR=4.3						
TEIG				LR	LR	04 05 29.6	
	comp=Z,255nm,21.6s,MS3.5,baz=330,slow=38						
QLMT	**Earthquake Lak**	**20.45**	**357**	*e*Pn	**P**	**03 57 08.1**	**+3.3**
RLMT	**Red Lodge**	**20.71**	**1**	*e*P	**P**	**03 57 08.3**	**+0.7**
KRMB	**Red Mountain**	**20.73**	**329**	*e*P	**P**	**03 57 07.2**	**-0.6**
DLMT	**Dillon**	**21.06**	**355**	*e*P	**P**	**03 57 12.4**	**+1.1**
	11nm,1.1s,mb4.1						
BOZ	**Bozeman (W)**	**21.27**	**357**	*e*P	**P**	**03 57 13.9**	**+0.2**
	13nm,1.5s,mb4.0						
GLAT	**Glass**	**21.30**	**51**	*e*P	**P**	**03 57 15.4**	**+1.4**
BMO	**Blue Mountains**	**21.31**	**345**	*e*P	**P**	**03 57 13.5**	**-0.6**
GCMT	**Greycliff**	**21.37**	**0**	*e*P	**P**	**03 57 14.7**	**-0.1**
FVM	**French Village**	**21.40**	**46**	*e*P	**P**	**03 57 14.0**	**-1.1**
	55nm,1.9s,mb4.6						
KBO	**Bosley Butte**	**21.41**	**330**	*e*P	**P**	**03 57 15.3**	**0.0**
LRM	**Limekiln Ridge**	**21.50**	**355**	*e*P	**P**	**03 57 16.4**	**+0.2**
PLAL	**Pickwick Lake**	**21.63**	**56**	*e*P	**P**	**03 57 18.9**	**+1.2**
KEBM	**Edson Butte**	**21.98**	**331**	*e*P	**P**	**03 57 21.4**	**0.0**
SIUC	**Southern Illin**	**22.06**	**48**	*e*P	**P**	**03 57 22.6**	**+0.3**
	29nm,1.1s,mb4.6						
ECSD	**EROS,Sioux Fal**	**22.16**	**26**	*e*P	**P**	**03 57 22.2**	**-0.9**
SCIA	**State Center**	**22.29**	**34**	*e*P	**P**	**03 57 24.9**	**+0.3**
	99nm,1.8s,mb4.9						
LAO	**LASA Array**	**22.46**	**7**	*e*P	**P**	**03 57 26.3**	**-0.1**
	15nm,1.0s,mb4.4						
CROR	**Criterion Ridg**	**22.46**	**339**	P	**P**	**03 57 26.9**	**+0.4**
LNOR	**Lincton Mounta**	**22.50**	**344**	*e*P	**P**	**03 57 25.6**	**-1.2**
MSO	**Missoula**	**22.65**	**353**	*e*P	**P**	**03 57 28.7**	**+0.4**
CHMT	**Chamberlain Mo**	**22.66**	**354**	*e*P	**P**	**03 57 28.4**	**-0.1**
SSOR	**Sweet Springs**	**22.86**	**336**	P	**P**	**03 57 30.6**	**0.0**
OLIL	**Olney**	**23.34**	**47**	*e*P	**P**	**03 57 36.2**	**+0.4**
	45nm,1.4s,mb4.7						

EGMT	Eagleton	23.60	0	eP	P	03 57 37.4	-0.8
OD2	Odessa Site #2	24.03	345	eP	P	03 57 41.2	-0.9
DGMT	Dagmar	24.46	9	eP	P	03 57 46.5	+0.5
	80nm,1.1s,mb5.1						
CPCT	Cooper Cave	24.51	57	eP	P	03 57 46.5	-0.1
NEW	Newport	24.53	348	eP	P	03 57 45.9	-0.8
JFWS	Jewell Farm	24.56	36	eP	P	03 57 47.7	+0.7
	14nm,1.0s,mb4.4						
ETW	Entiat	24.64	343	eP	P	03 57 46.1	-1.5
WALA	Waterton Lakes	24.84	354	eP	P	03 57 48.8	-0.8
TKL	Tuckaleechee C	25.15	57	P	P	03 57 52.5	+0.1
	6.4nm,0.8s,mb4.2,baz=212,slow=10,SNR=7.8						
TKL				LR	LR	04 08 32.8	
	comp=Z,1μm,19.9s,MS4.4,baz=232,slow=38						
AGMN	Agassiz Refuge	26.32	21	eP	P	03 58 04.1	+1.2
	46nm,1.9s,mb4.7						
ULM	Lac du Bonnet	28.02	19	P	P	03 58 18.9	+0.7
	1.9nm,0.8s,mb3.8,baz=308,slow=12,SNR=2.0						
ULM				LR	LR	04 08 55.2	
	comp=Z,170nm,20.6s,MS3.6,baz=218,slow=35						
DLBC	Dease Lake	36.94	342	eP	P	03 59 36.5	+0.4
YKA	Yellowknife Ar	38.24	356	P	P	03 59 44.5	-2.5
	1.9nm,1.0s,mb3.8,baz=174,slow=7.8,SNR=5.6						
YKA				LR	LR	04 15 57.4	
	comp=Z,236nm,18.6s,MS4.0,baz=165,slow=37						
YKA	Yellowknife Ar	38.24	356	P	P	03 59 44.5	-2.5
OTAV	Otavalo	38.74	124	eP	P	03 59 49.8	-2.0
	6.3nm,1.0s,mb4.3						
ROSC	El Rosal	39.28	114	LR	LR	04 17 51.9	
	comp=Z,139nm,20.1s,MS3.8,baz=18,slow=39						
SCHQ	Schefferville	43.91	35	LR	LR	04 18 45.1	
	comp=Z,409nm,18.0s,MS4.4,baz=262,slow=36						
DAWY	Dawson	44.16	342	eP	P	04 00 35.9	+0.3
TAOE	Nuku Hiva Isla	44.33	226	eS	S	04 07 10.4	-0.1
	643nm,27.2s						
TAOE				eLR	LR	04 12 58.0	
	2μm,26.7s						
EGAK	Eagle	45.20	342	eP	P	04 00 43.2	-0.6
	7.7nm,0.9s,mb4.5						
IMA2	Indian Mountai	49.98	338	eP	P	04 01 20.2	-0.8
RKT	Rikitea	53.14	209	eLR	LR	04 17 04.2	
	312nm,29.8s						
PPT	Papeete	56.91	227	eS	S	04 10 06.6	+1.5
	133nm,26.2s						
PPT				eLR	LR	04 18 46.5	
	652nm,27.8s,baz=30						
PPT	Papeete	56.91	227	LR	LR	04 19 41.7	
	comp=Z,346nm,18.5s,MS4.5,baz=1.3,slow=29						
JMIC	Jan Mayen	70.79	20	LR	LR	04 34 23.9	
	comp=Z,167nm,19.3s,MS4.3,baz=272,slow=36						
CPUP	Villa Florida	71.52	131	P	P	04 03 50.5	+2.3
	2.4nm,0.8s,mb4.2,baz=314,slow=6.0,SNR=5.2						
CPUP				LR	LR	04 36 25.3	
	comp=Z,48nm,19.6s,MS3.8,baz=167,slow=37						
PETK	Petropavlovsk-	72.31	321	P	P	04 03 51.7	-0.9
	4.7nm,0.9s,mb4.4,baz=81,slow=9.3,SNR=6.8						
PETK				LR	LR	04 29 00.5	
	comp=Z,49nm,20.4s,MS3.8,baz=280,slow=30						
PLCA	Paso Flores	74.36	150	LR	LR	04 30 48.3	
	comp=Z,145nm,19.3s,MS4.3,baz=187,slow=31						
ARCES	ARCESS Array B	81.03	14	P	P	04 04 40.7	-0.9
	1.7nm,0.6s,mb4.2,baz=305,slow=2.9,SNR=9.3						
ARCES				LR	LR	04 39 40.5	
	comp=Z,99nm,19.7s,MS4.2,baz=192,slow=35						
NOA	NORSAR Array B	82.56	25	LR	LR	04 41 28.4	
	comp=Z,182nm,18.1s,MS4.5,baz=295,slow=36						
ESDC	Sonseca Array	86.08	48	LR	LR	04 43 53.1	
	comp=Z,98nm,18.1s,MS4.2,baz=310,slow=36						
MDT	Midelt	88.88	54	LR	LR	04 45 24.9	
	comp=Z,188nm,19.1s,MS4.5,baz=104,slow=36						
GERES	GERESS Array B	91.43	33	LR	LR	04 45 07.8	
	comp=Z,171nm,21.2s,MS4.5,baz=289,slow=35						
AKASG	Malin Array Be	96.98	25	LR	LR	04 50 10.2	
	comp=Z,146nm,18.6s,MS4.5,baz=335,slow=36						
KEST	Kesra	97.08	46	LR	LR	04 48 56.9	
	comp=Z,63nm,18.7s,MS4.1,baz=286,slow=35						
VAE	Valguarnera	99.20	42	LR	LR	04 48 56.4	
	comp=Z,160nm,18.4s,MS4.5,baz=306,slow=34						
CD2	Chengdu	116.30	328	ePKP	PKPdf	04 11 08.3	-2.7
GYA	Guiyang	118.37	323	ePDIF	Pdif	04 07 33.8	-0.1
GYA				PKP	PKPdf	04 11 13.5	-1.6
GYA				PP	PP	04 12 33.9	+3.4
GYA				PP	PP		
	comp=Z,80nm,6.9s						
WRA	Warramunga Arr	120.84	261	PKP	PKPdf	04 11 20.0	+0.1
	comp=Z,0.7nm,0.8s,baz=63,slow=1.7,SNR=6.2						
KMI	Kunming	121.55	325	PKP	PKPdf	04 11 19.7	-1.6
KMI				XPKP		04 11 26.7	
ASAR	Alice Springs	122.25	256	PKP	PKPdf	04 11 22.4	-0.1
	comp=Z,0.6nm,0.8s,baz=160,slow=1.3,SNR=5.9						

IDC 03 04:25:32.3±11.0, 2515N×10898W, h0^{km}, mb3.6/1, mb1 3.9/3, mb1mx3.6/21, mbtmp3.4/3, ML3.4/2, MS3.9/3, Ms1 3.9/3, ms1mx3.2/25, Error ellipse: s-maj=200.9km s-min=95.6km az=27.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	15.42	331	Pn	Pn	04 29 14.5	+3.3
	0.1nm,0.3s,baz=152,slow=11,SNR=6.0						
PDAR	Pinedale Array	17.58	359	P	Pn	04 29 38.9	+0.2
	0.0nm,0.3s,baz=178,slow=9.9,SNR=4.2						
ULM	Lac du Bonnet	27.04	19	LR	LR	04 43 23.7	
	comp=Z,110nm,18.3s,baz=265,slow=40						
YKA	Yellowknife Ar	37.53	356	P	P	04 32 47.6	-0.1
	0.6nm,0.6s,baz=166,slow=8.1,SNR=3.2						
PPT	Papeete	58.02	227	LR	LR	04 53 34.1	
	comp=Z,146nm,19.6s,baz=325,slow=29						
SPITS	Spitsbergen Ar	72.22	10	LR	LR	05 10 17.5	
	comp=Z,142nm,19.0s,baz=180,slow=37						

*BJI **03** 04:26:10.4, 2503N×10893W, h8^{km}, Ms4.5, Msz4.2*
*ISCJB **03** 04:26:16.4±0.5, 2457N±005×10976W±007, h10^{km}, mb4.1/9, MS3.8/2, Error ellipse: s-maj=10.0km s-min=5.9km az=34.7*
*IDC **03** 04:26:17.2±1.1, 2469N×10964W, h0^{km}, mb4.2/4, mb1 4.4/6, mb1mx4.0/20, mbtmp4.1/6, ML4.0/1, MS3.7/2, Ms1 3.7/2, ms1mx3.1/25, Error ellipse: s-maj=47.7km s-min=25.0km az=74.0*
*NEIC **03** 04:26:18.0±0.6, 2454N×10988W, h10^{km}, mb4.2/13, Error ellipse: s-maj=10.7km s-min=8.9km az=114.0*
ISC 03 04:26:18.0±0.5, 2454N±005×10979W±006, h10^{km}, n53, σ1^{s}18/46, mb4.1/9, MS3.8/2, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	0.64	227	i P	Pg	04 26 29.3	-1.1
LPIG				i S	Sg	04 26 39.8	+1.0
BNM	Barren Site	9.96	15	Pn	Pn	04 28 41.5	+0.2
ANMO	Albuquerque	10.77	15	Pn	Pn	04 28 54.8	+2.5
GSC	Goldstone	12.32	332	ePn	Pn	04 29 13.8	+0.3
WMOK	Wichita Mounta	13.95	41	ePn	Pn	04 29 39.0	+3.3
NVAR	Mina Array Bea	15.62	334	Pn	Pn	04 30 00.8	+2.6
	0.1nm,0.3s,baz=162,slow=12,SNR=7.9						
DUG	Dugway	15.82	351	ePn	Pn	04 30 01.4	+0.7
	18nm,1.1s						
DAU	Daniels Canyon	15.88	356	ePn	Pn	04 30 03.3	+1.8
JLU	Jordanelle	16.08	355	ePn	Pn	04 30 06.3	+2.2
WAKR	Walker	16.15	332	ePn	Pn	04 30 06.2	+1.1
CBKS	Cedar Bluff	16.59	29	ePn	Pn	04 30 13.6	+3.0
	30nm,1.0s						
HWUT	Hardware Ranch	17.09	355	ePn	Pn	04 30 16.7	-0.1
	34nm,1.6s						
MIAR	Mount Ida	17.26	51	ePn	Pn	04 30 22.0	+2.9
HVU	Hansel Valley	17.37	353	ePn	Pn	04 30 20.7	+0.2
PDAR	Pinedale Array	18.18	1	P	Pn	04 30 29.8	-0.7
	0.1nm,0.3s,baz=166,slow=8.7,SNR=9.9						
REDW	Red Top Meadow	18.80	358	ePn	Pn	04 30 38.4	+0.5
	16nm,1.6s						
RRI2	Red Ridge	18.80	357	eP	Pn	04 30 37.6	-0.5
	16nm,1.2s						
SNOW	Snow King Moun	18.89	358	ePn	Pn	04 30 38.2	-1.0
	15nm,1.3s						
TPAW	Teton Pass	18.93	357	eP	Pn	04 30 37.7	-1.8
	21nm,1.4s						
IMW	Indian Meadow	19.33	357	eP	Pn	04 30 43.3	-1.1
HLID	Hailey	19.35	350	ePn	Pn	04 30 46.0	+1.3
MOD	Modoc	19.39	336	ePn	Pn	04 30 43.6	-1.6
FLWY	Flagg Ranch	19.51	358	eP	Pn	04 30 45.2	-1.3
	20nm,1.4s						
QLMT	Earthquake Lak	20.29	357	ePn	P	04 30 54.0	+0.3
MCMT	McKenzie Canyo	20.39	354	eP	P	04 30 54.3	-0.7
BOZ	Bozeman (W)	21.11	356	eP	P	04 31 01.2	-1.5
	18nm,1.8s,mb4.1						
GCMT	Greycliff	21.20	0	eP	P	04 31 01.7	-2.0
FVM	French Village	21.24	46	eP	P	04 31 04.5	+0.3
	9.0nm,1.1s,mb4.0						
LRM	Limekiln Ridge	21.34	355	eP	P	04 31 05.5	+0.3
PLAL	Pickwick Lake	21.49	56	eP	P	04 31 06.8	-0.1
	12nm,1.3s,mb4.1						
SIUC	Southern Illin	21.91	48	eP	P	04 31 10.7	-0.7
ECSD	EROS,Sioux Fal	21.98	26	eP	P	04 31 12.0	0.0
	8.0nm,1.0s,mb4.1						
LAO	LASA Array	22.29	6	eP	P	04 31 15.2	-0.1
MSO	Missoula	22.49	353	eP	P	04 31 17.2	-0.2
EGMT	Eagleton	23.44	0	eP	P	04 31 27.9	+0.5
CPCT	Cooper Cave	24.37	58	eP	P	04 31 35.8	-0.5
NEW	Newport	24.38	348	eP	P	04 31 36.0	-0.2
WALA	Waterton Lakes	24.69	353	eP	P	04 31 37.8	-1.2
	13nm,1.0s,mb4.4						
ELN	Prospectdale	27.83	56	eP	P	04 32 06.1	-1.5
ULM	Lac du Bonnet	27.85	19	P	P	04 32 06.8	-0.8
	5.7nm,1.0s,mb4.2,baz=170,slow=13,SNR=4.1						
YKA	Yellowknife Ar	38.08	356	P	P	04 33 35.8	-0.7
	0.7nm,0.8s,mb3.4,baz=178,slow=6.9,SNR=5.4						
DAWY	Dawson	44.02	342	eP	P	04 34 24.4	-1.0
BORG	Borgarnes	67.44	28	LR	LR	05 04 02.7	
	comp=Z,65nm,20.8s,MS3.8,baz=20,slow=34						
CPUP	Villa Florida	71.59	131	P	P	04 37 40.7	+1.0
	1.0nm,0.6s,mb3.9,baz=318,slow=6.9,SNR=4.0						
PETK	Petropavlovsk-	72.22	321	P	P	04 37 44.5	+1.4
	3.9nm,1.0s,mb4.3,baz=88,slow=12,SNR=5.4						
MDJ	Mudanjiang	92.42	322	P	P	04 39 24.0	-5.1
KEST	Kesra	96.93	46	LR	LR	05 23 38.9	
	comp=Z,24nm,18.1s,MS3.7,baz=253,slow=36						
BJI	Beijing	102.79	326	P	Pdif	04 40 11.0	-4.8
LZH	Lanzhou	111.84	331	ePKP	PKiKP	04 44 45.1	-8.4
CD2	Chengdu	116.19	328	ePKP	PKPdf	04 44 56.1	-5.9
WRA	Warramunga Arr	120.92	261	PKP	PKPdf	04 45 12.6	+1.3
	1.2nm,0.9s,baz=68,slow=2.4,SNR=5.6						
KMI	Kunming	121.44	325	PKP	PKPdf	04 45 07.4	-4.9
ASAR	Alice Springs	122.34	257	PKP	PKPdf	04 45 14.4	+0.5
	1.0nm,0.8s,baz=71,slow=1.7,SNR=7.5						

*IDC **03** 04:41:32.9±1.0, 560S×14648E, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx4.0/16, mbtmp4.0/10, ML3.9/1, MS3.2/1, Ms1 3.2/1, ms1mx2.8/18, Error ellipse: s-maj=35.3km s-min=13.8km az=106.0*
*NEIC **03** 04:41:34.6±0.8, 547S×14637E, h10^{km}, mb4.6/1, Error ellipse: s-maj=22.1km s-min=12.4km az=94.0*
*ISCJB **03** 04:41:40.4±2.5, 57S±0.1×1464E±02, h75^{km}±27^{km}, mb3.8/8, Error ellipse: s-maj=26.3km s-min=18.4km az=25.5*
ISC 03 04:41:42.0±2.3, 57S±01×1463E±01, h71^{km}±25^{km}, n18, σ0^{s}98/16, mb3.8/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.76	167	ePn	Pn	04 42 38.3	+0.7
COEN	Coen	8.76	201	ePn	Pn	04 43 46.4	+0.4
	5.1nm,0.6s						
CTA	Charters Tower	14.29	180	Pn	Pn	04 45 00.0	-0.8
	baz=351,slow=15,SNR=2.4						
KAKA	Kakadu	15.36	242	ePn	Pn	04 45 15.4	+0.6
	17nm,0.5s						
WB2	Warramunga Arr	18.32	218	eP	Pn	04 45 49.8	-1.6
WRA	Warramunga Arr	18.33	218	P	Pn	04 45 50.2	-1.2
	0.4nm,0.3s,baz=40,slow=12,SNR=19						
WRA				S	S	04 49 06.4	-10
	0.2nm,0.3s,baz=45,slow=24,SNR=5.4						
WRA				PcP	PcP	04 50 22.4	+2.6
	0.2nm,0.3s,baz=27,slow=1.9,SNR=9.1						
ASAR	Alice Springs	21.49	213	P	P	04 46 25.1	+0.2
	2.0nm,0.8s,mb3.5,baz=40,slow=8.8,SNR=14						
ASAR				S	S	04 50 27.4	+8.1
	0.3nm,0.5s,baz=33,slow=24,SNR=4.4						
FITZ	Fitzroy Crossi	23.66	237	P	P	04 46 46.9	-0.2
	5.3nm,0.9s,mb3.9,baz=82,slow=9.1,SNR=20						
STKA	Stephens Creek	26.40	189	P	P	04 47 13.4	+1.5
	3.6nm,0.8s,mb3.8,baz=326,slow=23,SNR=4.7						
KSRS	Korea Array	46.25	340	P	P	04 50 00.3	+0.1
	0.8nm,0.6s,mb3.6,baz=152,slow=8.1,SNR=4.7						
KSRS				LR	LR	05 07 15.4	
	comp=Z,28nm,18.8s,baz=260,slow=33						
CMAR	Chiang Mai Arr	52.52	298	P	P	04 50 50.2	+1.8
	1.0nm,0.3s,mb4.3,baz=116,slow=6.1,SNR=8.6						
PETK	Petropavlovsk-	59.38	8	P	P	04 51 35.6	-1.2
	1.3nm,0.7s,mb4.1,baz=159,slow=8.7,SNR=3.8						
SONM	Songino Array	63.83	331	P	P	04 52 05.9	-0.9
	0.4nm,0.4s,mb3.6,baz=134,slow=6.4,SNR=3.7						
MKAR	Makanchi Array	76.85	321	P	P	04 53 27.0	+0.7
	0.6nm,0.5s,mb3.5,baz=117,slow=5.9,SNR=2.5						
CPUP	Villa Florida	140.75	145	PKP	PKPdf	05 01 06.3	+1.8
	0.8nm,0.6s,baz=228,slow=6.2,SNR=3.7						
TORD	Torodi Ar. Bea	144.37	285	PKP	PKPdf	05 01 10.9	-0.1
	2.2nm,0.6s,baz=66,slow=3.7,SNR=56						
DBIC	Dimbokro	151.34	273	PKPbc	PKPbc	05 01 29.8	+1.1
	1.9nm,0.5s,baz=57,slow=2.8,SNR=7.4						
BDFB	Brasilia	154.47	146	PKPbc	PKPbc	05 01 35.2	-0.3
	1.7nm,0.6s,baz=46,slow=4.7,SNR=4.6						

IDC 03 04:47:36.4±4.8, 1522S×17351W, h0^{km}, mb3.7/3, mb1 4.1/4, mb1mx3.8/17, mbtmp3.8/4, Error ellipse: s-maj=387.3km s-min=23.7km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.12	52	Pn	Pn	04 48 12.0	-1.1
	87nm,0.3s,baz=255,slow=12,SNR=72						
AFI				Sn	Sn	04 48 31.5	-8.7
	294nm,0.3s,baz=96,slow=19,SNR=22						
WRA	Warramunga Arr	49.78	257	P	P	04 56 31.0	-0.2
	0.4nm,0.7s,baz=92,slow=7.4,SNR=2.7						
ASAR	Alice Springs	50.07	252	P	P	04 56 33.1	-0.2
	1.3nm,0.6s,baz=86,slow=8.1,SNR=24						
PDAR	Pinedale Array	82.20	42	P	P	05 00 00.8	+1.4
	0.4nm,0.8s,baz=218,slow=5.7,SNR=3.6						

*ISK **03** 05:11:01.5, 3953N×3852E, h5^{km}, MD3.7, ML3.6*
*DDA **03** 05:11:02.5, 3954N×3850E, h5^{km}±4^{km}, Md3.6*
*CSEM **03** 05:11:02.5±0.1, 3951N×3852E, h5^{km}, MD3.7, Error ellipse: s-maj=1.3km s-min=1.1km az=175.0*
*ISCJB **03** 05:11:03.7±0.3, 3951N±002×3851E±002, h10^{km}, Error ellipse: s-maj=3.1km s-min=2.7km az=173.7*
ISC 03 05:11:03.6±0.5, 3954N±002×3855E±003, h2^{km}±5^{km}, n57, σ1^{s}04/70, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DARE	Darende-Malaty	0.82	224	ePN	Pn	05 11 26.6	+4.5
PTK	Pertek	0.93	134	PG	Pg	05 11 20.9	-0.4
PTK				SG	Sg	05 11 34.5	+1.1
EZC	Erzincan	1.00	78	PG	Pg	05 11 15.9	-6.9
EZC				SG	Sg	05 11 26.1	-10
ELZG	Elazig	1.10	162	i P	Pg	05 11 23.9	-0.8
ELZG				i S	Sg	05 11 39.8	+0.9
GUMT	Gumushane	1.16	38	PN	Pn	05 11 25.1	-1.7
MYA	Malataya	1.22	184	PN	Pn	05 11 25.6	-2.0
MALT	Malatya	1.23	184	PN	Pn	05 11 25.5	-2.2
SVSK	Karacayir	1.25	288	ePN	Pn	05 11 26.2	-1.8
SVSK				eSN	Sn	05 11 44.6	-0.8
RSDY	Resadiye-TOKAT	1.27	313	ePN	Pn	05 11 26.2	-2.0
SVRC	Sivrice-ELAZID	1.31	153	ePN	Pn	05 11 27.2	-1.6
AKCD	Akcadag	1.34	201	i P	Pg	05 11 27.2	-2.0
AKCD				i S	Sg	05 11 47.6	+1.0
ESPY	Espiye-Giresun	1.38	6	ePN	Pn	05 11 28.9	-0.9
GRSN	GIRESUNGRSN	1.40	351	i P	Pn	05 11 29.0	-1.0
GRSN				i S	Sg	05 11 48.8	+0.4
KOPT	Kop Dagi	1.58	72	i P	Pn	05 11 33.2	+0.7
KOPT				i S	Sg	05 11 58.6	+4.4
SARI	SarD1z-Kayseri	1.68	240	ePN	Pg	05 11 38.0	+2.3
MACK	Trabzon	1.68	33	i P	Pn	05 11 34.5	+0.6
MACK				i S	Sn	05 11 57.7	+1.6
KTUT	Trabzon	1.72	33	ePN	Pn	05 11 34.3	-0.2
TOKT	Tokat	1.72	297	ePN	Pn	05 11 33.8	-0.7
PINB	Pinarbasi	1.88	243	i P	Pn	05 11 37.1	+0.5
PINB				i S	Sg	05 12 05.2	+1.3
ATAB	Bozova	2.08	185	i P	Pg	05 11 42.4	-1.1
BNGL	BINGOL	2.11	105	i P	Pg	05 11 43.0	-1.0
BNGL				i S	Sg	05 12 14.1	+2.8
URFA	Urfa	2.11	174	ePN	Pn	05 11 39.3	-0.5
EZM	Erzurum	2.20	80	ePN	Pn	05 11 41.3	+0.1
ERZM	Erzurum	2.21	80	i P	Pg	05 11 44.7	-1.1
BNN	Bunyan	2.21	253	ePN	Pn	05 11 40.6	-0.6
GZT	Gaziantep	2.32	200	i P	Pn	05 11 42.8	+0.1
KMRS	Kahramanmaras	2.41	213	ePN	Pn	05 11 43.3	-0.6
PZAR	Pazar-Rize	2.43	47	ePN	Pn	05 11 44.6	+0.4
KVT	Kavak	2.45	310	ePN	Pn	05 11 43.7	-0.8
YOZ	Yozgat	2.49	273	ePN	Pn	05 11 44.7	-0.4
GAZ	Gaziantep	2.59	204	ePN	Pn	05 11 45.9	-0.6
ANDN	Andirin	2.61	222	i P	Pn	05 11 46.8	+0.1
ANDN				i S	Sg	05 12 26.6	-0.8
HOMI	Horasan	2.64	78	i P	Pn	05 11 52.3	+5.2
BEST	Besiri	2.70	127	i P	Pn	05 11 53.1	+5.2
MARD	Mardin	2.83	141	i P	Pn	05 11 52.5	+2.6
KOZT	Kozan	2.96	227	ePN	Pn	05 11 51.7	+0.1
BCA	Borcka	3.02	50	ePN	Pn	05 11 53.0	+0.7
ARTV	Artvin	3.06	57	i P	Pg	05 11 59.0	-3.3
ARTV				i S	Sg	05 12 42.2	+0.2
CTKT	Corum	3.08	292	i P	Pn	05 11 54.1	+1.0
CORM	Corum	3.08	283	ePN	Pn	05 11 53.0	-0.2
CDAG	Cicekdag	3.23	273	i P	Pn	05 11 56.0	+0.8
CDAG				i S	Sg	05 12 47.3	+0.1
DIKM	Dikmen	3.27	311	ePN	Pn	05 11 56.0	+0.2
NIG	Nigde	3.39	246	ePN	Pn	05 11 57.3	-0.2
AGRB	Hanur-Agry	3.44	88	ePN	Pn	05 11 58.9	+0.8
BYBT	Boyabat	3.46	305	ePN	Pn	05 11 58.9	+0.4
KARA	Karaisali	3.56	231	ePN	Pn	05 12 00.2	+0.4
KAMT	Kaman	3.74	269	ePN	Pn	05 12 02.5	+0.1
TOS	Tosya	3.77	295	ePN	Pn	05 12 02.8	+0.2
HTY	Hatay	3.91	210	ePN	Pn	05 12 04.9	+0.3
MERS	Mersin	4.14	231	ePN	Pn	05 12 07.8	-0.1
BALT	Daday	4.41	298	i P	Pn	05 12 12.1	+0.7
ANTO	Ankara	4.45	276	ePN	Pn	05 12 12.5	+0.5
SAFT	Safranbolu	4.78	293	ePN	Pn	05 12 17.6	+1.1
IKL	Isikli	5.07	231	ePN	Pn	05 12 21.4	+0.9
KONT	Konya--Tatoy	5.09	254	ePN	Pn	05 12 21.7	+0.9
KIZT	Kizilcal	5.22	265	ePN	Pn	05 12 23.8	+1.2
HDMB	Hadim	5.42	244	ePN	Pn	05 12 26.4	+1.1

BJI 03 05:39:19.2, 2208N×11900E, h15^{km}, ML4.0, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QZH	Quanzhou	2.87	353	⇑iPG	Pg	05 40 11.4	-2.9
QZH				S	Sn	05 40 40.6	+1.8
QZH				Smax			
	comp=N,370nm,0.4s						
QZH				Smax			
	comp=E,800nm,0.5s						
GZH	Guangzhou	5.32	282	P	Pn	05 40 39.0	+0.8
GZH				Smax			
	comp=N,147nm,0.6s						
GZH				Smax			
	comp=E,136nm,0.7s						

MAN 03 05:56:17, 1753N×12271E, h22^{km}, mb4.4, ML3.2, MS3.0, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALP	Palanan	0.54	210	eP	Pb	05 56 29.1	+1.2
PALP				eS	Sb	05 56 39.0	+3.9
CVP	Callao Caves	0.86	281	⇑iP	Pb	05 56 31.8	-1.5
CVP				i S	Sb	05 56 42.0	-2.4
CAUP	Cauayan	1.03	235	eP	Pn	05 56 36.8	+0.7
APYP	Conner	1.43	283	eP	Pn	05 56 41.2	-0.5
APYP				eS	Sn	05 56 55.1	-4.8
ABRA	Dolores	1.91	274	eP	Pn	05 56 48.3	+0.1
ABRA				eS	Sn	05 57 08.5	-3.0
BALP	Baler	2.09	211	eP	Pn	05 56 54.3	+3.6
SIPP	Brgy, Tapao	2.18	281	⇑iP	Pn	05 56 53.1	+1.2
SIPP				i S	Sn	05 57 20.0	+1.8

BJI 03 06:04:21.3, 3555N×9955E, h9^{km}, ML3.4, Ms3.7, Msz3.8, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	Lanzhou	3.53	80	ePG	Pg	06 05 25.2	-3.7
LZH				SG	Sg	06 06 10.6	-4.1
LZH				LR	LR		
	comp=N,723nm,5.0s						
LZH				LR	LR		
	comp=Z,955nm,7.7s						
GTA	Gaotai	3.86	3	P	Pn	06 05 18.9	-1.9
GTA				PG	Pg	06 05 33.8	-1.4
GTA				SG	Sg	06 06 21.9	-3.3
GTA				Smax			
	comp=N,56nm,1.1s						
GTA				Smax			
	comp=E,59nm,1.1s						

*ATH **03** 06:27:07.5, 3679N×2929E, h30^{km}, MD3.3/3*
*ISCJB **03** 06:27:10.6±0.6, 3680N±003×2903E±003, h10^{km}±4^{km}, Error ellipse: s-maj=5.8km s-min=3.7km az=170.3*
*ISK **03** 06:27:10.5, 3684N×2903E, h11^{km}, MD3.2*
*CSEM **03** 06:27:10.1±0.1, 3684N×2904E, h10^{km}, MD3.2, Error ellipse: s-maj=2.3km s-min=1.3km az=175.0*
*DDA **03** 06:27:11.7, 3690N×2900E, h7^{km}±7^{km}, Md3.2*
ISC 03 06:27:11.2±0.5, 3680N±003×2902E±003, h13^{km}±4^{km}, n25, σ0^{s}82/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DALT	Dalyan (Mudla)	0.31	264	PG	Pg	06 27 17.1	-0.4
DALT				eSG	Sg	06 27 22.3	+0.6
TURN	Turunc	0.34	282	i P	Pg	06 27 22.4	+4.3
TURN				i S	Sg	06 27 31.4	+8.7
GOLH	Golhisar	0.61	45	i P	Pg	06 27 21.9	-1.3
GOLH				i S	Sg	06 27 32.0	+0.6
YER	Yerkesik	0.67	300	ePG	Pg	06 27 23.7	-0.7
YER				eSG	Sg	06 27 34.0	+0.7
ELL	Elmali	0.72	94	ePG	Pg	06 27 24.8	-0.4
ELL				eSG	Sg	06 27 35.7	+1.1
AKAS	Kas	0.74	140	i P	Pg	06 27 26.8	+1.2
AKAS				i S	Sg	06 27 41.4	+6.1
ARG	Arkhangelos	0.93	231	ePN	Pn	06 27 28.4	-1.6
ARG				eSN	Sn	06 27 43.7	+0.6
DENT	Denizli	0.95	1	ePG	Pg	06 27 28.1	-1.5
MLSB	Milas	1.11	297	ePN	Pn	06 27 32.0	-0.5
AYDN	Tasoluk	1.25	314	i P	Pn	06 27 33.9	-0.5
AYDN				i S	Sb	06 27 52.2	+1.6
BDRM	Kayabasi	1.29	282	i P	Pn	06 27 35.3	+0.3
BDRM				i S	Sb	06 27 52.8	+1.0
BODT	Bodrum	1.39	281	ePN	Pn	06 27 36.8	+0.4
BCK	Bucak	1.42	62	ePN	Pn	06 27 36.0	-0.7
KHL	Karahalli	1.57	15	ePN	Pn	06 27 38.5	-0.3
KHAL	Karahalli	1.61	13	i P	Pn	06 27 38.5	-0.9
KHAL				i S	Sn	06 28 00.7	+0.7
TKTP	Tekketepe	1.61	40	i P	Pn	06 27 40.4	+1.0
TKTP				i S	Sn	06 28 05.1	+5.0
KULA	Kula-Manisa	1.73	351	ePN	Pn	06 27 40.7	-0.4
KARP	Karpathos	1.96	231	ePN	Pn	06 27 43.1	-1.0
SHUT	Suhut-Afyon	2.13	34	ePN	Pn	06 27 46.2	-0.3
AKS	Akhisar	2.28	336	ePN	Pn	06 27 48.7	+0.1
ALT	Altintas	2.41	21	ePN	Pn	06 27 50.1	-0.3
HDMB	Hadim	2.79	86	ePN	Pn	06 27 55.9	+0.3
KIZT	Kizilcal	3.07	47	ePN	Pn	06 27 59.8	+0.3
NPS	Neapolis	3.16	242	ePN	Pn	06 27 59.9	-0.8
IKL	Isikli	3.80	97	ePN	Pn	06 28 10.4	+0.8

NNC 03 06:29:33.6±5.5, 5397N×8734E, h0^{km}, mb3.7, mpv3.3, 4C-7D, Error ellipse: s-maj=42.6km s-min=29.9km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	6.26	242	⇓Pn	Pn	06 31 06.9	-0.2
	4.4nm,0.8s						
KURK				⇑Sn	Sn	06 32 20.5	+1.3
	2.6nm,0.7s						
KURK				⇓Lg		06 32 54.1	
	6.9nm,1.0s						
KURBB	Kurchatov Arra	6.36	242	⇓Pn	Pn	06 31 09.5	+1.0
	1.0nm,0.7s,baz=53,slow=14						
KURBB				⇓Sn	Sn	06 32 21.6	-0.1
	1.2nm,0.7s						
KURBB				⇓Lg		06 32 53.3	
	1.9nm,0.9s,baz=62,slow=34						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**7.87**	**206**	⇑Pn	Pn	06 31 31.8	+2.6
	0.6nm,0.6s,baz=26,slow=14,SNR=7.6						
MK31				⇑Sn	Sn	06 33 06.2	+7.3
	0.5nm,0.4s,baz=95,slow=14,SNR=2.6						
MK31				⇓Lg		06 33 46.7	
	1.9nm,0.6s,baz=26,slow=28,SNR=4.5						
VOSK	**Vostochnaya**	**9.86**	**269**	⇓Pn	Pn	06 31 55.1	-1.4
	1.7nm,0.6s						
VOSK				⇑Sn	Sn	06 33 46.3	-1.5
	6.8nm,0.8s						

*MOS **03** 06:33:05.3±1.9, 5177N×10501E, h16km, mb4.4/1, Error ellipse: s-maj=13.1km s-min=11.4km az=102.2*
MOS Felt (II) at Listvyanka.
BYKL 03 06:33:05.3±0.3, 5172N×10493E, h18km±4km, 6C-2D, FELT I=II MSK at Listvyanka, Lake Baykal region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSTR	**Listvyanka**	**0.16**	**338**	⇑iPG	Pg	06 33 09.7	0.0
LSTR				i		06 33 12.7	
LSTR				pmax	pmax		
	comp=Z,899nm,0.2s						
LSTR				smax			
	comp=E,10µm,0.1s						
LSTR	**Listvyanka**	**0.16**	**338**	⇑iPg	Pg	06 33 09.8	+0.1
	comp=E,384nm,0.2s						
LSTR				⇓iPg	Pg	06 33 09.8	+0.1
	comp=E,285nm,0.2s						
LSTR				⇑iPg	Pg	06 33 09.8	+0.1
	comp=E,817nm,0.2s						
LSTR				iSg	Sg	06 33 12.7	+0.1
IRK	**Irkutsk**	**0.66**	**322**	ePG	Pg	06 33 18.1	-0.3
IRK				e		06 33 26.8	
IRK				pmax	pmax		
	comp=Z,614nm,0.3s						
IRK				smax			
	comp=N,769nm,0.4s						
IRK	**Irkutsk**	**0.66**	**322**	⇑iPg	Pg	06 33 18.0	-0.4
IRK				eSg	Sg	06 33 26.9	-0.3
IRK				Pmax			
	comp=N,829nm,0.3s						
IRK				Smax			
	comp=N,2µm,0.4s						
TLY	**Talaya**	**0.80**	**268**	c iPG	Pg	06 33 20.2	-0.7
TLY				e		06 33 31.0	
TLY	**Talaya**	**0.80**	**268**	ePg	Pg	06 33 20.6	-0.3
TLY				eSg	Sg	06 33 31.8	+0.3
TLY				Pmax			
	comp=N,69nm,0.1s						
TLY				Smax			
	comp=N,694nm,0.5s						
STDB	**Stepnoy Dvoret**	**1.00**	**63**	ePg	Pg	06 33 24.8	+0.2
STDB				eSg	Sg	06 33 39.1	+1.4
STDB				Pmax			
	comp=N,168nm,0.1s						
STDB				Smax			
	comp=N,3µm,0.3s						
KAB	**Kabansk**	**1.12**	**72**	ePG	Pg	06 33 24.8	-2.1
KAB				e		06 33 41.7	
KAB				pmax	pmax		
	comp=Z,246nm,0.3s						
KAB				smax			
	comp=N,3µm,0.7s						
KAB	**Kabansk**	**1.12**	**72**	ePg	Pg	06 33 26.4	-0.5
KAB				eSg	Sg	06 33 41.5	-0.1
KAB				Pmax			
	comp=N,497nm,0.3s						
KAB				Smax			
	comp=N,3µm,0.5s						
HRMR	**Khuramsha**	**1.26**	**93**	⇓iPg	Pg	06 33 28.1	-1.6
HRMR				eSg	Sg	06 33 44.9	-1.3
TRG	**Tyrgan**	**1.36**	**39**	ePG	Pg	06 33 29.6	-1.9
TRG				e		06 33 46.8	
TRG				pmax	pmax		
	comp=Z,37nm,0.2s						
TRG				smax			
	comp=N,474nm,0.1s						
TRG	**Tyrgan**	**1.36**	**39**	ePg	Pg	06 33 29.7	-1.8
TRG				eSg	Sg	06 33 46.8	-2.4
TRG				Pmax			
	comp=N,36nm,0.2s						
TRG				Smax			
	comp=N,474nm,0.1s						
ARS	**Arshan**	**1.57**	**278**	ePN	Pn	06 33 33.4	+1.2
ARS				e		06 33 54.3	
ARS				pmax	pmax		
	comp=Z,94nm,0.2s						
ARS				smax			
	comp=E,927nm,0.5s						
ARS	**Arshan**	**1.57**	**278**	ePg	Pg	06 33 33.4	-2.1
ARS				e		06 33 34.9	
ARS				eSg	Sg	06 33 53.8	-2.1
ARS				e		06 33 56.3	
ARS				max			
	comp=E,107nm,0.5s						
ARS				max			
	comp=E,920nm,0.6s						
ZAK	**Zakamensk**	**1.70**	**218**	ePN	Pn	06 33 36.1	+2.1
ZAK				e		06 33 58.5	
ZAK				pmax	pmax		
	comp=Z,71nm,0.2s						
ZAK				smax			
	comp=N,404nm,0.2s						
ZAK	**Zakamensk**	**1.70**	**218**	ePn	Pn	06 33 35.0	+1.0
ZAK				ePg	Pg	06 33 36.2	-1.7
ZAK				eSg	Sg	06 33 59.3	-0.7
ZAK				Pmax			
	comp=N,76nm,0.4s						
ZAK				Smax			
	comp=N,404nm,0.2s						
UUDB	**Ulan-Yde**	**1.70**	**84**	⇑iPg	Pg	06 33 35.5	-2.5
UUDB				eSn	Sn	06 33 56.4	+1.0
UUDB				eSg	Sg	06 33 57.9	-2.3
UUDB				Pmax			
	comp=N,66nm,0.5s						
UUDB				Smax			
	comp=N,346nm,0.9s						
MOY	**Mondy**	**2.45**	**270**	ePN	Pn	06 33 48.6	+4.3
MOY				e		06 34 21.0	
MOY				pmax	pmax		
	comp=Z,39nm,0.2s						
MOY				smax			
	comp=N,441nm,1.3s						
MOY	**Mondy**	**2.45**	**270**	ePn	Pn	06 33 44.5	+0.2
MOY				ePg	Pg	06 33 48.7	-3.6
MOY				eSg	Sg	06 34 20.3	-3.7
MOY				Pmax			
	comp=N,39nm,0.3s						
MOY				Smax			
	comp=N,441nm,1.4s						
OGRR	**Ongureny**	**2.52**	**39**	ePN	Pn	06 33 46.4	+1.1
OGRR				e		06 33 50.0	
OGRR				e		06 34 21.4	
OGRR				pmax	pmax		
	comp=Z,22nm,0.4s						
OGRR				smax			
	comp=E,176nm,0.4s						
OGRR	**Ongureny**	**2.52**	**39**	ePn	Pn	06 33 46.6	+1.3
OGRR				ePg	Pg	06 33 50.3	-3.3
OGRR				eSn	Sn	06 34 17.1	+1.7
OGRR				eSg	Sg	06 34 22.5	-3.7
OGRR				Pmax			
	comp=E,19nm,0.3s						
OGRR				Smax			
	comp=E,179nm,0.3s						
MXMB	**Maximikha**	**2.80**	**55**	ePn	Pn	06 33 50.8	+1.7
MXMB				ePg	Pg	06 33 55.7	-3.2
MXMB				e		06 34 21.8	
MXMB				eSg	Sg	06 34 33.7	-1.4
MXMB				Pmax			
	comp=E,16nm,0.3s						
MXMB				Smax			
	comp=E,187nm,0.3s						
ORL	**Orlik**	**3.26**	**287**	ePN	Pn	06 34 02.1	+6.7
ORL				e		06 34 43.5	
ORL				pmax	pmax		
	comp=Z,20nm,0.4s						
ORL				smax			
	comp=N,290nm,0.8s						
ORL	**Orlik**	**3.26**	**287**	ePn	Pn	06 33 58.6	+3.2
ORL				ePg	Pg	06 34 03.2	-4.5
ORL				eSg	Sg	06 34 45.0	-4.9
ORL				Pmax			
	comp=N,18nm,0.6s						
ORL				Smax			
	comp=N,290nm,0.7s						
SYVR	**Suvo**	**3.64**	**56**	ePn	Pn	06 34 01.3	+0.6
SYVR				ePg	Pg	06 34 10.3	-4.8
SYVR				eSn	Sn	06 34 41.8	-1.4
SYVR				eSg	Sg	06 34 58.6	-3.6
SYVR				Pmax			
	comp=N,7.0nm,0.6s						
SYVR				Smax			
	comp=N,34nm,0.4s						
ULN	**Ulaanbaatar**	**4.10**	**160**	ePN	Pn	06 34 08.6	+1.7
YLYR	**Ulyunkhan**	**4.89**	**47**	ePn	Pn	06 34 19.5	+1.6
YLYR				ePg	Pg	06 34 33.6	-5.3
YLYR				eSg	Sg	06 35 36.3	-6.0
YLYR				Pmax			
	comp=N,3.0nm,0.5s						
YLYR				Smax			
	comp=N,29nm,1.4s						
NIZ	**Nizh Angarsk**	**4.90**	**32**	ePn	Pn	06 34 20.9	+3.0
NIZ				ePg	Pg	06 34 32.3	-6.7
NIZ				eSn	Sn	06 35 14.7	+0.6
NIZ				eSg	Sg	06 35 35.8	-6.6
NIZ				Pmax			
	comp=N,5.0nm,0.3s						
NIZ				Smax			
	comp=N,69nm,1.2s						
KPC	**Khapcheranga**	**5.14**	**110**	ePn	Pn	06 34 20.1	-1.2
KPC				ePg	Pg	06 34 36.9	-6.8
KPC				eSg	Sg	06 35 44.6	-5.7
KPC				Pmax			
	comp=N,11nm,0.5s						
KPC				Smax			
	comp=N,36nm,1.3s						
TDJR	**Todzha**	**5.49**	**281**	ePg	Pg	06 34 42.5	-7.8
TDJR				eSg	Sg	06 35 52.5	-8.9
KMO	**Kumora**	**5.59**	**39**	ePg	Pg	06 34 45.2	-7.0
KMO				eSg	Sg	06 35 57.8	-6.6
KMO				Pmax			
	comp=N,4.0nm,0.4s						
KMO				Smax			
	comp=N,52nm,1.3s						
UKT	**Uakit**	**6.41**	**50**	ePn	Pn	06 34 41.0	+2.4
UKT				eSg	Sn	06 36 23.0	+32
UKT				Smax			
	comp=N,21nm,2.0s						
KRAR	**Krasnoyarsk**	**8.32**	**306**	ePN	Pn	06 35 06.1	+1.2
KURK	**Kurchatov**	**16.49**	**277**	eP	Pn	06 36 57.6	+2.2
KURK				pmax	pmax		
	comp=Z,2.0nm,1.3s						

IDC 03 06:45:35.1±8.7, 1183S×16612E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/15, mbtmp3.9/3, MS4.6/1, Ms1 4.6/1, ms1mx3.1/20, Error ellipse: s-maj=261.0km s-min=54.5km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.57**	**251**	P	P	06 51 59.6	0.0
	1.2nm,0.9s,baz=84,slow=8.7,SNR=7.8						
RPZ	**Rata Peaks**	**32.05**	**173**	LR	LR	07 02 35.3	
	comp=Z,917nm,18.3s,baz=287,slow=32						
ASAR	**Alice Springs**	**32.78**	**245**	P	P	06 52 10.2	+0.1
	1.0nm,0.8s,baz=68,slow=9.7,SNR=11						
MKAR	**Makanchi Array**	**94.35**	**317**	P	P	06 58 56.7	0.0
	0.5nm,0.6s,baz=88,slow=5.9,SNR=5.1						

IDC 03 07:10:51.0±2.2, 1616S×6576E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.6/20, mbtmp3.8/4, MS3.6/4, Ms1 3.6/4, ms1mx3.2/32, Error ellipse: s-maj=71.0km s-min=33.6km az=54.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**39.27**	**244**	LR	LR	07 32 42.7	
	comp=Z,67nm,19.1s,baz=262,slow=33						
CMAR	**Chiang Mai Arr**	**47.44**	**45**	P	P	07 19 27.1	-0.6
	1.3nm,0.4s,baz=240,slow=7.2,SNR=4.8						
CMAR				LR	LR	07 34 24.1	
	comp=Z,87nm,21.7s,baz=185,slow=30						
ASAR	**Alice Springs**	**63.99**	**109**	P	P	07 21 26.8	0.0
	0.4nm,0.7s,baz=268,slow=6.5,SNR=5.6						
MKAR	**Makanchi Array**	**64.41**	**13**	P	P	07 21 29.5	+0.7
	0.1nm,0.3s,baz=190,slow=7.3,SNR=2.7						
WRA	**Warramunga Arr**	**64.91**	**105**	P	P	07 21 33.1	+0.3
	0.9nm,0.8s,baz=266,slow=5.7,SNR=5.5						
KSRS	**Korea Array**	**79.07**	**46**	LR	LR	07 52 19.6	
	comp=Z,32nm,21.8s,baz=206,slow=32						
ASAJ	**Asahikawa**	**91.96**	**45**	LR	LR	08 04 30.3	
	comp=Z,35nm,18.5s,baz=296,slow=35						
PDAR	**Pinedale Array**	**153.18**	**352**	PKPbc	PKPbc	07 30 51.4	+0.3
	0.4nm,0.7s,baz=47,slow=2.8,SNR=4.3						
PDAR				PKPab	PKPab	07 31 01.7	-0.8
	0.3nm,0.7s,baz=351,slow=2.0,SNR=3.8						

*DDA **03** 07:37:49.2, 3728N×2674E, h6km±5km, Md3.2*
*ATH **03** 07:37:49.7, 3726N×2688E, h20km±1km, MD3.7/4*
*ISCJB **03** 07:37:50.2±0.4, 3734N±002×2676E±002, h4km±3km, Error ellipse: s-maj=3.1km s-min=2.9km az=159.5*
*ISK **03** 07:37:50.1, 3734N×2678E, h5km, MD3.6*
*CSEM **03** 07:37:50.7±0.1, 3735N×2681E, h10km, MD3.7, Error ellipse: s-maj=1.3km s-min=1.2km az=165.0*
*NEIC **03** 07:37:52.5, 3740N×2674E, h6km, MD3.7(ATH), ML4.0(THE), After THE.*
*THE **03** 07:37:52.5, 3740N×2674E, h6km, ML4.0*
ISC 03 07:37:51.1±0.4, 3734N±002×2677E±002, h6km±3km, n44, σ0^{s}98/69, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.37**	**9**	ePB	**Pg**	**07 37 58.8**	**+0.5**
BODT	**Bodrum**	**0.52**	**122**	PG	**Pg**	**07 38 00.5**	**-0.5**
BODT				eSG	**Sg**	**07 38 08.1**	**+0.3**
GCAM	**G?zelcaml?**	**0.52**	**46**	iP	**Pg**	**07 38 01.0**	**-0.1**
GCAM				iS	**Sg**	**07 38 09.1**	**+1.2**
BDRM	**Kayabasi**	**0.61**	**117**	iP	**Pg**	**07 38 01.8**	**-1.0**
BDRM				iS	**Sg**	**07 38 09.9**	**-0.8**
MLSB	**Milas**	**0.81**	**93**	ePG	**Pg**	**07 38 06.1**	**-0.5**
MLSB				eSG	**Sg**	**07 38 17.4**	**+0.3**
AYDN	**Tasoluk**	**0.94**	**70**	iP	**Pg**	**07 38 08.0**	**-1.2**
AYDN				iS	**Sg**	**07 38 21.5**	**+0.1**
APE	**Apeiranthos**	**1.02**	**255**	ePg	**Pg**	**07 38 11.3**	**+0.6**
APE				eSg	**Sg**	**07 38 26.2**	**+2.2**
APE	**Apeiranthos**	**1.02**	**255**	ePN	**Pn**	**07 38 11.0**	**-1.0**
APE				eSN	**Sn**	**07 38 25.8**	**-0.8**
APE	**Apeiranthos**	**1.02**	**255**	ePg	**Pg**	**07 38 11.3**	**+0.6**
APE				eSn	**Sn**	**07 38 25.8**	**-0.8**
APE				eSg	**Sg**	**07 38 26.2**	**+2.2**
BLCB	**Balcova**	**1.07**	**12**	ePG	**Pg**	**07 38 10.9**	**-0.6**
BLCB				eSG	**Sg**	**07 38 25.7**	**+0.3**
IZM	**Izmir**	**1.13**	**20**	ePN	**Pn**	**07 38 11.6**	**-1.8**
KDAG	**Bornova**	**1.13**	**20**	iP	**Pg**	**07 38 11.8**	**-1.0**
KDAG				iS	**Sg**	**07 38 28.4**	**+0.8**
CHOS	**Chios island**	**1.19**	**332**	ePg	**Pg**	**07 38 13.3**	**-0.6**
CHOS				eSg	**Sg**	**07 38 29.2**	**-0.1**
YER	**Yerkesik**	**1.23**	**99**	ePN	**Pn**	**07 38 13.8**	**-1.0**
SANT	**Santorini**	**1.43**	**228**	ePg	**Pg**	**07 38 17.9**	**-0.5**
SANT				eSg	**Sg**	**07 38 37.7**	**+0.8**
THR5	**Thira Island,**	**1.46**	**231**	ePg	**Pg**	**07 38 18.4**	**-0.8**
THR6	**Thira Island,**	**1.47**	**229**	ePg	**Pg**	**07 38 18.6**	**-0.7**
TURN	**Turunc**	**1.54**	**107**	iP	**Pn**	**07 38 13.6**	**-5.5**
TURN				iS	**Sn**	**07 38 33.7**	**-5.7**
DALT	**Dalyan (Mudla)**	**1.60**	**110**	ePN	**Pn**	**07 38 19.3**	**-0.7**
AKS	**Akhisar**	**1.74**	**28**	ePN	**Pn**	**07 38 22.0**	**+0.1**
KARP	**Karpathos**	**1.82**	**170**	ePN	**Pn**	**07 38 20.8**	**-2.1**
DNZL	**Cakiroluk**	**1.85**	**78**	iP	**Pn**	**07 38 22.7**	**-0.6**
DNZL				iS	**Sg**	**07 38 52.6**	**+2.2**
DENT	**Denizli**	**1.85**	**76**	ePN	**Pn**	**07 38 23.8**	**+0.5**
KULA	**Kula-Manisa**	**1.90**	**51**	ePN	**Pn**	**07 38 24.2**	**+0.1**
PRK	**Paraskevi**	**1.94**	**349**	ePb	**Pb**	**07 38 23.6**	**-3.3**
PRK				eSb	**Sb**	**07 38 48.2**	**-3.2**
PRK	**Paraskevi**	**1.94**	**349**	ePN	**Pn**	**07 38 25.5**	**+0.9**
PRK				eSN	**Sn**	**07 38 51.0**	**+1.7**
PRK	**Paraskevi**	**1.94**	**349**	ePn	**Pn**	**07 38 25.5**	**+0.9**
PRK				eSb	**Sb**	**07 38 48.2**	**-3.2**
AYVA	**Ayvalik**	**1.97**	**358**	iP	**Pg**	**07 38 28.8**	**0.0**
AYVA				iS	**Sg**	**07 38 58.1**	**+3.9**
GOLH	**Golhisar**	**2.23**	**92**	iP	**Pn**	**07 38 29.0**	**+0.4**
GOLH				iS	**Sg**	**07 39 08.2**	**+5.4**
DEMI	**Demirci**	**2.29**	**42**	iP	**Pn**	**07 38 33.9**	**+4.5**
DEMI				iS	**Sn**	**07 39 04.6**	**+6.7**
LAST	**Lasithi**	**2.41**	**206**	ePn	**Pn**	**07 38 31.8**	**+0.8**
LAST				eSn	**Sn**	**07 39 02.7**	**+1.8**
BALB	**Balikesir**	**2.46**	**21**	ePN	**Pn**	**07 38 32.2**	**+0.5**
BALY	**Balya**	**2.49**	**15**	iP	**Pn**	**07 38 31.0**	**-1.2**
BALY				iS	**Sn**	**07 39 12.5**	**+10**
EZN	**Ezine**	**2.50**	**352**	ePN	**Pn**	**07 38 32.8**	**+0.4**
AKAS	**Kas**	**2.53**	**115**	iP	**Pn**	**07 38 33.4**	**+0.6**
AKAS				iS	**Sn**	**07 39 04.2**	**+0.3**
IDI	**Anoyia**	**2.55**	**217**	P	**Pn**	**07 38 33.5**	**+0.6**
BOZC	**Bozcaada**	**2.56**	**348**	iP	**Pn**	**07 38 32.3**	**-0.8**
BOZC				iS	**Sn**	**07 39 02.3**	**-2.2**
ELL	**Elmali**	**2.58**	**102**	ePN	**Pn**	**07 38 33.6**	**+0.2**
DST	**Dursunbey**	**2.69**	**32**	ePN	**Pn**	**07 38 35.6**	**+0.6**
ALT	**Altintas**	**3.14**	**56**	ePN	**Pn**	**07 38 41.7**	**+0.5**
NEO	**Neokhori**	**3.41**	**306**	P	**Pn**	**07 38 45.6**	**+0.8**
ENEZ	**Enez**	**3.42**	**352**	ePN	**Pn**	**07 38 45.2**	**+0.2**
RDO	**Rodhopi**	**3.92**	**346**	P	**Pn**	**07 38 52.2**	**+0.4**
HDMB	**Hadim**	**4.58**	**93**	ePN	**Pn**	**07 39 02.0**	**+1.1**

*IDC **03** 07:45:47.0±1.8, 2223N×12245E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/18, mbtmp3.6/5, Error ellipse: s-maj=63.1km s-min=23.1km az=50.0*
*ISCJB **03** 07:45:48.5±0.6, 2174N±004×12145E±005, h10km, mb3.6/5, Error ellipse: s-maj=7.1km s-min=5.4km az=40.3*
*TAP **03** 07:45:51.0, 2197N×12132E, h8km±1km, ML3.6, C*
ISC 03 07:45:49.0±1.0, 2183N±004×12148E±005, h2km±5km, n34, σ0^{s}94/42, mb3.6/5, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.21**	**19**	⇑iP	**Pg**	**07 45 57.0**	**+3.8**
	baz=67						
TWK1	**Hengchun**	**0.63**	**280**	⇑iP	**Pg**	**07 46 02.2**	**+1.1**
	baz=279						
TWK1				iS	**Sg**	**07 46 09.8**	**+0.4**
	baz=279						
HEN	**Hengchun**	**0.71**	**284**	P	**Pg**	**07 46 03.1**	**+0.5**
	baz=283						
HEN				S	**Sg**	**07 46 11.8**	**0.0**
	baz=283						
TAW	**Tawu**	**0.75**	**314**	eP	**Pg**	**07 46 04.7**	**+1.3**
	baz=315						
EAST	**Anshuo**	**0.80**	**313**	P	**Pg**	**07 46 04.2**	**-0.2**
	baz=313						
EAST				eS	**Sg**	**07 46 12.8**	**-2.0**
	baz=313						
ECL	**Taimali**	**0.90**	**328**	eP	**Pg**	**07 46 05.4**	**-0.9**
	baz=331						
ECL				eS	**Sg**	**07 46 16.4**	**-1.6**
	baz=331						
SCZT	**Fangliau**	**0.96**	**304**	P	**Pg**	**07 46 07.8**	**+0.3**
	baz=319						
TTN	**Taitung**	**0.96**	**342**	eP	**Pg**	**07 46 09.0**	**+1.4**
	baz=328						
TWG	**Pinlang**	**1.05**	**339**	P	**Pg**	**07 46 07.9**	**-1.3**
	baz=343						
SSD	**Sandimen**	**1.20**	**319**	eP	**Pg**	**07 46 12.5**	**+0.5**
	baz=332						
CHKT	**Chengkung**	**1.26**	**355**	eP	**Pg**	**07 46 12.7**	**-0.5**
	baz=11						
TWM1	**Shoushan**	**1.39**	**315**	P	**Pn**	**07 46 15.8**	**+0.4**
	baz=332						
ELDTW	**Lidau**	**1.41**	**343**	eP	**Pn**	**07 46 13.3**	**-2.5**
	baz=345						
STYT	**Tauyuan**	**1.48**	**333**	eP	**Pn**	**07 46 16.4**	**-0.3**
	baz=346						
SGST	**Jiashian**	**1.49**	**326**	P	**Pn**	**07 46 17.6**	**+0.7**
	baz=338						
SGST				eS	**Sb**	**07 46 36.6**	**-0.3**
	baz=338						
TWF1	**Yuli**	**1.52**	**354**	eP	**Pn**	**07 46 17.3**	**+0.1**
	baz=343						
CHN1	**Nanshi**	**1.61**	**327**	eP	**Pn**	**07 46 18.7**	**+0.3**
	baz=328						
CHN1				eS	**Sn**	**07 46 39.8**	**+0.1**
	baz=328						
WTP	**Ta-pu**	**1.62**	**331**	eP	**Pn**	**07 46 18.2**	**-0.3**
	baz=332						
WTP				eS	**Sn**	**07 46 40.5**	**+0.5**
	baz=332						
EHY	**Hungye**	**1.67**	**355**	eP	**Pn**	**07 46 18.1**	**-1.2**
	baz=345						
TWK	**Hsinying**	**1.69**	**328**	eP	**Pn**	**07 46 19.9**	**+0.3**
	baz=329						
TWK				eS	**Sn**	**07 46 42.1**	**+0.2**
	baz=329						
YUS	**Yu-Shan**	**1.72**	**344**	eP	**Pn**	**07 46 19.4**	**-0.5**
	baz=345						
ALS	**Alishan**	**1.78**	**340**	eP	**Pn**	**07 46 21.7**	**+0.9**
	baz=341						
CHN5	**Tsauling**	**1.90**	**337**	eP	**Pn**	**07 46 22.9**	**+0.4**
	baz=338						
SMLT	**Sun Moon Lake**	**2.11**	**345**	eP	**Pn**	**07 46 25.7**	**+0.4**
	baz=345						
TYC	**Yuchr**	**2.14**	**345**	eP	**Pn**	**07 46 26.4**	**+0.7**
	baz=344						
WHF	**Hehuan Shan**	**2.31**	**355**	eP	**Pn**	**07 46 29.0**	**+1.0**
	baz=354						
PNG	**Penghu**	**2.48**	**315**	eP	**Pn**	**07 46 28.3**	**-2.1**
	baz=317						
TWQ1	**Liyutan**	**2.58**	**346**	eP	**Pn**	**07 46 32.7**	**+0.8**
	baz=345						
ENTT	**Nioudou**	**2.79**	**2**	eP	**Pn**	**07 46 36.4**	**+1.7**
	baz=359						
CMAR	**Chiang Mai Arr**	**21.42**	**265**	P	**P**	**07 50 46.8**	**+8.4**
	1.5nm,0.4s,mb3.7,baz=85,slow=10.0,SNR=4.5						
MKAR	**Makanchi Array**	**40.23**	**318**	P	**P**	**07 53 27.8**	**+0.7**
	0.2nm,0.4s,mb3.2,baz=115,slow=10.0,SNR=2.5						
WRA	**Warramunga Arr**	**43.38**	**162**	P	**P**	**07 53 52.0**	**-1.1**
	0.5nm,0.5s,mb3.5,baz=344,slow=8.8,SNR=4.5						
ASAR	**Alice Springs**	**46.81**	**164**	P	**P**	**07 54 19.4**	**-1.0**
	0.2nm,0.4s,mb3.4,baz=350,slow=9.3,SNR=4.8						
STKA	**Stephens Creek**	**56.77**	**160**	P	**P**	**07 55 34.0**	**-0.6**
	1.0nm,0.6s,mb4.0,baz=336,slow=8.8,SNR=3.1						

*ISCJB **03** 07:47:35.6±0.3, 2352N±002×12160E±002, h26km±3km, Error ellipse: s-maj=3.8km s-min=2.5km az=40.7*
*TAP **03** 07:47:36.0, 2355N×12152E, h29km, ML3.5, B*
*JMA **03** 07:47:36.0±0.3, 2342N×12162E, h64km, M2.9*
ISC 03 07:47:35.9±0.3, 2353N±002×12158E±002, h24km±3km, n51, σ0^{s}82/87, 8C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.18**	**349**	eP	**Pb**	**07 47 41.8**	**+0.6**
	baz=5.0						
TEGC				eS	**Sb**	**07 47 46.7**	**+1.9**
	baz=5.0						
EHY	**Hungye**	**0.23**	**264**	⇑iP	**Pb**	**07 47 42.0**	**+0.1**
	baz=263						
EHY				S	**Sb**	**07 47 46.1**	**+0.2**
	baz=263						
ESL	**Shilin**	**0.31**	**335**	P	**Pb**	**07 47 42.8**	**-0.2**
	baz=337						
ESL				iS	**Sb**	**07 47 47.6**	**-0.2**
	baz=337						
TWF1	**Yuli**	**0.31**	**235**	⇑iP	**Pb**	**07 47 43.3**	**+0.3**
	baz=238						
TWF1				iS	**Sb**	**07 47 48.2**	**+0.4**
	baz=238						
ESF	**Shoufeng Towns**	**0.34**	**349**	eP	**Pb**	**07 47 43.7**	**+0.2**
	baz=347						
CHKT	**Chengkung**	**0.47**	**204**	P	**Pb**	**07 47 46.2**	**+0.6**
	baz=190						
CHKT				S	**Sb**	**07 47 53.8**	**+1.7**
	baz=190						
TWD	**Chiawan**	**0.55**	**2**	iP	**Pb**	**07 47 46.7**	**-0.2**
	baz=354						
TWD				S	**Sb**	**07 47 55.8**	**+1.5**
	baz=354						
YUS	**Yu-Shan**	**0.57**	**266**	⇑iP	**Pb**	**07 47 47.5**	**+0.2**
	baz=268						
YUS				iS	**Sb**	**07 47 54.7**	**-0.4**
	baz=268						
ELDTW	**Lidau**	**0.62**	**237**	P	**Pb**	**07 47 47.2**	**-0.8**
	baz=233						
ELDTW				eS	**Sb**	**07 47 55.1**	**-1.1**
	baz=233						
WHF	**Hehuan Shan**	**0.68**	**335**	⇓iP	**Pb**	**07 47 48.4**	**-0.6**
	baz=332						
WHF				eS	**Sb**	**07 47 56.9**	**-1.1**
	baz=332						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALS	Alishan	0.71	269	⇑iP	Pb	07 47 49.7	+0.1
	baz=275						
ALS				eS	Sb	07 47 57.7	-1.2
	baz=275						
SMLT	Sun Moon Lake	0.71	300	⇑iP	Pb	07 47 49.1	-0.5
	baz=304						
SMLT				S	Sb	07 47 58.0	-1.1
	baz=304						
TYC	Yuchr	0.76	300	P	Pb	07 47 49.7	-0.7
	baz=299						
TYC				iS	Sb	07 48 00.0	-0.3
	baz=299						
CHN5	Tsauling	0.83	275	iP	Pb	07 47 51.4	-0.1
	baz=273						
CHN5				iS	Sb	07 48 02.3	0.0
	baz=273						
STYT	Tauyuan	0.84	244	⇑iP	Pb	07 47 51.4	-0.3
	baz=242						
STYT				eS	Sb	07 48 02.1	-0.5
	baz=242						
TWG	Pinlang	0.85	213	eP	Pb	07 47 50.4	-1.5
	baz=201						
WNT	Mingjian	0.89	293	eP	Pb	07 47 53.0	+0.4
	baz=292						
WNT				eS	Sb	07 48 04.8	+0.8
	baz=292						
ENA	Nanau	0.91	9	eP	Pb	07 47 51.8	-1.1
	baz=358						
ENA				eS	Sb	07 48 03.7	-0.9
	baz=358						
NNS	Nan Shan	0.92	348	eP	Pb	07 47 52.5	-0.7
	baz=349						
NNS				eS	Sb	07 48 03.6	-1.5
	baz=349						
WTP	Ta-pu	0.93	252	iP	Pb	07 47 53.2	-0.1
	baz=250						
WTP				S	Sb	07 48 05.4	+0.2
	baz=250						
WGK	Gukeng	0.94	280	eP	Pb	07 47 53.4	-0.1
	baz=279						
WGK				eS	Sb	07 48 05.7	+0.1
	baz=279						
SGST	Jiashian	1.02	244	eP	Pn	07 47 54.8	+0.1
	baz=242						
SGST				S	Sb	07 48 09.0	+1.2
	baz=242						
CHN1	Nanshi	1.02	251	⇑iP	Pn	07 47 54.9	+0.2
	baz=249						
CHN1				iS	Sb	07 48 08.9	+1.0
	baz=249						
TCU	Taichung	1.03	307	eP	Pn	07 47 54.9	+0.1
	baz=306						
TCU				eS	Sb	07 48 09.0	+0.9
	baz=306						
TWK	Hsinying	1.03	256	⇑P	Pn	07 47 55.1	+0.3
	baz=254						
TWK				eS	Sb	07 48 08.4	+0.2
	baz=254						
CHY	Chiayi	1.06	268	eP	Pn	07 47 53.0	-2.2
	baz=268						
ECL	Taimali	1.09	212	eP	Pn	07 47 54.4	-1.2
	baz=204						
TWQ1	Liyutan	1.10	318	P	Pn	07 47 56.2	+0.5
	baz=326						
TWQ1				S	Sn	07 48 10.5	+0.4
	baz=326						
TWC	Suao	1.10	13	P	Pn	07 47 55.7	-0.2
	baz=360						
TWC				eS	Sn	07 48 11.8	+1.5
	baz=360						
ENTT	Nioudou	1.10	359	eP	Pn	07 47 54.9	-1.0
	baz=358						
NSY	Sanyi	1.16	320	eP	Pn	07 47 57.1	+0.6
	baz=334						
NSY				eS	Sn	07 48 12.7	+1.1
	baz=334						
SSD	Sandimen	1.17	228	eP	Pn	07 47 56.7	0.0
	baz=227						
TWE	Neicheng	1.19	4	eP	Pn	07 47 56.5	-0.6
	baz=2.0						
NSTT	Nanjuang	1.22	334	eP	Pn	07 47 57.5	+0.1
	baz=321						
NSTT				S	Sn	07 48 12.5	-0.6
	baz=321						
TWM1	Shoushan	1.27	237	eP	Pn	07 47 58.4	+0.2
	baz=237						
EAST	Anshuo	1.32	211	eP	Pn	07 47 57.5	-1.4
	baz=202						
EGS		1.35	14	eP	Pn	07 48 00.3	+1.1
	baz=360						
EGS				eS	Sn	07 48 18.4	+2.0
	baz=360						
TWA	Mucha	1.44	0	eP	Pn	07 48 01.0	+0.5
	baz=5.0						
SCZT	Fangliau	1.45	218	eP	Pn	07 48 02.0	+1.4
	baz=206						
SCZT				eS	Sn	07 48 20.2	+1.3
	baz=206						
LAY	Lan-yu	1.48	181	eP	Pn	07 47 59.6	-1.4
	baz=168						
TWB1	Santiao Chiao	1.52	14	eP	Pn	07 48 01.6	+0.1
NWF	Wu-fen Shan	1.54	7	eP	Pn	07 48 01.9	-0.1
	baz=4.0						
YOJ	Yonaguni jima	1.61	54	P	Pn	07 48 03.1	+0.4
YOJ				eS	Sn	07 48 23.9	+1.2
YOJ	Yonaguni jima	1.61	54	eP	Pn	07 48 02.5	-0.2
	baz=58						
YOJ				eS	Sn	07 48 20.8	-1.9
	baz=58						
TWK1	Hengchun	1.73	204	eP	Pn	07 48 05.3	+0.8
	baz=195						
PNG	Penghu	1.86	272	eP	Pn	07 48 05.8	-0.4
	baz=272						
HATJ	Hateruma jima	2.11	75	P	Pn	07 48 09.6	0.0
HATJ				eS	Sn	07 48 34.0	-1.1
IRIF	Iriomote-Funau	2.13	67	P	Pn	07 48 10.5	+0.6
IRIF				eS	Sn	07 48 36.4	+0.8
JKRS	Kuro-shima	2.33	72	P	Pn	07 48 13.1	+0.3
JKRS				eS	Sn	07 48 40.1	-0.6
JIJ	Ishigaki jima	2.49	70	P	Pn	07 48 15.1	+0.2
JIJ				S	Sn	07 48 43.8	-0.7
JTJ	Tarama	3.06	68	P	Pn	07 48 22.9	+0.1
JTJ				eS	Sn	07 48 58.9	+0.2

*BJI **03** 08:11:39.0, 274N×9566E, h13km, mB4.8, mb4.7*
*ISCJB **03** 08:11:40.7±0.8, 271N±009×955E±0.1, h23km, mb4.4/11, Error ellipse: s-maj=20.3km s-min=8.2km az=146.9*
*DJA **03** 08:11:41, 275N×9540E, h24km, ML4.3/5*
*IDC **03** 08:11:42.8±1.2, 273N×9561E, h21km±3km, mb4.1/8, mb1 4.2/9, mb1mx3.9/20, mbtmp4.1/9, ML3.8/1, MS3.5/2, Ms1 3.6/2, ms1mx2.8/35, Error ellipse: s-maj=44.1km s-min=13.0km az=57.0*
*NEIC **03** 08:11:42.4±0.9, 261N×9548E, mb4.5/1, Error ellipse: s-maj=33.5km s-min=10.2km az=61.0*
ISC 03 08:11:43.0±0.8, 269N±009×956E±01, h24km, h24km±.9km:pP-P, n24, σ0s98/22, mb4.4/11, 1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	2.45	124	⇓eP	Pn	08 12 20.0	-1.4
BSI	Banda Aceh	2.80	355	P	Pn	08 12 24.0	-2.2
	0.0nm,0.0s						
PPI	Padang Panjang	5.76	123	P	Pn	08 13 08.6	+1.5
	0.0nm,0.0s						
SNG	Songkhla	6.73	48	P	Pn	08 13 21.0	+0.7
KKTK	Khon Kaen	15.33	27	P	Pn	08 15 21.8	+3.9
	370nm,0.9s						
CMAR	Chiang Mai Arr	16.01	12	Pn	Pn	08 15 28.4	+1.7
	0.1nm,0.3s,baz=202,slow=11,SNR=13						
CMAR				LR	LR	08 21 45.3	
	comp=Z,119nm,18.2s,baz=210,slow=38						
LSA	Lhasa	27.18	352	P	P	08 17 25.6	+0.8
LSA	Lhasa	27.18	352	eP	P	08 17 25.8	+1.0
	6.3nm,0.6s,mb4.3						
XAN	Xi'an	33.59	20	P	P	08 18 20.0	-1.4
XAN				AP	pP	08 18 28.7	+0.1
XAN				XP	sP	08 18 32.3	+0.7
XAN				AMB	AMB		
	comp=Z,28nm,0.8s,mb5.2						
XAN				AMB	AMB		
	comp=Z,37nm,5.3s						
LZH	Lanzhou	34.10	12	eP	P	08 18 25.0	-0.8
LZH				AP	pP	08 18 32.1	-1.0
LZH				XP	sP	08 18 36.0	-0.1
LZH				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,83nm,4.7s						
FITZ	Fitzroy Crossi	36.13	126	P	P	08 18 43.3	-0.2
	comp=Z,1.8nm,0.8s,mb4.1,baz=242,slow=17,SNR=4.5						
WRA	Warramunga Arr	44.22	122	P	P	08 19 50.4	-0.2
	comp=Z,2.0nm,0.7s,mb4.0,baz=301,slow=9.0,SNR=9.5						
WRA				pP	pP	08 19 57.3	-0.7
	comp=Z,1.4nm,0.8s,baz=302,slow=9.0,SNR=4.4						
MKAR	Makanchi Array	45.42	347	P	P	08 19 59.9	+0.2
	comp=Z,9.1nm,0.8s,mb4.7,baz=161,slow=8.3,SNR=62						
MKAR				pP	pP	08 20 06.2	-1.0
	comp=Z,8.5nm,0.7s,baz=153,slow=8.2,SNR=16						
MKAR	Makanchi Array	45.42	347	P	P	08 19 59.9	+0.2
MKAR				pP	pP	08 20 06.2	-1.0
KSRS	Korea Array	45.60	37	P	P	08 20 01.1	-0.2
	comp=Z,1.8nm,0.9s,mb4.0,baz=231,slow=9.4,SNR=4.8						
KSRS				pP	pP	08 20 07.2	-1.6
	comp=Z,1.5nm,0.8s,baz=16,slow=32,SNR=2.9						
ASAR	Alice Springs	45.60	127	P	P	08 20 01.8	+0.2
	comp=Z,0.8nm,0.6s,mb3.8,baz=301,slow=7.9,SNR=15						
ASAR				pP	pP	08 20 08.2	-0.9
	comp=Z,0.6nm,0.9s,baz=301,slow=7.8,SNR=2.9						
SONM	Songino Array	45.93	10	P	P	08 20 02.9	-0.9
	comp=Z,3.0nm,0.9s,mb4.2,baz=194,slow=8.5,SNR=12						
SONM				pP	pP	08 20 10.3	-0.9
	comp=Z,4.1nm,0.8s,baz=189,slow=8.6,SNR=12						
SONM				PcP	PcP	08 21 40.9	+0.4
	comp=Z,1.0nm,0.6s,baz=197,slow=3.2,SNR=4.6						
SONM				pPcP		08 21 48.3	
	comp=Z,1.3nm,0.7s,baz=191,slow=4.4,SNR=4.8						
ZAA0	Zalesovo Array	51.84	352	eP	P	08 20 49.0	-0.1
ZAA0				epP	pP	08 20 55.7	-0.9
ZALV	Zalesovo Beam	51.84	352	P	P	08 20 49.1	+0.1
	comp=Z,8.1nm,0.6s,mb4.8,baz=190,slow=6.8,SNR=18						
ZALV				pP	pP	08 20 55.8	-0.8
	comp=Z,5.5nm,0.6s,baz=183,slow=7.3,SNR=5.5						
BVAR	Borovoye Array	54.31	342	P	P	08 21 06.9	-0.3
	comp=Z,3.3nm,0.7s,mb4.4,baz=141,slow=7.6,SNR=18						
BVAR				pP	pP	08 21 13.8	-1.1
	comp=Z,2.9nm,0.6s,baz=138,slow=9.1,SNR=9.5						
AKTK	Aktyubinsk	57.15	332	P	P	08 21 28.6	+0.9
AKTO	Aktyubinsk	57.15	332	P	P	08 21 28.6	+0.9
	baz=128,slow=12						
AKASG	Malin Array Be	73.08	322	pP	pP	08 23 17.3	-1.7
	comp=Z,1.1nm,0.5s,baz=97,slow=4.8,SNR=3.0						
MAW	Mawson	73.80	192	LR	LR	08 50 28.8	
	comp=Z,47nm,20.6s,baz=346,slow=32						

*IDC **03** 08:33:36.2±3.4, 955N×125.11E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, Error ellipse: s-maj=298.5km s-min=27.8km az=65.0*
*ISCJB **03** 08:33:38.9±1.1, 988N±009×12627E±007, h33km, mb3.5/3, Error ellipse: s-maj=13.2km s-min=8.6km az=29.7*
*MAN **03** 08:33:42, 999N×12602E, h19km, mb4.3, ML3.1, MS2.9*
ISC 03 08:33:39.7±1.9, 992N±009×12624E±008, h27km±12km, n8, σ1s03/12, mb3.5/3, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.75	260	eP	Pb	08 33 54.0	-0.1
SCPH				iS	Sb	08 34 03.3	-0.7
PLP	Palo	1.75	315	⇓eP	Pn	08 34 09.0	+0.6
PLP				eS	Sn	08 34 29.4	-0.4
LLP	Lapu-Lapu	2.27	280	eP	Pn	08 34 14.8	-0.7
LLP				eS	Sn	08 34 42.6	-0.1
TBP	Tagbilaran	2.35	265	eP	Pn	08 34 18.1	+1.5
TBP				eS	Sn	08 34 44.7	0.0
RCP	Roxas	3.80	296	⇓iP	Pn	08 34 38.7	+2.1
WRA	Warramunga Arr	30.72	165	P	P	08 39 53.3	+0.7
	0.3nm,0.6s,mb3.3,baz=342,slow=9.3,SNR=3.6						
ASAR	Alice Springs	34.21	167	P	P	08 40 22.4	-0.8
	0.2nm,0.3s,mb3.5,baz=352,slow=6.9,SNR=7.7						
MKAR	Makanchi Array	52.29	323	P	P	08 42 46.7	-2.1
	0.4nm,0.5s,mb3.6,baz=120,slow=7.2,SNR=4.5						

*NNC **03** 08:33:59.0±5.0, 37.10N×71.09E, h170km±55km, mb2.8, mpv3.7, Error ellipse: s-maj=42.4km s-min=26.7km az=20.0*
ISC 03 08:33:57.4±2.5, 370N±02×711E±02, h160km±37km, n9, σ0s74/13, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.54	20	P	Pn	08 35 18.2	+0.2
	SNR=46						
UCH	Uchtor	5.88	25	P	Pn	08 35 22.7	+0.2
	SNR=15						
EKS2	Erkin-Say	6.06	19	P	Pn	08 35 25.5	+0.7
	SNR=8.8						
KK31	Karatay Array	6.16	356	P	Pn	08 35 27.0	+0.8
	2.7nm,0.5s,baz=177,slow=12,SNR=49						
KK31				⇑S	Sn	08 36 35.2	-0.7
	5.5nm,0.4s,baz=176,slow=22,SNR=34						
USP	Ospenovka	6.82	21	P	Pn	08 35 35.3	+0.4
	SNR=6.8						
TKM2	Tokmak 2	6.88	29	⇓P	Pn	08 35 35.5	-0.2
	2.9nm,0.4s						
TKM2				⇑S	Sn	08 36 52.5	-0.5
	5.7nm,0.9s						
TKM2	Tokmak 2	6.88	29	P	Pn	08 35 35.6	-0.1
	SNR=6.1						
AB31	Akbulak array	14.73	330	P	Pn	08 37 16.4	-1.5
	1.5nm,0.6s,baz=146,slow=13,SNR=23						
AB31				⇓S	Sn	08 39 55.9	-5.6
	2.4nm,0.8s,baz=150,slow=23,SNR=7.6						
AKTO	Aktyubinsk	16.44	329	⇓P	Pn	08 37 38.0	-0.6
	0.4nm,0.4s						
AKTO				⇑S	S	08 40 42.4	+1.2
	0.8nm,1.4s						

*IDC **03** 08:42:28.9±0.7, 1174S×16605E, h0km, mb4.4/15, mb1 4.4/16, mb1mx4.3/22, mbtmp4.4/16, ML4.3/1, MS3.8/11, Ms1 3.8/11, ms1mx3.6/25, Error ellipse: s-maj=22.1km s-min=18.3km az=129.0*
*ISCJB **03** 08:42:33.4±0.5, 1167S±009×16591E±007, h33km, mb4.4/19, MS3.8/11, Error ellipse: s-maj=12.8km s-min=9.8km az=179.5*
*BJI **03** 08:42:34.8, 1160S×16590E, h35km, mB5.2, mb4.7*
*NEIC **03** 08:42:34.9±0.5, 1163S×16593E, h35km, mb4.5/5, Error ellipse: s-maj=15.4km s-min=10.6km az=136.0*
ISC 03 08:42:35.1±0.5, 1167S±009×16599E±007, h35km, n38, σ1s10/29, mb4.4/19, MS3.8/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.34	290	Pn	Pn	08 44 04.3	-1.8
	6.5nm,0.3s,baz=160,slow=12,SNR=2.2						
HNR				Sn	Sn	08 45 18.2	+0.8
	28nm,0.3s,baz=75,slow=20,SNR=4.3						
CTA	Charters Tower	20.73	244	eP	P	08 47 14.6	+1.9
	11nm,1.1s						
CTA	Charters Tower	20.73	244	P	P	08 47 11.2	-1.5
	21nm,1.1s,baz=82,slow=13,SNR=6.4						
CTA				LR	LR	08 54 25.0	
	comp=Z,261nm,18.9s,MS3.6,baz=87,slow=34						
AFI	Afiamalu	21.80	98	LR	LR	08 53 56.1	
	comp=Z,224nm,19.3s,MS3.6,baz=283,slow=32						
ARMA	Armidale	22.92	213	eP	P	08 47 37.7	+1.6
STKA	Stephens Creek	30.16	224	eP	P	08 48 42.1	+0.1
	3.9nm,0.8s,mb4.2						
STKA	Stephens Creek	30.16	224	P	P	08 48 40.9	-1.1
	2.5nm,0.9s,mb4.0,baz=261,slow=22,SNR=4.1						
STKA				PcP	PcP	08 51 41.9	-0.9
	2.9nm,0.8s,baz=85,slow=5.5,SNR=3.4						
STKA				LR	LR	08 59 50.5	
	comp=Z,330nm,20.7s,MS4.0,baz=26,slow=34						
WB2	Warramunga Arr	31.48	251	eP	P	08 48 53.7	-0.1
WRA	Warramunga Arr	31.50	251	P	P	08 48 53.7	-0.2
	2.6nm,0.6s,mb4.3,baz=84,slow=9.3,SNR=30						
WRA				PcP	PcP	08 51 46.1	-0.5
	1.1nm,0.9s,baz=75,slow=3.0,SNR=5.0						
WRA				ScP	ScP	08 55 29.3	+2.1
	1.5nm,1.1s,baz=77,slow=3.7,SNR=5.8						
WRA				LR	LR	09 01 03.4	
	comp=Z,133nm,18.3s,MS3.6,baz=65,slow=35						
GUMO	Guam	32.69	320	LR	LR	09 01 05.0	
	comp=Z,90nm,20.1s,MS3.5,baz=93,slow=34						
ASAR	Alice Springs	32.73	244	P	P	08 49 03.9	-0.8
	3.6nm,0.7s,mb4.4,baz=67,slow=9.8,SNR=46						
ASAR				PcP	PcP	08 51 49.1	-0.8
	1.4nm,1.0s,baz=82,slow=3.0,SNR=5.3						
ASAR				ScP	ScP	08 55 34.5	+3.1
	0.6nm,0.9s,baz=84,slow=5.2,SNR=4.2						
RAR	Rarotonga	34.12	111	LR	LR	08 59 09.0	
	comp=Z,105nm,18.6s,MS3.6,baz=43,slow=29						
FITZ	Fitzroy Crossi	39.45	256	eP	P	08 50 02.5	+0.2
	6.8nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	39.45	256	P	P	08 50 02.9	+0.6
	2.4nm,0.8s,mb4.0,baz=89,slow=11,SNR=5.4						
PPT	Papeete	43.32	103	eS	S	08 57 13.9	+14
	66nm,26.8s						
PPT				eLR	LR	09 03 01.4	
	160nm,25.5s						
PPT	Papeete	43.32	103	LR	LR	09 06 51.7	
	comp=Z,241nm,18.7s,MS4.1,baz=142,slow=34						
JOW	Kunigami	52.97	317	P	P	08 51 49.2	+0.8
	5.1nm,0.6s,mb4.7,baz=125,slow=22,SNR=4.4						
MJAR	Matsushiro Arr	54.63	333	P	P	08 51 58.4	-2.0
	2.0nm,0.7s,mb4.2,baz=158,slow=7.3,SNR=4.4						
RKT	Rikitea	57.15	110	eLR	LR	09 09 31.3	
	162nm,27.0s						
KSRS	Korea Array	60.52	326	P	P	08 52 41.8	-0.1
	1.0nm,0.7s,mb4.0,baz=117,slow=8.3,SNR=3.7						
PETK	Petropavlovsk-	64.91	354	LR	LR	09 20 19.1	
	comp=Z,38nm,19.3s,MS3.6,baz=255,slow=35						
LZH	Lanzhou	75.35	312	eP	P	08 54 17.0	+1.8
LZH				AP	pP	08 54 25.0	-1.1
LZH				XP	sP	08 54 28.5	-1.7
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,83nm,4.2s						
KDAK	Kodiak Island	77.07	21	LR	LR	09 24 21.1	
	comp=Z,86nm,18.2s,MS4.1,baz=177,slow=33						
QSPA	South Pole Qui	78.34	180	P	P	08 54 30.2	-1.1
	comp=Z,6.5nm,1.0s,mb4.5,baz=20,slow=2.5,SNR=13						
ULN	Ulaanbaatar	78.94	324	eP	P	08 54 35.7	+0.7
	comp=Z,7.4nm,1.0s,mb4.6						
SONM	Songino Array	79.31	324	P	P	08 54 37.7	+0.6
	comp=Z,2.4nm,0.8s,mb4.2,baz=131,slow=5.2,SNR=12						
GTA	Gaotai	79.66	314	P	P	08 54 40.5	+1.3
GTA				AP	pP	08 54 50.9	+0.7
GTA				XP	sP	08 54 54.9	+0.7
GTA				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
YBH	Yreka Blue Hor	84.16	45	P	P	08 55 02.8	0.0
	comp=Z,1.1nm,0.6s,mb4.1,baz=242,slow=2.2,SNR=7.1						
YBH				LR	LR	09 25 44.9	
	comp=Z,71nm,19.0s,MS4.1,baz=260,slow=31						
EGAK	Eagle	85.88	20	eP	P	08 55 09.7	-1.2
	comp=Z,3.1nm,0.9s,mb4.5						
MOD	Modoc	85.91	46	eP	P	08 55 13.2	+1.6
	comp=Z,1.2nm,0.5s,mb4.4						
NVAR	Mina Array Bea	86.24	50	P	P	08 55 13.9	+0.6
	comp=Z,1.1nm,0.8s,mb4.1,baz=243,slow=8.0,SNR=6.6						
PDAR	Pinedale Array	93.80	47	LR	LR	09 33 28.4	
	comp=Z,38nm,18.4s,MS3.9,baz=87,slow=33						
MKAR	Makanchi Array	94.14	317	P	P	08 55 50.0	-0.2
	comp=Z,6.4nm,0.7s,mb5.2,baz=95,slow=6.3,SNR=61						
ZALV	Zalesovo Beam	94.20	324	P	P	08 55 49.4	-0.9
	comp=Z,1.6nm,0.6s,mb4.6,baz=110,slow=6.8,SNR=4.8						
ZALV	Zalesovo Beam	94.20	324	P	P	08 55 49.4	-0.9
KURK	Kurchatov	97.27	320	P	P	08 56 02.6	-1.7
	comp=Z,0.3nm,0.4s,mb4.1,baz=102,slow=4.1,SNR=3.4						
BOSA	Boshof	124.82	223	PKP	PKPdf	09 01 30.9	-1.1
	comp=Z,1.9nm,0.6s,baz=157,slow=4.1,SNR=6.6						
TORD	Torodi Ar. Bea	164.59	277	PKP	PKPdf	09 02 35.3	-0.9
	comp=Z,0.8nm,0.9s,baz=90,slow=1.4,SNR=3.0						

*IDC **03** 08:43:54.3±1.5, 3431N×24.11E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.4/23, mbtmp3.6/4, ML4.4/1, Error ellipse: s-maj=77.7km s-min=26.3km az=135.0*
*HLW **03** 08:43:56.7, 3502N×2368E, h33km, Mb3.3*
*CSEM **03** 08:43:58.1±0.2, 3476N×24.11E, h10km, ML3.3, Error ellipse: s-maj=11.3km s-min=4.1km az=59.0*
*ISCJB **03** 08:44:00.4±0.9, 3466N±005×238E±0.1, h65km±11km, mb3.5/3, Error ellipse: s-maj=17.2km s-min=7.5km az=162.9*
*ATH **03** 08:44:07.4, 3576N×2437E, h10km, MD3.6/3*
ISC 03 08:44:01.7±0.9, 3469N±005×238E±01, h57km±12km, n15, σ0s89/18, mb3.5/3, 2C-1D, Crete

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAM	Vamos	0.80	26	ePB	Pn	08 44 15.0	-2.0
VLI	Veliai	2.13	342	ePB	Pn	08 44 35.5	+0.6
KARP	Karpathos	2.91	72	ePN	Pn	08 44 47.5	+2.0
SLUM		3.41	159	⇑P	Pn	08 44 52.5	0.0
SLUM				S	Sn	08 45 32.5	+0.8
HMAT	Matruh	4.55	141	P	Pn	08 45 07.8	-0.2
HMAT				S	Sn	08 45 59.7	+0.1
AWBH		7.72	144	P	Pn	08 45 51.7	+0.3
AYT	Al 'Ayyat	7.99	126	P	Pn	08 45 55.1	-0.1
GLL	Jalalah	8.44	125	P	Pn	08 46 01.4	+0.1
HFRF	Wahat Farafira	8.47	151	⇑P	Pn	08 46 01.8	+0.1
SUZ		9.07	120	P	Pn	08 46 09.1	-0.8
HNKL	Nakhl	9.86	116	⇓P	Pn	08 46 19.6	-1.1
HNKL				S	Sn	08 48 05.0	-4.8
AKASG	Malin Array Be	16.49	12	Pn	Pn	08 47 50.5	+1.5
	1.2nm,0.3s,baz=208,slow=9.7,SNR=6.5						
TORD	Torodi Ar. Bea	29.32	228	P	P	08 49 58.4	-0.6
	0.3nm,0.8s,mb3.1,baz=29,slow=9.1,SNR=4.1						
KURK	Kurchatov	42.36	50	P	P	08 51 49.1	-0.9
	0.6nm,0.3s,mb3.6,baz=272,slow=8.3,SNR=5.8						
MKAR	Makanchi Array	44.98	56	P	P	08 52 11.3	+0.2
	0.4nm,0.3s,mb3.8,baz=265,slow=8.2,SNR=12						

*NEIC **03** 08:48:39.3, 1546N×9326W, h84km, MD4.2(MEX), After MEX.*
MEX 03 08:48:39.3±1.1, 1546N×9326W, h84km±26km, MD4.2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		1.10	120	iP	Pn	08 48 57.9	-2.0
THIG				iS	Sn	08 49 14.3	-0.9
TGIG		1.31	6	iP	Pn	08 49 01.3	-1.2
TGIG				iS	Sn	08 49 17.8	-2.1
CCIG	Comitan	1.35	53	eP	Pn	08 49 01.8	-1.1
CCIG				iS	Sn	08 49 19.4	-1.3
SCX	San Cristobal	1.40	25	iP	Pn	08 49 03.3	-0.2
SCX				iS	Sn	08 49 21.2	-0.6
CMIG	Matias Romero	2.25	316	eP	Pn	08 49 13.8	-0.9
CMIG				iS	Sn	08 49 40.8	-0.9
TEIG	Tepich	6.70	44	ePn	Pn	08 50 13.8	-1.3
	12nm,0.3s						

*PRU **03** 08:58:49.9, 5040N×1881E, h0km*
WAR 03 08:58:50.4, 5037N×1891E, ML2.6, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.72	223	ePG	Pg	08 59 03.2	-1.0
OKC				eSG	Sg	08 59 12.8	-0.8
	comp=Z,27nm,0.3s						
NIE	Niedzica	1.31	136	ePg	Pg	08 59 15.7	+0.2
NIE				eSg	Sg	08 59 33.5	+1.0
DPC	Dobruska-Polom	1.66	270	ePG	Pg	08 59 19.6	-2.5
DPC				eSG	Sg	08 59 40.5	-3.1
	comp=Z,13nm,0.4s						
UPC	Upice	1.86	275	eSG	Sg	08 59 46.7	-3.4
PRU	Pruhonice	2.83	264	eSG	Sg	09 00 17.3	-4.1
	comp=Z,6.6nm,0.6s						
KHC	Kasperske Hory	3.67	252	eSG	Sg	09 00 45.1	-3.2
	comp=Z,5.0nm,0.5s						

DDA 03 09:02:53.2, 3969N×2949E, h6km±2km, Md2.7, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.60	180	iP	Pg	09 03 04.9	+0.1
GDZ				iS	Sg	09 03 14.1	+1.4
DEMI	Demirci	0.88	223	iP	Pg	09 03 10.0	-0.2
DEMI				iS	Sg	09 03 26.3	+4.7
DEMI	Demirci	0.88	223	iP	Pg	09 03 10.0	-0.1
DEMI				iS	Sg	09 03 26.2	+4.6
BALY	Balya	1.44	272	iP	Pn	09 03 08.5	-11
BALY				iS	Sn	09 03 40.9	+2.0

*IDC **03** 09:09:35.0±1.0, 1156S×16576E, h0km, mb4.1/8, mb1 4.3/9, mb1mx4.1/17, mbtmp4.2/9, ML4.6/1, MS3.7/9, Ms1 3.7/9, ms1mx3.5/25, Error ellipse: s-maj=37.1km s-min=22.0km az=137.0*
*ISCJB **03** 09:09:38.3±0.7, 115S±0.1×1656E±0.1, h33km, mb4.3/11, MS3.6/8, Error ellipse: s-maj=23.2km s-min=13.0km az=146.2*
*NEIC **03** 09:09:41.8±0.8, 1141S×16559E, h50km, mb4.4/7, Error ellipse: s-maj=25.4km s-min=13.3km az=143.0*
ISC 03 09:09:40.0±0.7**, 114S**±01×**1656E**±01**, h35**km**, n27, σ0.91**/18**, mb4.3**/11**, MS3.6**/8**, Santa Cruz Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HNR Honiara 5.94 289 Pn **Pn 09 11 05.7 +0.1**
14nm,0.3s,baz=208,slow=14,SNR=4.8
HNR LR LR 09 13 15.5
comp=Z,664nm,20.9s,baz=121,slow=36
CTA Charters Tower 20.54 243 *e*P **P 09 14 16.1 +0.5**
13nm,0.9s
CTA Charters Tower 20.54 243 P **P 09 14 16.3 +0.7**
11nm,0.8s,baz=76,slow=12,SNR=10
CTA LR LR 09 20 31.9
comp=Z,248nm,21.6s,MS3.5,baz=85,slow=32
CTAO Charters Tower 20.54 243 *e*P **P 09 14 16.2 +0.6**
14nm,0.8s
AFI Afiamalu 22.17 99 LR LR 09 21 05.9
comp=Z,176nm,19.0s,MS3.5,baz=24,slow=31
STKA Stephens Creek 30.10 224 *e*P **P 09 15 46.6 +0.2**
2.0nm,0.6s,mb4.0
STKA Stephens Creek 30.10 224 P **P 09 15 46.6 +0.2**
3.5nm,0.8s,mb4.2,baz=28,slow=14,SNR=8.6
STKA LR LR 09 27 18.3
comp=Z,192nm,20.8s,MS3.7,baz=27,slow=35
WB2 Warramunga Arr 31.25 250 *e*P **P 09 15 56.2 -0.5**
WRA Warramunga Arr 31.26 250 P **P 09 15 56.8 0.0**
6.4nm,0.8s,mb4.5,baz=79,slow=9.1,SNR=25
WRA LR LR 09 27 25.7
comp=Z,113nm,19.9s,MS3.5,baz=100,slow=34
ASAR Alice Springs 32.53 244 P **P 09 16 07.3 -0.6**
1.9nm,0.9s,mb4.0,baz=71,slow=9.7,SNR=8.7
RAR Rarotonga 34.52 111 LR LR 09 27 03.1
comp=Z,199nm,19.4s,MS3.9,baz=321,slow=30
FITZ Fitzroy Crossi 39.19 255 *e*P **P 09 17 03.4 -1.6**
7.3nm,0.8s,mb4.5
PPT Papeete 43.70 103 *e*LQ 09 28 18.0
268nm,26.8s
PPT *e*LR LR 09 30 08.0
143nm,25.8s
PPT Papeete 43.70 103 LR LR 09 32 15.7
comp=Z,110nm,19.8s,MS3.8,baz=293,slow=31
KSRS Korea Array 60.13 326 LR LR 09 45 05.6
comp=Z,27nm,19.7s,MS3.4,baz=235,slow=35
CMAR Chiang Mai Arr 72.17 294 LR LR 09 48 31.6
comp=Z,40nm,21.3s,MS3.6,baz=185,slow=32
SONM Songino Array 78.91 324 P **P 09 21 42.9 +3.1**
0.5nm,0.5s,mb3.7,baz=116,slow=6.7,SNR=3.7
COLA College 83.67 18 *e*P **P 09 22 04.2 -0.5**
3.8nm,0.9s,mb4.5
MAW Mawson 84.33 202 P **P 09 22 09.1 +0.9**
0.8nm,0.6s,mb4.0,baz=108,slow=4.4,SNR=5.2
WRAK Wrangell Islan 84.72 30 *e*P **P 09 22 08.7 -1.4**
25nm,1.6s,mb5.1
EGAK Eagle 85.77 20 *e*P **P 09 22 15.5 +0.3**
2.7nm,0.7s,mb4.6
NVAR Mina Array Bea 86.34 50 P **P 09 22 18.8 +0.1**
0.3nm,0.7s,mb3.6,baz=251,slow=8.2,SNR=3.0
MKAR Makanchi Array 93.73 317 P **P 09 22 54.2 +1.0**
1.1nm,0.7s,mb4.4,baz=96,slow=6.2,SNR=7.7
MKAR Makanchi Array 93.73 317 P **P 09 22 54.2 +1.0**
ARCES ARCESS Array B 116.67 345 PKP PKPdf 09 28 20.4 +0.4
0.9nm,0.7s,baz=90,slow=1.9,SNR=6.3
KEST Kesra 147.66 322 PKPbc PKPbc 09 29 21.7 +0.4
1.6nm,0.7s,baz=293,slow=4.1,SNR=5.8
TORD Torodi Ar. Bea 164.22 278 PKP PKPdf 09 29 41.1 +0.3
0.4nm,0.9s,baz=128,slow=2.4,SNR=2.6

IDC 03 09:25:19.2±9.7**, 1141S**×**16522E, h0**km**, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.6**/15**, mbtmp3.7**/3**, Error ellipse: s-maj=297.2km s-min=53.7km az=125.0, Santa Cruz Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 30.88 250 P P 09 31 38.0 +0.5
0.4nm,0.7s,baz=84,slow=9.2,SNR=5.7
ASAR Alice Springs 32.17 244 P P 09 31 48.6 -0.3
0.3nm,0.6s,baz=61,slow=9.7,SNR=6.2
MKAR Makanchi Array 93.43 317 P P 09 38 36.5 -0.1
0.7nm,0.6s,baz=97,slow=6.3,SNR=6.4

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*ISCJB **03** 09:34:13.1±0.6, 1828S±005×6904W±007, h146km±6km, mb4.1/9, Error ellipse: s-maj=10.8km s-min=8.3km az=150.9*
*NEIC **03** 09:34:14.3±0.7, 1823S×6898W, h141km±8km, mb4.9/1, Error ellipse: s-maj=12.9km s-min=9.0km az=223.0*
*IDC **03** 09:34:15.3±1.3, 1824S×6885W, h146km±10km, mb3.8/9, mb1 3.8/13, mb1mx3.7/21, mbtmp3.7/13, Error ellipse: s-maj=18.5km s-min=12.7km az=75.0*
ISC 03 09:34:14.0±0.6**, 1831S**±005×**6904W**±007**, h138**km±6km**, n21, σ1.15**/22**, mb4.1**/9**, 1C, Northern Chile**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LPAZ La Paz 2.19 24 P **Pn 09 34 52.8 +2.0**
33nm,0.3s,baz=187,slow=4.8,SNR=727
LPAZ S **Sn 09 35 19.6 +0.6**
9.8nm,0.3s,baz=290,slow=22,SNR=9.4
ARE Arequipa 2.98 308⇑*i*P **Pn 09 35 00.6 0.0**
ARE *i* S **Sn 09 35 35.7 -0.8**
LVC Limon Verde 4.28 178 P **Pn 09 35 20.2 +2.6**
3.1nm,0.3s,baz=352,slow=9.2,SNR=39
LVC S **Sn 09 36 05.8 -1.4**
9.1nm,0.3s,baz=353,slow=8.0,SNR=5.2
LVC Limon Verde 4.28 178 P **Pn 09 35 20.2 +2.6**
LVC S **Sn 09 36 05.8 -1.4**
SIV San Ignacio 7.96 74 P **Pn 09 36 04.9 -2.0**
5.7nm,0.3s,baz=265,slow=11,SNR=138
NNA Nana 9.81 309 P **Pn 09 36 29.9 -1.7**
1.8nm,0.3s,baz=151,slow=10,SNR=4.6
NNA Nana 9.81 309 P **Pn 09 36 29.9 -1.7**
CPUP Villa Florida 13.45 128 P **Pn 09 37 19.4 0.0**
0.3nm,0.3s,baz=293,slow=11,SNR=3.5
BDFB Brasilia 20.29 86 P **P 09 38 38.6 -0.4**
2.1nm,0.4s,baz=227,slow=6.5,SNR=4.9
PLCA Paso Flores 22.38 183 P **P 09 39 02.1 +1.2**
5.7nm,1.1s,mb3.9,baz=354,slow=8.5,SNR=4.5
TEIG Tepich 42.69 333 P **P 09 41 57.9 +0.6**
3.8nm,0.4s,mb4.4,baz=152,slow=7.6,SNR=8.1
FVM French Village 59.49 340 *e*P **P 09 44 02.0 -0.5**
8.5nm,0.6s,mb4.8
DBIC Dimbokro 67.98 75 P **P 09 44 57.8 -0.9**
2.7nm,0.6s,mb4.2,baz=234,slow=7.5,SNR=8.5
PDAR Pinedale Array 71.30 330 P **P 09 45 19.0 +0.7**
0.4nm,0.5s,mb3.4,baz=109,slow=11,SNR=3.3
ULM Lac du Bonnet 72.25 342 P **P 09 45 23.1 -0.8**
1.7nm,0.5s,mb4.0,baz=184,slow=4.7,SNR=4.2
NVAR Mina Array Bea 72.92 321 P **P 09 45 29.7 +1.6**
0.8nm,0.6s,mb3.6,baz=121,slow=6.7,SNR=2.0
TORD Torodi Ar. Bea 76.42 71 P **P 09 45 48.1 -0.7**
3.8nm,0.5s,mb4.3,baz=254,slow=5.6,SNR=51
YKA Yellowknife Ar 88.15 341 P **P 09 46 49.1 +0.5**
2.8nm,0.4s,mb4.5,baz=134,slow=4.7,SNR=49
ASAR Alice Springs 132.65 209 PKP PKPdf 09 53 13.6 +0.6
0.3nm,0.4s,baz=155,slow=2.2,SNR=3.3
WRA Warramunga Arr 135.60 212 PKP PKPdf 09 53 18.9 +0.2
0.5nm,0.5s,baz=147,slow=1.7,SNR=7.0
SONM Songino Array 150.32 6 PKPbc PKPbc 09 53 49.9 +1.1
3.2nm,0.6s,baz=306,slow=1.2,SNR=13

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*GUC **03** 09:35:44.5±0.7, 2503S×7048W, h54km±6km, MD4.3, ML4.2*
*NEIC **03** 09:35:44.5, 2503S×7048W, h54km, mb4.7/23, MD4.3(GUC), After GUC.*
NEIC Felt [III] at Taltal.
*ISCJB **03** 09:35:45.9±0.5, 2508S±003×7061W±007, h43km±5km, mb4.7/33, MS3.8/5, Error ellipse: s-maj=10.3km s-min=4.3km az=2.6*
*MOS **03** 09:35:45.1±1.0, 2491S×7058W, h35km, mb5.0/5, Error ellipse: s-maj=16.6km s-min=9.0km az=104.5*
*IDC **03** 09:35:46.9±3.0, 2501S×7066W, h35km±22km, mb4.4/11, mb1 4.4/17, mb1mx4.3/22, mbtmp4.3/17, ML4.4/5, MS3.7/11, Ms1 3.8/11, ms1mx3.6/30, Error ellipse: s-maj=22.1km s-min=14.2km az=84.0*
ISC 03 09:35:46.6±0.9**, 2506S**±003×**7066W**±007**, h32**km±6km**, h42**km±1.1km**: pP-P, n106, σ0.96**/103**, mb4.7**/33**, MS3.8**/5**, 5C-1D, Near coast of northern Chile**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CPN1 Cerro Paranal 0.49 28 *e*P **Pb 09 35 56.3 -0.6**
CPN1 *i* S **Sb 09 36 04.6 +0.5**
CPN1 AML AML 09 36 06.3
comp=N,39μm,0.4s
ANCH Antofagasta 1.39 9⇑*i*P **Pn 09 36 09.7 0.0**
ANCH *i* S **Sn 09 36 27.2 +0.2**
CEN1 Los Morros 1.71 14⇓*i*P **Pn 09 36 09.3 -4.9**
CEN1 *i* S **Sn 09 36 27.7 -7.3**
CEN1 AML AML 09 36 41.5
comp=E,4μm,0.6s
CDCH Caldera 2.01 184⇑*i*P **Pn 09 36 16.8 -1.5**
CDCH *i* S **Sn 09 36 42.1 -0.3**
CDCH AML AML 09 36 42.2
comp=N,2μm,0.4s
CDCH Caldera 2.01 184⇑*i*P **Pn 09 36 16.8 -1.5**
CDCH *i* S **Sn 09 36 42.1 -0.3**
LVC Limon Verde 2.91 34 Pn **Pn 09 36 32.5 +1.8**
comp=N,28nm,0.3s,baz=220,slow=11,SNR=12
LVC Pg **Pn 09 36 39.0 +8.3**
comp=N,99nm,0.3s,baz=225,slow=16,SNR=43
LVC LR LR 09 37 02.0
comp=N,553nm,20.4s,baz=221,slow=26
LVC Sn **Sn 09 37 06.5 +1.9**
comp=N,112nm,0.3s,baz=233,slow=13,SNR=4.3
LVC Lg 09 37 18.2
comp=N,372nm,0.3s,baz=353,slow=2.6,SNR=12
LVC Limon Verde 2.91 34 Pn **Pn 09 36 32.5 +1.8**
LVC LR LR 09 37 02.0
LVC Sn **Sn 09 37 06.5 +1.9**
LVC Lg 09 37 18.2
VACH Vallenar 3.50 181 *i* P **Pn 09 36 39.1 +0.2**
VACH *i* S **Sn 09 37 19.5 +0.2**
LCO Las Campanas 3.94 181 *e*Pn **Pn 09 36 44.3 -0.5**
CFAA Coronel Fontan 6.86 162 Pn **Pn 09 37 26.6 +1.6**
comp=N,0.4nm,0.3s,baz=340,slow=13,SNR=16
CFAA Sn **Sn 09 38 55.8 +14**
comp=N,0.6nm,0.3s,baz=197,slow=20,SNR=2.2
CFAA LR LR 09 40 17.2
comp=N,106nm,18.5s,baz=96,slow=39
ARE Arequipa 8.59 355 *e*P **Pn 09 37 46.0 -2.7**
ARE *e*S **Sn 09 39 18.0 -6.5**
LPAZ La Paz 9.04 16 Pn **Pn 09 37 55.3 +0.4**
comp=N,2.3nm,0.3s,baz=198,slow=8.4,SNR=14
LPAZ LR LR 09 41 37.5
comp=N,560nm,21.2s,baz=205,slow=39
CPUP Villa Florida 12.09 99 Pn **Pn 09 38 37.7 +1.0**
comp=N,0.3nm,0.3s,baz=270,slow=14,SNR=2.3
CPUP LR LR 09 43 46.1
comp=N,771nm,19.1s,baz=262,slow=40
SIV San Ignacio 12.72 47 Pn **Pn 09 38 45.2 -0.2**
comp=N,1.7nm,0.3s,baz=240,slow=11,SNR=4.1
SIV LR LR 09 44 37.3
comp=N,468nm,20.6s,baz=226,slow=42
SIV San Ignacio 12.72 47 Pn **Pn 09 38 45.2 -0.2**
SIV LR LR 09 44 37.3
TRQA Tornquist 14.91 152 *e*Pn **Pn 09 39 13.6 -1.5**
PLCA Paso Flores 15.63 180 Pn **Pn 09 39 26.4 +1.9**
comp=N,0.2nm,0.3s,baz=346,slow=12,SNR=6.1
PLCA LR LR 09 45 28.6
comp=N,502nm,20.2s,baz=0.4,slow=37
BDFB Brasilia 23.18 70 P **P 09 40 49.2 -1.5**
comp=N,5.5nm,0.8s,mb4.0,baz=234,slow=12,SNR=5.7
BDFB LR LR 09 51 07.2
comp=N,176nm,18.9s,MS3.5,baz=304,slow=40
EFI East Falkland 28.27 163 *e*P **P 09 41 37.1 +0.3**
USHA Ushuaia 29.79 177 P **P 09 41 49.6 -0.6**
comp=N,4.7nm,1.1s,mb4.2,baz=348,slow=3.0,SNR=2.0
USHA LR LR 09 54 31.0
comp=N,308nm,19.5s,MS4.0,baz=340,slow=38
ROSC El Rosal 29.95 353 LR LR 09 54 07.9
comp=N,136nm,21.2s,MS3.6,baz=9.8,slow=37
PCRV Puerto La Cruz 35.51 10 LR LR 09 58 13.6
comp=N,252nm,19.5s,MS4.0,baz=182,slow=38
TEIG Tepich 48.16 338 P **P 09 44 23.0 -1.0**
comp=N,4.9nm,0.5s,mb4.8,baz=145,slow=2.9,SNR=5.1
VNA1 Neumayer--Stat 57.51 160 *e* **P 09 45 33.4 +1.1**
VNA1 *e* 09 45 34.9
VNA1 *e* 09 45 38.1
VNA2 Neumayer--Watz 57.87 160 *e* **P 09 45 35.4 +0.5**
VNA2 *e* 09 45 37.3
VNA2 *e* 09 45 40.0
SNAA Sanae 59.48 160 *e* **P 09 45 46.1 0.0**
SNAA *e* 09 45 47.8
SNAA *e* 09 45 51.3
SNAA Sanae 59.48 160 *e*P **P 09 45 46.3 +0.2**
LHS Liberty Hill 59.98 350 *e*P **P 09 45 46.5 -3.4**
JCT Junction City 61.88 332 *e*P **P 09 46 02.4 -0.5**
JCT pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
JCT Junction City 61.88 332 *e*P **P 09 46 02.4 -0.5**
comp=Z,9.9nm,0.8s,mb5.0
PLAL Pickwick Lake 61.95 344 *e*P **P 09 46 00.8 -2.5**
comp=Z,12nm,1.2s,mb4.9
MIAR Mount Ida 63.14 339 *e*P **P 09 46 10.2 -1.0**
MIAR pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
MIAR Mount Ida 63.14 339 *e*P **P 09 46 10.2 -1.0**
comp=Z,6.4nm,0.9s,mb4.8
WCI Wyandotte Cave 64.64 346 *e*P **P 09 46 19.0 -2.0**
FVM French Village 65.40 343 *e*P **P 09 46 24.1 -1.9**
GDL2 Guadalupe Moun 65.40 329 *e*P **P 09 46 26.6 +0.5**
ACSO Alum Creek Sta 65.96 350 *e*P **P 09 46 27.5 -2.0**
LAZ Ladron 68.52 328 *e*P **P 09 46 46.4 +0.4**
LAZ *e*pP pP 09 46 59.0 +3.1
ANMO Albuquerque 68.65 329 *e*P **P 09 46 47.6 +0.9**
ANMO Albuquerque 68.65 329 *e*P **P 09 46 47.1 +0.4**
TUC Tucson 68.70 324 *e*P **P 09 46 47.7 +0.6**
CBKS Cedar Bluff 69.12 336 *e*P **P 09 46 49.0 -0.6**
JFWS Jewell Farm 70.00 345 *e*P **P 09 46 53.5 -1.4**
JFWS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
JFWS Jewell Farm 70.00 345 *e*P **P 09 46 53.5 -1.4**
comp=Z,9.3nm,0.9s,mb4.7
SDCO Great Sand Dun 70.53 331 *e*P **P 09 46 58.3 +0.1**
comp=Z,8.0nm,1.2s,mb4.5
LIC Lamto 70.93 73 *e*P **P 09 46 59.8 -1.5**
comp=Z,90nm,1.9s,mb5.4
TIC Toumodi 71.14 73 *e*P **P 09 47 01.5 -1.0**
comp=Z,32nm,0.8s,mb5.3
TIC Toumodi 71.14 73 *e*P **P 09 47 01.5 -1.0**
TIC pmax pmax
comp=Z,32nm,0.8s,mb5.3
KIC Kosan Boka 71.25 73 *e*P **P 09 47 03.0 -0.2**
comp=Z,93nm,1.0s,mb5.7
DBIC Dimbokro 71.30 73 P **P 09 47 03.4 0.0**
comp=Z,8.8nm,0.7s,mb4.8,baz=209,slow=6.7,SNR=14
DBIC Dimbokro 71.30 73 P **P 09 47 03.4 0.0**
MVCO Mesa Verde 71.44 329 *e*P **P 09 47 04.1 +0.3**
comp=Z,11nm,1.1s,mb4.7
WUAZ Wupatki 71.50 326 *e*P **P 09 47 05.4 +1.2**
comp=Z,10nm,1.0s,mb4.7
PV01 Paradox Valley 72.22 329 *e*P **P 09 47 08.8 +0.3**
ISCO Idaho Springs 72.29 332 *e*P **P 09 47 09.5 +0.7**
ECSD EROS,Sioux Fal 72.48 341 *e*P **P 09 47 09.2 -0.7**
comp=Z,10nm,0.9s,mb4.8
SRU San Rafael 73.92 329 *e*P **P 09 47 18.9 +0.4**
CCUT Cedar City 74.09 326 *e*P **P 09 47 20.3 +0.8**
MSU Marysvale 74.24 327 *e*P **P 09 47 21.6 +1.2**
RWWY Rawlins 74.53 332 *e*P **P 09 47 22.1 +0.1**
comp=Z,7.9nm,1.0s,mb4.6
ISA Isabella 75.43 321 *e*P **P 09 47 28.4 +1.1**
JLU Jordanelle 75.53 329 *e*P **P 09 47 28.6 +0.8**
DUG Dugway 75.86 328 *e*P **P 09 47 30.7 +1.0**
HWUT Hardware Ranch 76.38 330 *e*P **P 09 47 32.8 +0.1**
comp=Z,6.5nm,0.9s,mb4.6
PDAR Pinedale Array 76.42 332 P **P 09 47 32.9 +0.1**
comp=Z,0.7nm,0.7s,mb3.7,baz=136,slow=5.3,SNR=5.5
AGMN Agassiz Refuge 76.44 343 *e*P **P 09 47 31.1 -1.7**
MTUM Tungsten Hills 76.70 323 *e*P **P 09 47 35.3 +0.8**
NVAR Mina Array Bea 77.34 323 P **P 09 47 38.9 +0.8**
comp=Z,1.8nm,0.8s,mb4.0,baz=158,slow=5.8,SNR=9.7
REDW Red Top Meadow 77.46 331 *e*P **P 09 47 39.2 +0.6**
ELK Elko 77.47 327 *e*P **P 09 47 39.3 +0.6**
SNOW Snow King Moun 77.50 331 *e*P **P 09 47 39.5 +0.7**
comp=Z,6.5nm,0.9s,mb4.6
LOHW Long Hollow 77.55 331 *e*P **P 09 47 39.4 +0.2**
comp=Z,6.1nm,1.1s,mb4.4
TPAW Teton Pass 77.60 331 *e*P **P 09 47 39.8 +0.3**
comp=Z,5.7nm,0.9s,mb4.5
RRI2 Red Ridge 77.65 331 *e*P **P 09 47 40.6 +0.9**
comp=Z,9.4nm,1.1s,mb4.6
IMW Indian Meadow 77.92 331 *e*P **P 09 47 41.4 +0.2**
FLWY Flagg Ranch 77.97 332 *e*P **P 09 47 42.6 +1.1**
comp=Z,9.7nm,0.8s,mb4.8
ULM Lac du Bonnet 78.24 344 P **P 09 47 41.8 -1.0**
comp=Z,6.2nm,1.0s,mb4.5,baz=254,slow=2.1,SNR=4.7
LAO LASA Array 78.32 336 *e*P **P 09 47 43.6 +0.2**
PAHR Pah Rah Range 78.84 324 *e*P **P 09 47 47.4 +1.0**
comp=Z,9.8nm,0.8s,mb4.8
GCMT Greycliff 78.92 333 *e*P **P 09 47 46.3 -0.3**
DLMT Dillon 79.81 331 *e*P **P 09 47 51.9 +0.4**
comp=Z,3.9nm,0.8s,mb4.4
TORD Torodi Ar. Bea 80.06 70 P **P 09 47 53.4 -0.2**
comp=Z,20nm,0.8s,mb5.1,baz=255,slow=5.1,SNR=71
LRM Limekiln Ridge 80.11 332 *e*P **P 09 47 53.9 +0.8**
MOD Modoc 80.90 325 *e*P **P 09 47 57.1 -0.4**
comp=Z,4.2nm,0.7s,mb4.5
MAW Mawson 81.39 164⇑*i*P **P 09 48 00.2 +0.4**
comp=Z,10nm,0.8s,mb4.8
MAW Mawson 81.39 164 P **P 09 48 00.4 +0.6**
comp=Z,11nm,0.8s,mb4.9,baz=221,slow=6.0,SNR=32
MAW Mawson 81.39 164⇑*i*P **P 09 48 00.2 +0.4**
MAW pmax pmax
comp=Z,10.0nm,0.8s
BMO Blue Mountains 81.56 328 *e*P **P 09 48 01.1 +0.2**
BMO *e**PP pP 09 48 13.4 +2.3
BMO pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
BMO Blue Mountains 81.56 328 *e*P **P 09 48 01.1 +0.2**
comp=Z,5.0nm,1.2s,mb4.3
BMO *e*pP pP 09 48 13.4 +2.4
YBH Yreka Blue Hor 82.06 323 *e*P **P 09 48 02.7 -0.9**
BOSA Boshof 83.19 118 P **P 09 48 09.7 -0.4**
comp=Z,9.8nm,0.8s,mb4.9,baz=240,slow=4.1,SNR=12
OD2 Odessa Site #2 84.09 329 *e*P **P 09 48 13.4 -0.6**
OD2 *e*pP pP 09 48 25.9 +1.7
YKA Yellowknife Ar 94.00 341 P **P 09 48 59.4 -1.4**
comp=Z,2.6nm,0.8s,mb4.7,baz=141,slow=4.2,SNR=8.2
YKA Yellowknife Ar 94.00 341 P **P 09 48 59.4 -1.4**
KEST Kesra 96.71 54 LR LR 10 30 46.1
comp=Z,46nm,19.2s,MS4.0,baz=217,slow=34
ASAR Alice Springs 126.03 208 PKP PKPdf 09 54 45.5 -0.7
comp=Z,2.7nm,0.8s,baz=132,slow=2.1,SNR=8.5
WRA Warramunga Arr 129.09 211 PKP PKPdf 09 54 51.5 -0.6
comp=Z,3.0nm,0.8s,baz=165,slow=1.7,SNR=11
ZALV Zalesovo Beam 145.84 26 PKPbc PKPbc 09 55 22.2 -0.1
comp=Z,9.6nm,0.7s,baz=300,slow=4.2,SNR=19
EKS2 Erkin-Say 145.96 50 P PKPdf 09 55 23.7 +1.5
SNR=8.7
AML Almayashu 146.07 51 P PKPdf 09 55 24.4 +1.9
SNR=9.8
AAK Ala-Archa 146.46 50 P PKPdf 09 55 25.5 +2.4
SNR=6.0
UCH Uchtor 146.62 50 P PKPdf 09 55 25.5 +2.2
SNR=21
KBK Karagaybulak 146.77 49 P PKPdf 09 55 25.3 +1.8
SNR=8.3
TKM2 Tokmak 2 147.12 49 P PKPdf 09 55 25.4 +1.3
SNR=12
MKAR Makanchi Array 149.43 38 PKP PKPdf 09 55 27.3 -0.5
comp=Z,4.8nm,0.9s,baz=337,slow=2.2,SNR=8.3
MKAR PKPbc PKPbc 09 55 32.0 -0.2
comp=Z,9.7nm,0.7s,baz=321,slow=2.6,SNR=82
SONM Songino Array 157.15 5 PKP PKPdf 09 55 39.4 +0.5
comp=Z,0.5nm,0.6s,baz=107,slow=1.5,SNR=5.3
SONM PKPab PKPab 09 56 09.5 0.0
comp=Z,2.5nm,0.9s,baz=331,slow=3.5,SNR=6.3

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*GII **03** 09:36:53.6±1.2, 3549N×2856E, h31km±3km, mb4.1/19, ML4.0/19*
*ISK **03** 09:37:43.9, 3580N×28.16E, h30km, ML3.8*
*ISCJB **03** 09:37:45.6±0.2, 3593N±002×2828E±002, h81km±7km, Error ellipse: s-maj=3.8km s-min=3.3km az=7.3*
*CSEM **03** 09:37:45.1±0.0, 3594N×2831E, h59km±1km, Mw3.4, Error ellipse: s-maj=1.6km s-min=1.4km az=44.0*
*NEIC **03** 09:37:46.0, 3593N×2831E, h10km, MD3.8(ATH), After ATH.*
*HLW **03** 09:37:47.3, 3586N×2832E, h33km, Mb4.2*
*DDA **03** 09:37:47.3, 36.16N×2823E, h30km±3km, Md3.7*
*ATH **03** 09:37:49.4, 36.15N×2792E, h42km±1km, MD3.8/7*
*NIC **03** 09:37:50.0±0.3, 3597N×2860E, h55km, mb4.2, ML3.7, MW3.4*
ISC 03 09:37:47.2±0.2**, 3595N**±002×**2829E**±002**, h64**km±11km**, n107, σ1.02**/151**, 11C-1D, Eastern Mediterranean Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ARG Arkhangelos 0.30 333 *e*P **Pn 09 37 57.2 -0.4**
DALT Dalyan (Mudla) 0.86 19 PG **Pn 09 38 03.0 -0.6**
DALT *e*SG **Sn 09 38 17.2 +1.5**
TURN Turunc 0.95 15 *i* P **Pn 09 38 03.2 -1.5**
TURN *i* S **Sn 09 38 14.2 -3.6**
TURN Turunc 0.95 15 *i* P **Pn 09 38 03.2 -1.5**
TURN *i* S **Sn 09 38 14.2 -3.6**
KARP Karpathos 1.00 247 *e*P **Pn 09 38 06.1 +0.8**
KARP *e*S **Sn 09 38 18.7 -0.1**
AKAS Kas 1.10 75 *i* P **Pn 09 38 08.2 +1.6**
AKAS *i* S **Sn 09 38 23.5 +2.4**
YER Yerkesik 1.18 360 *e*PN **Pn 09 38 07.5 -0.1**
BDRM Kayabasi 1.30 329 *i* P **Pn 09 38 08.6 -0.7**
BDRM *i* S **Sn 09 38 24.0 -1.8**
BODT Bodrum 1.36 325 *e*PN **Pn 09 38 09.2 -0.8**
BODT *e*SN **Sn 09 38 25.6 -1.6**
MLSB Milas 1.40 343 *e*PN **Pn 09 38 10.4 -0.2**
ELL Elmali 1.53 58 *e*PN **Pn 09 38 12.3 0.0**
GOLH Golhisar 1.64 38 *i* P **Pn 09 38 15.4 +1.6**
GOLH *i* S **Sn 09 38 36.4 +2.4**
AYDN Tasoluk 1.74 349 *i* P **Pn 09 38 15.1 0.0**
AYDN *i* S **Sn 09 38 36.1 -0.2**
ZKR Zakros 1.89 244 P **Pn 09 38 18.7 +1.6**
DENT Denizli 1.90 18 *e*PN **Pn 09 38 17.4 +0.2**
GCAM G?zelcaml? 1.94 334 *i* P **Pn 09 38 17.2 -0.6**
GCAM *i* S **Sn 09 38 39.0 -2.2**
SMG Samos 2.11 327 *e*P **Pn 09 38 19.2 -0.9**
ANTB Antalya 2.13 63 *e*PN **Pn 09 38 21.3 +0.9**
NPS Neapolis 2.29 253 *e*P **Pn 09 38 23.0 +0.5**
NPS *e*S **Sn 09 38 47.8 -1.8**
SANT Santorini 2.33 281 P **Pn 09 38 23.4 +0.3**
BCK Bucak 2.38 50 *e*PN **Pn 09 38 24.0 +0.1**
APE Apeiranthos 2.49 297 *e*P **Pn 09 38 24.6 -0.6**
KHL Karahalli 2.56 22 *e*PN **Pn 09 38 26.8 +0.5**
IZM Izmir 2.58 342 *e*PN **Pn 09 38 26.1 -0.4**
KULA Kula-Manisa 2.58 6 *e*PN **Pn 09 38 26.3 -0.2**
KHAL Karahalli 2.60 21 *i* P **Pn 09 38 26.8 0.0**
KHAL *i* S **Sn 09 38 55.9 -1.3**
BLCB Balcova 2.63 338 *e*PN **Pn 09 38 26.7 -0.4**
IDI Anoyia 2.85 258 P **Pn 09 38 31.0 +0.8**
AKS Akhisar 2.95 353 *e*PN **Pn 09 38 31.0 -0.5**
DEMI Demirci 3.10 6 *i* P **Pn 09 38 33.5 -0.2**
DEMI *i* S **Sn 09 39 07.0 -2.5**
SHUT Suhut-Afyon 3.16 34 *e*PN **Pn 09 38 35.2 +0.8**
ALT Altintas 3.42 24 *e*PN **Pn 09 38 38.6 +0.7**
PPCY Paphos 3.48 107 P **Pn 09 38 39.2 +0.4**
HDMB Hadim 3.53 72 *e*PN **Pn 09 38 40.9 +1.4**
ALFC Alevga 3.60 101 P **Pn 09 38 40.5 0.0**
23nm,0.2s
ALFC S **Sn 09 39 20.9 -0.9**
BALB Balikesir 3.70 355 *e*PN **Pn 09 38 42.5 +0.7**
ERMK Ermenek 3.80 78 *i* P **Pn 09 38 47.1 +4.0**
ERMK *i* S **Sn 09 39 30.0 +3.4**
ERMK Ermenek 3.80 78 *i* S **Sn 09 39 30.0 +3.5**
BALY Balya 3.82 352 *i* P **Pn 09 38 43.3 -0.1**
BALY *i* S **Sn 09 39 24.4 -2.6**
KONT Konya--Tatoy 3.82 57 *e*PN **Pn 09 38 44.3 +0.8**
LEF Lefka 3.84 101 *e*PN **Pn 09 38 43.4 -0.3**
SZAC Souni-Zanaja 3.94 106 P **Pn 09 38 45.9 +0.8**
SZAC S **Sn 09 39 28.4 -1.6**
KIZT Kizilcal 4.09 43 *e*PN **Pn 09 38 48.4 +1.3**
MAMC Mammari 4.09 100 P **Pn 09 38 51.3 +4.1**
CSS Prodhromos 4.23 102 P **Pn 09 38 49.4 +0.3**
7.5nm,0.2s
CSS S **Sn 09 39 35.9 -1.3**
CSS Prodhromos 4.23 102 P **Pn 09 38 50.4 +1.3**
KYTH Kithira 4.27 276 *e*P **Pn 09 38 50.0 +0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LFK	**Lefkose**	**4.32**	**97**	*e*PN	**Pn**	**09 38 50.7**	**+0.3**
IKL	**Isikli**	**4.38**	**85**	*e*PN	**Pn**	**09 38 52.8**	**+1.7**
VLI	**Veliai**	**4.39**	**282**	*e*P	**Pn**	**09 38 51.3**	**+0.1**
MEST	**Erdemli**	**4.77**	**81**	*i* P	**Pn**	**09 38 59.8**	**+3.3**
MEST				*i* S	**Sn**	**09 39 48.4**	**-2.1**
EREN	**Erenkoy**	**4.80**	**93**	*e*PN	**Pn**	**09 38 58.0**	**+1.1**
HMAT	**Matruh**	**4.95**	**192**	⇑P	**Pn**	**09 38 59.1**	**+0.2**
MERS	**Mersin**	**5.11**	**78**	*e*PN	**Pn**	**09 39 02.1**	**+1.0**
SLUM		**5.13**	**211**	⇑P	**Pn**	**09 39 01.5**	**+0.1**
NEO	**Neokhori**	**5.23**	**311**	P	**Pn**	**09 39 04.3**	**+1.5**
ITM	**Ithomi**	**5.27**	**285**	P	**Pn**	**09 39 06.3**	**+3.1**
KARA	**Karaisali**	**5.60**	**75**	*e*PN	**Pn**	**09 39 09.0**	**+1.3**
AANS		**6.22**	**154**	P	**Pn**	**09 39 16.0**	**-0.3**
HNTI	**Hanita**	**6.36**	**115**	Pn	**Pn**	**09 39 19.8**	**+1.5**
HNTI				Sn	**Sn**	**09 40 25.7**	**-3.8**
OFRI	**'Ofer**	**6.46**	**119**	Pn	**Pn**	**09 39 20.7**	**+1.1**
OFRI				Sn	**Sn**	**09 40 27.6**	**-4.3**
HWQ	**Hawqa**	**6.49**	**103**	*e*Pn	**Pn**	**09 39 20.7**	**+0.6**
SQR		**6.53**	**157**	P	**Pn**	**09 39 20.6**	**+0.1**
MMA3	**Mount Meron ar**	**6.56**	**114**	Pn	**Pn**	**09 39 21.8**	**+0.8**
MMA3				Sn	**Sn**	**09 40 30.4**	**-4.0**
MMA2	**Mount Meron ar**	**6.57**	**114**	Pn	**Pn**	**09 39 22.0**	**+0.9**
MMA2				Sn	**Sn**	**09 40 31.1**	**-3.5**
HNAT	**Natroun**	**6.60**	**162**	⇑P	**Pn**	**09 39 21.7**	**+0.2**
HRSH	**Kfar Ka'horesh**	**6.63**	**117**	⇑P	**Pn**	**09 39 23.0**	**+1.1**
FYM	**Al Fayyum**	**6.66**	**159**	P	**Pn**	**09 39 22.4**	**+0.1**
RCY	**Rachaya**	**6.67**	**109**	*e*Pn	**Pn**	**09 39 23.3**	**+0.8**
KSDI	**Kefar Szold**	**6.67**	**112**	Pn	**Pn**	**09 39 23.4**	**+0.8**
KSDI				Sn	**Sn**	**09 40 33.5**	**-3.6**
AYT	**Al 'Ayyat**	**6.68**	**158**	⇑P	**Pn**	**09 39 22.9**	**+0.2**
HRI	**Mount Hermon**	**6.70**	**111**	Pn	**Pn**	**09 39 23.2**	**+0.4**
HRI				Sn	**Sn**	**09 40 35.1**	**-2.6**
KOT	**Kottamia**	**6.70**	**153**	P	**Pn**	**09 39 22.6**	**-0.3**
KOT				S	**Sn**	**09 40 32.9**	**-5.0**
SLTI	**Sal'it**	**6.71**	**122**	Pn	**Pn**	**09 39 23.1**	**0.0**
SLTI				Sn	**Sn**	**09 40 33.7**	**-4.3**
RSH		**6.74**	**136**	P	**Pn**	**09 39 23.0**	**-0.4**
HHAG	**Hagoal**	**6.78**	**151**	P	**Pn**	**09 39 24.1**	**+0.1**
HHAG				S	**Sn**	**09 40 34.2**	**-5.7**
MMLI	**Mount Malkishu**	**6.87**	**119**	Pn	**Pn**	**09 39 25.3**	**+0.1**
MMLI				Sn	**Sn**	**09 40 37.8**	**-4.2**
KSHT	**Keshet**	**6.88**	**113**	Pn	**Pn**	**09 39 26.3**	**+0.9**
KSHT				Sn	**Sn**	**09 40 39.3**	**-2.9**
HSAF	**As Saff**	**6.89**	**156**	⇑P	**Pn**	**09 39 25.4**	**-0.1**
GLL	**Jalalah**	**6.98**	**155**	⇑P	**Pn**	**09 39 26.4**	**-0.3**
HMDT	**Nahal Hemdat**	**7.04**	**120**	Pn	**Pn**	**09 39 27.9**	**+0.3**
HMDT				Sn	**Sn**	**09 40 42.2**	**-4.0**
KZIT	**Kziot**	**7.17**	**133**	Pn	**Pn**	**09 39 29.0**	**-0.3**
KZIT				Sn	**Sn**	**09 40 44.4**	**-4.8**
RTMI	**Retamim**	**7.24**	**131**	Pn	**Pn**	**09 39 30.4**	**+0.1**
RTMI				Sn	**Sn**	**09 40 46.5**	**-4.6**
YTIR	**Yattir**	**7.30**	**127**	Pn	**Pn**	**09 39 31.4**	**+0.3**
YTIR				Sn	**Sn**	**09 40 48.0**	**-4.6**
DSI	**Dead Sea**	**7.34**	**124**	Pn	**Pn**	**09 39 31.4**	**-0.4**
DSI				Sn	**Sn**	**09 40 49.5**	**-4.1**
HBNS	**Bani Suwayf**	**7.40**	**160**	⇑P	**Pn**	**09 39 33.0**	**+0.5**
MZDA	**Masada**	**7.50**	**126**	Pn	**Pn**	**09 39 33.8**	**0.0**
MZDA				Sn	**Sn**	**09 40 53.6**	**-3.7**
RMNI	**Mount Ramon**	**7.61**	**133**	Sn	**Sn**	**09 40 54.6**	**-5.4**
AWBH		**7.63**	**176**	P	**Pn**	**09 39 34.8**	**-0.7**
HNKL	**Nakhl**	**7.67**	**140**	⇑P	**Pn**	**09 39 35.8**	**-0.4**
HNKL				S	**Sn**	**09 40 56.0**	**-5.7**
ZFRI	**Zfri**	**7.89**	**131**	Pn	**Pn**	**09 39 39.0**	**-0.1**
ZFRI				Sn	**Sn**	**09 41 02.1**	**-4.9**
PRNI	**Paran**	**7.93**	**133**	Pn	**Pn**	**09 39 39.1**	**-0.6**
PRNI				Sn	**Sn**	**09 41 02.6**	**-5.3**
KRMI	**Paran Flat**	**7.94**	**135**	Pn	**Pn**	**09 39 39.4**	**-0.4**
KRMI				Sn	**Sn**	**09 41 02.7**	**-5.4**
HRFI	**Mount Harif**	**8.18**	**134**	Pn	**Pn**	**09 39 43.0**	**-0.1**
HRFI				Sn	**Sn**	**09 41 09.1**	**-4.9**
MBRI	**Mt Berech**	**8.29**	**136**	Pn	**Pn**	**09 39 44.6**	**0.0**
MBRI				Sn	**Sn**	**09 41 12.0**	**-4.8**
EIL	**Elat**	**8.40**	**136**	Pn	**Pn**	**09 39 45.9**	**-0.4**
EIL				Sn	**Sn**	**09 41 14.2**	**-5.3**
HBST	**Basata**	**8.64**	**139**	P	**Pn**	**09 39 49.8**	**+0.4**
HQLS		**8.75**	**137**	P	**Pn**	**09 39 50.6**	**-0.3**
HFRF	**Wahat Farafira**	**8.78**	**180**	⇑P	**Pn**	**09 39 50.6**	**-0.7**
JLOS		**9.42**	**138**	S	**Sn**	**09 41 37.9**	**-6.7**
JLOS		**9.42**	**138**	P	**Pn**	**09 39 59.5**	**-0.7**
HHRG	**Al Ghardaqah**	**9.80**	**151**	⇑P	**Pn**	**09 40 05.1**	**-0.1**
HHRG				S	**Sn**	**09 41 46.6**	**-7.1**
HDK1	**Dakhla**	**10.42**	**174**	P	**Pn**	**09 40 13.9**	**+0.1**
HSFG		**10.52**	**151**	P	**Pn**	**09 40 16.1**	**+0.9**
HSFG		**10.52**	**151**	P	**Pn**	**09 40 16.0**	**+0.8**
GTR	**Jabal at Tayr**	**10.59**	**169**	P	**Pn**	**09 40 15.6**	**-0.5**
HDK2	**Wahat Dakhilah**	**11.61**	**177**	⇓P	**Pn**	**09 40 30.2**	**+0.2**

*IDC **03** 09:45:06.5±0.6, 2151S×16838E, h0km, mb4.7/12, mb1 4.8/13, mb1mx4.7/16, mbtmp4.7/13, ML4.0/1, MS4.2/20, Ms1 4.2/20, ms1mx4.1/24, Error ellipse: s-maj=21.5km s-min=17.7km az=163.0*

*ISCJB **03** 09:45:07.5±0.3, 2153S±006×16841E±005, h15km, mb5.0/45, MS4.3/30, Error ellipse: s-maj=9.4km s-min=5.8km az=155.5*

*LDG **03** 09:45:09.4±0.3, 2094S×16801E, h10km, Mb5.1/3, Ms4.3/9, Error ellipse: s-maj=32.8km s-min=17.2km az=8.0*

*BJI **03** 09:45:10.9, 2090S×16825E, h20km, mB5.3, mb5.0, Ms4.8, Msz4.5*

*MOS **03** 09:45:10.1±1.2, 2154S×16838E, h33km, mb5.0/12, Error ellipse: s-maj=15.1km s-min=11.0km az=7.6*

*NEIC **03** 09:45:11.1±0.3, 2149S×16844E, h30km, mb5.2/17, MS4.6/1, Error ellipse: s-maj=12.3km s-min=6.8km az=159.0*

*GCMT **03** 09:45:11.1±0.2, 2153S×16834E, h12km, MW5.0/72, Moment Tensor Solution. s29,c36; s72,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.13±.10; $M_{\theta\theta}$1.28±.12; $M_{\phi\phi}$2.86±.10; $M_{r\theta}$-1.09±.35; $M_{\theta\phi}$-1.85±.08; $M_{\phi r}$0.84±.35; Best double couple: $M_0$4.33000×10^{16} NP1:ϕ_s332.00000°, δ36.00000°, λ-81.00000°. NP2: ϕ_s141.00000°, δ54.00000°, λ-97.00000°. Principal axes: T 4.2840, Plg9.0000°, Azm236.0000°; N 0.1010, Plg5.0000°, Azm145.0000°; P -4.3750, Plg80.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 03 09:45:09.1±0.3**, 2158S**±006×**16842E**±005**, h16**km**, h16**km±1.3km**:pP-P, n179,** σ1s**09**/98**, mb5.0**/45**, MS4.3**/30**, 9C-10D, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**1.90**	**255**	*e*P	**Pn**	**09 45 39.5**	**-1.4**
DZM				*e*S	**Sn**	**09 46 04.0**	**-0.5**
RAO	**Raoul Island**	**14.51**	**125**	LR	LR	09 52 54.7	
	comp=Z,481nm,19.9s,baz=286,slow=32						
EIDS	**Eidsvold**	**16.35**	**253**	*e*P	**Pn**	**09 49 02.1**	**+4.1**
ARMA	**Armidale**	**17.46**	**236**	*e*P	**Pn**	**09 49 14.1**	**+2.1**
URZ	**Urewera**	**18.23**	**158**	P	**Pn**	**09 49 23.7**	**+2.2**
	0.4nm,0.3s,baz=335,slow=11,SNR=8.2						
URZ				LR	LR	09 55 40.2	
	comp=Z,691nm,18.2s,baz=242,slow=35						
AFI	**Afiamalu**	**20.33**	**71**	P	**P**	**09 49 45.6**	**+0.9**
	77nm,1.0s,baz=190,slow=12,SNR=3.8						
AFI				LR	LR	09 56 10.8	
	comp=Z,754nm,18.6s,MS4.1,baz=262,slow=33						
AFI	**Afiamalu**	**20.33**	**71**	*e*P	**P**	**09 49 42.2**	**-2.5**
AFI				LR	LR	09 56 10.8	
CTA	**Charters Tower**	**20.77**	**270**	*e*P	**P**	**09 49 51.5**	**+2.0**
	55nm,0.9s						
CTA	**Charters Tower**	**20.77**	**270**	P	**P**	**09 49 51.6**	**+2.1**
	66nm,0.8s,baz=85,slow=13,SNR=11						
CTA	**Charters Tower**	**20.77**	**270**	*e*P	**P**	**09 49 51.5**	**+2.0**
CTA				pmax	pmax		
	comp=Z,55nm,0.9s						
CTAO	**Charters Tower**	**20.77**	**270**	*e*P	**P**	**09 49 51.3**	**+1.8**
CTAO				pmax	pmax		
	comp=Z,66nm,0.8s						
CTAO	**Charters Tower**	**20.77**	**270**	*e*P	**P**	**09 49 51.3**	**+1.8**
	comp=Z,66nm,0.8s						
CNB	**Canberra Magne**	**21.58**	**227**	*e*P	**P**	**09 50 01.6**	**+3.5**
RPZ	**Rata Peaks**	**22.18**	**175**	LR	LR	09 56 59.2	
	comp=Z,520nm,21.3s,MS3.9,baz=344,slow=32						
PMG	**Port Moresby**	**23.76**	**297**	*e*P	**P**	**09 50 24.8**	**+3.8**
COEN	**Coen**	**25.18**	**283**	*e*P	**P**	**09 50 35.2**	**+1.2**
	comp=Z,22nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**26.00**	**241**	*e*P	**P**	**09 50 42.0**	**+0.7**
	comp=Z,12nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**26.00**	**241**	P	**P**	**09 50 42.0**	**+0.7**
	comp=Z,13nm,0.9s,mb4.5,baz=70,slow=7.0,SNR=14						
STKA				LR	LR	10 01 15.7	
	comp=Z,900nm,18.4s,MS4.3,baz=96,slow=37						
RAR	**Rarotonga**	**29.59**	**95**	P	**P**	**09 51 13.5**	**-0.1**
	comp=Z,20nm,0.9s,mb4.8,baz=270,slow=6.3,SNR=3.3						
RAR				LR	LR	10 00 22.0	
	comp=Z,355nm,18.4s,MS4.0,baz=276,slow=31						
WB2	**Warramunga Arr**	**31.86**	**267**	*e*P	**P**	**09 51 32.3**	**-1.4**
WRAB	**Tennant Creek**	**31.87**	**267**	P	**P**	**09 51 36.5**	**+2.8**
	comp=Z,160nm,1.1s,mb5.8,SNR=6.0						
WRAB	**Tennant Creek**	**31.87**	**267**	*e*P	**P**	**09 51 36.3**	**+2.6**
WRA	**Warramunga Arr**	**31.88**	**267**	P	**P**	**09 51 32.1**	**-1.7**
	comp=Z,6.8nm,1.0s,mb4.4,baz=101,slow=8.5,SNR=33						
WRA				LR	LR	10 04 24.4	
	comp=Z,1µm,19.8s,MS4.6,baz=90,slow=36						
ASAR	**Alice Springs**	**31.89**	**260**	P	**P**	**09 51 33.1**	**-0.7**
	comp=Z,15nm,0.9s,mb4.8,baz=83,slow=8.9,SNR=63						
KAKA	**Kakadu**	**35.42**	**278**	*e*P	**P**	**09 52 03.7**	**-1.0**
	comp=Z,34nm,0.9s,mb5.3						
FORT	**Forrest**	**37.20**	**247**	*e*P	**P**	**09 52 20.5**	**+0.8**
	comp=Z,25nm,0.8s,mb5.1						
FORT	**Forrest**	**37.20**	**247**	*e*P	**P**	**09 52 17.0**	**-2.7**
PPT	**Papeete**	**39.69**	**92**	*e*S	**S**	**09 58 36.9**	**-7.0**
	comp=Z,159nm,25.2s						
PPT				*e*LQ		10 01 39.3	
	comp=Z,974nm,29.0s						
PPT				*e*LR	LR	10 03 19.0	
	comp=Z,762nm,27.2s						
PPT	**Papeete**	**39.69**	**92**	LR	LR	10 04 36.6	
	comp=Z,434nm,20.3s,MS4.3,baz=269,slow=29						
FITZ	**Fitzroy Crossi**	**40.30**	**267**	⇓*i*P	**P**	**09 52 45.5**	**-0.4**
	comp=Z,51nm,0.8s,mb5.3						
FITZ	**Fitzroy Crossi**	**40.30**	**267**	LR	LR	10 09 17.6	
	comp=Z,752nm,19.4s,MS4.5,baz=106,slow=36						
GUMO	**Guam**	**41.90**	**324**	LR	LR	10 08 43.5	
	comp=Z,130nm,18.7s,MS3.8,baz=90,slow=34						
MBWA	**Marble Bar**	**45.19**	**261**	*e*P	**P**	**09 53 25.4**	**-0.2**
	comp=Z,28nm,0.7s,mb5.2						
KLBR	**Kellerberrin**	**46.05**	**246**	*e*P	**P**	**09 53 31.1**	**-1.1**
	comp=Z,57nm,1.0s,mb5.5						
NWAO	**Narrogin (SRO)**	**46.49**	**245**	*e*P	**P**	**09 53 35.3**	**-0.4**
NWAO				pmax	pmax		
	comp=Z,38nm,1.1s						
NWAO	**Narrogin (SRO)**	**46.49**	**245**	*e*P	**P**	**09 53 35.2**	**-0.5**
	comp=Z,38nm,1.1s,mb5.2						
MUN	**Mundaring**	**47.36**	**246**	*e*P	**P**	**09 53 42.1**	**-0.4**
RKT	**Rikitea**	**52.09**	**103**	*e*LR	LR	10 09 02.5	
	comp=Z,223nm,30.8s						
SBA	**Scott Base**	**56.33**	**180**	*e*P	**P**	**09 54 42.1**	**-6.6**
SBA				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
SBA	**Scott Base**	**56.33**	**180**	*e*P	**P**	**09 54 42.0**	**-6.7**
	comp=Z,18nm,1.0s,mb5.1						
MJAR	**Matsushiro Arr**	**64.47**	**333**	P	**P**	**09 55 43.8**	**-1.0**
	comp=Z,1.6nm,0.6s,mb4.2,baz=169,slow=6.5,SNR=3.9						
MJAR				LR	LR	10 23 08.1	
	comp=Z,71nm,18.2s,MS3.9,baz=185,slow=36						
TATO	**Taipei**	**64.96**	**313**	*e*P	**P**	**09 55 47.6**	**-0.6**
	comp=Z,44nm,0.9s,mb5.5						
QSPA	**South Pole Qui**	**68.49**	**180**	LR	LR	10 25 10.3	
	comp=Z,179nm,18.1s,MS4.3,baz=25,slow=35						
KSRS	**Korea Array**	**70.01**	**327**	P	**P**	**09 56 19.8**	**-0.2**
	comp=Z,2.3nm,0.8s,mb4.1,baz=125,slow=5.3,SNR=7.2						
KSRS				LR	LR	10 22 26.5	
	comp=Z,59nm,18.9s,MS3.9,baz=141,slow=32						
NJ2	**Nanjing**	**71.37**	**317**	*e*P	**P**	**09 56 30.4**	**+2.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
YSS	**Yuzh-Sakhalins**	**72.04**	**342**	*e*P	**P**	**09 56 32.9**	**+0.8**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
VLA	**Vladivostok**	**72.63**	**333**	*e*P	**P**	**09 56 35.7**	**0.0**
VLA				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.3						
WHN	**Wuhan**	**73.36**	**313**	⇑P	**P**	**09 56 40.3**	**-0.1**
MDJ	**Mudanjiang**	**74.82**	**332**	P	**P**	**09 56 48.4**	**-0.1**
MDJ				AMB	AMB		
	comp=Z,16nm,2.4s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,130nm,3.6s						
MDJ				LR	LR		
	comp=N,49nm,28.3s,MS3.8						
MDJ				LR	LR		
	comp=E,48nm,24.9s,MS3.8						
MDJ				LR	LR		
	comp=Z,44nm,30.8s						
PEA0B	**Petropavlovsk-**	**74.95**	**353**	*e*P	**P**	**09 56 48.9**	**-0.2**
PETK	**Petropavlovsk-**	**74.95**	**353**	P	**P**	**09 56 49.5**	**+0.4**
	comp=Z,13nm,0.9s,mb4.9,baz=130,slow=6.0,SNR=19						
PETK				LR	LR	10 27 43.1	
	comp=Z,47nm,18.8s,MS3.8,baz=153,slow=34						
MAW	**Mawson**	**75.99**	**202**	*e*P	**P**	**09 56 55.2**	**+0.2**
	comp=Z,3.3nm,0.8s,mb4.3						
MAW	**Mawson**	**75.99**	**202**	P	**P**	**09 56 55.3**	**+0.3**
	comp=Z,4.0nm,0.8s,mb4.4,baz=112,slow=8.5,SNR=8.0						
MAW				LR	LR	10 25 27.8	
	comp=Z,205nm,20.6s,MS4.4,baz=312,slow=32						
MAW	**Mawson**	**75.99**	**202**	*e*P	**P**	**09 56 55.2**	**+0.2**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CN2	**Changchun**	**76.06**	**329**	*e*P	**P**	**09 56 55.6**	**-0.1**
CN2				*e*XP	sP	09 57 02.4	-0.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA	**Guiyang**	**76.54**	**306**	⇑*i*P	**P**	**09 57 01.9**	**+3.1**
GYA				PCP	PcP	09 57 12.8	+2.4
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=N,560nm,21.0s,MS5.0						
GYA				LR	LR		
	comp=E,590nm,20.7s,MS5.0						
GYA				LR	LR		
	comp=Z,570nm,20.2s,MS4.9						
NANT	**Nan**	**77.46**	**296**	P	**P**	**09 57 02.5**	**-1.6**
KLR	**Kul'dur**	**77.69**	**336**	*e*P	**P**	**09 56 58.8**	**-5.9**
BJI	**Beijing**	**78.28**	**322**	P	**P**	**09 57 08.0**	**-0.2**
BJI				S	S	10 06 57.5	-5.2
BJI				AMB	AMB		
	comp=Z,9.0nm,1.7s,mb4.4						
BJI				AMB	AMB		
	comp=Z,219nm,6.9s						
BJI				LR	LR		
	comp=N,141nm,9.8s						
BJI				LR	LR		
	comp=E,92nm,11.1s						
CHRT	**Chiangrai**	**78.72**	**297**	⇑P	**P**	**09 57 12.5**	**+1.4**
	comp=E,105nm,1.0s,mb5.7						
CMAR	**Chiang Mai Arr**	**78.78**	**295**	P	**P**	**09 57 12.7**	**+1.3**
	comp=E,1.7nm,0.4s,mb4.3,baz=127,slow=4.4,SNR=11						
CMAR	**Chiang Mai Arr**	**78.78**	**295**	*i* P	**P**	**09 57 12.6**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KMI	**Kunming**	**78.87**	**303**	P	**P**	**09 57 12.3**	**+0.5**
KMI				AP	pP	09 57 17.4	+0.1
KMI				XP	sP	09 57 19.0	-0.2
KMI				PP	PP	10 00 16.3	+5.5
KMI				XS	sS	10 07 20.7	+2.1
KMI				AMB	AMB		
	comp=Z,18nm,0.9s,mb5.0						
KMI				AMB	AMB		
	comp=Z,105nm,3.9s						
KMI				LR	LR		
	comp=N,72nm,20.7s,MS4.2						
KMI				LR	LR		
	comp=E,103nm,19.7s,MS4.2						
KMI				LR	LR		
	comp=Z,87nm,20.7s,MS4.1						
KMI	**Kunming**	**78.87**	**303**	P	**P**	**09 57 12.3**	**+0.5**
KMI				*PP	pP	09 57 17.4	+0.1
KMI				*SP	sP	09 57 19.0	-0.2
KMI						10 00 16.3	
KMI				PPP		10 02 06.7	
KMI				S	S	10 07 15.5	+5.9
KMI				*SS	sS	10 07 20.7	+2.1
KMI	**Kunming**	**78.87**	**303**	P	**P**	**09 57 12.3**	**+0.5**
KMI				pP	pP	09 57 17.4	+0.1
KMI				sP	sP	09 57 19.0	-0.2
KMI				PP	PP	10 00 16.3	+5.5
KMI				PPP		10 02 06.7	
KMI				S	S	10 07 15.5	+5.9
KMI				sS	sS	10 07 20.7	+2.1
KMI				SS	SS	10 12 21.1	+5.9
KMI				SSS		10 15 44.6	
XAN	**Xi'an**	**79.13**	**313**	P	**P**	**09 57 12.9**	**-0.2**
XAN				AP	pP	09 57 20.3	+1.8
XAN				XP	sP	09 57 24.1	+3.6
XAN				AMB	AMB		
	comp=Z,11nm,1.6s,mb4.5						
XAN				AMB	AMB		
	comp=Z,92nm,8.3s						
CD2	**Chengdu**	**81.06**	**308**	⇑*i*P	**P**	**09 57 23.6**	**0.0**
CD2				AP	pP	09 57 28.3	-0.7
CD2				XP	sP	09 57 31.2	+0.3
CD2				PP	PP	10 00 32.9	+4.0
CD2				S	S	10 07 34.8	+2.3
CD2				XS	sS	10 07 42.9	+1.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				AMB	AMB		
	comp=Z,40nm,8.4s						
CD2				LR	LR		
	comp=N,150nm,15.6s,MS4.6						
CD2				LR	LR		
	comp=E,140nm,18.0s,MS4.6						
CD2				LR	LR		
	comp=Z,210nm,19.2s,MS4.5						
HHC	**Hu-ho-hao-te**	**81.50**	**320**	*e*P	**P**	**09 57 27.8**	**+2.1**
HHC				AP	pP	09 57 30.8	-0.3
HHC				XP	sP	09 57 33.5	+0.4
HHC				XS	sS	10 07 48.3	+2.6
HHC				AMB	AMB		
	comp=Z,14nm,0.6s,mb5.1						
HHC				AMB	AMB		
	comp=Z,118nm,7.8s						
HHC				LR	LR		
	comp=N,105nm,15.4s,MS4.5						
HHC				LR	LR		
	comp=E,123nm,16.7s,MS4.5						
HHC				LR	LR		
	comp=Z,72nm,15.4s,MS4.1						
SYO	**Syowa Base**	**82.48**	**196**	⇑*e*P	**P**	**09 57 28.2**	**-2.3**
SYO	**Syowa Base**	**82.48**	**196**	⇑*e*pP	**P**	**09 57 30.8**	**+0.3**
HIA	**Hailar**	**82.75**	**330**	*e*P	**P**	**09 57 30.0**	**-2.0**
LZH	**Lanzhou**	**83.73**	**313**	⇑P	**P**	**09 57 38.7**	**+1.3**
LZH				AP	pP	09 57 44.9	+2.0
LZH				XP	sP	09 57 46.3	+1.5
LZH				*e*S	S	10 08 02.0	+2.3
LZH				XS	sS	10 08 11.2	+2.5
LZH				AMB	AMB		
	comp=Z,62nm,1.6s,mb5.5						
LZH				AMB	AMB		
	comp=Z,245nm,4.7s						
LZH				LR	LR		
	comp=E,1µm,17.7s						
LZH				LR	LR		
	comp=Z,1µm,19.2s,MS5.3						
LZH	**Lanzhou**	**83.73**	**313**	⇑P	**P**	**09 57 38.7**	**+1.3**
LZH				*SP	sP	09 57 46.3	+1.5
LZH						10 00 55.8	
LZH				*e*S	S	10 08 02.0	+2.3
LZH	**Lanzhou**	**83.73**	**313**	⇑P	**P**	**09 57 38.7**	**+1.3**
LZH				pP	pP	09 57 44.9	+2.0
LZH				sP	sP	09 57 46.3	+1.5
LZH				PP	PP	10 00 55.8	+5.0
LZH				*e*S	S	10 08 02.0	+2.3
LZH				sS	sS	10 08 11.2	+2.5
LZH				*e*SS	SS	10 13 38.0	+11
SNAA	**Sanae**	**86.80**	**183**	*e*P	**P**	**09 57 51.0**	**-1.2**
SNAA				*e*	pP	09 57 56.5	-1.2
VNA2	**Neumayer--Watz**	**87.70**	**181**	*e*P	**P**	**09 57 55.8**	**-0.8**
VNA2				*e*	pP	09 58 00.1	-2.0
SHL	**Shillong**	**87.78**	**298**	*e*x	**P**	**09 57 59.0**	**+1.2**
VNA1	**Neumayer--Stat**	**87.99**	**181**	*e*P	**P**	**09 57 57.3**	**-0.7**
VNA1				*e*	pP	09 58 01.5	-2.0
GTA	**Gaotai**	**88.18**	**314**	P	**P**	**09 57 59.8**	**+0.5**
GTA				AP	pP	09 58 04.6	-0.2
GTA				XP	sP	09 58 06.9	+0.2
GTA				SKS		10 08 27.5	
GTA				S	S	10 08 45.5	+2.4
GTA				XS	sS	10 08 53.3	+1.1
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.8						
GTA				AMB	AMB		
	comp=Z,105nm,4.8s						
GTA				LR	LR		
	comp=N,79nm,17.4s,MS4.4						
GTA				LR	LR		
	comp=E,110nm,18.0s,MS4.4						
GTA				LR	LR		
	comp=Z,71nm,16.5s,MS4.2						
ULN	**Ulaanbaatar**	**88.28**	**324**	⇓*i*P	**P**	**09 57 59.8**	**+0.2**
ULN	**Ulaanbaatar**	**88.28**	**324**	*e*P	**P**	**09 57 59.9**	**+0.3**
SONM	**Songino Array**	**88.63**	**323**	P	**P**	**09 58 01.0**	**-0.3**
	comp=Z,3.2nm,0.8s,mb4.7,baz=141,slow=4.4,SNR=13						
SONM				LR	LR	10 32 10.3	
	comp=Z,73nm,20.6s,MS4.1,baz=154,slow=32						
YAK	**Yakutsk**	**88.86**	**343**	*e*P	**P**	**09 58 01.2**	**-0.8**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
WDC	**Whiskeytown Da**	**89.04**	**45**	*e*P	**P**	**09 58 03.3**	**-0.1**
CMB	**Columbia Colle**	**89.28**	**48**	*e*P	**P**	**09 58 04.6**	**+0.1**
YBH	**Yreka Blue Hor**	**89.50**	**44**	LR	LR	10 29 56.4	
	comp=Z,242nm,18.5s,MS4.7,baz=175,slow=30						
YBH	**Yreka Blue Hor**	**89.50**	**44**	*e*P	**P**	**09 58 06.1**	**+0.6**
YBH				pmax	pmax		
	comp=Z,29nm,2.1s						
YBH	**Yreka Blue Hor**	**89.50**	**44**	*e*P	**P**	**09 58 06.1**	**+0.6**
	comp=Z,29nm,2.1s,mb5.2						
ISA	**Isabella**	**89.54**	**51**	*e*P	**P**	**09 58 06.2**	**+0.4**
ISA				pmax	pmax		
	comp=Z,37nm,2.0s,mb5.4						
ISA	**Isabella**	**89.54**	**51**	*e*P	**P**	**09 58 06.2**	**+0.3**
	comp=Z,37nm,2.0s,mb5.4						
HUMO	**Hull Mountain**	**89.78**	**43**	*e*P	**P**	**09 58 07.5**	**+0.7**
	comp=Z,26nm,1.8s,mb5.3						
PFO	**Pinyon Flat Ob**	**90.12**	**54**	LR	LR	10 30 04.1	
	comp=Z,81nm,18.6s,MS4.2,baz=278,slow=30						
MTUM	**Tungsten Hills**	**90.24**	**50**	*e*P	**P**	**09 58 09.6**	**+0.6**
NVAR	**Mina Array Bea**	**90.91**	**49**	P	**P**	**09 58 12.1**	**-0.1**
	comp=Z,2.1nm,0.7s,mb4.6,baz=229,slow=8.9,SNR=21						
NVAR	**Mina Array Bea**	**90.91**	**49**	P	**P**	**09 58 12.1**	**-0.1**
LPIG	**La Paz**	**91.11**	**65**	LR	LR	10 29 40.7	
	comp=Z,253nm,21.1s,MS4.6,baz=189,slow=29						
MOD	**Modoc**	**91.16**	**45**	*e*P	**P**	**09 58 13.4**	**+0.2**
TPNV	**Topopah Spring**	**91.72**	**51**	*e*P	**P**	**09 58 16.2**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,35nm,2.1s,mb5.3						
TPNV	**Topopah Spring**	**91.72**	**51**	*e*P	**P**	**09 58 16.2**	**+0.3**
	comp=Z,35nm,2.1s,mb5.3						
IMA2	**Indian Mountai**	**91.96**	**15**	*e*P	**P**	**09 58 15.7**	**-0.6**
TLY	**Talaya**	**92.25**	**326**	*e*P	**P**	**09 58 18.0**	**0.0**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.8						
COLA	**College**	**92.49**	**17**	*e*P	**P**	**09 58 16.4**	**-2.4**
SKAG	**Skagway**	**92.88**	**25**	*e*P	**P**	**09 58 20.1**	**-0.6**
EGAK	**Eagle**	**94.38**	**19**	*e*P	**P**	**09 58 26.7**	**-0.8**
	comp=Z,12nm,0.9s,mb5.3						
HVS	**Khovu-Aksy**	**97.44**	**322**	*e*P	**P**	**09 58 38.7**	**-3.1**
HVS				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.7						
WMQ	**Urumqi**	**98.26**	**314**	*e*P	**P**	**09 58 46.5**	**+0.8**
WMQ				AP	pP	09 58 51.0	-0.2
WMQ				SKS		10 09 23.0	
WMQ				*e*S	S	10 10 12.0	-0.8
WMQ				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,106nm,4.6s						
WMQ				LR	LR		
	comp=N,118nm,23.4s,MS4.6						
WMQ				LR	LR		
	comp=E,203nm,27.2s,MS4.6						
WMQ				LR	LR		
	comp=Z,102nm,18.6s						
PDAR	**Pinedale Array**	**98.76**	**48**	LR	LR	10 36 15.5	
	comp=Z,75nm,18.9s,MS4.2,baz=270,slow=31						
SMCO	**Snowmass**	**99.33**	**52**	*e*Pdif	**P**	**09 58 50.5**	**0.0**
	comp=Z,5.8nm,0.7s,mb5.2						
MKAR	**Makanchi Array**	**102.86**	**315**	P	Pdif	09 59 04.6	-1.5
	comp=Z,0.6nm,0.7s,baz=116,slow=3.4,SNR=3.8						
ARCES	**ARCESS Array B**	**127.12**	**345**	PKP	PKPdf	10 04 10.5	-1.3
	comp=Z,2.0nm,0.6s,baz=45,slow=1.9,SNR=8.7						
ARCES	**ARCESS Array B**	**127.12**	**345**	PKP	PKPdf	10 04 10.5	-1.3
KMBO	**Kilima Mbogo**	**127.26**	**251**	*i* PKIKP	PKPdf	10 04 10.8	-3.0
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BDFB	**Brasilia**	**128.57**	**133**	PKP	PKPdf	10 04 15.0	-1.2
	comp=Z,1.9nm,0.4s,baz=117,slow=4.5,SNR=3.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKASG	Malin Array Be	136.91	323	PKP	PKPdf	10 04 29.1	-1.8
	comp=Z,0.2nm,0.3s,baz=53,slow=1.3,SNR=4.4						
NOA	NORSAR Array B	137.48	344	PKP	PKPdf	10 04 31.2	-0.4
	comp=Z,0.9nm,0.7s,baz=144,slow=5.4,SNR=4.0						
OKC	Ostrava-Krasne	143.32	327	ePKP	PKPdf	10 04 39.9	-2.6
PSZ	Piszkesteto	143.57	324	⇓ePKP	PKPdf	10 04 41.1	-1.9
BSEG	Bad Segeberg	143.66	338	ePKPbc	PKPdf	10 04 43.3	+0.3
DPC	Dobruska-Polom	143.88	329	ePKP	PKPdf	10 04 41.8	-1.6
PVCC	Panska Ves	144.56	331	ePKP	PKPdf	10 04 43.5	-1.1
BRG	Berggiesshubel	144.59	332	i PKIKP	PKPdf	10 04 43.3	-1.4
BRG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRG	Berggiesshubel	144.59	332	ePKPbc	PKPdf	10 04 43.3	-1.4
BRG	Berggiesshubel	144.59	332	i P	PKPdf	10 04 43.3	-1.3
	comp=Z,16nm,1.0s						
CLL	Collm	144.68	333	ePKPbc	PKPdf	10 04 43.5	-1.3
CLL	Collm	144.68	333	i PKP	PKPdf	10 04 43.5	-1.3
CLL				e		10 04 45.0	
MODS	Modra-Piesok	144.69	326	ePKP	PKPdf	10 04 44.4	-0.5
PRU	Pruhonice	144.96	330	ePKP	PKPdf	10 04 44.2	-1.1
CLZ	Clausthal	145.32	336	ePKPbc	PKPbc	10 04 46.1	+0.4
CONA	Conrad Observa	145.71	327	⇓iP	PKPdf	10 04 47.4	+0.7
	comp=Z,121nm,2.1s						
CSNA	Conrad Observa	145.71	327	⇓iP	PKPdf	10 04 47.5	+0.8
	comp=Z,119nm,2.1s						
NKC	Novy Kostel	145.71	332	ePKP	PKPdf	10 04 47.1	+0.5
MOX	Moxa	145.76	334	ePKP	PKPdf	10 04 47.3	+0.6
	comp=Z,20nm,1.6s						
KHC	Kasperske Hory	146.00	330	ePKP	PKPdf	10 04 47.8	+0.6
KHC				x	x	10 05 04.0	
KHC	Kasperske Hory	146.00	330	ePKP	PKPdf	10 04 47.8	+0.6
KHC				e		10 05 04.0	
MANZ	Manzenberg	146.04	332	ePKPbc	PKPbc	10 04 48.0	0.0
GEC2	GERESS Array S	146.15	330	ePKPbc	PKPbc	10 04 48.0	-0.4
GERES	GERESS Array B	146.15	330	PKPbc	PKPbc	10 04 48.5	+0.1
	comp=Z,5.7nm,0.8s,baz=45,slow=2.6,SNR=16						
ROTZ	Rotzenmuhle	146.16	332	ePKPbc	PKPbc	10 04 48.7	+0.3
WET	Wettzell	146.32	331	ePKPbc	PKPbc	10 04 48.7	-0.2
GRF	Grafenberg Arr	146.65	333	ePKPbc	PKPbc	10 04 50.2	+0.4
SOKA	Soboth	146.94	326	⇓iP	PKPdf	10 04 49.9	+1.0
TNS	Taunus Mts	147.35	336	ePKPbc	PKPbc	10 04 50.7	-1.1
KBA	Koelnbreinsper	147.54	328	⇓iP	PKPbc	10 04 51.6	-0.8
	comp=Z,12nm,0.9s						
KBA	Koelnbreinsper	147.54	328	⇓iP	PKPbc	10 04 51.6	-0.8
MEM	Membach	147.90	339	PKPbc	PKPbc	10 04 53.4	+0.1
MEM				APKPab		10 05 01.8	
WTTA	Wattenberg	148.25	329	⇓iP	PKPdf	10 04 50.4	-0.6
	comp=Z,13nm,1.0s						
WLF	Walferdange	148.65	338	PKPbc	PKPbc	10 04 56.3	+1.1
WLF	Walferdange	148.65	338	ePKPbc	PKPbc	10 04 56.0	+0.7
GIVF	Givet	148.73	339	ePKP1	PKPbc	10 04 55.1	-0.4
DOU	Dourbes	148.81	340	PKPbc	PKPbc	10 04 55.6	0.0
DOU				PKPab	PKPab	10 05 00.3	+0.8
DOU				APKPab		10 05 03.3	
BAIF	Baives	148.97	340	ePKP1	PKPbc	10 04 55.9	-0.2
	comp=Z,9.9nm,0.8s						
DAVA	Damuels	149.04	331	⇓iP	PKPbc	10 04 56.4	+0.1
	comp=Z,20nm,1.6s						
CDF	Champ du Feu	149.26	335	ePKP1	PKPbc	10 04 56.3	-0.6
	comp=Z,48nm,1.4s						
BRMO	Bormio	149.42	329	PKP	PKPbc	10 04 57.1	-0.2
HINF	Hinteralfeld	149.91	335	ePKP1	PKPbc	10 04 57.8	-0.7
HAU	Haudompre	149.96	336	ePKP1	PKPbc	10 04 58.0	-0.6
	comp=Z,16nm,0.8s						
HAU				eMLR	MLR		
	comp=Z,98nm,21.5s,MS4.3						
HAU	Haudompre	149.96	336	ePKP	PKPbc	10 04 58.0	-0.6
HAU				LR	LR		
	comp=Z,100nm,21.5s,MS4.6						
MEZF	Maizieres J'vi	150.02	338	ePKP1	PKPbc	10 04 58.8	+0.1
SGO	Sicignano	150.38	316	PKIKP	PKPbc	10 04 59.0	-0.9
CSSN	Cassano Irpino	150.40	317	PKP	PKPdf	10 04 57.8	+3.2
NRCA	Norcia	150.43	321	PKP	PKPbc	10 04 58.8	-1.1
VAI	Varese	150.62	330	PKIKP	PKPbc	10 04 59.1	-1.1
SDI	San Donato	150.69	319	PKIKP	PKPbc	10 04 59.2	-1.4
CABF	La Chapelle	151.20	334	ePKP1	PKPbc	10 05 01.6	0.0
	comp=Z,22nm,0.8s						
FLN	La Foliniere	151.46	345	ePKP1	PKPbc	10 05 01.4	-0.7
	comp=Z,34nm,0.8s						
FLN				eMLR	MLR		
	comp=Z,91nm,22.2s,MS4.2						
LOR	Lormes	151.49	338	ePKP1	PKPbc	10 05 01.7	-0.5
	comp=Z,14nm,0.8s						
LOR				eMLR	MLR		
	comp=Z,70nm,22.8s,MS4.1						
LDF	La Druitiere	151.53	344	ePKP1	PKPbc	10 05 01.4	-0.9
SSF	Saint Saulge	151.79	338	ePKP1	PKPbc	10 05 02.5	-0.4
	comp=Z,15nm,0.8s						
LPL	La Plagne	151.80	332	ePKP1	PKPbc	10 05 03.0	0.0
	comp=Z,13nm,0.9s						
LPG	La Plagne	151.81	332	ePKP1	PKPbc	10 05 03.1	+0.1
	comp=Z,15nm,0.9s						
GRR	Gorron	151.90	345	ePKP1	PKPbc	10 05 02.5	-0.6
SGMF	Saint Gilles	152.42	347	ePKP1	PKPbc	10 05 03.4	-0.9
BGF	Bois d'Agland	152.46	338	ePKP1	PKPbc	10 05 03.9	-0.6
	comp=Z,21nm,0.9s						
ORIF	Oris-en-Rattie	152.64	332	ePKP1	PKPbc	10 05 04.5	-0.4
	comp=Z,5.8nm,0.6s						
ORIF				eMLR	MLR		
	comp=Z,87nm,22.0s,MS4.2						
PGF	Pioggiola	152.91	325	ePKP1	PKPbc	10 05 04.9	-0.7
	comp=Z,41nm,1.0s						
TCF	Toulx Ste Croi	152.91	339	ePKP1	PKPbc	10 05 04.9	-0.6
	comp=Z,9.8nm,0.7s						
MFF	Saint Martin d	153.36	342	ePKP1	PKPbc	10 05 05.6	-0.9
LMR	La Mourre	153.59	329	ePKP1	PKPbc	10 05 06.3	-0.8
TORD	Torodi Ar. Bea	164.82	239	PKP	PKPdf	10 05 12.6	-0.6
	comp=Z,2.5nm,0.9s,baz=357,slow=0.2,SNR=11						

IDC 03 10:04:38.4±0.9, 21.60S×168.43E, h0km, mb4.3/10, mb1 4.4/10, mb1mx4.3/16, mbtmp4.3/10, MS3.8/6, Ms1 3.8/6, ms1mx3.5/18, Error ellipse: s-maj=30.3km s-min=21.9km az=151.0
ISCJB 03 10:04:41.8±6.3, 21.6S±0.1×168.4E±0.1, h31km±43km, mb4.3/10, MS3.8/5, Error ellipse: s-maj=25.6km s-min=15.9km az=160.4
NEIC 03 10:04:42.8±0.7, 21.63S×168.50E, h30km, mb4.6/4, Error ellipse: s-maj=28.0km s-min=15.2km az=161.0
ISC 03 10:04:42.4±6.4, 21.6S±0.1×168.4E±0.1, h24km±44km, n26, σ0.76/19, mb4.3/10, MS3.8/5, 1D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	1.87	256	eP	Pn	10 05 12.7	-0.2
DZM				eS	Sn	10 05 35.9	+0.1
URZ	Urewera	18.21	158	LR	LR	10 14 12.4	
	comp=Z,298nm,19.4s,baz=195,slow=32						
AFI	Afiamalu	20.36	71	LR	LR	10 15 31.1	
	comp=Z,152nm,20.9s,MS3.3,baz=244,slow=32						
CTA	Charters Tower	20.75	270	eP	P	10 09 24.5	+2.9
	14nm,0.9s						
CTA	Charters Tower	20.75	270	P	P	10 09 21.9	+0.3
	4.9nm,0.9s,baz=84,slow=14,SNR=2.6						
CTAO	Charters Tower	20.75	270	eP	P	10 09 22.1	+0.6
	23nm,1.0s						
STKA	Stephens Creek	25.96	241	P	P	10 10 15.0	+1.7
	4.4nm,0.8s,mb4.0,baz=88,slow=11,SNR=3.7						
STKA				LR	LR	10 18 49.8	
	comp=Z,277nm,18.4s,MS3.8,baz=28,slow=33						
WRA	Warramunga Arr	31.85	267	P	P	10 11 04.7	-1.1
	2.4nm,0.9s,mb4.0,baz=96,slow=8.1,SNR=14						
WRA				LR	LR	10 23 03.3	
	comp=Z,254nm,20.5s,MS3.9,baz=105,slow=35						
ASAR	Alice Springs	31.86	260	P	P	10 11 04.5	-1.3
	0.6nm,0.9s,mb3.4,baz=82,slow=9.2,SNR=4.1						
PPT	Papeete	39.71	92	eLR	LR	10 22 50.1	
	103nm,29.8s						
FITZ	Fitzroy Crossi	40.28	267	⇓iP	P	10 12 17.8	-0.1
	12nm,0.9s,mb4.6						
FITZ	Fitzroy Crossi	40.28	267	P	P	10 12 17.5	-0.4
	3.6nm,0.6s,mb4.3,baz=141,slow=8.5,SNR=20						
QSPA	South Pole Qui	68.45	180	P	P	10 15 42.4	+0.5
	5.0nm,1.0s,mb4.5,baz=17,slow=3.3,SNR=8.1						
QSPA	South Pole Qui	68.45	180	P	P	10 15 42.4	+0.4
PETK	Petropavlovsk-	74.98	353	P	P	10 16 21.6	+0.2
	7.2nm,0.9s,mb4.6,baz=143,slow=5.2,SNR=11						
PETK				LR	LR	10 45 05.7	
	comp=Z,36nm,20.2s,MS3.7,baz=0.1,slow=32						
CMAR	Chiang Mai Arr	78.77	295	P	P	10 16 44.3	+0.7
	1.2nm,0.3s,mb4.3,baz=146,slow=4.0,SNR=5.6						
SNAA	Sanae	86.77	183	e	P	10 17 23.6	-0.6
SNAA				e		10 17 27.3	
VNA2	Neumayer--Watz	87.66	181	e	P	10 17 28.3	-0.3
VNA2				e		10 17 31.8	
SONM	Songino Array	88.64	323	P	P	10 17 33.4	0.0
	0.9nm,0.7s,mb4.2,baz=149,slow=6.2,SNR=5.4						
NVAR	Mina Array Bea	90.95	49	P	P	10 17 44.5	+0.1
	0.8nm,0.7s,mb4.2,baz=231,slow=8.8,SNR=8.6						
PLCA	Paso Flores	97.28	139	LR	LR	10 51 09.9	
	comp=Z,82nm,18.8s,MS4.2,baz=186,slow=29						
REDW	Red Top Meadow	98.13	47	eP	P	10 18 17.2	-0.1
	9.2nm,1.9s,mb5.0						
ARCES	ARCESS Array B	127.14	345	PKP	PKPdf	10 23 42.1	-1.8
	2.0nm,0.9s,baz=84,slow=3.7,SNR=4.0						
KHC	Kasperske Hory	146.03	330	ePKP	PKPdf	10 24 20.0	+0.7
GERES	GERESS Array B	146.17	330	PKPbc	PKPbc	10 24 20.9	+0.3
	1.6nm,0.6s,baz=60,slow=3.7,SNR=9.6						
TORD	Torodi Ar. Bea	164.78	239	PKP	PKPdf	10 24 43.6	-1.6
	0.7nm,0.9s,baz=247,slow=1.6,SNR=3.6						

ATH 03 10:21:28.3, 37.95N×23.64E, h32km±3km, MD2.8/5, ML2.0
ISCJB 03 10:21:29.2±1.2, 37.95N±0.06×23.8E±0.1, h28km±8km, Error ellipse: s-maj=15.8km s-min=9.3km az=0.9
CSEM 03 10:21:29.0±0.2, 37.95N×23.80E, h33km±1km, ML2.4, Error ellipse: s-maj=4.3km s-min=3.4km az=79.0
THE 03 10:21:30.4, 37.97N×23.67E, h8km, ML2.4
ISC 03 10:21:29.4±1.2, 37.95N±0.05×23.8E±0.1, h26km±8km, n10, σ0.54/13, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATH	Athens Observa	0.05	295	ePB	Pb	10 21 33.6	-0.2
PTL	Penteli	0.12	38	ePB	Pb	10 21 34.5	+0.1
KVR	Kavouri	0.12	180	ePB	Pb	10 21 34.7	+0.3
DID	Didima	0.61	224	ePg	Pb	10 21 41.2	-0.3
DID				eSg	Sb	10 21 49.8	+0.1
LTK	Loutraki	0.64	277	ePg	Pb	10 21 41.4	-0.5
LKR	Lokris	0.92	319	ePg	Pn	10 21 46.6	0.0
LKR				eSg	Sb	10 21 58.9	+0.3
LKR	Lokris	0.92	319	ePn	Pn	10 21 45.1	-1.5
LKR	Lokris	0.92	319	ePg	Pn	10 21 46.7	+0.1
LKR				eSg	Sb	10 21 58.9	+0.3
VLX	Vlachokerasia	1.25	243	ePg	Pn	10 21 52.2	+1.1
VLI	Veliai	1.40	209	ePN	Pn	10 21 52.7	-0.5

ISCJB 03 11:23:15.0±2.2, 10.8S±0.6×166.4E±0.1, h33km, mb3.8/5, MS3.4/2, Error ellipse: s-maj=89.2km s-min=18.3km az=173.5
IDC 03 11:23:15.2±13.0, 10.87S×166.01E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/17, mbtmp3.9/5, MS3.5/2, Ms1 3.5/2, ms1mx2.9/24, Error ellipse: s-maj=217.0km s-min=95.2km az=66.0
NEIC 03 11:23:16.9±1.9, 10.76S×166.38E, h35km, Error ellipse: s-maj=75.8km s-min=15.0km az=174.0
ISC 03 11:23:16.9±2.2, 10.8S±0.6×166.4E±0.1, h35km, n6, σ0.83/6, mb3.8/5, MS3.4/2, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	21.48	242	P	P	11 28 01.9	-0.7
	3.6nm,0.7s,mb3.8,baz=71,slow=12,SNR=4.1						
CTA				LR	LR	11 34 35.5	
	comp=Z,125nm,21.3s,MS3.3,baz=227,slow=32						
AFI	Afiamalu	21.57	101	eP	P	11 28 03.6	-0.1
STKA	Stephens Creek	31.07	224	P	P	11 29 32.6	+0.8
	2.4nm,0.9s,mb4.0,baz=48,slow=12,SNR=3.3						
STKA				LR	LR	11 39 49.9	
	comp=Z,132nm,21.8s,MS3.6,baz=27,slow=32						
WRA	Warramunga Arr	32.16	250	P	P	11 29 41.6	0.0
	1.1nm,0.7s,mb3.8,baz=81,slow=8.9,SNR=8.6						
ASAR	Alice Springs	33.47	243	P	P	11 29 52.4	-0.7
	0.6nm,0.9s,mb3.5,baz=64,slow=10,SNR=6.9						
FITZ	Fitzroy Crossi	40.05	255	P	P	11 30 49.8	+0.7
	1.7nm,0.8s,mb3.8,baz=104,slow=10,SNR=3.6						

ISCJB 03 11:31:27.5±0.8, 16.85N±0.06×95.27W±0.04, h96km±10km, Error ellipse: s-maj=9.7km s-min=5.6km az=177.8
NEIC 03 11:31:28.9, 16.85N×95.27W, h97km, MD4.1(MEX), After MEX.
MEX 03 11:31:28.4±1.7, 16.86N×95.28W, h101km±14km, MD4.1
ISC 03 11:31:28.3±0.9, 16.85N±0.06×95.27W±0.04, h91km±11km, n12, σ1.05/22, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.44	57	iP	Pn	11 31 42.4	-0.4
CMIG				iS	Sn	11 31 53.2	-0.3
HUIG	Huatulco	1.34	217	iP	Pn	11 31 51.1	-1.1
HUIG				iS	Sn	11 32 10.8	+0.5
HUIG	Huatulco	1.34	217	iP	Pn	11 31 51.1	-1.1
HUIG				iS	Sn	11 32 10.9	+0.6
OXX	Oaxaca	1.41	279	iP	Pn	11 31 54.3	+1.3
OXX				iS	Sn	11 32 13.3	+1.7
VHO	Vista Hermosa	1.42	279	iP	Pn	11 31 53.5	+0.4
VHO				iS	Sn	11 32 12.3	+0.4
TUIG	Tuzandepetl	1.43	34	eP	Pn	11 31 54.3	+1.0
TUIG				iS	Sn	11 32 10.8	-1.3
TGIG		2.06	92	iP	Pn	11 32 00.7	-0.7
TPIG	Tehuac#an	2.53	308	iP	Pn	11 32 07.6	0.0
TPIG				iS	Sn	11 32 37.0	-0.8
PNIG	Pinotepa	2.78	261	iP	Pn	11 32 08.8	-2.0
PNIG				eP		11 32 09.1	
PNIG				iS	Sn	11 32 42.0	-1.7
PNIG	Pinotepa	2.78	261	iP	Pn	11 32 09.0	-1.9
PNIG				iS	Sn	11 32 41.4	-2.2
CCIG	Comitan	3.06	100	iP	Pn	11 32 15.0	+0.3
CCIG				iS	Sn	11 32 51.3	+0.9
PPM	Popocatepetl	3.88	305	eP	Pn	11 32 27.1	+1.3

IDC 03 11:40:15.8±3.0, 15.77S×175.59W, h0km, mb4.3/4, mb1 4.4/4, mb1mx3.9/16, mbtmp4.3/4, Error ellipse: s-maj=85.9km s-min=42.3km az=23.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.03	240	P	P	11 48 08.9	-0.3
	1.7nm,0.5s,baz=82,slow=8.9,SNR=7.7						
WRA	Warramunga Arr	47.71	257	P	P	11 48 54.9	+0.2
	0.5nm,0.2s,baz=90,slow=8.0,SNR=46						
WRA				PcP	PcP	11 50 23.9	-0.3
	0.4nm,0.4s,baz=94,slow=3.6,SNR=6.1						
ASAR	Alice Springs	47.99	252	P	P	11 48 56.9	0.0
	7.4nm,0.6s,baz=88,slow=8.2,SNR=172						
ASAR				PcP	PcP	11 50 25.0	-0.1
	0.8nm,0.6s,baz=100,slow=3.8,SNR=8.8						
QSPA	South Pole Qui	74.28	180	P	P	11 51 54.8	+0.4
	2.7nm,0.8s,baz=36,slow=10,SNR=8.2						

IDC 03 11:41:26.1±0.8, 54.22S×120.17W, h0km, mb3.9/5, mb1 4.1/5, mb1mx4.0/14, mbtmp3.9/5, MS4.0/16, Ms1 4.0/16, ms1mx3.9/22, Error ellipse: s-maj=45.9km s-min=23.2km az=161.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	Palmer Station	29.36	133	LR	LR	11 56 02.0	
	comp=Z,361nm,18.1s,baz=261,slow=30						
USHA	Ushuaia	29.47	113	LR	LR	11 55 39.1	
	comp=Z,206nm,18.2s,baz=229,slow=29						
RKT	Rikitea	32.99	334	eLR	LR	11 56 54.3	
	424nm,26.5s,baz=163						
RKT	Rikitea	32.99	334	eT		12 22 58.7	
	2.4nm,0.2s						
PLCA	Paso Flores	35.39	88	LR	LR	11 59 48.6	
	comp=Z,152nm,18.0s,baz=194,slow=31						
QSPA	South Pole Qui	35.98	180	P	P	11 48 28.7	+0.8
	1.8nm,0.9s,baz=116,slow=3.8,SNR=4.0						
QSPA				LR	LR	12 00 24.9	
	comp=Z,136nm,20.4s,baz=282,slow=32						
MEH	Mehetia	42.16	318	eT		12 34 33.3	
	641nm,0.3s						
PPT	Papeete	43.04	317	eLR	LR	12 01 28.2	
	455nm,25.5s,baz=147						
PPT	Papeete	43.04	317	LR	LR	12 02 41.1	
	comp=Z,255nm,18.4s,baz=142,slow=30						
RAR	Rarotonga	44.49	302	LR	LR	12 03 37.4	
	comp=Z,121nm,19.9s,baz=84,slow=30						
PMOR	Pomariorio Ree	44.72	320	eT		12 37 51.7	
	8.5nm,0.3s						
RAO	Raoul Island	48.14	277	LR	LR	12 06 38.7	
	comp=Z,68nm,19.7s,baz=98,slow=31						
CPUP	Villa Florida	53.30	85	P	P	11 50 45.4	-1.2
	0.3nm,0.4s,baz=216,slow=10,SNR=3.2						
CPUP				LR	LR	12 10 37.7	
	comp=Z,248nm,18.7s,baz=201,slow=33						
LPAZ	La Paz	55.07	67	P	P	11 51 01.2	+1.6
	4.6nm,1.1s,baz=182,slow=3.2,SNR=7.8						
LPAZ				LR	LR	12 08 49.0	
	comp=Z,120nm,20.9s,baz=199,slow=30						
MAW	Mawson	58.48	181	LR	LR	12 15 54.4	
	comp=Z,79nm,18.7s,baz=66,slow=35						
BDFB	Brasilia	67.03	85	LR	LR	12 19 02.4	
	comp=Z,147nm,18.2s,baz=278,slow=34						
STKA	Stephens Creek	69.28	244	LR	LR	12 15 26.9	
	comp=Z,180nm,19.8s,baz=164,slow=30						
ROSC	El Rosal	70.14	49	LR	LR	12 17 13.6	
	comp=Z,68nm,18.9s,baz=278,slow=31						
ASAR	Alice Springs	79.91	244	P	P	11 53 36.8	0.0
	0.5nm,0.8s,baz=157,slow=4.9,SNR=3.8						
WRA	Warramunga Arr	82.72	246	P	P	11 53 51.1	-0.6
	1.4nm,0.9s,baz=146,slow=4.5,SNR=9.4						
WRA				LR	LR	12 24 16.3	
	comp=Z,103nm,21.3s,baz=300,slow=31						
BOSA	Boshof	92.27	150	LR	LR	12 31 25.3	
	comp=Z,117nm,20.6s,baz=353,slow=32						
PDAR	Pinedale Array	97.03	8	LR	LR	12 33 04.8	
	comp=Z,46nm,20.6s,baz=260,slow=32						
SONM	Songino Array	150.48	277	PKPbc	PKPbc	12 01 19.0	+0.4
	0.9nm,0.8s,baz=160,slow=1.5,SNR=7.2						
SONM				PKPab	PKPab	12 01 24.4	-0.8
	1.0nm,0.8s,baz=115,slow=1.8,SNR=7.0						
GERES	GERESS Array B	151.22	82	PKPbc	PKPbc	12 01 20.2	-0.1
	0.4nm,0.3s,baz=144,slow=2.3,SNR=3.5						
MKAR	Makanchi Array	163.95	252	PKPab	PKPab	12 02 24.1	+0.9
	0.5nm,0.8s,baz=108,slow=3.2,SNR=3.9						

ISCJB 03 11:45:25.1±6.5, 14.1N±0.2×145.5E±0.9, h120km±31km, mb3.6/5, Error ellipse: s-maj=145.0km s-min=22.2km az=167.2
IDC 03 11:45:26.6±3.3, 14.10N×145.38E, h113km±13km, mb3.4/6, mb1 3.4/6, mb1mx3.2/19, mbtmp3.4/6, Error ellipse: s-maj=80.3km s-min=18.0km az=79.0
ISC 03 11:45:26.7±5.1, 14.1N±0.2×145.5E±0.6, h116km±29km, n7, σ0.69/8, mb3.6/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.80	230	P	Pn	11 45 46.4	-0.1
	377nm,0.3s,baz=128,slow=4.4,SNR=412						
GUMO				S	Sn	11 46 00.4	-1.0
JOW	Kunigami	20.48	311	P	P	11 49 56.0	+0.7
	8.6nm,0.5s,baz=140,slow=12,SNR=5.6						
WRA	Warramunga Arr	35.57	198	P	P	11 52 12.8	-0.2
	1.0nm,0.5s,mb4.0,baz=22,slow=9.6,SNR=15						
ASAR	Alice Springs	39.22	197	P	P	11 52 44.0	+0.3
	0.3nm,0.6s,mb3.3,baz=19,slow=12,SNR=5.5						
SONM	Songino Array	46.67	324	P	P	11 53 43.2	-0.3
	0.4nm,0.4s,mb3.5,baz=134,slow=10,SNR=3.4						
MKAR	Makanchi Array	61.55	316	P	P	11 55 31.4	-0.1
	0.3nm,0.5s,mb3.6,baz=86,slow=8.7,SNR=3.5						
KURK	Kurchatov	64.58	320	P	P	11 55 51.0	-0.5
	0.7nm,0.6s,mb3.7,baz=102,slow=7.1,SNR=3.8						

CSEM 03 11:58:35.1±0.2, 31.45N×11.48E, h2km, MD5.0, Error ellipse: s-maj=6.1km s-min=4.1km az=72.0
ISCJB 03 11:58:36.1±0.8, 31.51N±0.06×11.54E±0.08, h10km, mb3.9/4, Error ellipse: s-maj=9.9km s-min=9.0km az=178.5
IDC 03 11:58:37.7±1.1, 31.48N×11.30E, h0km, mb3.9/5, mb1 3.8/7, mb1mx3.7/24, mbtmp3.8/7, ML3.3/2, MS3.2/1, Ms1 3.2/1, ms1mx2.3/37, Error ellipse: s-maj=33.2km s-min=20.0km az=123.0
NEIC 03 11:58:38.5±0.9, 31.56N×11.57E, h10km, MG4.0(MDD), Error ellipse: s-maj=10.9km s-min=10.6km az=147.0
TUN 03 11:58:49.3, 32.30N×11.27E, h10km, MD5.0
ISC 03 11:58:38.7±0.8, 31.55N±0.07×11.55E±0.08, h10km, n45, σ1.23/50, mb3.9/4, 1C-4D, Near coast of Libya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEDT	Meda	2.90	332	⇓eP	Pn	11 59 22.0	-2.9
BERT	Berda	3.43	322	iP	Pn	11 59 31.5	-0.7
SYA	Sidi Yaiche	3.93	325	⇓eP	Pn	11 59 39.5	+0.4
OAR	Oum El Arais	3.98	319	⇓eP	Pn	11 59 39.8	0.0
TROT	Trozza	4.32	338	iP	Pn	11 59 43.5	-1.0
TROT	Trozza	4.32	338	⇑eP	Pn	11 59 43.5	-1.0
KEST	Kesra	4.56	337	Pn	Pn	11 59 46.6	-1.1
	1.2nm,0.3s,baz=114,slow=5.0,SNR=71						
KEST				Sn	Sn	12 00 43.9	+3.1
	2.4nm,0.3s,baz=310,slow=22,SNR=7.3						
ZGN	Zaghouan	4.96	346	⇓eP	Pn	11 59 52.5	-0.7
GHAT	Ghardimaou	5.62	332	iP	Pn	12 00 00.5	-1.8
VAE	Valguarnera	6.37	21	LR	LR	12 03 30.8	
	comp=Z,179nm,18.8s,baz=24,slow=45						
CEL	Celeste	7.58	27	Pn	Pn	12 00 29.1	-0.2
CEL	Celeste	7.58	27	Pn	Pn	12 00 29.1	-0.2
VSL	Villasalto	8.12	348	ePn	Pn	12 00 34.7	-2.0
VSL				eSn	Sn	12 01 59.7	-8.8
VSL	Villasalto	8.12	348	ePn	Pn	12 00 34.7	-2.0
VSL				eSn	Sn	12 01 59.7	-8.8
ETOS	Mallorca	10.84	322	P	Pn	12 01 13.6	-0.4
ETOS	Mallorca	10.84	322	P	Pn	12 01 13.6	-0.4
EIBI	Ibiza	11.18	315	P	Pn	12 01 18.7	+0.1
	0.5nm,0.2s						
EIBI				S	Sn	12 03 04.9	-19
EIBI	Ibiza	11.18	315	P	Pn	12 01 18.7	+0.1
	0.5nm,0.2s						
EIBI				S	Sn	12 03 04.9	-19
EBEN	Beniarda	11.99	310	P	Pn	12 01 29.3	-0.3
	1.9nm,0.5s						
EBEN	Beniarda	11.99	310	P	Pn	12 01 29.3	-0.4
	1.9nm,0.5s						
EMUR	La Murta	12.25	304	P	Pn	12 01 33.2	0.0
	1.1nm,0.2s						
EMUR	La Murta	12.25	304	P	Pn	12 01 33.2	0.0
	1.1nm,0.2s						
ENIJ	Nijar	12.60	299	P	Pn	12 01 38.5	+0.6
	0.2nm,0.1s						
ENIJ	Nijar	12.60	299	P	Pn	12 01 38.5	+0.6
	0.2nm,0.1s						
ETOB	Tobarra	12.84	307	P	Pn	12 01 41.9	+0.6
	0.8nm,0.2s						
ETOB	Tobarra	12.84	307	P	Pn	12 01 41.9	+0.6
	0.8nm,0.2s						
EBER	Berja	13.08	298	P	Pn	12 01 46.3	+1.7
	0.7nm,0.4s						
EBER	Berja	13.08	298	P	Pn	12 01 46.3	+1.7
	0.7nm,0.4s						
EMOS	Mosqueruela	13.11	315	P	Pn	12 01 45.8	+0.8
	0.3nm,0.2s						
EMOS	Mosqueruela	13.11	315	P	Pn	12 01 45.8	+0.9
	0.3nm,0.2s						
EHUE	Huescar	13.20	302	P	Pn	12 01 46.8	+0.5
	0.1nm,0.2s						
EVIA	Vianos	13.50	305	P	Pn	12 01 50.3	0.0
	1.1nm,0.4s						
EVIA	Vianos	13.50	305	P	Pn	12 01 50.3	0.0
	1.1nm,0.4s						
EQES	Quesada	13.55	301	P	Pn	12 01 52.3	+1.4
	1.1nm,0.2s						
EGUA	Guajares	13.57	297	P	Pn	12 01 52.9	+1.6
	1.9nm,0.2s						
EGUA	Guajares	13.57	297	P	Pn	12 01 52.9	+1.6
	1.9nm,0.2s						
MDT	Midelt	13.75	280	Pn	Pn	12 01 51.9	-1.9
	0.2nm,0.3s,baz=54,slow=18,SNR=6.2						
MDT				Sn	Sn	12 04 18.2	-8.3
	0.2nm,0.3s,baz=284,slow=12,SNR=2.8						
ERON	Agron	13.81	297	P	Pn	12 01 55.8	+1.2
	0.7nm,0.3s						
ERON	Agron	13.81	297	P	Pn	12 01 55.8	+1.2
	0.7nm,0.3s						
TORD	Torodi Ar. Bea	20.44	209	P	P	12 03 15.2	-1.1
	2.4nm,0.7s,baz=26,slow=10.0,SNR=24						
DBIC	Dimbokro	29.12	215	P	P	12 04 38.4	-1.5
	1.2nm,0.4s,mb4.0,baz=16,slow=12,SNR=5.5						
MKAR	Makanchi Array	55.12	52	P	P	12 08 12.2	+1.2
	1.0nm,0.7s,mb4.0,baz=276,slow=6.5,SNR=9.0						
ZALV	Zalesovo Beam	55.58	43	P	P	12 08 16.0	+1.8
	1.0nm,0.5s,mb4.1,baz=252,slow=7.6,SNR=4.4						
SONM	Songino Array	70.36	45	P	P	12 09 55.7	+3.1
	0.4nm,0.6s,mb3.5,baz=269,slow=5.8,SNR=3.9						
SONM	Songino Array	70.36	45	P	P	12 09 55.7	+3.1

*NNC **03** 12:35:45.3±7.3, 3709N×7094E, h203km±75km, mb2.6, mpv3.9, Error ellipse: s-maj=66.1km s-min=45.4km az=29.0*

ISC 03 12:35:47.4±3.4**, 373N**±03×**714E**±03**, h247**km±27km**, n10,** σ**0ˢ70**/14**, 5C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.16**	**20**	P	**Pn**	**12 37 04.1**	**-0.8**
	SNR=108						
UCH	**Uchtor**	**5.50**	**25**	P	**Pn**	**12 37 08.4**	**-0.7**
	SNR=21						
KZA	**Kyzart**	**5.65**	**31**	P	**Pn**	**12 37 12.1**	**+1.2**
	SNR=12						
EKS2	**Erkin-Say**	**5.68**	**18**	P	**Pn**	**12 37 11.4**	**+0.1**
	SNR=8.8						
KK31	**Karatay Array**	**5.85**	**354**	⇓P	**Pn**	**12 37 12.3**	**-1.1**
	3.8nm,0.3s,baz=187,slow=13,SNR=85						
KK31				⇓S	**S**	**12 38 22.7**	**+0.6**
	8.2nm,0.3s,baz=189,slow=21,SNR=16						
AAK	**Ala-Archa**	**5.86**	**23**	P	**Pn**	**12 37 13.7**	**+0.2**
	SNR=9.3						
TKM2	**Tokmak 2**	**6.50**	**29**	⇑P	**Pn**	**12 37 21.5**	**-0.1**
	8.6nm,0.7s						
TKM2				⇑S	**S**	**12 38 42.8**	**+5.8**
	2.8nm,0.6s						
TKM2	**Tokmak 2**	**6.50**	**29**	P	**Pn**	**12 37 21.6**	**+0.1**
	SNR=18						
AB31	**Akbulak array**	**14.55**	**329**	⇑P	**Pn**	**12 39 03.1**	**+1.1**
	0.5nm,0.4s,baz=149,slow=11,SNR=24						
AB31				⇑S	**S**	**12 41 42.4**	**-0.2**
	1.2nm,0.7s,baz=163,slow=22,SNR=6.5						
AKTO	**Aktyubinsk**	**16.25**	**328**	⇑P	**P**	**12 39 26.3**	**+5.4**
	0.7nm,1.2s						
AKTO				⇓S	**S**	**12 42 17.9**	**-0.3**
	0.3nm,0.8s						

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*ISCJB **03** 12:40:05.0±2.2, 24.12S±009×1800W±0.1, h469km±29km, mb4.1/11, Error ellipse: s-maj=18.2km s-min=12.8km az=24.5*

*NEIC **03** 12:40:06.4±1.2, 2405S×17998W, h473km±17km, mb4.5/5, Error ellipse: s-maj=17.1km s-min=10.7km az=145.0*

*IDC **03** 12:40:07.3±1.9, 24.12S×17992W, h483km±20km, mb3.6/8, mb1 3.8/10, mb1mx3.6/17, mbtmp3.6/10, Error ellipse: s-maj=21.1km s-min=17.1km az=155.0*

ISC 03 12:40:06.4±1.6**, 240S**±01×**1800E**±01**, h469**km±23km**, n16,** σ**0ˢ58**/17**, mb4.1**/11**, 4D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.72**	**39**	P	**P**	**12 42 52.7**	**-0.3**
	1.5nm,0.3s,baz=277,slow=20,SNR=3.0						
URZ	**Urewera**	**14.39**	**189**	P	**P**	**12 43 10.7**	**+0.2**
	0.7nm,0.3s,baz=23,slow=7.7,SNR=7.5						
URZ				S	**S**	**12 45 37.3**	**-5.2**
	0.4nm,0.3s,baz=186,slow=21,SNR=4.2						
CTA	**Charters Tower**	**31.47**	**270**	⇓*i*P	**P**	**12 45 50.1**	**+1.6**
	18nm,0.4s,mb4.9						
CTA	**Charters Tower**	**31.47**	**270**	P	**P**	**12 45 50.1**	**+1.6**
	23nm,0.4s,mb4.9,baz=100,slow=12,SNR=53						
STKA	**Stephens Creek**	**34.67**	**248**	*e*P	**P**	**12 46 15.6**	**+0.1**
	3.1nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**34.67**	**248**	P	**P**	**12 46 16.3**	**+0.8**
	3.9nm,0.6s,mb4.0,baz=94,slow=9.6,SNR=14						
ASAR	**Alice Springs**	**42.01**	**261**	P	**P**	**12 47 15.6**	**-0.1**
	3.6nm,0.5s,mb4.0,baz=99,slow=6.1,SNR=5.4						
ASAR				ScP	ScP	12 52 03.1	-2.4
	2.0nm,0.9s,baz=113,slow=4.1,SNR=9.2						
WB2	**Warramunga Arr**	**42.38**	**266**	⇓*i*P	**P**	**12 47 18.3**	**-0.3**
WRA	**Warramunga Arr**	**42.39**	**266**	P	**P**	**12 47 18.4**	**-0.3**
	12nm,0.6s,mb4.5,baz=102,slow=8.3,SNR=129						
WRA				ScP	ScP	12 52 05.5	-1.7
	3.7nm,0.9s,baz=101,slow=4.0,SNR=14						
FORT	**Forrest**	**46.26**	**250**	*e*P	**P**	**12 47 47.5**	**-1.1**
	18nm,0.6s,mb4.7						
KAKA	**Kakadu**	**46.32**	**275**	⇓*i*P	**P**	**12 47 48.9**	**-0.3**
	9.0nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**50.81**	**266**	⇓*i*P	**P**	**12 48 22.7**	**-0.1**
	12nm,0.6s,mb4.4						
QSPA	**South Pole Qui**	**66.05**	**180**	P	**P**	**12 50 04.9**	**-0.2**
	2.1nm,0.7s,mb3.9,baz=9.6,slow=3.6,SNR=10.0						
KSRS	**Korea Array**	**78.35**	**320**	P	**P**	**12 51 17.0**	**-0.3**
	0.9nm,0.7s,mb3.3,baz=134,slow=5.4,SNR=4.6						
NVAR	**Mina Array Bea**	**84.85**	**44**	P	**P**	**12 51 51.1**	**+0.4**
	0.5nm,0.6s,mb3.4,baz=229,slow=8.7,SNR=7.0						
PDAR	**Pinedale Array**	**92.79**	**44**	P	**P**	**12 52 28.1**	**+0.3**
	0.6nm,0.5s,mb3.9,baz=270,slow=1.5,SNR=4.7						

IDC 03 12:53:57.1±2.2**, 266N**×**12684E, h0**km**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/15**, mbtmp3.5**/3**, Error ellipse: s-maj=174.7km s-min=26.2km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.63**	**162**	P	P	12 59 09.3	-1.0
	1.1nm,0.5s,baz=342,slow=10,SNR=25						
ASAR	**Alice Springs**	**27.05**	**166**	P	P	12 59 42.2	+0.9
	0.2nm,0.4s,baz=341,slow=7.8,SNR=8.0						
MKAR	**Makanchi Array**	**58.49**	**326**	P	P	13 03 55.1	0.0
	0.3nm,0.5s,baz=123,slow=8.0,SNR=4.5						

PRE 03 13:01:59.6±1.3**, 2691S**×**2680E, h2**km**, ML3.5, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.50**	**92**	*e*P	Pg	13 02 09.2	0.0
PRYS				*e*S	Sg	13 02 15.9	+0.2
PRYS				AML	AML	13 02 17.0	
	comp=Z,506nm,0.2s						
SWZ	**Schweizer**	**1.34**	**258**	*e*P	Pg	13 02 25.8	+0.5
SWZ				*e*S	Sg	13 02 43.3	+0.7
SWZ				AML	AML	13 02 47.7	
	comp=Z,1µm,0.4s						
SEK	**Senekal**	**1.59**	**153**	*e*P	Pn	13 02 30.0	+1.3
SEK				*e*S	Sn	13 02 50.1	+0.3
SEK				AML	AML	13 02 52.9	
	comp=Z,473nm,0.3s						
SLR	**Silverton**	**1.77**	**49**	*e*P	Pn	13 02 32.2	+0.9
SLR				*e*S	Sn	13 02 55.8	+1.4
SLR				AML	AML	13 02 59.3	
	comp=Z,440nm,0.5s						
KSD	**Kokstad**	**4.29**	**148**	*e*P	Pn	13 03 06.6	+0.8
KSD				*e*S	Sn	13 03 55.6	-0.8
KSD				AML	AML	13 04 14.6	
	comp=Z,124nm,0.9s						
PKA	**Prieska**	**4.50**	**231**	*e*P	Pn	13 03 08.7	-0.2
PKA				*e*S	Sn	13 04 01.3	-0.4
PKA				AML	AML	13 04 38.2	
	comp=Z,55nm,0.5s						
UPI	**Upington**	**5.13**	**252**	*e*P	Pn	13 03 18.7	+1.3
UPI				*e*S	Sn	13 04 15.4	-1.9
UPI				AML	AML	13 04 47.2	
	comp=Z,25nm,0.6s						
MOPA	**Mopani**	**5.36**	**52**	*e*P	Pn	13 03 20.9	+0.2
MOPA				*e*S	Sn	13 04 20.6	-2.4
MOPA				AML	AML	13 04 24.8	
	comp=Z,59nm,0.7s						
SUR	**Sutherland**	**7.54**	**222**	*e*P	Pn	13 03 51.9	+1.4
SUR				*e*S	Sn	13 05 12.8	-3.8

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*CSEM **03** 13:21:16.7±0.1, 3727N×173W, h12km, ML3.7/20, Error ellipse: s-maj=2.1km s-min=1.3km az=146.0*

*ISCJB **03** 13:21:16.0±0.4, 3751N±002×201W±002, h7km±2km, Error ellipse: s-maj=4.2km s-min=2.5km az=155.8*

*INMG **03** 13:21:17.6±1.4, 3727N×177W, h21km±3km, ML3.2, Error ellipse: s-maj=3.6km s-min=2.2km az=161.0*

*LDG **03** 13:21:17.3±0.2, 3726N×184W, h5km, Ml3.5/4, Error ellipse: s-maj=5.2km s-min=2.5km az=150.0*

*MDD **03** 13:21:17.1±0.3, 3729N×184W, h11km, mbLg3.1/30, Error ellipse: s-maj=4.2km s-min=2.2km az=145.0, PRIMO*

MDD EMS: IV INTENSIDAD MIMA.

*NEIC **03** 13:21:17.1, 3730N×184W, h11km, MN3.2(MDD), After MDD.*

NEIC Felt [IV] in the Cuevas del Almanzora area. Also felt at Almeria and Huercal-Overa.

*SFS **03** 13:21:17.0, 3720N×180W, h11km, ML3.2*

ISC 03 13:21:16.8±0.4**, 3741N**±002×**196W**±002**, h6**km±2km**, n151,** σ**1ˢ16**/256**, 6C-4D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENIJ	**Nijar**	**0.48**	**204**	⇑Pg	**Pg**	**13 21 25.4**	**-0.7**
	402nm,0.4s,SNR=18						
ENIJ	**Nijar**	**0.48**	**204**	P	**Pg**	**13 21 25.5**	**-0.7**
EHUE	**Huescar**	**0.64**	**309**	⇓Pg	**Pg**	**13 21 30.3**	**+1.1**
	13nm,0.3s,SNR=18						
EHUE				Lg		13 21 42.1	
	105nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**0.64**	**309**	Pg	**Pg**	**13 21 30.2**	**+1.1**
EHUE				Lg		13 21 42.1	
EMUR	**La Murta**	**0.71**	**53**	⇑Pg	**Pg**	**13 21 30.0**	**-0.6**
	512nm,0.3s,SNR=18						
EMUR				Lg		13 21 39.4	
	1µm,0.4s,SNR=16						
EMUR	**La Murta**	**0.71**	**53**	Pg	**Pg**	**13 21 30.0**	**-0.6**
	512nm,0.3s,SNR=18						
EMUR	**La Murta**	**0.71**	**53**	P	**Pg**	**13 21 30.0**	**-0.6**
EMUR				Lg		13 21 41.7	
CART	**Cartagena**	**0.78**	**77**	⇑P	**Pg**	**13 21 30.2**	**-1.7**
CART				S	**Sg**	**13 21 40.2**	**-1.9**
CART	**Cartagena**	**0.78**	**77**	*i* P	**Pg**	**13 21 30.2**	**-1.7**
CART				*e*S	**Sg**	**13 21 40.2**	**-1.9**
EBER	**Berja**	**0.90**	**235**	⇑Pg	**Pg**	**13 21 33.7**	**-0.4**
	513nm,0.3s,SNR=18						
EBER				Lg		13 21 46.1	
	288nm,0.3s,SNR=9.9						
EBER	**Berja**	**0.90**	**235**	Pg	**Pg**	**13 21 33.7**	**-0.4**
	444nm,0.3s,SNR=18						
EBER	**Berja**	**0.90**	**235**	P	**Pg**	**13 21 33.7**	**-0.4**
EBER				Lg		13 21 45.7	
EQES	**Quesada**	**0.96**	**294**	Pg	**Pg**	**13 21 37.0**	**+1.7**
	74nm,0.3s,SNR=128						
EQES				Lg		13 21 52.9	
	321nm,0.2s,SNR=20						
EQES	**Quesada**	**0.96**	**294**	Pg	**Pg**	**13 21 37.8**	**+2.5**
EQES	**Quesada**	**0.96**	**294**	Pg	**Pg**	**13 21 37.8**	**+2.5**
EQES				Lg		13 21 53.4	
EQUE	**Quentar**	**1.20**	**260**	⇑Pg	**Pg**	**13 21 39.7**	**-0.1**
	117nm,0.3s,SNR=18						
EQUE				Lg		13 21 57.6	
	171nm,0.3s,SNR=14						
ETOB	**Tobarra**	**1.27**	**15**	Pg	**Pg**	**13 21 41.5**	**+0.3**
	92nm,0.3s,SNR=150						
ETOB				Lg		13 21 59.3	
	311nm,0.5s,SNR=11						
ETOB	**Tobarra**	**1.27**	**15**	Pg	**Pg**	**13 21 41.5**	**+0.3**
	92nm,0.3s,SNR=150						
ETOB	**Tobarra**	**1.27**	**15**	P	**Pn**	**13 21 41.6**	**+0.4**
ETOB				Lg		13 21 59.8	
ECOG	**Cogollos-Vega**	**1.29**	**264**	⇓Pg	**Pg**	**13 21 41.4**	**-0.1**
	78nm,0.4s,SNR=18						
ECOG				Lg		13 22 01.2	
	162nm,0.5s,SNR=13						
ECOG	**Cogollos-Vega**	**1.29**	**264**	P	**Pn**	**13 21 41.6**	**+0.2**
ECOG				Lg		13 22 02.1	
EVIA	**Vianos**	**1.29**	**341**	⇓Pg	**Pg**	**13 21 42.6**	**+0.9**
	340nm,0.3s,SNR=18						
EVIA				Lg		13 22 02.0	
	564nm,0.5s,SNR=22						
EVIA	**Vianos**	**1.29**	**341**	Pg	**Pg**	**13 21 42.7**	**+1.0**
	340nm,0.3s,SNR=18						
EVIA	**Vianos**	**1.29**	**341**	P	**Pn**	**13 21 42.7**	**+1.2**
EVIA				Lg		13 22 02.4	
EGUA	**Guajares**	**1.41**	**246**	Pg	**Pg**	**13 21 42.6**	**-1.2**
	70nm,0.2s,SNR=7.9						
EGUA				Lg		13 22 02.8	
	570nm,0.7s,SNR=7.9						
EGUA	**Guajares**	**1.41**	**246**	Pg	**Pg**	**13 21 42.6**	**-1.2**
EGUA				Lg		13 22 03.0	
ERON	**Agron**	**1.52**	**256**	⇑Pg	**Pg**	**13 21 45.3**	**-0.8**
	12nm,0.2s,SNR=18						
ERON				Lg		13 22 06.4	
	41nm,0.4s,SNR=7.9						
ERON	**Agron**	**1.52**	**256**	Pg	**Pg**	**13 21 45.1**	**-0.9**
ERON				Lg		13 22 10.2	
EBAN	**Banos Encina**	**1.63**	**298**	Pn	**Pn**	**13 21 47.2**	**+1.2**
	0.6nm,0.1s,SNR=7.9						
EBAN				Pg	**Pg**	**13 21 48.5**	**+0.4**
	59nm,0.2s,SNR=72						
EBAN				Lg		13 22 11.5	
	197nm,0.2s,SNR=13						
EBAN	**Banos Encina**	**1.63**	**298**	Pg	**Pg**	**13 21 48.1**	**0.0**
EBAN				Lg		13 22 11.3	
EALB	**Alboran**	**1.71**	**211**	Pg	**Pg**	**13 21 47.0**	**-2.5**
	40nm,0.4s,SNR=7.8						
EALB				Lg		13 22 08.4	
	27nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.71**	**211**	Pg	**Pg**	**13 21 47.0**	**-2.5**
	40nm,0.4s,SNR=7.8						
ELOJ	**Sierra Loja**	**1.77**	**262**	Pg	**Pg**	**13 21 50.2**	**-0.5**
	25nm,0.3s,SNR=33						
ELOJ				Lg		13 22 16.5	
	80nm,0.4s,SNR=6.3						
ELUQ	**Luque**	**1.84**	**275**	Pn	**Pn**	**13 21 47.9**	**-1.1**
	3.3nm,0.1s,SNR=7.9						
ELUQ				Pg	**Pg**	**13 21 51.4**	**-0.7**
	69nm,0.3s,SNR=48						
ELUQ				Lg		13 22 18.6	
	113nm,0.3s,SNR=9.5						
ELUQ	**Luque**	**1.84**	**275**	Pg	**Pg**	**13 21 52.0**	**-0.1**
	69nm,0.3s,SNR=48						
ELUQ	**Luque**	**1.84**	**275**	Pn	**Pn**	**13 21 47.9**	**-1.1**
ELUQ				Pg	**Pg**	**13 21 51.2**	**-0.9**
ELUQ				Pg	**Pg**	**13 21 52.0**	**-0.1**
ELUQ				Lg		13 22 18.6	
EBEN	**Beniarda**	**1.88**	**46**	Pn	**Pn**	**13 21 47.4**	**-2.1**
	9.5nm,0.2s,SNR=15						
EBEN				Pg	**Pg**	**13 21 52.4**	**-0.5**
	40nm,0.3s,SNR=17						
EBEN				Lg		13 22 18.1	
	125nm,0.7s,SNR=6.1						
EBEN	**Beniarda**	**1.88**	**46**	Pn	**Pn**	**13 21 47.4**	**-2.1**
	16nm,0.4s,SNR=15						
EBEN	**Beniarda**	**1.88**	**46**	Pn	**Pn**	**13 21 47.5**	**-2.0**
EBEN				Pg	**Pg**	**13 21 52.4**	**-0.5**
EBEN				Lg		13 22 08.9	
EMAL	**Malaga-Limoner**	**2.08**	**252**	⇓P	**Pn**	**13 21 54.4**	**+2.2**
EMAL				S	**Sn**	**13 22 23.7**	**+5.3**
EMAL	**Malaga-Limoner**	**2.08**	**252**	*i* P	**Pn**	**13 21 54.4**	**+2.2**
EMAL				*e*S	**Sn**	**13 22 23.7**	**+5.3**
EADA	**Adamuz**	**2.20**	**291**	Pn	**Pn**	**13 21 54.6**	**+0.6**
	17nm,0.3s,SNR=136						
EADA				Sn	**Sn**	**13 22 22.6**	**+1.0**
	23nm,0.3s,SNR=5.8						
EADA				Lg		13 22 30.4	
	76nm,0.3s,SNR=10						
EADA	**Adamuz**	**2.20**	**291**	Pn	**Pn**	**13 21 54.7**	**+0.7**
EADA				Sn	**Sn**	**13 22 22.6**	**+1.1**
	23nm,0.3s,SNR=5.8						
EADA	**Adamuz**	**2.20**	**291**	Pn	**Pn**	**13 21 54.7**	**+0.7**
EADA				Sn	**Sn**	**13 22 22.6**	**+1.0**
EADA				Lg		13 22 31.5	
EMIJ	**Mijas**	**2.41**	**250**	Pn	**Pn**	**13 21 56.3**	**-0.4**
	14nm,0.3s,SNR=8.9						
EMIJ				Lg		13 22 34.0	
	84nm,0.8s,SNR=6.3						
ESDC	**Sonseca Array**	**2.75**	**326**	Pn	**Pn**	**13 22 02.7**	**+1.2**
	1.7nm,0.2s,baz=145,slow=13,SNR=13						
ESDC				Pg	**Pg**	**13 22 09.1**	**-0.4**
	17nm,0.4s,baz=146,slow=18,SNR=58						
ESDC				Lg		13 22 47.2	
	9.4nm,0.3s,baz=143,slow=29,SNR=7.2						
ESDC	**Sonseca Array**	**2.75**	**326**	Pn	**Pn**	**13 22 02.7**	**+1.3**
	1.7nm,0.2s,SNR=13						
ESDC	**Sonseca Array**	**2.75**	**326**	Pg	**Pg**	**13 22 09.1**	**-0.4**
	17nm,0.4s,SNR=58						
LIJA	**Lijar**	**2.80**	**261**	*e*P	**Pn**	**13 22 06.0**	**+3.9**
LIJA				*e*S	**Sn**	**13 22 43.0**	**+6.9**
ECAB	**El Cabril**	**2.82**	**285**	Pn	**Pn**	**13 22 02.8**	**+0.4**
	34nm,0.3s,SNR=66						
ECAB				Sn	**Sn**	**13 22 37.2**	**+0.5**
	235nm,0.2s,SNR=32						
ECAB				Lg		13 22 47.8	
	158nm,0.3s,SNR=5.2						
ECAB	**El Cabril**	**2.82**	**285**	Pn	**Pn**	**13 22 02.8**	**+0.4**
	34nm,0.3s,SNR=66						
ECAB	**El Cabril**	**2.82**	**285**	Pg	**Pg**	**13 22 11.2**	**+0.4**
ECAB				Sn	**Sn**	**13 22 37.2**	**+0.5**
	235nm,0.2s,SNR=32						
ECAB	**El Cabril**	**2.82**	**285**	P	**Pn**	**13 22 02.8**	**+0.4**
ECAB				Pg	**Pg**	**13 22 11.2**	**+0.4**
ECAB				Sn	**Sn**	**13 22 37.2**	**+0.5**
ECAB				Lg		13 22 47.8	
PAB	**San Pablo**	**2.83**	**319**	*e*Pn	**Pn**	**13 22 02.8**	**+0.2**
PAB	**San Pablo**	**2.83**	**319**	*e*Pg	**Pg**	**13 22 11.1**	**-0.1**
PAB	**San Pablo**	**2.83**	**319**	*e*Pn	**Pn**	**13 22 02.8**	**+0.2**
PAB				*e*Pg	**Pg**	**13 22 11.1**	**-0.1**
PAB				*e*Sg	**Sg**	**13 22 48.6**	**+0.7**
EJIF	**Jimena Fronter**	**2.97**	**252**	Pg	**Pg**	**13 22 09.7**	**-4.0**
	5.7nm,0.4s,SNR=4.0						
EJIF	**Jimena Fronter**	**2.97**	**252**	Pg	**Pg**	**13 22 11.3**	**-2.4**
EJIF	**Jimena Fronter**	**2.97**	**252**	Pg	**Pg**	**13 22 11.3**	**-2.4**
EIBI	**Ibiza**	**3.06**	**57**	Pn	**Pn**	**13 22 04.0**	**-1.8**
	11nm,0.3s,SNR=29						
EIBI				Sn	**Sn**	**13 22 37.4**	**-5.3**
	42nm,0.4s,SNR=7.6						
EIBI	**Ibiza**	**3.06**	**57**	Pn	**Pn**	**13 22 04.0**	**-1.7**
	11nm,0.3s,SNR=29						
EIBI				Sn	**Sn**	**13 22 37.5**	**-5.2**
	10nm,0.3s,SNR=7.6						
EIBI	**Ibiza**	**3.06**	**57**	Pn	**Pn**	**13 22 04.0**	**-1.8**
EIBI				Sn	**Sn**	**13 22 37.5**	**-5.2**
ESPR	**Espera**	**3.16**	**261**	Pn	**Pn**	**13 22 11.1**	**+4.0**
	2.8nm,0.2s,SNR=7.9						
ESPR				Pg	**Pg**	**13 22 19.1**	**+1.7**
	20nm,0.6s,SNR=14						
ESPR				Lg		13 22 53.3	
	18nm,0.3s,SNR=7.9						
ESPR	**Espera**	**3.16**	**261**	Pg	**Pg**	**13 22 11.2**	**-6.1**
EMOS	**Mosqueruela**	**3.17**	**21**	Pn	**Pn**	**13 22 09.8**	**+2.6**
	2.3nm,0.3s,SNR=7.9						
EMOS				Pg	**Pg**	**13 22 18.0**	**+0.5**
	14nm,0.6s,SNR=7.9						
EMOS				Lg		13 22 58.8	
	45nm,0.8s,SNR=7.9						
EMOS	**Mosqueruela**	**3.17**	**21**	Pn	**Pn**	**13 22 09.8**	**+2.6**
EMOS				Pg	**Pg**	**13 22 18.0**	**+0.5**
EMOS				Lg		13 23 02.0	
ETOR	**Torete**	**3.40**	**359**	Pg	**Pg**	**13 22 22.8**	**+0.8**
	50nm,0.2s,SNR=13						
ETOR	**Torete**	**3.40**	**359**	Pg	**Pg**	**13 22 22.8**	**+0.8**
ETOR				Lg		13 23 07.4	
GUD	**Guadarrama**	**3.65**	**333**	Pn	**Pn**	**13 22 16.1**	**+2.3**
	1.9nm,0.3s,SNR=7.6						
GUD				Pg	**Pg**	**13 22 26.8**	**+0.1**
	24nm,0.4s,SNR=19						
GUD				Lg		13 23 14.9	
	88nm,0.4s,SNR=5.0						
GUD	**Guadarrama**	**3.65**	**333**	Pn	**Pn**	**13 22 16.1**	**+2.3**
GUD				Pg	**Pg**	**13 22 26.8**	**+0.1**
GUD				Lg		13 23 15.3	
EMIN	**Mina Concepcio**	**3.76**	**277**	Pn	**Pn**	**13 22 16.0**	**+0.6**
	3.9nm,0.1s,SNR=35						
EMIN				Sn	**Sn**	**13 22 59.4**	**-0.5**
	4.7nm,0.5s,SNR=7.9						
EMIN				Lg		13 23 16.3	
	7.3nm,0.7s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.76**	**277**	Pn	**Pn**	**13 22 16.1**	**+0.8**
	2.8nm,0.3s,SNR=35						
EMIN				Sn	**Sn**	**13 23 00.3**	**+0.4**
EMIN	**Mina Concepcio**	**3.76**	**277**	Pn	**Pn**	**13 22 16.1**	**+0.7**
EMIN				Sn	**Sn**	**13 23 00.3**	**+0.5**
EMIN				Lg		13 23 16.3	
ERTA	**Horta de San J**	**3.96**	**26**	Pn	**Pn**	**13 22 18.2**	**+0.1**
	5.7nm,0.4s,SNR=7.9						
ERTA				Sn	**Sn**	**13 23 02.8**	**-2.1**
	5.1nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**3.96**	**26**	Pn	**Pn**	**13 22 18.2**	**+0.1**
	4.8nm,0.9s,SNR=7.9						
ERTA				Sn	**Sn**	**13 23 02.8**	**-2.1**
	15nm,0.8s,SNR=7.9						
PBAR	**Barrancos**	**4.09**	**282**	*e*Pn	**Pn**	**13 22 20.7**	**+0.8**
PBAR				*e*Sn	**Sn**	**13 23 07.8**	**-0.3**
PBAR				*e*Sg	**Sg**	**13 23 28.3**	**0.0**
PBAR				A		13 23 36.6	
	32nm,0.6s						
PBAR	**Barrancos**	**4.09**	**282**	*e*Pn	**Pn**	**13 22 20.7**	**+0.8**
PBAR				*e*Sn	**Sn**	**13 23 07.8**	**-0.3**
PBAR				*e*Sg	**Sg**	**13 23 28.3**	**0.0**
	32nm,0.6s						
EBAD	**Badajoz**	**4.20**	**290**	Pn	**Pn**	**13 22 21.8**	**+0.4**
	4.3nm,0.5s,SNR=17						
EBAD				Sn	**Sn**	**13 23 10.3**	**-0.5**
	14nm,0.3s,SNR=5.7						
EBAD				Lg		13 23 31.2	
	76nm,0.2s,SNR=6.3						
EBAD	**Badajoz**	**4.20**	**290**	Pn	**Pn**	**13 22 21.9**	**+0.4**
	4.3nm,0.5s,SNR=17						
EBAD				Sn	**Sn**	**13 23 10.7**	**-0.2**
	14nm,0.3s,SNR=5.7						
EBAD	**Badajoz**	**4.20**	**290**	Pn	**Pn**	**13 22 21.9**	**+0.4**
EBAD				Sn	**Sn**	**13 23 10.7**	**-0.1**
EBAD				Lg		13 23 33.7	
EGRO	**El Granado**	**4.39**	**273**	Pn	**Pn**	**13 22 24.1**	**0.0**
	1.6nm,0.1s,SNR=9.6						
EGRO				Sn	**Sn**	**13 23 15.3**	**-0.2**
	18nm,0.3s,SNR=6.3						
EGRO				Lg		13 23 37.2	
	30nm,0.6s,SNR=6.0						
EGRO	**El Granado**	**4.39**	**273**	Pn	**Pn**	**13 22 25.1**	**+1.0**
	3.8nm,0.3s,SNR=9.6						
EGRO				Sn	**Sn**	**13 23 15.6**	**+0.1**
EGRO	**El Granado**	**4.39**	**273**	Pn	**Pn**	**13 22 25.1**	**+1.0**
EGRO				Sn	**Sn**	**13 23 15.6**	**+0.1**
EGRO				Lg		13 23 37.2	
ETOS	**Mallorca**	**4.42**	**56**	Pn	**Pn**	**13 22 23.3**	**-1.1**
	4.3nm,0.3s,SNR=10						
ETOS				Sn	**Sn**	**13 23 10.5**	**-5.6**
	4.2nm,0.3s,SNR=5.3						
ETOS	**Mallorca**	**4.42**	**56**	Pn	**Pn**	**13 22 23.6**	**-0.8**
	4.3nm,0.3s,SNR=10						
ETOS				Sn	**Sn**	**13 23 10.5**	**-5.7**
	4.3nm,0.3s,SNR=5.3						
ETOS	**Mallorca**	**4.42**	**56**	Pn	**Pn**	**13 22 23.6**	**-0.8**
ETOS				Sn	**Sn**	**13 23 10.5**	**-5.6**
ESAC	**San Caprasio**	**4.45**	**15**	Lg		13 23 37.0	
	72nm,0.4s,SNR=7.9						
PVAQ	**Vaqueiros**	**4.58**	**272**	*e*Pn	**Pn**	**13 22 26.8**	**+0.1**
PVAQ				*e*Sn	**Sn**	**13 23 19.0**	**-1.2**
PVAQ				*e*Sg	**Sg**	**13 23 43.2**	**-0.8**
PVAQ				A		13 23 51.7	
	16nm,0.4s						
PVAQ	**Vaqueiros**	**4.58**	**272**	*e*Pn	**Pn**	**13 22 26.8**	**+0.1**
PVAQ				*e*Sn	**Sn**	**13 23 19.0**	**-1.2**
PVAQ				*e*Sg	**Sg**	**13 23 43.2**	**-0.8**
	16nm,0.4s						
EPOB	**Poblet**	**4.58**	**30**	Pn	**Pn**	**13 22 27.3**	**+0.6**
	2.1nm,0.4s,SNR=7.9						
EPOB				Sn	**Sn**	**13 23 18.1**	**-2.1**
	2.3nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**4.58**	**30**	Pn	**Pn**	**13 22 27.3**	**+0.6**
	2.3nm,0.8s,SNR=7.9						
EPOB				Sn	**Sn**	**13 23 18.1**	**-2.1**
	15nm,1.0s,SNR=7.9						
PESTR	**Estremoz**	**4.67**	**290**	*e*Pn	**Pn**	**13 22 28.7**	**+0.9**
PESTR				*e*Sn	**Sn**	**13 23 22.2**	**-0.1**
PESTR				*e*Sg	**Sg**	**13 23 46.0**	**-0.7**
PESTR				A		13 23 58.4	
	36nm,0.8s						
PESTR	**Estremoz**	**4.67**	**290**	*e*Pn	**Pn**	**13 22 28.7**	**+0.9**
PESTR				*e*Sn	**Sn**	**13 23 22.2**	**-0.1**
PESTR				*e*Sg	**Sg**	**13 23 46.0**	**-0.7**
	36nm,0.8s						
PMRV	**Marv??o**	**4.71**	**297**	*e*Pn	**Pn**	**13 22 29.9**	**+1.4**
PMRV				*e*Sn	**Sn**	**13 23 23.0**	**-0.4**
PMRV				*e*Sg	**Sg**	**13 23 46.7**	**-1.5**
PMRV				A		13 24 04.9	
	61nm,0.6s						
PMRV	**Marv??o**	**4.71**	**297**	*e*Pn	**Pn**	**13 22 29.9**	**+1.4**
PMRV				*e*Sn	**Sn**	**13 23 23.0**	**-0.4**
PMRV				*e*Sg	**Sg**	**13 23 46.7**	**-1.5**
	61nm,0.6s						
PBEJ	**Beja**	**4.72**	**279**	*e*Pn	**Pn**	**13 22 29.4**	**+0.8**
PBEJ				*e*Sn	**Sn**	**13 23 22.8**	**-0.8**
PBEJ				A		13 23 50.4	
	20nm,0.4s						
PBEJ	**Beja**	**4.72**	**279**	*e*Pn	**Pn**	**13 22 29.4**	**+0.8**
PBEJ				*e*Sn	**Sn**	**13 23 22.8**	**-0.8**
	20nm,0.4s						
PBDV	**Barranco-do-Ve**	**4.76**	**270**	*e*Pn	**Pn**	**13 22 27.0**	**-2.1**
PBDV				*e*Sn	**Sn**	**13 23 23.9**	**-0.7**
PBDV				A		13 23 57.0	
	20nm,0.5s						
PBDV	**Barranco-do-Ve**	**4.76**	**270**	*e*Pn	**Pn**	**13 22 27.0**	**-2.1**
PBDV				*e*Sn	**Sn**	**13 23 23.9**	**-0.7**
	20nm,0.5s						
EVO	**Evora**	**4.91**	**285**	*e*Pn	**Pn**	**13 22 33.4**	**+2.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EVO				eSn	Sn	13 23 28.4	+0.1
EVO				eSg	Sg	13 23 55.9	+1.4
	59nm,0.4s						
PCBR	Castelo Branco	4.95	301	ePn	Pn	13 22 33.0	+1.3
PCBR				eSn	Sn	13 23 29.1	-0.2
PCBR				eSg	Sg	13 23 55.7	-0.1
PCBR				A		13 24 08.6	
	31nm,0.8s						
PCBR	Castelo Branco	4.95	301	ePn	Pn	13 22 33.0	+1.3
PCBR				eSn	Sn	13 23 29.1	-0.2
PCBR				eSg	Sg	13 23 55.7	-0.1
	31nm,0.8s						
EVOP	Sao Brissos	4.99	285	ePn	Pn	13 22 33.4	+1.1
EVOP				eSn	Sn	13 23 28.4	-1.9
EVOP				eSg	Sg	13 23 55.9	-1.3
	30nm,0.4s						
MOE	Montemor	5.17	284	ePn	Pn	13 22 36.0	+1.3
MOE				eSn	Sn	13 23 33.8	-0.8
ECRI	Cripan	5.21	356	Pn	Pn	13 22 36.1	+0.9
	5.8nm,0.2s,SNR=7.9						
ECRI				Lg		13 24 06.2	
	11nm,0.4s,SNR=7.9						
ECRI	Cripan	5.21	356	Pn	Pn	13 22 35.9	+0.7
	5.8nm,0.2s,SNR=7.9						
ECRI	Cripan	5.21	356	Pn	Pn	13 22 35.9	+0.7
ECRI				Lg		13 24 06.2	
MTE	Manteigas	5.28	306	eSg	Sg	13 24 05.6	-0.6
MTE				A		13 24 16.5	
	82nm,0.7s						
MTE	Manteigas	5.28	306	eSg	Sg	13 24 05.6	-0.6
	82nm,0.7s						
MORF	Marmelete	5.33	271	ePn	Pn	13 22 37.2	+0.3
MORF				eSn	Sn	13 23 36.8	-1.8
MORF				A		13 23 41.5	
	15nm,0.3s						
MORF	Marmelete	5.33	271	P	Pn	13 22 37.1	+0.2
MORF				S	Sn	13 23 36.3	-2.3
MORF	Marmelete	5.33	271	ePn	Pn	13 22 37.2	+0.3
MORF				eSn	Sn	13 23 36.8	-1.8
	15nm,0.3s						
MVO	Moncorvo	5.43	315	ePn	Pn	13 22 40.0	+1.7
MVO				eSn	Sn	13 23 40.8	-0.2
MVO				eSg	Sg	13 24 10.1	-1.0
MVO				A		13 24 20.8	
	31nm,0.5s						
MVO	Moncorvo	5.43	315	ePn	Pn	13 22 40.0	+1.7
MVO				eSn	Sn	13 23 40.8	-0.2
MVO				eSg	Sg	13 24 10.1	-1.0
	31nm,0.5s						
PFVI	Vila Bisbo	5.48	269	ePn	Pn	13 22 39.5	+0.5
PFVI				eSn	Sn	13 23 41.2	-1.2
PFVI				A		13 24 24.6	
	11nm,0.6s						
PFVI	Vila Bisbo	5.48	269	ePn	Pn	13 22 39.5	+0.5
PFVI				eSn	Sn	13 23 41.2	-1.2
	11nm,0.6s						
EORO	Oroz-Betelu	5.50	5	Pn	Pn	13 22 40.8	+1.6
	0.2nm,0.0s,SNR=4.0						
EORO				Pg	Pg	13 23 03.2	+1.1
	7.0nm,0.5s,SNR=4.0						
EORO				Lg		13 24 13.0	
	0.3nm,0.0s,SNR=7.9						
EORO	Oroz-Betelu	5.50	5	Pn	Pn	13 22 40.5	+1.3
	2.2nm,0.3s,SNR=5.6						
EORO	Oroz-Betelu	5.50	5	Pg	Pg	13 23 01.8	-0.3
	7.0nm,0.5s,SNR=7.9						
EBIE	Bielsa	5.51	16	Pn	Pn	13 22 40.3	+0.9
	1.3nm,0.3s,SNR=7.9						
EBIE	Bielsa	5.51	16	Pn	Pn	13 22 41.0	+1.6
EBIE	Bielsa	5.51	16	Pn	Pn	13 22 41.0	+1.7
ETSF	Etsaut	5.58	11	ePn	Pn	13 22 40.6	+0.2
ETSF				eSn	Sn	13 23 43.1	-1.7
ETSF				eSg	Sg	13 24 17.0	+0.9
	9.6nm,0.6s						
ETSF	Etsaut	5.58	11	ePn	Pn	13 22 40.6	+0.2
ETSF				eSn	Sn	13 23 43.1	-1.7
ETSF				eSg	Sg	13 24 17.0	+0.9
	4.8nm,0.6s						
PVIS	Viseu	5.67	307	eSn	Sn	13 23 46.9	-0.2
PVIS				A		13 24 29.1	
	18nm,0.9s						
PVIS	Viseu	5.67	307	eSn	Sn	13 23 46.9	-0.2
	18nm,0.9s						
SJPF	Ste Jean	5.72	5	ePn	Pn	13 22 43.0	+0.7
SJPF				eSn	Sn	13 23 44.1	-4.1
SJPF				eSg	Sg	13 24 19.9	-0.6
	17nm,0.7s						
SJPF	Ste Jean	5.72	5	Pn	Pn	13 22 43.0	+0.7
SJPF				Sn	Sn	13 23 44.1	-4.1
SJPF				Lg		13 24 19.9	
	8.6nm,0.7s						
SJPF	Ste Jean	5.72	5	ePn	Pn	13 22 43.0	+0.7
SJPF				eSg	Sg	13 24 19.9	-0.6
	8.6nm,0.7s						
PBRG	Braganca	5.73	321	ePn	Pn	13 22 42.5	+0.1
PBRG				eSn	Sn	13 23 48.4	-0.1
PBRG				eSg	Sg	13 24 18.6	-2.2
PBRG				A		13 24 29.5	
	23nm,0.7s						
PBRG	Braganca	5.73	321	ePn	Pn	13 22 42.5	+0.1
PBRG				eSn	Sn	13 23 48.4	-0.1
PBRG				eSg	Sg	13 24 18.6	-2.2
	23nm,0.7s						
EALK	Alkurruntz	5.81	3	Pn	Pn	13 22 46.3	+2.8
	7.1nm,0.4s,SNR=6.1						
EALK	Alkurruntz	5.81	3	Pn	Pn	13 22 44.4	+0.9
	7.1nm,0.4s,SNR=6.1						
EALK	Alkurruntz	5.81	3	Pn	Pn	13 22 44.4	+0.9
ECAL	Calabor	5.83	322	Pn	Pn	13 22 46.2	+2.4
	4.7nm,0.3s,SNR=8.9						
ECAL				Sn	Sn	13 23 50.1	-0.8
	3.2nm,0.5s,SNR=7.9						
ECAL				Lg		13 24 22.0	
	35nm,0.5s,SNR=7.9						
ECAL	Calabor	5.83	322	Pn	Pn	13 22 46.2	+2.4
ECAL	Calabor	5.83	322	Pn	Pn	13 22 46.2	+2.4
ECAL				Lg		13 24 24.5	
EPF	Esparros	5.88	17	ePn	Pn	13 22 45.4	+0.9
EPF				eSn	Sn	13 23 48.9	-3.3
EPF				eSg	Sg	13 24 25.0	-0.6
	15nm,0.7s						
EPF	Esparros	5.88	17	ePn	Pn	13 22 45.4	+0.9
EPF				eSn	Sn	13 23 48.9	-3.3
EPF				eSg	Sg	13 24 25.0	-0.6
	7.7nm,0.7s						
ELAN	Lanestosa	5.92	350	Pn	Pn	13 22 46.8	+1.8
	2.5nm,0.3s,SNR=6.4						
ELAN				Sn	Sn	13 23 50.4	-2.7
	6.0nm,0.4s,SNR=7.9						
ELAN				Lg		13 24 26.1	
	31nm,0.6s,SNR=7.9						
ELAN	Lanestosa	5.92	350	Pn	Pn	13 22 46.8	+1.8
ELAN				Lg		13 24 28.2	
PCAB	Cabril	6.35	314	eSg	Sg	13 24 40.6	-0.1
EARI	Arriondas	6.38	338	Pn	Pn	13 22 53.3	+2.0
	7.7nm,0.3s,SNR=20						
EARI				Sn	Sn	13 24 02.3	-2.2
	120nm,2.1s,SNR=4.8						
EARI				Lg		13 24 40.0	
	20nm,0.7s,SNR=7.9						
EARI	Arriondas	6.38	338	Pn	Pn	13 22 53.3	+1.9
EARI	Arriondas	6.38	338	Pn	Pn	13 22 53.4	+2.0
EARI				Sn	Sn	13 24 02.3	-2.2
ELOB	Lobios	6.47	315	Pn	Pn	13 22 54.7	+2.1
	0.4nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	13 24 05.4	-1.4
	4.0nm,0.7s,SNR=7.9						
ELOB				Lg		13 24 41.9	
	22nm,0.5s,SNR=7.9						
ELOB	Lobios	6.47	315	Pn	Pn	13 22 54.4	+1.8
ELOB	Lobios	6.47	315	Pn	Pn	13 22 54.4	+1.8
ELOB				Sn	Sn	13 24 05.4	-1.4
LFF	La Frestale	7.79	14	ePn	Pn	13 23 10.9	+0.2
PGF	Pioggiola	9.85	55	ePn	Pn	13 23 38.0	-0.9
QUIF	Quistinic	10.53	356	ePn	Pn	13 23 49.0	+0.7

ISCJB ***03*** *13:45:04.9±0.2,3485N±001×597W±003,h10^{km},Error ellipse: s-maj=3.3km s-min=2.1km az=170.2*
CSEM ***03*** *13:45:05.7±0.1,3468N×587W,h5^{km},ML3.3/11,Error ellipse: s-maj=3.9km s-min=2.3km az=81.0*
CNRM ***03*** *13:45:08.5,3469N×591W,h3^{km},MD3.5*
INMG ***03*** *13:45:09.3±1.1,3480N×594W,h28^{km}±9^{km},ML2.5,Error ellipse: s-maj=3.5km s-min=2.8km az=93.0*
MDD ***03*** *13:45:09.5±1.1,3477N×596W,h27^{km}±10^{km},mbLg2.6/17, Error ellipse: s-maj=5.3km s-min=3.1km az=85.0,PRIMO*
NEIC ***03*** *13:45:09.0,3495N×593W,h0^{km},MN2.6(MDD),After MDD.*
ISC 03 13:45:05.7±0.2,**3483N**±001×**595W**±003,**h10**^{km},**n89**, σ**1^{s}42**/166,**1D**,**Morocco**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGT	Taghat	1.06	135	eP	Pg	13 45 26.0	0.0
TGT				eS	Sg	13 45 38.0	-1.8
RTC	Rabat Centre	1.12	222	i P	Pb	13 45 28.0	+0.8
RTC				i S	Sb	13 45 42.0	+0.1
ECEU	Ceuta	1.17	24	⇓P	Pb	13 45 30.6	+2.6
	2.9nm,0.1s,SNR=18						
ECEU				S	Sb	13 45 43.6	+0.4
	2.8nm,0.1s,SNR=6.8						
ECEU	Ceuta	1.17	24	P	Pb	13 45 30.6	+2.6
	2.9nm,0.1s,SNR=6.2						
ECEU				S	Sb	13 45 43.8	+0.6
	6.1nm,0.1s,SNR=6.8						
IFR	Ifrane	1.47	152	P	Pn	13 45 31.0	-1.3
IFR				S	Sn	13 45 48.0	-3.6
MIF	Mishlifen	1.54	157	i P	Pn	13 45 33.0	-0.2
MIF				i S	Sn	13 45 52.0	-1.1
TZK	Tazeka	1.64	116	P	Pn	13 45 36.0	+1.5
TZK				S	Sn	13 45 55.0	-0.6
CZD	Col de Zad	1.94	157	P	Pn	13 45 40.0	+1.3
CZD				S	Sn	13 46 03.0	-0.2
EMIJ	Mijas	1.98	29	P	Pn	13 45 41.6	+2.3
	1.5nm,0.2s,SNR=7.9						
EMIJ				S	Sn	13 46 04.5	+0.3
	5.9nm,0.2s,SNR=7.9						
EMIJ	Mijas	1.98	29	Pn	Pn	13 45 40.0	+0.7
EMIJ	Mijas	1.98	29	P	Pn	13 45 41.6	+2.3
	1.5nm,0.2s,SNR=7.9						
EMIJ				S	Sn	13 46 04.6	+0.4
	9.2nm,0.4s,SNR=7.9						
EMIJ				Sn	Sn	13 46 05.9	+1.7
EMIJ	Mijas	1.98	29	Pn	Pn	13 45 40.0	+0.6
EMIJ				Sn	Sn	13 46 06.0	+1.7
ESPR	Espera	2.04	2	P	Pn	13 45 43.6	+3.5
	1.4nm,0.2s,SNR=7.9						
ESPR				S	Sn	13 46 05.3	-0.3
	11nm,0.2s,SNR=7.9						
ESPR	Espera	2.04	2	Pn	Pn	13 45 41.9	+1.8
ESPR				Sn	Sn	13 46 05.5	-0.1
ESPR	Espera	2.04	2	Pn	Pn	13 45 41.9	+1.7
ESPR				Sn	Sn	13 46 05.5	-0.1
KIB	El Ksiba	2.25	182	P	Pn	13 45 44.0	+1.1
KIB				S	Sn	13 46 10.0	-0.7
KIB	El Ksiba	2.25	182	eP	Pn	13 45 44.0	+1.1
TZC	Tazercounte	2.71	190	eP	Pn	13 45 49.0	-0.3
TZC				eS	Sn	13 46 19.0	-3.1
PBDV	Barranco-do-Ve	2.90	327	ePn	Pn	13 45 53.1	+1.2
PBDV				eSn	Sn	13 46 25.8	-1.0
PBDV				A		13 46 29.1	
	8.0nm,0.2s						
PBDV	Barranco-do-Ve	2.90	327	ePn	Pn	13 45 53.1	+1.2
PBDV				eSn	Sn	13 46 25.8	-1.0
	8.0nm,0.2s						
PVAQ	Vaqueiros	2.94	331	ePn	Pn	13 45 53.6	+1.1
PVAQ				eSn	Sn	13 46 26.7	-1.2
PVAQ				A		13 46 29.6	
	18nm,0.5s						
PVAQ	Vaqueiros	2.94	331	ePn	Pn	13 45 53.6	+1.1
PVAQ				eSn	Sn	13 46 26.7	-1.2
	18nm,0.5s						
EGRO	El Granado	2.97	336	P	Pn	13 45 54.3	+1.3
	2.6nm,0.1s,SNR=25						
EGRO				S	Sn	13 46 27.6	-1.0
	15nm,0.1s,SNR=12						
EGRO	El Granado	2.97	336	P	Pn	13 45 54.3	+1.4
	2.6nm,0.1s,SNR=25						
EGRO	El Granado	2.97	336	Pn	Pn	13 45 54.3	+1.3
EGRO				Sn	Sn	13 46 28.1	-0.6
EMIN	Mina Concepcio	2.99	349	P	Pn	13 45 54.4	+1.2
	1.8nm,0.1s,SNR=20						
EMIN				S	Sn	13 46 28.1	-1.1
	5.0nm,0.1s,SNR=6.2						
EMIN	Mina Concepcio	2.99	349	P	Pn	13 45 54.4	+1.2
	1.8nm,0.1s,SNR=20						
EMIN	Mina Concepcio	2.99	349	Pn	Pn	13 45 54.4	+1.2
EMIN				Sn	Sn	13 46 27.5	-1.6
ELUQ	Luque	3.05	26	P	Pn	13 45 55.1	+1.1
	2.5nm,0.2s,SNR=7.9						
ELUQ				S	Sn	13 46 29.5	-1.1
	6.3nm,0.2s,SNR=7.9						
ELUQ	Luque	3.05	26	S	Sn	13 46 28.9	-1.6
	6.3nm,0.2s,SNR=7.9						
ZFT	Errachidia	3.09	154	eP	Pn	13 45 54.0	-0.5
ZFT				i S	Sn	13 46 29.0	-2.5
EQUE	Quentar	3.13	40	P	Pn	13 45 57.9	+2.8
	1.9nm,0.3s,SNR=7.9						
EQUE				S	Sn	13 46 32.6	+0.1
	3.6nm,0.3s,SNR=7.9						
EQUE	Quentar	3.13	40	P	Pn	13 45 56.5	+1.4
	1.9nm,0.3s,SNR=7.9						
EQUE				S	Sn	13 46 32.3	-0.2
	1.9nm,0.2s,SNR=7.9						
EBER	Berja	3.23	49	P	Pn	13 45 57.5	+1.0
	1.9nm,0.2s,SNR=7.9						
EBER				S	Sn	13 46 35.1	0.0
	3.9nm,0.4s,SNR=7.9						
EBER	Berja	3.23	49	P	Pn	13 45 57.5	+1.0
	1.9nm,0.2s,SNR=7.9						
EBER				S	Sn	13 46 33.5	-1.6
	3.5nm,0.4s,SNR=7.9						
EBER	Berja	3.23	49	Pn	Pn	13 45 57.5	+1.0
EBER				Sn	Sn	13 46 33.5	-1.6
ECAB	El Cabril	3.27	7	P	Pn	13 46 00.1	+3.1
	2.9nm,0.2s,SNR=10						
ECAB				S	Sn	13 46 34.4	-1.6
	7.5nm,0.1s,SNR=10						
ECAB	El Cabril	3.27	7	P	Pn	13 45 58.3	+1.3
	2.9nm,0.2s,SNR=10						
ECAB	El Cabril	3.27	7	Pn	Pn	13 46 00.2	+3.2
ECAB				Sn	Sn	13 46 33.5	-2.5
ECAB				S	Sn	13 46 34.4	-1.6
	12nm,0.1s,SNR=10						
ECAB	El Cabril	3.27	7	Pn	Pn	13 46 00.2	+3.2
ECAB				Sn	Sn	13 46 33.5	-2.5
PFVI	Vila Bisbo	3.28	315	ePn	Pn	13 45 57.8	+0.7
PFVI				eSn	Sn	13 46 34.9	-1.2
PFVI				A		13 46 45.0	
	7.3nm,0.7s						
PFVI	Vila Bisbo	3.28	315	ePn	Pn	13 45 57.8	+0.7
PFVI				eSn	Sn	13 46 34.9	-1.2
	7.3nm,0.7s						
MORF	Marmelete	3.30	319	ePn	Pn	13 45 58.1	+0.6
MORF				eSn	Sn	13 46 36.0	-0.8
MORF				A		13 46 39.5	
	15nm,0.5s						
MORF	Marmelete	3.30	319	ePn	Pn	13 45 58.1	+0.6
MORF				eSn	Sn	13 46 36.0	-0.8
	15nm,0.5s						
PBAR	Barrancos	3.46	346	ePn	Pn	13 46 00.9	+1.3
PBAR				eSn	Sn	13 46 39.5	-1.0
PBAR				A		13 46 41.0	
	6.4nm,0.2s						
PBAR	Barrancos	3.46	346	ePn	Pn	13 46 00.9	+1.3
PBAR				eSn	Sn	13 46 39.5	-1.0
	6.4nm,0.2s						
EADA	Adamuz	3.51	18	P	Pn	13 46 02.0	+1.6
	1.2nm,0.2s,SNR=7.9						
EADA				S	Sn	13 46 40.2	-1.8
	12nm,0.2s,SNR=6.0						
EADA	Adamuz	3.51	18	Pn	Pn	13 46 01.4	+1.0
EADA	Adamuz	3.51	18	P	Pn	13 46 02.0	+1.6
	1.2nm,0.2s,SNR=7.9						
EADA				S	Sn	13 46 40.1	-1.9
	10nm,0.1s,SNR=6.0						
EADA	Adamuz	3.51	18	Pn	Pn	13 46 01.4	+1.0
EADA				Sn	Sn	13 46 40.1	-1.9
PTEO	Sao Teotonio	3.52	321	ePn	Pn	13 46 01.3	+0.8
PTEO				eSn	Sn	13 46 41.3	-0.9
PTEO				A		13 46 44.0	
	7.5nm,0.3s						
PTEO	Sao Teotonio	3.52	321	ePn	Pn	13 46 01.3	+0.8
PTEO				eSn	Sn	13 46 41.3	-0.9
	7.5nm,0.3s						
PBEJ	Beja	3.55	335	ePn	Pn	13 46 02.3	+1.5
PBEJ				eSn	Sn	13 46 41.9	-0.9
PBEJ				A		13 46 46.1	
	7.9nm,0.3s						
PBEJ	Beja	3.55	335	ePn	Pn	13 46 02.3	+1.5
PBEJ				eSn	Sn	13 46 41.9	-0.9
	7.9nm,0.3s						
EBAN	Banos Encina	3.76	27	P	Pn	13 46 05.9	+2.1
	3.5nm,0.1s,SNR=7.9						
EBAN				S	Sn	13 46 46.1	-1.9
	4.4nm,0.1s,SNR=7.9						
EBAN	Banos Encina	3.76	27	P	Pn	13 46 05.6	+1.8
	3.5nm,0.1s,SNR=7.9						
EBAN				S	Sn	13 46 45.9	-2.2
	4.4nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	13 46 46.3	-1.8
EBAN	Banos Encina	3.76	27	Pn	Pn	13 46 05.6	+1.8
EBAN				Sn	Sn	13 46 46.3	-1.8
EQES	Quesada	3.77	37	S	Sn	13 46 48.0	-0.4
	5.0nm,0.4s,SNR=7.9						
EQES	Quesada	3.77	37	S	Sn	13 46 48.0	-0.4
	5.0nm,0.4s,SNR=7.9						
OUK	Oukaimeden	3.95	205	eP	Pn	13 46 06.0	-0.4
OUK				i S	Sn	13 46 50.0	-2.8
CIA	Chichaoua	4.01	217	eP	Pn	13 46 08.0	+0.7
CIA				i S	Sn	13 46 52.0	-2.4
EBAD	Badajoz	4.01	348	P	Pn	13 46 09.3	+2.1
	3.4nm,0.1s,SNR=12						
EBAD				S	Sn	13 46 52.3	-2.0
	4.1nm,0.1s,SNR=6.0						
EBAD	Badajoz	4.01	348	Pn	Pn	13 46 09.6	+2.4
EBAD	Badajoz	4.01	348	Pn	Pn	13 46 09.6	+2.3
EBAD				Sn	Sn	13 46 52.6	-1.7
EHUE	Huescar	4.03	41	P	Pn	13 46 10.4	+3.0
	0.6nm,0.1s,SNR=7.9						
EHUE				S	Sn	13 46 55.5	+0.7
	1.1nm,0.2s,SNR=7.9						
EHUE	Huescar	4.03	41	P	Pn	13 46 10.4	+2.9
	0.7nm,0.2s,SNR=7.9						
EHUE				S	Sn	13 46 52.4	-2.3
	1.1nm,0.2s,SNR=7.9						
EHUE	Huescar	4.03	41	Pn	Pn	13 46 10.4	+3.0
EHUE				Sn	Sn	13 46 52.4	-2.3
EVO	Evora	4.05	336	eSn	Sn	13 46 54.5	-0.8
EVO				A		13 46 56.1	
	20nm,0.1s						
EVO	Evora	4.05	336	eSn	Sn	13 46 54.5	-0.8
	20nm,0.1s						
MOE	Montemor	4.16	333	ePn	Pn	13 46 10.9	+1.6
MOE				eSn	Sn	13 46 57.0	-1.0
PESTR	Estremoz	4.24	342	ePn	Pn	13 46 12.5	+2.1
PESTR				eSn	Sn	13 46 58.7	-1.2
PESTR				A		13 47 07.6	
	5.9nm,0.6s						
PESTR	Estremoz	4.24	342	ePn	Pn	13 46 12.5	+2.1
PESTR				eSn	Sn	13 46 58.7	-1.2
	5.9nm,0.6s						
JHA	Jbel Lahdid	4.25	225	eP	Pn	13 46 12.0	+1.4
JHA				i S	Sn	13 47 00.0	-0.3
EVIA	Vianos	4.71	35	P	Pn	13 46 20.0	+3.3
	1.2nm,0.1s,SNR=7.9						
EVIA				S	Sn	13 47 09.1	-2.2
	1.5nm,0.1s,SNR=7.9						
EVIA	Vianos	4.71	35	P	Pn	13 46 17.9	+1.1
	0.8nm,0.1s,SNR=7.9						
EVIA				S	Sn	13 47 08.7	-2.7
	3.6nm,0.3s,SNR=7.9						
EVIA	Vianos	4.71	35	Pn	Pn	13 46 17.9	+1.1
EVIA				Sn	Sn	13 47 08.7	-2.6
PMRV	Marv??o	4.74	346	ePn	Pn	13 46 18.7	+1.5
PMRV				eSn	Sn	13 47 10.7	-1.4
PMRV				A		13 47 12.1	
	3.6nm,0.3s						
PMRV	Marv??o	4.74	346	ePn	Pn	13 46 18.7	+1.5
PMRV				eSn	Sn	13 47 10.7	-1.4
	3.6nm,0.3s						
PCBR	Castelo Branco	5.15	347	ePn	Pn	13 46 24.8	+1.9
PCBR				eSn	Sn	13 47 20.1	-2.2
PCBR				A		13 47 21.3	
	4.3nm,0.5s						
PCBR	Castelo Branco	5.15	347	ePn	Pn	13 46 24.8	+1.9
PCBR				eSn	Sn	13 47 20.1	-2.2
	4.3nm,0.5s						
ETOB	Tobarra	5.20	42	P	Pn	13 46 25.1	+1.6
	0.7nm,0.1s,SNR=7.2						
ETOB				S	Sn	13 47 22.1	-1.4
	1.5nm,0.2s,SNR=7.9						
ETOB	Tobarra	5.20	42	P	Pn	13 46 25.1	+1.6
	0.7nm,0.1s,SNR=7.2						
ETOB				S	Sn	13 47 21.4	-2.1
	2.7nm,0.4s,SNR=7.9						
ETOB	Tobarra	5.20	42	Pn	Pn	13 46 25.1	+1.6
ETOB				Sn	Sn	13 47 21.4	-2.1
MVO	Moncorvo	6.38	353	ePn	Pn	13 46 41.1	+1.3
MVO				eSn	Sn	13 47 50.6	-2.1
MVO				A		13 47 51.7	
	4.2nm,0.6s						
ECAL	Calabor	7.13	355	S	Sn	13 48 07.1	-4.0
	2.3nm,0.2s,SNR=7.9						
ECAL	Calabor	7.13	355	Pn	Pn	13 46 51.7	+1.6
ECAL	Calabor	7.13	355	Pn	Pn	13 46 51.7	+1.7
ECAL				Sn	Sn	13 48 07.1	-4.0
ELOB	Lobios	7.22	347	P	Pn	13 46 52.6	+1.3
	0.2nm,0.1s,SNR=4.0						
ELOB				S	Sn	13 48 10.3	-3.0
	0.4nm,0.1s,SNR=7.9						
ELOB	Lobios	7.22	347	P	Pn	13 46 52.6	+1.3
	0.1nm,0.0s,SNR=4.0						

ISCJB ***03*** *14:46:51.8±1.3,2463N±005×10954W±006,h4^{km}±10^{km}, mb4.2/11,MS3.7/14,Error ellipse: s-maj=11.4km s-min=5.6km az=41.0*
IDC ***03*** *14:46:53.2±1.9,2465N×10981W,h0^{km},mb3.7/2, mb1 4.1/7,mb1mx3.9/24,mbtmp3.9/7,ML3.6/4,MS3.6/16, Ms1 3.7/16,ms1mx3.5/40,Error ellipse: s-maj=45.5km s-min=13.4km az=107.0*
NEIC ***03*** *14:46:53.9±0.7,2458N×10954W,h10^{km},mb4.0/23,Error ellipse: s-maj=10.4km s-min=6.6km az=129.0*
MEX ***03*** *14:46:56.7±0.5,2489N×11001W,h10^{km},MD4.2*
ISC 03 14:46:53.6±1.4,**2451N**±005×**10951W**±005,**h13**^{km}±12^{km}, **n81**,σ**0^{s}92**/71,**mb4.2**/11,**MS3.7**/14,**Gulf of California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	La Paz	0.83	241	Pn	Pn	14 47 10.7	-0.3
	905nm,0.3s,baz=32,slow=2.7,SNR=229						
LPIG				LR	LR	14 47 22.2	
	comp=Z,2μm,18.5s,baz=0.0,slow=40						
LPIG				Sn	Sn	14 47 22.9	-0.2
	2μm,0.3s,baz=158,slow=17,SNR=46						
LPIG	La Paz	0.83	241	i P	Pb	14 47 10.3	+0.4
LPIG				i S	Sb	14 47 21.6	+0.5
LPIG	La Paz	0.83	241	i P	Pb	14 47 10.3	+0.4
LPIG				Pn	Pn	14 47 10.8	-0.3
LPIG				i S	Sb	14 47 21.6	+0.5
LPIG				LR	LR	14 47 22.2	
LPIG				Sn	Sn	14 47 22.9	-0.2
MAIG	Mazatlaan	3.12	114	i P	Pg	14 47 53.7	+0.3
MAIG				i S	Sg	14 48 33.1	-0.8
HPIG		4.23	54	i P	Pn	14 47 59.6	+1.8
HPIG				i S	Sn	14 48 53.0	+5.9
HSIG		4.67	344	i P	Pn	14 47 58.8	-5.2
HSIG				i S	Sn	14 48 47.6	-11
TUC	Tucson	7.85	352	ePn	Pn	14 48 44.2	-3.4
GLA	Glamis	9.70	333	ePn	Pn	14 49 11.3	-1.7
BNM	Barren Site	9.93	14	ePn	Pn	14 49 14.8	-1.3
LAZ	Ladron	10.07	11	ePn	Pn	14 49 17.4	-0.7
ANMO	Albuquerque	10.74	14	Pn	Pn	14 49 28.1	+1.0
	0.1nm,0.3s,baz=207,slow=12,SNR=9.4						
ANMO				Lg		14 52 25.9	
	0.1nm,0.3s,baz=296,slow=9.6,SNR=3.3						
ANMO	Albuquerque	10.74	14	eP	Pn	14 49 28.6	+1.4
PFO	Pinyon Flat Ob	10.91	328	Pn	Pn	14 49 29.6	+0.1
	0.2nm,0.3s,baz=150,slow=14,SNR=6.2						
PFO				LR	LR	14 53 40.1	
	comp=Z,176nm,18.0s,baz=337,slow=38						
WUAZ	Wupatki	11.09	352	eP	Pn	14 49 32.8	+0.8
LDFC	Landfair	11.60	337	ePn	Pn	14 49 40.1	+1.2
GSC	Goldstone	12.47	331	ePn	Pn	14 49 51.2	+0.3
MVCO	Mesa Verde	12.69	4	ePn	Pn	14 49 54.0	+0.1
ISA	Isabella	13.55	327	ePn	Pn	14 50 04.3	-1.3
SDCO	Great Sand Dun	13.63	14	P	Pn	14 50 11.9	+5.2
TPNV	Topopah Spring	13.68	337	ePn	Pn	14 50 08.5	+1.1
WMOK	Wichita Mounta	13.81	40	ePn	Pn	14 50 09.5	+0.3
MSU	Marysvale	14.14	351	eP	Pn	14 50 16.6	+2.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MTUM	Tungsten Hills	14.96	331	ePn	Pn	14 50 24.8	0.0
MPU	Maple Canyon	15.57	354	ePn	Pn	14 50 38.1	+5.3
NVAR	Mina Array Bea	15.76	334	Pn	Pn	14 50 35.1	-0.2
	0.1nm,0.3s,baz=162,slow=16,SNR=5.1						
DUG	Dugway	15.89	351	ePn	Pn	14 50 41.7	+4.8
	20nm,1.1s						
DAU	Daniels Canyon	15.93	355	eP	Pn	14 50 42.2	+4.8
BGU	Big Grassy Mou	16.63	351	eP	Pn	14 50 46.1	-0.4
ELK	Elko	16.89	345	Pn	Pn	14 50 49.9	+0.2
	0.1nm,0.3s,baz=174,slow=8.0,SNR=8.0						
ELK				LR	LR	14 57 02.0	
	comp=Z,218nm,20.3s,baz=110,slow=36						
HWUT	Hardware Ranch	17.14	355	eP	Pn	14 50 53.0	+0.2
	13nm,1.1s						
HVU	Hansel Valley	17.44	352	P	Pn	14 50 57.3	+0.7
	9.9nm,1.1s						
PDAR	Pinedale Array	18.21	360	P	Pn	14 51 05.7	-0.5
	0.1nm,0.3s,baz=163,slow=11,SNR=20						
AHID	Auburn Hatcher	18.26	356	eP	Pn	14 51 05.7	-1.0
	1.8nm,0.3s						
REDW	Red Top Meadow	18.84	357	eP	Pn	14 51 14.3	+0.5
	11nm,1.3s						
RRI2	Red Ridge	18.85	356	eP	Pn	14 51 13.4	-0.5
	11nm,1.3s						
TPAW	Teton Pass	18.97	357	eP	Pn	14 51 15.0	-0.3
	9.6nm,1.2s						
LOHW	Long Hollow	19.08	358	eP	Pn	14 51 15.7	-1.0
	2.3nm,0.7s						
IMW	Indian Meadow	19.38	357	eP	Pn	14 51 18.1	-2.2
	17nm,1.4s						
WVOR	Wild Horse Val	19.41	339	P	Pn	14 51 17.4	-3.3
	19nm,1.4s						
HLID	Hailey	19.43	349	eP	Pn	14 51 20.1	-0.8
	3.5nm,1.0s						
TEIG	Tepich	20.09	98	LR	LR	15 00 53.3	
	comp=Z,146nm,20.6s,MS3.3,baz=24,slow=41						
QLMT	Earthquake Lak	20.34	356	eP	P	14 51 30.9	+1.3
YBH	Yreka Blue Hor	20.38	331	P	P	14 51 30.8	+0.7
	0.9nm,0.7s,baz=159,slow=8.6,SNR=4.0						
YBH				LR	LR	14 59 34.5	
	comp=Z,54nm,20.7s,MS2.9,baz=150,slow=38						
MCMT	McKenzie Canyo	20.45	353	eP	P	14 51 32.4	+1.5
RLMT	Red Lodge	20.57	0	eP	P	14 51 33.3	+1.2
	3.2nm,1.0s						
DLMT	Dillon	20.96	354	eP	P	14 51 36.9	+0.6
	9.2nm,1.2s						
BOZ	Bozeman (W)	21.16	356	eP	P	14 51 37.5	-1.0
	6.6nm,1.3s,mb3.8						
GCMT	Greycliff	21.24	360	eP	P	14 51 39.3	-0.1
BMO	Blue Mountains	21.26	345	eP	P	14 51 38.6	-1.0
	12nm,1.4s,mb4.0						
LCCM	Lewis and Clar	21.37	355	P	P	14 51 41.7	+1.0
ECSD	EROS,Sioux Fal	21.90	26	eP	P	14 51 47.2	+0.8
	9.9nm,1.2s,mb4.1						
VIPM	Ingram Point	21.91	338	P	P	14 51 48.2	+1.6
LAO	LASA Array	22.29	6	P	P	14 51 50.6	0.0
	9.4nm,0.8s,mb4.3						
LNOR	Lincton Mounta	22.46	344	eP	P	14 51 52.3	-0.1
MSO	Missoula	22.55	352	eP	P	14 51 53.2	-0.2
	7.3nm,1.3s,mb4.0						
CHMT	Chamberlain Mo	22.56	353	eP	P	14 51 53.4	-0.1
EGMT	Eagleton	23.47	360	eP	P	14 52 02.2	-0.8
	18nm,1.3s,mb4.3						
LON	Longmire	24.28	339	eP	P	14 52 10.2	-0.4
	9.8nm,1.3s,mb4.1						
DGMT	Dagmar	24.28	9	eP	P	14 52 10.7	+0.1
	9.0nm,0.7s,mb4.3						
NEW	Newport	24.46	348	eP	P	14 52 11.0	-1.2
	32nm,1.7s,mb4.5						
ETW	Entiat	24.60	342	eP	P	14 52 13.2	-0.3
WALA	Waterton Lakes	24.75	353	eP	P	14 52 15.1	+0.3
	15nm,1.0s,mb4.5						
TKL	Tuckaleechee C	24.82	57	LR	LR	15 02 44.3	
	comp=Z,258nm,21.9s,MS3.7,baz=252,slow=38						
ULM	Lac du Bonnet	27.80	19	LR	LR	15 04 49.2	
	comp=Z,28nm,20.3s,MS2.8,baz=52,slow=39						
YKA	Yellowknife Ar	38.13	356	LR	LR	15 10 18.2	
	comp=Z,134nm,18.3s,MS3.8,baz=10.0,slow=37						
ROSC	El Rosal	39.05	114	LR	LR	15 12 12.1	
	comp=Z,60nm,19.8s,MS3.4,baz=26,slow=39						
SCHQ	Schefferville	43.62	35	LR	LR	15 13 51.1	
	comp=Z,188nm,18.7s,MS4.0,baz=257,slow=37						
DAWY	Dawson	44.13	342	P	P	14 55 01.3	-0.2
RKT	Rikitea	53.40	210	eT		15 52 59.1	
	1.9nm,0.2s						
LPAZ	La Paz	57.22	131	LR	LR	15 19 12.9	
	comp=Z,49nm,19.0s,MS3.6,baz=284,slow=34						
PPT	Papeete	57.23	227	eLR	LR	15 13 10.7	
	161nm,27.2s						
PETK	Petropavlovsk-	72.40	321	P	P	14 58 19.1	-0.3
	1.7nm,0.8s,mb4.0,baz=71,slow=11,SNR=3.9						
ARCES	ARCESS Array B	80.82	15	LR	LR	15 36 16.1	
	comp=Z,58nm,18.4s,MS4.0,baz=6.8,slow=37						
NOA	NORSAR Array B	82.31	25	LR	LR	15 36 27.4	
	comp=Z,49nm,20.3s,MS3.9,baz=115,slow=36						
ESDC	Sonseca Array	85.77	48	LR	LR	15 35 00.4	
	comp=Z,51nm,19.5s,MS3.9,baz=235,slow=34						
GERES	GERESS Array B	91.14	34	LR	LR	15 39 38.4	
	comp=Z,73nm,20.2s,MS4.1,baz=287,slow=35						
VRAC	Vranov	92.26	32	LR	LR	15 39 52.1	
	comp=Z,55nm,19.2s,MS4.0,baz=176,slow=34						
KEST	Kesra	96.77	46	LR	LR	15 44 51.9	
	comp=Z,24nm,18.2s,MS3.7,baz=230,slow=36						
WRA	Warramunga Arr	121.17	261	PKP	PKPdf	15 05 47.9	+0.9
	0.3nm,0.6s,baz=74,slow=2.5,SNR=5.3						
ASAR	Alice Springs	122.58	257	PKP	PKPdf	15 05 51.1	+1.5
	1.1nm,1.2s,baz=72,slow=3.0,SNR=3.4						
ASAR	Alice Springs	122.58	257	PKP	PKPdf	15 05 51.1	+1.5

*IDC **03** 15:09:43.1±0.7, 1209S×16600E, h0km, mb4.3/14, mb1 4.4/15, mb1mx4.3/19, mbtmp4.4/15, ML4.7/1, MS4.1/7, Ms1 4.1/7, ms1mx3.6/29, Error ellipse: s-maj=22.7km s-min=17.4km az=88.0*

*ISCJB **03** 15:09:46.8±0.5, 1207S±008×16594E±008, h33km, mb4.4/20, MS4.0/7, Error ellipse: s-maj=12.3km s-min=9.7km az=44.6*

*BJI **03** 15:09:46.7, 1101S×16674E, h11km, mB5.1, mb4.8*

*NEIC **03** 15:09:48.7±0.5, 1199S×16593E, mb4.6/4, Error ellipse: s-maj=13.8km s-min=11.1km az=105.0*

ISC 03 15:09:48.6±0.5**, 1207S**±008×**16602E**±008**, h35**km**,**
(h34km±4.7km**:pP-P), n49,** σ1ˢ**17**/29**, mb4.4**/20**, MS4.0**/7**,**
Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.51	293	Pn	Pn	15 11 21.7	-0.3
	16nm,0.3s,baz=71,slow=3.1,SNR=7.0						
HNR				Sn	Sn	15 12 36.5	+1.3
	5.2nm,0.3s,baz=80,slow=23,SNR=5.6						
HNR	Honiara	6.51	293	ePn	Pn	15 11 20.1	-1.9
HNR				Sn	Sn	15 12 36.5	+1.3
CTA	Charters Tower	20.58	245	P	P	15 14 24.5	-0.2
	16nm,1.1s,baz=63,slow=13,SNR=6.6						
CTA				LR	LR	15 20 44.3	
	comp=Z,309nm,21.2s,MS3.6,baz=49,slow=32						
CTA	Charters Tower	20.58	245	P	P	15 14 24.5	-0.2
CTA				LR	LR	15 20 44.3	
CTAO	Charters Tower	20.58	245	eP	P	15 14 25.2	+0.5
	38nm,1.4s						
AFI	Afiamalu	21.72	97	LR	LR	15 20 53.3	
	comp=Z,334nm,18.7s,MS3.8,baz=161,slow=31						
ARMA	Armidale	22.61	214	eP	P	15 14 47.2	+0.8
	1.7nm,1.5s,mb3.2						
STKA	Stephens Creek	29.90	225	P	P	15 15 51.3	-1.9
	1.7nm,0.6s,mb4.0,baz=33,slow=14,SNR=4.9						
STKA				PcP	PcP	15 18 57.1	+1.5
	3.4nm,1.0s,baz=236,slow=5.9,SNR=3.2						
STKA				LR	LR	15 27 29.8	
	comp=Z,328nm,19.3s,MS4.0,baz=24,slow=36						
WRA	Warramunga Arr	31.40	251	P	P	15 16 05.4	-1.1
	1.1nm,0.6s,mb3.9,baz=83,slow=8.5,SNR=10						
WRA				PcP	PcP	15 18 59.7	-0.1
	1.2nm,0.9s,baz=83,slow=3.1,SNR=5.8						
RPZ	Rata Peaks	31.83	173	P	P	15 16 09.9	-0.2
	17nm,0.8s,mb4.9,baz=224,slow=18,SNR=4.8						
ASAR	Alice Springs	32.59	245	P	P	15 16 15.7	-1.3
	1.7nm,0.7s,mb4.1,baz=71,slow=9.1,SNR=13						
ASAR				PcP	PcP	15 19 03.7	+0.7
	1.0nm,0.9s,baz=75,slow=2.5,SNR=4.9						
GUMO	Guam	33.01	320	P	P	15 16 19.9	-0.8
	8.8nm,0.3s,mb5.2,baz=215,slow=23,SNR=5.3						
GUMO				LR	LR	15 28 17.5	
	comp=Z,188nm,19.6s,MS3.8,baz=140,slow=34						
PPT	Papeete	43.20	103	eS	S	15 24 27.0	+16
	97nm,26.5s						
PPT				eLQ		15 28 19.1	
	296nm,25.8s						
PPT				eLR	LR	15 30 10.7	
	290nm,26.5s						
DAV	Davao City (W)	44.48	293	LR	LR	15 32 50.7	
	comp=Z,109nm,21.5s,MS3.7,baz=155,slow=31						
NWAO	Narrogin (SRO)	49.12	237	LR	LR	15 40 12.3	
	comp=Z,426nm,18.2s,MS4.5,baz=27,slow=37						
MJAR	Matsushiro Arr	54.99	333	P	P	15 19 15.0	-1.6
	2.4nm,0.9s,mb4.2,baz=238,slow=17,SNR=6.6						
RKT	Rikitea	56.99	110	eLR	LR	15 36 33.9	
	138nm,25.8s						
KSRS	Korea Array	60.86	326	P	P	15 19 57.7	0.0
	1.9nm,0.7s,mb4.3,baz=136,slow=7.4,SNR=12						
KSRS				PcP	PcP	15 20 42.0	+0.8
	1.7nm,0.7s,baz=126,slow=4.2,SNR=4.9						
SBA	Scott Base	65.78	180	eP	P	15 20 32.3	+2.6
	16nm,0.9s,mb5.0						
SBA				epP	pP	15 20 43.5	+3.0
CN2	Changchun	66.75	329	eP	P	15 20 36.4	+0.1
CN2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
CMAR	Chiang Mai Arr	72.76	294	P	P	15 21 14.9	+1.0
	comp=Z,1.5nm,0.6s,mb4.1,baz=122,slow=5.2,SNR=9.0						
LZH	Lanzhou	75.64	312	eP	P	15 21 33.0	+2.7
LZH				AP	pP	15 21 43.2	+1.9
LZH				XP	sP	15 21 47.0	+1.7
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,85nm,4.7s						
ULN	Ulaanbaatar	79.28	324	eP	P	15 21 50.5	+0.1
	comp=Z,4.9nm,0.8s,mb4.5						
SONM	Songino Array	79.64	324	P	P	15 21 53.2	+0.8
	comp=Z,2.4nm,0.8s,mb4.2,baz=140,slow=6.3,SNR=17						
GTA	Gaotai	79.95	314	eP	P	15 21 57.3	+3.0
GTA				AP	pP	15 22 02.8	-2.5
GTA				XP	sP	15 22 05.9	-3.4
GTA				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.2						
MAW	Mawson	83.88	202	P	P	15 22 15.2	+0.7
	comp=Z,1.6nm,0.9s,mb4.1,baz=106,slow=15,SNR=5.2						
EGAK	Eagle	86.24	20	eP	P	15 22 25.4	-0.8
	comp=Z,4.5nm,1.1s,mb4.6						
NVAR	Mina Array Bea	86.48	50	P	P	15 22 28.4	+0.4
	comp=Z,0.7nm,0.9s,mb3.9,baz=209,slow=4.9,SNR=3.8						
MKAR	Makanchi Array	94.44	317	P	P	15 23 05.5	+0.4
	comp=Z,4.1nm,0.9s,mb4.9,baz=96,slow=6.3,SNR=11						
ZAA0	Zalesovo Array	94.53	324	eP	P	15 23 04.1	-1.2
ZAA0				epP	pP	15 23 15.6	-0.9
ZALV	Zalesovo Beam	94.53	324	P	P	15 23 04.5	-0.8
	comp=Z,4.9nm,0.8s,mb5.0,baz=108,slow=4.8,SNR=22						
USHA	Ushuaia	99.19	152	LR	LR	15 59 21.4	
	comp=Z,421nm,20.6s,MS4.9,slow=30						
ARCES	ARCESS Array B	117.38	345	PKP	PKPdf	15 28 29.6	-0.3
	comp=Z,1.5nm,0.6s,baz=75,slow=1.4,SNR=11						
BOSA	Boshof	124.55	222	PKP	PKPdf	15 28 43.0	-2.0
	comp=Z,1.9nm,0.9s,baz=158,slow=11,SNR=2.1						
LBTB	Lobatse	126.63	226	PKP	PKPdf	15 28 49.5	+0.4
	comp=Z,2.5nm,0.8s,baz=272,slow=11,SNR=3.1						
AKASG	Malin Array Be	127.86	327	PKP	PKPdf	15 28 49.2	-1.3
	comp=Z,0.3nm,0.4s,baz=55,slow=2.3,SNR=4.7						
AKASG	Malin Array Be	127.86	327	PKP	PKPdf	15 28 49.2	-1.4
MBDF	Montbardon	142.91	335	ePKP1	PKPdf	15 29 15.1	-3.6
ORIF	Oris-en-Rattie	143.11	336	ePKP1	PKPdf	15 29 16.5	-2.6
	comp=Z,13nm,0.9s						
SBF	Sospel	143.33	334	ePKP1	PKPdf	15 29 14.7	-4.8
PGF	Pioggiola	143.65	331	ePKP1	PKPdf	15 29 16.9	-3.2
FRF	La Foret Royal	143.91	334	ePKP1	PKPdf	15 29 18.5	-2.0
LMR	La Mourre	144.16	334	ePKP1	PKPdf	15 29 18.5	-2.5
	comp=Z,47nm,1.1s						
LASF	Ste Croix	144.60	338	ePKP1	PKPdf	15 29 20.5	-1.2
	comp=Z,16nm,1.0s						
MTLF	Montolieu	145.83	339	ePKP1	PKPbc	15 29 24.4	0.0
	comp=Z,23nm,1.2s						
ETSF	Etsaut	147.15	342	ePKP1	PKPbc	15 29 29.2	+0.9
	comp=Z,13nm,1.1s						
SJPF	Ste Jean	147.15	343	ePKP1	PKPbc	15 29 28.8	+0.5
KEST	Kesra	148.38	322	PKPbc	PKPbc	15 29 32.5	+0.6
	comp=Z,3.7nm,0.7s,baz=253,slow=0.7,SNR=15						
TORD	Torodi Ar. Bea	164.66	276	PKP	PKPdf	15 29 50.0	+0.2
	comp=Z,1.4nm,0.9s,baz=358,slow=1.4,SNR=7.8						

CASC 03 15:12:16.1±2.8**, 835N**×**8289W, h18**km±11km**, MD3.6,**
3C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.41	317	⇑iP	Pg	15 12 23.6	-0.9
BRU2	Volcan	0.48	24	⇑eP	Pg	15 12 25.8	0.0
BRU2				eS	Sg	15 12 34.2	+1.9
TBS2		0.49	28	⇑eP	Pg	15 12 32.9	+6.8
TBS2				eS	Sg	15 12 40.9	+8.1
CTCR	Cotoan	0.56	13	⇓iP	Pg	15 12 27.1	-0.1
CTCR				eS	Sg	15 12 35.1	+0.4
BAR1		0.98	335	eS	Sb	15 12 46.6	-0.5
BUS	Buena Vista	1.47	324	eP	Pn	15 12 40.8	-0.9
BUS				eS	Sn	15 13 00.7	+0.1
LCR2	La Lucha 2	1.77	322	eP	Pn	15 12 45.0	-0.8
LCR2				eS	Sn	15 13 10.5	+2.7
PRS1	Puriscal	2.15	319	eP	Pn	15 12 50.2	-0.8
PRS1				eS	Sn	15 13 17.3	+0.1
CGA2	Cerro Gallo 2	2.27	317	eP	Pn	15 12 55.0	+2.3
CGA2				eS	Sn	15 13 22.9	+2.6

IDC 03 15:13:53.4±41.0**, 299S**×**6628E, h0**km**, mb3.9**/3**, mb1 4.1**/3**,**
mb1mx3.6/20**, mbtmp3.9**/3**, MS3.6**/7**, Ms1 3.6**/7**,**
ms1mx3.3/36**, Error ellipse: s-maj=1085.0km**
s-min=332.4km az=142.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	Lobatse	44.85	237	LR	LR	15 38 37.3	
	comp=Z,103nm,18.6s,baz=312,slow=33						
BOSA	Boshof	46.60	233	LR	LR	15 38 59.6	
	comp=Z,77nm,19.0s,baz=0.4,slow=32						
GNI	Garni	47.26	337	LR	LR	15 42 13.5	
	comp=Z,65nm,20.8s,baz=99,slow=36						
BVAR	Borovoye Array	55.92	3	LR	LR	15 47 39.2	
	comp=Z,59nm,19.5s,baz=49,slow=36						
ZALV	Zalesovo Beam	58.81	13	LR	LR	15 50 35.3	
	comp=Z,30nm,19.5s,baz=59,slow=37						
ASAR	Alice Springs	68.33	114	P	P	15 24 57.5	+0.4
	0.4nm,0.6s,baz=285,slow=5.9,SNR=13						
WRA	Warramunga Arr	68.37	110	P	P	15 24 57.3	0.0
	0.9nm,0.8s,baz=288,slow=5.9,SNR=6.5						
STKA	Stephens Creek	75.96	122	P	P	15 25 42.2	-0.4
	2.8nm,1.1s,baz=275,slow=12,SNR=3.2						
NOA	NORSAR Array B	76.52	336	LR	LR	16 02 49.6	
	comp=Z,34nm,18.9s,baz=50,slow=38						
QSPA	South Pole Qui	87.01	180	LR	LR	15 59 56.9	
	comp=Z,53nm,19.8s,slow=32						

*ISCJB **03** 15:20:40.6±0.3, 5536N±002×11052E±003, h10km, Error ellipse: s-maj=3.8km s-min=2.0km az=142.6*

*MOS **03** 15:20:42.5±1.0, 5548N×11038E, h18km, mb4.7/1, Error ellipse: s-maj=10.5km s-min=6.2km az=64.8*

*BYKL **03** 15:20:42.9±0.3, 5546N×11044E, h11km±20km*

*NEIC **03** 15:20:42.6±0.6, 5546N×11059E, h10km, Error ellipse: s-maj=7.8km s-min=6.0km az=149.0*

*IDC **03** 15:20:49.6±6.5, 5520N×10950E, h0km, mb1 3.8/3, mb1mx3.4/23, mbtmp3.8/3, ML3.5/1, Error ellipse: s-maj=71.7km s-min=32.1km az=63.0*

ISC 03 15:20:42.6±0.3**, 5540N**±002×**11056E**±003**, h10**km**, n70,**
σ1ˢ**49**/140**, 13C-9D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	Kumora	0.61	36	ePG	Pg	15 20 53.8	-0.6
KMO				e		15 21 00.8	
KMO				pmax	pmax		
	comp=Z,1μm,0.4s						
KMO				smax			
	comp=N,5μm,1.2s						
KMO	Kumora	0.61	36	⇓iPg	Pg	15 20 53.7	-0.7
KMO				Pmax		15 20 54.2	
	comp=N,1μm,0.8s						
KMO				i Sg	Sg	15 21 01.9	-0.5
KMO				Smax		15 21 05.4	
	comp=N,5μm,1.0s						
KMO	Kumora	0.61	36	ePg	Pg	15 20 53.8	-0.6
KMO				eSg	Sg	15 21 00.8	-1.6
YLYR	Ulyunkhan	0.63	146	⇑iPG	Pg	15 20 55.9	+1.2
YLYR				e		15 21 05.3	
YLYR				pmax	pmax		
	comp=Z,829nm,0.3s						
YLYR				smax			
	comp=N,3μm,0.2s						
YLYR	Ulyunkhan	0.63	146	⇓iPg	Pg	15 20 55.9	+1.2
	comp=N,815nm,0.5s						
YLYR				⇑iPg	Pg	15 20 55.9	+1.2
	comp=N,526nm,0.5s						
YLYR				⇑iPg	Pg	15 20 55.9	+1.2
	comp=N,946nm,0.5s						
YLYR				Pmax		15 20 56.1	
	comp=N,854nm,0.6s						
YLYR				eSg	Sg	15 21 05.6	+2.7
YLYR				Smax		15 21 06.1	
	comp=N,2μm,0.3s						
YLYR	Ulyunkhan	0.63	146	⇑iPg	Pg	15 20 55.9	+1.2
YLYR				eSg	Sg	15 21 05.3	+2.4
NIZ	Nizh Angarsk	0.69	303	ePG	Pg	15 20 54.2	-1.8
NIZ				e		15 21 01.9	
NIZ				pmax	pmax		
	comp=Z,482nm,0.7s						
NIZ				smax			
	comp=E,1μm,1.0s						
NIZ	Nizh Angarsk	0.69	303	⇑iPg	Pg	15 20 54.1	-1.9
	comp=E,108nm,0.8s						
NIZ				⇓iPg	Pg	15 20 54.1	-1.9
	comp=E,67nm,0.8s						
NIZ				⇑iPg	Pg	15 20 54.1	-1.9
	comp=E,337nm,0.8s						
NIZ				Pmax		15 20 54.9	
	comp=E,428nm,0.6s						
NIZ				eSg	Sg	15 21 01.9	-3.1
NIZ				Smax		15 21 03.7	
	comp=E,1μm,0.5s						
NIZ	Nizh Angarsk	0.69	303	ePg	Pg	15 20 54.2	-1.8
NIZ				eSg	Sg	15 21 01.9	-3.1
YOA	Uoyan	0.99	41	⇑iPG	Pg	15 21 00.9	-0.7
YOA				i		15 21 14.9	
YOA				pmax	pmax		
	comp=Z,774nm,0.4s						
YOA				smax			
	comp=E,5μm,0.9s						
YOA	Uoyan	0.99	41	⇑iPg	Pg	15 21 00.8	-0.8
YOA				Pmax		15 21 02.0	
	comp=E,659nm,0.4s						
YOA				eSg	Sg	15 21 15.0	+0.6
YOA				Smax		15 21 20.9	
	comp=E,5μm,1.0s						
YOA	Uoyan	0.99	41	⇑iPg	Pg	15 21 00.9	-0.7
YOA				i Sg	Sg	15 21 14.9	+0.5
UKT	Uakit	1.75	86	ePN	Pg	15 21 15.1	-1.0
UKT				e		15 21 39.1	
UKT				pmax	pmax		
	comp=Z,659nm,0.5s						
UKT				smax			
	comp=N,1μm,0.4s						
UKT	Uakit	1.75	86	⇑iPg	Pg	15 21 15.1	-1.0
UKT				Pmax		15 21 16.6	
	comp=N,649nm,0.6s						
UKT				i Sg	Sg	15 21 39.2	+0.5
UKT				Smax		15 21 41.8	
	comp=N,2μm,1.3s						
UKT	Uakit	1.75	86	ePg	Pg	15 21 15.1	-1.0
UKT				eSg	Sg	15 21 39.1	+0.4
SYVR	Suvo	1.77	191	ePN	Pg	15 21 15.8	-0.8
SYVR				e		15 21 40.9	
SYVR				pmax	pmax		
	comp=Z,577nm,0.5s						
SYVR				smax			
	comp=E,3μm,0.9s						
SYVR	Suvo	1.77	191	⇑iPg	Pg	15 21 15.6	-1.0
	comp=E,248nm,1.2s						
SYVR				⇑iPg	Pg	15 21 15.6	-1.0
	comp=E,91nm,1.2s						
SYVR				⇓iPg	Pg	15 21 15.6	-1.0
	comp=E,223nm,1.2s						
SYVR				Pmax		15 21 16.9	
	comp=E,569nm,0.4s						
SYVR				eSg	Sg	15 21 41.3	+1.7
SYVR				e		15 21 42.8	
SYVR				max		15 21 43.4	
	comp=E,3μm,0.9s						
SYVR	Suvo	1.77	191	ePg	Pg	15 21 15.8	-0.8
SYVR				eSg	Sg	15 21 40.9	+1.3
SVKR	Severomuysk	1.84	66	ePN	Pg	15 21 16.8	-1.1
SVKR				e		15 21 41.9	
SVKR				pmax	pmax		
	comp=Z,348nm,1.3s						
SVKR				smax			
	comp=N,6μm,1.6s						
SVKR	Severomuysk	1.84	66	ePg	Pg	15 21 16.9	-1.0
SVKR				Pmax		15 21 23.2	
	comp=N,267nm,0.3s						
SVKR				i Sg	Sg	15 21 42.3	+0.6
SVKR				Smax		15 21 43.9	
	comp=N,6μm,0.6s						
SVKR	Severomuysk	1.84	66	ePg	Pg	15 21 16.8	-1.1
SVKR				eSg	Sg	15 21 41.9	+0.2
MXMB	Maximikha	2.39	207	⇓iPn	Pn	15 21 23.8	+2.0
MXMB				ePg	Pg	15 21 26.2	-2.2
MXMB				Pmax		15 21 29.3	
	comp=N,492nm,0.8s						
MXMB				eSn	Sn	15 21 53.2	+2.1
MXMB				eSg	Sg	15 21 59.1	-0.2
MXMB				Smax		15 22 01.3	
	comp=N,3μm,0.8s						
OGRR	Ongureny	2.47	226	ePN	Pn	15 21 24.5	+1.7
OGRR				e		15 21 28.1	
OGRR				e		15 21 59.8	
OGRR				pmax	pmax		
	comp=Z,228nm,0.4s						
OGRR				smax			
	comp=N,840nm,1.1s						
OGRR	Ongureny	2.47	226	⇓iPn	Pn	15 21 24.7	+1.9
OGRR				⇑iPg	Pg	15 21 27.2	-2.6
OGRR				Pmax		15 21 28.6	
	comp=N,228nm,0.3s						
OGRR				eSn	Sn	15 21 53.7	+0.8
OGRR				eSg	Sg	15 21 59.9	-1.9
OGRR				Smax		15 22 03.5	
	comp=N,848nm,0.4s						
BOD	Bodaibo	3.08	37	ePN	Pn	15 21 33.0	+1.7
BOD				e		15 21 38.8	
BOD				e		15 22 17.2	
BOD				pmax	pmax		
	comp=Z,38nm,0.4s						
BOD				smax			
	comp=N,370nm,0.5s						
BOD	Bodaibo	3.08	37	ePn	Pn	15 21 32.7	+1.4
BOD				ePg	Pg	15 21 37.2	-4.4
BOD				Pmax		15 21 38.0	
	comp=N,64nm,0.7s						
BOD				eSn	Sn	15 22 09.1	+1.0
BOD				eSg	Sg	15 22 17.1	-4.4
BOD				Smax		15 22 19.0	
	comp=N,373nm,0.5s						
NLYR	Nelyaty	3.09	67	ePN	Pn	15 21 33.2	+1.8
NLYR				e		15 21 38.1	
NLYR	Nelyaty	3.09	67	ePn	Pn	15 21 32.2	+0.8
NLYR				ePg	Pg	15 21 39.0	-2.8
NLYR				Pmax		15 21 45.8	
	comp=N,90nm,0.9s						
NLYR				eSn	Sn	15 22 10.0	+1.7
NLYR				eSg	Sg	15 22 20.4	-1.4
NLYR				Smax		15 22 22.5	
	comp=N,1μm,0.9s						
TRG	Tyrgan	3.63	225	ePN	Pn	15 21 40.4	+1.7
TRG				e		15 21 48.4	
TRG				eS	Sn	15 22 22.4	+0.9
TRG				e		15 22 34.8	
TRG				pmax	pmax		
	comp=Z,82nm,0.5s						
TRG				smax			
	comp=N,376nm,0.4s						
TRG	Tyrgan	3.63	225	ePn	Pn	15 21 40.3	+1.6
TRG				ePg	Pg	15 21 47.5	-4.5
TRG				Pmax		15 21 52.6	
	comp=N,84nm,0.8s						
TRG				eSg	Sg	15 22 33.7	-5.3
TRG				Smax		15 22 42.7	
	comp=N,428nm,0.7s						
CIT	Chita	3.82	151	ePN	Pn	15 21 43.3	+1.9
CIT				e		15 21 52.0	

CIT				e		15 22 42.3	
CIT				pmax	pmax		
	comp=Z,96nm,0.5s						
CIT				smax			
	comp=E,1µm,0.7s						
CIT	**Chita**	**3.82**	**151**	*e*Pn	**Pn**	**15 21 42.5**	**+1.1**
CIT				*e*Pg	**Pg**	**15 21 52.6**	**-3.2**
CIT				Pmax		15 21 54.9	
	comp=E,113nm,0.6s						
CIT				*e*Sn	**Sn**	**15 22 29.0**	**+2.7**
CIT				*e*Sg	**Sg**	**15 22 43.2**	**-2.0**
CIT				Smax		15 22 48.3	
	comp=E,1µm,0.6s						
UUDB	**Ulan-Yde**	**3.94**	**207**	*e*Pn	**Pn**	**15 21 44.2**	**+1.2**
UUDB				*e*Pg	**Pg**	**15 21 53.8**	**-4.2**
UUDB				Pmax		15 21 56.1	
	comp=E,201nm,0.7s						
UUDB				*e*Sg	**Sg**	**15 22 45.8**	**-3.1**
UUDB				Smax		15 22 56.5	
	comp=E,539nm,1.5s						
KAB	**Kabansk**	**4.08**	**216**	*e*Sg	**Sg**	**15 22 51.8**	**-1.7**
KAB				Smax		15 23 02.1	
	comp=E,968nm,0.8s						
STDB	**Stepnoy Dvoret**	**4.08**	**219**	*e*Pn	**Pn**	**15 21 47.3**	**+2.3**
STDB				*e*Pg	**Pg**	**15 21 58.1**	**-2.6**
STDB				Pmax		15 22 00.7	
	comp=E,106nm,0.7s						
STDB				*e*Sg	**Sg**	**15 22 52.1**	**-1.5**
STDB				Smax		15 22 58.2	
	comp=E,1µm,1.0s						
HRMR	**Khuramsha**	**4.35**	**211**⇓	*i*Pn	**Pn**	**15 21 50.7**	**+2.1**
HRMR				*e*Pg	**Pg**	**15 22 00.2**	**-5.6**
HRMR				Pmax		15 22 04.3	
	comp=E,231nm,0.6s						
HRMR				*e*Sg	**Sg**	**15 22 57.4**	**-4.7**
HRMR				Smax		15 23 07.4	
	comp=E,1µm,0.7s						
CRS	**Chara**	**4.56**	**68**	*e*PN	**Pg**	**15 22 06.4**	**-3.6**
CRS				*e*		15 23 06.1	
CRS				pmax	pmax		
	comp=Z,95nm,1.1s						
CRS				smax			
	comp=E,441nm,1.3s						
CRS	**Chara**	**4.56**	**68**	*e*Pn	**Pn**	**15 21 50.8**	**-0.8**
CRS				*e*Pg	**Pg**	**15 22 05.9**	**-4.1**
CRS				Pmax		15 22 19.3	
	comp=E,95nm,1.2s						
CRS				*e*Sg	**Sg**	**15 23 06.0**	**-3.0**
CRS				Smax		15 23 13.7	
	comp=E,444nm,1.3s						
IRK	**Irkutsk**	**4.89**	**232**	*e*PN	**Pn**	**15 21 56.5**	**+0.5**
IRK				*e*		15 22 11.2	
IRK				*e*S	**Sn**	**15 22 53.0**	**+0.4**
IRK				*e*		15 23 13.6	
IRK				pmax	pmax		
	comp=Z,128nm,0.9s						
IRK				smax			
	comp=N,1µm,0.9s						
IRK	**Irkutsk**	**4.89**	**232**	*e*Pn	**Pn**	**15 21 56.8**	**+0.8**
IRK				*e*Pg	**Pg**	**15 22 10.6**	**-5.5**
IRK				Pmax		15 22 15.0	
	comp=N,128nm,0.5s						
IRK				*e*Sn	**Sn**	**15 22 52.8**	**+0.2**
IRK				*e*Sg	**Sg**	**15 23 13.4**	**-6.0**
IRK				Smax		15 23 15.6	
	comp=N,1µm,0.9s						
LSTR	**Listvyanka**	**4.91**	**226**	*e*Pn	**Pn**	**15 21 57.2**	**+0.8**
LSTR				*e*Pg	**Pg**	**15 22 10.5**	**-6.1**
LSTR				Pmax		15 22 12.9	
	comp=N,33nm,0.6s						
LSTR				*e*Sn	**Sn**	**15 22 53.3**	**+0.1**
LSTR				*e*Sg	**Sg**	**15 23 12.6**	**-7.6**
LSTR				Smax		15 23 20.6	
	comp=N,273nm,1.0s						
TUP	**Tupik**	**5.50**	**96**	*e*PN	**Pn**	**15 22 06.5**	**+2.0**
TUP				*e*		15 22 23.5	
TUP				*e*		15 23 36.9	
TUP				pmax	pmax		
	comp=Z,25nm,0.8s						
TUP				smax			
	comp=N,402nm,1.2s						
TUP	**Tupik**	**5.50**	**96**	*e*Pn	**Pn**	**15 22 06.5**	**+2.0**
TUP				max		15 22 07.2	
	comp=N,41nm,0.7s						
TUP				*e*Sn	**Sn**	**15 23 08.0**	**+0.2**
TUP				*e*Sg	**Sg**	**15 23 36.7**	**-2.5**
TUP				Smax		15 23 43.0	
	comp=N,443nm,1.3s						
TLY	**Talaya**	**5.56**	**231**	*e*PN	**Pn**	**15 22 04.5**	**-0.7**
TLY				*e*		15 22 21.2	
TLY				*e*S	**Sn**	**15 23 07.9**	**-1.2**
TLY				*e*		15 23 33.2	
TLY				pmax	pmax		
	comp=Z,82nm,0.8s						
TLY				smax			
	comp=N,276nm,0.9s						
TLY	**Talaya**	**5.56**	**231**	*e*Pn	**Pn**	**15 22 06.3**	**+1.1**
TLY				*e*Pg	**Pg**	**15 22 21.5**	**-7.4**
TLY				Pmax		15 22 24.7	
	comp=N,62nm,0.8s						
TLY				*e*Sn	**Sn**	**15 23 09.3**	**+0.2**
TLY				*e*Sg	**Sg**	**15 23 33.0**	**-7.9**
TLY				Smax		15 23 38.4	
	comp=N,230nm,0.9s						
KPC	**Khapcheranga**	**5.81**	**168**	*e*PN	**Pn**	**15 22 10.2**	**+1.5**
KPC				*e*		15 22 28.4	
KPC				*e*S	**Sn**	**15 23 14.8**	**-0.6**
KPC				*e*		15 23 45.2	
KPC				pmax	pmax		
	comp=Z,27nm,0.9s						
KPC				smax			
	comp=E,346nm,1.3s						
KPC	**Khapcheranga**	**5.81**	**168**	*e*Pn	**Pn**	**15 22 09.5**	**+0.8**
KPC				*e*Pg	**Pg**	**15 22 28.3**	**-5.5**
KPC				Pmax		15 22 41.6	
	comp=E,26nm,1.3s						
KPC				*e*Sn	**Sn**	**15 23 14.3**	**-1.1**
KPC				*e*Sg	**Sg**	**15 23 44.8**	**-4.2**
KPC				Smax		15 23 46.5	
	comp=E,346nm,1.0s						
ARS	**Arshan**	**5.96**	**238**	*e*PN	**Pn**	**15 22 11.8**	**+1.0**
ARS				*e*		15 22 30.6	
ARS				*e*		15 23 45.4	
ARS				pmax	pmax		
	comp=Z,138nm,0.5s						
ARS				smax			
	comp=E,893nm,0.9s						
ZAK	**Zakamensk**	**6.68**	**224**	*e*PN	**Pn**	**15 22 23.0**	**+2.3**
ZAK				*e*		15 22 44.9	
ZAK				*e*		15 24 10.5	
ZAK				pmax	pmax		
	comp=Z,12nm,0.6s						
ZAK				smax			
	comp=E,217nm,1.1s						
ZAK	**Zakamensk**	**6.68**	**224**	*e*Pn	**Pn**	**15 22 23.0**	**+2.3**
ZAK				*e*Pg	**Pg**	**15 22 43.0**	**-7.4**
ZAK				Pmax		15 22 45.5	
	comp=E,11nm,0.6s						
ZAK				*e*Sg	**Sg**	**15 24 08.1**	**-8.8**
ZAK				Smax		15 24 16.0	
	comp=E,217nm,1.0s						
MOY	**Mondy**	**6.82**	**241**	*e*PN	**Pn**	**15 22 24.7**	**+2.1**
MOY				*e*		15 22 46.2	
MOY				*e*S	**Sn**	**15 23 39.8**	**-0.3**
MOY				*e*		15 24 13.9	
MOY				pmax	pmax		
	comp=Z,35nm,0.9s						
MOY				pmax	pmax		
	comp=E,348nm,1.7s						
MOY	**Mondy**	**6.82**	**241**	*e*Pn	**Pn**	**15 22 24.0**	**+1.4**
MOY				max		15 22 25.9	
	comp=E,76nm,1.3s						
MOY				*e*Sn	**Sn**	**15 23 40.1**	**0.0**
MOY				*e*Sg	**Sg**	**15 24 14.2**	**-7.1**
MOY				Smax		15 24 28.2	
	comp=E,348nm,1.8s						
ORL	**Orlik**	**6.96**	**250**	*e*PN	**Pn**	**15 22 23.5**	**-1.0**
ORL				*e*S	**Sn**	**15 23 42.5**	**-1.1**
ORL				*e*S	**Sg**	**15 24 17.1**	**-8.7**
ORL				smax			
	comp=N,467nm,1.7s						
ORL	**Orlik**	**6.96**	**250**	*e*Pn	**Pn**	**15 22 23.0**	**-1.5**
ORL				max		15 22 27.0	
	comp=N,52nm,1.3s						
ORL				*e*Sn	**Sn**	**15 23 42.8**	**-0.8**
ORL				*e*Sg	**Sg**	**15 24 16.9**	**-8.9**
ORL				Smax		15 24 20.4	
	comp=N,467nm,1.3s						
ULN	**Ulaanbaatar**	**7.85**	**198**	*e*PN	**Pn**	**15 22 38.4**	**+1.6**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ULN	**Ulaanbaatar**	**7.85**	**198**	*e*Pn	**Pn**	**15 22 38.4**	**+1.6**
	comp=Z,6.7nm,0.6s						
SONM	**Songino Array**	**8.01**	**201**	Pn	**Pn**	**15 22 41.7**	**+2.9**
	comp=Z,0.8nm,0.3s,baz=11,slow=14,SNR=16						
SONM				Pg	Pn	15 23 09.8	+31
	comp=Z,1.7nm,0.3s,baz=7.8,slow=16,SNR=11						
SONM				Sn	**Sn**	**15 24 06.5**	**-2.9**
	comp=Z,0.6nm,0.3s,baz=13,slow=19,SNR=2.8						
SONM				Lg		15 24 51.5	
	comp=Z,1.0nm,0.3s,baz=40,slow=12,SNR=5.1						
SONM	**Songino Array**	**8.01**	**201**	PN	**Pn**	**15 22 41.7**	**+2.9**
SONM						15 23 09.8	
SONM						15 24 06.5	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SONM				smax			
	comp=N,1.0nm,0.3s						
IENR	**Iengra**	**8.10**	**78**	*e*Sg	Sx	15 24 54.9	
CLNS	**Chul'man**	**8.14**	**74**	*e*PN	Px	15 22 54.5	
CLNS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLNS				pmax	pmax		
	comp=N,3.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,114nm,12.0s						
CLNS				MLR	MLR		
	comp=N,28nm,12.0s						
CLNS				MLR	MLR		
	comp=E,127nm,11.0s						
TDJR	**Todzha**	**9.05**	**257**	*e*Sg	Sx	15 25 22.9	
KRAR	**Krasnoyarsk**	**10.01**	**281**	*e*P	**Pn**	**15 23 05.6**	**-0.6**
KZLR	**Kyzyl**	**10.27**	**256**⇓	*e*P	**Pn**	**15 23 12.5**	**+2.6**
HVS	**Khovu-Aksy**	**10.96**	**254***d*	*i*P	**Pn**	**15 23 19.6**	**+0.4**
ABNR	**Abakan**	**11.23**	**269**	*e*P	**Pn**	**15 23 22.4**	**-0.6**
ZAA0	**Zalesovo Array**	**14.94**	**275**	*e*Pn	**Pn**	**15 24 13.7**	**+0.2**
ZALV	**Zalesovo Beam**	**14.94**	**275**	Pn	**Pn**	**15 24 14.0**	**+0.5**
	comp=E,0.1nm,0.3s,baz=81,slow=8.9,SNR=10						
ZALV				Lg		15 28 26.2	
	comp=E,0.1nm,0.3s,baz=85,slow=31,SNR=2.7						
ZAL	**Zalesovo**	**14.95**	**275**	P	**Pn**	**15 24 14.0**	**+0.3**
MKAR	**Makanchi Array**	**19.62**	**256**	P	**Pn**	**15 25 12.2**	**0.0**
	comp=E,0.2nm,0.3s,baz=54,slow=10.0,SNR=5.7						
KURK	**Kurchatov**	**19.66**	**270**	*e*P	**Pn**	**15 25 12.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KURK				MLR	MLR		
	comp=Z,100nm,20.0s						

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*IDC **03** 15:22:48.6±0.9, 1195S×16598E, h0^{km}, mb4.3/13, mb1 4.4/14, mb1mx4.2/20, mbtmp4.3/14, ML4.3/1, MS4.2/7, Ms1 4.2/7, ms1mx3.7/22, Error ellipse: s-maj=25.6km s-min=18.0km az=90.0*

*ISCJB **03** 15:22:51.4±4.9, 1193S±009×1659E±0.1, h26^{km}±32^{km}, mb4.4/20, MS4.1/7, Error ellipse: s-maj=20.1km s-min=11.5km az=149.0*

*BJI **03** 15:22:55.4, 1190S×16590E, h47^{km}, mB5.2, mb4.6*

*NEIC **03** 15:22:55.5±2.7, 1192S×16591E, h47^{km}±21^{km}, mb4.4/6, Error ellipse: s-maj=20.8km s-min=10.7km az=86.0*

ISC 03 15:22:54.1±5.0**, 1193S**±009×**1659E**±01**, h32**^{km}±33^{km}**, n48, σ0**^{s}**85**/34**, mb4.4**/20**, MS4.1**/7**, 2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.36**	**292**	Pn	**Pn**	**15 24 24.2**	**-1.4**
	6.0nm,0.3s,baz=125,slow=6.5,SNR=2.9						
HNR				Sn	**Sn**	**15 25 37.3**	**0.0**
	8.4nm,0.3s,baz=311,slow=11,SNR=5.2						
HNR	**Honiara**	**6.36**	**292**	*e*Pn	**Pn**	**15 24 26.9**	**+1.3**
	233nm,0.9s						
HNR				Sn	**Sn**	**15 25 37.3**	**0.0**
CTA	**Charters Tower**	**20.54**	**244**	*e*P	**P**	**15 27 30.2**	**+0.2**
	7.9nm,1.2s						
CTA	**Charters Tower**	**20.54**	**244**	P	**P**	**15 27 30.7**	**+0.6**
	5.3nm,0.7s,baz=76,slow=13,SNR=5.9						
CTA				LR	LR	15 34 27.5	
	comp=Z,519nm,20.4s,MS3.9,baz=55,slow=34						
CTAO	**Charters Tower**	**20.54**	**244**	*e*P	**P**	**15 27 30.3**	**+0.2**
	15nm,1.1s						
AFI	**Afiamalu**	**21.84**	**98**	S	**S**	**15 31 44.2**	**+0.3**
	8.9nm,0.3s,baz=164,slow=21,SNR=9.3						
AFI				LR	LR	15 33 45.4	
	comp=Z,448nm,20.7s,MS3.9,baz=275,slow=30						
ARMA	**Armidale**	**22.66**	**214**	*e*P	**P**	**15 27 53.5**	**+0.8**
ARMA	**Armidale**	**22.66**	**214**	*e*P	**P**	**15 27 53.4**	**+0.7**
	1.6nm,1.3s,mb3.3						
STKA	**Stephens Creek**	**29.92**	**225**	*e*P	**P**	**15 28 59.8**	**+0.6**
	7.7nm,1.9s,mb4.1						
STKA	**Stephens Creek**	**29.92**	**225**	P	**P**	**15 28 58.8**	**-0.4**
	2.3nm,0.7s,mb4.0,baz=64,slow=13,SNR=6.5						
STKA				LR	LR	15 40 23.9	
	comp=Z,519nm,18.6s,MS4.2,baz=30,slow=35						
WB2	**Warramunga Arr**	**31.33**	**251**	*e*P	**P**	**15 29 11.6**	**-0.2**
WRA	**Warramunga Arr**	**31.34**	**251**	P	**P**	**15 29 11.2**	**-0.7**
	1.3nm,0.6s,mb3.9,baz=83,slow=9.0,SNR=18						
WRA				LR	LR	15 41 16.1	
	comp=Z,268nm,18.2s,MS4.0,baz=85,slow=35						
RPZ	**Rata Peaks**	**31.98**	**173**	P	**P**	**15 29 16.4**	**-0.8**
	15nm,0.7s,mb4.9,baz=29,slow=13,SNR=4.4						
RPZ				LR	LR	15 40 51.5	
	comp=Z,494nm,18.7s,MS4.2,baz=251,slow=34						
ASAR	**Alice Springs**	**32.55**	**245**	P	**P**	**15 29 21.4**	**-1.1**
	1.4nm,0.7s,mb4.0,baz=70,slow=9.7,SNR=23						
RAR	**Rarotonga**	**34.10**	**110**	LR	LR	15 40 29.2	
	comp=Z,212nm,19.7s,MS3.9,baz=238,slow=31						
FITZ	**Fitzroy Crossi**	**39.31**	**256**	*e*P	**P**	**15 30 20.3**	**-0.2**
	8.7nm,1.1s,mb4.4						
FITZ	**Fitzroy Crossi**	**39.31**	**256**	P	**P**	**15 30 19.8**	**-0.7**
	0.9nm,0.6s,mb3.6,baz=157,slow=10,SNR=5.0						
PPT	**Papeete**	**43.34**	**103**	*e*S	**S**	**15 37 19.0**	**-0.5**
	117nm,26.2s						
PPT				*e*LQ		15 41 12.5	
	926nm,27.2s						
PPT				*e*LR	LR	15 43 03.3	
	404nm,26.8s,baz=265						
PPT	**Papeete**	**43.34**	**103**	LR	LR	15 45 55.3	
	comp=Z,447nm,18.0s,MS4.4,baz=129,slow=32						
MJAR	**Matsushiro Arr**	**54.82**	**333**	P	**P**	**15 32 19.7**	**-1.5**
	3.6nm,1.0s,mb4.3,baz=166,slow=6.3,SNR=6.4						
RKT	**Rikitea**	**57.14**	**110**	*e*LR	LR	15 49 08.2	
KSRS	**Korea Array**	**60.69**	**326**	P	**P**	**15 33 02.5**	**+0.1**
	1.5nm,0.8s,mb4.2,baz=144,slow=7.3,SNR=7.6						
SBA	**Scott Base**	**65.92**	**180**	*e*P	**P**	**15 33 37.4**	**+0.9**
	17nm,1.1s,mb5.0						
CN2	**Changchun**	**66.58**	**329**	*e*P	**P**	**15 33 41.3**	**+0.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
XAN	**Xi'an**	**70.83**	**313**	P	**P**	**15 34 12.4**	**+4.5**
XAN				AP	pP	15 34 19.3	+1.4
XAN				XP	sP	15 34 23.7	+2.1
XAN				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.4						
XAN				AMB	AMB		
	comp=Z,60nm,4.9s						
HHC	**Hu-ho-hao-te**	**72.61**	**320**	*e*P	**P**	**15 34 19.1**	**+0.7**
HHC				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,100nm,5.9s						
CMAR	**Chiang Mai Arr**	**72.61**	**294**	P	**P**	**15 34 20.4**	**+1.5**
	comp=Z,1.5nm,0.9s,mb3.9,baz=111,slow=4.5,SNR=8.4						
LZH	**Lanzhou**	**75.47**	**312**	*e*P	**P**	**15 34 35.5**	**+0.3**
LZH				AMB	AMB		
	comp=Z,22nm,1.6s,mb4.8						
LZH				AMB	AMB		
	comp=Z,85nm,4.3s						
QSPA	**South Pole Qui**	**78.08**	**180**	P	**P**	**15 34 49.3**	**0.0**
	comp=Z,7.3nm,0.9s,mb4.6,baz=20,slow=3.1,SNR=16						
ULN	**Ulaanbaatar**	**79.11**	**324**	*e*P	**P**	**15 34 54.8**	**-0.5**
	comp=Z,24nm,1.4s,mb4.9						
SONM	**Songino Array**	**79.47**	**324**	P	**P**	**15 34 58.4**	**+1.1**
	comp=Z,3.7nm,1.0s,mb4.3,baz=134,slow=5.9,SNR=22						
GTA	**Gaotai**	**79.78**	**314**	*e*P	**P**	**15 35 01.0**	**+1.8**
GTA				AMB	AMB		
	comp=Z,5.0nm,1.7s,mb4.2						
MKAR	**Makanchi Array**	**94.27**	**317**	P	**P**	**15 36 09.7**	**-0.5**
	comp=Z,3.4nm,0.8s,mb4.8,baz=99,slow=6.3,SNR=19						
ZAA0	**Zalesovo Array**	**94.36**	**324**	*e*P	**P**	**15 36 09.3**	**-1.1**
ZALV	**Zalesovo Beam**	**94.36**	**324**	P	**P**	**15 36 09.7**	**-0.7**
	comp=Z,6.1nm,1.0s,mb5.0,baz=108,slow=4.8,SNR=19						
BVAR	**Borovoye Array**	**102.74**	**322**	P	Pdif	15 36 47.4	-0.8
	comp=Z,0.3nm,0.3s,baz=134,slow=4.3,SNR=4.1						
ARCES	**ARCESS Array B**	**117.23**	**345**	PKP	PKPdf	15 41 34.0	-1.5
	comp=Z,1.2nm,0.9s,baz=66,slow=1.5,SNR=4.6						
ARCES	**ARCESS Array B**	**117.23**	**345**	PKP	PKPdf	15 41 34.0	-1.6
AKASG	**Malin Array Be**	**127.69**	**327**	PKP	PKPdf	15 41 54.9	-1.3
	comp=Z,0.2nm,0.3s,baz=62,slow=2.8,SNR=4.4						
DAVOX	**Davos/Dischmat**	**139.80**	**334**	PKP	PKPdf	15 42 20.8	+1.8
	comp=Z,0.8nm,0.2s,baz=167,slow=22,SNR=3.7						
SBF	**Sospel**	**143.16**	**334**	*e*PKP1	PKPdf	15 42 22.6	-2.5
FRF	**La Foret Royal**	**143.75**	**334**	*e*PKP1	PKPdf	15 42 22.8	-3.3
	comp=Z,16nm,1.0s						
SMRF	**Simiane la Rot**	**143.85**	**336**	*e*PKP1	PKPdf	15 42 25.0	-1.3
LASF	**Ste Croix**	**144.43**	**338**⇑	*i*PKP1	PKPdf	15 42 25.8	-1.5
	comp=Z,29nm,1.3s						
MTLF	**Montolieu**	**145.67**	**339**⇑	*i*PKP1	PKPbc	15 42 29.6	-0.2
	comp=Z,37nm,1.3s						
KEST	**Kesra**	**148.21**	**322**	PKPbc	PKPbc	15 42 37.5	+0.2
	comp=Z,3.8nm,1.0s,baz=110,slow=1.2,SNR=7.9						
TORD	**Torodi Ar. Bea**	**164.54**	**276**	PKP	PKPdf	15 42 55.2	-0.4
	comp=Z,1.8nm,1.1s,baz=317,slow=1.5,SNR=7.8						
TORD	**Torodi Ar. Bea**	**164.54**	**276**	PKP	PKPdf	15 42 55.2	-0.4

IDC 03 15:41:41.5±5.1**, 1576S**×**17242W, h181**^{km}±34^{km}**, mb3.4**/4**, mb1 3.7**/4**, mb1mx3.3**/17**, mbtmp3.4**/4**, Error ellipse: s-maj=146.9km s-min=19.5km az=146.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.94**	**19**	P	Pn	15 42 18.1	0.0
	4.8nm,0.3s,baz=7.1,slow=24,SNR=15						
AFI				S	Sn	15 42 37.7	-8.7
	8.7nm,0.3s,baz=19,slow=23,SNR=21						
STKA	**Stephens Creek**	**44.68**	**240**	P	P	15 49 36.8	+0.4
	1.6nm,0.8s,baz=102,slow=9.8,SNR=6.0						
WRA	**Warramunga Arr**	**50.69**	**257**	P	P	15 50 22.2	-0.6
	0.5nm,0.5s,baz=97,slow=6.9,SNR=23						
ASAR	**Alice Springs**	**50.90**	**252**	P	P	15 50 24.6	+0.2
	5.9nm,0.5s,baz=89,slow=7.8,SNR=253						
NVAR	**Mina Array Bea**	**73.97**	**41**	P	P	15 52 57.4	+0.4
	0.2nm,0.5s,baz=203,slow=6.5,SNR=2.2						

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*ISCJB **03** 15:45:00.7±1.2, 189N±0.1×6432W±003, h34^{km}±18^{km}, Error ellipse: s-maj=18.6km s-min=4.6km az=8.2*

*TRN **03** 15:45:00.1, 1887N×6432W, h32^{km}, MD3.8*

*RSPR **03** 15:45:02.2, 1895N×6429W, h20^{km}±7^{km}, MD3.5/15, MD3.5/15*

*NEIC **03** 15:45:02.2, 1895N×6429W, h20^{km}, MD3.5(RSPR), After RSPR.*

ISC 03 15:45:01.1±1.3**, 189N**±01×**6431W**±003**, h28**^{km}±6^{km}**, n25, σ0**^{s}**65**/47**, 13C-4D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.19**	**185**⇑	*i*P	**Pb**	**15 45 07.4**	**+0.5**
TBVI	**Tortola**	**0.57**	**210**⇑	*i*P	**Pb**	**15 45 12.1**	**-0.5**
MTP	**Monte Pirata**	**1.43**	**235**⇓	*e*P	**Pn**	**15 45 24.5**	**-0.7**
MTP				*e*S	**Sn**	**15 45 43.3**	**+0.3**
STMA	**St. Maarten, A**	**1.44**	**127**	*e*P	**Pn**	**15 45 25.6**	**+0.3**
STMA				*e*S	**Sn**	**15 45 44.0**	**+0.8**
SMRT	**St. Maarten**	**1.46**	**126**⇓	*e*P	**Pn**	**15 45 25.2**	**-0.4**
SMRT				*e*S	**Sn**	**15 45 43.5**	**-0.3**
CBYP	**Canovanas**	**1.60**	**247**	*e*P	**Pn**	**15 45 27.0**	**-0.5**
HUMP	**Col San Antoni**	**1.65**	**242**⇓	*e*P	**Pn**	**15 45 27.4**	**-0.8**
HUMP				*e*S	**Sn**	**15 45 48.1**	**-0.3**
CPD	**Cerro la Pandu**	**1.75**	**240**	*e*P	**Pn**	**15 45 26.7**	**-2.9**
SJG	**San Juan**	**1.92**	**246**⇑	*e*P	**Pn**	**15 45 31.3**	**-0.6**
SJG	**San Juan**	**1.92**	**246**⇑	*e*P	**Pn**	**15 45 31.3**	**-0.5**
SJG				*e*S	**Sn**	**15 45 55.5**	**+0.5**
SJG	**San Juan**	**1.92**	**246**⇑	*e*P	**Pn**	**15 45 31.3**	**-0.5**
SJG				*e*S	**Sn**	**15 45 54.2**	**-0.9**
SJG				*e*S	**Sn**	**15 45 55.5**	**+0.5**
SJG	**San Juan**	**1.92**	**246**	*e*Pn	**Pn**	**15 45 31.2**	**-0.7**
SJG				*e*S	**Sn**	**15 45 54.2**	**-0.9**
SJG				*e*Sn	**Sn**	**15 45 54.9**	**-0.2**
CELP	**Cerrillos**	**2.31**	**249**⇑	*e*P	**Pn**	**15 45 37.1**	**-0.1**
CELP				*e*S	**Sn**	**15 46 05.5**	**+0.8**
ICM	**Isla Caja Muer**	**2.33**	**244**⇑	*e*P	**Pn**	**15 45 38.4**	**+0.9**
ICM				*e*S	**Sn**	**15 46 05.5**	**+0.2**
ICM				*e*S	**Sn**	**15 46 05.8**	**+0.5**
ICM	**Isla Caja Muer**	**2.33**	**244**⇑	*e*P	**Pn**	**15 45 38.4**	**+0.9**
ICM				*e*S	**Sn**	**15 46 05.8**	**+0.5**
OBIP	**Obispado Ponce**	**2.34**	**249**⇑	*e*P	**Pn**	**15 45 37.8**	**+0.1**
OBIP				*e*S	**Sn**	**15 46 05.6**	**0.0**
OBIP	**Obispado Ponce**	**2.34**	**249**⇑	*e*P	**Pn**	**15 45 37.8**	**+0.1**
OBIP				*e*S	**Sn**	**15 46 05.6**	**0.0**
AOPR	**Arecibo Observ**	**2.38**	**257**⇑	*e*P	**Pn**	**15 45 38.0**	**-0.2**
AOPR	**Arecibo Observ**	**2.38**	**257**⇑	*e*P	**Pn**	**15 45 38.1**	**-0.2**
AOPR				*e*S	**Sn**	**15 46 06.1**	**-0.5**
AOPR				*e*S	**Sn**	**15 46 06.7**	**+0.2**
AOPR	**Arecibo Observ**	**2.38**	**257**⇑	*e*P	**Pn**	**15 45 38.0**	**-0.2**
AOPR				*e*S	**Sn**	**15 46 06.1**	**-0.5**
GBPR	**Guanica, Bosqu**	**2.61**	**249**⇑	*e*P	**Pn**	**15 45 42.6**	**+1.2**
GBPR				*e*S	**Sn**	**15 46 12.4**	**+0.3**
AGPR	**Aguadilla, PR**	**2.69**	**261**	*e*P	**Pn**	**15 45 41.9**	**-0.5**
AGPR				*e*S	**Sn**	**15 46 14.5**	**+0.3**
LSP	**Las Mesas**	**2.73**	**255**⇑	*e*P	**Pn**	**15 45 43.8**	**+0.8**
LSP				*e*S	**Sn**	**15 46 14.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**2.80**	**252**⇓	*e*P	**Pn**	**15 45 44.8**	**+0.7**
CRPR				*e*S	**Sn**	**15 46 16.7**	**-0.2**
BPA	**Boggy Peak**	**2.99**	**128**	*e*S	**Sn**	**15 46 21.2**	**-0.3**

NEIC 03 16:10:12.5, 3793S×**17660E, h150**^{km}**, MG4.1**(WEL)**, After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.52**	**129**	P	Pn	16 10 33.7	-0.2
MWZ	**Matawai**	**0.84**	**119**	P	Pn	16 10 35.7	-0.2
MWZ				S	Sn	16 10 53.8	0.0
RITZ	**Rihia Road**	**1.20**	**209**	P	Pn	16 10 39.6	+0.6
BKZ	**Black Stump Fm**	**1.24**	**184**	P	Pn	16 10 39.3	-0.1
PUZ	**Puketiti**	**1.32**	**97**	P	Pn	16 10 39.9	-0.2
KNZ	**Kokohu**	**1.38**	**143**	P	Pn	16 10 40.9	+0.2
WTVZ	**West Tongariro**	**1.43**	**213**	P	Pn	16 10 41.5	+0.3
TWVZ	**Taurewa**	**1.46**	**218**	P	Pn	16 10 41.7	+0.1
NGZ	**Ngauruhoe**	**1.47**	**212**	P	Pn	16 10 42.1	+0.4
HIZ	**Hauiti**	**1.49**	**246**	P	Pn	16 10 42.5	+0.6
WPVZ	**Whakapapa**	**1.52**	**213**	P	Pn	16 10 42.4	+0.2
TUVZ	**Tukino**	**1.53**	**209**	P	Pn	16 10 42.6	+0.3
FWVZ	**Far West T-bar**	**1.56**	**211**	P	Pn	16 10 42.7	+0.1
WNVZ	**Wahianoa**	**1.60**	**209**	P	Pn	16 10 43.2	+0.1
MOVZ	**Moawhango**	**1.62**	**204**	P	Pn	16 10 42.8	-0.5
TSZ	**Takapari Road**	**2.19**	**193**	P	Pn	16 10 48.7	-1.0
WAZ	**Wanganui**	**2.22**	**214**	P	Pn	16 10 49.8	-0.3
MRZ	**Mangatainoka R**	**2.84**	**196**	P	Pn	16 10 56.0	-1.8
KIW	**Kapiti Island**	**3.21**	**204**	P	Pn	16 10 59.9	-2.5
MTW	**Mount Morrison**	**3.33**	**194**	P	Pn	16 11 01.4	-2.6
CAW	**Cannon Point**	**3.39**	**200**	P	Pn	16 11 02.2	-2.5
MRW	**Makara Radio**	**3.61**	**203**	P	Pn	16 11 04.7	-2.9
MSWZ	**Moikau Station**	**3.63**	**196**	P	Pn	16 11 04.9	-3.0
WEL	**Wellington**	**3.64**	**202**	P	Pn	16 11 05.1	-2.8
SNZO	**South Karori**	**3.68**	**203**	P	Pn	16 11 05.3	-3.2
BHW	**Baring Head**	**3.72**	**200**	P	Pn	16 11 05.9	-3.1
TCW	**Tory Channel**	**3.74**	**208**	P	Pn	16 11 06.1	-3.1
NNZ	**Nelson**	**4.12**	**216**	P	Pn	16 11 11.1	-3.1
QRZ	**Quartz Range**	**4.28**	**226**	P	Pn	16 11 12.9	-3.4
BSWZ	**Blackbirch Sta**	**4.32**	**208**	P	Pn	16 11 13.0	-3.9
THZ	**Tophouse**	**4.77**	**215**	P	Pn	16 11 19.9	-2.9
KHZ	**Kahutara**	**5.06**	**207**	P	Pn	16 11 22.8	-3.8
LTZ	**Lake Taylor**	**5.87**	**213**	P	Pn	16 11 33.6	-3.7
MQZ	**McQueen's Vall**	**6.50**	**206**	P	Pn	16 11 40.3	-5.5
ODZ	**Otahua Downs**	**8.39**	**210**	P	Pn	16 12 06.2	-4.8
TUZ	**Tuapeka**	**9.55**	**211**	P	Pn	16 12 22.6	-3.7

IDC 03 16:12:21.6±4.0**, 432S**×**10230E, h0**^{km}**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/18**, mbtmp3.6**/4**, Error ellipse: s-maj=206.5km s-min=26.7km az=53.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**34.85**	**119**	P	P	16 19 14.5	-0.3
	0.2nm,0.4s,baz=294,slow=8.8,SNR=7.7						
ASAR	**Alice Springs**	**36.04**	**125**	P	P	16 19 25.2	+0.2
	0.3nm,0.6s,baz=301,slow=8.0,SNR=11						
STKA	**Stephens Creek**	**45.90**	**131**	P	P	16 20 46.1	-0.1
	1.9nm,0.8s,baz=308,slow=16,SNR=2.9						
MKAR	**Makanchi Array**	**53.88**	**343**	P	P	16 21 46.6	0.0
	0.3nm,0.3s,baz=153,slow=8.2,SNR=6.0						

NIED ***03*** *16:14:00, 45.00N×150.10E, h92km, Mw6.2 Best double couple: M0 2.64000×10^18 NP1:φs 58.00000°, δ65.00000°, λ142.00000°. NP2:φs 166.00000°, δ56.00000°, λ30.00000°.*

BGS ***03*** *16:14:44.6±1.3, 4649N×15048E, h0km±999km, mb6.8*

MOS ***03*** *16:14:51.3±0.8, 4583N×150.11E, h86km, mb6.3/123, MS5.6/56, Error ellipse: s-maj=5.6km s-min=3.3km az=102.9*

MOS Felt (IV) at Kuril'sk, (II) at Yuzhno-Kuril'sk.

ISCJB ***03*** *16:14:52.4±0.1, 4572N±002×150.15E±002, h99km, mb6.2/441, Error ellipse: s-maj=2.6km s-min=1.5km az=146.8*

BJI ***03*** *16:14:52.1, 4577N×150.11E, h94km, mB6.3, mb6.3*

NEIC ***03*** *16:14:53.6±0.1, 4584N×150.06E, h94km, mb6.3/289, ME6.2, Error ellipse: s-maj=2.9km s-min=2.0km az=175.0 Broadband fault plane solution: P waves. NP1: φs 150.00000°, δ73.00000°, λ32.00000°. NP2:φs 50.00000°, δ60.00000°, λ160.00000°. Principal axes: T Plg34.0000°, Azm14.0000°; N Plg0.0000°, Azm0.0000°; P Plg8.0000°, Azm278.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Recorded [2 JMA] in eastern and south-central Hokkaido. Also recorded [2 JMA] in Aomori, Iwate and Miyagi Prefectures, Honshu.

SKHL ***03*** *16:14:53.3±1.7, 4570N×150.20E, h92km±32km, mb7.0/6, mbh6.9/2, mbv7.2/6, ms6.0/3, msh6.9/6, msha7.1/2*

GCMT ***03*** *16:14:53.6±0.1, 4577N×150.33E, h100km, MW6.2/99, Moment Tensor Solution. s95,c239; s99,c386; Duration: 3s0 Moment tensor: Scale 10^18Nm; Mrr 0.76±.01; Mθθ 1.60±.01; Mφφ -2.36±.01; Mrθ 1.10±.01; Mθφ -0.41±.01; Mφr -0.38±.01; Best double couple: M0 2.42500×10^18 NP1:φs 45.00000°, δ62.00000°, λ158.00000°. NP2:φs 146.00000°, δ70.00000°, λ30.00000°. Principal axes: T 2.4230, Plg35.0000°, Azm8.0000°; N 0.0050, Plg55.0000°, Azm177.0000°; P -2.4280, Plg5.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

IDC ***03*** *16:14:54.0±0.3, 4579N×150.04E, h100km±2km, mb5.4/24, mb1 5.5/30, mb1mx5.5/31, mbtmp5.4/30, MS5.4/22, Ms1 5.4/22, ms1mx5.1/34 Error ellipse: s-maj=8.9km s-min=7.0km az=129.0*

SZGRF ***03*** *16:14:57.9, 47.10N×149.13E, h65km, mb6.7, Northwest of Kuril Islands, Russia*

JMA ***03*** *16:14:57.3±0.5, 4502N×150.12E, h126km, M6.3*

JMA Felt II J1.

DJA ***03*** *16:15:13, 45.71N×149.62E, h248km, Mw5.5/24*

ISC 03 16:14:54.4±0.1, 4580N±002×15010E±002, h101km, h101km±.9km:pP-P, n1660, σ0s97/1680, mb6.2/441, 438C-113D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.67**	**251**	⇓*i* P	**Pn**	**16 15 21.0**	**-1.7**
KUR				*e*S	**Sn**	**16 15 43.0**	**-1.2**
KUR				pmax	pmax		
	comp=Z,600μm,1.6s						
KUR				pmax	pmax		
	comp=N,125nm,1.6s						
KUR				pmax	pmax		
	comp=E,188nm,1.6s						
KUR				smax			
	comp=N,2425μm,2.0s						
KUR				smax			
	comp=E,2μm,2.0s						
KUR	**Kuril'sk**	**1.67**	**251**	⇓*i* P	**Pn**	**16 15 21.0**	**-1.7**
KUR				AMB	AMB	16 15 22.4	
	comp=E,600μm,1.6s						
KUR				AMB	AMB	16 15 22.4	
	comp=E,125μm,1.6s						
KUR				AMB	AMB	16 15 22.4	
	comp=E,188μm,1.6s						
KUR				*e*S	**Sn**	**16 15 43.0**	**-1.2**
KUR				A		16 15 47.0	
	comp=E,2425μm,2.0s						
KUR				A		16 15 47.0	
	comp=E,2413μm,2.0s						
YUK	**Yuzh-Kuril'sk**	**3.49**	**241**	*i* PN	**Pn**	**16 15 47.0**	**+0.4**
YUK				*i* S	**Sn**	**16 16 26.0**	**-1.0**
YUK				pmax	pmax		
	comp=E,17μm,0.5s						
YUK				pmax	pmax		
	comp=Z,20μm,0.5s						
YUK				pmax	pmax		
	comp=N,15μm,0.8s						
YUK				pmax	pmax		
	comp=Z,104μm,2.2s						
YUK				pmax	pmax		
	comp=N,75μm,2.8s						
YUK				pmax	pmax		
	comp=E,180μm,3.4s						
YUK	**Yuzh-Kuril'sk**	**3.49**	**241**	⇓*i* P	**Pn**	**16 15 47.0**	**+0.4**
YUK				⇓*i* P		16 15 47.2	
YUK				⇓*i* P		16 15 47.2	
YUK				⇓*i* P		16 15 47.2	
YUK				AMB	AMB	16 15 49.0	
	comp=E,17μm,0.5s						
YUK				AMB	AMB	16 15 49.0	
	comp=E,20μm,0.5s						
YUK				AMB	AMB	16 15 49.0	
	comp=E,104μm,2.2s						
YUK				AMB	AMB	16 15 49.0	
	comp=E,75μm,2.8s						
YUK				AMB	AMB	16 15 49.0	
	comp=E,180μm,3.4s						
YUK				AMB	AMB	16 15 49.0	
	comp=E,15μm,0.8s						
YUK				*i* S	**Sn**	**16 16 26.0**	**-1.0**
NEM2	**Nemuro 2**	**3.95**	**233**	⇓P	**Pn**	**16 15 51.6**	**-1.3**
NEM2				*e*S	**Sn**	**16 16 33.7**	**-4.5**
JRA	**Rausu**	**4.00**	**244**	⇓P	**Pn**	**16 15 54.7**	**+1.2**
JNK	**Nakash**	**4.43**	**242**	⇓P	**Pn**	**16 15 59.9**	**+0.6**
JTKR	**Abashiri--Toko**	**4.76**	**250**	⇓P	**Pn**	**16 16 05.5**	**+1.7**
JAK	**Akkeshi**	**4.78**	**236**	⇓P	**Pn**	**16 16 02.9**	**-1.1**
JAK				*e*S	**Sn**	**16 16 53.8**	**-4.4**
JMP	**Maruseppu**	**5.11**	**252**	⇓P	**Pn**	**16 16 10.3**	**+1.8**
JAR	**Ashorobuto**	**5.17**	**243**	⇓P	**Pn**	**16 16 10.3**	**+1.0**
YSS	**Yuzh-Sakhalins**	**5.21**	**285**	K *i* PN	**Pn**	**16 16 13.4**	**+3.5**
YSS				*e*S	**Sn**	**16 17 10.0**	**+1.4**
YSS				pmax	pmax		
	comp=E,18μm,0.9s						
YSS				pmax	pmax		
	comp=Z,17μm,0.9s						
YSS				pmax	pmax		
	comp=N,5μm,0.6s						
YSS				pmax	pmax		
	comp=E,61μm,6.0s						
YSS				pmax	pmax		
	comp=Z,102μm,6.0s						
YSS				pmax	pmax		
	comp=N,35μm,4.0s						
YSS				MLR	MLR		
	comp=E,46μm,14.0s						
YSS				MLR	MLR		
	comp=Z,67μm,14.0s						
YSS	**Yuzh-Sakhalins**	**5.21**	**285**	⇓*i* P	**Pn**	**16 16 13.4**	**+3.5**
YSS				AMB	AMB	16 16 16.8	
	comp=E,61μm,6.0s						
YSS				AMB	AMB	16 16 16.8	
	comp=Z,35μm,4.0s						
YSS				AMB	AMB	16 16 16.8	
	comp=Z,102μm,6.0s						
YSS				*es*P		16 16 38.0	
YSS				*e*S	**Sn**	**16 17 10.0**	**+1.4**
YSS				*e*LQ		16 17 28.0	
YSS				AMS	AMS	16 18 18.0	
	comp=Z,67μm,14.0s						
YSS				AMS	AMS	16 18 18.0	
	comp=Z,46μm,14.0s						
YSS				AMS	AMS	16 18 18.0	
	comp=Z,44μm,14.0s						
YSS				AMS	AMS	16 18 18.0	
	comp=Z,48μm,14.0s						
YSS				AMS	AMS	16 18 18.0	
	comp=Z,32μm,16.0s						
YSS	**Yuzh-Sakhalins**	**5.21**	**285**	⇓*i* Pn	**Pn**	**16 16 13.8**	**+4.0**
JOB	**Onbets**	**5.34**	**239**	⇓P	**Pn**	**16 16 11.5**	**-0.2**
JOB				*e*S	**Sn**	**16 17 08.9**	**-3.0**
JSE	**Soyaes**	**5.36**	**264**	⇓P	**Pn**	**16 16 15.1**	**+3.2**
JKK2	**Kamakawa 2**	**5.57**	**252**	P	**Pn**	**16 16 17.0**	**+2.2**
ASAJ	**Asahikawa**	**5.58**	**255**	P	**Pn**	**16 16 15.1**	**+0.2**
	comp=Z,531nm,0.3s,baz=87,slow=14,SNR=920						
ASAJ				S	**Sn**	**16 17 18.3**	**+0.6**
	comp=Z,59nm,0.3s,baz=337,slow=30,SNR=2.1						
ASAJ	**Asahikawa**	**5.58**	**255**	⇓P	**Pn**	**16 16 17.6**	**+2.7**
ASAJ	**Asahikawa**	**5.58**	**255**	PN	**Pn**	**16 16 15.1**	**+0.2**
ASAJ				S	**Sn**	**16 17 18.3**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,531nm,0.3s						
ASAJ				smax			
	comp=N,59nm,0.3s						
ASAJ	**Asahikawa**	**5.58**	**255**	P	**Pn**	**16 16 17.2**	**+2.3**
JWK2	**Keihoku**	**5.78**	**268**	⇓P	**Pn**	**16 16 22.3**	**+4.7**
JCH	**Churui**	**5.79**	**239**	⇓P	**Pn**	**16 16 16.8**	**-1.0**
JCH				*e*S	**Sn**	**16 17 17.8**	**-5.1**
JFR	**Furan**	**5.98**	**246**	⇓P	**Pn**	**16 16 21.6**	**+1.3**
JSS	**Shosan**	**6.00**	**259**	⇓P	**Pn**	**16 16 24.1**	**+3.5**
JAB	**Ashibetsu**	**6.07**	**251**	⇓P	**Pn**	**16 16 24.1**	**+2.6**
JEM	**Erimo**	**6.28**	**235**	⇓P	**Pn**	**16 16 24.0**	**-0.4**
JEM				*e*S	**Sn**	**16 17 29.6**	**-5.1**
JHR	**Hokuryu**	**6.30**	**254**	⇓P	**Pn**	**16 16 27.6**	**+2.9**
JBT2	**Biratori 2**	**6.32**	**244**	⇓P	**Pn**	**16 16 24.8**	**-0.1**
JBT2				*e*S	**Sn**	**16 17 32.4**	**-3.2**
SKR	**Severo-Kuril's**	**6.33**	**37**	⇑*i* PN	**Pn**	**16 16 24.0**	**-0.9**
SKR				*i* S	**Sn**	**16 17 32.5**	**-3.2**
SKR				pmax	pmax		
	comp=N,12μm,6.0s						
SKR				pmax	pmax		
	comp=E,20μm,6.0s						
SKR				pmax	pmax		
	comp=Z,15μm,6.0s						
SKR				pmax	pmax		
	comp=N,2μm,0.8s						
SKR				pmax	pmax		
	comp=E,2μm,0.8s						
SKR				pmax	pmax		
	comp=Z,4μm,0.8s						
SKR				smax			
	comp=N,280nm,0.6s						
SKR				smax			
	comp=E,2μm,0.6s						
SKR				smax			
	comp=N,59μm,8.0s						
SKR				smax			
	comp=E,175μm,8.0s						
SKR				MLR	MLR		
	comp=Z,52μm,14.0s						
SKR				MLR	MLR		
	comp=N,42μm,12.0s						
SKR				MLR	MLR		
	comp=E,98μm,12.0s						
SKR	**Severo-Kuril's**	**6.33**	**37**	⇑*i* P	**Pn**	**16 16 24.0**	**-0.9**
SKR				AMB	AMB	16 16 28.0	
	comp=E,12μm,6.0s						
SKR				AMB	AMB	16 16 28.0	
	comp=E,20μm,6.0s						
SKR				AMB	AMB	16 16 28.0	
	comp=E,15μm,6.0s						
SKR				AMB	AMB	16 16 28.7	
	comp=E,2μm,0.8s						
SKR				AMB	AMB	16 16 28.7	
	comp=E,2μm,0.8s						
SKR				AMB	AMB	16 16 28.7	
	comp=E,4μm,0.8s						
SKR				*e*S	**Sn**	**16 17 32.5**	**-3.2**
SKR				A		16 17 41.1	
	comp=E,3μm,0.6s						
SKR				A		16 17 41.1	
	comp=E,2μm,0.6s						
SKR				A		16 17 41.1	
	comp=E,1μm,0.6s						
SKR				A		16 17 50.0	
	comp=E,60μm,8.0s						
SKR				A		16 17 50.0	
	comp=E,170μm,8.0s						
SKR				A		16 17 50.0	
	comp=E,90μm,8.0s						
SKR				A		16 17 50.0	
	comp=E,59μm,8.0s						
SKR				A		16 17 50.0	
	comp=E,175μm,8.0s						
SKR				A		16 17 50.0	
	comp=E,82μm,8.0s						
SKR				AMS	AMS	16 18 44.0	
	comp=E,52μm,14.0s						
SKR				AMS	AMS	16 18 44.0	
	comp=E,44μm,12.0s						
SKR				AMS	AMS	16 18 44.0	
	comp=E,91μm,12.0s						
SKR				AMS	AMS	16 18 44.0	
	comp=E,42μm,12.0s						
SKR				AMS	AMS	16 18 44.0	
	comp=E,98μm,12.0s						
SKR				AMS	AMS	16 18 44.0	
	comp=E,52μm,14.0s						
JNBK	**Urakawa-nobuka**	**6.36**	**239**	⇓P	**Pn**	**16 16 23.7**	**-1.7**
JNBK				*e*S	**Sn**	**16 17 31.4**	**-5.1**
UGL	**Uglegorsk**	**6.36**	**304**	⇓*i* P	**Pn**	**16 16 30.0**	**+4.6**
UGL				⇓*i* P		16 16 30.0	
UGL				AMB	AMB	16 16 31.5	
	comp=E,5μm,1.2s						
UGL				AMB	AMB	16 16 31.5	
	comp=E,12μm,1.2s						
UGL				AMB	AMB	16 16 31.5	
	comp=E,24μm,1.2s						
UGL				AMB	AMB	16 16 33.0	
	comp=E,38μm,6.0s						
UGL				AMB	AMB	16 16 33.0	
	comp=E,40μm,6.0s						
UGL				AMB	AMB	16 16 33.0	
	comp=E,35μm,6.0s						
UGL				A		16 18 45.0	
	comp=E,8μm,1.5s						
UGL				A		16 18 45.0	
	comp=E,18μm,1.5s						
UGL				A		16 18 54.0	
	comp=E,48μm,6.0s						
UGL				A		16 18 54.0	
	comp=E,38μm,6.0s						
UGL				A		16 18 54.0	
	comp=E,52μm,6.0s						
JEW	**Eniwo**	**6.87**	**248**	P	**Pn**	**16 16 33.7**	**+1.3**
TYV	**Tymovskoe**	**7.09**	**318**	⇑*i* P	**Pn**	**16 16 39.2**	**+3.9**
TYV				AMB	AMB	16 16 41.0	
	comp=E,390nm,1.0s						
TYV				AMB	AMB	16 16 41.0	
	comp=E,1μm,1.0s						
TYV				AMB	AMB	16 16 41.0	
	comp=E,1μm,1.0s						
TYV				AMS	AMS	16 21 44.0	
	comp=E,30μm,12.0s						
TYV				AMS	AMS	16 21 44.0	
	comp=E,29μm,11.0s						
JSK	**Shakotan**	**7.29**	**254**	P	**Pn**	**16 16 39.6**	**+1.4**
JNB	**Noboribetsu**	**7.32**	**246**	⇓P	**Pn**	**16 16 37.8**	**-0.7**
JNB				*e*S	**Sn**	**16 17 55.6**	**-4.4**
JKB	**Kayabe**	**7.63**	**242**	⇓P	**Pn**	**16 16 41.0**	**-1.8**
JKB				*e*S	**Sn**	**16 18 01.5**	**-6.0**
JSH	**Shimam**	**7.88**	**250**	⇓P	**Pn**	**16 16 46.7**	**+0.6**
JOT	**Ohata**	**7.91**	**239**	⇓P	**Pn**	**16 16 43.5**	**-3.1**
JYM2	**Yakumo 2**	**7.92**	**246**	⇓P	**Pn**	**16 16 45.9**	**-0.9**
JSR	**Shiriuchi**	**8.21**	**242**	P	**Pn**	**16 16 48.5**	**-2.2**
JSR				*e*S	**Sn**	**16 18 15.2**	**-6.5**
JTM	**Tenmabayashi**	**8.27**	**236**	P	**Pn**	**16 16 47.9**	**-3.6**
JTM				*e*S	**Sn**	**16 18 13.6**	**-10**
JANG	**Nango**	**8.30**	**232**	P	**Pn**	**16 16 47.4**	**-4.4**
JANG				*e*S	**Sn**	**16 18 13.0**	**-11**
JTH	**Tanohata**	**8.42**	**229**	P	**Pn**	**16 16 48.6**	**-4.9**
JTH				*e*S	**Sn**	**16 18 15.6**	**-11**
JOSM	**Okushiri--Mats**	**8.52**	**248**	P	**Pn**	**16 16 54.1**	**-0.7**
JOSM				*e*S	**Sn**	**16 18 25.3**	**-3.8**
PEA0B	**Petropavlovsk-**	**8.83**	**31**	⇑*i* P	**Pn**	**16 16 58.4**	**-0.6**
PETK	**Petropavlovsk-**	**8.83**	**31**	P	**Pn**	**16 16 58.1**	**-0.9**
	comp=E,70nm,0.3s,baz=227,slow=14,SNR=711						
PETK				S	**Sn**	**16 18 42.4**	**+5.9**
	baz=148,slow=12,SNR=1.7						
PETK				LR	LR	16 20 50.7	
	comp=E,21μm,18.2s,baz=217,slow=40						
OKH	**Okha**	**9.04**	**332**	⇑*i* PN	**Pn**	**16 17 06.1**	**+4.3**
OKH				*e*S	**Sn**	**16 18 48.0**	**+6.4**
OKH				pmax	pmax		
	comp=Z,49μm,5.0s						
OKH				smax			
	comp=E,97μm,8.0s						
OKH				MLR	MLR		
	comp=Z,45μm,18.0s						
OKH	**Okha**	**9.04**	**332**	⇑*i* P	**Pn**	**16 17 06.1**	**+4.3**
OKH				⇑*i* P		16 17 06.2	
OKH				AMB	AMB	16 17 06.6	
	comp=Z,23μm,6.0s						
OKH				AMB	AMB	16 17 06.6	
	comp=Z,27μm,4.0s						
OKH				AMB	AMB	16 17 06.6	
	comp=Z,49μm,5.0s						
OKH				AMB	AMB	16 17 08.0	
	comp=Z,17μm,1.5s						
OKH				*e*S	**Sn**	**16 18 48.0**	**+6.4**
OKH				A		16 19 00.0	
	comp=Z,97μm,8.0s						
OKH				A		16 19 00.0	
	comp=Z,35μm,8.0s						
OKH				AMS	AMS	16 21 40.2	
	comp=Z,59μm,14.0s						
OKH				AMS	AMS	16 21 40.2	
	comp=Z,45μm,18.0s						
OKH				AMS	AMS	16 21 40.2	
	comp=Z,70μm,16.0s						
PET	**Petropavlovsk**	**9.12**	**35**	*α i* PN	**Pn**	**16 17 00.5**	**-2.5**
PET				pmax	pmax		
	comp=Z,7μm,13.5s						
PET				pmax	pmax		
	comp=Z,9μm,11.4s						
PET				pmax	pmax		
	comp=Z,560nm,2.0s						
PET				MLR	MLR		
	comp=Z,50μm,21.0s						
PET				MLR	MLR		
	comp=Z,40μm,19.0s						
PET	**Petropavlovsk**	**9.12**	**35**	⇑*i* Pn	**Pn**	**16 17 00.3**	**-2.6**
OFUJ	**Ofunato**	**9.16**	**226**	⇓P	**Pn**	**16 16 58.9**	**-4.6**
JRG	**Rokugo**	**9.46**	**231**	P	**Pn**	**16 17 03.7**	**-4.0**
JRG				*e*S	**Sn**	**16 18 43.8**	**-8.4**
JMK	**Ichinoseki**	**9.48**	**227**	P	**Pn**	**16 17 03.2**	**-4.8**
TEY	**Ternei**	**9.52**	**270**	*e*P	**Pn**	**16 17 12.0**	**+3.5**
TEY				A		16 19 40.0	
	comp=Z,49μm,18.0s						
TEY				A		16 19 52.0	
	comp=Z,21μm,16.0s						
NKL	**Nikolayevsk**	**9.57**	**324**	*i* P	**Pn**	**16 17 12.0**	**+3.0**
NKL				AMB	AMB	16 17 14.0	
	comp=Z,9μm,4.0s						
NKL				AMB	AMB	16 17 14.0	
	comp=Z,10μm,4.0s						
NKL				AMB	AMB	16 17 14.5	
	comp=Z,700nm,1.5s						
NKL				AMB	AMB	16 17 14.5	
	comp=Z,520nm,1.5s						
NKL				AMB	AMB	16 17 14.5	
	comp=Z,1μm,1.5s						
NKL				*e*S	**Sn**	**16 19 02.0**	**+7.5**
NKL				A		16 19 08.0	
	comp=Z,31μm,12.0s						
NKL				A		16 19 08.0	
	comp=Z,11μm,12.0s						
NKL				*e*L		16 19 36.0	
NKL				AMS	AMS	16 20 50.0	
	comp=Z,48μm,17.0s						
NKL				AMS	AMS	16 20 50.0	
	comp=Z,39μm,17.0s						
NKL				AMS	AMS	16 20 50.0	
	comp=Z,44μm,17.0s						
JOG2	**Oga 2**	**9.58**	**236**	P	**Pn**	**16 17 06.0**	**-3.3**
JIO	**Ouri**	**9.80**	**225**	P	**Pn**	**16 17 07.1**	**-5.2**
JIO				*e*S	**Sn**	**16 18 47.8**	**-13**
JYA	**Atsumi**	**10.54**	**231**	⇓P	**Pn**	**16 17 18.6**	**-3.7**
JYA				*e*S	**Sn**	**16 19 10.0**	**-8.3**
JFK	**Kawauchi**	**10.89**	**223**	P	**Pn**	**16 17 22.3**	**-4.8**
JFK				*e*S	**Sn**	**16 19 13.1**	**-14**
JAW	**Awa shima**	**10.89**	**231**	⇓P	**Pn**	**16 17 23.2**	**-3.9**
JNS	**Sasagawa**	**11.32**	**229**	⇓P	**Pn**	**16 17 29.1**	**-3.8**
JFY	**Yanaizu**	**11.43**	**226**	P	**Pn**	**16 17 30.7**	**-3.7**
JFY				*e*S	**Sn**	**16 19 31.2**	**-8.8**
JSB	**Shiboa**	**11.67**	**224**	P	**Pn**	**16 17 34.3**	**-3.2**
JSD	**Sado**	**11.73**	**233**	⇓P	**Pn**	**16 17 34.5**	**-3.9**
JHK	**Hiroka**	**11.90**	**228**	⇓P	**Pn**	**16 17 37.0**	**-3.7**
JKT	**Katashina**	**12.16**	**226**	P	**Pn**	**16 17 40.9**	**-3.1**
JAG	**Ashikaga**	**12.32**	**224**	P	**Pn**	**16 17 42.1**	**-4.1**
JJN	**Nakama**	**12.46**	**230**	P	**Pn**	**16 17 44.9**	**-3.2**
JHG	**Hegura jima**	**12.63**	**236**	⇓P	**Pn**	**16 17 46.9**	**-3.3**
JSZ	**Suzu**	**12.65**	**233**	P	**Pn**	**16 17 47.2**	**-3.4**
MAJO	**Matsushiro**	**12.86**	**228**	⇓*e* PN	**Pn**	**16 17 49.1**	**-4.2**
MAJO				pmax	pmax		
	comp=Z,1μm,1.0s						
MAJO	**Matsushiro**	**12.86**	**228**	⇓*e* Pn	**Pn**	**16 17 49.1**	**-4.3**
	comp=Z,1μm,1.0s						
MAT	**Matsushiro**	**12.86**	**228**	P	**Pn**	**16 17 51.1**	**-2.2**
MAT				S	**Sn**	**16 20 10.0**	**-4.7**
MAT	**Matsushiro**	**12.86**	**228**	P	**Pn**	**16 17 49.9**	**-3.4**
MJAR	**Matsushiro Arr**	**12.86**	**228**	P	**Pn**	**16 17 50.8**	**-2.6**
	comp=Z,21nm,0.3s,baz=30,slow=14,SNR=515						
MJAR				LR	LR	16 22 52.4	
	comp=Z,21μm,21.1s,baz=55,slow=37						
MJAR	**Matsushiro Arr**	**12.86**	**228**	PN	**Pn**	**16 17 50.8**	**-2.5**
MJAR				pmax	pmax		
	comp=Z,21nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,21μm,21.2s						
KLR	**Kul'dur**	**12.87**	**292**	⇑*i* PN	**Pn**	**16 17 52.0**	**-1.3**
KLR				*e*S	**Sn**	**16 20 18.5**	**+3.9**
KLR				pmax	pmax		
	comp=Z,3μm,1.4s						
KLR				pmax	pmax		
	comp=N,4μm,11.0s						
KLR				pmax	pmax		
	comp=E,17μm,11.0s						
KLR				pmax	pmax		
	comp=Z,18μm,11.0s						
KLR				MLR	MLR		
	comp=E,16μm,14.0s						
KLR				MLR	MLR		
	comp=Z,18μm,14.0s						
JNG	**Nsakai**	**13.02**	**228**	P	**Pn**	**16 17 52.2**	**-3.2**
VLA	**Vladivostok**	**13.28**	**265**	*i* PN	**Pn**	**16 17 58.3**	**-0.4**
VLA				*e*		16 20 25.6	
VLA				pmax	pmax		
	comp=Z,2μm,1.5s						
VLA	**Vladivostok**	**13.28**	**265**	⇑*i* P	**Pn**	**16 17 58.1**	**-0.6**
JTT	**Ttatey**	**13.28**	**231**	P	**Pn**	**16 17 55.9**	**-2.9**
JNT	**Takato**	**13.41**	**227**	P	**Pn**	**16 17 56.9**	**-3.6**
JGN	**Niukaw**	**13.57**	**230**	P	**Pn**	**16 17 59.8**	**-2.9**
JGM	**Miyama**	**14.29**	**230**	P	**Pn**	**16 18 09.1**	**-2.8**
JAO	**Obara**	**14.33**	**227**	P	**Pn**	**16 18 09.3**	**-3.2**
MDJ	**Mudanjiang**	**14.50**	**273**	P	**Pn**	**16 18 13.9**	**-0.7**
MDJ				AP		16 18 29.2	
MDJ				XP		16 18 36.9	
MDJ				S	**Sn**	**16 20 53.8**	**-0.5**
MDJ				PCP	PcP	16 23 22.9	+1.1
MDJ				SCP	ScP	16 26 47.9	+1.6
MDJ				PCS	PcS	16 26 57.8	+1.1
MDJ				SCS	ScS	16 30 25.0	+1.3
MDJ				AMB	AMB		
	comp=Z,202nm,2.0s						
MDJ				AMB	AMB		
	comp=Z,8μm,8.0s						
MDJ				LR	LR		
	comp=N,31μm,17.8s						
MDJ				LR	LR		
	comp=E,20μm,22.2s						
MDJ				LR	LR		
	comp=Z,27μm,29.2s						
MDJ	**Mudanjiang**	**14.50**	**273**	⇓*i* Pn	**Pn**	**16 18 14.6**	**0.0**
	comp=Z,1μm,0.8s						
JFM	**Mihama**	**14.81**	**231**	P	**Pn**	**16 18 16.4**	**-2.2**
JHJ	**Hachijo jima 2**	**14.94**	**216**	P	**Pn**	**16 18 19.6**	**-0.7**
	comp=Z,28nm,0.3s,baz=66,slow=2.7,SNR=7.6						
JHJ				S	**Sn**	**16 20 53.6**	**-12**
	comp=Z,267nm,0.3s,baz=279,slow=22,SNR=7.8						
JKY	**Yasaka**	**15.22**	**233**	P	**Pn**	**16 18 21.7**	**-2.1**

JWT	**Wachi**	**15.31**	**232**	P	**Pn**	**16 18 22.9**	**-2.0**
JHE	**Heguri**	**15.63**	**230**	P	**Pn**	**16 18 26.1**	**-2.8**
JKS	**Kasai**	**15.84**	**232**	P	**Pn**	**16 18 29.4**	**-2.1**
ZEA	**Zeya**	**16.70**	**307**	⇓*i*P	**Pn**	**16 18 41.4**	**-0.6**
ZEA				AMB	AMB	16 18 45.0	
	comp=Z,2μm,2.0s						
ZEA				AMB	AMB	16 18 45.0	
	comp=Z,2μm,2.0s						
ZEA				AMB	AMB	16 18 45.0	
	comp=Z,4μm,2.0s						
ZEA				AMB	AMB	16 18 45.9	
	comp=Z,2μm,1.4s						
ZEA				AMB	AMB	16 18 45.9	
	comp=Z,2μm,1.6s						
ZEA				AMB	AMB	16 18 45.9	
	comp=Z,1μm,1.2s						
ZEA				*e*S	**S**	**16 21 43.0**	**-8.7**
ZEA				A		16 21 52.0	
	comp=Z,42μm,11.0s						
ZEA				A		16 21 52.0	
	comp=Z,25μm,9.0s						
JJG	**Jouge**	**17.04**	**235**	P	**Pn**	**16 18 44.4**	**-1.9**
SMY	**Shemya**	**17.08**	**57**	*e*P	**Pn**	**16 18 46.9**	**+0.3**
SMY				*e*		16 21 42.7	
SMY				pmax	pmax		
	comp=Z,8μm,1.9s						
SMY	**Shemya**	**17.08**	**57**	*e*P	**Pn**	**16 18 46.3**	**-0.3**
	comp=Z,6μm,2.0s						
SEY	**Seymchan**	**17.22**	**4**	*c i*P	**Pn**	**16 18 47.0**	**-1.2**
SEY	**Seymchan**	**17.22**	**4**	⇑*i*P	**Pn**	**16 18 47.1**	**-1.1**
CN2	**Changchun**	**17.59**	**272**	*e*P	**Pn**	**16 18 50.7**	**-2.2**
CN2				*e*PP		16 19 08.7	
CN2				*e*S	**S**	**16 22 00.6**	**-8.4**
CN2				PCP	PcP	16 23 27.1	+0.6
CN2				SCS	ScS	16 30 30.1	-2.2
CN2				AMB	AMB		
	comp=Z,1μm,0.7s						
CN2				AMB	AMB		
	comp=Z,7μm,12.0s						
CN2				LR	LR		
	comp=N,88μm,14.0s						
CN2				LR	LR		
	comp=E,23μm,14.0s						
CN2				LR	LR		
	comp=Z,24μm,16.0s						
KSRS	**Korea Array**	**18.51**	**251**	P	**P**	**16 19 02.6**	**-0.1**
	comp=Z,46nm,0.3s,baz=57,slow=10,SNR=476						
KSRS				LR	LR	16 25 47.7	
	comp=Z,10μm,18.1s,baz=63,slow=35						
KSRS	**Korea Array**	**18.51**	**251**	P	**P**	**16 19 02.6**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,46nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,10μm,18.1s						
CLNS	**Chul'man**	**19.12**	**314**	*c i*P	**P**	**16 19 09.9**	**+0.8**
CLNS				*e*S	**S**	**16 22 33.3**	**-7.0**
CLNS				pmax	pmax		
	comp=Z,418nm,1.3s						
CLNS				pmax	pmax		
	comp=N,190nm,1.2s						
CLNS				pmax	pmax		
	comp=E,294nm,1.4s						
CLNS				smax			
	comp=N,1μm,1.6s						
CLNS				smax			
	comp=E,973nm,1.9s						
CLNS				MLR	MLR		
	comp=Z,8μm,15.0s						
CLNS				MLR	MLR		
	comp=N,8μm,13.0s						
CLNS				MLR	MLR		
	comp=E,7μm,14.0s						
INCN	**Inchon**	**19.36**	**253**	P	**P**	**16 19 13.0**	**+1.1**
	SNR=176						
INCN	**Inchon**	**19.36**	**253**	⇓*i*Pn	**Pn**	**16 19 12.8**	**-1.2**
	comp=E,2μm,0.7s						
INCN				*e*S	**S**	**16 22 47.4**	**+2.1**
SNY	**Shenyang**	**19.51**	**268**	⇓P	**P**	**16 19 14.3**	**+0.8**
SNY				S	**S**	**16 22 38.5**	**-10**
SNY				AMB	AMB		
	comp=Z,1μm,1.5s						
SNY				AMB	AMB		
	comp=Z,12μm,3.9s						
SNY				LR	LR		
	comp=N,46μm,21.4s						
SNY				LR	LR		
	comp=E,12μm,13.7s						
SNY				LR	LR		
	comp=Z,24μm,32.7s						
CBIJ	**Chichi jima**	**19.70**	**201**	P	**P**	**16 19 15.4**	**-0.3**
	comp=Z,26nm,0.3s,baz=347,slow=6.7,SNR=6.6						
CBIJ				S	**S**	**16 22 42.2**	**-10**
	comp=Z,70nm,0.3s,baz=321,slow=23,SNR=8.7						
CBIJ	**Chichi jima**	**19.70**	**201**	P	**P**	**16 19 17.1**	**+1.4**
JTSN	**Tsuno**	**19.73**	**233**	P	**P**	**16 19 17.3**	**+1.3**
JIU2	**Izumi 2**	**19.90**	**235**	P	**P**	**16 19 18.4**	**+0.6**
JUR	**Ureshino**	**20.01**	**238**	P	**P**	**16 19 19.9**	**+0.9**
AMKA	**Amchitka**	**20.03**	**63**	*e*P	**P**	**16 19 17.1**	**-1.9**
	comp=Z,164nm,0.7s						
YAK	**Yakutsk**	**20.07**	**331**	*c i*P	**P**	**16 19 18.2**	**-1.2**
YAK				*e**PP		16 19 42.2	
YAK				*i* S	**S**	**16 22 54.8**	**-4.3**
YAK				*e*		16 23 26.9	
YAK				*e**SS	sS	16 23 36.2	+5.6
YAK				*e*		16 30 37.6	
YAK				pmax	pmax		
	comp=Z,3μm,1.3s						
YAK				pmax	pmax		
	comp=N,2μm,1.4s						
YAK				pmax	pmax		
	comp=E,1μm,0.9s						
YAK	**Yakutsk**	**20.07**	**331**	⇑*e*Pn	**P**	**16 19 18.0**	**-1.4**
YAK				*e*S	**S**	**16 22 58.8**	**-0.3**
JTZ	**Takazaki**	**20.22**	**233**	P	**P**	**16 19 22.6**	**+1.3**
JZO	**Okuchi**	**20.32**	**235**	P	**P**	**16 19 23.0**	**+0.6**
JHD	**Hondo**	**20.35**	**236**	P	**P**	**16 19 23.6**	**+0.9**
NGSJ	**Nagasakinomoza**	**20.43**	**237**	P	**P**	**16 19 24.5**	**+1.0**
HIA	**Hailar**	**20.71**	**291**	⇓*e*P	**P**	**16 19 23.4**	**-3.0**
HIA				*i* *SP	sP	16 19 55.7	-2.5
HIA				pmax	pmax		
	comp=Z,4μm,1.4s						
HIA	**Hailar**	**20.71**	**291**	⇓*e*P	**P**	**16 19 23.4**	**-3.0**
	comp=Z,4μm,1.4s						
HIA				*i* sP	sP	16 19 55.7	-2.5
JSJ	**Shimokoshiki**	**21.17**	**235**	P	**P**	**16 19 32.0**	**+0.6**
DL2	**Dalian**	**22.06**	**262**	*i* P	**P**	**16 19 40.5**	**-0.4**
DL2				AP		16 19 59.8	
DL2				S	**S**	**16 23 36.1**	**-1.6**
DL2				XS	sS	16 24 07.2	-3.7
DL2				SCS	ScS	16 30 46.7	-0.8
DL2				AMB	AMB		
	comp=Z,710nm,0.9s,mb6.0						
DL2				AMB	AMB		
	comp=Z,4μm,5.3s						
DL2				LR	LR		
	comp=N,4μm,15.7s						
DL2				LR	LR		
	comp=E,4μm,13.7s						
DL2				LR	LR		
	comp=Z,8μm,19.7s						
JTK	**Tokunoshima**	**24.57**	**230**	P	**P**	**16 20 04.8**	**-0.1**
CIT	**Chita**	**24.62**	**298**	*e*P	**P**	**16 20 03.4**	**-1.6**
CIT				*e*		16 20 30.6	
CIT				*e*		16 21 00.8	
CIT				*e*		16 24 15.0	
BOD	**Bodaibo**	**25.02**	**312**	*e*P	**P**	**16 20 05.6**	**-3.0**
BOD				*e*	pP	16 20 29.4	-1.3
BOD				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.0						
BJI	**Beijing**	**25.37**	**269**	P	**P**	**16 20 12.7**	**+0.7**
BJI				AP	pP	16 20 30.9	-3.3
BJI				XP	sP	16 20 42.0	-3.9
BJI				S	**S**	**16 24 30.8**	**-0.2**
BJI				XS	sS	16 25 07.1	-2.6
BJI				AMB	AMB		
	comp=Z,681nm,1.3s,mb5.9						
BJI				AMB	AMB		
	comp=Z,11μm,3.3s						
BJI				LR	LR		
	comp=N,40μm,21.0s						
BJI				LR	LR		
	comp=E,12μm,25.5s						
BJI				LR	LR		
	comp=Z,25μm,38.0s						
BJT	**Baijiatuau**	**25.39**	**269**	⇓*i*P	**P**	**16 20 12.7**	**+0.6**
BJT				pmax	pmax		
	comp=Z,2μm,0.8s						
BJT	**Baijiatuau**	**25.39**	**269**	⇓*i*P	**P**	**16 20 12.7**	**+0.5**
	comp=Z,2μm,0.8s,mb6.6						
JOW	**Kunigami**	**25.70**	**230**	P	**P**	**16 20 14.2**	**-0.9**
	comp=Z,535nm,0.8s,mb6.0,baz=31,slow=7.1,SNR=250						
JOW				S	**S**	**16 24 35.4**	**-0.9**
	comp=Z,15nm,1.1s,baz=295,slow=28,SNR=5.5						
JOW	**Kunigami**	**25.70**	**230**	P	**P**	**16 20 15.5**	**+0.5**
JIH	**Iheya**	**25.70**	**231**	P	**P**	**16 20 14.4**	**-0.7**
JAGN	**Aguni-jima**	**26.45**	**231**	P	**P**	**16 20 20.7**	**-1.1**
TIA	**Tai'an**	**26.50**	**261**	⇓P	**P**	**16 20 22.9**	**+0.7**
TIA				PP		16 21 09.0	
TIA				S	**S**	**16 24 53.0**	**+4.1**
TIA				AMB	AMB		
	comp=Z,268nm,0.8s,mb5.8						
TIA				LR	LR		
	comp=N,5μm,9.0s						
TIA				LR	LR		
	comp=E,4μm,12.0s						
NAH1	**Naha**	**26.51**	**230**	P	**P**	**16 20 23.2**	**+0.8**
JJT2	**Tamagusuku 2**	**26.53**	**230**	P	**P**	**16 20 23.4**	**+0.8**
SSE	**Sheshan**	**26.80**	**247**	⇓P	**P**	**16 20 26.1**	**+1.1**
SSE				AP	pP	16 20 48.4	+1.2
SSE				XP	sP	16 20 58.9	0.0
SSE				S	**S**	**16 24 52.1**	**-1.6**
SSE				XS	sS	16 25 30.2	-2.4
SSE				AMB	AMB		
	comp=Z,577nm,0.9s,mb6.1						
SSE				AMB	AMB		
	comp=Z,4μm,11.9s						
SSE				LR	LR		
	comp=N,11μm,19.7s						
SSE				LR	LR		
	comp=E,12μm,19.7s						
SSE				LR	LR		
	comp=Z,11μm,36.3s						
JKE	**Kume jima 2**	**26.90**	**232**	P	**P**	**16 20 25.2**	**-0.7**
NJ2	**Nanjing**	**27.71**	**251**	*e*P	**P**	**16 20 33.7**	**+0.6**
NJ2				AP	pP	16 20 55.6	+0.1
NJ2				XP	sP	16 21 07.1	0.0
NJ2				PP	PP	16 21 27.4	-10
NJ2				S	**S**	**16 25 04.5**	**-3.5**
NJ2				XS	sS	16 25 45.5	-1.5
NJ2				AMB	AMB		
	comp=Z,240nm,1.0s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,2μm,11.4s						
NJ2				LR	LR		
	comp=N,7μm,19.2s						
NJ2				LR	LR		
	comp=E,12μm,16.5s						
NJ2				LR	LR		
	comp=Z,12μm,16.5s						
TIXI	**Tiksi**	**27.83**	**346**	*c i*P	**P**	**16 20 31.0**	**-2.7**
TIXI				*e**PP	pP	16 20 55.5	-0.6
TIXI				*e*		16 21 24.7	
TIXI				*e*S	**S**	**16 25 02.8**	**-6.3**
TIXI				*e**SS	sS	16 25 41.0	-7.0
TIXI				pmax	pmax		
	comp=Z,293nm,1.5s,mb5.6						
TIXI				MLR	MLR		
	comp=Z,9μm,15.0s						
TIXI	**Tiksi**	**27.83**	**346**	⇑*e*P	**P**	**16 20 31.2**	**-2.5**
	comp=Z,62nm,0.5s,mb5.4						
TIXI				*e*PcP	PcP	16 23 45.9	-1.1
HHC	**Hu-ho-hao-te**	**28.27**	**274**	⇓*i*P	**P**	**16 20 37.4**	**-0.6**
HHC				AP	pP	16 20 58.9	-1.5
HHC				XP	sP	16 21 11.0	-1.0
HHC				PP	PP	16 21 31.6	-12
HHC				PCP	PcP	16 23 49.1	+0.5
HHC				S	**S**	**16 25 14.7**	**-1.9**
HHC				XS	sS	16 25 52.3	-3.3
HHC				SS	SS	16 26 44.7	-35
HHC				SCP	ScP	16 27 19.8	-0.5
HHC				PCS	PcS	16 27 29.9	-1.0
HHC				SCS	ScS	16 31 11.1	-2.1
HHC				AMB	AMB		
	comp=Z,1μm,1.0s,mb6.4						
HHC				AMB	AMB		
	comp=Z,5μm,6.0s						
HHC				LR	LR		
	comp=N,8μm,11.6s						
HHC				LR	LR		
	comp=E,15μm,13.4s						
HHC				LR	LR		
	comp=Z,16μm,12.5s						
TIY	**Taiyuan**	**29.02**	**267**	⇓*e*P	**P**	**16 20 46.7**	**+2.0**
TIY				AP	pP	16 21 08.4	+1.3
TIY				XP	sP	16 21 19.9	+1.2
TIY				PP	PP	16 21 42.4	-9.4
TIY				S	**S**	**16 25 29.8**	**+1.4**
TIY				XS	sS	16 26 05.9	-1.5
TIY				PCS	PcS	16 27 35.6	+2.2
TIY				AMB	AMB		
	comp=Z,489nm,1.1s,mb6.0						
TIY				AMB	AMB		
	comp=Z,3μm,2.8s,mb6.4						
TIY				LR	LR		
	comp=N,5μm,10.0s						
TIY				LR	LR		
	comp=E,9μm,15.5s						
TIY				LR	LR		
	comp=Z,7μm,15.9s						
ULN	**Ulaanbaatar**	**29.24**	**290**	*d i*P	**P**	**16 20 45.8**	**-0.7**
ULN	**Ulaanbaatar**	**29.24**	**290**	*e*P	**P**	**16 20 45.6**	**-0.9**
	comp=Z,60nm,0.7s,mb5.3						
JTJ	**Tarama**	**29.38**	**233**	P	**P**	**16 20 47.3**	**-0.7**
BTO	**Baotou**	**29.45**	**274**	*e*P	**P**	**16 20 48.5**	**+0.1**
BTO				S	**S**	**16 25 30.6**	**-4.5**
SONM	**Songino Array**	**29.68**	**290**	P	**P**	**16 20 50.9**	**+0.5**
	comp=Z,52nm,0.7s,mb5.3,baz=77,slow=8.0,SNR=94						
SONM				PcP	PcP	16 23 53.0	+0.9
	comp=Z,16nm,0.6s,baz=142,slow=2.1,SNR=3.8						
SONM				ScP	ScP	16 27 25.5	+0.8
	comp=Z,9.2nm,0.8s,baz=91,slow=5.8,SNR=4.6						
SONM				LR	LR	16 33 39.3	
	comp=Z,9μm,18.1s,baz=81,slow=38						
SONM				PKPPKP		16 54 48.4	
	comp=Z,1.7nm,1.1s,baz=219,slow=1.9,SNR=3.6						
SONM	**Songino Array**	**29.68**	**290**	P	**P**	**16 20 50.9**	**+0.5**
SONM				PcP	PcP	16 23 53.0	+0.9
SONM				ScP	ScP	16 27 25.5	+0.8
SONM				LR	LR	16 33 39.3	
JIJ	**Ishigaki jima**	**29.91**	**233**	P	**P**	**16 20 50.8**	**-1.9**
JKRS	**Kuro-shima**	**30.09**	**233**	P	**P**	**16 20 54.5**	**+0.3**
IRIF	**Iriomote-Funau**	**30.17**	**234**	P	**P**	**16 20 53.7**	**-1.2**
IRK	**Irkutsk**	**30.31**	**299**	*e*P	**P**	**16 20 55.4**	**-0.5**
IRK				*e*S	**S**	**16 25 47.0**	**-1.4**
IRK				pmax	pmax		
	comp=Z,72nm,1.6s,mb5.0						
TLY	**Talaya**	**30.77**	**298**	P	**P**	**16 21 00.4**	**+0.5**
	comp=Z,273nm,0.8s,mb6.0,SNR=7.5						
TLY	**Talaya**	**30.77**	**298**	⇑P	**P**	**16 21 00.1**	**+0.1**
	SNR=31						
TLY	**Talaya**	**30.77**	**298**	*e*P	**P**	**16 21 00.0**	**+0.1**
TLY				*e*		16 21 34.3	
TLY				*e*		16 22 16.1	
TLY				*e*S	**S**	**16 25 51.2**	**-4.3**
TLY				*e*SS	SS	16 27 49.1	-21
TLY				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.2						
TLY				MLR	MLR		
	comp=Z,5μm,14.0s						
TLY	**Talaya**	**30.77**	**298**	⇑*i*P	**P**	**16 21 00.3**	**+0.4**
TATO	**Taipei**	**30.97**	**238**	P	**P**	**16 21 00.7**	**-1.3**
TATO				*e*pP	pP	16 21 20.7	-3.8
ZAK	**Zakamensk**	**31.19**	**296**	*e*P	**P**	**16 21 04.0**	**+0.3**
ZAK				*e*	pP	16 21 28.4	+2.2
ZAK				pmax	pmax		
	comp=Z,35nm,1.4s,mb4.9						
WHN	**Wuhan**	**31.66**	**254**	⇓P	**P**	**16 21 08.5**	**+0.5**
WHN				S	**S**	**16 26 06.0**	**-3.9**
WHN				AMB	AMB		
	comp=Z,761nm,0.8s,mb6.5						
WHN				LR	LR		
	comp=N,8μm,12.0s						
WHN				LR	LR		
	comp=E,9μm,12.0s						
SDPT	**Sand Point**	**32.17**	**55**	*e*P	**P**	**16 21 11.5**	**-0.7**
	comp=E,97nm,0.8s,mb5.6						
MOY	**Mondy**	**32.40**	**299**	*e*P	**P**	**16 21 14.0**	**-0.3**
MOY				*e*		16 21 45.1	
MOY				*e*		16 26 17.4	
MOY				pmax	pmax		
	comp=Z,84nm,1.5s,mb5.2						
GUMO	**Guam**	**32.41**	**190**	P	**P**	**16 21 11.5**	**-3.2**
GUMO				pmax	pmax		
	comp=Z,86nm,1.2s,mb5.4						
GUMO	**Guam**	**32.41**	**190**	P	**P**	**16 21 11.5**	**-3.1**
	comp=Z,86nm,1.2s,mb5.4						
QZH	**Quanzhou**	**32.74**	**241**	*i* P	**P**	**16 21 18.6**	**+1.1**
QZH				AP	pP	16 21 41.0	+0.9
QZH				S	**S**	**16 26 29.8**	**+3.0**
QZH				XS	sS	16 27 04.0	-2.0
QZH				AMB	AMB		
	comp=Z,910nm,0.9s,mb6.6						
QZH				AMB	AMB		
	comp=Z,8μm,2.6s,mb7.1						
QZH				LR	LR		
	comp=N,7μm,12.0s						
QZH				LR	LR		
	comp=E,6μm,10.2s						
QZH				LR	LR		
	comp=Z,9μm,12.4s						
CHGN	**Chignik**	**33.27**	**53**	*e*P	**P**	**16 21 20.4**	**-1.4**
XAN	**Xi'an**	**33.34**	**264**	P	**P**	**16 21 23.3**	**+0.6**
XAN				AP	pP	16 21 45.5	+0.2
XAN				XP	sP	16 21 56.9	0.0
XAN				PP	PP	16 22 37.6	-2.2
XAN				PCP	PcP	16 24 00.4	-1.8
XAN				S	**S**	**16 26 34.9**	**-1.1**
XAN				SCP	ScP	16 27 37.3	+0.1
XAN				PCS	PcS	16 27 47.5	-0.5
XAN				SS	SS	16 28 46.0	-18
XAN				SCS	ScS	16 31 35.7	-2.6
XAN				AMB	AMB		
	comp=Z,575nm,1.4s,mb6.2						
XAN				AMB	AMB		
	comp=Z,2μm,15.0s						
XAN				LR	LR		
	comp=N,3μm,19.0s						
XAN				LR	LR		
	comp=E,7μm,24.8s						
XAN				LR	LR		
	comp=Z,14μm,38.4s						
TTA	**Tatalina**	**34.51**	**41**	P	**P**	**16 21 23.7**	**-8.7**
TTA				pmax	pmax		
	comp=Z,2μm,1.6s,mb6.8						
TTA	**Tatalina**	**34.51**	**41**	*e*P	**P**	**16 21 33.0**	**+0.6**
SVW2	**Sparrevohn**	**34.63**	**44**	*e*P	**P**	**16 21 34.4**	**+0.9**
IMA2	**Indian Mountai**	**35.80**	**35**	*e*P	**P**	**16 21 43.8**	**+0.4**
LZH	**Lanzhou**	**35.82**	**271**	⇓P	**P**	**16 21 45.7**	**+1.7**
LZH				AP	pP	16 22 08.8	+2.0
LZH				XP	sP	16 22 17.4	-1.0
LZH				PP	PP	16 23 07.0	-0.1
LZH				AMB	AMB		
	comp=Z,2μm,1.1s,mb6.9						
LZH				AMB	AMB		
	comp=Z,6μm,4.9s						
LZH				LR	LR		
	comp=N,9μm,11.2s						
LZH				LR	LR		
	comp=Z,15μm,15.3s						
LZH	**Lanzhou**	**35.82**	**271**	⇓P	**P**	**16 21 45.7**	**+1.7**
LZH				pP	pP	16 22 08.8	+2.0
LZH				sP	sP	16 22 17.4	-1.0
LZH				PP	PP	16 23 07.0	-0.1
LZH				S	**S**	**16 27 01.0**	**-13**
LZH				sS	sS	16 27 39.0	-15
LZH				SS	SS	16 29 12.0	-42
OHAK	**Old Harbor**	**36.00**	**51**	*e*P	**P**	**16 21 44.2**	**-1.1**
	comp=Z,1μm,1.6s,mb6.7						
KDAK	**Kodiak Island**	**36.32**	**50**	P	**P**	**16 21 47.0**	**-1.0**
	comp=Z,4μm,1.3s,mb7.1,SNR=97						
KDAK	**Kodiak Island**	**36.32**	**50**	*e*P	**P**	**16 21 47.1**	**-0.9**
KDAK				*e*PcP	PcP	16 24 11.1	+0.6
KRAR	**Krasnoyarsk**	**36.49**	**307**	⇓*i*P	**P**	**16 21 47.7**	**-1.8**
KRAR				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
KRAR				MLR	MLR		
	comp=Z,12μm,16.0s						
CVP	**Callao Caves**	**36.56**	**229**	⇓*e*P	**P**	**16 21 49.5**	**-0.9**
APYP	**Conner**	**36.74**	**230**	*e*P	**P**	**16 21 50.2**	**-1.7**
PALP	**Palanan**	**36.77**	**228**	*e*P	**P**	**16 21 52.7**	**+0.5**
HVS	**Khovu-Aksy**	**36.98**	**299**	*i* P	**P**	**16 21 53.0**	**-0.7**
GTA	**Gaotai**	**37.05**	**278**	P	**P**	**16 21 56.0**	**+1.6**
GTA				AP	pP	16 22 18.6	+1.3
GTA				XP	sP	16 22 30.8	+2.0
GTA				PP	PP	16 23 24.7	+4.1
GTA				PCP	PcP	16 24 16.1	+3.1
GTA				S	**S**	**16 27 32.3**	**-0.3**
GTA				SCP	ScP	16 27 53.2	+2.6
GTA				PCS	PcS	16 28 03.5	+2.3
GTA				XS	sS	16 28 11.3	-1.0
GTA				SS	SS	16 30 05.6	-12
GTA				SCS	ScS	16 31 59.1	+0.9
GTA				AMB	AMB		
	comp=Z,130nm,0.8s,mb5.9						
GTA				AMB	AMB		
	comp=Z,3μm,6.9s						
GTA				LR	LR		
	comp=N,19μm,17.4s						
GTA				LR	LR		
	comp=E,9μm,20.1s						
GTA				LR	LR		
	comp=Z,10μm,20.4s						
SJPP	**Brgy, Tapao**	**37.11**	**231**	⇑*i*P	**P**	**16 21 55.2**	**+0.1**
CAUP	**Cauayan**	**37.19**	**229**	*e*P	**P**	**16 21 56.4**	**+0.6**
ABRA	**Dolores**	**37.20**	**231**	*e*P	**P**	**16 21 54.6**	**-1.3**
SLKM	**Skilak Lake**	**37.28**	**45**	*e*P	**P**	**16 21 54.3**	**-1.8**
SLKM				*e*		16 24 13.2	
GZH	**Guangzhou**	**37.37**	**245**	P	**P**	**16 21 52.8**	**-4.5**
GZH				PP	PP	16 23 20.9	-3.4
GZH				S	**S**	**16 27 28.6**	**-9.2**
GZH				LR	LR		
	comp=N,9μm,16.3s						
GZH				LR	LR		
	comp=E,9μm,14.4s						
GZH				LR	LR		
	comp=Z,8μm,24.4s						
HKC	**Hong Kong Obse**	**37.42**	**243**	⇓*i*P	**P**	**16 21 58.0**	**+0.3**
HKC				*i* S	**S**	**16 27 40.0**	**+1.5**
PMR	**Palmer**	**37.73**	**43**	*e*P	**P**	**16 21 58.5**	**-1.3**
PMR				pmax	pmax		
	comp=Z,630nm,1.1s,mb6.4						
PMR	**Palmer**	**37.73**	**43**	*e*P	**P**	**16 21 58.5**	**-1.3**
	comp=Z,630nm,1.1s,mb6.4						
COLA	**College**	**38.17**	**38**	*c i*P	**P**	**16 22 03.6**	**+0.1**
COLA	**College**	**38.17**	**38**	*e*P	**P**	**16 22 04.2**	**+0.7**
	comp=Z,4μm,1.6s,mb7.0						
BALP	**Baler**	**38.32**	**228**	*e*P	**P**	**16 22 05.5**	**+0.2**
BOLP	**Bolinao**	**38.67**	**231**	*e*P	**P**	**16 22 07.0**	**-1.3**
CDQ	**Chengdu**	**38.71**	**264**	⇓*i*P	**P**	**16 22 09.3**	**+0.9**
CD2				AP	pP	16 22 31.6	+0.1
CD2				XP	sP	16 22 43.5	+0.5
CD2				PP	PP	16 23 42.0	+3.1
CD2				PCP	PcP	16 24 14.6	-3.6
CD2				S	**S**	**16 27 56.8**	**-1.1**
CD2				PCS	PcS	16 28 08.6	+0.8
CD2				XS	sS	16 28 34.0	-3.7
CD2				SS	SS	16 30 44.1	-8.0
CD2				SCS	ScS	16 32 08.6	+0.6
CD2				AMB	AMB		
	comp=Z,2μm,0.7s,mb7.0						
CD2				AMB	AMB		
	comp=Z,4μm,3.8s						
CD2				LR	LR		
	comp=N,12μm,16.8s						
CD2				LR	LR		
	comp=E,7μm,18.2s						
CD2				LR	LR		
	comp=Z,15μm,30.2s						
MID	**Middleton Isla**	**39.34**	**46**	*e*P	**P**	**16 22 13.8**	**+0.4**
GYA	**Guiyang**	**39.46**	**256**	⇓*i*P	**P**	**16 22 14.2**	**-0.6**
GYA				AP	pP	16 22 38.3	+0.4
GYA				XP	sP	16 22 50.8	+1.5
GYA				PP	PP	16 23 50.6	+3.5
GYA				S	**S**	**16 27 59.9**	**-9.4**
GYA				SCP	ScP	16 28 01.2	+1.2
GYA				XS	sS	16 28 49.6	+0.4
GYA				SS	SS	16 30 59.9	-7.4
GYA				SCS	ScS	16 32 11.4	-1.1
GYA				AMB	AMB		
	comp=Z,640nm,0.7s,mb6.6						
GYA				AMB	AMB		
	comp=Z,3μm,4.5s						
GYA				LR	LR		

comp=N,8μm,18.5s
GYA LR LR
comp=E,5μm,17.1s
GYA LR LR
comp=Z,4μm,17.1s
MENT Mentasta 40.12 40 *e*P **P 16 22 20.3 +0.5**
PLP Palo 40.62 220⇓*e*P **P 16 22 23.7 -0.7**
PLP *e*S pP 16 22 46.6 -1.0
EGAK Eagle 41.03 37 *e*P **P 16 22 27.3 0.0**
comp=Z,3μm,1.4s,mb6.9
RCP Roxas 41.31 223⇓*e*P **P 16 22 30.4 +0.4**
KALP Kalibo 41.40 224⇑*e*P **P 16 22 32.5 +1.7**
ZALV Zalesovo Beam 41.47 306 P **P 16 22 29.3 -1.7**
comp=Z,15nm,0.6s,mb5.0,baz=74,slow=6.9,SNR=70
ZALV pP pP 16 22 54.1 -0.1
comp=Z,21nm,0.6s,baz=77,slow=7.2,SNR=5.2
ZALV PcP PcP 16 24 27.0 +0.3
comp=Z,88nm,0.7s,baz=71,slow=3.1,SNR=19
ZALV ScP ScP 16 28 05.3 -2.1
comp=Z,11nm,0.7s,baz=72,slow=4.8,SNR=4.4
ZALV PKiKP PKiKP 16 31 32.1 -1.2
comp=Z,4.3nm,0.8s,baz=340,slow=0.2,SNR=3.5
ZALV LR LR 16 39 44.5
comp=Z,6μm,18.2s,baz=67,slow=36
ZALV Zalesovo Beam 41.47 306 P **P 16 22 29.3 -1.7**
ZALV pP pP 16 22 54.1 -0.1
ZALV PcP PcP 16 24 27.0 +0.3
ZALV ScP ScP 16 28 05.3 -2.1
ZAL Zalesovo 41.48 306 P **P 16 22 29.3 -1.8**
ZAL *PP pP 16 22 54.2 -0.2
ZAL 16 24 27.0
ZAL pmax pmax
comp=Z,15nm,0.6s
ZAL MLR MLR
comp=Z,6μm,18.2s
SCPH Surigao 41.62 218 *e*P **P 16 22 32.4 -0.2**
LLP Lapu-Lapu 41.83 221 *e*P **P 16 22 33.5 -0.8**
DAWY Dawson 41.89 38 *e*P **P 16 22 34.5 +0.2**
DAWY *e*PP PP 16 24 09.6 -3.2
NVS Novosibirsk 42.11 308⇑*i*P **P 16 22 34.7 -1.4**
NVS *i* *PP pP 16 22 59.1 -0.4
NVS *i* 16 24 28.7
NVS *e*S **S 16 28 39.3 -8.6**
NVS *e* 16 32 24.7
NVS pmax pmax
comp=Z,82nm,1.5s,mb5.2
NVS pmax pmax
comp=N,19nm,1.4s
NVS pmax pmax
comp=E,51nm,1.2s
NVS smax
comp=N,288nm,1.8s
NVS smax
comp=E,180nm,1.6s
TBP Tagbilaran 42.42 220 *e*P **P 16 22 38.1 -1.0**
QIZ Qiongzhong 42.55 245 P **P 16 22 40.9 +0.8**
QIZ AP pP 16 23 01.5 -2.0
QIZ XP sP 16 23 12.9 -2.0
QIZ PP PP 16 24 20.2 -0.4
QIZ S **S 16 28 56.3 +1.1**
QIZ XS sS 16 29 32.8 -2.7
QIZ AMB AMB
comp=Z,121nm,1.1s,mb5.5
QIZ AMB AMB
comp=Z,2μm,7.7s
QIZ LR LR
comp=N,4μm,14.6s
QIZ LR LR
comp=E,6μm,14.8s
QIZ LR LR
comp=Z,7μm,25.4s
QIZ Qiongzhong 42.55 245 *e*P **P 16 22 42.6 +2.4**
comp=Z,101nm,0.9s,mb5.5
KMI Kunming 43.01 258 P **P 16 22 44.9 +1.1**
KMI AP pP 16 23 07.2 0.0
KMI XP sP 16 23 20.6 +2.0
KMI PP PP 16 24 22.8 -2.6
KMI S **S 16 28 55.1 -6.6**
KMI XS sS 16 29 37.9 -4.2
KMI AMB AMB
comp=Z,526nm,1.7s,mb6.0
KMI AMB AMB
comp=Z,4μm,3.1s
KMI LR LR
comp=N,4μm,15.2s
KMI LR LR
comp=E,5μm,16.9s
KMI LR LR
comp=Z,6μm,19.4s
KMI Kunming 43.01 258 P **P 16 22 44.9 +1.1**
KMI pP pP 16 23 07.2 0.0
KMI sP sP 16 23 20.6 +2.0
KMI PP PP 16 24 22.8 -2.6
KMI PPP 16 25 01.0
KMI S **S 16 28 55.1 -6.6**
KMI sS sS 16 29 37.9 -4.2
KMI SS SS 16 32 00.4 -17
KMI SSS 16 32 51.4
WMQ Urumqi 43.31 291 P **P 16 22 47.2 +1.2**
WMQ AP pP 16 23 10.0 +0.5
WMQ XP sP 16 23 21.5 +0.6
WMQ PP PP 16 24 32.5 +4.1
WMQ PCS PcS 16 28 25.0 -0.6
WMQ S **S 16 29 07.0 +1.2**
WMQ XS sS 16 29 47.0 +0.8
WMQ SCS ScS 16 32 35.0 -0.4
WMQ AMB AMB
comp=Z,124nm,0.8s,mb5.7
WMQ AMB AMB
comp=Z,647nm,4.4s
WMQ LR LR
comp=N,13μm,19.1s
WMQ LR LR
comp=E,8μm,12.0s
WMQ LR LR
comp=Z,7μm,27.4s
HYT Haines Junctio 43.40 43 *e*P **P 16 22 50.5 +4.0**
DAV Davao City (W) 44.02 216⇓*e*P **P 16 22 50.7 -1.3**
SKAG Skagway 44.81 44 *e*P **P 16 22 59.3 +1.5**
comp=Z,5μm,2.9s,mb6.8
MKAR Makanchi Array 45.51 297 P **P 16 23 02.7 -0.7**
comp=Z,75nm,0.8s,mb5.5,baz=79,slow=6.7,SNR=266
MKAR PcP PcP 16 24 41.2 +0.6
comp=Z,51nm,0.6s,baz=101,slow=2.5,SNR=4.8
MKAR ScP ScP 16 28 22.3 -1.7
comp=Z,13nm,0.9s,baz=65,slow=5.5,SNR=4.8
MKAR S **S 16 29 36.3 -1.3**
comp=Z,9.6nm,1.0s,baz=68,slow=16,SNR=2.6
MKAR LR LR 16 43 25.9
comp=Z,10μm,18.0s,baz=63,slow=38
MKAR PKPPKP 16 54 28.5
comp=Z,0.2nm,0.3s,baz=310,slow=5.7,SNR=3.7
MKAR PKP2bc 16 54 58.8
comp=Z,0.7nm,0.8s,baz=305,slow=4.3,SNR=4.3
MKAR Makanchi Array 45.51 297 P **P 16 23 02.7 -0.8**
MKAR 16 24 41.2
MKAR S **S 16 29 36.3 -1.3**
MKAR pmax pmax
comp=Z,75nm,0.8s
MKAR smax
comp=N,10.0nm,1.0s
MKAR MLR MLR
comp=Z,10μm,18.0s
MKAR Makanchi Array 45.51 297 P **P 16 23 02.7 -0.7**
MKAR PcP PcP 16 24 41.2 +0.6
MKAR ScP ScP 16 28 22.3 -1.7
MKAR S **S 16 29 36.3 -1.3**
MKAR LR LR 16 43 25.9
MKAR P'P' 16 54 28.5
MKAR ⇑*e* 16 54 58.8
SIT Sitka 45.56 48 *e*P **P 16 23 05.1 +1.4**
SIT pmax pmax
comp=Z,1μm,1.7s,mb6.4
SIT Sitka 45.56 48 *e*P **P 16 23 05.1 +1.4**
comp=Z,1μm,1.7s,mb6.4
KURK Kurchatov 46.14 303 P **P 16 23 07.8 -0.6**
comp=Z,997nm,0.7s,mb6.7
KURK Kurchatov 46.14 303 P **P 16 23 07.2 -1.1**
SNR=67
KURK Kurchatov 46.14 303*c* *i*P **P 16 23 06.9 -1.5**
KURK pmax pmax
comp=Z,129nm,0.7s,mb5.8
KURK MLR MLR
comp=Z,6μm,15.0s
CRAG Craig 47.27 49 *e*P **P 16 23 18.5 +1.4**
comp=Z,729nm,1.7s,mb6.1
DLBC Dease Lake 47.75 44⇑*i*P **P 16 23 22.6 +1.9**
KDM Kudat 48.23 227 ⇑P **P 16 23 25.9 +0.9**
LSA Lhasa 48.23 272 P **P 16 23 27.4 +2.6**
LSA PP PP 16 25 14.9 -3.0
LSA S **S 16 30 07.2 -9.4**
LSA SS SS 16 33 37.7 -9.2
LSA AMB AMB
comp=Z,440nm,0.8s,mb6.3
LSA LR LR
comp=N,9μm,23.8s
LSA LR LR
comp=E,8μm,25.8s
LSA LR LR
comp=Z,9μm,26.5s
LSA Lhasa 48.23 272 *e*P **P 16 23 27.4 +2.6**
LSA *e* 16 25 16.9
LSA pmax pmax
comp=Z,331nm,0.8s,mb6.2
LSA Lhasa 48.23 272 *e*P **P 16 23 27.4 +2.6**
comp=Z,331nm,0.8s,mb6.2
LSA *e*PP PP 16 25 16.9 -1.0
UBT Ubonrachathani 48.43 246 ⇑P **P 16 23 28.5 +2.0**
CHRT Chiangrai 48.56 255 ⇓P **P 16 23 28.5 +1.0**
comp=Z,2μm,0.8s,mb7.0
KIP Kipapa 48.56 102 P **P 16 23 27.2 -0.3**
KIP pmax pmax
comp=Z,410nm,1.2s,mb6.2
KIP Kipapa 48.56 102⇓*e*P **P 16 23 27.1 -0.4**
comp=Z,406nm,1.2s,mb6.2
NANT Nan 48.69 253 ⇓P **P 16 23 27.5 -1.0**
comp=Z,2μm,1.0s,mb6.9
MYLDM Lahad Datu 48.89 224 ⇓P **P 16 23 30.7 +0.7**
KKTK Khon Kaen 49.04 249 ⇓P **P 16 23 31.9 +0.7**
comp=Z,3μm,0.5s,mb7.5
SDKM Sandakan 49.13 226 ⇓P **P 16 23 32.4 +0.5**
KKM Kota Kinabalu 49.28 227 ⇓P **P 16 23 34.0 +1.0**
IMP Imphal 49.31 265 *e*P **P 16 23 33.0 -0.2**
IMP *ex* x 16 30 23.0
SWI Sorong 49.36 205 P **P 16 23 33.7 +0.1**
MNI Manado 49.43 214 P **P 16 23 33.5 -0.6**
CHG Chiang Mai 49.86 255 ⇓P **P 16 23 38.7 +1.3**
comp=Z,150nm,0.8s,mb6.0
BRVK Borovoye 49.88 309 P **P 16 23 36.7 -0.4**
comp=Z,479nm,0.9s,mb6.4,SNR=35
BRVK Borovoye 49.88 309 ⇓P **P 16 23 36.5 -0.6**
SNR=44
BRVK Borovoye 49.88 309⇑*i*P **P 16 23 35.5 -1.6**
TSM Tawau 49.96 224 ⇑P **P 16 23 38.8 +0.6**
CMAR Chiang Mai Arr 50.11 254 P **P 16 23 40.2 +0.9**
comp=Z,142nm,0.8s,mb6.0,baz=40,slow=7.3,SNR=577
CMAR pP pP 16 24 03.1 -0.1
comp=Z,63nm,0.7s,baz=36,slow=8.3,SNR=5.8
CMAR ScP ScP 16 28 43.1 -0.6
comp=Z,2.8nm,0.9s,baz=28,slow=4.1,SNR=3.5
CMAR LR LR 16 46 07.3
comp=Z,4μm,19.3s,baz=172,slow=37
CMAR PKPPKP 16 54 27.4
comp=Z,0.9nm,0.8s,baz=257,slow=4.1,SNR=4.0
CMAR Chiang Mai Arr 50.11 254 P **P 16 23 40.2 +0.9**
CMAR *PP pP 16 24 03.2 -0.1
CMAR pmax pmax
comp=Z,142nm,0.8s
CMAR MLR MLR
comp=Z,4μm,19.3s
SHL Shillong 50.24 267⇓*i*P **P 16 23 42.5 +2.2**
SHL *e*S **S 16 30 47.0 +2.1**
AAA Alma-Ata 50.49 295 *i* P **P 16 23 43.0 +1.1**
AAA *i* S **S 16 30 45.8 -2.2**
AAA pmax pmax
comp=Z,2μm,8.1s
AAA smax
comp=E,3μm,12.0s
AAA MLR MLR
comp=Z,7μm,16.0s
BDT Bhumibol Dam 50.92 253 ⇑P **P 16 23 46.5 +1.1**
comp=Z,89nm,1.0s,mb5.8
NST Nakhon Sawan 51.30 251 ⇑P **P 16 23 50.0 +1.8**
comp=Z,267nm,0.8s,mb6.3
POHA Pohakuloa 51.40 102⇓*e*P **P 16 23 48.8 -0.1**
comp=Z,468nm,1.3s,mb6.4
GTK Gangtok 51.43 271 *e*P **P 16 23 47.0 -2.1**
ULHL Ulahol 51.46 294 P **P 16 23 51.0 +1.9**
SNR=72
TKM2 Tokmak 2 51.52 295 P **P 16 23 50.3 +0.6**
SNR=87
KHU Kahuku 51.69 102⇓*e*P **P 16 23 51.0 -0.1**
STCH Steam Cracks 51.92 102 *e*P **P 16 23 52.8 -0.1**
CHMS Chumysh 52.02 296 P **P 16 23 53.8 +0.5**
SNR=23
USP Ospenovka 52.04 296 P **P 16 23 54.1 +0.7**
SNR=139
TAPN Taplejung 52.05 272 *e*P **P 16 23 54.9 +1.2**
comp=Z,950nm,0.7s,mb6.9
TAPN Taplejung 52.05 272 *e*P **P 16 23 54.8 +1.1**
comp=Z,950nm,0.7s,mb6.9
TAPN Taplejung 52.05 272 *e*P **P 16 23 54.8 +1.1**
comp=Z,950nm,0.7s,mb6.9
KBK Karagaybulak 52.07 295 P **P 16 23 54.6 +0.9**
SNR=63
KZA Kyzart 52.18 295 P **P 16 23 56.2 +1.8**
SNR=75
FRU Bishkek 52.19 296⇑*e*P **P 16 23 55.0 +0.5**
FRU *e* pP 16 24 22.0 +3.3
FRU *e*S **S 16 31 08.0 -3.3**
FRU *e* 16 33 33.0
FRU pmax pmax
comp=Z,280nm,1.8s,mb6.0
FRU smax
comp=E,4μm,11.0s
AAK Ala-Archa 52.37 296 P **P 16 23 56.5 +0.6**
SNR=50
RES Resolute Bay 52.39 18 *e*P **P 16 23 55.2 -0.4**
comp=E,41μm,0.9s
UCH Uchtor 52.57 295 P **P 16 23 58.3 +0.9**
SNR=27
ODAN Odare 52.58 272 *e*P **P 16 23 58.6 +1.0**
comp=E,846nm,1.0s,mb6.7
ODAN Odare 52.58 272 *e*P **P 16 23 59.2 +1.6**
comp=E,638nm,0.9s,mb6.7
ODAN Odare 52.58 272 *e*P **P 16 23 59.2 +1.6**
comp=E,638nm,0.9s,mb6.7
EKS2 Erkin-Say 52.81 296 P **P 16 23 59.6 +0.5**
SNR=152
JIRN Jiri 52.92 273 *e*P **P 16 24 01.8 +1.6**
comp=E,1μm,0.7s,mb7.1
JIRN Jiri 52.92 273 *e*P **P 16 24 02.1 +1.9**
comp=E,2μm,0.8s,mb7.1
JIRN Jiri 52.92 273 *e*P **P 16 24 02.1 +1.9**
comp=E,2μm,0.8s,mb7.1
YKA Yellowknife Ar 52.92 35 P **P 16 24 00.0 +0.4**
comp=E,391nm,0.6s,mb6.6,baz=298,slow=7.0,SNR=934
YKA pP pP 16 24 23.5 -0.4
comp=E,44nm,0.7s,baz=297,slow=6.7,SNR=1.7
YKA LR LR 16 48 19.1
comp=E,3μm,21.4s,baz=190,slow=38
YKA PKP2bc 16 54 33.2
comp=E,1.8nm,1.0s,baz=118,slow=2.5,SNR=4.4
YKA Yellowknife Ar 52.92 35 *i* P **P 16 24 00.0 +0.3**
YKA pmax pmax
comp=Z,391nm,0.6s
YKA Yellowknife Ar 52.92 35 P **P 16 24 00.1 +0.4**
YKA pP pP 16 24 23.4 -0.4
YKA LR LR 16 48 19.1
YKA ⇑*e* 16 54 33.2
AAI Ambon 52.98 208 P **P 16 24 02.6 +2.0**
GUN Gumba 52.99 274 *e*P **P 16 24 02.4 +1.8**
comp=Z,2μm,1.0s,mb7.1
GUN Gumba 52.99 274 *e*P **P 16 24 02.3 +1.7**
comp=Z,2μm,1.1s,mb7.2
GUN Gumba 52.99 274 *e*P **P 16 24 02.3 +1.7**
comp=Z,2μm,1.1s,mb7.2
KSH Kashi 53.07 291⇑*i*P **P 16 24 03.0 +1.9**
KSH AP pP 16 24 26.1 +0.8
KSH XP sP 16 24 37.3 +0.8
KSH PCP PcP 16 25 10.3 +2.1
KSH PP PP 16 26 05.1 +3.5
KSH SCP ScP 16 28 57.1 +0.8
KSH PCS PcS 16 29 07.0 -0.1
KSH S **S 16 31 23.1 -0.2**
KSH XS sS 16 32 04.0 -0.9
KSH SCS ScS 16 33 39.0 -1.6
KSH SS SS 16 35 03.1 -0.3
KSH AMB AMB
comp=Z,1μm,2.3s,mb6.6
KSH LR LR
comp=N,13μm,12.0s
KSH LR LR
comp=E,15μm,9.2s
KSH LR LR
comp=Z,10μm,13.3s
RAMN Ramite 53.07 272 *e*P **P 16 24 02.5 +1.2**
comp=Z,2μm,0.8s,mb7.2
RAMN Ramite 53.07 272 *e*P **P 16 24 02.6 +1.3**
comp=Z,2μm,0.8s,mb7.1
RAMN Ramite 53.07 272 *e*P **P 16 24 02.6 +1.3**
comp=Z,2μm,0.8s,mb7.1
SVE Sverdlovsk 53.09 317⇓*e*P **P 16 23 59.9 -1.1**
SVE *e* 16 25 01.7
SVE *e*S **S 16 31 19.0 -4.2**
SVE *e* 16 33 40.9
SVE pmax pmax
comp=Z,217nm,1.0s,mb6.1
SVE MLR MLR
comp=Z,5μm,15.0s
KBS Kingsbay 53.11 351 *e*P **P 16 23 59.0 -1.8**
KBS Kingsbay 53.11 351⇑*i*P **P 16 23 58.4 -2.4**
KBS AMb AMB 16 24 02.1
comp=Z,354nm,1.7s,mb6.1
KBS *e*S **S 16 31 24.2 +1.3**
KBS Kingsbay 53.11 351 *e*P **P 16 23 58.9 -1.9**
KBS pmax pmax
comp=Z,160nm,1.0s,mb6.0
KBS Kingsbay 53.11 351 *e*P **P 16 23 58.6 -2.3**
comp=Z,155nm,1.0s,mb6.0
AML Almayashu 53.14 295 P **P 16 24 02.7 +1.2**
SNR=100
BTM Bintulu 53.32 229 ⇑P **P 16 24 04.3 +1.1**
SHBG Sahibganj 53.41 270 *ex* x 16 23 31.8
KKN Kakani 53.48 274 *e*P **P 16 24 05.9 +1.7**
comp=Z,1μm,0.7s,mb7.1
KKN Kakani 53.48 274 *e*P **P 16 24 05.7 +1.5**
comp=Z,1μm,0.7s,mb7.1
KKN Kakani 53.48 274 *e*P **P 16 24 05.7 +1.5**
KKN pmax pmax
comp=Z,1μm,0.7s,mb7.1
KKN Kakani 53.48 274 *e*P **P 16 24 05.7 +1.5**
comp=Z,1μm,0.7s,mb7.1
PKI Pulchoki 53.52 274 *e*P **P 16 24 06.2 +1.6**
comp=Z,1μm,0.9s,mb6.9
PKI Pulchoki 53.52 274 *e*P **P 16 24 06.1 +1.5**
comp=Z,2μm,1.2s,mb7.0
PKI Pulchoki 53.52 274 *e*P **P 16 24 06.2 +1.6**
PKI pmax pmax
comp=Z,1μm,0.9s,mb6.9
PKIN Phulchoki 53.53 274 *e*P **P 16 24 06.2 +1.6**
comp=Z,1μm,0.9s,mb6.9
PKIN Phulchoki 53.53 274 *e*P **P 16 24 06.2 +1.6**
comp=Z,1μm,0.9s,mb6.9
PCI Palu 53.63 219 P **P 16 24 04.3 -1.2**
DMN Daman 53.71 274 *e*P **P 16 24 07.5 +1.6**
comp=Z,2μm,0.9s,mb7.2
DMN Daman 53.71 274 *e*P **P 16 24 07.7 +1.8**
comp=Z,2μm,0.9s,mb7.2
DMN Daman 53.71 274 *e*P **P 16 24 07.7 +1.8**
comp=Z,2μm,0.9s,mb7.2
GKN Gorkha 53.80 275 *e*P **P 16 24 08.2 +1.6**
comp=Z,574nm,0.9s,mb6.6
NNT Nongplab 53.81 249 ⇓P **P 16 24 08.0 +1.2**
comp=Z,793nm,0.9s,mb6.7
DANN Dangsing 54.20 275 *e*P **P 16 24 11.7 +2.2**
comp=Z,1μm,0.7s,mb7.1
DANN Dangsing 54.20 275 *e*P **P 16 24 11.8 +2.3**
comp=Z,1μm,0.7s,mb7.1
DANN Dangsing 54.20 275 *e*P **P 16 24 11.8 +2.3**
comp=Z,1μm,0.7s,mb7.1
HSP Hornsund 54.20 349 *e*P **P 16 24 06.2 -2.6**
ARU Arti 54.28 317 P **P 16 24 08.0 -1.7**
comp=Z,1μm,1.1s,mb6.8,SNR=88
ARU Arti 54.28 317*c* *i*P **P 16 24 08.1 -1.6**
ARU *e**PP pP 16 24 33.2 -0.8
ARU *e* 16 25 09.3
ARU *e* 16 26 08.0
ARU *e*PPP 16 27 20.5
ARU *e*S **S 16 31 36.8 -2.5**
ARU *e* 16 33 44.0
ARU *e*SSS 16 37 25.8
ARU pmax pmax
comp=Z,377nm,1.2s,mb6.3
ARU MLR MLR
comp=Z,6μm,17.0s
SBUM Sibu 54.41 229 ⇓P **P 16 24 12.2 +1.1**
KOLN Koldanda 54.66 275 *e*P **P 16 24 14.8 +1.9**
comp=Z,1μm,0.8s,mb6.9
KOLN Koldanda 54.66 275 *e*P **P 16 24 14.8 +1.9**
CAL Calcutta 54.67 267 *e*P **P 16 24 12.5 -0.5**
CAL *e*S **S 16 31 47.0 +1.7**
PMG Port Moresby 55.02 184 *e*P **P 16 24 13.1 -2.3**
PMG *e**PP pP 16 24 37.4 -2.4
PMG *e**SP sP 16 24 48.6 -2.3
PMG pmax pmax
comp=Z,74nm,1.1s
PMG Port Moresby 55.02 184 *e*P **P 16 24 13.1 -2.3**
comp=Z,74nm,1.1s,mb5.6
PMG *e*pP pP 16 24 37.4 -2.4
PMG *e*sP sP 16 24 48.6 -2.3
KDI Kendari 55.24 214⇓*e*P **P 16 24 17.5 +0.5**
KDI *e*S **S 16 31 47.0 -5.9**
BOK Bokaro 55.57 270 *e*P **P 16 24 20.5 +1.1**
BJO Bjornoya 55.59 346 *e*P **P 16 24 16.9 -2.0**
BJO *i* 16 27 40.6
BJO AMS AMS 16 52 18.1
comp=Z,2μm,18.7s
BJO1 Bjornoya 55.62 346 *e*P **P 16 24 16.9 -2.2**
BJO1 *i* 16 27 40.6
BJO1 LR LR
comp=Z,2μm,18.7s
HNR Honiara 55.69 168 P **P 16 24 18.6 -1.6**
comp=Z,86nm,1.0s,mb5.7,baz=162,slow=9.6,SNR=2.8
HNR pP pP 16 24 42.6 -2.0
comp=Z,134nm,1.1s,baz=184,slow=16,SNR=2.5
HNR Honiara 55.69 168 P **P 16 24 18.6 -1.6**
HNR *PP pP 16 24 42.6 -2.1
HNR pmax pmax
comp=Z,86nm,1.0s,mb5.7
PGC Sidney 55.70 53⇑*i*P **P 16 24 19.9 -0.1**
comp=Z,181nm,0.6s,mb6.3
PTH Pithoragarh 55.92 279 *e*P **P 16 24 23.0 +1.1**
PTH *e*S **S 16 32 02.0 +0.1**
NLWA Neilton Lookou 56.14 55⇑*i*P **P 16 24 23.8 +0.7**
comp=Z,434nm,1.1s,mb6.4
KSM Kuching 56.25 230 ⇓P **P 16 24 25.7 +1.4**
LVZ Lovozero 56.79 336 P **P 16 24 25.7 -1.8**
comp=Z,634nm,1.2s,mb6.5,SNR=12
LVZ Lovozero 56.79 336*c* *i*P **P 16 24 25.2 -2.3**
LVZ pmax pmax
comp=Z,232nm,1.7s,mb5.9
LVZ MLR MLR
comp=Z,4μm,23.0s
JCW Jim Creek 56.80 53⇑*i*P **P 16 24 28.1 +0.3**
RPW Rockport 56.89 53⇑*i*P **P 16 24 28.4 0.0**
DDI Dehra Dun 56.94 281 *e*P **P 16 24 27.7 -1.4**
DDI *ex* x 16 32 02.6
SDNR Sundarnagar 56.98 283 *e*P **P 16 24 30.0 +0.7**
SDNR *ex* x 16 32 13.0
BMW Boistfort Moun 57.01 55 *e*P **P 16 24 29.9 +0.6**
DLH Dalhousie 57.04 284 *e*P **P 16 24 31.0 +1.3**
KTGM Kuala Trenggan 57.23 240 ⇓P **P 16 24 33.5 +2.2**
THN Thein Dam 57.27 285 *e*P **P 16 24 31.1 -0.3**
THN *ex* x 16 32 11.6
SNG Songkhla 57.34 244 P **P 16 24 35.0 +3.0**
comp=Z,540nm,0.9s,mb6.6
KAPI Kappang 57.36 217 P **P 16 24 32.5 +0.4**
comp=Z,442nm,0.9s,mb6.5,SNR=7.6
APA Apatity 57.37 336⇓*i*P **P 16 24 29.8 -1.7**
APA *i* *PP sP 16 25 04.0 -3.2
APA *i* 16 25 24.0
APA *i* PPP 16 27 59.0
APA *i* S **S 16 32 13.0 -6.9**
APA pmax pmax
comp=Z,54nm,0.6s,mb5.8
APA MLR MLR
comp=Z,4μm,18.0s
PONG Pong 57.40 284 *ex* x 16 25 30.0
BHK Bhakra 57.40 283 *e*P **P 16 24 32.8 +0.5**
HEBO Mount Hebo 57.41 57⇑*i*P **P 16 24 33.3 +1.2**
comp=Z,418nm,0.8s,mb6.5
DAG Danmarks Havn 57.50 357⇓*i*P **P 16 24 30.9 -1.4**
DAG pmax pmax
comp=Z,340nm,1.0s,mb6.3
DAG Danmarks Havn 57.50 357*j* *i*P **P 16 24 30.9 -1.4**

comp=Z,335nm,1.0s,mb6.3
DAG Danmarks Havn 57.50 357 *i* P **P 16 24 30.9 -1.4**
comp=Z,335nm,1.0s,mb6.3
KEV Kevo 57.52 340 *ep* **P 16 24 30.5 -2.1**
comp=Z,11nm,0.3s,mb5.3
KEV Kevo 57.52 340 *eP* **P 16 24 30.5 -2.1**
KEV pmax pmax
comp=Z,11nm,0.3s,mb5.4
LON Longmire 57.67 54 P **P 16 24 34.2 +0.3**
BWNR Bhubaneshwar 57.91 267 *ex* **P 16 24 32.0 -4.0**
BWNR *eS* **S 16 32 28.1 -0.1**
TWW Teanaway 57.98 54 P **P 16 24 37.1 +0.9**
ETW Entiat 58.02 53 *eP* **P 16 24 36.7 +0.3**
COR Corvallis 58.02 57 *eP* **P 16 24 37.9 +1.4**
COR pmax pmax
comp=Z,561nm,0.6s,mb6.8
COR Corvallis 58.02 57 *eP* **P 16 24 37.9 +1.4**
comp=Z,561nm,0.6s,mb6.8
ARCES ARCESS Array B 58.05 340 P **P 16 24 34.5 -1.8**
comp=Z,55nm,1.0s,mb5.5,baz=74,slow=3.5,SNR=101
ARCES pP pP 16 25 00.8 0.0
comp=Z,16nm,0.8s,baz=38,slow=6.1,SNR=2.2
ARCES PcP PcP 16 25 27.5 +0.6
comp=Z,33nm,0.7s,baz=46,slow=5.2,SNR=8.2
ARCES LR LR 16 53 57.9
comp=Z,3μm,18.9s,baz=214,slow=40
ARCES PKPPKP 16 54 22.5
comp=Z,3.3nm,0.9s,baz=5.7,slow=4.9,SNR=4.6
ARCES PKP2ab 16 54 45.5
comp=Z,8.7nm,1.1s,baz=195,slow=2.4,SNR=6.1
ARCES ARCESS Array B 58.05 340 P **P 16 24 34.5 -1.7**
ARCES *PP pP 16 25 00.9 +0.1
ARCES 16 25 27.5
ARCES pmax pmax
comp=Z,55nm,1.0s
ARCES MLR MLR
comp=Z,3μm,18.9s
ARCES ARCESS Array B 58.05 340 P **P 16 24 34.5 -1.8**
ARCES pP pP 16 25 00.8 0.0
ARCES PcP PcP 16 25 27.5 +0.6
ARCES LR LR 16 53 57.9
ARCES P'P' 16 54 22.5
ARCES P'P'ab 16 54 45.5
EBG Ellensburg 58.28 54 P **P 16 24 39.0 +0.7**
KEBM Edson Butte 58.39 59 *eP* **P 16 24 40.2 +1.2**
EDM Edmonton 58.47 44 *eP* **P 16 24 39.5 +0.1**
NDI New Delhi 58.52 280 *eP* **P 16 24 39.0 -1.2**
NDI *ex* x 16 32 32.5
EPH Ephrata 58.57 53 P **P 16 24 40.3 0.0**
KULM Kulim 58.78 242 ⇓P **P 16 24 43.9 +1.8**
KBO Bosley Butte 58.84 60 *eP* **P 16 24 43.3 +1.2**
KTK1 Kautokeino 58.98 340 ⇑*iP* **P 16 24 41.2 -1.5**
KTK1 AMb AMB 16 24 43.8
comp=Z,382nm,1.6s,mb6.2
KTK1 Kautokeino 58.98 340 ⇑*iP* **P 16 24 41.2 -1.5**
comp=Z,382nm,1.6s,mb6.2
OD2 Odessa Site #2 59.04 52 P **P 16 24 43.4 -0.1**
RSW Rattlesnake Hi 59.13 54 *eP* **P 16 24 44.5 +0.4**
HAWA Hanford 59.16 54 ⇑*iP* **P 16 24 44.6 +0.3**
comp=Z,576nm,1.4s,mb6.4
IPM Ipoh 59.18 241 ⇑P **P 16 24 46.5 +1.7**
HUMO Hull Mountain 59.37 59 *eP* **P 16 24 46.5 +0.7**
comp=Z,69nm,0.6s,mb5.9
NEW Newport 59.41 51 ⇑*iP* **P 16 24 46.1 +0.1**
comp=Z,1μm,2.0s,mb6.7
KRMB Red Mountain 59.43 60 ⇑*iP* **P 16 24 47.4 +1.1**
KRMB *epP* pP 16 25 09.0 -2.0
KRMB *esP* sP 16 25 19.7 -2.3
TRO Tromso 59.46 342 *eP* **P 16 24 44.8 -1.3**
TRO AMb AMB 16 24 47.1
comp=Z,344nm,1.7s,mb6.1
TRO *eS* **S 16 32 43.6 -3.4**
TRO AMS AMS 16 53 25.4
comp=Z,2μm,19.5s
TRO Tromso 59.46 342 *eP* **P 16 24 44.8 -1.2**
TRO pmax pmax
comp=Z,344nm,1.7s,mb6.1
TRO MLR MLR
comp=Z,2μm,19.5s
TRO Tromso 59.46 342 *eP* **P 16 24 44.8 -1.3**
comp=Z,344nm,1.7s,mb6.1
TRO LR LR
comp=Z,2μm,19.5s
MYKOM Kota Tinggi 59.62 237 ⇑P **P 16 24 49.6 +1.7**
KGM Kluang 59.75 237 ⇓P **P 16 24 50.9 +2.1**
FRIM Kepong 59.79 240 ⇓P **P 16 24 51.1 +2.0**
COEN Coen 59.80 188 *eP* **P 16 24 49.1 +0.1**
comp=Z,81nm,0.9s,mb5.8
COEN *epP* pP 16 25 12.6 -1.1
YBH Yreka Blue Hor 60.03 60 ⇑*iP* **P 16 24 51.6 +1.2**
YBH pmax pmax
comp=Z,104nm,0.6s
YBH Yreka Blue Hor 60.03 60 ⇑*iP* **P 16 24 51.6 +1.2**
comp=Z,104nm,0.6s,mb6.0
JBP Jabalpur 60.10 273 *eP* **P 16 24 52.2 +1.1**
JBP *eS* **S 16 32 56.1 -0.3**
LNOR Lincton Mounta 60.17 54 *eP* **P 16 24 51.7 +0.4**
KAKA Kakadu 60.38 200 *eP* **P 16 24 52.3 -0.6**
comp=Z,78nm,0.7s,mb5.8
KAKA *e* 16 24 57.5
KAKA *epP* pP 16 25 17.6 -0.1
KAKA *esP* sP 16 25 27.6 -1.1
WALA Waterton Lakes 60.65 49 *eP* **P 16 24 54.8 +0.4**
comp=Z,254nm,0.7s,mb6.4
KIPM Iron Peak 60.71 62 *eP* **P 16 24 55.9 +0.9**
KCPM Cahto Peak 60.72 62 *eP* **P 16 24 56.1 +1.1**
WDC Whiskeytown Da 60.82 61 *eP* **P 16 24 56.2 +0.4**
WDC pmax pmax
comp=Z,265nm,1.3s,mb6.1
WDC Whiskeytown Da 60.82 61 *eP* **P 16 24 56.2 +0.4**
comp=Z,266nm,1.3s,mb6.1
JOF Joensuu 61.24 333 *ep* **P 16 24 55.9 -2.3**
comp=Z,33nm,0.3s,mb5.8
JOF Joensuu 61.24 333 *eP* **P 16 24 55.9 -2.3**
JOF pmax pmax
comp=Z,33nm,0.3s,mb5.8
BMO Blue Mountains 61.33 54 *eP* **P 16 24 59.7 +0.5**
BMO pmax pmax
comp=Z,491nm,1.4s,mb6.3
BMO Blue Mountains 61.33 54 *eP* **P 16 24 59.7 +0.5**
comp=Z,491nm,1.4s,mb6.3
VIS Vishakhapatnam 61.37 266 *i* P **P 16 25 01.4 +1.7**
VIS *eP* 16 25 01.6
VIS AMb AMB 16 25 03.8
comp=Z,453nm,1.0s,mb6.5
VIS *ex* x 16 25 04.0
comp=Z,474nm,1.0s
VIS *i* S **S 16 33 13.3 +0.6**
MOD Modoc 61.37 58 *eP* **P 16 25 00.1 +0.7**
comp=Z,314nm,0.6s,mb6.5
HOPS Hopland 61.45 62 *eP* **P 16 25 00.3 +0.2**
comp=Z,410nm,1.4s,mb6.3
AJM Ajmer 61.68 280 *eP* **P 16 25 02.9 +1.1**
AJM AMb AMB 16 25 05.2
comp=Z,1μm,1.0s,mb6.9
LOF Lofoten 61.82 343 *eP* **P 16 25 02.8 +0.8**
LOF AMb AMB 16 25 05.1
comp=Z,284nm,1.3s,mb6.1
LOF Lofoten 61.82 343 *eP* **P 16 25 02.8 +0.8**
comp=Z,284nm,1.3s,mb6.1
MSO Missoula 61.99 51 *eP* **P 16 25 03.9 +0.3**
comp=Z,589nm,1.4s,mb6.4
NSHM Saint Helena R 62.02 63 *eP* **P 16 25 04.0 +0.1**
WVOR Wild Horse Val 62.03 57 *eP* **P 16 25 04.6 +0.7**
WVOR pmax pmax
comp=Z,1μm,1.5s,mb6.6
WVOR Wild Horse Val 62.03 57 *eP* **P 16 25 04.6 +0.7**
comp=Z,1μm,1.5s,mb6.6
NGP Nagpur 62.07 272 *eP* **P 16 25 02.9 -1.6**
NGP *ex* x 16 25 05.5
comp=Z,676nm,1.3s
NGP *ex* x 16 33 17.5
MCCM Marconi Confer 62.09 63 *eP* **P 16 25 04.2 -0.2**
comp=Z,117nm,0.7s,mb6.0
OHCM Honcut 62.22 61 *eP* **P 16 25 05.0 -0.2**
CHMT Chamberlain Mo 62.31 50 *eP* **P 16 25 05.8 +0.1**
JNW Jan Mayen West 62.46 352 *eP* **P 16 25 07.2 +0.9**
JMIC Jan Mayen 62.51 352 ⇑*iP* **P 16 25 06.1 -0.5**
JMIC AMb AMB 16 25 12.4
comp=Z,957nm,3.3s
JMIC *eS* **S 16 33 27.1 +1.4**
JMIC Jan Mayen 62.51 352 ⇑*iP* **P 16 25 06.1 -0.5**
comp=Z,957nm,3.3s
XMAS Kiritimati 63.17 117 *eP* **P 16 25 11.1 -0.7**
comp=Z,138nm,1.1s,mb5.8

FCC Fort Churchill 63.19 32 *eP* **P 16 25 11.0 -0.3**
FCC pmax pmax
comp=Z,535nm,0.6s,mb6.7
FCC Fort Churchill 63.19 32 *eP* **P 16 25 11.0 -0.2**
comp=Z,535nm,0.6s,mb6.7
PAHR Pah Rah Range 63.27 60 *eP* **P 16 25 12.5 +0.4**
comp=Z,146nm,0.7s,mb6.0
MOR8 Moi Rana 63.28 341 ⇑*iP* **P 16 25 09.0 -2.8**
MOR8 AMb AMB 16 25 11.3
comp=Z,215nm,1.1s,mb6.0
MOR8 Moi Rana 63.28 341 ⇑*iP* **P 16 25 09.0 -2.8**
comp=Z,215nm,1.1s,mb6.0
KONS Konsvik 63.29 342 *eP* **P 16 25 11.7 -0.1**
KONS AMb AMB 16 25 17.4
comp=Z,155nm,1.4s,mb5.7
KAF Kangasniemi 63.40 334 *ep* **P 16 25 10.6 -2.0**
comp=Z,15nm,0.3s,mb5.4,baz=39,slow=6.3
KAF Kangasniemi 63.40 334 *eP* **P 16 25 10.6 -2.0**
KAF pmax pmax
comp=Z,15nm,0.3s,mb5.4
EGMT Eagleton 63.46 48 *eP* **P 16 25 13.6 +0.3**
comp=Z,830nm,1.2s,mb6.5
DLMT Dillon 63.64 51 *eP* **P 16 25 14.7 +0.3**
comp=Z,212nm,0.9s,mb6.0
CMB Columbia Colle 63.70 62 *eP* **P 16 25 15.1 +0.1**
CMB pmax pmax
comp=Z,479nm,1.4s,mb6.1
CMB Columbia Colle 63.70 62 *eP* **P 16 25 15.1 +0.1**
comp=Z,479nm,1.4s,mb6.1
HLID Hailey 63.77 54 ⇑*iP* **P 16 25 15.9 +0.6**
comp=Z,255nm,1.3s,mb5.9
HLID *epP* pP 16 25 43.4 +3.1
AKL Akola 63.79 273 *eP* **P 16 25 16.7 +0.9**
SAO San Andreas Ge 63.83 63 ⇑*eP* **P 16 25 15.8 -0.1**
SAO *e**PP pP 16 25 40.2 -0.7
SAO pmax pmax
comp=Z,170nm,1.3s,mb5.7
SAO San Andreas Ge 63.83 63 ⇑*eP* **P 16 25 15.8 -0.1**
comp=Z,170nm,1.3s,mb5.7
SAO *epP* pP 16 25 40.2 -0.7
MCMT McKenzie Canyo 63.84 52 *eP* **P 16 25 15.8 0.0**
PUL Pulkovo 63.87 331 ⇑*eP* **P 16 25 14.0 -1.7**
BOZ Bozeman (W) 63.98 51 ⇑*iP* **P 16 25 17.7 +1.0**
BOZ pmax pmax
comp=Z,264nm,0.8s,mb6.1
BOZ Bozeman (W) 63.98 51 ⇑*iP* **P 16 25 17.6 +0.9**
comp=Z,264nm,0.8s,mb6.1
MOS Moscow 64.02 324 *eP* **P 16 25 12.4 -4.4**
MOS *e**PP pP 16 25 38.9 -2.9
MOS *e* 16 25 48.4
MOS *eS* **S 16 33 36.9 -7.9**
MOS *e**SS sS 16 34 18.8 -8.8
MOS *e* 16 34 56.6
MOS pmax pmax
comp=Z,289nm,1.6s,mb5.9
MOS MLR MLR
comp=Z,5μm,17.0s
BMN Battle Mountai 64.11 58 ⇑*iP* **P 16 25 18.4 +0.7**
BMN pmax pmax
comp=Z,273nm,0.6s,mb6.3
BMN Battle Mountai 64.11 58 ⇑*iP* **P 16 25 18.4 +0.8**
comp=Z,273nm,0.6s,mb6.3
QLMT Earthquake Lak 64.61 51 *eP* **P 16 25 21.5 +0.6**
NVAR Mina Array Bea 64.72 60 P **P 16 25 22.4 +0.7**
comp=Z,215nm,0.6s,mb6.1,baz=290,slow=7.2,SNR=842
NVAR PKPPKP 16 54 03.0
comp=Z,1.0nm,0.9s,baz=178,slow=3.5,SNR=4.0
NVAR PKP2ab 16 54 16.2
comp=Z,2.5nm,1.0s,baz=166,slow=4.4,SNR=5.8
NVAR Mina Array Bea 64.72 60 P **P 16 25 22.4 +0.7**
NVAR P'P' 16 54 03.0
NVAR P'P'ab 16 54 16.2
OBN Obninsk 64.89 324 P **P 16 25 21.1 -1.4**
comp=Z,1μm,1.2s,mb6.6,SNR=8.4
OBN Obninsk 64.89 324 *c iP* **P 16 25 20.8 -1.7**
OBN *i* *PP pP 16 25 45.6 -1.9
OBN *i* 16 25 54.0
OBN *i* SS SS 16 38 17.2 +9.4
OBN pmax pmax
comp=Z,331nm,1.2s,mb6.0
OBN MLR MLR
comp=Z,3μm,18.0s
OBN Obninsk 64.89 324 ⇑*iP* **P 16 25 20.9 -1.6**
HYB Hyderabad 64.91 270 *iP* **P 16 25 24.5 +1.3**
HYB *eS* **S 16 33 56.0 -0.8**
HYB Hyderabad 64.91 270 *eP* **P 16 25 24.5 +1.3**
HYB *eS* **S 16 33 56.0 -0.8**
GCMT Greycliff 64.94 49 *eP* **P 16 25 23.8 +0.8**
YMR Madison River 64.97 51 ⇑*eP* **P 16 25 24.0 +0.8**
comp=Z,287nm,0.8s,mb6.2
ELK Elko 65.08 57 ⇑*iP* **P 16 25 24.6 +0.6**
ELK pmax pmax
comp=Z,116nm,0.8s
ELK Elko 65.08 57 ⇑*iP* **P 16 25 24.6 +0.7**
comp=Z,116nm,0.8s,mb5.8
YNR Norris Junctio 65.10 51 ⇑*iP* **P 16 25 25.4 +1.4**
YNR *epP* pP 16 25 50.1 +1.0
YFT Old Faithful 65.18 51 *eP* **P 16 25 26.6 +2.0**
NSS Namsos 65.22 341 *eP* **P 16 25 22.3 -2.2**
NSS *eS* S 16 33 59.9 +0.5
NSS AMS AMS 16 57 04.0
comp=Z,5μm,21.4s
MTUM Tungsten Hills 65.25 61 *eP* **P 16 25 25.6 +0.5**
PTRM Twissleman Ran 65.31 64 *eP* **P 16 25 25.7 +0.2**
LKWY Lake 65.34 51 *eP* **P 16 25 27.6 +2.0**
LKWY pmax pmax
comp=Z,418nm,1.4s,mb6.1
LKWY Lake 65.34 51 *eP* **P 16 25 27.6 +2.0**
comp=Z,418nm,1.4s,mb6.1
IMW Indian Meadow 65.48 52 *eP* **P 16 25 27.9 +1.4**
comp=Z,840nm,1.7s,mb6.3
VRHR Novokhopersk 65.49 319 *eP* **P 16 25 24.9 -1.5**
VRHR *i* *PP pP 16 25 53.7 +2.2
VRHR *eS* S 16 33 57.3 -5.7
VRHR *e* 16 35 08.7
VRHR *eSSS* 16 41 19.7
VRHR pmax pmax
comp=Z,140nm,0.6s,mb6.0
VRHR pmax pmax
comp=N,160nm,1.7s
VRHR pmax pmax
comp=E,120nm,1.7s
VRHR smax
comp=N,1μm,2.2s
VRHR smax
comp=Z,310nm,2.3s
VRHR smax
comp=E,1μm,1.9s
FLWY Flagg Ranch 65.50 51 *eP* **P 16 25 27.9 +1.3**
comp=E,910nm,1.6s,mb6.3
DCID1 Drake Creek 65.55 52 *eP* **P 16 25 28.1 +1.1**
comp=E,225nm,0.8s,mb6.0
RLMT Red Lodge 65.59 50 *eP* **P 16 25 28.0 +0.8**
comp=E,443nm,1.3s,mb6.1
LATR Latur 65.63 272 *eP* **P 16 25 28.3 +0.4**
LATR AMb AMB 16 25 31.1
comp=Z,383nm,1.0s,mb6.2
RRI2 Red Ridge 65.63 52 *eP* **P 16 25 28.8 +1.3**
comp=Z,580nm,0.7s,mb6.5
CTA Charters Tower 65.67 184 *eP* **P 16 25 27.0 -0.8**
comp=Z,12nm,0.6s,mb4.9
CTA *e* 16 25 31.8
CTA *epP* pP 16 25 54.3 +1.4
CTA *ePKPPKP* 16 53 57.8
CTA Charters Tower 65.67 184 P **P 16 25 27.3 -0.5**
comp=Z,23nm,0.9s,mb5.0,baz=0.9,slow=7.2,SNR=22
CTA pP pP 16 25 52.6 -0.3
comp=Z,31nm,0.8s,baz=23,slow=7.3,SNR=4.4
CTA Charters Tower 65.67 184 *eP* **P 16 25 27.0 -0.8**
CTA *e**PP pP 16 25 54.3 +1.4
CTA pmax pmax
comp=Z,12nm,0.6s
CTAO Charters Tower 65.67 184 *eP* **P 16 25 27.2 -0.6**
CTAO pmax pmax
comp=Z,80nm,1.0s,mb5.5
CTAO Charters Tower 65.67 184 *eP* **P 16 25 27.2 -0.6**
comp=Z,80nm,1.0s,mb5.5
MOOW Moose Ponds 65.69 52 *eP* **P 16 25 28.8 +0.9**
comp=Z,4μm,0.7s,mb7.3
TPAW Teton Pass 65.74 52 *eP* **P 16 25 29.5 +1.3**
comp=Z,945nm,1.3s,mb6.5
HVU Hansel Valley 65.83 54 *eP* **P 16 25 29.5 +0.7**
HVU pmax pmax
comp=Z,98nm,0.7s,mb5.8
HVU Hansel Valley 65.83 54 *eP* **P 16 25 29.5 +0.7**

comp=Z,98nm,0.7s,mb5.8
LOHW Long Hollow 65.86 52 *eP* **P 16 25 29.8 +0.9**
comp=Z,853nm,1.4s,mb6.4
SNOW Snow King Moun 65.87 52 *eP* **P 16 25 30.4 +1.4**
comp=Z,625nm,1.4s,mb6.2
REDW Red Top Meadow 65.88 52 *eP* **P 16 25 30.1 +1.0**
comp=Z,2μm,1.8s,mb6.6
DGMT Dagmar 65.96 45 *eP* **P 16 25 29.7 +0.2**
comp=Z,721nm,0.7s,mb6.6
AHID Auburn Hatcher 66.13 53 *eP* **P 16 25 31.2 +0.5**
comp=Z,419nm,1.4s,mb6.1
LAO LASA Array 66.15 47 *eP* **P 16 25 31.3 +0.6**
comp=Z,1μm,1.3s,mb6.5
VOR Voronezh 66.15 321 ⇑*iP* **P 16 25 29.5 -1.1**
VOR pmax pmax
comp=Z,300nm,1.2s,mb6.0
BGU Big Grassy Mou 66.24 55 ⇑*eP* **P 16 25 31.8 +0.4**
SPUT South Promonto 66.33 55 *eP* **P 16 25 32.5 +0.5**
ISA Isabella 66.39 63 *eP* **P 16 25 31.0 -1.5**
ISA pmax pmax
comp=Z,213nm,1.4s,mb5.8
ISA Isabella 66.39 63 *eP* **P 16 25 31.0 -1.4**
comp=Z,213nm,1.4s,mb5.8
SFJD Kangerlussuaq 66.43 9 ⇑*iP* **P 16 25 31.8 -0.4**
SFJD *i* S S 16 34 09.8 -4.1
SFJD pmax pmax
comp=Z,970nm,1.1s,mb6.5
SFJD MLR MLR
comp=Z,3μm,19.0s
SFJD Kangerlussuaq 66.43 9 ⇑*iP* **P 16 25 31.8 -0.4**
comp=Z,971nm,1.1s,mb6.5
SFJD *i* S S 16 34 09.8 -4.1
SFJD
comp=Z,3μm,19.0s
SFJD Kangerlussuaq 66.43 9 *i* P **P 16 25 33.5 +1.3**
SFJD *i* S pP 16 25 46.6 -11
SFJD Kangerlussuaq 66.43 9 *eP* **P 16 25 31.5 -0.7**
comp=Z,2μm,1.3s,mb6.7
VRSR Storozhevoye 66.51 320 *eP* **P 16 25 31.9 -1.1**
VRSR *i* *PP pP 16 26 01.7 +3.6
VRSR *eS* S 16 34 09.4 -6.0
VRSR *e* 16 35 16.3
VRSR *eSS* SS 16 38 35.5 +2.3
VRSR pmax pmax
comp=Z,50nm,0.5s,mb5.6
VRSR pmax pmax
comp=N,80nm,0.9s
VRSR pmax pmax
comp=E,80nm,0.9s
VRSR smax
comp=E,1μm,4.9s
VRSR smax
comp=Z,90nm,2.8s
VRSR smax
comp=N,720nm,4.0s
HWUT Hardware Ranch 66.63 54 *eP* **P 16 25 34.6 +0.7**
comp=N,186nm,0.6s,mb6.1
MDRS Chennai 66.71 265 *eP* **P 16 25 34.7 -0.1**
MDRS AMb AMB 16 25 38.7
comp=Z,261nm,0.8s,mb6.1
MDRS *i* S S 16 34 19.0 +0.2
DUG Dugway 66.84 56 *eP* **P 16 25 35.8 +0.5**
DUG pmax pmax
comp=Z,172nm,0.7s,mb6.0
DUG Dugway 66.84 56 *eP* **P 16 25 35.8 +0.5**
comp=Z,172nm,0.7s,mb6.0
OSI Osito Adit 66.91 64 *eP* **P 16 25 35.8 0.0**
comp=Z,210nm,0.8s,mb6.0
TPNV Topopah Spring 66.92 60 *eP* **P 16 25 36.2 +0.4**
TPNV pmax pmax
comp=Z,299nm,0.8s,mb6.2
TPNV Topopah Spring 66.92 60 *eP* **P 16 25 36.2 +0.3**
comp=Z,299nm,0.8s,mb6.2
NOQ North Oquirrh 66.94 55 *eP* **P 16 25 36.5 +0.7**
comp=Z,507nm,0.7s,mb6.5
WRAB Tennant Creek 66.97 196 P **P 16 25 35.0 -1.1**
comp=Z,1μm,0.9s,mb6.7,SNR=25
WRAB Tennant Creek 66.97 196 *d iP* **P 16 25 35.0 -1.1**
WB2 Warramunga Arr 66.97 196 ⇓*iP* **P 16 25 34.9 -1.2**
WB2 *e* 16 25 40.8
WB2 *epP* pP 16 25 59.6 -1.8
WB2 *esP* sP 16 26 12.9 +0.6
WB2 *ePKPPKP* 16 53 59.9
WRA Warramunga Arr 66.98 196 P **P 16 25 35.2 -0.9**
comp=Z,50nm,0.8s,mb5.4,baz=12,slow=6.1,SNR=143
WRA pP pP 16 25 59.4 -2.0
comp=Z,56nm,0.9s,baz=11,slow=6.4,SNR=4.1
WRA LR LR 16 51 54.9
comp=Z,2μm,21.5s,baz=25,slow=33
WRA PKPPKP 16 54 01.0
comp=Z,5.8nm,0.7s,baz=188,slow=3.1,SNR=10
WRA Warramunga Arr 66.98 196 *i* P **P 16 25 35.2 -1.0**
WRA pmax pmax
comp=Z,50nm,0.9s
BW06 Boulder Array 66.99 52 *eP* **P 16 25 36.4 +0.3**
comp=Z,467nm,0.7s,mb6.4
PDAR Pinedale Array 66.99 52 P **P 16 25 36.5 +0.3**
comp=Z,147nm,0.6s,mb6.0,baz=287,slow=1.3,SNR=812
PDAR pP pP 16 26 00.7 -0.7
comp=Z,29nm,0.7s,baz=278,slow=4.0,SNR=1.5
PDAR PKP2ab 16 54 08.8
comp=Z,1.6nm,1.0s,baz=165,slow=6.2,SNR=7.0
CTU Camp Tracy 67.13 55 *eP* **P 16 25 37.3 +0.3**
comp=Z,134nm,0.6s,mb6.0
FITZ Fitzroy Crossi 67.36 205 *eP* **P 16 25 38.6 0.0**
comp=Z,84nm,0.7s,mb5.7
FITZ *e* 16 25 43.6
FITZ *epP* pP 16 26 04.7 +0.9
FITZ *esP* sP 16 26 16.3 +1.5
FITZ *eSCS* ScS 16 35 28.4 +1.2
FITZ *ePKPPKP* 16 54 05.8
JLU Jordanelle 67.36 55 *eP* **P 16 25 38.9 +0.4**
NLU North Lily Min 67.43 56 *eP* **P 16 25 39.5 +0.5**
POO Poona 67.45 274 *eP* **P 16 25 40.6 +1.2**
POO AMb AMB 16 25 42.9
comp=Z,517nm,0.9s,mb6.4
MWC Mount Wilson 67.58 64 *eP* **P 16 25 39.9 -0.1**
MWC pmax pmax
comp=Z,486nm,1.5s,mb6.1
MWC Mount Wilson 67.58 64 *eP* **P 16 25 39.9 -0.2**
comp=Z,486nm,1.5s,mb6.1
DAU Daniels Canyon 67.60 55 *eP* **P 16 25 40.9 +0.9**
MPU Maple Canyon 67.64 55 *eP* **P 16 25 40.8 +0.5**
comp=Z,197nm,0.6s,mb6.1
GSC Goldstone 67.66 62 *eP* **P 16 25 40.4 -0.1**
GSC pmax pmax
comp=Z,538nm,1.4s,mb6.2
GSC Goldstone 67.66 62 *eP* **P 16 25 40.4 0.0**
comp=Z,538nm,1.4s,mb6.2
MOL Molde 67.91 342 *eS* S 16 34 31.9 +0.1
MOL AMS AMS 17 00 11.2
comp=Z,2μm,19.7s
BOM Bombay 67.93 275 *ex* sP 16 26 14.3 -4.3
BOM *ex* S 16 34 38.0 +4.7
KAD Karad 68.04 273 *eP* **P 16 25 43.9 +0.7**
KAD AMb AMB 16 25 46.2
comp=Z,549nm,0.8s,mb6.4
DOMB Dombas 68.04 341 *eP* **P 16 25 41.3 -1.1**
DOMB AMb AMB 16 25 46.2
comp=Z,248nm,1.9s,mb5.7
DOMB Dombas 68.04 341 *eP* **P 16 25 41.3 -1.1**
comp=Z,248nm,1.9s,mb5.7
MAK Makhachkala 68.08 309 *d iP* **P 16 25 44.6 +1.6**
MAK *i* pP 16 26 08.0 -0.3
MAK *i* *SP sP 16 26 20.5 +1.2
MAK *e* 16 28 16.9
MAK *i* S S 16 34 31.7 -2.8
MAK *e**SS sS 16 35 21.5 +3.7
MAK *i* 16 35 32.3
MAK pmax pmax
comp=N,220nm,0.8s
MAK pmax pmax
comp=Z,440nm,1.3s,mb6.1
MAK pmax pmax
comp=E,318nm,0.7s
MAK MLR MLR
comp=Z,10μm,20.0s
MAK MLR MLR
comp=E,12μm,17.0s
MAK MLR MLR
comp=N,6μm,15.0s
MSU Marysvale 68.33 57 *eP* **P 16 25 45.4 +0.8**
TMUT Trail Mountain 68.37 56 *eP* **P 16 25 45.1 +0.3**
NB2 NORSAR Subarra 68.42 340 P **P 16 25 43.7 -1.1**
comp=Z,198nm,1.0s,mb5.9,baz=29,slow=6.2
NB2 NORSAR Subarra 68.42 340 P **P 16 25 43.0 -1.8**

NOA NORSAR Array B 68.42 340 P **P** **16 25 43.8 -1.1**
comp=Z,54nm,0.6s,mb5.6,baz=29,slow=6.4,SNR=177
NOA pP pP 16 26 08.0 -2.1
comp=Z,24nm,0.8s,baz=30,slow=6.3,SNR=1.3
NOA LR LR 16 59 49.2
comp=Z,2μm,18.3s,baz=30,slow=39
NOA NORSAR Array B 68.42 340 P **P** **16 25 43.8 -1.0**
NOA *PP pP 16 26 08.0 -2.1
NOA pmax pmax
comp=Z,54nm,0.6s
NOA MLR MLR
comp=Z,2μm,18.3s
HFA0 Hagfors New Ar 68.58 338 P **P** **16 25 43.0 -2.8**
ULM Lac du Bonnet 68.59 39 P **P** **16 25 45.5 -0.5**
comp=Z,143nm,0.6s,mb6.0,baz=317,slow=6.9,SNR=155
ULM PKPPKP 16 54 00.1
comp=Z,6.1nm,1.0s,baz=286,slow=4.5,SNR=4.4
ULM LR LR 16 58 19.2
comp=Z,3μm,19.8s,baz=321,slow=38
MNK Minsk 68.74 328⇑ *iP* **P** **16 25 43.0 -3.9**
MNK *e**PP pP 16 26 14.0 +1.8
MNK *e*PPP 16 29 56.0
MNK *e*S S 16 34 35.0 -6.9
MNK *e**SS sS 16 35 30.0 +4.7
MNK *e*SS SS 16 39 10.0 +2.6
MNK pmax pmax
comp=Z,560nm,1.0s,mb6.3
MNK MLR MLR
comp=Z,11μm,14.0s
XMIS Christmas Isla 68.77 228 *eP* **P** **16 25 48.0 +0.4**
LDFC Landfair 68.85 61⇑ *iP* **P** **16 25 48.1 +0.2**
comp=Z,447nm,0.8s,mb6.3
SRU San Rafael 68.89 55 *eP* **P** **16 25 48.3 +0.2**
SRU pmax pmax
comp=Z,216nm,0.7s,mb6.1
SRU San Rafael 68.89 55 *eP* **P** **16 25 48.3 +0.2**
comp=Z,216nm,0.7s,mb6.1
PFO Pinyon Flat Ob 68.99 63 P **P** **16 25 48.5 -0.3**
comp=Z,566nm,2.2s,mb6.0,SNR=45
PFO Pinyon Flat Ob 68.99 63 P **P** **16 25 48.7 -0.1**
comp=Z,38nm,0.9s,mb5.2,baz=322,slow=5.7,SNR=65
PFO LR LR 16 52 25.1
comp=Z,1μm,18.4s,baz=298,slow=33
PFO PKP2ab 16 54 00.5
comp=Z,0.7nm,0.6s,baz=110,slow=3.0,SNR=4.7
RWWY Rawlins 69.00 52 *eP* **P** **16 25 48.8 0.0**
comp=Z,656nm,1.5s,mb6.2
RSSD Black Hills 69.02 48 *eP* **P** **16 25 48.8 -0.1**
RSSD pmax pmax
comp=Z,983nm,1.4s,mb6.5
RSSD Black Hills 69.02 48 *eP* **P** **16 25 48.8 0.0**
comp=Z,983nm,1.4s,mb6.5
DZM Mont Dzumac 69.16 164 *eP* **P** **16 25 51.2 +1.4**
HYA Hoyanger 69.45 342 *eP* **P** **16 25 51.9 +0.7**
HYA AMb AMB 16 25 55.0
comp=Z,529nm,0.9s,mb6.4
HYA Hoyanger 69.45 342 *eP* **P** **16 25 51.9 +0.7**
comp=Z,529nm,0.9s,mb6.4
BAR Barrett 69.47 64 *eP* **P** **16 25 51.2 -0.6**
comp=Z,170nm,1.1s,mb5.8
GOA Goa 69.53 271⇑ *eP* **P** **16 25 53.1 +0.8**
GOA *i* x x 16 34 50.1
BORG Borgarnes 69.59 356 P **P** **16 25 53.0 +1.0**
comp=Z,6μm,0.7s,mb7.5,SNR=51
SUE Sulen 69.85 343 *eP* **P** **16 25 53.8 +0.2**
SUE AMb AMB 16 25 56.1
comp=Z,440nm,1.3s,mb6.1
SUE Sulen 69.85 343 *eP* **P** **16 25 53.8 +0.2**
comp=Z,440nm,1.3s,mb6.1
KIV Kislovodsk 69.94 313 P **P** **16 25 55.2 +0.7**
comp=Z,3μm,0.9s,mb7.1,SNR=73
KIV Kislovodsk 69.94 313 P **P** **16 25 55.1 +0.6**
SNR=146
KIV Kislovodsk 69.94 313*c iP* **P** **16 25 54.9 +0.4**
KIV *e* 16 26 13.4
KIV *i* *PP pP 16 26 22.9 +3.1
KIV *e* 16 28 30.8
KIV *i* SS SS 16 39 31.8 +5.5
KIV pmax pmax
comp=Z,427nm,1.2s,mb6.2
KIV MLR MLR
comp=Z,6μm,18.0s
KIV Kislovodsk 69.94 313⇑ *iP* **P** **16 25 56.5 +2.0**
KIV Kislovodsk 69.94 313⇑ *iP* **P** **16 25 56.5 +2.0**
AGMN Agassiz Refuge 70.03 40 *eP* **P** **16 25 54.1 -0.9**
comp=Z,618nm,1.3s,mb6.3
KONO Kongsberg 70.03 340⇑ *iP* **P** **16 25 53.9 -0.9**
KONO AMb AMB 16 25 57.5
comp=Z,230nm,1.7s,mb5.7
KONO *e*S S 16 34 55.8 -1.2
KONO AMS AMS 17 01 22.8
comp=Z,3μm,21.8s
KONO Kongsberg 70.03 340⇑ *eP* **P** **16 25 54.2 -0.6**
KONO Kongsberg 70.03 340⇑ *eP* **P** **16 25 54.3 -0.5**
PHWY Pilot Hill 70.22 51 *eP* **P** **16 25 56.1 -0.1**
comp=Z,575nm,1.6s,mb6.2
PV10 Paradox Valley 70.24 55 *eP* **P** **16 25 57.1 +0.7**
DGRG David-gareji 70.27 309 P **P** **16 25 57.6 +1.0**
ASK Askoy 70.28 342 *eP* **P** **16 25 54.9 -1.4**
ASK AMb AMB 16 25 58.0
comp=Z,758nm,1.5s,mb6.3
ASK Askoy 70.28 342 *eP* **P** **16 25 54.9 -1.4**
comp=Z,758nm,1.5s,mb6.3
RUND Rundenannen 70.31 342 *eP* **P** **16 25 58.1 +1.6**
RUND AMb AMB 16 26 01.2
comp=Z,592nm,1.0s,mb6.4
RUND Rundenannen 70.31 342 *eP* **P** **16 25 58.1 +1.6**
comp=Z,592nm,1.0s,mb6.4
BER Bergen 70.34 342⇑ *iP* **P** **16 25 56.8 +0.1**
BER *e*S S 16 35 01.9 +1.4
BER AMS AMS 17 03 13.3
comp=Z,3μm,15.7s
GLA Glamis 70.37 63 *eP* **P** **16 25 57.5 +0.2**
GLA pmax pmax
comp=Z,701nm,1.5s,mb6.3
GLA Glamis 70.37 63 *eP* **P** **16 25 57.5 +0.2**
comp=Z,701nm,1.5s,mb6.3
MTA Mtatsminda 70.41 310 P **P** **16 25 58.6 +1.2**
TBLG Delisi 70.42 310 P **P** **16 25 59.2 +1.7**
EGD Espegrend 70.47 342 *eP* **P** **16 25 56.3 -1.2**
EGD AMb AMB 16 25 59.2
comp=Z,679nm,1.7s,mb6.2
EGD Espegrend 70.47 342 *eP* **P** **16 25 56.3 -1.2**
comp=Z,679nm,1.7s,mb6.2
PALK Pallekele 70.48 260 P **P** **16 25 59.1 +0.9**
comp=Z,644nm,0.9s,mb6.5,SNR=12
PALK Pallekele 70.48 260 P **P** **16 25 59.3 +1.1**
SNR=6.6
ODD1 Odda 70.49 341 *eP* **P** **16 25 57.1 -0.5**
ODD1 AMb AMB 16 25 59.2
comp=Z,442nm,1.7s,mb6.0
ODD1 Odda 70.49 341 *eP* **P** **16 25 57.1 -0.5**
comp=Z,442nm,1.7s,mb6.0
ONI Oni 70.51 311 P **P** **16 25 59.1 +1.1**
GOR Gori 70.58 311 P **P** **16 26 00.1 +1.7**
KOD Kodaikanal 70.63 265 *eP* **P** **16 25 59.6 +0.5**
PV01 Paradox Valley 70.67 55 *eP* **P** **16 25 59.1 0.0**
ASAR Alice Springs 70.69 196 P **P** **16 25 59.3 +0.2**
comp=Z,29nm,0.8s,mb5.2,baz=7.1,slow=5.7,SNR=278
ASAR pP pP 16 26 24.0 -0.5
comp=Z,46nm,0.7s,baz=13,slow=7.0,SNR=3.7
ASAR PKPPKP 16 53 53.4
comp=Z,3.3nm,0.8s,baz=186,slow=2.5,SNR=14
SUW Suwalki 70.80 330 *eP* **P** **16 25 57.9 -1.6**
SUW *e*S S 16 35 00.7 -5.3
SUW *e*SKSac SKSac 16 35 50.1 -2.1
SUW *e*ScS ScS 16 36 16.8 +23
SUW LMZ 16 54 16.9
comp=Z,4μm,31.1s
SUW Suwalki 70.80 330 *eP* **P** **16 25 57.9 -1.7**
SUW *e*S S 16 35 00.7 -5.3
SUW *e* 16 35 50.1
SUW Suwalki 70.80 330 *eP* **P** **16 25 57.9 -1.7**
SUW *e*S S 16 35 00.7 -5.3
SUW *e*SKSac SKSac 16 35 50.1 -2.1
SUW *e*ScS ScS 16 36 16.8 +23
WUAZ Wupatki 70.81 59 *eP* **P** **16 26 00.6 +0.7**
comp=Z,601nm,1.6s,mb6.2
BLS5 Blasjo 70.97 341⇑ *iP* **P** **16 26 01.0 +0.6**
BLS5 AMb AMB 16 26 04.1
comp=Z,169nm,1.6s,mb5.6
BLS5 Blasjo 70.97 341⇑ *iP* **P** **16 26 01.0 +0.6**
comp=Z,169nm,1.6s,mb5.6
AKASG Malin Array Be 71.14 325 P **P** **16 26 00.4 -1.3**
comp=Z,81nm,0.5s,mb5.8,baz=36,slow=6.1,SNR=189
AKASG pP pP 16 26 27.2 +0.1
comp=Z,38nm,0.7s,baz=36,slow=6.2,SNR=1.7
AKASG PKP2bc 16 53 56.7
comp=Z,0.1nm,0.3s,baz=229,slow=4.3,SNR=7.4
AKASG LR LR 16 57 35.2
comp=Z,6μm,20.5s,baz=40,slow=36
AKASG Malin Array Be 71.14 325 *i P* **P** **16 26 00.4 -1.3**
AKASG pmax pmax
comp=Z,81nm,0.5s
AKASG Malin Array Be 71.14 325 P **P** **16 26 00.4 -1.3**
AKASG pP pP 16 26 27.2 +0.1
AKASG ⇑*e* 16 53 56.7
AKASG LR LR 16 57 35.1
ISCO Idaho Springs 71.18 52 *eP* **P** **16 26 02.9 +0.8**
ISCO pmax pmax
comp=Z,637nm,1.4s,mb6.3
ISCO Idaho Springs 71.18 52 *eP* **P** **16 26 02.9 +0.8**
comp=Z,637nm,1.4s,mb6.3
MVCO Mesa Verde 71.35 56 *eP* **P** **16 26 03.5 +0.3**
comp=Z,190nm,0.7s,mb6.0
KMY Karmoy 71.42 342 *eP* **P** **16 26 03.6 +0.3**
KMY AMb AMB 16 26 05.9
comp=Z,466nm,1.7s,mb6.0
KMY Karmoy 71.42 342 *eP* **P** **16 26 03.6 +0.3**
comp=Z,466nm,1.7s,mb6.0
GNI Garni 71.52 309⇑ **P** **16 26 05.6 +1.5**
SNR=134
GNI Garni 71.52 309*c iP* **P** **16 26 05.7 +1.5**
GNI pmax pmax
comp=Z,486nm,1.3s
GNI Garni 71.52 309⇑ *iP* **P** **16 26 05.9 +1.7**
comp=Z,975nm,1.4s,mb6.4
SOC Sochi 71.71 314*c iP* **P** **16 26 05.2 0.0**
SOC *e* 16 26 20.9
SOC *e**PP pP 16 26 30.8 +0.1
SOC *e*PPP 16 30 25.5
SOC *i* S S 16 35 14.3 -2.5
SOC *e* 16 35 57.9
SOC pmax pmax
comp=Z,210nm,0.8s,mb6.0
SOC pmax pmax
comp=Z,520nm,3.8s
SOC Sochi 71.71 314 *i P* **P** **16 26 05.5 +0.3**
SNART Snartemo 71.77 340 *eP* **P** **16 26 04.4 -0.9**
WAL1 Walls 71.81 346⇑ *eP* **P** **16 26 04.2 -1.3**
LRW Lerwick 71.84 345 *eP* **P** **16 26 05.5 -0.2**
LRW AMb AMB 16 26 07.9
comp=Z,816nm,1.9s,mb6.2
ANN Anapa 71.95 316*c iP* **P** **16 26 06.0 -0.6**
ANN *e**PP pP 16 26 32.3 +0.2
ANN *e* 16 28 44.3
ANN *i* S S 16 35 15.9 -3.6
ANN *i* *SS sS 16 35 59.0 -4.2
ANN *e*SSS 16 43 16.0
ANN pmax pmax
comp=Z,676nm,1.9s,mb6.2
ANN MLR MLR
comp=Z,6μm,23.0s
MBWA Marble Bar 72.12 210 P **P** **16 26 08.0 +0.2**
SNR=18
MBWA Marble Bar 72.12 210 *eP* **P** **16 26 07.4 -0.4**
comp=Z,130nm,1.0s,mb5.7
MBWA *e*pP pP 16 26 32.1 -1.2
MBWA SP 16 26 42.0
TRD Trivandrum 72.20 264 *eP* **P** **16 26 09.5 +1.0**
EYMN Ely 72.23 38⇑ *iP* **P** **16 26 07.5 -0.8**
comp=Z,2μm,1.5s,mb6.6
EYMN *e*pP pP 16 26 32.9 -0.8
BCA Borcka 72.27 312 *eP* **P** **16 26 09.1 +0.5**
ARTV Artvin 72.30 311 *i P* **P** **16 26 09.4 +0.7**
DYDN Diyadin 72.52 309 *i P* **P** **16 26 12.1 +2.0**
SDCO Great Sand Dun 72.68 54⇑ *iP* **P** **16 26 11.5 +0.4**
comp=Z,412nm,1.6s,mb6.0
SDCO *e*pP pP 16 26 37.1 +0.5
COP Copenhagen 72.78 336⇑ *iP* **P** **16 26 10.5 -0.9**
COP *i* S S 16 35 26.3 -2.3
COP *i* 16 36 27.1
COP pmax pmax
comp=Z,110nm,0.7s,mb5.8
COP MLR MLR
comp=Z,1μm,19.0s
COP Copenhagen 72.78 336⇑ *iP* **P** **16 26 10.5 -0.9**
comp=Z,109nm,0.7s,mb5.8
COP *i* S S 16 35 26.3 -2.3
COP *i* 16 36 27.1
COP
comp=Z,1μm,19.0s
WAR Warsaw 73.00 330 *eP* **P** **16 26 12.7 0.0**
WAR *e*S S 16 35 27.1 -4.2
WAR *e*SKSac SKSac 16 36 10.8 +2.0
WAR LMZ 16 55 48.6
comp=Z,5μm,27.6s
WAR Warsaw 73.00 330 *eP* **P** **16 26 12.7 0.0**
WAR *e*S S 16 35 27.1 -4.2
WAR *e* 16 36 10.8
WAR Warsaw 73.00 330 *eP* **P** **16 26 12.7 0.0**
WAR *e*S S 16 35 27.1 -4.2
WAR *e*SKSac SKSac 16 36 10.8 +2.0
WAR LR LR
comp=Z,5μm,27.6s
ECSD EROS,Sioux Fal 73.04 44⇑ *iP* **P** **16 26 12.4 -0.7**
comp=Z,850nm,1.1s,mb6.5
ECSD *e*pP pP 16 26 37.0 -1.7
HOMI Horasan 73.12 310 *i P* **P** **16 26 15.1 +1.4**
TUC Tucson 73.37 61 *eP* **P** **16 26 15.3 0.0**
TUC *e**PP pP 16 26 40.0 -0.8
TUC *e* 16 28 58.4
TUC pmax pmax
comp=Z,247nm,1.5s,mb5.8
TUC Tucson 73.37 61 *eP* **P** **16 26 15.3 0.0**
comp=Z,247nm,1.5s,mb5.8
TUC *e*pP pP 16 26 40.0 -0.8
TUC *e*PP PP 16 28 58.4 -1.1
TVAN Van 73.40 308 *i P* **P** **16 26 17.5 +2.2**
GKP Gorka Klasztor 73.41 333 *eP* **P** **16 26 14.4 -0.7**
GKP *e*S S 16 35 30.2 -5.6
GKP *e*SKSac SKSac 16 36 12.9 +1.0
GKP LMZ 17 01 17.4
comp=Z,6μm,20.9s
GKP Gorka Klasztor 73.41 333 *eP* **P** **16 26 14.5 -0.6**
GKP *e*S S 16 35 30.2 -5.7
GKP *e*SKSac SKSac 16 36 12.9 +1.0
GKP LR LR
comp=Z,6μm,20.9s
SIM Simferopol' 73.41 318*c iP* **P** **16 26 14.8 -0.5**
SIM *e**PP pP 16 26 40.0 -0.9
SIM *i* S S 16 35 28.5 -7.7
SIM *i* *SS sS 16 36 13.0 -7.0
SIM *e*PS 16 36 28.0
SIM pmax pmax
comp=Z,133nm,1.1s,mb5.7
SIM MLR MLR
comp=Z,7μm,21.3s
ERZM Erzurum 73.51 311 *i P* **P** **16 26 17.7 +1.7**
RGN Rugen 73.51 335 *eP* **P** **16 26 15.4 -0.3**
comp=Z,1μm,1.7s,mb6.4
EZM Erzurum 73.52 311 *eP* **P** **16 26 18.8 +2.8**
KTUT Trabzon 73.57 312 *eP* **P** **16 26 14.8 -1.5**
LVV L'vov 73.88 327*c iP* **P** **16 26 16.9 -1.0**
LVV *i* S S 16 35 39.0 -2.3
LVV *i* PS 16 36 15.0
LVV MLR MLR
comp=Z,2μm,16.0s
KOPT Kop Dagi 73.89 311 *i P* **P** **16 26 19.8 +1.6**
HAKT HAKKARI 73.93 307 *i P* **P** **16 26 19.8 +1.4**
MLA1 Latheron 73.95 346⇑ *eP* **P** **16 26 17.5 -0.6**
TATV Tatvan 74.04 309 *i P* **P** **16 26 20.7 +1.6**
LAZ Ladron 74.09 57 *eP* **P** **16 26 20.2 +0.7**
GUMT Gumushane 74.10 312 *eP* **P** **16 26 21.3 +1.9**
ANMO Albuquerque 74.10 56*c iP* **P** **16 26 19.9 +0.4**
ANMO Albuquerque 74.10 56 *eP* **P** **16 26 19.9 +0.4**
comp=Z,88nm,0.8s,mb5.5
ESPY Espiye-Giresun 74.16 313 *eP* **P** **16 26 20.1 +0.4**
KIS Kishinev 74.20 323 *αP* **P** **16 26 19.0 -0.8**
KIS *e**PP pP 16 26 48.0 +2.6
KIS *i* S S 16 35 40.0 -4.9
KIS *i* *SS sS 16 36 19.0 -10
KIS pmax pmax
comp=N,80nm,2.0s
KIS pmax pmax
comp=E,700nm,2.0s
KIS pmax pmax
comp=Z,1μm,2.0s,mb6.3
KIS pmax pmax
comp=N,8μm,2.0s
KIS pmax pmax
comp=E,700nm,2.0s
KIS pmax pmax
comp=Z,1μm,2.0s,mb6.3
KIS smax
comp=E,800nm,2.0s
KIS smax
comp=N,2μm,11.0s
KIS smax
comp=E,2μm,12.0s
KIS MLR MLR
comp=Z,6μm,17.0s
KIS MLR MLR
comp=N,5μm,15.0s
KIS MLR MLR
comp=Z,7μm,16.0s
KIS Kishinev 74.20 323⇑ *iP* **P** **16 26 19.0 -0.8**
comp=Z,1μm,2.0s,mb6.3
KIS *e*pP pP 16 26 48.0 +2.6
KIS *i* S S 16 35 40.0 -4.9
comp=Z,600nm,2.0s
KIS *i* sS sS 16 36 19.0 -10
KIS *e*SSS 16 42 52.0
KIS *e*LQ 16 50 20.0
KIS LRM 17 01 16.0
comp=Z,7μm,16.0s
RSC Scourie 74.21 347⇑ *eP* **P** **16 26 19.1 -0.6**
BNGL BINGOL 74.32 310 *i P* **P** **16 26 22.5 +1.8**
RTO Tolsta 74.35 347⇑ *eP* **P** **16 26 19.4 -1.0**
LENM Lemitar 74.36 57 *eP* **P** **16 26 21.5 +0.5**
GRSN GIRESUNGRSN 74.38 313 *i P* **P** **16 26 20.8 -0.2**
BANOM Banah 74.40 291 P **P** **16 26 22.5 +1.2**
SNR=34
REB Eisghbrachaidh 74.45 347⇑ *eP* **P** **16 26 20.2 -0.8**
MVH1 Achvaich 74.45 346⇑ *eP* **P** **16 26 20.4 -0.7**
LPM Los Pinos Moun 74.45 57 *eP* **P** **16 26 21.9 +0.3**
KWP Kalwaria 74.53 328 *eP* **P** **16 26 22.0 +0.3**
KWP *e*S S 16 35 43.9 -4.7
KWP *e*S S 16 35 44.5 -4.1
KWP *e*SKSac SKSac 16 36 21.7 +1.2
KWP LMZ 16 57 37.0
comp=Z,5μm,23.6s
KWP Kalwaria 74.53 328⇑ *iP* **P** **16 26 21.9 +0.2**
KWP Kalwaria 74.53 328 *eP* **P** **16 26 22.0 +0.3**
KWP *e*S S 16 35 43.9 -4.7
KWP *e*S S 16 35 44.5 -4.1
KWP *e*SKSac SKSac 16 36 21.7 +1.3
BNM Barren Site 74.57 57 *eP* **P** **16 26 22.6 +0.4**
IAS Iasi 74.57 323⇑ *iP* **P** **16 26 22.7 +0.7**
IAS Iasi 74.57 323 P **P** **16 26 22.8 +0.8**
MCD Coleburn Disti 74.62 345 *eP* **P** **16 26 21.4 -0.7**
COWI Conover 74.68 38⇑ *iP* **P** **16 26 21.9 -0.8**
comp=Z,206nm,0.7s,mb6.0
RRR Rubha Reidh 74.78 347⇑ *eP* **P** **16 26 22.2 -0.8**
MME1 Meikle Cairn 74.82 345⇑ *eP* **P** **16 26 22.1 -1.1**
BIDO Bidbid 74.84 288⇑⇑ **P** **16 26 25.2 +1.2**
SNR=40
RRH Rhenigidale 74.86 347⇑ *eP* **P** **16 26 22.8 -0.7**
BSEG Bad Segeberg 74.90 337 *eP* **P** **16 26 23.5 -0.3**
BSEG *e*S S 16 35 48.7 -3.9
BSEG *e*ScS ScS 16 36 25.5 -0.9
WBK Wadi Bani Khal 74.90 287 P **P** **16 26 26.3 +2.0**
SNR=70
MDO Dochfour 74.94 346⇑ *eP* **P** **16 26 23.1 -0.8**
SCHQ Schefferville 74.97 21 P **P** **16 26 24.2 0.0**
comp=Z,113nm,0.7s,mb5.7,baz=351,slow=6.3,SNR=85
SCHQ pP pP 16 26 51.4 +1.6
comp=Z,22nm,0.5s,baz=273,slow=8.7,SNR=1.6
SCHQ LR LR 17 04 18.4
comp=Z,2μm,18.3s,baz=330,slow=40
SCHQ Schefferville 74.97 21 P **P** **16 26 24.2 0.0**
SCHQ pP pP 16 26 51.4 +1.6
SCHQ LR LR 17 04 18.4
KAC Achnashellach 75.04 347⇑ *eP* **P** **16 26 24.0 -0.6**
CBKS Cedar Bluff 75.07 49 *eP* **P** **16 26 23.8 -1.2**
CBKS *e**PP pP 16 26 48.7 -2.0
CBKS pmax pmax
comp=Z,236nm,0.7s,mb6.0
CBKS Cedar Bluff 75.07 49 *eP* **P** **16 26 23.8 -1.2**
comp=Z,236nm,0.7s,mb6.0
CBKS *e*pP pP 16 26 48.7 -2.0
MSL Mosul 75.09 307 *i x* x 16 26 27.5
MSL *e*x x 16 26 36.0
MSL *i* x x 16 35 55.0
MSL *e*x x 16 36 24.0
OJC Ojcow 75.11 330⇑ *iP* **P** **16 26 24.7 -0.3**
OJC *e* 16 26 38.9
OJC *e*S S 16 35 49.6 -5.4
OJC *e* 16 36 23.7
OJC MLR MLR
comp=Z,4μm,20.0s
RUE Ruedersdorf 75.17 334 *eP* **P** **16 26 24.9 -0.4**
comp=Z,1μm,1.7s,mb6.4
BUR08 Bucovina Ar. S 75.18 325⇑ *iP* **P** **16 26 25.3 -0.2**
BURAR Bucovina Array 75.20 325⇑ *iP* **P** **16 26 25.4 -0.2**
BURAR Bucovina Array 75.20 325 P **P** **16 26 25.6 +0.1**
SMDO Samad 75.21 288 P **P** **16 26 27.3 +1.3**
SNR=33
KPL Plockton 75.25 347⇑ *iP* **P** **16 26 25.2 -0.6**
KPL AMb AMB 16 26 28.1
comp=Z,1μm,1.3s,mb6.5
STHS Stebnicka Huta 75.25 328 *eP* **P** **16 26 26.1 +0.2**
STHS pmax pmax
comp=Z,136nm,0.8s,mb5.7
STHS Stebnicka Huta 75.25 328 *eP* **P** **16 26 26.1 +0.2**
comp=Z,136nm,0.8s,mb5.7
RSDY Resadiye-TOKAT 75.25 313 *eP* **P** **16 26 27.4 +1.3**
HATD Hatta, Dubai 75.26 290⇑⇑ **P** **16 26 27.3 +0.9**
SNR=63
KOLS Kolonicke sedl 75.27 327 *eP* **P** **16 26 27.0 +1.0**
KOLS *e* 16 26 29.4
PTK Pertek 75.30 311 *eP* **P** **16 26 28.2 +1.9**
KSK Scoval 75.30 347⇑ *eP* **P** **16 26 24.7 -1.2**
HLG Helgoland 75.33 338 *eP* **P** **16 26 25.9 -0.4**
comp=Z,996nm,1.8s,mb6.2
KSB Sheil Bridge 75.34 347⇑ *eP* **P** **16 26 25.6 -0.6**
HOQ Hoqain 75.34 289⇓⇓ **P** **16 26 27.6 +0.8**
SNR=76
DIKM Dikmen 75.35 315 *eP* **P** **16 26 27.8 +1.2**
KVT Kavak 75.39 314 *eP* **P** **16 26 28.2 +1.4**
ASHO Ashiyiah 75.41 290 P **P** **16 26 28.2 +1.0**
SNR=82
UZH Uzhgorod 75.51 327*d iP* **P** **16 26 26.7 -0.7**
UZH *e*S S 16 35 56.0 -3.4
DIY Diyarbakir 75.58 310 *eP* **P** **16 26 30.3 +2.4**
NIE Niedzica 75.59 329 *i P* **P** **16 26 28.1 +0.3**
NIE *e*pP pP 16 26 52.3 -1.2
CRVS Cervenica-Dubn 75.60 328 *eP* **P** **16 26 27.7 -0.2**
CRVS *e*S S 16 35 54.9 -5.5
CRVS *e*SCS ScS 16 36 30.3 -1.9
DIYA Diyarbakir 75.62 310 *i P* **P** **16 26 29.6 +1.4**
TLCR 75.62 321⇓⇓ *iP* **P** **16 26 28.4 +0.3**
TLCR 75.62 321 P **P** **16 26 28.1 +0.1**
JMDO Jabal Madar 75.65 287 P **P** **16 26 30.0 +1.4**
SNR=71
KAR1 Arisaig 75.69 347⇑ *eP* **P** **16 26 27.6 -0.6**
BOYT Boyabat 75.70 315 *i P* **P** **16 26 30.8 +2.2**
TOKT Tokat 75.71 314 *eP* **P** **16 26 30.7 +2.0**
MARD Mardin 75.71 309 *i P* **P** **16 26 30.0 +1.3**
SVRC Sivrice-ELAZID 75.72 311 *eP* **P** **16 26 31.0 +2.2**
BZK Bozkurt 75.73 316 *eP* **P** **16 26 29.9 +1.1**
BYBT Boyabat 75.73 316 *eP* **P** **16 26 30.9 +2.1**
SVSK Karacayir 75.78 313 *eP* **P** **16 26 30.3 +1.2**
KSP Ksiaz 75.78 332 *eP* **P** **16 26 28.6 -0.2**
KSP *e*S S 16 35 54.2 -8.2
KSP *e*SKSac SKSac 16 36 32.0 +2.3
KSP *e*SS SS 16 40 55.7 +0.8
KSP LMZ 17 01 14.2
comp=Z,9μm,21.5s
KSP Ksiaz 75.78 332⇑ *eP* **P** **16 26 28.5 -0.4**
KSP *e*PP PP 16 29 18.0 -1.3
KSP *e*PPP 16 31 05.5
KSP *e*S S 16 35 57.0 -5.4
KSP *e*SKS 16 36 31.0
KSP LR LR
comp=Z,10μm,21.5s
RAC Raciborz 75.78 330 *eP* **P** **16 26 29.3 +0.4**
RAC *e* 16 26 40.1
RAC *e*S S 16 35 57.8 -4.6
RAC MLR MLR
comp=Z,4μm,16.0s
ELZG Elazig 75.80 311 *i P* **P** **16 26 30.8 +1.5**

ARMA Armidale 75.87 179 eP P 16 26 30.9 +1.5
ARMA e 16 26 38.4
ARMA epP pP 16 26 55.2 0.0
ODB Odobesti 75.91 323⇑iP P 16 26 31.7 +2.0
ODB Odobesti 75.91 323 ⇑P P 16 26 31.7 +2.0
EBH Black Hill 75.93 345⇑eP P 16 26 28.9 -0.7
VRI Vrincioaia 75.98 323⇑iP P 16 26 30.3 +0.2
VRI Vrincioaia 75.98 323 P P 16 26 30.5 +0.4
BSY Bisya 75.99 288 P P 16 26 31.8 +1.2
SNR=70
OKC Ostrava-Krasne 76.01 330⇑eP P 16 26 29.8 -0.4
OKC eS S 16 35 59.1 -5.8
OKC AMS AMS 17 07 40.0
comp=Z,3µm,14.9s
OKC Ostrava-Krasne 76.01 330 eP P 16 26 29.8 -0.4
OKC eS S 16 35 59.1 -5.8
PLOR Plostina 76.02 323⇓iP P 16 26 31.0 +0.7
SCIA State Center 76.06 43⇑iP P 16 26 30.2 -0.4
comp=Z,874nm,0.8s,mb6.5
SCIA epP pP 16 26 55.3 -1.0
ESY Stoneypath 76.08 345⇑eP P 16 26 29.8 -0.6
DARE Darende-Malaty 76.08 312 eP P 16 26 35.4 +4.6
BRD Bordesti 76.10 323⇓iP P 16 26 32.5 +1.7
EAB Aberfoyle 76.13 346⇑eP P 16 26 30.2 -0.6
UPC Upice 76.16 332⇑eP P 16 26 30.7 -0.3
EDI Edinburgh 76.18 345⇑iP P 16 26 30.2 -0.8
EDI AMb AMB 16 26 34.2
comp=Z,674nm,1.6s,mb6.1
DPC Dobruska-Polom 76.19 332⇑iP P 16 26 31.3 +0.1
DPC eS S 16 36 02.7 -4.2
DPC AMS AMS 17 05 10.0
comp=Z,4µm,16.4s
MALT Malatya 76.23 311 eP P 16 26 31.7 0.0
MALT Malatya 76.23 311⇑iP P 16 26 33.3 +1.6
MALT Malatya 76.23 311 P P 16 26 33.4 +1.7
NRDL Niedersach Rie 76.24 336 eP P 16 26 31.0 -0.4
comp=Z,1µm,1.9s,mb6.2
NRDL eS S 16 36 03.7 -3.6
NRDL eScS ScS 16 36 36.5 -0.8
MORC Moravsky Berou 76.27 331⇑iP P 16 26 31.7 0.0
MORC Moravsky Berou 76.27 331 P P 16 26 31.8 +0.1
EBL Broad Law 76.30 345⇑eP P 16 26 30.8 -0.9
EAU Auchinoon 76.30 345⇑eP P 16 26 31.4 -0.3
KECS Kecovo 76.31 328 eP P 16 26 30.5 -1.4
KECS pmax pmax
comp=Z,101nm,0.8s,mb5.6
KECS Kecovo 76.31 328 eP P 16 26 30.5 -1.4
comp=Z,101nm,0.8s,mb5.6
KECS eS S 16 36 02.8 -5.4
LIKS Likavka 76.33 329 eP P 16 26 32.9 +0.9
LIKS pmax pmax
comp=Z,422nm,1.5s,mb6.0
LIKS Likavka 76.33 329 eP P 16 26 32.9 +0.9
LIKS Likavka 76.33 329 eP P 16 26 32.9 +0.9
comp=Z,422nm,1.5s,mb6.0
BALT Daday 76.35 316 iP P 16 26 33.0 +0.7
CTKT Corum 76.36 315 iP P 16 26 33.5 +1.2
TIRR Tirgusor 76.37 321⇑iP P 16 26 32.1 -0.2
TIRR Tirgusor 76.37 321 P P 16 26 32.7 +0.4
HARR Harsova 76.40 322⇑iP P 16 26 33.0 +0.5
HARR Harsova 76.40 322 P P 16 26 33.1 +0.6
XSO Sourhope Farm 76.41 344⇑eP P 16 26 31.8 -0.6
TOS Tosya 76.42 316 eP P 16 26 34.3 +1.6
CLL Collm 76.43 334⇑iP P 16 26 31.9 -0.6
CLL iS S 16 36 04.7 -4.8
CLL i 16 36 23.9
CLL i 16 36 36.1
CLL pmax pmax
comp=Z,2µm,1.8s,mb6.5
CLL MLR MLR
comp=Z,3µm,21.8s
CLL Collm 76.43 334 eP P 16 26 31.6 -0.9
comp=Z,2µm,1.8s,mb6.5
CLL eS S 16 36 04.0 -5.5
CLL eScS ScS 16 36 37.3 -1.5
CLL Collm 76.43 334⇑iP P 16 26 31.9 -0.6
comp=Z,2µm,1.8s,mb6.5
CLL iPcP PcP 16 26 44.0 +0.1
CLL ex x 16 27 15.0
CLL ePP PP 16 29 25.0 +0.3
CLL ePPP 16 31 16.0
CLL iS S 16 36 04.7 -4.8
CLL i (SKSac) 16 36 23.9
CLL iScS ScS 16 36 36.1 -2.7
CLL eSP 16 36 47.0
CLL eSSS 16 44 42.0
CLL ex x 16 45 42.0
CLL eSSSS 16 46 36.0
CLL LmH 16 58 00.0
comp=N,6µm,19.1s
CLL LmH 16 58 00.0
comp=E,10µm,20.1s
CLL LmV 17 02 00.0
comp=Z,3µm,21.8s
CLL Collm 76.43 334⇑iP P 16 26 31.9 -0.6
comp=Z,2µm,1.8s,mb6.5
CLL iS S 16 36 04.7 -4.8
CLL iSKSac SKSac 16 36 23.9 -11
CLL iScS ScS 16 36 36.1 -2.7
CLL LR LR
comp=Z,3µm,21.8s
KSU1 Kansas State U 76.49 47⇑iP P 16 26 31.6 -1.5
comp=Z,250nm,0.7s,mb6.0
AKCD Akcadag 76.51 311 iP P 16 26 35.2 +1.9
BRG Berggiesshubel 76.52 333⇑iP P 16 26 32.3 -0.7
BRG e 16 26 40.0
BRG S S 16 36 08.0 -2.4
BRG PS 16 36 39.0
BRG pmax pmax
comp=Z,415nm,1.7s,mb5.9
BRG MLR MLR
comp=Z,3µm,17.9s
BRG MLR MLR
comp=N,4µm,20.1s
BRG MLR MLR
comp=E,4µm,20.1s
BRG Berggiesshubel 76.52 333 eP P 16 26 32.4 -0.6
comp=Z,684nm,1.6s,mb6.1
BRG eS S 16 36 04.7 -5.7
BRG eScS ScS 16 36 38.4 -1.2
BRG Berggiesshubel 76.52 333⇑iP P 16 26 32.3 -0.8
comp=Z,693nm,1.7s,mb6.1
BRG e 16 26 40.0
comp=Z,112nm,1.0s
BRG e 16 27 11.0
BRG S S 16 36 08.0 -2.4
BRG PS 16 36 39.0
BRG SS SS 16 40 54.0 -12
BRG LR LR
comp=Z,5µm,17.9s
BRG
comp=N,6µm,20.1s
BRG
comp=E,7µm,20.1s
BRG Berggiesshubel 76.52 333⇑iP P 16 26 32.3 -0.8
comp=E,415nm,1.7s,mb5.9
BRG e 16 26 40.0
BRG e 16 27 11.0
BRG S S 16 36 08.0 -2.4
BRG PS 16 36 39.0
BRG SS SS 16 40 54.0 -12
BRG LR LR
comp=Z,3µm,17.9s
PGBU Glenifferbraes 76.52 346⇑iP P 16 26 32.6 -0.3
PGBU AMb AMB 16 26 35.5
comp=Z,3µm,1.7s,mb6.7
MLR Muntele Rosu 76.61 323⇑iP P 16 26 33.7 +0.1
MLR Muntele Rosu 76.61 323 P P 16 26 33.9 +0.3
PVCC Panska Ves 76.61 333⇑eP P 16 26 33.3 -0.3
PVCC eS S 16 36 05.9 -5.6
PVCC AMS AMS 17 04 10.0
comp=Z,5µm,18.0s
BHD Baghdad 76.62 304 ix x 16 26 33.0
BHD ex x 16 26 53.0
BHD ex x 16 27 08.5
BHD ex x 16 36 09.0
BHD ex x 16 36 51.0
CVD Cernavoda 76.65 321⇓iP P 16 26 34.8 +0.9
CVD Cernavoda 76.65 321 ⇓P P 16 26 34.9 +0.9
FBE Freiberg 76.66 334 eP P 16 26 33.4 -0.4
comp=Z,2µm,1.8s,mb6.5
URFA Urfa 76.67 310 eP P 16 26 35.6 +1.4
JFWS Jewell Farm 76.67 41⇑iP P 16 26 32.7 -1.4
JFWS e*PP pP 16 26 59.6 -0.2
JFWS pmax pmax
comp=Z,166nm,0.7s,mb5.9
JFWS Jewell Farm 76.67 41⇑iP P 16 26 32.7 -1.4
comp=Z,166nm,0.7s,mb5.9
JFWS epP pP 16 26 59.6 -0.2
CLZ Clausthal 76.74 336 eP P 16 26 34.3 0.0
CLZ eS S 16 36 09.2 -3.7
CLZ e 16 36 40.3
CLZ pmax pmax
comp=Z,2µm,1.7s,mb6.5
CLZ Clausthal 76.74 336 eP P 16 26 34.3 0.0
comp=Z,2µm,1.7s,mb6.5
CLZ eS S 16 36 09.2 -3.7
CLZ eScS ScS 16 36 40.3 -1.1
ESK Eskdalemuir 76.76 345 P P 16 26 34.3 0.0
comp=Z,2µm,1.1s,mb6.8,SNR=29
ESK Eskdalemuir 76.76 345⇓eP P 16 26 32.9 -1.4
ESK AMb AMB 16 26 36.8
comp=Z,914nm,1.7s,mb6.2
CORM Corum 76.78 315 eP P 16 26 36.3 +1.6
DRGR 76.86 326⇑iP P 16 26 35.0 0.0
DRGR 76.86 326 P P 16 26 35.1 +0.1
SARI SarD1z-Kayseri 76.86 312 eP P 16 26 38.9 +3.7
ECK Cauldkaine Hil 76.87 345⇑eP P 16 26 34.2 -0.8
AMTX Amarillo 76.88 53⇑iP P 16 26 35.4 +0.1
comp=Z,1µm,1.4s,mb6.5
AMTX epP pP 16 26 59.8 -1.3
WIT Witteveen 76.89 338⇓eP P 16 26 35.0 -0.1
WIT Witteveen 76.89 338⇑iP P 16 26 35.8 +0.7
comp=Z,2µm,1.4s,mb6.7
SNX Sinaia 76.89 323⇓iP P 16 26 36.7 +1.4
SNX Sinaia 76.89 323 ⇓P P 16 26 36.6 +1.4
VYHS Vyhne 76.90 329 eP P 16 26 35.3 +0.1
VYHS eS S 16 36 11.0 -3.7
VYHS eScS ScS 16 36 42.4 -0.3
VYHS Vyhne 76.90 329 eP P 16 26 35.3 +0.1
comp=Z,41nm,0.7s,mb5.3
VYHS eS S 16 36 11.0 -3.7
VYHS eScS ScS 16 36 42.4 -0.3
VYHS LR LR
comp=Z,5µm,27.9s
SAFT Safranbolu 76.92 317 eP P 16 26 37.1 +1.6
ATAB Bozova 76.93 311 iP P 16 26 37.2 +1.6
CANT Cankiri 76.95 316 eP P 16 26 37.3 +1.6
KOLL Kolacno 76.98 329 eP P 16 26 35.9 +0.2
VRAC Vranov 76.99 331⇑iP P 16 26 36.0 +0.3
VRAC Vranov 76.99 331 P P 16 26 36.1 +0.3
PSZ Piszkesteto 77.00 328⇑iP P 16 26 36.4 +0.6
PSZ Piszkesteto 77.00 328⇑iP P 16 26 36.2 +0.4
PSZ Piszkesteto 77.00 328 P P 16 26 36.0 +0.3
XAL Allendale 77.00 344⇑eP P 16 26 35.0 -0.6
JAVC Velka Javorina 77.00 330 P P 16 26 36.6 +0.8
PINB Pinarbasi 77.02 313 iP P 16 26 37.5 +1.4
VOIR 77.02 324⇓iP P 16 26 36.5 +0.5
VOIR 77.02 324 P P 16 26 36.5 +0.5
IBBN Ibbenburen 77.06 337 eP P 16 26 35.6 -0.4
comp=Z,452nm,0.8s,mb6.2
IBBN eS S 16 36 11.2 -5.0
IBBN eScS ScS 16 36 41.7 -2.2
PSN Preselentsi 77.09 321 iP P 16 26 30.3 -6.1
PRU Pruhonice 77.09 332⇑iP P 16 26 36.1 -0.2
PRU eS S 16 36 11.5 -5.2
PRU AMS AMS 17 04 30.0
comp=Z,4µm,16.5s
ELDT Eldivan 77.13 316 iP P 16 26 37.8 +1.1
BNN Bunyan 77.17 313 eP P 16 26 38.0 +1.1
UMR Umm Al-Rimmam 77.29 299 iP P 16 26 38.4 +0.6
baz=299
UMR AMb AMB 16 26 39.3
comp=Z,1µm,1.0s,mb6.5,baz=299
GCD Castle Douglas 77.32 345⇑eP P 16 26 36.9 -0.6
CDAG Cicekdag 77.33 315 iP P 16 26 39.5 +1.7
MIB Mutribah 77.34 300 iP P 16 26 38.6 +0.6
baz=300
MIB AMb AMB 16 26 40.1
comp=Z,2µm,1.2s,mb6.6,baz=300
TREC Trest 77.38 331⇑iP P 16 26 37.6 -0.3
TREC eS S 16 36 14.7 -5.1
TREC AMS AMS 17 03 10.0
comp=Z,4µm,18.3s
WERD Werda 77.40 334 eP P 16 26 37.6 -0.4
comp=Z,1µm,1.9s,mb6.3
GZT Gaziantep 77.40 311 iP P 16 26 39.9 +1.7
MOX Moxa 77.44 334 eP P 16 26 37.8 -0.4
comp=Z,1µm,1.9s,mb6.3
MOX
comp=Z,2µm,24.0s
MOX Moxa 77.44 334 eP P 16 26 37.8 -0.4
MOX pmax pmax
comp=Z,1µm,1.9s,mb6.3
MOX MLR MLR
comp=Z,2µm,24.0s
MOX Moxa 77.44 334 eP P 16 26 37.8 -0.4
comp=Z,1µm,1.9s,mb6.3
MOX eS S 16 36 15.8 -4.6
MOX eScS ScS 16 36 45.8 -1.2
KDZE Karadeniz Ereo 77.45 317 eP P 16 26 38.7 +0.3
GAL1 Galloway 77.46 345⇑iP P 16 26 37.7 -0.5
GAL1 AMb AMB 16 26 40.5
comp=Z,1µm,1.6s,mb6.4
GUNZ Gunzen 77.46 334 eP P 16 26 38.1 -0.2
comp=Z,279nm,0.9s,mb6.0
WERN Wernitzgruen 77.52 334 eP P 16 26 38.4 -0.2
comp=Z,295nm,0.8s,mb6.1
BERN Bernov 77.52 334⇑P pP 16 27 01.8 -2.7
NKC Novy Kostel 77.54 334⇑iP P 16 26 38.3 -0.5
NKC eS S 16 36 15.2 -6.4
NKC AMS AMS 17 04 30.0
comp=Z,4µm,16.5s
NKC Novy Kostel 77.54 334⇑iP P 16 26 38.3 -0.5
NKC eS S 16 36 15.2 -6.4
MODS Modra-Piesok 77.55 330 eP P 16 26 39.6 +0.7
MODS eS S 16 36 19.2 -2.6
MODS eSCS ScS 16 36 48.9 +0.8
KBD Kabd 77.58 299 iP P 16 26 40.1 +0.7
baz=299
KBD AMb AMB 16 26 41.6
comp=Z,758nm,1.3s,mb6.3,baz=299
GLMI Grayling 77.62 36⇑iP P 16 26 38.9 -0.4
comp=Z,1µm,0.8s,mb6.6
WTSB Winterswijk 77.62 338⇑iP P 16 26 38.8 -0.4
comp=Z,684nm,0.8s,mb6.4
KMRS Kahramanmaras 77.64 312 eP P 16 26 40.9 +1.3
BUD Budapest 77.68 328 iP P 16 26 40.3 +0.7
STKA Stephens Creek 77.70 187 eP P 16 26 40.2 +0.6
comp=Z,15nm,0.9s
STKA e 16 26 45.8
STKA epP pP 16 27 04.8 -0.7
STKA Stephens Creek 77.70 187 P P 16 26 40.5 +0.9
comp=Z,24nm,1.0s,mb4.9,baz=353,slow=7.5,SNR=22
STKA pP pP 16 27 05.0 -0.5
comp=Z,49nm,0.9s,baz=319,slow=10.0,SNR=4.7
STKA PKKPbc PKKPbc 16 45 42.0 -0.2
comp=Z,3.4nm,1.0s,baz=336,slow=5.8,SNR=2.9
STKA LR LR 17 00 38.3
comp=Z,2µm,18.8s,baz=354,slow=35
GAZ Gaziantep 77.72 311 eP P 16 26 41.3 +1.2
SGKT Sivrigoynuk 77.73 317 iP P 16 26 41.2 +1.2
HPK Haverah Park 77.74 343⇑eP P 16 26 39.8 0.0
HPK AMb AMB 16 26 42.5
comp=Z,2µm,1.8s,mb6.5
UBBA Unterbreizbach 77.76 335 eP P 16 26 39.5 -0.5
comp=Z,411nm,1.1s,mb6.1
UBBA eS S 16 36 19.3 -4.6
UBBA eScS ScS 16 36 48.6 -1.0
ZST Bratislava 77.77 330 eP P 16 26 41.0 +0.9
ZST pmax pmax
comp=Z,203nm,0.9s,mb5.8
ZST Bratislava 77.77 330 eP P 16 26 41.0 +0.9
comp=Z,203nm,0.9s,mb5.8
ZST eS S 16 36 20.6 -3.5
ZST eScS ScS 16 36 47.7 -2.1
RST Umm Al-Ruwaisa 77.77 300 iP P 16 26 40.8 +0.4
baz=300
RST AMb AMB 16 26 42.3
comp=Z,54nm,1.1s,mb5.2,baz=300
NAY Al-Naaiem 77.80 299 iP P 16 26 41.0 +0.4
baz=299
NAY AMb AMB 16 26 42.6
comp=Z,763nm,1.2s,mb6.3,baz=299
PRD Provadia 77.81 321 iP P 16 26 40.6 +0.2
MANZ Manzenberg 77.86 334 eP P 16 26 40.3 -0.3
comp=Z,581nm,1.6s,mb6.1
MANZ eS S 16 36 19.6 -5.4
MANZ eScS ScS 16 36 50.1 -0.4
ANDN Andirin 77.87 312 iP P 16 26 42.3 +1.4
LDU Leeds Universi 77.87 343⇑eP P 16 26 40.4 -0.2
LOD Lodumlu 77.92 316 eP P 16 26 41.3 +0.2
ANTO Ankara 77.92 316 eP P 16 26 42.1 +1.1
ANTO Ankara 77.92 316 P P 16 26 42.2 +1.1
SNR=89
ANTO Ankara 77.92 316⇑iP P 16 26 41.8 +0.7
ANTO pmax pmax
comp=Z,984nm,1.3s,mb6.4
ANTO Ankara 77.92 316⇑iP P 16 26 42.0 +0.9
ANTO Ankara 77.92 316⇑iP P 16 26 41.8 +0.7
comp=Z,984nm,1.3s,mb6.4
GIM North Isle of 77.96 345⇑eP P 16 26 40.6 -0.5
BUG Bochum--Univer 77.97 337 eP P 16 26 40.5 -0.6
comp=Z,2µm,1.8s,mb6.5
BUG eS S 16 36 22.4 -3.7
BUG eScS ScS 16 36 49.9 -1.4
ROTZ Rotzenmuhle 78.03 334 eP P 16 26 41.6 +0.1
comp=Z,1µm,1.7s,mb6.4
ROTZ eS S 16 36 22.6 -4.2
ROTZ eScS ScS 16 36 52.9 +1.1
HENT Hendek 78.09 317 iP P 16 26 42.3 +0.2
WIM Isle of Man 78.14 345⇑eP P 16 26 41.6 -0.4
AWI1 Witton 78.14 341 eP P 16 26 42.7 +0.7
KHC Kasperske Hory 78.15 332⇑iP P 16 26 42.2 0.0
KHC e 16 26 46.5
KHC eS S 16 36 23.1 -5.0
KHC MLR MLR
comp=Z,6µm,16.0s
KHC Kasperske Hory 78.15 332⇑iP P 16 26 42.2 0.0
KHC x x 16 26 46.5
KHC x x 16 26 59.5
KHC eS S 16 36 23.1 -5.0
KHC AMS AMS 17 05 10.0
comp=Z,6µm,16.0s
KHC Kasperske Hory 78.15 332⇑iP P 16 26 42.2 0.0
KHC e 16 26 46.5
KHC e 16 26 59.5
KHC eS S 16 36 23.1 -5.0
KHC LR LR
comp=Z,6µm,16.0s
ABA1 Baconsthorpe 78.15 341⇑eP P 16 26 42.7 +0.6
LHO Holmfirth 78.17 343⇑eP P 16 26 41.9 -0.4
KOZT Kozan 78.22 312 eP P 16 26 45.3 +2.6
MDU Mudurnu 78.22 317 eP P 16 26 44.0 +1.2
BZS Buzias 78.26 326⇑iP P 16 26 42.5 -0.3
BZS Buzias 78.26 326 P P 16 26 42.6 -0.2
GMM Mts of Mourne 78.27 346⇑eP P 16 26 42.2 -0.6
ZIMR 78.33 322⇑iP P 16 26 43.7 +0.4
ZIMR 78.33 322 P P 16 26 43.8 +0.5
GEC2 GERESS Array S 78.36 332 eP P 16 26 42.9 -0.4
GEC2 eS S 16 36 26.3 -4.1
GEC2 e 16 36 54.2
GEC2 pmax pmax
comp=Z,254nm,0.8s,mb6.0
GEC2 GERESS Array S 78.36 332 eP P 16 26 42.9 -0.4
comp=Z,254nm,0.8s,mb6.0
GEC2 eS S 16 36 26.3 -4.1
GEC2 eScS ScS 16 36 54.2 -0.3
GERES GERESS Array B 78.36 332 P P 16 26 43.1 -0.3
comp=Z,132nm,0.6s,mb5.9,baz=35,slow=5.4,SNR=867
GERES PKKPbc PKKPbc 16 45 37.0 -1.2
comp=Z,0.2nm,0.4s,baz=132,slow=2.0,SNR=3.8
GERES PKP2bc 16 54 03.6
comp=Z,1.6nm,1.1s,baz=176,slow=4.0,SNR=5.2
GERES LR LR 17 04 25.2
comp=Z,4µm,20.0s,baz=32,slow=38
GERES GERESS Array B 78.36 332 P P 16 26 43.1 -0.3
GERES PKKPbc PKKPbc 16 45 37.0 -1.2
GERES ⇑e 16 54 03.6
GERES LR LR 17 04 25.2
WET Wettzell 78.36 333 eP P 16 26 43.4 +0.1
WET eS S 16 36 26.6 -3.8
WET e 16 36 55.6
WET pmax pmax
comp=Z,2µm,1.7s,mb6.5
WET Wettzell 78.36 333 eP P 16 26 43.4 +0.1
comp=Z,2µm,1.7s,mb6.5
WET eS S 16 36 26.6 -3.8
WET eScS ScS 16 36 55.6 +1.0
NIG Nigde 78.36 313 eP P 16 26 45.4 +1.8
KBI1 Birley Grange 78.38 343⇑eP P 16 26 43.0 -0.3
AEU East Anglia Un 78.38 341 eP P 16 26 43.7 +0.3
GRA1 Grafenberg Arr 78.40 334 eP P 16 26 43.6 +0.1
comp=Z,3µm,1.8s,mb6.7
GRA1 eS S 16 36 27.7 -3.0
GRA1 eScS ScS 16 36 55.5 +0.7
GRA1 eP'P' 16 54 00.8
GRF Grafenberg Arr 78.40 334 eP P 16 26 43.6 +0.1
GRF eS S 16 36 27.7 -3.0
GRF e 16 36 55.5
GRF pmax pmax
comp=Z,3µm,1.8s,mb6.7
GRF Grafenberg Arr 78.40 334 eP P 16 26 43.6 +0.1
GRF eS S 16 36 27.7 -3.0
GRF e 16 36 55.5
GRF pmax pmax
comp=Z,3µm,1.8s,mb6.7
GRF Grafenberg Arr 78.40 334 eP P 16 26 43.6 +0.1
comp=Z,3µm,1.8s,mb6.7
GRF eS S 16 36 27.7 -3.0
GRF eScS ScS 16 36 55.5 +0.7
GRF ePKPPKP 16 54 00.8
GRF Grafenberg Arr 78.40 334 eP P 16 26 43.6 +0.1
comp=Z,3µm,1.8s,mb6.7
GRF eS S 16 36 27.7 -3.0
GRF eScS ScS 16 36 55.5 +0.7
SZH Strazhica 78.40 322 iP P 16 26 43.8 +0.1
SILT Sile 78.42 318 eP P 16 26 43.7 -0.1
CONA Conrad Observa 78.43 331 iP P 16 26 44.2 +0.5
comp=Z,2µm,1.9s,mb6.6,SNR=335
CSNA Conrad Observa 78.43 331⇑iP P 16 26 44.3 +0.6
comp=Z,2µm,1.9s,mb6.6
CRAR CRAIOVA 78.44 324 P P 16 26 44.6 +0.7
WMOK Wichita Mounta 78.60 52⇑iP P 16 26 44.5 -0.4
WMOK e*PP pP 16 27 10.2 -0.6
WMOK e 16 29 42.7
WMOK pmax pmax
comp=Z,177nm,0.8s,mb5.9
WMOK Wichita Mounta 78.60 52⇑iP P 16 26 44.5 -0.4
comp=Z,177nm,0.8s,mb6.0
WMOK epP pP 16 27 10.2 -0.6
WMOK ePP PP 16 29 42.7 -0.7
KLYT Kilyos 78.62 319 eP P 16 26 45.6 +0.7
KWF Weaver Farm 78.67 343⇑eP P 16 26 44.6 -0.4
STNC Stoke 78.67 343⇑iP P 16 26 45.0 0.0
STNC AMb AMB 16 26 49.9
comp=Z,2µm,1.8s,mb6.6
DJES Djerdap 78.69 325 P P 16 26 43.4 -1.8
PVL Pavlikeni 78.70 322 iP P 16 26 45.2 -0.1
COBT Iskenderun 78.72 311 iP P 16 26 46.9 +1.4
TNS Taunus Mts 78.74 336 eP P 16 26 45.1 -0.3
TNS eS S 16 36 29.9 -4.5
TNS e 16 36 55.9
TNS pmax pmax
comp=Z,341nm,0.9s,mb6.2
TNS Taunus Mts 78.74 336 eP P 16 26 45.1 -0.3
comp=Z,341nm,0.9s,mb6.2
TNS eS S 16 36 29.9 -4.5
TNS eScS ScS 16 36 55.9 -1.7
DMUB Kingscourt 78.76 346 eP P 16 26 45.9 +0.5
ISK Istanbul-Kandi 78.76 319 eP P 16 26 45.7 0.0
JMB Yambol 78.76 321 eP P 16 26 46.2 +0.6
JMB Yambol 78.76 321 iP P 16 26 46.0 +0.3
KARA Karaisali 78.78 313 eP P 16 26 47.2 +1.3
FORT Forrest 78.80 199 eP P 16 26 46.4 +0.6
comp=Z,72nm,0.7s,mb5.6
FORT e 16 26 51.1
FORT epP pP 16 27 10.7 -1.0
BGKT Bogazkoy 78.80 319 eP P 16 26 46.6 +0.6
YURE YUREGIR 78.81 312 iP P 16 26 47.9 +1.9
CWF Charnwood Fore 78.82 343⇑iP P 16 26 45.3 -0.5
CWF AMb AMB 16 26 49.3
comp=Z,1µm,1.8s,mb6.5
WPM1 Penmaenmawr 78.84 344⇑eP P 16 26 45.1 -0.8
PKSM Moragy 78.90 328⇑iP P 16 26 45.6 -0.7
PKSM Moragy 78.90 328 P P 16 26 45.8 -0.6
WLF1 Llynfaes 78.91 345 eP P 16 26 45.4 -0.9
WLF1 AMb AMB 16 26 49.4
comp=Z,941nm,1.7s,mb6.3
HGN Heimansgroeve 78.94 338⇑eP P 16 26 45.9 -0.6

HGN Heimansgroeve 78.94 338⇑ *i* P P 16 26 46.2 -0.3
comp=Z,854nm,1.7s,mb6.3
HGN Heimansgroeve 78.94 338 *i* S S 16 36 30.9 -5.6
ADVT Abdulvahap 78.94 318 *e*P P 16 26 46.6 -0.1
YRC Rhoscolyn 78.98 345⇑ *e*P P 16 26 45.9 -0.7
BEBN Eben Emael 78.98 338 P P 16 26 46.5 -0.2
ELBA Catalca 78.99 319 *i* P P 16 26 46.9 0.0
YLL Llanberis 79.01 345⇑ *e*P P 16 26 46.3 -0.5
YLV Yalova 79.01 318 *e*P P 16 26 47.2 +0.1
SLVT Silivri 79.02 319 *e*P P 16 26 48.2 +1.0
MOA Molln 79.04 331 *i* P P 16 26 47.1 0.0
comp=Z,2µm,2.5s,mb6.5,SNR=149
SBD1 Bryn Du 79.06 344⇑ *e*P P 16 26 47.1 0.0
MEM Membach 79.06 338 P P 16 26 46.7 -0.4
comp=Z,470nm,1.7s,mb6.0
HTY Hatay 79.08 311 *e*P P 16 26 49.4 +1.9
ARSA Arzberg 79.13 330⇓ *i*P P 16 26 47.8 +0.2
comp=Z,2µm,2.1s,mb6.5,SNR=189
KIZT Kizilcal 79.13 316 *e*P P 16 26 48.5 +0.7
SIND Sindeldorf 79.19 335 P P 16 26 47.5 -0.3
EDRB Edirne 79.19 321 *e*P P 16 26 47.8 -0.2
TOD Tromm 79.19 336 *e*P P 16 26 47.8 -0.1
GEMT Gemlik 79.20 318 *e*P P 16 26 48.6 +0.5
YRE Yr Eifl 79.21 345⇑ *e*P P 16 26 47.0 -0.9
DLF Lyons Farm 79.28 346 *e*P P 16 26 48.8 +0.5
KDHN Kadinhani 79.30 315 *i* P P 16 26 49.0 +0.4
CRLT Corlu 79.32 320 *e*P P 16 26 51.5 +2.7
UCC Uccle 79.32 339 P P 16 26 48.0 -0.5
comp=Z,570nm,1.9s,mb6.1
SWS Schriesheim-Wi 79.33 336 P P 16 26 48.6 0.0
HLM1 Long Mynd 79.35 344⇑ *e*P P 16 26 48.7 0.0
DCN Croghan 79.36 346 *e*P P 16 26 49.1 +0.4
MERS Mersin 79.36 313 *e*P P 16 26 49.9 +0.9
LPIG La Paz 79.42 66 P P 16 26 49.5 0.0
comp=Z,46nm,0.6s,mb5.5,baz=30,slow=2.3,SNR=8.2
LPIG LR LR 16 53 38.0
comp=Z,863nm,21.6s,baz=330,slow=29
BCLA Clavier 79.42 338 P P 16 26 48.8 -0.3
comp=Z,321nm,1.2s,mb6.0
LADK Ladik-KONYA 79.42 315 *e*P P 16 26 50.2 +0.9
ULDT Uludag 79.46 318 *i* P P 16 26 50.1 +0.6
TKR Tekirdag 79.52 320 *e*P P 16 26 51.0 +1.2
DIM Dimitrovgrad 79.56 321 *i* P P 16 26 50.5 +0.5
KOGS Kog 79.56 330⇑ *i*P P 16 26 49.6 -0.4
RUP Ruppelstein 79.60 337 *e*P P 16 26 49.9 -0.2
KONT Konya--Tatoy 79.62 315 *e*P P 16 26 51.3 +0.9
KTD Kalmit 79.66 336 *e*P P 16 26 50.1 -0.3
SSW Stow on the Wo 79.66 343⇑ *e*P P 16 26 50.4 0.0
SKP1 Kophill 79.67 342⇑ *e*P P 16 26 49.8 -0.6
HDH Heidenheim-Cha 79.69 334 P P 16 26 50.9 +0.3
FUR Furstenfeldbru 79.73 333 *e*P P 16 26 50.7 -0.1
FUR *e*S S 16 36 41.4 -3.5
FUR *e* 16 37 06.8
FUR pmax pmax
comp=Z,3µm,1.8s,mb6.8
FUR Furstenfeldbru 79.73 333 *e*P P 16 26 50.7 -0.1
comp=Z,3µm,1.8s,mb6.8
FUR *e*S S 16 36 41.4 -3.5
FUR *e*ScS ScS 16 37 06.8 +1.1
HAE Alders End 79.74 343⇑ *e*P P 16 26 50.7 -0.1
PGB Panagyurishte 79.74 323 *i* P P 16 26 51.0 0.0
MEST Erdemli 79.77 313 *i* P P 16 26 51.7 +0.4
SOKA Soboth 79.79 330⇑ *i*P P 16 26 51.3 +0.1
comp=Z,2µm,1.8s,mb6.7
MFT Murefte 79.80 320 *e*P P 16 26 52.6 +1.3
PERS Pernice 79.80 330⇑ *e*P P 16 26 51.2 0.0
PERS *e*S S 16 36 41.1 -4.7
PERS *e* 16 37 04.3
MRMT Marmara Adasi 79.80 319 *e*P P 16 26 51.5 +0.1
TFO1 Folkestone 79.81 341⇑ *e*P P 16 26 50.8 -0.4
TFO1 AMb AMB 16 26 54.0
comp=Z,2µm,1.3s,mb6.9
STU Stuttgart 79.82 335 *e*P P 16 26 50.9 -0.4
comp=Z,2µm,1.7s,mb6.5
STU *e*S S 16 36 42.0 -3.9
STU *e*ScS ScS 16 37 06.5 0.0
GIVF Givet 79.84 338⇑ *i*P P 16 26 51.2 -0.2
comp=Z,2µm,1.6s,mb6.5
GIVF Givet 79.84 338⇑ *i*P P 16 26 51.2 -0.2
GIVF pmax pmax
comp=Z,1µm,1.6s,mb6.5
GIVF Givet 79.84 338⇑ *i*P P 16 26 51.2 -0.2
comp=Z,1µm,1.6s,mb6.5
HTR Trewern Hill 79.84 344⇑ *e*P P 16 26 51.3 0.0
BNT Bandirma 79.85 319 *e*P P 16 26 52.7 +1.0
ALT Altintas 79.85 317 *e*P P 16 26 52.7 +1.0
MCH1 Michaelchurch 79.87 343⇑ *i*P P 16 26 51.4 -0.1
MCH1 AMb AMB 16 26 54.2
comp=Z,2µm,1.6s,mb6.7
PLD Plovdiv 79.87 322 *e*P P 16 26 51.7 0.0
PLD Plovdiv 79.87 322 *i* P P 16 26 51.2 -0.5
WLF Walferdange 79.88 337 P P 16 26 51.6 0.0
comp=Z,401nm,1.9s,mb5.9
WLF Walferdange 79.88 337 *e*P P 16 26 51.8 +0.2
comp=Z,1µm,1.9s,mb6.5
WLF *e*S S 16 36 43.2 -3.3
WLF *e*ScS ScS 16 37 07.0 +0.1
DOU Dourbes 79.90 338 P P 16 26 51.2 -0.5
comp=Z,31nm,1.9s,mb4.8
SART Tekirdag 79.92 320 *i* P P 16 26 52.2 +0.2
RKY Sarkoy-Tekirda 79.92 320 *e*P P 16 26 52.6 +0.6
KDZ Kurdzhali 79.93 321 *i* P P 16 26 52.0 0.0
ZAVS Zavodnje 80.00 330 P P 16 26 51.3 -1.0
KBA Koelnbreinsper 80.02 332⇑ *i*P P 16 26 52.7 +0.4
comp=Z,2µm,1.8s,mb6.7,SNR=676
KBA Koelnbreinsper 80.02 332⇑ *i*P P 16 26 52.8 +0.4
KBA pmax pmax
comp=Z,2µm,1.8s,mb6.7
SLM Saint Louis 80.03 44⇑ *i*P P 16 26 52.0 -0.6
SLM pmax pmax
comp=Z,479nm,0.8s,mb6.4
SLM Saint Louis 80.03 44⇑ *i*P P 16 26 52.0 -0.7
comp=Z,479nm,0.8s,mb6.4
BAIF Baives 80.04 338⇑ *i*P P 16 26 52.4 0.0
comp=Z,2µm,1.5s,mb6.4
BAIF Baives 80.04 338⇑ *i*P P 16 26 52.4 0.0
BAIF pmax pmax
comp=Z,937nm,1.5s,mb6.4
BAIF Baives 80.04 338⇑ *i*P P 16 26 52.4 0.0
comp=Z,936nm,1.5s,mb6.4
SHUT Suhut-Afyon 80.04 316 *e*P P 16 26 53.8 +1.1
LBG Lerchenberg 80.04 335 P P 16 26 52.4 -0.1
LANF Langenberg 80.04 336 *e*P P 16 26 52.5 -0.0
GRUS Gruza 80.05 325 P P 16 26 52.3 -0.3
BUCH Bad Urach 80.06 335 P P 16 26 52.9 +0.3
SWN1 Swindon 80.08 343⇑ *e*P P 16 26 52.1 -0.5
SWN1 AMb AMB 16 26 55.6
comp=Z,4µm,1.7s,mb7.0
MENF Mencas 80.09 340 *e*P P 16 26 52.5 -0.2
OBKA Obir 80.10 331 *i* P P 16 26 52.8 -0.1
comp=Z,3µm,2.8s,mb6.5,SNR=158
GDZ Gediz 80.13 317 *i* P P 16 26 53.5 +0.3
RAO Raoul Island 80.15 152 LR LR 17 02 53.4
comp=Z,856nm,18.4s,baz=180,slow=36
WOL Wolverton 80.15 342⇑ *e*P P 16 26 52.7 -0.3
WOL AMb AMB 16 26 55.4
comp=Z,2µm,1.9s,mb6.7
DIVS Divibare 80.16 326 *e*P P 16 26 52.8 -0.4
HGH Gray Hill 80.17 343⇑ *e*P P 16 26 53.0 -0.1
DURS Dursunbey 80.19 318 *i* P P 16 26 53.8 +0.3
RZN Rozhen 80.21 322 *i* P P 16 26 53.7 +0.2
ALN Alexandroupoli 80.27 320 *e*P P 16 26 54.0 +0.1
IKL Isikli 80.27 313 *e*P P 16 26 54.3 +0.3
BTOK Tokmak 80.27 318 *i* P P 16 26 54.3 +0.4
RDO Rodhopi 80.29 321 *e*P P 16 26 54.4 +0.4
MYKA Terra Mystica 80.31 331⇓ *i*P P 16 26 53.6 -0.4
comp=Z,6µm,2.0s,mb7.0
HDMB Hadim 80.32 314 *e*P P 16 26 54.9 +0.7
ENEZ Enez 80.36 320 *e*P P 16 26 54.9 +0.6
SISC Sisak 80.36 329 *i* P P 16 26 54.5 +0.3
WATA Walderalm 80.37 333⇑ *i*P P 16 26 54.7 +0.4
comp=Z,3µm,1.9s,mb6.8,SNR=142
WATA Walderalm 80.37 333⇑ *i*P P 16 26 54.7 +0.4
WATA pmax pmax
comp=Z,3µm,1.9s,mb6.8
LPK Lapseki 80.37 320 *e*P P 16 26 55.8 +1.4
FKH Fakeheh 80.37 310⇑ *e*P P 16 26 55.9 +1.4
STR Strasbourg 80.41 336 *e*P P 16 26 54.9 +0.4
WTTA Wattenberg 80.41 333⇑ *i*P P 16 26 55.0 +0.5
comp=Z,3µm,1.9s,mb6.8,SNR=379
WTTA Wattenberg 80.41 333⇑ *i*P P 16 26 55.1 +0.6
WTTA pmax pmax
comp=Z,3µm,1.9s,mb6.8
BALB Balikesir 80.44 319 *e*P P 16 26 54.3 -0.5
FVM French Village 80.45 44⇑ *i*P P 16 26 54.3 -0.6
FVM pmax pmax
comp=Z,848nm,1.4s,mb6.4
FVM French Village 80.45 44⇑ *i*P P 16 26 54.3 -0.6
comp=Z,848nm,1.4s,mb6.4
BFO Black Forest 80.47 335 P P 16 26 54.2 -0.6
comp=Z,2µm,1.0s,mb6.9
BFO Black Forest 80.47 335 *e*P P 16 26 54.3 -0.5
BFO *e*S S 16 36 48.1 -4.6
BFO pmax pmax
comp=Z,1µm,1.7s,mb6.4
BFO Black Forest 80.47 335 *e*P P 16 26 54.3 -0.5
comp=Z,1µm,1.7s,mb6.4
BFO *e*S S 16 36 48.1 -4.6
BFO *e*ScS ScS 16 37 11.2 -0.6
BALY Balya 80.48 319 *i* P P 16 26 54.8 -0.2
RETA Reutte 80.49 333⇑ *i*P P 16 26 55.2 +0.2
comp=Z,2µm,2.0s,mb6.6,SNR=164
MOTA Moosalm 80.51 333⇑ *i*P P 16 26 55.2 +0.2
comp=Z,2µm,1.7s,mb6.7,SNR=279
MOTA Moosalm 80.51 333⇑ *i*P P 16 26 55.2 +0.2
MOTA pmax pmax
comp=Z,2µm,1.7s,mb6.7
LJU Ljubljana 80.52 330⇑ *i*P P 16 26 54.4 -0.7
LJU *e*S S 16 36 47.8 -5.5
LJU Ljubljana 80.52 330⇑ *i*P P 16 26 54.4 -0.7
LJU *e*S S 16 36 47.8 -5.5
LJU *e* 16 37 09.2
UBR Ueberruh 80.52 334 P P 16 26 55.6 +0.5
DEMI Demirci 80.53 318 *i* P P 16 26 55.5 +0.2
SPAK Spaichingen-Ko 80.55 335 *e*P P 16 26 55.3 +0.1
TKTP Tekketepe 80.55 316 *i* P P 16 26 55.8 +0.4
EREN Erenkoy 80.56 312 *e*P P 16 26 56.3 +0.8
ABTA Abfaltersbach 80.58 332⇑ *i*P P 16 26 54.8 -0.6
comp=Z,907nm,1.9s,mb6.3,SNR=66
SQTA Sankt Quirin 80.58 333⇑ *i*P P 16 26 55.8 +0.4
SNR=86
BBLS Lazići 80.59 326 P P 16 26 55.8 +0.3
PTCC Patocco-Chiusa 80.60 331 P P 16 26 54.5 -1.0
FVI Forni Avoltri 80.62 332 P P 16 26 54.8 -0.9
FVI P 16 26 58.6
SEST Monte Rota 80.68 332 P P 16 26 55.8 -0.1
ROBS Robic 80.69 331⇑ *i*P P 16 26 54.8 -1.2
KHAL Karahalli 80.69 317 *i* P P 16 26 56.5 +0.4
CDF Champ du Feu 80.70 336⇑ *i*P P 16 26 56.0 -0.1
KHL Karahalli 80.71 317 *e*P P 16 26 57.4 +1.1
MMB Musomiste 80.71 322 *i* P P 16 26 57.0 +0.8
BOJS Bojanci 80.73 330⇑ *i*P P 16 26 55.9 -0.4
BOJS *e*S S 16 36 49.6 -5.9
BOJS *e* 16 37 11.9
CNB Canberra Magne 80.74 181 *e*P P 16 27 02.5 +6.4
CNB *e*pP pP 16 27 20.4 -1.8
VOY Vojsko 80.74 331 *e*P P 16 26 55.3 -1.0
VOY *e* pP 16 27 18.5 -3.8
VOY *e* 16 28 19.3
GMNA Gemona 80.75 331 P P 16 26 55.4 -1.0
KKB Krupnik 80.76 323 *i* P P 16 26 57.3 +0.8
SIW Isle of Wight 80.78 342⇑ *e*P P 16 26 55.7 -0.7
LIBD Limburg 80.85 336 *e*P P 16 26 56.7 -0.1
NVR Nevrokopi 80.85 322 *e*P P 16 26 57.2 +0.2
SISB Singen-Schiene 80.86 335 P P 16 26 57.6 +0.7
BCK Bucak 80.88 315 *e*P P 16 26 56.3 -0.8
GADA Gvkgeada 80.90 320 *e*P P 16 26 57.5 +0.3
FETA Feichten 80.91 333 *i* P P 16 26 57.5 +0.3
comp=Z,2µm,2.1s,mb6.5,SNR=104
ECH Echery 80.92 336 *e*P P 16 26 57.0 -0.2
KIZ Kirchzarten 80.93 335 P P 16 26 57.0 -0.3
DAVA Damuels 80.94 334 *i* P P 16 26 57.5 +0.1
comp=Z,2µm,1.9s,mb6.6,SNR=134
OLIL Olney 80.97 42⇑ *i*P P 16 26 57.2 -0.4
comp=Z,498nm,0.8s,mb6.4
KULA Kula-Manisa 80.97 317 *e*P P 16 26 56.7 -0.9
FELD Feldberg im Sc 80.98 335 *e*P P 16 26 57.1 -0.4
EZN Ezine 81.00 320 *e*P P 16 26 58.0 +0.1
KNDS Knezji Dol 81.02 330⇑ *i*P P 16 26 57.1 -0.6
BHL Bhannes 81.03 310⇑ *e*P P 16 26 58.5 +0.5
PLE Pljevlja 81.04 326⇑ *i*P P 16 26 58.0 +0.1
AKIS Akhisar 81.08 318 *e*P P 16 26 58.8 +0.5
LFK Lefkose 81.09 312 *e*P P 16 26 59.0 +0.7
HTL Hartland 81.11 344⇑ *e*P P 16 26 58.4 +0.2
HTL AMb AMB 16 27 01.0
comp=Z,1µm,1.7s,mb6.5
BOZC Bozcaada 81.11 320 *i* P P 16 26 58.0 -0.4
JCT Junction City 81.19 55⇑ *i*P P 16 26 58.5 -0.5
JCT pmax pmax
comp=Z,274nm,0.8s,mb6.1
JCT Junction City 81.19 55⇑ *i*P P 16 26 58.5 -0.5
comp=Z,274nm,0.8s,mb6.1
IVA Berane 81.23 325⇑ *i*P P 16 26 58.9 0.0
APPI Appiano 81.24 333 P P 16 26 58.0 -0.9
THEF They Montfort 81.24 337 *e*P P 16 26 58.8 -0.1
MEZF Maizieres J'vi 81.24 337⇑ *i*P P 16 26 59.1 +0.2
comp=Z,1µm,0.9s,mb6.4
MEZF Maizieres J'vi 81.24 337⇑ *i*P P 16 26 59.1 +0.2
comp=Z,1µm,0.9s,mb6.7
SIUC Southern Illin 81.25 44⇑ *e*P P 16 26 58.8 -0.3
comp=Z,642nm,0.8s,mb6.5
MOF Molkenrain 81.25 336 *e*P P 16 26 58.6 -0.4
AYVA Ayvalik 81.25 319 *i* P P 16 26 59.0 -0.1
RCY Rachaya 81.26 310⇑ *e*P P 16 27 00.4 +1.1
ZUR Degenried 81.26 335 ⇑P P 16 26 59.1 +0.1
STIP Stip 81.28 323 *e*P P 16 26 58.6 -0.7
STIP Stip 81.28 323⇑ *i*P P 16 26 58.8 -0.5
STIP *i*S S 16 37 01.0 -0.4
ANTB Antalya 81.28 315 *e*P P 16 27 00.8 +1.5
MAMC Mammari 81.34 312 ⇑P P 16 26 59.9 +0.2
HAU Haudompre 81.34 336⇑ *i*P P 16 26 59.2 -0.2
comp=Z,2µm,1.6s,mb6.4
HAU *e*MLR MLR
comp=Z,4µm,22.0s
HAU Haudompre 81.34 336⇑ *i*P P 16 26 59.2 -0.2
HAU pmax pmax
comp=Z,941nm,1.6s,mb6.4
HAU MLR MLR
comp=Z,4µm,22.0s
HAU Haudompre 81.34 336⇑ *i*P P 16 26 59.2 -0.2
comp=Z,941nm,1.6s,mb6.4
HAU LR LR
comp=Z,4µm,22.0s
UPM Unac-Piva 81.34 326⇑ *i*P P 16 26 58.7 -0.8
SALA Sala 81.35 308 ⇑P P 16 27 07.7 +7.9
BLO Bloomington 81.35 41⇑ *i*P P 16 26 59.1 -0.6
BLO *e*PP pP 16 27 24.7 -1.0
BLO *e* 16 30 04.1
BLO pmax pmax
comp=Z,300nm,0.7s,mb6.2
BLO Bloomington 81.35 41⇑ *i*P P 16 26 59.1 -0.6
comp=Z,300nm,0.7s,mb6.2
BLO *e*pP pP 16 27 24.7 -1.0
BLO *e*PP PP 16 30 04.1 -1.9
SKO Skopje 81.36 324 *e*P P 16 27 00.6 +0.9
SKO Skopje 81.36 324⇑ *i*P P 16 27 00.7 +1.0
SKO *i*S S 16 36 59.3 -2.9
HINF Hinteralfeld 81.36 336⇑ *i*P P 16 26 59.2 -0.4
comp=Z,292nm,0.9s,mb5.8
HINF Hinteralfeld 81.36 336⇑ *i*P P 16 26 59.2 -0.4
HINF pmax pmax
comp=Z,146nm,0.9s,mb5.8
HINF Hinteralfeld 81.36 336⇑ *i*P P 16 26 59.2 -0.4
comp=Z,146nm,0.9s,mb5.8
KNT Kendrikon 81.42 323 *e*P P 16 27 00.0 0.0
VAY Valandovo 81.43 323 *e*P P 16 26 59.7 -0.3
VAY Valandovo 81.43 323⇑ *i*P P 16 26 59.9 -0.1
VAY *i*S S 16 36 58.9 -4.0
PVY Plav 81.43 325⇑ *i*P P 16 26 59.2 -0.8
CSS Prodhromos 81.44 312 ⇑P P 16 27 00.8 +0.6
comp=Z,4.2nm,1.2s
CSS Prodhromos 81.44 312 *e*P P 16 27 00.7 +0.5
DNZL Cakiroluk 81.44 317 *i* P P 16 27 00.8 +0.6
LOS Limnos 81.48 320 *e*P P 16 27 00.3 0.0
CTI Castel Tesino 81.48 332 P P 16 26 59.2 -1.0
BBS Basel-Blauen 81.50 335 *e*P P 16 27 00.2 -0.1
PRK Paraskevi 81.50 319 *e*P P 16 27 00.3 -0.1
PRK Paraskevi 81.50 319 *e*P P 16 27 00.2 -0.2
SOH Sokhos 81.50 322 *e*P P 16 27 00.1 -0.4
BRMO Bormio 81.51 333 P P 16 27 00.5 +0.1
MIAR Mount Ida 81.53 48⇑ *i*P P 16 27 00.3 -0.4
MIAR pmax pmax
comp=Z,307nm,0.7s,mb6.2
MIAR Mount Ida 81.53 48⇑ *i*P P 16 27 00.3 -0.4
comp=Z,307nm,0.7s,mb6.2
DYA Yadsworthy 81.54 344⇑ *i*P P 16 27 00.3 -0.1
DYA AMb AMB 16 27 03.0
comp=Z,3µm,1.5s,mb6.8
LEF Lefka 81.55 313 *e*P P 16 27 01.0 +0.2
GOLH Golhisar 81.55 316 *i* P P 16 27 01.0 +0.2
BCI Bajram Curri 81.59 325 *e*PN P 16 27 00.5 -0.3
LLS Linth-Limmern 81.60 334 ⇑P P 16 27 00.9 +0.1
MUO Muotathal 81.61 334 ⇑P P 16 27 01.0 +0.1
OUR Ouranopolis 81.63 321 *e*P P 16 27 01.1 -0.1
NKY Niksic 81.64 326⇑ *i*P P 16 26 59.9 -1.2
WHFO Wadi Hawf 81.66 287 ⇓P P 16 27 02.0 +0.4
SNR=8.5
RBK Rabkut 81.66 286 ⇑P P 16 27 01.9 +0.3
SNR=7.0
LONY Lake Ozonia 81.66 30⇑ *e*P P 16 26 59.9 -1.3
comp=Z,112nm,0.9s,mb5.7
ALFC Alevga 81.67 313 ⇑P P 16 27 01.2 -0.2
comp=Z,6.9nm,0.9s
NVLJ Novalja 81.68 329 *i* P P 16 26 59.7 -1.6
KDAG Bornova 81.72 318 *i* P P 16 27 01.8 +0.2
IZM Izmir 81.72 318 *e*P P 16 27 02.0 +0.3
BRY Bratogost 81.74 326⇑ *i*P P 16 27 00.2 -1.4
ELL Elmali 81.77 315 *e*P P 16 27 02.5 +0.6
USIN University of 81.79 42⇑ *i*P P 16 27 01.7 -0.3
comp=Z,511nm,0.9s,mb6.3
VDL Val di Lei 81.79 334 ⇑P P 16 27 02.3 +0.5
LOMF Lomont 81.80 336 *e*P P 16 27 01.8 0.0
HORT Hortiatis 81.80 322 *e*P P 16 27 01.4 -0.6
GRG Griva 81.80 323 *e*P P 16 27 01.9 -0.1
CSA1 St Austell 81.80 344⇑ *i*P P 16 27 01.8 0.0
FRNY Flat Rock 81.83 30⇑ *i*P P 16 27 00.7 -1.4
comp=Z,279nm,1.7s,mb5.8
THE Thessaloniki 81.83 322 *e*P P 16 27 01.4 -0.7
PLG Polygyros 81.83 322 *e*P P 16 27 01.9 -0.3
PLG Polygyros 81.83 322 *e*P P 16 27 02.0 -0.2
TUE Stuetta 81.83 334 P P 16 27 01.1 -1.0
BLCB Balcova 81.84 318 *e*P P 16 27 02.4 +0.2
MABI Malga Bissina 81.84 333 P P 16 27 01.7 -0.4
TTG Podgorica 81.86 326⇑ *i*P P 16 27 01.5 -0.7
AKMC Akamas 81.91 313 ⇑P P 16 27 02.5 -0.1
PUK Puka 81.93 325 *e*PN P 16 27 02.0 -0.6
KRUS Krusevo 81.94 324⇑ *i*P P 16 27 03.3 +0.6
KRUS *i*S S 16 37 05.1 -3.0
UALR University of 82.00 47⇑ *e*P P 16 27 02.4 -0.7
comp=Z,306nm,1.4s,mb5.9
PPCY Paphos 82.01 313 ⇑P P 16 27 03.0 -0.2
PHP Peshkopia 82.01 324 *e*PN P 16 27 02.5 -0.6
AYDN Tasoluk 82.02 317 *i* P P 16 27 04.3 +1.0
CCA1 Carnmenellis 82.03 344⇑ *i*P P 16 27 02.9 0.0
MAGA Magasa 82.05 333 P P 16 27 02.6 -0.6
ACSO Alum Creek Sta 82.07 38⇑ *i*P P 16 27 02.8 -0.6
comp=Z,424nm,0.8s,mb6.3
ALLY Allegheny Colle 82.08 36⇑ *i*P P 16 27 03.0 -0.4
comp=Z,687nm,0.8s,mb6.5
STON Ston 82.09 327 *i* P P 16 27 01.1 -2.4
PAIG Paliouri 82.10 321 *e*P P 16 27 03.3 -0.3
CMA1 Manaccan 82.11 344⇑ *i*P P 16 27 03.6 +0.2
CGW Gweek 82.11 344⇑ *i*P P 16 27 03.3 -0.1
BUM Brajici-Budva 82.11 326⇑ *i*P P 16 27 03.1 -0.5
HCY Herceg Novi 82.14 326⇑ *i*P P 16 27 02.8 -0.9
BIA Bitola 82.20 323⇑ *i*P P 16 27 03.4 -0.7
BIA *i*S S 16 37 09.2 -1.6
WCI Wyandotte Cave 82.22 41⇑ *e*P P 16 27 03.9 -0.3
WCI pmax pmax
comp=Z,507nm,0.9s,mb6.3
WCI Wyandotte Cave 82.22 41⇑ *e*P P 16 27 03.9 -0.4
comp=Z,507nm,0.9s,mb6.3
YER Yerkesik 82.25 317 *e*P P 16 27 05.6 +1.2
ULC Ulcinj 82.25 325⇑ *i*P P 16 27 03.8 -0.5
CHOS Chios island 82.29 319 *e*P P 16 27 04.8 +0.2
GCAM G?zelcaml? 82.30 318 *i* P P 16 27 05.0 +0.4
TURN Turunc 82.31 316 *i* P P 16 27 06.5 +1.8
AKAS Kas 82.33 315 *i* P P 16 27 03.8 -1.0
PMOR Pomariorio Ree 82.33 121 *e*P P 16 27 04.9 -0.1
comp=Z,272nm,1.3s,mb5.9
OHR Ohrid 82.34 324 *e*P P 16 27 03.9 -0.9
OHR Ohrid 82.34 324⇑ *i*P P 16 27 04.1 -0.7
OHR *i*S S 16 37 09.1 -3.2
JSA Saint Aubin 82.36 342⇑ *e*P P 16 27 04.1 -0.6
NCB Newcomb 82.36 31⇑ *i*P P 16 27 03.9 -0.9
comp=Z,70nm,0.8s,mb5.5
MLSB Milas 82.36 317 *e*P P 16 27 06.0 +1.0
ABTO Aybut 82.37 287 P P 16 27 06.0 +0.6
SNR=14
DALT Dalyan (Mudla) 82.37 316 *e*P P 16 27 06.1 +1.0
FNA Florina 82.38 323 *e*P P 16 27 04.5 -0.4
FLN La Foliniere 82.38 341⇑ *i*P P 16 27 04.8 -0.1
comp=Z,1µm,0.9s,mb6.5
FLN *e*MLR MLR
comp=Z,3µm,21.5s
FLN La Foliniere 82.38 341⇑ *i*P P 16 27 04.8 -0.1
FLN pmax pmax
comp=Z,699nm,0.9s,mb6.5
FLN MLR MLR
comp=Z,3µm,21.5s
FLN La Foliniere 82.38 341⇑ *i*P P 16 27 04.8 -0.1
comp=Z,699nm,0.9s,mb6.5
FLN LR LR
comp=Z,3µm,21.5s
KLBR Kellerberrin 82.42 207 *e*P P 16 27 05.0 -0.1
comp=Z,46nm,0.8s,mb5.4
KLBR *e* 16 27 09.8
KLBR *e*pP pP 16 27 30.3 -0.9
LKBD Leukerbad 82.43 335 ⇑P P 16 27 05.4 +0.2
LDF La Druitiere 82.46 341⇑ *i*P P 16 27 05.1 -0.2
comp=Z,2µm,1.2s,mb6.5
LDF La Druitiere 82.46 341⇑ *i*P P 16 27 05.1 -0.2
LDF pmax pmax
comp=Z,1µm,1.3s,mb6.5
LDF La Druitiere 82.46 341⇑ *i*P P 16 27 05.1 -0.2
comp=Z,1µm,1.3s,mb6.5
LIT Litokhoron 82.47 322 *e*P P 16 27 04.8 -0.8
SMG Samos 82.48 318 *e*P P 16 27 05.2 -0.4
UTMT University of 82.51 44 *e*P P 16 27 05.5 -0.3
comp=Z,962nm,1.2s,mb6.5
TIR Tirane 82.53 325 *e*P P 16 27 05.6 -0.2
TIR Tirane 82.53 325 *e*PN P 16 27 05.4 -0.4
VAI Varese 82.56 334 P P 16 27 05.5 -0.3
KZN Kozani 82.61 323 *e*P P 16 27 05.6 -0.6
AOS Alonnisos 82.63 321 *e*P P 16 27 06.2 -0.2
MMK Mattmark 82.64 334 ⇑P P 16 27 06.8 +0.6
CABF La Chapelle 82.68 336⇑ *i*P P 16 27 06.5 0.0
comp=Z,676nm,1.1s,mb6.1
CABF La Chapelle 82.68 336⇑ *i*P P 16 27 06.5 0.0
CABF pmax pmax
comp=Z,338nm,1.1s,mb6.1
CABF La Chapelle 82.68 336⇑ *i*P P 16 27 06.5 0.0
comp=Z,338nm,1.1s,mb6.1
LOR Lormes 82.69 338⇑ *i*P P 16 27 06.4 -0.1
comp=Z,2µm,1.2s,mb6.4
LOR *e*MLR MLR
comp=Z,4µm,20.2s
LOR Lormes 82.69 338⇑ *i*P P 16 27 06.4 -0.1
LOR pmax pmax
comp=Z,791nm,1.2s,mb6.4
LOR MLR MLR
comp=Z,4µm,20.3s
LOR Lormes 82.69 338⇑ *i*P P 16 27 06.4 -0.1
comp=Z,791nm,1.2s,mb6.4
LOR LR LR
comp=Z,4µm,20.3s
MDV Middlebury 82.70 30 *e*P P 16 27 05.2 -1.4
BDRM Kayabasi 82.71 317 *i* P P 16 27 07.1 +0.3
BODT Bodrum 82.77 317 *e*P P 16 27 07.4 +0.2
XOR Xorichti 82.78 321 *e*P P 16 27 06.5 -0.6
DIX Grande Dixence 82.78 335 ⇑P P 16 27 07.6 +0.6
FIU Minerbio Fiu 82.78 332 P P 16 27 08.1 +1.1
RAVA Ravarino 82.80 332 P P 16 27 08.5 +1.4
NEO Neokhori 82.81 321 *e*P P 16 27 06.6 -0.7
GRR Gorron 82.82 341⇑ *i*P P 16 27 07.3 +0.2
comp=Z,3µm,1.0s,mb6.7
GRR Gorron 82.82 341⇑ *i*P P 16 27 07.3 +0.2
comp=Z,1µm,1.0s,mb6.7
PKME Peaks-Kenny Pk 82.87 27⇑ *i*P P 16 27 07.2 -0.3
comp=Z,174nm,1.0s,mb5.8
LBNH Lisbon 82.92 29⇑ *i*P P 16 27 07.5 -0.2
LBNH pmax pmax
comp=Z,121nm,0.9s,mb5.7
LBNH Lisbon 82.92 29⇑ *i*P P 16 27 07.5 -0.3
comp=Z,121nm,0.9s,mb5.7
EMV Vieux Emosson 82.94 335 ⇑P P 16 27 08.2 +0.4
SSF Saint Saulge 82.98 338⇑ *i*P P 16 27 08.0 0.0
comp=Z,603nm,0.9s,mb6.1
SSF Saint Saulge 82.98 338⇑ *i*P P 16 27 08.0 0.0
SSF pmax pmax

comp=Z,302nm,0.9s,mb6.1
SSF Saint Saulge 82.98 338⇑ iP P 16 27 08.0 0.0
comp=Z,302nm,0.9s,mb6.1
AOI Ancona 83.01 330 P P 16 27 08.1 -0.1
ORO Oropa 83.01 334 P P 16 27 07.6 -0.6
ARG Arkhangelos 83.06 316 eP P 16 27 08.9 +0.3
ACCN Adirondack Com 83.06 31⇑ iP P 16 27 09.5 +1.0
comp=Z,188nm,0.9s,mb5.9
RSM Repubblica di 83.08 331 P P 16 27 09.0 +0.4
TOO Toolangi 83.10 184 eP P 16 27 09.7 +1.3
TOO epP pP 16 27 34.5 0.0
NATX Nacogdoches 83.10 51⇑ eP P 16 27 09.1 +0.2
comp=Z,3µm,1.5s,mb6.8
NATX epP pP 16 27 34.4 -0.6
THL Klokotos Trika 83.12 322 eP P 16 27 07.2 -1.6
THL Klokotos Trika 83.12 322 eP P 16 27 07.2 -1.7
FSSB Fossombrone 83.17 330 P P 16 27 09.3 +0.2
TRAV Traversella 83.19 334 P P 16 27 08.6 -0.5
ZCCA Zocca 83.20 332 P P 16 27 10.7 +1.5
BINY Binghamton 83.24 33⇑ iP P 16 27 08.6 -0.9
comp=Z,1µm,1.9s,mb6.4
HNH Hanover 83.27 29⇑ iP P 16 27 09.2 -0.3
comp=Z,187nm,0.8s,mb6.0
AVF Avril sur Loir 83.27 338⇑ iP P 16 27 09.6 +0.1
comp=Z,909nm,0.9s,mb6.3
AVF Avril sur Loir 83.27 338⇑ iP P 16 27 09.6 +0.1
AVF pmax pmax
comp=Z,454nm,0.9s,mb6.3
AVF Avril sur Loir 83.27 338⇑ iP P 16 27 09.6 +0.1
comp=Z,454nm,0.9s,mb6.3
SMF Signal de Mont 83.27 337⇑ iP P 16 27 09.6 +0.1
comp=Z,2µm,1.1s,mb6.5
SMF Signal de Mont 83.27 337⇑ iP P 16 27 09.6 +0.1
SMF pmax pmax
comp=Z,915nm,1.1s,mb6.5
SMF Signal de Mont 83.27 337⇑ iP P 16 27 09.6 +0.1
comp=Z,915nm,1.1s,mb6.5
MUN Mundaring 83.29 208 eP P 16 27 09.5 0.0
MUN esP sP 16 27 48.6 +2.2
CING Cingoli 83.31 330 P P 16 27 09.7 -0.1
SFI Santa Sofia 83.31 331 P P 16 27 10.7 +0.9
FNVD Fontana Vidola 83.32 332 P P 16 27 10.7 +0.9
SGMF Saint Gilles 83.32 342⇑ iP P 16 27 10.0 +0.3
comp=Z,1µm,0.8s,mb6.6
SGMF Saint Gilles 83.32 342⇑ iP P 16 27 10.0 +0.3
SGMF pmax pmax
comp=Z,745nm,0.8s,mb6.6
SGMF Saint Gilles 83.32 342⇑ iP P 16 27 10.0 +0.3
comp=Z,745nm,0.8s,mb6.6
ERBM Eremo 83.33 332 P P 16 27 10.9 +1.1
BOB Bobbio (Coli) 83.33 333 P P 16 27 10.2 +0.4
GSCL Gusciola 83.33 332 P P 16 27 10.8 +0.9
PPT Papeete 83.34 123 eS S 16 37 28.2 +5.4
comp=Z,4µm,25.8s
PPT eSS SS 16 43 04.1 +13
comp=Z,3µm,26.0s
PPT eLQ 16 49 35.6
comp=Z,7µm,28.2s
PPT eLR LR 16 53 18.4
comp=Z,4µm,21.5s,baz=325
PPT Papeete 83.34 123 LR LR 16 58 15.8
comp=Z,3µm,19.0s,baz=324,slow=31
PPT Papeete 83.34 123 eP P 16 27 10.1 0.0
PPT eS S 16 37 28.2 +5.4
PPT pmax pmax
comp=Z,61nm,1.4s
PPT Papeete 83.34 123 eP P 16 27 10.1 0.0
comp=Z,60nm,1.4s,mb5.2
PPT eS S 16 37 28.2 +5.4
PPT eSS SS 16 43 04.1 +13
PPT eLQ 16 49 35.6
SEI Scarperia 83.34 331 P P 16 27 10.9 +1.0
VMG Vicchio 83.36 331 P P 16 27 10.9 +0.9
ROSF Rostrenen 83.40 342⇑ iP P 16 27 10.4 +0.3
comp=Z,5µm,1.4s,mb6.9
ROSF Rostrenen 83.40 342⇑ iP P 16 27 10.4 +0.3
ROSF pmax pmax
comp=Z,3µm,1.4s,mb6.9
ROSF Rostrenen 83.40 342⇑ iP P 16 27 10.4 +0.3
comp=Z,3µm,1.4s,mb6.9
PAE Paea 83.41 123 eP P 16 27 10.2 -0.3
comp=Z,440nm,1.3s,mb6.1
PAE Paea 83.41 123 eP P 16 27 10.2 -0.3
PAE pmax pmax
comp=Z,440nm,1.3s,mb6.1
LSD Lago del Serru 83.42 335 P P 16 27 11.1 +0.8
AGG Agios Georgios 83.44 322 eP P 16 27 09.1 -1.4
LKR Lokris 83.45 321 eP P 16 27 09.6 -1.0
LKR Lokris 83.45 321 eP P 16 27 09.6 -1.0
TIAR Tiarei 83.47 123 eP P 16 27 10.6 -0.2
comp=Z,2µm,1.6s,mb6.7
LPL La Plagne 83.49 335⇑ iP P 16 27 11.4 +0.8
comp=Z,646nm,1.0s,mb6.1
LPL La Plagne 83.49 335⇑ iP P 16 27 11.4 +0.8
LPL pmax pmax
comp=Z,323nm,1.0s,mb6.1
LPL La Plagne 83.49 335⇑ iP P 16 27 11.4 +0.8
comp=Z,323nm,1.0s,mb6.1
LPG La Plagne 83.50 335⇑ iP P 16 27 11.6 +0.9
comp=Z,866nm,1.0s,mb6.2
LPG La Plagne 83.50 335⇑ iP P 16 27 11.6 +0.9
LPG pmax pmax
comp=Z,433nm,1.0s,mb6.2
LPG La Plagne 83.50 335⇑ iP P 16 27 11.6 +0.9
comp=Z,433nm,1.0s,mb6.2
SNTG Esanatoglia 83.50 330 P P 16 27 11.1 +0.3
BADI Badiali 83.52 331 P P 16 27 11.5 +0.7
OFFI Offida 83.52 329 P P 16 27 11.8 +0.9
JAN Janina 83.54 323 eP P 16 27 11.4 +0.4
PTL Penteli 83.56 320 eP P 16 27 10.0 -1.2
VLC Villacollemand 83.57 332 P P 16 27 11.1 0.0
CDCA Citt' di Caste 83.57 331 P P 16 27 11.8 +0.7
BDI Bagni Di Lucca 83.58 332 P P 16 27 10.7 -0.5
APE Apeiranthos 83.60 318⇑ iP P 16 27 10.0 -1.4
APE Apeiranthos 83.60 318 P P 16 27 10.6 -0.8
BGF Bois d'Agland 83.62 338⇑ iP P 16 27 11.4 +0.1
comp=Z,586nm,0.8s,mb6.2
BGF Bois d'Agland 83.62 338⇑ iP P 16 27 11.4 +0.1
BGF pmax pmax
comp=Z,293nm,0.8s,mb6.2
BGF Bois d'Agland 83.62 338⇑ iP P 16 27 11.4 +0.1
comp=Z,293nm,0.8s,mb6.2
MURB Monte Urbino 83.64 330 P P 16 27 12.0 +0.5
RSP Reno Superiore 83.66 335 P P 16 27 10.9 -0.6
FFD Franklin Falls 83.69 29⇑ eP P 16 27 11.8 0.0
comp=Z,270nm,0.8s,mb6.1
OXF Oxford 83.69 46⇑ iP P 16 27 11.3 -0.6
OXF pmax pmax
comp=Z,545nm,0.9s,mb6.4
OXF Oxford 83.69 46⇑ iP P 16 27 11.3 -0.6
comp=Z,545nm,0.9s,mb6.4
TVO Taravao 83.70 123 eP P 16 27 12.2 +0.2
comp=Z,1µm,1.4s,mb6.6
TVO Taravao 83.70 123 eP P 16 27 12.2 +0.2
TVO pmax pmax
comp=Z,1µm,1.4s,mb6.6
SRN Sarande 83.71 324 ePN P 16 27 11.3 -0.6
EVR Evrytania 83.75 322 eP P 16 27 11.4 -0.7
FGMS Monte Sant'Ang 83.75 327 P P 16 27 11.6 -0.5
MAIM Mastiano 83.75 332 P P 16 27 11.1 -0.9
MSAG Monte S. Angel 83.77 327 P P 16 27 11.7 -0.4
ASS Assisi 83.77 330 P P 16 27 12.4 +0.3
QUIF Quistinic 83.77 342⇑ iP P 16 27 12.0 -0.1
comp=Z,2µm,1.4s,mb6.5
QUIF Quistinic 83.77 342⇑ iP P 16 27 12.0 -0.1
QUIF pmax pmax
comp=Z,1µm,1.4s,mb6.5
QUIF Quistinic 83.77 342⇑ iP P 16 27 12.0 -0.1
comp=Z,1µm,1.4s,mb6.5
KVR Kavouri 83.79 320 eP P 16 27 10.5 -1.8
SGRT San Giovanni R 83.79 327 P P 16 27 11.8 -0.5
NRCA Norcia 83.81 330 P P 16 27 12.9 +0.6
PCP Piancastagn 83.82 333 P P 16 27 11.8 -0.5
NWAO Narrogin (SRO) 83.82 207 eP P 16 27 12.7 +0.4
NWAO pmax pmax
comp=Z,157nm,1.0s
NWAO Narrogin (SRO) 83.82 207 eP P 16 27 12.7 +0.4
comp=Z,157nm,1.0s,mb5.8
TERO Teramo 83.82 329 P P 16 27 12.6 +0.2
HKT Hockley 83.84 53⇑ eP P 16 27 12.4 -0.3
HKT pmax pmax
comp=Z,547nm,1.9s,mb6.1
HKT Hockley 83.84 53⇑ eP P 16 27 12.4 -0.3
comp=Z,547nm,1.9s,mb6.1
CSNT Castellina Chi 83.88 331 P P 16 27 12.6 -0.1

PII Pisa 83.91 332 P P 16 27 11.9 -0.9
RGNG Rignano Grg 83.92 328 P P 16 27 12.3 -0.6
BNI Bardonecchia 83.92 335 P P 16 27 13.6 +0.7
KEK Kerkira 83.93 324 eP P 16 27 12.5 -0.5
GDM Grand'Maison 83.95 335 eP P 16 27 13.6 +0.6
PLDF La Plantade 83.95 337 eP P 16 27 13.3 +0.3
NAIG Nisos Aigina 83.97 320 eP P 16 27 11.0 -2.3
PLAL Pickwick Lake 83.98 45⇑ iP P 16 27 12.6 -0.8
comp=Z,172nm,0.8s,mb5.9
LTK Loutraki 83.98 321 eP P 16 27 11.4 -2.0
AGO Saint Agoulin 84.01 338 eP P 16 27 14.0 +0.7
GRN Grenoble 84.03 336 eP P 16 27 14.1 +0.7
TCF Toulx Ste Croi 84.03 338⇑ iP P 16 27 13.8 +0.4
comp=Z,4µm,1.6s,mb6.7
TCF Toulx Ste Croi 84.03 338⇑ iP P 16 27 13.8 +0.4
TCF pmax pmax
comp=Z,2µm,1.6s,mb6.7
TCF Toulx Ste Croi 84.03 338⇑ iP P 16 27 13.8 +0.4
comp=Z,2µm,1.6s,mb6.7
KARP Karpathos 84.06 317 eP P 16 27 13.3 -0.5
QLNO Quiliano 84.07 333 P P 16 27 13.0 -0.7
AQU L'Aquila 84.13 329 P P 16 27 14.5 +0.5
CIGN Sant'Elia a Pi 84.19 328 P P 16 27 14.5 +0.2
MBDF Montbardon 84.19 335⇑ iP P 16 27 14.3 +0.1
comp=Z,285nm,0.6s,mb6.0
MBDF Montbardon 84.19 335⇑ iP P 16 27 14.3 +0.1
MBDF pmax pmax
comp=Z,143nm,0.6s,mb6.0
MBDF Montbardon 84.19 335⇑ iP P 16 27 14.3 +0.1
comp=Z,143nm,0.6s,mb6.0
SANT Santorini 84.20 318 eP P 16 27 12.2 -2.2
FIN Finale Ligure 84.22 334 P P 16 27 13.5 -0.9
INTR Introdacqua 84.25 329 P P 16 27 14.2 -0.4
DOI San Damiano 84.25 334 P P 16 27 12.8 -1.7
GRFL Gerfalco 84.27 331 P P 16 27 14.3 -0.4
ORIF Oris-en-Rattie 84.28 335⇑ iP P 16 27 15.4 +0.7
comp=Z,908nm,0.8s,mb6.4
ORIF eMLR MLR
comp=Z,6µm,22.8s
ORIF Oris-en-Rattie 84.28 335⇑ iP P 16 27 15.4 +0.7
ORIF pmax pmax
comp=Z,454nm,0.8s,mb6.3
ORIF Oris-en-Rattie 84.28 335⇑ iP P 16 27 15.4 +0.7
comp=Z,454nm,0.8s,mb6.3
DID Didima 84.29 320 eP P 16 27 12.3 -2.6
FIAM Fiamignano 84.31 329 P P 16 27 15.1 +0.2
PYM Petit Puy Mans 84.32 338 eP P 16 27 15.2 +0.3
MFF Saint Martin d 84.33 340⇑ iP P 16 27 15.4 +0.5
comp=Z,1µm,1.0s,mb6.4
MFF Saint Martin d 84.33 340⇑ iP P 16 27 15.4 +0.5
MFF pmax pmax
comp=Z,666nm,1.0s,mb6.4
MFF Saint Martin d 84.33 340⇑ iP P 16 27 15.4 +0.5
comp=Z,666nm,1.0s,mb6.4
FG5 Orsara di Pugl 84.38 328 P P 16 27 11.7 -3.6
FG5 P 16 27 15.4
SURF Saint Ours 84.40 335 eP P 16 27 15.7 +0.4
FG4 Candela 84.41 327 P P 16 27 15.6 +0.2
LKD Lekas 84.42 323 eP P 16 27 14.2 -1.3
PTQR Pietraquaria 84.42 329 P P 16 27 15.4 -0.1
RNI2 Rionero Sannit 84.43 328 P P 16 27 13.3 -2.2
MIDA Miranda 84.44 328 P P 16 27 15.7 +0.1
STV Sant Anna di V 84.46 334 P P 16 27 14.0 -1.6
LATE Laterza 84.46 330 P P 16 27 15.4 -0.3
MEH Mehetia 84.47 122 eP P 16 27 15.9 0.0
comp=Z,4µm,1.3s,mb7.1
VVLD Villa Vallelon 84.47 329 P P 16 27 15.4 -0.3
QUA2 Belchertown 84.50 30 eP P 16 27 15.2 -0.7
comp=Z,179nm,1.0s,mb5.8
SDI San Donato 84.55 329 P P 16 27 15.7 -0.4
HRV Adam Dziewonsk 84.58 30 eP P 16 27 16.1 -0.1
HRV pmax pmax
comp=Z,263nm,1.0s,mb6.1
HRV Adam Dziewonsk 84.58 30 eP P 16 27 16.1 -0.2
comp=Z,263nm,1.0s,mb6.1
PSB1 Pescosannita 84.60 328 P P 16 27 16.1 -0.3
RLS Riolos of Patr 84.61 322 eP P 16 27 16.5 0.0
SGG Gregorio Mates 84.62 328 P P 16 27 16.1 -0.4
SAOF Saorge 84.62 334 eP P 16 27 16.2 -0.2
CERT Cerreto 84.63 329 P P 16 27 16.0 -0.5
MTCE Montecelio 84.65 330 P P 16 27 16.0 -0.6
AUTN L'Aution 84.66 334 eP P 16 27 16.5 -0.1
VIVF Saint-Julien-l 84.69 336⇑ iP P 16 27 17.3 +0.6
comp=Z,3µm,1.6s,mb6.6
VIVF Saint-Julien-l 84.69 336⇑ iP P 16 27 17.3 +0.6
VIVF pmax pmax
comp=Z,1µm,1.6s,mb6.6
VIVF Saint-Julien-l 84.69 336⇑ iP P 16 27 17.3 +0.6
comp=Z,1µm,1.6s,mb6.6
TOUF Mont Tournerai 84.69 334 eP P 16 27 16.9 +0.1
PTRP Pietrapertosa 84.73 327 P P 16 27 17.5 +0.4
LBL Lubilhac 84.73 337 eP P 16 27 17.7 +0.7
MRLC Muro Lucano 84.75 327 P P 16 27 16.6 -0.5
WES Weston 84.76 29 eP P 16 27 17.1 -0.1
WES pmax pmax
comp=Z,381nm,0.8s,mb6.4
WES Weston 84.76 29 eP P 16 27 17.1 -0.1
comp=Z,381nm,0.8s,mb6.4
LUCF Luceram 84.77 334 eP P 16 27 17.0 -0.2
SBF Sospel 84.77 334⇑ iP P 16 27 16.8 -0.4
comp=Z,528nm,0.8s,mb6.2
SBF Sospel 84.77 334⇑ iP P 16 27 16.8 -0.4
SBF pmax pmax
comp=Z,264nm,0.8s,mb6.2
SBF Sospel 84.77 334⇑ iP P 16 27 16.8 -0.4
comp=Z,264nm,0.8s,mb6.2
VLX Vlachokerasia 84.78 321 eP P 16 27 16.1 -1.3
MVIF Mont Vial 84.83 334 eP P 16 27 17.4 -0.1
CSSN Cassano Irpino 84.83 327 P P 16 27 16.9 -0.7
RFI Roccamonfina 84.84 328 P P 16 27 17.5 -0.1
TZTN Tazewell 84.85 41 eP P 16 27 17.6 -0.2
comp=Z,264nm,0.8s,mb6.2
MAON Monte Argentar 84.86 331 P P 16 27 17.2 -0.4
KFL Anninata 84.86 322 eP P 16 27 17.3 -0.5
ZKR Zakros 84.87 317 eP P 16 27 17.8 0.0
TOLF Tolfa 84.88 330 P P 16 27 17.5 -0.3
VLS Valsamata 84.89 322 eP P 16 27 17.3 -0.6
VLS Valsamata 84.89 322 eP P 16 27 17.3 -0.6
MON Monaco 84.90 334 P P 16 27 18.0 +0.2
RDP Rocca di Papa 84.90 329 P P 16 27 17.6 -0.2
REVF Revere 84.91 334 eP P 16 27 17.5 -0.4
ROM9 Roma 84.91 330 P P 16 27 18.0 +0.1
VBMS Vicksburg 84.94 48⇑ iP P 16 27 18.7 +0.4
comp=Z,362nm,0.9s,mb6.3
VBMS epP pP 16 27 45.2 +0.7
LAV9 Lanuvio 84.97 329 P P 16 27 18.2 0.0
ORI Oriolo Calabro 84.98 326 P P 16 27 19.2 +0.9
SGO Sicignano 84.99 327 P P 16 27 18.0 -0.3
NPS Neapolis 85.03 317 eP P 16 27 17.6 -1.1
CALN Calern 85.04 334 eP P 16 27 18.5 0.0
PAL Palisades 85.05 32⇑ iP P 16 27 18.1 -0.5
PAL e*SP sP 16 27 49.2 -6.4
PAL pmax pmax
comp=Z,228nm,0.8s,mb6.2
PAL Palisades 85.05 32⇑ iP P 16 27 18.1 -0.5
comp=Z,228nm,0.8s,mb6.2
PAL esP sP 16 27 49.2 -6.4
VLI Veliai 85.08 320 eP P 16 27 18.4 -0.4
BRYW Bryant College 85.10 30⇑ eP P 16 27 18.5 -0.4
comp=Z,328nm,0.7s,mb6.4
RJF Les Rejaudoux 85.13 338⇑ iP P 16 27 19.4 +0.5
comp=Z,4µm,1.5s,mb6.8
RJF eMLR MLR
comp=Z,5µm,22.2s
RJF Les Rejaudoux 85.13 338⇑ iP P 16 27 19.4 +0.5
RJF pmax pmax
comp=Z,2µm,1.5s,mb6.8
RJF MLR MLR
comp=Z,5µm,22.3s
RJF Les Rejaudoux 85.13 338⇑ iP P 16 27 19.4 +0.5
comp=Z,2µm,1.5s,mb6.8
RJF LR LR
comp=Z,5µm,22.3s
ITM Ithomi 85.14 321 eP P 16 27 18.3 -0.9
LAST Lasithi 85.18 317 eP P 16 27 18.8 -0.6
CPNY Central Park 85.22 32⇑ iP P 16 27 19.1 -0.4
comp=Z,274nm,0.9s,mb6.2
SMRF Simiane la Rot 85.23 335⇑ iP P 16 27 20.0 +0.5
comp=Z,2µm,1.8s,mb6.5
SMRF Simiane la Rot 85.23 335⇑ iP P 16 27 20.0 +0.5
comp=Z,2µm,1.8s,mb6.8
CUC Castrocucco 85.28 327 P P 16 27 18.6 -1.2
FRF La Foret Royal 85.29 334⇑ iP P 16 27 19.5 -0.3
comp=Z,3µm,1.7s,mb6.6

FRF La Foret Royal 85.29 334⇑ iP P 16 27 19.5 -0.3
FRF pmax pmax
comp=Z,1µm,1.7s,mb6.6
FRF La Foret Royal 85.29 334⇑ iP P 16 27 19.5 -0.3
comp=Z,1µm,1.7s,mb6.6
SDMD Soldier's Deli 85.31 35⇑ iP P 16 27 19.4 -0.5
comp=Z,743nm,1.5s,mb6.4
CAF Calviac 85.33 338⇑ iP P 16 27 20.8 +0.8
comp=Z,2µm,1.0s,mb6.6
CAF Calviac 85.33 338⇑ iP P 16 27 20.8 +0.8
CAF pmax pmax
comp=Z,794nm,1.0s,mb6.6
CAF Calviac 85.33 338⇑ iP P 16 27 20.8 +0.8
comp=Z,794nm,1.0s,mb6.6
KYTH Kithira 85.39 320 eP P 16 27 19.0 -1.4
PGF Pioggiola 85.46 332⇑ iP P 16 27 20.4 -0.2
comp=Z,547nm,0.9s,mb6.2
PGF Pioggiola 85.46 332⇑ iP P 16 27 20.4 -0.2
PGF pmax pmax
comp=Z,274nm,0.9s,mb6.2
PGF Pioggiola 85.46 332⇑ iP P 16 27 20.4 -0.2
comp=Z,274nm,0.9s,mb6.2
VENT Ventotene 85.49 328 P P 16 27 20.4 -0.4
ELN Prospectdale 85.53 38⇑ iP P 16 27 20.5 -0.6
LMR La Mourre 85.54 334⇑ iP P 16 27 21.0 0.0
comp=Z,4µm,1.6s,mb6.8
LMR La Mourre 85.54 334⇑ iP P 16 27 21.0 0.0
comp=Z,2µm,1.6s,mb6.8
VAM Vamos 85.58 318 eP P 16 27 20.1 -1.3
SIVA Sivas 85.61 318 eP P 16 27 21.4 -0.2
TIP Timpagrande 85.62 325 P P 16 27 21.5 0.0
LASF Ste Croix 85.63 336⇑ iP P 16 27 22.3 +0.8
comp=Z,3µm,1.7s,mb6.7
CORF Corte 85.64 332 eP P 16 27 21.5 0.0
LFF La Frestale 85.67 339⇑ iP P 16 27 21.8 +0.2
BLA Blacksburg 85.69 38⇑ iP P 16 27 21.5 -0.4
BLA pmax pmax
comp=Z,364nm,1.0s,mb6.3
BLA Blacksburg 85.69 38⇑ iP P 16 27 21.5 -0.3
comp=Z,364nm,1.0s,mb6.3
KARN Karanos 85.71 319 eP P 16 27 21.3 -0.7
GRI Girifalco 86.06 326 P P 16 27 23.5 -0.2
GVD Gavdhos 86.10 318 eP P 16 27 23.5 -0.4
URVA University of 86.60 36⇑ eP P 16 27 26.0 -0.4
CEL Celeste 86.75 326 P P 16 27 25.6 -1.5
MTLF Montolieu 86.77 337⇑ iP P 16 27 27.4 +0.4
comp=Z,2µm,1.6s,mb6.4
MTLF Montolieu 86.77 337⇑ iP P 16 27 27.4 +0.4
MTLF pmax pmax
comp=Z,839nm,1.6s,mb6.4
MTLF Montolieu 86.77 337⇑ iP P 16 27 27.4 +0.4
comp=Z,839nm,1.6s,mb6.4
SCLL Scilla 86.82 326 P P 16 27 25.6 -1.8
SOI Samo 86.85 325 P P 16 27 27.0 -0.6
LRDF Laroque-de-Fa 87.05 337 eP P 16 27 29.0 +0.6
MTTG Motta San Giov 87.05 326 P P 16 27 27.3 -1.2
URZ Urewera 87.14 159 P P 16 27 26.6 -2.0
comp=Z,6.6nm,0.8s,baz=79,slow=5.5,SNR=3.9
URZ pP pP 16 27 52.6 -2.3
comp=Z,18nm,0.9s,baz=359,slow=6.5,SNR=4.8
URZ LR LR 17 02 53.0
comp=Z,2µm,19.0s,baz=2.2,slow=33
DGI Dorgali Grotta 87.26 331 P P 16 27 29.4 -0.1
CARF Carcanieres 87.38 337 eP P 16 27 30.5 +0.5
FILF Fillols 87.39 337 eP P 16 27 30.8 +0.7
USI Ustica 87.41 328 P P 16 27 29.6 -0.6
EJON La Jonquera 87.41 336 P P 16 27 31.5 +1.4
comp=Z,639nm,1.5s,mb6.3
MLS Moulis 87.42 338 eP P 16 27 30.0 -0.2
GOGA Godfrey 87.47 42⇑ iP P 16 27 30.4 -0.3
GOGA pmax pmax
comp=Z,711nm,1.4s,mb6.4
GOGA Godfrey 87.47 42⇑ iP P 16 27 30.4 -0.3
comp=Z,711nm,1.4s,mb6.4
EPF Esparros 87.55 338⇑ iP P 16 27 30.1 -0.7
comp=Z,1µm,1.5s,mb6.4
EPF Esparros 87.55 338⇑ iP P 16 27 30.1 -0.7
EPF pmax pmax
comp=Z,606nm,1.5s,mb6.4
EPF Esparros 87.55 338⇑ iP P 16 27 30.1 -0.7
comp=Z,606nm,1.5s,mb6.4
MELF Melles 87.59 338 eP P 16 27 30.6 -0.4
LABF Labassere 87.61 338 eP P 16 27 30.0 -1.1
BRAL Brewton 87.68 46⇑ iP P 16 27 31.7 +0.1
comp=Z,636nm,0.7s,mb6.8
BRAL epP pP 16 27 57.8 -0.2
BRAL esP sP 16 28 09.5 +0.8
VALF Valcebollere 87.69 337 eP P 16 27 32.0 +0.5
REYF Montagne du Re 87.70 339 eP P 16 27 30.6 -1.0
ORDF Ordiarp 87.70 339 eP P 16 27 30.0 -1.6
OSSF Osses 87.74 339 eP P 16 27 30.3 -1.5
CSLB Castelbuono 87.75 327 P P 16 27 29.8 -2.1
RESF Ens 87.76 338 eP P 16 27 32.5 +0.7
ATE Arette 87.77 339 eP P 16 27 31.4 -0.5
JSC Jenkinsville 87.77 40 eP P 16 27 31.7 -0.3
VIEF Viey 87.77 338 eP P 16 27 32.2 +0.3
EALK Alkurruntz 87.84 340 P P 16 27 31.6 -0.6
comp=Z,267nm,1.6s,mb6.0
SJPF Ste Jean 87.87 339 eP P 16 27 31.9 -0.5
comp=Z,452nm,1.5s,mb6.0
SJPF Ste Jean 87.87 339 eP P 16 27 31.9 -0.5
SJPF pmax pmax
comp=Z,226nm,1.5s,mb6.0
SJPF Ste Jean 87.87 339 eP P 16 27 31.9 -0.5
comp=Z,226nm,1.5s,mb6.0
AGST Augusta-Monte 87.88 326 P P 16 27 32.1 -0.4
LARF Larrau 87.88 339 eP P 16 27 31.9 -0.5
ELIZ Elizondo 87.90 340 P P 16 27 32.3 -0.2
ELIZ pmax pmax
comp=Z,98nm,0.9s,mb5.8
ELIZ Elizondo 87.90 340 P P 16 27 32.3 -0.2
comp=Z,98nm,0.9s,mb5.8
ETSF Etsaut 87.91 339⇑ iP P 16 27 32.8 +0.3
comp=Z,722nm,1.4s,mb6.2
ETSF Etsaut 87.91 339⇑ iP P 16 27 32.8 +0.3
ETSF pmax pmax
comp=Z,361nm,1.4s,mb6.2
ETSF Etsaut 87.91 339⇑ iP P 16 27 32.8 +0.3
comp=Z,361nm,1.4s,mb6.2
EBIE Bielsa 87.93 338 P P 16 27 33.2 +0.5
comp=Z,141nm,0.9s,mb6.0
SSY Sortino 88.03 326 P P 16 27 32.7 -0.5
VSL Villasalto 88.07 331 P P 16 27 33.3 -0.1
HVZN Vizzini 88.15 326 P P 16 27 33.1 -0.7
HAVL Avola 88.18 325 P P 16 27 33.6 -0.3
ERC Erice 88.22 328 P P 16 27 33.9 -0.2
EMIR Miracle 88.28 337 P P 16 27 35.4 +1.1
comp=Z,120nm,0.8s,mb6.0
ELAN Lanestosa 88.28 341 P P 16 27 33.4 -0.9
comp=Z,171nm,1.2s,mb6.0
HMDC Modica 88.32 326 P P 16 27 34.3 -0.3
CNNC Cliffs of the 88.44 37 eP P 16 27 35.3 +0.1
comp=Z,268nm,0.8s,mb6.3
EARI Arriondas 88.61 342 P P 16 27 35.2 -0.6
comp=Z,236nm,1.3s,mb6.1
COW Cow Castle Cre 88.78 40 eP P 16 27 37.2 +0.4
EPOB Poblet 88.92 337 P P 16 27 37.2 -0.2
comp=Z,83nm,0.8s,mb5.8
EPON Pontenova 88.98 344 P P 16 27 36.4 -1.2
comp=Z,258nm,1.1s,mb6.2
ESAC San Caprasio 88.99 338 P P 16 27 37.9 +0.3
comp=Z,239nm,0.7s,mb6.3
NHSC New Hope 89.24 40 eP P 16 27 39.1 +0.1
comp=Z,2µm,1.8s,mb6.8
ERTA Horta de San J 89.49 338 P P 16 27 40.6 +0.5
comp=Z,38nm,0.8s,mb5.5
STS Santiago 89.68 344 P P 16 27 40.5 -0.3
STS pmax pmax
comp=Z,42nm,0.7s,mb5.7
STS Santiago 89.68 344 P P 16 27 40.5 -0.4
comp=Z,42nm,0.7s,mb5.7
EMAZ Mazaricos 89.69 345 P P 16 27 40.4 -0.6
comp=Z,170nm,1.1s,mb6.1
ERUA La Rua 89.88 343 P P 16 27 40.7 -1.1
ERUA pmax pmax
comp=Z,839nm,3.2s
ERUA La Rua 89.88 343 P P 16 27 40.7 -1.1
comp=Z,839nm,3.2s
ETOS Mallorca 89.91 335 P P 16 27 42.4 +0.4
comp=Z,288nm,1.0s,mb6.4
ECAL Calabor 90.23 343 P P 16 27 43.1 -0.3
comp=Z,18nm,0.6s,mb5.4
ETOR Torete 90.24 339 P P 16 27 43.0 -0.5
ETOR pmax pmax
comp=Z,70nm,0.7s,mb5.9

ETOR Torete 90.24 339 P **P** **16 27 43.0 -0.5**
comp=Z,70nm,0.7s,mb5.9
EMOS Mosqueruela 90.26 338 P **P** **16 27 43.6 -0.1**
comp=Z,47nm,0.7s,mb5.7
PBRG Braganca 90.36 343 *e*P **P** **16 27 42.6 -1.5**
comp=Z,273nm,1.9s,mb6.1
ELOB Lobios 90.57 344 P **P** **16 27 44.8 -0.2**
comp=Z,129nm,1.2s,mb5.9
PCAB Cabril 90.71 344 *e*P **P** **16 27 44.4 -1.3**
comp=Z,375nm,1.8s,mb6.2
GUD Guadarrama 90.91 341 P **P** **16 27 46.1 -0.5**
GUD pmax pmax
comp=Z,16nm,0.8s,mb5.2
GUD Guadarrama 90.91 341 P **P** **16 27 46.1 -0.5**
comp=Z,16nm,0.8s,mb5.2
EIBI Ibiza 91.02 336 P **P** **16 27 47.5 +0.4**
comp=Z,275nm,1.2s,mb6.3
MVO Moncorvo 91.04 343 *e*P **P** **16 27 45.8 -1.4**
comp=Z,318nm,1.5s,mb6.2
MVO Moncorvo 91.04 343 *e*PP PP 16 31 23.7 -0.1
MVO *e*SKSac SKSac 16 38 10.5 +0.6
MVO Moncorvo 91.04 343 *e*LR LR 16 56 23.9
comp=Z,2µm,17.5s
RPZ Rata Peaks 91.06 165 P **P** **16 27 47.2 +0.4**
comp=Z,12nm,1.1s,mb4.9,baz=15,slow=20,SNR=3.6
RPZ pP pP 16 28 12.5 -0.8
comp=Z,43nm,0.8s,baz=46,slow=2.6,SNR=7.4
CMAH Djebel Manchou 91.32 331 P **P** **16 27 47.0 -1.6**
CAEH `Ain El Ouahch 91.38 331 P **P** **16 27 48.0 -0.9**
KEST Kesra 91.45 329 P **P** **16 27 49.0 -0.2**
comp=Z,71nm,1.0s,mb5.8,baz=348,slow=1.0,SNR=100
KEST LR LR 17 12 09.0
comp=Z,2µm,20.9s,baz=163,slow=38
ABSA Djebel Ababsia 91.62 331 P **P** **16 27 50.0 0.0**
PVIS Viseu 91.64 343 *e*P **P** **16 27 48.8 -1.2**
comp=Z,292nm,1.6s,mb6.3
EBEN Beniarda 91.75 337 P **P** **16 27 51.0 +0.5**
comp=Z,41nm,0.9s,mb5.7
CKFL Kef-Lekhel 91.76 331 P **P** **16 27 50.0 -0.7**
ESDC Sonseca Array 91.78 340 P **P** **16 27 49.7 -1.0**
comp=Z,31nm,0.8s,mb5.6,baz=13,slow=4.4,SNR=63
MTE Manteigas 91.88 343 *e*P **P** **16 27 49.8 -1.3**
comp=Z,280nm,1.5s,mb6.3
MTE Manteigas 91.88 343 *e*SKSac SKSac 16 38 14.8 +0.1
MTE Manteigas 91.88 343 *e*LR LR 16 59 59.1
comp=Z,2µm,18.5s
DFRA Djebel Bou Aff 91.91 332 P **P** **16 27 51.0 -0.4**
CASM Ain Smara 91.97 331 P **P** **16 27 51.0 -0.6**
PAB San Pablo 92.00 341 *e*P **P** **16 27 49.1 -2.6**
PAB pmax pmax
comp=Z,156nm,1.5s,mb6.0
PAB San Pablo 92.00 341 *e*P **P** **16 27 49.1 -2.6**
comp=Z,156nm,1.5s,mb6.0
ETOB Tobarra 92.16 338 P **P** **16 27 52.4 0.0**
comp=Z,46nm,0.7s,mb5.8
CTEI Djebel Teioual 92.17 331 P **P** **16 27 51.5 -1.1**
SET Setif 92.38 332 P **P** **16 27 54.0 +0.5**
PCBR Castelo Branco 92.40 343 *e*P **P** **16 27 51.9 -1.7**
comp=Z,178nm,1.6s,mb6.0
EVIA Vianos 92.41 339 P **P** **16 27 53.8 +0.2**
EVIA pmax pmax
comp=Z,24nm,0.7s,mb5.5
EVIA Vianos 92.41 339 P **P** **16 27 53.8 +0.2**
comp=Z,24nm,0.7s,mb5.5
CKHR Kef el Ahmar 92.52 332 P **P** **16 27 55.0 +0.9**
ABA Alger-Bouzarea 92.58 334 P **P** **16 27 55.7 +1.3**
PMRV Marv??o 92.78 343 *e*P **P** **16 27 53.7 -1.6**
comp=Z,179nm,1.5s,mb6.2
PMRV Marv??o 92.78 343 *e*PP PP 16 31 38.2 +0.6
PMRV *e*SKSac SKSac 16 38 21.0 +1.2
PMRV Marv??o 92.78 343 *e*LR LR 16 58 23.8
comp=Z,2µm,31.3s
PMRV Marv??o 92.78 343 *e*P **P** **16 27 53.6 -1.7**
PTOM Tomar 92.81 344 *e*P **P** **16 27 54.3 -1.1**
comp=Z,234nm,1.9s,mb6.2
EMUR La Murta 92.83 338 P **P** **16 27 55.5 0.0**
comp=Z,21nm,0.9s,mb5.5
DWPF Disney 92.84 44 *e*P **P** **16 27 55.5 -0.3**
comp=Z,40nm,0.7s,mb5.8
AKET Djebel Ketaf 93.01 333 P **P** **16 27 57.3 +0.9**
ATAF Djebel Tarf 93.05 333 P **P** **16 27 57.9 +1.3**
ADJB Djebel Djouab 93.05 334 P **P** **16 27 57.3 +0.7**
EMHD Djebel Mahouad 93.12 334 P **P** **16 27 57.0 -0.1**
EBAN Banos Encina 93.18 340 P **P** **16 27 56.9 -0.3**
EBAN pmax pmax
comp=Z,25nm,0.9s,mb5.5
EBAN Banos Encina 93.18 340 P **P** **16 27 56.9 -0.2**
comp=Z,25nm,0.9s,mb5.5
EHUE Huescar 93.21 339 P **P** **16 27 56.6 -0.7**
EHUE pmax pmax
comp=Z,223nm,1.8s,mb6.2
EHUE Huescar 93.21 339 P **P** **16 27 56.6 -0.7**
comp=Z,223nm,1.8s,mb6.2
EQES Quesada 93.34 339 P **P** **16 27 58.3 +0.4**
comp=Z,21nm,0.8s,mb5.5
EBAD Badajoz 93.35 342 P **P** **16 27 57.2 -0.7**
comp=Z,15nm,0.8s,mb5.4
PESTR Estremoz 93.36 343 *e*P **P** **16 27 56.3 -1.7**
comp=Z,162nm,1.6s,mb6.1
PESTR Estremoz 93.36 343 *e*PP PP 16 31 42.4 +0.3
PESTR *e*SKSac SKSac 16 38 24.4 +1.4
PESTR Estremoz 93.36 343 *e*LR LR 17 06 50.8
comp=Z,3µm,18.1s
EADA Adamuz 93.36 340 P **P** **16 27 58.1 +0.1**
comp=Z,20nm,0.9s,mb5.5
EBNR Beni Rached 93.51 335 P **P** **16 27 59.0 +0.3**
ECAB El Cabril 93.65 341 P **P** **16 27 59.2 -0.1**
comp=Z,36nm,1.0s,mb5.7
ECHA Ech Chlef 93.69 335 P **P** **16 28 00.0 +0.5**
EVO Evora 93.77 343⇑ *i*P **P** **16 27 58.2 -1.7**
comp=Z,713nm,1.9s,mb6.4
EVO *e*MLR MLR
comp=Z,4µm,21.0s
EVO Evora 93.77 343 *e*P **P** **16 27 58.3 -1.6**
comp=Z,166nm,1.6s,mb6.1
EVO Evora 93.77 343 *e*PP PP 16 31 45.0 -0.3
ELUQ Luque 93.87 340 P **P** **16 28 00.2 -0.1**
ELUQ pmax pmax
comp=Z,15nm,0.7s,mb5.4
ELUQ Luque 93.87 340 P **P** **16 28 00.2 -0.2**
comp=Z,15nm,0.7s,mb5.4
ENIJ Nijar 93.91 338 P **P** **16 28 00.1 -0.4**
ENIJ pmax pmax
comp=Z,36nm,0.9s,mb5.7
ENIJ Nijar 93.91 338 P **P** **16 28 00.1 -0.4**
comp=Z,36nm,0.9s,mb5.7
PBAR Barrancos 93.91 342 *e*P **P** **16 27 59.0 -1.5**
comp=Z,139nm,1.9s,mb6.0
PBAR Barrancos 93.91 342 *e*PP PP 16 31 46.5 +0.1
PBAR *e*SKSac SKSac 16 38 26.3 +0.3
PBAR Barrancos 93.91 342 *e*LR LR 17 02 26.5
comp=Z,2µm,21.1s
EANR `Ain N'Sour 93.95 335 P **P** **16 28 01.0 +0.3**
ECOG Cogollos-Vega 93.97 339 P **P** **16 28 00.7 -0.1**
ECOG pmax pmax
comp=Z,26nm,0.8s,mb5.6
ECOG Cogollos-Vega 93.97 339 P **P** **16 28 00.7 -0.1**
comp=Z,26nm,0.8s,mb5.6
EBER Berja 94.15 339 P **P** **16 28 01.0 -0.7**
comp=Z,37nm,1.2s,mb5.6
EMIN Mina Concepcio 94.22 342 P **P** **16 28 00.7 -1.3**
comp=Z,31nm,0.9s,mb5.6
PBEJ Beja 94.23 343 *e*P **P** **16 28 00.6 -1.4**
comp=Z,206nm,1.5s,mb6.2
ELOJ Sierra Loja 94.23 340 P **P** **16 28 02.1 +0.1**
ELOJ pmax pmax
comp=Z,10.0nm,0.5s,mb5.4
ELOJ Sierra Loja 94.23 340 P **P** **16 28 02.1 +0.1**
comp=Z,9.8nm,0.5s,mb5.4
ERON Agron 94.27 339 P **P** **16 28 01.4 -0.8**
comp=Z,147nm,2.4s,mb5.9
EGUA Guajares 94.39 339 P **P** **16 28 01.8 -1.0**
comp=Z,3µm,3.0s
ETRT Tiaret 94.41 335 P **P** **16 28 02.0 -0.9**
EGRO El Granado 94.62 342 P **P** **16 28 03.4 -0.4**
comp=Z,21nm,0.8s,mb5.6
PVAQ Vaqueiros 94.80 342 *e*P **P** **16 28 03.2 -1.4**
comp=Z,118nm,1.7s,mb6.0
PVAQ Vaqueiros 94.80 342 *e*PP PP 16 31 53.8 +0.5
PVAQ *e*SKSac SKSac 16 38 31.6 +0.8
PVAQ Vaqueiros 94.80 342 *e*LR LR 17 06 00.7
comp=Z,3µm,18.4s
PTEO Sao Teotonio 94.87 343 *e*P **P** **16 28 03.6 -1.3**
comp=Z,264nm,1.5s,mb6.5
PTEO Sao Teotonio 94.87 343 *e*P **P** **16 28 03.5 -1.4**
ESPR Espera 94.90 341 P **P** **16 28 05.4 +0.3**
comp=Z,35nm,1.0s,mb5.7
EMIJ Mijas 94.94 340 P **P** **16 28 04.3 -0.9**
comp=Z,18nm,0.8s,mb5.5
PBDV Barranco-do-Ve 95.00 343 *e*P **P** **16 28 04.3 -1.2**
comp=Z,128nm,1.7s,mb6.1
PBDV Barranco-do-Ve 95.00 343 *e*PP PP 16 31 55.5 +0.6
PBDV *e*SKSac SKSac 16 38 32.5 +0.6
PBDV Barranco-do-Ve 95.00 343 *e*LR LR 17 03 31.9
comp=Z,3µm,18.1s
MORF Marmelete 95.08 343 *e*P **P** **16 28 04.7 -1.2**
comp=Z,287nm,1.5s,mb6.5
MORF Marmelete 95.08 343 *e*SKSac SKSac 16 38 32.1 -0.3
MORF Marmelete 95.08 343 *e*LR LR 17 01 09.3
comp=Z,3µm,24.0s
EALB Alboran 95.10 338 P **P** **16 28 04.8 -1.2**
comp=Z,50nm,3.3s
EJIF Jimena Fronter 95.21 340 P **P** **16 28 05.1 -1.4**
EJIF pmax pmax
comp=Z,446nm,2.0s,mb6.5
EJIF Jimena Fronter 95.21 340 P **P** **16 28 05.1 -1.4**
comp=Z,446nm,2.0s,mb6.5
PFVI Vila Bisbo 95.29 343 *e*P **P** **16 28 05.0 -1.8**
comp=Z,146nm,1.4s,mb6.2
PFVI Vila Bisbo 95.29 343 *e*PP PP 16 31 58.8 +1.7
PFVI *e*SKSac SKSac 16 38 34.0 +0.6
PFVI Vila Bisbo 95.29 343 *e*LR LR 17 01 41.8
comp=Z,2µm,17.3s
PFVI Vila Bisbo 95.29 343 *e*P **P** **16 28 04.9 -1.9**
TEIG Tepich 95.68 53 *e*P **P** **16 28 07.9 -1.0**
comp=Z,19nm,0.9s,mb5.5
RKT Rikitea 96.40 117 *e*SKSac SKSac 16 38 44.8 +5.6
comp=Z,2µm,27.2s
RKT Rikitea 96.40 117 *e*PS PS 16 41 00.1 +3.4
comp=Z,1µm,33.6s
RKT *e*SS SS 16 46 13.7 +14
comp=Z,2µm,27.8s
RKT Rikitea 96.40 117 *e*LR LR 16 59 21.7
comp=Z,3µm,26.2s,baz=315
SLAT Slait 96.66 301 *i* P **P** **16 28 13.0 -0.4**
SLAT AMb AMB 16 28 14.2
comp=Z,84nm,1.6s,mb5.9
SLAT *i* S S 16 38 40.0 -46
PMPS Porto Santo 100.55 348 *e*P Pdif 16 28 29.9 -0.7
comp=Z,299nm,1.6s
PMAR Madeira 100.96 349 *e*P Pdif 16 28 32.4 0.0
TGUH Tegucigalpa,Un 101.16 56 *e*Pdif Pdif 16 28 33.1 -0.2
CFTV Fuerteventura 104.75 346 P Pdif 16 28 48.7 -0.6
comp=Z,540nm,3.8s
CCAN Las Canadas 105.34 348 P Pdif 16 28 51.0 -0.9
comp=Z,661nm,4.8s
KMBO Kilima Mbogo 106.59 286 PP PP 16 33 23.7 0.0
comp=Z,5.8nm,1.0s,baz=34,slow=11,SNR=7.2
DRV Dumont d'Urvil 112.40 184 PP PP 16 34 28.0 +23
DRV SP SP 16 43 38.0 +11
DRV SS SS 16 50 02.0 +25
DRV L 17 01 00.0
DRV R 17 08 00.0
TORD Torodi Ar. Bea 114.77 326 PKiKP PKiKP 16 33 22.6 -0.8
comp=Z,9.3nm,0.5s,baz=18,slow=1.9,SNR=111
TORD pPKiKP 16 33 48.2
comp=Z,4.5nm,0.5s,baz=8.9,slow=1.5,SNR=4.4
TORD PP PP 16 34 17.8 -3.9
comp=Z,8.4nm,1.0s,baz=20,slow=6.5,SNR=6.8
TORD PKKPbc PKKPbc 16 43 58.3 -0.6
comp=Z,0.9nm,0.5s,baz=210,slow=2.3,SNR=8.8
TORD PKKP PKKPdf 16 44 26.6 +5.4
comp=Z,1.8nm,0.8s,baz=192,slow=2.6,SNR=2.9
DBIC Dimbokro 123.17 330 PKP PKPdf 16 33 39.0 -0.6
comp=Z,50nm,0.7s,baz=8.2,slow=2.2,SNR=71
DBIC pPKP pPKPdf 16 34 06.9 -0.2
comp=Z,23nm,0.6s,baz=0.4,slow=1.8,SNR=5.7
DBIC PP PP 16 35 14.8 -4.7
comp=Z,11nm,0.8s,baz=356,slow=6.6,SNR=6.1
DBIC Dimbokro 123.17 330 PKP PKPdf 16 33 39.0 -0.6
DBIC pPKP pPKPdf 16 34 06.9 -0.2
DBIC PP PP 16 35 14.8 -4.7
TIC Toumodi 123.25 330 *e*PKIKP PKPdf 16 33 39.1 -0.6
comp=Z,188nm,0.7s
KIC Kosan Boka 123.41 330 *e*PKIKP PKPdf 16 33 39.4 -0.6
comp=Z,198nm,0.8s
LIC Lamto 123.64 330⇑ *i*PKIKP PKPdf 16 33 39.7 -0.8
comp=Z,106nm,0.8s
LIC *e*MLR MLR
comp=Z,2µm,21.2s
LIC Lamto 123.64 330 *e*PKIKP PKPdf 16 33 39.6 -0.9
comp=Z,118nm,0.7s
LIC Lamto 123.64 330⇑ *i*PKPdf PKPdf 16 33 39.7 -0.8
LIC LR LR
comp=Z,830nm,21.3s
SBA Scott Base 123.81 176 *e*PKIKP PKPdf 16 33 38.7 -0.1
MAW Mawson 130.32 210 *e*PKP PKPdf 16 33 51.7 +0.3
comp=Z,7.3nm,0.8s
MAW *e*pPKP pPKPdf 16 34 17.5 -1.5
MAW *e*SKP 16 37 05.4
MAW *e* 16 37 43.0
MAW *e* 16 37 53.0
MAW Mawson 130.32 210 PKP PKPdf 16 33 51.9 +0.4
comp=Z,7.8nm,0.8s,baz=319,slow=1.7,SNR=12
MAW pPKP pPKPdf 16 34 19.2 +0.2
comp=Z,23nm,1.0s,baz=41,slow=1.9,SNR=6.9
TSUM Tsumeb 132.87 288 *e*PKPpre 16 33 44.0
TSUM *e*PKPdf PKPdf 16 33 58.8 +1.0
TSUM *e*pPKPdf pPKPdf 16 34 26.4 +1.0
TSUM *e*PP PP 16 36 21.3 -2.9
TSUM *e*SKPbc SKPbc 16 37 17.1 +1.0
TSUM *e* 16 38 05.8
BOSA Boshof 133.77 272 PKhKP 16 33 52.8
comp=Z,6.8nm,0.8s,baz=88,slow=5.7,SNR=5.5
BOSA PKP PKPdf 16 33 59.9 +0.7
comp=Z,6.2nm,0.7s,baz=44,slow=2.2,SNR=9.1
BOSA pPKP pPKPdf 16 34 24.2 -2.6
comp=Z,8.0nm,0.7s,baz=329,slow=2.1,SNR=2.8
BOSA PP PP 16 36 23.9 -6.2
comp=Z,15nm,1.0s,baz=60,slow=8.4,SNR=5.2
LPAZ La Paz 136.63 60 PKhKP 16 33 53.8
comp=Z,4.2nm,0.7s,baz=346,slow=5.2,SNR=13
LPAZ PKP PKPdf 16 34 05.8 +0.9
comp=Z,9.3nm,0.7s,baz=29,slow=3.1,SNR=15
LPAZ PP PP 16 36 48.0 +0.3
comp=Z,9.1nm,1.1s,baz=300,slow=3.1,SNR=3.8
SYO Syowa Base 139.01 211⇑ *e*PKPdf PKPdf 16 34 06.4 -1.3
SYO Syowa Base 139.01 211⇑ *e*X 16 34 08.4
SYO Syowa Base 139.01 211⇓ *e*pPKPdf pPKPdf 16 34 33.4 -1.9
LVC Limon Verde 140.85 67 *e*PKPpre 16 34 07.5
LVC *e*PKPdf PKPdf 16 34 12.9 +0.5
LCO Las Campanas 143.96 77 *e*PKPdf PKPdf 16 34 16.0 -1.8
TLL Tololo Astrono 144.61 78⇑ *i*P PKPdf 16 34 17.8 -1.1
BDFB Brasilia 146.31 33 PKPbc PKPbc 16 34 22.7 -0.8
comp=Z,221nm,0.8s,baz=306,slow=2.6,SNR=188
BDFB pPKPbc pPKPbc 16 34 51.4 +0.6
comp=Z,53nm,0.7s,baz=210,slow=17,SNR=2.1
FCH Farellones 146.81 82⇑ *i*P PKPdf 16 34 22.2 -0.4
MAIT Maitri 147.93 204 *e*PKPdif PKPdf 16 34 26.2 +3.0
PLCA Paso Flores 150.21 95 PKP PKPdf 16 34 26.8 -1.0
comp=Z,11nm,0.8s,baz=190,slow=1.8,SNR=17
PLCA PKPbc PKPbc 16 34 33.0 0.0
comp=Z,140nm,0.7s,baz=248,slow=2.1,SNR=136
PLCA pPKPbc pPKPbc 16 35 00.4 -0.1
comp=Z,111nm,0.9s,baz=257,slow=3.9,SNR=5.7
CPUP Villa Florida 150.75 58 PKP PKPdf 16 34 28.6 -0.6
comp=Z,5.3nm,0.8s,baz=304,slow=2.4,SNR=19
CPUP PKPbc PKPbc 16 34 34.4 -0.4
comp=Z,46nm,0.6s,baz=298,slow=3.0,SNR=88
CPUP pPKPbc pPKPbc 16 35 02.0 -0.2
comp=Z,41nm,0.6s,baz=321,slow=1.9,SNR=5.0
SNAA Sanae 151.04 197 *e*PKPdf PKPbc 16 34 33.4 -0.7
SNAA *e* 16 34 38.7
SNAA *e* 16 34 41.0
SNAA *e* 16 35 00.8
SNAA *e* 16 35 04.7
SNAA *e* 16 38 22.5
VNA2 Neumayer--Watz 152.54 196 *e*PKPdf PKPbc 16 34 37.3 -0.2
VNA2 *e* 16 34 42.9
VNA2 *e* 16 34 50.0
VNA2 *e* 16 35 04.9
VNA2 *e* 16 35 08.6
VNA2 *e* 16 38 27.9
VNA2 *e* 16 38 49.1
VNA3 Neumayer Olymp 152.69 194 *e*PKPdf PKPbc 16 34 37.3 -0.5
VNA3 *e* 16 34 42.7
VNA3 *e* 16 34 49.8
VNA3 *e* 16 35 04.8
VNA3 *e* 16 35 08.2
VNA3 *e* 16 38 27.6
VNA3 *e* 16 38 48.8
VNA1 Neumayer--Stat 152.93 196 *e*PKPdf PKPbc 16 34 38.4 +0.1
VNA1 *e* 16 34 44.0
VNA1 *e* 16 34 51.2
VNA1 *e* 16 35 06.0
VNA1 *e* 16 35 09.6
VNA1 *e* 16 35 17.6
VNA1 *e* 16 38 29.0
PMSA Palmer Station 153.35 148 *e*PKPdf PKPdf 16 34 33.0 +1.3
PMSA *e*PKPbc PKPbc 16 34 39.1 -0.3
PMSA *e* 16 35 07.1
VAO Valinhos 153.36 37⇓ *i*P PKPdf 16 34 30.8 -2.3
VAO *i* 16 34 40.6
VAO *i* 16 34 53.1
TRQA Tornquist 155.04 83 PKPdf PKPdf 16 34 32.7 -2.3
TRQA *e*PKPbc PKPdf 16 34 42.2 +7.2
LPA La Plata 156.15 73 *ce*PKP PKPdf 16 34 35.0 -1.6
LPA La Plata 156.15 73 *e*PKP PKPab 16 35 03.0 -1.8
LPA *ep*PKP pPKPab 16 35 34.0 +2.5

IDC 03 17:06:07.3±6.6, 2978S×17641W, h76km±47km, mb3.3/3, mb1 3.4/3, mb1mx3.3/14, mbtmp3.3/3, Error ellipse: s-maj=156.3km s-min=58.2km az=18.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.42**	**291**	P	Pn	17 06 31.1	-0.3
	104nm,0.3s,baz=247,slow=22,SNR=6.1						
RAO				S	Sn	17 06 49.5	0.0
	87nm,0.3s,baz=103,slow=22,SNR=6.5						
STKA	**Stephens Creek**	**35.97**	**256**	P	P	17 13 00.7	0.0
	2.2nm,1.0s,baz=90,slow=11,SNR=2.7						
ASAR	**Alice Springs**	**44.53**	**266**	P	P	17 14 11.4	0.0
	0.3nm,0.7s,baz=101,slow=7.2,SNR=4.7						
WRA	**Warramunga Arr**	**45.46**	**271**	P	P	17 14 18.9	-0.1
	0.6nm,0.7s,baz=111,slow=8.1,SNR=8.3						

*ISCJB **03** 17:16:37.3±2.3, 4808N±006×155.15E±009, h1km±14km, mb4.4/33, Error ellipse: s-maj=13.1km s-min=6.3km az=136.4*
*BJI **03** 17:16:42.2, 4842N×15557E, h66km, mB5.1, mb4.5, Ms4.8, Msz4.7*
*MOS **03** 17:16:43.0±1.2, 4813N×15504E, h38km, mb4.6/16, Error ellipse: s-maj=10.5km s-min=7.3km az=103.9*
*NEIC **03** 17:16:44.9±1.3, 4814N×155.16E, h40km±9km, mb4.6/9, Error ellipse: s-maj=15.3km s-min=9.7km az=148.0*
*IDC **03** 17:16:45.5±2.8, 4817N×15493E, h47km±26km, mb3.7/14, mb1 4.0/16, mb1mx3.9/21, mbtmp3.8/16, ML4.0/2, MS3.4/1, Ms1 3.4/1, ms1mx3.0/46, Error ellipse: s-maj=20.5km s-min=13.9km az=142.0*
*SZGRF **03** 17:16:46.0, 4800N×15452E, h33km, mb4.8, Kuril Islands, Russia*

ISC 03 17:16:42.3±2.7, 4815N±007×1550E±01, h18km±16km, n106, σ0.989/105, mb4.3/33, 21C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.63**	**15**	*e*PN	**Pn**	**17 17 23.0**	**-0.7**
SKR				*i* S	**Sn**	**17 17 54.5**	**-0.7**
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				smax			
	comp=N,430nm,0.6s						
SKR				smax			
	comp=E,290nm,0.6s						
SKR				smax			
	comp=Z,240nm,0.6s						
PEA0B	**Petropavlovsk-**	**5.24**	**18**	*e*P	**Pn**	**17 18 00.4**	**+0.8**
PETK	**Petropavlovsk-**	**5.24**	**18**	P	**Pn**	**17 18 00.6**	**+1.0**
	comp=Z,3.0nm,0.3s,baz=182,slow=13,SNR=55						
PETK				LR	LR	17 20 28.0	
	comp=Z,323nm,18.6s,baz=274,slow=42						
PET	**Petropavlovsk**	**5.39**	**24**	*e*PN	**Pn**	**17 18 01.0**	**-0.7**
PET				pmax	pmax		
	comp=Z,38nm,0.4s						
PET	**Petropavlovsk**	**5.39**	**24**	*e*P	**Pn**	**17 18 00.8**	**-0.9**
	comp=Z,28nm,0.4s						
KUR	**Kuril'sk**	**5.73**	**242**	*e*PN	**Pn**	**17 18 05.0**	**-1.3**
KUR				pmax	pmax		
	comp=N,80nm,0.5s						
KUR				pmax	pmax		
	comp=E,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
YSS	**Yuzh-Sakhalins**	**8.39**	**266**⇑	*e*PN	**Pn**	**17 18 47.1**	**+4.2**
YSS				*e*S	**Sn**	**17 20 24.0**	**+6.9**
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS	**Yuzh-Sakhalins**	**8.39**	**266**	*e*P	**Pn**	**17 18 47.3**	**+4.5**
	comp=Z,28nm,0.4s						
ASAJ	**Asahikawa**	**9.53**	**250**	P	**Pn**	**17 18 58.8**	**+0.4**
	comp=Z,2.3nm,0.3s,baz=86,slow=14,SNR=21						
ASAJ	**Asahikawa**	**9.53**	**250**	PN	**Pn**	**17 18 58.8**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SEY	**Seymchan**	**14.89**	**355**	*e*P	**Pn**	**17 20 12.0**	**+0.5**
KLR	**Kul'dur**	**15.40**	**283**	*e*P	**Pn**	**17 20 17.8**	**-0.6**
VLA	**Vladivostok**	**16.92**	**261**	*e*P	**Pn**	**17 20 40.0**	**+2.1**
VLA				pmax	pmax		
	comp=Z,4.0nm,0.2s						
MJAR	**Matsushiro Arr**	**16.96**	**233**	P	**Pn**	**17 20 34.9**	**-3.6**
	comp=Z,0.3nm,0.3s,baz=304,slow=14,SNR=5.7						
YAK	**Yakutsk**	**19.90**	**324**	*e*P	**Pn**	**17 21 21.0**	**+6.9**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK	**Yakutsk**	**19.90**	**324**	*e*P	**Pn**	**17 21 12.0**	**-2.1**
	comp=Z,9.0nm,0.6s						
CLNS	**Chul'man**	**20.16**	**307**	*e*P	**P**	**17 21 17.8**	**+2.5**
CLNS				pmax	pmax		
	comp=Z,16nm,1.0s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.8s						
KSRS	**Korea Array**	**22.47**	**252**	P	**P**	**17 21 40.8**	**+0.5**
	comp=E,5.6nm,0.7s,mb4.1,baz=51,slow=10.0,SNR=24						
KSRS	**Korea Array**	**22.47**	**252**	P	**P**	**17 21 40.8**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
HIA	**Hailar**	**23.19**	**286**	*e*P	**P**	**17 21 48.0**	**+0.2**
NJ2	**Nanjing**	**31.66**	**253**	*e*P	**P**	**17 23 05.2**	**+0.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
ULN	**Ulaanbaatar**	**31.69**	**288**⇑	*e*P	**P**	**17 23 03.9**	**-0.5**
SONM	**Songino Array**	**32.12**	**288**	P	**P**	**17 23 07.3**	**-0.9**
	comp=Z,0.9nm,0.8s,mb3.7,baz=69,slow=8.4,SNR=9.0						
SONM	**Songino Array**	**32.12**	**288**	P	**P**	**17 23 07.3**	**-0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TLY	**Talaya**	**32.72**	**296**	*e*P	**P**	**17 23 13.3**	**-0.1**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
ZAK	**Zakamensk**	**33.29**	**294**	*e*P	**P**	**17 23 17.0**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.8						
LZH	**Lanzhou**	**39.15**	**271**	*e*P	**P**	**17 24 09.1**	**+0.4**
LZH				AMB	AMB		
	comp=Z,16nm,1.2s,mb4.6						
LZH				AMB	AMB		
	comp=Z,83nm,4.7s						
GTA	**Gaotai**	**40.04**	**279**	*e*P	**P**	**17 24 16.7**	**+0.6**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.0s,mb3.8						
ZALV	**Zalesovo Beam**	**42.86**	**305**	P	**P**	**17 24 37.5**	**-1.4**
	comp=Z,0.9nm,0.4s,mb3.8,baz=62,slow=7.6,SNR=5.1						
ZAL	**Zalesovo**	**42.87**	**305**	P	**P**	**17 24 37.5**	**-1.6**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**47.46**	**297**	P	**P**	**17 25 14.8**	**-0.8**
	comp=Z,4.9nm,0.7s,mb4.6,baz=63,slow=7.9,SNR=34						
MKAR	**Makanchi Array**	**47.46**	**297**	P	**P**	**17 25 14.8**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR	**Makanchi Array**	**47.46**	**297**	P	**P**	**17 25 14.8**	**-0.8**
KURK	**Kurchatov**	**47.68**	**303** *d*	*i*P	**P**	**17 25 16.4**	**-0.8**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
YKA	**Yellowknife Ar**	**49.02**	**38**	P	**P**	**17 25 27.1**	**-0.3**
	comp=Z,1.0nm,0.7s,mb4.0,baz=293,slow=6.8,SNR=4.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YKA	Yellowknife Ar	49.02	38	⇑eP	P	17 25 27.1	-0.3
CMAR	Chiang Mai Arr	53.96	257	P	P	17 26 04.8	-0.1
	comp=Z,1.8nm,0.8s,mb4.1,baz=34,slow=7.5,SNR=12						
CMAR	Chiang Mai Arr	53.96	257	⇑eP	P	17 26 05.6	+0.7
ARCES	ARCESS Array B	56.95	341	P	P	17 26 23.8	-2.0
	comp=Z,1.7nm,0.8s,mb4.1,baz=19,slow=7.7,SNR=5.3						
ARCES	ARCESS Array B	56.95	341	P	P	17 26 23.8	-2.0
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	Mina Array Bea	60.64	64	P	P	17 26 53.7	+1.8
	comp=Z,0.4nm,0.7s,mb3.7,baz=277,slow=7.2,SNR=2.9						
PDAR	Pinedale Array	62.87	55	P	P	17 27 06.7	-0.1
	comp=Z,0.5nm,0.9s,mb3.6,baz=327,slow=4.3,SNR=3.9						
NB2	NORSAR Subarra	67.31	342	P	P	17 27 34.7	-0.7
	comp=Z,2.0nm,0.6s,mb4.3,baz=26,slow=6.5						
NOA	NORSAR Array B	67.31	342	P	P	17 27 35.2	-0.1
	comp=Z,2.8nm,0.7s,mb4.4,baz=27,slow=6.4,SNR=7.8						
NOA	NORSAR Array B	67.31	342	P	P	17 27 35.3	-0.1
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ANMO	Albuquerque	69.99	60	eP	P	17 27 51.1	-1.4
WRA	Warramunga Arr	70.27	201	P	P	17 27 52.7	-1.5
	comp=Z,0.6nm,0.8s,mb3.6,baz=16,slow=6.4,SNR=7.0						
WRA	Warramunga Arr	70.27	201	i P	P	17 27 53.7	-0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KIV	Kislovodsk	70.74	315	eP	P	17 27 56.2	-0.8
KIV				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
AKASG	Malin Array Be	71.09	327	P	P	17 27 58.1	-0.9
	comp=Z,3.2nm,0.6s,mb4.5,baz=32,slow=6.2,SNR=8.6						
AKASG	Malin Array Be	71.09	327	i P	P	17 27 58.0	-1.0
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SCHQ	Schefferville	71.50	24	P	P	17 28 00.6	-0.8
	comp=Z,1.3nm,0.4s,mb4.2,baz=233,slow=20,SNR=4.8						
ASAR	Alice Springs	73.96	200	P	P	17 28 15.7	-0.5
	comp=Z,0.4nm,0.5s,mb3.6,baz=18,slow=5.2,SNR=8.0						
STHS	Stebnicka Huta	74.94	331	eP	P	17 28 22.6	+0.8
STHS				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
STHS	Stebnicka Huta	74.94	331	eP	P	17 28 22.6	+0.8
	comp=Z,5.2nm,0.7s,mb4.6						
KOLS	Kolonicke sedl	75.02	330	eP	P	17 28 23.0	+0.8
BUR08	Bucovina Ar. S	75.10	327	eP	P	17 28 22.0	-0.7
BURAR	Bucovina Array	75.12	327	⇑iP	P	17 28 23.0	+0.1
BURAR	Bucovina Array	75.12	327	⇑P	P	17 28 23.0	+0.1
KSP	Ksiaz	75.22	334	eP	P	17 28 23.1	-0.2
CRVS	Cervenica-Dubn	75.32	330	eP	P	17 28 24.0	+0.1
DPC	Dobruska-Polom	75.65	334	eP	P	17 28 26.5	+0.7
CLL	Collm	75.71	337	⇑iP	P	17 28 26.0	-0.2
CLL				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
CLL	Collm	75.71	337	eP	P	17 28 25.9	-0.3
	comp=Z,9.0nm,0.8s,mb4.8						
CLL	Collm	75.71	337	⇑iP	P	17 28 26.0	-0.2
	comp=Z,9.0nm,0.8s,mb4.8						
CLL	Collm	75.71	337	⇑iP	P	17 28 26.0	-0.2
	comp=Z,9.0nm,0.8s,mb4.8						
MORC	Moravsky Berou	75.79	333	⇓iP	P	17 28 27.6	+0.9
MORC	Moravsky Berou	75.79	333	⇓P	P	17 28 27.6	+1.0
PVCC	Panska Ves	75.99	335	eP	P	17 28 28.4	+0.6
KECS	Kecovo	76.00	331	eP	P	17 28 28.0	+0.1
KECS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
KECS	Kecovo	76.00	331	eP	P	17 28 28.0	+0.1
	comp=Z,2.3nm,0.9s,mb4.1						
PRU	Pruhonice	76.48	335	eP	P	17 28 30.7	+0.1
VRAC	Vranov	76.49	333	⇑iP	P	17 28 31.8	+1.1
VRAC	Vranov	76.49	333	⇑P	P	17 28 31.8	+1.2
VYHS	Vyhne	76.52	332	eP	P	17 28 31.3	+0.5
MLR	Muntele Rosu	76.65	326	⇑iP	P	17 28 32.1	+0.5
MLR	Muntele Rosu	76.65	326	⇑P	P	17 28 32.1	+0.4
DRGR		76.71	329	⇑iP	P	17 28 31.9	-0.1
DRGR		76.71	329	⇑P	P	17 28 31.9	0.0
VOIR		77.03	326	⇑iP	P	17 28 34.6	+0.8
VOIR		77.03	326	⇑P	P	17 28 34.6	+0.9
MALT	Malatya	77.14	314	⇑iP	P	17 28 35.6	+1.1
MALT	Malatya	77.14	314	⇑P	P	17 28 35.6	+1.1
ROTZ	Rotzenmuhle	77.33	336	eP	P	17 28 36.2	+0.9
	comp=Z,6.0nm,1.0s,mb4.5						
ZST	Bratislava	77.33	333	eP	P	17 28 36.4	+1.0
ZST				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ZST	Bratislava	77.33	333	eP	P	17 28 36.4	+1.0
	comp=Z,5.0nm,0.9s,mb4.4						
KHC	Kasperske Hory	77.53	335	eP	P	17 28 37.3	+0.8
GRA1	Grafenberg Arr	77.66	337	eP	P	17 28 37.7	+0.5
	comp=Z,15nm,0.9s,mb4.9						
GRF	Grafenberg Arr	77.66	337	eP	P	17 28 37.7	+0.5
GRF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
GRF	Grafenberg Arr	77.66	337	eP	P	17 28 37.7	+0.5
GRF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
GRF	Grafenberg Arr	77.66	337	eP	P	17 28 37.7	+0.5
	comp=Z,15nm,0.9s,mb4.9						
WET	Wettzell	77.71	336	eP	P	17 28 38.1	+0.6
WET				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WET	Wettzell	77.71	336	eP	P	17 28 38.1	+0.6
	comp=Z,6.0nm,0.8s,mb4.6						
GEC2	GERESS Array S	77.75	335	eP	P	17 28 37.8	+0.1
GEC2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
GEC2	GERESS Array S	77.75	335	eP	P	17 28 37.8	+0.1
	comp=Z,4.0nm,0.8s,mb4.4						
GERES	GERESS Array B	77.75	335	P	P	17 28 37.4	-0.3
	comp=Z,1.8nm,0.6s,mb4.2,baz=34,slow=5.4,SNR=19						
GERES	GERESS Array B	77.75	335	P	P	17 28 37.4	-0.3
GERES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BZS	Buzias	78.11	329	⇑iP	P	17 28 39.3	-0.5
BZS	Buzias	78.11	329	⇑P	P	17 28 39.3	-0.5
MIB	Mutribah	79.03	302	eP	P	17 28 45.0	-0.1
	baz=302						
MIB				AMb	AMB	17 28 45.7	
	comp=Z,22nm,0.7s,mb5.2,baz=302						
RST	Umm Al-Ruwaisa	79.45	303	eP	P	17 28 47.3	-0.1
	baz=302						
RST				AMb	AMB	17 28 47.6	
	comp=Z,1.0nm,0.9s,mb3.8,baz=302						
NAY	Al-Naaiem	79.50	302	eP	P	17 28 47.5	-0.3
	baz=302						
NAY				AMb	AMB	17 28 48.6	
	comp=Z,11nm,1.1s,mb4.7,baz=302						
RDF	Al-Radifah	79.57	302	eP	P	17 28 48.2	+0.1
	baz=302						
RDF				AMb	AMB	17 28 50.0	
	comp=Z,25nm,1.1s,mb5.1,baz=302						
CPUP	Villa Florida	146.64	61	PKPbc	PKPdf	17 36 19.2	-1.8
	comp=Z,0.5nm,0.4s,baz=338,slow=7.2,SNR=3.9						
CPUP	Villa Florida	146.64	61	PKIKP	PKPdf	17 36 19.2	-1.8
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CPUP	Villa Florida	146.64	61	PKPbc	PKPdf	17 36 19.2	-1.8

IDC 03 17:28:41.4±25.0, 1029S×16694E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.7/16, mbtmp4.1/4, ML4.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.7/29, Error ellipse: s-maj=441.9km s-min=66.3km az=48.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.95	276	Pn	Pn	17 30 24.7	+0.2
	5.3nm,0.3s,baz=167,slow=11,SNR=4.2						
HNR				LR	LR	17 32 05.1	
	comp=Z,107nm,18.3s,baz=118,slow=29						
STKA	Stephens Creek	31.80	224	P	P	17 35 07.9	+0.2
	3.5nm,0.9s,baz=45,slow=11,SNR=4.5						
WRA	Warramunga Arr	32.85	249	P	P	17 35 17.3	+0.2
	3.8nm,0.9s,baz=80,slow=9.1,SNR=16						
ASAR	Alice Springs	34.18	243	P	P	17 35 28.4	-0.3
	0.8nm,0.8s,baz=69,slow=9.9,SNR=8.4						

*NEIC **03** 17:38:43.0, 2997S×7165W, h40km, MD4.2(GUC), After GUC.*

GUC 03 17:38:43.0±0.7, 2997S×7165W, h40km±3km, MD4.2, ML4.3, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	La Serena	0.36	80	⇑iP	Pn	17 38 51.9	0.0
LSCH				i S	Sn	17 38 58.3	+0.1
TLL	Tololo Astrono	0.76	105	⇓iP	Pn	17 38 58.3	+1.0
TLL				i S	Sn	17 39 09.5	+2.0
TLL				AML	AML	17 39 13.0	
	comp=N,8μm,0.7s						
TLL	Tololo Astrono	0.76	105	⇓iP	Pn	17 38 58.3	+1.0
TLL				i S	Sn	17 39 09.5	+2.0
LCO	Las Campanas	1.27	41	eP	Pn	17 39 06.0	+1.8
VACH	Vallenar	1.60	29	⇑iP	Pn	17 39 10.2	+1.5
VACH				i S	Sn	17 39 30.1	+2.0
VACH				AML	AML	17 39 36.0	
	comp=E,5μm,0.4s						
VACH	Vallenar	1.60	29	⇑iP	Pn	17 39 10.2	+1.5
VACH				i S	Sn	17 39 30.1	+2.0
JACH	Jahuel	2.85	162	eP	Pn	17 39 27.5	+1.5
JACH				i S	Sn	17 40 01.1	+2.1
CDCH	Caldera	2.98	14	eP	Pn	17 39 27.6	-0.2
CDCH				i S	Sn	17 40 01.8	-0.5
PEL	Peldehue	3.27	166	⇓iP	Pn	17 39 32.7	+1.0
PEL				i S	Sn	17 40 10.8	+1.5
PEL				AML	AML	17 40 24.6	
	comp=N,1μm,0.6s						
FCH	Farellones	3.54	161	eP	Pn	17 39 37.5	+2.1
FCH				i S	Sn	17 40 18.4	+2.4
FCH				AML	AML	17 40 31.1	
	comp=E,446nm,0.3s						
RCDM	Rinconada Maip	3.58	169	eP	Pn	17 39 37.0	+1.1
RCDM				AML	AML	17 40 33.6	
	comp=E,465nm,0.5s						
TACH	Talagante	3.72	171	eP	Pn	17 39 38.6	+0.8
PCH	Pirque	3.76	165	eP	Pn	17 39 39.9	+1.4
CACH	El Canelo	4.23	168	eP	Pn	17 39 46.3	+1.4
CACH				i S	Sn	17 40 35.5	+2.5
SFDO	San Fernando	4.66	173	eP	Pn	17 39 51.6	+0.8

*ISCJB **03** 17:47:43.4±0.5, 3645N±003×7076E±006, h199km±6km, mb3.4/7, Error ellipse: s-maj=9.0km s-min=3.8km az=157.7*

*NEIC **03** 17:47:45.5±1.7, 3645N×7077E, h208km±20km, mb4.8/7, Error ellipse: s-maj=15.8km s-min=7.6km az=52.0*

*NNC **03** 17:47:47.5±4.2, 3684N×7058E, h186km±33km, mb3.1, mpv4.2, Error ellipse: s-maj=33.8km s-min=24.5km az=22.0*

*IDC **03** 17:47:51.7±4.4, 3652N×7075E, h275km±46km, mb3.1/8, mb1 3.3/11, mb1mx3.1/24, mbtmp3.2/11, Error ellipse: s-maj=21.4km s-min=12.7km az=15.0*

ISC 03 17:47:44.4±0.5, 3648N±003×7077E±007, h196km±5km, n77, σ1s11/90, mb3.4/7, 9C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.81	160	⇓P	Pn	17 48 32.2	+0.6
CEP				S	Sn	17 49 08.0	-0.4
CHCP	Chirah Chowk	3.48	143	⇓P	Pn	17 48 40.1	+0.5
SARP	Sargodha	4.81	160	P	Pn	17 48 56.8	+0.5
JMU	Jammu	5.07	137	eS	Sn	17 49 55.0	-3.8
THN	Thein Dam	5.74	133	eP	Pn	17 49 07.4	-0.9
THN				eS	Sn	17 50 12.0	-2.4
DLH	Dalhousie	5.81	131	eP	Pn	17 49 08.0	-1.2
DLH				eS	Sn	17 50 14.0	-2.1
AML	Almayashu	6.08	21	P	Pn	17 49 12.9	+0.4
	SNR=184						
UCH	Uchtor	6.43	26	P	Pn	17 49 17.5	+0.5
	SNR=31						
KZA	Kyzart	6.58	30	P	Pn	17 49 21.0	+2.0
	SNR=6.0						
EKS2	Erkin-Say	6.59	20	P	Pn	17 49 19.6	+0.4
	SNR=32						
KK31	Karatay Array	6.62	358	P	Pn	17 49 19.1	-0.4
	3.8nm,0.2s,baz=175,slow=12,SNR=363						
KK31				⇑S	Sn	17 50 29.8	-5.1
	51nm,0.4s,baz=184,slow=22,SNR=30						
AAK	Ala-Archa	6.78	24	P	Pn	17 49 22.3	+0.7
	SNR=13						
KBK	Karagaybulak	6.96	26	P	Pn	17 49 24.6	+0.7
	SNR=6.6						
ULHL	Ulahol	7.15	35	P	Pn	17 49 27.6	+1.3
	SNR=8.4						
SDNR	Sundarnagar	7.15	132	ex	x	17 49 34.4	
SDNR				eS	Sn	17 50 41.1	-6.5
CHMS	Chumysh	7.19	24	P	Pn	17 49 27.3	+0.3
	SNR=5.8						
USP	Ospenovka	7.36	22	P	Pn	17 49 29.2	+0.1
	SNR=6.1						
TKM2	Tokmak 2	7.43	29	⇑P	Pn	17 49 29.9	-0.1
	8.7nm,0.4s						
TKM2				⇑S	Sn	17 50 51.7	-2.2
	15nm,0.7s						
TKM2	Tokmak 2	7.43	29	P	Pn	17 49 30.8	+0.7
	SNR=18						
KLP	Kalpa	7.93	126	eP	Pn	17 49 36.7	0.0
KLP				eS	Sn	17 51 01.6	-4.4
JOSI	Joshimath	9.41	126	eS	Sn	17 51 35.1	-6.3
NDI	New Delhi	9.48	143	ex	x	17 51 31.0	
SONA	Sohna	9.79	145	eP	Pn	17 49 59.4	-1.5
SONA				eS	Sn	17 51 41.2	-9.1
MK31	Makanchi Array	13.41	36	P	Pn	17 50 47.0	0.0
	2.7nm,0.8s,baz=215,slow=9.3,SNR=12						
MKAR	Makanchi Array	13.41	36	P	Pn	17 50 46.8	-0.2
	0.3nm,0.3s,baz=224,slow=10,SNR=13						
DANN	Dangsing	13.63	123	eP	Pn	17 50 49.9	0.0
	13nm,0.3s						
DANN	Dangsing	13.63	123	eP	Pn	17 50 49.5	-0.4
DANN	Dangsing	13.63	123	eP	Pn	17 50 49.5	-0.4
KOLN	Koldanda	13.90	125	eP	Pn	17 50 52.4	-0.8
	8.7nm,0.3s						
KOLN	Koldanda	13.90	125	eP	Pn	17 50 52.5	-0.7
	9.2nm,0.3s						
KOLN	Koldanda	13.90	125	eP	Pn	17 50 52.5	-0.7
	9.2nm,0.3s						
AB31	Akbulak array	15.01	332	P	Pn	17 51 05.6	-1.1
	2.9nm,0.6s,baz=144,slow=12,SNR=58						
AB31				⇑S	S	17 53 46.1	-7.2
	2.4nm,0.6s,baz=162,slow=24,SNR=5.4						
DMN	Daman	15.02	122	eP	Pn	17 51 07.5	+0.5
	7.7nm,0.2s						
DMN	Daman	15.02	122	eP	Pn	17 51 07.1	+0.1
DMN	Daman	15.02	122	eP	Pn	17 51 07.1	+0.1
KKN	Kakani	15.02	121	eP	Pn	17 51 07.5	+0.5
	28nm,0.7s						
KKN	Kakani	15.02	121	eP	Pn	17 51 07.4	+0.4
KKN	Kakani	15.02	121	eP	Pn	17 51 07.4	+0.4
KURBB	Kurchatov Arra	15.20	19	⇑P	Pn	17 51 06.3	-2.6
	0.3nm,0.4s						
PKIN	Phulchoki	15.24	121	eP	Pn	17 51 10.5	+0.8
	19nm,0.5s						
PKIN	Phulchoki	15.24	121	eP	Pn	17 51 10.9	+1.2
	21nm,0.4s						
PKI	Pulchoki	15.25	121	eP	Pn	17 51 10.7	+0.9
	29nm,0.7s						
PKI	Pulchoki	15.25	121	eP	Pn	17 51 10.7	+0.9
	29nm,0.7s						
PKI	Pulchoki	15.25	121	eP	Pn	17 51 10.9	+1.1
	21nm,0.4s						
KURK	Kurchatov	15.31	19	⇑P	Pn	17 51 09.1	-1.2
	6.1nm,1.5s						
KURK	Kurchatov	15.31	19	P	Pn	17 51 06.9	-3.4
	0.2nm,0.3s,baz=206,slow=12,SNR=13						
GUN	Gumba	15.37	120	eP	Pn	17 51 13.2	+2.0
	12nm,0.3s						
GUN	Gumba	15.37	120	eP	Pn	17 51 12.5	+1.3
	12nm,0.3s						
GUN	Gumba	15.37	120	eP	Pn	17 51 12.5	+1.3
	12nm,0.3s						
JIRN	Jiri	15.74	120	eP	Pn	17 51 17.1	+1.4
	49nm,0.4s						
JIRN	Jiri	15.74	120	eP	Pn	17 51 17.1	+1.4
	49nm,0.4s						
VOSK	Vostochnaya	16.24	0	⇑P	Pn	17 51 21.0	-0.5
	1.8nm,0.3s						
VOSK				⇓S	S	17 54 17.2	-3.7
	2.2nm,0.7s						
RAMN	Ramite	16.46	121	eP	Pn	17 51 24.3	-0.1
	16nm,0.6s						
RAMN	Ramite	16.46	121	eP	Pn	17 51 24.0	-0.4
	12nm,0.5s						
RAMN	Ramite	16.46	121	eP	Pn	17 51 24.0	-0.4
	12nm,0.5s						
BVA0	Borovoye Array	16.55	359	⇓P	Pn	17 51 25.7	+0.5
	0.8nm,0.7s,baz=155,slow=8.6,SNR=35						
BVA0				S	S	17 54 26.0	-1.0
	0.5nm,0.8s,baz=171,slow=23,SNR=6.8						
BVAR	Borovoye Array	16.55	359	P	Pn	17 51 24.9	-0.3
	2.1nm,0.3s,baz=170,slow=12,SNR=31						
BVAR				S	S	17 54 25.9	-1.1
	0.3nm,0.3s,baz=168,slow=22,SNR=6.7						
AKTK	Aktyubinsk	16.71	331	P	Pn	17 51 27.5	+0.4
AKTK				S	S	17 54 25.9	-4.4
AKTO	Aktyubinsk	16.71	331	⇑P	Pn	17 51 27.1	0.0
	4.3nm,0.9s						
AKTO				⇑S	S	17 54 27.8	-2.5
	1.0nm,1.0s						
AKTO	Aktyubinsk	16.71	331	P	Pn	17 51 27.5	+0.4
	2.9nm,0.3s,baz=139,slow=9.7,SNR=68						
AKTO				S	S	17 54 25.9	-4.4
	0.2nm,0.3s,baz=327,slow=20,SNR=3.7						
TAPN	Taplejung	17.00	118	eP	Pn	17 51 32.0	+1.2
	14nm,0.4s						
TAPN	Taplejung	17.00	118	eP	Pn	17 51 32.0	+1.2
	14nm,0.4s						
ODAN	Odare	17.07	120	eP	Pn	17 51 32.1	+0.4
	10nm,0.6s						
ODAN	Odare	17.07	120	eP	Pn	17 51 33.0	+1.3
	10.0nm,0.6s						
ODAN	Odare	17.07	120	eP	Pn	17 51 33.0	+1.3
	10.0nm,0.6s						
ZAA0	Zalesovo Array	20.01	25	eP	P	17 52 02.3	+0.5
ZALV	Zalesovo Beam	20.01	25	P	P	17 52 02.8	+1.0
	1.2nm,0.3s,baz=221,slow=12,SNR=31						
GNI	Garni	20.73	288	P	P	17 52 12.0	+2.3
	3.1nm,0.6s,baz=0.6,slow=17,SNR=2.8						
SONM	Songino Array	28.50	55	P	P	17 53 22.9	+1.7
	0.5nm,0.6s,mb3.3,baz=123,slow=11,SNR=4.6						
CMAR	Chiang Mai Arr	30.61	118	P	P	17 53 41.5	+1.4
	0.6nm,0.7s,mb3.3,baz=286,slow=7.9,SNR=4.6						
AKASG	Malin Array Be	32.82	309	P	P	17 53 59.4	+0.4
	1.0nm,0.6s,mb3.5,baz=81,slow=7.2,SNR=5.0						
AKASG	Malin Array Be	32.82	309	P	P	17 53 59.4	+0.4
ARCES	ARCESS Array B	41.09	338	P	P	17 55 08.9	+0.5
	0.7nm,0.6s,mb3.2,baz=106,slow=7.7,SNR=5.8						
NOA	NORSAR Array B	44.29	323	P	P	17 55 34.3	+0.1
	baz=104,slow=7.6						
TORD	Torodi Ar. Bea	65.53	269	P	P	17 58 05.7	-1.4
	0.5nm,0.5s,mb3.5,baz=52,slow=6.3,SNR=12						
WRA	Warramunga Arr	82.13	122	P	P	17 59 41.6	-1.7
	0.7nm,0.4s,mb3.6,baz=323,slow=5.0,SNR=7.9						
ASAR	Alice Springs	84.39	125	P	P	17 59 53.5	-1.2
	0.8nm,0.7s,mb3.5,baz=312,slow=4.8,SNR=7.9						

IDC 03 17:48:29.4±9.2, 2507S×17921W, h114km±91km, mb3.6/4, mb1 3.8/5, mb1mx3.5/15, mbtmp3.7/5, ML5.1/1, Error ellipse: s-maj=107.1km s-min=38.6km az=175.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.33	165	P	Pn	17 49 33.2	0.0
	93nm,0.3s,baz=25,slow=22,SNR=5.7						
CTA	Charters Tower	32.22	272	P	P	17 54 48.0	+1.0
	4.3nm,0.5s,baz=85,slow=9.3,SNR=9.1						
STKA	Stephens Creek	34.98	250	P	P	17 55 09.9	-0.9
	0.8nm,0.5s,baz=100,slow=12,SNR=2.9						
ASAR	Alice Springs	42.57	262	P	P	17 56 14.4	+0.2
	0.3nm,0.3s,baz=92,slow=7.7,SNR=19						
WRA	Warramunga Arr	43.06	267	P	P	17 56 17.9	-0.4
	0.6nm,0.4s,baz=103,slow=7.7,SNR=17						
NOA	NORSAR Array B	143.34	352	PKP	PKPdf	18 07 49.9	+0.1
	1.4nm,0.6s,baz=22,slow=2.8,SNR=4.2						
AKASG	Malin Array Be	146.34	327	PKPbc	PKPbc	18 07 55.9	-0.8
	0.5nm,0.4s,baz=45,slow=4.0,SNR=5.0						

*NEIC **03** 17:51:01.9, 1681N×10009W, h6km, MD3.7(MEX), After MEX.*

MEX 03 17:51:01.9±0.5, 1681N×10009W, h6km±3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.18	72	i P	Pg	17 51 05.3	-0.1
ACX				i S	Sg	17 51 08.7	+0.9
ACX	Acapulco	0.18	72	eP	Pg	17 51 02.7	-2.8
ACX				i P		17 51 05.3	
ACX				i S	Sg	17 51 06.1	-1.7
ACX				i S	Sg	17 51 08.7	+0.9
CAIG	El Cayaco	0.29	324	i P	Pg	17 51 07.0	-0.5
CAIG				i S	Sg	17 51 11.0	-0.4
MEIG	Mezcala	1.20	22	eP	Pg	17 51 21.1	-3.8
MEIG				i S	Sg	17 51 36.8	-3.6
ZIIG	Zihuatanejo	1.53	301	i P	Pn	17 51 26.9	-2.9
ZIIG				i S	Sn	17 51 45.5	-4.6
PLIG	Platanillo	1.67	20	i P	Pn	17 51 28.5	-3.2
PLIG				i S	Sn	17 51 48.6	-4.9
PNIG	Pinotepa	1.93	102	eP	Pn	17 51 31.8	-3.6
PNIG				i S	Sn	17 51 54.8	-5.2

*ISCJB **03** 17:51:53.2±3.7, 117S±0.1×1660E±0.1, h50km±29km, mb4.3/9, MS3.9/4, Error ellipse: s-maj=24.6km s-min=20.0km az=157.4*

*IDC **03** 17:51:54.5±4.6, 1160S×16605E, h49km±38km, mb4.0/9, mb1 4.1/10, mb1mx3.9/18, mbtmp4.1/10, ML4.6/1, MS4.0/4, Ms1 4.0/4, ms1mx3.6/19, Error ellipse: s-maj=31.9km s-min=23.7km az=80.0*

*NEIC **03** 17:51:55.2±2.4, 1159S×16605E, h57km±19km, mb4.5/1, Error ellipse: s-maj=18.4km s-min=14.2km az=108.0*

ISC 03 17:51:55.3±3.1, 116S±01×1660E±01, h56km±25km, n18, σ0s56/17, mb4.3/9, MS3.9/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.36	289	P	Pn	17 53 26.4	0.0
	14nm,0.3s,baz=161,slow=5.0,SNR=8.6						
HNR				S	Sn	17 54 37.6	-0.1
	4.6nm,0.3s,baz=150,slow=20,SNR=2.4						
CTA	Charters Tower	20.79	244	P	P	17 56 33.4	+1.4
	4.2nm,0.6s,baz=70,slow=13,SNR=7.0						
CTA				LR	LR	18 03 44.4	
	comp=Z,469nm,19.3s,MS3.9,baz=100,slow=34						
CTA	Charters Tower	20.79	244	P	P	17 56 33.4	+1.4
CTA				LR	LR	18 03 44.4	
CTAO	Charters Tower	20.79	244	eP	P	17 56 33.1	+1.1
AFI	Afiamalu	21.77	98	LR	LR	18 03 15.5	
	comp=Z,329nm,19.5s,MS3.8,baz=166,slow=31						
STKA	Stephens Creek	30.23	224	P	P	17 58 00.8	0.0
	1.2nm,0.6s,mb3.8,baz=18,slow=13,SNR=2.7						
STKA				PcP	PcP	18 01 00.7	+0.1
	1.1nm,0.5s,baz=176,slow=10,SNR=3.9						
STKA				LR	LR	18 09 54.5	
	comp=Z,416nm,18.6s,MS4.1,baz=45,slow=36						
WB2	Warramunga Arr	31.54	251	eP	P	17 58 12.0	-0.5
WRA	Warramunga Arr	31.55	251	P	P	17 58 12.4	-0.2
	2.1nm,0.6s,mb4.1,baz=83,slow=9.0,SNR=25						
WRA				PcP	PcP	18 01 04.0	-0.3
	0.4nm,0.7s,baz=70,slow=3.3,SNR=4.6						
WRA				LR	LR	18 10 22.6	
	comp=Z,185nm,18.6s,MS3.8,baz=245,slow=35						
RPZ	Rata Peaks	32.29	173	P	P	17 58 18.7	-0.1
	15nm,1.0s,mb4.8,baz=135,slow=1.4,SNR=4.7						
ASAR	Alice Springs	32.79	244	P	P	17 58 22.8	-0.7
	3.3nm,0.6s,mb4.4,baz=69,slow=9.6,SNR=58						
KAKA	Kakadu	32.84	265	eP	P	17 58 23.3	-0.6
	5.1nm,0.6s,mb4.6						
MBWA	Marble Bar	45.28	252	eP	P	18 00 07.9	+0.1
CMAR	Chiang Mai Arr	72.59	294	P	P	18 03 18.1	+0.9
	0.7nm,0.9s,mb3.6,baz=108,slow=4.7,SNR=4.1						
NVAR	Mina Array Bea	86.17	50	P	P	18 04 30.6	-0.2
	0.6nm,0.8s,mb3.9,baz=238,slow=8.4,SNR=3.8						
MKAR	Makanchi Array	94.11	317	P	P	18 05 08.4	+0.6
	2.5nm,0.7s,mb4.8,baz=97,slow=6.3,SNR=26						
ZALV	Zalesovo Beam	94.17	324	P	P	18 05 07.3	-0.5
	1.0nm,0.6s,mb4.5,baz=132,slow=4.0,SNR=6.3						
ZALV	Zalesovo Beam	94.17	324	P	P	18 05 07.3	-0.5
BOSA	Boshof	124.90	223	PKP	PKPdf	18 10 49.8	0.0
	2.0nm,0.6s,baz=119,slow=2.1,SNR=7.1						

MEX 03 17:55:13.7±0.8, 1685N×10010W, h5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.17	85	i P	Pg	17 55 16.6	-0.5
ACX				i S	Sg	17 55 19.2	-0.2
CAIG	El Cayaco	0.26	320	i P	Pg	17 55 18.1	-0.6
CAIG				i S	Sg	17 55 22.6	+0.5
MEIG	Mezcala	1.16	23	i P	Pg	17 55 32.3	-3.7

MEIG				iS	Sg	17 55 48.1	-3.0
PNIG	**Pinotepa**	**1.94**	**103**	iP	Pn	17 55 44.9	-2.4
PNIG				iS	Sn	17 56 08.5	-3.6
UTMO	**Huajuapan**	**2.40**	**66**	iP	Pn	17 55 49.7	-3.9
UTMO				iS	Sn	17 56 20.3	-3.1

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*ISCJB **03** 18:02:26.0±0.5, 4370N±005×10519W±006, h0^{km}, Error ellipse: s-maj=7.2km s-min=5.5km az=146.0*
*IDC **03** 18:02:26.5±1.7, 4363N×10542W, h0^{km}, mb3.8/1, mb1 3.6/6, mb1mx3.4/25, mbtmp3.4/6, ML2.9/4, MS3.7/1, Ms1 3.7/1, ms1mx2.7/36, Error ellipse: s-maj=47.9km s-min=7.2km az=149.0*
*NEIC **03** 18:02:27.6±0.4, 4369N×10520W, h0^{km}, ML3.5, Error ellipse: s-maj=6.3km s-min=4.8km az=150.0, Suspected Mining explosion.*
NEIC 70 km [45 miles] SSE of Gillette.
ISC 03 18:02:27.4±0.5**, 4371N**±005×**10517W**±005**, h0^{km}, n37, σ0^{s}98**/39**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.91**	**63**	eP	**Pg**	**18 02 46.1**	**+1.2**
PHWY	**Pilot Hill**	**2.42**	**185**	ePn	**Pn**	**18 03 07.5**	**-0.6**
RWWY	**Rawlins**	**2.52**	**217**	ePn	**Pn**	**18 03 10.0**	**+0.5**
LAO	**LASA Array**	**3.07**	**346**	ePn	**Pn**	**18 03 19.1**	**+1.9**
RLMT	**Red Lodge**	**3.26**	**297**	ePn	**Pn**	**18 03 19.0**	**-0.8**
BW06	**Boulder Array**	**3.34**	**255**	ePn	**Pn**	**18 03 19.9**	**-1.0**
PDAR	**Pinedale Array**	**3.34**	**255**	Pn	**Pn**	**18 03 20.1**	**-0.8**
	4.1nm,0.3s,baz=73,slow=15,SNR=38						
PDAR				Pg	**Pg**	**18 03 25.6**	**-5.9**
	7.1nm,0.3s,baz=68,slow=20,SNR=42						
PDAR				Lg		18 04 04.8	
	16nm,0.3s,baz=68,slow=30,SNR=13						
GCMT	**Greycliff**	**3.82**	**305**	ePn	**Pn**	**18 03 27.0**	**-0.5**
ISCO	**Idaho Springs**	**3.92**	**185**	ePn	**Pn**	**18 03 29.4**	**+0.5**
LOHW	**Long Hollow**	**3.95**	**270**	ePn	**Pn**	**18 03 28.7**	**-0.4**
FLWY	**Flagg Ranch**	**4.02**	**277**	ePn	**Pn**	**18 03 29.3**	**-0.9**
SNOW	**Snow King Moun**	**4.07**	**268**	ePn	**Pn**	**18 03 31.5**	**+0.6**
YNR	**Norris Junctio**	**4.09**	**286**	ePn	**Pn**	**18 03 32.2**	**+1.1**
REDW	**Red Top Meadow**	**4.15**	**267**	ePn	**Pn**	**18 03 31.5**	**-0.4**
YFT	**Old Faithful**	**4.15**	**282**	ePn	**Pn**	**18 03 34.2**	**+2.2**
IMW	**Indian Meadow**	**4.18**	**275**	ePn	**Pn**	**18 03 32.3**	**-0.1**
TPAW	**Teton Pass**	**4.21**	**269**	ePn	**Pn**	**18 03 32.4**	**-0.4**
AHID	**Auburn Hatcher**	**4.44**	**260**	ePn	**Pn**	**18 03 36.7**	**+0.8**
RRI2	**Red Ridge**	**4.49**	**267**	ePn	**Pn**	**18 03 36.0**	**-0.6**
DGMT	**Dagmar**	**4.81**	**8**	ePn	**Pn**	**18 03 41.6**	**+0.6**
BOZ	**Bozeman (W)**	**5.00**	**295**	ePn	**Pn**	**18 03 42.6**	**-1.0**
HWUT	**Hardware Ranch**	**5.17**	**248**	ePn	**Pn**	**18 03 45.0**	**-1.0**
	13nm,0.5s						
EGMT	**Eagleton**	**5.37**	**325**	ePn	**Pn**	**18 03 48.8**	**0.0**
	11nm,0.5s						
DLMT	**Dillon**	**5.56**	**290**	ePn	**Pn**	**18 03 52.7**	**+1.3**
	11nm,1.0s						
DAU	**Daniels Canyon**	**5.60**	**236**	ePn	**Pn**	**18 03 53.4**	**+1.5**
MCMT	**McKenzie Canyo**	**5.63**	**284**	Pn	**Pn**	**18 03 55.8**	**+3.5**
SPUT	**South Promonto**	**5.89**	**248**	Pn	**Pn**	**18 03 56.1**	**+0.2**
HVU	**Hansel Valley**	**5.92**	**254**	ePn	**Pn**	**18 03 52.6**	**-3.8**
	6.2nm,0.5s						
SRU	**San Rafael**	**6.11**	**223**	ePn	**Pn**	**18 03 58.0**	**-0.9**
ECSD	**EROS,Sioux Fal**	**6.20**	**87**	ePn	**Pn**	**18 04 00.9**	**+0.9**
	7.2nm,0.5s						
ELK	**Elko**	**8.04**	**252**	Pn	**Pn**	**18 04 26.2**	**+0.8**
	0.1nm,0.3s,baz=42,slow=14,SNR=2.8						
ELK				Lg		18 06 39.4	
	0.0nm,0.3s,baz=198,slow=20,SNR=3.7						
ULM	**Lac du Bonnet**	**9.11**	**41**	Pn	**Pn**	**18 04 39.2**	**-0.8**
	1.5nm,0.3s,baz=239,slow=12,SNR=12						
ULM				Pg	Pn	18 05 15.3	+35
	0.7nm,0.3s,baz=236,slow=15,SNR=4.9						
ULM				Sn	**Sn**	**18 06 21.9**	**-1.4**
	0.5nm,0.3s,baz=180,slow=2.2,SNR=5.3						
ULM				Lg		18 07 17.6	
	0.6nm,0.3s,baz=125,slow=13,SNR=4.0						
ULM	**Lac du Bonnet**	**9.11**	**41**	Pn	**Pn**	**18 04 39.2**	**-0.8**
ULM				Pg	Pn	18 05 15.3	+35
ULM				Sn	**Sn**	**18 06 21.9**	**-1.4**
ULM				Lg		18 07 17.6	
NVAR	**Mina Array Bea**	**11.23**	**246**	Pn	**Pn**	**18 05 08.9**	**-0.2**
	0.1nm,0.3s,baz=53,slow=14,SNR=3.5						
PFO	**Pinyon Flat Ob**	**13.38**	**225**	LR	LR	18 11 11.0	
	comp=Z,329nm,20.5s,baz=348,slow=40						
YKA	**Yellowknife Ar**	**19.61**	**347**	P	**Pn**	**18 06 58.1**	**-0.1**
	0.1nm,0.3s,baz=154,slow=8.7,SNR=4.7						
ARCES	**ARCESS Array B**	**61.42**	**18**	P	**P**	**18 12 43.1**	**-1.8**
	1.5nm,0.9s,baz=337,slow=7.9,SNR=6.1						

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*IDC **03** 18:15:07.9±0.8, 449N×9685E, h0^{km}, mb4.3/12, mb1 4.4/12, mb1mx4.2/19, mbtmp4.3/12, MS3.7/1, Ms1 3.9/1, ms1mx3.2/28, Error ellipse: s-maj=38.6km s-min=13.3km az=50.0*
*NEIC **03** 18:15:10.6±0.4, 413N×9637E, h30^{km}, mb4.8/13, Error ellipse: s-maj=20.2km s-min=8.2km az=50.0*
*ISCJB **03** 18:15:12.3±0.9, 420N±006×9647E±006, h55^{km}±8^{km}, mb4.6/29, Error ellipse: s-maj=11.8km s-min=7.0km az=44.3*
*DJA **03** 18:15:14, 414N×9649E, h50^{km}, ML4.9/7*
ISC 03 18:15:13.8±0.9**, 418N**±006×**9645E**±006**, h53^{km}**±8^{km}**, n90, σ1^{s}11**/88**, mb4.6**/29**, 22C-9D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**1.74**	**319**	P	**Pn**	**18 15 41.9**	**+0.3**
	0.0nm,0.0s						
BSI	**Banda Aceh**	**1.74**	**319**	⇑eP	**Pn**	**18 15 33.0**	**-8.6**
BSI				eS	**Sn**	**18 15 53.0**	**-10**
PSI	**Prapat**	**2.83**	**119**	⇓eP	**Pn**	**18 15 58.0**	**+1.5**
GSI	**Gunungsitoli**	**3.08**	**158**	⇑eP	**Pn**	**18 16 00.0**	**+0.1**
TRSI	**Tarutung**	**3.30**	**130**	P	**Pn**	**18 16 01.8**	**-1.2**
	0.0nm,0.0s						
KULM	**Kulim**	**4.33**	**75**	⇓P	**Pn**	**18 16 17.2**	**+0.1**
IPM	**Ipoh**	**4.58**	**86**	⇑P	**Pn**	**18 16 19.7**	**-0.8**
SNG	**Songkhla**	**5.11**	**54**	P	**Pn**	**18 16 28.0**	**+0.2**
	840nm,1.0s						
FRIM	**Kepong**	**5.25**	**100**	⇓P	**Pn**	**18 16 29.1**	**-0.7**
PPI	**Padang Panjang**	**6.07**	**139**	P	**Pn**	**18 16 42.2**	**+1.2**
	101nm,1.1s						
KTGM	**Kuala Trenggan**	**6.76**	**80**	⇑P	**Pn**	**18 16 50.0**	**-0.5**
KGM	**Kluang**	**7.19**	**107**	⇓P	**Pn**	**18 16 55.5**	**-0.9**
MYKOM	**Kota Tinggi**	**7.77**	**108**	⇓P	**Pn**	**18 17 03.6**	**-0.7**
NNT	**Nongplab**	**8.96**	**21**	P	**Sn**	**18 18 47.0**	**-13**
	366nm,0.9s						
KKTK	**Khon Kaen**	**13.60**	**27**	P	**Pn**	**18 18 34.0**	**+10**
KSM	**Kuching**	**14.10**	**101**	⇑P	**Pn**	**18 18 31.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**14.39**	**10**	Pn	**Pn**	**18 18 33.6**	**-1.0**
	0.1nm,0.3s,baz=194,slow=15,SNR=3.1						
CMAR				Lg		18 22 26.4	
	0.0nm,0.3s,baz=352,slow=25,SNR=4.5						
CMAR				LR	LR	18 24 14.4	
	comp=Z,311nm,18.8s,baz=200,slow=39						
CHG	**Chiang Mai**	**14.74**	**9**	⇑P	**Pn**	**18 18 48.9**	**+10**
	19nm,1.0s						
NANT	**Nan**	**15.11**	**16**	P	**Pn**	**18 18 49.0**	**+5.0**
CHRT	**Chiangrai**	**15.93**	**12**	⇓P	**Pn**	**18 19 02.0**	**+7.5**
BTM	**Bintulu**	**16.63**	**93**	⇑P	**Pn**	**18 19 04.7**	**+1.2**
KKM	**Kota Kinabalu**	**19.77**	**84**	⇑P	**Pn**	**18 19 41.3**	**-0.3**
KDM	**Kudat**	**20.47**	**81**	⇓P	**P**	**18 19 48.9**	**+1.6**
SDKM	**Sandakan**	**20.72**	**85**	⇓P	**P**	**18 19 51.2**	**+1.1**
KMMI	**Kalianget**	**20.74**	**122**	P	**P**	**18 19 51.3**	**+1.1**
	0.0nm,0.0s						
TSM	**Tawau**	**21.37**	**89**	⇑P	**P**	**18 19 58.6**	**+1.6**
MYLDM	**Lahad Datu**	**22.00**	**87**	⇓P	**P**	**18 20 05.3**	**+1.5**
MTNI	**Mataram**	**23.43**	**123**	P	**P**	**18 20 17.3**	**-1.3**
	0.0nm,0.0s						
PCI	**Palu**	**23.91**	**102**	P	**P**	**18 20 22.1**	**-0.9**
	0.0nm,0.0s						
KAPI	**Kappang**	**25.01**	**111**	P	**P**	**18 20 32.4**	**-0.6**
	26nm,1.1s,mb4.7,baz=283,slow=10,SNR=6.1						
LSA	**Lhasa**	**25.87**	**349**	eP	**P**	**18 20 41.7**	**+1.2**
	6.0nm,0.6s,mb4.3						
BATI	**Baumata**	**30.65**	**118**	P	**P**	**18 21 21.8**	**-1.6**
	17nm,0.6s,mb5.0,baz=270,slow=19,SNR=2.9						
FITZ	**Fitzroy Crossi**	**36.32**	**128**	eP	**P**	**18 22 11.5**	**-1.2**
	9.2nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**36.32**	**128**	P	**P**	**18 22 11.9**	**-0.7**
	6.8nm,0.8s,mb4.6,baz=288,slow=6.2,SNR=18						
KAKA	**Kakadu**	**39.50**	**116**	eP	**P**	**18 22 37.2**	**-2.4**
	22nm,0.9s,mb4.9						
KSRS	**Korea Array**	**43.88**	**37**	P	**P**	**18 23 16.1**	**+1.1**
	1.7nm,0.8s,mb3.8,baz=221,slow=9.3,SNR=8.0						
MKAR	**Makanchi Array**	**44.18**	**346**	P	**P**	**18 23 16.6**	**-0.7**
	1.0nm,0.5s,mb3.8,baz=160,slow=9.2,SNR=13						
WRA	**Warramunga Arr**	**44.28**	**124**	P	**P**	**18 23 18.7**	**+0.2**
	65nm,0.7s,mb5.5,baz=301,slow=9.2,SNR=408						
WRAB	**Tennant Creek**	**44.29**	**124**	eP	**P**	**18 23 18.9**	**+0.3**
	72nm,0.7s,mb5.5						
WB2	**Warramunga Arr**	**44.29**	**124**	⇑iP	**P**	**18 23 18.8**	**+0.1**
SONM	**Songino Array**	**44.32**	**10**	P	**P**	**18 23 17.9**	**-0.5**
	0.8nm,0.5s,mb3.7,baz=194,slow=8.6,SNR=8.3						
ASAR	**Alice Springs**	**45.81**	**129**	P	**P**	**18 23 30.9**	**+0.3**
	3.8nm,0.7s,mb4.5,baz=302,slow=7.7,SNR=76						
KURK	**Kurchatov**	**48.73**	**345**	eP	**P**	**18 23 52.1**	**-0.8**
ZAA0	**Zalesovo Array**	**50.51**	**351**	eP	**P**	**18 24 05.7**	**-0.8**
ZALV	**Zalesovo Beam**	**50.51**	**351**	P	**P**	**18 24 04.1**	**-2.3**
	1.0nm,0.7s,mb3.8,baz=160,slow=4.7,SNR=5.8						
RDF	**Al-Radifah**	**52.44**	**304**	eP	**P**	**18 24 21.7**	**+0.4**
	baz=299						
RDF				AMb	AMB	18 24 28.8	
	comp=Z,42nm,1.1s,mb5.3,baz=299						
NAY	**Al-Naaiem**	**52.79**	**304**	eP	**P**	**18 24 24.9**	**+1.0**
	baz=299						
NAY				AMb	AMB	18 24 31.1	
	comp=Z,25nm,0.9s,mb5.1,baz=299						
MIB	**Mutribah**	**52.89**	**305**	eP	**P**	**18 24 25.8**	**+1.2**
	baz=301						
MIB				AMb	AMB	18 24 31.9	
	comp=Z,32nm,1.1s,mb5.2,baz=301						
STKA	**Stephens Creek**	**55.92**	**133**	eP	**P**	**18 24 47.3**	**+0.7**
	comp=Z,3.6nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**55.92**	**133**	P	**P**	**18 24 47.7**	**+1.1**
	comp=Z,3.9nm,0.6s,mb4.6,baz=336,slow=6.1,SNR=12						
AKASG	**Malin Array Be**	**72.45**	**322**	P	**P**	**18 26 38.2**	**+3.6**
	comp=Z,0.5nm,0.4s,mb3.8,baz=92,slow=5.0,SNR=5.0						
VRI	**Vrincioaia**	**72.94**	**317**	⇑iP	**P**	**18 26 42.8**	**+5.2**
PLOR	**Plostina**	**72.99**	**317**	⇑iP	**P**	**18 26 43.3**	**+5.4**
MLR	**Muntele Rosu**	**73.40**	**316**	⇑iP	**P**	**18 26 41.8**	**+1.5**
MLR	**Muntele Rosu**	**73.40**	**316**	⇑P	**P**	**18 26 41.9**	**+1.5**
VOIR		**74.01**	**316**	⇑iP	**P**	**18 26 47.3**	**+3.4**
VOIR		**74.01**	**316**	⇑P	**P**	**18 26 47.4**	**+3.5**
BURAR	**Bucovina Array**	**74.31**	**318**	⇑iP	**P**	**18 26 47.2**	**+1.6**
BURAR	**Bucovina Array**	**74.31**	**318**	⇑P	**P**	**18 26 47.2**	**+1.6**
DRGR		**75.84**	**317**	⇑iP	**P**	**18 27 00.3**	**+5.8**
DRGR		**75.84**	**317**	⇑P	**P**	**18 27 00.2**	**+5.8**
OJC	**Ojcow**	**78.26**	**320**	eP	**P**	**18 27 08.8**	**+0.9**
PKSM	**Moragy**	**78.55**	**316**	⇑iP	**P**	**18 27 14.7**	**+5.0**
PKSM	**Moragy**	**78.55**	**316**	⇑P	**P**	**18 27 14.7**	**+5.0**
ARCES	**ARCESS Array B**	**79.49**	**340**	P	**P**	**18 27 15.2**	**+0.9**
	comp=Z,1.5nm,0.5s,mb4.2,baz=90,slow=5.5,SNR=9.8						
BRG	**Berggiesshubel**	**82.04**	**321**	eP	**P**	**18 27 34.5**	**+6.2**
	comp=Z,3.2nm,0.9s,mb4.3						
GERES	**GERESS Array B**	**82.09**	**319**	P	**P**	**18 27 29.9**	**+1.2**
	comp=Z,0.6nm,0.4s,mb3.8,baz=95,slow=8.2,SNR=10						
GRA1	**Grafenberg Arr**	**83.74**	**319**	ePKP	**P**	**18 27 42.0**	**+4.9**
GRF	**Grafenberg Arr**	**83.74**	**319**	ePKP	**P**	**18 27 42.0**	**+4.9**
KEST	**Kesra**	**85.23**	**305**	P	**P**	**18 27 53.2**	**+8.2**
	comp=Z,1.7nm,0.8s,mb4.2,baz=348,slow=4.6,SNR=5.6						
LPG	**La Plagne**	**86.83**	**315**	eP	**P**	**18 27 52.2**	**-0.5**
	comp=Z,18nm,0.9s,mb5.0						
LPG	**La Plagne**	**86.83**	**315**	eP	**P**	**18 27 52.2**	**-0.5**
	comp=Z,8.8nm,0.9s,mb5.0						
LPL	**La Plagne**	**86.84**	**315**	eP	**P**	**18 27 52.2**	**-0.5**
	comp=Z,10nm,0.9s,mb4.8						
LPL	**La Plagne**	**86.84**	**315**	eP	**P**	**18 27 52.2**	**-0.5**
	comp=Z,5.1nm,0.9s,mb4.8						
HAU	**Haudompre**	**86.99**	**318**	eP	**P**	**18 27 52.1**	**-1.3**
	comp=Z,9.9nm,0.9s,mb4.8						
HAU	**Haudompre**	**86.99**	**318**	eP	**P**	**18 27 52.1**	**-1.3**
	comp=Z,4.9nm,0.9s,mb4.7						
ORIF	**Oris-en-Rattie**	**87.48**	**315**	eP	**P**	**18 27 55.3**	**-0.5**
	comp=Z,13nm,1.1s,mb4.8						
ORIF	**Oris-en-Rattie**	**87.48**	**315**	eP	**P**	**18 27 55.3**	**-0.5**
	comp=Z,6.5nm,1.1s,mb4.8						
LOR	**Lormes**	**88.72**	**317**	eP	**P**	**18 28 00.1**	**-1.5**
	comp=Z,10.0nm,0.9s,mb4.8						
LOR	**Lormes**	**88.72**	**317**	eP	**P**	**18 28 00.1**	**-1.5**
	comp=Z,5.0nm,0.9s,mb4.8						
SMF	**Signal de Mont**	**88.78**	**316**	eP	**P**	**18 27 59.8**	**-2.2**
	comp=Z,16nm,1.1s,mb5.0						
SMF	**Signal de Mont**	**88.78**	**316**	eP	**P**	**18 27 59.8**	**-2.2**
	comp=Z,8.1nm,1.1s,mb5.0						
AVF	**Avril sur Loir**	**89.10**	**317**	eP	**P**	**18 28 01.9**	**-1.6**
CAF	**Calviac**	**90.18**	**315**	eP	**P**	**18 28 07.5**	**-1.1**
	comp=Z,8.6nm,1.0s,mb4.7						
CAF	**Calviac**	**90.18**	**315**	eP	**P**	**18 28 07.5**	**-1.1**
	comp=Z,4.3nm,1.0s,mb4.7						
TORD	**Torodi Ar. Bea**	**93.67**	**283**	P	**P**	**18 28 29.5**	**+4.2**
	comp=Z,0.7nm,0.6s,mb4.2,baz=93,slow=3.4,SNR=5.2						
TORD	**Torodi Ar. Bea**	**93.67**	**283**	P	**P**	**18 28 29.5**	**+4.2**
CPUP	**Villa Florida**	**146.61**	**226**	PKPbc	PKPbc	18 34 52.2	+2.0
	comp=Z,1.7nm,0.7s,baz=138,slow=4.4,SNR=4.3						
CPUP	**Villa Florida**	**146.61**	**226**	PKPbc	PKPbc	18 34 52.2	+1.9
LPAZ	**La Paz**	**160.66**	**230**	PKP	PKPdf	18 35 15.9	+7.1
	comp=Z,0.5nm,0.8s,baz=42,slow=5.6,SNR=3.9						

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*IDC **03** 18:39:40.4±1.9, 108N×9737E, h0^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.7/20, mbtmp3.8/9, ML3.9/1, Error ellipse: s-maj=63.6km s-min=20.5km az=59.0*
*ISCJB **03** 18:39:45.5±2.0, 12N±02×975E±03, h46^{km}±10^{km}, mb3.8/8, Error ellipse: s-maj=59.4km s-min=19.7km az=153.2*
ISC 03 18:39:46.0±2.8**, 12N**±02×**975E**±03**, h35^{km}**±15^{km}**, n10, σ0^{s}42**/10**, mb3.8**/8**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.19**	**36**	⇑eP	**Pn**	**18 39 53.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**17.27**	**5**	P	**Pn**	**18 43 43.8**	**-0.7**
	0.2nm,0.3s,baz=195,slow=12,SNR=5.6						
WRA	**Warramunga Arr**	**41.78**	**122**	P	**P**	**18 47 32.6**	**+0.2**
	0.9nm,1.0s,mb3.4,baz=300,slow=9.6,SNR=4.1						
ASAR	**Alice Springs**	**43.15**	**127**	P	**P**	**18 47 43.2**	**-0.4**
	0.2nm,0.8s,mb2.9,baz=296,slow=7.1,SNR=6.1						
KSRS	**Korea Array**	**45.74**	**34**	P	**P**	**18 48 04.3**	**+0.3**
	1.0nm,0.8s,mb3.8,baz=217,slow=9.7,SNR=5.8						
SONM	**Songino Array**	**47.15**	**8**	P	**P**	**18 48 15.6**	**+0.8**
	0.9nm,0.5s,mb3.9,baz=190,slow=8.6,SNR=7.2						
MKAR	**Makanchi Array**	**47.36**	**346**	P	**P**	**18 48 16.9**	**+0.4**
	0.6nm,0.4s,mb3.9,baz=159,slow=9.1,SNR=16						
ZALV	**Zalesovo Beam**	**53.65**	**351**	P	**P**	**18 49 03.8**	**-0.1**
	1.2nm,0.4s,mb4.2,baz=174,slow=6.2,SNR=8.2						
PETK	**Petropavlovsk-**	**71.64**	**33**	P	**P**	**18 51 03.6**	**-0.3**
	2.6nm,0.9s,mb4.1,baz=254,slow=19,SNR=3.5						
ARCES	**ARCESS Array B**	**82.67**	**340**	P	**P**	**18 52 05.3**	**-0.3**
	1.5nm,0.9s,mb4.0,baz=90,slow=9.9,SNR=3.6						

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*IDC **03** 18:48:47.0±4.0, 2102S×16790E, h0^{km}, mb3.9/6, mb1 4.0/6, mb1mx3.9/14, mbtmp3.9/6, MS3.5/1, Ms1 3.5/1, ms1mx3.0/18, Error ellipse: s-maj=125.7km s-min=29.3km az=136.0*
ISC 03 18:48:51.1±3.0**, 212S**±05×**1681E**±04**, h35^{km}, n9, σ1^{s}07**/8**, mb3.8**/6**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**1.82**	**240**	eP	**Pn**	**18 49 15.6**	**-4.3**
DZM				eS	**Sn**	**18 49 42.5**	**+0.7**
AFI	**Afiamalu**	**20.45**	**73**	LR	LR	18 59 45.2	
	comp=Z,129nm,19.7s,baz=152,slow=32						
STKA	**Stephens Creek**	**25.98**	**240**	P	**P**	**18 54 20.9**	**+0.4**
	2.0nm,0.8s,mb3.7,baz=90,slow=7.1,SNR=3.7						
WRA	**Warramunga Arr**	**31.64**	**266**	P	**P**	**18 55 11.5**	**+0.4**
	0.9nm,1.0s,mb3.6,baz=92,slow=9.7,SNR=3.8						
ASAR	**Alice Springs**	**31.71**	**259**	P	**P**	**18 55 10.7**	**-1.0**
	2.0nm,0.9s,mb3.9,baz=91,slow=8.7,SNR=12						
FITZ	**Fitzroy Crossi**	**40.06**	**267**	P	**P**	**18 56 20.9**	**-2.3**
	1.4nm,1.0s,mb3.6,baz=127,slow=5.1,SNR=3.1						
PETK	**Petropavlovsk-**	**74.50**	**353**	P	**P**	**19 00 26.9**	**+1.2**
	4.0nm,0.9s,mb4.3,baz=170,slow=9.0,SNR=5.4						
SONM	**Songino Array**	**88.13**	**324**	P	**P**	**19 01 38.2**	**+0.2**
	0.5nm,0.8s,mb3.8,baz=101,slow=7.7,SNR=3.7						
GERES	**GERESS Array B**	**145.65**	**330**	PKPbc	PKPbc	19 08 25.5	-0.4
	0.3nm,0.6s,baz=46,slow=2.8,SNR=6.3						

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*IDC **03** 20:01:00.7±6.5, 3704N×7235E, h200^{km}±57^{km}, mb3.4/4, mb1 3.4/8, mb1mx3.0/25, mbtmp3.2/8, MS3.1/2, Ms1 3.1/2, ms1mx2.5/26, Error ellipse: s-maj=50.2km s-min=29.1km az=145.0*
*ISCJB **03** 20:01:03.0±0.4, 3734N±003×7229E±007, h222^{km}±6^{km}, mb3.5/4, Error ellipse: s-maj=9.6km s-min=4.2km az=164.3*
*NEIC **03** 20:01:04.0±1.7, 3728N×7221E, h218^{km}±21^{km}, mb4.8/8, Error ellipse: s-maj=17.1km s-min=6.3km az=68.0*
*NNC **03** 20:01:09.5±7.8, 3785N×7213E, h220^{km}±67^{km}, mb2.7, mpv3.8, Error ellipse: s-maj=71.1km s-min=42.8km az=11.0*
ISC 03 20:01:03.9±0.4**, 3734N**±003×**7227E**±007**, h212^{km}**±6^{km}**, n44, σ0^{s}83**/51**, mb3.5**/4**, 6C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.52**	**185**	P	**Pn**	**20 02 01.2**	**+0.8**
CEP				S	**S**	**20 02 45.0**	**+0.2**
CHCP	**Chirah Chowk**	**3.76**	**167**	P	**Pn**	**20 02 04.8**	**+1.5**
THW	**Thamme Wali**	**4.56**	**186**	P	**Pn**	**20 02 13.1**	**0.0**
AML	**Almayashu**	**4.91**	**12**	P	**Pn**	**20 02 17.4**	**+0.1**
	SNR=135						
UCH	**Uchtor**	**5.18**	**19**	P	**Pn**	**20 02 20.9**	**+0.2**
	SNR=32						
KZA	**Kyzart**	**5.26**	**25**	P	**Pn**	**20 02 21.5**	**-0.2**
	SNR=12						
EKS2	**Erkin-Say**	**5.44**	**12**	P	**Pn**	**20 02 24.1**	**0.0**
	SNR=35						
AAK	**Ala-Archa**	**5.55**	**17**	P	**Pn**	**20 02 26.0**	**+0.5**
	SNR=16						
THN	**Thein Dam**	**5.66**	**149**	eP	**Pn**	**20 02 26.7**	**-0.3**
THN				ex	x	20 03 30.5	
DLH	**Dalhousie**	**5.67**	**147**	eP	**Pn**	**20 02 27.0**	**-0.1**
DLH				eS	**S**	**20 03 31.0**	**-2.1**
KBK	**Karagaybulak**	**5.69**	**20**	P	**Pn**	**20 02 28.2**	**+0.9**
	SNR=6.0						
KK31	**Karatay Array**	**5.91**	**347**	⇑P	**Pn**	**20 02 29.4**	**-0.7**
	2.1nm,0.3s,baz=155,slow=11,SNR=184						
KK31				⇑S	**S**	**20 03 33.1**	**-5.5**
	25nm,0.3s,baz=167,slow=20,SNR=4.3						
CHMS	**Chumysh**	**5.96**	**18**	P	**Pn**	**20 02 31.1**	**+0.4**
	SNR=6.2						
TKM2	**Tokmak 2**	**6.13**	**24**	P	**Pn**	**20 02 32.9**	**0.0**
	7.3nm,0.5s						
TKM2				⇑S	**S**	**20 03 41.5**	**-2.0**
	7.5nm,0.7s						
TKM2	**Tokmak 2**	**6.13**	**24**	P	**Pn**	**20 02 32.8**	**-0.1**
	SNR=8.9						
KLP	**Kalpa**	**7.61**	**138**	eP	**Pn**	**20 02 52.5**	**+0.4**
KLP				eS	**S**	**20 04 14.9**	**-3.6**
DDI	**Dehra Dun**	**8.49**	**144**	ex	x	20 03 01.0	
DDI				eS	**S**	**20 04 34.8**	**-4.5**
JOSI	**Joshimath**	**9.08**	**136**	eP	**Pn**	**20 03 11.1**	**0.0**
JOSI				ex	x	20 04 45.2	
SONA	**Sohna**	**9.93**	**155**	eP	**Pn**	**20 03 19.4**	**-2.7**
SONA				eS	**S**	**20 05 04.2**	**-9.1**
MKAR	**Makanchi Array**	**12.02**	**35**	P	**Pn**	**20 03 49.1**	**+0.7**
	0.3nm,0.3s,baz=235,slow=14,SNR=6.1						
DANN	**Dangsing**	**13.17**	**130**	eP	**Pn**	**20 04 02.7**	**-0.4**
	20nm,0.3s						
KOLN	**Koldanda**	**13.49**	**132**	eP	**Pn**	**20 04 06.6**	**-0.5**
	6.8nm,0.3s						
GKN	**Gorkha**	**13.96**	**128**	eP	**Pn**	**20 04 13.5**	**+0.6**
KKN	**Kakani**	**14.51**	**127**	eP	**Pn**	**20 04 19.9**	**+0.2**
	21nm,0.5s						
DMN	**Daman**	**14.53**	**128**	eP	**Pn**	**20 04 20.2**	**+0.3**
	18nm,0.6s						
PKI	**Pulchoki**	**14.75**	**128**	eP	**Pn**	**20 04 23.1**	**+0.6**
	16nm,0.5s						
GUN	**Gumba**	**14.81**	**125**	eP	**Pn**	**20 04 23.5**	**+0.2**
	25nm,0.4s						
AB31	**Akbulak array**	**14.89**	**327**	⇑P	**Pn**	**20 04 23.1**	**-0.9**
	3.3nm,0.8s,baz=135,slow=11,SNR=39						
AB31				⇑S	**S**	**20 06 58.6**	**-10**
	0.8nm,0.3s,baz=3.9,slow=50,SNR=5.8						
JIRN	**Jiri**	**15.19**	**125**	eP	**Pn**	**20 04 27.8**	**-0.1**
BVAR	**Borovoye Array**	**15.74**	**356**	P	**Pn**	**20 04 35.7**	**+1.5**
	0.2nm,0.3s,baz=156,slow=8.5,SNR=3.1						
BVAR				LR	LR	20 12 09.6	
	comp=Z,38nm,18.7s,baz=357,slow=42						
RAMN	**Ramite**	**15.94**	**126**	eP	**Pn**	**20 04 36.5**	**-0.4**
	26nm,0.6s						
TAPN	**Taplejung**	**16.39**	**123**	eP	**P**	**20 04 42.0**	**+0.6**
ODAN	**Odare**	**16.51**	**125**	eP	**P**	**20 04 43.8**	**+1.2**
	11nm,0.4s						
AKTK	**Aktyubinsk**	**16.60**	**327**	P	**P**	**20 04 43.8**	**+0.4**
AKTO	**Aktyubinsk**	**16.60**	**327**	⇑P	**P**	**20 04 44.2**	**+0.8**
	0.8nm,0.7s						
AKTO				⇓S	**S**	**20 07 44.9**	**-0.9**
	0.3nm,0.6s						
AKTO	**Aktyubinsk**	**16.60**	**327**	P	**P**	**20 04 43.8**	**+0.4**
	1.0nm,0.3s,baz=121,slow=9.2,SNR=19						
LSA	**Lhasa**	**17.47**	**110**	eP	**P**	**20 04 57.7**	**+4.6**
ZAA0	**Zalesovo Array**	**18.73**	**24**	eP	**P**	**20 05 06.5**	**0.0**
ZALV	**Zalesovo Beam**	**18.73**	**24**	P	**P**	**20 05 06.2**	**-0.4**
	0.6nm,0.3s,baz=220,slow=10,SNR=12						
ARCES	**ARCESS Array B**	**40.77**	**337**	P	**P**	**20 08 24.3**	**+0.5**
	0.5nm,0.4s,mb3.3,baz=114,slow=8.4,SNR=8.1						
NOA	**NORSAR Array B**	**44.33**	**322**	P	**P**	**20 08 52.3**	**-0.2**
	1.1nm,0.8s,mb3.2,baz=103,slow=7.1,SNR=3.2						
MJAR	**Matsushiro Arr**	**51.70**	**70**	LR	LR	20 33 48.3	
	comp=Z,30nm,18.5s,baz=255,slow=38						
TORD	**Torodi Ar. Bea**	**66.75**	**269**	P	**P**	**20 11 31.1**	**-1.6**
	1.0nm,0.4s,mb3.8,baz=48,slow=5.7,SNR=68						
YKA	**Yellowknife Ar**	**80.36**	**3**	P	**P**	**20 12 50.9**	**-0.1**
	0.6nm,0.5s,mb3.5,baz=349,slow=5.3,SNR=6.9						

NEIC 03 20:01:48.2, 3642N×12099W, h8^{km}, ML2.9(NCEDC)**, 5C-7D, After NCEDC., Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U04C	**Hernandez Rese**	**0.17**	**108**	⇑P	Pg	20 01 52.2	+0.3
	baz=0.2,SNR=1000						
SAO	**San Andreas Ge**	**0.51**	**313**	eP	Pg	20 01 57.5	-0.6
PKD	**Parkfield**	**0.59**	**142**	⇓P	Pg	20 01 59.4	-0.2
	baz=0.6,SNR=150						
PACP	**Pacheco Peak**	**0.64**	**338**	⇓P	Pg	20 02 01.1	+0.6
	baz=0.6,SNR=57						
PTRM	**Twissleman Ran**	**0.99**	**140**	eP	Pg	20 02 06.8	-0.3
S05C	**Merced**	**1.07**	**29**	⇓P	Pg	20 02 08.1	-0.6
	baz=1.1,SNR=38						
T06C	**Millerton Lake**	**1.19**	**60**	⇑P	Pb	20 02 09.4	-1.5
	baz=1.2,SNR=42						
SMMC	**Simmler**	**1.36**	**144**	⇑P	Pn	20 02 12.5	-1.0
	baz=1.4,SNR=12						
RCTC	**Rector, Farmer**	**1.42**	**94**	⇑P	Pn	20 02 13.1	-1.1
	baz=1.4,SNR=8.2						
KCC	**Kaiser Creek**	**1.62**	**55**	⇓P	Pn	20 02 15.9	-1.1
	baz=1.6,SNR=6.8						
VES	**Vestal, Richgr**	**1.65**	**110**	⇓P	Pn	20 02 16.6	-0.8
	baz=1.6,SNR=8.0						
CMB	**Columbia Colle**	**1.69**	**16**	⇓P	Pn	20 02 17.4	-0.5
	baz=1.7,SNR=36						
CMB	**Columbia Colle**	**1.69**	**16**	ePn	Pn	20 02 17.3	-0.6
S06C	**San Francisco**	**1.72**	**32**	⇑P	Pn	20 02 18.8	+0.4
	baz=1.7,SNR=28						
MTUM	**Tungsten Hills**	**2.16**	**64**	ePn	Pn	20 02 25.3	+0.9
ISA	**Isabella**	**2.17**	**110**	⇓Pn	Pn	20 02 24.7	+0.1
	baz=2.2,SNR=26						
ISA	**Isabella**	**2.17**	**110**	ePn	Pn	20 02 24.4	-0.2
GSC	**Goldstone**	**3.58**	**107**	ePn	Pn	20 02 44.7	+0.8
TPNV	**Topopah Spring**	**3.85**	**81**	ePn	Pn	20 02 49.5	+1.8

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*NEIC **03** 20:26:03.1±1.9, 1225S×16628E, h10^{km}, mb4.4/1, Error ellipse: s-maj=61.7km s-min=21.1km az=120.0*
*IDC **03** 20:26:08.2±2.5, 1225S×166.15E, h40^{km}±6^{km}, mb3.8/7, mb1 3.8/7, mb1mx3.6/15, mbtmp3.7/7, MS3.6/3, Ms1 3.6/3, ms1mx3.1/23, Error ellipse: s-maj=71.7km s-min=24.1km az=119.0*
ISC 03 20:26:09.4±3.3**, 122S**±03×**1660E**±06**, h42^{km}, h42^{km}**±1.3^{km}**:pP-P, n11, σ0^{s}86**/8**, mb3.9**/8**, MS3.5**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**21.75**	**97**	LR	LR	20 38 19.5	
	comp=Z,102nm,18.1s,MS3.3,baz=105,slow=34						
STKA	**Stephens Creek**	**29.78**	**225**	P	**P**	**20 32 13.0**	**+0.7**
	1.4nm,0.9s,mb3.7,baz=158,slow=18,SNR=3.4						
STKA				pP	pP	20 32 24.4	+0.8
	2.2nm,0.8s,baz=33,slow=9.4,SNR=2.4						
STKA				LR	LR	20 43 49.6	
	comp=Z,113nm,20.4s,MS3.5,baz=43,slow=36						
WRA	**Warramunga Arr**	**31.32**	**252**	P	**P**	**20 32 25.3**	**-0.6**
	0.7nm,1.0s,mb3.5,baz=83,slow=8.8,SNR=5.7						
WRA				pP	pP	20 32 36.9	-0.4
	1.3nm,0.8s,baz=83,slow=8.5,SNR=6.4						
WRA				pPcP		20 35 31.0	
	0.9nm,0.8s,baz=85,slow=2.8,SNR=6.2						
ASAR	**Alice Springs**	**32.49**	**245**	P	**P**	**20 32 35.6**	**-0.6**
	0.8nm,0.7s,mb3.6,baz=67,slow=9.4,SNR=11						
ASAR				pP	pP	20 32 47.0	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	2.6nm,0.7s,baz=70,slow=9.5,SNR=15						
ASAR				pPcP		20 35 34.0	
	1.0nm,0.8s,baz=78,slow=2.4,SNR=9.0						
PPT	Papeete	43.23	103	LR	LR	20 48 13.1	
	comp=Z,116nm,21.7s,MS3.7,baz=314,slow=31						
CMAR	Chiang Mai Arr	72.76	294	P	P	20 37 35.5	+1.6
	0.4nm,0.6s,mb3.5,baz=207,slow=30,SNR=3.0						
CMAR				pP	pP	20 37 46.7	+0.4
	0.6nm,0.7s,baz=117,slow=5.0,SNR=4.7						
ULN	Ulaanbaatar	79.34	324	eP	P	20 38 11.0	+0.2
	5.7nm,1.2s,mb4.4						
SONM	Songino Array	79.70	324	P	P	20 38 12.8	+0.1
	0.9nm,0.8s,mb3.8,baz=140,slow=5.1,SNR=7.5						
MKAR	Makanchi Array	94.49	317	P	P	20 39 25.4	+0.1
	1.6nm,0.6s,mb4.6,baz=96,slow=5.7,SNR=17						
MKAR				pP	pP	20 39 37.0	-1.0
	1.5nm,0.7s,baz=97,slow=6.2,SNR=8.9						
ZALV	Zalesovo Beam	94.59	324	P	P	20 39 24.1	-1.5
	0.4nm,0.4s,mb4.2,baz=111,slow=3.4,SNR=5.2						
ARCES	ARCESS Array B	117.48	345	PKP	PKPdf	20 44 48.4	-1.7
	1.9nm,1.0s,baz=77,slow=1.9,SNR=4.1						

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*ISCJB **03** 20:56:25.3±3.2, 14.1S±0.1×76.7W±0.2, h15km±23km, mb4.3/10, MS3.5/3, Error ellipse: s-maj=31.0km s-min=10.2km az=147.9*

*IDC **03** 20:56:25.2±0.9, 14.08S×76.68W, h0km, mb4.1/7, mb1 4.2/12, mb1mx4.1/20, mbtmp4.1/12, ML4.1/4, MS3.4/7, Ms1 3.4/7, ms1mx3.2/24, Error ellipse: s-maj=36.2km s-min=15.9km az=53.0*

*NEIC **03** 20:56:26.9±0.6, 14.14S×76.74W, h10km, mb4.5/2, Error ellipse: s-maj=22.1km s-min=9.2km az=57.0*

ISC 03 20:56:26.9±4.5**, 14.0S**±0.1×**76.6W**±0.2**, h7**km±29km**, n30, σ1.00**/19**, mb4.3**/10**, MS3.5**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	Nana	2.02	354	Pn	Pn	20 57 00.8	-0.6
	52nm,0.3s,baz=173,slow=13,SNR=25						
NNA				Lg		20 57 25.5	
	159nm,0.3s,baz=214,slow=5.8,SNR=7.4						
ATAH	Atahualpa	7.17	346	Pn	Pn	20 58 11.6	-0.7
	3.7nm,0.3s,baz=173,slow=6.3,SNR=12						
ATAH				Lg		20 59 59.4	
	2.4nm,0.3s,baz=321,slow=11,SNR=3.6						
ATAH				LR	LR	21 00 45.4	
	comp=Z,223nm,20.4s,baz=21,slow=37						
LPAZ	La Paz	8.51	107	Pn	Pn	20 58 32.9	+2.2
	1.0nm,0.3s,baz=277,slow=13,SNR=21						
LPAZ				LR	LR	21 01 28.5	
	comp=Z,76nm,21.1s,baz=276,slow=36						
LVC	Limon Verde	11.26	141	Pn	Pn	20 59 08.5	+0.1
	1.0nm,0.3s,baz=305,slow=11,SNR=7.4						
LVC				Sn	Sn	21 01 07.3	-7.3
	0.2nm,0.3s,baz=189,slow=16,SNR=2.5						
LVC				Lg		21 02 16.4	
	0.1nm,0.3s,baz=278,slow=21,SNR=2.6						
LVC				LR	LR	21 02 41.2	
	comp=Z,214nm,21.3s,baz=116,slow=34						
OTAV	Otavalo	14.27	353	eP	Pn	20 59 54.1	+4.6
	9.7nm,0.9s						
ROSC	El Rosal	18.88	7	LR	LR	21 09 05.8	
	comp=Z,242nm,21.3s,baz=203,slow=40						
CFAA	Coronel Fontan	19.13	158	P	Pn	21 00 50.5	-0.9
	0.1nm,0.3s,baz=328,slow=12,SNR=9.8						
CPUP	Villa Florida	21.84	127	P	P	21 01 19.5	-0.5
	2.3nm,0.8s,mb3.7,baz=278,slow=11,SNR=6.3						
CPUP				LR	LR	21 11 09.6	
	comp=Z,113nm,19.7s,MS3.3,baz=56,slow=40						
CPUP	Villa Florida	21.84	127	P	P	21 01 19.5	-0.5
CPUP				LR	LR	21 11 09.6	
PCRV	Puerto La Cruz	26.81	27	LR	LR	21 14 09.0	
	comp=Z,159nm,21.8s,MS3.5,baz=85,slow=40						
BDFB	Brasilia	27.70	97	LR	LR	21 13 47.5	
	comp=Z,133nm,18.9s,MS3.5,baz=186,slow=38						
SDCO	Great Sand Dun	58.18	333	eP	P	21 06 21.4	-0.3
	3.3nm,0.9s,mb4.4						
WUAZ	Wupatki	59.23	327	eP	P	21 06 29.9	+0.9
	3.4nm,0.8s,mb4.4						
PDAR	Pinedale Array	64.07	334	P	P	21 07 03.1	+1.7
	0.7nm,0.6s,mb3.9,baz=145,slow=5.4,SNR=4.0						
NVAR	Mina Array Bea	65.13	325	P	P	21 07 10.3	+1.8
	0.4nm,0.5s,mb3.7,baz=172,slow=7.2,SNR=3.2						
NVAR	Mina Array Bea	65.13	325	P	P	21 07 10.3	+1.8
ULM	Lac du Bonnet	66.18	347	P	P	21 07 14.6	-0.4
	1.4nm,0.5s,mb4.3,baz=98,slow=2.6,SNR=3.3						
DBIC	Dimbokro	74.11	79	P	P	21 08 03.5	-1.0
	3.5nm,0.7s,mb4.4,baz=254,slow=4.1,SNR=7.1						
KIC	Kosan Boka	74.13	79	e?	P	21 08 04.3	-0.3
	51nm,1.0s,mb5.4						
YKA	Yellowknife Ar	81.82	343	P	P	21 08 45.1	-1.1
	1.4nm,0.8s,mb4.0,baz=137,slow=5.3,SNR=8.7						
TORD	Torodi Ar. Bea	82.12	74	P	P	21 08 48.8	-0.1
	6.9nm,0.9s,mb4.6,baz=260,slow=3.7,SNR=32						
ASAR	Alice Springs	132.11	219	PKP	PKPdf	21 15 39.2	-3.0
	0.6nm,0.9s,baz=163,slow=4.8,SNR=4.1						
WRA	Warramunga Arr	134.54	223	PKP	PKPdf	21 15 45.9	-1.1
	1.0nm,0.8s,baz=138,slow=1.6,SNR=7.4						
ZAA0	Zalesovo Array	137.56	16	eP	PKPdf	21 15 51.4	-0.1
ZALV	Zalesovo Beam	137.56	16	PKP	PKPdf	21 15 51.5	0.0
	2.2nm,0.8s,baz=264,slow=1.5,SNR=9.8						
ZALV	Zalesovo Beam	137.56	16	PKP	PKPdf	21 15 51.5	0.0
KURK	Kurchatov	138.25	24	PKP	PKPdf	21 15 52.7	-0.1
	0.8nm,0.7s,baz=303,slow=2.8,SNR=4.3						
ULN	Ulaanbaatar	146.10	356	eP	PKPdf	21 16 07.4	+0.5
SONM	Songino Array	146.18	356	PKPbc	PKPbc	21 16 07.9	-0.1
	3.4nm,0.8s,baz=323,slow=2.0,SNR=26						
KSRS	Korea Array	148.02	321	PKPbc	PKPbc	21 16 10.1	-3.5
	1.3nm,0.6s,baz=124,slow=39,SNR=2.9						

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*ISCJB **03** 21:09:31.2±0.6, 32.14S±0.03×71.53W±0.08, h67km±11km, Error ellipse: s-maj=11.0km s-min=4.7km az=179.5*

*NEIC **03** 21:09:31.5, 32.14S×71.32W, h40km, MD4.2(GUC), After GUC.*

*GUC **03** 21:09:31.5±2.3, 32.14S×71.32W, h40km±8km, MD4.2, ML3.7*

*IDC **03** 21:09:38.7±3.9, 31.59S×71.16W, h96km±31km, mb3.4/1, mb1 3.4/4, mb1mx3.3/15, mbtmp3.2/4, MS3.0/2, Ms1 3.1/2, ms1mx2.7/12, Error ellipse: s-maj=45.3km s-min=28.8km az=138.0*

ISC 03 21:09:31.9±0.6**, 32.15S**±0.03×**71.54W**±0.08**, h62**km±11km**, n27, σ0.68**/43**, 1C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.88	185⇓	iP	Pn	21 09 48.0	-0.6
IHA				i S	Sn	21 10 00.7	-0.1
PEL	Peldehue	1.23	144⇑	iP	Pn	21 09 52.3	-0.8
PEL				i S	Sn	21 10 07.8	-1.0
PEL				AML	AML	21 10 10.8	
	comp=E,4µm,0.3s						
RCDM	Rinconada Maip	1.48	155	eP	Pn	21 09 56.0	-0.3
RCDM				i S	Sn	21 10 14.5	-0.2
RCDM				AML	AML	21 10 20.2	
	comp=E,2µm,0.3s						
RCDM	Rinconada Maip	1.48	155	eP	Pn	21 09 56.0	-0.3
RCDM				i S	Sn	21 10 14.5	-0.2
SAN	Santiago	1.50	151	eP	Pn	21 09 56.0	-0.6
SAN				i S	Sn	21 10 15.1	-0.2
SAN				AML	AML	21 10 19.8	
	comp=N,1µm,0.6s						
SAN	Santiago	1.50	151	eP	Pn	21 09 56.0	-0.6
SAN				i S	Sn	21 10 15.1	-0.2
CLCH	Cerro Calan	1.51	146	eP	Pn	21 09 57.0	+0.2
CLCH				i S	Sn	21 10 15.3	-0.1
CLCH				AML	AML	21 10 18.7	
	comp=N,3µm,0.5s						
CLCH	Cerro Calan	1.51	146	P	Pn	21 09 57.0	+0.2
CLCH				i S	Sn	21 10 15.3	-0.1
FCH	Farellones	1.58	138⇓	iP	Pn	21 09 54.7	-3.1
FCH				i S	Sn	21 10 12.4	-4.8
TACH	Talagante	1.59	161	eP	Pn	21 09 57.9	+0.1
TACH				i S	Sn	21 10 18.1	+0.7
ANTU	Antumapu	1.61	152	eP	Pn	21 09 58.2	0.0
ANTU				i S	Sn	21 10 17.8	-0.2
ANTU				AML	AML	21 10 25.0	
	comp=E,2µm,0.5s						
ANTU	Antumapu	1.61	152	eP	Pn	21 09 58.2	0.0
ANTU				i S	Sn	21 10 17.8	-0.2
PCH	Pirque	1.71	150	eP	Pn	21 09 58.9	-0.5
PCH				i S	Sn	21 10 20.5	+0.3
LNV	Longovilo	1.81	177	eP	Pn	21 10 00.9	+0.1
LNV				i S	Sn	21 10 23.7	+1.0
CHCH	Chadas Angostu	1.93	157	eP	Pn	21 10 02.1	-0.4
CHCH				i S	Sn	21 10 26.0	+0.3
TLL	Tololo Astrono	2.07	18⇓	iP	Pn	21 10 04.2	-0.2
TLL				i S	Sn	21 10 29.8	+0.7
TLL				AML	AML	21 10 39.5	
	comp=N,1µm,0.5s						
TLL	Tololo Astrono	2.07	18⇓	iP	Pn	21 10 04.2	-0.2
TLL				i S	Sn	21 10 29.8	+0.7
CACH	El Canelo	2.12	158	eP	Pn	21 10 06.1	+1.0
LSCH	La Serena	2.25	7	eP	Pn	21 10 06.6	-0.2
LSCH				i S	Sn	21 10 33.8	+0.5
SFDO	San Fernando	2.50	170	eP	Pn	21 10 11.1	+0.8
SFDO				i S	Sn	21 10 40.3	+0.7
CFAA	Coronel Fontan	2.86	80	P	Pn	21 10 16.2	+1.1
	comp=N,2.4nm,0.3s,baz=258,slow=13,SNR=38						
CFAA				S	Sn	21 10 48.8	+0.3
	comp=N,1.8nm,0.3s,baz=104,slow=14,SNR=3.1						
PLCA	Paso Flores	8.61	175	P	Px	21 11 48.2	
	comp=N,0.2nm,0.3s,baz=337,slow=14,SNR=3.6						
LPAZ	La Paz	16.09	12	P	Pn	21 13 12.9	-1.3
	comp=N,0.1nm,0.3s,baz=186,slow=6.6,SNR=3.9						
LPAZ				LR	LR	21 19 14.0	
	comp=N,55nm,21.1s,baz=251,slow=37						
BDFB	Brasilia	26.97	58	LR	LR	21 25 20.6	
	comp=N,45nm,21.1s,baz=26,slow=36						
TORD	Torodi Ar. Bea	83.19	70	P	P	21 21 51.8	+0.1
	comp=N,0.8nm,1.0s,baz=228,slow=3.7,SNR=6.1						
ZALV	Zalesovo Beam	152.43	31	PKPbc	PKPbc	21 29 22.2	+1.8
	comp=N,1.2nm,0.4s,baz=296,slow=3.3,SNR=6.7						
ZALV				PKPab	PKPab	21 29 31.4	+0.6
	comp=N,2.3nm,0.8s,baz=304,slow=2.6,SNR=8.4						
MKAR	Makanchi Array	155.21	46	PKPbc	PKPdf	21 29 28.1	+10
	comp=N,0.6nm,1.0s,baz=342,slow=4.0,SNR=3.3						
MKAR				PKPab	PKPab	21 29 40.5	-2.4
	comp=N,0.3nm,0.7s,baz=298,slow=3.1,SNR=4.1						

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*CSEM **03** 21:16:30.8±0.3, 80.44N×22.33E, h2km, mb3.5/1, Error ellipse: s-maj=5.5km s-min=3.1km az=53.0*

*NAO **03** 21:16:38.0±3.6, 80.02N×20.93E, ML3.5*

*IDC **03** 21:16:39.1±1.6, 79.98N×20.62E, h0km, mb3.5/5, mb1 3.8/7, mb1mx3.6/23, mbtmp3.8/7, ML4.1/3, Error ellipse: s-maj=30.5km s-min=19.5km az=112.0*

*NEIC **03** 21:16:40.3±1.0, 79.93N×20.68E, h10km, mb3.5/1, Error ellipse: s-maj=16.1km s-min=11.1km az=162.0*

BER 03 21:16:40.1±2.4**, 80.26N**×**19.77E, h10**km**, MD3.1, ML3.4, ML3.5**(NAO)**, Svalbard region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	1.95	231	Pn	Pn	21 17 11.3	-1.9
KBS				Pg	Pg	21 17 15.5	-1.9
KBS				Lg		21 17 41.3	
KBS	Kingsbay	1.95	231	eP	Pn	21 17 11.9	-1.2
KBS				eSg	Sg	21 17 41.6	-1.1
KBS				AML	AML	21 17 42.7	
	comp=Z,678nm,0.2s						
KBS	Kingsbay	1.95	231	ePg	Pg	21 17 15.6	-1.8
KBS				eSg	Sg	21 17 41.6	-1.1
	comp=Z,678nm,0.2s,SNR=93						
KBS	Kingsbay	1.95	231	ePn	Pn	21 17 11.7	-1.5
KBS				ePg	Pg	21 17 15.6	-1.9
KBS				eSn	Sn	21 17 35.4	-2.2
KBS				eSg	Sg	21 17 41.2	-1.5
HSP	Hornsund	3.37	196	ePn	Pn	21 17 30.8	-1.9
HSP				eS	Sg	21 18 21.7	-6.5
BJO	Bjornoya	5.79	182	eP	Pn	21 18 01.5	-4.3
BJO				eSg	Sg	21 19 39.1	-6.5
BJO				AML	AML	21 19 49.9	
	comp=Z,165nm,0.6s						
BJO	Bjornoya	5.79	182	eP	Pn	21 18 01.5	-4.3
	SNR=49						
BJO				eSg	Sg	21 19 39.1	-6.5
	SNR=91						
BJO1	Bjornoya	5.79	182	eP	Pn	21 18 01.5	-4.4
BJO1				eSg	Sg	21 19 39.1	-6.7
BJO1	Bjornoya	5.79	182	eP	Pn	21 18 01.5	-4.4
BJO1				eSg	Sg	21 19 39.1	-6.7
KEV	Kevo	10.71	166	ep	Sn	21 21 00.4	-13
	comp=Z,4.4nm,0.4s						
KEV	Kevo	10.71	166	eSn	Sn	21 20 58.2	-15
KEV	Kevo	10.71	166	ePn	Pn	21 19 08.4	-4.8
KEV				eSn	Sn	21 20 58.2	-15
ARA0	ARCESS Array S	10.88	169	Pn	Pn	21 19 09.6	-5.9
	baz=359,slow=12						
ARA0				Sn	Sn	21 21 02.3	-15
	baz=359,slow=22						
ARCES	ARCESS Array B	10.88	169	Pn	Pn	21 19 09.7	-5.8
	comp=Z,2.0nm,0.3s,baz=0.0,slow=12,SNR=69						
ARCES				Sn	Sn	21 21 01.9	-15
	comp=Z,2.2nm,0.3s,baz=1.0,slow=22,SNR=6.5						
ARCES	ARCESS Array B	10.88	169	Pn	Pn	21 19 09.7	-5.8
ARCES				Sn	Sn	21 21 01.9	-15
KTK1	Kautokeino	11.34	174	eP	Pn	21 19 17.5	-4.4
KTK1				eS	Sn	21 21 14.4	-14
KTK1				AML	AML	21 21 38.0	
	comp=Z,5.9nm,0.5s						
JMIC	Jan Mayen	11.44	232	Pn	Pn	21 19 23.4	+0.2
	comp=Z,1.7nm,0.3s,baz=128,slow=12,SNR=4.7						
JOF	Joensuu	17.73	162	ep	Pn	21 20 46.2	-0.4
	comp=Z,1.4nm,0.4s						
KAF	Kangasniemi	18.34	170	ep	Pn	21 20 50.4	-3.6
	comp=Z,1.1nm,0.3s						
FIA0	FINESS Array S	19.00	171	P	Pn	21 20 57.1	-5.0
	baz=3.1,slow=11						
NB2	NORSAR Subarra	19.48	193	P	Pn	21 21 03.3	-4.5
NOA	NORSAR Array B	19.48	193	P	Pn	21 21 04.3	-3.4
	comp=Z,0.2nm,0.3s,baz=13,slow=9.8,SNR=3.3						
NOA	NORSAR Array B	19.48	193	P	Pn	21 21 04.3	-3.5
HFS	Hagfors	20.31	189	P	P	21 21 13.4	-2.2
	comp=Z,2.9nm,0.5s,baz=19,slow=9.7,SNR=21						
HFS	Hagfors	20.31	189	P	P	21 21 11.4	-4.2
	baz=27,slow=9.3						
AKASG	Malin Array Be	29.85	168	P	P	21 22 46.7	-0.3
	comp=Z,0.3nm,0.4s,baz=354,slow=9.2,SNR=3.2						
MKAR	Makanchi Array	39.65	107	P	P	21 24 09.8	-1.6
	comp=Z,0.3nm,0.5s,baz=340,slow=8.0,SNR=3.6						
MKAR	Makanchi Array	39.65	107	P	P	21 24 09.8	-1.6
SONM	Songino Array	42.70	83	P	P	21 24 36.1	-0.5
	comp=Z,0.2nm,0.7s,baz=356,slow=10,SNR=2.6						
TORD	Torodi Ar. Bea	67.64	199	P	P	21 27 35.1	-1.7
	comp=Z,0.3nm,0.5s,baz=354,slow=8.0,SNR=11						

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*IDC **03** 21:21:11.4±7.3, 13.82N×89.82W, h33km±54km, mb3.7/6, mb1 4.0/7, mb1mx3.7/20, mbtmp3.7/7, ML4.0/1, MS3.6/11, Ms1 3.5/11, ms1mx3.3/34, Error ellipse: s-maj=55.9km s-min=21.9km az=56.0*

*ISCJB **03** 21:21:13.0±0.7, 13.47N±0.08×90.47W±0.05, h78km±6km, mb3.9/8, Error ellipse: s-maj=14.9km s-min=4.4km az=32.3*

*CASC **03** 21:21:13.4±2.2, 13.43N×90.49W, h27km±6km, MD4.1, ML4.4, mb4.5(NEIC)*

*NEIC **03** 21:21:16.1±1.3, 13.59N×90.22W, h80km±10km, mb4.5/1, MD4.8(SNET), Error ellipse: s-maj=18.8km s-min=12.1km az=203.0*

NEIC Felt [II] at San Salvador, El Salvador.

ISC 03 21:21:14.4±0.7**, 13.49N**±0.08×**90.45W**±0.05**, h71**km±6km**, n56, σ0.92**/39**, mb3.9**/8**, 9C-3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONS		0.75	71	eP	x	21 21 28.4	
SONS				eS	x	21 21 39.6	
SONS				i		21 21 40.2	
	comp=Z,20µm,0.3s						
RTR	El Retiro	0.88	63⇑	eP	x	21 21 30.6	
RTR			⇑	iP	x	21 21 30.9	
SNJE	San Jose	0.90	65⇑	iP	x	21 21 30.7	
SNJE			⇑	iP	x	21 21 31.0	
PCG	Pacaya	0.91	350	eP	Pn	21 21 31.7	-0.2
PCG				eS	Sn	21 21 44.3	-0.5
RBDL	Robledal	0.96	50⇓	eP	x	21 21 32.0	
RBDL				eS	x	21 21 48.5	
FUG	Fuego 3	1.02	338⇓	iP	Pn	21 21 32.8	-0.5
NBG	Las Nubes	1.09	5⇑	eP	Pn	21 21 35.3	+1.1
FG6		1.14	338	eP	Pn	21 21 34.5	-0.3
BOQS	Boqueron	1.16	78	eP	x	21 21 34.8	
BOQS				eS	x	21 21 50.9	
SNET	Serv Nac Est T	1.20	81⇓	eP	x	21 21 35.1	
SNET				eS	x	21 21 51.0	
SNET				e		21 21 54.9	
	comp=Z,17µm,0.9s						
LFRS	El Faro	1.35	84	eP	x	21 21 37.2	
LBRS	Las Brisas	1.39	80⇑	eP	x	21 21 37.8	
LBRS				eS	x	21 21 57.2	
JAT	Jato	1.42	306⇑	eP	Pn	21 21 38.4	+0.1
JAT				eS	Sn	21 21 56.2	-0.1
SNVI	San Vicente	1.57	86	eP	x	21 21 40.7	
SNVI				eS	x	21 22 03.3	
MRL	Marmol	1.73	25	eP	Pn	21 21 43.4	+1.0
VSM	San Miguel	2.12	92	eP	x	21 21 48.0	
VSM				AML	x	21 22 19.5	
	comp=Z,754nm,0.2s						
BLLM	Bellamira	2.15	91	eP	x	21 21 49.0	
CAHU	Cacacuatique	2.19	83⇑	eP	x	21 21 48.6	
CAHU				eS	x	21 22 17.9	
CNCH	Conchagua	2.55	95	eP	x	21 21 53.8	
CNCH				eS	x	21 22 26.7	
TGUH	Tegucigalpa,Un	3.14	79	eP	Pn	21 22 00.5	-1.0
TGUH	Tegucigalpa,Un	3.14	79	ePn	Pn	21 21 59.8	-1.7
CCIG	Comitan	3.22	330	eP	Pn	21 22 05.0	+2.4
CCIG				i S	Sn	21 22 38.1	-1.7
CRIN	San Cristobal	3.40	103⇑	eP	Pn	21 22 06.1	+1.0
CRIN				eS	Sn	21 22 44.1	-0.3
LEON	Leon	3.63	107	eP	Pn	21 22 07.0	-1.2
LEON				eS	Sn	21 22 50.0	+0.1
TELN	Telica	3.63	104	eP	Pn	21 22 08.2	-0.1
CNGN	Cerro Negro	3.79	105	eP	Pn	21 22 10.0	-0.4
COPN	Copaltepe	3.98	109	eP	Pn	21 22 13.2	+0.2
APYN	Apoyeque	4.19	107	eP	Pn	21 22 16.1	+0.2
CMIG	Matias Romero	5.58	310	Pn	Pn	21 22 35.5	+0.7
	comp=Z,3.8nm,0.3s,baz=122,slow=10,SNR=37						
CMIG				Sn	Sn	21 23 37.1	-0.5
	comp=Z,5.5nm,0.3s,baz=100,slow=17,SNR=5.7						
CMIG				LR	LR	21 25 07.9	
	comp=Z,340nm,21.1s,baz=170,slow=40						
CMIG	Matias Romero	5.58	310	Pn	Pn	21 22 35.5	+0.7
CMIG				eP		21 22 36.5	
CMIG				Sn	Sn	21 23 37.1	-0.5
CMIG				i S	Sn	21 23 38.4	+0.8
CMIG				LR	LR	21 25 07.9	
TEIG	Tepich	7.01	17	Pn	Pn	21 22 56.0	+1.6
	comp=Z,11nm,0.3s,baz=201,slow=5.0,SNR=56						
TEIG				Lg		21 24 53.9	
	comp=Z,1.0nm,0.3s,baz=81,slow=20,SNR=2.6						
TEIG				LR	LR	21 25 59.9	
	comp=Z,425nm,18.2s,baz=273,slow=44						
TEIG	Tepich	7.01	17	ePn	Pn	21 22 55.7	+1.3
TEIG				eSn	Sn	21 24 29.8	+17
TEIG				Lg		21 24 53.9	
TEIG				LR	LR	21 25 59.9	
VHO	Vista Hermosa	7.03	301	i P	Pn	21 23 00.2	+5.5
VHO				i S	Sn	21 24 12.6	-0.7
CHI2		18.68	117	eP	Px	21 22 06.3	
TKL	Tuckaleechee C	22.87	14	P	P	21 26 12.1	+0.1
	comp=Z,1.6nm,0.4s,mb3.8,baz=193,slow=14,SNR=5.8						
TKL				LR	LR	21 35 44.2	
	comp=Z,183nm,20.5s,baz=319,slow=39						
ATAH	Atahualpa	23.62	149	LR	LR	21 32 45.7	
	comp=Z,82nm,21.8s,baz=213,slow=29						
SJG	San Juan	23.82	76	LR	LR	21 34 43.9	
	comp=Z,115nm,21.9s,baz=272,slow=35						
WCI	Wyandotte Cave	24.91	8	eP	P	21 26 31.0	+0.3
	comp=Z,12nm,0.6s,mb4.5						
PCRV	Puerto La Cruz	25.47	95	LR	LR	21 37 32.2	
	comp=Z,35nm,19.2s,baz=283,slow=39						
PDAR	Pinedale Array	33.52	334	P	P	21 27 47.4	+0.3
	comp=Z,0.3nm,0.7s,mb3.2,baz=133,slow=11,SNR=2.8						
PDAR				PcP	PcP	21 30 27.8	+1.2
	comp=Z,0.7nm,0.9s,baz=78,slow=3.6,SNR=4.1						
NVAR	Mina Array Bea	35.02	320	P	P	21 28 03.1	+2.9
	comp=Z,4.4nm,0.7s,mb4.4,baz=137,slow=7.8,SNR=28						
NVAR				PcP	PcP	21 30 33.7	+2.8
	comp=Z,1.9nm,0.9s,baz=140,slow=4.2,SNR=6.3						
LPAZ	La Paz	36.91	143	P	P	21 28 17.2	+0.6
	comp=Z,1.3nm,0.8s,mb3.9,baz=320,slow=8.1,SNR=6.3						
LPAZ	La Paz	36.91	143	P	P	21 28 17.2	+0.6
ULM	Lac du Bonnet	36.92	354	P	P	21 28 14.9	-1.3
	comp=Z,1.8nm,0.5s,mb4.3,baz=143,slow=6.1,SNR=4.3						
SCHQ	Schefferville	45.19	19	LR	LR	21 48 31.4	
	comp=Z,72nm,19.1s,baz=175,slow=37						
YKA	Yellowknife Ar	51.87	346	P	P	21 30 14.8	-0.4
	comp=Z,0.7nm,0.7s,mb3.8,baz=150,slow=7.1,SNR=3.5						
PLCA	Paso Flores	57.02	162	LR	LR	21 51 58.6	
	comp=Z,77nm,18.7s,baz=2.0,slow=32						
PPT	Papeete	66.01	244	LR	LR	21 52 36.5	
	comp=Z,127nm,18.8s,baz=43,slow=28						
DBIC	Dimbokro	84.20	85	LR	LR	22 07 06.7	
	comp=Z,34nm,21.4s,baz=267,slow=33						
DAVOX	Davos/Dischmat	87.22	43	LR	LR	22 10 50.7	
	comp=Z,26nm,18.0s,baz=81,slow=34						
TORD	Torodi Ar. Bea	89.03	77	P	P	21 34 01.0	-1.3
	comp=Z,0.3nm,0.8s,mb3.4,baz=254,slow=4.1,SNR=3.6						
SONM	Songino Array	117.13	347	PKP	PKPdf	21 39 52.4	+0.9
	comp=Z,0.4nm,0.9s,baz=48,slow=2.1,SNR=2.9						
MKAR	Makanchi Array	119.64	6	PKP	PKPdf	21 39 55.8	-0.5
	comp=Z,0.2nm,0.5s,baz=32,slow=3.8,SNR=2.6						
WRA	Warramunga Arr	136.73	255	PKP	PKPdf	21 40 31.5	+2.0
	comp=Z,0.3nm,0.7s,baz=87,slow=2.0,SNR=3.9						
ASAR	Alice Springs	136.91	250	PKP	PKPdf	21 40 32.5	+2.7
	comp=Z,0.2nm,0.7s,baz=126,slow=1.6,SNR=2.9						
CMAR	Chiang Mai Arr	146.93	344	PKPbc	PKPbc	21 40 50.8	+1.1
	comp=Z,2.1nm,0.6s,baz=339,slow=3.1,SNR=16						

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*IDC **03** 21:51:44.7±1.4, 52.38N×160.75E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/20, mbtmp3.7/7, Error ellipse: s-maj=30.9km s-min=22.0km az=95.0*

*KRSC **03** 21:51:47.0±0.4, 52.24N×160.67E, h16km±16km, ML4.3*

*ISCJB **03** 21:51:48.2±0.9, 52.17N±0.05×160.70E±0.07, h44km±8km, mb3.7/7, Error ellipse: s-maj=9.6km s-min=5.4km az=147.6*

*MOS **03** 21:51:48.9±2.0, 52.30N×160.45E, h43km, mb3.9/6, Error ellipse: s-maj=16.1km s-min=9.3km az=99.2*

*NEIC **03** 21:51:51.5±2.1, 52.41N×160.52E, h46km±16km, Error ellipse: s-maj=21.4km s-min=15.0km az=120.0*

ISC 03 21:51:50.1±0.9**, 52.19N**±0.05×**160.62E**±0.07**, h39**km±8km**, n46, σ1.23**/61**, mb3.7**/7**, 3C, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.98	339	eP	Pn	21 52 04.9	-2.4
SPN				i S	Sn	21 52 17.4	-2.5
NLC	Nalytchevo	1.25	322	eP	Pn	21 52 09.4	-1.6
NLC				i S	Sn	21 52 26.3	-0.3
RUS	Russkaya	1.31	281	eP	Pn	21 52 11.1	-0.8
RUS				i S	Sn	21 52 28.0	-0.1
PET	Petropavlovsk	1.46	306α	iPN	Pn	21 52 12.7	-1.2
PET				eS	Sn	21 52 31.0	-0.7
PET				pmax	pmax		
	comp=Z,300nm,0.6s						
PET				pmax	pmax		
	comp=Z,332nm,0.5s						
PET				smax			
	comp=N,900nm,1.3s						
PET				smax			
	comp=N,1µm,0.6s						
PET				smax			
	comp=E,2µm,0.6s						
PET	Petropavlovsk	1.46	306	eP	Pn	21 52 12.8	-1.1
PET				i S	Sn	21 52 32.2	+0.5
PET	Petropavlovsk	1.46	306	ePn	Pn	21 52 12.9	-1.0
PET				eSn	Sn	21 52 30.9	-0.9
AVH	Avacha	1.57	314	eP	Pn	21 52 15.1	-0.3
AVH				i S	Sn	21 52 35.4	+1.0
KII	Karymskiy	1.98	340	eP	Pn	21 52 20.4	-0.6
KII				i S	Sn	21 52 44.8	+0.3
PEA0B	Petropavlovsk-	2.00	298	ePn	Pn	21 52 20.8	-0.5
PEA0B				eSn	Sn	21 52 44.3	-0.8
PETK	Petropavlovsk-	2.00	298	Pn	Pn	21 52 21.0	-0.3
	comp=E,34nm,0.3s,baz=99,slow=18,SNR=333						
PETK				Sn	Sn	21 52 47.8	+2.7
	comp=E,24nm,0.3s,baz=113,slow=26,SNR=11						
GNL	Ganaly	2.21	314	eP	Pn	21 52 24.8	+0.6
GNL				i S	Sn	21 52 53.2	+2.9
MIPR	Malaya Ipel'ka	2.37	274	eP	Pn	21 52 27.2	+0.8
MIPR				i S	Sn	21 52 57.2	+2.9
MKZ	Mys Kozlova	2.46	15	eP	Pn	21 52 26.0	-1.6
MKZ				i S	Sn	21 52 53.6	-2.8
TUMR	Tumrok	3.11	355	P	Pn	21 52 36.7	+0.2
TUMR				i S	Sn	21 53 14.2	+1.8
SKR	Severo-Kuril's	3.19	244	ePN	Pn	21 52 32.5	-5.2
SKR				eS	Sn	21 53 13.5	-1.0

SKR				pmax	pmax		
	comp=Z,20nm,0.3s						
SKR				smax			
	comp=N,90nm,0.6s						
SKR				smax			
	comp=E,90nm,0.6s						
SKR				smax			
	comp=Z,20nm,0.6s						
KMNR	**Kamenistaya**	**3.58**	**357**	P	**Pn**	**21 52 44.1**	**+1.1**
BZMR	**Bezymyannaya**	**3.75**	**359**	P	**Pn**	**21 52 46.0**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**3.76**	**1**	P	**Pn**	**21 52 46.8**	**+1.4**
KIRR	**Kirishev**	**3.77**	**358**	P	**Pn**	**21 52 47.7**	**+2.1**
BZWR	**Bezymyannyi-We**	**3.78**	**359**	P	**Pn**	**21 52 45.4**	**-0.4**
KPT	**Kopyto**	**3.79**	**357**	P	**Pn**	**21 52 46.6**	**+0.7**
ZLN	**Zelenaya**	**3.84**	**2**	P	**Pn**	**21 52 47.8**	**+1.3**
CIRR	**Tsirk**	**3.93**	**1**	P	**Pn**	**21 52 47.8**	**0.0**
KRSR	**Krestovskiy**	**4.04**	**360**	P	**Pn**	**21 52 49.6**	**+0.4**
SRDR	**Sredinnyy**	**4.17**	**353**	P	**Pn**	**21 52 51.0**	**-0.1**
KBTR	**Krutoberegovo**	**4.23**	**17**	P	**Pn**	**21 52 51.2**	**-0.7**
SRKR	**Sorokina**	**4.48**	**4**	P	**Pn**	**21 52 55.6**	**+0.2**
YAK	**Yakutsk**	**19.28**	**313**	*e*P	**Pn**	**21 56 08.3**	**-4.0**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MJAR	**Matsushiro Arr**	**22.25**	**234**	P	**P**	**21 56 45.8**	**+2.5**
	comp=Z,1.5nm,0.5s,mb3.6,baz=14,slow=12,SNR=6.0						
MJAR	**Matsushiro Arr**	**22.25**	**234**	*e*P	**P**	**21 56 46.9**	**+3.5**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HIA	**Hailar**	**25.79**	**280**	*e*P	**P**	**21 57 15.7**	**-1.4**
SONM	**Songino Array**	**34.43**	**285**	P	**P**	**21 58 33.1**	**-0.3**
	comp=Z,0.2nm,0.3s,mb3.5,baz=69,slow=8.2,SNR=5.0						
SONM	**Songino Array**	**34.43**	**285**	*e*P	**P**	**21 58 33.1**	**-0.3**
KURK	**Kurchatov**	**48.49**	**303**	⇑*i*P	**P**	**22 00 27.0**	**-1.4**
MKAR	**Makanchi Array**	**48.84**	**297**	P	**P**	**22 00 29.6**	**-1.6**
	comp=Z,0.4nm,0.4s,mb3.8,baz=46,slow=5.7,SNR=12						
MKAR	**Makanchi Array**	**48.84**	**297**	*e*P	**P**	**22 00 29.6**	**-1.6**
WDC	**Whiskeytown Da**	**51.88**	**71**	*e*P	**P**	**22 00 54.6**	**+0.3**
DAV	**Davao City (W)**	**53.37**	**225**	P	**P**	**22 01 05.6**	**0.0**
	comp=Z,286nm,0.4s,baz=27,slow=6.8,SNR=4.5						
ARCES	**ARCESS Array B**	**54.25**	**342**	P	**P**	**22 01 10.2**	**-1.1**
	comp=Z,1.3nm,0.8s,mb3.9,baz=20,slow=8.9,SNR=5.8						
ARCES	**ARCESS Array B**	**54.25**	**342**	P	**P**	**22 01 10.2**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**58.31**	**259**	P	**P**	**22 01 42.9**	**+2.0**
	comp=Z,0.7nm,0.7s,mb3.8,baz=17,slow=6.7,SNR=6.4						
CMAR	**Chiang Mai Arr**	**58.31**	**259**	*e*P	**P**	**22 01 42.9**	**+2.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**64.50**	**344**	P	**P**	**22 02 22.4**	**+0.2**
	baz=15,slow=5.5						
AKASG	**Malin Array Be**	**69.55**	**329**	P	**P**	**22 02 54.3**	**-0.1**
	comp=Z,0.5nm,0.3s,mb3.9,baz=30,slow=7.0,SNR=2.9						
AKASG	**Malin Array Be**	**69.55**	**329**	P	**P**	**22 02 54.3**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**79.07**	**205**	P	**P**	**22 03 52.4**	**+2.5**
	comp=Z,0.2nm,0.5s,mb3.3,baz=12,slow=4.8,SNR=3.7						

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*IDC **03** 21:54:23.2±0.8, 221N×12660E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.9/17, mbtmp3.9/10, Error ellipse: s-maj=38.8km s-min=13.9km az=76.0*

*ISCJB **03** 21:54:25.1±4.8, 229N±008×12700E±008, h24km±37km, mb3.9/9, Error ellipse: s-maj=13.1km s-min=12.4km az=41.8*

*NEIC **03** 21:54:28.3±0.5, 221N×12664E, h35km, mb3.9/1, Error ellipse: s-maj=25.7km s-min=8.5km az=76.0*

*DJA **03** 21:54:28, 067S×12420E, h100km, ML4.4/1*

ISC 03 21:54:27.4±6.7**, 222N**±010×**1269E**±01**, h28**km±52km**, n15, σ0^{s}96**/16**, mb3.9**/9**, 2D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	**Ternate**	**1.52**	**160**	⇓*e*P	**Pn**	**21 54 51.0**	**-1.7**
MNI	**Manado**	**2.15**	**249**	⇓*e*P	**Pn**	**21 55 02.5**	**+1.1**
MNI				*e*S	**Sn**	**21 55 32.0**	**+4.9**
FITZ	**Fitzroy Crossi**	**20.23**	**183**	*e*P	**P**	**21 58 59.8**	**-0.6**
	2.7nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.23**	**183**	P	**P**	**21 59 00.9**	**+0.5**
	1.8nm,0.5s,baz=22,slow=11,SNR=6.3						
FITZ	**Fitzroy Crossi**	**20.23**	**183**	*e*P	**P**	**21 59 01.0**	**+0.6**
	3.0nm,0.4s						
WRA	**Warramunga Arr**	**23.22**	**162**	P	**P**	**21 59 31.8**	**-0.6**
	4.1nm,0.7s,mb4.0,baz=339,slow=11,SNR=33						
WB2	**Warramunga Arr**	**23.23**	**162**	*e*P	**P**	**21 59 33.1**	**+0.6**
JOW	**Kunigami**	**24.51**	**3**	P	**P**	**21 59 45.4**	**+0.9**
	5.2nm,0.6s,mb4.2,baz=172,slow=10.0,SNR=4.3						
ASAR	**Alice Springs**	**26.63**	**165**	P	**P**	**22 00 04.8**	**+1.0**
	0.6nm,0.4s,mb3.5,baz=343,slow=8.0,SNR=16						
ASAR				PcP	PcP	22 03 27.7	+0.2
	0.5nm,0.7s,baz=346,slow=2.6,SNR=4.4						
CMAR	**Chiang Mai Arr**	**31.75**	**302**	P	**P**	**22 00 48.1**	**-1.2**
	0.8nm,0.7s,mb3.6,baz=123,slow=8.4,SNR=8.1						
KSRS	**Korea Array**	**35.08**	**1**	P	**P**	**22 01 18.3**	**+0.3**
	0.9nm,0.5s,mb4.0,baz=177,slow=9.8,SNR=3.9						
MJAR	**Matsushiro Arr**	**35.73**	**16**	P	**P**	**22 01 24.6**	**+0.9**
	1.0nm,0.7s,mb3.9,baz=198,slow=9.7,SNR=3.9						
STKA	**Stephens Creek**	**36.69**	**159**	P	**P**	**22 01 32.4**	**+0.4**
	0.9nm,0.5s,mb3.9,baz=342,slow=9.0,SNR=8.3						
SONM	**Songino Array**	**48.76**	**342**	P	**P**	**22 03 09.0**	**-0.7**
	0.5nm,0.6s,mb3.7,baz=153,slow=5.8,SNR=4.6						
MKAR	**Makanchi Array**	**58.86**	**326**	P	**P**	**22 04 22.1**	**-1.4**
	0.5nm,0.3s,mb4.0,baz=117,slow=8.3,SNR=18						

IDC 03 22:04:43.3±2.2**, 161N**×**12650E, h0**km**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/15**, mbtmp3.5**/3**, MS4.5**/1**, Ms1 4.5**/1**, ms1mx2.9**/20**, 1D, Error ellipse: s-maj=186.6km s-min=26.2km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	**Ternate**	**1.19**	**133**	⇓*e*P	Pg	22 05 01.5	-4.7
WRA	**Warramunga Arr**	**22.75**	**161**	P	P	22 09 45.6	-1.7
	1.2nm,0.4s,baz=339,slow=11,SNR=9.9						
ASAR	**Alice Springs**	**26.13**	**164**	P	P	22 10 20.8	+1.5
	0.9nm,0.8s,baz=344,slow=9.3,SNR=8.4						
CBIJ	**Chichi jima**	**29.47**	**29**	LR	LR	22 21 53.4	
	comp=Z,962nm,20.4s,baz=2.7,slow=35						
MKAR	**Makanchi Array**	**59.17**	**326**	P	P	22 14 46.0	0.0
	0.1nm,0.4s,baz=119,slow=8.4,SNR=4.7						

IDC 03 22:12:26.4±10.0**, 1170S**×**16590E, h0**km**, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/15**, mbtmp3.9**/3**, MS3.5**/3**, Ms1 3.5**/3**, ms1mx3.0**/21**, Error ellipse: s-maj=329.4km s-min=55.5km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**21.88**	**98**	LR	LR	22 23 16.8	
	comp=Z,47nm,19.3s,baz=85,slow=30						
STKA	**Stephens Creek**	**30.07**	**224**	LR	LR	22 30 40.6	
	comp=Z,125nm,20.4s,baz=28,slow=36						
WRA	**Warramunga Arr**	**31.40**	**251**	P	P	22 18 49.5	+0.1
	1.2nm,0.8s,baz=80,slow=9.2,SNR=6.3						
ASAR	**Alice Springs**	**32.64**	**244**	P	P	22 19 00.2	0.0
	1.7nm,0.7s,baz=75,slow=9.4,SNR=14						
KDAK	**Kodiak Island**	**77.13**	**21**	LR	LR	22 57 57.9	
	comp=Z,52nm,18.5s,baz=110,slow=35						
MKAR	**Makanchi Array**	**94.10**	**317**	P	P	22 25 46.8	0.0
	0.4nm,0.7s,baz=106,slow=5.1,SNR=4.4						

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*ISCJB **03** 22:24:05.7±0.9, 2430S±006×6700W±0.1, h164km±13km, mb3.4/3, Error ellipse: s-maj=20.8km s-min=9.5km az=0.1*

*IDC **03** 22:24:08.3±2.3, 24.11S×6707W, h167km±16km, mb3.3/3, mb1 3.7/7, mb1mx3.5/17, mbtmp3.5/7, Error ellipse: s-maj=32.3km s-min=19.1km az=177.0*

ISC 03 22:24:06.7±0.9**, 2430S**±006×**670W**±01**, h158**km±12km**, n10, σ0^{s}88**/10**, mb3.4**/3**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.41**	**314**	P	**Pn**	**22 24 48.6**	**+1.5**
	31nm,0.3s,baz=142,slow=5.0,SNR=190						
LVC				S	**Sn**	**22 25 18.4**	**0.0**
	68nm,0.3s,baz=230,slow=5.0,SNR=47						
CFAA	**Coronel Fontan**	**7.36**	**188**	S	**Sn**	**22 27 13.1**	**-0.7**
	0.1nm,0.3s,baz=262,slow=17,SNR=4.6						
LPAZ	**La Paz**	**8.04**	**352**	P	**Pn**	**22 26 01.1**	**+0.6**
	2.2nm,0.3s,baz=176,slow=9.1,SNR=51						
LPAZ				S	**Sn**	**22 27 28.9**	**-1.4**
	0.1nm,0.3s,baz=90,slow=20,SNR=2.4						
SIV	**San Ignacio**	**9.97**	**35**	P	**Pn**	**22 26 25.4**	**-0.8**
	0.9nm,0.3s,baz=226,slow=13,SNR=12						
BDFB	**Brasilia**	**19.82**	**68**	P	**P**	**22 28 26.6**	**+1.5**
	0.4nm,0.3s,baz=224,slow=9.7,SNR=13						
TORD	**Torodi Ar. Bea**	**76.69**	**69**	P	**P**	**22 35 40.4**	**-0.3**
	0.5nm,0.7s,mb3.3,baz=260,slow=5.7,SNR=10.0						
PDAR	**Pinedale Array**	**77.39**	**329**	P	**P**	**22 35 43.8**	**-0.1**
	0.2nm,0.3s,mb3.2,baz=106,slow=8.6,SNR=2.4						
YKA	**Yellowknife Ar**	**94.39**	**340**	P	**P**	**22 37 07.9**	**0.0**
	0.5nm,0.9s,mb3.6,baz=123,slow=5.4,SNR=3.4						
WRA	**Warramunga Arr**	**131.35**	**207**	PKP	PKPdf	22 43 01.3	+0.4
	0.4nm,0.8s,baz=167,slow=2.1,SNR=3.6						
MKAR	**Makanchi Array**	**146.77**	**40**	PKPbc	PKPbc	22 43 30.2	+0.3
	0.2nm,0.3s,baz=299,slow=3.0,SNR=2.8						

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*BJI **03** 23:00:52.5, 3720N×7150E, h99km, mB4.6, mb4.4*

*MOS **03** 23:00:52.6±1.1, 3706N×7156E, h104km, mb3.9/6, Error ellipse: s-maj=12.8km s-min=8.7km az=85.3*

*NEIC **03** 23:00:53.0±1.1, 3700N×7160E, h96km±11km, mb4.2/1, Error ellipse: s-maj=13.4km s-min=5.1km az=58.0*

*ISCJB **03** 23:00:54.0±0.5, 37.14N±002×7174E±006, h119km±6km, mb3.8/12, Error ellipse: s-maj=7.5km s-min=3.4km az=172.6*

*IDC **03** 23:00:57.0±3.3, 37.19N×7164E, h130km±31km, mb3.5/7, mb1 3.7/11, mb1mx3.5/25, mbtmp3.6/11, MS3.7/1, Ms1 3.7/1, ms1mx2.5/32, Error ellipse: s-maj=15.7km s-min=14.4km az=128.0*

*NNC **03** 23:01:01.8±3.1, 3775N×7148E, h189km±29km, mb3.5, mpv4.7, Error ellipse: s-maj=27.7km s-min=19.0km az=14.0*

ISC 03 23:00:55.6±0.4**, 3714N**±002×**7180E**±006**, h121**km±5km**, n80, σ1^{s}25**/104**, mb3.8**/12**, 7C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.31**	**178**	⇓P	**Pn**	**23 01 47.5**	**+1.5**
CEP				S	**Sn**	**23 02 26.0**	**+1.1**
CHCP	**Chirah Chowk**	**3.67**	**161**	P	**Pn**	**23 01 53.7**	**+2.9**
KSH	**Kashi**	**4.05**	**53**	⇑*i*P	**Pn**	**23 01 59.3**	**+3.5**
KSH				S	**Sn**	**23 02 45.3**	**+2.8**
KSH				Smax			
	comp=N,4μm,0.3s						
KSH				Smax			
	comp=E,4μm,0.8s						
THW	**Thamme Wali**	**4.33**	**181**	P	**Pn**	**23 02 00.4**	**+0.8**
JMU	**Jammu**	**5.09**	**149**	*e*S	**Sn**	**23 03 04.5**	**-3.0**
AML	**Almayashu**	**5.20**	**16**	P	**Pn**	**23 02 11.6**	**+0.4**
	SNR=298						
AML	**Almayashu**	**5.20**	**16**	*e*Pn	**Pn**	**23 02 11.5**	**+0.3**
	comp=E,606nm,0.6s						
AML				*e*Sn	**Sn**	**23 03 08.8**	**-1.2**
UCH	**Uchtor**	**5.50**	**22**	P	**Pn**	**23 02 16.0**	**+0.7**
	SNR=89						
UCH	**Uchtor**	**5.50**	**22**	*e*Pn	**Pn**	**23 02 15.9**	**+0.6**
	comp=E,116nm,0.5s						
UCH				*e*Sn	**Sn**	**23 03 15.8**	**-1.5**
KZA	**Kyzart**	**5.61**	**27**	P	**Pn**	**23 02 16.5**	**-0.2**
	SNR=86						
THN	**Thein Dam**	**5.69**	**144**	*e*P	**Pn**	**23 02 18.9**	**+1.0**
THN				*e*x	x	23 03 24.2	
DLH	**Dalhousie**	**5.72**	**142**	*e*P	**Pn**	**23 02 20.0**	**+1.7**
DLH				*e*S	**Sn**	**23 03 22.0**	**-0.8**
EKS2	**Erkin-Say**	**5.72**	**15**	P	**Pn**	**23 02 18.7**	**+0.4**
	SNR=184						
EKS2	**Erkin-Say**	**5.72**	**15**	*e*Pn	**Pn**	**23 02 18.7**	**+0.5**
	comp=E,101nm,0.8s						
EKS2				*e*Sn	**Sn**	**23 03 22.2**	**-0.5**
AAK	**Ala-Archa**	**5.87**	**20**	P	**Pn**	**23 02 21.1**	**+0.9**
	SNR=102						
KBK	**Karagaybulak**	**6.02**	**23**	P	**Pn**	**23 02 23.3**	**+1.0**
	SNR=47						
KK31	**Karatay Array**	**6.04**	**351**	⇑P	**Pn**	**23 02 21.1**	**-1.4**
	comp=E,16nm,0.3s,baz=181,slow=13,SNR=9.7						
KK31				⇓S	**Sn**	**23 03 23.9**	**-6.4**
	comp=E,76nm,0.6s,baz=163,slow=24,SNR=5.9						
FRU	**Bishkek**	**6.09**	**20**	⇓*i*PN	**Pn**	**23 02 24.0**	**+0.8**
FRU				pmax	pmax		
	comp=Z,140nm,1.7s						
CHMS	**Chumysh**	**6.28**	**20**	P	**Pn**	**23 02 26.1**	**+0.4**
	SNR=137						
USP	**Ospenovka**	**6.46**	**18**	P	**Pn**	**23 02 28.2**	**0.0**
	SNR=25						
TKM2	**Tokmak 2**	**6.47**	**26**	⇓P	**Pn**	**23 02 29.0**	**+0.7**
	comp=Z,93nm,0.8s						
TKM2				⇑S	**Sn**	**23 03 39.9**	**-0.8**
	comp=Z,61nm,0.6s						
TKM2	**Tokmak 2**	**6.47**	**26**	*e*PN	**Pn**	**23 02 29.2**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,137nm,0.9s						
TKM2	**Tokmak 2**	**6.47**	**26**	P	**Pn**	**23 02 28.9**	**+0.6**
	SNR=91						
TKM2	**Tokmak 2**	**6.47**	**26**	*e*Pn	**Pn**	**23 02 29.2**	**+0.9**
	comp=Z,137nm,0.9s						
TKM2				*e*Sn	**Sn**	**23 03 36.0**	**-4.7**
BHK	**Bhakra**	**6.87**	**145**	*e*P	**Pn**	**23 02 34.6**	**+0.8**
BHK				*e*S	**Sn**	**23 03 48.6**	**-1.8**
SDNR	**Sundarnagar**	**7.06**	**141**	*e*P	**Pn**	**23 02 36.1**	**-0.3**
SDNR				*e*S	**Sn**	**23 03 51.2**	**-4.0**
AAA	**Alma-Ata**	**7.28**	**31**	*e*PN	**Pn**	**23 02 39.4**	**+0.1**
AAA				pmax	pmax		
	comp=Z,127nm,0.9s						
KLP	**Kalpa**	**7.72**	**134**	*e*P	**Pn**	**23 02 46.5**	**+1.1**
KLP				*e*S	**Sn**	**23 04 07.7**	**-3.5**
KLP				AML	AML	23 04 22.5	
	comp=N,525nm,1.1s						
KLP				AML	AML	23 04 24.8	
	comp=E,526nm,0.7s						
DDI	**Dehra Dun**	**8.56**	**141**	*e*P	**Pn**	**23 02 56.3**	**-0.4**
DDI				*e*x	x	23 04 29.7	
NDI	**New Delhi**	**9.58**	**150**	*e*P	**Pn**	**23 03 09.5**	**-1.0**
NDI				*e*S	**Sn**	**23 04 50.0**	**-6.2**
SONA	**Sohna**	**9.91**	**152**	*e*P	**Pn**	**23 03 14.8**	**-0.1**
SONA				*e*S	**Sn**	**23 04 55.6**	**-8.8**
SONA				AML	AML	23 05 06.0	
	comp=E,80nm,0.3s						
SONA				AML	AML	23 05 07.1	
	comp=N,33nm,0.4s						
MK31	**Makanchi Array**	**12.40**	**36**	P	**Pn**	**23 03 47.8**	**0.0**
	comp=N,7.3nm,0.7s,baz=224,slow=12,SNR=70						
MKAR	**Makanchi Array**	**12.40**	**36**	P	**Pn**	**23 03 48.0**	**+0.3**
	comp=N,0.6nm,0.3s,baz=225,slow=13,SNR=69						
MKAR	**Makanchi Array**	**12.40**	**36**	P	**Pn**	**23 03 48.1**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
DANN	**Dangsing**	**13.33**	**128**	*e*P	**Pn**	**23 03 59.4**	**-0.7**
KOLN	**Koldanda**	**13.64**	**130**	*e*P	**Pn**	**23 04 02.4**	**-1.7**
	comp=Z,35nm,0.3s						
WMQ	**Urumqi**	**13.81**	**56**	*e*P	**Pn**	**23 04 05.2**	**-0.9**
WMQ				*e*S	**Sn**	**23 06 37.0**	**-1.3**
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s						
WMQ				AMB	AMB		
	comp=Z,117nm,5.0s						
WMQ				LR	LR		
	comp=N,202nm,4.9s						
WMQ				LR	LR		
	comp=E,146nm,5.3s						
WMQ				LR	LR		
	comp=Z,166nm,4.2s						
GKN	**Gorkha**	**14.13**	**126**	*e*P	**Pn**	**23 04 09.4**	**-1.0**
	comp=Z,4.1nm,0.3s						
KURBB	**Kurchatov Arra**	**14.32**	**18**	⇑P	**Pn**	**23 04 09.4**	**-3.1**
	comp=Z,1.8nm,0.6s						
KURK	**Kurchatov**	**14.43**	**18**	⇑P	**Pn**	**23 04 10.5**	**-3.4**
	comp=Z,7.3nm,0.7s						
KURK	**Kurchatov**	**14.43**	**18**	P	**Pn**	**23 04 09.3**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=26						
KURK				S	**Sn**	**23 06 54.2**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=238,slow=13,SNR=3.7						
KKN	**Kakani**	**14.69**	**125**	*e*P	**Pn**	**23 04 16.2**	**-1.3**
	comp=Z,78nm,0.7s						
KKN	**Kakani**	**14.69**	**125**	*e*P	**Pn**	**23 04 16.2**	**-1.3**
KKN				pmax	pmax		
	comp=Z,78nm,0.7s						
DMN	**Daman**	**14.70**	**126**	*e*P	**Pn**	**23 04 16.8**	**-0.8**
PKIN	**Phulchoki**	**14.91**	**126**	*e*P	**Pn**	**23 04 20.0**	**-0.3**
	comp=Z,35nm,0.5s						
PKI	**Pulchoki**	**14.93**	**126**	*e*P	**Pn**	**23 04 20.1**	**-0.3**
GUN	**Gumba**	**15.01**	**124**	*e*P	**Pn**	**23 04 20.8**	**-0.6**
	comp=Z,274nm,0.9s						
JIRN	**Jiri**	**15.38**	**124**	*e*P	**Pn**	**23 04 24.9**	**-1.2**
VOSK	**Vostochnaya**	**15.60**	**358**	⇑P	**Pn**	**23 04 26.2**	**-2.3**
	comp=Z,5.5nm,1.0s						
VOSK				⇑S	**S**	**23 07 09.4**	**-19**
	comp=Z,5.4nm,0.8s						
BVAR	**Borovoye Array**	**15.92**	**357**	P	**Pn**	**23 04 31.2**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=162,slow=15,SNR=17						
BVAR				S	**S**	**23 07 30.5**	**-4.0**
	comp=Z,0.2nm,0.3s,baz=168,slow=25,SNR=3.0						
RAMN	**Ramite**	**16.12**	**125**	*e*P	**Pn**	**23 04 34.6**	**-0.7**
	comp=Z,144nm,0.9s						
AKTK	**Aktyubinsk**	**16.57**	**328**	P	**Pn**	**23 04 38.2**	**-2.3**
AKTK				S	**S**	**23 07 27.2**	**-18**
AKTO	**Aktyubinsk**	**16.57**	**328**	P	**Pn**	**23 04 38.2**	**-2.3**
	comp=Z,0.8nm,0.3s,baz=137,slow=13,SNR=14						
AKTO				S	**S**	**23 07 27.2**	**-18**
	comp=Z,0.2nm,0.3s,baz=56,slow=19,SNR=2.7						
TAPN	**Taplejung**	**16.60**	**121**	*e*P	**Pn**	**23 04 41.3**	**+0.1**
	comp=Z,87nm,0.9s						
ODAN	**Odare**	**16.71**	**123**	*e*P	**Pn**	**23 04 42.1**	**-0.4**
	comp=Z,69nm,0.7s						
LSA	**Lhasa**	**17.76**	**109**	P	**Pn**	**23 04 57.8**	**+2.7**
LSA	**Lhasa**	**17.76**	**109**	*e*P	**Pn**	**23 04 57.2**	**+2.1**
LSA				pmax	pmax		
	comp=Z,13nm,0.8s						
LSA	**Lhasa**	**17.76**	**109**	*e*P	**Pn**	**23 04 57.2**	**+2.1**
	comp=Z,13nm,0.8s						
ZAL	**Zalesovo**	**19.05**	**24**	P	**P**	**23 05 09.0**	**+0.8**
ZAL				S	**S**	**23 08 38.2**	**+0.4**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAA0	**Zalesovo Array**	**19.07**	**24**	*e*P	**P**	**23 05 08.9**	**+0.6**
ZAA0				*e*S	**S**	**23 08 38.0**	**-0.1**
ZALV	**Zalesovo Beam**	**19.07**	**24**	P	**P**	**23 05 08.9**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=220,slow=11,SNR=19						
ZALV				S	**S**	**23 08 38.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=218,slow=18,SNR=4.0						
NVS	**Novosibirsk**	**19.36**	**20**	*e*P	**P**	**23 05 12.5**	**+1.0**
NVS				*e*S	**S**	**23 08 39.8**	**-4.0**
NVS				pmax	pmax		
	comp=N,9.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,11nm,0.8s						
NVS				smax			
	comp=N,32nm,2.0s						
ARU	**Arti**	**21.25**	**339**	*d i*P	**P**	**23 05 37.2**	**+5.4**
ARU				*e*S	**S**	**23 09 22.2**	**+1.4**
ARU				*e*SS		23 09 39.8	
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb3.9						
GNI	**Garni**	**21.32**	**286**	P	**P**	**23 05 33.2**	**+0.5**
	comp=Z,2.7nm,0.5s,mb3.8,baz=13,slow=9.4,SNR=4.2						
GNI	**Garni**	**21.32**	**286**	P	**P**	**23 05 33.2**	**+0.5**
GNI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GTA	**Gaotai**	**22.08**	**75**	P	**P**	**23 05 45.2**	**+4.5**
GTA				AP		23 06 02.7	
GTA				AMB	AMB		
	comp=Z,32nm,0.8s,mb4.7						
LZH	**Lanzhou**	**25.68**	**83**	*e*P	**P**	**23 06 17.5**	**+3.3**
LZH				AMB	AMB		
	comp=Z,17nm,1.3s,mb4.3						
LZH				AMB	AMB		
	comp=Z,87nm,4.7s						
ZAK	**Zakamensk**	**26.09**	**49**	*e*P	**P**	**23 06 20.7**	**+3.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.5						
SONM	**Songino Array**	**27.45**	**56**	P	**P**	**23 06 32.8**	**+2.9**
	comp=Z,1.1nm,0.9s,mb3.4,baz=262,slow=9.5,SNR=6.5						
SONM	**Songino Array**	**27.45**	**56**	P	**P**	**23 06 32.8**	**+2.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**30.21**	**121**	P	**P**	**23 06 57.1**	**+2.4**
	comp=Z,1.0nm,0.4s,mb3.8,baz=308,slow=8.8,SNR=10						
CMAR	**Chiang Mai Arr**	**30.21**	**121**	P	**P**	**23 06 57.1**	**+2.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
XAN	**Xi'an**	**30.22**	**85**	P	**P**	**23 06 57.5**	**+2.8**
XAN				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.2						
XAN				AMB	AMB		
	comp=Z,86nm,9.8s						
ARCES	**ARCESS Array B**	**40.81**	**337**	P	**P**	**23 08 25.4**	**+0.8**
	comp=Z,1.0nm,0.5s,mb3.9,baz=113,slow=8.2,SNR=9.3						
ARCES	**ARCESS Array B**	**40.81**	**337**	P	**P**	**23 08 25.5**	**+0.9**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**44.26**	**323**	P	**P**	**23 08 52.9**	**+0.3**
	baz=96,slow=7.8						
JOW	**Kunigami**	**48.37**	**85**	LR	LR	23 33 47.4	
	comp=Z,73nm,20.2s,baz=350,slow=41						
TORD	**Torodi Ar. Bea**	**66.37**	**269**	P	**P**	**23 11 30.1**	**-1.7**
	comp=Z,0.2nm,0.5s,mb3.2,baz=54,slow=5.2,SNR=9.0						
YKA	**Yellowknife Ar**	**80.58**	**3**	P	**P**	**23 12 54.8**	**+0.7**
	comp=Z,2.0nm,0.7s,mb4.1,baz=350,slow=5.4,SNR=14						
WRA	**Warramunga Arr**	**81.78**	**122**	P	**P**	**23 13 01.2**	**+0.1**
	comp=Z,0.3nm,0.6s,mb3.3,baz=327,slow=5.4,SNR=3.3						

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*ISCJB **03** 23:23:25.5±1.2, 276N±004×8441W±003, h17km±7km, mb5.0/126, MS4.3/25, Error ellipse: s-maj=7.5km s-min=4.0km az=38.2*

*MOS **03** 23:23:25.4±0.9, 279N×8448W, h16km, mb5.4/50, MS4.3/4, Error ellipse: s-maj=8.0km s-min=5.2km az=95.3*

*NEIC **03** 23:23:29.9±0.7, 271N×8442W, h41km±6km, mb5.1/89, MS4.3/3, Error ellipse: s-maj=6.0km s-min=3.4km az=219.0*

*BJI **03** 23:23:29.9, 270N×8440W, h40km, mB5.2, Ms4.7, Msz4.6*

*GCMT **03** 23:23:29.9±0.2, 269N×8440W, h12km, MW5.1/73, Moment Tensor Solution. s57,c84; s73,c136; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.88±.11; $M_{\theta\theta}$5.39±.09; $M_{\phi\phi}$-0.51±.12; $M_{r\theta}$2.90±.27; $M_{\theta\phi}$1.38±.09; $M_{\phi r}$0.37±.34; Best double couple: $M_0$6.04400×10^{16} NP1:ϕ_s74.00000°, δ31.00000°, λ-96.00000°. NP2: ϕ_s260.00000°, δ59.00000°, λ-87.00000°. Principal axes: T 6.4450, Plg14.0000°, Azm348.0000°; N -0.8050, Plg3.0000°, Azm79.0000°; P -5.6420, Plg75.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **03** 23:23:31.1±2.7, 275N×8434W, h56km±23km, mb4.3/16, mb1 4.4/21, mb1mx4.4/25, mbtmp4.3/21, ML3.6/5, MS4.3/24, Ms1 4.3/24, ms1mx4.3/26 Error ellipse: s-maj=20.3km s-min=11.1km az=64.0*

*SZGRF **03** 23:23:37.8, 463N×8391W, h33km, mb5.2, Off coast of central America*

ISC 03 23:23:29.9±0.6**, 275N**±004×**8439W**±003**, h37**km±4km**, h23**km±4.4km**:pP-P, n459, σ0^{s}97**/391**, mb5.0**/126**, MS4.3**/25**, 5C-2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**5.99**	**12**	*e*P	**Pn**	**23 24 53.3**	**-2.8**
OTAV	**Otavalo**	**6.44**	**113**	*e*Pn	**Pn**	**23 25 00.4**	**-1.9**
OTAV				*e*Sn	**Sn**	**23 26 14.4**	**-0.1**
BAR1		**6.54**	**9**	*e*P	**Pn**	**23 25 01.7**	**-1.9**
QCR	**Quepos**	**6.63**	**2**	*e*P	**Pn**	**23 25 02.7**	**-2.3**
BUS	**Buena Vista**	**6.79**	**5**	*e*P	**Pn**	**23 25 05.8**	**-1.3**
LCR2	**La Lucha 2**	**6.96**	**3**	*e*P	**Pn**	**23 25 07.9**	**-1.4**
URSC	**Urasca**	**7.06**	**5**	*e*P	**Pn**	**23 25 09.7**	**-1.2**
JCR	**Jicaral**	**7.09**	**354**	*e*P	**Pn**	**23 25 10.0**	**-1.3**
PRS1	**Puriscal**	**7.19**	**1**	*e*P	**Pn**	**23 25 10.0**	**-2.5**
CGA2	**Cerro Gallo 2**	**7.22**	**359**	*e*P	**Pn**	**23 25 11.8**	**-1.1**
VCR	**Vista de Mar**	**7.43**	**350**	*e*P	**Pn**	**23 25 14.3**	**-1.6**
BCIP	**Isla Barro Col**	**7.81**	**35**	*e*P	**Pn**	**23 25 23.1**	**+2.0**
BCIP	**Isla Barro Col**	**7.81**	**35**	*e*Pn	**Pn**	**23 25 23.6**	**+2.4**
MADN	**Villa Maderas**	**8.68**	**353**	*e*P	**Pn**	**23 25 33.4**	**+0.4**
CONN	**Concepcion**	**8.84**	**352**	*e*P	**Pn**	**23 25 35.8**	**+0.5**
APON	**Apoyo**	**9.26**	**350**	*e*P	**Pn**	**23 25 42.0**	**+1.0**
CRUN	**El Crucero**	**9.37**	**348**	*e*P	**Pn**	**23 25 45.5**	**+3.0**
MGAN	**Managua**	**9.52**	**349**	*e*P	**Pn**	**23 25 45.3**	**+0.8**
TISN	**Laguna Tiscapa**	**9.52**	**349**	*e*P	**Pn**	**23 25 45.5**	**+1.0**
WILN	**Americas 2**	**9.52**	**349**	*e*P	**Pn**	**23 25 43.2**	**-1.3**
XAVN	**Gruta Xavier**	**9.53**	**348**	*e*P	**Pn**	**23 25 46.3**	**+1.6**
CSAN		**9.59**	**348**	*e*P	**Pn**	**23 25 47.0**	**+1.6**
COPN	**Copaltepe**	**9.62**	**347**	*e*P	**Pn**	**23 25 47.2**	**+1.2**
APYN	**Apoyeque**	**9.62**	**348**	*e*P	**Pn**	**23 25 47.3**	**+1.3**
HUEN		**9.69**	**350**	*e*P	**Pn**	**23 25 48.1**	**+1.2**
LEON	**Leon**	**9.92**	**346**	*e*P	**Pn**	**23 25 51.0**	**+0.9**
CNGN	**Cerro Negro**	**9.95**	**347**	*e*P	**Pn**	**23 25 50.7**	**+0.1**
TEL3	**Telica 3**	**10.06**	**346**	*e*P	**Pn**	**23 25 54.0**	**+2.0**

TELN Telica 10.09 346 *e*P P **23 25 53.8 +1.5**
CRIN San Cristobal 10.23 345 *e*P P **23 25 54.5 +0.2**
ROSC El Rosal 10.25 78 P P **23 25 56.5 +1.9**
1.5nm,0.3s,baz=89,slow=19,SNR=11
ROSC LR LR 23 29 50.7
comp=Z,853nm,19.5s,baz=220,slow=37
CHI2 10.79 80 *e*P P **23 25 54.8 -7.2**
CNCH Conchagua 11.00 342 *e*P x 23 26 06.7
VSM San Miguel 11.28 340 *e*P x 23 26 11.1
ATAH Atahualpa 11.38 148 P P **23 26 13.7 +3.6**
0.6nm,0.3s,baz=337,slow=8.7,SNR=9.3
ATAH LR LR 23 30 07.4
comp=Z,3µm,18.9s,baz=334,slow=34
CAHU Cacacuatique 11.58 341 *e*P x 23 26 14.9
TGUH Tegucigalpa,Un 11.59 346 *e*P P **23 26 14.7 +1.8**
TGUH Tegucigalpa,Un 11.59 346 *e*Pn P **23 26 15.7 +2.8**
SNVI San Vicente 11.65 338 *e*P x 23 26 15.6
BOQS Boqueron 11.94 336 *e*P x 23 26 19.6
SBLS San Blas 12.17 335 *e*P x 23 26 23.7
SDV Santo Domingo 14.97 65 LR LR 23 32 26.8
comp=Z,802nm,19.8s,baz=82,slow=36
SDV Santo Domingo 14.97 65 *e*P P **23 26 56.3 -2.7**
SDV Santo Domingo 14.97 65 *e*P P **23 27 01.4 +2.3**
CCIG Comitan 15.46 331 *e*P P **23 27 06.0 +0.6**
NNA Nana 16.45 153 Pn P **23 27 19.6 +1.5**
475nm,1.5s,SNR=5.1
NNA Nana 16.45 153 P P **23 27 18.9 +0.9**
0.8nm,0.3s,baz=317,slow=8.8,SNR=6.3
NNA LR LR 23 33 07.2
comp=Z,1µm,20.8s,baz=325,slow=35
NNA Nana 16.45 153 P P **23 27 18.9 +0.9**
NNA LR LR 23 33 07.2
HUIG Huatulco 17.34 319 *i* P P **23 27 27.6 -1.6**
CMIG Matias Romero 17.59 325 P P **23 27 32.6 +0.3**
0.2nm,0.3s,baz=139,slow=10,SNR=24
CMIG LR LR 23 33 01.4
comp=Z,2µm,21.8s,baz=144,slow=32
TEIG Tepich 17.78 348 P P **23 27 34.9 +0.2**
0.3nm,0.3s,baz=157,slow=9.4,SNR=8.9
TEIG LR LR 23 34 02.2
comp=Z,3µm,18.4s,baz=333,slow=36
TEIG Tepich 17.78 348 *e*P P **23 27 34.0 -0.7**
TEIG Tepich 17.78 348 *e*P P **23 27 36.3 +1.7**
58nm,1.0s
VHO Vista Hermosa 18.70 320 *i* P P **23 27 46.6 +0.7**
PNIG Pinotepa 19.14 316 *i* P P **23 27 50.5 -0.7**
PCRV Puerto La Cruz 20.95 68 P P **23 28 10.0 +0.1**
82nm,1.1s,baz=280,slow=7.2,SNR=10
CAIG El Cayaco 21.10 313 *i* P P **23 28 07.3 -4.1**
PPM Popocatepetl 21.38 320 *i* P P **23 28 16.5 +2.1**
PLIG Platanillo 21.47 317 *i* P P **23 28 16.2 +0.8**
IIO Organos 21.83 321 *i* P P **23 28 24.3 +5.1**
PTVM Pico Tres Padr 22.08 320 *i* P P **23 28 21.0 -0.9**
ARE Arequipa 22.95 147 *e*P P **23 28 31.0 -0.1**
AOPR Arecibo Observ 23.21 47 *e*P P **23 28 33.4 -0.5**
50nm,1.2s,mb4.8
SJG San Juan 23.51 48 P P **23 28 36.1 -0.7**
14nm,0.6s,mb4.6,baz=269,slow=6.1,SNR=6.7
SJG LR LR 23 37 48.6
comp=Z,308nm,21.0s,MS3.7,baz=244,slow=36
SJG San Juan 23.51 48 *e*P P **23 28 37.9 +1.1**
CPD Cerro la Pandu 23.64 49 *e*P P **23 28 38.3 +0.3**
HUMP Col San Antoni 23.75 49 *e*P P **23 28 38.7 -0.4**
80nm,1.2s,mb5.0
CBYP Canovanas 23.83 48 *e*P P **23 28 40.0 +0.3**
MTP Monte Pirata 23.95 49 *e*P P **23 28 40.5 -0.4**
LPAZ La Paz 24.82 140 P P **23 28 49.0 +0.2**
22nm,1.1s,mb4.6,baz=326,slow=9.0,SNR=34
LPAZ LR LR 23 39 33.0
comp=Z,2µm,20.1s,MS4.6,baz=82,slow=39
LPAZ La Paz 24.82 140 P P **23 28 49.0 +0.2**
LPAZ LR LR 23 39 33.0
DWPF Disney 25.38 6 *e*P P **23 28 53.0 -0.7**
BBGH Gun Hill 26.64 66 *e*P P **23 29 05.8 +0.4**
HKT Hockley 29.15 339 *e*P P **23 29 26.7 -0.9**
HKT pmax pmax
comp=Z,73nm,1.7s,mb5.1
HKT Hockley 29.15 339 *e*P P **23 29 26.7 -0.9**
comp=Z,73nm,1.7s,mb5.1
LVC Limon Verde 29.39 150 LR LR 23 39 59.2
comp=Z,884nm,21.6s,MS4.3,baz=301,slow=34
LVC Limon Verde 29.39 150 P P **23 29 29.4 -0.4**
SIV San Ignacio 29.63 130 P P **23 29 30.7 -1.4**
comp=Z,2.7nm,1.1s,mb3.9,baz=316,slow=9.7,SNR=9.5
SIV PcP PcP 23 32 35.4 -0.8
comp=Z,2.3nm,0.8s,baz=274,slow=2.0,SNR=3.7
VBMS Vicksburg 29.87 350 *e*P P **23 29 33.7 -0.3**
VBMS PP PP 23 30 39.7 -2.3
VBMS *e*PcP PcP 23 32 31.3 -5.2
GOGA Godfrey 30.51 2 *e*P P **23 29 39.2 -0.4**
GOGA pmax pmax
comp=Z,40nm,1.2s,mb5.1
GOGA Godfrey 30.51 2 *e*P P **23 29 39.2 -0.4**
comp=Z,40nm,1.2s,mb5.1
JCT Junction City 31.20 334 *e*P P **23 29 46.1 +0.3**
JCT pmax pmax
comp=Z,46nm,1.6s,mb5.1
JCT Junction City 31.20 334 *e*P P **23 29 46.1 +0.3**
comp=Z,46nm,1.6s,mb5.1
JSC Jenkinsville 31.50 5 *e*P P **23 29 47.7 -0.7**
OXF Oxford 31.94 352 *e*P P **23 29 51.0 -1.2**
OXF pmax pmax
comp=Z,73nm,1.1s,mb5.4
OXF Oxford 31.94 352 *e*P P **23 29 51.0 -1.3**
comp=Z,73nm,1.1s,mb5.4
PLAL Pickwick Lake 32.25 354 *e*P P **23 29 53.8 -1.1**
UALR University of 32.71 348 *e*P P **23 29 58.3 -0.7**
comp=Z,46nm,1.5s,mb5.2
MIAR Mount Ida 32.77 346 *e*P P **23 29 58.6 -0.9**
TZTN Tazewell 33.64 1 *e*P P **23 30 06.5 -0.5**
LCO Las Campanas 34.20 158 *e*P P **23 30 10.2 -1.8**
ELN Prospectdale 34.47 5 *e*P P **23 30 13.7 -0.6**
BLA Blacksburg 34.49 6 *e*P P **23 30 13.9 -0.5**
BLA pmax pmax
comp=Z,78nm,1.3s,mb5.5
BLA Blacksburg 34.49 6 *e*P P **23 30 13.9 -0.4**
comp=Z,78nm,1.3s,mb5.5
WMOK Wichita Mounta 34.53 339 *e*P P **23 30 14.1 -0.7**
BBSR BB Station 34.79 30 P P **23 30 17.0 -0.1**
GDL2 Guadalupe Moun 34.80 329 *e*P P **23 30 18.0 +0.8**
SIUC Southern Illin 35.08 353 *e*P P **23 30 18.8 -0.7**
comp=Z,28nm,0.8s,mb5.2
USIN University of 35.17 355 *e*P P **23 30 19.5 -0.8**
URVA University of 35.22 9 *e*P P **23 30 19.7 -1.0**
WCI Wyandotte Cave 35.35 357 *e*P P **23 30 19.5 -2.3**
WCI pmax pmax
comp=Z,24nm,1.0s,mb5.1
WCI Wyandotte Cave 35.35 357 *e*P P **23 30 19.5 -2.4**
comp=Z,24nm,1.0s,mb5.1
FVM French Village 35.50 352 *e*P P **23 30 22.0 -1.1**
FVM pmax pmax
comp=Z,27nm,1.6s,mb4.9
FVM French Village 35.50 352 *e*P P **23 30 22.0 -1.1**
comp=Z,27nm,1.6s,mb4.9
AMTX Amarillo 35.79 335 *e*P P **23 30 25.8 +0.1**
comp=Z,22nm,1.0s,mb5.0
OLIL Olney 35.97 355 *e*P P **23 30 26.1 -1.0**
comp=Z,54nm,1.1s,mb5.4
BLO Bloomington 36.30 357 *e*P P **23 30 28.7 -1.3**
BLO *e*PP pP 23 30 35.6 -5.0
BLO pmax pmax
comp=Z,20nm,1.0s,mb5.0
BLO Bloomington 36.30 357 *e*P P **23 30 28.7 -1.3**
comp=Z,20nm,1.0s,mb5.0
BLO *e*pP pP 23 30 35.6 -5.0
MCWV Mont Chateau 36.97 6 *e*P P **23 30 35.0 -0.6**
comp=Z,60nm,1.4s,mb5.2
ACSO Alum Creek Sta 37.33 2 *e*P P **23 30 37.6 -1.1**
comp=Z,29nm,1.0s,mb5.1
CFAA Coronel Fontan 37.46 157 P P **23 30 39.7 -0.2**
comp=Z,1.0nm,0.3s,mb4.2,baz=272,slow=6.2,SNR=48
CFAA Coronel Fontan 37.46 157 P P **23 30 39.7 -0.2**
BNM Barren Site 37.50 329 *e*P P **23 30 41.2 +1.0**
LPM Los Pinos Moun 37.63 329 *e*P P **23 30 42.4 +1.1**
LENM Lemitar 37.69 329 *e*P P **23 30 42.2 +0.3**
KSU1 Kansas State U 37.86 344 *e*P P **23 30 42.1 -1.1**
LAZ Ladron 37.96 329 *e*P P **23 30 44.6 +0.5**
ANMO Albuquerque 38.04 330 *c i*P P **23 30 45.4 +0.6**
ANMO Albuquerque 38.04 330 *e*P P **23 30 45.4 +0.6**
comp=Z,25nm,1.1s,mb4.9
TUC Tucson 38.47 323 *e*P P **23 30 48.3 -0.1**
CBKS Cedar Bluff 38.53 341 *e*P P **23 30 48.9 0.0**
CBKS *e*PP pP 23 30 56.8 -2.7
CBKS pmax pmax
comp=Z,47nm,1.0s,mb5.2
CBKS Cedar Bluff 38.53 341 *e*P P **23 30 48.9 0.0**
comp=Z,47nm,1.0s,mb5.2
CBKS *e*pP pP 23 30 56.8 -2.8
CPUP Villa Florida 38.99 140 LR LR 23 49 32.0
comp=Z,701nm,19.1s,MS4.5,baz=304,slow=40
PAL Palisades 39.24 13 *e*P P **23 30 54.8 +0.1**
PAL pmax pmax
comp=Z,56nm,1.4s,mb5.1
PAL Palisades 39.24 13 *e*P P **23 30 54.8 +0.1**
comp=Z,56nm,1.4s,mb5.1
SCIA State Center 39.78 350 *e*P P **23 30 58.7 -0.5**
comp=Z,74nm,1.5s,mb5.2
SDCO Great Sand Dun 39.85 334 *e*P P **23 31 00.1 +0.2**
comp=Z,29nm,1.1s,mb4.9
BINY Binghamton 39.99 10 *e*P P **23 31 00.1 -0.8**
comp=Z,42nm,1.1s,mb5.1
JFWS Jewell Farm 40.33 353 *e*P P **23 31 02.4 -1.4**
JFWS pmax pmax
comp=Z,74nm,1.8s,mb5.1
JFWS Jewell Farm 40.33 353 *e*P P **23 31 02.4 -1.4**
comp=Z,74nm,1.8s,mb5.1
BDFB Brasilia 40.35 118 P P **23 31 02.0 -2.4**
comp=Z,4.1nm,0.9s,mb4.2,baz=309,slow=10,SNR=5.4
BDFB LR LR 23 47 54.3
comp=Z,652nm,18.4s,MS4.5,baz=215,slow=36
MVCO Mesa Verde 40.84 330 *e*P P **23 31 09.2 +1.1**
comp=Z,27nm,0.9s,mb4.9
WUAZ Wupatki 41.09 326 *e*P P **23 31 11.0 +0.8**
comp=Z,45nm,1.3s,mb4.9
GLA Glamis 41.48 320 *e*P P **23 31 14.3 +0.8**
GLA pmax pmax
comp=Z,46nm,1.6s,mb4.9
GLA Glamis 41.48 320 *e*P P **23 31 14.3 +0.8**
comp=Z,46nm,1.6s,mb4.9
PV01 Paradox Valley 41.59 331 *e*P P **23 31 13.6 -0.7**
ISCO Idaho Springs 41.61 335 *e*P P **23 31 14.9 +0.5**
PV10 Paradox Valley 42.01 331 *e*P P **23 31 17.9 +0.2**
HNH Hanover 42.17 13 *e*P P **23 31 18.6 -0.3**
ECSD EROS,Sioux Fal 42.23 347 *e*P P **23 31 17.9 -1.4**
comp=Z,69nm,1.6s,mb5.0
LONY Lake Ozonia 42.58 10 *e*P P **23 31 21.0 -1.2**
PHWY Pilot Hill 42.81 337 *e*P P **23 31 24.8 +0.7**
FRNY Flat Rock 42.98 11 *e*P P **23 31 24.1 -1.3**
comp=Z,94nm,2.3s,mb5.1
SRU San Rafael 43.31 330 *e*P P **23 31 28.7 +0.4**
MSU Marysvale 43.71 328 *e*P P **23 31 32.0 +0.5**
TMUT Trail Mountain 43.80 330 *e*P P **23 31 32.9 +0.7**
RWWY Rawlins 43.85 335 *e*P P **23 31 33.1 +0.5**
comp=Z,32nm,1.0s,mb5.0
SHPR Sheep Range 43.97 324 *e*P P **23 31 34.1 +0.5**
GSC Goldstone 44.18 321 *e*P P **23 31 36.2 +0.9**
GSC pmax pmax
comp=Z,51nm,1.6s,mb5.0
GSC Goldstone 44.18 321 *e*P P **23 31 36.2 +0.9**
comp=Z,51nm,1.6s,mb5.0
MWC Mount Wilson 44.32 319 *e*P P **23 31 36.6 +0.2**
MWC pmax pmax
comp=Z,35nm,1.4s,mb4.9
MWC Mount Wilson 44.32 319 *e*P P **23 31 36.5 +0.1**
comp=Z,35nm,1.4s,mb4.9
PKME Peaks-Kenny Pk 44.37 15 *e*P P **23 31 36.5 -0.1**
MPU Maple Canyon 44.56 330 *e*P P **23 31 39.7 +1.5**
DAU Daniels Canyon 44.67 331 *e*P P **23 31 40.0 +0.8**
RSSD Black Hills 44.72 340 *e*P P **23 31 39.6 +0.2**
JLU Jordanelle 44.91 331 *e*P P **23 31 41.5 +0.4**
TPNV Topopah Spring 44.91 323 *e*P P **23 31 42.3 +1.2**
PLCA Paso Flores 45.08 165 P P **23 31 41.0 -1.4**
comp=Z,7.8nm,1.1s,mb4.4,baz=22,slow=8.0,SNR=5.1
PLCA LR LR 23 46 08.7
comp=Z,450nm,21.7s,MS4.4,baz=3.9,slow=30
PLCA Paso Flores 45.08 165 P P **23 31 41.0 -1.4**
PLCA LR LR 23 46 08.7
NOQ North Oquirrh 45.28 330 *e*P P **23 31 45.0 +1.0**
DUG Dugway 45.29 329 *e*P P **23 31 44.5 +0.4**
EYMN Ely 45.44 353 *e*P P **23 31 43.3 -1.8**
ISA Isabella 45.47 320 *e*P P **23 31 46.5 +0.9**
TRQA Tornquist 45.59 155 *e*P P **23 31 45.2 -1.2**
BW06 Boulder Array 45.74 334 *e*P P **23 31 47.2 -0.4**
PDAR Pinedale Array 45.74 334 P P **23 31 47.0 -0.5**
comp=Z,6.3nm,1.0s,mb4.5,baz=134,slow=8.5,SNR=33
PDAR PcP PcP 23 33 24.5 -0.4
comp=Z,4.5nm,1.0s,baz=153,slow=4.3,SNR=4.8
PDAR LR LR 23 51 40.7
comp=Z,865nm,20.2s,MS4.7,baz=150,slow=37
HWUT Hardware Ranch 45.74 331 *e*P P **23 31 47.2 -0.4**
comp=Z,34nm,1.1s,mb5.2
SPUT South Promonto 45.94 330 *e*P P **23 31 49.4 +0.2**
BGU Big Grassy Mou 45.94 330 *e*P P **23 31 48.9 -0.4**
AHID Auburn Hatcher 46.42 333 *e*P P **23 31 52.5 -0.4**
AGMN Agassiz Refuge 46.44 349 *e*P P **23 31 51.8 -1.1**
HVU Hansel Valley 46.46 331 *e*P P **23 31 53.3 +0.1**
MTUM Tungsten Hills 46.58 322 *e*P P **23 31 56.8 +2.5**
REDW Red Top Meadow 46.78 334 *e*P P **23 31 55.7 -0.1**
SNOW Snow King Moun 46.82 334 *e*P P **23 31 56.1 +0.1**
LOHW Long Hollow 46.87 334 *e*P P **23 31 56.4 -0.1**
TPAW Teton Pass 46.93 334 *e*P P **23 31 57.0 +0.1**
ELK Elko 46.96 328 *e*P P **23 31 57.4 +0.2**
ELK pmax pmax
comp=Z,9.0nm,1.0s
ELK Elko 46.96 328 *e*P P **23 31 57.4 +0.2**
comp=Z,9.3nm,1.0s,mb4.7
RRI2 Red Ridge 46.98 333 *e*P P **23 31 56.1 -1.2**
DCID1 Drake Creek 47.11 333 *e*P P **23 31 58.0 -0.4**
NVAR Mina Array Bea 47.12 323 P P **23 31 59.0 +0.5**
comp=Z,3.0nm,0.6s,mb4.4,baz=168,slow=5.0,SNR=16
NVAR PcP PcP 23 33 30.7 +0.8
comp=Z,1.6nm,0.6s,baz=140,slow=4.7,SNR=2.8
IMW Indian Meadow 47.24 334 *e*P P **23 31 59.1 -0.3**
YFT Old Faithful 47.64 334 *e*P P **23 32 05.6 +3.1**
LAO LASA Array 47.71 340 *e*P P **23 32 02.5 -0.4**
comp=Z,34nm,1.4s,mb5.2
BMN Battle Mountai 47.82 326 *e*P P **23 32 04.2 +0.3**
WAKR Walker 47.85 323 *e*P P **23 32 06.3 +2.1**
CMB Columbia Colle 48.14 321 *e*P P **23 32 07.8 +1.4**
CMB pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
CMB Columbia Colle 48.14 321 *e*P P **23 32 07.8 +1.4**
comp=Z,7.0nm,1.3s,mb4.5
QLMT Earthquake Lak 48.20 334 *e*P P **23 32 07.6 +0.9**
GCMT Greycliff 48.24 336 *e*P P **23 32 06.5 -0.5**
GCMT *e*PcP PcP 23 33 34.2 +0.5
ULM Lac du Bonnet 48.32 350 P P **23 32 06.6 -0.9**
comp=Z,38nm,1.1s,mb5.3,baz=165,slow=7.9,SNR=16
ULM LR LR 23 52 58.5
comp=Z,277nm,19.1s,MS4.3,baz=133,slow=37
HLID Hailey 48.59 331 *e*P P **23 32 09.0 -0.8**
BOZ Bozeman (W) 48.93 335 *e*P P **23 32 12.1 -0.3**
LRM Limekiln Ridge 49.42 334 *e*P P **23 32 16.2 0.0**
WVOR Wild Horse Val 49.96 327 *e*P P **23 32 19.3 -1.0**
WVOR pmax pmax
comp=Z,36nm,1.5s,mb5.2
WVOR Wild Horse Val 49.96 327 *e*P P **23 32 19.3 -1.0**
comp=Z,36nm,1.5s,mb5.2
EGMT Eagleton 50.12 338 *e*P P **23 32 21.0 -0.3**
MOD Modoc 50.53 325 *e*P P **23 32 24.9 +0.3**
MOD *e*pP pP 23 32 38.2 +2.6
CHMT Chamberlain Mo 50.62 335 P P **23 32 22.5 -2.7**
CHMT *e*PcP PcP 23 33 42.0 -0.4
MSO Missoula 50.86 334 *e*P P **23 32 26.7 -0.2**
BMO Blue Mountains 50.96 330 *e*P P **23 32 26.5 -1.3**
YBH Yreka Blue Hor 51.82 324 *e*P P **23 32 32.7 -1.6**
KHMM Horse Mountain 51.91 322 *e*P P **23 32 35.9 +0.8**
LNOR Lincton Mounta 52.17 330 *e*P P **23 32 36.1 -0.7**
KRMB Red Mountain 52.41 323 *e*P P **23 32 38.5 -0.2**
WALA Waterton Lakes 52.58 336 *e*P P **23 32 39.4 -0.4**
comp=Z,31nm,1.4s,mb5.0
HAWA Hanford 53.15 330 *e*P P **23 32 43.6 -0.5**
NEW Newport 53.35 333 *e*P P **23 32 43.6 -1.9**
NEW *e* 23 33 52.2
NEW pmax pmax
comp=Z,13nm,1.4s
NEW Newport 53.35 333 *e*P P **23 32 43.6 -1.9**
comp=Z,13nm,1.4s,mb4.7
NEW *e*PcP PcP 23 33 52.2 -0.4
OD2 Odessa Site #2 53.45 332 *e*P P **23 32 45.8 -0.5**
SCHQ Schefferville 53.85 12 P P **23 32 47.0 -2.1**
comp=Z,17nm,1.0s,mb4.9,baz=192,slow=6.7,SNR=6.6
SCHQ LR LR 23 56 15.9
comp=Z,517nm,18.7s,MS4.6,baz=206,slow=36
ETW Entiat 54.38 331 *e*P P **23 32 51.9 -1.1**
RKT Rikitea 55.58 240 eLQ 23 47 01.7
comp=Z,412nm,30.8s
RKT *e*LR LR 23 49 23.4
comp=Z,365nm,26.8s
EDM Edmonton 55.70 339 *e*P P **23 33 01.6 -0.8**
FCC Fort Churchill 56.37 354 *e*P P **23 33 06.9 -0.2**
FCC pmax pmax
comp=Z,62nm,1.3s,mb5.5
FCC Fort Churchill 56.37 354 *e*P P **23 33 06.9 -0.2**
comp=Z,62nm,1.3s,mb5.5
TAOE Nuku Hiva Isla 56.76 258 *e*LR LR 23 49 59.3
comp=Z,1µm,25.9s
EFI East Falkland 58.66 161 *e*P P **23 33 21.5 -1.8**
YKA Yellowknife Ar 63.71 345 P P **23 33 55.9 -1.4**
comp=Z,1.3nm,0.8s,mb4.0,baz=135,slow=6.8,SNR=11
YKA LR LR 00 04 47.3
comp=Z,271nm,18.1s,MS4.5,baz=160,slow=39
YKA Yellowknife Ar 63.71 345 P P **23 33 55.9 -1.4**
YKA LR LR 00 04 47.3
DLBC Dease Lake 65.93 336 *e*P P **23 34 12.5 +0.5**
PPT Papeete 67.32 250 *e*LR LR 23 54 46.5
comp=Z,451nm,24.8s
PPT Papeete 67.32 250 LR LR 23 55 59.1
comp=Z,295nm,19.7s,MS4.5,baz=31,slow=29
PMSA Palmer Station 69.00 171 *e*P P **23 34 30.5 -0.7**
comp=Z,13nm,1.4s,mb4.7
HYT Haines Junctio 70.41 335 *e*P P **23 34 42.6 +2.6**
DAWY Dawson 72.86 338 *e*P P **23 34 53.7 -1.0**
EYAK Cordova Ski Ar 73.86 333 *e*P P **23 34 59.7 -1.0**
comp=Z,17nm,0.8s,mb5.0
EGAK Eagle 73.88 338 *e*P P **23 35 00.1 -0.6**
comp=Z,8.6nm,1.0s,mb4.6
COLA College 76.49 337 *d i*P P **23 35 16.1 +0.4**
COLA College 76.49 337 *e*P P **23 35 15.5 -0.2**
PTEO Sao Teotonio 76.97 52 *e*P P **23 35 20.3 +1.3**
comp=Z,35nm,1.2s,mb5.2
PBDV Barranco-do-Ve 77.56 53 *e*P P **23 35 27.9 +5.6**
comp=Z,44nm,2.7s,mb4.9
PBDV *e*SKS S 23 45 18.1 +6.8
EVO Evora 77.64 51 *e*P P **23 35 21.7 -1.0**
comp=Z,28nm,1.2s,mb4.8
EVO *e*MLR MLR
comp=Z,144nm,21.8s,MS4.0
PBEJ Beja 77.69 52 *e*P P **23 35 24.1 +1.0**
comp=Z,18nm,1.2s,mb4.9
PVAQ Vaqueiros 77.75 52 *e*P P **23 35 24.7 +1.3**
PVAQ *e*SKS S 23 45 19.0 +5.7
PVAQ Vaqueiros 77.75 52 eLQ 23 56 31.9
PVAQ eLR LR 00 00 20.8
comp=Z,94nm,18.1s
EGRO El Granado 77.94 52 P P **23 35 25.1 +0.6**
comp=Z,5.8nm,0.9s,mb4.5
PVIS Viseu 77.98 49 *e*P P **23 35 25.7 +1.1**
comp=Z,20nm,2.1s,mb4.7
PESTR Estremoz 78.00 51 *e*P P **23 35 25.3 +0.6**
comp=Z,38nm,1.5s,mb5.1
PESTR *e*SKS S 23 45 20.8 +4.8
PESTR Estremoz 78.00 51 eLQ 23 56 40.2
PESTR eLR LR 00 00 32.4
comp=Z,75nm,24.5s
PCBR Castelo Branco 78.19 50 *e*P P **23 35 26.6 +0.8**
comp=Z,21nm,1.2s,mb4.9
MTE Manteigas 78.20 49 *e*SKS 23 45 23.8
MTE Manteigas 78.20 49 eLQ 23 56 41.5
MTE eLR LR 00 00 34.7
comp=Z,146nm,22.0s
PMRV Marv??o 78.21 50 *e*P P **23 35 25.7 -0.2**
comp=Z,12nm,1.4s,mb4.6
PMRV *e*SKS S 23 45 24.1 +5.8
PMRV Marv??o 78.21 50 eLQ 23 56 45.1
PMRV eLR LR 00 00 37.7
comp=Z,83nm,24.9s
PBAR Barrancos 78.36 52 *e*P P **23 35 28.1 +1.4**
comp=Z,14nm,1.6s,mb4.6
PBAR Barrancos 78.36 52 eLR LR 00 00 37.3
comp=Z,94nm,18.4s
SVW2 Sparrevohn 78.58 332 *e*P P **23 35 25.8 -1.6**
EMIN Mina Concepcio 78.61 52 P P **23 35 28.1 0.0**
comp=Z,70nm,3.9s
MVO Moncorvo 78.68 49 *e*P P **23 35 29.9 +1.5**
comp=Z,30nm,1.2s,mb5.1
MVO Moncorvo 78.68 49 eLR LR 00 00 46.4
comp=Z,130nm,19.6s
ESPR Espera 79.18 53 P P **23 35 33.2 +1.9**
comp=Z,18nm,1.3s,mb4.8
IMA2 Indian Mountai 79.19 337 *e*P P **23 35 30.1 -0.6**
TTA Tatalina 79.25 334 *e*P P **23 35 30.7 -0.4**
TTA pmax pmax
comp=Z,33nm,1.4s,mb5.1
TTA Tatalina 79.25 334 *e*P P **23 35 30.7 -0.4**
comp=Z,33nm,1.4s,mb5.1
DBIC Dimbokro 79.29 84 P P **23 35 31.5 -0.9**
comp=Z,8.4nm,1.2s,mb4.6,baz=235,slow=5.4,SNR=4.3
DBIC LR LR 00 08 40.6
comp=Z,107nm,18.6s,MS4.2,baz=251,slow=34
EJIF Jimena Fronter 79.45 54 P P **23 35 32.8 0.0**
EJIF pmax pmax
comp=Z,214nm,2.8s,mb5.6
EJIF Jimena Fronter 79.45 54 P P **23 35 32.8 0.0**
comp=Z,214nm,2.8s,mb5.6
ECAB El Cabril 79.62 52 P P **23 35 36.0 +2.3**
comp=Z,17nm,1.3s,mb4.8
EMIJ Mijas 80.02 54 P P **23 35 37.8 +2.0**
comp=Z,100nm,4.5s
ELOJ Sierra Loja 80.56 53 P P **23 35 39.6 +0.9**
ELOJ pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ELOJ Sierra Loja 80.56 53 P P **23 35 39.6 +0.9**
comp=Z,7.1nm,0.9s,mb4.6
GUD Guadarrama 80.80 49 P P **23 35 40.7 +0.7**
GUD pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
GUD Guadarrama 80.80 49 P P **23 35 40.7 +0.7**
comp=Z,2.5nm,0.5s,mb4.4
ERON Agron 80.83 53 P P **23 35 41.2 +1.0**
ESDC Sonseca Array 80.88 50 P P **23 35 40.0 -0.4**
comp=Z,7.8nm,1.0s,mb4.6,baz=276,slow=5.1,SNR=21
ESDC LR LR 00 03 47.5
comp=Z,91nm,21.3s,MS4.1,baz=275,slow=30
ESDC Sonseca Array 80.88 50 P P **23 35 40.3 -0.1**
comp=Z,4.2nm,0.8s,mb4.4
EBAN Banos Encina 80.91 52 P P **23 35 41.6 +1.0**
EBAN pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
EBAN Banos Encina 80.91 52 P P **23 35 41.6 +0.9**
comp=Z,1.8nm,0.4s,mb4.3
ECOG Cogollos-Vega 81.03 53 P P **23 35 43.5 +2.2**
ECOG pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
ECOG Cogollos-Vega 81.03 53 P P **23 35 43.5 +2.2**
comp=Z,7.2nm,0.7s,mb4.7
EQES Quesada 81.46 52 P P **23 35 44.2 +0.7**
comp=Z,16nm,1.1s,mb4.9
EBER Berja 81.55 53 P P **23 35 46.1 +2.1**
comp=Z,5.3nm,0.8s,mb4.5
EHUE Huescar 81.83 52 P P **23 35 46.0 +0.5**
EHUE pmax pmax
comp=Z,47nm,1.6s,mb5.2
EHUE Huescar 81.83 52 P P **23 35 46.0 +0.5**
comp=Z,47nm,1.6s,mb5.2
QUIF Quistinic 82.08 42 *e*P P **23 35 46.4 -0.2**
comp=Z,84nm,1.4s,mb5.2
QUIF Quistinic 82.08 42 *e*P P **23 35 46.4 -0.2**
QUIF pmax pmax
comp=Z,42nm,1.4s,mb5.2
QUIF Quistinic 82.08 42 *e*P P **23 35 46.4 -0.2**
comp=Z,42nm,1.4s,mb5.2
SGMF Saint Gilles 82.51 42 *e*P P **23 35 48.4 -0.4**
comp=Z,123nm,1.6s,mb5.4
SGMF Saint Gilles 82.51 42 *e*P P **23 35 48.4 -0.4**
SGMF pmax pmax
comp=Z,61nm,1.6s,mb5.4
SGMF Saint Gilles 82.51 42 *e*P P **23 35 48.4 -0.4**
comp=Z,62nm,1.6s,mb5.4
ETOB Tobarra 82.69 52 P P **23 35 49.7 -0.3**
EMUR La Murta 82.91 52 P P **23 35 50.9 -0.2**
comp=Z,4.3nm,0.6s,mb4.7
EALK Alkurruntz 82.93 47 P P **23 35 51.3 +0.1**
SJPF Ste Jean 83.13 47 *e*P P **23 35 52.5 +0.3**
comp=Z,69nm,1.4s,mb5.2
SJPF Ste Jean 83.13 47 *e*P P **23 35 52.5 +0.3**
SJPF pmax pmax
comp=Z,34nm,1.4s,mb5.2
SJPF Ste Jean 83.13 47 *e*P P **23 35 52.5 +0.3**
comp=Z,34nm,1.4s,mb5.2
ETSF Etsaut 83.61 47 *e*P P **23 35 55.1 +0.5**
comp=Z,18nm,1.2s,mb4.8
ETSF Etsaut 83.61 47 *e*P P **23 35 55.1 +0.5**
ETSF pmax pmax

comp=Z,9.0nm,1.2s,mb4.8
ETSF Etsaut 83.61 47 *e*P **P 23 35 55.1 +0.5**
comp=Z,9.0nm,1.2s,mb4.8
GRR Gorron 83.65 42 *e*P **P 23 35 54.4 -0.3**
comp=Z,69nm,1.3s,mb5.3
GRR Gorron 83.65 42 *e*P **P 23 35 54.4 -0.3**
GRR pmax pmax
comp=Z,34nm,1.3s,mb5.3
GRR Gorron 83.65 42 *e*P **P 23 35 54.4 -0.3**
comp=Z,34nm,1.3s,mb5.3
FLN La Foliniere 83.92 41 *e*P **P 23 35 56.0 -0.1**
comp=Z,86nm,1.4s,mb5.4
FLN *e*MLR MLR
comp=Z,273nm,23.0s,MS4.3
FLN La Foliniere 83.92 41 *e*P **P 23 35 56.0 -0.1**
FLN pmax pmax
comp=Z,43nm,1.4s,mb5.4
FLN MLR MLR
comp=Z,270nm,23.0s,MS4.6
FLN La Foliniere 83.92 41 *e*P **P 23 35 56.0 -0.1**
comp=Z,43nm,1.4s,mb5.4
FLN LR LR
comp=Z,270nm,23.0s,MS4.6
MFF Saint Martin d 84.05 44 *e*P **P 23 35 56.7 -0.1**
comp=Z,51nm,1.4s,mb5.2
MFF Saint Martin d 84.05 44 *e*P **P 23 35 56.7 -0.1**
MFF pmax pmax
comp=Z,25nm,1.4s,mb5.2
MFF Saint Martin d 84.05 44 *e*P **P 23 35 56.7 -0.1**
comp=Z,25nm,1.4s,mb5.2
LDF La Druitiere 84.15 42 *e*P **P 23 35 57.1 -0.1**
comp=Z,58nm,1.3s,mb5.3
LDF La Druitiere 84.15 42 *e*P **P 23 35 57.1 -0.1**
LDF pmax pmax
comp=Z,29nm,1.3s,mb5.2
LDF La Druitiere 84.15 42 *e*P **P 23 35 57.1 -0.1**
comp=Z,29nm,1.3s,mb5.2
EPF Esparros 84.28 47 *e*P **P 23 35 58.4 +0.4**
comp=Z,36nm,1.2s,mb5.1
EPF Esparros 84.28 47 *e*P **P 23 35 58.4 +0.4**
EPF pmax pmax
comp=Z,18nm,1.2s,mb5.1
EPF Esparros 84.28 47 *e*P **P 23 35 58.4 +0.4**
comp=Z,18nm,1.2s,mb5.1
LFF La Frestale 84.62 45 *e*P **P 23 35 59.7 0.0**
comp=Z,97nm,1.6s,mb5.4
LFF La Frestale 84.62 45 *e*P **P 23 35 59.7 0.0**
LFF pmax pmax
comp=Z,48nm,1.6s,mb5.4
LFF La Frestale 84.62 45 *e*P **P 23 35 59.7 0.0**
comp=Z,48nm,1.6s,mb5.4
RJF Les Rejaudoux 85.17 45 *e*P **P 23 36 02.4 -0.1**
comp=Z,73nm,1.5s,mb5.3
RJF *e*MLR MLR
comp=Z,160nm,21.0s,MS4.1
RJF Les Rejaudoux 85.17 45 *e*P **P 23 36 02.4 -0.1**
RJF pmax pmax
comp=Z,36nm,1.5s,mb5.3
RJF MLR MLR
comp=Z,160nm,21.0s,MS4.4
RJF Les Rejaudoux 85.17 45 *e*P **P 23 36 02.4 -0.1**
comp=Z,36nm,1.5s,mb5.3
RJF LR LR
comp=Z,160nm,21.0s,MS4.4
CAF Calviac 85.56 45 *e*P **P 23 36 04.3 -0.1**
comp=Z,78nm,1.6s,mb5.4
CAF Calviac 85.56 45 *e*P **P 23 36 04.3 -0.1**
CAF pmax pmax
comp=Z,39nm,1.6s,mb5.4
CAF Calviac 85.56 45 *e*P **P 23 36 04.3 -0.1**
comp=Z,39nm,1.6s,mb5.4
TORD Torodi Ar. Bea 85.57 77 P **P 23 36 04.0 -1.1**
comp=Z,1.7nm,0.6s,mb4.4,baz=278,slow=1.9,SNR=20
TORD LR LR 00 13 51.5
comp=Z,88nm,18.4s,MS4.2,baz=190,slow=35
TORD Torodi Ar. Bea 85.57 77 P **P 23 36 04.0 -1.1**
TORD LR LR 00 13 51.5
MTLF Montolieu 85.66 47 *e*P **P 23 36 04.8 -0.1**
comp=Z,64nm,1.3s,mb5.4
MTLF Montolieu 85.66 47 *e*P **P 23 36 04.8 -0.1**
MTLF pmax pmax
comp=Z,32nm,1.3s,mb5.4
MTLF Montolieu 85.66 47 *e*P **P 23 36 04.8 -0.1**
comp=Z,32nm,1.3s,mb5.4
TCF Toulx Ste Croi 85.67 44 *e*P **P 23 36 04.6 -0.4**
comp=Z,66nm,1.4s,mb5.4
TCF Toulx Ste Croi 85.67 44 *e*P **P 23 36 04.6 -0.4**
TCF pmax pmax
comp=Z,33nm,1.4s,mb5.4
TCF Toulx Ste Croi 85.67 44 *e*P **P 23 36 04.6 -0.4**
comp=Z,33nm,1.4s,mb5.4
BGF Bois d'Agland 86.11 44 *e*P **P 23 36 06.8 -0.3**
comp=Z,116nm,1.3s,mb5.6
BGF Bois d'Agland 86.11 44 *e*P **P 23 36 06.8 -0.3**
BGF pmax pmax
comp=Z,58nm,1.3s,mb5.7
BGF Bois d'Agland 86.11 44 *e*P **P 23 36 06.8 -0.3**
comp=Z,58nm,1.3s,mb5.7
PYM Petit Puy Mans 86.23 45 *e*P **P 23 36 07.9 +0.2**
AGO Saint Agoulin 86.31 44 *e*P **P 23 36 07.9 -0.2**
LBL Lubilhac 86.39 45 *e*P **P 23 36 09.0 +0.4**
AVF Avril sur Loir 86.46 43 *e*P **P 23 36 08.0 -0.8**
comp=Z,64nm,1.4s,mb5.3
AVF Avril sur Loir 86.46 43 *e*P **P 23 36 08.0 -0.8**
AVF pmax pmax
comp=Z,32nm,1.4s,mb5.4
AVF Avril sur Loir 86.46 43 *e*P **P 23 36 08.0 -0.8**
comp=Z,32nm,1.4s,mb5.4
SSF Saint Saulge 86.57 43 *e*P **P 23 36 08.6 -0.7**
comp=Z,31nm,1.3s,mb5.1
SSF Saint Saulge 86.57 43 *e*P **P 23 36 08.6 -0.7**
SSF pmax pmax
comp=Z,16nm,1.3s,mb5.1
SSF Saint Saulge 86.57 43 *e*P **P 23 36 08.6 -0.7**
comp=Z,16nm,1.3s,mb5.1
PLDF La Plantade 86.65 44 *e*P **P 23 36 09.5 -0.3**
SMF Signal de Mont 86.80 44 *e*P **P 23 36 09.9 -0.6**
comp=Z,58nm,1.4s,mb5.3
SMF Signal de Mont 86.80 44 *e*P **P 23 36 09.9 -0.6**
SMF pmax pmax
comp=Z,29nm,1.4s,mb5.3
SMF Signal de Mont 86.80 44 *e*P **P 23 36 09.9 -0.6**
comp=Z,29nm,1.4s,mb5.3
LOR Lormes 86.81 43 *e*P **P 23 36 09.9 -0.6**
comp=Z,46nm,1.3s,mb5.2
LOR *e*MLR MLR
comp=Z,132nm,20.2s,MS4.0
LOR Lormes 86.81 43 *e*P **P 23 36 09.9 -0.6**
LOR pmax pmax
comp=Z,23nm,1.3s,mb5.2
LOR MLR MLR
comp=Z,130nm,20.3s,MS4.3
LOR Lormes 86.81 43 *e*P **P 23 36 09.9 -0.6**
comp=Z,23nm,1.3s,mb5.2
LOR LR LR
comp=Z,130nm,20.3s,MS4.3
LASF Ste Croix 86.84 46 *e*P **P 23 36 10.0 -0.8**
comp=Z,65nm,1.5s,mb5.3
BAIF Baives 87.01 40 *e*P **P 23 36 11.1 -0.3**
comp=Z,61nm,1.4s,mb5.3
BAIF Baives 87.01 40 *e*P **P 23 36 11.1 -0.3**
BAIF pmax pmax
comp=Z,30nm,1.4s,mb5.3
BAIF Baives 87.01 40 *e*P **P 23 36 11.1 -0.3**
comp=Z,30nm,1.4s,mb5.3
UCC Uccle 87.09 39 P **P 23 36 12.1 +0.3**
DOU Dourbes 87.25 40 P **P 23 36 12.8 +0.2**
comp=Z,16nm,2.2s,mb4.9
DOU AP pP 23 36 19.5 -4.7
DOU E pP 23 36 25.3 +1.1
DOU E 23 36 42.1
GIVF Givet 87.40 40 *e*P **P 23 36 13.1 -0.2**
comp=Z,156nm,1.5s,mb5.7
GIVF Givet 87.40 40 *e*P **P 23 36 13.1 -0.2**
GIVF pmax pmax
comp=Z,78nm,1.5s,mb5.7
GIVF Givet 87.40 40 *e*P **P 23 36 13.1 -0.2**
comp=Z,78nm,1.5s,mb5.7
VIVF Saint-Julien-l 87.41 45 *e*P **P 23 36 14.0 +0.5**
comp=Z,82nm,1.4s,mb5.5
VIVF Saint-Julien-l 87.41 45 *e*P **P 23 36 14.0 +0.5**
VIVF pmax pmax
comp=Z,41nm,1.4s,mb5.5
VIVF Saint-Julien-l 87.41 45 *e*P **P 23 36 14.0 +0.5**
comp=Z,41nm,1.4s,mb5.5
MEZF Maizieres J'vi 87.59 42 *e*P **P 23 36 14.0 -0.3**
comp=Z,82nm,1.4s,mb5.5
MEZF Maizieres J'vi 87.59 42 *e*P **P 23 36 14.0 -0.3**
comp=Z,82nm,1.4s,mb5.8
BCLA Clavier 87.70 40 P **P 23 36 14.8 0.0**
comp=Z,16nm,1.3s,mb5.1
BCLA AP pP 23 36 20.1 -6.3
BEBN Eben Emael 87.93 39 P **P 23 36 16.0 +0.2**
HGN Heimansgroeve 88.09 39 *e*P **P 23 36 16.0 -0.6**
comp=Z,22nm,1.5s,mb5.2
MEM Membach 88.14 40 P **P 23 36 16.9 0.0**
comp=Z,15nm,1.3s,mb5.1
MEM AP pP 23 36 23.9 -4.6
THEF They Montfort 88.22 42 *e*P **P 23 36 17.4 +0.1**
WLF Walferdange 88.27 41 P **P 23 36 18.4 +0.9**
comp=Z,34nm,1.6s,mb5.3
WLF AP pP 23 36 24.2 -5.0
WLF Walferdange 88.27 41 *e*P **P 23 36 17.9 +0.4**
comp=Z,55nm,1.3s,mb5.6
CABF La Chapelle 88.35 44 *e*P **P 23 36 18.0 +0.1**
comp=Z,49nm,1.3s,mb5.3
CABF La Chapelle 88.35 44 *e*P **P 23 36 18.0 +0.1**
CABF pmax pmax
comp=Z,25nm,1.3s,mb5.3
CABF La Chapelle 88.35 44 *e*P **P 23 36 18.0 +0.1**
comp=Z,25nm,1.3s,mb5.3
HAU Haudompre 88.47 42 *e*P **P 23 36 18.0 -0.5**
comp=Z,56nm,1.6s,mb5.2
HAU *e*MLR MLR
comp=Z,134nm,21.2s,MS4.0
HAU Haudompre 88.47 42 *e*P **P 23 36 18.0 -0.5**
HAU pmax pmax
comp=Z,28nm,1.6s,mb5.2
HAU MLR MLR
comp=Z,130nm,21.3s,MS4.3
HAU Haudompre 88.47 42 *e*P **P 23 36 18.0 -0.5**
comp=Z,28nm,1.6s,mb5.2
HAU LR LR
comp=Z,130nm,21.3s,MS4.3
WTSB Winterswijk 88.59 38 *e*P **P 23 36 18.8 -0.1**
comp=Z,57nm,1.6s,mb5.6
HINF Hinteralfeld 88.82 42 *e*P **P 23 36 19.5 -0.6**
comp=Z,38nm,1.5s,mb5.2
HINF Hinteralfeld 88.82 42 *e*P **P 23 36 19.5 -0.6**
HINF pmax pmax
comp=Z,19nm,1.5s,mb5.2
HINF Hinteralfeld 88.82 42 *e*P **P 23 36 19.5 -0.6**
comp=Z,19nm,1.5s,mb5.2
RUP Ruppelstein 88.86 40 *e*P **P 23 36 20.7 +0.4**
BUG Bochum--Univer 88.91 39 *e*P **P 23 36 20.5 +0.1**
comp=Z,36nm,1.5s,mb5.5
ECH Echery 89.00 42 *e*P **P 23 36 20.8 -0.2**
CDF Champ du Feu 89.07 42 *e*P **P 23 36 20.9 -0.4**
IBBN Ibbenburen 89.16 38 *e*P **P 23 36 21.8 +0.2**
comp=Z,59nm,1.5s,mb5.7
LANF Langenberg 89.39 41 *e*P **P 23 36 22.8 0.0**
NOA NORSAR Array B 90.33 29 LR LR 00 12 30.0
comp=Z,121nm,19.5s,MS4.3,baz=285,slow=32
BSEG Bad Segeberg 90.57 36 *e*P **P 23 36 28.4 +0.2**
comp=Z,19nm,1.3s,mb5.3
CLZ Clausthal 90.80 38 *e*P **P 23 36 29.9 +0.6**
CLZ pmax pmax
comp=Z,17nm,1.2s,mb5.2
CLZ Clausthal 90.80 38 *e*P **P 23 36 29.9 +0.6**
comp=Z,17nm,1.2s,mb5.2
KEST Kesra 91.44 54 LR LR 00 09 42.6
comp=Z,28nm,21.2s,MS3.7,baz=201,slow=30
FETA Feichten 91.50 43 ⇑*i*P **P 23 36 34.2 +1.6**
comp=Z,5.8nm,1.1s,mb4.8
FETA Feichten 91.50 43 ⇑*i*PcP PcP 23 36 34.2 +0.7
comp=Z,5.8nm,1.1s
GRA1 Grafenberg Arr 91.56 40 *e*P **P 23 36 33.3 +0.5**
comp=Z,30nm,1.6s,mb5.4
GRF Grafenberg Arr 91.56 40 *e*P **P 23 36 33.3 +0.5**
GRF pmax pmax
comp=Z,30nm,1.6s,mb5.4
GRF Grafenberg Arr 91.56 40 *e*P **P 23 36 33.3 +0.5**
GRF pmax pmax
comp=Z,30nm,1.6s,mb5.4
GRF Grafenberg Arr 91.56 40 *e*P **P 23 36 33.3 +0.5**
comp=Z,30nm,1.6s,mb5.4
MANZ Manzenberg 92.09 40 *e*P **P 23 36 35.7 +0.4**
comp=Z,11nm,1.5s,mb5.0
WERD Werda 92.17 39 *e*P **P 23 36 36.1 +0.4**
comp=Z,12nm,1.4s,mb5.0
NKC Novy Kostel 92.28 40 *e*P **P 23 36 37.0 +0.8**
CLL Collm 92.50 39 *e*P **P 23 36 37.8 +0.6**
comp=Z,18nm,1.4s,mb5.2
CLL Collm 92.50 39 ⇓*i*P **P 23 36 37.9 +0.7**
comp=Z,17nm,1.4s,mb5.2
CLL *e*pP pP 23 36 48.0 -0.8
CLL *e*sPP 23 40 34.0
CLL *e*S S 23 47 41.0 +2.5
CLL *e*SP SP 23 48 51.0 +2.0
CLL *e*ScSScS 00 00 03.0
WET Wettzell 92.69 41 *e*P **P 23 36 38.6 +0.5**
WET pmax pmax
comp=Z,21nm,1.4s,mb5.4
WET Wettzell 92.69 41 *e*P **P 23 36 38.6 +0.5**
comp=Z,21nm,1.4s,mb5.4
BRG Berggiesshubel 93.14 39 *e*P **P 23 36 41.0 +0.8**
BRG pmax pmax
comp=Z,11nm,1.6s,mb5.0
BRG Berggiesshubel 93.14 39 *e*P **P 23 36 40.4 +0.2**
comp=Z,18nm,1.6s,mb5.2
BRG Berggiesshubel 93.14 39 *e*P **P 23 36 41.0 +0.8**
comp=Z,18nm,1.6s,mb5.3
KHC Kasperske Hory 93.15 41 *e*P **P 23 36 40.9 +0.7**
GERES GERESS Array B 93.27 41 P **P 23 36 41.0 +0.2**
comp=Z,1.9nm,1.0s,mb4.5,baz=245,slow=2.8,SNR=11
GERES LR LR 00 12 46.6
comp=Z,101nm,20.9s,MS4.2,baz=281,slow=32
PVCC Panska Ves 93.59 39 *e*P **P 23 36 43.0 +0.8**
PRU Pruhonice 93.65 40 *e*P **P 23 36 44.2 +1.7**
ARCES ARCESS Array B 94.30 19 LR LR 00 15 51.5
comp=Z,112nm,18.3s,MS4.4,baz=3.7,slow=33
TREC Trest 94.36 40 *e*P **P 23 36 46.5 +0.7**
UPC Upice 94.50 39 *e*P **P 23 36 48.0 +1.6**
DPC Dobruska-Polom 94.72 39 *e*P **P 23 36 48.4 +1.0**
CSNA Conrad Observa 94.83 42 ⇑*i*P **P 23 36 48.3 +0.3**
comp=Z,9.4nm,1.3s,mb5.1
CSNA Conrad Observa 94.83 42 ⇑*i*PcP PcP 23 36 48.3 0.0
comp=Z,9.4nm,1.3s
MODS Modra-Piesok 95.69 41 *e*P **P 23 36 52.3 +0.4**
KOLL Kolacno 96.38 41 *e*P **P 23 36 56.5 +1.4**
VYHS Vyhne 96.68 41 *e*P **P 23 36 57.0 +0.6**
VYHS pmax pmax
comp=Z,4.0nm,2.0s,mb4.5
VYHS Vyhne 96.68 41 *e*P **P 23 36 57.0 +0.6**
comp=Z,4.3nm,2.0s,mb4.5
DRV Dumont d'Urvil 109.15 197 SP SP 23 52 06.0 +21
DRV R 00 15 00.0
SOC Sochi 111.98 40 *i* PKIKP PKiKP 23 42 02.5 +1.1
ZALV Zalesovo Beam 122.79 8 PKP PKPdf 23 42 20.3 -1.6
comp=Z,0.5nm,0.5s,baz=253,slow=4.5,SNR=5.4
ZALV PP PP 23 43 57.5 -1.6
comp=Z,0.3nm,0.3s,baz=328,slow=7.0,SNR=3.8
ZALV Zalesovo Beam 122.79 8 PKP PKPdf 23 42 20.3 -1.6
ZALV PP PP 23 43 57.5 -1.6
ZAL Zalesovo 122.80 8 PKIKP PKPdf 23 42 20.3 -1.6
ZAL 23 43 57.5
KURK Kurchatov 124.78 13 *i* PKIKP PKPdf 23 42 22.8 -3.0
CN2 Changchun 126.48 333 *e*PDIF Pdif 23 39 13.5 +4.7
ZAK Zakamensk 126.67 354 *e*PKIKP PKPdf 23 42 28.3 -1.1
ZAK pmax pmax
comp=Z,2.0nm,1.6s
CTA Charters Tower 127.71 247 PKP PKPdf 23 42 30.9 -1.4
comp=Z,5.3nm,0.9s,baz=37,slow=7.5,SNR=3.6
CTAO Charters Tower 127.71 247 PKIKP PKPdf 23 42 31.4 -0.9
STKA Stephens Creek 127.99 231 PKP PKPdf 23 42 30.9 -1.6
comp=Z,1.9nm,0.8s,baz=295,slow=1.2,SNR=4.5
STKA Stephens Creek 127.99 231 PKP PKPdf 23 42 30.9 -1.6
SONM Songino Array 128.75 351 PKP PKPdf 23 42 32.9 -0.6
comp=Z,0.7nm,0.8s,baz=8.5,slow=2.8,SNR=5.8
MKAR Makanchi Array 129.29 12 PKP PKPdf 23 42 32.8 -1.8
comp=Z,1.2nm,0.9s,baz=29,slow=2.8,SNR=6.2
KSRS Korea Array 130.01 326 PKP PKPdf 23 42 35.5 -0.8
comp=Z,1.3nm,0.8s,baz=103,slow=1.7,SNR=6.1
AML Almayashu 131.10 22 *e*P PKPdf 23 42 38.7 +0.5
UCH Uchtor 131.32 21 *e*P PKPdf 23 42 39.2 +0.7
WMQ Urumqi 133.10 8 *e*PKP PKPdf 23 42 40.5 -1.4
WMQ XPKP 23 42 55.0
WMQ *e*PP PP 23 45 11.0 +4.1
WMQ PKS 23 46 15.0
WMQ SKKS SKKSac 23 51 58.0 -3.2
WMQ PP PP
comp=Z,168nm,4.6s
BJI Beijing 133.43 338 PKP PKPdf 23 42 41.3 -1.3
ASAR Alice Springs 137.55 237 PKP PKPdf 23 42 49.0 -1.7
comp=Z,3.0nm,1.0s,baz=121,slow=2.4,SNR=11
GTA Gaotai 137.87 355 *e*PKP PKPdf 23 42 51.6 +0.7
GTA XPKP 23 43 06.0
GTA PP PP 23 45 37.8 +0.8
GTA PP PP
comp=Z,91nm,5.4s
GTA LR LR
comp=Z,147nm,18.0s,MS4.8
WB2 Warramunga Arr 138.52 243 *e*P PKPdf 23 42 51.0 -1.6
WRA Warramunga Arr 138.53 243 PKP PKPdf 23 42 50.9 -1.7
comp=Z,3.6nm,0.9s,baz=107,slow=1.4,SNR=13
NJ2 Nanjing 138.96 329 *e*PKP PKPdf 23 42 53.6 +0.5
LZH Lanzhou 140.61 349 *e*PKP PKPdf 23 42 49.3 -6.7
XAN Xi'an 141.32 342 PKP PKPdf 23 42 59.5 +2.2
XAN XPKP 23 43 12.1
CD2 Chengdu 145.64 348 *e*PKP PKPdf 23 43 04.4 -0.6
CD2 APKP 23 43 11.5
CD2 XPKP 23 43 15.9
CD2 PP PP 23 46 28.8 +4.5
CD2 SKS SKSdf 23 50 08.0 -3.6
CD2 SKKS SKKSac 23 53 12.4 -2.9
CD2 PP PP
comp=Z,120nm,11.8s
FITZ Fitzroy Crossi 146.85 241 *e*PKP PKPdf 23 43 06.8 -0.6
comp=Z,19nm,1.0s
FITZ Fitzroy Crossi 146.85 241 PKPbc PKPbc 23 43 06.9 -2.4
comp=Z,8.7nm,0.9s,baz=45,slow=0.8,SNR=12
DANN Dangsing 147.05 19 *e*P PKPbc 23 43 09.7 +0.2
comp=Z,113nm,0.8s
LSA Lhasa 147.45 7 PKP2 PKPbc 23 43 09.2 -1.4
KOLN Koldanda 147.53 20 *e*P PKPbc 23 43 10.4 -0.5
comp=Z,9.1nm,0.6s
KKN Kakani 148.05 17 *e*P PKPbc 23 43 12.0 -0.3
GUN Gumba 148.11 16 *e*P PKPbc 23 43 12.5 +0.1
comp=Z,171nm,1.2s
DMN Daman 148.16 18 *e*P PKPbc 23 43 12.2 -0.4
comp=Z,148nm,1.6s
PKIN Phulchoki 148.28 17 *e*P PKPbc 23 43 12.2 -0.7
comp=Z,136nm,1.6s
PKI Pulchoki 148.29 17 *e*P PKPbc 23 43 12.4 -0.5
comp=Z,152nm,1.6s
JIRN Jiri 148.43 16 *e*P PKPbc 23 43 12.9 -0.4
comp=Z,135nm,1.4s
GYA Guiyang 149.06 340 PKP PKPdf 23 43 09.4 -1.4
GYA PKP2 PKPab 23 43 19.6 +0.6
GYA PKS 23 46 42.8
GYA PP PP 23 46 47.9 +3.3
GYA SKS SKSdf 23 50 12.4 -4.2
GYA SKKS SKKSac 23 53 33.8 -0.9
GYA PP PP
comp=Z,120nm,8.4s
GYA LR LR
comp=N,170nm,24.5s,MS4.8
GYA LR LR
comp=E,110nm,25.8s,MS4.8
GYA LR LR
comp=Z,120nm,24.6s,MS4.6
TAPN Taplejung 149.12 14 *e*P PKPdf 23 43 11.5 +0.6
comp=Z,140nm,1.5s
RAMN Ramite 149.22 16 *e*P PKPdf 23 43 10.3 -0.8
comp=Z,103nm,1.1s
ODAN Odare 149.51 15 *e*P PKPdf 23 43 10.6 -1.0
comp=Z,113nm,1.5s
KMI Kunming 151.44 346 PKIKP PKPdf 23 43 12.9 -1.7
KMI 23 43 20.9
KMI 23 43 24.5
CMAR Chiang Mai Arr 158.67 351 PKP PKPdf 23 43 24.4 -0.2
comp=Z,0.7nm,0.5s,baz=306,slow=2.9,SNR=4.5
CMAR PKPab PKPab 23 43 58.5 -1.2
comp=Z,9.4nm,1.3s,baz=350,slow=5.0,SNR=13
CMAR PP PP 23 47 42.0 +3.5
comp=Z,4.0nm,1.2s,baz=356,slow=4.5,SNR=6.1

JMA ***03*** *23:24:59.3±0.4, 2896N×143.41E, h38km, M3.9*
IDC 03 23:24:54.1±6.4, 2889N×14429E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.7/19, mbtmp3.7/6, ML3.6/2, Error ellipse: s-maj=228.2km s-min=22.1km az=70.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**6.40**	**335**	P	Pn	23 26 27.8	-1.9
BSO3	**Boso 3**	**6.71**	**332**	P	Pn	23 26 31.6	-2.4
JHO	**Hitachi**	**8.31**	**339**	S	Sn	23 28 22.6	-7.9
JRY	**Ryogami san**	**8.44**	**329**	P	Pn	23 26 55.6	-2.0
JFK	**Kawauchi**	**8.93**	**342**	P	Pn	23 26 59.7	-4.6
MJAR	**Matsushiro Arr**	**9.19**	**328**	Pn	Pn	23 27 05.4	-2.5
	0.5nm,0.3s,baz=148,slow=11,SNR=6.7						
KSRS	**Korea Array**	**16.13**	**306**	Pn	Pn	23 28 41.5	-0.7
	0.2nm,0.3s,baz=111,slow=15,SNR=5.7						
SONM	**Songino Array**	**34.77**	**313**	P	P	23 31 47.4	+1.2
	0.3nm,0.3s,baz=106,slow=9.6,SNR=5.1						
WRA	**Warramunga Arr**	**49.49**	**192**	P	P	23 33 46.9	+0.5
	1.7nm,0.7s,baz=12,slow=8.2,SNR=7.1						
MKAR	**Makanchi Array**	**50.80**	**308**	P	P	23 33 56.2	+0.1
	0.3nm,0.6s,baz=93,slow=8.7,SNR=4.0						
ASAR	**Alice Springs**	**53.20**	**192**	P	P	23 34 13.4	-0.8
	0.5nm,0.9s,baz=13,slow=7.3,SNR=3.0						

DJA ***03*** *23:29:21, 921S×112.48E, h72km, ML4.2/2*
IDC 03 23:29:20.1±3.5, 780S×11177E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.6/16, mbtmp3.7/4, Error ellipse: s-maj=202.0km s-min=28.8km az=54.0, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**26.44**	**129**	P	P	23 34 59.0	+0.1
	0.3nm,0.5s,baz=307,slow=10,SNR=4.3						
SONM	**Songino Array**	**55.60**	**356**	P	P	23 38 58.0	+0.5
	0.1nm,0.3s,baz=179,slow=6.9,SNR=3.9						
MKAR	**Makanchi Array**	**60.35**	**337**	P	P	23 39 31.4	+0.5
	1.0nm,0.4s,baz=148,slow=7.5,SNR=23						
ZALV	**Zalesovo Beam**	**65.59**	**343**	P	P	23 40 04.6	-0.9
	0.7nm,0.5s,baz=146,slow=4.9,SNR=4.7						

ISCJB ***03*** *23:46:07.3±0.6, 4362N±005×7156E±006, h10km, Error ellipse: s-maj=7.8km s-min=6.1km az=161.0*
NNC ***03*** *23:46:07.1±0.9, 4355N×7161E, h0km, mb3.3, mpv2.8, Error ellipse: s-maj=24.7km s-min=5.1km az=152.0*
ISC 03 23:46:09.6±2.8, 435N±01×715E±02, h19km±31km, n16, σ1§08/17, 10C-4D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**0.83**	**245**	⇓P	**Pg**	**23 46 25.6**	**-0.3**
	6.6nm,0.4s,baz=337,slow=7.7,SNR=1237						
KK31				⇑S	**Sg**	**23 46 37.4**	**+0.4**
	11nm,0.2s,baz=73,slow=26,SNR=28						
EKS2	**Erkin-Say**	**1.82**	**115**	P	**Pn**	**23 46 37.2**	**-2.7**
	SNR=15						
AML	**Almayashu**	**2.07**	**129**	P	**Pn**	**23 46 41.1**	**-2.1**
	SNR=14						
USP	**Ospenovka**	**2.17**	**94**	P	**Pn**	**23 46 44.3**	**-0.3**
	SNR=42						
AAK	**Ala-Archa**	**2.32**	**110**	P	**Pn**	**23 46 46.3**	**-0.3**
	SNR=18						
CHMS	**Chumysh**	**2.39**	**100**	P	**Pn**	**23 46 47.2**	**-0.4**
	SNR=22						
UCH	**Uchtor**	**2.51**	**118**	P	**Pn**	**23 46 49.5**	**+0.2**
	SNR=33						
KBK	**Karagaybulak**	**2.62**	**107**	P	**Pn**	**23 46 50.3**	**-0.6**
	SNR=18						
TKM2	**Tokmak 2**	**3.01**	**99**	⇑Pn	**Pn**	**23 46 57.5**	**+1.3**
	2.9nm,0.4s						
TKM2				⇑Lg		23 47 35.3	
	28nm,0.5s						
TKM2	**Tokmak 2**	**3.01**	**99**	P	**Sn**	**23 47 35.5**	**+3.8**
	SNR=8.4						
KZA	**Kyzart**	**3.06**	**116**	P	**Pn**	**23 46 59.0**	**+2.1**
	SNR=8.8						
MK31	**Makanchi Array**	**8.30**	**63**	⇑Pn	**Pn**	**23 48 09.0**	**+0.2**
	0.1nm,0.2s,baz=232,slow=9.3,SNR=13						
MK31				⇓Sn	**Sn**	**23 49 47.9**	**+6.1**
	2.6nm,0.9s						
MK31				⇓Lg		23 50 26.4	
	5.4nm,1.1s						
KURBB	**Kurchatov Arra**	**8.60**	**31**	⇓Pn	**Pn**	**23 48 12.7**	**-0.2**
	0.2nm,0.7s						
KURBB				⇑Lg		23 50 39.1	
	1.4nm,0.7s						
KURK	**Kurchatov**	**8.71**	**31**	⇑Lg		23 50 42.5	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	3.6nm,0.7s						
VOSK	**Vostochnaya**	**9.27**	**358**	⇑Pn	**Pn**	**23 48 16.8**	**-5.3**
	2.0nm,1.2s						
VOSK				⇑Sn	**Sn**	**23 50 05.7**	**-0.1**
	2.2nm,1.2s						
VOSK				⇑Lg		23 51 01.2	
	0.1nm,0.3s						
BVA0	**Borovoye Array**	**9.60**	**356**	⇑Lg		23 51 08.2	
	0.5nm,0.7s						

IDC 03 23:48:00.9±2.5**,728S**×**12805E,h0km,mb3.7**/1**,mb1 3.5**/3**, mb1mx3.3**/14**,mbtmp3.3**/3**,ML3.3**/1**,Error ellipse: s-maj=293.2km s-min=32.7km az=65.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.99**	**155**	Pn	Pn	23 51 18.5	-2.0
	0.1nm,0.3s,baz=330,slow=13,SNR=3.9						
WRA				Sn	Sn	23 53 41.9	-15
	0.2nm,0.3s,baz=332,slow=20,SNR=5.2						
ASAR	**Alice Springs**	**17.24**	**162**	P	Pn	23 52 05.0	+1.8
	0.1nm,0.3s,baz=340,slow=13,SNR=4.3						
MKAR	**Makanchi Array**	**67.41**	**328**	P	P	23 58 58.3	+0.1
	0.3nm,0.4s,baz=119,slow=8.2,SNR=4.6						

*NEIC **04** 00:31:25.0±0.8,699S×10683W,h10km,mb4.9/21,Error ellipse: s-maj=16.9km s-min=15.4km az=48.0*
*IDC **04** 00:31:25.7±1.3,650S×10749W,h0km,mb4.3/9,mb1 4.5/9, mb1mx4.4/15,mbtmp4.3/9,MS4.3/15,Ms1 4.3/15, ms1mx4.2/21,Error ellipse: s-maj=43.5km s-min=22.2km az=57.0*
*GCMT **04** 00:31:25.0±0.2,6.19S×107.16W,h16km±1km,MW5.1/72, Moment Tensor Solution. s36,c44; s72,c113; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.39±.15; Mθθ-0.91±.14; Mφφ1.30±.15; Mrθ1.16±.41; Mθφ4.62±.12; Mφr-1.18±.43; Best double couple: Mo5.03900×10^16 NP1:φs262.00000°,δ75.00000°,λ-12.00000°. NP2: φs355.00000°,δ78.00000°,λ-165.00000°. Principal axes: T 4.9550, Plg2.0000°, Azm128.0000°; N 0.1700, Plg71.0000°, Azm31.0000°; P -5.1230, Plg19.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **04** 00:31:28.1±1.0,63S±0.1×1069W±0.1,h10km,mb4.7/30, MS4.3/15 Error ellipse: s-maj=26.1km s-min=10.9km az=138.3*
ISC 04 00:31:30.7±1.0**,62S**±01×**1067W**±01**,h10km,n105, σ1^{s}21**/83**,mb4.6**/30**,MS4.3**/15**,Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**25.94**	**27**	P	**P**	**00 37 06.8**	**+3.4**
	0.9nm,0.6s,mb3.5,baz=175,slow=11,SNR=5.4						
CMIG				LR	LR	00 45 02.5	
	comp=Z,1μm,19.7s,MS4.5,baz=179,slow=31						
ATAH	**Atahualpa**	**28.11**	**93**	LR	LR	00 45 45.2	
	comp=Z,1μm,21.3s,MS4.5,baz=276,slow=30						
OTAV	**Otavalo**	**28.90**	**78**	eP	**P**	**00 37 29.0**	**-1.2**
NNA	**Nana**	**30.00**	**103**	LR	LR	00 46 26.3	
	comp=Z,918nm,20.2s,MS4.4,baz=274,slow=29						
LPIG	**La Paz**	**30.36**	**353**	LR	LR	00 45 42.5	
	comp=Z,223nm,20.7s,MS3.8,baz=180,slow=28						
RKT	**Rikitea**	**32.00**	**235**	eLR	LR	00 45 35.5	
	1μm,27.5s,baz=57						
JCT	**Junction City**	**37.09**	**10**	eP	**P**	**00 38 40.8**	**-0.6**
	15nm,1.3s,mb4.7						
LPAZ	**La Paz**	**39.04**	**108**	LR	LR	00 51 59.5	
	comp=Z,424nm,20.9s,MS4.2,baz=113,slow=31						
GLA	**Glamis**	**39.83**	**349**	eP	**P**	**00 39 05.1**	**+0.8**
LVC	**Limon Verde**	**39.88**	**118**	LR	LR	00 51 20.0	
	comp=Z,1μm,21.6s,MS4.6,baz=282,slow=30						
BNM	**Barren Site**	**40.16**	**0**	eP	**P**	**00 39 07.9**	**+0.8**
BNM				ePP	PP	00 40 44.3	+4.7
LENM	**Lemitar**	**40.18**	**360**	eP	**P**	**00 39 08.3**	**+1.1**
LAZ	**Ladron**	**40.41**	**359**	eP	**P**	**00 39 09.9**	**+0.8**
LCO	**Las Campanas**	**40.83**	**128**	P	**P**	**00 39 13.8**	**+1.1**
WUAZ	**Wupatki**	**41.76**	**354**	eP	**P**	**00 39 21.9**	**+1.6**
LDFC	**Landfair**	**41.85**	**350**	eP	**P**	**00 39 22.1**	**+1.1**
GSC	**Goldstone**	**42.40**	**348**	eP	**P**	**00 39 25.9**	**+0.4**
	30nm,1.8s,mb4.6						
MIAR	**Mount Ida**	**42.41**	**16**	eP	**P**	**00 39 24.5**	**-1.1**
	12nm,1.1s,mb4.5						
MVCO	**Mesa Verde**	**43.25**	**358**	eP	**P**	**00 39 33.4**	**+1.1**
SHPR	**Sheep Range**	**43.25**	**350**	eP	**P**	**00 39 32.6**	**+0.2**
PPT	**Papeete**	**43.35**	**251**	eLQ		00 49 11.0	
	2μm,28.0s						
PPT				eLR	LR	00 50 57.2	
	401nm,24.0s,baz=74						
PPT	**Papeete**	**43.35**	**251**	LR	LR	00 52 16.9	
	comp=Z,255nm,20.1s,MS4.1,baz=82,slow=29						
SDCO	**Great Sand Dun**	**43.76**	**1**	eP	**P**	**00 39 36.5**	**0.0**
	10.0nm,1.3s,mb4.4						
TPNV	**Topopah Spring**	**43.88**	**349**	eP	**P**	**00 39 38.5**	**+1.0**
CFAA	**Coronel Fontan**	**43.90**	**130**	LR	LR	00 53 32.2	
	comp=Z,81nm,18.9s,MS3.7,baz=347,slow=30						
PV01	**Paradox Valley**	**44.17**	**358**	eP	**P**	**00 39 39.7**	**0.0**
PLAL	**Pickwick Lake**	**44.59**	**22**	eP	**P**	**00 39 42.1**	**-1.0**
	31nm,1.5s,mb4.9						
MTUM	**Tungsten Hills**	**44.76**	**347**	eP	**P**	**00 39 45.3**	**+0.8**
MSU	**Marysvale**	**44.81**	**354**	eP	**P**	**00 39 46.4**	**+1.5**
SRU	**San Rafael**	**45.25**	**356**	eP	**P**	**00 39 49.3**	**+0.9**
CBKS	**Cedar Bluff**	**45.28**	**8**	eP	**P**	**00 39 50.2**	**+1.6**
SIV	**San Ignacio**	**45.70**	**106**	P	**P**	**00 39 54.8**	**+2.5**
	1.7nm,0.8s,mb4.0,baz=258,slow=10,SNR=3.5						
NVAR	**Mina Array Bea**	**45.73**	**347**	P	**P**	**00 39 50.8**	**-1.4**
	5.5nm,1.1s,mb4.4,baz=178,slow=9.0,SNR=16						
ISCO	**Idaho Springs**	**45.81**	**1**	eP	**P**	**00 39 52.7**	**-0.1**
	16nm,1.5s,mb4.7						
CMB	**Columbia Colle**	**45.85**	**345**	eP	**P**	**00 39 53.9**	**+0.8**
WAKR	**Walker**	**46.06**	**346**	eP	**P**	**00 39 56.6**	**+1.9**
NLU	**North Lily Min**	**46.22**	**354**	eP	**P**	**00 39 57.4**	**+1.4**
MPU	**Maple Canyon**	**46.24**	**355**	eP	**P**	**00 39 58.0**	**+1.8**
AOPR	**Arecibo Observ**	**46.34**	**57**	P	**P**	**00 39 56.9**	**-0.4**
	10.0nm,0.9s,mb4.8						
DUG	**Dugway**	**46.54**	**354**	eP	**P**	**00 39 59.2**	**+0.7**
	16nm,1.3s,mb4.8						
DAU	**Daniels Canyon**	**46.60**	**355**	eP	**P**	**00 40 00.8**	**+1.8**
NOQ	**North Oquirrh**	**46.92**	**354**	eP	**P**	**00 40 03.7**	**+2.3**
PLCA	**Paso Flores**	**47.13**	**142**	LR	LR	00 55 14.7	
	comp=Z,867nm,18.8s,MS4.7,baz=318,slow=30						
PAHR	**Pah Rah Range**	**47.19**	**347**	eP	**P**	**00 40 05.0**	**+1.4**
	14nm,1.2s,mb4.8						
PHWY	**Pilot Hill**	**47.31**	**1**	eP	**P**	**00 40 05.8**	**+1.2**
SPUT	**South Promonto**	**47.60**	**354**	eP	**P**	**00 40 07.3**	**+0.5**
RWWY	**Rawlins**	**47.69**	**359**	eP	**P**	**00 40 07.9**	**+0.4**
TZTN	**Tazewell**	**47.75**	**25**	eP	**P**	**00 40 08.0**	**-0.1**
	23nm,1.2s,mb5.1						
HWUT	**Hardware Ranch**	**47.81**	**355**	eP	**P**	**00 40 07.1**	**-1.4**
	9.4nm,1.3s,mb4.7						
WDC	**Whiskeytown Da**	**48.81**	**344**	eP	**P**	**00 40 15.9**	**-0.3**
BW06	**Boulder Array**	**48.83**	**357**	eP	**P**	**00 40 15.2**	**-1.1**
PDAR	**Pinedale Array**	**48.83**	**357**	P	**P**	**00 40 14.7**	**-1.6**
	1.3nm,0.9s,mb4.0,baz=161,slow=6.3,SNR=12						
AHID	**Auburn Hatcher**	**48.93**	**356**	eP	**P**	**00 40 16.7**	**-0.4**
	9.6nm,0.4s,mb5.2						
AHID				PcP	PcP	00 41 38.3	-2.9
MOD	**Modoc**	**49.49**	**347**	eP	**P**	**00 40 22.2**	**+0.9**
REDW	**Red Top Meadow**	**49.50**	**356**	eP	**P**	**00 40 21.9**	**+0.5**
RRI2	**Red Ridge**	**49.52**	**356**	eP	**P**	**00 40 20.3**	**-1.3**
	8.7nm,1.1s,mb4.7						
TPAW	**Teton Pass**	**49.64**	**356**	eP	**P**	**00 40 22.6**	**+0.1**
LOHW	**Long Hollow**	**49.74**	**356**	eP	**P**	**00 40 22.4**	**-0.7**
YBH	**Yreka Blue Hor**	**49.93**	**344**	P	**P**	**00 40 21.7**	**-3.0**
	1.8nm,0.8s,mb4.1,baz=146,slow=6.0,SNR=5.0						
IMW	**Indian Meadow**	**50.04**	**356**	eP	**P**	**00 40 25.0**	**-0.5**
	29nm,1.7s,mb5.0						
HLID	**Hailey**	**50.05**	**353**	eP	**P**	**00 40 25.0**	**-0.5**
	7.6nm,1.3s,mb4.6						
RSSD	**Black Hills**	**50.17**	**2**	eP	**P**	**00 40 24.6**	**-1.9**
	13nm,1.3s,mb4.8						
FLWY	**Flagg Ranch**	**50.21**	**356**	eP	**P**	**00 40 26.4**	**-0.3**
BBGH	**Gun Hill**	**50.61**	**67**	eP	**P**	**00 40 24.2**	**-6.2**
QLMT	**Earthquake Lak**	**51.01**	**356**	eP	**P**	**00 40 34.0**	**+1.2**
CPUP	**Villa Florida**	**51.04**	**119**	P	**P**	**00 40 34.0**	**+0.6**
	4.4nm,0.9s,mb4.4,baz=275,slow=8.1,SNR=7.5						
CPUP				LR	LR	00 58 28.4	
	comp=Z,492nm,21.6s,MS4.5,baz=271,slow=31						
MCMT	**McKenzie Canyo**	**51.13**	**354**	eP	**P**	**00 40 33.4**	**-0.3**
JFWS	**Jewell Farm**	**51.14**	**15**	eP	**P**	**00 40 34.1**	**+0.3**
RLMT	**Red Lodge**	**51.17**	**358**	eP	**P**	**00 40 33.5**	**-0.5**
DLMT	**Dillon**	**51.63**	**355**	eP	**P**	**00 40 39.1**	**+1.7**
BOZ	**Bozeman (W)**	**51.83**	**356**	eP	**P**	**00 40 38.9**	**0.0**
GCMT	**Greycliff**	**51.86**	**357**	eP	**P**	**00 40 38.5**	**-0.6**
LRM	**Limekiln Ridge**	**52.08**	**355**	eP	**P**	**00 40 41.8**	**+1.0**
LAO	**LASA Array**	**52.69**	**0**	eP	**P**	**00 40 45.8**	**+0.5**
LNOR	**Lincton Mounta**	**52.89**	**350**	eP	**P**	**00 40 45.7**	**-1.1**
CHMT	**Chamberlain Mo**	**53.23**	**354**	eP	**P**	**00 40 50.4**	**+1.1**
COWI	**Conover**	**54.40**	**15**	eP	**P**	**00 40 55.9**	**-1.9**
	24nm,1.6s,mb4.9						
DGMT	**Dagmar**	**54.51**	**2**	eP	**P**	**00 40 57.2**	**-1.5**
	45nm,1.4s,mb5.3						
ETW	**Entiat**	**54.94**	**349**	eP	**P**	**00 40 59.2**	**-2.6**
AGMN	**Agassiz Refuge**	**55.12**	**9**	P	**P**	**00 41 03.2**	**+0.1**
	15nm,1.3s,mb4.9						
WALA	**Waterton Lakes**	**55.42**	**354**	eP	**P**	**00 41 04.7**	**-0.5**
JCW	**Jim Creek**	**55.83**	**348**	eP	**P**	**00 41 07.2**	**-1.0**
RPW	**Rockport**	**55.98**	**348**	eP	**P**	**00 41 08.1**	**-1.2**
ULM	**Lac du Bonnet**	**57.03**	**8**	P	**P**	**00 41 14.7**	**-2.0**
	21nm,1.3s,mb5.0,baz=214,slow=7.8,SNR=6.0						
ULM				LR	LR	01 03 46.4	
	comp=Z,187nm,18.4s,MS4.2,baz=230,slow=34						
BDFB	**Brasilia**	**58.20**	**104**	LR	LR	01 03 58.0	
	comp=Z,697nm,21.2s,MS4.8,baz=86,slow=33						
EDM	**Edmonton**	**59.49**	**355**	eP	**P**	**00 41 32.1**	**-1.7**
AFI	**Afiamalu**	**64.39**	**258**	eP	**P**	**00 41 58.1**	**-9.5**
DLBC	**Dease Lake**	**67.14**	**347**	eP	**P**	**00 42 23.2**	**-1.3**
YKA	**Yellowknife Ar**	**68.80**	**356**	P	**P**	**00 42 32.1**	**-2.6**
	7.5nm,0.9s,mb4.6,baz=165,slow=6.1,SNR=28						
YKA				LR	LR	01 10 10.3	
	comp=Z,101nm,18.0s,MS4.1,baz=170,slow=34						
SCHQ	**Schefferville**	**69.29**	**23**	P	**P**	**00 42 37.2**	**-0.8**
	5.7nm,0.9s,mb4.5,baz=211,slow=5.7,SNR=3.9						
SCHQ				LR	LR	01 11 40.9	
	comp=Z,170nm,19.0s,MS4.3,baz=84,slow=35						
HYT	**Haines Junctio**	**71.07**	**345**	eP	**P**	**00 42 50.3**	**+1.4**
DAWY	**Dawson**	**74.28**	**346**	eP	**P**	**00 43 05.8**	**-2.0**
PMR	**Palmer**	**75.16**	**340**	eP	**P**	**00 43 10.9**	**-2.1**
	8.6nm,0.8s,mb4.7						
EGAK	**Eagle**	**75.30**	**345**	eP	**P**	**00 43 11.2**	**-2.6**
	17nm,1.0s,mb4.9						
PETK	**Petropavlovsk-**	**98.32**	**323**	LR	LR	01 21 47.0	
	comp=Z,112nm,19.4s,MS4.4,baz=264,slow=31						
MAJO	**Matsushiro**	**113.81**	**307**	PKiKP	PKiKP	00 50 03.5	-6.7
TSUM	**Tsumeb**	**119.59**	**116**	PKPdf	PKPdf	00 50 14.0	-7.8
NWAO	**Narrogin (SRO)**	**122.95**	**224**	ePKPdf	PKPdf	00 50 18.2	-10
SONM	**Songino Array**	**129.86**	**331**	PKP	PKPdf	00 50 38.1	-2.6
	0.3nm,0.3s,baz=126,slow=2.0,SNR=3.8						
ZALV	**Zalesovo Beam**	**131.52**	**351**	PP	PP	00 53 00.1	-1.6
	0.6nm,0.5s,baz=349,slow=5.3,SNR=3.9						
MKAR	**Makanchi Array**	**138.85**	**351**	PKP	PKPdf	00 50 54.0	-3.5
	0.4nm,0.6s,baz=15,slow=6.0,SNR=3.7						
MKAR				PP	PP	00 53 47.0	-1.1
	0.4nm,0.7s,baz=353,slow=4.9,SNR=4.6						
MKAR	**Makanchi Array**	**138.85**	**351**	PKP	PKPdf	00 50 54.0	-3.5
MKAR				PP	PP	00 53 47.0	-1.1
KMBO	**Kilima Mbogo**	**143.26**	**100**	PKP	PKPdf	00 51 03.8	-2.6
	2.0nm,0.9s,baz=198,slow=3.2,SNR=3.3						
AML	**Almayashu**	**144.25**	**360**	ePKP	PKPdf	00 51 02.5	-4.8
CMAR	**Chiang Mai Arr**	**152.22**	**298**	PKPbc	PKPbc	00 51 22.8	-4.9
	2.6nm,0.8s,baz=40,slow=0.9,SNR=9.6						

*IDC **04** 01:03:26.7±5.9,297N×9972E,h0km,mb3.7/4,mb1 3.8/4, mb1mx3.6/17,mbtmp3.7/4,MS3.2/1,Ms1 3.2/1, ms1mx2.8/26,Error ellipse: s-maj=322.4km s-min=23.7km az=56.0*
*ISCJB **04** 01:03:27.9±1.2,26N±03×99.1E±02,h33km,mb3.7/4,Error ellipse: s-maj=54.4km s-min=10.6km az=37.5*
ISC 04 01:03:30.1±1.1**,26N**±03×**991E**±02**,h35km,n6,**σ**1^{s}17**/6**, mb3.7**/4**,1D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**4.79**	**307**	⇓eP	**Pn**	**01 04 41.5**	**+1.7**
BSI				eS	**Sn**	**01 05 33.0**	**-1.1**
DAV	**Davao City (W)**	**26.74**	**79**	LR	LR	01 19 43.5	
	comp=Z,50nm,19.2s,baz=188,slow=38						
WRA	**Warramunga Arr**	**41.18**	**125**	P	**P**	**01 11 11.3**	**-0.2**
	0.5nm,0.3s,mb3.6,baz=305,slow=9.0,SNR=7.5						
ASAR	**Alice Springs**	**42.74**	**130**	P	**P**	**01 11 23.9**	**-0.3**
	0.3nm,0.6s,mb3.2,baz=307,slow=8.0,SNR=4.1						
MKAR	**Makanchi Array**	**46.42**	**344**	P	**P**	**01 11 53.1**	**-0.1**
	0.4nm,0.4s,mb3.7,baz=164,slow=8.2,SNR=7.1						
ZALV	**Zalesovo Beam**	**52.54**	**349**	P	**P**	**01 12 39.8**	**+0.1**
	0.8nm,0.3s,mb4.1,baz=156,slow=6.2,SNR=4.4						

*ISK **04** 01:10:58.7,3954N×2787E,h12km,MD2.5*
*CSEM **04** 01:10:58.2±0.1,3956N×2791E,h10km,MD2.5,Error ellipse: s-maj=4.3km s-min=2.6km az=57.0*
*ISCJB **04** 01:10:59.6±0.7,3957N±004×2790E±005,h10km±4km, Error ellipse: s-maj=7.0km s-min=6.0km az=150.9*
*DDA **04** 01:10:59.7,3957N×2797E,h7km±4km,Md3.0*
ISC 04 01:10:59.6±0.6**,3957N**±004×**2791E**±005**,h11km**±4km**,n11, **σ**0^{s}70**/22**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.07**	**341**	PG	**Pg**	**01 11 01.8**	**-0.2**
BALB				SG	**Sg**	**01 11 04.0**	**+0.3**
BTOK	**Tokmak**	**0.21**	**26**	i P	**Pg**	**01 11 03.5**	**-0.7**
BTOK				i S	**Sg**	**01 11 07.3**	**+0.2**
BALY	**Balya**	**0.28**	**307**	i P	**Pg**	**01 11 05.2**	**-0.1**
BALY				i S	**Sg**	**01 11 13.9**	**+4.7**
DEMI	**Demirci**	**0.82**	**130**	i P	**Pg**	**01 11 14.5**	**-0.8**
DEMI				i S	**Sg**	**01 11 29.2**	**+3.2**
AYVA	**Ayvalik**	**0.98**	**255**	i P	**Pg**	**01 11 19.5**	**+1.0**
AYVA				i S	**Sg**	**01 11 39.9**	**+8.7**
ULDT	**Uludag**	**1.10**	**58**	i P	**Pb**	**01 11 19.7**	**-1.0**
ULDT				i S	**Sb**	**01 11 35.6**	**+0.5**
KULA	**Kula-Manisa**	**1.20**	**151**	ePN	**Pn**	**01 11 21.8**	**-0.7**
KULA				eSN	**Sn**	**01 11 38.8**	**+0.1**
MFT	**Murefte**	**1.31**	**339**	ePN	**Pn**	**01 11 23.3**	**-0.5**
MFT				eSN	**Sn**	**01 11 41.5**	**+0.2**
GDZ	**Gediz**	**1.31**	**111**	i P	**Pn**	**01 11 24.1**	**+0.2**
GDZ				i S	**Sb**	**01 11 41.0**	**0.0**
GDZ	**Gediz**	**1.31**	**111**	i P	**Pn**	**01 11 24.0**	**+0.2**
GDZ				i S	**Sb**	**01 11 41.0**	**0.0**
YLV	**Yalova**	**1.50**	**48**	ePN	**Pn**	**01 11 26.3**	**-0.2**
YLV				eSN	**Sn**	**01 11 47.0**	**+0.9**

*ISCJB **04** 01:15:17.7±1.3,16.18S±009×74.1W±0.1,h39km±14km, mb4.0/6,MS4.0/3,Error ellipse: s-maj=21.4km s-min=10.6km az=143.0*
*NEIC **04** 01:15:19.3±0.5,16.16S×74.12W,h35km,mb4.0/1,Error ellipse: s-maj=15.0km s-min=9.0km az=47.0*
*IDC **04** 01:15:19.9±3.0,16.16S×7403W,h37km±25km,mb4.0/5, mb1 4.1/9,mb1mx3.8/18,mbtmp4.0/9,ML3.8/3,MS3.8/5, Ms1 3.8/5,ms1mx3.3/21,Error ellipse: s-maj=30.1km s-min=19.2km az=56.0*
ISC 04 01:15:19.6±1.1**,1624S**±009×**741W**±01**,h39km**±12km**,n22, **σ**1^{s}25**/23**,mb4.0**/6**,MS4.0**/3**,1C,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**2.50**	**96**	⇑iP	**Pn**	**01 16 00.0**	**+2.1**
ARE				eS	**Sn**	**01 16 22.0**	**-5.2**
NNA	**Nana**	**5.00**	**327**	Pn	**Pn**	**01 16 30.6**	**-1.5**
	2.2nm,0.3s,baz=137,slow=15,SNR=4.0						
NNA				Sn	**Sn**	**01 17 36.4**	**+7.7**
	26nm,0.3s,baz=218,slow=19,SNR=3.2						
LPAZ	**La Paz**	**5.72**	**91**	Pn	**Pn**	**01 16 48.5**	**+6.4**
	5.1nm,0.3s,baz=272,slow=12,SNR=93						
LPAZ				Sn	**Sn**	**01 17 59.5**	**+13**
	baz=180,slow=20,SNR=1.4						
LPAZ				LR	LR	01 19 05.3	
	comp=Z,360nm,18.7s,baz=269,slow=40						
LVC	**Limon Verde**	**8.01**	**143**	Pn	**Pn**	**01 17 15.0**	**+1.5**
	3.6nm,0.3s,baz=312,slow=9.9,SNR=24						
LVC				Sn	**Sn**	**01 18 39.8**	**-3.0**
	5.8nm,0.3s,baz=112,slow=19,SNR=7.0						
LVC	**Limon Verde**	**8.01**	**143**	Pn	**Pn**	**01 17 15.0**	**+1.5**
LVC				Sn	**Sn**	**01 18 39.8**	**-3.0**
ATAH	**Atahualpa**	**10.10**	**335**	Pn	**Pn**	**01 17 42.6**	**+0.5**
	0.4nm,0.3s,baz=200,slow=15,SNR=2.2						
ATAH				Sn	**Sn**	**01 19 48.9**	**+15**
	0.8nm,0.3s,baz=156,slow=19,SNR=4.4						
SIV	**San Ignacio**	**12.51**	**91**	Pn	**Pn**	**01 18 14.2**	**-1.0**
	1.4nm,0.3s,baz=283,slow=11,SNR=21						
CFAA	**Coronel Fontan**	**16.20**	**162**	Pn	**Pn**	**01 19 04.5**	**0.0**
	0.0nm,0.3s,baz=0.0,slow=6.1,SNR=2.8						
CPUP	**Villa Florida**	**18.55**	**126**	P	**Pn**	**01 19 30.8**	**-2.8**
	0.1nm,0.3s,baz=299,slow=19,SNR=2.0						
CPUP				LR	LR	01 28 03.1	
	comp=Z,135nm,20.0s,baz=284,slow=41						
PLCA	**Paso Flores**	**24.60**	**174**	P	**P**	**01 20 37.4**	**+1.3**
	6.4nm,0.9s,mb4.1,baz=342,slow=10,SNR=8.1						
PLCA	**Paso Flores**	**24.60**	**174**	P	**P**	**01 20 37.4**	**+1.3**
BDFB	**Brasilia**	**25.08**	**92**	P	**P**	**01 20 41.2**	**+0.5**
	6.0nm,0.9s,mb4.1,baz=236,slow=8.4,SNR=5.9						
PCRV	**Puerto La Cruz**	**27.86**	**20**	LR	LR	01 33 08.3	
	comp=Z,365nm,18.3s,MS4.0,baz=193,slow=38						
DUG	**Dugway**	**66.70**	**329**	eP	**P**	**01 26 06.6**	**0.0**
	1.3nm,0.8s,mb4.0						
DBIC	**Dimbokro**	**72.17**	**77**	P	**P**	**01 26 40.6**	**-0.3**
	1.6nm,0.5s,mb4.2,baz=244,slow=9.6,SNR=7.4						
DBIC				LR	LR	01 57 22.4	
	comp=Z,83nm,19.5s,MS4.0,baz=258,slow=35						
TORD	**Torodi Ar. Bea**	**80.39**	**73**	P	**P**	**01 27 27.9**	**+0.3**
	2.7nm,0.6s,mb4.4,baz=257,slow=5.6,SNR=66						
TORD				LR	LR	01 59 49.3	
	comp=Z,75nm,21.2s,MS4.0,baz=195,slow=33						
TORD	**Torodi Ar. Bea**	**80.39**	**73**	P	**P**	**01 27 27.9**	**+0.3**
TORD				LR	LR	01 59 49.3	
YKA	**Yellowknife Ar**	**84.66**	**342**	P	**P**	**01 27 48.4**	**-0.4**
	0.2nm,0.6s,mb3.4,baz=143,slow=5.4,SNR=3.1						
WRA	**Warramunga Arr**	**134.47**	**219**	PKP	PKPdf	01 34 34.8	+0.3
	0.3nm,0.4s,baz=142,slow=2.0,SNR=3.3						
ZALV	**Zalesovo Beam**	**138.93**	**19**	PKP	PKPdf	01 34 43.3	+1.7
	0.4nm,0.4s,baz=333,slow=5.0,SNR=2.1						
MKAR	**Makanchi Array**	**143.76**	**28**	PKP	PKPdf	01 34 49.2	-1.3
	0.2nm,0.3s,baz=260,slow=5.0,SNR=2.6						
SONM	**Songino Array**	**148.49**	**359**	PKPbc	PKPbc	01 35 03.4	+1.3
	0.9nm,0.8s,baz=12,slow=3.5,SNR=3.5						

*ISCJB **04** 01:24:48.5±1.4,15.1S±0.1×72.5W±0.1,h60km±16km, mb4.1/5,Error ellipse: s-maj=23.5km s-min=13.4km az=42.3*
*IDC **04** 01:24:50.4±2.5,15.19S×7252W,h58km±24km,mb3.7/3, mb1 3.6/7,mb1mx3.5/19,mbtmp3.5/7,ML3.3/4,MS3.2/1, Ms1 3.2/1,ms1mx2.7/24,Error ellipse: s-maj=53.8km s-min=22.9km az=28.0*
*NEIC **04** 01:24:50.3±0.9,15.16S×7254W,h59km±11km,mb4.3/2, Error ellipse: s-maj=15.6km s-min=9.2km az=222.0*
ISC 04 01:24:50.5±1.2**,152S**±01×**726W**±01**,h60km**±14km**,n13, **σ**0^{s}61**/12**,mb4.1**/5**,Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.40**	**105**	P	**Pn**	**01 25 55.7**	**+0.9**
	0.3nm,0.3s,baz=253,slow=11,SNR=11						
LPAZ	**La Paz**	**4.40**	**105**	P	**Pn**	**01 25 55.7**	**+0.9**
NNA	**Nana**	**5.23**	**307**	P	**Pn**	**01 26 06.1**	**-0.1**
	6.7nm,0.3s,baz=142,slow=13,SNR=14						
LVC	**Limon Verde**	**8.17**	**156**	ePn	**Pn**	**01 26 46.3**	**-0.1**
	15nm,1.4s						
SIV	**San Ignacio**	**11.09**	**96**	P	**Pn**	**01 27 25.8**	**-0.6**
	0.1nm,0.3s,baz=278,slow=16,SNR=2.9						
CFAA	**Coronel Fontan**	**16.84**	**167**	P	**Pn**	**01 28 42.0**	**-0.2**
	0.1nm,0.3s,baz=335,slow=12,SNR=5.4						
CFAA	**Coronel Fontan**	**16.84**	**167**	P	**Pn**	**01 28 42.0**	**-0.2**
ROSC	**El Rosal**	**19.97**	**355**	LR	LR	01 37 24.6	
	comp=Z,70nm,21.1s,baz=156,slow=38						
SDMD	**Soldier's Deli**	**54.43**	**356**	eP	**P**	**01 34 10.6**	**-0.9**
	1.7nm,0.6s,mb4.2						
QUA2	**Belchertown**	**57.15**	**0**	eP	**P**	**01 34 31.1**	**+0.2**
	2.8nm,0.7s,mb4.4						
DBIC	**Dimbokro**	**70.49**	**77**	P	**P**	**01 35 59.1**	**-0.2**
	3.6nm,0.9s,mb4.3,baz=236,slow=7.3,SNR=2.9						
TORD	**Torodi Ar. Bea**	**78.66**	**73**	P	**P**	**01 36 46.5**	**-0.1**
	1.2nm,0.8s,mb3.9,baz=250,slow=5.4,SNR=6.5						
YKA	**Yellowknife Ar**	**84.11**	**342**	P	**P**	**01 37 15.6**	**+1.2**
	0.4nm,0.8s,mb3.6,baz=132,slow=4.5,SNR=3.3						

*IDC **04** 01:37:54.9±1.2,3428N×7420E,h0km,mb3.6/5,mb1 3.7/8, mb1mx3.5/24,mbtmp3.6/8,ML3.5/3,Error ellipse: s-maj=30.9km s-min=24.6km az=87.0*
*ISCJB **04** 01:38:00.9±1.1,3440N±006×742E±0.1,h65km±15km, mb3.5/3,Error ellipse: s-maj=20.3km s-min=7.1km az=160.1*
*NEIC **04** 01:38:14.5±2.6,3526N×7420E,h104km±20km,mb3.8/2, Error ellipse: s-maj=33.3km s-min=12.7km az=223.0*
ISC 04 01:38:01.9±0.9**,3438N**±006×**741E**±01**,h55km**±14km**,n21, **σ**1^{s}27**/27**,mb3.5**/3**,Southwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**2.37**	**145**	eP	**Pn**	**01 38 38.9**	**+0.6**
THN				eS	**Sn**	**01 39 11.2**	**+5.0**
DLH	**Dalhousie**	**2.41**	**139**	eP	**Pn**	**01 38 40.0**	**+1.1**
DLH				ex	**Sn**	**01 39 09.0**	**+1.8**
BHK	**Bhakra**	**3.54**	**146**	eP	**Pn**	**01 39 01.8**	**+7.4**
BHK				eS	**Sn**	**01 39 47.4**	**+12**
SDNR	**Sundarnagar**	**3.76**	**139**	eP	**Pn**	**01 39 02.6**	**+5.3**
SDNR				eS	**Sn**	**01 39 50.6**	**+10**
KLP	**Kalpa**	**4.50**	**128**	eP	**Pn**	**01 39 05.0**	**-2.5**
KLP				eS	**Sn**	**01 39 58.4**	**-0.2**
KLP				AML	AML	01 40 21.5	
	comp=N,172nm,0.6s						
KLP				AML	AML	01 40 21.6	
	comp=E,215nm,0.5s						
DDI	**Dehra Dun**	**5.25**	**139**	ex	x	01 39 35.0	
DDI				eS	**Sn**	**01 40 16.0**	**-1.1**
NDI	**New Delhi**	**6.28**	**154**	ex	**Sn**	**01 40 39.0**	**-3.2**
KUDL	**Kundal**	**6.55**	**161**	eP	**Pn**	**01 39 33.5**	**-2.0**
KUDL				eS	**Sn**	**01 40 49.3**	**+0.4**
SONA	**Sohna**	**6.62**	**156**	eP	**Pn**	**01 39 36.9**	**+0.2**
SONA				ex	x	01 40 48.0	
AML	**Almayashu**	**7.74**	**358**	ePn	**Pn**	**01 39 52.6**	**+0.8**
UCH	**Uchtor**	**7.84**	**2**	ePn	**Pn**	**01 39 54.6**	**+1.4**
	comp=E,1.4nm,0.6s						
MKAR	**Makanchi Array**	**13.86**	**24**	Pn	**Pn**	**01 41 15.6**	**+0.1**
	comp=E,0.1nm,0.3s,baz=204,slow=14,SNR=2.1						
KURK	**Kurchatov**	**16.66**	**10**	Pn	**Pn**	**01 41 46.8**	**-4.6**
	comp=E,0.1nm,0.3s,baz=197,slow=11,SNR=3.7						
BVAR	**Borovoye Array**	**18.82**	**353**	P	**Pn**	**01 42 16.9**	**-1.0**
	comp=E,0.3nm,0.3s,baz=149,slow=12,SNR=5.0						
AKTK	**Aktyubinsk**	**19.89**	**329**	P	**Pn**	**01 42 29.2**	**-1.3**
AKTO	**Aktyubinsk**	**19.89**	**329**	P	**Pn**	**01 42 29.2**	**-1.3**
	comp=E,0.8nm,0.3s,baz=121,slow=13,SNR=4.3						
ZALV	**Zalesovo Beam**	**20.98**	**18**	P	**P**	**01 42 39.2**	**-1.0**
	comp=E,0.9nm,0.4s,baz=202,slow=10,SNR=4.7						
ZALV	**Zalesovo Beam**	**20.98**	**18**	P	**P**	**01 42 39.2**	**-1.0**
ARCES	**ARCESS Array B**	**44.06**	**338**	P	**P**	**01 46 06.0**	**+2.1**
	comp=E,1.2nm,0.9s,mb3.6,baz=112,slow=9.8,SNR=4.5						
TORD	**Torodi Ar. Bea**	**68.24**	**271**	P	**P**	**01 48 58.2**	**+1.1**
	comp=E,0.3nm,0.6s,mb3.5,baz=42,slow=5.5,SNR=12						
WRA	**Warramunga Arr**	**78.72**	**124**	P	**P**	**01 49 58.9**	**+0.4**
	comp=E,0.4nm,0.6s,mb3.5,baz=307,slow=6.9,SNR=2.7						

MEX 04 01:42:19.3±0.5**,1556N**×**9665W,h23km**±22km**,MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.56**	**68**	i P	Pb	01 42 28.9	-1.7
HUIG				eS	Sb	01 42 35.9	-2.3
VHO	**Vista Hermosa**	**1.51**	**357**	i P	Pn	01 42 41.9	-3.0
VHO				eS	Sn	01 43 00.4	-3.4
OXX	**Oaxaca**	**1.52**	**357**	i P	Pn	01 42 42.5	-2.5
OXX				i S	Sn	01 43 01.7	-2.3
PNIG	**Pinotepa**	**1.64**	**300**	i P	Pn	01 42 44.0	-2.8
PNIG				eS	Sn	01 43 04.0	-3.1
CMIG	**Matias Romero**	**2.28**	**48**	i P	Pn	01 42 53.2	-2.3
CMIG				eS	Sn	01 43 20.3	-2.6
TPIG	**Tehuac#an**	**2.92**	**347**	i P	Pn	01 43 02.1	-2.3
TPIG				eS	Sn	01 43 36.1	-2.7
MEIG	**Mezcala**	**3.69**	**310**	i S	Sn	01 43 53.1	-4.6

*TRN **04** 01:50:35.4,1905N×6442W,h53km*
*RSPR **04** 01:50:36.9,1906N×6437W,h59km±2km,MD3.5/8, MD3.5/8*
*NEIC **04** 01:50:36.9,1906N×6437W,h59km,MD3.5(RSPR),After RSPR.*
ISC 04 01:50:35.9±1.8**,191N**±02×**644W**±01**,h59km**±25km**,n11, **σ**0^{s}44**/19**,11C,Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.36**	**177**	⇑eP	**Pn**	**01 50 46.6**	**+0.2**
ABV				eS	**Sn**	**01 50 54.2**	**+0.1**
TBVI	**Tortola**	**0.71**	**201**	⇑eP	**Pn**	**01 50 50.4**	**+0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBVI				eS	Sn	01 51 00.5	-0.3
MTP	Monte Pirata	1.50	229⇑	eP	Pn	01 51 00.4	-0.3
MTP				eS	Sn	01 51 19.3	0.0
CBYP	Canovanas	1.64	241⇑	eP	Pn	01 51 02.3	-0.2
HUMP	Col San Antoni	1.70	237⇑	eP	Pn	01 51 03.1	-0.2
HUMP				eS	Sn	01 51 23.5	-0.6
CPD	Cerro la Pandu	1.81	235⇑	eP	Pn	01 51 05.2	+0.3
CPD				eS	Sn	01 51 27.3	+0.6
SJG	San Juan	1.96	241⇑	eP	Pn	01 51 06.9	0.0
AOPR	Arecibo Observ	2.39	252⇑	eP	Pn	01 51 12.1	-0.7
AOPR	Arecibo Observ	2.39	252⇑	eP	Pn	01 51 12.6	-0.1
AOPR				eS	Sn	01 51 40.2	-0.7
AOPR	Arecibo Observ	2.39	252⇑	eP	Pn	01 51 12.1	-0.7
AOPR				eS	Sn	01 51 40.2	-0.7
CRPR	Cabo Rojo, PR	2.83	248⇑	eP	Pn	01 51 19.1	+0.4
CRPR				eS	Sn	01 51 52.6	+1.0

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*IDC **04** 01:50:25.9±2.7, 35.07N×71.23E, h0^{km}, mb3.7/3, mb1 3.7/7, mb1mx3.5/24, mbtmp3.6/7, ML3.5/3, Error ellipse: s-maj=62.6km s-min=26.2km az=136.0*
*NEIC **04** 01:50:34.8±3.4, 35.13N×71.53E, h87^{km}±21^{km}, Error ellipse: s-maj=39.1km s-min=20.5km az=157.0*
*ISCJB **04** 01:50:36.4±2.0, 35.37N±0.09×71.4E±0.2, h103^{km}±23^{km}, mb3.3/2, Error ellipse: s-maj=25.2km s-min=10.4km az=150.9*
ISC 04 01:50:38.6±1.6, **35.41N**±0.09×**71.4E**±0.2, **h104**^{km}±19^{km}, **n16**, σ1^{s}**02**/17, **mb3.3**/2, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.94	14	ePn	Pn	01 52 17.8	+0.2
	9.6nm,0.6s						
UCH	Uchtor	7.22	19	ePn	Pn	01 52 21.4	0.0
	3.9nm,0.6s						
EKS2	Erkin-Say	7.47	13	ePn	Pn	01 52 24.9	+0.1
	2.9nm,0.6s						
DDI	Dehra Dun	7.54	130	ex	Pn	01 52 28.0	+2.2
DDI				ex	Sn	01 53 48.5	-1.2
MKAR	Makanchi Array	14.00	32	Pn	Pn	01 53 50.3	-1.9
	0.1nm,0.3s,baz=193,slow=12,SNR=2.5						
KURK	Kurchatov	16.16	17	Pn	Pn	01 54 15.2	-4.2
	baz=203,slow=12,SNR=2.6						
BVAR	Borovoye Array	17.62	358	P	Pn	01 54 37.3	0.0
	0.2nm,0.3s,baz=151,slow=11,SNR=3.8						
AKTK	Aktyubinsk	17.89	331	P	Pn	01 54 40.4	-0.2
AKTO	Aktyubinsk	17.89	331	P	Pn	01 54 40.4	-0.2
	0.2nm,0.3s,baz=141,slow=12,SNR=21						
ZAA0	Zalesovo Array	20.77	23	eP	P	01 55 11.5	+0.5
ZALV	Zalesovo Beam	20.77	23	P	P	01 55 11.8	+0.8
	7.9nm,0.8s,baz=221,slow=9.8,SNR=20						
ZALV	Zalesovo Beam	20.77	23	P	P	01 55 11.8	+0.8
NOA	NORSAR Array B	45.45	324	P	P	01 58 46.6	-0.2
	baz=97,slow=8.1						
TORD	Torodi Ar. Bea	66.04	269	P	P	02 01 13.8	-0.8
	0.3nm,0.6s,mb3.3,baz=40,slow=4.7,SNR=6.6						
TORD	Torodi Ar. Bea	66.04	269	P	P	02 01 13.8	-0.8
YKA	Yellowknife Ar	82.31	3	P	P	02 02 51.5	+3.2
	0.4nm,0.7s,mb3.3,baz=352,slow=5.0,SNR=3.0						

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*TRN **04** 02:00:35.2, 19.03N×64.47W, h45^{km}*
*RSPR **04** 02:00:36.7, 19.09N×64.44W, h50^{km}±2^{km}, MD3.5/8, MD3.5/8*
*NEIC **04** 02:00:36.7, 19.09N×64.44W, h50^{km}, MD3.5(RSPR), After RSPR.*
ISC 04 02:00:35.7±2.0, **19.1N**±0.2×**64.4W**±0.2, **h54**^{km}±32^{km}, **n11**, σ0^{s}**34**/15, **11C**, **Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.34	168⇑	eP	Pn	02 00 45.7	0.0
ABV				eS	Sn	02 00 52.7	0.0
TBVI	Tortola	0.68	197⇑	eP	Pn	02 00 49.2	-0.2
TBVI				eS	Sn	02 00 59.5	+0.2
MTP	Monte Pirata	1.45	228⇑	eP	Pn	02 00 59.4	-0.2
CBYP	Canovanas	1.58	240⇑	eP	Pn	02 01 01.4	-0.1
CBYP				eS	Sn	02 01 21.2	+0.4
HUMP	Col San Antoni	1.65	236⇑	eP	Pn	02 01 02.1	-0.1
HUMP				eS	Sn	02 01 21.8	-0.5
CPD	Cerro la Pandu	1.76	235⇑	eP	Pn	02 01 04.0	+0.2
CPD	Cerro la Pandu	1.76	235⇑	eP	Pn	02 01 04.2	+0.4
SJG	San Juan	1.90	240⇑	eP	Pn	02 01 05.8	+0.1
AOPR	Arecibo Observ	2.33	252⇑	eP	Pn	02 01 11.2	-0.5
CRPR	Cabo Rojo, PR	2.77	248⇑	eP	Pn	02 01 18.1	+0.4
CRPR	Cabo Rojo, PR	2.77	248⇑	eP	Pn	02 01 18.6	+1.0

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*ISCJB **04** 02:11:45.0±0.8, 19.92S±0.06×68.76W±0.09, h112^{km}±10^{km}, mb4.1/5, Error ellipse: s-maj=15.3km s-min=8.4km az=159.7*
*NEIC **04** 02:11:47.0±0.8, 19.98S×68.76W, h117^{km}±8^{km}, mb4.6/1, Error ellipse: s-maj=12.9km s-min=10.0km az=86.0*
*IDC **04** 02:11:47.3±1.5, 20.05S×68.66W, h116^{km}±12^{km}, mb3.7/6, mb1 3.7/10, mb1mx3.6/20, mbtmp3.6/10, Error ellipse: s-maj=26.4km s-min=12.1km az=111.0*
ISC 04 02:11:46.3±0.7, **19.93S**±0.06×**68.76W**±0.09, **h108**^{km}±10^{km}, **n17**, σ0^{s}**49**/17, **mb4.1**/5, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.68	183	P	Pn	02 12 28.6	+0.6
	15nm,0.3s,baz=4.5,slow=12,SNR=120						
LVC				S	Sn	02 12 59.4	-0.6
	80nm,0.3s,baz=307,slow=19,SNR=23						
LVC	Limon Verde	2.68	183	P	Pn	02 12 28.6	+0.6
LVC				S	Sn	02 12 59.4	-0.6
LPAZ	La Paz	3.67	9	P	Pn	02 12 45.8	+4.6
	2.8nm,0.3s,baz=198,slow=7.6,SNR=94						
ARE	Arequipa	4.31	323	eP	Pn	02 12 50.0	+0.1
ARE				eS	Sn	02 13 39.0	-0.2
SIV	San Ignacio	8.30	63	P	Pn	02 13 44.0	+0.1
	5.5nm,0.3s,baz=261,slow=10,SNR=135						
CPUP	Villa Florida	12.29	123	P	Pn	02 14 37.5	-0.1
	0.2nm,0.3s,baz=287,slow=15,SNR=4.8						
BDFB	Brasilia	20.20	81	P	P	02 16 13.2	+0.5
	1.9nm,0.5s,baz=219,slow=12,SNR=5.1						
PLCA	Paso Flores	20.80	184	P	P	02 16 18.8	-0.1
	1.7nm,0.6s,baz=356,slow=13,SNR=6.3						
DBIC	Dimbokro	68.16	74	P	P	02 22 34.9	-0.5
	2.1nm,0.5s,mb4.2,baz=231,slow=10,SNR=8.4						
QSPA	South Pole Qui	70.26	180	P	P	02 22 48.2	+0.9
	1.0nm,0.4s,mb4.0,baz=202,slow=1.4,SNR=14						
TORD	Torodi Ar. Bea	76.70	71	P	P	02 23 25.4	-0.7
	1.2nm,0.4s,mb4.0,baz=254,slow=5.4,SNR=85						
YKA	Yellowknife Ar	89.76	341	P	P	02 24 32.0	0.0
	0.9nm,0.7s,mb4.0,baz=132,slow=4.5,SNR=9.8						
YKA				pP	pP	02 25 03.2	+3.0
	0.6nm,0.7s,baz=131,slow=4.6,SNR=5.4						
YKA	Yellowknife Ar	89.76	341	P	P	02 24 32.0	0.0
YKA				pP	pP	02 25 03.2	+3.0
CASY	Casey	94.06	180	eP	P	02 24 43.5	-8.7
	2.1nm,0.7s,mb4.6						
WB2	Warramunga Arr	134.37	211	ePKPdf	PKPdf	02 30 52.0	-0.4
WRA	Warramunga Arr	134.37	211	PKP	PKPdf	02 30 51.4	-1.1
	0.5nm,0.7s,baz=153,slow=1.8,SNR=3.1						
SONM	Songino Array	151.88	7	PKPbc	PKPbc	02 31 28.7	+0.2
	0.4nm,0.4s,baz=323,slow=2.2,SNR=2.4						

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*ISCJB **04** 02:17:03.0±0.5, 59.02S±0.09×25.5W±0.2, h10^{km}, mb4.1/12, MS3.7/6, Error ellipse: s-maj=16.9km s-min=9.5km az=144.6*
*IDC **04** 02:17:06.2±3.6, 59.01S×25.65W, h20^{km}±21^{km}, mb4.1/12, mb1 4.1/12, mb1mx4.0/20, mbtmp4.1/12, MS3.7/7, Ms1 3.7/7, ms1mx3.5/16, Error ellipse: s-maj=21.3km s-min=17.7km az=45.0*
*NEIC **04** 02:17:08.1±0.3, 58.99S×25.65W, h35^{km}, Error ellipse: s-maj=14.3km s-min=11.2km az=215.0*
ISC 04 02:17:03.8±7.5, **59.0S**±0.1×**25.6W**±0.2, **h3**^{km}±48^{km}, **n31**, σ0^{s}**75**/18, **mb4.1**/12, **MS3.7**/6, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.71	155	e	Pn	02 20 18.4	-0.3
VNA2	Neumayer--Watz	14.11	155	e	Pn	02 20 24.4	+0.3
SNAA	Sanae	15.68	153	e	Pn	02 20 44.3	-0.8
SNAA				eS	Sn	02 23 23.1	-16
PMSA	Palmer Station	18.76	236	LR	LR	02 27 09.0	
	comp=Z,204nm,18.4s,baz=66,slow=32						
USHA	Ushuaia	23.44	262	P	P	02 22 14.5	+0.6
	5.5nm,0.7s,mb4.1,baz=103,slow=15,SNR=7.6						
USHA				LR	LR	02 29 22.5	
	comp=Z,166nm,19.3s,MS3.5,baz=43,slow=31						
QSPA	South Pole Qui	31.21	180	P	P	02 23 24.9	+1.3
	6.4nm,0.6s,mb4.7,baz=202,slow=2.9,SNR=53						
QSPA				PcP	PcP	02 26 17.5	-0.3
	2.4nm,0.9s,baz=328,slow=0.4,SNR=4.3						
PLCA	Paso Flores	33.44	283	P	P	02 23 43.9	+0.4
	3.9nm,1.2s,mb4.2,baz=121,slow=6.4,SNR=3.0						
MAW	Mawson	37.26	141	P	P	02 24 16.5	+0.5
	0.5nm,0.3s,mb3.8,baz=231,slow=14,SNR=3.6						
CPUP	Villa Florida	39.44	312	LR	LR	02 36 44.3	
	comp=Z,50nm,21.6s,MS3.3,baz=299,slow=30						
CFAA	Coronel Fontan	39.56	295	P	P	02 24 35.7	-0.1
	0.7nm,0.7s,mb3.5,baz=150,slow=8.4,SNR=7.7						
BDFB	Brasilia	46.38	330	LR	LR	02 43 38.6	
	comp=Z,47nm,18.4s,MS3.5,baz=194,slow=34						
SIV	San Ignacio	50.25	313	P	P	02 25 59.3	-1.7
	0.6nm,0.8s,mb3.7,baz=198,slow=9.6,SNR=2.8						
TSUM	Tsumeb	50.49	57	P	P	02 26 03.7	+0.9
	1.3nm,0.7s,mb4.1,baz=143,slow=10,SNR=3.6						
LPAZ	La Paz	52.80	305	P	P	02 26 20.3	+0.2
	0.5nm,0.5s,mb3.7,baz=159,slow=10,SNR=5.2						
DBIC	Dimbokro	67.56	22	P	P	02 28 01.3	0.0
	2.7nm,0.8s,mb4.4,baz=216,slow=8.7,SNR=3.7						
DBIC				LR	LR	02 49 31.5	
	comp=Z,58nm,21.8s,MS3.8,baz=109,slow=29						
DBIC	Dimbokro	67.56	22	P	P	02 28 01.3	0.0
DBIC				LR	LR	02 49 31.5	
TORD	Torodi Ar. Bea	75.27	28	P	P	02 28 48.0	+0.3
	3.0nm,0.6s,mb4.4,baz=198,slow=6.3,SNR=70						
TORD	Torodi Ar. Bea	75.27	28	P	P	02 28 48.0	+0.2
KMBO	Kilima Mbogo	75.37	67	LR	LR	03 00 11.7	
	comp=Z,46nm,19.1s,MS3.8,baz=219,slow=34						
STKA	Stephens Creek	88.81	169	P	P	02 29 58.6	-0.2
	4.2nm,0.9s,mb4.8,baz=113,slow=5.8,SNR=5.0						
STKA				LR	LR	03 07 24.7	
	comp=Z,128nm,19.9s,MS4.3,baz=205,slow=34						
ASAR	Alice Springs	95.89	161	P	P	02 30 30.3	-1.3
	1.1nm,0.7s,mb4.4,baz=185,slow=4.4,SNR=12						
QUA2	Belchertown	108.10	325	ePKP	PKiKP	02 35 30.3	-1.7
HNR	Honiara	111.62	186	ePKP	PKiKP	02 35 34.9	-4.7
KKM	Kota Kinabalu	119.59	135	ePKPdf	PKPdf	02 35 53.9	-1.0
PDAR	Pinedale Array	122.61	300	PKP	PKPdf	02 35 57.5	-2.2
	0.2nm,0.5s,baz=112,slow=6.3,SNR=4.1						
ULM	Lac du Bonnet	122.97	314	PKP	PKPdf	02 35 58.3	-1.8
	1.8nm,0.5s,baz=232,slow=5.2,SNR=5.3						
NVAR	Mina Array Bea	123.30	290	PKP	PKPdf	02 36 02.1	+1.0
	0.3nm,0.5s,baz=117,slow=3.1,SNR=4.2						
BMO	Blue Mountains	127.78	296	ePKPdf	PKPdf	02 36 08.2	-1.3
ARCES	ARCESS Array B	133.39	22	PKP	PKPdf	02 36 18.6	-0.8
	1.1nm,0.6s,baz=210,slow=1.8,SNR=8.5						
ARCES				SKPbc	SKPbc	02 39 45.3	-2.8
	2.0nm,1.1s,baz=204,slow=2.7,SNR=5.6						
YKA	Yellowknife Ar	138.93	315	PKP	PKPdf	02 36 29.0	-0.8
	2.5nm,0.6s,baz=128,slow=2.5,SNR=31						
SONM	Songino Array	149.95	90	PKPbc	PKPbc	02 36 52.7	-1.5
	1.3nm,0.6s,baz=242,slow=3.2,SNR=4.7						

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*ATH **04** 02:31:27.4, 38.00N×26.10E, h10^{km}, MD3.1/3*
*ISCJB **04** 02:31:29.7±0.9, 38.21N±0.02×26.80E±0.05, h1^{km}±6^{km}, Error ellipse: s-maj=6.9km s-min=4.1km az=177.7*
*ISK **04** 02:31:30.5, 38.23N×26.87E, h10^{km}, MD2.9*
*DDA **04** 02:31:30.7, 38.20N×26.87E, h7^{km}±3^{km}, Md2.9*
*CSEM **04** 02:31:30.2±0.1, 38.22N×26.88E, h8^{km}, MD2.9, Error ellipse: s-maj=2.0km s-min=1.3km az=93.0*
ISC 04 02:31:30.4±0.7, **38.20N**±0.02×**26.80E**±0.05, **h7**^{km}±5^{km}, **n18**, σ0^{s}**69**/29, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.26	46	PG	Pg	02 31 35.0	-0.5
BLCB				SG	Sg	02 31 38.7	-0.3
IZM	Izmir	0.41	61	PG	Pg	02 31 38.2	-0.1
IZM				SG	Sg	02 31 43.0	-0.7
KDAG	Bornova	0.42	61	i P	Pg	02 31 38.4	0.0
KDAG				i S	Sg	02 31 44.3	+0.4
SMG	Samos	0.49	177	ePB	Pg	02 31 39.8	-0.1
GCAM	G?zelcaml?	0.61	146	i P	Pg	02 31 42.0	0.0
GCAM				i S	Sg	02 31 50.5	+0.6
AYDN	Tasoluk	1.01	122	i P	Pg	02 31 49.5	-0.2
AYDN				i S	Sg	02 32 03.0	+0.2
AKS	Akhisar	1.04	49	ePG	Pg	02 31 49.7	-0.7
AKS				eSG	Sg	02 32 03.8	0.0
AYVA	Ayvalik	1.11	355	i P	Pg	02 31 51.8	+0.1
AYVA				i S	Sg	02 32 08.1	+2.1
PRK	Paraskevi	1.12	338	ePB	Pb	02 31 51.0	-1.1
BODT	Bodrum	1.21	160	ePN	Pn	02 31 54.1	+0.4
BDRM	Kayabasi	1.24	156	i P	Pb	02 31 54.1	-0.1
BDRM				i S	Sg	02 32 10.6	+0.3
KULA	Kula-Manisa	1.49	77	ePN	Pn	02 31 57.3	-0.3
KULA				eSN	Sn	02 32 16.6	-0.7
YER	Yerkesik	1.59	132	ePN	Pn	02 31 59.1	+0.2
BALY	Balya	1.66	22	i P	Pn	02 31 58.8	-1.1
BALY				i S	Sg	02 32 24.4	+0.6
BALB	Balikesir	1.66	30	ePN	Pn	02 31 59.7	-0.3
EZN	Ezine	1.66	347	ePN	Pn	02 32 00.1	+0.1
EZN	Ezine	1.66	347	ePn	Pn	02 32 00.0	0.0
DEMI	Demirci	1.72	60	i P	Pg	02 32 03.2	-0.1
DEMI				i S	Sn	02 32 25.1	+2.2

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*TRN **04** 02:55:37.8, 19.08N×64.40W, h52^{km}*
*RSPR **04** 02:55:39.2, 19.14N×64.37W, h54^{km}±4^{km}, MD3.5/8, MD3.5/8*
*NEIC **04** 02:55:39.2, 19.14N×64.37W, h54^{km}, MD3.5(RSPR), After RSPR.*
ISC 04 02:55:38.6±1.8, **19.1N**±0.2×**64.4W**±0.1, **h56**^{km}±28^{km}, **n12**, σ0^{s}**34**/21, **11C-1D**, **Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.39	175⇓	eP	Pn	02 55 48.7	-0.4
ABV				eS	Sn	02 55 56.9	+0.3
TBVI	Tortola	0.74	199⇑	eP	Pn	02 55 53.0	-0.1
TBVI	Tortola	0.74	199⇑	eP	Pn	02 55 53.1	0.0
TBVI				eS	Sn	02 56 03.6	0.0
TBVI	Tortola	0.74	199⇑	eP	Pn	02 55 53.0	-0.1
TBVI				eS	Sn	02 56 03.6	0.0
MTP	Monte Pirata	1.52	228⇑	eP	Pn	02 56 03.1	-0.3
MTP				eS	Sn	02 56 22.3	+0.2
CBYP	Canovanas	1.65	240⇑	eP	Pn	02 56 05.2	0.0
CBYP				eS	Sn	02 56 24.8	-0.4
HUMP	Col San Antoni	1.71	236⇑	eP	Pn	02 56 06.0	-0.1
HUMP				eS	Sn	02 56 26.1	-0.7
HUMP	Col San Antoni	1.71	236⇑	eP	Pn	02 56 06.0	-0.1
HUMP				eS	Sn	02 56 26.1	-0.7
CPD	Cerro la Pandu	1.82	234⇑	eP	Pn	02 56 07.9	+0.3
CPD				eS	Sn	02 56 30.1	+0.6
SJG	San Juan	1.97	240⇑	eP	Pn	02 56 09.5	0.0
AOPR	Arecibo Observ	2.39	252⇑	eP	Pn	02 56 15.1	-0.2
AOPR				eS	Sn	02 56 43.6	+0.1
CRPR	Cabo Rojo, PR	2.83	247⇑	eP	Pn	02 56 21.9	+0.6

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*IDC **04** 02:56:46.3±4.3, 34.83N×5.34W, h0^{km}, mb2.9/1, mb1 3.3/3, mb1mx3.1/23, mbtmp3.0/3, ML3.3/1, Error ellipse: s-maj=129.1km s-min=27.9km az=94.0*
*ISCJB **04** 02:56:47.7±0.2, 34.92N±0.01×5.52W±0.02, h10^{km}, Error ellipse: s-maj=2.6km s-min=2.0km az=177.5*
*NEIC **04** 02:56:47.5±0.9, 34.76N×5.50W, h10^{km}, MG3.5(MDD), Error ellipse: s-maj=10.3km s-min=7.8km az=216.0*
*CSEM **04** 02:56:48.2±0.1, 34.81N×5.31W, h10^{km}, ML3.1/9, Error ellipse: s-maj=2.2km s-min=1.9km az=94.0*
*INMG **04** 02:56:51.0±1.4, 35.00N×5.59W, h0^{km}, ML2.4, Error ellipse: s-maj=4.2km s-min=3.4km az=128.0*
*MDD **04** 02:56:51.5±0.7, 34.89N×5.42W, h18^{km}±6^{km}, mbLg2.5/22, Error ellipse: s-maj=4.3km s-min=3.1km az=88.0, PRIMO*
*CNRM **04** 02:56:52.3, 34.86N×5.33W, h17^{km}, MD3.8*
ISC 04 02:56:48.9±0.2, **34.92N**±0.01×**5.47W**±0.02, **h10**^{km}, **n114**, σ1^{s}**35**/212, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGT	Taghat	0.91	158	i P	Pg	02 57 08.5	+2.1
TGT				i S	Sg	02 57 19.5	+1.2
ECEU	Ceuta	0.98	4	P	Pg	02 57 10.7	+2.9
	36nm,0.4s,SNR=31						
ECEU				S	Sg	02 57 24.3	+3.7
	103nm,0.6s,SNR=15						
ECEU	Ceuta	0.98	4	P	Pg	02 57 10.7	+2.9
	36nm,0.4s,SNR=31						
ECEU				S	Sg	02 57 26.7	+6.1
	282nm,1.3s,SNR=15						
MPAL	Palemas	1.29	76	i P	Pn	02 57 13.0	0.0
MPAL				i S	Sb	02 57 30.5	+0.6
TZK	Tazeka	1.34	127	i P	Pn	02 57 12.5	-1.2
TZK				i S	Sb	02 57 29.0	-2.4
TOU	Touzarine	1.41	88	i P	Pn	02 57 13.0	-1.6
TOU				i S	Sn	02 57 31.0	-2.2
IFR	Ifrane	1.42	168	P	Pn	02 57 13.0	-1.8
IFR				S	Sn	02 57 30.5	-3.1
RTC	Rabat Centre	1.47	231	i P	Pn	02 57 18.0	+2.5
RTC				i S	Sn	02 57 36.0	+1.2
MIF	Mishlifen	1.52	172	i P	Pn	02 57 16.0	-0.1
MIF				i S	Sn	02 57 35.0	-0.8
EJIF	Jimena Fronter	1.53	0	P	Pn	02 57 18.4	+2.1
	40nm,0.6s,SNR=7.9						
EJIF				S	Sn	02 57 39.8	+3.6
	62nm,0.7s,SNR=4.0						
EJIF	Jimena Fronter	1.53	0	P	Pn	02 57 18.1	+1.8
	40nm,0.6s,SNR=7.9						
EJIF				S	Sn	02 57 42.0	+5.7
	62nm,0.7s,SNR=4.0						
EJIF	Jimena Fronter	1.53	0	P	Pn	02 57 18.1	+1.8
EJIF				S	Sn	02 57 42.0	+5.7
REAL	Reales	1.58	8	P	Pn	02 57 17.0	+0.1
REAL				S	Sn	02 57 24.0	-13
REAL	Reales	1.58	8	i P	Pn	02 57 17.0	+0.1
EMIJ	Mijas	1.74	19	P	Pn	02 57 19.2	+0.1
	6.0nm,0.3s,SNR=16						
EMIJ				S	Sn	02 57 41.1	-0.3
	20nm,0.4s,SNR=4.0						
EMIJ	Mijas	1.74	19	P	Pn	02 57 19.2	0.0
	5.6nm,0.4s,SNR=16						
EMIJ				S	Sn	02 57 44.5	+3.1
	29nm,0.5s,SNR=4.9						
EMIJ	Mijas	1.74	19	P	Pn	02 57 19.2	+0.1
EMIJ				S	Sn	02 57 44.5	+3.1
CZD	Col de Zad	1.91	169	i P	Pn	02 57 23.0	+1.5
CZD				i S	Sn	02 57 43.0	-2.6
ESPR	Espera	1.97	351	P	Pn	02 57 22.8	+0.5
	0.4nm,0.1s,SNR=9.0						
ESPR				S	Sn	02 57 48.3	+1.1
	17nm,0.4s,SNR=7.9						
ESPR	Espera	1.97	351	P	Pn	02 57 22.8	+0.4
	3.1nm,0.7s,SNR=9.0						
LIJA	Lijar	1.99	2	P	Pn	02 57 23.0	+0.5
LIJA				S	Sn	02 57 28.0	-19
LIJA	Lijar	1.99	2	eP	Pn	02 57 23.0	+0.5
EALB	Alboran	2.24	62	P	Pn	02 57 25.1	-0.8
	6.1nm,0.2s,SNR=7.3						
EALB				S	Sn	02 57 52.8	-0.8
	50nm,0.6s						
EALB	Alboran	2.24	62	P	Pn	02 57 25.1	-0.9
	28nm,0.6s,SNR=7.3						
EALB				S	Sn	02 57 52.8	-0.8
	50nm,0.6s						
ZAI	Zaio	2.24	88	eP	Pn	02 57 26.0	0.0
ZAI				i S	Sn	02 57 49.0	-4.7
AVE	Averroes	2.28	226	P	Pn	02 57 28.8	+2.2
AVE				S	Sn	02 57 57.2	+2.5
KIB	El Ksiba	2.38	192	P	Pn	02 57 30.0	+2.0
KIB				S	Sn	02 57 56.0	-1.2
EGUA	Guajares	2.46	38	P	Pn	02 57 28.2	-0.9
	17nm,0.4s,SNR=7.9						
EGUA				S	Sn	02 58 01.4	+2.3
	142nm,0.9s,SNR=7.9						
ELOJ	Sierra Loja	2.47	25	P	Pn	02 57 32.0	+2.8
	3.3nm,0.4s,SNR=11						
ELOJ				S	Sn	02 58 00.2	+0.8
	10nm,0.6s,SNR=7.9						
ELOJ	Sierra Loja	2.47	25	P	Pn	02 57 30.5	+1.3
	3.3nm,0.4s,SNR=11						
ELOJ	Sierra Loja	2.47	25	P	Pn	02 57 30.5	+1.3
ELOJ				S	Sn	02 58 05.5	+6.1
EQUE	Quentar	2.81	35	P	Pn	02 57 34.6	+0.7
	3.2nm,0.4s,SNR=13						
EQUE				S	Sn	02 58 09.7	+1.8
	11nm,0.5s,SNR=4.7						
EQUE	Quentar	2.81	35	P	Pn	02 57 34.6	+0.7
	3.2nm,0.4s,SNR=13						
EQUE				S	Sn	02 58 09.7	+1.8
	11nm,0.5s,SNR=4.7						
ECOG	Cogollos-Vega	2.82	33	P	Pn	02 57 36.2	+2.3
	5.3nm,0.4s,SNR=7.9						
ECOG				S	Sn	02 58 08.2	+0.3
	10nm,0.8s,SNR=7.9						
ECOG	Cogollos-Vega	2.82	33	P	Pn	02 57 35.6	+1.7
	5.3nm,0.4s,SNR=7.9						
ECOG				S	Sn	02 58 08.2	+0.3
	10nm,0.8s,SNR=7.9						
ECOG	Cogollos-Vega	2.82	33	P	Pn	02 57 35.6	+1.6
ECOG				S	Sn	02 58 08.2	+0.3
EBER	Berja	2.88	46	P	Pn	02 57 34.6	-0.2
	6.2nm,0.3s,SNR=26						
EBER				S	Sn	02 58 09.7	+0.2
	78nm,0.7s,SNR=4.7						
EBER	Berja	2.88	46	P	Pn	02 57 34.6	-0.2
	6.2nm,0.3s,SNR=26						
EBER				S	Sn	02 58 10.3	+0.8
	78nm,0.7s,SNR=4.7						
EBER	Berja	2.88	46	P	Pn	02 57 34.6	-0.2
EBER				S	Sn	02 58 10.3	+0.8
EMIN	Mina Concepcio	3.01	342	P	Pn	02 57 36.5	-0.1
	0.3nm,0.1s,SNR=10.0						
EMIN				S	Sn	02 58 12.9	+0.3
	1.9nm,0.1s,SNR=6.1						
EMIN	Mina Concepcio	3.01	342	P	Pn	02 57 36.5	-0.1
	0.3nm,0.1s,SNR=10.0						
EMIN				S	Sn	02 58 13.9	+1.2
	4.8nm,0.4s,SNR=6.1						
EMIN	Mina Concepcio	3.01	342	P	Pn	02 57 36.5	-0.1
EMIN				S	Sn	02 58 13.9	+1.3
ZFT	Errachidia	3.02	162	i P	Pn	02 57 35.0	-1.8
ZFT				i S	Sn	02 58 10.0	-3.0
PBDV	Barranco-do-Ve	3.06	320	ePn	Pn	02 57 37.5	+0.2
PBDV				eSn	Sn	02 58 12.7	-1.3
PBDV				A		02 58 23.9	
	8.8nm,0.6s						
PBDV	Barranco-do-Ve	3.06	320	ePn	Pn	02 57 37.5	+0.2
PBDV				eSn	Sn	02 58 12.7	-1.3
	8.8nm,0.6s						
PVAQ	Vaqueiros	3.08	324	ePn	Pn	02 57 37.5	0.0
PVAQ				eSn	Sn	02 58 12.8	-1.6
PVAQ				A		02 58 18.8	
	15nm,0.5s						
PVAQ	Vaqueiros	3.08	324	ePn	Pn	02 57 37.5	0.0
PVAQ				eSn	Sn	02 58 12.8	-1.6
	15nm,0.5s						
EGRO	El Granado	3.08	329	P	Pn	02 57 37.7	+0.2
	1.2nm,0.1s,SNR=25						
EGRO				S	Sn	02 58 13.7	-0.8
	14nm,0.2s,SNR=6.3						
EGRO	El Granado	3.08	329	P	Pn	02 57 37.8	+0.2
	1.2nm,0.1s,SNR=25						
EGRO				S	Sn	02 58 13.6	-0.8
EGRO	El Granado	3.08	329	P	Pn	02 57 37.8	+0.3
EGRO				S	Sn	02 58 13.7	-0.8
ECAB	El Cabril	3.15	1	P	Pn	02 57 41.0	+2.4
	0.8nm,0.0s,SNR=7.3						
ECAB				S	Sn	02 58 15.1	-1.2
	33nm,0.5s,SNR=6.6						
ECAB	El Cabril	3.15	1	P	Pn	02 57 40.5	+1.9
	4.6nm,0.6s,SNR=7.3						
ECAB				S	Sn	02 58 15.1	-1.2
	33nm,0.5s,SNR=6.6						
ECAB	El Cabril	3.15	1	P	Pn	02 57 40.5	+1.9
ECAB				S	Sn	02 58 15.1	-1.2
EADA	Adamuz	3.32	12	P	Pn	02 57 42.0	+1.1
	0.2nm,0.1s,SNR=7.6						
EADA				S	Sn	02 58 20.7	+0.2
	8.4nm,0.3s,SNR=4.8						
EADA	Adamuz	3.32	12	P	Pn	02 57 42.1	+1.2
	0.2nm,0.1s,SNR=7.6						
EADA				S	Sn	02 58 20.7	+0.2
	8.4nm,0.3s,SNR=4.8						
EADA	Adamuz	3.32	12	P	Pn	02 57 42.1	+1.2
EADA				S	Sn	02 58 20.7	+0.2
EQES	Quesada	3.47	33	P	Pn	02 57 44.2	+1.3
	6.0nm,0.5s,SNR=22						
EQES				S	Sn	02 58 24.1	0.0
	9.6nm,0.5s,SNR=4.6						
EQES	Quesada	3.47	33	P	Pn	02 57 44.2	+1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.9nm,0.3s,SNR=22						
EQES				S	Sn	02 58 25.0	+0.9
	26nm,0.9s,SNR=4.6						
EQES	Quesada	3.47	33	P	Pn	02 57 44.2	+1.3
EQES				S	Sn	02 58 25.0	+0.9
PBAR	Barrancos	3.49	339	ePn	Pn	02 57 43.7	+0.5
PBAR				eSn	Sn	02 58 23.7	-0.9
PBAR				A		02 58 29.4	
	7.7nm,0.4s						
PBAR	Barrancos	3.49	339	ePn	Pn	02 57 43.7	+0.5
PBAR				eSn	Sn	02 58 23.7	-0.9
	7.7nm,0.4s						
PFVI	Vila Bisbo	3.51	310	ePn	Pn	02 57 43.0	-0.4
PFVI				eSn	Sn	02 58 23.5	-1.5
PFVI				A		02 58 36.9	
	6.5nm,0.5s						
PFVI	Vila Bisbo	3.51	310	ePn	Pn	02 57 43.0	-0.4
PFVI				eSn	Sn	02 58 23.5	-1.5
	6.5nm,0.5s						
MORF	Marmelete	3.51	314	ePn	Pn	02 57 43.2	-0.3
MORF				eSn	Sn	02 58 23.1	-2.0
MORF				A		02 58 28.5	
	5.4nm,0.1s						
MORF	Marmelete	3.51	314	ePn	Pn	02 57 43.2	-0.3
MORF				eSn	Sn	02 58 23.1	-2.0
	5.4nm,0.1s						
EBAN	Banos Encina	3.51	22	P	Pn	02 57 45.7	+2.1
	2.5nm,0.2s,SNR=7.9						
EBAN				S	Sn	02 58 25.3	+0.2
	0.6nm,0.1s,SNR=7.9						
EBAN	Banos Encina	3.51	22	P	Pn	02 57 45.2	+1.7
	0.4nm,0.1s,SNR=7.9						
EBAN				S	Sn	02 58 26.2	+1.0
	0.6nm,0.2s,SNR=7.9						
EBAN	Banos Encina	3.51	22	P	Pn	02 57 45.2	+1.6
EBAN				S	Sn	02 58 26.2	+1.0
PBEJ	Beja	3.66	329	ePn	Pn	02 57 46.1	+0.6
PBEJ				eSn	Sn	02 58 27.7	-1.0
PBEJ				A		02 58 32.9	
	4.9nm,0.5s						
PBEJ	Beja	3.66	329	ePn	Pn	02 57 46.1	+0.6
PBEJ				eSn	Sn	02 58 27.7	-1.0
	4.9nm,0.5s						
EHUE	Huescar	3.71	38	P	Pn	02 57 48.3	+2.0
	0.9nm,0.3s,SNR=7.9						
EHUE				S	Sn	02 58 28.8	-1.2
	1.4nm,0.4s,SNR=4.0						
EHUE	Huescar	3.71	38	P	Pn	02 57 48.1	+1.9
	0.2nm,0.2s,SNR=7.9						
EHUE				S	Sn	02 58 31.8	+1.8
	5.2nm,0.7s,SNR=7.9						
EHUE	Huescar	3.71	38	P	Pn	02 57 48.1	+1.9
EHUE				S	Sn	02 58 31.8	+1.9
PTEO	Sao Teotonio	3.72	316	ePn	Pn	02 57 46.1	-0.2
PTEO				eSn	Sn	02 58 28.7	-1.4
PTEO				A		02 58 44.5	
	6.5nm,0.6s						
PTEO	Sao Teotonio	3.72	316	ePn	Pn	02 57 46.1	-0.2
PTEO				eSn	Sn	02 58 28.7	-1.4
	6.5nm,0.6s						
EBAD	Badajoz	4.03	343	P	Pn	02 57 50.7	+0.1
	0.6nm,0.1s,SNR=12						
EBAD				S	Sn	02 58 36.8	-1.0
	5.5nm,0.2s,SNR=5.0						
EBAD	Badajoz	4.03	343	P	Pn	02 57 51.3	+0.7
	0.6nm,0.1s,SNR=12						
EBAD				S	Sn	02 58 36.9	-0.9
	5.5nm,0.2s,SNR=5.0						
EBAD	Badajoz	4.03	343	P	Pn	02 57 51.3	+0.7
EBAD				S	Sn	02 58 36.9	-0.9
EVO	Evora	4.15	331	eS	Sn	02 58 40.1	-0.7
EVO				A		02 58 41.8	
	5.4nm,0.2s						
EVO	Evora	4.15	331	eS	Sn	02 58 40.1	-0.7
	5.4nm,0.2s						
OUK	Oukaimeden	4.21	209	eP	Pn	02 57 55.0	+1.9
OUK				i S	Sn	02 58 42.0	-0.3
PESTR	Estremoz	4.29	337	ePn	Pn	02 57 55.9	+1.6
PESTR				eSn	Sn	02 58 43.3	-1.1
PESTR				A		02 58 46.0	
	2.8nm,0.4s						
PESTR	Estremoz	4.29	337	ePn	Pn	02 57 55.9	+1.6
PESTR				eSn	Sn	02 58 43.3	-1.1
	2.8nm,0.4s						
CIA	Chichaoua	4.33	220	i P	Pn	02 57 56.0	+1.2
CIA				i S	Sn	02 58 45.0	-0.3
EVIA	Vianos	4.41	32	P	Pn	02 57 55.9	0.0
	0.6nm,0.1s,SNR=7.9						
EVIA				S	Sn	02 58 46.1	-1.2
	3.5nm,0.4s,SNR=7.9						
EVIA	Vianos	4.41	32	P	Pn	02 57 56.9	+1.0
	0.5nm,0.2s,SNR=7.9						
EVIA				S	Sn	02 58 46.1	-1.2
	0.5nm,0.2s,SNR=7.9						
EVIA	Vianos	4.41	32	P	Pn	02 57 56.9	+1.0
EVIA				S	Sn	02 58 46.1	-1.2
EMUR	La Murta	4.49	48	P	Pn	02 57 58.0	+1.1
	3.3nm,0.3s,SNR=7.9						
EMUR				S	Sn	02 58 47.2	-2.0
	7.2nm,0.5s,SNR=4.0						
EMUR	La Murta	4.49	48	P	Pn	02 57 58.0	+1.0
	0.4nm,0.2s,SNR=7.9						
EMUR				S	Sn	02 58 47.2	-2.0
	6.8nm,0.5s,SNR=7.9						
JHA	Jbel Lahdid	4.60	228	eP	Pn	02 57 59.0	+0.5
JHA				i S	Sn	02 58 51.0	-1.0
PMRV	Marv??o	4.76	342	ePn	Pn	02 58 01.5	+0.9
PMRV				eSn	Sn	02 58 54.4	-1.4
PMRV				A		02 58 58.7	
	4.4nm,0.7s						
PMRV	Marv??o	4.76	342	ePn	Pn	02 58 01.5	+0.9
PMRV				eSn	Sn	02 58 54.4	-1.4
	4.4nm,0.7s						
ETOB	Tobarra	4.87	39	P	Pn	02 58 03.4	+1.2
	1.6nm,0.4s,SNR=7.7						
ETOB				S	Sn	02 58 56.8	-1.9
	60nm,1.5s,SNR=7.9						
ETOB	Tobarra	4.87	39	P	Pn	02 58 03.5	+1.3
	1.6nm,0.4s,SNR=7.7						
ETOB				S	Sn	02 58 58.1	-0.6
	8.7nm,1.2s,SNR=7.9						
ESDC	Sonseca Array	4.90	14	Pn	Pn	02 58 02.9	+0.3
	0.5nm,0.3s,baz=198,slow=13,SNR=7.3						
ESDC				Sn	Sn	02 58 56.6	-2.7
	1.4nm,0.3s,baz=198,slow=23,SNR=9.2						
ESDC	Sonseca Array	4.90	14	P	Pn	02 58 02.9	+0.3
	0.3nm,0.3s,baz=197,slow=13,SNR=5.3						
GUD	Guadarrama	5.81	10	P	Pn	02 58 14.3	-0.8
	0.5nm,0.2s,SNR=4.0						
GUD				S	Sn	02 59 20.3	-1.5
	0.8nm,0.2s,SNR=7.9						
GUD	Guadarrama	5.81	10	P	Pn	02 58 15.5	+0.4
	0.2nm,0.2s,SNR=7.9						
GUD	Guadarrama	5.81	10	P	Pn	02 58 15.5	+0.4
GUD				S	Sn	02 59 20.3	-1.5
ETOR	Torete	6.48	24	P	Pn	02 58 24.4	+0.1
	5.6nm,0.3s,SNR=8.4						
ETOR				S	Sn	02 59 36.0	-2.3
	0.6nm,0.1s,SNR=4.0						
ETOR	Torete	6.48	24	P	Pn	02 58 24.4	+0.1
ETOR				S	Sn	02 59 36.0	-2.3
EMOS	Mosqueruela	6.73	35	P	Pn	02 58 28.0	+0.3
	0.0nm,0.0s,SNR=7.9						
EMOS				S	Sn	02 59 41.7	-2.6
	0.1nm,0.1s,SNR=4.0						
EMOS	Mosqueruela	6.73	35	P	Pn	02 58 28.7	+1.0
	0.3nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	6.73	35	P	Pn	02 58 28.7	+1.0
ECAL	Calabor	7.08	352	P	Pn	02 58 33.5	+0.9
	0.1nm,0.1s,SNR=7.9						
ECAL				S	Sn	02 59 49.7	-3.4
	1.4nm,0.2s,SNR=7.9						
ECAL	Calabor	7.08	352	P	Pn	02 58 33.1	+0.5
	0.6nm,0.3s,SNR=7.9						
ECAL	Calabor	7.08	352	P	Pn	02 58 33.1	+0.5
ECAL				S	Sn	02 59 49.7	-3.4
ELOB	Lobios	7.23	344	P	Pn	02 58 35.3	+0.7
	0.2nm,0.1s,SNR=7.9						
ELOB				S	Sn	02 59 53.0	-3.7
	0.1nm,0.1s,SNR=7.9						
ELOB	Lobios	7.23	344	P	Pn	02 58 35.3	+0.7
ELOB	Lobios	7.23	344	P	Pn	02 58 35.3	+0.7
ELOB				S	Sn	02 59 54.1	-2.7
GERES	GERESS Array B	19.86	40	P	Pn	03 01 18.3	-3.2
	0.1nm,0.3s,baz=218,slow=12,SNR=4.3						
GERES	GERESS Array B	19.86	40	P	Pn	03 01 18.3	-3.2
TORD	Torodi Ar. Bea	22.62	162	P	P	03 01 47.7	-2.2
	0.2nm,0.5s,baz=344,slow=12,SNR=9.1						
TORD	Torodi Ar. Bea	22.62	162	P	P	03 01 47.7	-2.2

*IDC **04** 03:25:17.2±0.7, 34.06N×81.72E, h0km, mb3.9/12, mb1 4.1/14, mb1mx4.0/24, mbtmp4.0/14, ML3.5/2, MS3.1/4, Ms1 3.2/4, ms1mx2.7/29, Error ellipse: s-maj=23.9km s-min=15.9km az=53.0*
*MOS **04** 03:25:20.7±1.5, 34.22N×81.86E, h33km, mb4.2/11, Error ellipse: s-maj=21.6km s-min=8.9km az=103.4*
*ISCJB **04** 03:25:23.0±1.0, 34.19N±0.05×81.76E±0.07, h53km±11km, mb3.9/13, MS3.1/3, Error ellipse: s-maj=9.7km s-min=9.0km az=149.0*
*NEIC **04** 03:25:23.9±1.9, 34.18N×81.83E, h44km±17km, mb4.1/1, Error ellipse: s-maj=23.5km s-min=14.0km az=215.0*
*BJI **04** 03:25:24.9, 34.31N×81.90E, h49km, mB4.6, mb3.8, ML3.5, Ms3.8, Msz3.4*
ISC 04 03:25:25.4±0.7, **34.21N**±0.05×**81.78E**±0.07, **h61**km±8km, **n55, σ1s03**/50, **mb3.9**/13, **1C, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DDI	Dehra Dun	5.00	220	ex	x	03 26 42.0	
DDI				ex	x	03 28 08.4	
THN	Thein Dam	5.38	252	eP	Pn	03 26 41.2	-1.8
NDI	New Delhi	6.75	216	eP	Pn	03 27 02.0	+0.2
CEP	Cherat	8.20	270	P	Pn	03 27 21.5	-0.2
CEP				S	Sn	03 29 00.0	+7.1
THW	Thamme Wali	8.50	263	P	Pn	03 27 25.7	0.0
ULHL	Ulahol	9.12	333	P	Pn	03 27 38.0	+3.8
	SNR=8.9						
LSA	Lhasa	9.14	117	P	Pn	03 27 36.0	+1.5
UCH	Uchtor	9.83	327	P	Pn	03 27 44.4	+0.5
	SNR=20						
UCH	Uchtor	9.83	327	ePn	Pn	03 27 44.3	+0.4
	15nm,0.9s						
TKM2	Tokmak 2	9.95	333	eP	Pn	03 27 46.0	+0.6
TKM2				pmax	pmax		
	comp=Z,29nm,1.2s						
TKM2	Tokmak 2	9.95	333	P	Pn	03 27 50.9	+5.5
	SNR=14						
TKM2	Tokmak 2	9.95	333	ePn	Pn	03 27 46.0	+0.5
	comp=Z,29nm,1.2s						
AML	Almayashu	10.14	324	P	Pn	03 27 52.0	+3.9
	SNR=7.1						
AML	Almayashu	10.14	324	ePn	Pn	03 27 48.3	+0.2
	comp=Z,9.7nm,0.8s						
FRU	Bishkek	10.27	329	⇑iP	Pn	03 27 51.0	+1.2
FRU				pmax	pmax		
	comp=Z,100nm,1.9s						
FRU				pmax	pmax		
	comp=E,90nm,2.0s						
CHMS	Chumysh	10.35	330	P	Pn	03 27 55.9	+5.0
	SNR=5.1						
WMQ	Urumqi	10.64	24	P	Pn	03 27 55.5	+0.6
WMQ				AMB	AMB		
	comp=Z,18nm,1.2s						
WMQ				AMB	AMB		
	comp=Z,176nm,3.9s						
WMQ				LR	LR		
	comp=Z,176nm,15.2s						
MKAR	Makanchi Array	12.57	2	Pn	Pn	03 28 18.7	-2.5
	comp=Z,0.5nm,0.3s,baz=183,slow=15,SNR=28						
MKAR	Makanchi Array	12.57	2	P	Pn	03 28 18.7	-2.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GTA	Gaotai	15.34	65	eP	Pn	03 29 03.4	+5.3
GTA				AP	pP	03 29 08.9	-5.6
GTA				XP	sP	03 29 11.6	-11
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	16.65	353	Pn	Pn	03 29 09.8	-4.7
	comp=Z,0.0nm,0.3s,baz=171,slow=12,SNR=18						
KURK				LR	LR	03 36 28.4	
	comp=Z,67nm,18.7s,baz=190,slow=40						
ZAL	Zalesovo	19.83	5	P	Pn	03 29 51.5	-1.4
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	Zalesovo Beam	19.85	5	P	Pn	03 29 51.5	-1.6
	comp=Z,1.8nm,0.7s,baz=195,slow=11,SNR=6.7						
ZALV	Zalesovo Beam	19.85	5	P	Pn	03 29 51.5	-1.6
BVAR	Borovoye Array	20.49	340	P	P	03 29 56.5	-1.4
	comp=Z,11nm,0.9s,baz=144,slow=10,SNR=13						
BVAR	Borovoye Array	20.49	340	P	P	03 29 56.5	-1.4
BVAR				pmax	pmax		
	comp=Z,11nm,0.9s						
NVS	Novosibirsk	20.65	2	eP	P	03 29 59.2	-0.5
CMAR	Chiang Mai Arr	21.92	131	P	P	03 30 12.4	-1.2
	comp=Z,7.3nm,0.8s,mb4.1,baz=312,slow=11,SNR=26						
CMAR	Chiang Mai Arr	21.92	131	P	P	03 30 12.5	-1.1
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN	Xi'an	22.45	83	P	P	03 30 19.7	+0.5
XAN				AP		03 30 29.4	
XAN				XP	sP	03 30 33.9	-6.4
XAN				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb3.9						
XAN				AMB	AMB		
	comp=Z,78nm,4.7s						
ZAK	Zakamensk	22.55	38	eP	P	03 30 18.8	-1.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.6						
SONM	Songino Array	22.90	46	P	P	03 30 25.3	+1.6
	comp=Z,2.0nm,0.9s,mb3.5,baz=246,slow=11,SNR=7.6						
SONM	Songino Array	22.90	46	P	P	03 30 25.3	+1.5
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKTK	Aktyubinsk	23.75	320	P	P	03 30 32.1	+0.3
AKTO	Aktyubinsk	23.75	320	P	P	03 30 32.1	+0.3
	comp=Z,6.5nm,1.0s,mb4.0,baz=108,slow=10,SNR=4.2						
AKTO	Aktyubinsk	23.75	320	P	P	03 30 32.1	+0.3
AKTO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
GNI	Garni	29.95	292	LR	LR	03 45 17.0	
	comp=Z,36nm,19.8s,baz=133,slow=40						
KSRS	Korea Array	37.27	71	LR	LR	03 48 31.0	
	comp=Z,30nm,20.7s,baz=277,slow=37						
ARCES	ARCESS Array B	46.70	336	P	P	03 33 48.8	+1.2
	comp=Z,3.0nm,1.0s,mb4.2,baz=84,slow=5.0,SNR=5.1						
ARCES	ARCESS Array B	46.70	336	P	P	03 33 48.8	+1.2
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRG	Berggiesshubel	50.87	311	eP	P	03 34 21.1	+1.3
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BRG	Berggiesshubel	50.87	311	e(P)	P	03 34 21.1	+1.3
	comp=Z,3.3nm,0.8s,mb4.3						
BRG				e		03 34 25.6	
	comp=Z,3.3nm,0.8s						
GERES	GERESS Array B	51.35	308	P	P	03 34 24.1	+0.7
	comp=Z,1.0nm,0.7s,mb3.8,baz=73,slow=4.5,SNR=6.0						
GERES	GERESS Array B	51.35	308	P	P	03 34 24.1	+0.7
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	51.45	324	LR	LR	03 59 03.3	
	comp=Z,22nm,18.2s,baz=235,slow=39						
WRA	Warramunga Arr	73.49	129	P	P	03 36 51.3	-0.3
	comp=Z,0.6nm,0.3s,mb3.9,baz=326,slow=5.6,SNR=3.9						
WRA	Warramunga Arr	73.49	129	P	P	03 36 51.3	-0.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TORD	Torodi Ar. Bea	74.60	276	P	P	03 36 58.3	0.0
	comp=Z,1.0nm,0.5s,mb4.0,baz=48,slow=5.1,SNR=33						
ASAR	Alice Springs	75.93	132	P	P	03 37 04.9	-0.7
	comp=Z,0.3nm,0.5s,mb3.5,baz=317,slow=6.0,SNR=3.8						
YKA	Yellowknife Ar	82.73	8	P	P	03 37 42.3	+0.2
	comp=Z,0.9nm,0.5s,mb4.0,baz=338,slow=5.5,SNR=9.9						
YKA	Yellowknife Ar	82.73	8	P	P	03 37 42.3	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DBIC	Dimbokro	83.52	274	P	P	03 37 47.4	+0.3
	comp=Z,2.5nm,0.9s,mb4.4,baz=100,slow=6.1,SNR=3.1						
DBIC	Dimbokro	83.52	274	P	P	03 37 47.4	+0.4
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LPAZ	La Paz	147.63	296	PKPbc	PKPbc	03 45 05.6	+2.3
	comp=Z,0.6nm,0.8s,baz=31,slow=5.9,SNR=3.4						
LPAZ	La Paz	147.63	296	PKP2	PKPbc	03 45 05.6	+2.3
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						

*NEIC **04** 03:36:52.1, 30.85S×71.69W, h20km, ML3.7(GUC), After GUC.*
GUC 04 03:36:52.1±0.8, **30.85S**×**71.69W**, **h20**km±4km, **MD3.7, ML3.7, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSCH	La Serena	1.02	23	⇓iP	Pb	03 37 10.3	-0.7
LSCH				i S	Sb	03 37 23.6	-0.3
TLL	Tololo Astrono	1.02	49	⇓iP	Pb	03 37 10.8	-0.4
TLL				i S	Sb	03 37 24.8	+0.6
TLL				AML	AML	03 37 26.8	
	comp=E,1µm,0.3s						
TLL	Tololo Astrono	1.02	49	⇓iP	Pb	03 37 10.8	-0.4
TLL				i S	Sb	03 37 24.8	+0.6
CHNG	Los Chungos	1.04	171	⇑iP	Pb	03 37 10.6	-0.9
CHNG				i S	Sb	03 37 24.0	-0.7
LCO	Las Campanas	2.02	25	eSn	Sn	03 37 51.0	+1.2
VACH	Vallenar	2.41	20	⇑iP	Pn	03 37 31.1	+0.8
VACH				i S	Sn	03 38 01.6	+2.3
VACH				AML	AML	03 38 08.9	
	comp=N,1µm,0.4s						
VACH	Vallenar	2.41	20	⇑iP	Pn	03 37 31.1	+0.8
VACH				i S	Sn	03 38 01.6	+2.3
PEL	Peldehue	2.44	160	i P	Pn	03 37 32.0	+1.1
PEL				i S	Sn	03 38 02.8	+2.7
PEL				AML	AML	03 38 11.4	
	comp=N,663nm,0.5s						
FCH	Farellones	2.74	155	AML	AML	03 38 21.8	
	comp=N,240nm,0.2s						
ANTU	Antumapu	2.86	162	AML	AML	03 38 33.1	
	comp=N,220nm,0.5s						

*ISK **04** 03:52:18.6, 38.07N×37.46E, h5km, MD2.9*
*DDA **04** 03:52:18.8, 38.03N×37.45E, h7km±2km, Md2.9*
*CSEM **04** 03:52:18.0±0.1, 38.06N×37.47E, h2km, MD2.9, Error ellipse: s-maj=1.4km s-min=1.1km az=167.0*
*ISCJB **04** 03:52:19.1±0.6, 38.05N±0.03×37.47E±0.03, h2km±7km, Error ellipse: s-maj=5.0km s-min=4.2km az=149.3*
ISC 04 03:52:19.9±0.5, **38.05N**±0.03×**37.47E**±0.03, **h10**km±6km, **n15, σ0s83**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKCD	Akcadag	0.43	56	i P	Pg	03 52 27.6	-0.7
AKCD				i S	Sg	03 52 36.0	+2.1
GZT	Gaziantep	0.70	174	i P	Pg	03 52 33.6	+0.2
GZT				i S	Sg	03 52 42.3	-0.2
MALT	Malatya	0.80	71	ePG	Pg	03 52 34.3	-1.0
MALT				eSG	Sg	03 52 45.8	+0.2
SARI	SarD1z-Kayseri	0.87	316	ePG	Pg	03 52 35.7	-1.0
SARI				eSG	Sg	03 52 48.6	+0.6
GAZ	Gaziantep	0.90	193	ePG	Pg	03 52 36.8	-0.5
GAZ				eSG	Sg	03 52 49.9	+0.8
DARE	Darende-Malaty	0.93	16	ePG	Pg	03 52 28.7	-9.1
DARE				eSG	Sg	03 52 36.6	-13
ANDN	Andirin	1.01	242	i P	Pg	03 52 37.4	-1.9
ANDN				i S	Sg	03 52 54.1	+1.7
PINB	Pinarbasi	1.04	307	i P	Pg	03 52 39.0	-1.0
PINB				i S	Sg	03 52 54.0	+0.5
URFA	Urfa	1.23	119	ePN	Pn	03 52 43.2	0.0
ELZG	Elazig	1.27	69	i P	Pn	03 52 43.3	-0.4
ELZG				i S	Sb	03 53 00.8	+0.4
KOZT	Kozan	1.42	247	ePN	Pn	03 52 46.0	+0.2
SVRC	Sivrice-ELAZID	1.48	77	ePN	Pn	03 52 46.6	0.0
BNN	Bunyan	1.50	302	ePN	Pn	03 52 47.1	+0.2
PTK	Pertek	1.72	60	ePN	Pn	03 52 50.0	0.0
SVSK	Karacayir	1.90	349	ePN	Pn	03 52 52.5	+0.2

*ISCJB **04** 03:54:07.7±0.7, 23.89S±0.06×66.9W±0.1, h176km±16km, Error ellipse: s-maj=17.8km s-min=9.3km az=3.7*
*IDC **04** 03:54:09.0±1.1, 23.84S×66.96W, h182km±15km, mb3.5/1, mb1 3.4/7, mb1mx3.3/18, mbtmp3.3/7, Error ellipse: s-maj=19.9km s-min=16.4km az=95.0*
*NEIC **04** 03:54:08.4±0.8, 23.95S×66.94W, h185km±14km, mb4.2/1, Error ellipse: s-maj=17.1km s-min=12.2km az=107.0*
ISC 04 03:54:08.7±0.7, **23.90S**±0.06×**66.8W**±0.1, **h166**km±16km, **n14, σ1s20**/17, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.30	304	P	Pn	03 54 49.6	+1.4
	31nm,0.3s,baz=129,slow=8.6,SNR=197						
LVC				S	Sn	03 55 19.1	+0.4
	82nm,0.3s,baz=271,slow=20,SNR=34						
LVC	Limon Verde	2.30	304	P	Pn	03 54 49.6	+1.4
LVC				S	Sn	03 55 19.1	+0.4
LCO	Las Campanas	6.15	213	ePn	Pn	03 55 35.9	-1.5
	4.6nm,0.3s						
LPAZ	La Paz	7.67	351	P	Pn	03 55 58.6	+0.9
	0.3nm,0.3s,baz=163,slow=5.6,SNR=19						
LPAZ				S	Sn	03 57 20.9	-2.8
	baz=233,slow=20,SNR=1.8						
CFAA	Coronel Fontan	7.77	189	P	Pn	03 55 58.6	-0.2
	0.1nm,0.3s,baz=18,slow=16,SNR=3.9						
CFAA				S	Sn	03 57 22.1	-3.8
	0.1nm,0.3s,baz=139,slow=14,SNR=3.3						
CPUP	Villa Florida	8.95	108	P	Pn	03 56 14.5	0.0
	0.1nm,0.3s,baz=290,slow=5.0,SNR=4.2						
CPUP	Villa Florida	8.95	108	P	Pn	03 56 14.5	0.0
SIV	San Ignacio	9.56	36	P	Pn	03 56 21.8	-0.9
	0.8nm,0.3s,baz=242,slow=11,SNR=27						
SIV				S	Sn	03 58 00.8	-8.1
	baz=217,slow=14,SNR=3.1						
PLCA	Paso Flores	17.07	190	P	Pn	03 57 58.2	+0.9
	0.1nm,0.3s,baz=3.6,slow=12,SNR=3.6						
PLCA	Paso Flores	17.07	190	P	Pn	03 57 58.2	+0.9
BDFB	Brasilia	19.51	69	P	P	03 58 25.0	+1.7
	0.9nm,0.3s,baz=234,slow=12,SNR=12						
TORD	Torodi Ar. Bea	76.40	69	P	P	04 05 39.5	-0.6
	0.5nm,0.4s,baz=260,slow=5.9,SNR=32						
WRA	Warramunga Arr	131.78	207	PKP	PKPdf	04 12 58.8	-3.9
	0.5nm,0.9s,baz=154,slow=1.8,SNR=3.3						
WRA	Warramunga Arr	131.78	207	PKP	PKPdf	04 12 58.8	-3.9

*ISCJB **04** 04:33:04.7±0.5, 31.03N±0.05×50.17E±0.07, h10km, Error ellipse: s-maj=8.9km s-min=6.7km az=36.0*
*CSEM **04** 04:33:04.6±0.1, 31.06N×50.09E, h16km, ML3.3, Error ellipse: s-maj=4.5km s-min=2.3km az=51.0*
*THR **04** 04:33:04.6±0.4, 31.06N×50.11E, h18km±6km, ML3.3*
ISC 04 04:33:06.0±0.5, **31.07N**±0.05×**50.12E**±0.07, **h10**km, **n17, σ0s62**/19, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.53	313	ePg	Pn	04 33 32.7	-0.7
MIB	Mutribah	2.71	243	eP	Pn	04 33 49.5	-0.1
	baz=239						
MIB				AML	AML	04 34 34.6	
	comp=Z,130nm,0.7s,baz=239						
KBD	Kabd	2.83	229	eP	Pn	04 33 52.1	+0.9
	baz=223						
KBD				AML	AML	04 34 35.6	
	comp=Z,39nm,0.3s,baz=223						
NASN	Na'in	2.86	52	ePn	Pn	04 33 52.0	+0.2
NAY	Al-Naaiem	3.08	235	eP	Pn	04 33 55.4	+0.7
	baz=230						
NAY				AML	AML	04 34 47.4	
	comp=Z,33nm,0.4s,baz=230						
RDF	Al-Radifah	3.09	227	eP	Pn	04 33 55.7	+0.9
	baz=222						
RDF				AML	AML	04 34 42.2	
	comp=Z,84nm,0.4s,baz=222						
RST	Umm Al-Ruwaisa	3.12	241	eP	Pn	04 33 55.5	+0.3
	baz=237						
KFJS		3.44	214	P	Pn	04 33 60.0	+0.3
ASAO	Ashtian	3.47	359	ePn	Pn	04 34 00.2	+0.2
ASAO				eSg	Sg	04 34 53.2	-4.3
ASAO				AML	AML	04 34 59.5	
	comp=N,52nm,0.7s						
ASAO				AML	AML	04 35 06.0	
	comp=E,61nm,0.6s						
ASAO	Ashtian	3.47	359	ePn	Pn	04 34 00.2	+0.2
	SNR=52						
ASAO				eSg	Sg	04 34 53.2	-4.2
	SNR=91						
GHIR	Ghir-Karzin	3.73	137	ePn	Pn	04 34 03.5	-0.2
GHIR				AML	AML	04 35 23.9	
	comp=E,65nm,0.4s						

GHIR AML AML 04 35 29.7
comp=N,52nm,0.6s
DAMV Damavand 4.80 18 *e*Pn **Pn 04 34 18.6 +0.2**
DAMV AML AML 04 35 52.5
comp=E,14nm,0.6s
BOQSS 5.22 187 P **Pn 04 34 23.8 -0.4**
KRBR Kerman 5.83 99 *e*Pn **Pn 04 34 33.1 +0.6**
ASYS 6.17 236 P **Pn 04 34 36.0 -1.2**
BTHS 7.03 175 P **Pn 04 34 48.1 -0.9**
HRDDS 8.13 184 P **Pn 04 35 03.6 -0.5**

IDC 04 04:42:38.2±8.4**,1127S×16467E,h0km,mb3.8**/4**, mb1 3.9**/4**,mb1mx3.7**/15**,mbtmp3.8**/4**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.8**/20**,Error ellipse: s-maj=247.5km s-min=39.3km az=122.0,Santa Cruz Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CTA Charters Tower 19.76 241 LR LR 04 53 07.6
comp=Z,78nm,19.5s,baz=235,slow=32
WRA Warramunga Arr 30.42 250 P P 04 48 53.2 +0.6
0.3nm,0.5s,baz=82,slow=9.7,SNR=2.5
ASAR Alice Springs 31.75 243 P P 04 49 03.8 -0.5
0.6nm,0.6s,baz=65,slow=9.6,SNR=5.6
SONM Songino Array 78.23 324 P P 04 54 40.5 +0.8
0.5nm,0.5s,baz=134,slow=4.2,SNR=4.4
MKAR Makanchi Array 92.97 317 P P 04 55 52.9 -0.6
1.6nm,0.6s,baz=94,slow=6.2,SNR=14

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*MOS **04** 04:50:36.7±1.1,2045S×6868W,h85km,mb4.9/9,Error ellipse: s-maj=17.0km s-min=7.6km az=115.4*
*ISCJB **04** 04:50:38.3±0.7,2039S±004×6860W±005,h95km±6km, mb4.7/54,Error ellipse: s-maj=7.6km s-min=5.7km az=144.3*
*NEIC **04** 04:50:41.4±0.2,2045S×6857W,mb4.8/44,Error ellipse: s-maj=6.5km s-min=4.7km az=62.0*
NEIC Felt [III] at Pica and Pozo Almonte, Chile. Also felt at Iquique.
*IDC **04** 04:50:41.2±0.5,2055S×6871W,h112km±4km,mb4.3/14, mb1 4.4/18,mb1mx4.4/20,mbtmp4.3/18,MS3.7/2, Ms1 3.6/2,ms1mx2.9/22,Error ellipse: s-maj=14.6km s-min=6.6km az=95.0*
*BJI **04** 04:50:41.4,2040S×6860W,h113km,mB4.8*
ISC 04 04:50:41.5±0.7**,2048S**±004×**6856W**±005**,h111**km±7km**, h116**km±.6km**:pP-P,n473,**σ**0.59**/454**,mb4.7**/54**,154C-150D, Chile-Bolivia border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
LVC Limon Verde 2.15 189 P **Pn 04 51 15.6 -0.9**
87nm,0.3s,baz=357,slow=10,SNR=446
LVC S **Sn 04 51 41.9 -1.4**
247nm,0.3s,baz=90,slow=20,SNR=37
LVC Limon Verde 2.15 189⇑*i*Pn **Pn 04 51 15.4 -1.1**
LVC *e*Sn **Sn 04 51 44.9 +1.7**
LPAZ La Paz 4.19 6 P **Pn 04 51 46.6 +3.2**
11nm,0.3s,baz=183,slow=4.9,SNR=301
LPAZ S **Sn 04 52 35.3 +3.9**
7.9nm,0.3s,baz=344,slow=18,SNR=4.5
ARE Arequipa 4.86 325 *e*P **Pn 04 51 48.0 -4.5**
ARE *e*S **Sn 04 52 43.0 -4.8**
SIV San Ignacio 8.40 59 P **Pn 04 52 41.0 +0.5**
27nm,0.3s,baz=248,slow=11,SNR=437
SIV S **Sn 04 54 15.3 +1.6**
0.5nm,0.3s,baz=180,slow=17,SNR=3.5
LCO Las Campanas 8.72 192 *e*Pn **Pn 04 52 45.4 +0.7**
36nm,0.8s
CFAA Coronel Fontan 11.09 179 P **Pn 04 53 11.2 -5.5**
0.1nm,0.3s,baz=356,slow=16,SNR=11
CFAA S **Sn 04 55 07.5 -11**
0.2nm,0.3s,baz=253,slow=20,SNR=4.5
NNA Nana 11.59 315 P **Pn 04 53 19.9 -3.6**
0.7nm,0.3s,baz=144,slow=18,SNR=2.5
NNA S **Sn 04 55 24.1 -7.1**
0.9nm,0.3s,baz=225,slow=20,SNR=2.6
NNA Nana 11.59 315 P **Pn 04 53 19.9 -3.6**
NNA S **Sn 04 55 24.1 -7.1**
CPUP Villa Florida 11.84 122 P **Pn 04 53 26.9 +0.1**
1.9nm,0.3s,baz=288,slow=12,SNR=42
TRQA Tornquist 18.43 163 *e*P **P 04 54 47.1 -1.0**
25nm,0.7s
BDFB Brasilia 20.12 80 P **P 04 55 07.9 +1.2**
12nm,0.5s,baz=250,slow=13,SNR=29
BDFB LR LR 05 04 48.8
comp=Z,128nm,18.7s,baz=12,slow=42
VAO Valinhos 20.22 101⇑*e*P **P 04 55 08.1 +0.3**
VAO *i* 04 55 08.5
PLCA Paso Flores 20.26 184 P **P 04 55 06.9 -1.1**
29nm,0.9s,baz=7.3,slow=12,SNR=37
OTAV Otavalo 22.75 334 *e*P **P 04 55 35.3 +0.7**
7.2nm,0.9s,mb4.0
ROSC El Rosal 25.80 347 P **P 04 56 02.8 +0.4**
4.7nm,0.4s,mb4.3,baz=259,slow=22,SNR=6.6
EFI East Falkland 32.20 168 *e*P **P 04 56 56.7 -2.1**
CPD Cerro la Pandu 38.36 4 *e*P **P 04 57 49.8 -2.1**
CPD pmax pmax
comp=Z,25nm,1.0s,mb5.0
CPD Cerro la Pandu 38.36 4 *e*P **P 04 57 49.8 -2.1**
comp=Z,25nm,1.0s,mb5.0
SJG San Juan 38.42 4 *e*P **P 04 57 50.1 -2.3**
MTP Monte Pirata 38.45 5 *e*P **P 04 57 48.7 -3.9**
MPR Mayaguez 38.47 2 *e*P **P 04 57 50.4 -2.4**
CBYP Canovanas 38.60 4 *e*P **P 04 57 51.4 -2.4**
comp=Z,26nm,0.9s,mb5.0
AOPR Arecibo Observ 38.62 3 *e*P **P 04 57 51.6 -2.4**
comp=Z,8.6nm,0.6s,mb4.8
NHSC New Hope 54.42 348 *e*P **P 04 59 55.9 -1.3**
JSC Jenkinsville 55.78 347 *e*P **P 05 00 06.0 -0.9**
PLAL Pickwick Lake 58.18 341 *e*P **P 05 00 21.5 -2.3**
comp=Z,9.0nm,0.9s,mb4.8
ELN Prospectdale 58.53 349 *e*P **P 05 00 25.8 -0.4**
JCT Junction City 58.90 328 *e*P **P 05 00 27.7 -1.2**
JCT pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
JCT Junction City 58.90 328 *e*P **P 05 00 27.7 -1.2**
comp=Z,5.5nm,0.9s,mb4.6
WCI Wyandotte Cave 60.72 344 *e*P **P 05 00 39.4 -1.8**
WCI pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
WCI Wyandotte Cave 60.72 344 *e*P **P 05 00 39.4 -1.8**
comp=Z,9.3nm,0.8s,mb4.9
MCWV Mont Chateau 60.74 350 *e*P **P 05 00 40.3 -1.0**
USIN University of 60.84 343 *e*P **P 05 00 40.2 -1.8**
SIUC Southern Illin 61.06 341 *e*P **P 05 00 42.2 -1.3**
comp=Z,20nm,1.1s,mb5.1
VNA1 Neumayer--Stat 61.14 161 *e*P **P 05 00 44.4 +0.7**
VNA1 *e* 05 00 47.7
VNA2 Neumayer--Watz 61.51 161 *e*P **P 05 00 46.8 +0.7**
VNA2 *e* 05 00 50.1
BLO Bloomington 61.67 344 *e*P **P 05 00 45.6 -2.0**
BLO pmax pmax
comp=Z,16nm,0.6s,mb5.2
BLO Bloomington 61.67 344 *e*P **P 05 00 45.6 -2.0**
comp=Z,16nm,0.6s,mb5.2
FVM French Village 61.68 340 *e*P **P 05 00 46.3 -1.4**
FVM *e**PP pP 05 01 15.0 +0.1
FVM pmax pmax
comp=Z,17nm,0.8s,mb5.1
FVM French Village 61.68 340 *e*P **P 05 00 46.2 -1.4**
comp=Z,17nm,0.8s,mb5.1
FVM *e*pP pP 05 01 15.0 +0.1
ACSO Alum Creek Sta 61.87 348 *e*P **P 05 00 47.5 -1.4**
comp=Z,17nm,0.7s,mb5.2
ACSO *e*pP pP 05 01 15.8 -0.4
ALLY Alegheny Colle 62.73 350 *e*P **P 05 00 54.3 -0.3**
comp=Z,30nm,0.6s,mb5.4
ALLY *e*pP pP 05 01 21.3 -0.6
BINY Binghamton 62.73 354 *e*P **P 05 00 53.6 -1.0**
SNAA Sanae 63.14 161 *e*P **P 05 00 57.0 0.0**
SNAA *e* 05 01 00.4
SNAA *e* pP 05 01 25.2 +0.9
SNAA *e* 05 01 37.8
SNAA Sanae 63.14 161 *e*P **P 05 00 57.2 +0.2**
319A Douglas 64.68 322 ⇑P **P 05 01 07.4 -0.3**
baz=65,SNR=7.4
LONY Lake Ozonia 65.01 355 *e*P **P 05 01 08.1 -1.4**
comp=Z,7.8nm,0.7s,mb4.7
219A White Tail Can 65.13 322 ⇑P **P 05 01 10.2 -0.3**
baz=66,SNR=6.4
BNM Barren Site 65.30 326 *e*P **P 05 01 11.2 -0.4**
218A Dragoon 65.56 322 ⇓P **P 05 01 13.1 -0.2**
baz=66
119A Ashpeak Ranch, 65.72 323 ⇑P **P 05 01 14.2 -0.2**
baz=66
LAZ Ladron 65.76 326 *e*P **P 05 01 14.8 +0.2**
LAZ *e*pP pP 05 01 42.9 +0.8
ANMO Albuquerque 65.83 326*d i*P **P 05 01 14.3 -0.7**
ANMO Albuquerque 65.83 326 *e*P **P 05 01 14.7 -0.3**
217A Green Valley 65.87 321 ⇓P **P 05 01 14.9 -0.4**
baz=66,SNR=8.2
118A Homack Ranch, 66.00 322 ⇑P **P 05 01 15.6 -0.5**
baz=66
Z19A T-Link Ranch, 66.09 323 ⇑P **P 05 01 16.8 +0.1**
baz=66
SCIA State Center 66.13 340 *e*P **P 05 01 15.6 -1.1**
SCIA *e*pP pP 05 01 50.9 +6.6
JFWS Jewell Farm 66.16 343 *e*pP pP 05 01 44.5 0.0
TUC Tucson 66.23 322 *e*P **P 05 01 17.5 -0.2**
117A Oracle 66.40 322 ⇓P **P 05 01 18.5 -0.2**
baz=67,SNR=10
216A Three Points, 66.41 321 ⇓P **P 05 01 18.7 -0.1**
baz=67,SNR=9.1
Y19A Nutrioso 66.57 324 ⇓P **P 05 01 20.2 +0.4**
baz=67,SNR=19
Z17A San Carlos Hig 66.77 322 ⇑P **P 05 01 20.7 -0.3**
baz=67
Y18A Canyon Day Jun 66.88 323 ⇑P **P 05 01 21.6 -0.1**
baz=67,SNR=6.3
X19A St. Johns 66.94 324 ⇓P **P 05 01 21.9 -0.3**
baz=67
116A Eloy 66.95 321 ⇓P **P 05 01 22.1 -0.2**
baz=67,SNR=6.9
214A Organ Pipe Nat 67.19 320 ⇓P **P 05 01 23.8 0.0**
baz=68,SNR=9.8
Y17A Roosevelt 67.28 323 ⇓P **P 05 01 24.3 +0.1**
baz=68,SNR=15
Z16A Peralta Trail, 67.35 322 ⇑P **P 05 01 24.7 -0.1**
baz=68,SNR=6.5
115A Sonoran Desert 67.36 321 ⇓P **P 05 01 25.0 +0.2**
baz=68
X18A Snowflake 67.38 324 ⇓P **P 05 01 25.0 +0.1**
baz=68
W19A Sanders 67.51 325 ⇑P **P 05 01 25.6 0.0**
baz=68
SDCO Great Sand Dun 67.54 329 *e*P **P 05 01 25.7 -0.1**
comp=Z,14nm,1.3s,mb4.6
W18A Petrified Fore 67.70 324 ⇑P **P 05 01 26.7 -0.2**
baz=68
X17A Forest Lakes 67.72 323 ⇑P **P 05 01 27.5 +0.5**
baz=68,SNR=8.4
Z15A Gila River Ind 67.74 321 ⇑P **P 05 01 27.0 -0.2**
baz=68
Y16A Circle Bar Ran 67.77 322 ⇓P **P 05 01 27.5 +0.2**
baz=68,SNR=9.5
V19A Window Rock 67.78 325 ⇑P **P 05 01 27.4 0.0**
baz=68
LIC Lamto 67.79 74 *e*P **P 05 01 28.2 +0.2**
comp=Z,26nm,0.9s,mb5.1
TIC Toumodi 67.98 74 *e*P **P 05 01 29.4 +0.3**
comp=Z,157nm,1.6s,mb5.6
TIC Toumodi 67.98 74 *e*P **P 05 01 29.4 +0.3**
TIC pmax pmax
comp=Z,157nm,1.6s,mb5.6
KIC Kosan Boka 68.11 74 *e*P **P 05 01 30.3 +0.4**
comp=Z,42nm,0.6s,mb5.4
DBIC Dimbokro 68.14 74 P **P 05 01 30.5 +0.4**
comp=Z,10nm,0.7s,mb4.8,baz=221,slow=8.4,SNR=25
X16A Lo Mia Camp, P 68.14 323 ⇑P **P 05 01 29.9 +0.3**
baz=69,SNR=9.3
V18A Ganado 68.25 325 ⇑P **P 05 01 29.9 -0.4**
baz=69
Y15A Casa Rosa Ranc 68.32 322 ⇑P **P 05 01 30.7 -0.1**
baz=69,SNR=8.7
T19A Beclabito 68.61 326 ⇑P **P 05 01 32.0 -0.5**
baz=69,SNR=7.6
MVCO Mesa Verde 68.62 327 *e*P **P 05 01 32.3 -0.3**
X15A Humboldt 68.64 322 ⇓P **P 05 01 32.9 +0.1**
baz=69,SNR=11
112A Yuma 68.66 319 ⇓P **P 05 01 33.3 +0.3**
baz=69
W16A Flagstaff 68.68 323 ⇑P **P 05 01 33.6 +0.6**
baz=69
Y14A Wickenburg 68.70 321 ⇑P **P 05 01 33.0 -0.2**
baz=69,SNR=9.9
ECSD EROS,Sioux Fal 68.89 339 *e*P **P 05 01 32.6 -1.5**
comp=Z,24nm,1.4s,mb4.8
WUAZ Wupatki 68.90 324 *e*P **P 05 01 34.7 +0.4**
comp=Z,14nm,1.0s,mb4.7
X14A Yava 69.01 322 ⇓P **P 05 01 35.3 +0.2**
baz=70
Y13A Salome 69.10 321 ⇓P **P 05 01 35.6 0.0**
baz=70,SNR=10
W15A Williams 69.16 323 ⇑P **P 05 01 36.6 +0.6**
baz=70,SNR=5.0
GLA Glamis 69.17 320 ⇑P **P 05 01 36.1 0.0**
baz=70
ISCO Idaho Springs 69.22 330 *e*P **P 05 01 36.1 -0.1**
ISCO *e**PP pP 05 02 04.8 +0.8
U16A Tuba City 69.22 324 ⇓P **P 05 01 36.4 +0.1**
baz=70,SNR=5.6
T18A Mexican Hat 69.28 326 ⇑P **P 05 01 36.3 -0.4**
baz=70,SNR=14
U17A Shonto 69.31 325 ⇑P **P 05 01 37.0 +0.2**
baz=70,SNR=9.8
S19A Harvey Farm, M 69.36 327 ⇑P **P 05 01 36.8 -0.3**
baz=70,SNR=6.8
Y12C Blythe 69.47 320 ⇑P **P 05 01 37.9 0.0**
baz=70,SNR=6.4
V15A Kaibab Nationa 69.57 323 ⇓P **P 05 01 38.9 +0.4**
baz=70,SNR=14
PDMCI Parker Dam,Lak 69.62 321 ⇑P **P 05 01 38.5 -0.3**
baz=70
W14A Seligman 69.65 322 ⇓P **P 05 01 39.4 +0.4**
baz=70,SNR=7.4
T17A Navajo Res., N 69.67 325 ⇓P **P 05 01 39.7 +0.6**
baz=70,SNR=12
DVTC Desert V Tower 69.69 318 ⇑P **P 05 01 39.2 0.0**
baz=70
SWSC Sam W. Stewart 69.69 319 ⇑P **P 05 01 39.3 +0.1**
baz=70
S18A Hurst Farm, Bl 69.76 326 ⇑P **P 05 01 39.8 +0.2**
baz=70,SNR=14
R19A Curley Farm, L 69.83 327 ⇑P **P 05 01 39.8 -0.3**
baz=70
V14A Boquillas Ranc 69.96 323 ⇑P **P 05 01 41.5 +0.6**
baz=70,SNR=12
W13A Hualapai Mount 70.03 322 ⇓P **P 05 01 41.7 +0.4**
baz=70
MONP Monument Peak 70.04 318 ⇑P **P 05 01 41.6 +0.2**
baz=70
T16A Glen Canyon Da 70.05 325 ⇓P **P 05 01 41.9 +0.5**
baz=70
BAR Barrett 70.06 318 *e*P **P 05 01 41.9 +0.4**
U15A North Rim 70.07 324 ⇑P **P 05 01 42.2 +0.6**
baz=70,SNR=14
IRM Iron Mountain 70.13 320 ⇓P **P 05 01 41.9 0.0**
baz=71,SNR=8.3
R18A Canyonlands Na 70.23 327 ⇓P **P 05 01 42.1 -0.4**
baz=71
Q19A Hogan Spring (70.34 327 ⇑P **P 05 01 43.4 +0.3**
baz=71,SNR=7.2
PFO Pinyon Flat Ob 70.54 319 ⇑P **P 05 01 44.7 +0.2**
baz=71
T15A Red Dirt Ranch 70.55 324 ⇓P **P 05 01 45.0 +0.6**
baz=71,SNR=12
U14A Mt Trumbull 70.56 323 ⇓P **P 05 01 45.2 +0.6**
baz=71,SNR=21
V13A Grand Canyon W 70.62 322 ⇓P **P 05 01 45.2 +0.3**
baz=71,SNR=14
S16A Weppner Ranch, 70.64 325 ⇑P **P 05 01 44.8 -0.1**
baz=71,SNR=7.7
R17A Hanksville Air 70.68 326 ⇓P **P 05 01 45.1 -0.1**
baz=71,SNR=18
P19A Cripple Cowboy 70.71 328 ⇑P **P 05 01 45.5 +0.1**
baz=71
LDFC Landfair 70.73 321 *e*P **P 05 01 46.7 +1.1**
W12A Cal Nev Ari 70.75 321 ⇑P **P 05 01 45.9 +0.2**
baz=71
GMRC Granite Mounta 70.86 320 ⇓P **P 05 01 46.8 +0.4**
baz=71,SNR=11
Q18A Rafter H Ranch 70.89 327 ⇓P **P 05 01 46.5 0.0**
baz=71
T14A Hurricane 70.97 324 ⇓P **P 05 01 47.6 +0.6**
baz=71,SNR=10
R16A Teasdale 70.99 325 ⇓P **P 05 01 47.5 +0.4**
baz=71
MURC Murrieta 71.00 319 ⇓P **P 05 01 47.3 0.0**
baz=72
U13A Pakoon Wash 71.00 323 ⇓P **P 05 01 47.7 +0.5**
baz=72,SNR=5.6
S15A Panguitch 71.02 324 ⇓P **P 05 01 47.6 +0.3**
baz=72
V12A Nelson 71.03 322 ⇑P **P 05 01 47.4 0.0**
baz=72,SNR=8.3
SRU San Rafael 71.10 327 *e*P **P 05 01 47.9 +0.2**
O19A Miners Draw (B 71.29 328 ⇓P **P 05 01 48.7 -0.1**
baz=72,SNR=11
Q16A Castle Valley 71.29 326 ⇑P **P 05 01 48.9 +0.1**
baz=72,SNR=5.8
HEC Hector,Ludlow 71.29 320 ⇑P **P 05 01 49.4 +0.4**
baz=72,SNR=6.3
P18A Preston Nutter 71.34 327 ⇑P **P 05 01 49.4 +0.2**
baz=72,SNR=13
U12A Valley of Fire 71.34 322 ⇑P **P 05 01 49.6 +0.3**
baz=72,SNR=7.8
R15A Junction 71.36 325 ⇑P **P 05 01 49.6 +0.3**
baz=72,SNR=7.4
T13A Saint George 71.40 323 ⇑P **P 05 01 50.2 +0.6**
baz=72,SNR=7.8
V11A Goodsprings 71.45 321 ⇑P **P 05 01 50.1 +0.2**
baz=72
P17A Butcher Ranch, 71.48 327 ⇓P **P 05 01 50.0 0.0**
baz=72,SNR=10
S14A Cedar City 71.52 324 ⇓P **P 05 01 50.5 +0.3**
baz=72
MSU Marysvale 71.53 325 *e*P **P 05 01 50.8 +0.5**
TMUT Trail Mountain 71.59 326 *e*P **P 05 01 50.5 -0.1**
O18A Roosevelt 71.70 328 ⇑P **P 05 01 51.6 +0.3**
baz=72
BFSC Mount Baldy St 71.71 319 ⇑P **P 05 01 51.9 +0.4**
baz=72
SHPR Sheep Range 71.75 322 *e*P **P 05 01 52.1 +0.3**
N19A John Jarvie Ra 71.77 329 ⇓P **P 05 01 51.3 -0.4**
baz=72,SNR=5.6
S13A Holt Ranch, En 71.77 324 ⇑P **P 05 01 52.6 +0.8**
baz=72,SNR=17
GSC Goldstone 71.90 320 ⇓P **P 05 01 53.0 +0.4**
baz=72
GSC Goldstone 71.90 320 *e*P **P 05 01 53.3 +0.6**
Q15A Fillmore 71.99 325 ⇑P **P 05 01 53.6 +0.6**
baz=72
O17A Robinson Place 72.02 327 ⇓P **P 05 01 53.7 +0.5**
baz=72,SNR=7.4
RSSD Black Hills 72.02 334 *e*P **P 05 01 52.4 -0.7**
N18A Larsen Ranch, 72.08 328 ⇑P **P 05 01 54.1 +0.6**
baz=72
DECC Green Verdugo 72.13 318 ⇓P **P 05 01 54.5 +0.4**
baz=73
R13A O'Grain Ranch, 72.26 324 ⇑P **P 05 01 55.5 +0.8**
baz=73,SNR=6.3
T11A Corn Creek, Al 72.30 322 ⇓P **P 05 01 55.5 +0.5**
baz=73,SNR=12
EDW2 Edwards Air Fo 72.34 319 ⇓P **P 05 01 54.9 -0.3**
baz=73,SNR=5.0
S12A Delamar Landin 72.35 323 ⇑P **P 05 01 55.9 +0.7**
baz=73
P15A Leamington 72.35 326 ⇓P **P 05 01 55.7 +0.5**
baz=73
U10A Ash Meadows, A 72.38 321 ⇓P **P 05 01 55.7 +0.3**
baz=73
O16A Springville 72.42 327 ⇑P **P 05 01 56.0 +0.4**
baz=73
DAU Daniels Canyon 72.44 327 *e*P **P 05 01 56.5 +0.8**
Q14A Sevier Lake (B 72.46 325 ⇑P **P 05 01 56.5 +0.6**
baz=73,SNR=12
BLG Laguna Peak 72.50 318 ⇑P **P 05 01 56.3 +0.1**
baz=73
NLU North Lily Min 72.53 326 *e*P **P 05 01 56.9 +0.7**
LRMC Laurel Mountai 72.55 320 ⇓P **P 05 01 56.6 +0.1**
baz=73
N17A Moffit Pass 72.63 328 ⇓P **P 05 01 57.1 +0.3**
baz=73,SNR=20
JLU Jordanelle 72.69 327 *e*P **P 05 01 57.5 +0.3**
JLU *e*pP pP 05 02 26.0 +0.9
TPNV Topopah Spring 72.69 322 *e*P **P 05 01 57.7 +0.4**
TPNV pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
TPNV Topopah Spring 72.69 322 *e*P **P 05 01 57.7 +0.4**
comp=Z,10nm,1.0s,mb4.6
AGMN Agassiz Refuge 72.69 341 *e*P **P 05 01 55.9 -1.2**
comp=Z,8.9nm,0.8s,mb4.7
R12A Pony Springs, 72.72 324 ⇑P **P 05 01 58.2 +0.8**
baz=73,SNR=16
FURC Furnace Creek, 72.72 321 ⇑P **P 05 01 58.0 +0.5**
baz=73,SNR=5.8
P14A Drum Mountains 72.78 325 ⇑P **P 05 01 58.4 +0.7**
baz=73,SNR=16
MPMC Manual Prospec 72.82 320 ⇓P **P 05 01 58.1 +0.1**
baz=73
Q13A Wheeler Ranch, 72.84 324 ⇓P **P 05 01 58.4 +0.3**
baz=73,SNR=5.1
S11A Rachel 72.88 322 ⇑P **P 05 01 59.0 +0.6**
baz=73
N16A Rees Ranch, Co 72.89 327 ⇓P **P 05 01 58.9 +0.6**
baz=73
O15A The Old Anders 72.97 326 ⇓P **P 05 01 59.1 +0.3**
baz=73
DUG Dugway 73.09 326 *e*P **P 05 01 59.8 +0.2**
DUG *e**PP pP 05 02 29.0 +1.4
ISA Isabella 73.15 319 *e*P **P 05 02 00.4 +0.4**
ISA pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
ISA Isabella 73.15 319 ⇓P **P 05 02 00.2 +0.2**
baz=74,SNR=7.7
ISA Isabella 73.15 319 *e*P **P 05 02 00.4 +0.4**
comp=Z,9.1nm,0.8s,mb4.7
P13A Bates Ranch, G 73.19 325 ⇓P **P 05 02 00.5 +0.3**
baz=74
R11A Troy Canyon, C 73.28 323 ⇑P **P 05 02 01.2 +0.5**
baz=74,SNR=10
M16A Huntsville 73.31 328 ⇓P **P 05 02 00.5 -0.3**
baz=74,SNR=5.1
Q12A Willow Creek R 73.34 324 ⇑P **P 05 02 01.3 +0.2**
baz=74,SNR=5.9
BW06 Boulder Array 73.39 330 *e*P **P 05 02 00.8 -0.5**
PDAR Pinedale Array 73.39 330 P **P 05 02 00.5 -0.7**
comp=Z,2.3nm,0.9s,mb4.0,baz=123,slow=6.9,SNR=12
N15A Stansbury Isla 73.44 327 ⇓P **P 05 02 01.5 -0.1**
baz=74
PKM Peak Mountain 73.48 318 ⇑P **P 05 02 02.2 +0.2**
baz=74
HWUT Hardware Ranch 73.49 328 *e*P **P 05 02 01.6 -0.3**
comp=Z,9.6nm,0.7s,mb4.7
S10A Tonopah Range, 73.56 322 ⇑P **P 05 02 02.7 +0.3**
baz=74,SNR=8.1
VES Vestal, Richgr 73.64 319 ⇑P **P 05 02 02.9 0.0**
baz=74,SNR=6.4
R10A Warm Springs 73.64 323 ⇑P **P 05 02 03.4 +0.6**
baz=74,SNR=11
Q11A Duckwater 73.67 323 ⇓P **P 05 02 03.3 +0.3**
baz=74,SNR=9.7
P12A McGill 73.69 324 ⇓P **P 05 02 03.6 +0.5**
baz=74,SNR=6.0
SPUT South Promonto 73.72 327 *e*P **P 05 02 03.5 +0.3**
SPUT *e*pP pP 05 02 32.0 +0.8
L16A Fish Haven 73.73 328 ⇓P **P 05 02 03.2 -0.1**
baz=74,SNR=7.9
BGU Big Grassy Mou 73.73 326 *e*P **P 05 02 03.1 -0.2**
BGU *e*pP pP 05 02 32.1 +0.7
N14A Grayback Hills 73.76 326 ⇑P **P 05 02 03.3 -0.2**
baz=74,SNR=9.8
S09A Goldfield 73.79 322 ⇓P **P 05 02 03.8 0.0**
baz=74,SNR=5.3
M15A Larsen Ranch, 73.83 327 ⇑P **P 05 02 03.5 -0.4**
baz=74,SNR=15
SMMC Simmler 73.86 318 ⇑P **P 05 02 04.6 +0.4**
baz=74,SNR=5.2
RCTC Rector, Farmer 74.05 319 ⇓P **P 05 02 05.0 -0.2**
baz=74
R09A Tonopah 74.05 322 ⇑P **P 05 02 05.3 +0.1**
baz=74,SNR=6.3
Q10A Clear Creek Ra 74.07 323 ⇑P **P 05 02 05.8 +0.5**
baz=74
AHID Auburn Hatcher 74.13 329 *e*P **P 05 02 05.5 -0.1**
comp=Z,10nm,0.8s,mb4.6
O12A Currie 74.17 325 ⇑P **P 05 02 06.1 +0.2**
baz=75,SNR=12
S08C White Mtn Res 74.19 321 ⇓P **P 05 02 06.4 +0.3**
baz=75
L15A Malad City 74.20 328 ⇓P **P 05 02 05.5 -0.5**
baz=75,SNR=16
P11A Circle Ranch, 74.21 324 ⇑P **P 05 02 06.1 -0.1**
baz=75
HVU Hansel Valley 74.23 327 *e*P **P 05 02 06.2 0.0**
M14A Sheep Mountain 74.32 327 ⇓P **P 05 02 06.5 -0.2**
baz=75,SNR=6.4

MTUM **Tungsten Hills** 74.33 321 *e*P P 05 02 07.5 +0.6
K16A **Soda Springs** 74.42 329 ⇓P P 05 02 07.5 +0.2
baz=75,SNR=15
ULM **Lac du Bonnet** 74.44 342 P P 05 02 05.8 -1.4
comp=Z,5.0nm,0.5s,mb4.5,baz=145,slow=6.9,SNR=10
REDW **Red Top Meadow** 74.46 329 *e*P P 05 02 07.8 +0.3
SNOW **Snow King Moun** 74.49 330 *e*P P 05 02 07.8 +0.2
comp=Z,7.3nm,0.9s,mb4.4
LOHW **Long Hollow** 74.53 330 *e*P P 05 02 07.9 0.0
TPAW **Teton Pass** 74.60 329 *e*P P 05 02 08.5 +0.2
comp=Z,7.0nm,0.8s,mb4.4
TPAW *e*pP pP 05 02 37.8 +1.4
L14A **Malta** 74.65 327 ⇑P P 05 02 08.2 -0.5
baz=75,SNR=6.7
RRI2 **Red Ridge** 74.67 329 *e*P P 05 02 09.0 +0.3
comp=Z,15nm,0.9s,mb4.7
RRI2 *e*pP pP 05 02 38.1 +1.2
J16A **Bone** 74.76 329 ⇑P P 05 02 09.1 -0.1
baz=75
ELK **Elko** 74.77 325 *e*P P 05 02 09.4 +0.1
K15A **Arbon** 74.77 328 ⇓P P 05 02 09.1 -0.2
baz=75,SNR=8.8
DCID1 **Drake Creek** 74.79 329 *e*P P 05 02 09.7 +0.3
NVAR **Mina Array Bea** 74.89 322 P P 05 02 10.4 +0.3
comp=Z,3.2nm,0.9s,mb4.1,baz=169,slow=6.9,SNR=18
NVAR pP pP 05 02 38.0 -0.2
comp=Z,2.1nm,0.9s,baz=144,slow=7.2,SNR=3.9
IMW **Indian Meadow** 74.90 330 *e*P P 05 02 10.3 +0.3
comp=Z,16nm,1.3s,mb4.6
FLWY **Flagg Ranch** 74.93 330 *e*P P 05 02 10.7 +0.5
comp=Z,19nm,0.8s,mb4.9
Q08A **Gabbs** 74.97 322 ⇑P P 05 02 10.1 -0.4
baz=75,SNR=6.5
K14A **Jones Ranch, D** 74.99 327 ⇓P P 05 02 10.0 -0.5
baz=75
LAO **LASA Array** 75.00 334 *e*P P 05 02 10.3 -0.3
comp=Z,16nm,1.0s,mb4.7
LAO *e*pP pP 05 02 40.3 +1.6
SCHQ **Schefferville** 75.02 1 P P 05 02 09.7 -0.7
comp=Z,8.6nm,0.9s,mb4.5,baz=129,slow=3.2,SNR=8.9
U04C **Hernandez Rese** 75.03 319 ⇓P P 05 02 11.0 +0.1
baz=76
L13A **Double Diamond** 75.05 327 ⇓P P 05 02 11.1 +0.1
baz=76,SNR=11
RLMT **Red Lodge** 75.07 331 *e*P P 05 02 10.5 -0.5
comp=Z,10nm,0.8s,mb4.6
M12A **Wells** 75.07 326 ⇓P P 05 02 10.8 -0.3
baz=76,SNR=5.7
I16A **Newdale** 75.15 329 ⇓P P 05 02 11.6 +0.2
baz=76,SNR=7.2
LKWY **Lake** 75.16 330 *e*P P 05 02 13.1 +1.6
LKWY pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
LKWY **Lake** 75.16 330 *e*P P 05 02 13.1 +1.6
comp=Z,8.9nm,0.8s,mb4.5
J15A **Blackfoot** 75.25 329 ⇑P P 05 02 12.2 +0.2
baz=76,SNR=12
YFT **Old Faithful** 75.28 330 *e*P P 05 02 12.3 +0.2
S05C **Merced** 75.38 320 ⇑P P 05 02 13.1 +0.2
baz=76
N10A **Dunphy** 75.44 324 ⇓P P 05 02 13.3 +0.1
baz=76
S06C **San Francisco** 75.44 320 ⇓P P 05 02 13.3 +0.1
baz=76,SNR=8.2
K13A **Stover Farm, H** 75.53 327 ⇓P P 05 02 14.0 +0.3
baz=76,SNR=5.3
M11A **Holland Ranch,** 75.55 325 ⇓P P 05 02 14.2 +0.4
baz=76,SNR=7.3
P08A **Dixie Valley** 75.61 323 ⇑P P 05 02 14.8 +0.6
baz=76
R06C **Coleville** 75.63 321 ⇑P P 05 02 14.9 +0.6
baz=76
L12A **House Creek Ra** 75.65 326 ⇓P P 05 02 14.9 +0.6
baz=76,SNR=9.8
H16A **Russell Place,** 75.66 330 ⇓P P 05 02 14.9 +0.6
baz=76,SNR=12
DGMT **Dagmar** 75.67 336 *e*P P 05 02 14.4 +0.2
comp=Z,23nm,0.6s,mb5.1
DGMT *e*pP pP 05 02 42.7 +0.2
I15A **Monteview** 75.72 329 ⇓P P 05 02 15.4 +0.7
baz=76,SNR=10
J14A **Carey** 75.73 328 ⇓P P 05 02 15.5 +0.8
baz=76,SNR=8.9
GCMT **Greycliff** 75.77 332 *e*P P 05 02 14.7 -0.2
GCMT *e*pP pP 05 02 43.5 +0.4
QLMT **Earthquake Lak** 75.84 330 *e*P P 05 02 16.1 +0.8
K12A **Draper Farm, C** 75.94 327 ⇓P P 05 02 16.5 +0.5
baz=76,SNR=14
L11A **Cat Creek Ranc** 76.05 326 ⇑P P 05 02 16.9 +0.3
baz=76,SNR=6.9
O08A **Rochester Mine** 76.06 323 ⇑P P 05 02 17.1 +0.4
baz=76
R05C **Kirkwood Meado** 76.11 321 ⇓P P 05 02 17.5 +0.4
baz=77
J13A **Cove Ranch, Pi** 76.11 328 ⇑P P 05 02 17.3 +0.4
baz=77
I14A **Mackay** 76.14 328 ⇑P P 05 02 17.6 +0.5
baz=77,SNR=7.3
H15A **Lima** 76.25 329 ⇑P P 05 02 18.3 +0.6
baz=77
R04C **Big Horse Ranc** 76.34 320 ⇓P P 05 02 18.4 0.0
baz=77
HLID **Hailey** 76.35 328 *e*P P 05 02 18.9 +0.6
comp=Z,9.0nm,0.8s,mb4.5
HLID *e*pP pP 05 02 47.7 +1.2
L10A **Juniper Basin** 76.37 325 ⇑P P 05 02 18.7 +0.3
baz=77,SNR=12
PAHR **Pah Rah Range** 76.37 322 *e*P P 05 02 18.8 +0.3
comp=Z,15nm,0.8s,mb4.8
PAHR *e*pP pP 05 02 47.9 +1.2
O07A **Toulon** 76.38 323 ⇓P P 05 02 18.5 0.0
baz=77
M09A **Marrel Ranch,** 76.44 324 ⇓P P 05 02 19.0 +0.2
baz=77
I13A **Wildhorse Cree** 76.46 328 ⇓P P 05 02 19.4 +0.5
baz=77,SNR=12
J12A **Stokes Ranch,** 76.48 327 ⇓P P 05 02 19.2 +0.2
baz=77,SNR=6.8
MCMT **McKenzie Canyo** 76.51 329 *e*P P 05 02 19.6 +0.5
MCMT *e*pP pP 05 02 49.1 +1.7
LAVA **Lava Cap Winer** 76.54 321 ⇓P P 05 02 18.9 -0.6
baz=77
BOZ **Bozeman (W)** 76.55 330 *e*P P 05 02 19.1 -0.2
BOZ pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
BOZ **Bozeman (W)** 76.55 330 *e*P P 05 02 19.1 -0.2
comp=Z,2.8nm,0.7s,mb4.1
G15A **Dillon** 76.59 330 ⇑P P 05 02 19.9 +0.3
baz=77,SNR=5.8
H14A **Leadore** 76.60 329 ⇓P P 05 02 20.3 +0.6
baz=77,SNR=7.0
K11A **Parker Ranch,** 76.62 326 ⇓P P 05 02 20.0 +0.2
baz=77,SNR=5.7
TORD **Torodi Ar. Bea** 76.71 70 P P 05 02 21.1 +0.2
comp=Z,7.7nm,0.6s,mb4.6,baz=253,slow=5.6,SNR=107
TORD pP pP 05 02 50.4 +1.2
comp=Z,14nm,0.8s,baz=250,slow=5.3,SNR=12
TORD LR LR 05 34 00.7
comp=Z,52nm,18.2s,baz=155,slow=34
TORD **Torodi Ar. Bea** 76.71 70 P P 05 02 21.1 +0.2
TORD pP pP 05 02 50.4 +1.2
TORD LR LR 05 34 00.7
DLMT **Dillon** 76.78 330 *e*P P 05 02 20.7 0.0
comp=Z,20nm,1.5s,mb4.6
DLMT *e*pP pP 05 02 48.9 -0.1
P05C **Yuba Gap, Truc** 76.82 321 ⇑P P 05 02 21.5 +0.5
baz=77
MFID **Camas Ranch** 76.97 327 ⇑P P 05 02 22.1 +0.3
baz=77,SNR=5.6
H13A **Challis** 77.00 328 ⇓P P 05 02 22.3 +0.4
baz=77,SNR=20
LRM **Limekiln Ridge** 77.06 330 *e*P P 05 02 22.8 +0.5
K10A **MacKenzie Ranc** 77.07 326 ⇓P P 05 02 22.3 0.0
baz=78,SNR=7.1
F15A **Butte** 77.09 330 ⇓P P 05 02 22.5 +0.1
baz=78,SNR=6.3
G14A **Jackson** 77.11 329 ⇑P P 05 02 22.8 +0.3
baz=78
Q03C **Winters** 77.23 320 ⇓P P 05 02 23.7 +0.4
baz=78
H12A **Diamond D Ranc** 77.28 328 ⇓P P 05 02 23.7 +0.2
baz=78,SNR=10
CVS **Carmenet Viney** 77.32 319 ⇓P P 05 02 23.8 0.0
baz=78
N06A **Buffalo Meadow** 77.32 323 ⇑P P 05 02 23.7 -0.1
baz=78,SNR=6.9
SYO **Syowa Base** 77.34 159 ⇑*i*P P 05 02 22.4 -1.2
SYO **Syowa Base** 77.34 159 ⇑*e*PcP PcP 05 02 28.4 -5.3
M07A **Soldier Meadow** 77.37 323 ⇓P P 05 02 24.1 +0.1
baz=78
I11A **Placerville** 77.39 327 ⇑P P 05 02 24.3 +0.2
baz=78
O05C **Quincy** 77.43 321 ⇑P P 05 02 24.5 +0.1
baz=78
L08A **Fields** 77.45 324 ⇑P P 05 02 24.3 -0.2
baz=78,SNR=5.5
K09A **Rome** 77.47 325 ⇓P P 05 02 24.5 -0.1
baz=78,SNR=7.2
ORV **Oroville** 77.51 321 ⇑P P 05 02 24.9 +0.1
baz=78,SNR=10
EGMT **Eagleton** 77.53 333 *e*P P 05 02 24.6 -0.2
comp=Z,14nm,0.8s,mb4.8
E15A **Deer Lodge** 77.60 330 ⇑P P 05 02 25.4 +0.2
baz=78,SNR=9.1
L07A **Adell** 77.89 324 ⇑P P 05 02 27.2 +0.3
baz=78
F13A **Darby** 77.93 329 ⇑P P 05 02 27.3 +0.3
baz=78,SNR=34
J09A **Fry Pan Ranch,** 77.93 326 ⇓P P 05 02 27.5 +0.4
baz=78
H11A **Donnelly** 77.97 328 ⇑P P 05 02 27.4 0.0
baz=78,SNR=5.5
M06C **Likely Place G** 77.98 323 ⇓P P 05 02 27.7 +0.3
baz=78,SNR=7.7
E14A **Clinton** 77.99 330 ⇑P P 05 02 27.8 +0.4
baz=78,SNR=8.5
D15A **Lincoln** 78.00 331 ⇑P P 05 02 27.9 +0.4
baz=78,SNR=9.1
CHMT **Chamberlain Mo** 78.24 330 *e*P P 05 02 28.6 -0.1
CHMT *e*pP pP 05 02 58.5 +1.4
H10A **Noah's Angus R** 78.27 327 ⇑P P 05 02 29.2 +0.3
baz=79
K07A **Rock Creek Ran** 78.28 324 ⇓P P 05 02 30.2 +1.1
baz=79
GASB **Alder Springs** 78.30 320 ⇑P P 05 02 29.8 +0.5
baz=79,SNR=5.1
HATC **Hat Creek Radi** 78.30 322 ⇓P P 05 02 28.8 -0.5
baz=79
J08A **Circle Bar Ran** 78.32 325 ⇓P P 05 02 29.5 +0.3
baz=79
E13A **Victor** 78.33 330 ⇓P P 05 02 29.8 +0.6
baz=79,SNR=23
MOD **Modoc** 78.34 323 ⇓P P 05 02 29.5 0.0
baz=79
MOD **Modoc** 78.34 323 *e*P P 05 02 30.0 +0.5
F12A **Elk City** 78.35 329 ⇑P P 05 02 29.4 +0.1
baz=79,SNR=7.1
I09A **Lost Marbles R** 78.35 326 ⇑P P 05 02 29.6 +0.2
baz=79
M05C **Lookout** 78.47 322 ⇓P P 05 02 30.0 -0.2
baz=79,SNR=5.3
D14A **Greenough** 78.48 330 ⇓P P 05 02 29.9 -0.2
baz=79
MSO **Missoula** 78.50 330 *e*P P 05 02 30.5 +0.3
comp=Z,2.9nm,0.9s,mb4.0
MSO *e*pP pP 05 03 01.0 +2.5
P01C **Double 8 Ranch** 78.55 320 ⇑P P 05 02 30.5 -0.2
baz=79
G11A **Walters Elk Ra** 78.59 328 ⇑P P 05 02 30.8 0.0
baz=79,SNR=11
O02C **Red Bluff** 78.67 321 ⇓P P 05 02 31.2 -0.1
baz=79
BMO **Blue Mountains** 78.73 327 *e*P P 05 02 31.3 -0.2
BMO pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
BMO **Blue Mountains** 78.73 327 *e*P P 05 02 31.3 -0.2
comp=Z,10nm,1.1s,mb4.6
L05A **Lakeview** 78.74 323 ⇑P P 05 02 31.8 +0.2
baz=79,SNR=7.3
I08A **Drewsey** 78.74 326 ⇓P P 05 02 31.8 +0.2
baz=79,SNR=10
WDC **Whiskeytown Da** 78.78 321 ⇓P P 05 02 30.0 -1.9
baz=79
H09A **Durkee** 78.79 327 ⇑P P 05 02 31.8 -0.1
baz=79,SNR=5.1
F11A **Grangeville** 78.88 328 ⇑P P 05 02 32.0 -0.3
baz=79,SNR=14
K06A **Valley Falls** 78.91 324 ⇓P P 05 02 32.9 +0.3
baz=79,SNR=5.4
D13A **Huson** 78.94 330 ⇑P P 05 02 32.5 -0.1
baz=79
G10A **Bishop Farm, J** 78.95 327 ⇑P P 05 02 33.2 +0.5
baz=79,SNR=28
E12A **Beaver Dam Sad** 78.97 329 ⇑P P 05 02 32.4 -0.4
baz=79
M03C **McCloud** 78.97 322 ⇑P P 05 02 32.2 -0.7
baz=79,SNR=5.8
C14A **Swan Lake** 79.10 331 ⇓P P 05 02 33.3 -0.2
baz=80,SNR=8.3
M04C **Macdoel** 79.14 322 ⇓P P 05 02 33.3 -0.5
baz=80,SNR=7.8
J06A **Christmas Vall** 79.15 324 ⇓P P 05 02 33.6 -0.3
baz=80,SNR=7.3
H08A **Prairie City** 79.21 326 ⇑P P 05 02 34.4 +0.2
baz=80,SNR=7.7
K05A **Summer Lake** 79.22 324 ⇓P P 05 02 34.6 +0.4
baz=80,SNR=6.6
E11A **Bogner Ranch,** 79.24 329 ⇓P P 05 02 33.7 -0.6
baz=80
O01C **Eel River Cons** 79.26 320 ⇓P P 05 02 34.8 +0.3
baz=80
G09A **Cove** 79.27 327 ⇓P P 05 02 35.0 +0.5
baz=80,SNR=23
D12A **Red Ives Fores** 79.33 330 ⇓P P 05 02 34.7 0.0
baz=80
I07A **Izee** 79.36 325 ⇓P P 05 02 34.9 -0.1
baz=80,SNR=6.7
N02C **Big Bar** 79.38 321 ⇓P P 05 02 35.0 -0.1
baz=80,SNR=13
C13A **Hot Springs** 79.42 330 ⇑P P 05 02 35.1 -0.1
baz=80,SNR=10
L04A **Klamath Falls** 79.42 323 ⇑P P 05 02 34.8 -0.5
baz=80,SNR=5.2
M02C **Callahan** 79.47 322 ⇑P P 05 02 34.8 -0.8
baz=80
F10A **Beach Ranch, E** 79.48 328 ⇓P P 05 02 35.8 +0.2
baz=80
YBH **Yreka Blue Hor** 79.61 322 ⇓P P 05 02 35.1 -1.2
baz=80
I06A **Prineville** 79.64 325 ⇑P P 05 02 36.7 +0.2
baz=80,SNR=6.0
J05A **Fort Rock** 79.77 324 ⇓P P 05 02 37.2 0.0
baz=80,SNR=5.7
E10A **Myers Farm, Un** 79.78 328 ⇓P P 05 02 37.3 +0.2
baz=80,SNR=6.8
D11A **Klaveano Farm,** 79.79 329 ⇓P P 05 02 37.0 -0.2
baz=80,SNR=5.9
JCC **Jacoby Creek** 79.81 321 ⇑P P 05 02 37.4 0.0
baz=80
C12B **Naegeli Ranch,** 79.86 330 ⇑P P 05 02 37.8 +0.2
baz=80
B13A **Whitefish** 79.87 331 ⇓P P 05 02 37.8 +0.2
baz=80,SNR=7.9
G08A **Pilot Rock** 79.89 326 ⇓P P 05 02 37.9 +0.1
baz=80,SNR=7.3
WALA **Waterton Lakes** 80.12 332 *e*P P 05 02 38.8 -0.1
comp=Z,10nm,0.8s,mb4.7
WALA *e*pP pP 05 03 08.3 +0.9
F08A **Pendleton** 80.14 327 ⇑P P 05 02 38.7 -0.4
baz=81
J04A **Umpqua Nationa** 80.23 323 ⇑P P 05 02 39.6 0.0
baz=81
H06A **Lindquist Farm** 80.24 325 ⇓P P 05 02 40.2 +0.5
baz=81,SNR=8.7
G07A **Ruggs Ranch, H** 80.24 326 ⇓P P 05 02 40.1 +0.4
baz=81,SNR=6.9
A13A **Flathead Natio** 80.26 331 ⇑P P 05 02 40.3 +0.6
baz=81
D10A **Wagner Farm, O** 80.26 329 ⇑P P 05 02 39.3 -0.4
baz=81,SNR=10
HUMO **Hull Mountain** 80.30 322 ⇓P P 05 02 39.0 -1.0
baz=81
E09A **Wood Farm, Sta** 80.31 328 ⇑P P 05 02 39.8 -0.2
baz=81
C11A **Tepee Creek (N** 80.32 330 ⇑P P 05 02 40.0 0.0
baz=81
I05A **Bend** 80.36 324 ⇓P P 05 02 40.8 +0.5
baz=81
B12A **Libby** 80.46 330 ⇓P P 05 02 40.7 0.0
baz=81,SNR=7.3
K02A **Glendale** 80.71 322 ⇓P P 05 02 42.4 +0.2
baz=81
G06A **Carlson Farm,** 80.73 326 ⇑P P 05 02 42.7 +0.4
baz=81
I04A **Tendick Farm,** 80.75 324 ⇑P P 05 02 41.8 -0.6
baz=81
D09A **Jones Farm, Ri** 80.77 328 ⇓P P 05 02 42.1 -0.3
baz=81,SNR=6.2
B11A **Sandpoint** 80.80 330 ⇓P P 05 02 42.4 -0.1
baz=81
F07A **Phinny Hill Vi** 80.80 326 ⇑P P 05 02 42.8 +0.2
baz=81
C10A **Spiker Farm,** 80.81 329 ⇑P P 05 02 42.7 +0.1
baz=81
A12A **Yaak River Ran** 80.82 331 ⇑P P 05 02 42.7 +0.1
baz=81,SNR=8.8
MDT **Midelt** 80.84 50 P P 05 02 44.3 +1.1
comp=Z,1.4nm,0.8s,mb3.8,baz=237,slow=9.8,SNR=4.3
HAWA **Hanford** 80.93 327 *e*P P 05 02 43.7 +0.4
comp=Z,11nm,0.9s,mb4.7
HAWA *e*pP pP 05 03 12.9 +1.1
RSW **Rattlesnake Hi** 80.96 327 *e*P P 05 02 44.0 +0.5
RSW *e*pP pP 05 03 12.1 +0.1
D08A **Wollman Farm,** 81.07 328 ⇓P P 05 02 44.5 +0.5
baz=82
G05A **Wamic** 81.09 325 ⇓P P 05 02 44.6 +0.4
baz=82
J02A **Umpqua** 81.13 323 ⇓P P 05 02 44.6 +0.1
baz=82
F06A **Goldendale** 81.16 326 ⇑P P 05 02 44.4 -0.2
baz=82
A11A **Hall Mountain,** 81.17 330 ⇑P P 05 02 44.6 0.0
baz=82,SNR=15
OD2 **Odessa Site #2** 81.19 328 P P 05 02 44.7 0.0
H04A **Detroit Lake** 81.20 324 ⇑P P 05 02 44.4 -0.4
baz=82
C09A **Chrisman Ranch** 81.26 329 ⇑P P 05 02 44.7 -0.4
baz=82,SNR=9.6
I03A **Eugene** 81.35 323 ⇓P P 05 02 45.8 +0.2
baz=82
F05A **White Salmon** 81.59 326 ⇑P P 05 02 46.9 0.0
baz=82
C08A **Higginbotham F** 81.63 328 ⇑P P 05 02 47.0 0.0
baz=82
B09A **Rice** 81.63 329 ⇑P P 05 02 46.6 -0.4
baz=82,SNR=7.9
D07A **Quincy** 81.69 327 ⇑P P 05 02 47.5 +0.1
baz=82,SNR=5.3
G04A **Mulino** 81.69 325 ⇓P P 05 02 47.7 +0.3
baz=82
A10A **Northport** 81.74 330 ⇑P P 05 02 47.3 -0.3
baz=82
E06A **Yakima** 81.77 326 ⇓P P 05 02 47.9 +0.1
baz=82
H03A **Soap Creek Ran** 81.80 324 ⇑P P 05 02 48.5 +0.5
baz=82
EBG **Ellensburg** 81.80 327 P P 05 02 48.5 +0.6
WTV **Waterville** 82.02 328 P P 05 02 49.0 0.0
C07A **Waterville** 82.07 328 ⇑P P 05 02 49.1 -0.2
baz=82,SNR=17
F04A **Amboy** 82.13 325 ⇑P P 05 02 49.6 -0.1
baz=83
D06A **Cle Elum** 82.13 327 ⇓P P 05 02 49.8 +0.1
baz=83
ETW **Entiat** 82.15 328 P P 05 02 49.9 +0.2
B08A **Colville Reser** 82.16 329 ⇓P P 05 02 49.1 -0.7
baz=83,SNR=7.0
A09A **Danville** 82.22 329 ⇓P P 05 02 49.6 -0.5
baz=83,SNR=9.9
NLW **Nelson Butte** 82.47 328 P P 05 02 51.1 -0.2
A08A **Turner Farm, O** 82.54 329 ⇓P P 05 02 51.4 -0.3
baz=83,SNR=18
B07A **Winthrop** 82.62 328 ⇓P P 05 02 51.3 -0.8
baz=83,SNR=11
D05A **Enumclaw** 82.72 326 ⇑P P 05 02 52.4 -0.3
baz=83
C05A **Tolt Reservoir** 82.90 327 ⇑P P 05 02 53.1 -0.5
baz=83
EDM **Edmonton** 82.98 335 *e*P P 05 02 52.4 -1.5
EDM *e**PP pP 05 03 22.0 -0.5
A07A **Ashnola River,** 83.14 329 ⇑P P 05 02 54.7 -0.1
baz=84,SNR=14
RPW **Rockport** 83.30 328 P P 05 02 54.6 -1.0
B06A **Marblemount** 83.33 328 ⇓P P 05 02 55.2 -0.6
baz=84
JCW **Jim Creek** 83.34 327 *e*P P 05 02 55.1 -0.8
JCW *e*pP pP 05 03 24.6 +0.1
B05A **Bryant** 83.47 327 ⇑P P 05 02 55.4 -1.2
baz=84,SNR=5.0
CMW **Cultus Mountai** 83.59 327 P P 05 02 56.4 -0.7
A06A **Chilliwack** 83.71 328 ⇓P P 05 02 57.0 -0.8
baz=84
A05A **Maple Falls** 83.95 328 ⇑P P 05 02 58.3 -0.7
baz=84
B04A **Port Angeles** 84.06 326 ⇑P P 05 02 59.3 -0.3
baz=84
A04A **Legoe Bay, Lum** 84.08 327 ⇓P P 05 02 59.3 -0.4
baz=84,SNR=5.7
PGC **Sidney** 84.41 327 *e*P P 05 03 01.1 -0.2
ESDC **Sonseca Array** 84.88 44 P P 05 03 04.0 +0.1
comp=Z,2.3nm,0.9s,mb4.1,baz=244,slow=4.5,SNR=5.3
ESDC pP pP 05 03 33.0 +0.4
comp=Z,1.0nm,0.7s,baz=256,slow=5.5,SNR=2.7
MAW **Mawson** 85.21 163 P P 05 03 05.4 +0.2
comp=Z,4.4nm,0.5s,mb4.6,baz=221,slow=5.5,SNR=19
SFJD **Kangerlussuaq** 88.23 7 P P 05 03 19.0 -0.6
comp=Z,3.9nm,0.4s,mb4.8,baz=217,slow=5.1,SNR=2.6
YKA **Yellowknife Ar** 90.33 340 P P 05 03 28.7 -0.8
comp=Z,12nm,0.8s,mb5.1,baz=131,slow=4.6,SNR=59
YKA pP pP 05 03 58.4 -0.1
comp=Z,9.0nm,0.8s,baz=134,slow=4.7,SNR=11
YKA **Yellowknife Ar** 90.33 340 P P 05 03 28.7 -0.8
YKA pP pP 05 03 58.4 -0.1
YKW3 **Yellowknife Ar** 90.39 341 *e*P P 05 03 29.0 -0.7
DLBC **Dease Lake** 93.45 332 *e*P P 05 03 44.3 +0.3
HKL **Haleakala** 94.99 290 *e*P P 05 03 50.6 -1.4
KIP **Kipapa** 96.77 290 *e*P P 05 04 00.3 +0.2
ASAR **Alice Springs** 130.97 208 PKP PKPdf 05 09 39.5 -1.1
comp=Z,1.8nm,0.5s,baz=124,slow=1.6,SNR=25
WRA **Warramunga Arr** 134.00 211 PKP PKPdf 05 09 45.7 -0.8
comp=Z,2.5nm,0.6s,baz=162,slow=1.8,SNR=16
KURK **Kurchatov** 140.30 33 *i* PKIKP PKPdf 05 09 56.6 -0.5
ZALV **Zalesovo Beam** 140.89 25 PKP PKPdf 05 09 56.7 -1.4
comp=Z,4.9nm,0.7s,baz=285,slow=2.9,SNR=8.6
BOD **Bodaibo** 142.66 358 *e*PKHKP 05 09 55.1
MKAR **Makanchi Array** 144.62 35 PKP PKPdf 05 10 04.4 -0.5
comp=Z,7.0nm,0.6s,baz=324,slow=4.7,SNR=71
MKAR pPKP pPKPdf 05 10 34.6 -0.6
comp=Z,1.7nm,0.6s,baz=337,slow=2.8,SNR=3.1
KLR **Kul'dur** 147.04 335 *e*PKHKP 05 10 04.2
GUMO **Guam** 147.35 263 PKPbc PKPbc 05 10 11.6 -1.5
comp=Z,24nm,0.4s,baz=347,slow=21,SNR=5.9
NDI **New Delhi** 147.91 68 *ex* x 05 10 11.0
WMQ **Urumqi** 149.45 35 *e*PKP PKPdf 05 10 12.5 -0.6
ZAK **Zakamensk** 149.47 10 *e*PKHKP 05 10 13.6
ZAK pmax pmax
comp=Z,5.0nm,1.3s
MDJ **Mudanjiang** 151.60 332 PKP PKPdf 05 10 14.0 -2.4
MJAR **Matsushiro Arr** 151.68 310 PKPbc PKPbc 05 10 22.4 -0.7
comp=Z,1.8nm,0.4s,baz=118,slow=1.5,SNR=9.7
MJAR PKPab PKPab 05 10 30.4 -1.9
comp=Z,2.9nm,0.7s,baz=76,slow=1.6,SNR=5.7
SONM **Songino Array** 152.40 7 PKP PKPdf 05 10 18.2 +0.7
comp=Z,1.9nm,0.8s,baz=307,slow=0.3,SNR=12
SONM PKPbc PKPbc 05 10 24.6 +0.2
comp=Z,5.9nm,0.8s,baz=328,slow=1.3,SNR=25
SONM PKPab PKPab 05 10 35.5 +0.7
comp=Z,2.1nm,0.7s,baz=328,slow=3.9,SNR=6.8
ULN **Ulaanbaatar** 152.45 6 *e*PKPdf PKPdf 05 10 17.5 0.0
ULN *e*PKPbc PKPbc 05 10 23.7 -0.8
KSRS **Korea Array** 157.83 323 PKP PKPdf 05 10 25.8 +0.6
comp=Z,1.4nm,0.8s,baz=11,slow=0.6,SNR=6.1
KSRS PKPab PKPab 05 10 57.9 -0.6
comp=Z,2.5nm,0.7s,baz=66,slow=3.4,SNR=6.4
GTA **Gaotai** 158.65 25 *e*PKP PKPdf 05 10 27.0 +0.9
HHC **Hu-ho-hao-te** 159.69 360 *e*PKP PKPdf 05 10 23.1 -4.2
HHC APKP 05 10 52.6
HHC PKS 05 13 54.6
HHC PP PP 05 14 46.7 -0.4
HHC SKS SKSdf 05 17 16.2 -6.3
HHC SKKS SKKSac 05 21 22.6 -3.7
HHC SS SS 05 34 42.8 -2.0
HHC PP PP
comp=Z,40nm,8.3s
HHC LR LR
comp=N,123nm,20.4s
HHC LR LR
comp=E,167nm,20.9s
HHC LR LR
comp=Z,64nm,20.7s
BJI **Beijing** 160.08 349 PKP PKPdf 05 10 24.0 -3.8

LZH	**Lanzhou**	**163.08**	**22**	PKP	PKPdf	05 10 30.0	-1.0
LZH				APKP		05 10 57.1	
LZH				XPKP		05 11 07.6	
LZH				LR	LR		
	comp=E,125nm,18.5s						
LZH				LR	LR		
	comp=Z,197nm,20.3s						
NJ2	**Nanjing**	**166.70**	**332**	*e*PKP	PKPdf	05 10 34.1	-0.1
CD2	**Chengdu**	**167.52**	**32**	*e*PKP	PKPdf	05 10 31.7	-3.2
CD2				PKP2	PKPab	05 11 39.0	-2.0
CD2				PP	PP	05 15 27.7	-1.2
CD2				SKS	SKSdf	05 17 24.0	-4.7
CD2				SKKS	SKKSac	05 22 03.6	-3.0
CD2				SS	SS	05 36 02.7	-3.9
CD2				PP	PP		
	comp=Z,90nm,9.6s						
CD2				LR	LR		
	comp=N,160nm,21.4s						
CD2				LR	LR		
	comp=E,150nm,22.4s						
CD2				LR	LR		
	comp=Z,130nm,18.4s						
CMAR	**Chiang Mai Arr**	**168.05**	**98**	PKP	PKPdf	05 10 35.4	-0.2
	comp=Z,0.7nm,0.3s,baz=309,slow=0.8,SNR=6.3						
KMI	**Kunming**	**170.74**	**58**	PKP	PKPdf	05 10 33.0	-4.0
GYA	**Guiyang**	**172.61**	**35**	*e*PKP	PKPdf	05 10 35.2	-2.7
GYA				APKP		05 11 06.7	
GYA				XPKP		05 11 18.9	
GYA				PKP2	PKPab	05 12 01.4	-2.3
GYA				PKS		05 14 05.6	
GYA				PP	PP	05 15 53.2	-1.3
GYA				PP	PP		
	comp=Z,90nm,8.4s						

*ISCJB **04** 05:53:02.7±0.5, 4256N±002×4338E±004, h10^{km}, Error ellipse: s-maj=3.9km s-min=2.6km az=160.7*
*TIF **04** 05:53:02.9, 4258N×4345E, h12^{km}±1^{km}*
*CSEM **04** 05:53:03.5±0.1, 4256N×4340E, h10^{km}, mb3.9, Error ellipse: s-maj=1.6km s-min=1.3km az=83.0*
*MOS **04** 05:53:05.2±1.3, 4264N×4362E, h17^{km}, mb3.9/1, Error ellipse: s-maj=16.8km s-min=7.4km az=89.0*
ISC 04 05:53:03.1±0.6, **4254N**±002×**4335E**±004, **h3**^{km}±8^{km}, **n19**, σ**0^{s}86**/37, **2D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.08**	**60**	P	**Pg**	**05 53 05.2**	**+0.4**
ONI				S	**Sg**	**05 53 06.8**	**+0.9**
DIGR	**Digorskoe uzhe**	**0.40**	**25**	*i* Pg	**Pg**	**05 53 10.2**	**-0.6**
DIGR				*i* Sg	**Sg**	**05 53 15.6**	**-0.3**
ZEI	**Tsey**	**0.46**	**60**	*i* Pg	**Pg**	**05 53 11.4**	**-0.6**
ZEI				*i* Sg	**Sg**	**05 53 17.4**	**-0.7**
KORR	**Kora**	**0.76**	**44**	*i* Pg	**Pg**	**05 53 17.1**	**-0.6**
KORR				*e*Sg	**Sg**	**05 53 27.4**	**-0.1**
GOR	**Gori**	**0.79**	**134**	P	**Pg**	**05 53 18.0**	**-0.2**
GOR				S	**Sg**	**05 53 29.0**	**+0.6**
LSNR	**Lesken**	**0.81**	**25**	*i* Pg	**Pg**	**05 53 18.4**	**-0.3**
LSNR				*e*Sg	**Sg**	**05 53 29.2**	**0.0**
ARNR	**Ardon**	**0.94**	**46**	*e*Pg	**Pg**	**05 53 19.8**	**-1.4**
ARNR				*e*Sg	**Sg**	**05 53 32.8**	**-0.6**
BTKR	**Batakoyurt**	**1.21**	**46**	*e*Pg	**Pg**	**05 53 25.6**	**-0.7**
BTKR				*e*Sg	**Sg**	**05 53 44.1**	**+2.2**
KUBR	**Kubataba**	**1.26**	**2**	*e*Pg	**Pg**	**05 53 27.8**	**+0.5**
KUBR				*i* Sg	**Sg**	**05 53 45.7**	**+2.0**
SHAR	**Shatzhatmas**	**1.30**	**338**	⇓*e*PG	**Pg**	**05 53 27.9**	**-0.2**
SHAR				*e*S	**Sg**	**05 53 44.9**	**-0.1**
TBLG	**Delisi**	**1.31**	**128**	Pg	**Pg**	**05 53 27.6**	**-0.6**
TBLG				Sg	**Sg**	**05 53 44.8**	**-0.3**
MTA	**Mtatsminda**	**1.36**	**128**	P	**Pn**	**05 53 29.0**	**0.0**
MTA				S	**Sb**	**05 53 46.8**	**-0.3**
PRTR	**Priterechnaya**	**1.39**	**29**	*e*Pg	**Pg**	**05 53 28.8**	**-1.0**
PRTR				*e*Sg	**Sg**	**05 53 49.7**	**+1.9**
KIV0	**Kislovodsk Arr**	**1.50**	**341**	*e*Pg	**Pg**	**05 53 31.1**	**-0.7**
KIV0				*e*Sg	**Sg**	**05 53 50.5**	**-0.7**
KIV	**Kislovodsk**	**1.50**	**341**	⇓*i*PG	**Pg**	**05 53 32.6**	**+0.8**
KIV				*i*		05 53 52.1	
KIV				pmax	pmax		
	comp=Z,33nm,1.0s						
KIV	**Kislovodsk**	**1.50**	**341**	*i* Pg	**Pg**	**05 53 32.6**	**+0.8**
	comp=Z,33nm,1.0s						
KIV				*i* Sg	**Sg**	**05 53 52.1**	**+0.8**
BEYR	**Belyy Ugol+**	**1.52**	**345**	*e*Pg	**Pg**	**05 53 32.0**	**-0.3**
BEYR				*e*Sg	**Sg**	**05 53 51.3**	**-0.8**
ARTV	**Artvin**	**1.72**	**219**	*i* P	**Pn**	**05 53 35.0**	**+1.0**
ARTV				*i* S	**Sb**	**05 53 57.7**	**+0.4**
DGRG	**David-gareji**	**1.86**	**125**	P	**Pg**	**05 53 37.5**	**-1.2**
DGRG				S	**Sg**	**05 54 04.3**	**+1.5**

*BJI **04** 06:03:21.7, 1138S×16708E, h56^{km}, mB4.7, mb4.5, Ms4.6, Msz4.4*
*ISCJB **04** 06:03:22.9±0.8, 122S±0.1×1662E±02, h66^{km}, mb4.1/13, Error ellipse: s-maj=21.5km s-min=15.6km az=17.8*
*IDC **04** 06:03:24.7±0.8, 1209S×16628E, h68^{km}±5^{km}, mb3.9/12, mb1 4.0/12, mb1mx3.9/17, mbtmp3.9/12, MS4.1/4, Ms1 4.1/4, ms1mx3.5/31, Error ellipse: s-maj=23.0km s-min=16.6km az=111.0*
*NEIC **04** 06:03:24.3±0.7, 1198S×166.18E, mb3.9/1, Error ellipse: s-maj=18.1km s-min=17.1km az=146.0*
ISC 04 06:03:24.7±0.8, **121S**±01×**1663E**±01, **h68**^{km}, **h68**^{km}±2.3^{km}**:pP-P, n28,** σ**0^{s}92**/19, **mb4.1**/13, **1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.78**	**293**	P	**Pn**	**06 04 56.7**	**-4.9**
	25nm,0.3s,baz=170,slow=8.4,SNR=7.8						
CTA	**Charters Tower**	**20.79**	**245**	*e*P	**P**	**06 08 00.1**	**-0.3**
	8.4nm,1.2s						
CTA	**Charters Tower**	**20.79**	**245**	P	**P**	**06 07 59.6**	**-0.8**
	9.5nm,1.1s,baz=73,slow=17,SNR=3.1						
CTA				LR	LR	06 15 19.2	
	comp=Z,372nm,19.4s,baz=54,slow=34						
AFI	**Afiamalu**	**21.45**	**97**	LR	LR	06 15 13.9	
	comp=Z,357nm,20.6s,baz=275,slow=33						
STKA	**Stephens Creek**	**30.03**	**225**	*e*P	**P**	**06 09 31.9**	**+4.6**
	2.6nm,0.8s,mb3.9						
STKA	**Stephens Creek**	**30.03**	**225**	P	**P**	**06 09 28.1**	**+0.8**
	2.4nm,0.9s,mb3.9,baz=22,slow=13,SNR=3.6						
WRA	**Warramunga Arr**	**31.62**	**252**	P	**P**	**06 09 40.2**	**-1.3**
	1.1nm,0.7s,mb3.7,baz=83,slow=8.7,SNR=7.0						
WRA				PcP	PcP	06 12 33.4	+1.0
	2.4nm,0.8s,baz=84,slow=3.3,SNR=9.0						
WRA				pPcP		06 12 52.4	
	3.1nm,0.9s,baz=79,slow=3.3,SNR=7.7						
RPZ	**Rata Peaks**	**31.74**	**173**	P	**P**	**06 09 42.3**	**+0.2**
	10nm,0.7s,mb4.7,baz=4.4,slow=13,SNR=4.2						
ASAR	**Alice Springs**	**32.79**	**245**	P	**P**	**06 09 50.5**	**-1.1**
	1.5nm,0.8s,mb3.9,baz=72,slow=9.8,SNR=15						
ASAR				PcP	PcP	06 12 36.5	+0.9
	4.0nm,0.8s,baz=62,slow=2.4,SNR=17						
ASAR				pPcP		06 12 55.5	
	4.8nm,0.8s,baz=68,slow=2.4,SNR=13						
FITZ	**Fitzroy Crossi**	**39.62**	**256**	P	**P**	**06 10 51.0**	**+1.0**
	0.7nm,0.6s,mb3.7,baz=67,slow=13,SNR=3.1						
FITZ				pP	pP	06 11 06.5	-0.3
	1.5nm,0.6s,baz=65,slow=14,SNR=2.0						
PPT	**Papeete**	**42.94**	**103**	LR	LR	06 25 32.9	
	comp=Z,203nm,19.9s,baz=307,slow=31						
NWAO	**Narrogin (SRO)**	**49.30**	**237**	LR	LR	06 33 13.1	
	comp=Z,396nm,18.3s,baz=18,slow=36						
TAOE	**Nuku Hiva Isla**	**52.71**	**92**	*e*LR	LR	06 28 54.0	
	1μm,23.8s						
RKT	**Rikitea**	**56.72**	**110**	*e*LR	LR	06 30 44.9	
	199nm,25.0s						
KSRS	**Korea Array**	**61.07**	**326**	P	**P**	**06 13 30.4**	**-1.2**
	1.4nm,0.6s,mb4.2,baz=135,slow=6.6,SNR=5.5						
KSRS				pP	pP	06 13 49.4	0.0
	2.2nm,0.7s,baz=136,slow=7.1,SNR=4.8						
XAN	**Xi'an**	**71.24**	**312**	P	**P**	**06 14 37.8**	**+1.0**
XAN				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
XAN				AMB	AMB		
	comp=Z,34nm,5.6s						
CMAR	**Chiang Mai Arr**	**73.03**	**294**	P	**P**	**06 14 48.4**	**+0.5**
	comp=Z,0.9nm,0.3s,mb4.0,baz=126,slow=4.6,SNR=3.7						
LZH	**Lanzhou**	**75.87**	**312**	*e*P	**P**	**06 15 04.8**	**+0.8**
LZH				AP	pP	06 15 18.9	-3.5
LZH				LR	LR		
	comp=N,187nm,14.3s						
LZH				LR	LR		
	comp=Z,234nm,18.0s						
SONM	**Songino Array**	**79.85**	**324**	P	**P**	**06 15 26.0**	**+0.2**
	comp=Z,3.7nm,0.8s,mb4.3,baz=133,slow=5.1,SNR=21						
SONM				pP	pP	06 15 45.1	+0.7
	comp=Z,3.6nm,0.6s,baz=132,slow=5.4,SNR=10						
GTA	**Gaotai**	**80.19**	**314**	⇑P	**P**	**06 15 29.2**	**+1.4**
GTA				AP	pP	06 15 48.3	+1.9
GTA				AMB	AMB		
	comp=Z,114nm,5.9s						
GTA				LR	LR		
	comp=Z,99nm,11.3s						
MAW	**Mawson**	**83.91**	**202**	P	**P**	**06 15 47.7**	**+0.9**
	comp=Z,1.6nm,0.8s,mb3.9,baz=75,slow=9.0,SNR=4.8						
MAW				pP	pP	06 16 05.8	+0.3
	comp=Z,1.5nm,0.7s,baz=139,slow=8.7,SNR=3.4						
NVAR	**Mina Array Bea**	**86.32**	**50**	P	**P**	**06 15 58.4**	**-1.1**
	comp=Z,0.3nm,0.7s,mb3.3,baz=233,slow=4.3,SNR=2.8						
MKAR	**Makanchi Array**	**94.67**	**317**	P	**P**	**06 16 38.4**	**+0.1**
	comp=Z,11nm,0.7s,mb5.4,baz=95,slow=6.5,SNR=89						
MKAR				pP	pP	06 16 57.4	+0.2
	comp=Z,11nm,0.7s,baz=93,slow=6.5,SNR=19						
ZALV	**Zalesovo Beam**	**94.74**	**324**	P	**P**	**06 16 37.3**	**-1.1**
	comp=Z,0.6nm,0.3s,mb4.4,baz=95,slow=11,SNR=3.7						
ZALV				pP	pP	06 16 56.4	-1.0
	comp=Z,1.0nm,0.5s,baz=119,slow=5.2,SNR=2.7						
ARCES	**ARCESS Array B**	**117.52**	**345**	PKP	PKPdf	06 22 01.4	-0.7
	comp=Z,1.1nm,0.7s,baz=78,slow=1.7,SNR=5.5						
ARCES				pPKP	pPKPdf	06 22 20.5	-1.3
	comp=Z,1.0nm,0.6s,baz=22,slow=1.3,SNR=1.7						
ARCES	**ARCESS Array B**	**117.52**	**345**	PKP	PKPdf	06 22 01.4	-0.8
ARCES				pPKP	pPKPdf	06 22 20.5	-1.3
KEST	**Kesra**	**148.59**	**322**	PKPbc	PKPbc	06 23 05.3	+0.9
	comp=Z,0.9nm,0.4s,baz=128,slow=3.0,SNR=4.0						
TORD	**Torodi Ar. Bea**	**164.92**	**275**	PKP	PKPdf	06 23 21.5	-0.5
	comp=Z,0.7nm,0.9s,baz=357,slow=3.0,SNR=3.7						
TORD				PKPab	PKPab	06 24 19.6	+0.9
	comp=Z,0.5nm,0.7s,baz=93,slow=4.5,SNR=3.8						

*MOS **04** 06:18:19.9±2.0, 36.17N×71.34E, h33^{km}, mb4.3/8, Error ellipse: s-maj=13.9km s-min=9.0km az=89.7*
*BJI **04** 06:18:21.5, 3649N×7064E, h90^{km}, mb4.6*
*IDC **04** 06:18:22.9±6.3, 36.16N×7126E, h57^{km}±55^{km}, mb3.5/7, mb1 3.7/11, mb1mx3.6/24, mbtmp3.6/11, ML4.0/4, MS3.4/2, Ms1 3.4/2, ms1mx2.7/26, Error ellipse: s-maj=35.4km s-min=19.1km az=18.0*
*NEIC **04** 06:18:26.2±1.1, 3623N×7146E, h90^{km}±11^{km}, mb4.6/2, Error ellipse: s-maj=12.9km s-min=4.9km az=58.0*
*ISCJB **04** 06:18:27.0±0.6, 3636N±003×7153E±005, h110^{km}±7^{km}, mb4.0/17, Error ellipse: s-maj=7.4km s-min=4.1km az=166.4*
*NNC **04** 06:18:32.3±4.8, 3683N×7084E, h110^{km}±58^{km}, mb3.5, mpv4.3, Error ellipse: s-maj=36.5km s-min=24.2km az=20.0*
ISC 04 06:18:26.6±0.6, **3626N**±003×**7149E**±006, **h92**^{km}±7^{km}, **n84,** σ**1^{s}27**/96, **mb4.0**/17, **12C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.46**	**172**	⇓P	**Pn**	**06 19 10.5**	**+5.6**
CEP				S	**Sn**	**06 19 42.0**	**+7.7**
THW	**Thamme Wali**	**3.46**	**176**	⇑P	**Pn**	**06 19 23.5**	**+5.0**
JMU	**Jammu**	**4.52**	**141**	*e*S	**Sn**	**06 20 22.5**	**-1.6**
KSH	**Kashi**	**4.81**	**46**	*e*P	**Pn**	**06 19 41.3**	**+4.7**
KSH				*e*S	**Sn**	**06 20 32.6**	**+1.6**
KSH				Smax			
	comp=N,623nm,0.3s						
KSH				Smax			
	comp=E,547nm,0.4s						
THN	**Thein Dam**	**5.18**	**136**	*e*P	**Pn**	**06 19 45.6**	**+4.0**
THN				*e*x	x	06 20 45.5	
DLH	**Dalhousie**	**5.24**	**134**	*e*P	**Pn**	**06 19 48.0**	**+5.5**
DLH				*e*x	x	06 20 50.0	
AML	**Almayashu**	**6.11**	**16**	P	**Pn**	**06 19 55.1**	**+0.9**
	SNR=146						
AML	**Almayashu**	**6.11**	**16**	*e*Pn	**Pn**	**06 19 55.0**	**+0.8**
	comp=E,44nm,0.3s						
AML				*e*Sn	**Sn**	**06 21 00.6**	**-2.0**
UCH	**Uchtor**	**6.40**	**21**	P	**Pn**	**06 19 60.0**	**+1.7**
	SNR=33						
UCH	**Uchtor**	**6.40**	**21**	*e*Pn	**Pn**	**06 19 59.8**	**+1.6**
	comp=E,14nm,0.4s						
UCH				*e*Sn	**Sn**	**06 21 07.6**	**-2.2**
SDNR	**Sundarnagar**	**6.58**	**135**	*e*P	**Pn**	**06 20 03.0**	**+2.3**
SDNR				*e*S	**Sn**	**06 21 14.0**	**-0.3**
EKS2	**Erkin-Say**	**6.63**	**15**	P	**Pn**	**06 20 02.2**	**+0.9**
	SNR=24						
EKS2	**Erkin-Say**	**6.63**	**15**	*e*Pn	**Pn**	**06 20 02.2**	**+0.9**
	comp=E,13nm,0.5s						
EKS2				*e*Sn	**Sn**	**06 21 15.6**	**+0.2**
AAK	**Ala-Archa**	**6.77**	**19**	P	**Pn**	**06 20 04.6**	**+1.3**
	SNR=14						
KK31	**Karatay Array**	**6.88**	**354**	P	**Pn**	**06 20 03.4**	**-1.2**
	comp=E,15nm,0.5s,baz=189,slow=14,SNR=268						
KK31				⇑S	**Sn**	**06 21 13.4**	**-7.9**
	comp=E,7.3nm,0.3s,baz=184,slow=24,SNR=7.1						
SMLA	**Simla**	**6.97**	**136**	⇑*i*P	**Pn**	**06 20 09.1**	**+3.1**
SMLA				*i* S	**Sn**	**06 21 22.0**	**-1.7**
SMLA				*e*x	x	06 21 29.4	
	comp=N,1μm,0.4s						
SMLA				*e*x	x	06 21 30.6	
	comp=E,772nm,0.3s						
CHMS	**Chumysh**	**7.18**	**19**	P	**Pn**	**06 20 09.7**	**+0.8**
	SNR=12						
KLP	**Kalpa**	**7.33**	**128**	*e*P	**Pn**	**06 20 15.1**	**+4.0**
KLP				*e*S	**Sn**	**06 21 31.0**	**-1.7**
KLP				AML	AML	06 21 43.0	
	comp=N,289nm,0.8s						
KLP				AML	AML	06 21 43.6	
	comp=E,389nm,0.8s						
TKM2	**Tokmak 2**	**7.37**	**24**	⇑P	**Pn**	**06 20 12.5**	**+1.1**
	comp=E,18nm,0.8s						
TKM2				⇑S	**Sn**	**06 21 34.3**	**+1.0**
	comp=E,6.6nm,0.7s						
TKM2	**Tokmak 2**	**7.37**	**24**	*e*P	**Pn**	**06 20 12.6**	**+1.2**
TKM2				pmax	pmax		
	comp=Z,15nm,0.6s						
TKM2	**Tokmak 2**	**7.37**	**24**	P	**Pn**	**06 20 12.5**	**+1.1**
	SNR=30						
TKM2	**Tokmak 2**	**7.37**	**24**	*e*Pn	**Pn**	**06 20 12.6**	**+1.3**
	comp=Z,15nm,0.6s						
USP	**Ospenovka**	**7.37**	**17**	P	**Pn**	**06 20 11.6**	**+0.2**
	SNR=9.8						
NDI	**New Delhi**	**8.97**	**146**	*e*x	x	06 22 11.0	
SONA	**Sohna**	**9.28**	**148**	*e*P	**Pn**	**06 20 41.3**	**+3.7**
SONA				*e*S	**Sn**	**06 22 14.8**	**-5.4**
DANN	**Dangsing**	**13.03**	**124**	*e*P	**Pn**	**06 21 28.5**	**+0.4**
	comp=Z,30nm,0.3s						
MK31	**Makanchi Array**	**13.26**	**34**	⇑P	**Pn**	**06 21 30.2**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=211,slow=11,SNR=22						
MKAR	**Makanchi Array**	**13.26**	**34**	P	**Pn**	**06 21 30.3**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=229,slow=15,SNR=9.7						
MKAR	**Makanchi Array**	**13.26**	**34**	*e*P	**Pn**	**06 21 31.5**	**+0.5**
KOLN	**Koldanda**	**13.30**	**126**	*e*P	**Pn**	**06 21 31.4**	**-0.3**
	comp=Z,19nm,0.5s						
GKN	**Gorkha**	**13.84**	**123**	*e*P	**Pn**	**06 21 39.2**	**+0.4**
DMN	**Daman**	**14.41**	**123**	*e*P	**Pn**	**06 21 45.9**	**-0.2**
	comp=Z,14nm,0.3s						
KKN	**Kakani**	**14.41**	**122**	*e*P	**Pn**	**06 21 45.7**	**-0.5**
PKIN	**Phulchoki**	**14.63**	**122**	*e*P	**Pn**	**06 21 49.1**	**+0.2**
PKI	**Pulchoki**	**14.64**	**122**	*e*P	**Pn**	**06 21 49.1**	**0.0**
	comp=Z,13nm,0.4s						
GUN	**Gumba**	**14.76**	**120**	*e*P	**Pn**	**06 21 50.6**	**+0.1**
JIRN	**Jiri**	**15.12**	**120**	*e*P	**Pn**	**06 21 55.2**	**-0.1**
KURBB	**Kurchatov Arra**	**15.23**	**17**	⇑P	**Pn**	**06 21 58.4**	**+2.0**
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**15.33**	**17**	⇑P	**Pn**	**06 21 59.6**	**+1.9**
	comp=Z,7.8nm,1.2s						
KURK	**Kurchatov**	**15.33**	**17**	P	**Pn**	**06 21 57.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=208,slow=10,SNR=14						
KURK	**Kurchatov**	**15.33**	**17**	⇑*i*P	**Pn**	**06 21 59.6**	**+1.9**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AB31	**Akbulak array**	**15.48**	**331**	⇑P	**Pn**	**06 21 55.5**	**-4.1**
	comp=Z,1.9nm,0.3s,baz=138,slow=13,SNR=204						
AB31				⇓S	S	06 24 35.1	-25
	comp=Z,2.2nm,0.6s,baz=156,slow=22,SNR=5.9						
RAMN	**Ramite**	**15.85**	**122**	*e*P	**Pn**	**06 22 03.6**	**-0.8**
	comp=Z,13nm,0.4s						
TAPN	**Taplejung**	**16.38**	**118**	*e*P	**Pn**	**06 22 10.5**	**-0.5**
	comp=Z,21nm,0.3s						
ODAN	**Odare**	**16.46**	**120**	*e*P	**Pn**	**06 22 11.5**	**-0.4**
VOSK	**Vostochnaya**	**16.46**	**359**	⇑P	**Pn**	**06 22 08.1**	**-3.7**
	comp=Z,3.4nm,0.9s						
BVA0	**Borovoye Array**	**16.78**	**358**	⇑P	**Pn**	**06 22 14.4**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=236,slow=34,SNR=12						
BVA0				S	**S**	**06 25 11.4**	**-15**
	comp=Z,1.2nm,1.8s,baz=144,slow=18,SNR=3.9						
BVAR	**Borovoye Array**	**16.78**	**358**	P	**Pn**	**06 22 14.4**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=181,slow=15,SNR=8.5						
BVAR				LR	LR	06 28 48.6	
	comp=Z,25nm,18.3s,baz=51,slow=37						
BVAR	**Borovoye Array**	**16.78**	**358**	P	**Pn**	**06 22 14.4**	**-1.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				MLR	MLR		
	comp=Z,25nm,18.3s						
AKTK	**Aktyubinsk**	**17.18**	**330**	P	**Pn**	**06 22 19.0**	**-1.7**
AKTO	**Aktyubinsk**	**17.18**	**330**	⇓P	**Pn**	**06 22 18.5**	**-2.2**
	comp=Z,1.8nm,0.9s						
AKTO				⇓S	**S**	**06 25 17.8**	**-17**
	comp=Z,0.5nm,0.7s						
AKTO	**Aktyubinsk**	**17.18**	**330**	P	**Pn**	**06 22 19.0**	**-1.7**
	comp=Z,1.3nm,0.3s,baz=148,slow=8.9,SNR=14						
AKTO	**Aktyubinsk**	**17.18**	**330**	P	**Pn**	**06 22 19.0**	**-1.7**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	**19.95**	**24**	P	**Pn**	**06 22 51.3**	**-2.3**
ZAL				pmax	pmax		
	comp=Z,25nm,0.4s						
ZAA0	**Zalesovo Array**	**19.97**	**24**	*e*P	**Pn**	**06 22 50.8**	**-3.1**
ZALV	**Zalesovo Beam**	**19.97**	**24**	P	**Pn**	**06 22 51.3**	**-2.5**
	comp=Z,25nm,0.4s,baz=217,slow=10.0,SNR=68						
NVS	**Novosibirsk**	**20.27**	**20**	*e*P	**P**	**06 22 53.5**	**-1.0**
MIB	**Mutribah**	**21.22**	**259**	*e*P	**P**	**06 23 04.6**	**-0.4**
	baz=250						
MIB				AMb	AMB	06 23 10.9	
	comp=Z,21nm,0.8s,mb4.5,baz=250						
GNI	**Garni**	**21.34**	**289**	P	**P**	**06 23 08.5**	**+2.2**
	comp=Z,6.3nm,0.4s,mb4.3,baz=117,slow=4.1,SNR=3.7						
GNI	**Garni**	**21.34**	**289**	P	**P**	**06 23 08.5**	**+2.3**
GNI				pmax	pmax		
	comp=Z,6.0nm,0.4s						
RDF	**Al-Radifah**	**21.42**	**257**	*e*P	**P**	**06 23 08.3**	**+1.2**
	baz=247						
RDF				AMb	AMB	06 23 12.9	
	comp=Z,16nm,1.0s,mb4.3,baz=247						
NAY	**Al-Naaiem**	**21.53**	**258**	*e*P	**P**	**06 23 09.1**	**+0.8**
	baz=249						
NAY				AMb	AMB	06 23 10.3	
	comp=Z,11nm,1.0s,mb4.1,baz=249						
ARU	**Arti**	**21.99**	**341**	*d i*P	**P**	**06 23 14.0**	**+1.1**
ARU				*e*		06 23 49.7	
ARU				*e*S	**S**	**06 27 12.0**	**+2.1**
ARU				*e*SS		06 27 51.7	
ARU				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.1						
GTA	**Gaotai**	**22.55**	**73**	*e*P	**P**	**06 23 23.0**	**+4.0**
GTA				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.2						
KIV	**Kislovodsk**	**23.25**	**298**	*e*P	**P**	**06 23 24.3**	**-1.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0						
TLY	**Talaya**	**27.52**	**46**	*e*P	**P**	**06 24 04.3**	**0.0**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
SONM	**Songino Array**	**28.15**	**55**	P	**P**	**06 24 12.1**	**+2.1**
	comp=Z,0.5nm,0.6s,mb3.2,baz=245,slow=9.4,SNR=3.8						
SONM	**Songino Array**	**28.15**	**55**	P	**P**	**06 24 12.1**	**+2.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ULN	**Ulaanbaatar**	**28.59**	**55**	*e*P	**P**	**06 24 13.7**	**-0.1**
AKASG	**Malin Array Be**	**33.40**	**309**	P	**P**	**06 24 55.4**	**-0.7**
	comp=Z,1.0nm,0.5s,mb3.9,baz=80,slow=7.2,SNR=6.1						
AKASG	**Malin Array Be**	**33.40**	**309**	*e*P	**P**	**06 24 56.0**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HIA	**Hailar**	**37.11**	**54**	*e*P	**P**	**06 25 28.1**	**+0.2**
NJ2	**Nanjing**	**39.12**	**82**	*e*P	**P**	**06 25 46.5**	**+1.5**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
ARCES	**ARCESS Array B**	**41.52**	**338**	P	**P**	**06 26 04.9**	**+0.6**
	comp=Z,2.9nm,0.7s,mb4.1,baz=114,slow=7.4,SNR=20						
ARCES	**ARCESS Array B**	**41.52**	**338**	P	**P**	**06 26 04.9**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NB2	**NORSAR Subarra**	**44.81**	**323**	P	**P**	**06 26 31.0**	**+0.1**
	comp=Z,1.9nm,0.5s,mb4.1,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.81**	**323**	P	**P**	**06 26 30.6**	**-0.3**
	baz=96,slow=7.8,SNR=6.8						
NOA	**NORSAR Array B**	**44.81**	**323**	*e*P	**P**	**06 26 31.0**	**+0.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**66.11**	**269**	P	**P**	**06 29 02.8**	**-1.5**
	comp=Z,0.4nm,0.5s,mb3.5,baz=50,slow=5.7,SNR=9.6						
YKA	**Yellowknife Ar**	**81.47**	**3**	P	**P**	**06 30 32.9**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.7,baz=347,slow=5.1,SNR=4.1						
YKA	**Yellowknife Ar**	**81.47**	**3**	*e*P	**P**	**06 30 33.5**	**+0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**81.53**	**122**	P	**P**	**06 30 34.9**	**+0.8**
	comp=Z,0.3nm,0.4s,mb3.5,baz=324,slow=5.2,SNR=5.8						
SCHQ	**Schefferville**	**82.47**	**337**	LR	LR	07 11 18.0	
	comp=Z,102nm,19.3s,baz=81,slow=38						
ASAR	**Alice Springs**	**83.79**	**125**	P	**P**	**06 30 47.1**	**+1.3**
	comp=Z,0.2nm,0.3s,mb3.4,baz=304,slow=5.1,SNR=3.6						

*SZGRF **04** 06:19:58.0, 4579N×15482E, h33^{km}, mb4.7, East of Kuril Islands, Russia*
*NIED **04** 06:20:00, 47.10N×153.10E, h32^{km}, Mw4.3 Best double couple: $M_0$2.73000×10^{15} NP1:ϕ_s305.00000°, δ87.00000°, λ19.00000°. NP2:ϕ_s214.00000°, δ71.00000°, λ177.00000°.*
*SKHL **04** 06:20:04.6±1.2, 4677N×153.15E, h107^{km}±53^{km}, mb4.9/4, Ms4.0/1, msh5.8/2*
*MOS **04** 06:20:05.8±1.2, 4687N×15302E, h55^{km}, mb4.6/20, Error ellipse: s-maj=10.2km s-min=8.4km az=103.0*
*ISCJB **04** 06:20:06.4±0.7, 4681N±006×15289E±007, h57^{km}±6^{km}, mb4.6/59, MS3.6/6, Error ellipse: s-maj=11.5km s-min=4.9km az=142.2*
*IDC **04** 06:20:11.1±2.5, 4707N×15278E, h80^{km}±22^{km}, mb3.9/17, mb1 4.1/20, mb1mx4.0/26, mbtmp3.9/20, MS3.5/9, Ms1 3.5/9, ms1mx3.3/28, Error ellipse: s-maj=17.0km s-min=12.0km az=151.0*
*BJI **04** 06:20:11.0, 4708N×15284E, h92^{km}, mB4.6, mb4.6*
*NEIC **04** 06:20:12.4±1.1, 4709N×15280E, h88^{km}±9^{km}, mb4.7/30, Error ellipse: s-maj=11.0km s-min=6.1km az=155.0*
ISC 04 06:20:08.2±0.6, **4695N**±006×**15285E**±007, **h52**^{km}±5^{km}, **n162,** σ**1^{s}13**/168, **mb4.6**/59, **MS3.6**/6, **14C-12D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.87**	**245**	⇑*i*PN	**Pn**	**06 21 03.6**	**-1.5**
KUR				*e*S	**Sn**	**06 21 48.7**	**-0.6**
KUR				pmax	pmax		
	comp=E,30nm,0.6s						
KUR				pmax	pmax		
	comp=Z,190nm,0.6s						
KUR				smax			
	comp=N,490nm,0.6s						
KUR				smax			
	comp=E,220nm,0.6s						
KUR	**Kuril'sk**	**3.87**	**245**	⇑*i*P	**Pn**	**06 21 03.6**	**-1.5**
KUR				AMB	AMB	06 21 04.1	
	comp=E,30nm,0.6s						
KUR				AMB	AMB	06 21 04.1	
	comp=E,190nm,0.6s						
KUR				*e*S	**Sn**	**06 21 48.7**	**-0.6**
KUR				A		06 21 56.8	
	comp=E,486nm,0.6s						
KUR				A		06 21 56.8	
	comp=E,220nm,0.6s						
SKR	**Severo-Kuril's**	**4.31**	**29**	*e*PN	**Pn**	**06 21 10.1**	**-1.0**
SKR				*e*S	**Sn**	**06 21 56.2**	**-3.8**
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				smax			
	comp=E,320nm,0.4s						
SKR				smax			
	comp=N,160nm,0.6s						
SKR				smax			
	comp=Z,110nm,0.6s						
SKR	**Severo-Kuril's**	**4.31**	**29**	*e*P	**Pn**	**06 21 10.1**	**-1.0**

SKR AMB AMB 06 21 13.0
comp=Z,50nm,0.5s
SKR AMB AMB 06 21 13.0
comp=Z,90nm,0.5s
SKR *e*S **Sn** **06 21 56.2 -3.8**
SKR A 06 22 12.0
comp=Z,320nm,0.4s
SKR A 06 22 12.0
comp=Z,160nm,0.6s
SKR A 06 22 12.0
comp=Z,110nm,0.6s
NEM2 Nemuro 2 6.17 237 P **Pn** **06 21 35.5 -1.2**
NEM2 *e*S **Sn** **06 22 43.4 -2.5**
JNK Nakash 6.65 243 P **Pn** **06 21 44.5 +1.3**
JNK *e*S **Sn** **06 22 58.5 +0.8**
PEA0B Petropavlovsk- 6.91 25 *e*Pn **Pn** **06 21 51.8 +5.1**
PEA0B *e*Sn Sn 06 23 28.9 +25
PETK Petropavlovsk- 6.91 25 P **Pn** **06 21 46.6 0.0**
comp=Z,1.4nm,0.3s,baz=174,slow=11,SNR=9.7
PETK S **Sn** **06 23 10.3 +6.6**
baz=188,slow=19,SNR=1.9
PETK Petropavlovsk- 6.91 25 P **Pn** **06 21 46.6 0.0**
PETK S **Sn** **06 23 10.3 +6.5**
YSS Yuzh-Sakhalins 6.91 274 *e*P **Pn** **06 21 51.1 +4.3**
JTKR Abashiri--Toko 6.96 248 P **Pn** **06 21 49.7 +2.3**
PET Petropavlovsk 7.13 29 *e*PN **Pn** **06 21 55.7 +5.9**
PET pmax pmax
comp=Z,32nm,0.9s
PET Petropavlovsk 7.13 29 *e*Pn **Pn** **06 21 57.1 +7.3**
PET *e*Sn **Sn** **06 23 08.0 -1.3**
JMP Maruseppu 7.29 250 P **Pn** **06 21 55.0 +3.0**
JAR Ashorobuto 7.39 244 P **Pn** **06 21 54.7 +1.4**
JAR *e*S **Sn** **06 23 16.5 +0.8**
JOB Onbets 7.57 241 P **Pn** **06 21 55.8 0.0**
JOB *e*S **Sn** **06 23 17.8 -2.4**
ASAJ Asahikawa 7.74 252 P **Pn** **06 22 00.7 +2.6**
comp=Z,3.4nm,0.3s,baz=67,slow=9.9,SNR=21
ASAJ LR LR 06 24 48.4
comp=Z,212nm,19.2s,baz=319,slow=36
ASAJ Asahikawa 7.74 252 PN **Pn** **06 22 00.7 +2.6**
ASAJ pmax pmax
comp=Z,3.0nm,0.3s
ASAJ MLR MLR
comp=Z,212nm,19.2s
JKK2 Kamakawa 2 7.75 250 P **Pn** **06 22 01.1 +2.9**
TYV Tymovskoe 7.78 304 *e*P **Pn** **06 22 01.0 +2.4**
TYV AMB AMB 06 22 03.0
comp=Z,30nm,0.9s
TYV AMS AMS 06 25 02.0
comp=Z,500nm,20.0s
JCH Churui 8.02 241 P **Pn** **06 22 01.4 -0.6**
JCH *e*S **Sn** **06 23 28.3 -3.0**
ERM Erimo 8.51 238 *e*PN **Pn** **06 22 08.4 -0.2**
JBT2 Biratori 2 8.54 245 P **Pn** **06 22 09.7 +0.7**
JNBK Urakawa-nobuka 8.58 241 P **Pn** **06 22 09.1 -0.6**
JNBK *e*S **Sn** **06 23 40.8 -4.2**
JNB Noboribetsu 9.53 246 P **Pn** **06 22 22.6 0.0**
JKB Kayabe 9.85 243 P **Pn** **06 22 25.3 -1.7**
JKB *e*S **Sn** **06 24 11.2 -4.9**
JANG Nango 10.52 235 P **Pn** **06 22 32.2 -3.9**
JANG *e*S **Sn** **06 24 21.5 -11**
JRG Rokugo 11.68 234 P **Pn** **06 22 49.2 -2.8**
KLR Kul'dur 14.28 287 *e*P **Pn** **06 23 28.1 +0.8**
MAT Matsushiro 15.06 232 P **Pn** **06 23 44.0 +6.4**
MJAR Matsushiro Arr 15.06 232 P **Pn** **06 23 41.6 +4.0**
comp=Z,1.1nm,0.3s,baz=37,slow=9.0,SNR=14
MJAR LR LR 06 28 48.5
comp=Z,112nm,18.8s,baz=125,slow=34
MJAR Matsushiro Arr 15.06 232 P **Pn** **06 23 41.6 +4.0**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR MLR MLR
comp=Z,112nm,18.8s
SEY Seymchan 16.02 359 *e*P **Pn** **06 23 53.8 +4.1**
JHJ Hachijo jima 2 17.03 220 LR LR 06 30 42.0
comp=Z,92nm,20.2s,baz=88,slow=37
KSRS Korea Array 20.69 252 P **P** **06 24 45.4 +1.6**
comp=Z,3.1nm,0.6s,baz=55,slow=10,SNR=14
KSRS Korea Array 20.69 252 *e*P **P** **06 24 45.3 +1.5**
KSRS pmax pmax
comp=Z,3.0nm,0.6s
HIA Hailar 22.13 288 *i* P **P** **06 25 00.5 +1.4**
TIXI Tiksi 27.23 344 *i* P **P** **06 25 49.6 +2.9**
SONM Songino Array 31.10 289 P **P** **06 26 20.6 -0.7**
comp=Z,0.4nm,0.6s,mb3.4,baz=69,slow=8.0,SNR=2.7
SONM LR LR 06 40 05.7
comp=Z,123nm,18.1s,MS3.6,baz=89,slow=38
TLY Talaya 31.93 297 *i* P **P** **06 26 26.8 -1.8**
TLY pmax pmax
comp=Z,1.0nm,0.6s,mb3.8
ZAK Zakamensk 32.43 295 *e*P **P** **06 26 29.1 -3.9**
ZAK pmax pmax
comp=Z,2.0nm,1.9s,mb3.6
GUMO Guam 33.93 194 LR LR 06 37 54.6
comp=Z,25nm,21.1s,MS2.9,baz=90,slow=31
XAN Xi'an 35.36 265 P **P** **06 26 58.5 0.0**
XAN AMB AMB
comp=Z,7.0nm,0.9s,mb4.6
COLA College 36.09 39⇑ *i*P **P** **06 27 03.9 -0.5**
LZH Lanzhou 37.70 271 *e*P **P** **06 27 19.8 +1.3**
LZH AMB AMB
comp=Z,15nm,1.3s,mb4.6
LZH AMB AMB
comp=Z,78nm,4.9s
GTA Gaotai 38.76 279 *e*P **P** **06 27 31.5 +4.1**
GTA AMB AMB
comp=Z,4.0nm,0.7s,mb4.3
ZALV Zalesovo Beam 42.35 306 PcP PcP 06 29 49.0 -0.2
comp=Z,1.5nm,0.6s,baz=31,slow=3.5,SNR=5.6
ZALV LR LR 06 46 54.5
comp=Z,86nm,18.7s,MS3.7,baz=90,slow=38
WRAK Wrangell Islan 45.13 49 *e*P **P** **06 28 16.0 -3.1**
comp=Z,7.3nm,0.6s,mb4.7
DLBC Dease Lake 45.58 46 P **P** **06 28 23.8 +1.2**
baz=291,slow=12
DLBC Dease Lake 45.58 46 P **P** **06 28 23.8 +1.2**
MKAR Makanchi Array 46.69 297 P **P** **06 28 30.6 -0.8**
comp=Z,0.8nm,0.4s,mb4.0,baz=66,slow=7.6,SNR=10
MKAR PcP PcP 06 30 03.8 -0.5
comp=Z,0.9nm,0.6s,baz=63,slow=4.4,SNR=4.3
MKAR LR LR 06 49 19.8
comp=Z,134nm,18.9s,MS3.9,baz=258,slow=38
MKAR Makanchi Array 46.69 297 *e*P **P** **06 28 30.6 -0.9**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
KURK Kurchatov 47.11 303 P **P** **06 28 34.2 -0.5**
comp=Z,2.7nm,0.7s,mb4.3,baz=69,slow=8.5,SNR=16
KURK LR LR 06 49 40.2
comp=Z,101nm,18.4s,MS3.8,baz=200,slow=38
KURK Kurchatov 47.11 303⇑ *i*P **P** **06 28 33.4 -1.2**
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KURK Kurchatov 47.11 303 P **P** **06 28 34.2 -0.5**
KURK LR LR 06 49 40.2
BVAR Borovoye Array 50.59 309 P **P** **06 29 00.2 -1.1**
comp=Z,0.7nm,0.4s,mb3.9,baz=54,slow=12,SNR=4.5
BVAR PcP PcP 06 30 17.5 -0.8
comp=Z,1.5nm,0.5s,baz=64,slow=6.8,SNR=5.5
BVAR Borovoye Array 50.59 309 P **P** **06 29 00.2 -1.1**
BVAR 06 30 17.5
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR pmax pmax
comp=Z,2.0nm,0.5s
YKA Yellowknife Ar 50.87 37 P **P** **06 29 03.2 -0.1**
comp=Z,3.9nm,0.8s,mb4.4,baz=296,slow=7.0,SNR=8.5
YKA PcP PcP 06 30 18.5 -0.6
comp=Z,0.7nm,0.6s,baz=306,slow=4.0,SNR=4.3
YKA Yellowknife Ar 50.87 37 P **P** **06 29 03.2 -0.1**
YKA 06 30 18.5
YKA pmax pmax
comp=Z,4.0nm,0.8s
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 50.87 37 P **P** **06 29 03.2 -0.1**
YKA PcP PcP 06 30 18.5 -0.6
CMAR Chiang Mai Arr 52.25 256 P **P** **06 29 15.2 +1.0**
comp=Z,4.1nm,0.8s,mb4.4,baz=36,slow=7.0,SNR=15
CMAR Chiang Mai Arr 52.25 256 *e*P **P** **06 29 15.1 +1.0**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
TAPN Taplejung 53.91 273 *e*P **P** **06 29 27.2 +0.9**
comp=Z,17nm,0.7s,mb5.1
ODAN Odare 54.44 273 *e*P **P** **06 29 31.3 +1.1**
comp=Z,12nm,0.7s,mb4.9

JIRN Jiri 54.75 274 *e*P **P** **06 29 33.4 +1.0**
comp=Z,18nm,0.6s,mb5.3
RAMN Ramite 54.93 273 *e*P **P** **06 29 34.2 +0.5**
comp=Z,28nm,0.6s,mb5.5
KKN Kakani 55.29 275 *e*P **P** **06 29 37.7 +1.4**
comp=Z,20nm,0.6s,mb5.3
KKN Kakani 55.29 275 *e*P **P** **06 29 37.7 +1.4**
KKN pmax pmax
comp=Z,20nm,0.6s,mb5.3
PKI Pulchoki 55.34 275 *e*P **P** **06 29 37.2 +0.5**
DMN Daman 55.53 275 *e*P **P** **06 29 39.1 +1.1**
comp=Z,26nm,0.8s,mb5.3
DANN Dangsing 55.97 277 *e*P **P** **06 29 42.2 +1.0**
comp=Z,22nm,0.6s,mb5.4
KOLN Koldanda 56.45 276 *e*P **P** **06 29 45.3 +0.7**
comp=Z,19nm,0.9s,mb5.1
ARCES ARCESS Array B 57.60 341 P **P** **06 29 51.2 -0.9**
comp=Z,0.5nm,0.4s,mb3.9,baz=20,slow=6.5,SNR=8.9
ARCES ARCESS Array B 57.60 341 P **P** **06 29 51.2 -0.9**
ARCES pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 57.60 341 P **P** **06 29 51.2 -0.9**
AKTO Aktyubinsk 58.46 312 LR LR 06 57 29.4
comp=Z,86nm,19.1s,MS3.9,baz=253,slow=38
JOF Joensuu 61.08 334 *e*p **P** **06 30 15.1 -1.0**
comp=Z,3.8nm,0.8s,mb4.6
JOF Joensuu 61.08 334 *e*P **P** **06 30 15.1 -1.0**
JOF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
HLID Hailey 61.54 56 *e*P **P** **06 30 19.6 0.0**
comp=Z,3.7nm,1.4s,mb4.3
BOZ Bozeman (W) 61.77 52 *e*P **P** **06 30 21.6 +0.5**
BOZ pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
BOZ Bozeman (W) 61.77 52 *e*P **P** **06 30 21.6 +0.5**
comp=Z,1.2nm,0.6s,mb4.2
NVAR Mina Array Bea 62.50 62 P **P** **06 30 26.3 +0.2**
comp=Z,1.8nm,0.7s,mb4.3,baz=290,slow=7.6,SNR=14
KAF Kangasniemi 63.19 335 *e*p **P** **06 30 29.3 -1.0**
comp=Z,4.0nm,0.6s,mb4.7
KAF Kangasniemi 63.19 335 *e*P **P** **06 30 29.3 -1.0**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
RRI2 Red Ridge 63.41 54 *e*P **P** **06 30 33.2 +1.1**
comp=Z,7.0nm,0.7s,mb4.9
TPAW Teton Pass 63.53 54 *e*P **P** **06 30 33.6 +0.7**
comp=Z,5.2nm,1.1s,mb4.5
SNOW Snow King Moun 63.65 54 *e*P **P** **06 30 34.7 +1.0**
comp=Z,1.7nm,0.8s,mb4.1
REDW Red Top Meadow 63.66 54 *e*P **P** **06 30 34.5 +0.8**
comp=Z,9.9nm,1.3s,mb4.7
HWUT Hardware Ranch 64.41 56 *e*P **P** **06 30 39.1 +0.4**
comp=Z,2.1nm,0.9s,mb4.2
DUG Dugway 64.62 58 *e*P **P** **06 30 40.4 +0.3**
DUG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
DUG Dugway 64.62 58 *e*P **P** **06 30 40.4 +0.4**
comp=Z,4.4nm,1.0s,mb4.4
PDAR Pinedale Array 64.77 54 P **P** **06 30 41.0 0.0**
comp=Z,3.1nm,0.8s,mb4.4,baz=319,slow=0.8,SNR=27
NB2 NORSAR Subarra 67.98 341 P **P** **06 31 00.3 -0.9**
comp=Z,11nm,0.8s,mb4.9,baz=27,slow=6.5
NOA NORSAR Array B 67.98 341 P **P** **06 31 00.6 -0.6**
baz=27,slow=6.3,SNR=19
NOA NORSAR Array B 67.98 341 *e*P **P** **06 31 00.6 -0.6**
NOA pmax pmax
comp=Z,9.0nm,0.7s
WRA Warramunga Arr 68.64 199 P **P** **06 31 04.9 -0.8**
comp=Z,0.9nm,0.7s,mb3.8,baz=16,slow=6.3,SNR=4.5
WRA Warramunga Arr 68.64 199 *e*P **P** **06 31 03.7 -2.1**
WRA pmax pmax
comp=Z,1.0nm,0.7s
SDCO Great Sand Dun 70.46 55 P **P** **06 31 17.6 +0.6**
comp=Z,21nm,0.9s,mb5.1
AKASG Malin Array Be 71.28 326 P **P** **06 31 20.6 -1.1**
comp=Z,9.0nm,0.4s,mb5.1,baz=33,slow=6.1,SNR=32
AKASG Malin Array Be 71.28 326 *e*P **P** **06 31 20.6 -1.1**
AKASG pmax pmax
comp=Z,9.0nm,0.4s
ASAR Alice Springs 72.34 198 P **P** **06 31 28.6 +0.3**
comp=Z,1.8nm,0.7s,mb4.1,baz=7.4,slow=5.4,SNR=14
ASAR Alice Springs 72.34 198 *e*P **P** **06 31 28.6 +0.3**
ASAR pmax pmax
comp=Z,2.0nm,0.7s
KWP Kalwaria 74.56 329 *e*P **P** **06 31 41.3 +0.2**
KWP Kalwaria 74.56 329 *e*P **P** **06 31 41.3 +0.2**
STHS Stebnicka Huta 75.25 330 *e*P **P** **06 31 45.6 +0.5**
STHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
STHS Stebnicka Huta 75.25 330 *e*P **P** **06 31 45.6 +0.5**
STHS Stebnicka Huta 75.25 330 *e*P **P** **06 31 45.6 +0.5**
comp=Z,5.2nm,0.8s,mb4.5
KOLS Kolonicke sedl 75.30 329 *e*P **P** **06 31 45.1 -0.3**
BURAR Bucovina Array 75.32 326⇓ *i*P **P** **06 31 45.3 -0.3**
BURAR Bucovina Array 75.32 326⇓P **P** **06 31 45.3 -0.2**
CRVS Cervenica-Dubn 75.61 329 *e*P **P** **06 31 47.0 -0.2**
VRI Vrincioaia 76.18 324⇑ *i*P **P** **06 31 50.7 +0.2**
MORC Moravsky Berou 76.18 332⇓ *i*P **P** **06 31 50.2 -0.2**
MORC Moravsky Berou 76.18 332⇓P **P** **06 31 50.2 -0.2**
CLL Collm 76.21 335⇓ *i*P **P** **06 31 49.8 -0.8**
CLL pmax pmax
comp=Z,14nm,1.2s,mb4.8
CLL Collm 76.21 335 *e*P **P** **06 31 49.6 -1.0**
comp=Z,10.0nm,0.9s,mb4.8
CLL Collm 76.21 335⇓ *i*P **P** **06 31 49.8 -0.8**
comp=Z,14nm,1.2s,mb4.8
CLL Collm 76.21 335⇓ *i*P **P** **06 31 49.8 -0.8**
comp=Z,14nm,1.2s,mb4.8
KECS Kecovo 76.31 330 *e*P **P** **06 31 47.4 -3.8**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KECS Kecovo 76.31 330 *e*P **P** **06 31 47.4 -3.8**
KECS *e* 06 31 50.6
KECS Kecovo 76.31 330 *e*P **P** **06 31 47.4 -3.8**
comp=Z,2.9nm,1.0s,mb4.2
TIRR Tirgusor 76.64 323⇓ *i*P **P** **06 31 52.8 -0.4**
TIRR Tirgusor 76.64 323⇓P **P** **06 31 52.9 -0.3**
MLR Muntele Rosu 76.80 325⇑ *i*P **P** **06 31 55.0 +1.0**
VYHS Vyhne 76.86 331 *e*P **P** **06 31 50.2 -4.1**
MALT Malatya 76.89 313⇓ *i*P **P** **06 31 55.8 +1.2**
MALT Malatya 76.89 313⇓P **P** **06 31 55.8 +1.2**
WERD Werda 77.18 335 *e*P **P** **06 31 56.0 0.0**
comp=Z,16nm,1.7s,mb4.7
VOIR 77.20 325⇑ *i*P **P** **06 31 56.6 +0.4**
GUNZ Gunzen 77.25 335 *e*P **P** **06 31 55.5 -0.9**
comp=Z,7.0nm,1.0s,mb4.5
WERN Wernitzgruen 77.30 335 *e*P **P** **06 31 56.3 -0.4**
comp=Z,6.0nm,0.8s,mb4.6
GRA1 Grafenberg Arr 78.16 336 *e*P **P** **06 32 01.3 -0.2**
comp=Z,10.0nm,0.6s,mb4.9
GRF Grafenberg Arr 78.16 336 *e*P **P** **06 32 01.3 -0.2**
GRF pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
GRF Grafenberg Arr 78.16 336 *e*P **P** **06 32 01.3 -0.2**
GRF pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
GRF Grafenberg Arr 78.16 336 *e*P **P** **06 32 01.3 -0.2**
comp=Z,10.0nm,0.6s,mb4.9
WET Wettzell 78.18 334 *e*P **P** **06 32 01.4 -0.2**
WET pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
WET Wettzell 78.18 334 *e*P **P** **06 32 01.4 -0.2**
comp=Z,9.0nm,1.2s,mb4.6
GEC2 GERESS Array S 78.20 334 *e*P **P** **06 32 01.0 -0.7**
GEC2 pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
GEC2 GERESS Array S 78.20 334 *e*P **P** **06 32 01.0 -0.7**
comp=Z,5.0nm,1.0s,mb4.4
GERES GERESS Array B 78.20 334 P **P** **06 32 00.3 -1.4**
comp=Z,1.1nm,0.4s,mb4.1,baz=34,slow=5.2,SNR=7.6
GERES GERESS Array B 78.20 334 P **P** **06 32 00.3 -1.4**
GERES pmax pmax
comp=Z,1.0nm,0.4s
CONA Conrad Observa 78.34 332⇓ *i*P **P** **06 32 02.7 +0.2**
comp=Z,5.4nm,0.8s,mb4.5
CSNA Conrad Observa 78.34 332⇑ *i*P **P** **06 32 02.6 +0.1**
comp=Z,5.9nm,0.8s,mb4.6
MIB Mutribah 78.41 301 *e*P **P** **06 32 02.9 -0.3**
baz=16
MIB AMb AMB 06 32 04.0
comp=Z,49nm,0.7s,mb5.5,baz=16
RST Umm Al-Ruwaisa 78.83 301 *e*P **P** **06 32 03.2 -2.4**
baz=16
RST AMb AMB 06 32 04.6
comp=Z,3.0nm,2.0s,mb3.9,baz=16
NAY Al-Naaiem 78.87 301 *e*P **P** **06 32 04.7 -1.1**
baz=16
NAY AMb AMB 06 32 06.5
comp=Z,17nm,1.0s,mb4.9,baz=16
RDF Al-Radifah 78.93 301 *e*P **P** **06 32 04.8 -1.3**
baz=16
RDF AMb AMB 06 32 18.4
comp=Z,30nm,1.4s,mb5.0,baz=16
KBA Koelnbreinsper 79.88 333⇑ *i*P **P** **06 32 11.1 +0.1**
comp=Z,8.9nm,0.7s,mb4.8
KBA Koelnbreinsper 79.88 333⇑ *i*P **P** **06 32 11.1 +0.1**
KBA pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
WTTA Wattenberg 80.23 334⇑ *i*P **P** **06 32 12.9 0.0**
comp=Z,7.0nm,0.7s,mb4.7
WTTA Wattenberg 80.23 334⇑ *i*P **P** **06 32 12.9 0.0**
WTTA pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
MOTA Moosalm 80.32 335⇑ *i*P **P** **06 32 13.3 0.0**
comp=Z,7.0nm,1.1s,mb4.5
MOTA Moosalm 80.32 335⇑ *i*P **P** **06 32 13.3 0.0**
MOTA pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
ASF Jabal al Asfar 82.43 310 P **P** **06 32 24.5 -0.3**
comp=Z,3.3nm,1.0s,mb4.2,baz=358,slow=2.7,SNR=4.2
ASF Jabal al Asfar 82.43 310 P **P** **06 32 24.5 -0.3**
ASF pmax pmax
comp=Z,3.0nm,1.0s
MMAI Mount Meron Ar 82.55 311 P **P** **06 32 25.9 +0.5**
comp=Z,3.5nm,0.5s,mb4.7,baz=40,slow=9.1,SNR=4.8
IDI Anoyia 85.75 320 P **P** **06 32 39.2 -2.4**
comp=Z,5.4nm,0.6s,mb4.9,baz=34,slow=11,SNR=4.8
TORD Torodi Ar. Bea 114.83 329 PKP PKiKP 06 38 41.8 -1.4
comp=Z,0.2nm,0.5s,baz=37,slow=1.9,SNR=3.4
DBIC Dimbokro 123.07 333 PKP PKPdf 06 38 57.6 -1.5
comp=Z,3.7nm,0.8s,baz=186,slow=9.3,SNR=3.2
BDFB Brasilia 144.28 36 PKP PKPdf 06 39 35.8 -2.7
comp=Z,5.3nm,0.9s,baz=161,slow=2.3,SNR=5.4
PLCA Paso Flores 148.40 95 PKPbc PKPbc 06 39 47.1 -1.2
comp=Z,3.6nm,1.1s,baz=32,slow=23,SNR=4.2
CPUP Villa Florida 148.52 60 PKPbc PKPbc 06 39 47.9 -1.1
comp=Z,1.4nm,0.5s,baz=326,slow=2.7,SNR=8.3

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*MOS **04** 06:20:26.1±1.2,2249S×7030W,h33km,mb5.2/12, Error ellipse: s-maj=16.4km s-min=7.0km az=113.0*
*ISCJB **04** 06:20:26.9±0.7,2267S±003×7029W±005,h41km±7km, mb5.0/53,MS4.2/9, Error ellipse: s-maj=7.1km s-min=4.7km az=178.7*
*NEIC **04** 06:20:27.7±0.2,2265S×7037W,mb5.1/41,ML4.7(GUC), Error ellipse: s-maj=7.7km s-min=4.6km az=68.0*
NEIC Felt [IV] at Tocopilla; [III] at Maria Elena, Mejillones, Pica and Pozo Almonte; [II] at Iquique and Sierra Gorda.
*IDC **04** 06:20:27.4±0.5,2260S×7035W,h32km±3km,mb4.6/13, mb1 4.6/18,mb1mx4.6/21,mbtmp4.6/18,ML4.7/5,MS4.0/15, Ms1 4.0/15,ms1mx3.9/19, Error ellipse: s-maj=15.5km s-min=11.3km az=69.0*
*BJI **04** 06:20:27.6,2260S×7040W,h34km,mB5.2,Ms5.1,Msz4.9*
*GUC **04** 06:20:28.6±0.8,2308S×7120W,h50km±11km,ML4.7*
ISC 04 06:20:28.9±0.6,2269S±003×7035W±005,h41km±6km, h36km±1.0km:pP-P,n588,σ0°68/546,mb5.0/53,MS4.2/9, 177C-177D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.71**	**169**	⇓ *i*P	**Pn**	**06 20 45.2**	**+2.8**
CEN1				*i* S	**Sn**	**06 20 58.3**	**+6.1**
CEN1				AML	AML	06 21 05.6	
	comp=E,26μm,0.5s						
ANCH	**Antofagasta**	**0.99**	**183**	⇑ *i*P	**Pn**	**06 20 45.9**	**-0.4**
ANCH				*i* S	**Sn**	**06 20 58.6**	**-0.4**
ANCH				AML	AML	06 21 05.3	
	comp=N,89μm,0.7s						
ANCH	**Antofagasta**	**0.99**	**183**	⇑ *i*P	**Pn**	**06 20 45.9**	**-0.4**
ANCH				*i* S	**Sn**	**06 20 58.6**	**-0.4**
LVC	**Limon Verde**	**1.33**	**87**	Pn	**Pn**	**06 20 53.3**	**+2.4**
	comp=N,2μm,0.3s,baz=261,slow=13,SNR=9221						
LVC				Sn	**Sn**	**06 21 07.9**	**+0.4**
	comp=N,1μm,0.3s,baz=267,slow=18,SNR=12						
LVC	**Limon Verde**	**1.33**	**87**	*i* P	**Pn**	**06 20 54.8**	**+3.9**
LVC				*i* S	**Sn**	**06 21 12.1**	**+4.7**
LVC	**Limon Verde**	**1.33**	**87**	*e*Pn	**Pn**	**06 20 52.8**	**+1.9**
LVC				*e*Sn	**Sn**	**06 21 12.1**	**+4.7**
CPN1	**Cerro Paranal**	**1.92**	**182**	*e*P	**Pn**	**06 20 58.6**	**-0.6**
CPN1				*i* S	**Sn**	**06 21 21.7**	**-0.4**
CPN1				AML	AML	06 21 33.3	
	comp=E,14μm,0.3s						
CDCH	**Caldera**	**4.38**	**186**	*e*P	**Pn**	**06 21 29.6**	**-3.3**
CDCH				*i* S	**Sn**	**06 22 16.8**	**-5.9**
ARE	**Arequipa**	**6.29**	**350**	*e*P	**Pn**	**06 21 55.0**	**-4.2**
ARE				*e*S	**Sn**	**06 23 01.0**	**-8.8**
LCO	**Las Campanas**	**6.30**	**183**	*e*Pn	**Pn**	**06 21 57.4**	**-1.8**
	comp=E,310nm,1.0s						
LCO				*e*Sn	**Sn**	**06 23 24.6**	**+15**
LPAZ	**La Paz**	**6.71**	**19**	Pn	**Pn**	**06 22 06.8**	**+1.9**
	comp=E,4.3nm,0.3s,baz=222,slow=7.4,SNR=171						
LPAZ				Sn	**Sn**	**06 23 21.7**	**+1.7**
	comp=E,1.0nm,0.3s,baz=53,slow=18,SNR=1.9						
LPAZ				LR	LR	06 24 53.1	
	comp=E,2μm,20.4s,baz=197,slow=40						
LPAZ	**La Paz**	**6.71**	**19**	P	**Pn**	**06 22 06.8**	**+1.9**
LPAZ						06 23 21.7	
CFAA	**Coronel Fontan**	**9.07**	**169**	Pn	**Pn**	**06 22 35.6**	**-1.7**
	comp=E,0.3nm,0.3s,baz=341,slow=13,SNR=24						
CFAA				Sn	**Sn**	**06 24 18.8**	**+0.7**
	comp=E,0.2nm,0.3s,baz=253,slow=20,SNR=2.0						
CFAA				LR	LR	06 26 11.1	
	comp=E,163nm,20.2s,baz=110,slow=38						
SIV	**San Ignacio**	**11.00**	**54**	Pn	**Pn**	**06 23 03.0**	**-0.8**
	comp=E,3.3nm,0.3s,baz=242,slow=13,SNR=64						
SIV				Sn	**Sn**	**06 25 07.0**	**+1.4**
	baz=281,slow=17,SNR=1.9						
NNA	**Nana**	**12.32**	**329**	Pn	**Pn**	**06 23 18.4**	**-3.3**
	comp=E,1.2nm,0.3s,baz=117,slow=11,SNR=3.6						
NNA				Sn	**Sn**	**06 25 26.3**	**-11**
	comp=E,3.5nm,0.3s,baz=214,slow=19,SNR=6.2						
NNA				LR	LR	06 27 31.9	
	comp=E,477nm,21.9s,baz=150,slow=35						
NNA	**Nana**	**12.32**	**329**	Pn	**Pn**	**06 23 18.4**	**-3.3**
NNA				Sn	**Sn**	**06 25 26.3**	**-11**
NNA				LR	LR	06 27 31.9	
CPUP	**Villa Florida**	**12.39**	**110**	Pn	**Pn**	**06 23 23.4**	**+0.7**
	comp=E,2.7nm,0.3s,baz=271,slow=12,SNR=22						
CPUP				LR	LR	06 28 54.8	
	comp=E,1μm,18.9s,baz=270,slow=41						
TRQA	**Tornquist**	**16.92**	**157**	*e*Pn	**Pn**	**06 24 24.2**	**+1.7**
ATAH	**Atahualpa**	**17.42**	**332**	P	**Pn**	**06 24 27.6**	**-1.3**
	comp=E,0.3nm,0.3s,baz=147,slow=7.6,SNR=5.9						
ATAH				LR	LR	06 30 23.0	
	comp=E,313nm,21.5s,baz=266,slow=35						
PLCA	**Paso Flores**	**17.99**	**180**	P	**Pn**	**06 24 35.8**	**+0.1**
	comp=E,1.3nm,0.3s,baz=355,slow=14,SNR=31						
PLCA				PcP	PcP	06 29 10.0	+0.6
	comp=E,0.2nm,0.3s,baz=0.0,slow=2.0,SNR=3.9						
PLCA				LR	LR	06 31 23.6	
	comp=E,706nm,21.7s,baz=5.5,slow=36						
VAO	**Valinhos**	**21.55**	**95**	*e*P	**P**	**06 25 14.0**	**-0.8**
VAO				*i*		06 25 16.8	
VAO				*i*		06 25 19.1	
VAO				*i*		06 25 30.5	
BDFB	**Brasilia**	**22.22**	**76**	P	**P**	**06 25 22.7**	**+0.7**
	comp=E,7.1nm,0.5s,mb4.4,baz=253,slow=11,SNR=20						
BDFB				LR	LR	06 35 15.6	
	comp=E,762nm,21.3s,MS4.1,baz=192,slow=40						
OTAV	**Otavalo**	**24.12**	**340**	*e*P	**P**	**06 25 40.9**	**0.0**
ROSC	**El Rosal**	**27.66**	**351**	P	**P**	**06 26 13.4**	**+0.4**
	comp=E,5.5nm,0.5s,mb4.4,baz=123,slow=9.5,SNR=6.7						
ROSC				LR	LR	06 38 01.0	
	comp=E,317nm,19.5s,MS3.9,baz=195,slow=38						
EFI	**East Falkland**	**30.45**	**165**	*c*P	**P**	**06 26 37.0**	**-0.5**
USHA	**Ushuaia**	**32.13**	**178**	P	**P**	**06 26 52.5**	**+0.4**
	comp=E,13nm,0.7s,mb4.9,baz=343,slow=8.3,SNR=14						
SJG	**San Juan**	**40.76**	**6**	*e*P	**P**	**06 28 02.3**	**-3.8**
MTP	**Monte Pirata**	**40.81**	**7**	*e*P	**P**	**06 28 02.5**	**-4.0**
PMSA	**Palmer Station**	**42.27**	**176**	P	**P**	**06 28 19.2**	**+1.3**
	comp=E,28nm,0.8s,mb5.0,baz=1.6,slow=6.8,SNR=23						
PMSA	**Palmer Station**	**42.27**	**176**	*e*P	**P**	**06 28 19.1**	**+1.1**
	comp=E,54nm,1.2s,mb5.0						
TEIG	**Tepich**	**46.11**	**336**	*e*P	**P**	**06 28 47.6**	**-1.6**
	comp=E,28nm,1.1s,mb5.1						
BRAL	**Brewton**	**55.75**	**343**	*e*P	**P**	**06 30 01.0**	**-0.5**
BRAL				*e*pP	pP	06 30 10.5	-2.9
HKT	**Hockley**	**57.79**	**334**	*e*P	**P**	**06 30 14.4**	**-1.6**
HKT				*e**PP	pP	06 30 26.4	-1.6
HKT				pmax	pmax		

comp=Z,5.0nm,0.9s,mb4.5
HKT Hockley 57.79 334 *e*P **P 06 30 14.4 -1.6**
comp=Z,4.7nm,0.9s,mb4.5
HKT *e*pP pP 06 30 26.4 -1.6
RKT Rikitea 59.06 256 *e*S **S 06 38 36.7 +7.2**
comp=Z,222nm,30.0s
RKT *e*LR LR 06 48 04.2
comp=Z,516nm,25.8s
VNA1 Neumayer--Stat 59.62 160 *e*P **P 06 30 29.3 +1.0**
VNA1 *e* 06 30 32.7
VNA1 *e* pP 06 30 39.4 -0.8
OXF Oxford 59.70 342 *e*P **P 06 30 26.8 -2.4**
OXF pmax pmax
comp=Z,54nm,1.1s,mb5.5
OXF Oxford 59.70 342 *e*P **P 06 30 26.8 -2.4**
comp=Z,54nm,1.1s,mb5.5
PLAL Pickwick Lake 59.77 343 *e*P **P 06 30 27.0 -2.7**
comp=Z,23nm,1.1s,mb5.1
JCT Junction City 59.96 331 *e*P **P 06 30 29.9 -1.2**
VNA2 Neumayer--Watz 59.98 160 *e*P **P 06 30 31.6 +0.9**
VNA2 *e* 06 30 35.3
VNA2 *e* pP 06 30 41.7 -1.0
BLA Blacksburg 60.33 351 *e*P **P 06 30 32.8 -0.7**
BLA pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
BLA Blacksburg 60.33 351 *e*P **P 06 30 32.8 -0.7**
comp=Z,3.5nm,0.5s,mb4.7
ELN Prospectdale 60.40 350 *e*P **P 06 30 33.0 -1.0**
UALR University of 60.85 339 *e*P **P 06 30 35.6 -1.5**
comp=Z,23nm,1.0s,mb5.3
MIAR Mount Ida 61.05 338 *e*P **P 06 30 36.9 -1.6**
SNAA Sanae 61.60 161 *e*P **P 06 30 42.0 +0.3**
SNAA *e* 06 30 45.9
SNAA *e* pP 06 30 52.1 -1.6
WCI Wyandotte Cave 62.42 346 *e*P **P 06 30 45.2 -2.4**
USIN University of 62.49 345 *e*P **P 06 30 45.8 -2.3**
MVL Millersville 62.62 355 *e*P **P 06 30 39.1 -10**
comp=Z,12nm,0.9s,mb5.0
SIUC Southern Illin 62.65 343 *e*P **P 06 30 47.1 -2.0**
WMOK Wichita Mounta 63.18 334 *e*P **P 06 30 50.4 -2.3**
FVM French Village 63.24 342 *e*P **P 06 30 51.2 -1.8**
OLIL Olney 63.33 345 *e*P **P 06 30 50.7 -3.0**
comp=Z,7.7nm,0.5s,mb5.1
BLO Bloomington 63.38 346 *e*P **P 06 30 51.5 -2.4**
GDL2 Guadalupe Moun 63.54 328 *e*P **P 06 30 55.1 0.0**
ACSO Alum Creek Sta 63.70 349 *e*P **P 06 30 53.9 -2.1**
comp=Z,20nm,0.8s,mb5.2
AMTX Amarillo 64.53 332 *e*P **P 06 31 00.1 -1.5**
319A Douglas 65.44 324 ⇓P **P 06 31 07.8 +0.2**
baz=66,SNR=16
219A White Tail Can 65.90 324 ⇑P **P 06 31 10.7 +0.1**
baz=66,SNR=14
MAIT Maitri 66.17 159 *e*P **P 06 31 11.1 -0.7**
MAIT *e*E pP 06 31 22.3 -1.6
NVL N'lazarevskaya 66.20 159 *c i*P **P 06 31 13.2 +1.2**
NVL *e* pP 06 31 23.2 -0.9
NVL pmax pmax
comp=Z,33nm,1.2s,mb5.2
KSU1 Kansas State U 66.20 338 *e*P **P 06 31 10.8 -1.5**
comp=Z,25nm,1.2s,mb5.1
BNM Barren Site 66.23 328 *e*P **P 06 31 12.8 +0.2**
LPM Los Pinos Moun 66.36 328 *e*P **P 06 31 13.7 +0.2**
MDV Middlebury 66.41 358 *e*P **P 06 31 13.0 -0.6**
MDV *e*pP pP 06 31 24.5 -1.2
LENM Lemitar 66.41 327 *e*P **P 06 31 14.4 +0.6**
119A Ashpeak Ranch, 66.52 325 ⇑P **P 06 31 14.6 0.0**
baz=67,SNR=5.1
217A Green Valley 66.58 323 ⇑P **P 06 31 15.0 +0.1**
baz=67,SNR=14
LAZ Ladron 66.69 327 *e*P **P 06 31 16.0 +0.4**
118A Homack Ranch, 66.78 324 ⇑P **P 06 31 16.3 +0.1**
baz=67,SNR=10
ANMO Albuquerque 66.79 328 *e*P **P 06 31 16.1 -0.1**
Z19A T-Link Ranch, 66.90 325 ⇓P **P 06 31 17.3 +0.3**
baz=67,SNR=6.2
TUC Tucson 66.97 323 *e*P **P 06 31 17.4 0.0**
CBKS Cedar Bluff 67.10 335 *e*P **P 06 31 17.5 -0.6**
216A Three Points, 67.11 323 ⇓P **P 06 31 18.4 +0.1**
baz=67,SNR=8.7
117A Oracle 67.15 324 ⇑P **P 06 31 18.7 +0.2**
baz=67,SNR=21
Y19A Nutrioso 67.41 326 ⇑P **P 06 31 20.9 +0.8**
baz=68,SNR=36
Z17A San Carlos Hig 67.55 324 ⇓P **P 06 31 21.2 +0.1**
baz=68,SNR=6.7
SCIA State Center 67.67 342 *e*P **P 06 31 20.0 -1.6**
comp=Z,24nm,0.7s,mb5.3
SCIA *e*pP pP 06 31 29.5 -4.3
116A Eloy 67.67 323 ⇑P **P 06 31 22.0 +0.1**
baz=68,SNR=7.9
Y18A Canyon Day Jun 67.69 325 ⇑P **P 06 31 22.2 +0.3**
baz=68,SNR=8.7
X19A St. Johns 67.80 326 ⇑P **P 06 31 22.9 +0.3**
baz=68
JFWS Jewell Farm 67.81 344 *e*P **P 06 31 20.6 -1.9**
214A Organ Pipe Nat 67.85 322 ⇑P **P 06 31 23.3 +0.3**
baz=68,SNR=9.1
Y17A Roosevelt 68.06 324 ⇑P **P 06 31 24.7 +0.5**
baz=68,SNR=22
115A Sonoran Desert 68.07 323 ⇑P **P 06 31 24.9 +0.6**
baz=68
Z16A Peralta Trail, 68.11 324 ⇑P **P 06 31 24.7 +0.1**
baz=68,SNR=11
X18A Snowflake 68.22 325 ⇓P **P 06 31 25.6 +0.4**
baz=68
W19A Sanders 68.38 326 ⇑P **P 06 31 26.6 +0.4**
baz=68
Z15A Gila River Ind 68.47 323 ⇑P **P 06 31 27.0 +0.1**
baz=69,SNR=5.0
X17A Forest Lakes 68.53 325 ⇑P **P 06 31 28.0 +0.8**
baz=69,SNR=16
Y16A Circle Bar Ran 68.54 324 ⇓P **P 06 31 27.8 +0.5**
baz=69,SNR=9.9
W18A Petrified Fore 68.56 326 ⇓P **P 06 31 27.8 +0.4**
baz=69
V19A Window Rock 68.68 327 ⇑P **P 06 31 28.4 +0.3**
baz=69,SNR=11
X16A Lo Mia Camp, P 68.93 324 ⇑P **P 06 31 30.2 +0.5**
baz=69,SNR=8.6
Z14A Wintersburg 68.96 323 ⇓P **P 06 31 30.1 +0.1**
baz=69
113A Mohawk Valley, 68.99 322 ⇓P **P 06 31 30.1 0.0**
baz=69
W17A Winslow 69.04 325 ⇓P **P 06 31 30.8 +0.5**
baz=69
Y15A Casa Rosa Ranc 69.06 323 ⇑P **P 06 31 30.6 +0.1**
baz=69,SNR=7.6
V18A Ganado 69.12 326 ⇑P **P 06 31 30.9 0.0**
baz=69
112A Yuma 69.29 321 ⇓P **P 06 31 32.3 +0.3**
baz=69
X15A Humboldt 69.41 324 ⇓P **P 06 31 33.2 +0.5**
baz=70,SNR=12
Y14A Wickenburg 69.42 323 ⇑P **P 06 31 32.9 +0.2**
baz=70
W16A Flagstaff 69.49 325 ⇓P **P 06 31 34.0 +0.8**
baz=70,SNR=16
T19A Beclabito 69.54 328 ⇑P **P 06 31 33.3 -0.1**
baz=70,SNR=13
MVCO Mesa Verde 69.58 328 *e*P **P 06 31 33.8 +0.2**
WUAZ Wupatki 69.72 325 *e*P **P 06 31 35.3 +0.7**
comp=Z,31nm,1.0s,mb5.2
X14A Yava 69.75 323 ⇑P **P 06 31 35.2 +0.4**
baz=70,SNR=7.6
Y13A Salome 69.79 322 ⇑P **P 06 31 35.2 +0.2**
baz=70
GLA Glamis 69.81 321 *e*P **P 06 31 35.4 +0.3**
GLA pmax pmax
comp=Z,59nm,1.9s,mb5.2
GLA Glamis 69.81 321 ⇓P **P 06 31 35.5 +0.3**
baz=70,SNR=5.4
GLA Glamis 69.81 321 *e*P **P 06 31 35.4 +0.2**
comp=Z,60nm,1.9s,mb5.2
W15A Williams 69.94 324 ⇑P **P 06 31 36.8 +0.8**
baz=70,SNR=8.2
LIC Lamto 70.00 74 *e*P **P 06 31 36.3 -0.5**
comp=Z,29nm,0.8s,mb5.3
U16A Tuba City 70.08 326 ⇑P **P 06 31 37.2 +0.5**
baz=70
Y12C Blythe 70.14 322 ⇓P **P 06 31 37.6 +0.4**
baz=70,SNR=7.6
U17A Shonto 70.19 326 ⇓P **P 06 31 38.0 +0.7**
baz=70,SNR=18
TIC Toumodi 70.19 74 *e*P **P 06 31 36.9 -1.1**
comp=Z,81nm,1.0s,mb5.6
TIC Toumodi 70.19 74 *e*P **P 06 31 36.9 -1.1**
TIC pmax pmax
comp=Z,81nm,1.0s,mb5.6
T18A Mexican Hat 70.20 327 ⇓P **P 06 31 37.4 -0.1**
baz=70,SNR=19
DVTC Desert V Tower 70.27 320 ⇑P **P 06 31 38.3 +0.3**
baz=70
SWSC Sam W. Stewart 70.29 320 ⇓P **P 06 31 38.5 +0.3**
baz=70
KIC Kosan Boka 70.31 74 *e*P **P 06 31 37.9 -0.8**
comp=Z,74nm,0.8s,mb5.7
S19A Harvey Farm, M 70.32 328 ⇑P **P 06 31 38.5 +0.3**
baz=70,SNR=13
ISCO Idaho Springs 70.34 332 *e*P **P 06 31 38.2 -0.1**
ISCO pmax pmax
comp=Z,48nm,1.8s,mb5.1
ISCO Idaho Springs 70.34 332 *e*P **P 06 31 38.2 0.0**
comp=Z,48nm,1.8s,mb5.1
DBIC Dimbokro 70.35 74 P **P 06 31 38.2 -0.7**
comp=Z,6.4nm,0.9s,mb4.6,baz=202,slow=6.2,SNR=7.1
DBIC pP pP 06 31 48.4 -2.7
comp=Z,19nm,0.8s,baz=223,slow=5.6,SNR=12
DBIC LR LR 07 00 54.5
comp=Z,141nm,21.2s,MS4.2,baz=226,slow=34
DBIC Dimbokro 70.35 74 P **P 06 31 38.2 -0.7**
DBIC *PP pP 06 31 48.4 -2.7
DBIC Dimbokro 70.35 74 P **P 06 31 38.2 -0.8**
DBIC pP pP 06 31 48.4 -2.7
DBIC LR LR 07 00 54.5
ECSD EROS,Sioux Fal 70.36 340 *e*P **P 06 31 33.1 -5.2**
V15A Kaibab Nationa 70.38 325 ⇑P **P 06 31 39.2 +0.7**
baz=70,SNR=17
W14A Seligman 70.41 324 ⇓P **P 06 31 39.6 +0.8**
baz=70,SNR=10
SMCO Snowmass 70.44 331 *e*P **P 06 31 30.9 -8.0**
T17A Navajo Res., N 70.56 327 ⇑P **P 06 31 40.5 +0.8**
baz=71,SNR=17
MONP Monument Peak 70.62 320 ⇓P **P 06 31 40.7 +0.5**
baz=71
BAR Barrett 70.63 320 *e*P **P 06 31 40.6 +0.5**
S18A Hurst Farm, Bl 70.69 328 ⇑P **P 06 31 41.1 +0.7**
baz=71
V14A Boquillas Ranc 70.74 324 ⇑P **P 06 31 41.6 +0.8**
baz=71,SNR=16
W13A Hualapai Mount 70.77 323 ⇑P **P 06 31 41.8 +0.8**
baz=71
IRM Iron Mountain 70.79 322 ⇓P **P 06 31 41.4 +0.3**
baz=71,SNR=10
R19A Curley Farm, L 70.81 328 ⇑P **P 06 31 41.1 0.0**
baz=71,SNR=7.1
U15A North Rim 70.90 325 ⇑P **P 06 31 42.8 +1.1**
baz=71
T16A Glen Canyon Da 70.91 326 ⇓P **P 06 31 42.4 +0.5**
baz=71,SNR=6.8
109C Camp Elliot, M 71.03 320 ⇓P **P 06 31 42.6 0.0**
baz=71
S17A Black Ridge (B 71.06 327 ⇑P **P 06 31 43.0 +0.3**
baz=71
PFO Pinyon Flat Ob 71.16 321 ⇓P **P 06 31 43.9 +0.5**
baz=71
R18A Canyonlands Na 71.19 328 ⇓P **P 06 31 43.3 -0.1**
baz=71
Q19A Hogan Spring (71.33 329 ⇑P **P 06 31 44.4 +0.1**
baz=71,SNR=13
U14A Mt Trumbull 71.36 325 ⇑P **P 06 31 45.5 +0.9**
baz=72,SNR=31
V13A Grand Canyon W 71.38 324 ⇑P **P 06 31 45.3 +0.6**
baz=72
T15A Red Dirt Ranch 71.39 326 ⇓P **P 06 31 45.5 +0.8**
baz=72,SNR=16
LDFC Landfair 71.44 322 *e*P **P 06 31 45.9 +0.9**
W12A Cal Nev Ari 71.46 323 ⇓P **P 06 31 45.2 0.0**
baz=72
PHWY Pilot Hill 71.52 333 *e*P **P 06 31 45.4 0.0**
S16A Weppner Ranch, 71.52 327 ⇑P **P 06 31 45.6 +0.1**
baz=72,SNR=10
GMRC Granite Mounta 71.53 322 ⇓P **P 06 31 46.2 +0.6**
baz=72
R17A Hanksville Air 71.62 328 ⇓P **P 06 31 46.2 +0.2**
baz=72
P19A Cripple Cowboy 71.73 329 ⇓P **P 06 31 47.0 +0.3**
baz=72
V12A Nelson 71.76 323 ⇑P **P 06 31 47.2 +0.2**
baz=72,SNR=9.6
U13A Pakoon Wash 71.78 324 ⇓P **P 06 31 47.4 +0.3**
baz=72
T14A Hurricane 71.80 325 ⇓P **P 06 31 47.8 +0.7**
baz=72,SNR=17
Q18A Rafter H Ranch 71.87 328 ⇑P **P 06 31 47.6 +0.1**
baz=72,SNR=8.8
S15A Panguitch 71.88 326 ⇑P **P 06 31 48.2 +0.6**
baz=72
BBRC Big Bear Sol-O 71.89 321 ⇓P **P 06 31 48.3 +0.5**
baz=72
R16A Teasdale 71.90 327 ⇑P **P 06 31 48.0 +0.3**
baz=72
HEC Hector,Ludlow 71.95 322 ⇑P **P 06 31 48.6 +0.5**
baz=72,SNR=9.4
SRU San Rafael 72.06 328 *e*P **P 06 31 49.0 +0.3**
U12A Valley of Fire 72.11 324 ⇓P **P 06 31 49.5 +0.5**
baz=72,SNR=18
TUQ Turquoise Moun 72.15 322 ⇓P **P 06 31 49.8 +0.4**
baz=72,SNR=5.2
V11A Goodsprings 72.17 323 ⇑P **P 06 31 49.7 +0.3**
baz=72,SNR=7.5
CIS Catalina Islan 72.17 319 ⇑P **P 06 31 49.7 +0.3**
baz=72
T13A Saint George 72.20 325 ⇑P **P 06 31 50.3 +0.7**
baz=72,SNR=15
Q16A Castle Valley 72.23 328 ⇓P **P 06 31 50.0 +0.3**
baz=72,SNR=18
R15A Junction 72.24 326 ⇓P **P 06 31 50.3 +0.5**
baz=72
BFSC Mount Baldy St 72.31 320 ⇓P **P 06 31 50.5 +0.2**
baz=72
CCUT Cedar City 72.31 325 *e*P pP 06 32 00.5 -1.9
O19A Miners Draw (B 72.33 330 ⇓P **P 06 31 50.3 0.0**
baz=72,SNR=24
P18A Preston Nutter 72.33 329 ⇓P **P 06 31 50.8 +0.5**
baz=72,SNR=23
S14A Cedar City 72.36 326 ⇑P **P 06 31 51.0 +0.5**
baz=72,SNR=6.0
MSU Marysvale 72.42 327 *e*P **P 06 31 51.5 +0.6**
P17A Butcher Ranch, 72.45 328 ⇑P **P 06 31 51.1 +0.1**
baz=72,SNR=15
SHPR Sheep Range 72.50 323 *e*P **P 06 31 51.9 +0.5**
TMUT Trail Mountain 72.54 328 *e*P **P 06 31 52.1 +0.6**
GSC Goldstone 72.56 322 ⇓P **P 06 31 52.2 +0.5**
baz=73
GSC Goldstone 72.56 322 *e*P **P 06 31 52.6 +0.8**
RWWY Rawlins 72.59 332 *e*P **P 06 31 55.5 +3.8**
comp=Z,82nm,2.3s,mb5.2
S13A Holt Ranch, En 72.59 325 ⇓P **P 06 31 52.8 +0.9**
baz=73,SNR=20
O18A Roosevelt 72.72 329 ⇑P **P 06 31 52.8 +0.3**
baz=73,SNR=12
N19A John Jarvie Ra 72.83 330 ⇓P **P 06 31 53.0 -0.2**
baz=73
Q15A Fillmore 72.90 327 ⇓P **P 06 31 53.9 +0.2**
baz=73,SNR=12
EDW2 Edwards Air Fo 72.95 321 ⇓P **P 06 31 54.1 0.0**
baz=73
P16A Fountain Green 73.00 328 ⇑P **P 06 31 54.6 +0.3**
baz=73,SNR=5.5
O17A Robinson Place 73.01 329 ⇓P **P 06 31 54.8 +0.5**
baz=73,SNR=42
BLG Laguna Peak 73.06 319 ⇑P **P 06 31 54.8 +0.1**
baz=73
T11A Corn Creek, Al 73.07 324 ⇓P **P 06 31 55.5 +0.7**
baz=73
U10A Ash Meadows, A 73.09 323 ⇑P **P 06 31 55.4 +0.6**
baz=73
R13A O'Grain Ranch, 73.10 325 ⇓P **P 06 31 55.9 +1.0**
baz=73
N18A Larsen Ranch, 73.12 330 ⇑P **P 06 31 54.7 -0.2**
baz=73,SNR=10
S12A Delamar Landin 73.14 324 ⇓P **P 06 31 56.1 +0.9**
baz=73
LRMC Laurel Mountai 73.19 321 ⇓P **P 06 31 55.7 +0.2**
baz=73
OSI Osito Adit 73.20 320 ⇓P **P 06 31 55.4 -0.1**
baz=73
P15A Leamington 73.28 327 ⇓P **P 06 31 56.0 +0.1**
baz=73,SNR=5.6
RSSD Black Hills 73.30 335 *e*P **P 06 31 55.6 -0.3**
RSSD pmax pmax
comp=Z,12nm,0.6s,mb5.0
RSSD Black Hills 73.30 335 *e*P **P 06 31 55.6 -0.3**
comp=Z,12nm,0.6s,mb5.0
MPU Maple Canyon 73.30 328 *e*P **P 06 31 56.8 +0.7**
Q14A Sevier Lake (B 73.34 326 ⇑P **P 06 31 57.0 +0.7**
baz=73
O16A Springville 73.39 328 ⇓P **P 06 31 56.9 +0.3**
baz=74
FURC Furnace Creek, 73.42 322 ⇓P **P 06 31 57.0 +0.1**
baz=74,SNR=8.3
TPNV Topopah Spring 73.42 323 *e*P **P 06 31 57.7 +0.9**
DAU Daniels Canyon 73.43 329 *e*P **P 06 31 57.4 +0.6**
NLU North Lily Min 73.47 328 *e*P **P 06 31 57.8 +0.8**
MPMC Manual Prospec 73.49 322 ⇑P **P 06 31 57.4 +0.2**
baz=74
R12A Pony Springs, 73.54 325 ⇓P **P 06 31 58.1 +0.6**
baz=74,SNR=26
ARVC Arvin 73.62 320 ⇑P **P 06 31 58.3 +0.3**
baz=74
N17A Moffit Pass 73.64 329 ⇑P **P 06 31 58.4 +0.5**
baz=74,SNR=30
S11A Rachel 73.65 324 ⇑P **P 06 31 58.9 +0.8**
baz=74
JLU Jordanelle 73.67 329 *e*P **P 06 31 58.6 +0.5**
P14A Drum Mountains 73.69 327 ⇓P **P 06 31 59.2 +0.9**
baz=74
Q13A Wheeler Ranch, 73.70 326 ⇑P **P 06 31 59.0 +0.6**
baz=74
PPT Papeete 73.76 257 *e*S S 06 41 35.8 +8.0
comp=Z,77nm,27.2s
PPT Papeete 73.76 257 *e*LR LR 06 54 54.1
comp=Z,287nm,26.2s
PPT Papeete 73.76 257 LR LR 06 56 28.1
comp=Z,157nm,18.1s,MS4.3,baz=343,slow=29
ISA Isabella 73.78 321 ⇓P **P 06 31 59.3 +0.4**
baz=74,SNR=7.3
ISA Isabella 73.78 321 *e*P **P 06 31 59.3 +0.4**
N16A Rees Ranch, Co 73.88 329 ⇓P **P 06 31 59.7 +0.3**
baz=74,SNR=9.2
O15A The Old Anders 73.92 328 ⇑P **P 06 32 00.2 +0.5**
baz=74
DUG Dugway 74.02 327 *e*P **P 06 32 00.6 +0.3**
DUG pmax pmax
comp=Z,22nm,1.1s,mb5.0
DUG Dugway 74.02 327 *e*P **P 06 32 00.6 +0.3**
comp=Z,22nm,1.1s,mb5.0
PKM Peak Mountain 74.05 319 ⇓P **P 06 32 01.0 +0.5**
baz=74
P13A Bates Ranch, G 74.07 326 ⇓P **P 06 32 01.3 +0.7**
baz=74
R11A Troy Canyon, C 74.08 325 ⇓P **P 06 32 01.3 +0.7**
baz=74
Q12A Willow Creek R 74.19 325 ⇓P **P 06 32 01.6 +0.3**
baz=74,SNR=7.8
VES Vestal, Richgr 74.26 321 ⇓P **P 06 32 01.7 -0.1**
baz=74,SNR=5.7
M16A Huntsville 74.31 329 ⇑P **P 06 32 01.6 -0.3**
baz=74,SNR=8.6
S10A Tonopah Range, 74.32 324 ⇑P **P 06 32 02.6 +0.6**
baz=74
N15A Stansbury Isla 74.41 328 ⇑P **P 06 32 02.2 -0.3**
baz=74,SNR=10
R10A Warm Springs 74.42 324 ⇓P **P 06 32 03.6 +0.9**
baz=74
SMMC Simmler 74.44 320 ⇑P **P 06 32 03.3 +0.5**
baz=74
Q11A Duckwater 74.48 325 ⇑P **P 06 32 03.4 +0.5**
baz=75,SNR=15
PDAR Pinedale Array 74.49 331 P **P 06 32 02.2 -0.7**
comp=Z,2.1nm,0.5s,mb4.4,baz=131,slow=7.6,SNR=24
BW06 Boulder Array 74.49 331 *e*P **P 06 32 02.2 -0.7**
HWUT Hardware Ranch 74.50 329 *e*P **P 06 32 02.6 -0.4**
comp=Z,24nm,1.1s,mb5.0
S09A Goldfield 74.52 323 ⇓P **P 06 32 03.5 +0.3**
baz=75
P12A McGill 74.55 326 ⇓P **P 06 32 03.7 +0.4**
baz=75,SNR=10
O13A Hicks Ranch, I 74.56 327 ⇑P **P 06 32 03.8 +0.4**
baz=75
RCTC Rector, Farmer 74.67 321 ⇑P **P 06 32 03.8 -0.3**
baz=75
BGU Big Grassy Mou 74.69 328 *e*P **P 06 32 03.8 -0.3**
BGU *e*pP pP 06 32 14.5 -1.9
SPUT South Promonto 74.69 328 *e*P **P 06 32 04.2 0.0**
N14A Grayback Hills 74.71 328 ⇑P **P 06 32 04.1 -0.1**
baz=75,SNR=15
L16A Fish Haven 74.75 329 ⇓P **P 06 32 04.3 -0.1**
baz=75,SNR=13
R09A Tonopah 74.81 324 ⇓P **P 06 32 05.3 +0.4**
baz=75
M15A Larsen Ranch, 74.81 329 ⇓P **P 06 32 04.6 -0.3**
baz=75,SNR=21
Q10A Clear Creek Ra 74.86 324 ⇓P **P 06 32 05.8 +0.6**
baz=75,SNR=6.7
S08C White Mtn Res 74.89 322 ⇓P **P 06 32 05.8 +0.5**
baz=75
MTUM Tungsten Hills 75.01 322 *e*P **P 06 32 06.5 +0.4**
P11A Circle Ranch, 75.05 325 ⇑P **P 06 32 06.6 +0.4**
baz=75
O12A Currie 75.05 326 ⇓P **P 06 32 06.6 +0.3**
baz=75
AHID Auburn Hatcher 75.19 330 *e*P **P 06 32 06.8 -0.2**
comp=Z,27nm,1.0s,mb5.1
PKD Parkfield 75.19 320 ⇑P **P 06 32 07.1 -0.1**
baz=75
L15A Malad City 75.20 329 ⇓P **P 06 32 06.5 -0.5**
baz=75,SNR=14
HVU Hansel Valley 75.21 329 *e*P **P 06 32 07.2 +0.1**
N13A Wendover, West 75.22 327 ⇓P **P 06 32 06.9 -0.3**
baz=75,SNR=5.4
M14A Sheep Mountain 75.28 328 ⇑P **P 06 32 07.3 -0.2**
baz=75,SNR=15
Q09A Carvers 75.29 324 ⇑P **P 06 32 08.0 +0.3**
baz=75
O11A Cowboy Ranch, 75.42 326 ⇓P **P 06 32 08.8 +0.5**
baz=76
R08A Mina 75.45 323 ⇑P **P 06 32 08.6 0.0**
baz=76,SNR=7.2
K16A Soda Springs 75.46 330 ⇑P **P 06 32 08.8 +0.3**
baz=76,SNR=21
P10A Eureka 75.47 325 ⇑P **P 06 32 09.4 +0.7**
baz=76
M13A Montello 75.58 327 ⇑P **P 06 32 08.8 -0.4**
baz=76
SNOW Snow King Moun 75.58 331 *e*P **P 06 32 09.3 +0.2**
comp=Z,14nm,0.8s,mb5.0
NVAR Mina Array Bea 75.62 323 P **P 06 32 09.9 +0.3**
comp=Z,5.5nm,0.8s,mb4.5,baz=162,slow=6.5,SNR=30
NVAR pP pP 06 32 20.5 -1.3
comp=Z,2.4nm,0.7s,baz=158,slow=5.0,SNR=6.6
NVAR Mina Array Bea 75.62 323 P **P 06 32 09.9 +0.3**
NVAR pP pP 06 32 20.5 -1.3
LOHW Long Hollow 75.62 331 *e*P **P 06 32 09.5 0.0**
comp=Z,28nm,1.4s,mb5.0
L14A Malta 75.63 328 ⇓P **P 06 32 09.4 -0.1**
baz=76
N12A Clover Valley, 75.64 327 ⇓P **P 06 32 09.4 -0.1**
baz=76
ELK Elko 75.66 326 *e*P **P 06 32 09.8 +0.1**
ELK pmax pmax
comp=Z,9.0nm,1.0s
ELK Elko 75.66 326 *e*P **P 06 32 09.8 +0.1**
comp=Z,9.4nm,1.0s,mb4.7
TPAW Teton Pass 75.69 331 *e*P **P 06 32 09.8 0.0**
comp=Z,12nm,0.8s,mb4.9
Q08A Gabbs 75.72 324 ⇓P **P 06 32 10.1 0.0**
baz=76
RRI2 Red Ridge 75.74 330 *e*P **P 06 32 10.3 +0.2**
comp=Z,19nm,0.8s,mb5.1
K15A Arbon 75.79 329 ⇓P **P 06 32 10.3 -0.1**
baz=76
J16A Bone 75.82 330 ⇑P **P 06 32 10.7 +0.1**
baz=76
SYO Syowa Base 75.86 160 *e*P **P 06 32 09.4 -1.1**
SYO Syowa Base 75.86 160 *e*pP pP 06 32 19.4 -3.4
DCID1 Drake Creek 75.87 331 *e*P **P 06 32 11.6 +0.7**
O10A Cortez Mining, 75.98 325 ⇑P **P 06 32 11.6 +0.1**
baz=76
K14A Jones Ranch, D 75.99 329 ⇑P **P 06 32 11.1 -0.4**
baz=76,SNR=6.0
M12A Wells 75.99 327 ⇑P **P 06 32 11.5 -0.1**
baz=76
IMW Indian Meadow 76.00 331 *e*P **P 06 32 11.0 -0.6**
comp=Z,19nm,1.3s,mb4.9
L13A Double Diamond 76.01 328 ⇓P **P 06 32 11.8 +0.1**
baz=76
S05C Merced 76.02 321 ⇓P **P 06 32 11.9 0.0**
baz=76,SNR=7.1
FLWY Flagg Ranch 76.04 331 *e*P **P 06 32 12.3 +0.6**

comp=Z,30nm,0.8s,mb5.3
ULM **Lac du Bonnet** 76.06 343 P P 06 32 10.0 -1.8
comp=Z,5.4nm,0.5s,mb4.7,baz=144,slow=7.3,SNR=9.3
S06C **San Francisco** 76.11 322 ⇑P P 06 32 12.4 0.0
baz=76,SNR=10
I16A **Newdale** 76.23 331 ⇑P P 06 32 13.2 +0.3
baz=76,SNR=11
O09A **Fish Creek Ran** 76.26 325 ⇑P P 06 32 13.0 -0.1
baz=76,SNR=6.2
LKWY **Lake** 76.29 332 *eP* P 06 32 14.8 +1.6
J15A **Blackfoot** 76.29 330 ⇓P P 06 32 13.3 +0.1
baz=76,SNR=16
N10A **Dunphy** 76.29 326 ⇓P P 06 32 13.2 -0.1
baz=76
LAO **LASA Array** 76.30 335 *eP* P 06 32 12.8 -0.4
comp=Z,31nm,0.9s,mb5.2
LAO *epP* pP 06 32 23.4 -2.1
WAKR **Walker** 76.31 322 *eP* P 06 32 14.6 +1.2
R06C **Coleville** 76.33 322 ⇑P P 06 32 14.1 +0.5
baz=76
YFT **Old Faithful** 76.39 331 *eP* P 06 32 15.6 +1.8
P08A **Dixie Valley** 76.39 324 ⇑P P 06 32 14.0 +0.1
baz=76
M11A **Holland Ranch,** 76.45 327 ⇓P P 06 32 14.2 +0.1
baz=76,SNR=22
K13A **Stover Farm, H** 76.50 328 ⇓P P 06 32 14.4 -0.1
baz=77,SNR=7.4
CMB **Columbia Colle** 76.53 322 ⇑P P 06 32 14.5 -0.2
baz=77
YNR **Norris Junctio** 76.53 332 *eP* P 06 32 16.2 +1.7
L12A **House Creek Ra** 76.58 327 ⇓P P 06 32 15.4 +0.4
baz=77,SNR=14
YMR **Madison River** 76.62 331 *eP* P 06 32 16.0 +0.9
comp=Z,58nm,1.4s,mb5.3
J14A **Carey** 76.74 329 ⇑P P 06 32 16.1 +0.2
baz=77,SNR=12
H16A **Russell Place,** 76.77 331 ⇓P P 06 32 16.3 +0.4
baz=77,SNR=15
I15A **Monteview** 76.78 330 ⇑P P 06 32 16.5 +0.5
baz=77,SNR=11
R05C **Kirkwood Meado** 76.81 322 ⇓P P 06 32 16.6 +0.3
baz=77,SNR=6.7
O08A **Rochester Mine** 76.86 324 ⇓P P 06 32 16.2 -0.3
baz=77,SNR=5.5
K12A **Draper Farm, C** 76.89 328 ⇑P P 06 32 17.1 +0.4
baz=77,SNR=19
M10A **I.L. Ranch, Tu** 76.89 326 ⇓P P 06 32 16.7 0.0
baz=77
N09A **Rock Creek Ran** 76.92 325 ⇓P P 06 32 16.3 -0.5
baz=77
GCMT **Greycliff** 76.95 333 *eP* P 06 32 16.8 -0.1
QLMT **Earthquake Lak** 76.95 331 *eP* P 06 32 17.8 +0.9
L11A **Cat Creek Ranc** 76.97 327 ⇓P P 06 32 17.3 +0.2
baz=77,SNR=12
R04C **Big Horse Ranc** 76.99 321 ⇑P P 06 32 17.7 +0.3
baz=77
WCN **Washoe City** 77.04 323 ⇑P P 06 32 17.8 +0.2
baz=77
DGMT **Dagmar** 77.05 338 *eP* P 06 32 17.4 0.0
J13A **Cove Ranch, Pi** 77.11 329 ⇑P P 06 32 18.1 +0.2
baz=77,SNR=10
PAHR **Pah Rah Range** 77.12 323 *eP* P 06 32 18.7 +0.7
comp=Z,30nm,0.9s,mb5.2
O07A **Toulon** 77.16 324 ⇓P P 06 32 18.2 0.0
baz=77
I14A **Mackay** 77.17 330 ⇑P P 06 32 18.8 +0.6
baz=77,SNR=16
LAVA **Lava Cap Winer** 77.22 322 ⇑P P 06 32 18.2 -0.4
baz=77
L10A **Juniper Basin** 77.27 327 ⇓P P 06 32 19.2 +0.4
baz=77,SNR=30
SCHQ **Schefferville** 77.27 2 P P 06 32 16.4 -2.1
comp=Z,3.3nm,0.7s,mb4.4,baz=103,slow=11,SNR=5.4
M09A **Marrel Ranch,** 77.29 326 ⇓P P 06 32 19.0 0.0
baz=77
H15A **Lima** 77.33 330 ⇓P P 06 32 19.7 +0.6
baz=77
HLID **Hailey** 77.35 329 *eP* P 06 32 19.6 +0.4
comp=Z,18nm,0.9s,mb5.0
P06A **Stead Airport,** 77.38 323 ⇓P P 06 32 20.0 +0.5
baz=78
J12A **Stokes Ranch,** 77.45 328 ⇓P P 06 32 20.0 +0.2
baz=78,SNR=22
I13A **Wildhorse Cree** 77.48 329 ⇑P P 06 32 20.5 +0.6
baz=78,SNR=15
P05C **Yuba Gap, Truc** 77.52 322 ⇓P P 06 32 20.4 +0.2
baz=78,SNR=7.0
K11A **Parker Ranch,** 77.55 327 ⇑P P 06 32 20.3 -0.1
baz=78,SNR=14
Q04C **Lincoln** 77.64 322 ⇓P P 06 32 21.0 0.0
baz=78
N07B **Gerlach** 77.64 324 ⇑P P 06 32 21.0 +0.1
baz=78
H14A **Leadore** 77.66 330 ⇑P P 06 32 21.3 +0.4
baz=78,SNR=9.5
BOZ **Bozeman (W)** 77.67 332 *eP* P 06 32 20.6 -0.4
BOZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BOZ **Bozeman (W)** 77.67 332 *eP* P 06 32 20.6 -0.4
comp=Z,3.2nm,0.9s,mb4.2
O06A **Flanigan** 77.68 323 ⇓P P 06 32 21.3 +0.2
baz=78
G15A **Dillon** 77.68 331 ⇓P P 06 32 21.1 +0.1
baz=78,SNR=14
BEKR **Beckwourth** 77.77 323 ⇑P P 06 32 21.6 0.0
baz=78,SNR=12
M08A **Happy Creek Ra** 77.80 325 ⇓P P 06 32 21.8 +0.1
baz=78
L09A **Wilkinson Ranc** 77.84 326 ⇓P P 06 32 22.0 +0.1
baz=78
Q03C **Winters** 77.87 321 ⇓P P 06 32 22.8 +0.6
baz=78
DLMT **Dillon** 77.88 331 *eP* P 06 32 22.3 +0.2
comp=Z,18nm,1.1s,mb4.9
MFID **Camas Ranch** 77.93 328 ⇑P P 06 32 22.6 +0.2
baz=78,SNR=12
CVS **Carmenet Viney** 77.94 321 ⇓P P 06 32 22.4 -0.2
baz=78
K10A **MacKenzie Ranc** 77.98 327 ⇓P P 06 32 22.6 -0.1
baz=78
H13A **Challis** 78.03 330 ⇓P P 06 32 23.3 +0.3
baz=78
OHCM **Honcut** 78.04 322 *eP* P 06 32 23.2 0.0
MCCM **Marconi Confer** 78.05 320 ⇑P P 06 32 24.0 +0.8
baz=78
N06A **Buffalo Meadow** 78.09 324 ⇑P P 06 32 23.6 +0.2
baz=78,SNR=16
O05C **Quincy** 78.14 323 ⇑P P 06 32 23.7 0.0
baz=78,SNR=6.4
LRM **Limekiln Ridge** 78.17 331 *eP* P 06 32 24.3 +0.6
M07A **Soldier Meadow** 78.18 325 ⇑P P 06 32 23.9 +0.1
baz=78
G14A **Jackson** 78.18 330 ⇓P P 06 32 23.9 +0.1
baz=78
ORV **Oroville** 78.20 322 ⇓P P 06 32 24.1 +0.1
baz=78,SNR=17
F15A **Butte** 78.21 331 ⇑P P 06 32 24.1 +0.1
baz=78,SNR=12
MNRC **McLaughlin Nat** 78.28 321 ⇑P P 06 32 24.7 +0.2
baz=78
H12A **Diamond D Ranc** 78.30 329 ⇑P P 06 32 24.9 +0.4
baz=78
L08A **Fields** 78.31 326 ⇓P P 06 32 24.4 -0.2
baz=78
K09A **Rome** 78.36 326 ⇓P P 06 32 24.6 -0.2
baz=78
I11A **Placerville** 78.36 328 ⇑P P 06 32 24.6 -0.2
baz=78
J10A **Berg Farm, Mel** 78.40 327 ⇑P P 06 32 24.6 -0.4
baz=78
O04C **Chester** 78.48 323 ⇓P P 06 32 25.5 -0.1
baz=79,SNR=5.8
F14A **Wisdom** 78.58 331 ⇑P P 06 32 26.2 +0.3
baz=79
L07A **Adell** 78.71 325 ⇓P P 06 32 27.2 +0.4
baz=79
E15A **Deer Lodge** 78.72 332 ⇓P P 06 32 26.8 +0.1
baz=79,SNR=22
HOPS **Hopland** 78.73 321 ⇑P P 06 32 27.2 +0.2
baz=79
M06C **Likely Place G** 78.76 324 ⇑P P 06 32 27.3 +0.2
baz=79
K08A **Mann Creek Ran** 78.77 326 ⇑P P 06 32 26.9 -0.2
baz=79
EGMT **Eagleton** 78.77 334 *eP* P 06 32 26.2 -0.8
comp=Z,20nm,1.1s,mb5.0
J09A **Fry Pan Ranch,** 78.84 327 ⇑P P 06 32 27.3 -0.2
baz=79

GASB **Alder Springs** 78.96 321 ⇑P P 06 32 28.8 +0.6
baz=79,SNR=5.2
H11A **Donnelly** 78.97 329 ⇑P P 06 32 27.9 -0.2
baz=79,SNR=6.2
F13A **Darby** 78.99 330 ⇑P P 06 32 28.5 +0.3
baz=79,SNR=52
TORD **Torodi Ar. Bea** 79.01 71 P P 06 32 28.2 -0.8
comp=Z,7.7nm,0.5s,mb4.9,baz=254,slow=5.2,SNR=204
TORD pP pP 06 32 38.4 -3.0
comp=Z,22nm,0.8s,baz=254,slow=5.2,SNR=25
TORD PKKPbc PKKPbc 06 51 20.9 -0.2
comp=Z,0.3nm,0.4s,baz=59,slow=2.4,SNR=8.2
TORD LR LR 07 06 47.7
comp=Z,91nm,20.3s,MS4.1,baz=210,slow=35
TORD **Torodi Ar. Bea** 79.01 71 P P 06 32 28.2 -0.8
TORD pP pP 06 32 38.4 -3.0
TORD PKKPbc PKKPbc 06 51 20.9 -0.2
TORD LR LR 07 06 47.7
HATC **Hat Creek Radi** 79.03 323 ⇓P P 06 32 28.3 -0.3
baz=79,SNR=6.4
E14A **Clinton** 79.09 331 ⇑P P 06 32 29.2 +0.4
baz=79
K07A **Rock Creek Ran** 79.14 326 ⇑P P 06 32 29.4 +0.3
baz=79
MOD **Modoc** 79.14 324 ⇓P P 06 32 29.3 +0.1
baz=79,SNR=15
MOD **Modoc** 79.14 324 *eP* P 06 32 29.3 +0.1
comp=Z,15nm,1.0s,mb4.9
D15A **Lincoln** 79.15 332 ⇓P P 06 32 29.2 +0.1
baz=79,SNR=8.8
J08A **Circle Bar Ran** 79.21 326 ⇓P P 06 32 29.5 0.0
baz=79
M05C **Lookout** 79.23 324 ⇓P P 06 32 29.4 -0.2
baz=79,SNR=9.9
H10A **Noah's Angus R** 79.24 328 ⇑P P 06 32 29.1 -0.5
baz=79
I09A **Lost Marbles R** 79.28 327 ⇓P P 06 32 29.8 -0.1
baz=79,SNR=5.2
LTIM **Timbered Crate** 79.29 323 P P 06 32 29.7 -0.3
O02C **Red Bluff** 79.35 322 ⇓P P 06 32 29.7 -0.7
baz=80
CHMT **Chamberlain Mo** 79.37 332 *eP* P 06 32 30.8 +0.5
F12A **Elk City** 79.39 330 ⇑P P 06 32 30.3 -0.2
baz=80,SNR=11
E13A **Victor** 79.42 331 ⇓P P 06 32 30.7 +0.1
baz=80,SNR=34
WDC **Whiskeytown Da** 79.48 322 *eP* P 06 32 29.2 -1.8
WDC pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
WDC **Whiskeytown Da** 79.48 322 ⇓P P 06 32 29.4 -1.6
baz=80,SNR=6.9
WDC **Whiskeytown Da** 79.48 322 *eP* P 06 32 29.1 -1.9
comp=Z,5.7nm,0.6s,mb4.7
L05A **Lakeview** 79.53 324 ⇑P P 06 32 31.6 +0.4
baz=80
G11A **Walters Elk Ra** 79.61 329 ⇑P P 06 32 31.5 -0.1
baz=80,SNR=36
MSO **Missoula** 79.61 331 *eP* P 06 32 31.9 +0.3
D14A **Greenough** 79.61 332 ⇑P P 06 32 31.6 0.0
baz=80,SNR=6.2
J07A **Hines** 79.65 326 ⇓P P 06 32 32.1 +0.2
baz=80
I08A **Drewsey** 79.65 327 ⇓P P 06 32 32.1 +0.2
baz=80
BMO **Blue Mountains** 79.70 328 *eP* P 06 32 32.3 +0.2
M03C **McCloud** 79.71 323 ⇑P P 06 32 31.6 -0.7
baz=80
K06A **Valley Falls** 79.74 325 ⇓P P 06 32 32.7 +0.3
baz=80
H09A **Durkee** 79.74 328 ⇓P P 06 32 32.1 -0.2
baz=80
M04C **Macdoel** 79.90 324 ⇑P P 06 32 33.1 -0.1
baz=80,SNR=11
F11A **Grangeville** 79.91 329 ⇓P P 06 32 32.9 -0.4
baz=80,SNR=23
O01C **Eel River Cons** 79.92 321 ⇑P P 06 32 33.9 +0.5
baz=80
G10A **Bishop Farm, J** 79.94 329 ⇑P P 06 32 33.7 +0.3
baz=80,SNR=30
J06A **Christmas Vall** 80.00 325 ⇓P P 06 32 33.6 -0.2
baz=80,SNR=17
K05A **Summer Lake** 80.03 325 ⇑P P 06 32 34.5 +0.5
baz=80
E12A **Beaver Dam Sad** 80.03 330 ⇓P P 06 32 33.7 -0.2
baz=80
D13A **Hixon** 80.04 331 ⇓P P 06 32 34.0 +0.1
baz=80
N02C **Big Bar** 80.07 322 ⇓P P 06 32 34.3 0.0
baz=80
H08A **Prairie City** 80.14 327 ⇑P P 06 32 34.6 +0.1
baz=80
L04A **Klamath Falls** 80.19 324 ⇑P P 06 32 34.4 -0.4
baz=80
M02C **Callahan** 80.20 323 ⇑P P 06 32 34.1 -0.8
baz=80,SNR=5.3
C14A **Swan Lake** 80.24 332 ⇓P P 06 32 35.0 0.0
baz=80
G09A **Cove** 80.24 328 ⇑P P 06 32 35.1 0.0
baz=80,SNR=40
I07A **Izee** 80.25 326 ⇓P P 06 32 35.2 +0.1
baz=80
E11A **Bogner Ranch,** 80.28 330 ⇓P P 06 32 34.4 -0.8
baz=80,SNR=10
YBH **Yreka Blue Hor** 80.34 323 ⇓P P 06 32 34.5 -1.2
baz=80,SNR=6.1
YBH **Yreka Blue Hor** 80.34 323 *eP* P 06 32 34.5 -1.2
KHMM **Horse Mountain** 80.35 322 *eP* P 06 32 36.4 +0.7
K04A **Chilquin** 80.40 324 ⇓P P 06 32 35.8 -0.2
baz=80
D12A **Red Ives Fores** 80.41 331 ⇑P P 06 32 35.7 -0.2
baz=80
JCC **Jacoby Creek** 80.48 322 ⇓P P 06 32 36.7 +0.2
baz=81
F10A **Beach Ranch, E** 80.48 329 ⇓P P 06 32 36.1 -0.2
baz=81,SNR=23
I06A **Prineville** 80.52 326 ⇑P P 06 32 37.0 +0.5
baz=81
C13A **Hot Springs** 80.53 331 ⇓P P 06 32 36.7 +0.1
baz=81
J05A **Fort Rock** 80.60 325 ⇑P P 06 32 37.2 +0.2
baz=81
F09A **S2 Ranch, Elgi** 80.62 328 ⇑P P 06 32 36.6 -0.5
baz=81,SNR=11
H07A **Lands Inn, Kim** 80.64 327 ⇓P P 06 32 37.1 -0.1
baz=81
E10A **Myers Farm, Un** 80.80 329 ⇓P P 06 32 37.7 -0.3
baz=81,SNR=27
G08A **Pilot Rock** 80.83 328 ⇑P P 06 32 38.0 -0.2
baz=81,SNR=12
D11A **Klaveano Farm,** 80.86 330 ⇑P P 06 32 37.5 -0.8
baz=81
LNOR **Lincton Mounta** 80.92 328 *eP* P 06 32 37.5 -1.2
C12B **Naegeli Ranch,** 80.96 331 ⇑P P 06 32 38.8 0.0
baz=81
TSUM **Tsumeb** 80.97 107 *epP* P 06 32 40.7 +1.0
B13A **Whitefish** 81.02 332 ⇓P P 06 32 38.9 -0.2
baz=81,SNR=16
J04A **Umpqua Nationa** 81.03 324 ⇓P P 06 32 39.3 0.0
baz=81
HUMO **Hull Mountain** 81.06 324 ⇓P P 06 32 38.9 -0.6
baz=81
F08A **Pendleton** 81.10 328 ⇑P P 06 32 38.9 -0.7
baz=81
VIPM **Ingram Point** 81.12 326 P P 06 32 40.1 +0.3
L02A **Cave Junction** 81.12 323 ⇑P P 06 32 39.7 -0.1
baz=81
H06A **Lindquist Farm** 81.13 326 ⇓P P 06 32 40.3 +0.5
baz=81
G07A **Ruggs Ranch, H** 81.17 327 ⇓P P 06 32 40.3 +0.3
baz=81,SNR=17
M01C **Crescent City** 81.21 322 ⇑P P 06 32 39.9 -0.4
baz=81
I05A **Bend** 81.22 326 ⇑P P 06 32 40.7 +0.4
baz=81,SNR=12
D10A **Wagner Farm, O** 81.30 330 ⇑P P 06 32 39.7 -0.9
baz=81,SNR=24
E09A **Wood Farm, Sta** 81.31 329 ⇑P P 06 32 40.0 -0.8
baz=81
C11A **Tepee Creek (N** 81.41 331 ⇑P P 06 32 40.8 -0.4
baz=82
A13A **Flathead Natio** 81.42 332 ⇓P P 06 32 41.5 +0.2
baz=82
K02A **Glendale** 81.47 323 ⇓P P 06 32 41.6 0.0
baz=82,SNR=5.0
H05A **Madras** 81.53 326 ⇓P P 06 32 42.2 +0.3
baz=82
I04A **Tendick Farm,** 81.57 325 ⇓P P 06 32 41.5 -0.7
baz=82

B12A **Libby** 81.58 331 ⇑P P 06 32 42.0 -0.1
baz=82,SNR=13
G06A **Carlson Farm,** 81.63 327 ⇓P P 06 32 42.9 +0.4
baz=82
E08A **Dider Farm, El** 81.74 328 ⇓P P 06 32 42.3 -0.7
baz=82
REDWA **Red Mountain** 81.78 328 P P 06 32 43.4 +0.2
D09A **Jones Farm, Ri** 81.79 329 ⇑P P 06 32 42.6 -0.6
baz=82,SNR=5.1
C10A **Spilker Farm,** 81.87 330 ⇓P P 06 32 43.1 -0.6
baz=82,SNR=12
HAWA **Hanford** 81.90 328 *eP* P 06 32 43.8 0.0
B11A **Sandpoint** 81.90 331 ⇓P P 06 32 42.9 -0.8
baz=82
J02A **Umpqua** 81.91 324 ⇑P P 06 32 44.1 +0.1
baz=82
RSW **Rattlesnake Hi** 81.93 328 *eP* P 06 32 43.9 -0.1
A12A **Yaak River Ran** 81.95 332 ⇓P P 06 32 43.9 -0.2
baz=82
G05A **Wamic** 81.99 326 ⇑P P 06 32 44.7 +0.4
baz=82
GBL **Gable Mountain** 82.01 328 P P 06 32 44.3 -0.1
H04A **Detroit Lake** 82.05 326 ⇑P P 06 32 44.0 -0.7
baz=82,SNR=6.9
D08A **Wollman Farm,** 82.08 329 ⇓P P 06 32 44.4 -0.4
baz=82,SNR=7.2
F06A **Goldendale** 82.08 327 ⇓P P 06 32 44.9 +0.1
baz=82,SNR=5.7
NEW **Newport** 82.11 331 *eP* P 06 32 44.0 -0.9
NEW pmax pmax
comp=Z,4.0nm,0.6s
NEW **Newport** 82.11 331 *eP* P 06 32 44.0 -0.9
comp=Z,3.5nm,0.6s,mb4.5
VFP **Flag Point** 82.11 326 P P 06 32 45.2 +0.2
I03A **Eugene** 82.15 324 ⇑P P 06 32 45.3 0.0
baz=82
E07A **Sunnyside** 82.17 328 ⇑P P 06 32 45.1 -0.1
baz=82
OD2 **Odessa Site #2** 82.21 329 P P 06 32 45.2 -0.3
A11A **Hall Mountain,** 82.28 331 ⇑P P 06 32 45.6 -0.2
baz=82,SNR=27
C09A **Chrisman Ranch** 82.30 330 ⇓P P 06 32 45.6 -0.3
baz=82
F05A **White Salmon** 82.50 327 ⇑P P 06 32 46.9 -0.1
baz=83
G04A **Mulino** 82.56 326 ⇑P P 06 32 47.0 -0.4
baz=83
H03A **Soap Creek Ran** 82.63 325 ⇑P P 06 32 47.8 +0.1
baz=83,SNR=5.9
C08A **Higginbotham F** 82.66 329 ⇑P P 06 32 47.1 -0.7
baz=83
D07A **Quincy** 82.68 328 ⇑P P 06 32 47.7 -0.2
baz=83
B09A **Rice** 82.70 330 ⇑P P 06 32 47.4 -0.6
baz=83
E06A **Yakima** 82.72 327 ⇓P P 06 32 48.2 0.0
baz=83
EBG **Ellensburg** 82.77 328 P P 06 32 48.6 +0.2
A10A **Northport** 82.83 331 ⇓P P 06 32 47.6 -1.0
baz=83
TBM **Table Mountain** 82.97 328 P P 06 32 49.6 +0.2
F04A **Amboy** 83.02 326 ⇓P P 06 32 49.0 -0.7
baz=83,SNR=7.9
WTV **Waterville** 83.03 329 P P 06 32 49.1 -0.6
G03A **Yamhill** 83.05 325 ⇓P P 06 32 50.0 +0.1
baz=83
C07A **Waterville** 83.07 329 ⇓P P 06 32 49.3 -0.6
baz=83,SNR=16
D06A **Cle Elum** 83.10 328 ⇓P P 06 32 49.6 -0.5
baz=83
E05A **Randle** 83.12 327 ⇑P P 06 32 49.3 -0.9
baz=83
ETW **Entiat** 83.14 329 P P 06 32 50.0 -0.3
B08A **Colville Reser** 83.20 330 ⇓P P 06 32 49.5 -1.1
baz=83,SNR=7.5
A09A **Danville** 83.30 330 ⇑P P 06 32 50.1 -0.9
baz=83
MAW **Mawson** 83.57 164 *eP* P 06 32 52.7 +0.3
comp=Z,14nm,0.9s,mb5.1
MAW **Mawson** 83.57 164 P P 06 32 52.8 +0.4
comp=Z,18nm,0.8s,mb5.2,baz=217,slow=6.3,SNR=45
MAW LR LR 07 09 43.6
comp=Z,155nm,20.5s,MS4.4,baz=72,slow=35
MAW **Mawson** 83.57 164 *eP* P 06 32 52.7 +0.3
MAW pmax pmax
comp=Z,14nm,0.9s
A08A **Turner Farm, O** 83.60 330 ⇑P P 06 32 51.7 -0.9
baz=84,SNR=21
B07A **Winthrop** 83.64 329 ⇓P P 06 32 51.9 -0.9
baz=84,SNR=19
D05A **Enumclaw** 83.66 327 ⇑P P 06 32 52.2 -0.8
baz=84
C05A **Tolt Reservoir** 83.86 328 ⇑P P 06 32 52.8 -1.2
baz=84
D04A **Dobbs Creek Ra** 84.02 327 ⇓P P 06 32 54.6 -0.1
baz=84
E03A **Lebam** 84.02 326 ⇓P P 06 32 54.4 -0.4
baz=84
BOSA **Boshof** 84.06 118 P P 06 32 55.8 +0.2
comp=Z,12nm,0.8s,mb5.0,baz=275,slow=3.4,SNR=18
BOSA pP pP 06 33 05.6 -2.5
comp=Z,9.4nm,0.8s,baz=260,slow=3.9,SNR=7.3
BOSA LR LR 07 09 52.0
comp=Z,104nm,18.6s,MS4.2,baz=194,slow=35
BOSA **Boshof** 84.06 118 P P 06 32 55.8 +0.1
BOSA *PP pP 06 33 05.6 -2.5
A07A **Ashnola River,** 84.18 330 ⇓P P 06 32 55.1 -0.4
baz=84,SNR=23
RPW **Rockport** 84.30 329 P P 06 32 54.8 -1.4
JCW **Jim Creek** 84.32 328 *eP* P 06 32 54.7 -1.6
B06A **Marblemount** 84.33 329 ⇑P P 06 32 55.0 -1.4
baz=84
B05A **Bryant** 84.45 328 ⇓P P 06 32 55.5 -1.5
baz=84,SNR=5.6
HDW **Hoodsport** 84.51 327 P P 06 32 57.0 -0.2
C04A **Brinnon** 84.51 327 ⇑P P 06 32 56.6 -0.7
baz=85
CMW **Cultus Mountai** 84.57 328 P P 06 32 56.5 -1.1
MBW **Mount Baker** 84.72 329 P P 06 32 57.0 -1.2
A06A **Chilliwack** 84.73 329 ⇓P P 06 32 57.2 -1.2
baz=85
A05A **Maple Falls** 84.95 329 ⇑P P 06 32 58.4 -1.1
baz=85
B04A **Port Angeles** 85.01 327 ⇓P P 06 32 59.4 -0.4
baz=85
A04A **Legoe Bay, Lum** 85.06 328 ⇓P P 06 32 59.3 -0.7
baz=85
PGC **Sidney** 85.38 328 *eP* P 06 33 01.4 -0.2
ESDC **Sonseca Array** 87.61 45 LR LR 07 13 42.1
comp=Z,57nm,18.5s,MS4.0,baz=270,slow=36
YKA **Yellowknife Ar** 91.87 341 P P 06 33 30.9 -1.2
comp=Z,5.4nm,0.7s,mb5.0,baz=137,slow=4.1,SNR=30
YKA pP pP 06 33 41.6 -3.1
comp=Z,3.3nm,0.7s,baz=138,slow=4.3,SNR=8.9
YKA LR LR 07 18 12.9
comp=Z,68nm,18.1s,MS4.1,baz=155,slow=38
YKA **Yellowknife Ar** 91.87 341 P P 06 33 30.9 -1.3
YKA *PP pP 06 33 41.6 -3.1
YKA **Yellowknife Ar** 91.87 341 P P 06 33 30.9 -1.2
YKA pP pP 06 33 41.6 -3.2
YKA LR LR 07 18 12.9
DLBC **Dease Lake** 94.65 333 P P 06 33 44.4 -0.7
baz=0.0,slow=1.0
ARCES **ARCESS Array B** 113.09 22 PKKPbc PKKPbc 06 49 47.2 -2.4
comp=Z,2.1nm,1.0s,baz=90,slow=2.4,SNR=4.8
AKASG **Malin Array Be** 113.19 43 PKiKP PKiKP 06 38 59.5 -2.1
comp=Z,0.7nm,0.5s,baz=262,slow=3.2,SNR=4.3
KIV **Kislovodsk** 121.75 51 *i* PKiKP PKPdf 06 39 17.2 -1.2
ASAR **Alice Springs** 128.24 209 PKP PKPdf 06 39 30.6 -0.9
comp=Z,7.2nm,0.9s,baz=146,slow=2.1,SNR=50
ASAR pPKP pPKPdf 06 39 41.5 -2.9
comp=Z,8.7nm,0.9s,baz=149,slow=1.8,SNR=16
ARU **Arti** 129.88 34 *i* PKiKP PKPdf 06 39 33.9 +0.4
ARU 06 41 48.2
ARU SS SS 06 59 12.9 +6.1
SEY **Seymchan** 130.65 336 ⇑ *i* PKiKP PKPdf 06 39 34.6 -0.2
WB2 **Warramunga Arr** 131.24 212 *e*PKP PKPdf 06 39 36.3 -1.0
WB2 *ep*PKP pPKPdf 06 39 48.1 -2.1
WB2 *e*PKS 06 43 01.5
WRA **Warramunga Arr** 131.25 212 PKP PKPdf 06 39 37.0 -0.3
comp=Z,4.7nm,0.5s,baz=153,slow=1.8,SNR=29
WRA pPKP pPKPdf 06 39 48.2 -2.0
comp=Z,4.6nm,0.7s,baz=164,slow=1.7,SNR=10
PETK **Petropavlovsk-** 132.71 322 PKP PKPdf 06 39 38.4 -0.5
comp=Z,3.0nm,0.5s,baz=63,slow=3.4,SNR=6.5
FITZ **Fitzroy Crossi** 136.55 202 *eP* PKPdf 06 39 45.8 -1.5
comp=Z,6.4nm,0.7s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FITZ	**Fitzroy Crossi**	**136.55**	**202**	PKP	PKPdf	06 39 46.2	-1.1
	comp=Z,3.8nm,0.7s,baz=168,slow=6.3,SNR=10						
BVAR	**Borovoye Array**	**137.53**	**34**	PKP	PKPdf	06 39 47.5	-0.5
	comp=Z,2.5nm,0.6s,baz=257,slow=4.0,SNR=12						
NVS	**Novosibirsk**	**142.31**	**25**	*e*PKIKP	PKPdf	06 39 54.8	-1.8
KURK	**Kurchatov**	**143.05**	**33**	PKhKP		06 39 54.2	
	comp=Z,1.6nm,0.6s,baz=305,slow=3.5,SNR=7.4						
KURK				PKP	PKPdf	06 39 58.2	+0.2
	comp=Z,1.1nm,0.5s,baz=302,slow=2.8,SNR=6.2						
KURK	**Kurchatov**	**143.05**	**33**	PKP	PKPdf	06 39 54.2	-3.8
KURK				PKP	PKPdf	06 39 58.2	+0.2
ZAL	**Zalesovo**	**143.59**	**25**	PKIKP	PKPdf	06 39 55.5	-3.4
ZALV	**Zalesovo Beam**	**143.59**	**25**	PKP	PKPdf	06 39 55.5	-3.4
	comp=Z,12nm,0.7s,baz=333,slow=3.8,SNR=17						
EKS2	**Erkin-Say**	**144.19**	**48**	P	PKPdf	06 39 59.4	-0.9
	SNR=7.5						
AML	**Almayashu**	**144.33**	**49**	P	PKPdf	06 40 00.2	-0.3
	SNR=17						
FRU	**Bishkek**	**144.69**	**47**	*i* PKIKP	PKPdf	06 40 00.0	-1.2
FRU				*i*		06 40 12.0	
CHMS	**Chumysh**	**144.72**	**47**	P	PKPdf	06 40 00.9	-0.3
	SNR=6.7						
BOD	**Bodaibo**	**144.77**	**356**	*e*PKIKP	PKPdf	06 39 57.9	-2.9
BOD				pmax	pmax		
	comp=Z,33nm,0.8s						
UCH	**Uchtor**	**144.86**	**48**	P	PKPdf	06 40 02.4	+0.9
	SNR=32						
KBK	**Karagaybulak**	**144.99**	**47**	P	PKPdf	06 40 02.1	+0.4
	SNR=10						
TKM2	**Tokmak 2**	**145.32**	**46**	P	PKPbc	06 40 02.9	+0.7
	SNR=18						
GUMO	**Guam**	**145.41**	**261**	PKPbc	PKPbc	06 40 02.3	-0.9
	comp=Z,45nm,0.7s,baz=181,slow=12,SNR=5.5						
KSH	**Kashi**	**146.88**	**52**	*e*PKP	PKPdf	06 39 58.6	-6.4
KSH				PP	PP		
	comp=Z,177nm,4.0s						
KSH				LR	LR		
	comp=Z,327nm,5.5s						
MKAR	**Makanchi Array**	**147.38**	**36**	PKPbc	PKPbc	06 40 05.4	-2.7
	comp=Z,12nm,0.7s,baz=329,slow=1.4,SNR=42						
KLR	**Kul'dur**	**148.28**	**332**	*e*PKHKP		06 40 03.1	
THN	**Thein Dam**	**148.50**	**65**	*e*P	PKPdf	06 40 08.0	+0.1
HYB	**Hyderabad**	**150.35**	**95**	*i* PKP	PKPab	06 40 26.0	+3.0
TLY	**Talaya**	**150.69**	**8**	*e*PKIKP	PKPdf	06 40 12.3	+1.5
TLY				*e*		06 40 23.2	
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KAPI	**Kappang**	**150.75**	**201**	PKPbc	PKPbc	06 40 16.8	-0.8
	comp=Z,26nm,0.9s,baz=224,slow=7.5,SNR=8.4						
KAPI				PKPab	PKPab	06 40 24.3	-0.2
	comp=Z,41nm,1.0s,baz=150,slow=2.8,SNR=7.1						
MJAR	**Matsushiro Arr**	**151.72**	**306**	PKPbc	PKPbc	06 40 18.6	-0.6
	comp=Z,8.7nm,0.7s,baz=101,slow=1.3,SNR=19						
MJAR				PKPab	PKPab	06 40 27.4	-0.7
	comp=Z,1.1nm,0.3s,baz=332,slow=18,SNR=5.1						
MAT	**Matsushiro**	**151.72**	**306**	PKP	PKPbc	06 40 19.2	0.0
ZAK	**Zakamensk**	**151.92**	**9**	*e*PKIKP	PKPdf	06 40 05.1	-7.6
ZAK				*i*		06 40 19.1	
ZAK				*e*		06 40 27.4	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HIA	**Hailar**	**152.30**	**346**	*i* PKIKP	PKPbc	06 40 18.7	-1.4
MDJ	**Mudanjiang**	**152.69**	**328**	PKP	PKPdf	06 40 13.5	-0.5
SONM	**Songino Array**	**154.78**	**5**	PKP	PKPdf	06 40 17.0	+0.1
	comp=Z,2.0nm,0.8s,baz=308,slow=0.8,SNR=12						
SONM				PKPbc	PKPbc	06 40 25.0	-0.5
	comp=Z,2.8nm,0.9s,baz=317,slow=2.2,SNR=3.9						
SONM				pPKPbc	pPKPbc	06 40 35.9	-2.5
	comp=Z,2.6nm,0.8s,baz=296,slow=2.3,SNR=3.9						
SONM				PKPab	PKPab	06 40 40.7	+0.1
	comp=Z,2.4nm,0.7s,baz=327,slow=2.8,SNR=5.2						
SONM	**Songino Array**	**154.78**	**5**	PKIKP	PKPdf	06 40 17.0	+0.1
SONM						06 40 25.0	
SONM						06 40 35.9	
ULN	**Ulaanbaatar**	**154.80**	**4**	*i* PKIKP	PKPbc	06 40 24.4	-1.1
KSRS	**Korea Array**	**158.46**	**317**	PKP	PKPdf	06 40 21.1	-0.9
	comp=Z,1.3nm,0.5s,baz=4.9,slow=0.9,SNR=8.3						
KSRS				pPKP	pPKPdf	06 40 31.9	-3.1
	comp=Z,5.2nm,1.1s,baz=185,slow=1.5,SNR=4.8						
KSRS				PKPab	PKPab	06 40 55.5	-1.3
	comp=Z,2.4nm,0.7s,baz=54,slow=4.7,SNR=6.8						
KSRS				pPKPab	pPKPab	06 41 08.5	-0.9
	comp=Z,1.9nm,0.8s,baz=42,slow=4.9,SNR=5.0						
GTA	**Gaotai**	**161.35**	**24**	PKP	PKPdf	06 40 26.0	+0.8
GTA				APKP		06 40 36.5	
GTA				XPKP		06 40 40.7	
GTA				SKS	SKSdf	06 47 27.6	+0.6
GTA				PP	PP		
	comp=Z,121nm,8.0s						
GTA				LR	LR		
	comp=N,80nm,14.0s						
GTA				LR	LR		
	comp=E,56nm,14.6s						
GTA				LR	LR		
	comp=Z,115nm,16.4s						
HHC	**Hu-ho-hao-te**	**161.83**	**355**	*e*PKP	PKPdf	06 40 19.9	-5.7
HHC				APKP		06 40 31.1	
HHC				XPKP		06 40 34.9	
HHC				PKS		06 43 52.1	
HHC				SKS	SKSdf	06 47 19.5	-7.8
HHC				PP	PP		
	comp=Z,61nm,7.0s						
HHC				LR	LR		
	comp=N,122nm,17.9s						
HHC				LR	LR		
	comp=E,206nm,18.3s						
HHC				LR	LR		
	comp=Z,112nm,17.9s						
LZH	**Lanzhou**	**165.73**	**19**	*e*PKP	PKPdf	06 40 31.0	+1.6
LZH				APKP		06 40 41.9	
LZH				XPKP		06 40 45.6	
LZH				*e*PP	PP	06 45 18.6	+3.8
LZH				SKKS	SKKSac	06 52 01.2	+1.2
LZH				*e*SS	SS	07 05 49.4	0.0
LZH				PP	PP		
	comp=Z,143nm,8.5s						
LZH				LR	LR		
	comp=N,175nm,18.3s						
LZH				LR	LR		
	comp=Z,232nm,20.5s						
NJ2	**Nanjing**	**167.61**	**321**	*e*PKP	PKPdf	06 40 32.4	+1.4
CMAR	**Chiang Mai Arr**	**169.12**	**111**	PKP	PKPdf	06 40 31.7	-0.6
	comp=Z,1.5nm,0.3s,baz=335,slow=0.9,SNR=5.8						
CMAR				PKPab	PKPab	06 41 44.0	-0.2
	comp=Z,1.4nm,0.3s,baz=246,slow=5.6,SNR=4.1						
CD2	**Chengdu**	**170.27**	**31**	*e*PKP	PKPdf	06 40 31.5	-1.2
CD2				APKP		06 40 41.3	
CD2				XPKP		06 40 46.5	
CD2				PKP2	PKPab	06 41 48.8	0.0
CD2				PP	PP	06 45 39.7	+1.4
CD2				SKS	SKSdf	06 47 30.0	-3.1
CD2				SKKS	SKKSac	06 52 21.6	-1.1
CD2				SS	SS	07 06 33.7	-1.9
CD2				PP	PP		
	comp=Z,120nm,10.8s						
CD2				LR	LR		
	comp=N,170nm,15.6s						
CD2				LR	LR		
	comp=E,270nm,16.8s						
CD2				LR	LR		
	comp=Z,150nm,16.8s						
KMI	**Kunming**	**173.23**	**68**	PKIKP	PKPdf	06 40 33.9	-0.4
KMI						06 40 45.4	
KMI	**Kunming**	**173.23**	**68**	PKP	PKPdf	06 40 33.9	-0.4
KMI				pPKP	pPKPdf	06 40 45.4	-1.9
KMI				sPKP		06 40 49.2	
GYA	**Guiyang**	**175.37**	**35**	PKP	PKPdf	06 40 35.2	+0.3
GYA				APKP		06 40 46.5	
GYA				XPKP		06 40 51.2	
GYA				PKP2	PKPab	06 42 12.3	+0.8
GYA				PKS		06 44 06.4	
GYA				PP	PP	06 46 05.8	+2.3
GYA				SKS	SKSdf	06 47 32.6	-2.3
GYA				SKKS	SKKSac	06 52 46.9	-0.4
GYA				SS	SS	07 07 22.0	-3.5
GYA				PP	PP		
	comp=Z,120nm,8.0s						
GYA				LR	LR		
	comp=N,190nm,25.5s						
GYA				LR	LR		
	comp=E,170nm,24.8s						
GYA				LR	LR		
	comp=Z,150nm,25.6s						

MAN 04 06:34:39,714N×12527E,h2^{km},mb4.3,ML3.1,MS2.9,1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.22**	**233**	⇑*i*P	Pg	06 34 43.8	+0.5
KCP				*i* S	Sg	06 34 46.6	+0.4

*NEIC **04** 06:46:34.7,1529N×9297W,h95^{km},MD4.3(MEX),After MEX.*

MEX 04 06:46:34.4±1.1**,1530N×9294W,h100^{km}±9^{km},MD4.3, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.76**	**121**	*e*P	Pn	06 46 50.8	-1.6
THIG				*i* S	Sn	06 47 04.2	-1.7
CCIG	**Comitan**	**1.25**	**38**	*e*P	Pn	06 46 57.0	-0.6
CCIG				*i* S	Sn	06 47 14.5	-0.6
SCX	**San Cristobal**	**1.46**	**12**	*i* P	Pn	06 47 00.2	+0.1
SCX				*i* S	Sn	06 47 18.5	-1.1
TGIG		**1.48**	**353**	*e*P	Pn	06 46 59.3	-1.1
TGIG				*i* S	Sn	06 47 17.9	-2.2
CMIG	**Matias Romero**	**2.58**	**314**	*e*P	Pn	06 47 14.6	+0.1
CMIG				*i* S	Sn	06 47 42.2	-3.1
CMIG	**Matias Romero**	**2.58**	**314**	*e*P	Pn	06 47 14.6	+0.1
CMIG				*i* S	Sn	06 47 41.8	-3.5
SCIG	**Sabancuy**	**4.01**	**25**	*i* P	Pn	06 47 33.5	-0.2
SCIG				*i* S	Sn	06 48 17.2	-2.5
SCIG				*i* S	Sn	06 48 17.2	-2.5
VHO	**Vista Hermosa**	**4.04**	**296**	*e*P	Pn	06 47 33.4	-0.8
VHO				*i* S	Sn	06 48 18.4	-2.2
PNIG	**Pinotepa**	**5.11**	**283**	*i* P	Pn	06 47 49.2	+0.6
PNIG				*i* S	Sn	06 48 43.0	-3.3
UTMO	**Huajuapan**	**5.29**	**299**	*i* P	Pn	06 47 50.5	-0.6
TEIG	**Tepich**	**6.61**	**42**	*i* P	Pn	06 48 05.5	-3.5
TEIG				*i* S	Sn	06 49 17.3	-5.6

NNC 04 06:51:24.2±2.1**,5323N×8759E,h0^{km},mb3.8,mpv3.3, 7C-4D,Error ellipse: s-maj=15.9km s-min=11.4km az=57.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**6.09**	**249**	⇑Pn	Pn	06 52 56.3	+0.9
	2.8nm,0.5s						
KURK				⇑Sn	Sn	06 54 07.7	+2.0
	2.8nm,0.6s						
KURK				⇑Lg		06 54 41.0	
	18nm,1.0s						
KURBB	**Kurchatov Arra**	**6.18**	**249**	⇑Pn	Pn	06 52 57.2	+0.6
	1.5nm,0.5s,baz=60,slow=14						
KURBB				⇓Sn	Sn	06 54 08.7	+0.7
	1.3nm,0.8s						
KURBB				⇑Lg		06 54 43.5	
	4.0nm,0.8s,baz=63,slow=32						
MK31	**Makanchi Array**	**7.29**	**210**	⇓Pn	Pn	06 53 14.8	+3.0
	0.4nm,0.3s,baz=30,slow=13,SNR=15						
MK31				⇓Sn	Sn	06 54 41.4	+6.2
	1.3nm,0.6s						
MK31				⇑Lg		06 55 13.8	
	2.4nm,0.6s,baz=34,slow=30,SNR=3.6						
VOSK	**Vostochnaya**	**10.04**	**274**	⇑Pn	Pn	06 53 47.7	-1.8
	3.8nm,1.4s						
VOSK				⇓Sn	Sn	06 55 41.7	-1.0
	2.6nm,0.6s						

*ATH **04** 07:12:20.8,3884N×2525E,h10^{km},MD3.2/3*
*DDA **04** 07:12:23.1,3873N×2564E,h7^{km}±6^{km},Md3.0*
*ISCJB **04** 07:12:24.1±1.3,3874N±005×2560E±0.10,h10^{km},Error ellipse: s-maj=11.2km s-min=7.0km az=2.8*
*CSEM **04** 07:12:25.5±0.3,3880N×2562E,h30^{km},MD3.0,Error ellipse: s-maj=11.2km s-min=4.3km az=119.0*
ISC 04 07:12:25.5±1.7**,3878N**±006×**256E**±01**,h25^{km}**±12^{km}**,n7, σ0^{s}78**/11**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.68**	**47**	*e*PB	**Pb**	**07 12 37.8**	**-1.0**
AYVA	**Ayvalik**	**0.98**	**57**	*i* P	**Pn**	**07 12 43.2**	**-0.4**
AYVA				*i* S	**Sb**	**07 12 56.8**	**+0.5**
BOZC	**Bozcaada**	**1.11**	**17**	*i* P	**Pn**	**07 12 44.8**	**-0.6**
BOZC				*i* S	**Sn**	**07 13 01.0**	**+1.1**
KDAG	**Bornova**	**1.34**	**106**	*i* P	**Pn**	**07 12 47.2**	**-1.3**
KDAG				*i* S	**Sn**	**07 13 05.5**	**0.0**
SMG	**Samos**	**1.43**	**138**	*e*PB	**Pb**	**07 12 52.5**	**+1.1**
APE	**Apeiranthos**	**1.71**	**183**	*e*PN	**Pn**	**07 12 54.0**	**+0.3**
BALY	**Balya**	**1.82**	**58**	*i* P	**Pn**	**07 12 55.5**	**+0.3**
BALY				*i* S	**Sn**	**07 13 22.2**	**+4.8**

GII 04 07:29:50.7±0.7**,2982N×3619E,h0^{km},ML2.4**/7**, EXPLOSION,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.02**	**282**	Pg	Pg	07 30 11.3	+1.0
HRFI				Sg	Sg	07 30 26.4	+2.9
HRFI	**Mount Harif**	**1.02**	**282**	Pg	Pg	07 30 11.7	+1.5
HRFI				Sg	Sg	07 30 25.1	+1.6
EIL	**Elat**	**1.08**	**262**	Pg	Pg	07 30 12.4	+0.9
EIL				Sg	Sg	07 30 28.2	+2.6
EIL	**Elat**	**1.08**	**262**	Pg	Pg	07 30 12.6	+1.1
EIL				Sg	Sg	07 30 28.3	+2.7
MBRI	**Mt Berech**	**1.11**	**269**	Pg	Pg	07 30 12.6	+0.7
MBRI				Sg	Sg	07 30 28.9	+2.7
MBRI	**Mt Berech**	**1.11**	**269**	Pg	Pg	07 30 12.6	+0.7
MBRI				Sg	Sg	07 30 29.0	+2.7
ZFRI	**Zfri**	**1.14**	**310**	Pg	Pg	07 30 13.1	+0.5
ZFRI				Sg	Sg	07 30 29.6	+2.3
ZFRI	**Zfri**	**1.14**	**310**	Pg	Pg	07 30 13.0	+0.4
ZFRI				Sg	Sg	07 30 28.4	+1.0
PRNI	**Paran**	**1.15**	**298**	Pg	Pg	07 30 13.4	+0.6
PRNI				Sg	Sg	07 30 30.5	+2.7
PRNI	**Paran**	**1.15**	**298**	Pg	Pg	07 30 13.3	+0.5
PRNI				Sg	Sg	07 30 29.2	+1.5
KRMI	**Paran Flat**	**1.30**	**283**	Pg	Pg	07 30 15.8	+0.1
KRMI				Sg	Sg	07 30 34.6	+2.0
KRMI	**Paran Flat**	**1.30**	**283**	Pg	Pg	07 30 15.7	+0.1
KRMI				Sg	Sg	07 30 34.0	+1.5
MZDA	**Masada**	**1.65**	**335**	Pn	Pn	07 30 20.8	-0.1
MZDA				Sn	Sn	07 30 43.6	+0.9
MZDA	**Masada**	**1.65**	**335**	Pn	Pn	07 30 20.7	-0.2
MZDA				Sn	Sn	07 30 42.5	-0.3
KZIT	**Kziot**	**1.89**	**305**	Sn	Sn	07 30 51.0	+2.3
KZIT	**Kziot**	**1.89**	**305**	Sn	Sn	07 30 50.4	+1.7

IDC 04 07:36:58.5±2.1**,414N×12610E,h0^{km},mb3.6**/4**,mb1 3.8**/4**, mb1mx3.6**/17**,mbtmp3.6**/4**,Error ellipse: s-maj=128.8km s-min=25.9km az=69.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.11**	**181**	P	P	07 41 55.3	-0.3
	0.8nm,0.8s,baz=13,slow=11,SNR=5.1						
WRA	**Warramunga Arr**	**25.27**	**162**	P	P	07 42 26.8	+0.2
	1.6nm,0.6s,baz=341,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**28.67**	**165**	P	P	07 42 57.2	0.0
	0.4nm,0.7s,baz=346,slow=7.5,SNR=4.6						
MKAR	**Makanchi Array**	**56.86**	**325**	P	P	07 46 45.1	+0.1
	0.2nm,0.4s,baz=119,slow=8.6,SNR=4.6						

IDC 04 08:15:56.0±2.8**,1169S×16490E,h0^{km},mb4.1**/4**, mb1 4.2**/4**,mb1mx3.8**/15**,mbtmp4.0**/4**,MS3.3**/4**,Ms1 3.3**/4**, ms1mx3.0**/26**,Error ellipse: s-maj=101.0km s-min=38.8km az=128.0,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**19.77**	**243**	P	Pn	08 20 30.6	+1.3
	0.2nm,0.3s,baz=98,slow=15,SNR=3.1						
CTA				LR	LR	08 26 47.1	
	comp=Z,69nm,21.8s,baz=245,slow=33						
AFI	**Afiamalu**	**22.85**	**98**	LR	LR	08 28 30.0	
	comp=Z,40nm,19.2s,baz=212,slow=33						
STKA	**Stephens Creek**	**29.41**	**223**	P	P	08 22 01.9	+0.6
	1.0nm,0.3s,baz=62,slow=3.8,SNR=3.6						
STKA				LR	LR	08 32 50.1	
	comp=Z,112nm,18.6s,baz=25,slow=34						
WRA	**Warramunga Arr**	**30.48**	**251**	P	P	08 22 11.2	+0.3
	1.3nm,0.7s,baz=82,slow=8.5,SNR=6.2						
ASAR	**Alice Springs**	**31.76**	**244**	P	P	08 22 21.6	-0.5
	1.1nm,0.7s,baz=69,slow=9.4,SNR=12						
PPT	**Papeete**	**44.36**	**103**	LR	LR	08 38 59.2	
	comp=Z,61nm,18.5s,baz=223,slow=31						
MKAR	**Makanchi Array**	**93.42**	**317**	P	P	08 29 13.3	0.0
	0.2nm,0.3s,baz=102,slow=6.1,SNR=3.7						
ARCES	**ARCESS Array B**	**116.74**	**345**	PKP	PKPdf	08 34 41.7	-0.1
	0.8nm,0.8s,baz=64,slow=4.1,SNR=5.1						

IDC 04 08:22:46.7±2.3**,250N×12628E,h0^{km},mb3.4**/3**,mb1 3.6**/3**, mb1mx3.5**/15**,mbtmp3.4**/3**,MS4.2**/1**,Ms1 4.2**/1**, ms1mx2.8**/19**,Error ellipse: s-maj=194.4km s-min=28.1km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.66**	**161**	P	P	08 27 59.7	-0.5
	0.8nm,0.5s,baz=339,slow=10,SNR=6.7						
ASAR	**Alice Springs**	**27.05**	**164**	P	P	08 28 31.2	+0.4
	0.3nm,0.6s,baz=344,slow=7.1,SNR=6.5						
CBIJ	**Chichi jima**	**28.82**	**30**	LR	LR	08 38 06.1	
	comp=Z,511nm,21.3s,baz=141,slow=32						
MKAR	**Makanchi Array**	**58.31**	**326**	P	P	08 32 43.6	+0.1
	0.2nm,0.4s,baz=122,slow=6.9,SNR=1.9						

IDC 04 08:54:44.1±2.7**,573S×15050E,h0^{km},mb3.6**/4**,mb1 3.8**/4**, mb1mx3.6**/15**,mbtmp3.6**/4**,Error ellipse: s-maj=67.8km s-min=42.5km az=108.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.13**	**227**	P	P	08 59 29.8	-0.9
	1.0nm,0.8s,baz=54,slow=11,SNR=12						
ASAR	**Alice Springs**	**23.95**	**220**	P	P	08 59 58.4	-1.8
	0.5nm,0.5s,baz=56,slow=8.7,SNR=14						
FITZ	**Fitzroy Crossi**	**27.21**	**241**	P	P	09 00 31.0	+1.1
	0.8nm,0.5s,baz=70,slow=9.5,SNR=5.6						
STKA	**Stephens Creek**	**27.32**	**197**	P	P	09 00 32.1	+1.5
	2.7nm,1.0s,baz=23,slow=11,SNR=3.8						
TORD	**Torodi Ar. Bea**	**148.38**	**286**	PKPbc	PKPbc	09 14 32.8	-0.8
	0.4nm,0.5s,baz=68,slow=3.6,SNR=4.8						

IDC 04 08:55:00.6±7.0**,2194N×14266E,h308^{km}**±69^{km}**,mb3.1**/9**, mb1 3.2**/9**,mb1mx3.1**/18**,mbtmp3.1**/9**,Error ellipse: s-maj=45.4km s-min=12.5km az=80.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.03**	**324**	P	P	08 59 11.8	+0.5
	4.7nm,0.7s,baz=146,slow=8.9,SNR=16						
SONM	**Songino Array**	**38.84**	**321**	P	P	09 01 56.3	-0.2
	0.6nm,0.5s,baz=148,slow=8.4,SNR=4.8						
WRA	**Warramunga Arr**	**42.41**	**192**	P	P	09 02 25.7	-0.1
	0.6nm,0.4s,baz=15,slow=9.0,SNR=21						
ASAR	**Alice Springs**	**46.12**	**191**	P	P	09 02 55.0	+0.1
	0.2nm,0.3s,baz=14,slow=7.6,SNR=5.7						
STKA	**Stephens Creek**	**53.52**	**181**	P	P	09 03 49.8	-0.3
	0.7nm,0.7s,baz=300,slow=19,SNR=2.3						
ZALV	**Zalesovo Beam**	**53.72**	**322**	P	P	09 03 50.9	-0.5
	1.2nm,0.8s,baz=90,slow=8.6,SNR=3.5						
MKAR	**Makanchi Array**	**54.18**	**313**	P	P	09 03 55.0	+0.2
	0.4nm,0.5s,baz=90,slow=9.6,SNR=4.7						
ARCES	**ARCESS Array B**	**78.54**	**341**	P	P	09 06 27.6	-0.2
	2.0nm,0.9s,baz=65,slow=6.8,SNR=5.4						
NVAR	**Mina Array Bea**	**83.37**	**51**	P	P	09 06 53.4	-0.4
	0.1nm,0.4s,baz=289,slow=2.8,SNR=3.1						
LPAZ	**La Paz**	**150.40**	**84**	PKPbc	PKPbc	09 14 18.1	+1.6
	0.7nm,0.6s,baz=274,slow=3.1,SNR=6.5						

IDC 04 09:01:19.4±3.2**,600S×15087E,h0^{km},mb3.5**/3**,mb1 3.8**/3**, mb1mx3.5**/15**,mbtmp3.5**/3**,Error ellipse: s-maj=113.7km s-min=44.1km az=122.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.22**	**228**	P	P	09 06 06.5	-0.6
	0.8nm,0.7s,baz=51,slow=10,SNR=9.8						
ASAR	**Alice Springs**	**23.98**	**221**	P	P	09 06 34.9	-1.0
	0.5nm,0.4s,baz=56,slow=8.9,SNR=15						
FITZ	**Fitzroy Crossi**	**27.41**	**242**	P	P	09 07 08.2	+1.2
	1.4nm,0.7s,baz=45,slow=11,SNR=4.7						
TORD	**Torodi Ar. Bea**	**148.81**	**285**	PKPbc	PKPbc	09 21 09.6	-0.4
	0.3nm,0.5s,baz=66,slow=3.4,SNR=4.3						

IDC 04 09:39:15.6±5.2**,2287S×17509W,h0^{km},mb4.0**/3**, mb1 4.3**/3**,mb1mx3.9**/15**,mbtmp4.0**/3**,MS3.9**/2**,Ms1 3.9**/2**, ms1mx3.0**/32**,Error ellipse: s-maj=336.8km s-min=32.7km az=155.0,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.65**	**258**	P	P	09 47 46.3	+0.2
	0.9nm,0.7s,baz=95,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**46.99**	**264**	P	P	09 47 48.5	-0.3
	0.2nm,0.5s,baz=103,slow=8.1,SNR=13						
PFO	**Pinyon Flat Ob**	**79.18**	**47**	LR	LR	10 19 44.1	
	comp=Z,92nm,20.8s,baz=56,slow=31						
NVAR	**Mina Array Bea**	**80.94**	**42**	P	P	09 51 32.2	+0.4
	0.4nm,0.7s,baz=216,slow=8.2,SNR=4.7						
ELK	**Elko**	**84.22**	**41**	LR	LR	10 21 25.2	
	comp=Z,60nm,21.5s,baz=242,slow=30						

*SZGRF **04** 09:41:51.4,3395S×17791W,h33^{km},mb4.9,South of Kermadec Islands*
*BJI **04** 09:41:54.4,3291S×17909W,h5^{km},mB5.5,mb5.5,Ms5.0, Msz4.8*
*MOS **04** 09:41:54.8±1.1,33.16S×179.44W,h10^{km},mb5.4/29, MS4.3/4,Error ellipse: s-maj=11.3km s-min=9.3km az=64.6*
*ISCJB **04** 09:41:56.2±1.3,3313S±003×17939W±005,h17^{km}±9^{km}, mb5.2/56,MS4.6/31,Error ellipse: s-maj=7.8km s-min=4.1km az=37.8*
*GCMT **04** 09:41:57.2±0.2,3325S×17904W,h58^{km},MW5.4/79, Moment Tensor Solution. s72,c120; s79,c125; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.28±.03; $M_{\theta\theta}$0.04±.03; $M_{\phi\phi}$-1.32±.03; $M_{r\theta}$-0.03±.02; $M_{\theta\phi}$-0.49±.02; $M_{\phi r}$0.40±.02; Best double couple: $M_0$1.43800×10^{17} NP1:ϕ_s206.00000°,δ38.00000°, λ102.00000°. NP2:ϕ_s11.00000°,δ53.00000°,λ81.00000°. Principal axes: T 1.3480, Plg80.0000°, Azm243.0000°; N 0.1830, Plg7.0000°, Azm16.0000°; P -1.5280, Plg8.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **04** 09:41:57.2±0.2,3308S×17934W,mb5.3/28 Error ellipse: s-maj=8.3km s-min=4.1km az=124.0*
*IDC **04** 09:42:00.7±1.3,3306S×17944W,h47^{km}±11^{km},mb4.6/17, mb1 4.7/19,mb1mx4.7/21,mbtmp4.6/19,ML5.0/2,MS4.6/19, Ms1 4.6/19,ms1mx4.4/23,Error ellipse: s-maj=12.9km s-min=9.3km az=122.0*
*DJA **04** 09:42:18,3343S×17970W,h184^{km},mb5.3/15*
ISC 04 09:41:59.7±1.3**,3310S**±003×**17938W**±005**,h29^{km}**±9^{km}**, h19^{km}**±2.1^{km}**:pP-P,n542,σ0^{s}76**/406**,mb5.2**/56**,MS4.6**/31**, 119C-106D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.04**	**18**	P	**Pn**	**09 42 59.3**	**-0.1**
	127nm,0.3s,baz=121,slow=10.0,SNR=12						
RAO				S	**Sn**	**09 43 44.3**	**-1.4**
	811nm,0.3s,baz=105,slow=22,SNR=4.5						
RAO	**Raoul Island**	**4.04**	**18**	P	**Pn**	**09 42 59.3**	**-0.1**
RAO				S	**Sn**	**09 43 44.3**	**-1.4**
RAO				pmax	pmax		
	comp=Z,127nm,0.3s						
RAO				smax			
	comp=N,811nm,0.3s						
RAO	**Raoul Island**	**4.04**	**18**	*e*Pn	**Pn**	**09 42 58.9**	**-0.6**
MXZ	**Matakaoa Point**	**4.84**	**202**	P	**Pn**	**09 43 09.9**	**-0.6**
MXZ				S	**Sn**	**09 44 06.5**	**+1.0**
WIZ	**White Island**	**5.23**	**211**	P	**Pn**	**09 43 17.8**	**+1.9**
WIZ				S	**Sn**	**09 44 18.1**	**+2.9**
PUZ	**Puketiti**	**5.32**	**201**	P	**Pn**	**09 43 15.4**	**-1.7**

PUZ S Sn 09 44 17.8 +0.4
KUZ Kuaotunu 5.43 227 P Pn 09 43 22.4 +3.8
MWZ Matawai 5.80 205 P Pn 09 43 22.2 -1.4
URZ Urewera 5.89 208 P Pn 09 43 23.8 -1.1
comp=N,36nm,0.3s,baz=327,slow=3.1,SNR=164
URZ S Sn 09 44 31.7 +0.4
comp=N,78nm,0.3s,baz=114,slow=23,SNR=8.0
URZ Urewera 5.89 208 P Pn 09 43 23.8 -1.1
WCZ Waipu Caves 5.91 240 P Pn 09 43 30.1 +4.9
EDRZ Edgecumbe 5.91 211 P Pn 09 43 26.9 +1.7
MKAZ Moumakai 6.00 227 P Pn 09 43 30.5 +4.1
KARZ Kaharoa 6.07 215 P Pn 09 43 30.0 +2.6
TAZ Tarawera 6.12 212 P Pn 09 43 30.7 +2.7
OUZ Omahuta 6.20 248 P Pn 09 43 33.7 +4.6
TOZ Tahuroa Road 6.23 221 P Pn 09 43 32.9 +3.3
HATZ Hinemaiaia 6.85 211 P Pn 09 43 38.1 +0.1
BKZ Black Stump Fm 6.92 208 P Pn 09 43 37.3 -1.7
HIZ Hauiti 7.15 219 P Pn 09 43 45.7 +3.5
NGZ Ngauruhoe 7.30 212 P Pn 09 43 44.8 +0.6
WPVZ Whakapapa 7.35 213 P Pn 09 43 45.6 +0.7
TUVZ Tukino 7.35 212 P Pn 09 43 45.2 +0.3
FWVZ Far West T-bar 7.38 212 P Pn 09 43 44.9 -0.5
MOVZ Moawhango 7.42 211 P Pn 09 43 44.3 -1.6
WNVZ Wahianoa 7.42 212 P Pn 09 43 46.1 +0.2
VRZ Vera Road 7.66 217 P Pn 09 43 50.0 +0.8
TSZ Takapari Road 7.89 207 P Pn 09 43 48.8 -3.6
WAZ Wanganui 8.05 213 P Pn 09 43 53.9 -0.6
PKE Pukeiti 8.11 220 P Pn 09 43 58.6 +3.2
MRZ Mangatainoka R 8.56 207 P Pn 09 43 57.3 -4.2
KIW Kapiti Island 8.99 209 P Pn 09 44 02.9 -4.6
MTW Mount Morrison 9.02 205 P Pn 09 44 02.8 -5.1
CAW Cannon Point 9.14 207 P Pn 09 44 04.5 -5.0
PAWZ Paruwai Farm 9.24 205 *e*P Pn 09 44 06.5 -4.4
MSWZ Moikau Station 9.34 206 P Pn 09 44 08.1 -4.1
MRW Makara Radio 9.39 209 P Pn 09 44 08.5 -4.4
TCW Tory Channel 9.55 210 P Pn 09 44 10.1 -5.0
RPZ Rata Peaks 12.97 212 P Pn 09 44 54.3 -7.6
comp=N,4.4nm,0.3s,baz=71,slow=6.1,SNR=22
RPZ S Sn 09 47 08.9 -16
comp=N,4.9nm,0.3s,baz=176,slow=13,SNR=4.3
DZM Mont Dzumac 16.68 308 *e*P Pn 09 45 57.3 +6.0
AFI Afiamalu 20.32 22 P P 09 46 32.5 -0.9
comp=N,14nm,0.5s,baz=112,slow=13,SNR=5.9
AFI S S 09 50 01.6 -18
comp=N,14nm,0.6s,baz=50,slow=23,SNR=2.6
RAR Rarotonga 21.04 61 P P 09 46 44.1 +2.9
comp=N,22nm,0.9s,mb4.5,baz=270,slow=16,SNR=3.9
RAR S S 09 50 18.5 -16
comp=N,29nm,0.9s,baz=270,slow=21,SNR=3.3
RAR LR LR 09 52 35.2
comp=N,1μm,21.9s,MS4.3,baz=262,slow=30
RAR T 10 08 15.3
comp=N,112nm,0.4s,baz=90,slow=4.8,SNR=5.8
ARMA Armidale 24.77 268 *e*P P 09 47 23.8 +5.0
CNB Canberra Magne 25.90 256 *e*P P 09 47 32.6 +3.6
CNB *e*PCP PcP 09 50 55.7 -1.7
CNB *e*S S 09 51 57.9 +0.7
TAU Tasmania Unive 27.85 240 P P 09 47 47.1 +0.6
comp=N,193nm,0.8s,mb5.8,SNR=6.0
TAU Tasmania Unive 27.85 240 *e*P P 09 47 45.6 -0.9
TAU pmax pmax
comp=Z,24nm,0.8s,mb4.9
TAU Tasmania Unive 27.85 240 *e*P P 09 47 45.6 -1.0
comp=Z,24nm,0.8s,mb4.9
TOO Toolangi 28.90 251 *e*P P 09 47 59.2 +3.3
TOO *e*PCP PcP 09 51 03.1 -1.5
TOO *e*S S 09 53 17.3 +33
TOO Toolangi 28.90 251 *e*P P 09 47 59.2 +3.3
TOO *e* 09 51 03.1
HNR Honiara 30.31 316 P P 09 48 08.3 -0.2
comp=Z,108nm,0.7s,mb5.7,baz=238,slow=2.1,SNR=6.9
HNR Honiara 30.31 316 P P 09 48 08.3 -0.3
HNR pmax pmax
comp=Z,108nm,0.7s,mb5.7
HNR pmax pmax
comp=Z,95nm,0.4s,mb5.9
HNR Honiara 30.31 316 *e*P P 09 48 07.3 -1.3
comp=Z,154nm,0.9s,mb5.7
PPT Papeete 30.92 67 *e*LR LR 09 56 16.3
comp=Z,3μm,26.2s,baz=232
PPT Papeete 30.92 67 LR LR 09 57 09.2
comp=Z,1μm,20.7s,MS4.5,baz=247,slow=29
PPT T 10 20 39.9
comp=Z,95nm,0.4s,baz=214,slow=22,SNR=7.1
STKA Stephens Creek 32.82 261 *e*P P 09 48 31.9 +1.4
comp=Z,4.7nm,0.6s,mb4.6
STKA *e*PCP PcP 09 51 12.0 -3.1
STKA *e*S S 09 54 22.0 +36
STKA Stephens Creek 32.82 261 P P 09 48 31.1 +0.5
comp=Z,6.6nm,0.7s,mb4.7,baz=100,slow=8.7,SNR=16
STKA PKiKP PKiKP 09 58 37.2 -4.4
comp=Z,1.9nm,0.6s,baz=62,slow=2.7,SNR=5.3
STKA LR LR 10 00 35.3
comp=Z,3μm,20.3s,MS4.9,baz=85,slow=34
CTA Charters Tower 33.20 284 *e*P P 09 48 35.2 +1.2
comp=Z,50nm,0.5s,mb5.7
CTA *e*PCP PcP 09 51 12.7 -3.6
CTA *e*S S 09 53 32.1 -20
CTA Charters Tower 33.20 284 *e*P P 09 48 35.2 +1.2
CTA *e* 09 51 12.7
CTA pmax pmax
comp=Z,50nm,0.5s
CTAO Charters Tower 33.20 284 *e*P P 09 48 35.9 +1.9
PMG Port Moresby 38.81 300 *e*P P 09 49 22.9 +0.8
COEN Coen 38.99 290 *e*P P 09 49 25.2 +1.6
comp=Z,15nm,0.6s,mb4.9
RKT Rikitea 40.15 87 *e*LR LR 10 00 39.4
comp=Z,4μm,27.0s,baz=247
DRV Dumont d'Urvil 41.20 203 P P 09 49 50.0 +8.7
DRV R 10 01 00.0
ASAR Alice Springs 41.88 271 P P 09 49 47.7 +0.3
comp=Z,70nm,0.7s,mb5.4,baz=109,slow=7.5,SNR=169
ASAR S S 09 55 59.8 -3.9
comp=Z,2.2nm,0.9s,baz=115,slow=15,SNR=5.9
ASAR PKiKP PKiKP 09 58 46.0 -3.3
comp=Z,0.6nm,0.6s,baz=85,slow=1.7,SNR=5.1
ASAR Alice Springs 41.88 271 P P 09 49 47.7 +0.3
ASAR S S 09 55 59.8 -3.9
ASAR pmax pmax
comp=Z,70nm,0.7s
ASAR smax
comp=N,2.0nm,0.9s
WB2 Warramunga Arr 43.10 276 *e*P P 09 49 57.1 -0.3
WB2 *e*PCP PcP 09 51 45.1 -1.9
WB2 *e*S S 09 56 10.3 -12
WRAB Tennant Creek 43.11 276 P P 09 49 57.0 -0.4
comp=N,754nm,0.5s,SNR=31
WRAB Tennant Creek 43.11 276*c i*P P 09 49 57.4 0.0
WRAB Tennant Creek 43.11 276 *e*P P 09 49 56.4 -1.0
comp=N,61nm,0.6s,mb5.5
WRA Warramunga Arr 43.11 276 P P 09 49 57.2 -0.3
comp=N,68nm,0.5s,mb5.6,baz=115,slow=7.8,SNR=334
WRA S S 09 56 18.1 -3.8
comp=N,1.7nm,0.8s,baz=113,slow=13,SNR=3.6
WRA PKiKP PKiKP 09 58 47.4 -3.0
comp=N,0.7nm,0.6s,baz=136,slow=0.2,SNR=7.1
WRA Warramunga Arr 43.11 276 P P 09 49 57.2 -0.3
WRA S S 09 56 18.1 -3.9
WRA pmax pmax
comp=Z,68nm,0.5s
WRA smax
comp=N,2.0nm,0.8s
WRA Warramunga Arr 43.11 276 P P 09 49 57.2 -0.3
WRA S S 09 56 18.1 -3.8
FORT Forrest 44.28 258 *e*P P 09 50 05.9 -0.9
comp=N,87nm,0.6s,mb5.7
FORT *e*PCP PcP 09 51 47.6 -3.2
SBA Scott Base 45.27 184 *e*P P 09 50 14.5 +0.5
SBA pmax pmax
comp=Z,24nm,1.0s,mb5.0
SBA Scott Base 45.27 184 *e*P P 09 50 14.5 +0.5
comp=Z,24nm,1.0s,mb5.0
KAKA Kakadu 48.32 283 *e*P P 09 50 38.9 +0.2
FITZ Fitzroy Crossi 51.25 273 *e*P P 09 51 00.3 -0.6
comp=Z,22nm,0.6s,mb5.3
FITZ *e*S S 09 58 18.8 +0.9
CASY Casey 52.21 209 *e*P P 09 51 05.3 -2.1
NWAO Narrogin (SRO) 52.39 252 LR LR 10 12 20.8
comp=Z,652nm,20.8s,MS4.7,baz=141,slow=35
NWAO Narrogin (SRO) 52.39 252 *e*P P 09 51 06.5 -2.8
KLBR Kellerberrin 52.41 253 *e*P P 09 51 07.3 -2.2
comp=Z,35nm,0.9s,mb5.3
MUN Mundaring 53.52 252 *e*P P 09 51 16.3 -1.3
MBWA Marble Bar 54.82 266 *e*P P 09 51 25.4 -1.9

BATI Baumata 56.90 280 LR LR 10 15 59.0
comp=Z,1μm,18.6s,MS5.0,baz=123,slow=36
QSPA South Pole Qui 57.02 180 P P 09 51 42.0 -0.1
comp=Z,38nm,0.7s,mb5.5,baz=26,slow=2.3,SNR=59
GUMO Guam 57.62 318 LR LR 10 12 55.5
comp=Z,347nm,20.8s,MS4.4,baz=142,slow=32
MIR Mirnyy 59.19 208*i*⇓*i*P P 09 51 56.0 -1.5
MIR *i* 09 52 41.0
MIR pmax pmax
comp=Z,300nm,1.5s,mb6.1
KAPI Kappang 62.99 282 LR LR 10 20 08.8
comp=Z,436nm,20.9s,MS4.6,baz=127,slow=36
KAPI Kappang 62.99 282 *e*P P 09 52 22.7 -1.4
comp=Z,17nm,0.8s,mb5.2
MAW Mawson 69.38 201 *e*P P 09 53 02.4 -1.8
comp=Z,11nm,0.8s,mb4.8
MAW Mawson 69.38 201 P P 09 53 02.3 -1.9
comp=Z,12nm,0.7s,mb5.0,baz=138,slow=7.5,SNR=25
MAW LR LR 10 22 08.1
comp=Z,688nm,19.6s,MS4.9,baz=116,slow=35
MAW Mawson 69.38 201 *e*P P 09 53 02.4 -1.8
MAW pmax pmax
comp=Z,11nm,0.8s
PMSA Palmer Station 70.29 156 *e*P P 09 53 09.0 -0.8
comp=Z,6.8nm,0.4s,mb4.9
SYO Syowa Base 74.23 194⇑*e*P P 09 53 29.3 -4.0
SYO Syowa Base 74.23 194⇓*i X* 09 53 32.6
USHA Ushuaia 74.35 146 LR LR 10 17 42.7
comp=Z,720nm,20.6s,MS5.0,baz=276,slow=29
SNAA Sanae 75.49 179 *e*P P 09 53 38.6 -2.0
SNAA *e* 09 53 45.3
SNAA *e* 09 53 52.4
SNAA Sanae 75.49 179 *e*P P 09 53 39.3 -1.3
SNAA Sanae 75.49 179 *e*P P 09 53 38.6 -1.9
comp=Z,18nm,0.8s,mb5.0
VNA2 Neumayer--Watz 76.11 177 *e*P P 09 53 42.9 -1.2
VNA2 *e* 09 53 48.8
VNA2 *e* 09 53 56.4
MAIT Maitri 76.11 184 *e*P P 09 53 42.4 -1.7
NVL N'lazarevskaya 76.12 184*c i*P P 09 53 43.6 -0.5
NVL *e* 09 53 56.5
NVL pmax pmax
comp=Z,59nm,1.6s,mb5.3
JHJ Hachijo jima 2 76.27 326 LR LR 10 21 59.2
comp=Z,338nm,18.4s,MS4.7,baz=169,slow=32
VNA1 Neumayer--Stat 76.35 177 *e*P P 09 53 44.9 -0.6
VNA1 *e* 09 53 51.2
VNA1 *e* 09 53 58.0
JOW Kunigami 77.64 314 LR LR 10 23 26.0
comp=Z,317nm,20.3s,MS4.6,baz=343,slow=32
MJAR Matsushiro Arr 79.81 327 P P 09 54 03.3 -1.7
comp=Z,3.5nm,0.8s,mb4.4,baz=163,slow=5.9,SNR=8.8
MJAR LR LR 10 23 24.9
comp=Z,335nm,21.1s,MS4.7,baz=130,slow=31
MAJO Matsushiro 79.81 327 *e*P P 09 54 01.2 -3.8
PLCA Paso Flores 81.52 133 P P 09 54 13.9 -0.5
comp=Z,4.4nm,0.6s,mb4.6,baz=255,slow=6.2,SNR=19
PLCA Paso Flores 81.52 133 P P 09 54 13.9 -0.5
PLCA pmax pmax
comp=Z,4.0nm,0.6s
QIZ Qiongzhong 85.11 296 P P 09 54 37.2 +4.1
QIZ PP PP 09 57 53.9 +3.1
QIZ S S 10 05 07.5 +6.6
QIZ SS SS 10 10 39.2 +3.8
QIZ LR LR
comp=Z,332nm,34.9s,MS4.5
KSRS Korea Array 85.66 321 P P 09 54 33.6 -1.8
comp=Z,4.4nm,0.8s,mb4.8,baz=138,slow=5.6,SNR=14
KSRS LR LR 10 29 46.1
comp=Z,182nm,21.1s,MS4.4,baz=140,slow=34
YSS Yuzh-Sakhalins 86.68 335⇑*i*P P 09 54 41.2 +1.1
YSS pmax pmax
comp=Z,13nm,0.7s,mb5.3
YSS MLR MLR
comp=Z,100nm,18.0s,MS4.3
NJ2 Nanjing 87.13 311 *e*P P 09 54 44.7 +2.0
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.5
PKM Peak Mountain 87.70 45⇓P P 09 54 46.0 +0.5
baz=88
PET Petropavlovsk 87.88 347 *i*P P 09 54 46.3 +0.5
PET pmax pmax
comp=Z,28nm,1.9s,mb5.2
PET MLR MLR
comp=Z,100nm,19.0s,MS4.2
VLA Vladivostok 87.98 327 *i*P P 09 54 45.2 -1.3
VLA pmax pmax
comp=Z,18nm,0.7s,mb5.4
PKD Parkfield 88.00 44⇑P P 09 54 47.8 +1.0
baz=88
SAO San Andreas Ge 88.05 43 *e*P P 09 54 46.2 -0.8
SAO pmax pmax
comp=Z,11nm,1.1s,mb5.0
SAO San Andreas Ge 88.05 43 *e*P P 09 54 46.2 -0.9
comp=Z,11nm,1.1s,mb5.0
BAR Barrett 88.13 49 *e*P P 09 54 47.2 -0.4
comp=Z,28nm,1.6s,mb5.2
PEA0B Petropavlovsk- 88.14 346 *e*P P 09 54 46.4 -0.6
PETK Petropavlovsk- 88.14 346 P P 09 54 46.1 -0.9
comp=Z,17nm,0.8s,mb5.3,baz=117,slow=6.2,SNR=18
PETK LR LR 10 29 21.9
comp=Z,205nm,20.5s,MS4.5,baz=168,slow=32
MCCM Marconi Confer 88.22 41⇓P P 09 54 48.6 +0.8
baz=89
MWC Mount Wilson 88.31 47 *e*P P 09 54 48.6 +0.3
MWC pmax pmax
comp=Z,41nm,1.6s,mb5.4
MWC Mount Wilson 88.31 47 *e*P P 09 54 48.6 +0.3
comp=Z,41nm,1.6s,mb5.4
PACP Pacheco Peak 88.31 43⇑P P 09 54 49.4 +1.1
baz=89
V05C Boulder Hill, 88.32 44⇑P P 09 54 49.5 +1.2
baz=89
MURC Murrieta 88.42 48⇓P P 09 54 49.3 +0.4
baz=89
MONP Monument Peak 88.43 49⇑P P 09 54 49.6 +0.6
baz=89
ARVC Arvin 88.45 46⇓P P 09 54 50.1 +1.1
baz=89
DVTC Desert V Tower 88.48 49⇑P P 09 54 49.9 +0.7
baz=89
BFSC Mount Baldy St 88.56 47⇑P P 09 54 50.0 +0.5
baz=89
HOPS Hopland 88.72 40⇑P P 09 54 51.0 +0.9
baz=89
VES Vestal, Richgr 88.79 45⇑P P 09 54 50.7 +0.2
baz=89
EDW2 Edwards Air Fo 88.79 46⇓P P 09 54 50.8 +0.2
baz=89
SWSC Sam W. Stewart 88.86 49⇑P P 09 54 51.4 +0.5
baz=89
PFO Pinyon Flat Ob 88.89 48 P P 09 54 51.2 +0.2
comp=Z,5.7nm,0.7s,mb5.0,baz=233,slow=3.7,SNR=10
PFO Pinyon Flat Ob 88.89 48 P P 09 54 51.3 +0.2
PFO pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
PFO Pinyon Flat Ob 88.89 48⇓P P 09 54 51.2 +0.2
baz=89
PFO Pinyon Flat Ob 88.89 48 *e*P P 09 54 50.9 -0.2
comp=Z,7.5nm,0.8s,mb5.1
P01C Double 8 Ranch 88.92 40⇑P P 09 54 51.5 +0.4
baz=89
KCPM Cahto Peak 88.94 40 *e*P P 09 54 51.6 +0.5
MNRC McLaughlin Nat 88.98 41⇓P P 09 54 51.9 +0.5
baz=89
RCTC Rector, Farmer 89.02 44⇑P P 09 54 51.6 0.0
baz=89
ISA Isabella 89.03 45⇑P P 09 54 52.0 +0.3
baz=89
ISA Isabella 89.03 45 *e*P P 09 54 52.2 +0.5
ISA *e*pP pP 09 54 57.0 -4.1
BBRC Big Bear Sol-O 89.03 47⇓P P 09 54 51.8 +0.1
baz=89
Q03C Winters 89.05 41⇓P P 09 54 52.1 +0.5
baz=89
S05C Merced 89.10 43⇑P P 09 54 52.1 +0.1
baz=89
T06C Millerton Lake 89.22 44⇓P P 09 54 52.4 -0.1
baz=90
GASB Alder Springs 89.39 40⇓P P 09 54 54.1 +0.9
baz=90,SNR=15
CMB Columbia Colle 89.54 43 *e*P P 09 54 54.0 0.0
CMB pmax pmax
comp=Z,18nm,1.0s,mb5.4
CMB Columbia Colle 89.54 43⇑P P 09 54 53.3 -0.7
baz=90

CMB Columbia Colle 89.54 43 *e*P P 09 54 54.0 0.0
comp=Z,18nm,1.0s,mb5.4
GLA Glamis 89.55 49 *e*P P 09 54 54.3 +0.1
GLA *e**PP pP 09 54 59.8 -3.8
GLA pmax pmax
comp=Z,22nm,0.8s,mb5.5
GLA Glamis 89.55 49⇓P P 09 54 54.5 +0.3
baz=90
GLA Glamis 89.55 49 *e*P P 09 54 54.3 +0.1
comp=Z,22nm,0.8s,mb5.5
GLA *e*pP pP 09 54 59.8 -3.9
Q04C Lincoln 89.55 41⇓P P 09 54 53.8 -0.2
baz=90
SUTB Sutter Butte 89.59 41⇑P P 09 54 53.8 -0.4
baz=90,SNR=5.3
O02C Red Bluff 89.72 40⇑P P 09 54 54.9 +0.1
baz=90,SNR=19
S06C San Francisco 89.74 43⇑P P 09 54 55.1 +0.1
baz=90
GSC Goldstone 89.79 47 *e*P P 09 54 55.8 +0.5
GSC pmax pmax
comp=Z,73nm,1.9s,mb5.7
GSC Goldstone 89.79 47⇑P P 09 54 55.4 +0.1
baz=90
GSC Goldstone 89.79 47 *e*P P 09 54 55.8 +0.5
comp=Z,72nm,1.9s,mb5.7
OHCM Honcut 89.83 41 *e*P P 09 54 55.0 -0.4
LAVA Lava Cap Winer 89.84 42⇓P P 09 54 54.9 -0.6
baz=90
MPMC Manual Prospec 89.89 46⇓P P 09 54 55.5 -0.2
baz=90
N02C Big Bar 89.91 39⇓P P 09 54 55.3 -0.3
baz=90,SNR=5.7
ORV Oroville 89.98 41⇑P P 09 54 55.3 -0.8
baz=90,SNR=6.0
O03C Acorn Hollow, 90.00 40⇓P P 09 54 56.1 0.0
baz=90
113A Mohawk Valley, 90.04 50⇑P P 09 54 56.2 -0.3
baz=90
IRM Iron Mountain 90.06 48⇑P P 09 54 57.0 +0.4
baz=90
MTUM Tungsten Hills 90.12 44 *e*P P 09 54 57.2 +0.4
WDC Whiskeytown Da 90.14 40 *e*P P 09 54 56.8 0.0
WDC pmax pmax
comp=Z,49nm,1.8s,mb5.5
WDC Whiskeytown Da 90.14 40⇑P P 09 54 56.5 -0.2
baz=90,SNR=6.0
WDC Whiskeytown Da 90.14 40 *e*P P 09 54 56.8 +0.1
comp=Z,49nm,1.8s,mb5.5
214A Organ Pipe Nat 90.14 51⇑P P 09 54 56.3 -0.7
baz=90
GMRC Granite Mounta 90.15 48⇑P P 09 54 57.2 +0.2
baz=90
R05C Kirkwood Meado 90.18 42⇑P P 09 54 56.7 -0.3
baz=90,SNR=7.3
Y12C Blythe 90.19 49⇑P P 09 54 57.8 +0.6
baz=90
MDJ Mudanjiang 90.20 326 P P 09 54 57.7 +0.8
MDJ AP pP 09 55 01.0 -5.4
MDJ XP sP 09 55 02.3 -7.5
MDJ PP PP 09 58 31.0 -0.3
MDJ S S 10 05 51.8 +3.3
MDJ XS sS 10 05 57.5 -6.7
MDJ AMB AMB
comp=Z,7.0nm,1.7s,mb4.7
MDJ AMB AMB
comp=Z,62nm,5.1s
MDJ LR LR
comp=N,274nm,22.6s,MS4.7
MDJ LR LR
comp=E,199nm,21.4s,MS4.7
MDJ LR LR
comp=Z,400nm,23.8s,MS4.8
MDJ Mudanjiang 90.20 326 P P 09 54 58.4 +1.5
P05C Yuba Gap, Truc 90.30 42⇓P P 09 54 56.8 -0.7
baz=91,SNR=6.1
WAKR Walker 90.41 43 *e*P P 09 54 58.5 +0.5
R06C Coleville 90.41 43⇑P P 09 54 57.8 -0.2
baz=91
TUQ Turquoise Moun 90.42 47⇑P P 09 54 58.0 -0.2
baz=91
S08C White Mtn Res 90.45 44⇓P P 09 54 58.1 -0.2
baz=91,SNR=7.6
SHOC Shoshone 90.51 46⇑P P 09 54 58.4 -0.3
baz=91
M02C Callahan 90.55 39⇓P P 09 54 59.0 +0.3
baz=91,SNR=6.8
O05C Quincy 90.58 41⇑P P 09 54 59.3 +0.5
baz=91
GRAC Grapevine Rang 90.59 45⇑P P 09 54 59.1 +0.2
baz=91
Y13A Salome 90.67 49⇓P P 09 54 59.7 +0.2
baz=91,SNR=6.1
LDFC Landfair 90.69 48 *e*P P 09 55 00.7 +1.3
K01A Sixes 90.74 37⇑P P 09 55 00.2 +0.8
baz=91
WCN Washoe City 90.77 42⇓P P 09 55 00.2 +0.4
baz=91
PDMCI Parker Dam,Lak 90.79 49⇓P P 09 55 00.3 +0.4
baz=91
NEE2 Needles Airpor 90.79 48⇑P P 09 55 00.7 +0.8
baz=91
CHGN Chignik 90.82 12 *e*P P 09 54 59.6 +0.1
M03C McCloud 90.86 39⇓P P 09 54 59.9 -0.2
baz=91,SNR=7.0
YBH Yreka Blue Hor 90.87 39 P P 09 54 59.9 -0.2
comp=Z,3.5nm,0.8s,mb4.7,baz=122,slow=8.0,SNR=5.8
YBH Yreka Blue Hor 90.87 39 P P 09 54 59.9 -0.2
YBH pmax pmax
comp=Z,4.0nm,0.8s
YBH Yreka Blue Hor 90.87 39⇑P P 09 55 00.1 -0.1
baz=91,SNR=5.5
HATC Hat Creek Radi 90.89 40⇓P P 09 55 00.5 +0.3
baz=91
Z14A Wintersburg 90.95 50⇓P P 09 55 01.0 +0.3
baz=91
V11A Goodsprings 90.99 47⇑P P 09 55 01.2 +0.3
baz=91
115A Sonoran Desert 91.00 51⇓P P 09 55 01.2 +0.3
baz=91,SNR=5.3
NVAR Mina Array Bea 91.00 43 P P 09 55 00.9 0.0
comp=Z,3.2nm,0.7s,mb4.7,baz=225,slow=7.8,SNR=20
216A Three Points, 91.06 52⇓P P 09 55 01.8 +0.5
baz=91
R08A Mina 91.06 44⇓P P 09 55 01.2 +0.1
baz=91
S09A Goldfield 91.16 45⇓P P 09 55 01.8 +0.2
baz=92
K02A Glendale 91.21 38⇑P P 09 55 01.9 +0.2
baz=92,SNR=5.7
TPNV Topopah Spring 91.22 46 *e*P P 09 55 02.1 +0.2
116A Eloy 91.25 51⇑P P 09 55 02.0 -0.1
baz=92
V12A Nelson 91.27 47⇑P P 09 55 02.2 +0.1
baz=92
Y14A Wickenburg 91.28 50⇑P P 09 55 02.1 -0.2
baz=92,SNR=7.0
O06A Flanigan 91.33 41⇑P P 09 55 02.1 -0.2
baz=92
217A Green Valley 91.35 52⇓P P 09 55 02.3 -0.3
baz=92,SNR=5.9
M04C Macdoel 91.36 39⇑P P 09 55 02.8 +0.4
baz=92
HUMO Hull Mountain 91.37 38⇑P P 09 55 02.1 -0.3
baz=92,SNR=5.8
HUMO Hull Mountain 91.37 38 *e*P P 09 55 02.8 +0.4
comp=Z,50nm,1.8s,mb5.5
M05C Lookout 91.44 40⇓P P 09 55 02.4 -0.4
baz=92,SNR=7.4
W13A Hualapai Mount 91.47 48⇓P P 09 55 02.7 -0.4
baz=92
Q08A Gabbs 91.51 43⇑P P 09 55 02.8 -0.4
baz=92,SNR=8.0
SHPR Sheep Range 91.59 47 *e*P P 09 55 04.4 +0.8
J02A Umpqua 91.59 37⇑P P 09 55 03.4 0.0
baz=92
R09A Tonopah 91.59 44⇓P P 09 55 03.3 -0.3
baz=92,SNR=7.4
CN2 Changchun 91.59 324 *e*P P 09 55 03.8 +0.4
CN2 *e*PP PP 09 58 44.3 +1.9
CN2 *e*S S 10 06 01.3 0.0
CN2 AMB AMB
comp=Z,20nm,0.7s,mb5.6
CN2 AMB AMB
comp=Z,150nm,4.0s
CN2 LR LR
comp=N,140nm,20.0s,MS4.6

CN2 LR LR
comp=E,200nm,20.0s,MS4.6
CN2 LR LR
comp=Z,290nm,21.0s,MS4.7
L04A Klamath Falls 91.61 39 ⇑P **P 09 55 03.6 +0.1**
baz=92,SNR=12
S10A Tonopah Range, 91.66 45 ⇓P **P 09 55 03.7 -0.2**
baz=92,SNR=8.6
X14A Yava 91.69 49 ⇑P **P 09 55 04.1 0.0**
baz=92
M06C Likely Place G 91.69 40 ⇑P **P 09 55 03.8 -0.1**
baz=92,SNR=5.8
TUC Tucson 91.70 52 *eP* **P 09 55 05.3 +1.1**
TUC pmax pmax
comp=Z,37nm,1.9s,mb5.4
TUC Tucson 91.70 52 *eP* **P 09 55 05.3 +1.1**
comp=Z,37nm,1.9s,mb5.4
Y15A Casa Rosa Ranc 91.72 50 ⇓P **P 09 55 04.2 -0.1**
baz=92,SNR=8.0
N06A Buffalo Meadow 91.73 41 ⇑P **P 09 55 03.6 -0.5**
baz=92,SNR=7.4
O07A Toulon 91.86 42 ⇑P **P 09 55 05.0 +0.3**
baz=92
GYA Guiyang 91.89 300 P **P 09 55 06.5 +1.3**
GYA AP pP 09 55 13.8 -0.9
GYA XP sP 09 55 16.9 -1.2
GYA PP PP 09 58 49.5 +4.4
GYA SKS 10 05 38.2
GYA S S 10 06 06.0 +1.2
GYA SS SS 10 12 19.7 +5.7
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,160nm,5.7s
GYA LR LR
comp=N,490nm,22.5s,MS5.0
GYA LR LR
comp=E,470nm,22.8s,MS5.0
GYA LR LR
comp=Z,450nm,21.6s,MS4.9
V13A Grand Canyon W 91.89 48 ⇓P **P 09 55 05.2 +0.2**
baz=92
117A Oracle 91.89 52 ⇑P **P 09 55 05.3 +0.2**
baz=92
Z16A Peralta Trail, 91.92 51 ⇓P **P 09 55 05.4 +0.1**
baz=92,SNR=6.1
U12A Valley of Fire 91.92 47 ⇑P **P 09 55 05.5 +0.3**
baz=92,SNR=9.8
218A Dragoon 91.98 53 ⇑P **P 09 55 05.6 +0.1**
baz=92,SNR=5.9
S11A Rachel 91.98 45 ⇓P **P 09 55 05.7 +0.3**
baz=92
K04A Chilquin 92.01 39 ⇓P **P 09 55 05.9 +0.6**
baz=92
T11A Corn Creek, Al 92.03 46 ⇑P **P 09 55 05.9 +0.2**
baz=92,SNR=9.8
W14A Seligman 92.04 49 ⇑P **P 09 55 06.2 +0.5**
baz=92
R10A Warm Springs 92.08 45 ⇑P **P 09 55 06.2 +0.4**
baz=92
L05A Lakeview 92.08 39 ⇑P **P 09 55 06.5 +0.8**
baz=92
X15A Humboldt 92.12 50 ⇑P **P 09 55 06.3 +0.2**
baz=92,SNR=5.8
319A Douglas 92.13 54 ⇑P **P 09 55 06.4 +0.1**
baz=92
I03A Eugene 92.18 37 ⇑P **P 09 55 06.6 +0.5**
baz=92
Y16A Circle Bar Ran 92.22 50 ⇓P **P 09 55 07.0 +0.4**
baz=92,SNR=9.4
J04A Umpqua Nationa 92.25 38 ⇑P **P 09 55 06.5 0.0**
baz=93,SNR=7.5
U13A Pakoon Wash 92.26 47 ⇑P **P 09 55 06.5 -0.2**
baz=93,SNR=5.2
MOD Modoc 92.27 40 ⇑P **P 09 55 06.4 -0.2**
baz=93,SNR=11
MOD Modoc 92.27 40 *eP* **P 09 55 06.5 -0.1**
V14A Boquillas Ranc 92.30 48 ⇑P **P 09 55 07.2 +0.3**
baz=93
O08A Rochester Mine 92.35 42 ⇓P **P 09 55 06.8 -0.2**
baz=93,SNR=11
118A Homack Ranch, 92.44 52 ⇑P **P 09 55 07.9 +0.2**
baz=93,SNR=8.6
I04A Tendick Farm, 92.49 37 ⇑P **P 09 55 07.6 0.0**
baz=93
Y17A Roosevelt 92.52 51 ⇓P **P 09 55 08.4 +0.4**
baz=93,SNR=6.6
K05A Summer Lake 92.53 39 ⇑P **P 09 55 08.2 +0.4**
baz=93,SNR=8.1
R11A Troy Canyon, C 92.54 45 ⇓P **P 09 55 08.2 +0.3**
baz=93
X16A Lo Mia Camp, P 92.59 50 ⇑P **P 09 55 08.3 +0.1**
baz=93,SNR=6.2
T13A Saint George 92.69 47 ⇓P **P 09 55 08.9 +0.2**
baz=93
J05A Fort Rock 92.74 38 ⇑P **P 09 55 08.4 -0.3**
baz=93,SNR=5.8
U14A Mt Trumbull 92.75 48 ⇓P **P 09 55 08.8 -0.2**
baz=93,SNR=6.2
O09A Fish Creek Ran 92.81 43 ⇓P **P 09 55 08.8 -0.4**
baz=93
Q11A Duckwater 92.83 45 ⇓P **P 09 55 08.9 -0.3**
baz=93
P10A Eureka 92.86 44 ⇓P **P 09 55 09.1 -0.3**
baz=93
L07A Adell 92.87 40 ⇑P **P 09 55 09.2 -0.1**
baz=93,SNR=11
K06A Valley Falls 92.92 39 ⇓P **P 09 55 09.2 -0.3**
baz=93,SNR=11
X17A Forest Lakes 92.95 50 ⇓P **P 09 55 09.8 -0.1**
baz=93
119A Ashpeak Ranch, 92.97 52 ⇓P **P 09 55 10.3 +0.2**
baz=93
BMN Battle Mountai 92.97 43 *eP* **P 09 55 10.0 +0.1**
BMN pmax pmax
comp=Z,32nm,1.8s,mb5.5
BMN Battle Mountai 92.97 43 *eP* **P 09 55 10.0 +0.1**
comp=Z,32nm,1.8s,mb5.5
V15A Kaibab Nationa 93.00 49 ⇓P **P 09 55 10.1 0.0**
baz=93
M08A Happy Creek Ra 93.01 41 ⇑P **P 09 55 09.6 -0.4**
baz=93,SNR=7.6
S13A Holt Ranch, En 93.08 46 ⇓P **P 09 55 10.2 -0.3**
baz=93,SNR=5.9
N09A Rock Creek Ran 93.08 42 ⇓P **P 09 55 10.4 0.0**
baz=93,SNR=5.5
Y18A Canyon Day Jun 93.10 51 ⇓P **P 09 55 10.8 +0.1**
baz=93,SNR=7.4
R12A Pony Springs, 93.11 45 ⇓P **P 09 55 10.5 -0.1**
baz=93,SNR=8.4
CMAR Chiang Mai Arr 93.20 290 P **P 09 55 10.3 -1.1**
comp=Z,1.5nm,0.3s,mb4.9,baz=140,slow=4.4,SNR=4.2
CMAR PP PP 09 58 56.8 +1.3
comp=Z,1.5nm,0.4s,baz=139,slow=7.1,SNR=8.5
CMAR LR LR 10 35 40.7
comp=Z,87nm,21.4s,MS4.2,baz=125,slow=35
CMAR Chiang Mai Arr 93.20 290 P **P 09 55 10.3 -1.2**
CMAR 09 58 56.8
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CMAR MLR MLR
comp=Z,87nm,21.4s
CMAR Chiang Mai Arr 93.20 290 P **P 09 55 10.3 -1.1**
CMAR PP PP 09 58 56.8 +1.3
CMAR LR LR 10 35 40.7
H04A Detroit Lake 93.23 37 ⇓P **P 09 55 10.2 -0.8**
baz=94
J06A Christmas Vall 93.28 39 ⇑P **P 09 55 11.0 -0.2**
baz=94
O10A Cortez Mining, 93.29 43 ⇑P **P 09 55 11.4 0.0**
baz=94
KDAK Kodiak Island 93.30 14 LR LR 10 28 56.5
comp=Z,195nm,20.6s,MS4.5,baz=177,slow=30
U15A North Rim 93.31 48 ⇓P **P 09 55 11.6 0.0**
baz=94,SNR=7.8
I05A Bend 93.34 38 ⇑P **P 09 55 11.5 +0.1**
baz=94
K07A Rock Creek Ran 93.38 40 ⇑P **P 09 55 11.2 -0.5**
baz=94
R13A O'Grain Ranch, 93.40 46 ⇓P **P 09 55 11.5 -0.4**
baz=94
Q12A Willow Creek R 93.44 45 ⇓P **P 09 55 12.2 +0.2**
baz=94
M09A Marrel Ranch, 93.51 42 ⇓P **P 09 55 12.1 -0.2**
baz=94
L08A Fields 93.53 41 ⇑P **P 09 55 12.1 -0.3**
baz=94
WVOR Wild Horse Val 93.53 40 *eP* **P 09 55 11.7 -0.7**
WVOR pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
WVOR Wild Horse Val 93.53 40 *eP* **P 09 55 11.7 -0.8**
comp=Z,7.4nm,1.0s,mb5.1
O11A Cowboy Ranch, 93.67 44 ⇑P **P 09 55 13.2 +0.1**
baz=94
H05A Madras 93.70 37 ⇑P **P 09 55 13.4 +0.3**
baz=94
Y19A Nutrioso 93.72 52 ⇑P **P 09 55 13.0 -0.5**
baz=94
I06A Prineville 93.73 38 ⇓P **P 09 55 13.6 +0.3**
baz=94
L09A Wilkinson Ranc 93.78 41 ⇑P **P 09 55 13.9 +0.3**
baz=94
J07A Hines 93.81 39 ⇑P **P 09 55 13.9 +0.3**
baz=94
K08A Mann Creek Ran 93.82 40 ⇑P **P 09 55 13.5 -0.3**
baz=94,SNR=13
Q13A Wheeler Ranch, 93.86 45 ⇑P **P 09 55 13.9 -0.1**
baz=94
KMI Kunming 94.00 297 P **P 09 55 14.3 -0.7**
KMI AP pP 09 55 22.1 -2.4
KMI XP sP 09 55 24.6 -3.3
KMI PP PP 09 59 03.3 +1.6
KMI S S 10 06 22.0 -1.6
KMI XS sS 10 06 33.2 -6.2
KMI SS SS 10 12 49.9 +5.5
KMI AMB AMB
comp=Z,8.0nm,1.2s,mb5.0
KMI AMB AMB
comp=Z,76nm,3.9s
KMI LR LR
comp=N,161nm,19.8s,MS4.7
KMI LR LR
comp=E,230nm,20.4s,MS4.7
KMI LR LR
comp=Z,311nm,35.6s
KMI Kunming 94.00 297 P **P 09 55 14.3 -0.7**
KMI *PP pP 09 55 22.1 -2.4
KMI 09 59 03.3
KMI PPP 10 01 06.1
KMI S S 10 06 22.0 -1.6
KMI SS SS 10 12 49.9 +5.5
KMI SSS 10 16 28.0
KMI Kunming 94.00 297 P **P 09 55 14.3 -0.7**
KMI pP pP 09 55 22.1 -2.4
KMI sP sP 09 55 24.6 -3.3
KMI PP PP 09 59 03.3 +1.6
KMI PPP 10 01 06.1
KMI S S 10 06 22.0 -1.6
KMI sS sS 10 06 33.2 -6.2
KMI SS SS 10 12 49.9 +5.5
KMI SSS 10 16 28.0
BJI Beijing 94.03 316 P **P 09 55 15.0 +0.2**
BJI S S 10 06 23.7 +0.5
BJI AMB AMB
comp=Z,7.0nm,1.2s,mb5.0
BJI AMB AMB
comp=Z,76nm,6.9s
BJI LR LR
comp=N,237nm,23.7s
BJI LR LR
comp=E,205nm,30.9s
BJI LR LR
comp=Z,400nm,29.4s
S15A Panguitch 94.05 47 ⇓P **P 09 55 15.4 +0.4**
baz=94
G05A Wamic 94.07 37 ⇓P **P 09 55 15.6 +0.8**
baz=94
M10A I.L. Ranch, Tu 94.08 42 ⇓P **P 09 55 15.4 +0.4**
baz=94
P13A Bates Ranch, G 94.19 45 ⇓P **P 09 55 15.1 -0.5**
baz=94
I07A Izee 94.20 39 ⇓P **P 09 55 15.5 0.0**
baz=95
K09A Rome 94.21 41 ⇑P **P 09 55 15.2 -0.3**
baz=95
H06A Lindquist Farm 94.21 38 ⇑P **P 09 55 15.4 -0.1**
baz=95
J08A Circle Bar Ran 94.25 40 ⇓P **P 09 55 15.3 -0.4**
baz=95
O12A Currie 94.29 44 ⇑P **P 09 55 15.4 -0.6**
baz=95
ELK Elko 94.31 43 P **P 09 55 15.3 -0.7**
comp=Z,1.2nm,0.6s,mb4.5,baz=250,slow=5.2,SNR=5.5
ELK Elko 94.31 43 *eP* **P 09 55 15.9 -0.2**
ELK pmax pmax
comp=Z,2.0nm,0.7s
ELK Elko 94.31 43 *eP* **P 09 55 15.9 -0.2**
comp=Z,2.3nm,0.7s,mb4.7
Q14A Sevier Lake (B 94.33 46 ⇓P **P 09 55 16.7 +0.5**
baz=95
V18A Ganado 94.36 50 ⇑P **P 09 55 15.9 -0.5**
baz=95
G06A Carlson Farm, 94.41 37 ⇑P **P 09 55 16.2 -0.2**
baz=95
U17A Shonto 94.44 49 ⇑P **P 09 55 17.0 +0.2**
baz=95
M11A Holland Ranch, 94.44 42 ⇑P **P 09 55 17.5 +0.9**
baz=95
L10A Juniper Basin 94.49 42 ⇓P **P 09 55 16.9 0.0**
baz=95
N12A Clover Valley, 94.50 43 ⇓P **P 09 55 17.2 +0.3**
baz=95
I08A Drewsey 94.57 39 ⇓P **P 09 55 17.5 +0.4**
baz=95
T17A Navajo Res., N 94.60 48 ⇓P **P 09 55 17.9 +0.5**
baz=95
J09A Fry Pan Ranch, 94.63 40 ⇓P **P 09 55 17.6 +0.2**
baz=95
F06A Goldendale 94.70 37 ⇑P **P 09 55 17.7 0.0**
baz=95
K10A MacKenzie Ranc 94.73 41 ⇓P **P 09 55 17.6 -0.3**
baz=95
E05A Randle 94.77 36 ⇓P **P 09 55 17.8 -0.2**
baz=95
H08A Prairie City 94.93 39 ⇑P **P 09 55 18.4 -0.4**
baz=95
M12A Wells 94.93 43 ⇑P **P 09 55 18.0 -0.9**
baz=95
L11A Cat Creek Ranc 94.95 42 ⇑P **P 09 55 18.9 0.0**
baz=95
R16A Teasdale 94.98 47 ⇓P **P 09 55 18.6 -0.6**
baz=95
C04A Brinnon 95.00 34 ⇑P **P 09 55 19.8 +0.8**
baz=95
E06A Yakima 95.14 36 ⇓P **P 09 55 19.6 -0.2**
baz=96
K11A Parker Ranch, 95.19 41 ⇓P **P 09 55 20.2 +0.1**
baz=96
J10A Berg Farm, Mel 95.22 41 ⇓P **P 09 55 20.1 -0.1**
baz=96
T18A Mexican Hat 95.27 49 ⇓P **P 09 55 20.4 -0.2**
baz=96
G08A Pilot Rock 95.31 38 ⇑P **P 09 55 20.6 +0.1**
baz=96
M13A Montello 95.33 43 ⇑P **P 09 55 20.6 -0.1**
baz=96
ATAH Atahualpa 95.33 102 LR LR 10 25 35.2
comp=Z,61nm,21.4s,MS4.0,baz=90,slow=27
L12A House Creek Ra 95.35 42 ⇑P **P 09 55 21.2 +0.5**
baz=96
R17A Hanksville Air 95.53 47 ⇓P **P 09 55 22.7 +1.0**
baz=96
TMUT Trail Mountain 95.77 46 *eP* **P 09 55 21.9 -0.9**
B05A Bryant 95.81 34 ⇓P **P 09 55 23.1 +0.4**
baz=96
BMO Blue Mountains 95.88 39 *eP* **P 09 55 26.6 +3.5**
BMO pmax pmax
comp=Z,23nm,2.3s,mb5.2
BMO Blue Mountains 95.88 39 *eP* **P 09 55 26.6 +3.5**
comp=Z,23nm,2.3s,mb5.2
M14A Sheep Mountain 95.89 44 ⇑P **P 09 55 22.7 -0.6**
baz=96
G09A Cove 95.91 39 ⇑P **P 09 55 22.7 -0.5**
baz=96
H10A Noah's Angus R 96.00 40 ⇑P **P 09 55 23.2 -0.4**
baz=96
J12A Stokes Ranch, 96.02 41 ⇓P **P 09 55 23.2 -0.6**
baz=96
SRU San Rafael 96.08 47 *eP* **P 09 55 23.4 -0.8**
S19A Harvey Farm, M 96.11 49 ⇑P **P 09 55 23.3 -1.1**
baz=96
ANMO Albuquerque 96.16 52 P **P 09 55 23.9 -0.8**
comp=Z,0.3nm,0.3s,mb4.2,baz=229,slow=1.7,SNR=3.2
ETW Entiat 96.20 36 *eP* **P 09 55 25.9 +1.4**
K13A Stover Farm, H 96.20 42 ⇓P **P 09 55 24.5 -0.2**
baz=96
G10A Bishop Farm, J 96.27 39 ⇑P **P 09 55 24.8 0.0**
baz=97
L14A Malta 96.29 43 ⇓P **P 09 55 24.7 -0.3**
baz=97
H11A Donnelly 96.47 40 ⇓P **P 09 55 25.2 -0.6**
baz=97
D08A Wollman Farm, 96.52 37 ⇑P **P 09 55 25.5 -0.5**
baz=97
CD2 Chengdu 96.54 303 *eP* **P 09 55 29.4 +2.9**
CD2 AP pP 09 55 35.8 -0.2
CD2 XP sP 09 55 38.5 -0.9
CD2 PP PP 09 59 27.1 +5.8
CD2 SKS 10 06 03.9
CD2 S S 10 06 46.8 +1.4
CD2 XS sS 10 06 57.6 -3.6
CD2 SS SS 10 13 26.1 +5.8
CD2 AMB AMB
comp=Z,20nm,0.9s,mb5.5
CD2 AMB AMB
comp=Z,30nm,8.2s
CD2 LR LR
comp=N,260nm,26.4s,MS4.7
CD2 LR LR
comp=E,240nm,26.4s,MS4.7
CD2 LR LR
comp=Z,310nm,21.6s,MS4.8
E09A Wood Farm, Sta 96.55 38 ⇑P **P 09 55 26.2 +0.1**
baz=97
HLID Hailey 96.60 42 *eP* **P 09 55 26.1 -0.3**
O17A Robinson Place 96.61 46 ⇓P **P 09 55 26.6 0.0**
baz=97
J13A Cove Ranch, Pi 96.63 42 ⇓P **P 09 55 26.7 +0.1**
baz=97
K14A Jones Ranch, D 96.65 43 ⇑P **P 09 55 27.0 +0.3**
baz=97
F10A Beach Ranch, E 96.66 38 ⇓P **P 09 55 26.5 -0.2**
baz=97
G11A Walters Elk Ra 96.79 39 ⇑P **P 09 55 27.5 +0.3**
baz=97
J14A Carey 96.95 42 ⇑P **P 09 55 28.2 +0.2**
baz=97
H12A Diamond D Ranc 97.00 41 ⇓P **P 09 55 27.7 -0.5**
baz=97
A07A Ashnola River, 97.17 35 ⇓P **P 09 55 28.9 +0.1**
baz=98
F11A Grangeville 97.17 39 ⇓P **P 09 55 28.1 -0.8**
baz=98
B08A Colville Reser 97.20 36 ⇓P **P 09 55 28.7 -0.3**
baz=98
HHC Hu-ho-hao-te 97.27 314 *eP* **P 09 55 28.5 -1.0**
HHC AP pP 09 55 33.5 -5.5
HHC XP sP 09 55 35.7 -6.7
HHC PP PP 09 59 28.7 +1.9
HHC SKS 10 06 03.8
HHC S S 10 06 49.6 -1.6
HHC XS sS 10 06 57.0 -10
HHC SS SS 10 13 31.6 +1.3
HHC AMB AMB
comp=Z,7.0nm,0.6s,mb5.3
HHC AMB AMB
comp=Z,136nm,6.4s
HHC LR LR
comp=N,138nm,18.0s,MS4.7
HHC LR LR
comp=E,212nm,18.7s,MS4.7
HHC LR LR
comp=Z,350nm,18.8s,MS4.9
L16A Fish Haven 97.33 44 ⇓P **P 09 55 29.3 -0.4**
baz=98
H13A Challis 97.33 41 ⇑P **P 09 55 29.4 -0.3**
baz=98
P19A Cripple Cowboy 97.34 47 ⇓P **P 09 55 29.0 -0.9**
baz=98
D10A Wagner Farm, O 97.36 38 ⇓P **P 09 55 29.6 -0.2**
baz=98
I14A Mackay 97.37 42 ⇓P **P 09 55 29.5 -0.4**
baz=98
F12A Elk City 97.56 39 ⇓P **P 09 55 31.2 +0.5**
baz=98
J15A Blackfoot 97.61 43 ⇓P **P 09 55 31.3 +0.3**
baz=98
K16A Soda Springs 97.74 43 ⇓P **P 09 55 32.0 +0.3**
baz=98
B09A Rice 97.83 36 ⇑P **P 09 55 31.7 -0.1**
baz=98
H14A Leadore 97.86 41 ⇑P **P 09 55 32.5 +0.4**
baz=98
F13A Darby 98.08 40 ⇑P **P 09 55 33.0 0.0**
baz=98
LPAZ La Paz 98.08 115 P **P 09 55 34.0 +0.1**
comp=Z,0.6nm,0.6s,mb4.3,baz=0.1,slow=1.3,SNR=3.9
LPAZ La Paz 98.08 115 P **P 09 55 34.0 +0.1**
LPAZ pmax pmax
comp=Z,1.0nm,0.6s
LPAZ La Paz 98.08 115 P **P 09 55 34.0 +0.1**
SMCO Snowmass 98.32 48 *eP* **P 09 55 31.1 -3.2**
SMCO ePP pP 09 55 51.2 +7.3
TPAW Teton Pass 98.52 43 *eP* **P 09 55 35.9 +0.8**
SNOW Snow King Moun 98.61 43 *eP* **P 09 55 35.0 -0.5**
PDAR Pinedale Array 98.89 44 P **P 09 55 37.5 +0.8**
comp=Z,0.6nm,0.7s,mb4.2,baz=181,slow=2.7,SNR=6.9
PDAR PKKPbc PKKPbc 10 12 02.3 -2.1
comp=Z,0.3nm,0.5s,baz=72,slow=4.5,SNR=4.5
PDAR LR LR 10 34 34.1
comp=Z,173nm,19.0s,MS4.6,baz=234,slow=32
H16A Russell Place, 99.09 42 ⇓P **P 09 55 38.0 +0.3**
baz=99
CPUP Villa Florida 99.20 130 LR LR 10 32 16.0
comp=Z,438nm,20.8s,MS4.9,baz=214,slow=30
LZH Lanzhou 99.40 307 *eP* **P 09 55 40.5 +1.3**
LZH AP pP 09 55 47.0 -1.7
LZH XP sP 09 55 49.7 -2.4
LZH *e*PP PP 09 59 47.2 +4.0
LZH SKS 10 06 13.6
LZH *e*S S 10 07 08.7 -0.7
LZH XS sS 10 07 19.5 -5.8
LZH *e*SS SS 10 14 03.8 +3.5
LZH AMB AMB
comp=Z,23nm,1.5s,mb5.5
LZH AMB AMB
comp=Z,125nm,8.4s
LZH LR LR
comp=E,431nm,17.5s
LZH LR LR
comp=Z,576nm,19.2s,MS5.1
LZH Lanzhou 99.40 307 *eP* **P 09 55 40.5 +1.3**
LZH *PP pP 09 55 47.0 -1.7
LZH *e* 09 59 47.2
LZH 10 06 13.6
LZH *e*S S 10 07 08.7 -0.7
LZH *SS sS 10 07 19.5 -5.8
LZH *e*SS SS 10 14 03.8 +3.5
LZH Lanzhou 99.40 307 *eP* **P 09 55 40.5 +1.3**
LZH pP pP 09 55 47.0 -1.7
LZH sP sP 09 55 49.7 -2.4
LZH *e*PP PP 09 59 47.2 +4.0
LZH SKS 10 06 13.6
LZH *e*S S 10 07 08.7 -0.7
LZH sS sS 10 07 19.5 -5.8
LZH *e*SS SS 10 14 03.8 +3.5
SONM Songino Array 104.36 318 Pdiff Pdif 09 56 00.9 -0.4
comp=Z,0.2nm,0.5s,baz=151,slow=3.3,SNR=2.3
YKA Yellowknife Ar 108.38 26 PKiKP PKiKP 10 00 22.4 -1.9
comp=Z,0.9nm,0.7s,baz=265,slow=2.4,SNR=3.4
YKA PKKPbc PKKPbc 10 11 32.6 -3.9
comp=Z,1.6nm,0.7s,baz=38,slow=3.3,SNR=6.2
TKL Tuckaleechee C 112.47 61 PKiKP PKiKP 10 00 31.4 -1.4
comp=Z,2.8nm,0.7s,baz=203,slow=10,SNR=2.4
TKL Tuckaleechee C 112.47 61 *i* PKiKP PKiKP 10 00 31.4 -1.5
TKL pmax pmax
comp=Z,3.0nm,0.7s
TKL Tuckaleechee C 112.47 61 PKPdf PKiKP 10 00 31.4 -1.4
WMQ Urumqi 113.96 308 *e*PKP PKiKP 10 00 34.0 -1.4
WMQ PP PP 10 01 33.5 +3.4
WMQ PKS 10 04 09.0
WMQ PP PP
comp=Z,187nm,4.2s
WMQ LR LR
comp=N,215nm,26.0s,MS4.8
WMQ LR LR
comp=E,278nm,27.5s,MS4.8
WMQ LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,380nm,25.0s,MS4.9						
BOSA	Boshof	114.33	204	PKP	PKiKP	10 00 35.0	-1.8
	comp=Z,3.2nm,0.5s,baz=164,slow=3.0,SNR=16						
BOSA	Boshof	114.33	204	PKIKP	PKiKP	10 00 35.0	-1.8
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	Makanchi Array	118.59	309	PKP	PKPdf	10 00 41.6	-2.6
	comp=Z,2.1nm,0.5s,baz=56,slow=3.1,SNR=13						
MKAR				PKKPbc	PKKPbc	10 10 59.7	-1.6
	comp=Z,0.4nm,0.4s,baz=273,slow=3.2,SNR=3.7						
MKAR	Makanchi Array	118.59	309	PKP	PKPdf	10 00 41.6	-2.6
MKAR				PKKPbc	PKKPbc	10 10 59.7	-1.6
ZAA0	Zalesovo Array	119.25	318	ePKPdf	PKPdf	10 00 42.5	-2.8
ZALV	Zalesovo Beam	119.25	318	PKP	PKPdf	10 00 42.2	-3.1
	comp=Z,2.6nm,0.4s,baz=120,slow=3.8,SNR=6.9						
ZAL	Zalesovo	119.26	318	PKIKP	PKPdf	10 00 42.2	-3.1
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KURK	Kurchatov	122.04	313	PKP	PKPdf	10 00 47.3	-3.4
	comp=Z,8.1nm,0.7s,baz=115,slow=1.8,SNR=26						
KURK	Kurchatov	122.04	313	iPKIKP	PKPdf	10 00 48.1	-2.6
KURK	Kurchatov	122.04	313	ePKPdf	PKPdf	10 00 47.7	-3.1
FRNY	Flat Rock	122.98	55	ePKPdf	PKPdf	10 00 51.4	-1.3
AML	Almayashu	123.03	302	ePKPdf	PKPdf	10 00 51.7	-1.2
LBNH	Lisbon	123.97	56	ePKIKP	PKPdf	10 00 54.7	0.0
TSUM	Tsumeb	125.53	200	ePKPdf	PKPdf	10 00 57.0	-1.5
PKME	Peaks-Kenny Pk	126.04	55	ePKPdf	PKPdf	10 00 58.9	+0.3
BVAR	Borovoye Array	127.48	314	PKP	PKPdf	10 00 58.6	-2.5
	comp=Z,4.9nm,0.5s,baz=81,slow=1.5,SNR=23						
BVAR	Borovoye Array	127.48	314	PKIKP	PKPdf	10 00 58.6	-2.5
BVAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BRVK	Borovoye	127.55	314	ePKIKP	PKPdf	10 00 57.7	-3.5
KMBO	Kilima Mbogo	131.52	233	PKP	PKPdf	10 01 10.6	+0.5
	comp=Z,1.6nm,0.7s,baz=219,slow=23,SNR=3.6						
KMBO				SKPbc	SKPbc	10 04 29.7	-3.6
	comp=Z,3.6nm,0.9s,baz=109,slow=3.9,SNR=7.7						
KMBO	Kilima Mbogo	131.52	233	PKIKP	PKPdf	10 01 10.6	+0.5
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KMBO				pmax	pmax		
	comp=N,4.0nm,0.9s						
KMBO	Kilima Mbogo	131.52	233	PKP	PKPdf	10 01 10.6	+0.5
KMBO				SKPbc	SKPbc	10 04 29.7	-3.6
KBS	Kingsbay	133.82	357	iPKIKP	PKPdf	10 01 11.1	-1.4
ARU	Arti	134.38	319	iPKIKP	PKPdf	10 01 13.0	-1.1
ARU				SS	SS	10 21 36.3	+1.2
ARU				MLR	MLR		
	comp=Z,151nm,24.0s,MS4.6						
SFJD	Kangerlussuaq	134.94	26	PKP	PKPdf	10 01 15.9	+1.1
	comp=Z,7.6nm,0.5s,baz=134,slow=2.4,SNR=7.1						
SFJD	Kangerlussuaq	134.94	26	PKIKP	PKPdf	10 01 15.9	+1.1
SFJD				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AKTK	Aktyubinsk	135.00	310	PKP	PKPdf	10 01 15.4	0.0
AKTO	Aktyubinsk	135.00	310	PKP	PKPdf	10 01 15.4	0.0
	comp=Z,4.0nm,0.5s,baz=99,slow=5.2,SNR=14						
AKTO	Aktyubinsk	135.00	310	PKIKP	PKPdf	10 01 15.4	0.0
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ARCES	ARCESS Array B	140.95	346	PKhKP		10 01 19.0	
	comp=Z,2.3nm,0.4s,baz=29,slow=2.8,SNR=24						
ARCES				PKP	PKPdf	10 01 25.1	-0.7
	comp=Z,18nm,0.8s,baz=48,slow=1.8,SNR=18						
ARCES	ARCESS Array B	140.95	346	iPKHKP		10 01 19.0	
ARCES						10 01 25.2	
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARCES				pmax	pmax		
	comp=Z,18nm,0.8s						
ARCES	ARCESS Array B	140.95	346	PKP	PKPdf	10 01 25.1	-0.7
DGRG	David-gareji	143.76	296	P	PKPdf	10 01 28.5	-3.2
GNI	Garni	144.19	294	iPKIKP	PKPdf	10 01 29.9	-2.6
MTA	Mtatsminda	144.20	297	P	PKPdf	10 01 26.9	-5.5
JOF	Joensuu	144.45	336	epkp	PKPdf	10 01 28.7	-3.5
	comp=Z,19nm,0.5s						
JOF	Joensuu	144.45	336	ePKIKP	PKPdf	10 01 28.7	-3.5
JOF				pmax	pmax		
	comp=Z,19nm,0.5s						
ONI	Oni	145.20	298	P	PKPbc	10 01 30.5	-3.3
VRHR	Novokhopersk	145.22	314	ePKP2	PKPab	10 01 31.0	-2.7
VRHR				pmax	pmax		
	comp=Z,50nm,0.7s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,60nm,1.0s						
BORG	Borgarnes	145.58	16	PKPbc	PKPbc	10 01 33.3	-1.0
	comp=E,44nm,0.9s,baz=258,slow=1.1,SNR=3.5						
KIV	Kislovodsk	145.69	301	cePKIKP	PKPdf	10 01 33.1	-1.8
KIV				i		10 04 52.1	
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MOS	Moscow	145.83	323	ePKHKP		10 01 30.5	
MOS				e		10 05 00.3	
MOS				pmax	pmax		
	comp=Z,144nm,1.0s						
MOS				pmax	pmax		
	comp=Z,500µm,2.4s						
VOR	Voronezh	146.49	315	ePKIKP	PKPdf	10 01 35.0	-1.0
VOR				pmax	pmax		
	comp=Z,200nm,1.8s						
OBN	Obninsk	146.65	322	⇑iPKP2	PKPab	10 01 37.0	-2.0
OBN				e		10 05 08.8	
OBN				pmax	pmax		
	comp=Z,131nm,1.9s						
VRSR	Storozhevoye	146.65	314	ePKP2	PKPab	10 01 35.8	-3.3
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRSR				pmax	pmax		
	comp=N,7.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.7s						
KAF	Kangasniemi	146.66	338	epkp	PKPdf	10 01 34.6	-1.4
	comp=E,34nm,0.5s,baz=44,slow=2.7						
KAF	Kangasniemi	146.66	338	ePKIKP	PKPdf	10 01 34.6	-1.4
KAF				pmax	pmax		
	comp=Z,34nm,0.5s						
SOC	Sochi	147.87	301	iPKP2	PKPab	10 01 42.5	-1.7
MALT	Malatya	149.01	291	ePKIKP	PKPdf	10 01 41.2	+0.6
ANN	Anapa	149.33	303	iPKIKP	PKPdf	10 01 42.5	+1.6
ANN				pmax	pmax		
	comp=Z,126nm,1.8s						
NB2	NORSAR Subarra	151.21	349	PKP	PKPbc	10 01 46.7	-2.6
	comp=Z,40nm,0.8s,baz=18,slow=2.6						
NB2	NORSAR Subarra	151.21	349	PKP	PKPbc	10 01 46.7	-2.6
	baz=18,slow=2.6						
NOA	NORSAR Array B	151.21	349	PKPbc	PKPbc	10 01 46.9	-2.4
	comp=Z,22nm,0.6s,baz=14,slow=4.1,SNR=74						
NOA	NORSAR Array B	151.21	349	PKIKP	PKPbc	10 01 46.9	-2.4
NOA				pmax	pmax		
	comp=Z,22nm,0.6s						
MNK	Minsk	151.27	326	ePKIKP	PKPdf	10 01 39.0	-4.6
NAO01	NORSAR Array S	151.45	349	ePKPbc	PKPbc	10 01 47.2	-2.6
AKASG	Malin Array Be	152.64	319	PKP	PKPdf	10 01 43.3	-2.5
	comp=Z,0.4nm,0.4s,baz=71,slow=1.7,SNR=4.1						
AKASG				PKPbc	PKPbc	10 01 51.0	-1.9
	comp=Z,3.9nm,0.4s,baz=57,slow=2.1,SNR=16						
AKASG	Malin Array Be	152.64	319	PKIKP	PKPdf	10 01 43.3	-2.5
AKASG						10 01 51.0	
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AKASG	Malin Array Be	152.64	319	PKP	PKPdf	10 01 43.3	-2.5
AKASG				PKPbc	PKPbc	10 01 51.0	-1.9
KIEV	Kiev	152.65	319	ePKIKP	PKPbc	10 01 50.8	-2.1
LIC	Lamto	152.75	168	ePKIKP	PKPdf	10 01 45.9	-1.3
	comp=Z,71nm,0.7s						
DBIC	Dimbokro	153.21	168	PKP	PKPdf	10 01 46.4	-1.5
	comp=Z,5.9nm,0.8s,baz=98,slow=3.2,SNR=5.7						
DBIC				PKPbc	PKPbc	10 01 53.9	-1.4
	comp=Z,8.2nm,0.6s,baz=178,slow=2.3,SNR=15						
DBIC	Dimbokro	153.21	168	PKIKP	PKPdf	10 01 46.4	-1.4
DBIC						10 01 53.9	
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DBIC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
DBIC	Dimbokro	153.21	168	ePKPdf	PKPdf	10 01 47.2	-0.6
SUW	Suwalki	153.67	329	ePKP	PKPbc	10 01 52.6	-2.4
SUW				e		10 02 07.1	
SUW	Suwalki	153.67	329	ePKP	PKPbc	10 01 52.6	-2.4
SUW				e		10 02 07.1	
BUR08	Bucovina Ar. S	156.44	315	PKPdf	PKPdf	10 01 51.4	+0.2
KWP	Kalwaria	156.74	322	ePKP	PKPab	10 02 20.5	-0.6
KWP				e		10 02 31.3	
UZH	Uzhgorod	157.55	320	ePKIKP	PKPdf	10 01 50.6	-2.0
STHS	Stebnicka Huta	157.62	323	ePKP	PKPdf	10 01 51.5	-1.1
STHS	Stebnicka Huta	157.62	323	ePKP	PKPdf	10 01 51.6	-1.0
CRVS	Cervenica-Dubn	157.83	322	ePKP	PKPdf	10 01 52.2	-0.7
KECS	Kecovo	158.60	322	ePKP	PKPdf	10 01 51.2	-2.7
KECS				e		10 02 29.1	
VYHS	Vyhne	159.43	324	ePKP	PKPab	10 02 33.7	+1.0
CLL	Collm	159.68	337	ePKPab	PKPab	10 02 31.6	-2.1
CLL	Collm	159.68	337	ePKPab	PKPab	10 02 32.0	-1.7
	comp=Z,11nm,1.0s						
CLL				epPKPab	pPKPab	10 02 39.0	-4.2
CLL				ePP	PP	10 06 15.0	0.0
CLL				ePPPP		10 12 10.0	
CLL				ePPS		10 19 26.0	
BRG	Berggiesshubel	159.72	335	ePKPdf	PKPdf	10 01 52.7	-2.4
BRG				ePKPab	PKPab	10 02 33.1	-0.8
BRG	Berggiesshubel	159.72	335	ePKP	PKPab	10 02 33.4	-0.5
	comp=Z,5.3nm,0.8s						
FBE	Freiberg	159.89	336	ePKPdf	PKPdf	10 01 53.0	-2.3
FBE				ePKPab	PKPab	10 02 34.3	-0.3
TORD	Torodi Ar. Bea	160.11	183	PKP	PKPdf	10 01 54.3	-2.3
	comp=Z,6.8nm,0.7s,baz=195,slow=0.2,SNR=22						
TORD				PKPab	PKPab	10 02 34.6	-1.8
	comp=Z,21nm,0.6s,baz=176,slow=4.7,SNR=6.4						
TORD				PP	PP	10 06 15.4	-1.7
	comp=Z,1.1nm,0.9s,baz=208,slow=5.8,SNR=3.6						
IBBN	Ibbenburen	160.12	347	ePKPdf	PKPdf	10 01 53.5	-2.0
MODS	Modra-Piesok	160.27	326	ePKP	PKPdf	10 01 54.6	-1.2
MODS				e		10 02 34.3	
WERD	Werda	160.64	337	ePKPdf	PKPdf	10 01 52.8	-3.3
GUNZ	Gunzen	160.71	337	ePKPdf	PKPdf	10 01 53.9	-2.3
WERN	Wernitzgruen	160.76	337	ePKPdf	PKPdf	10 01 53.0	-3.3
WERN				ePKPab	PKPab	10 02 37.1	-1.3
MANZ	Manzenberg	161.10	337	ePKPdf	PKPdf	10 01 54.1	-2.6
ROTZ	Rotzenmuhle	161.26	336	ePKPab	PKPab	10 02 39.6	-1.0
GEC2	GERESS Array S	161.47	332	ePKPdf	PKPdf	10 01 53.6	-3.5
GERES	GERESS Array B	161.47	332	PKP	PKPdf	10 01 54.9	-2.2
	comp=Z,0.6nm,0.5s,baz=28,slow=3.5,SNR=7.0						
GERES				PKPab	PKPab	10 02 40.3	-1.3
	comp=Z,1.4nm,0.6s,baz=49,slow=2.6,SNR=4.9						
GERES	GERESS Array B	161.47	332	PKIKP	PKPdf	10 01 54.9	-2.2
GERES						10 02 40.3	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WET	Wettzell	161.54	334	ePKPdf	PKPdf	10 01 54.5	-2.6
GRF	Grafenberg Arr	161.65	338	ePKIKP	PKPdf	10 01 51.6	-5.6
GRF				e		10 02 41.6	
GRF				e		10 06 22.6	
GRF	Grafenberg Arr	161.65	338	ePKPdf	PKPdf	10 01 51.6	-5.6
GRF				ePKPab	PKPab	10 02 41.6	-0.7
GRF				ePP	PP	10 06 22.6	-3.0
GRF				eL		11 19 22.4	
	comp=Z,208nm,22.0s						
TNS	Taunus Mts	161.94	344	ePKPab	PKPab	10 02 43.8	+0.2
MEM	Membach	162.06	349	PKP	PKPdf	10 01 57.2	-0.4
UCC	Uccle	162.10	352	PKP	PKPdf	10 01 56.7	-0.9
BCLA	Clavier	162.35	350	PKP	PKPdf	10 01 56.5	-1.5
RJOB	Jochberg	162.72	331	ePKPab	PKPab	10 02 47.6	+0.5
DOU	Dourbes	162.77	351	PKP	PKPdf	10 01 57.6	-0.7
BAIF	Baives	162.85	352	ePKIKP	PKPdf	10 01 56.5	-1.9
WLF	Walferdange	162.95	348	PKP	PKPdf	10 01 57.6	-0.9
WTTA	Wattenberg	163.57	333	⇑iP	PKPdf	10 01 57.7	-1.5
	comp=Z,14nm,1.1s						
MOTA	Moosalm	163.70	334	⇑iP	PKPdf	10 01 54.6	-4.7
	comp=Z,62nm,2.5s						
MOTA	Moosalm	163.70	334	⇑iPKPdf	PKPdf	10 01 57.6	-1.8
	comp=Z,62nm,2.5s						
BFO	Black Forest	163.72	341	ePKPab	PKPab	10 02 48.7	-2.7
FLN	La Foliniere	164.33	3	ePKIKP	PKPdf	10 01 58.0	-1.9
LDF	La Druitiere	164.51	2	ePKIKP	PKPdf	10 01 58.2	-1.8
	comp=Z,45nm,1.3s						
LOR	Lormes	165.64	351	ePKIKP	PKPdf	10 01 59.4	-1.6
SSF	Saint Saulge	165.88	352	ePKIKP	PKPdf	10 01 59.1	-2.1
MFF	Saint Martin d	166.50	2	ePKIKP	PKPdf	10 02 00.9	-0.8
TCF	Toulx Ste Croi	166.77	355	ePKIKP	PKPdf	10 02 00.0	-2.0
RJF	Les Rejaudoux	167.79	357	ePKIKP	PKPdf	10 02 00.7	-2.0
SBF	Sospel	168.01	336	ePKIKP	PKPdf	10 02 01.6	-1.3
SJPF	Ste Jean	169.90	8	ePKIKP	PKPdf	10 02 02.9	-1.3
MVO	Moncorvo	169.90	35	ePKPdf	PKPdf	10 02 07.2	+3.0
MVO	Moncorvo	169.90	35	eLR	LR	11 04 05.5	
	comp=Z,153nm,18.0s						
EPF	Esparros	170.08	1	ePKIKP	PKPdf	10 02 03.0	-1.3
	comp=Z,24nm,1.1s						
MTE	Manteigas	170.21	40	eLR	LR	11 02 26.3	
	comp=Z,237nm,20.0s						
PCBR	Castelo Branco	170.63	42	ePKPdf	PKPdf	10 02 04.1	-0.6
PMRV	Marv??o	170.96	43	eLR	LR	11 08 31.4	
	comp=Z,168nm,20.0s						
EVO	Evora	171.14	50	ePKPdf	PKPdf	10 02 06.0	+1.0
PESTR	Estremoz	171.20	47	eLR	LR	11 02 30.4	
	comp=Z,163nm,22.0s						
PFVI	Vila Bisbo	171.28	60	eLR	LR	11 02 45.4	
	comp=Z,192nm,20.0s						
MORF	Marmelete	171.33	58	ePKPdf	PKPdf	10 02 04.9	-0.2
MORF	Marmelete	171.33	58	eLR	LR	11 10 09.4	
	comp=Z,234nm,20.0s						
GUD	Guadarrama	171.56	26	PKIKP	PKPdf	10 02 05.1	0.0
PBDV	Barranco-do-Ve	171.87	57	ePKPdf	PKPdf	10 02 08.9	+3.5
PBDV	Barranco-do-Ve	171.87	57	eLR	LR	11 03 25.3	
	comp=Z,203nm,20.0s						
PVAQ	Vaqueiros	171.94	55	eLR	LR	11 03 13.5	
	comp=Z,188nm,22.0s						
PBAR	Barrancos	171.97	49	ePKPdf	PKPdf	10 02 04.5	-0.9
PBAR	Barrancos	171.97	49	eLR	LR	11 04 18.8	
	comp=Z,201nm,20.0s						
KEST	Kesra	172.33	292	PKP	PKPdf	10 02 04.5	-1.2
	comp=Z,3.3nm,1.0s,baz=297,slow=2.1,SNR=4.3						
ESDC	Sonseca Array	172.47	28	PKP	PKPdf	10 02 04.6	-1.0
	comp=Z,1.4nm,0.6s,baz=352,slow=2.9,SNR=6.4						
ESDC				PKPab	PKPab	10 03 28.7	-1.7
	comp=Z,1.0nm,0.5s,baz=321,slow=3.8,SNR=4.1						
ESDC	Sonseca Array	172.47	28	PKP	PKPdf	10 02 04.1	-1.5

*TRN **04** 09:52:36.0, 19.11N×64.46W, h40^{km}*
*RSPR **04** 09:52:37.7, 19.18N×64.45W, h41^{km}±4^{km}, MD3.5/7, MD3.5/7*
*NEIC **04** 09:52:37.7, 19.18N×64.45W, h41^{km}, MD3.5(RSPR), After RSPR.*
ISC 04 09:52:36.6±1.9**, 19.2N**±0.2×**64.4W**±0.1**, h49**^{km}±35^{km}**, n9, σ0.^{s}34**/16**, 7C-1D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	Anegada	0.43	169	⇑eP	Pn	09 52 46.9	-0.1
ABV				eS	Sn	09 52 54.5	+0.1
TBVI	Tortola	0.76	195	⇑eP	Pn	09 52 51.1	0.0
TBVI				eS	Sn	09 53 01.5	0.0
TBVI	Tortola	0.76	195	⇑eP	Pn	09 52 51.1	0.0
TBVI				eS	Sn	09 53 01.5	0.0
MTP	Monte Pirata	1.50	226	⇑eP	Pn	09 53 00.8	-0.3
MTP				eS	Sn	09 53 19.6	0.0
CBYP	Canovanas	1.62	238	⇑eP	Pn	09 53 02.7	-0.1
CBYP				eS	Sn	09 53 21.8	-0.8
HUMP	Col San Antoni	1.69	234	eP	Pn	09 53 03.5	-0.3
CPD	Cerro la Pandu	1.80	232	⇑eP	Pn	09 53 05.6	+0.3
CPD				eS	Sn	09 53 27.6	+0.6
AOPR	Arecibo Observ	2.35	250	⇓iP	Pn	09 53 12.7	-0.2
AOPR				eS	Sn	09 53 40.7	+0.2
CRPR	Cabo Rojo, PR	2.80	246	⇑eP	Pn	09 53 19.4	+0.5

*ISCJB **04** 10:00:39.5±4.0, 47.06N±0.09×156.3E±0.2, h17^{km}±29^{km}, mb3.9/7, Error ellipse: s-maj=23.8km s-min=11.1km az=28.3*
*IDC **04** 10:00:39.0±1.0, 46.99N×156.35E, h0^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.8/22, mbtmp3.8/8, ML3.0/1, Error ellipse: s-maj=27.2km s-min=24.1km az=81.0*
*MOS **04** 10:00:42.4±2.3, 47.18N×155.91E, h37^{km}, mb4.1/4, Error ellipse: s-maj=26.1km s-min=19.6km az=66.0*
ISC 04 10:00:42.6±4.1**, 47.04N**±0.09×**156.4E**±0.2**, h23**^{km}±30^{km}**, n15, σ0.^{s}99**/16**, mb3.9**/7**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.14	8	Pn	Pn	10 02 13.2	+1.5
	0.4nm,0.3s,baz=175,slow=13,SNR=2.7						
PETK				Sn	Sn	10 03 20.3	-0.8
	0.2nm,0.3s,baz=351,slow=25,SNR=2.3						
PET	Petropavlovsk	6.17	13	ePN	Pn	10 02 12.4	+0.2
YSS	Yuzh-Sakhalins	9.29	274	ePN	Pn	10 02 48.7	-6.3
ERM	Erimo	10.67	247	iPN	Pn	10 03 12.7	-1.2
SONM	Songino Array	33.32	290	P	P	10 07 17.2	-1.1
	0.3nm,0.5s,mb3.5,baz=54,slow=7.3,SNR=2.7						
COLA	College	34.53	39	iP	P	10 07 26.8	-1.8
MKAR	Makanchi Array	48.77	299	P	P	10 09 25.4	+0.2
	0.3nm,0.2s,mb3.9,baz=64,slow=8.2,SNR=4.5						
KURK	Kurchatov	49.04	305	P	P	10 09 28.5	+1.2
	1.9nm,0.6s,mb4.3,baz=68,slow=8.2,SNR=17						
BVAR	Borovoye Array	52.38	310	P	P	10 09 53.4	+1.0
	1.1nm,0.4s,mb4.1,baz=68,slow=8.2,SNR=6.3						
BVAR	Borovoye Array	52.38	310	P	P	10 09 53.4	+1.0
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	Pinedale Array	62.77	56	P	P	10 11 05.8	+0.1
	comp=Z,1.3nm,1.2s,mb3.9,baz=312,slow=8.0,SNR=2.5						
WRA	Warramunga Arr	69.56	202	P	P	10 11 49.1	-0.3
	comp=Z,1.4nm,0.8s,mb3.9,baz=21,slow=6.7,SNR=5.0						
WRA	Warramunga Arr	69.56	202	eP	P	10 11 49.6	+0.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	73.23	201	P	P	10 12 12.3	+0.8
	comp=Z,0.7nm,0.8s,mb3.6,baz=17,slow=6.8,SNR=3.7						
ASAR	Alice Springs	73.23	201	P	P	10 12 12.3	+0.8
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

*LDG **04** 10:02:21.9±0.4, 12.32S×167.61E, h10^{km}, Mb4.9/4, Error ellipse: s-maj=56.2km s-min=18.3km az=86.0*
*IDC **04** 10:02:42.3±2.1, 13.61S×167.19E, h183^{km}±17^{km}, mb4.0/19, mb1 4.1/19, mb1mx4.0/22, mbtmp4.0/19, Error ellipse: s-maj=18.1km s-min=11.9km az=113.0*
*ISCJB **04** 10:02:44.5±3.4, 13.65S±0.09×167.1E±0.1, h216^{km}±32^{km}, mb4.2/27, Error ellipse: s-maj=18.0km s-min=13.2km az=40.2*
*BJI **04** 10:02:46.6, 12.94S×166.89E, h203^{km}, mB4.9, mb4.6*
*NEIC **04** 10:02:46.3±3.4, 13.61S×167.13E, h222^{km}±30^{km}, mb4.4/6, Error ellipse: s-maj=13.5km s-min=11.3km az=71.0*
ISC 04 10:02:47.1±2.9**, 13.67S**±0.09×**167.1E**±0.1**, h227**^{km}±28^{km}**, n74, σ0.^{s}75**/33**, mb4.2**/27**, 1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	20.95	249	eP	P	10 07 13.2	+0.3
	7.6nm,0.6s						
CTA	Charters Tower	20.95	249	P	P	10 07 13.0	+0.1
	12nm,0.7s,baz=82,slow=11,SNR=11						
URZ	Urewera	26.05	162	P	P	10 07 59.5	-0.2
	5.5nm,0.8s,mb4.2,baz=299,slow=14,SNR=3.3						
STKA	Stephens Creek	29.58	228	eP	P	10 08 32.0	+0.9
	6.7nm,0.6s,mb4.5						
STKA	Stephens Creek	29.58	228	P	P	10 08 32.0	+0.9
	7.7nm,0.6s,mb4.5,baz=45,slow=8.0,SNR=37						
STKA				PcP	PcP	10 11 30.2	+0.1
	3.9nm,0.7s,baz=52,slow=4.5,SNR=6.4						
STKA				ScP	ScP	10 14 55.2	+4.8
	1.9nm,0.5s,baz=51,slow=5.0,SNR=10						
TOO	Toolangi	30.62	215	eP	P	10 08 40.2	0.0
WB2	Warramunga Arr	31.95	254	eP	P	10 08 51.3	-0.7
WRA	Warramunga Arr	31.96	254	P	P	10 08 51.3	-0.8
	1.7nm,0.5s,mb3.8,baz=85,slow=9.5,SNR=50						
WRA				PcP	PcP	10 11 36.9	+0.2
	3.5nm,0.8s,baz=78,slow=3.0,SNR=13						
WRA				ScP	ScP	10 15 03.5	+4.9
	0.9nm,0.8s,baz=83,slow=3.8,SNR=5.2						
ASAR	Alice Springs	32.93	248	P	P	10 09 00.1	-0.4
	4.1nm,0.5s,mb4.2,baz=75,slow=9.2,SNR=134						
ASAR				PcP	PcP	10 11 39.4	+0.1
	2.6nm,0.6s,baz=81,slow=2.5,SNR=15						
ASAR				S	S	10 14 01.1	-0.5
	2.1nm,0.9s,baz=80,slow=15,SNR=9.2						
ASAR				ScP	ScP	10 15 06.8	+4.9
	2.4nm,0.9s,baz=78,slow=3.2,SNR=12						
KAKA	Kakadu	33.77	268	eP	P	10 09 08.0	+0.2
	5.1nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	40.08	258	eP	P	10 10 02.3	+1.4
	2.0nm,0.5s,mb3.8						
NWAO	Narrogin (SRO)	49.18	238	P	P	10 11 11.5	-1.0
	13nm,1.0s,mb4.2,baz=76,slow=7.2,SNR=5.5						
JOW	Kunigami	55.18	317	P	P	10 11 54.8	-1.8
	14nm,0.8s,mb4.5,baz=174,slow=9.1,SNR=5.7						
MJAR	Matsushiro Arr	56.90	332	P	P	10 12 07.1	-1.4
	3.0nm,0.7s,mb4.0,baz=168,slow=6.9,SNR=8.3						
ASAJ	Asahikawa	61.70	340	P	P	10 12 41.9	+0.6
	7.2nm,0.7s,mb4.4,baz=202,slow=12,SNR=6.0						
KSRS	Korea Array	62.79	326	P	P	10 12 48.2	-0.3
	1.4nm,0.7s,mb3.7,baz=145,slow=7.1,SNR=6.8						
PETK	Petropavlovsk-	66.99	354	P	P	10 13 15.5	+0.2
	7.0nm,0.8s,mb4.3,baz=135,slow=5.3,SNR=9.5						
CN2	Changchun	68.67	329	eP	P	10 13 26.2	+0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
XAN	Xi'an	72.87	312	P	P	10 13 51.7	+0.2
XAN				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.6						
XAN				AMB	AMB		
	comp=Z,18nm,3.3s						
KMI	Kunming	73.63	302	P	P	10 13 57.0	+0.9
KMI				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.5						
CMAR	Chiang Mai Arr	74.39	294	P	P	10 14 01.8	+1.1
	comp=Z,4.9nm,0.6s,mb4.3,baz=124,slow=4.4,SNR=24						
LZH	Lanzhou	77.50	312	⇓P	P	10 14 18.7	+0.8
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,107nm,5.0s						
ULN	Ulaanbaatar	81.20	324	eP	P	10 14 37.9	+0.4
	comp=Z,10nm,1.1s,mb4.4						
SONM	Songino Array	81.56	324	P	P	10 14 39.6	+0.2
	comp=Z,2.8nm,0.9s,mb3.9,baz=138,slow=6.1,SNR=19						
GTA	Gaotai	81.83	314	eP	P	10 14 42.1	+1.1
GTA				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.3						
MAW	Mawson	82.81	202	P	P	10 14 45.6	0.0
	comp=Z,3.5nm,0.6s,mb4.3,baz=109,slow=5.1,SNR=13						
YBH	Yreka Blue Hor	84.77	45	P	P	10 14 56.0	0.0
	comp=Z,0.5nm,0.5s,mb3.5,baz=139,slow=1.8,SNR=5.5						
TLY	Talaya	85.04	326	eP	P	10 14 57.0	-0.1
	comp=Z,3.3nm,0.8s,mb4.1						
NVAR	Mina Array Bea	86.69	49	P	P	10 15 05.3	-0.2
	comp=Z,0.6nm,0.8s,mb3.4,baz=235,slow=7.8,SNR=3.7						
ELK	Elko	89.69	48	P	P	10 15 19.6	+0.1
	comp=Z,0.4nm,0.8s,mb3.3,baz=208,slow=14,SNR=3.5						
MKAR	Makanchi Array	96.34	316	P	P	10 15 50.0	0.0
	comp=Z,2.6nm,0.6s,mb4.7,baz=91,slow=6.6,SNR=26						
ZALV	Zalesovo Beam	96.45	324	P	P	10 15 48.7	-1.6
	comp=Z,1.1nm,0.3s,mb4.6,baz=98,slow=6.0,SNR=3.2						
ARCES	ARCESS Array B	119.19	346	PKP	PKPdf	10 21 08.0	-0.5
	comp=Z,2.7nm,0.6s,baz=67,slow=1.7,SNR=18						
BOSA	Boshof	124.08	221	PKP	PKPdf	10 21 19.4	+0.2
	comp=Z,4.3nm,1.0s,baz=184,slow=8.9,SNR=4.5						
AKASG	Malin Array Be	129.78	326	PKP	PKPdf	10 21 29.0	-0.3
	comp=Z,0.6nm,0.4s,baz=47,slow=3.0,SNR=4.2						
GERES	GERESS Array B	138.64	333	PKP	PKPdf	10 21 46.8	+0.8
	comp=Z,0.7nm,0.4s,baz=67,slow=1.3,SNR=5.6						
CDF	Champ du Feu	141.54	338	ePKP1	PKPdf	10 21 45.0	-6.2
HINF	Hinteralfeld	142.20	338	ePKP1	PKPdf	10 21 46.9	-5.5
CABF	La Chapelle	143.50	338	ePKP1	PKPdf	10 21 53.5	-1.2
	comp=Z,27nm,1.1s						
FLN	La Foliniere	143.54	346	ePKP1	PKPdf	10 21 51.6	-3.1
	comp=Z,6.3nm,0.5s						
LDF	La Druitiere	143.61	346	ePKP1	PKPdf	10 21 51.7	-3.2
	comp=Z,3.7nm,0.4s						
LOR	Lormes	143.69	341	ePKP1	PKPdf	10 21 54.1	-1.0
GRR	Gorron	143.97	346	ePKP1	PKPdf	10 21 53.4	-2.1
	comp=Z,7.4nm,0.4s						
SSF	Saint Saulge	143.99	341	ePKP1	PKPdf	10 21 54.1	-1.5
	comp=Z,16nm,0.9s						
LPL	La Plagne	144.17	336	ePKP1	PKPdf	10 21 55.1	-0.8
	comp=Z,12nm,0.8s						
LPG	La Plagne	144.18	336	ePKP1	PKPdf	10 21 55.2	-0.8
	comp=Z,20nm,0.9s						
SMF	Signal de Mont	144.25	340	ePKP1	PKPdf	10 21 54.6	-1.4
	comp=Z,22nm,0.9s						
AVF	Avril sur Loir	144.28	341	ePKP1	PKPdf	10 21 54.6	-1.5
SGMF	Saint Gilles	144.47	348	ePKP1	PKPdf	10 21 55.1	-1.3
	comp=Z,40nm,0.7s						
ROSF	Rostrenen	144.53	349	ePKP1	PKPdf	10 21 55.3	-1.2
	comp=Z,29nm,0.8s						
CEL	Celeste	144.64	319	eP	PKPdf	10 21 55.6	-1.4
BGF	Bois d'Agland	144.65	341	ePKP1	PKPdf	10 21 56.1	-0.6
	comp=Z,37nm,0.7s						
MBDF	Montbardon	144.81	335	ePKP1	PKPdf	10 21 56.7	-0.4
	comp=Z,21nm,0.8s						

QUIF	Quistinic	144.91	349	ePKP1	PKPdf	10 21 56.4	-0.7
	comp=Z,21nm,0.5s						
ORIF	Oris-en-Rattie	145.00	337	ePKP1	PKPbc	10 21 57.7	+0.5
	comp=Z,60nm,0.8s						
TCF	Toulx Ste Croi	145.09	342	ePKP1	PKPbc	10 21 57.5	0.0
	comp=Z,25nm,0.8s						
SBF	Sospel	145.24	334	ePKP1	PKPbc	10 21 57.8	-0.2
	comp=Z,64nm,0.9s						
MFF	Saint Martin d	145.47	344	ePKP1	PKPbc	10 21 58.5	-0.1
	comp=Z,53nm,1.2s						
VIVF	Saint-Julien-l	145.51	338	ePKP1	PKPbc	10 21 59.1	+0.3
PGF	Pioggiola	145.56	331	ePKP1	PKPbc	10 21 59.1	0.0
	comp=Z,26nm,0.6s						
FRF	La Foret Royal	145.81	334	ePKP1	PKPbc	10 21 59.6	-0.2
	comp=Z,39nm,0.7s						
SMRF	Simiane la Rot	145.91	336	ePKP1	PKPbc	10 22 00.5	+0.4
	comp=Z,18nm,0.6s						
LMR	La Mourre	146.06	334	ePKP1	PKPbc	10 22 00.4	-0.1
	comp=Z,45nm,0.8s						
RJF	Les Rejaudoux	146.18	342	ePKP1	PKPbc	10 22 01.0	+0.2
	comp=Z,28nm,1.0s						
CAF	Calviac	146.35	341	ePKP1	PKPbc	10 22 01.6	+0.3
	comp=Z,17nm,1.0s						
LASF	Ste Croix	146.48	338	ePKP1	PKPbc	10 22 02.1	+0.4
	comp=Z,63nm,1.2s						
LFF	La Frestale	146.75	342	ePKP1	PKPbc	10 22 02.6	+0.2
	comp=Z,13nm,0.6s						
MTLF	Montolieu	147.70	339	ePKP1	PKPbc	10 22 05.4	+0.3
	comp=Z,27nm,0.8s						
EPF	Esparros	148.60	341	ePKP1	PKPbc	10 22 06.6	-0.8
SJPF	Ste Jean	148.99	343	ePKP1	PKPbc	10 22 08.9	+0.5
ETSF	Etsaut	148.99	342	ePKP1	PKPbc	10 22 09.1	+0.7
KEST	Kesra	150.30	322	PKPbc	PKPbc	10 22 12.5	+0.6
	comp=Z,4.8nm,0.6s,baz=140,slow=0.0,SNR=15						
ESDC	Sonseca Array	152.93	345	PKPbc	PKPbc	10 22 17.3	-0.3
	comp=Z,0.4nm,0.3s,baz=19,slow=8.7,SNR=3.7						
ESDC				PKPab	PKPab	10 22 29.5	-0.1
	comp=Z,2.6nm,0.9s,baz=24,slow=3.1,SNR=4.6						
TORD	Torodi Ar. Bea	165.81	270	PKP	PKPdf	10 22 25.2	-0.4
	comp=Z,2.5nm,1.0s,baz=38,slow=1.6,SNR=8.1						
TORD				PKPab	PKPab	10 23 26.5	0.0
	comp=Z,1.6nm,1.0s,baz=90,slow=3.0,SNR=5.9						

*ISCJB **04** 10:03:58.5±0.6,2364S±004×6670W±007,h202^{km}±8^{km}, mb3.8/7, Error ellipse: s-maj=10.4km s-min=6.7km az=7.4*
*IDC **04** 10:03:59.7±0.9,2350S×6668W,h192^{km}±8^{km}, mb3.7/7, mb1 3.8/13, mb1mx3.7/21, mbtmp3.7/13, Error ellipse: s-maj=15.3km s-min=12.2km az=32.0*
*NEIC **04** 10:03:59.9±0.7,2355S×6666W,h197^{km}±8^{km}, MD4.1(GUC), Error ellipse: s-maj=11.6km s-min=10.3km az=115.0*
*GUC **04** 10:04:01.3±0.7,2391S×6722W,h237^{km}±97^{km}, MD4.1, ML4.5*
ISC 04 10:03:59.5±0.6,**2363S**±005×**6669W**±007,**h195**^{km}±7^{km}, **n26**,σ**1^{s}25**/30,**mb3.8**/7,**3C-1D,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.29	296	P	Pn	10 04 41.6	+0.9
	170nm,0.3s,baz=110,slow=6.5,SNR=1234						
LVC				S	Sn	10 05 12.3	-0.4
	48nm,0.3s,baz=280,slow=22,SNR=13						
CEN1	Los Morros	3.24	273	⇓ iP	Pn	10 04 54.1	+2.4
CEN1				i S	Sn	10 05 33.3	+0.9
CEN1				AML	AML	10 05 38.8	
	comp=E,336nm,0.4s						
ANCH	Antofagasta	3.42	268	⇑ iP	Pn	10 04 57.2	+3.4
ANCH				i S	Sn	10 05 37.6	+1.3
CPN1	Cerro Paranal	3.54	253	⇑ iP	Pn	10 04 55.8	+0.4
CPN1				i S	Sn	10 05 36.9	-2.2
CPN1				AML	AML	10 05 38.8	
	comp=E,831nm,0.5s						
CDCH	Caldera	5.08	227	⇑ iP	Pn	10 05 13.8	-1.0
CDCH				i S	Sn	10 06 09.6	-4.6
VACH	Vallenar	6.14	216	i S	Sn	10 06 35.1	-3.7
LPAZ	La Paz	7.43	349	P	Pn	10 05 45.1	-0.3
	comp=E,1.5nm,0.3s,baz=146,slow=5.5,SNR=41						
LPAZ				S	Sn	10 07 05.8	-3.5
	baz=66,slow=20,SNR=2.3						
TLL	Tololo Astrono	7.48	209	i S	Sn	10 07 08.7	-1.7
CFAA	Coronel Fontan	8.06	189	P	Pn	10 05 53.6	0.0
	comp=E,0.1nm,0.3s,baz=19,slow=14,SNR=9.1						
CFAA				S	Sn	10 07 21.1	-3.1
	comp=E,0.7nm,0.3s,baz=246,slow=12,SNR=14						
CPUP	Villa Florida	8.90	110	P	Pn	10 06 06.0	+1.5
	comp=E,0.4nm,0.3s,baz=275,slow=9.2,SNR=10						
CPUP	Villa Florida	8.90	110	eP	Pn	10 06 05.8	+1.3
SIV	San Ignacio	9.25	36	P	Pn	10 06 07.6	-1.5
	comp=E,2.1nm,0.3s,baz=220,slow=12,SNR=40						
SIV				S	Sn	10 07 36.3	-16
	comp=E,0.0nm,0.3s,baz=241,slow=15,SNR=3.5						
PLCA	Paso Flores	17.36	190	P	Pn	10 07 52.0	+1.7
	comp=E,0.2nm,0.3s,baz=22,slow=14,SNR=4.4						
BDFB	Brasilia	19.28	69	P	P	10 08 11.0	+1.3
	comp=E,2.9nm,0.3s,baz=234,slow=11,SNR=36						
DBIC	Dimbokro	67.41	72	P	P	10 14 33.9	-0.6
	comp=E,2.4nm,0.5s,mb4.1,baz=210,slow=11,SNR=3.8						
ANMO	Albuquerque	69.40	326	P	P	10 14 47.2	+0.9
	comp=E,1.2nm,0.6s,mb3.7,baz=172,slow=6.4,SNR=8.2						
TOA0	Torodi Ar. Sit	76.17	69	eP	P	10 15 25.9	-0.6
TORD	Torodi Ar. Bea	76.17	69	P	P	10 15 26.1	-0.5
	comp=E,1.7nm,0.3s,mb4.1,baz=261,slow=5.8,SNR=72						
TORD				pP	pP	10 16 18.1	+4.8
	comp=E,0.5nm,0.7s,baz=230,slow=5.0,SNR=1.4						
PDAR	Pinedale Array	76.98	329	P	P	10 15 30.9	+0.4
	comp=E,0.5nm,0.6s,mb3.3,baz=131,slow=6.7,SNR=4.5						
ULM	Lac du Bonnet	77.97	341	P	P	10 15 35.0	-0.8
	comp=E,1.0nm,0.5s,mb3.7,baz=158,slow=11,SNR=2.2						
BOSA	Boshof	80.64	117	P	P	10 15 51.5	+0.5
	comp=E,2.0nm,0.5s,mb4.0,baz=171,slow=3.0,SNR=7.6						
YBH	Yreka Blue Hor	83.15	321	P	P	10 16 03.2	-0.3
	comp=E,0.4nm,0.2s,mb3.7,baz=124,slow=4.5,SNR=6.1						
ASAR	Alice Springs	128.91	204	PKP	PKPdf	10 22 44.9	+0.3
	comp=E,0.3nm,0.9s,baz=123,slow=1.9,SNR=2.5						
WRA	Warramunga Arr	132.09	207	PKP	PKPdf	10 22 51.4	+0.7
	comp=E,0.3nm,0.9s,baz=165,slow=1.7,SNR=4.3						
MKAR	Makanchi Array	146.05	39	PKPbc	PKPbc	10 23 16.9	+0.5
	comp=E,1.2nm,0.7s,baz=323,slow=3.2,SNR=8.2						
MKAR				pPKPbc	pPKPbc	10 24 13.0	+6.8
	comp=E,0.2nm,0.2s,baz=270,slow=3.0,SNR=1.7						
CMAR	Chiang Mai Arr	165.63	108	PKPab	PKPab	10 24 42.5	+1.0
	comp=E,1.0nm,0.6s,baz=255,slow=5.7,SNR=4.7						

NEIC 04 10:39:50.1,3681S×17774E,h176^{km},MG3.9(WEL),**After WEL.,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.88	149	P	Pn	10 40 16.5	0.0
MXZ				S	Sn	10 40 36.5	-0.4
PUZ	Puketiti	1.33	162	P	Pn	10 40 20.3	+0.2
PUZ				S	Sn	10 40 43.0	-0.4
MWZ	Matawai	1.54	186	P	Pn	10 40 22.4	+0.4
URZ	Urewera	1.54	199	P	Pn	10 40 22.1	+0.1
KUZ	Kuaotunu	1.62	271	P	Pn	10 40 22.7	-0.2
KNZ	Kokohu	2.21	181	P	Pn	10 40 29.2	0.0
BKZ	Black Stump Fm	2.56	202	P	Pn	10 40 32.5	-0.6
TUVZ	Tukino	2.96	213	P	Pn	10 40 38.8	+0.8
FWVZ	Far West T-bar	3.00	215	P	Pn	10 40 38.4	0.0
MOVZ	Moawhango	3.04	211	P	Pn	10 40 37.9	-1.0
TSZ	Takapari Road	3.54	203	P	Pn	10 40 43.9	-1.2
MRZ	Mangatainoka R	4.21	203	P	Pn	10 40 51.4	-2.2
KIW	Kapiti Island	4.62	208	P	Pn	10 40 56.1	-2.8
MTW	Mount Morrison	4.68	201	P	Pn	10 40 56.9	-2.9
CAW	Cannon Point	4.78	205	P	Pn	10 40 57.9	-3.0
MRW	Makara Radio	5.01	207	P	Pn	10 41 01.0	-3.0
TCW	Tory Channel	5.16	210	P	Pn	10 41 02.8	-3.2
NNZ	Nelson	5.56	216	P	Pn	10 41 08.4	-2.8
KHZ	Kahutara	6.47	209	P	Pn	10 41 19.6	-3.6
LTZ	Lake Taylor	7.30	214	P	Pn	10 41 30.2	-3.9

*IDC **04** 11:01:28.1±10.0,12.16S×16587E,h46^{km}±73^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.5/16, mbtmp3.7/5, ML4.8/1, Error ellipse: s-maj=75.1km s-min=39.2km az=104.0*
ISC 04 11:01:27.0±5.8,**122S**±02×**1659E**±03,**h38**^{km}±43^{km},**n5**, σ**0^{s}28**/6,**mb3.6**/4,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.49	294	P	Pn	11 02 60.0	0.0
	20nm,0.3s,baz=194,slow=8.6,SNR=5.1						
HNR				S	Sn	11 04 12.8	0.0
	4.2nm,0.3s,baz=323,slow=23,SNR=2.8						
WRA	Warramunga Arr	31.28	252	P	P	11 07 43.3	-0.2
	0.3nm,0.8s,mb3.2,baz=78,slow=7.6,SNR=3.3						
ASAR	Alice Springs	32.46	245	P	P	11 07 54.1	+0.2
	0.3nm,0.7s,mb3.2,baz=68,slow=10,SNR=5.3						
SONM	Songino Array	79.69	324	P	P	11 13 30.5	-0.2
	0.5nm,0.7s,mb3.5,baz=132,slow=8.0,SNR=3.7						
MKAR	Makanchi Array	94.48	317	P	P	11 14 43.5	+0.2
	1.4nm,0.7s,mb4.5,baz=98,slow=6.1,SNR=7.8						

*HLW **04** 11:18:42.3,2973N×3679E,h20^{km}, Mb2.9*
*CSEM **04** 11:18:42.7±0.6,2980N×3644E,h2^{km}, ML2.9, Error ellipse: s-maj=13.6km s-min=7.6km az=78.0*
*SGS **04** 11:18:45.0,3006N×3607E,h6^{km}*
ISC 04 11:18:40.6±1.7,**2993N**±007×**367E**±01,**h10**^{km},**n11**, σ**1^{s}17**/15,**Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HQLS		1.52	246	S	Sn	11 19 21.4	-6.3
HQLS		1.52	246	P	Pn	11 19 06.1	-1.7
JLOS		1.57	221	P	Pn	11 19 09.2	+0.8
JLOS		1.57	221	P	Pn	11 19 09.2	+0.8
JLOS				S	Sn	11 19 27.8	-1.0
HBST	Basata	1.82	247	P	Pn	11 19 11.9	-0.1
HBST				S	Sn	11 19 33.9	-1.2
RSHS		2.30	225	S	Sn	11 19 48.5	+1.7
RSHS		2.30	225	P	Pn	11 19 18.4	-0.1
HNKL	Nakhl	2.32	271	P	Pn	11 19 19.6	+0.8
HNKL				S	Sn	11 19 47.5	+0.1
HNKL	Nakhl	2.32	271	P	Pn	11 19 19.6	+0.8
HNKL				S	Sn	11 19 47.5	+0.1
RSH		2.73	293	P	Pn	11 19 27.1	+2.6
HRSH	Kfar Ka'horesh	3.00	337	P	Pn	11 19 27.1	-1.1

IDC 04 11:19:56.6±13.0,**1214S**×**16733E**,**h0**^{km},**mb3.6**/3, **mb1 3.9**/3,**mb1mx3.6**/15,**mbtmp3.6**/3,**MS3.2**/1,**Ms1 3.2**/1, **ms1mx2.4**/21,**Error ellipse: s-maj=322.9km s-min=73.7km az=114.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	7.73	290	LR	LR	11 24 35.3	
	comp=Z,172nm,21.0s,baz=115,slow=36						
WRA	Warramunga Arr	32.59	252	P	P	11 26 30.2	+0.1
	0.2nm,0.5s,baz=84,slow=9.3,SNR=3.9						
ASAR	Alice Springs	33.72	245	P	P	11 26 40.0	+0.1
	0.6nm,0.8s,baz=70,slow=9.2,SNR=3.8						
CMAR	Chiang Mai Arr	73.97	293	P	P	11 31 34.4	0.0
	1.2nm,0.8s,baz=145,slow=3.3,SNR=3.0						

*NIED **04** 11:37:00,4540N×15050E,h35^{km}, Mw3.8 Best double couple: M₀5.72000×10^{14} NP1:φ$_s$36.00000°,δ59.00000°, λ72.00000°. NP2:φ$_s$248.00000°,δ35.00000°,λ117.00000°.*
JMA 04 11:37:32.9±0.4,**4544N**×**15047E**,**h30**^{km},**M4.3**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	3.97	240	P	Pn	11 38 30.7	-1.0
NEM2				eS	Sn	11 39 13.1	-4.1
JRA	Rausu	4.10	250	P	Pn	11 38 35.2	+1.8
JNK	Nakash	4.51	248	P	Pn	11 38 40.0	+0.9
JNK				eS	Sn	11 39 30.7	+0.2
JAK	Akkeshi	4.81	242	P	Pn	11 38 42.5	-0.8
JAK				eS	Sn	11 39 34.2	-3.8
JTKR	Abashiri--Toko	4.90	255	P	Pn	11 38 46.8	+2.3
JAR	Ashorobuto	5.26	248	P	Pn	11 38 51.2	+1.8
JMP	Maruseppu	5.26	257	P	Pn	11 38 52.1	+2.6
JOB	Onbets	5.40	244	P	Pn	11 38 51.9	+0.5
JOB				eS	Sn	11 39 50.2	-2.3
JKK2	Kamakawa 2	5.73	257	P	Pn	11 38 58.5	+2.7
JCH	Churui	5.85	244	P	Pn	11 38 57.2	-0.3
JCH				eS	Sn	11 39 59.6	-3.9
JNBK	Urakawa-nobuka	6.41	243	P	Pn	11 39 04.5	-0.7
JNBK				eS	Sn	11 40 12.7	-4.6
JNB	Noboribetsu	7.42	250	P	Pn	11 39 20.0	+0.9
JKB	Kayabe	7.71	246	P	Pn	11 39 22.6	-0.4
JKB				eS	Sn	11 40 42.9	-6.3
JANG	Nango	8.29	236	eS	Sn	11 40 53.4	-10
JTM	Tenmabayashi	8.30	239	eS	Sn	11 40 54.9	-8.9
JTH	Tanohata	8.39	232	eS	Sn	11 40 53.8	-12
OFUJ	Ofunato	9.10	229	eS	Sn	11 41 12.7	-11
JRG	Rokugo	9.45	234	eS	Sn	11 41 21.4	-11
JIO	Ouri	9.74	227	eS	Sn	11 41 27.0	-12

*IDC **04** 11:45:09.9±2.4,4744S×16562E,h0^{km}, mb4.0/3, mb1 4.3/5, mb1mx4.1/13, mbtmp4.1/5, ML3.7/2, MS3.8/3, Ms1 3.7/3, ms1mx3.2/19, Error ellipse: s-maj=69.5km s-min=29.3km az=167.0*
*NEIC **04** 11:45:10.6,4760S×16522E,h74^{km}, ML4.7(WEL), After WEL.*
*ISCJB **04** 11:45:12.9±1.8,478S±02×1660E±02,h65^{km}±19^{km}, mb3.9/3, Error ellipse: s-maj=28.9km s-min=17.4km az=142.1*
ISC 04 11:45:12.4±2.3,**476S**±02×**1656E**±01,**h20**^{km}±20^{km},**n28**, σ**1^{s}12**/28,**mb4.0**/3,**MS3.7**/3,**Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	2.33	44	P	Pn	11 45 49.5	-0.1
WHZ				S	Sn	11 46 17.8	+0.2
DCZ	Deep Cove	2.36	27	P	Pn	11 45 49.1	-0.8
MLZ	Mavora Lakes	2.86	39	P	Pn	11 45 56.6	-0.1
MLZ				S	Sn	11 46 30.5	0.0
TUZ	Tuapeka	3.21	61	P	Pn	11 46 02.1	+0.5
TUZ				S	Sn	11 46 41.1	+1.9
MSZ	Milford Sound	3.33	30	P	Pn	11 46 04.5	+1.3
EAZ	Earnscleugh	3.48	49	P	Pn	11 46 05.4	+0.1
WKZ	Wanaka	3.63	42	P	Pn	11 46 08.4	+1.0
ODZ	Otahua Downs	4.32	56	P	Pn	11 46 15.5	-1.3
LBZ	Lake Benmore	4.52	47	P	Pn	11 46 18.2	-1.4
FOZ	Fox Glacier	4.94	37	P	Pn	11 46 27.5	+2.2
RPZ	Rata Peaks	5.44	47	Pn	Pn	11 46 29.5	-2.7
	1.8nm,0.3s,baz=30,slow=4.5,SNR=16						
RPZ				Sn	Sn	11 47 31.6	-2.5
	6.9nm,0.3s,baz=90,slow=7.4,SNR=3.1						
RPZ	Rata Peaks	5.44	47	P	Pn	11 46 29.6	-2.6
WVZ	Waitaha Valley	5.78	41	P	Pn	11 46 37.9	+1.0
LTZ	Lake Taylor	6.72	47	P	Pn	11 46 47.6	-2.3
DSZ	Denniston Nort	7.32	39	P	Pn	11 46 57.8	-0.2
THZ	Tophouse	7.80	44	P	Pn	11 47 05.1	+0.4
QRZ	Quartz Range	8.38	39	P	Pn	11 47 12.3	-0.4
NNZ	Nelson	8.45	44	P	Pn	11 47 15.0	+1.4
URZ	Urewera	12.55	46	Pn	Pn	11 48 09.3	-0.5
	0.7nm,0.3s,baz=274,slow=7.4,SNR=5.0						
URZ				Sn	Sn	11 50 19.8	-9.0
	0.2nm,0.3s,baz=198,slow=22,SNR=1.9						
WCZ	Waipu Caves	13.33	32	P	Pn	11 48 21.0	+0.7
STKA	Stephens Creek	24.09	302	LR	LR	11 58 49.0	
	comp=Z,112nm,21.2s,MS3.3,baz=204,slow=34						
CTA	Charters Tower	31.61	324	LR	LR	12 02 47.8	
	comp=Z,120nm,20.4s,MS3.6,baz=328,slow=34						
ASAR	Alice Springs	34.73	302	P	P	11 52 01.2	+0.3
	2.1nm,0.7s,mb4.2,baz=133,slow=8.4,SNR=24						
WRA	Warramunga Arr	37.45	307	P	P	11 52 23.8	-0.4
	1.2nm,0.8s,mb3.8,baz=141,slow=7.8,SNR=9.0						
MJAR	Matsushiro Arr	87.26	338	LR	LR	12 32 09.9	
	comp=Z,101nm,18.8s,MS4.2,baz=230,slow=32						
CMAR	Chiang Mai Arr	88.69	299	P	P	11 58 04.2	+0.1
	0.8nm,0.6s,mb4.2,baz=160,slow=3.8,SNR=5.2						
TORD	Torodi Ar. Bea	143.13	207	PKP	PKPdf	12 04 43.4	-1.6
	0.6nm,0.8s,baz=147,slow=2.9,SNR=3.1						
ARCES	ARCESS Array B	150.65	333	PKPbc	PKPbc	12 05 03.0	+1.6
	4.3nm,0.8s,baz=46,slow=3.5,SNR=8.6						

*NEIC **04** 11:57:16.9±0.7,4880N×15581E,h10^{km}, Error ellipse: s-maj=24.3km s-min=11.4km az=119.0*
*MOS **04** 11:57:20.8±1.4,49.19N×15551E,h58^{km}, mb4.0/4, Error ellipse: s-maj=24.5km s-min=10.6km az=62.4*
*ISCJB **04** 11:57:21.5±1.2,49.12N±009×1556E±0.1,h61^{km}±12^{km}, mb3.6/8, Error ellipse: s-maj=20.2km s-min=8.4km az=135.9*
*IDC **04** 11:57:21.6±3.2,4893N×15578E,h46^{km}±32^{km}, mb3.3/7, mb1 3.7/9, mb1mx3.5/21, mbtmp3.5/9, ML3.7/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/21, Error ellipse: s-maj=36.5km s-min=17.0km az=147.0*
*KRSC **04** 11:57:21.4±1.2,4932N×156.11E,h5^{km}±5^{km}, ML4.5*
ISC 04 11:57:23.7±1.0,**4918N**±009×**1555E**±01,**h63**^{km}±10^{km},**n36**, σ**1^{s}46**/40,**mb3.6**/8,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.56	15	ePN	Pn	11 57 46.5	-2.7
SKR				i S	Sn	11 58 06.0	-2.5
SKR				pmax	pmax		
	comp=N,20nm,0.5s						
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				smax			
	comp=N,1μm,2.0s						
SKR				smax			
	comp=E,2μm,2.0s						
SKR				smax			
	comp=N,350nm,0.2s						
SKR				smax			
	comp=E,1μm,0.2s						
ALID	Alaid	1.69	1	eP	Pn	11 57 50.4	-0.6
ALID				i S	Sn	11 58 11.5	-0.2
MIPR	Malaya Ipel'ka	3.21	14	P	Pn	11 58 11.4	-0.1
RUS	Russkaya	3.78	29	eP	Pn	11 58 17.4	-2.0
RUS				i S	Sn	11 58 58.7	-3.9
PEA0B	Petropavlovsk-	4.17	19	eP	Pn	11 58 25.2	+0.4
PETK	Petropavlovsk-	4.17	19	P	Pn	11 58 24.8	+0.1
	comp=E,2.4nm,0.3s,baz=180,slow=10,SNR=40						
PETK				S	Sn	11 59 25.7	+13
	baz=209,slow=21,SNR=2.3						
PETK				LR	LR	12 00 25.4	
	comp=E,156nm,18.7s,baz=233,slow=42						
PET	Petropavlovsk	4.34	26	ePN	Pn	11 58 26.8	-0.2
PET				eS	Sn	11 59 18.5	+2.3
PET				pmax	pmax		
	comp=Z,33nm,0.6s						
PET				smax			
	comp=N,126nm,0.6s						
PET				smax			
	comp=E,104nm,0.6s						
PET	Petropavlovsk	4.34	26	P	Pn	11 58 26.6	-0.4
PET				i S	Sn	11 59 14.5	-1.7
PET	Petropavlovsk	4.34	26	eP	Pn	11 58 26.7	-0.3
GNL	Ganaly	4.78	18	P	Pn	11 58 34.3	+1.3
SPN	Mys Shipunski	4.85	34	eP	Pn	11 58 33.0	-1.0
SPN				i S	Sn	11 59 26.0	-2.8
KMNR	Kamenistaya	7.20	22	P	Pn	11 59 08.0	+1.9
KIRR	Kirishev	7.40	22	P	Pn	11 59 10.6	+1.7
BZMR	Bezymyannaya	7.42	22	P	Pn	11 59 10.7	+1.6
BZWR	Bezymyannyi-We	7.45	22	P	Pn	11 59 11.5	+2.0
BZGR	Bezymyannyi-Gr	7.48	23	P	Pn	11 59 11.0	+1.1
SRDR	Sredinnyy	7.60	18	P	Pn	11 59 13.2	+1.7
YSS	Yuzh-Sakhalins	8.82	260	ePN	Pn	11 59 26.0	-2.3
ASAJ	Asahikawa	10.21	245	P	Pn	11 59 46.9	-0.4
	comp=E,1.1nm,0.3s,baz=70,slow=12,SNR=11						
ASAJ	Asahikawa	10.21	245	PN	Pn	11 59 46.9	-0.4
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	Erimo	11.22	235	ePN	Pn	12 00 03.4	+2.3
KSRS	Korea Array	23.10	250	P	P	12 02 23.8	-0.2
	comp=Z,1.5nm,0.7s,mb3.5,baz=45,slow=10,SNR=5.7						
KSRS	Korea Array	23.10	250	P	P	12 02 23.8	-0.2
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
SONM	Songino Array	32.11	287	LR	LR	12 18 16.9	
	comp=Z,58nm,18.0s,baz=66,slow=39						
COLA	College	33.24	41	eP	P	12 03 54.2	-0.1
ZALV	Zalesovo Beam	42.53	304	LR	LR	12 23 20.1	
	comp=Z,14nm,20.3s,baz=226,slow=36						
MKAR	Makanchi Array	47.27	296	P	P	12 05 51.8	+1.5
	comp=Z,0.2nm,0.2s,mb3.6,baz=54,slow=9.8,SNR=3.0						
KURK	Kurchatov	47.38	303	eP	P	12 05 49.7	-1.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
CMAR	Chiang Mai Arr	54.49	257	P	P	12 06 46.4	+1.5
	comp=Z,0.5nm,0.3s,mb3.9,baz=46,slow=7.7,SNR=3.4						
CMAR	Chiang Mai Arr	54.49	257	P	P	12 06 46.4	+1.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	ARCESS Array B	56.08	341	LR	LR	12 35 24.0	
	comp=Z,42nm,19.4s,baz=139,slow=40						
NVAR	Mina Array Bea	59.92	65	P	P	12 07 24.1	+1.1
	comp=Z,0.3nm,0.6s,mb3.5,baz=302,slow=8.4,SNR=3.0						
PDAR	Pinedale Array	62.04	56	P	P	12 07 35.9	-1.4
	comp=Z,0.3nm,0.7s,mb3.5,baz=358,slow=2.2,SNR=2.8						
WRA	Warramunga Arr	71.34	201	P	P	12 08 34.7	-1.8
	comp=Z,0.7nm,0.9s,mb3.6,baz=12,slow=5.7,SNR=4.7						
WRA	Warramunga Arr	71.34	201	i P	P	12 08 34.7	-1.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	75.03	200	P	P	12 08 57.4	-0.9
	comp=Z,0.2nm,0.7s,mb3.2,baz=10.0,slow=6.2,SNR=5.2						

*TAP **04** 12:05:01.6,2327N×12059E,h14^{km}, ML3.7,B*
*ISCJB **04** 12:05:02.9±0.2,2327N±001×12061E±002,h12^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=2.1km az=174.6*
*JMA **04** 12:05:03.3±0.3,23.18N×12060E,h112^{km}, M2.8*
ISC 04 12:05:03.1±0.2,**2327N**±001×**12060E**±002,**h12**^{km}±2^{km}, **n59**,σ**0^{s}99**/105,**16C-5D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTP	Ta-pu	0.03	155	⇓ iP	Pg	12 05 04.6	-0.6
	baz=136						
TWK	Hsinying	0.10	267	⇑ iP	Pg	12 05 05.3	-0.7
	baz=270						
TWK				i S	Sg	12 05 06.7	-1.3
	baz=270						
STYT	Tauyuan	0.18	127	⇑ iP	Pg	12 05 06.6	-0.5
	baz=117						
STYT				S	Sg	12 05 10.0	+0.1
	baz=117						
SGST	Jiashian	0.19	185	⇓ iP	Pg	12 05 06.8	-0.4
	baz=182						
SGST				S	Sg	12 05 10.5	+0.4
	baz=182						
CHY	Chiayi	0.28	324	⇑ iP	Pg	12 05 08.7	-0.1
	baz=326						
CHY				S	Sg	12 05 13.8	+1.2
	baz=326						
ALS	Alishan	0.30	38	⇓ iP	Pg	12 05 08.9	-0.4
	baz=48						
ALS				eS	Sg	12 05 14.2	+0.8
	baz=48						
CHN8	Yiju	0.37	282	⇑ iP	Pg	12 05 09.8	-0.5
	baz=283						
CHN8				i S	Sg	12 05 16.6	+1.3
	baz=283						
SCLT	Jiali	0.39	256	P	Pg	12 05 10.8	0.0
	baz=256						
SCLT				eS	Sg	12 05 18.0	+2.1
	baz=256						
YUS	Yu-Shan	0.39	56	⇑ iP	Pg	12 05 10.8	0.0
	baz=67						
YUS				i S	Sg	12 05 16.8	+0.8
	baz=67						
ELDTW	Lidau	0.39	102	⇑ iP	Pg	12 05 10.3	-0.5
	baz=95						
ELDTW				i S	Sg	12 05 16.4	+0.3
	baz=95						
WGK	Gukeng	0.41	355	P	Pg	12 05 11.2	0.0
	baz=356						
WGK				S	Sg	12 05 18.6	+1.8
	baz=356						
TAI1	Yung-k'ang	0.41	236	i P	Pg	12 05 11.3	+0.1
	baz=236						
TAI1				S	Sg	12 05 19.1	+2.4
	baz=236						
TWM1	Shoushan	0.48	200	eP	Pg	12 05 13.4	+1.0
	baz=188						
WSF	Szhu	0.50	316	⇑ iP	Pg	12 05 12.4	-0.5
	baz=317						
WSF				i S	Sg	12 05 20.8	+1.2
	baz=317						
SSD	Sandimen	0.53	177	⇑ iP	Pg	12 05 13.0	-0.4
	baz=176						
SSD				S	Sg	12 05 21.0	+0.7
	baz=176						
WNT	Mingjian	0.61	7	P	Pg	12 05 14.8	-0.1
	baz=8.0						
WNT				S	Sg	12 05 24.6	+1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=8.0						
TWG	Pinlang baz=128	0.62	136	⇑iP	Pg	12 05 14.6	-0.6
TWG	baz=128			S	Sg	12 05 23.4	-0.1
TWF1	Yuli baz=83	0.65	83	⇑iP	Pg	12 05 14.7	-0.9
TWF1	baz=83			S	Sg	12 05 23.3	-0.8
WTCT	Ta-ch'eng baz=334	0.66	334	eP	Pg	12 05 14.7	-1.2
WTCT	baz=334			eS	Sg	12 05 25.0	+0.5
SMLT	Sun Moon Lake baz=25	0.67	24	i P	Pg	12 05 15.6	-0.4
SMLT	baz=25			S	Sg	12 05 26.1	+1.3
TYC	Yuchr baz=21	0.67	20	⇓iP	Pg	12 05 15.6	-0.5
TYC	baz=21			eS	Sg	12 05 25.2	+0.3
EHY	Hungye baz=77	0.70	71	⇑iP	Pg	12 05 15.8	-0.8
EHY	baz=77			eS	Sg	12 05 24.7	-1.2
TTN	Taitung baz=129	0.72	136	P	Pg	12 05 16.8	-0.2
TTN	baz=129			eS	Sg	12 05 28.7	+2.2
CHKT	Chengkung baz=104	0.72	104	⇑iP	Pg	12 05 16.9	-0.2
CHKT	baz=104			eS	Sg	12 05 28.6	+2.0
ECL	Taimali baz=144	0.75	154	⇑iP	Pg	12 05 16.6	-0.9
ECL	baz=144			S	Sg	12 05 27.9	+0.6
TCU	Taichung baz=352	0.87	5	eP	Pg	12 05 18.3	-1.7
TCU	baz=352			eS	Sg	12 05 31.6	+0.3
SCZT	Fangliau baz=170	0.90	179	eP	Pg	12 05 19.4	-1.0
SCZT	baz=170			eS	Sg	12 05 33.7	+1.6
EAST	Anshuo baz=160	0.91	166	⇑iP	Pg	12 05 19.9	-0.8
EAST	baz=160			eS	Sg	12 05 33.6	+1.0
ESL	Shilin baz=63	0.94	55	eP	Pg	12 05 19.8	-1.3
ESL	baz=63			eS	Sg	12 05 33.0	-0.3
TAW	Tawu baz=163	0.95	163	eP	Pg	12 05 20.2	-1.2
TAW	baz=163			eS	Sg	12 05 34.6	+0.9
PNG	Penghu baz=273	1.00	287	⇑iP	Pb	12 05 20.1	-2.3
PNG	baz=273			eS	Sg	12 05 33.5	-2.0
WHF	Hehuan Shan baz=35	1.06	35	⇑iP	Pb	12 05 22.5	-0.9
WHF	baz=35			eS	Sb	12 05 37.5	+0.3
TWQ1	Liyutan baz=355	1.08	8	⇓iP	Pb	12 05 22.7	-1.0
TWQ1	baz=355			S	Sb	12 05 38.0	+0.2
TWT	Tachien baz=28	1.11	28	eP	Pb	12 05 22.2	-2.0
TWT	baz=28			eS	Sb	12 05 38.3	-0.3
NSY	Sanyi baz=356	1.15	7	eP	Pb	12 05 23.5	-1.4
NSY	baz=356			eS	Sb	12 05 40.8	+1.1
HWA	Hwalien baz=53	1.16	53	eP	Pb	12 05 24.8	-0.3
HWA	baz=53			eS	Sb	12 05 40.2	+0.2
TWD	Chiawan baz=58	1.22	48	i P	Pn	12 05 25.1	-0.8
TWD	baz=58			S	Sb	12 05 40.6	-1.1
HEN	Hengchun baz=174	1.27	174	eP	Pn	12 05 27.0	+0.4
TWK1	Hengchun baz=163	1.34	172	eP	Pn	12 05 27.5	-0.1
NNS	Nan Shan baz=32	1.36	31	eP	Pn	12 05 27.4	-0.5
NSTT	Nanjuang baz=14	1.40	15	P	Pn	12 05 27.0	-1.4
NSTT	baz=14			S	Sn	12 05 46.5	-0.4
LAY	Lan-yu baz=144	1.51	144	eP	Pn	12 05 27.9	-2.0
ENA	Nanau baz=57	1.55	42	eP	Pn	12 05 30.5	-0.1
ENA	baz=57			eS	Sn	12 05 51.5	+0.9
NSK	Sanguang baz=27	1.56	26	eP	Pn	12 05 30.0	-0.6
ENTT	Nioudou baz=24	1.62	33	P	Pn	12 05 31.9	+0.4
ENTT	baz=24			eS	Sn	12 05 54.3	+2.0
TWE	Neicheng baz=34	1.74	34	eP	Pn	12 05 34.0	+0.9
TWE	baz=34			eS	Sn	12 05 58.2	+3.0
TWC	Suao baz=31	1.75	40	P	Pn	12 05 34.1	+0.8
TWC	baz=31			eS	Sn	12 05 56.5	+0.9
TWA	Mucha baz=13	1.92	28	eP	Pn	12 05 37.7	+2.1
TWS1	Kuangyinshan baz=7.0	1.97	22	eP	Pn	12 05 36.2	0.0
NWF	Wu-fen Shan baz=32	2.09	31	eP	Pn	12 05 39.8	+1.8
TWB1	Santiao Chiao baz=19	2.14	36	eP	Pn	12 05 38.3	-0.3
KNM	Kinmen baz=313	2.29	300	eP	Pn	12 05 39.5	-1.2
YOJ	Yonaguni jima	2.50	61	P	Pn	12 05 44.1	+0.5
YOJ				eS	Sn	12 06 14.5	+0.4
YOJ	Yonaguni jima baz=62	2.50	61	eP	Pn	12 05 43.1	-0.5
HATJ	Hateruma jima	3.04	74	P	Pn	12 05 50.8	-0.2
HATJ				eS	Sn	12 06 27.3	0.0
IRIF	Iriomote-Funau	3.06	69	P	Pn	12 05 51.1	-0.1
IRIF				S	Sn	12 06 28.6	+0.9
JKRS	Kuro-shima	3.27	72	P	Pn	12 05 54.2	+0.1
JKRS				eS	Sn	12 06 33.9	+0.9
JIJ	Ishigaki jima	3.42	71	P	Pn	12 05 55.8	-0.4
JIJ				eS	Sn	12 06 36.0	-0.7
JTJ	Tarama	3.99	69	P	Pn	12 06 04.3	+0.2
JTJ				eS	Sn	12 06 50.2	-0.6

NIED ***04*** *12:16:00, 2400N×12170E, h47km, Mw4.3 Best double couple: M₀3.22000×10^15 NP1:φs47.00000°, δ66.00000°, λ-128.00000°. NP2:φs290.00000°, δ44.00000°, λ-36.00000°.*

BJI ***04*** *12:16:29.5, 2366N×12179E, h40km, mB4.5, mb4.1, ML4.3, Ms4.0, Msz3.9*

NEIC ***04*** *12:16:31.4±1.0, 2375N×12177E, h29km±7km, mb4.3/6, Error ellipse: s-maj=7.8km s-min=5.9km az=78.0*

ISCJB ***04*** *12:16:32.9±0.2, 2384N±001×12175E±002, h48km±2km, mb4.1/16, MS3.7/4, Error ellipse: s-maj=2.7km s-min=1.9km az=42.4*

JMA ***04*** *12:16:33.9±0.2, 2402N×12174E, h78km±4km, M4.3*

IDC ***04*** *12:16:33.1±3.1, 2382N×12182E, h44km±32km, mb4.0/10, mb1 4.2/11, mb1mx4.0/21, mbtmp4.0/11, ML4.3/1, MS3.5/6, Ms1 3.5/6, ms1mx3.1/31, Error ellipse: s-maj=20.1km s-min=14.1km az=59.0*

TAP ***04*** *12:16:33.5, 2389N×12166E, h40km, ML4.8, B*

ISC 04 12:16:33.5±0.3**, 2385N**±001×**12175E**±001**, h33**km±2km**, n118, σ1§08**/186**, mb4.1**/16**, MS3.7**/4**, 25C-12D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien baz=331	0.18	315	⇓iP	Pb	12 16 40.4	+0.5
ESF	Shoufeng Towns baz=277	0.22	277	eP	Pb	12 16 40.3	+0.1
ESF	baz=277			S	Sb	12 16 45.5	+0.6
TEGC	Jichi Village baz=207	0.23	234	eP	Pb	12 16 41.3	+0.9
TEGC	baz=207			eS	Sb	12 16 47.5	+2.4
TWD	Chiawan baz=332	0.27	329	⇓iP	Pb	12 16 40.9	0.0
TWD	baz=332			i S	Sb	12 16 46.3	+0.4
ESL	Shilin baz=260	0.29	264	⇓iP	Pb	12 16 40.9	-0.1
ESL	baz=260			eS	Sb	12 16 45.6	-0.6
NACB	Ninganchiao	0.35	337	eP	Pb	12 16 41.2	-0.7
EHP	Heping Village baz=13	0.46	359	P	Pb	12 16 43.2	-0.3
EHP	baz=13			S	Sb	12 16 51.1	+0.7
EHY	Hungye baz=219	0.52	229	⇑iP	Pb	12 16 43.5	-0.7
EHY	baz=219			eS	Sb	12 16 50.6	-1.1
WHF	Hehuan Shan baz=302	0.53	304	⇓iP	Pb	12 16 43.9	-0.7
ENA	Nanau baz=13	0.58	360	⇑iP	Pb	12 16 44.9	-0.4
TWF1	Yuli baz=221	0.64	220	⇑iP	Pn	12 16 45.3	-0.9
TWF1	baz=221			eS	Sb	12 16 54.3	-0.8
TWT	Tachien baz=308	0.66	308	⇓iP	Pn	12 16 46.1	-0.4
TWT	baz=308			S	Sb	12 16 54.2	-1.5
NNS	Nan Shan baz=333	0.68	330	⇓iP	Pn	12 16 46.0	-0.8
NNS	baz=333			S	Sb	12 16 54.8	-1.4
TWC	Suao baz=7.0	0.77	7	⇑iP	Pn	12 16 48.0	+0.1
TWC	baz=7.0			eS	Sn	12 16 58.9	+0.6
SMLT	Sun Moon Lake baz=272	0.78	273	⇑iP	Pn	12 16 47.5	-0.6
SMLT	baz=272			S	Sn	12 16 57.1	-1.5
ENTT	Nioudou baz=353	0.81	348	⇓iP	Pn	12 16 48.0	-0.5
YUS	Yu-Shan baz=240	0.81	244	⇑iP	Pn	12 16 48.8	+0.3
YUS	baz=240			S	Sn	12 16 58.6	-0.8
TYC	Yuchr baz=274	0.82	274	⇑iP	Pn	12 16 47.9	-0.7
TYC	baz=274			eS	Sn	12 16 57.5	-2.1
CHKT	Chengkung baz=191	0.82	205	eP	Pn	12 16 47.8	-0.9
CHKT	baz=191			eS	Sn	12 17 01.1	+1.4
TWE	Neicheng baz=350	0.87	355	⇓iP	Pn	12 16 49.1	-0.4
TWE	baz=350			eS	Sn	12 17 00.1	-1.0
YHNB	Yeheng	0.89	338	eP	Pn	12 16 48.8	-0.8
NSK	Sanguang baz=330	0.90	337	⇓iP	Pn	12 16 49.4	-0.4
ILA	Ilan baz=352	0.92	0	eP	Pn	12 16 50.3	+0.3
ILA	baz=352			eS	Sn	12 17 03.9	+1.9
ALS	Alishan baz=241	0.93	249	⇑iP	Pn	12 16 50.4	+0.2
ALS	baz=241			eS	Sn	12 17 01.9	-0.3
ELDTW	Lidau baz=217	0.94	226	eP	Pn	12 16 49.3	-1.0
ELDTW	baz=217			eS	Sn	12 17 01.9	-0.6
WNT	Mingjian baz=270	0.97	272	⇑iP	Pn	12 16 51.2	+0.4
WNT	baz=270			S	Sn	12 17 03.5	+0.1
TWQ1	Liyutan baz=299	1.02	300	⇑iP	Pn	12 16 51.8	+0.4
TWQ1	baz=299			eS	Sn	12 17 04.2	-0.5
TCU	Taichung baz=286	1.02	287	⇑iP	Pn	12 16 52.1	+0.6
TCU	baz=286			S	Sn	12 17 05.8	+1.1
NSTT	Nanjuang baz=316	1.04	319	⇓iP	Pn	12 16 52.2	+0.5
NSTT	baz=316			S	Sn	12 17 04.3	-0.7
NSY	Sanyi baz=302	1.06	302	⇑iP	Pn	12 16 52.5	+0.4
NSY	baz=302			S	Sn	12 17 06.1	+0.4
WGK	Gukeng baz=260	1.10	262	⇑iP	Pn	12 16 52.8	+0.3
WGK	baz=260			eS	Sn	12 17 07.5	+1.0
STYT	Tauyuan baz=231	1.13	233	⇑iP	Pn	12 16 53.3	+0.3
STYT	baz=231			eS	Sn	12 17 07.5	+0.1
TWA	Mucha baz=343	1.14	353	eP	Pn	12 16 53.2	+0.1
TWA	baz=343			eS	Sn	12 17 07.1	-0.5
TATO	Taipei	1.15	348	eP	Pn	12 16 52.9	-0.3
TWB1	Santiao Chiao baz=29	1.18	11	⇑iP	Pn	12 16 54.4	+0.8
TWB1	baz=29			S	Sn	12 17 09.7	+1.2
HSN	Hsinchu baz=323	1.19	324	eP	Pn	12 16 54.2	+0.4
HSN	baz=323			eS	Sn	12 17 09.8	+1.1
TWG	Pinlang baz=198	1.19	211	⇑iP	Pn	12 16 52.5	-1.3
TWG	baz=198			eS	Sn	12 17 07.3	-1.6
WTP	Ta-pu baz=238	1.20	240	⇑iP	Pn	12 16 54.6	+0.7
WTP	baz=238			S	Sn	12 17 10.0	+1.0
TAP1	Taipei baz=351	1.21	350	eP	Pn	12 16 52.7	-1.3
TAP1	baz=351			eS	Sn	12 17 09.2	0.0
TTN	Taitung baz=204	1.22	207	eP	Pn	12 16 52.9	-1.3
NWF	Wu-fen Shan baz=346	1.22	1	eP	Pn	12 16 54.6	+0.4
NWF	baz=346			eS	Sn	12 17 10.8	+1.2
NCU	National Centr baz=335	1.23	336	eP	Pn	12 16 54.8	+0.4
NCU	baz=335			eS	Sn	12 17 10.7	+0.9
CHY	Chiayi baz=253	1.26	254	⇑iP	Pn	12 16 55.3	+0.6
CHY	baz=253			eS	Sn	12 17 11.7	+1.1
TWS1	Kuangyinshan baz=346	1.28	347	eP	Pn	12 16 55.2	+0.1
TWS1	baz=346			eS	Sn	12 17 12.1	+0.9
TWK	Hsinying baz=242	1.29	244	⇑iP	Pn	12 16 55.7	+0.6
TWK	baz=242			eS	Sn	12 17 11.6	+0.3
YOJ	Yonaguni jima	1.31	62	P	Pn	12 16 56.1	+0.7
YOJ				S	Sn	12 17 12.6	+0.9
YOJ	Yonaguni jima baz=78	1.31	62	⇓iP	Pn	12 16 56.2	+0.8
YOJ	baz=78			eS	Sn	12 17 12.7	+0.9
SGST	Jiashian baz=233	1.31	235	⇑iP	Pn	12 16 56.6	+1.2
SGST	baz=233			eS	Sn	12 17 13.4	+1.6
WTCT	Ta-ch'eng baz=270	1.34	271	⇑iP	Pn	12 16 56.3	+0.4
WTCT	baz=270			eS	Sn	12 17 13.2	+0.6
WSF	Szhu baz=251	1.41	262	⇑P	Pn	12 16 57.3	+0.4
WSF	baz=251			eS	Sn	12 17 15.6	+1.3
TWY	Chenhua baz=356	1.43	355	eP	Pn	12 16 56.7	-0.4
ECL	Taimali baz=202	1.44	211	eP	Pn	12 16 55.7	-1.5
ECL	baz=202			eS	Sn	12 17 15.2	+0.2
CHN8	Yiju baz=250	1.49	251	⇓iP	Pn	12 16 58.1	+0.1
CHN8	baz=250			eS	Sn	12 17 17.1	+0.8
SSD	Sandimen baz=223	1.50	223	eP	Pn	12 16 57.9	-0.2
SSD	baz=223			eS	Sn	12 17 18.8	+2.4
SCLT	Jiali baz=245	1.57	245	eP	Pn	12 16 59.5	+0.4
SCLT	baz=245			eS	Sn	12 17 19.4	+1.1
TWM1	Shoushan baz=244	1.59	230	eP	Pn	12 17 01.1	+1.9
TWM1	baz=244			eS	Sn	12 17 23.3	+4.7
TAI1	Yung-k'ang baz=240	1.61	240	eP	Pn	12 17 00.3	+0.8
TAI1	baz=240			eS	Sn	12 17 20.8	+1.7
EAST	Anshuo baz=201	1.67	210	eP	Pn	12 16 59.3	-1.1
TAW	Tawu baz=200	1.68	208	eP	Pn	12 17 00.1	-0.3
SCZT	Fangliau baz=228	1.80	215	eP	Pn	12 17 03.5	+1.3
SCZT	baz=228			eS	Sn	12 17 26.1	+2.3
PCYT	Pengchaiyu baz=19	1.80	9	P	Pn	12 17 02.3	+0.1
PCYT	baz=19			eS	Sn	12 17 25.7	+1.8
LAY	Lan-yu baz=175	1.81	186	eP	Pn	12 17 01.0	-1.3
LAY	baz=175			eS	Sn	12 17 23.4	-0.7
KAU	Kaohsiung baz=240	1.83	226	eP	Pn	12 17 03.9	+1.2
IRIF	Iriomote-Funau	1.88	75	P	Pn	12 17 04.3	+1.1
IRIF				S	Sn	12 17 27.5	+1.7
HATJ	Hateruma jima	1.90	83	P	Pn	12 17 04.6	+1.1
HATJ				S	Sn	12 17 28.0	+1.8
PNG	Penghu baz=263	2.03	263	⇑iP	Pn	12 17 04.7	-0.6
PNG	baz=263			eS	Sn	12 17 28.5	-1.0
HEN	Hengchun baz=198	2.05	207	eP	Pn	12 17 07.3	+1.6
HEN	baz=198			eS	Sn	12 17 33.0	+2.8
TWK1	Hengchun baz=207	2.08	205	eP	Pn	12 17 06.3	+0.2
TWK1	baz=207			eS	Sn	12 17 31.6	+0.7
JKRS	Kuro-shima	2.10	79	P	Pn	12 17 07.7	+1.3
JKRS				S	Sn	12 17 33.1	+1.7
JIJ	Ishigaki jima	2.25	76	P	Pn	12 17 09.0	+0.6
JIJ				S	Sn	12 17 35.1	+0.1
JTJ	Tarama	2.81	73	P	Pn	12 17 17.1	+1.0
JTJ				S	Sn	12 17 49.1	+0.2
QZH	Quanzhou	3.08	291	⇑iP	Pn	12 17 18.2	-1.5
QZH	comp=N,2μm,0.7s			Smax			
QZH	comp=E,1μm,0.5s			Smax			
QZH	comp=N,1μm,6.3s			LR	LR		
QZH	comp=E,2μm,7.2s			LR	LR		
QZH	comp=Z,1μm,7.4s			LR	LR		
KNM	Kinmen baz=279	3.08	281	⇑iP	Pn	12 17 20.2	+0.5
JMJ	Miyako jima 2	3.38	73	P	Pn	12 17 25.0	+1.1
JMJ				S	Sn	12 18 03.3	+0.5
JMJ	Miyako jima 2 baz=75	3.38	73	eP	Pn	12 17 24.4	+0.6
JOGS	Gusukube	3.46	74	P	Pn	12 17 26.2	+1.2
JOGS				S	Sn	12 18 06.9	+2.0
JKE	Kume jima 2	5.19	61	P	Pn	12 17 49.3	+0.5
JKE				S	Sn	12 18 45.8	-1.8
JAGN	Aguni-jima	5.68	60	P	Pn	12 17 55.7	+0.2
JAGN				S	Sn	12 18 58.5	-1.0
JJT2	Tamagusuku 2	5.91	66	P	Pn	12 18 00.0	+1.4
JIH	Iheya	6.46	59	P	Pn	12 18 06.1	-0.1
JIH				S	Sn	12 19 16.1	-2.7
JOW	Kunigami comp=Z,14nm,0.3s,baz=172,slow=11,SNR=45	6.61	62	P	Pn	12 18 07.5	-0.9
JOW	comp=Z,7.2nm,0.3s,baz=137,slow=28,SNR=4.4			S	Sn	12 19 21.6	-1.0
JOW	comp=Z,212nm,19.7s,baz=239,slow=40			LR	LR	12 20 59.7	
JOW	Kunigami	6.61	62	P	Pn	12 18 07.5	-0.8
JOW				S	Sn	12 19 19.5	-3.1
JOW	Kunigami baz=65	6.61	62	eP	Pn	12 18 07.0	-1.4
JTK	Tokunoshima	7.58	57	P	Pn	12 18 20.2	-1.5
JTK				S	Sn	12 19 42.2	-4.3
JAM	Amami Oshima	8.40	56	P	Pn	12 18 31.2	-1.6
JAM				S	Sn	12 20 01.0	-5.5
JMZ	Minamidaito 2	8.83	75	P	Pn	12 18 35.1	-3.7
JMZ				S	Sn	12 20 07.2	-10
QIZ	Qiongzhong	12.07	249	eP	Pn	12 19 20.7	-2.6
KSRS	Korea Array comp=Z,1.1nm,0.3s,baz=202,slow=12,SNR=26	14.56	20	P	Pn	12 19 59.0	+1.9
KSRS	comp=Z,54nm,18.6s,baz=185,slow=43			LR	LR	12 26 53.6	
XAN	Xi'an	15.12	315	P	Pn	12 20 03.8	-0.9
XAN				AP	pP	12 20 10.1	-8.1
XAN				XP	sP	12 20 13.7	-8.7
XAN	comp=Z,6.0nm,1.0s			AMB	AMB		
XAN	comp=Z,64nm,6.3s			AMB	AMB		
KMI	Kunming	17.35	278	P	Pn	12 20 25.8	-7.3
LZH	Lanzhou	19.69	312	eP	Pn	12 21 02.5	+1.0
LZH				AP	pP	12 21 07.4	-1.3
LZH				ePP		12 21 20.5	
LZH				eS	Sn	12 24 35.0	-6.8
LZH	comp=Z,19nm,1.1s			AMB	AMB		
LZH	comp=Z,81nm,4.0s			AMB	AMB		
LZH	comp=E,206nm,11.5s			LR	LR		
LZH	comp=Z,365nm,13.6s			LR	LR		
LZH	Lanzhou	19.69	312	eP	Pn	12 21 02.5	+1.0
LZH				pP	pP	12 21 07.4	-1.3
LZH				sP	sP	12 21 16.3	+3.4
LZH				ePP		12 21 20.5	
LZH				eS	Sn	12 24 35.0	-6.8
LZH				sS	sS	12 24 40.3	-14
LZH				eSS		12 24 58.7	
CMAR	Chiang Mai Arr comp=Z,3.9nm,1.0s,mb3.8,baz=59,slow=8.9,SNR=12	21.92	260	P	P	12 21 24.4	+0.2
GTA	Gaotai	24.19	315	eP	P	12 21 46.3	-0.5
GTA				AP		12 21 54.3	
GTA				XP	sP	12 21 57.9	-2.4
GTA	comp=Z,4.0nm,1.1s,mb3.8			AMB	AMB		
ULN	Ulaanbaatar comp=Z,3.5nm,0.6s,mb4.1	26.67	338	eP	P	12 22 08.5	-0.8
SONM	Songino Array comp=Z,3.0nm,0.7s,mb3.9,baz=158,slow=9.9,SNR=22	26.88	337	P	P	12 22 10.2	-0.9
SONM	comp=Z,106nm,19.6s,MS3.4,baz=337,slow=39			LR	LR	12 34 02.4	
KAKA	Kakadu comp=Z,9.1nm,0.8s,mb4.6	37.81	163	eP	P	12 23 43.7	-3.2
MKAR	Makanchi Array comp=Z,2.9nm,0.7s,mb4.2,baz=98,slow=11,SNR=14	38.94	316	P	P	12 23 55.0	-1.2
ZALV	Zalesovo Beam comp=Z,3.2nm,0.6s,mb4.1,baz=116,slow=7.9,SNR=12	40.81	327	P	P	12 24 09.7	-1.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV				LR	LR	12 42 14.8	
	comp=Z,46nm,20.1s,MS3.3,baz=123,slow=38						
TKM2	Tokmak 2	42.38	308	eP	P	12 24 24.8	+0.2
	comp=Z,2.0nm,0.6s,mb3.9						
KURK	Kurchatov	42.68	320	P	P	12 24 25.6	-1.3
	comp=Z,0.6nm,0.3s,mb3.8,baz=116,slow=9.3,SNR=7.3						
UCH	Uchtor	43.03	307	eP	P	12 24 30.9	+1.0
	comp=Z,2.0nm,1.0s,mb3.8						
MBWA	Marble Bar	44.77	183	eP	P	12 24 41.3	-2.8
WRAB	Tennant Creek	45.21	163	eP	P	12 24 45.3	-2.2
WRA	Warramunga Arr	45.22	163	P	P	12 24 44.5	-3.1
	comp=Z,3.6nm,0.7s,mb4.3,baz=345,slow=8.7,SNR=22						
WB2	Warramunga Arr	45.22	163	eP	P	12 24 45.4	-2.2
ASAR	Alice Springs	48.68	165	P	P	12 25 13.1	-1.5
	comp=Z,2.6nm,0.8s,mb4.3,baz=342,slow=6.7,SNR=21						
STKA	Stephens Creek	58.57	160	eP	P	12 26 25.3	-1.6
	comp=Z,2.0nm,0.5s,mb4.4						
STKA	Stephens Creek	58.57	160	P	P	12 26 24.9	-2.1
	comp=Z,2.5nm,0.5s,mb4.5,baz=333,slow=7.1,SNR=12						
EGAK	Eagle	71.65	27	eP	P	12 27 50.7	-0.8
	comp=Z,3.9nm,0.7s,mb4.5						
DAWY	Dawson	72.60	27	eP	P	12 27 56.4	-0.8
NOA	NORSAR Array B	78.76	332	LR	LR	13 06 07.8	
	comp=Z,36nm,18.1s,MS3.8,baz=320,slow=38						
YKA	Yellowknife Ar	83.08	23	P	P	12 28 53.9	-1.6
	comp=Z,1.7nm,0.5s,mb4.3,baz=313,slow=5.3,SNR=8.8						
JCW	Jim Creek	88.45	37	eP	P	12 29 21.6	-0.8
ETW	Entiat	89.67	37	eP	P	12 29 27.2	-0.9
PPT	Papeete	95.76	107	LR	LR	13 08 04.0	
	comp=Z,77nm,19.0s,MS4.2,baz=39,slow=32						
NVAR	Mina Array Bea	96.33	43	P	P	12 29 58.4	-0.6
	comp=Z,0.5nm,0.6s,mb4.1,baz=271,slow=5.9,SNR=5.5						
NVAR	Mina Array Bea	96.33	43	P	P	12 29 58.4	-0.7

*ISCJB **04** 12:33:03.3±1.1, 4563N±005×2656E±007, h144km±8km, Error ellipse: s-maj=9.2km s-min=7.3km az=27.7*
*BUC **04** 12:33:03.0±1.2, 4559N×2649E, h153km±11km, MD3.9/3, Error ellipse: s-maj=14.3km s-min=6.9km az=40.0*
*NEIC **04** 12:33:03.8, 4553N×2645E, h145km, MG3.1(BUC), After BUC.*
*CSEM **04** 12:33:03.8±0.2, 4562N×2650E, h136km±1km, MD3.9/3, Error ellipse: s-maj=2.4km s-min=2.3km az=24.0*
ISC 04 12:33:03.6±1.1, **4563N**±006×**2657E**±007, **h148**km±7km, **n28**, σ**0s.78**/45, **9C-9D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.23	15	⇑iP	Pn	12 33 23.3	-0.2
PLOR				iS	Sn	12 33 38.4	-0.5
VRI	Vrincioaia	0.26	26	⇓iP	Pn	12 33 23.7	+0.1
VRI				iS	Sn	12 33 38.8	-0.2
VRI	Vrincioaia	0.26	26	⇓iP	Pn	12 33 23.7	+0.1
VRI				iS	Sn	12 33 38.7	-0.3
VRI	Vrincioaia	0.26	26	P	Pn	12 33 23.7	0.0
VRI				S	Sn	12 33 39.9	+0.9
BRD	Bordesti	0.33	103	⇑iP	Pn	12 33 25.1	+1.2
ODB	Odobesti	0.37	67	⇓iP	Pn	12 33 25.0	+1.0
ODB				iS	Sn	12 33 40.1	+0.5
ODB	Odobesti	0.37	67	⇓P	Pn	12 33 25.0	+1.0
ODB				S	Sn	12 33 41.2	+1.6
MLR	Muntele Rosu	0.46	253	⇑iP	Pn	12 33 24.4	0.0
MLR				iS	Sn	12 33 40.0	-0.2
MLR	Muntele Rosu	0.46	253	P	Pn	12 33 24.5	+0.1
MLR				iS	Sn	12 33 40.0	-0.2
MLR	Muntele Rosu	0.46	253	P	Pn	12 33 24.5	+0.2
MLR				S	Sn	12 33 42.1	+1.9
ISR	Istrita	0.51	182	⇑iP	Pn	12 33 25.2	+0.5
VOIR		1.08	260	⇑iP	Pn	12 33 28.4	-0.4
VOIR				iS	Sn	12 33 46.7	-1.3
VOIR		1.08	260	⇑P	Pn	12 33 28.4	-0.4
VOIR				S	Sn	12 33 46.7	-1.3
CFR	Carcaliu	1.20	112	⇓iP	Pn	12 33 29.9	+0.1
CFR				iS	Sn	12 33 49.7	-0.1
BUC1	Bucharest	1.34	197	iS	Sn	12 33 52.2	-0.1
HARR	Harsova	1.35	134	⇑iP	Pn	12 33 31.8	+0.5
HARR	Harsova	1.35	134	P	Pn	12 33 31.7	+0.4
HARR				S	Sn	12 33 52.0	-0.5
HARR	Harsova	1.35	134	P	Pn	12 33 31.7	+0.4
HARR				S	Sn	12 33 52.0	-0.6
TIRR	Tirgusor	1.76	131	⇑iP	Pn	12 33 36.1	+0.4
TIRR				iS	Sn	12 33 59.5	-0.8
TIRR	Tirgusor	1.76	131	⇑iP	Pn	12 33 36.1	+0.4
TIRR				S	Sn	12 33 59.6	-0.7
TIRR	Tirgusor	1.76	131	P	Pn	12 33 36.0	+0.3
TIRR				S	Sn	12 33 59.6	-0.7
KIS	Kishinev	2.08	48	iS	Sn	12 34 05.0	-1.9
	300nm,1.0s						
BURAR	Bucovina Array	2.19	335	⇓iP	Pn	12 33 41.5	+0.8
BUR08	Bucovina Ar. S	2.22	335	eP	Pn	12 33 41.5	+0.4
BUR08	Bucovina Ar. S	2.22	335	eP	Pn	12 33 41.5	+0.4
DRGR		2.92	295	⇓iP	Pn	12 33 48.6	-1.1
DRGR		2.92	295	⇓P	Pn	12 33 48.7	-1.0
DRGR		2.92	295	⇓P	Pn	12 33 48.7	-1.0

IDC 04 12:35:18.9±9.2, **3325S**×**17932W**, **h45**km±70km, **mb3.6**/2, **mb1 3.9**/3, **mb1mx3.5**/15, **mbtmp3.7**/3, **ML3.5**/1, **Error ellipse: s-maj=72.7km s-min=39.4km az=55.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.78	209	P	Pn	12 36 42.9	+0.8
	1.5nm,0.3s,baz=55,slow=0.4,SNR=26						
URZ				S	Sn	12 37 47.0	-0.1
	2.4nm,0.3s,baz=158,slow=23,SNR=8.1						
ASAR	Alice Springs	41.92	271	P	P	12 43 05.5	+0.2
	0.6nm,0.5s,baz=108,slow=7.5,SNR=19						
WRA	Warramunga Arr	43.17	276	P	P	12 43 15.3	-0.2
	0.9nm,0.5s,baz=114,slow=7.8,SNR=31						
TORD	Torodi Ar. Bea	159.97	183	PKPab	PKPab	12 55 52.5	-0.6
	0.4nm,0.6s,baz=165,slow=3.3,SNR=4.6						

KRSC 04 12:39:06.9±1.6, **5053N**×**15644E**, **h81**km±81km, **ML3.5**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALID	Alaid	0.66	301	S	Sn	12 39 36.4	+2.9
MIPR	Malaya Ipel'ka	1.76	6	P	Pn	12 39 38.4	+2.8
RUS	Russkaya	2.31	33	P	Pn	12 39 45.2	+2.4
RUS				S	Sn	12 40 13.1	+2.8
SDLR	Sedlovina	3.14	28	P	Pn	12 39 56.3	+2.2
SDLR				S	Sn	12 40 32.2	+1.7

*SOF **04** 13:13:58.7, 4108N×2434E, h20km, MD2.5*
*BEO **04** 13:14:00.8±1.2, 4103N×2431E*
*ISCJB **04** 13:14:00.3±0.5, 41.15N±003×2435E±004, h10km, Error ellipse: s-maj=4.7km s-min=3.9km az=176.1*
*THE **04** 13:14:01.4, 41.17N×2435E, h3km, ML2.7*
*NEIC **04** 13:14:01.4, 41.17N×2435E, h4km, ML2.7(THE), After THE.*
*CSEM **04** 13:14:01.6±0.1, 4124N×2433E, h20km, ML2.7, Error ellipse: s-maj=4.1km s-min=1.8km az=141.0*
ISC 04 13:14:01.4±0.5, **4113N**±003×**2435E**±004, **h4**km±13km, **n15**, σ**1s.20**/22, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RZN	Rozhen	0.62	26	iPg	Pg	13 14 12.7	-0.6
MMB	Musomiste	0.66	314	iPg	Pg	13 14 12.7	-1.3
SOH	Sokhos	0.82	248	ePg	Pg	13 14 17.1	+0.1
SOH				eSg	Sg	13 14 29.0	+1.4
OUR	Ouranopolis	0.84	200	ePg	Pg	13 14 17.9	+0.4
PLD	Plovdiv	1.01	15	ePg	Pg	13 14 19.6	-1.1
PLD	Plovdiv	1.01	15	ePg	Pg	13 14 20.4	-0.3
PLD				eSg	Sg	13 14 35.7	+1.9
PLD	Plovdiv	1.01	15	ePg	Pg	13 14 19.6	-1.1
PLD				eSg	Sg	13 14 35.7	+1.9
HORT	Hortiatis	1.09	241	ePg	Pg	13 14 22.2	-0.1
KNT	Kendrikon	1.10	272	ePg	Pg	13 14 21.8	-0.6
KNT				eSg	Sg	13 14 37.8	+1.1
KKB	Krupnik	1.21	308	iPg	Pg	13 14 22.0	-2.5
DIM	Dimitrovgrad	1.27	44	iPg	Pg	13 14 25.4	-0.4
ALN	Alexandroupoli	1.30	100	ePg	Pg	13 14 25.5	-0.8
ALN				eSg	Sg	13 14 44.8	+1.6
LOS	Limnos	1.32	155	ePg	Pg	13 14 25.7	-0.9
ZAPS	Zavoj	2.49	330	ePn	Pn	13 14 45.3	+2.6
ZAPS				eSg	Sg	13 15 23.0	+1.5
BARS	Barje	2.53	312	ePn	Pn	13 14 42.6	-0.6
BARS				eSg	Sg	13 15 21.7	-1.0

*ISCJB **04** 13:16:59.9±0.7, 4427N±005×8121E±005, h10km, Error ellipse: s-maj=7.2km s-min=5.4km az=160.5*
*IDC **04** 13:17:00.8±1.6, 4430N×8129E, h0km, mb3.7/1, mb1 3.4/5, mb1mx3.3/25, mbtmp3.4/5, ML3.3/4, Error ellipse: s-maj=23.4km s-min=13.0km az=116.0*
*BJI **04** 13:17:02.4, 4442N×8164E, h19km, ML3.4*
*NEIC **04** 13:17:06.5±1.2, 4438N×8142E, h44km±14km, Error ellipse: s-maj=21.1km s-min=8.7km az=139.0*
*NNC **04** 13:17:07.9±3.6, 4471N×8181E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=45.3km s-min=13.8km az=127.0*
ISC 04 13:17:02.7±0.6, **4433N**±004×**8130E**±005, **h10**km, **n19**, σ**1s.40**/30, **8C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	2.56	15	⇓Pn	Pn	13 17 45.2	+1.0
	1.4nm,0.2s,baz=189,slow=12,SNR=821						
MK31				⇑Pg	Pg	13 17 50.9	-0.8
	48nm,0.6s,baz=186,slow=15,SNR=60						
MK31				⇓Sn	Sn	13 18 17.3	+2.0
	41nm,0.5s,baz=183,slow=24,SNR=12						
MKAR	Makanchi Array	2.56	15	Pn	Pn	13 17 45.2	+1.0
	2.7nm,0.3s,baz=191,slow=14,SNR=45						
MKAR				Pg	Pg	13 17 50.5	-1.2
	25nm,0.3s,baz=190,slow=15,SNR=196						
MKAR				Sn	Sn	13 18 16.9	+1.5
	36nm,0.3s,baz=199,slow=15,SNR=8.8						
MKAR				Lg		13 18 22.2	
	27nm,0.3s,baz=154,slow=39,SNR=11						
MKAR	Makanchi Array	2.56	15	Pn	Pn	13 17 45.2	+1.0
MKAR				Pg	Pg	13 17 50.5	-1.2
MKAR				Sn	Sn	13 18 16.9	+1.5
MKAR				Lg		13 18 22.2	
TKM2	Tokmak 2	4.38	253	⇑Pn	Pb	13 18 20.5	+0.9
	1.8nm,0.6s						
TKM2				Sn	Sg	13 19 20.2	-2.9
TKM2	Tokmak 2	4.38	253	ePg	Pn	13 18 12.2	+3.1
WMQ	Urumqi	4.64	94	ePG	Pb	13 18 22.0	-2.0
WMQ				S	Sn	13 19 07.0	+0.4
WMQ				Smax			
	comp=N,59nm,0.6s						
WMQ				Smax			
	comp=E,60nm,0.6s						
UCH	Uchtor	5.38	249	ePn	Pn	13 18 24.9	+1.9
	comp=E,8.8nm,0.5s						
UCH				ePg	Pg	13 18 38.5	-7.3
EKS2	Erkin-Say	5.72	256	ePn	Pn	13 18 31.2	+3.5
	comp=E,10nm,0.5s						
EKS2				ePg	Pg	13 18 49.8	-2.5
EKS2				eSg	Sg	13 20 06.9	+0.6
KURBB	Kurchatov Arra	6.57	344	⇓Pn	Pn	13 18 39.6	+0.4
	comp=E,0.2nm,0.3s						
KURBB				⇑Sn	Sn	13 19 54.1	0.0
	comp=E,2.6nm,0.7s						
KURBB				⇓Lg		13 20 32.6	
	comp=E,12nm,0.7s						
KURK	Kurchatov	6.64	345	⇑Pn	Pn	13 18 44.8	+4.6
	comp=E,1.5nm,0.3s						
KURK				⇑Lg		13 20 33.1	
	comp=E,38nm,1.4s						
KURK	Kurchatov	6.64	345	Pn	Pn	13 18 40.5	+0.2
	comp=E,0.3nm,0.3s,baz=165,slow=12,SNR=7.2						
KURK				Pg	Pb	13 18 56.5	-1.6
	comp=E,0.2nm,0.3s,baz=162,slow=12,SNR=4.7						
KURK				Sn	Sn	13 19 53.1	-2.8
	comp=E,0.5nm,0.3s,baz=93,slow=29,SNR=4.3						
KURK				Lg		13 20 31.0	
	comp=E,0.7nm,0.3s,baz=181,slow=27,SNR=8.6						
KK31	Karatay Array	7.91	265	⇑Pn	Px	13 19 13.5	
	comp=E,0.4nm,0.3s,baz=66,slow=13,SNR=4.3						
KK31				⇑Lg		13 21 25.0	
	comp=E,5.1nm,0.5s,baz=75,slow=29,SNR=12						
ZALV	Zalesovo Beam	9.89	12	Pn	Pn	13 19 24.4	-0.5
	comp=E,0.4nm,0.3s,baz=193,slow=16,SNR=5.6						
ZALV				Sn	Sn	13 21 09.0	-6.8
	comp=E,0.6nm,0.3s,baz=197,slow=26,SNR=3.0						
ZALV				Lg		13 22 16.4	
	baz=196,slow=26,SNR=2.7						
VOSK	Vostochnaya	10.82	325	⇓Lg		13 22 49.8	
	comp=E,20nm,0.8s						
BVA0	Borovoye Array	11.29	324	⇑Lg		13 23 04.7	
	comp=E,1.5nm,0.9s,baz=134,slow=26,SNR=6.4						
BVAR	Borovoye Array	11.29	324	Lg		13 23 02.0	
	comp=E,0.6nm,0.3s,baz=134,slow=26,SNR=7.8						
SONM	Songino Array	17.73	70	P	Pn	13 21 09.0	-0.5
	comp=E,0.1nm,0.3s,baz=286,slow=10,SNR=2.1						
NOA	NORSAR Array B	43.34	318	P	P	13 25 05.0	+0.5
	baz=80,slow=8.1						
TORD	Torodi Ar. Bea	73.53	272	P	P	13 28 34.9	-1.0
	comp=E,0.3nm,0.4s,baz=41,slow=4.5,SNR=2.7						

*ISCJB **04** 13:42:24.3±5.8, 222S±03×1762W±04, h1km±38km, mb4.0/5, Error ellipse: s-maj=74.5km s-min=12.9km az=42.9*
*IDC **04** 13:42:25.3±2.5, 2245S×17609W, h0km, mb4.0/4, mb1 4.4/5, mb1mx4.1/16, mbtmp4.1/5, ML2.5/1, MS3.6/1, Ms1 3.5/1, ms1mx2.8/22, Error ellipse: s-maj=96.8km s-min=24.2km az=143.0*
*NEIC **04** 13:42:30.0±2.0, 2232S×176.14W, h30km, mb4.1/1, Error ellipse: s-maj=76.6km s-min=15.1km az=141.0*
ISC 04 13:42:25.8±7.0, **224S**±03×**1761W**±03, **h4**km±44km, **n9**, σ**0s.66**/9, **mb4.0**/5, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	9.42	27	Pn	Pn	13 44 42.9	+0.5
	2.9nm,0.3s,baz=185,slow=22,SNR=4.0						
AFI				Sn	Sn	13 46 28.6	-0.2
	2.7nm,0.3s,baz=56,slow=23,SNR=2.8						
AFI	Afiamalu	9.42	27	ePn	Pn	13 44 42.3	-0.1
AFI				Sn	Sn	13 46 28.6	-0.2
STKA	Stephens Creek	38.59	247	LR	LR	14 05 06.0	
	comp=Z,79nm,18.6s,baz=25,slow=35						
ASAR	Alice Springs	45.83	258	P	P	13 50 48.6	-0.6
	1.4nm,0.8s,mb4.0,baz=103,slow=7.6,SNR=13						
WRAB	Tennant Creek	46.10	263	eP	P	13 50 51.4	-0.1
	2.1nm,0.8s,mb4.1						
WRA	Warramunga Arr	46.11	263	P	P	13 50 51.2	-0.4
	0.7nm,0.3s,mb4.0,baz=96,slow=8.2,SNR=28						
NVAR	Mina Array Bea	81.23	42	P	P	13 54 42.8	-0.3
	0.3nm,0.6s,mb3.4,baz=222,slow=11,SNR=4.0						
CMAR	Chiang Mai Arr	92.41	289	P	P	13 55 39.9	+1.5
	2.4nm,0.8s,mb4.6,baz=141,slow=3.1,SNR=14						
AKASG	Malin Array Be	145.55	331	PKPbc	PKPbc	14 02 05.2	-0.1
	0.6nm,0.3s,baz=41,slow=4.0,SNR=3.2						

*ISK **04** 14:01:35.6, 3636N×4458E, h5km, MD3.5*
*CSEM **04** 14:01:39.7±0.2, 3660N×4447E, h5km, MD3.5, Error ellipse: s-maj=5.2km s-min=3.0km az=89.0*
*DDA **04** 14:01:47.9, 3699N×4322E, h7km±5km, Md3.5*
ISC 04 14:01:42.2±2.8, **3670N**±009×**444E**±01, **h4**km±12km, **n15**, σ**0s.82**/19, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAKT	HAKKARI	1.03	327	iP	Pg	14 02 01.4	-0.6
HAKT				iS	Sg	14 02 23.2	+7.9
HKR	Hakkari	1.03	329	ePN	Pn	14 02 02.7	-0.8
HKR				eSN	Sg	14 02 23.3	+7.9
MSL	Mosul	1.09	255	ix	x	14 02 01.0	
MSL				ix	x	14 02 17.0	
SIRT	Sirnak	1.77	297	ePN	Pg	14 02 12.9	-3.4
SIRT				eSN	Sg	14 02 39.5	+0.3
TVAN	Van	2.00	337	iP	Pn	14 02 16.5	-0.3
TVAN				iS	Sn	14 02 41.4	-0.8
VANB	Van	2.06	337	ePN	Pn	14 02 17.7	0.0
VANB				eSN	Sg	14 02 49.0	+0.5
CLDR	Caldiran	2.47	351	ePN	Pn	14 02 23.6	+0.2
MARD	Mardin	2.98	283	iP	Pn	14 02 24.9	-5.4
MARD				iS	Sn	14 02 56.7	-10
AGRB	Hanur-Agry	3.08	339	ePN	Pn	14 02 32.7	+1.0
BHD	Baghdad	3.42	181	ex	x	14 02 32.0	
BHD				ex	x	14 03 13.0	
SVRC	Sivrice-ELAZID	4.39	294	ePN	Pn	14 02 50.5	+0.8
URFA	Urfa	4.54	281	ePN	Pn	14 02 50.2	-1.5
PTK	Pertek	4.54	300	ePN	Pn	14 02 52.5	+0.7
MALT	Malatya	5.03	291	ePN	Pn	14 02 58.7	+0.2
MYA	Malataya	5.03	291	ePN	Pn	14 02 59.3	+0.8

*ISCJB **04** 14:08:14.2±1.5, 194S±06×1784W±06, h582km±48km, mb3.9/8, Error ellipse: s-maj=124.0km s-min=19.8km az=136.1*
*NEIC **04** 14:08:14.4±1.2, 1956S×178.10W, h588km±15km, mb4.1/2, Error ellipse: s-maj=46.9km s-min=13.2km az=144.0*
*IDC **04** 14:08:14.2±1.9, 1950S×178.15W, h580km±23km, mb3.3/6, mb1 3.5/7, mb1mx3.2/16, mbtmp3.3/7, Error ellipse: s-maj=53.2km s-min=16.5km az=140.0*
ISC 04 14:08:14.5±1.5, **194S**±06×**1783W**±06, **h574**km±44km, **n13**, σ**0s.41**/13, **mb3.9**/8, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.28	50	P	P	14 10 15.9	+0.1
	4.1nm,0.3s,baz=160,slow=23,SNR=5.3						
AFI				S	S	14 11 55.0	-0.1
	3.2nm,0.3s,baz=174,slow=19,SNR=3.9						
AFI	Afiamalu	8.28	50	eP	P	14 10 16.0	+0.3
AFI				S	S	14 11 55.0	-0.1
CTAO	Charters Tower	33.37	263	eP	P	14 14 07.2	+0.8
	4.6nm,0.4s,mb4.5						
STKA	Stephens Creek	38.05	243	P	P	14 14 44.7	-0.2
	0.9nm,0.4s,mb3.7,baz=113,slow=8.4,SNR=4.4						
STKA	Stephens Creek	38.05	243	P	P	14 14 44.7	-0.2
WRAB	Tennant Creek	44.51	261	eP	P	14 15 35.6	-0.4
	1.2nm,0.4s,mb3.8						
WRA	Warramunga Arr	44.52	261	P	P	14 15 35.7	-0.4
	1.4nm,0.3s,mb4.0,baz=98,slow=7.4,SNR=81						
ASAR	Alice Springs	44.54	256	P	P	14 15 36.0	-0.2
	2.3nm,0.5s,mb4.0,baz=86,slow=8.0,SNR=60						
ASAR				PcP	PcP	14 17 05.8	-1.0
	0.6nm,0.7s,baz=100,slow=4.1,SNR=4.5						
MJAR	Matsushiro Arr	69.20	324	P	P	14 18 23.9	-0.4
	1.7nm,0.5s,mb3.7,baz=164,slow=5.2,SNR=6.6						
PETK	Petropavlovsk-	75.17	345	P	P	14 18 58.4	0.0
	2.0nm,0.7s,mb3.8,baz=124,slow=7.1,SNR=5.9						
CMAR	Chiang Mai Arr	89.52	290	P	P	14 20 12.3	+0.6
	0.8nm,0.8s,mb3.6,baz=115,slow=3.4,SNR=6.1						
ARCES	ARCESS Array B	127.82	350	PKP	PKPdf	14 26 13.2	-1.4
	0.4nm,0.4s,baz=45,slow=0.5,SNR=5.1						
GERES	GERESS Array B	149.10	345	PKPbc	PKPbc	14 26 57.6	-0.8
	0.7nm,0.5s,baz=350,slow=3.0,SNR=5.7						

*ISK **04** 14:28:54.8, 3526N×3652E, h5km, MD3.7, ML3.5*
*GII **04** 14:28:56.4±1.1, 3542N×3650E, h2km±1km, ML3.3/5*
*DDA **04** 14:28:57.8, 3534N×3623E, h11km±1km, Md3.5*
*CSEM **04** 14:28:57.6±0.1, 3534N×3655E, h15km, MD3.7, Error ellipse: s-maj=1.9km s-min=1.2km az=106.0*
*GRAL **04** 14:28:58.1±0.3, 3527N×3667E, h0km±3km, MD3.4, Fault plane solution: NP1:φs105.00000°, δ90.00000°, λ60.00000°.*
*ISCJB **04** 14:28:58.1±0.3, 3537N±002×3650E±004, h10km, Error ellipse: s-maj=4.5km s-min=2.1km az=16.0*
ISC 04 14:28:58.8±0.3, **3537N**±002×**3648E**±004, **h10**km, **n43**, σ**1s.20**/64, **3D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTY	Hatay	0.80	340	ePG	Pg	14 29 13.8	-0.3
HTY				eSG	Sg	14 29 26.9	+2.3
COBT	Iskenderun	1.16	351	iP	Pb	14 29 20.2	-0.7
COBT				iS	Sb	14 29 37.0	+1.0
HWQ	Hawqa	1.18	202	⇓eP	Pb	14 29 18.9	-2.3
HWQ				eS	Sb	14 29 34.2	-2.3
YURE	YUREGIR	1.60	335	iP	Pn	14 29 27.1	-0.1
YURE				iS	Sn	14 29 49.3	+1.4
BHL	Bhannes	1.62	205	⇓eP	Pn	14 29 26.2	-1.2
BHL				eS	Sn	14 29 47.2	-1.0
GAZ	Gaziantep	1.89	18	ePN	Pn	14 29 30.7	-0.4
GAZ				eSN	Sg	14 29 57.9	-1.6
EREN	Erenkoy	1.89	275	ePN	Pn	14 29 30.3	-0.8
RCY	Rachaya	1.96	196	⇓eP	Pn	14 29 30.6	-1.5
RCY				eS	Sn	14 29 54.6	-2.2
KMRS	Kahramanmaras	2.15	9	ePN	Pn	14 29 35.0	+0.2
KOZT	Kozan	2.17	346	ePN	Pn	14 29 35.8	+0.9
MERS	Mersin	2.18	314	ePN	Pn	14 29 35.1	0.0
HRI	Mount Hermon	2.19	197	Pn	Pn	14 29 35.8	+0.5
HRI				Sn	Sb	14 30 05.4	-0.3
ANDN	Andirin	2.21	357	iP	Pn	14 29 34.5	-0.9
ANDN				iS	Sn	14 30 01.5	-1.2
ANDN	Andirin	2.21	357	iP	Pn	14 29 34.5	-0.9
ANDN				iS	Sn	14 30 01.5	-1.3
KARA	Karaisali	2.21	329	ePN	Pn	14 29 35.4	-0.1
MEST	Erdemli	2.25	303	iP	Pn	14 29 36.1	+0.1
MEST				iS	Sn	14 30 04.3	+0.5
KSDI	Kefar Szold	2.28	198	Pn	Pn	14 29 36.2	-0.2
KSDI				Sn	Sn	14 30 07.4	+2.8
LFK	Lefkose	2.41	269	ePN	Pn	14 29 37.3	-1.0
IKL	Isikli	2.43	292	ePN	Pn	14 29 37.2	-1.3
KSHT	Keshet	2.45	193	Pn	Pn	14 29 39.5	+0.7
KSHT				Sn	Sn	14 30 11.8	+3.0
MMC7	Mount Meron ar	2.51	201	Pn	Pn	14 29 38.8	-0.9
MMA2	Mount Meron ar	2.52	201	Pn	Pn	14 29 39.0	-0.7
MMA2				Sn	Sn	14 30 12.9	+2.4
HNTI	Hanita	2.53	206	Pn	Pn	14 29 39.4	-0.5
HNTI				Sn	Sn	14 30 12.6	+1.9
ATAB	Bozova	2.55	34	iP	Pn	14 29 40.3	+0.1
ATAB				iS	Sb	14 30 16.8	+0.7
URFA	Urfa	2.80	42	ePN	Pn	14 29 43.2	-0.4
OFRI	'Ofer	3.01	205	Pn	Pn	14 29 46.7	+0.1
MMLI	Mount Malkishu	3.06	197	Pn	Pn	14 29 47.0	-0.1
MMLI				Sn	Sn	14 30 26.2	+2.4
NIG	Nigde	3.12	332	ePN	Pn	14 29 48.7	+0.7
AKCD	Akcadag	3.14	21	iP	Pn	14 29 48.0	-0.3
AKCD				iS	Sn	14 30 26.3	+0.6
HMDT	Nahal Hemdat	3.21	195	Pn	Pn	14 29 49.5	+0.3
HMDT				Sn	Sn	14 30 29.7	+2.1
SARI	SarD1z-Kayseri	3.30	3	ePN	Pn	14 29 47.8	-2.8
MALT	Malatya	3.32	27	ePN	Pn	14 29 51.1	+0.3
MALT	Malatya	3.32	27	Pn	Pn	14 29 49.8	-1.0
MYA	Malataya	3.33	27	ePN	Pn	14 29 50.6	-0.3
SLTI	Sal'it	3.35	201	Sn	Sn	14 30 33.1	+2.2
HDMB	Hadim	3.60	297	ePN	Pn	14 29 55.6	+0.9
ELZG	Elazig	3.71	32	iP	Pn	14 29 55.3	-0.8
ELZG				iS	Sb	14 30 52.1	+2.8
DARE	Darende-Malaty	3.73	16	ePN	Pn	14 29 51.4	-4.9
SVRC	Sivrice-ELAZID	3.76	36	ePN	Pn	14 29 56.9	+0.2
DIYA	Diyarbakir	3.88	48	iP	Pn	14 29 57.2	-1.3
DIYA				iS	Sb	14 30 55.5	+1.3
MARD	Mardin	3.97	60	iP	Pn	14 29 58.5	-1.2
MARD				iS	Sb	14 30 57.9	+0.9
PTK	Pertek	4.21	33	ePN	Pn	14 30 03.4	+0.3
MSL	Mosul	5.45	78	ex	x	14 30 18.0	
MSL				ex	x	14 31 20.0	

IDC 04 14:34:12.3±6.9, **616S**×**12849E**, **h270**km±98km, **mb3.2**/1, **mb1 2.9**/5, **mb1mx2.7**/16, **mbtmp2.8**/5, **Error ellipse: s-maj=90.2km s-min=63.4km az=101.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.25	230	P	Pn	14 35 45.3	+1.3
	2.9nm,0.3s,baz=360,slow=6.8,SNR=4.8						
BATI				S	S	14 36 56.9	-0.7
	3.9nm,0.3s,baz=32,slow=21,SNR=13						
FITZ	Fitzroy Crossi	12.20	193	P	Pn	14 36 58.1	+0.2
	0.1nm,0.3s,baz=33,slow=17,SNR=3.3						
FITZ				S	S	14 39 17.5	+3.7
	0.1nm,0.3s,baz=125,slow=21,SNR=2.8						
WRA	Warramunga Arr	14.84	158	P	Pn	14 37 29.5	-0.4
	0.2nm,0.3s,baz=332,slow=12,SNR=5.6						
ASAR	Alice Springs	18.17	164	P	P	14 38 05.3	-0.3
	0.1nm,0.3s,baz=340,slow=11,SNR=4.5						
STKA	Stephens Creek	28.37	156	P	P	14 39 41.9	-0.1
	0.8nm,0.5s,baz=328,slow=15,SNR=3.1						

*CSEM **04** 14:40:44.6±0.3, 3528N×3637E, h2km, MD2.8, Error ellipse: s-maj=10.8km s-min=2.8km az=84.0*
*ISCJB **04** 14:40:45.8±0.5, 3535N±002×3647E±008, h10km, Error ellipse: s-maj=9.9km s-min=3.0km az=5.1*
*GRAL **04** 14:40:45.6±0.3, 3531N×3654E, h0km±2km, MD3.3*
*DDA **04** 14:40:46.4, 3539N×36.18E, h8km±3km, Md2.8*
*GII **04** 14:41:44.3±1.3, 3557N×3601E, h5km±5km, ML3.3/3*

ISC 04 14:40:45.8±0.6,3535N±002×3651E±009,h10km,n16, σ1s17/29,3C,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWQ	Hawqa	1.16	204	⇑eP	Pb	14 41 05.9	-2.0
HWQ				eS	Sb	14 41 21.2	-1.8
COBT	Iskenderun	1.19	350	iP	Pb	14 41 07.3	-1.2
COBT				iS	Sb	14 41 24.2	+0.3
BHL	Bhannes	1.60	206	⇑eP	Pn	14 41 13.4	-0.7
BHL				eS	Sn	14 41 33.8	-1.0
YURE	YUREGIR	1.64	335	iP	Pn	14 41 14.8	+0.2
YURE				iS	Sn	14 41 36.9	+1.1
RCY	Rachaya	1.94	197	⇑eP	Pn	14 41 18.0	-0.8
RCY				eS	Sn	14 41 41.9	-1.3
HRI	Mount Hermon	2.17	197	Pn	Pn	14 41 23.5	+1.5
HRI				Sn	Sb	14 41 51.8	-0.3
GZT	Gaziantep	2.18	23	iP	Pn	14 41 21.0	-1.1
GZT				iS	Sn	14 41 53.0	+3.8
KSDI	Kefar Szold	2.26	198	Pn	Pn	14 41 23.6	+0.4
KSDI				Sn	Sn	14 41 54.0	+3.0
MEST	Erdemli	2.28	304	iP	Pn	14 41 23.4	-0.1
MEST				iS	Sn	14 41 51.4	-0.2
KSHT	Keshet	2.43	194	Pn	Pn	14 41 27.3	+1.8
KSHT				Sn	Sb	14 41 59.6	+0.1
MMB4	Mount Meron ar	2.49	202	Pn	Pn	14 41 25.9	-0.5
MMC7	Mount Meron ar	2.49	202	Pn	Pn	14 41 25.9	-0.5
HNTI	Hanita	2.51	206	Pn	Pn	14 41 26.9	+0.2
HNTI				Sn	Sn	14 41 59.2	+1.8
MMLI	Mount Malkishu	3.04	198	Pn	Pn	14 41 34.6	+0.7
MMLI				Sn	Sn	14 42 14.2	+3.9
HMDT	Nahal Hemdat	3.19	195	Pn	Pn	14 41 37.8	+1.8
HMDT				Sn	Sn	14 42 17.8	+3.7
MALT	Malatya	3.34	27	Pn	Pn	14 41 37.4	-0.6

*IDC **04** 14:41:30.7±1.3,3594N×243E,h0km,mb3.4/3,mb1 3.6/7, mb1mx3.5/26,mbtmp3.5/7,ML3.7/4,MS3.3/1,Ms1 3.3/1, ms1mx2.3/34,Error ellipse: s-maj=26.9km s-min=18.6km az=151.0*
*CRAAG **04** 14:41:30.0,3606N×278E,Ml4.7*
*ISCJB **04** 14:41:31.0±0.3,3630N±002×270E±002,h10km,mb3.5/4, Error ellipse: s-maj=2.9km s-min=2.5km az=162.7*
*CSEM **04** 14:41:31.4±0.1,3594N×272E,h5km,ML3.6/13,Error ellipse: s-maj=2.0km s-min=1.4km az=168.0*
*NEIC **04** 14:41:31.2±0.7,3607N×270E,h8km±6km,MG4.2(MDD), Error ellipse: s-maj=6.1km s-min=3.6km az=155.0*
*MDD **04** 14:41:32.1±0.4,3610N×268E,h0km,mb4.3/12,Error ellipse: s-maj=5.3km s-min=3.3km az=167.0,PRIMO*
*LDG **04** 14:41:32.5±0.2,3596N×277E,h10km,Ml3.4/20,Error ellipse: s-maj=4.1km s-min=3.2km az=151.0*
*CNRM **04** 14:41:34.8,3645N×255W,h30km,MD4.6*

ISC 04 14:41:32.6±0.3,3624N±002×270E±002,h10km,n126, σ1s36/199,mb3.5/4,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMHD	Djebel Mahouad	0.21	101	P	Pg	14 41 36.0	-0.9
ADJB	Djebel Djouab	0.60	98	P	Pg	14 41 43.0	-1.2
ADJB	Djebel Djouab	0.60	98	P	Pg	14 41 43.0	-1.2
ABA	Alger-Bouzarea	0.62	26	P	Pg	14 41 46.2	+1.6
ABMS	Boumerdes	0.81	51	P	Pg	14 41 49.8	+1.7
EBNR	Beni Rached	0.95	273	P	Pg	14 41 50.0	-0.8
AKET	Djebel Ketaf	0.98	101	P	Pg	14 41 50.9	-0.4
AKET	Djebel Ketaf	0.98	101	P	Pg	14 41 51.0	-0.3
AKET	Djebel Ketaf	0.98	101	P	Pg	14 41 51.0	-0.4
ECHA	Ech Chlef	1.08	266	P	Pg	14 41 51.5	-1.9
ECHF	Ech Chlef	1.10	266	P	Pb	14 41 51.5	-2.2
ATAF	Djebel Tarf	1.33	106	P	Pn	14 41 56.6	-0.6
EANR	'Ain N'Sour	1.33	258	P	Pn	14 41 54.9	-2.3
ETRT	Tiaret	1.42	234	P	Pn	14 41 56.9	-1.5
OKGL	Djebel Kef Gue	1.68	264	P	Pn	14 42 02.0	0.0
OJGS	Djebel Guires	1.75	246	P	Pn	14 42 01.0	-1.9
OJGS	Djebel Guires	1.75	246	P	Pn	14 42 01.9	-1.1
OJBR	Djebel Berber	2.02	252	P	Pn	14 42 00.0	-6.7
SET	Setif	2.18	90	P	Pn	14 42 09.0	+0.1
CKHR	Kef el Ahmar	2.29	95	P	Pg	14 42 15.0	-1.4
ODJA	Bouhanifia	2.49	249	P	Pg	14 42 20.0	-0.3
DFRA	Djebel Bou Aff	2.58	82	P	Pb	14 42 20.0	+1.1
USTO	Oran	2.68	260	P	Pg	14 42 26.0	+2.0
EIBI	Ibiza	2.98	339	Pn	Pn	14 42 21.3	+1.4
	31nm,0.4s,SNR=32						
EIBI				Sn	Sn	14 42 55.6	-0.1
	86nm,0.2s						
EIBI	Ibiza	2.98	339	Pn	Pn	14 42 21.3	+1.4
	31nm,0.4s,SNR=32						
EIBI				Sn	Sn	14 42 55.4	-0.3
	49nm,0.3s						
EIBI	Ibiza	2.98	339	Pn	Pn	14 42 21.3	+1.4
EIBI				Sn	Sn	14 42 55.4	-0.3
CTEI	Djebel Teioual	3.00	92	P	Pg	14 42 32.0	+1.9
CASM	Ain Smara	3.06	89	P	Pg	14 42 30.0	-1.3
CKFL	Kef-Lekhel	3.25	86	P	Pg	14 42 31.5	-3.3
EBEN	Beniarda	3.38	317	Pn	Pn	14 42 25.8	+0.3
	3.9nm,0.3s,SNR=13						
EBEN				Sn	Sn	14 43 05.6	0.0
	11nm,0.3s,SNR=8.8						
EBEN	Beniarda	3.38	317	Pn	Pn	14 42 25.8	+0.4
	3.9nm,0.3s,SNR=13						
EBEN	Beniarda	3.38	317	Pn	Pn	14 42 25.8	+0.3
EBEN				Sn	Sn	14 43 03.5	-2.1
CAEH	'Ain El Ouahch	3.39	80	P	Pg	14 42 35.0	-2.4
ETOS	Mallorca	3.52	1	Pn	Pn	14 42 28.9	+1.6
	115nm,1.0s,SNR=23						
ETOS				Sn	Sn	14 43 09.1	+0.1
	12nm,0.3s						
ETOS	Mallorca	3.52	1	Pn	Pn	14 42 28.9	+1.6
	115nm,1.0s,SNR=23						
ETOS	Mallorca	3.52	1	Pn	Pn	14 42 28.9	+1.6
ETOS				Sn	Sn	14 43 07.8	-1.2
EMUR	La Murta	3.53	298	Pn	Pn	14 42 27.1	-0.4
	6.9nm,0.3s,SNR=4.7						
EMUR				Sn	Sn	14 43 10.2	+0.9
	30nm,0.5s						
EMUR	La Murta	3.53	298	Pn	Pn	14 42 28.1	+0.6
	10nm,0.4s,SNR=4.7						
EMUR	La Murta	3.53	298	Pn	Pn	14 42 28.1	+0.6
EMUR				Sn	Sn	14 43 08.8	-0.5
CMAH	Djebel Manchou	3.83	83	P	Pn	14 42 36.0	+4.5
ABSA	Djebel Ababsia	3.86	88	P	Pn	14 42 34.5	+2.5
CABS	Djebel Ababsia	3.86	88	P	Pn	14 42 34.5	+2.5
ETOB	Tobarra	4.14	307	Pn	Pn	14 42 37.3	+1.4
	1.1nm,0.2s,SNR=23						
ETOB				Sn	Sn	14 43 25.8	+1.4
	76nm,0.8s,SNR=6.1						
ETOB	Tobarra	4.14	307	Pn	Pn	14 42 37.3	+1.4
	1.1nm,0.2s,SNR=23						
ETOB				Sn	Sn	14 43 25.8	+1.4
	16nm,0.6s,SNR=6.1						
ECHE	Chera	4.43	320	Pn	Pn	14 42 41.3	+1.5
	4.4nm,0.3s,SNR=6.3						
ECHE				Sn	Sn	14 43 31.8	+0.5
	10.0nm,0.4s						
ECHE	Chera	4.43	320	Pn	Pn	14 42 42.2	+2.5
	4.4nm,0.3s,SNR=6.3						
ECHE				Sn	Sn	14 43 31.5	+0.2
	10.0nm,0.4s						
ECHE	Chera	4.43	320	Pn	Pn	14 42 42.2	+2.5
ECHE				Sn	Sn	14 43 31.5	+0.2
EBER	Berja	4.55	280	Pn	Pn	14 42 40.2	-1.2
	6.3nm,0.3s,SNR=12						
EBER				Sn	Sn	14 43 32.6	-1.7
	34nm,0.6s,SNR=5.7						
EBER	Berja	4.55	280	Pn	Pn	14 42 40.2	-1.2
	8.1nm,0.3s,SNR=12						
EBER				Sn	Sn	14 43 32.6	-1.7
	8.8nm,0.3s,SNR=5.7						
ZAI	Zaio	4.62	256	P	Pn	14 42 40.0	-2.4
ZAI				S	Sn	14 43 29.0	-7.0
ZAI	Zaio	4.62	256	eP	Pn	14 42 40.0	-2.4
EVIA	Vianos	4.78	302	Pn	Pn	14 42 45.4	+0.8
	5.9nm,0.3s,SNR=4.9						
EMOS	Mosqueruela	4.81	330	Pn	Pn	14 42 46.7	+1.6
	9.8nm,0.3s,SNR=27						
EMOS				Sn	Sn	14 43 40.2	-0.7
	18nm,0.3s						
EMOS	Mosqueruela	4.81	330	Pn	Pn	14 42 46.7	+1.7
	13nm,0.3s,SNR=27						
EMOS				Sn	Sn	14 43 40.2	-0.6
	29nm,0.7s						
EQES	Quesada	4.87	290	Pn	Pn	14 42 47.3	+1.4
	7.5nm,0.3s,SNR=8.3						
EQES				Sn	Sn	14 43 38.8	-3.6
	9.5nm,0.3s,SNR=4.5						
EQES	Quesada	4.87	290	Pn	Pn	14 42 47.9	+2.0
	7.5nm,0.3s,SNR=8.3						
EQES				Sn	Sn	14 43 43.6	+1.2
	20nm,0.7s,SNR=4.5						
EQES	Quesada	4.87	290	Pn	Pn	14 42 47.9	+2.0
EQES				Sn	Sn	14 43 43.6	+1.3
EQUE	Quentar	5.03	283	Pn	Pn	14 42 47.9	-0.1
	18nm,0.4s,SNR=16						
ERTA	Horta de San J	5.06	339	Pn	Pn	14 42 51.1	+2.6
	9.8nm,0.4s,SNR=6.2						
ERTA	Horta de San J	5.06	339	Pn	Pn	14 42 49.7	+1.3
	9.8nm,0.4s,SNR=6.2						
ERTA	Horta de San J	5.06	339	Pn	Pn	14 42 49.7	+1.3
EPOB	Poblet	5.26	347	Pn	Pn	14 42 51.5	+0.3
	0.9nm,0.5s,SNR=7.9						
EPOB				Sn	Sn	14 43 51.2	-0.6
	6.6nm,0.6s,SNR=7.9						
KEST	Kesra	5.41	93	Pn	Pn	14 42 55.0	+1.7
	0.6nm,0.3s,baz=209,slow=4.4,SNR=11						
EMIR	Miracle	5.74	351	Pn	Pn	14 43 00.4	+2.7
	0.6nm,0.0s,SNR=9.2						
EMIR				Sn	Sn	14 44 03.0	-0.7
	9.5nm,0.3s						
EMIR	Miracle	5.74	351	Pn	Pn	14 43 00.4	+2.6
	0.6nm,0.0s,SNR=9.2						
TZK	Tazeka	6.03	251	P	Pn	14 43 01.0	-0.8
TZK				S	Sn	14 44 04.0	-7.0
EMIJ	Mijas	6.04	275	Pn	Pn	14 43 00.5	-1.3
	2.6nm,0.3s,SNR=7.9						
EMIJ				Sn	Sn	14 44 03.8	-7.2
	4.0nm,0.3s,SNR=7.9						
EMIJ	Mijas	6.04	275	Pn	Pn	14 42 59.3	-2.6
EMIJ	Mijas	6.04	275	Pn	Pn	14 42 59.3	-2.6
EADA	Adamuz	6.12	290	Pn	Pn	14 43 02.7	-0.3
	1.1nm,0.3s,SNR=5.9						
EADA				Sn	Sn	14 44 15.1	+2.1
	4.7nm,0.6s,SNR=7.9						
EADA	Adamuz	6.12	290	Pn	Pn	14 43 01.3	-1.7
EADA				Sn	Sn	14 44 20.2	+7.1
VSL	Villasalto	6.20	56	ePn	Pn	14 43 02.6	-1.5
VSL				eSn	Sn	14 44 13.9	-1.1
VSL	Villasalto	6.20	56	ePn	Pn	14 43 02.6	-1.6
VSL				eSn	Sn	14 44 13.8	-1.2
ESDC	Sonseca Array	6.28	305	Pn	Pn	14 43 05.5	+0.3
	2.3nm,0.3s,baz=120,slow=13,SNR=14						
ESDC				Sn	Sn	14 44 18.8	+1.8
	0.9nm,0.3s,baz=116,slow=24,SNR=3.6						
MDT	Midelt	6.94	243	Pn	Pn	14 43 09.1	-5.1
	0.2nm,0.3s,baz=263,slow=6.5,SNR=5.1						
MDT				Lg		14 44 58.0	
	1.0nm,0.3s,baz=187,slow=2.6,SNR=4.2						
EPF	Esparros	7.02	346	ePn	Pn	14 43 16.9	+1.5
EPF				eSn	Sn	14 44 35.3	+0.1
	3.0nm,0.3s						
EPF	Esparros	7.02	346	ePn	Pn	14 43 16.9	+1.5
EPF				eSn	Sn	14 44 35.3	+0.1
	1.5nm,0.3s						
MTLF	Montolieu	7.10	357	ePn	Pn	14 43 17.8	+1.3
MTLF				eSn	Sn	14 44 37.2	0.0
	2.9nm,0.4s						
MTLF	Montolieu	7.10	357	ePn	Pn	14 43 17.8	+1.3
MTLF				eSn	Sn	14 44 37.2	0.0
	1.5nm,0.4s						
MIF	Mishlifen	7.11	249	P	Pn	14 43 16.0	-0.6
MIF				S	Sn	14 44 31.0	-6.4
ETSF	Etsaut	7.11	340	ePn	Pn	14 43 18.1	+1.5
CZD	Col de Zad	7.14	246	P	Pn	14 43 17.0	0.0
CZD				S	Sn	14 44 33.0	-5.2
ZFT	Errachidia	7.20	236	P	Pn	14 43 17.0	-0.8
ZFT				S	Sn	14 44 34.0	-5.6
SJPF	Ste Jean	7.50	337	ePn	Pn	14 43 23.1	+1.2
SJPF				eSn	Sn	14 44 46.5	-0.5
	1.5nm,0.5s						
SJPF	Ste Jean	7.50	337	Pn	Pn	14 43 23.1	+1.2
SJPF				Sn	Sn	14 44 46.5	-0.5
	0.8nm,0.5s						
LMR	La Mourre	7.67	21	ePn	Pn	14 43 25.2	+1.0
LMR				eSn	Sn	14 44 49.4	-1.7
	3.2nm,0.4s						
LMR	La Mourre	7.67	21	ePn	Pn	14 43 25.2	+1.0
LMR				eSn	Sn	14 44 49.4	-1.7
	1.6nm,0.4s						
LASF	Ste Croix	7.88	6	ePn	Pn	14 43 28.4	+1.3
LASF				eSn	Sn	14 44 55.5	-0.7
	2.0nm,0.3s						
LASF	Ste Croix	7.88	6	ePn	Pn	14 43 28.4	+1.3
LASF				eSn	Sn	14 44 55.5	-0.7
	1.0nm,0.3s						
FRF	La Foret Royal	7.91	21	ePn	Pn	14 43 28.4	+0.8
FRF				eSn	Sn	14 44 55.5	-1.7
	4.1nm,0.3s						
FRF	La Foret Royal	7.91	21	Pn	Pn	14 43 28.4	+0.8
FRF				Sn	Sn	14 44 55.5	-1.7
	2.0nm,0.3s						
PGF	Pioggiola	7.96	36	ePn	Pn	14 43 29.0	+0.7
PGF				eSn	Sn	14 44 55.8	-2.6
SMRF	Simiane la Rot	8.03	15	ePn	Pn	14 43 30.5	+1.3
SMRF				eSn	Sn	14 44 59.1	-1.0
	3.6nm,0.5s						
SMRF	Simiane la Rot	8.03	15	ePn	Pn	14 43 30.5	+1.3
SMRF				eSn	Sn	14 44 59.1	-1.0
	1.8nm,0.5s						
KIB	El Ksiba	8.09	246	P	Pn	14 43 31.0	+0.9
KIB				S	Sn	14 44 56.0	-5.7
SBF	Sospel	8.43	24	ePn	Pn	14 43 35.7	+1.0
SBF				eSn	Sn	14 45 08.0	-1.9
	3.2nm,0.3s						
SBF	Sospel	8.43	24	Pn	Pn	14 43 35.7	+1.0
SBF				Sn	Sn	14 45 08.0	-1.9
	1.6nm,0.3s						
CAF	Calviac	8.69	357	ePn	Pn	14 43 39.4	+1.2
CAF				eSn	Sn	14 45 14.9	-1.3
	2.7nm,0.4s						
CAF	Calviac	8.69	357	ePn	Pn	14 43 39.4	+1.2
CAF				eSn	Sn	14 45 14.9	-1.3
	1.4nm,0.4s						
VIVF	Saint-Julien-l	8.73	9	ePn	Pn	14 43 39.9	+1.0
VIVF				eSn	Sn	14 45 16.0	-1.3
	7.5nm,0.7s						
VIVF	Saint-Julien-l	8.73	9	ePn	Pn	14 43 39.9	+1.0
VIVF				eSn	Sn	14 45 16.0	-1.3
	3.8nm,0.7s						
LFF	La Frestale	8.81	351	ePn	Pn	14 43 41.2	+1.2
LFF				eSn	Sn	14 45 18.2	-1.1
	5.7nm,0.3s						
LFF	La Frestale	8.81	351	ePn	Pn	14 43 41.2	+1.2
LFF				eSn	Sn	14 45 18.2	-1.1
	2.8nm,0.3s						
EVO	Evora	8.83	288	ePn	Pn	14 43 40.7	+0.5
EVO				eSn	Sn	14 45 16.6	-3.1
	1.6nm,0.3s						
EVOP	Sao Brissos	8.91	288	ePn	Pn	14 43 40.7	-0.6
ORIF	Oris-en-Rattie	9.00	15	ePn	Pn	14 43 43.6	+1.1
ORIF				eSn	Sn	14 45 22.4	-1.4
	0.9nm,0.3s						
ORIF	Oris-en-Rattie	9.00	15	Pn	Pn	14 43 43.6	+1.1
ORIF				Sn	Sn	14 45 22.4	-1.4
	0.4nm,0.3s						
MBDF	Montbardon	9.02	19	ePn	Pn	14 43 43.8	+1.0
MBDF				eSn	Sn	14 45 22.7	-1.8
	3.9nm,0.5s						
MBDF	Montbardon	9.02	19	Pn	Pn	14 43 43.8	+1.0
MBDF				Sn	Sn	14 45 22.7	-1.8
	1.9nm,0.5s						
RJF	Les Rejaudoux	9.10	355	ePn	Pn	14 43 45.1	+1.3
RJF				eSn	Sn	14 45 25.1	-1.2
	1.7nm,0.2s						
RJF	Les Rejaudoux	9.10	355	ePn	Pn	14 43 45.1	+1.3
RJF				eSn	Sn	14 45 25.1	-1.2
	0.9nm,0.2s						
LPG	La Plagne	9.74	17	ePn	Pn	14 43 54.0	+1.4
LPG				eSn	Sn	14 45 40.2	-1.8
	3.4nm,0.2s						
LPG	La Plagne	9.74	17	Pn	Pn	14 43 54.0	+1.4
LPG				Sn	Sn	14 45 40.2	-1.8
	1.7nm,0.2s						
LPL	La Plagne	9.75	17	ePn	Pn	14 43 53.9	+1.1
LPL				eSn	Sn	14 45 40.5	-1.9
	1.7nm,0.2s						
LPL	La Plagne	9.75	17	Pn	Pn	14 43 53.9	+1.1
LPL				Sn	Sn	14 45 40.5	-1.9
	0.9nm,0.2s						
BGF	Bois d'Agland	10.31	1	ePn	Pn	14 44 01.5	+1.1
BGF				eSn	Sn	14 45 53.9	-2.1
	3.6nm,0.4s						
BGF	Bois d'Agland	10.31	1	ePn	Pn	14 44 01.5	+1.1
BGF				eSn	Sn	14 45 53.9	-2.1
	1.8nm,0.4s						
CABF	La Chapelle	10.67	13	ePn	Pn	14 44 06.3	+1.0
SSF	Saint Saulge	10.83	3	ePn	Pn	14 44 08.7	+1.2
SSF				eSn	Sn	14 46 06.3	-2.4
	2.4nm,0.2s						
SSF	Saint Saulge	10.83	3	ePn	Pn	14 44 08.7	+1.2
SSF				eSn	Sn	14 46 06.3	-2.4
	1.2nm,0.2s						
HAU	Haudompre	12.06	12	ePn	Pn	14 44 25.3	+0.9
GERES	GERESS Array B	14.96	29	Pn	Pn	14 45 06.9	+3.0
	0.2nm,0.3s,baz=220,slow=12,SNR=4.5						
TORD	Torodi Ar. Bea	23.01	183	P	P	14 46 34.3	-3.4
	0.9nm,0.9s,mb3.2,baz=359,slow=8.1,SNR=5.0						
AKASG	Malin Array Be	23.90	44	P	P	14 46 47.8	+1.5
	0.3nm,0.3s,mb3.1,baz=240,slow=12,SNR=2.2						
ZALV	Zalesovo Beam	57.30	44	P	P	14 51 24.7	+4.5
	0.6nm,0.3s,mb4.0,baz=311,slow=9.4,SNR=2.9						
MKAR	Makanchi Array	58.13	53	P	P	14 51 30.1	+3.9
	0.2nm,0.2s,mb3.7,baz=288,slow=5.7,SNR=3.8						

*BJI **04** 14:47:57.2,3299N×11690W,h23km,mB4.5,mb4.4*
*ISCJB **04** 14:47:58.5±0.3,3272N±002×11740W±002,h10km,Error ellipse: s-maj=3.0km s-min=1.8km az=36.3*
*NEIC **04** 14:47:59.0,3277N×11734W,h11km,mb3.9/1, ML4.0(PAS),After PAS.*
NEIC Felt [III] at Coronado, Del Mar, La Jolla, Poway, San Diego and Solana Beach; [II] at Carlsbad, Chula Vista, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, Oceanside, San Marcos, Santee, Spring Valley and Vista. Felt at Bonita, Cardiff-by-the-Sea, Costa Mesa, Fallbrook, Fullerton, Garden Grove, Glendale, Hemet, Laguna Niguel, Lakeside, Los Alamitos, Menifee, Murrieta, Norco, Orange, Rancho Santa Margarita, Riverside, San Clemente, Upland, Valley Center and Whittier.
*ECX **04** 14:48:00.4±0.5,3278N×11732W,h9km±3km,MD4.0, ML4.1*
*IDC **04** 14:48:03.2±1.7,3290N×117.11W,h0km,mb1 4.1/5, mb1mx3.7/25,mbtmp3.7/5,ML3.8/5,Error ellipse: s-maj=16.2km s-min=13.3km az=61.0*

ISC 04 14:47:59.4±0.3,3272N±002×11741W±002,h10km,n133, σ1s26/173,59C-59D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
109C	Camp Elliot, M	0.31	56	P	Pg	14 48 04.3	-1.2
	baz=0.2,SNR=458						
109C				⇓S	Sg	14 48 07.5	-2.2
	baz=0.2						
DPP	Dos Picos Cty	0.48	54	⇓iP	Pg	14 48 07.3	-1.5
EML	El Monte Cty P	0.50	70	⇓iP	Pg	14 48 07.8	-1.4
BAR	Barrett	0.62	93	⇑iP	Pg	14 48 10.1	-1.3
BAR				eS	Sg	14 48 17.9	-1.7
BAR	Barrett	0.62	93	⇑ePg	Pg	14 48 10.1	-1.4
BAR				eSg	Sg	14 48 17.1	-2.5
CBX	Cerro Bola	0.75	122	⇑iP	Pg	14 48 13.2	-0.6
CBX				eS	Sg	14 48 23.3	-0.3
MONP	Monument Peak	0.85	78	⇓P	Pg	14 48 13.9	-1.9
	baz=0.8,SNR=1000						
MONP				⇑S	Sg	14 48 24.6	-2.3
	baz=0.8						
MURC	Murrieta	0.90	11	P	Pg	14 48 14.9	-1.8
	baz=0.8,SNR=291						
MURC				⇓S	Sg	14 48 26.2	-2.2
	baz=0.8						
SCI	San Clemente I	0.99	286	⇑P	Pg	14 48 18.0	-0.6
	baz=1.1						
SCI				⇑S	Sg	14 48 31.7	+0.2
	baz=1.1						
ENX	Ensenada	1.04	143	⇑eP	Pg	14 48 18.9	-0.6
ENX				eS	Sg	14 48 32.9	-0.2
ENX				⇑e		14 48 34.9	
	comp=N,6μm,0.6s						
CIS	Catalina Islan	1.08	310	P	Pg	14 48 18.7	-1.6
	baz=1.1,SNR=690						
CIS				⇑S	Sg	14 48 33.2	-1.1
	baz=1.1						
DVTC	Desert V Tower	1.10	93	P	Pb	14 48 18.8	-1.8
	baz=1.0,SNR=260						
DVTC				⇑S	Sg	14 48 33.0	-1.9
	baz=1.0						
RMX	La Rumorosa	1.13	96	⇓eP	Pb	14 48 19.3	-1.7
RMX				eS	Sb	14 48 33.5	-2.2
PBX	Punta Banda	1.13	149	⇑eP	Pb	14 48 20.0	-1.0
PBX				eS	Sb	14 48 36.0	+0.1
PBX				⇓e		14 48 37.5	
	comp=E,5μm,0.8s						
PBX				⇑e		14 48 41.8	
	comp=N,5μm,0.9s						
PFO	Pinyon Flat Ob	1.20	42	Pg	Pg	14 48 20.1	-2.3
	comp=N,125nm,0.3s,baz=228,slow=13,SNR=985						
PFO				Lg		14 48 34.5	
	baz=132,slow=14						
PFO	Pinyon Flat Ob	1.20	42	P	Pb	14 48 20.1	-2.0
	baz=1.1,SNR=1000						
PFO				⇓S	Sb	14 48 35.1	-2.6
	baz=1.1						
PFO	Pinyon Flat Ob	1.20	42	eP	Pb	14 48 20.0	-2.2
PFO				eS	Sb	14 48 34.9	-2.8
FMP	Fort Macarthur	1.24	323	⇑P	Pn	14 48 20.8	-2.1
	baz=1.2,SNR=25						
FMP				⇑S	Sb	14 48 38.7	-0.3
	baz=1.2						
ECNX	Esteban Cantu	1.26	147	⇑eP	Pn	14 48 22.6	-0.5
ECNX				⇑eP		14 48 19.1	
ECNX				eS	Sb	14 48 33.2	-6.4
ECNX				eS	Sb	14 48 40.0	+0.5
SWSC	Sam W. Stewart	1.38	80	⇓P	Pn	14 48 23.3	-1.4
	baz=1.3,SNR=461						
SWSC				⇑S	Sb	14 48 41.2	-1.7
	baz=1.3						
BFSC	Mount Baldy St	1.53	352	⇑P	Pn	14 48 25.7	-1.2
	baz=1.5,SNR=170						
BFSC				⇑S	Sn	14 48 46.1	-0.7
	baz=1.5						
BBRC	Big Bear Sol-O	1.59	15	⇑P	Pn	14 48 26.6	-1.1
	baz=1.5,SNR=50						
BBRC				⇑S	Sn	14 48 47.2	-1.1
	baz=1.5						
MWC	Mount Wilson	1.60	340	⇑ePn	Pn	14 48 26.2	-1.6
MWC				eSn	Sn	14 48 45.4	-3.0
DECC	Green Verdugo	1.71	333	⇑P	Pn	14 48 28.0	-1.3
	baz=1.7						
CPBX	Cerro Prieto	1.80	99	ePN	Pn	14 48 30.3	-0.2
CPBX				eS	Sn	14 48 54.4	+1.0
SNCC	San Nicolas Is	1.86	287	⇓P	Pn	14 48 30.6	-0.7
	baz=1.9						
SNCC	San Nicolas Is	1.86	287	ePn	Pn	14 48 30.6	-0.7
SNCC				ePg	Pg	14 48 34.2	-0.8
BLG	Laguna Peak	1.96	315	⇓P	Pn	14 48 30.8	-2.0
	baz=2.0,SNR=30						
BLG				⇓Sb	Sb	14 49 01.3	+1.5
	baz=2.0						
RRX	Edison Barstow	2.18	9	⇓Pb	Pb	14 48 37.9	-1.1
	baz=2.1						
RRX				⇓Sb	Sb	14 49 06.2	0.0
	baz=2.1						
OSI	Osito Adit	2.19	330	⇑P	Pn	14 48 34.8	-1.1
	baz=2.2						
OSI	Osito Adit	2.19	330	ePn	Pn	14 48 34.4	-1.5
GLA	Glamis	2.20	81	⇑P	Pn	14 48 35.2	-0.8
	baz=2.1,SNR=37						
GLA	Glamis	2.20	81	ePn	Pn	14 48 35.1	-0.8
EDW2	Edwards Air Fo	2.21	347	⇓P	Pn	14 48 35.8	-0.4
	baz=2.2,SNR=100						
EDW2				⇑Sb	Sb	14 49 06.6	-0.4
	baz=2.2						
BSC	Santa Cruz Isl	2.26	305	⇑P	Pn	14 48 35.6	-1.2
	baz=2.3,SNR=13						
HEC	Hector,Ludlow	2.29	23	⇓P	Pn	14 48 36.6	-0.6
	baz=2.2,SNR=203						
HEC				⇓Sb	Sb	14 49 09.0	-0.2
	baz=2.2						
IRM	Iron Mountain	2.37	52	⇓P	Pn	14 48 37.7	-0.7
	baz=2.3,SNR=110						
GMRC	Granite Mounta	2.52	35	⇑P	Pn	14 48 40.1	-0.3
	baz=2.4,SNR=146						
GSC	Goldstone	2.62	11	⇓Sb	Sb	14 49 19.2	+0.3

	baz=2.5						
GSC	**Goldstone**	**2.62**	**11**	*e*Pn	**Pn**	**14 48 42.1**	**+0.2**
GSC				*e*Pg	**Pg**	**14 48 46.9**	**-2.9**
GSC				*e*Sn	**Sn**	**14 49 11.8**	**-1.9**
GSC				*e*Sg	**Sg**	**14 49 20.0**	**-3.8**
Y12C	**Blythe**	**2.63**	**66**	⇑P	**Pn**	**14 48 41.0**	**-0.9**
	baz=2.5,SNR=10						
Y12C				⇓S	**Sn**	**14 49 12.4**	**-1.5**
	baz=2.5						
ARVC	**Arvin**	**2.68**	**334**	⇑P	**Pn**	**14 48 42.2**	**-0.4**
	baz=2.6						
LRMC	**Laurel Mountai**	**2.76**	**355**	⇑Sb	**Sb**	**14 49 24.2**	**+1.3**
	baz=2.7						
PKM	**Peak Mountain**	**2.96**	**318**	⇓P	**Pn**	**14 48 46.1**	**-0.3**
	baz=2.9						
TUQ	**Turquoise Moun**	**2.98**	**24**	⇓P	**Pn**	**14 48 46.5**	**-0.2**
	baz=2.9,SNR=10						
LDFC	**Landfair**	**3.03**	**38**	*e*Pn	**Pn**	**14 48 47.8**	**+0.3**
LDFC				*e*Pg	**Pg**	**14 48 54.3**	**-3.2**
113A	**Mohawk Valley,**	**3.07**	**88**	⇑P	**Pn**	**14 48 47.7**	**-0.3**
	baz=3.0,SNR=16						
113A				⇑S	**Sn**	**14 49 25.1**	**+0.4**
	baz=3.0						
ISA	**Isabella**	**3.07**	**344**	⇓P	**Pn**	**14 48 47.9**	**0.0**
	baz=3.0						
ISA				⇓Sb	**Sb**	**14 49 32.8**	**+1.2**
	baz=3.0						
ISA	**Isabella**	**3.07**	**344**	*e*Pn	**Pn**	**14 48 47.9**	**0.0**
ISA				*e*Pg	**Pg**	**14 48 55.1**	**-3.2**
ISA				*e*Sg	**Sg**	**14 49 33.0**	**-5.0**
NEE2	**Needles Airpor**	**3.10**	**48**	⇓P	**Pn**	**14 48 47.8**	**-0.5**
	baz=3.0,SNR=20						
Y13A	**Salome**	**3.19**	**69**	⇓P	**Pn**	**14 48 49.2**	**-0.4**
	baz=3.1						
SHOC	**Shoshone**	**3.31**	**16**	⇑Sb	**Sb**	**14 49 40.4**	**+1.9**
	baz=3.2						
W12A	**Cal Nev Ari**	**3.33**	**39**	⇓P	**Pn**	**14 48 51.6**	**+0.1**
	baz=3.2						
SMMC	**Simmler**	**3.37**	**321**	⇑P	**Pn**	**14 48 52.4**	**+0.4**
	baz=3.4						
V11A	**Goodsprings**	**3.52**	**27**	⇓P	**Pn**	**14 48 54.2**	**+0.1**
	baz=3.4,SNR=7.1						
V12A	**Nelson**	**3.67**	**35**	⇓P	**Pn**	**14 48 56.6**	**+0.3**
	baz=3.6,SNR=24						
PTRM	**Twissleman Ran**	**3.74**	**322**	*e*Pn	**Pn**	**14 48 56.8**	**-0.4**
W13A	**Hualapai Mount**	**3.77**	**50**	⇓P	**Pn**	**14 48 57.8**	**+0.2**
	baz=3.7,SNR=44						
W13A				⇓Sb	**Sb**	**14 49 52.9**	**+1.1**
	baz=3.7						
Y14A	**Wickenburg**	**3.88**	**71**	⇓P	**Pn**	**14 48 57.8**	**-1.3**
	baz=3.8						
214A	**Organ Pipe Nat**	**3.96**	**100**	⇓P	**Pn**	**14 49 00.2**	**-0.1**
	baz=3.9						
U11A	**Corn Creek**	**4.06**	**24**	⇓P	**Pn**	**14 49 01.3**	**-0.2**
	baz=4.0						
PKD	**Parkfield**	**4.13**	**322**	⇓P	**Pn**	**14 49 01.7**	**-0.9**
	baz=4.1						
X14A	**Yava**	**4.15**	**64**	⇑P	**Pn**	**14 49 03.3**	**+0.4**
	baz=4.0						
V13A	**Grand Canyon W**	**4.22**	**41**	⇑P	**Pn**	**14 49 04.3**	**+0.5**
	baz=4.1,SNR=73						
TPNV	**Topopah Spring**	**4.33**	**12**	*e*Pn	**Pn**	**14 49 07.2**	**+1.9**
TPNV				*e*Sg	**Sg**	**14 50 12.8**	**-5.6**
115A	**Sonoran Desert**	**4.37**	**89**	⇓P	**Pn**	**14 49 05.6**	**-0.2**
	baz=4.3						
W14A	**Seligman**	**4.37**	**54**	⇓P	**Pn**	**14 49 06.2**	**+0.3**
	baz=4.3,SNR=40						
U12A	**Valley of Fire**	**4.40**	**32**	⇓P	**Pn**	**14 49 06.6**	**+0.4**
	baz=4.3,SNR=76						
Y15A	**Casa Rosa Ranc**	**4.42**	**72**	⇓P	**Pn**	**14 49 07.0**	**+0.4**
	baz=4.3						
V03C	**Hunter Liggett**	**4.57**	**317**	P	**Pn**	**14 49 07.7**	**-0.9**
	baz=4.6,SNR=46						
T12A	**Moapa**	**4.57**	**28**	⇓P	**Pn**	**14 49 09.3**	**+0.7**
	baz=4.5						
V14A	**Boquillas Ranc**	**4.60**	**50**	⇑P	**Pn**	**14 49 09.8**	**+0.8**
	baz=4.5,SNR=40						
U13A	**Pakoon Wash**	**4.65**	**37**	⇑P	**Pn**	**14 49 10.5**	**+0.7**
	baz=4.5,SNR=139						
X15A	**Humboldt**	**4.66**	**66**	⇑P	**Pn**	**14 49 10.2**	**+0.4**
	baz=4.5,SNR=21						
T06C	**Millerton Lake**	**4.68**	**337**	⇓P	**Pn**	**14 49 10.3**	**+0.2**
	baz=4.6						
MTUM	**Tungsten Hills**	**4.72**	**349**	*e*Pn	**Pn**	**14 49 11.2**	**+0.5**
MTUM				Pg	**Pg**	**14 49 28.5**	**-1.4**
S08C	**White Mtn Res**	**4.81**	**353**	⇑P	**Pn**	**14 49 13.3**	**+1.4**
	baz=4.8						
116A	**Eloy**	**4.81**	**90**	⇓P	**Pn**	**14 49 12.8**	**+0.9**
	baz=4.7						
T11A	**Corn Creek, Al**	**4.86**	**21**	⇑P	**Pn**	**14 49 13.9**	**+1.3**
	baz=4.8						
W15A	**Williams**	**4.93**	**59**	⇑P	**Pn**	**14 49 14.6**	**+1.1**
	baz=4.8						
S09A	**Goldfield**	**5.00**	**2**	⇑P	**Pn**	**14 49 15.6**	**+1.1**
	baz=4.9						
Z16A	**Peralta Trail,**	**5.06**	**81**	⇑P	**Pn**	**14 49 16.0**	**+0.6**
	baz=5.0						
U14A	**Mt Trumbull**	**5.08**	**42**	⇓P	**Pn**	**14 49 16.5**	**+0.9**
	baz=5.0						
216A	**Three Points,**	**5.08**	**96**	⇓P	**Pn**	**14 49 16.6**	**+1.0**
	baz=5.0						
Y16A	**Circle Bar Ran**	**5.10**	**75**	⇑P	**Pn**	**14 49 16.8**	**+1.0**
	baz=5.0						
S11A	**Rachel**	**5.10**	**15**	⇓P	**Pn**	**14 49 17.1**	**+1.2**
	baz=5.0						
T13A	**Saint George**	**5.17**	**33**	⇓P	**Pn**	**14 49 17.8**	**+1.0**
	baz=5.1						
SAO	**San Andreas Ge**	**5.23**	**322**	*e*Pn	**Pn**	**14 49 17.0**	**-0.7**
	comp=N,16nm,0.8s						
S10A	**Tonopah Range,**	**5.24**	**7**	⇑P	**Pn**	**14 49 18.9**	**+1.2**
	baz=5.2						
X16A	**Lo Mia Camp, P**	**5.26**	**70**	⇑P	**Pn**	**14 49 19.0**	**+0.9**
	baz=5.1						
S12A	**Delamar Landin**	**5.31**	**23**	⇓P	**Pn**	**14 49 20.5**	**+1.8**
	baz=5.2						
V15A	**Kaibab Nationa**	**5.32**	**53**	⇑P	**Pn**	**14 49 20.2**	**+1.2**
	baz=5.2						
PACP	**Pacheco Peak**	**5.34**	**324**	⇓P	**Pn**	**14 49 20.5**	**+1.4**
	baz=5.3						
W16A	**Flagstaff**	**5.43**	**63**	⇑P	**Pn**	**14 49 21.3**	**+0.9**
	baz=5.3						
R09A	**Tonopah**	**5.52**	**3**	⇓P	**Pn**	**14 49 23.4**	**+1.8**
	baz=5.4						
S06C	**San Francisco**	**5.53**	**340**	⇓P	**Pn**	**14 49 22.8**	**+1.0**
	baz=5.5						
Y17A	**Roosevelt**	**5.59**	**78**	⇓P	**Pn**	**14 49 23.5**	**+1.0**
	baz=5.5						
T14A	**Hurricane**	**5.60**	**38**	⇑P	**Pn**	**14 49 24.0**	**+1.2**
	baz=5.5						
TUC	**Tucson**	**5.61**	**92**	*e*Pn	**Pn**	**14 49 23.1**	**+0.2**
	comp=N,4.4nm,0.6s						
U15A	**North Rim**	**5.61**	**47**	⇑P	**Pn**	**14 49 24.6**	**+1.6**
	baz=5.5						
117A	**Oracle**	**5.63**	**90**	⇑P	**Pn**	**14 49 24.6**	**+1.5**
	baz=5.5						
R10A	**Warm Springs**	**5.63**	**9**	⇓P	**Pn**	**14 49 25.0**	**+1.8**
	baz=5.5						
S13A	**Holt Ranch, En**	**5.66**	**30**	⇓P	**Pn**	**14 49 25.2**	**+1.7**
	baz=5.5						
217A	**Green Valley**	**5.66**	**98**	⇑P	**Pn**	**14 49 25.4**	**+1.8**
	baz=5.6						
WUAZ	**Wupatki**	**5.73**	**59**	*e*Pn	**Pn**	**14 49 26.3**	**+1.7**
	comp=N,17nm,0.6s						
X17A	**Forest Lakes**	**5.75**	**72**	⇑P	**Pn**	**14 49 25.9**	**+1.1**
	baz=5.6						
NVAR	**Mina Array Bea**	**5.75**	**353**	Pn	**Pn**	**14 49 28.4**	**+3.7**
	comp=N,0.5nm,0.3s,baz=174,slow=16,SNR=13						
NVAR				Pg	**Pg**	**14 49 41.5**	**-8.0**
	comp=N,0.8nm,0.3s,baz=166,slow=14,SNR=11						
NVAR				Lg		14 50 56.0	
	comp=N,0.2nm,0.3s,baz=177,slow=32,SNR=2.2						
R11A	**Troy Canyon, C**	**5.81**	**14**	⇑P	**Pn**	**14 49 26.9**	**+1.2**
	baz=5.7						
CMB	**Columbia Colle**	**5.84**	**336**	*e*Pn	**Pn**	**14 49 24.4**	**-1.6**
	comp=N,11nm,0.8s						
T15A	**Red Dirt Ranch**	**5.95**	**43**	⇓P	**Pn**	**14 49 29.1**	**+1.5**
	baz=5.8						
R12A	**Pony Springs,**	**6.04**	**21**	⇓P	**Pn**	**14 49 30.7**	**+1.8**
	baz=5.9						
S14A	**Cedar City**	**6.11**	**33**	⇓P	**Pn**	**14 49 31.4**	**+1.6**
	baz=6.0						
R13A	**O'Grain Ranch,**	**6.13**	**26**	⇓P	**Pn**	**14 49 32.0**	**+2.0**
	baz=6.0						
118A	**Homack Ranch,**	**6.27**	**89**	⇓P	**Pn**	**14 49 33.1**	**+1.1**
	baz=6.2						
218A	**Dragoon**	**6.27**	**95**	⇓P	**Pn**	**14 49 33.7**	**+1.7**
	baz=6.2						
Q11A	**Duckwater**	**6.28**	**13**	⇑P	**Pn**	**14 49 33.8**	**+1.7**
	baz=6.2						
T16A	**Glen Canyon Da**	**6.45**	**47**	⇑P	**Pn**	**14 49 35.7**	**+1.3**
	baz=6.3						
X18A	**Snowflake**	**6.48**	**72**	⇑P	**Pn**	**14 49 36.3**	**+1.5**
	baz=6.4						
MSU	**Marysvale**	**7.18**	**35**	*e*Pn	**Pn**	**14 49 44.4**	**0.0**
ELK	**Elko**	**8.20**	**12**	Pn	**Pn**	**14 50 02.0**	**+3.6**
	comp=N,0.9nm,0.3s,baz=204,slow=10.0,SNR=15						
ELK				Lg		14 52 14.4	
	comp=N,0.1nm,0.3s,baz=116,slow=23,SNR=4.4						
ELK	**Elko**	**8.20**	**12**	Pn	**Pn**	**14 50 00.3**	**+1.9**
	comp=N,4.7nm,0.7s						
SRU	**San Rafael**	**8.47**	**39**	*e*Pn	**Pn**	**14 50 04.5**	**+2.2**
	comp=N,12nm,0.7s						
PV10	**Paradox Valley**	**8.85**	**48**	P	**Pn**	**14 50 08.0**	**+0.6**
PV01	**Paradox Valley**	**9.01**	**51**	*e*P	**Pn**	**14 50 12.5**	**+3.0**
BNM	**Barren Site**	**9.12**	**78**	*e*P	**Pn**	**14 50 13.4**	**+2.3**
ANMO	**Albuquerque**	**9.38**	**73**	Pn	**Pn**	**14 50 16.8**	**+2.2**
	comp=N,0.6nm,0.3s,baz=265,slow=13,SNR=8.8						
ANMO				Lg		14 52 52.4	
	comp=N,0.1nm,0.3s,baz=158,slow=18,SNR=2.8						
ANMO	**Albuquerque**	**9.38**	**73**	Pn	**Pn**	**14 50 14.0**	**-0.6**
	comp=N,2.8nm,0.5s						
HWUT	**Hardware Ranch**	**10.02**	**26**	*e*P	**Pn**	**14 50 28.3**	**+4.9**
	comp=N,9.3nm,0.8s						
PDAR	**Pinedale Array**	**11.79**	**29**	Pn	**Pn**	**14 50 52.7**	**+5.1**
	comp=N,0.1nm,0.3s,baz=211,slow=11,SNR=14						
IMW	**Indian Meadow**	**12.26**	**23**	P	**Pn**	**14 50 58.8**	**+4.8**
	comp=N,11nm,1.5s						
TXAR	**Lajitas Array**	**12.26**	**102**	Pn	**Pn**	**14 50 57.7**	**+3.6**
	comp=N,0.4nm,0.3s,baz=281,slow=13,SNR=33						
RSSD	**Black Hills**	**15.45**	**39**	*e*P	**Pn**	**14 51 39.4**	**+2.1**
	comp=N,6.3nm,1.1s						
MDJ	**Mudanjiang**	**81.88**	**318**	P	**P**	**15 00 17.8**	**-1.2**
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.7s						
MDJ				AMB	AMB		
	comp=Z,31nm,5.5s						

ISCJB ***04*** *14:53:15.2±0.8,6097S±008×235W±03,h10km,mb4.2/5, Error ellipse: s-maj=17.9km s-min=10.2km az=166.2*
IDC ***04*** *14:53:15.6±1.0,6082S×2373W,h0km,mb4.3/4,mb1 4.3/5, mb1mx3.9/17,mbtmp4.3/5,ML5.5/1,Error ellipse: s-maj=55.3km s-min=23.7km az=108.0*
NEIC ***04*** *14:53:16.8±0.7,6082S×2372W,h10km,mb4.0/2,Error ellipse: s-maj=21.8km s-min=15.0km az=104.0*
ISC 04 14:53:17.1±0.7**,6091S**±007×**236W**±02**,h10km,n15, σ1s17**/18**,mb4.2**/5**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**11.58**	**154**	*e*	**Pn**	**14 56 03.0**	**+0.8**
VNA1				*e*		14 56 05.2	
VNA1				*e*S	**Sn**	**14 58 08.4**	**-3.0**
VNA3	**Neumayer Olymp**	**11.77**	**157**	*e*	**Pn**	**14 56 05.1**	**+0.3**
VNA3				*e*		14 56 06.7	
VNA3				*e*S	**Sn**	**14 58 10.5**	**-5.5**
VNA2	**Neumayer--Watz**	**11.98**	**154**	*e*	**Pn**	**14 56 08.2**	**+0.6**
VNA2				*e*		14 56 10.1	
VNA2				*e*S	**Sn**	**14 58 14.7**	**-6.4**
SNAA	**Sanae**	**13.54**	**151**	*e*	**Pn**	**14 56 29.6**	**+0.6**
SNAA				*e*		14 56 32.0	
SNAA				*e*S	**Sn**	**14 58 52.9**	**-6.3**
SNAA	**Sanae**	**13.54**	**151**	*e*Pn	**Pn**	**14 56 29.5**	**+0.6**
	14nm,0.5s						
PMSA	**Palmer Station**	**18.60**	**241**	P	**Pn**	**14 57 33.5**	**-0.9**
	1.5nm,0.3s,baz=83,slow=11,SNR=8.4						
PMSA	**Palmer Station**	**18.60**	**241**	*e*P	**Pn**	**14 57 33.7**	**-0.7**
	2.3nm,0.5s						
QSPA	**South Pole Qui**	**29.32**	**180**	P	**P**	**14 59 21.3**	**+2.1**
	1.4nm,0.6s,mb3.9,baz=199,slow=2.6,SNR=22						
LBTB	**Lobatse**	**48.98**	**66**	*e*P	**P**	**15 02 04.0**	**+0.5**
	1.2nm,0.3s,mb4.4						
DBIC	**Dimbokro**	**68.97**	**20**	P	**P**	**15 04 23.4**	**+1.2**
	2.1nm,0.6s,mb4.2,baz=167,slow=8.8,SNR=4.7						
DBIC	**Dimbokro**	**68.97**	**20**	*e*P	**P**	**15 04 23.4**	**+1.1**
TOA0	**Torodi Ar. Sit**	**76.53**	**25**	*e*P	**P**	**15 05 05.1**	**-2.0**
TORD	**Torodi Ar. Bea**	**76.53**	**25**	P	**P**	**15 05 06.2**	**-0.9**
	4.8nm,0.9s,mb4.5,baz=199,slow=6.2,SNR=16						
ASAR	**Alice Springs**	**93.77**	**159**	P	**P**	**15 06 33.9**	**-0.3**
	0.5nm,0.7s,mb4.0,baz=182,slow=3.0,SNR=9.5						
SONM	**Songino Array**	**148.93**	**92**	PKPbc	PKPbc	15 13 03.5	-0.4
	2.0nm,0.8s,baz=220,slow=2.3,SNR=6.0						

NIED ***04*** *15:19:00,3500N×13540E,h5km,Mw3.5 Best double couple: M0 1.69000×10^14 NP1:φs27.00000°,δ74.00000°, λ143.00000°. NP2:φs129.00000°,δ55.00000°,λ20.00000°.*
JMA 04 15:19:51.7,3496N×13545E,h9km,M3.7,6C-3D Broadband fault plane solution: P waves. NP1: φs129.00000°**,**δ69.00000°**,**λ10.00000°. **NP2:**φs36.00000°**,** δ80.00000°**,**λ158.00000°. **Principal axes:** T Plg22.0000°**,** Azm351.0000°**;** N Plg66.0000°**,** Azm193.0000°**;** P Plg8.0000°**,** Azm84.0000°**; Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.32**	**353**	⇑P	Pg	15 19 58.2	+0.1
JWT				S	Sg	15 20 02.5	0.0
JHE	**Heguri**	**0.36**	**148**	⇑P	Pg	15 19 58.9	+0.1
JHE				S	Sg	15 20 04.1	+0.5
JKS	**Kasai**	**0.50**	**273**	⇓P	Pg	15 20 01.3	-0.1
JKS				S	Sg	15 20 07.9	0.0
JAJ2	**Tsuna**	**0.71**	**221**	⇓P	Pg	15 20 05.2	-0.2
JAJ2				S	Sg	15 20 14.9	+0.2
JKY	**Yasaka**	**0.72**	**337**	⇑P	Pg	15 20 05.4	-0.3
JKY				*e*S	Sg	15 20 15.0	-0.1
JWY	**Kouya**	**0.75**	**171**	⇑P	Pg	15 20 05.8	-0.3
JWY				S	Sg	15 20 15.7	-0.2
TSUJ	**Tsu 2**	**0.84**	**107**	⇓P	Pg	15 20 07.4	-0.4
TSUJ				S	Sg	15 20 18.3	-0.4
JKSM	**Kasumi**	**0.90**	**314**	⇑P	Pg	15 20 08.4	-0.6
JKSM				S	Sg	15 20 20.0	-0.7
JKN2	**Miekihoku**	**0.99**	**136**	⇑P	Pg	15 20 10.1	-0.6
JKN2				S	Sg	15 20 22.9	-0.7
MAT	**Matsushiro**	**2.74**	**54**	P	Pn	15 20 37.8	+1.9
MAT				S	Sn	15 21 11.4	+2.3

IDC 04 15:23:14.2±2.3**,1486S**×**17365W,h0km,mb3.8**/5**, mb1 4.2**/6**,mb1mx3.9**/17**,mbtmp3.9**/6**,MS3.8**/20**, Ms1 3.8**/20**,ms1mx3.6**/35 **Error ellipse: s-maj=225.3km s-min=20.1km az=154.0,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.04**	**63**	Pn	Pn	15 23 47.9	-1.9
	60nm,0.3s,baz=144,slow=2.2,SNR=96						
AFI				Sn	Sn	15 24 09.2	-6.8
	173nm,0.3s,baz=63,slow=20,SNR=12						
AFI				LR	LR	15 24 17.4	
	comp=Z,407nm,20.1s,baz=271,slow=31						
RAR	**Rarotonga**	**14.62**	**118**	LR	LR	15 30 51.3	
	comp=Z,391nm,20.3s,baz=267,slow=31						
PPT	**Papeete**	**23.26**	**100**	*e*LQ		15 32 41.5	
	865nm,27.5s						
PPT				*e*LR	LR	15 33 35.6	
	330nm,26.8s						
PPT	**Papeete**	**23.26**	**100**	LR	LR	15 34 35.9	
	comp=Z,179nm,20.4s,baz=291,slow=29						
URZ	**Urewera**	**24.70**	**198**	LR	LR	15 37 10.0	
	comp=Z,358nm,19.3s,baz=22,slow=34						
HNR	**Honiara**	**26.36**	**279**	LR	LR	15 35 52.8	
	comp=Z,68nm,21.6s,baz=308,slow=29						
RKT	**Rikitea**	**37.39**	**109**	*e*LR	LR	15 40 05.4	
	205nm,30.2s						
STKA	**Stephens Creek**	**44.10**	**239**	LR	LR	15 45 57.7	
	comp=Z,82nm,21.0s,baz=26,slow=31						
WRA	**Warramunga Arr**	**49.74**	**256**	P	P	15 32 08.2	-0.5
	1.0nm,0.8s,baz=90,slow=7.3,SNR=10						
ASAR	**Alice Springs**	**50.05**	**251**	P	P	15 32 10.8	-0.2
	8.3nm,0.9s,baz=87,slow=7.6,SNR=56						
MJAR	**Matsushiro Arr**	**68.37**	**320**	LR	LR	15 58 49.3	
	comp=Z,148nm,20.4s,baz=145,slow=31						
ASAJ	**Asahikawa**	**70.96**	**328**	LR	LR	16 00 10.7	
	comp=Z,55nm,19.4s,baz=152,slow=31						
PETK	**Petropavlovsk-**	**72.04**	**342**	LR	LR	16 08 12.0	
	comp=Z,15nm,18.2s,baz=291,slow=37						
PFO	**Pinyon Flat Ob**	**72.73**	**47**	LR	LR	15 59 21.4	
	comp=Z,92nm,21.2s,slow=30						
YBH	**Yreka Blue Hor**	**73.31**	**37**	LR	LR	15 59 43.2	
	comp=Z,56nm,18.2s,slow=30						
NVAR	**Mina Array Bea**	**74.09**	**42**	P	P	15 34 51.5	-0.7
	0.5nm,0.8s,baz=238,slow=14,SNR=2.8						
QSPA	**South Pole Qui**	**75.18**	**180**	LR	LR	15 59 59.1	
	comp=Z,66nm,20.3s,slow=29						
KSRS	**Korea Array**	**75.61**	**316**	LR	LR	16 03 28.9	
	comp=Z,30nm,19.3s,baz=7.8,slow=32						
BBB	**Bella Bella**	**77.51**	**27**	LR	LR	15 59 34.9	
	comp=Z,44nm,21.3s,slow=28						
TXAR	**Lajitas Array**	**80.51**	**56**	P	P	15 35 30.6	+2.1
	0.9nm,1.0s,baz=254,slow=4.7,SNR=4.5						
TXAR				LR	LR	16 05 42.0	
	comp=Z,60nm,19.8s,baz=0.0,slow=32						
PDAR	**Pinedale Array**	**82.02**	**42**	P	P	15 35 37.5	+1.3
	0.5nm,0.8s,baz=220,slow=9.4,SNR=1.9						
PDAR				LR	LR	16 08 48.7	
	comp=Z,56nm,18.6s,baz=69,slow=33						
MAW	**Mawson**	**88.23**	**199**	LR	LR	16 12 44.1	
	comp=Z,90nm,20.7s,baz=247,slow=34						
PLCA	**Paso Flores**	**90.05**	**132**	LR	LR	16 08 58.9	
	comp=Z,115nm,20.1s,baz=11,slow=30						
CMAR	**Chiang Mai Arr**	**92.22**	**288**	LR	LR	16 13 31.1	
	comp=Z,94nm,18.3s,baz=145,slow=33						
ULM	**Lac du Bonnet**	**93.66**	**39**	LR	LR	16 12 20.2	
	comp=Z,62nm,18.1s,baz=347,slow=32						

NIED ***04*** *15:49:00,2500N×12560E,h53km,Mw4.0 Best double couple: M0 1.13000×10^15 NP1:φs59.00000°,δ79.00000°, λ95.00000°. NP2:φs216.00000°,δ12.00000°,λ67.00000°.*
IDC ***04*** *15:49:23.1±0.9,2501N×12541E,h0km,mb3.7/8, mb1 3.8/9,mb1mx3.7/21,mbtmp3.7/9,ML2.9/1,Error ellipse: s-maj=26.5km s-min=19.1km az=79.0*
ISCJB ***04*** *15:49:28.6±0.5,2501N±008×12563E±006,h55km±5km, mb3.6/9,Error ellipse: s-maj=15.3km s-min=6.1km az=148.1*
JMA ***04*** *15:49:29.1±0.1,2499N×12561E,h53km±1km,M4.0*
JMA Felt I J1.
NEIC ***04*** *15:49:30.8±1.0,2507N×12565E,h62km±10km,mb3.9/1, Error ellipse: s-maj=13.7km s-min=11.2km az=160.0*
ISC 04 15:49:29.5±0.5**,2500N**±008×**12563E**±006**,h48km**±5km**, n29,σ0s85**/35**,mb3.6**/9**,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.32**	**221**	P	**Pn**	**15 49 38.4**	**-0.2**
JOGS				S	**Sn**	**15 49 45.3**	**+0.3**
JMJ	**Miyako jima 2**	**0.36**	**239**	P	**Pn**	**15 49 38.8**	**-0.2**
JMJ				S	**Sn**	**15 49 45.6**	**-0.2**
JTJ	**Tarama**	**0.92**	**247**	P	**Pn**	**15 49 45.7**	**-0.3**
JTJ				S	**Sn**	**15 49 57.7**	**-0.5**
JIJ	**Ishigaki jima**	**1.50**	**245**	P	**Pn**	**15 49 53.5**	**-0.4**
JIJ				*e*S	**Sn**	**15 50 11.2**	**-1.0**
JKRS	**Kuro-shima**	**1.66**	**243**	P	**Pn**	**15 49 56.1**	**0.0**
JKE	**Kume jima 2**	**1.68**	**38**	P	**Pn**	**15 49 56.6**	**+0.2**
IRIF	**Iriomote-Funau**	**1.85**	**249**	P	**Pn**	**15 49 58.9**	**+0.1**
HATJ	**Hateruma jima**	**1.91**	**241**	P	**Pn**	**15 50 00.1**	**+0.5**
JAGN	**Aguni-jima**	**2.15**	**42**	P	**Pn**	**15 50 03.2**	**+0.4**
YOJ	**Yonaguni jima**	**2.44**	**258**	P	**Pn**	**15 50 06.5**	**-0.4**
JIH	**Iheya**	**2.92**	**46**	P	**Pn**	**15 50 14.1**	**+0.7**
JOW	**Kunigami**	**3.00**	**52**	Pn	**Pn**	**15 50 15.3**	**+0.8**
	2.5nm,0.3s,baz=178,slow=12,SNR=16						
JOW				Sn	**Sn**	**15 50 54.1**	**+4.9**
	12nm,0.3s,baz=130,slow=27,SNR=6.7						
JOW	**Kunigami**	**3.00**	**52**	P	**Pn**	**15 50 15.2**	**+0.7**
TATO	**Taipei**	**3.76**	**270**	*e*Pn	**Pn**	**15 50 28.0**	**+3.1**
NACB	**Ninganchiao**	**3.77**	**258**	*e*Pn	**Pn**	**15 50 25.0**	**0.0**
YHNB	**Yeheng**	**3.88**	**266**	*e*Pn	**Pn**	**15 50 28.7**	**+2.1**
JTK	**Tokunoshima**	**4.07**	**46**	P	**Pn**	**15 50 21.2**	**-8.0**
JAM	**Amami Oshima**	**4.92**	**45**	P	**Pn**	**15 50 40.1**	**-0.7**
JMZ	**Minamidaito 2**	**5.12**	**80**	P	**Pn**	**15 50 40.8**	**-2.8**
JMZ				*e*S	**Sn**	**15 51 35.0**	**-6.4**
ASAJ	**Asahikawa**	**23.56**	**32**	P	**P**	**15 54 35.2**	**-0.2**
	2.8nm,0.8s,mb3.8,baz=114,slow=27,SNR=5.0						
ULN	**Ulaanbaatar**	**27.14**	**332**	P	**P**	**15 55 07.7**	**-0.3**
SONM	**Songino Array**	**27.40**	**331**	P	**P**	**15 55 09.9**	**-0.4**
	0.3nm,0.3s,mb3.3,baz=153,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**40.64**	**314**	P	**P**	**15 57 03.9**	**-0.9**
	0.3nm,0.3s,mb3.4,baz=102,slow=10,SNR=3.7						
ZALV	**Zalesovo Beam**	**41.85**	**325**	P	**P**	**15 57 12.9**	**-1.6**
	1.3nm,0.5s,mb3.8,baz=106,slow=9.2,SNR=4.2						
UCH	**Uchtor**	**45.21**	**305**	*e*P	**P**	**15 57 43.1**	**+1.3**
	2.0nm,1.0s,mb3.9						
WRA	**Warramunga Arr**	**45.47**	**168**	P	**P**	**15 57 44.5**	**+0.5**
	0.4nm,0.6s,mb3.4,baz=348,slow=8.6,SNR=2.4						
ASAR	**Alice Springs**	**49.04**	**170**	P	**P**	**15 58 12.2**	**+0.5**
	0.4nm,1.0s,mb3.4,baz=354,slow=7.1,SNR=7.3						
ARCES	**ARCESS Array B**	**70.29**	**338**	P	**P**	**16 00 37.1**	**-0.2**
	0.5nm,0.5s,mb3.7,baz=47,slow=7.1,SNR=5.0						
GERES	**GERESS Array B**	**84.74**	**322**	P	**P**	**16 01 59.1**	**+0.7**
	0.5nm,0.6s,mb3.8,baz=108,slow=3.0,SNR=4.1						

ISK ***04*** *15:49:29.9,3724N×3881E,h6km,MD3.0*
ISCJB ***04*** *15:49:30.8±1.0,3725N±005×3883E±004,h8km±6km, Error ellipse: s-maj=8.7km s-min=5.0km az=173.1*
CSEM ***04*** *15:49:30.6±0.2,3731N×3877E,h10km,MD3.0,Error ellipse: s-maj=5.7km s-min=2.2km az=150.0*
DDA ***04*** *15:49:30.6,3726N×3882E,h5km±1km,Md2.8,Ml2.5*
ISC 04 15:49:30.8±1.0**,3725N**±005×**3884E**±004**,h8km**±6km**,n18, σ0s98**/28**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.19**	**357**	*e*PG	**Pg**	**15 49 34.4**	**-0.3**
ATAB	**Bozova**	**0.48**	**297**	*i* P	**Pg**	**15 49 40.2**	**0.0**
ATAB				*i* S	**Sg**	**15 49 48.0**	**+1.5**
GZT	**Gaziantep**	**1.02**	**276**	*i* P	**Pg**	**15 49 49.0**	**-1.4**
GZT				*i* S	**Sg**	**15 50 07.7**	**+4.0**
MALT	**Malatya**	**1.11**	**343**	*e*PN	**Pn**	**15 49 52.0**	**-0.7**
MALT				*e*SN	**Sn**	**15 50 07.2**	**-0.9**
MYA	**Malataya**	**1.12**	**343**	*e*PN	**Pn**	**15 49 51.9**	**-0.9**
SVRC	**Sivrice-ELAZID**	**1.18**	**18**	*e*PN	**Pn**	**15 49 53.3**	**-0.4**
SVRC				*e*SN	**Sn**	**15 50 10.0**	**0.0**
DIYA	**Diyarbakir**	**1.22**	**56**	*i* P	**Pb**	**15 49 54.6**	**+0.5**
ELZG	**Elazig**	**1.25**	**5**	*e*P	**Pn**	**15 49 54.5**	**-0.1**
ELZG				*i* S	**Sb**	**15 50 14.5**	**+3.7**
AKCD	**Akcadag**	**1.27**	**325**	*i* P	**Pn**	**15 49 55.1**	**+0.3**
AKCD				*i* S	**Sb**	**15 50 12.4**	**+1.0**
GAZ	**Gaziantep**	**1.30**	**267**	*e*PN	**Pn**	**15 49 54.6**	**-0.6**
GAZ				*e*SN	**Sn**	**15 50 12.8**	**-0.1**
MARD	**Mardin**	**1.55**	**87**	*i* P	**Pn**	**15 49 58.5**	**-0.3**
MARD				*i* S	**Sn**	**15 50 20.3**	**+1.2**
KMRS	**Kahramanmaras**	**1.56**	**280**	*e*PN	**Pn**	**15 49 58.2**	**-0.7**
KMRS				*e*SN	**Sn**	**15 50 19.6**	**+0.3**
PTK	**Pertek**	**1.69**	**15**	*e*PN	**Pn**	**15 50 01.1**	**+0.4**
DARE	**Darende-Malaty**	**1.88**	**335**	*e*PN	**Pn**	**15 50 00.6**	**-2.6**
ANDN	**Andirin**	**2.01**	**280**	*i* P	**Pn**	**15 50 08.3**	**+3.2**
ANDN				*i* S	**Sn**	**15 50 36.4**	**+6.1**
COBT	**Iskenderun**	**2.19**	**251**	*e*P	**Pn**	**15 50 11.1**	**+3.5**
SARI	**SarD1z-Kayseri**	**2.21**	**311**	*e*PN	**Pn**	**15 50 08.4**	**+0.6**
KOZT	**Kozan**	**2.41**	**276**	*e*PN	**Pn**	**15 50 10.2**	**-0.3**

IDC ***04*** *15:59:27.0±0.8,1354N×12067E,h0km,mb4.4/9, mb1 4.5/9,mb1mx4.2/19,mbtmp4.4/9,MS3.4/4,Ms1 3.4/4, ms1mx3.0/27,Error ellipse: s-maj=50.6km s-min=14.2km az=66.0*
MAN ***04*** *15:59:29,1327N×12022E,h1km,mb4.8,ML3.7,MS3.7*
ISCJB ***04*** *15:59:32.8±0.5,1331N±003×12025E±006,h56km±6km, mb4.4/16,MS3.3/2,Error ellipse: s-maj=9.5km s-min=4.6km az=4.2*
NEIC ***04*** *15:59:32.1±0.3,1348N×12061E,h35km,mb4.3/6,Error ellipse: s-maj=16.7km s-min=5.4km az=60.0*
ISC 04 15:59:33.8±0.5**,1331N**±003×**12024E**±006**,h47km**±6km**, n42,σ1s07**/45**,mb4.4**/16**,MS3.3**/2**,3C-1D,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.42**	**1**	*e*P	**Pn**	**15 59 38.0**	**-6.0**
LUBP				*e*S	**Sn**	**15 59 43.1**	**-8.1**
TGY	**Tagaytay City**	**1.04**	**41**	⇑*e*P	**Pn**	**15 59 51.5**	**-0.6**
TGY				*i* S	**Sn**	**16 00 05.8**	**+0.4**
SJMP	**San Jose**	**1.20**	**134**	*e*P	**Pn**	**15 59 53.6**	**-0.6**
BUSP	**Coron**	**1.30**	**182**	*e*P	**Pn**	**15 59 54.8**	**-0.8**
BUSP				*e*S	**Sn**	**16 00 12.2**	**+0.5**
OTRP	**Odiongan**	**1.98**	**118**	*e*P	**Pn**	**16 00 07.1**	**+2.3**
POLP	**Polilio Island**	**2.17**	**49**	*e*P	**Pn**	**16 00 06.6**	**-0.8**
ENPP	**El Nido**	**2.24**	**201**	*e*P	**Pn**	**16 00 07.6**	**-0.8**
ENPP				*e*S	**Sn**	**16 00 33.7**	**-1.1**
PCPH	**Palayan**	**2.39**	**20**	⇑*e*P	**Pn**	**16 00 08.3**	**-2.1**

PCPH				*i* S	Sn	16 00 37.4	-1.1
SCZP	Santa Cruz	2.47	353	*e*P	Pn	16 00 13.3	+1.7
CUYO	Cuyo Island	2.56	163	*e*P	Pn	16 00 11.9	-0.9
KALP	Kalibo	2.61	128⇓	*e*P	Pn	16 00 19.0	+5.4
RCP	Roxas	3.00	125⇑	*e*P	Pn	16 00 28.0	+9.1
GUIM	Jordan	3.52	139	*e*P	Pn	16 00 26.2	+0.1
GUIM				*e*S	Sn	16 01 09.2	+2.7
PVCP	Virac	3.82	85	*e*P	Pn	16 00 30.2	+0.1
CAUP	Cauayan	3.92	23	*e*P	Pn	16 00 31.9	+0.3
PALP	Palanan	4.29	29	*e*P	Pn	16 00 37.8	+1.2
IPIL	Ipil	5.95	157	*e*P	Pn	16 00 59.1	-0.2
DAV	Davao City (W)	8.13	139	LR	LR	16 05 18.4	
	comp=Z,376nm,19.6s,baz=244,slow=44						
JOW	Kunigami	15.42	28	LR	LR	16 07 58.8	
	comp=Z,111nm,18.6s,baz=163,slow=34						
CM31	Chiang Mai Arr	21.11	287	*e*P	P	16 04 16.9	+2.4
	7.3nm,0.8s,mb4.1						
CMAR	Chiang Mai Arr	21.11	287	P	P	16 04 17.1	+2.5
	8.8nm,0.9s,mb4.1,baz=95,slow=9.1,SNR=55						
BATI	Baumata	23.61	172	P	P	16 04 41.6	+1.0
	43nm,0.6s,mb5.1,baz=94,slow=1.1,SNR=18						
KSRS	Korea Array	25.00	15	LR	LR	16 14 37.8	
	comp=Z,51nm,19.4s,MS3.0,baz=190,slow=37						
KAKA	Kakadu	28.54	154	*e*P	P	16 05 24.7	-0.5
	7.5nm,0.6s,mb4.6						
KAKA	Kakadu	28.54	154	*e*P	P	16 05 24.4	-0.8
FITZ	Fitzroy Crossi	31.66	170	*e*P	P	16 05 53.1	+0.3
WRAB	Tennant Creek	35.83	157	*e*P	P	16 06 28.8	-0.2
	23nm,1.0s,mb5.1						
WRA	Warramunga Arr	35.84	157	P	P	16 06 28.9	-0.1
	15nm,0.6s,mb5.1,baz=336,slow=9.6,SNR=98						
WB2	Warramunga Arr	35.84	157	*e*P	P	16 06 28.5	-0.6
ULN	Ulaanbaatar	36.16	345	*e*P	P	16 06 30.8	-0.7
	2.7nm,0.8s,mb4.2						
SONM	Songino Array	36.30	344	P	P	16 06 32.3	-0.5
	3.2nm,0.6s,mb4.4,baz=162,slow=9.4,SNR=26						
SONM				LR	LR	16 21 58.6	
	comp=Z,89nm,20.4s,MS3.5,baz=26,slow=37						
QIS	Mount Isa	38.67	150	*e*P	P	16 06 51.9	-1.1
	2.9nm,0.6s,mb4.2						
ASAR	Alice Springs	39.10	160	P	P	16 06 57.3	+0.7
	11nm,0.6s,mb4.8,baz=338,slow=6.6,SNR=278						
MKAR	Makanchi Array	46.08	324	P	P	16 07 53.4	+0.3
	1.1nm,0.7s,mb3.9,baz=133,slow=10.0,SNR=6.9						
UCH	Uchtor	48.86	315	*e*P	P	16 08 16.5	+1.8
	2.7nm,0.9s,mb4.3						
ZALV	Zalesovo Beam	49.20	333	P	P	16 08 17.5	+0.4
	0.4nm,0.4s,mb3.8,baz=90,slow=8.6,SNR=3.2						
STKA	Stephens Creek	49.37	156	*e*P	P	16 08 18.3	-0.4
	2.4nm,0.8s,mb4.3						
STKA	Stephens Creek	49.37	156	P	P	16 08 18.0	-0.7
	2.3nm,0.6s,mb4.4,baz=328,slow=7.7,SNR=4.0						
KURK	Kurchatov	50.27	327	*e*P	P	16 08 25.2	-0.1
ARCES	ARCESS Array B	79.29	339	P	P	16 11 33.3	-0.6
	1.0nm,0.5s,mb4.0,baz=79,slow=6.7,SNR=9.2						
NB2	NORSAR Subarra	87.40	333	P	P	16 12 14.2	-1.6
	comp=Z,2.8nm,0.8s,mb4.5,baz=67,slow=5.1						
NOA	NORSAR Array B	87.40	333	P	P	16 12 14.4	-1.4
	baz=68,slow=4.6,SNR=4.9						

*IDC **04** 16:25:16.2±7.1, 1048S×16168E, h70^{km}±49^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.2/16, mbtmp3.2/3, Error ellipse: s-maj=57.2km s-min=34.2km az=95.0*

ISC 04 16:25:15.9±6.5**, 105S**±03×**1617E**±04**, h67**^{km}±45^{km}**, n4, σ0^{s}53**/5**, mb3.2**/3**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.03	301	P	Pn	16 25 48.0	0.0
	133nm,0.3s,baz=117,slow=2.3,SNR=142						
HNR				S	Sn	16 26 12.3	0.0
	315nm,0.3s,baz=161,slow=21,SNR=14						
WRA	Warramunga Arr	27.99	247	P	P	16 31 01.0	+0.4
	0.5nm,0.8s,mb3.1,baz=78,slow=9.1,SNR=3.0						
ASAR	Alice Springs	29.55	240	P	P	16 31 14.1	-0.4
	0.1nm,0.4s,mb2.8,baz=66,slow=10,SNR=6.6						
SONM	Songino Array	75.92	325	P	P	16 36 55.3	0.0
	1.2nm,0.8s,mb3.6,baz=137,slow=6.3,SNR=7.1						

*ISCJB **04** 17:21:20.7±0.5, 4975N±006×15338E±009, h196^{km}±5^{km}, mb3.7/22, Error ellipse: s-maj=11.9km s-min=6.5km az=41.8*
*MOS **04** 17:21:20.3±1.0, 4980N×15346E, h196^{km}, mb3.9/16, Error ellipse: s-maj=12.2km s-min=9.0km az=81.1*
*NEIC **04** 17:21:21.8±0.6, 4978N×15331E, h190^{km}±6^{km}, mb4.5/7, Error ellipse: s-maj=10.8km s-min=6.2km az=137.0*
*KRSC **04** 17:21:22.0±1.8, 4928N×15482E, h189^{km}±51^{km}, ML4.8*
*IDC **04** 17:21:23.2±1.4, 4983N×15342E, h202^{km}±13^{km}, mb3.5/15, mb1 3.8/18, mb1mx3.7/26, mbtmp3.6/18, Error ellipse: s-maj=14.4km s-min=9.3km az=143.0*

ISC 04 17:21:21.6±0.5**, 4976N**±006×**15334E**±009**, h188**^{km}±5^{km}**, n79, σ0^{s}99**/90**, mb3.9**/22**, 7C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALID	Alaid	1.80	51	*e*P	Pn	17 21 56.9	-0.2
SKR	Severo-Kuril's	2.01	61	*i* PN	Pn	17 21 58.0	-1.3
SKR				*e*S	Sn	17 22 28.0	-0.5
SKR				pmax	pmax		
	comp=N,310nm,0.5s						
SKR				pmax	pmax		
	comp=E,190nm,0.5s						
SKR				pmax	pmax		
	comp=Z,1μm,0.5s						
SKR				pmax	pmax		
	comp=Z,2μm,1.5s						
SKR				smax			
	comp=N,510nm,0.3s						
SKR				smax			
	comp=E,560nm,0.3s						
MIPR	Malaya Ipel'ka	3.32	39	P	Pn	17 22 15.2	+0.8
MIPR				*i* S	Sn	17 22 54.2	-1.5
RUS	Russkaya	4.22	49	*e*P	Pn	17 22 24.3	-1.3
RUS				*i* S	Sn	17 23 09.9	-6.0
PEA0B	Petropavlovsk-	4.33	37	*e*Pn	Pn	17 22 27.8	+0.9
PEA0B				*e*Sn	Sn	17 23 17.5	-0.8
PETK	Petropavlovsk-	4.33	37	P	Pn	17 22 27.6	+0.6
	comp=E,8.2nm,0.3s,baz=185,slow=9.3,SNR=289						
PETK				S	Sn	17 23 18.8	+0.5
	comp=E,1.1nm,0.3s,baz=278,slow=10,SNR=4.4						
PET	Petropavlovsk	4.67	43	*e*PN	Pn	17 22 31.0	-0.3
PET				*e*S	Sn	17 23 22.5	-3.6
PET				pmax	pmax		
	comp=Z,34nm,0.4s						
PET				smax			
	comp=N,150nm,0.5s						
PET				smax			
	comp=E,125nm,0.5s						
PET	Petropavlovsk	4.67	43	P	Pn	17 22 31.2	-0.1
PET				*i* S	Sn	17 23 21.5	-4.6
PET	Petropavlovsk	4.67	43	*e*Pn	Pn	17 22 30.8	-0.5
PET				*e*Sn	Sn	17 23 20.2	-5.9
GNL	Ganaly	4.87	34	P	Pn	17 22 34.8	+0.8
SPN	Mys Shipunski	5.36	49	*e*P	Pn	17 22 38.6	-1.6
SPN				*i* S	Sn	17 23 33.5	-8.6
TUMR	Tumrok	6.92	34	P	Pn	17 23 01.4	+0.9
KMNR	Kamenistaya	7.32	32	P	Pn	17 23 07.7	+1.9
BZMR	Bezymyannaya	7.55	32	P	Pn	17 23 10.5	+1.7
BZWR	Bezymyannyi-We	7.58	32	P	Pn	17 23 09.1	0.0
YSS	Yuzh-Sakhalins	7.59	252*d*	*i*PN	Pn	17 23 13.6	+4.2
YSS	Yuzh-Sakhalins	7.59	252	*e*Pn	Pn	17 23 13.5	+4.2
	comp=E,33nm,1.1s						
SRDR	Sredinnyy	7.61	28	P	Pn	17 23 12.5	+2.9
BZGR	Bezymyannyi-Gr	7.63	33	P	Pn	17 23 10.6	+0.8
ZLN	Zelenaya	7.72	33	P	Pn	17 23 13.2	+2.1
ASAJ	Asahikawa	9.26	237	P	Pn	17 23 35.2	+4.0
	comp=E,4.5nm,0.3s,baz=71,slow=13,SNR=64						
ASAJ	Asahikawa	9.26	237	PN	Pn	17 23 35.3	+4.0
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ERM	Erimo	10.49	226	*e*PN	Pn	17 23 46.1	-1.3
ERM				pmax	pmax		
	comp=Z,39nm,0.5s						
ERM	Erimo	10.49	226	*e*Pn	Pn	17 23 46.1	-1.3
	comp=Z,39nm,0.5s						
ERM				*e*Sn	Sn	17 25 32.8	-11
SEY	Seymchan	13.22	358⇑	*i*PN	Pn	17 24 20.1	-1.9
KLR	Kul'dur	14.04	276	*e*P	Pn	17 24 32.8	+0.5
KLR				pmax	pmax		
	comp=E,28nm,1.6s						
KLR				pmax	pmax		
	comp=Z,34nm,1.6s						
MDJ	Mudanjiang	16.91	261	*e*Pn	Pn	17 25 06.8	-0.4
	comp=Z,24nm,1.0s						
MDJ				*e*		17 25 12.2	
MAJO	Matsushiro	17.17	225	*e*P	Pn	17 25 09.4	-1.0
MAJO				pmax	pmax		
	comp=Z,11nm,0.4s						
MAJO	Matsushiro	17.17	225	*e*P	Pn	17 25 09.4	-1.0
	comp=Z,11nm,0.4s						
MAT	Matsushiro	17.17	225	P	Pn	17 25 10.7	+0.3
MJAR	Matsushiro Arr	17.17	225	P	Pn	17 25 10.8	+0.4
	comp=Z,2.2nm,0.3s,baz=19,slow=12,SNR=27						
MJAR	Matsushiro Arr	17.17	225	P	Pn	17 25 10.8	+0.4
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YAK	Yakutsk	17.95	322	*e*P	Pn	17 25 18.8	-0.5
YAK				pmax	pmax		
	comp=Z,26nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.4s						
CLNS	Chul'man	18.32	304	*e*P	P	17 25 28.9	+7.5
CLNS				pmax	pmax		
	comp=Z,24nm,0.9s						
CLNS				pmax	pmax		
	comp=E,16nm,0.9s						
CLNS				pmax	pmax		
	comp=N,13nm,1.0s						
HIA	Hailar	21.72	282	*i* P	P	17 25 58.4	+0.6
KSRS	Korea Array	22.01	246	P	P	17 26 02.6	+1.8
	comp=N,9.5nm,0.9s,mb4.2,baz=47,slow=10,SNR=23						
KSRS	Korea Array	22.01	246	P	P	17 26 02.6	+1.8
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
ULN	Ulaanbaatar	30.17	284⇑	*i*P	P	17 27 13.9	0.0
SONM	Songino Array	30.59	285	P	P	17 27 17.9	+0.3
	comp=Z,0.1nm,0.3s,mb3.0,baz=70,slow=7.0,SNR=3.3						
SONM				PcP	PcP	17 30 10.8	-0.3
	comp=Z,0.6nm,0.6s,baz=116,slow=2.0,SNR=5.3						
SONM	Songino Array	30.59	285	P	P	17 27 17.9	+0.3
SONM						17 30 10.8	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TLY	Talaya	31.04	293⇑	*i*P	P	17 27 22.1	+0.7
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
TLY	Talaya	31.04	293	P	P	17 27 21.0	-0.4
	comp=Z,2.1nm,0.6s,mb4.0						
ZAK	Zakamensk	31.65	291	*e*P	P	17 27 27.7	+0.9
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.5						
ZALV	Zalesovo Beam	41.03	303	P	P	17 28 45.5	-0.6
	comp=Z,0.5nm,0.4s,mb3.5,baz=73,slow=4.8,SNR=2.4						
ZALV				PcP	PcP	17 30 42.1	0.0
	comp=Z,0.9nm,0.4s,baz=74,slow=4.1,SNR=4.3						
ZAL	Zalesovo	41.05	303	P	P	17 28 45.5	-0.7
ZAL						17 30 42.1	
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	45.75	295	P	P	17 29 24.0	+0.1
	comp=Z,1.7nm,0.7s,mb3.8,baz=64,slow=8.2,SNR=10						
MKAR				PcP	PcP	17 30 58.0	-0.2
	comp=Z,0.3nm,0.3s,baz=44,slow=4.4,SNR=2.9						
MKAR	Makanchi Array	45.75	295	P	P	17 29 24.0	+0.1
MKAR						17 30 58.0	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	45.88	301	P	P	17 29 25.0	+0.2
	comp=Z,2.1nm,0.9s,mb3.8,baz=64,slow=8.3,SNR=6.1						
KURK	Kurchatov	45.88	301*c*	*i*P	P	17 29 25.0	+0.2
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.0						
BVAR	Borovoye Array	49.10	308	P	P	17 29 49.7	+0.1
	comp=Z,1.7nm,0.6s,mb3.9,baz=64,slow=8.0,SNR=8.5						
BVAR				PcP	PcP	17 31 09.8	-0.3
	comp=Z,1.8nm,0.5s,baz=87,slow=3.0,SNR=9.1						
BVAR	Borovoye Array	49.10	308	P	P	17 29 49.7	+0.1
BVAR						17 31 09.8	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	Borovoye	49.14	308	*e*P	P	17 29 48.9	-1.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
BRVK	Borovoye	49.14	308	*e*P	P	17 29 48.9	-0.9
	comp=Z,3.3nm,0.8s,mb4.0						
KBS	Kingsbay	49.55	351	*e*P	P	17 29 50.2	-2.5
ARU	Arti	52.92	316*c*	*i*P	P	17 30 17.7	-0.3
ARU				*e*		17 31 23.3	
ARU				*e*		17 32 21.9	
ARU				*e*S	S	17 37 30.9	-1.1
ARU				*e*SS	SS	17 41 08.4	-4.5
ARU				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
ARU	Arti	52.92	316	*e*P	P	17 30 17.4	-0.6
	comp=Z,16nm,0.8s,mb4.8						
EKS2	Erkin-Say	53.09	295	P	P	17 30 19.5	+0.1
CMAR	Chiang Mai Arr	53.28	254	P	P	17 30 22.6	+1.5
	comp=Z,3.3nm,0.8s,mb4.1,baz=32,slow=6.6,SNR=21						
CMAR	Chiang Mai Arr	53.28	254⇑	*e*P	P	17 30 23.6	+2.5
ARCES	ARCESS Array B	55.07	340	P	P	17 30 33.0	-0.3
	comp=Z,1.6nm,0.6s,mb3.9,baz=37,slow=7.4,SNR=12						
ARCES	ARCESS Array B	55.07	340	P	P	17 30 33.0	-0.3
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
JOF	Joensuu	58.71	333	*e*p	P	17 30 58.6	-0.4
	comp=Z,1.5nm,0.4s,mb4.2						
JOF	Joensuu	58.71	333	*e*P	P	17 30 58.6	-0.4
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
NVAR	Mina Array Bea	60.94	64	P	P	17 31 14.9	+0.4
	comp=Z,1.1nm,0.6s,mb3.9,baz=290,slow=7.3,SNR=9.6						
PDAR	Pinedale Array	62.88	55	P	P	17 31 27.6	+0.3
	comp=Z,0.7nm,0.5s,mb3.8,baz=313,slow=7.1,SNR=4.4						
NB2	NORSAR Subarra	65.43	341	P	P	17 31 43.8	+0.1
	comp=Z,0.7nm,0.3s,mb4.0,baz=30,slow=6.5						
NOA	NORSAR Array B	65.43	341	P	P	17 31 44.0	+0.4
	comp=Z,0.6nm,0.4s,mb3.8,baz=25,slow=6.4,SNR=5.3						
NOA	NORSAR Array B	65.43	341	P	P	17 31 44.1	+0.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KIV	Kislovodsk	68.82	314*c*	*i*P	P	17 32 05.6	+0.3
KIV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
AKASG	Malin Array Be	69.14	326	P	P	17 32 05.7	-1.4
	comp=Z,0.7nm,0.5s,mb3.6,baz=33,slow=6.3,SNR=3.7						
AKASG	Malin Array Be	69.14	326	P	P	17 32 05.7	-1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRAB	Tennant Creek	71.39	199*d*	*i*P	P	17 32 21.1	+0.1
WRA	Warramunga Arr	71.41	199	P	P	17 32 20.2	-0.9
	comp=Z,0.6nm,0.5s,mb3.6,baz=11,slow=6.8,SNR=5.4						
WRA	Warramunga Arr	71.41	199	P	P	17 32 20.2	-0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CLL	Collm	73.79	335	*i* P	P	17 32 34.9	0.0
	comp=Z,5.0nm,0.8s,mb4.3						
ASAR	Alice Springs	75.11	198	P	P	17 32 42.6	0.0
	comp=Z,0.7nm,0.5s,mb3.5,baz=12,slow=5.3,SNR=22						
ASAR	Alice Springs	75.11	198	P	P	17 32 42.7	0.0
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	Lajitas Array	75.90	61	P	P	17 32 47.4	0.0
	comp=Z,1.7nm,0.6s,mb3.9,baz=298,slow=4.3,SNR=27						
TXAR				pP	pP	17 33 32.0	-0.5
	comp=Z,0.5nm,0.6s,baz=297,slow=4.6,SNR=4.6						
TXAR	Lajitas Array	75.90	61	P	P	17 32 47.4	0.0
TXAR				*PP	pP	17 33 32.0	-0.5
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

JMA 04 17:28:40.1, 3496N×13545E, h9^{km}±1^{km}**, M2.6, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	0.32	353	P	Pg	17 28 46.7	+0.2
JWT				S	Sg	17 28 50.9	0.0
JHE	Heguri	0.36	148	P	Pg	17 28 47.3	+0.1
JHE				S	Sg	17 28 52.4	+0.4
JKS	Kasai	0.50	273	P	Pg	17 28 49.7	-0.1
JKS				S	Sg	17 28 56.2	-0.1
JAJ2	Tsuna	0.71	221	P	Pg	17 28 53.6	-0.2
JAJ2				S	Sg	17 29 03.3	+0.2
MAT	Matsushiro	2.74	54	P	Pn	17 29 27.4	+3.1
MAT				*e*S	Sn	17 30 01.8	+4.3

NEIC 04 17:31:38.2, 6789N×15503W, h0^{km}**, ML3.1**(AEIC)**, ML3.5**(PMR)**, After AEIC., Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMA2	Indian Mountai	1.90	163	*e*P	Pn	17 32 11.9	+0.1
IM3	Indian Mountai	1.98	165	P	Pn	17 32 12.8	-0.1
IM3				S	Sn	17 32 41.1	+2.8
GCSA	Galena City Sc	3.24	194	P	Pn	17 32 31.6	+1.4
BM3	Burnt Mountain	4.01	92	P	Pn	17 32 41.2	+0.5
BPAW	Bear Paw Mtn.	4.15	155	P	Pn	17 32 43.5	+0.8
BPAW				S	Sn	17 33 33.8	+2.1
CHUM	Lake Minchumin	4.17	163	P	Pn	17 32 44.0	+0.9
CHUM				S	Sn	17 33 33.9	+1.5
COLA	College	4.18	133	P	Pn	17 32 44.1	+1.0
IL1	Eielson Array	4.53	130	P	Pn	17 32 49.1	+1.2
KTH	Kantishna Hill	4.67	157	P	Pn	17 32 51.2	+1.4
KTH				S	Sn	17 33 47.0	+2.3
MCK	McKinley	4.87	146	P	Pn	17 32 54.0	+1.5
TRF	Thorofare Moun	4.87	154	P	Pn	17 32 54.2	+1.6
TT01	Tatalina	5.02	185	P	Pn	17 32 53.4	-1.2
PPLA	Purkeypile	5.15	165	P	Pn	17 32 57.4	+0.9
SVW2	Sparrevohn	6.83	182	*e*P	Pn	17 33 18.8	-0.6
BCA3	Beaver Creek A	7.32	125	P	Pn	17 33 27.2	+1.0
CHGN	Chignik	11.73	189	*e*P	Pn	17 34 27.7	+1.1

*NEIC **04** 17:42:00.7, 1691N×10094W, h13^{km}, MD3.6(MEX), After MEX.*

MEX 04 17:42:00.6±0.7**, 1694N×10093W, h10**^{km}±9^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.65	80	*i* P	Pg	17 42 11.5	-1.6
CAIG				*i* S	Sg	17 42 19.7	-1.9
ZIIG	Zihuatanejo	0.84	323	*i* P	Pg	17 42 14.6	-2.2
ZIIG				*i* S	Sg	17 42 25.2	-2.5
ACX	Acapulco	0.97	94	*i* P	Pg	17 42 17.2	-2.2
ACX				*i* S	Sg	17 42 29.2	-2.8
MEIG	Mezcala	1.59	52	*i* P	Pn	17 42 26.0	-2.8
MEIG				*i* S	Sn	17 42 45.1	-4.4
PLIG	Platanillo	1.99	43	*i* P	Pn	17 42 31.0	-3.3
PLIG				*i* S	Sn	17 42 54.6	-4.6

*BJI **04** 18:00:30.5, 1236S×16628E, h20^{km}, mB5.0, mb4.8, Ms4.6, Msz4.4*
*IDC **04** 18:00:33.7±0.6, 1167S×16556E, h0^{km}, mb4.5/18, mb1 4.6/18, mb1mx4.5/21, mbtmp4.5/18, MS4.0/18, Ms1 4.0/18, ms1mx3.9/29, Error ellipse: s-maj=20.9km s-min=14.5km az=96.0*
*ISCJB **04** 18:00:37.7±0.4, 1170S±005×16552E±007, h40^{km}, mb4.6/34, MS4.0/20, Error ellipse: s-maj=9.2km s-min=7.8km az=3.0*
*GCMT **04** 18:00:37.9±0.3, 1170S×16538E, h12^{km}, MW4.9/58, Moment Tensor Solution. s24,c31; s58,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.63±.08; $M_{\theta\theta}$0.21±.08; $M_{\phi\phi}$2.42±.07; $M_{r\theta}$-0.96±.34; $M_{\theta\phi}$-0.23±.07; $M_{\phi r}$0.34±.27; Best double couple: $M_0$2.71000×10^{16} NP1:ϕ_s9.00000°, δ42.00000°, λ-66.00000°. NP2: ϕ_s158.00000°, δ52.00000°, λ-110.00000°. Principal axes: T 2.4840, Plg5.0000°, Azm262.0000°; N 0.4520, Plg16.0000°, Azm170.0000°; P -2.9350, Plg73.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **04** 18:00:37.9±3.1, 1167S×16561E, h29^{km}±21^{km}, mb4.8/19 Error ellipse: s-maj=9.5km s-min=7.3km az=75.0*

ISC 04 18:00:37.4±3.4**, 1167S**±006×**16560E**±006**, h24**^{km}±24^{km}**, h41**^{km}±3.2^{km}**:pP-P, n81, σ0^{s}90**/59**, mb4.6**/34**, MS4.0**/20**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.98	291	Pn	Pn	18 02 05.6	+1.1
	52nm,0.3s,baz=124,slow=15,SNR=7.0						
HNR				Sn	Sn	18 03 09.9	-2.3
	44nm,0.3s,baz=53,slow=20,SNR=5.9						
HNR	Honiara	5.98	291	*e*Pn	Pn	18 02 05.3	+0.9
HNR				Pn	Pn	18 02 05.6	+1.2
HNR				Sn	Sn	18 03 09.9	-2.3
HNR				*e*Sn	Sn	18 03 11.6	-0.7
DZM	Mont Dzumac	10.38	176	*e*P	Pn	18 03 04.8	+0.1
DZM	Mont Dzumac	10.38	176	*e*Pn	Pn	18 03 04.7	-0.1
PMG	Port Moresby	18.27	275	P	Pn	18 04 54.2	+4.8
	23nm,0.9s						
CTA	Charters Tower	20.39	243	*e*P	P	18 05 13.6	+1.0
	6.3nm,0.7s						
CTA				*e*S	S	18 09 01.8	+1.9
CTA	Charters Tower	20.39	243	P	P	18 05 11.4	-1.1
	8.8nm,1.0s,baz=80,slow=19,SNR=2.9						
CTA				LR	LR	18 12 04.3	
	comp=Z,786nm,18.0s,MS4.1,baz=68,slow=34						
CTAO	Charters Tower	20.39	243	*e*P	P	18 05 11.4	-1.2
	10nm,0.7s						
AFI	Afiamalu	22.18	98	LR	LR	18 13 14.4	
	comp=Z,297nm,18.3s,MS3.7,baz=98,slow=34						
ARMA	Armidale	22.72	213	*e*P	P	18 05 38.1	+0.6
URZ	Urewera	28.41	161	P	P	18 06 30.5	+0.5
	6.4nm,0.5s,mb4.5,baz=350,slow=17,SNR=8.1						
STKA	Stephens Creek	29.89	224	*e*P	P	18 06 43.4	+0.1
	6.5nm,0.9s,mb4.4						
STKA	Stephens Creek	29.89	224	P	P	18 06 42.3	-1.0
	6.8nm,0.8s,mb4.4,baz=43,slow=6.9,SNR=11						
STKA				LR	LR	18 17 55.0	
	comp=Z,456nm,18.1s,MS4.2,baz=32,slow=35						
WRAB	Tennant Creek	31.12	251	*e*P	P	18 06 54.0	-0.4
	10nm,1.2s,mb4.5						
WB2	Warramunga Arr	31.13	251	*e*P	P	18 06 54.2	-0.1
WRA	Warramunga Arr	31.14	251	P	P	18 06 53.9	-0.6
	4.4nm,0.6s,mb4.4,baz=82,slow=9.1,SNR=30						
WRA				PcP	PcP	18 09 50.2	+0.8
	0.5nm,0.8s,baz=75,slow=2.6,SNR=5.0						
WRA				LR	LR	18 18 35.0	
	comp=Z,210nm,18.6s,MS3.8,baz=80,slow=35						
RPZ	Rata Peaks	32.28	173	P	P	18 07 05.2	+1.1
	22nm,0.6s,mb5.2,baz=309,slow=1.3,SNR=14						
ASAR	Alice Springs	32.39	244	P	P	18 07 03.9	-1.5
	4.3nm,0.8s,mb4.3,baz=72,slow=8.3,SNR=34						
ASAR				PcP	PcP	18 09 53.0	+0.2
	0.8nm,0.7s,baz=58,slow=3.0,SNR=4.3						
KAKA	Kakadu	32.41	265	*e*P	P	18 07 04.5	-1.2
	8.3nm,0.7s,mb4.7						
GUMO	Guam	32.44	320	LR	LR	18 19 14.7	
	comp=Z,266nm,18.3s,MS4.0,baz=270,slow=35						
RAR	Rarotonga	34.48	110	LR	LR	18 18 37.7	
	comp=Z,168nm,21.3s,MS3.8,baz=254,slow=31						
FITZ	Fitzroy Crossi	39.08	256	*e*P	P	18 08 02.3	-0.6
	16nm,0.7s,mb4.9						
PPT	Papeete	43.69	103	*e*S	S	18 15 20.5	+11
	156nm,25.2s						
PPT				*e*LQ		18 19 21.1	
	364nm,26.5s						
PPT				*e*LR	LR	18 21 15.0	
	865nm,31.2s,baz=269						
PPT	Papeete	43.69	103	LR	LR	18 24 04.8	
	comp=Z,208nm,20.4s,MS4.0,baz=295,slow=32						
DAV	Davao City (W)	43.94	293	LR	LR	18 24 57.2	
	comp=Z,135nm,20.6s,MS3.8,baz=130,slow=33						
MBWA	Marble Bar	44.86	252	*e*P	P	18 08 50.5	+0.4
	7.2nm,0.7s,mb4.6						
KLBR	Kellerberrin	48.25	238	*e*P	P	18 09 16.4	-0.2
	104nm,1.9s,mb5.5						
NWAO	Narrogin (SRO)	49.00	236	P	P	18 09 22.4	+0.1
	12nm,0.8s,mb5.0,baz=60,slow=7.5,SNR=3.9						
NWAO	Narrogin (SRO)	49.00	236	*e*P	P	18 09 22.1	-0.2
	15nm,0.9s,mb5.0						
KKM	Kota Kinabalu	52.18	287	P	P	18 09 47.6	+1.0
TAOE	Nuku Hiva Isla	53.40	92	*e*LR	LR	18 25 16.6	
	1μm,28.1s						
MJAR	Matsushiro Arr	54.45	333	P	P	18 10 02.4	-0.5
	3.5nm,0.7s,mb4.4,baz=169,slow=7.9,SNR=10						
MAJO	Matsushiro	54.45	333	*e*P	P	18 10 01.8	-1.0
	7.7nm,0.6s,mb4.8						

MAT	Matsushiro	54.45	333	P	P	18 10 03.3	+0.4
YHNB	Yeheng	56.27	310	P	P	18 10 17.0	+0.9
	11nm,0.7s,mb5.0						
RKT	Rikitea	57.51	110	eLR	LR	18 27 39.1	
	531nm,30.0s,baz=272						
ASAJ	Asahikawa	59.33	341	P	P	18 10 37.6	+0.4
	5.8nm,0.7s,mb4.7,baz=211,slow=18,SNR=13						
KSRS	Korea Array	60.30	326	P	P	18 10 44.5	+0.4
	0.7nm,0.6s,mb3.9,baz=137,slow=7.1,SNR=3.8						
YSS	Yuzh-Sakhalins	61.83	342	P	P	18 10 54.2	-0.1
	31nm,1.2s,mb5.3						
PETK	Petropavlovsk-	64.87	355	P	P	18 11 14.9	+0.6
	0.9nm,0.5s,mb4.0,baz=154,slow=6.4,SNR=4.7						
PETK				LR	LR	18 34 07.3	
	comp=Z,57nm,21.7s,MS3.7,baz=192,slow=31						
PETK	Petropavlovsk-	64.87	355	P	P	18 11 14.9	+0.6
PETK				LR	LR	18 34 07.3	
KMI	Kunming	71.32	302	P	P	18 11 57.1	+1.7
KMI				AP	pP	18 12 09.2	+5.9
KMI				XP	sP	18 12 13.6	+7.5
KMI				PP	PP	18 14 40.5	+6.5
KMI				S	S	18 21 17.3	+5.2
KMI				XS	sS	18 21 36.6	+12
KMI				SS	SS	18 25 59.4	+12
KMI				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.5						
KMI				AMB	AMB		
	comp=Z,69nm,4.0s						
KMI				LR	LR		
	comp=N,122nm,15.4s						
KMI				LR	LR		
	comp=E,93nm,22.1s						
KMI				LR	LR		
	comp=Z,132nm,16.4s,MS4.3						
KMI	Kunming	71.32	302	P	P	18 11 57.1	+1.7
KMI				pP	pP	18 12 09.2	+5.9
KMI				sP	sP	18 12 13.6	+7.5
KMI				PP	PP	18 14 40.5	+6.5
KMI				PPP		18 16 23.1	
KMI				S	S	18 21 17.3	+5.2
KMI				sS	sS	18 21 36.6	+12
KMI				SS	SS	18 25 59.4	+12
KMI				SSS		18 29 08.3	
CMAR	Chiang Mai Arr	72.23	294	P	P	18 12 02.1	+1.1
	comp=Z,2.3nm,0.7s,mb4.2,baz=124,slow=4.5,SNR=17						
CMAR				LR	LR	18 41 20.2	
	comp=Z,64nm,18.6s,MS3.9,baz=127,slow=34						
HIA	Hailar	72.83	331	P	P	18 12 04.8	+0.8
LZH	Lanzhou	75.06	312	eP	P	18 12 21.0	+3.7
LZH				AP	pP	18 12 31.2	+6.0
LZH				XP	sP	18 12 35.3	+7.2
LZH				AMB	AMB		
	comp=Z,25nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,63nm,6.2s						
LZH				LR	LR		
	comp=E,162nm,15.2s						
LZH				LR	LR		
	comp=Z,201nm,18.5s,MS4.5						
ULN	Ulaanbaatar	78.72	324	eP	P	18 12 38.5	+0.9
	comp=Z,3.9nm,0.6s,mb4.5						
SONM	Songino Array	79.08	324	P	P	18 12 40.9	+1.3
	comp=Z,1.3nm,0.5s,mb4.1,baz=150,slow=5.3,SNR=12						
GTA	Gaotai	79.38	314	eP	P	18 12 42.5	+1.0
GTA				AP	pP	18 12 56.4	+7.0
GTA				AMB	AMB		
	comp=Z,4.0nm,1.4s,mb4.2						
TRF	Thorofare Moun	82.15	18	P	P	18 12 54.9	-0.8
	comp=Z,4μm,1.2s						
TLY	Talaya	82.56	326	eP	P	18 12 58.4	+0.3
	comp=Z,5.2nm,0.8s,mb4.6						
MCK	McKinley	82.78	19	eP	P	18 12 58.0	-1.0
	comp=Z,16nm,1.3s,mb4.9						
COLA	College	83.92	18	eP	P	18 13 04.3	-0.5
	comp=Z,12nm,0.8s,mb5.1						
COLA				e		18 13 16.5	
MAW	Mawson	84.09	202	P	P	18 13 06.0	+0.1
	comp=Z,4.2nm,0.8s,mb4.6,baz=108,slow=7.0,SNR=9.6						
MAW				LR	LR	18 45 14.3	
	comp=Z,107nm,19.9s,MS4.2,baz=244,slow=32						
YBH	Yreka Blue Hor	84.43	46	LR	LR	18 40 19.2	
	comp=Z,65nm,21.8s,MS4.0,baz=167,slow=28						
EGAK	Eagle	86.01	20	eP	P	18 13 15.2	-0.2
	comp=Z,7.2nm,0.6s,mb5.1						
EGAK				e		18 13 27.6	
NVAR	Mina Array Bea	86.53	50	P	P	18 13 18.6	+0.1
	comp=Z,0.5nm,0.5s,mb4.0,baz=236,slow=7.5,SNR=3.6						
PFO	Pinyon Flat Ob	86.56	55	LR	LR	18 50 43.4	
	comp=Z,78nm,18.1s,MS4.2,baz=311,slow=35						
LPIG	La Paz	89.40	65	LR	LR	18 43 09.8	
	comp=Z,70nm,21.3s,MS4.1,baz=118,slow=29						
MKAR	Makanchi Array	93.87	317	P	P	18 13 52.9	+0.1
	comp=Z,3.6nm,0.7s,mb4.9,baz=94,slow=6.0,SNR=26						
ZAA0	Zalesovo Array	93.97	324	eP	P	18 13 52.3	-0.8
ZALV	Zalesovo Beam	93.97	324	P	P	18 13 52.2	-0.8
	comp=Z,2.5nm,0.7s,mb4.8,baz=108,slow=4.8,SNR=9.2						
ZALV				LR	LR	18 53 32.1	
	comp=Z,43nm,19.1s,MS3.9,baz=124,slow=34						
ANMO	Albuquerque	94.92	55	LR	LR	18 47 39.6	
	comp=Z,43nm,21.0s,MS3.9,baz=160,slow=30						
YKA	Yellowknife Ar	95.59	27	P	P	18 13 58.6	-1.6
	comp=Z,1.3nm,0.6s,mb4.5,baz=260,slow=5.0,SNR=4.0						
YKA				LR	LR	18 59 40.9	
	comp=Z,79nm,18.4s,MS4.2,baz=260,slow=37						
TXAR	Lajitas Array	96.25	61	LR	LR	18 51 50.9	
	comp=Z,75nm,19.2s,MS4.2,baz=180,slow=32						
SNAA	Sanae	96.49	184	eP	P	18 14 02.5	-1.9
	comp=Z,3.5nm,1.2s,mb4.7						
ARCES	ARCESS Array B	116.90	345	PKP	PKPdf	18 19 19.3	0.0
	comp=Z,1.9nm,0.5s,baz=102,slow=1.3,SNR=25						
LPAZ	La Paz	120.04	117	PKP	PKPdf	18 19 27.1	+0.1
	comp=Z,0.9nm,0.5s,baz=190,slow=1.2,SNR=5.7						
BOSA	Boshof	124.56	223	PKP	PKPdf	18 19 37.0	+1.6
	comp=Z,2.4nm,1.0s,baz=193,slow=5.8,SNR=3.6						
BOSA	Boshof	124.56	223	PKP	PKPdf	18 19 37.0	+1.6
SIV	San Ignacio	126.27	120	PKP	PKPdf	18 19 38.7	-0.2
	comp=Z,1.8nm,0.6s,baz=286,slow=1.7,SNR=12						
NOA	NORSAR Array B	127.26	345	PKP	PKPdf	18 19 40.7	+1.2
	comp=Z,1.0nm,0.9s,baz=39,slow=2.1,SNR=3.5						
MBDF	Montbardon	142.38	335	ePKP1	PKPdf	18 20 08.7	+0.5
	comp=Z,3.8nm,0.6s						
ORIF	Oris-en-Rattie	142.58	336	ePKP1	PKPdf	18 20 09.2	+0.7
MFF	Saint Martin d	143.15	344	ePKP1	PKPdf	18 20 07.5	-2.0
	comp=Z,11nm,0.7s						
LASF	Ste Croix	144.07	337	ePKP1	PKPdf	18 20 11.6	+0.4
	comp=Z,22nm,1.0s						
LFF	La Frestale	144.39	341	ePKP1	PKPdf	18 20 11.6	-0.1
	comp=Z,13nm,0.5s						
MTLF	Montolieu	145.31	338	ePKP1	PKPbc	18 20 15.0	+1.9
	comp=Z,14nm,0.6s						
ETSF	Etsaut	146.64	341	ePKP1	PKPbc	18 20 19.6	+2.4
	comp=Z,12nm,0.8s						
KEST	Kesra	147.82	322	PKPbc	PKPbc	18 20 21.5	+0.8
	comp=Z,2.3nm,0.8s,baz=174,slow=2.5,SNR=7.3						
ESDC	Sonseca Array	150.61	343	PKPbc	PKPbc	18 20 27.6	0.0
	comp=Z,1.1nm,0.6s,baz=14,slow=5.8,SNR=4.0						

*ISCJB **04** 18:15:52.4±4.4, 12.10S±0.08×165.96E±0.09, h15km±31km, mb4.6/22, MS3.9/8, Error ellipse: s-maj=17.3km s-min=11.7km az=141.4*

*BJI **04** 18:15:56.6, 11.80S×166.65E, h52km, mB4.9, mb4.7, Ms4.5, Msz4.2*

*IDC **04** 18:15:57.2±1.4, 12.16S×166.03E, h35km±6km, mb4.2/11, mb1 4.3/12, mb1mx4.2/19, mbtmp4.3/12, ML5.2/1, MS3.9/8, Ms1 3.9/8, ms1mx3.6/26, Error ellipse: s-maj=33.7km s-min=19.7km az=120.0*

*NEIC **04** 18:15:58.5±3.4, 12.08S×165.94E, h46km±24km, mb4.8/10, Error ellipse: s-maj=27.2km s-min=11.6km az=106.0*

ISC 04 18:15:57.8±1.9**, 12.11S**±0.08×**166.0E**±0.1**, h38**km±15km**, h36**km±3.1km**:pP-P, n44,** σ1.03/32**, mb4.6**/22**, MS3.9**/8**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.49	294	Pn	Pn	18 17 30.9	0.0
	47nm,0.3s,baz=137,slow=6.0,SNR=20						
HNR				Sn	Sn	18 18 44.0	+0.3
	37nm,0.3s,baz=24,slow=22,SNR=5.7						
DZM	Mont Dzumac	9.91	177	eP	Pn	18 18 17.7	-0.1
CTA	Charters Tower	20.52	245	eP	P	18 20 34.6	+1.6
	11nm,0.8s						
CTA	Charters Tower	20.52	245	P	P	18 20 34.7	+1.8
	12nm,0.9s,baz=82,slow=11,SNR=4.5						
CTA				LR	LR	18 26 26.5	
	comp=Z,287nm,18.6s,MS3.7,baz=72,slow=31						
AFI	Afiamalu	21.76	97	LR	LR	18 28 17.1	
	comp=Z,321nm,18.4s,MS3.8,baz=235,slow=34						
STKA	Stephens Creek	29.83	225	eP	P	18 22 04.4	+2.9
	4.2nm,0.8s,mb4.2						
STKA	Stephens Creek	29.83	225	P	P	18 22 00.5	-1.0
	2.1nm,0.8s,mb3.9,baz=54,slow=14,SNR=2.1						
STKA				LR	LR	18 33 25.1	
	comp=Z,216nm,18.9s,MS3.8,baz=26,slow=35						
STKA	Stephens Creek	29.83	225	P	P	18 22 00.5	-1.0
WRAB	Tennant Creek	31.32	252	eP	P	18 22 13.9	-1.0
	9.0nm,1.0s,mb4.5						
WB2	Warramunga Arr	31.33	252	eP	P	18 22 14.9	0.0
WRA	Warramunga Arr	31.34	252	P	P	18 22 14.1	-0.8
	2.2nm,0.8s,mb4.0,baz=82,slow=8.7,SNR=11						
WRA				pP	pP	18 22 25.1	-0.4
	5.1nm,0.7s,baz=82,slow=8.6,SNR=16						
WRA				pPcP		18 25 20.9	
	3.1nm,0.9s,baz=82,slow=3.1,SNR=12						
ASAR	Alice Springs	32.52	245	P	P	18 22 24.6	-0.8
	5.1nm,0.7s,mb4.6,baz=67,slow=9.7,SNR=22						
ASAR				pP	pP	18 22 35.6	-0.3
	12nm,0.7s,baz=68,slow=9.5,SNR=29						
ASAR				PcP	PcP	18 25 11.0	-0.6
	1.3nm,1.0s,baz=104,slow=3.9,SNR=4.1						
ASAR				pPcP		18 25 23.2	
	2.8nm,0.8s,baz=85,slow=2.6,SNR=11						
KAKA	Kakadu	32.74	265	eP	P	18 22 25.9	-1.4
	13nm,0.6s,mb5.0						
RAR	Rarotonga	33.98	110	LR	LR	18 32 58.1	
	comp=Z,130nm,20.9s,MS3.6,baz=326,slow=30						
FITZ	Fitzroy Crossi	39.33	256	eP	P	18 23 23.9	+0.2
	7.5nm,0.9s,mb4.4						
PPT	Papeete	43.24	103	eLQ		18 34 23.0	
	299nm,30.5s						
PPT				eLR	LR	18 36 06.6	
	215nm,27.2s,baz=272						
PPT	Papeete	43.24	103	LR	LR	18 37 51.3	
	comp=Z,192nm,18.5s,MS4.0,baz=304,slow=30						
MBWA	Marble Bar	45.07	252	eP	P	18 24 09.7	-0.8
	14nm,0.9s,mb4.8						
KAPI	Kappang	46.19	275	LR	LR	18 46 10.3	
	comp=Z,74nm,18.1s,MS3.7,baz=1.4,slow=39						
KKM	Kota Kinabalu	52.66	287	eP	P	18 25 08.8	0.0
MJAR	Matsushiro Arr	55.01	333	P	P	18 25 23.8	-1.8
	1.9nm,0.8s,mb4.2,baz=162,slow=6.1,SNR=5.4						
MAJO	Matsushiro	55.01	333	eP	P	18 25 24.9	-0.7
	8.1nm,0.9s,mb4.8						
KSRS	Korea Array	60.88	326	P	P	18 26 07.1	+0.4
	1.2nm,0.9s,mb4.0,baz=137,slow=7.1,SNR=4.1						
KSRS				PcP	PcP	18 26 50.8	+0.7
	1.2nm,0.9s,baz=137,slow=4.1,SNR=4.1						
YSS	Yuzh-Sakhalins	62.36	342	P	P	18 26 16.5	0.0
	16nm,1.0s,mb5.1						
MDJ	Mudanjiang	65.39	332	P	P	18 26 34.7	-1.7
SBA	Scott Base	65.74	180	eP	P	18 26 39.2	+0.9
	11nm,0.9s,mb4.9						
CN2	Changchun	66.76	329	eP	P	18 26 45.4	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
KMI	Kunming	71.86	302	P	P	18 27 19.0	+1.7
KMI				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.2						
CMAR	Chiang Mai Arr	72.74	294	P	P	18 27 24.1	+1.5
	comp=Z,1.9nm,0.8s,mb4.0,baz=127,slow=4.2,SNR=6.5						
HIA	Hailar	73.40	330	eP	P	18 27 26.0	+0.1
	comp=Z,14nm,0.9s,mb4.9						
LZH	Lanzhou	75.63	312	eP	P	18 27 41.7	+2.5
LZH				AP	pP	18 27 50.2	-0.5
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,73nm,6.2s						
ULN	Ulaanbaatar	79.29	324	eP	P	18 28 00.3	+0.9
	comp=Z,17nm,1.1s,mb4.9						
SONM	Songino Array	79.65	324	P	P	18 28 02.3	+1.0
	comp=Z,3.6nm,0.9s,mb4.3,baz=136,slow=6.0,SNR=21						
PDAR	Pinedale Array	94.11	47	LR	LR	19 07 33.4	
	comp=Z,46nm,18.0s,MS4.0,baz=68,slow=33						
MKAR	Makanchi Array	94.44	317	P	P	18 29 14.4	+0.4
	comp=Z,6.4nm,0.7s,mb5.1,baz=93,slow=6.5,SNR=51						
MKAR				pP	pP	18 29 25.0	-0.7
	comp=Z,7.2nm,0.8s,baz=98,slow=5.3,SNR=18						
ZALV	Zalesovo Beam	94.54	324	P	P	18 29 13.4	-0.8
	comp=Z,4.5nm,0.8s,mb4.9,baz=108,slow=4.8,SNR=17						
TXAR	Lajitas Array	96.15	61	LR	LR	19 01 58.4	
	comp=Z,106nm,21.1s,MS4.3,baz=180,slow=29						
KURK	Kurchatov	97.59	320	P	P	18 29 27.2	-1.0
	comp=Z,0.6nm,0.8s,mb4.2,baz=95,slow=4.4,SNR=4.1						
BVAR	Borovoye Array	102.92	322	P	Pdif	18 29 51.0	-0.9
	comp=Z,1.1nm,0.9s,baz=92,slow=4.9,SNR=5.2						
ARCES	ARCESS Array B	117.42	345	PKP	PKPdf	18 34 38.0	-0.9
	comp=Z,1.7nm,0.7s,baz=85,slow=1.5,SNR=5.0						
AKASG	Malin Array Be	127.87	326	PKP	PKPdf	18 34 58.5	-0.9
	comp=Z,0.3nm,0.5s,baz=62,slow=2.0,SNR=4.3						
KEST	Kesra	148.39	322	PKPbc	PKPbc	18 35 40.9	+0.2
	comp=Z,2.8nm,0.9s,baz=314,slow=5.0,SNR=5.1						
TORD	Torodi Ar. Bea	164.62	276	PKP	PKPdf	18 35 57.7	-0.9
	comp=Z,2.8nm,1.0s,baz=26,slow=1.7,SNR=9.0						
TORD				PKPab	PKPab	18 36 54.5	+0.6
	comp=Z,0.7nm,0.9s,baz=116,slow=3.4,SNR=2.3						
TORD	Torodi Ar. Bea	164.62	276	PKP	PKPdf	18 35 57.7	-0.9
TORD				PKPab	PKPab	18 36 54.5	+0.6

*ISCJB **04** 18:19:34.8±1.1, 31.24S±0.02×72.00W±0.07, h21km±7km, mb4.2/6, Error ellipse: s-maj=10.3km s-min=3.5km az=177.5*

*NEIC **04** 18:19:37.0±2.5, 31.18S×71.81W, h30km±19km, mb4.4/2, Error ellipse: s-maj=17.8km s-min=6.5km az=91.0*

*IDC **04** 18:19:37.6±5.5, 31.30S×71.69W, h33km±40km, mb4.2/5, mb1 4.1/9, mb1mx3.9/19, mbtmp4.0/9, ML4.1/4, Error ellipse: s-maj=29.1km s-min=26.9km az=79.0*

*GUC **04** 18:19:37.0±0.7, 31.27S×71.78W, h25km±2km, MD4.2, ML4.3*

ISC 04 18:19:35.4±1.0**, 31.23S**±0.02×**71.88W**±0.07**, h11**km±5km**, n48,** σ0.91/57**, mb4.2**/6**, 2C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.72	154	⇓iP	Pg	18 19 49.5	+0.1
CHNG				iS	Sg	18 19 58.5	-0.4
OVCH	Ovalle	0.85	43	iP	Pg	18 19 51.9	+0.1
OVCH				iS	Sg	18 20 03.5	+0.6
OVCH				AML	AML	18 20 06.4	
	comp=N,9μm,0.3s						
OVCH	Ovalle	0.85	43	iP	Pg	18 19 51.9	+0.1
OVCH				iS	Sg	18 20 03.5	+0.6
PTCH	Petorca	1.30	142	eP	Pn	18 19 58.3	-1.2
PTCH				iS	Sb	18 20 14.5	-2.1
PTCH				AML	AML	18 20 16.9	
	comp=E,4μm,0.2s						
PTCH	Petorca	1.30	142	eP	Pn	18 19 58.3	-1.2
PTCH				iS	Sb	18 20 14.5	-2.1
TLL	Tololo Astrono	1.41	41	⇓iP	Pn	18 20 01.2	+0.3
TLL				iS	Sn	18 20 19.3	-0.1
TLL				AML	AML	18 20 27.6	
	comp=N,4μm,0.6s						
TLL	Tololo Astrono	1.41	41	⇓iP	Pn	18 20 01.2	+0.3
TLL				iS	Sn	18 20 19.3	-0.1
LSCH	La Serena	1.43	23	iP	Pn	18 20 01.4	+0.2
LSCH				iS	Sn	18 20 20.4	+0.4
JACH	Jahuel	1.81	143	⇓iP	Pn	18 20 06.9	+0.5
JACH				iS	Sn	18 20 29.2	-0.1
ROCH	El Roble	1.88	157	iP	Pn	18 20 08.1	+0.7
ROCH				iS	Sn	18 20 32.0	+0.8
PEL	Peldehue	2.15	152	eP	Pn	18 20 12.0	+0.8
PEL				iS	Sn	18 20 38.5	+0.6
PEL				AML	AML	18 20 45.0	
	comp=N,6μm,0.4s						
RCDM	Rinconada Maip	2.42	158	iP	Pn	18 20 14.6	-0.2
RCDM				iS	Sn	18 20 43.9	-0.6
RCDM				AML	AML	18 20 56.4	
	comp=N,2μm,0.5s						
RCDM	Rinconada Maip	2.42	158	iP	Pn	18 20 14.6	-0.2
RCDM				iS	Sn	18 20 43.9	-0.6
CLCH	Cerro Calan	2.44	153	⇑iP	Pn	18 20 15.6	+0.6
CLCH				iS	Sn	18 20 45.2	+0.4
CLCH				AML	AML	18 20 54.6	
	comp=E,3μm,0.4s						
CLCH				AML	AML	18 20 55.2	
	comp=E,4μm,0.3s						
LCO	Las Campanas	2.44	25	ePn	Pn	18 20 14.8	-0.3
LCO				eSn	Sn	18 20 46.3	+1.5
SAN	Santiago	2.44	155	AML	AML	18 20 55.7	
	comp=N,2μm,0.4s						
FCH	Farellones	2.48	148	eP	Pn	18 20 16.4	+0.8
FCH				iS	Sn	18 20 47.0	+1.1
FCH				AML	AML	18 20 51.7	
	comp=E,1μm,0.2s						
ANTU	Antumapu	2.56	156	AML	AML	18 20 57.9	
	comp=N,2μm,0.6s						
PCH	Pirque	2.64	155	⇑iP	Pn	18 20 18.5	+0.6
PCH				iS	Sn	18 20 50.2	+0.3
VACH	Vallenar	2.82	20	AML	AML	18 21 07.0	
	comp=E,4μm,0.7s						
CFAA	Coronel Fontan	3.13	98	Pn	Pn	18 20 26.8	+2.1
	comp=E,5.8nm,0.3s,baz=268,slow=11,SNR=117						
CFAA				Lg		18 21 08.2	
	comp=E,17nm,0.3s,baz=12,slow=15,SNR=11						
SFDO	San Fernando	3.45	168	eP	Pn	18 20 29.9	+1.0
SFDO				iS	Sn	18 21 09.8	0.0
LVC	Limon Verde	8.98	18	Pn	Pn	18 21 40.3	-4.7
	comp=E,0.2nm,0.3s,baz=180,slow=17,SNR=1.8						
LVC				Sn	Sn	18 23 15.7	-10
	comp=E,1.1nm,0.3s,baz=183,slow=8.1,SNR=3.7						
LVC	Limon Verde	8.98	18	Pn	Pn	18 21 40.3	-4.7
LVC				Sn	Sn	18 23 15.7	-10
PLCA	Paso Flores	9.54	174	Pn	Pn	18 21 52.2	-0.4
	comp=E,0.4nm,0.3s,baz=333,slow=11,SNR=8.0						
PLCA	Paso Flores	9.54	174	ePn	Pn	18 21 52.2	-0.4
TRQA	Tornquist	10.61	133	ePn	Pn	18 22 06.4	-0.9
CPUP	Villa Florida	13.66	73	Pn	Pn	18 22 47.3	-1.7
	comp=E,0.5nm,0.3s,baz=227,slow=13,SNR=4.3						
LPAZ	La Paz	15.27	14	Pn	Pn	18 23 11.4	+0.5
	comp=E,0.2nm,0.3s,baz=170,slow=6.9,SNR=8.3						
SIV	San Ignacio	18.10	35	P	Pn	18 23 45.4	-1.4
	comp=E,0.3nm,0.3s,baz=214,slow=11,SNR=13						
NNA	Nana	19.70	345	P	Pn	18 24 00.6	-5.6
BDFB	Brasilia	26.75	60	P	P	18 25 12.8	-2.3
	comp=E,5.7nm,0.9s,mb4.1,baz=177,slow=7.1,SNR=5.2						
VNA3	Neumayer Olymp	51.87	159	e	P	18 28 43.2	0.0
VNA3				e		18 29 23.4	
VNA2	Neumayer--Watz	52.51	158	e	P	18 28 47.5	-0.5
VNA2				e		18 29 25.1	
TEIG	Tepich	53.53	341	P	P	18 28 56.0	-0.1
	comp=E,5.5nm,0.9s,mb4.5,baz=129,slow=13,SNR=3.8						
TXAR	Lajitas Array	67.40	330	P	P	18 30 30.8	0.0
	comp=E,0.4nm,0.8s,mb3.5,baz=138,slow=8.5,SNR=3.3						
DBIC	Dimbokro	74.18	72	P	P	18 31 10.7	-1.7
	comp=E,3.8nm,0.5s,mb4.6,baz=242,slow=6.8,SNR=6.3						
DBIC	Dimbokro	74.18	72	eP	P	18 31 10.1	-2.3
	comp=E,10nm,1.0s,mb4.7						
SDCO	Great Sand Dun	75.47	333	P	P	18 31 19.8	+0.5
	comp=E,1.5nm,1.0s,mb3.9						
TORD	Torodi Ar. Bea	83.14	70	P	P	18 32 00.2	-1.4
	comp=E,4.2nm,0.7s,mb4.6,baz=268,slow=4.9,SNR=18						
AKASG	Malin Array Be	120.20	46	PKP	PKPdf	18 38 23.2	-2.7
	comp=E,0.1nm,0.2s,baz=276,slow=1.8,SNR=4.3						
WRA	Warramunga Arr	123.23	210	PKP	PKPdf	18 38 30.5	-2.3
	comp=E,0.5nm,0.6s,baz=164,slow=1.5,SNR=8.8						
BVAR	Borovoye Array	145.13	40	PKPbc	PKPbc	18 39 11.3	-0.6
	comp=E,1.5nm,0.5s,baz=285,slow=1.7,SNR=10						
ZAA0	Zalesovo Array	151.79	30	eP	PKPbc	18 39 27.8	-1.7
ZALV	Zalesovo Beam	151.79	30	PKPbc	PKPbc	18 39 27.9	-1.6
	comp=E,5.2nm,0.6s,baz=296,slow=3.5,SNR=20						
ZALV	Zalesovo Beam	151.79	30	PKPbc	PKPbc	18 39 27.9	-1.6
MKAR	Makanchi Array	154.77	45	PKPbc	PKPbc	18 39 34.8	-1.5
	comp=E,0.6nm,0.8s,baz=325,slow=3.6,SNR=4.8						
MKAR				PKPab	PKPab	18 39 50.0	-1.4
	comp=E,0.8nm,0.9s,baz=308,slow=4.5,SNR=4.0						
MKAR	Makanchi Array	154.77	45	PKPbc	PKPbc	18 39 34.8	-1.5
MKAR				PKPab	PKPab	18 39 50.0	-1.4

*NEIC **04** 18:36:04.5, 31.26S×71.73W, h15km, ML3.1(GUC), After GUC.*

GUC 04 18:36:04.5±0.6**, 31.26S×71.73W, h15**km±4km**, MD3.6, ML3.1, 3C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.65	163	⇑iP	Pg	18 36 16.6	-0.6
CHNG				iS	Sg	18 36 25.5	-0.3
OVCH	Ovalle	0.79	35	⇑iP	Pg	18 36 18.9	-1.0
OVCH				iS	Sg	18 36 29.9	-0.5
OVCH				AML	AML	18 36 33.4	
	comp=N,840nm,0.5s						
OVCH	Ovalle	0.79	35	⇑iP	Pg	18 36 18.9	-1.0
OVCH				iS	Sg	18 36 29.9	-0.5
PTCH	Petorca	1.21	146	iP	Pn	18 36 25.5	-1.3
PTCH				iS	Sb	18 36 41.3	-1.1
PTCH				AML	AML	18 36 44.0	
	comp=E,373nm,0.1s						
PTCH	Petorca	1.21	146	iP	Pn	18 36 25.5	-1.3
PTCH				iS	Sb	18 36 41.3	-1.1
TLL	Tololo Astrono	1.35	36	eP	Pn	18 36 28.3	-0.6
TLL				iS	Sn	18 36 46.6	+0.1
TLL				AML	AML	18 36 54.6	
	comp=N,315nm,0.6s						
TLL	Tololo Astrono	1.35	36	eP	Pn	18 36 28.3	-0.6
TLL				iS	Sn	18 36 46.6	+0.1
JACH	Jahuel	1.71	146	iP	Pn	18 36 33.9	+0.1
JACH				iS	Sn	18 36 56.1	+0.7
PEL	Peldehue	2.07	155	eP	Pn	18 36 39.1	+0.3
PEL				iS	Sn	18 37 05.5	+1.2
PEL				AML	AML	18 37 11.4	
	comp=N,369nm,0.7s						
RCDM	Rinconada Maip	2.35	161	AML	AML	18 37 16.8	
	comp=E,155nm,0.6s						
CLCH	Cerro Calan	2.35	155	AML	AML	18 37 21.6	
	comp=E,203nm,0.3s						
FCH	Farellones	2.39	150	⇓iP	Pn	18 36 43.5	+0.4
FCH				iS	Sn	18 37 14.0	+1.9
FCH				AML	AML	18 37 18.7	
	comp=E,137nm,0.2s						
LCO	Las Campanas	2.41	22	ePn	Pn	18 36 42.2	-1.2
LCO				eSn	Sn	18 37 13.3	+0.6
TACH	Talagante	2.47	165	iP	Pn	18 36 45.5	+1.2
TACH				iS	Sn	18 37 16.5	+2.3
PCH	Pirque	2.56	157	iP	Pn	18 36 46.6	+1.1
PCH				iS	Sn	18 37 18.4	+2.0

IDC 04 18:42:07.7±7.3**, 12.28S×165.66E, h0**km**, mb3.9**/5**, mb1 4.1**/5**, mb1mx3.8**/16**, mbtmp3.8**/5**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/24**, Error ellipse: s-maj=200.6km s-min=37.8km az=122.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.17	245	LR	LR	18 52 25.1	
	comp=Z,91nm,19.4s,baz=279,slow=31						
WRA	Warramunga Arr	31.00	252	P	P	18 48 26.7	-0.4
	1.5nm,0.8s,baz=81,slow=9.2,SNR=9.7						
ASAR	Alice Springs	32.18	245	P	P	18 48 37.5	+0.1
	1.4nm,0.8s,baz=76,slow=9.0,SNR=12						
CMAR	Chiang Mai Arr	72.53	294	P	P	18 53 38.0	+1.0
	0.4nm,0.8s,baz=134,slow=3.5,SNR=5.8						
SONM	Songino Array	79.61	324	P	P	18 54 16.8	+0.1
	0.4nm,0.7s,baz=122,slow=5.4,SNR=2.9						
MKAR	Makanchi Array	94.36	317	P	P	18 55 28.7	-0.6
	0.5nm,0.7s,baz=93,slow=6.3,SNR=4.4						

*ISCJB **04** 19:03:21.7±0.4, 6.86N±0.05×73.00W±0.05, h166km±5km, mb3.8/5, Error ellipse: s-maj=11.1km s-min=5.0km az=42.5*

*IDC **04** 19:03:22.2±0.7, 6.76N×72.94W, h160km±9km, mb3.6/5, mb1 3.9/8, mb1mx3.5/23, mbtmp3.7/8, Error ellipse: s-maj=24.7km s-min=7.6km az=132.0*

*FUNV **04** 19:03:22.0, 6.71N×73.14W, h162km, MW3.6*

*NEIC **04** 19:03:22.6±0.8, 6.83N×73.03W, h159km±9km, mb4.0/1, Error ellipse: s-maj=16.6km s-min=10.8km az=144.0*

ISC 04 19:03:22.7±0.4**, 6.84N**±0.05×**72.98W**±0.06**, h160**km±6km**, n31,** σ0.93/40**, mb3.8**/5**, 1C-13D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.22	33	⇓iP	Pn	19 03 51.5	+1.1
CAPV				eS	Sn	19 04 11.9	+0.4
ROSC	El Rosal	2.38	214	P	Pn	19 04 03.6	+0.7
	84nm,0.3s,baz=17,slow=1.5,SNR=86						
ROSC				S	Sn	19 04 33.4	-0.5
	166nm,0.3s,baz=86,slow=19,SNR=13						
SOCV	Socops	2.55	56	⇓iP	Pn	19 04 06.2	+1.2
SOCV				eS	Sn	19 04 38.5	+0.9
VIGV	El Vigia	2.56	39	⇓iP	Pn	19 04 05.9	+0.9
VIGV				eS	Sn	19 04 37.8	+0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDV	Santo Domingo	3.09	49	P	Pn	19 04 12.9	+1.3
	77nm,0.3s,baz=217,slow=3.4,SNR=35						
SDV				S	Sn	19 04 49.9	+0.3
	31nm,0.3s,baz=288,slow=20,SNR=10						
SDV	Santo Domingo	3.09	49	P	Pn	19 04 12.9	+1.3
SDV				eSn	Sn	19 04 49.8	+0.2
SDV				S	Sn	19 04 49.9	+0.3
ELOV	Elorza	3.48	87	⇓eP	Pn	19 04 17.5	+1.0
VIRV	Villa del Rosa	3.69	9	⇓eP	Pn	19 04 18.2	-1.1
VIRV				eS	Sn	19 05 01.9	-1.3
QARV	Quebrada Arrib	4.14	36	⇓iP	Pn	19 04 25.8	+0.8
SANV	Sanarito	4.32	52	⇓eP	Pn	19 04 27.7	+0.3
SANV				eS	Sn	19 05 16.1	-1.7
CURV	Curarigua	4.35	43	⇓iP	Pn	19 04 28.1	+0.4
CURV				eS	Sn	19 05 17.9	-0.6
DABV	Dabajuro	4.67	30	⇑eP	Pn	19 04 32.6	+0.5
TEPV	Terepaima	4.87	50	⇓iP	Pn	19 04 35.1	+0.5
SIQV	Siquisique	4.92	39	⇓iP	Pn	19 04 35.1	-0.1
SIQV				eS	Sn	19 05 29.4	-2.5
BAUV	El Baul	5.32	67	⇓iP	Pn	19 04 39.7	-0.9
TURV	Turiamo	6.22	54	eP	Pn	19 04 52.2	-0.3
CAOV	Caicara del Or	6.63	85	⇓iP	Pn	19 04 56.7	-1.2
BCIP	Isla Barro Col	7.17	289	P	Pn	19 05 02.0	-3.2
CUPV	Cœpira	7.80	65	⇓iP	Pn	19 05 12.6	-0.9
OTAV	Otavalo	8.53	220	ePn	Pn	19 05 23.1	0.0
OTAV				eSn	Sn	19 06 56.9	-1.3
PCRV	Puerto La Cruz	8.89	68	P	Pn	19 05 27.7	-0.3
	1.2nm,0.3s,baz=270,slow=9.1,SNR=2.9						
TEIG	Tepich	19.93	313	P	P	19 07 43.5	+1.1
	4.9nm,0.4s,baz=152,slow=15,SNR=3.9						
LPAZ	La Paz	23.47	168	pP	pP	19 08 50.0	+1.4
	1.9nm,0.9s,baz=349,slow=13,SNR=8.0						
TXAR	Lajitas Array	36.56	312	P	P	19 10 13.3	+0.1
	0.7nm,0.6s,mb3.5,baz=128,slow=9.5,SNR=11						
TXAR	Lajitas Array	36.56	312	P	P	19 10 13.3	+0.1
ULM	Lac du Bonnet	47.32	340	P	P	19 11 39.6	-0.5
	2.5nm,0.4s,mb4.2,baz=153,slow=8.2,SNR=5.7						
PDAR	Pinedale Array	48.15	324	P	P	19 11 47.2	+0.5
	0.5nm,0.4s,mb3.5,baz=123,slow=8.4,SNR=3.9						
HLID	Hailey	51.51	322	eP	P	19 12 13.0	+0.9
	4.0nm,1.2s,mb3.9						
YKA	Yellowknife Ar	63.30	340	P	P	19 13 34.3	+0.1
	1.1nm,0.5s,mb4.0,baz=134,slow=6.6,SNR=7.2						
ASAR	Alice Springs	149.23	234	PKPbc	PKPbc	19 22 52.4	-0.9
	0.7nm,0.6s,baz=120,slow=3.8,SNR=13						
WRA	Warramunga Arr	150.47	241	PKPbc	PKPbc	19 22 55.6	-0.8
	0.8nm,0.4s,baz=109,slow=2.4,SNR=38						

*ISK **04** 19:04:12.9, 3563N×2821E, h4km, MD3.2*
*CSEM **04** 19:04:13.5±0.2, 3557N×2823E, h15km, MD3.0, Error ellipse: s-maj=4.2km s-min=3.1km az=162.0*
*ISCJB **04** 19:04:13.7±1.0, 3560N±007×28.18E±005, h7km±9km, Error ellipse: s-maj=11.7km s-min=7.0km az=177.1*
*DDA **04** 19:04:14.8, 3579N×28.19E, h7km±4km, Md3.0*
*ATH **04** 19:04:18.5, 3601N×2781E, h17km, MD3.2/4*
*NEIC **04** 19:04:18.5, 3601N×2781E, h17km, MD3.2(ATH), After ATH.*
ISC 04 19:04:13.5±1.2**, 3554N**±007×**2819E**±005**, h10**km±9km**, n16, σ0.88**/27**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.68	355	ePB	Pg	19 04 25.5	-1.1
KARP	Karpathos	0.84	271	ePN	Pg	19 04 32.3	+2.6
DALT	Dalyan (Mudla)	1.28	16	ePN	Pn	19 04 36.6	-0.8
DALT				eSN	Sn	19 04 53.3	-1.4
AKAS	Kas	1.34	58	i P	Pn	19 04 37.7	-0.6
AKAS				i S	Sb	19 04 56.4	+0.4
TURN	Turunc	1.37	14	i P	Pn	19 04 35.7	-3.0
TURN				i S	Sb	19 04 52.4	-4.5
YER	Yerkesik	1.59	3	ePN	Pn	19 04 41.4	-0.4
YER				eSN	Sn	19 05 02.6	+0.2
BDRM	Kayabasi	1.64	339	i P	Pn	19 04 42.2	-0.2
BDRM				i S	Sn	19 05 03.6	0.0
BODT	Bodrum	1.68	335	ePN	Pn	19 04 42.5	-0.4
BODT				eSN	Sn	19 05 04.8	+0.2
MLSB	Milas	1.79	349	ePN	Pn	19 04 44.5	+0.1
MLSB				eSN	Sn	19 05 07.6	+0.4
ELL	Elmali	1.84	48	ePN	Pn	19 04 45.3	+0.2
GOLH	Golhisar	2.02	33	i P	Pn	19 04 48.8	+1.1
GOLH				i S	Sn	19 05 14.0	+1.0
NPS	Neapolis	2.13	263	ePB	Pb	19 04 52.0	-0.1
AYDN	Tasoluk	2.13	353	i P	Pn	19 04 49.2	0.0
AYDN				i S	Sn	19 05 16.6	+0.8
DNZL	Cakiroluk	2.25	17	i P	Pb	19 04 54.6	+0.3
DNZL				i S	Sb	19 05 23.4	+1.1
SMG	Samos	2.43	334	ePN	Pn	19 04 52.1	-1.1
BALY	Balya	4.22	354	i P	Pn	19 05 18.6	+0.7
BALY				i S	Sn	19 06 06.6	-0.6

IDC 04 19:06:49.1±2.9**, 1228S×16632E, h0**km**, mb4.1**/5**, mb1 4.1**/6**, mb1mx3.9**/17**, mbtmp4.1**/6**, ML4.6**/1**, Error ellipse: s-maj=74.0km s-min=37.4km az=128.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.87	294	Pn	Pn	19 08 31.4	+0.2
	12nm,0.3s,baz=130,slow=7.9,SNR=4.0						
WRA	Warramunga Arr	31.61	252	P	P	19 13 13.1	-0.8
	0.5nm,0.9s,baz=83,slow=9.4,SNR=2.7						
ASAR	Alice Springs	32.77	245	P	P	19 13 24.9	+0.9
	0.6nm,0.8s,baz=71,slow=8.9,SNR=5.1						
SONM	Songino Array	79.99	324	P	P	19 19 00.6	+0.4
	0.9nm,0.7s,baz=137,slow=5.5,SNR=7.1						
MKAR	Makanchi Array	94.80	317	P	P	19 20 13.5	+0.8
	3.4nm,0.7s,baz=96,slow=6.4,SNR=26						
ZALV	Zalesovo Beam	94.88	324	P	P	19 20 11.6	-1.3
	0.7nm,0.7s,baz=116,slow=3.4,SNR=4.6						

*ISCJB **04** 19:08:37.1±1.0, 503N±0.1×1563E±02, h140km±9km, Error ellipse: s-maj=26.7km s-min=9.2km az=44.1*
*KRSC **04** 19:08:37.7±1.1, 5023N×15679E, h94km±96km, ML3.8*
*MOS **04** 19:08:38.9±0.3, 5080N×155.17E, h94km, mb4.1/1, Error ellipse: s-maj=42.6km s-min=22.4km az=51.0*
ISC 04 19:08:38.1±1.1**, 503N**±01×**1563E**±02**, h134**km±9km**, n19, σ0.96**/24**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.43	342	ePN	Pn	19 08 56.5	-0.7
SKR				pmax	pmax		
	comp=Z,330nm,0.4s						
SKR				pmax	pmax		
	comp=N,200nm,0.3s						
SKR				pmax	pmax		
	comp=E,150nm,0.3s						
SKR				pmax	pmax		
	comp=Z,200µm,1.5s						
SKR				pmax	pmax		
	comp=N,740nm,0.3s						
SKR				pmax	pmax		
	comp=E,2µm,0.2s						
SKR				pmax	pmax		
	comp=N,3µm,1.0s						
SKR				pmax	pmax		
	comp=E,3µm,1.0s						
ALID	Alaid	0.77	321	P	Pn	19 08 59.1	-0.3
MIPR	Malaya Ipel'ka	2.02	8	eP	Pn	19 09 13.2	+0.7
MIPR				i S	Sn	19 09 39.2	+0.2
RUS	Russkaya	2.56	32	eP	Pn	19 09 19.6	+0.4
RUS				i S	Sn	19 09 50.7	-0.2
PET	Petropavlovsk	3.11	27	i PN	Pn	19 09 26.7	+0.4
PET	Petropavlovsk	3.11	27	P	Pn	19 09 26.6	+0.3
PET				i S	Sn	19 10 01.7	-1.8
SDLR	Sedlovina	3.40	27	P	Pn	19 09 31.3	+1.3
SDLR				i S	Sn	19 10 09.8	-0.4
NLC	Nalytchevo	3.46	32	P	Pn	19 09 30.6	-0.1
GNL	Ganaly	3.57	16	P	Pn	19 09 33.5	+1.3
SPN	Mys Shipunski	3.65	38	P	Pn	19 09 33.6	+0.4
SPN				i S	Sn	19 10 13.7	-2.2
MKZ	Mys Kozlova	5.42	36	P	Pn	19 09 56.2	-0.5
KMNR	Kamenistaya	5.98	22	P	Pn	19 10 05.8	+1.6
BZMR	Bezymyannaya	6.20	22	P	Pn	19 10 09.1	+1.9
KBTR	Krutoberegovo	7.11	31	P	Pn	19 10 19.1	-0.3
YSS	Yuzh-Sakhalins	9.58	255	ePN	Pn	19 10 48.1	-4.5
ERM	Erimo	12.30	233	ePN	Pn	19 11 28.3	-0.3
COLA	College	32.07	42	i P	P	19 14 59.3	+7.6
TLY	Talaya	32.60	293	eP	P	19 14 55.9	-0.7
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	47.24	302	eP	P	19 16 56.4	-0.8

*NEIC **04** 19:10:14.8±1.1, 487S×15335E, h10km, mb4.2/2, Error ellipse: s-maj=24.1km s-min=14.9km az=187.0*
*IDC **04** 19:10:15.0±2.6, 483S×15307E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.8/16, mbtmp3.9/5, Error ellipse: s-maj=65.6km s-min=34.3km az=100.0*
*ISCJB **04** 19:10:16.9±1.3, 5.1S±02×15335E±0.10, h33km, mb3.8/6, Error ellipse: s-maj=25.8km s-min=14.0km az=175.6*
ISC 04 19:10:17.9±6.5**, 50S**±02×**1533E**±01**, h25**km±50km**, n12, σ1.08**/12**, mb3.8**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.48	234	ePn	Pn	19 12 06.4	+0.8
PMG				eSn	Sn	19 13 28.6	-1.0
HNR	Honiara	7.90	124	ePn	Pn	19 12 10.2	-1.0
	20nm,0.8s						
WRAB	Tennant Creek	23.66	230	eP	P	19 15 27.8	+0.1
	3.2nm,0.4s,mb4.1						
WB2	Warramunga Arr	23.66	230	eP	P	19 15 26.7	-1.0
WRA	Warramunga Arr	23.67	230	P	P	19 15 28.7	+0.9
	3.1nm,0.4s,mb4.0,baz=53,slow=9.9,SNR=63						
ASAR	Alice Springs	26.32	223	P	P	19 15 52.8	+1.0
	0.6nm,0.5s,mb3.4,baz=55,slow=9.1,SNR=9.4						
STKA	Stephens Creek	28.86	201	P	P	19 16 16.8	+2.2
	1.5nm,0.8s,mb3.8,baz=19,slow=12,SNR=2.7						
STKA	Stephens Creek	28.86	201	P	P	19 16 16.8	+2.2
FITZ	Fitzroy Crossi	29.99	242	eP	P	19 16 23.2	-1.5
	4.4nm,1.4s,mb4.0						
FITZ	Fitzroy Crossi	29.99	242	P	P	19 16 23.4	-1.4
	0.5nm,0.2s,mb3.8,baz=49,slow=11,SNR=7.0						
CMAR	Chiang Mai Arr	58.44	295	P	P	19 20 11.9	-0.2
	0.3nm,0.3s,mb3.8,baz=116,slow=6.1,SNR=4.1						
TORD	Torodi Ar. Bea	150.86	288	PKPbc	PKPbc	19 30 09.1	-0.2
	0.4nm,0.6s,baz=83,slow=2.5,SNR=10						

IDC 04 19:14:05.5±2.7**, 1154S×16549E, h0**km**, mb4.1**/5**, mb1 4.2**/5**, mb1mx3.9**/17**, mbtmp4.0**/5**, MS3.5**/4**, Ms1 3.5**/4**, ms1mx3.1**/23**, Error ellipse: s-maj=92.3km s-min=37.7km az=131.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.35	243	LR	LR	19 25 15.4	
	comp=Z,105nm,21.3s,baz=336,slow=33						
AFI	Afiamalu	22.30	98	LR	LR	19 26 56.9	
	comp=Z,92nm,18.2s,baz=84,slow=35						
STKA	Stephens Creek	29.91	224	P	P	19 20 14.4	-0.7
	2.7nm,0.8s,baz=39,slow=13,SNR=3.1						
STKA				LR	LR	19 32 03.2	
	comp=Z,96nm,19.6s,baz=24,slow=36						
WRA	Warramunga Arr	31.08	251	P	P	19 20 26.4	+0.8
	1.9nm,1.0s,baz=78,slow=9.2,SNR=8.3						
ASAR	Alice Springs	32.35	244	P	P	19 20 36.6	-0.1
	1.4nm,0.9s,baz=77,slow=9.3,SNR=9.7						
FITZ	Fitzroy Crossi	39.01	256	P	P	19 21 33.9	-0.2
	2.5nm,0.8s,baz=87,slow=8.7,SNR=5.4						
FITZ				LR	LR	19 36 18.0	
	comp=Z,81nm,19.1s,baz=337,slow=34						
MKAR	Makanchi Array	93.71	317	P	P	19 27 24.5	+0.3
	0.7nm,0.7s,baz=91,slow=6.3,SNR=5.2						
ARCES	ARCESS Array B	116.75	345	PKP	PKPdf	19 32 51.0	-0.3
	0.6nm,0.6s,baz=90,slow=1.2,SNR=4.9						

*ISCJB **04** 19:29:43.6±0.7, 4023N±005×25.16E±006, h10km, Error ellipse: s-maj=6.6km s-min=6.1km az=4.7*
*ATH **04** 19:29:43.6, 4035N×2532E, h90km*
*THE **04** 19:29:44.5, 4025N×25.15E, h12km, ML3.0*
*CSEM **04** 19:29:44.1±0.1, 4022N×25.16E, h15km, MD2.7, Error ellipse: s-maj=3.3km s-min=3.0km az=174.0*
*DDA **04** 19:29:49.9, 4028N×2575E, h7km±6km, Md2.7*
ISC 04 19:29:43.6±0.8**, 4020N**±005×**2519E**±005**, h9**km±8km**, n11, σ1.08**/15**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOS	Limnos	0.28	197	ePg	Pg	19 29 50.3	+1.1
OUR	Ouranopolis	0.93	278	ePg	Pg	19 30 01.4	-0.2
ALN	Alexandroupoli	0.95	43	ePg	Pg	19 30 01.9	-0.1
ALN				eSg	Sg	19 30 15.6	+1.2
RDO	Rodhopi	0.98	16	eP	Pg	19 30 01.9	-0.5
PRK	Paraskevi	1.27	139	eP	Pn	19 30 08.1	+0.6
PLG	Polygyros	1.34	278	eP	Pn	19 30 08.5	-0.1
PLG	Polygyros	1.34	278	eP	Pn	19 30 08.1	-0.5
AYVA	Ayvalik	1.46	127	eP	Pn	19 30 07.5	-2.7
AYVA				i S	Sn	19 30 29.7	+0.2
NVR	Nevrokopi	1.53	319	eP	Pn	19 30 10.7	-0.4
BALY	Balya	1.92	103	eP	Pn	19 30 19.4	+2.8
BALY				i S	Sn	19 30 45.7	+4.8
DURS	Dursunbey	2.60	102	i P	Pg	19 30 32.1	-1.2
DURS				i S	Sg	19 31 06.4	-0.7

KRSC 04 20:53:36.0±1.0**, 5317N×16272E, h10**km±10km**, ML3.7, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	1.51	338	P	Pn	20 54 01.8	-1.2
MKZ				S	Sn	20 54 21.0	-1.7
SPN	Mys Shipunski	1.63	269	eP	Pn	20 54 04.9	+0.2
SPN				S	Sn	20 54 26.1	+0.5
NLC	Nalytchevo	2.03	271	P	Pn	20 54 11.7	+1.5
NLC				S	Sn	20 54 37.5	+1.9
KII	Karymskiy	2.13	295	P	Pn	20 54 12.8	+1.2
KII				S	Sn	20 54 39.3	+1.2
AVH	Avacha	2.40	274	P	Pn	20 54 16.7	+1.5
AVH				S	Sn	20 54 46.4	+1.8
PET	Petropavlovsk	2.46	268	S	Sn	20 54 48.3	+2.2
TUMR	Tumrok	2.60	326	S	Sn	20 54 52.1	+2.4
RUS	Russkaya	2.66	256	P	Pn	20 54 19.7	+0.9
RUS				S	Sn	20 54 51.2	+0.1
GNL	Ganaly	2.91	282	P	Pn	20 54 24.6	+2.4
GNL				S	Sn	20 54 59.6	+2.4
KMNR	Kamenistaya	2.97	332	P	Pn	20 54 25.1	+2.0
KMNR				S	Sn	20 55 00.9	+2.2
BZMR	Bezymyannaya	3.06	336	P	Pn	20 54 26.0	+1.7
BZMR				S	Sn	20 55 02.1	+1.1
ZLN	Zelenaya	3.06	339	P	Pn	20 54 25.9	+1.5
KIRR	Kirishev	3.11	335	S	Sn	20 55 03.7	+1.4
CIRR	Tsirk	3.17	340	S	Sn	20 55 05.8	+2.2
MIPR	Malaya Ipel'ka	3.73	259	P	Pn	20 54 36.0	+2.4

*JMA **04** 21:03:48.3±0.4, 2443N×12232E, h48km, M2.6*
TAP 04 21:03:48.2, 2400N×12233E, h17km**, ML3.0, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.67	277	eP	Pg	21 04 02.3	+0.9
	baz=276						
TWD				eS	Sg	21 04 12.4	+2.1
	baz=276						
ENA	Nanau	0.68	308	eP	Pg	21 04 02.3	+0.7
	baz=308						
ENA				eS	Sg	21 04 12.1	+1.4
	baz=308						
TWC	Suao	0.74	324	P	Pb	21 04 02.9	+0.2
	baz=324						
TWC				eS	Sb	21 04 13.7	+1.1
	baz=324						
YOJ	Yonaguni jima	0.77	54	P	Pb	21 04 01.0	-2.3
YOJ				S	Sb	21 04 10.2	-3.3
ESL	Shilin	0.84	257	P	Pb	21 04 04.5	+0.2
	baz=256						
ESL				eS	Sb	21 04 16.6	+1.2
	baz=256						
ILA	Ilan	0.92	325	eP	Pb	21 04 06.0	+0.2
	baz=325						
ILA				eS	Sb	21 04 19.0	+1.2
	baz=325						
TWE	Neicheng	0.93	320	P	Pb	21 04 06.4	+0.5
	baz=319						
TWE				eS	Sb	21 04 19.5	+1.4
	baz=319						
ENTT	Nioudou	0.94	313	P	Pb	21 04 06.7	+0.6
	baz=312						
ENTT				eS	Sb	21 04 19.7	+1.5
	baz=312						
NNS	Nan Shan	0.97	297	eP	Pb	21 04 07.6	+1.0
	baz=296						
NNS				eS	Sb	21 04 20.5	+1.4
	baz=296						
WHF	Hehuan Shan	0.98	278	P	Pb	21 04 07.2	+0.5
	baz=278						
WHF				eS	Sb	21 04 21.1	+1.7
	baz=278						
EHY	Hungye	1.04	242	P	Pb	21 04 07.8	-0.1
	baz=241						
EHY				eS	Sb	21 04 22.1	+0.9
	baz=241						
TWB1	Santiao Chiao	1.05	343	eP	Pb	21 04 07.9	0.0
	baz=342						
TWB1				eS	Sb	21 04 22.4	+1.1
	baz=342						
TWT	Tachien	1.08	284	eP	Pb	21 04 09.3	+0.8
	baz=282						
TWT				eS	Sb	21 04 23.9	+1.7
	baz=282						
TWF1	Yuli	1.14	236	P	Pn	21 04 09.5	+0.1
	baz=235						
TWF1				eS	Sb	21 04 25.1	+1.0
	baz=235						
NWF	Wu-fen Shan	1.17	335	eP	Pn	21 04 10.0	+0.1
	baz=334						
NWF				eS	Sb	21 04 26.1	+1.1
	baz=334						
TWA	Mucha	1.18	325	eP	Pn	21 04 10.6	+0.6
	baz=325						
TWA				eS	Sb	21 04 26.5	+1.2
	baz=325						
CHKT	Chengkung	1.26	225	eP	Pn	21 04 09.9	-1.1
	baz=224						
CHKT				eS	Sb	21 04 26.1	-1.4
	baz=224						
TAP1	Taipei	1.26	325	eP	Pn	21 04 11.7	+0.6
	baz=324						
TAP1				eS	Sb	21 04 28.5	+0.9
	baz=324						
SMLT	Sun Moon Lake	1.31	265	eP	Pn	21 04 12.4	+0.7
	baz=264						
SMLT				eS	Sn	21 04 29.6	+0.8
	baz=264						
IRIF	Iriomote-Funau	1.32	75	P	Pn	21 04 10.1	-1.8
IRIF				S	Sn	21 04 26.2	-3.0
TYC	Yuchr	1.35	266	eP	Pn	21 04 12.8	+0.5
	baz=265						
TYC				eS	Sn	21 04 30.1	+0.4
	baz=265						
HATJ	Hateruma jima	1.35	87	P	Pn	21 04 12.4	+0.1
YUS	Yu-Shan	1.36	248	P	Pn	21 04 13.2	+0.8
	baz=247						
YUS				eS	Sn	21 04 30.9	+0.8
	baz=247						
NSTT	Nanjuang	1.36	298	eP	Pn	21 04 12.8	+0.4
	baz=297						
NSTT				eS	Sn	21 04 31.3	+1.3
	baz=297						
TWS1	Kuangyinshan	1.37	323	eP	Pn	21 04 13.3	+0.7
	baz=322						
TWS1				eS	Sn	21 04 31.2	+0.9
	baz=322						
NCU	National Centr	1.41	313	eP	Pn	21 04 13.2	0.0
	baz=312						
NCU				eS	Sn	21 04 32.4	+1.0
	baz=312						
ELDTW	Lidau	1.45	236	eP	Pn	21 04 13.4	-0.2
	baz=235						
ELDTW				eS	Sn	21 04 31.7	-0.5
	baz=235						
TWQ1	Liyutan	1.46	284	eP	Pn	21 04 14.2	+0.5
	baz=283						
TWQ1				eS	Sn	21 04 33.1	+0.7
	baz=283						
HSN	Hsinchu	1.47	303	eP	Pn	21 04 14.8	+0.9
	baz=304						
HSN				eS	Sn	21 04 33.9	+1.2
	baz=304						
ALS	Alishan	1.48	251	eP	Pn	21 04 14.8	+0.7
	baz=250						
ALS				eS	Sn	21 04 33.8	+0.8
	baz=250						
NSY	Sanyi	1.49	286	eP	Pn	21 04 14.6	+0.4
	baz=286						
NSY				eS	Sn	21 04 33.8	+0.7
	baz=286						
WNT	Mingjian	1.51	266	eP	Pn	21 04 15.3	+0.8
	baz=265						
WNT				eS	Sn	21 04 34.7	+1.0
	baz=265						
TCU	Taichung	1.51	276	eP	Pn	21 04 15.3	+0.7
	baz=275						
TCU				eS	Sn	21 04 34.8	+0.9
	baz=275						
JKRS	Kuro-shima	1.56	81	P	Pn	21 04 13.0	-2.1
JKRS				S	Sn	21 04 33.7	-1.2
CHN5	Tsauling	1.56	255	eP	Pn	21 04 15.9	+0.7
	baz=254						
CHN5				eS	Sn	21 04 35.5	+0.5
	baz=254						
WGK	Gukeng	1.65	259	eP	Pn	21 04 17.0	+0.6
	baz=258						
WGK				eS	Sn	21 04 37.7	+0.6
	baz=258						
TWG	Pinlang	1.65	225	eP	Pn	21 04 16.9	+0.5
	baz=224						
TWG				eS	Sn	21 04 37.8	+0.6
	baz=224						
TTN	Taitung	1.65	221	eP	Pn	21 04 16.8	+0.4
	baz=221						
TTN				eS	Sn	21 04 37.6	+0.4
	baz=221						
STYT	Tauyuan	1.66	240	eP	Pn	21 04 17.5	+0.9
	baz=239						
STYT				eS	Sn	21 04 38.4	+0.8
	baz=239						
JIJ	Ishigaki jima	1.70	77	P	Pn	21 04 15.0	-2.1
JIJ				S	Sn	21 04 35.5	-2.9
WTP	Ta-pu	1.74	245	eP	Pn	21 04 19.0	+1.3
	baz=244						
WTP				eS	Sn	21 04 40.9	+1.4
	baz=244						
TWK	Hsinying	1.84	247	eP	Pn	21 04 19.6	+0.6
	baz=246						
TWK				eS	Sn	21 04 42.5	+0.7
	baz=246						
SGST	Jiashian	1.84	240	eP	Pn	21 04 20.3	+1.2
	baz=240						
SGST				eS	Sn	21 04 42.6	+0.6
	baz=240						
ECL	Taimali	1.88	222	eP	Pn	21 04 19.0	-0.6
	baz=221						
WSF	Szhu	1.96	260	eP	Pn	21 04 21.5	+0.8
	baz=259						
WSF				eS	Sn	21 04 45.9	+1.1
	baz=259						
SSD	Sandimen	2.00	232	eP	Pn	21 04 22.2	+1.0
	baz=231						
SSD				eS	Sn	21 04 46.6	+0.8
	baz=231						
LAY	Lan-yu	2.08	200	eP	Pn	21 04 21.4	-0.9
	baz=200						
TWM1	Shoushan	2.11	236	eP	Pn	21 04 23.3	+0.6
	baz=236						
TWM1				eS	Sn	21 04 49.2	+0.8
	baz=236						
EAST	Anshuo	2.11	220	eP	Pn	21 04 23.1	+0.4
	baz=220						
EAST				eS	Sn	21 04 49.3	+0.7
	baz=220						
SCZT	Fangliau	2.26	224	eP	Pn	21 04 26.2	+1.4
	baz=224						
SCZT				eS	Sn	21 04 53.2	+1.0
	baz=224						
JTJ	Tarama	2.26	73	P	Pn	21 04 23.1	-1.7
JTJ				eS	Sn	21 04 49.0	-3.3
PNG	Penghu	2.57	261	eP	Pn	21 04 30.3	+1.1
	baz=260						
PNG				eS	Sn	21 05 00.7	+0.6
	baz=260						

*ISCJB **04** 21:11:45.7±2.2, 40.10N±0.06×19.4E±02, h10km, Error ellipse: s-maj=23.5km s-min=6.9km az=14.7*

*CSEM **04** 21:11:45.9±0.7, 40.17N×1948E, h20km, MD3.4, Error ellipse: s-maj=16.2km s-min=4.7km az=99.0*
*ATH **04** 21:11:52.7, 3979N×1994E, h2km, MD3.4/4*
ISC 04 21:11:48.2±2.0**, 4003N**±005×**197E**±02**, h10**km**, n13,** σ**1.28**/20**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.32**	**168**	*e*PG	**Pg**	**21 11 55.5**	**+0.9**
JAN	**Janina**	**0.95**	**112**	*e*PB	**Pb**	**21 12 06.5**	**-0.3**
OHR	**Ohrid**	**1.36**	**37**	*i* Pn	**Pn**	**21 12 11.9**	**-1.4**
OHR				*i* Sn	**Sn**	**21 12 31.7**	**+0.2**
OHR	**Ohrid**	**1.36**	**37**	*i* Pn	**Pn**	**21 12 11.8**	**-1.5**
OHR				*i* Sn	**Sn**	**21 12 31.6**	**+0.2**
BIA	**Bitola**	**1.58**	**51**	*i* Pn	**Pn**	**21 12 14.3**	**-2.0**
BIA				*i* Sn	**Sn**	**21 12 37.4**	**+0.7**
BIA	**Bitola**	**1.58**	**51**	*i* Pn	**Pn**	**21 12 14.2**	**-2.1**
BIA				*i* Sn	**Sn**	**21 12 37.4**	**+0.7**
KRUS	**Krusevo**	**1.78**	**41**	*i* Pn	**Pn**	**21 12 19.1**	**+0.1**
KRUS				*i* Sn	**Sn**	**21 12 43.2**	**+1.5**
KRUS	**Krusevo**	**1.78**	**41**	*i* Pn	**Pn**	**21 12 19.0**	**0.0**
KRUS				*i* Sn	**Sn**	**21 12 43.1**	**+1.4**
EVR	**Evrytania**	**1.96**	**124**	*e*PG	**Pg**	**21 12 23.9**	**-2.0**
EVR	**Evrytania**	**1.96**	**124**	*e*Pg	**Pg**	**21 12 23.5**	**-2.4**
VLS	**Valsamata**	**1.97**	**159**	*e*PB	**Pb**	**21 12 25.0**	**+0.9**
STIP	**Stip**	**2.51**	**48**	*i* Pn	**Pb**	**21 12 32.6**	**-0.7**
VAY	**Valandovo**	**2.53**	**58**	*i* Pn	**Pn**	**21 12 32.2**	**+2.9**
VAY				*i* Sn	**Sn**	**21 13 05.3**	**+5.1**

*IDC **04** 21:15:37.3±3.6, 520S×14869E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/15, mbtmp3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/22, Error ellipse: s-maj=111.8km s-min=31.8km az=108.0*
*ISCJB **04** 21:15:41.7±1.5, 521S±0.10×1485E±03, h33km, mb3.5/5, Error ellipse: s-maj=41.0km s-min=12.8km az=8.3*
*NEIC **04** 21:15:42.5±1.2, 517S×14866E, h35km, mb3.9/4, Error ellipse: s-maj=33.3km s-min=10.3km az=100.0*
ISC 04 21:15:43.3±1.5**, 518S**±010×**1486E**±03**, h35**km**, n18,** σ**0.72**/16**, mb3.5**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**12.06**	**111**	LR	LR	21 21 59.5	
	comp=Z,74nm,18.5s,baz=112,slow=32						
WRAB	**Tennant Creek**	**20.16**	**222**	*e*P	**P**	**21 20 15.5**	**+0.8**
	2.7nm,0.6s						
WB2	**Warramunga Arr**	**20.16**	**222**	*e*P	**P**	**21 20 14.9**	**+0.1**
WRA	**Warramunga Arr**	**20.17**	**222**	P	**P**	**21 20 15.5**	**+0.6**
	1.5nm,0.5s,baz=48,slow=11,SNR=17						
ASAR	**Alice Springs**	**23.18**	**216**	P	**P**	**21 20 47.0**	**0.0**
	0.4nm,0.4s,mb3.2,baz=51,slow=8.9,SNR=10						
FITZ	**Fitzroy Crossi**	**25.82**	**238**	*e*P	**P**	**21 21 10.5**	**-1.0**
	1.2nm,0.3s,mb3.9						
FITZ	**Fitzroy Crossi**	**25.82**	**238**	P	**P**	**21 21 10.1**	**-1.4**
	0.6nm,0.3s,mb3.5,baz=51,slow=11,SNR=7.7						
DAV	**Davao City (W)**	**25.96**	**298**	P	**P**	**21 21 12.6**	**-0.2**
STKA	**Stephens Creek**	**27.35**	**193**	*e*P	**P**	**21 21 24.5**	**-0.7**
	2.6nm,0.8s,mb3.8						
ENH	**Enshi**	**51.39**	**316**	P	**P**	**21 24 44.1**	**-0.7**
MKAR	**Makanchi Array**	**77.86**	**320**	P	**P**	**21 27 38.4**	**+1.1**
	0.1nm,0.6s,mb2.9,baz=95,slow=7.8,SNR=4.3						
MKAR	**Makanchi Array**	**77.86**	**320**	P	**P**	**21 27 38.4**	**+1.1**
TKM2	**Tokmak 2**	**81.17**	**315**	P	**P**	**21 27 56.4**	**+0.9**
KURK	**Kurchatov**	**81.49**	**323**	*e*P	**P**	**21 27 56.5**	**-0.4**
	2.8nm,1.4s,mb4.0						
UCH	**Uchtor**	**81.76**	**314**	P	**P**	**21 27 59.4**	**+0.8**
EKS2	**Erkin-Say**	**82.40**	**314**	P	**P**	**21 28 00.9**	**-1.0**
BRVK	**Borovoye**	**87.09**	**324**	P	**P**	**21 28 25.3**	**-0.1**
TORD	**Torodi Ar. Bea**	**146.38**	**286**	PKPbc	PKPbc	21 35 19.8	-1.7
	0.2nm,0.6s,baz=89,slow=2.8,SNR=5.2						

IDC 04 21:17:49.2±3.5**, 1059S**×**16522E, h0**km**, mb3.7**/2**, mb1 3.9**/2**, mb1mx3.5**/16**, mbtmp3.7**/2**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx2.9**/29**, Error ellipse: s-maj=176.8km s-min=51.1km az=143.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.57**	**240**	LR	LR	21 28 02.6	
	comp=Z,32nm,19.0s,baz=303,slow=30						
WRA	**Warramunga Arr**	**31.16**	**249**	P	P	21 24 11.0	+0.9
	0.6nm,0.7s,baz=79,slow=8.9,SNR=9.3						
ASAR	**Alice Springs**	**32.54**	**242**	P	P	21 24 21.4	-0.9
	0.8nm,0.7s,baz=76,slow=9.2,SNR=6.9						
PFO	**Pinyon Flat Ob**	**86.25**	**55**	LR	LR	22 01 46.6	
	comp=Z,76nm,19.3s,baz=187,slow=31						
ARCES	**ARCESS Array B**	**115.77**	**345**	PKP	PKPdf	21 36 33.1	0.0
	1.2nm,0.9s,baz=64,slow=4.2,SNR=3.8						

*ISK **04** 21:29:17.3, 3462N×2747E, h30km, MD3.5*
*DDA **04** 21:29:20.8, 35.18N×2766E, h8km±3km, Md3.4*
*ISCJB **04** 21:29:23.9±1.2, 3521N±005×2781E±005, h4km±7km, Error ellipse: s-maj=9.3km s-min=6.2km az=143.7*
*CSEM **04** 21:29:25.4±0.3, 3533N×2784E, h8km, MD3.6, Error ellipse: s-maj=6.8km s-min=4.3km az=159.0*
*ATH **04** 21:29:27.1, 3540N×2764E, h17km, MD3.6/7*
*NEIC **04** 21:29:27.1, 3540N×2764E, h17km, MD3.6(ATH), After ATH.*
ISC 04 21:29:24.7±1.4**, 3521N**±005×**2782E**±006**, h6**km±8km**, n21,** σ**0.96**/31**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.63**	**303**	*e*PB	**Pg**	**21 29 35.6**	**-1.3**
ARG	**Arkhangelos**	**1.04**	**14**	*e*PN	**Pn**	**21 29 44.5**	**-1.3**
DALT	**Dalyan (Mudla)**	**1.69**	**23**	*e*PN	**Pn**	**21 29 54.8**	**0.0**
DALT				*e*SN	**Sg**	**21 30 22.3**	**+3.1**
AKAS	**Kas**	**1.78**	**54**	*i* P	**Pn**	**21 29 56.2**	**+0.2**
AKAS				*i* S	**Sn**	**21 30 20.2**	**+1.3**
TURN	**Turunc**	**1.78**	**21**	*i* P	**Pn**	**21 29 54.1**	**-1.8**
TURN				*i* S	**Sn**	**21 30 17.7**	**-1.2**
NPS	**Neapolis**	**1.81**	**272**	*e*PN	**Pn**	**21 29 57.2**	**+0.9**
BDRM	**Kayabasi**	**1.88**	**351**	*i* P	**Pn**	**21 29 56.5**	**-0.9**
BDRM				*i* S	**Sb**	**21 30 23.6**	**+0.5**
BODT	**Bodrum**	**1.90**	**348**	*e*PN	**Pn**	**21 29 56.3**	**-1.3**
BODT				*e*SN	**Sb**	**21 30 24.4**	**+0.8**
YER	**Yerkesik**	**1.96**	**11**	*e*PN	**Pn**	**21 29 58.4**	**-0.1**
YER				*e*SN	**Sg**	**21 30 28.1**	**+0.4**
MLSB	**Milas**	**2.08**	**359**	*e*PN	**Pn**	**21 29 59.8**	**-0.4**
ELL	**Elmali**	**2.29**	**47**	*e*PN	**Pn**	**21 30 03.0**	**0.0**
AYDN	**Tasoluk**	**2.45**	**1**	*i* P	**Pn**	**21 30 05.0**	**-0.2**
AYDN				*i* S	**Sn**	**21 30 36.3**	**+0.9**
GOLH	**Golhisar**	**2.47**	**34**	*i* P	**Pn**	**21 30 06.6**	**+1.1**
GOLH				*i* S	**Sb**	**21 30 40.1**	**0.0**
SMG	**Samos**	**2.62**	**343**	*e*PN	**Pn**	**21 30 07.9**	**+0.4**
APE	**Apeiranthos**	**2.62**	**316**	*e*PB	**Pn**	**21 30 07.6**	**0.0**
VAM	**Vamos**	**2.96**	**275**	*e*PN	**Pn**	**21 30 14.0**	**+1.7**
BCK	**Bucak**	**3.17**	**44**	*e*PN	**Pn**	**21 30 15.3**	**+0.2**
DEMI	**Demirci**	**3.90**	**10**	*i* P	**Pn**	**21 30 24.1**	**-1.0**
VLI	**Veliai**	**4.24**	**292**	*e*PN	**Pn**	**21 30 31.0**	**+1.3**
ERMK	**Ermenek**	**4.38**	**69**	*e*P	**Pn**	**21 30 22.0**	**-10**
ERMK				*i* S	**Sn**	**21 31 09.3**	**-14**
BALY	**Balya**	**4.53**	**358**	*i* P	**Pn**	**21 30 32.7**	**-1.0**
BALY				*i* S	**Sn**	**21 31 26.1**	**-0.5**

*BJI **04** 21:53:19.4, 577S×13103E, h56km, mB5.4, mb5.3, Ms4.6, Msz4.4*
*IDC **04** 21:53:21.8±2.8, 540S×13071E, h27km±18km, mb4.9/15, mb1 4.9/15, mb1mx4.9/16, mbtmp4.9/15, MS4.4/8, Ms1 4.4/8, ms1mx4.2/20, Error ellipse: s-maj=23.3km s-min=11.4km az=74.0*
*MOS **04** 21:53:21.3±0.8, 530S×13074E, h33km, mb5.5/34, MS4.6/6, Error ellipse: s-maj=11.7km s-min=5.9km az=109.9*
*GCMT **04** 21:53:22.8±0.1, 538S×13081E, h19km, MW5.3/81, Moment Tensor Solution. s79,c125; s81,c141; Duration: 1.1 Moment tensor: Scale 10^{17}Nm; M_{rr}1.12±.02; $M_{\theta\theta}$-0.26±.01; $M_{\phi\phi}$-0.85±.02; $M_{r\theta}$0.03±.04; $M_{\theta\phi}$0.58±.01; $M_{\phi r}$-0.14±.04; Best double couple: $M_0$1.17700×10^{17} NP1:ϕ_s326.00000°, δ42.00000°, λ86.00000°. NP2:ϕ_s151.00000°, δ48.00000°, λ94.00000°. Principal axes: T 1.1310, Plg86.0000°, Azm97.0000°; N 0.0890, Plg3.0000°, Azm329.0000°; P -1.2230, Plg3.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **04** 21:53:22.8±0.7, 537S×13077E, h35km±6km, mb5.4/26 Error ellipse: s-maj=5.7km s-min=3.6km az=69.0*
*ISCJB **04** 21:53:22.5±0.2, 539S±003×13081E±003, h49km, mb5.3/82, MS4.5/34, Error ellipse: s-maj=4.2km s-min=3.7km az=173.3*
*DJA **04** 21:53:23, 546S×13093E, h37km, Mw5.5/12*
ISC 04 21:53:24.6±0.2**, 538S**±003×**13080E**±003**, h51**km**, h51**km±1.4km**:pP-P, n301,** σ**1.02**/281**, mb5.3**/82**, MS4.5**/34**, 43C-15D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**2.75**	**317**	P	**Pn**	**21 54 04.6**	**-1.6**
	0.0nm,0.0s						
AAI	**Ambon**	**3.10**	**303**	P	**Pn**	**21 54 08.8**	**-2.2**
	0.0nm,0.0s						
SWI	**Sorong**	**4.51**	**6**	P	**Pn**	**21 54 27.7**	**-2.7**
	0.0nm,0.0s						
KAKA	**Kakadu**	**7.46**	**168**	*e*P	**Pn**	**21 55 07.4**	**-3.5**
	177nm,0.4s						
KAKA				*e*S	**Sn**	**21 56 27.2**	**-7.1**
KDI	**Kendari**	**8.28**	**279**	P	**Pn**	**21 55 22.2**	**+0.1**
	0.0nm,0.0s						
KDI	**Kendari**	**8.28**	**279**	⇑*e*P	**Pn**	**21 55 22.3**	**+0.2**
KDI				*e*S	**Sn**	**21 57 06.6**	**+12**
BATI	**Baumata**	**8.55**	**235**	P	**Pn**	**21 55 27.1**	**+1.3**
	0.0nm,0.0s						
BATI	**Baumata**	**8.55**	**235**	Pn	**Pn**	**21 55 26.9**	**+1.1**
	26nm,0.3s,baz=121,slow=1.5,SNR=37						
BATI				Sn	**Sn**	**21 57 03.3**	**+2.4**
	baz=130,slow=17,SNR=1.6						
BATI				LR	LR	21 58 01.8	
	comp=Z,2µm,18.6s,baz=251,slow=33						
JAY	**Jayapura**	**10.28**	**74**	P	**Pn**	**21 55 48.7**	**-0.8**
	0.0nm,0.0s						
KAPI	**Kappang**	**11.01**	**271**	Pn	**Pn**	**21 56 00.5**	**+1.0**
	10nm,0.3s,baz=127,slow=5.6,SNR=68						
KAPI	**Kappang**	**11.01**	**271**	*e*Pn	**Pn**	**21 56 01.0**	**+1.4**
PCI	**Palu**	**11.81**	**292**	P	**Pn**	**21 56 13.0**	**+2.5**
	0.0nm,0.0s						
PCI	**Palu**	**11.81**	**292**	⇓*e*P	**Pn**	**21 56 14.0**	**+3.5**
DAV	**Davao City (W)**	**13.42**	**337**	P	**Pn**	**21 56 33.0**	**+0.6**
	SNR=7.2						
DAV	**Davao City (W)**	**13.42**	**337**	⇑*e*P	**Pn**	**21 56 33.3**	**+0.9**
DAV	**Davao City (W)**	**13.42**	**337**	Pn	**Pn**	**21 56 29.4**	**-2.9**
FITZ	**Fitzroy Crossi**	**13.62**	**201**	*e*P	**Pn**	**21 56 29.2**	**-5.9**
	26nm,0.5s						
FITZ				*e*		21 56 35.5	
FITZ				*e*S	**Sn**	**21 58 51.6**	**-13**
FITZ	**Fitzroy Crossi**	**13.62**	**201**	Pn	**Pn**	**21 56 28.8**	**-6.3**
	1.8nm,0.3s,baz=40,slow=12,SNR=59						
FITZ				Sn	**Sn**	**21 58 56.2**	**-8.7**
	14nm,0.3s,baz=186,slow=18,SNR=7.5						
FITZ				LR	LR	22 01 45.2	
	comp=Z,1µm,19.4s,baz=27,slow=37						
WRAB	**Tennant Creek**	**14.88**	**167**	*e*P	**Pn**	**21 56 46.2**	**-5.6**
WRAB	**Tennant Creek**	**14.88**	**167**	*e*Pn	**Pn**	**21 56 45.3**	**-6.5**
MTNI	**Mataram**	**14.88**	**257**	P	**Pn**	**21 56 51.8**	**-0.1**
	0.0nm,0.0s						
WRA	**Warramunga Arr**	**14.88**	**167**	Pn	**Pn**	**21 56 43.1**	**-8.8**
	1.6nm,0.3s,baz=347,slow=13,SNR=40						
WRA				Sn	**Sn**	**21 59 24.6**	**-11**
	17nm,0.3s,baz=284,slow=8.9,SNR=7.6						
WB2	**Warramunga Arr**	**14.88**	**167**	*e*P	**Pn**	**21 56 45.4**	**-6.6**
WB2				*e*S	**Sn**	**21 59 23.0**	**-13**
KHKI	**Kahang-Kahang**	**15.38**	**258**	P	**Pn**	**21 56 59.8**	**+1.4**
	0.0nm,0.0s						
TSM	**Tawau**	**16.10**	**306**	⇑P	**Pn**	**21 57 07.3**	**-0.3**
MYLDM	**Lahad Datu**	**16.15**	**310**	⇑P	**Pn**	**21 57 09.9**	**+1.6**
PMG	**Port Moresby**	**16.70**	**105**	*e*P	**Pn**	**21 57 15.2**	**-0.1**
SDKM	**Sandakan**	**17.45**	**309**	⇑P	**Pn**	**21 57 26.3**	**+1.8**
TRT	**Tretes**	**18.20**	**262**	⇑*e*P	**Pn**	**21 57 31.0**	**-2.7**
TRT	**Tretes**	**18.20**	**262**	⇑*e*P	**Pn**	**21 57 31.0**	**-2.7**
ASAR	**Alice Springs**	**18.43**	**171**	P	**Pn**	**21 57 32.1**	**-4.2**
	3.2nm,0.3s,baz=10.0,slow=9.5,SNR=125						
ASAR				S	**S**	**22 00 52.1**	**-11**
	4.1nm,0.3s,baz=358,slow=31,SNR=4.9						
KKM	**Kota Kinabalu**	**18.46**	**308**	⇓P	**Pn**	**21 57 37.2**	**+0.3**
KKM	**Kota Kinabalu**	**18.46**	**308**	*e*P	**Pn**	**21 57 35.8**	**-1.1**
KKM				S	**S**	**22 01 05.7**	**+2.0**
KDM	**Kudat**	**18.53**	**311**	⇑P	**Pn**	**21 57 38.6**	**+0.8**
MBWA	**Marble Bar**	**19.01**	**213**	*e*Pn	**Pn**	**21 57 41.6**	**-1.9**
SJI	**Sawahan**	**19.06**	**262**	P	**Pn**	**21 57 44.5**	**+0.4**
	0.0nm,0.0s						
BTM	**Bintulu**	**19.64**	**295**	⇓P	**Pn**	**21 57 50.8**	**-0.3**
SBUM	**Sibu**	**20.13**	**292**	⇑P	**P**	**21 57 55.3**	**+0.8**
CTA	**Charters Tower**	**20.97**	**136**	*e*P	**P**	**21 58 04.2**	**+0.6**
	65nm,0.9s						
CTA				*e*pP		21 58 17.3	
CTA				*e*S	**S**	**22 02 01.0**	**+6.5**
CTA	**Charters Tower**	**20.97**	**136**	P	**P**	**21 58 04.5**	**+0.9**
	88nm,0.9s,baz=328,slow=15,SNR=37						
CTA	**Charters Tower**	**20.97**	**136**	*e*P	**P**	**21 58 04.2**	**+0.6**
CTA				*e**PP		21 58 17.3	
CTA				*e*S	**S**	**22 02 01.0**	**+6.5**
CTA				pmax	pmax		
	comp=Z,65nm,0.9s						
CTAO	**Charters Tower**	**20.97**	**136**	*e*P	**P**	**21 58 04.4**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,150nm,1.0s						
CTAO	**Charters Tower**	**20.97**	**136**	*e*Pn	**P**	**21 58 04.4**	**+0.8**
	comp=Z,154nm,1.0s						
BJII	**Banjamegara**	**21.05**	**264**	P	**P**	**21 58 04.3**	**-0.3**
	comp=Z,0.0nm,0.0s						
KSM	**Kuching**	**21.57**	**288**	⇑P	**P**	**21 58 11.6**	**+1.4**
KSM	**Kuching**	**21.57**	**288**	*e*P	**P**	**21 58 07.7**	**-2.5**
LEM	**Lembang**	**23.10**	**265**	P	**P**	**21 58 25.0**	**-1.4**
	comp=Z,0.0nm,0.0s						
GUMO	**Guam**	**23.45**	**36**	LR	LR	22 06 33.8	
	comp=Z,676nm,18.6s,MS4.1,baz=208,slow=34						
GUMO	**Guam**	**23.45**	**36**	*e*P	**P**	**21 58 28.9**	**-0.8**
GUMO				pmax	pmax		
	comp=Z,47nm,0.8s,mb5.0						
GUMO	**Guam**	**23.45**	**36**	*e*P	**P**	**21 58 28.9**	**-0.9**
	comp=Z,47nm,0.8s,mb5.0						
CBJI	**Citeko**	**23.85**	**266**	P	**P**	**21 58 31.3**	**-2.1**
	comp=Z,0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**24.82**	**276**	P	**P**	**21 58 40.8**	**-1.5**
	comp=Z,0.0nm,0.0s						
FORT	**Forrest**	**25.40**	**186**	*e*P	**P**	**21 58 46.4**	**-0.9**
	comp=Z,41nm,0.4s,mb5.3						
MYKOM	**Kota Tinggi**	**27.85**	**284**	⇑P	**P**	**21 59 11.6**	**+2.0**
STKA	**Stephens Creek**	**28.23**	**160**	*e*P	**P**	**21 59 12.3**	**-0.5**
	comp=Z,21nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**28.23**	**160**	P	**P**	**21 59 12.6**	**-0.3**
	comp=Z,22nm,0.8s,mb4.8,baz=343,slow=9.3,SNR=23						
KGM	**Kluang**	**28.42**	**284**	⇑P	**P**	**21 59 16.0**	**+1.2**
KLBR	**Kellerberrin**	**28.81**	**204**	*e*P	**P**	**21 59 17.4**	**-0.5**
	comp=Z,43nm,1.1s,mb5.1						
KLBR				*e*pP	pP	21 59 29.6	-1.4
KTGM	**Kuala Trenggan**	**29.61**	**291**	⇓P	**P**	**21 59 23.7**	**-1.6**
MUN	**Mundaring**	**29.78**	**206**	*e*P	**P**	**21 59 25.6**	**-1.0**
MUN				*e*pP	pP	21 59 38.6	-1.1
NWAO	**Narrogin (SRO)**	**30.19**	**203**	P	**P**	**21 59 28.9**	**-1.3**
	comp=Z,9.2nm,0.6s,mb4.7,baz=0.9,slow=9.0,SNR=11						
NWAO	**Narrogin (SRO)**	**30.19**	**203**	*e*P	**P**	**21 59 30.1**	**0.0**
NWAO				*e*	pP	21 59 42.5	-0.7
NACB	**Ninganchiao**	**30.71**	**343**	*e*P	**P**	**21 59 33.7**	**-1.1**
YHNB	**Yeheng**	**31.24**	**343**	*e*P	**P**	**21 59 39.3**	**-0.3**
IPM	**Ipoh**	**31.31**	**288**	⇓P	**P**	**21 59 38.5**	**-1.9**
ARMA	**Armidale**	**31.70**	**144**	*e*P	**P**	**21 59 44.6**	**+1.0**
QIZ	**Qiongzhong**	**31.85**	**320**	P	**P**	**21 59 44.0**	**-1.0**
QIZ				XP	sP	22 00 06.2	+2.1
QIZ				S	**S**	**22 04 49.8**	**-2.4**
QIZ				XS	sS	22 05 15.2	+0.8
QIZ				AMB	AMB		
	comp=Z,191nm,5.4s						
QIZ				LR	LR		
	comp=N,326nm,17.2s,MS4.3						
QIZ				LR	LR		
	comp=E,341nm,13.7s,MS4.3						
QIZ				LR	LR		
	comp=Z,392nm,14.4s,MS4.2						
QIZ	**Qiongzhong**	**31.85**	**320**	P	**P**	**21 59 44.6**	**-0.3**
KULM	**Kulim**	**31.92**	**289**	⇑P	**P**	**21 59 45.7**	**+0.1**
JOW	**Kunigami**	**32.11**	**356**	P	**P**	**21 59 47.0**	**-0.1**
	comp=Z,24nm,1.1s,mb5.0,baz=171,slow=8.8,SNR=20						
JOW				LR	LR	22 11 30.9	
	comp=Z,1µm,21.4s,MS4.5,baz=27,slow=34						
QZH	**Quanzhou**	**32.40**	**339**	P	**P**	**21 59 48.5**	**-1.1**
QZH				S	**S**	**22 05 00.2**	**-0.4**
QZH				LR	LR		
	comp=N,2µm,19.7s,MS4.8						
QZH				LR	LR		
	comp=E,960nm,15.6s,MS4.8						
QZH				LR	LR		
	comp=Z,600nm,20.0s,MS4.3						
UBT	**Ubonrachathani**	**32.75**	**309**	⇑P	**P**	**21 59 53.5**	**+0.6**
PSI	**Prapat**	**32.87**	**284**	⇓*e*P	**P**	**21 59 50.9**	**-3.1**
GZH	**Guangzhou**	**33.04**	**330**	P	**P**	**21 59 57.5**	**+2.2**
GZH				S	**S**	**22 05 16.3**	**+5.7**
GZH				LR	LR		
	comp=N,419nm,17.0s,MS4.3						
GZH				LR	LR		
	comp=E,386nm,17.0s,MS4.3						
GZH				LR	LR		
	comp=Z,488nm,20.7s,MS4.2						
CAN	**Canberra**	**34.20**	**153**	*e*P	**P**	**22 00 06.2**	**+0.9**
COCO	**West Island**	**34.22**	**256**	*e*P	**P**	**22 00 05.6**	**-0.1**
CNB	**Canberra Magne**	**34.36**	**153**	*e*P	**P**	**22 00 07.9**	**+1.2**
CNB				*e*pP	pP	22 00 19.8	-0.1
TOO	**Toolangi**	**34.73**	**159**	*e*P	**P**	**22 00 11.4**	**+1.5**
TOO				*e*pP	pP	22 00 24.0	+0.9
KKTK	**Khon Kaen**	**35.09**	**308**	P	**P**	**22 00 13.0**	**-0.2**
NST	**Nakhon Sawan**	**36.87**	**305**	P	**P**	**22 00 26.0**	**-2.5**
	comp=Z,33nm,1.4s,mb5.0						
SSE	**Sheshan**	**37.41**	**346**	⇓P	**P**	**22 00 35.2**	**+2.4**
SSE				AP	pP	22 00 49.0	+2.9
SSE				XP	sP	22 00 54.8	+2.7
SSE				PP	PP	22 02 02.3	+3.2
SSE				S	**S**	**22 06 21.8**	**+4.2**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,158nm,3.6s						
SSE				LR	LR		
	comp=N,344nm,17.8s,MS4.2						
SSE				LR	LR		
	comp=E,164nm,17.7s,MS4.2						
SSE				LR	LR		
	comp=Z,376nm,17.7s,MS4.2						
NANT	**Nan**	**38.17**	**310**	⇑P	**P**	**22 00 39.0**	**-0.4**
	comp=Z,675nm,1.0s,mb6.3						
NJ2	**Nanjing**	**38.92**	**344**	*e*P	**P**	**22 00 47.2**	**+1.7**
NJ2				AP	pP	22 01 01.9	+3.0
NJ2				XP	sP	22 01 09.6	+4.8
NJ2				PP	PP	22 02 22.0	+6.4
NJ2				S	**S**	**22 06 41.0**	**+0.6**
NJ2				XS	sS	22 07 05.5	+2.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,310nm,4.0s						
NJ2				LR	LR		
	comp=N,100nm,18.4s,MS4.2						
NJ2				LR	LR		
	comp=E,290nm,17.2s,MS4.2						
WHN	**Wuhan**	**39.04**	**337**	P	**P**	**22 00 46.5**	**0.0**
WHN				*e*S	**S**	**22 06 42.0**	**-0.2**
CM31	**Chiang Mai Arr**	**39.34**	**308**	*e*P	**P**	**22 00 48.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**39.34**	**308**	P	**P**	**22 00 49.0**	**-0.2**
	comp=E,11nm,0.8s,mb4.7,baz=141,slow=7.5,SNR=50						
CMAR				ScP	ScP	22 06 44.5	+2.9
	comp=E,1.3nm,0.7s,baz=155,slow=3.3,SNR=6.8						
CMAR	**Chiang Mai Arr**	**39.34**	**308**	*e*P	**P**	**22 00 49.0**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,11nm,0.8s						
GYA	**Guiyang**	**39.35**	**325**	⇓*i*P	**P**	**22 00 52.9**	**+3.7**
GYA				AP	pP	22 01 06.4	+3.8
GYA				XP	sP	22 01 13.7	+5.2
GYA				PP	PP	22 02 28.6	+8.2
GYA				SCP	ScP	22 06 42.0	+0.4
GYA				S	**S**	**22 06 51.2**	**+4.1**
GYA				SS	SS	22 09 42.6	0.0
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,210nm,4.9s						
GYA				LR	LR		
	comp=N,890nm,17.5s,MS4.8						
GYA				LR	LR		
	comp=E,870nm,16.8s,MS4.8						
GYA				LR	LR		
	comp=Z,750nm,17.6s,MS4.6						
CHRT	**Chiangrai**	**39.50**	**310**	⇓P	**P**	**22 00 50.0**	**-0.5**
	comp=Z,184nm,1.0s,mb5.8						
CHG	**Chiang Mai**	**39.54**	**308**	⇑P	**P**	**22 00 50.5**	**-0.4**
	comp=Z,49nm,0.9s,mb5.2						
TAU	**Tasmania Unive**	**40.14**	**161**	*e*P	**P**	**22 00 54.9**	**-0.6**
TAU				pmax	pmax		
	comp=Z,172nm,2.1s,mb5.4						
TAU	**Tasmania Unive**	**40.14**	**161**	*e*P	**P**	**22 00 54.9**	**-0.7**
	comp=Z,172nm,2.1s,mb5.4						
KMI	**Kunming**	**40.79**	**319**	P	**P**	**22 01 01.5**	**+0.4**
KMI				AP	pP	22 01 14.5	-0.1
KMI				XP	sP	22 01 19.4	-1.1
KMI				PP	PP	22 02 39.5	+3.5
KMI				S	**S**	**22 07 05.2**	**-3.4**
KMI				AMB	AMB		
	comp=Z,45nm,1.6s,mb4.8						
KMI				LR	LR		
	comp=N,273nm,15.1s,MS4.5						
KMI				LR	LR		
	comp=E,323nm,12.8s,MS4.5						
KMI				LR	LR		
	comp=Z,320nm,14.0s,MS4.3						
KMI	**Kunming**	**40.79**	**319**	P	**P**	**22 01 01.5**	**+0.4**
KMI				*PP	pP	22 01 14.5	-0.1
KMI						22 02 39.5	
KMI				PPP		22 03 01.7	
KMI				S	**S**	**22 07 05.2**	**-3.4**
KMI				SS	SS	22 09 58.7	-13
KMI				SSS		22 10 38.3	
KMI	**Kunming**	**40.79**	**319**	P	**P**	**22 01 01.5**	**+0.4**
KMI				pP	pP	22 01 14.5	-0.1
KMI				sP	sP	22 01 19.4	-1.1
KMI				PP	PP	22 02 39.5	+3.5
KMI				PPP		22 03 01.7	
KMI				ScP	ScP	22 06 50.9	+3.7
KMI				PcS	PcS	22 06 54.1	+1.5
KMI				S	**S**	**22 07 05.2**	**-3.4**
KMI				sS	sS	22 07 28.8	-2.3
KMI				SS	SS	22 09 58.7	-13
KMI				SSS		22 10 38.3	
ENH	**Enshi**	**40.91**	**331**	P	**P**	**22 01 02.1**	**0.0**
MAJO	**Matsushiro**	**42.27**	**9**	*e*P	**P**	**22 01 11.7**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.2						
MAJO	**Matsushiro**	**42.27**	**9**	*e*P	**P**	**22 01 11.7**	**-1.4**
	comp=Z,62nm,1.0s,mb5.2						
MAT	**Matsushiro**	**42.27**	**9**	P	**P**	**22 01 12.5**	**-0.6**
MAT				S	**S**	**22 07 28.0**	**-2.2**
MJAR	**Matsushiro Arr**	**42.27**	**9**	P	**P**	**22 01 12.0**	**-1.1**
	comp=Z,30nm,1.1s,mb4.8,baz=187,slow=10,SNR=50						
MJAR	**Matsushiro Arr**	**42.27**	**9**	*e*P	**P**	**22 01 11.9**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,30nm,1.1s						
KSRS	**Korea Array**	**42.69**	**357**	P	**P**	**22 01 16.8**	**+0.3**
	comp=Z,9.1nm,0.5s,mb4.8,baz=172,slow=8.6,SNR=42						
KSRS				LR	LR	22 18 58.6	
	comp=Z,412nm,18.2s,MS4.4,baz=184,slow=36						
KSRS	**Korea Array**	**42.69**	**357**	*e*P	**P**	**22 01 16.8**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.8						
TIA	**Tai'an**	**43.31**	**344**	*e*P	**P**	**22 01 20.0**	**-1.5**
XAN	**Xi'an**	**44.33**	**334**	P	**P**	**22 01 28.8**	**-0.9**
XAN				AP	pP	22 01 41.4	-1.9
XAN				AMB	AMB		
	comp=Z,43nm,0.8s,mb5.2						
XAN				AMB	AMB		
	comp=Z,199nm,4.6s						
XAN				LR	LR		
	comp=E,148nm,12.1s						
XAN				LR	LR		
	comp=Z,331nm,15.9s,MS4.3						
CD2	**Chengdu**	**44.39**	**326**	⇓*i*P	**P**	**22 01 29.8**	**-0.5**
CD2				AP	pP	22 01 43.7	-0.1
CD2				XP	sP	22 01 48.9	-0.9
CD2				PP	PP	22 03 15.6	+0.9
CD2				PCS	PcS	22 07 03.5	-3.4
CD2				S	**S**	**22 08 03.1**	**+1.7**
CD2				XS	sS	22 08 27.7	+3.5
CD2				SS	SS	22 11 15.9	-6.0
CD2				AMB	AMB		
	comp=Z,40nm,1.6s,mb4.9						
CD2				AMB	AMB		
	comp=Z,300nm,7.8s						

CD2 LR LR
comp=N,820nm,14.4s,MS5.1
CD2 LR LR
comp=E,2μm,15.6s,MS5.1
CD2 LR LR
comp=Z,380nm,18.0s,MS4.4
DL2 Dalian 44.87 350⇑ *i*P **P 22 01 34.0 0.0**
DL2 AP pP 22 01 47.9 +0.3
DL2 S **S** **22 08 08.2 +0.1**
DL2 AMB AMB
comp=Z,30nm,1.0s,mb5.1
DL2 AMB AMB
comp=Z,110nm,4.4s
DL2 LR LR
comp=N,200nm,15.6s,MS4.4
DL2 LR LR
comp=E,290nm,16.0s,MS4.4
DL2 LR LR
comp=Z,270nm,18.2s,MS4.2
TIY Taiyuan 46.16 340⇑ *e*P **P 22 01 44.2 0.0**
TIY AP pP 22 01 54.0 -3.8
TIY PP PP 22 03 32.6 -0.7
TIY S **S** **22 08 26.4 -0.3**
TIY AMB AMB
comp=Z,343nm,4.9s
TIY LR LR
comp=N,212nm,10.6s,MS4.5
TIY LR LR
comp=E,255nm,12.9s,MS4.5
TIY LR LR
comp=Z,190nm,21.0s
BJT Baijiatuau 47.14 345 *e*P **P 22 01 51.4 -0.4**
BJT pmax pmax
comp=Z,86nm,1.1s
BJT Baijiatuau 47.14 345 *e*P **P 22 01 51.4 -0.4**
comp=Z,86nm,1.1s,mb5.6
BJI Beijing 47.16 345 P **P 22 01 51.5 -0.5**
BJI AP pP 22 02 08.0 +2.4
BJI XP sP 22 02 14.2 +2.7
BJI PP PP 22 03 40.7 -2.7
BJI S **S** **22 08 39.0 -2.0**
BJI SS SS 22 12 07.9 -1.0
BJI AMB AMB
comp=Z,70nm,1.4s,mb5.4
BJI AMB AMB
comp=Z,415nm,3.4s
BJI LR LR
comp=N,197nm,19.3s,MS4.3
BJI LR LR
comp=E,288nm,23.1s,MS4.3
BJI LR LR
comp=Z,189nm,23.7s,MS4.0
VLA Vladivostok 48.28 1 *e*P **P 22 02 00.0 -0.6**
VLA *e**PP pP 22 02 13.5 -0.8
VLA pmax pmax
comp=Z,109nm,1.4s,mb5.7
VLA MLR MLR
comp=Z,400nm,16.2s,MS4.5
VLA Vladivostok 48.28 1 *i*P **P 22 02 01.1 +0.5**
LZH Lanzhou 48.37 331⇑ P **P 22 02 01.8 +0.3**
LZH AP pP 22 02 15.0 -0.2
LZH XP sP 22 02 20.1 -0.9
LZH PP PP 22 03 55.3 +0.7
LZH S **S** **22 09 00.5 +2.2**
LZH XS sS 22 09 22.7 +1.4
LZH SS SS 22 12 28.5 -0.3
LZH AMB AMB
comp=Z,69nm,1.1s,mb5.6
LZH AMB AMB
comp=Z,368nm,6.2s
LZH LR LR
comp=E,536nm,12.9s
LZH LR LR
comp=Z,812nm,17.6s,MS4.8
LZH Lanzhou 48.37 331⇑ P **P 22 02 01.8 +0.3**
LZH pP pP 22 02 15.0 -0.2
LZH sP sP 22 02 20.1 -0.9
LZH PP PP 22 03 55.3 +0.7
LZH S **S** **22 09 00.5 +2.2**
LZH sS sS 22 09 22.7 +1.4
LZH SS SS 22 12 28.5 -0.3
SHL Shillong 48.72 311 *e*P **P 22 02 04.0 -0.3**
SHL *ex* x 22 09 02.0
CN2 Changchun 49.19 355 *e*P **P 22 02 06.9 -0.7**
CN2 *e*XP sP 22 02 29.3 +2.1
CN2 *e*PP PP 22 04 03.1 +1.3
CN2 *e*S **S** **22 09 10.8 +1.3**
CN2 *e*SS SS 22 12 40.2 -1.4
CN2 AMB AMB
comp=Z,50nm,0.7s,mb5.7
CN2 AMB AMB
comp=Z,280nm,6.0s
CN2 LR LR
comp=N,380nm,19.0s,MS4.5
CN2 LR LR
comp=E,300nm,19.0s,MS4.5
CN2 LR LR
comp=Z,390nm,20.0s,MS4.4
HHC Hu-ho-hao-te 49.27 341⇑ P **P 22 02 08.4 +0.1**
HHC AP pP 22 02 21.7 -0.3
HHC XP sP 22 02 29.2 +1.3
HHC PCP PcP 22 03 28.5 -2.1
HHC PP PP 22 04 04.6 +1.9
HHC SCP ScP 22 07 18.6 -3.2
HHC PCS PcS 22 07 24.4 -2.6
HHC S **S** **22 09 12.4 +1.6**
HHC XS sS 22 09 35.0 +1.2
HHC SCS ScS 22 11 51.9 -3.9
HHC SS SS 22 12 41.4 -1.7
HHC AMB AMB
comp=Z,35nm,1.2s,mb5.3
HHC AMB AMB
comp=Z,333nm,5.8s
HHC LR LR
comp=N,184nm,15.0s,MS4.4
HHC LR LR
comp=E,224nm,15.8s,MS4.4
HHC LR LR
comp=Z,216nm,15.7s,MS4.2
BTO Baotou 49.58 339 *e*P **P 22 02 09.1 -1.5**
MDJ Mudanjiang 49.78 359 P **P 22 02 12.1 +0.1**
MDJ AP pP 22 02 25.8 0.0
MDJ XP sP 22 02 31.6 0.0
MDJ PP PP 22 04 07.1 -0.1
MDJ SCP ScP 22 07 23.0 -0.8
MDJ PCS PcS 22 07 28.8 -0.2
MDJ S **S** **22 09 18.3 +0.6**
MDJ AMB AMB
comp=Z,32nm,1.3s,mb5.2
MDJ AMB AMB
comp=Z,226nm,4.6s
MDJ LR LR
comp=N,288nm,17.4s,MS4.4
MDJ LR LR
comp=E,120nm,13.7s,MS4.4
MDJ LR LR
comp=Z,337nm,17.9s,MS4.4
MDJ Mudanjiang 49.78 359 *e*P **P 22 02 11.5 -0.5**
comp=Z,50nm,1.1s,mb5.5
LSA Lhasa 51.60 315 P **P 22 02 26.6 +0.5**
LSA PCP PcP 22 03 37.7 -1.7
LSA PP PP 22 04 22.1 -2.0
LSA PCS PcS 22 07 35.7 -1.8
LSA S **S** **22 09 42.1 -1.5**
LSA AMB AMB
comp=Z,260nm,5.0s
LSA LR LR
comp=E,130nm,25.3s
LSA LR LR
comp=Z,240nm,18.5s
LSA Lhasa 51.60 315 *e*P **P 22 02 26.5 +0.4**
LSA pmax pmax
comp=Z,52nm,1.1s,mb5.4
LSA Lhasa 51.60 315 *e*P **P 22 02 26.5 +0.4**
comp=Z,52nm,1.1s,mb5.4
RPZ Rata Peaks 52.04 144 P **P 22 02 29.1 -0.1**
comp=Z,31nm,0.9s,mb5.2,baz=334,slow=3.1,SNR=6.1
GTA Gaotai 52.96 330⇑ P **P 22 02 36.4 +0.4**
GTA AP pP 22 02 49.0 -0.8
GTA XP sP 22 02 55.3 -0.4
GTA PCP PcP 22 03 45.8 +1.5
GTA PP PP 22 04 38.4 +2.2
GTA S **S** **22 10 01.4 -0.4**
GTA XS sS 22 10 23.1 -1.9
GTA SCS ScS 22 12 20.3 -1.0
GTA SS SS 22 13 41.1 -0.6
GTA AMB AMB
comp=Z,42nm,1.5s,mb5.2
GTA AMB AMB
comp=Z,309nm,3.9s
GTA LR LR
comp=N,149nm,18.7s,MS4.2
GTA LR LR
comp=E,167nm,18.1s,MS4.2
GTA LR LR
comp=Z,204nm,15.2s,MS4.3
YSS Yuzh-Sakhalins 53.17 10*o**e*P **P 22 02 37.0 -0.3**
YSS *e**PP pP 22 02 53.2 +2.0
YSS *e*S **S** **22 10 04.0 -0.4**
YSS pmax pmax
comp=Z,50nm,0.8s,mb5.5
YSS MLR MLR
comp=Z,400nm,19.0s,MS4.5
YSS MLR MLR
comp=N,500nm,18.0s
YSS Yuzh-Sakhalins 53.17 10 *e*P **P 22 02 37.7 +0.3**
comp=N,38nm,0.5s,mb5.6
URZ Urewera 53.21 135 P **P 22 02 37.9 0.0**
comp=N,8.5nm,0.6s,mb4.8,baz=256,slow=11,SNR=6.9
KLR Kul'dur 54.39 1 *e*P **P 22 02 41.2 -5.0**
KLR pmax pmax
comp=E,45nm,1.6s
KLR pmax pmax
comp=Z,200nm,1.6s,mb5.8
KLR MLR MLR
comp=N,900nm,17.0s,MS5.0
KLR MLR MLR
comp=E,500nm,17.0s,MS5.0
HIA Hailar 55.27 351*c* *i*P **P 22 02 52.7 +0.1**
HIA Hailar 55.27 351 *e*P **P 22 02 52.3 -0.3**
HYB Hyderabad 56.34 295 *i*P **P 22 03 03.0 +2.1**
HYB *e*pP pP 22 03 12.0 -2.8
HYB Hyderabad 56.34 295 *e*P **P 22 03 00.5 -0.4**
HYB *e* pP 22 03 12.0 -2.8
ULN Ulaanbaatar 56.99 341 P **P 22 03 06.0 +1.1**
SNR=39
ULN Ulaanbaatar 56.99 341*c* *i*P **P 22 03 05.7 +0.8**
ULN Ulaanbaatar 56.99 341 *e*P **P 22 03 05.8 +0.9**
SONM Songino Array 57.17 341 P **P 22 03 06.8 +0.6**
comp=E,10nm,0.7s,mb5.0,baz=156,slow=8.3,SNR=58
SONM LR LR 22 31 05.4
comp=E,223nm,18.6s,MS4.3,baz=157,slow=40
SONM Songino Array 57.17 341 *e*P **P 22 03 06.8 +0.6**
SONM pmax pmax
comp=Z,10.0nm,0.7s
CIT Chita 59.04 348 *e*P **P 22 03 19.8 +0.6**
CIT *e* pP 22 03 34.8 +1.5
CIT pmax pmax
comp=Z,105nm,2.3s,mb5.5
ZAK Zakamensk 60.41 340⇓ *i*P **P 22 03 28.5 -0.1**
ZAK *e* 22 11 39.3
ZAK pmax pmax
comp=Z,19nm,1.7s,mb4.8
TLY Talaya 61.40 341 P **P 22 03 36.6 +1.3**
SNR=16
TLY Talaya 61.40 341 *e*P **P 22 03 36.2 +0.9**
TLY *e*S **S** **22 11 54.0 +1.6**
TLY pmax pmax
comp=Z,20nm,1.1s,mb5.2
TLY MLR MLR
comp=Z,181nm,17.0s,MS4.3
TLY Talaya 61.40 341 *e*P **P 22 03 36.3 +1.0**
comp=Z,144nm,2.2s,mb5.7
DRV Dumont d'Urvil 61.52 176 S **S** **22 12 10.0 +16**
DRV R 22 23 00.0
NDI New Delhi 61.65 307 *e*P **P 22 03 35.0 -2.5**
IRK Irkutsk 61.68 342⇑ *i*P **P 22 03 37.6 +0.4**
IRK *e* 22 04 18.9
IRK *e* 22 05 57.3
IRK pmax pmax
comp=Z,110nm,2.3s,mb5.6
BOM Bombay 61.98 295 *ex* x 22 03 27.0
CLNS Chul'man 62.19 356 *e*P **P 22 03 41.0 +0.5**
CLNS *e* 22 04 23.3
CLNS *e* 22 05 55.1
CLNS *e*S **S** **22 11 59.2 -3.0**
CLNS *e* 22 13 33.7
CLNS pmax pmax
comp=Z,36nm,1.1s,mb5.4
CLNS pmax pmax
comp=E,10.0nm,1.1s
CLNS pmax pmax
comp=N,34nm,1.2s
CLNS smax
comp=N,441μm,13.9s
CLNS smax
comp=E,246μm,16.1s
CLNS MLR MLR
comp=Z,119nm,18.0s,MS4.1
CLNS MLR MLR
comp=E,148nm,13.0s
CLNS MLR MLR
comp=N,93nm,19.0s
MOY Mondy 62.27 340 *e*P **P 22 03 42.2 +1.0**
MOY pmax pmax
comp=Z,141nm,1.7s,mb5.8
CASY Casey 62.42 189 *e*P **P 22 03 41.7 -0.3**
CASY *e*pP pP 22 03 54.8 -1.3
CASY Casey 62.42 189 *e*P **P 22 03 41.9 -0.1**
CASY *e*pP pP 22 03 54.8 -1.3
WMQ Urumqi 62.49 326⇑ *i*P **P 22 03 43.3 +0.5**
WMQ AP pP 22 04 00.0 +3.0
WMQ XP sP 22 04 06.0 +3.3
WMQ PCP PcP 22 04 21.0 -0.7
WMQ PP PP 22 06 04.0 +3.1
WMQ PCS PcS 22 08 22.0 -2.9
WMQ S **S** **22 12 07.0 +0.5**
WMQ XS sS 22 12 33.5 +3.3
WMQ SCS ScS 22 13 27.0 -3.9
WMQ AMB AMB
comp=Z,71nm,1.0s,mb5.8
WMQ AMB AMB
comp=Z,403nm,3.5s
WMQ LR LR
comp=N,327nm,23.5s,MS4.6
WMQ LR LR
comp=E,263nm,20.2s,MS4.6
WMQ LR LR
comp=Z,263nm,22.2s,MS4.3
PEA0B Petropavlovsk- 62.54 18 *e*P **P 22 03 43.7 +0.8**
PETK Petropavlovsk- 62.54 18 P **P 22 03 43.6 +0.6**
comp=Z,15nm,0.6s,mb5.3,baz=186,slow=4.8,SNR=22
PETK LR LR 22 25 16.7
comp=Z,145nm,22.0s,MS4.1,baz=200,slow=31
SMLA Simla 62.72 309 *i*P **P 22 03 43.9 -0.7**
SMLA *ex* x 22 03 46.5
comp=Z,34nm,0.4s
SMLA *i*S **S** **22 12 09.2 -0.7**
PET Petropavlovsk 62.77 19 *e*P **P 22 03 45.2 +0.7**
PET *e* pP 22 03 58.8 +0.2
PET *e* 22 06 01.5
PET *e*S **S** **22 12 12.2 +2.6**
PET *e* 22 13 25.2
PET *e*SS SS 22 16 19.2 +3.8
PET pmax pmax
comp=Z,200nm,6.2s
PET pmax pmax
comp=Z,71nm,1.1s,mb5.7
PET Petropavlovsk 62.77 19 *i*P **P 22 03 45.6 +1.1**
BOD Bodaibo 64.44 350 *e*P **P 22 03 55.1 -0.3**
BOD pmax pmax
comp=Z,43nm,1.6s,mb5.2
MIR Mirnyy 66.41 196⇑ *i*P **P 22 04 09.0 +0.9**
MIR *i* 22 04 41.0
MIR pmax pmax
comp=Z,100nm,0.8s,mb5.9
MIR MLR MLR
comp=Z,2μm,18.0s,MS5.2
YAK Yakutsk 67.22 359*c**e*P **P 22 04 13.2 0.0**
YAK *e**PP pP 22 04 24.6 -2.9
YAK *e* 22 04 39.0
YAK *e*S S 22 13 04.1 +0.2
YAK *e* 22 14 04.3
YAK pmax pmax
comp=N,20nm,1.0s
YAK pmax pmax
comp=E,3.0nm,0.8s
YAK pmax pmax
comp=Z,300nm,18.4s
YAK smax
comp=N,322μm,6.3s
YAK smax
comp=E,27μm,2.0s
YAK MLR MLR
comp=Z,263nm,16.0s,MS4.5
YAK MLR MLR
comp=N,266nm,20.0s
YAK MLR MLR
comp=E,78nm,13.0s
YAK Yakutsk 67.22 359 *e*P **P 22 04 13.4 +0.2**
MK31 Makanchi Array 67.32 326 P **P 22 04 14.4 +0.2**
MK31 pmax pmax
comp=Z,15nm,0.3s,mb5.5
MKAR Makanchi Array 67.32 326 P **P 22 04 14.6 +0.4**
comp=Z,41nm,0.5s,mb5.7,baz=114,slow=7.7,SNR=644
MKAR PKP2bc 22 32 47.0
comp=Z,0.8nm,0.9s,baz=346,slow=4.1,SNR=3.6
MKAR Makanchi Array 67.32 326 P **P 22 04 14.6 +0.4**
MKAR ⇑ *e* 22 32 47.0
KSH Kashi 67.38 317⇑ *i*P **P 22 04 16.0 +1.3**
KSH *e*AP pP 22 04 32.0 +3.0
KSH *e*XP sP 22 04 39.1 +4.3
KSH *e*PCP PcP 22 04 42.3 +0.3
KSH *e*PP PP 22 06 47.1 +3.2
KSH *e*S S 22 13 04.6 -2.2
KSH *e*SCS ScS 22 14 05.1 -3.6
KSH *e*SS SS 22 17 29.1 +1.3
KSH AMB AMB
comp=Z,675nm,2.6s,mb6.2
KSH LR LR
comp=Z,501nm,4.8s
KRAR Krasnoyarsk 68.65 338 *e*P **P 22 04 22.0 -0.3**
KRAR pmax pmax
comp=Z,59nm,1.7s,mb5.2
KZA Kyzart 69.08 319 P **P 22 04 26.8 +1.5**
SNR=24
TKM2 Tokmak 2 69.26 320 *e*P **P 22 04 26.7 +0.3**
TKM2 pmax pmax
comp=Z,70nm,1.3s,mb5.4
TKM2 Tokmak 2 69.26 320 P **P 22 04 27.1 +0.7**
SNR=21
TKM2 Tokmak 2 69.26 320 *e*P **P 22 04 26.7 +0.4**
comp=Z,70nm,1.3s,mb5.4
UCH Uchtor 69.63 319 P **P 22 04 30.1 +1.4**
SNR=36
UCH Uchtor 69.63 319 *e*P **P 22 04 29.4 +0.6**
comp=Z,66nm,1.3s,mb5.4
CHMS Chumysh 69.84 320 P **P 22 04 30.2 +0.2**
SNR=11
FRU Bishkek 69.85 319 *i*P **P 22 04 30.0 0.0**
FRU *i* 22 04 54.0
FRU pmax pmax
comp=Z,150nm,2.4s,mb5.5
SEY Seymchan 70.08 10*c* *i*P **P 22 04 31.7 +0.7**
SEY Seymchan 70.08 10⇑ *i*P **P 22 04 31.8 +0.8**
AML Almayashu 70.12 318 P **P 22 04 33.0 +1.2**
SNR=37
AML Almayashu 70.12 318 *e*P **P 22 04 32.6 +0.8**
comp=Z,98nm,1.3s,mb5.6
USP Ospenovka 70.13 320 P **P 22 04 32.2 +0.4**
SNR=33
EKS2 Erkin-Say 70.31 319 P **P 22 04 34.0 +1.1**
SNR=34
EKS2 Erkin-Say 70.31 319 *e*P **P 22 04 33.5 +0.6**
comp=Z,59nm,0.6s,mb5.7
EKS2 PP PP 22 07 08.8 -0.4
ZAA0 Zalesovo Array 70.50 333 *e*P **P 22 04 33.1 -0.7**
ZAA0 *e* pP 22 04 46.1 -2.1
ZALV Zalesovo Beam 70.50 333 P **P 22 04 33.1 -0.7**
comp=Z,25nm,0.8s,mb5.2,baz=119,slow=5.0,SNR=51
ZAL Zalesovo 70.50 333 P **P 22 04 33.1 -0.7**
KURK Kurchatov 71.56 328 P **P 22 04 40.7 +0.4**
SNR=64
KURK Kurchatov 71.56 328*c* *i*P **P 22 04 40.3 0.0**
KURK pmax pmax
comp=Z,122nm,1.3s,mb5.7
KURK Kurchatov 71.56 328 *e*P **P 22 04 40.7 +0.4**
comp=Z,113nm,1.1s,mb5.7
NVS Novosibirsk 71.78 333⇑ *i*P **P 22 04 40.6 -0.9**
NVS *i* pP 22 04 53.6 -2.3
NVS *i* S S 22 13 56.1 -1.8
NVS pmax pmax
comp=N,74nm,1.7s
NVS pmax pmax
comp=Z,108nm,1.7s,mb5.5
NVS pmax pmax
comp=E,60nm,1.6s
NVS smax
comp=N,39nm,2.2s
NVS smax
comp=E,75nm,2.2s
KK31 Karatay Array 72.66 318 *i*P **P 22 04 46.8 -0.2**
KK31 pmax pmax
comp=Z,26nm,0.9s,mb5.2
SBA Scott Base 74.83 173 *e*P **P 22 05 00.8 +1.6**
SBA pmax pmax
comp=Z,19nm,1.1s,mb4.9
SBA Scott Base 74.83 173 *e*P **P 22 05 00.8 +1.7**
comp=Z,18nm,1.1s,mb4.9
SMDO Samad 76.37 295 P **P 22 05 09.0 0.0**
SNR=16
BIDO Bidbid 76.40 296 P **P 22 05 09.6 +0.4**
SNR=22
VOSK Vostochnaya 76.67 327 P **P 22 05 09.0 -1.0**
VOSK pmax pmax
comp=Z,15nm,0.6s,mb5.1
MAW Mawson 76.74 201 *e*P **P 22 05 11.0 +0.8**
comp=Z,11nm,0.9s,mb4.8
MAW *e*pP pP 22 05 23.4 -1.4
MAW Mawson 76.74 201 P **P 22 05 10.2 0.0**
comp=Z,15nm,0.9s,mb4.9,baz=69,slow=6.5,SNR=39
MAW LR LR 22 37 15.7
comp=Z,492nm,18.3s,MS4.9,baz=60,slow=34
MAW Mawson 76.74 201 *e*P **P 22 05 11.0 +0.8**
MAW *e**PP pP 22 05 23.4 -1.4
MAW pmax pmax
comp=Z,11nm,0.9s
TIXI Tiksi 76.89 359*c* *i*P **P 22 05 09.8 -1.1**
TIXI pmax pmax
comp=Z,25nm,0.7s,mb5.2
TIXI MLR MLR
comp=Z,409nm,19.0s,MS4.8
TIXI Tiksi 76.89 359 *i*P **P 22 05 10.9 0.0**
BVA0 Borovoye Array 77.13 327 *i*P **P 22 05 12.1 -0.5**
BVA0 pmax pmax
comp=Z,29nm,2.3s,mb4.8
HOQ Hoqain 77.14 296 P **P 22 05 13.9 +0.5**
SNR=18
BRVK Borovoye 77.20 327 P **P 22 05 13.2 +0.2**
SNR=26
BRVK Borovoye 77.20 327⇑ *i*P **P 22 05 12.9 -0.1**
HATD Hatta, Dubai 78.45 297 P **P 22 05 21.4 +0.9**
SNR=7.8
ASHO Ashiyiah 78.48 296 P **P 22 05 21.5 +0.7**
SNR=8.2
UNV Unalaska Valle 78.72 32 *e*P **P 22 05 21.9 +0.5**
AB31 Akbulak array 81.75 321 *i*P **P 22 05 37.2 -0.6**
AB31 pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
SDPT Sand Point 82.53 32 *e*P **P 22 05 42.3 +0.5**
AKTO Aktyubinsk 83.29 322 P **P 22 05 45.3 -0.5**
AKTO pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
SVE Sverdlovsk 83.80 329⇑ *e*P **P 22 05 48.5 +0.2**
SVE *e* pP 22 06 01.9 -1.1
SVE *e* 22 09 00.5
SVE *e*S S 22 16 05.3 -2.2
SVE pmax pmax
comp=Z,94nm,1.6s,mb5.7
ARU Arti 84.76 328*c* *i*P **P 22 05 52.8 -0.4**
ARU *e**PP pP 22 06 04.7 -3.2
ARU *e* 22 09 07.5
ARU *e*S S 22 16 11.5 -5.6
ARU *e*SS SS 22 21 46.1 -3.9
ARU pmax pmax
comp=Z,67nm,1.7s,mb5.5
ARU Arti 84.76 328 *e*P **P 22 05 52.0 -1.2**
SYO Syowa Base 85.45 201⇓ *i*P **P 22 05 55.0 -1.5**
SYO Syowa Base 85.45 201⇓ *i*P **P 22 05 56.5 0.0**
UMR Umm Al-Rimmam 86.63 300 *e*P **P 22 06 02.0 -1.1**
baz=300
UMR AMb AMB 22 06 08.1
comp=Z,47nm,1.2s,mb5.6,baz=300
RDF Al-Radifah 86.69 299 *e*P **P 22 06 02.6 -0.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=299						
RDF				AMb	AMB	22 06 05.0	
	comp=Z,65nm,1.3s,mb5.7,baz=299						
SVW2	**Sparrevohn**	**86.84**	**28**	*e*P	**P**	**22 06 04.4**	**+1.0**
OHAK	**Old Harbor**	**86.92**	**32**	*e*P	**P**	**22 06 04.6**	**+0.7**
NAY	**Al-Naaiem**	**87.00**	**300**	*e*P	**P**	**22 06 04.0**	**-0.9**
	baz=300						
NAY				AMb	AMB	22 06 06.2	
	comp=Z,36nm,1.3s,mb5.4,baz=300						
TTA	**Tatalina**	**87.19**	**26**	*e*P	**P**	**22 06 04.9**	**-0.2**
RST	**Umm Al-Ruwaisa**	**87.25**	**300**	*e*P	**P**	**22 06 04.8**	**-1.3**
	baz=300						
RST				AMb	AMB	22 06 07.2	
	comp=Z,2.0nm,1.2s,baz=300						
KDAK	**Kodiak Island**	**87.43**	**31**	*e*P	**P**	**22 06 07.2**	**+0.9**
	comp=Z,62nm,1.2s,mb5.7						
MAK	**Makhachkala**	**88.73**	**313**	*e*P	**P**	**22 06 14.3**	**+1.4**
MAK				*e*S	S	22 16 40.2	-16
MAK				*e*		22 16 52.3	
MAK				pmax	pmax		
	comp=Z,127nm,1.0s,mb6.2						
MAK				MLR	MLR		
	comp=Z,279nm,21.0s,MS4.7						
IMA2	**Indian Mountai**	**89.05**	**23**	*e*P	**P**	**22 06 13.1**	**-0.7**
KTH	**Kantishna Hill**	**89.58**	**26**	*e*P	**P**	**22 06 16.4**	**+0.1**
	comp=Z,38nm,1.5s,mb5.5						
TRF	**Thorofare Moun**	**89.83**	**26**	*e*P	**P**	**22 06 18.2**	**+0.7**
	comp=Z,4μm,1.2s						
GNI	**Garni**	**90.42**	**310**	⇑*i*P	**P**	**22 06 21.0**	**+0.2**
GNI				*i* *PP	pP	22 06 37.5	+1.8
GNI				pmax	pmax		
	comp=Z,17nm,1.7s						
GNI	**Garni**	**90.42**	**310**	*e*P	**P**	**22 06 21.0**	**+0.1**
MCK	**McKinley**	**90.48**	**26**	*e*P	**P**	**22 06 19.4**	**-1.2**
MCK				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.2						
MCK	**McKinley**	**90.48**	**26**	*e*P	**P**	**22 06 19.4**	**-1.1**
	comp=Z,11nm,0.8s,mb5.2						
MCK				*e*PP	PP	22 09 49.6	-6.0
COLA	**College**	**91.16**	**25**	⇑*i*P	**P**	**22 06 24.3**	**+0.6**
COLA	**College**	**91.16**	**25**	*e*P	**P**	**22 06 24.1**	**+0.5**
DIV	**Divide**	**91.49**	**29**	*e*P	**P**	**22 06 25.9**	**+0.6**
	comp=Z,60nm,1.4s,mb5.7						
KIV	**Kislovodsk**	**92.34**	**314**	*c i*P	**P**	**22 06 29.0**	**-0.6**
KIV				*e*		22 10 11.5	
KIV				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.9						
KIV	**Kislovodsk**	**92.34**	**314**	⇑*i*P	**P**	**22 06 29.1**	**-0.5**
KMBO	**Kilima Mbogo**	**93.43**	**269**	P	**P**	**22 06 35.7**	**+0.3**
	comp=Z,2.4nm,0.8s,mb4.7,baz=63,slow=7.5,SNR=5.2						
KMBO	**Kilima Mbogo**	**93.43**	**269**	P	**P**	**22 06 35.7**	**+0.3**
EGAK	**Eagle**	**93.98**	**25**	P	**P**	**22 06 36.7**	**0.0**
	comp=Z,20nm,1.2s,mb5.4						
MAIT	**Maitri**	**94.15**	**197**	*e*P	pP	22 06 49.8	-2.5
DAWY	**Dawson**	**94.71**	**26**	*e*P	**P**	**22 06 40.6**	**+0.6**
OBN	**Obninsk**	**96.80**	**325**	⇑*i*P	**P**	**22 06 49.2**	**-0.6**
OBN				*e*		22 10 40.3	
OBN				pmax	pmax		
	comp=Z,51nm,2.5s,mb5.5						
OBN	**Obninsk**	**96.80**	**325**	*e*P	**P**	**22 06 49.2**	**-0.6**
OBN				LR	LR		
	comp=Z,100nm,19.0s,MS4.3						
SNAA	**Sanae**	**97.42**	**193**	*e*Pdiff	pP	22 07 06.0	-1.2
SNAA				*e*		22 07 11.0	
SNAA	**Sanae**	**97.42**	**193**	*e*P	**P**	**22 06 52.7**	**+0.4**
SNAA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SNAA	**Sanae**	**97.42**	**193**	*e*P	**P**	**22 06 52.7**	**+0.3**
	comp=Z,5.3nm,0.9s,mb5.0						
VNA2	**Neumayer--Watz**	**98.98**	**193**	*e*Pdiff	pP	22 07 13.6	-0.6
VNA2				*e*		22 07 17.4	
ARCES	**ARCESS Array B**	**100.34**	**340**	P	Pdif	22 07 04.7	-1.0
	comp=Z,2.7nm,0.8s,baz=74,slow=5.3,SNR=6.4						
ARCES	**ARCESS Array B**	**100.34**	**340**	P	Pdif	22 07 04.7	-1.0
LSZ	**Lusaka**	**100.69**	**253**	P	Pdif	22 07 07.8	+0.5
LBTB	**Lobatse**	**101.41**	**243**	*e*P	Pdif	22 07 11.3	+0.9
BUR08	**Bucovina Ar. S**	**104.46**	**318**	*e*Pdif	Pdif	22 07 22.3	-1.7
NVAR	**Mina Array Bea**	**109.66**	**51**	Pdiff	Pdif	22 07 52.2	+5.1
	comp=Z,1.2nm,0.8s,baz=256,slow=6.0,SNR=5.2						
BRG	**Berggiesshubel**	**110.92**	**323**	*e*P	PP	22 12 40.1	+10
	comp=Z,6.8nm,1.3s						
GERES	**GERESS Array B**	**111.69**	**321**	PKiKP	PKiKP	22 11 53.3	-0.3
	comp=Z,0.6nm,0.7s,baz=114,slow=1.2,SNR=6.4						
GERES				PP	PP	22 12 37.9	+1.9
	comp=Z,0.6nm,0.8s,baz=79,slow=6.9,SNR=5.2						
WTTA	**Wattenberg**	**113.49**	**320**	⇑*i*P	PKiKP	22 11 56.9	-0.3
	comp=Z,7.6nm,1.1s						
MOTA	**Moosalm**	**113.81**	**320**	⇓*i*P	PKiKP	22 11 57.4	-0.4
	comp=Z,4.1nm,1.1s						
MSU	**Marysvale**	**114.37**	**50**	PKIKP	PKiKP	22 12 00.5	+1.4
PDAR	**Pinedale Array**	**115.19**	**45**	PKP	PKiKP	22 12 01.0	+0.5
	comp=Z,0.7nm,0.6s,baz=351,slow=3.0,SNR=4.4						
HINF	**Hinteralfeld**	**116.33**	**321**	*e*PKIKP	PKPdf	22 12 01.9	-0.7
LPG	**La Plagne**	**117.28**	**319**	*e*PKIKP	PKPdf	22 12 04.4	-0.1
	comp=Z,7.5nm,0.8s						
CABF	**La Chapelle**	**117.28**	**320**	*e*PKIKP	PKPdf	22 12 04.4	-0.1
	comp=Z,23nm,1.0s						
LPL	**La Plagne**	**117.28**	**319**	*e*PKIKP	PKPdf	22 12 04.5	0.0
	comp=Z,2.7nm,0.4s						
MBDF	**Montbardon**	**117.55**	**318**	*e*PKIKP	PKPdf	22 12 04.3	-0.8
	comp=Z,7.6nm,0.9s						
ORIF	**Oris-en-Rattie**	**118.07**	**319**	*e*PKIKP	PKPdf	22 12 04.9	-1.1
	comp=Z,8.2nm,0.9s						
RSSD	**Black Hills**	**118.52**	**42**	*e*PKIKP	PKPdf	22 12 07.3	+0.3
SSF	**Saint Saulge**	**118.71**	**322**	*e*PKIKP	PKPdf	22 12 07.0	-0.2
	comp=Z,3.6nm,0.7s						
VIVF	**Saint-Julien-l**	**118.88**	**319**	*e*PKIKP	PKPdf	22 12 07.1	-0.5
BGF	**Bois d'Agland**	**119.34**	**321**	*e*PKIKP	PKPdf	22 12 07.8	-0.6
	comp=Z,4.1nm,0.5s						
SDCO	**Great Sand Dun**	**119.64**	**49**	*e*PKPdf	PKPdf	22 12 10.3	+1.0
ANMO	**Albuquerque**	**119.69**	**53**	*d i*PKIKP	PKPdf	22 12 09.8	+0.3
TCF	**Toulx Ste Croi**	**119.85**	**321**	*e*PKIKP	PKPdf	22 12 09.3	-0.1
CAF	**Calviac**	**120.54**	**320**	*e*PKIKP	PKPdf	22 12 11.1	+0.3
ULM	**Lac du Bonnet**	**120.66**	**33**	PKP	PKPdf	22 12 10.5	-0.4
	comp=Z,2.5nm,0.7s,baz=45,slow=1.4,SNR=2.8						
MFF	**Saint Martin d**	**121.16**	**323**	*e*PKIKP	PKPdf	22 12 11.6	-0.3
	comp=Z,4.4nm,0.6s						
TXAR	**Lajitas Array**	**123.41**	**58**	PKP	PKPdf	22 12 17.5	+0.7
	comp=Z,1.0nm,0.8s,baz=224,slow=1.6,SNR=12						
TXAR	**Lajitas Array**	**123.41**	**58**	*e*PKIKP	PKPdf	22 12 17.5	+0.7
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**123.41**	**58**	PKP	PKPdf	22 12 17.5	+0.7
TAM	**Tamanrasset**	**124.51**	**294**	*e*PKIKP	PKPdf	22 12 19.5	+0.4
JCT	**Junction City**	**126.33**	**56**	*e*PKIKP	PKPdf	22 12 22.3	-0.1
TORD	**Torodi Ar. Bea**	**129.26**	**283**	PKP	PKPdf	22 12 28.2	-0.2
	comp=Z,3.0nm,0.8s,baz=84,slow=1.9,SNR=22						
TORD				SKPbc		22 15 47.0	
	comp=Z,1.7nm,0.7s,baz=57,slow=4.3,SNR=8.1						
TORD	**Torodi Ar. Bea**	**129.26**	**283**	PKP	PKPdf	22 12 28.2	-0.2
TORD				SKPbc		22 15 47.0	
PLCA	**Paso Flores**	**130.10**	**159**	PKP	PKPdf	22 12 29.5	+0.2
	comp=Z,2.4nm,0.7s,baz=345,slow=23,SNR=3.2						
EVO	**Evora**	**130.20**	**317**	*e*PKIKP	PKPdf	22 12 29.8	+0.3
OLIL	**Olney**	**131.61**	**41**	*e*PKPdf	PKPdf	22 12 32.9	+0.8
CMIG	**Matias Romero**	**133.82**	**72**	PKP	PKPdf	22 12 38.0	+1.2
	comp=Z,2.0nm,0.7s,baz=244,slow=2.1,SNR=3.7						
DBIC	**Dimbokro**	**135.90**	**274**	PKhKP		22 12 32.7	
	comp=Z,3.6nm,1.0s,baz=121,slow=4.1,SNR=7.0						
DBIC				PKP	PKPdf	22 12 41.2	+0.3
	comp=Z,2.6nm,0.8s,baz=292,slow=5.2,SNR=5.3						
DBIC				SKPbc	SKPbc	22 16 09.7	+1.0
	comp=Z,2.8nm,0.7s,baz=29,slow=3.5,SNR=4.4						
DBIC	**Dimbokro**	**135.90**	**274**	PKHKP		22 12 32.7	
DBIC						22 12 41.2	
DBIC	**Dimbokro**	**135.90**	**274**	PKP		22 12 32.7	
DBIC				PKP	PKPdf	22 12 41.2	+0.3
DBIC				SKPbc	SKPbc	22 16 09.7	+1.0
LIC	**Lamto**	**136.06**	**273**	*e*PKIKP	PKPdf	22 12 40.1	-1.1
TKL	**Tuckaleechee C**	**136.19**	**42**	PKP	PKPdf	22 12 42.7	+1.8
	comp=Z,4.0nm,0.7s,baz=219,slow=2.1,SNR=4.2						
TKL	**Tuckaleechee C**	**136.19**	**42**	PKP	PKPdf	22 12 42.7	+1.8
LVC	**Limon Verde**	**146.15**	**146**	*e*PKP	PKPdf	22 13 01.2	+2.1
CPUP	**Villa Florida**	**147.51**	**166**	PKPbc	PKPbc	22 13 02.7	-1.2
	comp=Z,5.2nm,0.5s,baz=207,slow=1.5,SNR=21						
NNA	**Nana**	**147.54**	**122**	*e*PKP	PKPdf	22 13 02.8	+1.2
ARE	**Arequipa**	**149.06**	**135**	*e*PKP2	PKPbc	22 13 09.0	+0.8
BCIP	**Isla Barro Col**	**149.38**	**81**	*e*PKPdf	PKPdf	22 13 05.5	+0.8
BCIP				*e*PKPbc	PKPbc	22 13 09.6	+0.5
OTAV	**Otavalo**	**150.35**	**99**	*e*PKPdf	PKPdf	22 13 07.1	+0.9
LPAZ	**La Paz**	**151.46**	**139**	PKP	PKPdf	22 13 08.8	+1.0
	comp=Z,1.4nm,1.0s,baz=78,slow=6.5,SNR=3.7						
LPAZ				PKPbc	PKPbc	22 13 15.8	+1.9
	comp=Z,7.5nm,0.5s,baz=204,slow=2.3,SNR=39						
LPAZ	**La Paz**	**151.46**	**139**	PKP	PKPdf	22 13 08.8	+1.0
LPAZ				PKPbc	PKPbc	22 13 15.8	+1.9
ROSC	**El Rosal**	**154.96**	**90**	PKPbc	PKPbc	22 13 23.5	+1.8
	comp=Z,5.5nm,0.4s,baz=100,slow=21,SNR=4.2						

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*ATH **04** 21:58:15.6, 4129N×2394E, h19km±2km, MD3.1/3*
*ISCJB **04** 21:58:16.5±0.5, 4123N±004×2394E±004, h17km±8km, Error ellipse: s-maj=7.7km s-min=4.3km az=149.0*
*THE **04** 21:58:16.6, 4121N×2391E, h14km, ML2.4*
*CSEM **04** 21:58:16.1±0.2, 4125N×2395E, h20km, MD3.1, Error ellipse: s-maj=4.3km s-min=3.0km az=170.0*
ISC 04 21:58:15.9±0.5, **4119N**±003×**2398E**±004, **h10**km±6km, **n14**, σ**0ˢ96**/25, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVR	**Nevrokopi**	**0.18**	**331**	*e*PB	**Pg**	**21 58 19.6**	**-0.2**
NVR				*e*SB	**Sg**	**21 58 21.9**	**-0.5**
SOH	**Sokhos**	**0.60**	**232**	*e*Pg	**Pg**	**21 58 27.9**	**+0.4**
SOH				*e*Sg	**Sg**	**21 58 35.7**	**+0.4**
KNT	**Kendrikon**	**0.82**	**268**	*e*Pg	**Pg**	**21 58 31.4**	**-0.3**
KNT				*e*Sg	**Sg**	**21 58 42.4**	**+0.2**
OUR	**Ouranopolis**	**0.85**	**180**	*e*Pg	**Pg**	**21 58 33.0**	**+0.6**
OUR				*e*Sg	**Sg**	**21 58 45.9**	**+2.5**
HORT	**Hortiatis**	**0.89**	**229**	*e*Pg	**Pg**	**21 58 33.1**	**+0.1**
HORT				*e*Sg	**Sg**	**21 58 45.9**	**+1.3**
PLG	**Polygyros**	**0.91**	**207**	*e*PN	**Pn**	**21 58 34.0**	**-0.8**
PLG				*e*SN	**Sn**	**21 58 47.5**	**-0.4**
THE	**Thessaloniki**	**0.95**	**234**	*e*Pg	**Pg**	**21 58 34.3**	**+0.1**
THE				*e*Sg	**Sg**	**21 58 46.8**	**+0.3**
PLD	**Plovdiv**	**1.06**	**30**	*e*Pg	**Pg**	**21 58 36.4**	**+0.1**
PLD				*e*Sg	**Sg**	**21 58 51.5**	**+1.3**
RDO	**Rodhopi**	**1.18**	**92**	*e*PN	**Pn**	**21 58 38.5**	**0.0**
RDO				*e*SN	**Sn**	**21 58 55.5**	**+0.9**
GRG	**Griva**	**1.22**	**260**	*e*Pg	**Pg**	**21 58 37.6**	**-1.6**
PAIG	**Paliouri**	**1.28**	**190**	*e*Pg	**Pg**	**21 58 39.9**	**-0.6**
PAIG	**Paliouri**	**1.28**	**190**	*e*Pg	**Pg**	**21 58 39.8**	**-0.7**
LOS	**Limnos**	**1.51**	**146**	*e*Pg	**Pg**	**21 58 42.2**	**-2.6**
LOS				*e*Sg	**Sg**	**21 59 03.0**	**-1.4**
ALN	**Alexandroupoli**	**1.59**	**100**	*e*Pb	**Pb**	**21 58 44.3**	**-1.1**
ALN				*e*Sb	**Sb**	**21 59 06.5**	**+0.9**

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*ISCJB **04** 22:02:09.3±0.4, 4758N±002×1673E±003, h10km, Error ellipse: s-maj=3.7km s-min=2.7km az=142.1*
*IPEC **04** 22:02:09.6±0.2, 4758N×1680E, h11km±1km, ML1.8/2, Error ellipse: s-maj=1.2km s-min=1.0km az=62.0*
*VIE **04** 22:02:09.1±0.3, 4757N×1674E, h9km±2km, mb1.9/3, ML2.3/4, Error ellipse: s-maj=2.3km s-min=1.2km az=116.0 14 km NNE of Lutzmannsburg*
*CSEM **04** 22:02:11.4±0.5, 4767N×1663E, h1km±2km, ML2.9/7, Error ellipse: s-maj=9.4km s-min=5.7km az=21.0*
*PRU **04** 22:02:11.9, 4770N×1655E, h15km*
ISC 04 22:02:09.9±0.5, **4765N**±002×**1667E**±003, **h0**km±4km, **n30**, σ**1ˢ31**/54, **5C-2D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONA	**Conrad Observa**	**0.61**	**297**	⇑*e*Pg	**Pg**	**22 02 23.2**	**+1.5**
	2.4nm,0.1s,SNR=11						
CONA				⇑*i*Sg	**Sg**	**22 02 32.4**	**+2.8**
	13nm,0.2s						
CSNA	**Conrad Observa**	**0.61**	**297**	⇑*i*Pg	**Pg**	**22 02 23.2**	**+1.5**
	2.5nm,0.1s						
CSNA				⇓*i*Sg	**Sg**	**22 02 32.5**	**+2.9**
	16nm,0.1s						
ZST	**Bratislava**	**0.61**	**28**	*e*PG	**Pg**	**22 02 22.5**	**+0.8**
ZST				*e*SG	**Sg**	**22 02 30.6**	**+0.9**
ZST	**Bratislava**	**0.61**	**28**	*e*Pg	**Pg**	**22 02 22.4**	**+0.7**
ZST				*e*Sg	**Sg**	**22 02 30.6**	**+0.9**
MODS	**Modra-Piesok**	**0.83**	**29**	*e*Pg	**Pg**	**22 02 26.3**	**+0.5**
MODS				*e*Sg	**Sg**	**22 02 37.2**	**+0.7**
MODS	**Modra-Piesok**	**0.83**	**29**	*e*PG	**Pg**	**22 02 26.2**	**+0.4**
MODS				*e*SG	**Sg**	**22 02 37.2**	**+0.7**
ARSA	**Arzberg**	**0.88**	**243**	⇑*e*Pg	**Pg**	**22 02 26.2**	**-0.6**
	12nm,0.1s,SNR=8.1						
ARSA				⇓*i*Sg	**Sg**	**22 02 38.5**	**+0.4**
	11nm,0.2s						
ARSA	**Arzberg**	**0.88**	**243**	*e*Pg	**Pg**	**22 02 27.2**	**+0.4**
ARSA				Sg	**Sg**	**22 02 38.5**	**+0.4**
	11nm,0.2s						
KOGS	**Kog**	**1.24**	**194**	*i* Pg	**Pg**	**22 02 32.8**	**-0.9**
KOGS				*i* Sg	**Sg**	**22 02 48.6**	**-1.2**
KRUC	**Moravsky**	**1.42**	**353**	*e*Pn	**Pn**	**22 02 36.2**	**-0.8**
KRUC				*e*Sn	**Sn**	**22 02 56.8**	**+0.4**
	11nm,0.3s						
PERS	**Pernice**	**1.47**	**227**	*i* Pg	**Pg**	**22 02 39.2**	**+1.1**
PERS				*i* Sg	**Sg**	**22 02 56.9**	**-0.3**
KOLL	**Kolacno**	**1.48**	**51**	*e*PN	**Pn**	**22 02 38.7**	**+0.9**
KOLL				*e*SN	**Sn**	**22 02 57.4**	**-0.5**
KOLL	**Kolacno**	**1.48**	**51**	*e*Pn	**Pn**	**22 02 38.7**	**+0.9**
KOLL				*e*Sn	**Sn**	**22 02 57.4**	**-0.5**
MOA	**Molln**	**1.64**	**278**	*e*Pg	**Pg**	**22 02 41.4**	**+0.1**
	comp=Z,0.9nm,0.1s,SNR=8.0						
MOA				⇑*i*Sg	**Sg**	**22 03 04.2**	**+1.8**
	comp=N,7.0nm,0.2s						
MOA	**Molln**	**1.64**	**278**	*e*Pn	**Pn**	**22 02 40.0**	**+0.1**
MOA	**Molln**	**1.64**	**278**	Pg	**Pg**	**22 02 41.4**	**+0.1**
	0.9nm,0.1s,SNR=8.0						
MOA				*e*Sn	**Sn**	**22 03 02.8**	**+1.2**
MOA				Sg	**Sg**	**22 03 04.2**	**+1.8**
	7.0nm,0.2s						
VRAC	**Vranov**	**1.66**	**358**	*e*Pn	**Pn**	**22 02 39.5**	**-0.7**
VRAC				*e*Sn	**Sn**	**22 03 02.6**	**+0.4**
	4.4nm,0.2s						
VYHS	**Vyhne**	**1.68**	**59**	*e*PN	**Pn**	**22 02 41.2**	**+0.7**
VYHS				*e*SN	**Sn**	**22 03 04.0**	**+1.3**
VYHS	**Vyhne**	**1.68**	**59**	*e*Pn	**Pn**	**22 02 41.2**	**+0.7**
VYHS				*e*Sn	**Sn**	**22 03 04.0**	**+1.3**
TREC	**Trest**	**1.82**	**335**	*e*PG	**Pg**	**22 02 43.0**	**-1.8**
TREC				*e*SG	**Sg**	**22 03 06.9**	**-1.5**
	comp=Z,11nm,0.5s						
PKSM	**Moragy**	**1.98**	**136**	*e*Pn	**Pn**	**22 02 41.5**	**-3.1**
PKSM				*e*Sn	**Sn**	**22 03 05.5**	**-4.5**
MORC	**Moravsky Berou**	**2.20**	**15**	*e*Pn	**Pn**	**22 02 46.9**	**-0.8**
KHC	**Kasperske Hory**	**2.54**	**307**	*e*PG	**Pg**	**22 02 55.8**	**-2.7**
KHC				*e*x	x	22 02 59.5	
KHC				*e*x	x	22 03 15.5	
KHC				*e*SG	**Sg**	**22 03 28.4**	**-3.0**
	comp=Z,5.2nm,0.3s						
KECS	**Kecovo**	**2.69**	**71**	*e*SG	**Sg**	**22 03 37.8**	**+1.5**
DPC	**Dobruska-Polom**	**2.71**	**355**	*e*PG	**Pg**	**22 03 00.4**	**-1.4**
DPC				*e*SG	**Sg**	**22 03 37.1**	**+0.2**
PRU	**Pruhonice**	**2.73**	**330**	*e*PG	**Pg**	**22 03 00.6**	**-1.6**
PRU				*e*SG	**Sg**	**22 03 36.2**	**-1.3**
	comp=Z,11nm,0.5s						
PVCC	**Panska Ves**	**3.19**	**335**	*e*SG	**Sg**	**22 03 51.0**	**-1.4**
	comp=Z,8.7nm,0.3s						
BRG	**Berggiesshubel**	**3.68**	**332**	SG	**Sg**	**22 04 09.7**	**+1.5**
	comp=Z,2.8nm,0.5s						
NKC	**Novy Kostel**	**3.80**	**314**	*e*SG	**Sg**	**22 04 09.9**	**-1.9**
CLL	**Collm**	**4.37**	**328**	*e*Sg	**Sg**	**22 04 28.0**	**-2.2**
	comp=Z,8.0nm,1.0s						

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*NSSP **04** 22:12:14.2, 4105N×4377E, h10km, ML3.0*
*TIF **04** 22:12:15.5, 41.13N×43.88E, h10km±2km*
*ISCJB **04** 22:12:15.8±0.3, 41.17N±002×4385E±004, h10km, Error ellipse: s-maj=4.2km s-min=2.3km az=20.2*
*CSEM **04** 22:12:15.8±0.3, 41.12N×4385E, h8km, ML3.0, Error ellipse: s-maj=7.5km s-min=4.0km az=43.0*
*ISK **04** 22:12:15.3, 41.16N×4387E, h5km, MD3.7*
*MOS **04** 22:12:19.0±1.0, 41.14N×44.10E, h13km, mb4.4/1, Error ellipse: s-maj=37.0km s-min=7.0km az=87.5*
ISC 04 22:12:16.2±0.4, **4113N**±002×**4386E**±004, **h1**km±4km, **n33**, σ**1ˢ17**/49, **5C-3D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMRZ	**Gyumri**	**0.32**	**184**	P	**Pg**	**22 12 23.0**	**+0.7**
GMRZ				S	**Sg**	**22 12 27.0**	**+0.5**
KARS	**Kars**	**0.78**	**229**	*e*PG	**Pg**	**22 12 31.0**	**-0.1**
KARS				*e*SG	**Sg**	**22 12 42.5**	**+1.3**
GOR	**Gori**	**0.88**	**12**	P	**Pn**	**22 12 33.1**	**-2.6**
GOR				S	**Sn**	**22 12 46.1**	**-3.0**
TBLG	**Delisi**	**0.90**	**47**	P	**Pg**	**22 12 32.8**	**-0.6**
TBLG				S	**Sg**	**22 12 45.6**	**+0.6**
MTA	**Mtatsminda**	**0.90**	**51**	P	**Pg**	**22 12 32.9**	**-0.6**
MTA				S	**Sg**	**22 12 45.6**	**+0.3**
ERE	**Yerevan**	**1.06**	**154**	⇑P	**Pg**	**22 12 32.0**	**-4.6**
ERE				S	**Sg**	**22 12 47.0**	**-3.4**
DGRG	**David-gareji**	**1.19**	**74**	P	**Pg**	**22 12 38.6**	**-0.4**
DGRG				S	**Sg**	**22 12 56.3**	**+2.0**
GNI	**Garni**	**1.19**	**145**	*e*PN	**Pn**	**22 12 38.0**	**-1.9**
GNI				*e*SN	**Sn**	**22 12 55.9**	**-0.8**
ONI	**Oni**	**1.48**	**348**	P	**Pg**	**22 12 43.7**	**-1.0**
ONI				S	**Sg**	**22 13 04.5**	**+0.6**
DYDN	**Diyadin**	**1.59**	**185**	*e*P	**Pn**	**22 12 46.2**	**+0.8**
ZEI	**Tsey**	**1.64**	**1**	*e*PN	**Pg**	**22 12 47.3**	**-0.4**
ZEI				*e*S	**Sg**	**22 13 10.2**	**+1.2**
AGRB	**Hanur-Agry**	**1.69**	**203**	*e*PN	**Pn**	**22 12 47.4**	**+0.6**
BCA	**Borcka**	**1.71**	**281**	*e*PN	**Pn**	**22 12 46.4**	**-0.8**
BCA				*e*SN	**Sn**	**22 13 08.6**	**-1.2**
LACR	**Lac**	**1.73**	**11**	⇓*i*PN	**Pg**	**22 12 48.3**	**-1.0**
LACR				*i* S	**Sg**	**22 13 12.1**	**+0.4**
DIGR	**Digorskoe uzhe**	**1.78**	**353**	⇓*i*PN	**Pg**	**22 12 49.9**	**-0.5**
HOMI	**Horasan**	**1.84**	**235**	*i* P	**Pn**	**22 12 49.3**	**+0.4**
KORR	**Kora**	**1.96**	**4**	⇑*i*PN	**Pg**	**22 12 53.0**	**-0.9**
CLDR	**Caldiran**	**1.98**	**179**	*e*PN	**Pn**	**22 12 50.9**	**0.0**
VLKR	**Vladikavkaz**	**2.01**	**17**	*e*PN	**Pg**	**22 12 53.8**	**-1.0**
VLKR				*e*S	**Sg**	**22 13 21.4**	**+0.5**
SNJR	**Sundja**	**2.06**	**20**	*e*PN	**Pg**	**22 12 54.6**	**-1.2**
SNJR				*e*S	**Sg**	**22 13 24.9**	**+2.3**
ARNR	**Ardon**	**2.08**	**9**	⇓*i*PN	**Pg**	**22 12 55.0**	**-1.2**
LSNR	**Lesken**	**2.14**	**359**	⇑*i*PN	**Pg**	**22 12 55.9**	**-1.4**
PZAR	**Pazar-Rize**	**2.23**	**272**	*e*PN	**Pn**	**22 12 54.3**	**-0.1**
ERZM	**Erzurum**	**2.26**	**238**	*i* P	**Pn**	**22 12 55.5**	**+0.8**
EZM	**Erzurum**	**2.26**	**238**	*e*PN	**Pn**	**22 12 55.2**	**+0.5**
BTKR	**Batakoyurt**	**2.30**	**13**	⇑*i*PN	**Pg**	**22 12 59.0**	**-1.3**
BTKR				*e*S	**Sg**	**22 13 32.1**	**+2.0**
TVAN	**Van**	**2.62**	**188**	*i* P	**Pg**	**22 13 07.1**	**+0.7**
PRTR	**Priterechnaya**	**2.64**	**7**	*e*PN	**Pn**	**22 13 02.7**	**+2.8**
PRTR				*e*S	**Sn**	**22 13 34.5**	**+1.9**
KOPT	**Kop Dagi**	**2.79**	**248**	*i* P	**Pg**	**22 13 08.9**	**-0.8**
KIV	**Kislovodsk**	**2.96**	**343**	⇑*i*PN	**Pn**	**22 13 07.5**	**+3.3**
KIV				pmax	pmax		
	comp=Z,26nm,1.2s						
KTUT	**Trabzon**	**3.10**	**269**	*e*PN	**Pn**	**22 13 06.8**	**+0.6**
GUMT	**Gumushane**	**3.39**	**260**	*e*PN	**Pn**	**22 13 10.8**	**+0.6**
HAKT	**HAKKARI**	**3.57**	**182**	*i* P	**Pn**	**22 13 16.7**	**+4.1**

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*ISCJB **04** 22:16:22.9±0.6, 3724N±003×2705E±004, h10km±5km, Error ellipse: s-maj=6.2km s-min=4.7km az=136.1*
*CSEM **04** 22:16:22.0±0.1, 3725N×2703E, h10km, MD3.0, Error ellipse: s-maj=2.8km s-min=1.8km az=35.0*
*ISK **04** 22:16:22.9, 3726N×2708E, h8km, MD3.0*
*ATH **04** 22:16:22.4, 3781N×2683E, h65km*
*DDA **04** 22:16:22.8, 3725N×2705E, h7km±4km, Md2.9*
ISC 04 22:16:23.0±0.7, **3723N**±003×**2703E**±005, **h12**km±5km, **n17**, σ**0ˢ80**/27, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.28**	**126**	*e*PG	**Pg**	**22 16 28.8**	**+0.1**
BODT				*e*SG	**Sg**	**22 16 33.2**	**+0.7**
BDRM	**Kayabasi**	**0.37**	**116**	*i* P	**Pg**	**22 16 30.4**	**+0.1**
BDRM				*i* S	**Sg**	**22 16 36.3**	**+1.0**
GCAM	**G?zelcaml?**	**0.50**	**19**	*i* P	**Pg**	**22 16 32.4**	**-0.5**
GCAM				*i* S	**Sg**	**22 16 39.8**	**+0.3**
SMG	**Samos**	**0.51**	**342**	*e*P	**Pg**	**22 16 32.2**	**-0.8**
SMG				*e*S	**Sg**	**22 16 40.0**	**+0.3**
MLSB	**Milas**	**0.60**	**83**	*e*PG	**Pg**	**22 16 34.3**	**-0.4**
MLSB				*e*SG	**Sg**	**22 16 42.2**	**-0.3**
AYDN	**Tasoluk**	**0.80**	**57**	*i* P	**Pg**	**22 16 37.4**	**-1.1**
AYDN				*i* S	**Sg**	**22 16 49.3**	**+0.3**
YER	**Yerkesik**	**1.00**	**95**	*e*PG	**Pg**	**22 16 41.8**	**-0.5**
BLCB	**Balcova**	**1.16**	**0**	*e*PN	**Pn**	**22 16 44.6**	**-0.4**
BLCB				*e*SN	**Sn**	**22 17 01.0**	**+0.3**
IZM	**Izmir**	**1.18**	**9**	*e*PN	**Pn**	**22 16 45.1**	**-0.3**
KDAG	**Bornova**	**1.19**	**9**	*i* P	**Pn**	**22 16 45.1**	**-0.3**
KDAG				*i* S	**Sb**	**22 17 03.6**	**+2.7**
APE	**Apeiranthos**	**1.21**	**263**	*e*P	**Pn**	**22 16 45.0**	**-0.8**
APE				*e*S	**Sb**	**22 17 02.3**	**+0.9**
TURN	**Turunc**	**1.30**	**105**	*i* P	**Pn**	**22 16 43.9**	**-3.2**
TURN				*i* S	**Sb**	**22 16 59.3**	**-4.8**
TURN	**Turunc**	**1.30**	**105**	*i* P	**Pn**	**22 16 43.8**	**-3.3**
DALT	**Dalyan (Mudla)**	**1.36**	**109**	*e*PN	**Pn**	**22 16 48.3**	**+0.4**
KULA	**Kula-Manisa**	**1.82**	**45**	*e*PN	**Pn**	**22 16 54.8**	**+0.6**
PRK	**Paraskevi**	**2.10**	**344**	*e*P	**Pn**	**22 16 48.3**	**-10**
DEMI	**Demirci**	**2.25**	**36**	*e*P	**Pn**	**22 17 05.6**	**+5.5**

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*ISCJB **04** 22:17:41.8±1.1, 547N±006×1268E±01, h102km±10km, mb4.0/15, Error ellipse: s-maj=20.5km s-min=7.7km az=163.8*
*NEIC **04** 22:17:41.8±0.9, 543N×12672E, h83km±9km, mb4.2/8, Error ellipse: s-maj=11.3km s-min=4.5km az=72.0*
*IDC **04** 22:17:43.1±2.0, 543N×12674E, h94km±16km, mb3.8/10, mb1 4.0/11, mb1mx3.8/19, mbtmp3.9/11, Error ellipse: s-maj=49.4km s-min=11.0km az=70.0*
ISC 04 22:17:41.9±1.1, **549N**±006×**1269E**±01, **h86**km±11km, **n29**, σ**0ˢ88**/29, **mb4.0**/15, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.06**	**320**	P	**Pn**	**22 18 13.4**	**-1.3**
	43nm,0.3s,baz=249,slow=9.7,SNR=4.5						
DAV				S	**Sn**	**22 18 41.0**	**+1.3**
	100nm,0.3s,baz=69,slow=18,SNR=6.4						
BATI	**Baumata**	**15.92**	**192**	P	**Pn**	**22 21 22.4**	**+1.4**
	4.4nm,0.3s,baz=58,slow=1.0,SNR=4.9						
KAKA	**Kakadu**	**18.89**	**163**	*e*P	**Pn**	**22 21 55.7**	**-1.5**
	6.2nm,0.5s						
GUMO	**Guam**	**19.44**	**64**	P	**Pn**	**22 22 03.5**	**-0.2**
YHNB	**Yeheng**	**19.80**	**345**	P	**Pn**	**22 22 06.5**	**-1.3**
FITZ	**Fitzroy Crossi**	**23.47**	**183**	*e*P	**P**	**22 22 44.1**	**+0.2**
	1.9nm,0.6s,mb3.6						
FITZ	**Fitzroy Crossi**	**23.47**	**183**	P	**P**	**22 22 44.2**	**+0.4**
	1.1nm,0.5s,mb3.5,baz=358,slow=10,SNR=8.4						
WRAB	**Tennant Creek**	**26.30**	**164**	*e*P	**P**	**22 23 11.1**	**+1.6**
	3.6nm,0.5s,mb4.1						
WRAB				*e*PcP	PcP	22 26 33.5	-0.5
WRA	**Warramunga Arr**	**26.30**	**164**	P	**P**	**22 23 09.6**	**0.0**
	3.4nm,0.4s,mb4.1,baz=346,slow=10,SNR=14						
WB2	**Warramunga Arr**	**26.31**	**164**	*e*P	**P**	**22 23 09.4**	**-0.2**
MBWA	**Marble Bar**	**27.40**	**195**	*e*P	**P**	**22 23 18.5**	**-0.9**
ENH	**Enshi**	**29.62**	**328**	*e*P	**P**	**22 23 39.1**	**0.0**
ASAR	**Alice Springs**	**29.77**	**167**	P	**P**	**22 23 40.4**	**0.0**
	1.0nm,0.5s,mb3.7,baz=340,slow=6.7,SNR=16						
ASAR				PcP	PcP	22 26 43.7	+1.3
	0.5nm,0.4s,baz=326,slow=1.8,SNR=6.0						
CMAR	**Chiang Mai Arr**	**30.18**	**298**	P	**P**	**22 23 42.7**	**-1.6**
	0.8nm,0.5s,mb3.6,baz=103,slow=7.6,SNR=4.5						
CMAR	**Chiang Mai Arr**	**30.18**	**298**	P	**P**	**22 23 42.6**	**-1.6**
INCN	**Inchon**	**31.85**	**360**	P	**P**	**22 23 59.0**	**+0.4**
BJT	**Baijiatuau**	**35.72**	**346**	*e*P	**P**	**22 24 33.5**	**+1.3**
	6.6nm,0.7s,mb4.7						
NWAO	**Narrogin (SRO)**	**39.29**	**193**	P	**P**	**22 25 02.1**	**-0.2**
	4.5nm,0.6s,mb4.5,baz=17,slow=9.1,SNR=5.3						
STKA	**Stephens Creek**	**39.70**	**160**	*e*P	**P**	**22 25 06.5**	**+0.6**
	3.0nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**39.70**	**160**	P	**P**	**22 25 06.2**	**+0.3**
	4.6nm,0.9s,mb4.3,baz=332,slow=8.0,SNR=7.8						
LSA	**Lhasa**	**41.44**	**310**	*e*P	**P**	**22 25 20.7**	**+0.5**
ULN	**Ulaanbaatar**	**45.52**	**341**	*e*P	**P**	**22 25 53.1**	**+0.4**
	1.4nm,0.5s,mb4.0						
SONM	**Songino Array**	**45.70**	**341**	P	**P**	**22 25 55.4**	**+1.2**
	0.5nm,0.4s,mb3.6,baz=158,slow=9.1,SNR=4.9						
MKAR	**Makanchi Array**	**56.23**	**325**	P	**P**	**22 27 12.6**	**-0.5**
	0.7nm,0.5s,mb4.0,baz=117,slow=7.3,SNR=17						
ZALV	**Zalesovo Beam**	**59.12**	**333**	P	**P**	**22 27 33.2**	**-0.1**
	1.1nm,0.5s,mb4.1,baz=115,slow=6.7,SNR=4.3						
KURK	**Kurchatov**	**60.37**	**327**	*e*P	**P**	**22 27 41.2**	**-0.8**
	2.0nm,0.6s,mb4.3						
BRVK	**Borovoye**	**66.03**	**327**	*e*P	**P**	**22 28 18.8**	**-0.5**
	1.7nm,0.8s,mb3.9						
ARCES	**ARCESS Array B**	**88.87**	**340**	P	**P**	**22 30 26.6**	**+0.4**
	1.8nm,0.9s,mb4.1,baz=64,slow=5.6,SNR=5.4						
TORD	**Torodi Ar. Bea**	**122.53**	**289**	PKP	PKPdf	22 36 28.6	+0.1
	0.4nm,0.9s,baz=60,slow=1.5,SNR=7.1						

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*TAP **04** 22:23:52.4, 2405N×12243E, h24km, ML2.7, D*
*ISCJB **04** 22:23:53.1±0.6, 2404N±005×12242E±002, h27km±5km, Error ellipse: s-maj=7.9km s-min=3.4km az=165.8*
*JMA **04** 22:23:53.0±0.4, 2402N×12245E, h12km, M1.7*
ISC 04 22:23:53.0±0.7, **2404N**±005×**12242E**±003, **h24**km±6km, **n22**, σ**0ˢ49**/42, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.68	52	P	Pb	22 24 06.0	-0.3
YOJ				eS	Sb	22 24 15.0	-0.4
ENA	Nanau	0.73	302	P	Pb	22 24 06.8	-0.4
	baz=300						
ENA				eS	Sb	22 24 17.3	+0.5
	baz=300						
HWA	Hwalien	0.75	266	eP	Pb	22 24 07.2	-0.2
	baz=264						
HWA				eS	Sb	22 24 18.1	+0.9
	baz=264						
TWD	Chiawan	0.76	273	eP	Pb	22 24 07.4	-0.1
	baz=272						
TWD				eS	Sb	22 24 18.0	+0.6
	baz=272						
TWC	Suao	0.77	318	P	Pb	22 24 07.3	-0.5
	baz=316						
TWC				eS	Sb	22 24 18.3	+0.3
	baz=316						
ESL	Shilin	0.93	256	eP	Pb	22 24 10.0	-0.5
	baz=255						
ESL				eS	Sb	22 24 23.2	+0.8
	baz=255						
TWE	Neicheng	0.97	315	eP	Pn	22 24 10.4	-0.7
	baz=313						
TWE				eS	Sb	22 24 23.6	+0.1
	baz=313						
ENTT	Nioudou	0.98	308	eP	Pn	22 24 11.2	-0.2
	baz=306						
ENTT				eS	Sb	22 24 24.0	0.0
	baz=306						
NNS	Nan Shan	1.04	293	eP	Pn	22 24 11.6	-0.5
	baz=291						
NNS				eS	Sb	22 24 25.5	0.0
	baz=291						
WHF	Hehuan Shan	1.06	276	eP	Pn	22 24 12.3	-0.1
	baz=274						
WHF				eS	Sb	22 24 26.5	+0.2
	baz=274						
EHY	Hungye	1.14	243	eP	Pn	22 24 12.8	-0.6
	baz=241						
EHY				eS	Sn	22 24 28.4	+0.1
	baz=241						
TWT	Tachien	1.16	281	eP	Pn	22 24 13.6	-0.2
	baz=279						
TWT				eS	Sn	22 24 29.2	+0.3
	baz=279						
IRIF	Iriomote-Funau	1.23	76	P	Pn	22 24 15.1	+0.3
IRIF				eS	Sn	22 24 31.3	+0.7
TWF1	Yuli	1.24	237	eP	Pn	22 24 14.4	-0.4
	baz=236						
TWF1				eS	Sn	22 24 30.5	-0.3
	baz=236						
SMLT	Sun Moon Lake	1.40	264	eP	Pn	22 24 16.6	-0.4
	baz=263						
SMLT				eS	Sn	22 24 34.9	+0.1
	baz=263						
TYC	Yuchr	1.44	265	eP	Pn	22 24 17.4	-0.2
	baz=264						
TYC				eS	Sn	22 24 35.8	+0.1
	baz=264						
YUS	Yu-Shan	1.45	248	eP	Pn	22 24 17.8	-0.1
	baz=247						
YUS				eS	Sn	22 24 36.3	+0.1
	baz=247						
JKRS	Kuro-shima	1.46	82	eS	Sn	22 24 38.5	+2.1
ELDTW	Lidau	1.54	237	eP	Pn	22 24 18.5	-0.6
	baz=236						
ELDTW				eS	Sn	22 24 38.5	+0.2
	baz=236						
ALS	Alishan	1.57	251	eP	Pn	22 24 19.7	+0.3
	baz=250						
ALS				eS	Sn	22 24 39.2	+0.1
	baz=250						
JIJ	Ishigaki jima	1.60	78	eS	Sn	22 24 39.3	-0.6
CHN5	Tsauling	1.66	255	eP	Pn	22 24 20.4	-0.2
	baz=254						
CHN5				eS	Sn	22 24 41.3	+0.2
	baz=254						

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*IDC **04** 22:26:19.6±1.2, 528S×13103E, h0km, mb4.1/6, mb1 4.2/8, mb1mx4.0/13, mbtmp4.1/8, ML4.3/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/26, Error ellipse: s-maj=49.4km s-min=19.5km az=75.0*
*ISCJB **04** 22:26:23.4±3.1, 560S±009×1312E±02, h65km±27km, mb4.0/8, Error ellipse: s-maj=32.2km s-min=8.9km az=157.4*
*NEIC **04** 22:26:24.4±0.8, 543S×13089E, h35km, mb4.2/1, Error ellipse: s-maj=29.6km s-min=9.9km az=78.0*
ISC 04 22:26:30.9±2.1, **593S**±009×**1309E**±02, **h120**km±19km, **n19**, $\sigma 1^{s}18$/23, **mb4.0**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	8.33	239	Pn	Pn	22 28 29.8	+0.9
	6.1nm,0.3s,baz=100,slow=3.4,SNR=5.7						
FITZ	Fitzroy Crossi	13.14	203	eP	Pn	22 29 34.4	+1.4
	2.2nm,0.3s						
FITZ				eS	Sn	22 31 54.3	-3.6
FITZ	Fitzroy Crossi	13.14	203	Pn	Pn	22 29 31.4	-1.6
	0.3nm,0.3s,baz=33,slow=13,SNR=6.9						
FITZ				Sn	Sn	22 31 56.9	-1.0
	0.3nm,0.3s,baz=210,slow=20,SNR=3.1						
WRAB	Tennant Creek	14.32	167	ePn	Pn	22 29 49.2	+1.1
	68nm,2.3s						
WRAB				eSn	Sn	22 32 27.4	+1.0
WRA	Warramunga Arr	14.32	167	Pn	Pn	22 29 46.0	-2.2
	0.3nm,0.3s,baz=347,slow=13,SNR=4.9						
WRA				Sn	Sn	22 32 25.6	-0.9
	0.5nm,0.3s,baz=355,slow=23,SNR=5.1						
ASAR	Alice Springs	17.87	171	P	Pn	22 30 35.9	+4.0
	0.4nm,0.3s,baz=353,slow=12,SNR=10						
ASAR				S	S	22 33 50.5	+0.5
	0.1nm,0.3s,baz=354,slow=24,SNR=3.5						
MBWA	Marble Bar	18.61	215	eP	P	22 30 44.3	+5.3
STKA	Stephens Creek	27.69	160	P	P	22 32 15.4	+7.7
	0.8nm,0.4s,mb3.6,baz=348,slow=10,SNR=4.1						
CMAR	Chiang Mai Arr	39.75	308	P	P	22 33 50.8	-1.3
	0.9nm,0.3s,mb4.0,baz=138,slow=7.7,SNR=4.5						
CMAR	Chiang Mai Arr	39.75	308	P	P	22 33 50.8	-1.3
KSRS	Korea Array	43.25	357	LR	LR	22 50 57.0	
	comp=Z,16nm,20.3s,baz=240,slow=35						
SONM	Songino Array	57.72	341	P	P	22 36 08.9	-0.1
	0.5nm,0.6s,mb3.7,baz=152,slow=8.1,SNR=5.1						
MKAR	Makanchi Array	67.83	326	P	P	22 37 17.4	+1.4
	2.2nm,0.5s,mb4.2,baz=142,slow=7.3,SNR=15						
TKM2	Tokmak 2	69.74	320	P	P	22 37 28.2	+0.3
	45nm,1.1s,mb5.2						
EKS2	Erkin-Say	70.79	319	P	P	22 37 35.0	+0.7
ZALV	Zalesovo Beam	71.03	333	P	P	22 37 35.3	-0.2
	0.4nm,0.4s,mb3.6,baz=113,slow=3.3,SNR=3.7						
KURK	Kurchatov	72.08	328	eP	P	22 37 42.6	+0.7
	2.5nm,0.9s,mb4.0						
MAW	Mawson	76.27	201	P	P	22 38 13.3	+7.3
	0.7nm,0.5s,mb3.6,baz=72,slow=6.4,SNR=3.5						
BRVK	Borovoye	77.71	327	P	P	22 38 11.9	-2.4

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*CSEM **04** 22:28:57.1±0.4, 3721N×2705E, h25km, MD2.8, Error ellipse: s-maj=9.3km s-min=4.1km az=61.0*
*ISK **04** 22:28:57.4, 3730N×2701E, h5km, MD2.8*
*ISCJB **04** 22:28:58.2±1.4, 3722N±005×271E±01, h29km±5km, Error ellipse: s-maj=14.6km s-min=7.1km az=158.2*
*DDA **04** 22:28:59.2, 3728N×2709E, h7km±6km, Md2.2*
ISC 04 22:28:58.4±1.4, **3722N**±005×**271E**±01, **h27**km±6km, **n8**, $\sigma 0^{s}72$/15, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	Bodrum	0.26	129	ePG	Pb	22 29 04.4	-0.6
BODT				eSG	Sb	22 29 09.5	+0.1
BDRM	Kayabasi	0.34	117	i P	Pb	22 29 05.9	-0.3
BDRM				i S	Sb	22 29 12.6	+1.0
GCAM	G?zelcaml?	0.50	16	i P	Pb	22 29 08.2	-0.4
GCAM				i S	Sb	22 29 15.6	0.0
MLSB	Milas	0.58	83	ePG	Pb	22 29 09.9	0.0
MLSB				eSG	Sb	22 29 18.4	+0.6
AYDN	Tasoluk	0.79	56	i P	Pb	22 29 13.2	-0.3
AYDN				i S	Sb	22 29 23.0	-0.7
YER	Yerkesik	0.98	95	ePG	Pn	22 29 18.2	+1.9
IZM	Izmir	1.18	8	ePN	Pn	22 29 19.4	+0.3
IZM				eSN	Sn	22 29 34.8	+0.5
TURN	Turunc	1.28	105	eP	Pn	22 29 19.4	-1.0
TURN				i S	Sn	22 29 35.9	-0.8

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*ISCJB **04** 22:35:20.9±0.6, 3724N±003×2702E±004, h10km, Error ellipse: s-maj=5.1km s-min=3.4km az=41.1*
*CSEM **04** 22:35:20.0±0.1, 3726N×2701E, h5km, MD3.0, Error ellipse: s-maj=2.8km s-min=1.8km az=38.0*
*ATH **04** 22:35:20.5, 3727N×2701E, h25km±1km, MD3.2/3*
*DDA **04** 22:35:21.0, 3727N×2706E, h7km±5km, Md2.8*
*ISK **04** 22:35:20.4, 3728N×2709E, h5km, MD3.0*
ISC 04 22:35:20.8±0.8, **3724N**±003×**2698E**±005, **h6**km±6km, **n20**, $\sigma 0^{s}80$/34, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	Bodrum	0.32	124	ePG	Pg	22 35 26.9	0.0
BODT				eSG	Sg	22 35 32.2	+1.1
BDRM	Kayabasi	0.41	115	i P	Pg	22 35 28.3	-0.4
BDRM				i S	Sg	22 35 34.6	+0.6
SMG	Samos	0.48	346	ePB	Pg	22 35 30.3	+0.2
SMG				eSB	Sg	22 35 37.1	+0.6
GCAM	G?zelcaml?	0.50	23	i P	Pg	22 35 30.4	-0.2
GCAM				i S	Sg	22 35 37.7	+0.6
MLSB	Milas	0.64	85	ePG	Pg	22 35 31.7	-1.3
MLSB				eSG	Sg	22 35 40.8	-0.5
AYDN	Tasoluk	0.83	59	i P	Pg	22 35 35.5	-1.2
AYDN				i S	Sg	22 35 46.5	-0.9
AYDN	Tasoluk	0.83	59	i P	Pg	22 35 35.5	-1.2
AYDN				i S	Sg	22 35 46.5	-1.0
YER	Yerkesik	1.04	95	ePG	Pg	22 35 40.4	-0.4
YER				eSG	Sg	22 35 54.5	+0.1
BLCB	Balcova	1.15	2	ePN	Pn	22 35 42.8	-0.7
BLCB				eSN	Sn	22 35 59.3	-0.1
APE	Apeiranthos	1.17	262	ePN	Pn	22 35 43.3	-0.5
APE				eSN	Sn	22 36 00.3	+0.2
IZM	Izmir	1.18	11	ePN	Pn	22 35 42.8	-1.1
KDAG	Bornova	1.19	11	i P	Pg	22 35 43.1	-0.4
KDAG				i S	Sg	22 36 00.6	+1.7
TURN	Turunc	1.35	105	eP	Pn	22 35 41.0	-5.2
TURN				i S	Sb	22 35 56.4	-7.6
DALT	Dalyan (Mudla)	1.40	109	ePN	Pn	22 35 47.2	+0.3
DNZL	Cakiroluk	1.70	74	i P	Pn	22 35 53.1	+2.1
DNZL				i S	Sn	22 36 18.3	+5.2
AKS	Akhisar	1.77	22	ePN	Pn	22 35 52.7	+0.8
KULA	Kula-Manisa	1.84	46	ePN	Pn	22 35 52.9	-0.1
PRK	Paraskevi	2.08	345	ePN	Pn	22 35 55.6	-0.7
ELL	Elmali	2.39	101	ePN	Pn	22 36 01.1	+0.6
BALY	Balya	2.55	11	i P	Pn	22 36 09.3	+6.6
BALY				i S	Sn	22 36 40.3	+6.3

IDC 04 22:39:13.6±8.8, **2130S**×**6757W**, **h127**km±123km, **mb3.8**/2, **mb1 3.6**/3, **mb1mx3.3**/15, **mbtmp3.6**/3, **ML3.5**/1, **Error ellipse: s-maj=290.8km s-min=73.3km az=86.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	5.02	354	P	Pn	22 40 27.5	+0.6
	1.0nm,0.3s,baz=176,slow=9.4,SNR=17						
LPAZ				S	Sn	22 41 25.5	+1.5
	baz=2.6,slow=24,SNR=1.6						
DBIC	Dimbokro	67.48	73	P	P	22 49 56.3	0.0
	6.1nm,1.2s,baz=234,slow=8.7,SNR=3.0						
TORD	Torodi Ar. Bea	76.11	70	P	P	22 50 48.0	+0.1
	0.8nm,0.7s,baz=253,slow=5.5,SNR=16						

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*NEIC **04** 23:03:59.5, 1698N×9948W, h40km, MD3.6(MEX), After MEX.*
MEX 04 23:03:59.4±0.8, **1698N**×**9949W**, **h41**km±16km, **MD3.6**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.43	254	i P	Pn	23 04 07.7	-1.5
ACX				i S	Sn	23 04 14.5	-1.6
CAIG	El Cayaco	0.75	275	i P	Pn	23 04 12.2	-1.3
CAIG				i S	Sn	23 04 21.4	-2.3
MEIG	Mezcala	0.95	352	i P	Pn	23 04 14.1	-2.1
MEIG				i S	Sn	23 04 26.2	-2.3
PLIG	Platanillo	1.40	359	i P	Pn	23 04 21.1	-1.4
PLIG				i S	Sn	23 04 38.5	-1.3
ZIIG	Zihuatanejo	1.99	288	i P	Pn	23 04 28.7	-1.8
ZIIG				i S	Sn	23 04 51.8	-2.5
ZIIG	Zihuatanejo	1.99	288	i P	Pn	23 04 28.6	-2.0
ZIIG				i S	Sn	23 04 51.8	-2.5

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*IDC **04** 23:04:28.0±1.0, 237N×12725E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.9/16, mbtmp3.9/7, Error ellipse: s-maj=106.2km s-min=16.0km az=71.0*
*ISCJB **04** 23:04:31.0±0.7, 238N±0.10×1273E±02, h33km, mb4.2/12, Error ellipse: s-maj=37.2km s-min=8.9km az=162.5*
*NEIC **04** 23:04:32.9±0.5, 237N×12734E, h35km, mb4.3/8, Error ellipse: s-maj=26.4km s-min=6.1km az=72.0*
ISC 04 23:04:33.0±0.7, **237N**±010×**1274E**±02, **h35**km, **n19**, $\sigma 0^{s}62$/19, **mb4.2**/12, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.41	185	eP	P	23 09 07.0	-0.2
	6.4nm,2.0s						
FITZ	Fitzroy Crossi	20.41	185	P	P	23 09 07.3	+0.1
	0.7nm,0.5s,baz=19,slow=10.0,SNR=6.6						
WRAB	Tennant Creek	23.20	163	eP	P	23 09 36.9	-0.1
	15nm,1.6s,mb4.2						
WRA	Warramunga Arr	23.21	163	P	P	23 09 37.1	0.0
	2.8nm,0.4s,mb4.0,baz=339,slow=10,SNR=18						
WRA				PcP	PcP	23 13 24.5	-0.1
	0.2nm,0.5s,baz=330,slow=2.4,SNR=3.2						
WB2	Warramunga Arr	23.21	163	eP	P	23 09 37.1	0.0
MBWA	Marble Bar	24.55	197	eP	P	23 09 49.8	+0.3
ASAR	Alice Springs	26.65	167	P	P	23 10 08.6	-0.1
	1.0nm,0.6s,mb3.5,baz=348,slow=6.9,SNR=13						
ASAR				PcP	PcP	23 13 32.9	+0.8
	0.4nm,0.4s,baz=337,slow=1.7,SNR=5.5						
KLBR	Kellerberrin	34.99	194	eP	P	23 11 22.0	-0.1
	39nm,1.5s,mb5.1						
NWAO	Narrogin (SRO)	36.39	194	P	P	23 11 33.6	-0.5
STKA	Stephens Creek	36.65	159	eP	P	23 11 37.0	+0.7
	3.2nm,0.8s,mb4.2						
STKA	Stephens Creek	36.65	159	P	P	23 11 36.9	+0.6
	3.9nm,0.7s,mb4.3,baz=343,slow=6.7,SNR=9.5						
LSA	Lhasa	43.80	312	P	P	23 12 36.4	+0.7
SONM	Songino Array	48.77	341	P	P	23 13 15.3	+0.9
	0.8nm,0.6s,mb4.0,baz=161,slow=9.4,SNR=5.5						
MKAR	Makanchi Array	59.02	325	P	P	23 14 29.1	-0.2
	1.0nm,0.5s,mb4.1,baz=122,slow=8.0,SNR=11						
ZALV	Zalesovo Beam	62.07	333	P	P	23 14 49.8	-0.2
	0.7nm,0.4s,mb4.1,baz=121,slow=6.9,SNR=3.5						
EKS2	Erkin-Say	62.27	318	eP	P	23 14 52.8	+1.3
	2.5nm,0.6s,mb4.5						
KURK	Kurchatov	63.21	328	eP	P	23 14 56.3	-1.4
	1.1nm,0.5s,mb4.2						
BRVK	Borovoye	68.86	327	eP	P	23 15 33.0	-0.9
	4.9nm,1.3s,mb4.3						
ARU	Arti	76.41	328	eP	P	23 16 18.4	-0.3
	2.2nm,0.8s,mb4.1						

IDC 04 23:12:59.6±2.1, **1295N**×**9213E**, **h0**km, **mb3.6**/4, **mb1 3.8**/5, **mb1mx3.5**/22, **mbtmp3.7**/5, **Error ellipse: s-maj=64.0km s-min=26.2km az=59.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.54	49	Pn	Pn	23 15 05.2	+0.5
	baz=235,slow=16,SNR=7.6						
MKAR	Makanchi Array	34.74	348	P	P	23 19 51.5	0.0
	0.6nm,0.8s,baz=170,slow=8.6,SNR=5.0						
KURK	Kurchatov	39.24	346	P	P	23 20 29.6	-0.1
	0.6nm,0.7s,baz=160,slow=7.8,SNR=3.3						
ZALV	Zalesovo Beam	41.31	353	P	P	23 20 45.9	-0.9
	0.9nm,0.5s,baz=160,slow=4.6,SNR=5.0						
WRA	Warramunga Arr	52.85	128	P	P	23 22 17.6	+0.2
	0.6nm,0.7s,baz=308,slow=7.8,SNR=4.0						

IDC 04 23:16:15.4±3.9, **1120S**×**16520E**, **h0**km, **mb3.9**/3, **mb1 4.2**/3, **mb1mx3.8**/17, **mbtmp3.9**/3, **MS3.3**/2, **Ms1 3.3**/2, **ms1mx2.8**/27, **Error ellipse: s-maj=231.8km s-min=48.1km az=146.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	20.25	242	LR	LR	23 27 15.8	
	comp=Z,69nm,21.3s,baz=293,slow=33						
STKA	Stephens Creek	29.96	223	LR	LR	23 32 57.4	
	comp=Z,93nm,21.5s,baz=26,slow=33						
WRA	Warramunga Arr	30.93	250	P	P	23 22 34.7	+0.5
	1.8nm,0.7s,baz=78,slow=8.8,SNR=6.5						
ASAR	Alice Springs	32.24	243	P	P	23 22 45.0	-0.8
	1.0nm,0.8s,baz=75,slow=8.7,SNR=6.3						
FITZ	Fitzroy Crossi	38.82	255	P	P	23 23 42.8	+0.3
	1.8nm,0.7s,baz=116,slow=11,SNR=5.3						
ARCES	ARCESS Array B	116.35	345	PKP	PKPdf	23 35 00.4	-0.1
	1.0nm,0.9s,baz=101,slow=1.2,SNR=5.4						

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*TAP **04** 23:20:14.0, 2402N×12248E, h27km, ML2.6, D*
*JMA **04** 23:20:14.3, 2397N×12244E, h5km±2km*
*ISCJB **04** 23:20:16.4±0.4, 2403N±005×12239E±002, h33km, Error ellipse: s-maj=6.8km s-min=3.1km az=176.7*
ISC 04 23:20:14.6±0.8, **2398N**±005×**12241E**±002, **h12**km±6km, **n19**, $\sigma 0^{s}69$/29, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.73	49	P	Pg	23 20 28.2	-0.6
YOJ				S	Sg	23 20 37.9	-0.5
TWD	Chiawan	0.75	278	eP	Pg	23 20 29.4	+0.2
	baz=274						
TWD				eS	Sg	23 20 40.0	+1.0
	baz=274						
ENA	Nanau	0.75	306	eP	Pg	23 20 29.7	+0.5
	baz=301						
ENA				S	Sg	23 20 40.6	+1.5
	baz=301						
TWC	Suao	0.81	321	P	Pg	23 20 29.7	-0.5
	baz=316						
TWC				eS	Sg	23 20 40.5	-0.3
	baz=316						
TWE	Neicheng	1.00	318	eP	Pb	23 20 33.0	-0.8
	baz=313						
TWE				eS	Sb	23 20 46.8	-0.1
	baz=313						
ENTT	Nioudou	1.01	311	eP	Pb	23 20 33.7	-0.3
	baz=306						
NNS	Nan Shan	1.05	296	eP	Pb	23 20 34.0	-0.7
	baz=292						
NNS				eS	Sb	23 20 48.1	-0.3
	baz=292						
WHF	Hehuan Shan	1.06	279	eP	Pb	23 20 34.5	-0.3
	baz=276						
WHF				eS	Sb	23 20 48.1	-0.4
	baz=276						
EHY	Hungye	1.10	245	eP	Pb	23 20 35.1	-0.4
	baz=244						
EHY				eS	Sb	23 20 49.0	-0.8
	baz=244						
TWF1	Yuli	1.19	239	P	Pn	23 20 36.5	-0.6
	baz=238						
IRIF	Iriomote-Funau	1.26	73	eS	Sb	23 20 53.8	-0.6
HATJ	Hateruma jima	1.28	86	P	Pn	23 20 37.8	-0.5
SMLT	Sun Moon Lake	1.38	266	eP	Pn	23 20 39.0	-0.6
	baz=264						
TYC	Yuchr	1.42	267	eP	Pn	23 20 41.5	+1.3
	baz=265						
JKRS	Kuro-shima	1.49	80	P	Pn	23 20 41.2	+0.1
JKRS				eS	Sn	23 21 00.8	+0.4
ALS	Alishan	1.54	253	eP	Pn	23 20 42.2	+0.3
	baz=251						
CHN5	Tsauling	1.63	257	eP	Pn	23 20 44.0	+1.0
	baz=255						
JIJ	Ishigaki jima	1.63	76	P	Pn	23 20 43.5	+0.4
JIJ				eS	Sn	23 21 04.0	0.0
JTJ	Tarama	2.19	72	eS	Sn	23 21 19.6	+1.7

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*NNC **04** 23:21:12.5±2.3, 3663N×6952E, h0km, mb4.3, mpv4.5, Error ellipse: s-maj=19.4km s-min=14.2km az=170.0*
*IDC **04** 23:21:22.8±0.8, 3720N×6968E, h0km, mb3.8/11, mb1 4.0/16, mb1mx3.9/27, mbtmp3.9/16, ML3.7/4, MS3.5/12, Ms1 3.5/12, ms1mx3.2/40, Error ellipse: s-maj=17.7km s-min=13.8km az=49.0*
*MOS **04** 23:21:26.6±1.4, 3741N×6962E, h37km, mb4.1/11, Error ellipse: s-maj=12.4km s-min=6.2km az=86.4*
*ISCJB **04** 23:21:28.3±0.7, 3745N±003×6959E±006, h53km±8km, mb3.9/15, MS3.5/10, Error ellipse: s-maj=8.5km s-min=4.3km az=165.5*
*NEIC **04** 23:21:34.1±1.6, 3766N×6981E, h89km±16km, mb4.3/4, Error ellipse: s-maj=15.0km s-min=9.3km az=219.0*
*BJI **04** 23:21:45.2, 38.19N×7076E, h88km, mB4.5, mb3.9, Ms4.0, Msz3.9*
ISC 04 23:21:30.5±0.6, **3748N**±003×**6962E**±006, **h56**km±7km, **n103**, $\sigma 1^{s}50$/118, **mb3.9**/15, **MS3.5**/10, **10C-10D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	4.10	152	⇓P	Pn	23 22 31.5	+0.9
CHCP	Chirah Chowk	4.84	141	P	Pn	23 22 41.7	+1.0
THW	Thamme Wali	4.99	159	P	Pn	23 22 42.5	-0.3
KSH	Kashi	5.38	66	eP	Pn	23 22 50.0	+1.8
KSH				Smax			
	comp=N,3μm,1.4s						
KSH				Smax			
	comp=E,907nm,0.8s						
AML	Almayashu	5.60	33	P	Pn	23 22 52.6	+1.4
	SNR=46						
AML	Almayashu	5.60	33	ePn	Pn	23 22 52.8	+1.6
	comp=E,80nm,0.5s						
AML				eSn	Sn	23 23 53.0	-1.2
KK31	Karatay Array	5.66	7	Pn	Pn	23 22 52.2	+0.3
	comp=E,1.8nm,0.3s,baz=200,slow=16,SNR=124						
KK31				⇑Sn	Sn	23 24 10.6	+15
	comp=E,27nm,0.5s,baz=194,slow=28,SNR=4.7						
KK31	Karatay Array	5.66	7	PN	Pn	23 22 52.1	+0.2
KK31				pmax	pmax		
	comp=Z,4.0nm,0.2s						
KK31				pmax	pmax		
	comp=Z,29nm,0.4s						
DRP	Derazinda	5.75	175	P	Pn	23 22 52.5	-0.7
UCH	Uchtor	6.05	37	P	Pn	23 22 58.8	+1.5
	SNR=28						
UCH	Uchtor	6.05	37	ePn	Pn	23 22 58.4	+1.1
	comp=Z,68nm,0.8s						
EKS2	Erkin-Say	6.08	30	P	Pn	23 23 01.9	+4.3
	SNR=21						
EKS2	Erkin-Say	6.08	30	ePn	Pn	23 22 59.6	+1.9
	comp=Z,31nm,0.6s						
EKS2				Sn	Sn	23 24 02.6	-3.2
JMU	Jammu	6.43	136	ex	x	23 23 25.0	
JMU				eS	Sn	23 24 14.0	-0.5
FRU	Bishkek	6.57	34	i PN	Pn	23 23 06.0	+1.6
FRU				pmax	pmax		
	comp=Z,130nm,1.6s						
FRU				pmax	pmax		
	comp=N,870nm,1.8s						
CHMS	Chumysh	6.76	34	P	Pn	23 23 07.9	+0.9
	SNR=26						
USP	Ospenovka	6.87	31	P	Pn	23 23 09.3	+0.8
	SNR=14						
ULHL	Ulahol	6.97	45	P	Pn	23 23 10.9	+1.0
	SNR=8.7						
TKM2	Tokmak 2	7.10	38	⇑Pn	Pn	23 23 09.3	-2.4
	comp=N,28nm,0.8s						
TKM2				⇓Sn	Sn	23 24 36.0	+5.1
	comp=N,78nm,1.2s						
TKM2	Tokmak 2	7.10	38	ePN	Pn	23 23 12.2	+0.5
TKM2				pmax	pmax		
	comp=Z,36nm,0.8s						
TKM2	Tokmak 2	7.10	38	P	Pn	23 23 12.3	+0.7
	SNR=24						
TKM2	Tokmak 2	7.10	38	ePn	Pn	23 23 12.2	+0.5
	comp=Z,36nm,0.8s						
TKM2				eSn	Sn	23 24 30.2	-0.7
THN	Thein Dam	7.10	133	eP	Pn	23 23 11.7	0.0
THN				ex	x	23 25 06.2	
DLH	Dalhousie	7.17	132	eP	Pn	23 23 19.0	+6.3
DLH				eS	Sn	23 24 35.0	+2.3
KNDC	Almaty	8.02	42	⇑Pn	Pn	23 23 27.6	+3.4
	comp=Z,70nm,0.9s						
KNDC				⇑Sn	Sn	23 24 59.1	+5.8
	comp=Z,301nm,1.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BHK	Bhakra	8.25	135	ex	x	23 23 52.0	
BHK				eS	Sn	23 24 53.6	-5.7
SDNR	Sundarnagar	8.51	132	eP	Pn	23 23 31.0	0.0
SMLA	Simla	8.89	133	i P	Pn	23 23 36.8	+0.5
SMLA				i S	Sn	23 25 10.3	-4.7
SMLA				ex	x	23 25 16.8	
	comp=E,648nm,0.3s						
SMLA				ex	x	23 25 18.7	
	comp=N,702nm,0.3s						
KLP	Kalpa	9.27	127	eP	Pn	23 23 42.7	+1.3
KLP				eS	Sn	23 25 21.1	-3.1
DDI	Dehra Dun	10.00	133	eP	Pn	23 23 51.6	+0.1
DDI				ex	x	23 25 45.4	
JOSI	Joshimath	10.75	127	eP	Pn	23 24 04.3	+2.6
JOSI				ex	x	23 26 04.0	
NDI	New Delhi	10.84	142	ex	x	23 24 00.0	
NDI				eS	Sn	23 25 55.0	-7.7
KUDL	Kundal	10.96	146	eP	Pn	23 24 02.2	-2.3
KUDL				eS	Sn	23 25 57.0	-8.5
KUDL				AML	AML	23 27 27.4	
	comp=N,30nm,0.5s						
AYAN	Aya Nagar	10.96	143	eP	Pn	23 24 02.8	-1.8
AYAN				eS	Sn	23 25 59.3	-6.4
SONA	Sohna	11.14	144	eP	Pn	23 24 05.8	-1.1
SONA				eS	Sn	23 26 03.1	-6.8
SONA				AML	AML	23 27 42.8	
	comp=E,34nm,0.7s						
SONA				AML	AML	23 27 46.3	
	comp=N,20nm,0.3s						
MK31	Makanchi Array	13.21	41	⇓Pn	Pn	23 24 32.5	-2.6
	comp=N,7.8nm,0.8s,baz=228,slow=13,SNR=22						
MK31				⇑Sn	Sn	23 27 13.2	+13
	comp=N,12nm,1.2s						
MK31	Makanchi Array	13.21	41	eP	Pn	23 24 36.1	+1.0
MKAR	Makanchi Array	13.21	41	Pn	Pn	23 24 33.9	-1.2
	comp=N,0.3nm,0.3s,baz=229,slow=14,SNR=22						
MKAR				Lg		23 28 23.0	
	comp=N,0.1nm,0.3s,baz=252,slow=32,SNR=2.6						
MKAR	Makanchi Array	13.21	41	Pn	Pn	23 24 33.9	-1.2
MKAR				Lg		23 28 23.0	
AB31	Akbulak array	13.70	332	⇑Pn	Pn	23 24 38.8	-2.9
	comp=N,2.2nm,0.4s,baz=157,slow=12,SNR=77						
AB31				⇑Sn	Sn	23 27 22.8	+11
	comp=N,5.6nm,0.7s						
AB31	Akbulak array	13.70	332	eP	Pn	23 24 38.8	-2.9
AB31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KURBB	Kurchatov Arra	14.60	23	⇓Pn	Pn	23 24 50.1	-3.5
	comp=Z,0.7nm,0.6s						
KURBB				⇓Sn	Sn	23 27 42.8	+8.8
	comp=Z,9.9nm,1.4s						
KURK	Kurchatov	14.71	23	⇓Pn	Pn	23 24 52.5	-2.6
	comp=Z,8.6nm,1.2s						
KURK				⇓Sn	Sn	23 27 46.4	+10
	comp=Z,49nm,1.7s						
KURK	Kurchatov	14.71	23	Pn	Pn	23 24 50.2	-4.9
	comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=8.5						
KURK				Lg		23 29 05.6	
	comp=Z,0.0nm,0.3s,baz=208,slow=28,SNR=3.9						
KURK	Kurchatov	14.71	23	eP	Pn	23 24 52.8	-2.3
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	Kurchatov	14.71	23	ePn	Pn	23 24 52.8	-2.3
	comp=Z,4.9nm,0.8s						
KURK				Lg		23 29 05.7	
VOSK	Vostochnaya	15.27	3	⇓Pn	Pn	23 25 00.8	-1.5
	comp=Z,4.1nm,0.6s						
VOSK				⇓Sn	Sn	23 28 01.4	+11
	comp=Z,57nm,2.5s						
AKTK	Aktyubinsk	15.38	331	Pn	Pn	23 25 02.1	-1.7
AKTK				Sn	Sn	23 27 48.2	-4.8
AKTK				Lg		23 29 44.3	
AKTK				LR	LR	23 31 11.1	
AKTO	Aktyubinsk	15.38	331	⇑Pn	Pn	23 25 01.9	-1.9
	comp=Z,4.7nm,0.9s						
AKTO				⇑Sn	Sn	23 27 58.6	+5.6
	comp=Z,5.1nm,1.8s						
AKTO	Aktyubinsk	15.38	331	Pn	Pn	23 25 02.1	-1.7
	comp=Z,0.5nm,0.3s,baz=149,slow=13,SNR=16						
AKTO				Sn	Sn	23 27 48.2	-4.8
	comp=Z,0.4nm,0.3s,baz=300,slow=20,SNR=1.8						
AKTO				Lg		23 29 44.3	
	comp=Z,0.1nm,0.3s,baz=225,slow=9.7,SNR=3.0						
AKTO				LR	LR	23 31 11.1	
	comp=Z,224nm,21.3s,baz=334,slow=38						
BVA0	Borovoye Array	15.55	2	⇑Pn	Pn	23 25 04.9	-1.1
	comp=Z,1.1nm,1.0s,baz=166,slow=11,SNR=32						
BVA0	Borovoye Array	15.55	2	eP	Pn	23 25 08.5	+2.5
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	Borovoye Array	15.55	2	Pn	Pn	23 25 04.1	-1.9
	comp=Z,0.2nm,0.3s,baz=167,slow=14,SNR=8.6						
BVAR				Lg		23 29 35.6	
	comp=Z,0.1nm,0.3s,baz=176,slow=31,SNR=2.9						
BRVK	Borovoye	15.58	1	eP	Pn	23 25 05.3	-1.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRVK	Borovoye	15.58	1	ePn	Pn	23 25 05.3	-1.1
	comp=Z,7.1nm,0.7s						
ZAL	Zalesovo	19.50	28	P	Pn	23 25 52.5	-2.0
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL				MLR	MLR		
	comp=Z,90nm,22.0s						
LSA	Lhasa	19.52	107	eP	Pn	23 25 53.5	-1.4
LSA				pmax	pmax		
	comp=Z,19nm,1.0s						
LSA	Lhasa	19.52	107	eP	Pn	23 25 53.5	-1.4
	comp=Z,19nm,1.0s						
ZAA0	Zalesovo Array	19.52	28	eP	Pn	23 25 52.0	-2.7
ZALV	Zalesovo Beam	19.52	28	P	Pn	23 25 52.5	-2.2
	comp=Z,1.4nm,0.3s,baz=212,slow=10,SNR=14						
ZALV				LR	LR	23 34 13.1	
	comp=Z,90nm,22.0s,baz=13,slow=39						
GNI	Garni	19.55	286	LR	LR	23 35 10.2	
	comp=Z,67nm,19.0s,baz=252,slow=42						
GNI	Garni	19.55	286	eP	Pn	23 25 54.5	-0.7
GNI				pmax	pmax		
	comp=Z,24nm,1.1s						
GNI	Garni	19.55	286	eP	Pn	23 25 54.5	-0.7
	comp=Z,24nm,1.1s						
NVS	Novosibirsk	19.69	24	i P	Pn	23 25 53.9	-2.8
NVS				pmax	pmax		
	comp=N,6.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,11nm,1.2s						
NVS				pmax	pmax		
	comp=N,11nm,1.5s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.7s						
SVE	Sverdlovsk	20.26	346	eP	P	23 26 03.7	+2.7
SVE				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARU	Arti	20.35	342	d iP	P	23 26 03.2	+1.2
ARU				e		23 26 21.1	
ARU				eS	S	23 29 46.1	-0.7
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	Arti	20.35	342	eP	P	23 26 03.4	+1.4
	comp=Z,8.2nm,0.5s						
KIV	Kislovodsk	21.36	296	eP	P	23 26 21.0	+8.1
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.0						
HYB	Hyderabad	21.48	156	i P	P	23 26 18.0	+3.6
HYB	Hyderabad	21.48	156	eP	P	23 26 18.0	+3.6
SHL	Shillong	22.33	116	eP	P	23 26 27.0	+3.5
SHL				eS	S	23 30 29.0	+3.1
GTA	Gaotai	23.68	76	eP	P	23 26 38.4	+1.5
GTA				PP		23 27 14.4	
GTA				AMB	AMB		
	comp=Z,2.0nm,0.9s,mb3.5						
GTA				AMB	AMB		
	comp=Z,57nm,4.2s						
GTA				LR	LR		
	comp=N,241nm,13.4s,MS4.0						
GTA				LR	LR		
	comp=E,298nm,16.4s,MS4.0						
GTA				LR	LR		
	comp=Z,313nm,14.3s,MS3.9						
ZAK	Zakamensk	27.20	51	eP	P	23 27 14.4	+5.7
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
ASF	Jabal al Asfar	27.29	269	LR	LR	23 40 24.7	
	comp=Z,99nm,18.5s,MS3.4,baz=146,slow=42						
SONM	Songino Array	28.71	57	P	P	23 27 20.8	-1.3
	comp=Z,0.2nm,0.5s,mb3.1,baz=264,slow=5.8,SNR=2.1						
SONM				LR	LR	23 39 29.1	
	comp=Z,185nm,18.1s,MS3.7,baz=265,slow=38						
EIL	Elat	29.79	265	LR	LR	23 42 05.8	
	comp=Z,90nm,18.2s,MS3.4,baz=278,slow=42						
AKASG	Malin Array Be	31.47	308	P	P	23 27 46.9	+0.3
	comp=Z,0.8nm,0.4s,mb3.9,baz=81,slow=7.6,SNR=3.4						
AKASG	Malin Array Be	31.47	308	P	P	23 27 46.9	+0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	Chiang Mai Arr	31.89	118	P	P	23 27 49.8	-0.8
	comp=Z,1.2nm,0.5s,mb4.0,baz=320,slow=10,SNR=7.8						
CMAR	Chiang Mai Arr	31.89	118	P	P	23 27 49.8	-0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BOD	Bodaibo	35.30	40	eP	P	23 28 20.2	+0.4
ARCES	ARCESS Array B	39.82	338	P	P	23 28 59.5	+1.7
	comp=Z,1.3nm,0.7s,mb3.8,baz=106,slow=7.7,SNR=8.6						
ARCES	ARCESS Array B	39.82	338	P	P	23 28 59.5	+1.8
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	39.82	338	P	P	23 28 59.5	+1.7
GERES	GERESS Array B	41.46	304	PP	PP	23 30 56.4	+8.4
	comp=Z,0.8nm,0.9s,baz=70,slow=8.7,SNR=4.5						
GERES				LR	LR	23 48 44.7	
	comp=Z,37nm,20.8s,MS3.2,baz=283,slow=39						
HFS	Hagfors	41.61	321	P	P	23 29 13.2	+0.5
	comp=Z,0.9nm,0.5s,mb3.7,baz=97,slow=12,SNR=4.1						
HFS				LR	LR	23 47 40.0	
	comp=Z,86nm,18.3s,MS3.7,baz=257,slow=38						
HFS	Hagfors	41.61	321	P	P	23 29 13.2	+0.6
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS				MLR	MLR		
	comp=Z,86nm,18.3s						
NB2	NORSAR Subarra	42.93	323	P	P	23 29 24.6	+1.3
	comp=Z,1.2nm,0.7s,mb3.7,baz=96,slow=8.6						
NOA	NORSAR Array B	42.93	323	P	P	23 29 24.9	+1.6
	comp=Z,1.0nm,0.7s,mb3.6,baz=98,slow=8.0,SNR=3.1						
NOA				LR	LR	23 49 02.9	
	comp=Z,46nm,19.2s,MS3.4,baz=75,slow=38						
NOA	NORSAR Array B	42.93	323	P	P	23 29 24.9	+1.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,46nm,19.2s						
KSRS	Korea Array	45.61	71	LR	LR	23 49 08.2	
	comp=Z,45nm,18.0s,MS3.5,baz=305,slow=36						
KEST	Kesra	47.68	287	LR	LR	23 53 39.8	
	comp=Z,21nm,19.2s,MS3.1,baz=246,slow=40						
EKA	Eskdalemuir Ar	50.81	315	P	P	23 30 26.1	+1.2
	comp=Z,1.3nm,0.9s,mb3.9,baz=75,slow=8.2,SNR=3.1						
EKA	Eskdalemuir Ar	50.81	315	P	P	23 30 26.1	+1.2
EKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KAPI	Kappang	62.91	121	LR	LR	00 04 42.7	
	comp=Z,65nm,18.9s,MS3.8,baz=338,slow=41						
TORD	Torodi Ar. Bea	64.65	267	P	P	23 32 03.0	+0.5
	comp=Z,0.7nm,0.4s,mb4.0,baz=51,slow=6.4,SNR=15						
YKA	Yellowknife Ar	80.31	2	P	P	23 33 37.0	+2.0
	comp=Z,1.3nm,0.5s,mb4.2,baz=353,slow=5.4,SNR=5.1						
YKA	Yellowknife Ar	80.31	2	P	P	23 33 37.0	+2.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	80.31	2	P	P	23 33 37.0	+2.0
WRA	Warramunga Arr	83.45	121	P	P	23 33 50.6	-1.4
	comp=Z,0.4nm,0.5s,mb3.7,baz=332,slow=5.4,SNR=6.3						
ASAR	Alice Springs	85.72	124	P	P	23 34 02.3	-1.2
	comp=Z,0.3nm,0.5s,mb3.7,baz=310,slow=5.1,SNR=4.2						
CTA	Charters Tower	91.95	114	P	P	23 34 34.2	+1.1
	comp=Z,9.3nm,1.0s,mb5.1,baz=315,slow=5.7,SNR=3.6						
CTA	Charters Tower	91.95	114	P	P	23 34 34.2	+1.1
CTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						

*ISCJB **04** 23:21:40.2±1.2, 3520N±006×2421E±005, h6km±7km, mb3.6/5, Error ellipse: s-maj=10.2km s-min=6.4km az=28.9*

*IDC **04** 23:21:40.8±1.1, 3526N×2420E, h0km, mb3.7/5, mb1 3.7/10, mb1mx3.5/30, mbtmp3.6/10, ML3.6/5, Error ellipse: s-maj=22.1km s-min=8.6km az=7.0*

*CSEM **04** 23:21:42.2, 3540N×2426E, h11km, MD3.8/10, After ATH*

*ATH **04** 23:21:42.2, 3540N×2426E, h11km±1km, MD3.8/10*

*NEIC **04** 23:21:42.2, 3540N×2426E, h11km, MD3.8(ATH), After ATH.*

ISC 04 23:21:41.4±1.3**, 3526N**±006×**2424E**±005**, h2**km±8km**, n21, σ0§87**/24**, mb3.6**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAM	Vamos	0.15	348	ePG	Pg	23 21 44.1	-0.3
VAM				eSG	Sg	23 21 46.2	-0.2
IDI	Anoyia	0.53	86	Pg	Pg	23 21 51.7	+0.1
	48nm,0.3s,baz=282,slow=16,SNR=574						
IDI				Lg		23 22 00.1	
	655nm,0.3s,baz=264,slow=9.2,SNR=137						
NPS	Neapolis	1.12	89	ePB	Pb	23 22 02.9	-0.7
NPS				eSB	Sb	23 22 18.5	-0.2
KYTH	Kithira	1.41	317	ePB	Pb	23 22 07.5	-1.0
VLI	Veliai	1.80	324	ePN	Pn	23 22 13.8	+0.3
APE	Apeiranthos	2.09	30	ePN	Pn	23 22 17.7	+0.2
APE				eSN	Sn	23 22 43.4	-0.7
KARP	Karpathos	2.41	82	ePN	Pn	23 22 23.0	+1.2
ITM	Ithomi	2.68	316	ePN	Pn	23 22 26.5	+0.9
SMG	Samos	3.22	40	ePN	Pn	23 22 33.8	+0.8
ARG	Arkhangelos	3.30	72	ePN	Pn	23 22 35.7	+1.5
PRK	Paraskevi	4.30	22	ePN	Pn	23 22 48.2	+0.4
MMAI	Mount Meron Ar	9.52	100	Pn	Pn	23 23 59.8	+0.3
	0.9nm,0.3s,baz=294,slow=11,SNR=5.1						
EIL	Elat	10.62	119	Pn	Pn	23 24 14.0	-0.6
	0.4nm,0.3s,baz=329,slow=6.0,SNR=4.5						
ASF	Jabal al Asfar	10.98	103	Pn	Pn	23 24 18.9	-0.7
	0.1nm,0.3s,baz=90,slow=1.0,SNR=2.9						
GERES	GERESS Array B	15.65	333	Pn	Pn	23 25 25.1	+2.2
	0.1nm,0.3s,baz=150,slow=10,SNR=4.5						
AKASG	Malin Array Be	15.86	12	Pn	Pn	23 25 25.0	-0.5
	1.7nm,0.3s,baz=206,slow=11,SNR=3.6						
HFS	Hagfors	25.82	348	P	P	23 27 12.4	-1.3
	1.3nm,0.8s,mb3.5,baz=152,slow=13,SNR=5.0						
EKA	Eskdalemuir Ar	27.53	325	P	P	23 27 30.0	+0.8
	1.1nm,0.7s,mb3.6,baz=128,slow=9.3,SNR=4.2						
TORD	Torodi Ar. Bea	29.98	228	P	P	23 27 51.1	-0.3
	0.6nm,0.4s,mb3.6,baz=31,slow=9.0,SNR=21						
ARCES	ARCESS Array B	34.34	1	P	P	23 28 27.2	-1.9
	0.4nm,0.4s,mb3.7,baz=180,slow=9.2,SNR=7.7						
MKAR	Makanchi Array	44.35	57	P	P	23 29 52.9	-0.1
	0.5nm,0.5s,mb3.5,baz=269,slow=9.5,SNR=3.9						

IDC 04 23:25:53.5±4.0**, 477S**×**14759E, h0**km**, mb3.8**/2**, mb1 4.0**/3**, mb1mx3.6**/15**, mbtmp3.8**/3**, Error ellipse: s-maj=118.8km s-min=47.2km az=109.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	Warramunga Arr	19.84	219	eP	Pn	23 30 26.2	-1.4
WRA	Warramunga Arr	19.85	219	P	Pn	23 30 26.0	-1.7
	0.4nm,0.3s,baz=43,slow=10,SNR=9.2						
ASAR	Alice Springs	22.96	214	P	P	23 30 59.2	-0.4
	1.2nm,0.4s,baz=47,slow=8.3,SNR=18						
FITZ	Fitzroy Crossi	25.22	237	P	P	23 31 21.5	+0.3
	1.4nm,0.5s,baz=52,slow=9.1,SNR=9.7						
TORD	Torodi Ar. Bea	145.34	286	PKPbc	PKPbc	23 45 33.6	-0.6
	0.2nm,0.6s,baz=81,slow=3.3,SNR=5.8						

*IDC **04** 23:37:01.6±3.1, 1370S×16726E, h190km±23km, mb4.0/11, mb1 4.1/11, mb1mx3.9/18, mbtmp4.0/11, Error ellipse: s-maj=32.5km s-min=17.2km az=121.0*

*ISCJB **04** 23:37:02.6±2.1, 1368S±009×167.1E±0.1, h209km±18km, mb4.2/17, Error ellipse: s-maj=20.8km s-min=14.2km az=6.2*

*NEIC **04** 23:37:02.7±2.1, 1362S×16721E, h199km±17km, mb4.5/9, Error ellipse: s-maj=16.1km s-min=9.1km az=97.0*

ISC 04 23:37:04.0±2.3**, 1364S**±009×**1671E**±01**, h205**km±19km**, n65, σ0§85**/29**, mb4.2**/17**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	8.16	300	Pn	Pn	23 38 58.3	-1.0
CTA	Charters Tower	20.95	249	P	P	23 41 31.7	+0.5
	4.9nm,0.6s,baz=56,slow=6.7,SNR=5.3						
CTAO	Charters Tower	20.95	249	eP	P	23 41 32.3	+1.2
	5.9nm,0.8s						
ARMA	Armidale	21.97	218	eP	P	23 41 43.1	+1.6
CNB	Canberra Magne	26.86	213	eP	P	23 42 26.7	+1.0
SNZO	South Karori	28.36	168	P	P	23 42 37.9	-1.0
STKA	Stephens Creek	29.59	228	eP	P	23 42 50.7	+0.8
	6.5nm,0.3s,mb4.7						
STKA	Stephens Creek	29.59	228	P	P	23 42 50.6	+0.7
	9.8nm,0.4s,mb4.8,baz=45,slow=8.5,SNR=32						
STKA				PcP	PcP	23 45 48.7	-0.9
	2.4nm,0.5s,baz=130,slow=18,SNR=5.6						
TOO	Toolangi	30.64	215	eP	P	23 43 00.0	+0.9
WB2	Warramunga Arr	31.94	254	eP	P	23 43 10.5	-0.2
WRAB	Tennant Creek	31.94	254	eP	P	23 43 10.6	-0.1
	48nm,2.2s,mb4.6						
WRA	Warramunga Arr	31.95	254	P	P	23 43 10.3	-0.5
	1.3nm,0.5s,mb3.7,baz=86,slow=9.2,SNR=12						
WRA				PcP	PcP	23 45 55.3	-0.8
	1.8nm,0.7s,baz=82,slow=3.2,SNR=8.9						
WRA				ScP	ScP	23 49 21.4	+1.2
	1.1nm,0.7s,baz=87,slow=3.5,SNR=6.5						
ASAR	Alice Springs	32.92	247	P	P	23 43 18.8	-0.5
	4.1nm,0.4s,mb4.3,baz=75,slow=9.3,SNR=76						
ASAR				PcP	PcP	23 45 58.1	-0.6
	1.5nm,0.6s,baz=83,slow=2.5,SNR=12						
ASAR				S	S	23 48 19.4	-2.6
	0.7nm,0.7s,baz=81,slow=14,SNR=4.8						
ASAR				ScP	ScP	23 49 24.4	+0.8
	2.8nm,0.9s,baz=80,slow=3.4,SNR=13						
KAKA	Kakadu	33.74	267	eP	P	23 43 27.3	+0.8
	4.6nm,0.6s,mb4.2						
FORT	Forrest	39.72	238	eP	P	23 44 16.5	-0.2
	14nm,0.6s,mb4.6						
FITZ	Fitzroy Crossi	40.07	258	P	P	23 44 18.8	-0.9
	1.7nm,0.8s,mb3.5,baz=124,slow=15,SNR=3.8						
FITZ				PcP	PcP	23 46 20.1	-0.3
	2.1nm,0.8s,baz=306,slow=23,SNR=5.3						
FITZ	Fitzroy Crossi	40.07	258	eP	P	23 44 19.3	-0.4
FITZ				PcP	PcP	23 46 20.1	-0.3
MBWA	Marble Bar	45.68	254	eP	P	23 45 05.3	+0.6
	4.1nm,0.5s,mb4.0						
KLBR	Kellerberrin	48.50	240	eP	P	23 45 25.5	-0.9
	4.8nm,0.3s,mb4.3						
NWAO	Narrogin (SRO)	49.17	238	eP	P	23 45 30.8	-0.7
	16nm,0.9s,mb4.4						
CASY	Casey	64.47	202	eP	P	23 47 17.3	-1.0
	5.1nm,0.6s,mb4.3						
PETK	Petropavlovsk-	66.96	354	P	P	23 47 34.5	+0.2
	0.6nm,0.4s,mb3.6,baz=160,slow=4.7,SNR=4.0						
MDJ	Mudanjiang	67.24	332	eP	P	23 47 37.4	+1.1
CMAR	Chiang Mai Arr	74.36	294	P	P	23 48 20.9	+1.2
	2.9nm,0.8s,mb4.0,baz=132,slow=5.1,SNR=12						
SONM	Songino Array	81.52	324	P	P	23 48 58.7	+0.2
	0.7nm,0.4s,mb3.6,baz=158,slow=5.9,SNR=7.8						
MAW	Mawson	82.83	202	P	P	23 49 04.5	-0.6
	5.2nm,0.5s,mb4.5,baz=96,slow=15,SNR=5.0						
MKAR	Makanchi Array	96.30	316	P	P	23 50 09.1	0.0
	1.7nm,0.6s,mb4.4,baz=86,slow=6.9,SNR=18						
ZALV	Zalesovo Beam	96.42	324	P	P	23 50 08.3	-1.1
	1.2nm,0.6s,mb4.3,baz=108,slow=4.8,SNR=5.8						
ARCES	ARCESS Array B	119.16	346	PKP	PKPdf	23 55 26.5	-1.4
	1.4nm,0.5s,baz=57,slow=1.5,SNR=19						
ARCES				PKKPbc	PKKPbc	00 05 39.8	-4.9
	1.9nm,0.8s,baz=222,slow=2.9,SNR=11						
BOSA	Boshof	124.09	221	PKP	PKPdf	23 55 38.0	-0.7
	2.4nm,1.0s,baz=117,slow=6.8,SNR=2.8						
NOA	NORSAR Array B	129.53	345	PKP	PKPdf	23 55 47.0	-0.9
	0.7nm,0.6s,baz=29,slow=2.0,SNR=3.9						
GERES	GERESS Array B	138.60	333	PKP	PKPdf	23 56 05.9	+0.5
	0.8nm,0.7s,baz=48,slow=2.0,SNR=7.2						
CDF	Champ du Feu	141.50	338	ePKP1	PKPdf	23 56 04.3	-6.3
FLN	La Foliniere	143.50	346	ePKP1	PKPdf	23 56 10.5	-3.6
GRR	Gorron	143.94	346	ePKP1	PKPdf	23 56 12.5	-2.4
	7.7nm,0.5s						
SSF	Saint Saulge	143.95	341	ePKP1	PKPdf	23 56 13.0	-2.0
	5.1nm,0.6s						
LPL	La Plagne	144.13	336	ePKP1	PKPdf	23 56 14.2	-1.2
LPG	La Plagne	144.14	336	ePKP1	PKPdf	23 56 14.3	-1.1
	8.5nm,0.7s						
SMF	Signal de Mont	144.21	340	ePKP1	PKPdf	23 56 13.7	-1.8
	16nm,1.0s						
AVF	Avril sur Loir	144.24	341	ePKP1	PKPdf	23 56 13.6	-1.9
	11nm,0.6s						
SGMF	Saint Gilles	144.43	348	ePKP1	PKPdf	23 56 14.2	-1.6
	30nm,0.7s						
ROSF	Rostrenen	144.49	349	ePKP1	PKPdf	23 56 14.4	-1.5
	24nm,0.8s						
BGF	Bois d'Agland	144.61	341	ePKP1	PKPdf	23 56 15.1	-1.1
	20nm,0.6s						
MBDF	Montbardon	144.77	335	ePKP1	PKPdf	23 56 15.8	-0.7
	17nm,0.8s						
QUIF	Quistinic	144.87	349	ePKP1	PKPdf	23 56 15.5	-1.1
	19nm,0.7s						
ORIF	Oris-en-Rattie	144.96	337	ePKP1	PKPdf	23 56 16.8	0.0
	31nm,0.8s						
TCF	Toulx Ste Croi	145.05	342	ePKP1	PKPbc	23 56 16.7	-0.1
	17nm,0.9s						
SBF	Sospel	145.20	334	ePKP1	PKPbc	23 56 17.0	-0.3
MFF	Saint Martin d	145.43	344	ePKP1	PKPbc	23 56 17.6	-0.3
	9.4nm,0.6s						
VIVF	Saint-Julien-l	145.47	338	ePKP1	PKPbc	23 56 18.2	+0.1
PGF	Pioggiola	145.53	331	ePKP1	PKPbc	23 56 18.1	-0.3
	38nm,0.8s						
FRF	La Foret Royal	145.78	334	ePKP1	PKPbc	23 56 18.7	-0.4
	24nm,0.7s						
SMRF	Simiane la Rot	145.87	336	ePKP1	PKPbc	23 56 19.5	+0.1
	20nm,0.8s						
LMR	La Mourre	146.02	334	ePKP1	PKPbc	23 56 19.4	-0.4
	13nm,0.5s						
RJF	Les Rejaudoux	146.15	342	ePKP1	PKPbc	23 56 20.1	0.0
CAF	Calviac	146.31	341	ePKP1	PKPbc	23 56 20.7	+0.1
LASF	Ste Croix	146.44	338	ePKP1	PKPbc	23 56 21.0	0.0
	7.9nm,0.6s						
LFF	La Frestale	146.71	342	ePKP1	PKPbc	23 56 21.6	-0.2
	15nm,0.7s						
MTLF	Montolieu	147.66	339	ePKP1	PKPbc	23 56 24.4	0.0
	13nm,0.7s						
EPF	Esparros	148.56	341	ePKP1	PKPbc	23 56 25.7	-1.1
SJPF	Ste Jean	148.95	343	ePKP1	PKPbc	23 56 27.8	0.0
ETSF	Etsaut	148.96	342	ePKP1	PKPbc	23 56 28.7	+0.9
	7.7nm,0.7s						
KEST	Kesra	150.26	322	PKPbc	PKPbc	23 56 31.2	0.0
	2.9nm,0.6s,baz=172,slow=1.8,SNR=11						
ESDC	Sonseca Array	152.89	345	PKPbc	PKPbc	23 56 36.5	-0.6
	0.3nm,0.5s,baz=19,slow=5.2,SNR=3.3						
ESDC				PKPab	PKPab	23 56 49.1	+0.2
	0.4nm,0.5s,baz=6.6,slow=4.7,SNR=4.4						
TORD	Torodi Ar. Bea	165.79	270	PKP	PKPdf	23 56 43.8	-1.3
	1.1nm,0.8s,baz=130,slow=3.1,SNR=8.6						
TORD				PKPab	PKPab	23 57 45.6	-0.2
	0.8nm,0.5s,baz=93,slow=4.4,SNR=11						

*NIED **04** 23:55:00, 2170N×12090E, h41km, Mw4.0 Best double couple: M0 1.31000×10^15 NP1:φs131.00000°, δ81.00000°, λ88.00000°. NP2:φs323.00000°, δ9.00000°, λ102.00000°.*

*IDC **04** 23:55:06.8±0.9, 2171N×12057E, h0km, mb4.0/8, mb1 4.0/10, mb1mx3.8/23, mbtmp3.9/10, ML3.4/2, MS3.1/5, Ms1 3.1/5, ms1mx2.8/33, Error ellipse: s-maj=26.3km s-min=17.3km az=70.0*

*BJI **04** 23:55:10.9, 2202N×12028E, h14km, ML3.5*

*ISCJB **04** 23:55:11.2±0.5, 2181N±003×12057E±003, h53km±4km, mb4.0/7, MS3.1/3, Error ellipse: s-maj=4.8km s-min=4.4km az=142.5*

*NEIC **04** 23:55:11.9±2.2, 2177N×12068E, h38km±25km, MG3.8(JMA), Error ellipse: s-maj=23.7km s-min=13.7km az=50.0*

*TAP **04** 23:55:11.3, 2183N×12058E, h47km, ML4.6, C*

*JMA **04** 23:55:13.2±0.3, 2168N×12093E, h106km, M3.8*

ISC 04 23:55:12.0±0.5**, 2180N**±003×**12054E**±003**, h37**km±6km**, n80, σ0§80**/129**, mb4.0**/7**, MS3.1**/3**, 1C-13D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEN	Hengchun	0.28	41	⇓iP	Pn	23 55 20.3	+0.6
	baz=30						
TWK1	Hengchun	0.28	59	⇓iP	Pn	23 55 20.3	+0.4
	baz=60						
TWK1				eS	Sn	23 55 26.5	+1.2
	baz=60						
SCZT	Fangliau	0.58	7	⇓iP	Pn	23 55 23.7	0.0
	baz=4.0						
SCZT				i S	Sn	23 55 32.4	+0.5

baz=4.0
TAW **Tawu** **0.65** **31**⇓*i*P **Pn** **23 55 24.8 +0.1**
baz=18
TAW *i* S **Sn** **23 55 33.9 +0.2**
baz=18
EAST **Anshuo** **0.65** **26**⇓*i*P **Pn** **23 55 24.8 +0.1**
baz=24
EAST S **Sn** **23 55 34.2 +0.5**
baz=24
KAU **Kaohsiung** **0.80** **344** P **Pn** **23 55 26.8 +0.1**
baz=341
KAU *e*S **Sn** **23 55 38.3 +0.9**
baz=341
ECL **Taimali** **0.88** **26**⇓*i*P **Pn** **23 55 27.9 0.0**
baz=24
ECL *e*S **Sn** **23 55 39.7 +0.2**
baz=24
SSD **Sandimen** **0.95** **5**⇓*i*P **Pn** **23 55 28.6 -0.2**
baz=2.0
SSD *e*S **Sn** **23 55 40.7 -0.4**
baz=2.0
LAY **Lan-yu** **0.97** **75**⇓*i*P **Pn** **23 55 28.0 -1.0**
baz=76
LAY *e*S **Sn** **23 55 39.9 -1.7**
baz=76
TWM1 **Shoushan** **1.03** **354** *e*P **Pn** **23 55 30.4 +0.5**
baz=351
TWM1 *e*S **Sn** **23 55 44.2 +1.1**
baz=351
TTN **Taitung** **1.10** **30** *e*P **Pn** **23 55 31.3 +0.3**
baz=29
TTN *e*S **Sn** **23 55 47.4 +2.5**
baz=29
TWG **Pinlang** **1.13** **26**⇓*i*P **Pn** **23 55 31.0 -0.3**
baz=24
TWG S **Sn** **23 55 46.2 +0.6**
baz=24
TAI1 **Yung-k'ang** **1.27** **347** *e*P **Pn** **23 55 33.3 0.0**
baz=344
TAI1 *e*S **Sn** **23 55 48.9 -0.1**
baz=344
SGST **Jiashian** **1.28** **2** *e*P **Pn** **23 55 33.4 0.0**
baz=347
SGST *e*S **Sn** **23 55 49.7 +0.4**
baz=347
STYT **Tauyuan** **1.37** **8** *e*P **Pn** **23 55 34.5 -0.2**
baz=353
STYT *e*S **Sn** **23 55 51.1 -0.5**
baz=353
SCLT **Jiali** **1.41** **347** *e*P **Pn** **23 55 34.8 -0.3**
baz=344
SCLT *e*S **Sn** **23 55 52.5 0.0**
baz=344
WTP **Ta-pu** **1.44** **3** *e*P **Pn** **23 55 35.4 -0.2**
baz=360
WTP *e*S **Sn** **23 55 53.0 -0.3**
baz=360
ELDTW **Lidau** **1.45** **18** *e*P **Pn** **23 55 36.1 +0.4**
baz=15
ELDTW *e*S **Sn** **23 55 53.9 +0.3**
baz=15
TWK **Hsinying** **1.46** **358** *e*P **Pn** **23 55 35.8 -0.1**
baz=355
TWK *e*S **Sn** **23 55 52.7 -1.1**
baz=355
CHKT **Chengkung** **1.50** **30** P **Pn** **23 55 36.4 0.0**
baz=29
CHKT *e*S **Sn** **23 55 54.8 0.0**
baz=29
CHN8 **Yiju** **1.57** **349** *e*P **Pn** **23 55 36.9 -0.5**
baz=346
CHN8 *e*S **Sn** **23 55 56.1 -0.4**
baz=346
CHY **Chiayi** **1.69** **356** *e*P **Pn** **23 55 38.7 -0.4**
baz=353
CHY *e*S **Sn** **23 55 58.5 -1.1**
baz=353
TWF1 **Yuli** **1.70** **24** P **Pn** **23 55 38.8 -0.3**
baz=33
TWF1 *e*S **Sn** **23 55 59.2 -0.4**
baz=33
ALS **Alishan** **1.72** **8**⇓*i*P **Pn** **23 55 39.8 +0.3**
baz=354
ALS *e*S **Sn** **23 56 00.8 +0.6**
baz=354
YUS **Yu-Shan** **1.73** **13**⇓*i*P **Pn** **23 55 40.3 +0.8**
baz=357
YUS *e*S **Sn** **23 56 00.2 -0.1**
baz=357
CHN5 **Tsauling** **1.79** **4** P **Pn** **23 55 40.1 -0.4**
baz=1.0
CHN5 *e*S **Sn** **23 56 01.8 -0.2**
baz=1.0
EHY **Hungye** **1.85** **23** *e*P **Pn** **23 55 41.2 0.0**
baz=31
EHY *e*S **Sn** **23 56 03.4 +0.1**
baz=31
WSF **Szhu** **1.85** **351** *e*P **Pn** **23 55 40.5 -0.8**
baz=338
WSF *e*S **Sn** **23 56 02.5 -1.0**
baz=338
WGK **Gukeng** **1.88** **1** *e*P **Pn** **23 55 40.4 -1.2**
baz=349
PNG **Penghu** **1.98** **333** *e*P **Pn** **23 55 41.2 -1.8**
baz=339
PNG *e*S **Sn** **23 56 03.9 -2.8**
baz=339
WTCT **Ta-ch'eng** **2.07** **353** *e*P **Pn** **23 55 43.9 -0.3**
baz=351
WTCT *e*S **Sn** **23 56 08.0 -0.8**
baz=351
WNT **Mingjian** **2.07** **4** *e*P **Pn** **23 55 43.8 -0.5**
baz=1.0
SMLT **Sun Moon Lake** **2.10** **9**⇓*i*P **Pn** **23 55 45.0 +0.3**
baz=356
SMLT *e*S **Sn** **23 56 10.1 +0.5**
baz=356
TYC **Yuchr** **2.12** **8**⇓*i*P **Pn** **23 55 45.0 +0.1**
baz=5.0
TYC *e*S **Sn** **23 56 08.8 -1.2**
baz=5.0
ESL **Shilin** **2.17** **22** *e*P **Pn** **23 55 45.3 -0.3**
baz=32
ESL *e*S **Sn** **23 56 11.2 0.0**
baz=32
TCU **Taichung** **2.34** **3** *e*P **Pn** **23 55 47.6 -0.3**
baz=1.0
HWA **Hwalien** **2.38** **24** *e*P **Pn** **23 55 48.0 -0.5**
baz=22
WHF **Hehuan Shan** **2.43** **16** *e*P **Pn** **23 55 49.7 +0.5**
baz=12
WHF *e*S **Sn** **23 56 18.4 +0.7**
baz=12
TWD **Chiawan** **2.47** **23** *e*P **Pn** **23 55 49.6 -0.1**
baz=20
TWD *e*S **Sn** **23 56 17.5 -1.2**
baz=20
TWT **Tachien** **2.51** **13** *e*P **Pn** **23 55 50.3 0.0**
baz=359
TWT *e*S **Sn** **23 56 19.5 -0.2**
baz=359
TWQ1 **Liyutan** **2.55** **5** *e*P **Pn** **23 55 50.8 0.0**
baz=1.0
TWQ1 *e*S **Sn** **23 56 20.7 +0.1**
baz=1.0
NACB **Ninganchiao** **2.56** **22** *e*Pn **Pn** **23 55 50.4 -0.5**
NACB *e*Sn **Sn** **23 56 21.5 +0.7**
NSY **Sanyi** **2.61** **4** *e*P **Pn** **23 55 52.1 +0.4**
baz=353
NNS **Nan Shan** **2.74** **16**⇑*i*P **Pn** **23 55 54.9 +1.5**
baz=14
NNS *e*S **Sn** **23 56 26.2 +0.9**
baz=14
ENA **Nanau** **2.84** **23** *e*P **Pn** **23 55 54.5 -0.3**
baz=20
NSTT **Nanjuang** **2.85** **8** *e*P **Pn** **23 55 54.6 -0.4**
baz=354
YHNB **Yeheng** **2.96** **15** *e*Pn **Pn** **23 55 57.1 +0.7**
YHNB *e*Sn **Sn** **23 56 32.4 +1.6**
NSK **Sanguang** **2.96** **15** *e*P **Pn** **23 55 57.9 +1.4**
baz=12
ENTT **Nioudou** **2.98** **18** *e*P **Pn** **23 55 57.4 +0.6**
baz=28
TWC **Suao** **3.05** **23** *e*P **Pn** **23 55 57.8 +0.1**
baz=19
TWC *e*S **Sn** **23 56 32.1 -0.8**
baz=19
TWE **Neicheng** **3.09** **19** *e*P **Pn** **23 55 58.5 +0.3**
baz=29
KNM **Kinmen** **3.25** **324** *e*P **Pn** **23 56 00.2 -0.2**
baz=321
KNM *e*S **Sn** **23 56 37.1 -0.8**
baz=321
TATO **Taipei** **3.28** **15** *e*Pn **Pn** **23 56 02.0 +1.2**
TATO *e*Sn **Sn** **23 56 42.1 +3.4**
TWA **Mucha** **3.31** **17** *e*P **Pn** **23 56 01.9 +0.6**
baz=1.0
TWS1 **Kuangyinshan** **3.38** **14** *e*P **Pn** **23 56 02.9 +0.6**
baz=360
NWF **Wu-fen Shan** **3.45** **19** *e*P **Pn** **23 56 04.1 +0.9**
baz=14
NWF *e*S **Sn** **23 56 43.5 +0.6**
baz=14
TWB1 **Santiao Chiao** **3.46** **22** *e*P **Pn** **23 56 04.6 +1.2**
baz=19
YOJ **Yonaguni jima** **3.49** **40** P **Pn** **23 56 04.9 +1.1**
YOJ S **Sn** **23 56 44.0 +0.1**
YOJ **Yonaguni jima** **3.49** **40** P **Pn** **23 56 03.9 +0.1**
baz=36
YOJ *e*S **Sn** **23 56 44.3 +0.4**
baz=36
QZH **Quanzhou** **3.61** **331** P **Pn** **23 56 04.6 -0.8**
QZH S **Sn** **23 56 43.0 -3.7**
QZH Smax
comp=N,130nm,0.6s
QZH Smax
comp=E,180nm,0.8s
HATJ **Hateruma jima** **3.75** **53** P **Pn** **23 56 07.4 0.0**
HATJ S **Sn** **23 56 48.5 -1.9**
IRIF **Iriomote-Funau** **3.87** **49** P **Pn** **23 56 09.5 +0.5**
IRIF S **Sn** **23 56 53.1 -0.2**
JKRS **Kuro-shima** **4.01** **52** P **Pn** **23 56 11.1 +0.2**
JKRS S **Sn** **23 56 56.0 -0.7**
JIJ **Ishigaki jima** **4.18** **52** P **Pn** **23 56 13.2 -0.1**
JIJ S **Sn** **23 56 58.6 -2.4**
JTJ **Tarama** **4.76** **53** P **Pn** **23 56 21.1 -0.1**
JTJ S **Sn** **23 57 14.0 -1.1**
JOW **Kunigami** **8.65** **53** Pn **Pn** **23 57 11.9 -2.7**
comp=E,1.0nm,0.3s,baz=185,slow=12,SNR=5.3
JOW LR LR 23 59 46.5
comp=E,45nm,20.1s,baz=229,slow=32
NJ2 **Nanjing** **10.32** **352** *e*P **Pn** **23 57 37.6 +0.1**
KSRS **Korea Array** **16.86** **21** Pn **Pn** **23 59 06.0 +0.9**
comp=E,0.2nm,0.3s,baz=188,slow=9.5,SNR=3.0
KSRS LR LR 00 05 24.3
comp=E,85nm,18.7s,baz=353,slow=36
CMAR **Chiang Mai Arr** **20.55** **265** P **P** **23 59 48.1 +0.6**
comp=E,1.2nm,0.6s,baz=72,slow=9.7,SNR=8.2
CMAR LR LR 00 08 11.5
comp=E,47nm,20.8s,MS2.8,baz=85,slow=38
MJAR **Matsushiro Arr** **21.25** **42** LR LR 00 08 47.3
comp=E,94nm,21.1s,MS3.1,baz=210,slow=38
ASAJ **Asahikawa** **28.78** **34** P **P** **00 01 08.2 +2.0**
comp=E,5.7nm,0.7s,mb4.4,baz=288,slow=14,SNR=3.9
MKAR **Makanchi Array** **39.67** **318** P **P** **00 02 41.2 +0.9**
comp=E,0.7nm,0.6s,mb3.5,baz=110,slow=10,SNR=5.8
MKAR **Makanchi Array** **39.67** **318** P **P** **00 02 41.2 +0.9**
ZALV **Zalesovo Beam** **41.95** **329** P **P** **00 02 58.9 -0.1**
comp=E,1.8nm,0.7s,mb3.8,baz=112,slow=7.4,SNR=6.5
PETK **Petropavlovsk-** **42.17** **39** LR LR 00 19 59.7
comp=E,32nm,19.6s,MS3.2,baz=131,slow=35
WRA **Warramunga Arr** **43.62** **161** P **P** **00 03 11.6 -1.3**
comp=E,3.0nm,0.7s,mb4.1,baz=344,slow=8.9,SNR=14
ASAR **Alice Springs** **47.02** **163** P **P** **00 03 39.0 -0.8**
comp=E,0.6nm,0.4s,mb3.9,baz=340,slow=6.5,SNR=11
BVAR **Borovoye Array** **49.16** **322** P **P** **00 03 56.7 +0.7**
comp=E,0.7nm,0.5s,mb4.0,baz=117,slow=7.7,SNR=5.3
STKA **Stephens Creek** **57.05** **159** P **P** **00 04 55.5 +1.2**
comp=E,1.2nm,0.7s,mb4.1,baz=331,slow=13,SNR=2.9
STKA **Stephens Creek** **57.05** **159** P **P** **00 04 55.5 +1.2**

*NEIC **04** 23:57:02.7, 1602N×9468W, h33km, MD3.9(MEX), After MEX.*
MEX 04 23:57:02.0±0.8, 1602N×9467W, h57km±43km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**1.08**	**349**	*i* P	Pn	23 57 19.6	-1.4
CMIG				*i* S	Sn	23 57 33.1	-2.0
CMIG	**Matias Romero**	**1.08**	**349**	*i* P	Pn	23 57 19.6	-1.4
CMIG				*i* S	Sn	23 57 33.1	-2.0
HUIG	**Huatulco**	**1.40**	**260**	*i* P	Pn	23 57 23.5	-1.8
HUIG				*i* S	Sn	23 57 41.1	-1.7
HUIG	**Huatulco**	**1.40**	**260**	*i* P	Pn	23 57 23.5	-1.8
HUIG				*i* S	Sn	23 57 41.2	-1.6
SCX	**San Cristobal**	**2.08**	**70**	*i* P	Pn	23 57 36.2	+1.7
SCX	**San Cristobal**	**2.08**	**70**	*i* P	Pn	23 57 26.8	-7.7
CCIG	**Comitan**	**2.45**	**84**	*i* P	Pn	23 57 39.2	-0.4
CCIG				*i* S	Sn	23 58 06.4	-2.0
CCIG	**Comitan**	**2.45**	**84**	*e*P	Pn	23 57 40.6	+1.0
CCIG				*i* S	Sn	23 58 06.5	-1.9
TPIG	**Tehuac#an**	**3.50**	**313**	*i* S	Sn	23 58 31.8	-2.4

IDC 05 00:04:25.3±1.0, 278S×14213E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.6/14, mbtmp3.6/6, ML3.6/1, Error ellipse: s-maj=32.2km s-min=20.8km az=98.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.68**	**203**	P	Pn	00 08 45.2	-0.2
	0.2nm,0.3s,baz=27,slow=12,SNR=5.9						
FITZ	**Fitzroy Crossi**	**22.21**	**226**	P	P	00 09 22.1	-1.4
	0.8nm,0.6s,baz=45,slow=17,SNR=4.2						
ASAR	**Alice Springs**	**22.24**	**200**	P	P	00 09 25.1	+1.2
	0.3nm,0.5s,baz=31,slow=11,SNR=4.0						
MJAR	**Matsushiro Arr**	**39.29**	**355**	P	P	00 11 55.4	-0.6
	0.8nm,0.3s,baz=170,slow=7.4,SNR=3.1						
PPT	**Papeete**	**68.48**	**108**	P	P	00 15 29.9	-0.1
	32nm,0.4s,baz=253,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**71.95**	**321**	P	P	00 15 51.5	+0.7
	0.9nm,0.8s,baz=114,slow=8.0,SNR=6.3						
ZALV	**Zalesovo Beam**	**73.74**	**329**	P	P	00 16 01.3	+0.1
	0.9nm,0.6s,baz=117,slow=4.8,SNR=4.3						

*NSSP **05** 00:10:56.8, 4107N×4375E, h13km, ML2.6*
*TIF **05** 00:10:57.7, 4110N×4389E, h10km±4km*
*MOS **05** 00:10:57.2±2.3, 4100N×4259E, h26km, mb4.0/1, Error ellipse: s-maj=48.2km s-min=11.2km az=66.8*
*ISCJB **05** 00:10:59.5±0.6, 4114N±002×4391E±006, h7km±5km, Error ellipse: s-maj=7.1km s-min=3.6km az=170.7*
*CSEM **05** 00:11:00.2±1.0, 4109N×4415E, h17km±5km, ML2.6, Error ellipse: s-maj=35.8km s-min=10.2km az=74.0*
ISC 05 00:10:59.9±0.6, 4112N±002×4394E±006, h9km±6km, n19, σ1§25/34, 1C-1D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMRZ	**Gyumri**	**0.32**	**194**	P	**Pg**	**00 11 07.0**	**+0.9**
GMRZ				S	**Sg**	**00 11 11.0**	**+0.7**
STE	**Stepanavan**	**0.35**	**109**	⇑P	**Pg**	**00 11 06.3**	**-0.4**
STE				S	**Sg**	**00 11 14.0**	**+2.7**
TBLG	**Delisi**	**0.86**	**44**	P	**Pg**	**00 11 15.1**	**-1.3**
TBLG				S	**Sg**	**00 11 28.1**	**+0.4**
MTA	**Mtatsminda**	**0.86**	**48**	P	**Pg**	**00 11 15.1**	**-1.4**
MTA				S	**Sg**	**00 11 27.9**	**+0.1**
GOR	**Gori**	**0.88**	**8**	P	**Pg**	**00 11 15.5**	**-1.3**
GOR				S	**Sg**	**00 11 28.8**	**+0.6**
ERE	**Yerevan**	**1.03**	**157**	P	**Pg**	**00 11 15.0**	**-4.6**
ERE				S	**Sg**	**00 11 30.0**	**-3.0**
DGRG	**David-gareji**	**1.13**	**72**	P	**Pb**	**00 11 21.2**	**-0.5**
GNI	**Garni**	**1.15**	**147**	⇓P	**Pb**	**00 11 20.5**	**-1.3**
GNI				S	**Sg**	**00 11 37.2**	**+0.5**
ONI	**Oni**	**1.51**	**346**	P	**Pn**	**00 11 26.4**	**-0.7**
ONI				S	**Sn**	**00 11 47.2**	**+0.4**
ZEI	**Tsey**	**1.65**	**359**	*e*Pn	**Pn**	**00 11 28.8**	**-0.3**
VADZ	**Vardenis**	**1.67**	**124**	P	**Pg**	**00 11 35.0**	**+3.1**
VADZ				S	**Sg**	**00 12 01.0**	**+7.5**
LACR	**Lac**	**1.73**	**9**	*e*Pn	**Pn**	**00 11 27.6**	**-2.5**
DIGR	**Digorskoe uzhe**	**1.80**	**352**	*e*Pn	**Pn**	**00 11 31.0**	**-0.1**
KORR	**Kora**	**1.97**	**3**	*e*Pn	**Pn**	**00 11 35.4**	**+2.0**
KORR				*e*Sn	**Sg**	**00 12 03.6**	**+0.4**
SNJR	**Sundja**	**2.06**	**18**	*e*Pn	**Pg**	**00 11 39.3**	**0.0**
SNJR				*e*Sn	**Sg**	**00 12 10.4**	**+4.5**
ARNR	**Ardon**	**2.09**	**7**	*e*Pn	**Pn**	**00 11 37.7**	**+2.7**
ARNR				*e*Sn	**Sg**	**00 12 07.6**	**+0.7**
BTKR	**Batakoyurt**	**2.30**	**11**	*e*Pn	**Pn**	**00 11 41.1**	**+3.2**
BTKR				*e*Sn	**Sg**	**00 12 13.5**	**-0.2**
KIV	**Kislovodsk**	**2.98**	**342**	PN	**Pg**	**00 11 56.0**	**-1.0**
KIV				*e*		00 12 18.8	
KIV				*e*		00 12 41.0	
KIV				pmax	pmax		
	comp=Z,11nm,1.4s						
KIV	**Kislovodsk**	**2.98**	**342**	Pn	**Pg**	**00 11 56.0**	**-1.0**
	comp=Z,11nm,1.4s						
KIV				*e*Sn	**Sn**	**00 12 18.8**	**-4.4**
KIV				*e*Sg	**Sg**	**00 12 41.0**	**+5.3**

*NEIC **05** 01:16:05.7, 1687N×9410W, h150km, MD3.9(MEX), After MEX.*
MEX 05 01:16:05.7±1.3, 1687N×9410W, h150km±16km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.78**	**286**	*i* P	Pn	01 16 27.5	-1.2
CMIG				*i* S	Sn	01 16 44.2	-2.1
TGIG		**0.94**	**96**	*i* P	Pn	01 16 28.8	-1.2
TGIG				*i* S	Sn	01 16 46.6	-1.9
TUIG	**Tuzandepetl**	**1.20**	**345**	*i* P	Pn	01 16 30.3	-1.9
TUIG				*i* S	Sn	01 16 49.8	-2.9
CCIG	**Comitan**	**1.97**	**107**	*i* P	Pn	01 16 39.5	-1.0
CCIG				*i* S	Sn	01 17 06.1	-1.1
HUIG	**Huatulco**	**2.22**	**241**	*i* P	Pn	01 16 40.9	-2.5
HUIG				*i* S	Sn	01 17 11.6	-0.9
OXX	**Oaxaca**	**2.52**	**275**	*i* P	Pn	01 16 47.8	+0.7
OXX				*i* S	Sn	01 17 19.2	+0.2
VHO	**Vista Hermosa**	**2.53**	**275**	*i* P	Pn	01 16 47.1	-0.1
VHO				*i* S	Sn	01 17 17.8	-1.4

*ISCJB **05** 01:20:44.4±0.5, 2406S±004×6679W±006, h198km±6km, mb3.7/9, Error ellipse: s-maj=9.0km s-min=6.7km az=17.7*
*IDC **05** 01:20:45.1±0.9, 2399S×6672W, h188km±8km, mb3.7/8, mb1 3.8/14, mb1mx3.7/20, mbtmp3.6/14, Error ellipse: s-maj=13.3km s-min=10.8km az=74.0*
*NEIC **05** 01:20:45.8±0.6, 2395S×6670W, h195km±6km, mb3.9/1, Error ellipse: s-maj=9.2km s-min=8.1km az=83.0*
*GUC **05** 01:20:46.8±0.7, 2432S×6710W, h200km, ML4.4*
ISC 05 01:20:45.4±0.5, 2401S±005×6676W±006, h190km±6km, n28, σ1§02/33, mb3.8/9, 1C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.42**	**305**	P	**Pn**	**01 21 29.4**	**+1.6**
	37nm,0.3s,baz=127,slow=5.9,SNR=371						
LVC				S	**Sn**	**01 22 01.4**	**+0.8**
	7.8nm,0.3s,baz=224,slow=20,SNR=3.1						
LVC	**Limon Verde**	**2.42**	**305**	P	**Pn**	**01 21 29.4**	**+1.6**
LVC				S	**Sn**	**01 22 01.4**	**+0.8**
CEN1	**Los Morros**	**3.21**	**280**	⇓*i*P	**Pn**	**01 21 38.9**	**+1.8**
CEN1				*i* S	**Sn**	**01 22 18.0**	**+0.6**
CEN1				AML	AML	01 22 20.8	
	comp=N,385nm,0.7s						
ANCH	**Antofagasta**	**3.36**	**275**	*e*P	**Pn**	**01 21 39.5**	**+0.6**
ANCH				*i* S	**Sn**	**01 22 18.8**	**-1.8**
CPN1	**Cerro Paranal**	**3.38**	**259**	*e*P	**Pn**	**01 21 39.5**	**+0.4**
CPN1				*i* S	**Sn**	**01 22 19.2**	**-1.8**
CPN1				AML	AML	01 22 23.0	
	comp=E,550nm,0.5s						
CDCH	**Caldera**	**4.78**	**229**	⇑*i*P	**Pn**	**01 21 54.9**	**-1.8**
CDCH				*i* S	**Sn**	**01 22 47.5**	**-5.3**
CFAA	**Coronel Fontan**	**7.68**	**189**	P	**Pn**	**01 22 34.5**	**+0.1**
	comp=E,0.2nm,0.3s,baz=12,slow=11,SNR=21						
CFAA				S	**Sn**	**01 23 56.3**	**-4.7**
	comp=E,0.3nm,0.3s,baz=142,slow=22,SNR=18						
LPAZ	**La Paz**	**7.79**	**350**	P	**Pn**	**01 22 36.8**	**+0.8**
	comp=E,0.9nm,0.3s,baz=193,slow=9.6,SNR=23						
LPAZ				S	**Sn**	**01 24 02.7**	**-1.0**
	comp=E,0.4nm,0.3s,baz=247,slow=24,SNR=5.7						
LPAZ	**La Paz**	**7.79**	**350**	P	**Pn**	**01 22 36.8**	**+0.8**
LPAZ				S	**Sn**	**01 24 02.7**	**-1.0**
CPUP	**Villa Florida**	**8.85**	**107**	P	**Pn**	**01 22 49.8**	**-0.1**
	comp=E,0.7nm,0.3s,baz=274,slow=12,SNR=15						
SIV	**San Ignacio**	**9.60**	**35**	P	**Pn**	**01 22 58.5**	**-1.1**
	comp=E,0.5nm,0.3s,baz=219,slow=13,SNR=15						
SIV				S	**Sn**	**01 24 46.9**	**0.0**
	comp=E,0.1nm,0.3s,baz=225,slow=19,SNR=2.0						
PLCA	**Paso Flores**	**16.98**	**190**	P	**Pn**	**01 24 32.3**	**+0.5**
	comp=E,0.2nm,0.3s,baz=330,slow=7.2,SNR=4.0						
BDFB	**Brasilia**	**19.48**	**68**	P	**P**	**01 24 58.6**	**+0.5**
	comp=E,1.1nm,0.3s,baz=236,slow=12,SNR=15						
PMSA	**Palmer Station**	**40.80**	**178**	P	**P**	**01 28 09.4**	**+1.6**
	comp=E,1.4nm,0.6s,mb3.8,baz=347,slow=14,SNR=3.3						
TXAR	**Lajitas Array**	**63.81**	**324**	P	**P**	**01 30 57.5**	**+0.1**
	comp=E,0.4nm,0.7s,mb3.4,baz=153,slow=7.3,SNR=5.8						
DBIC	**Dimbokro**	**67.60**	**71**	P	**P**	**01 31 20.6**	**-1.4**
	comp=E,3.9nm,0.9s,mb4.1,baz=234,slow=8.7,SNR=3.7						
ANMO	**Albuquerque**	**69.68**	**326**	P	**P**	**01 31 34.5**	**+0.1**
	comp=E,1.0nm,0.7s,mb3.7,baz=189,slow=4.4,SNR=5.9						
ANMO	**Albuquerque**	**69.68**	**326**	P	**P**	**01 31 34.5**	**0.0**
TORD	**Torodi Ar. Bea**	**76.37**	**69**	P	**P**	**01 32 13.4**	**-0.7**
	comp=E,0.8nm,0.5s,mb3.6,baz=265,slow=6.0,SNR=20						
PDAR	**Pinedale Array**	**77.27**	**329**	P	**P**	**01 32 19.2**	**+0.7**
	comp=E,0.3nm,0.3s,mb3.4,baz=139,slow=4.3,SNR=3.1						
HWUT	**Hardware Ranch**	**77.35**	**327**	*e*P	**P**	**01 32 20.0**	**+1.0**
	comp=E,1.6nm,0.6s,mb3.8						
ULM	**Lac du Bonnet**	**78.30**	**341**	P	**P**	**01 32 23.4**	**-0.6**
	comp=E,2.2nm,0.6s,mb4.0,baz=160,slow=5.7,SNR=6.4						
YKA	**Yellowknife Ar**	**94.20**	**340**	P	**P**	**01 33 41.3**	**-0.8**
	comp=E,2.5nm,0.9s,mb4.4,baz=133,slow=4.4,SNR=4.6						
ASAR	**Alice Springs**	**128.54**	**204**	PKP	PKPdf	01 39 30.2	-0.2
	comp=E,1.0nm,0.7s,baz=156,slow=2.3,SNR=9.9						
WRA	**Warramunga Arr**	**131.72**	**207**	PKP	PKPdf	01 39 36.5	+0.1
	comp=E,0.5nm,0.3s,baz=164,slow=1.6,SNR=6.5						
ZALV	**Zalesovo Beam**	**143.30**	**28**	PKP	PKPdf	01 39 54.1	-2.5
	comp=E,3.6nm,1.0s,baz=299,slow=3.6,SNR=6.4						
MKAR	**Makanchi Array**	**146.39**	**40**	PKPbc	PKPbc	01 40 04.3	+0.5
	comp=E,2.2nm,0.5s,baz=303,slow=3.3,SNR=14						
SONM	**Songino Array**	**155.60**	**11**	PKPab	PKPab	01 40 42.2	-0.9
	comp=E,0.4nm,0.6s,baz=351,slow=7.3,SNR=2.9						

IDC 05 01:26:51.3±30.0, 2323S×17352W, h0km, mb4.2/4, mb1 4.3/4, mb1mx4.0/16, mbtmp4.2/4, Error ellipse: s-maj=544.3km s-min=154.4km az=78.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.43**	**267**	P	P	01 34 06.7	+0.2
	4.3nm,0.5s,baz=100,slow=12,SNR=5.2						
STKA	**Stephens Creek**	**40.48**	**248**	P	P	01 34 32.1	+0.1
	1.2nm,0.4s,baz=84,slow=10,SNR=6.5						
ASAR	**Alice Springs**	**48.00**	**258**	P	P	01 35 32.4	0.0
	0.5nm,0.4s,baz=97,slow=7.9,SNR=7.2						
WRA	**Warramunga Arr**	**48.38**	**263**	P	P	01 35 34.9	-0.5
	1.6nm,0.5s,baz=105,slow=8.2,SNR=9.4						

*IDC **05** 01:36:30.5±3.4, 3187N×14060E, h52km±26km, mb3.5/4, mb1 3.8/5, mb1mx3.5/19, mbtmp3.5/5, ML4.1/1, MS3.9/1, Ms1 3.9/1, ms1mx2.6/23, Error ellipse: s-maj=50.8km s-min=21.7km az=73.0*
*JMA **05** 01:36:31.1±0.6, 3228N×14093E, h19km, M4.0*
*NEIC **05** 01:36:31.8±2.5, 3187N×14077E, h66km±20km, MG4.0(JMA), Error ellipse: s-maj=38.1km s-min=22.9km az=78.0*
*ISCJB **05** 01:36:32.8±1.7, 3225N±009×1408E±0.1, h69km±12km, mb3.6/4, Error ellipse: s-maj=20.2km s-min=14.6km az=25.3*
ISC 05 01:36:33.5±1.7, 322N±01×1408E±01, h65km±13km, n20, σ1§15/26, mb3.6/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.23**	**316**	P	**Pn**	**01 36 54.4**	**-0.3**
JHJ2				S	**Sn**	**01 37 08.5**	**-2.1**
JHJ	**Hachijo jima 2**	**1.25**	**316**	P	**Pn**	**01 36 54.5**	**-0.6**
	51nm,0.3s,baz=90,slow=22,SNR=15						
JHJ				S	**Sn**	**01 37 10.7**	**-0.5**
	277nm,0.3s,baz=53,slow=20,SNR=16						
BSO1	**Boso 1**	**2.42**	**3**	P	**Pn**	**01 37 08.8**	**-2.0**
BSO2	**Boso 2**	**2.52**	**359**	*e*S	**Sn**	**01 37 41.0**	**-0.6**
BSO3	**Boso 3**	**2.58**	**354**	P	**Pn**	**01 37 12.1**	**-0.8**
BSO3				*e*S	**Sn**	**01 37 43.4**	**+0.2**
JIM2	**Oshima 3**	**2.75**	**335**	P	**Pn**	**01 37 15.7**	**+0.5**
JIM2				*e*S	**Sn**	**01 37 46.4**	**-0.8**

JOD2	Odawara 2	3.36	335	P	Pn	01 37 24.5	+1.0
JOD2				eS	Sn	01 38 03.1	+0.9
JYN	Shimob	3.77	330	P	Pn	01 37 31.8	+2.6
JRY	Ryogami san	4.10	338	P	Pn	01 37 34.9	+1.2
JAG	Ashikaga	4.34	345	P	Pn	01 37 37.3	+0.4
MJAR	Matsushiro Arr	4.82	334	P	Pn	01 37 45.2	+1.7
	6.9nm,0.3s,baz=161,slow=14,SNR=18						
MJAR				S	Sn	01 38 45.3	+7.4
	baz=167,slow=29,SNR=3.1						
MAJO	Matsushiro	4.82	334	ePn	Pn	01 37 46.6	+3.1
	18nm,0.3s						
MAT	Matsushiro	4.82	334	P	Pn	01 37 47.4	+3.9
MAT				eS	Sn	01 38 44.4	+6.4
CBIJ	Chichi jima	5.25	167	LR	LR	01 39 11.8	
	comp=Z,1μm,20.7s,baz=263,slow=33						
MKAR	Makanchi Array	46.41	306	P	P	01 44 53.5	+0.1
	0.5nm,0.4s,mb3.6,baz=88,slow=10,SNR=4.3						
WRA	Warramunga Arr	52.24	188	P	P	01 45 33.5	-4.6
	0.2nm,0.4s,mb3.5,baz=5.8,slow=7.6,SNR=5.8						
AKASG	Malin Array Be	77.81	323	P	P	01 48 23.3	-0.4
	0.3nm,0.3s,mb3.5,baz=50,slow=5.7,SNR=3.0						
AKASG	Malin Array Be	77.81	323	P	P	01 48 23.3	-0.4
NOA	NORSAR Array B	78.43	337	P	P	01 48 25.9	-1.0
	baz=52,slow=7.6						
TXAR	Lajitas Array	93.44	52	P	P	01 49 42.0	-0.1
	0.5nm,0.8s,mb3.9,baz=318,slow=6.3,SNR=5.2						

*CSEM **05** 02:05:28.8±0.1, 2777N×5278E, h10km, mb4.0/3, Error ellipse: s-maj=2.7km s-min=1.7km az=53.0*
*ISCJB **05** 02:05:29.3±1.4, 2777N±004×5278E±005, h10km±10km, mb3.8/15, Error ellipse: s-maj=8.8km s-min=5.3km az=143.3*
*THR **05** 02:05:32.7±0.3, 2798N×5305E, h18km±3km, ML3.6*
*NEIC **05** 02:05:32.6, 2797N×5304E, h18km, mb3.8/3, ML3.6(THR), MN3.5(TEH), After THR.*
*IDC **05** 02:05:39.3±8.7, 2784N×5276E, h84km±78km, mb3.5/12, mb1 3.5/13, mb1mx3.4/28, mbtmp3.5/13, ML3.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/26, Error ellipse: s-maj=38.8km s-min=15.9km az=153.0*
*TEH **05** 02:06:01.3, 2820N×5278E, h18km, ML3.5*
ISC 05 02:05:30.7±1.5**, 2777N**±004×**5281E**±005**, h6**km±11km**, n68, σ1s01**/77**, mb3.8**/15**, 2C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.53	17	ePg	Pg	02 05 39.5	-1.5
GHIR				AML	AML	02 05 51.3	
	comp=E,7μm,0.3s						
GHIR				AML	AML	02 05 51.4	
	comp=N,6μm,0.5s						
GHIR	Ghir-Karzin	0.53	17	Pn	Pg	02 05 39.0	-2.0
GHIR	Ghir-Karzin	0.53	17	ePg	Pg	02 05 39.5	-1.5
	SNR=111						
IPAR	Pars	2.07	6	Pn	Pn	02 06 07.2	+1.2
IPAR	Pars	2.07	6	ePg	Pn	02 06 07.7	+1.7
IPAR	Pars	2.07	6	ePn	Pn	02 06 07.3	+1.3
BNDS	Bandar-Abbas	3.00	96	ePn	Pn	02 06 19.2	+0.4
BNDS				eSg	Sg	02 07 01.2	-6.0
BNDS				AML	AML	02 07 19.9	
	comp=N,236nm,0.6s						
BNDS	Bandar-Abbas	3.00	96	Pn	Pn	02 06 19.0	+0.2
BNDS				Sg	Sg	02 07 01.0	-6.2
BANOM	Banah	3.62	120	P	Pn	02 06 26.7	-0.5
	SNR=35						
NAZ	Nazwa, Dubai	3.77	137	Pn	Pn	02 06 29.6	+0.3
ASUD	Al Ashush, Dub	3.86	144	P	Pn	02 06 32.1	+1.5
	SNR=10.0						
FAQ	Al Faqa, Dubai	3.91	140	Pn	Pn	02 06 31.4	+0.1
	SNR=12						
FAQ	Al Faqa, Dubai	3.91	140	P	Pn	02 06 31.7	+0.4
	SNR=12						
IMEH	Mehriz	3.93	23	Pn	Pn	02 06 32.4	+0.9
IMEH	Mehriz	3.93	23	ePn	Pn	02 06 32.5	+1.0
IMEH				e		02 06 34.5	
HATD	Hatta, Dubai	4.18	134	⇑P	Pn	02 06 34.9	-0.1
	SNR=11						
ASHO	Ashiyiah	4.24	136	P	Pn	02 06 35.3	-0.5
	SNR=36						
IBAF	Bafgh	4.50	32	Pn	Pn	02 06 39.5	+0.2
IBAF				eSn	Sn	02 07 25.1	-6.8
IBAF	Bafgh	4.50	32	ePn	Pn	02 06 39.5	+0.2
IBAF				e		02 06 47.9	
IBAF				eSn	Sn	02 07 25.6	-6.3
IBAF	Bafgh	4.50	32	Pn	Pn	02 06 39.5	+0.2
IBAF				Sn	Sn	02 07 25.5	-6.4
ICHK	Chekchek	4.67	17	ePn	Pn	02 06 42.4	+0.8
ICHK				e		02 06 43.6	
KBD	Kabd	4.72	288	eP	Pn	02 06 45.0	+2.6
UMR	Umm Al-Rimmam	4.82	293	eP	Pn	02 06 45.3	+1.6
	baz=288						
UMR				AML	AML	02 07 42.1	
	comp=Z,30nm,0.4s,baz=288						
NASN	Na'in	5.01	360	ePn	Pn	02 06 46.7	+0.4
NASN	Na'in	5.01	360	Pn	Pn	02 06 46.0	-0.4
IZEF	Zefreh	5.12	355	Pn	Pn	02 06 47.9	0.0
IZEF				eSn	Sn	02 07 39.1	-8.2
IZEF	Zefreh	5.12	355	ePn	Pn	02 06 47.9	0.0
IZEF				eSn	Sn	02 07 39.8	-7.5
IZEF				e		02 07 56.2	
IPIR	Pirpir	5.17	342	Pn	Pn	02 06 48.2	-0.4
IPIR				eSn	Sn	02 07 40.6	-7.9
IPIR	Pirpir	5.17	342	ePn	Pn	02 06 48.3	-0.3
IPIR				eSn	Sn	02 07 40.6	-7.9
IPIR				e		02 07 51.3	
IPIR	Pirpir	5.17	342	Pn	Pn	02 06 48.2	-0.4
IPIR				Sn	Sn	02 07 40.5	-8.0
MIB	Mutribah	5.21	294	eP	Pn	02 06 50.6	+1.4
	baz=290						
MIB				AML	AML	02 07 52.7	
	comp=Z,30nm,0.4s,baz=290						
IKLH	Kolahrood	5.63	349	ePn	Pn	02 06 54.3	-0.6
IKLH				e		02 06 57.2	
BSY	Bisya	6.39	141	P	Pn	02 07 04.9	-0.4
	SNR=48						
ISFB	Sefidab	6.58	356	⇓ePn	Pn	02 07 07.3	-0.6
ISFB	Sefidab	6.58	356	ePn	Pn	02 07 07.4	-0.5
ISFB				e		02 07 27.2	
SMDO	Samad	6.67	134	⇑P	Pn	02 07 08.3	-0.8
	SNR=9.4						
IKOM	Komasi	7.84	326	ePn	Pn	02 07 24.9	-0.3
IRAZ	Razeghan	8.00	343	Pn	Pn	02 07 26.6	-0.8
IRAZ	Razeghan	8.00	343	ePn	Pn	02 07 26.7	-0.7
IGHG	Ghaleghazi	8.45	322	Pn	Pn	02 07 33.2	-0.4
IGHG	Ghaleghazi	8.45	322	ePn	Pn	02 07 33.3	-0.3
IGHG				e		02 09 25.8	
GNI	Garni	14.04	334	P	Pn	02 08 60.0	+10
	comp=Z,1.4nm,0.3s,baz=118,slow=17,SNR=4.1						
EIL	Elat	15.79	281	LR	LR	02 16 36.7	
	comp=Z,49nm,20.1s,baz=334,slow=42						
MMAI	Mount Meron Ar	15.90	293	P	Pn	02 09 15.6	+0.5
	comp=Z,0.4nm,0.3s,baz=98,slow=21,SNR=2.2						
MALT	Malatya	15.98	315	eP	Pn	02 09 21.7	+5.7
	comp=Z,2.9nm,1.0s						
AML	Almayashu	22.24	44	eP	P	02 10 30.0	+2.0
	comp=Z,3.8nm,0.6s,mb4.0						
AML	Almayashu	22.24	44	eP	P	02 10 30.0	+1.9
	comp=Z,3.8nm,0.6s,mb4.0						
EKS2	Erkin-Say	22.59	43	eP	P	02 10 33.1	+1.4
	comp=Z,3.5nm,0.6s,mb4.0						
EKS2	Erkin-Say	22.59	43	eP	P	02 10 33.1	+1.4
	comp=Z,3.5nm,0.6s,mb4.0						
UCH	Uchtor	22.80	45	eP	P	02 10 33.6	-0.4
	comp=Z,3.2nm,0.8s,mb3.8						
AKTK	Aktyubinsk	22.98	9	P	P	02 10 36.4	+0.6
AKTO	Aktyubinsk	22.98	9	P	P	02 10 36.4	+0.6
	comp=Z,0.8nm,0.4s,mb3.5,baz=198,slow=6.4,SNR=3.1						
IDI	Anoyia	24.90	294	P	P	02 10 54.7	+0.4
	comp=Z,4.7nm,0.7s,mb4.1,baz=72,slow=10,SNR=10						
BVAR	Borovoye Array	28.40	23	P	P	02 11 24.6	-1.1
	comp=Z,0.5nm,0.5s,mb3.4,baz=222,slow=1.9,SNR=2.9						
KURK	Kurchatov	30.13	33	P	P	02 11 39.6	-1.5
	comp=Z,0.4nm,0.5s,mb3.4,baz=236,slow=9.2,SNR=6.5						
KURK	Kurchatov	30.13	33	P	P	02 11 39.5	-1.5
ZAA0	Zalesovo Array	35.11	33	eP	P	02 12 26.0	+1.4
ZAA0	Zalesovo Array	35.11	33	eP	P	02 12 26.0	+1.4
ZALV	Zalesovo Beam	35.11	33	P	P	02 12 25.4	+0.8
	comp=Z,0.7nm,0.3s,mb4.0,baz=232,slow=9.2,SNR=3.9						
ZALV				PcP	PcP	02 14 52.3	-3.8
	comp=Z,0.7nm,0.3s,baz=258,slow=6.6,SNR=3.1						
HFS	Hagfors	41.81	332	P	P	02 13 19.7	-1.1
	comp=Z,1.2nm,0.4s,mb3.9,baz=137,slow=8.7,SNR=18						
NOA	NORSAR Array B	43.33	332	P	P	02 13 31.6	-1.6
	baz=155,slow=14						
ARCES	ARCESS Array B	44.70	347	P	P	02 13 43.1	-0.9
	comp=Z,0.6nm,0.3s,mb3.9,baz=149,slow=7.9,SNR=29						
SONM	Songino Array	45.82	49	P	P	02 13 53.0	-0.3
	comp=Z,0.2nm,0.3s,mb3.5,baz=270,slow=10,SNR=2.5						
ESDC	Sonseca Array	47.98	300	P	P	02 14 09.7	-0.5
	comp=Z,0.1nm,0.4s,mb3.2,baz=82,slow=6.7,SNR=3.3						
EKA	Eskdalemuir Ar	48.42	321	P	P	02 14 10.8	-2.6
	comp=Z,1.0nm,0.9s,mb3.9,baz=103,slow=7.8,SNR=4.9						
TORD	Torodi Ar. Bea	49.72	264	P	P	02 14 22.8	-1.2
	comp=Z,0.9nm,0.7s,mb3.9,baz=69,slow=7.9,SNR=11						
TORD	Torodi Ar. Bea	49.72	264	P	P	02 14 22.8	-1.2
DBIC	Dimbokro	58.39	260	P	P	02 15 26.4	-0.9
	comp=Z,1.1nm,0.3s,mb4.4,baz=42,slow=6.7,SNR=11						

*IPEC **05** 02:06:58.0±0.4, 5166N×1608E, h0km±1km, ML2.5/4, Error ellipse: s-maj=2.2km s-min=1.7km az=18.0*
*NEIC **05** 02:06:59.4±0.5, 5159N×1603E, h5km, ML2.6(BRA), ML2.8(SZGRF), Error ellipse: s-maj=6.4km s-min=4.3km az=198.0*
*ISCJB **05** 02:06:59.0±0.4, 5146N±002×1599E±003, h0km, Error ellipse: s-maj=3.3km s-min=2.2km az=16.1*
*PRU **05** 02:07:00.8, 5152N×1597E, h0km*
*IDC **05** 02:07:00.8±1.0, 5156N×1581E, h0km, mb1 2.9/2, mb1mx2.8/21, mbtmp2.7/2, ML2.9/2, Error ellipse: s-maj=15.4km s-min=12.0km az=115.0*
*WAR **05** 02:07:00.2, 5158N×1599E, ML2.8, Mining Induced*
*VIE **05** 02:07:01.9±0.5, 5135N×1599E, h0km, mb2.2/4, ML3.0/4, Error ellipse: s-maj=3.0km s-min=2.8km az=169.0 76 km WNW of Wroclaw Suspected Mining induced.*
*CSEM **05** 02:07:01.1±0.1, 5153N×1599E, h1km, ML3.4/10, Error ellipse: s-maj=2.7km s-min=2.1km az=9.0*
ISC 05 02:06:59.7±0.4**, 5154N**±002×**1599E**±003**, h0**km**, n49, σ0s90**/99**, 2C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	165	ePg	Pg	02 07 14.2	+0.7
KSP				eSg	Sg	02 07 24.3	+1.5
KSP	Ksiaz	0.72	165	ePg	Pg	02 07 14.1	+0.6
KSP				eSg	Sg	02 07 24.1	+1.2
KSP	Ksiaz	0.72	165	ePg	Pg	02 07 14.2	+0.7
KSP				i Sg	Sg	02 07 24.4	+1.5
UPC	Upice	1.03	179	ePG	Pg	02 07 19.3	-0.2
DPC	Dobruska-Polom	1.21	170	Pg	Pg	02 07 22.9	+0.1
DPC				eSg	Sg	02 07 39.2	+0.7
DPC	Dobruska-Polom	1.21	170	ePG	Pg	02 07 22.9	+0.1
DPC				eSG	Sg	02 07 39.3	+0.8
	comp=Z,56nm,0.5s						
PVCC	Panska Ves	1.35	222	ePG	Pg	02 07 25.4	-0.2
PVCC				eSG	Sg	02 07 44.3	+1.2
	comp=Z,127nm,0.2s						
BRG	Berggiesshubel	1.45	243	Pg	Pg	02 07 27.5	0.0
BRG	Berggiesshubel	1.45	243	PN	Pn	02 07 27.1	0.0
BRG				PG	Pg	02 07 27.5	0.0
BRG				SG	Sg	02 07 47.5	+1.3
	comp=Z,92nm,0.5s						
PRU	Pruhonice	1.81	211	ePN	Pn	02 07 31.4	-0.6
PRU				ePG	Pg	02 07 33.5	-0.7
PRU				eSG	Sg	02 07 57.6	0.0
	comp=Z,39nm,0.5s						
CLL	Collm	1.88	264	i Pn	Pn	02 07 31.8	-1.3
	comp=Z,11nm,0.5s						
CLL				i Pg	Pg	02 07 34.9	-0.9
CLL				i x	x	02 07 38.6	
CLL				eSg	Sg	02 08 02.0	+1.8
	comp=Z,21nm,0.4s						
CLL	Collm	1.88	264	i Pn	Pn	02 07 31.8	-1.3
CLL				i Pg	Pg	02 07 34.9	-0.9
CLL				eSg	Sg	02 08 02.0	+1.8
GKP	Gorka Klasztor	1.89	23	ePn	Pn	02 07 35.7	+2.5
GKP				ePg	Pg	02 07 40.4	+4.4
GKP				eSg	Sg	02 08 01.2	+0.7
GKP	Gorka Klasztor	1.89	23	ePn	Pn	02 07 35.7	+2.5
GKP				ePg	Pg	02 07 40.4	+4.4
GKP				eSg	Sg	02 08 01.2	+0.7
MORC	Moravsky Berou	2.02	150	ePn	Pn	02 07 34.3	-0.7
MORC				eSg	Sg	02 08 04.3	-0.3
MORC	Moravsky Berou	2.02	150	ePn	Pn	02 07 34.3	-0.7
MORC				eSg	Sg	02 08 04.3	-0.3
OKC	Ostrava-Krasne	2.19	140	ePG	Pg	02 07 40.3	-1.3
OKC				eSG	Sg	02 08 09.4	-0.5
	comp=Z,34nm,0.4s						
VRAC	Vranov	2.27	170	ePn	Pn	02 07 38.6	+0.2
VRAC				eSg	Sg	02 08 12.0	-0.5
	comp=Z,23nm,0.3s						
TREC	Trest	2.27	188	ePN	Pn	02 07 39.0	+0.6
TREC				ePG	Pg	02 07 42.6	-0.6
KRUC	Moravsky	2.49	174	ePn	Pn	02 07 41.4	-0.1
KRUC				eSg	Sg	02 08 19.5	-0.3
	comp=Z,15nm,0.5s						
NKC	Novy Kostel	2.60	241	ePN	Pn	02 07 42.7	-0.2
NKC				ePG	Pg	02 07 48.8	-0.6
NKC				eSG	Sg	02 08 23.6	+0.6
	comp=Z,51nm,0.5s						
OJC	Ojcow	2.75	117	ePg	Pg	02 07 51.8	-0.6
OJC				eSg	Sg	02 08 28.1	+0.1
KHC	Kasperske Hory	2.86	214	ePN	Pn	02 07 46.2	-0.3
KHC				ePG	Pg	02 07 52.4	-2.1
KHC				eSN	Sn	02 08 20.5	-1.2
KHC				eSG	Sg	02 08 30.6	-1.0
	comp=Z,11nm,0.4s						
JAVC	Velka Javorina	2.89	157	ePn	Pn	02 07 47.6	+0.7
JAVC				eSg	Sg	02 08 32.6	0.0
	comp=Z,10nm,0.6s						
MOX	Moxa	2.90	254	ePN	Pn	02 07 46.2	-0.8
MOX				ePG	Pg	02 07 54.7	-0.5
MOX				eSG	Sg	02 08 33.8	+1.0
GEC2	GERESS Array S	3.07	209	ePn	Pn	02 07 50.3	+0.9
GERES	GERESS Array B	3.07	209	Pn	Pn	02 07 50.2	+0.8
	comp=Z,1.0nm,0.3s,baz=30,slow=13,SNR=29						
GERES				Lg		02 08 36.7	
	comp=Z,3.5nm,0.3s,baz=28,slow=25,SNR=10						
WET	Wettzell	3.12	221	ePn	Pn	02 07 50.1	+0.1
MODS	Modra-Piesok	3.28	165	eSG	Sg	02 08 44.7	-0.2
MODS	Modra-Piesok	3.28	165	eSg	Sg	02 08 44.7	-0.2
KOLL	Kolacno	3.35	151	ePN	Pn	02 07 54.9	+1.7
KOLL				ePG	Pg	02 08 03.8	0.0
KOLL				eSG	Sg	02 08 48.4	+1.2
KOLL	Kolacno	3.35	151	ePn	Pn	02 07 54.9	+1.7
KOLL	Kolacno	3.35	151	ePn	Pn	02 07 54.9	+1.7
KOLL				ePg	Pg	02 08 03.8	0.0
KOLL				eSg	Sg	02 08 48.4	+1.2
ZST	Bratislava	3.42	167	eSG	Sg	02 08 48.1	-1.5
ZST	Bratislava	3.42	167	eSg	Sg	02 08 48.1	-1.5
NIE	Niedzica	3.48	126	eP	Pg	02 08 06.7	+0.3
NIE				eS	Sg	02 08 52.5	+1.0
CLZ	Clausthal	3.51	277	ePn	Pn	02 07 55.2	-0.2
GRA1	Grafenberg Arr	3.56	241	ePn	Pn	02 07 56.8	+0.7
GRA1				eSg	Sg	02 08 54.8	+1.0
GRF	Grafenberg Arr	3.56	241	ePn	Pn	02 07 56.8	+0.7
GRF				eSg	Sg	02 08 54.8	+1.0
VYHS	Vyhne	3.56	148	ePN	Pn	02 07 55.6	-0.5
VYHS				ePG	Pg	02 08 08.2	+0.3
VYHS				eSG	Sg	02 08 55.2	+1.2
VYHS	Vyhne	3.56	148	ePn	Pn	02 07 55.6	-0.5
VYHS	Vyhne	3.56	148	ePn	Pn	02 07 55.6	-0.5
VYHS				ePg	Pg	02 08 08.2	+0.3
VYHS				eSg	Sg	02 08 55.2	+1.2
CONA	Conrad Observa	3.62	181	⇓iPn	Pn	02 07 56.9	0.0
CONA				⇓iSg	Sg	02 08 55.3	-0.5
	comp=Z,19nm,0.4s						
MOA	Molln	3.86	198	⇑iPn	Pn	02 08 00.6	+0.4
MOA				⇑iSg	Sg	02 09 03.2	-0.4
	comp=Z,13nm,0.5s						
STHS	Stebnicka Huta	3.97	120	ePN	Pn	02 08 01.7	-0.1
STHS				ePG	Pg	02 08 14.5	-1.3
STHS				eSG	Sg	02 09 10.5	+3.3
STHS	Stebnicka Huta	3.97	120	ePn	Pn	02 08 01.7	-0.1
STHS	Stebnicka Huta	3.97	120	ePn	Pn	02 08 01.7	-0.1
STHS				ePg	Pg	02 08 14.5	-1.3
STHS				eSg	Sg	02 09 10.5	+3.3
AKASG	Malin Array Be	8.37	91	Pn	Pn	02 09 01.4	-0.8
	comp=Z,0.5nm,0.3s,baz=280,slow=12,SNR=3.0						
NOA	NORSAR Array B	9.88	346	Pn	Pn	02 09 20.6	-2.2
	baz=163,slow=14						

*ISCJB **05** 02:38:17.8±0.4, 2385N±003×12173E±002, h32km±3km, Error ellipse: s-maj=5.6km s-min=3.3km az=159.7*
*TAP **05** 02:38:17.3, 2385N×12168E, h38km±1km, ML3.1, D*
*JMA **05** 02:38:18.0±0.3, 2387N×12172E, h62km, M2.7*
ISC 05 02:38:18.3±0.4**, 2386N**±003×**12170E**±002**, h33**km±3km**, n26, σ0s52**/43**, 2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.14	324	eP	Pb	02 38 24.7	+0.4
	baz=332						
ESF	Shoufeng Towns	0.17	273	⇓eP	Pb	02 38 25.2	+0.6
	baz=277						
TWD	Chiawan	0.24	337	i P	Pb	02 38 25.3	0.0
	baz=342						
TWD				eS	Sb	02 38 31.0	+1.0
	baz=342						
ESL	Shilin	0.25	259	eP	Pb	02 38 25.3	-0.1
	baz=261						
ESL				S	Sb	02 38 30.5	+0.3
	baz=261						
WHF	Hehuan Shan	0.48	306	⇓iP	Pb	02 38 28.2	-0.4
	baz=308						
WHF				eS	Sb	02 38 35.6	-0.2
	baz=308						
EHY	Hungye	0.49	224	P	Pb	02 38 27.8	-1.0
	baz=223						
EHY				eS	Sb	02 38 35.4	-0.6
	baz=223						
ENA	Nanau	0.56	4	eP	Pb	02 38 29.5	-0.4
	baz=5.0						
TWT	Tachien	0.61	309	eP	Pn	02 38 30.7	-0.1
	baz=309						
TWF1	Yuli	0.63	216	eP	Pn	02 38 29.6	-1.2
	baz=215						
NNS	Nan Shan	0.65	333	eP	Pn	02 38 30.6	-0.6
	baz=334						
NNS				eS	Sb	02 38 39.4	-0.7
	baz=334						
SMLT	Sun Moon Lake	0.73	272	eP	Pn	02 38 31.9	-0.4
	baz=272						
SMLT				S	Sn	02 38 41.9	-0.4
	baz=272						
TWC	Suao	0.76	11	eP	Pn	02 38 32.5	-0.2
	baz=11						
TWC				eS	Sn	02 38 43.1	+0.1
	baz=11						
TYC	Yuchr	0.77	273	eP	Pn	02 38 32.5	-0.4
	baz=274						
YUS	Yu-Shan	0.78	242	P	Pn	02 38 33.1	+0.2
	baz=241						
YUS				S	Sn	02 38 43.2	-0.3
	baz=241						
ENTT	Nioudou	0.78	351	eP	Pn	02 38 32.7	-0.4
	baz=352						
ALS	Alishan	0.89	247	eP	Pn	02 38 35.0	+0.5
	baz=247						
ALS				eS	Sn	02 38 46.7	+0.4
	baz=247						
CHN5	Tsauling	0.97	254	eP	Pn	02 38 36.1	+0.5
	baz=254						
CHN5				eS	Sn	02 38 49.4	+1.2
	baz=254						
TWQ1	Liyutan	0.97	300	eP	Pn	02 38 35.7	0.0
	baz=301						
NSTT	Nanjuang	0.99	320	eP	Pn	02 38 36.6	+0.6
	baz=321						
NSTT				eS	Sn	02 38 49.0	+0.1
	baz=321						
CHN1	Nanshi	1.27	238	eP	Pn	02 38 40.5	+0.8
	baz=237						
YOJ	Yonaguni jima	1.34	63	P	Pn	02 38 40.7	0.0
YOJ				S	Sn	02 38 57.5	+0.1
IRIF	Iriomote-Funau	1.92	75	P	Pn	02 38 49.1	+0.4
IRIF				S	Sn	02 39 11.9	+0.2
HATJ	Hateruma jima	1.94	84	P	Pn	02 38 48.7	-0.3
HATJ				eS	Sn	02 39 12.4	+0.2
JKRS	Kuro-shima	2.15	80	P	Pn	02 38 52.4	+0.6
JKRS				S	Sn	02 39 17.8	+0.5
JIJ	Ishigaki jima	2.29	77	P	Pn	02 38 53.6	-0.2
JIJ				S	Sn	02 39 19.8	-1.1
JTJ	Tarama	2.85	74	P	Pn	02 39 01.8	+0.3
JTJ				S	Sn	02 39 34.6	-0.1

*ISCJB **05** 02:54:06.9±1.1, 1969S±0.10×1679E±0.1, h33km, mb3.8/5, Error ellipse: s-maj=17.0km s-min=13.1km az=23.9*
*IDC **05** 02:54:38.5±8.5, 2093S×16830E, h366km±91km, mb3.3/6, mb1 3.4/6, mb1mx3.2/16, mbtmp3.3/6, Error ellipse: s-maj=75.9km s-min=27.6km az=5.0*
ISC 05 02:54:09.0±1.1**, 197S**±01×**1679E**±01**, h35**km**, n10, σ1s48**/9**, mb3.8**/5**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.73	210	eP	Pn	02 54 47.3	-3.0
DZM				eS	Sn	02 55 22.4	+0.3
RAO	Raoul Island	16.00	129	P	Pn	02 57 52.2	+0.7
	76nm,0.3s,baz=233,slow=20,SNR=2.7						
CTA	Charters Tower	20.38	265	P	P	02 58 51.4	+8.6
	2.6nm,0.6s,baz=104,slow=13,SNR=5.0						
STKA	Stephens Creek	26.54	238	P	P	02 59 41.5	-2.1
	1.2nm,0.5s,mb3.7,baz=86,slow=13,SNR=4.5						
WRA	Warramunga Arr	31.56	264	P	P	03 00 29.8	+1.4
	0.4nm,0.5s,mb3.5,baz=100,slow=8.1,SNR=6.5						
ASAR	Alice Springs	31.81	257	P	P	03 00 31.1	+0.6
	4.0nm,0.7s,mb4.4,baz=87,slow=9.2,SNR=46						
FITZ	Fitzroy Crossi	39.96	265	P	P	03 01 41.9	+1.5
	1.8nm,0.6s,mb4.0,baz=118,slow=11,SNR=8.2						
SONM	Songino Array	86.85	324	P	P	03 06 48.0	-1.9
	0.2nm,0.5s,mb3.6,baz=134,slow=4.2,SNR=3.8						
ARCES	ARCESS Array B	125.20	345	PKP	PKPdf	03 12 56.2	-8.9
	1.3nm,0.9s,baz=59,slow=4.3,SNR=3.8						
GERES	GERESS Array B	144.30	331	PKPbc	PKPdf	03 13 34.4	-6.9
	1.1nm,0.6s,baz=64,slow=2.3,SNR=5.3						

*NEIC **05** 03:00:23.6, 1661N×9460W, h100km, MD3.7(MEX), After MEX.*
MEX 05 03:00:23.6±1.0**, 1661N**×**9460W, h100**km±11km**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.56	330	i P	Pn	03 00 38.5	-1.3
CMIG				i S	Sn	03 00 50.3	-1.6
TGIG		1.42	83	i P	Pn	03 00 47.8	-1.1
TGIG				i S	Sn	03 01 06.6	-1.5
HUIG	Huatulco	1.67	240	eP	Pn	03 00 49.7	-2.3
HUIG				i S	Sn	03 01 12.9	-0.7
SCX	San Cristobal	1.89	86	eP	Pn	03 01 02.3	+7.6
OXX	Oaxaca	2.09	283	i P	Pn	03 00 57.8	+0.5
OXX				i S	Sn	03 01 21.3	-1.9
VHO	Vista Hermosa	2.10	283	eP	Pn	03 00 56.4	-1.0
VHO				i S	Sn	03 01 22.5	-0.8
CCIG	Comitan	2.38	97	i P	Pn	03 01 00.9	-0.2
CCIG				i S	Sn	03 01 27.9	-2.1

*MEX **05** 03:07:33.9±0.3, 2488N×11066W, h12km±6km, MD5.0*
*ISCJB **05** 03:07:35.7±0.2, 2438N±002×10995W±002, h10km, mb5.0/69, MS4.9/47, Error ellipse: s-maj=3.4km s-min=2.7km az=30.3*
*IDC **05** 03:07:36.7±0.5, 2456N×11024W, h0km, mb4.5/13, mb1 4.8/19, mb1mx4.6/28, mbtmp4.6/19, ML3.8/6, MS4.9/32, Ms1 4.9/32, ms1mx4.8/39, Error ellipse: s-maj=16.7km s-min=8.7km az=86.0*
*GCMT **05** 03:07:37.3±0.2, 2467N×10986W, h12km±1km, MW5.4/81, Moment Tensor Solution. s73,c121; s81,c167; Duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.26±.02; $M_{\theta\theta}$-0.48±.02; $M_{\phi\phi}$0.74±.03; $M_{r\theta}$-0.26±.06; $M_{\theta\phi}$-1.16±.02; $M_{\phi r}$-0.17±.06; Best double couple: $M_0$1.35800×10^{17} NP1:ϕ_s105.00000°, δ78.00000°, λ-168.00000°. NP2:ϕ_s13.00000°, δ78.00000°, λ-12.00000°. Principal axes: T 1.4420, Plg0.0000°, Azm59.0000°; N -0.1670, Plg73.0000°, Azm150.0000°; P -1.2750, Plg17.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **05** 03:07:37.2±1.4, 2454N×10992W, h10km, mb5.2/24, MS5.1/7 Error ellipse: s-maj=7.9km s-min=4.2km az=94.2*
*NEIC **05** 03:07:37.3±0.4, 2435N×10995W, h10km, mb5.0/73, Error*

ellipse: s-maj=6.2km s-min=3.9km az=17.0
NEIC Felt [IV] at La Paz, Mexico.
*BJI **05** 03:07:37.3, 24.40N×110.00W, h10km, mB5.5, mb5.3, Ms5.3, Msz5.0*
ISC 05 03:07:36.1±0.3**, 2423N**±002×**10995W**±002**, h10km, n677,** σ**0.97**/670**, mb5.0**/69**, MS4.9**/47**, 183C-191D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.36**	**248**	Pg	**Pg**	**03 07 45.3**	**+2.2**
	1µm,0.3s,baz=26,slow=2.6,SNR=166						
LPIG				Lg		03 07 57.7	
	17µm,0.3s,baz=132,slow=19,SNR=69						
LPIG	**La Paz**	**0.36**	**248**	*i* P	**Pg**	**03 07 47.6**	**+4.4**
LPIG				*i* S	**Sg**	**03 07 58.3**	**+10**
LPIG	**La Paz**	**0.36**	**248**	Pg	**Pg**	**03 07 45.4**	**+2.2**
LPIG				*i* S	**Sg**	**03 07 57.2**	**+9.3**
LPIG				Lg		03 07 57.8	
MAIG	**Mazatlaan**	**3.39**	**107**	*i* P	**Pn**	**03 08 35.8**	**+6.6**
MAIG				*i* S	**Sg**	**03 09 23.9**	**-1.2**
HPIG		**4.71**	**54**	*e*P	**Pn**	**03 08 45.7**	**-1.5**
HPIG				*i* S	**Sn**	**03 09 41.9**	**-0.1**
ANIG	**Ahuacatlan**	**5.93**	**121**	*e*P	**Pn**	**03 09 12.2**	**+8.2**
ANIG				*i* S	**Sn**	**03 10 28.5**	**+17**
319A	**Douglas**	**7.14**	**5**	⇑P	**Pn**	**03 09 17.1**	**-3.5**
	baz=7.0,SNR=21						
319A				⇓S	**Sn**	**03 10 33.4**	**-8.4**
	baz=7.0						
217A	**Green Valley**	**7.55**	**354**	⇓P	**Pn**	**03 09 23.6**	**-2.7**
	baz=7.5,SNR=15						
TXAR	**Lajitas Array**	**7.57**	**46**	Pn	**Pn**	**03 09 20.6**	**-5.9**
	4.0nm,0.3s,baz=230,slow=14,SNR=116						
TXAR				Pg	**Pg**	**03 09 52.8**	**-8.2**
	baz=234,slow=17,SNR=8.8						
TXAR				Lg		03 11 27.1	
	2.5nm,0.3s,baz=221,slow=30,SNR=3.8						
TXAR				LR	LR	03 12 39.5	
	comp=Z,10µm,20.3s,baz=120,slow=40						
TXAR	**Lajitas Array**	**7.57**	**46**	Pn	**Pn**	**03 09 20.6**	**-5.9**
TXAR				Pg	**Pg**	**03 09 52.8**	**-8.2**
TXAR				Lg		03 11 27.1	
TXAR				LR	LR	03 12 39.5	
218A	**Dragoon**	**7.71**	**359**	⇓P	**Pn**	**03 09 26.3**	**-2.2**
	baz=7.6,SNR=9.5						
218A				⇓S	**Sn**	**03 10 46.5**	**-9.3**
	baz=7.6						
219A	**White Tail Can**	**7.76**	**4**	⇑P	**Pn**	**03 09 27.5**	**-1.6**
	baz=7.7,SNR=19						
219A				⇓S	**Sn**	**03 10 45.4**	**-12**
	baz=7.7						
216A	**Three Points,**	**7.85**	**351**	⇓P	**Pn**	**03 09 28.7**	**-1.7**
	baz=7.8,SNR=14						
TUC	**Tucson**	**8.08**	**355**	*e*Pn	**Pn**	**03 09 30.8**	**-2.7**
214A	**Organ Pipe Nat**	**8.10**	**342**	⇑P	**Pn**	**03 09 31.7**	**-2.0**
	baz=8.0,SNR=20						
117A	**Oracle**	**8.34**	**355**	⇓P	**Pn**	**03 09 34.9**	**-2.2**
	baz=8.2,SNR=41						
117A				⇑S	**Sn**	**03 11 04.4**	**-6.8**
	baz=8.2						
118A	**Homack Ranch,**	**8.38**	**360**	⇑P	**Pn**	**03 09 35.6**	**-1.9**
	baz=8.3,SNR=25						
116A	**Eloy**	**8.44**	**350**	⇑P	**Pn**	**03 09 35.8**	**-2.7**
	baz=8.3,SNR=24						
119A	**Ashpeak Ranch,**	**8.52**	**4**	⇑P	**Pn**	**03 09 37.6**	**-1.9**
	baz=8.4,SNR=10						
115A	**Sonoran Desert**	**8.67**	**347**	⇑P	**Pn**	**03 09 39.7**	**-1.9**
	baz=8.6,SNR=13						
Z18A	**Geronimo**	**8.82**	**360**	⇓P	**Pn**	**03 09 42.1**	**-1.5**
	baz=8.7						
Z17A	**San Carlos Hig**	**9.04**	**357**	⇑P	**Pn**	**03 09 45.4**	**-1.3**
	baz=9.0,SNR=22						
Z19A	**T-Link Ranch,**	**9.04**	**4**	⇓P	**Pn**	**03 09 46.3**	**-0.4**
	baz=9.0,SNR=6.3						
Z19A				⇓S	**Sn**	**03 11 21.7**	**-7.0**
	baz=9.0						
113A	**Mohawk Valley,**	**9.14**	**339**	⇑P	**Pn**	**03 09 47.8**	**-0.3**
	baz=9.1,SNR=37						
Z16A	**Peralta Trail,**	**9.17**	**352**	⇑P	**Pn**	**03 09 47.9**	**-0.5**
	baz=9.1,SNR=11						
112A	**Yuma**	**9.22**	**335**	⇑P	**Pn**	**03 09 48.9**	**-0.2**
	baz=9.1,SNR=9.4						
Z15A	**Gila River Ind**	**9.23**	**348**	⇓P	**Pn**	**03 09 48.9**	**-0.4**
	baz=9.1,SNR=11						
GDL2	**Guadalupe Moun**	**9.34**	**31**	*e*Pn	**Pn**	**03 09 48.9**	**-1.9**
Y17A	**Roosevelt**	**9.46**	**355**	⇑P	**Pn**	**03 09 50.7**	**-1.8**
	baz=9.4,SNR=34						
Y17A				⇓S	**Sn**	**03 11 30.9**	**-8.0**
	baz=9.4						
Z14A	**Wintersburg**	**9.47**	**345**	⇓P	**Pn**	**03 09 52.8**	**+0.2**
	baz=9.4,SNR=14						
Y18A	**Canyon Day Jun**	**9.51**	**360**	⇑P	**Pn**	**03 09 51.4**	**-1.8**
	baz=9.4,SNR=46						
Y18A				⇑S	**Sn**	**03 11 36.9**	**-3.2**
	baz=9.4						
LNIG	**Linares**	**9.56**	**84**	*i* P	**Pn**	**03 09 57.6**	**+3.7**
LNIG				*i* S	**Sn**	**03 11 53.4**	**+12**
Y16A	**Circle Bar Ran**	**9.70**	**352**	⇓P	**Pn**	**03 09 55.5**	**-0.3**
	baz=9.6,SNR=74						
Y19A	**Nutrioso**	**9.71**	**3**	⇓P	**Pn**	**03 09 55.3**	**-0.5**
	baz=9.6,SNR=42						
GLA	**Glamis**	**9.77**	**335**	⇓P	**Pn**	**03 09 56.5**	**-0.2**
	baz=9.7,SNR=28						
Y15A	**Casa Rosa Ranc**	**9.91**	**348**	⇓P	**Pn**	**03 09 57.7**	**-0.9**
	baz=9.8,SNR=87						
DVTC	**Desert V Tower**	**9.99**	**329**	⇓P	**Pn**	**03 09 58.8**	**-0.8**
	baz=9.9,SNR=32						
Y14A	**Wickenburg**	**10.03**	**345**	⇓P	**Pn**	**03 10 00.8**	**+0.5**
	baz=9.9,SNR=50						
SWSC	**Sam W. Stewart**	**10.08**	**331**	⇑P	**Pn**	**03 10 00.9**	**-0.1**
	baz=10.0,SNR=35						
X17A	**Forest Lakes**	**10.10**	**356**	⇑P	**Pn**	**03 09 59.9**	**-1.2**
	baz=10.0,SNR=32						
Y13A	**Salome**	**10.13**	**341**	⇑P	**Pn**	**03 10 02.0**	**+0.4**
	baz=10.0,SNR=25						
Y22C	**IRIS PASSCAL I**	**10.15**	**14**	⇓P	**Pn**	**03 10 02.8**	**+0.9**
	baz=10						
X19A	**St. Johns**	**10.17**	**3**	⇑P	**Pn**	**03 10 02.6**	**+0.4**
	baz=10,SNR=43						
LENM	**Lemitar**	**10.23**	**14**	*e*Pn	**Pn**	**03 10 01.9**	**-1.1**
LENM				*e*S	Sx	03 12 46.8	
X16A	**Lo Mia Camp, P**	**10.23**	**353**	⇑P	**Pn**	**03 10 03.3**	**+0.2**
	baz=10,SNR=87						
X18A	**Snowflake**	**10.26**	**360**	⇑P	**Pn**	**03 10 03.0**	**-0.4**
	baz=10,SNR=16						
X18A				⇑S	**Sn**	**03 11 55.1**	**-3.4**
	baz=10						
BAR	**Barrett**	**10.28**	**326**	*e*Pn	**Pn**	**03 10 02.6**	**-1.2**
Y12C	**Blythe**	**10.29**	**338**	⇓P	**Pn**	**03 10 03.6**	**-0.2**
	baz=10,SNR=25						
BNM	**Barren Site**	**10.30**	**16**	*e*Pn	**Pn**	**03 10 02.3**	**-1.6**
BNM				*e*S	Sx	03 12 29.8	
MONP	**Monument Peak**	**10.33**	**328**	⇑P	**Pn**	**03 10 04.3**	**0.0**
	baz=10,SNR=58						
X15A	**Humboldt**	**10.41**	**349**	⇑P	**Pn**	**03 10 05.2**	**-0.2**
	baz=10,SNR=112						
X15A				⇓S	**Sn**	**03 12 00.7**	**-1.5**
	baz=10						
LAZ	**Ladron**	**10.42**	**13**	*e*Pn	**Pn**	**03 10 04.5**	**-1.2**
LAZ				*e*S	Sx	03 12 53.7	
LPM	**Los Pinos Moun**	**10.45**	**15**	*e*Pn	**Pn**	**03 10 05.4**	**-0.6**
X14A	**Yava**	**10.52**	**347**	⇓P	**Pn**	**03 10 07.1**	**+0.1**
	baz=10,SNR=102						
BC3	**Big Chuckw Mtn**	**10.55**	**334**	⇓P	**Pn**	**03 10 07.8**	**+0.4**
	baz=10,SNR=30						
109C	**Camp Elliot, M**	**10.67**	**326**	⇓P	**Pn**	**03 10 09.4**	**+0.3**
	baz=11,SNR=6.0						
PDMCI	**Parker Dam,Lak**	**10.68**	**341**	⇑P	**Pn**	**03 10 10.1**	**+0.9**
	baz=11,SNR=43						
W17A	**Winslow**	**10.83**	**357**	⇓P	**Pn**	**03 10 12.0**	**+0.8**
	baz=11						
W18A	**Petrified Fore**	**10.85**	**1**	⇑P	**Pn**	**03 10 12.1**	**+0.6**
	baz=11,SNR=19						
W18A				⇑S	**Sn**	**03 12 12.0**	**-0.9**
	baz=11						
W19A	**Sanders**	**10.85**	**2**	⇑P	**Pn**	**03 10 12.0**	**+0.5**
	baz=11,SNR=7.7						
IRM	**Iron Mountain**	**10.88**	**337**	⇓P	**Pn**	**03 10 12.4**	**+0.5**
	baz=11,SNR=8.9						
W16A	**Flagstaff**	**10.91**	**353**	⇑P	**Pn**	**03 10 13.0**	**+0.6**
	baz=11,SNR=12						
W16A				⇑S	**Sn**	**03 12 13.3**	**-1.1**
	baz=11						
PFO	**Pinyon Flat Ob**	**10.94**	**330**	Pn	**Pn**	**03 10 10.8**	**-2.0**
	0.5nm,0.3s,baz=154,slow=12,SNR=53						
PFO				Lg		03 13 09.6	
	0.1nm,0.3s,baz=82,slow=18,SNR=2.1						
PFO				LR	LR	03 13 45.6	
	comp=Z,8µm,21.9s,baz=302,slow=35						
PFO	**Pinyon Flat Ob**	**10.94**	**330**	⇑P	**Pn**	**03 10 13.7**	**+1.0**
	baz=11,SNR=56						
PFO	**Pinyon Flat Ob**	**10.94**	**330**	*e*Pn	**Pn**	**03 10 13.8**	**+1.1**
PFO				Lg		03 13 09.6	
PFO				LR	LR	03 13 45.6	
BELC	**Belle Mtn.**	**11.07**	**333**	⇑P	**Pn**	**03 10 15.1**	**+0.5**
	baz=11,SNR=21						
W15A	**Williams**	**11.09**	**350**	⇓P	**Pn**	**03 10 15.9**	**+1.1**
	baz=11,SNR=49						
ANMO	**Albuquerque**	**11.10**	**15**	Pn	**Pn**	**03 10 15.2**	**+0.3**
	0.1nm,0.3s,baz=194,slow=14,SNR=23						
ANMO				Lg		03 13 16.7	
	0.1nm,0.3s,baz=293,slow=16,SNR=3.1						
ANMO	**Albuquerque**	**11.10**	**15**	*d i*P	**Pn**	**03 10 15.5**	**+0.6**
ANMO	**Albuquerque**	**11.10**	**15**	*e*Pn	**Pn**	**03 10 14.6**	**-0.3**
NEE2	**Needles Airpor**	**11.26**	**340**	⇑P	**Pn**	**03 10 17.7**	**+0.7**
	baz=11,SNR=9.5						
W14A	**Seligman**	**11.27**	**347**	⇓P	**Pn**	**03 10 18.0**	**+0.7**
	baz=11,SNR=93						
MURC	**Murrieta**	**11.29**	**327**	⇑P	**Pn**	**03 10 17.9**	**+0.4**
	baz=11,SNR=12						
WUAZ	**Wupatki**	**11.31**	**354**	⇓P	**Pn**	**03 10 18.5**	**+0.7**
	baz=11,SNR=23						
WUAZ	**Wupatki**	**11.31**	**354**	*e*Pn	**Pn**	**03 10 18.7**	**+0.9**
WUAZ				*e*S	Sx	03 13 04.8	
W13A	**Hualapai Mount**	**11.35**	**343**	⇓P	**Pn**	**03 10 19.4**	**+1.0**
	baz=11,SNR=165						
W13A				⇑S	**Sn**	**03 12 26.0**	**+0.7**
	baz=11						
V18A	**Ganado**	**11.44**	**0**	⇑P	**Pn**	**03 10 20.3**	**+0.8**
	baz=11,SNR=33						
V19A	**Window Rock**	**11.47**	**4**	⇑P	**Pn**	**03 10 21.1**	**+1.2**
	baz=11,SNR=13						
GMRC	**Granite Mounta**	**11.62**	**336**	⇓P	**Pn**	**03 10 22.8**	**+0.7**
	baz=12,SNR=15						
V14A	**Boquillas Ranc**	**11.69**	**347**	⇓P	**Pn**	**03 10 23.7**	**+0.8**
	baz=12,SNR=111						
V14A				⇓S	**Sn**	**03 12 33.7**	**+0.2**
	baz=12						
BBRC	**Big Bear Sol-O**	**11.70**	**330**	⇓P	**Pn**	**03 10 24.0**	**+0.9**
	baz=12,SNR=23						
LDFC	**Landfair**	**11.70**	**339**	*e*Pn	**Pn**	**03 10 25.1**	**+1.9**
V15A	**Kaibab Nationa**	**11.71**	**351**	⇓P	**Pn**	**03 10 24.4**	**+1.2**
	baz=12,SNR=66						
V15A				⇑S	**Sn**	**03 12 33.9**	**0.0**
	baz=12						
W12A	**Cal Nev Ari**	**11.83**	**340**	⇑P	**Pn**	**03 10 25.9**	**+1.0**
	baz=12,SNR=22						
HEC	**Hector,Ludlow**	**11.93**	**334**	⇑P	**Pn**	**03 10 27.2**	**+0.9**
	baz=12,SNR=5.7						
BFSC	**Mount Baldy St**	**12.03**	**328**	⇑P	**Pn**	**03 10 28.1**	**+0.6**
	baz=12,SNR=11						
V13A	**Grand Canyon W**	**12.09**	**344**	⇓P	**Pn**	**03 10 29.2**	**+0.7**
	baz=12,SNR=56						
V13A				⇓S	**Sn**	**03 12 46.8**	**+3.3**
	baz=12						
MWC	**Mount Wilson**	**12.21**	**326**	*e*P	**Pn**	**03 10 29.5**	**-0.6**
V12A	**Nelson**	**12.21**	**341**	⇑P	**Pn**	**03 10 30.8**	**+0.7**
	baz=12,SNR=77						
RRX	**Edison Barstow**	**12.25**	**332**	⇓P	**Pn**	**03 10 31.3**	**+0.6**
	baz=12						
SNCC	**San Nicolas Is**	**12.29**	**319**	⇓P	**Pn**	**03 10 31.3**	**+0.1**
	baz=12						
SNCC	**San Nicolas Is**	**12.29**	**319**	*e*Pn	**Pn**	**03 10 30.9**	**-0.4**
	271nm,1.2s						
TUQ	**Turquoise Moun**	**12.31**	**336**	⇓P	**Pn**	**03 10 32.0**	**+0.6**
	baz=12,SNR=10						
U15A	**North Rim**	**12.32**	**351**	⇑P	**Pn**	**03 10 32.9**	**+1.3**
	baz=12,SNR=59						
U17A	**Shonto**	**12.34**	**357**	⇑P	**Pn**	**03 10 32.6**	**+0.7**
	baz=12						
U17A				⇓S	**Sn**	**03 12 49.7**	**+0.2**
	baz=12						
DECC	**Green Verdugo**	**12.37**	**326**	⇓P	**Pn**	**03 10 32.2**	**-0.1**
	baz=12,SNR=6.6						
U14A	**Mt Trumbull**	**12.46**	**348**	⇓P	**Pn**	**03 10 35.2**	**+1.7**
	baz=12,SNR=40						
V11A	**Goodsprings**	**12.50**	**339**	⇓P	**Pn**	**03 10 34.7**	**+0.7**
	baz=12,SNR=40						
GSC	**Goldstone**	**12.53**	**333**	⇓P	**Pn**	**03 10 35.5**	**+1.1**
	baz=12,SNR=79						
GSC	**Goldstone**	**12.53**	**333**	*e*Pn	**Pn**	**03 10 35.2**	**+0.7**
T19A	**Beclabito**	**12.58**	**3**	⇓P	**Pn**	**03 10 35.6**	**+0.5**
	baz=12,SNR=40						
T19A				⇑S	**Sn**	**03 12 55.6**	**+0.3**
	baz=12						
U13A	**Pakoon Wash**	**12.62**	**345**	⇓P	**Pn**	**03 10 36.7**	**+0.9**
	baz=12,SNR=27						
BLG	**Laguna Peak**	**12.65**	**323**	⇑P	**Pn**	**03 10 35.3**	**-0.9**
	baz=13						
EDW2	**Edwards Air Fo**	**12.70**	**328**	⇑P	**Pn**	**03 10 37.3**	**+0.5**
	baz=13,SNR=26						
T17A	**Navajo Res., N**	**12.74**	**357**	⇓P	**Pn**	**03 10 37.5**	**+0.1**
	baz=13,SNR=24						
T16A	**Glen Canyon Da**	**12.78**	**354**	⇓P	**Pn**	**03 10 39.2**	**+1.3**
	baz=13,SNR=27						
U12A	**Valley of Fire**	**12.79**	**343**	⇑P	**Pn**	**03 10 38.9**	**+0.9**
	baz=13,SNR=18						
AMTX	**Amarillo**	**12.81**	**32**	*e*Pn	**Pn**	**03 10 36.7**	**-1.7**
SHOC	**Shoshone**	**12.85**	**336**	⇑P	**Pn**	**03 10 39.6**	**+0.8**
	baz=13,SNR=36						
OSI	**Osito Adit**	**12.86**	**326**	⇓P	**Pn**	**03 10 39.3**	**+0.3**
	baz=13,SNR=9.5						
OSI	**Osito Adit**	**12.86**	**326**	*e*Pn	**Pn**	**03 10 39.1**	**+0.2**
	145nm,1.1s						
T18A	**Mexican Hat**	**12.86**	**0**	⇓P	**Pn**	**03 10 39.1**	**+0.1**
	baz=13,SNR=31						
T18A				⇓S	**Sn**	**03 13 01.3**	**-0.9**
	baz=13						
BSC	**Santa Cruz Isl**	**12.89**	**321**	⇑P	**Pn**	**03 10 39.5**	**+0.1**
	baz=13,SNR=5.8						
T15A	**Red Dirt Ranch**	**12.91**	**351**	⇑P	**Pn**	**03 10 40.8**	**+1.1**
	baz=13,SNR=32						
T15A				⇓S	**Sn**	**03 13 06.4**	**+2.9**
	baz=13						
MVCO	**Mesa Verde**	**12.99**	**5**	⇓P	**Pn**	**03 10 40.8**	**0.0**
	baz=13,SNR=8.4						
MVCO				⇑S	**Sn**	**03 13 06.2**	**+0.7**
	baz=13						
MVCO	**Mesa Verde**	**12.99**	**5**	*e*Pn	**Pn**	**03 10 40.6**	**-0.2**
U11A	**Corn Creek**	**13.02**	**340**	⇓P	**Pn**	**03 10 42.1**	**+0.9**
	baz=13,SNR=28						
SHPR	**Sheep Range**	**13.03**	**341**	*e*Pn	**Pn**	**03 10 40.8**	**-0.5**
LRMC	**Laurel Mountai**	**13.06**	**331**	⇑P	**Pn**	**03 10 42.5**	**+0.8**
	baz=13,SNR=30						
T14A	**Hurricane**	**13.07**	**349**	⇓P	**Pn**	**03 10 42.5**	**+0.7**
	baz=13,SNR=13						
T14A				⇑S	**Sn**	**03 13 07.2**	**-0.1**
	baz=13						
T12A	**Moapa**	**13.11**	**343**	⇑P	**Pn**	**03 10 43.2**	**+0.8**
	baz=13,SNR=11						
T13A	**Saint George**	**13.19**	**346**	⇑P	**Pn**	**03 10 44.4**	**+1.0**
	baz=13,SNR=26						
T13A				⇑S	**Sn**	**03 13 15.0**	**+4.8**
	baz=13						
ARVC	**Arvin**	**13.31**	**327**	⇓P	**Pn**	**03 10 45.6**	**+0.5**
	baz=13,SNR=34						
U10A	**Ash Meadows, A**	**13.33**	**337**	⇑P	**Pn**	**03 10 46.9**	**+1.5**
	baz=13,SNR=28						
S17A	**Black Ridge (B**	**13.38**	**357**	⇓P	**Pn**	**03 10 46.7**	**+0.6**
	baz=13,SNR=17						
S17A				⇓S	**Sn**	**03 13 15.4**	**+0.6**
	baz=13						
S18A	**Hurst Farm, Bl**	**13.41**	**360**	⇓P	**Pn**	**03 10 46.5**	**0.0**
	baz=13,SNR=24						
S18A				⇑S	**Sn**	**03 13 15.9**	**+0.2**
	baz=13						
MPMC	**Manual Prospec**	**13.46**	**333**	⇑P	**Pn**	**03 10 47.9**	**+0.7**
	baz=13,SNR=103						
S19A	**Harvey Farm, M**	**13.49**	**3**	⇓P	**Pn**	**03 10 47.5**	**0.0**
	baz=13,SNR=16						
S19A				⇓S	**Sn**	**03 13 18.2**	**+0.7**
	baz=13						
S16A	**Weppner Ranch,**	**13.52**	**354**	⇓P	**Pn**	**03 10 48.8**	**+0.8**
	baz=13,SNR=77						
S15A	**Panguitch**	**13.56**	**352**	⇓P	**Pn**	**03 10 49.8**	**+1.3**
	baz=14,SNR=17						
ISA	**Isabella**	**13.57**	**329**	⇓P	**Pn**	**03 10 49.1**	**+0.5**
	baz=14,SNR=34						
ISA	**Isabella**	**13.57**	**329**	*e*Pn	**Pn**	**03 10 48.6**	**-0.1**
FURC	**Furnace Creek,**	**13.57**	**336**	⇓P	**Pn**	**03 10 49.4**	**+0.7**
	baz=14,SNR=55						
PKM	**Peak Mountain**	**13.65**	**323**	⇓P	**Pn**	**03 10 49.8**	**0.0**
	baz=14,SNR=13						
S13A	**Holt Ranch, En**	**13.72**	**347**	⇑P	**Pn**	**03 10 51.3**	**+0.6**
	baz=14,SNR=45						
T11A	**Corn Creek, Al**	**13.73**	**342**	⇑P	**Pn**	**03 10 52.0**	**+1.1**
	baz=14,SNR=100						
S14A	**Cedar City**	**13.76**	**349**	⇓P	**Pn**	**03 10 52.8**	**+1.5**
	baz=14,SNR=36						
TPNV	**Topopah Spring**	**13.78**	**338**	⇑P	**Pn**	**03 10 53.0**	**+1.5**
	baz=14,SNR=35						
TPNV	**Topopah Spring**	**13.78**	**338**	*e*Pn	**Pn**	**03 10 53.1**	**+1.6**
HKT	**Hockley**	**13.79**	**63**	*e*P	**Pn**	**03 10 54.7**	**+2.9**
HKT				pmax	pmax		
	comp=Z,163nm,1.7s						
HKT	**Hockley**	**13.79**	**63**	*e*Pn	**Pn**	**03 10 54.7**	**+2.9**
	comp=Z,163nm,1.7s						
S12A	**Delamar Landin**	**13.98**	**344**	⇓P	**Pn**	**03 10 55.7**	**+1.5**
	baz=14,SNR=155						
SDCO	**Great Sand Dun**	**13.99**	**15**	*e*Pn	**Pn**	**03 10 55.8**	**+1.4**
VES	**Vestal, Richgr**	**14.00**	**328**	P	**Pn**	**03 10 55.4**	**+0.8**
	baz=14,SNR=46						
R19A	**Curley Farm, L**	**14.03**	**2**	⇑P	**Pn**	**03 10 54.8**	**-0.1**
	baz=14						
CWC	**Cottonwood Cre**	**14.04**	**332**	⇑P	**Pn**	**03 10 55.9**	**+0.8**
	baz=14,SNR=32						
R16A	**Teasdale**	**14.07**	**355**	⇓P	**Pn**	**03 10 56.2**	**+0.7**
	baz=14,SNR=19						
R16A				⇓S	**Sn**	**03 13 35.0**	**+3.3**
	baz=14						
R15A	**Junction**	**14.07**	**352**	⇓P	**Pn**	**03 10 56.7**	**+1.1**
	baz=14,SNR=23						
R18A	**Canyonlands Na**	**14.11**	**0**	⇑P	**Pn**	**03 10 56.1**	**+0.1**
	baz=14,SNR=20						
R17A	**Hanksville Air**	**14.16**	**358**	⇑P	**Pn**	**03 10 57.4**	**+0.7**
	baz=14,SNR=37						
GRAC	**Grapevine Rang**	**14.23**	**335**	⇓P	**Pn**	**03 10 58.5**	**+0.8**
	baz=14,SNR=23						
S11A	**Rachel**	**14.26**	**341**	⇓P	**Pn**	**03 10 58.5**	**+0.5**
	baz=14,SNR=32						
R14A	**James Farms, M**	**14.26**	**350**	⇑P	**Pn**	**03 10 59.4**	**+1.2**
	baz=14						
WMOK	**Wichita Mounta**	**14.27**	**40**	*e*P	**Pn**	**03 10 55.4**	**-2.9**
R13A	**O'Grain Ranch,**	**14.32**	**347**	⇓P	**Pn**	**03 11 00.1**	**+1.2**
	baz=14,SNR=40						
MSU	**Marysvale**	**14.36**	**353**	*e*P	**Pn**	**03 10 59.7**	**+0.3**
V05C	**Boulder Hill,**	**14.44**	**326**	⇓P	**Pn**	**03 11 01.1**	**+0.6**
	baz=14						
RCTC	**Rector, Farmer**	**14.46**	**328**	⇑P	**Pn**	**03 11 01.7**	**+0.9**
	baz=14,SNR=13						
R12A	**Pony Springs,**	**14.60**	**345**	⇑P	**Pn**	**03 11 04.0**	**+1.2**
	baz=14,SNR=105						
TIN	**Tinemaha**	**14.62**	**333**	⇑P	**Pn**	**03 11 03.8**	**+0.7**
	baz=14						
HELL	**Mitchell Peak**	**14.66**	**330**	⇑P	**Pn**	**03 11 04.5**	**+1.0**
	baz=15						
Q16A	**Castle Valley**	**14.68**	**356**	⇓P	**Pn**	**03 11 04.8**	**+1.0**
	baz=15,SNR=20						
Q19A	**Hogan Spring (**	**14.69**	**2**	⇑P	**Pn**	**03 11 03.9**	**0.0**
	baz=15,SNR=6.5						
Q19A				⇑S	**Sn**	**03 13 47.4**	**+0.6**
	baz=15						
S10A	**Tonopah Range,**	**14.78**	**339**	⇓P	**Pn**	**03 11 05.9**	**+0.7**
	baz=15,SNR=97						
S09A	**Goldfield**	**14.82**	**337**	⇑P	**Pn**	**03 11 06.4**	**+0.7**
	baz=15,SNR=99						
Q18A	**Rafter H Ranch**	**14.82**	**359**	⇑P	**Pn**	**03 11 05.8**	**0.0**
	baz=15,SNR=10						
Q18A				⇑S	**Sn**	**03 13 51.9**	**+1.8**
	baz=15						
PKD	**Parkfield**	**14.83**	**324**	⇑P	**Pn**	**03 11 05.7**	**-0.1**
	baz=15						
SRU	**San Rafael**	**14.84**	**358**	⇓P	**Pn**	**03 11 06.0**	**0.0**
	baz=15,SNR=24						
SRU	**San Rafael**	**14.84**	**358**	*e*Pn	**Pn**	**03 11 05.5**	**-0.4**
Q15A	**Fillmore**	**14.87**	**353**	⇑P	**Pn**	**03 11 07.2**	**+0.9**
	baz=15,SNR=14						
R11A	**Troy Canyon, C**	**14.87**	**342**	⇑P	**Pn**	**03 11 06.9**	**+0.5**
	baz=15,SNR=5.6						
Q14A	**Sevier Lake (B**	**14.98**	**350**	P	**Pn**	**03 11 08.8**	**+1.0**
	baz=15,SNR=30						
S08C	**White Mtn Res**	**14.98**	**334**	⇓P	**Pn**	**03 11 08.6**	**+0.7**
	baz=15,SNR=52						
MTUM	**Tungsten Hills**	**15.02**	**333**	*e*Pn	**Pn**	**03 11 09.2**	**+0.8**
R10A	**Warm Springs**	**15.02**	**340**	⇑P	**Pn**	**03 11 09.1**	**+0.6**
	baz=15,SNR=26						
TMUT	**Trail Mountain**	**15.05**	**356**	*e*Pn	**Pn**	**03 11 10.4**	**+1.5**
Q13A	**Wheeler Ranch,**	**15.08**	**348**	⇑P	**Pn**	**03 11 10.1**	**+0.9**
	baz=15,SNR=64						
P17A	**Butcher Ranch,**	**15.21**	**358**	⇓P	**Pn**	**03 11 11.4**	**+0.5**
	baz=15,SNR=18						
R09A	**Tonopah**	**15.22**	**338**	⇑P	**Pn**	**03 11 11.6**	**+0.4**
	baz=15,SNR=94						
T06C	**Millerton Lake**	**15.24**	**329**	⇓P	**Pn**	**03 11 10.8**	**-0.6**
	baz=15,SNR=58						
V03C	**Hunter Liggett**	**15.26**	**323**	⇑P	**Pn**	**03 11 12.7**	**+1.0**
	baz=15						
U04C	**Hernandez Rese**	**15.27**	**325**	⇑P	**Pn**	**03 11 12.8**	**+1.0**
	baz=15						
KCC	**Kaiser Creek**	**15.32**	**331**	⇓P	**Pn**	**03 11 13.1**	**+0.7**
	baz=15						
Q12A	**Willow Creek R**	**15.33**	**345**	⇑P	**Pn**	**03 11 13.2**	**+0.7**
	baz=15,SNR=137						
P18A	**Preston Nutter**	**15.35**	**359**	P	**Pn**	**03 11 13.3**	**+0.5**
	baz=15,SNR=44						
Q11A	**Duckwater**	**15.35**	**343**	P	**Pn**	**03 11 13.8**	**+1.0**
	baz=15,SNR=41						
MLAC	**Mammoth Lakes**	**15.37**	**332**	⇑P	**Pn**	**03 11 13.8**	**+0.8**
	baz=15						
P19A	**Cripple Cowboy**	**15.38**	**3**	⇓P	**Pn**	**03 11 14.2**	**+1.1**
	baz=15						
P16A	**Fountain Green**	**15.40**	**355**	⇓P	**Pn**	**03 11 14.2**	**+0.8**
	baz=15,SNR=17						
P15A	**Leamington**	**15.42**	**353**	⇑P	**Pn**	**03 11 13.8**	**+0.1**
	baz=15,SNR=15						
NATX	**Nacogdoches**	**15.43**	**58**	*e*Pn	**Pn**	**03 11 13.8**	**-0.2**
	comp=Z,179nm,1.4s						
P14A	**Drum Mountains**	**15.54**	**351**	⇑P	**Pn**	**03 11 15.6**	**+0.3**
	baz=16,SNR=25						
Q10A	**Clear Creek Ra**	**15.54**	**341**	⇓P	**Pn**	**03 11 16.1**	**+0.8**
	baz=16,SNR=15						
P13A	**Bates Ranch, G**	**15.56**	**348**	P	**Pn**	**03 11 16.3**	**+0.8**
	baz=16,SNR=82						
R08A	**Mina**	**15.69**	**336**	⇓P	**Pn**	**03 11 18.1**	**+0.8**
	baz=16,SNR=6.1						
P12A	**McGill**	**15.76**	**346**	⇑P	**Pn**	**03 11 18.2**	**+0.1**
	baz=16,SNR=41						
NLU	**North Lily Min**	**15.78**	**354**	*e*Pn	**Pn**	**03 11 17.9**	**-0.4**
CMIG	**Matias Romero**	**15.78**	**114**	Pn	**Pn**	**03 11 26.7**	**+8.2**
	comp=Z,0.1nm,0.3s,baz=290,slow=9.9,SNR=8.9						
CMIG				LR	LR	03 17 23.9	
	comp=Z,8µm,18.8s,baz=282,slow=36						
Q09A	**Carvers**	**15.80**	**339**	⇓P	**Pn**	**03 11 19.3**	**+0.7**
	baz=16,SNR=14						
MPU	**Maple Canyon**	**15.80**	**355**	*e*P	**Pn**	**03 11 21.3**	**+2.6**
S05C	**Merced**	**15.81**	**328**	⇑P	**Pn**	**03 11 17.8**	**-0.9**
	baz=16						
NVAR	**Mina Array Bea**	**15.84**	**335**	Pn	**Pn**	**03 11 20.2**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=169,slow=14,SNR=5.4						
NVAR	**Mina Array Bea**	**15.84**	**335**	Pn	**Pn**	**03 11 20.2**	**+1.0**
R07C	**Lee Vining**	**15.84**	**333**	⇓P	**Pn**	**03 11 19.4**	**+0.2**
	baz=16						
SAO	**San Andreas Ge**	**15.93**	**324**	*e*P	**Pn**	**03 11 17.6**	**-2.7**
O17A	**Robinson Place**	**15.93**	**358**	⇑P	**Pn**	**03 11 20.7**	**+0.4**
	baz=16,SNR=30						
ISCO	**Idaho Springs**	**15.95**	**12**	*e*P	**Pn**	**03 11 22.2**	**+1.7**
O16A	**Springville**	**15.98**	**356**	⇓P	**Pn**	**03 11 21.0**	**0.0**
	baz=16,SNR=16						
O18A	**Roosevelt**	**15.98**	**360**	⇓P	**Pn**	**03 11 21.4**	**+0.4**
	baz=16,SNR=24						
S06C	**San Francisco**	**16.02**	**330**	⇑P	**Pn**	**03 11 21.8**	**+0.3**
	baz=16,SNR=66						
PACP	**Pacheco Peak**	**16.02**	**325**	⇑P	**Pn**	**03 11 22.1**	**+0.5**
	baz=16						
O19A	**Miners Draw (B**	**16.03**	**2**	⇑P	**Pn**	**03 11 22.1**	**+0.5**
	baz=16,SNR=21						
P11A	**Circle Ranch,**	**16.04**	**344**	⇓P	**Pn**	**03 11 22.5**	**+0.7**
	baz=16,SNR=20						
Q08A	**Gabbs**	**16.08**	**337**	⇑P	**Pn**	**03 11 23.0**	**+0.7**
	baz=16,SNR=22						
DUG	**Dugway**	**16.10**	**352**	*e*P	**Pn**	**03 11 23.6**	**+1.1**
DUG				pmax	pmax		
	comp=Z,200nm,1.4s						
DUG	**Dugway**	**16.10**	**352**	⇓P	**Pn**	**03 11 23.2**	**+0.7**
	baz=16,SNR=62						
DUG	**Dugway**	**16.10**	**352**	*e*Pn	**Pn**	**03 11 23.6**	**+1.1**
	comp=Z,200nm,1.4s						
O15A	**The Old Anders**	**16.14**	**353**	⇓P	**Pn**	**03 11 23.9**	**+0.9**
	baz=16,SNR=7.2						
DAU	**Daniels Canyon**	**16.17**	**356**	*e*P	**Pn**	**03 11 24.1**	**+0.7**
O13A	**Hicks Ranch, I**	**16.21**	**349**	⇓P	**Pn**	**03 11 24.2**	**+0.2**
	baz=16,SNR=7.6						
P10A	**Eureka**	**16.30**	**342**	⇑P	**Pn**	**03 11 25.7**	**+0.6**

baz=16,SNR=18
WAKR Walker 16.36 333 *e*Pn Pn 03 11 26.6 +0.8
JLU Jordanelle 16.37 356 *e*Pn Pn 03 11 26.7 +0.7
R06C Coleville 16.38 333 ⇓P Pn 03 11 26.5 +0.4
baz=16,SNR=40
CMB Columbia Colle 16.39 330 ⇑P Pn 03 11 25.8 -0.4
baz=16,SNR=38
CMB Columbia Colle 16.39 330 *e*Pn Pn 03 11 26.0 -0.3
P09A Austin 16.44 340 ⇑P Pn 03 11 26.7 -0.2
baz=16
NOQ North Oquirrh 16.47 354 *e*Pn Pn 03 11 28.1 +0.8
CTU Camp Tracy 16.48 355 *e*Pn Pn 03 11 27.2 -0.2
O12A Currie 16.49 347 P Pn 03 11 27.8 +0.3
baz=16,SNR=70
O11A Cowboy Ranch, 16.56 344 P Pn 03 11 29.2 +0.7
baz=16,SNR=42
N19A John Jarvie Ra 16.62 2 ⇓P Pn 03 11 29.7 +0.5
baz=16,SNR=18
N16A Rees Ranch, Co 16.65 356 P Pn 03 11 30.6 +1.0
baz=17,SNR=17
N17A Moffit Pass 16.68 358 ⇑P Pn 03 11 30.2 +0.3
baz=17,SNR=19
N18A Larsen Ranch, 16.70 1 ⇓P Pn 03 11 30.6 +0.5
baz=17,SNR=7.7
WENL Wente Vineyard 16.73 326 ⇑P Pn 03 11 30.7 +0.1
baz=17,SNR=7.1
N15A Stansbury Isla 16.75 353 ⇓P Pn 03 11 31.3 +0.5
baz=17
N14A Grayback Hills 16.79 351 ⇑P Pn 03 11 31.8 +0.5
baz=17,SNR=26
R05C Kirkwood Meado 16.80 332 ⇓P Pn 03 11 31.6 +0.2
baz=17,SNR=21
JRSC Jasper Ridge 16.82 324 ⇓P Pn 03 11 30.7 -1.1
baz=17
R04C Big Horse Ranc 16.82 329 ⇓P Pn 03 11 31.0 -0.8
baz=17,SNR=13
BGU Big Grassy Mou 16.84 352 *e*Pn Pn 03 11 32.2 +0.3
P08A Dixie Valley 16.88 338 ⇑P Pn 03 11 33.2 +0.8
baz=17
CBKS Cedar Bluff 16.92 28 *e*P Pn 03 11 32.3 -0.7
CBKS pmax pmax
comp=Z,210nm,1.1s
CBKS Cedar Bluff 16.92 28 *e*Pn Pn 03 11 32.3 -0.7
comp=Z,210nm,1.1s
O10A Cortez Mining, 16.93 343 ⇑P Pn 03 11 33.6 +0.5
baz=17,SNR=25
N13A Wendover, West 16.95 349 ⇑P Pn 03 11 33.6 +0.3
baz=17,SNR=19
O09A Fish Creek Ran 17.02 341 ⇑P Pn 03 11 34.8 +0.6
baz=17,SNR=31
P07A Fallon 17.03 336 ⇓P Pn 03 11 34.9 +0.6
baz=17
BDM Black Diamond 17.04 326 ⇑P Pn 03 11 34.1 -0.4
baz=17
ELK Elko 17.05 346 Pn Pn 03 11 34.6 0.0
comp=Z,0.1nm,0.3s,baz=177,slow=9.7,SNR=25
ELK LR LR 03 17 59.1
comp=Z,6μm,18.3s,baz=163,slow=37
ELK Elko 17.05 346 *e*Pn Pn 03 11 34.8 +0.2
M16A Huntsville 17.09 356 P Pn 03 11 35.6 +0.5
baz=17,SNR=58
N12A Clover Valley, 17.11 347 ⇑P Pn 03 11 35.4 0.0
baz=17,SNR=40
LAVA Lava Cap Winer 17.13 330 ⇓P Pn 03 11 35.6 0.0
baz=17,SNR=24
SPUT South Promonto 17.16 354 *e*Pn Pn 03 11 34.1 -1.8
WCN Washoe City 17.16 333 ⇓P Pn 03 11 36.9 +0.8
baz=17,SNR=30
N11A Elko Archery C 17.23 345 ⇑P Pn 03 11 36.9 0.0
baz=17,SNR=7.7
BMN Battle Mountai 17.27 341 *e*P Pn 03 11 36.9 -0.4
M15A Larsen Ranch, 17.31 354 ⇓P Pn 03 11 38.1 +0.3
baz=17,SNR=11
N10A Dunphy 17.34 343 ⇓P Pn 03 11 38.3 +0.1
baz=17,SNR=11
PAHR Pah Rah Range 17.36 335 *e*Pn Pn 03 11 39.5 +1.0
HWUT Hardware Ranch 17.38 356 *e*Pn Pn 03 11 38.5 -0.1
O08A Rochester Mine 17.43 339 ⇓P Pn 03 11 39.8 +0.4
baz=17,SNR=46
M13A Montello 17.44 349 ⇑P Pn 03 11 39.7 +0.3
baz=17
FARB Farallon Islan 17.45 323 ⇓P Pn 03 11 39.8 +0.2
baz=17
M14A Sheep Mountain 17.45 351 P Pn 03 11 40.3 +0.7
baz=17,SNR=43
Q04C Lincoln 17.50 329 ⇓P Pn 03 11 40.9 +0.7
baz=17,SNR=12
P05C Yuba Gap, Truc 17.52 332 ⇑P Pn 03 11 40.9 +0.3
baz=17,SNR=26
P06A Stead Airport, 17.54 334 ⇑P Pn 03 11 40.7 0.0
baz=18
RWWY Rawlins 17.56 7 *e*Pn Pn 03 11 42.1 +1.2
comp=Z,324nm,2.3s
MIAR Mount Ida 17.56 50 *e*P Pn 03 11 39.4 -1.6
MIAR pmax pmax
comp=Z,261nm,2.3s
MIAR Mount Ida 17.56 50 *e*Pn Pn 03 11 39.4 -1.6
comp=Z,261nm,2.3s
O07A Toulon 17.57 337 ⇑P Pn 03 11 41.5 +0.4
baz=18,SNR=24
M12A Wells 17.63 348 ⇓P Pn 03 11 41.8 0.0
baz=18,SNR=28
Q03C Winters 17.64 327 ⇓P Pn 03 11 42.3 +0.3
baz=18,SNR=10
CVS Carmenet Viney 17.64 326 ⇓P Pn 03 11 41.2 -0.8
baz=18,SNR=8.7
HVU Hansel Valley 17.66 353 *e*P Pn 03 11 42.5 +0.4
MCCM Marconi Confer 17.71 325 ⇑P Pn 03 11 42.1 -0.8
baz=18
N09A Rock Creek Ran 17.75 341 P Pn 03 11 43.6 +0.4
baz=18,SNR=26
L16A Fish Haven 17.78 356 ⇑P Pn 03 11 44.3 +0.7
baz=18,SNR=12
M11A Holland Ranch, 17.83 346 ⇓P Pn 03 11 44.4 +0.2
baz=18,SNR=49
L15A Malad City 17.84 354 P Pn 03 11 44.5 +0.2
baz=18,SNR=24
NSHM Saint Helena R 17.85 326 *e*Pn Pn 03 11 42.4 -2.2
N08A GE Springer Mi 17.87 339 ⇓P Pn 03 11 45.3 +0.5
baz=18
BEKR Beckwourth 17.89 333 ⇓P Pn 03 11 45.6 +0.6
baz=18,SNR=19
O06A Flanigan 17.93 335 ⇓P Pn 03 11 46.3 +0.7
baz=18
OHCM Honcut 17.94 330 *e*Pn Pn 03 11 47.1 +1.4
L14A Malta 17.96 352 ⇓P Pn 03 11 46.2 +0.3
baz=18,SNR=52
SUTB Sutter Butte 18.00 329 ⇓P Pn 03 11 46.4 0.0
baz=18,SNR=11
MNRC McLaughlin Nat 18.04 327 ⇓P Pn 03 11 47.2 +0.2
baz=18
M10A I.L. Ranch, Tu 18.10 344 P Pn 03 11 48.5 +1.0
baz=18,SNR=33
L13A Double Diamond 18.11 350 ⇓P Pn 03 11 47.7 -0.1
baz=18,SNR=27
ORV Oroville 18.13 330 ⇓P Pn 03 11 48.3 +0.4
baz=18,SNR=18
N07B Gerlach 18.15 338 ⇑P Pn 03 11 47.9 -0.4
baz=18,SNR=13
O05C Quincy 18.20 332 ⇓P Pn 03 11 49.1 +0.2
baz=18,SNR=14
M09A Marrel Ranch, 18.25 342 ⇓P Pn 03 11 49.9 +0.4
baz=18,SNR=12
L12A House Creek Ra 18.35 348 ⇑P Pn 03 11 51.3 +0.6
baz=18,SNR=10
N06A Buffalo Meadow 18.44 336 ⇑P Pn 03 11 51.9 +0.1
baz=18,SNR=18
HOPS Hopland 18.45 326 *e*Pn Pn 03 11 52.5 +0.6
K14A Jones Ranch, D 18.46 352 P Pn 03 11 52.0 +0.1
baz=18,SNR=41
BW06 Boulder Array 18.49 1 *e*Pn Pn 03 11 51.5 -0.8
PDAR Pinedale Array 18.49 1 P Pn 03 11 51.5 -0.9
comp=Z,0.2nm,0.3s,baz=163,slow=11,SNR=119
PDAR LR LR 03 19 03.0
comp=Z,5μm,18.9s,baz=194,slow=38
AHID Auburn Hatcher 18.51 357 *e*Pn Pn 03 11 52.1 -0.4
comp=Z,249nm,1.6s
L11A Cat Creek Ranc 18.52 346 P Pn 03 11 53.2 +0.4
baz=18,SNR=51
K15A Arbon 18.53 354 ⇓P Pn 03 11 53.0 +0.1
baz=18,SNR=16
UALR University of 18.55 51 *e*P Pn 03 11 52.6 -0.6
comp=Z,200nm,1.5s
M08A Happy Creek Ra 18.55 340 ⇑P Pn 03 11 53.6 +0.4
baz=18,SNR=24
O04C Chester 18.57 332 ⇑P Pn 03 11 53.9 +0.5
baz=18,SNR=17
K16A Soda Springs 18.60 356 ⇓P Pn 03 11 53.6 -0.1
baz=18,SNR=7.2
L10A Juniper Basin 18.60 345 P Pn 03 11 54.2 +0.4
baz=18,SNR=40
KSU1 Kansas State U 18.64 34 *e*P Pn 03 11 53.8 -0.4
ELFS Eagle Lake Fie 18.68 334 ⇑P Pn 03 11 55.0 +0.4
baz=19
K13A Stover Farm, H 18.68 350 P Pn 03 11 55.1 +0.4
baz=19,SNR=38
O03C Acorn Hollow, 18.73 330 ⇑P Pn 03 11 55.3 +0.1
baz=19
M07A Soldier Meadow 18.76 338 ⇑P Pn 03 11 55.9 +0.2
baz=19,SNR=20
GASB Alder Springs 18.78 328 ⇓P Pn 03 11 56.2 +0.3
baz=19,SNR=10
K12A Draper Farm, C 18.81 349 P Pn 03 11 56.5 +0.2
baz=19,SNR=17
VBMS Vicksburg 18.86 61 *e*P Pn 03 11 57.9 +1.0
L09A Wilkinson Ranc 18.86 342 ⇑P Pn 03 11 56.9 0.0
baz=19
J16A Bone 19.04 356 P Pn 03 11 59.0 0.0
baz=19,SNR=46
M06C Likely Place G 19.07 335 ⇓P Pn 03 11 59.4 0.0
baz=19,SNR=18
REDW Red Top Meadow 19.09 358 *e*P Pn 03 11 59.3 -0.4
comp=Z,187nm,1.5s
RRI2 Red Ridge 19.10 357 *e*P Pn 03 11 59.0 -0.7
comp=Z,234nm,1.5s
LBCM Butte Creek Ri 19.11 333 P Pn 03 12 00.4 +0.5
HATC Hat Creek Radi 19.14 332 ⇓P Pn 03 12 00.1 -0.3
baz=19,SNR=10
K11A Parker Ranch, 19.16 346 P Pn 03 12 00.6 +0.1
baz=19,SNR=48
SNOW Snow King Moun 19.19 358 *e*P Pn 03 12 00.3 -0.6
comp=Z,197nm,1.6s
L08A Fields 19.22 341 P Pn 03 12 00.8 -0.3
baz=19,SNR=84
O02C Red Bluff 19.22 329 ⇓P Pn 03 12 01.0 -0.2
baz=19,SNR=9.7
TPAW Teton Pass 19.23 358 *e*P Pn 03 12 00.7 -0.6
comp=Z,132nm,1.3s
J15A Blackfoot 19.23 354 ⇓P Pn 03 12 00.5 -0.8
baz=19,SNR=62
KCPM Cahto Peak 19.23 326 *e*P Pn 03 12 01.5 +0.2
J14A Carey 19.27 352 ⇑P Pn 03 12 01.3 -0.4
baz=19,SNR=40
KIPM Iron Peak 19.27 327 *e*P Pn 03 12 02.2 +0.3
LOHW Long Hollow 19.34 359 *e*P Pn 03 12 00.8 -1.8
comp=Z,225nm,2.0s
DCID1 Drake Creek 19.34 357 *e*P Pn 03 12 02.4 -0.3
comp=Z,236nm,1.4s
K10A MacKenzie Ranc 19.36 344 P Pn 03 12 02.2 -0.7
baz=19,SNR=54
L07A Adell 19.38 338 ⇓P Pn 03 12 02.8 -0.4
baz=19,SNR=9.5
WDC Whiskeytown Da 19.43 330 *e*P Pn 03 12 03.8 +0.1
WDC pmax pmax
comp=Z,42nm,1.3s
WDC Whiskeytown Da 19.43 330 ⇑P Pn 03 12 02.6 -1.1
baz=19,SNR=14
WDC Whiskeytown Da 19.43 330 *e*P Pn 03 12 03.8 +0.1
comp=Z,42nm,1.3s
J13A Cove Ranch, Pi 19.43 351 ⇑P Pn 03 12 03.0 -0.7
baz=19,SNR=12
J12A Stokes Ranch, 19.44 349 P Pn 03 12 02.6 -1.2
baz=19,SNR=34
LTIM Timbered Crate 19.45 333 P Pn 03 12 03.9 -0.1
M05C Lookout 19.47 334 ⇑P Pn 03 12 03.3 -1.0
baz=19,SNR=18
MOOW Moose Ponds 19.48 358 *e*P Pn 03 12 03.4 -0.9
comp=Z,2μm,0.6s
K09A Rome 19.51 343 ⇓P Pn 03 12 03.7 -1.0
baz=19,SNR=97
WVOR Wild Horse Val 19.53 340 *e*P Pn 03 12 03.8 -1.1
WVOR pmax pmax
comp=Z,131nm,1.4s
WVOR Wild Horse Val 19.53 340 *e*P Pn 03 12 03.8 -1.2
comp=Z,131nm,1.4s
MOD Modoc 19.61 336 ⇓P Pn 03 12 04.8 -1.1
baz=20,SNR=23
MOD Modoc 19.61 336 *e*P Pn 03 12 04.8 -1.1
comp=Z,70nm,1.3s
HLID Hailey 19.63 350 P Pn 03 12 05.2 -0.9
baz=20,SNR=36
HLID Hailey 19.63 350 *e*P Pn 03 12 05.0 -1.0
comp=Z,61nm,1.5s
I16A Newdale 19.63 357 ⇑P Pn 03 12 05.0 -1.2
baz=20,SNR=44
O01C Eel River Cons 19.69 327 ⇓P Pn 03 12 06.2 -0.7
baz=20
MFID Camas Ranch 19.74 347 ⇑P Pn 03 12 05.6 -1.8
baz=20,SNR=31
K08A Mann Creek Ran 19.75 341 P Pn 03 12 07.1 -0.5
baz=20,SNR=14
M03C McCloud 19.80 332 ⇑P Pn 03 12 07.2 -1.1
baz=20,SNR=15
FLWY Flagg Ranch 19.81 358 *e*P Pn 03 12 08.1 -0.2
comp=Z,177nm,1.3s
I15A Monteview 19.83 355 ⇓P Pn 03 12 07.7 -0.7
baz=20,SNR=31
I14A Mackay 19.86 353 ⇑P Pn 03 12 08.1 -0.7
baz=20,SNR=36
I13A Wildhorse Cree 19.93 351 ⇑P Pn 03 12 08.6 -1.1
baz=20,SNR=35
L05A Lakeview 19.94 336 ⇓P Pn 03 12 08.5 -1.3
baz=20,SNR=21
J10A Berg Farm, Mel 19.95 345 ⇓P Pn 03 12 08.5 -1.4
baz=20,SNR=5.9
K07A Rock Creek Ran 19.95 340 P Pn 03 12 09.1 -0.9
baz=20,SNR=30
N02C Big Bar 19.97 329 ⇑P Pn 03 12 08.4 -1.9
baz=20,SNR=8.2
M04C Madoel 20.11 333 ⇓P P 03 12 10.0 0.0
baz=20,SNR=36
J09A Fry Pan Ranch, 20.12 343 P P 03 12 10.7 +0.6
baz=20,SNR=31
HBAR Harrisburg 20.13 51 *e*P P 03 12 12.1 +1.7
YFT Old Faithful 20.18 358 *e*P P 03 12 14.1 +3.3
KHMM Horse Mountain 20.21 328 *e*P P 03 12 12.1 +1.0
M02C Callahan 20.22 331 ⇓P P 03 12 11.6 +0.4
baz=20,SNR=8.2
I11A Placerville 20.24 347 ⇓P P 03 12 11.4 +0.1
baz=20,SNR=8.3
LKWY Lake 20.29 359 *e*P P 03 12 14.6 +2.7
LKWY pmax pmax
comp=Z,57nm,1.1s
LKWY Lake 20.29 359 *e*P P 03 12 14.6 +2.7
comp=Z,57nm,1.1s
JCC Jacoby Creek 20.31 328 ⇑P P 03 12 11.9 -0.3
baz=20
J08A Circle Bar Ran 20.33 342 ⇑P P 03 12 12.5 +0.2
baz=20,SNR=24
K06A Valley Falls 20.38 338 P P 03 12 13.7 +0.8
baz=20,SNR=36
YMR Madison River 20.40 358 *e*P P 03 12 13.6 +0.4
comp=Z,110nm,1.3s
RSSD Black Hills 20.42 12 *e*P P 03 12 14.3 +1.0
RSSD pmax pmax
comp=Z,16nm,1.0s
RSSD Black Hills 20.42 12 *e*P P 03 12 14.3 +0.9
comp=Z,16nm,1.0s
YBH Yreka Blue Hor 20.43 332 P P 03 12 12.3 -1.2
comp=Z,7.2nm,1.0s,baz=191,slow=6.1,SNR=8.2
YBH LR LR 03 20 32.0
comp=Z,3μm,18.7s,MS4.7,baz=150,slow=39
YBH Yreka Blue Hor 20.43 332 *e*P P 03 12 15.4 +1.9
YBH pmax pmax
comp=Z,22nm,1.3s
YBH Yreka Blue Hor 20.43 332 *e*P P 03 12 15.4 +1.9
comp=Z,22nm,1.3s
YBH LR LR 03 20 32.0
YNR Norris Junctio 20.44 359 *e*P P 03 12 16.7 +3.2
TEIG Tepich 20.45 97 P P 03 12 18.7 +4.8
comp=Z,26nm,1.1s,baz=276,slow=12,SNR=5.6
TEIG LR LR 03 20 41.7
comp=Z,2μm,21.2s,MS4.4,baz=291,slow=38
TEIG Tepich 20.45 97 *e*P P 03 12 18.5 +4.6
comp=Z,45nm,1.2s
H16A Russell Place, 20.45 357 P P 03 12 14.0 +0.3
baz=20,SNR=36
H15A Lima 20.45 354 ⇑P P 03 12 14.3 +0.6
baz=20,SNR=45
L04A Klamath Falls 20.46 334 ⇓P P 03 12 13.8 0.0
baz=20
H14A Leadore 20.52 353 P P 03 12 15.6 +1.1
baz=20,SNR=58
K05A Summer Lake 20.55 336 ⇓P P 03 12 15.4 +0.6
baz=20,SNR=23
QLMT Earthquake Lak 20.58 357 *e*P P 03 12 16.2 +1.1
H13A Challis 20.58 351 P P 03 12 15.7 +0.6
baz=20,SNR=48
I10A Payette 20.58 346 ⇓P P 03 12 15.6 +0.4
baz=20,SNR=9.1
OXF Oxford 20.58 55 *e*P P 03 12 15.7 +0.5
OXF pmax pmax
comp=Z,70nm,1.2s
OXF Oxford 20.58 55 *e*P P 03 12 15.7 +0.5
comp=Z,70nm,1.2s
J07A Hines 20.59 340 P P 03 12 16.1 +0.9
baz=20,SNR=20
H12A Diamond D Ranc 20.66 350 P P 03 12 16.6 +0.7
baz=21,SNR=62
MCMT McKenzie Canyo 20.68 354 P P 03 12 17.4 +1.3
I09A Lost Marbles R 20.70 344 P P 03 12 17.0 +0.6
baz=21,SNR=20
J06A Christmas Vall 20.75 339 ⇓P P 03 12 17.0 0.0
baz=21,SNR=75
K04A Chilguin 20.76 335 ⇑P P 03 12 16.4 -0.7
baz=21
GNAR Gosnell 20.79 51 *e*P P 03 12 19.7 +2.3
comp=Z,3μm,1.3s
KRMB Red Mountain 20.80 329 *e*P P 03 12 18.1 +0.5
RLMT Red Lodge 20.85 1 *e*P P 03 12 17.7 -0.3
comp=Z,66nm,1.3s
I08A Drewsey 20.86 342 ⇓P P 03 12 17.9 -0.2
baz=21
G15A Dillon 20.98 355 P P 03 12 20.2 +0.7
baz=21,SNR=50
H11A Donnelly 21.01 348 ⇓P P 03 12 19.8 +0.1
baz=21,SNR=16
H10A Noah's Angus R 21.05 346 ⇑P P 03 12 19.9 -0.3
baz=21,SNR=19
G14A Jackson 21.15 353 ⇑P P 03 12 21.4 +0.1
baz=21,SNR=6.1
J05A Fort Rock 21.16 337 ⇓P P 03 12 21.1 -0.2
baz=21,SNR=32
M01C Crescent City 21.16 330 ⇓P P 03 12 21.0 -0.4
baz=21
L02A Cave Junction 21.16 331 ⇑P P 03 12 21.8 +0.4
baz=21,SNR=7.7
HALT Halls 21.25 52 *e*P P 03 12 23.7 +1.3
HUMO Hull Mountain 21.25 333 ⇑P P 03 12 21.1 -1.2
baz=21
HUMO Hull Mountain 21.25 333 *e*Pn P 03 12 22.6 +0.2
I07A Izee 21.29 341 ⇑P P 03 12 22.1 -0.7
baz=21,SNR=17
PARMO Parma 21.32 50 *e*P P 03 12 23.5 +0.4
H09A Durkee 21.33 345 P P 03 12 23.3 +0.1
baz=21,SNR=24
BRAL Brewton 21.35 67 *e*P P 03 12 26.2 +2.6
comp=Z,466nm,1.7s,mb5.5
I06A Prineville 21.39 339 ⇑P P 03 12 22.7 -1.1
baz=21,SNR=14
BOZ Bozeman (W) 21.41 357 *e*P P 03 12 23.7 -0.3
BOZ pmax pmax
comp=Z,75nm,1.5s,mb4.8
BOZ Bozeman (W) 21.41 357 P P 03 12 23.8 -0.2
baz=21,SNR=42
BOZ Bozeman (W) 21.41 357 *e*P P 03 12 23.7 -0.3
comp=Z,75nm,1.5s,mb4.8
BMO Blue Mountains 21.43 346 *e*P P 03 12 24.1 -0.1
comp=Z,60nm,1.4s,mb4.7
J04A Umpqua Nationa 21.44 335 ⇓P P 03 12 24.1 -0.4
baz=21,SNR=13
H08A Prairie City 21.45 343 ⇓P P 03 12 23.9 -0.6
baz=21
KBO Bosley Butte 21.49 330 *e*P P 03 12 26.5 +1.6
GCMT Greycliff 21.51 1 *e*P P 03 12 24.6 -0.5
FVM French Village 21.56 46 *e*P P 03 12 26.2 +0.5
FVM pmax pmax
comp=Z,36nm,1.0s,mb4.8
FVM French Village 21.56 46 *e*P P 03 12 26.2 +0.5
comp=Z,36nm,1.0s,mb4.8
K02A Glendale 21.61 332 ⇓P P 03 12 26.0 -0.2
baz=22
LCCM Lewis and Clar 21.61 356 P P 03 12 26.7 +0.5
LRM Limekiln Ridge 21.63 355 *e*P P 03 12 26.5 +0.1
F15A Butte 21.66 355 P P 03 12 26.7 0.0
baz=22,SNR=40
F14A Wisdom 21.71 354 ⇑P P 03 12 26.9 -0.3
baz=22
G11A Walters Elk Ra 21.73 348 P P 03 12 27.0 -0.5
baz=22,SNR=68
H07A Lands Inn, Kim 21.77 341 ⇑P P 03 12 27.4 -0.6
baz=22
PLAL Pickwick Lake 21.78 56 *e*P P 03 12 28.8 +0.7
comp=Z,116nm,1.5s,mb5.1
UTMT University of 21.79 51 *e*P P 03 12 29.2 +1.0
comp=Z,181nm,1.1s,mb5.4
F13A Darby 21.80 352 ⇓P P 03 12 27.5 -0.7
baz=22,SNR=86
G10A Bishop Farm, J 21.80 346 P P 03 12 27.9 -0.3
baz=22,SNR=47
F12A Elk City 21.90 350 P P 03 12 28.9 -0.4
baz=22,SNR=26
I05A Bend 21.93 338 ⇓P P 03 12 29.2 -0.5
baz=22,SNR=6.7
G09A Cove 21.94 345 ⇑P P 03 12 29.0 -0.7
baz=22,SNR=62
I04A Tendick Farm, 22.03 335 ⇑P P 03 12 29.1 -1.6
baz=22,SNR=15
HBO Huckleberry Mo 22.04 336 P P 03 12 30.4 -0.4
SLM Saint Louis 22.05 45 *e*P P 03 12 33.3 +2.4
SLM pmax pmax
comp=Z,141nm,1.4s,mb5.2
SLM Saint Louis 22.05 45 *e*P P 03 12 33.3 +2.3
comp=Z,141nm,1.4s,mb5.2
KEBM Edson Butte 22.06 331 *e*P P 03 12 31.4 +0.3
H06A Lindquist Farm 22.13 340 ⇑P P 03 12 30.1 -1.7
baz=22,SNR=33
J02A Umpqua 22.14 333 ⇓P P 03 12 31.0 -0.9
baz=22
F11A Grangeville 22.18 348 ⇑P P 03 12 31.0 -1.3
baz=22,SNR=31
SIUC Southern Illin 22.22 48 *e*P P 03 12 33.9 +1.1
comp=Z,293nm,1.6s,mb5.5
G08A Pilot Rock 22.25 343 P P 03 12 31.8 -1.2
baz=22,SNR=16
E15A Deer Lodge 22.25 355 ⇑P P 03 12 31.6 -1.4
baz=22,SNR=15
E14A Clinton 22.32 354 ⇓P P 03 12 33.0 -0.8
baz=22,SNR=19
ECSD EROS,Sioux Fal 22.32 26 *e*P P 03 12 32.4 -1.4
comp=Z,53nm,1.3s,mb4.8
H05A Madras 22.34 338 ⇑P P 03 12 32.9 -1.2
baz=22,SNR=8.5
F09A S2 Ranch, Elgi 22.37 345 ⇑P P 03 12 33.3 -1.0
baz=22,SNR=5.7
E13A Victor 22.42 352 P P 03 12 34.1 -0.7
baz=22,SNR=23
SCIA State Center 22.45 34 *e*P P 03 12 36.0 +0.8
comp=Z,437nm,1.8s,mb5.6
F10A Beach Ranch, E 22.47 347 ⇑P P 03 12 34.1 -1.3
baz=22,SNR=24
HRY Holter Researc 22.48 357 *e*P P 03 12 34.8 -0.7
I03A Eugene 22.52 334 ⇓P P 03 12 35.0 -0.8
baz=22,SNR=15
E12A Beaver Dam Sad 22.59 350 ⇑P P 03 12 35.8 -0.9
baz=22
LAO LASA Array 22.60 7 *e*P P 03 12 35.6 -1.2
comp=Z,99nm,1.3s,mb5.1
LNOR Lincton Mounta 22.61 345 *e*P P 03 12 36.6 -0.3
E11A Bogner Ranch, 22.64 349 ⇓P P 03 12 35.8 -1.4
baz=23
F08A Pendleton 22.67 344 ⇓P P 03 12 36.3 -1.2
baz=23,SNR=15
G06A Carlson Farm, 22.68 340 ⇓P P 03 12 36.4 -1.2
baz=23,SNR=11
H04A Detroit Lake 22.71 337 ⇓P P 03 12 37.0 -1.0
baz=23,SNR=17
I02A Mapleton 22.77 333 ⇑P P 03 12 37.7 -0.9
baz=23,SNR=8.0
MSO Missoula 22.77 353 *e*P P 03 12 38.1 -0.5
comp=Z,61nm,1.4s,mb4.8
CHMT Chamberlain Mo 22.79 354 *e*P P 03 12 38.1 -0.6
D15A Lincoln 22.85 355 ⇓P P 03 12 38.7 -0.8
baz=23,SNR=9.7
G05A Wamic 22.90 339 ⇓P P 03 12 39.1 -0.8
baz=23
D14A Greenough 22.98 354 P P 03 12 39.8 -1.0
baz=23,SNR=38
COR Corvallis 23.04 335 *e*P P 03 12 42.0 +0.6
COR pmax pmax
comp=Z,116nm,1.3s,mb5.2
COR Corvallis 23.04 335 *e*P P 03 12 42.0 +0.5

comp=Z,116nm,1.3s,mb5.2
F07A Phinny Hill Vi 23.07 342 ⇓P P 03 12 40.2 -1.5
baz=23
D13A Huson 23.10 352 ⇓P P 03 12 40.5 -1.5
baz=23,SNR=13
H03A Soap Creek Ran 23.11 335 ⇓P P 03 12 40.5 -1.7
baz=23,SNR=9.2
D12A Red Ives Fores 23.18 351 ⇑P P 03 12 41.2 -1.6
baz=23
F06A Goldendale 23.20 340 ⇓P P 03 12 41.3 -1.8
baz=23,SNR=7.5
G04A Mulino 23.27 337 ⇑P P 03 12 42.4 -1.4
baz=23
D11A Klaveano Farm, 23.33 349 P P 03 12 43.1 -1.4
baz=23,SNR=25
E08A Dider Farm, El 23.39 344 ⇓P P 03 12 43.0 -2.0
baz=23
USIN University of 23.40 49 eP P 03 12 47.3 +2.0
comp=Z,88nm,1.2s,mb5.1
HAWA Hanford 23.42 343 eP P 03 12 45.0 -0.3
comp=Z,26nm,1.2s,mb4.5
RSW Rattlesnake Hi 23.43 343 eP P 03 12 45.1 -0.5
SWET Sewanee 23.49 57 eP P 03 12 47.1 +0.8
OLIL Olney 23.50 47 eP P 03 12 46.3 0.0
comp=Z,136nm,1.1s,mb5.3
D10A Wagner Farm, O 23.52 347 ⇑P P 03 12 44.5 -1.9
baz=23
E07A Sunnyside 23.66 343 ⇑P P 03 12 46.3 -1.4
baz=24
TGUH Tegucigalpa,Un 23.66 111 eP P 03 12 54.3 +6.3
comp=Z,52nm,1.3s,mb4.8
C14A Swan Lake 23.68 354 ⇑P P 03 12 46.7 -1.3
baz=24
C13A Hot Springs 23.69 352 ⇓P P 03 12 46.2 -1.8
baz=24
EGMT Eagleton 23.74 0 ⇓P P 03 12 47.4 -1.1
baz=24,SNR=18
EGMT Eagleton 23.74 0 eP P 03 12 47.9 -0.6
comp=Z,152nm,1.5s,mb5.2
HEBO Mount Hebo 23.74 335 eP P 03 12 48.5 0.0
comp=Z,332nm,1.6s,mb5.5
C12B Naegeli Ranch, 23.84 351 ⇑P P 03 12 47.9 -1.5
baz=24
F04A Amboy 23.88 338 ⇓P P 03 12 47.7 -2.1
baz=24
D08A Wollman Farm, 23.88 345 ⇑P P 03 12 47.7 -2.0
baz=24
E06A Yakima 23.96 341 ⇓P P 03 12 49.7 -0.8
baz=24,SNR=12
C11A Tepee Creek (N 24.09 350 ⇓P P 03 12 50.2 -1.4
baz=24
OD2 Odessa Site #2 24.14 345 P P 03 12 50.4 -1.8
E05A Randle 24.21 340 ⇑P P 03 12 52.3 -0.6
baz=24,SNR=17
C10A Spilker Farm, 24.25 348 ⇓P P 03 12 51.7 -1.5
baz=24
D07A Quincy 24.27 343 ⇑P P 03 12 52.6 -0.8
baz=24
F03A Seaside 24.28 336 ⇓P P 03 12 52.4 -1.0
baz=24
B13A Whitefish 24.36 353 P P 03 12 53.1 -1.0
baz=24,SNR=12
LON Longmire 24.40 340 eP P 03 12 53.7 -0.8
LON pmax pmax
comp=Z,46nm,1.3s,mb4.8
LON Longmire 24.40 340 eP P 03 12 53.7 -0.9
comp=Z,46nm,1.3s,mb4.8
C09A Chrisman Ranch 24.43 346 ⇓P P 03 12 53.0 -1.8
baz=24
WCI Wyandotte Cave 24.48 50 eP P 03 12 56.4 +1.0
WCI pmax pmax
comp=Z,19nm,0.9s,mb4.5
WCI Wyandotte Cave 24.48 50 eP P 03 12 56.4 +1.0
comp=Z,19nm,0.9s,mb4.5
D06A Cle Elum 24.51 342 ⇓P P 03 12 54.4 -1.2
baz=24
E04A Onalaska 24.56 338 ⇑P P 03 12 55.0 -1.0
baz=24
C08A Higginbotham F 24.59 345 ⇓P P 03 12 55.5 -0.8
baz=24,SNR=5.8
B12A Libby 24.60 351 ⇑P P 03 12 55.5 -0.8
baz=24,SNR=8.4
DGMT Dagmar 24.61 9 eP P 03 12 57.8 +1.4
comp=Z,162nm,1.3s,mb5.4
NEW Newport 24.65 348 eP P 03 12 55.7 -1.1
NEW pmax pmax
comp=Z,28nm,1.0s
NEW Newport 24.65 348 eP P 03 12 55.7 -1.0
comp=Z,28nm,1.0s,mb4.8
CPCT Cooper Cave 24.65 57 eP P 03 12 57.3 +0.3
B11A Sandpoint 24.68 350 ⇑P P 03 12 56.2 -0.9
baz=25
B10A Chitwood Farm, 24.70 348 ⇑P P 03 12 56.1 -1.1
baz=25
JFWS Jewell Farm 24.72 36 eP P 03 12 56.4 -1.1
JFWS pmax pmax
comp=Z,38nm,1.0s,mb4.9
JFWS Jewell Farm 24.72 36 eP P 03 12 56.4 -1.1
comp=Z,38nm,1.0s,mb4.9
ETW Entiat 24.75 343 eP P 03 12 57.0 -0.7
C07A Waterville 24.75 344 ⇑P P 03 12 57.4 -0.3
baz=25
BLO Bloomington 24.78 47 eP P 03 12 59.1 +1.0
BLO pmax pmax
comp=Z,49nm,1.1s,mb5.0
BLO Bloomington 24.78 47 eP P 03 12 59.1 +1.0
comp=Z,49nm,1.1s,mb5.0
E03A Lebam 24.80 337 ⇓P P 03 12 57.5 -0.7
baz=25
D05A Enumclaw 24.85 340 ⇑P P 03 12 58.8 +0.2
baz=25,SNR=10
GOGA Godfrey 24.88 62 eP P 03 12 58.3 -0.8
GOGA pmax pmax
comp=Z,31nm,1.1s,mb4.8
GOGA Godfrey 24.88 62 eP P 03 12 58.3 -0.8
comp=Z,31nm,1.1s,mb4.8
A13A Flathead Natio 24.90 353 ⇓P P 03 12 58.4 -0.6
baz=25,SNR=9.8
WALA Waterton Lakes 24.97 354 eP P 03 13 00.0 +0.3
comp=Z,91nm,1.1s,mb5.2
B09A Rice 25.00 347 P P 03 12 58.8 -1.2
baz=25,SNR=5.9
A12A Yaak River Ran 25.06 351 ⇓P P 03 12 59.0 -1.5
baz=25,SNR=11
A11A Hall Mountain, 25.19 350 ⇓P P 03 13 01.7 0.0
baz=25,SNR=16
C06A Tall Timber Ra 25.19 343 ⇓P P 03 13 01.3 -0.4
baz=25
B08A Colville Reser 25.20 345 P P 03 13 00.9 -0.8
baz=25,SNR=11
C05A Tolt Reservoir 25.21 341 ⇓P P 03 13 01.8 -0.1
baz=25
TKL Tuckaleechee C 25.30 57 P P 03 13 04.1 +1.3
comp=Z,25nm,1.0s,mb4.7,baz=221,slow=6.9,SNR=14
TKL LR LR 03 23 43.6
comp=Z,8μm,20.0s,MS5.2,baz=249,slow=38
TKL Tuckaleechee C 25.30 57 eP P 03 13 02.6 -0.2
TKL LR LR 03 23 43.6
A10A Northport 25.42 348 ⇓P P 03 13 02.5 -1.3
baz=25,SNR=6.2
B07A Winthrop 25.48 344 P P 03 13 03.9 -0.5
baz=25,SNR=11
A09A Danville 25.61 347 ⇑P P 03 13 04.6 -0.9
baz=26
C04A Brinnon 25.62 339 ⇑P P 03 13 04.8 -0.8
baz=26,SNR=6.0
NLWA Neilton Lookou 25.64 338 eP P 03 13 08.6 +2.8
comp=Z,87nm,1.6s,mb5.0
JCW Jim Creek 25.73 341 eP P 03 13 05.3 -1.2
A08A Turner Farm, O 25.74 346 P P 03 13 06.0 -0.8
baz=26,SNR=8.5
TZTN Tazewell 25.77 55 eP P 03 13 08.8 +1.6
comp=Z,77nm,1.3s,mb5.1
RPW Rockport 25.84 342 eP P 03 13 06.2 -1.4
B05A Bryant 25.84 341 ⇓P P 03 13 06.6 -1.1
baz=26
DWPF Disney 25.85 75 eP P 03 13 18.1 +10
comp=Z,61nm,1.1s,mb5.0
B06A Marblemount 25.90 342 ⇑P P 03 13 06.7 -1.4
baz=26
A07A Ashnola River, 26.09 344 ⇑P P 03 13 09.1 -0.8
baz=26,SNR=7.7
B04A Port Angeles 26.09 339 ⇓P P 03 13 09.5 -0.4
baz=26
A06A Chilliwack 26.42 343 ⇑P P 03 13 11.4 -1.4
baz=26
A04A Legoe Bay, Lum 26.43 341 ⇓P P 03 13 11.6 -1.3
baz=26

AGMN Agassiz Refuge 26.48 21 eP P 03 13 15.8 +2.5
comp=Z,320nm,1.2s,mb4.7
A05A Maple Falls 26.50 342 ⇑P P 03 13 12.6 -0.9
baz=26
PGC Sidney 26.60 340 eP P 03 13 17.0 +2.5
LHS Liberty Hill 27.29 61 eP P 03 13 23.1 +2.3
COWI Conover 27.51 32 eP P 03 13 22.1 -0.6
comp=Z,27nm,1.1s,mb4.8
ACSO Alum Creek Sta 27.68 48 eP P 03 13 25.2 +0.9
comp=Z,30nm,1.3s,mb4.8
EYMN Ely 27.83 27 eP P 03 13 25.7 +0.2
comp=Z,31nm,1.2s,mb4.8
ELN Prospectdale 28.12 56 eP P 03 13 27.5 -0.7
ULM Lac du Bonnet 28.18 19 P P 03 13 29.2 +0.5
comp=Z,17nm,1.1s,mb4.6,baz=210,slow=12,SNR=8.3
ULM LR LR 03 25 13.6
comp=Z,2μm,20.6s,MS4.8,baz=30,slow=38
ULM Lac du Bonnet 28.18 19 P P 03 13 29.2 +0.5
ULM LR LR 03 25 13.6
BLA Blacksburg 28.36 56 eP P 03 13 30.2 -0.2
BLA pmax pmax
comp=Z,16nm,1.0s,mb4.6
BLA Blacksburg 28.36 56 eP P 03 13 30.2 -0.2
comp=Z,16nm,1.0s,mb4.6
EDM Edmonton 29.06 356 eP P 03 13 35.5 -0.9
FFC Flin Flon 31.03 9 eP P 03 13 51.9 -1.9
FFC pmax pmax
comp=Z,58nm,1.6s,mb5.2
FFC Flin Flon 31.03 9 eP P 03 13 51.9 -1.9
comp=Z,58nm,1.6s,mb5.2
BBB Bella Bella 31.16 338 LR LR 03 26 31.2
comp=Z,2μm,19.6s,MS4.7,baz=158,slow=37
BINY Binghamton 33.30 49 eP P 03 14 13.5 -0.5
comp=Z,22nm,1.1s,mb5.0
NCB Newcomb 35.16 47 eP P 03 14 28.6 -1.4
comp=Z,15nm,1.1s,mb4.8
FRNY Flat Rock 35.91 46 eP P 03 14 36.2 -0.3
FCC Fort Churchill 36.29 14 eP P 03 14 38.2 -1.3
FCC pmax pmax
comp=Z,47nm,1.2s,mb5.3
FCC Fort Churchill 36.29 14 eP P 03 14 38.2 -1.4
comp=Z,47nm,1.2s,mb5.3
DLBC Dease Lake 37.05 343 eP P 03 14 47.1 +1.1
YKA Yellowknife Ar 38.37 357 P P 03 14 56.3 -0.9
comp=Z,3.3nm,1.0s,mb4.0,baz=175,slow=34,SNR=5.0
YKA LR LR 03 31 07.6
comp=Z,2μm,18.4s,MS5.0,baz=175,slow=37
OTAV Otavalo 38.73 123 eP P 03 15 06.9 +6.1
comp=Z,46nm,1.5s,mb5.0
ROSC El Rosal 39.30 114 LR LR 03 32 54.2
comp=Z,1μm,19.0s,MS4.7,baz=177,slow=38
SDV Santo Domingo 40.48 105 P P 03 15 20.5 +5.2
comp=Z,8.9nm,0.3s,mb4.9,baz=356,slow=2.0,SNR=12
SDV LR LR 03 33 46.6
comp=Z,1μm,19.1s,MS4.8,baz=325,slow=38
SJG San Juan 41.16 90 eP P 03 15 24.1 +3.1
SJG pmax pmax
comp=Z,25nm,1.1s
SJG San Juan 41.16 90 eP P 03 15 24.1 +3.1
comp=Z,25nm,1.1s,mb4.8
ATAH Atahualpa 43.71 131 LR LR 03 31 29.9
comp=Z,586nm,19.0s,MS4.5,baz=317,slow=32
SCHQ Schefferville 44.07 35 LR LR 03 33 47.1
comp=Z,2μm,20.3s,MS5.1,baz=245,slow=36
TAOE Nuku Hiva Isla 44.17 226 eS S 03 22 26.3 +7.6
comp=Z,2μm,25.0s
TAOE eLR LR 03 28 09.1
comp=Z,12μm,26.2s,baz=43
DAWY Dawson 44.26 342 eP P 03 15 46.4 +0.9
KDAK Kodiak Island 45.22 329 LR LR 03 31 12.2
comp=Z,2μm,20.7s,MS4.9,baz=135,slow=32
EGAK Eagle 45.30 342 eP P 03 15 53.9 +0.1
comp=Z,13nm,0.9s,mb4.8
TRF Thorofare Moun 47.37 337 eP P 03 16 10.2 +0.2
comp=Z,101nm,1.4s,mb5.6
COLA College 47.42 339 c iP P 03 16 11.2 +0.8
COLA College 47.42 339 eP P 03 16 10.1 -0.4
comp=Z,11nm,0.8s,mb4.8
KTH Kantishna Hill 47.66 337 eP P 03 16 12.2 0.0
comp=Z,μm,0.7s
PPLA Purkeypile 47.75 335 eP P 03 16 13.3 +0.3
comp=Z,122nm,1.4s,mb5.7
TTA Tatalina 49.25 334 eP P 03 16 24.2 -0.4
TTA pmax pmax
comp=Z,40nm,1.4s,mb5.3
TTA Tatalina 49.25 334 eP P 03 16 24.2 -0.4
comp=Z,40nm,1.4s,mb5.2
IMA2 Indian Mountai 50.08 338 eP P 03 16 30.6 -0.3
RKT Rikitea 52.97 209 eS S 03 24 31.3 +8.7
comp=Z,570nm,26.2s
RKT eLQ 03 30 07.7
comp=Z,487nm,27.5s
RKT eLR LR 03 32 19.7
comp=Z,2μm,29.2s,baz=23
PPT Papeete 56.75 227 eS S 03 25 21.9 +8.3
comp=Z,1μm,25.2s
PPT eSS SS 03 29 10.2 +8.3
comp=Z,204nm,24.2s
PPT eLR LR 03 33 57.4
comp=Z,4μm,27.5s,baz=31
PPT Papeete 56.75 227 LR LR 03 34 41.0
comp=Z,1μm,21.9s,MS5.0,baz=68,slow=29
LPAZ La Paz 57.34 130 P P 03 17 32.0 +7.3
comp=Z,3.9nm,1.3s,mb4.3,baz=353,slow=7.7,SNR=6.6
LPAZ LR LR 03 40 06.7
comp=Z,350nm,21.9s,MS4.4,baz=322,slow=34
SUMG Summit 61.54 19 eP P 03 17 53.5 +0.6
comp=Z,3.5nm,1.1s,mb4.4
JMIC Jan Mayen 70.95 20 AMS AMS 03 47 36.9
comp=Z,563nm,18.4s,MS4.9
CMLA Cha da Macela 71.38 56 i LR LR 03 40 44.5
CPUP Villa Florida 71.50 131 P P 03 19 01.8 +4.5
comp=Z,11nm,1.1s,mb4.7,baz=294,slow=7.0,SNR=5.2
CPUP LR LR 03 48 19.2
comp=Z,194nm,21.1s,MS4.3,baz=311,slow=34
CPUP Villa Florida 71.50 131 eP P 03 18 60.0 +2.7
CPUP LR LR 03 48 19.2
PET Petropavlovsk 71.83 321 eP P 03 19 00.9 +1.9
PET pmax pmax
comp=Z,22nm,1.7s,mb4.8
PET MLR MLR
comp=Z,200nm,20.0s,MS4.4
KBS Kingsbay 72.11 10 eS S 03 28 23.8 +1.8
KBS eSS SS 03 32 52.2 -6.1
KBS AMS AMS 03 48 25.1
comp=Z,916nm,18.5s,MS5.1
SEY Seymchan 72.11 332 d iP P 03 19 00.6 +0.2
BDFB Brasilia 72.27 117 P P 03 19 08.6 +6.5
comp=Z,8.2nm,1.1s,mb4.6,baz=206,slow=2.1,SNR=5.3
BDFB LR LR 03 50 15.4
comp=Z,397nm,20.7s,MS4.7,baz=100,slow=35
PETK Petropavlovsk- 72.36 321 P P 03 19 02.4 +0.2
comp=Z,7.4nm,1.0s,mb4.6,baz=59,slow=12,SNR=7.7
PETK LR LR 03 45 16.9
comp=Z,122nm,18.8s,MS4.2,baz=265,slow=31
PLCA Paso Flores 74.29 150 LR LR 03 45 16.2
comp=Z,693nm,21.9s,MS4.9,baz=128,slow=30
BJO Bjornoya 76.22 12 AMS AMS 03 51 26.1
comp=Z,1μm,21.6s,MS5.1
TIXI Tiksi 76.27 344 eP P 03 19 28.1 +3.5
TIXI pmax pmax
comp=Z,24nm,1.7s,mb4.8
TIXI MLR MLR
comp=Z,500nm,19.0s,MS4.8
TRO Tromso 79.53 16 eS S 03 29 40.5 -3.5
TRO eSS SS 03 34 54.3 +3.6
TRO AMS AMS 03 54 55.4
comp=Z,591nm,14.6s,MS5.1
MOL Molde 80.41 25 AMS AMS 03 55 36.8
comp=Z,953nm,21.2s,MS5.1
BER Bergen 80.76 27 AMS AMS 03 55 10.4
comp=Z,1μm,19.7s,MS5.3
NSS Namsos 80.83 22 AMS AMS 03 55 52.6
comp=Z,1μm,13.9s,MS5.4
ARCES ARCESS Array B 81.18 14 P P 03 19 51.3 -0.3
comp=Z,2.7nm,0.6s,mb4.3,baz=316,slow=3.3,SNR=14
ARCES LR LR 03 59 15.7
comp=Z,640nm,19.6s,MS5.0,baz=103,slow=38
YAK Yakutsk 81.82 336 eP P 03 19 54.0 -1.1
YAK pmax pmax
comp=Z,25nm,1.0s,mb5.1
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,13nm,1.4s
YAK MLR MLR
comp=Z,452nm,19.0s,MS4.8

YAK MLR MLR
comp=N,278nm,16.0s,MS5.0
YAK MLR MLR
comp=E,467nm,17.0s,MS5.0
NB2 NORSAR Subarra 82.72 25 P P 03 20 00.2 +0.3
comp=Z,65nm,2.0s,mb5.3,baz=306,slow=5.1
NOA NORSAR Array B 82.72 25 P P 03 20 00.4 +0.5
comp=Z,5.5nm,1.0s,mb4.5,baz=307,slow=5.0,SNR=5.1
NOA LR LR 03 56 39.6
comp=Z,1μm,18.5s,MS5.3,baz=305,slow=36
KONO Kongsberg 82.93 26 c iP P 03 20 04.7 +3.7
YSS Yuzh-Sakhalins 83.61 319 ⇑ eP P 03 20 05.0 +0.3
YSS e pP 03 20 10.0 +1.9
YSS pmax pmax
comp=Z,70nm,1.2s,mb5.7
ERM Erimo 85.73 314 eP P 03 20 17.2 +1.6
ESDC Sonseca Array 86.24 48 LR LR 03 56 36.6
comp=Z,607nm,19.0s,MS5.0,baz=290,slow=34
CLL Collm 89.65 32 eP P 03 20 36.0 +1.8
CLL ePPS 03 32 54.0
CLL eSS SS 03 37 18.0 -2.6
CLL ex x 03 41 48.0
CLL eSSSS 03 44 06.0
CLL Collm 89.65 32 eP P 03 20 36.0 +1.8
CLL LR LR
comp=Z,2μm,17.7s,MS5.5
NKC Novy Kostel 90.07 33 AMS AMS 04 01 10.0
comp=Z,1μm,18.3s
BOD Bodaibo 90.40 338 eP P 03 20 35.1 -2.5
BOD pmax pmax
comp=Z,6.0nm,2.3s,mb4.5
PVCC Panska Ves 90.91 32 AMS AMS 04 02 40.0
comp=Z,1μm,16.5s
PRU Pruhonice 91.25 32 AMS AMS 04 02 10.0
comp=Z,2μm,16.6s
KHC Kasperske Hory 91.34 33 AMS AMS 03 59 40.0
comp=Z,1μm,19.1s
GERES GERESS Array B 91.59 33 LR LR 04 00 29.4
comp=Z,1μm,21.2s,MS5.3,baz=306,slow=35
MJAR Matsushiro Arr 91.81 312 P P 03 20 45.4 +0.8
comp=Z,3.0nm,0.7s,mb4.7,baz=56,slow=4.9,SNR=5.6
MAJO Matsushiro 91.81 312 eP P 03 20 45.3 +0.7
MAJO pmax pmax
comp=Z,14nm,0.9s,mb5.3
MAJO Matsushiro 91.81 312 eP P 03 20 45.3 +0.7
comp=Z,14nm,0.9s,mb5.3
MAT Matsushiro 91.81 312 P P 03 20 46.1 +1.5
DPC Dobruska-Polom 91.87 31 AMS AMS 04 03 20.0
comp=Z,1μm,15.7s
VLA Vladivostok 92.15 320 ⇑ iP P 03 20 47.5 +1.5
VLA pmax pmax
comp=Z,33nm,1.3s,mb5.5
VLA MLR MLR
comp=Z,400nm,21.0s,MS4.8
TREC Trest 92.18 32 AMS AMS 04 02 30.0
comp=Z,2μm,18.0s
URZ Urewera 92.34 229 LR LR 03 53 22.9
comp=Z,735nm,18.9s,MS5.2,baz=34,slow=30
MDJ Mudanjiang 92.57 322 P P 03 20 46.5 -1.4
MDJ S S 03 31 51.5 -0.9
MDJ AMB AMB
comp=Z,3.0nm,0.4s,mb5.1
MDJ AMB AMB
comp=Z,42nm,4.7s
MDJ LR LR
comp=N,143nm,14.1s
MDJ LR LR
comp=E,229nm,22.1s
MDJ LR LR
comp=Z,254nm,18.3s,MS4.7
VRAC Vranov 92.70 32 LR LR 04 04 15.6
comp=Z,1μm,18.2s,MS5.3,baz=293,slow=37
OKC Ostrava-Krasne 93.07 31 AMS AMS 04 05 30.0
comp=Z,800nm,15.2s
HNR Honiara 93.91 261 LR LR 03 53 56.1
comp=Z,698nm,20.4s,MS5.1,baz=228,slow=30
HIA Hailar 94.50 330 eP P 03 20 58.9 +2.2
CN2 Changchun 95.39 323 eP P 03 21 02.3 +1.4
OBN Obninsk 95.93 19 P P 03 21 07.0 +3.9
OBN e pP 03 21 10.2 +3.7
OBN SS SS 03 38 52.0 +1.9
OBN pmax pmax
comp=Z,12nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,1μm,17.0s,MS5.5
KEST Kesra 97.24 46 LR LR 04 04 07.5
comp=Z,342nm,19.2s,MS4.8,baz=245,slow=35
KSRS Korea Array 98.00 317 LR LR 04 01 56.0
comp=Z,146nm,21.4s,MS4.4,baz=32,slow=33
TLY Talaya 98.86 340 eP P 03 21 15.8 -0.6
TLY e 03 34 57.6
TLY eSS SS 03 39 40.3 +8.9
TLY pmax pmax
comp=Z,5.0nm,1.2s,mb4.9
TLY MLR MLR
comp=Z,652nm,20.0s,MS5.1
RPZ Rata Peaks 98.90 226 LR LR 03 56 46.3
comp=Z,695nm,19.8s,MS5.2,baz=38,slow=30
ARU Arti 99.07 6 ⇑ iP P 03 21 17.6 +0.4
ARU pmax pmax
comp=Z,14nm,2.5s,mb5.0
KIS Kishinev 99.92 27 eP Pdif 03 21 20.0 -1.1
KIS e 03 33 04.0
KIS MLR MLR
comp=Z,800nm,16.0s,MS5.3
KIS MLR MLR
comp=Z,600nm,16.0s
ULN Ulaanbaatar 100.91 336 ⇑ eP Pdif 03 21 27.5 +2.0
NJ2 Nanjing 107.16 318 ePDIF Pdif 03 21 53.5 +0.2
NJ2 PP PP 03 26 20.5 +0.7
NJ2 PP PP
comp=Z,600nm,4.5s
NJ2 LR LR
comp=N,5μm,21.6s
NJ2 LR LR
comp=E,3μm,27.5s
NJ2 LR LR
comp=Z,3μm,27.4s
KIV Kislovodsk 107.65 20 SS SS 03 41 38.0 +5.5
KIV pmax pmax
comp=Z,8.0nm,1.3s
KIV MLR MLR
comp=Z,1μm,19.0s,MS5.5
WMQ Urumqi 110.37 346 ePKP PKiKP 03 26 12.0 +3.3
WMQ ePP PP 03 26 50.0 +7.7
WMQ PKS 03 29 47.0
WMQ PP PP
comp=Z,144nm,4.9s
WMQ LR LR
comp=N,482nm,19.0s,MS5.2
WMQ LR LR
comp=E,439nm,18.2s,MS5.2
WMQ LR LR
comp=Z,478nm,25.4s
LZH Lanzhou 112.04 331 ePKP PKiKP 03 26 13.8 +1.7
LZH XPKP 03 26 18.3
LZH ePP PP 03 27 00.0 +5.3
LZH SKKS SKKSac 03 33 51.5 -7.1
LZH eSS SS 03 42 31.0 -0.9
LZH PP PP
comp=Z,91nm,7.5s
LZH LR LR
comp=N,167nm,18.0s
LZH LR LR
comp=Z,275nm,20.1s,MS4.8
LZH Lanzhou 112.04 331 ePKIKP PKiKP 03 26 13.8 +1.7
LZH 03 26 16.0
LZH 03 26 18.3
LZH e 03 27 00.0
LZH eSS SS 03 42 31.0 -0.9
LZH Lanzhou 112.04 331 ePKP PKiKP 03 26 13.8 +1.7
LZH pPKP 03 26 16.0
LZH sPKP 03 26 18.3
LZH ePP PP 03 27 00.0 +5.3
LZH SKKS SKKSac 03 33 51.5 -7.1
LZH eSS SS 03 42 31.0 -0.9
GYA Guiyang 118.43 323 ePDIF Pdif 03 22 45.0 +1.6
GYA PKP PKPdf 03 26 26.6 +2.0
GYA PP PP 03 27 45.8 +5.8
GYA PKS 03 30 01.4
GYA SKS SKSdf 03 33 36.7 -0.4
GYA SKKS SKKSac 03 34 37.9 -4.0
GYA SS SS 03 43 56.2 -0.2
GYA PP PP
comp=Z,120nm,7.4s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GYA				LR	LR		
	comp=N,190nm,20.5s,MS4.8						
GYA				LR	LR		
	comp=E,170nm,21.8s,MS4.8						
GYA				LR	LR		
	comp=Z,150nm,20.6s,MS4.6						
WRA	Warramunga Arr	120.73	260	PKP	PKPdf	03 26 30.5	+1.4
	comp=Z,1.3nm,0.8s,baz=67,slow=1.6,SNR=6.3						
KMI	Kunming	121.61	325	PKIKP	PKPdf	03 26 32.3	+1.6
KMI						03 26 37.6	
KMI						03 28 05.0	
KMI				PPP		03 30 39.1	
KMI				SS	SS	03 44 36.1	-1.1
KMI				SSS		03 49 10.1	
ASAR	Alice Springs	122.13	256	PKP	PKPdf	03 26 32.9	+1.2
	comp=Z,0.9nm,0.8s,baz=83,slow=3.5,SNR=5.2						
CMAR	Chiang Mai Arr	129.07	324	PKP	PKPdf	03 26 45.2	+0.1
	comp=Z,1.1nm,0.4s,baz=340,slow=2.3,SNR=6.2						

*DDA **05** 03:20:31.8, 3684N×2791E, h7^{km}±8^{km}, Md2.3*
*ISCJB **05** 03:20:34.8±1.2, 3693N±007×2778E±004, h11^{km}±7^{km}, Error ellipse: s-maj=11.2km s-min=5.8km az=5.1*
*CSEM **05** 03:20:34.4±0.2, 3698N×2777E, h20^{km}, MD2.8, Error ellipse: s-maj=4.0km s-min=2.2km az=12.0*
*ISK **05** 03:20:34.1, 3698N×2776E, h24^{km}, MD2.8*
ISC 05 03:20:35.3±1.1**, 3695N**±006×**2777E**±004**, h13**^{km}±8^{km}**, n8, σ0^{s}47**/15**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.29	294	iP	Pg	03 20 40.8	-0.5
BDRM				iS	Sg	03 20 45.5	+0.2
MLSB	Milas	0.35	1	ePG	Pg	03 20 41.8	-0.5
MLSB				eSG	Sg	03 20 47.4	+0.3
BODT	Bodrum	0.39	288	ePG	Pg	03 20 42.8	-0.2
BODT				eSG	Sg	03 20 48.8	+0.5
YER	Yerkesik	0.45	65	ePG	Pg	03 20 43.6	-0.6
YER				eSG	Sg	03 20 51.1	+0.9
TURN	Turunc	0.67	96	iP	Pg	03 20 43.1	-5.3
TURN				iS	Sg	03 20 49.8	-7.3
DALT	Dalyan (Mudla)	0.72	104	ePG	Pg	03 20 49.4	+0.2
AYDN	Tasoluk	0.72	7	iP	Pg	03 20 48.8	-0.4
AYDN				iS	Sg	03 20 58.3	-0.4
GCAM	G?zelcaml?	0.87	330	iP	Pb	03 20 52.0	-0.1
GCAM				iS	Sb	03 21 04.2	+0.6

*IDC **05** 03:21:54.4±2.7, 097N×9704E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.7/19, mbtmp3.7/7, ML4.3/1, MS4.4/1, Ms1 4.4/1, ms1mx3.1/38, Error ellipse: s-maj=108.9km s-min=20.2km az=59.0*
*ISCJB **05** 03:21:57.1±1.2, 10N±0.1×970E±02, h33^{km}, mb3.7/6, Error ellipse: s-maj=26.1km s-min=16.0km az=145.4*
ISC 05 03:22:00.0±1.3**, 11N**±01×**972E**±02**, h35**^{km}**, n9, σ0^{s}37**/8**, mb3.7**/6**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.47	57	⇑eP	Pn	03 22 10.0	-0.3
CMAR	Chiang Mai Arr	17.39	6	P	Pn	03 26 00.5	+0.5
	0.4nm,0.3s,baz=195,slow=11,SNR=4.2						
WRA	Warramunga Arr	41.97	122	P	P	03 29 48.2	+0.2
	0.6nm,0.5s,mb3.5,baz=302,slow=8.9,SNR=3.6						
ASAR	Alice Springs	43.32	127	P	P	03 29 58.9	0.0
	0.3nm,0.4s,mb3.3,baz=297,slow=8.1,SNR=3.8						
SONM	Songino Array	47.28	8	P	P	03 30 30.0	+0.1
	0.7nm,0.6s,mb3.8,baz=201,slow=11,SNR=3.4						
MKAR	Makanchi Array	47.38	346	P	P	03 30 30.9	+0.2
	0.8nm,0.7s,mb3.8,baz=148,slow=9.0,SNR=4.5						
MJAR	Matsushiro Arr	51.82	42	LR	LR	03 55 12.4	
	comp=Z,358nm,19.4s,baz=70,slow=38						
KURK	Kurchatov	51.93	345	P	P	03 31 04.4	-0.9
	0.4nm,0.6s,mb3.5,baz=167,slow=6.8,SNR=4.2						
ZALV	Zalesovo Beam	53.70	351	P	P	03 31 18.4	+0.1
	3.1nm,0.8s,mb4.3,baz=175,slow=7.3,SNR=8.2						

*ISCJB **05** 03:32:45.3±0.5, 2406S±009×699E±0.1, h10^{km}, mb4.2/14, MS4.2/5, Error ellipse: s-maj=17.4km s-min=12.8km az=5.0*
*IDC **05** 03:32:45.6±0.6, 2399S×6986E, h0^{km}, mb4.2/12, mb1 4.3/12, mb1mx4.2/20, mbtmp4.2/12, MS4.1/5, Ms1 4.1/5, ms1mx3.8/26, Error ellipse: s-maj=21.0km s-min=18.6km az=68.0*
*NEIC **05** 03:32:47.2±0.4, 2401S×6985E, h10^{km}, mb4.5/1, Error ellipse: s-maj=14.1km s-min=12.4km az=66.0*
ISC 05 03:32:47.2±0.5**, 2402S**±009×**699E**±01**, h10**^{km}**, n29, σ0^{s}76**/22**, mb4.2**/14**, MS4.2**/5**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSZ	Lusaka	40.07	275	P	P	03 40 23.6	+0.6
	3.8nm,1.0s,mb4.1,baz=117,slow=8.6,SNR=6.8						
MAW	Mawson	43.80	184	P	P	03 40 52.3	-0.6
	3.0nm,0.7s,mb4.1,baz=4.5,slow=9.7,SNR=9.3						
MAW				LR	LR	03 54 46.8	
	comp=Z,116nm,20.6s,MS3.8,baz=223,slow=30						
CMAR	Chiang Mai Arr	50.87	37	P	P	03 41 47.0	-1.5
	1.2nm,0.3s,mb4.3,baz=308,slow=18,SNR=3.0						
CMAR				LR	LR	03 58 42.6	
	comp=Z,142nm,21.8s,MS4.0,baz=336,slow=31						
ASAR	Alice Springs	58.10	104	P	P	03 42 42.1	+1.0
	1.2nm,0.9s,mb3.9,baz=254,slow=5.8,SNR=8.5						
ASAR				PcP	PcP	03 43 33.0	+0.1
	0.6nm,0.7s,baz=260,slow=3.6,SNR=5.0						
WRA	Warramunga Arr	59.48	100	P	P	03 42 50.7	-0.1
	2.1nm,0.9s,mb4.2,baz=254,slow=7.0,SNR=6.8						
SNAA	Sanae	61.96	200	e	P	03 43 07.2	+0.3
SNAA				e		03 43 14.4	
SNAA				e		03 43 18.5	
STKA	Stephens Creek	62.84	115	LR	LR	04 10 01.0	
	comp=Z,306nm,18.4s,MS4.5,baz=275,slow=36						
VNA2	Neumayer--Watz	63.34	201	e	P	03 43 14.5	-1.6
VNA2				e		03 43 21.5	
VNA2				e		03 43 25.4	
VNA1	Neumayer--Stat	63.62	201	e	P	03 43 18.6	+0.7
VNA1				e		03 43 26.1	
VNA1				e		03 43 30.3	
QSPA	South Pole Qui	66.10	180	P	P	03 43 34.5	+0.5
	5.0nm,0.8s,mb4.6,baz=256,slow=2.4,SNR=17						
CTA	Charters Tower	70.10	104	LR	LR	04 11 40.6	
	comp=Z,406nm,18.9s,MS4.7,baz=135,slow=33						
MKAR	Makanchi Array	71.37	9	P	P	03 44 07.0	-0.1
	1.6nm,0.7s,mb4.0,baz=187,slow=6.1,SNR=7.8						
KURK	Kurchatov	74.81	6	eP	P	03 44 27.7	+0.3
	6.3nm,1.3s,mb4.4						
TORD	Torodi Ar. Bea	76.12	291	P	P	03 44 34.9	-0.9
	2.4nm,1.0s,mb4.1,baz=123,slow=3.3,SNR=7.4						
SONM	Songino Array	78.70	24	P	P	03 44 50.2	+0.7
	0.8nm,0.8s,mb3.7,baz=187,slow=6.0,SNR=4.1						
ZALV	Zalesovo Beam	78.72	9	P	P	03 44 49.0	-0.4
	1.6nm,0.6s,mb4.1,baz=205,slow=3.1,SNR=5.3						
ZALV	Zalesovo Beam	78.72	9	P	P	03 44 49.0	-0.4
KSRS	Korea Array	81.96	43	LR	LR	04 18 28.1	
	comp=Z,40nm,18.2s,MS3.8,baz=30,slow=34						
AKASG	Malin Array Be	82.59	335	P	P	03 45 10.1	-0.1
	1.2nm,0.4s,mb4.3,baz=140,slow=4.7,SNR=6.4						
KWP	Kalwaria	84.44	331	eP	P	03 45 20.1	+0.4
	5.2nm,0.9s,mb4.7						
VYHS	Vyhne	85.39	329	eP	P	03 45 24.8	+0.2
VYHS	Vyhne	85.39	329	eP	P	03 45 24.8	+0.2
MODS	Modra-Piesok	86.05	328	eP	P	03 45 29.1	+1.2
MODS	Modra-Piesok	86.05	328	eP	P	03 45 29.1	+1.2
GERES	GERESS Array B	88.14	327	P	P	03 45 37.0	-0.9
	0.6nm,0.8s,mb3.9,baz=149,slow=8.9,SNR=4.4						
ULM	Lac du Bonnet	151.56	341	PKPbc	PKPbc	03 52 41.2	-0.2
	3.1nm,0.7s,baz=112,slow=4.1,SNR=5.3						
ULM	Lac du Bonnet	151.56	341	PKPbc	PKPbc	03 52 41.2	-0.2
PDAR	Pinedale Array	161.30	359	PKP	PKPdf	03 52 49.4	+1.3
	0.6nm,0.9s,baz=23,slow=3.0,SNR=3.9						
TXAR	Lajitas Array	172.16	314	PKPab	PKPab	03 54 22.0	+1.8
	1.0nm,0.9s,baz=97,slow=4.0,SNR=8.6						

*ISCJB **05** 04:00:46.3±2.4, 1277N±007×48.10E±004, h10^{km}±15^{km}, mb4.2/22, MS3.8/5, Error ellipse: s-maj=12.6km s-min=6.1km az=6.1*
*IDC **05** 04:00:46.5±0.7, 1268N×4838E, h0^{km}, mb4.2/20, mb1 4.3/21, mb1mx4.2/30, mbtmp4.2/21, ML3.3/1, MS3.8/5, Ms1 3.9/5, ms1mx3.5/31, Error ellipse: s-maj=17.1km s-min=16.4km az=105.0*
*NEIC **05** 04:00:47.9±0.3, 1265N×4836E, h10^{km}, mb4.5/4, Error ellipse: s-maj=8.7km s-min=7.8km az=107.0*
*DHMR **05** 04:00:47.2±1.5, 1325N×4802E, h14^{km}±13^{km}, ML4.0*
*CSEM **05** 04:00:49.2±0.2, 1282N×48.12E, h30^{km}, mb4.5/3, Error ellipse: s-maj=7.4km s-min=5.7km az=163.0*
ISC 05 04:00:48.0±2.9**, 1274N**±007×**4807E**±004**, h11**^{km}±18^{km}**, n49, σ1^{s}44**/51**, mb4.2**/22**, MS3.8**/5**, 2D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MUKL	Al Mukalla	1.96	28	iP	Pn	04 01 15.3	-6.0
MUKL				iS	Sn	04 01 36.9	-9.1
MUKL				AML	AML	04 01 44.4	
	comp=E,2μm,0.5s						
BDHA	Al Bayda'	2.73	297	iP	Pn	04 01 30.3	-1.6
BDHA				iS	Sn	04 02 03.4	-1.5
BDHA				AML	AML	04 02 08.0	
	comp=N,3μm,0.5s						
BDHA	Al Bayda'	2.73	297	iP	Pn	04 01 30.3	-1.5
BDHA				iS	Sn	04 02 03.4	-1.5
LBOS		2.97	293	iP	Pn	04 01 34.4	-0.7
LBOS				iS	Sn	04 02 10.9	+0.1
TRBA	At Turbah	3.89	278	⇓iP	Pn	04 01 46.9	-0.9
TRBA				AML	AML	04 01 52.1	
	comp=Z,442nm,0.5s						
TRBA				iS	Sn	04 02 36.2	+2.7
DHBB	Dhamar BB	4.01	297	iP	Pn	04 01 47.3	-2.2
DHBB				iS	Sn	04 02 34.1	-2.5
UDYN	Al 'Udayn	4.18	287	iP	Pn	04 01 50.8	-0.9
UDYN				AML	AML	04 01 57.9	
	comp=Z,296nm,0.5s						
UDYN				iS	Sn	04 02 39.5	-1.2
KMBO	Kilima Mbogo	17.47	219	P	Pn	04 04 53.4	+1.5
	comp=Z,0.1nm,0.3s,baz=34,slow=14,SNR=6.5						
EIL	Elat	20.78	326	P	P	04 05 31.9	+2.6
	comp=Z,3.9nm,0.6s,baz=41,slow=5.5,SNR=3.7						
EIL				LR	LR	04 13 59.3	
	comp=Z,175nm,19.0s,MS3.5,baz=53,slow=38						
ASF	Jabal al Asfar	21.89	334	P	P	04 05 43.3	+2.1
	comp=Z,3.9nm,0.9s,mb3.8,baz=347,slow=4.8,SNR=7.6						
MMAI	Mount Meron Ar	23.27	332	P	P	04 05 58.3	+2.5
	comp=Z,1.2nm,0.4s,mb3.7,baz=127,slow=11,SNR=3.6						
MALT	Malatya	26.87	343	eP	P	04 06 32.3	+3.3
	comp=Z,3.6nm,0.8s,mb4.0						
AKTK	Aktyubinsk	38.46	10	P	P	04 08 10.1	+0.2
AKTK	Aktyubinsk	38.46	10	P	P	04 08 10.2	+0.3
AKTO	Aktyubinsk	38.46	10	P	P	04 08 10.2	+0.3
	comp=Z,1.9nm,0.7s,mb4.0,baz=161,slow=12,SNR=6.2						
AKASG	Malin Array Be	40.86	342	P	P	04 08 31.5	+1.7
	comp=Z,1.0nm,0.5s,mb3.7,baz=167,slow=8.4,SNR=6.9						
AKASG	Malin Array Be	40.86	342	P	P	04 08 31.5	+1.6
TAM	Tamanrasset	41.60	290	eP	P	04 08 39.6	+3.1
STHS	Stebnicka Huta	42.73	334	eP	P	04 08 51.1	+5.9
STHS	Stebnicka Huta	42.73	334	eP	P	04 08 51.1	+5.9
LBTB	Lobatse	43.46	210	P	P	04 08 52.2	+0.8
	comp=Z,5.1nm,0.8s,mb4.3,baz=45,slow=10,SNR=7.2						
BVAR	Borovoye Array	43.95	19	P	P	04 08 55.1	0.0
	comp=Z,1.1nm,0.6s,mb3.8,baz=193,slow=6.1,SNR=8.0						
BVAR				PcP	PcP	04 10 42.0	+1.1
	comp=Z,0.9nm,0.6s,baz=219,slow=1.8,SNR=4.0						
ARU	Arti	44.34	8	eP	P	04 08 58.6	+0.5
	comp=Z,5.0nm,0.4s,mb4.6						
ARU	Arti	44.34	8	eP	P	04 08 58.6	+0.5
	comp=Z,5.0nm,0.4s,mb4.6						
MKAR	Makanchi Array	44.47	33	P	P	04 08 57.9	-1.4
	comp=Z,2.7nm,0.9s,mb4.0,baz=226,slow=10.0,SNR=7.7						
TORD	Torodi Ar. Bea	45.15	276	P	P	04 09 07.2	+2.0
	comp=Z,4.0nm,0.7s,mb4.3,baz=88,slow=7.9,SNR=11						
TORD				PcP	PcP	04 10 48.7	+3.1
	comp=Z,0.8nm,0.7s,baz=81,slow=3.2,SNR=3.9						
KURK	Kurchatov	45.30	27	P	P	04 09 04.6	-1.2
	comp=Z,2.7nm,1.0s,mb4.0,baz=226,slow=8.1,SNR=12						
KURK	Kurchatov	45.30	27	eP	P	04 09 04.9	-1.0
	comp=Z,4.1nm,1.0s,mb4.2						
KURK	Kurchatov	45.30	27	eP	P	04 09 04.9	-0.9
	comp=Z,4.1nm,1.0s,mb4.2						
GERES	GERESS Array B	45.85	329	P	P	04 09 10.6	+0.3
	comp=Z,1.5nm,0.8s,mb4.0,baz=140,slow=8.5,SNR=6.8						
CMAR	Chiang Mai Arr	49.20	77	P	P	04 09 35.0	-1.8
	comp=Z,3.9nm,0.7s,mb4.6,baz=276,slow=8.6,SNR=25						
CMAR				LR	LR	04 29 08.2	
	comp=Z,189nm,20.1s,MS4.1,baz=153,slow=35						
ZALV	Zalesovo Beam	50.29	27	P	P	04 09 44.8	+0.3
	comp=Z,0.5nm,0.3s,mb4.0,baz=237,slow=7.4,SNR=3.6						
WLF	Walferdange	50.33	326	eP	P	04 09 45.6	+0.7
	comp=Z,6.7nm,0.8s,mb4.7						
WLF	Walferdange	50.33	326	eP	P	04 09 45.6	+0.7
	comp=Z,6.7nm,0.8s,mb4.7						
DBIC	Dimbokro	52.45	269	LR	LR	04 31 57.0	
	comp=Z,108nm,18.8s,MS3.9,baz=27,slow=36						
HFS	Hagfors	53.65	339	P	P	04 10 11.2	+1.8
	comp=Z,3.7nm,0.9s,mb4.3,baz=174,slow=1.3,SNR=4.3						
NB2	NORSAR Subarra	55.15	339	P	P	04 10 22.0	+1.7
	comp=Z,4.7nm,1.1s,mb4.4,baz=127,slow=7.9						
NOA	NORSAR Array B	55.15	339	P	P	04 10 22.7	+2.3
	comp=Z,1.5nm,0.8s,mb4.1,baz=133,slow=7.0,SNR=3.9						
NOA				LR	LR	04 37 32.1	
	comp=Z,43nm,19.9s,MS3.5,baz=65,slow=40						
NOA	NORSAR Array B	55.15	339	P	P	04 10 22.7	+2.3
NOA				LR	LR	04 37 32.1	
ARCES	ARCESS Array B	58.53	351	P	P	04 10 44.0	-0.2
	comp=Z,1.7nm,0.7s,mb4.2,baz=64,slow=9.9,SNR=7.3						
SONM	Songino Array	59.52	42	P	P	04 10 51.2	-0.3
	comp=Z,2.7nm,1.0s,mb4.2,baz=240,slow=6.7,SNR=10						
FITZ	Fitzroy Crossi	82.41	110	LR	LR	04 43 14.3	
	comp=Z,82nm,18.4s,MS4.1,baz=88,slow=31						
MJAR	Matsushiro Arr	82.64	54	P	P	04 13 10.2	-1.7
	comp=Z,0.8nm,0.3s,mb4.2,baz=292,slow=11,SNR=3.2						
WRA	Warramunga Arr	90.83	110	P	P	04 13 51.1	-1.1
	comp=Z,5.2nm,0.9s,mb4.9,baz=297,slow=3.7,SNR=24						
WB2	Warramunga Arr	90.84	110	⇓iP	P	04 13 51.1	-1.2
ASAR	Alice Springs	91.29	114	P	P	04 13 53.0	-1.3
	comp=Z,3.0nm,1.0s,mb4.6,baz=287,slow=4.6,SNR=13						
NVAR	Mina Array Bea	127.52	347	PKP	PKPdf	04 19 54.9	+1.2
	comp=Z,0.4nm,0.5s,baz=251,slow=5.4,SNR=3.4						
TXAR	Lajitas Array	130.06	327	PKP	PKPdf	04 19 59.0	+0.2
	comp=Z,0.3nm,0.8s,baz=132,slow=1.9,SNR=3.8						
TXAR	Lajitas Array	130.06	327	PKP	PKPdf	04 19 59.0	+0.2

*ISCJB **05** 04:20:30.9±1.4, 3278N±003×11734W±008, h8^{km}±8^{km}, Error ellipse: s-maj=10.7km s-min=5.2km az=175.4*
*NEIC **05** 04:20:31.7, 3276N×11735W, h11^{km}, ML2.6(PAS), After PAS.*
NEIC Felt at San Diego.
*ECX **05** 04:20:32.6±0.4, 3279N×11732W, h5^{km}±29^{km}, MD2.4, ML2.5*
ISC 05 04:20:31.1±1.3**, 3279N**±003×**11735W**±008**, h15**^{km}±6^{km}**, n15, σ0^{s}23**/25**, 2C-5D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DPP	Dos Picos Cty	0.40	58	⇓eP	Pg	04 20 39.6	+0.3
BAR	Barrett	0.58	100	P	Pg	04 20 42.4	-0.1
BAR				eS	Sg	04 20 50.1	-0.1
PLM	Palomar	0.70	36	⇑iP	Pg	04 20 44.9	+0.1
PLM				eS	Sg	04 20 54.4	+0.4
CBX	Cerro Bola	0.75	129	⇑eP	Pg	04 20 45.4	-0.3
CBX				eS	Sg	04 20 55.5	0.0
DGR	Domenigoni Val	0.91	18	⇓iP	Pb	04 20 48.4	-0.2
BORC	Borrego Spring	0.92	58	eP	Pb	04 20 48.7	-0.1
BORC				eS	Sb	04 21 00.7	-0.1
CBKC	Canebrake	0.93	83	⇓iP	Pb	04 20 49.0	0.0
POB	Polly Butte	0.97	22	⇓iP	Pb	04 20 49.6	0.0
ENX	Ensenada	1.07	147	eP	Pb	04 20 51.0	-0.3
ENX				eS	Sb	04 21 05.5	+0.3
ENX				e		04 21 07.6	
	comp=N,134nm,0.5s						
ENX	Ensenada	1.07	147	eP	Pb	04 20 51.0	-0.3
ENX				eS	Sb	04 21 05.5	+0.3
RMX	La Rumorosa	1.09	99	⇓eP	Pb	04 20 51.5	-0.2
RMX				eS	Sb	04 21 05.6	-0.1
PFO	Pinyon Flat Ob	1.11	42	P	Pb	04 20 52.0	0.0
PBX	Punta Banda	1.17	153	eP	Pn	04 20 52.5	-0.4
PBX				eS	Sb	04 21 08.2	+0.2
PBX				e		04 21 09.9	
	comp=N,115nm,0.2s						
PBX	Punta Banda	1.17	153	eP	Pn	04 20 52.5	-0.4
PBX				eS	Sb	04 21 08.2	+0.2
ECNX	Esteban Cantu	1.29	150	eP	Pn	04 20 55.0	+0.3
ECNX				eS	Sb	04 21 12.0	+0.4

*MOS **05** 04:29:12.9±1.5, 2.12N×12836E, h33^{km}, mb5.0/8, Error ellipse: s-maj=36.8km s-min=12.9km az=108.6*
*ISCJB **05** 04:29:17.6±0.8, 1.16N±005×12642E±005, h53^{km}±8^{km}, mb4.7/23, Error ellipse: s-maj=8.1km s-min=7.5km az=178.4*
*IDC **05** 04:29:21.1±3.2, 108N×12636E, h70^{km}±30^{km}, mb4.1/10, mb1 4.2/12, mb1mx4.1/19, mbtmp4.2/12, ML4.3/2, Error ellipse: s-maj=34.9km s-min=10.5km az=77.0*
*NEIC **05** 04:29:21.9±2.0, 108N×12642E, h80^{km}±19^{km}, mb4.6/10, Error ellipse: s-maj=16.7km s-min=7.2km az=68.0*
*DJA **05** 04:29:22, 1.19N×12668E, h50^{km}, mb4.5/9*
ISC 05 04:29:19.5±0.7**, 112N**±005×**12649E**±005**, h56**^{km}±7^{km}**, n52, σ0^{s}95**/55**, mb4.7**/23**, 2C-7D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNE	Ternate	0.94	111	⇓eP	Pn	04 29 36.0	-0.6
TNE				eS	Sn	04 29 49.0	-0.2
MNI	Manado	1.68	281	⇓eP	Pn	04 29 43.0	-3.6
MNI				eS	Sn	04 29 57.5	-10
LBMI	Labuha	2.02	150	P	Pn	04 29 51.9	+0.7
	0.0nm,0.0s						
KDI	Kendari	6.36	217	P	Pn	04 30 50.4	-0.3
	0.0nm,0.0s						
KDI	Kendari	6.36	217	⇓eP	Pn	04 30 50.0	-0.7
KDI				eS	Sn	04 32 02.0	0.0
PCI	Palu	6.95	253	P	Pn	04 30 58.8	0.0
	0.0nm,0.0s						
KAPI	Kappang	9.08	228	P	Pn	04 31 28.4	+0.4
	4.3nm,0.3s,baz=39,slow=14,SNR=7.9						
KHKI	Kahang-Kahang	14.37	229	P	Pn	04 32 47.4	+7.4
	0.0nm,0.0s						
KMMI	Kalianget	14.90	237	P	Pn	04 32 53.4	+6.4
	0.0nm,0.0s						
KAKA	Kakadu	14.96	157	eP	Pn	04 32 50.6	+2.9
	50nm,1.2s						
KAKA	Kakadu	14.96	157	eP	Pn	04 32 53.1	+5.4
	38nm,0.5s						
KSM	Kuching	16.18	271	eP	Pn	04 33 05.0	+1.6
SJI	Sawahan	17.12	239	P	Pn	04 33 15.9	+0.8
	0.0nm,0.0s						
BJII	Banjamegara	18.73	243	P	Pn	04 33 34.8	0.0
	0.0nm,0.0s						
FITZ	Fitzroy Crossi	19.12	182	⇓iP	Pn	04 33 37.9	-1.5
	11nm,0.8s						
FITZ	Fitzroy Crossi	19.12	182	P	Pn	04 33 37.9	-1.5
	0.5nm,0.3s,baz=14,slow=10,SNR=13						
WRAB	Tennant Creek	22.30	160	c iP	P	04 34 13.6	+1.2
WRAB	Tennant Creek	22.30	160	eP	P	04 34 12.7	+0.3
	49nm,1.0s,mb4.9						
WRA	Warramunga Arr	22.30	160	P	P	04 34 12.8	+0.4
	15nm,0.6s,mb4.6,baz=330,slow=11,SNR=64						
WRA				S	S	04 38 14.2	-0.6
	1.4nm,0.8s,baz=333,slow=20,SNR=6.3						
WB2	Warramunga Arr	22.31	160	⇓iP	P	04 34 12.7	+0.2
MBWA	Marble Bar	23.11	196	eP	P	04 34 19.9	-1.0
	6.3nm,0.8s,mb4.1						
JOW	Kunigami	25.62	4	P	P	04 34 45.0	+1.1
	11nm,0.6s,mb4.6,baz=142,slow=13,SNR=3.9						
ASAR	Alice Springs	25.67	164	P	P	04 34 45.2	+0.8
	2.3nm,0.4s,mb4.0,baz=344,slow=7.2,SNR=34						
ASAR				PcP	PcP	04 38 15.2	+1.4
	0.9nm,0.5s,baz=348,slow=2.1,SNR=6.8						
KLBR	Kellerberrin	33.57	194	eP	P	04 35 54.7	+0.3
	14nm,0.6s,mb5.1						
NWAO	Narrogin (SRO)	34.98	194	P	P	04 36 04.2	-2.2
	7.0nm,0.6s,mb4.8,baz=72,slow=7.9,SNR=8.7						
STKA	Stephens Creek	35.81	158	⇑iP	P	04 36 14.7	+1.1
	3.7nm,0.6s,mb4.5						
STKA	Stephens Creek	35.81	158	P	P	04 36 14.6	+1.0
	5.5nm,0.7s,mb4.6,baz=333,slow=8.0,SNR=8.6						
MJAR	Matsushiro Arr	36.88	16	P	P	04 36 21.8	-0.9
	1.6nm,0.5s,mb4.1,baz=187,slow=11,SNR=5.0						
MJAR	Matsushiro Arr	36.88	16	P	P	04 36 21.8	-0.9
ULN	Ulaanbaatar	49.52	343	eP	P	04 38 05.5	+1.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ULN	Ulaanbaatar	49.52	343	eP	P	04 38 05.5	+1.1
	comp=Z,2.1nm,0.5s,mb4.4						
SONM	Songino Array	49.68	342	P	P	04 38 07.7	+2.0
	comp=Z,1.8nm,0.8s,mb4.2,baz=157,slow=9.4,SNR=3.5						
BOD	Bodaibo	57.39	352	eP	P	04 39 02.4	+0.4
BOD				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
MKAR	Makanchi Array	59.56	326	P	P	04 39 16.7	-0.7
	comp=Z,2.1nm,0.4s,mb4.5,baz=117,slow=7.7,SNR=17						
MKAR	Makanchi Array	59.56	326	P	P	04 39 16.7	-0.7
YAK	Yakutsk	60.80	2	eP	P	04 39 16.7	-8.9
YAK				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.2						
TKM2	Tokmak 2	61.55	320	eP	P	04 39 30.4	-0.6
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
TKM2	Tokmak 2	61.55	320	eP	P	04 39 30.4	-0.6
	comp=Z,3.4nm,0.7s,mb4.6						
UCH	Uchtor	61.94	318	eP	P	04 39 33.9	+0.3
	comp=Z,3.4nm,0.9s,mb4.5						
ZALV	Zalesovo Beam	62.80	334	P	P	04 39 38.8	-0.3
	comp=Z,0.9nm,0.5s,mb4.2,baz=35,slow=5.4,SNR=4.2						
ZAL	Zalesovo	62.80	334	P	P	04 39 38.8	-0.3
KURK	Kurchatov	63.81	328	d iP	P	04 39 45.1	-0.8
KURK				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
KURK	Kurchatov	63.81	328	eP	P	04 39 44.9	-1.0
	comp=Z,17nm,0.8s,mb5.1						
ARU	Arti	77.00	328	d iP	P	04 41 04.7	-1.6
ARU				e		04 43 57.0	
ARU				eS	S	04 50 55.7	+5.4
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
ARU	Arti	77.00	328	eP	P	04 41 05.5	-0.7
	comp=Z,11nm,0.6s,mb5.0						
KIV	Kislovodsk	84.76	314	eP	P	04 41 49.6	+1.7
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
ANN	Anapa	88.55	315	eP	P	04 42 05.4	-1.0
ANN				pmax	pmax		
	comp=Z,147nm,1.4s,mb6.1						
ANN				MLR	MLR		
	comp=N,644nm,24.0s						
ANN				MLR	MLR		
	comp=E,622nm,24.0s						
ANN				MLR	MLR		
	comp=Z,704nm,24.0s						
OBN	Obninsk	89.04	325	eP	P	04 42 08.3	-0.1
OBN				pmax	pmax		
	comp=Z,11nm,0.4s,mb5.5						
KMBO	Kilima Mbogo	89.26	269	iP	P	04 42 18.2	+7.8
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARCES	ARCESS Array B	92.80	340	P	P	04 42 24.4	-1.2
	comp=Z,1.9nm,0.8s,mb4.6,baz=80,slow=7.8,SNR=6.2						
BUR08	Bucovina Ar. S	96.78	318	eP	P	04 42 44.5	+0.2
TORD	Torodi Ar. Bea	123.46	286	PKP	PKPdf	04 48 12.0	+0.4
	comp=Z,0.6nm,0.8s,baz=100,slow=1.9,SNR=4.9						

*BJI **05** 04:35:13.2, 51.10N×17820W, h20^{km}, mB4.9, mb4.8, Ms4.6, Msz4.5*
*MOS **05** 04:35:14.5±0.8, 5126N×17825W, h33^{km}, mb4.8/54, Error ellipse: s-maj=9.6km s-min=6.6km az=86.7*
*ISCJB **05** 04:35:15.7±0.7, 5124N±006×17821W±004, h45^{km}±5^{km}, mb4.6/90, MS3.8/11, Error ellipse: s-maj=10.3km s-min=3.7km az=174.5*
*NEIC **05** 04:35:15.2, 51.15N×17820W, h21^{km}, mb4.6/61, ML4.5(AEIC), After AEIC.*
*IDC **05** 04:35:18.4±4.3, 5126N×178.18W, h57^{km}±38^{km}, mb4.0/22, mb1 4.2/24, mb1mx4.2/28, mbtmp4.1/24, ML4.2/2, MS3.8/11, Ms1 3.8/11, ms1mx3.5/40, Error ellipse: s-maj=18.9km s-min=11.2km az=168.0*
ISC 05 04:35:17.9±0.7**, 5130N**±006×**17820W**±004**, h47**^{km}±5^{km}**, h21**^{km}±5.6^{km}**:pP-P, n261, σ0^{s}81**/259**, mb4.6**/90**, MS3.8**/11**, 18C-8D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADK	Adak	1.11	58	P	Pn	04 35 35.4	-1.6
ADK				S	Sn	04 35 50.8	-0.4
ADK	Adak	1.11	58	P	Pn	04 35 35.5	-1.6
ADK				S	Sn	04 35 50.8	-0.4
AMKA	Amchitka	1.57	274	P	Pn	04 35 41.6	-1.6
AMKA				S	Sn	04 36 03.7	+1.5

SMY Shemya 4.97 290 P Pn 04 36 30.2 +0.4
SMY S Sn **04 37 26.9 +1.1**
FX1 Attu Island--F 5.55 290 P Pn **04 36 37.6 -0.2**
NIKO Nikolski 6.00 70 P Pn **04 36 43.3 -0.6**
UNV Unalaska Valle 7.57 66 ePn Pn **04 37 05.7 +0.2**
55nm,1.0s
PET Petropavlovsk 14.30 286 eP Pn **04 38 44.8 +7.5**
PET MLR MLR
comp=Z,200nm,19.0s
PETK Petropavlovsk- 14.87 286 P Pn **04 38 45.4 +0.6**
comp=Z,0.3nm,0.3s,baz=104,slow=12,SNR=8.5
PETK LR LR 04 44 14.3
comp=Z,334nm,21.7s,baz=274,slow=36
SVW2 Sparrevohn 15.88 43 ePn Pn **04 38 56.8 -0.9**
KDAK Kodiak Island 16.16 56 P Pn **04 39 01.2 -0.1**
comp=Z,3.1nm,0.3s,baz=225,slow=5.5,SNR=16
TTA Tatalina 16.65 37 eP Pn **04 39 13.7 +6.2**
SLKM Skilak Lake 18.06 48 eP Pn **04 39 25.6 +0.6**
PPLA Purkeypile 18.14 40 eP Pn **04 39 27.9 +2.1**
comp=Z,18nm,0.7s
SEW Seward 18.31 50 eP Pn **04 39 29.1 +1.1**
RC01 Rabbit Creek A 18.47 47 eP Pn **04 39 27.6 -2.3**
comp=Z,12nm,0.9s
CHUM Lake Minchumin 18.57 37 eP Pn **04 39 31.8 +0.7**
comp=Z,18nm,0.9s
KTH Kantishna Hill 18.95 39 eP Pn **04 39 36.0 +0.3**
comp=Z,51nm,0.8s
TRF Thorofare Moun 19.16 40 eP Pn **04 39 38.4 +0.2**
comp=Z,52nm,1.0s
IMA2 Indian Mountai 19.32 31 eP Pn **04 39 42.7 +2.6**
SEY Seymchan 19.56 318 eP Pn **04 39 41.1 -1.8**
MCK McKinley 19.82 40 eP Pn **04 39 44.2 -1.8**
MCK pmax pmax
comp=Z,10µm,0.6s
MCK McKinley 19.82 40 eP Pn **04 39 44.1 -1.9**
comp=Z,10µm,0.6s
COLA College 20.75 38 eP P **04 39 56.1 +1.9**
COLA pmax pmax
comp=Z,16nm,0.8s
COLA College 20.75 38 eP P **04 39 56.1 +1.9**
comp=Z,16nm,0.8s
EGAK Eagle 23.37 41 eP P **04 40 21.4 -0.5**
comp=Z,6.7nm,0.7s,mb4.2
DAWY Dawson 23.91 43 eP P **04 40 25.6 -1.2**
YSS Yuzh-Sakhalins 25.70 276 eP P **04 40 43.6 +0.3**
YSS pmax pmax
comp=Z,16nm,0.6s,mb4.7
YSS Yuzh-Sakhalins 25.70 276 eP P **04 40 43.6 +0.3**
comp=Z,16nm,0.6s,mb4.7
ASAJ Asahikawa 27.08 270 P P **04 40 55.5 -0.2**
comp=Z,9.3nm,0.8s,mb4.3,baz=84,slow=11,SNR=4.4
ASAJ Asahikawa 27.08 270 P P **04 40 55.6 -0.1**
ASAJ pmax pmax
comp=Z,9.0nm,0.8s
KLR Kul'dur 31.56 286 ⇓iP P **04 41 30.7 -4.7**
MJAR Matsushiro Arr 34.14 262 P P **04 41 56.8 -1.3**
comp=Z,2.1nm,0.4s,mb4.4,baz=57,slow=7.1,SNR=8.5
MJAR LR LR 04 54 56.3
comp=Z,240nm,19.4s,MS3.9,baz=80,slow=34
MJAR Matsushiro Arr 34.14 262 P P **04 41 56.8 -1.3**
MJAR pmax pmax
comp=Z,2.0nm,0.4s
MJAR MLR MLR
comp=Z,240nm,19.4s
MAJO Matsushiro 34.14 262 eP P **04 41 57.7 -0.4**
MAJO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MAJO Matsushiro 34.14 262 eP P **04 41 57.7 -0.4**
comp=Z,8.7nm,0.8s,mb4.7
MDJ Mudanjiang 34.95 280 P P **04 42 04.0 -1.0**
MDJ AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
MDJ AMB AMB
comp=Z,90nm,7.8s
YKA Yellowknife Ar 35.02 46 P P **04 42 04.9 -0.4**
comp=Z,2.7nm,0.7s,mb4.3,baz=287,slow=7.6,SNR=5.2
YKA LR LR 04 58 31.1
comp=Z,90nm,18.2s,MS3.6,baz=210,slow=40
YKA Yellowknife Ar 35.02 46 P P **04 42 04.9 -0.4**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA MLR MLR
comp=Z,91nm,18.2s
JCW Jim Creek 35.74 72 eP P **04 42 11.6 -0.1**
LON Longmire 36.48 74 eP P **04 42 19.8 +1.7**
LON pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
LON Longmire 36.48 74 eP P **04 42 19.8 +1.8**
comp=Z,4.1nm,0.7s,mb4.5
ETW Entiat 36.97 72 eP P **04 42 23.1 +0.9**
CN2 Changchun 37.93 281 eP P **04 42 29.5 -0.9**
RSW Rattlesnake Hi 37.99 74 eP P **04 42 31.2 +0.3**
HAWA Hanford 38.03 74 eP P **04 42 31.8 +0.7**
comp=Z,4.4nm,0.7s,mb4.3
BOD Bodaibo 38.33 307 eP P **04 42 31.5 -2.0**
BOD pmax pmax
comp=Z,4.0nm,2.2s,mb3.8
YBH Yreka Blue Hor 38.52 82 P P **04 42 36.5 +1.1**
comp=Z,1.1nm,0.6s,mb3.8,baz=224,slow=6.5,SNR=3.9
YBH Yreka Blue Hor 38.52 82 P P **04 42 36.5 +1.1**
YBH pmax pmax
comp=Z,1.0nm,0.6s
EDM Edmonton 38.53 61 eP P **04 42 35.0 -0.3**
NEW Newport 38.56 70 eP P **04 42 36.1 +0.5**
NEW pmax pmax
comp=Z,8.0nm,0.8s
NEW Newport 38.56 70 eP P **04 42 36.1 +0.4**
comp=Z,8.5nm,0.8s,mb4.5
HIA Hailar 38.66 292 eP P **04 42 35.6 -0.9**
HIA pmax pmax
comp=Z,6.0nm,0.4s
HIA Hailar 38.66 292 eP P **04 42 35.6 -0.9**
comp=Z,6.5nm,0.4s,mb4.7
MOD Modoc 39.92 80 eP P **04 42 48.1 +1.1**
comp=Z,4.7nm,0.8s,mb4.3
KSRS Korea Array 40.01 271 P P **04 42 48.5 +0.6**
comp=Z,4.4nm,0.7s,mb4.3,baz=55,slow=8.3,SNR=13
KSRS LR LR 04 57 31.4
comp=Z,75nm,19.1s,MS3.5,baz=248,slow=33
BMO Blue Mountains 40.16 75 eP P **04 42 49.7 +0.7**
comp=Z,3.7nm,1.1s,mb4.0
WVOR Wild Horse Val 40.65 78 eP P **04 42 54.2 +1.1**
WVOR pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
WVOR Wild Horse Val 40.65 78 eP P **04 42 54.2 +1.2**
comp=Z,6.7nm,0.9s,mb4.3
MSO Missoula 41.14 70 eP P **04 42 57.4 +0.3**
comp=Z,7.6nm,1.3s,mb4.2
CHMT Chamberlain Mo 41.51 70 eP P **04 42 59.9 -0.1**
HLID Hailey 42.60 74 eP P **04 43 09.3 +0.3**
comp=Z,6.2nm,0.9s,mb4.3
BOZ Bozeman (W) 43.13 70 eP P **04 43 13.1 -0.2**
BOZ pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
BOZ Bozeman (W) 43.13 70 eP P **04 43 13.1 -0.1**
comp=Z,4.5nm,0.7s,mb4.3
NVAR Mina Array Bea 43.19 83 P P **04 43 12.3 -1.6**
comp=Z,0.5nm,0.5s,mb3.5,baz=288,slow=7.1,SNR=4.5
NVAR Mina Array Bea 43.19 83 P P **04 43 12.3 -1.6**
ELK Elko 43.71 78 eP P **04 43 18.4 +0.4**
ELK pmax pmax
comp=Z,5.0nm,0.8s
ELK Elko 43.71 78 eP P **04 43 18.4 +0.4**
comp=Z,4.6nm,0.8s,mb4.3
RLMT Red Lodge 44.81 70 eP P **04 43 27.7 +1.0**
comp=Z,17nm,1.3s,mb4.7
TPNV Topopah Spring 45.39 83 eP P **04 43 32.1 +0.7**
TPNV pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
TPNV Topopah Spring 45.39 83 eP P **04 43 32.1 +0.7**
comp=Z,8.4nm,0.9s,mb4.6
HWUT Hardware Ranch 45.45 75 eP P **04 43 30.8 -1.0**
comp=Z,3.6nm,0.9s,mb4.2
DUG Dugway 45.52 77 eP P **04 43 33.0 +0.5**
DUG pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
DUG Dugway 45.52 77 eP P **04 43 33.0 +0.6**
comp=Z,5.8nm,0.7s,mb4.6
PDAR Pinedale Array 45.98 73 P P **04 43 36.6 +0.6**
comp=Z,7.5nm,0.8s,mb4.7,baz=308,slow=3.9,SNR=65
ULN Ulaanbaatar 46.63 297 eP P **04 43 41.6 +0.5**
ULN pmax pmax
comp=Z,11nm,1.0s,mb4.7
ULN Ulaanbaatar 46.63 297 eP P **04 43 41.6 +0.6**
comp=Z,11nm,1.0s,mb4.8
MSU Marysvale 46.94 79 eP P **04 43 43.8 +0.2**

SONM Songino Array 47.02 297 P P **04 43 45.1 +1.0**
comp=Z,4.9nm,0.7s,mb4.6,baz=53,slow=10,SNR=27
SONM LR LR 05 04 03.6
comp=Z,220nm,20.9s,MS4.1,baz=84,slow=37
SONM Songino Array 47.02 297 P P **04 43 45.1 +1.0**
SONM pmax pmax
comp=Z,5.0nm,0.7s
SONM MLR MLR
comp=Z,220nm,20.9s
TMUT Trail Mountain 47.05 77 eP P **04 43 44.2 -0.3**
ZAK Zakamensk 47.32 301 eP P **04 43 47.2 +0.8**
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb4.0
SRU San Rafael 47.58 77 eP P **04 43 49.4 +0.8**
SRU pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
SRU San Rafael 47.58 77 eP P **04 43 49.4 +0.8**
comp=Z,6.9nm,0.9s,mb4.7
WUAZ Wupatki 49.33 81 eP P **04 44 03.2 +1.1**
comp=Z,5.6nm,0.8s,mb4.7
ULM Lac du Bonnet 49.42 57 P P **04 44 01.6 -0.9**
comp=Z,2.6nm,0.8s,mb4.3,baz=327,slow=9.1,SNR=4.0
ULM LR LR 05 04 55.6
comp=Z,89nm,19.5s,MS3.8,baz=0.1,slow=36
ISCO Idaho Springs 50.14 73 eP P **04 44 08.6 +0.4**
ISCO pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
ISCO Idaho Springs 50.14 73 eP P **04 44 08.6 +0.5**
comp=Z,3.3nm,1.1s,mb4.3
SDCO Great Sand Dun 51.51 75 eP P **04 44 18.4 0.0**
comp=Z,3.7nm,0.9s,mb4.3
TUC Tucson 51.82 84 eP P **04 44 21.1 +0.2**
TUC pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
TUC Tucson 51.82 84 eP P **04 44 21.1 +0.2**
comp=Z,2.8nm,0.8s,mb4.2
WHN Wuhan 53.03 274 P P **04 44 29.5 -0.4**
XAN Xi'an 54.04 281 P P **04 44 36.6 -0.7**
XAN AP pP 04 44 45.5 -4.9
XAN XP sP 04 44 50.0 -5.8
XAN AMB AMB
comp=Z,8.0nm,1.0s,mb4.6
XAN AMB AMB
comp=Z,80nm,6.9s
ZALV Zalesovo Beam 54.36 314 P P **04 44 40.5 +1.2**
comp=Z,0.5nm,0.3s,mb3.9,baz=46,slow=6.2,SNR=2.6
ZALV PcP PcP 04 45 43.0 +0.4
comp=Z,7.6nm,0.8s,baz=32,slow=4.1,SNR=18
ZALV LR LR 05 11 22.5
comp=Z,58nm,18.6s,MS3.7,baz=72,slow=40
ZAL Zalesovo 54.38 314 P P **04 44 40.5 +1.1**
ZAL 04 45 43.0
ZAL pmax pmax
comp=Z,1.0nm,0.3s
ZAL pmax pmax
comp=Z,8.0nm,0.8s
ZAL MLR MLR
comp=Z,58nm,18.6s
LZH Lanzhou 55.77 287 ⇓P P **04 44 50.0 +0.3**
LZH AP pP 04 44 54.7 -8.1
LZH AMB AMB
comp=Z,21nm,1.3s,mb5.0
LZH AMB AMB
comp=Z,84nm,4.0s
GTA Gaotai 55.94 292 P P **04 44 51.5 +0.6**
GTA S S **04 52 38.9 +3.7**
GTA SS SS 04 56 27.1 +6.1
GTA AMB AMB
comp=Z,35nm,0.7s,mb5.5
GTA AMB AMB
comp=Z,186nm,5.1s
GTA LR LR
comp=N,145nm,19.0s,MS4.2
GTA LR LR
comp=E,101nm,18.4s,MS4.2
GTA LR LR
comp=Z,144nm,17.5s,MS4.1
ARCES ARCESS Array B 58.24 350 P P **04 45 05.6 -1.0**
comp=Z,2.2nm,0.7s,mb4.3,baz=25,slow=7.3,SNR=13
ARCES PcP PcP 04 45 57.0 -0.4
comp=Z,4.3nm,0.8s,baz=0.0,slow=5.2,SNR=7.2
ARCES ARCESS Array B 58.24 350 P P **04 45 05.6 -1.0**
ARCES 04 45 57.0
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES pmax pmax
comp=Z,4.0nm,0.8s
TXAR Lajitas Array 58.30 82 P P **04 45 07.5 -0.2**
comp=Z,0.4nm,0.5s,mb3.7,baz=308,slow=6.2,SNR=9.1
TXAR LR LR 05 05 59.1
comp=Z,52nm,20.9s,MS3.6,baz=180,slow=32
KURK Kurchatov 59.35 314 eP P **04 45 13.5 -1.1**
KURK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KURK Kurchatov 59.35 314 eP P **04 45 13.5 -1.2**
comp=Z,2.7nm,0.6s,mb4.5
MKAR Makanchi Array 60.38 309 P P **04 45 20.2 -1.6**
comp=Z,3.6nm,0.8s,mb4.5,baz=53,slow=7.0,SNR=14
MKAR PcP PcP 04 46 06.5 +0.1
comp=Z,0.9nm,0.6s,baz=32,slow=1.4,SNR=4.1
MKAR Makanchi Array 60.38 309 P P **04 45 20.2 -1.6**
MKAR 04 46 06.5
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
GYA Guiyang 60.70 277 P P **04 45 29.2 +4.9**
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb5.0
MIAR Mount Ida 60.80 70 eP P **04 45 24.5 -0.3**
MIAR pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
MIAR Mount Ida 60.80 70 eP P **04 45 24.5 -0.3**
comp=Z,6.3nm,0.8s,mb4.8
OLIL Olney 61.05 63 eP P **04 45 26.4 -0.1**
comp=Z,6.1nm,0.5s,mb5.0
WCI Wyandotte Cave 62.41 63 eP P **04 45 35.2 -0.4**
WCI pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
WCI Wyandotte Cave 62.41 63 eP P **04 45 35.1 -0.5**
comp=Z,7.6nm,0.8s,mb4.9
ARU Arti 62.87 329 eP P **04 45 37.8 -0.6**
ARU pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
ARU Arti 62.87 329 eP P **04 45 37.8 -0.6**
comp=Z,3.5nm,0.7s,mb4.6
BORG Borgarnes 62.91 11 LR LR 05 12 39.0
comp=Z,70nm,21.1s,MS3.8,baz=48,slow=36
OXF Oxford 63.26 68 eP P **04 45 40.5 -0.9**
OXF pmax pmax
comp=Z,22nm,0.8s,mb5.3
OXF Oxford 63.26 68 eP P **04 45 40.5 -0.9**
comp=Z,22nm,0.8s,mb5.3
HNR Honiara 63.37 204 LR LR 05 13 08.0
comp=Z,51nm,18.3s,MS3.7,baz=322,slow=36
PLAL Pickwick Lake 63.70 66 eP P **04 45 43.5 -0.8**
comp=Z,5.9nm,0.6s,mb4.8
JOF Joensuu 63.77 345 ep P **04 45 35.3 -8.9**
comp=Z,0.7nm,0.4s,mb4.0
JOF Joensuu 63.77 345 eP P **04 45 35.3 -8.9**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KMI Kunming 64.11 278 P P **04 45 51.5 +4.5**
KMI AP pP 04 45 59.2 -1.2
KMI AMB AMB
comp=Z,7.0nm,0.9s,mb4.7
CPCT Cooper Cave 65.39 64 eP P **04 45 55.1 -0.1**
ELN Prospectdale 66.18 60 eP P **04 45 59.9 -0.4**
NB2 NORSAR Subarra 67.76 355 P P **04 46 10.1 +0.2**
comp=Z,1.8nm,0.6s,mb4.3,baz=9.4,slow=6.9
NOA NORSAR Array B 67.76 355 P P **04 46 09.9 0.0**
comp=Z,1.5nm,0.7s,mb4.2,baz=8.1,slow=6.3,SNR=5.5
NOA NORSAR Array B 67.76 355 P P **04 46 10.0 +0.1**
NOA pmax pmax
comp=Z,2.0nm,0.7s
LSA Lhasa 67.82 290 eP P **04 46 12.9 +2.1**
LSA pmax pmax
comp=Z,26nm,1.0s,mb5.2
LSA Lhasa 67.82 290 eP P **04 46 12.9 +2.0**
comp=Z,26nm,1.0s,mb5.2
JSC Jenkinsville 68.07 62 eP P **04 46 12.5 +0.2**
SHL Shillong 70.43 287 eP P **04 46 26.0 -1.1**
CMAR Chiang Mai Arr 71.39 276 P P **04 46 33.0 0.0**
comp=Z,2.0nm,0.6s,mb4.2,baz=29,slow=6.6,SNR=11
CMAR Chiang Mai Arr 71.39 276 P P **04 46 33.0 0.0**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
TAPN Taplejung 71.59 291 eP P **04 46 35.4 +1.4**
comp=Z,144nm,1.0s
ODAN Odare 72.14 291 eP P **04 46 37.7 +0.3**
GUN Gumba 72.23 292 eP P **04 46 38.9 +1.0**
comp=Z,226nm,0.7s
JIRN Jiri 72.24 292 eP P **04 46 39.1 +1.1**
comp=Z,164nm,0.8s
RAMN Ramite 72.54 291 eP P **04 46 40.4 +0.7**
comp=Z,149nm,0.8s
KKN Kakani 72.67 293 eP P **04 46 41.3 +0.8**
comp=Z,66nm,0.8s,mb5.6
PKI Pulchoki 72.76 293 eP P **04 46 41.5 +0.4**
comp=Z,103nm,1.1s,mb5.7
PKIN Phulchoki 72.77 293 eP P **04 46 41.5 +0.4**
GKN Gorkha 72.88 293 eP P **04 46 42.1 +0.3**
PPT Papeete 73.01 151 LR LR 05 14 30.7
comp=Z,124nm,19.1s,MS4.2,baz=316,slow=32
DANN Dangsing 73.12 294 eP P **04 46 44.1 +0.9**
comp=Z,136nm,0.9s
KOLN Koldanda 73.66 294 eP P **04 46 46.8 +0.5**
comp=Z,64nm,0.9s,mb5.5
AKASG Malin Array Be 75.74 342 P P **04 46 57.4 -0.7**
comp=Z,4.1nm,0.5s,mb4.6,baz=18,slow=5.6,SNR=18
AKASG Malin Array Be 75.74 342 P P **04 46 57.4 -0.6**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
KSP Ksiaz 77.50 351 eP P **04 47 07.9 0.0**
BRG Berggiesshubel 77.69 352 eP P **04 47 08.8 -0.2**
BRG pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
BRG Berggiesshubel 77.69 352 eP P **04 47 08.8 -0.2**
comp=Z,4.2nm,1.2s,mb4.3
KWP Kalwaria 77.88 346 eP P **04 47 10.8 +0.7**
KWP Kalwaria 77.88 346 eP P **04 47 10.8 +0.7**
STHS Stebnicka Huta 78.30 347 eP P **04 47 13.0 +0.6**
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
STHS Stebnicka Huta 78.30 347 eP P **04 47 13.0 +0.6**
STHS Stebnicka Huta 78.30 347 eP P **04 47 13.0 +0.6**
comp=Z,3.8nm,0.7s,mb4.4
KOLS Kolonicke sedl 78.62 346 eP P **04 47 14.7 +0.5**
KIV Kislovodsk 78.72 331⇑eP P **04 47 15.8 +1.0**
KIV pmax pmax
comp=Z,12nm,0.9s,mb4.8
BAIF Baives 79.00 358 eP P **04 47 16.2 -0.1**
KECS Kecovo 79.32 347 eP P **04 47 18.3 +0.3**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KECS Kecovo 79.32 347 eP P **04 47 18.3 +0.3**
comp=Z,3.2nm,0.9s,mb4.2
BUR08 Bucovina Ar. S 79.41 344 eP P **04 47 19.0 +0.5**
BURAR Bucovina Array 79.44 344⇓iP P **04 47 18.2 -0.5**
BURAR Bucovina Array 79.44 344⇓P P **04 47 18.2 -0.5**
VYHS Vyhne 79.52 349 eP P **04 47 19.1 0.0**
GERES GERESS Array B 79.72 352 P P **04 47 20.6 +0.4**
comp=Z,1.7nm,0.7s,mb4.1,baz=25,slow=3.5,SNR=9.7
GERES GERESS Array B 79.72 352 P P **04 47 20.6 +0.4**
GERES pmax pmax
comp=Z,2.0nm,0.7s
MODS Modra-Piesok 79.83 350 eP P **04 47 19.8 -1.0**
PSZ Piszkesteto 79.95 348⇓iP P **04 47 20.4 -1.1**
PSZ Piszkesteto 79.95 348⇓P P **04 47 20.4 -1.0**
FLN La Foliniere 80.30 2 eP P **04 47 22.9 -0.4**
comp=Z,14nm,0.7s,mb4.7
FLN La Foliniere 80.30 2 eP P **04 47 22.9 -0.4**
FLN pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
FLN La Foliniere 80.30 2 eP P **04 47 22.9 -0.4**
comp=Z,7.2nm,0.7s,mb4.7
LDF La Druitiere 80.48 1 eP P **04 47 23.6 -0.7**
comp=Z,15nm,0.7s,mb4.7
LDF La Druitiere 80.48 1 eP P **04 47 23.6 -0.7**
LDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
LDF La Druitiere 80.48 1 eP P **04 47 23.6 -0.7**
comp=Z,7.3nm,0.7s,mb4.7
MEZF Maizieres J'vi 80.54 358 eP P **04 47 24.5 -0.1**
CDF Champ du Feu 80.56 356 eP P **04 47 24.4 -0.3**
comp=Z,4.8nm,0.7s,mb4.3
CDF Champ du Feu 80.56 356 eP P **04 47 24.4 -0.3**
CDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
CDF Champ du Feu 80.56 356 eP P **04 47 24.4 -0.3**
comp=Z,2.4nm,0.7s,mb4.2
DRGR 80.65 346⇑iP P **04 47 25.0 -0.2**
DRGR 80.65 346⇑P P **04 47 24.9 -0.3**
ROSF Rostrenen 80.65 3 eP P **04 47 24.9 -0.3**
GRR Gorron 80.67 2 eP P **04 47 24.9 -0.4**
SGMF Saint Gilles 80.76 3 eP P **04 47 25.5 -0.3**
comp=Z,19nm,0.8s,mb4.8
SGMF Saint Gilles 80.76 3 eP P **04 47 25.5 -0.3**
SGMF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SGMF Saint Gilles 80.76 3 eP P **04 47 25.5 -0.3**
comp=Z,9.0nm,0.8s,mb4.4
VRI Vrincioaia 80.85 343⇑iP P **04 47 26.6 +0.3**
VRI Vrincioaia 80.85 343⇑P P **04 47 26.6 +0.3**
HAU Haudompre 81.00 357 eP P **04 47 26.7 -0.4**
QUIF Quistinic 81.08 3 eP P **04 47 27.5 0.0**
HINF Hinteralfeld 81.17 357 eP P **04 47 27.4 -0.6**
comp=Z,5.0nm,0.8s,mb4.2
HINF Hinteralfeld 81.17 357 eP P **04 47 27.4 -0.6**
HINF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
HINF Hinteralfeld 81.17 357 eP P **04 47 27.4 -0.6**
comp=Z,2.5nm,0.8s,mb4.2
MLR Muntele Rosu 81.36 343⇑iP P **04 47 28.9 -0.1**
MLR Muntele Rosu 81.36 343⇑P P **04 47 28.9 -0.2**
WTTA Wattenberg 81.46 353⇑iP P **04 47 29.6 +0.1**
comp=Z,7.9nm,0.7s,mb4.7
WTTA Wattenberg 81.46 353⇑iP P **04 47 29.6 +0.1**
WTTA pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
VOIR 81.57 344⇑iP P **04 47 31.5 +1.3**
SOKA Soboth 81.74 351⇑iP P **04 47 31.1 0.0**
HARR Harsova 81.75 341⇑iP P **04 47 31.2 +0.1**
HARR Harsova 81.75 341⇑P P **04 47 31.2 0.0**
PKSM Moragy 81.79 348⇓iP P **04 47 31.1 -0.2**
PKSM Moragy 81.79 348⇓P P **04 47 31.1 -0.2**
LOR Lormes 81.80 359 eP P **04 47 30.7 -0.6**
comp=Z,12nm,0.9s,mb4.5
LOR Lormes 81.80 359 eP P **04 47 30.7 -0.6**
LOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LOR Lormes 81.80 359 eP P **04 47 30.7 -0.6**
comp=Z,5.8nm,0.9s,mb4.5
TIRR Tirgusor 81.88 341⇑iP P **04 47 32.0 +0.2**
TIRR Tirgusor 81.88 341⇑P P **04 47 32.0 +0.2**
BZS Buzias 81.96 346⇑iP P **04 47 31.8 -0.4**
BZS Buzias 81.96 346⇑P P **04 47 31.8 -0.4**
SSF Saint Saulge 82.01 359 eP P **04 47 32.2 -0.3**
comp=Z,10.0nm,0.9s,mb4.5
SSF Saint Saulge 82.01 359 eP P **04 47 32.2 -0.3**
SSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
SSF Saint Saulge 82.01 359 eP P **04 47 32.2 -0.3**
comp=Z,5.0nm,0.9s,mb4.4
WRA Warramunga Arr 82.21 224 P P **04 47 32.3 -1.4**
comp=Z,1.8nm,0.8s,mb4.1,baz=35,slow=6.2,SNR=9.9
WRA Warramunga Arr 82.21 224 P P **04 47 32.3 -1.4**
WRA pmax pmax
comp=Z,2.0nm,0.8s
AVF Avril sur Loir 82.28 359 eP P **04 47 33.5 -0.4**
comp=Z,22nm,1.1s,mb4.7
AVF Avril sur Loir 82.28 359 eP P **04 47 33.5 -0.4**
AVF pmax pmax
comp=Z,11nm,1.1s,mb4.7
AVF Avril sur Loir 82.28 359 eP P **04 47 33.5 -0.4**
comp=Z,11nm,1.1s,mb4.7
CABF La Chapelle 82.40 357 eP P **04 47 34.7 +0.2**
comp=Z,18nm,1.0s,mb4.7
CABF La Chapelle 82.40 357 eP P **04 47 34.7 +0.2**
CABF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
CABF La Chapelle 82.40 357 eP P **04 47 34.7 +0.2**
comp=Z,8.9nm,1.0s,mb4.7
SMF Signal de Mont 82.42 359 eP P **04 47 34.3 -0.3**
comp=Z,25nm,0.9s,mb4.8
SMF Signal de Mont 82.42 359 eP P **04 47 34.3 -0.3**
SMF pmax pmax
comp=Z,13nm,0.9s,mb4.9
SMF Signal de Mont 82.42 359 eP P **04 47 34.3 -0.3**
comp=Z,13nm,0.9s,mb4.8
MFF Saint Martin d 82.47 1 eP P **04 47 34.7 -0.1**

	comp=Z,28nm,1.1s,mb4.8						
MFF	**Saint Martin d**	**82.47**	**1**	*e*P	**P**	**04 47 34.7**	**-0.1**
MFF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
MFF	**Saint Martin d**	**82.47**	**1**	*e*P	**P**	**04 47 34.7**	**-0.1**
	comp=Z,14nm,1.1s,mb4.8						
BGF	**Bois d'Agland**	**82.52**	**359**	*e*P	**P**	**04 47 34.8**	**-0.3**
TCF	**Toulx Ste Croi**	**82.80**	**360**	*e*P	**P**	**04 47 36.2**	**-0.4**
	comp=Z,12nm,0.9s,mb4.6						
TCF	**Toulx Ste Croi**	**82.80**	**360**	*e*P	**P**	**04 47 36.2**	**-0.4**
TCF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
TCF	**Toulx Ste Croi**	**82.80**	**360**	*e*P	**P**	**04 47 36.2**	**-0.4**
	comp=Z,5.8nm,0.9s,mb4.6						
RJF	**Les Rejaudoux**	**83.78**	**0**	*e*P	**P**	**04 47 41.5**	**-0.1**
	comp=Z,18nm,1.0s,mb4.9						
RJF	**Les Rejaudoux**	**83.78**	**0**	*e*P	**P**	**04 47 41.5**	**-0.1**
RJF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
RJF	**Les Rejaudoux**	**83.78**	**0**	*e*P	**P**	**04 47 41.5**	**-0.1**
	comp=Z,9.1nm,1.0s,mb4.9						
ORIF	**Oris-en-Rattie**	**84.10**	**357**	*e*P	**P**	**04 47 42.8**	**-0.5**
	comp=Z,14nm,0.9s,mb4.8						
ORIF	**Oris-en-Rattie**	**84.10**	**357**	*e*P	**P**	**04 47 42.8**	**-0.5**
ORIF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
ORIF	**Oris-en-Rattie**	**84.10**	**357**	*e*P	**P**	**04 47 42.8**	**-0.5**
	comp=Z,7.2nm,0.9s,mb4.8						
LFF	**La Frestale**	**84.14**	**1**	*e*P	**P**	**04 47 43.4**	**-0.1**
	comp=Z,16nm,0.7s,mb5.0						
LFF	**La Frestale**	**84.14**	**1**	*e*P	**P**	**04 47 43.4**	**-0.1**
LFF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0						
LFF	**La Frestale**	**84.14**	**1**	*e*P	**P**	**04 47 43.4**	**-0.1**
	comp=Z,8.1nm,0.7s,mb5.0						
CAF	**Calviac**	**84.16**	**360**	*e*P	**P**	**04 47 43.5**	**-0.1**
	comp=Z,31nm,1.1s,mb5.1						
CAF	**Calviac**	**84.16**	**360**	*e*P	**P**	**04 47 43.5**	**-0.1**
CAF				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.0						
CAF	**Calviac**	**84.16**	**360**	*e*P	**P**	**04 47 43.5**	**-0.1**
	comp=Z,15nm,1.1s,mb5.0						
FITZ	**Fitzroy Crossi**	**84.71**	**232**	P	**P**	**04 47 45.8**	**-0.8**
	comp=Z,4.8nm,0.7s,mb4.7,baz=350,slow=1.6,SNR=13						
LASF	**Ste Croix**	**84.99**	**359**	*e*P	**P**	**04 47 47.9**	**+0.1**
MALT	**Malatya**	**85.17**	**332**	⇑*i*P	**P**	**04 47 48.9**	**+0.1**
MALT	**Malatya**	**85.17**	**332**	*e*P	**P**	**04 47 49.4**	**+0.6**
ASAR	**Alice Springs**	**85.68**	**223**	P	**P**	**04 47 50.5**	**-0.8**
	comp=Z,2.1nm,0.7s,mb4.5,baz=29,slow=5.2,SNR=21						
ASAR	**Alice Springs**	**85.68**	**223**	P	**P**	**04 47 50.5**	**-0.8**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
EPF	**Esparros**	**86.05**	**1**	*e*P	**P**	**04 47 53.0**	**-0.1**
ETSF	**Etsaut**	**86.16**	**2**	*e*P	**P**	**04 47 54.0**	**+0.4**
	comp=Z,6.4nm,0.7s,mb4.7						
ETSF	**Etsaut**	**86.16**	**2**	*e*P	**P**	**04 47 54.0**	**+0.4**
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
ETSF	**Etsaut**	**86.16**	**2**	*e*P	**P**	**04 47 54.0**	**+0.4**
	comp=Z,3.2nm,0.7s,mb4.7						
PGF	**Pioggiola**	**86.33**	**355**	*e*P	**P**	**04 47 54.1**	**-0.3**
	comp=Z,27nm,0.8s,mb5.2						
PGF	**Pioggiola**	**86.33**	**355**	*e*P	**P**	**04 47 54.1**	**-0.3**
PGF				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.2						
PGF	**Pioggiola**	**86.33**	**355**	*e*P	**P**	**04 47 54.1**	**-0.3**
	comp=Z,13nm,0.8s,mb5.2						
ESDC	**Sonseca Array**	**89.27**	**4**	P	**P**	**04 48 07.5**	**-1.0**
	comp=Z,1.8nm,0.6s,mb4.6,baz=349,slow=4.5,SNR=8.8						
STKA	**Stephens Creek**	**90.06**	**213**	P	**P**	**04 48 12.2**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.8,baz=344,slow=5.0,SNR=5.7						
MBWA	**Marble Bar**	**90.27**	**236**	*e*P	**P**	**04 48 12.0**	**-1.3**
	comp=Z,6.8nm,0.9s,mb5.0						
TORD	**Torodi Ar. Bea**	**115.83**	**0**	PKP	PKPdf	04 53 53.9	-1.4
	comp=Z,0.5nm,0.6s,baz=327,slow=2.2,SNR=9.5						
DBIC	**Dimbokro**	**121.98**	**8**	PKP	PKPdf	04 54 06.2	-1.0
	comp=Z,2.6nm,0.5s,baz=129,slow=20,SNR=6.0						
DBIC	**Dimbokro**	**121.98**	**8**	*e*PKPdf	PKPdf	04 54 05.7	-1.4
TSUM	**Tsumeb**	**145.63**	**333**	*e*PKPdf	PKPdf	04 54 50.8	0.0

*NEIC **05** 05:05:32.5, 1679N×9965W, h7km, MD3.5(MEX), After MEX.*
MEX 05 05:05:32.5±1.2**, 1679N×9965W, h7km**±9km**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.27**	**286**	*i* P	Pg	05 05 37.6	-0.2
ACX				*i* S	Sg	05 05 41.2	-0.2
CAIG	**El Cayaco**	**0.64**	**293**	*e*P	Pg	05 05 43.8	-1.2
CAIG				*i* S	Sg	05 05 52.9	-0.5
MEIG	**Mezcala**	**1.13**	**1**	*e*P	Pg	05 05 50.2	-3.9
MEIG				*i* S	Sg	05 06 04.4	-4.4
PLIG	**Platanillo**	**1.60**	**5**	*i* P	Pn	05 05 58.5	-2.6
PLIG				*i* S	Sn	05 06 18.3	-3.7
ZIIG	**Zihuatanejo**	**1.92**	**295**	*i* P	Pn	05 06 00.5	-5.0
ZIIG				*i* S	Sn	05 06 25.0	-4.8

*BEO **05** 05:08:12.9±0.7, 41.13N×19.37E, h3km±2km, ML4.8/3*
*PRU **05** 05:08:12.9, 4086N×1924E, h15km, M4.5*
*IDC **05** 05:08:13.9±0.6, 4144N×1959E, h0km, mb4.4/19, mb1 4.3/30, mb1mx4.3/37, mbtmp4.2/30, ML4.0/9, MS4.1/26, Ms1 4.1/26, ms1mx4.0/40, Error ellipse: s-maj=10.7km s-min=10.2km az=49.0*
*TIR **05** 05:08:13.4±2.0, 4126N×1951E, h28km±15km, ML4.5*
*SKO **05** 05:08:13.7, 4135N×1932E, h0km, M4.2, ML4.8*
*ISCJB **05** 05:08:14.6±0.1, 41374N±0010×1944E±001, h10km, mb4.7/58, MS4.3/34, Error ellipse: s-maj=1.5km s-min=1.1km az=31.4*
*ATH **05** 05:08:14.1, 4148N×19.13E, h110km±8km*
*SZGRF **05** 05:08:15.5, 41.17N×1939E, h10km, mb3.9, Albania*
*PDG **05** 05:08:15.7±0.6, 4134N×1947E, h11km±1km, MD4.4/10, ML4.6/9, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
*GCMT **05** 05:08:15.6±0.4, 4137N×1933E, h23km±1km, MW4.9/53, Moment Tensor Solution. s20,c24; s53,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.94±.18; $M_{\theta\theta}$0.04±.11; $M_{\phi\phi}$-1.98±.12; $M_{r\theta}$1.15±.16; $M_{\theta\phi}$0.67±.06; $M_{\phi r}$-1.27±.13; Best double couple: $M_0$2.68700×10^{16} NP1:ϕ_s0.00000°, δ29.00000°, λ120.00000°. NP2: ϕ_s147.00000°, δ65.00000°, λ75.00000°. Principal axes: T 2.6590, Plg66.0000°, Azm30.0000°; N 0.0560, Plg14.0000°, Azm154.0000°; P -2.7140, Plg19.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **05** 05:08:15.6, 4135N×1947E, h9km, mb4.5/21, ML4.8(PDG), After PDG.*
NEIC Felt [III] at Tirana.
*CSEM **05** 05:08:15.0±0.0, 4132N×1951E, h10km, mb4.7/16, ML4.5/12, Mw4.9, Error ellipse: s-maj=0.9km s-min=0.6km az=12.0*
*LDG **05** 05:08:15.5±0.1, 4137N×1950E, h11km, Ml4.6/20, Error ellipse: s-maj=3.1km s-min=1.8km az=9.0*
*MOS **05** 05:08:16.7±1.5, 4140N×1935E, h33km, mb4.7/25, MS4.0/24, Error ellipse: s-maj=3.3km s-min=2.4km az=111.5*
*BJI **05** 05:08:16.9, 4229N×2003E, h5km, mB4.9, mb4.7, Ms4.8, Msz4.5*
*HLW **05** 05:09:04.7, 3865N×2405E, h33km, Mb4.0*
ISC 05 05:08:16.8±0.3**, 41365N**±0010×**1945E**±001**, h12**km±2km**, h13**km±1.3km**:pP-P, n668, σ1**s**41**/824**, mb4.7**/58**, MS4.3**/34**, 51C-34D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.31**	**93**	⇓*i*Pg	**Pg**	**05 08 22.1**	**-1.0**
TIR				*e*Sg	**Sg**	**05 08 27.1**	**-0.3**
TIR	**Tirane**	**0.31**	**93**	*i* PG	**Pg**	**05 08 22.3**	**-0.8**
TIR				*i* SG	**Sg**	**05 08 26.8**	**-0.6**
TIR	**Tirane**	**0.31**	**93**	⇓*i*Pg	**Pg**	**05 08 22.1**	**-1.0**
TIR				Sg	**Sg**	**05 08 25.6**	**-1.8**
TIR	**Tirane**	**0.31**	**93**	*e*Pg	**Pg**	**05 08 22.1**	**-1.0**
TIR				Sg	**Sg**	**05 08 25.6**	**-1.8**
QSH	**Qafa e Shtames**	**0.38**	**65**	*i* PG	**Pg**	**05 08 21.1**	**-3.2**
ULC	**Ulcinj**	**0.62**	**346**	⇓*i*Pg	**Pg**	**05 08 27.9**	**-0.9**
ULC				*e*Sg	**Sg**	**05 08 38.3**	**+1.4**
ULC	**Ulcinj**	**0.62**	**346**	*i* PG	**Pg**	**05 08 27.8**	**-1.0**
ULC				*i* SG	**Sg**	**05 08 38.3**	**+1.4**
ULC	**Ulcinj**	**0.62**	**346**	P	**Pg**	**05 08 28.1**	**-0.7**
PUK	**Puka**	**0.75**	**26**	*i* PG	**Pg**	**05 08 29.5**	**-1.9**
PUK	**Puka**	**0.75**	**26**	Pg	**Pg**	**05 08 29.7**	**-1.7**
PUK				Sg	**Sg**	**05 08 40.7**	**-0.6**
PHP	**Peshkopia**	**0.81**	**66**	*i* PG	**Pg**	**05 08 29.7**	**-2.7**
PHP				*i* SG	**Sg**	**05 08 41.0**	**-2.0**
PHP	**Peshkopia**	**0.81**	**66**	Pg	**Pg**	**05 08 29.8**	**-2.6**
BUM	**Brajici-Budva**	**1.02**	**336**	⇑*i*Pg	**Pg**	**05 08 35.6**	**-0.9**
BUM				*e*Sg	**Sg**	**05 08 51.2**	**+1.4**
BUM	**Brajici-Budva**	**1.02**	**336**	*i* PG	**Pg**	**05 08 35.6**	**-0.9**
BUM				*i* SG	**Sg**	**05 08 51.2**	**+1.4**
BUM	**Brajici-Budva**	**1.02**	**336**	P	**Pb**	**05 08 36.2**	**-0.1**
BUM				S	**Sb**	**05 08 49.0**	**-0.7**
OHR	**Ohrid**	**1.05**	**104**	*i* Pg	**Pg**	**05 08 33.8**	**-3.1**
OHR				*i* Sg	**Sg**	**05 08 50.3**	**-0.3**
OHR				*e*Lg		05 08 52.6	
	comp=E,11µm,0.6s						
OHR				*e*Lg		05 08 54.6	
	comp=N,15µm,0.8s						
OHR	**Ohrid**	**1.05**	**104**	*i* Pg	**Pg**	**05 08 33.8**	**-3.1**
OHR				*i* Sg	**Sg**	**05 08 50.2**	**-0.4**
PDG	**Podgorica**	**1.07**	**353**	*i* PG	**Pb**	**05 08 35.5**	**-1.7**
PDG				*i* SG	**Sg**	**05 08 52.8**	**+1.4**
PDG	**Podgorica**	**1.07**	**353**	⇓*i*Pg	**Pb**	**05 08 35.5**	**-1.7**
PDG				*e*Sg	**Sg**	**05 08 52.8**	**+1.4**
TTG	**Podgorica**	**1.07**	**353**	⇓*i*Pg	**Pb**	**05 08 35.5**	**-1.7**
TTG				*e*Sg	**Sg**	**05 08 52.8**	**+1.4**
TTG	**Podgorica**	**1.07**	**353**	P	**Pb**	**05 08 35.5**	**-1.7**
TTG				S	**Sb**	**05 08 48.0**	**-3.2**
TPE	**Tepelena**	**1.15**	**158**	*e*PN	**Pn**	**05 08 39.7**	**+1.1**
TPE				*i* SN	**Sn**	**05 08 57.9**	**+3.7**
PVY	**Plav**	**1.29**	**17**	⇓*i*Pg	**Pg**	**05 08 38.7**	**-2.9**
PVY				*e*Sg	**Sg**	**05 08 59.5**	**+1.2**
PVY	**Plav**	**1.29**	**17**	*i* PG	**Pg**	**05 08 38.7**	**-2.9**
PVY				*i* SG	**Sg**	**05 08 59.5**	**+1.2**
PVY	**Plav**	**1.29**	**17**	P	**Pn**	**05 08 38.6**	**-1.9**
PVY				S	**Sb**	**05 08 54.0**	**-3.4**
HCY	**Herceg Novi**	**1.29**	**327**	⇑*i*Pg	**Pg**	**05 08 40.6**	**-1.0**
HCY				*e*Sg	**Sg**	**05 09 00.1**	**+1.6**
HCY	**Herceg Novi**	**1.29**	**327**	*i* PG	**Pg**	**05 08 40.6**	**-1.0**
HCY				*i* SG	**Sg**	**05 09 00.1**	**+1.6**
HCY	**Herceg Novi**	**1.29**	**327**	⇑*i*Pg	**Pg**	**05 08 40.6**	**-1.0**
HCY				S	**Sb**	**05 08 59.0**	**+1.5**
HCY				*e*Sg	**Sg**	**05 09 00.1**	**+1.6**
HCY	**Herceg Novi**	**1.29**	**327**	P	**Pn**	**05 08 40.8**	**+0.2**
HCY				S	**Sb**	**05 08 59.0**	**+1.5**
KRUS	**Krusevo**	**1.35**	**89**	*i* Pg	**Pg**	**05 08 39.5**	**-3.3**
KRUS				*i* Sg	**Sg**	**05 09 00.0**	**-0.3**
KRUS				*e*Lg		05 09 02.4	
	comp=E,3µm,0.5s						
KRUS				*e*Lg		05 09 02.6	
	comp=N,2µm,0.4s						
KRUS	**Krusevo**	**1.35**	**89**	*i* Pg	**Pg**	**05 08 39.4**	**-3.4**
KRUS				*i* Sg	**Sg**	**05 09 00.0**	**-0.4**
BIA	**Bitola**	**1.46**	**103**	*i* Pg	**Pg**	**05 08 40.9**	**-3.8**
BIA				*i* Sg	**Sg**	**05 09 02.4**	**-1.2**
BIA				*e*Lg		05 09 04.1	
	comp=N,3µm,0.5s						
BIA				*e*Lg		05 09 05.2	
	comp=E,6µm,0.5s						
BIA	**Bitola**	**1.46**	**103**	*i* Pg	**Pg**	**05 08 40.9**	**-3.8**
BIA				*i* Sg	**Sg**	**05 09 02.3**	**-1.3**
NKY	**Niksic**	**1.49**	**347**	⇓*i*Pg	**Pg**	**05 08 43.6**	**-1.7**
NKY				*e*Sg	**Sg**	**05 09 05.8**	**+1.2**
NKY	**Niksic**	**1.49**	**347**	*i* PG	**Pg**	**05 08 43.3**	**-2.0**
NKY				*i* SG	**Sg**	**05 09 05.8**	**+1.2**
NKY	**Niksic**	**1.49**	**347**	⇓*i*Pg	**Pg**	**05 08 43.6**	**-1.7**
NKY				S	**Sn**	**05 09 02.0**	**-0.5**
NKY				*e*Sg	**Sg**	**05 09 05.8**	**+1.2**
NKY	**Niksic**	**1.49**	**347**	P	**Pn**	**05 08 43.4**	**+0.2**
NKY				S	**Sn**	**05 09 02.0**	**-0.5**
BEY	**Berane**	**1.54**	**12**	*i* PG	**Pg**	**05 08 43.5**	**-2.9**
BEY				*i* SG	**Sg**	**05 09 06.8**	**+0.4**
BEY	**Berane**	**1.54**	**12**	⇓*i*Pg	**Pg**	**05 08 43.5**	**-2.9**
BEY				*e*Sg	**Sg**	**05 09 06.8**	**+0.4**
IVA	**Berane**	**1.54**	**12**	⇓*i*Pg	**Pg**	**05 08 43.5**	**-2.9**
IVA				*e*Sg	**Sg**	**05 09 06.8**	**+0.4**
IVA	**Berane**	**1.54**	**12**	P	**Pn**	**05 08 43.3**	**-0.7**
IVA				S	**Sn**	**05 09 03.0**	**-0.9**
FNA	**Florina**	**1.57**	**111**	*e*P	**Pn**	**05 08 44.1**	**-0.2**
TREB	**Trebinje**	**1.58**	**329**	*e*Pn	**Pn**	**05 08 45.0**	**+0.5**
TREB				*e*Sg	**Sg**	**05 09 08.6**	**+1.0**
SKO	**Skopje**	**1.61**	**67**	*i* Pn	**Pn**	**05 08 44.0**	**-0.9**
SKO				*i* Sn	**Sn**	**05 09 07.4**	**+1.9**
SKO				*e*Lg		05 09 11.8	
	comp=E,13µm,0.8s						
SKO				*e*Lg		05 09 12.1	
	comp=N,15µm,0.5s						
SKO	**Skopje**	**1.61**	**67**	*i* Pn	**Pn**	**05 08 43.9**	**-1.0**
SKO				*i* Sn	**Sn**	**05 09 07.4**	**+1.8**
PE1	**Pezze di Greco**	**1.63**	**251**	*i* Pn	**Pn**	**05 08 45.5**	**+0.3**
KEK	**Kerkira**	**1.67**	**171**	*e*P	**Pn**	**05 08 46.0**	**+0.2**
BRY	**Bratogost**	**1.68**	**337**	⇑*i*Pn	**Pn**	**05 08 46.3**	**+0.5**
BRY				*e*Sn	**Sg**	**05 09 10.5**	**-0.2**
BRY	**Bratogost**	**1.68**	**337**	*i* PG	**Pn**	**05 08 46.3**	**+0.5**
BRY				*i* SG	**Sg**	**05 09 10.5**	**-0.2**
BRY	**Bratogost**	**1.68**	**337**	⇑*i*Pn	**Pn**	**05 08 46.3**	**+0.5**
BRY				S	**Sn**	**05 09 09.0**	**+1.8**
BRY				*e*Sn	**Sg**	**05 09 10.5**	**-0.2**
BRY	**Bratogost**	**1.68**	**337**	P	**Pn**	**05 08 46.6**	**+0.8**
BRY				S	**Sn**	**05 09 09.0**	**+1.8**
UPM	**Unac-Piva**	**1.88**	**348**	⇑*i*Pn	**Pn**	**05 08 49.3**	**+0.7**
UPM				*e*Sn	**Sn**	**05 09 15.2**	**+3.0**
UPM	**Unac-Piva**	**1.88**	**348**	⇑*i*Pn	**Pn**	**05 08 49.3**	**+0.7**
UPM				S	**Sn**	**05 09 14.0**	**+1.8**
UPM				*e*Sn	**Sn**	**05 09 15.2**	**+3.0**
UPM	**Unac-Piva**	**1.88**	**348**	P	**Pn**	**05 08 49.9**	**+1.3**
UPM				S	**Sn**	**05 09 14.0**	**+1.8**
SJES	**Sjenica**	**1.94**	**11**	*e*Pn	**Pn**	**05 08 50.9**	**+1.5**
SJES				*e*Sn	**Sn**	**05 09 17.5**	**+3.9**
BAI	**Bari**	**1.96**	**263**	*i* Pn	**Pn**	**05 08 49.9**	**+0.2**
PLE	**Pljevlja**	**1.96**	**359**	⇑*i*Pn	**Pn**	**05 08 50.7**	**+0.9**
PLE				*e*Sn	**Sn**	**05 09 17.2**	**+2.9**
PLE	**Pljevlja**	**1.96**	**359**	P	**Pn**	**05 08 51.4**	**+1.6**
PLE				S	**Sn**	**05 09 15.0**	**+0.7**
PLE				*e*Sn	**Sn**	**05 09 17.2**	**+2.9**
PLE	**Pljevlja**	**1.96**	**359**	P	**Pn**	**05 08 51.4**	**+1.6**
PLE				S	**Sn**	**05 09 15.0**	**+0.7**
STON	**Ston**	**1.99**	**320**	*e*Pn	**Pn**	**05 08 50.1**	**0.0**
STON				Sn	**Sn**	**05 09 15.0**	**0.0**
STON	**Ston**	**1.99**	**320**	*e*Pn	**Pn**	**05 08 50.1**	**0.0**
STON				Sn	**Sn**	**05 09 14.9**	**-0.1**
JAN	**Janina**	**2.01**	**147**	*e*P	**Pn**	**05 08 51.2**	**+0.7**
JAN	**Janina**	**2.01**	**147**	*e*P	**Pn**	**05 08 52.1**	**+1.6**
KZN	**Kozani**	**2.05**	**120**	*e*P	**Pn**	**05 08 52.2**	**+1.2**
MEV	**Metsovon**	**2.08**	**139**	*e*P	**Pn**	**05 08 54.0**	**+2.7**
STIP	**Stip**	**2.08**	**80**	*i* Pn	**Pn**	**05 08 51.1**	**-0.3**
STIP				*i* Sn	**Sn**	**05 09 16.1**	**-1.0**
STIP				*e*Lg		05 09 21.8	
	comp=E,863nm,0.8s						
STIP				*e*Lg		05 09 23.0	
	comp=N,2µm,0.9s						
STIP	**Stip**	**2.08**	**80**	*i* Pn	**Pn**	**05 08 51.0**	**-0.4**
STIP				*i* Sn	**Sn**	**05 09 16.1**	**-1.1**
SG1	**Sgolgore (BA)**	**2.16**	**257**	*i* Pn	**Pn**	**05 08 52.8**	**+0.3**
GRG	**Griva**	**2.27**	**99**	*e*P	**Pn**	**05 08 54.4**	**+0.4**
BARS	**Barje**	**2.28**	**50**	*e*Pn	**Pn**	**05 08 54.1**	**0.0**
BARS	**Barje**	**2.28**	**50**	*e*Pn	**Pn**	**05 08 54.4**	**+0.3**
BARS				*e*Sn	**Sn**	**05 09 26.0**	**+3.9**
BARS	**Barje**	**2.28**	**50**	*e*Pn	**Pn**	**05 08 54.4**	**+0.3**
VAY	**Valandovo**	**2.35**	**90**	*i* Pn	**Pn**	**05 08 54.4**	**-0.7**
VAY				*e*Lg		05 09 29.9	
	comp=E,2µm,0.6s						
VAY				*e*Lg		05 09 31.7	
	comp=N,2µm,0.8s						
VAY	**Valandovo**	**2.35**	**90**	*i* Pn	**Pn**	**05 08 54.3**	**-0.8**
CDT	**Castel del Mon**	**2.41**	**264**	*i* Pn	**Pn**	**05 08 59.3**	**+3.4**
BBLS	**Lazići**	**2.50**	**359**	*e*Pn	**Pn**	**05 08 58.1**	**+0.9**
BBLS				*e*Sn	**Sn**	**05 09 32.4**	**+4.9**
BBLS	**Lazići**	**2.50**	**359**	P	**Pn**	**05 08 57.7**	**+0.6**
KNT	**Kendrikon**	**2.61**	**93**	*e*P	**Pn**	**05 08 58.5**	**-0.2**
ORI	**Oriolo Calabro**	**2.62**	**241**	Pn	**Pn**	**05 08 59.2**	**+0.3**
LIT	**Litokhoron**	**2.63**	**118**	*e*P	**Pn**	**05 08 59.2**	**+0.2**
FGMS	**Monte Sant'Ang**	**2.65**	**279**	*i* Pnu	**Pn**	**05 08 59.5**	**+0.3**
MS1	**Monte Sant'Ang**	**2.66**	**279**	*i* Pn	**Pn**	**05 08 59.5**	**+0.2**
THL	**Klokotos Trika**	**2.66**	**132**	*e*P	**Pn**	**05 08 60.0**	**+0.6**
THL	**Klokotos Trika**	**2.66**	**132**	*e*P	**Pn**	**05 09 00.5**	**+1.2**
GRUS	**Gruza**	**2.69**	**20**	*e*Pn	**Pn**	**05 09 00.8**	**+1.0**
PTRP	**Pietrapertosa**	**2.70**	**253**	Pn	**Pn**	**05 09 01.5**	**+1.6**
THE	**Thessaloniki**	**2.76**	**104**	*e*P	**Pn**	**05 09 00.5**	**-0.2**
DIVS	**Divibare**	**2.76**	**8**	*e*Pn	**Pn**	**05 09 00.8**	**+0.1**
DIVS				*e*Sn	**Sn**	**05 09 37.5**	**+3.5**
LKD	**Levkas**	**2.81**	**160**	*e*P	**Pn**	**05 09 01.8**	**+0.4**
LKD	**Levkas**	**2.81**	**160**	P	**Pn**	**05 09 02.2**	**+0.8**
HORT	**Hortiatis**	**2.87**	**104**	*e*P	**Pn**	**05 09 02.1**	**0.0**
RGNG	**Rignano Grg**	**2.92**	**277**	Pn	**Pn**	**05 09 03.0**	**+0.1**
FG4	**Candela**	**2.97**	**267**	*i* P	**Pn**	**05 09 04.6**	**+0.9**
FG4	**Candela**	**2.97**	**267**	*i* Pnu	**Pn**	**05 09 04.6**	**+0.9**
SOH	**Sokhos**	**3.00**	**99**	*e*P	**Pn**	**05 09 04.2**	**+0.1**
SOH	**Sokhos**	**3.00**	**99**	P	**Pn**	**05 09 04.0**	**0.0**
TIP	**Timpagrande**	**3.00**	**224**	*e*Pn	**Pn**	**05 09 04.4**	**+0.4**
TIP	**Timpagrande**	**3.00**	**224**	*e*Pn	**Pn**	**05 09 04.4**	**+0.3**
TIP				Sn	**Sn**	**05 09 42.9**	**+3.0**
ZAPS	**Zavoj**	**3.04**	**50**	*e*Pn	**Pn**	**05 09 05.0**	**+0.5**
ZAPS				*e*Sn	**Sn**	**05 09 43.6**	**+2.9**
EVR	**Evrytania**	**3.04**	**143**	*e*P	**Pn**	**05 09 06.8**	**+2.2**
MRLC	**Muro Lucano**	**3.06**	**260**	Pn	**Pn**	**05 09 05.6**	**+0.8**
BOLS	**Boljevac**	**3.08**	**36**	*e*Pn	**Pn**	**05 09 04.6**	**-0.5**
FG5	**Orsara di Pugl**	**3.15**	**270**	*i* P	**Pn**	**05 09 07.4**	**+1.3**
FG5	**Orsara di Pugl**	**3.15**	**270**	*i* Pnr		05 09 07.4	
SVIS	**Svilajnac**	**3.18**	**24**	*e*Pn	**Pn**	**05 09 06.3**	**-0.1**
PLG	**Polygyros**	**3.19**	**107**	*e*P	**Pn**	**05 09 06.7**	**+0.1**
AGG	**Agios Georgios**	**3.22**	**136**	*e*P	**Pn**	**05 09 08.1**	**+1.1**
SGO	**Sicignano**	**3.24**	**257**	Pn	**Pn**	**05 09 08.0**	**+0.7**
FG2	**Serracapriola**	**3.25**	**279**	*i* Pnr	**Pn**	**05 09 07.8**	**+0.4**
VLS	**Valsamata**	**3.30**	**164**	*e*P	**Pn**	**05 09 08.0**	**-0.2**
NVR	**Nevrokopi**	**3.32**	**89**	*e*P	**Pn**	**05 09 09.4**	**+1.0**
CSSN	**Cassano Irpino**	**3.38**	**263**	Pn	**Pn**	**05 09 09.8**	**+0.5**
GRI	**Girifalco**	**3.44**	**223**	Pn	**Pn**	**05 09 10.1**	**0.0**
BEO	**Beograd**	**3.52**	**12**	P	**Pn**	**05 09 11.5**	**+0.3**
BEO	**Beograd**	**3.52**	**12**	*e*Pn	**Pn**	**05 09 12.0**	**+0.8**
PAIG	**Paliouri**	**3.52**	**113**	*e*P	**Pn**	**05 09 10.3**	**-0.9**
NEO	**Neokhori**	**3.54**	**124**	*e*P	**Pn**	**05 09 12.7**	**+1.2**
OUR	**Ouranopolis**	**3.59**	**105**	*e*P	**Pn**	**05 09 11.9**	**-0.3**
RLS	**Riolos of Patr**	**3.65**	**154**	*e*P	**Pn**	**05 09 12.7**	**-0.3**
BLY	**Banja Luka**	**3.77**	**335**	*e*Pn	**Pn**	**05 09 15.3**	**+0.7**
BLY				*e*Sn	**Sn**	**05 09 58.6**	**-0.2**
FGSL	**Fruska Gora**	**3.80**	**4**	*e*Pn	**Pn**	**05 09 14.7**	**-0.3**
FGSL				*e*Sn	**Sn**	**05 10 00.6**	**+1.0**
SGG	**Gregorio Mates**	**3.82**	**272**	Pn	**Pn**	**05 09 16.7**	**+1.5**
LKR	**Lokris**	**3.84**	**134**	*e*P	**Pn**	**05 09 16.8**	**+1.2**
MIDA	**Miranda**	**3.91**	**276**	Pn	**Pn**	**05 09 17.5**	**+0.9**
RNI2	**Rionero Sannit**	**3.99**	**277**	Pn	**Pn**	**05 09 19.1**	**+1.5**
DJES	**Djerdap**	**3.99**	**33**	*e*Pn	**Pn**	**05 09 17.9**	**+0.2**
DJES	**Djerdap**	**3.99**	**33**	P	**Pn**	**05 09 18.9**	**+1.2**
DJES	**Djerdap**	**3.99**	**33**	P	**Pn**	**05 09 18.9**	**+1.2**
RFI	**Roccamonfina**	**4.12**	**271**	*i* Pnu	**Pn**	**05 09 21.2**	**+1.8**
CEL	**Celeste**	**4.14**	**223**	*e*Pn	**Pn**	**05 09 19.6**	**-0.1**
INTR	**Introdacqua**	**4.20**	**281**	Pn	**Pn**	**05 09 21.3**	**+0.8**
SOI	**Samo**	**4.20**	**220**	Pn	**Pn**	**05 09 20.1**	**-0.5**
SCLL	**Scilla**	**4.23**	**224**	Pn	**Pn**	**05 09 20.0**	**-1.0**
SDI	**San Donato**	**4.25**	**277**	P	**Pn**	**05 09 22.7**	**+1.5**
VVLD	**Villa Vallelon**	**4.40**	**279**	Pn	**Pn**	**05 09 24.5**	**+1.3**
MTTG	**Motta San Giov**	**4.43**	**222**	Pn	**Pn**	**05 09 23.2**	**-0.6**
BZS	**Buzias**	**4.53**	**20**	⇑*i*P	**Pn**	**05 09 24.6**	**-0.5**
BZS	**Buzias**	**4.53**	**20**	⇓*i*Pn	**Pn**	**05 09 24.7**	**-0.4**
BZS				*e*Sn	**Sn**	**05 10 19.1**	**+1.5**
BZS	**Buzias**	**4.53**	**20**	⇑P	**Pn**	**05 09 24.6**	**-0.5**
TERO	**Teramo**	**4.53**	**288**	Pn	**Pn**	**05 09 25.7**	**+0.6**
PTQR	**Pietraquaria**	**4.58**	**280**	Pn	**Pn**	**05 09 27.0**	**+1.3**
RDO	**Rodhopi**	**4.59**	**91**	*e*P	**Pn**	**05 09 25.9**	**0.0**
RDO	**Rodhopi**	**4.59**	**91**	*e*P	**Pn**	**05 09 27.3**	**+1.4**
ITM	**Ithomi**	**4.60**	**155**	*e*P	**Pn**	**05 09 26.3**	**+0.3**
ITM	**Ithomi**	**4.60**	**155**	*e*P	**Pn**	**05 09 27.0**	**+1.0**
AQU	**L'Aquila**	**4.62**	**284**	Pn	**Pn**	**05 09 27.5**	**+1.2**
SISC	**Sisak**	**4.68**	**332**	*e*Pn	**Pn**	**05 09 26.0**	**-1.1**
SISC				Sn	**Sn**	**05 10 18.9**	**-2.3**
SISC	**Sisak**	**4.68**	**332**	*e*Pn	**Pn**	**05 09 25.9**	**-1.1**
SISC				Sn	**Sn**	**05 10 18.8**	**-2.4**
ATH	**Athens Observa**	**4.72**	**134**	*e*P	**Pn**	**05 09 28.4**	**+0.7**
NAIG	**Nisos Aigina**	**4.76**	**138**	*e*P	**Pn**	**05 09 28.5**	**+0.2**
NAIG	**Nisos Aigina**	**4.76**	**138**	*e*P	**Pn**	**05 09 28.0**	**-0.3**
FIAM	**Fiamignano**	**4.82**	**283**	Pn	**Pn**	**05 09 30.7**	**+1.7**
DID	**Didima**	**4.84**	**142**	*e*P	**Pn**	**05 09 28.9**	**-0.4**
KVR	**Kavouri**	**4.86**	**135**	*e*P	**Pn**	**05 09 30.0**	**+0.4**
CERT	**Cerreto**	**4.88**	**279**	Pn	**Pn**	**05 09 31.0**	**+1.1**
PKSM	**Moragy**	**4.88**	**353**	*e*Pn	**Pn**	**05 09 29.6**	**-0.3**
PKSM	**Moragy**	**4.88**	**353**	⇑*i*P	**Pn**	**05 09 29.0**	**-0.9**
PKSM	**Moragy**	**4.88**	**353**	⇑*e*Pn	**Pn**	**05 09 29.2**	**-0.7**
PKSM				*e*Sn	**Sn**	**05 10 28.9**	**+2.7**
PKSM	**Moragy**	**4.88**	**353**	P	**Pn**	**05 09 29.2**	**-0.6**
ZIMR		**4.94**	**60**	P	**Pn**	**05 09 31.2**	**+0.6**
ZIMR		**4.94**	**60**	P	**Pn**	**05 09 31.2**	**+0.6**
NRCA	**Norcia**	**4.94**	**289**	Pn	**Pn**	**05 09 31.6**	**+1.0**
ALN	**Alexandroupoli**	**5.00**	**93**	*e*P	**Pn**	**05 09 31.4**	**-0.1**
GADA	**Gvkgeada**	**5.04**	**101**	*e*P	**Pn**	**05 09 31.7**	**-0.3**
GADA	**Gvkgeada**	**5.04**	**101**	P	**Pn**	**05 09 31.7**	**-0.3**
CING	**Cingoli**	**5.05**	**296**	Pn	**Pn**	**05 09 32.3**	**+0.1**
	comp=N,668nm,1.0s						
ENEZ	**Enez**	**5.11**	**95**	*e*P	**Pn**	**05 09 34.3**	**+1.3**
BOJS	**Bojanci**	**5.14**	**325**	*i* Pn	**Pn**	**05 09 33.9**	**+0.4**
BOJS				*i* Sn	**Sn**	**05 10 31.1**	**-1.6**
SNTG	**Esanatoglia**	**5.18**	**294**	*i* Pnr	**Pn**	**05 09 34.3**	**+0.3**
	comp=N,234nm,0.5s						
PKS6	**Bocsa**	**5.23**	**1**	*e*P	**Pn**	**05 09 34.8**	**+0.1**
PKS6				S	**Sn**	**05 10 34.5**	**-0.4**
	comp=N,7.8nm,0.5s						
AGST	**Augusta-Monte**	**5.25**	**220**	Pn	**Pn**	**05 09 32.9**	**-2.0**
BOZC	**Bozcaada**	**5.25**	**105**	*i* P	**Pn**	**05 09 34.1**	**-0.9**
ASS	**Assisi**	**5.33**	**291**	P	**Pn**	**05 09 37.0**	**+1.0**
ASS				pmax	pmax		
	comp=Z,24nm,0.6s						
ASS	**Assisi**	**5.33**	**291**	Pn	**Pn**	**05 09 37.0**	**+1.0**
	comp=Z,24nm,0.6s						
GIB	**Gibilmanna**	**5.37**	**233**	P	**Pn**	**05 09 37.1**	**+0.5**
GIB				pmax	pmax		
	comp=Z,215nm,0.8s						
GIB	**Gibilmanna**	**5.37**	**233**	Pn	**Pn**	**05 09 37.1**	**+0.5**
	comp=Z,215nm,0.8s						
VLI	**Veliai**	**5.38**	**149**	*e*P	**Pn**	**05 09 36.7**	**0.0**
VLI	**Veliai**	**5.38**	**149**	*e*P	**Pn**	**05 09 38.0**	**+1.3**
SSY	**Sortino**	**5.41**	**220**	Pn	**Pn**	**05 09 34.6**	**-2.5**
FSSB	**Fossombrone**	**5.45**	**297**	*i* Pnr	**Pn**	**05 09 37.8**	**+0.1**
	comp=Z,569nm,0.5s						
EZN	**Ezine**	**5.46**	**104**	*e*P	**Pn**	**05 09 38.7**	**+0.9**
EZN	**Ezine**	**5.46**	**104**	P	**Pn**	**05 09 38.7**	**+0.9**
MURB	**Monte Urbino**	**5.47**	**293**	Pn	**Pn**	**05 09 39.0**	**+1.0**
VAE	**Valguarnera**	**5.50**	**227**	Pn	**Pn**	**05 09 40.0**	**+1.6**
	comp=Z,1.7nm,0.3s,baz=114,slow=12,SNR=3.1						
HAVL	**Avola**	**5.54**	**219**	Pn	**Pn**	**05 09 36.4**	**-2.5**
	comp=Z,296nm,0.3s						
PKSN	**Nyarlorinc**	**5.54**	**3**	*e*P	**Pn**	**05 09 41.8**	**+2.9**
PKSN				*e*S	**Sn**	**05 10 44.4**	**+2.0**
	comp=Z,4.8nm,0.6s						
HVZN	**Vizzini**	**5.56**	**223**	Pn	**Pn**	**05 09 37.6**	**-1.7**
PRK	**Paraskevi**	**5.63**	**110**	*e*P	**Pn**	**05 09 41.1**	**+1.0**
PRK	**Paraskevi**	**5.63**	**110**	P	**Pn**	**05 09 42.1**	**+2.0**
PKS7	**Kunszentmiklos**	**5.69**	**358**	*e*P	**Pn**	**05 09 40.2**	**-0.7**
PKS7				S	**Sn**	**05 10 48.7**	**+2.7**
	comp=Z,6.8nm,0.4s						
HMDC	**Modica**	**5.70**	**221**	Pn	**Pn**	**05 09 39.3**	**-1.9**
CDCA	**Citt' di Caste**	**5.74**	**294**	Pn	**Pn**	**05 09 43.1**	**+1.5**
	comp=Z,193nm,1.0s						
BADI	**Badiali**	**5.75**	**294**	Pn	**Pn**	**05 09 43.2**	**+1.5**
	comp=Z,584nm,0.7s						
VOIR		**5.76**	**43**	⇑*i*P	**Pn**	**05 09 43.7**	**+1.7**
RSM	**Repubblica di**	**5.76**	**299**	P	**Pn**	**05 09 43.1**	**+1.1**
RSM				pmax	pmax		
	comp=Z,482nm,1.0s						
RSM	**Repubblica di**	**5.76**	**299**	Pn	**Pn**	**05 09 43.1**	**+1.1**
	comp=Z,482nm,1.0s						
KYTH	**Kithira**	**5.80**	**150**	*e*P	**Pn**	**05 09 43.0**	**+0.5**
KYTH	**Kithira**	**5.80**	**150**	*e*P	**Pn**	**05 09 43.5**	**+1.0**
LJU	**Ljubljana**	**5.88**	**324**	*i* Pn	**Pn**	**05 09 44.2**	**+0.6**
LJU				*i* Sn	**Sn**	**05 10 50.6**	**-0.3**
RKY	**Sarkoy-Tekirda**	**5.88**	**94**	*e*P	**Pn**	**05 09 45.5**	**+1.9**
RKY	**Sarkoy-Tekirda**	**5.88**	**94**	P	**Pn**	**05 09 46.1**	**+2.4**
CHOS	**Chios island**	**5.89**	**118**	*e*P	**Pn**	**05 09 46.1**	**+2.4**
AYVA	**Ayvalik**	**5.90**	**108**	*e*P	**Pn**	**05 09 44.5**	**+0.6**
DRGR		**5.91**	**22**	⇑*i*P	**Pn**	**05 09 43.5**	**-0.5**
DRGR		**5.91**	**22**	P	**Pn**	**05 09 45.2**	**+1.2**
DRGR		**5.91**	**22**	P	**Pn**	**05 09 45.2**	**+1.2**
MFT	**Murefte**	**5.95**	**93**	*e*P	**Pn**	**05 09 45.6**	**+1.1**
MFT	**Murefte**	**5.95**	**93**	P	**Pn**	**05 09 44.7**	**+0.2**
SNX	**Sinaia**	**5.95**	**46**	⇓*i*P	**Pn**	**05 09 46.0**	**+1.4**
SNX	**Sinaia**	**5.95**	**46**	⇓P	**Pn**	**05 09 46.0**	**+1.4**
JAVS	**Javornik**	**5.98**	**321**	*i* Pn	**Pn**	**05 09 44.9**	**0.0**
JAVS				*i* Sn	**Sn**	**05 10 52.0**	**-1.3**
BUD	**Budapest**	**6.12**	**357**	⇑*e*Pn	**Pn**	**05 09 56.6**	**+10**
BUD				*e*Sn	**Sn**	**05 11 03.6**	**+6.7**
BUD	**Budapest**	**6.12**	**357**	P	**Pn**	**05 09 51.2**	**+4.3**

PERS	Pernice	6.12	331	iPn	Pn	05 09 46.8	-0.1
PERS				iSn	Sn	05 10 52.4	-4.4
SFI	Santa Sofia	6.16	297	P	Pn	05 09 48.3	+0.9
SFI				pmax	pmax		
	comp=Z,132nm,0.5s						
SFI	Santa Sofia	6.16	297	Pn	Pn	05 09 48.3	+0.9
	comp=Z,132nm,0.5s						
VOY	Vojsko	6.16	321	⇑ePn	Pn	05 09 47.3	-0.1
VOY				eSn	Sn	05 10 56.0	-1.8
SOKA	Soboth	6.19	331	⇑iPn	Pn	05 09 47.9	0.0
OBKA	Obir	6.24	327	⇑iPn	Pn	05 09 48.3	-0.2
	SNR=12						
OBKA				⇑iSn	Sn	05 11 01.2	+1.5
MLR	Muntele Rosu	6.27	47	⇑iP	Pn	05 09 50.0	+1.0
MLR	Muntele Rosu	6.27	47	P	Pn	05 09 50.8	+1.8
APE	Apeiranthos	6.38	130	eP	Pn	05 09 56.7	+6.2
APE	Apeiranthos	6.38	130	eP	Pn	05 09 51.2	+0.8
APE	Apeiranthos	6.38	130	eP	Pn	05 09 50.6	+0.2
VMG	Vicchio	6.38	297	Pn	Pn	05 09 52.0	+1.6
	comp=Z,161nm,0.5s						
CSNT	Castellina Chi	6.39	292	Pn	Pn	05 09 50.8	+0.1
	comp=Z,130nm,0.6s						
ISR	Istrita	6.39	52	⇑iP	Pn	05 09 58.2	+7.5
BALY	Balya	6.43	102	iP	Pn	05 09 51.8	+0.7
COLI	Coloredo	6.48	319	⇓eP	Pn	05 09 51.0	-0.9
BNT	Bandirma	6.50	96	eP	Pn	05 09 53.6	+1.5
BNT	Bandirma	6.50	96	P	Pn	05 09 53.6	+1.5
IESO	Jesolo	6.52	312	⇑eP	Pn	05 09 52.0	-0.3
ARSA	Arzberg	6.52	336	⇓iPn	Pn	05 09 52.8	+0.4
	SNR=7.8						
ARSA	Arzberg	6.52	336	ePn	Pn	05 09 52.8	+0.4
SEI	Scarperia	6.54	297	Pn	Pn	05 09 53.8	+1.2
	comp=Z,372nm,0.4s						
PSZ	Piszkesteto	6.56	3	eP	Pn	05 09 52.3	-0.6
PSZ						05 11 10.7	
PSZ				pmax	pmax		
	comp=Z,32nm,0.9s						
PSZ	Piszkesteto	6.56	3	⇑ePn	Pn	05 09 52.1	-0.8
PSZ				eSn	Sn	05 11 08.2	+0.6
PSZ	Piszkesteto	6.56	3	⇑iP	Pn	05 09 51.8	-1.1
PSZ	Piszkesteto	6.56	3	ePn	Pn	05 09 52.3	-0.6
	comp=Z,32nm,0.9s						
PSZ				S	Sn	05 11 10.7	+3.1
PSZ	Piszkesteto	6.56	3	ePn	Pn	05 09 52.3	-0.7
	comp=Z,32nm,0.9s						
PSZ				Sn	Sn	05 11 10.7	+3.1
BAD	Bernadia	6.62	319	⇑eP	Pn	05 09 53.0	-0.8
BALB	Balikesir	6.65	102	eP	Pn	05 09 55.9	+1.7
BALB	Balikesir	6.65	102	P	Pn	05 09 55.9	+1.7
PTCC	Patocco-Chiusa	6.69	321	Pn	Pn	05 09 54.2	-0.5
	comp=Z,150nm,0.7s						
IZM	Izmir	6.70	114	eP	Pn	05 09 55.9	+1.1
IZM	Izmir	6.70	114	P	Pn	05 09 55.9	+1.1
MYKA	Terra Mystica	6.72	323	⇑iPn	Pn	05 09 54.9	-0.3
BTOK	Tokmak	6.73	101	iP	Pn	05 09 56.3	+1.1
FNVD	Fontana Vidola	6.74	297	Pn	Pn	05 09 56.5	+1.1
	comp=Z,168nm,1.0s						
ELBA	Catalca	6.77	89	eP	Pg	05 10 24.3	-2.0
SMG	Samos	6.78	120	eP	Pn	05 09 57.3	+1.4
CAE	Caneva	6.88	315	⇑eP	Pn	05 09 57.0	-0.3
PLOR	Plostina	6.88	47	P	Pn	05 09 58.7	+1.3
PLRO	Paularo	6.89	321	⇑eP	Pn	05 09 58.0	+0.5
VRI	Vrincioaia	6.94	47	⇓iP	Pn	05 09 58.8	+0.7
VRI	Vrincioaia	6.94	47	P	Pn	05 09 59.5	+1.4
VRI	Vrincioaia	6.94	47	P	Pn	05 09 59.5	+1.4
PII	Pisa	7.00	293	P	Pn	05 09 59.2	+0.2
PII				pmax	pmax		
	comp=Z,34nm,0.5s						
PII	Pisa	7.00	293	Pn	Pn	05 09 59.2	+0.2
	comp=Z,34nm,0.5s						
ZST	Bratislava	7.03	347	eSn	Sn	05 11 17.3	-1.9
ZST	Bratislava	7.03	347	eSN	Sn	05 11 17.3	-1.9
GCAM	G?zelcaml?	7.04	119	iP	Pn	05 10 01.2	+1.7
CONA	Conrad Observa	7.04	340	⇑iPn	Pn	05 09 59.4	-0.1
CONA				⇑iSn	Sn	05 11 19.1	-0.3
HARR	Harsova	7.05	59	⇓iP	Pn	05 10 00.4	+0.8
HARR	Harsova	7.05	59	P	Pn	05 10 00.5	+0.9
BDI	Bagni Di Lucca	7.05	295	P	Pn	05 09 59.7	0.0
BDI				pmax	pmax		
	comp=Z,69nm,0.8s						
BDI	Bagni Di Lucca	7.05	295	Pn	Pn	05 09 59.7	0.0
	comp=Z,69nm,0.8s						
DURS	Dursunbey	7.10	101	iP	Pn	05 10 01.6	+1.3
FVI	Forni Avoltri	7.10	320	P	Pn	05 10 00.9	+0.5
FVI				pmax	pmax		
	comp=Z,107nm,0.6s						
FVI	Forni Avoltri	7.10	320	Pn	Pn	05 10 00.9	+0.5
	comp=Z,107nm,0.6s						
VYHS	Vyhne	7.14	357	eP	Pn	05 10 00.9	0.0
VYHS				e		05 11 26.3	
VYHS				MLR	MLR		
	comp=Z,900nm,20.5s						
VYHS	Vyhne	7.14	357	ePN	Pn	05 10 00.9	0.0
VYHS				eSN	Sn	05 11 26.3	+4.4
KECS	Kecovo	7.16	6	iPN	Pn	05 10 01.6	+0.5
KECS				eSN	Sn	05 11 22.7	+0.5
MODS	Modra-Piesok	7.18	348	ePN	Pn	05 10 01.9	+0.5
MODS				eSN	Sn	05 11 27.6	+4.9
KBA	Koelnbreinsper	7.20	325	⇓iPn	Pn	05 10 01.9	+0.2
KBA				⇑iSn	Sn	05 11 25.7	+2.4
VLC	Villacollemand	7.23	296	ePn	Pn	05 10 02.2	+0.1
	comp=Z,9.7nm,0.5s						
VLC				Sn	Sn	05 11 21.1	-3.0
VLC	Villacollemand	7.23	296	ePn	Pn	05 10 02.2	+0.1
	comp=Z,9.7nm,0.5s						
VLC				Sn	Sn	05 11 21.1	-3.0
KOLL	Kolacno	7.25	354	ePN	Pn	05 10 04.9	+2.5
KOLL				eSN	Sn	05 11 21.8	-2.8
FAU	Forcella Aurin	7.27	314	⇓eP	Pn	05 10 02.0	-0.6
TIRR	Tirgusor	7.27	62	eP	Pn	05 10 03.7	+1.0
TIRR						05 11 27.4	
TIRR				pmax	pmax		
	comp=Z,56nm,0.9s						
TIRR	Tirgusor	7.27	62	⇑iP	Pn	05 10 03.6	+0.9
TIRR	Tirgusor	7.27	62	ePn	Pn	05 10 03.7	+1.0
	comp=Z,56nm,0.9s						
TIRR				Sn	Sn	05 11 27.4	+2.4
TIRR	Tirgusor	7.27	62	ePn	Pn	05 10 03.7	+1.1
	comp=Z,56nm,0.9s						
TIRR				Sn	Sn	05 11 27.4	+2.3
ERBM	Eremo	7.30	298	Pn	Pn	05 10 04.8	+1.7
CTI	Castel Tesino	7.34	312	P	Pn	05 10 03.0	-0.6
CTI				pmax	pmax		
	comp=Z,68nm,0.7s						
CTI	Castel Tesino	7.34	312	Pn	Pn	05 10 03.0	-0.6
	comp=Z,68nm,0.7s						
ABTA	Abfaltersbach	7.34	319	⇑iPn	Pn	05 10 03.6	0.0
IDI	Anoyia	7.42	143	Pn	Pn	05 10 03.8	-1.0
	comp=Z,3.6nm,0.3s,baz=326,slow=10,SNR=17						
IDI				Sn	Sn	05 11 22.3	-6.5
	comp=Z,10nm,0.3s,baz=109,slow=23,SNR=6.5						
IDI				LR	LR	05 12 52.4	
	comp=Z,222nm,18.7s,baz=337,slow=38						
IDI	Anoyia	7.42	143	Pn	Pn	05 10 03.8	-1.0
IDI				Sn	Sn	05 11 22.3	-6.5
BODT	Bodrum	7.46	123	eP	Pn	05 10 06.2	+0.8
BODT	Bodrum	7.46	123	P	Pn	05 10 06.1	+0.8
DEMI	Demirci	7.46	105	iP	Pn	05 10 05.9	+0.6
MOA	Molln	7.46	332	⇑iPn	Pn	05 10 06.1	+0.8
	SNR=12						
MOA	Molln	7.46	332	ePn	Pn	05 10 06.3	+1.0
MOA	Molln	7.46	332	Pn	Pn	05 10 06.1	+0.8
	comp=Z,11nm,6.0s						
BURAR	Bucovina Array	7.48	31	⇓iP	Pn	05 10 07.7	+2.1
BURAR	Bucovina Array	7.48	31	P	Pn	05 10 07.8	+2.2
BURAR	Bucovina Array	7.48	31	P	Pn	05 10 07.8	+2.2
BUR08	Bucovina Ar. S	7.50	31	ePn	Pn	05 10 07.3	+1.5
BUR08				Sn	Sn	05 11 32.5	+1.8
BUR08	Bucovina Ar. S	7.50	31	ePn	Pn	05 10 07.3	+1.4
BUR08				Sn	Sn	05 11 32.5	+1.8
UZH	Uzhgorod	7.54	15	eP	Pn	05 10 06.3	0.0
UZH				eS	Sn	05 11 35.0	+3.4
UZH				pmax	pmax		
	comp=N,100nm,0.8s						
UZH				pmax	pmax		
	comp=E,100nm,0.8s						
UZH	Uzhgorod	7.54	15	eP	Pn	05 10 06.3	0.0
UZH				eS	Sn	05 11 35.0	+3.4
BDRM	Kayabasi	7.54	122	iP	Pn	05 10 07.7	+1.2
YLV	Yalova	7.55	93	eP	Pn	05 10 09.5	+2.9
YLV	Yalova	7.55	93	P	Pn	05 10 09.4	+2.8
JAVC	Velka Javorina	7.60	351	P	Pn	05 10 09.6	+2.4
CRVS	Cervenica-Dubn	7.67	10	ePN	Pn	05 10 08.8	+0.7
CRVS				eSN	Sn	05 11 36.9	+2.0
CORF	Corte	7.75	280	eP	Pn	05 10 09.7	+0.5
KOLS	Kolonicke sedl	7.83	14	ePN	Pn	05 10 10.8	+0.5
KOLS				eSN	Sn	05 11 40.5	+1.8
TLCR		7.83	58	⇓iP	Pn	05 10 11.7	+1.4
TLCR		7.83	58	⇓P	Pn	05 10 11.7	+1.4
PGF	Pioggiola	7.88	282	ePn	Pn	05 10 07.6	-3.4
PGF				eSn	Sn	05 11 32.6	-7.4
	comp=E,44nm,0.8s						
PGF	Pioggiola	7.88	282	ePn	Pn	05 10 07.6	-3.4
PGF				eSn	Sn	05 11 32.6	-7.4
	comp=E,22nm,0.8s						
VSL	Villasalto	7.91	260	ePn	Pn	05 10 10.9	-0.5
VSL	Villasalto	7.91	260	ePn	Pn	05 10 10.9	-0.5
VSL				Sn	Sn	05 11 41.8	+1.0
RJOB	Jochberg	7.95	326	ePn	Pn	05 10 13.2	+1.3
RJOB				eSn	Sn	05 11 40.6	-1.0
MABI	Malga Bissina	7.99	309	Pn	Pn	05 10 12.1	-0.4
GDZ	Gediz	8.00	103	iP	Pn	05 10 12.4	-0.4
BOB	Bobbio (Coli)	8.07	298	P	Pn	05 10 14.3	+0.6
BOB				pmax	pmax		
	comp=Z,85nm,0.6s						
BOB	Bobbio (Coli)	8.07	298	Pn	Pn	05 10 14.3	+0.6
	comp=Z,85nm,0.6s						
NIE	Niedzica	8.08	4	eP	Pn	05 10 16.0	+2.3
NIE				eSn	Sn	05 11 49.2	+4.3
WTTA	Wattenberg	8.13	319	⇓iPn	Pn	05 10 14.7	+0.3
	SNR=18						
WTTA				⇓iSn	Sn	05 11 47.0	+0.8
WTTA	Wattenberg	8.13	319	ePn	Pn	05 10 14.2	-0.3
STHS	Stebnicka Huta	8.15	8	ePN	Pn	05 10 17.7	+3.0
STHS				eSN	Sn	05 11 51.0	+4.3
VRAC	Vranov	8.19	347	Pn	Pn	05 10 15.4	+0.1
	comp=Z,0.5nm,0.3s,baz=171,slow=13,SNR=6.1						
VRAC	Vranov	8.19	347	P	Pn	05 10 15.4	+0.1
VRAC				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRAC	Vranov	8.19	347	⇑iP	Pn	05 10 18.6	+3.3
WATA	Walderalm	8.21	319	⇑iPn	Pn	05 10 15.5	0.0
	SNR=12						
WATA				⇑iSn	Sn	05 11 49.7	+1.5
DNZL	Cakiroluk	8.27	113	iP	Pn	05 10 18.4	+2.0
KHAL	Karahalli	8.28	108	iP	Pn	05 10 18.2	+1.6
BRMO	Bormio	8.31	311	Pn	Pn	05 10 19.3	+2.4
KARP	Karpathos	8.38	131	eP	Pn	05 10 19.0	+1.0
TREC	Trest	8.41	342	AMS	AMS	05 13 50.0	
	comp=Z,2µm,13.2s						
TURN	Turunc	8.41	119	iP	Pn	05 10 17.8	-0.5
FETA	Feichten	8.44	315	⇑iPn	Pn	05 10 19.3	+0.6
FETA				⇓iSn	Sn	05 11 56.9	+3.2
MOTA	Moosalm	8.45	318	⇓iPn	Pn	05 10 19.1	+0.2
	SNR=7.6						
ALT	Altintas	8.48	102	eP	Pn	05 10 20.1	+0.8
ALT	Altintas	8.48	102	P	Pn	05 10 19.2	0.0
GEC2	GERESS Array S	8.51	333	ePn	Pn	05 10 19.7	0.0
GEC2				eSn	Sn	05 11 53.2	-2.3
GEC2	GERESS Array S	8.51	333	ePn	Pn	05 10 20.8	+1.1
GEC2				Sn	Sn	05 11 53.4	-2.2
GERES	GERESS Array B	8.51	333	Pn	Pn	05 10 19.2	-0.4
	comp=Z,0.7nm,0.3s,baz=156,slow=13,SNR=14						
GERES				Sn	Sn	05 11 53.1	-2.4
	comp=Z,2.3nm,0.3s,baz=153,slow=24,SNR=7.0						
GERES				LR	LR	05 14 17.3	
	comp=Z,1µm,18.3s,baz=142,slow=43						
GERES	GERESS Array B	8.51	333	P	Pn	05 10 19.2	-0.5
GERES						05 11 53.1	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES				smax			
	comp=N,2.0nm,0.3s						
GERES				MLR	MLR		
	comp=Z,1µm,18.3s						
MORC	Moravsky Berou	8.52	352	eP	Pn	05 10 20.8	+1.0
MORC						05 12 02.5	
MORC				pmax	pmax		
	comp=Z,15nm,1.7s						
MORC	Moravsky Berou	8.52	352	⇑iP	Pn	05 10 28.9	+9.1
MORC	Moravsky Berou	8.52	352	ePn	Pn	05 10 20.8	+1.0
	comp=Z,15nm,1.7s						
MORC				S	Sn	05 12 02.5	+6.8
MORC	Moravsky Berou	8.52	352	ePn	Pn	05 10 20.8	+1.1
	comp=Z,15nm,1.7s						
MORC				Sn	Sn	05 12 02.5	+6.8
OKC	Ostrava-Krasne	8.52	354	ePN	Pn	05 10 21.5	+1.7
OKC				AMS	AMS	05 14 10.0	
	comp=Z,2µm,12.6s						
KWP	Kalwaria	8.58	14	eP	Pn	05 10 23.1	+2.5
KWP				ePP		05 10 32.8	
KWP	Kalwaria	8.58	14	⇓iP	Pn	05 10 23.1	+2.5
KWP	Kalwaria	8.58	14	ePn	Pn	05 10 23.5	+3.0
KWP				ePP		05 10 32.8	
FIN	Finale Ligure	8.74	293	Pn	Pn	05 10 22.3	-0.5
DAVOX	Davos/Dischmat	8.76	311	Pn	Pn	05 10 24.5	+1.4
	comp=Z,2.3nm,0.3s,baz=327,slow=20,SNR=16						
DAVOX				Sn	Sn	05 11 59.4	-2.2
	comp=Z,3.7nm,0.3s,baz=148,slow=21,SNR=2.9						
KIS	Kishinev	8.77	47	eP	Pn	05 10 26.0	+2.7
KIS				MLR	MLR		
	comp=N,2µm,15.0s						
KIS				MLR	MLR		
	comp=Z,4µm,15.0s						
KIS				MLR	MLR		
	comp=E,2µm,14.0s						
KIS				MLR	MLR		
	comp=Z,3µm,16.0s						
KIS	Kishinev	8.77	47	eP	Pn	05 10 26.0	+2.7
	comp=Z,3µm,16.0s						
KHC	Kasperske Hory	8.80	334	eP	Pn	05 10 23.6	0.0
KHC				e		05 12 02.4	
KHC				MLR	MLR		
	comp=Z,1µm,15.1s						
KHC	Kasperske Hory	8.80	334	Pn	Pn	05 10 23.6	0.0
KHC				Sn	Sn	05 12 02.4	-0.2
KHC	Kasperske Hory	8.80	334	ePN	Pn	05 10 23.6	0.0
KHC				x	x	05 10 45.5	
KHC				eSN	Sn	05 12 02.4	-0.2
KHC				AMS	AMS	05 14 10.0	
	comp=Z,1µm,15.1s						
KHC				x	x	05 53 29.0	
VDL	Val di Lei	8.84	309	⇓P	Pn	05 10 25.5	+1.3
GOLH	Golhisar	8.86	114	iP	Pn	05 10 33.3	+8.9
OJC	Ojcow	8.86	1	eP	Pn	05 10 26.6	+2.2
OJC				eSn	Sn	05 12 05.1	+1.0
ESKT	Eskisehir	8.89	98	iP	Pn	05 10 25.6	+0.7
TUE	Stuetta	8.90	308	ePn	Pn	05 10 25.5	+0.5
TUE				eSn	Sn	05 12 03.2	-1.9
TUE	Stuetta	8.90	308	ePn	Pn	05 10 25.5	+0.6
TUE				eSn	Sn	05 12 03.2	-1.8
VAI	Varese	8.96	304	P	Pn	05 10 24.5	-1.3
WET	Wettzell	9.05	331	ePn	Pn	05 10 26.7	-0.4
DAVA	Damuels	9.06	314	⇑iPn	Pn	05 10 27.7	+0.6
DAVA	Damuels	9.06	314	ePn	Pn	05 10 25.9	-1.2
DAVA				eSn	Sn	05 12 05.7	-3.2
SBF	Sospel	9.20	290	eP	Pn	05 10 31.6	+2.4
SBF	Sospel	9.20	290	ePg	Px	05 11 06.3	
SBF				eSn	Sn	05 12 04.7	-7.9
	comp=Z,110nm,0.8s						
SBF	Sospel	9.20	290	eP	Pn	05 10 31.6	+2.4
SBF	Sospel	9.20	290	ePn	Pn	05 10 26.0	-3.2
SBF				ePg	Px	05 11 06.3	
SBF				eSn	Sn	05 12 04.7	-7.9
DPC	Dobruska-Polom	9.25	347	ePN	Pn	05 10 30.1	+0.4
DPC				AMS	AMS	05 14 50.0	
	comp=Z,2µm,13.6s						
PRU	Pruhonice	9.28	340	ePN	Pn	05 10 30.8	+0.6
PRU				AMS	AMS	05 14 20.0	
	comp=Z,1µm,14.8s						
LLS	Linth-Limmern	9.29	310	⇑P	Pn	05 10 32.1	+1.7
ORO	Oropa	9.36	301	Pn	Pn	05 10 28.6	-2.7
AKAS	Kas	9.44	120	eP	Pn	05 10 40.7	+8.3
TRAV	Traversella	9.47	300	Pn	Pn	05 10 30.8	-2.0
	comp=Z,23nm,0.5s						
SGKT	Sivrigoynuk	9.57	91	iP	Pn	05 10 35.5	+1.3
MUO	Muotathal	9.57	309	⇓P	Pn	05 10 36.9	+2.7
KEST	Kesra	9.71	238	Pn	Pn	05 10 38.0	+1.9
	comp=Z,0.1nm,0.3s,baz=333,slow=14,SNR=3.0						
KEST				LR	LR	05 15 46.1	
	comp=Z,809nm,18.2s,baz=168,slow=46						
FRF	La Foret Royal	9.71	287	ePn	Pn	05 10 34.5	-1.7
FRF				eSn	Sn	05 12 16.2	-8.9
	comp=Z,73nm,0.9s						
KSP	Ksiaz	9.73	348	ePn	Pn	05 10 40.0	+3.7
KSP				eSn	Sn	05 12 34.5	+9.1
PVCC	Panska Ves	9.77	341	AMS	AMS	05 14 40.0	
	comp=Z,1µm,16.2s						
LMR	La Mourre	9.78	286	ePn	Pn	05 10 34.4	-2.7
LMR				eSn	Sn	05 12 17.7	-9.1
	comp=Z,100nm,1.2s						
KIZT	Kizilcal	9.84	101	eP	Pn	05 10 38.9	+1.0
KIZT	Kizilcal	9.84	101	P	Pn	05 10 40.6	+2.7
MBDF	Montbardon	9.87	294	ePn	Pn	05 10 35.9	-2.4
MBDF				eSn	Sn	05 12 20.3	-8.6
	comp=Z,33nm,0.5s						
LKBD	Leukerbad	9.90	304	⇓P	Pn	05 10 37.8	-0.9
DIX	Grande Dixence	9.91	302	⇓P	Pn	05 10 38.7	-0.1
LTBQ	Tobruq	9.96	157	iP	Pn	05 10 36.7	-2.9
	SNR=124						
LTBQ				eS	Sn	05 12 21.6	-10
	comp=Z,56nm,0.4s,SNR=124						
BNI	Bardonecchia	10.03	296	eP	Pn	05 10 41.2	+0.8
BNI				e		05 12 32.6	
BNI				pmax	pmax		
	comp=Z,11nm,0.6s						
BNI	Bardonecchia	10.03	296	ePn	Pn	05 10 41.2	+0.8
	comp=Z,11nm,0.6s						
BNI	Bardonecchia	10.03	296	ePn	Pn	05 10 41.1	+0.7
	comp=Z,11nm,0.6s						
BNI				eSn	Sn	05 12 32.5	-0.2
SLE	Schleitheim	10.10	313	⇑P	Pn	05 10 41.6	+0.2
LPG	La Plagne	10.12	298	ePn	Pn	05 10 39.1	-2.6
LPG				eSn	Sn	05 12 25.7	-9.3
	comp=Z,119nm,0.9s						
NKC	Novy Kostel	10.12	334	AMS	AMS	05 14 50.0	
	comp=Z,1µm,14.0s						
GRF	Grafenberg Arr	10.13	328	eL		05 15 18.3	
	comp=Z,2µm,19.2s						
KDHN	Kadinhani	10.13	102	iP	Pn	05 10 43.8	+1.9
LPL	La Plagne	10.13	298	ePn	Pn	05 10 39.5	-2.4
LPL				eSn	Sn	05 12 26.6	-8.8
	comp=Z,63nm,0.5s						
SPAK	Spaichingen-Ko	10.14	315	eP	Pn	05 10 40.2	-1.8
EMV	Vieux Emosson	10.22	302	⇓P	Pn	05 10 43.3	+0.1
BRG	Berggiesshubel	10.25	340	eP	Pn	05 10 43.6	+0.2
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,52nm,1.8s						
BRG				MLR	MLR		
	comp=Z,863nm,14.1s						
BRG				MLR	MLR		
	comp=N,529nm,20.4s						
BRG				MLR	MLR		
	comp=E,332nm,20.4s						
BRG	Berggiesshubel	10.25	340	ePn	Pn	05 10 42.3	-1.1
BRG	Berggiesshubel	10.25	340	eP	Pn	05 10 43.6	+0.2
	comp=E,9.9nm,1.1s						
BRG				e		05 12 57.4	
	comp=E,87nm,1.8s						
BRG							
	comp=Z,1µm,14.1s						
BRG							
	comp=N,883nm,20.4s						
BRG							
	comp=E,554nm,20.4s						
RSL	Roselend	10.27	299	eP	Pn	05 10 44.1	+0.4
FELD	Feldberg im Sc	10.43	312	eP	Pn	05 10 45.0	-1.0
BALT	Daday	10.47	84	eP	Pn	05 10 46.5	+0.1
BBS	Basel-Blauen	10.49	310	eP	Pn	05 10 47.4	+0.6
BFO	Black Forest	10.52	315	ePn	Pn	05 10 46.2	-1.0
BFO				eSn	Sn	05 12 39.0	-5.9
BFO	Black Forest	10.52	315	ePn	Pn	05 10 46.3	-0.9
BFO	Black Forest	10.52	315	ePn	Pn	05 10 46.4	-0.8
ORIF	Oris-en-Rattie	10.53	294	ePn	Pn	05 10 44.8	-2.6
ORIF				eSn	Sn	05 12 36.1	-9.1
	comp=E,45nm,0.7s						
SMRF	Simiane la Rot	10.55	289	ePn	Pn	05 10 45.1	-2.5
MOX	Moxa	10.76	332	ePN	Pn	05 10 54.5	+4.1
MOX							
	comp=Z,1µm,19.0s						
MOX	Moxa	10.76	332	ePn	Pn	05 10 50.0	-0.4
MOX	Moxa	10.76	332	eP	Pn	05 10 54.5	+4.1
	comp=Z,1µm,19.0s						
SLUM		10.89	153	P	Pn	05 10 48.2	-4.1
CLL	Collm	10.89	338	eP	Pn	05 10 57.0	+4.7
CLL				MLR	MLR		
	comp=Z,1µm,17.4s						
CLL	Collm	10.89	338	ePn	Pn	05 10 57.0	+4.7
CLL				eSn	Sn	05 12 35.0	-19
CLL				ex	x	05 12 44.0	
CLL				eSb	Sn	05 13 26.0	+32
CLL				eSg		05 14 08.0	
CLL	Collm	10.89	338	eP	Pn	05 10 57.0	+4.7
	comp=Z,1µm,17.4s						
MOF	Molkenrain	10.91	311	eP	Pn	05 10 53.0	+0.5
CABF	La Chapelle	10.96	303	ePn	Pn	05 10 50.7	-2.5
CABF				eSn	Sn	05 12 45.9	-10
	comp=Z,16nm,0.5s						
CABF	La Chapelle	10.96	303	ePn	Pn	05 10 50.7	-2.5
CABF				eSn	Sn	05 12 45.9	-10
	comp=Z,7.8nm,0.5s						
HINF	Hinteralfeld	11.05	310	ePn	Pn	05 10 51.2	-3.3
HINF				eSn	Sn	05 12 47.9	-10
	comp=Z,23nm,0.4s						
HINF	Hinteralfeld	11.05	310	ePn	Pn	05 10 51.2	-3.3
HINF				eSn	Sn	05 12 47.9	-10
	comp=Z,12nm,0.4s						
ECH	Echery	11.09	312	eP	Pn	05 10 54.4	-0.6
ECH	Echery	11.09	312	ePn	Pn	05 10 55.1	+0.1
CDF	Champ du Feu	11.14	313	ePn	Pn	05 10 52.6	-3.0
CDF				eSn	Sn	05 12 50.0	-10
	comp=Z,13nm,0.5s						
CDF	Champ du Feu	11.14	313	ePn	Pn	05 10 52.6	-3.0
CDF				eSn	Sn	05 12 50.0	-10
	comp=Z,6.6nm,0.5s						
OG05	Jujurieux	11.15	299	eP	Pn	05 10 54.2	-1.6
SIM	Simferopol’	11.30	67	eP	Pn	05 10 59.3	+1.5
SIM				pmax	pmax		
	comp=Z,65nm,0.5s						
SIM				MLR	MLR		
	comp=Z,690nm,15.9s						
SIM	Simferopol’	11.30	67	eP	Pn	05 10 59.3	+1.5
	comp=Z,690nm,15.9s						
VIVF	Saint-Julien-l	11.35	293	ePn	Pn	05 10 55.4	-3.2
VIVF				eSn	Sn	05 12 55.2	-10
	comp=Z,30nm,0.9s						
VIVF	Saint-Julien-l	11.35	293	ePn	Pn	05 10 55.4	-3.2
VIVF				eSn	Sn	05 12 55.2	-10
	comp=Z,15nm,0.9s						
HAU	Haudompre	11.44	310	ePn	Pn	05 10 56.7	-3.1
HAU				eSn	Sn	05 12 57.6	-10
	comp=Z,55nm,0.7s						
HAU	Haudompre	11.44	310	ePn	Pn	05 10 56.7	-3.1
HAU				eSn	Sn	05 12 57.6	-10
	comp=Z,28nm,0.7s						
KIEV	Kiev	11.53	33	ePn	Pn	05 11 00.9	0.0
KIEV	Kiev	11.53	33	ePn	Pn	05 11 00.8	-0.1
AKASG	Malin Array Be	11.54	33	Pn	Pn	05 10 58.2	-2.9
	comp=Z,0.5nm,0.3s,baz=219,slow=14,SNR=15						
AKASG	Malin Array Be	11.54	33	P	Pn	05 10 58.2	-2.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKBB	Malin Array Si	11.54	33	ePn	Pn	05 11 00.9	-0.2
AKBB	Malin Array Si	11.54	33	ePn	Pn	05 11 00.9	-0.2
HMAT	Matruh	11.96	147	P	Pn	05 10 58.6	-8.3
PLDF	La Plantade	12.35	297	eP	Pn	05 11 09.7	-2.5
SMF	Signal de Mont	12.41	300	ePn	Pn	05 11 09.9	-3.1
SMF				eSn	Sn	05 13 20.4	-11
	comp=Z,25nm,0.5s						
SMF	Signal de Mont	12.41	300	ePn	Pn	05 11 09.9	-3.1
SMF				eSn	Sn	05 13 20.4	-11
	comp=Z,13nm,0.5s						
MEZF	Maizieres J’vi	12.44	310	ePn	Pn	05 11 09.0	-4.4
LOR	Lormes	12.62	303	ePn	Pn	05 11 13.2	-2.7
LOR				eSn	Sn	05 13 25.9	-10
	comp=Z,32nm,0.5s						
LOR	Lormes	12.62	303	ePn	Pn	05 11 13.2	-2.7
LOR				eSn	Sn	05 13 25.9	-10
	comp=Z,16nm,0.5s						
SSF	Saint Saulge	12.77	302	ePn	Pn	05 11 14.8	-3.1
SSF				eSn	Sn	05 13 28.8	-11
	comp=Z,16nm,0.5s						
SSF	Saint Saulge	12.77	302	ePn	Pn	05 11 14.8	-3.1
SSF				eSn	Sn	05 13 28.8	-11
	comp=Z,7.8nm,0.5s						
AVF	Avril sur Loir	12.78	301	ePn	Pn	05 11 14.9	-3.1
AVF				eSn	Sn	05 13 29.1	-11
	comp=Z,26nm,0.8s						
AVF	Avril sur Loir	12.78	301	ePn	Pn	05 11 14.9	-3.1

AVF eSn Sn 05 13 29.1 -11
comp=Z,13nm,0.8s
SUW Suwalki 12.90 10 eP Pn 05 11 21.6 +1.9
MTLF Montolieu 12.90 285 ePn Pn 05 11 16.6 -3.2
BGF Bois d'Agland 13.03 299 ePn Pn 05 11 18.3 -3.2
BGF eSn Sn 05 13 35.5 -11
comp=Z,27nm,0.4s
BGF Bois d'Agland 13.03 299 ePn Pn 05 11 18.3 -3.2
BGF eSn Sn 05 13 35.5 -11
comp=Z,13nm,0.4s
CAF Calviac 13.18 291 ePn Pn 05 11 20.4 -3.2
TCF Toulx Ste Croi 13.38 297 ePn Pn 05 11 23.0 -3.3
TCF eSn Sn 05 13 43.9 -11
comp=Z,9.7nm,0.5s
TCF Toulx Ste Croi 13.38 297 ePn Pn 05 11 23.0 -3.3
TCF eSn Sn 05 13 43.9 -11
comp=Z,4.8nm,0.5s
GIVF Givet 13.42 316 ePn Pn 05 11 23.4 -3.4
ANDN Andirin 13.59 101 *i* P Pn 05 11 31.5 +2.3
BAIF Baives 13.73 314 ePn Pn 05 11 27.5 -3.5
LFF La Frestale 14.12 291 ePn Pn 05 11 32.9 -3.4
MNK Minsk 14.28 20 eP Pn 05 11 37.0 -1.5
GZT Gaziantep 14.57 100 *i* P Pn 05 11 42.9 +0.3
MALT Malatya 14.89 96⇑*i* P Pn 05 11 52.4 +5.4
MALT Malatya 14.89 96 Pn Pn 05 11 46.2 -0.8
comp=Z,5.9nm,1.4s
MFF Saint Martin d 15.04 297 ePn Pn 05 11 45.6 -3.2
SOC Sochi 15.12 75 eP Pn 05 11 47.8 -2.2
SOC *e* 05 14 37.5
SOC pmax pmax
comp=Z,5.0nm,0.5s
SOC MLR MLR
comp=Z,70nm,12.0s
SOC Sochi 15.12 75 eP Pn 05 11 47.8 -2.2
comp=Z,5.0nm,0.5s
SOC eS Sn 05 14 37.5 +0.3
comp=Z,70nm,12.0s
MMAI Mount Meron Ar 15.19 118 Pn Pn 05 11 47.2 -3.7
comp=Z,1.9nm,0.3s,baz=308,slow=16,SNR=3.8
LDF La Druitiere 15.60 304 ePn Pn 05 11 53.1 -3.1
FLN La Foliniere 15.88 304 ePn Pn 05 11 57.1 -2.8
HFRF Wahat Farafira 15.95 150 P Pn 05 11 55.0 -5.9
EVIA Vianos 17.03 268 P Pn 05 12 19.6 +5.0
EVIA pmax pmax
comp=Z,12nm,0.9s
EVIA Vianos 17.03 268 P Pn 05 12 19.6 +5.0
comp=Z,12nm,0.9s
SGMF Saint Gilles 17.04 301 ePn Pn 05 12 12.5 -2.1
KIV Kislovodsk 17.28 74 P Pn 05 12 20.0 +2.4
KIV pmax pmax
comp=Z,8.0nm,0.8s
KIV MLR MLR
comp=Z,200nm,18.0s
KIV Kislovodsk 17.28 74 ePn Pn 05 12 18.9 +1.3
comp=Z,31nm,0.9s
KIV Kislovodsk 17.28 74 P Pn 05 12 20.0 +2.4
comp=Z,200nm,18.0s
KIV Kislovodsk 17.28 74 ePn Pn 05 12 18.9 +1.3
comp=Z,31nm,0.9s
QUIF Quistinic 17.34 300 ePn Pn 05 12 16.8 -1.6
EHUE Huescar 17.35 265 P Pn 05 12 23.5 +4.9
EHUE pmax pmax
comp=Z,8.0nm,1.2s
EHUE Huescar 17.35 265 P Pn 05 12 23.5 +5.0
comp=Z,8.1nm,1.2s
ROSF Rostrenen 17.52 301 ePn Pn 05 12 19.3 -1.3
GOF Gofitskoye 17.57 70 eP Pn 05 12 30.1 +8.9
EQES Quesada 17.71 266 P Pn 05 12 26.9 +3.8
comp=Z,60nm,1.0s
OBN Obninsk 17.80 34*ce*P Pn 05 12 21.8 -2.2
OBN *e* 05 15 43.8
OBN pmax pmax
comp=Z,76nm,1.5s
OBN MLR MLR
comp=Z,600nm,16.0s
GUD Guadarrama 17.82 275 P Pn 05 12 25.4 +0.9
GUD pmax pmax
comp=Z,8.0nm,1.0s
GUD Guadarrama 17.82 275 P Pn 05 12 25.4 +0.9
comp=Z,8.0nm,1.0s
GUD Guadarrama 17.82 275 P Pn 05 12 25.4 +1.0
comp=Z,7.9nm,1.0s
ESDC Sonseca Array 17.87 272 P Pn 05 12 26.8 +1.7
comp=Z,0.3nm,0.3s,baz=73,slow=12,SNR=4.5
ESDC LR LR 05 20 02.4
comp=Z,324nm,19.1s,baz=70,slow=39
ESDC Sonseca Array 17.87 272 P Pn 05 12 28.3 +3.2
ESDC Sonseca Array 17.87 272 P Pn 05 12 28.3 +3.2
ONI Oni 17.88 78 P Pn 05 12 28.3 +3.2
ECOG Cogollos-Vega 18.26 265 P Pn 05 12 33.2 +3.4
ECOG pmax pmax
comp=Z,10.0nm,0.8s
ECOG Cogollos-Vega 18.26 265 P Pn 05 12 33.2 +3.4
comp=Z,10.0nm,0.8s
ECOG Cogollos-Vega 18.26 265 P Pn 05 12 33.2 +3.4
comp=Z,10nm,0.8s
ERON Agron 18.52 264 P Pn 05 12 35.2 +2.1
ERON Agron 18.52 264 P Pn 05 12 35.2 +2.1
MOS Moscow 18.66 33 eP Pn 05 12 32.5 -2.1
MOS eS Sn 05 16 04.6 +1.6
MOS pmax pmax
comp=Z,67nm,0.8s
EADA Adamuz 18.73 268 P Pn 05 12 37.4 +1.8
EADA Adamuz 18.73 268 P Pn 05 12 37.4 +1.9
ELOJ Sierra Loja 18.74 265 P Pn 05 12 36.7 +1.0
ELOJ pmax pmax
comp=Z,9.0nm,0.9s
ELOJ Sierra Loja 18.74 265 P Pn 05 12 36.7 +1.0
comp=Z,9.0nm,0.9s
ELOJ Sierra Loja 18.74 265 P Pn 05 12 36.7 +1.0
comp=Z,9.3nm,0.9s
HDK2 Wahat Dakhilah 18.76 152 P Pn 05 12 34.9 -1.1
TBLG Delisi 18.92 80 P Pn 05 12 41.1 +3.3
MTA Mtatsminda 18.96 81 P Pn 05 12 40.2 +1.9
HFS Hagfors 19.13 351 P Pn 05 12 37.1 -3.1
comp=Z,0.6nm,0.3s,baz=165,slow=12,SNR=10.0
HFS LR LR 05 21 14.9
comp=Z,423nm,18.4s,baz=339,slow=41
HFS Hagfors 19.13 351 P Pn 05 12 37.1 -3.1
HFS pmax pmax
comp=Z,1.0nm,0.3s
HFS MLR MLR
comp=Z,423nm,18.4s
GNI Garni 19.18 85 P Pn 05 12 38.4 -2.6
comp=Z,2.0nm,0.3s,baz=4.2,slow=4.1,SNR=9.4
GNI Garni 19.18 85*c i*P Pn 05 12 40.0 -1.0
GNI pmax pmax
comp=Z,60nm,1.7s
GNI Garni 19.18 85 *i* P Pn 05 12 40.0 -1.0
comp=Z,60nm,1.7s
GNI Garni 19.18 85 ePn Pn 05 12 40.5 -0.6
comp=Z,44nm,1.4s
KONO Kongsberg 19.31 345 eP Pn 05 12 41.9 -0.5
ECAB El Cabril 19.39 268 P Pn 05 12 43.8 +0.3
ECAB El Cabril 19.39 268 P Pn 05 12 43.8 +0.2
EMIJ Mijas 19.41 264 P Pn 05 12 42.2 -1.6
comp=Z,23nm,0.9s
EMIJ Mijas 19.41 264 P Pn 05 12 42.2 -1.6
comp=Z,23nm,0.9s
MVO Moncorvo 19.89 278 A 05 22 04.4
comp=Z,260nm,16.0s
EJIF Jimena Fronter 19.98 264 P Pn 05 12 50.5 0.0
EJIF pmax pmax
comp=Z,11nm,0.8s
EJIF Jimena Fronter 19.98 264 P Pn 05 12 50.5 0.0
comp=Z,11nm,0.8s
EJIF Jimena Fronter 19.98 264 P Pn 05 12 50.5 0.0
comp=Z,11nm,0.8s
ESPR Espera 20.11 265 P P 05 12 51.4 +1.1
ESPR Espera 20.11 265 P P 05 12 51.4 +1.1
NB2 NORSAR Subarra 20.34 348 P P 05 12 50.5 -2.0
comp=Z,7.2nm,0.9s,baz=166,slow=11
NOA NORSAR Array B 20.34 348 P P 05 12 51.0 -1.4
baz=160,slow=12
NOA LR LR 05 21 59.0
comp=Z,391nm,19.0s,MS3.8,baz=180,slow=41
EKA Eskdalemuir Ar 20.39 321 P P 05 12 52.9 -0.3
comp=Z,2.4nm,0.5s,baz=111,slow=8.7,SNR=9.2
EKA Eskdalemuir Ar 20.39 321 P P 05 12 52.9 -0.2
EKA pmax pmax
comp=Z,2.0nm,0.5s
MTE Manteigas 20.41 276 eP P 05 13 00.9 +7.4
comp=Z,32nm,1.8s
MTE A 05 22 47.8
comp=Z,294nm,16.0s

EMIN Mina Concepcio 20.43 268 P P 05 12 56.0 +2.3
EMIN Mina Concepcio 20.43 268 P P 05 12 56.0 +2.3
PMRV Marv??o 20.51 273 eP P 05 12 58.7 +4.1
comp=Z,42nm,1.8s
PMRV eS S 05 16 49.3 +5.6
PMRV A 05 24 58.6
comp=Z,314nm,16.0s
PBAR Barrancos 20.58 270 eP P 05 12 57.0 +1.7
comp=Z,89nm,1.5s
PBAR eS S 05 16 52.9 +7.7
PBAR A 05 22 08.3
comp=Z,862nm,16.0s
PESTR Estremoz 20.80 272 eP P 05 13 01.4 +3.7
comp=Z,32nm,1.0s
PESTR eS S 05 16 59.4 +10
PESTR A 05 21 27.4
comp=Z,257nm,18.0s
MDT Midelt 20.96 254 P P 05 13 00.2 +0.8
comp=Z,7.1nm,0.9s,baz=78,slow=13,SNR=11
MDT LR LR 05 20 55.8
comp=Z,265nm,19.8s,MS3.6,baz=249,slow=36
EGRO El Granado 21.11 268 P P 05 13 04.9 +3.8
EGRO El Granado 21.11 268 P P 05 13 04.9 +3.8
KAF Kangasniemi 21.18 9 ep P 05 12 58.8 -2.8
comp=Z,18nm,0.5s,mb4.6
KAF Kangasniemi 21.18 9 eP P 05 12 58.8 -2.8
KAF pmax pmax
comp=Z,18nm,0.5s,mb4.7
EVO Evora 21.21 271 eP P 05 13 05.9 +3.7
comp=Z,36nm,1.6s,mb4.5
PBEJ Beja 21.25 270 eP P 05 13 03.9 +1.3
comp=Z,29nm,1.5s,mb4.4
PVAQ Vaqueiros 21.33 268 eP P 05 13 04.3 +0.8
comp=Z,64nm,1.8s,mb4.7
PVAQ eS S 05 17 10.7 +11
PVAQ A 05 23 09.8
comp=Z,288nm,16.0s
PBDV Barranco-do-Ve 21.55 268 eS S 05 17 07.6 +3.4
PBDV A 05 23 15.7
comp=Z,254nm,16.0s
DCN Croghan 21.57 313 eP P 05 13 09.6 +3.7
TAM Tamanrasset 21.91 217 eP P 05 13 11.5 +1.8
TAM Tamanrasset 21.91 217 eP P 05 13 11.5 +1.8
PMAFR Mafra 22.05 273 eS S 05 17 17.1 +3.0
PMAFR A 05 25 45.3
comp=Z,251nm,16.0s
PFVI Vila Bisbo 22.26 268 eP P 05 13 18.1 +4.7
comp=Z,77nm,1.7s,mb4.9
PFVI eS S 05 17 15.9 -2.2
PFVI A 05 22 51.4
comp=Z,214nm,18.0s
JOF Joensuu 22.71 14 ep P 05 13 15.2 -2.7
comp=Z,17nm,0.6s,mb4.7
JOF Joensuu 22.71 14 eP P 05 13 15.2 -2.7
JOF pmax pmax
comp=Z,17nm,0.6s,mb4.7
RST Umm Al-Ruwaisa 25.27 109 eP P 05 13 40.6 -2.2
baz=109
RST AMb AMB 05 13 48.1
comp=Z,2.0nm,1.1s,baz=109
MIB Mutribah 25.34 108 eP P 05 13 41.4 -2.0
baz=108
MIB AMb AMB 05 13 48.4
comp=Z,98nm,0.9s,mb5.3,baz=108
NAY Al-Naaiem 25.59 109 eP P 05 13 43.6 -2.0
baz=109
NAY AMb AMB 05 13 46.8
comp=Z,18nm,1.1s,mb4.5,baz=109
UMR Umm Al-Rimmam 25.75 108 eP P 05 13 44.7 -2.4
baz=108
UMR AMb AMB 05 13 50.8
comp=Z,53nm,1.4s,mb4.9,baz=108
APA Apatity 27.34 12 eP P 05 14 00.0 -1.1
APA eS S 05 18 44.0 +3.7
APA pmax pmax
comp=Z,16nm,0.8s,mb4.6
APA MLR MLR
comp=Z,600nm,12.0s,MS4.4
APA Apatity 27.34 12 eP P 05 14 00.0 -1.1
comp=Z,16nm,0.8s,mb4.6
AKTK Aktyubinsk 28.05 58 P P 05 14 05.3 -2.3
AKTK LR LR 05 27 41.1
AKTO Aktyubinsk 28.05 58 P P 05 14 05.3 -2.3
comp=Z,2.1nm,0.3s,mb4.2,baz=275,slow=9.2,SNR=8.3
AKTO LR LR 05 27 41.1
comp=Z,368nm,20.2s,MS4.0,baz=64,slow=42
AKTO Aktyubinsk 28.05 58 P P 05 14 05.4 -2.3
AKTO pmax pmax
comp=Z,2.0nm,0.4s,mb4.1
AKTO MLR MLR
comp=Z,368nm,20.2s,MS4.0
ARCES ARCESS Array B 28.41 4 P P 05 14 07.5 -3.1
comp=Z,1.5nm,0.9s,baz=189,slow=10,SNR=12
ARCES LR LR 05 26 31.5
comp=Z,603nm,20.1s,MS4.2,baz=190,slow=39
ARCES ARCESS Array B 28.41 4 P P 05 14 07.6 -3.0
ARCES pmax pmax
comp=Z,2.0nm,0.9s
ARCES MLR MLR
comp=Z,603nm,20.1s
KEV Kevo 28.73 5 ep P 05 14 10.6 -2.9
comp=Z,0.4nm,0.4s
AB31 Akbulak array 29.26 61 eP P 05 14 16.2 -2.2
AB31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
ARU Arti 29.32 46*d i*P P 05 14 16.5 -2.4
ARU *e* 05 17 22.2
ARU eS S 05 19 12.5 +0.8
ARU *e*SS SS 05 20 35.2 -41
ARU pmax pmax
comp=Z,37nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,709nm,17.0s,MS4.4
ARU Arti 29.32 46 ePcP PcP 05 17 22.2 -2.8
ARU Arti 29.32 46 eP P 05 14 16.4 -2.5
comp=Z,18nm,0.9s,mb4.8
SVE Sverdlovsk 30.53 45⇑eP P 05 14 28.0 -1.6
SVE eS S 05 19 27.8 -2.8
SVE *e* 05 24 58.7
SVE pmax pmax
comp=Z,39nm,0.9s,mb5.2
SVE MLR MLR
comp=Z,922nm,17.0s,MS4.5
TOA0 Torodi Ar. Sit 32.10 214 eP P 05 14 44.6 +0.9
TOA0 Torodi Ar. Sit 32.10 214 eP P 05 14 44.6 +0.8
TORD Torodi Ar. Bea 32.10 214 P P 05 14 44.0 +0.3
comp=Z,2.4nm,0.9s,mb4.0,baz=6.8,slow=10,SNR=14
TORD LR LR 05 30 27.3
comp=Z,275nm,18.8s,MS4.0,baz=25,slow=41
CMLA Cha da Macela 34.56 279 eLR LR 05 24 33.5
BRVK Borovoye 35.72 53 eP P 05 15 13.8 -1.1
BRVK pmax pmax
comp=Z,21nm,0.8s,mb5.1
BRVK Borovoye 35.72 53 eP P 05 15 13.8 -1.1
comp=Z,21nm,0.8s,mb5.1
BVA0 Borovoye Array 35.79 53 *i* P P 05 15 13.4 -2.0
BVA0 pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BVAR Borovoye Array 35.79 53 P P 05 15 14.1 -1.3
comp=Z,10.0nm,0.8s,mb4.8,baz=269,slow=6.8,SNR=43
BVAR Borovoye Array 35.79 53 P P 05 15 14.1 -1.3
BVAR pmax pmax
comp=Z,10.0nm,0.8s
KK31 Karatay Array 37.37 70 *i* P P 05 15 27.9 -1.2
KK31 pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
KK31 Karatay Array 37.37 70 *i* P P 05 15 27.9 -1.2
comp=Z,1.0nm,0.4s,mb4.0
EKS2 Erkin-Say 39.80 69 eP P 05 15 49.1 -0.4
comp=Z,46nm,0.6s,mb5.4
EKS2 Erkin-Say 39.80 69 eP P 05 15 49.1 -0.4
comp=Z,46nm,0.6s,mb5.4
DBIC Dimbokro 40.77 219 P P 05 15 57.6 -0.1
comp=Z,2.3nm,0.6s,mb4.0,baz=341,slow=14,SNR=4.4
DBIC LR LR 05 35 43.5
comp=Z,190nm,19.2s,MS4.0,baz=12,slow=40
DBIC Dimbokro 40.77 219 P P 05 15 57.6 -0.1
DBIC pmax pmax
comp=Z,2.0nm,0.6s
DBIC MLR MLR
comp=Z,190nm,19.2s
KURK Kurchatov 41.11 56 P P 05 15 57.6 -2.6
comp=Z,1.3nm,0.3s,mb4.1,baz=277,slow=8.7,SNR=9.0
KURK Kurchatov 41.11 56*c i*P P 05 15 58.2 -2.0
KURK pmax pmax
comp=Z,14nm,1.6s,mb4.3

KURK Kurchatov 41.11 56 *e*P P 05 15 58.3 -1.9
comp=Z,20nm,1.4s,mb4.6
NVS Novosibirsk 43.17 49⇑*i*P P 05 16 15.9 -1.0
NVS *e* 05 17 55.0
NVS pmax pmax
comp=N,15nm,1.5s
NVS pmax pmax
comp=Z,57nm,1.5s,mb5.1
NVS pmax pmax
comp=E,36nm,1.1s
ZAL Zalesovo 44.23 50 P P 05 16 23.8 -1.7
ZAL pmax pmax
comp=Z,16nm,0.4s
ZAL MLR MLR
comp=Z,437nm,19.1s
ZAL Zalesovo 44.23 50 P P 05 16 23.8 -1.7
comp=Z,437nm,19.1s
ZAA0 Zalesovo Array 44.24 50 eP P 05 16 23.8 -1.7
ZAA0 Zalesovo Array 44.24 50 eP P 05 16 23.8 -1.7
ZALV Zalesovo Beam 44.24 50 P P 05 16 23.8 -1.8
comp=Z,16nm,0.3s,mb5.2,baz=285,slow=8.6,SNR=47
ZALV LR LR 05 37 05.8
comp=Z,437nm,19.1s,MS4.4,baz=22,slow=39
ZALV Zalesovo Beam 44.24 50 P P 05 16 23.8 -1.8
ZALV LR LR 05 37 05.8
MK31 Makanchi Array 44.41 61 *i* P P 05 16 25.1 -1.9
MK31 pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
MK31 Makanchi Array 44.41 61 *i* P P 05 16 25.1 -1.9
comp=Z,8.0nm,0.5s,mb4.7
MKAR Makanchi Array 44.41 61 P P 05 16 25.4 -1.6
comp=Z,18nm,0.7s,mb4.9,baz=282,slow=7.5,SNR=69
MKAR LR LR 05 37 59.1
comp=Z,215nm,20.3s,MS4.1,baz=286,slow=40
MKAR Makanchi Array 44.41 61⇑eP P 05 16 25.3 -1.7
MKAR Makanchi Array 44.41 61 P P 05 16 25.4 -1.6
MKAR LR LR 05 37 59.1
NDI New Delhi 48.16 86 eP P 05 16 52.0 -4.7
WMQ Urumqi 48.99 63 eP P 05 17 02.1 -0.8
WMQ AP pP 05 17 07.0 +0.1
WMQ XP sP 05 17 10.0 +1.6
WMQ PCP PcP 05 18 27.0 +0.2
WMQ *e*S S 05 24 05.0 -1.9
WMQ AMB AMB
comp=Z,11nm,1.1s,mb4.8
WMQ AMB AMB
comp=Z,156nm,5.2s
WMQ LR LR
comp=N,423nm,15.4s,MS4.8
WMQ LR LR
comp=E,684nm,15.7s,MS4.8
WMQ LR LR
comp=Z,384nm,18.0s,MS4.4
DANN Dangsing 53.23 83 eP P 05 17 32.5 -2.5
comp=Z,116nm,0.8s
KOLN Koldanda 53.42 83 eP P 05 17 33.7 -2.7
comp=Z,43nm,0.9s,mb5.4
KKN Kakani 54.66 82 eP P 05 17 42.5 -3.0
comp=Z,29nm,0.6s,mb5.5
PKI Pulchoki 54.88 82 eP P 05 17 44.4 -2.7
comp=Z,45nm,0.9s,mb5.5
GUN Gumba 55.05 82 eP P 05 17 46.1 -2.2
comp=Z,179nm,1.0s
JIRN Jiri 55.41 82 eP P 05 17 48.6 -2.3
comp=Z,52nm,0.4s
SCHQ Schefferville 55.58 316 P P 05 17 50.7 -1.0
comp=Z,4.5nm,0.9s,mb4.5,baz=50,slow=17,SNR=2.9
SCHQ LR LR 05 40 55.7
comp=Z,181nm,20.4s,MS4.2,baz=67,slow=35
TLY Talaya 55.77 49 eP P 05 17 52.7 -0.4
TLY pmax pmax
comp=Z,17nm,0.9s,mb5.1
TLY MLR MLR
comp=Z,473nm,17.0s,MS4.6
TLY Talaya 55.77 49 eP P 05 17 53.0 -0.1
comp=Z,17nm,0.8s,mb5.1
TLY Talaya 55.77 49 eP P 05 17 53.0 -0.1
comp=Z,17nm,0.8s,mb5.1
RAMN Ramite 56.10 82 eP P 05 17 52.9 -3.0
comp=Z,59nm,0.6s,mb5.8
ZAK Zakamensk 56.12 50 eP P 05 17 54.1 -1.5
ZAK pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
TAPN Taplejung 56.71 81 eP P 05 17 57.9 -2.3
comp=Z,42nm,0.9s,mb5.5
ODAN Odare 56.74 82 eP P 05 17 57.6 -2.8
comp=Z,77nm,1.0s,mb5.7
TIXI Tiksi 56.96 21⇑*i*P P 05 17 58.4 -2.9
TIXI pmax pmax
comp=Z,34nm,2.5s,mb4.9
LSA Lhasa 57.98 77 P P 05 18 07.6 -1.6
GTA Gaotai 59.08 63 eP P 05 18 15.2 -1.4
GTA AP pP 05 18 18.6 -2.0
GTA XP sP 05 18 21.3 -0.9
GTA S S 05 26 23.2 -0.1
GTA XS sS 05 26 30.4 +0.5
GTA AMB AMB
comp=Z,8.0nm,0.6s,mb4.9
GTA AMB AMB
comp=Z,63nm,3.8s
GTA LR LR
comp=N,143nm,20.5s,MS4.3
GTA LR LR
comp=E,146nm,16.9s,MS4.3
GTA LR LR
comp=Z,188nm,19.3s,MS4.2
SONM Songino Array 59.10 52 P P 05 18 15.5 -1.2
comp=Z,7.3nm,0.9s,mb4.7,baz=292,slow=9.1,SNR=26
SONM LR LR 05 46 09.1
comp=Z,429nm,20.1s,MS4.6,baz=101,slow=39
SONM Songino Array 59.10 52 P P 05 18 15.5 -1.2
SONM pmax pmax
comp=Z,7.0nm,0.9s
SONM MLR MLR
comp=Z,429nm,20.1s
ULN Ulaanbaatar 59.48 51*c i*P P 05 18 18.1 -1.2
ULN Ulaanbaatar 59.48 51 eP P 05 18 18.2 -1.1
comp=Z,8.0nm,1.1s,mb4.7
LZH Lanzhou 63.54 64 eP P 05 18 45.0 -1.9
LZH AP pP 05 18 49.8 -1.1
LZH XP sP 05 18 52.1 -0.3
LZH PP PP 05 21 06.3 0.0
LZH *e*S S 05 27 15.2 -4.9
LZH XS sS 05 27 22.5 -4.2
LZH *e*SS SS 05 31 23.0 -3.8
LZH AMB AMB
comp=Z,19nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,73nm,6.3s
LZH LR LR
comp=E,313nm,16.5s
LZH LR LR
comp=Z,407nm,18.0s,MS4.7
LZH Lanzhou 63.54 64 eP P 05 18 45.0 -1.9
LZH *SP sP 05 18 52.1 -0.3
LZH 05 21 06.3
LZH *e*S S 05 27 15.2 -4.9
LZH *e*SS SS 05 31 23.0 -3.8
LZH Lanzhou 63.54 64 pP pP 05 18 49.8 -1.1
LZH Lanzhou 63.54 64 eP P 05 18 45.0 -1.9
LZH pP pP 05 18 49.8 -1.1
LZH sP sP 05 18 52.1 -0.3
LZH PP PP 05 21 06.3 0.0
LZH *e*S S 05 27 15.2 -4.9
LZH sS sS 05 27 22.5 -4.2
LZH *e*SS SS 05 31 23.0 -3.8
HHC Hu-ho-hao-te 65.93 56 eP P 05 18 58.5 -3.9
HHC AP pP 05 19 01.5 -5.0
HHC PCP PcP 05 19 29.7 -3.5
HHC PP PP 05 21 25.0 -2.2
HHC SCP 05 23 30.5
HHC PCS 05 23 33.0
HHC S S 05 27 42.6 -6.8
HHC SCS ScS 05 28 50.0 -8.2
HHC SS SS 05 31 58.2 -5.6
HHC AMB AMB
comp=Z,12nm,0.6s,mb5.1
HHC AMB AMB
comp=Z,81nm,6.5s
HHC LR LR
comp=N,145nm,17.1s,MS4.7
HHC LR LR
comp=E,355nm,17.4s,MS4.7
HHC LR LR
comp=Z,297nm,17.4s,MS4.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CD2	**Chengdu**	**66.38**	**69**	⇓iP	**P**	**05 19 03.8**	**-1.7**
CD2				AP	pP	05 19 08.5	-1.0
CD2				XP	sP	05 19 10.9	-0.1
CD2				PP	PP	05 21 31.8	+0.4
CD2				S	S	05 27 50.8	-4.4
CD2				XS	sS	05 27 58.5	-3.4
CD2				SS	SS	05 32 08.0	-3.3
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
CD2				AMB	AMB		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=N,180nm,12.0s,MS4.7						
CD2				LR	LR		
	comp=E,250nm,14.4s,MS4.7						
CD2				LR	LR		
	comp=Z,120nm,16.8s,MS4.2						
XAN	**Xi'an**	**68.13**	**63**	P	**P**	**05 19 14.6**	**-1.9**
XAN				AP	pP	05 19 26.1	+5.5
XAN				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.8						
XAN				AMB	AMB		
	comp=Z,39nm,5.0s						
KMI	**Kunming**	**69.04**	**75**	P	**P**	**05 19 21.9**	**-0.5**
KMI				AP	pP	05 19 25.0	-1.4
KMI				XP	sP	05 19 26.7	-1.2
KMI				PP	PP	05 21 56.1	+1.5
KMI				S	S	05 28 26.5	-0.8
KMI				XS	sS	05 28 31.4	-2.5
KMI				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.6						
KMI				AMB	AMB		
	comp=Z,76nm,5.5s						
KMI				LR	LR		
	comp=N,80nm,22.6s,MS4.2						
KMI				LR	LR		
	comp=E,123nm,18.1s,MS4.2						
KMI				LR	LR		
	comp=Z,114nm,18.1s,MS4.2						
KMI	**Kunming**	**69.04**	**75**	i P	**P**	**05 19 21.9**	**-0.5**
KMI				pP	pP	05 19 25.0	-1.4
KMI				sP	sP	05 19 26.7	-1.2
KMI				PP	PP	05 21 56.1	+1.5
KMI				S	S	05 28 26.5	-0.8
KMI				sS	sS	05 28 31.4	-2.5
KMI				SS	SS	05 32 53.0	+0.3
KMI				SSS		05 35 55.0	
BJI	**Beijing**	**69.26**	**55**	P	**P**	**05 19 22.0**	**-1.5**
BJI				S	S	05 28 26.2	-3.2
BJI				AMB	AMB		
	comp=Z,8.0nm,1.8s,mb4.3						
BJI				LR	LR		
	comp=N,252nm,22.9s,MS4.5						
BJI				LR	LR		
	comp=E,226nm,20.6s,MS4.5						
BJI				LR	LR		
	comp=Z,109nm,23.6s,MS4.0						
YKA	**Yellowknife Ar**	**70.12**	**339**	P	**P**	**05 19 27.1**	**-1.3**
	comp=Z,1.7nm,0.6s,mb4.1,baz=40,slow=6.3,SNR=4.4						
YKA				LR	LR	05 53 12.6	
	comp=Z,76nm,18.2s,MS4.0,baz=200,slow=38						
YKA	**Yellowknife Ar**	**70.12**	**339**	P	**P**	**05 19 27.1**	**-1.3**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA				MLR	MLR		
	comp=Z,76nm,18.2s						
YKA	**Yellowknife Ar**	**70.12**	**339**	P	**P**	**05 19 27.1**	**-1.3**
YKA				LR	LR	05 53 12.6	
CMAR	**Chiang Mai Arr**	**70.28**	**82**	P	**P**	**05 19 27.4**	**-2.7**
	comp=Z,1.4nm,0.5s,mb4.2,baz=312,slow=7.8,SNR=7.7						
CMAR	**Chiang Mai Arr**	**70.28**	**82**	i P	**P**	**05 19 27.3**	**-2.8**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GYA	**Guiyang**	**71.06**	**71**	P	**P**	**05 19 36.7**	**+2.0**
GYA				PCP	PcP	05 19 57.0	+2.0
GYA				PP	PP	05 22 14.3	+2.3
GYA				S	S	05 28 49.6	-1.3
GYA				SKS		05 29 33.4	
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,90nm,5.2s						
GYA				LR	LR		
	comp=N,390nm,19.5s,MS4.8						
GYA				LR	LR		
	comp=E,270nm,20.8s,MS4.8						
GYA				LR	LR		
	comp=Z,350nm,21.6s,MS4.6						
KLR	**Kul'dur**	**71.95**	**40**	eP	**P**	**05 19 33.2**	**-6.5**
CN2	**Changchun**	**72.31**	**47**	eP	**P**	**05 19 42.1**	**+0.1**
ULM	**Lac du Bonnet**	**72.66**	**323**	P	**P**	**05 19 42.7**	**-1.3**
	comp=Z,4.1nm,0.7s,mb4.5,baz=49,slow=7.6,SNR=6.9						
ULM				LR	LR	05 54 21.1	
	comp=Z,125nm,18.9s,MS4.2,baz=57,slow=38						
ULM	**Lac du Bonnet**	**72.66**	**323**	P	**P**	**05 19 42.7**	**-1.3**
ULM				LR	LR	05 54 21.1	
MDJ	**Mudanjiang**	**74.00**	**44**	P	**P**	**05 19 51.0**	**-0.9**
MDJ				AP	pP	05 19 54.2	-1.8
MDJ				XP	sP	05 19 55.5	-2.0
MDJ				S	S	05 29 07.7	-16
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.4s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,62nm,6.4s						
MDJ				LR	LR		
	comp=N,221nm,18.3s,MS4.7						
MDJ				LR	LR		
	comp=E,223nm,17.6s,MS4.7						
MDJ				LR	LR		
	comp=Z,363nm,16.9s,MS4.7						
KSRS	**Korea Array**	**77.95**	**51**	LR	LR	05 57 57.3	
	comp=Z,212nm,18.7s,MS4.5,baz=156,slow=38						
EGMT	**Eagleton**	**80.30**	**328**	eP	**P**	**05 20 27.5**	**+0.2**
	comp=Z,11nm,0.9s,mb4.8						
EGMT	**Eagleton**	**80.30**	**328**	eP	**P**	**05 20 27.5**	**+0.2**
	comp=Z,11nm,0.9s,mb4.8						
DLMT	**Dillon**	**83.60**	**328**	eP	**P**	**05 20 45.4**	**+0.7**
DLMT	**Dillon**	**83.60**	**328**	eP	**P**	**05 20 45.4**	**+0.7**
BDFB	**Brasilia**	**84.17**	**243**	P	**P**	**05 20 47.7**	**-0.2**
	comp=Z,4.0nm,0.8s,mb4.6,baz=164,slow=2.7,SNR=4.3						
BDFB				LR	LR	06 01 06.6	
	comp=Z,173nm,20.1s,MS4.4,baz=114,slow=38						
BDFB	**Brasilia**	**84.17**	**243**	P	**P**	**05 20 47.7**	**-0.2**
BDFB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BDFB				MLR	MLR		
	comp=Z,173nm,20.1s						
MJAR	**Matsushiro Arr**	**84.34**	**45**	P	**P**	**05 20 47.6**	**-1.0**
	comp=Z,1.1nm,0.3s,mb4.4,baz=316,slow=7.0,SNR=4.1						
MJAR				LR	LR	06 02 17.1	
	comp=Z,212nm,18.1s,MS4.6,baz=335,slow=38						
MJAR	**Matsushiro Arr**	**84.34**	**45**	P	**P**	**05 20 47.6**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,212nm,18.1s						
PDAR	**Pinedale Array**	**84.46**	**325**	P	**P**	**05 20 48.8**	**-0.3**
	comp=Z,0.8nm,0.6s,mb4.0,baz=57,slow=6.1,SNR=9.0						
PDAR				LR	LR	06 01 10.5	
	comp=Z,154nm,18.5s,MS4.4,baz=47,slow=38						
WMOK	**Wichita Mounta**	**85.40**	**313**	eP	**P**	**05 20 54.7**	**+0.7**
WMOK				pmax	pmax		
	comp=Z,18nm,1.9s,mb4.9						
WMOK	**Wichita Mounta**	**85.40**	**313**	eP	**P**	**05 20 54.7**	**+0.7**
	comp=Z,18nm,1.9s,mb4.9						
WMOK	**Wichita Mounta**	**85.40**	**313**	eP	**P**	**05 20 54.7**	**+0.7**
	comp=Z,18nm,1.9s,mb4.9						
JOW	**Kunigami**	**85.50**	**58**	LR	LR	06 02 45.8	
	comp=Z,148nm,20.1s,MS4.4,baz=322,slow=38						
BMO	**Blue Mountains**	**85.83**	**331**	eP	**P**	**05 20 55.2**	**-0.7**
BMO				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.7						
BMO	**Blue Mountains**	**85.83**	**331**	eP	**P**	**05 20 55.2**	**-0.7**
	comp=Z,4.6nm,1.1s,mb4.6						
BMO	**Blue Mountains**	**85.83**	**331**	eP	**P**	**05 20 55.2**	**-0.7**
	comp=Z,4.6nm,1.1s,mb4.6						
ROSC	**El Rosal**	**89.66**	**276**	LR	LR	05 56 25.6	
	comp=Z,84nm,19.6s,MS4.2,baz=40,slow=32						
TXAR	**Lajitas Array**	**92.19**	**313**	P	**P**	**05 21 26.7**	**+0.3**
	comp=Z,0.9nm,0.8s,mb4.1,baz=67,slow=4.0,SNR=11						
TXAR				LR	LR	06 03 26.6	
	comp=Z,94nm,18.1s,MS4.3,baz=190,slow=36						
TXAR	**Lajitas Array**	**92.19**	**313**	P	**P**	**05 21 26.7**	**+0.3**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR				MLR	MLR		
	comp=Z,94nm,18.1s						
CPUP	**Villa Florida**	**97.81**	**242**	LR	LR	06 08 35.2	
	comp=Z,167nm,21.4s,MS4.5,baz=34,slow=37						
LPAZ	**La Paz**	**98.80**	**256**	LR	LR	06 06 56.8	
	comp=Z,76nm,21.0s,MS4.2,baz=131,slow=36						
ASAR	**Alice Springs**	**123.26**	**93**	PKP	PKPdf	05 27 11.4	-2.1
	comp=Z,1.5nm,0.8s,baz=331,slow=2.2,SNR=12						
ASAR	**Alice Springs**	**123.26**	**93**	PKIKP	PKPdf	05 27 11.4	-2.1
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						

ISCJB ***05*** *05:25:43.9±1.4, 4131N±008×1941E±008, h10km, Error ellipse: s-maj=14.1km s-min=4.2km az=33.6*
SKO ***05*** *05:25:43.2, 4133N×1933E, h0km, M2.2, ML2.7*
BEO ***05*** *05:25:47.4±0.5, 4149N×1968E, h5km±4km, ML2.1/2*
ISC 05 05:25:43.9±1.5**, 4128N**±009×**1940E**±008**, h3**km±6km**, n11, σ0.83**/19**, Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.35**	**79**	ePg	**Pg**	**05 25 50.7**	**0.0**
TIR				eSg	**Sg**	**05 25 55.5**	**+0.2**
OHR	**Ohrid**	**1.07**	**99**	ePg	**Pg**	**05 26 03.4**	**-1.0**
OHR				i Sg	**Sg**	**05 26 20.1**	**+1.9**
OHR				eLg		05 26 20.4	
	comp=N,130nm,0.7s						
OHR				eLg		05 26 21.2	
	comp=E,108nm,0.6s						
KRUS	**Krusevo**	**1.39**	**86**	ePg	**Pg**	**05 26 08.4**	**-2.2**
KRUS				eSg	**Sg**	**05 26 28.4**	**-0.3**
KRUS				eLg		05 26 29.1	
	comp=N,50nm,0.4s						
KRUS				eLg		05 26 30.0	
	comp=E,36nm,0.4s						
BIA	**Bitola**	**1.48**	**100**	ePn	**Pn**	**05 26 11.3**	**-0.1**
BIA				i Sn	**Sn**	**05 26 32.1**	**+1.0**
BIA				eLg		05 26 32.7	
	comp=N,35nm,0.2s						
BIA				eLg		05 26 33.4	
	comp=E,68nm,0.4s						
TREB	**Trebinje**	**1.63**	**332**	ePg	**Pg**	**05 26 15.7**	**+0.5**
TREB				eSg	**Sg**	**05 26 37.3**	**+0.9**
SKO	**Skopje**	**1.68**	**65**	ePn	**Pn**	**05 26 14.7**	**+0.6**
SKO				i Sn	**Sn**	**05 26 36.0**	**-0.1**
SKO				eLg		05 26 36.4	
	comp=E,87nm,0.9s						
SKO				eLg		05 26 37.1	
	comp=N,102nm,0.5s						
BARS	**Barje**	**2.36**	**49**	ePn	**Pn**	**05 26 23.4**	**-0.1**
BARS				eSg	**Sg**	**05 26 52.8**	**-7.0**
VAY	**Valandovo**	**2.39**	**88**	ePn	**Pn**	**05 26 24.2**	**+0.3**
VAY				eLg		05 26 59.7	
	comp=N,20nm,0.7s						
VAY				eLg		05 27 00.6	
	comp=E,17nm,0.8s						
BBLS	**Lazići**	**2.58**	**0**	ePn	**Pn**	**05 26 25.9**	**-0.6**
BBLS				eSn	**Sn**	**05 26 58.0**	**-0.4**
DIVS	**Divibare**	**2.85**	**9**	ePn	**Pn**	**05 26 30.4**	**+0.2**
ZAPS	**Zavoj**	**3.12**	**49**	ePn	**Pn**	**05 26 32.8**	**-1.1**

ISCJB ***05*** *05:48:21.4±1.4, 28N±02×1289E±03, h33km, mb3.8/7, Error ellipse: s-maj=50.0km s-min=15.2km az=153.4*
NEIC ***05*** *05:48:24.4±1.7, 263N×12888E, h35km, mb3.5/2, Error ellipse: s-maj=47.8km s-min=14.9km az=55.0*
IDC ***05*** *05:48:44.3±9.7, 230N×12845E, h236km±91km, mb3.3/6, mb1 3.5/6, mb1mx3.3/16, mbtmp3.3/6, Error ellipse: s-maj=84.3km s-min=15.4km az=57.0*
ISC 05 05:48:23.3±1.5**, 28N**±02×**1290E**±03**, h35**km**, n9, σ0.71**/9**, mb3.8**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.99**	**189**	P	**P**	**05 53 03.8**	**0.0**
	1.4nm,0.7s,baz=21,slow=17,SNR=5.6						
WRAB	**Tennant Creek**	**23.16**	**167**	eP	**P**	**05 53 27.3**	**+0.4**
	0.4nm,0.2s,mb3.5						
WRA	**Warramunga Arr**	**23.17**	**167**	P	**P**	**05 53 27.2**	**+0.2**
	2.7nm,0.5s,mb4.0,baz=344,slow=10,SNR=32						
WB2	**Warramunga Arr**	**23.17**	**167**	eP	**P**	**05 53 27.8**	**+0.8**
MBWA	**Marble Bar**	**25.44**	**200**	P	**P**	**05 53 46.9**	**-1.1**
	0.6nm,0.6s,mb3.3						
ASAR	**Alice Springs**	**26.70**	**170**	P	**P**	**05 53 58.9**	**-0.5**
	1.1nm,0.5s,mb3.6,baz=355,slow=8.0,SNR=22						
ASAR				PcP	PcP	05 57 18.4	-4.1
	0.8nm,0.4s,baz=356,slow=2.3,SNR=12						
CMAR	**Chiang Mai Arr**	**33.30**	**300**	P	**P**	**05 54 59.1**	**+1.2**
	0.8nm,0.3s,mb4.1,baz=112,slow=7.2,SNR=6.9						
STKA	**Stephens Creek**	**36.47**	**162**	P	**P**	**05 55 24.8**	**-0.3**
	2.1nm,0.5s,mb4.3,baz=351,slow=9.3,SNR=4.3						
MKAR	**Makanchi Array**	**59.63**	**325**	P	**P**	**05 58 23.0**	**-0.9**
	0.5nm,0.6s,mb3.8,baz=137,slow=6.0,SNR=5.3						

ISCJB ***05*** *05:52:29.7±0.6, 3203S±004×6724W±007, h138km±8km, mb3.0/2, Error ellipse: s-maj=9.3km s-min=6.2km az=18.2*
IDC ***05*** *05:52:30.7±1.2, 3201S×6724W, h130km±11km, mb3.1/2, mb1 3.4/7, mb1mx3.3/18, mbtmp3.2/7, Error ellipse: s-maj=28.5km s-min=23.5km az=106.0*
GUC ***05*** *05:52:30.2±0.7, 3201S×6733W, h150km, MD3.7, ML4.1*
NEIC ***05*** *05:52:30.5±0.5, 3204S×6721W, h127km±8km, MD3.7(GUC), Error ellipse: s-maj=9.0km s-min=6.0km az=98.0*
ISC 05 05:52:30.7±0.6**, 3203S**±004×**6722W**±007**, h132**km±9km**, n34, σ0.75**/45**, mb3.0**/2**, 5C-4D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.96**	**296**	P	**Pn**	**05 52 53.5**	**0.0**
	10nm,0.3s,baz=117,slow=7.6,SNR=739						
CFAA				S	**Sn**	**05 53 10.5**	**-0.2**
	33nm,0.3s,baz=122,slow=16,SNR=106						
FCH	**Farellones**	**2.89**	**243**	⇑iP	**Pn**	**05 53 16.6**	**+0.7**
FCH				i S	**Sn**	**05 53 51.6**	**+0.8**
JACH	**Jahuel**	**2.92**	**256**	⇑iP	**Pn**	**05 53 17.0**	**+0.7**
JACH				i S	**Sn**	**05 53 52.2**	**+0.6**
CLCH	**Cerro Calan**	**3.11**	**243**	⇑iP	**Pn**	**05 53 19.0**	**+0.3**
CLCH				i S	**Sn**	**05 53 56.2**	**+0.4**
CLCH				AML	AML	05 54 00.2	
	comp=E,329nm,0.5s						
PEL	**Peldehue**	**3.13**	**248**	⇓iP	**Pn**	**05 53 18.7**	**-0.3**
PEL				i S	**Sn**	**05 53 56.0**	**-0.3**
PEL				AML	AML	05 53 58.1	
	comp=N,297nm,0.5s						
PCH	**Pirque**	**3.19**	**239**	⇓iP	**Pn**	**05 53 20.1**	**+0.3**
ANTU	**Antumapu**	**3.26**	**241**	eP	**Pn**	**05 53 20.8**	**+0.1**
ANTU				i S	**Sn**	**05 53 59.3**	**0.0**
ANTU				AML	AML	05 54 05.7	
	comp=E,136nm,0.6s						
ANTU	**Antumapu**	**3.26**	**241**	eP	**Pn**	**05 53 20.8**	**+0.1**
ANTU				i S	**Sn**	**05 53 59.3**	**0.0**
RCDM	**Rinconada Maip**	**3.35**	**243**	eP	**Pn**	**05 53 21.6**	**-0.2**
RCDM				i S	**Sn**	**05 54 01.4**	**-0.1**
RCDM				AML	AML	05 54 03.3	
	comp=E,298nm,0.1s						
RCDM	**Rinconada Maip**	**3.35**	**243**	eP	**Pn**	**05 53 21.6**	**-0.2**
RCDM				i S	**Sn**	**05 54 01.4**	**-0.1**
CHCH	**Chadas Angostu**	**3.45**	**236**	eP	**Pn**	**05 53 23.1**	**0.0**
CHCH				i S	**Sn**	**05 53 55.4**	**-8.5**
CACH	**El Canelo**	**3.52**	**233**	⇓iP	**Pn**	**05 53 24.7**	**+0.7**
TACH	**Talagante**	**3.52**	**242**	⇑iP	**Pn**	**05 53 23.5**	**-0.5**
TACH				i S	**Sn**	**05 54 05.0**	**-0.5**
TLL	**Tololo Astrono**	**3.59**	**300**	eP	**Pn**	**05 53 25.8**	**+0.7**
TLL				i S	**Sn**	**05 54 07.2**	**0.0**
TLL				AML	AML	05 54 11.5	
	comp=N,262nm,0.5s						
TLL	**Tololo Astrono**	**3.59**	**300**	eP	**Pn**	**05 53 25.8**	**+0.7**
TLL				i S	**Sn**	**05 54 07.2**	**0.0**
LNV	**Longovilo**	**4.01**	**240**	eP	**Pn**	**05 53 28.3**	**-2.2**
LNV				i S	**Sn**	**05 54 13.7**	**-3.3**
LSCH	**La Serena**	**4.05**	**300**	eP	**Pn**	**05 53 30.7**	**-0.4**
SFDO	**San Fernando**	**4.09**	**230**	⇓iP	**Pn**	**05 53 30.8**	**-0.7**
LCO	**Las Campanas**	**4.25**	**314**	eP	**Pn**	**05 53 34.2**	**+0.4**
LCO				i S	**Sn**	**05 54 22.6**	**-0.2**
LCO	**Las Campanas**	**4.25**	**314**	ePn	**Pn**	**05 53 34.2**	**+0.4**
LCO				eSn	**Sn**	**05 54 22.1**	**-0.6**
VACH	**Vallenar**	**4.61**	**318**	⇑iP	**Pn**	**05 53 38.3**	**-0.2**
TRQA	**Tornquist**	**7.39**	**146**	ePn	**Pn**	**05 54 16.6**	**+0.7**
PLCA	**Paso Flores**	**9.09**	**196**	P	**Pn**	**05 54 38.7**	**+0.1**
	comp=N,0.2nm,0.3s,baz=6.2,slow=11,SNR=5.3						
LVC	**Limon Verde**	**9.50**	**351**	P	**Pn**	**05 54 44.2**	**-0.2**
	comp=N,0.4nm,0.3s,baz=176,slow=13,SNR=4.2						
CPUP	**Villa Florida**	**10.34**	**59**	P	**Pn**	**05 54 54.2**	**-1.3**
	comp=N,1.3nm,0.3s,baz=221,slow=11,SNR=13						
LPAZ	**La Paz**	**15.70**	**357**	P	**Pn**	**05 56 06.9**	**+2.3**
	comp=N,0.1nm,0.3s,baz=203,slow=8.8,SNR=6.0						
SIV	**San Ignacio**	**16.92**	**21**	P	**Pn**	**05 56 19.2**	**-0.4**
	comp=N,0.3nm,0.3s,baz=209,slow=12,SNR=17						
TXAR	**Lajitas Array**	**70.16**	**327**	P	**P**	**06 03 28.1**	**-0.8**
	comp=N,0.1nm,0.5s,mb2.8,baz=152,slow=8.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**79.73**	**67**	P	**P**	**06 04 24.7**	**+0.6**
	comp=N,0.6nm,0.8s,mb3.3,baz=282,slow=5.9,SNR=3.2						
WB2	**Warramunga Arr**	**124.34**	**205**	eP	PKPdf	06 11 09.0	-5.4
KURK	**Kurchatov**	**148.68**	**43**	PKPbc	PKPbc	06 12 02.4	+0.7
	comp=N,1.3nm,0.5s,baz=297,slow=3.2,SNR=7.0						
KURK	**Kurchatov**	**148.68**	**43**	PKPbc	PKPbc	06 12 02.4	+0.7
ZALV	**Zalesovo Beam**	**150.37**	**34**	PKPbc	PKPbc	06 12 06.4	+0.6
	comp=N,1.9nm,0.4s,baz=294,slow=3.1,SNR=7.9						
MKAR	**Makanchi Array**	**152.42**	**49**	PKPbc	PKPbc	06 12 10.1	-0.7
	comp=N,0.7nm,0.6s,baz=333,slow=0.3,SNR=5.1						

IDC ***05*** *06:02:11.6±0.6, 5150N×17682W, h0km, mb4.3/15, mb1 4.5/17, mb1mx4.3/27, mbtmp4.3/17, ML4.0/2, MS3.5/11, Ms1 3.5/11, ms1mx3.2/42, Error ellipse: s-maj=22.6km s-min=12.8km az=169.0*
BJI ***05*** *06:02:16.8, 5236N×177.11W, h31km, mB4.8, mb4.8, Ms4.4, Msz4.2*
ISCJB ***05*** *06:02:18.3±0.6, 5167N±007×17686W±004, h57km±4km, mb4.4/38, MS3.7/14, Error ellipse: s-maj=12.4km s-min=4.0km az=175.1*
NEIC ***05*** *06:02:18.9±0.6, 5156N×17684W, h52km±5km, mb4.4/21, ML4.3(AEIC), Error ellipse: s-maj=10.7km s-min=3.9km az=172.0*
ISC 05 06:02:19.6±0.6**, 5163N**±008×**17684W**±004**, h53**km±5km**, h48**km±4.8km**:pP-P, n252, σ0.54**/250**, mb4.4**/38**, MS3.7**/14**, 85C-90D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**0.27**	**21**	P	**Pn**	**06 02 26.9**	**-1.8**
ADK				S	**Sn**	**06 02 35.0**	**-0.2**
AMKA	**Amchitka**	**2.43**	**266**	ePn	**Pn**	**06 02 55.8**	**-0.9**
AMKA				Sn	**Sn**	**06 03 26.5**	**+1.4**
NIKO	**Nikolski**	**5.08**	**72**	ePn	**Pn**	**06 03 33.0**	**0.0**
SMY	**Shemya**	**5.68**	**285**	ePn	**Pn**	**06 03 42.2**	**+0.9**
FX1	**Attu Island--F**	**6.27**	**285**	P	**Pn**	**06 03 50.2**	**+0.9**
UNV	**Unalaska Valle**	**6.66**	**66**	ePn	**Pn**	**06 03 54.9**	**+0.3**
	47nm,1.6s						
SPIA	**Saint Paul Isl**	**6.76**	**32**	P	**Pn**	**06 03 56.6**	**+0.7**
SDPT	**Sand Point**	**10.43**	**63**	Pn	**Pn**	**06 04 45.9**	**-0.3**
SVW2	**Sparrevohn**	**15.05**	**43**	ePn	**Pn**	**06 05 49.2**	**+0.7**
KDAK	**Kodiak Island**	**15.26**	**57**	Pn	**Pn**	**06 05 49.8**	**-1.6**
	1.6nm,0.3s,baz=334,slow=5.6,SNR=7.1						
KDAK	**Kodiak Island**	**15.26**	**57**	ePn	**Pn**	**06 05 50.5**	**-0.9**
	82nm,1.8s						
PETK	**Petropavlovsk-**	**15.60**	**285**	Pn	**Pn**	**06 05 54.4**	**-1.4**
	0.2nm,0.3s,baz=240,slow=16,SNR=2.8						
PETK				LR	LR	06 11 49.0	
	comp=Z,93nm,19.2s,baz=265,slow=37						
SEW	**Seward**	**17.44**	**50**	ePn	**Pn**	**06 06 17.3**	**-1.5**
KTH	**Kantishna Hill**	**18.15**	**39**	eP	**Pn**	**06 06 28.4**	**+1.1**
	25nm,0.8s						
TRF	**Thorofare Moun**	**18.35**	**40**	eP	**Pn**	**06 06 30.9**	**+1.0**
	26nm,1.1s						
MCK	**McKinley**	**19.02**	**40**	eP	**Pn**	**06 06 36.8**	**-1.1**
	12nm,0.7s						
EGAK	**Eagle**	**22.55**	**41**	eP	**P**	**06 07 14.1**	**-0.7**
	11nm,0.8s,mb4.3						
DAWY	**Dawson**	**23.08**	**43**	P	**P**	**06 07 21.6**	**+1.2**
ASAJ	**Asahikawa**	**27.93**	**271**	P	**P**	**06 08 04.5**	**-0.1**
	7.3nm,0.8s,mb4.3,baz=53,slow=10,SNR=4.4						
ASAJ				LR	LR	06 17 11.1	
	comp=Z,58nm,19.9s,MS3.2,baz=328,slow=32						
BBB	**Bella Bella**	**29.62**	**69**	LR	LR	06 17 20.2	
	comp=Z,91nm,22.0s,MS3.4,baz=268,slow=31						
YKA	**Yellowknife Ar**	**34.16**	**47**	P	**P**	**06 08 59.0**	**-0.1**
	4.2nm,0.9s,mb4.3,baz=277,slow=9.9,SNR=3.1						
YKA				LR	LR	06 23 17.4	
	comp=Z,37nm,19.2s,MS3.1,baz=20,slow=37						
MJAR	**Matsushiro Arr**	**35.03**	**262**	P	**P**	**06 09 06.2**	**-0.8**
	1.0nm,0.3s,mb4.2,baz=50,slow=8.1,SNR=6.4						
MJAR				LR	LR	06 21 35.5	
	comp=Z,116nm,19.0s,MS3.6,baz=50,slow=33						
MJAR	**Matsushiro Arr**	**35.03**	**262**	P	**P**	**06 09 06.2**	**-0.8**
MJAR				LR	LR	06 21 35.5	
MAT	**Matsushiro**	**35.04**	**262**	P	**P**	**06 09 08.2**	**+1.2**
A07A	**Ashnola River,**	**35.36**	**71**	⇓P	**P**	**06 09 10.2**	**+0.6**
	baz=35						
B07A	**Winthrop**	**35.78**	**72**	⇓P	**P**	**06 09 13.2**	**0.0**
	baz=36						
A08A	**Turner Farm, O**	**36.06**	**71**	⇓P	**P**	**06 09 15.6**	**0.0**
	baz=36						
B08A	**Colville Reser**	**36.29**	**72**	⇑P	**P**	**06 09 17.8**	**+0.2**
	baz=36						
H04A	**Detroit Lake**	**36.37**	**79**	⇑P	**P**	**06 09 18.7**	**+0.4**
	baz=36						
A09A	**Danville**	**36.45**	**71**	⇑P	**P**	**06 09 19.2**	**+0.2**
	baz=36						
A10A	**Northport**	**37.05**	**70**	⇓P	**P**	**06 09 24.3**	**+0.2**
	baz=37						
HAWA	**Hanford**	**37.11**	**75**	eP	**P**	**06 09 25.1**	**+0.5**
	6.5nm,1.1s,mb4.4						
D08A	**Wollman Farm,**	**37.16**	**74**	⇑P	**P**	**06 09 24.9**	**-0.1**
	baz=37						
C09A	**Chrisman Ranch**	**37.18**	**72**	⇓P	**P**	**06 09 25.0**	**-0.2**
	baz=37						
H06A	**Lindquist Farm**	**37.47**	**78**	⇑P	**P**	**06 09 28.0**	**+0.4**
	baz=37						
EDM	**Edmonton**	**37.62**	**62**	eP	**P**	**06 09 28.3**	**-0.5**
NEW	**Newport**	**37.64**	**71**	eP	**P**	**06 09 29.0**	**0.0**
	6.8nm,0.9s,mb4.4						
A11A	**Hall Mountain,**	**37.76**	**69**	⇓P	**P**	**06 09 30.8**	**+0.7**
	baz=38,SNR=8.0						
G08A	**Pilot Rock**	**38.02**	**76**	⇓P	**P**	**06 09 32.4**	**+0.1**
	baz=38						
D10A	**Wagner Farm, O**	**38.14**	**73**	⇑P	**P**	**06 09 33.1**	**-0.1**
	baz=38						
M04C	**Macdoel**	**38.14**	**83**	⇑P	**P**	**06 09 33.6**	**+0.2**
	baz=38						
A12A	**Yaak River Ran**	**38.19**	**69**	⇓P	**P**	**06 09 34.2**	**+0.5**
	baz=38						
K05A	**Summer Lake**	**38.20**	**81**	⇓P	**P**	**06 09 34.7**	**+0.8**
	baz=38						
I07A	**Izee**	**38.32**	**78**	⇑P	**P**	**06 09 35.4**	**+0.6**
	baz=38						
K06A	**Valley Falls**	**38.55**	**80**	⇓P	**P**	**06 09 37.5**	**+0.7**
	baz=38						
H08A	**Prairie City**	**38.59**	**77**	⇓P	**P**	**06 09 37.6**	**+0.5**
	baz=38						
L05A	**Lakeview**	**38.61**	**82**	⇓P	**P**	**06 09 38.3**	**+1.0**
	baz=38						
D11A	**Klaveano Farm,**	**38.70**	**72**	⇑P	**P**	**06 09 37.5**	**-0.5**
	baz=39						
G09A	**Cove**	**38.73**	**75**	⇑P	**P**	**06 09 38.3**	**0.0**
	baz=39						
J07A	**Hines**	**38.82**	**79**	⇑P	**P**	**06 09 39.5**	**+0.5**
	baz=39						
A13A	**Flathead Natio**	**38.91**	**69**	⇑P	**P**	**06 09 39.7**	**0.0**
	baz=39						
I08A	**Drewsey**	**38.98**	**78**	⇑P	**P**	**06 09 40.6**	**+0.3**
	baz=39						
MOD	**Modoc**	**39.02**	**82**	⇓P	**P**	**06 09 41.0**	**+0.2**
	baz=39						
MOD	**Modoc**	**39.02**	**82**	eP	**P**	**06 09 41.0**	**+0.3**
	6.5nm,1.0s,mb4.3						
G10A	**Bishop Farm, J**	**39.12**	**75**	⇑P	**P**	**06 09 41.5**	**0.0**
	baz=39						
B13A	**Whitefish**	**39.15**	**69**	⇓P	**P**	**06 09 42.0**	**+0.3**
	baz=39						
K07A	**Rock Creek Ran**	**39.23**	**80**	⇓P	**P**	**06 09 42.9**	**+0.5**
	baz=39						
M06C	**Likely Place G**	**39.31**	**83**	⇑P	**P**	**06 09 44.0**	**+0.8**
	baz=39						
J08A	**Circle Bar Ran**	**39.34**	**78**	⇑P	**P**	**06 09 43.7**	**+0.3**
	baz=39						
C13A	**Hot Springs**	**39.42**	**70**	⇑P	**P**	**06 09 44.4**	**+0.4**
	baz=39						
E12A	**Beaver Dam Sad**	**39.47**	**73**	⇑P	**P**	**06 09 44.3**	**-0.1**
	baz=39						
L07A	**Adell**	**39.55**	**81**	⇓P	**P**	**06 09 45.8**	**+0.7**
	baz=40						
K08A	**Mann Creek Ran**	**39.68**	**79**	⇑P	**P**	**06 09 46.6**	**+0.5**
	baz=40						
H10A	**Noah's Angus R**	**39.72**	**76**	⇓P	**P**	**06 09 46.7**	**+0.2**
	baz=40						

WVOR	**Wild Horse Val** 5.2nm,0.9s,mb4.3	39.75	80	*e*P	P	06 09 47.5	+0.7
J09A	**Fry Pan Ranch,** baz=40	39.78	78	⇓P	P	06 09 47.4	+0.3
C14A	**Swan Lake** baz=40	39.87	70	⇓P	P	06 09 47.6	-0.1
N06A	**Buffalo Meadow** baz=40	39.97	83	⇓P	P	06 09 49.0	+0.3
F12A	**Elk City** baz=40,SNR=6.6	40.00	73	⇑P	P	06 09 48.4	-0.4
M07A	**Soldier Meadow** baz=40,SNR=7.9	40.01	81	⇑P	P	06 09 49.9	+0.9
L08A	**Fields** baz=40	40.06	80	⇑P	P	06 09 49.8	+0.4
H11A	**Donnelly** baz=40	40.10	75	⇓P	P	06 09 49.9	+0.2
K09A	**Rome** baz=40	40.16	79	⇓P	P	06 09 50.4	+0.2
E13A	**Victor** baz=40	40.28	72	⇑P	P	06 09 50.7	-0.4
O06A	**Flanigan** baz=40	40.32	83	⇓P	P	06 09 51.5	-0.1
D14A	**Greenough** baz=40	40.35	71	⇓P	P	06 09 51.2	-0.5
M08A	**Happy Creek Ra** baz=40	40.47	81	⇑P	P	06 09 53.5	+0.8
N07B	**Gerlach** baz=40	40.49	82	⇑P	P	06 09 53.1	+0.2
F13A	**Darby** baz=40	40.53	73	⇓P	P	06 09 52.8	-0.4
I11A	**Placerville** baz=40	40.56	76	⇑P	P	06 09 53.0	-0.5
K10A	**MacKenzie Ranc** baz=40,SNR=6.2	40.64	78	⇑P	P	06 09 53.8	-0.4
E14A	**Clinton** baz=41	40.70	71	⇓P	P	06 09 54.6	0.0
KSRS	**Korea Array** 3.4nm,0.9s,mb4.0,baz=55,slow=8.9,SNR=6.4	40.86	272	P	P	06 09 56.8	+0.7
KSRS	comp=Z,46nm,19.9s,MS3.3,baz=145,slow=33			LR	LR	06 24 23.7	
H12A	**Diamond D Ranc** baz=41	40.88	75	⇓P	P	06 09 55.7	-0.4
O07A	**Toulon** baz=41	40.91	83	⇑P	P	06 09 56.2	-0.2
MFID	**Camas Ranch** baz=41	40.92	77	⇑P	P	06 09 56.0	-0.4
D15A	**Lincoln** baz=41	40.95	70	⇓P	P	06 09 56.4	-0.3
N08A	**GE Springer Mi** baz=41	41.00	81	⇑P	P	06 09 57.1	-0.1
R05C	**Kirkwood Meado** baz=41	41.04	85	⇓P	P	06 09 57.3	-0.2
K11A	**Parker Ranch,** baz=41	41.15	78	⇑P	P	06 09 58.2	-0.2
E15A	**Deer Lodge** baz=41	41.20	71	⇓P	P	06 09 58.3	-0.4
L10A	**Juniper Basin** baz=41	41.28	79	⇓P	P	06 09 59.1	-0.3
O08A	**Rochester Mine** baz=41	41.28	82	⇑P	P	06 09 59.4	-0.1
J12A	**Stokes Ranch,** baz=41	41.45	76	⇓P	P	06 10 00.9	+0.1
R06C	**Coleville** baz=41	41.54	85	⇓P	P	06 10 01.9	+0.3
M10A	**I.L. Ranch, Tu** baz=42	41.55	80	⇓P	P	06 10 01.8	+0.2
L11A	**Cat Creek Ranc** baz=42,SNR=6.5	41.66	78	⇑P	P	06 10 02.6	0.0
I13A	**Wildhorse Cree** baz=42,SNR=5.3	41.67	75	⇓P	P	06 10 02.6	0.0
S06C	**San Francisco** baz=42	41.68	86	⇑P	P	06 10 02.4	-0.3
HLID	**Hailey** baz=42,SNR=5.2	41.69	76	⇓P	P	06 10 02.9	+0.1
HLID	**Hailey** 3.4nm,1.1s,mb3.9	41.69	76	*e*P	P	06 10 03.0	+0.2
H14A	**Leadore** baz=42	41.74	74	⇑P	P	06 10 03.0	-0.2
K12A	**Draper Farm, C** baz=42	41.91	77	⇓P	P	06 10 04.8	+0.2
J13A	**Cove Ranch, Pi** baz=42,SNR=8.0	41.93	76	⇓P	P	06 10 04.6	-0.1
MCMT	**McKenzie Canyo**	41.93	73	*e*P	P	06 10 04.5	-0.2
O09A	**Fish Creek Ran** baz=42	41.95	82	⇑P	P	06 10 04.8	-0.1
G15A	**Dillon** baz=42	41.96	73	⇑P	P	06 10 04.5	-0.4
EGMT	**Eagleton** baz=42	42.05	67	⇑P	P	06 10 05.5	-0.2
EGMT	**Eagleton** 6.9nm,0.8s,mb4.3	42.05	67	*e*P	P	06 10 05.5	-0.1
M11A	**Holland Ranch,** baz=42	42.06	79	⇓P	P	06 10 05.8	-0.1
I14A	**Mackay** baz=42,SNR=5.4	42.07	75	⇓P	P	06 10 05.5	-0.3
L12A	**House Creek Ra** baz=42,SNR=9.6	42.12	78	⇓P	P	06 10 07.0	+0.7
H15A	**Lima** baz=42	42.17	73	⇓P	P	06 10 06.1	-0.6
BOZ	**Bozeman (W)** baz=42	42.21	71	⇓P	P	06 10 07.0	0.0
BOZ	**Bozeman (W)** 3.1nm,1.0s,mb3.9	42.21	71	*e*P	P	06 10 07.0	0.0
Q08A	**Gabbs** baz=42	42.27	84	⇑P	P	06 10 08.1	+0.2
NVAR	**Mina Array Bea** 1.9nm,0.8s,mb3.8,baz=290,slow=9.3,SNR=6.8	42.30	84	P	P	06 10 08.1	+0.2
J14A	**Carey** baz=42	42.37	75	⇑P	P	06 10 08.6	+0.3
N11A	**Elko Archery C** baz=42	42.46	80	⇓P	P	06 10 09.3	+0.3
M12A	**Wells** baz=42	42.61	79	⇑P	P	06 10 10.4	+0.2
L13A	**Double Diamond** baz=43	42.81	77	⇓P	P	06 10 12.2	+0.3
N12A	**Clover Valley,** baz=43,SNR=5.7	42.86	79	⇑P	P	06 10 12.6	+0.3
O11A	**Cowboy Ranch,** baz=43	42.91	81	⇓P	P	06 10 13.0	+0.3
HELL	**Mitchell Peak** baz=43	42.95	87	⇑P	P	06 10 12.6	-0.5
H16A	**Russell Place,** baz=43	42.95	72	⇑P	P	06 10 13.2	+0.2
S08C	**White Mtn Res** baz=43	42.96	85	⇑P	P	06 10 13.3	+0.2
J15A	**Blackfoot** baz=43	42.98	75	⇓P	P	06 10 13.9	+0.7
M13A	**Montello** baz=43	43.10	78	⇓P	P	06 10 14.3	0.0
R09A	**Tonopah** baz=43	43.19	84	⇑P	P	06 10 14.6	-0.3
L14A	**Malta** baz=43,SNR=6.5	43.27	77	⇓P	P	06 10 16.3	+0.7
K15A	**Arbon** baz=43	43.32	76	⇓P	P	06 10 16.3	+0.3
O12A	**Currie** baz=43	43.39	80	⇓P	P	06 10 16.4	-0.2
S09A	**Goldfield** baz=43	43.41	84	⇓P	P	06 10 17.3	+0.5
M14A	**Sheep Mountain** baz=43	43.51	77	⇑P	P	06 10 18.0	+0.4
J16A	**Bone** baz=43	43.54	74	⇓P	P	06 10 18.2	+0.4
R10A	**Warm Springs** baz=44	43.63	83	⇓P	P	06 10 18.8	+0.3
S10A	**Tonopah Range,** baz=44,SNR=5.7	43.68	84	⇑P	P	06 10 18.9	0.0
Q11A	**Duckwater** baz=44	43.69	82	⇓P	P	06 10 19.1	0.0
P12A	**McGill** baz=44	43.77	81	⇑P	P	06 10 19.7	0.0
L15A	**Malad City** baz=44	43.80	76	⇑P	P	06 10 20.1	+0.2
K16A	**Soda Springs** baz=44	43.81	75	⇓P	P	06 10 20.9	+1.0
N14A	**Grayback Hills** baz=44	44.00	78	⇑P	P	06 10 21.4	-0.1
R11A	**Troy Canyon, C** baz=44	44.04	83	⇓P	P	06 10 21.7	-0.1
Q12A	**Willow Creek R** baz=44	44.08	81	⇑P	P	06 10 22.3	+0.1
P13A	**Bates Ranch, G** baz=44	44.33	80	⇓P	P	06 10 24.4	+0.2
L16A	**Fish Haven** baz=44	44.38	76	⇑P	P	06 10 24.6	+0.2
FURC	**Furnace Creek,** baz=44	44.42	86	⇑P	P	06 10 24.8	-0.1
TPNV	**Topopah Spring** baz=44	44.50	85	⇓P	P	06 10 25.9	+0.3
TPNV	**Topopah Spring** 5.2nm,0.8s,mb4.4	44.50	85	*e*P	P	06 10 25.7	+0.2
DUG	**Dugway** baz=44	44.62	79	⇓P	P	06 10 26.1	-0.3
DUG	**Dugway** 5.6nm,1.1s,mb4.3	44.62	79	*e*P	P	06 10 26.4	0.0
Q13A	**Wheeler Ranch,** baz=44,SNR=5.0	44.63	81	⇓P	P	06 10 26.5	-0.1
M16A	**Huntsville** baz=45,SNR=5.1	44.67	77	⇓P	P	06 10 27.1	+0.3
P14A	**Drum Mountains** baz=45	44.83	79	⇓P	P	06 10 28.0	-0.1
S12A	**Delamar Landin** baz=45,SNR=5.0	44.95	83	⇑P	P	06 10 29.2	+0.1
T11A	**Corn Creek, Al** baz=45,SNR=8.8	44.95	84	⇑P	P	06 10 29.6	+0.4
BW06	**Boulder Array**	45.06	74	*e*P	P	06 10 30.0	+0.1
PDAR	**Pinedale Array** 3.1nm,0.7s,mb4.3,baz=307,slow=4.3,SNR=31	45.06	74	P	P	06 10 29.9	0.0
Q14A	**Sevier Lake (B** baz=45,SNR=7.9	45.07	80	⇓P	P	06 10 30.2	+0.2
R13A	**O'Grain Ranch,** baz=45	45.14	82	⇑P	P	06 10 30.8	+0.1
GSC	**Goldstone** baz=45	45.21	87	⇑P	P	06 10 31.1	-0.1
O16A	**Springville** baz=45	45.41	78	⇑P	P	06 10 32.6	-0.1
S13A	**Holt Ranch, En** baz=46	45.58	82	⇑P	P	06 10 34.1	0.0
V11A	**Goodsprings** baz=46	45.72	85	⇑P	P	06 10 35.1	-0.1
T13A	**Saint George** baz=46	45.91	83	⇑P	P	06 10 36.2	-0.5
N18A	**Larsen Ranch,** baz=46	46.05	76	⇑P	P	06 10 37.1	-0.7
TMUT	**Trail Mountain**	46.15	79	*e*P	P	06 10 39.6	+1.1
R15A	**Junction** baz=46	46.16	80	⇓P	P	06 10 38.3	-0.4
U13A	**Pakoon Wash** baz=46	46.26	84	⇓P	P	06 10 39.5	0.0
GMRC	**Granite Mounta** baz=46	46.26	87	⇓P	P	06 10 39.0	-0.5
Q16A	**Castle Valley** baz=46	46.40	79	⇓P	P	06 10 41.1	+0.5
N19A	**John Jarvie Ra** baz=46	46.40	76	⇑P	P	06 10 40.7	+0.1
P18A	**Preston Nutter** baz=46	46.53	78	⇓P	P	06 10 41.8	+0.3
R16A	**Teasdale** baz=46	46.60	80	⇑P	P	06 10 42.8	+0.6
V13A	**Grand Canyon W** baz=46	46.60	84	⇓P	P	06 10 41.7	-0.5
SRU	**San Rafael** baz=47	46.68	78	⇑P	P	06 10 42.7	0.0
SRU	**San Rafael** 2.2nm,0.9s,mb4.1	46.68	78	*e*P	P	06 10 42.8	+0.1
U14A	**Mt Trumbull** baz=47	46.74	83	⇑P	P	06 10 43.5	+0.3
O19A	**Miners Draw (B** baz=47,SNR=12	46.80	76	⇓P	P	06 10 43.6	0.0
T15A	**Red Dirt Ranch** baz=47,SNR=6.8	46.85	82	⇑P	P	06 10 44.1	+0.1
S16A	**Wegner Ranch,** baz=47,SNR=6.2	46.89	81	⇑P	P	06 10 44.8	+0.4
Q18A	**Rafter H Ranch** baz=47	46.92	78	⇓P	P	06 10 44.4	-0.2
R17A	**Hanksville Air** baz=47	46.99	79	⇓P	P	06 10 45.1	0.0
W13A	**Hualapai Mount** baz=47	47.16	85	⇑P	P	06 10 46.3	-0.2
U15A	**North Rim** baz=47,SNR=6.8	47.28	82	⇓P	P	06 10 47.5	+0.1
V14A	**Boquillas Ranc** baz=47	47.29	84	⇓P	P	06 10 47.2	-0.3
P19A	**Cripple Cowboy** baz=47	47.29	77	⇑P	P	06 10 47.0	-0.5
S17A	**Black Ridge (B** baz=47,SNR=9.5	47.43	80	⇓P	P	06 10 48.4	-0.2
R18A	**Canyonlands Na** baz=47	47.51	79	⇓P	P	06 10 48.2	-1.0
PDMC	**Parker Dam,Lak** baz=47	47.52	86	⇓P	P	06 10 48.6	-0.7
Q19A	**Hogan Spring (** baz=47	47.54	78	⇓P	P	06 10 48.8	-0.6
W14A	**Seligman** baz=48	47.58	84	⇑P	P	06 10 49.7	-0.1
SONM	**Songino Array** 1.8nm,0.7s,mb4.2,baz=51,slow=10.0,SNR=11	47.62	297	P	P	06 10 50.1	+0.1
SONM				PcP	PcP	06 12 18.7	-0.1
V15A	4.1nm,0.9s,baz=54,slow=2.9,SNR=12 **Kaibab Nationa** baz=48	47.75	83	⇓P	P	06 10 51.0	-0.1
T17A	**Navajo Res., N** baz=48	47.84	81	⇑P	P	06 10 51.8	0.0
S18A	**Hurst Farm, Bl** baz=48	47.89	79	⇑P	P	06 10 51.7	-0.5
U17A	**Shonto** baz=48	48.18	81	⇑P	P	06 10 54.0	-0.3
X14A	**Yava** baz=48	48.19	85	⇑P	P	06 10 54.1	-0.3
T18A	**Mexican Hat** baz=48,SNR=10	48.32	80	⇓P	P	06 10 54.9	-0.5
S19A	**Harvey Farm, M** baz=48,SNR=5.2	48.38	79	⇓P	P	06 10 55.6	-0.4
WUAZ	**Wupatki** baz=48	48.44	83	⇓P	P	06 10 56.2	-0.2
WUAZ	**Wupatki** 5.5nm,0.8s,mb4.6	48.44	83	*e*P	P	06 10 56.4	0.0
Y14A	**Wickenburg** baz=48	48.47	85	⇑P	P	06 10 55.9	-0.7
X15A	**Humboldt** baz=48	48.58	84	⇓P	P	06 10 57.2	-0.3
W16A	**Flagstaff** baz=48	48.62	83	⇓P	P	06 10 58.1	+0.3
HHC	**Hu-ho-hao-te**	48.80	287	*e*P	P	06 10 57.4	-1.7
HHC				AP	pP	06 11 11.3	-1.8
HHC				XP	sP	06 11 16.5	-2.7
HHC				PCP	PcP	06 12 23.0	-0.1
HHC				PP	PP	06 12 51.1	-1.2
HHC				SCP	ScP	06 16 12.3	-1.1
HHC				PCS	PcS	06 16 17.5	-1.8
HHC				S	**S**	**06 17 54.8**	**-3.3**
HHC				XS	sS	06 18 17.4	-4.3
HHC				SCS	ScS	06 20 42.6	-3.8
HHC				SS	SS	06 21 21.2	-7.4
HHC				AMB	AMB		
HHC	comp=Z,18nm,0.7s,mb5.2			AMB	AMB		
HHC	comp=Z,75nm,6.7s			LR	LR		
HHC	comp=N,162nm,19.2s,MS4.2			LR	LR		
HHC	comp=E,203nm,18.1s,MS4.2			LR	LR		
Y15A	comp=Z,134nm,19.2s,MS4.0 **Casa Rosa Ranc** baz=49	48.87	85	⇓P	P	06 10 59.7	-0.1
T19A	**Beclabito** baz=49,SNR=17	49.03	80	⇓P	P	06 11 00.9	-0.1
MVCO	**Mesa Verde** baz=49	49.11	79	⇑P	P	06 11 01.6	0.0
MVCO	**Mesa Verde**	49.11	79	*e*P	P	06 11 01.5	-0.1
X16A	**Lo Mia Camp, P** baz=49	49.12	84	⇑P	P	06 11 01.5	-0.1
W18A	**Petrified Fore** baz=50	49.71	82	⇑P	P	06 11 06.0	-0.1
115A	**Sonoran Desert** baz=50	49.77	86	⇓P	P	06 11 06.6	-0.1
X18A	**Snowflake** baz=50	49.97	83	⇓P	P	06 11 08.0	-0.1
Y17A	**Roosevelt** baz=50	49.97	84	⇑P	P	06 11 07.9	-0.2
Y18A	**Canyon Day Jun** baz=50	50.41	83	⇓P	P	06 11 11.8	+0.3
X19A	**St. Johns** baz=50	50.44	82	⇑P	P	06 11 11.2	-0.5
SDCO	**Great Sand Dun** comp=Z,4.7nm,1.6s,mb4.2	50.59	76	*e*P	P	06 11 12.8	+0.1
118A	**Homack Ranch,** baz=51	51.22	84	⇑P	P	06 11 17.4	-0.2
119A	**Ashpeak Ranch,** baz=52	51.55	84	⇑P	P	06 11 20.2	+0.2
218A	**Dragoon** baz=52	51.62	85	⇑P	P	06 11 20.3	-0.3
LAZ	**Ladron**	51.78	81	*e*P	P	06 11 22.2	+0.5
ECSD	**EROS,Sioux Fal** comp=Z,4.2nm,0.8s,mb4.4	52.02	65	*e*P	P	06 11 21.3	-2.1
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.4s,mb3.8,baz=76,slow=8.0,SNR=2.5	54.74	314	P	P	06 11 43.1	-0.1
ZALV				PcP	PcP	06 12 45.0	-0.2
ZALV	comp=Z,3.5nm,0.7s,baz=26,slow=4.4,SNR=11			LR	LR	06 36 54.0	
XAN	comp=Z,37nm,18.6s,MS3.5,baz=45,slow=38 **Xi'an**	54.81	282	P	P	**06 11 43.5**	**-0.5**
XAN				AP	pP	06 11 52.6	-5.6
XAN				XP	sP	06 11 56.9	-7.4
XAN	comp=Z,17nm,1.0s,mb5.0			AMB	AMB		
XAN	comp=Z,65nm,7.1s			AMB	AMB		
LZH	**Lanzhou**	56.49	287	*e*P	P	**06 11 56.6**	**+0.7**
LZH				AP	pP	06 12 10.1	-0.2
LZH				*e*PP	PP	06 14 04.2	+2.4
LZH	comp=Z,17nm,1.5s,mb4.8			AMB	AMB		
LZH	comp=Z,49nm,5.9s			AMB	AMB		
LZH	comp=E,198nm,15.7s			LR	LR		
LZH	comp=Z,246nm,17.3s,MS4.4			LR	LR		
LZH	**Lanzhou**	56.49	287	*e*P	P	**06 11 56.6**	**+0.7**
LZH				pP	pP	06 12 10.1	-0.2
LZH				sP	sP	06 12 16.0	-0.3
LZH				*e*PP	PP	06 14 04.2	+2.4
TXAR	**Lajitas Array** comp=Z,2.2nm,0.8s,mb4.2,baz=298,slow=4.7,SNR=24	57.40	83	P	P	**06 12 01.8**	**-0.7**
TXAR				LR	LR	06 33 08.7	
ARCES	comp=Z,35nm,20.5s,MS3.5,baz=185,slow=32 **ARCESS Array B**	58.04	351	P	P	**06 12 06.5**	**+0.1**
ARCES	comp=Z,4.2nm,1.1s,mb4.4,baz=45,slow=7.0,SNR=5.7			LR	LR	06 37 29.7	
FVM	comp=Z,55nm,19.1s,MS3.7,baz=12,slow=36 **French Village** comp=Z,5.2nm,0.9s,mb4.6	59.33	66	*e*P	P	**06 12 14.4**	**-1.4**
KURK	**Kurchatov** comp=Z,2.6nm,0.5s,mb4.5,baz=42,slow=6.5,SNR=13	59.73	315	P	P	**06 12 18.4**	**+0.1**
KURK				PcP	PcP	06 13 03.8	-0.9
KURK	comp=Z,1.7nm,0.9s,baz=37,slow=3.1,SNR=5.3 **Kurchatov**	59.73	315	P	P	**06 12 18.4**	**+0.1**
KURK				PcP	PcP	06 13 03.8	-0.9
MIAR	**Mount Ida** comp=Z,3.6nm,0.8s,mb4.5	59.88	71	*e*P	P	**06 12 18.7**	**-1.0**
CD2	**Chengdu**	60.12	283	*e*P	P	**06 12 22.1**	**+0.7**
CD2				XP	sP	06 12 40.1	-1.7
CD2				PP	PP	06 14 36.2	+2.1
CD2				SS	SS	06 24 27.6	-0.1
CD2	comp=Z,10.0nm,0.8s,mb4.9			AMB	AMB		
CD2	comp=Z,30nm,6.2s			AMB	AMB		
CD2	comp=N,180nm,14.8s			LR	LR		
CD2	comp=Z,130nm,16.2s,MS4.2			LR	LR		
USIN	**University of**	60.91	65	*e*P	P	**06 12 26.2**	**-0.5**
GYA	**Guiyang**	61.51	277	P	P	**06 12 32.1**	**+1.2**
GYA	comp=Z,10.0nm,0.9s,mb5.0			AMB	AMB		
KMI	**Kunming**	64.90	279	P	P	**06 12 54.5**	**+1.2**
KMI				AP	pP	06 13 08.3	+0.4
KMI				PP	PP	06 15 18.0	+1.7
KMI				S	**S**	**06 21 29.1**	**-1.7**
KMI				XS	sS	06 21 52.4	-2.9
KMI				SS	SS	06 25 42.2	-0.5
KMI	comp=Z,11nm,1.0s,mb4.8			AMB	AMB		
KMI	comp=Z,102nm,5.5s			AMB	AMB		
KMI	comp=N,113nm,16.0s,MS4.2			LR	LR		
KMI	comp=E,54nm,16.8s,MS4.2			LR	LR		
KMI	comp=Z,107nm,16.4s,MS4.1			LR	LR		
KMI	**Kunming**	64.90	279	P	P	**06 12 54.5**	**+1.2**
KMI				pP	pP	06 13 08.3	+0.4
KMI				sP	sP	06 13 14.7	+0.8
KMI				PP	PP	06 15 18.0	+1.7
KMI				S	**S**	**06 21 29.1**	**-1.7**
KMI				sS	sS	06 21 52.4	-2.9
KMI				SS	SS	06 25 42.2	-0.5
ELN	**Prospectdale**	65.27	61	*e*P	P	**06 12 55.1**	**-0.5**
BLA	**Blacksburg** comp=Z,7.1nm,0.8s,mb4.8	65.46	61	*e*P	P	**06 12 56.4**	**-0.4**
JSC	**Jenkinsville**	67.15	63	*e*P	P	**06 13 07.3**	**-0.4**
NOA	**NORSAR Array B** baz=7.2,slow=6.7	67.50	356	P	P	**06 13 09.7**	**+0.3**
NOA	comp=Z,34nm,20.5s,MS3.5,baz=345,slow=34			LR	LR	06 40 08.7	
HFS	**Hagfors** comp=Z,59nm,22.0s,MS3.8,baz=48,slow=33	68.27	354	LR	LR	06 39 51.9	
CMAR	**Chiang Mai Arr** comp=Z,3.7nm,0.7s,mb4.4,baz=28,slow=6.9,SNR=16	72.20	277	P	P	**06 13 38.8**	**-0.1**
WRA	**Warramunga Arr** comp=Z,0.9nm,0.8s,mb3.9,baz=38,slow=6.3,SNR=8.8	83.06	226	P	P	**06 14 37.4**	**-1.7**
FITZ	**Fitzroy Crossi** comp=Z,3.6nm,0.8s,mb4.7,baz=21,slow=2.4,SNR=8.3	85.59	234	P	P	**06 14 51.1**	**-1.0**
ASAR	**Alice Springs** comp=Z,2.4nm,0.8s,mb4.5,baz=36,slow=4.5,SNR=20	86.51	224	P	P	**06 14 56.0**	**-0.5**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.6s,baz=353,slow=2.0,SNR=6.4	115.48	2	PKP	PKPdf	06 20 53.7	-1.9
DBIC	**Dimbokro** comp=Z,4.9nm,0.9s,baz=297,slow=2.3,SNR=3.7	121.52	9	PKP	PKPdf	06 21 06.1	-1.2
PLCA	**Paso Flores** comp=Z,4.2nm,1.0s,baz=333,slow=4.5,SNR=2.8	129.88	108	PKP	PKPdf	06 21 22.0	-0.3
MAW	**Mawson** comp=Z,7.3nm,0.9s,baz=98,slow=1.7,SNR=13	147.43	218	PKPbc	PKPbc	06 21 55.3	-0.7
BOSA	**Boshof** comp=Z,2.9nm,0.6s,baz=50,slow=2.7,SNR=8.3	151.68	316	PKPbc	PKPbc	06 22 06.1	-1.6

TRN ***05*** *06:06:40.9, 1067N×6247W, h3km, MD3.1*
NEIC ***05*** *06:06:40.9, 1067N×6247W, h3km, MD3.1(TRN), After TRN.*
ISCJB ***05*** *06:06:42.6±0.8, 1038N±005×6240W±003, h14km±6km, Error ellipse: s-maj=8.6km s-min=4.0km az=165.4*
FUNV ***05*** *06:06:43.3, 1041N×6240W, h1km, MW2.8*
ISC 05 06:06:42.8±0.6, 1040N±005×6240W±003, h14km±5km, n13, σ1§02/23, 3C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.30**	**35**	⇑*e*P	**Pg**		**06 06 48.4**	**-0.6**
GUIV				*e*S	**Sg**		**06 06 53.4**	**+0.2**
GUNV	**Guanoco**	**0.58**	**246**	⇓*i*P	**Pg**		**06 06 54.5**	**+0.2**
GUNV				*e*S	**Sg**		**06 07 03.5**	**+1.5**
TCE	**Chacachacare**	**0.70**	**65**	*e*P	**Pg**		**06 06 55.3**	**-1.2**
TCE				*e*S	**Sg**		**06 07 05.4**	**-0.3**
CRUV	**Carupano**	**0.87**	**288**	⇑*e*P	**Pg**		**06 06 59.2**	**-0.4**
CRUV				*e*S	**Sg**		**06 07 09.8**	**-1.2**
TPP	**Pointe-a-Pierr**	**0.94**	**95**	*e*P	**Pb**		**06 07 02.1**	**+1.2**
TPP				*e*S	**Sg**		**06 07 17.0**	**+3.8**
TRN	**Trinidad (W)**	**1.01**	**76**	*e*P	**Pb**		**06 07 00.8**	**-1.3**
TRN				*e*S	**Sb**		**06 07 15.8**	**+0.5**
ITEV	**Isla Los Testi**	**1.19**	**323**	⇑*e*P	**Pn**		**06 07 05.8**	**+0.8**
ITEV				*e*S	**Sb**		**06 07 21.4**	**+0.9**
TBH	**Brigand Hill**	**1.31**	**86**	*e*P	**Pn**		**06 07 07.0**	**+0.2**
TPR	**Prospect**	**1.77**	**64**	*e*P	**Pn**		**06 07 12.8**	**-0.3**
PCRV	**Puerto La Cruz**	**2.21**	**264**	*e*P	**Pn**		**06 07 20.0**	**+0.8**
CUPV	**Cœpira**	**3.35**	**264**	*e*P	**Pn**		**06 07 36.1**	**+1.3**
CUPV				*e*S	**Sn**		**06 08 14.3**	**-0.2**
CAOV	**Caicara del Or**	**4.94**	**232**	*e*P	**Pn**		**06 07 57.1**	**+0.5**
CAOV				*e*S	**Sn**		**06 08 51.3**	**-2.2**
BAUV	**El Baul**	**5.75**	**256**	*e*P	**Pn**		**06 08 08.0**	**+0.3**
BAUV				*e*S	**Sn**		**06 09 10.9**	**-2.7**

ISCJB ***05*** *06:43:21.4±1.3, 25N±02×957E±02, h33km, mb3.8/6, Error ellipse: s-maj=30.0km s-min=15.3km az=140.1*
IDC ***05*** *06:43:29.0±17.0, 269N×9593E, h77km±140km, mb3.4/6, mb1 3.6/7, mb1mx3.4/19, mbtmp3.5/7, ML4.3/1, Error ellipse: s-maj=142.4km s-min=18.5km az=58.0*
ISC 05 06:43:23.8±1.3, 25N±02×957E±02, h35km, n8, σ0§49/8, mb3.8/6, 1C, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.23**	**85**	⇑*e*P	**Pn**		**06 44 11.6**	**-0.4**
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=197,slow=9.7,SNR=6.4	**16.16**	**11**	P	**Pn**		**06 47 09.3**	**+0.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.99	122	P	P	06 51 28.1	0.0
	0.3nm,0.3s,mb3.5,baz=300,slow=9.3,SNR=2.9						
ASAR	Alice Springs	45.37	127	P	P	06 51 39.5	+0.5
	0.3nm,0.7s,mb3.2,baz=300,slow=8.0,SNR=3.8						
MKAR	Makanchi Array	45.63	347	P	P	06 51 40.5	-0.2
	1.1nm,0.4s,mb4.1,baz=159,slow=8.6,SNR=34						
SONM	Songino Array	46.09	10	P	P	06 51 43.8	-0.5
	1.1nm,0.6s,mb4.0,baz=182,slow=10,SNR=4.1						
ZALV	Zalesovo Beam	52.05	352	P	P	06 52 29.2	-0.6
	1.5nm,0.7s,mb4.0,baz=165,slow=6.2,SNR=4.9						
ARCES	ARCESS Array B	80.81	340	P	P	06 55 33.8	+0.3
	1.0nm,0.9s,mb3.8,baz=76,slow=5.1,SNR=7.5						

*NEIC **05** 06:53:45.8, 1908N×7007W, h63^{km}, MD3.7(RSPR), After RSPR.*

RSPR 05 06:53:45.8, 1908N×7007W, h63^{km}±1^{km}, MD3.7/7, MD3.7/7, 6C-3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR08	Loma La Naviza	0.12	161⇑	eP	Pn	06 53 55.0	-0.3
DR08				eS	Sn	06 54 01.5	-0.6
STDO	Santo Domingo	0.64	168⇑	eP	Pn	06 53 59.1	-0.4
STDO				eS	Sn	06 54 08.7	-0.8
AGPR	Aguadilla, PR	2.86	102⇓	eP	Pn	06 54 28.3	-0.7
AGPR				eS	Sn	06 55 02.9	+0.5
LSP	Las Mesas	2.96	107⇑	eP	Pn	06 54 29.6	-0.8
LSP				eS	Sn	06 55 03.9	-0.9
CRPR	Cabo Rojo, PR	3.00	110⇑	eP	Pn	06 54 30.4	-0.5
CRPR				eS	Sn	06 55 05.2	-0.5
AOPR	Arecibo Observ	3.22	103⇓	eP	Pn	06 54 33.0	-0.9
AOPR	Arecibo Observ	3.22	103	eS	Sn	06 55 11.6	+0.4
AOPR	Arecibo Observ	3.22	103	ePn	Pn	06 54 32.7	-1.2
AOPR				eSn	Sn	06 55 12.4	+1.2
CELP	Cerrillos	3.45	106	eS	Sn	06 55 16.2	-0.6
ICM	Isla Caja Muer	3.56	109⇑	eP	Pn	06 54 38.7	+0.1
SJG	San Juan	3.84	104⇑	eP	Pn	06 54 42.2	-0.2
SJG				eS	Sn	06 55 27.0	+0.8
SJG	San Juan	3.84	104	ePn	Pn	06 54 41.9	-0.4
SJG				eSn	Sn	06 55 28.2	+2.0
HUMP	Col San Antoni	4.11	102⇓	eP	Pn	06 54 46.0	0.0
HUMP				eS	Sn	06 55 32.8	0.0

*ISCJB **05** 07:00:09.6±1.1, 4138N±006×1952E±006, h10^{km}, Error ellipse: s-maj=10.0km s-min=3.9km az=34.7*
*TIR **05** 07:00:10.1±0.9, 4151N×1960E, h6^{km}±63^{km}*
*SKO **05** 07:00:10.1, 4138N×1947E, h4^{km}, M2.2, ML2.5*
*CSEM **05** 07:00:11.6±0.2, 4153N×1972E, h8^{km}, ML2.2, Error ellipse: s-maj=4.7km s-min=1.9km az=56.0*
*BEO **05** 07:00:12.2±0.4, 4155N×1971E, h0^{km}±4^{km}, ML2.2/2*

ISC 05 07:00:10.2±1.1, 4141N±006×1952E±006, h3^{km}±6^{km}, n17, σ0^{s}93/31, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.27	104	ePG	Pg	07 00 15.6	+0.2
TIR				i SG	Sg	07 00 20.2	+1.4
TIR	Tirane	0.27	104	ePg	Pg	07 00 15.8	+0.4
TIR				eSg	Sg	07 00 20.4	+1.6
QSH	Qafa e Shtames	0.31	69	ePG	Pg	07 00 15.0	-1.2
PUK	Puka	0.69	24	ePG	Pg	07 00 22.7	-0.8
PHP	Peshkopia	0.74	68	ePG	Pg	07 00 23.4	-1.1
PHP				i SG	Sg	07 00 34.2	+0.1
OHR	Ohrid	1.01	107	i Pg	Pg	07 00 28.0	-1.6
OHR				i Sg	Sg	07 00 43.5	+0.8
OHR				i Lg		07 00 44.2	
	comp=N,86nm,0.4s						
OHR				i Lg		07 00 45.6	
	comp=E,96nm,0.5s						
OHR	Ohrid	1.01	107	i Pg	Pg	07 00 27.9	-1.7
OHR				i Sg	Sg	07 00 43.4	+0.7
KRUS	Krusevo	1.30	91	i Pg	Pn	07 00 33.5	-1.8
KRUS				i Sg	Sg	07 00 53.6	+1.5
KRUS				i Lg		07 00 54.2	
	comp=N,17nm,0.3s						
KRUS				i Lg		07 00 54.3	
	comp=E,30nm,0.5s						
KRUS	Krusevo	1.30	91	i Pg	Pn	07 00 33.5	-1.8
KRUS				i Sg	Sg	07 00 53.5	+1.5
BIA	Bitola	1.42	105	i Pg	Pg	07 00 36.9	-0.5
BIA				i Sg	Sg	07 00 55.5	-0.2
BIA				i Lg		07 00 56.6	
	comp=N,18nm,0.2s						
BIA				i Lg		07 00 58.1	
	comp=E,25nm,0.3s						
BIA	Bitola	1.42	105	i Pg	Pg	07 00 36.8	-0.6
BIA				i Sg	Sg	07 00 55.4	-0.3
SKO	Skopje	1.54	68	i Pn	Pn	07 00 39.5	+0.9
SKO				i Sn	Sn	07 00 59.5	+0.2
SKO	Skopje	1.54	68	i Pn	Pn	07 00 39.5	+0.8
SKO				i Sn	Sn	07 00 59.4	+0.2
TREB	Trebinje	1.57	327	ePn	Pn	07 00 39.3	+0.3
TREB				eSg	Sg	07 01 01.4	+0.8
BARS	Barje	2.21	50	ePn	Pn	07 00 47.5	-0.3
BARS				eSg	Sn	07 01 15.5	-0.2
BBLS	Lazići	2.46	358	ePn	Pn	07 00 52.3	+1.1
DIVS	Divibare	2.71	7	ePn	Pn	07 00 55.5	+0.8
DIVS				eSn	Sn	07 01 27.3	-0.7

*NEIC **05** 07:00:59.6, 1908N×6998W, h55^{km}, MD3.7(RSPR), After RSPR.*

RSPR 05 07:00:59.6, 1908N×6998W, h55^{km}±1^{km}, MD3.7/6, MD3.7/6, 8C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR08	Loma La Naviza	0.13	199⇑	eP	Pn	07 01 07.5	-0.6
DR08				eS	Sn	07 01 13.9	-0.3
STDO	Santo Domingo	0.63	176⇑	eP	Pn	07 01 11.9	-0.8
STDO				eS	Sn	07 01 21.3	-0.9
AGPR	Aguadilla, PR	2.78	102⇑	eP	Pn	07 01 41.2	-0.5
AGPR				eS	Sn	07 02 12.9	-1.3
LSP	Las Mesas	2.89	108⇑	eP	Pn	07 01 42.2	-1.0
LSP				eS	Sn	07 02 16.8	+0.1
LRS	Lares	3.07	104⇑	eP	Pn	07 01 45.7	0.0
LRS				eS	Sn	07 02 20.4	-0.8
AOPR	Arecibo Observ	3.14	103⇑	eP	Pn	07 01 46.3	-0.4
AOPR	Arecibo Observ	3.14	103	eS	Sn	07 02 23.0	0.0
AOPR	Arecibo Observ	3.14	103	ePn	Pn	07 01 46.5	-0.1
AOPR				eSn	Sn	07 02 22.7	-0.3
CELP	Cerrillos	3.38	107⇑	eP	Pn	07 01 49.8	-0.1
CELP				eS	Sn	07 02 29.1	+0.4
HUMP	Col San Antoni	4.02	103⇑	eP	Pn	07 01 58.0	-0.8
HUMP	Col San Antoni	4.02	103	eS	Sn	07 02 44.1	-0.6
HUMP	Col San Antoni	4.02	103	Pn	Pn	07 01 57.1	-1.7
HUMP				Sn	Sn	07 02 45.6	+0.9

IDC 05 07:04:36.8±4.7, 1996S×17547W, h0^{km}, mb4.1/5, mb1 4.2/5, mb1mx4.0/18, mbtmp4.1/5, Error ellipse: s-maj=143.4km s-min=91.2km az=168.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	35.91	263	P	P	07 11 39.6	+0.6
	2.5nm,0.6s,baz=86,slow=13,SNR=3.1						
STKA	Stephens Creek	40.16	244	P	P	07 12 14.7	-0.1
	1.4nm,0.5s,baz=78,slow=9.3,SNR=4.2						
ASAR	Alice Springs	46.96	256	P	P	07 13 09.4	-0.2
	2.3nm,0.5s,baz=96,slow=8.0,SNR=38						
ASAR				PcP	PcP	07 14 42.2	-0.1
	0.4nm,0.7s,baz=109,slow=3.9,SNR=5.1						
WRA	Warramunga Arr	47.03	261	P	P	07 13 09.4	-1.0
	0.6nm,0.3s,baz=97,slow=7.3,SNR=17						
FITZ	Fitzroy Crossi	55.46	261	P	P	07 14 14.1	+0.4
	0.8nm,0.4s,baz=114,slow=10.0,SNR=4.2						

*DDA **05** 07:05:58.8, 3723N×2698E, h7^{km}±6^{km}, Md3.2*
*ISCJB **05** 07:05:59.2±0.8, 3725N±003×2697E±004, h1^{km}±6^{km}, Error ellipse: s-maj=5.6km s-min=4.3km az=164.8*
*CSEM **05** 07:05:59.9±0.1, 3728N×2704E, h10^{km}, MD3.1, Error ellipse: s-maj=1.9km s-min=1.5km az=52.0*
*ATH **05** 07:06:00.2, 3731N×2703E, h33^{km}±2^{km}, MD3.3/5*
*ISK **05** 07:06:00.2, 3727N×2706E, h8^{km}, MD3.1*
*NEIC **05** 07:06:00.0, 3728N×2708E, h9^{km}, MD3.3(ATH), ML3.2(ISK), After ISK.*

ISC 05 07:06:00.4±0.6, 3725N±003×2700E±004, h7^{km}±4^{km}, n26, σ0^{s}72/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.31	128	ePG	Pg	07 06 06.3	-0.2
BODT				eSG	Sg	07 06 11.1	+0.5
BDRM	Kayabasi	0.40	118	i P	Pg	07 06 07.8	-0.4
BDRM				i S	Sg	07 06 13.4	0.0
SMG	Samos	0.47	344	ePB	Pg	07 06 09.9	+0.3
SMG				eSB	Sg	07 06 17.0	+1.2
GCAM	G?zelcaml?	0.48	22	i P	Pg	07 06 09.7	-0.1
GCAM				i S	Sg	07 06 17.0	+0.9
MLSB	Milas	0.62	86	ePG	Pg	07 06 11.6	-0.7
MLSB				eSG	Sg	07 06 20.2	-0.2
NISR	Nisiros	0.65	171	ePN	Pg	07 06 14.5	+1.6
AYDN	Tasoluk	0.81	60	i P	Pg	07 06 14.7	-1.2
AYDN				i S	Sg	07 06 26.1	-0.3
YER	Yerkesik	1.03	96	ePG	Pg	07 06 20.0	-0.2
YER				eSG	Sg	07 06 33.5	0.0
BLCB	Balcova	1.13	2	ePN	Pn	07 06 21.8	-0.8
BLCB				eSN	Sn	07 06 38.5	+0.1
IZM	Izmir	1.16	10	ePN	Pn	07 06 22.1	-0.9
KDAG	Bornova	1.17	10	i P	Pg	07 06 21.8	-1.0
APE	Apeiranthos	1.19	262	ePN	Pn	07 06 23.0	-0.4
TURN	Turunc	1.34	106	i P	Pn	07 06 20.6	-4.8
TURN				i S	Sb	07 06 36.1	-6.9
ARG	Arkhangelos	1.37	139	ePN	Pn	07 06 25.6	-0.3
DALT	Dalyan (Mudla)	1.40	110	ePN	Pn	07 06 26.0	-0.3
DALT				eSN	Sn	07 06 45.2	+0.3
SANT	Santorini	1.52	235	ePn	Pn	07 06 26.8	-1.1
SANT				Sn	Sn	07 06 48.4	+0.5
SANT	Santorini	1.52	235	ePn	Pn	07 06 26.8	-1.1
SANT				Sn	Sn	07 06 48.4	+0.4
DNZL	Cakiroluk	1.68	74	i P	Pn	07 06 30.8	+0.6
DNZL				i S	Sn	07 06 55.7	+3.7
KARP	Karpathos	1.71	176	ePN	Pn	07 06 30.1	-0.4
AKS	Akhisar	1.75	21	ePN	Pn	07 06 31.7	+0.7
KULA	Kula-Manisa	1.82	46	ePN	Pn	07 06 31.7	-0.3
GOLH	Golhisar	2.04	90	i P	Pn	07 06 36.5	+1.3
KHL	Karahalli	2.27	61	ePN	Pn	07 06 38.1	0.0
ELL	Elmali	2.38	101	ePN	Pn	07 06 40.5	+0.7
BALY	Balya	2.53	11	i P	Pn	07 06 46.5	+4.7
BALY				i S	Sn	07 07 21.1	+8.2
DURS	Dursunbey	2.61	26	i P	Pn	07 06 49.1	+6.1

IDC 05 07:23:12.5±2.0, 242S×12806E, h0^{km}, mb3.3/2, mb1 3.6/3, mb1mx3.4/15, mbtmp3.4/3, ML3.3/1, Error ellipse: s-maj=149.1km s-min=25.9km az=67.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.47	161	P	Pn	07 27 30.8	+0.8
	0.1nm,0.3s,baz=340,slow=12,SNR=2.8						
ASAR	Alice Springs	21.87	165	P	P	07 28 06.3	-0.7
	0.2nm,0.3s,baz=344,slow=11,SNR=7.0						
MKAR	Makanchi Array	63.35	327	P	P	07 33 43.8	+0.2
	0.4nm,0.6s,baz=121,slow=7.4,SNR=3.3						

*ISCJB **05** 07:27:48.3±2.6, 1201S±009×1659E±0.1, h45^{km}±20^{km}, mb4.5/14, MS3.8/10, Error ellipse: s-maj=22.2km s-min=11.2km az=147.2*
*NEIC **05** 07:27:49.1±0.6, 1194S×16595E, h35^{km}, mb4.6/4, Error ellipse: s-maj=16.0km s-min=11.6km az=87.0*
*IDC **05** 07:27:52.2±5.0, 1193S×16584E, h58^{km}±40^{km}, mb4.2/12, mb1 4.3/13, mb1mx4.1/20, mbtmp4.2/13, ML4.9/1, MS3.9/10, Ms1 3.8/10, ms1mx3.5/27, Error ellipse: s-maj=31.6km s-min=17.5km az=88.0*

ISC 05 07:27:51.2±2.0, 1200S±009×1659E±01, h55^{km}±15^{km}, n34, σ0^{s}88/23, mb4.5/14, MS3.8/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.40	293	P	Pn	07 29 24.3	+1.3
	26nm,0.3s,baz=164,slow=7.4,SNR=4.9						
HNR				S	Sn	07 30 33.2	-1.5
	baz=180,slow=20,SNR=2.5						
DZM	Mont Dzumac	10.03	177	eP	Pn	07 30 11.9	-0.7
DZM	Mont Dzumac	10.03	177	ePn	Pn	07 30 12.3	-0.2
CTA	Charters Tower	20.53	244	P	P	07 32 26.2	+1.1
	16nm,1.0s,baz=70,slow=13,SNR=8.1						
CTA				LR	LR	07 39 00.4	
	comp=Z,177nm,18.8s,MS3.5,baz=46,slow=33						
AFI	Afiamalu	21.81	97	LR	LR	07 40 08.2	
	comp=Z,245nm,18.2s,MS3.6,baz=270,slow=34						
STKA	Stephens Creek	29.88	225	P	P	07 33 54.5	+0.8
	3.5nm,0.8s,mb4.1,baz=22,slow=8.8,SNR=4.8						
STKA				LR	LR	07 44 23.9	
	comp=Z,150nm,20.2s,MS3.6,baz=25,slow=33						
WB2	Warramunga Arr	31.32	251	eP	P	07 34 06.6	+0.1
WRA	Warramunga Arr	31.33	251	P	P	07 34 06.5	-0.1
	2.9nm,0.6s,mb4.3,baz=84,slow=9.3,SNR=33						
WRA				LR	LR	07 46 12.5	
	comp=Z,90nm,19.6s,MS3.4,baz=70,slow=35						
RPZ	Rata Peaks	31.91	173	P	P	07 34 12.7	+1.3
	20nm,0.9s,mb5.0,baz=242,slow=1.6,SNR=6.9						
ASAR	Alice Springs	32.53	245	P	P	07 34 16.7	-0.4
	3.5nm,0.8s,mb4.4,baz=68,slow=9.6,SNR=42						
ASAR				PcP	PcP	07 37 03.2	+0.2
	0.9nm,0.9s,baz=87,slow=3.2,SNR=5.0						
KAKA	Kakadu	32.70	265	eP	P	07 34 18.4	-0.3
	5.1nm,0.6s,mb4.6						
GUMO	Guam	32.90	320	LR	LR	07 45 55.9	
	comp=Z,136nm,20.9s,MS3.6,baz=126,slow=33						
RAR	Rarotonga	34.06	110	LR	LR	07 45 36.6	
	comp=Z,654nm,18.8s,MS4.4,baz=180,slow=31						
FITZ	Fitzroy Crossi	39.31	256	eP	P	07 35 15.3	+0.1
	5.3nm,0.8s,mb4.3						
FITZ	Fitzroy Crossi	39.31	256	P	P	07 35 15.2	0.0
	2.4nm,0.8s,mb4.0,baz=106,slow=13,SNR=6.6						
PPT	Papeete	43.31	103	eLR	LR	07 47 54.4	
	122nm,23.5s						
PPT	Papeete	43.31	103	LR	LR	07 51 10.1	
	comp=Z,182nm,19.4s,MS4.0,baz=16,slow=32						
RKT	Rikitea	57.10	110	eLR	LR	07 54 14.6	
	173nm,24.5s						
KSRS	Korea Array	60.76	326	P	P	07 37 57.1	-0.3
	1.3nm,0.7s,mb4.1,baz=131,slow=7.5,SNR=3.7						
PETK	Petropavlovsk-	65.23	355	P	P	07 38 26.1	-0.6
	1.3nm,0.6s,mb4.2,baz=148,slow=11,SNR=4.5						
SBA	Scott Base	65.85	180	eP	P	07 38 28.8	-1.7
	27nm,0.7s,mb5.4						
CMAR	Chiang Mai Arr	72.65	294	P	P	07 39 15.2	+1.6
	2.0nm,0.6s,mb4.2,baz=122,slow=4.7,SNR=6.3						
KDAK	Kodiak Island	77.40	21	LR	LR	08 06 60.0	
	comp=Z,59nm,20.6s,MS3.9,baz=290,slow=30						
ULN	Ulaanbaatar	79.17	324	eP	P	07 39 51.0	+0.8
	6.4nm,0.9s,mb4.5						
SONM	Songino Array	79.53	324	P	P	07 39 52.6	+0.5
	3.5nm,1.0s,mb4.2,baz=125,slow=4.7,SNR=8.8						
PDAR	Pinedale Array	94.07	47	LR	LR	08 21 04.7	
	comp=Z,45nm,19.5s,MS3.9,baz=88,slow=34						
MKAR	Makanchi Array	94.33	317	P	P	07 41 05.1	+0.3
	7.1nm,0.7s,mb5.2,baz=100,slow=6.4,SNR=43						
ZALV	Zalesovo Beam	94.43	324	P	P	07 41 04.4	-0.7
	3.2nm,0.9s,mb4.8,baz=114,slow=3.7,SNR=7.0						
TXAR	Lajitas Array	96.13	61	LR	LR	08 18 51.4	
	comp=Z,70nm,18.3s,MS4.2,baz=255,slow=32						
SNAA	Sanae	96.18	184	e	P	07 41 11.9	-0.9
VNA2	Neumayer--Watz	97.14	182	e	P	07 41 16.6	-0.6
ARCES	ARCESS Array B	117.30	345	PKP	PKPdf	07 46 31.6	+1.7
	1.5nm,0.9s,baz=29,slow=2.8,SNR=4.4						
BOSA	Boshof	124.54	223	PKP	PKPdf	07 46 45.4	+0.3
	3.1nm,0.9s,baz=152,slow=3.2,SNR=3.7						
TORD	Torodi Ar. Bea	164.56	276	PKP	PKPdf	07 47 50.1	+0.3
	0.7nm,1.0s,baz=127,slow=3.8,SNR=2.4						

*ISCJB **05** 07:33:10.0±1.0, 2987N±003×3622E±005, h0^{km}, Error ellipse: s-maj=6.7km s-min=4.8km az=2.0*
*GII **05** 07:33:10.7±1.1, 2990N×36.15E, h0^{km}, ML2.7/8, EXPLOSION*
*CSEM **05** 07:33:10.4, 2998N×3620E, h5^{km}, ML2.6, After SNSN*
*SGS **05** 07:33:10.4, 2998N×3620E, h5^{km}*

ISC 05 07:33:09.9±1.0, 2986N±003×3626E±006, h0^{km}, n13, σ0^{s}79/23, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	Mount Harif	1.08	280	Pg	Pg	07 33 29.6	-1.0
HRFI				Sg	Sg	07 33 44.8	+0.2
EIL	Elat	1.16	261	Pg	Pg	07 33 31.7	-0.4
EIL				Sg	Sg	07 33 48.0	+0.9
ZFRI	Zfri	1.17	307	Sg	Sg	07 33 47.8	+0.4
MBRI	Mt Berech	1.17	267	Pg	Pg	07 33 31.7	-0.8
MBRI				Sg	Sg	07 33 48.8	+1.1
HQLS		1.19	242	P	Pg	07 33 31.9	-0.8
HQLS		1.19	242	P	Pg	07 33 31.9	-0.8
HQLS				S	Sg	07 33 48.0	-0.1
PRNI	Paran	1.20	294	Pg	Pg	07 33 31.6	-1.3
PRNI				Sg	Sg	07 33 48.3	-0.1
JLOS		1.31	211	P	Pg	07 33 34.5	-0.5
JLOS				S	Sg	07 33 52.6	+0.6
KRMI	Paran Flat	1.36	281	Pg	Pg	07 33 34.7	-1.3
KRMI				Sg	Sg	07 33 53.4	-0.3
MZDA	Masada	1.64	332	Pn	Pn	07 33 39.7	-0.3
MZDA				Sn	Sn	07 34 01.6	-0.2
DSI	Dead Sea	1.86	336	Pn	Pn	07 33 43.8	+0.6
DSI				Sn	Sn	07 34 08.8	+1.4
KZIT	Kziot	1.92	303	Pn	Pn	07 33 44.1	+0.3
KZIT				Sn	Sn	07 34 08.7	0.0
RSHS		2.02	220	P	Pn	07 33 46.9	+1.7

*NIED **05** 08:03:00, 4330N×14620E, h86^{km}, Mw3.7 Best double couple: $M_0$4.53000×10^{14} NP1:ϕ_s342.00000°, δ60.00000°, λ-88.00000°. NP2:ϕ_s157.00000°, δ30.00000°, λ-94.00000°.*
*MOS **05** 08:03:09.0±1.8, 4329N×14645E, h83^{km}, mb3.9/3, Error ellipse: s-maj=21.4km s-min=16.0km az=67.0*
*ISCJB **05** 08:03:09.7±0.7, 4330N±006×14633E±007, h88^{km}±5^{km}, mb3.5/5, Error ellipse: s-maj=11.3km s-min=6.0km az=138.6*
*NEIC **05** 08:03:10.9±4.5, 4324N×14643E, h90^{km}±33^{km}, MG4.1(JMA), Error ellipse: s-maj=53.5km s-min=22.2km az=77.0*
NEIC Recorded [2 JMA] in eastern Hokkaido.
*IDC **05** 08:03:11.3±5.3, 4332N×14623E, h85^{km}±40^{km}, mb3.4/5, mb1 3.5/7, mb1mx3.4/21, mbtmp3.4/7, Error ellipse: s-maj=50.1km s-min=18.5km az=74.0*
*JMA **05** 08:03:12.4±0.1, 4328N×146.19E, h80^{km}±1^{km}, M4.1*
JMA Felt II J1.

ISC 05 08:03:10.9±0.7, 4331N±006×14632E±007, h81^{km}±5^{km}, n24, σ0^{s}82/37, mb3.5/5, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.43	278	P	Pn	08 03 24.9	+0.8
NEM2				eS	Sn	08 03 34.2	+0.3
YUK	Yuzh-Kuril'sk	0.80	336⇓	i PN	Pn	08 03 28.0	+0.3
YUK				i S	Sn	08 03 40.1	-0.1
YUK				pmax	pmax		
	comp=Z,8μm,0.4s						
YUK				pmax	pmax		
	comp=N,190nm,0.3s						
YUK				pmax	pmax		
	comp=E,3μm,0.3s						
YUK				smax			
	comp=N,12μm,0.5s						
YUK				smax			
	comp=E,14μm,0.5s						
YUK				smax			
	comp=N,3μm,1.0s						
JRA	Rausu	1.08	306	P	Pn	08 03 31.7	+0.8
JRA				eS	Sn	08 03 46.6	+0.8
JNK	Nakash	1.20	284	P	Pn	08 03 32.5	+0.1
JNK				eS	Sn	08 03 47.4	-1.1
JAK	Akkeshi	1.23	256	P	Pn	08 03 32.9	+0.2
JAK				eS	Sn	08 03 48.3	-0.9
JAR	Ashorobuto	1.86	271	P	Pn	08 03 41.5	+0.6
JAR				eS	Sn	08 04 03.5	-0.3
JOB	Onbets	1.86	258	P	Pn	08 03 41.4	+0.4
JOB				eS	Sn	08 04 03.1	-0.8
JTKR	Abashiri--Toko	1.88	292	P	Pn	08 03 41.9	+0.8
JTKR				eS	Sn	08 04 04.3	+0.2
KUR	Kuril'sk	2.23	29	ePN	Pn	08 03 44.5	-1.2
KUR				i S	Sn	08 04 11.0	-1.4
KUR				pmax	pmax		
	comp=N,80nm,0.4s						
KUR				pmax	pmax		
	comp=E,80nm,0.4s						
KUR				pmax	pmax		
	comp=Z,330nm,0.4s						
KUR				smax			
	comp=N,2μm,1.0s						
KUR				smax			
	comp=E,2μm,1.0s						
KUR				smax			
	comp=N,1μm,0.4s						
KUR				smax			
	comp=E,650nm,0.4s						
JMP	Maruseppu	2.26	289	P	Pn	08 03 47.1	+0.9
JCH	Churui	2.28	253	P	Pn	08 03 46.5	0.0
JCH				eS	Sn	08 04 12.8	-0.9
ERM	Erimo	2.67	242	ePn	Pn	08 03 53.3	+1.6
ERM				Sn	Sn	08 04 22.0	-1.1
ASAJ	Asahikawa	2.82	288	P	Pn	08 03 55.2	+1.5
	comp=E,47nm,0.3s,baz=109,slow=10.0,SNR=265						
ASAJ				S	Sn	08 04 25.8	-1.0
	comp=E,8.3nm,0.3s,baz=0.8,slow=23,SNR=7.0						
ASAJ	Asahikawa	2.82	288	PN	Pn	08 03 55.3	+1.6
ASAJ				S	Sn	08 04 25.8	-0.9
ASAJ				pmax	pmax		
	comp=Z,47nm,0.3s						
ASAJ				smax			
	comp=N,8.0nm,0.3s						
MJAR	Matsushiro Arr	9.19	225	P	Pn	08 05 19.7	-0.8
	comp=N,0.2nm,0.3s,baz=29,slow=14,SNR=3.6						
SONM	Songino Array	28.09	293	P	P	08 08 54.9	+0.2
	comp=N,0.5nm,0.4s,mb3.4,baz=83,slow=6.1,SNR=3.6						
SONM	Songino Array	28.09	293	eP	P	08 08 56.2	+1.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	44.26	298	P	P	08 11 12.2	+0.1
	comp=Z,0.9nm,0.4s,mb3.8,baz=82,slow=9.1,SNR=8.0						
MKAR	Makanchi Array	44.26	298	P	P	08 11 12.2	+0.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	59.45	339	P	P	08 13 04.6	0.0
	comp=Z,1.1nm,0.9s,mb3.9,baz=33,slow=7.4,SNR=4.5						
ARCES	ARCESS Array B	59.45	339	P	P	08 13 04.6	0.0
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	63.89	193	P	P	08 13 34.3	-0.6
	comp=Z,0.3nm,0.8s,mb3.2,baz=9.5,slow=6.8,SNR=2.9						
ASAR	Alice Springs	67.61	192	P	P	08 13 59.6	+0.8
	comp=Z,0.3nm,0.6s,mb3.3,baz=19,slow=5.9,SNR=5.3						
NOA	NORSAR Array B	69.80	339	P	P	08 14 11.1	-0.9
	baz=36,slow=7.6						

*ISCJB **05** 08:04:27.9±0.5, 38.12N±002×2724E±007, h8^{km}±5^{km}, Error ellipse: s-maj=9.4km s-min=3.5km az=174.9*
*DDA **05** 08:04:27.6, 38.12N×2723E, h6^{km}±4^{km}, Md2.8*
*ISK **05** 08:04:27.6, 38.13N×27.17E, h9^{km}, MD2.6*
*CSEM **05** 08:04:27.3±0.2, 38.13N×2720E, h10^{km}, MD2.6, Error ellipse: s-maj=6.1km s-min=2.6km az=85.0*

ISC 05 08:04:28.3±0.5, 3813N±002×2723E±008, h10^{km}±6^{km}, n10, σ0^{s}55/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	Izmir	0.27	6	PG	Pg	08 04 33.6	-0.2
IZM				eSG	Sg	08 04 38.1	+0.7
KDAG	Bornova	0.28	6	i P	Pg	08 04 33.8	-0.1
KDAG				i S	Sg	08 04 38.0	+0.4
BLCB	Balcova	0.30	330	PG	Pg	08 04 33.7	-0.5
BLCB				eSG	Sg	08 04 37.8	-0.4
GCAM	G?zelcaml?	0.42	179	i P	Pg	08 04 35.8	-0.8
GCAM				i S	Sg	08 04 42.4	+0.3
AYDN	Tasoluk	0.69	132	i P	Pg	08 04 41.8	+0.1
AYDN				i S	Sg	08 04 50.5	-0.2
BODT	Bodrum	1.06	176	ePG	Pg	08 04 48.7	0.0
BODT				eSG	Sg	08 05 03.9	+1.4
BDRM	Kayabasi	1.07	171	i P	Pg	08 04 48.2	-0.6
BDRM				i S	Sg	08 05 02.5	-0.3
KULA	Kula-Manisa	1.19	71	ePN	Pn	08 04 51.5	+0.5
DEMI	Demirci	1.48	51	i P	Pn	08 04 55.0	0.0
DEMI				i S	Sn	08 05 13.4	-1.0
BALY	Balya	1.64	11	i P	Pn	08 04 57.5	+0.3
BALY				i S	Sn	08 05 18.9	+0.5

ISCJB ***05*** *08:17:05.4±0.7, 603S±0.1×325W±02, h10^{km}, mb4.0/6, MS3.9/12, Error ellipse: s-maj=18.6km s-min=9.6km az=39.0*
IDC ***05*** *08:17:07.0±0.8, 6013S×3281W, h0^{km}, mb4.2/6, mb1 4.3/8, mb1mx4.1/18, mbtmp4.3/8, ML4.4/2, MS3.8/14, Ms1 3.8/14, ms1mx3.8/21, Error ellipse: s-maj=28.1km s-min=20.3km az=57.0*
NEIC ***05*** *08:17:07.7±0.7, 6017S×3261W, h10^{km}, mb4.1/1, Error ellipse: s-maj=17.6km s-min=11.9km az=221.0*
ISC 05 08:17:07.3±0.7**, 603S**±01×**326W**±02**, h10**^{km}**, n24,** σ**1^{s}42**/17**,**
mb4.0/6**, MS3.9**/12**, 1C, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.35**	**146**	*e*	**Pn**	**08 20 28.3**	**-1.7**
VNA1				*e*		08 20 30.7	
VNA1				*e*		08 20 42.6	
VNA1				*e*S	**Sn**	**08 23 02.3**	**-6.7**
VNA2	**Neumayer--Watz**	**14.74**	**147**	*e*	**Pn**	**08 20 33.5**	**-1.9**
VNA2				*e*		08 20 35.6	
VNA2				*e*		08 20 50.0	
VNA2				*e*S	**Sn**	**08 23 11.4**	**-7.1**
PMSA	**Palmer Station**	**15.09**	**239**	Pn	**Pn**	**08 20 40.9**	**+0.8**
	0.8nm,0.3s,baz=82,slow=12,SNR=26						
PMSA				LR	LR	08 25 26.1	
	comp=Z,267nm,21.2s,baz=278,slow=33						
SNAA	**Sanae**	**16.38**	**146**	*e*	**Pn**	**08 20 55.5**	**-1.4**
SNAA				*e*		08 20 58.1	
SNAA				*e*S	**Sn**	**08 23 46.8**	**-12**
SNAA	**Sanae**	**16.38**	**146**	*e*Pn	**Pn**	**08 20 57.3**	**+0.3**
	17nm,1.0s						
USHA	**Ushuaia**	**19.80**	**270**	P	**Pn**	**08 21 38.2**	**-0.8**
	0.2nm,0.3s,baz=60,slow=8.1,SNR=3.9						
USHA				LR	LR	08 27 24.5	
	comp=Z,288nm,18.3s,baz=99,slow=31						
MAIT	**Maitri**	**20.58**	**139**	*e*P	**P**	**08 21 47.4**	**+1.6**
QSPA	**South Pole Qui**	**29.95**	**180**	P	**P**	**08 23 17.7**	**+2.8**
	4.3nm,0.8s,mb4.2,baz=171,slow=6.1,SNR=18						
QSPA				LR	LR	08 34 42.8	
	comp=Z,355nm,18.1s,MS4.0,baz=185,slow=35						
SYO	**Syowa Base**	**30.26**	**137**⇑	*e*P	**P**	**08 23 17.8**	**+0.1**
CFAA	**Coronel Fontan**	**37.10**	**304**	P	**P**	**08 24 17.0**	**-0.5**
	0.3nm,0.6s,mb3.3,baz=166,slow=4.7,SNR=4.8						
CFAA				LR	LR	08 38 28.0	
	comp=Z,19nm,18.8s,MS2.9,baz=63,slow=35						
CPUP	**Villa Florida**	**37.95**	**322**	P	**P**	**08 24 23.6**	**-1.1**
	1.5nm,0.6s,mb3.9,baz=96,slow=7.2,SNR=5.6						
CPUP				LR	LR	08 37 52.8	
	comp=Z,148nm,20.5s,MS3.8,baz=156,slow=33						
MAW	**Mawson**	**38.49**	**142**	P	**P**	**08 24 30.5**	**+1.7**
	2.3nm,0.8s,mb4.0,baz=230,slow=12,SNR=5.6						
MAW				LR	LR	08 38 30.9	
	comp=Z,147nm,19.4s,MS3.8,baz=333,slow=33						
BDFB	**Brasilia**	**45.98**	**339**	LR	LR	08 43 06.3	
	comp=Z,91nm,21.2s,MS3.7,baz=60,slow=34						
BOSA	**Boshof**	**49.75**	**77**	LR	LR	08 42 00.4	
	comp=Z,136nm,20.6s,MS3.9,baz=174,slow=30						
LPAZ	**La Paz**	**50.88**	**314**	LR	LR	08 46 00.2	
	comp=Z,108nm,20.8s,MS3.9,baz=38,slow=34						
ROSC	**El Rosal**	**72.70**	**316**	LR	LR	09 03 02.7	
	comp=Z,50nm,18.3s,MS3.8,baz=23,slow=38						
TORD	**Torodi Ar. Bea**	**78.17**	**34**	P	**P**	**08 29 07.2**	**+0.7**
	7.2nm,0.9s,mb4.6,baz=198,slow=5.5,SNR=18						
KMBO	**Kilima Mbogo**	**79.13**	**73**	LR	LR	08 59 21.5	
	comp=Z,120nm,19.1s,MS4.2,baz=270,slow=32						
PPT	**Papeete**	**87.45**	**238**	LR	LR	09 00 17.3	
	comp=Z,52nm,18.4s,MS4.0,baz=144,slow=30						
STKA	**Stephens Creek**	**88.05**	**175**	LR	LR	09 06 49.5	
	comp=Z,135nm,19.5s,MS4.4,baz=205,slow=34						
ASAR	**Alice Springs**	**95.62**	**168**	P	**P**	**08 30 35.2**	**+2.5**
	0.6nm,0.7s,mb4.1,baz=177,slow=4.0,SNR=7.1						
WRA	**Warramunga Arr**	**99.35**	**168**	LR	LR	09 15 11.2	
	comp=Z,66nm,19.0s,MS4.2,baz=140,slow=35						
CMAR	**Chiang Mai Arr**	**125.90**	**119**	PKP	PKPdf	08 36 14.3	+5.3
	1.3nm,0.8s,baz=242,slow=1.9,SNR=3.2						
SONM	**Songino Array**	**153.38**	**99**	PKPbc	PKPbc	08 37 08.8	+4.4
	1.4nm,1.0s,baz=217,slow=3.6,SNR=3.5						

GII ***05*** *08:17:58.7±0.9, 3075N×3504E, h0^{km}, ML3.0/12, EXPLOSION*
ISCJB ***05*** *08:17:59.9±0.4, 3075N±002×3505E±004, h0^{km}, Error ellipse: s-maj=4.9km s-min=2.3km az=4.4*
ISC 05 08:18:00.4±0.4**, 3076N**±002×**3505E**±004**, h0**^{km}**, n16,**
σ**0^{s}87**/29**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFRI	**Zfri**	**0.23**	**152**	Pg	**Pg**	**08 18 04.4**	**-0.4**
ZFRI				Sg	**Sg**	**08 18 08.9**	**+1.2**
RMNI	**Mount Ramon**	**0.30**	**237**	Pg	**Pg**	**08 18 05.4**	**-0.7**
PRNI	**Paran**	**0.41**	**186**	Pg	**Pg**	**08 18 07.8**	**-0.4**
PRNI				Sg	**Sg**	**08 18 14.4**	**+0.9**
RTMI	**Retamim**	**0.43**	**314**	Pg	**Pg**	**08 18 08.1**	**-0.6**
RTMI				Sg	**Sg**	**08 18 15.7**	**+1.5**
KZIT	**Kziot**	**0.58**	**285**	Pg	**Pg**	**08 18 10.9**	**-0.7**
KZIT				Sg	**Sg**	**08 18 20.1**	**+0.9**
YTIR	**Yattir**	**0.61**	**5**	Pg	**Pg**	**08 18 11.2**	**-0.8**
YTIR				Sg	**Sg**	**08 18 21.1**	**+1.1**
MZDA	**Masada**	**0.61**	**26**	Pg	**Pg**	**08 18 11.3**	**-0.8**
MZDA				Sg	**Sg**	**08 18 20.9**	**+0.8**
KRMI	**Paran Flat**	**0.70**	**204**	Sg	**Sg**	**08 18 23.2**	**+0.4**
HRFI	**Mount Harif**	**0.72**	**181**	Pg	**Pg**	**08 18 13.6**	**-0.6**
HRFI				Sg	**Sg**	**08 18 24.0**	**+0.5**
DSI	**Dead Sea**	**0.86**	**19**	Pg	**Pg**	**08 18 17.5**	**+0.6**
DSI				Sg	**Sg**	**08 18 30.4**	**+2.4**
MBRI	**Mt Berech**	**0.97**	**187**	Pg	**Pg**	**08 18 18.3**	**-0.6**
MBRI				Sg	**Sg**	**08 18 31.9**	**+0.4**
EIL	**Elat**	**1.09**	**185**	Pg	**Pg**	**08 18 21.0**	**-0.3**
EIL				Sg	**Sg**	**08 18 35.7**	**+0.4**
SLTI	**Sal'it**	**1.48**	**360**	Pn	**Pn**	**08 18 27.4**	**-0.9**
SLTI				Sn	**Sn**	**08 18 48.0**	**-0.3**
HMDT	**Nahal Hemdat**	**1.54**	**15**	Pn	**Pn**	**08 18 27.7**	**-1.5**
HMDT				Sn	**Sn**	**08 18 49.7**	**-0.2**
MMLI	**Mount Malkishu**	**1.70**	**11**	Pn	**Pn**	**08 18 30.1**	**-1.3**
MMLI				Sn	**Sn**	**08 18 54.4**	**+0.5**
OFRI	**'Ofer**	**1.86**	**358**	Pn	**Pn**	**08 18 32.7**	**-0.8**

IDC 05 08:18:28.9±7.6**, 275N**×**12715E, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**,**
mb1mx3.6/15**, mbtmp3.8**/3**, Error ellipse:**
s-maj=149.9km s-min=118.7km az=78.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.63**	**163**	P	P	08 23 41.4	-0.7
	2.4nm,0.6s,baz=342,slow=11,SNR=23						
ASAR	**Alice Springs**	**27.07**	**166**	P	P	08 24 15.2	+1.9
	0.5nm,0.8s,baz=338,slow=9.8,SNR=5.7						
STKA	**Stephens Creek**	**37.07**	**159**	P	P	08 25 39.8	-1.1
	2.1nm,0.7s,baz=338,slow=8.1,SNR=6.2						

ISCJB ***05*** *08:18:46.1±0.6, 4235N±005×2395E±004, h3^{km}±8^{km}, Error ellipse: s-maj=8.4km s-min=4.8km az=21.8*
SOF ***05*** *08:18:46.0, 4236N×2397E, h15^{km}, MD2.5*
BEO ***05*** *08:18:47.2±0.6, 42.19N×23.89E, ML2.4/1*
ISC 05 08:18:46.7±0.6**, 4236N**±005×**2398E**±004**, h7**^{km}±7^{km}**, n14,**
σ**1^{s}02**/18**, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGB	**Panagyurishte**	**0.23**	**35**	*i* Pg	**Pg**	**08 18 52.0**	**+0.6**
PLD	**Plovdiv**	**0.59**	**115**	*e*Pg	**Pg**	**08 18 58.6**	**+0.5**
PLD				*e*Sg	**Sg**	**08 19 06.2**	**+0.4**
PLD	**Plovdiv**	**0.59**	**115**	*i* Pg	**Pg**	**08 18 58.2**	**+0.1**
VTS	**Vitosha**	**0.62**	**292**	*i* Pg	**Pg**	**08 18 58.0**	**-0.6**
MMB	**Musomiste**	**0.79**	**194**	*i* Pg	**Pg**	**08 19 02.4**	**+0.5**
KKB	**Krupnik**	**0.83**	**234**	*i* Pg	**Pg**	**08 19 02.7**	**+0.1**
RZN	**Rozhen**	**0.86**	**141**	*i* Pg	**Pg**	**08 19 03.4**	**+0.1**
KDZ	**Kurdzhali**	**1.28**	**123**	*i* P	**Pn**	**08 19 10.5**	**-0.4**
PVL	**Pavlikeni**	**1.31**	**49**	Pg	**Pg**	**08 19 09.2**	**-2.7**
ZAPS	**Zavoj**	**1.35**	**313**	*e*Pg	**Pg**	**08 19 13.2**	**+0.6**
ZAPS				*e*Sg	**Sg**	**08 19 32.6**	**+2.5**
VAY	**Valandovo**	**1.48**	**226**	*e*Pn	**Pn**	**08 19 12.6**	**-1.1**
VAY				*e*Sn	**Sn**	**08 19 33.6**	**+0.4**
BARS	**Barje**	**1.66**	**287**	*e*Pg	**Pg**	**08 19 16.6**	**-2.0**
BARS				*e*Sg	**Sg**	**08 19 39.6**	**-0.6**
SZH	**Strazhica**	**1.70**	**57**	*i* P	**Pn**	**08 19 17.0**	**+0.3**
KRUS	**Krusevo**	**2.27**	**245**	*e*Pn	**Pn**	**08 19 25.5**	**+1.0**

DDA ***05*** *08:19:15.3, 3722N×2698E, h5^{km}±5^{km}, Md3.1*
CSEM ***05*** *08:19:16.4±0.1, 3727N×2703E, h5^{km}, MD3.2, Error ellipse: s-maj=2.4km s-min=1.8km az=71.0*
ISK ***05*** *08:19:16.9, 3726N×2706E, h4^{km}, MD3.2*
ATH ***05*** *08:19:16.8, 3732N×2703E, h33^{km}±1^{km}, MD3.3/5*
ISCJB ***05*** *08:19:17.2±0.4, 3726N±002×2704E±003, h10^{km}, Error ellipse: s-maj=3.7km s-min=3.0km az=141.7*
NEIC ***05*** *08:19:17.0, 3727N×2706E, h5^{km}, MD3.3(ATH), ML3.1(ISK), After ISK.*
ISC 05 08:19:17.0±0.6**, 3726N**±002×**2699E**±004**, h3**^{km}±5^{km}**, n30,**
σ**0^{s}84**/48**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.33**	**128**	PG	**Pg**	**08 19 22.9**	**-0.3**
BODT				*e*SG	**Sg**	**08 19 27.6**	**+0.2**
BDRM	**Kayabasi**	**0.41**	**119**	*i* P	**Pg**	**08 19 24.3**	**-0.6**
BDRM				*i* S	**Sg**	**08 19 29.9**	**-0.4**
SMG	**Samos**	**0.46**	**345**	*e*PB	**Pg**	**08 19 26.4**	**+0.6**
SMG				*e*SB	**Sg**	**08 19 33.4**	**+1.6**
GCAM	**G?zelcaml?**	**0.48**	**24**	*i* P	**Pg**	**08 19 26.1**	**0.0**
GCAM				*i* S	**Sg**	**08 19 33.5**	**+1.2**
MLSB	**Milas**	**0.63**	**87**	*e*PG	**Pg**	**08 19 28.7**	**-0.3**
MLSB				*e*SG	**Sg**	**08 19 36.8**	**-0.3**
NISR	**Nisiros**	**0.66**	**170**	*e*PN	**Pg**	**08 19 31.1**	**+1.5**
AYDN	**Tasoluk**	**0.81**	**60**	*i* P	**Pg**	**08 19 31.4**	**-1.1**
AYDN				*i* S	**Sg**	**08 19 42.4**	**-0.6**
YER	**Yerkesik**	**1.04**	**97**	*e*PG	**Pg**	**08 19 36.6**	**-0.2**
YER				*e*SG	**Sg**	**08 19 50.6**	**+0.2**
BLCB	**Balcova**	**1.12**	**2**	*e*PN	**Pn**	**08 19 38.9**	**-0.6**
BLCB				*e*SN	**Sn**	**08 19 55.3**	**-0.1**
IZM	**Izmir**	**1.15**	**11**	*e*PN	**Pn**	**08 19 39.1**	**-0.9**
KDAG	**Bornova**	**1.16**	**11**	*i* P	**Pg**	**08 19 38.2**	**-0.9**
KDAG				*i* S	**Sg**	**08 19 55.5**	**+1.4**
APE	**Apeiranthos**	**1.18**	**261**	*e*PN	**Pn**	**08 19 39.5**	**-0.9**
TURN	**Turunc**	**1.35**	**106**	*i* P	**Pn**	**08 19 37.6**	**-5.0**
TURN				*i* S	**Sg**	**08 19 53.3**	**-6.9**
ARG	**Arkhangelos**	**1.39**	**139**	*e*PN	**Pn**	**08 19 42.2**	**-1.0**
DALT	**Dalyan (Mudla)**	**1.41**	**110**	*e*PN	**Pn**	**08 19 43.2**	**-0.2**
SANT	**Santorini**	**1.52**	**235**	*e*Pn	**Pn**	**08 19 45.3**	**+0.3**
SANT				Sn	**Sn**	**08 20 05.7**	**+0.5**
SANT	**Santorini**	**1.52**	**235**	*e*Pn	**Pn**	**08 19 45.3**	**+0.3**
SANT				Sn	**Sn**	**08 20 05.7**	**+0.4**
DNZL	**Cakiroluk**	**1.69**	**75**	*i* P	**Pn**	**08 19 47.7**	**+0.3**
DNZL				*i* S	**Sg**	**08 20 12.7**	**+1.4**
DENT	**Denizli**	**1.70**	**73**	*e*PN	**Pn**	**08 19 47.7**	**+0.3**
KARP	**Karpathos**	**1.72**	**175**	*e*PN	**Pn**	**08 19 46.8**	**-1.0**
AKS	**Akhisar**	**1.74**	**22**	*e*PN	**Pn**	**08 19 48.4**	**+0.4**
KULA	**Kula-Manisa**	**1.82**	**46**	*e*PN	**Pn**	**08 19 49.1**	**-0.1**
GOLH	**Golhisar**	**2.05**	**90**	*i* P	**Pn**	**08 19 53.4**	**+1.1**
GOLH				*i* S	**Sg**	**08 20 22.9**	**0.0**
KHAL	**Karahalli**	**2.27**	**60**	*i* P	**Pn**	**08 19 55.0**	**-0.2**
KHAL				*i* S	**Sn**	**08 20 29.3**	**+5.6**
KHAL	**Karahalli**	**2.27**	**60**	*i* P	**Pn**	**08 19 55.0**	**-0.3**
KHL	**Karahalli**	**2.27**	**61**	*e*PN	**Pn**	**08 19 55.2**	**-0.1**
AKAS	**Kas**	**2.34**	**115**	*i* P	**Pn**	**08 19 58.4**	**+2.2**
AKAS				*i* S	**Sg**	**08 20 32.3**	**+0.3**
ELL	**Elmali**	**2.39**	**102**	*e*PN	**Pn**	**08 19 57.6**	**+0.6**
BALY	**Balya**	**2.52**	**11**	*i* P	**Pg**	**08 20 04.3**	**-1.0**
BALY				*i* S	**Sg**	**08 20 35.0**	**-3.0**
DURS	**Dursunbey**	**2.61**	**26**	*i* P	**Pg**	**08 20 06.0**	**-0.9**
DURS				*i* S	**Sg**	**08 20 40.7**	**0.0**

CSEM ***05*** *09:04:43.3±0.2, 3722N×2820E, h12^{km}, MD2.7, Error ellipse: s-maj=6.3km s-min=3.6km az=20.0*
ISCJB ***05*** *09:04:44.2±0.6, 3726N±004×2822E±004, h10^{km}, Error ellipse: s-maj=6.7km s-min=3.8km az=35.3*
ISK ***05*** *09:04:44.0, 37.16N×28.14E, h5^{km}, MD2.7*
DDA ***05*** *09:04:44.7, 3723N×28.19E, h8^{km}, Md2.8*
ISC 05 09:04:44.5±0.8**, 3726N**±004×**2823E**±004**, h8**^{km}±17^{km}**, n10,**
σ**0^{s}82**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**162**	*e*PG	**Pg**	**09 04 46.7**	**-0.6**
YER				*e*SG	**Sg**	**09 04 49.0**	**-0.3**
MLSB	**Milas**	**0.36**	**276**	*e*PG	**Pg**	**09 04 51.4**	**-0.2**
MLSB				*e*SG	**Sg**	**09 04 57.2**	**+0.7**
TURN	**Turunc**	**0.49**	**142**	*i* P	**Pg**	**09 04 53.1**	**-0.8**
TURN				*i* S	**Sg**	**09 05 04.1**	**+3.8**
AYDN	**Tasoluk**	**0.49**	**325**	*i* P	**Pg**	**09 04 54.0**	**0.0**
AYDN				*i* S	**Sg**	**09 05 00.7**	**+0.3**
DALT	**Dalyan (Mudla)**	**0.59**	**146**	*e*PG	**Pg**	**09 04 55.2**	**-0.6**
DALT				*e*SG	**Sg**	**09 05 05.4**	**+1.9**
BDRM	**Kayabasi**	**0.66**	**253**	*i* P	**Pg**	**09 04 56.2**	**-0.9**
BDRM				*i* S	**Sg**	**09 05 06.8**	**+1.0**
BDRM	**Kayabasi**	**0.66**	**253**	*i* P	**Pg**	**09 04 56.2**	**-1.0**
BDRM				*i* S	**Sg**	**09 05 06.8**	**+1.0**
BODT	**Bodrum**	**0.76**	**255**	*e*PG	**Pg**	**09 04 58.2**	**-1.0**
DNZL	**Cakiroluk**	**0.78**	**56**	*i* P	**Pg**	**09 04 59.8**	**+0.3**
DNZL				*i* S	**Sg**	**09 05 15.2**	**+5.6**
GOLH	**Golhisar**	**1.06**	**91**	*i* P	**Pg**	**09 05 04.9**	**0.0**
GOLH				*i* S	**Sg**	**09 05 26.7**	**+8.1**

CSEM ***05*** *09:13:51.2±0.5, 3727N×2702E, h25^{km}, MD2.9, Error ellipse: s-maj=12.2km s-min=5.9km az=59.0*
ISCJB ***05*** *09:13:52.0±1.4, 3721N±006×2700E±0.10, h27^{km}±5^{km}, Error ellipse: s-maj=14.1km s-min=7.8km az=155.0*
ISK ***05*** *09:13:52.0, 3732N×2706E, h5^{km}, MD2.9*
DDA ***05*** *09:13:53.0, 3726N×2705E, h7^{km}±2^{km}, Md2.9*
ISC 05 09:13:52.2±1.4**, 3722N**±005×**2700E**±010**, h26**^{km}±5^{km}**, n9,**
σ**0^{s}93**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.29**	**122**	*e*PG	**Pb**	**09 13 59.0**	**-0.1**
BODT				*e*SG	**Sb**	**09 14 03.8**	**-0.1**
BDRM	**Kayabasi**	**0.39**	**113**	*i* P	**Pb**	**09 14 00.6**	**0.0**
BDRM				*i* S	**Sb**	**09 14 06.8**	**+0.6**
GCAM	**G?zelcaml?**	**0.51**	**21**	*i* P	**Pb**	**09 14 02.7**	**+0.1**
GCAM				*i* S	**Sb**	**09 14 09.7**	**-0.1**
MLSB	**Milas**	**0.62**	**83**	*e*PG	**Pb**	**09 14 04.5**	**0.0**
MLSB				*e*SG	**Sb**	**09 14 11.8**	**-1.0**
AYDN	**Tasoluk**	**0.82**	**57**	*i* P	**Pb**	**09 14 07.5**	**-0.4**
AYDN				*i* S	**Sb**	**09 14 19.3**	**+0.7**
YER	**Yerkesik**	**1.03**	**94**	*e*PG	**Pn**	**09 14 12.0**	**+1.1**
YER				*e*SG	**Sn**	**09 14 25.8**	**+1.4**
BLCB	**Balcova**	**1.17**	**2**	*e*PG	**Pn**	**09 14 12.3**	**-0.4**
TURN	**Turunc**	**1.33**	**105**	*i* P	**Pn**	**09 14 14.0**	**-0.9**
TURN				*i* S	**Sn**	**09 14 29.8**	**-1.9**
DALT	**Dalyan (Mudla)**	**1.38**	**108**	*e*PN	**Pn**	**09 14 18.8**	**+3.1**

TIF ***05*** *09:23:45.8, 4136N×4381E, h15^{km}±2^{km}*
CSEM ***05*** *09:23:46.0, 4120N×4396E, h14^{km}, mb3.7, After OBN*
MOS ***05*** *09:23:46.4±0.7, 4120N×4396E, h14^{km}, mb3.7/1, Error ellipse: s-maj=55.4km s-min=13.5km az=84.6*
ISC 05 09:23:49.3±1.9**, 413N**±01×**4395E**±010**, h35**^{km}**, n9,**
σ**1^{s}32**/14**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBLG	**Delisi**	**0.76**	**51**	Pg	**Pn**	**09 24 02.0**	**-1.6**
TBLG				Sg	**Sn**	**09 24 13.5**	**-0.3**
MTA	**Mtatsminda**	**0.77**	**55**	P	**Pn**	**09 24 02.6**	**-1.1**
MTA				S	**Sn**	**09 24 13.5**	**-0.6**
DGRG	**David-gareji**	**1.09**	**79**	P	**Pn**	**09 24 09.6**	**+1.5**
DGRG				S	**Sn**	**09 24 27.0**	**+5.1**
ONI	**Oni**	**1.38**	**345**	P	**Pn**	**09 24 09.6**	**-2.4**
ONI				S	**Sn**	**09 24 27.3**	**-1.6**
ZEI	**Tsey**	**1.52**	**359**	*e*Pg	**Pn**	**09 24 14.0**	**+0.1**
LACR	**Lac**	**1.59**	**9**	*e*Pn	**Pn**	**09 24 15.0**	**0.0**
LACR				*i* Sg	**Sn**	**09 24 36.3**	**+2.0**
DIGR	**Digorskoe uzhe**	**1.67**	**351**	*e*Pn	**Pn**	**09 24 16.4**	**+0.4**
KORR	**Kora**	**1.83**	**3**	*e*Pn	**Pn**	**09 24 20.1**	**+1.8**
ARNR	**Ardon**	**1.95**	**7**	*e*Pn	**Pn**	**09 24 21.4**	**+1.5**

IDC 05 09:44:41.8±10.0**, 1542S**×**6541E, h0**^{km}**, mb3.8**/2**,**
mb1 4.1/2**, mb1mx3.5**/19**, mbtmp3.8**/2**, MS3.8**/18**,**
Ms1 3.8/18**, ms1mx3.6**/37**, Error ellipse: s-maj=841.9km**
s-min=50.0km az=33.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**31.20**	**294**	LR	LR	10 00 59.7	
	comp=Z,77nm,19.2s,baz=264,slow=31						
BOSA	**Boshof**	**39.28**	**244**	LR	LR	10 05 16.0	
	comp=Z,180nm,20.3s,baz=259,slow=31						
CMAR	**Chiang Mai Arr**	**47.16**	**46**	LR	LR	10 08 55.7	
	comp=Z,108nm,18.9s,baz=184,slow=31						
NWAO	**Narrogin (SRO)**	**49.89**	**120**	LR	LR	10 10 23.6	
	comp=Z,61nm,19.8s,baz=122,slow=31						
MAW	**Mawson**	**52.17**	**181**	LR	LR	10 10 26.8	
	comp=Z,155nm,19.0s,baz=251,slow=30						
FITZ	**Fitzroy Crossi**	**57.52**	**102**	LR	LR	10 14 11.8	
	comp=Z,121nm,20.5s,baz=269,slow=31						
MKAR	**Makanchi Array**	**63.76**	**13**	LR	LR	10 20 52.5	
	comp=Z,23nm,20.1s,baz=355,slow=34						
ASAR	**Alice Springs**	**64.56**	**109**	P	P	09 55 21.6	+0.4
	0.7nm,0.8s,baz=262,slow=6.9,SNR=6.5						
WRA	**Warramunga Arr**	**65.43**	**105**	P	P	09 55 26.8	-0.2
	1.7nm,1.0s,baz=268,slow=5.6,SNR=7.0						
TORD	**Torodi Ar. Bea**	**69.12**	**291**	LR	LR	10 25 31.5	
	comp=Z,92nm,18.7s,baz=150,slow=35						
STKA	**Stephens Creek**	**70.44**	**119**	LR	LR	10 21 46.4	
	comp=Z,140nm,19.8s,baz=25,slow=32						
ZALV	**Zalesovo Beam**	**71.06**	**12**	LR	LR	10 25 09.4	
	comp=Z,40nm,19.5s,baz=237,slow=34						
VAE	**Valguarnera**	**71.17**	**319**	LR	LR	10 25 05.0	
	comp=Z,63nm,18.4s,baz=137,slow=34						
SONM	**Songino Array**	**72.83**	**28**	LR	LR	10 26 57.1	
	comp=Z,71nm,19.8s,baz=225,slow=35						
DBIC	**Dimbokro**	**72.96**	**282**	LR	LR	10 29 08.8	
	comp=Z,82nm,18.2s,baz=301,slow=37						
JOW	**Kunigami**	**74.08**	**56**	LR	LR	10 26 07.4	
	comp=Z,130nm,19.4s,baz=275,slow=34						
CTA	**Charters Tower**	**76.44**	**107**	LR	LR	10 26 36.3	
	comp=Z,137nm,19.8s,baz=47,slow=33						
KSRS	**Korea Array**	**78.80**	**46**	LR	LR	10 30 08.4	
	comp=Z,48nm,20.8s,baz=299,slow=35						
MDT	**Midelt**	**82.24**	**307**	LR	LR	10 33 58.7	
	comp=Z,51nm,18.5s,baz=44,slow=36						
GUMO	**Guam**	**83.69**	**74**	LR	LR	10 33 56.2	
	comp=Z,30nm,19.2s,baz=66,slow=35						
PDAR	**Pinedale Array**	**152.41**	**352**	PKPbc	PKPbc	10 04 40.4	+0.2
	0.7nm,0.7s,baz=32,slow=3.6,SNR=7.3						

MAN 05 09:54:54, 684N×**12374E, h0**^{km}**, mb4.3, ML3.2, MS3.0, 2C,**
Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.63**	**53**⇑	*i* P	Pg	09 55 07.2	+1.2
CTBH				*i* S	Sg	09 55 15.3	+1.2
PAGZ	**Pagadian**	**1.06**	**340**	*e*P	Pg	09 55 15.5	+1.1
PAGZ				*e*S	Sg	09 55 27.4	-0.8
GSPH	**General Santos**	**1.41**	**122**	*i* P	Pn	09 55 24.5	+3.5
GSPH				*i* S	Sg	09 55 46.6	+7.1
IPIL	**Ipil**	**1.50**	**309**	*e*P	Pn	09 55 22.4	+0.2
BUKP	**Musuan**	**1.67**	**52**	*e*P	Pn	09 55 24.9	+0.4
BUKP				*e*S	Sn	09 55 47.7	+1.1
DCPH	**Dipolog City**	**1.77**	**347**⇑	*e*P	Pn	09 55 27.9	+2.0

IDC ***05*** *09:56:36.2±1.3, 285N×12729E, h0^{km}, mb4.1/7, mb1 4.3/7, mb1mx4.0/17, mbtmp4.1/7, MS3.2/1, Ms1 3.2/1, ms1mx2.6/29, Error ellipse: s-maj=89.9km s-min=17.3km az=68.0*
ISCJB ***05*** *09:56:51.9±1.8, 25N±03×1269E±06, h148^{km}±15^{km}, mb4.0/6, Error ellipse: s-maj=99.1km s-min=17.3km az=157.5*
ISC 05 09:56:53.0±1.9**, 25N**±02×**1269E**±05**, h142**^{km}±15^{km}**, n13,**
σ**0^{s}59**/12**, mb4.0**/6**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	**Ternate**	**1.79**	**166**⇓	*e*P	**Pn**	**09 57 25.0**	**-0.2**
KAKA	**Kakadu**	**16.11**	**160**	*e*P	**Pn**	**10 00 32.7**	**+1.2**
	6.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.55**	**183**	*e*P	**P**	**10 01 20.7**	**+0.2**
	7.7nm,1.5s						
FITZ	**Fitzroy Crossi**	**20.55**	**183**	P	**P**	**10 01 20.6**	**+0.1**
	1.4nm,0.5s,baz=20,slow=12,SNR=8.3						
GUMO	**Guam**	**20.86**	**57**	LR	LR	10 08 05.2	
	comp=Z,64nm,18.5s,baz=128,slow=34						
WRA	**Warramunga Arr**	**23.49**	**162**	P	**P**	**10 01 49.3**	**-0.8**
	9.1nm,0.5s,mb4.4,baz=343,slow=11,SNR=95						
WB2	**Warramunga Arr**	**23.50**	**162**	*e*P	**P**	**10 01 49.1**	**-1.0**
ASAR	**Alice Springs**	**26.91**	**166**	P	**P**	**10 02 20.9**	**0.0**
	1.1nm,0.6s,mb3.7,baz=348,slow=7.3,SNR=23						
STKA	**Stephens Creek**	**36.95**	**159**	*e*P	**P**	**10 03 49.0**	**+0.5**
	4.3nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**36.95**	**159**	P	**P**	**10 03 48.9**	**+0.4**
	5.5nm,0.7s,mb4.3,baz=334,slow=9.6,SNR=15						
MKAR	**Makanchi Array**	**58.64**	**326**	P	**P**	**10 06 35.0**	**-0.3**
	0.7nm,0.5s,mb3.8,baz=121,slow=7.9,SNR=7.7						
KURK	**Kurchatov**	**62.85**	**328**	P	**P**	**10 07 03.8**	**+0.1**
	1.2nm,0.5s,mb4.0,baz=128,slow=6.2,SNR=4.9						
AKASG	**Malin Array Be**	**92.94**	**321**	P	**P**	**10 09 50.4**	**+0.4**
	0.3nm,0.3s,mb3.9,baz=64,slow=1.8,SNR=4.1						

CSEM ***05*** *10:01:07.9±0.5, 3701N×2800E, h30^{km}, MD2.6, Error ellipse: s-maj=14.7km s-min=7.8km az=6.0*
ISCJB ***05*** *10:01:08.9±1.1, 3704N±007×2803E±005, h34^{km}±17^{km}, Error ellipse: s-maj=12.2km s-min=6.7km az=14.9*
ISK ***05*** *10:01:09.9, 3708N×2794E, h5^{km}, MD2.6*
DDA ***05*** *10:01:09.4, 3700N×2804E, h7^{km}±2^{km}, Md2.8*
ISC 05 10:01:08.8±1.5**, 3705N**±006×**2803E**±005**, h35**^{km}±14^{km}**, n6,**
σ**0^{s}87**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.22**	**66**	*e*PG	**Pb**	**10 01 16.8**	**+0.9**
YER				*e*SG	**Sb**	**10 01 21.8**	**+1.2**
MLSB	**Milas**	**0.32**	**321**	*e*PG	**Pb**	**10 01 15.9**	**-1.1**
MLSB				*e*SG	**Sb**	**10 01 20.8**	**-1.7**
BDRM	**Kayabasi**	**0.47**	**273**	*i* P	**Pb**	**10 01 18.6**	**-0.4**
BDRM				*i* S	**Sb**	**10 01 26.4**	**+0.4**
TURN	**Turunc**	**0.49**	**110**	*i* P	**Pb**	**10 01 18.6**	**-0.7**
TURN				*i* S	**Sb**	**10 01 25.8**	**-0.8**
BODT	**Bodrum**	**0.57**	**272**	*e*PG	**Pb**	**10 01 20.9**	**+0.3**
BODT				*e*SG	**Sb**	**10 01 29.4**	**+0.6**
AYDN	**Tasoluk**	**0.62**	**349**	*i* P	**Pb**	**10 01 22.5**	**+1.0**
AYDN				*i* S	**Sb**	**10 01 30.0**	**-0.1**

IDC 05 10:08:49.0±12.0**, 1072S**×**16544E, h0**^{km}**, mb3.9**/3**,**
mb1 4.0/4**, mb1mx3.8**/17**, mbtmp4.0**/4**, ML4.2**/1**, Error**
ellipse: s-maj=208.4km s-min=46.3km az=43.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.56**	**283**	Pn	Pn	10 10 12.6	-0.5
	7.4nm,0.3s,baz=205,slow=14,SNR=2.6						
HNR				Sn	Sn	10 11 19.6	+1.9
	11nm,0.3s,baz=198,slow=13,SNR=2.4						
STKA	**Stephens Creek**	**30.47**	**223**	P	P	10 15 04.1	+0.4
	1.5nm,0.8s,baz=17,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**31.32**	**249**	P	P	10 15 11.4	+0.1
	1.3nm,0.7s,baz=81,slow=9.0,SNR=7.7						
ASAR	**Alice Springs**	**32.67**	**243**	P	P	10 15 23.0	-0.2
	1.0nm,0.8s,baz=68,slow=9.9,SNR=9.1						

IDC 05 10:19:30.9±3.8**, 585S**×**15143E, h0**^{km}**, mb3.4**/2**, mb1 3.8**/2**,**
mb1mx3.5/14**, mbtmp3.5**/2**, MS4.4**/1**, Ms1 4.4**/1**,**
ms1mx2.9/20**, Error ellipse: s-maj=141.8km**
s-min=51.6km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.73**	**228**	P	P	10 24 24.0	-0.1
	0.6nm,0.5s,baz=54,slow=11,SNR=11						
ASAR	**Alice Springs**	**24.46**	**222**	P	P	10 24 52.0	+0.2
	1.2nm,0.7s,baz=59,slow=8.9,SNR=12						
RPZ	**Rata Peaks**	**41.48**	**158**	LR	LR	10 41 24.6	
	comp=Z,521nm,19.7s,baz=258,slow=32						
TORD	**Torodi Ar. Bea**	**149.31**	**286**	PKPbc	PKPbc	10 39 22.4	-0.5
	0.3nm,0.5s,baz=54,slow=3.1,SNR=4.0						

IDC 05 10:21:59.4±18.0**, 517S**×**15090E, h171**^{km}±140^{km}**, mb3.5**/6**,**
mb1 3.7/6**, mb1mx3.5**/15**, mbtmp3.5**/6**, Error ellipse:**
s-maj=128.5km s-min=28.5km az=92.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	19.70	246	eP	P	10 26 16.6	+0.8
	9.5nm,0.5s						
WB2	Warramunga Arr	21.79	226	eP	P	10 26 37.6	-0.3
WRA	Warramunga Arr	21.80	226	P	P	10 26 37.7	-0.3
	1.9nm,0.3s,baz=50,slow=10,SNR=36						
WRA				PcP	PcP	10 30 31.6	+0.2
	0.4nm,0.6s,baz=38,slow=1.9,SNR=5.0						
ASAR	Alice Springs	24.62	220	P	P	10 27 04.2	+0.1
	2.0nm,0.4s,baz=55,slow=9.0,SNR=41						
FITZ	Fitzroy Crossi	27.83	240	eP	P	10 27 33.3	+0.4
	3.8nm,0.8s						
FITZ	Fitzroy Crossi	27.83	240	P	P	10 27 33.1	+0.2
	1.4nm,0.4s,baz=53,slow=11,SNR=16						
SONM	Songino Array	65.65	329	P	P	10 32 26.1	+1.0
	0.8nm,0.5s,baz=142,slow=5.7,SNR=3.3						
MKAR	Makanchi Array	79.37	319	P	P	10 33 46.3	+0.1
	0.2nm,0.3s,baz=90,slow=4.3,SNR=3.5						
ZALV	Zalesovo Beam	80.42	327	P	P	10 33 51.0	-0.8
	0.6nm,0.3s,baz=123,slow=5.3,SNR=3.2						
TORD	Torodi Ar. Bea	148.61	287	PKPbc	PKPbc	10 41 26.5	-0.7
	1.7nm,0.6s,baz=96,slow=2.5,SNR=12						

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*NEIC **05** 10:23:53.9, 3692N×2163E, h16km, MD3.5(ATH), After ATH.*
*CSEM **05** 10:23:53.9, 3692N×2163E, h16km, MD3.5/7, After ATH*
ATH 05 10:23:54.1, 3691N×2166E, h20km±1km, MD3.5/7, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	Ithomi	0.34	38	ePB	Pb	10 24 01.5	0.0
VLI	Veliai	1.04	100	ePN	Pn	10 24 14.3	+0.7
VLI	Veliai	1.04	100	ePb	Pb	10 24 13.6	+0.2
KYTH	Kithira	1.27	119	ePN	Pn	10 24 18.0	+1.3
VLS	Valsamata	1.52	326	ePN	Pn	10 24 22.5	+2.3
NAIG	Nisos Aigina	1.69	59	ePN	Pn	10 24 24.5	+2.1
NAIG	Nisos Aigina	1.69	59	ePn	Pn	10 24 26.5	+4.1
EVR	Evrytania	2.01	3	ePN	Pn	10 24 29.0	+2.2
EVR	Evrytania	2.01	3	ePb	Pb	10 24 27.6	-2.3
VAM	Vamos	2.54	125	ePN	Pn	10 24 37.0	+2.8
VAM	Vamos	2.54	125	ePb	Pb	10 24 38.0	-1.0

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*ISCJB **05** 10:30:21.9±0.2, 4832N±001×660E±002, h11km±3km, Error ellipse: s-maj=2.3km s-min=2.1km az=179.3*
*CSEM **05** 10:30:23.9±0.0, 4833N×666E, h12km, ML2.9/20, Error ellipse: s-maj=0.8km s-min=0.6km az=179.0*
*STR **05** 10:30:23.6±0.2, 4835N×668E, h10km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **05** 10:30:24.3±0.1, 4832N×664E, h11km, Md3.1/4, Ml2.9/19, Error ellipse: s-maj=1.3km s-min=1.0km az=171.0*
*NEIC **05** 10:30:24.3, 4832N×664E, h11km, ML2.2(SZGRF), ML2.5(STR), ML2.9(LDG), After LDG.*
*ZUR **05** 10:30:25.3, 4823N×677E, h-5km±1km, ML2.2/3*
*BGR **05** 10:30:25.5±1.1, 4838N×672E, h10km, ML2.2/4, Error ellipse: s-maj=13.3km s-min=5.6km az=35.0*
ISC 05 10:30:23.1±0.2, **4832N**±001×**663E**±002, **h17**km±3km, **n87**, σ**0ˢ90**/171, **3C-5D, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAU	Haudompre	0.37	210	ePg	Pg	10 30 31.8	+1.1
	SNR=1.0						
HAU				eSg	Sg	10 30 36.6	+0.8
	130nm,0.3s						
HAU	Haudompre	0.37	210	ePg	Pg	10 30 31.8	+1.1
	SNR=1.0						
HAU				eSg	Sg	10 30 36.6	+0.8
	65nm,0.3s						
ECH	Echery	0.37	107	Pg	Pg	10 30 31.1	+0.3
ECH				Sg	Sg	10 30 35.7	-0.3
THEF	They Montfort	0.44	257	Pg	Pg	10 30 32.9	+0.9
THEF				Sg	Sg	10 30 39.1	+1.2
CDF	Champ du Feu	0.44	78	ePg	Pg	10 30 32.2	+0.1
	SNR=1.0						
CDF				eSg	Sg	10 30 37.9	-0.2
	38nm,0.2s,SNR=1.0						
CDF	Champ du Feu	0.44	78	ePg	Pg	10 30 32.2	+0.1
	SNR=1.0						
CDF				eSg	Sg	10 30 37.9	-0.2
	19nm,0.2s,SNR=1.0						
HINF	Hinteralfeld	0.53	163	ePg	Pg	10 30 34.3	+0.7
	SNR=1.0						
HINF				eSg	Sg	10 30 41.2	+0.5
HINF				eSn	Sg	10 30 44.3	+3.6
	57nm,0.2s,SNR=1.0						
HINF	Hinteralfeld	0.53	163	ePg	Pg	10 30 34.3	+0.7
	SNR=1.0						
HINF				eSg	Sg	10 30 41.2	+0.5
HINF				eSn	Sg	10 30 44.3	+3.6
	29nm,0.2s,SNR=1.0						
MOF	Molkenrain	0.58	144	Pg	Pg	10 30 35.2	+0.6
LIBD	Limburg	0.68	104	Pg	Pg	10 30 36.4	0.0
LIBD				Sg	Sg	10 30 44.9	-0.5
RFYF	Reffroy	0.82	292	ePn	Pn	10 30 40.7	+0.8
	baz=112						
RFYF				eSn	Sn	10 30 52.3	+0.6
	123nm,0.2s,baz=111						
RFYF	Reffroy	0.82	292	ePn	Pn	10 30 40.7	+0.8
RFYF				eSn	Sn	10 30 52.3	+0.6
	61nm,0.2s						
RFYF	Reffroy	0.82	292	ePg	Pg	10 30 40.0	+0.8
RFYF				ePn	Pn	10 30 40.7	+0.8
RFYF				eSn	Sn	10 30 52.3	+0.6
LOMF	Lomont	0.98	172	Pg	Pg	10 30 43.2	+1.1
LOMF				Sg	Sg	10 30 55.6	+0.6
BOURR	Bourrignon	1.02	156	eS	Pg	10 30 43.8	+1.0
	147nm,0.4s						
BOURR	Bourrignon	1.02	156	⇓iP	Sg	10 30 57.2	+1.1
	147nm,0.4s						
BOURR	Bourrignon	1.02	156	⇓iP	Pg	10 30 43.8	+1.0
LANF	Langenberg	1.02	50	Pg	Pg	10 30 42.6	-0.3
LANF				Sg	Sg	10 30 55.0	-1.3
FELD	Feldberg im Sc	1.03	115	Pg	Pg	10 30 43.7	+0.7
FELD				Sg	Sg	10 30 56.3	-0.1
BBS	Basel-Blauen	1.05	145	Pg	Pg	10 30 44.0	+0.7
BBS				Sg	Sg	10 30 57.5	+0.5
MEZF	Maizieres J'vi	1.06	280	ePg	Pg	10 30 45.0	+1.3
	baz=101						
MEZF				eSg	Sg	10 30 58.6	+1.0
	47nm,0.2s,SNR=1.0						
MEZF	Maizieres J'vi	1.06	280	ePg	Pg	10 30 45.0	+1.3
MEZF				eSg	Sg	10 30 58.6	+1.0
	23nm,0.2s,SNR=1.0						
MEZF	Maizieres J'vi	1.06	280	ePn	Pn	10 30 44.0	+0.8
MEZF				ePg	Pg	10 30 45.0	+1.3
MEZF				eSg	Sg	10 30 58.6	+1.0
SFTF	Sexfontaines	1.07	264	ePg	Pg	10 30 44.9	+1.2
	baz=97						
SFTF				eSg	Sg	10 30 58.6	+0.9
	44nm,0.2s						
SFTF	Sexfontaines	1.07	264	ePg	Pg	10 30 44.9	+1.2
SFTF				eSg	Sg	10 30 58.6	+0.9
	22nm,0.2s						
SFTF	Sexfontaines	1.07	264	ePn	Pn	10 30 44.3	+1.0
SFTF				ePg	Pg	10 30 44.9	+1.2
SFTF				eSg	Sg	10 30 58.6	+0.9
BFO	Black Forest	1.14	89	ePg	Pg	10 30 44.2	-0.9
BFO				eSg	Sg	10 30 59.7	-0.3
BFO	Black Forest	1.14	89	ePg	Pg	10 30 44.2	-0.9
BFO				eSg	Sg	10 30 59.7	-0.3
BALST	Balsthal	1.22	143	eSg	Pg	10 30 47.0	+0.3
	116nm,0.3s						
BALST	Balsthal	1.22	143	i P	Sg	10 31 02.9	+0.2
	116nm,0.3s						
BALST	Balsthal	1.22	143	i P	Pg	10 30 47.0	+0.3
SULZ	Cheisacher	1.28	128	⇑eP	Pn	10 30 47.8	+1.6
	2.1nm,0.1s						
WLF	Walferdange	1.38	347	ePg	Pg	10 30 50.1	+0.4
WLF				eSg	Sg	10 31 07.8	+0.1
WLF	Walferdange	1.38	347	P	Pn	10 30 49.8	+2.3
WLF				S	Sn	10 31 08.0	+2.6
	comp=N,7.8nm,0.0s						
RUP	Ruppelstein	1.41	12	Pg	Pg	10 30 50.3	+0.1
RUP				Sg	Sg	10 31 08.0	-0.6
SPAK	Spaichingen-Ko	1.46	98	Pg	Pg	10 30 51.6	+0.3
SPAK				Sg	Sg	10 31 09.6	-0.7
CABF	La Chapelle	1.75	192	ePg	Pg	10 30 57.3	+0.5
	SNR=1.0						
CABF				eSg	Sg	10 31 19.8	+0.3
	comp=N,48nm,0.6s,SNR=1.0						
CABF	La Chapelle	1.75	192	ePg	Pg	10 30 57.3	+0.5
	SNR=1.0						
CABF				eSg	Sg	10 31 19.8	+0.3
	comp=N,24nm,0.6s,SNR=1.0						
CABF	La Chapelle	1.75	192	ePn	Pn	10 30 53.7	+1.0
CABF				ePg	Pg	10 30 57.3	+0.5
CABF				eSg	Sg	10 31 19.8	+0.3
STU	Stuttgart	1.77	74	eSg	Sg	10 31 19.8	-0.2
GIVF	Givet	2.14	327	ePg	Pg	10 31 04.1	0.0
GIVF				eSg	Sg	10 31 30.8	-1.0
	comp=N,13nm,0.2s,SNR=1.0						
GIVF	Givet	2.14	327	ePg	Pg	10 31 04.1	0.0
GIVF				eSg	Sg	10 31 30.8	-1.0
	comp=N,6.4nm,0.2s,SNR=1.0						
GIVF	Givet	2.14	327	ePn	Pn	10 30 58.3	+0.3
GIVF				ePg	Pg	10 31 04.1	0.0
GIVF				eSg	Sg	10 31 30.8	-1.0
LOR	Lormes	2.14	242	ePn	Pn	10 30 58.3	+0.2
	baz=64,SNR=1.0						
LOR	Lormes	2.14	242	ePg	Pg	10 31 04.4	+0.2
	baz=62,SNR=1.0						
LOR				eSg	Sg	10 31 31.9	-0.1
	comp=N,13nm,0.2s,baz=56,SNR=1.0						
LOR	Lormes	2.14	242	ePg	Pg	10 31 04.4	+0.2
	SNR=1.0						
LOR				eSg	Sg	10 31 31.9	-0.1
	comp=N,6.6nm,0.2s,SNR=1.0						
LOR	Lormes	2.14	242	ePn	Pn	10 30 58.3	+0.2
LOR				ePg	Pg	10 31 04.4	+0.2
LOR				eSg	Sg	10 31 31.9	-0.1
DOU	Dourbes	2.22	324	P	Pn	10 31 05.9	+6.8
DOU				S	Sn	10 31 32.3	+6.2
	comp=Z,5.7nm,0.0s						
DOU	Dourbes	2.22	324	P	Pn	10 31 05.8	+6.7
DOU				S	Sn	10 31 32.3	+6.2
TNS	Taunus Mts	2.25	31	eSg	Sg	10 31 33.8	-1.4
BAIF	Baives	2.35	319	ePg	Pg	10 31 07.6	-0.6
	SNR=1.0						
BAIF				eSn	Sn	10 31 28.0	-1.4
	SNR=1.0						
BAIF				eSg	Sg	10 31 37.6	-1.1
	comp=Z,6.1nm,0.3s,SNR=1.0						
BAIF	Baives	2.35	319	ePg	Pg	10 31 07.6	-0.6
	SNR=1.0						
BAIF				eSg	Sg	10 31 37.6	-1.1
	comp=Z,3.0nm,0.3s,SNR=1.0						
DAVA	Damuels	2.43	114	⇑iPn	Pn	10 31 09.0	+7.0
DAVA				⇓iSg	Sg	10 31 41.0	-0.1
	comp=Z,7.4nm,0.3s						
SSF	Saint Saulge	2.46	240	ePg	Pg	10 31 09.7	-0.5
	SNR=1.0						
SSF				eSn	Sn	10 31 31.4	-0.6
	SNR=1.0						
SSF				eSg	Sg	10 31 41.9	-0.1
	comp=Z,10nm,0.3s,SNR=1.0						
SSF	Saint Saulge	2.46	240	ePg	Pg	10 31 09.7	-0.5
	SNR=1.0						
SSF				eSn	Sn	10 31 31.4	-0.6
	SNR=1.0						
SSF				eSg	Sg	10 31 41.9	-0.1
	comp=Z,5.1nm,0.3s,SNR=1.0						
SSF	Saint Saulge	2.46	240	ePn	Pn	10 31 02.8	+0.4
SSF				ePg	Pg	10 31 09.7	-0.5
SSF				eSn	Sn	10 31 31.4	-0.6
SSF				eSg	Sg	10 31 41.9	-0.1
SMF	Signal de Mont	2.53	229	ePg	Pg	10 31 11.3	-0.2
	SNR=1.0						
SMF				eSg	Sg	10 31 44.0	-0.3
	comp=Z,28nm,0.3s,SNR=1.0						
SMF	Signal de Mont	2.53	229	ePg	Pg	10 31 11.3	-0.2
	SNR=1.0						
SMF				eSg	Sg	10 31 44.0	-0.3
	comp=Z,14nm,0.3s,SNR=1.0						
SMF	Signal de Mont	2.53	229	ePn	Pn	10 31 03.3	0.0
SMF				ePg	Pg	10 31 11.3	-0.2
SMF				eSg	Sg	10 31 44.0	-0.3
AVF	Avril sur Loir	2.69	237	ePg	Pg	10 31 14.2	-0.6
	SNR=1.0						
AVF				eSn	Sn	10 31 36.4	-1.5
	SNR=1.0						
AVF				eSg	Sg	10 31 49.4	-0.3
	comp=Z,5.8nm,0.2s,SNR=1.0						
AVF	Avril sur Loir	2.69	237	ePg	Pg	10 31 14.2	-0.6
	SNR=1.0						
AVF				eSn	Sn	10 31 36.4	-1.5
	SNR=1.0						
AVF				eSg	Sg	10 31 49.4	-0.3
	comp=Z,2.9nm,0.2s,SNR=1.0						
AVF	Avril sur Loir	2.69	237	ePn	Pn	10 31 05.9	+0.2
AVF				ePg	Pg	10 31 14.2	-0.6
AVF				eSn	Sn	10 31 36.4	-1.5
AVF				eSg	Sg	10 31 49.4	-0.3
LPL	La Plagne	2.81	178	ePg	Pg	10 31 15.8	-1.1
	SNR=1.0						
LPL				eSg	Sg	10 31 52.6	-0.7
	comp=Z,3.0nm,0.3s						
LPL	La Plagne	2.81	178	ePg	Pg	10 31 15.8	-1.1
	SNR=1.0						
LPL				eSg	Sg	10 31 52.6	-0.7
	comp=Z,1.5nm,0.3s						
LPG	La Plagne	2.83	178	ePg	Pg	10 31 16.9	-0.4
LPG				eSg	Sg	10 31 53.6	-0.3
	comp=Z,3.1nm,0.2s						
LPG	La Plagne	2.83	178	ePg	Pg	10 31 16.9	-0.4
LPG				eSg	Sg	10 31 53.6	-0.3
	comp=Z,1.5nm,0.2s						
FETA	Feichten	3.06	114	⇑iSg	Sg	10 32 01.6	+0.1
	comp=Z,2.9nm,0.6s						
BGF	Bois d'Agland	3.11	237	ePg	Pg	10 31 21.9	-0.9
	SNR=1.0						
BGF				eSg	Sg	10 32 00.7	-2.4
	comp=Z,21nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	3.11	237	ePg	Pg	10 31 21.9	-0.9
	SNR=1.0						
BGF				eSg	Sg	10 32 00.7	-2.4
	comp=Z,10nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	3.11	237	ePn	Pn	10 31 11.3	-0.1
BGF				ePg	Pg	10 31 21.9	-0.9
BGF				eSg	Sg	10 32 00.7	-2.4
MOTA	Moosalm	3.17	106	⇓iPn	Pn	10 31 19.8	+7.5
MOTA				⇓iSg	Sg	10 32 04.1	-0.8
	comp=Z,4.1nm,0.4s						
ORIF	Oris-en-Rattie	3.44	189	ePn	Pn	10 31 16.3	+0.3
	SNR=1.0						
ORIF				eSg	Sg	10 32 13.5	-0.2
	comp=Z,4.6nm,0.3s						
ORIF	Oris-en-Rattie	3.44	189	ePn	Pn	10 31 16.3	+0.3
	SNR=1.0						
ORIF				eSg	Sg	10 32 13.5	-0.2
	comp=Z,2.3nm,0.3s						
MBDF	Montbardon	3.60	178	eSg	Sg	10 32 16.9	-1.7
	comp=Z,0.6nm,0.2s						
MBDF	Montbardon	3.60	178	eSg	Sg	10 32 16.9	-1.7
	comp=Z,0.3nm,0.2s						
TCF	Toulx Ste Croi	3.63	238	ePg	Pg	10 31 32.4	-0.2
	SNR=1.0						
TCF				eSg	Sg	10 32 17.9	-1.7
	comp=Z,4.4nm,0.2s,SNR=1.0						
TCF	Toulx Ste Croi	3.63	238	ePg	Pg	10 31 32.4	-0.2
	SNR=1.0						
TCF				eSg	Sg	10 32 17.9	-1.7
	comp=Z,2.2nm,0.2s,SNR=1.0						
TCF	Toulx Ste Croi	3.63	238	ePn	Pn	10 31 18.4	-0.1
TCF				ePg	Pg	10 31 32.4	-0.2
TCF				eSg	Sg	10 32 17.9	-1.7
VIVF	Saint-Julien-l	3.72	202	eSg	Sg	10 32 19.3	-3.2
	comp=Z,7.7nm,0.4s,SNR=1.0						
VIVF	Saint-Julien-l	3.72	202	eSg	Sg	10 32 19.3	-3.2
	comp=Z,3.8nm,0.4s,SNR=1.0						
RJF	Les Rejaudoux	4.63	231	eSg	Sg	10 32 51.2	-0.4
	comp=Z,4.2nm,0.3s,SNR=1.0						
RJF	Les Rejaudoux	4.63	231	eSg	Sg	10 32 51.2	-0.4
	comp=Z,2.1nm,0.3s,SNR=1.0						
CLL	Collm	5.10	52	eSg	Sg	10 33 12.0	+5.4
MTLF	Montolieu	5.86	213	eSg	Sg	10 33 28.3	-2.7
	comp=Z,6.5nm,1.0s,SNR=1.0						
MTLF	Montolieu	5.86	213	eSg	Sg	10 33 28.3	-2.7
	comp=Z,3.2nm,1.0s,SNR=1.0						
QUIF	Quistinic	6.57	270	ePn	Pn	10 31 57.8	-1.0
ROSF	Rostrenen	6.60	274	ePn	Pn	10 31 56.8	-2.5
	SNR=1.0						

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*ISCJB **05** 10:52:38.0±5.6, 184N±0.1×1475E±05, h41km±40km, mb3.7/5, Error ellipse: s-maj=74.6km s-min=22.5km az=1.9*
*IDC **05** 10:52:41.2±8.1, 1838N×14745E, h49km±59km, mb3.5/5, mb1 3.7/6, mb1mx3.5/18, mbtmp3.6/6, ML4.0/1, Error ellipse: s-maj=99.2km s-min=20.7km az=83.0*
ISC 05 10:52:39.1±5.4, **184N**±01×**1477E**±05, **h38**km±39km, **n7**, σ**0ˢ54**/8, **mb3.7**/5, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.49	210	P	Pn	10 53 58.5	0.0
	5.5nm,0.3s,baz=76,slow=14,SNR=5.6						
GUMO				S	Sn	10 55 00.3	0.0
	1.8nm,0.3s,baz=27,slow=16,SNR=1.8						
WRA	Warramunga Arr	40.28	200	P	P	11 00 12.6	-0.2
	3.2nm,1.1s,mb4.0,baz=19,slow=8.1,SNR=12						
FITZ	Fitzroy Crossi	42.25	212	P	P	11 00 28.9	0.0
	0.7nm,0.6s,mb3.4,baz=38,slow=15,SNR=2.3						
ASAR	Alice Springs	43.91	198	P	P	11 00 42.4	+0.1
	0.5nm,0.6s,mb3.4,baz=19,slow=8.4,SNR=10						
ZALV	Zalesovo Beam	59.40	322	P	P	11 02 36.8	-0.8
	0.4nm,0.4s,mb3.8,baz=90,slow=5.8,SNR=3.4						
MKAR	Makanchi Array	60.03	314	P	P	11 02 42.3	+0.2
	0.5nm,0.7s,mb3.7,baz=102,slow=10,SNR=3.3						
BVAR	Borovoye Array	67.91	321	P	P	11 03 34.4	+0.6
	baz=83,slow=4.5						

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*IDC **05** 10:53:03.8±0.6, 1383S×7681W, h0km, mb4.7/15, mb1 4.7/20, mb1mx4.7/23, mbtmp4.6/20, ML3.8/4, MS4.3/21, Ms1 4.3/21, ms1mx4.2/32, Error ellipse: s-maj=18.6km s-min=10.0km az=82.0*
*ISCJB **05** 10:53:07.0±0.2, 1390S±004×7683W±005, h33km, mb5.0/55, MS4.5/133, Error ellipse: s-maj=7.2km s-min=4.1km az=146.1*
*MOS **05** 10:53:08.0±0.9, 1377S×7678W, h37km, mb5.2/12, MS4.3/22, Error ellipse: s-maj=16.7km s-min=6.9km az=119.5*
*NEIC **05** 10:53:09.3±0.2, 1388S×7676W, h35km, mb5.1/41, ML5.2(LIM), Error ellipse: s-maj=7.1km s-min=3.7km az=55.0*
NEIC Felt [III] at Calango, Chillca, Lima and Mala. Also felt at Canete, Chincha, Ica and Pisco.
*BJI **05** 10:53:09.3, 1390S×7680W, h35km, mB5.2, Ms5.1, Msz4.9*
ISC 05 10:53:05.3±2.1, **1390S**±004×**7678W**±005, **h7**km±13km, **n624**, σ**0ˢ51**/520, **mb5.0**/55, **MS4.5**/133, **184C-163D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	1.90	358	Pn	Pn	10 53 36.0	-2.0
	245nm,0.3s,baz=183,slow=12,SNR=148						
NNA				Sn	Sn	10 54 03.3	+1.1
	6μm,0.3s,baz=270,slow=11,SNR=26						
NNA				LR	LR	10 54 04.9	
	comp=Z,6μm,18.3s,baz=179,slow=33						
NNA	Nana	1.90	358	ePn	Pn	10 53 36.5	-1.5
ARE	Arequipa	5.70	117	eP	Pn	10 54 30.0	-0.4
ARE				eS	Sn	10 55 56.0	+20
ATAH	Atahualpa	7.04	347	Pn	Pn	10 54 47.8	-0.9
	16nm,0.3s,baz=170,slow=4.5,SNR=92						
ATAH				Sn	Sn	10 56 05.0	-4.0
	baz=66,slow=19,SNR=1.5						
ATAH				LR	LR	10 56 52.0	
	comp=Z,791nm,21.6s,baz=26,slow=33						
LPAZ	La Paz	8.68	107	Pn	Pn	10 55 15.7	+4.4
	1.3nm,0.3s,baz=275,slow=9.2,SNR=41						
LPAZ				LR	LR	10 58 07.5	
	comp=Z,643nm,18.5s,baz=281,slow=35						
LPAZ	La Paz	8.68	107	Pn	Pn	10 55 15.7	+4.4
LPAZ				LR	LR	10 58 07.5	
LVC	Limon Verde	11.44	140	Pn	Pn	10 55 49.4	+0.3
	2.0nm,0.3s,baz=300,slow=11,SNR=17						
LVC				Sn	Sn	10 57 53.3	-3.9
	2.8nm,0.3s,baz=352,slow=19,SNR=5.1						
LVC				Lg		10 58 55.1	
	0.7nm,0.3s,baz=248,slow=20,SNR=3.1						
LVC	Limon Verde	11.44	140	ePn	Pn	10 55 49.2	+0.1
OTAV	Otavalo	14.14	353	ePn	Pn	10 56 28.2	+2.2
SIV	San Ignacio	15.32	100	Pn	Pn	10 56 40.7	-1.3
	0.5nm,0.3s,baz=276,slow=11,SNR=13						
SIV				Sn	Sn	10 59 39.7	+7.7
	0.7nm,0.3s,baz=232,slow=15,SNR=3.3						
SIV				Lg		11 01 08.1	
	0.8nm,0.3s,baz=226,slow=23,SNR=3.0						
LCO	Las Campanas	16.06	160	ePn	Pn	10 56 52.9	+1.3
	49nm,1.1s						
ROSC	El Rosal	18.79	8	P	Pn	10 57 25.3	-0.4
	1.7nm,0.3s,baz=73,slow=19,SNR=3.8						
ROSC				S	Sn	11 01 07.3	+11
	1.2nm,0.3s,baz=68,slow=18,SNR=2.2						
ROSC				LR	LR	11 04 52.4	
	comp=Z,550nm,18.4s,baz=192,slow=38						
CFAA	Coronel Fontan	19.29	157	P	Pn	10 57 32.1	+0.4
	0.1nm,0.3s,baz=330,slow=12,SNR=20						
CFAA				LR	LR	11 04 10.6	
	comp=Z,148nm,18.3s,baz=345,slow=34						
CPUP	Villa Florida	22.02	127	P	P	10 58 01.5	+1.2
	14nm,0.9s,mb4.4,baz=286,slow=11,SNR=16						
CPUP				LR	LR	11 07 17.2	
	comp=Z,284nm,19.6s,MS3.7,baz=282,slow=39						
BCIP	Isla Barro Col	23.11	352	eP	P	10 58 13.3	+1.3
	67nm,1.0s,mb5.0						
BCIP				LR	LR		
	comp=Z,883nm,20.0s,MS4.2						
SDV	Santo Domingo	23.44	15	P	P	10 58 16.0	+0.6
	comp=Z,17nm,0.4s,mb4.8,baz=221,slow=9.9,SNR=5.6						
SDV				S	S	11 02 30.8	+1.8
	comp=Z,11nm,0.4s,baz=252,slow=20,SNR=2.0						
SDV	Santo Domingo	23.44	15	eP	P	10 58 16.6	+1.2
SDV				S	S	11 02 30.8	+1.8
SDV				LR	LR		
	comp=Z,319nm,19.0s,MS3.8						
PCRV	Puerto La Cruz	26.78	27	P	P	10 58 45.7	-0.3
	comp=Z,6.6nm,0.6s,mb4.4,baz=254,slow=7.4,SNR=4.2						
PCRV				S	S	11 03 21.1	-1.2
	comp=Z,5.9nm,0.7s,baz=329,slow=13,SNR=2.4						
PCRV				Lg		11 07 06.3	
	comp=Z,22nm,1.1s,baz=276,slow=17,SNR=4.5						
PCRV				LR	LR	11 09 49.9	
	comp=Z,1μm,18.8s,MS4.5,baz=34,slow=38						
PLCA	Paso Flores	27.28	170	P	P	10 58 50.6	+0.3
	comp=Z,9.9nm,0.8s,mb4.4,baz=334,slow=11,SNR=13						
PLCA				LR	LR	11 07 01.8	
	comp=Z,693nm,20.9s,MS4.2,baz=344,slow=31						
TRQA	Tornquist	27.42	154	PFAKE		10 59 00.0	+8.5
TRQA				LR	LR		
	comp=Z,1μm,19.0s,MS4.5						
BDFB	Brasilia	27.86	97	P	P	10 58 56.2	+0.5
	comp=Z,6.9nm,0.8s,mb4.3,baz=268,slow=10,SNR=6.8						
BDFB				LR	LR	11 09 44.5	
	comp=Z,941nm,20.5s,MS4.4,baz=44,slow=36						
TGUH	Tegucigalpa,Un	29.65	339	PFAKE		10 59 20.0	+8.4
TGUH				LR	LR		
	comp=Z,644nm,21.0s,MS4.2						
GRGR	Grenville	29.89	31	PFAKE		10 59 20.0	+6.3
GRGR				LR	LR		
	comp=Z,1μm,19.0s,MS4.5						
BBGH	Gun Hill	31.82	33	PFAKE		10 59 40.0	+9.2
BBGH				LR	LR		
	comp=Z,2μm,21.0s,MS4.7						
MPR	Mayaguez	33.29	17	eP	P	10 59 44.2	+0.7
SJG	San Juan	33.49	19	eP	P	10 59 45.2	-0.1
SJG				MLR	MLR		
	comp=Z,756nm,22.0s						
AOPR	Arecibo Observ	33.53	17	eP	P	10 59 46.2	+0.5
	comp=Z,22nm,0.9s,mb5.1						
HUMP	Col San Antoni	33.61	19	eP	P	10 59 46.0	-0.4
	comp=Z,16nm,0.8s,mb5.0						
MTP	Monte Pirata	33.66	20	eP	P	10 59 50.8	+4.0
CBYP	Canovanas	33.73	19	eP	P	10 59 48.0	+0.6
	comp=Z,36nm,1.2s,mb5.2						
TEIG	Tepich	35.74	341	eP	P	11 00 06.0	+1.2
	comp=Z,19nm,0.7s,mb5.1						
TEIG				LR	LR		
	comp=Z,522nm,20.0s,MS4.3						
USHA	Ushuaia	41.36	173	P	P	11 00 51.1	-0.6
	comp=Z,8.9nm,0.9s,mb4.4,baz=328,slow=9.5,SNR=3.8						
DWPF	Disney	42.00	354	PFAKE		11 01 10.0	+13
DWPF				LR	LR		
	comp=Z,380nm,19.0s,MS4.3						
KVTX	Kingsville	46.01	334	eP	P	11 01 36.8	+7.4
NHSC	New Hope	46.85	356	PFAKE		11 01 50.0	+14
NHSC				LR	LR		
	comp=Z,506nm,19.0s,MS4.5						

HKT Hockley 47.30 337 PFAKE 11 01 50.0 +10
HKT LR LR
comp=Z,222nm,21.0s,MS4.1
BBSR BB Station 47.44 14 PFAKE 11 01 50.0 +9.5
BBSR LR LR
comp=Z,432nm,22.0s,MS4.4
GOGA Godfrey 47.47 352 PFAKE 11 01 50.0 +9.2
GOGA LR LR
comp=Z,361nm,21.0s,MS4.3
VBMS Vicksburg 47.70 344 PFAKE 11 01 50.0 +7.4
VBMS LR LR
comp=Z,228nm,19.0s,MS4.2
NATX Nacogdoches 48.53 340 PFAKE 11 02 00.0 +11
NATX LR LR
comp=Z,327nm,21.0s,MS4.3
CNNC Cliffs of the 48.88 359 PFAKE 11 02 00.0 +8.4
CNNC LR LR
comp=Z,351nm,21.0s,MS4.3
JCT Junction City 49.37 334 *eP* **P 11 01 55.3 -0.2**
JCT pmax pmax
comp=Z,18nm,1.2s,mb5.0
JCT Junction City 49.37 334 *eP* **P 11 01 55.3 -0.2**
comp=Z,18nm,1.2s,mb5.0
OXF Oxford 49.62 346 PFAKE 11 02 10.0 +13
OXF LR LR
comp=Z,262nm,20.0s,MS4.2
TKL Tuckaleechee C 49.73 353 *eP* **P 11 01 56.5 -1.6**
PLAL Pickwick Lake 49.78 348 *eP* **P 11 01 56.6 -1.9**
PLAL LR LR
comp=Z,221nm,19.0s,MS4.2
TXAR Lajitas Array 50.21 329 P **P 11 02 01.4 -0.5**
comp=Z,4.0nm,0.8s,mb4.5,baz=148,slow=9.0,SNR=43
TXAR Lajitas Array 50.21 329 P **P 11 02 01.4 -0.5**
TZTN Tazewell 50.57 353 *eP* **P 11 02 08.5 +4.0**
comp=Z,19nm,0.9s,mb5.0
TZTN LR LR
comp=Z,381nm,19.0s,MS4.4
MIAR Mount Ida 50.75 342 *eP* **P 11 02 06.3 +0.4**
MIAR pmax pmax
comp=Z,13nm,0.9s,mb4.9
MIAR MLR MLR
comp=Z,231nm,19.0s,MS4.2
MIAR Mount Ida 50.75 342 *eP* **P 11 02 06.3 +0.4**
comp=Z,13nm,0.9s,mb4.9
MIAR LR LR
comp=Z,231nm,19.0s,MS4.2
BLA Blacksburg 50.95 356 PFAKE 11 02 20.0 +13
BLA LR LR
comp=Z,394nm,19.0s,MS4.5
URVA University of 51.20 359 *eP* **P 11 02 08.8 -0.4**
PMSA Palmer Station 51.57 173 *eP* **P 11 02 12.0 +0.3**
comp=Z,11nm,1.0s,mb4.7
WCI Wyandotte Cave 52.61 351 *eP* **P 11 02 18.1 -1.6**
WCI pmax pmax
comp=Z,19nm,1.0s,mb5.0
WCI MLR MLR
comp=Z,283nm,21.0s,MS4.3
WCI Wyandotte Cave 52.61 351 *eP* **P 11 02 18.1 -1.7**
comp=Z,19nm,1.0s,mb5.0
WCI LR LR
comp=Z,283nm,21.0s,MS4.3
SIUC Southern Illin 52.65 348 *eP* **P 11 02 19.2 -0.8**
comp=Z,26nm,0.8s,mb5.2
WMOK Wichita Mounta 52.69 337 PFAKE 11 02 30.0 +10
WMOK LR LR
comp=Z,195nm,22.0s,MS4.1
GDL2 Guadalupe Moun 52.91 331 *eP* **P 11 02 22.5 +0.4**
SDMD Soldier's Deli 53.03 360 *eP* **P 11 02 22.7 -0.1**
comp=Z,21nm,0.8s,mb5.1
FVM French Village 53.17 347 *eP* **P 11 02 23.2 -0.7**
MCWV Mont Chateau 53.35 357 PFAKE 11 02 40.0 +15
MCWV LR LR
comp=Z,497nm,20.0s,MS4.6
OLIL Olney 53.41 349 *eP* **P 11 02 23.9 -1.8**
comp=Z,34nm,1.0s,mb5.2
BLO Bloomington 53.57 351 *eP* **P 11 02 25.2 -1.6**
BLO pmax pmax
comp=Z,31nm,1.1s,mb5.2
BLO Bloomington 53.57 351 *eP* **P 11 02 25.2 -1.6**
comp=Z,31nm,1.1s,mb5.2
MVL Millersville 53.62 0 *eP* **P 11 02 18.5 -8.6**
comp=Z,36nm,1.1s,mb5.2
ACSO Alum Creek Sta 54.16 354 *eP* **P 11 02 34.5 +3.4**
ACSO LR LR
comp=Z,365nm,19.0s,MS4.5
319A Douglas 54.77 326 ⇓P **P 11 02 35.7 0.0**
baz=55,SNR=9.1
219A White Tail Can 55.24 326 ⇓P **P 11 02 39.1 0.0**
baz=55,SNR=10
BNM Barren Site 55.59 330 *eP* **P 11 02 41.4 -0.2**
RKT Rikitea 55.65 251 *eLR* LR 11 18 52.6
comp=Z,424nm,24.0s
218A Dragoon 55.65 326 ⇑P **P 11 02 42.2 +0.1**
baz=56,SNR=7.9
BRYW Bryant College 55.74 5 *eP* **P 11 02 48.0 +5.5**
LENM Lemitar 55.77 330 *eP* **P 11 02 43.0 +0.1**
BINY Binghamton 55.82 1 *eP* **P 11 02 43.0 0.0**
comp=Z,31nm,1.0s,mb5.3
BINY LR LR
comp=Z,241nm,19.0s,MS4.3
119A Ashpeak Ranch, 55.85 327 ⇑P **P 11 02 43.6 +0.1**
baz=56
KSU1 Kansas State U 55.88 341 PFAKE 11 03 00.0 +16
KSU1 LR LR
comp=Z,246nm,21.0s,MS4.3
217A Green Valley 55.92 325 ⇓P **P 11 02 44.0 -0.1**
baz=56
LAZ Ladron 56.04 330 *eP* **P 11 02 45.3 +0.5**
118A Homack Ranch, 56.11 326 ⇓P **P 11 02 45.4 0.0**
baz=56,SNR=8.2
ANMO Albuquerque 56.16 331 *eP* **P 11 02 45.1 -0.5**
ANMO pmax pmax
comp=Z,19nm,1.0s
ANMO MLR MLR
comp=Z,115nm,20.0s
ANMO Albuquerque 56.16 331 *eP* **P 11 02 45.1 -0.6**
comp=Z,19nm,1.0s,mb5.1
ANMO LR LR
comp=Z,115nm,20.0s,MS4.0
WES Weston 56.22 5 *eP* **P 11 02 52.5 +6.5**
WES MLR MLR
comp=Z,474nm,20.0s,MS4.6
Z19A T-Link Ranch, 56.24 327 ⇓P **P 11 02 46.4 +0.1**
baz=56
TUC Tucson 56.31 325 *eP* **P 11 02 46.0 -0.8**
TUC MLR MLR
comp=Z,382nm,21.0s,MS4.5
HRV Adam Dziewonsk 56.33 5 *eP* **P 11 02 52.3 +5.6**
HRV MLR MLR
comp=Z,344nm,21.0s,MS4.4
216A Three Points, 56.45 325 ⇑P **P 11 02 47.6 -0.2**
baz=57,SNR=5.3
117A Oracle 56.48 326 ⇓P **P 11 02 47.8 -0.2**
baz=57,SNR=12
Z18A Geronimo 56.49 326 ⇓P **P 11 02 48.0 0.0**
baz=57
CBKS Cedar Bluff 56.66 339 PFAKE 11 03 00.0 +11
CBKS LR LR
comp=Z,235nm,20.0s,MS4.3
Y19A Nutrioso 56.75 328 ⇓P **P 11 02 50.2 +0.2**
baz=57,SNR=8.3
Z17A San Carlos Hig 56.89 326 ⇓P **P 11 02 50.7 -0.2**
baz=57
116A Eloy 57.01 325 ⇑P **P 11 02 51.7 0.0**
baz=57,SNR=5.5
Y18A Canyon Day Jun 57.02 327 ⇑P **P 11 02 51.7 -0.1**
baz=57,SNR=5.6
ACCN Adirondack Com 57.07 3 *eP* **P 11 02 54.3 +2.3**
X19A St. Johns 57.14 328 ⇑P **P 11 02 52.7 0.0**
baz=57
214A Organ Pipe Nat 57.19 323 ⇓P **P 11 02 52.9 -0.2**
baz=57
Y17A Roosevelt 57.39 326 ⇓P **P 11 02 54.2 -0.3**
baz=58
115A Sonoran Desert 57.41 325 ⇑P **P 11 02 54.6 0.0**
baz=58
Z16A Peralta Trail, 57.44 326 ⇑P **P 11 02 54.7 -0.1**
baz=58
HNH Hanover 57.47 4 *eP* **P 11 02 56.2 +1.4**
SCIA State Center 57.56 346 PFAKE 11 03 10.0 +15
SCIA LR LR
comp=Z,239nm,21.0s,MS4.3
X18A Snowflake 57.56 328 ⇑P **P 11 02 55.5 -0.1**
baz=58
NCB Newcomb 57.63 2 *eP* **P 11 03 01.2 +5.3**
comp=Z,26nm,1.3s,mb5.1
NCB LR LR
comp=Z,261nm,20.0s,MS4.3
MDV Middlebury 57.71 3 *eP* **P 11 02 57.2 +0.7**
W19A Sanders 57.73 328 ⇑P **P 11 02 56.8 +0.1**
baz=58
Z15A Gila River Ind 57.80 325 ⇑P **P 11 02 57.6 +0.3**
baz=58
X17A Forest Lakes 57.86 327 ⇑P **P 11 02 58.2 +0.5**
baz=58,SNR=10
JFWS Jewell Farm 57.87 348 PFAKE 11 03 10.0 +12
JFWS LR LR
comp=Z,351nm,19.0s,MS4.5
Y16A Circle Bar Ran 57.88 326 ⇓P **P 11 02 57.9 +0.1**
baz=58
W18A Petrified Fore 57.91 328 ⇑P **P 11 02 58.1 +0.1**
baz=58
SDCO Great Sand Dun 58.02 333 *eP* **P 11 02 58.7 -0.1**
comp=Z,23nm,1.0s,mb5.2
SDCO LR LR
comp=Z,283nm,19.0s,MS4.4
LBNH Lisbon 58.02 4 *eP* **P 11 02 56.4 -2.3**
LBNH pmax pmax
comp=Z,30nm,1.0s,mb5.3
LBNH MLR MLR
comp=Z,388nm,19.0s,MS4.5
LBNH Lisbon 58.02 4 *eP* **P 11 02 56.4 -2.2**
comp=Z,30nm,1.0s,mb5.3
LBNH LR LR
comp=Z,388nm,19.0s,MS4.5
V19A Window Rock 58.03 329 ⇑P **P 11 02 58.9 0.0**
baz=58
X16A Lo Mia Camp, P 58.26 326 ⇓P **P 11 03 00.7 +0.1**
baz=58,SNR=6.4
LONY Lake Ozonia 58.27 2 *eP* **P 11 03 05.5 +5.2**
comp=Z,25nm,1.3s,mb5.1
LONY LR LR
comp=Z,394nm,19.0s,MS4.5
Z14A Wintersburg 58.30 325 ⇓P **P 11 03 00.8 -0.1**
baz=58
113A Mohawk Valley, 58.34 323 ⇑P **P 11 03 00.8 -0.3**
baz=58
W17A Winslow 58.38 327 ⇓P **P 11 03 01.3 -0.1**
baz=59
Y15A Casa Rosa Ranc 58.40 325 ⇑P **P 11 03 01.4 -0.1**
baz=59
V18A Ganado 58.47 329 ⇓P **P 11 03 01.4 -0.6**
baz=59
FRNY Flat Rock 58.52 3 *eP* **P 11 03 02.0 -0.1**
X15A Humboldt 58.74 326 ⇓P **P 11 03 03.9 0.0**
baz=59,SNR=7.4
Y14A Wickenburg 58.76 325 ⇓P **P 11 03 03.9 -0.1**
baz=59
W16A Flagstaff 58.83 327 ⇑P **P 11 03 04.7 +0.2**
baz=59
GLMI Grayling 58.87 353 PFAKE 11 03 20.0 +15
GLMI LR LR
comp=Z,571nm,21.0s,MS4.7
T19A Beclabito 58.90 330 ⇓P **P 11 03 04.5 -0.4**
baz=59
MVCO Mesa Verde 58.95 331 ⇑P **P 11 03 04.8 -0.5**
baz=59
MVCO Mesa Verde 58.95 331 PFAKE 11 03 20.0 +15
MVCO LR LR
comp=Z,197nm,19.0s,MS4.2
U18A Rough Rock, Ch 58.99 329 ⇑P **P 11 03 05.3 -0.3**
baz=59
WUAZ Wupatki 59.06 327 ⇓P **P 11 03 06.1 -0.1**
baz=59
WUAZ Wupatki 59.06 327 *eP* **P 11 03 06.9 +0.7**
WUAZ LR LR
comp=Z,116nm,20.0s,MS4.0
X14A Yava 59.09 325 ⇓P **P 11 03 06.7 +0.4**
baz=59,SNR=12
Y13A Salome 59.13 324 ⇓P **P 11 03 06.7 0.0**
baz=59
GLA Glamis 59.16 323 ⇓P **P 11 03 06.7 -0.2**
baz=59
PKME Peaks-Kenny Pk 59.27 6 *eP* **P 11 03 08.2 +0.9**
PKME LR LR
comp=Z,319nm,20.0s,MS4.5
W15A Williams 59.28 326 ⇓P **P 11 03 08.0 +0.4**
baz=60
U16A Tuba City 59.42 328 ⇓P **P 11 03 08.6 0.0**
baz=60
Y12C Blythe 59.48 324 ⇑P **P 11 03 08.8 -0.2**
baz=60
U17A Shonto 59.53 329 ⇓P **P 11 03 09.2 -0.1**
baz=60,SNR=7.6
T18A Mexican Hat 59.56 330 ⇓P **P 11 03 09.1 -0.4**
baz=60,SNR=13
DVTC Desert V Tower 59.63 322 ⇑P **P 11 03 10.4 +0.2**
baz=60
PDMCI Parker Dam,Lak 59.66 324 ⇓P **P 11 03 10.0 -0.2**
baz=60
S19A Harvy Farm, M 59.68 331 ⇓P **P 11 03 10.0 -0.4**
baz=60,SNR=11
V15A Kaibab Nationa 59.71 327 ⇑P **P 11 03 11.2 +0.6**
baz=60,SNR=7.3
W14A Seligman 59.75 326 ⇑P **P 11 03 11.2 +0.4**
baz=60,SNR=7.7
ISCO Idaho Springs 59.79 335 *eP* **P 11 03 10.7 -0.3**
ISCO MLR MLR
comp=Z,191nm,21.0s,MS4.2
T17A Navajo Res., N 59.91 329 ⇓P **P 11 03 12.3 +0.4**
baz=60,SNR=11
BC3 Big Chuckw Mtn 59.95 323 ⇓P **P 11 03 12.2 -0.1**
baz=60
S18A Hurst Farm, Bl 60.05 330 ⇑P **P 11 03 12.8 -0.1**
baz=60,SNR=11
V14A Boquillas Ranc 60.07 326 ⇑P **P 11 03 13.8 +0.7**
baz=60,SNR=9.4
W13A Hualapai Mount 60.10 325 ⇑P **P 11 03 13.8 +0.5**
baz=60,SNR=6.9
IRM Iron Mountain 60.14 324 ⇓P **P 11 03 13.8 +0.3**
baz=60,SNR=6.6
ECSD EROS,Sioux Fal 60.15 344 *eP* **P 11 03 12.1 -1.4**
comp=Z,28nm,1.1s,mb5.2
ECSD LR LR
comp=Z,153nm,20.0s,MS4.1
R19A Curley Farm, L 60.18 331 ⇑P **P 11 03 13.0 -0.7**
baz=60,SNR=6.7
U15A North Rim 60.24 327 ⇑P **P 11 03 14.6 +0.4**
baz=60,SNR=8.8
T16A Glen Canyon Da 60.26 328 ⇑P **P 11 03 14.2 -0.1**
baz=60
S17A Black Ridge (B 60.41 329 ⇑P **P 11 03 15.1 -0.2**
baz=61
PFO Pinyon Flat Ob 60.51 322 *eP* **P 11 03 17.2 +1.1**
PFO pmax pmax
comp=Z,16nm,1.3s,mb5.0
PFO Pinyon Flat Ob 60.51 322 ⇓P **P 11 03 16.1 0.0**
baz=61
PFO Pinyon Flat Ob 60.51 322 *eP* **P 11 03 17.2 +1.1**
comp=Z,16nm,1.3s,mb5.0
BELC Belle Mtn. 60.52 323 ⇑P **P 11 03 16.1 -0.1**
baz=61
R18A Canyonlands Na 60.55 330 ⇓P **P 11 03 15.7 -0.6**
baz=61
U14A Mt Trumbull 60.70 327 ⇓P **P 11 03 17.6 +0.2**
baz=61,SNR=8.4
Q19A Hogan Spring (60.71 331 ⇑P **P 11 03 17.0 -0.4**
baz=61,SNR=7.0
V13A Grand Canyon W 60.71 326 ⇓P **P 11 03 17.7 +0.2**
baz=61,SNR=8.7
T15A Red Dirt Ranch 60.73 328 ⇓P **P 11 03 17.7 +0.1**
baz=61,SNR=9.9
COWI Conover 60.75 350 PFAKE 11 03 30.0 +13
COWI LR LR
comp=Z,314nm,20.0s,MS4.5
W12A Cal Nev Ari 60.80 325 ⇑P **P 11 03 18.3 +0.2**
baz=61
S16A Weppner Ranch, 60.87 329 ⇑P **P 11 03 18.2 -0.3**
baz=61,SNR=11
GMRC Granite Mounta 60.88 324 ⇑P **P 11 03 18.9 +0.3**
baz=61
R17A Hanksville Air 60.97 330 ⇑P **P 11 03 18.9 -0.3**
baz=61,SNR=12
V12A Nelson 61.10 325 ⇑P **P 11 03 20.0 -0.1**
baz=61
U13A Pakoon Wash 61.12 326 ⇓P **P 11 03 20.3 +0.1**
baz=61
P19A Cripple Cowboy 61.12 332 ⇑P **P 11 03 19.7 -0.5**
baz=61,SNR=11
T14A Hurricane 61.13 327 ⇓P **P 11 03 20.7 +0.4**
baz=61
S15A Panguitch 61.22 328 ⇓P **P 11 03 21.2 +0.3**
baz=61
Q18A Rafter H Ranch 61.23 331 ⇑P **P 11 03 20.8 -0.2**
baz=62,SNR=8.0
BBRC Big Bear Sol-O 61.24 322 ⇓P **P 11 03 21.4 +0.3**
baz=61
R16A Teasdale 61.25 329 ⇓P **P 11 03 21.1 0.0**
baz=62
HEC Hector,Ludlow 61.30 323 ⇓P **P 11 03 21.8 +0.4**
baz=62
SRU San Rafael 61.43 331 ⇓P **P 11 03 21.9 -0.4**
baz=62
SRU San Rafael 61.43 331 *eP* **P 11 03 22.4 +0.1**
U12A Valley of Fire 61.44 326 ⇓P **P 11 03 22.6 +0.1**
baz=62
TUQ Turquoise Moun 61.49 324 ⇑P **P 11 03 22.7 -0.1**
baz=62
V11A Goodsprings 61.51 325 ⇓P **P 11 03 22.9 +0.1**
baz=62
T13A Saint George 61.54 327 ⇓P **P 11 03 23.5 +0.4**
baz=62
CIS Catalina Islan 61.55 321 ⇓P **P 11 03 23.4 +0.2**
baz=62
Q16A Castle Valley 61.59 330 ⇑P **P 11 03 23.4 +0.1**
baz=62,SNR=7.0
R15A Junction 61.59 329 ⇑P **P 11 03 23.4 +0.1**
baz=62
BFSC Mount Baldy St 61.67 322 ⇑P **P 11 03 24.1 +0.1**
baz=62
S14A Cedar City 61.70 328 ⇓P **P 11 03 24.5 +0.4**
baz=62
P18A Preston Nutter 61.70 331 ⇓P **P 11 03 23.8 -0.3**
baz=62
O19A Miners Draw (B 61.72 332 ⇓P **P 11 03 23.9 -0.3**
baz=62,SNR=9.3
T12A Moapa 61.76 326 ⇑P **P 11 03 24.3 -0.3**
baz=62
MSU Marysvale 61.77 329 *eP* **P 11 03 25.2 +0.6**
MVU Marysvale 61.78 329 PFAKE 11 03 40.0 +15
MVU LR LR
comp=Z,241nm,19.0s,MS4.4
P17A Butcher Ranch, 61.82 331 ⇓P **P 11 03 24.4 -0.4**
baz=62
SHPR Sheep Range 61.84 325 *eP* **P 11 03 25.4 +0.3**
MWC Mount Wilson 61.90 322 *eP* **P 11 03 26.8 +1.3**
GSC Goldstone 61.91 323 ⇑P **P 11 03 25.8 +0.3**
baz=62
GSC Goldstone 61.91 323 *eP* **P 11 03 26.2 +0.7**
GSC LR LR
comp=Z,181nm,19.0s,MS4.2
S13A Holt Ranch, En 61.93 327 ⇑P **P 11 03 26.3 +0.6**
baz=62,SNR=16
RWWY Rawlins 62.03 335 *eP* **P 11 03 26.0 -0.2**
comp=Z,21nm,1.0s,mb5.2
O18A Roosevelt 62.10 332 ⇑P **P 11 03 26.8 0.0**
baz=62
N19A John Jarvie Ra 62.23 333 ⇓P **P 11 03 27.0 -0.6**
baz=62,SNR=15
Q15A Fillmore 62.25 329 ⇑P **P 11 03 27.7 -0.1**
baz=62,SNR=8.3
EDW2 Edwards Air Fo 62.31 322 ⇓P **P 11 03 27.8 -0.5**
baz=62
P16A Fountain Green 62.36 330 ⇑P **P 11 03 28.8 +0.2**
baz=63
O17A Robinson Place 62.38 331 ⇑P **P 11 03 28.6 0.0**
baz=63,SNR=9.6
T11A Corn Creek, Al 62.41 326 ⇓P **P 11 03 29.3 +0.5**
baz=63,SNR=12
U10A Ash Meadows, A 62.43 325 ⇑P **P 11 03 29.3 +0.3**
baz=63
R13A O'Grain Ranch, 62.44 327 ⇑P **P 11 03 29.4 +0.3**
baz=63,SNR=9.4
S12A Delamar Landin 62.48 326 ⇓P **P 11 03 29.7 +0.3**
baz=63
N18A Larsen Ranch, 62.52 332 ⇓P **P 11 03 28.9 -0.6**
baz=63,SNR=9.9
P15A Leamington 62.64 330 ⇑P **P 11 03 30.5 +0.1**
baz=63
MPU Maple Canyon 62.67 330 *eP* **P 11 03 30.9 +0.4**
MPU LR LR
comp=Z,1µm,19.0s,MS5.1
Q14A Sevier Lake (B 62.69 329 ⇑P **P 11 03 31.1 +0.4**
baz=63,SNR=15
BSC Santa Cruz Isl 62.70 321 ⇓P **P 11 03 30.7 -0.3**
baz=63
O16A Springville 62.76 331 ⇑P **P 11 03 31.0 -0.2**
baz=63,SNR=6.9
TPNV Topopah Spring 62.76 325 *eP* **P 11 03 32.1 +0.8**
TPNV pmax pmax
comp=Z,11nm,0.9s,mb5.0
TPNV MLR MLR
comp=Z,192nm,19.0s,MS4.3
TPNV Topopah Spring 62.76 325 ⇑P **P 11 03 31.4 +0.2**
baz=63
TPNV Topopah Spring 62.76 325 *eP* **P 11 03 32.1 +0.8**
comp=Z,11nm,0.9s,mb5.0
TPNV LR LR
comp=Z,192nm,19.0s,MS4.3
FURC Furnace Creek, 62.76 324 ⇓P **P 11 03 31.1 -0.2**
baz=63,SNR=8.4
DAU Daniels Canyon 62.80 331 *eP* **P 11 03 32.2 +0.8**
MPMC Manual Prospec 62.83 324 ⇓P **P 11 03 31.4 -0.4**
baz=63,SNR=9.1
NLU North Lily Min 62.83 330 *eP* **P 11 03 32.9 +1.2**
RSSD Black Hills 62.86 338 *eP* **P 11 03 31.8 +0.1**
R12A Pony Springs, 62.88 327 ⇑P **P 11 03 32.4 +0.3**
baz=63,SNR=13
EYMN Ely 62.95 349 PFAKE 11 03 40.0 +7.8
EYMN LR LR
comp=Z,334nm,20.0s,MS4.5
S11A Rachel 62.99 326 ⇓P **P 11 03 33.3 +0.6**
baz=63
N17A Moffit Pass 63.02 332 ⇑P **P 11 03 33.2 +0.3**
baz=63,SNR=7.9
JLU Jordanelle 63.04 331 *eP* **P 11 03 33.5 +0.5**
P14A Drum Mountains 63.04 329 ⇑P **P 11 03 33.6 +0.5**
baz=63,SNR=8.5
Q13A Wheeler Ranch, 63.04 328 ⇑P **P 11 03 33.4 +0.3**
baz=63,SNR=8.8
DAC Darwin (Calif) 63.05 324 PFAKE 11 03 50.0 +17
DAC LR LR
comp=Z,294nm,19.0s,MS4.5
ISA Isabella 63.13 323 ⇓P **P 11 03 33.8 +0.1**
baz=63
ISA Isabella 63.13 323 *eP* **P 11 03 34.5 +0.7**
N16A Rees Ranch, Co 63.26 331 ⇑P **P 11 03 34.5 0.0**
baz=64,SNR=7.7
O15A The Old Anders 63.28 330 ⇑P **P 11 03 34.5 -0.1**
baz=64
DUG Dugway 63.38 330 ⇑P **P 11 03 35.7 +0.4**
baz=64
DUG Dugway 63.38 330 *eP* **P 11 03 35.6 +0.3**
DUG LR LR
comp=Z,159nm,19.0s,MS4.2
R11A Troy Canyon, C 63.41 327 ⇑P **P 11 03 35.9 +0.4**
baz=64,SNR=11
P13A Bates Ranch, G 63.42 328 ⇑P **P 11 03 36.0 +0.4**
baz=64,SNR=10
GRAC Grapevine Rang 63.43 324 ⇓P **P 11 03 35.8 +0.1**
baz=64
CWC Cottonwood Cre 63.44 323 ⇓P **P 11 03 35.9 +0.1**
baz=64
Q12A Willow Creek R 63.52 328 ⇓P **P 11 03 36.5 +0.2**
baz=64,SNR=12
VES Vestal, Richgr 63.61 322 ⇑P **P 11 03 36.8 -0.2**
baz=64
S10A Tonopah Range, 63.65 326 ⇓P **P 11 03 37.4 +0.2**
baz=64,SNR=12
M16A Huntsville 63.68 331 ⇑P **P 11 03 36.7 -0.5**
baz=64
R10A Warm Springs 63.76 326 ⇓P **P 11 03 38.5 +0.7**
baz=64,SNR=8.3
SMMC Simmler 63.81 321 ⇓P **P 11 03 38.3 +0.1**
baz=64
Q11A Duckwater 63.81 327 ⇑P **P 11 03 38.7 +0.5**
baz=64,SNR=10
S09A Goldfield 63.86 325 ⇑P **P 11 03 38.7 +0.2**
baz=64,SNR=9.0
P12A McGill 63.89 328 ⇑P **P 11 03 39.0 +0.3**
baz=64,SNR=14
O13A Hicks Ranch, I 63.91 329 ⇑P **P 11 03 38.9 +0.1**
baz=64
BW06 Boulder Array 63.91 334 *eP* **P 11 03 38.0 -0.7**
BW06 LR LR
comp=Z,172nm,20.0s,MS4.2
PDAR Pinedale Array 63.91 334 P **P 11 03 38.0 -0.8**
comp=Z,4.0nm,0.9s,mb4.5,baz=142,slow=7.5,SNR=13
RCTC Rector, Farmer 64.03 323 ⇑P **P 11 03 39.4 -0.3**
baz=64
BGU Big Grassy Mou 64.05 330 *eP* **P 11 03 39.0 -0.6**

N14A	Grayback Hills	64.06	330	⇓P	P	11 03 39.5	-0.3
	baz=64,SNR=7.3						
L16A	Fish Haven	64.14	332	⇓P	P	11 03 39.9	-0.4
	baz=64						
R09A	Tonopah	64.14	326	⇓P	P	11 03 40.2	-0.1
	baz=64,SNR=8.0						
HELL	Mitchell Peak	64.15	323	⇑P	P	11 03 40.3	-0.2
	baz=64,SNR=7.4						
M15A	Larsen Ranch,	64.18	331	⇓P	P	11 03 40.0	-0.5
	baz=64						
Q10A	Clear Creek Ra	64.20	326	⇓P	P	11 03 41.4	+0.7
	baz=64,SNR=8.7						
AGMN	Agassiz Refuge	64.20	346	*e*P	P	11 03 39.5	-1.1
S08C	White Mtn Res	64.23	324	⇓P	P	11 03 41.3	+0.3
	baz=64,SNR=8.1						
O12A	Currie	64.40	329	⇑P	P	11 03 42.0	+0.1
	baz=65,SNR=9.9						
N13A	Wendover, West	64.57	329	⇑P	P	11 03 42.8	-0.3
	baz=65						
L15A	Malad City	64.57	331	⇑P	P	11 03 42.3	-0.8
	baz=65,SNR=8.0						
HVU	Hansel Valley	64.58	331	*e*P	P	11 03 42.8	-0.4
AHID	Auburn Hatcher	64.59	333	PFAKE		11 04 00.0	+17
AHID				LR	LR		
	comp=Z,194nm,19.0s,MS4.3						
Q09A	Carvers	64.63	326	⇓P	P	11 03 43.9	+0.3
	baz=65,SNR=6.9						
M14A	Sheep Mountain	64.64	330	⇑P	P	11 03 43.0	-0.6
	baz=65,SNR=11						
MLAC	Mammoth Lakes	64.70	324	⇓P	P	11 03 44.3	+0.2
	baz=65						
O11A	Cowboy Ranch,	64.76	328	⇓P	P	11 03 44.6	+0.2
	baz=65,SNR=8.7						
P10A	Eureka	64.81	327	⇓P	P	11 03 45.3	+0.6
	baz=65,SNR=6.6						
K16A	Soda Springs	64.86	332	⇑P	P	11 03 44.5	-0.4
	baz=65,SNR=11						
M13A	Montello	64.93	330	⇑P	P	11 03 44.7	-0.7
	baz=65						
REDW	Red Top Meadow	64.95	333	*e*P	P	11 03 45.1	-0.5
	comp=Z,26nm,1.4s,mb5.1						
U04C	Hernandez Rese	64.98	322	⇑P	P	11 03 46.1	+0.2
	baz=65						
N12A	Clover Valley,	64.98	329	⇓P	P	11 03 45.6	-0.2
	baz=65						
SNOW	Snow King Moun	64.99	333	*e*P	P	11 03 45.8	0.0
L14A	Malta	65.00	331	⇑P	P	11 03 44.9	-1.0
	baz=65,SNR=8.8						
ELK	Elko	65.00	329	*e*P	P	11 03 46.0	+0.1
ELK				MLR	MLR		
	comp=Z,197nm,19.0s						
Q08A	Gabbs	65.06	325	⇑P	P	11 03 46.3	0.0
	baz=65						
TPAW	Teton Pass	65.10	333	*e*P	P	11 03 46.5	0.0
	comp=Z,14nm,1.3s,mb4.8						
P09A	Austin	65.12	326	⇑P	P	11 03 46.6	-0.1
	baz=65						
RRI2	Red Ridge	65.15	333	*e*P	P	11 03 47.1	+0.3
K15A	Arbon	65.17	332	⇓P	P	11 03 46.8	-0.2
	baz=65						
J16A	Bone	65.22	333	⇓P	P	11 03 47.0	-0.3
	baz=65,SNR=12						
DCID1	Drake Creek	65.28	333	*e*P	P	11 03 48.0	+0.3
N11A	Elko Archery C	65.31	328	⇓P	P	11 03 47.8	-0.1
	baz=66						
O10A	Cortez Mining,	65.32	327	⇑P	P	11 03 48.1	+0.1
	baz=66,SNR=7.7						
M12A	Wells	65.34	329	⇑P	P	11 03 47.6	-0.5
	baz=66,SNR=5.6						
K14A	Jones Ranch, D	65.36	331	⇑P	P	11 03 47.5	-0.7
	baz=66,SNR=9.0						
S05C	Merced	65.37	323	⇑P	P	11 03 48.7	+0.2
	baz=66						
L13A	Double Diamond	65.38	330	⇑P	P	11 03 47.9	-0.4
	baz=66,SNR=9.1						
S06C	San Francisco	65.46	324	⇑P	P	11 03 49.1	+0.2
	baz=66,SNR=8.4						
FLWY	Flagg Ranch	65.46	334	*e*P	P	11 03 49.0	+0.2
O09A	Fish Creek Ran	65.59	327	⇑P	P	11 03 49.7	-0.1
	baz=66,SNR=9.7						
N10A	Dunphy	65.63	328	⇓P	P	11 03 49.7	-0.4
	baz=66						
I16A	Newdale	65.64	333	⇑P	P	11 03 50.1	+0.1
	baz=66						
WAKR	Walker	65.65	324	*e*P	P	11 03 50.9	+0.7
R06C	Coleville	65.67	324	⇑P	P	11 03 50.8	+0.5
	baz=66						
J15A	Blackfoot	65.69	332	⇓P	P	11 03 50.0	-0.4
	baz=66,SNR=8.1						
LKWY	Lake	65.72	334	*e*P	P	11 03 51.7	+1.2
LKWY				MLR	MLR		
	comp=Z,430nm,21.0s,MS4.6						
P08A	Dixie Valley	65.73	326	⇓P	P	11 03 50.7	0.0
	baz=66						
M11A	Holland Ranch,	65.79	329	⇑P	P	11 03 50.8	-0.2
	baz=66,SNR=9.1						
BMN	Battle Mountai	65.80	327	PFAKE		11 04 00.0	+8.9
BMN				LR	LR		
	comp=Z,295nm,22.0s,MS4.5						
YFT	Old Faithful	65.82	334	*e*P	P	11 03 52.6	+1.4
LAO	LASA Array	65.86	338	*e*P	P	11 03 50.8	-0.5
	comp=Z,23nm,1.1s,mb5.1						
LAO				LR	LR		
	comp=Z,180nm,20.0s,MS4.3						
CMB	Columbia Colle	65.87	323	⇓P	P	11 03 51.3	-0.4
	baz=66						
CMB	Columbia Colle	65.87	323	*e*P	P	11 03 51.8	+0.2
CMB				LR	LR		
	comp=Z,133nm,22.0s,MS4.1						
K13A	Stover Farm, H	65.87	331	⇑P	P	11 03 51.0	-0.5
	baz=66						
L12A	House Creek Ra	65.94	330	⇓P	P	11 03 51.9	-0.1
	baz=66						
ULM	Lac du Bonnet	66.04	347	P	P	11 03 51.1	-1.3
	comp=Z,17nm,0.8s,mb5.1,baz=170,slow=7.1,SNR=21						
YMR	Madison River	66.05	334	PFAKE		11 04 10.0	+17
YMR				LR	LR		
	comp=Z,3μm,21.0s,MS5.4						
J14A	Carey	66.12	331	⇓P	P	11 03 53.0	-0.1
	baz=66,SNR=9.6						
R05C	Kirkwood Meado	66.15	324	⇑P	P	11 03 53.7	+0.3
	baz=66,SNR=6.6						
I15A	Monteview	66.18	333	⇓P	P	11 03 53.5	0.0
	baz=66,SNR=10						
O08A	Rochester Mine	66.19	326	⇓P	P	11 03 53.5	-0.2
	baz=66,SNR=8.5						
H16A	Russell Place,	66.20	334	⇓P	P	11 03 53.7	+0.1
	baz=66,SNR=14						
M10A	I.L. Ranch, Tu	66.24	328	⇑P	P	11 03 53.9	0.0
	baz=66						
K12A	Draper Farm, C	66.25	330	⇑P	P	11 03 54.1	+0.1
	baz=66,SNR=16						
N09A	Rock Creek Ran	66.26	327	⇑P	P	11 03 54.2	+0.1
	baz=66						
L11A	Cat Creek Ranc	66.32	329	⇓P	P	11 03 54.6	+0.2
	baz=66,SNR=13						
R04C	Big Horse Ranc	66.34	323	⇓P	P	11 03 54.9	+0.3
	baz=66						
QLMT	Earthquake Lak	66.38	334	*e*P	P	11 03 55.7	+1.0
WCN	Washoe City	66.38	325	⇓P	P	11 03 55.2	+0.3
	baz=67						
GCMT	Greycliff	66.42	336	*e*P	P	11 03 54.9	-0.1
PAHR	Pah Rah Range	66.45	325	*e*P	P	11 03 56.3	+0.9
J13A	Cove Ranch, Pi	66.49	331	⇑P	P	11 03 55.4	-0.1
	baz=67						
O07A	Toulon	66.49	326	⇓P	P	11 03 55.4	-0.2
	baz=67,SNR=11						
N08A	GE Springer Mi	66.53	327	⇑P	P	11 03 55.6	-0.2
	baz=67						
I14A	Mackay	66.56	332	⇓P	P	11 03 56.3	+0.3
	baz=67,SNR=12						
LAVA	Lava Cap Winer	66.56	324	⇑P	P	11 03 56.0	-0.1
	baz=67						
L10A	Juniper Basin	66.61	329	⇓P	P	11 03 56.3	0.0
	baz=67,SNR=13						
M09A	Marrel Ranch,	66.63	328	⇓P	P	11 03 56.3	-0.2
	baz=67,SNR=8.4						
BDM	Black Diamond	66.68	322	⇑P	P	11 03 57.4	+0.5
	baz=67						
DGMT	Dagmar	66.70	341	*e*P	P	11 03 56.8	+0.1
P06A	Stead Airport,	66.72	325	⇑P	P	11 03 57.7	+0.6
	baz=67						
HLID	Hailey	66.73	331	⇓P	P	11 03 57.3	+0.3
	baz=67,SNR=9.2						
HLID	Hailey	66.73	331	*e*P	P	11 03 56.8	-0.2
HLID				LR	LR		
	comp=Z,173nm,22.0s,MS4.2						

H15A	Lima	66.74	333	⇓P	P	11 03 57.3	+0.3
	baz=67,SNR=7.9						
J12A	Stokes Ranch,	66.81	330	⇓P	P	11 03 58.0	+0.4
	baz=67,SNR=8.4						
I13A	Wildhorse Cree	66.86	332	⇑P	P	11 03 57.9	+0.1
	baz=67,SNR=15						
P05C	Yuba Gap, Truc	66.86	324	⇑P	P	11 03 58.3	+0.3
	baz=67						
K11A	Parker Ranch,	66.91	330	⇑P	P	11 03 58.1	-0.1
	baz=67,SNR=6.4						
N07B	Gerlach	66.98	326	⇓P	P	11 03 58.5	-0.2
	baz=67,SNR=9.2						
Q04C	Lincoln	66.99	323	⇓P	P	11 03 59.1	+0.3
	baz=67						
MCMT	McKenzie Canyo	66.99	333	*e*P	P	11 03 58.7	0.0
O06A	Flanigan	67.02	325	⇓P	P	11 03 59.0	+0.1
	baz=67						
H14A	Leadore	67.06	332	⇓P	P	11 03 59.1	0.0
	baz=67,SNR=11						
G15A	Dillon	67.10	333	⇓P	P	11 03 59.2	-0.1
	baz=67,SNR=8.9						
BEKR	Beckwourth	67.11	325	⇓P	P	11 03 59.8	+0.3
	baz=67						
BOZ	Bozeman (W)	67.11	334	*e*P	P	11 03 59.1	-0.3
BOZ				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
BOZ				MLR	MLR		
	comp=Z,158nm,19.0s,MS4.2						
BOZ	Bozeman (W)	67.11	334	⇑P	P	11 03 59.0	-0.4
	baz=67						
BOZ	Bozeman (W)	67.11	334	*e*P	P	11 03 59.1	-0.3
	comp=Z,11nm,0.8s,mb4.9						
BOZ				LR	LR		
	comp=Z,158nm,19.0s,MS4.2						
M08A	Happy Creek Ra	67.14	327	⇑P	P	11 03 59.4	-0.2
	baz=67						
L09A	Wilkinson Ranc	67.18	328	⇓P	P	11 03 59.9	0.0
	baz=67						
FARB	Farallon Islan	67.19	322	⇓P	P	11 03 59.7	-0.4
	baz=67						
MFID	Camas Ranch	67.29	330	⇓P	P	11 04 00.6	+0.1
	baz=68,SNR=15						
DLMT	Dillon	67.30	333	*e*P	P	11 04 00.8	+0.2
	comp=Z,16nm,1.0s,mb5.0						
K10A	MacKenzie Ranc	67.33	329	⇓P	P	11 04 00.8	-0.1
	baz=68,SNR=11						
OHCM	Honcut	67.38	324	*e*P	P	11 04 01.6	+0.3
H13A	Challis	67.42	332	⇑P	P	11 04 01.0	-0.4
	baz=68,SNR=9.2						
N06A	Buffalo Meadow	67.42	326	⇑P	P	11 04 01.5	0.0
	baz=68,SNR=8.0						
O05C	Quincy	67.48	325	⇓P	P	11 04 02.2	+0.3
	baz=68						
SUTB	Sutter Butte	67.48	324	⇓P	P	11 04 01.7	-0.2
	baz=68						
M07A	Soldier Meadow	67.52	327	⇑P	P	11 04 01.9	-0.2
	baz=68						
ORV	Oroville	67.54	324	⇑P	P	11 04 02.3	+0.1
	baz=68,SNR=18						
G14A	Jackson	67.59	333	⇓P	P	11 04 02.1	-0.3
	baz=68						
LRM	Limekiln Ridge	67.60	334	*e*P	P	11 04 02.5	+0.1
F15A	Butte	67.63	334	⇓P	P	11 04 02.4	-0.3
	baz=68						
MNRC	McLaughlin Nat	67.64	323	⇓P	P	11 04 02.7	-0.1
	baz=68						
L08A	Fields	67.65	328	⇓P	P	11 04 02.7	-0.2
	baz=68,SNR=13						
H12A	Diamond D Ranc	67.68	332	⇓P	P	11 04 03.1	0.0
	baz=68,SNR=7.7						
K09A	Rome	67.70	329	⇑P	P	11 04 03.1	-0.1
	baz=68,SNR=16						
I11A	Placerville	67.72	330	⇑P	P	11 04 03.5	+0.2
	baz=68,SNR=9.6						
J10A	Berg Farm, Mel	67.75	330	⇓P	P	11 04 03.8	+0.3
	baz=68						
O04C	Chester	67.82	325	⇑P	P	11 04 04.0	-0.1
	baz=68						
ELFS	Eagle Lake Fie	67.83	325	⇑P	P	11 04 04.1	0.0
	baz=68						
WVOR	Wild Horse Val	67.98	328	*e*P	P	11 04 04.8	-0.1
WVOR				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
WVOR				MLR	MLR		
	comp=Z,223nm,20.0s,MS4.4						
WVOR	Wild Horse Val	67.98	328	*e*P	P	11 04 04.8	-0.2
	comp=Z,13nm,1.2s,mb4.8						
WVOR				LR	LR		
	comp=Z,223nm,20.0s,MS4.4						
F14A	Wisdom	67.99	333	⇑P	P	11 04 04.7	-0.2
	baz=68						
L07A	Adell	68.05	327	⇑P	P	11 04 05.4	0.0
	baz=68						
HOPS	Hopland	68.08	323	⇓P	P	11 04 06.0	+0.3
	baz=68						
M06C	Likely Place G	68.09	326	⇑P	P	11 04 05.9	+0.2
	baz=68						
K08A	Mann Creek Ran	68.11	328	⇑P	P	11 04 05.3	-0.5
	baz=68						
E15A	Deer Lodge	68.16	334	⇓P	P	11 04 05.7	-0.3
	baz=68						
J09A	Fry Pan Ranch,	68.19	329	⇓P	P	11 04 06.2	0.0
	baz=68,SNR=12						
I10A	Payette	68.26	330	⇑P	P	11 04 06.5	-0.1
	baz=68						
EGMT	Eagleton	68.28	337	⇑P	P	11 04 06.3	-0.4
	baz=68						
EGMT	Eagleton	68.28	337	*e*P	P	11 04 06.9	+0.1
	comp=Z,20nm,1.2s,mb5.0						
EGMT				LR	LR		
	comp=Z,101nm,19.0s,MS4.1						
GASB	Alder Springs	68.31	323	⇓P	P	11 04 07.2	+0.1
	baz=68						
H11A	Donnelly	68.34	331	⇓P	P	11 04 06.7	-0.5
	baz=69,SNR=9.8						
HATC	Hat Creek Radi	68.37	325	⇓P	P	11 04 07.3	-0.1
	baz=69						
F13A	Darby	68.40	333	⇓P	P	11 04 07.3	-0.2
	baz=69,SNR=12						
K07A	Rock Creek Ran	68.48	328	⇓P	P	11 04 08.0	0.0
	baz=69						
MOD	Modoc	68.48	326	⇑P	P	11 04 08.4	+0.3
	baz=69,SNR=7.2						
MOD	Modoc	68.48	326	*e*P	P	11 04 08.4	+0.3
E14A	Clinton	68.52	334	⇓P	P	11 04 08.3	0.0
	baz=69,SNR=11						
J08A	Circle Bar Ran	68.56	329	⇑P	P	11 04 08.2	-0.4
	baz=69						
M05C	Lookout	68.56	326	⇓P	P	11 04 08.5	-0.1
	baz=69,SNR=7.6						
D15A	Lincoln	68.60	335	⇑P	P	11 04 08.4	-0.3
	baz=69						
H10A	Noah's Angus R	68.61	330	⇑P	P	11 04 09.0	+0.2
	baz=69						
I09A	Lost Marbles R	68.64	329	⇑P	P	11 04 09.4	+0.4
	baz=69						
F12A	Elk City	68.79	332	⇑P	P	11 04 10.0	0.0
	baz=69,SNR=8.1						
CHMT	Chamberlain Mo	68.80	334	*e*P	P	11 04 10.2	+0.2
WDC	Whiskeytown Da	68.82	324	⇑P	P	11 04 10.8	+0.5
	baz=69						
E13A	Victor	68.84	333	⇑P	P	11 04 10.1	-0.2
	baz=69,SNR=12						
L05A	Lakeview	68.87	326	⇑P	P	11 04 10.8	+0.3
	baz=69						
SCHQ	Schefferville	68.97	6	P	P	11 04 10.1	-0.8
	comp=Z,9.0nm,0.9s,mb4.7,baz=170,slow=3.5,SNR=5.7						
SCHQ				LR	LR	11 35 33.2	
	comp=Z,270nm,19.9s,MS4.5,baz=198,slow=37						
G11A	Walters Elk Ra	68.98	331	⇓P	P	11 04 10.7	-0.5
	baz=69						
J07A	Hines	68.99	328	⇑P	P	11 04 10.9	-0.4
	baz=69						
I08A	Drewsey	69.00	329	⇓P	P	11 04 11.2	-0.1
	baz=69						
MSO	Missoula	69.03	334	*e*P	P	11 04 11.8	+0.4
	comp=Z,13nm,1.1s,mb4.8						
MSO				LR	LR		
	comp=Z,135nm,19.0s,MS4.2						
D14A	Greenough	69.04	334	⇑P	P	11 04 11.6	+0.1
	baz=69						
BMO	Blue Mountains	69.07	330	*e*P	P	11 04 11.3	-0.5
BMO				LR	LR		
	comp=Z,201nm,20.0s,MS4.4						
K06A	Valley Falls	69.08	327	⇓P	P	11 04 12.2	+0.3
	baz=69,SNR=10						
H09A	Durkee	69.10	330	⇑P	P	11 04 11.9	0.0
	baz=69						

M04C	Macdoel	69.23	326	⇑P	P	11 04 12.7	-0.1
	baz=69						
F11A	Grangeville	69.30	332	⇑P	P	11 04 12.5	-0.6
	baz=70,SNR=26						
G10A	Bishop Farm, J	69.30	331	⇑P	P	11 04 13.2	+0.1
	baz=70,SNR=15						
J06A	Christmas Vall	69.34	328	⇓P	P	11 04 13.6	+0.2
	baz=70,SNR=12						
K05A	Summer Lake	69.37	327	⇑P	P	11 04 14.1	+0.4
	baz=70						
N02C	Big Bar	69.41	324	⇓P	P	11 04 13.9	0.0
	baz=70						
E12A	Beaver Dam Sad	69.43	332	⇓P	P	11 04 13.5	-0.4
	baz=70						
D13A	Huson	69.46	334	⇑P	P	11 04 13.8	-0.3
	baz=70						
H08A	Prairie City	69.49	329	⇑P	P	11 04 14.4	+0.1
	baz=70,SNR=19						
L04A	Klamath Falls	69.53	326	⇓P	P	11 04 14.5	-0.1
	baz=70						
M02C	Callahan	69.53	325	⇓P	P	11 04 15.1	+0.4
	baz=70						
I07A	Izee	69.59	329	⇑P	P	11 04 15.0	0.0
	baz=70,SNR=10						
G09A	Cove	69.61	330	⇑P	P	11 04 15.2	+0.2
	baz=70,SNR=12						
VNA3	Neumayer Olymp	69.63	161	*e*P	P	11 04 14.5	-0.4
VNA3				*e*		11 04 21.1	
VNA3				*e*		11 04 27.2	
VNA3				*e*		11 04 33.3	
E11A	Bogner Ranch,	69.67	332	⇓P	P	11 04 14.8	-0.6
	baz=70,SNR=8.5						
YBH	Yreka Blue Hor	69.68	325	⇓P	P	11 04 15.3	-0.3
	baz=70						
YBH	Yreka Blue Hor	69.68	325	*e*P	P	11 04 14.7	-0.9
C14A	Swan Lake	69.68	334	⇓P	P	11 04 15.5	0.0
	baz=70						
PPT	Papeete	69.79	256	*e*S	S	11 13 38.2	+11
	comp=Z,365nm,25.0s						
PPT	Papeete	69.79	256	*e*LR	LR	11 25 11.9	
	comp=Z,170nm,25.0s						
PPT	Papeete	69.79	256	LR	LR	11 27 03.2	
	comp=Z,180nm,18.1s,MS4.4,baz=133,slow=29						
D12A	Red Ives Fores	69.82	333	⇑P	P	11 04 16.2	-0.2
	baz=70						
I06A	Prineville	69.86	328	⇑P	P	11 04 16.7	+0.1
	baz=70,SNR=7.3						
F10A	Beach Ranch, E	69.86	331	⇑P	P	11 04 16.7	+0.1
	baz=70,SNR=17						
VNA1	Neumayer--Stat	69.91	161	*e*P	P	11 04 16.9	+0.3
VNA1				*e*		11 04 22.9	
VNA1				*e*		11 04 29.4	
VNA1				*e*		11 04 35.4	
J05A	Fort Rock	69.93	327	⇑P	P	11 04 17.3	+0.2
	baz=70						
C13A	Hot Springs	69.96	334	⇑P	P	11 04 17.4	+0.3
	baz=70,SNR=12						
F09A	S2 Ranch, Elgi	69.99	331	⇓P	P	11 04 17.3	-0.1
	baz=70						
H07A	Lands Inn, Kim	69.99	329	⇓P	P	11 04 17.6	+0.2
	baz=70						
E10A	Myers Farm, Un	70.19	332	⇓P	P	11 04 18.4	-0.1
	baz=70						
G08A	Pilot Rock	70.19	330	⇓P	P	11 04 18.6	0.0
	baz=70,SNR=9.3						
D11A	Klaveano Farm,	70.25	332	⇑P	P	11 04 18.6	-0.4
	baz=70						
VNA2	Neumayer--Watz	70.26	161	*e*P	P	11 04 18.9	+0.2
VNA2				*e*		11 04 24.5	
VNA2				*e*		11 04 29.9	
VNA2				*e*		11 04 37.2	
LNOR	Lincton Mounta	70.28	331	*e*P	P	11 04 18.9	-0.3
J04A	Umpqua Nationa	70.37	327	⇓P	P	11 04 19.4	-0.4
	baz=71						
C12B	Naegeli Ranch,	70.38	333	⇑P	P	11 04 19.3	-0.4
	baz=71						
B13A	Whitefish	70.46	334	⇑P	P	11 04 20.1	0.0
	baz=71						
VIPM	Ingram Point	70.46	328	P	P	11 04 21.0	+0.7
F08A	Pendleton	70.47	330	⇑P	P	11 04 20.2	-0.1
	baz=71						
H06A	Lindquist Farm	70.48	329	⇓P	P	11 04 20.4	0.0
	baz=71,SNR=7.2						
I05A	Bend	70.56	328	⇓P	P	11 04 20.7	-0.2
	baz=71						
D10A	Wagner Farm, O	70.69	332	⇑P	P	11 04 21.0	-0.6
	baz=71,SNR=7.7						
E09A	Wood Farm, Sta	70.69	331	⇑P	P	11 04 20.9	-0.7
	baz=71						
K02A	Glendale	70.80	325	⇑P	P	11 04 22.2	-0.2
	baz=71						
C11A	Tepee Creek (N	70.82	333	⇓P	P	11 04 22.4	0.0
	baz=71						
A13A	Flathead Natio	70.87	335	⇑P	P	11 04 22.9	+0.2
	baz=71						
H05A	Madras	70.87	328	⇑P	P	11 04 22.9	+0.1
	baz=71						
I04A	Tendick Farm,	70.91	327	⇓P	P	11 04 22.7	-0.3
	baz=71						
G06A	Carlson Farm,	70.98	329	⇓P	P	11 04 23.5	0.0
	baz=71						
B12A	Libby	71.01	334	⇑P	P	11 04 24.0	+0.4
	baz=71,SNR=8.8						
F07A	Phinny Hill Vi	71.10	330	⇑P	P	11 04 24.5	+0.4
	baz=71						
D09A	Jones Farm, Ri	71.17	331	⇑P	P	11 04 24.4	-0.1
	baz=71,SNR=9.2						
J02A	Umpqua	71.24	326	⇓P	P	11 04 24.9	-0.2
	baz=71						
HAWA	Hanford	71.26	330	*e*P	P	11 04 25.5	+0.3
	comp=Z,14nm,0.9s,mb4.9						
HAWA				LR	LR		
	comp=Z,187nm,19.0s,MS4.4						
C10A	Spilker Farm,	71.27	332	⇑P	P	11 04 24.7	-0.4
	baz=72						
RSW	Rattlesnake Hi	71.29	330	*e*P	P	11 04 25.5	+0.2
B11A	Sandpoint	71.32	333	⇑P	P	11 04 25.2	-0.2
	baz=72,SNR=12						
G05A	Wamic	71.33	328	⇑P	P	11 04 25.8	+0.2
	baz=72						
GBL	Gable Mountain	71.37	330	P	P	11 04 26.2	+0.4
A12A	Yaak River Ran	71.39	334	⇑P	P	11 04 25.8	0.0
	baz=72,SNR=17						
H04A	Detroit Lake	71.39	328	⇓P	P	11 04 26.2	+0.2
	baz=72						
F06A	Goldendale	71.43	329	⇓P	P	11 04 26.5	+0.3
	baz=72						
D08A	Wollman Farm,	71.45	331	⇓P	P	11 04 26.2	-0.1
	baz=72						
I03A	Eugene	71.49	326	⇑P	P	11 04 26.6	0.0
	baz=72						
NEW	Newport	71.52	333	*e*P	P	11 04 26.6	0.0
NEW				pmax	pmax		
	comp=Z,15nm,0.9s						
NEW				MLR	MLR		
	comp=Z,139nm,19.0s						
NEW	Newport	71.52	333	*e*P	P	11 04 26.6	-0.1
	comp=Z,15nm,0.9s,mb4.9						
NEW				LR	LR		
	comp=Z,139nm,19.0s,MS4.2						
E07A	Sunnyside	71.53	330	⇓P	P	11 04 27.1	+0.4
	baz=72						
OD2	Odessa Site #2	71.59	331	*e*P	P	11 04 27.7	+0.6
FFC	Flin Flon	71.62	345	PFAKE		11 04 40.0	+13
FFC				LR	LR		
	comp=Z,221nm,19.0s,MS4.4						
C09A	Chrisman Ranch	71.69	332	⇓P	P	11 04 27.9	+0.2
	baz=72						
A11A	Hall Mountain,	71.71	334	⇑P	P	11 04 28.2	+0.4
	baz=72,SNR=7.6						
F05A	White Salmon	71.85	329	⇑P	P	11 04 28.9	+0.3
	baz=72						
SNAA	Sanae	71.86	161	*e*P	P	11 04 27.7	-0.7
SNAA				*e*		11 04 32.8	
SNAA				*e*		11 04 39.9	
SNAA				*e*		11 04 46.4	
SNAA	Sanae	71.86	161	*e*P	P	11 04 28.1	-0.3
G04A	Mulino	71.90	328	⇓P	P	11 04 29.5	+0.5
	baz=72						
H03A	Soap Creek Ran	71.97	327	⇑P	P	11 04 29.7	+0.3
	baz=72						
C08A	Higginbotham F	72.04	332	⇑P	P	11 04 29.8	0.0
	baz=72						
D07A	Quincy	72.05	331	⇑P	P	11 04 30.1	+0.3
	baz=72						
E06A	Yakima	72.07	330	⇓P	P	11 04 30.2	+0.2
	baz=72						

B09A	**Rice**	**72.09**	**332**	⇑P	**P**	**11 04 29.8**	**-0.3**
	baz=72						
EBG	**Ellensburg**	**72.13**	**330**	P	**P**	**11 04 31.3**	**+0.9**
A10A	**Northport**	**72.25**	**333**	⇑P	**P**	**11 04 31.2**	**+0.2**
	baz=72						
C07A	**Waterville**	**72.44**	**331**	⇑P	**P**	**11 04 32.1**	**-0.1**
	baz=73						
D06A	**Cle Elum**	**72.46**	**330**	⇑P	**P**	**11 04 32.5**	**+0.1**
	baz=73						
ETW	**Entiat**	**72.51**	**331**	*e*P	**P**	**11 04 33.4**	**+0.8**
B08A	**Colville Reser**	**72.59**	**332**	⇑P	**P**	**11 04 32.6**	**-0.4**
	baz=73						
A09A	**Danville**	**72.70**	**333**	⇓P	**P**	**11 04 33.7**	**0.0**
	baz=73,SNR=9.2						
A08A	**Turner Farm, O**	**72.99**	**332**	⇓P	**P**	**11 04 35.5**	**+0.1**
	baz=73,SNR=9.1						
D05A	**Enumclaw**	**73.02**	**330**	⇑P	**P**	**11 04 35.7**	**0.0**
	baz=73						
B07A	**Winthrop**	**73.02**	**331**	⇑P	**P**	**11 04 35.4**	**-0.2**
	baz=73						
E03A	**Lebam**	**73.37**	**328**	⇑P	**P**	**11 04 37.6**	**-0.1**
	baz=74						
A07A	**Ashnola River,**	**73.57**	**332**	⇑P	**P**	**11 04 38.9**	**+0.1**
	baz=74,SNR=9.6						
RPW	**Rockport**	**73.67**	**331**	P	**P**	**11 04 39.1**	**-0.4**
JCW	**Jim Creek**	**73.69**	**330**	*e*P	**P**	**11 04 38.9**	**-0.7**
B06A	**Marblemount**	**73.70**	**331**	⇓P	**P**	**11 04 39.1**	**-0.5**
	baz=74						
B05A	**Bryant**	**73.82**	**330**	⇑P	**P**	**11 04 40.1**	**-0.2**
	baz=74						
LIC	**Lamto**	**73.94**	**79**	*e*P	**P**	**11 04 42.5**	**+0.7**
	comp=Z,70nm,1.0s,mb5.5						
TIC	**Toumodi**	**74.06**	**79**	*e*P	**P**	**11 04 43.0**	**+0.5**
	comp=Z,35nm,0.5s,mb5.5						
TIC	**Toumodi**	**74.06**	**79**	*e*P	**P**	**11 04 43.0**	**+0.5**
TIC				pmax	pmax		
	comp=Z,35nm,0.5s,mb5.5						
NLWA	**Neilton Lookou**	**74.09**	**329**	⇑P	**P**	**11 04 41.9**	**0.0**
	baz=74						
NLWA	**Neilton Lookou**	**74.09**	**329**	*e*P	**P**	**11 04 42.8**	**+0.9**
	comp=Z,26nm,0.9s,mb5.2						
NLWA				LR	LR		
	comp=Z,250nm,19.0s,MS4.5						
A06A	**Chilliwack**	**74.11**	**331**	⇑P	**P**	**11 04 42.0**	**0.0**
	baz=74						
DBIC	**Dimbokro**	**74.22**	**79**	P	**P**	**11 04 44.1**	**+0.6**
	comp=Z,14nm,0.7s,mb5.0,baz=222,slow=6.3,SNR=16						
DBIC				LR	LR	11 34 56.2	
	comp=Z,495nm,19.4s,MS4.8,baz=224,slow=34						
KIC	**Kosan Boka**	**74.25**	**79**	*e*P	**P**	**11 04 44.5**	**+0.9**
	comp=Z,86nm,0.7s,mb5.8						
A05A	**Maple Falls**	**74.32**	**331**	⇑P	**P**	**11 04 43.4**	**+0.1**
	baz=74						
B04A	**Port Angeles**	**74.36**	**330**	⇓P	**P**	**11 04 43.7**	**+0.2**
	baz=75						
A04A	**Legoe Bay, Lum**	**74.43**	**330**	⇑P	**P**	**11 04 43.9**	**+0.1**
	baz=75,SNR=5.2						
MCW	**Mount Constitu**	**74.46**	**330**	P	**P**	**11 04 44.2**	**+0.1**
PGC	**Sidney**	**74.74**	**330**	*e*P	**P**	**11 04 52.3**	**+6.6**
YKA	**Yellowknife Ar**	**81.68**	**343**	P	**P**	**11 05 22.6**	**-1.2**
	comp=Z,4.6nm,0.8s,mb4.5,baz=140,slow=5.5,SNR=8.0						
YKA				LR	LR	11 41 43.0	
	comp=Z,84nm,19.3s,MS4.1,baz=355,slow=36						
SBA	**Scott Base**	**81.86**	**191**	PFAKE		11 05 40.0	+15
SBA				LR	LR		
	comp=Z,299nm,19.0s,MS4.7						
TORD	**Torodi Ar. Bea**	**82.23**	**74**	P	**P**	**11 05 27.7**	**-0.1**
	comp=Z,16nm,1.0s,mb4.9,baz=274,slow=5.1,SNR=43						
TORD				LR	LR	11 41 34.7	
	comp=Z,559nm,18.2s,MS5.0,baz=235,slow=35						
MDT	**Midelt**	**83.00**	**54**	LR	LR	11 42 40.1	
	comp=Z,360nm,18.4s,MS4.8,baz=322,slow=36						
SFS	**San Fernando**	**83.15**	**50**	PFAKE		11 05 40.0	+7.8
SFS				LR	LR		
	comp=Z,786nm,22.0s,MS5.0						
MTE	**Manteigas**	**83.75**	**46**	PFAKE		11 05 50.0	+15
MTE				LR	LR		
	comp=Z,438nm,21.0s,MS4.8						
DLBC	**Dease Lake**	**84.11**	**335**	*e*P	**P**	**11 05 37.0**	**+0.5**
PAB	**San Pablo**	**85.68**	**48**	PFAKE		11 06 00.0	+15
PAB				LR	LR		
	comp=Z,538nm,20.0s,MS4.9						
ESDC	**Sonseca Array**	**86.00**	**48**	P	**P**	**11 05 46.7**	**+0.2**
	comp=Z,1.0nm,0.5s,mb4.3,baz=247,slow=5.8,SNR=5.1						
ESDC				LR	LR	11 40 36.6	
	comp=Z,321nm,20.3s,MS4.7,baz=245,slow=33						
ESDC	**Sonseca Array**	**86.00**	**48**	P	**P**	**11 05 46.7**	**+0.2**
ESDC				LR	LR	11 40 36.6	
SYO	**Syowa Base**	**86.15**	**161**	⇓*e*P	**P**	**11 05 44.6**	**-2.1**
SYO	**Syowa Base**	**86.15**	**161**	⇑*e*PcP	PcP	11 05 50.6	+1.2
BORG	**Borgarnes**	**88.81**	**21**	LR	LR	11 44 51.3	
	comp=Z,116nm,18.1s,MS4.3,baz=204,slow=35						
TSUM	**Tsumeb**	**89.53**	**110**	PFAKE		11 06 20.0	+16
TSUM				LR	LR		
	comp=Z,159nm,19.0s,MS4.5						
SUMG	**Summit**	**89.89**	**11**	*e*P	**P**	**11 06 11.4**	**+7.1**
DAWY	**Dawson**	**91.03**	**337**	*e*P	**P**	**11 06 09.3**	**-0.5**
EGAK	**Eagle**	**92.05**	**337**	*e*P	**P**	**11 06 13.9**	**-0.6**
ESK	**Eskdalemuir**	**92.22**	**33**	PFAKE		11 06 30.0	+14
ESK				LR	LR		
	comp=Z,239nm,22.0s,MS4.6						
MAW	**Mawson**	**93.62**	**166**	P	**P**	**11 06 20.9**	**-1.0**
	comp=Z,1.1nm,0.8s,mb4.3,baz=194,slow=3.6,SNR=3.8						
MAW				LR	LR	11 45 21.5	
	comp=Z,244nm,20.3s,MS4.7,baz=239,slow=34						
BOSA	**Boshof**	**93.69**	**120**	LR	LR	11 49 50.7	
	comp=Z,229nm,18.4s,MS4.7,baz=87,slow=36						
PMR	**Palmer**	**93.95**	**333**	PFAKE		11 06 30.0	+6.6
PMR				LR	LR		
	comp=Z,360nm,19.0s,MS4.8						
COLA	**College**	**94.67**	**336**	*e*P	**P**	**11 06 25.6**	**-1.0**
COLA				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.3						
COLA	**College**	**94.67**	**336**	*e*P	**P**	**11 06 25.6**	**-1.1**
	comp=Z,12nm,1.0s,mb5.3						
KEST	**Kesra**	**94.89**	**55**	LR	LR	11 50 54.0	
	comp=Z,75nm,18.4s,MS4.2,baz=271,slow=37						
BNI	**Bardonecchia**	**95.16**	**45**	PFAKE		11 06 40.0	+11
BNI				LR	LR		
	comp=Z,411nm,20.0s,MS4.9						
WLF	**Walferdange**	**95.95**	**40**	PFAKE		11 06 40.0	+7.1
WLF				LR	LR		
	comp=Z,239nm,20.0s,MS4.7						
JMIC	**Jan Mayen**	**96.17**	**18**	LR	LR	11 45 40.3	
	comp=Z,129nm,19.3s,MS4.4,baz=277,slow=33						
BFO	**Black Forest**	**97.03**	**42**	PFAKE		11 06 50.0	+12
BFO				LR	LR		
	comp=Z,114nm,19.0s,MS4.4						
TUE	**Stuetta**	**97.30**	**44**	PFAKE		11 06 50.0	+11
TUE				LR	LR		
	comp=Z,294nm,20.0s,MS4.8						
VLC	**Villacollemand**	**97.53**	**46**	PFAKE		11 06 50.0	+10
VLC				LR	LR		
	comp=Z,237nm,19.0s,MS4.7						
DAVOX	**Davos/Dischmat**	**97.72**	**44**	LR	LR	11 49 01.9	
	comp=Z,336nm,18.9s,MS4.8,baz=267,slow=34						
CASY	**Casey**	**99.87**	**183**	PFAKE		11 07 00.0	+10
CASY				LR	LR		
	comp=Z,199nm,21.0s,MS4.6						
LSZ	**Lusaka**	**100.34**	**109**	PFAKE		11 07 00.0	+7.4
LSZ				LR	LR		
	comp=Z,389nm,19.0s,MS4.9						
TIP	**Timpagrande**	**101.34**	**52**	PFAKE		11 07 10.0	+13
TIP				LR	LR		
	comp=Z,198nm,19.0s,MS4.7						
PSZ	**Piszkesteto**	**104.62**	**44**	PFAKE		11 07 20.0	+8.4
PSZ				LR	LR		
	comp=Z,152nm,19.0s,MS4.6						
SANT	**Santorini**	**107.88**	**56**	PFAKE		11 11 50.0	+16
SANT				LR	LR		
	comp=Z,386nm,21.0s,MS4.9						
ISP	**Isparta**	**111.98**	**55**	PFAKE		11 11 50.0	+8.4
ISP				LR	LR		
	comp=Z,179nm,20.0s,MS4.7						
BILL	**Bilibino**	**112.75**	**339**	PFAKE		11 11 50.0	+7.9
BILL				LR	LR		
	comp=Z,88nm,19.0s,MS4.4						
KMBO	**Kilima Mbogo**	**113.00**	**97**	PFAKE		11 12 00.0	+16
KMBO				LR	LR		
	comp=Z,326nm,19.0s,MS4.9						
ANTO	**Ankara**	**113.75**	**52**	PFAKE		11 12 00.0	+15
ANTO				LR	LR		
	comp=Z,102nm,20.0s,MS4.4						
OBN	**Obninsk**	**114.61**	**35**	PFAKE		11 12 00.0	+14
OBN				LR	LR		
	comp=Z,287nm,20.0s,MS4.9						
MALT	**Malatya**	**118.20**	**54**	PFAKE		11 12 00.0	+6.5
MALT				LR	LR		
	comp=Z,105nm,20.0s,MS4.5						
TIXI	**Tiksi**	**120.24**	**351**	PFAKE		11 12 10.0	+14
TIXI				LR	LR		
	comp=Z,154nm,20.0s,MS4.6						
KIV	**Kislovodsk**	**120.66**	**47**	PFAKE		11 12 10.0	+12
KIV				LR	LR		
	comp=Z,67nm,19.0s,MS4.3						
GNI	**Garni**	**122.84**	**51**	PFAKE		11 12 10.0	+7.6
GNI				LR	LR		
	comp=Z,81nm,20.0s,MS4.4						
ARU	**Arti**	**125.60**	**29**	PFAKE		11 12 20.0	+13
ARU				LR	LR		
	comp=Z,205nm,20.0s,MS4.8						
YAK	**Yakutsk**	**128.34**	**344**	PFAKE		11 12 20.0	+7.8
YAK				LR	LR		
	comp=Z,123nm,19.0s,MS4.6						
AKTK	**Aktyubinsk**	**128.39**	**35**	PKP	PKPdf	11 12 11.7	-0.9
AKTO	**Aktyubinsk**	**128.39**	**35**	PKP	PKPdf	11 12 11.7	-0.9
	comp=Z,3.1nm,0.8s,baz=279,slow=1.9,SNR=5.6						
ASAR	**Alice Springs**	**132.11**	**219**	PKP	PKPdf	11 12 19.5	-1.1
	comp=Z,0.9nm,1.0s,baz=153,slow=3.0,SNR=5.5						
BRVK	**Borovoye**	**133.01**	**27**	PFAKE		11 12 30.0	+8.7
BRVK				LR	LR		
	comp=Z,208nm,20.0s,MS4.8						
BVAR	**Borovoye Array**	**133.08**	**27**	PKP	PKPdf	11 12 20.9	-0.5
	comp=Z,0.6nm,0.5s,baz=209,slow=2.7,SNR=5.0						
YSS	**Yuzh-Sakhalins**	**133.39**	**323**	PFAKE		11 12 30.0	+7.8
YSS				LR	LR		
	comp=Z,59nm,21.0s,MS4.3						
WRA	**Warramunga Arr**	**134.53**	**223**	PKP	PKPdf	11 12 24.2	-1.0
	comp=Z,1.4nm,0.7s,baz=128,slow=1.8,SNR=15						
WRAB	**Tennant Creek**	**134.53**	**223**	PFAKE		11 12 40.0	+15
WRAB				LR	LR		
	comp=Z,383nm,19.0s,MS5.1						
ZALV	**Zalesovo Beam**	**137.49**	**16**	PKP	PKPdf	11 12 28.9	-0.8
	comp=Z,7.2nm,0.8s,baz=322,slow=1.9,SNR=16						
ZAL	**Zalesovo**	**137.49**	**16**	PKIKP	PKPdf	11 12 28.9	-0.8
KURK	**Kurchatov**	**138.20**	**23**	PKP	PKPdf	11 12 31.6	+0.5
	comp=Z,3.0nm,0.8s,baz=314,slow=2.5,SNR=7.5						
KURK	**Kurchatov**	**138.20**	**23**	PKP	PKPdf	11 12 31.6	+0.5
KURK				LR	LR		
	comp=Z,164nm,19.0s,MS4.8						
MBWA	**Marble Bar**	**141.58**	**205**	PFAKE		11 12 50.0	+12
MBWA				LR	LR		
	comp=Z,253nm,21.0s,MS5.0						
EKS2	**Erkin-Say**	**141.71**	**36**	PFAKE		11 12 50.0	+12
EKS2				LR	LR		
	comp=Z,161nm,19.0s,MS4.8						
AML	**Almayashu**	**142.00**	**37**	PFAKE		11 12 50.0	+12
AML				LR	LR		
	comp=Z,133nm,20.0s,MS4.7						
HIA	**Hailar**	**142.20**	**342**	PFAKE		11 12 50.0	+12
HIA				LR	LR		
	comp=Z,177nm,20.0s,MS4.8						
TLY	**Talaya**	**142.31**	**360**	PFAKE		11 12 50.0	+12
TLY				LR	LR		
	comp=Z,129nm,20.0s,MS4.7						
UCH	**Uchtor**	**142.41**	**36**	PFAKE		11 12 50.0	+11
UCH				LR	LR		
	comp=Z,182nm,21.0s,MS4.8						
TKM2	**Tokmak 2**	**142.56**	**34**	*e*PKIKP	PKPdf	11 12 40.7	+1.5
TKM2				MLR	MLR		
	comp=Z,222nm,22.0s,MS4.9						
MKAR	**Makanchi Array**	**142.80**	**24**	PKP	PKPdf	11 12 37.3	-2.2
	comp=Z,1.6nm,0.7s,baz=298,slow=3.6,SNR=7.5						
ZAK	**Zakamensk**	**143.62**	**360**	*e*PKHKP		11 12 28.4	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.8s						
CN2	**Changchun**	**144.64**	**332**	*e*PKP	PKPdf	11 12 42.1	-0.7
ULN	**Ulaanbaatar**	**145.98**	**355**	*e*PKP2	PKPab	11 12 45.7	-0.5
ULN				MLR	MLR		
	comp=Z,145nm,21.0s,MS4.7						
SONM	**Songino Array**	**146.06**	**356**	PKPbc	PKPbc	11 12 45.8	-0.1
	comp=Z,8.3nm,0.8s,baz=330,slow=1.4,SNR=38						
WMQ	**Urumqi**	**147.34**	**21**	*e*PKP	PKPdf	11 12 49.1	+1.7
WMQ				APKP		11 13 00.0	
WMQ				XPKP		11 13 03.5	
WMQ				*e*PP	PP	11 16 21.0	+6.6
WMQ				PKS		11 16 23.0	
WMQ				PP	PP		
	comp=Z,156nm,5.2s						
WMQ				LR	LR		
	comp=Z,109nm,25.0s,MS4.5						
KSRS	**Korea Array**	**147.85**	**321**	PKPbc	PKPbc	11 12 51.0	-0.3
	comp=Z,7.9nm,1.0s,baz=331,slow=2.6,SNR=8.4						
INCN	**Inchon**	**148.60**	**323**	PFAKE		11 13 00.0	+10
INCN				LR	LR		
	comp=Z,541nm,22.0s,MS5.3						
BJT	**Baijiatuau**	**151.60**	**339**	PFAKE		11 13 10.0	+16
BJT				LR	LR		
	comp=Z,185nm,19.0s,MS4.9						
HHC	**Hu-ho-hao-te**	**152.18**	**346**	*e*PKP	PKPdf	11 12 49.7	-5.5
HHC				APKP		11 13 01.2	
HHC				XPKP		11 13 04.9	
HHC				PKS		11 16 23.1	
HHC				PP	PP	11 16 41.1	-1.1
HHC				SKS	SKSdf	11 19 52.1	-11
HHC				SKKS	SKKSac	11 23 25.3	-9.0
HHC				PP	PP		
	comp=Z,136nm,8.1s						
HHC				LR	LR		
	comp=N,124nm,19.8s,MS5.0						
HHC				LR	LR		
	comp=E,161nm,18.1s,MS5.0						
HHC				LR	LR		
	comp=Z,111nm,18.5s,MS4.7						
GTA	**Gaotai**	**154.41**	**6**	*e*PKP	PKPdf	11 12 59.1	+0.6
GTA				APKP		11 13 09.2	
GTA				XPKP		11 13 12.9	
GTA				PP	PP		
	comp=Z,107nm,6.2s						
GTA				LR	LR		
	comp=N,80nm,14.0s,MS4.8						
GTA				LR	LR		
	comp=E,95nm,18.1s,MS4.8						
GTA				LR	LR		
	comp=Z,107nm,18.7s,MS4.7						
KAPI	**Kappang**	**155.06**	**222**	PFAKE		11 13 10.0	+10
KAPI				LR	LR		
	comp=Z,142nm,19.0s,MS4.8						
NJ2	**Nanjing**	**156.95**	**324**	*e*PKP	PKPdf	11 13 00.7	-1.4
NJ2				APKP		11 13 10.7	
NJ2				PP	PP	11 17 12.5	+2.8
NJ2				SKS	SKSdf	11 20 00.0	-8.8
NJ2				SKKS	SKKSac	11 23 52.0	-8.5
NJ2				PP	PP		
	comp=Z,470nm,7.8s						
NJ2				LR	LR		
	comp=Z,2μm,26.7s,MS5.8						
LZH	**Lanzhou**	**157.90**	**359**	*e*PKP	PKPdf	11 13 04.0	+0.8
LZH				APKP		11 13 14.9	
LZH				XPKP		11 13 18.5	
LZH				*e*PP	PP	11 17 20.2	+6.1
LZH				SKKS	SKKSac	11 24 02.8	-2.2
LZH				*e*SS	SS	11 37 12.5	+0.6
LZH				PP	PP		
	comp=Z,116nm,8.6s						
LZH				LR	LR		
	comp=N,137nm,17.8s						
LZH				LR	LR		
	comp=Z,169nm,20.0s,MS4.9						
WHN	**Wuhan**	**160.52**	**330**	PKP	PKPdf	11 13 05.8	-0.6
LSA	**Lhasa**	**160.71**	**33**	PFAKE		11 13 20.0	+13
LSA				LR	LR		
	comp=Z,194nm,22.0s						
ENH	**Enshi**	**162.71**	**341**	PFAKE		11 13 20.0	+11
ENH				LR	LR		
	comp=Z,4.0nm,20.0s						
CD2	**Chengdu**	**163.06**	**358**	*e*PKP	PKPdf	11 13 07.2	-1.8
CD2				APKP		11 13 17.2	
CD2				XPKP		11 13 22.0	
CD2				PKP2	PKPab	11 13 59.2	+0.7
CD2				PP	PP	11 17 42.5	+0.6
CD2				SKS	SKSdf	11 20 07.0	-7.3
CD2				SKKS	SKKSac	11 24 23.6	-8.3
CD2				PP	PP		
	comp=Z,150nm,7.2s						
CD2				LR	LR		
	comp=N,230nm,16.8s						
CD2				LR	LR		
	comp=E,200nm,16.8s						
CD2				LR	LR		
	comp=Z,210nm,15.6s						
SHL	**Shillong**	**164.24**	**41**	*e*x	x	11 13 10.0	
KKM	**Kota Kinabalu**	**165.02**	**240**	PFAKE		11 13 20.0	+8.7
KKM				LR	LR		
	comp=Z,149nm,19.0s						
GYA	**Guiyang**	**167.09**	**346**	PKP	PKPdf	11 13 10.9	-1.7
GYA				APKP		11 13 22.8	
GYA				PKP2	PKPab	11 14 16.7	+0.4
GYA				PKS		11 16 42.8	
GYA				PP	PP	11 18 06.2	+3.1
GYA				SKS	SKSdf	11 20 09.6	-7.6
GYA				SKKS	SKKSac	11 24 47.2	-5.2
GYA				SS	SS	11 38 44.0	-3.7
GYA				PP	PP		
	comp=Z,120nm,7.9s						
GYA				LR	LR		
	comp=N,190nm,24.5s						
GYA				LR	LR		
	comp=E,170nm,22.8s						
GYA				LR	LR		
	comp=Z,150nm,24.6s						
KMI	**Kunming**	**168.82**	**2**	PKP	PKPdf	11 13 08.0	-5.8
QIZ	**Qiongzhong**	**171.86**	**310**	PFAKE		11 13 30.0	+14
QIZ				LR	LR		
	comp=Z,89nm,20.0s						
CHTO	**Chiang Mai**	**173.61**	**39**	PFAKE		11 13 30.0	+14
CHTO				LR	LR		
	comp=Z,132nm,21.0s						
CMAR	**Chiang Mai Arr**	**173.88**	**42**	PKP	PKPdf	11 13 16.2	-0.3
	comp=Z,0.6nm,0.3s,baz=271,slow=2.0,SNR=5.3						
CMAR				PKPab	PKPab	11 14 49.4	+2.7
	comp=Z,0.7nm,0.5s,baz=311,slow=5.5,SNR=3.3						

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*TAP **05** 10:57:27.6, 2522N×12231E, h186km, ML3.5, C*
*ISCJB **05** 10:57:28.1±0.9, 2508N±008×12231E±004, h182km±7km, Error ellipse: s-maj=13.8km s-min=5.1km az=175.2*
*JMA **05** 10:57:29.8±0.3, 2518N×12238E, h172km, M2.8*
ISC 05 10:57:28.4±0.8**, 2509N**±009**×12231E**±004**, h183**km±6km**, n38, σ0.ˢ54**/50**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.30**	**254**	P	**Pn**	**10 57 52.8**	**-0.1**
	baz=233						
NWF	**Wu-fen Shan**	**0.48**	**267**	*e*P	**Pn**	**10 57 53.5**	**0.0**
	baz=243						
TWC	**Suao**	**0.64**	**221**	P	**Pn**	**10 57 54.1**	**-0.1**
	baz=210						
TWA	**Mucha**	**0.67**	**260**	*e*P	**Pn**	**10 57 54.0**	**-0.3**
	baz=258						
TWY	**Chenhua**	**0.67**	**286**	*e*P	**Pn**	**10 57 54.0**	**-0.3**
	baz=275						
TWE	**Neicheng**	**0.69**	**238**	P	**Pn**	**10 57 54.4**	**-0.1**
	baz=227						
TWS1	**Kuangyinshan**	**0.81**	**271**	P	**Pn**	**10 57 55.0**	**-0.1**
	baz=269						
ENTT	**Nioudou**	**0.81**	**236**	*i* P	**Pn**	**10 57 55.3**	**+0.1**
	baz=229						
ENTT				*e*S	**Sn**	**10 58 16.3**	**+0.6**
	baz=229						
ENA	**Nanau**	**0.84**	**218**	P	**Pn**	**10 57 55.7**	**+0.3**
	baz=213						
ENA				S	**Sn**	**10 58 16.0**	**0.0**
	baz=213						
YOJ	**Yonaguni jima**	**0.90**	**134**	P	**Pn**	**10 57 56.1**	**+0.4**
YOJ				*e*S	**Sn**	**10 58 16.7**	**0.0**
NSK	**Sanguang**	**0.96**	**244**	P	**Pn**	**10 57 55.9**	**-0.2**
	baz=229						
NNS	**Nan Shan**	**1.07**	**233**	P	**Pn**	**10 57 57.3**	**+0.3**
	baz=234						
NNS				*e*S	**Sn**	**10 58 18.7**	**-0.2**
	baz=234						
TWD	**Chiawan**	**1.20**	**213**	P	**Pn**	**10 57 57.9**	**-0.1**
	baz=218						
NSTT	**Nanjuang**	**1.27**	**249**	P	**Pn**	**10 57 58.3**	**-0.3**
	baz=243						
NSTT				*e*S	**Sn**	**10 58 21.0**	**-0.8**
	baz=243						
TWT	**Tachien**	**1.33**	**231**	*e*P	**Pn**	**10 57 59.3**	**+0.2**
	baz=227						
TWT				*e*S	**Sn**	**10 58 23.3**	**+0.7**
	baz=227						
WHF	**Hehuan Shan**	**1.34**	**225**	⇑*i*P	**Pn**	**10 58 00.1**	**+1.0**
	baz=215						
WHF				*e*S	**Sn**	**10 58 23.4**	**+0.5**
	baz=215						
IRIF	**Iriomote-Funau**	**1.50**	**120**	P	**Pn**	**10 58 01.6**	**+1.0**
IRIF				*e*S	**Sn**	**10 58 25.6**	**+0.2**
ESL	**Shilin**	**1.50**	**212**	P	**Pn**	**10 58 00.1**	**-0.6**
	baz=203						
NSY	**Sanyi**	**1.56**	**245**	*e*P	**Pn**	**10 58 01.3**	**+0.1**
	baz=246						
TWQ1	**Liyutan**	**1.58**	**242**	P	**Pn**	**10 58 01.2**	**-0.2**
	baz=233						
TWQ1				*e*S	**Sn**	**10 58 26.3**	**-0.5**
	baz=233						
HATJ	**Hateruma jima**	**1.71**	**127**	*e*S	**Sn**	**10 58 29.0**	**-0.1**
SMLT	**Sun Moon Lake**	**1.76**	**227**	*i* P	**Pn**	**10 58 03.4**	**+0.2**
	baz=223						
JKRS	**Kuro-shima**	**1.77**	**118**	P	**Pn**	**10 58 03.9**	**+0.6**
JKRS				*e*S	**Sn**	**10 58 30.4**	**+0.2**
TYC	**Yuchr**	**1.77**	**228**	P	**Pn**	**10 58 03.6**	**+0.3**
	baz=225						
EHY	**Hungye**	**1.82**	**210**	*e*P	**Pn**	**10 58 03.6**	**-0.2**
	baz=203						
JIJ	**Ishigaki jima**	**1.82**	**113**	P	**Pn**	**10 58 03.9**	**+0.1**
JIJ				*e*S	**Sn**	**10 58 29.9**	**-1.2**
WNT	**Mingjian**	**1.91**	**231**	*e*P	**Pn**	**10 58 05.1**	**+0.4**
	baz=221						
TWF1	**Yuli**	**1.96**	**208**	*e*P	**Pn**	**10 58 04.6**	**-0.8**
	baz=206						
YUS	**Yu-Shan**	**2.02**	**218**	*e*P	**Pn**	**10 58 07.4**	**+1.4**
	baz=209						
ALS	**Alishan**	**2.09**	**221**	*e*P	**Pn**	**10 58 07.5**	**+0.8**
	baz=218						
JTJ	**Tarama**	**2.22**	**101**	P	**Pn**	**10 58 08.6**	**+0.5**
JTJ				*e*S	**Sn**	**10 58 38.3**	**-0.5**
ELDTW	**Lidau**	**2.23**	**212**	*e*P	**Pn**	**10 58 07.7**	**-0.6**
	baz=204						
STYT	**Tauyuan**	**2.39**	**217**	*e*P	**Pn**	**10 58 09.9**	**-0.1**
	baz=219						
WTP	**Ta-pu**	**2.40**	**220**	*e*P	**Pn**	**10 58 09.7**	**-0.5**
	baz=217						
CHN1	**Nanshi**	**2.50**	**221**	*e*P	**Pn**	**10 58 11.3**	**0.0**
	baz=218						
SGST	**Jiashian**	**2.55**	**219**	*e*P	**Pn**	**10 58 10.2**	**-1.7**
	baz=216						
SSD	**Sandimen**	**2.79**	**214**	*e*P	**Pn**	**10 58 14.8**	**+0.1**
	baz=211						
JKE	**Kume jima 2**	**4.22**	**72**	P	**Pn**	**10 58 32.2**	**-0.2**

IDC 05 10:58:17.6±12.0**, 1233S×16213E, h0km, mb3.9**/3**, mb1 4.0**/4**, mb1mx3.7**/16**, mbtmp3.9**/4**, ML3.8**/1**, Error ellipse: s-maj=228.6km s-min=41.5km az=84.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.59**	**323**	Pn	Pn	10 59 14.6	+0.1
	7.8nm,0.3s,baz=111,slow=17,SNR=3.6						
STKA	**Stephens Creek**	**27.12**	**221**	P	P	11 04 02.1	-0.2
	1.2nm,0.7s,baz=32,slow=9.5,SNR=2.6						
WRA	**Warramunga Arr**	**27.72**	**251**	P	P	11 04 08.1	+0.2
	1.8nm,1.0s,baz=81,slow=9.3,SNR=5.9						
ASAR	**Alice Springs**	**29.06**	**243**	P	P	11 04 19.9	+0.1
	0.9nm,0.8s,baz=64,slow=10,SNR=6.9						

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*IDC **05** 11:05:43.3±1.4, 3772N×7168E, h0km, mb3.7/3, mb1 3.8/6, mb1mx3.6/24, mbtmp3.7/6, ML3.6/3, MS3.4/2, Ms1 3.4/2, ms1mx2.6/37, Error ellipse: s-maj=27.0km s-min=26.8km az=39.0*
*NEIC **05** 11:05:44.7±1.0, 3778N×7156E, h10km, Error ellipse: s-maj=17.5km s-min=14.6km az=138.0*
*ISCJB **05** 11:05:51.2±3.9, 385N±02×71.1E±02, h76km±38km, mb3.6/3, Error ellipse: s-maj=34.1km s-min=20.3km az=19.6*
*NNC **05** 11:05:53.6±8.4, 3897N×7076E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=82.1km s-min=53.6km az=57.0*
ISC 05 11:05:51.0±3.0**, 384N**±02**×710E**±02**, h38**km±33km**, n12, σ0.ˢ94**/14**, mb3.7**/3**, 5C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	4.75	355	⇑Pn	Pn	11 07 01.7	+1.6
	2.6nm,0.4s,baz=177,slow=12,SNR=26						
KK31				⇑Sn	Sn	11 07 53.7	-0.2
	4.6nm,0.5s						
TKM2	Tokmak 2	5.73	36	⇑Pn	Pn	11 07 14.8	+1.4
	6.3nm,1.1s						
TKM2	Tokmak 2	5.73	36	ePn	Pn	11 07 12.7	-0.7
MKAR	Makanchi Array	11.82	41	Pn	Pn	11 08 36.1	-0.7
	0.3nm,0.3s,baz=225,slow=14,SNR=6.2						
AB31	Akbulak array	13.50	327	⇑Pn	Pn	11 08 58.7	-1.1
	0.9nm,0.7s,baz=149,slow=13,SNR=9.3						
AB31				⇑Sn	Sn	11 11 22.5	-5.8
	2.0nm,0.7s,baz=154,slow=22						
BVAR	Borovoye Array	14.67	358	Pn	Pn	11 09 21.2	+5.5
	0.3nm,0.3s,baz=163,slow=10,SNR=5.0						
BVAR				LR	LR	11 15 15.2	
	comp=Z,37nm,18.6s,baz=346,slow=37						
AKTK	Aktyubinsk	15.21	327	Pn	Pn	11 09 28.4	+5.6
AKTO	Aktyubinsk	15.21	327	Pn	Pn	11 09 28.4	+5.6
	0.2nm,0.3s,baz=143,slow=13,SNR=7.8						
ZALV	Zalesovo Beam	18.23	27	P	Pn	11 10 00.6	-0.1
	0.3nm,0.3s,baz=204,slow=10,SNR=4.6						
ARCES	ARCESS Array B	39.44	337	P	P	11 13 20.9	+4.1
	2.1nm,1.0s,mb3.8,baz=110,slow=10.0,SNR=4.1						
TORD	Torodi Ar. Bea	65.80	268	P	P	11 16 32.6	+0.1
	0.7nm,0.8s,mb3.7,baz=49,slow=6.6,SNR=4.4						
WRA	Warramunga Arr	82.95	122	P	P	11 18 07.1	-4.9
	0.4nm,0.9s,mb3.5,baz=324,slow=5.3,SNR=3.4						
WRA				LR	LR	12 02 04.3	
	comp=Z,79nm,21.1s,baz=155,slow=41						

JMA 05 11:10:49.4±0.4, 3188N×14135E, h0km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.79	314	P	Pn	11 11 22.1	+0.6
JHJ2				eS	Sn	11 11 44.9	0.0
BSO1	Boso 1	2.78	354	P	Pn	11 11 36.2	+1.0
BSO1				eS	Sn	11 12 12.9	+3.4
BSO3	Boso 3	3.00	347	P	Pn	11 11 39.8	+1.6
BSO3				eS	Sn	11 12 18.6	+3.8
BSO4	Boso 4	3.21	345	P	Pn	11 11 42.5	+1.4
JHU	Hanno	4.32	337	P	Pn	11 11 58.5	+2.2
JRY	Ryogami san	4.60	334	P	Pn	11 12 03.1	+2.9
JHO	Hitachi	4.76	352	P	Pn	11 12 03.8	+1.4
JHO				S	Sn	11 12 59.5	+1.2
JAG	Ashikaga	4.80	341	P	Pn	11 12 05.6	+2.7
JAG				eS	Sn	11 13 00.6	+1.4
JFK	Kawauchi	5.49	356	P	Pn	11 12 12.9	+0.5
JFK				eS	Sn	11 13 15.6	-0.6
JMK	Ichinoseki	7.06	359	P	Pn	11 12 35.2	+1.3
JMK				eS	Sn	11 13 54.1	-0.7

*ISCJB **05** 11:11:33.5±0.9, 2983N±003×3621E±005, h0km, Error ellipse: s-maj=6.5km s-min=4.7km az=2.5*
*GII **05** 11:11:34.5±1.2, 2985N×3613E, h0km, ML2.3/9, EXPLOSION*
*SGS **05** 11:11:34.6, 3000N×3611E, h7km*
*CSEM **05** 11:11:34.6, 3000N×3611E, h6km, ML2.8, After SNSN*
ISC 05 11:11:33.4±1.0, 2982N±003×3626E±005, h0km, n15, σ0.77/27, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRFI	Mount Harif	1.08	282	Pg	Pg	11 11 53.7	-0.5
HRFI				Sg	Sg	11 12 07.9	-0.4
EIL	Elat	1.15	263	Pg	Pg	11 11 55.7	+0.2
EIL				Sg	Sg	11 12 11.7	+1.3
HQLS		1.17	244	P	Pg	11 11 55.1	-0.7
HQLS		1.17	244	P	Pg	11 11 55.2	-0.6
HQLS				S	Sg	11 12 10.5	-0.5
MBRI	Mt Berech	1.17	269	Pg	Pg	11 11 55.2	-0.7
MBRI				Sg	Sg	11 12 12.2	+1.1
ZFRI	Zfri	1.19	308	Pg	Pg	11 11 55.7	-0.5
ZFRI				Sg	Sg	11 12 12.0	+0.4
PRNI	Paran	1.21	296	Pg	Pg	11 11 55.5	-1.2
PRNI				Sg	Sg	11 12 12.3	0.0
JLOS		1.28	212	P	Pg	11 11 58.2	+0.3
JLOS		1.28	212	P	Pg	11 11 58.2	+0.3
JLOS				S	Sg	11 12 15.9	+1.5
KRMI	Paran Flat	1.36	283	Pg	Pg	11 11 58.3	-1.3
KRMI				Sg	Sg	11 12 16.4	-0.9
RMNI	Mount Ramon	1.51	301	Pn	Pn	11 12 01.1	-0.6
RMNI				Sn	Sn	11 12 22.1	0.0
MZDA	Masada	1.67	333	Pn	Pn	11 12 04.0	+0.1
MZDA				Sn	Sn	11 12 27.0	+0.9
DSI	Dead Sea	1.90	337	Pn	Pn	11 12 08.1	+1.0
DSI				Sn	Sn	11 12 32.5	+0.8
KZIT	Kziot	1.94	304	Pn	Pn	11 12 07.3	-0.3
KZIT				Sn	Sn	11 12 33.4	+0.7
RSHS		1.99	221	P	Pn	11 12 07.5	-0.7

*NEIC **05** 11:35:14.9, 4152N×2013E, h8km, MD3.5(ATH), After TIR.*
*TIR **05** 11:35:15.9±1.8, 4140N×1963E, h29km±9km, ML3.3*
*ISCJB **05** 11:35:16.4±0.5, 4142N±002×1952E±003, h2km±3km, Error ellipse: s-maj=4.1km s-min=2.5km az=42.1*
*SKO **05** 11:35:16.5, 4137N×1944E, h5km, M2.7, ML3.1*
*CSEM **05** 11:35:17.8±0.1, 4151N×1965E, h8km, ML3.1, Error ellipse: s-maj=2.6km s-min=1.3km az=42.0*
*PDG **05** 11:35:17.7±0.5, 4146N×1957E, h11km±1km, MD3.2/5, ML3.3/10, Error ellipse: s-maj=1.5km s-min=2.1km az=0.0*
*BEO **05** 11:35:18.5±0.6, 4144N×1959E, h9km±2km, ML3.1/4*
*ATH **05** 11:35:21.0, 4143N×1974E, h38km, MD3.5/4*
ISC 05 11:35:17.3±0.5, 4141N±002×1952E±003, h3km±3km, n64, σ1.19/113, 13C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LACI	Lac	0.26	32	ePG	Pg	11 35 22.3	-0.1
LACI				i SG	Sg	11 35 26.7	+0.9
TIR	Tirane	0.27	104	ePG	Pg	11 35 22.7	+0.3
TIR				i SG	Sg	11 35 27.5	+1.7
TIR	Tirane	0.27	104	⇓iPg	Pg	11 35 22.7	+0.3
TIR				eSg	Sg	11 35 27.5	+1.7
TIR	Tirane	0.27	104	ePg	Pg	11 35 22.3	0.0
TIR				eSg	Sg	11 35 28.2	+2.4
QSH	Qafa e Shtames	0.31	69	ePG	Pg	11 35 22.0	-1.2
ULC	Ulcinj	0.59	340	⇑iPg	Pg	11 35 28.2	-0.4
ULC				eSg	Sg	11 35 37.7	+1.5
ULC	Ulcinj	0.59	340	i PG	Pg	11 35 28.2	-0.4
ULC				i SG	Sg	11 35 37.7	+1.5
PUK	Puka	0.69	24	ePG	Pg	11 35 29.4	-1.1
PUK				i SG	Sg	11 35 39.8	+0.4
BUM	Brajici-Budva	1.00	332	⇑iPg	Pg	11 35 36.2	-0.3
BUM				eSg	Sg	11 35 52.0	+2.5
BUM	Brajici-Budva	1.00	332	i PG	Pg	11 35 36.2	-0.3
BUM				i SG	Sg	11 35 52.0	+2.5
OHR	Ohrid	1.01	107	i Pg	Pg	11 35 35.6	-1.0
OHR				i Sg	Sg	11 35 50.5	+0.9
OHR				eLg		11 35 51.5	
	comp=N,419nm,0.5s						
OHR				eLg		11 35 52.0	
	comp=E,484nm,0.8s						
OHR	Ohrid	1.01	107	i Pg	Pg	11 35 35.6	-1.0
OHR				i Sg	Sg	11 35 50.5	+0.9
PDG	Podgorica	1.03	349	i PG	Pg	11 35 35.2	-1.9
PDG				i SG	Sg	11 35 51.6	+1.1
PDG	Podgorica	1.03	349	⇑iPg	Pg	11 35 35.2	-1.9
PDG				eSg	Sg	11 35 51.6	+1.1
TTG	Podgorica	1.03	349	⇑iPg	Pg	11 35 35.2	-1.9
TTG				eSg	Sg	11 35 51.6	+1.1
PVY	Plav	1.23	16	⇑iPg	Pg	11 35 38.5	-2.3
PVY				eSg	Sg	11 35 57.7	+1.0
HCY	Herceg Novi	1.29	324	⇑iPg	Pg	11 35 41.2	-0.7
HCY				eSg	Sg	11 36 00.7	+2.1
HCY	Herceg Novi	1.29	324	i PG	Pg	11 35 41.2	-0.7
HCY				i SG	Sg	11 36 00.7	+2.1
KRUS	Krusevo	1.30	91	i Pg	Pg	11 35 40.1	-2.1
KRUS				i Sg	Sg	11 36 00.3	+1.3
KRUS				eLg		11 36 01.4	
	comp=N,141nm,0.5s						
KRUS				eLg		11 36 01.7	
	comp=E,177nm,0.6s						
KRUS	Krusevo	1.30	91	i Pg	Pg	11 35 40.0	-2.2
KRUS				i Sg	Sg	11 36 00.3	+1.3
BIA	Bitola	1.41	106	i Pg	Pg	11 35 42.9	-1.5
BIA				i Sg	Sg	11 36 02.6	-0.1
BIA				eLg		11 36 03.7	
	comp=N,125nm,0.4s						
BIA				eLg		11 36 03.9	
	comp=E,118nm,0.4s						
BIA	Bitola	1.41	106	i Pg	Pg	11 35 42.9	-1.5
BIA				i Sg	Sg	11 36 02.5	-0.2
NKY	Niksic	1.45	345	⇓iPg	Pg	11 35 44.2	-0.9
NKY				eSg	Sg	11 36 05.2	+1.3
NKY	Niksic	1.45	345	i PG	Pg	11 35 44.2	-0.9
NKY				i SG	Sg	11 36 05.2	+1.3
BEY	Berane	1.48	11	i PG	Pg	11 35 43.7	-2.0
BEY				i SG	Sg	11 36 05.1	+0.1
BEY	Berane	1.48	11	⇑iPg	Pg	11 35 43.7	-2.0
BEY				eSg	Sg	11 36 05.1	+0.1
IVA	Berane	1.48	11	⇑iPg	Pg	11 35 43.7	-2.0
IVA				eSg	Sg	11 36 05.1	+0.1
SKO	Skopje	1.54	68	i Pn	Pn	11 35 45.6	0.0
SKO				i Sn	Sn	11 36 06.8	+0.8
SKO				eLg		11 36 07.6	
	comp=E,642nm,1.2s						
SKO				eLg		11 36 07.8	
	comp=N,334nm,0.5s						
SKO	Skopje	1.54	68	i Pn	Pn	11 35 45.5	-0.1
SKO				i Sn	Sn	11 36 06.8	+0.7
TREB	Trebinje	1.57	327	ePn	Pn	11 35 46.5	+0.5
TREB				eSn	Sn	11 36 06.1	-0.7
TREB				eSg	Sg	11 36 08.5	+0.8
BRY	Bratogost	1.66	334	⇓iPn	Pn	11 35 47.4	+0.2
BRY				eSn	Sg	11 36 10.6	+0.1
BRY	Bratogost	1.66	334	i PG	Pn	11 35 47.4	+0.2
BRY				i SG	Sg	11 36 10.6	+0.1
PE1	Pezze di Greco	1.70	250	ePn	Pn	11 35 46.3	-1.5
KEK	Kerkira	1.71	173	ePN	Pn	11 35 50.0	+2.0
UPM	Unac-Piva	1.84	346	⇑iPn	Pn	11 35 49.9	+0.1
UPM				eSn	Sn	11 36 14.9	+1.3
SJES	Sjenica	1.88	10	⇑ePn	Pn	11 35 51.3	+1.1
SJES				eSg	Sg	11 36 17.1	-0.5
SJES	Sjenica	1.88	10	ePn	Pn	11 35 49.9	-0.3
SJES				eSn	Sn	11 36 14.7	+0.3
PLE	Pljevlja	1.92	357	⇑iPn	Pn	11 35 51.5	+0.7
PLE				eSn	Sn	11 36 17.0	+1.6
STON	Ston	1.99	318	ePn	Pn	11 35 50.7	-1.1
STON				Sn	Sn	11 36 15.4	-1.8
STIP	Stip	2.02	81	i Pn	Pn	11 35 51.1	-1.1
STIP				i Sn	Sn	11 36 19.6	+1.8
STIP				eLg		11 36 20.4	
	comp=E,18nm,0.5s						
STIP				eLg		11 36 22.0	
	comp=N,23nm,0.4s						
STIP	Stip	2.02	81	i Pn	Pn	11 35 51.1	-1.1
STIP				i Sn	Sn	11 36 19.6	+1.7
JAN	Janina	2.02	150	ePN	Pn	11 35 54.0	+1.7
KZN	Kozani	2.03	122	ePN	Pn	11 35 53.0	+0.7
BARS	Barje	2.21	50	ePn	Pn	11 35 54.6	-0.2
BARS				eSn	Sn	11 36 22.2	-0.3
SG1	Sgolgore (BA)	2.22	256	ePn	Pn	11 35 56.2	+1.2
VAY	Valandovo	2.29	91	ePn	Pn	11 35 56.4	+0.4
VAY				eSn	Sn	11 36 23.6	-1.1
VAY				eLg		11 36 27.4	
	comp=E,55nm,0.8s						
VAY				eLg		11 36 28.1	
	comp=N,62nm,0.7s						
VAY	Valandovo	2.29	91	ePn	Pn	11 35 56.3	+0.3
VAY				eSn	Sn	11 36 23.5	-1.2
BBLS	Lazići	2.45	358	ePn	Pn	11 35 59.7	+1.6
BBLS				eSn	Sn	11 36 29.0	+0.4
DIVS	Divibare	2.71	7	ePn	Pn	11 36 02.1	+0.5
DIVS	Divibare	2.71	7	ePg	Pg	11 36 07.0	-2.1
DIVS				eSn	Sn	11 36 34.6	-0.2
DIVS	Divibare	2.71	7	ePn	Pn	11 36 00.0	-1.6
DIVS	Divibare	2.71	7	ePg	Pg	11 36 07.0	-2.1
DIVS				eSn	Sn	11 36 34.3	-0.5
ZAPS	Zavoj	2.96	50	⇓iPn	Pn	11 36 05.8	+0.7
ZAPS				eSn	Sn	11 36 39.5	-1.6
EVR	Evrytania	3.05	144	ePN	Pn	11 36 07.5	+1.2
SGO	Sicignano	3.30	256	Pn	Pn	11 36 09.5	-0.3
BLY	Banja Luka	3.75	334	ePn	Pn	11 36 14.8	-1.2
FGSL	Fruska Gora	3.75	3	ePn	Pn	11 36 14.4	-1.5
FGSL				eSn	Sn	11 36 59.9	-0.6
BZS	Buzias	4.47	19	⇓iP	Pn	11 36 24.3	-1.5
BZS	Buzias	4.47	19	ePn	Pn	11 36 24.2	-1.6
BZS				eSn	Sn	11 37 14.5	-3.8
PKSM	Moragy	4.84	353	⇓iP	Pn	11 36 37.5	+6.6
NRCA	Norcia	4.97	289	Pn	Pn	11 36 32.1	-0.7
	comp=N,16nm,0.6s						
DRGR		5.84	22	⇑iP	Pn	11 36 43.5	-1.2
VOY	Vojsko	6.16	320	⇑ePn	Pn	11 36 49.9	+0.8
VOY				eSn	Sn	11 37 55.7	-4.3
MLR	Muntele Rosu	6.20	47	⇓iP	Pn	11 36 51.9	+2.3

*ISCJB **05** 12:02:55.9±0.6, 2141S±004×6810W±005, h104km±6km, mb4.4/28, Error ellipse: s-maj=8.5km s-min=7.4km az=168.2*
*IDC **05** 12:02:57.0±0.9, 2140S×6823W, h102km±9km, mb4.2/11, mb1 4.2/15, mb1mx4.2/18, mbtmp4.1/15, MS3.1/3, Ms1 3.1/3, ms1mx2.8/26, Error ellipse: s-maj=14.5km s-min=11.8km az=138.0*
*NEIC **05** 12:02:57.0±0.6, 2156S×6821W, h104km±6km, mb4.5/18, Error ellipse: s-maj=9.4km s-min=6.2km az=75.0*
ISC 05 12:02:57.1±0.6, 2143S±004×6810W±005, h99km±5km, n92, σ0.91/89, mb4.4/28, 1C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.40	212	P	Pn	12 03 22.9	+0.8
	307nm,0.3s,baz=9.7,slow=7.9,SNR=3128						
LVC				S	Sn	12 03 40.9	-0.1
	99nm,0.3s,baz=247,slow=20,SNR=52						
LVC	Limon Verde	1.40	212	P	Pn	12 03 22.9	+0.8
LVC				S	Sn	12 03 40.9	-0.1
LPAZ	La Paz	5.11	360	P	Pn	12 04 16.6	+5.3
	3.2nm,0.3s,baz=192,slow=5.8,SNR=70						
ARE	Arequipa	5.89	326	eP	Pn	12 04 21.0	-0.9
ARE				eS	Sn	12 05 25.0	-3.0
LCO	Las Campanas	7.91	197	ePn	Pn	12 04 44.4	-5.0
	40nm,0.9s						
LCO				eSn	Sn	12 06 09.9	-7.2
SIV	San Ignacio	8.57	52	P	Pn	12 05 00.1	+1.7
	20nm,0.3s,baz=246,slow=12,SNR=385						
SIV				S	Sn	12 06 33.1	-0.4
	0.6nm,0.3s,baz=137,slow=24,SNR=6.1						
SIV				LR	LR	12 08 13.0	
	comp=Z,59nm,20.2s,baz=161,slow=36						
CFAA	Coronel Fontan	10.14	181	P	Pn	12 05 15.1	-4.5
	0.1nm,0.3s,baz=352,slow=12,SNR=5.3						
CFAA				S	Sn	12 07 03.0	-8.4
	0.1nm,0.3s,baz=270,slow=20,SNR=2.3						
CFAA	Coronel Fontan	10.14	181	P	Pn	12 05 15.1	-4.5
CFAA				S	Sn	12 07 03.0	-8.4
CPUP	Villa Florida	10.99	118	P	Pn	12 05 32.3	+1.1
	1.6nm,0.3s,baz=278,slow=12,SNR=14						
TRQA	Tornquist	17.40	164	eP	Pn	12 06 53.1	-0.4
	14nm,0.8s						
PLCA	Paso Flores	19.36	186	P	Pn	12 07 14.1	-2.7
	0.3nm,0.3s,baz=302,slow=11,SNR=10						
BDFB	Brasilia	19.88	77	P	Pn	12 07 22.5	-0.7
	0.7nm,0.3s,baz=210,slow=11,SNR=4.9						
BDFB				LR	LR	12 16 27.2	
	comp=Z,83nm,19.2s,baz=197,slow=40						
OTAV	Otavalo	23.79	334	eP	P	12 08 03.4	+2.6
ROSC	El Rosal	26.82	346	LR	LR	12 20 32.0	
	comp=Z,58nm,19.5s,baz=3.4,slow=39						
SJG	San Juan	39.34	3	eP	P	12 10 14.8	-2.0
PMSA	Palmer Station	43.41	177	P	P	12 10 49.8	+0.2
	2.0nm,0.6s,mb4.0,baz=331,slow=6.7,SNR=4.3						
BRAL	Brewton	55.22	340	eP	P	12 12 20.7	+0.8
LHS	Liberty Hill	56.89	347	eP	P	12 12 31.6	0.0
LHS				epP	PcP	12 13 21.4	-4.6
CPCT	Cooper Cave	58.67	344	eP	P	12 12 43.6	-0.5
SWET	Sewanee	58.82	343	eP	P	12 12 43.8	-1.3
PLAL	Pickwick Lake	59.22	341	eP	P	12 12 45.5	-2.4
	11nm,1.1s,mb4.8						
VNA3	Neumayer Olymp	59.90	161	e	P	12 12 52.2	0.0
JCT	Junction City	59.93	328	eP	P	12 12 51.6	-1.3
	7.3nm,0.8s,mb4.8						
VNA1	Neumayer--Stat	60.10	161	e	P	12 12 54.1	+0.6
VNA2	Neumayer--Watz	60.47	161	e	P	12 12 56.0	0.0
MIAR	Mount Ida	60.70	336	eP	P	12 12 57.2	-0.8
TXAR	Lajitas Array	61.00	324	P	P	12 12 59.1	-1.1
	1.0nm,0.6s,mb4.0,baz=149,slow=8.7,SNR=15						
SNAA	Sanae	62.10	161	e	P	12 13 06.6	-0.4
FVM	French Village	62.71	340	eP	P	12 13 10.2	-1.3
BNM	Barren Site	66.33	326	eP	P	12 13 35.5	+0.4
LAZ	Ladron	66.79	325	eP	P	12 13 39.2	+1.1
ANMO	Albuquerque	66.86	326	eP	P	12 13 38.7	+0.2
DBIC	Dimbokro	67.99	73	P	P	12 13 46.4	+0.3
	5.7nm,0.6s,mb4.6,baz=240,slow=6.8,SNR=13						
SDCO	Great Sand Dun	68.57	329	eP	P	12 13 49.7	+0.5
MVCO	Mesa Verde	69.65	327	eP	P	12 13 55.9	+0.1
	5.9nm,0.8s,mb4.5						
WUAZ	Wupatki	69.92	323	eP	P	12 13 58.5	+1.0
ISCO	Idaho Springs	70.26	330	eP	P	12 14 00.1	+0.6
PV01	Paradox Valley	70.39	327	eP	P	12 14 01.2	+0.8
PFO	Pinyon Flat Ob	71.54	319	eP	P	12 14 08.2	+0.8
SRU	San Rafael	72.13	327	eP	P	12 14 10.9	0.0
MSU	Marysvale	72.55	325	eP	P	12 14 14.2	+0.8
SHPR	Sheep Range	72.77	322	eP	P	12 14 15.4	+0.7
MPU	Maple Canyon	73.37	326	eP	P	12 14 18.9	+0.8
TPNV	Topopah Spring	73.70	322	eP	P	12 14 21.2	+1.0
	7.8nm,1.1s,mb4.3						
JLU	Jordanelle	73.72	327	eP	P	12 14 21.0	+0.9
AGMN	Agassiz Refuge	73.73	341	eP	P	12 14 19.1	-1.0
DUG	Dugway	74.12	326	eP	P	12 14 23.2	+0.7
ISA	Isabella	74.15	319	eP	P	12 14 23.3	+0.4
	9.9nm,0.8s,mb4.6						
PDAR	Pinedale Array	74.43	330	P	P	12 14 23.7	-0.5
	0.7nm,0.7s,mb3.5,baz=126,slow=7.8,SNR=7.8						
PTRM	Twissleman Ran	75.21	318	eP	P	12 14 27.7	-1.2
ULM	Lac du Bonnet	75.48	342	P	P	12 14 28.7	-1.4
	5.1nm,0.5s,mb4.5,baz=154,slow=4.4,SNR=13						
ULM	Lac du Bonnet	75.48	342	P	P	12 14 28.7	-1.4
REDW	Red Top Meadow	75.49	329	eP	P	12 14 30.6	+0.2
	15nm,1.5s,mb4.5						
LOHW	Long Hollow	75.56	330	eP	P	12 14 31.3	+0.5
	11nm,1.6s,mb4.3						
TPAW	Teton Pass	75.64	329	eP	P	12 14 31.8	+0.6
	4.1nm,0.8s,mb4.2						
RRI2	Red Ridge	75.71	329	eP	P	12 14 32.3	+0.7
	11nm,1.0s,mb4.5						
NVAR	Mina Array Bea	75.90	322	P	P	12 14 33.2	+0.4
	3.3nm,0.8s,mb4.1,baz=167,slow=7.6,SNR=16						
IMW	Indian Meadow	75.94	330	eP	P	12 14 33.6	+0.7
	6.6nm,1.0s,mb4.3						
SCHQ	Schefferville	75.95	1	P	P	12 14 31.6	-1.1
	4.3nm,0.6s,mb4.4,baz=137,slow=4.8,SNR=7.6						
FLWY	Flagg Ranch	75.97	330	eP	P	12 14 33.8	+0.7
	8.3nm,0.8s,mb4.5						
RLMT	Red Lodge	76.11	331	eP	P	12 14 34.0	+0.2
SYO	Syowa Base	76.31	159	⇑eP	P	12 14 33.0	-1.7
TORD	Torodi Ar. Bea	76.62	70	P	P	12 14 37.3	-0.1
	12nm,0.5s,mb4.8,baz=256,slow=5.4,SNR=160						
PAHR	Pah Rah Range	77.38	322	eP	P	12 14 42.0	+0.8
	18nm,0.7s,mb4.9						
HLID	Hailey	77.39	327	eP	P	12 14 41.7	+0.6
	8.4nm,0.8s,mb4.5						
MCMT	McKenzie Canyo	77.54	329	eP	P	12 14 42.7	+0.8
DLMT	Dillon	77.82	330	eP	P	12 14 44.0	+0.5
	3.4nm,0.9s,mb4.1						
BMO	Blue Mountains	79.76	327	eP	P	12 14 54.5	+0.4
	7.0nm,0.8s,mb4.5						
WALA	Waterton Lakes	81.16	331	eP	P	12 15 01.5	0.0
VIPM	Ingram Point	81.26	325	P	P	12 15 02.9	+0.8
HAWA	Hanford	81.96	327	eP	P	12 15 05.8	0.0
	4.7nm,0.8s,mb4.4						
OD2	Odessa Site #2	82.23	328	eP	P	12 15 07.3	+0.2
BOSA	Boshof	82.81	118	P	P	12 15 10.7	-0.1
	6.0nm,0.7s,mb4.6,baz=248,slow=6.0,SNR=10						
EBG	Ellensburg	82.83	327	P	P	12 15 10.8	+0.5
ETW	Entiat	83.18	327	P	P	12 15 12.1	+0.1
EDM	Edmonton	84.02	335	eP	P	12 15 14.6	-1.6
MAW	Mawson	84.18	163	P	P	12 15 17.0	0.0
	4.1nm,0.8s,mb4.3,baz=223,slow=7.1,SNR=11						
RPW	Rockport	84.33	328	P	P	12 15 16.9	-1.0
CMW	Cultus Mountai	84.62	327	P	P	12 15 18.7	-0.7
VDB	Vedder Mountai	85.01	328	P	P	12 15 20.3	-0.9
ESDC	Sonseca Array	85.25	44	P	P	12 15 23.5	+0.7
	0.3nm,0.5s,mb3.5,baz=235,slow=5.2,SNR=4.3						
YKA	Yellowknife Ar	91.37	340	P	P	12 15 50.5	-0.8
	10.0nm,0.6s,mb5.1,baz=134,slow=4.6,SNR=46						
YKA	Yellowknife Ar	91.37	340	P	P	12 15 50.5	-0.8
ASAR	Alice Springs	130.32	207	PKP	PKPdf	12 21 55.0	-1.5
	1.4nm,0.7s,baz=147,slow=2.4,SNR=15						
PETK	Petropavlovsk-	132.95	324	PKP	PKPdf	12 22 00.2	-0.3
	0.9nm,0.8s,baz=82,slow=3.6,SNR=2.9						
WRA	Warramunga Arr	133.40	210	PKP	PKPdf	12 22 01.3	-1.1
	1.7nm,0.7s,baz=154,slow=1.8,SNR=24						
FITZ	Fitzroy Crossi	138.48	200	PKP	PKPdf	12 22 11.1	-0.9
	0.9nm,0.6s,baz=214,slow=3.6,SNR=3.8						
ZALV	Zalesovo Beam	141.56	26	PKP	PKPdf	12 22 15.4	-0.9
	2.1nm,0.5s,baz=299,slow=3.0,SNR=7.6						
MKAR	Makanchi Array	145.13	36	PKPbc	PKPbc	12 22 22.8	+0.2
	6.7nm,0.6s,baz=319,slow=4.1,SNR=38						
GUMO	Guam	147.66	262	PKPbc	PKPbc	12 22 29.1	-1.8
	27nm,0.8s,baz=121,slow=3.0,SNR=3.6						
MJAR	Matsushiro Arr	152.62	309	PKPbc	PKPbc	12 22 41.1	-1.2
	1.3nm,0.5s,baz=62,slow=0.7,SNR=4.9						
MJAR				PKPab	PKPab	12 22 50.1	-3.1
	0.4nm,0.4s,baz=330,slow=6.2,SNR=3.8						
SONM	Songino Array	153.28	8	PKPbc	PKPbc	12 22 43.3	-0.1
	1.1nm,0.6s,baz=320,slow=1.2,SNR=5.5						
SONM				PKPab	PKPab	12 22 55.9	+0.3
	0.5nm,0.6s,baz=306,slow=3.3,SNR=3.6						

IDC 05 12:04:06.2±2.2, 619S×13096E, h0km, ML3.5/3, Error ellipse: s-maj=88.9km s-min=28.2km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.93	203	Pn	Pn	12 07 11.9	+0.6
	0.2nm,0.3s,baz=25,slow=14,SNR=14						
WRA	Warramunga Arr	14.06	167	Pn	Pn	12 07 25.9	-0.9
	0.2nm,0.3s,baz=349,slow=14,SNR=7.8						
WRA				Sn	Sn	12 09 54.9	-8.7
	0.3nm,0.3s,baz=340,slow=23,SNR=6.2						
ASAR	Alice Springs	17.60	171	P	Pn	12 08 13.2	+0.1
	0.2nm,0.3s,baz=353,slow=11,SNR=11						
MKAR	Makanchi Array	68.08	326	P	P	12 15 07.9	+0.1
	baz=114,slow=8.0						

*TEH **05** 12:25:43.9, 2839N×5641E, h12km, ML4.4*
*BJI **05** 12:27:00.0, 2840N×5670E, h14km, mB5.1, mb4.6*
*MOS **05** 12:27:00.9±0.8, 2830N×5671E, h33km, mb4.8/50, Error ellipse: s-maj=10.9km s-min=4.6km az=128.7*
*THR **05** 12:27:00.1±0.8, 2841N×5668E, h14km±7km, ML4.3*
*NEIC **05** 12:27:00.0, 2840N×5668E, h14km, mb4.8/65, ML4.3(THR), MN4.4(TEH), After THR.*
*CSEM **05** 12:27:01.5±0.1, 2841N×5661E, h30km, mb4.7/62, Ms4.0, Error ellipse: s-maj=2.8km s-min=1.6km az=17.0*
*ISCJB **05** 12:27:03.0±0.3, 2830N±002×5657E±003, h47km±3km, mb4.6/96, MS3.5/14, Error ellipse: s-maj=4.0km s-min=3.7km az=23.3*
*IDC **05** 12:27:05.9±5.7, 2837N×5664E, h62km±52km, mb4.2/19, mb1 4.2/22, mb1mx4.1/29, mbtmp4.2/22, ML4.4/3, MS3.5/14, Ms1 3.5/14, ms1mx3.4/34, Error ellipse: s-maj=20.6km s-min=13.0km az=156.0*
*SZGRF **05** 12:27:05.7, 2847N×5639E, h33km, mb4.7, Southern Iran*
ISC 05 12:27:04.8±0.3, 2826N±002×5657E±003, h49km±3km, n365, σ1.04/378, mb4.6/96, MS3.5/14, 66C-13D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.93	203	ePg	Pn	12 27 20.6	-0.9
BNDS				eSg	Sn	12 27 35.7	+1.9
BNDS				AML	AML	12 27 45.0	
	comp=N,9µm,0.6s						
BNDS	Bandar-Abbas	0.93	203	ePg	Pn	12 27 20.6	-0.9
	SNR=90						
BNDS				eSg	Sn	12 27 35.7	+1.9
	SNR=90						
BNDS	Bandar-Abbas	0.93	203	ePg	Pn	12 27 20.6	-0.9
BNDS				eSg	Sn	12 27 35.7	+1.9
KRBR	Kerman	1.72	5	ePg	Pn	12 27 28.7	-3.7
KRBR				AML	AML	12 28 05.0	
	comp=N,4µm,0.6s						
KRBR				AML	AML	12 28 09.1	
	comp=E,3µm,0.6s						
KRBR	Kerman	1.72	5	ePg	Pn	12 27 29.1	-3.2

BANOM **Banah** 2.34 186 Pn **Pn** 12 27 40.0 -0.8
SNR=50
BANOM Sn **Sn** 12 28 12.0 +3.7
GHIR **Ghir-Karzin** 3.16 271 *e*Pn **Pn** 12 27 53.1 +1.0
GHIR AML AML 12 28 59.9
comp=N,682nm,0.8s
GHIR AML AML 12 29 00.6
comp=E,868nm,0.6s
ISRV **Sarvestan** 3.24 291 *e*Pn **Pn** 12 27 55.2 +2.1
ISRV *e* 12 29 04.7
NAZ **Nazwa, Dubai** 3.36 194 Pn **Pn** 12 27 55.2 +0.4
SNR=25
IBAF **Bafgh** 3.43 345 Pn **Pn** 12 27 55.7 -0.1
IBAF *e*Sn **Sn** 12 28 34.0 -1.2
IBAF **Bafgh** 3.43 345 *e*Pn **Pn** 12 27 55.8 0.0
IBAF *e*Sn **Sn** 12 28 35.0 -0.2
IBAF *e* 12 29 00.3
IBAF **Bafgh** 3.43 345 Pn **Pn** 12 27 55.7 -0.1
IBAF Sn **Sn** 12 28 34.9 -0.3
HATD **Hatta, Dubai** 3.44 187 Pn **Pn** 12 27 55.6 -0.4
SNR=12
IPAR **Pars** 3.47 298 *e*Pn **Pn** 12 27 58.4 +2.2
IPAR *e* 12 29 07.5
IPAR **Pars** 3.47 298 Pn **Pn** 12 27 58.3 +2.1
IMOK **Mouk** 3.48 284 *e*Pn **Pn** 12 27 57.6 +1.1
IMOK *e*Lg 12 28 49.2
IMOK *e* 12 29 11.6
IMOK **Mouk** 3.48 284 Pn **Pn** 12 27 57.6 +1.1
IMOK Lg 12 28 49.1
IMEH **Mehriz** 3.56 332 *e*Pn **Pn** 12 27 58.4 +0.9
IMEH *e*Lg 12 28 51.9
IMEH *e* 12 29 19.0
IMEH **Mehriz** 3.56 332 Pn **Pn** 12 27 58.3 +0.8
IMEH Lg 12 28 51.9
ASHO **Ashiyiah** 3.59 188 Pn **Pn** 12 27 57.6 -0.4
SNR=45
FAQ **Al Faqa, Dubai** 3.61 194 Pn **Pn** 12 27 57.9 -0.3
SNR=38
ASUD **Al Ashush, Dub** 3.79 197 Pn **Pn** 12 28 01.4 +0.7
SNR=24
ZHSF **Zahedan** 3.92 69 *e*Pn **Pn** 12 28 00.3 -2.1
ZHSF *e*Sg **Sn** 12 28 57.8 +11
ICHK **Chekchek** 4.39 335 *e*Pn **Pn** 12 28 10.0 +1.1
ICHK *e* 12 28 36.0
IKOO **Kooshah** 4.65 26 *e*Pn **Pn** 12 28 10.9 -1.6
IKOO *e* 12 29 29.3
ITEG **Tejag** 4.99 22 *e*Pn **Pn** 12 28 15.3 -1.8
ITEG *e* 12 29 43.8
IDAH **Dahanechah** 5.29 32 *e*Pn **Pn** 12 28 23.0 +1.7
IDAH **Dahanechah** 5.29 32 *e*Pn **Pn** 12 28 22.0 +0.7
IDAH *e* 12 29 55.4
IGAR **Gharneh** 5.69 318 *e*Pn **Pn** 12 28 27.5 +0.7
IGAR *e*Sn **Sn** 12 29 28.0 -2.8
IGAR *e* 12 29 37.0
IZEF **Zefreh** 5.89 323 Pn **Pn** 12 28 30.0 +0.5
IZEF *e*Sn **Sn** 12 29 32.3 -3.5
IZEF **Zefreh** 5.89 323 *e*Pn **Pn** 12 28 30.1 +0.6
IZEF *e* 12 28 32.8
IZEF *e*Sn **Sn** 12 29 32.3 -3.5
IZEF **Zefreh** 5.89 323 Pn **Pn** 12 28 30.0 +0.5
IZEF Sn **Sn** 12 29 32.2 -3.6
SLWS 6.33 238 P **Pn** 12 28 35.2 -0.4
IPIR **Pirpir** 6.59 313 *e*Pn **Pn** 12 28 40.1 +0.9
IPIR *e*Sn **Sn** 12 29 48.9 -4.1
IPIR **Pirpir** 6.59 313 *e*Pn **Pn** 12 28 40.1 +0.9
IPIR *e*Sn **Sn** 12 29 48.9 -4.1
IPIR *e* 12 30 07.0
IPIR **Pirpir** 6.59 313 Pn **Pn** 12 28 40.1 +0.9
IPIR Sn **Sn** 12 29 48.8 -4.2
IKLH **Kolahrood** 6.62 321 *e*Pn **Pn** 12 28 40.2 +0.6
IKLH *e* 12 28 56.1
IKLH **Kolahrood** 6.62 321 Pn **Pn** 12 28 40.1 +0.5
BTHS 6.64 232 P **Pn** 12 28 38.3 -1.5
ISFB **Sefidab** 7.11 330 *e*Pn **Pn** 12 28 46.7 +0.4
ISFB *e* 12 31 34.0
ISFB **Sefidab** 7.11 330 Pn **Pn** 12 28 46.6 +0.3
IANJ **Anjilo** 7.53 343 *e*Pn **Pn** 12 28 52.4 +0.4
KFJS 7.62 271 P **Pn** 12 28 52.2 -1.0
ILAS **Lasjerd** 7.74 337 *e*Pn **Pn** 12 28 54.5 -0.3
ILAS *e* 12 30 19.1
KBD **Kabd** 7.85 279 *e*P **Pn** 12 28 55.6 -0.8
KBD AML AML 12 30 25.0
comp=Z,24nm,0.4s
UMR **Umm Al-Rimmam** 7.87 282 *e*P **Pn** 12 28 56.6 -0.1
IVRN **Varamin** 7.88 330 *e*Pn **Pn** 12 28 56.5 -0.3
IVRN *e* 12 29 01.3
RDF **Al-Radifah** 7.96 277 *e*P **Pn** 12 28 56.8 -1.1
RDF AML AML 12 30 26.2
comp=Z,56nm,0.5s
MIB **Mutribah** 8.23 283 *e*P **Pn** 12 29 00.6 -1.0
MIB AML AML 12 30 35.3
comp=Z,34nm,0.4s
NAY **Al-Naaiem** 8.25 279 *e*P **Pn** 12 29 01.0 -0.8
NAY AML AML 12 30 32.2
comp=Z,19nm,0.5s
IDMV **Damavand** 8.25 333 *e*Pn **Pn** 12 29 02.3 +0.4
MHI **Mashad** 8.39 16 *e*Pn **Pn** 12 29 05.7 +1.9
ASO **Ashtian** 8.40 320 *e*Pn **Pn** 12 29 03.7 -0.2
RST **Umm Al-Ruwaisa** 8.49 281 *e*P **Pn** 12 29 04.3 -0.8
RST **Umm Al-Ruwaisa** 8.49 281 *e*P **Pn** 12 29 04.3 -0.8
IAKL **Akhelmad** 8.52 12 *e*Pn **Pn** 12 29 07.0 +1.5
IAKL **Akhelmad** 8.52 12 *e*Pn **Pn** 12 29 07.1 +1.6
IGLO **Ghaloghah** 8.54 345 *e*Pn **Pn** 12 29 06.3 +0.5
IGLO *e* 12 32 01.9
IGLO **Ghaloghah** 8.54 345 Pn **Pn** 12 29 06.2 +0.4
IMYA **Miami** 8.59 19 *e*Pn **Pn** 12 29 07.4 +0.9
IMYA *e* 12 31 49.5
IMYA **Miami** 8.59 19 Pn **Pn** 12 29 07.3 +0.8
IR3 **Iran Long-Peri** 8.60 328 *e*Pn **Pn** 12 29 07.6 +0.9
IKRD **Kardeh** 8.65 10 *e*Pn **Pn** 12 29 11.7 +4.4
IKRD **Kardeh** 8.65 10 Pn **Pn** 12 29 11.6 +4.3
ISFR **Sfrayin** 8.85 7 *e*Pn **Pn** 12 29 12.0 +1.9
ISFR **Sfrayin** 8.85 7 Pn **Pn** 12 29 11.9 +1.8
IRAZ **Razeghan** 9.09 323 *e*Pn **Pn** 12 29 11.1 -2.2
SHAO **Shalim** 10.23 185 Pn **Pn** 12 29 27.5 -1.5
SNR=9.1
IVIS **Veis** 10.39 309 *e*Pn **Pn** 12 29 29.2 -2.0
IVIS *e* 12 29 36.7
IVIS **Veis** 10.39 309 Pn **Pn** 12 29 29.1 -2.1
LYLS 10.47 236 P **Pn** 12 29 29.0 -3.4
ILIN **Lien** 10.54 311 *e*Pn **Pn** 12 29 32.5 -0.7
IDHR **Dehrash** 10.80 309 *e*Pn **Pn** 12 29 35.2 -1.6
IDHR *e* 12 31 43.3
ASYS 10.85 269 P **Pn** 12 29 34.3 -3.2
IMRD **Marand** 13.81 322 *e*Pn **Pn** 12 30 17.6 -0.2
IMRD *e* 12 30 27.1
IMRD **Marand** 13.81 322 Pn **Pn** 12 30 17.5 -0.3
MSL **Mosul** 13.93 308 *ex* x 12 30 16.5
MSL *ex* x 12 32 51.0
GNI **Garni** 15.36 324 P **Pn** 12 30 43.3 +5.0
comp=Z,1.7nm,0.3s,baz=333,slow=7.5,SNR=9.2
GNI LR LR 12 37 11.1
comp=Z,166nm,19.3s,baz=332,slow=40
GNI **Garni** 15.36 324*d* *i*P **Pn** 12 30 43.5 +5.2
ERZM **Erzurum** 17.11 317 *i*P **Pn** 12 31 04.4 +4.0
ASF **Jabal al Asfar** 17.45 288 P **Pn** 12 31 05.2 +0.6
comp=Z,1.2nm,0.3s,baz=342,slow=7.3,SNR=9.9
ASF S **S** 12 34 13.9 -10
comp=Z,0.2nm,0.3s,baz=336,slow=19,SNR=3.4
ASF LR LR 12 38 59.8
comp=Z,162nm,19.9s,baz=317,slow=41
ASF **Jabal al Asfar** 17.45 288 P **Pn** 12 31 05.2 +0.6
ASF S **S** 12 34 13.9 -10
ASF pmax pmax
comp=Z,1.0nm,0.3s
ASF MLR MLR
comp=Z,162nm,19.9s
ASF **Jabal al Asfar** 17.45 288 P **Pn** 12 31 05.2 +0.6
comp=Z,1.0nm,0.3s
ASF S **S** 12 34 13.9 -10
comp=Z,162nm,19.9s
ELZG **Elazig** 17.86 309 *i*P **Pn** 12 31 08.9 -0.8
MALT **Malatya** 18.16 308 *e*P **Pn** 12 31 15.0 +1.7
MALT pmax pmax
comp=Z,29nm,1.2s
MALT **Malatya** 18.16 308 *e*P **Pn** 12 31 15.0 +1.7
comp=Z,29nm,1.2s
MMAI **Mount Meron Ar** 18.82 290 P **Pn** 12 31 21.9 +0.6
comp=Z,2.2nm,0.3s,baz=94,slow=12,SNR=4.9
MMAI LR LR 12 39 57.3
comp=Z,78nm,20.3s,baz=140,slow=41
EIL **Elat** 18.97 279 P **Pn** 12 31 23.4 +0.1
comp=Z,0.6nm,0.3s,baz=71,slow=4.3,SNR=6.3
EIL LR LR 12 39 33.1
comp=Z,220nm,19.6s,baz=285,slow=39
KIV **Kislovodsk** 19.22 328 *e*P **Pn** 12 31 26.3 +0.2
KIV pmax pmax
comp=Z,22nm,1.1s
KIV **Kislovodsk** 19.22 328 *e*P **Pn** 12 31 26.3 +0.2
comp=Z,22nm,1.1s
GRSN **GIRESUNGRSN** 19.62 315 *i*P **Pn** 12 31 30.4 -0.4
AML **Almayashu** 19.63 41 P **Pn** 12 31 28.8 -2.2
SNR=8.7
AML **Almayashu** 19.63 41 *e*P **Pn** 12 31 28.7 -2.2
comp=Z,20nm,0.8s
AML **Almayashu** 19.63 41 *e*P **Pn** 12 31 28.7 -2.2
comp=Z,20nm,0.8s
EKS2 **Erkin-Say** 20.02 40 P **P** 12 31 35.1 +1.8
SNR=12
EKS2 **Erkin-Say** 20.02 40 *e*P **P** 12 31 33.0 -0.4
comp=Z,17nm,0.9s
EKS2 **Erkin-Say** 20.02 40 *e*P **P** 12 31 33.0 -0.4
comp=Z,17nm,0.9s
UCH **Uchtor** 20.16 42 P **P** 12 31 37.7 +2.7
SNR=7.8
UCH **Uchtor** 20.16 42 *e*P **P** 12 31 37.6 +2.6
comp=Z,10nm,0.9s
UCH **Uchtor** 20.16 42 *e*P **P** 12 31 37.6 +2.6
comp=Z,10nm,0.9s
SOC **Sochi** 20.44 323 *e*P **P** 12 31 37.1 -0.9
SOC pmax pmax
comp=Z,30nm,0.9s
SOC **Sochi** 20.44 323 *e*P **P** 12 31 37.1 -0.9
comp=Z,30nm,0.9s
KZA **Kyzart** 20.51 43 P **P** 12 31 40.6 +1.9
SNR=7.4
FRU **Bishkek** 20.60 40 *e*P **P** 12 31 42.0 +2.3
CSS **Prodhromos** 20.87 295 *e*P **P** 12 31 46.7 +4.0
comp=Z,41nm,1.3s
ULHL **Ulahol** 21.21 44 P **P** 12 31 49.3 +3.0
SNR=20
TKM2 **Tokmak 2** 21.22 41 *e*P **P** 12 31 46.8 +0.4
TKM2 pmax pmax
comp=Z,16nm,0.9s,mb4.3
TKM2 **Tokmak 2** 21.22 41 P **P** 12 31 48.4 +2.0
SNR=14
TKM2 **Tokmak 2** 21.22 41 *e*P **P** 12 31 46.8 +0.4
comp=Z,16nm,0.9s,mb4.3
TKM2 **Tokmak 2** 21.22 41 *e*P **P** 12 31 46.8 +0.4
comp=Z,16nm,0.9s,mb4.3
CDAG **Cicekdag** 21.57 307 *i*P **P** 12 31 53.0 +2.8
CTKT **Corum** 21.73 310 *i*P **P** 12 31 53.1 +1.3
BOYT **Boyabat** 22.03 312 *i*P **P** 12 31 57.8 +2.7
BR131 **Keskin Array S** 22.12 307 *e*P **P** 12 31 56.8 +0.7
comp=Z,31nm,0.8s,mb4.8
BR131 **Keskin Array S** 22.12 307 *e*P **P** 12 31 56.8 +0.7
comp=Z,31nm,0.8s,mb4.8
AKTK **Aktyubinsk** 22.17 2 P **P** 12 31 55.6 -0.9
comp=Z,179nm,18.6s
AKTK **Aktyubinsk** 22.17 2 P **P** 12 31 55.6 -0.9
AKTK LR LR 12 41 24.3
AKTO **Aktyubinsk** 22.17 2 P **P** 12 31 55.6 -0.9
comp=Z,8.3nm,0.6s,mb4.3,baz=179,slow=12,SNR=20
AKTO LR LR 12 41 24.3
comp=Z,179nm,18.6s,MS3.5,baz=170,slow=39
AKTO **Aktyubinsk** 22.17 2 P **P** 12 31 55.6 -0.9
AKTO pmax pmax
comp=Z,8.0nm,0.6s,mb4.3
AKTO MLR MLR
comp=Z,179nm,18.6s,MS3.5
ANTO **Ankara** 22.78 307 *e*P **P** 12 32 03.6 +0.6
ANTO pmax pmax
comp=Z,16nm,0.7s,mb4.6
ANTO **Ankara** 22.78 307 *e*P **P** 12 32 03.6 +0.6
comp=Z,16nm,0.7s,mb4.6
ANTO **Ankara** 22.78 307 *e*P **P** 12 32 03.6 +0.6
comp=Z,16nm,0.7s,mb4.5
BALT **Daday** 23.09 311 *i*P **P** 12 32 06.4 +0.1
KOLN **Koldanda** 23.85 85 *e*P **P** 12 32 14.7 +1.1
comp=Z,26nm,0.9s,mb4.7
DANN **Dangsing** 23.92 83 *e*P **P** 12 32 15.4 +1.1
comp=Z,60nm,0.7s,mb5.2
GOLH **Golhisar** 24.36 298 *i*P **P** 12 32 19.4 +1.3
HENT **Hendek** 24.48 307 *i*P **P** 12 32 20.1 +0.9
KHAL **Karahalli** 24.70 301 *i*P **P** 12 32 22.1 +0.9
KHAL **Karahalli** 24.70 301 *i*P **P** 12 32 22.1 +0.9
GKN **Gorkha** 24.73 84 *e*P **P** 12 32 22.0 +0.4
GDZ **Gediz** 24.91 303 *i*P **P** 12 32 23.8 +0.6
DMN **Daman** 25.20 85 *e*P **P** 12 32 27.6 +1.7
comp=Z,27nm,0.9s,mb4.8
KKN **Kakani** 25.32 84 *e*P **P** 12 32 27.0 0.0
comp=Z,54nm,0.8s,mb5.1
PKI **Pulchoki** 25.47 85 *e*P **P** 12 32 28.9 +0.6
comp=Z,30nm,0.6s,mb5.0
GUN **Gumba** 25.83 84 *e*P **P** 12 32 31.4 -0.2
comp=Z,70nm,0.7s,mb5.3
JIRN **Jiri** 26.14 84 *e*P **P** 12 32 34.9 +0.5
comp=Z,15nm,0.4s,mb4.9
KDAG **Bornova** 26.40 300 *i*P **P** 12 32 38.2 +1.6
RAMN **Ramite** 26.61 86 *e*P **P** 12 32 39.2 +0.5
comp=Z,150nm,0.8s,mb5.6
BVAR **Borovoye Array** 26.77 19 P **P** 12 32 38.7 -1.1
comp=Z,5.6nm,0.7s,mb4.2,baz=199,slow=7.8,SNR=23
BVAR LR LR 12 43 43.4
comp=Z,174nm,19.0s,MS3.6,baz=210,slow=37
BVAR **Borovoye Array** 26.77 19 P **P** 12 32 38.7 -1.1
BVAR pmax pmax
comp=Z,6.0nm,0.7s
BVAR MLR MLR
comp=Z,174nm,19.0s
ODAN **Odare** 27.32 86 *e*P **P** 12 32 46.3 +1.2
comp=Z,15nm,0.8s,mb4.5
MKAR **Makanchi Array** 27.34 40 P **P** 12 32 44.0 -1.0
comp=Z,4.2nm,0.7s,mb4.0,baz=228,slow=8.5,SNR=21
MKAR **Makanchi Array** 27.34 40 P **P** 12 32 44.0 -1.0
MKAR pmax pmax
comp=Z,4.0nm,0.7s
TAPN **Taplejung** 27.52 84 *e*P **P** 12 32 45.8 -1.1
TIRR **Tirgusor** 27.66 313 *i*P **P** 12 32 48.5 +0.5
IDI **Anoyia** 27.75 293 P **P** 12 32 49.6 +0.7
comp=Z,8.1nm,0.7s,mb4.5,baz=339,slow=9.1,SNR=3.0
IDI **Anoyia** 27.75 293 P **P** 12 32 49.5 +0.6
KURK **Kurchatov** 27.95 31 P **P** 12 32 48.3 -2.1
comp=Z,1.9nm,0.6s,mb3.9,baz=230,slow=8.6,SNR=6.1
KURK LR LR 12 44 25.8
comp=Z,66nm,20.3s,MS3.2,baz=225,slow=38
KURK **Kurchatov** 27.95 31 *e*P **P** 12 32 48.1 -2.3
KURK pmax pmax
comp=Z,7.0nm,1.8s,mb4.0
VRI **Vrincioaia** 29.36 315 *i*P **P** 12 33 06.6 +3.6
VRI **Vrincioaia** 29.36 315 *i*P **P** 12 33 06.6 +3.6
MLR **Muntele Rosu** 29.69 314 *i*P **P** 12 33 08.9 +3.0
MLR **Muntele Rosu** 29.69 314 *i*P **P** 12 33 08.9 +3.0
AKASG **Malin Array Be** 30.49 325 P **P** 12 33 11.8 -1.1
comp=Z,14nm,0.5s,mb4.0,baz=128,slow=8.1,SNR=5.3
OBN **Obninsk** 30.49 337 P **P** 12 33 13.0 +0.1
OBN *e* pP 12 33 28.6 +3.0
OBN *e* 12 34 09.8
OBN pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
OBN **Obninsk** 30.49 337 P **P** 12 33 13.0 +0.1
comp=Z,8.0nm,0.9s,mb4.5
BURAR **Bucovina Array** 31.07 317 *i*P **P** 12 33 18.6 +0.5
BURAR **Bucovina Array** 31.07 317 *i*P **P** 12 33 18.6 +0.5
BUR08 **Bucovina Ar. S** 31.10 317 *e*P **P** 12 33 18.6 +0.2
BUR08 **Bucovina Ar. S** 31.10 317 *e*P **P** 12 33 18.6 +0.2
DRGR 32.27 314 *i*P **P** 12 33 29.5 +0.8
DRGR 32.27 314 *i*P **P** 12 33 29.5 +0.8
BZS **Buzias** 32.55 312 *i*P **P** 12 33 31.8 +0.7
BZS **Buzias** 32.55 312 *i*P **P** 12 33 31.8 +0.7
NVS **Novosibirsk** 32.84 29 *e*P **P** 12 33 32.2 -1.3
NVS *e*S Sx 12 40 41.4
NVS pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
NVS pmax pmax
comp=N,5.0nm,1.0s
NVS pmax pmax
comp=E,4.0nm,0.5s
NVS smax
comp=N,39nm,2.5s
NVS **Novosibirsk** 32.84 29 *e*P **P** 12 33 32.2 -1.3
comp=N,5.0nm,1.0s,mb4.4
ZAL **Zalesovo** 32.92 31 P **P** 12 33 32.8 -1.5
ZAL pmax pmax
comp=Z,7.0nm,0.5s
ZAL MLR MLR
comp=Z,49nm,21.1s
ZAL **Zalesovo** 32.92 31 P **P** 12 33 32.8 -1.5
comp=Z,49nm,21.1s
ZAA0 **Zalesovo Array** 32.94 31 *e*P **P** 12 33 32.9 -1.5
ZAA0 **Zalesovo Array** 32.94 31 *e*P **P** 12 33 32.9 -1.5
ZALV **Zalesovo Beam** 32.94 31 P **P** 12 33 32.8 -1.6
comp=Z,6.7nm,0.5s,mb4.8,baz=240,slow=9.1,SNR=30
ZALV LR LR 12 47 25.2
comp=Z,49nm,21.1s,MS3.2,baz=226,slow=37
KOLS **Kolonicke sedl** 33.42 318 *e*P **P** 12 33 39.8 +1.1
CRVS **Cervenica-Dubn** 33.90 317 *e*P **P** 12 33 43.5 +0.7
KECS **Kecovo** 34.32 316 *e*P **P** 12 33 47.8 +1.3
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KECS **Kecovo** 34.32 316 *e*P **P** 12 33 47.8 +1.3
comp=Z,3.0nm,0.9s,mb4.2
PSZ **Piszkesteto** 34.47 315 *e*P **P** 12 33 48.5 +0.7
KMBO **Kilima Mbogo** 34.60 216 P **P** 12 33 53.8 +4.5
comp=Z,0.6nm,0.3s,mb4.0,baz=46,slow=14,SNR=2.6
KMBO LR LR 12 47 59.5
comp=Z,118nm,20.5s,MS3.6,baz=109,slow=36
KMBO **Kilima Mbogo** 34.60 216 P **P** 12 33 53.8 +4.5
KMBO pmax pmax
comp=Z,1.0nm,0.3s
KMBO MLR MLR
comp=Z,118nm,20.5s
PKSM **Moragy** 34.71 311 *i*P **P** 12 33 50.1 +0.2
PKSM **Moragy** 34.71 311 *e*P **P** 12 33 50.2 +0.3
VYHS **Vyhne** 35.34 315 *e*P **P** 12 33 55.4 +0.1
VYHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
VYHS **Vyhne** 35.34 315 *e*P **P** 12 33 55.4 +0.1
comp=Z,2.0nm,1.0s,mb4.0
OJC **Ojcow** 35.43 318 *e*P **P** 12 33 55.9 -0.1
OKC **Ostrava-Krasne** 36.26 317 *e*P **P** 12 34 02.2 -0.9
KOGS **Kog** 36.36 311 *i*P **P** 12 34 04.4 +0.3
MORC **Moravsky Berou** 36.60 317 *i*P **P** 12 34 05.8 -0.2
MORC **Moravsky Berou** 36.60 317 *e*P **P** 12 34 05.4 -0.6
BOJS **Bojanci** 36.80 309 *i*P **P** 12 34 08.2 +0.4
LEGS **Legarje** 36.86 310 *e*P **P** 12 34 08.8 +0.5
VRAC **Vranov** 37.01 316 *i*P **P** 12 34 09.8 +0.2
VRAC **Vranov** 37.01 316 *e*P **P** 12 34 09.4 -0.2
ARSA **Arzberg** 37.06 312 *i*P **P** 12 34 10.5 +0.5
comp=Z,11nm,0.8s,mb4.8
ARSA **Arzberg** 37.06 312 P **P** 12 34 10.5 +0.5
comp=Z,11nm,0.8s,mb4.8
GTA **Gaotai** 37.28 61 *e*P **P** 12 34 11.5 -0.5
GTA AP pP 12 34 16.8 -8.1
GTA AMB AMB
comp=Z,4.0nm,0.8s,mb4.3
CEY **Cerknica** 37.42 309 *e*P **P** 12 34 13.3 +0.3
DPC **Dobruska-Polom** 37.54 317 *e*P **P** 12 34 18.1 +4.1
DPC **Dobruska-Polom** 37.54 317 *e*P **P** 12 34 13.7 -0.3
DPC *ex* x 12 34 18.1
DPC **Dobruska-Polom** 37.54 317 *e*P **P** 12 34 18.1 +4.1
MOA **Molln** 38.04 313 *i*P **P** 12 34 18.4 +0.1
comp=Z,22nm,0.8s,mb5.0,SNR=9.6
JOF **Joensuu** 38.38 342 *ep* **P** 12 34 19.6 -1.3
comp=Z,1.1nm,0.3s,mb4.1
JOF **Joensuu** 38.38 342 *e*P **P** 12 34 19.6 -1.3
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
GEC2 **GERESS Array S** 38.68 314 *e*P **P** 12 34 23.4 -0.2
GEC2 pmax pmax
comp=Z,13nm,0.9s,mb4.7
GEC2 **GERESS Array S** 38.68 314 *e*P **P** 12 34 23.4 -0.2
comp=Z,13nm,0.9s,mb4.7
GERES **GERESS Array B** 38.68 314 P **P** 12 34 23.7 +0.1
comp=Z,11nm,0.7s,mb4.5,baz=113,slow=8.8,SNR=29
GERES **GERESS Array B** 38.68 314 P **P** 12 34 23.7 +0.1
GERES pmax pmax
comp=Z,7.0nm,0.7s
KHC **Kasperske Hory** 38.84 314 *e*P **P** 12 34 24.7 -0.2
KHC *ex* x 12 34 29.8
KHC **Kasperske Hory** 38.84 314 *e*P **P** 12 34 29.8 +4.9
FINES **FINESS Array B** 38.90 337 *e*P **P** 12 34 24.0 -1.3
ABTA **Abfaltersbach** 38.94 310 *i*P **P** 12 34 26.1 +0.2
comp=Z,21nm,1.1s,mb4.8,SNR=5.4
RJOB **Jochberg** 38.97 312 *e*P **P** 12 34 26.1 0.0
comp=Z,19nm,0.7s,mb4.9
BRG **Berggiesshubel** 39.14 317 *e*P **P** 12 34 27.5 0.0
BRG pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
BRG **Berggiesshubel** 39.14 317 *e*P **P** 12 34 27.5 0.0
comp=Z,7.0nm,0.8s,mb4.4
WET **Wettzell** 39.28 314 *e*P **P** 12 34 28.1 -0.6
WET pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
WET **Wettzell** 39.28 314 *e*P **P** 12 34 28.1 -0.6
comp=Z,8.0nm,1.0s,mb4.4
KAF **Kangasniemi** 39.29 338 *ep* **P** 12 34 25.5 -3.1
comp=Z,0.7nm,0.4s,mb3.7
KAF **Kangasniemi** 39.29 338 *e*P **P** 12 34 25.5 -3.1
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
WTTA **Wattenberg** 39.63 311 *i*P **P** 12 34 31.2 -0.4
comp=Z,30nm,0.9s,mb5.0
WTTA **Wattenberg** 39.63 311 *i*P **P** 12 34 31.2 -0.4
WTTA pmax pmax
comp=Z,30nm,0.9s,mb5.0
CLL **Collm** 39.84 318 *e*P **P** 12 34 33.0 -0.3
CLL *e* pP 12 34 45.0 -1.3
CLL pmax pmax
comp=Z,11nm,1.0s,mb4.5
CLL **Collm** 39.84 318 *e*P **P** 12 34 33.5 +0.2
comp=Z,11nm,1.0s,mb4.5
CLL **Collm** 39.84 318 *e*P **P** 12 34 33.0 -0.3
comp=Z,11nm,1.0s,mb4.5
CLL *e* pP 12 34 45.0 -1.3
ROTZ **Rotzenmuhle** 39.87 315 *e*P **P** 12 34 33.5 -0.1
comp=Z,11nm,1.0s,mb4.5
MOTA **Moosalm** 40.00 311 *i*P **P** 12 34 34.4 -0.3
comp=Z,12nm,0.9s,mb4.7,SNR=7.8
MOTA **Moosalm** 40.00 311 *i*P **P** 12 34 34.4 -0.3
MOTA pmax pmax
comp=Z,12nm,0.9s,mb4.6
FETA **Feichten** 40.19 310 *i*P **P** 12 34 35.9 -0.3
comp=Z,23nm,0.7s,mb5.0,SNR=14
RETA **Reutte** 40.26 311 *i*P **P** 12 34 36.1 -0.7
comp=Z,9.0nm,0.6s,mb4.7
KEST **Kesra** 40.43 293 LR LR 12 55 06.7
comp=Z,33nm,19.8s,MS3.2,baz=240,slow=42
GRA1 **Grafenberg Arr** 40.47 315 *e*P **P** 12 34 38.8 +0.3
comp=Z,25nm,0.9s,mb4.9
GRF **Grafenberg Arr** 40.47 315 *e*P **P** 12 34 38.8 +0.3
GRF pmax pmax
comp=Z,25nm,0.9s,mb4.9
GRF **Grafenberg Arr** 40.47 315 *e*P **P** 12 34 38.8 +0.3
GRF pmax pmax
comp=Z,25nm,0.9s,mb4.9
GRF **Grafenberg Arr** 40.47 315 *e*P **P** 12 34 38.8 +0.3
comp=Z,25nm,0.9s,mb4.9
MOX **Moxa** 40.48 316 *e*P **P** 12 34 38.6 0.0
comp=Z,6.0nm,0.9s,mb4.3
PGF **Pioggiola** 40.79 303 *e*P **P** 12 34 40.9 -0.4
comp=Z,15nm,0.9s,mb4.3
PGF **Pioggiola** 40.79 303 *e*P **P** 12 34 40.9 -0.4
PGF pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
PGF **Pioggiola** 40.79 303 *e*P **P** 12 34 40.9 -0.4
comp=Z,7.7nm,0.9s,mb4.3
DAVA **Damuels** 40.81 311 *i*P **P** 12 34 40.6 -0.7
comp=Z,41nm,0.7s,mb5.2,SNR=18
DAVA **Damuels** 40.81 311 P **P** 12 34 40.6 -0.7
comp=Z,41nm,0.7s,mb5.2,SNR=18
KMI **Kunming** 41.18 83 P **P** 12 34 46.3 +1.6
KMI AMB AMB
comp=Z,9.0nm,0.7s,mb4.5
KMI **Kunming** 41.18 83 P **P** 12 34 46.3 +1.6
comp=Z,9.0nm,0.7s,mb4.5
STU **Stuttgart** 41.55 313 *e*P **P** 12 34 46.9 -0.5
comp=Z,15nm,0.4s,mb5.0
CLZ **Clausthal** 41.57 318 *e*P **P** 12 34 48.0 +0.5
CLZ pmax pmax
comp=Z,14nm,0.9s,mb4.6
CLZ **Clausthal** 41.57 318 *e*P **P** 12 34 48.0 +0.5
comp=Z,14nm,0.9s,mb4.6
NRDL **Niedersach Rie** 41.91 318 *e*P **P** 12 34 50.9 +0.6
comp=Z,14nm,1.2s,mb4.5
SBF **Sospel** 42.04 305 *i*P **P** 12 34 51.4 -0.1
comp=Z,52nm,0.8s,mb4.9
SBF **Sospel** 42.04 305 *i*P **P** 12 34 51.4 -0.1
SBF pmax pmax
comp=Z,26nm,0.8s,mb4.9
SBF **Sospel** 42.04 305 *i*P **P** 12 34 51.4 -0.1
comp=Z,26nm,0.8s,mb4.9
TNS **Taunus Mts** 42.34 315 *e*P **P** 12 34 53.7 -0.1
TNS pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,16nm,1.0s,mb4.6						
TNS	Taunus Mts	42.34	315	eP	P	12 34 53.7	-0.1
	comp=Z,16nm,1.0s,mb4.6						
MBDF	Montbardon	42.59	306	eP	P	12 34 56.6	+0.6
	comp=Z,21nm,0.7s,mb4.7						
MBDF	Montbardon	42.59	306	eP	P	12 34 56.6	+0.6
MBDF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
MBDF	Montbardon	42.59	306	eP	P	12 34 56.6	+0.6
	comp=Z,10nm,0.7s,mb4.7						
LPG	La Plagne	42.69	308	eP	P	12 34 56.6	-0.1
	comp=Z,22nm,0.8s,mb4.7						
LPG	La Plagne	42.69	308	eP	P	12 34 56.6	-0.1
LPG				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
LPG	La Plagne	42.69	308	eP	P	12 34 56.6	-0.1
	comp=Z,11nm,0.8s,mb4.7						
LPL	La Plagne	42.70	308	eP	P	12 34 56.6	-0.2
	comp=Z,28nm,0.9s,mb4.7						
LPL	La Plagne	42.70	308	eP	P	12 34 56.6	-0.2
LPL				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
LPL	La Plagne	42.70	308	eP	P	12 34 56.6	-0.2
	comp=Z,14nm,0.9s,mb4.7						
CDF	Champ du Feu	42.73	312	⇑iP	P	12 34 56.0	-1.1
	comp=Z,8.8nm,0.8s,mb4.2						
CDF	Champ du Feu	42.73	312	⇑iP	P	12 34 56.0	-1.1
CDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
CDF	Champ du Feu	42.73	312	⇑iP	P	12 34 56.0	-1.1
	comp=Z,4.4nm,0.8s,mb4.2						
ECH	Echery	42.78	312	eP	P	12 34 56.2	-1.2
	comp=Z,12nm,1.0s,mb4.6						
ECH	Echery	42.78	312	eP	P	12 34 56.2	-1.2
	comp=Z,12nm,1.0s,mb4.6						
HINF	Hinteralfeld	42.92	311	eP	P	12 34 57.8	-0.8
SONM	Songino Array	42.99	49	LR	LR	12 54 31.1	
	comp=Z,182nm,18.0s,MS4.0,baz=259,slow=38						
IBBN	Ibbenburen	43.25	318	eP	P	12 35 01.9	+0.7
	comp=Z,23nm,1.1s,mb4.8						
CABF	La Chapelle	43.27	309	⇑iP	P	12 35 01.6	+0.2
	comp=Z,44nm,0.8s,mb4.9						
CABF	La Chapelle	43.27	309	⇑iP	P	12 35 01.6	+0.2
CABF				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						
CABF	La Chapelle	43.27	309	⇑iP	P	12 35 01.6	+0.2
	comp=Z,22nm,0.8s,mb4.9						
HAU	Haudompre	43.28	311	eP	P	12 35 00.6	-0.9
	comp=Z,12nm,0.7s,mb4.4						
HAU				eMLR	MLR		
	comp=Z,70nm,19.9s,MS3.3						
HAU	Haudompre	43.28	311	eP	P	12 35 00.6	-0.9
HAU				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
HAU				MLR	MLR		
	comp=Z,70nm,19.9s,MS3.6						
HAU	Haudompre	43.28	311	eP	P	12 35 00.6	-0.9
	comp=Z,6.0nm,0.7s,mb4.4						
HAU				LR	LR		
	comp=Z,70nm,19.9s,MS3.6						
BUG	Bochum--Univer	43.34	316	eP	P	12 35 03.3	+1.4
	comp=Z,20nm,1.1s,mb4.8						
MEZF	Maizieres J'vi	44.21	312	eP	P	12 35 09.2	+0.2
	comp=Z,17nm,0.7s,mb4.6						
MEZF	Maizieres J'vi	44.21	312	eP	P	12 35 09.2	+0.2
	comp=Z,8.4nm,0.7s,mb4.6						
NB2	NORSAR Subarra	44.51	330	P	P	12 35 09.9	-1.3
	comp=Z,1.8nm,0.7s,mb4.0,baz=117,slow=7.9						
NOA	NORSAR Array B	44.51	330	P	P	12 35 09.9	-1.3
	comp=Z,2.3nm,0.7s,mb4.1,baz=116,slow=7.9,SNR=8.9						
NOA				LR	LR	12 57 29.8	
	comp=Z,24nm,20.0s,MS3.1,baz=120,slow=41						
NOA	NORSAR Array B	44.51	330	P	P	12 35 09.9	-1.3
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,24nm,20.0s						
GIVF	Givet	44.60	314	⇑iP	P	12 35 12.8	+0.8
	comp=Z,23nm,0.8s,mb4.7						
GIVF	Givet	44.60	314	⇑iP	P	12 35 12.8	+0.8
GIVF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
GIVF	Givet	44.60	314	⇑iP	P	12 35 12.8	+0.8
	comp=Z,12nm,0.8s,mb4.7						
LASF	Ste Croix	44.63	305	eP	P	12 35 12.2	-0.2
SMF	Signal de Mont	44.81	309	⇑iP	P	12 35 13.7	-0.1
	comp=Z,58nm,0.9s,mb5.1						
SMF	Signal de Mont	44.81	309	⇑iP	P	12 35 13.7	-0.1
SMF				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.1						
SMF	Signal de Mont	44.81	309	⇑iP	P	12 35 13.7	-0.1
	comp=Z,29nm,0.9s,mb5.1						
LOR	Lormes	44.86	310	⇑iP	P	12 35 13.4	-0.8
	comp=Z,27nm,0.9s,mb4.8						
LOR				eMLR	MLR		
	comp=Z,66nm,21.9s,MS3.2						
LOR	Lormes	44.86	310	⇑iP	P	12 35 13.4	-0.8
LOR				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
LOR				MLR	MLR		
	comp=Z,70nm,21.9s,MS3.5						
LOR	Lormes	44.86	310	⇑iP	P	12 35 13.4	-0.8
	comp=Z,14nm,0.9s,mb4.8						
LOR				LR	LR		
	comp=Z,70nm,21.9s,MS3.5						
KEV	Kevo	44.88	346	ep	P	12 35 12.3	-1.7
	comp=Z,1.4nm,0.3s,mb4.3						
KEV	Kevo	44.88	346	eP	P	12 35 12.3	-1.7
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
BAIF	Baives	44.99	314	⇑iP	P	12 35 16.1	+1.0
	comp=Z,26nm,0.9s,mb4.8						
BAIF	Baives	44.99	314	⇑iP	P	12 35 16.1	+1.0
BAIF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
BAIF	Baives	44.99	314	⇑iP	P	12 35 16.1	+1.0
	comp=Z,13nm,0.9s,mb4.8						
ARCES	ARCESS Array B	45.04	345	P	P	12 35 14.4	-0.8
	comp=Z,4.0nm,0.8s,mb4.3,baz=136,slow=8.2,SNR=13						
ARCES	ARCESS Array B	45.04	345	P	P	12 35 14.4	-0.8
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SSF	Saint Saulge	45.08	309	⇑iP	P	12 35 15.8	-0.1
	comp=Z,42nm,0.8s,mb5.0						
SSF	Saint Saulge	45.08	309	⇑iP	P	12 35 15.8	-0.1
SSF				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.0						
SSF	Saint Saulge	45.08	309	⇑iP	P	12 35 15.8	-0.1
	comp=Z,21nm,0.8s,mb5.0						
AVF	Avril sur Loir	45.16	309	⇑iP	P	12 35 16.2	-0.4
BGF	Bois d'Agland	45.49	309	⇑iP	P	12 35 19.0	-0.2
	comp=Z,30nm,0.9s,mb4.8						
BGF	Bois d'Agland	45.49	309	⇑iP	P	12 35 19.0	-0.2
BGF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
BGF	Bois d'Agland	45.49	309	⇑iP	P	12 35 19.0	-0.2
	comp=Z,15nm,0.9s,mb4.8						
MTLF	Montolieu	45.80	304	⇑iP	P	12 35 22.1	+0.4
	comp=Z,11nm,0.8s,mb4.5						
MTLF	Montolieu	45.80	304	⇑iP	P	12 35 22.1	+0.4
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
MTLF	Montolieu	45.80	304	⇑iP	P	12 35 22.1	+0.4
	comp=Z,5.3nm,0.8s,mb4.5						
TCF	Toulx Ste Croi	45.91	308	⇑iP	P	12 35 22.6	+0.1
	comp=Z,33nm,0.9s,mb5.0						
TCF	Toulx Ste Croi	45.91	308	⇑iP	P	12 35 22.6	+0.1
TCF				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
TCF	Toulx Ste Croi	45.91	308	⇑iP	P	12 35 22.6	+0.1
	comp=Z,16nm,0.9s,mb5.0						
CAF	Calviac	45.95	306	eP	P	12 35 22.1	-0.7
	comp=Z,18nm,0.9s,mb4.7						
CAF	Calviac	45.95	306	eP	P	12 35 22.1	-0.7
CAF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
CAF	Calviac	45.95	306	eP	P	12 35 22.1	-0.7
	comp=Z,9.1nm,0.9s,mb4.7						
RJF	Les Rejaudoux	46.35	307	⇑iP	P	12 35 26.5	+0.5
	comp=Z,33nm,0.9s,mb5.0						
RJF				eMLR	MLR		
	comp=Z,78nm,19.5s,MS3.4						
RJF	Les Rejaudoux	46.35	307	⇑iP	P	12 35 26.5	+0.5
RJF				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
RJF				MLR	MLR		
	comp=Z,80nm,19.5s,MS3.7						
RJF	Les Rejaudoux	46.35	307	⇑iP	P	12 35 26.5	+0.5
	comp=Z,17nm,0.9s,mb5.0						
RJF				LR	LR		
	comp=Z,80nm,19.5s,MS3.7						
MFF	Saint Martin d	47.55	309	eP	P	12 35 34.9	-0.4
	comp=Z,27nm,1.1s,mb4.9						
MFF	Saint Martin d	47.55	309	eP	P	12 35 34.9	-0.4
	comp=Z,13nm,1.1s,mb4.9						
LDF	La Druitiere	47.64	311	eP	P	12 35 35.3	-0.7
ETSF	Etsaut	47.84	304	⇑iP	P	12 35 39.7	+2.1
	comp=Z,16nm,0.9s,mb4.7						
ETSF	Etsaut	47.84	304	⇑iP	P	12 35 39.7	+2.1
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
ETSF	Etsaut	47.84	304	⇑iP	P	12 35 39.7	+2.1
	comp=Z,7.8nm,0.9s,mb4.7						
FLN	La Foliniere	47.89	312	⇑iP	P	12 35 37.3	-0.6
	comp=Z,26nm,0.8s,mb5.0						
FLN				eMLR	MLR		
	comp=Z,61nm,17.5s,MS3.3						
FLN	La Foliniere	47.89	312	⇑iP	P	12 35 37.3	-0.6
	comp=Z,13nm,0.8s,mb5.0						
FLN				LR	LR		
	comp=Z,60nm,17.5s,MS3.6						
GRR	Gorron	48.12	311	⇑iP	P	12 35 39.4	-0.3
	comp=Z,14nm,0.8s,mb4.7						
GRR	Gorron	48.12	311	⇑iP	P	12 35 39.4	-0.3
GRR				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
GRR	Gorron	48.12	311	⇑iP	P	12 35 39.4	-0.3
	comp=Z,6.8nm,0.8s,mb4.7						
SJPF	Ste Jean	48.32	304	eP	P	12 35 41.7	+0.4
	comp=Z,47nm,1.2s,mb5.1						
SJPF	Ste Jean	48.32	304	eP	P	12 35 41.7	+0.4
SJPF				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.1						
SJPF	Ste Jean	48.32	304	eP	P	12 35 41.7	+0.4
	comp=Z,24nm,1.2s,mb5.1						
SGMF	Saint Gilles	49.24	311	⇑iP	P	12 35 48.2	-0.1
	comp=Z,22nm,0.8s,mb5.0						
SGMF	Saint Gilles	49.24	311	⇑iP	P	12 35 48.2	-0.1
SGMF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
SGMF	Saint Gilles	49.24	311	⇑iP	P	12 35 48.2	-0.1
	comp=Z,11nm,0.8s,mb5.0						
BOD	Bodaibo	49.31	37	⇓iP	P	12 35 46.8	-1.8
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
BOD	Bodaibo	49.31	37	i P	P	12 35 46.8	-1.8
	comp=Z,8.0nm,1.0s,mb4.7						
QUIF	Quistinic	49.64	310	⇑iP	P	12 35 51.0	-0.4
	comp=Z,30nm,0.9s,mb5.0						
QUIF	Quistinic	49.64	310	⇑iP	P	12 35 51.0	-0.4
	comp=Z,15nm,0.9s,mb5.0						
ROSF	Rostrenen	49.72	311	eP	P	12 35 51.7	-0.3
	comp=Z,20nm,1.0s,mb4.8						
ROSF	Rostrenen	49.72	311	eP	P	12 35 51.7	-0.3
	comp=Z,10nm,1.0s,mb4.8						
ESDC	Sonseca Array	50.63	300	P	P	12 35 56.0	-2.9
	comp=Z,1.3nm,0.5s,mb4.1,baz=69,slow=7.6,SNR=6.0						
TORD	Torodi Ar. Bea	53.07	265	P	P	12 36 17.3	-0.2
	comp=Z,8.1nm,0.6s,mb4.9,baz=62,slow=6.9,SNR=58						
TORD				LR	LR	12 59 53.2	
	comp=Z,84nm,19.4s,MS3.8,baz=150,slow=37						
TORD	Torodi Ar. Bea	53.07	265	P	P	12 36 17.3	-0.2
TORD				LR	LR	12 59 53.1	
EVO	Evora	53.91	299	⇑iP	P	12 36 24.3	+1.0
	comp=Z,32nm,1.3s,mb4.8						
EVOP	Sao Brissos	53.99	299	⇑iP	P	12 36 24.3	+0.4
	comp=Z,16nm,1.3s,mb4.8						
KSRS	Korea Array	59.35	61	P	P	12 36 59.6	-2.4
	comp=Z,3.6nm,0.8s,mb4.5,baz=285,slow=6.6,SNR=8.2						
KSRS	Korea Array	59.35	61	P	P	12 36 59.6	-2.4
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
DBIC	Dimbokro	61.75	262	P	P	12 37 18.0	-0.6
	comp=Z,4.2nm,0.9s,mb4.6,baz=62,slow=6.9,SNR=5.3						
DBIC	Dimbokro	61.75	262	P	P	12 37 18.0	-0.6
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DBIC	Dimbokro	61.75	262	P	P	12 37 18.0	-0.6
BOSA	Boshof	64.01	211	P	P	12 37 33.8	+0.4
	comp=Z,1.6nm,0.5s,mb4.3,baz=40,slow=6.7,SNR=6.1						
BOSA	Boshof	64.01	211	P	P	12 37 33.8	+0.5
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
FITZ	Fitzroy Crossi	81.12	116	P	P	12 39 15.5	+0.2
	comp=Z,2.1nm,0.7s,mb4.2,baz=231,slow=6.5,SNR=4.9						
KAKA	Kakadu	83.84	108	eP	P	12 39 29.5	-0.1
	comp=Z,9.1nm,0.6s,mb5.1						
SCHQ	Schefferville	84.08	331	P	P	12 39 30.2	0.0
	comp=Z,2.3nm,0.7s,mb4.4,baz=28,slow=4.0,SNR=3.8						
SCHQ	Schefferville	84.08	331	P	P	12 39 30.2	0.0
EGAK	Eagle	86.24	8	eP	P	12 39 40.1	-0.7
	comp=Z,4.2nm,0.7s,mb4.8						
EGAK	Eagle	86.24	8	eP	P	12 39 40.1	-0.6
	comp=Z,4.2nm,0.7s,mb4.8						
DAWY	Dawson	87.13	7	eP	P	12 39 44.6	-0.5
DAWY	Dawson	87.13	7	eP	P	12 39 44.6	-0.5
WRA	Warramunga Arr	89.07	113	P	P	12 39 55.2	+0.1
	comp=Z,2.4nm,0.8s,mb4.6,baz=316,slow=4.0,SNR=32						
WRA	Warramunga Arr	89.07	113	P	P	12 39 55.2	+0.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WB2	Warramunga Arr	89.08	113	eP	P	12 39 54.5	-0.6
YKA	Yellowknife Ar	89.29	356	P	P	12 39 54.8	-0.5
	comp=Z,3.2nm,0.7s,mb4.8,baz=3.3,slow=5.4,SNR=9.8						
YKA				LR	LR	13 23 47.7	
	comp=Z,37nm,18.8s,MS3.8,baz=185,slow=38						
YKA	Yellowknife Ar	89.29	356	P	P	12 39 54.8	-0.6
ASAR	Alice Springs	90.61	117	P	P	12 40 02.3	+0.1
	comp=Z,1.0nm,0.6s,mb4.3,baz=303,slow=4.6,SNR=17						
ASAR	Alice Springs	90.61	117	P	P	12 40 02.3	+0.1
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	119.69	340	PKP	PKPdf	12 45 48.4	-1.4
	comp=Z,0.2nm,0.6s,baz=90,slow=3.8,SNR=3.7						
TXAR	Lajitas Array	119.69	340	PKP	PKPdf	12 45 48.4	-1.4

KRSC 05 12:42:44.6±0.5, 5278N×15973E, h44km±25km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.36	29	eP	Pn	12 42 53.8	-0.1
SPN				i S	Sn	12 43 00.8	+0.4
NLC	Nalytchevo	0.46	329	eP	Pn	12 42 54.7	-0.2
NLC				i S	Sn	12 43 02.4	+0.2
PET	Petropavlovsk	0.70	291	eP	Pn	12 42 57.6	-0.4
PET				i S	Sn	12 43 07.5	-0.2
AVH	Avacha	0.77	309	eP	Pn	12 42 59.1	+0.1
AVH				i S	Sn	12 43 09.8	+0.3
RUS	Russkaya	0.82	245	eP	Pn	12 42 59.3	-0.4
RUS				i S	Sn	12 43 10.5	-0.2
GNL	Ganaly	1.41	311	eP	Pn	12 43 07.7	-0.1
MIPR	Malaya Ipel'ka	1.88	256	eP	Pn	12 43 15.1	+0.9
MKZ	Mys Kozlova	2.14	33	eP	Pn	12 43 17.3	-0.5
MKZ				i S	Sn	12 43 40.6	-2.5
KMNR	Kamenistaya	3.00	5	P	Pn	12 43 32.3	+2.8
BZGR	Bezymyannyi-Gr	3.22	10	P	Pn	12 43 34.4	+1.9
BZWR	Bezymyannyi-We	3.22	8	P	Pn	12 43 32.8	+0.2
KRSR	Krestovskiy	3.48	8	P	Pn	12 43 38.9	+2.8
SRDR	Sredinnyy	3.54	360	P	Pn	12 43 40.3	+3.3
KBTR	Krutoberegovo	3.88	26	P	Pn	12 43 43.0	+1.4
KBTR				i S	Sn	12 44 26.4	+0.6

*GII **05** 12:53:47.3±1.5, 2979N×3626E, h0km, ML2.2/4, EXPLOSION*
*SGS **05** 12:53:48.6, 2999N×3638E, h14km*
*CSEM **05** 12:53:48.6, 2999N×3638E, h14km, ML2.5, After SNSN*
ISC 05 12:53:47.3±1.3, 2985N±005×3636E±007, h0km, n11, $\sigma 0^{s}98$/19, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRFI	Mount Harif	1.16	280	Pg	Pg	12 54 08.6	-0.9
HRFI				Sg	Sg	12 54 24.5	0.0
EIL	Elat	1.23	262	Pg	Pg	12 54 10.4	-0.6
EIL				Sg	Sg	12 54 27.3	+0.3
HQLS		1.25	244	P	Pg	12 54 10.8	-0.5
HQLS		1.25	244	P	Pg	12 54 10.8	-0.5
HQLS				S	Sg	12 54 27.9	+0.3
MBRI	Mt Berech	1.25	268	Pg	Pg	12 54 10.6	-0.7
MBRI				Sg	Sg	12 54 28.4	+0.8
JLOS		1.34	214	P	Pg	12 54 13.2	+0.2
JLOS		1.34	214	P	Pg	12 54 13.2	+0.2
JLOS				S	Sg	12 54 30.9	+0.4
KRMI	Paran Flat	1.44	281	Pn	Pn	12 54 13.4	-1.2
KRMI				Sn	Sn	12 54 33.2	-1.0
DSI	Dead Sea	1.91	334	Pn	Pn	12 54 21.9	+0.8
DSI				Sn	Sn	12 54 48.6	+2.8
RSHS		2.06	222	P	Pn	12 54 22.4	-0.7
RSHS		2.06	222	P	Pn	12 54 22.4	-0.7
RSHS				S	Sn	12 54 52.6	+3.0

IDC 05 13:08:01.3±8.0, 269N×12751E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/15, mbtmp4.1/3, Error ellipse: s-maj=142.2km s-min=124.9km az=81.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.47	164	P	P	13 13 12.6	-0.3
	2.7nm,0.4s,baz=344,slow=11,SNR=88						
WB2	Warramunga Arr	23.47	164	eP	P	13 13 12.6	-0.3
ASAR	Alice Springs	26.93	167	P	P	13 13 44.2	-0.2
	1.0nm,0.5s,baz=348,slow=7.4,SNR=21						
STKA	Stephens Creek	36.89	160	P	P	13 15 12.2	+0.5
	2.2nm,0.9s,baz=349,slow=8.8,SNR=4.9						

IDC 05 13:14:19.9±7.1, 311N×12706E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, Error ellipse: s-maj=124.0km s-min=99.6km az=116.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.12	184	P	P	13 19 07.3	+0.9
	1.0nm,0.6s,baz=4.7,slow=12,SNR=3.3						
WRA	Warramunga Arr	24.00	163	P	P	13 19 36.3	-0.1
	1.1nm,0.8s,baz=340,slow=10,SNR=6.2						
ASAR	Alice Springs	27.44	166	P	P	13 20 07.8	+0.3
	0.3nm,0.5s,baz=351,slow=8.1,SNR=6.8						
STKA	Stephens Creek	37.44	159	P	P	13 21 34.2	-0.8
	1.0nm,0.4s,baz=346,slow=9.5,SNR=3.1						

*IDC **05** 13:32:28.9±1.2, 5303N×171.15E, h0km, mb4.0/15, mb1 4.2/16, mb1mx4.1/26, mbtmp4.0/16, ML3.7/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/44, Error ellipse: s-maj=39.7km s-min=14.5km az=0.0*
*ISCJB **05** 13:32:31.5±0.8, 529N±0.1×17105E±006, h34km±8km, mb4.1/22, MS3.4/2, Error ellipse: s-maj=22.4km s-min=5.9km az=6.5*
*MOS **05** 13:32:31.9±0.9, 5298N×17102E, h34km, mb4.4/4, Error ellipse: s-maj=17.9km s-min=11.6km az=37.6*
*NEIC **05** 13:32:32.6±2.2, 5297N×171.14E, h26km±18km, mb4.3/8, Error ellipse: s-maj=20.3km s-min=5.2km az=181.0*
*KRSC **05** 13:32:32.7±1.6, 5286N×17050E, h14km±16km, ML4.5*
ISC 05 13:32:33.7±0.7, 529N±01×17111E±006, h35km±7km, n50, $\sigma 0^{s}82$/56, mb4.1/22, MS3.4/2, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.82	94	eP	Pn	13 33 01.9	-0.6
SMY				eS	Sn	13 33 24.2	-0.1
MKZ	Mys Kozlova	5.82	291	eP	Pn	13 33 56.5	-0.8
MKZ				i S	Sn	13 34 58.9	-3.8
KBTR	Krutoberegovo	5.86	308	eP	Pn	13 33 56.8	-1.2
KBTR				i S	Sn	13 34 59.4	-4.5
SPN	Mys Shipunski	6.70	276	eP	Pn	13 34 08.5	-0.9
SPN				i S	Sn	13 35 17.1	-7.3
ZLN	Zelenaya	6.78	302	eP	Pn	13 34 11.3	+0.7
KMNR	Kamenistaya	6.98	299	eP	Pn	13 34 14.2	+0.9
KPT	Kopyto	7.06	300	eP	Pn	13 34 15.1	+0.7
KOZR	Kozyr	7.27	300	P	Pn	13 34 18.6	+1.3
KOZ	Kozyrevsk	7.28	300	eP	Pn	13 34 18.6	+1.2
SRDR	Sredinnyy	7.46	302	eP	Pn	13 34 20.0	+0.2
AVH	Avacha	7.46	278	eP	Pn	13 34 19.9	-0.1
AVH				eS	Sn	13 35 36.0	-7.3
PET	Petropavlovsk	7.53	276	eP	Pn	13 34 20.9	+0.1
PET				eS	Sn	13 35 39.9	-4.9
PET				smax			
	comp=E,47nm,0.7s						
PET				smax			
	comp=N,47nm,0.8s						
PET	Petropavlovsk	7.53	276	eP	Pn	13 34 20.3	-0.5
RUS	Russkaya	7.68	272	eP	Pn	13 34 22.8	-0.1
GNL	Ganaly	7.94	281	eP	Pn	13 34 28.2	+1.8
PEA0B	Petropavlovsk-	8.10	277	ePn	Pn	13 34 29.1	+0.4
PEA0B				eSn	Sn	13 35 51.8	-7.0
PETK	Petropavlovsk-	8.10	277	Pn	Pn	13 34 28.1	-0.6
	comp=N,1.1nm,0.3s,baz=98,slow=15,SNR=26						
PETK				Sn	Sn	13 35 55.6	-3.2
	comp=N,1.9nm,0.3s,baz=89,slow=16,SNR=8.6						
KDAK	Kodiak Island	21.05	62	P	P	13 37 14.8	+0.6
	comp=N,3.3nm,0.4s,mb4.0,baz=230,slow=7.9,SNR=5.3						
KDAK	Kodiak Island	21.05	62	P	P	13 37 14.8	+0.6
COLA	College	23.87	44	eP	P	13 37 42.9	-0.5
COLA				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
COLA	College	23.87	44	eP	P	13 37 42.9	-0.5
	comp=Z,5.6nm,0.7s,mb4.1						
YKA	Yellowknife Ar	38.68	46	P	P	13 39 53.0	-0.5
	comp=Z,1.3nm,0.8s,mb3.7,baz=283,slow=9.5,SNR=2.8						
SONM	Songino Array	40.34	290	P	P	13 40 08.4	+0.9
	comp=Z,0.2nm,0.5s,mb3.1,baz=50,slow=7.3,SNR=4.0						
WALA	Waterton Lakes	45.38	63	eP	P	13 40 48.3	0.0
	comp=Z,8.2nm,0.8s,mb4.6						
HLID	Hailey	48.38	70	eP	P	13 41 11.3	-0.5
	comp=Z,0.7nm,0.4s,mb4.0						
BOZ	Bozeman (W)	48.65	66	eP	P	13 41 13.9	+0.1
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BOZ	Bozeman (W)	48.65	66	eP	P	13 41 13.9	+0.1
	comp=Z,1.9nm,0.7s,mb4.2						
NVAR	Mina Array Bea	49.42	77	P	P	13 41 20.5	+0.7
	comp=Z,0.7nm,0.8s,mb3.8,baz=274,slow=6.5,SNR=3.9						
RLMT	Red Lodge	50.28	65	eP	P	13 41 26.9	+0.6
	comp=Z,2.6nm,0.6s,mb4.4						
PDAR	Pinedale Array	51.63	67	P	P	13 41 35.4	-1.0
	comp=Z,1.9nm,0.7s,mb4.2,baz=336,slow=3.3,SNR=10						
KURK	Kurchatov	53.33	308	P	P	13 41 49.1	+0.3
	comp=Z,1.1nm,0.6s,mb3.9,baz=54,slow=7.6,SNR=10						
KURK	Kurchatov	53.33	308	eP	P	13 41 48.1	-0.8
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
KURK	Kurchatov	53.33	308	eP	P	13 41 48.1	-0.7
	comp=Z,3.4nm,1.1s,mb4.2						
PFO	Pinyon Flat Ob	53.78	80	LR	LR	14 00 07.0	
	comp=Z,65nm,20.9s,MS3.7,baz=145,slow=31						
ULM	Lac du Bonnet	53.89	53	P	P	13 41 51.6	-1.3
	comp=Z,4.1nm,1.1s,mb4.3,baz=339,slow=7.8,SNR=4.1						
MKAR	Makanchi Array	54.09	302	P	P	13 41 53.8	-0.7
	comp=Z,0.3nm,0.3s,mb3.6,baz=49,slow=6.4,SNR=6.1						
MKAR				LR	LR	14 06 32.7	
	comp=Z,18nm,19.4s,MS3.1,baz=351,slow=38						
ARCES	ARCESS Array B	55.34	346	P	P	13 42 03.1	-0.1
	comp=Z,2.3nm,0.8s,mb4.3,baz=25,slow=9.2,SNR=12						
BVAR	Borovoye Array	55.54	314	P	P	13 42 04.2	-0.7
	comp=Z,1.0nm,0.6s,mb4.0,baz=31,slow=9.1,SNR=7.2						
BRVK	Borovoye	55.57	314	eP	P	13 42 04.7	-0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
BRVK	Borovoye	55.57	314	eP	P	13 42 04.7	-0.4
	comp=Z,2.9nm,1.0s,mb4.3						
EYMN	Ely	57.56	52	eP	P	13 42 19.2	-0.1
	comp=Z,6.7nm,0.6s,mb4.8						
TXAR	Lajitas Array	64.42	75	P	P	13 43 06.7	+0.5
	comp=Z,1.1nm,0.5s,mb4.2,baz=303,slow=5.2,SNR=24						
TXAR	Lajitas Array	64.42	75	P	P	13 43 06.7	+0.5
CMAR	Chiang Mai Arr	64.75	267	P	P	13 43 09.7	+1.2
	comp=Z,0.7nm,0.6s,mb3.9,baz=25,slow=6.8,SNR=5.2						
NB2	NORSAR Subarra	65.30	349	P	P	13 43 11.4	0.0
	comp=Z,1.8nm,0.6s,mb4.3,baz=14,slow=6.9						
NOA	NORSAR Array B	65.30	349	P	P	13 43 11.5	+0.1
	comp=Z,2.9nm,0.7s,mb4.4,baz=15,slow=6.5,SNR=8.4						
AKASG	Malin Array Be	71.90	336	P	P	13 43 53.2	+0.5
	comp=Z,1.5nm,0.7s,mb4.0,baz=25,slow=5.7,SNR=2.5						
BUR08	Bucovina Ar. S	75.72	337	eP	P	13 44 16.6	+1.4
GERES	GERESS Array B	76.85	345	P	P	13 44 21.3	-0.2
	comp=Z,0.9nm,0.6s,mb3.9,baz=0.0,slow=5.6,SNR=5.4						
BOSA	Boshof	145.08	300	PKPbc	PKPbc	13 52 06.8	+0.4
	comp=Z,3.0nm,0.7s,baz=42,slow=4.2,SNR=6.9						

MOS ***05*** *13:36:00.9±0.9, 6.86S×155.72E, h33^{km}, mb4.9/5, Error ellipse: s-maj=12.7km s-min=10.5km az=109.5*
BJI ***05*** *13:36:06.3, 7.16S×156.35E, h120^{km}, mB4.9, mb4.7*
ISCJB ***05*** *13:36:06.6±1.3, 7.02S±0.06×155.88E±0.06, h91^{km}±13^{km}, mb4.8/45, Error ellipse: s-maj=10.3km s-min=9.2km az=22.6*
IDC ***05*** *13:36:08.0±2.3, 7.02S×155.84E, h90^{km}±22^{km}, mb4.4/17, mb1 4.4/18, mb1mx4.4/22, mbtmp4.4/18, MS3.6/8, Ms1 3.6/8, ms1mx3.4/23, Error ellipse: s-maj=17.3km s-min=11.6km az=77.0*
NEIC ***05*** *13:36:08.5±1.1, 7.01S×155.90E, h99^{km}±10^{km}, mb4.8/13, Error ellipse: s-maj=8.8km s-min=8.4km az=155.0*
DJA ***05*** *13:36:15, 7.14S×155.70E, h148^{km}, Mw5.3/5*
ISC 05 13:36:09.9±1.1**, 7.08S**±0.06×**155.89E**±0.06**, h108**^{km}±10^{km}**, h111**^{km}±1.6^{km}**:pP-P, n92,** σ0^{s}**98**/80**, mb4.8**/45**, 4C-1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.64	120	P	Pn	13 37 15.1	-2.8
	27nm,0.3s,baz=12,slow=9.3,SNR=12						
HNR				S	Sn	13 38 11.4	+0.6
	47nm,0.3s,baz=265,slow=21,SNR=10						
HNR	Honiara	4.64	120	eP	Pn	13 37 15.2	-2.7
PMG	Port Moresby	8.95	254	eP	Pn	13 38 18.0	+1.7
PMG	Port Moresby	8.95	254	eP	Pn	13 38 17.1	+0.7
	64nm,0.9s						
CTA	Charters Tower	15.96	215	P	Pn	13 39 50.2	+1.9
	0.4nm,0.3s,baz=38,slow=9.0,SNR=7.2						
CTA				LR	LR	13 45 16.2	
	comp=Z,196nm,18.2s,baz=60,slow=34						
CTA	Charters Tower	15.96	215	P	Pn	13 39 50.2	+1.9
CTA				LR	LR	13 45 16.2	
CTAO	Charters Tower	15.96	215	P	Pn	13 39 45.9	-2.4
DZM	Mont Dzumac	18.05	147	eP	P	13 40 13.6	+0.7
ARMA	Armidale	23.56	189	eP	P	13 41 12.0	+1.4
KAKA	Kakadu	23.76	255	eP	P	13 41 11.5	-1.2
	81nm,0.5s,mb5.3						
WRAB	Tennant Creek	24.49	236c	iP	P	13 41 19.1	-0.2
WRAB	Tennant Creek	24.49	236	eP	P	13 41 19.0	-0.3
	14nm,0.6s,mb4.5						
WB2	Warramunga Arr	24.50	236	eP	P	13 41 19.2	-0.1
WB2				ePCP	PcP	13 44 55.9	+0.6
WRA	Warramunga Arr	24.51	236	P	P	13 41 19.3	-0.1
	14nm,0.6s,mb4.6,baz=63,slow=9.5,SNR=240						
WRA				PcP	PcP	13 44 56.1	+0.8
	4.8nm,0.8s,baz=56,slow=2.4,SNR=10						
WRA				LR	LR	13 50 20.1	
	comp=Z,103nm,21.0s,baz=70,slow=35						
WRA	Warramunga Arr	24.51	236	P	P	13 41 19.3	-0.1
WRA						13 44 56.1	
ASAR	Alice Springs	26.79	230	P	P	13 41 39.2	-0.8
	4.2nm,0.5s,mb4.2,baz=60,slow=9.6,SNR=115						
ASAR				PcP	PcP	13 45 01.2	+0.7
	2.0nm,0.4s,baz=67,slow=2.6,SNR=12						
STKA	Stephens Creek	28.05	207	eP	P	13 41 51.3	+0.2
	6.1nm,0.8s,mb4.2						
STKA	Stephens Creek	28.05	207	P	P	13 41 50.7	-0.4
	2.4nm,0.5s,mb4.0,baz=36,slow=14,SNR=11						
STKA				PcP	PcP	13 45 03.7	+0.4
	2.2nm,0.8s,baz=17,slow=6.5,SNR=3.0						
STKA				LR	LR	13 52 46.1	
	comp=Z,199nm,19.5s,baz=27,slow=36						
FITZ	Fitzroy Crossi	31.44	247	eP	P	13 42 20.3	-1.0
	28nm,0.6s,mb5.2						
AFI	Afiamalu	32.48	105	LR	LR	13 53 12.7	
	comp=Z,110nm,18.7s,baz=163,slow=32						
FORT	Forrest	35.14	224	eP	P	13 42 52.6	-0.7
	17nm,0.5s,mb5.1						
URZ	Urewera	36.50	151	P	P	13 43 05.6	+0.8
	3.4nm,0.4s,mb4.7,baz=333,slow=2.1,SNR=5.1						
MBWA	Marble Bar	37.64	244	eP	P	13 43 13.4	-1.4
	9.4nm,0.6s,mb4.8						
RPZ	Rata Peaks	38.84	162	P	P	13 43 24.8	+0.4
	16nm,0.5s,mb5.1,baz=349,slow=13,SNR=13						
RPZ				LR	LR	13 55 31.4	
	comp=Z,156nm,18.6s,baz=182,slow=30						
KLBR	Kellerberrin	43.12	230	eP	P	13 43 58.7	-1.0
	17nm,0.6s,mb5.0						
NWAO	Narrogin (SRO)	44.11	229	LR	LR	14 02 05.4	
	comp=Z,156nm,21.9s,baz=119,slow=35						
MUN	Mundaring	44.47	231	eP	P	13 44 10.1	-0.4
MJAR	Matsushiro Arr	46.46	340	P	P	13 44 24.4	-1.6
	1.7nm,0.7s,mb3.9,baz=142,slow=2.3,SNR=4.6						
ERM	Erimo	50.23	348	eP	P	13 44 54.9	0.0
KSRS	Korea Array	51.43	331	P	P	13 45 03.8	-0.3
	3.4nm,0.8s,mb4.4,baz=137,slow=6.9,SNR=8.6						
KSRS				LR	LR	14 03 21.0	
	comp=Z,41nm,21.3s,baz=130,slow=32						
ASAJ	Asahikawa	52.36	348	P	P	13 45 11.2	+0.4
	6.3nm,0.8s,mb4.7,baz=217,slow=10,SNR=7.5						
WHN	Wuhan	54.62	315	P	P	13 45 28.7	+1.1
YSS	Yuzh-Sakhalins	55.05	349	eP	P	13 45 30.0	-0.4
YSS				MLR	MLR		
	comp=E,500nm,18.0s						
YSS				MLR	MLR		
	comp=Z,600nm,18.0s						
CN2	Changchun	57.65	334	eP	P	13 45 51.7	+2.8
GYA	Guiyang	58.22	307	P	P	13 45 55.2	+2.0
GYA				AP	pP	13 46 22.4	+3.0
GYA				XP	sP	13 46 33.0	+1.7
GYA				PCP	PcP	13 46 44.9	+1.4
GYA				PP	PP	13 48 06.2	+2.8
GYA				SCP	ScP	13 50 34.6	+0.6
GYA				PCS	PcS	13 50 45.8	+0.6
GYA				S	S	13 53 48.9	+2.0
GYA				XS	sS	13 54 33.2	+1.3
GYA				SCS	ScS	13 55 31.4	-1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,80nm,4.9s						
PETK	Petropavlovsk-	59.98	1	P	P	13 46 04.8	0.0
	comp=Z,3.5nm,0.7s,mb4.5,baz=153,slow=6.3,SNR=11						
KMI	Kunming	60.80	304	P	P	13 46 11.8	+0.8
KMI				AP	pP	13 46 38.6	+1.2
KMI				XP	sP	13 46 50.8	+1.6
KMI				PP	PP	13 48 30.6	+4.3
KMI				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.3						
KMI				AMB	AMB		
	comp=Z,32nm,3.6s						
KMI				LR	LR		
	comp=N,80nm,14.8s						
KMI				LR	LR		
	comp=E,86nm,17.1s						
KMI				LR	LR		
	comp=Z,90nm,15.9s						
KMI	Kunming	60.80	304	P	P	13 46 11.8	+0.8
KMI				pP	pP	13 46 38.6	+1.2
KMI				sP	sP	13 46 50.8	+1.6
KMI				PP	PP	13 48 30.6	+4.3
KMI				S	S	13 54 21.5	+1.2
KMI				sS	sS	13 55 06.9	+1.3
KMI				SS	SS	13 58 24.3	+3.0
CMAR	Chiang Mai Arr	61.63	295	P	P	13 46 16.9	+0.2
	comp=Z,3.4nm,0.7s,mb4.5,baz=127,slow=5.3,SNR=24						
CMAR				LR	LR	14 11 45.9	
	comp=Z,23nm,19.1s,baz=95,slow=35						
CD2	Chengdu	62.55	310	eP	P	13 46 23.0	+0.4
CD2				AP	pP	13 46 48.8	-0.3
CD2				PP	PP	13 48 43.8	+2.2
CD2				S	S	13 54 42.7	+0.6
CD2				SS	SS	13 58 51.2	+2.8
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				AMB	AMB		
	comp=Z,40nm,6.2s						
CD2				LR	LR		
	comp=N,200nm,14.4s						
CD2				LR	LR		
	comp=E,160nm,14.4s						
CD2				LR	LR		
	comp=Z,120nm,15.6s						
HHC	Hu-ho-hao-te	62.69	323	eP	P	13 46 22.4	-1.0
HHC				AP	pP	13 46 48.8	-1.1
HHC				PCP	PcP	13 46 59.9	-1.3
HHC				PP	PP	13 48 44.3	+1.6
HHC				SCP	ScP	13 50 49.6	-3.9
HHC				PCS	PcS	13 51 02.1	-2.4
HHC				S	S	13 54 41.5	-2.0
HHC				SCS	ScS	13 56 00.9	-4.9
HHC				SS	SS	13 58 49.9	-0.4
HHC				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,83nm,5.7s						
HHC				LR	LR		
	comp=N,154nm,16.7s						
HHC				LR	LR		
	comp=E,131nm,16.0s						
HHC				LR	LR		
	comp=Z,139nm,16.0s						
HIA	Hailar	64.38	335	eP	P	13 46 34.0	-0.3
LZH	Lanzhou	65.00	315	eP	P	13 46 40.3	+1.7
LZH				AP	pP	13 47 07.0	+1.7
LZH				XP	sP	13 47 18.9	+1.8
LZH				PP	PP	13 49 07.5	+4.4
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.7						
LZH				AMB	AMB		
	comp=Z,76nm,6.4s						
LZH				LR	LR		
	comp=E,219nm,16.3s						
LZH				LR	LR		
	comp=Z,327nm,18.5s						
GTA	Gaotai	69.41	317	eP	P	13 47 08.6	+2.2
GTA				AP	pP	13 47 37.3	+3.9
GTA				XP	sP	13 47 47.9	+2.8
GTA				AMB	AMB		
	comp=Z,4.0nm,0.5s,mb4.5						
ULN	Ulaanbaatar	69.56	327c	iP	P	13 47 07.6	+0.5
ULN	Ulaanbaatar	69.56	327	eP	P	13 47 07.3	+0.2
	comp=Z,16nm,1.0s,mb4.8						
SONM	Songino Array	69.89	327	P	P	13 47 09.5	+0.3
	comp=Z,13nm,0.7s,mb4.8,baz=138,slow=6.4,SNR=77						
YAK	Yakutsk	71.83	347	eP	P	13 47 20.9	+0.3
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
ZAK	Zakamensk	73.04	328	eP	P	13 47 27.9	-0.1
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
TAPN	Taplejung	74.21	301	eP	P	13 47 36.4	+1.0
	comp=Z,16nm,0.5s,mb5.0						
ODAN	Odare	74.34	300	eP	P	13 47 36.6	+0.4
	comp=Z,47nm,0.6s,mb5.4						
RAMN	Ramite	75.05	300	eP	P	13 47 39.3	-0.9
JIRN	Jiri	75.59	301	eP	P	13 47 43.9	+0.5
	comp=Z,28nm,0.6s,mb5.2						
GUN	Gumba	75.93	301	eP	P	13 47 45.8	+0.5
	comp=Z,67nm,0.7s,mb5.5						
PKI	Pulchoki	76.23	301	eP	P	13 47 46.7	-0.3
	comp=Z,24nm,0.8s,mb5.0						
PKIN	Phulchoki	76.25	301	eP	P	13 47 46.9	-0.2
KKN	Kakani	76.40	301	eP	P	13 47 48.1	+0.1
	comp=Z,21nm,0.6s,mb5.0						
DMN	Daman	76.50	300	eP	P	13 47 48.5	0.0
	comp=Z,29nm,0.6s,mb5.2						
KOLN	Koldanda	77.83	300	eP	P	13 47 55.9	-0.1
	comp=Z,24nm,0.6s,mb5.1						
WMQ	Urumqi	79.50	317	eP	P	13 48 04.2	-0.5
WMQ				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,116nm,5.2s						
WMQ				LR	LR		
	comp=Z,109nm,22.8s						
COLA	College	82.84	21	eP	P	13 48 21.4	-0.6
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
COLA	College	82.84	21	eP	P	13 48 21.4	-0.6
	comp=Z,2.9nm,0.8s,mb4.2						
QSPA	South Pole Qui	82.89	180	P	P	13 48 23.1	+1.0
	comp=Z,10nm,0.5s,mb4.9,baz=336,slow=0.9,SNR=137						
MKAR	Makanchi Array	84.06	318	P	P	13 48 28.7	+0.1
	comp=Z,9.7nm,0.6s,mb4.8,baz=99,slow=6.1,SNR=75						
MAW	Mawson	84.66	203	P	P	13 48 32.2	+0.9
	comp=Z,7.1nm,0.7s,mb4.7,baz=103,slow=6.1,SNR=22						
ZALV	Zalesovo Beam	84.75	326	P	P	13 48 30.9	-1.0
	comp=Z,6.8nm,0.5s,mb4.8,baz=116,slow=5.6,SNR=24						
ZAL	Zalesovo	84.76	326	P	P	13 48 30.9	-1.1
KURK	Kurchatov	87.45	322	P	P	13 48 44.0	-1.3
	comp=Z,2.2nm,0.5s,mb4.3,baz=98,slow=4.9,SNR=17						
KURK	Kurchatov	87.45	322c	iP	P	13 48 43.7	-1.6
KURK				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.4						
KURK	Kurchatov	87.45	322	eP	P	13 48 44.1	-1.1
	comp=Z,2.5nm,0.3s,mb4.6						
TKM2	Tokmak 2	87.72	314	eP	P	13 48 46.9	+0.2
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
TKM2	Tokmak 2	87.72	314	eP	P	13 48 46.9	+0.1
	comp=Z,2.0nm,0.6s,mb4.3						
AML	Almayashu	88.95	313	eP	P	13 48 53.3	+0.7
	comp=Z,5.3nm,0.8s,mb4.6						
SYO	Syowa Base	92.53	199⇑	eP	P	13 49 07.3	-1.4
SYO	Syowa Base	92.53	199⇓	ePcP	PcP	13 49 09.3	-0.1
BVAR	Borovoye Array	92.90	323	P	P	13 49 09.2	-1.5
	comp=Z,2.9nm,0.5s,mb4.9,baz=106,slow=5.4,SNR=22						
BRVK	Borovoye	92.97	323	eP	P	13 49 09.4	-1.6
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.0						
BRVK	Borovoye	92.97	323	eP	P	13 49 09.4	-1.6
	comp=Z,7.5nm,1.1s,mb4.9						
ARCES	ARCESS Array B	109.93	343	PKiKP	PKiKP	13 54 27.9	-0.2
	comp=Z,2.7nm,1.0s,baz=90,slow=1.2,SNR=4.8						
AKASG	Malin Array Be	118.13	325	PKP	PKPdf	13 54 43.6	-0.7
	comp=Z,2.6nm,0.6s,baz=72,slow=2.0,SNR=11						
KMBO	Kilima Mbogo	118.24	265	PKP	PKPdf	13 54 44.0	-1.6
	comp=Z,2.2nm,0.3s,baz=60,slow=1.5,SNR=11						
NOA	NORSAR Array B	120.07	341	PKP	PKPdf	13 54 47.4	-0.3
	baz=43,slow=2.4						
BOSA	Boshof	120.66	231	PKP	PKPdf	13 54 50.2	+0.3
	comp=Z,4.0nm,0.7s,baz=99,slow=0.8,SNR=11						
CLL	Collm	126.31	332	i PKPdf	PKPdf	13 55 00.1	+0.1
	comp=Z,6.0nm,1.1s						
CLL				epPKPdf	pPKPdf	13 55 28.0	-1.3
KHC	Kasperske Hory	127.46	330	ePKP	PKPdf	13 55 02.8	+0.6
GERES	GERESS Array B	127.58	329	PKP	PKPdf	13 55 02.8	+0.3
	comp=Z,2.9nm,0.7s,baz=79,slow=2.9,SNR=10						
ESDC	Sonseca Array	142.84	334	PKP	PKPdf	13 55 28.6	-2.5
	comp=Z,0.3nm,0.4s,baz=2.9,slow=2.6,SNR=3.4						
BDFB	Brasilia	147.28	134	PKPbc	PKPbc	13 55 41.7	-0.2
	comp=Z,8.1nm,0.7s,baz=227,slow=4.8,SNR=7.8						
TAM	Tamanrasset	147.49	302	ePKP2	PKPab	13 55 43.1	-1.4
TORD	Torodi Ar. Bea	153.91	285	PKP	PKPdf	13 55 48.9	-0.8
	comp=Z,1.5nm,1.1s,baz=126,slow=0.7,SNR=3.8						
TORD				PKPbc	PKPbc	13 55 57.1	-0.6
	comp=Z,4.7nm,0.7s,baz=38,slow=2.1,SNR=22						
TORD	Torodi Ar. Bea	153.91	285	PKP	PKPdf	13 55 48.9	-0.8
TORD				PKPbc	PKPbc	13 55 57.1	-0.6
DBIC	Dimbokro	160.88	270	PKPab	PKPab	13 56 41.6	+0.1
	comp=Z,10nm,0.5s,baz=90,slow=3.4,SNR=20						

CSEM ***05*** *13:46:01.5±0.1, 40.29N×36.11E, h5^{km}, MD2.7, Error ellipse: s-maj=3.4km s-min=2.0km az=176.0*
ISCJB ***05*** *13:46:02.3±0.6, 40.28N±0.06×36.12E±0.04, h10^{km}, Error ellipse: s-maj=7.9km s-min=4.3km az=177.9*
ISK ***05*** *13:46:02.0, 40.28N×36.12E, h8^{km}, MD2.7*
ISC 05 13:46:02.2±0.8**, 40.35N**±0.06×**36.09E**±0.04**, h2**^{km}±10^{km}**, n10,** σ0^{s}**61**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOKT	Tokat	0.35	95	ePG	Pg	13 46 08.5	-0.4
TOKT				eSG	Sg	13 46 14.3	+1.0
SVSK	Karacayir	0.82	122	ePG	Pg	13 46 17.0	-0.9
SVSK				eSG	Sg	13 46 28.2	-0.2
YOZ	Yozgat	0.93	220	ePG	Pg	13 46 19.3	-0.7
YOZ				eSG	Sg	13 46 32.6	+0.7
CTKT	Corum	1.03	286	i P	Pg	13 46 22.2	+0.3
CTKT	Corum	1.03	286	i P	Pg	13 46 22.2	+0.2
CORM	Corum	1.13	262	ePN	Pn	13 46 24.5	-0.6
CORM				eSN	Sn	13 46 41.2	-0.1
DIKM	Dikmen	1.44	334	ePN	Pn	13 46 30.2	+0.8
CDAG	Cicekdag	1.51	242	i P	Pg	13 46 31.7	+0.5
SARI	SarD1z-Kayseri	1.73	164	ePN	Pg	13 46 35.7	+0.2
BALT	Daday	2.37	301	i P	Pg	13 46 47.0	-0.6

IDC 05 13:55:05.6±12.0**, 24.45S**×**179.44W, h488**^{km}±111^{km}**, mb3.3**/5**, mb1 3.5**/6**, mb1mx3.2**/17**, mbtmp3.3**/6**, Error ellipse: s-maj=178.8km s-min=73.5km az=62.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	14.08	191	P	P	13 58 06.1	+0.1
	0.8nm,0.3s,baz=345,slow=14,SNR=5.5						
CTA	Charters Tower	31.99	271	eP	P	14 00 51.5	+0.6
	6.2nm,0.4s						
CTA	Charters Tower	31.99	271	P	P	14 00 51.6	+0.7
	8.7nm,0.5s,baz=93,slow=11,SNR=15						
STKA	Stephens Creek	35.00	249	eP	P	14 01 15.8	-0.4
	4.3nm,1.5s						
STKA	Stephens Creek	35.00	249	P	P	14 01 15.4	-0.8
	1.3nm,0.5s,baz=91,slow=9.0,SNR=7.6						
ASAR	Alice Springs	42.45	261	P	P	14 02 16.6	-0.4
	0.8nm,0.3s,baz=92,slow=6.9,SNR=42						
WB2	Warramunga Arr	42.87	267	eP	P	14 02 19.6	-0.7
WRA	Warramunga Arr	42.88	267	P	P	14 02 19.9	-0.4
	1.7nm,0.3s,baz=99,slow=7.1,SNR=121						
KAKA	Kakadu	46.87	275	eP	P	14 02 51.0	-0.2
	2.2nm,0.4s						
FITZ	Fitzroy Crossi	51.30	266	eP	P	14 03 24.6	+0.6
	2.1nm,0.6s						
FITZ	Fitzroy Crossi	51.30	266	P	P	14 03 24.7	+0.7
	1.1nm,0.5s,baz=107,slow=7.9,SNR=6.6						

ISCJB ***05*** *13:56:29.8±0.7, 0.48N±0.08×99.55E±0.07, h139^{km}±6^{km}, mb4.1/13, Error ellipse: s-maj=15.3km s-min=8.6km az=38.5*
NEIC ***05*** *13:56:29.6±4.2, 0.46N×99.73E, h123^{km}±35^{km}, mb4.1/5, Error ellipse: s-maj=33.9km s-min=10.3km az=56.0*
IDC ***05*** *13:56:30.5±3.2, 0.41N×99.64E, h128^{km}±24^{km}, mb3.8/7, mb1 3.8/8, mb1mx3.6/18, mbtmp3.7/8, Error ellipse: s-maj=40.4km s-min=15.3km az=62.0*
DJA ***05*** *13:56:32, 0.53N×99.45E, h94^{km}, Mw5.6/4*
ISC 05 13:56:30.7±0.7**, 0.46N**±0.08×**99.54E**±0.07**, h130**^{km}±5^{km}**, n33,** σ0^{s}**99**/27**, mb4.1**/13**, 4C-3D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	Padang Panjang	1.25	137	P	Pn	13 56 55.9	-0.2
	0.0nm,0.0s						
TRSI	Tarutung	1.66	339	P	Pn	13 57 00.7	0.0
	0.0nm,0.0s						
GSI	Gunungsitoli	2.14	293⇓	eP	Pn	13 57 08.0	+1.6
PSI	Prapat	2.41	345⇓	eP	Pn	13 57 07.8	-2.0
RGRI	Rengat	2.91	106	P	Pn	13 57 17.0	+0.9
	0.0nm,0.0s						
KGM	Kluang	4.08	68	⇓P	Pn	13 57 31.8	+0.2
IPM	Ipoh	4.26	20	⇑P	Pn	13 57 34.9	+0.9
MYKOM	Kota Tinggi	4.50	73	⇑P	Pn	13 57 37.9	+0.7
KULM	Kulim	4.92	13	⇑P	Pn	13 57 42.7	-0.1
DSRI	Dabo	5.12	101	P	Pn	13 57 46.0	+0.5
	102nm,0.9s						
KTGM	Kuala Trenggan	6.02	36	⇑P	Pn	13 57 56.5	-1.1
BSI	Banda Aceh	6.56	320	P	Pn	13 58 03.5	-1.3
	192nm,1.2s						
CMAR	Chiang Mai Arr	17.89	358	P	Pn	14 00 29.3	-2.2
	0.2nm,0.3s,baz=190,slow=10,SNR=6.5						
LSA	Lhasa	30.16	345	eP	P	14 02 29.8	+1.3
	5.7nm,0.6s,mb4.5						
WRA	Warramunga Arr	39.66	123	P	P	14 03 48.7	-1.6
	1.2nm,0.8s,mb3.6,baz=300,slow=9.3,SNR=5.3						
WRA				PcP	PcP	14 05 54.1	-0.6
	0.4nm,0.6s,baz=310,slow=2.4,SNR=7.5						
WRA				ScP	ScP	14 09 30.4	-1.2
	0.4nm,0.8s,baz=322,slow=2.9,SNR=6.5						
ASAR	Alice Springs	41.09	128	P	P	14 04 00.3	-1.6
	0.8nm,0.8s,mb3.4,baz=306,slow=8.2,SNR=8.2						
ASAR				PcP	PcP	14 05 59.3	+0.1
	0.6nm,0.6s,baz=308,slow=2.7,SNR=9.8						
ASAR				ScP	ScP	14 09 35.6	-1.5
	0.1nm,0.4s,baz=322,slow=3.8,SNR=4.5						
KSRS	Korea Array	45.17	32	P	P	14 04 35.7	+1.1
	1.0nm,0.6s,mb3.6,baz=231,slow=9.6,SNR=3.5						
UCH	Uchtor	47.29	335	eP	P	14 04 52.2	+1.2
	2.0nm,0.9s,mb3.8						
TKM2	Tokmak 2	47.41	336	eP	P	14 04 52.7	+0.8
	1.6nm,0.5s,mb3.9						
SONM	Songino Array	47.56	6	P	P	14 04 53.5	+0.6
	4.8nm,0.7s,mb4.3,baz=188,slow=9.6,SNR=38						
SONM				PcP	PcP	14 06 20.7	-0.1
	1.4nm,0.6s,baz=185,slow=3.7,SNR=8.2						
AML	Almayashu	47.56	334	eP	P	14 04 52.7	-0.4
	2.6nm,0.6s,mb4.0						
ULN	Ulaanbaatar	47.66	7	eP	P	14 04 54.0	+0.2
	2.3nm,0.6s,mb4.0						
EKS2	Erkin-Say	47.96	334	eP	P	14 04 56.5	+0.4
	146nm,1.2s,mb5.5						
MKAR	Makanchi Array	48.55	344	P	P	14 05 00.9	+0.3
	5.7nm,0.6s,mb4.4,baz=149,slow=7.9,SNR=44						
ZAA0	Zalesovo Array	54.68	349	eP	P	14 05 45.2	-0.8
ZALV	Zalesovo Beam	54.68	349	P	P	14 05 46.0	-0.1
	9.2nm,0.6s,mb4.7,baz=180,slow=6.4,SNR=47						
ARCES	ARCESS Array B	84.02	340	P	P	14 08 46.2	0.0
	1.4nm,0.6s,mb3.9,baz=108,slow=4.0,SNR=8.2						
NVAR	Mina Array Bea	127.97	38	PKP	PKPdf	14 15 22.5	+0.8
	0.7nm,0.9s,baz=257,slow=2.4,SNR=2.6						
PDAR	Pinedale Array	129.64	28	PKP	PKPdf	14 15 24.4	-0.3
	0.3nm,0.6s,baz=336,slow=2.0,SNR=2.2						
TXAR	Lajitas Array	143.00	35	PKhKP		14 15 46.7	
	0.4nm,0.6s,baz=272,slow=4.4,SNR=6.9						
TXAR				PKP	PKPdf	14 15 51.6	+1.8
	0.7nm,0.6s,baz=227,slow=1.1,SNR=7.3						
JCT	Junction City	144.15	29	ePKPdf	PKPdf	14 15 50.0	-1.8
CPUP	Villa Florida	145.98	219	PKPbc	PKPbc	14 15 56.9	+0.9
	0.3nm,0.3s,baz=137,slow=3.5,SNR=4.1						
GOGA	Godfrey	146.19	5	ePKPdf	PKPdf	14 15 55.0	-0.2

IDC ***05*** *14:06:33.9±4.8, 10.03S×160.09E, h36^{km}±27^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.7/16, mbtmp3.7/8, Error ellipse: s-maj=74.2km s-min=18.4km az=103.0*
ISCJB ***05*** *14:06:34.4±0.8, 9.9S±0.1×159.6E±0.1, h33^{km}, mb3.9/9, Error ellipse: s-maj=26.4km s-min=8.4km az=43.8*
NEIC ***05*** *14:06:35.0±2.5, 9.84S×159.56E, h24^{km}±23^{km}, mb4.5/1, Error ellipse: s-maj=36.4km s-min=19.2km az=112.0*
ISC 05 14:06:36.1±0.8**, 9.9S**±0.1×**159.7E**±0.2**, h35**^{km}**, n11,** σ1^{s}**00**/12**, mb3.9**/9**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.52	35	Pn	Pn	14 06 46.2	-0.9
	2µm,0.3s,baz=209,slow=13,SNR=1184						
HNR				Sn	Sn	14 06 54.8	+0.2
	4µm,0.3s,baz=151,slow=19,SNR=102						
WRAB	Tennant Creek	26.38	245	eP	P	14 12 08.6	-0.9
WRA	Warramunga Arr	26.39	245	P	P	14 12 10.1	+0.6
	1.6nm,0.8s,mb3.6,baz=70,slow=9.5,SNR=9.5						
STKA	Stephens Creek	27.56	215	P	P	14 12 18.8	-1.1
	1.8nm,0.7s,mb3.8,baz=52,slow=12,SNR=5.6						
ASAR	Alice Springs	28.15	238	P	P	14 12 24.9	-0.3
	0.4nm,0.5s,mb3.3,baz=63,slow=10,SNR=9.2						
KSRS	Korea Array	55.66	330	P	P	14 16 09.1	+0.2
	1.1nm,0.5s,mb4.1,baz=145,slow=7.2,SNR=5.9						
CMAR	Chiang Mai Arr	66.16	295	P	P	14 17 21.9	+1.3
	0.6nm,0.5s,mb3.9,baz=130,slow=5.4,SNR=4.7						
SBA	Scott Base	68.08	178	eP	P	14 17 33.3	+1.5
	1.1nm,0.3s,mb4.4						
SONM	Songino Array	74.24	326	P	P	14 18 10.4	+0.9
	0.9nm,0.6s,mb3.9,baz=134,slow=5.4,SNR=7.8						
MKAR	Makanchi Array	88.59	318	P	P	14 19 23.3	-2.1
	1.6nm,0.6s,mb4.5,baz=103,slow=5.7,SNR=12						
KURK	Kurchatov	91.92	321	P	P	14 19 41.2	+0.3
	0.1nm,0.4s,mb3.5,baz=90,slow=6.9,SNR=2.4						

ISCJB ***05*** *14:06:57.2±2.7, 14.26S±0.06×76.42W±0.08, h5^{km}±17^{km}, mb4.3/18, MS3.4/3, Error ellipse: s-maj=14.9km s-min=6.2km az=146.8*
IDC ***05*** *14:06:58.5±0.7, 14.21S×76.32W, h0^{km}, mb4.2/13, mb1 4.3/17, mb1mx4.3/23, mbtmp4.2/17, ML4.0/2, MS3.4/6, Ms1 3.4/6, ms1mx3.1/27, Error ellipse: s-maj=34.7km s-min=12.9km az=62.0*
NEIC ***05*** *14:07:03.7±0.4, 14.17S×76.23W, h35^{km}, mb4.6/5, ML4.3(LIM), Error ellipse: s-maj=16.7km s-min=6.7km az=59.0*
NEIC Felt [II] at Ica and Pisco.
ISC 05 14:06:59.4±2.9**, 14.26S**±0.06×**76.40W**±0.08**, h6**^{km}±18^{km}**, n43,** σ1^{s}**07**/43**, mb4.3**/18**, MS3.4**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.30	349	Pn	Pn	14 07 36.2	-1.8
	53nm,0.3s,baz=168,slow=13,SNR=35						
NNA				Sn	Sn	14 08 08.8	+2.2
	297nm,0.3s,baz=206,slow=17,SNR=11						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA				LR	LR	14 08 45.0	
	comp=Z,1μm,18.4s,baz=136,slow=47						
NNA	Nana	2.30	349	ePn	Pn	14 07 35.8	-2.1
NNA				eSn	Sn	14 08 05.7	-0.9
NNA				LR	LR	14 08 45.0	
ARE	Arequipa	5.22	115	eP	Pn	14 08 18.0	0.0
ARE				eS	Sn	14 09 20.0	+1.5
ATAH	Atahualpa	7.48	345	Pn	Pn	14 08 49.7	+0.6
	5.2nm,0.3s,baz=150,slow=5.0,SNR=16						
ATAH				Sn	Sn	14 10 25.1	+11
	0.2nm,0.3s,baz=0.6,slow=17,SNR=1.6						
LPAZ	La Paz	8.23	105	Pn	Pn	14 09 03.4	+4.0
	1.6nm,0.3s,baz=307,slow=8.6,SNR=39						
LPAZ				LR	LR	14 12 08.3	
	comp=Z,81nm,21.9s,baz=254,slow=38						
LPAZ	La Paz	8.23	105	ePn	Pn	14 09 03.1	+3.6
LPAZ				LR	LR	14 12 08.3	
LVC	Limon Verde	10.93	141	Pn	Pn	14 09 37.0	+0.6
	2.2nm,0.3s,baz=305,slow=9.5,SNR=26						
LVC				Sn	Sn	14 11 36.7	-2.3
	0.9nm,0.3s,baz=96,slow=19,SNR=3.5						
LVC				Lg		14 12 33.0	
	0.2nm,0.3s,baz=195,slow=19,SNR=3.1						
LVC	Limon Verde	10.93	141	ePn	Pn	14 09 36.8	+0.4
LVC				eSn	Sn	14 11 30.4	-8.7
LVC				Lg		14 12 33.0	
OTAV	Otavalo	14.55	352	eP	Pn	14 10 27.9	+1.9
	11nm,0.8s						
SIV	San Ignacio	14.90	99	Pn	Pn	14 10 29.0	-1.7
	0.3nm,0.3s,baz=272,slow=15,SNR=5.5						
CFAA	Coronel Fontan	18.81	158	P	Pn	14 11 20.7	+0.5
	0.1nm,0.3s,baz=326,slow=9.3,SNR=9.4						
ROSC	El Rosal	19.11	6	P	Pn	14 11 26.8	+2.9
	2.9nm,0.3s,baz=164,slow=10,SNR=3.3						
ROSC				LR	LR	14 18 14.3	
	comp=Z,44nm,21.9s,baz=201,slow=36						
CPUP	Villa Florida	21.51	127	P	P	14 11 48.6	-0.6
	1.8nm,0.6s,mb3.7,baz=296,slow=9.1,SNR=8.2						
CPUP				LR	LR	14 21 34.5	
	comp=Z,128nm,21.8s,MS3.3,baz=54,slow=41						
PLCA	Paso Flores	26.86	170	P	P	14 12 40.8	-0.1
	1.8nm,0.5s,mb3.9,baz=9.0,slow=13,SNR=6.8						
PLCA				LR	LR	14 21 09.5	
	comp=Z,142nm,20.6s,MS3.5,baz=185,slow=32						
PCRV	Puerto La Cruz	26.94	26	LR	LR	14 23 48.4	
	comp=Z,124nm,20.6s,MS3.5,baz=214,slow=38						
TEIG	Tepich	36.21	341	P	P	14 14 02.8	-0.3
	15nm,0.7s,mb5.0,baz=158,slow=10,SNR=8.3						
TKL	Tuckaleechee C	50.14	352	eP	P	14 15 53.5	-2.1
TXAR	Lajitas Array	50.71	329	P	P	14 16 00.3	+0.2
	3.2nm,0.7s,mb4.4,baz=147,slow=8.6,SNR=22						
PMSA	Palmer Station	51.16	173	eP	P	14 16 03.3	+0.3
	10nm,1.0s,mb4.7						
MIAR	Mount Ida	51.21	342	eP	P	14 16 02.7	-1.0
	4.3nm,0.6s,mb4.6						
ANMO	Albuquerque	56.65	330	P	P	14 16 43.9	+0.4
	1.9nm,0.8s,mb4.2,baz=145,slow=8.0,SNR=3.1						
ANMO	Albuquerque	56.65	330	P	P	14 16 43.9	+0.4
SDCO	Great Sand Dun	58.51	333	eP	P	14 16 56.8	+0.2
	3.9nm,0.9s,mb4.4						
FRNY	Flat Rock	58.87	2	eP	P	14 16 58.1	-0.8
	5.4nm,0.7s,mb4.7						
PDAR	Pinedale Array	64.40	333	P	P	14 17 36.8	+0.4
	0.3nm,0.3s,mb3.8,baz=134,slow=5.2,SNR=2.3						
NVAR	Mina Array Bea	65.47	325	P	P	14 17 43.0	-0.4
	1.0nm,0.8s,mb3.9,baz=149,slow=6.1,SNR=5.9						
NVAR	Mina Array Bea	65.47	325	P	P	14 17 43.0	-0.4
ELK	Elko	65.50	328	P	P	14 17 44.0	+0.5
	0.7nm,0.8s,mb3.8,baz=108,slow=3.2,SNR=3.2						
ULM	Lac du Bonnet	66.48	347	P	P	14 17 48.3	-1.3
	2.0nm,0.6s,mb4.3,baz=142,slow=10,SNR=2.6						
VNA3	Neumayer Olymp	69.17	161	e	P	14 18 06.8	+0.4
VNA3				e		14 18 11.4	
SCHQ	Schefferville	69.30	6	P	P	14 18 06.2	-1.1
	2.6nm,0.7s,mb4.3,baz=179,slow=6.6,SNR=2.3						
VNA1	Neumayer--Stat	69.44	161	e	P	14 18 09.2	+1.1
VNA1				e		14 18 14.2	
SNAA	Sanae	71.39	161	e	P	14 18 20.0	0.0
SNAA				e		14 18 25.3	
SNAA	Sanae	71.39	161	eP	P	14 18 20.0	0.0
	5.7nm,0.8s,mb4.5						
DBIC	Dimbokro	73.94	79	eP	P	14 18 36.1	-0.1
TORD	Torodi Ar. Bea	81.98	74	P	P	14 19 20.8	-0.1
	5.7nm,0.7s,mb4.6,baz=259,slow=3.4,SNR=29						
YKA	Yellowknife Ar	82.13	343	P	P	14 19 22.4	+1.8
	1.8nm,0.7s,mb4.1,baz=153,slow=4.2,SNR=4.1						
MAW	Mawson	93.18	165	P	P	14 20 14.0	-0.3
	0.8nm,0.4s,mb4.5,baz=254,slow=4.8,SNR=3.8						
WRA	Warramunga Arr	134.50	222	PKP	PKPdf	14 26 19.1	-0.5
	0.5nm,0.5s,baz=132,slow=1.6,SNR=9.0						
ZALV	Zalesovo Beam	137.74	16	PKP	PKPdf	14 26 26.0	+1.5
	2.1nm,0.7s,baz=321,slow=2.1,SNR=6.8						
KURK	Kurchatov	138.39	24	PKP	PKPdf	14 26 27.9	+2.1
	0.4nm,0.6s,baz=311,slow=2.6,SNR=5.1						
ULN	Ulaanbaatar	146.38	356	ePKPbc	PKPbc	14 26 42.3	+1.1
SONM	Songino Array	146.45	357	PKPbc	PKPbc	14 26 41.5	0.0
	4.2nm,0.8s,baz=311,slow=1.5,SNR=18						

*CSEM **05** 14:13:07.7±0.2, 27.72N×52.03E, h12km, ML3.6, Error ellipse: s-maj=4.7km s-min=2.7km az=35.0*
*THR **05** 14:13:08.2±0.3, 27.68N×52.01E, h25km±5km, ML3.5*
ISC 05 14:13:10.9±2.3**, 27.82N**±0.08×**52.06E**±0.10**, h15**km±11km**, n11,** σ0^s**72**/16**, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.94	60	ePg	Pg	14 13 27.8	-1.3
GHIR				eSg	Sg	14 13 42.1	+0.7
GHIR				AML	AML	14 13 46.2	
	comp=N,1μm,0.4s						
GHIR				AML	AML	14 13 47.2	
	comp=E,1μm,0.4s						
GHIR	Ghir-Karzin	0.94	60	ePg	Pg	14 13 27.8	-1.3
	SNR=95						
GHIR				eSg	Sg	14 13 42.1	+0.6
	SNR=95						
IMOK	Mouk	1.35	25	eSn	Sn	14 13 56.5	+3.7
ISRV	Sarvestan	1.81	30	ePn	Pn	14 13 42.2	+0.7
BNDS	Bandar-Abbas	3.67	96	ePn	Pn	14 14 06.3	-0.7
BNDS				AML	AML	14 14 56.2	
	comp=N,55nm,0.6s						
IMEH	Mehriz	4.20	31	ePn	Pn	14 14 14.9	+0.6
KRBR	Kerman	4.65	61	ePn	Pn	14 14 20.9	+0.5
KRBR				AML	AML	14 15 20.0	
	comp=E,55nm,0.7s						
KRBR				AML	AML	14 15 23.9	
	comp=N,40nm,0.7s						
IBAF	Bafgh	4.84	38	ePn	Pn	14 14 23.0	-0.1
IBAF				eSn	Sn	14 15 18.0	-0.9
IPIR	Pirpir	4.96	348	ePn	Pn	14 14 25.1	+0.4
IPIR				eSn	Sn	14 15 21.5	-0.2
IKLH	Kolahrood	5.50	356	ePn	Pn	14 14 32.3	+0.1
IKLH				eSn	Sn	14 15 34.4	-0.7
ZHSF	Zahedan	7.86	75	ePn	Pn	14 15 04.8	+0.2

*IDC **05** 14:19:10.4±2.5, 4.62S×102.57E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.9/19, mbtmp4.0/9, Error ellipse: s-maj=112.8km s-min=14.6km az=55.0*
*ISCJB **05** 14:19:11.5±1.4, 4.9S±0.2×102.2E±0.4, h33km, mb4.0/10, Error ellipse: s-maj=61.9km s-min=10.1km az=148.8*
*NEIC **05** 14:19:13.7±0.9, 4.80S×102.39E, h30km, mb4.0/1, Error ellipse: s-maj=43.0km s-min=7.4km az=59.0*
ISC 05 14:19:14.4±1.3**, 4.8S**±0.2×**102.4E**±0.4**, h35**km**, n17,** σ0^s**65**/17**, mb4.0**/10**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XMIS	Christmas Isla	6.50	150	ePn	Pn	14 20 46.9	-0.8
XMIS				Sn	Sn	14 21 52.3	-8.4
CMAR	Chiang Mai Arr	23.37	352	P	P	14 24 19.5	-0.7
	0.7nm,0.5s,mb3.4,baz=191,slow=8.8,SNR=6.8						
FITZ	Fitzroy Crossi	26.30	122	P	P	14 24 47.1	+0.1
	1.4nm,0.8s,mb3.5,baz=123,slow=19,SNR=3.4						
FITZ	Fitzroy Crossi	26.30	122	P	P	14 24 47.1	+0.1
WRA	Warramunga Arr	34.56	119	P	P	14 26 00.0	+0.1
	0.7nm,0.5s,mb3.9,baz=301,slow=9.1,SNR=15						
WRAB	Tennant Creek	34.56	119	eP	P	14 25 58.8	-1.2
	1.5nm,0.7s,mb4.0						
ASAR	Alice Springs	35.70	125	P	P	14 26 10.4	+0.6
	0.3nm,0.4s,mb3.6,baz=297,slow=7.5,SNR=16						
STKA	Stephens Creek	45.53	131	eP	P	14 27 32.2	+1.4
	2.7nm,0.5s,mb4.4						
STKA	Stephens Creek	45.53	131	P	P	14 27 32.5	+1.7
	3.1nm,0.5s,mb4.5,baz=304,slow=7.9,SNR=14						
STKA	Stephens Creek	45.53	131	eP	P	14 27 32.0	+1.2
SONM	Songino Array	52.54	3	P	P	14 28 24.5	+0.3
	3.0nm,0.6s,mb4.4,baz=182,slow=9.3,SNR=13						
MKAR	Makanchi Array	54.37	343	P	P	14 28 38.1	+0.4
	3.7nm,0.8s,mb4.4,baz=146,slow=8.1,SNR=17						
KURK	Kurchatov	58.97	343	P	P	14 29 10.2	0.0
	1.7nm,0.8s,mb4.2,baz=158,slow=6.4,SNR=10						
KURK	Kurchatov	58.97	343	eP	P	14 29 09.9	-0.3
ZAA0	Zalesovo Array	60.37	348	eP	P	14 29 19.8	0.0
ZALV	Zalesovo Beam	60.37	348	P	P	14 29 19.8	-0.1
	6.1nm,0.8s,mb4.7,baz=160,slow=4.7,SNR=18						
TXAR	Lajitas Array	145.33	42	PKPbc	PKPbc	14 38 49.3	+0.2
	1.0nm,0.6s,baz=278,slow=1.2,SNR=9.5						

*IDC **05** 14:22:12.3±0.5, 11.49S×165.79E, h0km, mb4.8/23, mb1 4.8/24, mb1mx4.8/27, mbtmp4.8/24, ML4.6/1, MS4.3/17, Ms1 4.3/17, ms1mx4.2/29, Error ellipse: s-maj=16.9km s-min=13.6km az=113.0*
*ISCJB **05** 14:22:15.4±0.3, 11.52S±0.05×165.75E±0.05, h33km, mb4.9/57, MS4.4/31, Error ellipse: s-maj=7.6km s-min=6.5km az=40.0*
*BJI **05** 14:22:15.2, 10.87S×165.97E, h10km, mB5.2, mb4.9, Ms4.9, Msz4.6*
*MOS **05** 14:22:16.5±1.8, 11.40S×165.67E, h33km, mb5.1/14, Error ellipse: s-maj=10.4km s-min=9.4km az=14.6*
*GCMT **05** 14:22:17.4±0.2, 11.59S×165.63E, h16km, MW5.2/73, Moment Tensor Solution. s55,c81; s73,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.75±.17; $M_{\theta\theta}$-1.04±.13; $M_{\phi\phi}$-3.70±.14; $M_{r\theta}$3.40±.39; $M_{\theta\phi}$2.22±.09; $M_{\phi r}$-3.57±.36; Best double couple: $M_0$6.92100×10^{16} NP1:ϕ_s341.00000°,δ23.00000°,λ109.00000°. NP2: ϕ_s140.00000°,δ68.00000°,λ82.00000°. Principal axes: T 6.8950, Plg66.0000°, Azm36.0000°; N 0.0630, Plg7.0000°, Azm143.0000°; P -6.9470, Plg23.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **05** 14:22:17.4±0.3, 11.48S×165.78E, h35km, mb4.9/19, MS4.8/1 Error ellipse: s-maj=10.4km s-min=7.4km az=131.0*
*DJA **05** 14:22:32, 11.63S×165.33E, h100km, Mw5.4/10*
ISC 05 14:22:17.4±0.3**, 11.49S**±0.05×**165.78E**±0.05**, h35**km**, (h10**km±4.3km**:pP-P), n197,** σ1^s**01**/109**, mb4.9**/57**, MS4.4**/31**, 12C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.09	289	Pn	Pn	14 23 44.8	-0.2
	16nm,0.3s,baz=205,slow=8.2,SNR=10						
HNR				Sn	Sn	14 24 51.2	-2.5
	7.4nm,0.3s,baz=86,slow=21,SNR=11						
HNR	Honiara	6.09	289	eP	Pn	14 23 44.3	-0.8
HNR				pmax	pmax		
	comp=Z,257nm,0.8s						
HNR	Honiara	6.09	289	ePn	Pn	14 23 44.3	-0.8
	comp=Z,257nm,0.8s						
DZM	Mont Dzumac	10.54	177	eP	Pn	14 24 45.7	-0.4
DZM	Mont Dzumac	10.54	177	ePn	Pn	14 24 45.5	-0.5
PMG	Port Moresby	18.43	275c	iP	Pn	14 26 33.2	+2.9
PMG	Port Moresby	18.43	275	P	Pn	14 26 30.4	+0.1
	comp=Z,53nm,1.0s						
CTA	Charters Tower	20.63	243	eP	P	14 26 54.6	+0.6
	comp=Z,28nm,0.9s						
CTA				eS	S	14 30 51.8	+9.0
CTA	Charters Tower	20.63	243	P	P	14 26 54.8	+0.8
	comp=Z,37nm,0.9s,baz=70,slow=12,SNR=21						
CTA				LR	LR	14 33 22.7	
	comp=Z,832nm,21.5s,MS4.1,baz=65,slow=32						
CTA	Charters Tower	20.63	243	eP	P	14 26 54.6	+0.6
CTA				pmax	pmax		
	comp=Z,28nm,0.9s						
CTAO	Charters Tower	20.63	243	eP	P	14 26 54.8	+0.8
CTAO				pmax	pmax		
	comp=Z,42nm,0.9s						
CTAO	Charters Tower	20.63	243	eP	P	14 26 54.8	+0.8
	comp=Z,42nm,0.9s						
AFI	Afiamalu	22.02	99	LR	LR	14 33 59.2	
	comp=Z,848nm,19.0s,MS4.2,baz=150,slow=32						
ARMA	Armidale	22.96	213	eP	P	14 27 19.4	+0.5
URZ	Urewera	28.52	161	P	P	14 28 10.4	+0.8
	comp=Z,13nm,1.0s,mb4.6,baz=358,slow=8.1,SNR=4.0						
STKA	Stephens Creek	30.14	224	eP	P	14 28 24.3	+0.1
	comp=Z,7.0nm,1.1s,mb4.3						
STKA				eS	S	14 33 24.0	+3.1
STKA	Stephens Creek	30.14	224	P	P	14 28 23.8	-0.4
	comp=Z,14nm,1.1s,mb4.6,baz=26,slow=10,SNR=8.7						
STKA				LR	LR	14 39 24.0	
	comp=Z,790nm,20.8s,MS4.3,baz=27,slow=34						
WRAB	Tennant Creek	31.35	251	eP	P	14 28 34.2	-0.8
WRAB				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.2						
WRAB	Tennant Creek	31.35	251	eP	P	14 28 34.2	-0.8
	comp=Z,52nm,1.3s,mb5.2						
WB2	Warramunga Arr	31.36	251	eP	P	14 28 33.6	-1.4
WB2				e		14 30 15.6	
WB2				eS	S	14 33 38.8	-1.3
WRA	Warramunga Arr	31.37	251	P	P	14 28 34.1	-1.0
	comp=Z,26nm,1.2s,mb5.0,baz=80,slow=9.8,SNR=26						
WRA				PcP	PcP	14 31 30.1	+1.6
	comp=Z,1.1nm,0.8s,baz=80,slow=2.4,SNR=4.2						
WRA				LR	LR	14 39 29.6	
	comp=Z,459nm,20.7s,MS4.1,baz=75,slow=33						
WRA	Warramunga Arr	31.37	251	P	P	14 28 34.1	-1.0
WRA						14 31 30.1	
RPZ	Rata Peaks	32.43	173	P	P	14 28 44.5	+0.4
	comp=Z,28nm,0.8s,mb5.1,baz=54,slow=12,SNR=8.7						
ASAR	Alice Springs	32.63	244	P	P	14 28 45.1	-1.0
	comp=Z,15nm,1.1s,mb4.8,baz=76,slow=9.4,SNR=37						
ASAR				PcP	PcP	14 31 34.0	+2.1
	comp=Z,1.5nm,0.9s,baz=86,slow=3.7,SNR=4.5						
RAR	Rarotonga	34.37	111	LR	LR	14 39 26.6	
	comp=Z,436nm,19.6s,MS4.2,baz=328,slow=30						
FITZ	Fitzroy Crossi	39.30	255	eP	P	14 29 42.3	-1.1
	comp=Z,41nm,1.0s,mb5.1						
FITZ				eS	S	14 35 46.0	+3.7
FITZ	Fitzroy Crossi	39.30	255	P	P	14 29 43.1	-0.3
	comp=Z,27nm,1.0s,mb4.9,baz=92,slow=7.9,SNR=22						
FITZ				LR	LR	14 44 24.1	
	comp=Z,482nm,20.0s,MS4.3,baz=78,slow=34						
BATI	Baumata	41.36	268	P	P	14 30 00.0	-0.5
	comp=Z,18nm,0.9s,mb4.7,baz=342,slow=6.4,SNR=2.4						
PPT	Papeete	43.56	103	eS	S	14 36 49.8	+4.4
	comp=Z,325nm,25.0s						
PPT				eLQ		14 40 38.0	
	comp=Z,2μm,27.0s						
PPT				eLR	LR	14 42 28.4	
	comp=Z,756nm,26.5s						
PPT	Papeete	43.56	103	LR	LR	14 46 09.2	
	comp=Z,589nm,19.0s,MS4.5,baz=126,slow=33						
DAV	Davao City (W)	44.04	293	LR	LR	14 45 35.6	
	comp=Z,232nm,21.8s,MS4.1,baz=278,slow=32						
MBWA	Marble Bar	45.09	252	eP	P	14 30 30.2	-0.4
	comp=Z,20nm,1.0s,mb4.9						
KAPI	Kappang	45.96	274	P	P	14 30 37.3	-0.3
	comp=Z,34nm,1.2s,mb5.2,baz=89,slow=7.5,SNR=5.2						
KLBR	Kellerberrin	48.50	238	eP	P	14 30 56.4	-0.7
	comp=Z,30nm,1.1s,mb5.2						
NWAO	Narrogin (SRO)	49.24	236	P	P	14 31 01.5	-1.3
	comp=Z,23nm,1.1s,mb5.1,baz=74,slow=7.5,SNR=6.5						
MUN	Mundaring	49.87	238	eP	P	14 31 07.6	0.0
JOW	Kunigami	52.70	317	P	P	14 31 29.5	+0.7
	comp=Z,28nm,0.9s,mb5.2,baz=116,slow=10,SNR=5.4						
MJAR	Matsushiro Arr	54.38	333	P	P	14 31 40.3	-0.6
	comp=Z,3.7nm,0.9s,mb4.3,baz=166,slow=10.0,SNR=6.7						
MAT	Matsushiro	54.38	333	P	P	14 31 41.3	+0.4
RKT	Rikitea	57.40	110	eS	S	14 40 05.1	+7.4
	comp=Z,156nm,26.2s						
RKT				eLQ		14 46 32.2	
	comp=Z,447nm,28.5s						
RKT				eLR	LR	14 48 49.1	
	comp=Z,504nm,25.0s,baz=283						
ASAJ	Asahikawa	59.23	341	P	P	14 32 16.1	+0.9
	comp=Z,8.6nm,0.8s,mb4.8,baz=253,slow=8.5,SNR=6.6						
KSRS	Korea Array	60.26	326	P	P	14 32 21.9	-0.5
	comp=Z,2.2nm,0.8s,mb4.3,baz=120,slow=7.1,SNR=6.5						
KSRS				LR	LR	14 55 35.5	
	comp=Z,132nm,20.1s,MS4.1,baz=322,slow=33						
YSS	Yuzh-Sakhalins	61.72	342	eP	P	14 32 35.9	+3.8
YSS				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
QIZ	Qiongzhong	62.92	298	P	P	14 32 41.5	+0.8
QIZ				S	S	14 41 14.4	+5.8
QIZ				LR	LR		
	comp=Z,256nm,21.4s,MS4.4						
PETK	Petropavlovsk-	64.71	355	P	P	14 32 52.1	+0.3
	comp=Z,5.5nm,0.8s,mb4.6,baz=109,slow=5.3,SNR=6.9						
PETK				LR	LR	14 59 13.9	
	comp=Z,140nm,19.2s,MS4.2,baz=44,slow=34						
WHN	Wuhan	64.72	312	P	P	14 32 53.0	+0.7
MDJ	Mudanjiang	64.76	332	P	P	14 32 52.9	+0.6
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,231nm,8.8s						
CASY	Casey	65.98	201	P	P	14 32 59.6	-0.3
	comp=Z,71nm,1.8s,mb5.4						
CN2	Changchun	66.14	329	eP	P	14 33 02.0	+0.7
CN2				eXP	sP	14 33 09.2	-6.9
CN2				eS	S	14 41 49.7	+2.3
CN2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
CN2				AMB	AMB		
	comp=Z,130nm,5.0s						
CN2				LR	LR		
	comp=N,210nm,17.0s,MS4.7						
CN2				LR	LR		
	comp=E,340nm,17.0s,MS4.7						
CN2				LR	LR		
	comp=Z,230nm,19.0s,MS4.4						
SBA	Scott Base	66.36	180	eP	P	14 33 03.4	+1.2
SBA				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
SBA	Scott Base	66.36	180	eP	P	14 33 03.4	+1.2
	comp=Z,8.5nm,1.0s,mb4.7						
KLR	Kul'dur	67.48	337	eP	P	14 33 05.8	-3.9
GYA	Guiyang	68.70	304	P	P	14 33 21.0	+3.2
GYA				PCP	PcP	14 33 45.8	+3.3
GYA				PP	PP	14 35 54.2	+4.2
GYA				SCP		14 37 48.4	
GYA				S	S	14 42 23.3	+4.5
GYA				SKS		14 43 16.8	
GYA				SS	SS	14 46 50.2	+5.9
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,110nm,5.7s						
GYA				LR	LR		
	comp=N,490nm,19.5s,MS4.9						
GYA				LR	LR		
	comp=E,470nm,20.8s,MS4.9						
GYA				LR	LR		
	comp=Z,450nm,20.6s,MS4.7						
BJI	Beijing	68.85	321	P	P	14 33 19.6	+1.1
BJI				PP	PP	14 35 52.7	+1.7
BJI				S	S	14 42 26.0	+5.9
BJI				SS	SS	14 46 45.9	-0.2
BJI				AMB	AMB		
	comp=Z,16nm,0.9s,mb5.0						
BJI				LR	LR		
	comp=N,381nm,19.9s,MS4.8						
BJI				LR	LR		
	comp=E,343nm,16.9s,MS4.8						
BJI				LR	LR		
	comp=Z,227nm,23.1s						
XAN	Xi'an	70.45	312	P	P	14 33 29.3	+0.8
XAN				AP	pP	14 33 39.2	-0.1
XAN				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.8						
XAN				AMB	AMB		
	comp=Z,62nm,5.4s						
XAN				LR	LR		
	comp=E,110nm,17.1s						
XAN				LR	LR		
	comp=Z,265nm,16.6s,MS4.6						
KMI	Kunming	71.38	302	P	P	14 33 36.3	+2.0
KMI				S	S	14 42 53.0	+2.6
KMI				SKS		14 43 35.4	
KMI				SS	SS	14 47 29.1	+3.4
KMI				AMB	AMB		
	comp=Z,21nm,1.5s,mb4.8						
KMI				AMB	AMB		
	comp=Z,208nm,5.5s						
KMI				LR	LR		
	comp=N,158nm,14.1s,MS4.5						
KMI				LR	LR		
	comp=E,130nm,16.1s,MS4.5						
KMI				LR	LR		
	comp=Z,144nm,18.6s,MS4.3						
KMI	Kunming	71.38	302	P	P	14 33 36.3	+2.0
KMI				sP	sP	14 33 40.0	-9.3
KMI				S	S	14 42 53.0	+2.6
KMI				sS	sS	14 42 55.8	-13
KMI				PS		14 43 22.6	
KMI				SKS		14 43 35.4	
KMI				SS	SS	14 47 29.1	+3.4
KMI				SSS		14 50 36.3	
HHC	Hu-ho-hao-te	72.19	320	eP	P	14 33 39.8	+0.9
HHC				AP	pP	14 33 43.9	-5.9
HHC				XP	sP	14 33 47.0	-6.8
HHC				PCP	PcP	14 33 57.9	+0.9
HHC				PP	PP	14 36 22.8	+3.0
HHC				S	S	14 43 02.1	+3.0
HHC				XS	sS	14 43 09.3	-7.8
HHC				SKS		14 43 38.9	
HHC				SCS	ScS	14 43 42.5	-0.2
HHC				SS	SS	14 47 42.3	+4.8
HHC				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,175nm,6.0s						
HHC				LR	LR		
	comp=N,231nm,14.6s,MS4.7						
HHC				LR	LR		
	comp=E,261nm,15.9s,MS4.7						
HHC				LR	LR		
	comp=Z,215nm,15.5s,MS4.5						
CMAR	Chiang Mai Arr	72.32	294	P	P	14 33 41.6	+1.5
	comp=Z,4.8nm,0.9s,mb4.4,baz=109,slow=4.5,SNR=11						
MIR	Mirnyy	72.68	204	eP	P	14 33 46.0	+4.6
MIR				i		14 34 02.0	
MIR				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.6						
HIA	Hailar	72.77	330	eP	P	14 33 43.0	+0.9
CD2	Chengdu	72.90	307⇑	iP	P	14 33 45.1	+1.8
CD2				AP	pP	14 33 48.0	-6.2
CD2				XP	sP	14 33 51.0	-7.3
CD2				PP	PP	14 36 29.8	+3.7
CD2				S	S	14 43 10.4	+2.8
CD2				XS	sS	14 43 18.3	-7.3
CD2				SS	SS	14 47 53.4	+4.7
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
CD2				AMB	AMB		
	comp=Z,100nm,8.2s						
CD2				LR	LR		
	comp=N,310nm,15.6s,MS4.9						
CD2				LR	LR		
	comp=E,420nm,18.0s,MS4.9						
CD2				LR	LR		
	comp=Z,220nm,18.0s,MS4.5						
LZH	Lanzhou	75.08	312	eP	P	14 33 57.1	+1.2
LZH				AP	pP	14 34 01.8	-5.1
LZH				XP	sP	14 34 05.0	-5.9
LZH				ePP	PP	14 36 48.2	+3.7
LZH				eS	S	14 43 34.1	+2.2
LZH				XS	sS	14 43 42.3	-7.7
LZH				AMB	AMB		
	comp=Z,35nm,1.1s,mb5.2						
LZH				AMB	AMB		
	comp=Z,196nm,5.3s						
LZH				LR	LR		
	comp=N,203nm,16.7s						
LZH				LR	LR		
	comp=Z,289nm,20.0s,MS4.6						
LZH	Lanzhou	75.08	312	eP	P	14 33 57.1	+1.2
LZH				*SP	sP	14 34 05.0	-5.9
LZH				e		14 36 48.2	
LZH				eS	S	14 43 34.1	+2.2
LZH	Lanzhou	75.08	312	eP	P	14 33 57.1	+1.2
LZH				pP	pP	14 34 01.8	-5.1
LZH				sP	sP	14 34 05.0	-5.9
LZH				ePP	PP	14 36 48.2	+3.7
LZH				eS	S	14 43 34.1	+2.2
LZH				sS	sS	14 43 42.3	-7.7
LZH				eSS	SS	14 48 29.2	+7.4
KDAK	Kodiak Island	76.98	21	P	P	14 34 06.2	0.0

comp=Z,10.0nm,0.9s,mb4.7,baz=134,slow=20,SNR=3.7
KDAK Kodiak Island 76.98 21 P **P** **14 34 06.2 0.0**
QSPA South Pole Qui 78.51 180 LR LR 15 04 09.6
comp=Z,160nm,19.9s,MS4.3,baz=35,slow=32
YAK Yakutsk 78.53 344 *e*P **P** **14 34 13.0 -1.8**
YAK pmax pmax
comp=Z,22nm,0.9s,mb5.1
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK Yakutsk 78.53 344 *e*P **P** **14 34 14.8 0.0**
comp=E,13nm,0.7s,mb5.0
ULN Ulaanbaatar 78.68 324 *e*P **P** **14 34 17.1 +1.2**
ULN pmax pmax
comp=Z,13nm,0.9s,mb4.9
ULN Ulaanbaatar 78.68 324 *e*P **P** **14 34 17.1 +1.1**
comp=Z,13nm,0.9s,mb4.9
SONM Songino Array 79.05 324 P **P** **14 34 18.6 +0.7**
comp=Z,5.0nm,0.9s,mb4.4,baz=135,slow=6.5,SNR=24
SONM LR LR 15 08 22.8
comp=Z,147nm,18.4s,MS4.3,baz=89,slow=35
GTA Gaotai 79.39 314 P **P** **14 34 22.6 +2.6**
GTA AP pP 14 34 25.8 -5.2
GTA XP sP 14 34 28.6 -6.5
GTA PP PP 14 37 25.4 +4.8
GTA S S 14 44 24.0 +5.4
GTA SKS 14 44 34.5
GTA AMB AMB
comp=Z,21nm,1.1s,mb5.0
GTA AMB AMB
comp=Z,161nm,4.5s
GTA LR LR
comp=N,262nm,18.4s,MS4.7
GTA LR LR
comp=E,196nm,16.4s,MS4.7
GTA LR LR
comp=Z,230nm,19.0s,MS4.5
TTA Tatalina 79.84 17 *e*P **P** **14 34 21.4 -0.5**
TTA pmax pmax
comp=Z,19nm,1.0s,mb5.0
TTA Tatalina 79.84 17 *e*P **P** **14 34 21.4 -0.5**
comp=Z,19nm,1.0s,mb5.0
BOD Bodaibo 80.95 335 *e*P **P** **14 34 26.0 -2.0**
BOD pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
DIV Divide 81.81 22 *e*P **P** **14 34 32.0 -0.5**
comp=Z,20nm,0.9s,mb5.0
KTH Kantishna Hill 81.81 18 *e*P **P** **14 34 31.2 -1.2**
comp=Z,5.0nm,0.8s,mb4.5
TRF Thorofare Moun 81.93 18 *e*P **P** **14 34 31.4 -1.7**
comp=Z,7.1nm,0.9s,mb4.6
ZAK Zakamensk 82.09 325 *e*P **P** **14 34 34.5 +0.3**
ZAK pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
TLY Talaya 82.51 326 *e*P **P** **14 34 36.9 +0.5**
TLY pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TLY Talaya 82.51 326 *e*P **P** **14 34 37.1 +0.7**
comp=Z,8.4nm,0.8s,mb4.8
MCK McKinley 82.55 19 *e*P **P** **14 34 35.3 -1.0**
MCK pmax pmax
comp=Z,22nm,1.2s,mb5.1
MCK McKinley 82.55 19 *e*P **P** **14 34 35.3 -1.0**
comp=Z,22nm,1.2s,mb5.1
COLA College 83.70 18⇑*i*P **P** **14 34 41.3 -0.9**
COLA College 83.70 18 *e*P **P** **14 34 40.5 -1.7**
comp=Z,20nm,0.8s,mb5.3
YBH Yreka Blue Hor 84.18 46 LR LR 15 05 42.8
comp=Z,118nm,20.4s,MS4.3,baz=298,slow=31
MAW Mawson 84.32 202 P **P** **14 34 46.0 +0.5**
comp=Z,17nm,1.3s,mb5.0,baz=82,slow=2.7,SNR=10
MAW LR LR 15 09 46.2
comp=Z,157nm,18.8s,MS4.4,baz=241,slow=34
MAW Mawson 84.32 202 P **P** **14 34 46.0 +0.5**
MAW LR LR 15 09 46.2
MTUM Tungsten Hills 85.76 51 *e*P **P** **14 34 53.7 +0.4**
EGAK Eagle 85.78 20 *e*P **P** **14 34 52.4 -0.3**
comp=Z,17nm,0.8s,mb5.3
PAHR Pah Rah Range 85.88 48 *e*P **P** **14 34 53.5 -0.3**
comp=Z,15nm,1.2s,mb5.1
NVAR Mina Array Bea 86.28 50 P **P** **14 34 55.2 -0.6**
comp=Z,1.5nm,0.9s,mb4.2,baz=236,slow=9.4,SNR=6.0
NVAR Mina Array Bea 86.28 50 P **P** **14 34 55.2 -0.6**
TIXI Tiksi 86.53 349 *e*P **P** **14 34 55.2 -1.1**
TIXI pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
BMO Blue Mountains 88.93 44 P **P** **14 35 07.7 -0.7**
BMO pmax pmax
comp=Z,6.0nm,1.4s,mb4.7
BMO Blue Mountains 88.93 44 P **P** **14 35 07.7 -0.6**
comp=Z,6.3nm,1.4s,mb4.8
WMQ Urumqi 89.43 315 P **P** **14 35 11.8 +1.0**
WMQ AP pP 14 35 17.0 -4.9
WMQ PP PP 14 38 45.0 +2.6
WMQ SKS 14 45 42.0
WMQ *e*S S 14 46 00.0 +1.3
WMQ AMB AMB
comp=Z,6.0nm,0.8s,mb5.0
WMQ AMB AMB
comp=Z,137nm,4.4s
WMQ LR LR
comp=N,211nm,19.9s,MS4.7
WMQ LR LR
comp=E,200nm,24.3s,MS4.7
WMQ LR LR
comp=Z,193nm,21.0s,MS4.5
HLID Hailey 90.56 46 *e*P **P** **14 35 15.7 -0.3**
comp=Z,2.5nm,1.0s,mb4.5
MSU Marysvale 90.93 51 *e*P **P** **14 35 18.4 +0.5**
CHMT Chamberlain Mo 92.21 43 *e*P **P** **14 35 23.3 -0.3**
MKAR Makanchi Array 93.87 317 P **P** **14 35 32.2 +1.0**
comp=Z,10.0nm,0.8s,mb5.3,baz=101,slow=6.3,SNR=37
ZALV Zalesovo Beam 93.94 324 P **P** **14 35 31.0 -0.4**
comp=Z,7.3nm,1.0s,mb5.1,baz=104,slow=6.3,SNR=18
ZALV Zalesovo Beam 93.94 324 P **P** **14 35 31.0 -0.4**
ZAL Zalesovo 93.95 324 P **P** **14 35 31.0 -0.4**
ANMO Albuquerque 94.67 55 LR LR 15 09 57.7
comp=Z,220nm,20.6s,MS4.6,baz=166,slow=30
NVS Novosibirsk 95.05 325 *e*P **P** **14 35 35.4 -1.1**
YKA Yellowknife Ar 95.35 27 P **P** **14 35 36.1 -1.6**
comp=Z,1.3nm,0.7s,mb4.5,baz=265,slow=4.8,SNR=3.7
YKA LR LR 15 20 53.3
comp=Z,120nm,18.1s,MS4.4,baz=235,slow=37
TXAR Lajitas Array 96.01 61 LR LR 15 13 01.6
comp=Z,321nm,18.7s,MS4.8,baz=75,slow=32
KURK Kurchatov 97.00 320*c* *i*P **P** **14 35 44.6 -0.9**
KURK pmax pmax
comp=Z,6.0nm,1.6s,mb4.8
ARCES ARCESS Array B 116.77 345 PKP PKPdf 14 40 57.1 -0.4
comp=Z,4.4nm,0.7s,baz=75,slow=1.4,SNR=11
LPAZ La Paz 119.95 116 PKP PKPdf 14 41 06.1 +0.9
comp=Z,2.2nm,0.9s,baz=354,slow=1.4,SNR=7.7
LPAZ La Paz 119.95 116 PKP PKPdf 14 41 06.1 +0.9
CPUP Villa Florida 123.70 133 PKP PKPdf 14 41 12.3 +0.1
comp=Z,4.1nm,0.8s,baz=287,slow=1.9,SNR=8.1
NB2 NORSAR Subarra127.14 345 PKPdf PKPdf 14 41 18.0 +0.3
comp=Z,2.2nm,0.8s,baz=32,slow=1.7
NOA NORSAR Array B127.14 345 PKP PKPdf 14 41 18.1 +0.4
comp=Z,3.5nm,0.8s,baz=34,slow=1.9,SNR=9.9
AKASG Malin Array Be 127.25 327 PKP PKPdf 14 41 18.9 +0.6
comp=Z,2.0nm,0.6s,baz=58,slow=1.5,SNR=14
KOLS Kolonicke sedl 131.95 328 *e*PKP PKPdf 14 41 29.3 +2.1
VYHS Vyhne 133.97 330 *e*PKP PKPdf 14 41 31.5 +0.5
KOLL Kolacno 134.13 330 *e*PKP PKPdf 14 41 32.7 +1.4
BRG Berggiesshubel 134.48 335 *e*P PKPdf 14 41 33.3 +1.4
comp=Z,5.5nm,0.9s
CLL Collm 134.53 336 *e*PKPdf PKPdf 14 41 34.0 +2.0
comp=Z,7.0nm,1.0s
GERES GERESS Array B 136.12 333 PKP PKPdf 14 41 35.9 +0.9
comp=Z,1.9nm,0.9s,baz=86,slow=1.9,SNR=9.4
GRA1 Grafenberg Arr 136.50 336 *e*PKP PKPdf 14 41 38.2 +2.5
GRF Grafenberg Arr 136.50 336 *e*PKPdf PKPdf 14 41 38.2 +2.5
BDFB Brasilia 137.03 128 PKP PKPdf 14 41 38.5 +0.8
comp=Z,6.9nm,0.8s,baz=211,slow=4.6,SNR=6.2
BDFB Brasilia 137.03 128 PKP PKPdf 14 41 38.5 +0.8
BNI Bardonecchia 142.07 336 *e*PKIKP PKPdf 14 41 42.3 -3.7
SGMF Saint Gilles 142.08 347 *e*PKP1 PKPdf 14 41 44.4 -1.5
BGF Bois d'Agland 142.18 341 *e*PKP1 PKPdf 14 41 46.9 +0.7
MBDF Montbardon 142.30 335 *e*PKP1 PKPdf 14 41 43.1 -3.3
ORIF Oris-en-Rattie 142.50 336 *e*PKP1 PKPdf 14 41 42.8 -4.0
comp=Z,19nm,0.7s
ORIF *e*MLR MLR
comp=Z,122nm,20.8s,MS4.3
SBF Sospel 142.72 334⇑*i*PKP1 PKPdf 14 41 45.3 -1.9
comp=Z,74nm,1.0s
VIVF Saint-Julien-l 143.01 337⇑*i*PKP1 PKPdf 14 41 44.8 -2.9
comp=Z,25nm,1.1s
PGF Pioggiola 143.04 331 *e*PKP1 PKPdf 14 41 47.1 -0.7
comp=Z,104nm,1.3s
FRF La Foret Royal 143.30 334⇑*i*PKP1 PKPdf 14 41 46.1 -2.2
comp=Z,87nm,1.2s
SMRF Simiane la Rot 143.40 336 *e*PKP1 PKPdf 14 41 47.0 -1.4
comp=Z,28nm,1.0s
LMR La Mourre 143.54 334⇑*i*PKP1 PKPdf 14 41 46.1 -2.6
comp=Z,70nm,1.1s
RJF Les Rejaudoux 143.72 341 *e*PKP1 PKPdf 14 41 45.8 -3.1
RJF *e*MLR MLR
comp=Z,165nm,19.0s,MS4.5
RJF Les Rejaudoux 143.72 341 *e*PKP PKPdf 14 41 45.8 -3.1
RJF LR LR
comp=Z,170nm,19.0s,MS4.8
CAF Calviac 143.88 340 *e*PKP1 PKPdf 14 41 47.8 -1.4
comp=Z,25nm,1.0s
LASF Ste Croix 143.98 338⇑*i*PKP1 PKPdf 14 41 49.0 -0.4
comp=Z,59nm,1.0s
LFF La Frestale 144.29 342 *e*PKP1 PKPdf 14 41 48.8 -1.1
comp=Z,70nm,1.1s
VSL Villasalto 145.13 327 *e*PKP PKPdf 14 41 52.1 +0.5
MTLF Montolieu 145.22 339⇑*i*PKP1 PKPbc 14 41 52.4 +1.2
comp=Z,86nm,1.0s
VALF Valcebollere 146.11 338 PKP PKPbc 14 41 55.3 +1.2
EPF Esparros 146.13 341 *e*PKP1 PKPbc 14 41 55.2 +1.1
comp=Z,22nm,0.9s
RESF Ems 146.33 341 PKP PKPbc 14 41 56.0 +1.3
VIEF Viey 146.36 341 PKP PKPbc 14 41 56.1 +1.3
EBIE Bielsa 146.50 341 PKP PKPab 14 41 58.9 +2.7
EALK Alkurruntz 146.52 343 PKP PKPab 14 41 58.4 +2.2
ETSF Etsaut 146.53 342⇑*i*PKP1 PKPbc 14 41 56.5 +1.2
comp=Z,56nm,1.1s
SJPF Ste Jean 146.54 343⇑*i*PKP1 PKPbc 14 41 55.9 +0.6
comp=Z,71nm,1.3s
EPOB Poblet 147.36 338 PKP PKPbc 14 41 59.5 +1.8
ESAC San Caprasio 147.57 341 PKP PKPbc 14 41 59.6 +1.3
EPON Pontenova 147.70 350 PKP PKPbc 14 41 59.6 +1.0
KEST Kesra 147.79 322 PKPbc PKPbc 14 42 00.5 +1.4
comp=Z,12nm,0.9s,baz=318,slow=1.8,SNR=25
ERTA Horta de San J 147.98 339 PKP PKPab 14 42 03.1 +1.1
CMAH Djebel Manchou 148.27 326 P PKPab 14 42 02.0 -1.4
EMAZ Mazaricos 148.33 353 PKP PKPbc 14 42 02.0 +1.8
STS Santiago 148.34 352 PKP2 PKPbc 14 42 01.2 +0.9
ABSA Djebel Ababsia 148.50 325 P PKPbc 14 42 02.5 +1.6
CKFL Kef-Lekhel 148.82 326 P PKPbc 14 42 03.5 +1.7
ETOR Torete 148.88 342 PKP2 PKPbc 14 42 03.2 +1.4
ECAL Calabor 148.97 349 PKP PKPbc 14 42 04.1 +2.2
CASM Ain Smara 149.05 326 P PKPbc 14 42 04.0 +1.7
DFRA Djebel Bou Aff 149.17 327 P PKPbc 14 42 05.0 +2.4
GUD Guadarrama 149.64 345 PKP2 PKPbc 14 42 05.3 +1.6
SET Setif 149.68 327 P PKPbc 14 42 06.0 +2.1
MVO Moncorvo 149.78 349 *e*PKPbc PKPbc 14 42 03.9 -0.1
AKF Akfadou 149.78 329 P PKPbc 14 42 05.9 +1.8
PVIS Viseu 150.36 350 *e*PKPbc PKPbc 14 42 06.4 +1.0
ABA Alger-Bouzarea 150.39 331 P PKPbc 14 42 07.6 +2.0
ESDC Sonseca Array 150.50 344 PKPbc PKPbc 14 42 06.4 +0.7
comp=Z,6.9nm,0.8s,baz=14,slow=2.7,SNR=17
ESDC PKPab PKPab 14 42 12.9 +0.6
comp=Z,9.3nm,0.8s,baz=15,slow=3.8,SNR=10
ESDC Sonseca Array 150.50 344 PKP PKPbc 14 42 06.5 +0.7
AKET Djebel Ketaf 150.58 329 P PKPbc 14 42 09.0 +2.9
MTE Manteigas 150.61 350 *e*PKPbc PKPbc 14 42 07.6 +1.6
MTE Manteigas 150.61 350 *e*PKPdf PKPdf 14 42 01.8 +1.2
MTE *e*PKPbc PKPbc 14 42 06.2 +0.2
ETOB Tobarra 150.69 339 PKP PKPbc 14 42 06.7 +0.4
ADJB Djebel Djouab 150.71 330 P PKPbc 14 42 08.6 +2.2
EVIA Vianos 151.02 341 PKIKP PKPbc 14 42 08.6 +1.6
PCBR Castelo Branco 151.14 349 *e*PKPbc PKPbc 14 42 08.2 +0.9
EMUR La Murta 151.30 338 PKP PKPbc 14 42 08.3 +0.6
PMRV Mau??o 151.53 349 *e*PKPbc PKPbc 14 42 09.0 +0.8
EHUE Huescar 151.79 340 PKIKP PKPbc 14 42 09.1 +0.3
EBAN Banos Encina 151.85 342 PKIKP PKPbc 14 42 10.6 +1.6
EQES Quesada 151.96 341 PKP PKPbc 14 42 09.1 -0.1
EADA Adamuz 152.07 344 PKP PKPbc 14 42 10.8 +1.3
EBAD Badajoz 152.10 348 PKP PKPbc 14 42 11.2 +1.7
ECAB El Cabril 152.38 345 PKP PKPbc 14 42 11.3 +1.1
ENIJ Nijar 152.42 339 PKIKP PKPbc 14 42 09.7 -0.6
EVO Evora 152.51 349 *e*PKIKP PKPdf 14 42 01.6 -1.9
comp=Z,33nm,1.2s
EVO *e*MLR MLR
comp=Z,169nm,21.5s,MS4.5
ELUQ Luque 152.55 343 PKIKP PKPbc 14 42 12.0 +1.4
ERON Agron 152.91 341 PKP PKPbc 14 42 10.6 -0.7
PBEJ Beja 152.97 349 *e*PKPbc PKPbc 14 42 12.9 +1.4
TORD Torodi Ar. Bea 164.37 278 PKP PKPdf 14 42 18.3 -0.1
comp=Z,3.0nm,0.9s,baz=106,slow=3.1,SNR=9.7

*SKHL **05** 14:22:14.5±1.0, 48.30N×155.10E, h59km±17km, mb5.2/6, mbv5.6/1, ms4.0/2, msh5.3/1*
*ISCJB **05** 14:22:15.9±0.1, 48.34N±003×154.81E±003, h37km, mb4.8/145, MS4.1/25, Error ellipse: s-maj=4.8km s-min=2.1km az=160.8*
*MOS **05** 14:22:15.6±0.7, 48.28N×154.87E, h37km, mb5.2/54, Error ellipse: s-maj=7.9km s-min=5.0km az=95.0*
*BJI **05** 14:22:16.0, 48.46N×155.02E, h57km, mB4.8, mb4.8, Ms4.3, Msz4.2*
*NEIC **05** 14:22:17.5±0.1, 48.33N×154.74E, mb4.9/89, MS4.1/4, Error ellipse: s-maj=4.6km s-min=2.9km az=156.0*
*SZGRF **05** 14:22:19.9, 48.43N×154.12E, h33km, mb4.9, Kuril Islands, Russia*
*IDC **05** 14:22:19.4±3.3, 48.46N×154.68E, h54km±29km, mb4.3/26, mb1 4.5/27, mb1mx4.5/28, mbtmp4.3/27, ML4.3/1, MS4.0/11, Ms1 4.0/11, ms1mx3.5/43, Error ellipse: s-maj=15.3km s-min=10.6km az=131.0*
ISC 05 14:22:18.4±0.1, 48.43N±003×154.72E±003, h39km±1.3km: pP-P, n53, σ068/532, mb4.8/145, MS4.1/25, 113C-98D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.43**	**21**	*e*PN	**Pn**	**14 22 53.5**	**-2.0**
SKR				*i* S	**Sn**	**14 23 22.0**	**-2.0**
SKR	comp=N,90nm,0.6s			pmax	pmax		
SKR	comp=E,80nm,0.6s			pmax	pmax		
SKR	comp=Z,170nm,0.6s			pmax	pmax		
SKR	comp=N,1μm,2.0s			pmax	pmax		
SKR	comp=E,1μm,2.0s			pmax	pmax		
SKR	comp=Z,1μm,2.0s			smax			
SKR	comp=N,3μm,0.6s			smax			
SKR	comp=E,1μm,0.6s			smax			
SKR	comp=N,5μm,2.0s			smax			
SKR	comp=E,3μm,2.0s			MLR	MLR		
SKR	comp=N,3μm,14.0s			MLR	MLR		
SKR	comp=Z,3μm,14.0s			MLR	MLR		
SKR	comp=E,3μm,18.0s			MLR	MLR		
SKR	**Severo-Kuril's**	**2.43**	**21**	*e*P	**Pn**	**14 22 53.5**	**-2.0**
SKR	comp=E,90nm,0.6s			AMB	AMB	14 22 55.1	
SKR	comp=E,80nm,0.6s			AMB	AMB	14 22 55.1	
SKR	comp=E,170nm,0.6s			AMB	AMB	14 22 58.0	
SKR	comp=E,1μm,2.0s			AMB	AMB	14 22 58.0	
SKR	comp=E,1μm,2.0s			AMB	AMB	14 22 58.0	
SKR	comp=E,1μm,2.0s			AMB	AMB	14 22 58.0	
SKR				*i* S	**Sn**	**14 23 22.0**	**-2.0**
SKR				A		14 23 28.5	
SKR	comp=E,3μm,0.6s			A		14 23 28.5	
SKR	comp=E,1μm,0.6s			A		14 23 28.5	
SKR	comp=E,1μm,0.6s			A		14 23 29.0	
SKR	comp=E,5μm,2.0s			A		14 23 29.0	
SKR	comp=E,5μm,2.0s			A		14 23 29.0	
SKR	comp=E,3μm,2.0s			A		14 23 29.0	
SKR	comp=E,2μm,2.0s			AMS	AMS	14 23 58.0	
SKR	comp=E,3μm,14.0s			AMS	AMS	14 23 58.0	
SKR	comp=E,3μm,14.0s			AMS	AMS	14 23 58.0	
SKR	comp=E,3μm,18.0s			AMS	AMS	14 23 58.0	
SKR	comp=E,3μm,14.0s			AMS	AMS	14 23 58.0	
SKR	comp=E,3μm,14.0s			AMS	AMS	14 23 58.0	
PEA0B	**Petropavlovsk-**	**5.05**	**21**⇑	*e*Pn	**Pn**	**14 23 32.9**	**+1.4**
PETK	**Petropavlovsk-**	**5.05**	**21**	P	**Pn**	**14 23 33.0**	**+1.6**
PETK	comp=E,12nm,0.3s,baz=178,slow=13,SNR=69			LR	LR	14 25 51.5	
PET	comp=E,1μm,18.2s,baz=330,slow=42			*e*PN	**Pn**	**14 23 33.6**	**-0.4**
PET	comp=Z,150nm,0.8s			pmax	pmax		
PET	**Petropavlovsk**	**5.23**	**27**	*e*Pn	**Pn**	**14 23 33.7**	**-0.3**
PET	comp=Z,78nm,0.4s			*e*Sn	**Sn**	**14 24 33.2**	**+0.2**
KUR	**Kuril'sk**	**5.69**	**238**⇑	*i*P	**Pn**	**14 23 39.5**	**-0.7**
KUR	comp=Z,170nm,0.6s			AMB	AMB	14 23 40.4	
KUR	comp=Z,130nm,0.6s			AMB	AMB	14 23 40.4	
KUR	comp=Z,710nm,0.6s			AMB	AMB	14 23 40.4	
KUR	comp=Z,2μm,1.0s			AMB	AMB	14 23 41.0	
KUR				*e*S	**Sn**	**14 24 44.0**	**-0.2**
KUR	comp=Z,4μm,1.6s			A		14 24 59.6	
KUR	comp=Z,3μm,1.6s			A		14 24 59.6	
KUR	comp=Z,620nm,0.8s			A		14 25 04.4	
KUR	comp=Z,280nm,0.8s			A		14 25 04.4	
YUK	**Yuzh-Kuril'sk**	**7.55**	**238**	*e*PN	**Pn**	**14 24 06.6**	**+0.8**
YUK	comp=Z,670nm,0.4s			pmax	pmax		
YUK	comp=N,190nm,0.3s			pmax	pmax		
YUK	comp=N,3μm,16.0s			MLR	MLR		
YUK	comp=E,3μm,20.0s			MLR	MLR		
YUK	comp=Z,3μm,20.0s			MLR	MLR		
YUK	**Yuzh-Kuril'sk**	**7.55**	**238**	*e*P	**Pn**	**14 24 06.6**	**+0.8**
YUK	comp=Z,190nm,0.2s			AMB	AMB	14 24 07.4	
YUK	comp=Z,670nm,0.4s			AMB	AMB	14 24 07.4	
YUK				*e*S	**Sn**	**14 25 32.4**	**+2.3**
YUK	comp=Z,310nm,0.5s			A		14 25 32.9	
YUK	comp=Z,3μm,20.0s			AMS	AMS	14 27 46.0	
YUK	comp=Z,3μm,16.0s			AMS	AMS	14 27 46.0	
YUK	comp=Z,3μm,20.0s			AMS	AMS	14 27 46.0	
TYV	**Tymovskoe**	**8.20**	**292**	*e*P	**Pn**	**14 24 18.5**	**+3.8**
TYV	comp=Z,30nm,0.8s			AMB	AMB	14 24 20.0	
TYV	comp=Z,900nm,16.0s			AMS	AMS	14 27 54.0	
YSS	**Yuzh-Sakhalins**	**8.21**	**264***d*	*i*PN	**Pn**	**14 24 17.8**	**+3.0**
YSS	comp=Z,44nm,0.8s			pmax	pmax		
YSS	**Yuzh-Sakhalins**	**8.21**	**264**⇑	*i*P	**Pn**	**14 24 18.5**	**+3.7**
YSS	comp=Z,60nm,1.0s			AMB	AMB	14 24 19.5	
YSS	comp=Z,50nm,0.5s			*e*S	**Sn**	**14 25 50.0**	**+3.8**
YSS				A		14 25 54.5	
YSS	**Yuzh-Sakhalins**	**8.21**	**264**	*e*Pn	**Pn**	**14 24 18.5**	**+3.7**
UGL	comp=Z,51nm,0.6s			AMB	AMB	14 24 23.5	
UGL	**Uglegorsk**	**8.39**	**279**	*e*P	**Pn**	**14 24 21.0**	**+3.7**
UGL	comp=Z,92nm,0.7s			AMS	AMS	14 27 44.0	
UGL	comp=Z,1μm,16.0s			AMS	AMS	14 27 44.0	
UGL	comp=Z,1μm,20.0s			AMS	AMS	14 27 44.0	
UGL	comp=Z,1μm,17.0s			AMS	AMS	14 27 44.0	
JMP	**Maruseppu**	**9.03**	**245**	P	**Pn**	**14 24 28.9**	**+2.8**
JWK2	**Keihoku**	**9.32**	**255**	P	**Pn**	**14 24 36.2**	**+6.2**
ASAJ	**Asahikawa**	**9.44**	**247**	P	**Pn**	**14 24 35.5**	**+3.9**
ASAJ	comp=Z,9.4nm,0.3s,baz=78,slow=14,SNR=122			LR	LR	14 27 57.4	
ASAJ	comp=Z,736nm,18.7s,baz=34,slow=36 **Asahikawa**	**9.44**	**247**	P	**Pn**	**14 24 35.7**	**+4.1**
ASAJ	**Asahikawa**	**9.44**	**247**	PN	**Pn**	**14 24 35.5**	**+3.9**
ASAJ	comp=Z,9.0nm,0.3s			pmax	pmax		
ASAJ	comp=Z,736nm,18.7s			MLR	MLR		
JEM	**Erimo**	**10.37**	**236**	P	**Pn**	**14 24 45.5**	**+1.1**
ERM	**Erimo**	**10.37**	**236***c*	*i*PN	**Pn**	**14 24 43.4**	**-1.0**
ERM	**Erimo**	**10.37**	**236**	*e*Pn	**Pn**	**14 24 43.3**	**-1.1**
JEW	comp=Z,33nm,0.5s **Eniwo**	**10.84**	**244**	P	**Pn**	**14 24 52.1**	**+1.3**
JSH	**Shimam**	**11.80**	**246**	P	**Pn**	**14 25 04.6**	**+0.6**
JOT	**Ohata**	**11.97**	**239**	P	**Pn**	**14 25 05.7**	**-0.7**
JTM	**Tenmabayashi**	**12.36**	**237**	P	**Pn**	**14 25 07.8**	**-3.8**
JYA	**Atsumi**	**14.65**	**233**	P	**Pn**	**14 25 37.9**	**-4.9**
KLR	**Kul'dur**	**15.14**	**282**	*e*P	**Pn**	**14 25 50.0**	**+0.8**
KLR	comp=E,85nm,1.6s			pmax	pmax		
KLR	comp=Z,74nm,1.6s			pmax	pmax		
KLR	comp=Z,700nm,14.0s			MLR	MLR		
JSD	**Sado**	**15.84**	**235**	P	**Pn**	**14 26 01.6**	**+3.3**
VLA	**Vladivostok**	**16.76**	**260**	*e*P	**Pn**	**14 26 09.6**	**-0.4**
VLA	comp=Z,32nm,0.7s			pmax	pmax		
VLA	comp=Z,300nm,17.0s			MLR	MLR		
MAJO	**Matsushiro**	**16.97**	**232**	*e*P	**Pn**	**14 26 09.9**	**-2.7**
MAJO	comp=Z,14nm,0.6s			pmax	pmax		
MAJO	**Matsushiro**	**16.97**	**232**	*e*Pn	**Pn**	**14 26 09.9**	**-2.7**
MAT	comp=Z,14nm,0.6s **Matsushiro**	**16.97**	**232**	P	**Pn**	**14 26 10.2**	**-2.4**
MJAR	**Matsushiro Arr**	**16.97**	**232**	P	**Pn**	**14 26 09.3**	**-3.3**
JRY	comp=Z,1.0nm,0.3s,baz=31,slow=13,SNR=24 **Ryogami san**	**17.02**	**229**	P	**Pn**	**14 26 15.9**	**+2.6**
MDJ	**Mudanjiang**	**17.68**	**267**	P	**Pn**	**14 26 21.5**	**+0.1**
MDJ				AP	pP	14 26 29.8	-1.9
MDJ				S	**Sn**	**14 29 32.0**	**-11**
MDJ				XS	sS	14 29 56.3	-2.5
MDJ				PCP	PcP	14 30 53.7	-4.4
MDJ	comp=Z,15nm,1.1s			AMB	AMB		
MDJ	comp=Z,48nm,6.5s			AMB	AMB		
MDJ	comp=N,151nm,8.9s			LR	LR		
MDJ	comp=E,201nm,13.2s			LR	LR		
MDJ	comp=Z,376nm,13.9s			LR	LR		
MDJ	**Mudanjiang**	**17.68**	**267**	*e*P	**Pn**	**14 26 22.1**	**+0.7**
JWT	comp=Z,21nm,0.8s **Wachi**	**19.41**	**235**	P	**Pn**	**14 26 41.2**	**-1.2**
YAK	**Yakutsk**	**19.56**	**323**	*e*P	**Pn**	**14 26 41.3**	**-2.6**
YAK				*e*		14 30 22.7	
YAK	comp=Z,29nm,0.9s			pmax	pmax		
YAK	comp=N,10.0nm,1.1s			pmax	pmax		
YAK	comp=E,11nm,1.1s			pmax	pmax		
YAK	**Yakutsk**	**19.56**	**323**	*e*P	**Pn**	**14 26 42.2**	**-1.8**

comp=E,56nm,0.9s
CLNS Chul'man 19.83 306 *e*P **Pn 14 26 49.7 +2.5**
CLNS pmax pmax
comp=N,21nm,1.2s
CLNS pmax pmax
comp=Z,37nm,1.2s
CLNS pmax pmax
comp=E,23nm,1.1s
CN2 Changchun 20.75 268 *e*P **P 14 26 53.4 -2.1**
CN2 *e*S **S 14 30 37.9 -6.9**
CN2 AMB AMB
comp=Z,20nm,0.9s
CN2 AMB AMB
comp=Z,210nm,3.0s
CN2 LR LR
comp=N,210nm,14.0s,MS3.9
CN2 LR LR
comp=E,270nm,14.0s,MS3.9
CN2 LR LR
comp=Z,310nm,15.0s,MS3.8
KSRS Korea Array 22.36 251 P **P 14 27 13.4 +0.6**
comp=Z,31nm,0.8s,mb4.8,baz=47,slow=10.0,SNR=49
KSRS Korea Array 22.36 251 P **P 14 27 13.4 +0.6**
KSRS pmax pmax
comp=Z,31nm,0.8s,mb4.8
DL2 Dalian 25.59 261 P **P 14 27 44.9 +1.3**
DL2 AMB AMB
comp=Z,30nm,0.9s,mb4.8
BOD Bodaibo 25.81 307 *e*P **P 14 27 43.0 -2.4**
BOD *e* 14 27 59.0
TIXI Tiksi 26.19 342 *e*P **P 14 27 50.3 +1.6**
TIXI pmax pmax
comp=Z,19nm,1.2s,mb4.5
TIXI MLR MLR
comp=Z,267nm,16.0s,MS3.9
BJI Beijing 28.61 267 P **P 14 28 10.7 0.0**
BJI S **S 14 32 57.0 +0.6**
BJI AMB AMB
comp=Z,5.0nm,0.7s,mb4.3
BJI LR LR
comp=N,171nm,10.8s,MS4.1
BJI LR LR
comp=E,210nm,10.1s,MS4.1
JOW Kunigami 29.80 233 P **P 14 28 21.2 -0.2**
comp=E,6.5nm,0.4s,mb4.7,baz=250,slow=12,SNR=3.4
HHC Hu-ho-hao-te 31.29 272 *e*P **P 14 28 33.0 -1.4**
HHC PP PP 14 29 36.4 -8.9
HHC PCP PcP 14 31 27.7 -0.1
HHC S **S 14 33 35.3 -3.0**
HHC AMB AMB
comp=Z,8.0nm,0.6s,mb4.7
HHC AMB AMB
comp=Z,74nm,5.0s
HHC LR LR
comp=N,252nm,13.2s,MS4.2
HHC LR LR
comp=E,241nm,13.1s,MS4.2
HHC LR LR
comp=Z,285nm,12.1s,MS4.2
ULN Ulaanbaatar 31.41 287 ⇓*i*P **P 14 28 34.6 -0.8**
ULN Ulaanbaatar 31.41 287 *e*P **P 14 28 34.9 -0.5**
comp=Z,3.1nm,0.9s,mb4.1
SONM Songino Array 31.84 287 P **P 14 28 38.4 -0.7**
comp=Z,1.9nm,0.8s,mb4.0,baz=69,slow=8.4,SNR=6.9
SONM PcP PcP 14 31 28.2 -0.9
comp=Z,1.8nm,0.7s,baz=104,slow=1.3,SNR=7.5
SONM LR LR 14 42 42.7
comp=Z,412nm,19.5s,MS4.1,baz=76,slow=38
SONM Songino Array 31.84 287 P **P 14 28 38.4 -0.7**
SONM 14 31 28.2
TLY Talaya 32.41 295 *e*P **P 14 28 44.4 +0.3**
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
TLY MLR MLR
comp=Z,252nm,15.0s,MS4.0
ZAK Zakamensk 32.99 293 *e*P **P 14 28 42.1 -7.1**
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
TRF Thorofare Moun 33.06 42 *e*P **P 14 28 49.2 -0.5**
comp=Z,4.9nm,0.8s,mb4.5
MCK McKinley 33.67 42 *e*P **P 14 28 54.0 -1.0**
COLA College 34.15 40 *c*⇑P **P 14 28 59.1 0.0**
COLA College 34.15 40 *e*P **P 14 28 58.7 -0.4**
comp=Z,13nm,0.8s,mb4.9
WHN Wuhan 35.42 255 ⇓P **P 14 29 10.3 -0.2**
XAN Xi'an 36.76 264 P **P 14 29 21.1 -0.8**
XAN AMB AMB
comp=Z,7.0nm,0.9s,mb4.5
XAN AMB AMB
comp=Z,60nm,5.8s
XAN LR LR
comp=E,194nm,16.8s
XAN LR LR
comp=Z,206nm,19.7s,MS3.9
EGAK Eagle 37.01 40 *e*P **P 14 29 22.5 -1.1**
comp=Z,10nm,0.8s,mb4.7
LZH Lanzhou 38.94 271 ⇑P **P 14 29 40.6 +0.3**
LZH AP pP 14 29 51.0 -0.3
LZH PP PP 14 31 14.1 +4.3
LZH AMB AMB
comp=Z,23nm,1.1s,mb4.8
LZH AMB AMB
comp=Z,135nm,5.2s
LZH LR LR
comp=N,536nm,13.3s
LZH LR LR
comp=Z,912nm,17.5s,MS4.7
LZH Lanzhou 38.94 271 ⇑P **P 14 29 40.6 +0.3**
LZH pP pP 14 29 51.0 -0.3
LZH sP sP 14 29 55.2 -0.8
LZH PP PP 14 31 14.1 +4.3
LZH *e*S **S 14 35 35.7 -0.2**
LZH sS sS 14 35 51.8 -2.4
LZH *e*SS SS 14 38 19.3 -9.0
GTA Gaotai 39.80 278 *e*P **P 14 29 47.9 +0.5**
GTA AP pP 14 29 58.0 -0.5
GTA PCP PcP 14 31 53.5 +0.6
GTA AMB AMB
comp=Z,6.0nm,1.1s,mb4.2
GTA AMB AMB
comp=Z,55nm,4.7s
GTA LR LR
comp=N,221nm,18.4s,MS4.2
GTA LR LR
comp=E,189nm,16.9s,MS4.2
GTA LR LR
comp=Z,337nm,18.7s,MS4.2
CD2 Chengdu 42.11 265 *e*P **P 14 30 06.4 -0.1**
CD2 AP pP 14 30 16.2 -1.5
CD2 PP PP 14 31 47.3 +2.9
CD2 AMB AMB
comp=Z,40nm,1.0s,mb5.0
CD2 AMB AMB
comp=Z,60nm,4.8s
CD2 LR LR
comp=N,230nm,13.2s,MS4.3
CD2 LR LR
comp=E,230nm,15.6s,MS4.3
CD2 LR LR
comp=Z,180nm,20.4s,MS3.9
ZALV Zalesovo Beam 42.53 305 P **P 14 30 08.4 -1.2**
comp=Z,1.1nm,0.5s,mb3.9,baz=51,slow=7.7,SNR=4.1
ZALV PcP PcP 14 32 01.2 -0.3
comp=Z,3.2nm,0.6s,baz=81,slow=4.5,SNR=8.4
ZALV LR LR 14 48 27.1
comp=Z,118nm,21.3s,MS3.7,baz=239,slow=37
ZAL Zalesovo 42.55 305 P **P 14 30 08.4 -1.4**
ZAL 14 32 01.2
GYA Guiyang 43.15 257 P **P 14 30 16.2 +1.2**
GYA AP pP 14 30 26.7 +0.6
GYA PP PP 14 31 59.2 +3.7
GYA PCP PcP 14 32 05.8 +1.7
GYA AMB AMB
comp=Z,20nm,0.8s,mb4.9
GYA AMB AMB
comp=Z,110nm,5.0s
GYA LR LR
comp=N,470nm,18.5s,MS4.6
GYA LR LR
comp=E,480nm,19.8s,MS4.6
GYA LR LR
comp=Z,440nm,18.6s,MS4.4
WMQ Urumqi 45.35 290 P **P 14 30 32.6 +0.2**
WMQ AP pP 14 30 42.5 -1.1
WMQ AMB AMB
comp=Z,7.0nm,0.6s,mb4.7
WMQ AMB AMB
comp=Z,136nm,4.4s
WMQ LR LR
comp=N,238nm,16.3s,MS4.3
WMQ LR LR
comp=E,239nm,17.5s,MS4.3
WMQ LR LR
comp=Z,288nm,18.7s,MS4.2
KMI Kunming 46.62 259 P **P 14 30 42.9 +0.3**
KMI AP pP 14 30 53.5 -0.4
KMI AMB AMB
comp=Z,18nm,1.0s,mb5.0
MKAR Makanchi Array 47.15 297 P **P 14 30 45.2 -1.3**
comp=Z,4.6nm,0.7s,mb4.5,baz=64,slow=7.9,SNR=24
MKAR PcP PcP 14 32 17.8 +0.3
comp=Z,0.5nm,0.4s,baz=58,slow=3.6,SNR=2.4
MKAR LR LR 14 52 12.3
comp=Z,162nm,18.5s,MS4.0,baz=241,slow=38
MKAR Makanchi Array 47.15 297 P **P 14 30 45.2 -1.3**
MKAR 14 32 17.8
MKAR Makanchi Array 47.15 297 P **P 14 30 45.2 -1.3**
MKAR PcP PcP 14 32 17.8 +0.3
MKAR LR LR 14 52 12.3
KURK Kurchatov 47.35 303 P **P 14 30 47.2 -0.8**
comp=Z,4.1nm,0.5s,mb4.6,baz=68,slow=8.5,SNR=48
KURK PcP PcP 14 32 18.4 +0.1
comp=Z,3.7nm,0.8s,baz=62,slow=3.5,SNR=6.1
KURK LR LR 14 51 57.5
comp=Z,188nm,19.6s,MS4.1,baz=60,slow=38
KURK Kurchatov 47.35 303 P **P 14 30 47.2 -0.8**
KURK 14 32 18.4
KURK pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KURK MLR MLR
comp=Z,188nm,19.6s,MS4.1
KURK Kurchatov 47.35 303 P **P 14 30 46.8 -1.3**
comp=Z,6.4nm,0.8s,mb4.6
YKA Yellowknife Ar 48.93 38 P **P 14 30 59.5 -0.5**
comp=Z,6.2nm,0.7s,mb4.7,baz=294,slow=7.0,SNR=10
BVAR Borovoye Array 50.64 309 LR LR 14 54 35.4
comp=Z,230nm,18.4s,MS4.2,baz=62,slow=38
LSA Lhasa 51.27 273 P **P 14 31 20.0 +1.8**
LSA Lhasa 51.27 273 *e*P **P 14 31 20.0 +1.8**
LSA pmax pmax
comp=Z,17nm,0.6s,mb5.2
LSA Lhasa 51.27 273 *e*P **P 14 31 20.0 +1.8**
comp=Z,17nm,0.6s,mb5.2
PGC Sidney 51.60 57 *e*P **P 14 31 20.3 -0.2**
NANT Nan 52.44 255 ⇑P **P 14 31 26.8 -0.2**
comp=Z,104nm,0.9s,mb5.8
TKM2 Tokmak 2 53.24 296 *e*P **P 14 31 32.2 -0.5**
TKM2 pmax pmax
comp=Z,32nm,0.4s,mb5.6
TKM2 Tokmak 2 53.24 296 *e*P **P 14 31 32.2 -0.4**
comp=Z,32nm,0.4s,mb5.6
SHL Shillong 53.50 268 ⇑*i*P **P 14 31 35.0 +0.2**
SHL *ex* x 14 34 32.2
B07A Winthrop 53.55 56 ⇑P **P 14 31 34.8 0.0**
baz=53
CHG Chiang Mai 53.56 257 ⇑P **P 14 31 35.9 +0.6**
comp=Z,22nm,0.9s,mb5.1
A08A Turner Farm, O 53.74 55 ⇓P **P 14 31 36.0 -0.2**
baz=54
CMAR Chiang Mai Arr 53.82 256 P **P 14 31 38.0 +0.8**
comp=Z,10nm,0.8s,mb4.8,baz=32,slow=7.2,SNR=64
ETW Entiat 53.92 57 *e*P **P 14 31 37.4 -0.2**
C07A Waterville 54.02 56 ⇓P **P 14 31 37.9 -0.4**
baz=54
B08A Colville Reser 54.04 55 ⇑P **P 14 31 38.3 -0.2**
baz=54
A09A Danville 54.10 54 ⇑P **P 14 31 39.0 +0.2**
baz=54
EDM Edmonton 54.37 48 *e*P **P 14 31 40.1 -0.7**
ARU Arti 54.51 317 *c*⇑*i*P **P 14 31 41.9 +0.2**
ARU *e* 14 33 43.4
ARU *e*S **S 14 39 18.5 +0.8**
ARU pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ARU Arti 54.51 317 P **P 14 31 39.4 -2.4**
A10A Northport 54.65 54 ⇓P **P 14 31 42.6 -0.2**
baz=54
B09A Rice 54.65 55 ⇑P **P 14 31 42.8 -0.1**
baz=54
D08A Wollman Farm, 55.02 56 ⇓P **P 14 31 45.2 -0.4**
baz=55
TAPN Taplejung 55.09 273 *e*P **P 14 31 47.2 +0.8**
comp=Z,11nm,0.4s,mb5.3
A11A Hall Mountain, 55.30 53 ⇑P **P 14 31 47.7 +0.2**
baz=55
B11A Sandpoint 55.61 54 ⇓P **P 14 31 50.1 +0.3**
baz=55
ODAN Odare 55.63 273 *e*P **P 14 31 47.8 -2.4**
comp=Z,17nm,0.5s,mb5.3
E09A Wood Farm, Sta 55.77 57 ⇓P **P 14 31 51.1 +0.1**
baz=56
JIRN Jiri 55.90 275 *e*P **P 14 31 52.8 +0.7**
comp=Z,44nm,0.6s,mb5.6
D10A Wagner Farm, O 55.93 56 ⇑P **P 14 31 51.7 -0.4**
baz=56
J05A Fort Rock 55.94 61 ⇑P **P 14 31 52.5 +0.3**
baz=56
C11A Tepee Creek (N 56.02 54 ⇓P **P 14 31 52.6 -0.1**
baz=56
RAMN Ramite 56.10 274 *e*P **P 14 31 51.2 -2.4**
A13A Flathead Natio 56.35 52 ⇑P **P 14 31 55.1 0.0**
baz=56
E10A Myers Farm, Un 56.36 56 ⇓P **P 14 31 55.1 -0.1**
baz=56
KKN Kakani 56.42 275 *e*P **P 14 31 56.3 +0.5**
comp=Z,32nm,0.7s,mb5.5
I07A Izee 56.46 60 ⇓P **P 14 31 55.9 0.0**
baz=56
PKI Pulchoki 56.48 275 *e*P **P 14 31 55.9 -0.4**
comp=Z,29nm,0.6s,mb5.5
K05A Summer Lake 56.48 62 ⇑P **P 14 31 56.2 +0.1**
baz=56
C12B Naegeli Ranch, 56.52 54 ⇑P **P 14 31 55.9 -0.4**
baz=56
WALA Waterton Lakes 56.54 52 *e*P **P 14 31 55.9 -0.5**
comp=Z,3.1nm,0.6s,mb4.5
J06A Christmas Vall 56.59 61 ⇑P **P 14 31 56.7 -0.1**
baz=56
ARCES ARCESS Array B 56.62 341 P **P 14 31 55.6 -1.1**
comp=Z,1.6nm,0.8s,mb4.1,baz=29,slow=8.1,SNR=7.5
ARCES LR LR 15 01 25.7
comp=Z,174nm,18.5s,MS4.2,baz=183,slow=42
DMN Daman 56.65 275 *e*P **P 14 31 57.5 0.0**
comp=Z,68nm,0.7s,mb5.8
B13A Whitefish 56.66 53 ⇓P **P 14 31 57.4 +0.1**
baz=56
H08A Prairie City 56.67 59 ⇑P **P 14 31 57.9 +0.4**
baz=56
GKN Gorkha 56.70 276 *e*P **P 14 31 58.0 +0.1**
comp=Z,2.2nm,0.3s,mb4.6
K06A Valley Falls 56.81 61 ⇑P **P 14 31 58.9 +0.5**
baz=57
E11A Bogner Ranch, 56.94 56 ⇑P **P 14 31 58.7 -0.6**
baz=57
C13A Hot Springs 57.02 54 ⇓P **P 14 31 60.0 +0.1**
baz=57
DANN Dangsing 57.05 277 *e*P **P 14 32 01.2 +0.8**
comp=Z,74nm,0.6s,mb5.9
G10A Bishop Farm, J 57.08 57 ⇑P **P 14 32 00.3 0.0**
baz=57,SNR=7.0
I08A Drewsey 57.10 59 ⇑P **P 14 32 00.5 +0.1**
baz=57
H09A Durkee 57.16 58 ⇓P **P 14 32 01.1 +0.3**
baz=57
BMO Blue Mountains 57.24 58 *e*P **P 14 32 01.4 -0.1**
BMO *e* pP 14 32 12.6 -0.3
BMO pmax pmax
comp=Z,31nm,1.8s,mb5.0
BMO Blue Mountains 57.24 58 *e*P **P 14 32 01.4 -0.1**
comp=Z,31nm,1.8s,mb5.0
BMO *e* pP 14 32 12.6 -0.3
E12A Beaver Dam Sad 57.25 55 ⇑P **P 14 32 01.7 +0.2**
baz=57
C14A Swan Lake 57.41 53 ⇓P **P 14 32 02.5 -0.1**
baz=57
D13A Huson 57.44 54 ⇓P **P 14 32 02.8 0.0**
baz=57
K07A Rock Creek Ran 57.46 61 ⇑P **P 14 32 03.4 +0.4**
baz=57
I09A Lost Marbles R 57.54 59 ⇑P **P 14 32 03.9 +0.4**
baz=57
KOLN Koldanda 57.54 276 *e*P **P 14 32 03.6 -0.2**
comp=Z,31nm,0.6s,mb5.5
H10A Noah's Angus R 57.72 58 ⇓P **P 14 32 04.7 -0.1**
baz=58,SNR=5.8
F12A Elk City 57.83 56 ⇓P **P 14 32 05.3 -0.3**
baz=58,SNR=8.3
K08A Mann Creek Ran 57.88 60 ⇑P **P 14 32 06.2 +0.3**
baz=58
J09A Fry Pan Ranch, 57.92 59 ⇑P **P 14 32 06.5 +0.3**
baz=58,SNR=5.9
D14A Greenough 57.96 54 ⇑P **P 14 32 06.0 -0.5**
baz=58,SNR=10
I10A Payette 58.00 58 ⇓P **P 14 32 07.4 +0.6**
baz=58
H11A Donnelly 58.06 57 ⇓P **P 14 32 07.3 +0.1**
baz=58
CHMT Chamberlain Mo 58.20 54 *e*P **P 14 32 07.6 -0.5**
M07A Soldier Meadow 58.31 62 ⇑P **P 14 32 09.1 +0.1**
baz=58
N06A Buffalo Meadow 58.32 63 ⇑P **P 14 32 09.2 +0.2**
baz=58
E14A Clinton 58.38 54 ⇓P **P 14 32 09.1 -0.3**
baz=58
AKTO Aktyubinsk 58.42 312 LR LR 14 58 31.4
comp=Z,64nm,21.6s,MS3.7,baz=231,slow=37
D15A Lincoln 58.52 53 ⇑P **P 14 32 10.0 -0.4**
baz=58
BEKR Beckwourth 58.56 64 ⇓P **P 14 32 10.7 -0.1**
baz=58
K10A MacKenzie Ranc 58.78 59 ⇑P **P 14 32 12.3 +0.1**
baz=59
H12A Diamond D Ranc 58.80 57 ⇑P **P 14 32 12.3 -0.1**
baz=59
E15A Deer Lodge 58.84 54 ⇑P **P 14 32 12.2 -0.4**
baz=59,SNR=5.3
SUMG Summit 58.94 5 *e*P **P 14 32 13.4 +0.4**
comp=Z,10nm,0.8s,mb4.9
MFID Camas Ranch 58.97 58 ⇑P **P 14 32 13.9 +0.3**
baz=59
H13A Challis 59.13 56 ⇓P **P 14 32 14.7 0.0**
baz=59,SNR=8.9
O07A Toulon 59.26 63 ⇓P **P 14 32 15.8 +0.2**
baz=59
K11A Parker Ranch, 59.26 59 ⇑P **P 14 32 15.6 +0.1**
baz=59
F15A Butte 59.29 54 ⇑P **P 14 32 15.9 +0.2**
baz=59,SNR=9.2
EGMT Eagleton 59.35 51 ⇓P **P 14 32 16.1 0.0**
baz=59
EGMT Eagleton 59.35 51 *e*P **P 14 32 15.9 -0.2**
comp=Z,15nm,1.0s,mb5.0
L10A Juniper Basin 59.45 60 ⇓P **P 14 32 17.2 +0.3**
baz=59
J12A Stokes Ranch, 59.49 58 ⇓P **P 14 32 17.2 0.0**
baz=59,SNR=5.8
I13A Wildhorse Cree 59.62 57 ⇑P **P 14 32 18.4 +0.4**
baz=59,SNR=14
HLID Hailey 59.67 57 ⇓P **P 14 32 18.4 0.0**
baz=60,SNR=6.5
HLID Hailey 59.67 57 *e*P **P 14 32 18.5 +0.1**
comp=Z,3.7nm,1.0s,mb4.4
G15A Dillon 59.72 55 ⇑P **P 14 32 18.5 -0.2**
baz=60
MCMT McKenzie Canyo 59.74 55 *e*P **P 14 32 19.0 +0.1**
M10A I.L. Ranch, Tu 59.76 60 ⇓P **P 14 32 19.5 +0.4**
baz=60
L11A Cat Creek Ranc 59.80 59 ⇑P **P 14 32 19.5 +0.2**
baz=60
BOZ Bozeman (W) 59.88 54 *e*P **P 14 32 19.9 +0.1**
BOZ pmax pmax
comp=Z,20nm,1.4s,mb5.0
BOZ Bozeman (W) 59.88 54 ⇓P **P 14 32 20.0 +0.2**
baz=60,SNR=16
BOZ Bozeman (W) 59.88 54 *e*P **P 14 32 19.9 +0.1**
comp=Z,20nm,1.4s,mb5.0
J13A Cove Ranch, Pi 59.91 57 ⇑P **P 14 32 20.4 +0.4**
baz=60
R06C Coleville 59.96 65 ⇓P **P 14 32 20.2 -0.3**
baz=60
I14A Mackay 59.98 57 ⇑P **P 14 32 21.0 +0.5**
baz=60,SNR=7.6
H15A Lima 59.98 55 ⇓P **P 14 32 20.6 +0.1**
baz=60
K12A Draper Farm, C 59.99 58 ⇑P **P 14 32 20.6 0.0**
baz=60
L12A House Creek Ra 60.24 59 ⇓P **P 14 32 22.4 +0.1**
baz=60
O09A Fish Creek Ran 60.25 62 ⇑P **P 14 32 22.8 +0.4**
baz=60
M11A Holland Ranch, 60.25 60 ⇓P **P 14 32 22.3 -0.1**
baz=60
QLMT Earthquake Lak 60.51 55 *e*P **P 14 32 24.9 +0.8**
O10A Cortez Mining, 60.57 61 ⇓P **P 14 32 24.9 +0.3**
baz=60
H16A Russell Place, 60.69 55 ⇑P **P 14 32 25.8 +0.4**
baz=60,SNR=13
NVAR Mina Array Bea 60.70 64 P **P 14 32 25.7 +0.1**
comp=Z,1.0nm,0.6s,mb4.2,baz=308,slow=7.3,SNR=3.8
NVAR Mina Array Bea 60.70 64 P **P 14 32 25.7 +0.1**
M12A Wells 60.77 60 ⇑P **P 14 32 26.7 +0.7**
baz=61
GCMT Greycliff 60.83 53 *e*P **P 14 32 27.0 +0.7**
J15A Blackfoot 60.88 56 ⇑P **P 14 32 27.1 +0.4**
baz=61
L13A Double Diamond 60.88 58 ⇑P **P 14 32 27.4 +0.7**
baz=61
K14A Jones Ranch, D 61.02 58 ⇓P **P 14 32 28.5 +0.8**
baz=61
O11A Cowboy Ranch, 61.17 61 ⇑P **P 14 32 29.2 +0.5**
baz=61
M13A Montello 61.23 59 ⇓P **P 14 32 29.3 +0.2**
baz=61
L14A Malta 61.32 58 ⇑P **P 14 32 30.3 +0.7**
baz=61
KAPI Kappang 61.38 221 P **P 14 32 29.2 -1.1**
comp=Z,8.5nm,1.0s,mb4.8,baz=46,slow=6.9,SNR=2.6
KAPI Kappang 61.38 221 P **P 14 32 29.2 -1.1**
IMW Indian Meadow 61.38 55 *e*P **P 14 32 31.0 +1.0**
comp=Z,10.0nm,1.3s,mb4.8
FLWY Flagg Ranch 61.39 55 *e*P **P 14 32 30.6 +0.4**
comp=Z,4.1nm,0.9s,mb4.6
FLWY *e* pP 14 32 42.3 +0.6
J16A Bone 61.42 56 ⇓P **P 14 32 31.2 +0.9**
baz=61
RLMT Red Lodge 61.48 53 *e*P **P 14 32 31.1 +0.3**
comp=Z,19nm,1.1s,mb5.1
RRI2 Red Ridge 61.53 56 *e*P **P 14 32 31.8 +0.7**
comp=Z,10nm,0.8s,mb5.0
R09A Tonopah 61.56 64 ⇓P **P 14 32 31.4 0.0**
baz=61,SNR=7.4
Q10A Clear Creek Ra 61.58 63 ⇑P **P 14 32 31.1 -0.4**
baz=61
O12A Currie 61.61 60 ⇓P **P 14 32 31.9 +0.2**
baz=61
TPAW Teton Pass 61.64 56 *e*P **P 14 32 33.3 +1.4**
comp=Z,16nm,1.1s,mb5.1
TPAW *e* pP 14 32 44.2 +0.8
K16A Soda Springs 61.72 56 ⇓P **P 14 32 33.5 +1.1**
baz=62
LOHW Long Hollow 61.75 55 *e*P **P 14 32 33.2 +0.6**
comp=Z,12nm,1.3s,mb4.9
REDW Red Top Meadow 61.78 56 *e*P **P 14 32 33.2 +0.5**
comp=Z,17nm,1.3s,mb5.0
S09A Goldfield 61.81 64 ⇓P **P 14 32 33.3 +0.2**
baz=62
L15A Malad City 61.82 58 ⇑P **P 14 32 33.4 +0.4**
baz=62
DGMT Dagmar 61.87 48 *e*P **P 14 32 33.1 -0.1**
comp=Z,12nm,0.7s,mb5.2
VES Vestal, Richgr 61.92 67 ⇑P **P 14 32 33.6 -0.2**
baz=62
R10A Warm Springs 61.99 63 ⇑P **P 14 32 34.5 +0.2**
baz=62
P12A McGill 62.03 61 ⇓P **P 14 32 34.6 +0.1**
baz=62
S10A Tonopah Range, 62.06 64 ⇓P **P 14 32 34.8 +0.1**
baz=62
CWC Cottonwood Cre 62.14 66 ⇓P **P 14 32 35.3 0.0**
baz=62
M15A Larsen Ranch, 62.14 58 ⇓P **P 14 32 35.3 +0.1**
baz=62
GRAC Grapevine Rang 62.20 65 ⇓P **P 14 32 35.8 +0.1**
baz=62
R11A Troy Canyon, C 62.38 63 ⇑P **P 14 32 36.5 -0.3**
baz=62,SNR=5.2
M16A Huntsville 62.70 58 ⇑P **P 14 32 39.1 +0.1**
baz=62
S11A Rachel 62.74 63 ⇑P **P 14 32 39.1 -0.2**
baz=63
MPMC Manual Prospec 62.74 66 ⇑P **P 14 32 39.2 -0.1**

baz=63
DUG Dugway 62.77 59 *e*P **P 14 32 39.2 -0.2**
DUG *e* pP 14 32 50.8 -0.2
DUG pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
DUG Dugway 62.77 59 ⇓P **P 14 32 39.9 +0.5**
baz=63
DUG Dugway 62.77 59 *e*P **P 14 32 39.2 -0.2**
comp=Z,7.4nm,1.0s,mb4.8
DUG *e* pP 14 32 50.8 -0.2
FURC Furnace Creek, 62.85 65 ⇑P **P 14 32 39.8 -0.3**
baz=63
PDAR Pinedale Array 62.89 55 P **P 14 32 40.3 +0.1**
comp=Z,7.5nm,0.9s,mb4.8,baz=316,slow=2.5,SNR=31
Q13A Wheeler Ranch, 62.89 61 ⇑P **P 14 32 40.2 -0.1**
baz=63
TPNV Topopah Spring 62.91 64 ⇓P **P 14 32 40.3 -0.1**
baz=63
O15A The Old Anders 62.91 59 ⇑P **P 14 32 40.5 +0.1**
baz=63
R12A Pony Springs, 62.97 62 ⇓P **P 14 32 40.7 -0.1**
baz=63
P14A Drum Mountains 63.02 60 ⇑P **P 14 32 41.1 0.0**
baz=63
EDW2 Edwards Air Fo 63.22 67 ⇓P **P 14 32 42.8 +0.3**
baz=63
S12A Delamar Landin 63.30 63 ⇓P **P 14 32 43.3 +0.3**
baz=63,SNR=6.1
SFJD Kangerlussuaq 63.30 11 *i* P **P 14 32 41.6 -0.9**
SFJD pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
SFJD Kangerlussuaq 63.30 11 *i* P **P 14 32 41.6 -0.9**
comp=Z,8.0nm,0.8s,mb4.9
Q14A Sevier Lake (B 63.30 61 ⇑P **P 14 32 43.4 +0.4**
baz=63,SNR=9.0
T11A Corn Creek, Al 63.33 63 ⇑P **P 14 32 42.7 -0.5**
baz=63,SNR=5.4
N17A Moffit Pass 63.40 58 ⇑P **P 14 32 43.9 +0.3**
baz=63
P15A Leamington 63.49 60 ⇑P **P 14 32 44.1 -0.1**
baz=63
GSC Goldstone 63.66 66 ⇑P **P 14 32 45.1 -0.3**
baz=64
Q15A Fillmore 63.82 60 ⇑P **P 14 32 46.3 0.0**
baz=64
N18A Larsen Ranch, 64.02 57 ⇑P **P 14 32 47.6 -0.1**
baz=64
TUQ Turquoise Moun 64.11 65 ⇑P **P 14 32 48.5 +0.2**
baz=64
HEC Hector,Ludlow 64.27 66 ⇑P **P 14 32 49.3 -0.1**
baz=64
O18A Roosevelt 64.32 58 ⇓P **P 14 32 50.2 +0.5**
baz=64
N19A John Jarvie Ra 64.36 57 ⇓P **P 14 32 49.5 -0.4**
baz=64
P17A Butcher Ranch, 64.44 59 ⇓P **P 14 32 50.7 +0.3**
baz=64
ULM Lac du Bonnet 64.54 42 P **P 14 32 50.1 -0.9**
comp=Z,5.7nm,0.7s,mb4.7,baz=313,slow=7.7,SNR=8.3
Q16A Castle Valley 64.57 59 ⇓P **P 14 32 51.2 -0.1**
baz=64
P18A Preston Nutter 64.61 58 ⇑P **P 14 32 51.6 0.0**
baz=64
U13A Pakoon Wash 64.62 63 ⇑P **P 14 32 51.4 -0.3**
baz=64,SNR=5.4
GMRC Granite Mounta 64.71 66 ⇓P **P 14 32 52.0 -0.3**
baz=64
SRU San Rafael 64.81 59 *e*P **P 14 32 52.6 -0.2**
SRU pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
SRU San Rafael 64.81 59 ⇓P **P 14 32 52.4 -0.5**
baz=65,SNR=11
SRU San Rafael 64.81 59 *e*P **P 14 32 52.6 -0.3**
comp=Z,7.5nm,0.9s,mb4.7
RSSD Black Hills 64.92 51 *e*P **P 14 32 53.3 -0.2**
RSSD *e* pP 14 33 04.4 -0.7
RSSD pmax pmax
comp=Z,23nm,1.0s,mb5.2
RSSD Black Hills 64.92 51 *e*P **P 14 32 53.3 -0.2**
comp=Z,22nm,1.0s,mb5.2
RSSD *e* pP 14 33 04.4 -0.7
V13A Grand Canyon W 64.99 64 ⇑P **P 14 32 54.1 0.0**
baz=65
Q18A Rafter H Ranch 65.03 59 ⇑P **P 14 32 54.5 +0.1**
baz=65
U14A Mt Trumbull 65.09 63 ⇑P **P 14 32 54.5 -0.2**
baz=65
S16A Weppner Ranch, 65.13 61 ⇓P **P 14 32 55.3 +0.3**
baz=65
T15A Red Dirt Ranch 65.15 62 ⇓P **P 14 32 55.6 +0.4**
baz=65
R17A Hanksville Air 65.17 60 ⇑P **P 14 32 55.1 -0.1**
baz=65
P19A Cripple Cowboy 65.33 58 ⇑P **P 14 32 56.3 +0.1**
baz=65
IRM Iron Mountain 65.44 66 ⇓P **P 14 32 56.4 -0.6**
baz=65
U15A North Rim 65.61 62 ⇓P **P 14 32 58.2 +0.2**
baz=65,SNR=5.6
Q19A Hogan Spring (65.63 58 ⇓P **P 14 32 57.7 -0.5**
baz=65,SNR=8.6
S17A Black Ridge (B 65.65 60 ⇓P **P 14 32 57.9 -0.5**
baz=66,SNR=13
R18A Canyonlands Na 65.66 59 ⇓P **P 14 32 58.0 -0.4**
baz=66,SNR=7.0
V14A Boquillas Ranc 65.67 63 ⇑P **P 14 32 58.2 -0.3**
baz=66,SNR=6.6
AGMN Agassiz Refuge 65.96 44 *e*P **P 14 32 59.0 -1.1**
comp=Z,4.1nm,0.7s,mb4.6
W14A Seligman 65.97 64 ⇓P **P 14 33 00.3 -0.1**
baz=66,SNR=5.5
S18A Hurst Farm, Bl 66.08 60 ⇓P **P 14 33 00.8 -0.3**
baz=66,SNR=9.0
R19A Curley Farm, L 66.09 59 ⇓P **P 14 33 01.0 -0.2**
baz=66
V15A Kaibab Nationa 66.09 63 ⇑P **P 14 33 01.0 -0.2**
baz=66,SNR=7.8
PV10 Paradox Valley 66.16 59 *e*P **P 14 33 02.0 +0.5**
W15A Williams 66.48 63 ⇓P **P 14 33 03.8 +0.1**
baz=66
T18A Mexican Hat 66.53 60 ⇓P **P 14 33 03.3 -0.7**
baz=66
S19A Harvey Farm, M 66.53 59 ⇓P **P 14 33 03.5 -0.5**
baz=66,SNR=8.5
X14A Yava 66.59 64 ⇑P **P 14 33 04.6 +0.2**
baz=66
WUAZ Wupatki 66.77 62 ⇑P **P 14 33 05.7 +0.1**
baz=67
Y14A Wickenburg 66.89 65 ⇑P **P 14 33 05.8 -0.5**
baz=67
X15A Humboldt 66.97 64 ⇑P **P 14 33 07.0 +0.1**
baz=67
NOA NORSAR Array B 66.98 342 P **P 14 33 05.3 -1.1**
comp=Z,2.5nm,0.6s,mb4.4,baz=26,slow=6.4,SNR=8.9
NOA LR LR 15 06 06.4
comp=Z,72nm,18.1s,MS3.9,baz=20,slow=39
NOA NORSAR Array B 66.98 342 P **P 14 33 05.3 -1.1**
NOA LR LR 15 06 06.4
ISCO Idaho Springs 67.08 56 *e*P **P 14 33 07.8 +0.3**
ISCO *e**PP pP 14 33 19.0 -0.2
ISCO pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
ISCO Idaho Springs 67.08 56 *e*P **P 14 33 07.8 +0.3**
comp=Z,7.3nm,0.9s,mb4.7
ISCO *e*pP pP 14 33 19.0 -0.1
T19A Beclabito 67.23 60 ⇑P **P 14 33 08.3 -0.2**
baz=67
MVCO Mesa Verde 67.27 59 ⇑P **P 14 33 08.5 -0.2**
baz=67
Y15A Casa Rosa Ranc 67.28 64 ⇓P **P 14 33 08.7 -0.1**
baz=67
V18A Ganado 67.48 61 ⇓P **P 14 33 10.1 +0.1**
baz=67
X16A Lo Mia Camp, P 67.49 63 ⇓P **P 14 33 10.4 +0.2**
baz=67
V19A Window Rock 68.00 61 ⇑P **P 14 33 13.5 +0.2**
baz=68
HYB Hyderabad 68.04 272 *i* P **P 14 33 14.0 +0.2**
HYB Hyderabad 68.04 272 *e*P **P 14 33 14.0 +0.2**
115A Sonoran Desert 68.21 65 ⇓P **P 14 33 14.9 +0.2**
baz=68
W19A Sanders 68.22 61 ⇑P **P 14 33 15.1 +0.4**
baz=68
X18A Snowflake 68.30 62 ⇑P **P 14 33 15.5 +0.3**
baz=68
Y17A Roosevelt 68.35 63 ⇑P **P 14 33 15.7 +0.2**
baz=68
SDCO Great Sand Dun 68.59 57 *e*P **P 14 33 17.0 0.0**
comp=Z,3.9nm,1.0s,mb4.3
X19A St. Johns 68.76 62 ⇓P **P 14 33 18.5 +0.4**
baz=69
Y18A Canyon Day Jun 68.77 63 ⇑P **P 14 33 18.4 +0.2**
baz=69
ECSD EROS,Sioux Fal 68.94 47 *e*P **P 14 33 17.9 -1.1**
comp=Z,13nm,1.0s,mb4.8
ECSD *e* pP 14 33 30.1 -0.7
216A Three Points, 69.17 65 ⇑P **P 14 33 20.6 -0.1**
baz=69
117A Oracle 69.20 64 ⇓P **P 14 33 20.6 -0.2**
baz=69
Z19A T-Link Ranch, 69.57 63 ⇑P **P 14 33 23.5 +0.4**
baz=69
118A Homack Ranch, 69.61 64 ⇓P **P 14 33 23.5 +0.1**
baz=69
119A Ashpeak Ranch, 69.92 63 ⇓P **P 14 33 25.7 +0.4**
baz=70
ANMO Albuquerque 70.03 60 *e*P **P 14 33 26.0 +0.1**
ANMO *e* pP 14 33 37.1 -0.6
ANMO pmax pmax
comp=Z,3.0nm,0.9s
ANMO Albuquerque 70.03 60 *e*P **P 14 33 26.0 +0.1**
comp=Z,3.2nm,0.9s,mb4.2
ANMO *e* pP 14 33 37.1 -0.6
218A Dragoon 70.03 64 ⇓P **P 14 33 26.3 +0.3**
baz=70
WRAB Tenant Creek 70.45 200 *e*P **P 14 33 27.1 -1.4**
WB2 Warramunga Arr 70.46 200 *e*P **P 14 33 27.4 -1.1**
WRA Warramunga Arr 70.46 200 P **P 14 33 27.4 -1.1**
comp=Z,15nm,0.8s,mb5.0,baz=15,slow=6.2,SNR=78
219A White Tail Can 70.49 64 ⇑P **P 14 33 28.8 0.0**
baz=70
AKASG Malin Array Be 70.75 327 P **P 14 33 29.5 -0.5**
comp=Z,1.2nm,0.4s,mb4.2,baz=34,slow=6.3,SNR=6.3
FITZ Fitzroy Crossi 71.14 209 *e*P **P 14 33 32.6 -0.1**
comp=Z,14nm,0.7s,mb5.0
FITZ Fitzroy Crossi 71.14 209 P **P 14 33 32.7 0.0**
comp=Z,9.5nm,0.8s,mb4.8,baz=26,slow=5.3,SNR=23
SCHQ Schefferville 71.34 24 P **P 14 33 33.1 -0.4**
comp=Z,5.2nm,0.4s,mb4.8,baz=323,slow=6.0,SNR=14
SCIA State Center 71.97 47 *e*P **P 14 33 37.0 -0.6**
comp=Z,18nm,0.4s,mb5.3
KWP Kalwaria 73.93 330 *e*P **P 14 33 49.6 +0.6**
KWP pmax pmax
comp=Z,22nm,1.1s,mb5.0
KWP Kalwaria 73.93 330 *e*P **P 14 33 49.6 +0.5**
comp=Z,22nm,1.1s,mb5.0
ASAR Alice Springs 74.15 200 P **P 14 33 50.4 -0.1**
comp=Z,6.7nm,0.9s,mb4.6,baz=14,slow=5.3,SNR=43
OJC Ojcow 74.36 332 *e*P **P 14 33 51.6 0.0**
WMOK Wichita Mounta 74.49 55 *e*P **P 14 33 51.6 -1.0**
WMOK *e* pP 14 34 03.0 -1.4
WMOK pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
WMOK Wichita Mounta 74.49 55 *e*P **P 14 33 51.6 -1.0**
comp=Z,7.3nm,0.9s,mb4.6
WMOK *e* pP 14 34 03.0 -1.4
STHS Stebnicka Huta 74.60 331 *e*P **P 14 33 53.9 +1.0**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
STHS Stebnicka Huta 74.60 331 *e*P **P 14 33 53.9 +1.0**
comp=Z,7.3nm,0.9s,mb4.6
KOLS Kolonicke sedl 74.67 330 *e*P **P 14 33 53.0 -0.4**
BUR08 Bucovina Ar. S 74.76 327 *e*P **P 14 33 53.9 +0.1**
BURAR Bucovina Array 74.78 327 ⇓*i*P **P 14 33 54.1 +0.1**
BURAR Bucovina Array 74.78 327 ⇓P **P 14 33 54.1 +0.1**
KSP Ksiaz 74.88 334 *e*P **P 14 33 54.5 0.0**
NIE Niedzica 74.90 331 *e*P **P 14 33 55.4 +0.7**
CRVS Cervenica-Dubn 74.97 330 *e*P **P 14 33 55.0 -0.1**
NRDL Niedersach Rie 75.03 339 *e*P **P 14 33 54.4 -1.0**
comp=Z,11nm,1.3s,mb4.6
OKC Ostrava-Krasne 75.21 333 *e*P **P 14 33 56.7 +0.2**
UPC Upice 75.26 334 *e*P **P 14 33 56.7 0.0**
TRPA Tarpa 75.28 329 ⇓*i*P **P 14 33 57.3 +0.4**
DPC Dobruska-Polom 75.31 334 *e*P **P 14 33 57.5 +0.5**
CLL Collm 75.38 336 ⇑*i*P **P 14 33 56.9 -0.5**
CLL *i* pP 14 34 11.0 +1.8
CLL pmax pmax
comp=Z,11nm,0.7s,mb4.9
CLL Collm 75.38 336 *e*P **P 14 33 56.9 -0.5**
comp=Z,11nm,0.7s,mb4.9
CLL Collm 75.38 336 ⇑*i*P **P 14 33 56.9 -0.5**
comp=Z,11nm,0.7s,mb4.9
CLL *i* PcP PcP 14 34 11.0 +0.5
CLL *e*PP PP 14 36 45.0 -0.8
CLL *e*SS SS 14 49 12.0 +49
CLL Collm 75.38 336 ⇑*i*P **P 14 33 56.9 -0.5**
comp=Z,11nm,0.7s,mb4.9
CLL *i* pP 14 34 11.0 +1.8
MORC Moravsky Berou 75.45 333 ⇓*i*P **P 14 33 58.3 +0.5**
MORC Moravsky Berou 75.45 333 *e*P **P 14 33 57.8 0.0**
comp=Z,15nm,1.0s,mb4.9
TLCR 75.45 324 ⇓*i*P **P 14 33 58.0 +0.1**
TLCR 75.45 324 ⇓P **P 14 33 58.0 0.0**
BRG Berggiesshubel 75.51 336 *i* P **P 14 33 58.1 -0.1**
BRG pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
BRG Berggiesshubel 75.51 336 *e*P **P 14 33 57.9 -0.3**
comp=Z,8.0nm,1.2s,mb4.5
BRG Berggiesshubel 75.51 336 *i* P **P 14 33 58.1 -0.1**
comp=Z,8.2nm,1.2s,mb4.5
CLZ Clausthal 75.57 338 *e*P **P 14 33 58.8 +0.3**
CLZ pmax pmax
comp=Z,19nm,1.2s,mb4.9
CLZ Clausthal 75.57 338 *e*P **P 14 33 58.8 +0.3**
comp=Z,19nm,1.2s,mb4.9
PVCC Panska Ves 75.65 335 *e*P **P 14 33 59.2 +0.2**
KECS Kecovo 75.66 331 *e*P **P 14 33 58.4 -0.7**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KECS Kecovo 75.66 331 *e*P **P 14 33 58.4 -0.7**
comp=Z,2.9nm,1.0s,mb4.2
TXAR Lajitas Array 75.73 62 P **P 14 33 59.5 -0.3**
comp=Z,7.1nm,0.7s,mb4.7,baz=299,slow=4.1,SNR=83
TXAR Lajitas Array 75.73 62 P **P 14 33 59.5 -0.3**
PRU Pruhonice 76.14 335 *e*P **P 14 34 02.0 +0.2**
PRU AMS AMS 15 09 30.0
comp=Z,100nm,20.8s
VRAC Vranov 76.15 333 ⇓*i*P **P 14 34 02.8 +0.9**
VRAC Vranov 76.15 333 ⇓P **P 14 34 02.8 +0.9**
VYHS Vyhne 76.18 332 *e*P **P 14 34 01.8 -0.2**
VYHS pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
VYHS Vyhne 76.18 332 *e*P **P 14 34 01.8 -0.2**
comp=Z,1.1nm,0.6s,mb4.0
KOLL Kolacno 76.24 332 *e*P **P 14 34 03.1 +0.7**
MLR Muntele Rosu 76.31 326 ⇓*i*P **P 14 34 03.8 +1.0**
MLR Muntele Rosu 76.31 326 ⇓P **P 14 34 03.8 +1.0**
PSZ Piszkesteto 76.34 331 ⇓*i*P **P 14 34 03.6 +0.6**
PSZ Piszkesteto 76.34 331 ⇓P **P 14 34 03.6 +0.6**
MOX Moxa 76.35 337 *e*P **P 14 34 02.8 -0.1**
comp=Z,12nm,1.4s,mb4.6
DRGR 76.37 328 ⇓*i*P **P 14 34 03.2 +0.1**
DRGR 76.37 328 ⇓P **P 14 34 03.2 +0.1**
NKC Novy Kostel 76.50 336 *e*P **P 14 34 04.1 +0.3**
BUG Bochum--Univer 76.68 340 *e*P **P 14 34 04.7 -0.1**
comp=Z,71nm,2.2s,mb5.2
VOIR 76.69 326 ⇑*i*P **P 14 34 05.5 +0.6**
VOIR 76.69 326 ⇑P **P 14 34 05.5 +0.6**
MODS Modra-Piesok 76.78 332 *e*P **P 14 34 05.8 +0.4**
MALT Malatya 76.80 314 *e*P **P 14 34 06.5 +0.8**
MALT pmax pmax
comp=Z,11nm,1.2s,mb4.7
MALT Malatya 76.80 314 ⇓*i*P **P 14 34 07.0 +1.3**
MALT Malatya 76.80 314 *e*P **P 14 34 06.5 +0.8**
comp=Z,11nm,1.2s,mb4.7
ZST Bratislava 76.99 332 *e*P **P 14 34 06.7 +0.1**
comp=Z,8.0nm,0.4s,mb5.0
ROTZ Rotzenmuhle 76.99 336 *e*P **P 14 34 06.6 0.0**
comp=Z,6.0nm,0.8s,mb4.6
KHC Kasperske Hory 77.19 335 *e*P **P 14 34 08.2 +0.5**
KHC *ex* x 14 34 27.0
KHC AMS AMS 15 10 10.0
comp=Z,100nm,21.3s
GRA1 Grafenberg Arr 77.32 337 *e*P **P 14 34 08.8 +0.4**
comp=Z,21nm,0.9s,mb5.1
GRF Grafenberg Arr 77.32 337 *e*P **P 14 34 08.8 +0.4**
GRF pmax pmax
comp=Z,21nm,0.9s,mb5.1
GRF Grafenberg Arr 77.32 337 *e*P **P 14 34 08.8 +0.4**
GRF pmax pmax
comp=Z,21nm,0.9s,mb5.1
GRF Grafenberg Arr 77.32 337 *e*P **P 14 34 08.8 +0.4**
comp=Z,21nm,0.9s,mb5.1
WET Wettzell 77.37 335 *e*P **P 14 34 09.2 +0.5**
WET pmax pmax
comp=Z,13nm,1.0s,mb4.8
WET Wettzell 77.37 335 *e*P **P 14 34 09.2 +0.5**
comp=Z,13nm,1.0s,mb4.8
GEC2 GERESS Array S 77.41 335 *e*P **P 14 34 08.8 -0.2**
GEC2 pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
GEC2 GERESS Array S 77.41 335 *e*P **P 14 34 08.8 -0.2**
comp=Z,6.0nm,0.7s,mb4.6
GERES GERESS Array B 77.41 335 P **P 14 34 09.1 +0.2**
comp=Z,3.6nm,0.6s,mb4.5,baz=38,slow=6.8,SNR=25
GERES LR LR 15 11 10.7
comp=Z,121nm,19.8s,MS4.2,baz=280,slow=38
MIAR Mount Ida 77.42 52 *e*P **P 14 34 08.3 -1.0**
MIAR *e* pP 14 34 18.1 -3.1
MIAR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
MIAR Mount Ida 77.42 52 *e*P **P 14 34 08.3 -1.0**
comp=Z,6.2nm,0.9s,mb4.5
MIAR *e* pP 14 34 18.1 -3.0
TNS Taunus Mts 77.53 339 *e*P **P 14 34 09.9 +0.3**
TNS pmax pmax
comp=Z,11nm,0.8s,mb4.8
TNS Taunus Mts 77.53 339 *e*P **P 14 34 09.9 +0.3**
comp=Z,11nm,0.8s,mb4.8
CONA Conrad Observa 77.60 333 ⇓*i*P **P 14 34 10.8 +0.8**
comp=Z,7.4nm,0.6s,mb4.8
BR131 Keskin Array S 77.90 318 *e*P **P 14 34 12.3 +0.4**
comp=Z,5.2nm,0.8s,mb4.5
PKSM Moragy 78.25 331 ⇑*i*P **P 14 34 12.8 -0.9**
GIVF Givet 78.49 341 *e*P **P 14 34 14.6 -0.3**
BAIF Baives 78.66 341 *e*P **P 14 34 15.8 -0.1**
comp=Z,35nm,1.0s,mb4.9
BAIF Baives 78.66 341 *e*P **P 14 34 15.8 -0.1**
BAIF pmax pmax
comp=Z,18nm,1.0s,mb5.0
BAIF Baives 78.66 341 *e*P **P 14 34 15.8 -0.1**
comp=Z,18nm,1.0s,mb5.0
MIB Mutribah 78.70 302 *e*P **P 14 34 16.1 -0.3**
baz=303
MIB AMb AMB 14 34 16.7
comp=Z,36nm,0.7s,mb5.4,baz=303
SOKA Soboth 78.97 333 ⇑*i*P **P 14 34 17.8 +0.1**
comp=Z,12nm,0.8s,mb4.9
KBA Koelnbreinsper 79.11 334 ⇑*i*P **P 14 34 19.4 +1.0**
comp=Z,33nm,0.8s,mb5.3
KBA Koelnbreinsper 79.11 334 ⇑*i*P **P 14 34 19.4 +1.0**
KBA pmax pmax
comp=Z,33nm,0.8s,mb5.3
RST Umm Al-Ruwaisa 79.12 302 *e*P **P 14 34 18.2 -0.5**
baz=303
RST AMb AMB 14 34 19.1
comp=Z,1.0nm,1.4s,mb3.5,baz=303
NAY Al-Naaiem 79.18 302 *e*P **P 14 34 18.3 -0.8**
baz=302
NAY AMb AMB 14 34 19.8
comp=Z,14nm,1.1s,mb4.8,baz=302
RDF Al-Radifah 79.25 302 *e*P **P 14 34 18.8 -0.7**
baz=302
RDF AMb AMB 14 34 20.9
comp=Z,49nm,1.0s,mb5.4,baz=302
BFO Black Forest 79.32 338 *e*P **P 14 34 19.2 -0.3**
BFO pmax pmax
comp=Z,16nm,1.2s,mb4.8
BFO Black Forest 79.32 338 *e*P **P 14 34 19.2 -0.3**
comp=Z,16nm,1.2s,mb4.8
WTTA Wattenberg 79.43 335 ⇑*i*P **P 14 34 20.6 +0.5**
comp=Z,26nm,0.8s,mb5.2
WTTA Wattenberg 79.43 335 ⇑*i*P **P 14 34 20.6 +0.5**
WTTA pmax pmax
comp=Z,26nm,0.8s,mb5.2
MOTA Moosalm 79.50 336 ⇑*i*P **P 14 34 20.9 +0.4**
comp=Z,21nm,1.0s,mb5.0
MOTA Moosalm 79.50 336 ⇑*i*P **P 14 34 21.0 +0.5**
MOTA pmax pmax
comp=Z,21nm,1.0s,mb5.0
CDF Champ du Feu 79.50 339 *e*P **P 14 34 20.4 -0.1**
comp=Z,23nm,0.9s,mb4.8
CDF Champ du Feu 79.50 339 *e*P **P 14 34 20.4 -0.1**
CDF pmax pmax
comp=Z,12nm,0.9s,mb4.8
CDF Champ du Feu 79.50 339 *e*P **P 14 34 20.4 -0.1**
comp=Z,12nm,0.9s,mb4.8
ECH Echery 79.71 339 *e*P **P 14 34 21.0 -0.6**
DAVA Damuels 79.88 337 ⇓*i*P **P 14 34 23.0 +0.4**
comp=Z,14nm,0.9s,mb4.9
FETA Feichten 79.90 336 ⇑*i*P **P 14 34 23.3 +0.6**
comp=Z,10nm,1.1s,mb4.7
MEZF Maizieres J'vi 79.94 340 *e*P **P 14 34 23.0 +0.1**
comp=Z,54nm,1.1s,mb5.1
MEZF Maizieres J'vi 79.94 340 *e*P **P 14 34 23.0 +0.1**
comp=Z,54nm,1.1s,mb5.4
HAU Haudompre 80.11 339 *e*P **P 14 34 23.5 -0.3**
comp=Z,16nm,0.8s,mb4.7
HAU *e*MLR MLR
comp=Z,144nm,22.0s,MS4.0
HAU Haudompre 80.11 339 *e*P **P 14 34 23.5 -0.3**
HAU pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
HAU MLR MLR
comp=Z,140nm,22.0s,MS4.3
HAU Haudompre 80.11 339 *e*P **P 14 34 23.5 -0.3**
comp=Z,8.3nm,0.8s,mb4.7
HAU LR LR
comp=Z,140nm,22.0s,MS4.3
HINF Hinteralfeld 80.16 339 *e*P **P 14 34 23.5 -0.6**
comp=Z,22nm,1.0s,mb4.7
HINF Hinteralfeld 80.16 339 *e*P **P 14 34 23.5 -0.6**
HINF pmax pmax
comp=Z,11nm,1.0s,mb4.7
HINF Hinteralfeld 80.16 339 *e*P **P 14 34 23.5 -0.6**
comp=Z,11nm,1.0s,mb4.7
TUE Stuetta 80.78 337 *e*P **P 14 34 27.6 +0.2**
comp=Z,21nm,0.8s,mb5.1
STKA Stephens Creek 80.80 191 P **P 14 34 26.1 -1.3**
comp=Z,4.3nm,0.8s,mb4.3,baz=299,slow=21,SNR=4.4
FLN La Foliniere 80.84 344 *e*P **P 14 34 27.3 -0.4**
comp=Z,34nm,1.0s,mb4.9
FLN *e*MLR MLR
comp=Z,79nm,19.0s,MS3.8
FLN La Foliniere 80.84 344 *e*P **P 14 34 27.3 -0.4**
FLN pmax pmax
comp=Z,17nm,1.0s,mb4.9
FLN MLR MLR
comp=Z,80nm,19.0s,MS4.1
FLN La Foliniere 80.84 344 *e*P **P 14 34 27.3 -0.4**
comp=Z,17nm,1.0s,mb4.9
FLN LR LR
comp=Z,80nm,19.0s,MS4.1
LDF La Druitiere 80.94 343 *e*P **P 14 34 27.7 -0.5**
comp=Z,23nm,1.0s,mb4.7
LDF La Druitiere 80.94 343 *e*P **P 14 34 27.7 -0.5**
LDF pmax pmax
comp=Z,11nm,1.0s,mb4.7
LDF La Druitiere 80.94 343 *e*P **P 14 34 27.7 -0.5**
comp=Z,11nm,1.0s,mb4.8
GRR Gorron 81.27 344 *e*P **P 14 34 29.9 -0.1**
comp=Z,63nm,1.1s,mb5.2
GRR Gorron 81.27 344 *e*P **P 14 34 29.9 -0.1**
GRR pmax pmax
comp=Z,31nm,1.1s,mb5.2
GRR Gorron 81.27 344 *e*P **P 14 34 29.9 -0.1**
comp=Z,31nm,1.1s,mb5.2
LOR Lormes 81.37 340 *e*P **P 14 34 30.0 -0.6**
comp=Z,42nm,1.0s,mb5.0
LOR *e*MLR MLR
comp=Z,130nm,23.0s,MS3.9
LOR Lormes 81.37 340 *e*P **P 14 34 30.0 -0.6**
LOR pmax pmax
comp=Z,21nm,1.0s,mb5.0
LOR MLR MLR
comp=Z,130nm,23.0s,MS4.2
LOR Lormes 81.37 340 *e*P **P 14 34 30.0 -0.6**
comp=Z,21nm,1.0s,mb5.0
LOR LR LR
comp=Z,130nm,23.0s,MS4.2
CABF La Chapelle 81.47 339 *e*P **P 14 34 31.1 0.0**
comp=Z,32nm,1.2s,mb4.8
CABF La Chapelle 81.47 339 *e*P **P 14 34 31.1 0.0**
CABF pmax pmax
comp=Z,16nm,1.2s,mb4.8
CABF La Chapelle 81.47 339 *e*P **P 14 34 31.1 0.0**
comp=Z,16nm,1.2s,mb4.8
SSF Saint Saulge 81.65 341 *e*P **P 14 34 31.8 -0.2**
comp=Z,18nm,0.8s,mb4.7
SSF Saint Saulge 81.65 341 *e*P **P 14 34 31.8 -0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SSF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
SSF	Saint Saulge	81.65	341	*e*P	P	14 34 31.8	-0.2
	comp=Z,8.9nm,0.8s,mb4.8						
SGMF	Saint Gilles	81.70	345	*e*P	P	14 34 31.5	-0.8
	comp=Z,19nm,0.8s,mb4.7						
SGMF	Saint Gilles	81.70	345	*e*P	P	14 34 31.5	-0.8
SGMF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
SGMF	Saint Gilles	81.70	345	*e*P	P	14 34 31.5	-0.8
	comp=Z,9.3nm,0.8s,mb4.8						
ROSF	Rostrenen	81.75	345	*e*P	P	14 34 32.6	+0.1
	comp=Z,32nm,1.0s,mb4.9						
ROSF	Rostrenen	81.75	345	*e*P	P	14 34 32.6	+0.1
ROSF				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
ROSF	Rostrenen	81.75	345	*e*P	P	14 34 32.6	+0.1
	comp=Z,16nm,1.0s,mb4.9						
AVF	Avril sur Loir	81.94	341	*e*P	P	14 34 33.4	-0.1
	comp=Z,24nm,0.9s,mb4.8						
AVF	Avril sur Loir	81.94	341	*e*P	P	14 34 33.4	-0.1
AVF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
AVF	Avril sur Loir	81.94	341	*e*P	P	14 34 33.4	-0.1
	comp=Z,12nm,0.9s,mb4.8						
SMF	Signal de Mont	81.97	340	*e*P	P	14 34 33.6	-0.1
	comp=Z,56nm,1.2s,mb5.1						
SMF	Signal de Mont	81.97	340	*e*P	P	14 34 33.6	-0.1
SMF				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
SMF	Signal de Mont	81.97	340	*e*P	P	14 34 33.6	-0.1
	comp=Z,28nm,1.2s,mb5.1						
QUIF	Quistinic	82.14	345	*e*P	P	14 34 34.2	-0.4
	comp=Z,30nm,1.1s,mb4.8						
QUIF	Quistinic	82.14	345	*e*P	P	14 34 34.2	-0.4
QUIF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
QUIF	Quistinic	82.14	345	*e*P	P	14 34 34.2	-0.4
	comp=Z,15nm,1.1s,mb4.8						
BGF	Bois d’Agland	82.27	341	*e*P	P	14 34 35.3	0.0
LPL	La Plagne	82.34	338	*e*P	P	14 34 36.5	+0.8
	comp=Z,28nm,0.8s,mb4.9						
LPL	La Plagne	82.34	338	*e*P	P	14 34 36.5	+0.8
LPL				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
LPL	La Plagne	82.34	338	*e*P	P	14 34 36.5	+0.8
	comp=Z,14nm,0.8s,mb5.0						
LPG	La Plagne	82.35	338	*e*P	P	14 34 36.7	+1.0
	comp=Z,59nm,1.0s,mb5.2						
LPG	La Plagne	82.35	338	*e*P	P	14 34 36.7	+1.0
LPG				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
LPG	La Plagne	82.35	338	*e*P	P	14 34 36.7	+1.0
	comp=Z,30nm,1.0s,mb5.2						
ASF	Jabal al Asfar	82.44	311	P	P	14 34 36.4	0.0
	comp=Z,2.4nm,0.4s,mb4.5,baz=28,slow=0.7,SNR=5.9						
TCF	Toulx Ste Croi	82.66	341	*e*P	P	14 34 37.5	+0.1
	comp=Z,31nm,1.0s,mb5.0						
TCF	Toulx Ste Croi	82.66	341	*e*P	P	14 34 37.5	+0.1
TCF				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
TCF	Toulx Ste Croi	82.66	341	*e*P	P	14 34 37.5	+0.1
	comp=Z,16nm,1.0s,mb5.0						
MFF	Saint Martin d	82.85	343	*e*P	P	14 34 38.3	0.0
	comp=Z,54nm,1.2s,mb5.2						
MFF	Saint Martin d	82.85	343	*e*P	P	14 34 38.3	0.0
MFF				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
MFF	Saint Martin d	82.85	343	*e*P	P	14 34 38.3	0.0
	comp=Z,27nm,1.2s,mb5.2						
MBDF	Montbardon	83.07	338	*e*P	P	14 34 39.6	+0.1
	comp=Z,27nm,1.0s,mb4.9						
MBDF	Montbardon	83.07	338	*e*P	P	14 34 39.6	+0.1
MBDF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
MBDF	Montbardon	83.07	338	*e*P	P	14 34 39.6	+0.1
	comp=Z,13nm,1.0s,mb4.9						
SSB	Saint Sauveur	83.09	339	*e*P	P	14 34 39.9	+0.3
ORIF	Oris-en-Rattie	83.11	338	*e*P	P	14 34 40.4	+0.7
	comp=Z,37nm,1.0s,mb5.1						
ORIF				*e*MLR	MLR		
	comp=Z,107nm,22.0s,MS3.9						
ORIF	Oris-en-Rattie	83.11	338	*e*P	P	14 34 40.4	+0.7
ORIF				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
ORIF	Oris-en-Rattie	83.11	338	*e*P	P	14 34 40.4	+0.7
	comp=Z,19nm,1.0s,mb5.1						
VIVF	Saint-Julien-l	83.46	339	*e*P	P	14 34 41.9	+0.4
	comp=Z,47nm,1.1s,mb5.1						
VIVF	Saint-Julien-l	83.46	339	*e*P	P	14 34 41.9	+0.4
VIVF				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1						
VIVF	Saint-Julien-l	83.46	339	*e*P	P	14 34 41.9	+0.4
	comp=Z,24nm,1.1s,mb5.1						
SBF	Sospel	83.70	337	*e*P	P	14 34 42.5	-0.3
	comp=Z,85nm,1.1s,mb5.5						
SBF	Sospel	83.70	337	*e*P	P	14 34 42.5	-0.3
SBF				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.5						
SBF	Sospel	83.70	337	*e*P	P	14 34 42.5	-0.3
	comp=Z,43nm,1.1s,mb5.5						
RJF	Les Rejaudoux	83.75	341	*e*P	P	14 34 43.0	0.0
	comp=Z,27nm,1.1s,mb5.0						
RJF				*e*MLR	MLR		
	comp=Z,116nm,22.5s,MS3.9						
RJF	Les Rejaudoux	83.75	341	*e*P	P	14 34 43.0	0.0
RJF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.0						
RJF				MLR	MLR		
	comp=Z,120nm,22.5s,MS4.2						
RJF	Les Rejaudoux	83.75	341	*e*P	P	14 34 43.0	0.0
	comp=Z,14nm,1.1s,mb5.0						
RJF				LR	LR		
	comp=Z,120nm,22.5s,MS4.2						
CAF	Calviac	83.99	341	*e*P	P	14 34 44.7	+0.5
	comp=Z,43nm,1.2s,mb5.2						
CAF	Calviac	83.99	341	*e*P	P	14 34 44.7	+0.5
CAF				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.1						
CAF	Calviac	83.99	341	*e*P	P	14 34 44.7	+0.5
	comp=Z,21nm,1.2s,mb5.2						
SMRF	Simiane la Rot	84.07	338	*e*P	P	14 34 45.4	+0.8
	comp=Z,49nm,1.1s,mb5.2						
SMRF	Simiane la Rot	84.07	338	*e*P	P	14 34 45.4	+0.8
	comp=Z,49nm,1.1s,mb5.5						
FRF	La Foret Royal	84.19	337	*e*P	P	14 34 45.1	-0.1
LFF	La Frestale	84.26	342	*e*P	P	14 34 45.8	+0.2
LASF	Ste Croix	84.39	339	*e*P	P	14 34 48.0	+1.7
	comp=Z,73nm,1.4s,mb5.3						
LMR	La Mourre	84.44	337	*e*P	P	14 34 46.4	-0.1
	comp=Z,324nm,1.8s,mb5.9						
LMR	La Mourre	84.44	337	*e*P	P	14 34 46.4	-0.1
LMR				pmax	pmax		
	comp=Z,162nm,1.8s,mb5.8						
LMR	La Mourre	84.44	337	*e*P	P	14 34 46.4	-0.1
	comp=Z,162nm,1.8s,mb5.8						
PGF	Pioggiola	84.50	335	*e*P	P	14 34 46.4	-0.4
	comp=Z,39nm,1.0s,mb5.2						
PGF	Pioggiola	84.50	335	*e*P	P	14 34 46.4	-0.4
PGF				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
PGF	Pioggiola	84.50	335	*e*P	P	14 34 46.4	-0.4
	comp=Z,20nm,1.0s,mb5.2						
MTLF	Montolieu	85.47	340	*e*P	P	14 34 52.0	+0.3
	comp=Z,18nm,1.1s,mb4.8						
MTLF	Montolieu	85.47	340	*e*P	P	14 34 52.0	+0.3
MTLF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
MTLF	Montolieu	85.47	340	*e*P	P	14 34 52.0	+0.3
	comp=Z,9.3nm,1.1s,mb4.8						
ETSF	Etsaut	86.48	342	*e*P	P	14 34 57.0	+0.3
NWAO	Narrogin (SRO)	87.65	211	P	P	14 35 01.4	-0.8
	comp=Z,4.9nm,0.8s,mb4.8,baz=14,slow=7.8,SNR=6.6						
NWAO	Narrogin (SRO)	87.65	211	P	P	14 35 01.4	-0.8
ESDC	Sonseca Array	90.26	344	P	P	14 35 13.3	-1.4
	comp=Z,0.8nm,0.6s,mb4.2,baz=62,slow=6.4,SNR=3.8						
KEST	Kesra	90.70	332	P	P	14 35 15.0	-1.8
	comp=Z,3.3nm,0.9s,mb4.7,baz=224,slow=1.8,SNR=4.8						
TORD	Torodi Ar. Bea	114.18	331	PKP	PKiKP	14 40 52.2	-1.4
	comp=Z,0.5nm,0.9s,baz=1.5,slow=1.0,SNR=3.3						
BOSA	Boshof	136.68	278	PKP	PKPdf	14 41 34.1	-1.9
	comp=Z,2.5nm,0.8s,baz=279,slow=1.7,SNR=3.2						
CPUP	Villa Florida	146.69	60	PKPbc	PKPbc	14 41 54.3	-1.4
	comp=Z,2.9nm,0.6s,baz=331,slow=2.5,SNR=7.0						
PLCA	Paso Flores	147.25	94	PKPbc	PKPbc	14 41 56.5	-0.4
	comp=Z,9.8nm,0.9s,baz=273,slow=3.6,SNR=9.1						
PLCA	Paso Flores	147.25	94	PKPbc	PKPbc	14 41 56.5	-0.4
SNAA	Sanae	154.47	196	*e*PKPdf	PKPbc	14 42 11.2	-1.8
SNAA				*e*		14 42 27.1	
VNA2	Neumayer--Watz	155.90	194	*e*PKPdf	PKPdf	14 42 15.4	+8.8
VNA2				*e*		14 42 32.8	
VNA2				*e*		14 42 45.3	
VNA3	Neumayer Olymp	155.97	192	*e*PKPdf	PKPdf	14 42 15.2	+8.5
VNA3				*e*		14 42 33.4	
VNA1	Neumayer--Stat	156.28	194	*e*PKPdf	PKPab	14 42 35.2	-0.3

*NEIC **05** 14:57:44.6, 1686N×9400W, h159^{km}, MD4.2(MEX), After MEX.*

MEX 05 14:57:44.6±1.2**, 1685N×9400W, h158**^{km}±12^{km}**, MD4.2, Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGIG		0.84	95	*i* P	Pn	14 58 07.9	-1.0
TGIG				*i* S	Sn	14 58 25.3	-2.2
CMIG	Matias Romero	0.88	286	*i* P	Pn	14 58 08.2	-1.1
CMIG				*i* S	Sn	14 58 26.3	-1.7
TUIG	Tuzandepetl	1.24	341	*i* P	Pn	14 58 10.7	-1.6
TUIG				*i* S	Sn	14 58 30.5	-3.1
SCX	San Cristobal	1.31	95	*i* P	Pn	14 58 11.8	-1.1
SCX				*i* S	Sn	14 58 33.2	-1.3
CCIG	Comitan	1.87	107	*i* P	Pn	14 58 18.1	-0.7
CCIG				*i* S	Sn	14 58 43.2	-1.7
HUIG	Huatulco	2.30	242	*i* P	Pn	14 58 21.0	-2.7
HUIG				*i* S	Sn	14 58 52.7	-1.1
THIG		2.55	139	*i* P	Pn	14 58 24.9	-1.9
THIG				*i* S	Sn	14 58 57.9	-1.4
OXX	Oaxaca	2.62	275	*i* P	Pn	14 58 28.3	+0.7
OXX				*i* S	Sn	14 59 00.3	-0.5
VHO	Vista Hermosa	2.63	275	*e*P	Pn	14 58 27.6	-0.1
VHO				*i* S	Sn	14 58 59.3	-1.7
PNIG	Pinotepa	3.99	264	*i* P	Pn	14 58 42.9	-2.0
PNIG				*i* S	Sn	14 59 29.1	-2.7
PPM	Popocatepetl	4.93	297	*i* P	Pn	14 58 58.9	+1.7
PPM				*i* S	Sn	14 59 43.2	-11
PLIG	Platanillo	5.47	287	*i* P	Pn	14 59 05.0	+0.6
TEIG	Tepich	6.38	57	*e*Pn	Pn	14 59 12.4	-4.0

*BJI **05** 14:59:10.0, 4330N×12680W, h10^{km}, mB4.9, mb4.4, Ms4.7, Msz4.5*
*IDC **05** 14:59:10.4±1.1, 4329N×12691W, h0^{km}, mb3.8/9, mb1 3.9/15, mb1mx3.8/28, mbtmp3.7/15, ML3.7/6, MS3.8/7, Ms1 3.8/7, ms1mx3.4/33, Error ellipse: s-maj=29.6km s-min=10.0km az=40.0*
*ISCJB **05** 14:59:12.0±2.0, 4342N±004×12680W±006, h14^{km}±12^{km}, mb4.1/15, MS3.8/7, Error ellipse: s-maj=8.6km s-min=5.5km az=147.5*
*NEIC **05** 14:59:12.3±0.5, 4331N×12678W, h10^{km}, mb4.3/9, Error ellipse: s-maj=7.9km s-min=4.9km az=210.0*

ISC 05 14:59:15.7±2.1**, 4343N**±004×**12681W**±008**, h28**^{km}±15^{km}**, n91,** σ**1.13**/89**, mb4.1**/15**, MS3.8**/7**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	1.90	106	*e*Pn	Pn	14 59 41.8	-4.4
RNO	Roman Nose	2.28	77	P	Pn	14 59 49.1	-2.4
MPOR	Mary’s Peak	2.59	64	P	Pn	14 59 54.3	-1.4
DBO	Dodson Butte	2.62	96	P	Pn	14 59 53.9	-2.2
HSO	Harness Mounta	2.71	87	P	Pn	14 59 56.2	-1.2
COR	Corvallis	2.79	64	*e*Pn	Pn	14 59 57.4	-1.0
HEBO	Mount Hebo	2.83	50	*e*Pn	Pn	14 59 58.2	-0.8
HUMO	Hull Mountain	2.94	105	*e*Pn	Pn	14 59 57.0	-3.5
HBO	Huckleberry Mo	3.29	81	P	Pn	15 00 04.1	-1.2
IRO	Indian Ridge	3.35	79	P	Pn	15 00 04.9	-1.3
SSOR	Sweet Springs	3.44	64	P	Pn	15 00 07.2	-0.2
YBH	Yreka Blue Hor	3.47	118	Pn	Pn	15 00 05.7	-2.1
	1.9nm,0.3s,baz=308,slow=9.5,SNR=22						
YBH				Sn	Sn	15 00 48.5	+0.6
	0.9nm,0.3s,baz=286,slow=19,SNR=3.2						
YBH	Yreka Blue Hor	3.47	118	*e*Pn	Pn	15 00 05.5	-2.3
BUOR	Burton Butte	3.55	107	P	Pn	15 00 07.3	-1.6
NLO	Nicolai Mounta	3.58	41	P	Pn	15 00 09.4	+0.1
HUOR	Husband	3.66	77	P	Pn	15 00 09.8	-0.6
BMW	Boistfort Moun	3.97	39	*e*Pn	Pn	15 00 14.3	-0.3
TDH	Tom, Dick, Har	4.05	61	P	Pn	15 00 15.9	+0.1
VBEM	Beaver Butte	4.09	65	P	Pn	15 00 16.9	+0.6
LVP	Lakeview Peak	4.10	48	P	Pn	15 00 16.6	+0.2
VFP	Flag Point	4.28	62	P	Pn	15 00 19.0	+0.1
NLWA	Neilton Lookou	4.47	27	*e*Pn	Pn	15 00 20.8	-0.8
NLWA				*e*Sn	Sn	15 01 11.7	-0.9
LON	Longmire	4.86	45	*e*Pn	Pn	15 00 27.0	+0.1
MOD	Modoc	5.04	105	*e*Pn	Pn	15 00 33.1	+3.8
OHCM	Honcut	5.72	134	*e*Pn	Pn	15 00 39.6	+0.8
PGC	Sidney	5.72	23	*e*Pn	Pn	15 00 37.7	-1.1
	32nm,0.5s						
JCW	Jim Creek	5.86	34	*e*Pn	Pn	15 00 41.5	+0.9
RSW	Rattlesnake Hi	5.92	57	*e*Pn	Pn	15 00 41.8	+0.3
HAWA	Hanford	5.96	58	*e*Pn	Pn	15 00 43.1	+1.1
	11nm,0.5s						
WVOR	Wild Horse Val	6.08	97	*e*Pn	Pn	15 00 40.8	-2.9
	6.1nm,0.8s						
ETW	Entiat	6.18	45	*e*Pn	Pn	15 00 45.5	+0.6
RPW	Rockport	6.23	34	*e*Pn	Pn	15 00 46.3	+0.6
LNOR	Lincton Mounta	6.55	65	*e*Pn	Pn	15 00 49.6	-0.5
OD2	Odessa Site #2	6.94	52	Pn	Pn	15 00 53.2	-2.3
BMO	Blue Mountains	6.99	75	*e*Pn	Pn	15 00 54.9	-1.1
	8.9nm,0.8s						
CMB	Columbia Colle	7.27	136	*e*Pn	Pn	15 00 58.4	-1.6
	20nm,1.1s						
NVAR	Mina Array Bea	8.15	125	Pn	Pn	15 01 11.6	-0.4
	0.2nm,0.3s,baz=289,slow=14,SNR=4.1						
NEW	Newport	8.31	51	*e*Pn	Pn	15 01 15.0	+0.7
	27nm,1.3s						
BBB	Bella Bella	8.81	355	Pn	Pn	15 01 22.1	+1.1
	1.1nm,0.3s,baz=230,slow=12,SNR=5.5						
ELK	Elko	9.01	103	Pn	Pn	15 01 25.4	+1.5
	0.1nm,0.3s,baz=290,slow=14,SNR=3.8						
ELK	Elko	9.01	103	Pn	Pn	15 01 25.4	+1.5
HLID	Hailey	9.02	85	Pn	Pn	15 01 25.4	+1.4
	2.3nm,0.7s						
MSO	Missoula	9.71	65	*e*Pn	Pn	15 01 34.4	+0.9
	6.0nm,1.0s						
ISA	Isabella	10.07	138	*e*Pn	Pn	15 01 38.1	-0.3
	28nm,1.4s						
MCMT	McKenzie Canyo	10.14	77	Pn	Pn	15 01 41.0	+1.7
CHMT	Chamberlain Mo	10.19	65	*e*Pn	Pn	15 01 40.4	+0.5
DLMT	Dillon	10.36	74	*e*Pn	Pn	15 01 42.7	+0.4
	6.9nm,0.9s						
WALA	Waterton Lakes	10.56	53	*e*Pn	Pn	15 01 44.4	-0.6
	10nm,1.0s						
BOZ	Bozeman (W)	11.06	73	*e*Pn	Pn	15 01 51.8	-0.2
	6.2nm,1.1s						
RRI2	Red Ridge	11.28	85	*e*Pn	Pn	15 01 55.0	+0.1
	4.9nm,0.9s						
IMW	Indian Meadow	11.51	82	P	Pn	15 01 59.8	+1.7
	7.0nm,1.4s						
TPAW	Teton Pass	11.53	84	*e*Pn	Pn	15 01 59.7	+1.4
	7.2nm,0.9s						
LOHW	Long Hollow	11.77	84	*e*P	Pn	15 02 02.6	+1.0
	3.4nm,0.9s						
MSU	Marysvale	12.10	109	*e*P	Pn	15 02 08.3	+2.2
GCMT	Greycliff	12.45	73	*e*P	Pn	15 02 12.3	+1.4
PDAR	Pinedale Array	12.63	87	Pn	Pn	15 02 16.2	+2.8
	0.1nm,0.3s,baz=283,slow=13,SNR=6.7						
PFO	Pinyon Flat Ob	12.71	137	LR	LR	15 06 56.1	
	comp=Z,566nm,19.7s,baz=314,slow=37						
EGMT	Eagleton	12.77	63	*e*P	Pn	15 02 13.1	-2.1
	23nm,1.3s						
ISCO	Idaho Springs	16.26	96	*e*P	Pn	15 03 04.6	+2.6
	5.8nm,1.0s						
SDCO	Great Sand Dun	17.14	102	*e*P	Pn	15 03 13.4	+0.3
	5.9nm,1.0s						
ANMO	Albuquerque	17.87	111	P	Pn	15 03 22.4	+0.3
	0.2nm,0.3s,baz=314,slow=9.5,SNR=4.8						
ANMO	Albuquerque	17.87	111	*e*P	Pn	15 03 23.7	+1.5
	7.5nm,1.1s						
LENM	Lemitar	17.98	114	P	Pn	15 03 27.1	+3.6
YKA	Yellowknife Ar	20.40	16	P	P	15 03 50.6	+0.5
	3.1nm,0.8s,baz=204,slow=11,SNR=5.3						
YKA				LR	LR	15 12 21.9	
	comp=Z,126nm,18.0s,MS3.3,baz=215,slow=38						
ECSD	EROS,Sioux Fal	21.83	79	*e*P	P	15 04 06.6	+1.0
	9.1nm,1.1s,mb4.1						
DAWY	Dawson	21.89	345	*e*P	P	15 04 06.5	+0.4
AGMN	Agassiz Refuge	22.01	66	*e*P	P	15 04 08.7	+1.1
	15nm,1.0s,mb4.4						
ULM	Lac du Bonnet	22.12	61	P	P	15 04 09.2	+0.5
	8.0nm,1.0s,mb4.1,baz=270,slow=11,SNR=8.1						
ULM				LR	LR	15 13 13.7	
	comp=Z,201nm,19.8s,MS3.5,baz=237,slow=38						
SLKM	Skilak Lake	22.17	329	*e*P	P	15 04 12.4	+3.3
TXAR	Lajitas Array	23.25	120	P	P	15 04 20.4	-0.4
	0.9nm,0.8s,mb3.3,baz=289,slow=7.7,SNR=9.4						
WMOK	Wichita Mounta	23.34	102	*e*P	P	15 04 22.6	+0.9
	22nm,1.2s,mb4.5						
LPIG	La Paz	23.58	140	LR	LR	15 12 49.2	
	comp=Z,258nm,19.2s,MS3.7,baz=297,slow=35						
PPLA	Purkeypile	24.44	332	*e*P	P	15 04 32.5	+0.9
	26nm,0.8s,mb4.7						
CHUM	Lake Minchumin	25.14	333	*e*P	P	15 04 38.6	+0.6
	13nm,1.0s,mb4.4						
TTA	Tatalina	25.83	329	*e*P	P	15 04 44.6	+0.3
	36nm,1.4s,mb4.7						
MIV	Mineville/With	37.93	70	*e*P	P	15 06 29.8	-0.7
ARCES	ARCESS Array B	65.53	10	P	P	15 09 55.1	-0.8
	0.8nm,0.7s,mb3.8,baz=320,slow=8.3,SNR=4.5						
NOA	NORSAR Array B	70.44	20	P	P	15 10 28.0	+1.1
	baz=315,slow=4.9						
CN2	Changchun	71.84	313	*e*P	P	15 10 35.3	-0.4
SONM	Songino Array	77.75	326	P	P	15 11 10.4	+0.6
	0.6nm,0.7s,mb3.6,baz=4.1,slow=2.0,SNR=3.9						
SONM				LR	LR	15 47 60.0	
	comp=Z,67nm,18.9s,MS4.0,baz=244,slow=38						
ZALV	Zalesovo Beam	79.29	342	P	P	15 11 17.4	-0.7
	0.6nm,0.6s,mb3.7,baz=46,slow=8.3,SNR=3.1						
ZALV				LR	LR	15 46 25.7	
	comp=Z,52nm,19.3s,MS3.9,baz=52,slow=36						
LPAZ	La Paz	80.05	124	P	P	15 11 23.0	+0.3
	1.3nm,0.8s,mb3.9,baz=315,slow=6.1,SNR=3.6						
HHC	Hu-ho-hao-te	81.00	319	*e*P	P	15 11 25.7	-1.9
HHC				S	S	15 21 32.2	-2.6
HHC				AMB	AMB		
	comp=Z,113nm,6.8s						
BVAR	Borovoye Array	82.79	350	P	P	15 11 36.3	-0.6
	comp=Z,0.8nm,0.7s,mb3.9,baz=21,slow=5.1,SNR=4.0						
KURK	Kurchatov	83.66	344	P	P	15 11 41.8	+0.4
	comp=Z,0.4nm,0.2s,mb4.1,baz=17,slow=4.4,SNR=2.9						
AKASG	Malin Array Be	83.96	15	P	P	15 11 41.4	-1.5
	comp=Z,0.2nm,0.3s,mb3.7,baz=321,slow=7.2,SNR=2.9						
MKAR	Makanchi Array	86.54	340	LR	LR	15 50 47.4	
	comp=Z,57nm,20.9s,MS4.0,baz=353,slow=36						
LZH	Lanzhou	88.42	321	*e*P	P	15 12 05.3	+0.2
LZH				AP	pP	15 12 10.2	-3.9
LZH				XP	sP	15 12 12.5	-4.9
LZH				*e*PP	PP	15 15 35.1	+2.8
LZH				AMB	AMB		
	comp=Z,83nm,5.0s						
LZH				LR	LR		
	comp=E,137nm,17.2s						
LZH				LR	LR		
	comp=Z,192nm,19.5s,MS4.5						
CD2	Chengdu	92.73	318	*e*P	P	15 12 24.8	-0.5
CD2				AP	pP	15 12 29.6	-4.7
CD2				XP	sP	15 12 32.2	-5.3
CD2				AMB	AMB		
	comp=Z,20nm,8.4s						
GYA	Guiyang	94.89	314	P	P	15 12 34.8	-0.5
LSZ	Lusaka	144.75	45	*e*PKPdf	PKPdf	15 18 49.6	-0.4

IDC 05 14:59:48.9±1.4**, 2240S×17987E, h0**^{km}**, mb3.9**/5**, mb1 4.2**/6**, mb1mx3.9**/16**, mbtmp3.9**/6**, ML3.9**/1**, Error ellipse: s-maj=60.0km s-min=26.3km az=155.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	15.99	188	Pn	Pn	15 03 36.3	+1.2
	0.5nm,0.3s,baz=8.1,slow=7.1,SNR=4.4						
STKA	Stephens Creek	35.19	246	P	P	15 06 43.4	-1.4
	0.8nm,0.4s,baz=104,slow=12,SNR=5.0						
ASAR	Alice Springs	42.18	259	P	P	15 07 43.2	-0.4
	0.2nm,0.3s,baz=91,slow=9.3,SNR=14						
WRA	Warramunga Arr	42.41	265	P	P	15 07 46.5	+1.0
	0.7nm,0.3s,baz=99,slow=7.1,SNR=49						
TXAR	Lajitas Array	89.74	58	P	P	15 12 48.6	-0.8
	0.2nm,0.6s,baz=210,slow=7.2,SNR=4.2						
PDAR	Pinedale Array	91.70	44	P	P	15 12 59.5	+1.4
	0.4nm,0.3s,baz=222,slow=7.3,SNR=3.7						

*IDC **05** 15:25:46.0±2.3, 1168S×16542E, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.9/17, mbtmp4.0/5, ML4.7/1, MS3.4/2, Ms1 3.4/2, ms1mx3.1/21, Error ellipse: s-maj=49.3km s-min=36.9km az=126.0*
*ISCJB **05** 15:25:49.1±5.5, 118S±02×1653E±02, h29^{km}±38^{km}, mb4.0/4, MS3.2/2, Error ellipse: s-maj=37.0km s-min=14.9km az=44.6*
*NEIC **05** 15:25:51.4±2.0, 1174S×16539E, h36^{km}±15^{km}, mb4.2/1, Error ellipse: s-maj=27.9km s-min=13.7km az=59.0*

ISC 05 15:25:51.8±2.6**, 118S**±02×**1654E**±02**, h36**^{km}±19^{km}**, n10,** σ**0.63**/10**, mb4.0**/4**, MS3.2**/2**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.79	293	Pn	Pn	15 27 15.8	+0.5
	20nm,0.3s,baz=139,slow=5.1,SNR=12						
HNR				Sn	Sn	15 28 21.8	+1.3
	8.2nm,0.3s,baz=27,slow=23,SNR=6.1						
HNR	Honiara	5.79	293	*e*Pn	Pn	15 27 15.3	0.0
HNR				Sn	Sn	15 28 18.5	-2.1
DZM	Mont Dzumac	10.31	174	*e*Pn	Pn	15 28 17.2	-0.1
CTA	Charters Tower	20.14	243	LR	LR	15 36 57.2	
	comp=Z,109nm,18.2s,MS3.2,baz=239,slow=33						
AFI	Afiamalu	22.40	98	LR	LR	15 36 41.3	
	comp=Z,101nm,20.7s,MS3.2,baz=202,slow=29						
WRAB	Tennant Creek	30.87	251	*e*P	P	15 32 05.5	+0.5
	5.0nm,1.2s,mb4.2						
WRA	Warramunga Arr	30.89	251	P	P	15 32 05.2	+0.1
	1.1nm,0.9s,mb3.7,baz=80,slow=9.1,SNR=18						
ASAR	Alice Springs	32.14	244	P	P	15 32 15.7	-0.4
	1.0nm,0.8s,mb3.7,baz=67,slow=9.3,SNR=10						
SONM	Songino Array	79.01	324	P	P	15 37 52.0	0.0
	0.4nm,0.8s,baz=134,slow=4.2,SNR=3.1						
MKAR	Makanchi Array	93.77	317	P	P	15 39 04.8	-0.2
	0.3nm,0.3s,mb4.2,baz=106,slow=5.2,SNR=2.9						

IDC 05 15:38:54.4±2.1**, 229N×12641E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/15**, mbtmp3.5**/3**, Error ellipse: s-maj=177.1km s-min=26.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.43	161	P	P	15 44 04.2	-1.3
	0.5nm,0.5s,baz=339,slow=12,SNR=16						
ASAR	Alice Springs	26.81	165	P	P	15 44 38.4	+1.9
	0.2nm,0.2s,baz=355,slow=9.7,SNR=6.9						
MKAR	Makanchi Array	58.55	326	P	P	15 48 52.3	-0.5
	0.6nm,0.4s,baz=112,slow=6.4,SNR=4.4						

NEIC 05 15:44:39.2, 5133N×17932W, h68^{km}**, ML4.0**(PMR)**, ML4.2**(AEIC)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.87	274	P	Pn	15 44 56.3	+0.4
AMKA				S	Sn	15 45 09.5	+1.2
FX1	Attu Island--F	4.89	292	P	Pn	15 45 50.3	+0.3
SPIA	Saint Paul Isl	7.91	39	P	Pn	15 46 32.2	+1.0
UNV	Unalaska Valle	8.20	67	P	Pn	15 46 35.9	+0.6
SVW2	Sparrevohn	16.34	44	*e*P	Pn	15 48 24.7	+0.9
SLKM	Skilak Lake	18.57	49	*e*P	Pn	15 48 51.6	+0.4
SEW	Seward	18.83	51	*e*P	Pn	15 48 52.9	-1.4

IDC 05 15:48:42.0±59.0**, 1720S×17783E, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.7**/15**, mbtmp3.8**/3**, Error ellipse: s-maj=1058.0km s-min=144.8km az=76.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.87	239	P	P	15 55 44.4	+0.6
	0.7nm,0.4s,baz=84,slow=7.4,SNR=4.1						
WRA	Warramunga Arr	41.23	259	P	P	15 56 28.6	-0.4
	0.2nm,0.3s,baz=94,slow=7.9,SNR=16						
ASAR	Alice Springs	41.54	254	P	P	15 56 31.2	-0.2
	1.4nm,0.5s,baz=89,slow=7.9,SNR=57						

*IDC **05** 15:58:58.2±0.9, 2823N×5676E, h0^{km}, mb4.1/12, mb1 4.1/14, mb1mx4.0/27, mbtmp4.0/14, ML3.7/2, MS3.0/4, Ms1 3.0/4, ms1mx2.7/31, Error ellipse: s-maj=23.5km s-min=17.4km az=173.0*
*ISCJB **05** 15:58:59.5±0.3, 2836N±003×5678E±004, h10^{km}, mb4.1/18, MS3.1/2, Error ellipse: s-maj=5.5km s-min=3.9km az=15.8*
*CSEM **05** 15:59:00.0±0.1, 2847N×5675E, h16^{km}, mb4.5/6, Ms3.7, Error ellipse: s-maj=2.7km s-min=2.3km az=147.0*
*THR **05** 15:59:01.4±0.7, 2842N×5663E, h14^{km}±6^{km}, ML3.7*
*NEIC **05** 15:59:01.5, 2842N×5663E, h14^{km}, mb4.2/10, ML3.7(THR), After THR.*
*TEH **05** 15:59:13.8, 2854N×5634E, h16^{km}, ML3.8*
ISC 05 15:59:00.9±0.3, **2833N**±003×**5685E**±004, **h10**^{km}, **n94**, σ**1^{s}29**/104, **mb4.1**/18, **MS3.1**/2, **1C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**1.10**	**213**	*e*Pg	**Pg**	**15 59 21.9**	**-0.3**
BNDS				*e*Sg	**Sg**	**15 59 36.9**	**+0.4**
BNDS				AML	AML	15 59 42.0	
	comp=N,1μm,0.5s						
BNDS	**Bandar-Abbas**	**1.10**	**213**	*e*Pg	**Pg**	**15 59 22.0**	**-0.2**
BNDS				*e*Sg	**Sg**	**15 59 36.9**	**+0.4**
	SNR=90						
BNDS	**Bandar-Abbas**	**1.10**	**213**	*e*Pg	**Pg**	**15 59 22.0**	**-0.2**
BNDS				*e*Sg	**Sg**	**15 59 36.0**	**-0.5**
KRBR	**Kerman**	**1.65**	**357**	*e*Pg	**Pn**	**15 59 30.0**	**0.0**
KRBR				*e*Sg	**Sn**	**15 59 51.5**	**+0.2**
KRBR				AML	AML	16 00 00.6	
	comp=N,1μm,0.4s						
KRBR				AML	AML	16 00 02.4	
	comp=E,1μm,0.5s						
KRBR	**Kerman**	**1.65**	**357**	*e*Pg	**Pn**	**15 59 30.0**	**0.0**
KRBR				*e*Sg	**Sn**	**15 59 51.0**	**-0.2**
BANOM	**Banah**	**2.45**	**192**	⇑P	**Pn**	**15 59 42.2**	**+1.3**
	SNR=38						
BANOM	**Banah**	**2.45**	**192**	Pn	**Pn**	**15 59 41.0**	**+0.1**
	SNR=38						
BANOM	**Banah**	**2.45**	**192**	P	**Pn**	**15 59 42.2**	**+1.3**
	SNR=38						
GHIR	**Ghir-Karzin**	**3.41**	**270**	*e*Pn	**Pn**	**15 59 53.9**	**-0.3**
GHIR				AML	AML	16 01 01.4	
	comp=E,161nm,0.6s						
GHIR				AML	AML	16 01 16.2	
	comp=N,147nm,0.6s						
GHIR	**Ghir-Karzin**	**3.41**	**270**	*e*Pn	**Pn**	**15 59 53.0**	**-1.2**
IBAF	**Bafgh**	**3.44**	**341**	*e*Pn	**Pn**	**15 59 57.7**	**+3.2**
IBAF				*e*Sn	**Sn**	**16 00 34.2**	**-1.1**
IBAF	**Bafgh**	**3.44**	**341**	*e*Pn	**Pn**	**15 59 57.7**	**+3.2**
IBAF				*e*Sn	**Sn**	**16 00 34.2**	**-1.1**
IBAF				*e*		16 01 02.7	
ISRV	**Sarvestan**	**3.44**	**289**	*e*Pn	**Pn**	**15 59 56.4**	**+1.8**
ISRV				*e*		16 01 13.3	
NAZ	**Nazwa, Dubai**	**3.49**	**198**	Pn	**Pn**	**15 59 57.0**	**+1.7**
	SNR=8.7						
IMEH	**Mehriz**	**3.62**	**328**	*e*Pn	**Pn**	**15 59 59.0**	**+2.0**
IMEH				*e*		16 00 14.9	
IPAR	**Pars**	**3.66**	**295**	*e*Pn	**Pn**	**15 59 58.8**	**+1.3**
IPAR				*e*Sn	**Sn**	**16 00 35.8**	**-4.9**
IPAR	**Pars**	**3.66**	**295**	*e*Pn	**Pn**	**16 00 00.5**	**+3.0**
IPAR				*e*Sn	**Sn**	**16 00 35.8**	**-4.9**
IPAR				*e*		16 01 13.0	
ZHSF	**Zahedan**	**3.67**	**69**	*e*Pn	**Pn**	**16 00 02.2**	**+4.5**
ZHSF	**Zahedan**	**3.67**	**69**	*e*Pn	**Pn**	**16 00 02.0**	**+4.3**
ASHO	**Ashiyiah**	**3.70**	**191**	⇓P	**Pn**	**15 59 58.9**	**+0.7**
	SNR=16						
ASHO	**Ashiyiah**	**3.70**	**191**	Pn	**Pn**	**15 59 59.0**	**+0.8**
	SNR=13						
IMOK	**Mouk**	**3.71**	**282**	*e*Pn	**Pn**	**16 00 00.0**	**+1.8**
IMOK				*e*Sn	**Sn**	**16 00 36.5**	**-5.4**
IMOK	**Mouk**	**3.71**	**282**	*e*Pn	**Pn**	**16 00 00.0**	**+1.8**
IMOK				*e*Sn	**Sn**	**16 00 36.5**	**-5.4**
IMOK				*e*		16 01 21.6	
FAQ	**Al Faqa, Dubai**	**3.74**	**198**	Pn	**Pn**	**15 59 59.6**	**+0.8**
	SNR=21						
ASUD	**Al Ashush, Dub**	**3.93**	**201**	Pn	**Pn**	**16 00 02.6**	**+1.2**
	SNR=24						
ICHK	**Chekchek**	**4.44**	**332**	*e*Pn	**Pn**	**16 00 10.7**	**+2.4**
ICHK				*e*		16 01 44.1	
IKOO	**Kooshah**	**4.49**	**24**	*e*Pn	**Pn**	**16 00 13.2**	**+4.3**
IKOO				*e*		16 01 34.7	
ITEG	**Tejag**	**4.84**	**19**	*e*Pn	**Pn**	**16 00 21.6**	**+7.8**
ITEG				*e*		16 01 44.4	
IDAH	**Dahanechah**	**5.11**	**30**	*e*Pn	**Pn**	**16 00 26.5**	**+9.0**
IDAH				*e*		16 02 01.3	
IMON	**Monand**	**5.42**	**26**	*e*Pn	**Pn**	**16 00 29.6**	**+7.8**
IMON				*e*		16 02 06.0	
IGAR	**Gharneh**	**5.81**	**316**	*e*Pn	**Pn**	**16 00 29.0**	**+1.8**
IGAR				*e*		16 01 39.1	
IZEF	**Zefreh**	**5.99**	**321**	*e*Pn	**Pn**	**16 00 31.1**	**+1.4**
IZEF				*e*		16 00 42.2	
IPIR	**Pirpir**	**6.73**	**312**	*e*Pn	**Pn**	**16 00 41.2**	**+1.4**
IPIR				*e*		16 02 00.6	
IKLH	**Kolahrood**	**6.73**	**319**	*e*Pn	**Pn**	**16 00 41.6**	**+1.8**
IKLH				*e*		16 03 08.8	
ISFB	**Sefidab**	**7.18**	**328**	*e*Pn	**Pn**	**16 00 47.6**	**+1.6**
ISFB				*e*		16 01 18.1	
IVRN	**Varamin**	**7.95**	**328**	*e*Pn	**Pn**	**16 00 59.0**	**+2.4**
IVRN				*e*		16 01 05.5	
KBD	**Kabd**	**8.09**	**278**	*e*P	**Pn**	**16 00 57.5**	**-0.9**
	baz=277						
KBD				AML	AML	16 02 28.1	
	comp=Z,9.0nm,0.3s,baz=277						
UMR	**Umm Al-Rimmam**	**8.10**	**281**	*e*P	**Pn**	**16 00 58.6**	**0.0**
	baz=280						
UMR				AML	AML	16 02 24.9	
	comp=Z,10.0nm,0.4s,baz=280						
RDF	**Al-Radifah**	**8.20**	**276**	*e*P	**Pn**	**16 01 00.2**	**+0.2**
RDF	**Al-Radifah**	**8.20**	**276**	*e*P	**Pn**	**16 01 00.2**	**+0.3**
	baz=275						
RDF				AML	AML	16 02 26.5	
	comp=Z,10.0nm,0.6s,baz=275						
IPAY	**Payeh**	**8.30**	**12**	*e*Pn	**Pn**	**16 01 07.8**	**+6.5**
IPAY				*e*		16 03 41.8	
IMYA	**Miami**	**8.45**	**18**	*e*Pn	**Pn**	**16 01 10.0**	**+6.6**
IMYA				*e*		16 03 44.3	
MIB	**Mutribah**	**8.46**	**282**	*e*P	**Pn**	**16 01 03.2**	**-0.3**
NAY	**Al-Naaiem**	**8.48**	**278**	*e*P	**Pn**	**16 01 03.6**	**-0.3**
IKRD	**Kardeh**	**8.54**	**9**	*e*Pn	**Pn**	**16 01 13.3**	**+8.7**
ASF	**Jabal al Asfar**	**17.66**	**287**	P	**Pn**	**16 03 05.7**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=84,slow=9.2,SNR=1.8						
MALT	**Malatya**	**18.31**	**308**	*e*P	**Pn**	**16 03 13.9**	**-1.1**
	comp=Z,4.7nm,0.9s						
MALT	**Malatya**	**18.31**	**308**	*e*P	**Pn**	**16 03 13.9**	**-1.1**
	comp=Z,4.7nm,0.9s						
MMAI	**Mount Meron Ar**	**19.02**	**290**	P	**Pn**	**16 03 22.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=99,slow=15,SNR=2.3						
EIL	**Elat**	**19.20**	**279**	LR	LR	16 11 44.0	
	comp=Z,65nm,21.4s,baz=107,slow=40						
AML	**Almayashu**	**19.42**	**40**	P	**Pn**	**16 03 30.3**	**+1.9**
	SNR=6.4						
AML	**Almayashu**	**19.42**	**40**	*e*P	**Pn**	**16 03 29.1**	**+0.7**
	comp=Z,5.6nm,0.8s						
EKS2	**Erkin-Say**	**19.81**	**39**	*e*P	**Pn**	**16 03 33.5**	**+0.5**
	comp=Z,5.9nm,0.9s						
EKS2	**Erkin-Say**	**19.81**	**39**	*e*P	**Pn**	**16 03 33.5**	**+0.5**
	comp=Z,5.9nm,0.9s						
UCH	**Uchtor**	**19.95**	**41**	*e*P	**Pn**	**16 03 35.2**	**+0.5**
	comp=Z,3.4nm,0.9s						
UCH	**Uchtor**	**19.95**	**41**	*e*P	**Pn**	**16 03 35.1**	**+0.4**
	comp=Z,3.4nm,0.9s						
AKTK	**Aktyubinsk**	**22.09**	**2**	P	**P**	**16 03 56.5**	**+0.4**
AKTK	**Aktyubinsk**	**22.09**	**2**	P	**P**	**16 03 56.5**	**+0.4**
AKTO	**Aktyubinsk**	**22.09**	**2**	P	**P**	**16 03 56.5**	**+0.4**
	comp=Z,3.2nm,0.8s,mb3.8,baz=179,slow=12,SNR=9.5						
BVAR	**Borovoye Array**	**26.63**	**18**	P	**P**	**16 04 38.8**	**-0.7**
	comp=Z,2.3nm,0.8s,mb3.8,baz=215,slow=13,SNR=11						
BVAR				LR	LR	16 14 47.5	
	comp=Z,16nm,20.8s,baz=20,slow=36						
BVAR	**Borovoye Array**	**26.63**	**18**	P	**P**	**16 04 38.8**	**-0.7**
BVAR				LR	LR	16 14 47.5	
MKAR	**Makanchi Array**	**27.13**	**40**	P	**P**	**16 04 44.8**	**+0.8**
	comp=Z,1.5nm,0.6s,mb3.7,baz=226,slow=8.1,SNR=10						
MKAR				LR	LR	16 16 56.9	
	comp=Z,42nm,18.8s,MS3.0,baz=4.5,slow=40						
KURK	**Kurchatov**	**27.77**	**30**	P	**P**	**16 04 49.0**	**-0.7**
	comp=Z,1.3nm,0.8s,mb3.6,baz=227,slow=8.5,SNR=6.9						
KURK	**Kurchatov**	**27.77**	**30**	*e*P	**P**	**16 04 48.8**	**-0.9**
KURK	**Kurchatov**	**27.77**	**30**	*e*P	**P**	**16 04 48.8**	**-0.9**
ZAA0	**Zalesovo Array**	**32.75**	**31**	*e*P	**P**	**16 05 33.5**	**-0.3**
ZAA0	**Zalesovo Array**	**32.75**	**31**	*e*P	**P**	**16 05 33.5**	**-0.3**
ZALV	**Zalesovo Beam**	**32.75**	**31**	P	**P**	**16 05 33.7**	**0.0**
	comp=Z,5.1nm,0.7s,mb4.5,baz=240,slow=9.0,SNR=21						
ZALV				LR	LR	16 20 19.7	
	comp=Z,41nm,18.4s,MS3.2,baz=76,slow=39						
ZALV	**Zalesovo Beam**	**32.75**	**31**	P	**P**	**16 05 33.7**	**-0.1**
ZALV				LR	LR	16 20 19.7	
GERES	**GERESS Array B**	**38.81**	**314**	P	**P**	**16 06 24.4**	**-1.3**
	comp=Z,1.2nm,0.7s,mb3.7,baz=116,slow=9.1,SNR=10						
KHC	**Kasperske Hory**	**38.96**	**314**	*e*P	**P**	**16 06 26.0**	**-1.1**
SBF	**Sospel**	**42.20**	**305**	*e*P	**P**	**16 06 51.9**	**-2.0**
	comp=Z,22nm,0.8s,mb4.6						
SBF	**Sospel**	**42.20**	**305**	*e*P	**P**	**16 06 51.9**	**-2.0**
	comp=Z,11nm,0.8s,mb4.5						
MBDF	**Montbardon**	**42.75**	**306**	*e*P	**P**	**16 06 59.0**	**+0.6**
SONM	**Songino Array**	**42.76**	**49**	P	**P**	**16 06 59.0**	**+0.6**
	comp=Z,1.5nm,0.9s,mb3.7,baz=262,slow=7.5,SNR=9.2						
LPG	**La Plagne**	**42.84**	**307**	*e*P	**P**	**16 06 59.2**	**+0.1**
LPL	**La Plagne**	**42.85**	**308**	*e*P	**P**	**16 06 58.4**	**-0.8**
ULN	**Ulaanbaatar**	**43.20**	**49**	*e*P	**P**	**16 07 02.0**	**0.0**
	comp=Z,2.3nm,0.9s,mb3.9						
ULN	**Ulaanbaatar**	**43.20**	**49**	*e*P	**P**	**16 07 02.0**	**0.0**
	comp=Z,2.3nm,0.9s,mb3.9						
CABF	**La Chapelle**	**43.42**	**309**	*e*P	**P**	**16 07 02.0**	**-1.8**
	comp=Z,36nm,1.1s,mb4.7						
CABF	**La Chapelle**	**43.42**	**309**	*e*P	**P**	**16 07 02.0**	**-1.8**
	comp=Z,18nm,1.1s,mb4.7						
SMF	**Signal de Mont**	**44.96**	**309**	*e*P	**P**	**16 07 13.8**	**-2.3**
	comp=Z,20nm,1.0s,mb4.6						
SMF	**Signal de Mont**	**44.96**	**309**	*e*P	**P**	**16 07 13.8**	**-2.3**
	comp=Z,9.9nm,1.0s,mb4.6						
LOR	**Lormes**	**45.01**	**310**	*e*P	**P**	**16 07 13.7**	**-2.8**
ARCES	**ARCESS Array B**	**45.03**	**345**	P	**P**	**16 07 15.4**	**-1.0**
	comp=Z,2.0nm,0.8s,mb4.0,baz=146,slow=9.8,SNR=3.7						
SSF	**Saint Saulge**	**45.23**	**309**	*e*P	**P**	**16 07 16.4**	**-1.8**
	comp=Z,14nm,1.0s,mb4.5						
SSF	**Saint Saulge**	**45.23**	**309**	*e*P	**P**	**16 07 16.4**	**-1.8**
	comp=Z,7.1nm,1.0s,mb4.5						
AVF	**Avril sur Loir**	**45.31**	**309**	*e*P	**P**	**16 07 17.1**	**-1.8**
TCF	**Toulx Ste Croi**	**46.06**	**308**	*e*P	**P**	**16 07 22.5**	**-2.4**
	comp=Z,14nm,1.1s,mb4.5						
TCF	**Toulx Ste Croi**	**46.06**	**308**	*e*P	**P**	**16 07 22.5**	**-2.4**
	comp=Z,7.1nm,1.1s,mb4.5						
TORD	**Torodi Ar. Bea**	**53.32**	**265**	P	**P**	**16 08 18.3**	**-2.3**
	comp=Z,3.0nm,0.7s,mb4.3,baz=62,slow=6.3,SNR=13						
KSRS	**Korea Array**	**59.11**	**61**	P	**P**	**16 08 59.7**	**-2.0**
	comp=Z,1.8nm,0.9s,mb4.1,baz=282,slow=8.3,SNR=3.7						
WRA	**Warramunga Arr**	**88.87**	**113**	P	**P**	**16 11 55.6**	**-0.2**
	comp=Z,1.4nm,0.7s,mb4.4,baz=317,slow=4.0,SNR=22						
ASAR	**Alice Springs**	**90.42**	**117**	P	**P**	**16 12 02.1**	**-0.8**
	comp=Z,0.6nm,0.6s,mb4.1,baz=304,slow=4.8,SNR=20						

*CSEM **05** 16:00:55.2±0.1, 3687N×2897E, h2^{km}, MD3.0, Error ellipse: s-maj=2.9km s-min=1.7km az=15.0*
*ISCJB **05** 16:00:56.6±0.6, 3684N±004×2899E±003, h10^{km}, Error ellipse: s-maj=5.6km s-min=3.6km az=175.1*
*ISK **05** 16:00:56.0, 3690N×2897E, h8^{km}, MD3.0*
*DDA **05** 16:00:56.9, 3692N×2901E, h7^{km}±7^{km}, Md3.2*
ISC 05 16:00:57.1±0.5, **3686N**±004×**2898E**±003, **h8**^{km}±6^{km}, **n13**, σ**1^{s}18**/23, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DALT	**Dalyan (Mudla)**	**0.29**	**251**	*e*PG	**Pg**	**16 01 01.9**	**-0.8**
DALT				*e*SG	**Sg**	**16 01 07.1**	**+0.5**
TURN	**Turunc**	**0.30**	**272**	*i* P	**Pg**	**16 01 07.5**	**+4.5**
TURN				*i* S	**Sg**	**16 01 16.2**	**+9.2**
TURN	**Turunc**	**0.30**	**272**	*i* S	**Sg**	**16 01 16.2**	**+9.2**
GOLH	**Golhisar**	**0.60**	**51**	*i* P	**Pg**	**16 01 07.1**	**-1.5**
GOLH				*i* S	**Sg**	**16 01 17.2**	**+0.8**
YER	**Yerkesik**	**0.62**	**296**	*e*PG	**Pg**	**16 01 08.2**	**-0.9**
YER				*e*SG	**Sg**	**16 01 16.9**	**-0.2**
ELL	**Elmali**	**0.76**	**98**	*e*PG	**Pg**	**16 01 11.2**	**-0.4**
ELL				*e*SG	**Sg**	**16 01 22.6**	**+1.1**
AKAS	**Kas**	**0.81**	**141**	*i* P	**Pg**	**16 01 12.0**	**-0.6**
AKAS				*i* S	**Sg**	**16 01 26.1**	**+3.0**
DNZL	**Cakiroluk**	**0.83**	**4**	*i* P	**Pg**	**16 01 11.5**	**-1.5**
DNZL				*i* S	**Sg**	**16 01 26.0**	**+2.2**
AYDN	**Tasoluk**	**1.18**	**313**	*i* P	**Pb**	**16 01 18.8**	**-1.0**
AYDN				*i* S	**Sb**	**16 01 37.5**	**+2.3**
BDRM	**Kayabasi**	**1.24**	**280**	*i* P	**Pn**	**16 01 20.2**	**-0.6**
BDRM				*i* S	**Sb**	**16 01 38.9**	**+1.9**
BODT	**Bodrum**	**1.35**	**279**	*e*PN	**Pn**	**16 01 21.8**	**-0.4**
KHL	**Karahalli**	**1.52**	**16**	*e*PN	**Pn**	**16 01 23.6**	**-1.0**
KHAL	**Karahalli**	**1.56**	**15**	*i* P	**Pn**	**16 01 24.7**	**-0.4**
KHAL				*i* S	**Sn**	**16 01 45.5**	**0.0**

IDC 05 16:10:57.6±1.7, **127N**×**12542E**, **h0**^{km}, **mb3.7**/3, **mb1 3.9**/3, **mb1mx3.5**/16, **mbtmp3.7**/3, **Error ellipse: s-maj=184.3km s-min=24.1km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.83**	**158**	P	P	16 16 02.5	+0.2
	1.2nm,0.3s,baz=336,slow=11,SNR=47						
ASAR	**Alice Springs**	**26.12**	**162**	P	P	16 16 33.9	+0.4
	0.3nm,0.3s,baz=343,slow=8.5,SNR=30						
ASAR				PcP	PcP	16 19 59.6	-1.5
	0.5nm,1.0s,baz=345,slow=1.9,SNR=4.1						
MKAR	**Makanchi Array**	**58.85**	**327**	P	P	16 20 58.5	+0.5
	0.2nm,0.4s,baz=111,slow=7.9,SNR=3.1						

*ISCJB **05** 16:13:57.1±1.1, 173S±02×1787W±02, h571^{km}±24^{km}, mb4.4/12, Error ellipse: s-maj=38.8km s-min=17.0km az=43.4*
*NEIC **05** 16:13:57.1±0.8, 1726S×17882W, h538^{km}±14^{km}, mb4.5/7, Error ellipse: s-maj=24.4km s-min=10.5km az=139.0*
*IDC **05** 16:13:57.1±1.8, 1708S×17904W, h519^{km}±24^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.4/16, mbtmp3.7/5, Error ellipse: s-maj=49.2km s-min=16.9km az=137.0*
ISC 05 16:13:57.6±1.1, **173S**±02×**1788W**±02, **h550**^{km}±21^{km}, **n29**, σ**0^{s}72**/28, **mb4.4**/12, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.51**	**65**	P	**P**	**16 15 50.2**	**-0.5**
	14nm,0.3s,baz=35,slow=3.9,SNR=17						
AFI	**Afiamalu**	**7.51**	**65**	*e*P	**P**	**16 15 50.0**	**-0.7**
DZM	**Mont Dzumac**	**14.73**	**249**	*e*P	**P**	**16 17 03.9**	**-0.4**
ARMA	**Armidale**	**29.97**	**239**	*e*P	**P**	**16 19 22.8**	**+1.0**
ARMA	**Armidale**	**29.97**	**239**	*e*P	**P**	**16 19 22.9**	**+1.0**
	0.2nm,0.7s						
CTA	**Charters Tower**	**33.22**	**260**	*e*P	**P**	**16 19 49.6**	**-0.1**
	6.5nm,0.6s						
CTAO	**Charters Tower**	**33.22**	**260**	*e*P	**P**	**16 19 49.5**	**-0.1**
	8.4nm,0.6s,mb4.5						
CNB	**Canberra Magne**	**33.55**	**231**	*e*P	**P**	**16 19 52.9**	**+0.7**
CAN	**Canberra**	**33.83**	**232**	*e*P	**P**	**16 19 55.0**	**+0.5**
PMG	**Port Moresby**	**34.02**	**279**	*e*P	**P**	**16 19 57.9**	**+1.4**
	17nm,0.8s,mb4.6						
TOO	**Toolangi**	**37.31**	**230**	*e*P	**P**	**16 20 24.1**	**+0.7**
STKA	**Stephens Creek**	**38.64**	**240**	*e*P	**P**	**16 20 34.9**	**+0.6**
	13nm,1.0s,mb4.4						
STKA	**Stephens Creek**	**38.64**	**240**	P	**P**	**16 20 34.9**	**+0.6**
	5.9nm,0.4s,mb4.5,baz=89,slow=9.2,SNR=36						
WB2	**Warramunga Arr**	**44.41**	**259**	*e*P	**P**	**16 21 19.3**	**-0.7**
WRAB	**Tennant Creek**	**44.41**	**259**	*e*P	**P**	**16 21 18.9**	**-1.1**
	8.8nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**44.42**	**259**	P	**P**	**16 21 19.4**	**-0.7**
	7.5nm,0.4s,mb4.5,baz=96,slow=7.0,SNR=232						
ASAR	**Alice Springs**	**44.64**	**254**	P	**P**	**16 21 21.9**	**+0.1**
	67nm,0.5s,mb5.4,baz=89,slow=7.9,SNR=2454						
ASAR				ScP	ScP	16 25 54.8	+2.2
	0.6nm,0.8s,baz=120,slow=3.9,SNR=4.7						
ASAR				S	**S**	**16 27 15.6**	**-2.7**
	1.6nm,1.0s,baz=82,slow=17,SNR=8.2						
KAKA	**Kakadu**	**47.26**	**269**	*e*P	**P**	**16 21 41.8**	**0.0**
	10nm,0.3s,mb4.8						
KAKA	**Kakadu**	**47.26**	**269**	*e*P	**P**	**16 21 41.8**	**0.0**
FORT	**Forrest**	**49.98**	**244**	*e*P	**P**	**16 22 00.9**	**-0.8**
	21nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**52.80**	**260**	*e*P	**P**	**16 22 22.6**	**+0.3**
	5.6nm,0.4s,mb4.2						
FITZ	**Fitzroy Crossi**	**52.80**	**260**	*e*P	**P**	**16 22 22.6**	**+0.3**
MBWA	**Marble Bar**	**57.90**	**256**	*e*P	**P**	**16 22 57.2**	**-0.6**
KLBR	**Kellerberrin**	**58.81**	**243**	*e*P	**P**	**16 23 03.0**	**-0.7**
	10nm,0.7s,mb4.2						
MUN	**Mundaring**	**60.11**	**243**	*e*P	**P**	**16 23 12.5**	**+0.1**
MJAR	**Matsushiro Arr**	**67.20**	**323**	P	**P**	**16 23 57.8**	**+0.5**
	1.1nm,0.5s,mb3.6,baz=176,slow=4.9,SNR=4.9						
PETK	**Petropavlovsk-**	**72.98**	**345**	P	**P**	**16 24 31.7**	**+0.4**
	3.9nm,1.1s,mb3.8,baz=121,slow=8.4,SNR=4.2						
GERES	**GERESS Array B**	**146.91**	**345**	PKPbc	PKPbc	16 32 40.8	+2.3
	0.2nm,0.5s,baz=97,slow=3.3,SNR=2.3						
GERES	**GERESS Array B**	**146.91**	**345**	PKPbc	PKPbc	16 32 40.8	+2.3

FUNV 05 16:37:26.7, 698N×7296W, h154^{km}**, MW3.6, 10C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.08**	**36**	⇑*i*P	Pn	16 37 52.3	-0.3
CAPV				*e*S	Sn	16 38 10.8	-1.5
VIGV	**El Vigia**	**2.43**	**40**	⇑*i*P	Pn	16 38 06.7	-0.4
VIGV				*e*S	Sn	16 38 35.9	-2.4
SOCV	**Socops**	**2.45**	**58**	⇑*e*P	Pn	16 38 07.0	-0.4
SOCV				*e*S	Sn	16 38 35.5	-3.3
ELOV	**Elorza**	**3.45**	**89**	⇑*e*P	Pn	16 38 18.6	-1.4
VIRV	**Villa del Rosa**	**3.54**	**9**	⇑*i*P	Pn	16 38 19.1	-2.0
VIRV				*e*S	Sn	16 38 58.2	-5.2
QARV	**Quebrada Arrib**	**4.00**	**37**	⇑*i*P	Pn	16 38 26.7	-0.5
SANV	**Sanarito**	**4.21**	**53**	*e*P	Pn	16 38 28.6	-1.1
CURV	**Curarigua**	**4.22**	**44**	⇑*e*P	Pn	16 38 28.9	-1.1
DABV	**Dabajuro**	**4.54**	**30**	*e*P	Pn	16 38 33.0	-1.1
TEPV	**Terepaima**	**4.76**	**51**	⇑*e*P	Pn	16 38 35.8	-1.2
SIQV	**Siquisique**	**4.79**	**40**	⇑*i*P	Pn	16 38 36.0	-1.4
BAUV	**El Baul**	**5.24**	**68**	⇑*i*P	Pn	16 38 40.4	-3.0
TURV	**Turiamo**	**6.12**	**55**	*e*P	Pn	16 38 53.6	-1.5
CAOV	**Caicara del Or**	**6.59**	**87**	*e*P	Pn	16 38 58.3	-3.0
BIRV	**Birongo**	**7.46**	**62**	*e*P	Pn	16 39 10.6	-2.4
CUPV	**Cœpira**	**7.72**	**66**	*e*P	Pn	16 39 13.5	-2.9

*ISK **05** 16:40:36.5, 3999N×3328E, h26^{km}, MD2.7*
*CSEM **05** 16:40:36.2±0.2, 4005N×3333E, h5^{km}, MD2.7, Error ellipse: s-maj=4.6km s-min=3.2km az=166.0*
*ISCJB **05** 16:40:37.2±0.5, 4001N±003×3331E±003, h10^{km}, Error ellipse: s-maj=4.1km s-min=3.5km az=154.5*
*DDA **05** 16:40:38.3, 4006N×3333E, h9^{km}, Md3.0*
ISC 05 16:40:37.3±0.5, **4006N**±003×**3331E**±003, **h4**^{km}±12^{km}, **n10**, σ**0^{s}69**/19, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTO	**Ankara**	**0.44**	**245**	*e*PG	**Pg**	**16 40 45.9**	**+0.1**
LOD	**Lodumlu**	**0.45**	**249**	*e*PG	**Pg**	**16 40 45.2**	**-0.8**
LOD				*e*SG	**Sg**	**16 40 52.7**	**+0.8**
KAMT	**Kaman**	**0.75**	**156**	*e*PG	**Pg**	**16 40 51.3**	**-0.4**
KAMT				*e*SG	**Sg**	**16 41 01.1**	**-0.4**
CDAG	**Cicekdag**	**0.92**	**117**	*i* P	**Pg**	**16 40 55.9**	**+0.9**
CDAG				*i* S	**Sg**	**16 41 08.3**	**+1.4**
CORM	**Corum**	**1.02**	**83**	*e*PG	**Pg**	**16 40 56.3**	**-0.5**
CORM				*e*SG	**Sg**	**16 41 09.9**	**-0.1**
ILGA	**Ilgaz**	**1.04**	**17**	*i* P	**Pg**	**16 40 56.2**	**-1.2**
ILGA				*i* S	**Sg**	**16 41 11.7**	**+0.9**
SGKT	**Sivrigoynuk**	**1.09**	**299**	*i* P	**Pg**	**16 40 58.5**	**+0.2**
SGKT				*i* S	**Sg**	**16 41 12.2**	**-0.2**
CTKT	**Corum**	**1.26**	**63**	*i* P	**Pg**	**16 41 00.1**	**-1.4**
CTKT				*i* S	**Sg**	**16 41 18.0**	**0.0**
BALT	**Daday**	**1.48**	**2**	*i* P	**Pn**	**16 41 04.8**	**+0.1**
BALT				*i* S	**Sg**	**16 41 25.5**	**+0.6**
KDHN	**Kadinhani**	**1.79**	**212**	*i* P	**Pn**	**16 41 08.8**	**-0.2**
KDHN				*i* S	**Sg**	**16 41 34.9**	**+0.1**

*ISCJB **05** 16:41:25.9±0.6, 3726N±007×722E±01, h154^{km}±18^{km}, Error ellipse: s-maj=19.8km s-min=6.1km az=151.6*
*NNC **05** 16:41:32.1±7.4, 3765N×7041E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=82.6km s-min=51.0km az=109.0*
ISC 05 16:41:26.9±0.6, **3726N**±006×**722E**±01, **h151**^{km}±15^{km}, **n20**, σ**1^{s}10**/27, **3C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.44**	**184**	⇓P	**Pn**	**16 42 20.3**	**+0.4**
CEP				S	**Sn**	**16 43 00.0**	**-1.0**
CHCP	**Chirah Chowk**	**3.70**	**166**	P	**Pn**	**16 42 25.2**	**+2.0**
THW	**Thamme Wali**	**4.47**	**185**	P	**Pn**	**16 42 32.7**	**-0.7**
THN	**Thein Dam**	**5.61**	**148**	*e*P	**Pn**	**16 42 48.8**	**+0.3**
THN				*e*S	**Sn**	**16 43 51.9**	**-0.3**
DLH	**Dalhousie**	**5.63**	**146**	*e*P	**Pn**	**16 42 50.0**	**+1.3**
DLH				*e*S	**Sn**	**16 43 53.0**	**+0.4**
KK31	**Karatay Array**	**5.98**	**348**	P	**Pn**	**16 42 55.0**	**+1.8**
	2.2nm,0.3s,baz=161,slow=11,SNR=169						
KK31				⇑S	**Sn**	**16 43 59.3**	**-1.5**
	24nm,0.4s						
SMLA	**Simla**	**7.37**	**145**	*i* P	**Pn**	**16 43 11.5**	**-0.3**
SMLA				*i* S	**Sn**	**16 44 29.8**	**-4.4**
SMLA				*e*x	x	16 44 34.3	
	comp=N,149nm,0.3s						
SMLA				*e*x	x	16 44 35.8	
	comp=E,294nm,0.3s						
KLP	**Kalpa**	**7.59**	**137**	*e*P	**Pn**	**16 43 10.8**	**-3.9**
KLP				*e*S	**Sn**	**16 44 28.0**	**-12**
KLP				AML	AML	16 44 48.1	
	comp=E,116nm,0.9s						
KLP				AML	AML	16 44 50.2	
	comp=N,182nm,1.0s						
DANN	**Dangsing**	**13.16**	**129**	*e*P	**Pn**	**16 44 27.0**	**-1.0**
	comp=N,32nm,0.4s						
KOLN	**Koldanda**	**13.48**	**131**	*e*P	**Pn**	**16 44 30.2**	**-1.9**
	comp=N,4.9nm,0.2s						
KKN	**Kakani**	**14.50**	**127**	*e*P	**Pn**	**16 44 43.8**	**-1.3**
DMN	**Daman**	**14.52**	**128**	*e*P	**Pn**	**16 44 45.2**	**-0.1**
	comp=N,15nm,0.4s						
PKI	**Pulchoki**	**14.74**	**127**	*e*P	**Pn**	**16 44 47.5**	**-0.5**
GUN	**Gumba**	**14.81**	**125**	*e*P	**Pn**	**16 44 47.3**	**-1.6**
	comp=N,28nm,0.4s						
AB31	**Akbulak array**	**14.93**	**327**	⇑Pn	**Pn**	**16 44 50.1**	**0.0**
	comp=N,1.3nm,0.5s,baz=140,slow=13,SNR=32						
AB31				⇑Sn	**Sn**	**16 47 24.8**	**-11**
	comp=N,1.2nm,0.5s						
JIRN	**Jiri**	**15.18**	**125**	*e*P	**Pn**	**16 44 54.5**	**+1.0**
	comp=N,37nm,0.4s						
RAMN	**Ramite**	**15.93**	**126**	*e*P	**Pn**	**16 45 03.2**	**+0.5**
	comp=N,87nm,0.8s						
TAPN	**Taplejung**	**16.39**	**123**	*e*P	**Pn**	**16 45 10.2**	**+1.9**
	comp=N,8.2nm,0.3s						
ODAN	**Odare**	**16.50**	**125**	*e*P	**Pn**	**16 45 10.8**	**+1.1**
	comp=N,7.6nm,0.4s						
AKTO	**Aktyubinsk**	**16.64**	**327**	⇓Pn	**Pn**	**16 45 11.3**	**+0.2**
	comp=N,0.4nm,0.6s						

*ISCJB **05** 16:45:18.7±0.6, 5015N±004×1906E±003, h0^{km}, Error ellipse: s-maj=6.3km s-min=2.7km az=6.2*
*WAR **05** 16:45:19.8, 5011N×1918E, ML2.4, Mining Induced*
*PRU **05** 16:45:19.9, 5018N×1908E, h0^{km}*
*IPEC **05** 16:45:19.5±0.1, 5016N×1913E, h3^{km}±1^{km}, ML1.7/3, Error ellipse: s-maj=2.9km s-min=0.9km az=169.0*
*CSEM **05** 16:45:20.1±0.3, 5020N×1913E, h1^{km}, ML2.5/5, Error ellipse: s-maj=7.0km s-min=3.4km az=5.0*
ISC 05 16:45:19.5±0.6, **5014N**±004×**1909E**±003, **h0**^{km}, **n22**, σ**1^{s}10**/40, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.46**	**80**	*e*Pg	**Pg**	**16 45 27.8**	**-0.6**
OJC				*e*Sg	**Sg**	**16 45 33.7**	**-0.7**
OKC	**Ostrava-Krasne**	**0.68**	**244**	*e*Pg	**Pg**	**16 45 33.2**	**+0.6**
OKC				Sg	**Sg**	**16 45 43.2**	**+1.8**
	15nm,0.4s						
OKC	**Ostrava-Krasne**	**0.68**	**244**	*e*PG	**Pg**	**16 45 33.4**	**+0.8**
OKC				*e*SG	**Sg**	**16 45 43.2**	**+1.8**
	comp=Z,15nm,0.4s						
MORC	**Moravsky Berou**	**1.06**	**250**	*e*Pg	**Pg**	**16 45 40.6**	**+0.7**
MORC				*e*Sg	**Sg**	**16 45 53.7**	**0.0**
NIE	**Niedzica**	**1.07**	**132**	*e*Pg	**Pg**	**16 45 38.8**	**-1.3**
NIE				*e*Sg	**Sg**	**16 45 54.1**	**+0.1**
STHS	**Stebnicka Huta**	**1.57**	**117**	*e*Pn	**Pn**	**16 45 49.1**	**+0.4**
STHS				*e*Sn	**Sn**	**16 46 11.2**	**+1.5**
KOLL	**Kolacno**	**1.63**	**196**	*e*PN	**Pn**	**16 45 51.2**	**+1.8**
KOLL				*e*SN	**Sn**	**16 46 11.0**	**-0.1**
KOLL	**Kolacno**	**1.63**	**196**	*e*Pn	**Pn**	**16 45 51.2**	**+1.8**
KOLL				*e*Sn	**Sn**	**16 46 11.0**	**-0.1**
VYHS	**Vyhne**	**1.66**	**186**	*e*PN	**Pn**	**16 45 48.8**	**-1.1**
VYHS				*e*SN	**Sn**	**16 46 10.1**	**-1.7**
VYHS	**Vyhne**	**1.66**	**186**	*e*Pn	**Pn**	**16 45 48.8**	**-1.1**
VYHS				*e*Sn	**Sn**	**16 46 10.1**	**-1.7**
DPC	**Dobruska-Polom**	**1.79**	**278**	*e*Pn	**Pn**	**16 45 51.5**	**-0.1**
DPC	**Dobruska-Polom**	**1.79**	**278**	Pg	**Pg**	**16 45 53.1**	**-0.7**
DPC				Sg	**Sg**	**16 46 16.4**	**-0.6**
	comp=Z,8.4nm,0.5s						

DPC	Dobruska-Polom	1.79	278	ePG	Pg	16 45 53.1	-0.7
DPC				eSG	Sg	16 46 16.4	-0.6
	comp=Z,8.4nm,0.5s						
VRAC	Vranov	1.82	244	ePn	Pn	16 45 52.1	0.0
VRAC				eSg	Sg	16 46 17.6	-0.5
	comp=Z,6.8nm,0.3s						
KECS	Kecovo	1.90	151	ePN	Pn	16 45 52.5	-0.6
KECS				eSN	Sn	16 46 15.4	-2.3
CRVS	Cervenica-Dubn	1.98	128	ePN	Pn	16 45 56.0	+1.7
CRVS				eSN	Sn	16 46 21.7	+1.9
CRVS	Cervenica-Dubn	1.98	128	ePn	Pn	16 45 56.0	+1.7
CRVS				eSn	Sn	16 46 21.7	+1.9
UPC	Upice	2.01	282	eSG	Sg	16 46 24.8	+0.8
KRUC	Moravsky	2.06	239	ePn	Pn	16 45 55.5	+0.1
KOLS	Kolonicke sedl	2.40	119	e	Pn	16 46 04.7	+4.7
KOLS				e		16 46 28.1	
KOLS				e		17 42 45.1	
PRU	Pruhonice	2.94	269	ePG	Pg	16 46 12.0	-3.8
PRU				eSG	Sg	16 46 52.0	-1.8
	comp=Z,3.6nm,0.6s						
KHC	Kasperske Hory	3.72	256	Pg	Pg	16 46 25.7	-5.2
KHC				Sg	Sg	16 47 19.8	+0.7
	comp=Z,3.2nm,0.7s						

NEIC 05 17:00:33.7, 4018S×17655E, h63km, ML3.7(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSZ	Takapari Road	0.47	285	P	Pn	17 00 44.4	-1.1
TSZ				S	Sn	17 00 51.9	-2.3
MRZ	Mangatainoka R	0.88	237	P	Pn	17 00 50.1	-0.3
MOVZ	Moawhango	0.99	321	P	Pn	17 00 51.2	-0.5
BKZ	Black Stump Fm	1.01	357	P	Pn	17 00 51.3	-0.7
WNVZ	Wahianoa	1.12	319	P	Pn	17 00 53.5	+0.1
TUVZ	Tukino	1.14	322	P	Pn	17 00 53.8	+0.1
DRZ	Dome Shelter	1.18	320	P	Pn	17 00 54.3	+0.1
FWVZ	Far West T-bar	1.20	320	P	Pn	17 00 54.1	-0.4
NGZ	Ngauruhoe	1.24	324	P	Pn	17 00 54.9	-0.1
WPVZ	Whakapapa	1.24	321	P	Pn	17 00 54.9	-0.1
MTW	Mount Morrison	1.26	219	P	Pn	17 00 54.7	-0.6
WAZ	Wanganui	1.27	289	P	Pn	17 00 55.9	+0.5
WTVZ	West Tongariro	1.29	325	P	Pn	17 00 55.5	-0.2
RITZ	Rihia Road	1.31	336	P	Pn	17 00 55.8	-0.1
HATZ	Hinemaiaia	1.33	344	P	Pn	17 00 55.6	-0.6
KATZ	Kakaramea	1.37	331	P	Pn	17 00 56.5	-0.2
TWVZ	Taurewa	1.40	322	P	Pn	17 00 56.6	-0.5
KIW	Kapiti Island	1.42	241	P	Pn	17 00 56.9	-0.5
RATZ	Rangitukua	1.44	335	P	Pn	17 00 57.3	-0.4
KNZ	Kokohu	1.45	37	P	Pn	17 00 57.2	-0.5
CAW	Cannon Point	1.46	230	P	Pn	17 00 57.1	-0.8
PAWZ	Paruwai Farm	1.47	215	P	Pn	17 00 57.5	-0.6
MSWZ	Moikau Station	1.58	218	P	Pn	17 00 58.5	-1.0
WATZ	Wairara	1.60	336	P	Pn	17 00 58.9	-0.9
VRZ	Vera Road	1.74	307	P	Pn	17 01 01.3	-0.3
MRW	Makara Radio	1.75	233	P	Pn	17 01 00.8	-1.0
SNZO	South Karori	1.80	231	P	Pn	17 01 01.3	-1.2
RAEZ	Rainy Point	1.89	297	P	Pn	17 01 04.4	+0.8
URZ	Urewera	1.97	13	P	Pn	17 01 03.4	-1.3
MWZ	Matawai	1.99	23	P	Pn	17 01 04.0	-1.1
TCW	Tory Channel	2.01	238	P	Pn	17 01 04.1	-1.2
NEZ	North Egmont	2.10	295	P	Pn	17 01 07.7	+1.2
HIZ	Hauiti	2.12	321	P	Pn	17 01 06.0	-0.8
PKE	Pukeiti	2.21	296	P	Pn	17 01 08.8	+0.8
PUZ	Puketiti	2.49	33	P	Pn	17 01 10.3	-1.5
NNZ	Nelson	2.62	246	P	Pn	17 01 12.6	-1.0
QRZ	Quartz Range	3.13	257	P	Pn	17 01 19.1	-1.5
THZ	Tophouse	3.18	239	P	Pn	17 01 19.5	-1.8
KHZ	Kahutara	3.19	224	P	Pn	17 01 19.6	-1.7
LTZ	Lake Taylor	4.13	230	P	Pn	17 01 31.7	-2.6
MQZ	McQueen's Vall	4.57	218	P	Pn	17 01 38.2	-2.0
ODZ	Otahua Downs	6.53	220	P	Pn	17 02 05.2	-1.8

BJI 05 17:05:58.3, 4769N×12160E, h20km, mB4.4, mb4.6, ML3.7, Ms3.9, Msz3.7, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HHC	Hu-ho-hao-te	9.92	230	eP	Pn	17 08 23.3	+3.6
HHC				S	Sn	17 10 15.6	+5.2
HHC				AMB	AMB		
	comp=Z,16nm,0.5s						
HHC				AMB	AMB		
	comp=Z,71nm,3.9s						
LZH	Lanzhou	17.54	235	eP	Pn	17 10 06.0	+4.6
LZH				AP	pP	17 10 09.6	+1.5
LZH				XP	sP	17 10 13.2	+2.5
LZH				ePP		17 10 20.8	
LZH				AMB	AMB		
	comp=Z,17nm,1.0s						
LZH				AMB	AMB		
	comp=Z,48nm,4.2s						
LZH				LR	LR		
	comp=E,186nm,8.3s						
LZH				LR	LR		
	comp=Z,213nm,10.7s						

*ISCJB **05** 17:33:53.8±0.8, 4136N±004×1946E±004, h3km±3km, Error ellipse: s-maj=7.5km s-min=2.8km az=38.2*
*CSEM **05** 17:33:54.1±0.8, 4108N×1945E, h35km, ML2.9/9, Error ellipse: s-maj=17.7km s-min=6.4km az=25.0*
*TIR **05** 17:33:54.4±1.8, 4137N×1951E, h16km±13km, ML2.8*
*PDG **05** 17:33:56.9±0.1, 4146N×1954E, h4km, ML2.9/9, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*SKO **05** 17:33:56.8, 4133N×1952E, h6km, M2.2, ML2.6*
*BEO **05** 17:34:01.0±1.2, 4179N×1977E, ML2.4/2*
ISC 05 17:33:54.6±0.8, **4134N**±004×**1945E**±004, **h4**km±4km, **n39**, σ**1s11**/76, **3C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.31	88	ePG	Pg	17 34 01.4	+0.9
TIR				i SG	Sg	17 34 05.7	+1.1
QSH	Qafa e Shtames	0.39	61	ePG	Pg	17 34 00.0	-2.0
ULC	Ulcinj	0.65	346	⇓iPg	Pg	17 34 07.0	+0.1
ULC				eSg	Sg	17 34 15.9	+0.6
ULC	Ulcinj	0.65	346	i PG	Pg	17 34 07.0	+0.1
ULC				i SG	Sg	17 34 15.9	+0.6
PUK	Puka	0.78	25	ePG	Pg	17 34 08.7	-0.8
PHP	Peshkopia	0.82	65	ePG	Pg	17 34 09.3	-1.0
PHP				i SG	Sg	17 34 21.2	+0.3
OHR	Ohrid	1.04	102	ePg	Pg	17 34 14.5	0.0
OHR				i Sg	Sg	17 34 27.9	-0.1
OHR				eLg		17 34 29.7	
	comp=E,81nm,0.4s						
OHR				eLg		17 34 30.0	
	comp=N,166nm,0.7s						
OHR	Ohrid	1.04	102	ePg	Pg	17 34 14.4	-0.1
OHR				i Sg	Sg	17 34 27.9	-0.1
BUM	Brajici-Budva	1.05	337	⇓iPg	Pg	17 34 14.6	-0.1
BUM				eSg	Sg	17 34 29.7	+1.4
BUM	Brajici-Budva	1.05	337	i PG	Pg	17 34 14.6	-0.1
BUM				i SG	Sg	17 34 29.7	+1.4
PDG	Podgorica	1.10	353	i PG	Pg	17 34 15.2	-0.5
PDG				i SG	Sg	17 34 30.6	+0.6
PDG	Podgorica	1.10	353	⇓iPg	Pg	17 34 15.2	-0.5
PDG				eSg	Sg	17 34 30.6	+0.6
TTG	Podgorica	1.10	353	⇓iPg	Pg	17 34 15.2	-0.5
TTG				eSg	Sg	17 34 30.6	+0.6
BCI	Bajram Curri	1.13	24	ePG	Pg	17 34 14.6	-1.6
PVY	Plav	1.32	17	⇓iPg	Pg	17 34 18.4	-1.4
PVY				eSg	Sg	17 34 37.4	+0.5
PVY	Plav	1.32	17	i PG	Pg	17 34 18.4	-1.4
PVY				i SG	Sg	17 34 37.4	+0.5
HCY	Herceg Novi	1.32	328	⇓iPg	Pg	17 34 19.8	-0.1
HCY				eSg	Sg	17 34 39.7	+2.7
HCY	Herceg Novi	1.32	328	i PG	Pg	17 34 19.8	-0.1
HCY				i SG	Sg	17 34 39.7	+2.7
KRUS	Krusevo	1.35	88	i Pg	Pg	17 34 19.6	-0.9
KRUS				i Sg	Sg	17 34 39.0	+1.1
KRUS				eLg		17 34 39.5	
	comp=N,29nm,0.3s						
KRUS				eLg		17 34 40.3	
	comp=E,26nm,0.2s						
KRUS	Krusevo	1.35	88	i Pg	Pg	17 34 19.6	-0.9
KRUS				i Sg	Sg	17 34 39.0	+1.0
BIA	Bitola	1.45	102	i Pg	Pg	17 34 22.4	+0.1
BIA				i Sg	Sg	17 34 41.5	+0.5
BIA				eLg		17 34 42.8	
	comp=N,38nm,0.3s						
BIA				eLg		17 34 43.2	
	comp=E,58nm,0.3s						
BIA	Bitola	1.45	102	i Pg	Pg	17 34 22.4	+0.1
BIA				i Sg	Sg	17 34 41.5	+0.5
NKY	Niksic	1.51	347	⇓iPg	Pg	17 34 22.9	-0.7
NKY				eSg	Sg	17 34 44.8	+1.6
NKY	Niksic	1.51	347	i PG	Pg	17 34 22.9	-0.7
NKY				i SG	Sg	17 34 44.8	+1.6
BEY	Berane	1.57	12	i PG	Pg	17 34 23.3	-1.3
BEY				i SG	Sg	17 34 46.2	+1.2
BEY	Berane	1.57	12	⇑iPg	Pg	17 34 23.3	-1.3
BEY				eSg	Sg	17 34 46.2	+1.2
IVA	Berane	1.57	12	⇑iPg	Pg	17 34 23.3	-1.3
IVA				eSg	Sg	17 34 46.2	+1.2
SKO	Skopje	1.62	66	ePn	Pn	17 34 25.5	+1.6
SKO				i Sn	Sn	17 34 46.4	+1.3
SKO				eLg		17 34 47.3	
	comp=N,130nm,0.5s						
SKO				eLg		17 34 47.4	
	comp=E,58nm,0.4s						
SKO	Skopje	1.62	66	ePn	Pn	17 34 25.4	+1.6
SKO				i Sn	Sn	17 34 46.4	+1.3
BRY	Bratogost	1.70	337	⇓iPn	Pg	17 34 26.4	-0.8
BRY				eSn	Sg	17 34 51.1	+1.8
BRY	Bratogost	1.70	337	i PG	Pg	17 34 26.4	-0.8
BRY				i SG	Sg	17 34 51.1	+1.8
UPM	Unac-Piva	1.91	348	⇑iPn	Pg	17 34 29.6	-1.5
UPM				eSn	Sg	17 34 55.6	-0.3
PLE	Pljevlja	1.99	359	⇓iPn	Pg	17 34 30.9	-1.9
PLE				eSn	Sg	17 34 57.7	-0.9
STON	Ston	2.01	320	ePn	Pn	17 34 29.5	+0.2
STON				Sn	Sn	17 34 54.0	-0.9
STON	Ston	2.01	320	ePn	Pn	17 34 29.4	+0.1
STON				Sn	Sn	17 34 54.0	-0.9
BARS	Barje	2.30	49	ePg	Pn	17 34 33.7	+0.5
BARS				eSg	Sn	17 34 59.9	-2.0
VAY	Valandovo	2.35	89	ePn	Pn	17 34 36.1	+2.2
VAY				i Sn	Sn	17 35 02.4	-0.7
VAY				eLg		17 35 04.5	
	comp=N,21nm,0.6s						
VAY				eLg		17 35 04.5	
	comp=E,21nm,0.7s						
BBLS	Lazići	2.53	359	ePn	Pn	17 34 37.8	+1.4
BBLS				eSg	Sn	17 35 08.0	+0.4
DIVS	Divibare	2.79	8	ePn	Pn	17 34 39.8	-0.1
DIVS				eSn	Sn	17 35 12.4	-1.6
DIVS				eSg	Sg	17 35 13.8	-10

*DDA **05** 17:37:45.0, 3981N×2374E, h19km±5km, Md3.5*
*ISCJB **05** 17:37:48.3±0.4, 3963N±002×2398E±002, h5km±3km, Error ellipse: s-maj=3.2km s-min=2.6km az=23.5*
*SOF **05** 17:37:48.3, 3965N×24.11E, h11km, MD4.1*
*ATH **05** 17:37:49.6, 3965N×2398E, h29km±1km, MD3.8/18, ML3.7*
*THE **05** 17:37:50.2, 3964N×2398E, h11km, ML4.2*
*CSEM **05** 17:37:50.5±0.1, 3965N×2397E, h25km, ML4.2, Error ellipse: s-maj=1.7km s-min=1.4km az=100.0*
*NEIC **05** 17:37:50.2, 3964N×2398E, h12km, ML3.7(ATH), ML4.2(THE), After THE.*
ISC 05 17:37:49.4±0.3, **3963N**±002×**2398E**±002, **h7**km±3km, **n115**, σ**1s05**/135, **12C-3D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	Paliouri	0.38	322	ePg	Pg	17 37 57.4	+0.6
PAIG				eSg	Sg	17 38 03.0	+1.2
AOS	Alonnisos	0.46	190	ePg	Pg	17 37 59.5	+1.2
XOR	Xorichti	0.66	247	ePg	Pg	17 38 02.9	+0.7
NEO	Neokhori	0.67	242	ePN	Pg	17 38 03.7	+1.4
NEO				eSN	Sg	17 38 13.2	+2.3
OUR	Ouranopolis	0.71	0	ePg	Pg	17 38 03.5	+0.5
PLG	Polygyros	0.85	331	ePB	Pg	17 38 05.2	-0.6
LOS	Limnos	0.90	70	ePg	Pg	17 38 07.2	+0.4
LIA	Limnos Island	0.96	73	ePg	Pg	17 38 08.3	+0.3
LIA				eSg	Sg	17 38 21.8	+1.3
LIA	Limnos Island	0.96	73	ePN	Pg	17 38 08.6	+0.7
LIA				eSN	Sg	17 38 21.7	+1.2
HORT	Hortiatis	1.18	325	ePg	Pg	17 38 11.6	-0.5
HORT				eSg	Sg	17 38 28.0	+0.6
LKR	Lokris	1.24	218	ePg	Pg	17 38 12.1	-1.0
LKR	Lokris	1.24	218	ePB	Pb	17 38 12.4	-0.7
LIT	Litokhoron	1.24	293	ePg	Pg	17 38 12.5	-0.8
LIT				eSg	Sg	17 38 30.2	+0.8
THE	Thessaloniki	1.27	323	ePg	Pg	17 38 13.1	-0.7
SOH	Sokhos	1.29	338	ePg	Pg	17 38 13.3	-0.8
SOH				eSg	Sg	17 38 30.6	-0.2
AGG	Agios Georgios	1.42	245	ePg	Pg	17 38 14.7	-1.9
THL	Klokotos Trika	1.52	268	ePg	Pg	17 38 16.4	-2.2
THL	Klokotos Trika	1.52	268	ePn	Pn	17 38 16.6	-0.4
PTL	Penteli	1.58	183	ePB	Pn	17 38 17.0	-0.8
GADA	Gvkgeada	1.58	68	ePN	Pn	17 38 16.9	-1.0
BOZC	Bozcaada	1.61	82	i P	Pn	17 38 17.8	-0.5
BOZC				i S	Sn	17 38 41.1	+1.8
ATH	Athens Observa	1.67	187	ePN	Pn	17 38 19.1	+0.1
NVR	Nevrokopi	1.72	357	ePN	Pn	17 38 19.5	-0.4
LTK	Loutraki	1.79	207	ePb	Pn	17 38 20.1	-0.6
KVR	Kavouri	1.80	185	ePB	Pn	17 38 21.0	+0.1
KVR	Kavouri	1.80	185	ePb	Pn	17 38 20.0	-0.9
PRK	Paraskevi	1.81	101	ePb	Pn	17 38 20.7	-0.4
PRK	Paraskevi	1.81	101	ePn	Pn	17 38 21.5	+0.4
PRK	Paraskevi	1.81	101	P	Pg	17 38 25.5	+1.3
PRK	Paraskevi	1.81	101	ePn	Pn	17 38 21.5	+0.4
PRK				P	Pg	17 38 25.5	+1.3
EZN	Ezine	1.82	83	ePN	Pn	17 38 23.1	+2.0
EVR	Evrytania	1.83	248	ePN	Pn	17 38 21.8	+0.5
KZN	Kozani	1.83	293	ePN	Pn	17 38 21.6	+0.3
NAIG	Nisos Aigina	1.91	192	ePN	Pn	17 38 22.2	-0.1
NAIG	Nisos Aigina	1.91	192	ePn	Pn	17 38 21.9	-0.4
RDO	Rodhopi	1.93	38	ePN	Pn	17 38 21.5	-1.2
MMB	Musomiste	1.97	354	i P	Pn	17 38 22.5	-0.7
ENEZ	Enez	2.00	56	ePN	Pn	17 38 25.1	+1.5
VAY	Valandovo	2.01	328	ePn	Pn	17 38 23.4	-0.3
VAY	Valandovo	2.01	328	i Pn	Pn	17 38 23.7	0.0
VAY				i Sn	Sg	17 38 55.3	+1.4
VAY	Valandovo	2.01	328	ePn	Pn	17 38 23.4	-0.3
VAY				i Sn	Sg	17 38 55.3	+1.4
ALN	Alexandroupoli	2.03	51	ePn	Pn	17 38 23.1	-0.9
CHOS	Chios island	2.04	127	ePn	Pn	17 38 24.3	+0.1
CHOS				eSn	Sn	17 38 50.3	+0.5
AYVA	Ayvalik	2.12	98	i P	Pn	17 38 23.8	-1.5
AYVA				i S	Sg	17 38 56.9	-0.7
RZN	Rozhen	2.13	15	i P	Pn	17 38 25.3	-0.2
LPK	Lapseki	2.26	70	ePN	Pn	17 38 31.6	+4.3
KDZ	Kurdzhali	2.30	28	P	Pn	17 38 26.3	-1.4
KKB	Krupnik	2.34	343	i P	Pn	17 38 28.2	-0.1
JAN	Janina	2.42	272	ePN	Pn	17 38 30.0	+0.6
BIA	Bitola	2.46	305	i Pn	Pn	17 38 29.9	-0.1
BIA	Bitola	2.46	305	i Pn	Pn	17 38 29.8	-0.2
STIP	Stip	2.48	327	i Pn	Pg	17 38 35.7	-1.1
STIP				i Sn	Sg	17 39 13.5	+4.6
RLS	Riolos of Patr	2.51	232	ePb	Pb	17 38 32.3	-2.5
PLD	Plovdiv	2.54	12	P	Pn	17 38 31.2	+0.2
VLX	Vlachokerasia	2.58	210	ePn	Pn	17 38 31.6	0.0
RKY	Sarkoy-Tekirda	2.67	66	ePN	Pg	17 38 38.9	-1.6
SART	Tekirdag	2.67	66	i P	Pn	17 38 31.8	-1.0
SART				eS	Sg	17 39 14.1	-1.2
BLCB	Balcova	2.69	116	ePN	Pn	17 38 36.7	+3.6
DIM	Dimitrovgrad	2.69	25	i P	Pg	17 38 41.2	+0.2
KRUS	Krusevo	2.71	311	i Pn	Pn	17 38 34.4	+1.0
MFT	Murefte	2.78	64	ePN	Pn	17 38 38.8	+4.4
BALY	Balya	2.81	87	i P	Pn	17 38 35.0	+0.3
BALY				i S	Sg	17 39 19.0	-0.7
APE	Apeiranthos	2.83	154	ePN	Pn	17 38 35.0	0.0
APE	Apeiranthos	2.83	154	⇓iP	Pn	17 38 34.7	-0.3
APE	Apeiranthos	2.83	154	ePn	Pn	17 38 35.0	0.0
APE	Apeiranthos	2.83	154	P	Pn	17 38 31.0	-4.0
APE				⇓P		17 38 34.7	
APE				ePn	Pn	17 38 35.0	0.0
IZM	Izmir	2.83	115	ePN	Pn	17 38 39.0	+3.8
KDAG	Bornova	2.84	114	i P	Pn	17 38 32.7	-2.4
KDAG				i S	Sg	17 39 22.1	+1.6
ITM	Ithomi	2.93	214	ePN	Pn	17 38 37.6	+1.2
MRMT	Marmara Adasi	2.94	69	ePN	Pn	17 38 42.5	+6.0
SMG	Samos	2.94	130	ePN	Pn	17 38 37.3	+0.7
BALB	Balikesir	3.01	89	ePN	Pn	17 38 41.9	+4.4
VLI	Veliai	3.02	196	ePN	Pn	17 38 38.0	+0.4
VTS	Vitosha	3.02	349	i P	Pn	17 38 38.0	+0.3
SKO	Skopje	3.04	321	i Pn	Pn	17 38 38.9	+1.0
SKO	Skopje	3.04	321	i Pn	Pn	17 38 38.8	+0.9
TKR	Tekirdag	3.04	62	ePN	Pn	17 38 43.8	+5.9
AKS	Akhisar	3.07	103	ePN	Pn	17 38 42.7	+4.4
BNT	Bandirma	3.11	75	ePN	Pn	17 38 44.2	+5.2
BTOK	Tokmak	3.13	86	i P	Pg	17 38 46.8	-2.6
BTOK				eS	Sg	17 39 25.2	-4.6
CRLT	Corlu	3.24	61	ePN	Pn	17 38 46.4	+5.8
KCT	Karacabey	3.42	78	ePN	Pn	17 38 49.0	+5.8
BARS	Barje	3.58	334	ePn	Pn	17 38 45.4	0.0
DST	Dursunbey	3.59	89	ePN	Pn	17 38 51.3	+5.8
SLVT	Silivri	3.60	62	ePN	Pn	17 38 52.0	+6.3
BODT	Bodrum	3.66	133	ePN	Pn	17 38 46.1	-0.4
CTT	Catalca	3.72	64	ePN	Pn	17 38 53.1	+5.8
KULA	Kula-Manisa	3.81	105	ePN	Pn	17 38 53.9	+5.4
SZH	Strazhica	3.92	21	i P	Pn	17 38 49.6	-0.5
BGKT	Bogazkoy	3.97	65	ePN	Pn	17 38 57.2	+6.5
GEMT	Gemlik	4.08	77	ePN	Pn	17 38 58.4	+6.2
KLYT	Kilyos	4.19	66	ePN	Pn	17 38 59.9	+6.1
YLV	Yalova	4.24	75	ePN	Pn	17 39 01.0	+6.5
BOLS	Boljevac	4.46	341	ePn	Pn	17 38 56.5	-1.0
ADVT	Abdulvahap	4.49	78	eP	Pn	17 39 04.3	+6.4
KHL	Karahalli	4.51	105	eP	Pn	17 39 03.5	+5.4
HRT	Hereke	4.51	73	eP	Pn	17 39 05.0	+6.9
ALT	Altintas	4.79	95	ePN	Pn	17 39 03.2	+1.3
GRUS	Gruza	4.91	331	ePn	Pn	17 38 58.9	-4.7
DIVS	Divibare	5.37	328	ePn	Pn	17 39 09.6	-0.3
DIVS				eSg	Sg	17 40 42.1	+0.3
BBLS	Lazići	5.45	323	ePn	Pn	17 39 11.7	+0.7
TIRR	Tirgusor	5.85	33	⇑iP	Pn	17 39 16.7	+0.2
TIRR	Tirgusor	5.85	33	⇑P	Pn	17 39 16.7	+0.2
VOIR		5.86	7	⇑iP	Pn	17 39 17.2	+0.5
VOIR		5.86	7	⇑P	Pn	17 39 17.2	+0.5
MLR	Muntele Rosu	6.04	13	⇑iP	Pn	17 39 20.5	+1.4
MLR	Muntele Rosu	6.04	13	⇑P	Pn	17 39 20.5	+1.4
BZS	Buzias	6.24	345	⇑iP	Pn	17 39 21.0	-0.8
BZS	Buzias	6.24	345	⇑P	Pn	17 39 21.0	-0.8
PLOR	Plostina	6.52	17	⇓iP	Pn	17 39 27.7	+1.9
VRI	Vrincioaia	6.55	17	⇑iP	Pn	17 39 28.1	+1.9
VRI	Vrincioaia	6.55	17	⇑P	Pn	17 39 28.1	+1.9
PKSM	Moragy	7.66	331	⇑iP	Pn	17 39 41.2	-0.1
BURAR	Bucovina Array	8.04	6	⇑iP	Pn	17 39 44.3	-2.2
BUR08	Bucovina Ar. S	8.06	6	eP	Pn	17 39 45.9	-1.0

*ISCJB **05** 17:41:48.4±1.8, 206S±02×1782W±02, h490km±35km, mb3.9/10, Error ellipse: s-maj=40.6km s-min=19.8km az=31.4*
*NEIC **05** 17:41:49.7±1.0, 2076S×17799W, h509km±13km, mb4.1/5, Error ellipse: s-maj=20.9km s-min=10.8km az=141.0*
*IDC **05** 17:41:49.8±2.3, 2078S×17794W, h510km±26km, mb3.3/7, mb1 3.5/9, mb1mx3.3/19, mbtmp3.4/9, Error ellipse: s-maj=32.0km s-min=17.2km az=140.0*
ISC 05 17:41:49.4±1.6, **208S**±02×**1781W**±02, **h496**km±32km, **n24**, σ**0s56**/16, **mb3.9**/10, **1C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	9.09	43	P	P	17 43 57.2	+0.1
	5.9nm,0.3s,baz=17,slow=15,SNR=5.0						
URZ	Urewera	17.94	192	P	P	17 45 29.0	-0.2
	1.4nm,0.3s,baz=329,slow=2.7,SNR=12						
CTA	Charters Tower	33.39	265	eP	P	17 47 47.0	+0.9
	3.3nm,0.4s,mb4.1						
CTA	Charters Tower	33.39	265	P	P	17 47 46.8	+0.7
	4.0nm,0.5s,mb4.1,baz=100,slow=10,SNR=8.6						
CTAO	Charters Tower	33.39	265	eP	P	17 47 46.8	+0.7
	4.8nm,0.7s,mb4.0						
STKA	Stephens Creek	37.61	244	P	P	17 48 22.1	+0.9
	4.3nm,1.2s,mb3.7,baz=163,slow=16,SNR=2.9						
ASAR	Alice Springs	44.38	257	P	P	17 49 15.7	+0.3
	3.1nm,0.5s,mb4.0,baz=88,slow=8.7,SNR=117						
ASAR				PcP	PcP	17 50 48.4	-0.4
	1.1nm,0.7s,baz=104,slow=3.6,SNR=9.3						
ASAR				S	S	17 55 08.8	-4.6
	0.6nm,0.9s,baz=88,slow=15,SNR=4.3						
WB2	Warramunga Arr	44.48	262	eP	P	17 49 15.7	-0.4
WRAB	Tennant Creek	44.48	262	eP	P	17 49 15.5	-0.6
	3.1nm,0.7s,mb3.9						
WRA	Warramunga Arr	44.49	262	P	P	17 49 15.7	-0.5
	1.9nm,0.3s,mb4.0,baz=95,slow=7.7,SNR=132						
KAKA	Kakadu	47.90	271	eP	P	17 49 41.8	-0.4
	5.2nm,0.4s,mb4.2						
FITZ	Fitzroy Crossi	52.92	263	P	P	17 50 18.9	-0.1
	0.8nm,0.5s,mb3.3,baz=98,slow=7.1,SNR=7.5						
MBWA	Marble Bar	57.72	258	eP	P	17 50 52.1	-0.4
	3.6nm,1.0s,mb3.7						
PETK	Petropavlovsk-	76.49	345	P	P	17 52 47.0	-0.4
	2.2nm,0.6s,mb3.9,baz=128,slow=4.4,SNR=4.1						
CMAR	Chiang Mai Arr	90.12	290	P	P	17 53 57.7	+1.1
	1.1nm,0.9s,mb3.7,baz=123,slow=3.2,SNR=7.3						
ARCES	ARCESS Array B	129.15	350	PKP	PKPdf	17 59 58.5	-1.5
	1.9nm,1.0s,baz=29,slow=2.8,SNR=6.6						
ARCES	ARCESS Array B	129.15	350	PKP	PKPdf	17 59 58.5	-1.5
AKASG	Malin Array Be	143.19	331	PKP	PKPdf	18 00 22.6	-3.8
	4.9nm,0.5s,baz=44,slow=4.3,SNR=42						
MALT	Malatya	144.02	307	ePKPdf	PKPdf	18 00 27.3	-1.0
CLL	Collm	148.29	347	⇓iPKPbc	PKPbc	18 00 38.3	-0.8
	comp=Z,5.0nm,0.6s						
CLL				⇑iPKPab	PKPab	18 00 42.9	-1.1
	comp=Z,5.0nm,0.9s						
BRG	Berggiesshubel	148.48	345	eP	PKPbc	18 00 39.3	-0.2
	comp=Z,5.5nm,1.0s						
BRG	Berggiesshubel	148.48	345	e(P)	PKPab	18 00 44.1	-0.7
	comp=Z,3.0nm,0.6s						
BRG	Berggiesshubel	148.48	345	eP	PKPbc	18 00 39.0	-0.5
BRG				P	PKPab	18 00 44.1	-0.7
GERES	GERESS Array B	150.42	344	PKPbc	PKPbc	18 00 43.6	-0.7
	comp=Z,0.9nm,0.6s,baz=36,slow=2.5,SNR=9.7						

*IDC **05** 18:40:55.1±2.5, 356N×9394E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.8/21, mbtmp3.9/7, ML3.9/1, Error ellipse: s-maj=97.6km s-min=19.7km az=60.0*
*NEIC **05** 18:40:59.1±1.2, 349N×9385E, h30km, mb4.1/1, Error ellipse: s-maj=39.7km s-min=11.9km az=65.0*
*ISCJB **05** 18:41:01.5±1.0, 413N±008×949E±02, h33km, mb4.0/7, Error ellipse: s-maj=25.1km s-min=10.7km az=175.3*
ISC 05 18:41:04.1±1.0, **417N**±008×**949E**±02, **h35**km, **n10**, σ**1s13**/11, **mb4.0**/7, **1C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	1.36	15	⇑eP	Pn	18 41 23.5	-3.1
BSI				eS	Sn	18 41 43.5	0.0
CMAR	Chiang Mai Arr	14.73	15	Pn	Pn	18 44 38.6	+8.6
	0.2nm,0.3s,baz=213,slow=12,SNR=14						
LSA	Lhasa	25.64	352	eP	P	18 46 33.0	+2.4
	3.4nm,0.6s,mb4.0						
MKAR	Makanchi Array	43.85	347	P	P	18 49 06.2	-0.7
	2.4nm,0.7s,mb4.0,baz=163,slow=8.7,SNR=18						
SONM	Songino Array	44.60	11	P	P	18 49 14.1	+1.3
	0.3nm,0.3s,mb3.5,baz=189,slow=9.6,SNR=3.6						
WRA	Warramunga Arr	45.53	123	P	P	18 49 20.9	+0.3
	1.6nm,0.6s,mb4.1,baz=299,slow=9.1,SNR=11						
WRAB	Tennant Creek	45.53	123	eP	P	18 49 20.8	0.0
ASAR	Alice Springs	46.98	128	P	P	18 49 31.6	-0.4
	0.6nm,0.4s,mb3.9,baz=296,slow=7.6,SNR=16						
KURK	Kurchatov	48.37	346	P	P	18 49 41.1	-1.3
	1.1nm,0.6s,mb4.1,baz=172,slow=7.0,SNR=6.1						
ZALV	Zalesovo Beam	50.30	352	P	P	18 49 56.9	-0.2
	1.2nm,0.5s,mb4.2,baz=188,slow=7.2,SNR=6.8						

*NEIC **05** 18:49:35.7, 1598N×9669W, h13km, MD4.2(MEX), After MEX.*
MEX 05 18:49:35.7±0.9, **1598N**×**9669W**, **h13**km±13km, **MD4.2, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.60	111	eP	Pg	18 49 45.8	-1.6
HUIG				i S	Sg	18 49 54.2	-1.2
VHO	Vista Hermosa	1.08	358	eP	Pb	18 49 53.1	-3.3
VHO				i S	Sb	18 50 06.3	-4.2
OXX	Oaxaca	1.09	359	i P	Pb	18 49 53.5	-3.0
OXX				i S	Sb	18 50 07.2	-3.5
PNIG	Pinotepa	1.44	287	eP	Pn	18 49 58.8	-2.7
PNIG				i S	Sn	18 50 14.3	-6.0
CMIG	Matias Romero	2.06	57	eP	Pn	18 50 05.0	-5.0
CMIG				i S	Sn	18 50 29.9	-5.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TPIG	Tehuac#an	2.51	345	iP	Pn	18 50 18.4	+2.2
TPIG				iS	Sn	18 50 46.6	-0.1
MEIG	Mezcala	3.40	305	iS	Sn	18 51 06.0	-2.8
TGIG		3.52	77	eP	Pn	18 50 39.8	+10
TGIG				iS	Sn	18 51 07.8	-3.8
PPM	Popocatepetl	3.58	329	eP	Pn	18 50 39.4	+8.4
PPM				iS	Sn	18 51 16.4	+3.2
YAIG	Yautepec	3.65	322	iS	Sn	18 51 05.4	-10

IDC 05 19:41:14.4±3.2**,431S**×**15259E,h0km,mb3.8**/3**,mb1 4.0**/3**, mb1mx3.6**/15**,mbtmp3.8**/3**,MS4.4**/1**,Ms1 4.4**/1**, ms1mx2.8**/26**,Error ellipse: s-maj=117.7km s-min=45.7km az=123.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	21.59	246	eP	P	19 46 09.2	+3.2
	7.4nm,0.6s						
WB2	Warramunga Arr	23.60	227	eP	P	19 46 26.9	-0.4
WRA	Warramunga Arr	23.61	227	P	P	19 46 27.4	0.0
	1.9nm,0.7s,baz=51,slow=9.3,SNR=25						
ASAR	Alice Springs	26.37	221	P	P	19 46 51.8	-0.7
	0.5nm,0.5s,baz=56,slow=9.4,SNR=5.2						
FITZ	Fitzroy Crossi	29.71	240	eP	P	19 47 22.9	+0.4
	2.5nm,0.4s						
FITZ	Fitzroy Crossi	29.71	240	P	P	19 47 23.2	+0.8
	1.5nm,0.5s,baz=62,slow=11,SNR=13						
RAR	Rarotonga	49.17	114	LR	LR	20 05 37.6	
	comp=Z,362nm,19.5s,baz=180,slow=30						
TORD	Torodi Ar. Bea	149.95	289	PKPbc	PKPbc	20 01 07.3	-0.6
	0.5nm,0.7s,baz=88,slow=2.6,SNR=7.2						

*ISCJB **05** 19:47:28.7±0.2,4935N±001×676E±002,h0km,Error ellipse: s-maj=1.7km s-min=1.6km az=41.9*
*PRU **05** 19:47:29.4,4940N×676E,h0km*
*STR **05** 19:47:30.8±0.3,4935N×682E,h1km,Ml2.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BGR **05** 19:47:30.9±0.3,4936N×687E,h1km,ML2.5/4,Error ellipse: s-maj=3.3km s-min=3.3km az=79.0*
*CSEM **05** 19:47:30.7±0.0,4938N×680E,h1km,ML3.2/25,Error ellipse: s-maj=0.9km s-min=0.8km az=51.0*
*LDG **05** 19:47:30.8±0.1,4939N×680E,h1km,Md3.3/2,Ml3.2/27, Error ellipse: s-maj=1.2km s-min=1.0km az=177.0, Suspected Mining induced.*
*NEIC **05** 19:47:30.2±0.3,4938N×679E,h10km,ML2.6(SZGRF), ML2.8(STR),ML3.2(LDG),Error ellipse: s-maj=3.8km s-min=3.1km az=181.0*
*LEDBW **05** 19:47:31.2±0.2,49380N±0009×685E±002,h1km,ML2.6, Error ellipse: s-maj=6.0km s-min=4.0km az=103.0*
*BNS **05** 19:47:32.1±0.9,4941N×691E,h1km,ML2.1*
ISC 05 19:47:29.6±0.2**,4937N**±001×**676E**±002**,h0km,n146, σ1§18**/284**,5C-2D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.38	30	⇓P*	Pg	19 47 37.7	+0.8
RUP	Ruppelstein	0.38	30	Pg	Pg	19 47 37.8	+0.9
WLF	Walferdange	0.50	307	ePg	Pg	19 47 41.3	+2.2
	SNR=21						
WLF				eSg	Sg	19 47 48.5	+3.0
	SNR=9.4						
WLF	Walferdange	0.50	307	P	Pg	19 47 41.3	+2.2
WLF	Walferdange	0.50	307	eP	Pg	19 47 41.1	+2.0
LANF	Langenberg	0.79	119	Pg	Pg	19 47 44.7	+0.1
LANF				Sg	Sg	19 47 55.7	+0.9
LANF	Langenberg	0.79	119	Pg	Pg	19 47 44.9	+0.2
KTD	Kalmit	0.86	93	P*	Pb	19 47 47.0	-0.4
KTD	Kalmit	0.86	93	Pg	Pg	19 47 46.7	+0.6
KTD				Sg	Sg	19 47 58.5	+1.2
BGG	Burgeitz	0.92	24	ePg	Pg	19 47 47.7	+0.6
HILG	Hillesheim	0.92	357	ePg	Pg	19 47 48.7	+1.4
CDF	Champ du Feu	1.02	160	ePn	Pn	19 47 50.1	-0.9
	SNR=1.0						
CDF				eSg	Sg	19 48 02.8	+0.6
	76nm,0.3s,SNR=1.0						
CDF	Champ du Feu	1.02	160	ePn	Pn	19 47 50.1	-0.9
	SNR=1.0						
CDF				eSg	Sg	19 48 02.8	+0.6
	38nm,0.3s,SNR=1.0						
CDF	Champ du Feu	1.02	160	ePg	Pg	19 47 49.1	+0.1
CDF				ePn	Pn	19 47 50.1	-0.9
CDF				eSg	Sg	19 48 02.8	+0.6
RFYF	Reffroy	1.13	229	ePg	Pg	19 47 52.9	+1.7
	baz=43						
RFYF				eSg	Sg	19 48 07.8	+2.0
	144nm,0.3s						
RFYF	Reffroy	1.13	229	ePg	Pg	19 47 52.9	+1.7
RFYF				eSg	Sg	19 48 07.8	+2.0
	72nm,0.3s						
ECH	Echery	1.19	167	Pg	Pg	19 47 53.3	+1.1
ECH				Sg	Sg	19 48 08.9	+1.3
ECH	Echery	1.19	167	P	Pg	19 47 53.4	+1.2
ECH				Sg	Sg	19 48 10.1	+2.5
ECH	Echery	1.19	167	Pn	Pn	19 47 53.4	+0.1
ECH				S	Sg	19 48 10.1	+2.5
ECH	Echery	1.19	167	eP	Pg	19 47 51.7	-0.5
STB	Steinbach	1.23	2	ePg	Pg	19 47 54.2	+1.1
STB				eSg	Sg	19 48 10.3	+1.4
	34nm,0.7s						
THEF	They Montfort	1.25	204	Pg	Pg	19 47 54.4	+0.8
THEF				Sg	Sg	19 48 11.7	+1.9
THEF	They Montfort	1.25	204	P	Pg	19 47 54.7	+1.1
THEF				Sg	Sg	19 48 12.5	+2.7
THEF	They Montfort	1.25	204	Pn	Pn	19 47 54.7	+0.4
THEF				S	Sg	19 48 12.5	+2.7
SWS	Schriesheim-Wi	1.27	84	P	Pg	19 47 53.3	-0.6
SWS				Pg	Pg	19 47 54.1	+0.2
SWS				S	Sg	19 48 09.5	-0.8
SWS	Schriesheim-Wi	1.27	84	P	Pg	19 47 54.1	+0.2
SWS	Schriesheim-Wi	1.27	84	Pg	Pg	19 47 54.1	+0.2
SWS				S	Sg	19 48 09.5	-0.8
KLL	Kalltalsperre	1.31	347	ePg	Pg	19 47 55.4	+0.7
MEM	Membach	1.33	339	P	Pg	19 47 56.1	+1.0
MEM	Membach	1.33	339	P	Pg	19 47 56.0	+0.9
DREG	Dreilaegerbach	1.34	345	ePg	Pg	19 47 55.8	+0.6
LIBD	Limburg	1.34	155	Pg	Pg	19 47 55.8	+0.6
LIBD				Sg	Sg	19 48 14.1	+1.5
TOD	Tromm	1.35	79	P	Pg	19 47 55.0	-0.5
TOD				Sg	Sg	19 48 13.5	+0.5
TOD	Tromm	1.35	79	Pn	Pn	19 47 55.0	-0.7
TOD				S	Sg	19 48 13.5	+0.5
TOD	Tromm	1.35	79	Pg	Pg	19 47 55.0	-0.4
TOD				Sg	Sg	19 48 12.9	0.0
TNS	Taunus Mts	1.39	51	P	Pg	19 47 55.2	-0.9
TNS				Sg	Sg	19 48 14.9	+0.9
TNS	Taunus Mts	1.39	51	ePg	Pg	19 47 55.1	-1.0
TNS				Sg	Sg	19 48 14.9	+0.9
TNS	Taunus Mts	1.39	51	ePg	Pg	19 47 55.1	-1.0
TNS				eSg	Sg	19 48 15.6	+1.6
HAU	Haudompre	1.39	192	ePg	Pg	19 47 57.3	+1.1
HAU				eSn	Sn	19 48 14.0	-1.3
	92nm,0.3s,SNR=1.0						
HAU	Haudompre	1.39	192	ePg	Pg	19 47 57.3	+1.1
HAU				eSn	Sn	19 48 14.0	-1.3
	46nm,0.3s,SNR=1.0						
HAU	Haudompre	1.39	192	ePn	Pn	19 47 56.4	+0.2
HAU				ePg	Pg	19 47 57.3	+1.1
HAU				eSn	Sn	19 48 14.0	-1.3
BCLA	Clavier	1.41	319	P	Pn	19 47 57.0	+0.5
MEZF	Maizieres J'vi	1.43	233	ePg	Pg	19 47 57.8	+0.9
	baz=50,SNR=1.0						
MEZF				eSg	Sg	19 48 16.2	+0.9
	88nm,0.5s,SNR=1.0						
MEZF	Maizieres J'vi	1.43	233	ePg	Pg	19 47 57.8	+0.9
	SNR=1.0						
MEZF				eSg	Sg	19 48 16.2	+0.9
	44nm,0.5s,SNR=1.0						
GIVF	Givet	1.46	301	ePg	Pg	19 47 58.4	+0.9
	SNR=1.0						
GIVF				eSn	Sn	19 48 14.9	-2.0
	SNR=1.0						
GIVF				eSg	Sg	19 48 16.9	+0.5
	62nm,0.3s,SNR=1.0						
GIVF	Givet	1.46	301	ePg	Pg	19 47 58.4	+0.9
	SNR=1.0						
GIVF				eSn	Sn	19 48 14.9	-2.0
	SNR=1.0						
GIVF				eSg	Sg	19 48 16.9	+0.5
	31nm,0.3s,SNR=1.0						
GIVF	Givet	1.46	301	ePn	Pn	19 47 56.8	-0.3
GIVF				ePg	Pg	19 47 58.4	+0.9
GIVF				eSn	Sn	19 48 14.9	-2.0
GIVF				eSg	Sg	19 48 16.9	+0.5
BFO	Black Forest	1.47	135	P	Pn	19 47 56.7	-0.6
BFO				Pg	Pg	19 47 58.0	+0.4
BFO				S	Sg	19 48 14.9	-1.7
BFO				Sg	Sg	19 48 17.2	+0.5
BFO	Black Forest	1.47	135	Pn	Pn	19 47 56.7	-0.6
BFO				Sn	Sn	19 48 14.9	-2.2
BFO	Black Forest	1.47	135	P	Pn	19 47 58.0	+0.8
BFO				S	Sg	19 48 17.2	+0.5
BFO	Black Forest	1.47	135	Pg	Pg	19 47 58.0	+0.3
BFO				S	Sg	19 48 14.9	-1.8
BFO				eSg	Sg	19 48 16.9	+0.2
BFO	Black Forest	1.47	135	ePg	Pg	19 47 57.8	+0.1
BFO				eSg	Sg	19 48 16.9	+0.2
HGN	Heimansgroeve	1.50	339	ePg	Pg	19 47 58.1	-0.1
HGN				eSg	Sg	19 48 18.8	+1.2
HGN	Heimansgroeve	1.50	339	eRg		19 48 40.2	
LBG	Lerchenberg	1.51	117	Pg	Pg	19 47 58.5	0.0
LBG				Sg	Sg	19 48 16.8	-1.3
MOF	Molkenrain	1.54	171	Pg	Pg	19 47 59.7	+0.7
MOF				Sg	Sg	19 48 19.4	+0.4
MOF	Molkenrain	1.54	171	Pg	Pg	19 47 59.9	+0.9
MOF				Sg	Sg	19 48 19.9	+1.0
MOF	Molkenrain	1.54	171	P	Pn	19 47 59.9	+1.7
MOF				S	Sn	19 48 19.9	+1.0
HINF	Hinteralfeld	1.56	178	ePg	Pg	19 47 59.8	+0.4
	SNR=1.0						
HINF				eSg	Sg	19 48 20.1	+0.6
	114nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	1.56	178	ePg	Pg	19 47 59.8	+0.4
	SNR=1.0						
HINF				eSg	Sg	19 48 20.1	+0.6
	57nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	1.56	178	ePn	Pn	19 47 58.3	-0.2
HINF				ePg	Pg	19 47 59.8	+0.4
HINF				eSg	Sg	19 48 20.1	+0.6
DOU	Dourbes	1.58	298	P	Pn	19 47 59.7	+0.9
KIZ	Kirchzarten	1.61	151	Pg	Pg	19 48 00.5	+0.1
KIZ				Sg	Sg	19 48 21.0	-0.3
SFTF	Sexfontaines	1.63	225	ePn	Pn	19 47 59.3	-0.2
	baz=43						
SFTF				eSg	Sg	19 48 23.2	+1.3
	49nm,0.4s						
SFTF	Sexfontaines	1.63	225	ePn	Pn	19 47 59.3	-0.2
SFTF				eSg	Sg	19 48 23.2	+1.3
	25nm,0.4s						
HOBG	Hohbusch	1.66	13	ePg	Pg	19 48 01.4	+0.1
FELD	Feldberg im Sc	1.71	151	P	Pn	19 47 59.8	-0.7
FELD				Pg	Pg	19 48 02.7	+0.5
FELD				Sg	Sg	19 48 25.2	+0.9
FELD	Feldberg im Sc	1.71	151	Pn	Pn	19 47 59.9	-0.7
FELD				S	Sn	19 48 25.2	+2.2
FELD	Feldberg im Sc	1.71	151	P	Pn	19 48 02.7	+2.2
FELD	Feldberg im Sc	1.71	151	Pg	Pg	19 48 02.5	+0.2
FELD				Sg	Sg	19 48 24.4	0.0
TUBL	Tuebingen-Lenn	1.75	118	Sg	Sg	19 48 26.7	+1.0
BAIF	Baives	1.80	294	ePg	Pg	19 48 04.6	+0.6
BAIF				eSg	Sg	19 48 27.6	+0.3
	48nm,0.4s,SNR=1.0						
BAIF	Baives	1.80	294	ePg	Pg	19 48 04.6	+0.6
BAIF				eSg	Sg	19 48 27.6	+0.3
	24nm,0.4s,SNR=1.0						
BAIF	Baives	1.80	294	ePn	Pn	19 48 01.7	-0.1
BAIF				ePg	Pg	19 48 04.6	+0.6
BAIF				eSg	Sg	19 48 27.6	+0.3
SPAK	Spaichingen-Ko	1.84	133	Pg	Pg	19 48 05.0	+0.1
SPAK				Sg	Sg	19 48 30.9	+2.1
SPAK	Spaichingen-Ko	1.84	133	P	Pn	19 48 05.0	+2.6
SPAK				S	Sn	19 48 30.9	+4.5
SPAK	Spaichingen-Ko	1.84	133	Pg	Pg	19 48 05.0	+0.1
SPAK				Sg	Sg	19 48 30.0	+1.2
SPAK	Spaichingen-Ko	1.84	133	Pg	Pg	19 48 04.8	-0.1
SPAK				Sg	Sg	19 48 30.0	+1.2
SIND	Sindeldorf	1.86	90	P	Pn	19 48 01.2	-1.4
BUCH	Bad Urach	1.94	117	P	Pn	19 48 03.9	+0.1
LOMF	Lomont	2.02	179	Pg	Pg	19 48 08.9	+0.6
LOMF				Sg	Sg	19 48 35.2	+0.7
LOMF	Lomont	2.02	179	Pg	Pg	19 48 08.8	+0.5
LOMF				Sg	Sg	19 48 35.6	+1.1
LOMF	Lomont	2.02	179	P	Pn	19 48 08.8	+3.9
LOMF				S	Sn	19 48 35.6	+4.8
LOMF	Lomont	2.02	179	Pg	Pg	19 48 08.8	+0.5
LOMF				Sg	Sg	19 48 35.2	+0.7
GUT	Gutenstein	2.03	129	P	Pn	19 48 04.9	0.0
GUT				Pg	Pg	19 48 08.4	-0.1
GUT				S	Sn	19 48 29.1	-1.8
GUT	Gutenstein	2.03	129	Pn	Pn	19 48 04.9	0.0
GUT				Sn	Sn	19 48 29.1	-1.8
GUT	Gutenstein	2.03	129	P	Pn	19 48 08.4	+3.4
SISB	Singen-Schiene	2.23	138	P*	Pb	19 48 12.8	+2.0
SISB				S*	Sb	19 48 41.8	+3.0
SISB	Singen-Schiene	2.23	138	Pn	Pn	19 48 07.3	-0.4
SISB				S	Sn	19 48 41.8	+5.9
SISB	Singen-Schiene	2.23	138	P	Pb	19 48 12.8	+2.0
UBBA	Unterbreizbach	2.54	54	eSg	Sg	19 48 49.6	-1.5
	SNR=2.6						
CABF	La Chapelle	2.80	190	ePg	Pg	19 48 23.6	+0.4
CABF				eSg	Sg	19 48 59.7	+0.3
	45nm,0.6s,SNR=1.0						
CABF	La Chapelle	2.80	190	ePg	Pg	19 48 23.6	+0.4
CABF				eSg	Sg	19 48 59.7	+0.3
	23nm,0.6s,SNR=1.0						
CABF	La Chapelle	2.80	190	ePn	Pn	19 48 15.8	+0.3
CABF				ePg	Pg	19 48 23.6	+0.4
CABF				eSg	Sg	19 48 59.7	+0.3
LOR	Lormes	2.86	224	ePn	Pn	19 48 15.7	-0.7
	baz=49,SNR=1.0						
LOR				eSn	Sn	19 48 49.1	-2.4
	SNR=1.0						
LOR				eSg	Sg	19 49 01.1	-0.3
	23nm,0.4s,SNR=1.0						
LOR	Lormes	2.86	224	ePn	Pn	19 48 15.7	-0.7
	SNR=1.0						
LOR				eSn	Sn	19 48 49.1	-2.4
	SNR=1.0						
LOR				eSg	Sg	19 49 01.1	-0.3
	11nm,0.4s,SNR=1.0						
GRF	Grafenberg Arr	2.92	82	eSg	Sg	19 49 04.7	+1.3
	SNR=3.3						
DAVA	Damuels	2.94	134	⇑iPn	Pn	19 48 18.7	+1.2
DAVA				⇓iSg	Sg	19 49 04.2	+0.1
	8.7nm,0.3s						
SSF	Saint Saulge	3.17	225	ePn	Pn	19 48 20.2	-0.5
	SNR=1.0						
SSF				eSn	Sn	19 48 56.5	-2.8
	SNR=1.0						
SSF				eSg	Sg	19 49 10.9	-0.6
	26nm,0.4s,SNR=1.0						
SSF	Saint Saulge	3.17	225	ePn	Pn	19 48 20.2	-0.5
	SNR=1.0						
SSF				eSn	Sn	19 48 56.5	-2.8
	SNR=1.0						
SSF				eSg	Sg	19 49 10.9	-0.6
	13nm,0.4s,SNR=1.0						
SMF	Signal de Mont	3.36	217	ePg	Pg	19 48 34.5	+0.6
	SNR=1.0						
SMF				eSn	Sn	19 49 00.6	-3.2
	SNR=1.0						
SMF				eSg	Sg	19 49 16.7	-0.7
	26nm,0.6s						
SMF	Signal de Mont	3.36	217	ePg	Pg	19 48 34.5	+0.6
	SNR=1.0						
SMF				eSn	Sn	19 49 00.6	-3.2
	SNR=1.0						
SMF				eSg	Sg	19 49 16.7	-0.7
	13nm,0.6s						
SMF	Signal de Mont	3.36	217	ePn	Pn	19 48 22.4	-0.8
SMF				ePg	Pg	19 48 34.5	+0.6
SMF				eSn	Sn	19 49 00.6	-3.2
SMF				eSg	Sg	19 49 16.7	-0.7
MOX	Moxa	3.38	66	ePg	Pg	19 48 32.5	-1.8
	SNR=1.9						
MOX				eSg	Sg	19 49 16.5	-1.6
MOX	Moxa	3.38	66	ePG	Pg	19 48 31.8	-2.5
MOX				eSG	Sg	19 49 16.5	-1.6
AVF	Avril sur Loir	3.45	223	ePn	Pn	19 48 24.4	-0.1
	SNR=1.0						
AVF				eSn	Sn	19 49 03.6	-2.4
	SNR=1.0						
AVF				eSg	Sg	19 49 20.1	-0.2
	13nm,0.5s						
AVF	Avril sur Loir	3.45	223	ePn	Pn	19 48 24.4	-0.1
	SNR=1.0						
AVF				eSn	Sn	19 49 03.6	-2.4
	SNR=1.0						
AVF				eSg	Sg	19 49 20.1	-0.2
	6.6nm,0.5s						
MOTA	Moosalm	3.53	123	⇑iPn	Pn	19 48 26.9	+1.3
MOTA				⇑iSg	Sg	19 49 24.6	+1.6
	3.6nm,0.5s						
FETA	Feichten	3.54	130	⇑iPn	Pn	19 48 27.4	+1.6
FETA				⇑iSg	Sg	19 49 24.2	+0.9
	4.4nm,0.7s						
GUNZ	Gunzen	3.74	72	ePg	Pg	19 48 40.3	-0.8
	SNR=2.1						
WERD	Werda	3.74	71	eSg	Sg	19 49 28.1	-1.6
	SNR=3.9						
NKC	Novy Kostel	3.78	75	ePG	Pg	19 48 39.3	-2.7
NKC				eSG	Sg	19 49 28.7	-2.3
	comp=Z,10.0nm,0.6s						
BGF	Bois d'Agland	3.85	225	ePn	Pn	19 48 29.9	-0.1
	SNR=1.0						
BGF				eSn	Sn	19 49 13.3	-2.7
	SNR=1.0						
BGF				eSg	Sg	19 49 32.1	-1.2
	comp=Z,60nm,0.5s,SNR=1.0						
BGF	Bois d'Agland	3.85	225	ePn	Pn	19 48 29.9	-0.1
	SNR=1.0						
BGF				eSn	Sn	19 49 13.3	-2.7
	SNR=1.0						
BGF				eSg	Sg	19 49 32.1	-1.2
	comp=Z,30nm,0.5s,SNR=1.0						
LPL	La Plagne	3.86	180	ePg	Pg	19 48 42.5	-0.9
LPL				eSg	Sg	19 49 32.7	-0.7
	comp=Z,5.1nm,0.4s						
LPL	La Plagne	3.86	180	ePg	Pg	19 48 42.5	-0.9
LPL				eSg	Sg	19 49 32.7	-0.7
	comp=Z,2.5nm,0.4s						
LPL	La Plagne	3.86	180	ePn	Pn	19 48 30.4	+0.3
LPL				ePg	Pg	19 48 42.5	-0.9
LPL				eSg	Sg	19 49 32.7	-0.7
LPG	La Plagne	3.88	180	ePn	Pn	19 48 29.9	-0.4
	SNR=1.0						
LPG				eSg	Sg	19 49 33.3	-0.7
	comp=Z,6.7nm,0.5s						
LPG	La Plagne	3.88	180	ePn	Pn	19 48 29.9	-0.4
	SNR=1.0						
LPG				eSg	Sg	19 49 33.3	-0.7
	comp=Z,3.3nm,0.5s						
WET	Wettzell	4.01	91	ePn	Pn	19 48 32.7	+0.5
	SNR=2.5						
TCF	Toulx Ste Croi	4.35	227	ePg	Pg	19 48 51.8	-1.1
	SNR=1.0						
TCF				eSg	Sg	19 49 47.7	-1.5
	comp=Z,14nm,0.6s,SNR=1.0						
TCF	Toulx Ste Croi	4.35	227	ePg	Pg	19 48 51.8	-1.1
	SNR=1.0						
TCF				eSg	Sg	19 49 47.7	-1.5
	comp=Z,6.9nm,0.6s,SNR=1.0						
TCF	Toulx Ste Croi	4.35	227	ePn	Pn	19 48 36.0	-0.8
TCF				ePg	Pg	19 48 51.8	-1.1
TCF				eSg	Sg	19 49 47.7	-1.5
CLL	Collm	4.44	62	eSg	Sg	19 49 50.0	-2.2
	comp=Z,5.0nm,1.1s						
KHC	Kasperske Hory	4.47	90	ePN	Pn	19 48 38.4	-0.1
KHC				ePG	Pg	19 48 54.5	-0.7
KHC				eSN	Sn	19 49 27.7	-3.5
KHC				eSG	Sg	19 49 51.4	-1.7
ORIF	Oris-en-Rattie	4.50	188	eSg	Sg	19 49 53.0	-0.9
	comp=Z,10nm,0.6s,SNR=1.0						
ORIF	Oris-en-Rattie	4.50	188	eSg	Sg	19 49 53.0	-0.9
	comp=Z,5.1nm,0.6s,SNR=1.0						
GEC2	GERESS Array S	4.59	94	ePn	Pn	19 48 40.6	+0.5
	SNR=9.2						
LDF	La Druitiere	4.60	263	ePg	Pg	19 48 56.5	-1.2
	SNR=1.0						
LDF				eSn	Sn	19 49 30.2	-4.2
	comp=Z,3.2nm,0.3s,SNR=1.0						
LDF	La Druitiere	4.60	263	ePg	Pg	19 48 56.5	-1.2
	SNR=1.0						
LDF				eSn	Sn	19 49 30.2	-4.2
	comp=Z,1.6nm,0.3s,SNR=1.0						
MBDF	Montbardon	4.64	180	eSg	Sg	19 49 57.4	-1.3
	comp=Z,5.3nm,0.7s						
MBDF	Montbardon	4.64	180	eSg	Sg	19 49 57.4	-1.3
	comp=Z,2.7nm,0.7s						
VIVF	Saint-Julien-l	4.74	198	eSg	Sg	19 49 59.9	-1.7
	comp=Z,8.8nm,0.6s,SNR=1.0						
VIVF	Saint-Julien-l	4.74	198	eSg	Sg	19 49 59.9	-1.7
	comp=Z,4.4nm,0.6s,SNR=1.0						
FLN	La Foliniere	4.80	265	ePn	Pn	19 48 42.9	-0.2
FLN				eSn	Sn	19 49 35.2	-4.2
	comp=Z,11nm,0.4s,SNR=1.0						
FLN	La Foliniere	4.80	265	ePn	Pn	19 48 42.9	-0.2
FLN				eSn	Sn	19 49 35.2	-4.2
	comp=Z,5.6nm,0.4s,SNR=1.0						
BRG	Berggiesshubel	4.86	69	PG	Pg	19 48 59.5	-3.1
BRG				SG	Sg	19 50 05.5	0.0
	comp=Z,3.2nm,0.9s						
PRU	Pruhonice	5.09	80	eSG	Sg	19 50 11.1	-1.8
GRR	Gorron	5.12	262	ePn	Pn	19 48 47.5	0.0
	SNR=1.0						
GRR				eSn	Sn	19 49 42.2	-5.1
	SNR=1.0						
GRR				eSg	Sg	19 50 10.8	-3.3
	comp=Z,6.5nm,0.4s,SNR=1.0						
GRR	Gorron	5.12	262	ePn	Pn	19 48 47.5	0.0
	SNR=1.0						
GRR				eSn	Sn	19 49 42.2	-5.1
	SNR=1.0						
GRR				eSg	Sg	19 50 10.8	-3.3
	comp=Z,3.2nm,0.4s,SNR=1.0						
CAF	Calviac	5.48	218	ePn	Pn	19 48 51.5	-0.9
CAF				eSg	Sg	19 50 23.5	-2.0
	comp=Z,4.7nm,0.4s						
CAF	Calviac	5.48	218	ePn	Pn	19 48 51.5	-0.9
CAF				eSg	Sg	19 50 23.5	-2.0
	comp=Z,2.3nm,0.4s						
SGMF	Saint Gilles	6.26	263	ePn	Pn	19 49 00.0	-3.1
	SNR=1.0						
SGMF				eSn	Sn	19 50 10.8	-4.4
	comp=Z,5.8nm,0.6s,SNR=1.0						
SGMF	Saint Gilles	6.26	263	ePn	Pn	19 49 00.0	-3.1
	SNR=1.0						
SGMF				eSn	Sn	19 50 10.8	-4.4
	comp=Z,2.9nm,0.6s,SNR=1.0						
QUIF	Quistinic	6.74	261	eSn	Sn	19 50 21.4	-5.7
	comp=Z,2.5nm,0.3s,SNR=1.0						
QUIF	Quistinic	6.74	261	eSn	Sn	19 50 21.4	-5.7
	comp=Z,1.2nm,0.3s,SNR=1.0						

*ISCJB **05** 19:48:06.5±0.5,1198S±007×166.13E±008,h25km, mb4.6/25,MS4.1/14,Error ellipse: s-maj=12.3km s-min=9.1km az=138.3*
*IDC **05** 19:48:06.5±4.7,1188S×16629E,h18km±27km,mb4.3/14, mb1 4.4/15,mb1mx4.3/20,mbtmp4.3/15,ML4.9/1,MS4.0/14, Ms1 4.0/14,ms1mx3.8/30,Error ellipse: s-maj=24.3km s-min=18.4km az=104.0*
*BJI **05** 19:48:08.2,1147S×16633E,h26km,mB5.2,mb4.9,Ms4.7, Msz4.5*
*NEIC **05** 19:48:10.1±2.6,1186S×16623E,h44km±20km,mb4.6/7, Error ellipse: s-maj=19.0km s-min=11.2km az=89.0*
*DJA **05** 19:48:44,1328S×16578E,h286km,mb4.6/7*
ISC 05 19:48:08.4±0.5**,1196S**±007×**16620E**±008**,h27km, h27km**±3.0km**:pP-P,n56,σ1§06**/39**,mb4.6**/25**,MS4.1**/14**, 1C-1D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.64	292	Pn	Pn	19 49 44.8	+0.5
	25nm,0.3s,baz=167,slow=5.6,SNR=20						
HNR				Sn	Sn	19 50 57.3	-1.8
	13nm,0.3s,baz=200,slow=15,SNR=3.9						
HNR				LR	LR	19 52 01.0	
	comp=Z,643nm,20.0s,baz=131,slow=35						
CTA	Charters Tower	20.79	245	eP	P	19 52 49.0	+1.3
	7.1nm,0.9s						
CTA	Charters Tower	20.79	245	P	P	19 52 49.0	+1.4
	7.6nm,0.8s,baz=87,slow=15,SNR=4.5						
CTA				LR	LR	19 59 51.1	
	comp=Z,466nm,20.4s,MS3.9,baz=59,slow=34						
AFI	Afiamalu	21.55	98	LR	LR	19 59 59.6	
	comp=Z,371nm,18.9s,MS3.8,baz=254,slow=33						
RAO	Raoul Island	22.69	142	LR	LR	20 00 28.6	

comp=Z,364nm,19.3s,MS3.8,baz=244,slow=33
ARMA Armidale 22.80 214 *e*P **P 19 53 12.5 +3.4**
STKA Stephens Creek 30.10 225 *e*P **P 19 54 16.8 +1.0**
3.4nm,0.8s,mb4.1
STKA Stephens Creek 30.10 225 P **P 19 54 17.3 +1.5**
2.4nm,0.9s,mb3.9,baz=47,slow=5.6,SNR=4.9
STKA LR LR 20 05 57.1
comp=Z,558nm,18.7s,MS4.2,baz=33,slow=35
WB2 Warramunga Arr 31.59 251 *e*P **P 19 54 28.3 -0.8**
WRA Warramunga Arr 31.60 251 P **P 19 54 28.5 -0.7**
1.7nm,0.6s,mb4.0,baz=84,slow=9.1,SNR=21
WRA PcP PcP 19 57 21.5 +0.2
5.8nm,0.9s,baz=78,slow=2.9,SNR=21
RPZ Rata Peaks 31.92 173 P **P 19 54 32.1 +0.4**
11nm,0.8s,mb4.8,baz=55,slow=4.9,SNR=5.4
ASAR Alice Springs 32.80 245 P **P 19 54 38.7 -1.0**
2.2nm,0.6s,mb4.2,baz=69,slow=9.5,SNR=46
ASAR PcP PcP 19 57 23.9 -0.6
7.3nm,0.9s,baz=81,slow=2.7,SNR=36
ASAR ScP ScP 20 01 07.5 +0.5
1.6nm,0.9s,baz=96,slow=2.3,SNR=8.0
GUMO Guam 33.04 320 LR LR 20 05 53.5
comp=Z,2μm,21.7s,MS4.7,baz=16,slow=32
FITZ Fitzroy Crossi 39.59 256 *e*P **P 19 55 37.9 +0.1**
6.0nm,0.8s,mb4.4
FITZ Fitzroy Crossi 39.59 256 P **P 19 55 37.5 -0.3**
3.4nm,1.0s,mb4.0,baz=72,slow=7.2,SNR=4.5
FITZ LR LR 20 11 26.1
comp=Z,234nm,19.2s,MS4.0,baz=77,slow=35
PPT Papeete 43.05 103 *e*S **S 20 02 46.8 +16**
117nm,25.0s
PPT *e*LR LR 20 08 36.8
233nm,22.5s,baz=285
PPT Papeete 43.05 103 LR LR 20 09 51.3
comp=Z,246nm,19.5s,MS4.1,baz=308,slow=30
MBWA Marble Bar 45.33 252 *e*P **P 19 56 24.3 -0.2**
KAPI Kappang 46.40 274 LR LR 20 14 45.3
comp=Z,84nm,20.2s,MS3.7,baz=94,slow=34
NWAO Narrogin (SRO) 49.33 237 LR LR 20 17 35.3
comp=Z,320nm,20.9s,MS4.3,baz=237,slow=36
TAOE Nuku Hiva Isla 52.80 92 *e*LR LR 20 13 06.6
867nm,24.7s
MJAR Matsushiro Arr 54.98 333 P **P 19 57 35.3 -2.0**
2.9nm,0.9s,mb4.3,baz=173,slow=8.8,SNR=5.1
RKT Rikitea 56.86 110 *e*LR LR 20 14 59.0
267nm,26.0s
KSRS Korea Array 60.88 326 P **P 19 58 18.0 -0.7**
2.2nm,0.7s,mb4.4,baz=136,slow=7.7,SNR=4.9
PETK Petropavlovsk- 65.21 354 LR LR 20 21 05.0
comp=Z,76nm,21.6s,MS3.9,baz=173,slow=30
CASY Casey 65.70 202 *e*P **P 19 58 49.9 -0.3**
14nm,1.3s,mb4.8
SBA Scott Base 65.89 180 *e*P **P 19 58 52.0 +0.7**
18nm,1.1s,mb5.0
CN2 Changchun 66.75 329 *e*P **P 19 58 57.3 0.0**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
BJI Beijing 69.47 321 P **P 19 59 15.0 +0.6**
BJI AMB AMB
comp=Z,21nm,1.0s,mb5.0
XAN Xi'an 71.06 312 P **P 19 59 24.7 +0.4**
XAN AP pP 19 59 30.3 -2.5
XAN AMB AMB
comp=Z,12nm,1.4s,mb4.6
XAN AMB AMB
comp=Z,94nm,6.9s
KMI Kunming 71.97 301 P **P 19 59 31.6 +1.6**
KMI AP pP 19 59 38.5 -0.1
KMI AMB AMB
comp=Z,8.0nm,1.6s,mb4.4
HHC Hu-ho-hao-te 72.81 320 *e*P **P 19 59 35.6 +0.9**
HHC AMB AMB
comp=Z,20nm,0.9s,mb5.0
HHC AMB AMB
comp=Z,156nm,6.8s
CMAR Chiang Mai Arr 72.88 294 P **P 19 59 36.8 +1.2**
comp=Z,2.8nm,0.9s,mb4.2,baz=118,slow=4.2,SNR=18
LZH Lanzhou 75.70 312 ⇓P **P 19 59 53.0 +1.4**
LZH AP pP 20 00 02.5 +2.3
LZH XP sP 20 00 06.7 +3.4
LZH AMB AMB
comp=Z,25nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,119nm,4.5s
ULN Ulaanbaatar 79.30 324 *e*P **P 20 00 11.5 0.0**
comp=Z,22nm,1.3s,mb4.9
SONM Songino Array 79.66 324 P **P 20 00 13.5 +0.1**
comp=Z,8.5nm,1.1s,mb4.6,baz=135,slow=5.3,SNR=26
GTA Gaotai 80.01 314 ⇑P **P 20 00 17.2 +1.7**
GTA AP pP 20 00 26.9 +2.7
GTA XP sP 20 00 30.3 +3.0
GTA AMB AMB
comp=Z,29nm,1.0s,mb5.2
GTA AMB AMB
comp=Z,96nm,3.9s
GTA LR LR
comp=N,90nm,14.9s,MS4.4
GTA LR LR
comp=E,116nm,15.5s,MS4.4
GTA LR LR
comp=Z,160nm,15.5s,MS4.5
LSA Lhasa 83.21 302 *e*P **P 20 00 34.2 +1.5**
comp=Z,3.7nm,0.8s,mb4.5
MAW Mawson 84.05 202 P **P 20 00 36.1 -0.1**
comp=Z,3.5nm,0.8s,mb4.5,baz=88,slow=5.8,SNR=7.6
MAW Mawson 84.05 202 *e*P **P 20 00 35.9 -0.4**
NVAR Mina Array Bea 86.27 50 P **P 20 00 47.1 -0.9**
comp=Z,0.3nm,0.6s,mb3.7,baz=224,slow=6.3,SNR=2.6
WMQ Urumqi 90.05 315 P **P 20 01 05.9 +0.1**
WMQ AMB AMB
comp=Z,12nm,1.2s,mb5.1
WMQ AMB AMB
comp=Z,102nm,4.2s
PDAR Pinedale Array 93.84 47 LR LR 20 36 33.8
comp=Z,54nm,20.1s,MS4.0,baz=62,slow=31
MKAR Makanchi Array 94.49 317 P **P 20 01 26.1 -0.1**
comp=Z,8.5nm,0.8s,mb5.2,baz=101,slow=6.3,SNR=65
ZALV Zalesovo Beam 94.55 324 P **P 20 01 25.2 -1.1**
comp=Z,0.6nm,0.3s,mb4.5,baz=126,slow=3.1,SNR=8.8
YKA Yellowknife Ar 95.58 27 LR LR 20 45 33.4
comp=Z,34nm,18.5s,MS3.9,baz=225,slow=36
TXAR Lajitas Array 95.87 61 LR LR 20 36 41.5
comp=Z,96nm,21.2s,MS4.2,baz=180,slow=30
SNAA Sanae 96.24 183 *e* **P 20 01 31.9 -2.0**
VNA3 Neumayer Olymp 96.95 181 *e* **P 20 01 35.5 -1.6**
VNA3 *e* 20 01 40.7
VNA1 Neumayer--Stat 97.50 182 *e* **P 20 01 38.4 -1.2**
VNA1 *e* 20 01 43.9
ARCES ARCESS Array B 117.33 345 PKP PKPdf 20 06 49.2 -1.7
comp=Z,2.1nm,0.8s,baz=35,slow=3.3,SNR=3.7
ARCES ARCESS Array B 117.33 345 PKP PKPdf 20 06 49.2 -1.7
BOSA Boshof 124.75 222 PKP PKPdf 20 07 05.9 -0.5
comp=Z,1.6nm,0.7s,baz=121,slow=5.9,SNR=4.0
MALT Malatya 126.77 309 *e*PKPdf PKPdf 20 07 10.1 +0.2
AKASG Malin Array Be 127.87 327 PKP PKPdf 20 07 11.2 -0.4
comp=Z,0.3nm,0.4s,baz=60,slow=1.1,SNR=4.2
TORD Torodi Ar. Bea 164.83 276 PKP PKPdf 20 08 09.4 -1.5
comp=Z,1.4nm,0.9s,baz=47,slow=2.1,SNR=5.6
TORD PKPab PKPab 20 09 06.8 -0.3
comp=Z,1.7nm,0.9s,baz=96,slow=4.1,SNR=5.2

IDC 05 20:06:42.4±1.7, 169N×12684E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/17, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=115.8km s-min=21.4km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.70 183**		P	Pn	20 11 13.8	-1.1
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=3.1						
WRA	**Warramunga Arr**	**22.72 161**		P	P	20 11 44.5	-1.6
	0.9nm,0.5s,baz=339,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**26.12 165**		P	P	20 12 19.5	+1.2
	0.4nm,0.4s,baz=348,slow=12,SNR=11						
MKAR	**Makanchi Array**	**59.29 326**		P	P	20 16 47.4	+1.5
	0.2nm,0.4s,baz=121,slow=7.4,SNR=2.2						
KURK	**Kurchatov**	**63.51 328**		P	P	20 17 13.0	-1.4
	0.2nm,0.5s,baz=128,slow=6.5,SNR=3.2						

IDC 05 20:10:42.1±3.7, 518S×14827E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.5/15, mbtmp3.6/3, Error ellipse: s-maj=113.6km s-min=45.8km az=112.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.98 222**		P	Pn	20 15 17.1	-0.7
	0.5nm,0.3s,baz=49,slow=12,SNR=22						
ASAR	**Alice Springs**	**23.01 216**		P	P	20 15 49.5	+0.7
	1.1nm,0.5s,baz=50,slow=8.7,SNR=19						
FITZ	**Fitzroy Crossi**	**25.57 238**		P	P	20 16 11.1	-1.9
	0.5nm,0.4s,baz=42,slow=12,SNR=5.1						
TORD	**Torodi Ar. Bea**	**146.10 286**		PKPbc	PKPbc	20 30 25.0	-0.2
	0.4nm,0.8s,baz=84,slow=4.0,SNR=3.0						

*ISCJB **05** 20:10:49.0±0.6, 2842N×004×568E±0.1, h10km, mb3.6/5, Error ellipse: s-maj=16.0km s-min=4.6km az=11.3*
*IDC **05** 20:10:48.0±1.2, 2822N×5669E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=39.3km s-min=29.9km az=148.0*
*THR **05** 20:10:51.5±0.3, 2844N×5657E, h14km±3km, ML3.1*
*CSEM **05** 20:10:52.0±0.1, 2847N×5641E, h35km, Ms4.0, Error ellipse: s-maj=10.0km s-min=2.7km az=107.0*
ISC 05 20:10:51.0±1.0, 2842N±004×567E±01, h12km±8km, n15, σ1§03/19, mb3.6/5, 1C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**1.11 203**		*e*Pg	**Pg**	**20 11 12.0**	**-0.3**
BNDS				*e*Sg	**Sg**	**20 11 27.1**	**+0.4**
BNDS				AML	AML	20 11 39.9	
	comp=N,665nm,0.5s						
BNDS	**Bandar-Abbas**	**1.11 203**		*e*Pg	**Pg**	**20 11 12.0**	**-0.3**
	SNR=90						
BNDS				*e*Sg	**Sg**	**20 11 27.1**	**+0.4**
	SNR=90						
KRBR	**Kerman**	**1.56 3**		*e*Pg	**Pg**	**20 11 20.1**	**-0.8**
KRBR				*e*Sg	**Sg**	**20 11 40.8**	**-0.3**
KRBR				AML	AML	20 11 56.5	
	comp=E,197nm,0.8s						
KRBR				AML	AML	20 11 58.6	
	comp=N,206nm,0.4s						
KRBR	**Kerman**	**1.56 3**		*e*Pg	**Pg**	**20 11 20.1**	**-0.8**
	SNR=90						
KRBR				*e*Sg	**Sg**	**20 11 40.8**	**-0.3**
	SNR=90						
BANOM	**Banah**	**2.51 187**		⇑P	**Pn**	**20 11 32.2**	**+0.6**
	SNR=31						
HATD	**Hatta, Dubai**	**3.61 188**		P	**Pn**	**20 11 45.9**	**-0.9**
FAQ	**Al Faqa, Dubai**	**3.79 195**		P	**Pn**	**20 11 49.4**	**+0.2**
	SNR=19						
ZHSF	**Zahedan**	**3.80 71**		*e*Pn	**Pn**	**20 11 52.6**	**+3.3**
ASUD	**Al Ashush, Dub**	**3.96 198**		P	**Pn**	**20 11 52.1**	**+0.5**
	SNR=27						
NASN	**Na'in**	**5.48 324**		*e*Pn	**Pn**	**20 12 14.4**	**+2.0**
BVAR	**Borovoye Array**	**26.59 19**		P	**P**	**20 16 29.8**	**+0.9**
	comp=N,0.3nm,0.5s,mb3.0,baz=208,slow=5.9,SNR=3.5						
ZALV	**Zalesovo Beam**	**32.76 31**		P	**P**	**20 17 23.7**	**+0.1**
	comp=N,0.7nm,0.4s,mb3.9,baz=227,slow=9.6,SNR=4.8						
TORD	**Torodi Ar. Bea**	**53.16 265**		P	**P**	**20 20 08.1**	**-1.1**
	comp=N,0.7nm,1.0s,mb3.6,baz=64,slow=7.6,SNR=10						
WRA	**Warramunga Arr**	**89.07 113**		P	**P**	**20 23 45.7**	**-0.7**
	comp=N,0.3nm,0.6s,mb3.8,baz=316,slow=3.8,SNR=4.2						
ASAR	**Alice Springs**	**90.61 117**		P	**P**	**20 23 51.4**	**-2.2**
	comp=N,0.3nm,0.7s,mb3.7,baz=317,slow=6.3,SNR=4.5						

IDC 05 20:11:56.0±8.5, 3356S×17858W, h76km±77km, mb3.7/3, mb1 3.8/4, mb1mx3.6/17, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=63.0km s-min=51.9km az=179.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**5.85 215**		P	Pn	20 13 20.8	+0.6
	1.5nm,0.3s,baz=299,slow=4.2,SNR=20						
URZ				S	Sn	20 14 25.8	0.0
	3.5nm,0.3s,baz=41,slow=23,SNR=6.7						
CTA	**Charters Tower**	**33.95 284**		P	P	20 18 32.6	+0.4
	5.7nm,1.1s,baz=148,slow=9.5,SNR=2.9						
ASAR	**Alice Springs**	**42.55 271**		P	P	20 19 44.5	+0.2
	0.5nm,0.5s,baz=109,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	**43.82 276**		P	P	20 19 54.2	-0.4
	0.7nm,0.3s,baz=116,slow=7.9,SNR=26						
NB2	**NORSAR Subarra**	**151.78 350**		PKP	PKPbc	20 31 43.0	+2.0
	comp=Z,0.8nm,0.6s,baz=15,slow=2.6						
NOA	**NORSAR Array B**	**151.78 350**		PKPbc	PKPbc	20 31 40.8	-0.3
	comp=Z,1.1nm,0.7s,baz=16,slow=4.2,SNR=3.8						

*NIED **05** 20:33:00, 2630N×12940E, h8km, Mw4.5 Best double couple: M◎5.66000×10^15 NP1:φ◎35.00000°, δ56.00000°, λ-95.00000°. NP2:φ◎223.00000°, δ35.00000°, λ-83.00000°.*
*JMA **05** 20:33:16.1±0.1, 2630N×12940E, h44km, M4.4*
JMA Felt I J1.
*MOS **05** 20:33:17.6±1.4, 2629N×12932E, h33km, mb4.7/16, Error ellipse: s-maj=14.5km s-min=6.9km az=116.1*
*ISCJB **05** 20:33:18.3±0.3, 2628N±003×12923E±003, h42km, mb4.4/38, MS3.9/17, Error ellipse: s-maj=5.2km s-min=3.8km az=151.1*
*BJI **05** 20:33:19.4, 2638N×12921E, h45km, mB4.7, mb4.6, Ms4.2, Msz4.0*
*IDC **05** 20:33:19.9±0.6, 2634N×129.17E, h41km±5km, mb4.0/13, mb1 4.1/14, mb1mx4.1/22, mbtmp4.0/14, ML3.6/1, MS3.7/12, Ms1 3.7/12, ms1mx3.4/35, Error ellipse: s-maj=17.7km s-min=7.3km az=46.0*
*NEIC **05** 20:33:20.9±0.4, 2616N×12902E, mb4.5/19, MW4.4(NIED), Error ellipse: s-maj=11.6km s-min=8.7km az=69.0*
NEIC Recorded [1 JMA] on Okinawa.
ISC 05 20:33:20.4±0.3, 2629N±004×12915E±003, h44km, h44km±1.3km:pP-P, n112, σ1§24/132, mb4.4/38, MS3.9/17, 2C-6D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**0.96 305**		P	**Pn**	**20 33 36.2**	**-1.2**
	4μm,0.3s,baz=125,slow=17,SNR=6400						
JOW				S	**Sn**	**20 33 48.9**	**-1.0**
	2μm,0.3s,baz=114,slow=19,SNR=38						
JOW	**Kunigami**	**0.96 305**		P	**Pn**	**20 33 36.1**	**-1.3**
JOW				S	**Sn**	**20 33 49.6**	**-0.3**
JJT2	**Tamagusuku 2**	**1.27 264**		P	**Pn**	**20 33 41.3**	**-0.4**
JJT2				S	**Sn**	**20 33 59.2**	**+1.6**
JIH	**Iheya**	**1.30 305**		P	**Pn**	**20 33 41.1**	**-1.0**
JIH				*e*S	**Sn**	**20 33 58.4**	**+0.2**
NAH1	**Naha**	**1.32 267**		P	**Pn**	**20 33 41.9**	**-0.4**
NAH1				S	**Sn**	**20 33 59.8**	**+1.1**
JTK	**Tokunoshima**	**1.50 353**		P	**Pn**	**20 33 42.0**	**-2.9**
JTK				*e*S	**Sn**	**20 33 59.2**	**-4.2**
JAGN	**Aguni-jima**	**1.74 280**		P	**Pn**	**20 33 47.9**	**-0.2**
JAGN				*e*S	**Sn**	**20 34 10.5**	**+1.4**
JMZ	**Minamidaito 2**	**1.92 104**		P	**Pn**	**20 33 43.9**	**-6.7**
JMZ				*e*S	**Sn**	**20 34 03.4**	**-10**
JKE	**Kume jima 2**	**2.12 272**		P	**Pn**	**20 33 52.4**	**-1.0**
JKE				*e*S	**Sn**	**20 34 18.4**	**-0.2**
JZK	**Kikaishima**	**2.15 20**		P	**Pn**	**20 33 50.1**	**-3.7**
JZK				S	**Sn**	**20 34 15.0**	**-4.2**
JAM	**Amami Oshima**	**2.16 11**		P	**Pn**	**20 33 49.8**	**-4.1**
JAM				*e*S	**Sn**	**20 34 14.5**	**-4.9**
JNN	**Nakanoshima**	**3.60 10**		P	**Pn**	**20 34 10.7**	**-3.0**
JNN				*e*S	**Sn**	**20 34 49.6**	**-5.3**
JOGS	**Gusukube**	**3.71 247**		P	**Pn**	**20 34 14.6**	**-0.6**
JOGS				*e*S	**Sn**	**20 34 57.2**	**-0.5**
JMJ	**Miyako jima 2**	**3.78 248**		P	**Pn**	**20 34 14.6**	**-1.6**
JMJ				*e*S	**Sn**	**20 34 59.8**	**+0.4**
JTJ	**Tarama**	**4.34 249**		P	**Pn**	**20 34 22.3**	**-1.6**
JTJ				*e*S	**Sn**	**20 35 10.8**	**-2.5**
JIJ	**Ishigaki jima**	**4.92 248**		P	**Pn**	**20 34 29.8**	**-2.0**
JIJ				*e*S	**Sn**	**20 35 24.0**	**-3.5**
JKRS	**Kuro-shima**	**5.08 247**		P	**Pn**	**20 34 33.4**	**-0.7**
IRIF	**Iriomote-Funau**	**5.28 250**		P	**Pn**	**20 34 34.7**	**-2.0**
IRIF				*e*S	**Sn**	**20 35 32.0**	**-4.3**
NACB	**Ninganchiao**	**7.16 255**		*e*P	**Pn**	**20 34 59.1**	**-3.4**
	114nm,1.8s						
YHNB	**Yeheng**	**7.21 259**		*e*P	**Pn**	**20 35 02.1**	**-1.1**
	40nm,0.8s						
KSRS	**Korea Array**	**11.18 355**		P	**Pn**	**20 35 57.4**	**-0.2**
	0.4nm,0.3s,baz=174,slow=13,SNR=11						
KSRS				LR	LR	20 40 43.4	
	comp=Z,250nm,18.7s,baz=178,slow=40						
MJAR	**Matsushiro Arr**	**12.81 35**		P	**Pn**	**20 36 24.6**	**+4.7**
	0.1nm,0.3s,baz=224,slow=10,SNR=3.5						
BJT	**Baijiatuao**	**17.46 325**		*e*P	**Pn**	**20 37 21.0**	**+0.4**
BJT				pmax	pmax		
	comp=Z,31nm,0.6s						
BJT	**Baijiatuao**	**17.46 325**		*e*P	**Pn**	**20 37 21.0**	**+0.4**
	comp=Z,31nm,0.6s						
BJI	**Beijing**	**17.47 325**		P	**Pn**	**20 37 21.5**	**+0.8**
BJI				AMB	AMB		
	comp=Z,44nm,0.7s						
BJI				AMB	AMB		
	comp=Z,278nm,3.8s						
BJI				LR	LR		
	comp=N,431nm,12.0s						
BJI				LR	LR		
	comp=E,332nm,15.5s						
BJI				LR	LR		
	comp=Z,244nm,24.7s						
BJI	**Beijing**	**17.47 325**		P	**Pn**	**20 37 21.5**	**+0.8**
	comp=Z,44nm,0.7s						
XAN	**Xi'an**	**19.11 299**		P	**Pn**	**20 37 40.0**	**-0.6**
XAN				AP	pP	20 37 48.6	-1.5
XAN				S	**S**	**20 41 13.3**	**-0.5**
XAN				AMB	AMB		
	comp=Z,25nm,0.6s						
XAN				AMB	AMB		
	comp=Z,127nm,9.3s						
XAN				LR	LR		
	comp=N,212nm,14.0s						
XAN				LR	LR		
	comp=E,82nm,13.2s						
XAN				LR	LR		
	comp=Z,383nm,17.1s						
QIZ	**Qiongzhong**	**19.21 252**		P	**Pn**	**20 37 43.4**	**+1.3**
QIZ				S	**S**	**20 41 16.7**	**+0.5**
QIZ				LR	LR		
	comp=N,350nm,18.1s						
QIZ				LR	LR		
	comp=Z,263nm,18.9s						
GUMO	**Guam**	**19.41 128**		LR	LR	20 44 57.8	
	comp=Z,153nm,19.7s,baz=282,slow=36						
ASAJ	**Asahikawa**	**20.86 28**		P	**P**	**20 37 57.4**	**-1.1**
	comp=Z,8.7nm,0.7s,baz=216,slow=16,SNR=16						
ASAJ				LR	LR	20 46 02.6	
	comp=Z,193nm,21.1s,MS3.5,baz=192,slow=37						
ASAJ	**Asahikawa**	**20.86 28**		P	**P**	**20 37 57.4**	**-1.1**
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ASAJ				MLR	MLR		
	comp=Z,193nm,21.1s						
KLR	**Kul'dur**	**23.00 4**		*e*P	**P**	**20 38 16.6**	**-4.6**
YSS	**Yuzh-Sakhalins**	**23.27 24**		*e*P	**P**	**20 38 24.0**	**-0.1**
YSS				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.5						
YSS	**Yuzh-Sakhalins**	**23.27 24**		*e*P	**P**	**20 38 22.4**	**-1.7**
	comp=Z,29nm,1.0s,mb4.7						
LZH	**Lanzhou**	**23.70 300**		*e*P	**P**	**20 38 27.0**	**-1.2**
LZH				AP		20 38 39.1	
LZH				XP	sP	20 38 45.3	+0.1
LZH				PP		20 39 00.9	
LZH				*e*S	**S**	**20 42 38.0**	**-2.0**
LZH				XS	sS	20 42 53.1	-6.5
LZH				*e*SS		20 43 29.2	
LZH				AMB	AMB		
	comp=Z,19nm,1.1s,mb4.4						
LZH				AMB	AMB		
	comp=Z,75nm,4.3s						
LZH				LR	LR		
	comp=E,426nm,13.4s						
LZH				LR	LR		
	comp=Z,583nm,14.5s,MS4.2						
LZH	**Lanzhou**	**23.70 300**		*e*P	**P**	**20 38 27.0**	**-1.2**
LZH				*PP		20 38 39.1	
LZH						20 39 00.9	
LZH				*e*S	**S**	**20 42 38.0**	**-2.0**
LZH				*SS	sS	20 42 53.1	-6.5
LZH				*eSS		20 43 29.2	
LZH				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.4						
LZH				MLR	MLR		
	comp=Z,580nm,14.5s,MS4.2						
LZH	**Lanzhou**	**23.70 300**		*e*P	**P**	**20 38 27.0**	**-1.2**
	comp=Z,19nm,1.1s,mb4.4						
LZH				pP		20 38 39.1	
LZH				sP	sP	20 38 45.3	+0.1
LZH				PP		20 39 00.9	
LZH				*e*S	**S**	**20 42 38.0**	**-2.0**
LZH				*sS	sS	20 42 53.1	-6.5
LZH				*eSS		20 43 29.2	
LZH				LR	LR		
	comp=Z,580nm,14.5s,MS4.2						
KMI	**Kunming**	**23.82 273**		P	**P**	**20 38 32.4**	**+3.0**
KMI				XP	sP	20 38 41.5	-4.9
KMI				S	**S**	**20 42 43.2**	**+1.1**
KMI				XS	sS	20 42 53.8	-7.9
KMI				SS		20 43 33.1	
KMI				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.3						
KMI				AMB	AMB		
	comp=Z,152nm,4.3s						
KMI				LR	LR		
	comp=N,267nm,10.2s,MS4.1						
KMI				LR	LR		
	comp=E,313nm,12.7s,MS4.1						
KMI				LR	LR		
	comp=Z,380nm,13.0s,MS4.0						
KMI	**Kunming**	**23.82 273**		P	**P**	**20 38 32.4**	**+3.0**
KMI				*SP	sP	20 38 41.5	-4.9
KMI				PPP		20 39 15.4	
KMI				S	**S**	**20 42 43.2**	**+1.1**
KMI				*SS	sS	20 42 53.8	-7.9
KMI				SS		20 43 33.1	
KMI				SSS		20 43 48.8	
KMI				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.3						
KMI				MLR	MLR		
	comp=Z,380nm,13.0s,MS4.0						
KMI	**Kunming**	**23.82 273**		P	**P**	**20 38 32.4**	**+3.0**
	comp=Z,14nm,1.0s,mb4.3						
KMI				sP	sP	20 38 41.5	-4.9
KMI				PPP		20 39 15.4	
KMI				S	**S**	**20 42 43.2**	**+1.1**
KMI				sS	sS	20 42 53.8	-7.9
KMI				SS		20 43 33.1	
KMI				SSS		20 43 48.8	
KMI				LR	LR		
	comp=Z,380nm,13.0s,MS4.0						
ULN	**Ulaanbaatar**	**27.66 327**		*e*P	**P**	**20 39 06.5**	**+2.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**27.66 327**		*e*P	**P**	**20 39 06.5**	**+2.6**
	comp=Z,3.1nm,0.8s,mb4.0						
GTA	**Gaotai**	**27.77 305**		*e*P	**P**	**20 39 04.7**	**-0.3**
GTA				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.6						
GTA				AMB	AMB		
	comp=Z,58nm,4.2s						
GTA				LR	LR		
	comp=N,339nm,16.1s,MS4.1						
GTA				LR	LR		
	comp=E,237nm,15.8s,MS4.1						
GTA				LR	LR		
	comp=Z,401nm,14.0s,MS4.2						
SONM	**Songino Array**	**27.96 326**		P	**P**	**20 39 06.6**	**0.0**
	comp=Z,1.9nm,0.5s,mb4.0,baz=144,slow=11,SNR=17						
SONM				LR	LR	20 51 19.6	
	comp=Z,107nm,18.2s,MS3.5,baz=320,slow=39						
CMAR	**Chiang Mai Arr**	**28.95 261**		P	**P**	**20 39 17.6**	**+1.9**
	comp=Z,0.9nm,0.9s,mb3.5,baz=67,slow=8.1,SNR=7.3						
CMAR				PcP	PcP	20 42 25.0	+1.1
	comp=Z,0.3nm,0.4s,baz=46,slow=2.6,SNR=4.2						
CMAR				LR	LR	20 53 13.9	
	comp=Z,108nm,18.4s,MS3.5,baz=80,slow=41						
CMAR	**Chiang Mai Arr**	**28.95 261**		P	**P**	**20 39 17.7**	**+2.0**
CMAR						20 42 25.0	
SHL	**Shillong**	**33.45 277**		*ex*	x	20 40 08.5	
YAK	**Yakutsk**	**35.74 0**		*e*P	**P**	**20 40 12.4**	**-2.2**
YAK				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.7						
YAK				pmax	pmax		
	comp=N,8.0nm,1.5s						
SEY	**Seymchan**	**39.73 16**		⇑*i*P	**P**	**20 40 51.0**	**+2.7**
MKAR	**Makanchi Array**	**42.12 312**		P	**P**	**20 41 08.0**	**-0.2**
	comp=N,0.6nm,0.3s,mb3.7,baz=93,slow=9.2,SNR=7.4						
MKAR				LR	LR	20 59 58.1	
	comp=N,81nm,20.8s,MS3.6,baz=165,slow=38						
ZALV	**Zalesovo Beam**	**42.71 322**		P	**P**	**20 41 11.8**	**-1.0**
	comp=N,1.4nm,0.4s,mb4.0,baz=112,slow=9.1,SNR=8.1						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
ZALV				PcP	PcP	20 43 03.2	-0.7
	comp=N,0.9nm,0.6s,baz=116,slow=3.4,SNR=4.3						
ZALV				LR	LR	21 00 43.4	
	comp=N,82nm,19.3s,MS3.6,baz=260,slow=38						
ZALV	**Zalesovo Beam**	**42.71**	**322**	P	**P**	**20 41 11.8**	**-1.0**
ZALV				PcP	PcP	20 43 03.2	-0.7
ZALV				LR	LR	21 00 43.4	
ZAL	**Zalesovo**	**42.71**	**322**	P	**P**	**20 41 11.9**	**-1.0**
ZAL						20 43 03.2	
FITZ	**Fitzroy Crossi**	**44.25**	**185**	*e*P	**P**	**20 41 25.5**	**-0.1**
	comp=N,7.1nm,0.8s,mb4.5						
KURK	**Kurchatov**	**45.35**	**316**	*e*P	**P**	**20 41 33.3**	**-0.8**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
KURK	**Kurchatov**	**45.35**	**316**	*e*P	**P**	**20 41 33.3**	**-0.7**
	comp=Z,3.1nm,0.9s,mb4.1						
WRA	**Warramunga Arr**	**46.23**	**173**	P	**P**	**20 41 40.3**	**-0.9**
	comp=Z,12nm,1.3s,mb4.7,baz=352,slow=8.4,SNR=19						
WRA				pP	pP	20 41 53.0	-0.6
	comp=Z,3.3nm,0.5s,baz=353,slow=8.3,SNR=11						
WB2	**Warramunga Arr**	**46.23**	**173**	*e*P	**P**	**20 41 40.2**	**-1.0**
WB2				*e*	pP	20 41 53.0	-0.6
TKM2	**Tokmak 2**	**46.32**	**305**	*e*P	**P**	**20 41 44.8**	**+2.9**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
TKM2	**Tokmak 2**	**46.32**	**305**	*e*P	**P**	**20 41 44.8**	**+3.0**
	comp=Z,6.0nm,0.8s,mb4.6						
UCH	**Uchtor**	**47.09**	**304**	*e*P	**P**	**20 41 51.0**	**+3.0**
	comp=Z,471nm,0.6s						
UCH				*e*pP	pP	20 42 00.7	+0.4
BILL	**Bilibino**	**47.36**	**18**⇑	*e*P	**P**	**20 41 49.3**	**-0.3**
BILL				*e*	pP	20 42 01.9	0.0
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
AML	**Almayashu**	**47.70**	**304**	*e*P	**P**	**20 41 53.4**	**+0.8**
	comp=Z,2.1nm,0.6s,mb4.3						
CTA	**Charters Tower**	**48.99**	**159**	P	**P**	**20 42 02.7**	**0.0**
	baz=340,slow=8.9						
CTA	**Charters Tower**	**48.99**	**159**	P	**P**	**20 42 02.7**	**0.0**
ASAR	**Alice Springs**	**49.87**	**174**	P	**P**	**20 42 08.9**	**-0.4**
	comp=Z,2.7nm,0.9s,mb4.3,baz=352,slow=7.2,SNR=21						
ASAR				pP	pP	20 42 21.8	0.0
	comp=Z,2.5nm,0.5s,baz=4.5,slow=14,SNR=14						
BRVK	**Borovoye**	**50.85**	**318**	*e*P	**P**	**20 42 15.8**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BRVK	**Borovoye**	**50.85**	**318**	*e*P	**P**	**20 42 15.8**	**-0.7**
	comp=Z,3.8nm,0.8s,mb4.4						
KBL	**Kabul**	**51.84**	**294**	*e*P	**P**	**20 42 26.2**	**+2.0**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
KBL	**Kabul**	**51.84**	**294**	*e*P	**P**	**20 42 26.2**	**+2.0**
	comp=Z,8.9nm,0.7s,mb4.8						
SVE	**Sverdlovsk**	**56.72**	**322**	*e*P	**P**	**20 43 00.3**	**+0.9**
SVE				*e*S	**S**	**20 50 47.6**	**-1.1**
SVE				*e*		20 52 46.1	
SVE				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
SVE				MLR	MLR		
	comp=Z,455nm,16.0s,MS4.7						
ARU	**Arti**	**57.86**	**322**	*d i*P	**P**	**20 43 07.0**	**-0.4**
ARU				*e*		20 45 14.7	
ARU				*e*S	**S**	**20 50 59.5**	**-4.2**
ARU				pmax	pmax		
	comp=Z,13nm,2.5s,mb4.5						
ARU				MLR	MLR		
	comp=Z,216nm,15.0s,MS4.4						
ARU	**Arti**	**57.86**	**322**	*e*P	**P**	**20 43 07.3**	**-0.1**
	comp=Z,5.0nm,1.0s,mb4.5						
AKTO	**Aktyubinsk**	**58.38**	**315**	LR	LR	21 10 24.2	
	comp=Z,51nm,18.2s,MS3.7,baz=85,slow=38						
STKA	**Stephens Creek**	**59.04**	**168**	P	**P**	**20 43 15.3**	**-0.5**
	comp=Z,2.2nm,0.9s,mb4.2,baz=338,slow=14,SNR=2.9						
STKA				pP	pP	20 43 28.1	-0.4
	comp=Z,1.0nm,0.6s,baz=14,slow=10.0,SNR=1.6						
COLA	**College**	**63.58**	**28**	*e*P	**P**	**20 43 50.3**	**+4.2**
GNI	**Garni**	**69.52**	**305**	LR	LR	21 20 04.6	
	comp=Z,50nm,18.7s,MS3.8,baz=269,slow=40						
KEV	**Kevo**	**69.69**	**339**	*e*p	**P**	**20 44 26.7**	**+1.7**
	comp=Z,0.3nm,0.4s,mb3.6						
KIV	**Kislovodsk**	**69.84**	**310**	κ*e*P	**P**	**20 44 28.0**	**+1.5**
KIV				*i*		20 44 35.0	
KIV				*i*	pP	20 44 40.1	+0.7
KIV				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
KIV				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.1						
KIV	**Kislovodsk**	**69.84**	**310**	*e*P	**P**	**20 44 27.3**	**+0.9**
	comp=Z,21nm,0.9s,mb5.1						
ARCES	**ARCESS Array B**	**70.26**	**339**	LR	LR	21 22 14.7	
	comp=Z,56nm,21.3s,MS3.8,baz=101,slow=42						
OBN	**Obninsk**	**70.29**	**322**	P	**P**	**20 44 30.0**	**+1.0**
OBN				*e*		20 44 36.0	
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
JOF	**Joensuu**	**70.39**	**331**	*e*p	**P**	**20 44 25.4**	**-4.1**
	comp=Z,0.7nm,0.4s,mb3.9						
MIB	**Mutribah**	**70.80**	**294**	*e*P	**P**	**20 44 33.2**	**+0.6**
	baz=294						
MIB				AML	AML	20 44 35.0	
	comp=Z,20nm,1.5s,baz=294						
RDF	**Al-Radifah**	**70.92**	**293**	*e*P	**P**	**20 44 34.2**	**+0.9**
	baz=293						
RDF				AMb	AMB	20 44 47.4	
	comp=Z,33nm,0.9s,mb5.3,baz=293						
NAY	**Al-Naaiem**	**71.06**	**294**	*e*P	**P**	**20 44 34.6**	**+0.5**
	baz=293						
NAY				AMb	AMB	20 44 50.4	
	comp=Z,11nm,0.9s,mb4.8,baz=293						
ANN	**Anapa**	**73.14**	**312**	*e*P	**P**	**20 44 42.4**	**-3.9**
ANN				pmax	pmax		
	comp=Z,49nm,1.3s,mb5.3						
MALT	**Malatya**	**74.75**	**305**	*e*P	**P**	**20 44 57.8**	**+1.9**
MALT				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
MALT	**Malatya**	**74.75**	**305**	*e*P	**P**	**20 44 57.8**	**+1.9**
	comp=Z,5.7nm,1.2s,mb4.4						
SIM	**Simferopol'**	**75.28**	**313**	*e*P	**P**	**20 45 00.2**	**+1.4**
SIM				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
AKASG	**Malin Array Be**	**76.03**	**320**	P	**P**	**20 45 02.9**	**-0.1**
	comp=Z,1.1nm,0.5s,mb4.1,baz=52,slow=6.1,SNR=8.2						
AKASG				pP	pP	20 45 15.2	-0.8
	comp=Z,3.0nm,0.5s,baz=60,slow=6.4,SNR=6.2						
BR131	**Keskin Array S**	**77.65**	**308**	*e*P	**P**	**20 45 13.4**	**+1.1**
	comp=Z,3.0nm,0.8s,mb4.3						
YKA	**Yellowknife Ar**	**78.12**	**25**	pP	pP	20 45 24.3	-3.3
	comp=Z,1.1nm,0.6s,baz=303,slow=5.7,SNR=3.9						
HFS	**Hagfors**	**79.16**	**333**	LR	LR	21 21 00.9	
	comp=Z,100nm,18.1s,MS4.2,baz=50,slow=36						
NB2	**NORSAR Subarra**	**79.63**	**334**	P	**P**	**20 45 22.3**	**-0.5**
	comp=Z,2.0nm,0.8s,mb4.1,baz=52,slow=5.6						
NOA	**NORSAR Array B**	**79.63**	**334**	P	**P**	**20 45 22.1**	**-0.7**
	comp=Z,3.8nm,0.8s,mb4.4,baz=51,slow=5.5,SNR=9.0						
NOA				pP	pP	20 45 34.0	-1.9
	comp=Z,3.5nm,0.9s,baz=51,slow=5.6,SNR=4.4						
NOA				LR	LR	21 24 49.8	
	comp=Z,60nm,18.4s,MS4.0,baz=40,slow=39						
NOA	**NORSAR Array B**	**79.63**	**334**	P	**P**	**20 45 22.1**	**-0.7**
NOA				*PP	pP	20 45 34.1	-1.8
OJC	**Ojcow**	**81.58**	**322**	*e*P	**P**	**20 45 34.5**	**+1.1**
OKC	**Ostrava-Krasne**	**82.69**	**322**	*e*P	**P**	**20 45 40.8**	**+1.6**
VYHS	**Vyhne**	**83.02**	**321**	*e*P	**P**	**20 45 42.3**	**+1.3**
DPC	**Dobruska-Polom**	**83.39**	**324**	*e*P	**P**	**20 45 44.2**	**+1.3**
MODS	**Modra-Piesok**	**83.96**	**322**	*e*P	**P**	**20 45 47.8**	**+2.0**
PRU	**Pruhonice**	**84.55**	**324**	*e*P	**P**	**20 45 49.3**	**+0.5**
CLL	**Collm**	**84.58**	**326**⇓	*i*P	**P**	**20 45 49.5**	**+0.6**
CLL				*i*	pP	20 46 01.8	-0.3
CLL				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
CLL	**Collm**	**84.58**	**326**⇓	*i*P	**P**	**20 45 49.5**	**+0.6**
	comp=Z,9.0nm,1.1s,mb4.8						
CLL				*i* PcP	PcP	20 45 54.3	+1.9
CLL				*i* pP	pP	20 46 01.8	-0.3
CLL				*e*sP	sP	20 46 09.0	+1.9
CLL	**Collm**	**84.58**	**326**⇓	*i*P	**P**	**20 45 49.5**	**+0.6**
	comp=Z,9.0nm,1.1s,mb4.8						
CLL				*i*		20 45 54.3	
CLL				*i*	pP	20 46 01.8	-0.3
KHC	**Kasperske Hory**	**85.55**	**324**	*e*P	**P**	**20 45 55.2**	**+1.4**
GERES	**GERESS Array B**	**85.65**	**323**	P	**P**	**20 45 54.9**	**+0.6**
	comp=Z,1.4nm,0.9s,mb4.2,baz=67,slow=3.5,SNR=7.6						
GERES				pP	pP	20 46 07.9	+0.3
	comp=Z,0.9nm,0.7s,baz=46,slow=7.6,SNR=4.8						
SFJD	**Kangerlussuaq**	**87.01**	**360**	P	**P**	**20 46 00.1**	**-0.6**
	comp=Z,6.7nm,0.7s,mb5.0,baz=306,slow=8.7,SNR=3.6						
PDAR	**Pinedale Array**	**92.60**	**39**	P	**P**	**20 46 27.0**	**-0.3**
	comp=Z,1.0nm,1.0s,mb4.2,baz=298,slow=3.2,SNR=4.3						
AGMN	**Agassiz Refuge**	**95.51**	**28**	*e*P	**P**	**20 46 41.1**	**+0.6**
	comp=Z,20nm,1.3s,mb5.4						
ANMO	**Albuquerque**	**99.52**	**43**	*e*P	**P**	**20 47 05.0**	**+6.1**

IDC 05 20:54:55.7±2.4**, 1121N**×**8582W, h0^{km}, mb3.8**/2**, mb1 4.2**/3**, mb1mx3.7**/20**, mbtmp3.8**/3**, ML3.4**/1**, MS3.3**/4**, Ms1 3.3**/4**, ms1mx2.8**/36**, Error ellipse: s-maj=180.2km s-min=44.2km az=39.0, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	**Tepich**	**9.27**	**346**	LR	LR	21 01 22.9	
	comp=Z,179nm,19.6s,baz=23,slow=42						
CMIG	**Matias Romero**	**10.55**	**305**	Pn	Pn	20 57 26.2	-2.1
	0.3nm,0.3s,baz=185,slow=11,SNR=4.5						
ROSC	**El Rosal**	**13.01**	**118**	LR	LR	21 01 54.3	
	comp=Z,66nm,21.5s,baz=130,slow=32						
ATAH	**Atahualpa**	**19.54**	**157**	LR	LR	21 06 08.9	
	comp=Z,108nm,19.4s,baz=111,slow=34						
TXAR	**Lajitas Array**	**24.54**	**320**	P	P	21 00 16.8	-0.4
	1.7nm,0.7s,baz=132,slow=10,SNR=6.8						
TXAR				PcP	PcP	21 03 55.4	-0.3
	0.3nm,0.8s,baz=134,slow=3.9,SNR=3.8						
NVAR	**Mina Array Bea**	**39.68**	**319**	P	P	21 02 31.5	+1.8
	2.3nm,1.1s,baz=129,slow=7.1,SNR=6.5						
SFJD	**Kangerlussuaq**	**60.48**	**15**	LR	LR	21 30 35.8	
	comp=Z,60nm,19.3s,baz=60,slow=35						
WRA	**Warramunga Arr**	**140.44**	**252**	PKP	PKPdf	21 14 28.5	+0.6
	0.4nm,0.8s,baz=86,slow=1.1,SNR=5.0						
CMAR	**Chiang Mai Arr**	**150.15**	**351**	PKPbc	PKPbc	21 14 48.6	-0.9
	1.2nm,0.9s,baz=325,slow=2.3,SNR=7.5						

*ISCJB **05** 21:14:43.5±1.6, 732S±006×129.19E±007, h127^{km}±16^{km}, mb4.0/14, Error ellipse: s-maj=13.6km s-min=8.3km az=145.4*
*IDC **05** 21:14:44.5±3.5, 729S×12896E, h114^{km}±34^{km}, mb3.7/13, mb1 3.8/16, mb1mx3.8/20, mbtmp3.8/16, Error ellipse: s-maj=23.2km s-min=12.8km az=78.0*
*NEIC **05** 21:14:45.8±1.6, 734S×12901E, h129^{km}±16^{km}, mb4.5/6, Error ellipse: s-maj=15.5km s-min=10.2km az=71.0*
ISC 05 21:14:43.7±1.5**, 731S**±007×**12923E**±007**, h110**^{km}±15^{km}**, n36, σ0^{s}90**/41**, mb4.0**/14**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.21**	**242**	P	**Pn**	**21 16 16.3**	**+3.4**
	36nm,0.3s,baz=80,slow=2.2,SNR=32						
BATI				S	**Sn**	**21 17 22.9**	**+0.4**
	58nm,0.3s,baz=75,slow=20,SNR=13						
KAKA	**Kakadu**	**6.23**	**150**⇓	*i*P	**Pn**	**21 16 18.9**	**+5.7**
	389nm,0.6s						
KAKA				*e*S	**Sn**	**21 17 21.7**	**-1.4**
FITZ	**Fitzroy Crossi**	**11.28**	**198**	*e*P	**Pn**	**21 17 21.7**	**+0.1**
	6.9nm,0.3s						
FITZ				*e*S	**Sn**	**21 19 17.0**	**-8.8**
FITZ	**Fitzroy Crossi**	**11.28**	**198**	P	**Pn**	**21 17 21.3**	**-0.4**
	1.2nm,0.3s,baz=32,slow=12,SNR=39						
FITZ				S	**Sn**	**21 19 17.4**	**-8.5**
	4.6nm,0.3s,baz=77,slow=23,SNR=14						
WRAB	**Tennant Creek**	**13.50**	**159**	*e*Pn	**Pn**	**21 17 50.8**	**0.0**
	13nm,0.6s						
WRAB				*e*Sn	**Sn**	**21 20 13.5**	**-6.0**
WRA	**Warramunga Arr**	**13.50**	**159**	P	**Pn**	**21 17 51.1**	**+0.3**
	2.6nm,0.3s,baz=328,slow=14,SNR=51						
WRA				S	**Sn**	**21 20 14.3**	**-5.3**
	5.5nm,0.3s,baz=327,slow=23,SNR=15						
WB2	**Warramunga Arr**	**13.51**	**159**	*e*P	**Pn**	**21 17 51.1**	**+0.2**
WB2				*e*S	**Sn**	**21 20 08.8**	**-11**
MBWA	**Marble Bar**	**16.55**	**213**	*e*Pn	**Pn**	**21 18 29.1**	**-0.2**
	3.7nm,0.4s						
MBWA				*e*Sn	**Sn**	**21 21 18.1**	**-15**
ASAR	**Alice Springs**	**16.87**	**165**	P	**Pn**	**21 18 36.4**	**+3.1**
	1.8nm,0.3s,baz=341,slow=10,SNR=119						
ASAR				S	**S**	**21 21 35.0**	**-6.7**
	1.4nm,0.3s,baz=200,slow=27,SNR=5.4						
KKM	**Kota Kinabalu**	**18.56**	**315**	*e*P	**P**	**21 18 51.2**	**-0.9**
CTA	**Charters Tower**	**20.83**	**129**	P	**P**	**21 19 20.9**	**+4.2**
	2.2nm,0.5s,baz=293,slow=13,SNR=2.8						
FORT	**Forrest**	**23.38**	**183**	*e*P	**P**	**21 19 41.6**	**-0.9**
	30nm,0.5s,mb4.9						
KLBR	**Kellerberrin**	**26.43**	**202**	*e*P	**P**	**21 20 10.2**	**0.0**
	12nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**27.03**	**156**	*e*P	**P**	**21 20 17.0**	**+1.4**
	3.7nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**27.03**	**156**	P	**P**	**21 20 16.9**	**+1.3**
	4.2nm,0.5s,mb4.2,baz=334,slow=7.0,SNR=19						
STKA	**Stephens Creek**	**27.03**	**156**	*e*P	**P**	**21 20 16.9**	**+1.3**
	4.0nm,0.4s,mb4.3						
MUN	**Mundaring**	**27.38**	**205**	*e*P	**P**	**21 20 18.6**	**-0.2**
NWAO	**Narrogin (SRO)**	**27.82**	**202**	P	**P**	**21 20 22.3**	**-0.3**
	3.4nm,0.6s,mb4.0,baz=25,slow=13,SNR=5.1						
NWAO	**Narrogin (SRO)**	**27.82**	**202**	P	**P**	**21 20 22.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**39.34**	**311**	P	**P**	**21 22 02.2**	**-0.3**
	0.7nm,0.5s,mb3.7,baz=138,slow=7.5,SNR=7.7						
MJAR	**Matsushiro Arr**	**44.42**	**10**	P	**P**	**21 22 43.1**	**-0.4**
	1.7nm,0.9s,mb3.8,baz=187,slow=9.9,SNR=3.1						
ASAJ	**Asahikawa**	**52.59**	**12**	P	**P**	**21 23 46.9**	**+0.8**
	1.1nm,0.3s,mb4.3,baz=270,slow=15,SNR=4.0						
SONM	**Songino Array**	**58.49**	**342**	P	**P**	**21 24 28.8**	**+0.6**
	0.4nm,0.6s,mb3.6,baz=139,slow=6.8,SNR=3.2						
PETK	**Petropavlovsk-**	**64.85**	**19**	P	**P**	**21 25 12.3**	**+1.5**
	2.1nm,0.6s,mb4.1,baz=197,slow=3.0,SNR=3.1						
PETK	**Petropavlovsk-**	**64.85**	**19**	P	**P**	**21 25 12.3**	**+1.5**
MKAR	**Makanchi Array**	**68.06**	**327**	P	**P**	**21 25 31.1**	**-0.3**
	1.8nm,0.4s,mb4.2,baz=120,slow=8.6,SNR=24						
ZALV	**Zalesovo Beam**	**71.52**	**334**	P	**P**	**21 25 50.5**	**-2.0**
	0.9nm,0.6s,mb3.8,baz=130,slow=6.5,SNR=4.8						
KURK	**Kurchatov**	**72.38**	**329**	P	**P**	**21 25 57.0**	**-0.7**
	1.6nm,0.5s,mb4.1,baz=129,slow=5.0,SNR=16						
KURK	**Kurchatov**	**72.38**	**329**	P	**P**	**21 25 57.0**	**-0.7**
MAW	**Mawson**	**74.39**	**201**	P	**P**	**21 26 09.4**	**+0.2**
	1.1nm,0.5s,mb3.8,baz=66,slow=7.0,SNR=6.8						
BVAR	**Borovoye Array**	**77.91**	**328**	P	**P**	**21 26 29.6**	**+0.2**
	0.3nm,0.4s,mb3.3,baz=117,slow=8.4,SNR=4.0						
TAOE	**Nuku Hiva Isla**	**89.51**	**99**	P	**P**	**21 27 29.5**	**+0.2**
CPUP	**Villa Florida**	**145.96**	**169**	PKPbc	PKPbc	21 34 10.0	-1.3
	0.8nm,0.4s,baz=148,slow=3.0,SNR=3.5						
CPUP	**Villa Florida**	**145.96**	**169**	PKPbc	PKPbc	21 34 10.0	-1.3
LPAZ	**La Paz**	**150.94**	**144**	PKPbc	PKPbc	21 34 26.0	+1.5
	0.8nm,0.4s,baz=243,slow=1.8,SNR=7.4						
LPAZ	**La Paz**	**150.94**	**144**	PKPbc	PKPbc	21 34 26.0	+1.5

JMA 05 21:16:15.1±0.2**, 3755N**×**14460E, h33**^{km}**, M3.9, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	**Ouri**	**2.72**	**290**	P	Pn	21 16 58.2	+1.7
JIO				S	Sn	21 17 30.4	+2.2
OFUJ	**Ofunato**	**2.77**	**304**	P	Pn	21 16 58.9	+1.8
OFUJ				*e*S	Sn	21 17 31.9	+2.6
JMK	**Ichinoseki**	**3.01**	**299**	P	Pn	21 17 02.3	+1.9
JMK				*e*S	Sn	21 17 37.5	+2.3
JMM	**Marumori**	**3.04**	**277**	*e*S	Sn	21 17 37.5	+1.5
JOM	**Ohasama**	**3.23**	**308**	P	Pn	21 17 05.9	+2.5
JOM				*e*S	Sn	21 17 43.5	+2.8
JYK	**Kaneyama**	**3.61**	**294**	P	Pn	21 17 11.4	+2.8
JYK				*e*S	Sn	21 17 53.6	+3.5
JANG	**Nango**	**3.71**	**320**	*e*S	Sn	21 17 53.6	+1.1
JOT	**Ohata**	**4.71**	**325**	P	Pn	21 17 26.1	+2.3
JOT				*e*S	Sn	21 18 18.0	+0.7
JKB	**Kayabe**	**5.13**	**329**	*e*S	Sn	21 18 27.0	-0.6
JCH	**Churui**	**5.15**	**350**	P	Pn	21 17 29.8	0.0
JCH				*e*S	Sn	21 18 26.3	-1.7
NEM2	**Nemuro 2**	**5.87**	**8**	P	Pn	21 17 36.8	-3.0
NEM2				*e*S	Sn	21 18 39.9	-6.0
JTKR	**Abashiri--Toko**	**6.44**	**356**	P	Pn	21 17 47.0	-0.5
JTKR				*e*S	Sn	21 18 56.2	-3.5
JHR	**Hokuryu**	**6.56**	**341**	P	Pn	21 17 51.8	+2.6
JHR				*e*S	Sn	21 19 03.4	+0.6

CASC 05 21:30:56.4±2.2**, 1052N**×**8662W, h2**^{km}**, MD4.0, 10C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCR	**Vista de Mar**	**1.05**	**112**⇑	*e*P	Pg	21 31 16.9	+0.3
VCR				*e*S	Sg	21 31 31.9	+1.7
SSN	**San Juan del S**	**1.09**	**44**⇑	*i*P	Pg	21 31 16.9	-0.4
SSN				*e*S	Sg	21 31 32.4	+1.0
2RIO	**Dos Rios de Up**	**1.37**	**89**⇑	*e*P	Pn	21 31 19.5	-3.0
2RIO				*e*S	Sg	21 31 37.5	-2.9
MADN	**Villa Maderas**	**1.39**	**50**⇑	*e*P	Pn	21 31 21.6	-1.2
CONN	**Concepcion**	**1.43**	**43**⇑	*e*P	Pn	21 31 22.2	-1.2
CUI		**1.43**	**84**⇑	*i*P	Pn	21 31 22.4	-1.0
CUI				*e*S	Sg	21 31 45.9	+3.5
CRUN	**El Crucero**	**1.49**	**12**⇑	*e*P	Pn	21 31 24.5	+0.3
APON	**Apoyo**	**1.49**	**21**	*e*P	Pn	21 31 23.8	-0.5
TICN	**Ticuantepe**	**1.56**	**14**	*e*P	Pn	21 31 24.7	-0.4
JCR	**Jicaral**	**1.63**	**114**	*e*P	Pn	21 31 25.7	-0.4
COPN	**Copaltepe**	**1.65**	**1**⇓	*e*P	Pn	21 31 25.9	-0.5
MGAN	**Managua**	**1.66**	**13**⇑	*e*P	Pn	21 31 24.8	-1.8
MGAN				*e*P		21 31 27.2	
CSAN		**1.67**	**7**	*e*P	Pn	21 31 25.1	-1.5
CSAN				*e*S	Sn	21 31 51.1	+2.4
APYN	**Apoyeque**	**1.73**	**9**	*e*P	Pn	21 31 28.4	+1.0
HUEN		**1.86**	**14**⇑	*e*P	Pn	21 31 28.2	-1.1
MOMN	**Momotombo**	**1.88**	**2**	*e*P	Pn	21 31 27.9	-1.7
LEON	**Leon**	**1.91**	**352**	*e*P	Pn	21 31 29.7	-0.2
CNGN	**Cerro Negro**	**1.97**	**358**	*e*P	Pn	21 31 31.2	+0.4
TEL3	**Telica 3**	**2.05**	**354**	*e*P	Pn	21 31 31.9	-0.1
TELN	**Telica**	**2.08**	**354**	*e*P	Pn	21 31 32.7	+0.3
PRS1	**Puriscal**	**2.34**	**103**	*e*P	Pn	21 31 36.1	+0.2
LCR2	**La Lucha 2**	**2.69**	**106**	*e*P	Pn	21 31 41.6	+0.8
URSC	**Urasca**	**2.88**	**103**	*e*P	Pn	21 31 44.3	+1.0
URSC				*e*S	Sn	21 32 22.6	+4.0
BUS	**Buena Vista**	**2.98**	**108**	*e*P	Pn	21 31 46.1	+1.4
CHI2		**14.04**	**114**	*e*P	Px	21 31 32.3	
CHI2				*e*S	Sx	21 32 03.1	
LAPE	**La Pedrera**	**15.15**	**100**⇑	*i*P	Px	21 31 18.3	
LAPE				*e*S	Sx	21 31 35.0	

*IDC **05** 21:42:51.3±0.7, 1070S×12282E, h0^{km}, mb4.1/8, mb1 4.3/11, mb1mx4.2/16, mbtmp4.2/11, ML4.5/3, MS3.5/5, Ms1 3.5/5, ms1mx3.3/20, Error ellipse: s-maj=36.5km s-min=15.5km az=70.0*
*ISCJB **05** 21:42:53.2±0.4, 1083S±005×12288E±007, h33^{km}, mb4.2/15, MS3.4/3, Error ellipse: s-maj=10.6km s-min=5.4km az=149.5*
*BJI **05** 21:42:54.6, 1070S×12280E, h41^{km}, mB5.1, mb4.5*
*NEIC **05** 21:42:56.7±1.0, 1075S×12284E, h42^{km}±10^{km}, mb4.5/8, Error ellipse: s-maj=15.5km s-min=6.8km az=71.0*
ISC 05 21:42:57.2±0.9**, 1101S**±005×**12283E**±007**, h62**^{km}±10^{km}**, n45, σ1^{s}26**/53**, mb4.2**/15**, 1C-1D, South of Timor**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.15**	**46**	Pn	**Pn**	**21 43 19.2**	**+2.0**
	585nm,0.3s,baz=255,slow=1.7,SNR=533						
BATI				Sn	**Sn**	**21 43 36.7**	**+4.6**
	1µm,0.3s,baz=163,slow=19,SNR=38						
WSI	**Waingapu**	**2.83**	**298**⇓	*e*P	**Pn**	**21 43 47.5**	**+7.6**
KAPI	**Kappang**	**6.69**	**333**	Pn	**Pn**	**21 44 30.2**	**-2.7**
	5.0nm,0.3s,baz=169,slow=9.0,SNR=23						
KAPI				LR	LR	21 47 37.2	
	comp=Z,456nm,20.0s,baz=169,slow=45						
KDI	**Kendari**	**7.01**	**358**⇑	*e*P	**Pn**	**21 44 37.5**	**+0.2**
KDI				*e*S	**Sn**	**21 45 49.2**	**-6.5**
FITZ	**Fitzroy Crossi**	**7.55**	**159**	*e*P	**Pn**	**21 44 46.4**	**+1.7**
	45nm,0.4s						
FITZ				*e*S	**Sn**	**21 46 04.0**	**-4.9**
FITZ	**Fitzroy Crossi**	**7.55**	**159**	Pn	**Pn**	**21 44 46.6**	**+2.0**
	2.7nm,0.3s,baz=346,slow=11,SNR=55						
FITZ				Sn	**Sn**	**21 46 06.7**	**-2.2**
	16nm,0.3s,baz=348,slow=13,SNR=4.4						
FITZ				LR	LR	21 48 39.3	
	comp=Z,223nm,18.1s,baz=340,slow=44						
KAKA	**Kakadu**	**9.56**	**101**	*e*P	**Pn**	**21 45 13.1**	**+1.0**
	21nm,0.3s						
KAKA				*e*S	**Sn**	**21 46 56.3**	**-1.7**
MBWA	**Marble Bar**	**10.52**	**196**	*e*Pn	**Pn**	**21 45 24.3**	**-0.9**
	23nm,0.6s						
MBWA				*e*Sn	**Sn**	**21 47 13.4**	**-8.1**
WRA	**Warramunga Arr**	**14.20**	**130**	Pn	**Pn**	**21 46 14.5**	**-0.7**
	2.6nm,0.3s,baz=309,slow=15,SNR=79						
WRA				Sn	**Sn**	**21 48 45.5**	**-5.8**
	7.0nm,0.3s,baz=298,slow=22,SNR=18						
WRAB	**Tennant Creek**	**14.20**	**130**	*e*Pn	**Pn**	**21 46 14.7**	**-0.5**
	31nm,0.8s						
WRAB				*e*Sn	**Sn**	**21 48 44.8**	**-6.6**
WB2	**Warramunga Arr**	**14.21**	**130**	*e*P	**Pn**	**21 46 14.8**	**-0.5**
WB2				*e*S	**Sn**	**21 48 42.5**	**-9.0**
ASAR	**Alice Springs**	**16.42**	**141**	Pn	**Pn**	**21 46 45.6**	**+1.9**
	2.2nm,0.3s,baz=318,slow=12,SNR=102						
ASAR				Sn	**Sn**	**21 49 38.5**	**-6.7**
	3.9nm,0.3s,baz=311,slow=23,SNR=20						
KKM	**Kota Kinabalu**	**18.18**	**338**	*e*Pn	**Pn**	**21 47 02.6**	**-2.7**
FORT	**Forrest**	**20.26**	**167**	*e*P	**P**	**21 47 32.2**	**+4.7**
	22nm,0.6s						
FORT				*e*S	**S**	**21 50 55.4**	**-16**
KLBR	**Kellerberrin**	**21.01**	**192**	*e*P	**P**	**21 47 40.3**	**+4.7**
	34nm,1.2s,mb4.6						
KLBR				*e*S	**S**	**21 51 19.2**	**-7.0**
MUN	**Mundaring**	**21.74**	**195**	*e*P	**P**	**21 47 53.6**	**+10**
MUN				*e*S	**S**	**21 51 34.0**	**-6.5**
NWAO	**Narrogin (SRO)**	**22.41**	**192**	P	**P**	**21 47 54.1**	**+3.5**
	4.8nm,0.7s,mb4.1,baz=27,slow=9.5,SNR=9.6						
NWAO				S	**S**	**21 51 52.7**	**-0.2**
	14nm,0.8s,baz=290,slow=13,SNR=7.2						
NWAO	**Narrogin (SRO)**	**22.41**	**192**	*e*P	**P**	**21 47 54.5**	**+4.0**
	45nm,1.5s,mb4.7						
NWAO				S	**S**	**21 51 52.7**	**-0.2**
CTA	**Charters Tower**	**24.28**	**115**	*e*P	**P**	**21 48 14.0**	**+5.2**
	7.5nm,0.6s,mb4.3						
CTA	**Charters Tower**	**24.28**	**115**	P	**P**	**21 48 14.3**	**+5.5**
	11nm,0.7s,mb4.4,baz=283,slow=11,SNR=14						
CTA				LR	LR	21 58 58.1	
	comp=Z,169nm,18.2s,baz=248,slow=40						
STKA	**Stephens Creek**	**27.04**	**143**	*e*P	**P**	**21 48 40.2**	**+6.5**
	4.5nm,1.0s,mb4.0						
STKA	**Stephens Creek**	**27.04**	**143**	P	**P**	**21 48 37.5**	**+3.8**
	2.2nm,0.7s,mb3.8,baz=307,slow=11,SNR=4.7						
STKA				PcP	PcP	21 51 57.8	+4.0
	3.0nm,0.6s,baz=314,slow=5.1,SNR=3.3						
STKA				LR	LR	21 59 28.7	
	comp=Z,103nm,20.0s,baz=26,slow=36						
QIZ	**Qiongzhong**	**32.48**	**337**	*e*P	**P**	**21 49 20.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**37.59**	**321**	P	**P**	**21 50 05.7**	**-0.3**
	1.1nm,0.7s,mb3.7,baz=153,slow=8.4,SNR=6.1						
CMAR				LR	LR	22 06 59.6	
	comp=Z,33nm,18.4s,baz=150,slow=39						
XAN	**Xi'an**	**46.71**	**344**	P	**P**	**21 51 19.0**	**-1.0**
XAN				AP	pP	21 51 26.0	-10
XAN				AMB	AMB		
	comp=Z,4.0nm,0.5s,mb4.6						
MJAR	**Matsushiro Arr**	**49.47**	**16**	P	**P**	**21 51 41.0**	**-0.3**
	comp=Z,1.5nm,0.6s,mb4.2,baz=199,slow=8.7,SNR=5.4						
LSA	**Lhasa**	**50.70**	**324**	*e*P	**P**	**21 51 50.0**	**-0.7**
	comp=Z,3.0nm,0.8s,mb4.3						
GTA	**Gaotai**	**54.55**	**338**	*e*P	**P**	**21 52 20.2**	**+1.3**
GTA				AP	pP	21 52 32.2	-3.0
GTA				XP	sP	21 52 37.1	-5.1
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**60.27**	**348**	*e*P	**P**	**21 52 59.3**	**+0.3**
	comp=Z,11nm,2.1s,mb4.5						
SONM	**Songino Array**	**60.38**	**347**	P	**P**	**21 53 00.8**	**+1.0**
	comp=Z,0.5nm,0.4s,mb3.9,baz=161,slow=6.6,SNR=5.9						
MKAR	**Makanchi Array**	**67.99**	**331**	P	**P**	**21 53 50.5**	**+0.8**
	comp=Z,1.6nm,0.6s,mb4.2,baz=139,slow=6.3,SNR=18						
AML	**Almayashu**	**69.45**	**323**	*e*P	**P**	**21 54 00.1**	**+1.2**
	comp=Z,2.9nm,0.8s,mb4.3						
ZAA0	**Zalesovo Array**	**72.29**	**338**	*e*P	**P**	**21 54 15.2**	**-0.6**
ZALV	**Zalesovo Beam**	**72.29**	**338**	P	**P**	**21 54 15.7**	**-0.2**
	comp=Z,1.7nm,0.6s,mb4.2,baz=137,slow=5.1,SNR=9.0						
SNAA	**Sanae**	**90.06**	**195**	*e*	**P**	**21 55 54.7**	**+4.9**
BOSA	**Boshof**	**91.34**	**241**	P	**P**	**21 56 00.4**	**+3.7**
	comp=Z,1.7nm,0.6s,mb4.6,baz=103,slow=2.6,SNR=5.8						
VNA2	**Neumayer--Watz**	**91.67**	**195**	*e*	**P**	**21 56 03.0**	**+5.7**
VNA3	**Neumayer Olymp**	**92.00**	**194**	*e*	**P**	**21 56 04.0**	**+5.2**
GERES	**GERESS Array B**	**110.80**	**318**	PKiKP	PKiKP	22 01 26.1	+3.0
	comp=Z,0.2nm,0.3s,baz=56,slow=2.5,SNR=1.9						
TORD	**Torodi Ar. Bea**	**122.51**	**279**	PKP	PKPdf	22 01 49.8	+3.2
	comp=Z,2.2nm,0.6s,baz=57,slow=1.7,SNR=47						
CPUP	**Villa Florida**	**142.88**	**180**	PKP	PKPdf	22 02 25.5	+1.0
	comp=Z,2.2nm,0.7s,baz=193,slow=4.6,SNR=5.2						
TKL	**Tuckaleechee C**	**145.59**	**40**	PKPbc	PKPbc	22 02 33.5	+4.3
	comp=Z,2.7nm,0.6s,baz=151,slow=6.4,SNR=4.5						
TKL	**Tuckaleechee C**	**145.59**	**40**	PKPbc	PKPbc	22 02 33.5	+4.3
LPAZ	**La Paz**	**150.79**	**158**	PKPbc	PKPbc	22 02 49.7	+6.2
	comp=Z,2.7nm,0.7s,baz=192,slow=1.9,SNR=14						

LPAZ	**La Paz**	**150.79**	**158**	PKPbc	PKPbc	22 02 49.7	+6.1

MOS ***05*** *22:09:09.4±0.9, 55.22N×161.54W, h10km, mb5.0/68, Error ellipse: s-maj=8.2km s-min=5.0km az=86.2*
SZGRF ***05*** *22:09:09.5, 54.00N×161.66W, h33km, mB5.0, mb4.7, Alaska Peninsula, United States*
BJI ***05*** *22:09:11.9, 55.48N×161.24W, h29km, mB5.0, mb4.8, Ms4.7, Msz4.5*
IDC ***05*** *22:09:17.3±1.8, 55.23N×161.42W, h59km±15km, mb4.3/23, mb1 4.5/25, mb1mx4.5/28, mbtmp4.3/25, MS3.6/16, Ms1 3.6/16, ms1mx3.4/38, Error ellipse: s-maj=16.1km s-min=9.8km az=180.0*
ISCJB ***05*** *22:09:17.9±0.3, 55.31N±0.02×161.40W±0.03, h73km±2km, mb4.6/147, Error ellipse: s-maj=3.8km s-min=2.4km az=16.6*
NEIC ***05*** *22:09:19.5, 54.95N×161.19W, h45km, mb4.8/99, MS3.9/3, ML4.6(AEIC), After AEIC.*
NEIC Felt at Cold Bay, King Cove and Sand Point.
ISC 05 22:09:19.3±0.3**, 55.34N**±0.02×**161.43W**±0.03**, h70**km±2km**, h66**km±3.9km**: pP-P, n760,** σ0.73/758**, mb4.6**/147**, 90C-64D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**0.54**	**89**	*e*P	**Pn**	**22 09 30.8**	**-1.6**
SDPT				*e*S	**Sn**	**22 09 40.8**	**-1.3**
FALS	**False Pass**	**1.24**	**248**	P	**Pn**	**22 09 40.0**	**-0.8**
FALS				S	**Sn**	**22 09 57.5**	**+0.6**
CHGN	**Chignik**	**1.95**	**59**	P	**Pn**	**22 09 50.8**	**+0.6**
CHGN				*e*Sn	**Sn**	**22 10 13.2**	**-0.6**
AKUT	**Akutan**	**2.79**	**246**	*e*Pn	**Pn**	**22 10 01.0**	**-0.6**
AKUT				*e*Sn	**Sn**	**22 10 20.6**	**-14**
AKLV	**Akutan Long Va**	**2.88**	**248**	P	**Pn**	**22 10 02.0**	**-0.8**
AKGG	**Akutan Green G**	**2.88**	**248**	P	**Pn**	**22 10 02.4**	**-0.4**
UNV	**Unalaska Valle**	**3.31**	**245**	P	**Pn**	**22 10 07.4**	**-1.3**
OKCD	**Okmok Cone D**	**4.35**	**247**	P	**Pn**	**22 10 23.5**	**+0.7**
OKCE	**Okmok Cone E**	**4.38**	**247**	P	**Pn**	**22 10 24.0**	**+0.8**
OHAK	**Old Harbor**	**4.91**	**64**	P	**Pn**	**22 10 29.0**	**-1.4**
NIKO	**Nikolski**	**4.97**	**245**	*e*Pn	**Pn**	**22 10 32.7**	**+1.5**
KDAK	**Kodiak Island**	**5.47**	**60**	P	**Pn**	**22 10 36.9**	**-1.1**
	17nm,0.3s,baz=248,slow=7.2,SNR=78						
KDAK				S	**Sn**	**22 11 36.9**	**-2.6**
	2.3nm,0.3s,baz=243,slow=9.8,SNR=2.7						
SVW2	**Sparrevohn**	**6.54**	**26**	P	**Pn**	**22 10 56.2**	**+3.5**
SLKM	**Skilak Lake**	**7.89**	**44**	P	**Pn**	**22 11 13.4**	**+2.3**
SEW	**Seward**	**7.99**	**48**	P	**Pn**	**22 11 13.1**	**+0.7**
TT01	**Tatalina**	**8.08**	**18**	P	**Pn**	**22 11 15.9**	**+2.2**
TTA	**Tatalina**	**8.10**	**18**	*e*P	**Pn**	**22 11 16.2**	**+2.2**
FIB	**Fire Island**	**8.32**	**41**	*e*Pn	**Pn**	**22 11 18.5**	**+1.6**
FIB				*e*Sn	**Sn**	**22 12 54.1**	**+4.9**
RC01	**Rabbit Creek A**	**8.43**	**42**	*e*Pn	**Pn**	**22 11 18.9**	**+0.3**
	44nm,0.4s						
PPLA	**Purkeypile**	**8.93**	**28**	P	**Pn**	**22 11 28.8**	**+3.4**
PMR	**Palmer**	**8.98**	**41**	*e*P	**Pn**	**22 11 26.2**	**+0.3**
KTH	**Kantishna Hill**	**9.80**	**29**	*e*Pn	**Pn**	**22 11 39.2**	**+2.0**
	42nm,0.8s						
KTH				Sn	**Sn**	**22 13 30.7**	**+5.2**
EYAK	**Cordova Ski Ar**	**9.82**	**52**	*e*Pn	**Pn**	**22 11 36.0**	**-1.4**
EYAK				*e*Sn	**Sn**	**22 13 24.9**	**-1.0**
DIV	**Divide**	**10.07**	**48**	*e*Pn	**Pn**	**22 11 40.5**	**-0.4**
RAGM	**Ragged Mountai**	**10.24**	**54**	*e*Pn	**Pn**	**22 11 42.7**	**-0.5**
MCK	**McKinley**	**10.52**	**32**	*e*P	**Pn**	**22 11 47.7**	**+0.8**
IMA2	**Indian Mountai**	**11.40**	**16**	*e*P	**Pn**	**22 12 02.0**	**+3.1**
COLA	**College**	**11.68**	**30**	*e*P	**Pn**	**22 12 07.4**	**+4.6**
COLA				*e*		22 14 10.8	
COLA				pmax	pmax		
	comp=Z,30nm,0.9s						
COLA	**College**	**11.68**	**30**	*e*Pn	**Pn**	**22 12 07.4**	**+4.6**
	comp=Z,30nm,0.9s						
COLA				*e*Sn	**Sn**	**22 14 10.8**	**-0.4**
AMKA	**Amchitka**	**12.17**	**259**	*e*Pn	**Pn**	**22 12 09.0**	**-0.5**
AMKA				*e*Sn	**Sn**	**22 14 09.6**	**-14**
PNL	**Peninsula**	**12.59**	**61**	*e*Pn	**Pn**	**22 12 14.0**	**-1.1**
	comp=Z,83nm,0.5s						
PNL				*e*Sn	**Sn**	**22 14 30.5**	**-2.8**
HYT	**Haines Junctio**	**13.75**	**57**	*e*Pn	**Pn**	**22 12 31.5**	**+0.9**
HYT				*e*Sn	**Sn**	**22 14 57.4**	**-4.1**
EGAK	**Eagle**	**13.78**	**39**	*e*Pn	**Pn**	**22 12 29.1**	**-1.9**
DAWY	**Dawson**	**14.07**	**43**	*e*Pn	**Pn**	**22 12 33.9**	**-0.9**
SKAG	**Skagway**	**14.61**	**63**	*e*Pn	**Pn**	**22 12 41.4**	**-0.5**
SKAG				*e*Sn	**Sn**	**22 15 21.6**	**-0.8**
CRAG	**Craig**	**16.03**	**78**	*e*Pn	**Pn**	**22 13 02.6**	**+2.5**
	comp=Z,27nm,0.7s						
WRAK	**Wrangell Islan**	**16.30**	**74**	*e*Pn	**Pn**	**22 13 04.6**	**+1.2**
	comp=Z,19nm,0.3s						
DLBC	**Dease Lake**	**17.34**	**67**	P	**Pn**	**22 13 16.2**	**-0.2**
DLBC				PcP	PcP	22 17 53.5	-0.8
	baz=297,slow=4.5						
DLBC	**Dease Lake**	**17.34**	**67**	*e*P	**Pn**	**22 13 17.3**	**+0.9**
BILL	**Bilibino**	**19.59**	**323**	⇓*e*P	**Pn**	**22 13 44.4**	**+1.1**
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,200nm,18.0s						
BBB	**Bella Bella**	**19.83**	**85**	P	**Pn**	**22 13 43.1**	**-3.2**
	comp=Z,0.4nm,0.3s,baz=228,slow=12,SNR=2.0						
BBB				LR	LR	22 19 45.2	
	comp=Z,131nm,19.4s,baz=303,slow=32						
PEA0B	**Petropavlovsk-**	**23.76**	**282**	*e*P	**P**	**22 14 25.4**	**+0.5**
PETK	**Petropavlovsk-**	**23.76**	**282**	P	**P**	**22 14 25.5**	**+0.6**
	comp=Z,5.2nm,0.4s,mb4.2,baz=78,slow=13,SNR=28						
PETK				LR	LR	22 22 48.9	
	comp=Z,62nm,20.7s,baz=82,slow=34						
OBC	**Olympics--Boni**	**24.04**	**92**	P	**P**	**22 14 28.5**	**+1.0**
OOW	**Octopus West**	**24.14**	**93**	P	**P**	**22 14 29.7**	**+1.3**
B04A	**Port Angeles**	**24.36**	**91**	⇑P	**P**	**22 14 31.0**	**+0.6**
	baz=24						
OSD	**Olympics--Snow**	**24.37**	**92**	P	**P**	**22 14 31.5**	**+1.0**
SEY	**Seymchan**	**24.39**	**307**	*e*P	**P**	**22 14 30.3**	**-0.3**
A04A	**Legoe Bay, Lum**	**24.47**	**89**	⇓P	**P**	**22 14 31.7**	**+0.3**
	baz=24						
NLWA	**Neilton Lookou**	**24.51**	**93**	⇑P	**P**	**22 14 32.1**	**+0.3**
	baz=24,SNR=12						
NLWA	**Neilton Lookou**	**24.51**	**93**	*e*P	**P**	**22 14 32.9**	**+1.1**
	comp=Z,57nm,0.9s,mb5.0						
A05A	**Maple Falls**	**24.69**	**88**	⇑P	**P**	**22 14 33.7**	**+0.3**
	baz=25						
YKW3	**Yellowknife Ar**	**24.70**	**54**	*e*P	**P**	**22 14 32.9**	**-0.4**
YKA	**Yellowknife Ar**	**24.71**	**54**	P	**P**	**22 14 33.5**	**0.0**
	comp=Z,5.4nm,0.4s,mb4.3,baz=276,slow=8.9,SNR=34						
YKA				PcP	PcP	22 18 07.6	-0.8
	comp=Z,3.9nm,0.6s,baz=273,slow=2.1,SNR=13						
YKA				ScP	ScP	22 21 42.7	+2.0
	comp=Z,0.9nm,0.6s,baz=284,slow=2.9,SNR=5.4						
YKA				LR	LR	22 24 08.7	
	comp=Z,61nm,22.0s,baz=255,slow=36						
YKA	**Yellowknife Ar**	**24.71**	**54**	P	**P**	**22 14 33.5**	**0.0**
YKA						22 18 07.6	
YKA	**Yellowknife Ar**	**24.71**	**54**	P	**P**	**22 14 33.5**	**0.0**
YKA				PcP	PcP	22 18 07.6	-0.8
YKA				ScP	ScP	22 21 42.7	+1.9
YKA				LR	LR	22 24 08.8	
D03A	**Wishkah Elem.**	**24.71**	**94**	⇑P	**P**	**22 14 34.4**	**+0.8**
	baz=25						
C04A	**Brinnon**	**24.84**	**92**	⇑P	**P**	**22 14 35.3**	**+0.5**
	baz=25						
B05A	**Bryant**	**25.05**	**90**	⇑P	**P**	**22 14 36.8**	**0.0**
	baz=25						
E03A	**Lebam**	**25.15**	**95**	⇑P	**P**	**22 14 37.8**	**+0.2**
	baz=25,SNR=7.9						
JCW	**Jim Creek**	**25.19**	**90**	*e*P	**P**	**22 14 38.1**	**+0.2**
RPW	**Rockport**	**25.29**	**89**	*e*P	**P**	**22 14 38.8**	**0.0**
BMW	**Boistfort Moun**	**25.38**	**94**	*e*P	**P**	**22 14 40.0**	**+0.3**
F03A	**Seaside**	**25.50**	**96**	⇑P	**P**	**22 14 41.6**	**+0.8**
	baz=25						
C05A	**Tolt Reservoir**	**25.59**	**91**	⇓P	**P**	**22 14 41.8**	**+0.3**
	baz=26						
E04A	**Onalaska**	**25.60**	**94**	⇓P	**P**	**22 14 42.2**	**+0.5**
	baz=26						
A07A	**Ashnola River,**	**25.63**	**87**	⇑P	**P**	**22 14 42.3**	**+0.4**
	baz=26,SNR=16						
D05A	**Enumclaw**	**25.69**	**92**	⇑P	**P**	**22 14 43.5**	**+1.1**
	baz=26						
LON	**Longmire**	**26.03**	**93**	*e*P	**P**	**22 14 46.3**	**+0.7**
LON				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
LON	**Longmire**	**26.03**	**93**	*e*P	**P**	**22 14 46.3**	**+0.7**
	comp=Z,7.6nm,0.8s,mb4.2						
B07A	**Winthrop**	**26.08**	**88**	⇓P	**P**	**22 14 47.4**	**+1.4**
	baz=26,SNR=6.8						
F04A	**Amboy**	**26.15**	**95**	⇑P	**P**	**22 14 46.9**	**+0.2**
	baz=26						
E05A	**Randle**	**26.17**	**93**	⇑P	**P**	**22 14 46.9**	**+0.1**
	baz=26						
A08A	**Turner Farm, O**	**26.32**	**86**	⇑P	**P**	**22 14 47.8**	**-0.3**
	baz=26						
ETW	**Entiat**	**26.41**	**90**	*e*P	**P**	**22 14 48.7**	**-0.3**
G04A	**Mulino**	**26.54**	**96**	⇑P	**P**	**22 14 50.3**	**+0.1**
	baz=26						
B08A	**Colville Reser**	**26.58**	**88**	⇑P	**P**	**22 14 50.7**	**+0.2**
	baz=26,SNR=6.3						
E06A	**Yakima**	**26.62**	**92**	⇑P	**P**	**22 14 50.9**	**0.0**
	baz=26,SNR=5.5						
A09A	**Danville**	**26.70**	**86**	⇓P	**P**	**22 14 52.1**	**+0.6**
	baz=27						
F05A	**White Salmon**	**26.73**	**94**	⇓P	**P**	**22 14 52.0**	**+0.2**
	baz=27						
SSOR	**Sweet Springs**	**26.76**	**97**	P	**P**	**22 14 52.8**	**+0.6**
HOOD	**Mount Hood Mea**	**26.95**	**95**	*e*P	**P**	**22 14 53.9**	**0.0**
	comp=Z,35nm,1.1s,mb4.8						
HOOD				*e*ScP	ScP	22 21 55.9	+8.3
H04A	**Detroit Lake**	**27.02**	**97**	⇑P	**P**	**22 14 54.2**	**-0.3**
	baz=27,SNR=6.5						
C08A	**Higginbotham F**	**27.05**	**88**	⇑P	**P**	**22 14 54.0**	**-0.7**
	baz=27						
J02A	**Umpqua**	**27.06**	**100**	⇓P	**P**	**22 14 54.7**	**-0.1**
	baz=27						
BROR	**Big Rock Looko**	**27.13**	**98**	P	**P**	**22 14 55.8**	**+0.3**
F06A	**Goldendale**	**27.18**	**94**	⇑P	**P**	**22 14 56.1**	**+0.1**
	baz=27						
G05A	**Wamic**	**27.18**	**95**	⇓P	**P**	**22 14 56.1**	**+0.2**
	baz=27,SNR=5.8						
B09A	**Rice**	**27.23**	**86**	⇓P	**P**	**22 14 56.4**	**+0.1**
	baz=27						
A10A	**Northport**	**27.28**	**85**	⇓P	**P**	**22 14 57.0**	**+0.2**
	baz=27						
I04A	**Tendick Farm,**	**27.44**	**98**	P	**P**	**22 14 58.7**	**+0.4**
	baz=27,SNR=7.9						
OD2	**Odessa Site #2**	**27.45**	**89**	*e*P	**P**	**22 14 57.5**	**-0.9**
RSW	**Rattlesnake Hi**	**27.50**	**91**	*e*P	**P**	**22 14 58.4**	**-0.4**
CROR	**Criterion Ridg**	**27.52**	**95**	P	**P**	**22 14 59.1**	**+0.1**
HAWA	**Hanford**	**27.54**	**91**	*e*P	**P**	**22 14 59.5**	**+0.4**
G06A	**Carlson Farm,**	**27.57**	**94**	⇑P	**P**	**22 14 59.3**	**-0.2**
	baz=28						
H05A	**Madras**	**27.59**	**96**	⇑P	**P**	**22 14 59.8**	**+0.2**
	baz=28						
EDM	**Edmonton**	**27.71**	**74**	*e*P	**P**	**22 15 00.9**	**+0.3**
I05A	**Bend**	**27.86**	**97**	⇑P	**P**	**22 15 02.7**	**+0.7**
	baz=28						
NEW	**Newport**	**27.89**	**86**	*e*P	**P**	**22 15 02.2**	**0.0**
NEW				*e*pP	pP	22 15 26.3	+7.5
HUMO	**Hull Mountain**	**27.89**	**101**	⇓P	**P**	**22 15 02.9**	**+0.6**
	baz=28						
J04A	**Umpqua Nationa**	**27.96**	**99**	P	**P**	**22 15 04.0**	**+1.1**
	baz=28,SNR=10						
A11A	**Hall Mountain,**	**27.97**	**84**	P	**P**	**22 15 03.7**	**+0.8**
	baz=28,SNR=10						
VIPM	**Ingram Point**	**28.02**	**96**	P	**P**	**22 15 03.6**	**+0.2**
H06A	**Lindquist Farm**	**28.05**	**95**	P	**P**	**22 15 03.8**	**+0.1**
	baz=28,SNR=16						
B11A	**Sandpoint**	**28.23**	**85**	⇑P	**P**	**22 15 05.4**	**+0.1**
	baz=28						
E09A	**Wood Farm, Sta**	**28.26**	**90**	P	**P**	**22 15 05.2**	**-0.4**
	baz=28,SNR=5.8						
F08A	**Pendleton**	**28.31**	**92**	⇓P	**P**	**22 15 05.7**	**-0.3**
	baz=28						
J05A	**Fort Rock**	**28.43**	**98**	P	**P**	**22 15 08.0**	**+0.9**
	baz=28,SNR=38						
G08A	**Pilot Rock**	**28.50**	**93**	P	**P**	**22 15 07.5**	**-0.1**
	baz=28,SNR=7.5						
LNOR	**Lincton Mounta**	**28.55**	**91**	*e*P	**P**	**22 15 07.3**	**-0.8**
H07A	**Lands Inn, Kim**	**28.57**	**94**	P	**P**	**22 15 08.2**	**-0.1**
	baz=28,SNR=19						
K04A	**Chilquin**	**28.58**	**100**	⇑P	**P**	**22 15 08.5**	**+0.1**
	baz=28						
YBH	**Yreka Blue Hor**	**28.61**	**102**	P	**P**	**22 15 08.7**	**0.0**
	comp=Z,8.7nm,1.0s,mb4.4,baz=295,slow=4.2,SNR=9.7						
YBH				LR	LR	22 23 55.1	
	comp=Z,127nm,19.7s,baz=334,slow=31						
YBH	**Yreka Blue Hor**	**28.61**	**102**	⇑P	**P**	**22 15 09.5**	**+0.8**
	baz=28						
C11A	**Tepee Creek (N**	**28.61**	**86**	⇑P	**P**	**22 15 08.0**	**-0.6**
	baz=28						
M02C	**Callahan**	**28.75**	**103**	⇑P	**P**	**22 15 10.7**	**+0.7**
	baz=29						
L04A	**Klamath Falls**	**28.77**	**101**	P	**P**	**22 15 11.1**	**+1.0**
	baz=29,SNR=10						
F09A	**S2 Ranch, Elgi**	**28.85**	**91**	⇓P	**P**	**22 15 11.4**	**+0.6**
	baz=29						
N02C	**Big Bar**	**28.89**	**104**	⇓P	**P**	**22 15 11.9**	**+0.7**
	baz=29						
I07A	**Izee**	**28.91**	**95**	P	**P**	**22 15 11.7**	**+0.3**
	baz=29,SNR=15						
K05A	**Summer Lake**	**28.98**	**99**	P	**P**	**22 15 12.9**	**+1.0**
	baz=29,SNR=16						
M04C	**Macdoel**	**29.06**	**101**	P	**P**	**22 15 13.7**	**+1.0**
	baz=29,SNR=7.5						
J06A	**Christmas Vall**	**29.06**	**97**	P	**P**	**22 15 12.9**	**+0.2**
	baz=29,SNR=37						
F10A	**Beach Ranch, E**	**29.09**	**90**	⇓P	**P**	**22 15 13.1**	**+0.2**
	baz=29						
H08A	**Prairie City**	**29.12**	**94**	P	**P**	**22 15 13.3**	**+0.1**
	baz=29,SNR=11						
G09A	**Cove**	**29.18**	**92**	P	**P**	**22 15 13.7**	**-0.1**
	baz=29,SNR=8.8						
K06A	**Valley Falls**	**29.29**	**98**	P	**P**	**22 15 15.6**	**+0.8**
	baz=29,SNR=22						
WALA	**Waterton Lakes**	**29.31**	**82**	*e*P	**P**	**22 15 14.8**	**-0.1**
B13A	**Whitefish**	**29.35**	**84**	⇓P	**P**	**22 15 15.2**	**+0.1**
	baz=29						
L05A	**Lakeview**	**29.45**	**100**	P	**P**	**22 15 17.2**	**+1.0**
	baz=29,SNR=11						
E11A	**Bogner Ranch,**	**29.45**	**89**	⇓P	**P**	**22 15 15.4**	**-0.8**
	baz=29						
WDC	**Whiskeytown Da**	**29.48**	**104**	⇓P	**P**	**22 15 17.1**	**+0.7**
	baz=29						
G10A	**Bishop Farm, J**	**29.55**	**91**	P	**P**	**22 15 16.9**	**-0.1**
	baz=30,SNR=16						
I08A	**Drewsey**	**29.55**	**95**	⇑P	**P**	**22 15 17.5**	**+0.5**
	baz=30						
H09A	**Durkee**	**29.61**	**93**	⇓P	**P**	**22 15 18.0**	**+0.5**
	baz=30						
O02C	**Red Bluff**	**29.62**	**105**	⇑P	**P**	**22 15 17.9**	**+0.2**
	baz=30						
C13A	**Hot Springs**	**29.66**	**85**	P	**P**	**22 15 17.9**	**0.0**
	baz=30,SNR=16						
BMO	**Blue Mountains**	**29.70**	**92**	*e*P	**P**	**22 15 18.6**	**+0.3**
M05C	**Lookout**	**29.73**	**101**	⇓P	**P**	**22 15 19.2**	**+0.5**
	baz=30						
F11A	**Grangeville**	**29.75**	**89**	P	**P**	**22 15 18.1**	**-0.6**
	baz=30,SNR=6.2						
E12A	**Beaver Dam Sad**	**29.79**	**88**	⇑P	**P**	**22 15 18.9**	**-0.2**
	baz=30						
MOD	**Modoc**	**29.85**	**99**	P	**P**	**22 15 20.3**	**+0.6**
	baz=30,SNR=10.0						
MOD	**Modoc**	**29.85**	**99**	*e*P	**P**	**22 15 20.2**	**+0.5**
HATC	**Hat Creek Radi**	**29.92**	**102**	P	**P**	**22 15 21.1**	**+0.8**
	baz=30,SNR=5.7						
K07A	**Rock Creek Ran**	**29.93**	**97**	P	**P**	**22 15 21.0**	**+0.6**
	baz=30,SNR=13						
J08A	**Circle Bar Ran**	**29.95**	**95**	P	**P**	**22 15 20.9**	**+0.3**
	baz=30,SNR=15						
G11A	**Walters Elk Ra**	**29.97**	**90**	P	**P**	**22 15 20.2**	**-0.5**
	baz=30,SNR=6.1						
I09A	**Lost Marbles R**	**29.98**	**94**	⇓P	**P**	**22 15 20.9**	**0.0**
	baz=30						
GASB	**Alder Springs**	**30.02**	**105**	P	**P**	**22 15 22.3**	**+1.1**
	baz=30,SNR=6.8						
D13A	**Huson**	**30.04**	**86**	⇑P	**P**	**22 15 20.7**	**-0.6**
	baz=30						
H10A	**Noah's Angus R**	**30.18**	**92**	P	**P**	**22 15 22.6**	**0.0**
	baz=30,SNR=19						
M06C	**Likely Place G**	**30.21**	**101**	⇑P	**P**	**22 15 23.6**	**+0.7**
	baz=30						
L07A	**Adell**	**30.31**	**98**	P	**P**	**22 15 24.6**	**+0.8**
	baz=30,SNR=7.3						
K08A	**Mann Creek Ran**	**30.34**	**96**	P	**P**	**22 15 24.5**	**+0.5**
	baz=30,SNR=67						
F12A	**Elk City**	**30.34**	**89**	P	**P**	**22 15 23.7**	**-0.3**
	baz=30,SNR=8.0						
J09A	**Fry Pan Ranch,**	**30.36**	**95**	⇓P	**P**	**22 15 24.2**	**0.0**
	baz=30						
WVOR	**Wild Horse Val**	**30.44**	**97**	*e*P	**P**	**22 15 25.1**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,26nm,0.8s,mb4.9						
WVOR	**Wild Horse Val**	**30.44**	**97**	*e*P	**P**	**22 15 25.1**	**+0.2**
	comp=Z,26nm,0.8s,mb4.9						
I10A	**Payette**	**30.45**	**93**	⇑P	**P**	**22 15 25.2**	**+0.2**
	baz=30						
ELFS	**Eagle Lake Fie**	**30.46**	**102**	⇑P	**P**	**22 15 25.8**	**+0.7**
	baz=30						
O04C	**Chester**	**30.47**	**103**	P	**P**	**22 15 25.8**	**+0.7**
	baz=30,SNR=7.4						
MSO	**Missoula**	**30.48**	**86**	*e*P	**P**	**22 15 24.4**	**-0.8**
	comp=Z,59nm,2.8s,mb4.7						
H11A	**Donnelly**	**30.53**	**91**	⇑P	**P**	**22 15 25.6**	**-0.1**
	baz=30						
E13A	**Victor**	**30.56**	**87**	⇓P	**P**	**22 15 25.8**	**-0.1**
	baz=30						
D14A	**Greenough**	**30.59**	**85**	P	**P**	**22 15 25.6**	**-0.5**
	baz=30,SNR=7.5						
ORV	**Oroville**	**30.76**	**104**	P	**P**	**22 15 27.1**	**-0.7**
	baz=31,SNR=6.5						
L08A	**Fields**	**30.77**	**97**	P	**P**	**22 15 28.2**	**+0.4**
	baz=31,SNR=53						
K09A	**Rome**	**30.79**	**96**	P	**P**	**22 15 28.0**	**+0.1**
	baz=31,SNR=16						
O05C	**Quincy**	**30.80**	**103**	P	**P**	**22 15 28.9**	**+0.7**
	baz=31,SNR=6.2						
M07A	**Soldier Meadow**	**30.82**	**99**	P	**P**	**22 15 28.9**	**+0.7**
	baz=31,SNR=34						
CHMT	**Chamberlain Mo**	**30.83**	**85**	*e*P	**P**	**22 15 28.0**	**-0.3**
F13A	**Darby**	**30.85**	**88**	P	**P**	**22 15 28.5**	**+0.1**
	baz=31,SNR=5.6						
N06A	**Buffalo Meadow**	**30.88**	**101**	P	**P**	**22 15 28.9**	**+0.2**
	baz=31,SNR=16						
OHCM	**Honcut**	**30.93**	**104**	*e*pP	pP	22 15 47.3	+1.5
E14A	**Clinton**	**30.97**	**86**	P	**P**	**22 15 29.4**	**-0.1**
	baz=31,SNR=8.4						
CVS	**Carmenet Viney**	**31.09**	**107**	⇑P	**P**	**22 15 30.8**	**+0.1**
	baz=31						
D15A	**Lincoln**	**31.17**	**85**	⇓P	**P**	**22 15 31.1**	**-0.2**
	baz=31						
BEKR	**Beckwourth**	**31.18**	**102**	P	**P**	**22 15 31.4**	**0.0**
	baz=31,SNR=12						
K10A	**MacKenzie Ranc**	**31.23**	**95**	P	**P**	**22 15 32.1**	**+0.3**
	baz=31,SNR=24						
M08A	**Happy Creek Ra**	**31.23**	**98**	P	**P**	**22 15 32.6**	**+0.7**
	baz=31,SNR=15						
O06A	**Flanigan**	**31.27**	**101**	P	**P**	**22 15 32.3**	**+0.1**
	baz=31,SNR=18						
H12A	**Diamond D Ranc**	**31.28**	**90**	P	**P**	**22 15 31.9**	**-0.4**
	baz=31,SNR=5.5						
N07B	**Gerlach**	**31.34**	**100**	P	**P**	**22 15 33.4**	**+0.6**
	baz=31,SNR=9.9						
F14A	**Wisdom**	**31.39**	**87**	P	**P**	**22 15 33.7**	**+0.5**
	baz=31,SNR=6.0						
MFID	**Camas Ranch**	**31.42**	**93**	P	**P**	**22 15 33.2**	**-0.3**
	baz=31,SNR=10.0						
P05C	**Yuba Gap, Truc**	**31.43**	**103**	P	**P**	**22 15 33.9**	**+0.2**
	baz=31,SNR=6.9						
E15A	**Deer Lodge**	**31.45**	**86**	P	**P**	**22 15 33.6**	**-0.2**
	baz=31,SNR=10						
H13A	**Challis**	**31.62**	**90**	P	**P**	**22 15 35.2**	**0.0**
	baz=32,SNR=5.5						
G14A	**Jackson**	**31.67**	**88**	⇑P	**P**	**22 15 35.4**	**-0.2**
	baz=32						
K11A	**Parker Ranch,**	**31.71**	**94**	P	**P**	**22 15 36.2**	**+0.2**
	baz=32,SNR=13						
LAVA	**Lava Cap Winer**	**31.75**	**104**	P	**P**	**22 15 36.2**	**-0.2**
	baz=32,SNR=16						
O07A	**Toulon**	**31.81**	**101**	P	**P**	**22 15 37.5**	**+0.5**
	baz=32,SNR=30						
N08A	**GE Springer Mi**	**31.81**	**99**	P	**P**	**22 15 36.8**	**-0.2**
	baz=32,SNR=28						
PAHR	**Pah Rah Range**	**31.84**	**102**	*e*P	**P**	**22 15 37.4**	**+0.2**
F15A	**Butte**	**31.87**	**87**	⇑P	**P**	**22 15 37.3**	**-0.1**
	baz=32						
L10A	**Juniper Basin**	**31.90**	**96**	P	**P**	**22 15 37.9**	**+0.2**
	baz=32,SNR=20						
LRM	**Limekiln Ridge**	**31.91**	**87**	*e*P	**P**	**22 15 37.6**	**-0.1**
WCN	**Washoe City**	**31.91**	**103**	P	**P**	**22 15 38.2**	**+0.4**
	baz=32,SNR=9.0						
J12A	**Stokes Ranch,**	**31.94**	**93**	P	**P**	**22 15 38.4**	**+0.3**
	baz=32,SNR=11						
DLMT	**Dillon**	**32.09**	**87**	*e*PcP	PcP	22 18 26.7	-0.3
I13A	**Wildhorse Cree**	**32.09**	**91**	⇓P	**P**	**22 15 39.2**	**-0.1**
	baz=32						
H14A	**Leadore**	**32.09**	**89**	P	**P**	**22 15 39.3**	**-0.1**
	baz=32,SNR=18						
N09A	**Rock Creek Ran**	**32.11**	**98**	P	**P**	**22 15 39.8**	**+0.3**
	baz=32,SNR=24						
O08A	**Rochester Mine**	**32.13**	**100**	⇑P	**P**	**22 15 40.0**	**+0.3**
	baz=32						
HLID	**Hailey**	**32.14**	**92**	P	**P**	**22 15 39.8**	**0.0**
	baz=32,SNR=6.9						
R05C	**Kirkwood Meado**	**32.15**	**104**	P	**P**	**22 15 40.1**	**+0.2**
	baz=32,SNR=9.0						
EGMT	**Eagleton**	**32.20**	**81**	*e*P	**P**	**22 15 39.9**	**-0.5**
	comp=Z,26nm,1.0s,mb4.9						
EGMT				*e*PcP	PcP	22 18 26.6	-0.6
M10A	**I.L. Ranch, Tu**	**32.22**	**96**	P	**P**	**22 15 40.9**	**+0.3**
	baz=32,SNR=17						
L11A	**Cat Creek Ranc**	**32.25**	**95**	P	**P**	**22 15 41.2**	**+0.4**
	baz=32,SNR=34						
MCMT	**McKenzie Canyo**	**32.26**	**88**	*e*P	**P**	**22 15 40.9**	**0.0**
G15A	**Dillon**	**32.27**	**88**	P	**P**	**22 15 40.4**	**-0.5**
	baz=32,SNR=5.9						
J13A	**Cove Ranch, Pi**	**32.38**	**92**	P	**P**	**22 15 42.0**	**+0.2**
	baz=32,SNR=9.1						
K12A	**Draper Farm, C**	**32.44**	**93**	⇑P	**P**	**22 15 42.9**	**+0.5**
	baz=32						
CMB	**Columbia Colle**	**32.45**	**105**	*e*P	**P**	**22 15 42.8**	**+0.2**
CMB				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8						
CMB	**Columbia Colle**	**32.45**	**105**	P	**P**	**22 15 42.6**	**0.0**
	baz=32,SNR=9.0						
CMB	**Columbia Colle**	**32.45**	**105**	*e*P	**P**	**22 15 42.8**	**+0.2**
	comp=Z,23nm,1.1s,mb4.8						
I14A	**Mackay**	**32.46**	**90**	⇓P	**P**	**22 15 42.9**	**+0.3**
	baz=32						
BOZ	**Bozeman (W)**	**32.48**	**86**	*e*P	**P**	**22 15 42.5**	**-0.2**
BOZ				*e*		22 18 27.6	
H15A	**Lima**	**32.51**	**89**	P	**P**	**22 15 42.8**	**-0.2**
	baz=32,SNR=16						
BMN	**Battle Mountai**	**32.56**	**99**	*e*P	**P**	**22 15 43.6**	**+0.1**
BMN				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
BMN	**Battle Mountai**	**32.56**	**99**	*e*P	**P**	**22 15 43.6**	**+0.1**
	comp=Z,15nm,0.8s,mb4.9						
P08A	**Dixie Valley**	**32.58**	**100**	⇓P	**P**	**22 15 44.1**	**+0.4**
	baz=32						
R06C	**Coleville**	**32.62**	**103**	P	**P**	**22 15 44.8**	**+0.7**
	baz=32,SNR=15						
WAKR	**Walker**	**32.64**	**103**	*e*P	**P**	**22 15 44.8**	**+0.5**
L12A	**House Creek Ra**	**32.69**	**94**	P	**P**	**22 15 45.1**	**+0.5**
	baz=33,SNR=10						
PACP	**Pacheco Peak**	**32.70**	**107**	⇑P	**P**	**22 15 44.9**	**+0.2**
	baz=33						
M11A	**Holland Ranch,**	**32.71**	**96**	P	**P**	**22 15 45.3**	**+0.5**
	baz=33,SNR=8.8						
O09A	**Fish Creek Ran**	**32.76**	**99**	P	**P**	**22 15 45.6**	**+0.4**
	baz=33,SNR=20						
N10A	**Dunphy**	**32.77**	**97**	⇓P	**P**	**22 15 45.7**	**+0.3**
	baz=33						
J14A	**Carey**	**32.80**	**91**	⇓P	**P**	**22 15 46.3**	**+0.8**
	baz=33						
S06C	**San Francisco**	**32.86**	**105**	P	**P**	**22 15 46.3**	**+0.1**
	baz=33,SNR=13						
QLMT	**Earthquake Lak**	**33.07**	**87**	*e*P	**P**	**22 15 48.2**	**+0.3**
R07C	**Lee Vining**	**33.16**	**103**	P	**P**	**22 15 49.4**	**+0.6**
	baz=33,SNR=22						
P09A	**Austin**	**33.20**	**100**	⇑P	**P**	**22 15 49.4**	**+0.3**
	baz=33						
M12A	**Wells**	**33.22**	**95**	P	**P**	**22 15 49.6**	**+0.4**
	baz=33,SNR=8.7						
Q08A	**Gabbs**	**33.23**	**101**	P	**P**	**22 15 49.7**	**+0.3**
	baz=33,SNR=8.2						
H16A	**Russell Place,**	**33.25**	**87**	P	**P**	**22 15 49.5**	**0.0**
	baz=33,SNR=17						
NVAR	**Mina Array Bea**	**33.33**	**102**	P	**P**	**22 15 50.4**	**+0.2**
	comp=Z,19nm,0.7s,mb5.0,baz=297,slow=9.1,SNR=99						
NVAR				PcP	PcP	22 18 29.6	-1.0
	comp=Z,2.4nm,0.6s,baz=286,slow=3.1,SNR=7.6						
NVAR	**Mina Array Bea**	**33.33**	**102**	P	**P**	**22 15 50.4**	**+0.2**
NVAR				PcP	PcP	22 18 29.6	-1.0
L13A	**Double Diamond**	**33.33**	**93**	P	**P**	**22 15 50.7**	**+0.4**
	baz=33,SNR=5.6						
J15A	**Blackfoot**	**33.37**	**90**	P	**P**	**22 15 51.6**	**+1.1**
	baz=33,SNR=13						
U04C	**Hernandez Rese**	**33.45**	**107**	⇑P	**P**	**22 15 51.4**	**+0.1**
	baz=33						
ELK	**Elko**	**33.47**	**96**	*e*P	**P**	**22 15 51.7**	**+0.2**
K14A	**Jones Ranch, D**	**33.48**	**92**	⇑P	**P**	**22 15 52.3**	**+0.7**
	baz=33						
GCMT	**Greycliff**	**33.51**	**85**	*e*P	**P**	**22 15 52.1**	**+0.4**

GCMT ePcP PcP 22 18 30.1 -0.8
N12A Clover Valley, 33.52 96 P **P 22 15 52.3 +0.5**
baz=33,SNR=18
P10A Eureka 33.54 99 P **P 22 15 52.5 +0.5**
baz=33,SNR=8.1
T06C Millerton Lake 33.56 106 P **P 22 15 52.2 -0.1**
baz=34,SNR=7.9
YNR Norris Junctio 33.57 87 eP **P 22 15 53.3 +1.1**
I16A Newdale 33.62 89 ⇑P **P 22 15 52.5 -0.2**
baz=34
YFT Old Faithful 33.64 87 eP **P 22 15 54.5 +1.6**
O11A Cowboy Ranch, 33.65 97 P **P 22 15 53.2 +0.2**
baz=34,SNR=8.7
Q09A Carvers 33.67 101 ⇑P **P 22 15 53.5 +0.2**
baz=34
M13A Montello 33.68 94 P **P 22 15 53.4 +0.1**
baz=34,SNR=9.1
K15A Arbon 33.76 91 P **P 22 15 54.9 +0.9**
baz=34,SNR=12
L14A Malta 33.77 93 P **P 22 15 54.8 +0.7**
baz=34,SNR=6.7
LKWY Lake 33.82 87 eP **P 22 15 56.2 +1.8**
LKWY pmax pmax
comp=Z,13nm,0.8s,mb4.8
LKWY Lake 33.82 87 eP **P 22 15 56.2 +1.8**
comp=Z,13nm,0.8s,mb4.8
IMW Indian Meadow 33.92 88 eP **P 22 15 55.6 +0.3**
J16A Bone 33.92 90 P **P 22 15 55.9 +0.6**
baz=34,SNR=7.4
FLWY Flagg Ranch 33.94 88 eP **P 22 15 56.4 +0.9**
comp=Z,19nm,0.9s,mb4.9
P11A Circle Ranch, 33.98 98 ⇓P **P 22 15 56.2 +0.3**
baz=34
N13A Wendover, West 33.99 95 ⇓P **P 22 15 56.5 +0.5**
baz=34
RRI2 Red Ridge 34.04 89 eP **P 22 15 57.0 +0.7**
comp=Z,5.8nm,0.6s,mb4.6
M14A Sheep Mountain 34.05 94 P **P 22 15 56.4 -0.1**
baz=34,SNR=7.1
S08C White Mtn Res 34.06 103 P **P 22 15 57.5 +0.8**
baz=34,SNR=44
O12A Currie 34.07 96 P **P 22 15 56.6 -0.1**
baz=34,SNR=10
Q10A Clear Creek Ra 34.12 100 P **P 22 15 57.5 +0.4**
baz=34,SNR=18
RLMT Red Lodge 34.13 85 eP **P 22 15 57.5 +0.4**
comp=Z,16nm,0.8s,mb4.9
R09A Tonopah 34.15 101 P **P 22 15 57.4 0.0**
baz=34,SNR=31
TPAW Teton Pass 34.16 89 eP **P 22 15 58.1 +0.7**
TPAW ePcP PcP 22 18 33.5 +0.7
HELL Mitchell Peak 34.18 105 P **P 22 15 57.4 -0.2**
baz=34,SNR=32
HVU Hansel Valley 34.20 93 eP **P 22 15 58.2 +0.4**
K16A Soda Springs 34.21 90 P **P 22 15 58.9 +1.1**
baz=34,SNR=5.9
L15A Malad City 34.28 92 P **P 22 15 58.8 +0.4**
baz=34,SNR=5.1
LOHW Long Hollow 34.28 88 eP **P 22 15 58.8 +0.4**
TIN Tinemaha 34.35 104 ⇑P **P 22 15 59.8 +0.7**
baz=34
S09A Goldfield 34.43 102 P **P 22 15 59.7 -0.1**
baz=34,SNR=19
P12A McGill 34.52 98 P **P 22 16 00.6 +0.1**
baz=34,SNR=28
Q11A Duckwater 34.53 99 P **P 22 16 00.8 +0.1**
baz=34,SNR=37
R10A Warm Springs 34.55 100 P **P 22 16 01.2 +0.4**
baz=34,SNR=11
N14A Grayback Hills 34.57 94 P **P 22 16 01.2 +0.2**
baz=34,SNR=5.2
S10A Tonopah Range, 34.64 101 P **P 22 16 01.5 -0.1**
baz=34,SNR=35
VES Vestal, Richgr 34.76 106 P **P 22 16 02.3 -0.4**
baz=35,SNR=7.4
YAK Yakutsk 34.84 310 eP **P 22 16 01.9 -1.1**
YAK pmax pmax
comp=Z,15nm,0.9s,mb4.8
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=N,3.0nm,0.9s
Q12A Willow Creek R 34.86 98 P **P 22 16 03.7 +0.3**
baz=35,SNR=8.7
GRAC Grapevine Rang 34.86 103 P **P 22 16 04.1 +0.6**
baz=35,SNR=6.5
CWC Cottonwood Cre 34.88 105 P **P 22 16 04.0 +0.3**
baz=35,SNR=11
R11A Troy Canyon, C 34.91 100 P **P 22 16 03.8 -0.2**
baz=35,SNR=40
PKM Peak Mountain 35.06 108 ⇑P **P 22 16 05.4 +0.1**
baz=35
DGMT Dagmar 35.08 77 eP **P 22 16 05.3 +0.1**
comp=N,36nm,1.1s,mb5.1
YSS Yuzh-Sakhalins 35.14 280 eP **P 22 16 06.6 +0.8**
YSS pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
M16A Huntsville 35.16 92 P **P 22 16 05.8 -0.3**
baz=35,SNR=7.6
DUG Dugway 35.22 95 eP **P 22 16 06.8 +0.2**
DUG pmax pmax
comp=Z,12nm,1.0s,mb4.7
DUG Dugway 35.22 95 P **P 22 16 06.6 0.0**
baz=35,SNR=5.3
DUG Dugway 35.22 95 eP **P 22 16 06.8 +0.2**
comp=Z,12nm,1.0s,mb4.7
ISA Isabella 35.23 106 P **P 22 16 06.2 -0.4**
baz=35,SNR=11
ISA Isabella 35.23 106 eP **P 22 16 06.2 -0.5**
Q13A Wheeler Ranch, 35.37 97 ⇓P **P 22 16 08.1 +0.2**
baz=35
FCC Fort Churchill 35.39 56 eP **P 22 16 07.6 -0.2**
BW06 Boulder Array 35.41 89 eP **P 22 16 07.7 -0.4**
BW06 eScP ScP 22 22 15.8 0.0
PDAR Pinedale Array 35.41 89 P **P 22 16 08.0 -0.2**
comp=Z,6.1nm,0.6s,mb4.6,baz=318,slow=5.0,SNR=36
PDAR PcP PcP 22 18 35.8 -0.7
comp=Z,0.9nm,0.6s,baz=28,slow=4.1,SNR=4.0
PDAR Pinedale Array 35.41 89 P **P 22 16 08.0 -0.2**
PDAR PcP PcP 22 18 35.8 -0.7
ARVC Arvin 35.43 107 ⇑P **P 22 16 08.2 -0.2**
baz=35
R12A Pony Springs, 35.48 99 ⇓P **P 22 16 09.0 +0.2**
baz=35
MPMC Manual Prospec 35.48 104 P **P 22 16 09.1 +0.2**
baz=35,SNR=38
P14A Drum Mountains 35.48 96 P **P 22 16 08.7 -0.1**
baz=35,SNR=7.0
TPNV Topopah Spring 35.53 102 eP **P 22 16 09.2 0.0**
FURC Furnace Creek, 35.53 103 P **P 22 16 09.5 +0.2**
baz=35,SNR=11
N16A Rees Ranch, Co 35.55 93 ⇑P **P 22 16 09.3 -0.1**
baz=35
Q14A Sevier Lake (B 35.77 97 P **P 22 16 11.3 -0.1**
baz=36,SNR=13
LRMC Laurel Mountai 35.79 105 P **P 22 16 11.3 -0.2**
baz=36,SNR=9.8
NLU North Lily Min 35.80 94 eP **P 22 16 11.9 +0.4**
S12A Delamar Landin 35.84 100 P **P 22 16 12.2 +0.3**
baz=36,SNR=14
U10A Ash Meadows, A 35.86 103 P **P 22 16 12.3 +0.2**
baz=36,SNR=8.9
T11A Corn Creek, Al 35.89 101 P **P 22 16 12.3 -0.1**
baz=36,SNR=38
R13A O'Grain Ranch, 35.94 98 ⇓P **P 22 16 12.7 -0.1**
baz=36
P15A Leamington 35.94 95 P **P 22 16 12.5 -0.3**
baz=36,SNR=5.2
DAU Daniels Canyon 35.96 93 eP **P 22 16 13.4 +0.5**
EDW2 Edwards Air Fo 36.07 106 P **P 22 16 13.2 -0.7**
baz=36,SNR=5.8
SHOC Shoshone 36.27 103 P **P 22 16 15.6 +0.1**
baz=36,SNR=7.3
GSC Goldstone 36.41 105 P **P 22 16 16.7 -0.1**
baz=36,SNR=18
GSC Goldstone 36.41 105 eP **P 22 16 16.7 -0.1**
S13A Holt Ranch, En 36.42 99 P **P 22 16 17.0 +0.2**
baz=36,SNR=7.5
N18A Larsen Ranch, 36.49 91 ⇑P **P 22 16 16.8 -0.7**
baz=36
MSU Marysvale 36.72 96 eP **P 22 16 19.6 +0.2**
BFSC Mount Baldy St 36.73 107 P **P 22 16 19.5 0.0**
baz=37,SNR=12
TMUT Trail Mountain 36.74 95 eP **P 22 16 20.0 +0.4**
O18A Roosevelt 36.77 92 ⇑P **P 22 16 20.2 +0.3**
baz=37
V11A Goodsprings 36.78 103 P **P 22 16 20.2 +0.3**
baz=37,SNR=11
T13A Saint George 36.79 100 P **P 22 16 20.1 +0.1**
baz=37,SNR=10.0
TUQ Turquoise Moun 36.80 104 ⇑P **P 22 16 20.2 +0.1**
baz=37
N19A John Jarvie Ra 36.83 91 ⇓P **P 22 16 19.9 -0.5**
baz=37
U12A Valley of Fire 36.85 101 ⇓P **P 22 16 20.4 -0.2**
baz=37
Q16A Castle Valley 37.02 95 P **P 22 16 22.2 +0.3**
baz=37,SNR=5.6
HEC Hector,Ludlow 37.02 105 P **P 22 16 21.8 -0.2**
baz=37,SNR=18
P18A Preston Nutter 37.06 93 ⇑P **P 22 16 22.3 0.0**
baz=37
U13A Pakoon Wash 37.19 100 P **P 22 16 23.9 +0.6**
baz=37,SNR=12
V12A Nelson 37.19 102 P **P 22 16 23.6 +0.3**
baz=37,SNR=12
T14A Hurricane 37.22 99 ⇓P **P 22 16 23.6 -0.1**
baz=37
SRU San Rafael 37.26 94 P **P 22 16 24.0 +0.1**
baz=37,SNR=19
SRU San Rafael 37.26 94 eP **P 22 16 24.0 0.0**
O19A Miners Draw (B 37.26 91 ⇑P **P 22 16 23.6 -0.3**
baz=37
R16A Teasdale 37.28 96 ⇑P **P 22 16 24.3 +0.2**
baz=37
GMRC Granite Mounta 37.43 104 P **P 22 16 25.1 -0.3**
baz=37,SNR=18
RWWY Rawlins 37.44 88 eP **P 22 16 24.8 -0.7**
comp=Z,16nm,0.9s,mb4.9
MURC Murrieta 37.46 107 ⇓P **P 22 16 25.7 0.0**
baz=37
Q18A Rafter H Ranch 37.48 94 P **P 22 16 25.4 -0.4**
baz=37,SNR=9.5
W12A Cal Nev Ari 37.49 103 ⇑P **P 22 16 26.1 +0.2**
baz=37
V13A Grand Canyon W 37.58 101 P **P 22 16 26.9 +0.1**
baz=38,SNR=11
S16A Weppner Ranch, 37.60 97 P **P 22 16 27.1 +0.2**
baz=38,SNR=6.2
R17A Hanksville Air 37.62 95 P **P 22 16 26.7 -0.3**
baz=38,SNR=8.9
U14A Mt Trumbull 37.63 100 P **P 22 16 27.8 +0.7**
baz=38,SNR=5.2
T15A Red Dirt Ranch 37.65 98 ⇓P **P 22 16 27.5 +0.2**
baz=38
RSSD Black Hills 37.71 83 eP **P 22 16 27.5 -0.2**
RSSD pmax pmax
comp=Z,22nm,0.6s,mb5.2
RSSD Black Hills 37.71 83 eP **P 22 16 27.5 -0.2**
comp=Z,22nm,0.6s,mb5.2
P19A Cripple Cowboy 37.78 92 P **P 22 16 28.2 -0.1**
baz=38,SNR=6.1
BELC Belle Mtn. 37.82 105 P **P 22 16 28.2 -0.5**
baz=38,SNR=23
PFO Pinyon Flat Ob 37.86 106 eP **P 22 16 27.7 -1.4**
PFO pmax pmax
comp=Z,26nm,1.0s,mb5.0
PFO Pinyon Flat Ob 37.86 106 P **P 22 16 28.6 -0.6**
baz=38,SNR=13
PFO Pinyon Flat Ob 37.86 106 eP **P 22 16 27.7 -1.4**
comp=Z,26nm,1.0s,mb5.0
ERM Erimo 37.91 273 eP **P 22 16 29.0 -0.5**
109C Camp Elliot, M 38.05 107 ⇑P **P 22 16 31.1 +0.4**
baz=38
Q19A Hogan Spring (38.08 93 P **P 22 16 30.0 -0.9**
baz=38,SNR=13
R18A Canyonlands Na 38.11 94 ⇓P **P 22 16 30.5 -0.6**
baz=38
S17A Black Ridge (B 38.11 96 ⇓P **P 22 16 31.3 +0.1**
baz=38
U15A North Rim 38.12 99 P **P 22 16 31.3 0.0**
baz=38,SNR=8.9
IRM Iron Mountain 38.17 104 P **P 22 16 31.6 -0.1**
baz=38,SNR=33
W13A Hualapai Mount 38.18 102 P **P 22 16 32.0 +0.2**
baz=38,SNR=15
V14A Boquillas Ranc 38.23 101 P **P 22 16 32.4 +0.2**
baz=38,SNR=12
BC3 Big Chuckw Mtn 38.38 105 P **P 22 16 32.7 -0.8**
baz=38,SNR=8.9
MONP Monument Peak 38.42 107 P **P 22 16 33.9 0.0**
baz=38,SNR=8.4
S18A Hurst Farm, Bl 38.53 95 P **P 22 16 33.9 -0.8**
baz=38,SNR=17
R19A Curley Farm, L 38.53 94 ⇑P **P 22 16 34.0 -0.7**
baz=38
W14A Seligman 38.55 101 P **P 22 16 34.8 -0.1**
baz=38,SNR=12
PV10 Paradox Valley 38.60 94 eP **P 22 16 35.8 +0.5**
V15A Kaibab Nationa 38.62 99 P **P 22 16 35.9 +0.4**
baz=38,SNR=23
PDMCI Parker Dam,Lak 38.63 103 ⇑P **P 22 16 35.3 -0.3**
baz=38
ULM Lac du Bonnet 38.64 69 P **P 22 16 35.0 -0.4**
comp=Z,11nm,0.6s,mb4.9,baz=308,slow=9.0,SNR=14
ULM PcP PcP 22 18 44.5 -1.6
comp=Z,2.7nm,0.4s,baz=270,slow=6.1,SNR=3.3
ULM LR LR 22 32 02.6
comp=Z,90nm,19.8s,baz=324,slow=35
PHWY Pilot Hill 38.69 87 eP **P 22 16 35.3 -0.7**
SWSC Sam W. Stewart 38.73 106 ⇑P **P 22 16 36.0 -0.4**
baz=39
DVTC Desert V Tower 38.77 107 P **P 22 16 36.6 -0.2**
baz=39,SNR=5.5
Y12C Blythe 38.82 104 P **P 22 16 37.0 -0.2**
baz=39,SNR=10.0
U17A Shonto 38.92 97 ⇑P **P 22 16 37.5 -0.4**
baz=39
S19A Harvey Farm, M 38.98 95 P **P 22 16 38.0 -0.5**
baz=39,SNR=5.5
T18A Mexican Hat 38.99 96 P **P 22 16 37.4 -1.1**
baz=39,SNR=14
W15A Williams 39.03 100 P **P 22 16 39.6 +0.7**
baz=39,SNR=5.7
PV01 Paradox Valley 39.04 94 eP **P 22 16 37.0 -1.9**
Y13A Salome 39.16 103 P **P 22 16 39.6 -0.3**
baz=39,SNR=8.1
GLA Glamis 39.18 105 P **P 22 16 39.8 -0.3**
baz=39,SNR=9.2
X14A Yava 39.20 102 P **P 22 16 40.4 +0.1**
baz=39,SNR=17
SMCO Snowmass 39.23 91 eScP ScP 22 22 30.1 -0.2
WUAZ Wupatki 39.29 99 ⇓P **P 22 16 41.1 +0.1**
baz=39
WUAZ Wupatki 39.29 99 eP **P 22 16 40.3 -0.8**
comp=Z,14nm,1.1s,mb4.7
W16A Flagstaff 39.51 100 P **P 22 16 43.4 +0.5**
baz=39,SNR=7.6
Y14A Wickenburg 39.53 102 P **P 22 16 42.6 -0.5**
baz=39,SNR=8.8
X15A Humboldt 39.55 101 P **P 22 16 43.4 +0.1**
baz=40,SNR=6.4
ISCO Idaho Springs 39.59 89 eP **P 22 16 43.5 0.0**
T19A Beclabito 39.69 95 P **P 22 16 43.7 -0.7**
baz=40,SNR=15
112A Yuma 39.70 105 ⇓P **P 22 16 44.5 0.0**
baz=40
MVCO Mesa Verde 39.72 95 eP **P 22 16 43.7 -0.9**
AGMN Agassiz Refuge 39.76 72 eP **P 22 16 43.4 -1.4**
comp=Z,38nm,0.9s,mb5.2
Y15A Casa Rosa Ranc 39.89 102 P **P 22 16 46.0 -0.1**
baz=40,SNR=11
V18A Ganado 39.97 98 ⇓P **P 22 16 46.3 -0.4**
baz=40
113A Mohawk Valley, 39.98 104 ⇑P **P 22 16 46.1 -0.7**
baz=40
X16A Lo Tiia Camp, P 40.05 100 P **P 22 16 47.6 +0.2**
baz=40,SNR=12
Y16A Circle Bar Ran 40.43 101 P **P 22 16 50.8 +0.3**
baz=40,SNR=6.0
V19A Window Rock 40.47 97 ⇓P **P 22 16 50.8 0.0**
baz=40
X18A Snowflake 40.81 99 ⇓P **P 22 16 53.8 +0.2**
baz=41
Z16A Peralta Trail, 40.85 101 ⇓P **P 22 16 54.1 +0.1**
baz=41
115A Sonoran Desert 40.88 103 P **P 22 16 54.5 +0.2**
baz=41,SNR=6.1
Y17A Roosevelt 40.92 100 ⇓P **P 22 16 54.6 +0.1**
baz=41
SDCO Great Sand Dun 41.06 91 eP **P 22 16 55.5 -0.2**
comp=Z,11nm,0.8s,mb4.7
214A Organ Pipe Nat 41.12 104 P **P 22 16 55.5 -0.7**
baz=41,SNR=8.3
X19A St. Johns 41.26 98 ⇓P **P 22 16 57.7 +0.3**
baz=41
116A Eloy 41.28 102 ⇑P **P 22 16 57.6 +0.1**
baz=41
Y18A Canyon Day Jun 41.31 100 ⇓P **P 22 16 58.4 +0.6**
baz=41
Z17A San Carlos Hig 41.42 101 ⇓P **P 22 16 59.4 +0.8**
baz=41
Y19A Nutrioso 41.62 99 P **P 22 17 01.1 +0.9**
baz=42,SNR=6.3
117A Oracle 41.81 102 P **P 22 17 01.9 0.0**
baz=42,SNR=9.7
ECSD EROS,Sioux Fal 42.13 78 eP **P 22 17 03.0 -1.3**
comp=Z,22nm,0.6s,mb5.1
118A Homack Ranch, 42.19 101 P **P 22 17 05.0 +0.1**
baz=42,SNR=5.2
EYMN Ely 42.32 70 eP **P 22 17 05.2 -0.6**
comp=Z,44nm,0.9s,mb5.2
217A Green Valley 42.37 102 P **P 22 17 06.5 +0.1**
baz=42,SNR=6.3
119A Ashpeak Ranch, 42.47 100 P **P 22 17 07.2 -0.1**
baz=42,SNR=6.7
ANMO Albuquerque 42.48 95 eP **P 22 17 06.5 -0.8**
ANMO e 22 18 59.0
218A Dragoon 42.65 101 ⇓P **P 22 17 08.7 0.0**
baz=43
LENM Lemitar 42.76 96 eP **P 22 17 09.8 +0.3**
LPM Los Pinos Moun 42.85 96 eP **P 22 17 08.6 -1.6**
BNM Barren Site 42.97 96 eP **P 22 17 10.9 -0.3**
219A White Tail Can 43.07 101 P **P 22 17 12.2 +0.1**
baz=43,SNR=6.0
319A Douglas 43.52 101 ⇑P **P 22 17 16.2 +0.5**
baz=43
CBKS Cedar Bluff 43.61 86 eP **P 22 17 15.7 -0.7**
CBKS pmax pmax
comp=Z,48nm,0.9s,mb5.2
CBKS Cedar Bluff 43.61 86 eP **P 22 17 15.7 -0.7**
comp=Z,48nm,0.9s,mb5.2
BOD Bodaibo 43.76 310 eP **P 22 17 16.1 -1.2**
BOD pmax pmax
comp=Z,5.0nm,1.1s,mb4.2
MDJ Mudanjiang 43.88 286 P **P 22 17 17.0 -1.4**
MDJ AMB AMB
comp=Z,3.0nm,0.6s,mb4.2
MDJ AMB AMB
comp=Z,53nm,4.6s
MJAR Matsushiro Arr 44.44 271 P **P 22 17 21.9 -1.1**
comp=Z,1.4nm,0.5s,mb4.0,baz=33,slow=7.4,SNR=5.2
COWI Conover 44.73 70 eP **P 22 17 24.2 -1.0**
comp=Z,16nm,0.6s,mb4.9
KSU1 Kansas State U 45.20 83 eP **P 22 17 27.4 -1.6**
comp=Z,14nm,0.7s,mb4.8
SCIA State Center 45.22 78 eP **P 22 17 28.6 -0.5**
comp=Z,24nm,0.6s,mb5.1
JFWS Jewell Farm 46.19 74 eP **P 22 17 35.2 -1.6**
SUMG Summit 46.45 20 eP **P 22 17 39.3 +0.8**
WMOK Wichita Mounta 47.02 89 eP **P 22 17 42.3 -1.1**
SFJD Kangerlussuaq 47.55 30 eP **P 22 17 45.7 -1.4**
SFJD pmax pmax
comp=Z,21nm,1.2s,mb4.8
SFJD Kangerlussuaq 47.55 30 eP **P 22 17 45.7 -1.3**
comp=Z,21nm,1.2s,mb4.8
TXAR Lajitas Array 48.23 98 P **P 22 17 51.9 -0.9**
comp=Z,7.8nm,0.7s,mb4.6,baz=304,slow=5.8,SNR=71
TXAR PcP PcP 22 19 17.8 -1.1
comp=Z,1.9nm,0.5s,baz=242,slow=1.3,SNR=8.9
TXAR LR LR 22 35 38.3
comp=Z,80nm,20.9s,baz=180,slow=33
TXAR Lajitas Array 48.23 98 P **P 22 17 51.9 -0.9**
TXAR 22 19 17.8
SLM Saint Louis 49.11 79 eP **P 22 17 57.9 -1.5**
JCT Junction City 49.56 94 eP **P 22 18 01.6 -1.4**
JCT epP pP 22 18 18.7 -1.8
KSRS Korea Array 49.64 280 P **P 22 18 04.1 +0.6**
comp=Z,4.5nm,0.8s,mb4.4,baz=50,slow=6.6,SNR=9.5
KSRS PcP PcP 22 19 23.8 -0.1
comp=Z,3.7nm,0.9s,baz=40,slow=5.1,SNR=4.1
KSRS LR LR 22 40 03.3
comp=Z,55nm,18.6s,baz=308,slow=37
SCHQ Schefferville 49.99 49 P **P 22 18 05.6 -0.3**
comp=Z,6.4nm,0.5s,mb4.8,baz=330,slow=8.6,SNR=16
SCHQ LR LR 22 40 48.7
comp=Z,48nm,18.1s,baz=270,slow=38
MIAR Mount Ida 50.13 85 eP **P 22 18 05.8 -1.4**
OLIL Olney 50.23 77 eP **P 22 18 06.6 -1.4**
comp=Z,24nm,0.6s,mb5.3
BLO Bloomington 50.80 76 eP **P 22 18 10.9 -1.3**
USIN University of 51.02 77 eP **P 22 18 12.6 -1.2**
NATX Nacogdoches 51.55 88 eP **P 22 18 17.1 -0.8**
WCI Wyandotte Cave 51.59 76 eP **P 22 18 16.4 -1.8**
WCI pmax pmax
comp=Z,16nm,1.0s,mb5.0
WCI Wyandotte Cave 51.59 76 eP **P 22 18 16.4 -1.8**
comp=Z,16nm,1.0s,mb5.0
ACSO Alum Creek Sta 52.00 72 eP **P 22 18 19.2 -2.0**
HKT Hockley 52.22 91 eP **P 22 18 21.8 -1.2**
HKT pmax pmax
comp=Z,45nm,1.5s,mb5.3
HKT Hockley 52.22 91 eP **P 22 18 21.8 -1.2**
comp=Z,45nm,1.5s,mb5.3
ALLY Alegheny Colle 52.53 69 eP **P 22 18 24.1 -1.0**
PLAL Pickwick Lake 52.93 80 eP **P 22 18 26.3 -1.8**
LONY Lake Ozonia 53.34 63 eP **P 22 18 29.5 -1.5**
comp=Z,19nm,1.0s,mb5.1
ULN Ulaanbaatar 53.38 303 eP **P 22 18 31.1 -0.1**
FRNY Flat Rock 53.70 62 eP **P 22 18 31.8 -1.8**
comp=Z,20nm,0.8s,mb5.2
SONM Songino Array 53.71 303 P **P 22 18 33.4 -0.2**
comp=Z,1.3nm,0.8s,mb4.0,baz=55,slow=5.5,SNR=8.2
SONM PcP PcP 22 19 39.2 +0.3
comp=Z,3.0nm,0.6s,baz=59,slow=1.8,SNR=7.7
SONM ScP ScP 22 23 30.1 -0.3
comp=Z,1.6nm,0.9s,baz=50,slow=3.4,SNR=6.0
SONM Songino Array 53.71 303 P **P 22 18 33.4 -0.3**
SONM 22 19 39.2
SWET Sewanee 53.96 79 eP **P 22 18 33.7 -1.9**
NCB Newcomb 53.99 63 eP **P 22 18 34.9 -0.9**
comp=Z,15nm,0.7s,mb5.1
MCWV Mont Chateau 54.11 71 eP **P 22 18 35.1 -1.6**
MIV Mineville/With 54.26 63 epP pP 22 18 54.7 -0.8
TZTN Tazewell 54.32 76 eP **P 22 18 37.0 -1.2**
comp=Z,19nm,0.8s,mb5.2
BINY Binghamton 54.34 66 eP **P 22 18 37.4 -0.9**
MDV Middlebury 54.49 62 eP **P 22 18 37.9 -1.6**
CPCT Cooper Cave 54.58 77 eP **P 22 18 38.4 -1.7**
ACCN Adirondack Com 54.69 63 eP **P 22 18 41.8 +1.0**
TKL Tuckaleechee C 54.84 77 eP **P 22 18 40.3 -1.8**
TKL e 22 19 42.3
LBNH Lisbon 54.95 61 eP **P 22 18 42.1 -0.6**
LBNH pmax pmax
comp=Z,22nm,0.9s,mb5.2
LBNH Lisbon 54.95 61 eP **P 22 18 42.1 -0.6**
comp=Z,22nm,0.9s,mb5.2
KEV Kevo 55.06 356 ep **P 22 18 42.0 -1.1**
comp=Z,1.7nm,0.4s,mb4.4
KEV Kevo 55.06 356 eP **P 22 18 42.0 -1.1**
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
HNH Hanover 55.16 62 eP **P 22 18 43.5 -0.7**
ARCES ARCESS Array B 55.33 357 P **P 22 18 44.4 -0.6**
comp=Z,3.4nm,0.8s,mb4.4,baz=30,slow=8.5,SNR=10.0
ARCES PcP PcP 22 19 44.5 -0.2
comp=Z,4.2nm,0.6s,baz=4.8,slow=4.7,SNR=8.8
ARCES LR LR 22 42 28.1
comp=Z,53nm,18.4s,baz=111,slow=36
ARCES ARCESS Array B 55.33 357 P **P 22 18 44.4 -0.7**
ARCES 22 19 44.5
ARCES ARCESS Array B 55.33 357 P **P 22 18 44.4 -0.7**
ARCES PcP PcP 22 19 44.5 -0.2
ARCES LR LR 22 42 28.1
ELN Prospectdale 55.37 73 eP **P 22 18 44.0 -1.8**
PKME Peaks-Kenny Pk 55.52 59 eP **P 22 18 45.6 -1.2**
comp=Z,18nm,0.9s,mb5.1
BLA Blacksburg 55.56 73 eP **P 22 18 41.1 -6.1**
BLA pmax pmax
comp=Z,16nm,0.7s,mb5.2
BLA Blacksburg 55.56 73 eP **P 22 18 41.0 -6.1**
comp=Z,16nm,0.7s,mb5.2
HHC Hu-ho-hao-te 56.13 294 eP **P 22 18 49.1 -2.1**
HHC PCP PcP 22 19 47.0 -1.4
HHC PP PP 22 20 56.7 +0.2
HHC PCS PcS 22 23 45.7 -3.1
HHC S **S** **22 26 29.6 -5.1**
HHC AMB AMB
comp=Z,11nm,0.5s,mb5.1
HHC AMB AMB

comp=Z,123nm,6.6s
HHC LR LR
comp=N,175nm,16.1s
HHC LR LR
comp=E,262nm,16.0s
HHC LR LR
comp=Z,142nm,14.4s
HRV Adam Dziewonsk 56.39 63 *eP* **P 22 18 51.9 -1.2**
HRV pmax pmax
comp=Z,16nm,0.9s,mb5.0
HRV Adam Dziewonsk 56.39 63 *eP* **P 22 18 51.9 -1.1**
comp=Z,16nm,0.9s,mb5.1
BRAL Brewton 56.43 83 *eP* **P 22 18 51.5 -2.0**
WES Weston 56.60 63 *eP* **P 22 18 54.1 -0.4**
GOGA Godfrey 56.67 78 *eP* **P 22 18 52.4 -2.7**
GOGA pmax pmax
comp=Z,14nm,0.9s,mb5.0
GOGA Godfrey 56.67 78 *eP* **P 22 18 52.4 -2.7**
comp=Z,14nm,0.9s,mb5.0
EMMW East Machias 56.82 58 *eP* **P 22 18 54.9 -1.2**
BRYW Bryant College 56.83 63 *eP* **P 22 18 55.3 -0.9**
JSC Jenkinsville 57.25 76 *eP* **P 22 18 57.3 -1.9**
ZALV Zalesovo Beam 58.27 320 P **P 22 19 06.6 +0.5**
comp=Z,0.6nm,0.3s,mb4.0,baz=29,slow=6.7,SNR=5.2
ZALV PcP PcP 22 19 56.4 -0.1
comp=Z,1.7nm,0.6s,baz=20,slow=4.7,SNR=6.2
ZALV ScP ScP 22 23 49.4 -0.9
comp=Z,0.3nm,0.3s,baz=0.0,slow=3.0,SNR=3.0
ZALV LR LR 22 46 39.0
comp=Z,62nm,19.4s,baz=56,slow=38
ZALV Zalesovo Beam 58.27 320 P **P 22 19 06.6 +0.5**
ZALV PcP PcP 22 19 56.4 -0.1
ZALV ScP ScP 22 23 49.4 -0.9
ZALV LR LR 22 46 39.0
ZAL Zalesovo 58.28 320 P **P 22 19 06.6 +0.4**
ZAL 22 19 56.4
JOF Joensuu 61.66 353 *ep* **P 22 19 28.5 -0.7**
comp=Z,0.7nm,0.3s,mb4.2
KAF Kangasniemi 62.73 356 *ep* **P 22 19 35.6 -0.7**
comp=Z,3.5nm,0.4s,mb4.6,baz=2.0,slow=6.5
KAF Kangasniemi 62.73 356 *eP* **P 22 19 35.6 -0.7**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
GTA Gaotai 63.16 301 *eP* **P 22 19 39.0 -0.5**
GTA AMB AMB
comp=Z,2.0nm,1.0s,mb4.0
LZH Lanzhou 63.70 296 *eP* **P 22 19 43.5 +0.4**
LZH *e*PP PP 22 22 05.6 +2.1
LZH *e*S **S 22 28 09.3 -2.7**
LZH *e*SS SS 22 32 18.5 -1.5
LZH AMB AMB
comp=Z,18nm,1.4s,mb4.7
LZH AMB AMB
comp=Z,105nm,7.5s
LZH LR LR
comp=N,275nm,16.5s
LZH LR LR
comp=Z,392nm,18.9s
LZH Lanzhou 63.70 296 *eP* **P 22 19 43.5 +0.4**
LZH pP pP 22 20 02.1 +0.7
LZH sP sP 22 20 10.5 +1.4
LZH *e*PP PP 22 22 05.6 +2.1
LZH *e*S **S 22 28 09.3 -2.7**
LZH sS sS 22 28 42.5 -0.4
LZH *e*SS SS 22 32 18.5 -1.5
NB2 NORSAR Subarra 63.82 4 P **P 22 19 43.1 -0.4**
comp=Z,7.1nm,0.8s,mb4.5,baz=357,slow=6.9
NOA NORSAR Array B 63.82 4 P **P 22 19 43.3 -0.2**
comp=Z,5.2nm,0.8s,mb4.4,baz=356,slow=6.6,SNR=19
NOA LR LR 22 47 27.9
comp=Z,22nm,18.4s,baz=310,slow=36
ARU Arti 63.94 337 *c i*P **P 22 19 44.1 -0.3**
ARU *e* 22 20 16.5
ARU *e* 22 22 02.9
ARU *e*S **S 22 28 14.6 +0.2**
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.5
ARU Arti 63.94 337 *eP* **P 22 19 44.2 -0.2**
comp=Z,5.5nm,0.5s,mb4.6
MKAR Makanchi Array 65.01 317 P **P 22 19 50.8 -0.7**
comp=Z,0.7nm,0.4s,mb3.9,baz=29,slow=5.8,SNR=6.9
MKAR LR LR 22 50 20.1
comp=Z,64nm,18.8s,baz=232,slow=38
KONO Kongsberg 65.14 5⇑ *eP* **P 22 19 52.5 +0.4**
WMQ Urumqi 65.23 312 *eP* **P 22 19 53.6 +0.6**
WMQ *e*S S 22 28 29.0 -1.7
WMQ AMB AMB
comp=Z,6.0nm,0.8s,mb4.5
WMQ AMB AMB
comp=Z,131nm,4.6s
WMQ LR LR
comp=N,115nm,21.6s
WMQ LR LR
comp=E,84nm,20.9s
WMQ LR LR
comp=Z,119nm,22.3s
CD2 Chengdu 67.77 292 *eP* **P 22 20 09.5 +0.1**
CD2 PP PP 22 22 40.2 +1.0
CD2 PCS 22 24 39.5
CD2 S S 22 28 59.0 -2.8
CD2 SCS ScS 22 29 57.2 -4.5
CD2 SS SS 22 33 22.5 -1.0
CD2 AMB AMB
comp=Z,20nm,1.1s,mb4.9
CD2 AMB AMB
comp=Z,90nm,8.4s
CD2 LR LR
comp=N,230nm,14.4s
CD2 LR LR
comp=E,180nm,14.8s
CD2 LR LR
comp=Z,190nm,12.0s
OBN Obninsk 68.93 349 P **P 22 20 15.0 -1.2**
OBN 22 20 40.0
OBN pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
DMUB Kingscourt 69.12 16 *eP* **P 22 20 17.6 +0.2**
DCN Croghan 69.60 16 *⇓iP* **P 22 20 20.6 +0.2**
GYA Guiyang 69.72 287 P **P 22 20 22.4 +0.8**
GYA PP PP 22 22 58.2 +2.1
GYA S S 22 29 23.5 -1.4
GYA SKS 22 30 11.4
GYA SS SS 22 33 53.2 -0.5
GYA AMB AMB
comp=Z,20nm,0.9s,mb5.0
GYA AMB AMB
comp=Z,130nm,5.6s
DLF Lyons Farm 69.76 16 *eP* **P 22 20 22.0 +0.6**
TKM2 Tokmak 2 70.83 319 *eP* **P 22 20 28.5 +0.4**
BSEG Bad Segeberg 70.88 5 *eP* **P 22 20 28.9 +0.7**
comp=Z,8.0nm,1.0s,mb4.5
PMOR Pomariorio Ree 71.00 166 *eT* 23 37 16.5
comp=Z,88nm,0.2s
VAH Vaihoa 71.26 166 *eT* 23 37 36.5
comp=Z,12nm,0.4s
HNR Honiara 72.14 220 LR LR 22 45 25.7
comp=Z,42nm,20.1s,baz=11,slow=30
AML Almayashu 72.21 320 *eP* **P 22 20 37.9 +1.4**
KMI Kunming 72.91 289 P **P 22 20 40.1 -0.7**
KMI S S 22 29 58.8 -3.0
KMI SKS 22 30 34.6
KMI SS SS 22 34 46.6 +4.0
KMI AMB AMB
comp=Z,3.0nm,0.5s,mb4.4
KMI AMB AMB
comp=Z,92nm,5.5s
CLZ Clausthal 72.97 5 *eP* **P 22 20 41.6 +0.9**
CLZ pmax pmax
comp=Z,13nm,1.2s,mb4.6
CLZ Clausthal 72.97 5 *eP* **P 22 20 41.6 +0.9**
comp=Z,13nm,1.2s,mb4.6
BUG Bochum-Univer 73.17 7 *eP* **P 22 20 41.5 -0.5**
comp=Z,9.0nm,0.5s,mb4.9
PPT Papeete 73.31 168 *e*LR LR 22 42 58.1
comp=Z,139nm,27.8s
PPT Papeete 73.31 168 LR LR 22 45 47.7
comp=Z,39nm,18.9s,baz=27,slow=30
TIAR Tiarei 73.33 168 *eT* 23 40 11.7
comp=Z,541nm,0.3s
TVO Taravao 73.56 168 *eT* 23 40 29.1
comp=Z,80nm,0.3s
CLL Collm 73.62 4 *i*P **P 22 20 44.5 -0.1**
CLL *i* pP 22 21 00.2 -3.0
CLL pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
CLL Collm 73.62 4 *i*P **P 22 20 44.5 -0.1**
comp=Z,4.0nm,0.8s,mb4.2
CLL Collm 73.62 4 *i*P **P 22 20 44.5 -0.1**
comp=Z,4.0nm,0.6s,mb4.3
CLL *i* PcP PcP 22 21 00.2 +0.1
AKASG Malin Array Be 73.96 353 P **P 22 20 45.9 -0.6**
comp=Z,4.7nm,0.4s,mb4.6,baz=8.6,slow=5.9,SNR=27
AKASG Malin Array Be 73.96 353 P **P 22 20 45.9 -0.6**
UBBA Unterbreizbach 73.97 6 *eP* **P 22 20 47.1 +0.5**
comp=Z,6.0nm,1.2s,mb4.2
BRG Berggiesshubel 74.09 3 *i*P **P 22 20 47.6 +0.3**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
BRG Berggiesshubel 74.09 3 *eP* **P 22 20 47.4 +0.1**
comp=Z,4.0nm,0.8s,mb4.2
BRG Berggiesshubel 74.09 3 *i*P **P 22 20 47.6 +0.3**
comp=Z,3.5nm,0.8s,mb4.2
MOX Moxa 74.23 5 *eP* **P 22 20 48.1 0.0**
comp=Z,7.0nm,0.7s,mb4.5
MOX Moxa 74.23 5 *eP* **P 22 20 48.1 0.0**
MOX pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
MOX Moxa 74.23 5 *eP* **P 22 20 48.7 +0.6**
comp=Z,7.0nm,0.7s,mb4.5
BAIF Baives 74.29 10 *eP* **P 22 20 48.5 0.0**
comp=Z,15nm,0.8s,mb4.5
BAIF Baives 74.29 10 *eP* **P 22 20 48.5 0.0**
BAIF pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
BAIF Baives 74.29 10 *eP* **P 22 20 48.5 0.0**
comp=Z,7.3nm,0.8s,mb4.5
GIVF Givet 74.30 9 *eP* **P 22 20 48.4 -0.2**
PVCC Panska Ves 74.45 3 *eP* **P 22 20 50.0 +0.6**
TNS Taunus Mts 74.47 7 *eP* **P 22 20 50.1 +0.6**
TNS pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
TNS Taunus Mts 74.47 7 *eP* **P 22 20 50.1 +0.6**
comp=Z,5.0nm,0.8s,mb4.3
DAV Davao City (W) 74.56 260 LR LR 22 53 33.0
comp=Z,57nm,18.4s,baz=211,slow=36
DPC Dobruska-Polom 74.66 1 *eP* **P 22 20 51.1 +0.4**
NKC Novy Kostel 74.67 4 *eP* **P 22 20 51.2 +0.5**
WLF Walferdange 74.85 8 *eP* **P 22 20 52.4 +0.6**
comp=Z,6.0nm,0.7s,mb4.4
MANZ Manzenberg 74.91 4 *eP* **P 22 20 52.0 -0.1**
comp=Z,3.0nm,1.0s,mb4.0
PRU Pruhonice 74.99 3 *eP* **P 22 20 52.7 +0.1**
FLN La Foliniere 75.04 13 *eP* **P 22 20 52.5 -0.4**
comp=Z,6.5nm,0.5s,mb4.3
FLN *e*MLR MLR
comp=Z,68nm,19.5s
FLN La Foliniere 75.04 13 *eP* **P 22 20 52.5 -0.4**
FLN pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
FLN MLR MLR
comp=Z,70nm,19.5s
FLN La Foliniere 75.04 13 *eP* **P 22 20 52.5 -0.4**
comp=Z,3.3nm,0.5s,mb4.3
FLN LR LR
comp=Z,70nm,19.5s
ROSF Rostrenen 75.08 15 *eP* **P 22 20 53.2 +0.1**
comp=Z,8.5nm,0.7s,mb4.3
ROSF Rostrenen 75.08 15 *eP* **P 22 20 53.2 +0.1**
ROSF pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
ROSF Rostrenen 75.08 15 *eP* **P 22 20 53.2 +0.1**
comp=Z,4.3nm,0.7s,mb4.3
ROTZ Rotzenmuhle 75.13 4 *eP* **P 22 20 53.5 +0.1**
comp=Z,2.0nm,0.9s,mb3.9
GRA1 Grafenberg Arr 75.16 5 *eP* **P 22 20 54.5 +1.0**
comp=Z,6.0nm,0.7s,mb4.4
GRF Grafenberg Arr 75.16 5 *eP* **P 22 20 54.5 +1.0**
GRF pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
GRF Grafenberg Arr 75.16 5 *eP* **P 22 20 54.5 +1.0**
GRF pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
GRF Grafenberg Arr 75.16 5 *eP* **P 22 20 54.5 +1.0**
comp=Z,6.0nm,0.7s,mb4.4
LSA Lhasa 75.18 301 *eP* **P 22 20 54.5 +0.5**
LSA pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
LSA Lhasa 75.18 301 *eP* **P 22 20 54.5 +0.5**
comp=Z,6.5nm,0.8s,mb4.4
OKC Ostrava-Krasne 75.19 0 *eP* **P 22 20 52.3 -1.4**
MORC Moravsky Berou 75.25 1⇑ *iP* **P 22 20 54.6 +0.5**
MORC Moravsky Berou 75.25 1 *eP* **P 22 20 54.3 +0.3**
LDF La Druitiere 75.26 13 *eP* **P 22 20 53.7 -0.4**
SGMF Saint Gilles 75.26 14 *eP* **P 22 20 54.1 -0.1**
KWP Kalwaria 75.34 357 *eP* **P 22 20 55.3 +0.7**
KWP Kalwaria 75.34 357⇑ *iP* **P 22 20 55.3 +0.7**
KWP Kalwaria 75.34 357 *eP* **P 22 20 55.3 +0.7**
GRR Gorron 75.36 13 *eP* **P 22 20 54.6 -0.1**
comp=Z,13nm,0.6s,mb4.5
GRR Gorron 75.36 13 *eP* **P 22 20 54.6 -0.1**
GRR pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
GRR Gorron 75.36 13 *eP* **P 22 20 54.6 -0.1**
comp=Z,6.4nm,0.6s,mb4.5
QUIF Quistinic 75.50 15 *eP* **P 22 20 55.5 -0.1**
STHS Stebnicka Huta 75.59 358 *i*P **P 22 20 57.3 +1.3**
STHS pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
STHS Stebnicka Huta 75.59 358 *i*P **P 22 20 57.3 +1.3**
comp=Z,7.4nm,0.6s,mb4.6
VRAC Vranov 75.71 1⇑ *iP* **P 22 20 57.2 +0.5**
VRAC Vranov 75.71 1⇑P P 22 20 57.2 +0.5
WET Wettzell 75.78 4 *eP* **P 22 20 56.8 -0.3**
WET pmax pmax
comp=Z,8.0nm,1.5s,mb4.2
WET Wettzell 75.78 4 *eP* **P 22 20 56.8 -0.3**
comp=Z,8.0nm,1.5s,mb4.2
KHC Kasperske Hory 75.82 3 *eP* **P 22 20 57.9 +0.6**
KOLS Kolonicke sedl 76.05 357 *eP* **P 22 20 59.4 +0.7**
GEC2 GERESS Array S 76.11 3 *eP* **P 22 20 59.0 0.0**
GEC2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
GEC2 GERESS Array S 76.11 3 *eP* **P 22 20 59.0 0.0**
comp=Z,3.0nm,0.8s,mb4.1
GERES GERESS Array B 76.11 3 P **P 22 20 59.4 +0.5**
comp=Z,1.8nm,0.6s,mb4.0,baz=20,slow=4.4,SNR=16
CDF Champ du Feu 76.19 8 *eP* **P 22 20 59.4 0.0**
comp=Z,5.8nm,0.7s,mb4.1
CDF Champ du Feu 76.19 8 *eP* **P 22 20 59.4 0.0**
CDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
CDF Champ du Feu 76.19 8 *eP* **P 22 20 59.4 0.0**
comp=Z,2.9nm,0.7s,mb4.1
BFO Black Forest 76.34 7 *eP* **P 22 21 00.4 +0.1**
BFO pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
BFO Black Forest 76.34 7 *eP* **P 22 21 00.4 +0.1**
comp=Z,5.0nm,0.9s,mb4.2
ECH Echery 76.37 8 *eP* **P 22 21 00.1 -0.4**
HAU Haudompre 76.52 8 *eP* **P 22 21 01.2 -0.1**
comp=Z,11nm,0.7s,mb4.4
HAU *e*MLR MLR
comp=Z,64nm,19.5s
HAU Haudompre 76.52 8 *eP* **P 22 21 01.2 -0.1**
HAU pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
HAU MLR MLR
comp=Z,60nm,19.5s
HAU Haudompre 76.52 8 *eP* **P 22 21 01.2 -0.1**
comp=Z,5.4nm,0.7s,mb4.4
HAU LR LR
comp=Z,60nm,19.5s
KECS Kecovo 76.54 359 *eP* **P 22 21 01.8 +0.4**
KECS pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
KECS Kecovo 76.54 359 *eP* **P 22 21 01.8 +0.4**
comp=Z,2.8nm,0.6s,mb4.2
VYHS Vyhne 76.54 360 *eP* **P 22 21 01.9 +0.5**
VYHS pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
VYHS Vyhne 76.54 360 *eP* **P 22 21 01.9 +0.5**
comp=Z,1.2nm,0.6s,mb3.8
MODS Modra-Piesok 76.65 1 *eP* **P 22 21 02.5 +0.4**
MODS Modra-Piesok 76.65 1 *eP* **P 22 21 02.6 +0.5**
HINF Hinteralfeld 76.74 8 *eP* **P 22 21 02.3 -0.3**
comp=Z,9.5nm,0.7s,mb4.4
HINF Hinteralfeld 76.74 8 *eP* **P 22 21 02.3 -0.3**
HINF pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
HINF Hinteralfeld 76.74 8 *eP* **P 22 21 02.3 -0.3**
comp=Z,4.8nm,0.7s,mb4.3
ZST Bratislava 76.83 1 *eP* **P 22 21 03.9 +0.8**
ZST pmax pmax
comp=Z,9.0nm,0.5s,mb4.8
ZST Bratislava 76.83 1 *eP* **P 22 21 03.9 +0.8**
comp=Z,9.2nm,0.5s,mb4.8
LOR Lormes 77.02 10 *eP* **P 22 21 03.7 -0.4**
comp=Z,14nm,0.7s,mb4.5
LOR *e*MLR MLR
comp=Z,63nm,17.2s
LOR Lormes 77.02 10 *eP* **P 22 21 03.7 -0.4**
LOR pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
LOR MLR MLR
comp=Z,60nm,17.3s
LOR Lormes 77.02 10 *eP* **P 22 21 03.7 -0.4**
comp=Z,7.1nm,0.7s,mb4.5
LOR LR LR
comp=Z,60nm,17.3s
CONA Conrad Observa 77.08 2⇓ *iP* **P 22 21 05.0 +0.6**
comp=Z,7.2nm,0.6s,mb4.6
CSNA Conrad Observa 77.08 2⇑ *iP* **P 22 21 05.1 +0.6**
comp=Z,6.2nm,0.6s,mb4.5
PSZ Piszkesteto 77.11 359⇑ *iP* **P 22 21 05.3 +0.7**
PSZ Piszkesteto 77.11 359 ⇑P P 22 21 05.3 +0.7
SSF Saint Saulge 77.18 11 *eP* **P 22 21 05.0 -0.1**
comp=Z,16nm,0.4s,mb4.8
SSF Saint Saulge 77.18 11 *eP* **P 22 21 05.0 -0.1**
SSF pmax pmax
comp=Z,8.0nm,0.4s,mb4.8
SSF Saint Saulge 77.18 11 *eP* **P 22 21 05.0 -0.1**
comp=Z,7.9nm,0.4s,mb4.8
MFF Saint Martin d 77.21 13 *eP* **P 22 21 05.4 +0.2**
comp=Z,24nm,0.6s,mb4.8
MFF Saint Martin d 77.21 13 *eP* **P 22 21 05.4 +0.2**
MFF pmax pmax
comp=Z,12nm,0.6s,mb4.8
MFF Saint Martin d 77.21 13 *eP* **P 22 21 05.4 +0.2**
comp=Z,12nm,0.6s,mb4.8
AVF Avril sur Loir 77.44 11 *eP* **P 22 21 06.3 -0.2**
comp=Z,15nm,0.5s,mb4.7
AVF Avril sur Loir 77.44 11 *eP* **P 22 21 06.3 -0.2**
AVF pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
AVF Avril sur Loir 77.44 11 *eP* **P 22 21 06.3 -0.2**
comp=Z,7.5nm,0.5s,mb4.7
MOTA Moosalm 77.50 5⇓ *iP* **P 22 21 07.1 +0.3**
comp=Z,4.4nm,0.6s,mb4.3
MOTA Moosalm 77.50 5⇓ *iP* **P 22 21 07.1 +0.3**
MOTA pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
WATA Walderalm 77.53 5⇑ *iP* **P 22 21 07.2 +0.2**
comp=Z,4.8nm,0.5s,mb4.5
WATA Walderalm 77.53 5⇑ *iP* **P 22 21 07.2 +0.2**
WATA pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
WTTA Wattenberg 77.60 5⇑ *iP* **P 22 21 07.9 +0.5**
comp=Z,13nm,0.7s,mb4.7
WTTA Wattenberg 77.60 5⇑ *iP* **P 22 21 07.9 +0.5**
WTTA pmax pmax
comp=Z,13nm,0.7s,mb4.8
BGF Bois d'Agland 77.61 11 *eP* **P 22 21 07.3 -0.2**
comp=Z,14nm,0.7s,mb4.5
BGF Bois d'Agland 77.61 11 *eP* **P 22 21 07.3 -0.2**
BGF pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
BGF Bois d'Agland 77.61 11 *eP* **P 22 21 07.3 -0.2**
comp=Z,7.3nm,0.7s,mb4.5
SMF Signal de Mont 77.63 10 *eP* **P 22 21 07.3 -0.3**
comp=Z,15nm,0.7s,mb4.5
SMF Signal de Mont 77.63 10 *eP* **P 22 21 07.3 -0.3**
SMF pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
SMF Signal de Mont 77.63 10 *eP* **P 22 21 07.3 -0.3**
comp=Z,7.3nm,0.7s,mb4.5
FETA Feichten 77.80 5⇓ *iP* **P 22 21 09.4 +0.9**
comp=Z,6.8nm,0.8s,mb4.4
TCF Toulx Ste Croi 77.81 12 *eP* **P 22 21 08.3 -0.3**
comp=Z,6.9nm,0.7s,mb4.2
TCF Toulx Ste Croi 77.81 12 *eP* **P 22 21 08.3 -0.3**
TCF pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
TCF Toulx Ste Croi 77.81 12 *eP* **P 22 21 08.3 -0.3**
comp=Z,3.5nm,0.7s,mb4.2
GOF Gofitskoye 77.85 343 *eP* **P 22 21 03.0 -5.8**
CABF La Chapelle 77.88 9 *eP* **P 22 21 09.3 +0.4**
comp=Z,14nm,0.7s,mb4.5
CABF La Chapelle 77.88 9 *eP* **P 22 21 09.3 +0.4**
CABF pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
CABF La Chapelle 77.88 9 *eP* **P 22 21 09.3 +0.4**
comp=Z,7.2nm,0.7s,mb4.5
DRGR 78.18 357⇑ *iP* **P 22 21 10.9 +0.3**
DRGR 78.18 357 ⇑P P 22 21 10.9 +0.3
SJG San Juan 78.25 75 *eP* **P 22 21 11.3 -0.1**
SOKA Soboth 78.31 2⇓ *iP* **P 22 21 12.0 +0.7**
comp=Z,5.8nm,0.5s,mb4.6
PERS Pernice 78.36 2 *eP* **P 22 21 12.5 +0.9**
HUMP Col San Antoni 78.39 75 *eP* **P 22 21 11.3 -0.9**
comp=Z,9.8nm,0.8s,mb4.6
CPD Cerro la Pandu 78.44 75 *eP* **P 22 21 11.7 -0.8**
CPD pmax pmax
comp=Z,465nm,1.1s
CPD Cerro la Pandu 78.44 75 *eP* **P 22 21 11.7 -0.8**
comp=Z,465nm,1.1s
OBKA Obir 78.47 3⇓ *iP* **P 22 21 12.8 +0.6**
comp=Z,27nm,0.5s,mb5.2
RJF Les Rejaudoux 78.69 12 *eP* **P 22 21 13.1 -0.4**
RJF *e*MLR MLR
comp=Z,34nm,19.5s
RJF Les Rejaudoux 78.69 12 *eP* **P 22 21 13.1 -0.4**
RJF LR LR
comp=Z,30nm,19.5s
ROBS Robic 78.70 4 *eP* **P 22 21 13.2 -0.3**
PKSM Moragy 78.82 360⇑ *iP* **P 22 21 13.8 -0.4**
PKSM Moragy 78.82 360 ⇑P P 22 21 13.8 -0.4
LFF La Frestale 78.96 13 *eP* **P 22 21 14.9 0.0**
comp=Z,11nm,0.5s,mb4.6
LFF La Frestale 78.96 13 *eP* **P 22 21 14.9 0.0**
LFF pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
LFF La Frestale 78.96 13 *eP* **P 22 21 14.9 0.0**
comp=Z,5.4nm,0.5s,mb4.6
KIV Kislovodsk 78.98 343 *deP* **P 22 21 15.5 +0.4**
KIV *e* 22 21 22.2
KIV pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
KIV Kislovodsk 78.98 343⇑ *iP* **P 22 21 15.1 0.0**
KIV Kislovodsk 78.98 343 *eP* **P 22 21 15.2 +0.1**
comp=Z,9.6nm,0.9s,mb4.6
LPL La Plagne 79.02 8 *eP* **P 22 21 16.2 +0.9**
comp=Z,6.7nm,0.6s,mb4.3
LPL La Plagne 79.02 8 *eP* **P 22 21 16.2 +0.9**
LPL pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
LPL La Plagne 79.02 8 *eP* **P 22 21 16.2 +0.9**
comp=Z,3.3nm,0.6s,mb4.3
LPG La Plagne 79.04 8 *eP* **P 22 21 16.5 +1.1**
comp=Z,4.8nm,0.6s,mb4.2
LPG La Plagne 79.04 8 *eP* **P 22 21 16.5 +1.1**
LPG pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
LPG La Plagne 79.04 8 *eP* **P 22 21 16.5 +1.1**
comp=Z,2.4nm,0.6s,mb4.2
JAVS Javornik 79.07 3 *eP* **P 22 21 15.1 -0.4**
CAF Calviac 79.13 12 *eP* **P 22 21 15.8 -0.1**
comp=Z,8.0nm,0.8s,mb4.3
CAF Calviac 79.13 12 *eP* **P 22 21 15.8 -0.1**
CAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
CAF Calviac 79.13 12 *eP* **P 22 21 15.8 -0.1**
comp=Z,4.0nm,0.8s,mb4.3
MLR Muntele Rosu 79.35 355⇑ *iP* **P 22 21 17.8 +0.7**
MLR Muntele Rosu 79.35 355 ⇑P P 22 21 17.8 +0.7
BZS Buzias 79.38 358⇓ *iP* **P 22 21 17.2 0.0**
BZS Buzias 79.38 358 ⇓P P 22 21 17.2 0.0
TLCR 79.47 353⇓ *iP* **P 22 21 11.7 -6.0**
BNI Bardonecchia 79.47 9 *eP* **P 22 21 19.1 +1.4**
BNI pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
BNI Bardonecchia 79.47 9 *eP* **P 22 21 19.1 +1.3**
comp=Z,7.9nm,0.6s,mb4.7
VIVF Saint-Julien-l 79.48 10 *eP* **P 22 21 17.9 +0.1**
comp=Z,6.4nm,0.6s,mb4.3
VIVF Saint-Julien-l 79.48 10 *eP* **P 22 21 17.9 +0.1**
VIVF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VIVF	Saint-Julien-l	79.48	10	eP	P	22 21 17.9	+0.1
	comp=Z,3.2nm,0.6s,mb4.3						
BOJS	Bojanci	79.49	2	i P	P	22 21 18.1	+0.2
ORIF	Oris-en-Rattie	79.54	9	eP	P	22 21 18.6	+0.5
	comp=Z,11nm,0.7s,mb4.5						
ORIF				eMLR	MLR		
	comp=Z,39nm,21.2s						
ORIF	Oris-en-Rattie	79.54	9	eP	P	22 21 18.6	+0.5
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ORIF	Oris-en-Rattie	79.54	9	eP	P	22 21 18.6	+0.5
	comp=Z,5.4nm,0.7s,mb4.5						
MBDF	Montbardon	79.81	9	eP	P	22 21 20.6	+1.1
	comp=Z,16nm,0.6s,mb4.8						
MBDF	Montbardon	79.81	9	eP	P	22 21 20.6	+1.1
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
MBDF	Montbardon	79.81	9	eP	P	22 21 20.6	+1.1
	comp=Z,7.8nm,0.6s,mb4.7						
HARR	Harsova	80.03	353	⇑iP	P	22 21 20.8	+0.1
HARR	Harsova	80.03	353	⇑P	P	22 21 20.8	0.0
LASF	Ste Croix	80.17	11	eP	P	22 21 21.8	+0.3
	comp=Z,9.6nm,0.9s,mb4.3						
TIRR	Tirgusor	80.23	353	⇑iP	P	22 21 21.1	-0.7
TIRR	Tirgusor	80.23	353	⇑P	P	22 21 21.1	-0.7
CMAR	Chiang Mai Arr	80.36	288	P	P	22 21 22.4	-0.4
	comp=Z,9.2nm,0.8s,mb4.6,baz=18,slow=5.6,SNR=44						
CMAR				LR	LR	22 59 35.7	
	comp=Z,38nm,20.0s,baz=190,slow=38						
SMRF	Simiane la Rot	80.44	9	eP	P	22 21 23.8	+0.8
	comp=Z,14nm,0.8s,mb4.5						
SMRF	Simiane la Rot	80.44	9	eP	P	22 21 23.8	+0.8
	comp=Z,14nm,0.8s,mb4.8						
SJPF	Ste Jean	80.49	15	eP	P	22 21 23.6	+0.4
	comp=Z,17nm,1.0s,mb4.5						
SJPF	Ste Jean	80.49	15	eP	P	22 21 23.6	+0.4
SJPF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
SJPF	Ste Jean	80.49	15	eP	P	22 21 23.6	+0.4
	comp=Z,8.4nm,1.0s,mb4.5						
MTLF	Montolieu	80.71	12	eP	P	22 21 24.5	+0.1
	comp=Z,4.4nm,0.6s,mb4.2						
MTLF	Montolieu	80.71	12	eP	P	22 21 24.5	+0.1
MTLF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
MTLF	Montolieu	80.71	12	eP	P	22 21 24.5	+0.1
	comp=Z,2.2nm,0.6s,mb4.2						
SBF	Sospel	80.72	8	eP	P	22 21 24.5	0.0
	comp=Z,45nm,0.9s,mb5.0						
SBF	Sospel	80.72	8	eP	P	22 21 24.5	0.0
SBF				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.0						
SBF	Sospel	80.72	8	eP	P	22 21 24.5	0.0
	comp=Z,22nm,0.9s,mb5.0						
ETSF	Etsaut	80.79	14	eP	P	22 21 25.3	+0.4
	comp=Z,14nm,0.7s,mb4.6						
ETSF	Etsaut	80.79	14	eP	P	22 21 25.3	+0.4
ETSF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
ETSF	Etsaut	80.79	14	eP	P	22 21 25.3	+0.4
	comp=Z,7.1nm,0.7s,mb4.6						
FRF	La Foret Royal	80.95	9	eP	P	22 21 24.4	-1.3
	comp=Z,14nm,0.8s,mb4.5						
FRF	La Foret Royal	80.95	9	eP	P	22 21 24.4	-1.3
FRF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
FRF	La Foret Royal	80.95	9	eP	P	22 21 24.4	-1.3
	comp=Z,7.2nm,0.8s,mb4.5						
LMR	La Mourre	81.17	9	eP	P	22 21 27.1	+0.2
MVO	Moncorvo	81.42	19	eP	P	22 21 28.9	+0.7
PVIS	Viseu	81.69	20	eP	P	22 21 30.6	+0.9
MTE	Manteigas	82.06	20	eP	P	22 21 32.5	+0.9
	comp=Z,28nm,1.1s,mb5.0						
PGF	Pioggiola	82.14	7	eP	P	22 21 32.3	+0.3
	comp=Z,16nm,0.7s,mb4.7						
PGF	Pioggiola	82.14	7	eP	P	22 21 32.3	+0.3
PGF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
PGF	Pioggiola	82.14	7	eP	P	22 21 32.3	+0.3
	comp=Z,8.1nm,0.7s,mb4.7						
PCBR	Castelo Branco	82.61	20	eP	P	22 21 35.0	+0.5
PTOM	Tomar	82.64	21	eP	P	22 21 35.5	+0.8
	comp=Z,38nm,0.9s,mb5.2						
PMRV	Marv??o	83.03	20	eP	P	22 21 37.2	+0.5
	comp=Z,29nm,1.5s,mb4.9						
PMAFR	Mafra	83.10	22	eP	P	22 21 37.7	+0.6
	comp=Z,52nm,0.6s,mb5.5						
ESDC	Sonseca Array	83.42	17	P	P	22 21 39.1	+0.4
	comp=Z,11nm,0.6s,mb4.8,baz=342,slow=4.5,SNR=46						
PESTR	Estremoz	83.53	20	eP	P	22 21 39.6	+0.3
	comp=Z,24nm,1.7s,mb4.8						
EVO	Evora	83.77	21	eP	P	22 21 40.5	0.0
	comp=Z,23nm,0.9s,mb4.7						
EVO				eMLR	MLR		
	comp=Z,36nm,20.0s						
EVO	Evora	83.77	21	eP	P	22 21 40.9	+0.4
PBAR	Barrancos	84.31	20	eP	P	22 21 43.8	+0.6
	comp=Z,30nm,1.8s,mb4.8						
BR131	Keskin Array S	84.43	348	eP	P	22 21 43.9	0.0
	comp=Z,0.8nm,0.4s,mb3.9						
MALT	Malatya	85.18	344	⇑iP	P	22 21 47.6	0.0
MALT	Malatya	85.18	344	eP	P	22 21 48.2	+0.6
OTAV	Otavalo	85.80	96	eP	P	22 21 50.6	-0.4
CTA	Charters Tower	87.25	228	eP	P	22 21 56.1	-1.7
	comp=Z,4.7nm,0.6s,mb4.6						
CTA	Charters Tower	87.25	228	P	P	22 21 55.6	-2.2
	comp=Z,7.3nm,0.7s,mb4.8,baz=35,slow=5.9,SNR=8.8						
CTA	Charters Tower	87.25	228	eP	P	22 21 56.1	-1.7
CTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KAKA	Kakadu	87.36	243	eP	P	22 21 56.6	-1.9
	comp=Z,8.5nm,0.6s,mb4.8						
KEST	Kesra	88.95	7	P	P	22 22 05.8	0.0
	comp=Z,1.4nm,0.8s,mb4.0,baz=324,slow=14,SNR=3.6						
WRAB	Tennant Creek	92.55	238	eP	P	22 22 20.3	-2.3
WB2	Warramunga Arr	92.55	238	eP	P	22 22 20.5	-2.2
WRA	Warramunga Arr	92.56	238	P	P	22 22 20.3	-2.3
	comp=Z,4.1nm,0.8s,mb4.8,baz=38,slow=5.6,SNR=30						
ASAR	Alice Springs	95.94	236	P	P	22 22 36.3	-1.8
	comp=Z,2.2nm,0.8s,mb4.6,baz=32,slow=4.8,SNR=21						
PLCA	Paso Flores	122.69	115	PKP	PKPdf	22 28 04.0	-2.1
	comp=Z,1.8nm,0.8s,baz=1.7,slow=7.4,SNR=3.8						
KMBO	Kilima Mbogo	123.86	337	PKP	PKPdf	22 28 09.3	+0.1
	comp=Z,2.2nm,0.6s,baz=180,slow=4.0,SNR=3.3						
BOSA	Boshof	152.86	347	PKPbc	PKPbc	22 29 07.2	-0.7
	comp=Z,6.6nm,0.8s,baz=4.3,slow=3.7,SNR=10						
MAW	Mawson	156.18	221	PKPbc	PKPdf	22 29 10.0	+6.0
	comp=Z,0.6nm,0.4s,baz=104,slow=17,SNR=3.6						
MAW				PKPab	PKPab	22 29 29.1	-3.1
	comp=Z,1.3nm,0.5s,baz=108,slow=13,SNR=4.5						
VNA3	Neumayer Olymp	159.96	153	ePKPdf	PKPab	22 29 44.8	-3.7
VNA2	Neumayer--Watz	160.73	154	ePKPdf	PKPab	22 29 48.5	-3.4
SNAA	Sanae	161.24	159	ePKPdf	PKPab	22 29 50.2	-3.9

*ISCJB **05** 22:22:55.2±0.3, 1079N±003×6853W±002, h10km, Error ellipse: s-maj=4.7km s-min=2.7km az=174.5*

*NEIC **05** 22:22:57.0, 1062N×6856W, h3km, MW4.2(CAR), After CAR.*

*FUNV **05** 22:22:57.6, 1067N×6856W, h7km, MW4.1*

ISC 05 22:22:57.7±0.7, **1071N**±003×**6854W**±002, **h21**km±7km, **n43**, σ**1§16**/74, **9C-6D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACV	Jacura	0.47	323	⇓iP	Pb	22 23 08.1	+0.7
JACV				eS	Sb	22 23 15.4	+1.5
JACV	Jacura	0.47	323	eP	Pb	22 23 07.5	+0.1
JACV				eS	Sb	22 23 15.8	+1.9
TURV	Turiamo	0.74	110	⇓eP	Pb	22 23 11.3	-0.5
TURV				eS	Sb	22 23 21.5	0.0
TURV	Turiamo	0.74	110	eP	Pb	22 23 11.5	-0.3
TURV				eS	Sb	22 23 21.4	-0.1
TEPV	Terepaima	0.97	221	⇑iP	Pb	22 23 14.3	-1.6
TEPV				eS	Sb	22 23 27.6	-0.8
SIQV	Siquisique	1.25	268	⇑eP	Pn	22 23 19.7	-0.2
SIQV				eS	Sb	22 23 37.4	+1.3
SIQV	Siquisique	1.25	268	⇑eP	Pn	22 23 19.3	-0.6
SIQV				eS	Sb	22 23 37.4	+1.3
SANV	Sanarito	1.55	219	⇑eP	Pn	22 23 24.6	+0.6
SANV				eS	Sn	22 23 43.9	+0.4
SANV	Sanarito	1.55	219	eP	Pn	22 23 24.0	0.0
SANV				eS	Sn	22 23 43.9	+0.4
CURV	Curarigua	1.56	244	⇑eP	Pn	22 23 24.1	0.0
CURV				eS	Sn	22 23 45.1	+1.4
CURV	Curarigua	1.56	244	eP	Pn	22 23 24.1	0.0
CURV				eS	Sn	22 23 45.2	+1.5
FUNV	FUNVISIS	1.72	98	⇑eP	Pn	22 23 26.0	-0.5
FUNV				eS	Sn	22 23 47.9	+0.1
BAUV	El Baul	1.82	164	⇓eP	Pn	22 23 28.2	+0.4
BAUV				eS	Sn	22 23 52.3	+2.1
QARV	Quebrada Arrib	2.01	256	⇑eP	Pn	22 23 30.9	+0.5
QARV				eS	Sn	22 23 55.9	+1.0
QARV	Quebrada Arrib	2.01	256	eP	Pn	22 23 30.5	0.0
QARV				eS	Sn	22 23 56.1	+1.2
DABV	Dabajuro	2.07	276	eP	Pn	22 23 31.5	+0.3
DABV				eS	Sn	22 23 57.4	+1.0
DABV	Dabajuro	2.07	276	eP	Pn	22 23 31.6	+0.4
DABV				eS	Sn	22 23 57.4	+1.1
BIRV	Birongo	2.25	96	⇑eP	Pn	22 23 33.7	0.0
BIRV				eS	Sn	22 24 01.5	+0.7
ORCV	Isla La Orchil	2.55	64	eP	Pn	22 23 37.0	-0.9
MERV	Las Mercedes	2.64	123	⇓eP	Pn	22 23 40.5	+1.4
MERV				eS	Sn	22 24 11.5	+1.0
SDV	Santo Domingo	2.74	229	ePn	Pn	22 23 39.8	-0.7
SDV				eSn	Sn	22 24 07.2	-5.8
CUPV	Cœpira	2.79	103	⇑eP	Pn	22 23 42.2	+1.1
CUPV				eS	Sn	22 24 15.2	+1.1
IMOV	Isla Los Monje	2.84	306	eP	Pn	22 23 42.7	+0.9
SOCV	Socops	3.32	224	eP	Pn	22 23 48.5	+0.2
SOCV				eS	Sn	22 24 25.3	-1.9
SOCV	Socops	3.32	224	eP	Pn	22 23 48.2	-0.2
SOCV				eS	Sn	22 24 25.7	-1.5
VIGV	El Vigia	3.34	237	eP	Pn	22 23 49.9	+1.1
VIGV				eS	Sn	22 24 26.4	-1.5
ELOV	Elorza	3.80	194	⇓eP	Pn	22 23 56.2	+1.2
ELOV				eS	Sn	22 24 37.2	-1.9
VIRV	Villa del Rosa	3.80	267	eP	Pn	22 23 54.4	-0.7
VIRV	Villa del Rosa	3.80	267	eP	Pn	22 23 54.4	-0.7
PCRV	Puerto La Cruz	3.88	97	eP	Pn	22 23 58.1	+2.0
CAOV	Caicara del Or	4.01	147	⇓eP	Pn	22 23 58.0	+0.1
IBAV	Isla La Blanqu	4.05	74	eP	Pn	22 23 57.3	-1.1
PRGV	PARIAGUAN	4.30	116	eP	Pn	22 24 03.1	+1.2
PRGV				eS	Sn	22 24 51.1	-0.4
CAPV	Capacho	4.67	233	eP	Pn	22 24 06.1	-0.9
CAPV				eS	Sn	22 24 57.9	-2.8
CAPV	Capacho	4.67	233	eP	Pn	22 24 06.1	-0.9
CAPV				eS	Sn	22 24 58.0	-2.7
GUNV	Guanoco	5.54	95	eP	Pn	22 24 19.9	+1.0
GRGR	Grenville	6.90	77	ePn	Pn	22 24 36.0	-1.7
GRGR				eSn	Sn	22 25 52.1	-3.6
CPD	Cerro la Pandu	7.72	19	ePn	Pn	22 24 47.3	-1.6
	14nm,0.7s						
AOPR	Arecibo Observ	7.79	13	ePn	Pn	22 24 51.1	+1.2
	17nm,0.5s						
AOPR				eSn	Sn	22 26 07.5	-10
HUMP	Col San Antoni	7.84	19	ePn	Pn	22 24 48.5	-2.1
	16nm,0.7s						
MTP	Monte Pirata	7.90	21	ePn	Pn	22 24 50.0	-1.4
MTP				eSn	Sn	22 26 09.4	-11
FDF	Fort de France	8.25	60	ePn	Pn	22 24 53.9	-2.3
LUEV	Luepa	8.51	124	eP	Pn	22 24 59.0	-0.8

*SKO **05** 22:33:47.5, 4131N×1934E, h1km, M2.2, ML2.6*

*TIR **05** 22:33:48.4±2.3, 4137N×1961E, h29km±13km, ML2.5*

*CSEM **05** 22:33:48.0±0.3, 4130N×1954E, h0km±2km, ML2.6/10, Error ellipse: s-maj=10.7km s-min=2.7km az=13.0*

*ISCJB **05** 22:33:49.6±0.7, 4141N±003×1955E±004, h10km, Error ellipse: s-maj=5.7km s-min=2.4km az=39.5*

*PDG **05** 22:33:50.6±0.2, 4147N×1961E, h10km, ML2.6/10, Error ellipse: s-maj=1.2km s-min=1.4km az=0.0*

ISC 05 22:33:48.7±0.9, **4134N**±004×**1948E**±004, **h2**km±4km, **n36**, σ**1§20**/71, **9C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.29	89	ePG	Pg	22 33 55.3	+1.0
TIR				i SG	Sg	22 33 59.9	+1.9
QSH	Qafa e Shtames	0.37	61	ePG	Pg	22 33 54.0	-1.7
ULC	Ulcinj	0.65	345	⇑iPg	Pg	22 34 00.8	-0.3
ULC				eSg	Sg	22 34 10.7	+1.3
ULC	Ulcinj	0.65	345	i PG	Pg	22 34 00.8	-0.3
ULC				i SG	Sg	22 34 10.7	+1.3
PUK	Puka	0.77	24	ePG	Pg	22 34 01.9	-1.5
PUK				i SG	Sg	22 34 12.1	-1.2
PHP	Peshkopia	0.80	64	ePG	Pg	22 34 02.7	-1.3
PHP				i SG	Sg	22 34 14.1	-0.3
OHR	Ohrid	1.02	103	i Pg	Pg	22 34 07.2	-1.0
OHR				i Sg	Sg	22 34 23.2	+1.7
OHR				eLg		22 34 23.3	
	comp=E,86nm,0.5s						
OHR				eLg		22 34 23.8	
	comp=N,74nm,0.4s						
OHR	Ohrid	1.02	103	i Pg	Pg	22 34 07.2	-1.1
OHR				i Sg	Sg	22 34 23.1	+1.6
OHR				eLg		22 34 23.2	
	comp=N,86nm,0.5s						
BUM	Brajici-Budva	1.05	336	⇓iPg	Pg	22 34 09.4	+0.5
BUM				eSg	Sg	22 34 24.3	+1.8
BUM	Brajici-Budva	1.05	336	i PG	Pg	22 34 09.4	+0.5
BUM				i SG	Sg	22 34 24.3	+1.8
PDG	Podgorica	1.10	352	i PG	Pg	22 34 08.6	-1.2
PDG				i SG	Sg	22 34 24.7	+0.7
PDG	Podgorica	1.10	352	⇑iPg	Pg	22 34 08.6	-1.2
PDG				eSg	Sg	22 34 24.7	+0.7
TTG	Podgorica	1.10	352	⇑iPg	Pg	22 34 08.6	-1.2
TTG				eSg	Sg	22 34 24.7	+0.7
BCI	Bajram Curri	1.11	23	ePG	Pg	22 34 07.8	-2.3
BCI				i SG	Sg	22 34 22.7	-1.8
PVY	Plav	1.30	16	⇓iPg	Pn	22 34 11.5	-2.5
PVY				eSg	Sg	22 34 30.4	-0.2
PVY	Plav	1.30	16	i PG	Pn	22 34 11.5	-2.5
PVY				i SG	Sg	22 34 30.4	-0.2
HCY	Herceg Novi	1.33	327	⇓iPg	Pn	22 34 13.6	-0.6
HCY				eSg	Sg	22 34 34.3	+3.0
HCY	Herceg Novi	1.33	327	i PG	Pn	22 34 13.6	-0.6
HCY				i SG	Sg	22 34 34.3	+3.0
KRUS	Krusevo	1.33	88	i Pg	Pn	22 34 12.9	-1.4
KRUS				i Sg	Sg	22 34 33.6	+2.1
KRUS				eLg		22 34 34.5	
	comp=E,24nm,0.4s						
KRUS				eLg		22 34 34.7	
	comp=N,16nm,0.3s						
KRUS	Krusevo	1.33	88	i Pg	Pn	22 34 12.9	-1.4
KRUS				i Sg	Sg	22 34 33.5	+2.0
KRUS				eLg		22 34 34.4	
	comp=N,24nm,0.4s						
BIA	Bitola	1.43	102	i Pg	Pn	22 34 14.3	-1.3
BIA				i Sg	Sg	22 34 35.7	+1.1
BIA				eLg		22 34 36.3	
	comp=N,13nm,0.2s						
BIA				eLg		22 34 37.2	
	comp=E,18nm,0.3s						
BIA	Bitola	1.43	102	i Pg	Pn	22 34 14.3	-1.3
BIA				i Sg	Sg	22 34 35.6	+1.0
BIA				eLg		22 34 36.2	
	comp=E,13nm,0.2s						
NKY	Niksic	1.51	346	⇑iPg	Pg	22 34 17.5	-0.2
NKY				eSg	Sg	22 34 38.7	+1.4
NKY	Niksic	1.51	346	i PG	Pg	22 34 17.5	-0.2
NKY				i SG	Sg	22 34 38.7	+1.4
BEY	Berane	1.56	11	i PG	Pn	22 34 16.9	-0.6
BEY				i SG	Sg	22 34 39.0	+0.2
BEY	Berane	1.56	11	⇑iPg	Pn	22 34 16.9	-0.6
BEY				eSg	Sg	22 34 39.0	+0.2
IVA	Berane	1.56	11	⇑iPg	Pn	22 34 16.9	-0.6
IVA				eSg	Sg	22 34 39.0	+0.2
SKO	Skopje	1.60	66	ePn	Pn	22 34 18.6	+0.6
SKO				i Sn	Sg	22 34 40.3	+0.3
SKO				eLg		22 34 41.3	
	comp=N,66nm,0.4s						
SKO				eLg		22 34 41.6	
	comp=E,59nm,0.8s						
SKO	Skopje	1.60	66	ePn	Pn	22 34 18.6	+0.6
SKO				i Sn	Sg	22 34 40.2	+0.2
SKO				eLg		22 34 41.2	
	comp=E,66nm,0.4s						
BRY	Bratogost	1.71	336	⇓iPn	Pg	22 34 20.7	-0.7
BRY				eSn	Sg	22 34 43.5	0.0
BRY	Bratogost	1.71	336	i PG	Pg	22 34 20.7	-0.7
BRY				i SG	Sg	22 34 43.6	+0.1
UPM	Unac-Piva	1.91	347	⇑iPn	Pn	22 34 22.9	+0.7
UPM				eSn	Sn	22 34 48.2	+1.4
PLE	Pljevlja	1.99	358	⇑iPn	Pn	22 34 23.7	+0.4
PLE				eSn	Sn	22 34 49.6	+0.8
STIP	Stip	2.06	79	ePn	Pn	22 34 24.6	+0.2
STIP				eSn	Sn	22 34 51.8	+1.1
STIP				eLg		22 34 53.4	
	comp=E,2.8nm,0.4s						
STIP				eLg		22 34 55.4	
	comp=N,7.0nm,0.5s						
STIP	Stip	2.06	79	ePn	Pn	22 34 24.6	+0.2
STIP				eSn	Sn	22 34 51.8	+1.1
STIP				eLg		22 34 53.4	
	comp=N,2.8nm,0.4s						
BZS	Buzias	4.55	19	⇑iP	Pn	22 34 57.4	-1.1
BZS				S	Sn	22 35 46.8	-5.1

*BJI **05** 22:49:05.5, 5585N×11033E, h7km, mB4.3, mb4.2, Ms3.9, Msz3.8*

*MOS **05** 22:49:06.6±1.5, 5594N×10992E, h14km, mb4.5/11, Error ellipse: s-maj=8.2km s-min=5.6km az=80.8*

MOS Felt (IV-V) at Kichera, (IV) at Nizhneangarsk, (IV) at Verhnyaya Zaimka.

*IDC **05** 22:49:06.3±0.7, 5593N×10995E, h0km, mb3.8/11, mb1 4.0/15, mb1mx3.9/26, mbtmp3.9/15, ML4.1/4, MS3.2/4, Ms1 3.2/4, ms1mx2.8/31, Error ellipse: s-maj=19.3km s-min=14.1km az=57.0*

*ISCJB **05** 22:49:06.0±0.2, 5583N±002×10995E±003, h10km, mb4.1/29, MS3.5/5, Error ellipse: s-maj=3.1km s-min=2.1km az=157.6*

*BYKL **05** 22:49:07.8±0.3, 5586N×10999E, h3km±18km, FELT I=IV-V MSK at Kichera, Nishneangarsk, IV at Verchnya Zaimka*

*NEIC **05** 22:49:07.6±0.4, 5600N×11005E, h10km, mb4.3/10, Error ellipse: s-maj=7.3km s-min=6.9km az=147.0*

ISC 05 22:49:07.9±0.2, **5584N**±002×**10999E**±003, **h10**km, **(h17**km±2.0km**:pP-P), n125**, σ**1§37**/207, **mb4.1**/29, **MS3.5**/5, **21C-27D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.26	255	ePG	Pg	22 49 13.0	-0.2
NIZ				e		22 49 17.4	
NIZ				pmax	pmax		
	comp=Z,4μm,0.3s						
NIZ				smax			
	comp=N,9μm,0.8s						
NIZ	Nizh Angarsk	0.26	255	⇓iPg	Pg	22 49 13.4	+0.2
NIZ				e		22 49 16.3	
NIZ				eSg	Sg	22 49 17.7	+1.0
NIZ				e		22 49 22.3	
KMO	Kumora	0.69	86	ePG	Pg	22 49 20.0	-1.2
KMO				e		22 49 27.8	
KMO				pmax	pmax		
	comp=Z,2μm,0.3s						
KMO				smax			
	comp=N,3μm,0.7s						
KMO	Kumora	0.69	86	⇑iPg	Pg	22 49 20.0	-1.2
KMO				Pmax		22 49 20.3	
	comp=N,2μm,0.4s						
KMO				e		22 49 21.9	
KMO				i Sg	Sg	22 49 29.3	-0.8
KMO				Smax		22 49 30.0	
	comp=N,13μm,1.4s						
YOA	Uoyan	1.02	73	⇑iPG	Pg	22 49 26.2	-1.3
YOA				i		22 49 40.8	
YOA				pmax	pmax		
	comp=Z,1μm,0.4s						
YOA				smax			
	comp=N,6μm,0.6s						
YOA	Uoyan	1.02	73	⇑iPg	Pg	22 49 26.2	-1.3
YOA				Pmax		22 49 27.6	
	comp=N,1μm,0.5s						
YOA				e		22 49 33.5	
YOA				eSg	Sg	22 49 40.7	0.0
YOA				e		22 49 43.6	
YOA				max		22 49 47.6	
	comp=N,16μm,1.0s						
YLYR	Ulyunkhan	1.18	145	⇑iPG	Pn	22 49 29.3	-1.1
YLYR				e		22 49 45.1	
YLYR				pmax	pmax		
	comp=Z,1μm,0.3s						
YLYR				smax			
	comp=N,2μm,0.5s						
YLYR	Ulyunkhan	1.18	145	⇓iPg	Pn	22 49 29.2	-1.2
	comp=N,1μm,0.8s						
YLYR				⇑iPg	Pn	22 49 29.2	-1.2
	comp=N,740nm,0.8s						
YLYR				⇑iPg	Pn	22 49 29.2	-1.2
	comp=N,1μm,0.8s						
YLYR				Pmax		22 49 31.9	
	comp=N,1μm,0.7s						
YLYR				eSg	Sg	22 49 45.2	-0.7
YLYR				Smax		22 50 00.9	
	comp=N,2μm,0.7s						
SVKR	Severomuysk	2.03	81	ePN	Pn	22 49 43.1	+1.0
SVKR				e		22 49 44.4	
SVKR				e		22 50 09.6	
SVKR				pmax	pmax		
	comp=Z,3μm,0.9s						
SVKR				smax			
	comp=N,9μm,1.6s						
SVKR	Severomuysk	2.03	81	ePn	Pn	22 49 43.3	+1.2
SVKR				⇓iPg	Pg	22 49 44.6	-2.1
SVKR				Pmax		22 49 45.0	
	comp=N,3μm,0.5s						
SVKR				eSn	Sn	22 50 09.1	+1.7
SVKR				i Sg	Sg	22 50 12.1	-0.9
SVKR				e		22 50 17.0	
SVKR				max		22 50 18.3	
	comp=N,19μm,0.8s						
UKT	Uakit	2.09	98	ePN	Pn	22 49 44.6	+1.6
UKT	Uakit	2.09	98	ePn	Pn	22 49 44.0	+1.0
UKT				⇓iPg	Pg	22 49 45.1	-2.9
	comp=N,386nm,0.8s						
UKT				⇑iPg	Pg	22 49 45.1	-2.9
	comp=N,933nm,0.8s						
UKT				⇑iPg	Pg	22 49 45.1	-2.9
	comp=N,896nm,0.8s						
UKT				Pmax		22 49 45.7	
	comp=N,1μm,1.0s						
UKT				eSn	Sn	22 50 10.9	+1.9
UKT				eSg	Sg	22 50 13.0	-2.1
UKT				Smax		22 50 14.9	
	comp=N,12μm,1.7s						
SYVR	Suvo	2.19	180	ePN	Pn	22 49 47.0	+2.7
SYVR				e		22 50 17.2	
SYVR				pmax	pmax		
	comp=Z,1μm,0.7s						
SYVR				smax			
	comp=E,8μm,1.0s						
SYVR	Suvo	2.19	180	⇑iPn	Pn	22 49 45.0	+0.7
SYVR				⇓iPg	Pg	22 49 47.5	-2.4
SYVR				Pmax		22 49 48.0	
	comp=E,1μm,0.7s						
SYVR				i Sg	Sg	22 50 17.2	-1.0
SYVR				Smax		22 50 21.3	
	comp=E,8μm,0.8s						
OGRR	Ongureny	2.60	213	ePN	Pn	22 49 51.7	+1.7
OGRR				e		22 49 55.4	
OGRR	Ongureny	2.60	213	⇓iPn	Pn	22 49 51.6	+1.6
	comp=E,39nm,0.9s						
OGRR				⇓iPn	Pn	22 49 51.6	+1.6
	comp=E,28nm,0.9s						
OGRR				⇑iPn	Pn	22 49 51.6	+1.6
	comp=E,70nm,0.9s						
OGRR				ePg	Pg	22 49 54.9	-2.9
OGRR				e		22 49 56.1	
OGRR				max		22 49 58.7	
	comp=E,333nm,0.5s						
OGRR				eSn	Sn	22 50 20.3	-1.4
OGRR				eSg	Sg	22 50 28.1	-3.4
OGRR				Smax		22 50 29.7	
	comp=E,2μm,0.8s						
MXMB	Maximikha	2.69	196	⇑iPn	Pn	22 49 52.3	+1.2
MXMB				⇓iPg	Pg	22 49 56.2	-3.1
MXMB				Pmax		22 50 03.4	
	comp=E,579nm,0.7s						
MXMB				eSn	Sn	22 50 25.5	+1.8
MXMB				eSg	Sg	22 50 31.5	-2.6
MXMB				Smax		22 50 39.1	
	comp=E,4μm,0.4s						
BOD	Bodaibo	2.97	46	ePN	Pn	22 49 54.8	-0.2
BOD				e		22 50 00.2	

BOD *e* 22 50 39.5
BOD pmax pmax
comp=Z,487nm,0.7s
BOD smax
comp=N,4µm,0.8s
BOD Bodaibo 2.97 46 ⇓*i* Pn **Pn 22 49 55.3 +0.3**
comp=N,72nm,0.9s
BOD ⇓*i* Pn **Pn 22 49 55.3 +0.3**
comp=N,102nm,0.9s
BOD ⇓*i* Pn **Pn 22 49 55.3 +0.3**
comp=N,102nm,0.9s
BOD ⇓*i* Pg **Pg 22 50 00.4 -4.3**
BOD Pmax 22 50 01.1
comp=N,485nm,0.8s
BOD *e* 22 50 32.1
BOD *i* Sg **Sg 22 50 38.6 -4.5**
BOD Smax 22 50 40.3
comp=N,4µm,1.3s
BOD *e* 22 50 41.6
NLYR Nelyaty 3.26 76 *e*PN **Pn 22 49 59.6 +0.6**
NLYR *e* 22 50 05.4
NLYR *e* 22 50 46.8
NLYR pmax pmax
comp=Z,388nm,0.6s
NLYR smax
comp=N,3µm,1.0s
ZRHB Zarechye 3.69 208 *e*Pn **Pn 22 50 06.9 +1.9**
ZRHB ⇑*i* 22 50 09.2
ZRHB *e*Pg **Pg 22 50 14.4 -4.2**
ZRHB Pmax 22 50 23.9
comp=N,443nm,0.6s
ZRHB *e*Sn **Sn 22 50 49.7 +1.2**
ZRHB *e*Sg **Sg 22 51 02.7 -3.7**
ZRHB Smax 22 51 33.9
comp=N,3µm,1.3s
TRG Tyrgan 3.75 216 *e*PN **Pn 22 50 07.3 +1.5**
TRG *e* 22 50 15.9
TRG *e*S **Sn 22 50 50.4 +0.4**
TRG *e* 22 51 03.8
TRG pmax pmax
comp=Z,170nm,0.3s
TRG smax
comp=E,1µm,0.4s
TRG Tyrgan 3.75 216 ⇓*i* Pn **Pn 22 50 07.3 +1.5**
comp=E,45nm,0.7s
TRG ⇓*i* Pn **Pn 22 50 07.3 +1.5**
comp=E,23nm,0.7s
TRG ⇑*i* Pn **Pn 22 50 07.3 +1.5**
comp=E,47nm,0.7s
TRG *e* 22 50 12.2
TRG max 22 50 13.2
comp=E,196nm,0.5s
TRG *e*Pg **Pg 22 50 15.3 -4.5**
TRG *i* Sn **Sn 22 50 50.4 +0.4**
TRG *e*Sg **Sg 22 51 04.2 -4.2**
TRG Smax 22 51 04.9
comp=E,1µm,1.3s
UUDB Ulan-Yde 4.21 200 *e*Pn **Pn 22 50 13.3 +1.2**
UUDB *e*Pg **Pg 22 50 22.9 -5.7**
UUDB Pmax 22 50 28.3
comp=E,120nm,0.6s
UUDB *e* 22 50 49.6
UUDB *e*Sg **Sg 22 51 17.3 -5.9**
UUDB Smax 22 51 23.7
comp=E,1µm,1.4s
STDB Stepnoy Dvoret 4.26 212 *e* **Sn 22 51 07.2 +4.8**
STDB *e*Sg **Sg 22 51 20.2 -4.3**
STDB *e* 22 51 46.0
STDB max 22 51 52.1
comp=E,4µm,1.6s
KAB Kabansk 4.28 209 *e*PN **Pb 22 50 26.5 +3.3**
KAB *e* 22 51 22.6
KAB pmax pmax
comp=Z,554nm,0.4s
KAB smax
comp=E,3µm,0.7s
KAB Kabansk 4.28 209 *e*Pn **Pn 22 50 16.4 +3.4**
KAB max 22 50 18.7
comp=E,503nm,0.3s
KAB *e* 22 50 28.1
KAB *e*Sg **Sg 22 51 20.3 -5.0**
KAB *e* 22 51 24.4
KAB max 22 51 47.7
comp=E,3µm,1.4s
CIT Chita 4.37 150 *e*PN **Pb 22 50 25.8 +1.1**
CIT *e* 22 51 23.6
CIT pmax pmax
comp=Z,480nm,1.5s
CIT smax
comp=E,838nm,1.3s
CIT Chita 4.37 150 *e* **Pn 22 50 15.8 +1.5**
CIT ⇓*i* Pg **Pg 22 50 26.1 -5.5**
CIT Pmax 22 50 27.0
comp=E,482nm,1.4s
CIT *e*Sg **Sg 22 51 23.8 -4.4**
CIT Smax 22 51 27.3
comp=E,967nm,1.1s
HRMR Khuramsha 4.59 204 ⇑*i* Pn **Pn 22 50 18.7 +1.4**
HRMR *e* 22 50 32.6
HRMR max 22 50 34.4
comp=E,267nm,0.6s
HRMR *e*Sn **Sn 22 51 10.3 -0.3**
HRMR *e*Sg **Sg 22 51 28.8 -6.4**
HRMR Smax 22 51 35.1
comp=E,3µm,0.8s
CRS Chara 4.72 74 *e*PN **Pb 22 50 32.9 +2.1**
CRS *e* 22 51 33.5
CRS pmax pmax
comp=Z,393nm,0.9s
CRS smax
comp=E,2µm,1.0s
CRS Chara 4.72 74 ⇓*i* Pn **Pn 22 50 19.8 +0.7**
CRS *e*Pg **Pg 22 50 32.1 -6.3**
CRS ⇓*i* 22 50 34.0
CRS max 22 50 35.4
comp=E,393nm,1.0s
CRS *e* 22 50 42.6
CRS *e*Sg **Sg 22 51 33.9 -5.6**
CRS Smax 22 51 39.5
comp=E,2µm,1.7s
IRK Irkutsk 4.93 225 *e*PN **Pb 22 50 36.0 +1.7**
IRK *e*S **Sn 22 51 17.7 -1.4**
IRK *e* 22 51 39.4
IRK pmax pmax
comp=Z,353nm,0.1s
IRK smax
comp=N,2µm,0.5s
IRK Irkutsk 4.93 225 *e*Pn **Pn 22 50 26.1 +4.1**
IRK *e* 22 50 44.7
IRK max 22 50 45.1
comp=N,277nm,0.3s
IRK *e*Sn **Sn 22 51 19.8 +0.7**
IRK *e*Sg **Sg 22 51 42.8 -3.4**
IRK Smax 22 51 49.9
comp=N,2µm,0.5s
LSTR Listvyanka 5.02 220 ⇑*i* Pn **Pn 22 50 23.9 +0.7**
LSTR *e*Pg **Pg 22 50 37.4 -6.5**
LSTR Pmax 22 50 44.4
comp=N,72nm,0.6s
LSTR *e*Sn **Sn 22 51 19.3 -1.8**
LSTR *e*Sg **Sg 22 51 42.7 -6.2**
LSTR Smax 22 51 57.1
comp=N,1µm,1.5s
TLY Talaya 5.62 225 *e*PN **Pn 22 50 31.6 +0.2**
TLY *e* 22 50 48.2
TLY *e*S **Sn 22 51 35.3 -0.6**
TLY *e* 22 52 00.0
TLY pmax pmax
comp=Z,89nm,0.6s
TLY smax
comp=N,811nm,1.0s
TLY Talaya 5.62 225 ⇓*i* Pn **Pn 22 50 31.6 +0.2**
TLY *e*Pg **Pg 22 50 48.9 -6.5**
TLY *e* 22 50 58.1
TLY max 22 50 58.9
comp=N,89nm,0.7s
TLY *i* Sn **Sn 22 51 35.1 -0.8**
TLY *e*Sg **Sg 22 52 01.6 -6.4**
TLY *e* 22 52 10.0
TLY max 22 52 13.4
comp=N,833nm,1.1s
TLY Talaya 5.62 225 *e*Pn **Pn 22 50 31.4 0.0**
comp=N,60nm,0.5s
TLY *e*Sn **Sn 22 51 29.4 -6.5**

TUP Tupik 5.89 100 *e*PN **Pn 22 50 35.3 +0.1**
TUP *e* 22 50 53.2
TUP *e*S **Sn 22 51 42.2 -0.5**
TUP *e* 22 52 10.9
TUP pmax pmax
comp=Z,60nm,0.7s
TUP smax
comp=N,1µm,0.9s
TUP Tupik 5.89 100 ⇓*i* Pn **Pn 22 50 35.5 +0.3**
TUP *e*Pg **Pg 22 50 53.6 -7.1**
TUP Pmax 22 51 00.6
comp=N,59nm,1.2s
TUP *e*Sn **Sn 22 51 39.5 -3.2**
TUP *e*Sg **Sg 22 52 10.8 -6.1**
TUP Smax 22 52 16.1
comp=N,1µm,1.0s
ARS Arshan 5.95 232 *e*PN **Pn 22 50 36.7 +0.7**
ARS *e* 22 50 54.0
ARS *e*S **Sn 22 51 41.7 -2.5**
KPC Khapcheranga 6.32 166 *e*PN **Pn 22 50 41.1 +0.1**
KPC Khapcheranga 6.32 166 *e*Pn **Pn 22 50 40.9 -0.1**
KPC *e*Pg **Pg 22 51 01.5 -7.3**
KPC Pmax 22 51 03.5
comp=N,142nm,0.9s
KPC *e* 22 51 57.2
KPC *i* Sg **Sg 22 52 24.3 -6.3**
KPC Smax 22 52 32.4
comp=N,543nm,1.3s
MOY Mondy 6.78 236 *e*PN **Pn 22 50 49.3 +2.0**
MOY *e* 22 51 09.6
MOY *e*S **Sn 22 52 03.0 -1.4**
MOY pmax pmax
comp=Z,75nm,0.4s
MOY pmax pmax
comp=N,615nm,1.2s
MOY Mondy 6.78 236 ⇓*i* Pn **Pn 22 50 49.2 +1.9**
MOY ⇓*i* 22 50 49.7
comp=N,38nm,1.0s
MOY ⇓*i* 22 50 49.7
comp=N,33nm,1.0s
MOY ⇑*i* 22 50 49.7
comp=N,95nm,1.0s
MOY *e* 22 50 54.2
MOY max 22 50 56.1
comp=N,235nm,1.1s
MOY *e*Sn **Sn 22 52 04.8 +0.4**
MOY *e*Sg **Sg 22 52 37.0 -8.2**
MOY Smax 22 52 55.1
comp=N,617nm,1.2s
ZAK Zakamensk 6.80 219 *e*PN **Pn 22 50 48.9 +1.3**
ZAK *e* 22 51 10.8
ZAK *e*S **Sn 22 52 04.6 -0.3**
ZAK pmax pmax
comp=Z,42nm,0.5s
ZAK smax
comp=N,564nm,1.0s
ZAK Zakamensk 6.80 219 *e*Pn **Pn 22 50 49.0 +1.4**
ZAK *e* 22 51 15.6
ZAK max 22 51 17.6
comp=N,38nm,1.2s
ZAK *e*Sn **Sn 22 52 07.2 +2.3**
ZAK *e*Sg **Sg 22 52 39.0 -6.9**
ZAK Smax 22 52 42.6
comp=N,560nm,1.0s
ORL Orlik 6.83 245 *e*PN **Pn 22 50 50.0 +2.0**
ORL *e*S **Sn 22 52 05.0 -0.7**
ORL *e*S **Sg 22 52 40.9 -5.9**
ORL smax
comp=N,707nm,1.2s
ORL Orlik 6.83 245 ⇑*i* Pn **Pn 22 50 49.9 +1.9**
ORL ⇓*i* 22 50 50.1
comp=N,31nm,0.9s
ORL ⇓*i* 22 50 50.1
comp=N,23nm,0.9s
ORL ⇑*i* 22 50 50.1
comp=N,25nm,0.9s
ORL *e* 22 50 52.9
ORL max 22 50 55.6
comp=N,130nm,1.2s
ORL Pg **Pg 22 51 10.1 -8.4**
ORL *e*Sn **Sn 22 52 05.3 -0.4**
ORL *e*Sg **Sg 22 52 40.0 -6.8**
ORL Smax 22 52 59.0
comp=N,705nm,1.1s
ULN Ulaanbaatar 8.19 194 *e*PN **Pn 22 51 08.3 +1.5**
ULN 22 52 40.5
ULN pmax pmax
comp=Z,10.0nm,0.6s
ULN Ulaanbaatar 8.19 194 *e*Sg Sx 22 53 22.2
ULN Ulaanbaatar 8.19 194 *e*Pn **Pn 22 51 08.3 +1.5**
comp=Z,10nm,0.6s
ULN Sn **Sn 22 52 40.5 +1.2**
SONM Songino Array 8.32 197 Pn **Pn 22 51 10.1 +1.5**
comp=Z,1.2nm,0.3s,baz=12,slow=13,SNR=32
SONM Sn **Sn 22 52 46.6 +4.1**
comp=Z,1.8nm,0.3s,baz=12,slow=21,SNR=4.1
SONM Lg 22 53 29.0
comp=Z,6.5nm,0.3s,baz=8.9,slow=32,SNR=6.7
CLNS Chul'man 8.34 77 *e*PG Px 22 51 41.2
CLNS *e*S Sx 22 53 24.9
CLNS pmax pmax
comp=Z,27nm,1.0s
CLNS pmax pmax
comp=E,35nm,1.0s
CLNS pmax pmax
comp=N,12nm,1.0s
CLNS smax
comp=N,546µm,12.3s
CLNS smax
comp=E,85µm,12.2s
CLNS MLR MLR
comp=N,66nm,11.0s
CLNS MLR MLR
comp=Z,44nm,12.0s
CLNS MLR MLR
comp=E,121nm,14.0s
ALDR Aldan 8.81 65 *e*Sg Sx 22 53 38.3
TDJR Todzha 8.85 253 *e*Pn **Pn 22 51 17.3 +1.5**
TDJR *e*Pg Pn 22 51 46.8 +31
TDJR *e*Sg Sn 22 53 40.4 +45
HIA Hailar 8.87 134 *e*Sg Sx 22 53 42.0
HIA Hailar 8.87 134 *e*Pn **Pn 22 51 18.1 +2.1**
HIA *e*Sn **Sn 22 53 03.7 +7.9**
KRR Krasnoyarsk 9.61 278 ⇓*e*P **Pn 22 51 24.8 -1.3**
KZLR Kyzyl 10.08 252 ⇓*e*P **Pn 22 51 38.4 +5.8**
BLRR Bol'shaya Rech 10.60 262 *de*P **Pn 22 51 40.7 +1.0**
YAK Yakutsk 11.88 51 *e*P **Pn 22 51 53.7 -3.4**
YAK pmax pmax
comp=Z,16nm,0.8s
YAK pmax pmax
comp=N,1.0nm,0.6s
YAK pmax pmax
comp=E,4.0nm,0.6s
YAK MLR MLR
comp=N,46nm,7.0s
YAK MLR MLR
comp=Z,163nm,9.0s
YAK MLR MLR
comp=E,76nm,7.0s
YAK Yakutsk 11.88 51 *e*Pn **Pn 22 51 55.0 -2.2**
YAK *e*Sn **Sn 22 53 58.6 -11**
ZAA0 Zalesovo Array 14.58 273 *e*Pn **Pn 22 52 32.5 -1.5**
ZAA0 Sn **Sn 22 55 14.2 -1.3**
ZALV Zalesovo Beam 14.58 273 Pn **Pn 22 52 33.8 -0.2**
comp=E,0.2nm,0.3s,baz=74,slow=11,SNR=9.2
ZALV Lg 22 56 41.9
comp=E,0.5nm,0.3s,baz=76,slow=18,SNR=6.1
ZALV LR LR 22 57 41.6
comp=E,30nm,18.1s,baz=93,slow=35
ZAL Zalesovo 14.60 273 P **Pn 22 52 33.8 -0.4**
HHC Hu-ho-hao-te 15.04 175 *e*P **Pn 22 52 36.2 -4.2**
HHC AMB AMB
comp=Z,5.0nm,0.6s
HHC AMB AMB
comp=Z,102nm,7.7s
NVS Novosibirsk 15.22 277 *e*P **Pn 22 52 46.7 +4.1**
NVS *e* 22 55 27.3
BJI Beijing 16.34 163 P **Pn 22 52 59.4 +2.2**
BJI AMB AMB
comp=Z,11nm,1.1s
TIXI Tiksi 17.77 20 *e*P **Pn 22 53 11.1 -3.9**
TIXI pmax pmax
comp=Z,19nm,0.7s
TIXI MLR MLR
comp=Z,135nm,10.0s

TIXI Tiksi 17.77 20 *e*Pn **Pn 22 53 10.9 -4.1**
comp=Z,23nm,0.4s
TIXI *e*Sn **Sn 22 56 22.0 -11**
GTA Gaotai 17.78 207 *e*P **Pn 22 53 19.0 +3.7**
GTA AP pP 22 53 22.4 +3.5
GTA XP sP 22 53 25.5 +5.3
GTA AMB AMB
comp=Z,3.0nm,0.9s
KURK Kurchatov 19.34 268 P **Pn 22 53 33.5 -0.7**
comp=Z,0.3nm,0.3s,baz=67,slow=11,SNR=23
KURK Lg 22 59 17.2
comp=Z,0.0nm,0.3s,baz=66,slow=32,SNR=6.1
KURK Kurchatov 19.34 268 *e*P **Pn 22 53 33.5 -0.7**
KURK Lg 22 59 17.2
MK31 Makanchi Array 19.42 254 P **Pn 22 53 34.6 -0.6**
MK31 pmax pmax
comp=Z,5.0nm,0.4s
MKAR Makanchi Array 19.42 254 P **Pn 22 53 34.6 -0.6**
comp=Z,1.9nm,0.3s,baz=54,slow=10.0,SNR=15
MKAR Lg 22 59 13.1
comp=Z,0.1nm,0.3s,baz=45,slow=14,SNR=2.8
LZH Lanzhou 20.20 195 *e*P **P 22 53 42.5 -0.1**
LZH AP 22 53 46.2
LZH XP sP 22 53 49.6 +2.8
LZH AMB AMB
comp=Z,20nm,1.3s
LZH AMB AMB
comp=Z,47nm,4.0s
LZH LR LR
comp=N,213nm,8.2s
LZH LR LR
comp=Z,307nm,10.6s,MS3.9
XAN Xi'an 21.82 182 P **P 22 54 00.5 +0.4**
XAN AP 22 54 07.5
XAN XP sP 22 54 10.6 +6.4
XAN AMB AMB
comp=Z,11nm,0.9s,mb4.3
XAN AMB AMB
comp=Z,46nm,6.7s
XAN LR LR
comp=E,316nm,16.4s
XAN LR LR
comp=Z,336nm,10.3s
KSRS Korea Array 22.02 139 P **P 22 54 04.7 +2.5**
comp=Z,0.6nm,0.4s,mb3.4,baz=92,slow=30,SNR=3.0
KSRS LR LR 23 03 43.0
comp=Z,117nm,19.8s,MS3.3,baz=333,slow=40
VOSK Vostochnaya 22.77 279 P **P 22 54 14.1 +4.0**
VOSK pmax pmax
comp=Z,7.0nm,0.6s,mb4.3
BVA0 Borovoye Array 22.98 280 P **P 22 54 17.8 +5.4**
BVA0 pmax pmax
comp=Z,1.0nm,0.5s,mb3.5
BVAR Borovoye Array 22.98 280 P **P 22 54 12.4 +0.1**
comp=Z,8.5nm,0.6s,mb4.4,baz=71,slow=9.6,SNR=12
BRVK Borovoye 23.03 280 *e*P **P 22 54 13.4 +0.6**
BRVK 22 58 02.7
BRVK pmax pmax
comp=Z,7.0nm,0.5s,mb4.3
BRVK Borovoye 23.03 280 *e*P **P 22 54 13.4 +0.6**
comp=Z,7.3nm,0.5s,mb4.4
BRVK PcP PcP 22 58 02.7 +0.9
TKM2 Tokmak 2 25.55 254 *e*P **P 22 54 39.4 +2.8**
TKM2 S **S 22 59 04.9 +0.9**
TKM2 pmax pmax
comp=Z,16nm,0.8s,mb4.6
TKM2 Tokmak 2 25.55 254 *e*P **P 22 54 39.4 +2.8**
comp=Z,16nm,0.8s,mb4.6
TKM2 S **S 22 59 04.9 +0.9**
UCH Uchtor 26.61 254 *e*P **P 22 54 45.3 -0.9**
comp=Z,3.5nm,0.8s,mb3.9
EKS2 Erkin-Say 26.72 256 *e*P **P 22 54 48.9 +1.7**
comp=Z,133nm,1.1s
SVE Sverdlovsk 26.90 293 ⇓*e*P **P 22 54 52.5 +3.8**
SVE *e*PPP 22 55 38.5
SVE *e*S **S 22 59 22.1 -3.0**
SVE *e* 23 00 58.1
SVE pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
MJAR Matsushiro Arr 27.16 123 P **P 22 54 52.4 +1.2**
comp=Z,0.7nm,0.5s,mb3.5,baz=248,slow=3.9,SNR=4.6
MJAR Matsushiro Arr 27.16 123 *e*P **P 22 54 55.2 +4.0**
MJAR pmax pmax
comp=Z,1.0nm,0.5s
BILL Bilibino 28.01 42 P **P 22 55 08.0 +9.5**
BILL *e* pP 22 55 12.7 +11
BILL pmax pmax
comp=Z,10.0nm,1.5s,mb4.2
BILL MLR MLR
comp=Z,100nm,16.0s,MS3.5
ARU Arti 28.12 293 *c i*P **P 22 54 57.8 -1.8**
ARU *e* 22 55 43.8
ARU *e*S **S 22 59 43.8 -0.4**
ARU pmax pmax
comp=Z,4.0nm,1.2s,mb3.9
AB31 Akbulak array 30.55 279 *e*P **P 22 55 22.1 +0.9**
QIZ Qiongzhong 36.75 180 P **P 22 56 14.5 -0.9**
QIZ S **S 23 01 55.8 -3.2**
QIZ LR LR
comp=E,97nm,22.6s
KEV Kevo 37.05 325 *ep* **P 22 56 16.5 -0.9**
comp=E,0.9nm,0.3s,mb4.1
KEV Kevo 37.05 325 *e*P **P 22 56 16.5 -0.9**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.1
ARCES ARCESS Array B 37.62 325 P **P 22 56 21.6 -0.6**
comp=Z,1.6nm,0.6s,mb4.0,baz=54,slow=11,SNR=10
ARCES LR LR 23 16 36.3
comp=Z,45nm,18.0s,MS3.3,baz=293,slow=44
JOF Joensuu 38.29 314 *ep* **P 22 56 27.5 -0.5**
comp=Z,2.6nm,0.4s,mb4.3
OBN Obninsk 39.80 301 P **P 22 56 45.0 +4.4**
KAF Kangasniemi 40.72 314 *ep* **P 22 56 47.5 -0.7**
comp=Z,1.4nm,0.3s,mb4.1
KAF Kangasniemi 40.72 314 *e*P **P 22 56 47.5 -0.7**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb3.9
KIV Kislovodsk 43.25 284 ⇑*e*P **P 22 57 11.4 +2.3**
KIV *i* pP 22 57 15.0 +2.8
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
KIV Kislovodsk 43.25 284 *e*P **P 22 57 09.3 +0.2**
comp=Z,7.6nm,0.8s,mb4.5
GNI Garni 44.65 278 *e*P **P 22 57 19.8 -0.6**
GNI pmax pmax
comp=Z,8.0nm,1.2s
ANN Anapa 45.55 288 *e*P **P 22 57 23.9 -3.6**
ANN pmax pmax
comp=Z,40nm,1.6s,mb5.1
NB2 NORSAR Subarra 47.20 319 P **P 22 57 40.1 -0.1**
comp=Z,1.2nm,0.5s,mb4.1,baz=40,slow=9.3
NOA NORSAR Array B 47.20 319 P **P 22 57 39.6 -0.6**
baz=48,slow=7.4
NOA LR LR 23 19 26.4
comp=Z,25nm,19.0s,MS3.2,baz=260,slow=39
NOA NORSAR Array B 47.20 319 *e*P **P 22 57 44.7 +4.5**
NOA pmax pmax
comp=Z,2.0nm,0.5s
MALT Malatya 49.45 281 *e*P **P 22 57 58.3 +0.5**
MALT pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
MALT Malatya 49.45 281 *e*P **P 22 57 58.3 +0.5**
comp=Z,1.6nm,0.6s,mb4.2
BR131 Keskin Array S 51.07 286 *e*P **P 22 58 09.6 -0.6**
comp=Z,0.6nm,0.5s,mb3.8
KHC Kasperske Hory 54.46 307 *e*P **P 22 58 34.5 -0.5**
KHC pP pP 22 58 40.5 +2.3
KHC Kasperske Hory 54.46 307 *e*P **P 22 58 34.5 -0.5**
KHC *e* 22 58 40.5
GERES GERESS Array B 54.61 306 P **P 22 58 36.4 +0.2**
comp=Z,0.8nm,0.6s,mb3.9,baz=54,slow=6.8,SNR=4.7
YKA Yellowknife Ar 56.99 23 P **P 22 58 51.9 -1.0**
comp=Z,1.7nm,0.7s,mb4.2,baz=331,slow=7.1,SNR=6.1
YKA Yellowknife Ar 56.99 23 P **P 22 58 51.9 -1.0**
ESDC Sonseca Array 69.61 311 P **P 23 00 16.1 -0.9**
comp=Z,0.7nm,0.7s,mb3.7,baz=18,slow=6.6,SNR=3.5
SCHQ Schefferville 69.66 358 P **P 23 00 16.6 -0.4**
comp=Z,4.4nm,0.9s,mb4.4,baz=19,slow=8.3,SNR=5.2
WRA Warramunga Arr 78.26 157 P **P 23 01 07.7 +0.1**
comp=Z,0.6nm,0.6s,mb3.7,baz=347,slow=6.0,SNR=4.5
JFWS Jewell Farm 80.13 15 P **P 23 01 14.0 -3.8**
JFWS pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
JFWS Jewell Farm 80.13 15 P **P 23 01 13.9 -3.8**
comp=Z,9.1nm,0.8s,mb4.8
ASAR Alice Springs 81.77 158 P **P 23 01 26.8 +0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.2nm,0.4s,mb3.4,baz=353,slow=5.0,SNR=3.9						
TORD	Torodi Ar. Bea	89.19	292	P	P	23 02 03.8	0.0
	comp=Z,0.2nm,0.6s,mb3.6,baz=9.1,slow=3.6,SNR=3.4						
CPUP	Villa Florida	149.11	337	PKPbc	PKPbc	23 08 54.3	-1.7
	comp=Z,0.6nm,0.6s,baz=258,slow=20,SNR=2.8						

*NEIC **05** 23:04:58.1, 1091N×7392W, h0km, MW3.1(CAR), After CAR.*
*IDC **05** 23:04:59.9±5.0, 1130N×7375W, h90km±44km, mb1 4.0/3, mb1mx3.3/21, mbtmp4.2/3, Error ellipse: s-maj=43.8km s-min=20.6km az=148.0*
*ISCJB **05** 23:05:00.8±1.4, 1095N±007×7377W±008, h120km±13km, Error ellipse: s-maj=13.6km s-min=10.4km az=31.5*
ISC 05 23:05:01.7±1.4**, 1096N**±007×**7379W**±008**, h112**km±18km**, n14, σ1.s13**/23**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIRV	Villa del Rosa	1.43	108	eP	Pn	23 05 25.5	-2.4
VIRV				eS	Sn	23 05 47.2	-0.5
DABV	Dabajuro	3.10	90	eP	Pn	23 05 48.8	-0.2
DABV				eS	Sn	23 06 27.0	+1.4
IMOV	Isla Los Monje	3.15	64	eP	Pn	23 05 50.1	+0.3
IMOV				eS	Sn	23 06 28.6	+1.6
VIGV	El Vigia	3.19	131	eP	Pn	23 05 49.4	-0.9
VIGV				eS	Sn	23 06 27.3	-0.4
SDV	Santo Domingo	3.73	123	P	Pn	23 05 58.5	+1.0
	20nm,0.3s,baz=24,slow=7.2,SNR=3.6						
SDV				S	Sn	23 06 42.9	+2.2
	103nm,0.3s,baz=234,slow=23,SNR=24						
CURV	Curarigua	3.88	104	eP	Pn	23 05 59.8	+0.3
CURV				eS	Sn	23 06 45.2	+0.8
SIQV	Siquisique	3.92	94	eP	Pn	23 06 00.1	0.0
SIQV				eS	Sn	23 06 45.7	+0.3
SOCV	Socops	3.93	132	eP	Pn	23 05 59.6	-0.6
SOCV				eS	Sn	23 06 44.7	-0.7
JACV	Jacura	4.87	88	eP	Pn	23 06 12.7	-0.2
TURV	Turiamo	5.87	94	eP	Pn	23 06 25.5	-0.9
TURV				eS	Sn	23 07 30.3	-2.1
ROSC	El Rosal	6.09	185	P	Pn	23 06 32.1	+2.8
	12nm,0.3s,baz=257,slow=2.5,SNR=15						
ROSC				S	Sn	23 07 45.8	+8.2
	0.9nm,0.3s,baz=225,slow=23,SNR=3.0						
PCRV	Puerto La Cruz	9.04	94	P	Pn	23 07 08.0	-1.3
	1.7nm,0.3s,baz=309,slow=6.5,SNR=12						
PCRV				S	Sn	23 08 49.4	+0.1
	0.2nm,0.3s,baz=231,slow=19,SNR=1.8						
ASAR	Alice Springs	150.76	241	PKPbc	PKPbc	23 24 42.6	+0.9
	0.4nm,0.4s,baz=105,slow=3.4,SNR=5.0						
WRA	Warramunga Arr	151.49	248	PKPbc	PKPbc	23 24 44.8	+1.3
	2.2nm,1.2s,baz=91,slow=2.2,SNR=4.8						

*CSEM **06** 00:26:35.6±0.5, 3720N×2708E, h25km, MD2.8, Error ellipse: s-maj=11.0km s-min=6.2km az=79.0*
*ISK **06** 00:26:36.6, 3729N×27.10E, h4km, MD2.8*
*DDA **06** 00:26:37.4, 3729N×27.12E, h7km±1km, Md2.8*
ISC 06 00:26:36.2±1.6**, 3721N**±008×**270E**±01**, h20**km±9km**, n8, σ0.s81**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.28	121	ePG	Pg	00 26 42.6	+0.1
BODT				eSG	Sg	00 26 47.7	+0.9
BDRM	Kayabasi	0.37	112	i P	Pg	00 26 43.8	-0.3
BDRM				i S	Sg	00 26 49.8	+0.3
GCAM	G?zelcaml?	0.52	20	i P	Pg	00 26 45.9	-0.8
MLSB	Milas	0.61	82	ePG	Pg	00 26 47.4	-1.0
AYDN	Tasoluk	0.82	57	i P	Pb	00 26 51.1	-0.7
AYDN				i S	Sb	00 27 02.8	+0.3
YER	Yerkesik	1.02	94	ePG	Pg	00 26 56.1	+0.1
YER				eSG	Sg	00 27 09.6	+0.2
IZM	Izmir	1.20	9	ePN	Pn	00 26 59.3	+1.4
IZM				eSN	Sn	00 27 14.4	+0.7
TURN	Turunc	1.31	104	i P	Pn	00 26 57.7	-1.8

*IDC **06** 00:31:20.2±1.2, 4666N×15530E, h0km, mb4.0/8, mb1 4.0/9, mb1mx3.8/24, mbtmp4.0/9, ML3.2/1, MS2.6/1, Ms1 2.6/1, ms1mx2.1/38, Error ellipse: s-maj=31.4km s-min=28.1km az=72.0*
*ISCJB **06** 00:31:23.6±1.1, 467N±02×1552E±03, h33km, mb4.0/10, Error ellipse: s-maj=30.5km s-min=23.4km az=42.4*
*MOS **06** 00:31:23.6±1.3, 4650N×15493E, h34km, mb4.6/2, Error ellipse: s-maj=30.6km s-min=20.3km az=122.9*
*NEIC **06** 00:31:25.4±0.9, 4682N×15545E, h35km, mb4.5/2, Error ellipse: s-maj=22.5km s-min=18.0km az=114.0*
ISC 06 00:31:25.7±1.1**, 468N**±01×**1554E**±02**, h35**km**, n17, σ1.s02**/17**, mb4.0**/10**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	5.46	256	ePN	Pn	00 32 38.0	-6.4
KUR				pmax	pmax		
	comp=Z,90nm,0.7s						
PETK	Petropavlovsk-	6.49	13	Pn	Pn	00 32 56.8	-1.8
	comp=Z,0.5nm,0.3s,baz=186,slow=9.6,SNR=2.9						
PETK				LR	LR	00 35 45.2	
	comp=Z,42nm,18.2s,baz=152,slow=40						
ZALV	Zalesovo Beam	43.83	306	P	P	00 39 27.1	-0.9
	comp=Z,0.5nm,0.4s,mb3.6,baz=73,slow=5.0,SNR=3.2						
ZAL	Zalesovo	43.85	306	P	P	00 39 27.1	-1.0
KURK	Kurchatov	48.62	304	P	P	00 40 05.5	-0.1
	comp=Z,2.0nm,0.6s,mb4.3,baz=67,slow=8.4,SNR=14						
KURK	Kurchatov	48.62	304	P	P	00 40 05.5	-0.1
BVAR	Borovoye Array	52.02	310	P	P	00 40 31.3	0.0
	comp=Z,2.6nm,0.6s,mb4.3,baz=63,slow=8.2,SNR=18						
BRVK	Borovoye	52.05	310	eP	P	00 40 32.2	+0.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
BRVK	Borovoye	52.05	310	eP	P	00 40 32.2	+0.7
	comp=Z,3.0nm,0.6s,mb4.4						
ARU	Arti	56.01	318	eP	P	00 41 00.2	-0.1
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
ARU	Arti	56.01	318	eP	P	00 41 00.1	-0.2
	comp=Z,2.7nm,0.6s,mb4.5						
ARCES	ARCESS Array B	58.30	342	P	P	00 41 16.7	+0.3
	comp=Z,1.2nm,0.7s,mb4.0,baz=30,slow=9.3,SNR=3.3						
ARCES	ARCESS Array B	58.30	342	P	P	00 41 16.7	+0.3
HFS	Hagfors	68.94	341	P	P	00 42 29.0	+2.4
	comp=Z,2.0nm,0.6s,mb4.2,baz=72,slow=4.8,SNR=8.5						
AKASG	Malin Array Be	72.35	327	P	P	00 42 48.9	+1.3
	comp=Z,0.6nm,0.4s,mb3.9,baz=35,slow=6.1,SNR=3.6						
ASAR	Alice Springs	72.78	201	P	P	00 42 49.3	-1.0
	comp=Z,0.5nm,0.6s,mb3.6,baz=20,slow=6.0,SNR=5.0						
TXAR	Lajitas Array	76.11	62	P	P	00 43 10.1	+0.3
	comp=Z,0.5nm,0.6s,mb3.6,baz=320,slow=7.8,SNR=5.5						

*IDC **06** 01:03:10.4±1.0, 3453N×73.11E, h0km, mb3.9/6, mb1 4.0/9, mb1mx3.8/24, mbtmp3.8/9, ML3.7/3, MS3.4/1, Ms1 3.5/1, ms1mx2.4/26, Error ellipse: s-maj=29.5km s-min=19.8km az=55.0*
*NDI **06** 01:03:12.2±2.5, 3497N×7298E, h60km, ML3.7*
*ISCJB **06** 01:03:14.3±0.6, 3460N±004×7332E±006, h48km±9km, mb3.7/5, Error ellipse: s-maj=9.4km s-min=4.7km az=151.7*
*NEIC **06** 01:03:18.4±1.3, 3467N×7321E, h60km±13km, Error ellipse: s-maj=14.1km s-min=11.3km az=137.0*
*NNC **06** 01:03:19.9±3.4, 3497N×72.10E, h0km, mb3.6, mpv4.2, Error ellipse: s-maj=48.8km s-min=28.9km az=85.0*
ISC 06 01:03:16.1±0.5**, 3458N**±004×**7322E**±007**, h43**km±9km**, n35, σ1.s50**/43**, mb3.8**/6**, 3C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	0.92	178	⇑P	Pn	01 03 30.3	-2.2
CEP	Cherat	1.32	236	⇓P	Pn	01 03 36.2	-1.8
THN	Thein Dam	2.99	135	eP	Pn	01 04 02.8	+1.9
THN				ex	x	01 04 43.8	
DLH	Dalhousie	3.06	131	eP	Pn	01 04 04.0	+2.0
DLH				ex	x	01 04 50.0	
KBL	Kabul	3.44	271	ePn	Pn	01 04 09.4	+2.3
KBL				eSn	Sn	01 04 53.1	+6.4
SDNR	Sundarnagar	4.40	133	eP	Pn	01 04 22.0	+1.7
SDNR				ex	x	01 05 28.4	
SMLA	Simla	4.78	135	i P	Pn	01 04 27.1	+1.5
SMLA				i S	Sn	01 05 23.4	+3.7
SMLA				eS	Sn	01 05 24.6	+4.9
SMLA				ex	x	01 05 24.9	
	comp=N,510nm,0.3s						
SMLA				ex	x	01 05 26.3	
	comp=E,350nm,0.4s						
KLP	Kalpa	5.20	124	eP	Pn	01 04 32.6	+1.3
KLP				eS	Sn	01 05 30.2	+0.1
KLP				AML	AML	01 06 02.6	
	comp=E,105nm,0.6s						
KLP				AML	AML	01 06 03.0	
	comp=N,192nm,0.8s						
SONA	Sohna	7.12	151	eP	Pn	01 04 58.5	+0.8
SONA				eS	Sn	01 06 16.5	-0.8
SONA				AML	AML	01 07 12.8	
	comp=N,9.4nm,0.3s						
SONA				AML	AML	01 07 13.1	
	comp=E,13nm,0.3s						
AML	Almayashu	7.55	3	ePn	Pn	01 05 04.9	+1.4
	comp=E,5.5nm,0.4s						
AML				eSn	Sn	01 06 26.7	-1.0
UCH	Uchtor	7.71	7	ePn	Pn	01 05 07.3	+1.7
	comp=E,4.1nm,0.7s						
EKS2	Erkin-Say	8.08	3	ePn	Pn	01 05 13.1	+2.3
	comp=E,2.6nm,0.7s						
EKS2				eSn	Sn	01 06 41.9	+1.1
KK31	Karatay Array	8.77	347	Pn	Pn	01 05 20.8	+0.6
	comp=E,3.8nm,0.3s,baz=168,slow=13,SNR=260						
KK31				⇑Sn	Sn	01 06 55.6	-2.1
	comp=E,1.5nm,0.3s,baz=165,slow=22,SNR=6.2						
DANN	Dangsing	10.93	122	eP	Pn	01 05 49.1	-0.8
	comp=E,27nm,0.4s						
DMN	Daman	12.32	121	eP	Pn	01 06 07.0	-1.9
	comp=E,11nm,0.3s						
KKN	Kakani	12.34	120	eP	Pn	01 06 07.7	-1.4
	comp=E,9.0nm,0.4s						
PKI	Pulchoki	12.56	120	eP	Pn	01 06 10.2	-2.0
	comp=E,11nm,0.3s						
JIRN	Jiri	13.07	118	eP	Pn	01 06 17.0	-2.1
	comp=E,21nm,0.3s						
RAMN	Ramite	13.78	120	eP	Pn	01 06 25.6	-3.2
MKAR	Makanchi Array	14.00	27	Pn	Pn	01 06 31.1	-0.5
	comp=E,0.1nm,0.3s,baz=207,slow=12,SNR=2.5						
TAPN	Taplejung	14.36	116	eP	Pn	01 06 33.2	-3.5
	comp=E,10nm,0.3s						
ODAN	Odare	14.40	118	eP	Pn	01 06 33.8	-3.5
AB31	Akbulak array	17.64	330	P	Pn	01 07 16.7	-1.7
	comp=E,0.3nm,0.3s,baz=143,slow=13,SNR=19						
AB31				⇓S	S	01 10 25.4	-14
	comp=E,0.8nm,0.7s						
BVAR	Borovoye Array	18.55	355	P	Pn	01 07 29.3	-0.1
	comp=E,0.4nm,0.3s,baz=167,slow=9.1,SNR=6.4						
AKTK	Aktyubinsk	19.35	330	P	Pn	01 07 38.1	-1.0
AKTO	Aktyubinsk	19.35	330	⇑P	Pn	01 07 37.9	-1.2
	comp=E,0.5nm,0.7s						
AKTO	Aktyubinsk	19.35	330	P	Pn	01 07 38.1	-1.0
	comp=E,0.5nm,0.3s,baz=135,slow=10,SNR=14						
ZALV	Zalesovo Beam	21.02	19	P	P	01 07 55.0	-0.8
	comp=E,3.2nm,0.4s,mb4.0,baz=214,slow=10,SNR=16						
CMAR	Chiang Mai Arr	27.95	118	P	P	01 09 04.4	+1.9
	comp=E,1.2nm,0.3s,mb4.0,baz=297,slow=9.5,SNR=4.1						
CMAR	Chiang Mai Arr	27.95	118	P	P	01 09 04.4	+1.9
ARCES	ARCESS Array B	43.60	338	P	P	01 11 16.7	+1.1
	comp=E,0.9nm,0.6s,mb3.7,baz=122,slow=8.7,SNR=6.5						
ESDC	Sonseca Array	59.97	300	LR	LR	01 40 21.7	
	comp=E,30nm,20.6s,baz=0.0,slow=37						
TORD	Torodi Ar. Bea	67.52	271	P	P	01 14 07.7	-0.4
	comp=E,0.6nm,0.8s,mb3.7,baz=55,slow=6.0,SNR=10						
WRA	Warramunga Arr	79.44	123	P	P	01 15 18.7	+0.7
	comp=E,0.3nm,0.4s,mb3.6,baz=325,slow=5.1,SNR=6.9						
ASAR	Alice Springs	81.67	126	P	P	01 15 30.6	+0.8
	comp=E,0.3nm,0.3s,mb3.6,baz=317,slow=5.2,SNR=5.4						

*IPEC **06** 01:24:44.6±0.1, 50.14N×19.14E, h0km, ML1.8/4, Error ellipse: s-maj=2.7km s-min=0.7km az=166.0*
*CSEM **06** 01:24:44.3±0.1, 5023N×19.13E, h1km, ML2.7/7, Error ellipse: s-maj=2.6km s-min=1.0km az=175.0*
*PRU **06** 01:24:45.3, 50.18N×1907E, h0km*
WAR 06 01:24:45.0, 5011N×1921E, ML2.4, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.39	74	ePg	Pg	01 24 52.6	+0.1
OJC				eSg	Sg	01 24 58.2	+0.5
OKC	Ostrava-Krasne	0.74	249	ePG	Pg	01 24 58.5	-0.6
OKC				eSG	Sg	01 25 08.6	-0.1
	comp=Z,16nm,0.5s						
NIE	Niedzica	1.00	134	ePg	Pg	01 25 05.3	+1.2
NIE				eSg	Sg	01 25 21.1	+4.1
MORC	Moravsky Berou	1.13	253	ePg	Pg	01 25 05.9	-0.7
MORC				eSg	Sg	01 25 19.6	-1.6
	comp=Z,17nm,0.2s						
STHS	Stebnicka Huta	1.49	117	ePN	Pn	01 25 13.9	+0.9
STHS				eSN	Sn	01 25 37.0	+3.9
STHS	Stebnicka Huta	1.49	117	ePn	Pn	01 25 13.9	+0.9
STHS				eSn	Sn	01 25 37.0	+3.9
JAVC	Velka Javorina	1.60	219	eSg	Sg	01 25 36.9	+0.4
	comp=Z,5.8nm,0.4s						
KOLL	Kolacno	1.62	199	ePN	Pn	01 25 13.5	-1.3
KOLL				eSN	Sn	01 25 36.4	0.0
KOLL	Kolacno	1.62	199	ePn	Pn	01 25 13.6	-1.2
KOLL				eSn	Sn	01 25 36.4	0.0
VYHS	Vyhne	1.64	189	ePN	Pn	01 25 13.9	-1.1
VYHS				eSN	Sn	01 25 35.6	-1.1
VYHS	Vyhne	1.64	189	ePn	Pn	01 25 13.9	-1.1
VYHS				eSn	Sn	01 25 35.6	-1.1
KECS	Kecovo	1.83	152	ePN	Pn	01 25 16.6	-1.1
KECS				eSN	Sn	01 25 41.6	+0.1
DPC	Dobruska-Polom	1.87	278	ePn	Pn	01 25 16.9	-1.3
DPC	Dobruska-Polom	1.87	278	Pg	Pg	01 25 17.0	-3.8
DPC				Sg	Sg	01 25 41.2	-3.8
	comp=Z,12nm,0.7s						
DPC	Dobruska-Polom	1.87	278	ePG	Pg	01 25 17.0	-3.8
DPC				eSG	Sg	01 25 41.2	-3.8
	comp=Z,12nm,0.7s						
VRAC	Vranov	1.88	246	ePn	Pn	01 25 18.3	0.0
VRAC				eSg	Sg	01 25 42.1	-3.2
	comp=Z,6.1nm,0.2s						
CRVS	Cervenica-Dubn	1.90	129	ePN	Pn	01 25 21.0	+2.4
CRVS				eSN	Sn	01 25 48.1	+4.8
CRVS	Cervenica-Dubn	1.90	129	ePn	Pn	01 25 21.0	+2.4
CRVS				eSn	Sn	01 25 48.1	+4.8
KRUC	Moravsky	2.11	241	eSg	Sg	01 25 49.4	-3.4
	comp=Z,5.7nm,0.4s						
PRU	Pruhonice	3.01	269	eSG	Sg	01 26 17.0	-4.7
	comp=Z,3.6nm,0.6s						
BRG	Berggiesshubel	3.45	285	SG	Sg	01 26 34.2	-1.5
	comp=Z,4.2nm,0.9s						
KHC	Kasperske Hory	3.79	257	eSG	Sg	01 26 42.4	-4.3

PPT 06 01:35:24.5±0.3**, 1815S×14152W, h10**km**, Ml3.9**/10**, Error ellipse: s-maj=15.5km s-min=2.5km az=34.0, Tuamotu Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMOR	Pomariorio Ree	6.86	296	ePn	Pn	01 37 03.2	-2.1
	2.0nm,0.1s						
PMOR				eSn	Sn	01 38 16.2	-7.3
	1.0nm,0.2s						
TVO	Taravao	7.37	272	ePn	Pn	01 37 06.4	-5.8
	37nm,0.1s						
TIAR	Tiarei	7.47	273	ePn	Pn	01 37 08.0	-5.6
	109nm,0.2s						
TIAR				eSn	Sn	01 38 22.1	-16
	50nm,0.2s						
TIAR				eT		01 44 10.6	
	97nm,0.2s						
RKT	Rikitea	7.88	130	ePn	Pn	01 37 17.6	-1.6
	3.0nm,0.1s						

*ISCJB **06** 02:00:20.4±0.7, 39.13N±003×4079E±004, h6km±8km, Error ellipse: s-maj=6.3km s-min=5.0km az=137.4*
*ISK **06** 02:00:20.4, 3924N×4068E, h5km, MD2.7*
*CSEM **06** 02:00:21.6±0.7, 3924N×4065E, h10km, MD2.7, Error ellipse: s-maj=27.1km s-min=7.3km az=137.0*
*DDA **06** 02:00:22.4, 39.15N×4109E, h11km, Md2.8*
ISC 06 02:00:21.1±0.6**, 3913N**±003×**4082E**±005**, h13**km±8km**, n7, σ0.s91**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.31	124	i P	Pg	02 00 26.6	-0.8
BNGL				i S	Sg	02 00 31.9	+0.2
EZM	Erzurum	0.88	28	ePG	Pg	02 00 38.0	-0.2
EZM				eSG	Sg	02 00 50.7	+1.0
ERZM	Erzurum	0.88	28	i P	Pg	02 00 36.7	-1.5
ERZM				i S	Sg	02 00 50.8	+1.0
PTK	Pertek	1.14	259	ePG	Pg	02 00 41.3	-1.7
PTK				eSG	Sg	02 00 58.0	+0.2
BEST	Besiri	1.28	164	i P	Pn	02 00 44.8	+0.1
BEST				i S	Sb	02 01 01.8	+0.4
SVRC	Sivrice-ELAZID	1.40	238	ePN	Pg	02 00 47.7	-0.3
SVRC				eSN	Sg	02 01 07.9	+1.7
GUMT	Gumushane	1.69	323	ePN	Pn	02 00 49.9	-0.3

*TEH **06** 02:10:06.5, 3020N×5032E, h16km, ML3.8*
*IDC **06** 02:10:22.5±2.3, 3081N×5005E, h0km, mb3.7/7, mb1 3.7/8, mb1mx3.6/26, mbtmp3.7/8, ML3.5/1, MS2.9/5, Ms1 2.9/5, ms1mx2.6/40, Error ellipse: s-maj=53.5km s-min=22.1km az=154.0*
*THR **06** 02:10:22.4±1.1, 3051N×5030E, h18km±10km, ML3.9*
*CSEM **06** 02:10:24.4±0.1, 3064N×5039E, h25km, ML3.9, Error ellipse: s-maj=1.9km s-min=1.5km az=162.0*
*ISCJB **06** 02:10:25.7±0.4, 3059N±004×5039E±004, h47km±7km, mb3.8/7, MS3.0/2, Error ellipse: s-maj=6.5km s-min=4.9km az=156.0*
*NEIC **06** 02:10:25.0, 3056N×5032E, h16km, mb3.7/2, ML3.9(THR), MN3.8(TEH), After TEH.*
ISC 06 02:10:27.1±0.4**, 3057N**±004×**5037E**±004**, h44**km±7km**, n81, σ0.s96**/87**, mb3.8**/7**, MS3.0**/2**, 4C-7D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	2.03	319	ePg	Pn	02 10 59.7	+0.9
SHGR				eSg	Sn	02 11 26.9	+3.9
SHGR				AML	AML	02 11 36.5	
	comp=E,1μm,0.6s						
SHGR				AML	AML	02 11 38.7	
	comp=N,1μm,0.6s						
SHGR	Shooshtar-Gavs	2.03	319	ePg	Pn	02 10 59.7	+0.9
	SNR=91						
SHGR				eSg	Sn	02 11 26.9	+3.9
	SNR=91						
SHGR	Shooshtar-Gavs	2.03	319	Pg	Pn	02 10 59.0	+0.2
SHGR				Sg	Sn	02 11 26.0	+3.0
IPIR	Pirpir	2.15	12	ePn	Pn	02 11 01.3	+0.9
IPIR				eSn	Sn	02 11 26.9	+1.0
IPIR	Pirpir	2.15	12	ePn	Pn	02 11 01.3	+0.9
IPIR				eSn	Sn	02 11 26.9	+1.0
IPIR				e		02 11 34.9	
IGAR	Gharneh	2.32	38	ePn	Pn	02 11 03.6	+0.9
IGAR				e		02 11 40.3	
IPAR	Pars	2.43	107	Pn	Pn	02 11 05.2	+0.9
IPAR	Pars	2.43	107	ePn	Pn	02 11 05.3	+1.0
IPAR				e		02 11 47.0	
UMR	Umm Al-Rimmam	2.51	247	eP	Pn	02 11 06.0	+0.6
KBD	Kabd	2.71	240	eP	Pn	02 11 08.3	+0.3
	baz=240						
KBD				AML	AML	02 11 43.5	
	comp=Z,141nm,0.6s,baz=240						
MIB	Mutribah	2.73	254	eP	Pn	02 11 09.6	+1.2
	baz=255						
MIB				AML	AML	02 11 45.3	
	comp=Z,176nm,0.4s,baz=255						
IZEF	Zefreh	2.86	35	Pn	Pn	02 11 10.3	+0.2
IZEF	Zefreh	2.86	35	⇓ePn	Pn	02 11 10.4	+0.3
IZEF				e		02 11 17.8	
IKLH	Kolahrood	2.92	20	Pn	Pn	02 11 11.1	0.0
IKLH	Kolahrood	2.92	20	ePn	Pn	02 11 11.2	+0.1
IKLH				e		02 12 08.0	
RDF	Al-Radifah	2.95	237	eP	Pn	02 11 11.5	+0.2
	baz=237						
RDF				AML	AML	02 11 50.1	
	comp=Z,128nm,0.3s,baz=237						
NAY	Al-Naaiem	3.02	245	eP	Pn	02 11 12.5	+0.2
	baz=245						
NAY				AML	AML	02 11 50.9	
	comp=Z,63nm,0.4s,baz=245						
NASN	Na'in	3.04	43	ePn	Pn	02 11 13.3	+0.6
NASN	Na'in	3.04	43	Pn	Pn	02 11 13.0	+0.3
RST	Umm Al-Ruwaisa	3.11	251	eP	Pn	02 11 13.5	-0.1
	baz=251						
RST				AML	AML	02 11 55.4	
	comp=Z,6.0nm,0.6s,baz=251						
GHIR	Ghir-Karzin	3.23	134	ePn	Pn	02 11 14.6	-0.7
GHIR				eSg	Sn	02 12 02.7	+10
GHIR	Ghir-Karzin	3.23	134	Pn	Pn	02 11 14.0	-1.2
GHIR				Sg	Sn	02 12 02.0	+10
IMEH	Mehriz	3.74	76	Pn	Pn	02 11 22.4	+0.2
IMEH				eSn	Sn	02 12 05.6	+0.6
IMEH	Mehriz	3.74	76	ePn	Pn	02 11 22.5	+0.3
IMEH				eSn	Sn	02 12 05.6	+0.6
IMEH				e		02 12 12.7	
ICHK	Chekchek	3.84	63	ePn	Pn	02 11 23.4	-0.2
ICHK				e		02 12 11.8	
ICHK	Chekchek	3.84	63	Pn	Pn	02 11 23.3	-0.3
ASAO	Ashtian	3.97	356	ePn	Pn	02 11 25.8	+0.4
ASAO				AML	AML	02 12 15.3	
	comp=N,114nm,0.4s						
ASAO				AML	AML	02 12 16.0	
	comp=E,110nm,0.5s						
ASAO	Ashtian	3.97	356	Pn	Pn	02 11 25.0	-0.5
ISFB	Sefidab	4.09	22	ePn	Pn	02 11 26.6	-0.4
ISFB				e		02 11 40.3	
IKOM	Komasi	4.33	327	ePn	Pn	02 11 29.9	-0.4
IKOM				e		02 13 08.4	
IKOM	Komasi	4.33	327	Pn	Pn	02 11 29.8	-0.5
IVRN	Varamin	4.56	14	ePn	Pn	02 11 33.2	-0.2
IBAF	Bafgh	4.58	76	ePn	Pn	02 11 33.4	-0.3
IBAF				e		02 11 56.1	
IBAF	Bafgh	4.58	76	Pn	Pn	02 11 33.3	-0.4
IRAZ	Razeghan	4.83	356	ePn	Pn	02 11 37.4	+0.2
IRAZ				e		02 12 39.4	
IR3	Iran Long-Peri	4.92	6	ePn	Pn	02 11 38.0	-0.4
IGHG	Ghaleghazi	4.93	320	ePn	Pn	02 11 37.1	-1.5
IGHG				e		02 13 31.0	
IVIS	Veis	4.93	324	Pn	Pn	02 11 38.3	-0.3
IVIS	Veis	4.93	324	ePn	Pn	02 11 38.4	-0.2
IVIS				e		02 12 45.8	
SNGE	Sanandaj	5.17	331	ePn	Pn	02 11 40.6	-1.3
SNGE				AML	AML	02 12 48.7	
	comp=E,46nm,0.5s						
DAMV	Damavand	5.22	15	ePn	Pn	02 11 42.9	+0.3
DAMV				AML	AML	02 12 43.0	
	comp=E,44nm,0.3s						
DAMV	Damavand	5.22	15	Pn	Pn	02 11 42.0	-0.6
CHTH	Charan	5.36	7	ePn	Pn	02 11 44.9	+0.5
CHTH	Charan	5.36	7	Pn	Pn	02 11 44.0	-0.5
IFIR	Firoozkooh	5.44	21	Pn	Pn	02 11 45.5	0.0
IFIR	Firoozkooh	5.44	21	ePn	Pn	02 11 45.6	+0.1
IFIR				e		02 12 50.9	
IANJ	Anjilo	5.72	30	Pn	Pn	02 11 48.7	-0.7
IANJ	Anjilo	5.72	30	ePn	Pn	02 11 48.8	-0.6
IANJ				e		02 11 54.2	
ISHM	Shahmirzad	5.77	24	ePn	Pn	02 11 49.7	-0.4
ISHM				e		02 11 58.4	
IPRN	Peran	5.89	16	ePn	Pn	02 11 52.1	+0.4
IPRN				e		02 12 59.3	
BNDS	Bandar-Abbas	5.99	120	ePn	Pn	02 11 52.8	-0.4
BNDS				AML	AML	02 13 15.5	
	comp=N,38nm,0.9s						
BNDS	Bandar-Abbas	5.99	120	Pn	Pn	02 11 52.0	-1.1
IGLO	Ghaloghah	6.58	25	ePn	Pn	02 12 01.7	+0.5
IGLO				e		02 12 09.6	
IKOO	Kooshah	7.60	74	ePn	Pn	02 12 14.7	-0.6
IKOO				e		02 14 44.7	
IHRS	Heris	8.20	341	ePn	Pn	02 12 22.8	-0.6
IHRS				e		02 13 32.0	
ASF	Jabal al Asfar	11.62	281	Pn	Pn	02 13 07.6	-2.7
	comp=N,0.3nm,0.3s,baz=116,slow=13,SNR=2.5						
ASF				LR	LR	02 18 24.2	
	comp=N,28nm,20.7s,baz=156,slow=43						
MMAI	Mount Meron Ar	12.96	285	LR	LR	02 19 29.2	
	comp=N,46nm,18.1s,baz=145,slow=43						
EIL	Elat	13.38	270	LR	LR	02 19 28.8	
	comp=N,53nm,19.6s,baz=103,slow=42						
BR131	Keskin Array S	16.43	308	eP	Pn	02 14 16.0	+1.6
BR131	Keskin Array S	16.43	308	eP	Pn	02 14 16.0	+1.6
	comp=N,1.8nm,0.8s						
AKTK	Aktyubinsk	20.65	14	P	P	02 15 00.7	-2.2
AKTO	Aktyubinsk	20.65	14	P	P	02 15 00.7	-2.2

	comp=N,0.2nm,0.4s,baz=203,slow=13,SNR=2.6						
AML	**Almayashu**	**21.97**	**52**	*e*P	**P**	**02 15 17.1**	**0.0**
AML	**Almayashu**	**21.97**	**52**	*e*P	**P**	**02 15 17.1**	**0.0**
	comp=N,5.4nm,0.8s,mb4.0						
VRI	**Vrincioaia**	**23.92**	**316**	⇓*i*P	**P**	**02 15 38.8**	**+2.0**
VRI	**Vrincioaia**	**23.92**	**316**	⇓P	**P**	**02 15 38.8**	**+2.0**
MLR	**Muntele Rosu**	**24.20**	**315**	⇓*i*P	**P**	**02 15 40.1**	**+0.8**
MLR	**Muntele Rosu**	**24.20**	**315**	⇑P	**P**	**02 15 40.6**	**+1.3**
VOIR		**24.72**	**314**	⇓*i*P	**P**	**02 15 44.1**	**0.0**
VOIR		**24.72**	**314**	⇑P	**P**	**02 15 45.3**	**+1.2**
VOIR		**24.72**	**314**	⇑P	**P**	**02 15 45.3**	**+1.2**
AKASG	**Malin Array Be**	**25.56**	**328**	P	**P**	**02 15 49.8**	**-1.8**
	comp=N,0.3nm,0.3s,mb3.3,baz=133,slow=8.1,SNR=4.6						
BVAR	**Borovoye Array**	**26.77**	**27**	P	**P**	**02 16 03.4**	**+0.9**
	comp=N,0.4nm,0.5s,mb3.2,baz=207,slow=6.0,SNR=3.1						
DRGR		**26.80**	**315**	⇑*i*P	**P**	**02 16 03.3**	**+0.4**
DRGR		**26.80**	**315**	⇓P	**P**	**02 16 03.5**	**+0.6**
DRGR		**26.80**	**315**	⇓P	**P**	**02 16 03.5**	**+0.6**
KURK	**Kurchatov**	**29.12**	**38**	P	**P**	**02 16 23.5**	**-0.1**
	comp=N,1.3nm,0.7s,mb3.8,baz=240,slow=9.3,SNR=8.1						
ZALV	**Zalesovo Beam**	**34.04**	**37**	P	**P**	**02 17 09.0**	**+2.2**
	comp=N,1.2nm,0.6s,mb4.0,baz=252,slow=8.4,SNR=5.1						
ZALV				LR	LR	02 32 50.5	
	comp=N,29nm,19.8s,MS3.0,baz=85,slow=40						
HFS	**Hagfors**	**38.34**	**331**	P	**P**	**02 17 41.7**	**-1.6**
	comp=N,1.0nm,0.4s,mb3.9,baz=123,slow=11,SNR=9.1						
ESDC	**Sonseca Array**	**44.77**	**297**	LR	LR	02 37 27.0	
	comp=N,21nm,20.4s,MS3.1,baz=130,slow=37						
TORD	**Torodi Ar. Bea**	**47.99**	**260**	P	**P**	**02 19 01.2**	**-0.7**
	comp=N,0.8nm,0.6s,mb3.9,baz=57,slow=8.3,SNR=9.4						

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*ISCJB **06** 02:12:59.0±1.0, 40.14N±0.04×20.7E±0.1, h4^{km}±10^{km}, Error ellipse: s-maj=13.4km s-min=6.8km az=5.9*
*CSEM **06** 02:12:59.0, 40.16N×20.69E, h4^{km}, MD3.2/4, After ATH*
*ATH **06** 02:12:59.0, 40.16N×20.69E, h4^{km}, MD3.2/4*
*NEIC **06** 02:12:59.0, 40.16N×20.69E, h4^{km}, MD3.2(ATH), After ATH.*
ISC 06 02:12:59.7±0.9**, 40.12N**±0.04×**20.66E**±0.10**, h11**^{km}±9^{km}**, n9,** $\sigma 1^{s}$**04**/12**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.48**	**162**	*e*PG	**Pg**	**02 13 08.5**	**-0.6**
JAN				*e*SG	**Sg**	**02 13 16.0**	**+0.5**
KEK	**Kerkira**	**0.78**	**239**	*e*PG	**Pg**	**02 13 14.6**	**-0.1**
KZN	**Kozani**	**0.87**	**77**	*e*PB	**Pg**	**02 13 15.0**	**-1.5**
OHR	**Ohrid**	**1.00**	**6**	*e*Pn	**Pn**	**02 13 19.1**	**-0.6**
BIA	**Bitola**	**1.03**	**29**	*i* Pn	**Pn**	**02 13 16.8**	**-3.4**
BIA				*i* Sn	**Sn**	**02 13 33.9**	**-0.8**
KRUS	**Krusevo**	**1.33**	**19**	*i* Pn	**Pn**	**02 13 23.9**	**-0.4**
KRUS				*i* Sn	**Sg**	**02 13 43.6**	**+1.0**
EVR	**Evrytania**	**1.49**	**143**	*e*PB	**Pb**	**02 13 28.0**	**+0.6**
VAY	**Valandovo**	**1.89**	**50**	*e*Pn	**Pn**	**02 13 32.7**	**+0.9**
STIP	**Stip**	**1.96**	**36**	*e*Pn	**Pn**	**02 13 34.8**	**+1.9**

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*ISCJB **06** 02:27:44.5±0.6, 22.01S±0.08×68.48W±0.08, h125^{km}±6^{km}, mb4.0/7, Error ellipse: s-maj=15.4km s-min=10.7km az=140.0*
*IDC **06** 02:27:45.1±0.6, 21.99S×68.55W, h115^{km}±8^{km}, mb3.7/5, mb1 3.8/8, mb1mx3.7/17, mbtmp3.6/8, Error ellipse: s-maj=21.4km s-min=17.2km az=156.0*
*NEIC **06** 02:27:45.1±0.6, 22.02S×68.52W, h116^{km}±7^{km}, mb3.9/3, Error ellipse: s-maj=11.3km s-min=10.3km az=95.0*
ISC 06 02:27:45.6±0.6**, 22.02S**±0.08×**68.47W**±0.08**, h119**^{km}±6^{km}**, n14,** $\sigma 0^{s}$**73**/17**, mb4.0**/7**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.72**	**214**	P	**Pn**	**02 28 05.2**	**+0.2**
	763nm,0.3s,baz=19,slow=6.7,SNR=7694						
LVC				S	**Sn**	**02 28 20.0**	**+0.4**
	1μm,0.3s,baz=278,slow=23,SNR=176						
LVC	**Limon Verde**	**0.72**	**214**	P	**Pn**	**02 28 05.2**	**+0.2**
LVC				S	**Sn**	**02 28 20.0**	**+0.4**
LPAZ	**La Paz**	**5.71**	**3**	P	**Pn**	**02 29 08.8**	**+0.7**
	2.2nm,0.3s,baz=181,slow=5.9,SNR=97						
SIV	**San Ignacio**	**9.21**	**51**	P	**Pn**	**02 29 54.1**	**-1.4**
	5.2nm,0.3s,baz=244,slow=11,SNR=105						
SIV				S	**Sn**	**02 31 37.0**	**-0.4**
	0.3nm,0.3s,baz=184,slow=17,SNR=3.1						
CFAA	**Coronel Fontan**	**9.55**	**179**	P	**Pn**	**02 29 58.5**	**-1.5**
	0.1nm,0.3s,baz=356,slow=15,SNR=8.8						
CPUP	**Villa Florida**	**11.04**	**115**	P	**Pn**	**02 30 21.0**	**+0.9**
	0.2nm,0.3s,baz=267,slow=13,SNR=4.1						
BDFB	**Brasilia**	**20.37**	**75**	P	**P**	**02 32 13.7**	**+0.8**
	7.2nm,0.6s,baz=232,slow=13,SNR=10						
TXAR	**Lajitas Array**	**61.28**	**325**	P	**P**	**02 37 47.7**	**-0.7**
	0.4nm,0.6s,mb3.6,baz=159,slow=8.3,SNR=6.3						
SRU	**San Rafael**	**72.42**	**327**	*e*P	**P**	**02 38 59.1**	**+0.3**
	1.2nm,0.7s,mb3.8						
PDAR	**Pinedale Array**	**74.75**	**330**	P	**P**	**02 39 12.4**	**0.0**
	0.6nm,0.6s,mb3.5,baz=133,slow=7.7,SNR=5.5						
RRI2	**Red Ridge**	**76.03**	**329**	*e*P	**P**	**02 39 19.8**	**+0.1**
	21nm,1.8s,mb4.6						
TORD	**Torodi Ar. Bea**	**77.15**	**70**	P	**P**	**02 39 27.4**	**+0.8**
	3.0nm,0.6s,mb4.2,baz=257,slow=5.4,SNR=18						
BMO	**Blue Mountains**	**80.06**	**327**	*e*P	**P**	**02 39 42.1**	**+0.2**
	0.9nm,0.6s,mb3.8						
YKA	**Yellowknife Ar**	**91.80**	**340**	P	**P**	**02 40 39.1**	**-0.3**
	0.9nm,0.6s,mb4.2,baz=133,slow=4.8,SNR=7.1						

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*ISK **06** 02:51:00.8, 36.66N×27.34E, h5^{km}, MD2.9*
*DDA **06** 02:51:00.2, 36.67N×27.67E, h7^{km}±7^{km}, Md2.9*
*CSEM **06** 02:51:02.1±0.5, 36.73N×27.40E, h15^{km}, MD2.9, Error ellipse: s-maj=9.7km s-min=4.0km az=35.0*
ISC 06 02:51:01.9±2.0**, 36.69N**±0.08×**27.34E**±0.09**, h10**^{km}±13^{km}**, n9,** $\sigma 0^{s}$**82**/16**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.38**	**356**	*e*PG	**Pg**	**02 51 09.4**	**+0.1**
BODT				*e*SG	**Sg**	**02 51 15.0**	**+0.7**
BDRM	**Kayabasi**	**0.39**	**12**	*i* P	**Pg**	**02 51 09.1**	**-0.4**
BDRM				*i* S	**Sg**	**02 51 13.9**	**-0.8**
MLSB	**Milas**	**0.70**	**30**	*e*PG	**Pg**	**02 51 15.1**	**-0.3**
YER	**Yerkesik**	**0.88**	**59**	*e*PG	**Pg**	**02 51 18.4**	**-0.4**
YER				*e*SG	**Sg**	**02 51 31.6**	**+1.3**
GCAM	**G?zelcaml?**	**1.02**	**355**	*i* P	**Pg**	**02 51 21.5**	**+0.1**
GCAM				*i* S	**Sg**	**02 51 36.2**	**+1.6**
TURN	**Turunc**	**1.03**	**79**	*i* P	**Pg**	**02 51 15.3**	**-6.4**
TURN				*i* S	**Sg**	**02 51 25.6**	**-10**
DALT	**Dalyan (Mudla)**	**1.05**	**85**	*e*PG	**Pg**	**02 51 21.3**	**-0.7**
DALT				*e*SG	**Sg**	**02 51 36.0**	**+0.4**
AYDN	**Tasoluk**	**1.06**	**24**	*i* P	**Pb**	**02 51 21.5**	**-0.9**
AYDN				*i* S	**Sg**	**02 51 34.8**	**-1.4**
ELL	**Elmali**	**2.06**	**88**	*e*PN	**Pn**	**02 51 37.3**	**+0.7**

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*ISCJB **06** 03:11:03.6±1.2, 20.2S±0.2×179.0W±0.1, h655^{km}±20^{km}, mb3.6/10, Error ellipse: s-maj=32.4km s-min=13.7km az=152.2*
*NEIC **06** 03:11:04.3±0.9, 20.08S×178.90W, h650^{km}±13^{km}, mb3.6/1, Error ellipse: s-maj=22.7km s-min=9.9km az=153.0*
*IDC **06** 03:11:07.9±2.4, 20.25S×179.00W, h699^{km}±34^{km}, mb3.1/8, mb1 3.4/9, mb1mx3.2/17, mbtmp3.1/9, Error ellipse: s-maj=42.8km s-min=12.6km az=161.0*
ISC 06 03:11:04.4±1.2**, 20.1S**±0.2×**179.0W**±0.1**, h646**^{km}±19^{km}**, n17,** $\sigma 0^{s}$**62**/18**, mb3.6**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.21**	**49**	P	**P**	**03 13 16.3**	**-0.4**
	5.9nm,0.3s,baz=288,slow=13,SNR=6.0						
URZ	**Urewera**	**18.44**	**190**	P	**P**	**03 14 41.7**	**-0.2**
	0.8nm,0.3s,baz=39,slow=8.8,SNR=3.8						
CTA	**Charters Tower**	**32.63**	**264**	P	**P**	**03 16 47.3**	**+1.1**
	3.5nm,0.2s,mb4.5,baz=98,slow=8.8,SNR=4.9						
CTAO	**Charters Tower**	**32.63**	**264**	*e*P	**P**	**03 16 46.6**	**+0.5**
	5.2nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**37.16**	**243**	P	**P**	**03 17 23.1**	**-0.2**
	1.7nm,0.4s,mb3.9,baz=121,slow=7.9,SNR=7.7						
ASAR	**Alice Springs**	**43.73**	**256**	P	**P**	**03 18 16.0**	**+0.7**
	1.7nm,0.3s,mb3.8,baz=87,slow=8.6,SNR=24						
ASAR				PcP	PcP	03 19 47.2	0.0
	0.3nm,0.6s,baz=117,slow=4.5,SNR=5.2						
ASAR				S	**S**	**03 23 59.6**	**-1.4**
	1.7nm,0.7s,baz=92,slow=16,SNR=12						
WB2	**Warramunga Arr**	**43.75**	**262**	*e*P	**P**	**03 18 15.5**	**0.0**
WB2				*e*S	**S**	**03 23 56.8**	**-4.5**
WRA	**Warramunga Arr**	**43.76**	**262**	P	**P**	**03 18 15.6**	**0.0**
	1.5nm,0.3s,mb3.9,baz=98,slow=7.0,SNR=120						
WRA				S	**S**	**03 23 57.4**	**-4.1**
	0.8nm,0.9s,baz=94,slow=13,SNR=4.3						
KAKA	**Kakadu**	**47.06**	**271**	*e*P	**P**	**03 18 40.4**	**-0.2**
	6.8nm,0.8s,mb4.0						
FITZ	**Fitzroy Crossi**	**52.19**	**262**	*e*P	**P**	**03 19 18.2**	**+0.3**
	5.0nm,1.5s,mb3.5						
NVAR	**Mina Array Bea**	**81.34**	**44**	P	**P**	**03 22 14.3**	**-1.2**
	0.5nm,0.7s,mb3.0,baz=247,slow=6.6,SNR=3.5						
TXAR	**Lajitas Array**	**87.59**	**58**	P	**P**	**03 22 46.9**	**+0.9**
	0.2nm,0.6s,mb2.9,baz=212,slow=5.4,SNR=4.0						
TXAR	**Lajitas Array**	**87.59**	**58**	P	**P**	**03 22 46.9**	**+0.9**
CMAR	**Chiang Mai Arr**	**89.12**	**290**	P	**P**	**03 22 53.6**	**+0.3**
	1.0nm,0.5s,mb3.8,baz=151,slow=2.7,SNR=5.8						
PDAR	**Pinedale Array**	**89.28**	**44**	P	**P**	**03 22 53.9**	**+0.4**
	0.4nm,0.7s,mb3.2,baz=245,slow=3.1,SNR=3.7						
ARCES	**ARCESS Array B**	**128.34**	**349**	PKP	PKPdf	03 28 57.0	-1.5
	1.6nm,0.7s,baz=350,slow=1.5,SNR=7.2						
CLL	**Collm**	**147.44**	**346**	*i* PKPbc	PKPbc	03 29 36.1	-1.1
	comp=Z,5.0nm,0.7s						

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*NEIC **06** 03:13:13.5, 17.00N×92.44W, h10^{km}, MD4.1(MEX), After MEX.*
MEX 06 03:13:12.6±0.7**, 17.03N**×**92.42W, h4**^{km}±4^{km}**, MD4.1, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCX	**San Cristobal**	**0.36**	**215**	*i* P	Pg	03 13 18.8	-0.7
SCX				*i* S	Sg	03 13 24.7	+0.6
TGIG		**0.72**	**250**	*i* P	Pg	03 13 26.0	-0.4
TGIG				*i* S	Sg	03 13 35.2	-0.5
CCIG	**Comitan**	**0.79**	**160**	*e*P	Pg	03 13 26.5	-1.2
CCIG				*i* S	Sg	03 13 37.6	-0.4
THIG		**2.11**	**176**	*i* P	Pn	03 13 41.8	-7.0
THIG				*i* S	Sn	03 14 11.1	-4.4
CMIG	**Matias Romero**	**2.36**	**272**	*i* P	Pn	03 13 52.1	0.0
CMIG				*i* S	Sn	03 14 16.6	-5.1
CMIG	**Matias Romero**	**2.36**	**272**	*i* P	Pn	03 13 52.1	0.0
CMIG				*i* S	Sn	03 14 18.6	-3.1
TEIG	**Tepich**	**5.05**	**50**	*i* P	Pn	03 14 27.2	-2.1
TEIG				*i* S	Sn	03 15 24.4	-3.8
TEIG	**Tepich**	**5.05**	**50**	*i* P	Pn	03 14 27.2	-2.1
TEIG				*i* S	Sn	03 15 23.8	-4.3

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*NIED **06** 03:34:00, 32.90N×140.70E, h86^{km}, Mw4.3 Best double couple: Mo2.84000×10^{15} NP1:φs252.00000°, δ74.00000°, λ99.00000°. NP2:φs42.00000°, δ18.00000°, λ61.00000°.*
*ISCJB **06** 03:34:43.6±0.9, 32.81N±0.05×140.74E±0.08, h66^{km}±6^{km}, mb4.1/13, Error ellipse: s-maj=10.8km s-min=8.2km az=10.6*
*IDC **06** 03:34:44.1±2.2, 32.72N×140.65E, h54^{km}±14^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.8/23, mbtmp3.9/12, ML4.2/2, MS3.1/2, Ms1 3.2/2, ms1mx2.4/43, Error ellipse: s-maj=33.9km s-min=13.9km az=77.0*
*NEIC **06** 03:34:45.0, 32.90N×140.71E, h63^{km}, mb4.4/3, After JMA.*
NEIC Recorded [2 JMA] on Hachijo-jima.
*JMA **06** 03:34:45.0±0.1, 32.90N×140.71E, h63^{km}±5^{km}, M4.3*
JMA Felt II J1.
ISC 06 03:34:44.5±1.0**, 32.81N**±0.06×**140.78E**±0.08**, h57**^{km}±7^{km}**, n33,** $\sigma 1^{s}$**15**/43**, mb4.1**/13**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.86**	**291**	P	**Pn**	**03 35 00.6**	**0.0**
JHJ2				S	**Sn**	**03 35 11.4**	**-1.0**
JHJ	**Hachijo jima 2**	**0.89**	**291**	P	**Pn**	**03 35 00.7**	**-0.3**
	685nm,0.3s,baz=66,slow=22,SNR=111						
JHJ				S	**Sn**	**03 35 11.3**	**-1.7**
	1μm,0.3s,baz=60,slow=22,SNR=26						
BSO1	**Boso 1**	**1.85**	**5**	P	**Pn**	**03 35 13.3**	**-0.5**
BSO1				S	**Sn**	**03 35 35.6**	**-0.4**
BSO3	**Boso 3**	**2.00**	**354**	P	**Pn**	**03 35 15.7**	**-0.2**
BSO3				*e*S	**Sn**	**03 35 39.4**	**-0.4**
BSO4	**Boso 4**	**2.21**	**351**	P	**Pn**	**03 35 18.9**	**+0.2**
JIM2	**Oshima 3**	**2.21**	**330**	P	**Pn**	**03 35 18.7**	**0.0**
JIM2				*e*S	**Sn**	**03 35 42.7**	**-2.2**
JIZS	**Izushimoda**	**2.48**	**321**	P	**Pn**	**03 35 23.0**	**+0.6**
JIZS				*e*S	**Sn**	**03 35 50.9**	**-0.5**
JOD2	**Odawara 2**	**2.82**	**331**	P	**Pn**	**03 35 27.2**	**+0.1**
JOD2				*e*S	**Sn**	**03 35 57.7**	**-2.2**
TK04	**Tokai 4**	**2.89**	**304**	P	**Pn**	**03 35 29.4**	**+1.4**
TK04				*e*S	**Sn**	**03 36 03.5**	**+2.0**
SHZ3	**Shizuoka 3**	**3.10**	**317**	P	**Pn**	**03 35 32.8**	**+1.9**
SHZ3				S	**Sn**	**03 36 12.4**	**+5.6**
JYN	**Shimob**	**3.26**	**326**	P	**Pn**	**03 35 34.6**	**+1.5**
JRY	**Ryogami san**	**3.56**	**335**	P	**Pn**	**03 35 38.0**	**+0.9**
JRY				*e*S	**Sn**	**03 36 17.0**	**-0.9**
MJAR	**Matsushiro Arr**	**4.28**	**331**	P	**Pn**	**03 35 47.6**	**+0.5**
	14nm,0.3s,baz=159,slow=12,SNR=88						
MJAR				S	**Sn**	**03 36 38.9**	**+3.1**
	5.0nm,0.3s,baz=138,slow=18,SNR=5.8						
MAJO	**Matsushiro**	**4.29**	**331**	*e*Pn	**Pn**	**03 35 47.9**	**+0.8**
MAT	**Matsushiro**	**4.29**	**331**	P	**Pn**	**03 35 48.4**	**+1.3**
MAT				S	**Sn**	**03 36 37.4**	**+1.6**
ASAJ	**Asahikawa**	**11.38**	**7**	P	**Pn**	**03 37 21.2**	**-3.0**
	1.8nm,0.3s,baz=209,slow=11,SNR=18						
KSRS	**Korea Array**	**11.50**	**297**	LR	LR	03 41 57.4	
	comp=Z,86nm,18.8s,baz=360,slow=38						
SONM	**Songino Array**	**29.92**	**310**	P	**P**	**03 40 45.9**	**-0.9**
	1.0nm,0.6s,mb3.7,baz=104,slow=8.2,SNR=4.3						
CMAR	**Chiang Mai Arr**	**40.07**	**260**	LR	LR	03 58 09.3	
	comp=Z,28nm,18.2s,baz=80,slow=35						
ZALV	**Zalesovo Beam**	**44.47**	**316**	P	**P**	**03 42 48.6**	**-1.2**
	0.7nm,0.3s,mb3.8,baz=107,slow=7.9,SNR=4.3						
MKAR	**Makanchi Array**	**46.03**	**306**	P	**P**	**03 43 01.4**	**-0.9**
	3.8nm,0.7s,mb4.4,baz=90,slow=10,SNR=21						
KURK	**Kurchatov**	**48.22**	**311**	P	**P**	**03 43 18.3**	**-0.9**
	2.1nm,0.7s,mb4.3,baz=87,slow=7.7,SNR=11						
WRA	**Warramunga Arr**	**52.81**	**188**	P	**P**	**03 43 53.5**	**-0.6**
	0.9nm,0.3s,mb4.1,baz=5.9,slow=7.6,SNR=24						
AML	**Almayashu**	**52.82**	**301**	*e*P	**P**	**03 43 53.6**	**-0.5**
	4.0nm,0.8s,mb4.4						
BVAR	**Borovoye Array**	**53.09**	**315**	P	**P**	**03 43 55.5**	**-0.4**
	0.7nm,0.5s,mb3.9,baz=76,slow=6.3,SNR=6.5						
ASAR	**Alice Springs**	**56.54**	**188**	P	**P**	**03 44 20.6**	**-0.4**
	0.7nm,0.5s,mb3.9,baz=3.6,slow=6.9,SNR=15						
AKTK	**Aktyubinsk**	**61.16**	**314**	P	**P**	**03 44 53.9**	**+1.0**
AKTO	**Aktyubinsk**	**61.16**	**314**	P	**P**	**03 44 53.9**	**+1.0**
	3.1nm,0.6s,mb4.6,baz=70,slow=11,SNR=8.0						
ARCES	**ARCESS Array B**	**67.77**	**340**	P	**P**	**03 45 35.5**	**-0.3**
	3.4nm,1.0s,mb4.3,baz=52,slow=8.0,SNR=4.9						
AKASG	**Malin Array Be**	**77.32**	**323**	P	**P**	**03 46 34.0**	**+1.1**
	0.3nm,0.3s,mb3.7,baz=47,slow=6.1,SNR=4.1						
DUG	**Dugway**	**80.54**	**48**	*e*P	**P**	**03 46 52.3**	**+1.7**
	0.9nm,0.6s,mb3.9						
PHWY	**Pilot Hill**	**84.33**	**44**	*e*P	**P**	**03 47 10.9**	**+0.5**
	6.0nm,0.7s,mb4.8						
JCT	**Junction City**	**94.87**	**49**	*e*P	**P**	**03 47 57.8**	**-2.8**

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*BJI **06** 03:42:33.7, 19.40N×105.40W, h25^{km}, mB5.4, Ms5.1, Msz4.9*
*SZGRF **06** 03:42:37.5, 18.63N×104.90W, h27^{km}, mb5.1, MS4.7, Near coast of Jalisco, Mexico*
*MOS **06** 03:42:38.6±1.0, 19.54N×105.02W, h33^{km}, mb5.0/30, MS4.7/4, Error ellipse: s-maj=9.2km s-min=4.6km az=92.5*
*GCMT **06** 03:42:38.8±0.3, 19.53N×105.23W, h30^{km}, MW5.2/67, Moment Tensor Solution. s55,c88; s67,c111; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; Mrr5.68±.21; Mθθ-3.99±.15; Mφφ-1.69±.17; Mrθ4.50±.23; Mθφ3.66±.13; Mφr-2.85±.25; Best double couple: Mo8.15900×10^{16} NP1:φs310.00000°, δ25.00000°, λ96.00000°. NP2: φs123.00000°, δ65.00000°, λ87.00000°. Principal axes: T 7.6690, Plg69.0000°, Azm28.0000°; N 0.9810, Plg2.0000°, Azm125.0000°; P -8.6490, Plg20.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **06** 03:42:38.8, 19.39N×105.41W, h26^{km}, mb4.8/94, MD5.0(MEX), After MEX.*
NEIC Felt [III] at Guadalajara and Puerto Vallarta; [II] at Colima. Felt at Bucerias, Chapala, El Grullo, Jalisco, Jocotepec, Manzanillo and Mascota.
*MEX **06** 03:42:38.8±0.8, 19.39N×105.42W, h24^{km}±24^{km}, MD4.8*
*IDC **06** 03:42:40.2±4.1, 19.61N×105.00W, h33^{km}±29^{km}, mb4.3/18, mb1 4.5/22, mb1mx4.4/28, mbtmp4.3/22, ML3.8/5, MS4.5/30, Ms1 4.5/30, ms1mx4.4/38, Error ellipse: s-maj=22.2km s-min=13.9km az=59.0*
*ISCJB **06** 03:42:42.1±0.4, 19.54N±0.03×105.02W±0.03, h70^{km}±3^{km}, mb4.7/92, Error ellipse: s-maj=6.6km s-min=2.9km az=33.8*
ISC 06 03:42:43.1±0.4**, 19.55N**±0.03×**105.02W**±0.03**, h63**^{km}±3^{km}**, h33**^{km}±10.9^{km}**:pP-P, n616,** $\sigma 0^{s}$**73**/596**, mb4.8**/92**, 178C-170D, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R15V		**1.05**	**111**	*i* P	**Pn**	**03 42 59.4**	**-2.5**
R15V				*i* S	**Sn**	**03 43 16.0**	**+0.2**
COLM	**Colima**	**1.30**	**106**	*i* P	**Pn**	**03 43 03.6**	**-1.7**
COLM				*i* S	**Sn**	**03 43 22.6**	**+0.7**
EZ5V		**1.34**	**93**	*e*P	**Pn**	**03 43 05.5**	**-0.2**
EZ5V				*i* S	**Sn**	**03 43 25.3**	**+2.6**
ANIG	**Ahuacatlan**	**1.57**	**17**	*e*P	**Pn**	**03 43 06.5**	**-2.4**
ANIG				*i* S	**Sn**	**03 43 29.4**	**+1.2**
GDLC		**1.91**	**53**	*e*P	**Pn**	**03 43 13.9**	**+0.4**
GDLC				*i* S	**Sn**	**03 43 40.1**	**+3.5**
MMIG	**Aquila**	**2.02**	**128**	*i* P	**Pn**	**03 43 12.6**	**-2.3**
MMIG				*i* S	**Sn**	**03 43 37.4**	**-1.7**
SFJM	**Santa Fe**	**2.08**	**63**	*i* P	**Pn**	**03 43 15.7**	**-0.1**
MOIG	**Morelia**	**3.61**	**87**	*i* P	**Pn**	**03 43 37.0**	**+0.3**
MOIG				*i* S	**Sn**	**03 44 22.5**	**+4.4**
MOIG	**Morelia**	**3.61**	**87**	*i* P	**Pn**	**03 43 37.0**	**+0.3**
MOIG				*i* S	**Sn**	**03 44 25.0**	**+6.9**
MAIG	**Mazatlaan**	**3.85**	**340**	*e*P	**Pn**	**03 43 35.9**	**-4.0**
MAIG				*i* S	**Sn**	**03 44 19.1**	**-4.9**
SZVM	**Salazar**	**5.33**	**91**	*e*P	**Pn**	**03 44 05.7**	**+5.6**
PLIG	**Platanillo**	**5.34**	**101**	*i* P	**Pn**	**03 44 02.1**	**+1.7**
MEIG	**Mezcala**	**5.36**	**107**	*i* P	**Pn**	**03 44 02.5**	**+1.9**
MEIG				*e*S	**Sn**	**03 45 08.1**	**+7.0**
LPIG	**La Paz**	**6.69**	**314**	Pn	**Pn**	**03 44 17.1**	**-1.6**
	2.0nm,0.3s,baz=332,slow=3.5,SNR=3.7						
PNIG	**Pinotepa**	**7.27**	**114**	*i* P	**Pn**	**03 44 27.4**	**+0.6**
TXAR	**Lajitas Array**	**9.82**	**7**	Pn	**Pn**	**03 45 01.5**	**-0.1**
	0.6nm,0.3s,baz=187,slow=15,SNR=54						
TXAR				Lg		03 47 48.7	
	0.8nm,0.3s,baz=190,slow=30,SNR=4.4						
TXAR				LR	LR	03 49 28.3	
	comp=Z,4μm,18.7s,baz=165,slow=42						
CMIG	**Matias Romero**	**9.93**	**103**	Pn	**Pn**	**03 45 01.7**	**-1.5**
	1.6nm,0.3s,baz=280,slow=11,SNR=19						
CMIG				Lg		03 47 45.4	
	1.1nm,0.3s,baz=151,slow=20,SNR=6.0						
CMIG				LR	LR	03 49 42.0	
	comp=Z,2μm,18.2s,baz=278,slow=42						
CMIG	**Matias Romero**	**9.93**	**103**	Pn	**Pn**	**03 45 01.7**	**-1.5**
CMIG				Lg		03 47 45.4	
CMIG				LR	LR	03 49 42.0	
JCT	**Junction City**	**11.87**	**22**	*e*P	**Pn**	**03 45 32.4**	**+2.9**
JCT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JCT	**Junction City**	**11.87**	**22**	*e*Pn	**Pn**	**03 45 32.4**	**+2.8**
	comp=Z,10nm,0.7s						
319A	**Douglas**	**12.39**	**343**	⇓P	**Pn**	**03 45 37.2**	**+0.5**
	baz=13,SNR=12						
219A	**White Tail Can**	**12.97**	**344**	⇓P	**Pn**	**03 45 45.1**	**+0.5**
	baz=14,SNR=12						
218A	**Dragoon**	**13.18**	**341**	⇓P	**Pn**	**03 45 47.7**	**+0.3**
	baz=14,SNR=12						
217A	**Green Valley**	**13.25**	**338**	⇓P	**Pn**	**03 45 48.6**	**+0.2**
	baz=14,SNR=7.8						
HKT	**Hockley**	**13.29**	**37**	*e*P	**Pn**	**03 45 49.9**	**+0.9**
HKT				pmax	pmax		
	comp=Z,362nm,1.8s						
HKT	**Hockley**	**13.29**	**37**	*e*Pn	**Pn**	**03 45 49.9**	**+0.9**
	comp=Z,362nm,1.8s						
216A	**Three Points,**	**13.69**	**336**	⇓P	**Pn**	**03 45 54.4**	**+0.2**
	baz=14,SNR=7.1						
119A	**Ashpeak Ranch,**	**13.71**	**345**	⇑P	**Pn**	**03 45 54.3**	**-0.3**
	baz=14,SNR=7.0						
118A	**Homack Ranch,**	**13.77**	**342**	⇓P	**Pn**	**03 45 55.3**	**-0.1**
	baz=14						
117A	**Oracle**	**13.95**	**340**	⇑P	**Pn**	**03 45 57.5**	**-0.2**
	baz=14,SNR=7.1						
214A	**Organ Pipe Nat**	**14.21**	**332**	⇑P	**Pn**	**03 46 00.6**	**-0.4**
	baz=15,SNR=18						
Z19A	**T-Link Ranch,**	**14.21**	**345**	⇓P	**Pn**	**03 46 01.5**	**+0.5**
	baz=15						
Z18A	**Geronimo**	**14.21**	**343**	⇓P	**Pn**	**03 46 01.1**	**0.0**
	baz=15						
116A	**Eloy**	**14.28**	**337**	⇓P	**Pn**	**03 46 01.4**	**-0.6**
	baz=15,SNR=11						
Z17A	**San Carlos Hig**	**14.54**	**342**	⇓P	**Pn**	**03 46 05.8**	**+0.4**
	baz=15,SNR=9.2						
Y22C	**IRIS PASSCAL I**	**14.57**	**354**	⇑P	**Pn**	**03 46 06.1**	**+0.3**
	baz=15						
115A	**Sonoran Desert**	**14.61**	**335**	⇑P	**Pn**	**03 46 06.2**	**-0.1**
	baz=15,SNR=10						
BNM	**Barren Site**	**14.62**	**355**	*e*Pn	**Pn**	**03 46 07.3**	**+0.9**
LENM	**Lemitar**	**14.67**	**354**	*e*Pn	**Pn**	**03 46 08.3**	**+1.3**
Y19A	**Nutrioso**	**14.84**	**346**	⇑P	**Pn**	**03 46 09.8**	**+0.5**
	baz=15,SNR=16						
Y18A	**Canyon Day Jun**	**14.86**	**344**	⇓P	**Pn**	**03 46 09.2**	**-0.4**
	baz=16,SNR=14						
Z16A	**Peralta Trail,**	**14.88**	**339**	⇓P	**Pn**	**03 46 09.7**	**-0.2**
	baz=16						
LAZ	**Ladron**	**14.92**	**353**	*e*Pn	**Pn**	**03 46 11.6**	**+1.2**
Y17A	**Roosevelt**	**15.02**	**341**	⇓P	**Pn**	**03 46 11.6**	**0.0**
	baz=16,SNR=17						
Z15A	**Gila River Ind**	**15.10**	**336**	⇓P	**Pn**	**03 46 12.5**	**-0.2**
	baz=16						
X19A	**St. Johns**	**15.30**	**347**	⇑P	**Pn**	**03 46 15.2**	**-0.1**
	baz=16,SNR=25						
113A	**Mohawk Valley,**	**15.32**	**331**	⇑P	**Pn**	**03 46 15.6**	**+0.1**
	baz=16,SNR=6.9						
NATX	**Nacogdoches**	**15.32**	**35**	*e*Pn	**Pn**	**03 46 17.5**	**+2.0**
	comp=Z,178nm,1.0s						
Y16A	**Circle Bar Ran**	**15.39**	**339**	⇑P	**Pn**	**03 46 16.5**	**+0.1**
	baz=16,SNR=23						
ANMO	**Albuquerque**	**15.40**	**356**	Pn	**Pn**	**03 46 14.9**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=167,slow=14,SNR=5.6						
ANMO				Lg		03 50 48.7	
	comp=Z,0.0nm,0.3s,baz=62,slow=23,SNR=6.1						
ANMO				LR	LR	03 52 31.4	
	comp=Z,3μm,20.7s,baz=23,slow=39						
ANMO	**Albuquerque**	**15.40**	**356**	⇑*e*P	**Pn**	**03 46 17.1**	**+0.6**
ANMO	**Albuquerque**	**15.40**	**356**	*e*Pn	**Pn**	**03 46 17.7**	**+1.2**
	comp=Z,85nm,1.9s						
Z14A	**Wintersburg**	**15.47**	**334**	⇑P	**Pn**	**03 46 17.5**	**0.0**
	baz=16						
112A	**Yuma**	**15.52**	**328**	⇑P	**Pn**	**03 46 17.7**	**-0.4**
	baz=16						
X18A	**Snowflake**	**15.55**	**345**	⇓P	**Pn**	**03 46 18.8**	**+0.3**
	baz=16,SNR=15						
AMTX	**Amarillo**	**15.56**	**10**	*e*P	**Pn**	**03 46 19.0**	**+0.4**
	comp=Z,100nm,1.3s						
X17A	**Forest Lakes**	**15.60**	**342**	⇓P	**Pn**	**03 46 19.6**	**+0.5**
	baz=16,SNR=20						
Y15A	**Casa Rosa Ranc**	**15.76**	**337**	⇓P	**Pn**	**03 46 20.9**	**-0.2**
	baz=16,SNR=40						
TEIG	**Tepich**	**15.76**	**85**	LR	LR	03 53 37.3	
	comp=Z,2μm,18.2s,baz=80,slow=42						
TEIG	**Tepich**	**15.76**	**85**	*e*Pn	**Pn**	**03 46 17.8**	**-3.5**
X16A	**Lo Mia Camp, P**	**15.87**	**340**	⇑P	**Pn**	**03 46 22.9**	**+0.3**
	baz=16,SNR=36						
W19A	**Sanders**	**15.98**	**347**	⇓P	**Pn**	**03 46 24.5**	**+0.6**
	baz=17						
Y14A	**Wickenburg**	**16.00**	**335**	⇓P	**Pn**	**03 46 24.3**	**+0.1**
	baz=17,SNR=29						
GLA	**Glamis**	**16.06**	**329**	*e*P	**Pn**	**03 46 25.0**	**+0.1**
GLA				pmax	pmax		
	comp=Z,123nm,1.4s						
GLA	**Glamis**	**16.06**	**329**	⇓P	**Pn**	**03 46 24.8**	**-0.1**
	baz=17,SNR=15						
GLA	**Glamis**	**16.06**	**329**	*e*P	**Pn**	**03 46 25.0**	**+0.1**
	comp=Z,123nm,1.4s						
W18A	**Petrified Fore**	**16.06**	**346**	⇓P	**Pn**	**03 46 25.2**	**+0.2**
	baz=17						
WMOK	**Wichita Mounta**	**16.11**	**19**	*e*P	**Pn**	**03 46 24.2**	**-1.4**
WMOK				pmax	pmax		
	comp=Z,205nm,1.9s						
WMOK	**Wichita Mounta**	**16.11**	**19**	*e*P	**Pn**	**03 46 24.2**	**-1.4**
	comp=Z,205nm,1.9s						
X15A	**Humboldt**	**16.20**	**338**	⇓P	**Pn**	**03 46 26.6**	**-0.1**
	baz=17,SNR=26						
Y13A	**Salome**	**16.23**	**333**	⇓P	**Pn**	**03 46 27.0**	**-0.2**
	baz=17,SNR=5.2						
W17A	**Winslow**	**16.27**	**343**	⇓P	**Pn**	**03 46 27.8**	**+0.2**
	baz=17,SNR=9.4						
DVTC	**Desert V Tower**	**16.40**	**325**	⇓P	**Pn**	**03 46 28.6**	**-0.6**
	baz=17						
X14A	**Yava**	**16.43**	**336**	⇑P	**Pn**	**03 46 30.2**	**+0.7**

baz=17,SNR=43
SWSC **Sam W. Stewart** 16.46 326 ⇑P Pn 03 46 29.8 -0.2
baz=17,SNR=8.1
Y12C **Blythe** 16.49 331 ⇑P Pn 03 46 30.4 +0.1
baz=17,SNR=13
V19A **Window Rock** 16.50 348 ⇓P Pn 03 46 31.0 +0.6
baz=17
W16A **Flagstaff** 16.53 341 ⇓P Pn 03 46 31.2 +0.4
baz=17,SNR=11
V18A **Ganado** 16.68 346 ⇑P Pn 03 46 33.1 +0.5
baz=17,SNR=6.4
MONP **Monument Peak** 16.75 325 ⇓P Pn 03 46 33.1 -0.6
baz=17
PDMCI **Parker Dam,Lak** 16.78 333 ⇑P Pn 03 46 34.3 +0.4
baz=17
W15A **Williams** 16.84 339 ⇑P Pn 03 46 35.4 +0.7
baz=17,SNR=6.7
BC3 **Big Chuckw Mtn** 16.85 329 ⇑P Pn 03 46 34.7 -0.1
baz=17,SNR=16
WUAZ **Wupatki** 16.87 342 ⇑P Pn 03 46 35.9 +0.8
baz=18,SNR=26
WUAZ **Wupatki** 16.87 342 eP Pn 03 46 36.4 +1.3
comp=Z,62nm,1.1s
X13A **Yucca** 16.90 334 ⇓P Pn 03 46 35.6 +0.1
baz=18
IRM **Iron Mountain** 17.12 330 ⇓P Pn 03 46 38.2 +0.1
baz=18,SNR=14
109C **Camp Elliot, M** 17.13 323 ⇑P Pn 03 46 37.6 -0.7
baz=18
W14A **Seligman** 17.16 337 ⇑P Pn 03 46 39.2 +0.6
baz=18,SNR=23
PFO **Pinyon Flat Ob** 17.32 326 P Pn 03 46 40.0 -0.6
comp=Z,0.2nm,0.3s,baz=137,slow=12,SNR=9.8
PFO LR LR 03 52 32.3
comp=Z,975nm,19.5s,baz=151,slow=34
PFO **Pinyon Flat Ob** 17.32 326 eP Pn 03 46 40.9 +0.2
PFO pmax pmax
comp=Z,45nm,1.2s
PFO **Pinyon Flat Ob** 17.32 326 ⇓P Pn 03 46 41.2 +0.5
baz=18,SNR=12
PFO **Pinyon Flat Ob** 17.32 326 eP Pn 03 46 40.9 +0.2
comp=Z,45nm,1.2s
U18A **Rough Rock, Ch** 17.34 347 ⇓P Pn 03 46 41.5 +0.6
baz=18
W13A **Hualapai Mount** 17.37 335 ⇓P Pn 03 46 41.3 +0.2
baz=18,SNR=19
NEE2 **Needles Airpor** 17.39 333 ⇑P Pn 03 46 41.0 -0.4
baz=18
U16A **Tuba City** 17.39 343 ⇑P Pn 03 46 42.0 +0.6
baz=18,SNR=13
V15A **Kaibab Nationa** 17.39 340 ⇑P Pn 03 46 42.2 +0.7
baz=18,SNR=37
BELC **Belle Mtn.** 17.40 328 ⇑P Pn 03 46 41.8 +0.2
baz=18,SNR=17
V14A **Boquillas Ranc** 17.54 338 ⇓P Pn 03 46 43.9 +0.6
baz=18,SNR=17
T19A **Beclabito** 17.57 349 ⇑P Pn 03 46 44.1 +0.4
baz=18
U17A **Shonto** 17.70 345 ⇓P Pn 03 46 45.9 +0.7
baz=18
MURC **Murrieta** 17.71 325 ⇓P Pn 03 46 45.2 -0.3
baz=18
MVCO **Mesa Verde** 17.86 351 ⇓P Pn 03 46 47.6 +0.4
baz=18
MVCO **Mesa Verde** 17.86 351 eP Pn 03 46 47.7 +0.5
comp=Z,92nm,1.4s
LDFC **Landfair** 17.86 332 eP Pn 03 46 49.0 +1.7
comp=Z,120nm,1.3s
GMRC **Granite Mounta** 17.87 330 ⇓P Pn 03 46 47.4 +0.1
baz=18,SNR=29
W12A **Cal Nev Ari** 17.95 333 ⇑P Pn 03 46 48.7 +0.5
baz=18
U15A **North Rim** 17.99 341 ⇑P Pn 03 46 49.2 +0.4
baz=19,SNR=10
T18A **Mexican Hat** 18.03 347 ⇓P Pn 03 46 49.8 +0.5
baz=19,SNR=9.5
SCI **San Clemente I** 18.04 321 ⇑P Pn 03 46 49.3 -0.1
baz=18
V13A **Grand Canyon W** 18.06 336 ⇓P Pn 03 46 50.2 +0.5
baz=19,SNR=54
MIAR **Mount Ida** 18.07 32 eP Pn 03 46 49.0 -0.7
MIAR pmax pmax
comp=Z,38nm,1.1s
MIAR **Mount Ida** 18.07 32 eP Pn 03 46 49.0 -0.7
comp=Z,38nm,1.1s
BBRC **Big Bear Sol-O** 18.07 327 ⇓P Pn 03 46 50.5 +0.7
baz=19
T17A **Navajo Res., N** 18.11 345 ⇑P Pn 03 46 50.6 +0.3
baz=19
VBMS **Vicksburg** 18.13 43 eP Pn 03 46 50.8 +0.3
comp=Z,82nm,1.0s
SDCO **Great Sand Dun** 18.14 359 eP Pn 03 46 51.0 +0.4
comp=Z,34nm,1.3s
HEC **Hector,Ludlow** 18.23 329 ⇓P Pn 03 46 51.8 +0.2
baz=19,SNR=26
CIS **Catalina Islan** 18.25 322 ⇓P Pn 03 46 51.6 -0.3
baz=19
U14A **Mt Trumbull** 18.27 339 ⇑P Pn 03 46 52.5 +0.3
baz=19
T16A **Glen Canyon Da** 18.28 343 ⇑P Pn 03 46 52.5 +0.2
baz=19
V12A **Nelson** 18.30 334 ⇓P Pn 03 46 52.4 -0.1
baz=19,SNR=9.6
FMP **Fort Macarthur** 18.41 323 ⇑P Pn 03 46 53.5 -0.4
baz=19
BFSC **Mount Baldy St** 18.45 325 ⇑P Pn 03 46 53.7 -0.6
baz=19,SNR=14
S19A **Harvey Farm, M** 18.49 350 ⇓P Pn 03 46 54.7 -0.1
baz=19
TUQ **Turquoise Moun** 18.53 331 ⇓P Pn 03 46 55.1 -0.2
baz=19,SNR=34
U13A **Pakoon Wash** 18.55 337 ⇓P Pn 03 46 55.5 -0.1
baz=19,SNR=31
T15A **Red Dirt Ranch** 18.56 341 ⇓P Pn 03 46 55.6 -0.1
baz=19,SNR=15
S18A **Hurst Farm, Bl** 18.59 348 ⇑P Pn 03 46 56.4 +0.3
baz=19,SNR=7.4
RRX **Edison Barstow** 18.60 328 ⇑P Pn 03 46 55.3 -0.8
baz=19
V11A **Goodsprings** 18.64 333 ⇑P Pn 03 46 56.4 -0.3
baz=19,SNR=14
MWC **Mount Wilson** 18.65 324 eP Pn 03 46 56.4 -0.4
MWC pmax pmax
comp=Z,48nm,1.2s
MWC **Mount Wilson** 18.65 324 eP Pn 03 46 56.4 -0.5
comp=Z,48nm,1.2s
S17A **Black Ridge (B** 18.72 346 ⇑P Pn 03 46 57.5 -0.1
baz=19,SNR=10.0
PV01 **Paradox Valley** 18.78 351 eP Pn 03 46 58.3 0.0
U12A **Valley of Fire** 18.79 336 ⇓P Pn 03 46 58.0 -0.4
baz=19
DECC **Green Verdugo** 18.82 324 ⇓P Pn 03 46 58.4 -0.5
baz=19
T14A **Hurricane** 18.82 340 ⇑P Pn 03 46 58.2 -0.6
baz=19,SNR=7.9
GSC **Goldstone** 18.84 329 eP Pn 03 46 57.7 -1.3
GSC pmax pmax
comp=Z,28nm,1.0s
GSC **Goldstone** 18.84 329 ⇑P Pn 03 46 58.1 -0.9
baz=19,SNR=22
GSC **Goldstone** 18.84 329 eP Pn 03 46 57.7 -1.3
comp=Z,28nm,1.0s
UALR **University of** 18.87 34 eP Pn 03 46 58.5 -1.0
comp=Z,47nm,1.0s
S16A **Weppner Ranch,** 19.00 344 ⇓P Pn 03 47 00.1 -0.8
baz=20,SNR=12
R19A **Curley Farm, L** 19.04 350 ⇑P Pn 03 47 00.6 -0.8
baz=20
T13A **Saint George** 19.07 338 ⇓P Pn 03 47 01.7 -0.1
baz=20,SNR=16
SHOC **Shoshone** 19.07 331 ⇑P Pn 03 47 00.9 -0.9
baz=20
PV10 **Paradox Valley** 19.09 350 eP Pn 03 46 59.5 -2.4
EDW2 **Edwards Air Fo** 19.11 326 ⇑P Pn 03 47 01.2 -1.0
baz=20,SNR=9.5
T12A **Moapa** 19.11 336 ⇑P Pn 03 47 01.4 -0.8
baz=20
U11A **Corn Creek** 19.12 334 ⇓P Pn 03 47 01.8 -0.5
baz=20
S15A **Panguitch** 19.17 342 ⇓P Pn 03 47 02.4 -0.5
baz=20
R18A **Canyonlands Na** 19.25 348 ⇑P Pn 03 47 02.7 -1.1
baz=20,SNR=13
R17A **Hanksville Air** 19.45 346 ⇓P Pn 03 47 04.9 -1.3
baz=20
S14A **Cedar City** 19.49 340 ⇓P Pn 03 47 06.0 -0.7
baz=20
R16A **Teasdale** 19.50 345 ⇓P Pn 03 47 05.8 -1.0
baz=20,SNR=9.9
U10A **Ash Meadows, A** 19.53 332 ⇑P Pn 03 47 06.2 -0.9
baz=20,SNR=14
S13A **Holt Ranch, En** 19.56 339 ⇓P Pn 03 47 06.7 -0.8
baz=20,SNR=7.7
R15A **Junction** 19.64 343 ⇑P Pn 03 47 07.6 -1.0
baz=20
Q19A **Hogan Spring (** 19.69 350 ⇓P Pn 03 47 07.5 -1.6
baz=20
CBKS **Cedar Bluff** 19.74 12 eP Pn 03 47 07.8 -1.9
CBKS pmax pmax
comp=Z,525nm,1.8s
CBKS **Cedar Bluff** 19.74 12 eP Pn 03 47 07.8 -1.9
comp=Z,526nm,1.8s
ARVC **Arvin** 19.75 325 ⇓P Pn 03 47 07.5 -2.3
baz=20
T11A **Corn Creek, Al** 19.76 335 ⇓P Pn 03 47 08.7 -1.2
baz=20,SNR=18
MPMC **Manual Prospec** 19.78 329 ⇑P Pn 03 47 08.5 -1.7
baz=20,SNR=31
FURC **Furnace Creek,** 19.81 331 ⇓P Pn 03 47 08.1 -2.4
baz=20
BRAL **Brewton** 19.82 51 eP Pn 03 47 10.1 -0.6
comp=Z,209nm,1.4s
MSU **Marysvale** 19.89 343 eP Pn 03 47 10.4 -1.1
TPNV **Topopah Spring** 19.93 333 eP Pn 03 47 11.0 -1.0
TPNV pmax pmax
comp=Z,56nm,1.0s
TPNV **Topopah Spring** 19.93 333 ⇓P Pn 03 47 10.9 -1.1
baz=20
TPNV **Topopah Spring** 19.93 333 eP Pn 03 47 11.0 -1.0
comp=Z,56nm,1.0s
S12A **Delamar Landin** 19.94 337 ⇓P Pn 03 47 11.1 -0.9
baz=20,SNR=29
R14A **James Farms, M** 19.94 341 ⇓P Pn 03 47 10.4 -1.6
baz=20
ISA **Isabella** 19.96 326 eP Pn 03 47 11.2 -1.1
ISA pmax pmax
comp=Z,34nm,1.0s
ISA **Isabella** 19.96 326 ⇑P Pn 03 47 10.3 -2.1
baz=20,SNR=18
ISA **Isabella** 19.96 326 eP Pn 03 47 11.2 -1.1
comp=Z,34nm,1.0s
Q18A **Rafter H Ranch** 19.98 348 ⇑P Pn 03 47 10.4 -2.1
baz=21
Q16A **Castle Valley** 20.03 346 ⇑P P 03 47 11.1 +0.3
baz=21,SNR=16
SRU **San Rafael** 20.07 347 eP P 03 47 11.8 +0.5
SRU pmax pmax
comp=Z,66nm,1.7s
SRU **San Rafael** 20.07 347 ⇑P P 03 47 11.1 -0.2
baz=21
SRU **San Rafael** 20.07 347 eP P 03 47 11.8 +0.5
comp=Z,66nm,1.7s
R13A **O'Grain Ranch,** 20.13 339 ⇑P P 03 47 13.4 +1.4
baz=21,SNR=51
PKM **Peak Mountain** 20.14 322 ⇑P P 03 47 10.4 -1.6
baz=21,SNR=5.1
ISCO **Idaho Springs** 20.19 359 eP P 03 47 13.5 +0.9
ISCO pmax pmax
comp=Z,27nm,1.3s
ISCO **Idaho Springs** 20.19 359 eP P 03 47 13.5 +0.9
comp=Z,27nm,1.3s
P19A **Cripple Cowboy** 20.31 351 ⇓P P 03 47 13.9 0.0
baz=21
S11A **Rachel** 20.32 335 ⇓P P 03 47 14.8 +0.9
baz=21
OXF **Oxford** 20.34 40 eP P 03 47 13.6 -0.7
OXF pmax pmax
comp=Z,45nm,1.0s
OXF **Oxford** 20.34 40 eP P 03 47 13.6 -0.6
comp=Z,45nm,1.0s
CWC **Cottonwood Cre** 20.37 328 ⇓P P 03 47 14.9 +0.4
baz=21,SNR=12
HBAR **Harrisburg** 20.37 36 eP P 03 47 15.1 +0.6
TMUT **Trail Mountain** 20.40 346 eP P 03 47 15.5 +0.7
Q15A **Fillmore** 20.41 343 ⇑P P 03 47 15.1 +0.2
baz=21
VES **Vestal, Richgr** 20.42 326 ⇓P P 03 47 15.7 +0.7
baz=21
P17A **Butcher Ranch,** 20.46 347 ⇑P P 03 47 15.9 +0.4
baz=21,SNR=15
GRAC **Grapevine Rang** 20.48 331 ⇓P P 03 47 16.3 +0.6
baz=21,SNR=24
R12A **Pony Springs,** 20.49 338 ⇑P P 03 47 16.9 +1.1
baz=21,SNR=60
P18A **Preston Nutter** 20.52 348 ⇓P P 03 47 16.6 +0.6
baz=21,SNR=12
SMMC **Simmler** 20.54 323 ⇑P P 03 47 16.6 +0.3
baz=21
Q14A **Sevier Lake (B** 20.65 341 ⇑P P 03 47 18.2 +0.7
baz=21,SNR=55
P16A **Fountain Green** 20.80 345 ⇑P P 03 47 19.7 +0.6
baz=21
KSU1 **Kansas State U** 20.80 19 eP P 03 47 19.0 -0.1
comp=Z,89nm,0.9s
Q13A **Wheeler Ranch,** 20.85 340 ⇑P P 03 47 20.5 +0.7
baz=21,SNR=20
RCTC **Rector, Farmer** 20.86 326 ⇑P P 03 47 20.3 +0.5
baz=21
R11A **Troy Canyon, C** 20.86 336 ⇓P P 03 47 20.2 +0.3
baz=21,SNR=48
V05C **Boulder Hill,** 20.89 324 ⇓P P 03 47 20.5 +0.4
baz=21
S10A **Tonopah Range,** 20.90 334 ⇓P P 03 47 21.3 +1.0
baz=21,SNR=54
P15A **Leamington** 20.92 344 ⇓P P 03 47 20.9 +0.5
baz=22,SNR=6.7
TIN **Tinemaha** 20.93 329 ⇑P P 03 47 21.1 +0.6
baz=21
O19A **Miners Draw (B** 20.98 351 ⇑P P 03 47 21.2 +0.1
baz=22,SNR=9.0
S09A **Goldfield** 21.01 332 ⇑P P 03 47 22.1 +0.7
baz=22,SNR=25
GNAR **Gosnell** 21.02 36 eP P 03 47 22.9 +1.4
comp=Z,961nm,0.9s
HELL **Mitchell Peak** 21.03 327 ⇑P P 03 47 22.7 +1.1
baz=22,SNR=80
O18A **Roosevelt** 21.09 349 ⇑P P 03 47 22.5 +0.3
baz=22,SNR=7.8
R10A **Warm Springs** 21.09 335 ⇑P P 03 47 23.5 +1.2
baz=22,SNR=34
P14A **Drum Mountains** 21.15 343 ⇑P P 03 47 23.6 +0.7
baz=22,SNR=26
O17A **Robinson Place** 21.16 348 ⇓P P 03 47 23.3 +0.3
baz=22,SNR=31
MPU **Maple Canyon** 21.18 346 eP P 03 47 24.0 +0.8
comp=Z,44nm,1.2s,mb4.7
Q12A **Willow Creek R** 21.20 338 ⇑P P 03 47 23.9 +0.5
baz=22,SNR=15
NLU **North Lily Min** 21.23 345 eP P 03 47 24.4 +0.7
S08C **White Mtn Res** 21.25 330 ⇓P P 03 47 25.0 +1.0
baz=22,SNR=52
PKD **Parkfield** 21.30 323 ⇓P P 03 47 24.4 -0.1
baz=22
P13A **Bates Ranch, G** 21.31 341 ⇑P P 03 47 25.0 +0.4
baz=22
Q11A **Duckwater** 21.32 337 ⇑P P 03 47 25.6 +0.8
baz=22,SNR=44
MTUM **Tungsten Hills** 21.33 329 eP P 03 47 25.5 +0.7
O16A **Springville** 21.33 346 ⇓P P 03 47 25.4 +0.6
baz=22
U05C **Westside ANR,** 21.35 325 ⇑P P 03 47 25.3 +0.3
baz=22
R09A **Tonopah** 21.37 333 ⇓P P 03 47 25.5 +0.2
baz=22,SNR=18
PLAL **Pickwick Lake** 21.47 41 eP P 03 47 26.3 -0.2
comp=Z,13nm,0.8s,mb4.3
DAU **Daniels Canyon** 21.48 347 eP P 03 47 26.8 +0.4
N19A **John Jarvie Ra** 21.57 351 ⇑P P 03 47 27.2 -0.2
baz=22,SNR=13
Q10A **Clear Creek Ra** 21.59 335 ⇑P P 03 47 28.2 +0.5
baz=22,SNR=7.7
P12A **McGill** 21.61 339 ⇓P P 03 47 28.2 +0.3
baz=22,SNR=8.0
T06C **Millerton Lake** 21.63 327 ⇑P P 03 47 27.3 -0.8
baz=22,SNR=19
O15A **The Old Anders** 21.63 344 ⇓P P 03 47 28.1 +0.1
baz=22,SNR=7.2
DUG **Dugway** 21.64 344 eP P 03 47 28.3 +0.1
DUG pmax pmax
comp=Z,28nm,1.2s,mb4.6
DUG **Dugway** 21.64 344 ⇓P P 03 47 28.7 +0.6
baz=22,SNR=14
DUG **Dugway** 21.64 344 eP P 03 47 28.3 +0.2
comp=Z,28nm,1.2s,mb4.6
GLAT **Glass** 21.65 36 eP P 03 47 29.1 +0.8
MLAC **Mammoth Lakes** 21.68 329 ⇑P P 03 47 29.4 +0.8
baz=22,SNR=6.1
PARMO **Parma** 21.68 35 eP P 03 47 30.0 +1.4
JLU **Jordanelle** 21.70 347 eP P 03 47 29.2 +0.4
N18A **Larsen Ranch,** 21.73 350 ⇑P P 03 47 29.2 +0.2
baz=22,SNR=19
U04C **Hernandez Rese** 21.73 324 ⇑P P 03 47 29.3 +0.1
baz=22,SNR=7.1
V03C **Hunter Liggett** 21.75 322 ⇓P P 03 47 29.6 +0.2
baz=22
CTU **Camp Tracy** 21.85 346 eP P 03 47 30.7 +0.3
comp=Z,57nm,1.2s,mb4.9
N17A **Moffit Pass** 21.90 348 ⇓P P 03 47 30.6 -0.3
baz=22,SNR=5.9
NOQ **North Oquirrh** 21.90 345 eP P 03 47 31.6 +0.7
comp=Z,84nm,1.4s,mb5.0
O13A **Hicks Ranch, I** 21.91 341 ⇑P P 03 47 31.4 +0.3
baz=22,SNR=7.8
R08A **Mina** 21.91 332 ⇓P P 03 47 31.7 +0.6
baz=22
Q09A **Carvers** 21.92 334 ⇑P P 03 47 31.5 +0.4
baz=22,SNR=5.5
N16A **Rees Ranch, Co** 21.97 347 ⇓P P 03 47 31.7 0.0
baz=23
P11A **Circle Ranch,** 21.98 337 ⇑P P 03 47 32.4 +0.6
baz=23
NVAR **Mina Array Bea** 22.07 331 P P 03 47 34.0 +1.3
comp=Z,31nm,1.0s,mb4.7,baz=153,slow=8.1
NVAR PcP PcP 03 51 30.5 +2.1
comp=Z,3.8nm,1.3s,baz=197,slow=4.0,SNR=4.0
R07C **Lee Vining** 22.14 330 ⇑P P 03 47 34.4 +0.8
baz=23
RWWY **Rawlins** 22.15 356 eP P 03 47 34.8 +1.2
comp=Z,13nm,1.1s,mb4.3
S05C **Merced** 22.21 326 ⇑P P 03 47 33.5 -0.8
baz=23
N15A **Stansbury Isla** 22.22 345 ⇓P P 03 47 34.2 -0.1
baz=23,SNR=5.4
Q08A **Gabbs** 22.26 333 ⇑P P 03 47 34.8 +0.1
baz=23,SNR=52
O12A **Currie** 22.28 340 ⇓P P 03 47 35.0 +0.1
baz=23
P10A **Eureka** 22.31 336 ⇓P P 03 47 35.4 +0.2
baz=23,SNR=14
FVM **French Village** 22.33 32 eP P 03 47 34.4 -1.2
FVM pmax pmax
comp=Z,12nm,0.4s,mb4.7
FVM **French Village** 22.33 32 eP P 03 47 34.4 -1.2
comp=Z,12nm,0.4s,mb4.7
N14A **Grayback Hills** 22.36 344 ⇑P P 03 47 36.0 +0.2
baz=23,SNR=7.3
S06C **San Francisco** 22.37 328 ⇑P P 03 47 35.2 -0.8
baz=23,SNR=8.4
BGU **Big Grassy Mou** 22.38 344 eP P 03 47 36.1 +0.1
M16A **Huntsville** 22.42 347 ⇑P P 03 47 36.0 -0.4
baz=23,SNR=9.8
O11A **Cowboy Ranch,** 22.46 338 ⇑P P 03 47 37.0 +0.2
baz=23
PACP **Pacheco Peak** 22.48 324 ⇓P P 03 47 36.1 -1.0
baz=23
P09A **Austin** 22.51 335 ⇑P P 03 47 37.4 0.0
baz=23,SNR=5.9
N13A **Wendover, West** 22.65 342 ⇓P P 03 47 38.9 0.0
baz=23
R06C **Coleville** 22.68 330 ⇑P P 03 47 38.9 -0.3
baz=23,SNR=23
Q07A **Schurz** 22.71 331 ⇑P P 03 47 39.4 -0.1
baz=23
M15A **Larsen Ranch,** 22.75 345 ⇓P P 03 47 39.7 -0.1
baz=23
SIUC **Southern Illin** 22.75 34 eP P 03 47 40.0 +0.1
comp=Z,54nm,1.0s,mb4.9
CMB **Columbia Colle** 22.76 327 eP P 03 47 39.7 -0.4
CMB pmax pmax
comp=Z,18nm,1.0s,mb4.5
CMB **Columbia Colle** 22.76 327 ⇑P P 03 47 39.4 -0.6
baz=23,SNR=15
CMB **Columbia Colle** 22.76 327 eP P 03 47 39.7 -0.4
comp=Z,18nm,1.0s,mb4.5
ELK **Elko** 22.87 340 P P 03 47 41.3 +0.1
comp=Z,6.1nm,0.9s,mb4.0,baz=149,slow=7.0,SNR=23
ELK LR LR 03 56 24.0
comp=Z,895nm,20.2s,baz=159,slow=36
ELK **Elko** 22.87 340 eP P 03 47 41.3 +0.1
ELK pmax pmax
comp=Z,78nm,1.8s
ELK **Elko** 22.87 340 eP P 03 47 41.3 +0.2
comp=Z,78nm,1.8s,mb4.8
N12A **Clover Valley,** 22.90 340 ⇑P P 03 47 41.3 -0.2
baz=24,SNR=8.6
O10A **Cortez Mining,** 22.91 337 ⇓P P 03 47 41.4 -0.2
baz=24,SNR=5.4
SLM **Saint Louis** 22.94 31 eP P 03 47 41.4 -0.5
SLM pmax pmax
comp=Z,152nm,0.9s,mb5.4
SLM **Saint Louis** 22.94 31 eP P 03 47 41.4 -0.5
comp=Z,152nm,0.9s,mb5.4
SWET **Sewanee** 22.98 43 eP P 03 47 41.7 -0.7
M14A **Sheep Mountain** 23.01 344 ⇑P P 03 47 42.5 -0.2
baz=24,SNR=26
P08A **Dixie Valley** 23.02 334 ⇓P P 03 47 42.7 -0.1
baz=24
L16A **Fish Haven** 23.05 348 ⇑P P 03 47 42.7 -0.4
baz=24,SNR=11
O09A **Fish Creek Ran** 23.06 336 ⇓P P 03 47 43.5 +0.3
baz=24,SNR=20
N11A **Elko Archery C** 23.10 339 ⇑P P 03 47 43.4 -0.2
baz=24
M13A **Montello** 23.10 342 ⇑P P 03 47 43.1 -0.5
baz=24,SNR=7.1
R05C **Kirkwood Meado** 23.12 329 ⇑P P 03 47 43.6 -0.3
baz=24,SNR=12
HVU **Hansel Valley** 23.12 345 eP P 03 47 44.3 +0.5
HVU pmax pmax
comp=Z,45nm,1.3s,mb4.7
HVU **Hansel Valley** 23.12 345 eP P 03 47 44.3 +0.5
comp=Z,44nm,1.3s,mb4.7
WENL **Wente Vineyard** 23.18 324 ⇑P P 03 47 44.5 +0.1
baz=24
R04C **Big Horse Ranc** 23.21 327 ⇑P P 03 47 45.2 +0.5
baz=24,SNR=8.8
P07A **Fallon** 23.24 332 ⇑P P 03 47 45.3 +0.4
baz=24
L15A **Malad City** 23.25 346 ⇑P P 03 47 44.6 -0.4
baz=24,SNR=16
N10A **Dunphy** 23.28 337 ⇑P P 03 47 45.2 -0.1
baz=24
JRSC **Jasper Ridge** 23.29 323 ⇑P P 03 47 45.0 -0.4
baz=24
BMN **Battle Mountai** 23.30 336 eP P 03 47 45.5 0.0
BMN pmax pmax
comp=Z,212nm,1.9s,mb5.2
BMN **Battle Mountai** 23.30 336 eP P 03 47 45.5 0.0
comp=Z,212nm,1.9s,mb5.2
M12A **Wells** 23.38 341 ⇑P P 03 47 46.1 0.0
baz=24,SNR=17
WCN **Washoe City** 23.44 330 ⇑P P 03 47 47.6 +0.8
baz=24,SNR=13
PDAR **Pinedale Array** 23.47 352 P P 03 47 46.9 0.0
comp=Z,2.5nm,0.9s,mb3.7,baz=168,slow=10.0,SNR=19
PDAR PcP PcP 03 51 31.9 +0.7
comp=Z,0.7nm,0.7s,baz=148,slow=3.9,SNR=4.3
PDAR LR LR 03 56 42.7
comp=Z,1μm,18.8s,baz=188,slow=36
L14A **Malta** 23.48 344 ⇑P P 03 47 47.2 +0.1
baz=24,SNR=13
BDM **Black Diamond** 23.48 325 ⇓P P 03 47 47.9 +0.7
baz=24
LAVA **Lava Cap Winer** 23.49 328 ⇓P P 03 47 47.4 +0.1
baz=24,SNR=8.0
O08A **Rochester Mine** 23.55 334 ⇓P P 03 47 48.2 +0.5
baz=24,SNR=24
PAHR **Pah Rah Range** 23.60 331 eP P 03 47 48.7 +0.5
comp=Z,125nm,1.6s,mb5.1
GOGA **Godfrey** 23.66 50 eP P 03 47 48.3 -0.6
GOGA pmax pmax
comp=Z,49nm,0.8s,mb5.0
GOGA **Godfrey** 23.66 50 eP P 03 47 48.3 -0.6
comp=Z,49nm,0.8s,mb5.0
M11A **Holland Ranch,** 23.67 340 ⇓P P 03 47 49.2 +0.3
baz=24,SNR=11
L13A **Double Diamond** 23.71 343 ⇓P P 03 47 49.2 -0.1
baz=24,SNR=12
O07A **Toulon** 23.75 333 ⇓P P 03 47 49.8 +0.2
baz=24,SNR=25
USIN **University of** 23.77 36 eP P 03 47 50.3 +0.5
comp=Z,356nm,1.3s,mb5.6
N09A **Rock Creek Ran** 23.78 336 ⇑P P 03 47 50.2 +0.4
baz=24,SNR=16

P06A **Stead Airport,** 23.81 331 ⇑P P 03 47 51.0 +0.9
baz=24
P05C **Yuba Gap, Truc** 23.85 329 ⇑P P 03 47 51.0 +0.5
baz=24,SNR=8.3
K16A **Soda Springs** 23.87 348 ⇑P P 03 47 50.3 -0.3
baz=24
Q04C **Lincoln** 23.88 327 ⇓P P 03 47 51.7 +0.9
baz=24
K15A **Arbon** 23.93 346 ⇑P P 03 47 50.8 -0.4
baz=24,SNR=8.5
K14A **Jones Ranch, D** 23.95 345 ⇓P P 03 47 51.4 +0.1
baz=25,SNR=9.5
N08A **GE Springer Mi** 23.96 335 ⇓P P 03 47 52.0 +0.6
baz=24,SNR=36
M10A **I.L. Ranch, Tu** 24.00 338 ⇓P P 03 47 51.9 +0.1
baz=25,SNR=13
CPCT **Cooper Cave** 24.04 45 eP P 03 47 51.2 -1.1
Q03C **Winters** 24.06 326 ⇓P P 03 47 53.1 +0.7
baz=24
L12A **House Creek Ra** 24.07 342 ⇓P P 03 47 52.3 -0.2
baz=25,SNR=13
CVS **Carmenet Viney** 24.09 325 ⇑P P 03 47 52.4 -0.3
baz=25
OLIL **Olney** 24.09 34 eP P 03 47 52.4 -0.4
comp=Z,146nm,1.4s,mb5.2
O06A **Flanigan** 24.17 331 ⇓P P 03 47 54.1 +0.7
baz=25
BEKR **Beckwourth** 24.17 330 ⇑P P 03 47 54.3 +0.8
baz=25,SNR=13
MCCM **Marconi Confer** 24.18 324 ⇑P P 03 47 53.2 -0.3
baz=25
M09A **Marrel Ranch,** 24.24 337 ⇑P P 03 47 54.7 +0.7
baz=25
REDW **Red Top Meadow** 24.25 350 eP P 03 47 54.2 +0.1
comp=Z,36nm,1.0s,mb4.8
K13A **Stover Farm, H** 24.27 344 ⇑P P 03 47 54.4 0.0
baz=25,SNR=26
N07B **Gerlach** 24.30 334 ⇓P P 03 47 54.5 -0.1
baz=25
J16A **Bone** 24.30 348 ⇓P P 03 47 54.6 +0.1
baz=25,SNR=20
OHCM **Honcut** 24.31 328 eP P 03 47 54.8 +0.2
RRI2 **Red Ridge** 24.32 349 eP P 03 47 54.9 +0.2
comp=Z,28nm,0.9s,mb4.7
L11A **Cat Creek Ranc** 24.32 340 ⇓P P 03 47 55.2 +0.4
baz=25
SNOW **Snow King Moun** 24.33 350 eP P 03 47 54.9 +0.1
comp=Z,55nm,1.3s,mb4.8
TPAW **Teton Pass** 24.39 350 eP P 03 47 55.5 +0.1
comp=Z,28nm,1.1s,mb4.6
SCIA **State Center** 24.44 22 eP P 03 47 55.3 -0.6
comp=Z,67nm,1.2s,mb5.0
LOHW **Long Hollow** 24.45 350 eP P 03 47 55.8 -0.1
comp=Z,33nm,1.3s,mb4.6
MNRC **McLaughlin Nat** 24.46 326 ⇑P P 03 47 54.9 -1.2
baz=25
L10A **Juniper Basin** 24.47 339 ⇓P P 03 47 56.4 +0.3
baz=25,SNR=28
ORV **Oroville** 24.48 328 ⇑P P 03 47 56.7 +0.4
baz=25,SNR=28
K12A **Draper Farm, C** 24.49 342 ⇑P P 03 47 56.3 0.0
baz=25
O05C **Quincy** 24.51 330 ⇑P P 03 47 57.1 +0.5
baz=25,SNR=11
RSSD **Black Hills** 24.52 2 eP P 03 47 56.8 +0.3
RSSD pmax pmax
comp=Z,15nm,1.4s,mb4.3
RSSD **Black Hills** 24.52 2 eP P 03 47 56.8 +0.3
comp=Z,15nm,1.4s,mb4.3
DCID1 **Drake Creek** 24.53 349 eP P 03 47 56.9 +0.2
comp=Z,45nm,1.0s,mb5.0
J15A **Blackfoot** 24.59 347 ⇑P P 03 47 57.1 -0.1
baz=25,SNR=30
M08A **Happy Creek Ra** 24.62 335 ⇑P P 03 47 58.0 +0.5
baz=25,SNR=28
N06A **Buffalo Meadow** 24.64 332 ⇓P P 03 47 58.2 +0.5
baz=25,SNR=37
TKL **Tuckaleechee C** 24.66 45 P P 03 47 56.7 -1.2
comp=Z,10nm,1.0s,mb4.3,baz=207,slow=11,SNR=7.0
TKL LR LR 04 00 07.4
comp=Z,954nm,20.5s,baz=250,slow=43
TKL **Tuckaleechee C** 24.66 45 eP P 03 47 56.9 -1.0
WCI **Wyandotte Cave** 24.72 37 eP P 03 47 58.5 0.0
WCI pmax pmax
comp=Z,32nm,0.9s,mb4.8
WCI **Wyandotte Cave** 24.72 37 eP P 03 47 58.5 0.0
comp=Z,32nm,0.9s,mb4.9
J14A **Carey** 24.76 345 ⇓P P 03 47 58.8 +0.1
baz=25,SNR=26
IMW **Indian Meadow** 24.78 350 eP P 03 47 59.0 +0.1
comp=Z,34nm,1.3s,mb4.7
L09A **Wilkinson Ranc** 24.84 337 ⇑P P 03 48 00.9 +1.4
baz=25,SNR=20
I16A **Newdale** 24.86 349 ⇑P P 03 47 59.6 0.0
baz=26
O04C **Chester** 24.87 330 ⇓P P 03 48 00.7 +0.8
baz=25,SNR=19
M07A **Soldier Meadow** 24.89 334 ⇑P P 03 48 00.5 +0.5
baz=25,SNR=23
FLWY **Flagg Ranch** 24.92 350 eP P 03 48 00.4 +0.1
comp=Z,49nm,1.3s,mb4.9
ELFS **Eagle Lake Fie** 24.94 331 ⇑P P 03 48 01.7 +1.3
baz=26
K11A **Parker Ranch,** 24.95 341 ⇓P P 03 48 00.4 -0.1
baz=26,SNR=13
J13A **Cove Ranch, Pi** 25.00 344 ⇑P P 03 48 01.0 +0.1
baz=26
O03C **Acorn Hollow,** 25.09 328 ⇑P P 03 48 01.8 +0.1
baz=26
J12A **Stokes Ranch,** 25.11 342 ⇑P P 03 48 01.9 0.0
baz=26,SNR=30
ECSD **EROS,Sioux Fal** 25.13 14 eP P 03 48 01.3 -0.8
comp=Z,18nm,1.1s,mb4.5
I15A **Monteview** 25.17 347 ⇑P P 03 48 02.8 +0.3
baz=26,SNR=5.6
HLID **Hailey** 25.21 344 ⇓P P 03 48 03.0 +0.2
baz=26,SNR=14
HLID **Hailey** 25.21 344 eP P 03 48 03.1 +0.2
comp=Z,12nm,1.1s,mb4.3
K10A **MacKenzie Ranc** 25.23 339 ⇓P P 03 48 03.0 0.0
baz=26,SNR=25
L08A **Fields** 25.24 336 ⇓P P 03 48 03.0 -0.2
baz=26
BLO **Bloomington** 25.25 35 eP P 03 48 03.1 -0.2
BLO pmax pmax
comp=Z,29nm,0.8s,mb4.9
BLO **Bloomington** 25.25 35 eP P 03 48 03.1 -0.2
comp=Z,29nm,0.8s,mb4.9
M06C **Likely Place G** 25.30 332 ⇑P P 03 48 04.7 +1.0
baz=26,SNR=18
YFT **Old Faithful** 25.30 350 eP P 03 48 03.8 +0.1
I14A **Mackay** 25.32 346 ⇓P P 03 48 04.5 +0.7
baz=26,SNR=36
TZTN **Tazewell** 25.32 44 eP P 03 48 03.0 -0.9
comp=Z,36nm,1.1s,mb4.8
HATC **Hat Creek Radi** 25.44 330 ⇑P P 03 48 05.4 +0.4
baz=26,SNR=6.1
K09A **Rome** 25.46 338 ⇓P P 03 48 05.1 0.0
baz=26,SNR=39
I13A **Wildhorse Cree** 25.47 345 ⇑P P 03 48 05.6 +0.5
baz=26,SNR=28
MFID **Camas Ranch** 25.47 341 ⇓P P 03 48 05.1 -0.2
baz=26,SNR=10
L07A **Adell** 25.49 335 ⇓P P 03 48 06.1 +0.7
baz=26,SNR=37
YMR **Madison River** 25.54 350 eP P 03 48 06.3 +0.5
comp=Z,24nm,1.1s,mb4.6
WVOR **Wild Horse Val** 25.56 336 eP P 03 48 06.1 +0.1
WVOR pmax pmax
comp=Z,31nm,1.4s,mb4.7
WVOR **Wild Horse Val** 25.56 336 eP P 03 48 06.1 +0.1
comp=Z,31nm,1.4s,mb4.6
H16A **Russell Place,** 25.62 350 ⇑P P 03 48 06.7 +0.2
baz=26,SNR=7.5
JSC **Jenkinsville** 25.69 50 eP P 03 48 07.5 +0.2
M05C **Lookout** 25.72 331 ⇓P P 03 48 07.9 +0.4
baz=26
K08A **Mann Creek Ran** 25.76 337 ⇓P P 03 48 07.9 +0.1
baz=26,SNR=16
QLMT **Earthquake Lak** 25.77 349 eP P 03 48 09.4 +1.5
J10A **Berg Farm, Mel** 25.78 340 ⇓P P 03 48 08.2 +0.2
baz=26
MOD **Modoc** 25.79 333 ⇓P P 03 48 07.9 -0.2
baz=26,SNR=22
MOD **Modoc** 25.79 333 eP P 03 48 08.8 +0.7
comp=Z,37nm,1.0s,mb4.9
H15A **Lima** 25.80 347 ⇑P P 03 48 08.7 +0.6
baz=26
H14A **Leadore** 25.95 346 ⇓P P 03 48 09.6 +0.1
baz=27,SNR=11
NHSC **New Hope** 25.96 54 eP P 03 48 09.5 -0.3
comp=Z,72nm,1.0s,mb5.2
I11A **Placerville** 25.97 342 ⇑P P 03 48 09.4 -0.3
baz=27,SNR=16
K07A **Rock Creek Ran** 26.02 336 ⇓P P 03 48 10.0 -0.1
baz=27,SNR=18
J09A **Fry Pan Ranch,** 26.04 339 ⇑P P 03 48 10.5 +0.2
baz=27,SNR=22
MCMT **McKenzie Canyo** 26.04 347 eP P 03 48 11.2 +0.9
H13A **Challis** 26.11 345 ⇑P P 03 48 11.4 +0.5
baz=27,SNR=15
LASM **Arnica Sink** 26.11 331 P P 03 48 11.7 +0.7
M03C **McCloud** 26.11 330 ⇑P P 03 48 10.1 -0.9
baz=27
O01C **Eel River Cons** 26.11 326 ⇓P P 03 48 11.5 +0.4
baz=27
L05A **Lakeview** 26.14 333 ⇑P P 03 48 12.2 +1.0
baz=27,SNR=12
H12A **Diamond D Ranc** 26.25 344 ⇓P P 03 48 12.4 +0.1
baz=27,SNR=12
G15A **Dillon** 26.29 348 ⇑P P 03 48 12.7 +0.1
baz=27,SNR=12
J08A **Circle Bar Ran** 26.30 337 ⇑P P 03 48 12.9 +0.2
baz=27
N02C **Big Bar** 26.35 328 ⇓P P 03 48 13.3 +0.2
baz=27
M04C **Macdoel** 26.37 331 ⇓P P 03 48 13.4 0.0
baz=27
I10A **Payette** 26.38 341 ⇓P P 03 48 13.9 +0.5
baz=27
JFWS **Jewell Farm** 26.42 25 eP P
JFWS pmax pmax
comp=Z,60nm,0.8s,mb5.2
JFWS **Jewell Farm** 26.42 25 eP P 03 48 12.9 -0.8
comp=Z,60nm,0.8s,mb5.2
GCMT **Greycliff** 26.45 353 eP P 03 48 14.3 +0.2
DLMT **Dillon** 26.50 348 eP P 03 48 14.9 +0.4
comp=Z,32nm,1.4s,mb4.7
K06A **Valley Falls** 26.51 334 ⇓P P 03 48 14.9 +0.3
baz=27,SNR=10
G14A **Jackson** 26.57 347 ⇓P P 03 48 15.2 +0.1
baz=27
I09A **Lost Marbles R** 26.58 339 ⇓P P 03 48 15.2 0.0
baz=27
BOZ **Bozeman (W)** 26.60 350 eP P 03 48 15.1 -0.3
BOZ pmax pmax
comp=Z,24nm,1.5s,mb4.5
BOZ **Bozeman (W)** 26.60 350 ⇑P P 03 48 15.5 +0.1
baz=27
BOZ **Bozeman (W)** 26.60 350 eP P 03 48 15.1 -0.3
comp=Z,24nm,1.5s,mb4.5
H11A **Donnelly** 26.71 342 ⇑P P 03 48 16.0 -0.4
baz=27,SNR=9.2
L04A **Klamath Falls** 26.71 331 ⇑P P 03 48 16.7 +0.3
baz=27
K05A **Summer Lake** 26.71 333 ⇑P P 03 48 16.8 +0.4
baz=27
YBH **Yreka Blue Hor** 26.74 330 LR LR 03 58 19.9
comp=Z,400nm,19.1s,baz=344,slow=35
I08A **Drewsey** 26.81 338 ⇑P P 03 48 17.2 -0.1
baz=27
H10A **Noah's Angus R** 26.82 341 ⇓P P 03 48 17.0 -0.4
baz=27,SNR=36
J06A **Christmas Vall** 26.85 335 ⇓P P 03 48 17.2 -0.4
baz=27,SNR=8.3
F15A **Butte** 26.94 348 ⇑P P 03 48 18.4 0.0
baz=28,SNR=24
K04A **Chilquin** 26.99 332 ⇓P P 03 48 18.6 -0.3
baz=28
F14A **Wisdom** 27.09 347 ⇑P P 03 48 20.0 +0.2
baz=28
LAO **LASA Array** 27.09 358 eP P 03 48 18.9 -0.8
comp=Z,9.6nm,1.0s,mb4.3
H09A **Durkee** 27.17 340 ⇓P P 03 48 20.2 -0.3
baz=28,SNR=5.7
BMO **Blue Mountains** 27.23 341 eP P 03 48 20.1 -0.9
comp=Z,8.8nm,0.9s,mb4.3
F13A **Darby** 27.28 346 ⇓P P 03 48 21.5 0.0
baz=28,SNR=70
J05A **Fort Rock** 27.32 334 ⇑P P 03 48 21.6 -0.2
baz=28,SNR=6.5
H08A **Prairie City** 27.38 338 ⇓P P 03 48 22.0 -0.4
baz=28,SNR=8.6
G11A **Walters Elk Ra** 27.42 343 ⇑P P 03 48 22.1 -0.6
baz=28,SNR=16
F12A **Elk City** 27.48 344 ⇓P P 03 48 23.2 0.0
baz=28,SNR=39
E15A **Deer Lodge** 27.53 349 ⇑P P 03 48 23.6 -0.1
baz=28,SNR=12
G10A **Bishop Farm, J** 27.57 341 ⇑P P 03 48 23.3 -0.8
baz=28,SNR=12
J04A **Umpqua Nationa** 27.66 332 ⇓P P 03 48 25.0 +0.1
baz=28,SNR=7.0
E14A **Clinton** 27.69 347 ⇑P P 03 48 24.8 -0.3
baz=28,SNR=21
G09A **Cove** 27.76 340 ⇓P P 03 48 25.5 -0.2
baz=28,SNR=6.3
H07A **Lands Inn, Kim** 27.76 337 ⇓P P 03 48 25.2 -0.6
baz=28
BLA **Blacksburg** 27.77 46 eP P 03 48 25.3 -0.7
BLA pmax pmax
comp=Z,27nm,1.2s,mb4.8
BLA **Blacksburg** 27.77 46 eP P 03 48 25.3 -0.6
comp=Z,27nm,1.2s,mb4.8
F11A **Grangeville** 27.83 343 ⇑P P 03 48 25.6 -0.8
baz=28,SNR=11
E13A **Victor** 27.86 346 ⇑P P 03 48 26.4 -0.3
baz=28,SNR=16
I05A **Bend** 28.05 335 ⇓P P 03 48 29.0 +0.6
baz=29
D15A **Lincoln** 28.10 349 ⇑P P 03 48 28.4 -0.4
baz=29
CHMT **Chamberlain Mo** 28.12 348 eP P 03 48 28.8 -0.2
G08A **Pilot Rock** 28.16 339 ⇓P P 03 48 28.6 -0.7
baz=29,SNR=13
E12A **Beaver Dam Sad** 28.17 344 ⇓P P 03 48 29.3 -0.1
baz=29
MSO **Missoula** 28.18 347 eP P 03 48 29.8 +0.4
comp=Z,11nm,1.0s,mb4.5
F10A **Beech Ranch, E** 28.22 342 ⇑P P 03 48 28.8 -1.1
baz=29,SNR=11
E11A **Bogner Ranch,** 28.28 344 ⇑P P 03 48 29.3 -1.1
baz=29,SNR=12
D14A **Greenough** 28.33 348 ⇑P P 03 48 30.6 -0.2
baz=29,SNR=10
D13A **Huson** 28.54 346 ⇓P P 03 48 32.3 -0.4
baz=29,SNR=19
EGMT **Eagleton** 28.67 353 ⇑P P 03 48 33.6 -0.2
baz=29
D12A **Red Ives Fores** 28.71 345 ⇓P P 03 48 33.4 -0.8
baz=29
I03A **Eugene** 28.75 332 ⇓P P 03 48 34.9 +0.2
baz=29
D11A **Klaveano Farm,** 28.95 344 ⇑P P 03 48 35.0 -1.3
baz=30,SNR=15
F07A **Phinny Hill Vi** 29.02 338 ⇓P P 03 48 36.6 -0.4
baz=30
I02A **Mapleton** 29.02 331 ⇓P P 03 48 35.9 -1.1
baz=30
C14A **Swan Lake** 29.04 348 ⇑P P 03 48 36.9 -0.1
baz=30
HOOD **Mount Hood Mea** 29.17 336 eP P 03 48 38.3 0.0
comp=Z,29nm,1.0s,mb5.0
F06A **Goldendale** 29.21 337 ⇑P P 03 48 39.2 +0.5
baz=30
D10A **Wagner Farm, O** 29.21 343 ⇓P P 03 48 37.8 -0.9
baz=30,SNR=14
COWI **Conover** 29.54 23 eP P 03 48 40.6 -0.9
comp=Z,12nm,0.7s,mb4.7
F05A **White Salmon** 29.56 336 ⇑P P 03 48 42.2 +0.4
baz=30,SNR=7.5
AGMN **Agassiz Refuge** 29.63 12 eP P 03 48 41.1 -1.2
comp=Z,19nm,1.2s,mb4.7
B13A **Whitefish** 29.76 347 ⇑P P 03 48 43.3 -0.2
baz=30,SNR=9.5
OD2 **Odessa Site #2** 29.94 341 eP P 03 48 43.6 -1.5
E06A **Yakima** 29.95 338 ⇓P P 03 48 45.4 +0.2
baz=30,SNR=8.7
A13A **Flathead Natio** 30.28 348 ⇑P P 03 48 48.0 -0.1
baz=31
NEW **Newport** 30.28 344 eP P 03 48 47.6 -0.5
NEW pmax pmax
comp=Z,14nm,1.1s
NEW **Newport** 30.28 344 eP P 03 48 47.6 -0.5
comp=Z,14nm,1.1s,mb4.6
EYMN **Ely** 30.39 18 eP P 03 48 47.6 -1.4
comp=Z,55nm,0.8s,mb5.3
LON **Longmire** 30.42 337 eP P 03 48 49.8 +0.4
LON pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
LON **Longmire** 30.42 337 eP P 03 48 49.8 +0.4
comp=Z,4.7nm,0.8s,mb4.3
D06A **Cle Elum** 30.46 338 ⇓P P 03 48 50.2 +0.5
baz=31,SNR=6.7
C07A **Waterville** 30.63 340 ⇑P P 03 48 51.1 -0.1
baz=31,SNR=6.5
ETW **Entiat** 30.64 339 eP P 03 48 50.6 -0.6
B09A **Rice** 30.70 343 ⇑P P 03 48 51.3 -0.5
baz=31,SNR=7.9
A11A **Hall Mountain,** 30.73 345 ⇓P P 03 48 51.9 -0.2
baz=31
D05A **Enumclaw** 30.86 337 ⇑P P 03 48 53.5 +0.2
baz=31
E03A **Lebam** 30.93 335 ⇓P P 03 48 54.4 +0.5
baz=32
B08A **Colville Reser** 30.99 341 ⇓P P 03 48 54.4 +0.1
baz=32,SNR=20
A10A **Northport** 31.05 344 ⇑P P 03 48 54.2 -0.7
baz=32,SNR=12
C05A **Tolt Reservoir** 31.18 338 ⇓P P 03 48 55.9 -0.2
baz=32,SNR=5.0
B07A **Winthrop** 31.32 341 ⇓P P 03 48 56.9 -0.4
baz=32,SNR=6.8
ULM **Lac du Bonnet** 31.49 11 P P 03 48 57.4 -1.3
comp=Z,6.8nm,0.9s,mb4.5,baz=212,slow=11,SNR=7.3
ULM PcP PcP 03 51 49.5 -0.9
comp=Z,5.1nm,0.9s,baz=289,slow=7.7,SNR=3.4
ULM LR LR 04 02 42.5
comp=Z,3μm,18.1s,baz=203,slow=38
JCW **Jim Creek** 31.69 338 eP P 03 48 59.8 -0.7
RPW **Rockport** 31.77 339 eP P 03 49 00.9 -0.3
B05A **Bryant** 31.81 338 ⇑P P 03 49 00.9 -0.7
baz=32
B06A **Marblemount** 31.82 339 ⇓P P 03 49 01.1 -0.5
baz=32,SNR=5.7
A07A **Ashnola River,** 31.92 341 ⇓P P 03 49 02.6 0.0
baz=32
OTAV **Otavalo** 32.34 123 eP P 03 49 10.3 +3.7
comp=Z,22nm,1.3s,mb4.8
A04A **Legoe Bay, Lum** 32.41 338 ⇑P P 03 49 06.9 0.0
baz=33,SNR=6.9
A05A **Maple Falls** 32.43 339 ⇓P P 03 49 06.9 -0.2
baz=33,SNR=6.8
SADO **Sadowa** 33.09 35 P P 03 49 11.7 -1.1
baz=247,slow=10
BINY **Binghamton** 33.36 41 eP P 03 49 14.7 -0.5
comp=Z,27nm,0.9s,mb5.2
PAL **Palisades** 34.06 44 eP P 03 49 20.9 -0.4
PAL pmax pmax
comp=Z,38nm,1.2s,mb5.2
PAL **Palisades** 34.06 44 eP P 03 49 20.9 -0.5
comp=Z,38nm,1.2s,mb5.1
EDM **Edmonton** 34.23 351 eP P 03 49 21.4 -1.2
FFC **Flin Flon** 35.20 3 eP P 03 49 29.6 -1.3
FFC pmax pmax
comp=Z,14nm,1.3s,mb4.7
FFC **Flin Flon** 35.20 3 eP P 03 49 29.6 -1.3
comp=Z,14nm,1.3s,mb4.7
NCB **Newcomb** 35.41 40 eP P 03 49 31.9 -1.0
comp=Z,5.5nm,0.5s,mb4.7
LONY **Lake Ozonia** 35.56 38 eP P 03 49 33.4 -0.8
comp=Z,7.3nm,0.8s,mb4.7
BRYW **Bryant College** 36.06 44 eP P 03 49 37.4 -1.1
comp=Z,25nm,1.0s,mb5.1
MDV **Middlebury** 36.06 40 eP P 03 49 36.7 -1.8
FRNY **Flat Rock** 36.27 39 eP P 03 49 39.0 -1.3
comp=Z,14nm,1.1s,mb4.8
DLBC **Dease Lake** 42.91 341 eP P 03 50 36.5 +1.2
YKA **Yellowknife Ar** 43.42 354 P P 03 50 38.2 -1.1
comp=Z,1.5nm,0.6s,mb3.9,baz=165,slow=8.0,SNR=8.1
YKA LR LR 04 08 39.2
comp=Z,746nm,18.1s,baz=170,slow=36
YKA **Yellowknife Ar** 43.42 354 P P 03 50 38.2 -1.1
YKA LR LR 04 08 39.2
SCHQ **Schefferville** 45.56 30 P P 03 50 56.1 -0.4
comp=Z,20nm,0.9s,mb5.1,baz=232,slow=5.8,SNR=14
SCHQ LR LR 04 10 45.9
comp=Z,423nm,19.0s,baz=112,slow=37
HYT **Haines Junctio** 47.18 339 eP P 03 51 12.8 +3.7
DAWY **Dawson** 50.14 341 eP P 03 51 31.8 0.0
LPAZ **La Paz** 50.82 132 P P 03 51 38.6 +1.0
comp=Z,1.8nm,1.1s,mb3.9,baz=342,slow=5.4,SNR=4.7
EGAK **Eagle** 51.18 341 eP P 03 51 39.5 -0.1
comp=Z,9.7nm,0.8s,mb4.8
RKT **Rikitea** 51.51 216 eS S 03 58 48.0 -10
comp=Z,244nm,27.5s
RKT eLR LR 04 06 21.8
comp=Z,1μm,27.0s
SLKM **Skilak Lake** 51.84 333 eP P 03 51 44.6 0.0
PMR **Palmer** 51.98 335 eP P 03 51 44.8 -0.8
PMR pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
PMR **Palmer** 51.98 335 eP P 03 51 44.8 -0.8
comp=Z,6.5nm,0.9s,mb4.6
MCK **McKinley** 53.12 337 eP P 03 51 54.1 +0.1
MCK pmax pmax
comp=Z,10μm,0.6s
MCK **McKinley** 53.12 337 eP P 03 51 54.1 +0.1
comp=Z,10μm,0.6s
COLA **College** 53.41 339‖eP P 03 51 56.3 +0.2
COLA **College** 53.41 339 eP P 03 51 55.6 -0.5
comp=Z,7.0nm,1.1s,mb4.5
TRF **Thorofare Moun** 53.46 337 eP P 03 51 56.6 +0.1
comp=Z,20nm,0.8s,mb5.1
KTH **Kantishna Hill** 53.76 337 eP P 03 51 58.5 -0.1
comp=Z,108nm,1.9s,mb5.5
PPLA **Purkeypile** 53.89 335 eP P 03 51 59.8 +0.1
comp=Z,163nm,1.9s,mb5.6
SVW2 **Sparrevohn** 54.43 333 eP P 03 52 02.5 -1.0
TTA **Tatalina** 55.44 334 eP P 03 52 09.8 -1.0
TTA pmax pmax
comp=Z,24nm,1.2s,mb5.1
TTA **Tatalina** 55.44 334 eP P 03 52 09.8 -1.0
comp=Z,34nm,1.2s,mb5.1
IMA2 **Indian Mountai** 56.10 338 eP P 03 52 14.6 -0.9
PPT **Papeete** 57.23 233 eS S 04 00 07.4 -8.2
comp=Z,323nm,28.5s
PPT eSS SS 04 03 56.8 -9.1
comp=Z,178nm,25.2s
PPT eLR LR 04 08 49.7
comp=Z,859nm,26.0s,baz=45
PPT **Papeete** 57.23 233 LR LR 04 10 35.4
comp=Z,171nm,21.9s,baz=113,slow=29
UNV **Unalaska Valle** 57.68 322 eP P 03 52 25.8 -1.1
comp=Z,5μm,1.2s
SFJD **Kangerlussuaq** 58.56 22 eP P 03 52 38.6 +5.7
SFJD **Kangerlussuaq** 58.56 22 iP P 03 52 38.6 +5.7
CPUP **Villa Florida** 64.97 133 P P 03 53 17.6 +1.0
comp=Z,2.8nm,0.9s,mb4.3,baz=331,slow=6.7,SNR=6.0
CPUP LR LR 04 21 42.8
comp=Z,174nm,20.2s,baz=314,slow=36
BDFB **Brasilia** 66.06 118 P P 03 53 25.7 +1.9
comp=Z,5.0nm,0.8s,mb4.6,baz=219,slow=9.8,SNR=5.4
BDFB LR LR 04 21 17.9
comp=Z,298nm,21.4s,baz=337,slow=35
RAR **Rarotonga** 67.16 236 LR LR 04 14 56.7
comp=Z,413nm,21.4s,baz=66,slow=29
PLCA **Paso Flores** 67.99 152 P P 03 53 38.5 +3.0
comp=Z,2.7nm,0.9s,mb4.3,baz=325,slow=5.0,SNR=3.4
PLCA LR LR 04 18 09.3
comp=Z,182nm,18.4s,baz=349,slow=31
PLCA **Paso Flores** 67.99 152 P P 03 53 38.5 +3.0
PLCA LR LR 04 18 09.3
BORG **Borgarnes** 69.83 27 LR LR 04 24 12.9
comp=Z,495nm,20.1s,baz=101,slow=36
BILL **Bilibino** 71.57 337‖eP P 03 53 57.7 +0.5
BILL e pP 03 54 13.7 -0.7
BILL e 03 56 35.2
BILL eS S 04 03 18.9 +7.7
BILL pmax pmax
comp=Z,27nm,1.5s,mb5.0
BILL MLR MLR
comp=Z,400nm,22.0s
JMIC **Jan Mayen** 73.79 20 LR LR 04 27 32.1
comp=Z,682nm,18.8s,baz=265,slow=36
SPITS **Spitsbergen Ar** 77.05 10 LR LR 04 28 47.4
comp=Z,530nm,20.4s,baz=150,slow=36
SEY **Seymchan** 78.37 333‖eP P 03 54 36.3 -0.2
PETK **Petropavlovsk-** 78.86 322 P P 03 54 39.5 +0.2
comp=Z,5.7nm,0.9s,mb4.5,baz=76,slow=12,SNR=4.7
DCN **Croghan** 79.05 37 eP P 03 54 41.0 +0.6
DLF **Lyons Farm** 79.49 37 eP P 03 54 43.0 +0.2
USHA **Ushuaia** 80.39 160 P P 03 54 48.2 +0.8

	comp=Z,6.0nm,0.8s,mb4.5,baz=11,slow=8.2,SNR=3.9						
ESK	Eskdalemuir	80.65	35	eP	P	03 54 47.8	-1.2
ESK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
ESK	Eskdalemuir	80.65	35	eP	P	03 54 47.8	-1.2
	comp=Z,5.7nm,0.7s,mb4.6						
EKA	Eskdalemuir Ar	80.67	35	P	P	03 54 49.7	+0.6
	comp=Z,3.5nm,0.9s,mb4.3,baz=297,slow=3.7,SNR=7.2						
TIXI	Tiksi	81.99	345	eP	P	03 54 55.1	-0.7
TIXI				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,256nm,18.0s						
EVO	Evora	83.33	52	⇑iP	P	03 55 04.6	+1.2
	comp=Z,22nm,0.9s,mb4.9						
ARCES	ARCESS Array B	84.50	16	P	P	03 55 09.3	+0.6
	comp=Z,9.4nm,0.9s,mb4.9,baz=319,slow=5.3,SNR=13						
ARCES				LR	LR	04 32 53.5	
	comp=Z,523nm,21.5s,baz=322,slow=36						
GRR	Gorron	84.60	40	eP	P	03 55 10.9	+1.2
	comp=Z,34nm,1.0s,mb5.2						
GRR	Gorron	84.60	40	eP	P	03 55 10.9	+1.2
GRR				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.1						
GRR	Gorron	84.60	40	eP	P	03 55 10.9	+1.2
	comp=Z,17nm,1.0s,mb5.1						
FLN	La Foliniere	84.68	40	eP	P	03 55 11.4	+1.3
	comp=Z,13nm,0.7s,mb4.9						
FLN	La Foliniere	84.68	40	eP	P	03 55 11.4	+1.3
FLN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0						
FLN	La Foliniere	84.68	40	eP	P	03 55 11.4	+1.3
	comp=Z,6.5nm,0.6s,mb4.9						
NB2	NORSAR Subarra	84.97	26	P	P	03 55 11.6	+0.3
	comp=Z,3.5nm,0.8s,mb4.5,baz=301,slow=4.8						
NOA	NORSAR Array B	84.97	26	P	P	03 55 11.8	+0.6
	comp=Z,4.8nm,0.8s,mb4.7,baz=300,slow=4.6,SNR=14						
NOA				LR	LR	04 33 39.2	
	comp=Z,227nm,19.3s,baz=310,slow=36						
KONO	Kongsberg	85.01	28	i P	P	03 55 12.5	+1.0
ESDC	Sonseca Array	85.88	49	LR	LR	04 34 30.9	
	comp=Z,257nm,18.1s,baz=300,slow=36						
HFS	Hagfors	86.50	26	LR	LR	04 34 36.9	
	comp=Z,333nm,19.6s,baz=283,slow=36						
LFF	La Frestale	87.01	43	eP	P	03 55 24.9	+3.2
	comp=Z,6.5nm,0.6s,mb4.8						
LFF	La Frestale	87.01	43	eP	P	03 55 24.9	+3.2
LFF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.7						
LFF	La Frestale	87.01	43	eP	P	03 55 24.9	+3.2
	comp=Z,3.3nm,0.6s,mb4.7						
YAK	Yakutsk	87.92	337	eP	P	03 55 23.8	-1.9
YAK				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.4						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
TNS	Taunus Mts	89.22	36	eP	P	03 55 32.4	+0.4
TNS				e*PP	pP	03 55 41.0	-8.8
TNS				pmax	pmax		
	comp=Z,14nm,1.4s,mb5.1						
TNS	Taunus Mts	89.22	36	eP	P	03 55 32.4	+0.4
	comp=Z,14nm,1.4s,mb5.1						
TNS				epP	pP	03 55 41.0	-8.8
GRA1	Grafenberg Arr	91.03	36	eP	P	03 55 41.0	+0.5
	comp=Z,16nm,1.6s,mb5.1						
GRA1				epP	pP	03 55 49.0	-9.3
GRA1				LR	LR		
	comp=Z,300nm,20.9s						
GRF	Grafenberg Arr	91.03	36	eP	P	03 55 41.0	+0.5
GRF				e*PP	pP	03 55 49.0	-9.3
GRF				pmax	pmax		
	comp=Z,16nm,1.6s,mb5.1						
GRF				MLR	MLR		
	comp=Z,300nm,20.9s						
GRF	Grafenberg Arr	91.03	36	eP	P	03 55 41.0	+0.5
GRF				e*PP	pP	03 55 49.0	-9.3
GRF				pmax	pmax		
	comp=Z,16nm,1.6s,mb5.1						
GRF				MLR	MLR		
	comp=Z,300nm,20.9s						
GRF	Grafenberg Arr	91.03	36	eP	P	03 55 41.0	+0.5
	comp=Z,16nm,1.6s,mb5.1						
GRF				epP	pP	03 55 49.0	-9.3
GRF				eL		04 35 44.4	
	comp=Z,264nm,20.9s						
CLL	Collm	91.10	34	eP	P	03 55 45.0	+4.2
CLL				ePP	PP	03 59 27.0	+9.5
CLL				ePS	PS	04 08 00.0	+10
CLL				ex	x	04 13 54.0	
CLL				ex	x	04 17 18.0	
CLL	Collm	91.10	34	eP	P	03 55 45.0	+4.2
CLL				ePP	PP	03 59 27.0	+9.5
CLL				LR	LR		
	comp=Z,300nm,18.6s						
DAVOX	Davos/Dischmat	91.79	39	LR	LR	04 36 35.2	
	comp=Z,609nm,21.7s,baz=268,slow=35						
KHC	Kasperske Hory	92.62	35	AMS	AMS	04 36 50.0	
	comp=Z,500nm,24.7s						
PRU	Pruhonice	92.66	34	AMS	AMS	04 41 40.0	
	comp=Z,400nm,14.8s						
GERES	GERESS Array B	92.85	35	LR	LR	04 37 30.8	
	comp=Z,384nm,19.9s,baz=286,slow=36						
DPC	Dobruska-Polom	93.38	33	AMS	AMS	04 43 00.0	
	comp=Z,300nm,16.6s						
KEST	Kesra	97.08	48	P	P	03 56 08.6	0.0
	comp=Z,3.9nm,1.2s,mb4.7,baz=302,slow=3.9,SNR=3.5						
KEST				LR	LR	04 40 57.2	
	comp=Z,91nm,19.1s,baz=236,slow=36						
DBIC	Dimbokro	97.29	80	LR	LR	04 38 23.1	
	comp=Z,159nm,20.6s,baz=281,slow=34						
HNR	Honiara	97.80	263	LR	LR	04 30 02.9	
	comp=Z,180nm,20.4s,baz=120,slow=29						
OBN	Obninsk	98.77	21	eP	P	03 56 16.3	+0.6
OBN				eSS	SS	04 14 36.2	+10
OBN				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb5.1						
OBN				MLR	MLR		
	comp=Z,500nm,18.0s						
AKASG	Malin Array Be	99.31	27	P	P	03 56 17.2	-1.0
	comp=Z,1.9nm,0.7s,mb4.7,baz=306,slow=3.6,SNR=9.6						
AKASG				LR	LR	04 45 06.3	
	comp=Z,360nm,18.1s,baz=285,slow=38						
CN2	Changchun	101.85	325	eP	Pdif	03 56 27.0	-2.5
HHC	Hu-ho-hao-te	110.97	331	ePKP	PKiKP	04 01 00.9	-8.6
HHC				PP	PP	04 01 45.1	-2.3
HHC				PKS		04 04 36.0	
HHC				SKS	SKSdf	04 08 11.7	-4.5
HHC				SKKS	SKKSac	04 08 39.8	-5.7
HHC				SS	SS	04 17 16.4	+3.1
HHC				PP	PP		
	comp=Z,87nm,7.6s						
HHC				LR	LR		
	comp=N,245nm,18.9s						
HHC				LR	LR		
	comp=E,283nm,18.5s						
HHC				LR	LR		
	comp=Z,265nm,19.0s						
NJ2	Nanjing	113.68	320	ePKP	PKiKP	04 01 07.6	-7.3
WMQ	Urumqi	115.88	350	ePKP	PKPdf	04 01 16.0	-2.8
WMQ				XPKP		04 01 30.0	
WMQ				ePP	PP	04 02 28.0	+6.2
WMQ				PKS		04 04 50.0	
WMQ				PP	PP		
	comp=Z,106nm,5.1s						
WMQ				LR	LR		
	comp=N,352nm,15.6s						
WMQ				LR	LR		
	comp=E,346nm,18.0s						
WMQ				LR	LR		
	comp=Z,464nm,18.2s						
LZH	Lanzhou	118.29	334	ePKP	PKPdf	04 01 23.0	-0.7
LZH				XPKP		04 01 27.5	
LZH				ePP	PP	04 02 45.2	+6.2
LZH				PP	PP		
	comp=Z,83nm,7.7s						
LZH				LR	LR		
	comp=E,158nm,18.2s						
LZH				LR	LR		
	comp=Z,283nm,20.3s						
STKA	Stephens Creek	119.55	244	PKP	PKPdf	04 01 25.0	-1.1
	comp=Z,1.6nm,0.2s,baz=296,slow=4.3,SNR=3.3						
STKA	Stephens Creek	119.55	244	PKP	PKPdf	04 01 25.0	-1.1
CD2	Chengdu	122.72	331	ePKP	PKPdf	04 01 27.4	-4.9
CD2				XPKP		04 01 35.2	
CD2				PP	PP	04 03 11.2	+1.8
CD2				PKS		04 05 02.6	
CD2				SKS	SKSdf	04 08 34.2	-4.9
CD2				SKKS	SKKSac	04 10 00.5	-3.6
CD2				SS	SS	04 19 52.2	+5.7
CD2				PP	PP		
	comp=Z,120nm,10.6s						
CD2				LR	LR		
	comp=N,180nm,18.4s						
CD2				LR	LR		
	comp=Z,210nm,16.8s						
WRAB	Tennant Creek	124.39	259	ePKIKP	PKPdf	04 01 35.4	-0.3
WRA	Warramunga Arr	124.40	259	PKP	PKPdf	04 01 35.6	-0.1
	comp=Z,1.4nm,0.6s,baz=76,slow=2.4,SNR=20						
GYA	Guiyang	124.89	325	ePDIF	Pdif	03 58 10.2	-1.7
GYA				PKP	PKPdf	04 01 33.4	-3.2
GYA				PP	PP	04 03 26.4	+2.2
GYA				PKS		04 05 09.5	
GYA				SKS	SKSdf	04 08 43.0	-0.3
GYA				PP	PP		
	comp=Z,120nm,6.8s						
GYA				LR	LR		
	comp=N,140nm,20.4s						
GYA				LR	LR		
	comp=E,130nm,21.0s						
GYA				LR	LR		
	comp=Z,110nm,20.7s						
ASAR	Alice Springs	125.39	254	PKP	PKPdf	04 01 37.5	0.0
	comp=Z,1.5nm,0.8s,baz=71,slow=2.1,SNR=13						
KMI	Kunming	128.03	328	PKP	PKPdf	04 01 40.2	-2.4
KMI				XPKP		04 01 44.0	
KMI				PP	PP	04 03 47.2	+2.2
KMI				PP	PP		
	comp=Z,64nm,6.7s						
KMI				LR	LR		
	comp=N,158nm,17.8s						
KMI				LR	LR		
	comp=E,133nm,16.8s						
KMI				LR	LR		
	comp=Z,181nm,16.9s						
CMAR	Chiang Mai Arr	135.51	327	PKP	PKPdf	04 01 57.6	+0.8
	comp=Z,0.9nm,0.3s,baz=334,slow=2.8,SNR=4.5						

NEIC 06 03:43:21.9, 5383N×16391W, h19km, ML3.4(PMR), ML3.5(AEIC), After AEIC., Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	False Pass	1.07	15	P	Pb	03 43 39.8	-2.1
FALS				S	Sb	03 43 54.6	-0.8
AKA	Akutan	1.14	286	P	Pn	03 43 41.0	-1.9
AKA				S	Sb	03 43 55.9	-1.6
AKUT	Akutan	1.14	286	P	Pn	03 43 40.9	-2.1
AKLV	Akutan Long Va	1.26	286	P	Pn	03 43 42.4	-2.1
AKGG	Akutan Green G	1.29	288	P	Pn	03 43 43.0	-1.8
UNV	Unalaska Valle	1.54	272	P	Pn	03 43 45.6	-2.7
SDPT	Sand Point	2.51	51	P	Pn	03 44 01.2	-0.5
SDPT				S	Sn	03 44 32.1	+0.4
OKCD	Okmok Cone D	2.54	263	P	Pn	03 44 01.3	-0.7
OKCE	Okmok Cone E	2.57	263	P	Pn	03 44 02.2	-0.3
NIKO	Nikolski	3.08	256	P	Pn	03 44 09.2	-0.3
CHGN	Chignik	4.01	50	eP	Pn	03 44 23.7	+1.4
SPIA	Saint Paul Isl	4.92	316	P	Pn	03 44 33.7	-1.2
OHAK	Old Harbor	6.92	56	eP	Pn	03 45 01.3	-0.9
SVW2	Sparrevohn	8.55	28	eP	Pn	03 45 23.4	-1.2

NEIC 06 03:44:18.1, 4532S×16661E, h20km, ML4.6(WEL), After WEL., Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.41	113	P	Pb	03 44 26.7	0.0
DCZ				S	Sb	03 44 31.6	-1.0
WHZ	Wether Hill Ro	1.10	122	P	Pn	03 44 38.0	-0.3
WHZ				S	Sb	03 44 51.6	-0.7
MLZ	Mavora Lakes	1.10	92	P	Pn	03 44 37.5	-0.9
MLZ				S	Sb	03 44 50.2	-2.2
MSZ	Milford Sound	1.14	56	P	Pn	03 44 38.2	-0.6
WKZ	Wanaka	1.77	75	P	Pn	03 44 48.9	+1.3
EAZ	Earnscleugh	1.91	88	P	Pn	03 44 50.9	+1.5
JCZ	Jackson Bay	1.97	52	P	Pn	03 44 51.7	+1.4
TUZ	Tuapeka	2.21	108	P	Pn	03 44 54.5	+0.9
LBZ	Lake Benmore	2.71	71	P	Pn	03 45 01.3	+0.9
FOZ	Fox Glacier	2.82	53	P	Pn	03 45 03.8	+1.9
ODZ	Otahua Downs	2.87	86	P	Pn	03 45 02.8	+0.2
RPZ	Rata Peaks	3.56	65	P	Pn	03 45 12.4	+0.3
WVZ	Waitaha Valley	3.72	54	P	Pn	03 45 14.7	+0.4
MQZ	McQueen's Vall	4.61	72	P	Pn	03 45 27.5	+0.9
LTZ	Lake Taylor	4.80	60	P	Pn	03 45 29.5	+0.3
DSZ	Denniston Nort	5.20	48	P	Pn	03 45 35.4	+0.8
KHZ	Kahutara	5.79	62	P	Pn	03 45 44.6	+1.8
THZ	Tophouse	5.79	54	P	Pn	03 45 44.5	+1.7
QRZ	Quartz Range	6.24	46	P	Pn	03 45 49.4	+0.4
TCW	Tory Channel	6.94	56	P	Pn	03 46 02.7	+4.1

*ISCJB **06** 03:58:54.8±3.5, 52S±02×1502E±03, h145km±28km, mb3.7/8, Error ellipse: s-maj=52.0km s-min=26.9km az=16.2*
*NEIC **06** 03:58:56.3±3.3, 524S×15039E, h155km±25km, mb3.9/3, Error ellipse: s-maj=43.8km s-min=21.3km az=90.0*
*IDC **06** 03:59:01.5±7.9, 547S×15047E, h206km±70km, mb3.4/6, mb1 3.6/7, mb1mx3.4/16, mbtmp3.5/7, Error ellipse: s-maj=55.9km s-min=28.5km az=91.0*
ISC 06 03:58:56.0±3.5, **53S**±02×**1504E**±03, **h149**km±26km, **n12**, $\sigma 0^{s}95$/12, **mb3.8**/8, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.21	218	ePn	Pn	04 00 11.6	-0.7
PMG				eS	Sn	04 01 11.6	-0.2
CTA	Charters Tower	15.27	195	P	Pn	04 02 25.2	+1.4
	0.4nm,0.3s,baz=23,slow=13,SNR=6.4						
CTAO	Charters Tower	15.27	195	eP	Pn	04 02 25.6	+1.8
	8.7nm,0.8s						
WRAB	Tennant Creek	21.36	226	eP	P	04 03 32.6	+1.0
	2.4nm,0.6s,mb3.7						
WRA	Warramunga Arr	21.37	226	P	P	04 03 32.2	+0.4
	1.4nm,0.4s,mb3.6,baz=51,slow=9.5,SNR=13						
ASAR	Alice Springs	24.23	219	P	P	04 03 59.0	-0.1
	0.9nm,0.5s,mb3.6,baz=58,slow=8.3,SNR=9.5						
FITZ	Fitzroy Crossi	27.34	240	P	P	04 04 27.0	-0.3
	5.1nm,0.8s,mb4.2,baz=72,slow=9.6,SNR=9.7						
STKA	Stephens Creek	27.72	196	P	P	04 04 28.8	-1.7
	2.0nm,0.5s,mb4.1,baz=21,slow=14,SNR=4.6						
SONM	Songino Array	65.47	329	P	P	04 09 24.4	+1.4
	0.5nm,0.5s,mb3.6,baz=161,slow=8.3,SNR=3.5						
ZALV	Zalesovo Beam	80.22	327	P	P	04 10 49.0	-0.8
	0.5nm,0.5s,mb3.4,baz=101,slow=6.0,SNR=2.3						
TKM2	Tokmak 2	82.54	314	eP	P	04 11 01.7	-0.6
	1.7nm,0.8s,mb3.8						
TORD	Torodi Ar. Bea	148.16	286	PKPbc	PKPbc	04 18 24.1	-1.3
	0.5nm,0.3s,baz=87,slow=2.5,SNR=26						

*ISCJB **06** 04:17:09.9±0.8, 4136N±003×1950E±004, h10km, Error ellipse: s-maj=5.8km s-min=2.5km az=38.3*
*TIR **06** 04:17:10.3±2.5, 4138N×1951E, h8km±20km, ML2.4*
*SKO **06** 04:17:10.2, 4139N×1940E, h0km, M2.0, ML2.4*
*CSEM **06** 04:17:10.2±0.3, 4131N×1951E, h8km, ML2.5/9, Error ellipse: s-maj=6.7km s-min=2.4km az=39.0*
*PDG **06** 04:17:15.2±0.3, 4152N×1945E, h6km, ML2.5/9, Error ellipse: s-maj=1.3km s-min=1.3km az=0.0*
*BEO **06** 04:17:29.9±2.0, 4210N×1984E, h15km±9km, ML1.8/2*
ISC 06 04:17:10.8±0.8, **4134N**±004×**1950E**±004, **h13**km±6km, **n37**, $\sigma 1^{s}08$/72, **3C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.27	89	i PG	Pg	04 17 16.8	+0.3
TIR				i SG	Sg	04 17 21.5	+1.1
LACI	Lac	0.33	28	ePG	Pg	04 17 16.9	-0.7
LACI				i SG	Sg	04 17 22.1	0.0
QSH	Qafa e Shtames	0.35	59	i PG	Pg	04 17 16.0	-1.9
ULC	Ulcinj	0.65	343	⇑iPg	Pg	04 17 24.0	+0.5
ULC				eSg	Sg	04 17 31.7	-0.3
ULC	Ulcinj	0.65	343	i PG	Pg	04 17 20.4	-3.1
ULC				i SG	Sg	04 17 31.7	-0.3
PUK	Puka	0.76	23	ePG	Pg	04 17 24.3	-1.2
PHP	Peshkopia	0.78	64	ePG	Pg	04 17 24.8	-1.2
PHP				i SG	Sg	04 17 36.0	-0.3
OHR	Ohrid	1.00	103	ePg	Pg	04 17 29.0	-1.2
OHR				i Sg	Sg	04 17 45.0	+1.7
OHR				eLg		04 17 45.5	
	comp=E,63nm,0.5s						
OHR				eLg		04 17 45.5	
	comp=N,69nm,0.6s						
OHR	Ohrid	1.00	103	ePg	Pg	04 17 28.9	-1.3
OHR				i Sg	Sg	04 17 45.0	+1.7
BUM	Brajici-Budva	1.06	335	⇑iPg	Pg	04 17 31.4	+0.2
BUM				eSg	Sg	04 17 45.8	+0.8
BUM	Brajici-Budva	1.06	335	i PG	Pg	04 17 31.4	+0.2
BUM				i SG	Sg	04 17 45.8	+0.8
PDG	Podgorica	1.10	351	i PG	Pg	04 17 31.9	-0.1
PDG				i SG	Sg	04 17 47.1	+0.7
PDG	Podgorica	1.10	351	⇓iPg	Pg	04 17 31.9	-0.1
PDG				eSg	Sg	04 17 47.1	+0.7
TTG	Podgorica	1.10	351	⇓iPg	Pg	04 17 31.9	-0.1
TTG				eSg	Sg	04 17 47.1	+0.7
BCI	Bajram Curri	1.11	22	ePG	Pg	04 17 30.6	-1.5
BCI				i SG	Sg	04 17 45.1	-1.5
PVY	Plav	1.30	16	⇑iPg	Pg	04 17 36.3	+0.5
PVY				eSg	Sg	04 17 54.4	+1.7
PVY	Plav	1.30	16	i PG	Pg	04 17 36.3	+0.5
PVY				i SG	Sg	04 17 54.4	+1.7
KRUS	Krusevo	1.31	88	i Pg	Pg	04 17 35.4	-0.7
KRUS				i Sg	Sg	04 17 53.0	-0.2
	comp=N,16nm,0.3s						
KRUS				eLg		04 17 54.6	
	comp=E,12nm,0.2s						
KRUS				eLg		04 17 55.2	
	comp=N,16nm,0.3s						
KRUS	Krusevo	1.31	88	i Pg	Pg	04 17 35.3	-0.8
KRUS				i Sg	Sg	04 17 52.9	-0.3
	comp=N,16nm,0.3s						
HCY	Herceg Novi	1.33	326	⇓iPg	Pg	04 17 36.3	-0.2
HCY				eSg	Sg	04 17 55.0	+1.2
HCY	Herceg Novi	1.33	326	i PG	Pg	04 17 36.3	-0.2
HCY				i SG	Sg	04 17 55.0	+1.2
BIA	Bitola	1.41	103	i Pg	Pg	04 17 37.4	-0.6
BIA				i Sg	Sg	04 17 58.4	+2.1
BIA				eLg		04 17 59.0	
	comp=E,33nm,0.3s						
BIA				eLg		04 18 00.1	
	comp=N,14nm,0.2s						
BIA	Bitola	1.41	103	i Pg	Pg	04 17 37.3	-0.6
BIA				i Sg	Sg	04 17 58.4	+2.1
NKY	Niksic	1.52	346	⇓iPg	Pg	04 17 40.1	+0.2
NKY				eSg	Sg	04 18 00.8	+1.2
NKY	Niksic	1.52	346	i PG	Pg	04 17 40.1	+0.2
NKY				i SG	Sg	04 18 00.8	+1.2
BEY	Berane	1.56	11	i PG	Pg	04 17 40.4	-0.3
BEY				i SG	Sg	04 18 02.8	+1.9
BEY	Berane	1.56	11	⇓iPg	Pg	04 17 40.4	-0.3
BEY				eSg	Sg	04 18 02.8	+1.9
IVA	Berane	1.56	11	⇓iPg	Pg	04 17 40.4	-0.3
IVA				eSg	Sg	04 18 02.8	+1.9
SKO	Skopje	1.58	66	i Pn	Pn	04 17 39.7	+1.2
SKO				i Sn	Sg	04 18 02.7	+0.9
SKO				eLg		04 18 03.7	
	comp=E,30nm,0.5s						
SKO				eLg		04 18 03.7	
	comp=N,47nm,0.4s						
SKO	Skopje	1.58	66	i Pn	Pn	04 17 39.6	+1.1
SKO				i Sn	Sg	04 18 02.6	+0.9
BRY	Bratogost	1.71	336	⇓iPg	Pg	04 17 43.0	-0.7
BRY				eSg	Sg	04 18 06.6	+0.7
BRY	Bratogost	1.71	336	i PG	Pg	04 17 43.0	-0.7
BRY				i SG	Sg	04 18 06.6	+0.7
UPM	Unac-Piva	1.91	347	⇓iPn	Pg	04 17 47.1	-0.4
UPM				eSn	Sg	04 18 11.4	-0.8
PLE	Pljevlja	1.99	358	⇓iPn	Pg	04 17 48.0	-0.9
PLE				eSn	Sg	04 18 14.0	-0.7
BARS	Barje	2.27	49	ePn	Pg	04 17 57.3	+3.1
BARS				eSg	Sg	04 18 22.3	-1.3
BBLS	Lazići	2.52	358	ePn	Pg	04 18 01.1	+1.9
BBLS				eSg	Sg	04 18 26.6	-5.3
DIVS	Divibare	2.78	7	ePn	Pg	04 18 03.2	-0.8
DIVS				eSn	Sn	04 18 27.9	-0.3

MEX 06 05:02:15.4±1.2, **1937N**×**10541W**, **h12**km±42km, **MD4.1**, **Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R15V		1.36	98	i P	Pn	05 02 36.3	-4.0
R15V				i S	Sb	05 02 52.7	-5.6
EZ5V		1.71	86	eP	Pn	05 02 42.5	-2.6
EZ5V				i S	Sn	05 03 03.2	-3.7
ANIG	Ahuacatlan	1.88	26	i P	Pn	05 02 43.9	-3.5
ANIG				i S	Sn	05 03 07.5	-3.6
MMIG	Aquila	2.23	118	eP	Pn	05 02 49.8	-2.4
MMIG				i S	Sn	05 03 16.2	-3.5
SFJM	Santa Fe	2.49	63	i P	Pn	05 02 55.3	-0.6
SFJM				i S	Sn	05 03 25.5	-0.8

*NEIC **06** 05:04:55.5, 1564N×9599W, h5km, MD4.2(MEX), After MEX.*
MEX 06 05:04:55.5±0.7, **1564N**×**9599W**, **h5**km, **MD4.2**, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.17	319	i P	Pg	05 04 58.6	-0.3
HUIG				i S	Sg	05 05 00.8	-0.3
VHO	Vista Hermosa	1.59	334	eP	Pn	05 05 20.9	-3.4
VHO				i S	Sn	05 05 40.4	-4.9
OXX	Oaxaca	1.59	334	i P	Pn	05 05 21.7	-2.7
CMIG	Matias Romero	1.79	36	i P	Pn	05 05 23.2	-3.9
CMIG				i S	Sn	05 05 46.4	-3.9
PNIG	Pinotepa	2.18	290	eP	Pn	05 05 29.7	-2.8
PNIG				i S	Sn	05 05 57.2	-2.8
UTMO	Huajuapan	2.78	322	eP	Pn	05 05 39.6	-1.2
UTMO				i S	Sn	05 06 12.2	-2.5
TGIG		2.98	67	eP	Pn	05 05 41.0	-2.5
TGIG				i S	Sn	05 06 17.9	-1.7
TPIG	Tehuac#an	3.06	335	i P	Pn	05 05 39.8	-4.7
TPIG				i S	Sn	05 06 18.8	-2.7
PPM	Popocatepetl	4.23	324	i P	Pn	05 05 60.0	-0.7
PPM				i S	Sn	05 06 46.9	-3.7

*ISCJB **06** 05:05:44.1±1.0, 245N±0.1×10936W±009, h10km, Error ellipse: s-maj=18.2km s-min=4.6km az=144.1*
*IDC **06** 05:05:44.4±2.3, 2449N×10956W, h0km, mb1 3.6/3, mb1mx3.5/20, mbtmp3.1/3, ML3.3/3, Error ellipse: s-maj=53.4km s-min=15.1km az=137.0*
*MEX **06** 05:05:48.0±0.5, 2488N×11093W, h22km±999km, MD4.4*
ISC 06 05:05:45.7±0.9, **245N**±01×**10945W**±009, **h10**km, **n7**, $\sigma 1^{s}29$/12, **Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	0.87	244	Pn	Pn	05 06 03.3	-0.7
	161nm,0.3s,baz=28,slow=5.9,SNR=96						
LPIG				Sn	Sn	05 06 14.2	-2.5
	630nm,0.3s,baz=180,slow=20,SNR=43						
LPIG	La Paz	0.87	244	i P	Pg	05 06 03.3	+0.8
LPIG				i S	Sg	05 06 14.5	+0.7
HPIG		4.20	54	i P	Pg	05 07 04.2	-2.0
HPIG				i S	Sg	05 08 01.0	+0.3
CGIG		6.01	12	i P	Pn	05 07 14.8	+0.2
CGIG				i S	Sn	05 08 22.2	-1.3
TXAR	Lajitas Array	7.07	46	Pn	Pn	05 07 31.1	+1.9
	0.1nm,0.3s,baz=226,slow=14,SNR=7.8						
TXAR				Sn	Sn	05 08 49.9	+0.1
	0.2nm,0.3s,baz=243,slow=16,SNR=8.0						
NVAR	Mina Array Bea	15.81	334	Pn	Pn	05 09 31.5	+3.1
	0.0nm,0.3s,baz=154,slow=11,SNR=4.5						
PDAR	Pinedale Array	18.24	360	P	Pn	05 09 59.4	+0.4
	0.0nm,0.3s,baz=171,slow=8.8,SNR=3.7						

*ISK **06** 05:16:59.5, 3997N×2561E, h3km, MD2.9*
*CSEM **06** 05:16:59.6±0.4, 3997N×2558E, h5km, MD2.9, Error ellipse: s-maj=7.6km s-min=3.2km az=71.0*
*DDA **06** 05:17:03.4, 4002N×2580E, h3km±5km, Md2.9*
ISC 06 05:17:00.5±2.3, **3998N**±005×**256E**±01, **h2**km±7km, **n7**, $\sigma 0^{s}76$/14, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.34	52	ePG	Pg	05 17 06.6	-0.4
GADA				eSG	Sg	05 17 11.7	+0.3
BOZC	Bozcaada	0.41	110	i P	Pg	05 17 08.1	-0.3
BOZC				i S	Sg	05 17 14.0	+0.3
EZN	Ezine	0.62	104	ePG	Pg	05 17 11.5	-0.8
EZN				eSG	Sg	05 17 19.7	-0.5
ENEZ	Enez	0.88	31	ePG	Pg	05 17 16.6	-0.9
ENEZ				eSG	Sg	05 17 30.0	+1.1
AYVA	Ayvalik	1.11	127	i P	Pg	05 17 26.8	+5.1
AYVA				i S	Sg	05 17 36.8	+0.8
MFT	Murefte	1.55	58	ePN	Pn	05 17 28.7	-0.3
MFT				eSN	Sn	05 17 49.2	-0.4
BALY	Balya	1.61	98	i P	Pn	05 17 31.7	+1.9
BALY				i S	Sn	05 17 50.6	-0.6

IDC 06 05:18:54.2±3.9, 2408N×10973W, h0km, mb1 3.8/3, mb1mx3.6/20, mbtmp3.3/3, ML3.6/3, Error ellipse: s-maj=66.1km s-min=15.9km az=156.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	0.53	273	Pn	Pg	05 19 09.5	+5.2
	291nm,0.3s,baz=38,slow=17,SNR=64						
LPIG				Sn	Sg	05 19 17.7	+6.6
	602nm,0.3s,baz=41,slow=19,SNR=56						
TXAR	Lajitas Array	7.54	45	Pn	Pn	05 20 45.0	-0.4
	0.2nm,0.3s,baz=224,slow=12,SNR=8.8						
TXAR				Sn	Sn	05 22 11.2	-0.4
	0.1nm,0.3s,baz=247,slow=20,SNR=2.1						
NVAR	Mina Array Bea	16.06	335	Pn	Pn	05 22 45.2	+3.8
	0.1nm,0.3s,baz=165,slow=11,SNR=12						
PDAR	Pinedale Array	18.64	0	P	Pn	05 23 14.7	+1.0
	0.0nm,0.3s,baz=159,slow=13,SNR=5.0						

*ISK **06** 05:58:20.6, 3841N×3922E, h5km, MD2.8*
*CSEM **06** 05:58:20.4±0.1, 3841N×3926E, h8km, MD2.8, Error ellipse: s-maj=2.7km s-min=2.2km az=167.0*
*ISCJB **06** 05:58:21.6±0.5, 3839N±003×3925E±003, h5km±4km, Error ellipse: s-maj=5.6km s-min=3.7km az=10.5*
*DDA **06** 05:58:21.2, 3834N×3923E, h7km±4km, Md2.9*
ISC 06 05:58:22.0±0.5, 3840N±003×3925E±003, h5km±4km, n13, σ0^{s}83/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.05	113	PG	Pg	05 58 22.8	-0.5
SVRC				SG	Sg	05 58 23.9	-0.3
ELZG	Elazig	0.23	296	i P	Pg	05 58 26.4	-0.2
ELZG				i S	Sg	05 58 30.6	+1.0
PTK	Pertek	0.51	12	ePG	Pg	05 58 31.1	-0.6
PTK				eSG	Sg	05 58 39.7	+1.3
MALT	Malatya	0.65	263	ePG	Pg	05 58 33.4	-1.1
MALT				eSG	Sg	05 58 43.9	+0.8
MYA	Malataya	0.65	264	ePG	Pg	05 58 33.6	-1.0
DIYA	Diyarbakir	0.83	124	i P	Pg	05 58 37.6	-0.3
DIYA				i S	Sg	05 58 49.8	+1.1
URFA	Urfa	1.01	200	ePG	Pg	05 58 41.8	+0.4
URFA				eSG	Sg	05 58 55.8	+1.2
AKCD	Akcadag	1.05	265	i P	Pg	05 58 40.6	-1.5
AKCD				i S	Sg	05 58 56.6	+0.8
ATAB	Bozova	1.20	220	i P	Pg	05 58 44.2	-0.7
ATAB				i S	Sg	05 59 00.8	+0.4
ATAB	Bozova	1.20	220	i P	Pg	05 58 44.2	-0.7
ATAB				i S	Sg	05 59 00.8	+0.4
MARD	Mardin	1.62	131	i P	Pn	05 58 50.4	-0.8
MARD				i S	Sn	05 59 11.6	-0.8
BEST	Besiri	1.67	107	i P	Pn	05 58 51.8	0.0
BEST				i S	Sn	05 59 14.8	+1.2
GZT	Gaziantep	1.69	233	i P	Pn	05 58 51.5	-0.6
GZT				i S	Sn	05 59 14.5	+0.3

*ISCJB **06** 06:02:28.0±0.6, 2427S±005×670W±01, h165km±13km, mb3.9/2, Error ellipse: s-maj=15.9km s-min=7.9km az=3.8*
*IDC **06** 06:02:28.8±1.1, 2425S×6696W, h154km±12km, mb3.8/2, mb1 3.7/8, mb1mx3.5/21, mbtmp3.6/8, Error ellipse: s-maj=16.8km s-min=11.8km az=89.0*
*NEIC **06** 06:02:29.1±0.7, 2427S×6697W, h160km±8km, mb4.7/2, Error ellipse: s-maj=12.7km s-min=8.4km az=104.0*
ISC 06 06:02:28.8±0.6, 2430S±005×670W±01, h151km±13km, n16, σ1^{s}34/19, mb3.9/2, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.45	313	P	Pn	06 03 11.1	+1.8
	45nm,0.3s,baz=138,slow=5.2,SNR=794						
LVC				S	Sn	06 03 41.1	+0.6
	41nm,0.3s,baz=359,slow=22,SNR=60						
LCO	Las Campanas	5.76	215	ePn	Pn	06 03 51.4	-0.9
	36nm,0.4s						
LCO				eSn	Sn	06 04 54.7	-2.9
CFAA	Coronel Fontan	7.37	189	P	Pn	06 04 15.6	+1.9
	0.2nm,0.3s,baz=354,slow=12,SNR=18						
CFAA				S	Sn	06 05 33.5	-2.5
	0.3nm,0.3s,baz=127,slow=18,SNR=8.3						
LPAZ	La Paz	8.04	352	P	Pn	06 04 23.3	+0.5
	1.9nm,0.3s,baz=166,slow=7.7,SNR=64						
LPAZ				S	Sn	06 05 50.0	-2.4
	0.4nm,0.3s,baz=344,slow=20,SNR=7.7						
LPAZ	La Paz	8.04	352	P	Pn	06 04 23.3	+0.5
LPAZ				S	Sn	06 05 50.0	-2.4
CPUP	Villa Florida	8.95	105	P	Pn	06 04 35.1	+0.3
	0.2nm,0.3s,baz=264,slow=13,SNR=3.1						
SIV	San Ignacio	9.94	35	P	Pn	06 04 47.5	-0.6
	2.0nm,0.3s,baz=217,slow=14,SNR=54						
SIV				S	Sn	06 06 28.1	-10
	baz=225,slow=17,SNR=3.9						
TRQA	Tornquist	14.36	164	ePn	Pn	06 05 45.0	-0.1
	13nm,0.6s						
PLCA	Paso Flores	16.66	190	P	Pn	06 06 14.6	+1.2
	0.2nm,0.3s,baz=7.6,slow=15,SNR=6.6						
PLCA	Paso Flores	16.66	190	P	Pn	06 06 14.6	+1.2
BDFB	Brasilia	19.77	68	P	P	06 06 47.6	+0.4
	1.9nm,0.3s,baz=231,slow=12,SNR=27						
QSPA	South Pole Qui	65.91	180	P	P	06 12 58.8	+0.9
	2.6nm,0.5s,mb4.3,baz=218,slow=0.5,SNR=15						
TORD	Torodi Ar. Bea	76.64	69	P	P	06 14 02.1	-1.2
	0.5nm,0.3s,mb3.6,baz=263,slow=6.3,SNR=16						
ASAR	Alice Springs	128.20	205	PKP	PKPdf	06 21 16.6	-1.2
	0.7nm,0.7s,baz=136,slow=2.3,SNR=6.7						
WRA	Warramunga Arr	131.38	207	PKP	PKPdf	06 21 22.5	-1.4
	0.5nm,0.4s,baz=162,slow=1.7,SNR=16						
MKAR	Makanchi Array	146.73	40	PKPbc	PKPbc	06 21 52.6	-0.2
	0.4nm,0.6s,baz=349,slow=1.5,SNR=3.4						

*NEIC **06** 06:19:23.7, 3000S×7168W, h38km, MD3.8(GUC), After GUC.*
GUC 06 06:19:23.7±0.7, 3000S×7168W, h38km±4km, MD3.8, ML3.0, 6C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	La Serena	0.39	76	⇓iP	Pn	06 19 32.8	-0.1
LSCH				i S	Sn	06 19 39.4	+0.1
LSCH				AML	AML	06 19 39.8	
	comp=E,830nm,0.3s						
OVCH	Ovalle	0.73	146	⇑iP	Pn	06 19 37.7	+0.2
OVCH				i S	Sn	06 19 47.9	+0.4
OVCH				AML	AML	06 19 51.1	
	comp=N,1μm,0.5s						
OVCH	Ovalle	0.73	146	⇑iP	Pn	06 19 37.7	+0.2
OVCH				i S	Sn	06 19 47.9	+0.4
TLL	Tololo Astrono	0.78	102	⇑iP	Pn	06 19 39.1	+1.0
TLL				i S	Sn	06 19 50.4	+1.8
TLL				AML	AML	06 19 54.0	
	comp=N,719nm,0.5s						
TLL	Tololo Astrono	0.78	102	⇑iP	Pn	06 19 39.1	+1.0
TLL				i S	Sn	06 19 50.4	+1.8
LCO	Las Campanas	1.31	41	i P	Pn	06 19 46.8	+1.3
LCO				i S	Sn	06 20 05.2	+3.5
VACH	Vallenar	1.64	30	⇑iP	Pn	06 19 51.0	+1.0
VACH				i S	Sn	06 20 12.2	+2.4
VACH				AML	AML	06 20 16.4	
	comp=E,1μm,0.1s						
VACH	Vallenar	1.64	30	⇑iP	Pn	06 19 51.0	+1.0
VACH				i S	Sn	06 20 12.2	+2.4

*ISCJB **06** 06:25:00.9±0.9, 3003S±003×7173W±010, h45km±8km, mb4.1/5, MS3.7/2, Error ellipse: s-maj=14.0km s-min=4.4km az=8.1*
*GUC **06** 06:25:00.7±0.6, 2999S×7170W, h37km±2km, MD4.3, ML4.7*
*NEIC **06** 06:25:00.7, 2999S×7170W, h37km, mb4.7/1, MD4.3(GUC), After GUC.*
*IDC **06** 06:25:03.3±3.1, 3008S×7164W, h52km±27km, mb3.7/4, mb1 3.9/9, mb1mx3.8/19, mbtmp3.7/9, ML3.9/5, MS3.4/4, Ms1 3.4/4, ms1mx3.0/26, Error ellipse: s-maj=30.1km s-min=25.0km az=98.0*
ISC 06 06:25:02.1±0.8, 3000S±003×7169W±008, h37km±10km, n37, σ0^{s}93/48, mb4.1/5, MS3.7/2, 2C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	La Serena	0.39	77	⇓iP	Pn	06 25 10.2	-1.2
LSCH				i S	Sn	06 25 16.6	-1.1
OVCH	Ovalle	0.74	146	⇓iP	Pn	06 25 14.9	-1.2
OVCH				i S	Sn	06 25 25.2	-0.9
OVCH				AML	AML	06 25 30.5	
	comp=N,23μm,0.3s						
OVCH	Ovalle	0.74	146	⇓iP	Pn	06 25 14.9	-1.2
OVCH				i S	Sn	06 25 25.2	-0.9
TLL	Tololo Astrono	0.78	103	eP	Pn	06 25 16.3	-0.3
TLL				i S	Sn	06 25 27.7	+0.5
TLL				AML	AML	06 25 31.4	
	comp=N,12μm,0.4s						
TLL	Tololo Astrono	0.78	103	eP	Pn	06 25 16.3	-0.3
TLL				i S	Sn	06 25 27.7	+0.5
LCO	Las Campanas	1.30	41	⇑iP	Pn	06 25 24.0	+0.2
LCO				i S	Sn	06 25 41.7	+1.6
VACH	Vallenar	1.63	30	⇓iP	Pn	06 25 28.3	0.0
VACH				i S	Sn	06 25 49.1	+1.0
VACH				AML	AML	06 25 56.9	
	comp=N,11μm,0.3s						
VACH	Vallenar	1.63	30	⇓iP	Pn	06 25 28.3	0.0
VACH				i S	Sn	06 25 49.1	+1.0
JACH	Jahuel	2.83	161	i P	Pn	06 25 45.1	+0.2
JACH				i S	Sn	06 26 18.8	+1.0
PEL	Peldehue	3.25	165	⇓eP	Pn	06 25 50.8	+0.2
PEL				i S	Sn	06 26 28.5	+0.5
PEL				AML	AML	06 26 47.7	
	comp=E,3μm,0.4s						
CFAA	Coronel Fontan	3.37	119	P	Pn	06 25 54.5	+2.2
	comp=E,2.4nm,0.3s,baz=317,slow=12,SNR=89						
CFAA				S	Sn	06 26 36.5	+5.5
	comp=E,12nm,0.3s,baz=76,slow=19,SNR=11						
CLCH	Cerro Calan	3.53	164	⇑iP	Pn	06 25 54.5	+0.2
CLCH				i S	Sn	06 26 35.6	+0.8
CLCH				AML	AML	06 26 55.2	
	comp=E,3μm,0.5s						
RCDM	Rinconada Maip	3.56	168	eP	Pn	06 25 54.5	-0.4
RCDM				i S	Sn	06 26 36.2	+0.6
RCDM				AML	AML	06 26 55.1	
	comp=E,1μm,0.2s						
RCDM	Rinconada Maip	3.56	168	eP	Pn	06 25 54.5	-0.4
RCDM				i S	Sn	06 26 36.2	+0.6
ANTU	Antumapu	3.67	166	i P	Pn	06 25 56.2	-0.1
TACH	Talagante	3.70	170	eP	Pn	06 25 56.6	-0.2
PCH	Pirque	3.75	165	eP	Pn	06 25 57.7	+0.3
SFDO	San Fernando	4.64	173	eP	Pn	06 26 09.3	-0.4
LVC	Limon Verde	7.76	19	P	Pn	06 26 50.2	-2.5
	comp=E,0.6nm,0.3s,baz=200,slow=12,SNR=11						
LVC				S	Sn	06 28 16.0	-3.4
	comp=E,2.7nm,0.3s,baz=166,slow=17,SNR=1.9						
PLCA	Paso Flores	10.75	175	P	Pn	06 27 32.5	-1.0
	comp=E,0.2nm,0.3s,baz=334,slow=13,SNR=3.0						
PLCA				LR	LR	06 31 41.8	
	comp=E,139nm,20.1s,baz=348,slow=37						
TRQA	Tornquist	11.37	138	ePn	Pn	06 27 41.7	-0.3
	comp=E,15nm,0.7s						
TRQA				eSn	Sn	06 29 42.2	-5.5
CPUP	Villa Florida	13.18	77	P	Pn	06 28 05.8	-0.9
	comp=E,0.6nm,0.3s,baz=241,slow=9.9,SNR=5.3						
LPAZ	La Paz	14.03	14	P	Pn	06 28 19.9	+1.5
	comp=E,0.3nm,0.3s,baz=195,slow=7.5,SNR=20						
LPAZ				LR	LR	06 33 17.4	
	comp=E,52nm,18.6s,baz=2.0,slow=35						
LPAZ	La Paz	14.03	14	P	Pn	06 28 19.9	+1.5
LPAZ				LR	LR	06 33 17.4	
SIV	San Ignacio	17.01	37	P	Pn	06 28 58.6	+1.3
	comp=E,0.3nm,0.3s,baz=225,slow=12,SNR=16						
USHA	Ushuaia	24.93	176	LR	LR	06 40 57.2	
	comp=E,82nm,19.8s,MS3.2,baz=195,slow=38						
BDFB	Brasilia	26.01	62	P	P	06 30 30.8	-0.9
	comp=E,1.8nm,0.6s,mb3.8,baz=177,slow=27,SNR=5.6						
VNA2	Neumayer--Watz	53.59	158	e	P	06 34 19.3	+0.2
SNAA	Sanae	55.18	159	e	P	06 34 30.1	-0.5
SNAA	Sanae	55.18	159	eP	P	06 34 29.5	-1.2
	comp=E,11nm,1.2s,mb4.8						
TXAR	Lajitas Array	66.42	330	P	P	06 35 48.1	+0.6
	comp=E,0.4nm,0.6s,mb3.6,baz=152,slow=7.7,SNR=6.2						
NVAR	Mina Array Bea	80.79	325	P	P	06 37 11.9	+0.2
	comp=E,1.1nm,1.0s,mb3.7,baz=168,slow=6.0,SNR=4.0						
TORD	Torodi Ar. Bea	82.57	70	P	P	06 37 21.2	-0.4
	comp=E,3.2nm,0.8s,mb4.4,baz=257,slow=4.7,SNR=12						
URZ	Urewera	86.58	227	LR	LR	07 12 10.0	
	comp=E,71nm,18.2s,MS4.1,baz=53,slow=33						
ASAR	Alice Springs	121.25	208	PKP	PKPdf	06 43 50.0	-1.6
	comp=E,0.1nm,0.4s,baz=152,slow=1.6,SNR=3.2						
WRA	Warramunga Arr	124.38	210	PKP	PKPdf	06 43 56.4	-1.4
	comp=E,0.4nm,0.5s,baz=157,slow=1.8,SNR=5.5						
ZALV	Zalesovo Beam	150.63	29	PKPbc	PKPbc	06 44 49.5	-0.1
	comp=E,3.9nm,0.6s,baz=297,slow=3.2,SNR=12						

*NIED **06** 06:27:00, 3100N×13160E, h32km, Mw4.0 Best double couple: Mo1.23000×10^15 NP1:φs5.00000°, δ75.00000°, λ79.00000°. NP2:φs223.00000°, δ18.00000°, λ127.00000°.*
*IDC **06** 06:27:06.3±2.1, 31.12N×13141E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.7/21, mbtmp3.7/5, ML4.0/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/33, Error ellipse: s-maj=46.3km s-min=28.4km az=65.0*
*ISCJB **06** 06:27:10.7±1.0, 3102N±005×1315E±01, h51km±9km, mb3.4/4, MS3.2/2, Error ellipse: s-maj=18.6km s-min=5.9km az=19.8*
*JMA **06** 06:27:10.9±0.1, 3103N×13157E, h34km±1km, M3.9*
JMA Felt I J1.
*NEIC **06** 06:27:10.9, 3103N×13157E, h34km, MG3.9(JMA), After JMA.*
ISC 06 06:27:11.3±1.5, 3103N±004×13153E±010, h34km±8km, n16, σ0^{s}58/20, mb3.4/4, MS3.2/2, 4C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSR	Tashiro 2	0.54	285	⇑P	Pn	06 27 22.2	-0.4
JTSR				eS	Sb	06 27 30.6	+0.2
JNAR	Kushima--Naru	0.54	336	⇓P	Pn	06 27 22.2	-0.4
JNAR				eS	Sb	06 27 30.4	-0.1
JTN	Tanegashima 3	0.60	232	⇑P	Pn	06 27 23.4	-0.1
JTN				eS	Sn	06 27 32.7	+0.7
JTZ	Takazaki	0.95	337	⇑P	Pn	06 27 28.3	+0.1
JTZ				eS	Sn	06 27 40.8	+0.3
JSU	Suzuyama	1.04	298	P	Pn	06 27 29.6	+0.2
JTSN	Tsuno	1.21	359	P	Pn	06 27 31.7	-0.1
JTSN				eS	Sn	06 27 47.4	+0.3
JKC	Kuchinoerabu	1.28	244	P	Pn	06 27 32.9	+0.1
JKC				eS	Sn	06 27 49.2	+0.4
JZO	Okuchi	1.36	324	⇑P	Pn	06 27 34.3	+0.4
JOW	Kunigami	5.06	215	Pn	Pn	06 28 24.6	-0.2
	11nm,0.3s,baz=96,slow=15,SNR=38						
JOW				Sn	Sn	06 29 21.2	-0.9
	6.4nm,0.3s,baz=75,slow=20,SNR=3.5						
KSRS	Korea Array	7.07	336	LR	LR	06 31 52.5	
	comp=Z,174nm,18.2s,baz=145,slow=41						
SONM	Songino Array	25.49	318	LR	LR	06 43 21.1	
	comp=Z,38nm,21.7s,MS2.9,baz=111,slow=38						
CMAR	Chiang Mai Arr	32.01	255	P	P	06 33 34.1	-0.5
	0.6nm,0.3s,mb3.9,baz=48,slow=8.2,SNR=4.7						
ZALV	Zalesovo Beam	40.39	318	LR	LR	06 53 04.8	
	comp=Z,56nm,18.1s,MS3.5,baz=74,slow=39						
MKAR	Makanchi Array	40.73	307	P	P	06 34 47.2	-1.5
	0.1nm,0.6s,mb2.6,baz=86,slow=9.5,SNR=4.1						
WRA	Warramunga Arr	50.75	177	P	P	06 36 08.0	0.0
	0.6nm,1.0s,mb3.5,baz=358,slow=8.6,SNR=4.8						
ASAR	Alice Springs	54.43	177	P	P	06 36 36.7	+1.5
	0.4nm,0.5s,mb3.6,baz=12,slow=13,SNR=8.9						

*ISCJB **06** 06:44:28.7±0.5, 3602N±002×1049W±004, h15km, Error ellipse: s-maj=4.7km s-min=3.1km az=0.2*
*MDD **06** 06:44:30.5±1.2, 3608N×1060W, h0km, mbLg3.6/22, Error ellipse: s-maj=11.2km s-min=7.6km az=79.0, PRIMO*
*NEIC **06** 06:44:30.7, 3602N×1071W, h15km, ML3.0(LIS), MN3.5(MDD), After MDD.*
*IGIL **06** 06:44:32.0, 36.14N×1065W, h2km, ML3.3*
*CNRM **06** 06:44:32.5, 3582N×1068W, h30km, MD3.8*
*LDG **06** 06:44:32.2±0.2, 3601N×1072W, h20km, Ml3.7/4, Error ellipse: s-maj=3.7km s-min=2.8km az=30.0*
*CSEM **06** 06:44:32.8±0.2, 3601N×1075W, h40km, ML4.1/19, Error ellipse: s-maj=4.0km s-min=3.0km az=140.0*
*INMG **06** 06:44:33.0±1.6, 36.12N×1065W, h13km±25km, ML3.1, Error ellipse: s-maj=24.2km s-min=3.5km az=55.0*
ISC 06 06:44:31.2±0.5, 3605N±002×1047W±004, h15km, n141, σ1^{s}31/272, 8C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.71	50	i Pn	Pn	06 45 01.7	+1.3
PFVI				eSn	Sn	06 45 22.9	+1.0
PFVI				A		06 45 24.1	
	138nm,0.2s						
PFVI	Vila Bisbo	1.71	50	ePn	Pn	06 45 01.7	+1.3
PFVI				eSn	Sn	06 45 22.9	+1.0
	138nm,0.2s						
PFVI	Vila Bisbo	1.71	50	ePn	Pn	06 45 01.7	+1.3
PFVI				eSn	Sn	06 45 23.0	+1.1
MORF	Marmelete	1.93	49	ePn	Pn	06 45 04.8	+1.4
MORF				eSn	Sn	06 45 28.5	+1.2
MORF				A		06 45 31.0	
	122nm,0.1s						
MORF	Marmelete	1.93	49	⇑Pn	Pn	06 45 04.8	+1.4
MORF				Sn	Sn	06 45 28.5	+1.2
	122nm,0.1s						
PTEO	Sao Teotonio	2.05	43	ePn	Pn	06 45 06.2	+1.1
PTEO				eSn	Sn	06 45 31.0	+0.7
PTEO				A		06 45 41.8	
	60nm,0.2s						
PTEO	Sao Teotonio	2.05	43	ePn	Pn	06 45 06.2	+1.1
PTEO				eSn	Sn	06 45 31.0	+0.7
	60nm,0.2s						
PTEO	Sao Teotonio	2.05	43	ePn	Pn	06 45 06.2	+1.1
PTEO				eSn	Sn	06 45 31.1	+0.8
PBDV	Barranco-do-Ve	2.36	59	ePn	Pn	06 45 11.2	+1.8
PBDV				eSn	Sn	06 45 40.0	+1.9
PBDV				A		06 45 42.8	
	26nm,0.2s						
PBDV	Barranco-do-Ve	2.36	59	⇑Pn	Pn	06 45 11.2	+1.8
PBDV				Sn	Sn	06 45 40.0	+1.9
	13nm,0.2s						
PVAQ	Vaqueiros	2.59	58	i Pn	Pn	06 45 14.3	+1.8
PVAQ				eSn	Sn	06 45 44.8	+1.1
PVAQ				A		06 45 49.1	
	50nm,0.3s						
PVAQ	Vaqueiros	2.59	58	⇑Pn	Pn	06 45 14.3	+1.8
PVAQ				Sn	Sn	06 45 44.8	+1.1
	25nm,0.3s						
EGRO	El Granado	2.82	57	⇑P	Pn	06 45 17.2	+1.6
	23nm,0.1s,SNR=18						
EGRO				S	Sn	06 45 51.5	+2.2
	19nm,0.1s,SNR=4.8						
EGRO	El Granado	2.82	57	P	Pn	06 45 17.2	+1.6
	23nm,0.1s,SNR=18						
EGRO				S	Sn	06 45 50.0	+0.7
	19nm,0.1s,SNR=4.8						
EGRO	El Granado	2.82	57	⇑P	Pn	06 45 17.2	+1.6
EGRO				S	Sn	06 45 50.0	+0.7
PBEJ	Beja	2.87	46	ePn	Pn	06 45 17.2	+0.9
PBEJ				eSn	Sn	06 45 50.9	+0.3
PBEJ				A		06 45 53.7	
	43nm,0.2s						
PBEJ	Beja	2.87	46	⇑Pn	Pn	06 45 17.2	+0.9
PBEJ				Sn	Sn	06 45 50.9	+0.3
	21nm,0.2s						
MOE	Montemor	2.99	34	ePn	Pn	06 45 19.0	+1.0
MOE				eSn	Sn	06 45 52.8	-0.8
PMAFR	Mafra	3.05	18	ePn	Pn	06 45 18.4	-0.4
PMAFR				eSn	Sn	06 45 53.0	-2.1
PMAFR				A		06 45 57.3	
	160nm,0.4s						
PMAFR	Mafra	3.05	18	ePn	Pn	06 45 18.4	-0.4
PMAFR				eSn	Sn	06 45 53.0	-2.1
	160nm,0.4s						
EVOP	Sao Brissos	3.10	36	ePn	Pn	06 45 20.1	+0.6
EVOP				eSn	Sn	06 45 54.8	-1.5
	30nm,0.2s						
EVO	Evora	3.16	38	ePn	Pn	06 45 20.1	-0.2
EVO				eSn	Sn	06 45 54.8	-2.9
	59nm,0.2s						
EVO	Evora	3.16	38	ePn	Pn	06 45 20.8	+0.5
EVO				eSn	Sn	06 45 57.3	-0.4
EVO				A		06 46 03.0	
	61nm,0.3s						
EVO	Evora	3.16	38	ePn	Pn	06 45 20.8	+0.5
EVO				eSn	Sn	06 45 57.3	-0.4
	61nm,0.3s						
ALMR	Almeirim	3.44	25	eP	Pn	06 45 24.7	+0.4
ALMR				eS	Sn	06 46 03.0	-1.8
ALMR				eS	Sn	06 46 03.0	-1.8
ALMR				AML	AML	06 46 05.3	
	comp=E,89nm,0.2s						
PBAR	Barrancos	3.47	51	ePn	Pn	06 45 25.7	+1.1
PBAR				eSn	Sn	06 46 05.4	+0.1
PBAR				A		06 46 07.7	
	comp=E,49nm,0.5s						
PBAR	Barrancos	3.47	51	ePn	Pn	06 45 25.7	+1.1
PBAR				eSn	Sn	06 46 05.4	+0.1
	comp=E,49nm,0.5s						
EMIN	Mina Concepcio	3.49	59	⇑P	Pn	06 45 26.1	+1.2
	comp=E,11nm,0.1s,SNR=18						
EMIN				S	Sn	06 46 06.5	+0.6
	comp=E,19nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.49	59	P	Pn	06 45 26.1	+1.2
	comp=E,11nm,0.1s,SNR=18						
EMIN				S	Sn	06 46 06.9	+0.9
	comp=E,18nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	3.49	59	⇑P	Pn	06 45 26.1	+1.2
EMIN				S	Sn	06 46 06.9	+1.0
PESTR	Estremoz	3.63	38	ePn	Pn	06 45 27.3	+0.5
PESTR				eSn	Sn	06 46 08.1	-1.2
PESTR				A		06 46 23.5	
	comp=E,24nm,0.6s						
PESTR	Estremoz	3.63	38	ePn	Pn	06 45 27.3	+0.5
PESTR				eSn	Sn	06 46 08.1	-1.2
	comp=E,24nm,0.6s						
AVE	Averroes	3.72	137	P	Pn	06 45 24.2	-3.9
ESPR	Espera	3.81	76	P	Pn	06 45 31.1	+1.9
	comp=E,35nm,0.2s,SNR=24						
ESPR				S	Sn	06 46 14.6	+0.8
	comp=E,168nm,0.2s						
ESPR	Espera	3.81	76	P	Pn	06 45 31.1	+1.9
	comp=E,35nm,0.2s,SNR=24						
ESPR				S	Sn	06 46 14.6	+0.9
	comp=E,168nm,0.2s						
EBAD	Badajoz	3.85	44	P	Pn	06 45 30.4	+0.5
	comp=E,5.6nm,0.1s,SNR=39						
EBAD				S	Sn	06 46 14.4	-0.5
	comp=E,63nm,0.2s,SNR=4.8						
EBAD	Badajoz	3.85	44	P	Pn	06 45 30.4	+0.5
	comp=E,5.6nm,0.1s,SNR=39						
EBAD				S	Sn	06 46 14.4	-0.5
	comp=E,27nm,0.1s,SNR=4.8						
PTOM	Tomar	3.92	24	ePn	Pn	06 45 31.2	+0.4
PTOM				eSn	Sn	06 46 14.6	-1.8
PTOM				A		06 46 20.1	
	comp=E,47nm,0.1s						
PTOM	Tomar	3.92	24	ePn	Pn	06 45 31.2	+0.4
PTOM				eSn	Sn	06 46 14.6	-1.8
	comp=E,47nm,0.1s						
EJIF	Jimena Fronter	4.06	83	P	Pn	06 45 35.3	+2.5
	comp=E,2.8nm,0.1s,SNR=7.9						
EJIF				S	Sn	06 46 21.0	+1.0
	comp=E,25nm,0.4s,SNR=4.0						
EJIF	Jimena Fronter	4.06	83	P	Pn	06 45 34.0	+1.3
	comp=E,2.8nm,0.1s,SNR=7.9						
EJIF				S	Sn	06 46 21.2	+1.2
	comp=E,9.9nm,0.4s,SNR=7.9						
EJIF	Jimena Fronter	4.06	83	P	Pn	06 45 34.0	+1.2
EJIF				S	Sn	06 46 21.2	+1.2
ECEU	Ceuta	4.13	91	P	Pn	06 45 34.9	+1.2
	comp=E,6.3nm,0.0s,SNR=7.9						

ECEU				S	Sn	06 46 24.2	+2.4
	comp=E,12nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**4.13**	**91**	P	**Pn**	**06 45 35.2**	**+1.5**
	comp=E,4.9nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**06 46 22.3**	**+0.5**
	comp=E,12nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**4.16**	**35**	*e*Pn	**Pn**	**06 45 34.6**	**+0.5**
PMRV				*e*Sn	**Sn**	**06 46 21.0**	**-1.5**
PMRV				A		06 46 24.5	
	comp=E,44nm,0.2s						
PMRV	**Marv??o**	**4.16**	**35**	*e*Pn	**Pn**	**06 45 34.6**	**+0.5**
PMRV				*e*Sn	**Sn**	**06 46 21.0**	**-1.5**
	comp=E,44nm,0.2s						
JHA	**Jbel Lahdid**	**4.38**	**169**	*i* P	**Pn**	**06 45 34.0**	**-3.2**
JHA				*i* S	**Sn**	**06 46 19.0**	**-9.0**
PCBR	**Castelo Branco**	**4.46**	**31**	*e*Pn	**Pn**	**06 45 38.5**	**+0.3**
PCBR				*e*Sn	**Sn**	**06 46 27.8**	**-2.1**
PCBR				A		06 46 33.6	
	comp=E,18nm,0.2s						
PCBR	**Castelo Branco**	**4.46**	**31**	*e*Pn	**Pn**	**06 45 38.5**	**+0.3**
PCBR				*e*Sn	**Sn**	**06 46 27.8**	**-2.1**
	comp=E,18nm,0.2s						
ECAB	**El Cabril**	**4.52**	**62**	P	**Pn**	**06 45 40.5**	**+1.5**
	comp=E,24nm,0.1s,SNR=63						
ECAB				S	**Sn**	**06 46 31.0**	**-0.2**
	comp=E,11nm,0.1s,SNR=7.6						
ECAB	**El Cabril**	**4.52**	**62**	P	**Pn**	**06 45 40.5**	**+1.5**
	comp=E,24nm,0.1s,SNR=63						
ECAB				S	**Sn**	**06 46 31.1**	**-0.1**
	comp=E,11nm,0.1s,SNR=7.6						
ECAB	**El Cabril**	**4.52**	**62**	P	**Pn**	**06 45 40.5**	**+1.5**
ECAB				S	**Sn**	**06 46 31.1**	**-0.1**
EMIJ	**Mijas**	**4.63**	**82**	P	**Pn**	**06 45 42.8**	**+2.2**
	comp=E,0.8nm,0.1s,SNR=4.0						
EMIJ				S	**Sn**	**06 46 34.7**	**+0.7**
	comp=E,8.2nm,0.2s,SNR=5.8						
EMIJ	**Mijas**	**4.63**	**82**	P	**Pn**	**06 45 41.8**	**+1.3**
	comp=E,0.8nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**06 46 34.7**	**+0.7**
	comp=E,6.8nm,0.2s,SNR=5.8						
EMIJ	**Mijas**	**4.63**	**82**	P	**Pn**	**06 45 41.8**	**+1.2**
EMIJ				S	**Sn**	**06 46 34.7**	**+0.7**
CIA	**Chichaoua**	**4.69**	**162**	*i* P	**Pn**	**06 45 39.0**	**-2.4**
CIA				*i* S	**Sn**	**06 46 27.5**	**-8.1**
TGT	**Taghat**	**4.86**	**112**	*e*P	**Pn**	**06 45 45.0**	**+1.3**
TGT				*i* S	**Sn**	**06 46 37.0**	**-2.7**
MTE	**Manteigas**	**4.92**	**27**	*e*Pn	**Pn**	**06 45 44.6**	**+0.1**
MTE				*e*Sn	**Sn**	**06 46 38.8**	**-2.3**
MTE				A		06 46 41.4	
	comp=E,27nm,0.6s						
MTE	**Manteigas**	**4.92**	**27**	*e*Pn	**Pn**	**06 45 44.6**	**+0.1**
MTE				*e*Sn	**Sn**	**06 46 38.8**	**-2.3**
	comp=E,27nm,0.6s						
KIB	**El Ksiba**	**5.04**	**132**	*i* P	**Pn**	**06 45 45.0**	**-1.3**
KIB				*i* S	**Sn**	**06 46 38.0**	**-6.2**
MIF	**Mishlifen**	**5.05**	**120**	*i* P	**Pn**	**06 45 47.5**	**+1.1**
MIF				*e*S	**Sn**	**06 46 43.0**	**-1.5**
IFR	**Ifrane**	**5.07**	**118**	P	**Pn**	**06 45 46.0**	**-0.6**
IFR				S	**Sn**	**06 46 40.0**	**-4.9**
PVIS	**Viseu**	**5.08**	**23**	*e*Pn	**Pn**	**06 45 46.6**	**-0.1**
PVIS				*e*Sn	**Sn**	**06 46 41.5**	**-3.6**
PVIS				A		06 46 44.9	
	comp=E,20nm,0.1s						
PVIS	**Viseu**	**5.08**	**23**	*e*Pn	**Pn**	**06 45 46.6**	**-0.1**
PVIS				*e*Sn	**Sn**	**06 46 41.5**	**-3.6**
	comp=E,20nm,0.1s						
TZC	**Tazercounte**	**5.10**	**139**	*i* P	**Pn**	**06 45 46.0**	**-1.1**
TZC				*i* S	**Sn**	**06 46 40.0**	**-5.7**
EADA	**Adamuz**	**5.16**	**64**	P	**Pn**	**06 45 49.2**	**+1.3**
	comp=E,18nm,0.2s,SNR=60						
EADA				S	**Sn**	**06 46 46.5**	**-0.6**
	comp=E,4.6nm,0.1s,SNR=5.2						
EADA	**Adamuz**	**5.16**	**64**	P	**Pn**	**06 45 49.3**	**+1.4**
	comp=E,18nm,0.2s,SNR=60						
EADA				S	**Sn**	**06 46 46.6**	**-0.5**
	comp=E,15nm,0.1s,SNR=5.2						
EADA	**Adamuz**	**5.16**	**64**	P	**Pn**	**06 45 49.3**	**+1.4**
EADA				S	**Sn**	**06 46 46.6**	**-0.5**
OUK	**Oukaimeden**	**5.29**	**155**	*i* P	**Pn**	**06 45 47.0**	**-2.7**
OUK				*i* S	**Sn**	**06 46 43.5**	**-6.9**
CZD	**Col de Zad**	**5.39**	**122**	*i* P	**Pn**	**06 45 51.0**	**-0.1**
CZD				*i* S	**Sn**	**06 46 49.0**	**-3.9**
ERON	**Agron**	**5.45**	**78**	S	**Sn**	**06 46 57.2**	**+2.9**
	comp=E,2.0nm,0.1s,SNR=4.0						
ERON	**Agron**	**5.45**	**78**	S	**Sn**	**06 46 54.0**	**-0.3**
	comp=E,1.7nm,0.1s,SNR=7.9						
TZK	**Tazeka**	**5.51**	**109**	*i* P	**Pn**	**06 45 52.5**	**-0.2**
TZK				*i* S	**Sn**	**06 46 52.0**	**-3.8**
EBAN	**Banos Encina**	**5.74**	**66**	P	**Pn**	**06 45 56.9**	**+1.1**
	comp=E,4.9nm,0.1s,SNR=12						
EBAN				S	**Sn**	**06 47 00.4**	**-1.1**
	comp=E,8.0nm,0.2s,SNR=5.8						
EBAN	**Banos Encina**	**5.74**	**66**	P	**Pn**	**06 45 56.9**	**+1.1**
	comp=E,4.9nm,0.1s,SNR=12						
EBAN				S	**Sn**	**06 47 00.8**	**-0.7**
	comp=E,3.2nm,0.1s,SNR=5.8						
EBAN	**Banos Encina**	**5.74**	**66**	P	**Pn**	**06 45 56.9**	**+1.0**
EBAN				S	**Sn**	**06 47 00.8**	**-0.6**
EQUE	**Quentar**	**5.77**	**76**	P	**Pn**	**06 45 58.1**	**+1.9**
	comp=E,1.2nm,0.1s,SNR=8.4						
EQUE				S	**Sn**	**06 47 02.3**	**+0.2**
	comp=E,11nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**5.77**	**76**	P	**Pn**	**06 45 58.9**	**+2.7**
	comp=E,1.2nm,0.1s,SNR=8.4						
EQUE				S	**Sn**	**06 47 01.1**	**-1.0**
	comp=E,2.4nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.77**	**27**	*e*Pn	**Pn**	**06 45 56.2**	**-0.1**
MVO				*e*Sn	**Sn**	**06 46 58.5**	**-3.7**
MVO				A		06 47 04.2	
	comp=E,23nm,0.6s						
MVO	**Moncorvo**	**5.77**	**27**	*e*Pn	**Pn**	**06 45 56.2**	**-0.1**
MVO				*e*Sn	**Sn**	**06 46 58.5**	**-3.7**
	comp=E,23nm,0.6s						
PCAB	**Cabril**	**5.96**	**18**	*e*Pn	**Pn**	**06 45 55.6**	**-3.3**
PCAB				*e*Sn	**Sn**	**06 47 01.9**	**-5.0**
PCAB				A		06 47 12.1	
	comp=E,16nm,0.2s						
PCAB	**Cabril**	**5.96**	**18**	*e*Pn	**Pn**	**06 45 55.6**	**-3.3**
PCAB				*e*Sn	**Sn**	**06 47 01.9**	**-5.0**
	comp=E,16nm,0.2s						
PAB	**San Pablo**	**5.97**	**52**	*e*Pn	**Pn**	**06 45 59.8**	**+0.8**
	comp=E,5.3nm,0.4s						
PAB				*e*Sn	**Sn**	**06 47 05.8**	**-1.3**
PAB	**San Pablo**	**5.97**	**52**	*e*Pn	**Pn**	**06 45 59.8**	**+0.8**
	comp=E,5.3nm,0.4s						
PAB				*e*Sn	**Sn**	**06 47 05.8**	**-1.3**
ELOB	**Lobios**	**6.11**	**17**	P	**Pn**	**06 46 00.4**	**-0.4**
	comp=E,0.8nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**06 47 06.5**	**-3.9**
	comp=E,5.8nm,0.1s,SNR=14						
ELOB	**Lobios**	**6.11**	**17**	P	**Pn**	**06 46 00.5**	**-0.3**
	comp=E,0.8nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**06 47 05.7**	**-4.6**
	comp=E,9.8nm,0.1s,SNR=14						
ELOB	**Lobios**	**6.11**	**17**	P	**Pn**	**06 46 00.5**	**-0.3**
ELOB				S	**Sn**	**06 47 05.7**	**-4.6**
EBER	**Berja**	**6.17**	**80**	P	**Pn**	**06 46 02.4**	**+0.7**
	comp=E,0.1nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**06 47 12.5**	**+0.6**
	comp=E,112nm,1.0s,SNR=7.9						
EBER	**Berja**	**6.17**	**80**	P	**Pn**	**06 46 01.8**	**+0.1**
	comp=E,0.6nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**06 47 11.9**	**0.0**
	comp=E,1.9nm,0.2s,SNR=7.9						
EBER	**Berja**	**6.17**	**80**	P	**Pn**	**06 46 01.8**	**+0.2**
EBER				S	**Sn**	**06 47 11.9**	**0.0**
EQES	**Quesada**	**6.18**	**71**	P	**Pn**	**06 46 03.1**	**+1.3**
	comp=E,0.7nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**06 47 10.7**	**-1.5**
	comp=E,1.5nm,0.1s,SNR=8.1						
EQES	**Quesada**	**6.18**	**71**	P	**Pn**	**06 46 02.8**	**+1.0**
	comp=E,0.7nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**06 47 10.2**	**-2.0**
	comp=E,1.5nm,0.1s,SNR=8.1						
EQES	**Quesada**	**6.18**	**71**	P	**Pn**	**06 46 02.8**	**+1.0**
EQES				S	**Sn**	**06 47 10.2**	**-2.0**
YBT	**Youssef Ben Ta**	**6.22**	**174**	P	**Pn**	**06 45 58.0**	**-4.4**
YBT				S	**Sn**	**06 47 03.5**	**-10**
PMAR	**Madeira**	**6.28**	**240**	*e*Pn	**Pn**	**06 45 54.2**	**-9.0**
PMAR				*e*Sn	**Sn**	**06 46 55.0**	**-20**
PMAR				A		06 47 01.2	
	comp=E,18nm,0.4s						
PMAR	**Madeira**	**6.28**	**240**	*e*Pn	**Pn**	**06 45 54.2**	**-9.0**
PMAR				*e*Sn	**Sn**	**06 46 55.0**	**-20**
	comp=E,18nm,0.4s						
ESDC	**Sonseca Array**	**6.29**	**53**	P	**Pn**	**06 46 04.1**	**+0.7**
	comp=E,30nm,0.1s,baz=239,slow=13,SNR=72						
ESDC				S	**Sn**	**06 47 13.1**	**-1.8**
	comp=E,3.5nm,0.3s,baz=241,slow=24,SNR=15						
ESDC	**Sonseca Array**	**6.29**	**53**	P	**Pn**	**06 46 04.1**	**+0.7**
	comp=E,30nm,0.1s,SNR=72						
ESDC				S	**Sn**	**06 47 13.1**	**-1.8**
	comp=E,3.5nm,0.3s,SNR=15						
PBRG	**Braganca**	**6.44**	**26**	*e*Pn	**Pn**	**06 46 05.4**	**0.0**
PBRG				*e*Sn	**Sn**	**06 47 13.9**	**-4.7**
PBRG				A		06 47 17.8	
	comp=E,15nm,0.3s						
PBRG	**Braganca**	**6.44**	**26**	*e*Pn	**Pn**	**06 46 05.4**	**0.0**
PBRG				*e*Sn	**Sn**	**06 47 13.9**	**-4.7**
	comp=E,15nm,0.3s						
ZFT	**Errachidia**	**6.46**	**127**	*i* P	**Pn**	**06 46 06.0**	**+0.2**
ZFT				*i* S	**Sn**	**06 47 14.0**	**-5.3**
EHUE	**Huescar**	**6.55**	**72**	P	**Pn**	**06 46 06.6**	**-0.3**
	comp=E,0.5nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**06 47 19.4**	**-2.0**
	comp=E,1.7nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**6.55**	**72**	P	**Pn**	**06 46 06.4**	**-0.5**
	comp=E,0.5nm,0.1s,SNR=7.9						
EHUE				S	**Sn**	**06 47 18.5**	**-2.8**
	comp=E,1.7nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**6.55**	**72**	P	**Pn**	**06 46 06.4**	**-0.5**
EHUE				S	**Sn**	**06 47 18.5**	**-2.8**
ECAL	**Calabor**	**6.56**	**25**	P	**Pn**	**06 46 07.2**	**+0.2**
	comp=E,2.8nm,0.1s,SNR=7.0						
ECAL				S	**Sn**	**06 47 18.2**	**-3.4**
	comp=E,18nm,0.2s,SNR=11						
ECAL	**Calabor**	**6.56**	**25**	P	**Pn**	**06 46 07.5**	**+0.4**
	comp=E,2.8nm,0.1s,SNR=7.0						
ECAL				S	**Sn**	**06 47 18.5**	**-3.1**
	comp=E,17nm,0.2s,SNR=11						
ECAL	**Calabor**	**6.56**	**25**	P	**Pn**	**06 46 07.5**	**+0.4**
ECAL				S	**Sn**	**06 47 18.5**	**-3.1**
GUD	**Guadarrama**	**6.76**	**45**	P	**Pn**	**06 46 10.4**	**+0.7**
	comp=E,4.1nm,0.2s,SNR=16						
GUD				S	**Sn**	**06 47 24.6**	**-1.7**
	comp=E,8.1nm,0.3s,SNR=9.9						
GUD	**Guadarrama**	**6.76**	**45**	P	**Pn**	**06 46 10.6**	**+0.9**
	comp=E,4.1nm,0.2s,SNR=16						
GUD				S	**Sn**	**06 47 24.9**	**-1.5**
	comp=E,5.2nm,0.2s,SNR=9.9						
GUD	**Guadarrama**	**6.76**	**45**	P	**Pn**	**06 46 10.7**	**+0.9**
GUD				S	**Sn**	**06 47 24.9**	**-1.5**
ERUA	**La Rua**	**6.84**	**21**	S	**Sn**	**06 47 25.0**	**-3.5**
	comp=E,11nm,0.2s,SNR=7.9						
ERUA	**La Rua**	**6.84**	**21**	P	**Pn**	**06 46 10.4**	**-0.5**
	comp=E,3.1nm,0.1s,SNR=7.9						
ERUA				S	**Sn**	**06 47 25.2**	**-3.2**
	comp=E,11nm,0.2s,SNR=7.9						
ERUA	**La Rua**	**6.84**	**21**	P	**Pn**	**06 46 10.4**	**-0.5**
ERUA				S	**Sn**	**06 47 25.2**	**-3.2**
EVIA	**Vianos**	**6.85**	**65**	P	**Pn**	**06 46 11.9**	**+0.8**
	comp=E,2.6nm,0.2s,SNR=6.2						
EVIA				S	**Sn**	**06 47 26.3**	**-2.4**
	comp=E,5.6nm,0.3s						
EVIA	**Vianos**	**6.85**	**65**	P	**Pn**	**06 46 11.8**	**+0.7**
	comp=E,2.6nm,0.2s,SNR=6.2						
EVIA				S	**Sn**	**06 47 26.5**	**-2.3**
	comp=E,2.6nm,0.2s						
EVIA	**Vianos**	**6.85**	**65**	P	**Pn**	**06 46 11.8**	**+0.7**
EVIA				S	**Sn**	**06 47 26.5**	**-2.2**
EMAZ	**Mazaricos**	**6.99**	**9**	P	**Pn**	**06 46 12.6**	**-0.3**
	comp=E,1.8nm,0.1s,SNR=5.0						
EMAZ				S	**Sn**	**06 47 24.2**	**-7.9**
	comp=E,14nm,0.2s,SNR=10						
EMAZ	**Mazaricos**	**6.99**	**9**	P	**Pn**	**06 46 12.5**	**-0.4**
	comp=E,1.8nm,0.1s,SNR=5.0						
EMAZ				S	**Sn**	**06 47 24.5**	**-7.5**
	comp=E,12nm,0.1s,SNR=10						
EMAZ	**Mazaricos**	**6.99**	**9**	P	**Pn**	**06 46 12.5**	**-0.4**
EMAZ				S	**Sn**	**06 47 24.5**	**-7.5**
EFAM	**Famara**	**7.37**	**201**	P	**Pn**	**06 46 09.9**	**-8.3**
	comp=E,0.5nm,0.1s,SNR=7.9						
EFAM				S	**Sn**	**06 47 24.7**	**-17**
	comp=E,4.7nm,0.2s,SNR=7.9						
EFAM	**Famara**	**7.37**	**201**	P	**Pn**	**06 46 09.5**	**-8.7**
	comp=E,0.6nm,0.2s,SNR=7.9						
EFAM				S	**Sn**	**06 47 24.4**	**-17**
	comp=E,3.3nm,0.2s,SNR=7.9						
EFAM	**Famara**	**7.37**	**201**	P	**Pn**	**06 46 09.5**	**-8.7**
EFAM				S	**Sn**	**06 47 24.4**	**-17**
EPON	**Pontenova**	**7.71**	**18**	S	**Sn**	**06 47 43.6**	**-6.1**
	comp=E,4.4nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.71**	**18**	S	**Sn**	**06 47 43.6**	**-6.1**
	comp=E,3.8nm,0.2s,SNR=7.9						
ETOR	**Torete**	**8.14**	**52**	P	**Pn**	**06 46 30.0**	**+1.2**
	comp=E,23nm,0.3s,SNR=19						
ETOR				S	**Sn**	**06 47 57.4**	**-3.0**
	comp=E,26nm,0.3s						
CFTV	**Fuerteventura**	**8.21**	**203**	S	**Sn**	**06 47 46.0**	**-16**
	comp=E,1.0nm,0.1s,SNR=7.9						
CFTV	**Fuerteventura**	**8.21**	**203**	S	**Sn**	**06 47 44.2**	**-18**
	comp=E,1.0nm,0.1s,SNR=7.9						
EARI	**Arriondas**	**8.30**	**28**	P	**Pn**	**06 46 32.6**	**+1.7**
	comp=E,0.0nm,0.1s,SNR=7.9						
EARI				S	**Sn**	**06 48 00.9**	**-3.4**
	comp=E,1.6nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**8.30**	**28**	P	**Pn**	**06 46 32.3**	**+1.4**
EARI	**Arriondas**	**8.30**	**28**	P	**Pn**	**06 46 32.3**	**+1.4**
EARI				S	**Sn**	**06 48 00.3**	**-4.0**
EMOS	**Mosqueruela**	**8.97**	**58**	P	**Pn**	**06 46 42.4**	**+2.3**
	comp=E,0.4nm,0.1s,SNR=6.1						
EMOS				S	**Sn**	**06 48 18.6**	**-2.2**
	comp=E,30nm,0.7s,SNR=7.9						
EMOS	**Mosqueruela**	**8.97**	**58**	P	**Pn**	**06 46 41.1**	**+1.0**
EMOS				S	**Sn**	**06 48 18.1**	**-2.8**
SJPF	**Ste Jean**	**10.03**	**42**	*e*Pn	**Pn**	**06 46 55.5**	**+0.9**
SJPF				*e*Sn	**Sn**	**06 48 42.3**	**-4.5**
	comp=E,1.4nm,0.3s						
SJPF	**Ste Jean**	**10.03**	**42**	*e*Pn	**Pn**	**06 46 55.5**	**+0.9**
SJPF				*e*Sn	**Sn**	**06 48 42.3**	**-4.5**
	comp=E,0.7nm,0.3s						
ETSF	**Etsaut**	**10.26**	**45**	*e*Pn	**Pn**	**06 46 58.5**	**+0.7**
ETSF				*e*Sn	**Sn**	**06 48 48.2**	**-4.4**
	comp=E,2.7nm,0.4s						
ETSF	**Etsaut**	**10.26**	**45**	*e*Pn	**Pn**	**06 46 58.5**	**+0.7**
ETSF				*e*Sn	**Sn**	**06 48 48.2**	**-4.4**
	comp=E,1.4nm,0.4s						
EBIE	**Bielsa**	**10.55**	**48**	P	**Pn**	**06 47 02.9**	**+1.1**
	comp=E,0.0nm,0.2s,SNR=7.9						
EBIE				S	**Sn**	**06 48 55.9**	**-3.7**
	comp=E,5.6nm,0.5s,SNR=7.9						
EBIE	**Bielsa**	**10.55**	**48**	P	**Pn**	**06 47 02.9**	**+1.2**
	comp=E,0.8nm,0.2s						
EPF	**Esparros**	**10.87**	**47**	*e*Pn	**Pn**	**06 47 06.1**	**0.0**
EPF				*e*Sn	**Sn**	**06 49 02.3**	**-5.1**
	comp=E,2.9nm,0.3s						
EPF	**Esparros**	**10.87**	**47**	*e*Pn	**Pn**	**06 47 06.1**	**0.0**
EPF				*e*Sn	**Sn**	**06 49 02.3**	**-5.1**
	comp=E,1.5nm,0.3s						
QUIF	**Quistinic**	**13.03**	**22**	*e*Pn	**Pn**	**06 47 35.1**	**-0.6**

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*IDC **06** 07:03:23.9±3.2, 504S×14527E, h0km, mb4.0/6, mb1 4.3/7, mb1mx4.0/17, mbtmp4.1/7, ML3.8/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/19, Error ellipse: s-maj=89.2km s-min=24.1km az=103.0*

*NEIC **06** 07:03:31.5±0.9, 501S×14480E, h35km, mb4.1/1, Error ellipse: s-maj=19.3km s-min=11.1km az=87.0*

*ISCJB **06** 07:03:34.4±4.4, 53S±02×145.1E±02, h92km±48km, mb3.8/6, Error ellipse: s-maj=36.1km s-min=23.1km az=144.0*

ISC 06 07:03:36.0±4.3**, 53S**±02×**1450E**±02**, h91**km±50km**, n12,** σ**0ˢ59**/12**, mb3.8**/6**, 1D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.63**	**153**	*e*Pn	**Pn**	**07 04 43.8**	**+0.1**
PMG				*e*Sn	**Sn**	**07 05 36.1**	**-0.1**
WRAB	**Tennant Creek**	**17.90**	**215**	*e*P	**Pn**	**07 07 39.1**	**0.0**
	12nm,0.8s						
WB2	**Warramunga Arr**	**17.91**	**214**	⇓*i*P	**Pn**	**07 07 39.2**	**0.0**
WRA	**Warramunga Arr**	**17.91**	**215**	P	**Pn**	**07 07 39.3**	**0.0**
	0.4nm,0.3s,baz=40,slow=12,SNR=62						
GUMO	**Guam**	**18.73**	**360**	LR	LR	07 12 47.6	
	comp=Z,58nm,19.2s,baz=44,slow=30						
ASAR	**Alice Springs**	**21.20**	**209**	P	**P**	**07 08 14.9**	**+0.6**
	6.6nm,1.1s,mb3.9,baz=36,slow=11,SNR=39						
FITZ	**Fitzroy Crossi**	**22.83**	**234**	P	**P**	**07 08 31.1**	**-0.6**
	1.8nm,0.8s,mb3.4,baz=63,slow=16,SNR=3.2						
CMAR	**Chiang Mai Arr**	**51.16**	**299**	P	**P**	**07 12 30.6**	**+0.4**
	1.7nm,0.4s,mb4.4,baz=121,slow=6.5,SNR=8.7						
MKAR	**Makanchi Array**	**75.68**	**321**	P	**P**	**07 15 12.0**	**+0.6**
	0.7nm,0.6s,mb3.6,baz=99,slow=7.5,SNR=6.3						
MKAR	**Makanchi Array**	**75.68**	**321**	P	**P**	**07 15 12.0**	**+0.6**
KURK	**Kurchatov**	**79.44**	**324**	P	**P**	**07 15 30.8**	**-1.6**
	0.5nm,0.7s,mb3.5,baz=113,slow=4.1,SNR=3.5						
BVAR	**Borovoye Array**	**85.02**	**324**	P	**P**	**07 16 01.9**	**+0.6**
	1.5nm,0.6s,mb4.1,baz=101,slow=7.7,SNR=5.4						

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*IDC **06** 07:09:42.8±0.7, 1804N×7655E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.9/23, mbtmp4.0/12, Error ellipse: s-maj=22.1km s-min=16.8km az=45.0*

*ISCJB **06** 07:09:43.8±1.0, 18.12N±004×7673E±003, h18km±8km, mb3.9/14, Error ellipse: s-maj=7.3km s-min=5.0km az=172.7*

*NEIC **06** 07:09:44.1±0.5, 1806N×7654E, h10km, mb3.6/2, Error ellipse: s-maj=14.4km s-min=9.1km az=224.0*

*NDI **06** 07:09:45.0±2.6, 1807N×7666E, h10km, ML3.8, mb3.6(NEIC)*

ISC 06 07:09:44.3±1.2**, 1808N**±004×**7669E**±003**, h8**km±7km**, n46,** σ**0ˢ89**/48**, mb3.9**/14**, 1C, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LATR	**Latur**	**0.35**	**340**	*e*P	**Pg**	**07 09 50.8**	**-0.5**
LATR				*e*S	**Sg**	**07 09 56.0**	**0.0**
HYB	**Hyderabad**	**1.90**	**110**	*i* Pn	**Pn**	**07 10 17.5**	**+0.6**
HYB				*e*Sn	**Sn**	**07 10 45.0**	**+4.0**
HYB	**Hyderabad**	**1.90**	**110**	*e*Pn	**Pn**	**07 10 17.5**	**+0.6**
HYB				*e*Sn	**Sn**	**07 10 42.5**	**+1.5**
KAD	**Karad**	**2.51**	**253**	*e*P	**Pn**	**07 10 25.6**	**+0.2**
KAD				*e*S	**Sn**	**07 10 55.8**	**-0.4**
AKL	**Akola**	**2.62**	**7**	*i* x	x	07 10 30.9	
AKL				*i* S	**Sn**	**07 11 00.1**	**+1.1**
POO	**Poona**	**2.73**	**280**	*e*P	**Pn**	**07 10 29.9**	**+1.5**
POO				*e*S	**Sn**	**07 11 02.6**	**+0.9**
GOA	**Goa**	**3.76**	**227**	⇑*i*P	**Pn**	**07 10 41.2**	**-1.4**
GOA				*i* x	x	07 11 31.3	
BOM	**Bombay**	**3.77**	**283**	*e*x	x	07 10 34.4	
BOM				*e*x	x	07 11 33.5	
NGP	**Nagpur**	**3.78**	**36**	*e*P	**Pn**	**07 10 43.9**	**+1.1**
NGP				*e*S	**Sn**	**07 11 26.2**	**-1.3**
VJD	**Vijayawada**	**4.09**	**112**	*i* P	**Pn**	**07 10 47.0**	**-0.1**
VJD				*i* S	**Sn**	**07 11 34.0**	**-1.2**
VIS	**Vishakhapatnam**	**6.33**	**92**	*e*P	**Pn**	**07 11 18.8**	**+0.9**
VIS				*e*S	**Sn**	**07 12 27.1**	**-3.4**
VIS				AML	AML	07 13 02.7	
	comp=N,134nm,0.2s						
VIS				AML	AML	07 13 03.5	
	comp=E,105nm,0.6s						
BOK	**Bokaro**	**10.30**	**55**	*e*S	**Sn**	**07 13 59.9**	**-8.3**
NDI	**New Delhi**	**10.56**	**3**	*e*P	**Pn**	**07 12 16.0**	**0.0**
NDI				*e*S	**Sn**	**07 14 07.0**	**-7.5**
KOLN	**Koldanda**	**11.55**	**32**	*e*P	**Pn**	**07 12 29.5**	**0.0**
	comp=E,31nm,0.6s						
DMN	**Daman**	**12.25**	**38**	*e*P	**Pn**	**07 12 39.5**	**+0.5**
DDI	**Dehra Dun**	**12.25**	**6**	*e*x	x	07 14 53.0	
PKIN	**Phulchoki**	**12.39**	**39**	*e*P	**Pn**	**07 12 41.5**	**+0.5**
PKI	**Pulchoki**	**12.40**	**39**	*e*P	**Pn**	**07 12 41.4**	**+0.3**
KKN	**Kakani**	**12.48**	**38**	*e*P	**Pn**	**07 12 42.1**	**-0.2**
	comp=E,38nm,0.7s						
RAMN	**Ramite**	**12.71**	**44**	*e*P	**Pn**	**07 12 45.4**	**0.0**
	comp=E,51nm,0.5s						
JIRN	**Jiri**	**12.94**	**41**	*e*P	**Pn**	**07 12 48.3**	**-0.2**
	comp=E,82nm,0.6s						
SMLA	**Simla**	**13.00**	**2**	*i* P	**Pn**	**07 12 47.7**	**-1.6**
SMLA				*i* x	x	07 15 06.3	
ODAN	**Odare**	**13.19**	**47**	*e*P	**Pn**	**07 12 52.0**	**+0.1**
	comp=E,23nm,0.5s						
SDNR	**Sundarnagar**	**13.36**	**1**	*e*x	x	07 15 16.0	
TAPN	**Taplejung**	**13.72**	**46**	*e*P	**Pn**	**07 12 57.8**	**-1.4**
	comp=E,52nm,0.6s						
THN	**Thein Dam**	**14.32**	**357**	*e*x	x	07 15 38.1	
CMAR	**Chiang Mai Arr**	**21.14**	**85**	P	**P**	**07 14 31.4**	**+1.6**
	comp=E,1.0nm,0.4s,mb3.5,baz=271,slow=11,SNR=4.9						
AML	**Almayashu**	**24.11**	**355**	*e*P	**P**	**07 14 59.9**	**-0.4**
	comp=E,1.2nm,0.6s,mb3.5						
UCH	**Uchtor**	**24.14**	**356**	*e*P	**P**	**07 15 00.4**	**-0.2**
	comp=E,1.3nm,0.7s,mb3.5						
MKAR	**Makanchi Array**	**29.00**	**8**	P	**P**	**07 15 43.5**	**-1.0**
	comp=E,0.7nm,0.7s,mb3.5,baz=184,slow=10,SNR=2.7						
KURK	**Kurchatov**	**32.59**	**2**	P	**P**	**07 16 15.5**	**-0.6**
	comp=E,1.2nm,0.5s,mb4.1,baz=195,slow=8.6,SNR=5.9						
BVAR	**Borovoye Array**	**35.22**	**353**	P	**P**	**07 16 39.6**	**+0.8**
	comp=E,0.7nm,0.5s,mb3.9,baz=155,slow=7.6,SNR=3.0						
ZALV	**Zalesovo Beam**	**36.35**	**8**	P	**P**	**07 16 49.0**	**+0.5**
	comp=E,1.0nm,0.4s,mb4.1,baz=190,slow=7.3,SNR=3.5						
SONM	**Songino Array**	**38.31**	**33**	P	**P**	**07 17 06.9**	**+1.6**
	comp=E,1.1nm,0.7s,mb3.7,baz=217,slow=6.9,SNR=3.6						
KSRS	**Korea Array**	**48.64**	**56**	P	**P**	**07 18 28.8**	**0.0**
	comp=E,1.4nm,0.6s,mb4.1,baz=263,slow=7.6,SNR=4.1						
ARCES	**ARCESS Array B**	**60.10**	**342**	P	**P**	**07 19 51.7**	**+0.1**
	comp=E,1.8nm,0.5s,mb4.3,baz=124,slow=7.0,SNR=19						
ARCES	**ARCESS Array B**	**60.10**	**342**	P	**P**	**07 19 51.7**	**+0.1**
KEST	**Kesra**	**61.48**	**301**	P	**P**	**07 20 01.6**	**0.0**
	comp=E,1.0nm,0.6s,mb4.1,baz=104,slow=4.2,SNR=3.4						
NOA	**NORSAR Array B**	**62.51**	**330**	P	**P**	**07 20 07.1**	**-1.0**
	baz=102,slow=7.1						
WRA	**Warramunga Arr**	**68.02**	**121**	P	**P**	**07 20 44.9**	**+0.4**
	comp=E,4.3nm,0.7s,mb4.6,baz=309,slow=6.1,SNR=55						
ASAR	**Alice Springs**	**69.57**	**125**	P	**P**	**07 20 54.6**	**+0.5**
	comp=E,1.0nm,0.6s,mb3.9,baz=317,slow=6.4,SNR=20						
TORD	**Torodi Ar. Bea**	**71.96**	**278**	P	**P**	**07 21 07.0**	**-1.9**
	comp=E,0.6nm,0.9s,mb3.5,baz=85,slow=5.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**71.96**	**278**	P	**P**	**07 21 07.0**	**-1.9**
NVAR	**Mina Array Bea**	**122.05**	**14**	PKP	PKPdf	07 28 40.2	+0.4
	comp=E,0.2nm,0.6s,baz=333,slow=1.0,SNR=2.2						
BDFB	**Brasilia**	**127.19**	**264**	PKP	PKPdf	07 28 50.7	+0.5
	comp=E,5.3nm,1.0s,baz=71,slow=8.0,SNR=3.6						
LPAZ	**La Paz**	**146.37**	**268**	PKPbc	PKPbc	07 29 26.6	0.0
	comp=E,4.3nm,0.8s,baz=101,slow=2.1,SNR=20						

NEIC 06 07:40:09.8, 3676S×17757E, h180km, MG4.1(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.99**	**144**	P	Pn	07 40 37.4	0.0
MXZ				S	Sn	07 40 59.0	+0.2
PUZ	**Puketiti**	**1.42**	**158**	P	Pn	07 40 41.1	+0.1
PUZ				S	Sn	07 41 04.3	-0.9
KUZ	**Kuaotunu**	**1.49**	**270**	P	Pn	07 40 41.4	-0.2
URZ	**Urewera**	**1.54**	**194**	P	Pn	07 40 42.1	0.0
MWZ	**Matawai**	**1.57**	**181**	P	Pn	07 40 42.5	+0.1
MKAZ	**Moumakai**	**1.96**	**259**	P	Pn	07 40 47.2	+0.9
OTAZ	**Otara**	**2.13**	**264**	P	Pn	07 40 49.2	+1.0
KNZ	**Kokohu**	**2.26**	**178**	P	Pn	07 40 49.7	+0.1
HIZ	**Hauiti**	**2.78**	**230**	P	Pn	07 40 57.2	+1.5
TWVZ	**Taurewa**	**2.86**	**216**	P	Pn	07 40 58.0	+1.3
NGZ	**Ngauruhoe**	**2.87**	**212**	P	Pn	07 40 57.7	+0.9
TUVZ	**Tukino**	**2.93**	**211**	P	Pn	07 40 58.1	+0.6
WNVZ	**Wahianoa**	**3.00**	**211**	P	Pn	07 40 58.5	+0.1
MOVZ	**Moawhango**	**3.01**	**208**	P	Pn	07 40 58.0	-0.4
TSZ	**Takapari Road**	**3.53**	**200**	P	Pn	07 41 03.6	-1.3
WAZ	**Wanganui**	**3.62**	**213**	P	Pn	07 41 06.3	+0.3
MRZ	**Mangatainoka R**	**4.20**	**201**	P	Pn	07 41 10.2	-3.1
KIW	**Kapiti Island**	**4.59**	**206**	P	Pn	07 41 16.0	-2.4
MTW	**Mount Morrison**	**4.68**	**200**	P	Pn	07 41 16.7	-2.8
CAW	**Cannon Point**	**4.76**	**203**	P	Pn	07 41 17.8	-2.7
PAWZ	**Paruwai Farm**	**4.91**	**199**	P	Pn	07 41 19.4	-3.0
MSWZ	**Moikau Station**	**4.99**	**201**	P	Pn	07 41 20.4	-3.1
MRW	**Makara Radio**	**4.99**	**206**	P	Pn	07 41 20.8	-2.7
SNZO	**South Karori**	**5.06**	**205**	P	Pn	07 41 21.4	-3.0
BHW	**Baring Head**	**5.09**	**204**	P	Pn	07 41 21.7	-3.2
TCW	**Tory Channel**	**5.13**	**209**	P	Pn	07 41 22.4	-3.0
NNZ	**Nelson**	**5.52**	**215**	P	Pn	07 41 27.8	-2.6
QRZ	**Quartz Range**	**5.66**	**223**	P	Pn	07 41 29.0	-3.2
THZ	**Tophouse**	**6.17**	**214**	P	Pn	07 41 36.5	-2.4
KHZ	**Kahutara**	**6.45**	**208**	P	Pn	07 41 39.2	-3.4
LTZ	**Lake Taylor**	**7.27**	**213**	P	Pn	07 41 49.9	-3.4
MQZ	**McQueen's Vall**	**7.89**	**207**	P	Pn	07 41 56.6	-4.9
ODZ	**Otahua Downs**	**9.79**	**210**	P	Pn	07 42 23.0	-3.4

IDC 06 07:56:29.4±13.0**, 2672S**×**17803W, h0**km**, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.6**/15**, mbtmp3.6**/4**, ML4.2**/1**, Error ellipse: s-maj=265.9km s-min=38.2km az=57.0, South of Fiji Islands**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RAO	Raoul Island	2.52	178	Pn	Pn	07 57 11.8	+0.1
	50nm,0.3s,baz=52,slow=19,SNR=3.2						
RAO				Sn	Sn	07 57 30.1	-13
	121nm,0.3s,baz=71,slow=22,SNR=7.5						
STKA	Stephens Creek	35.44	252	P	P	08 03 27.3	-0.1
	0.9nm,0.7s,baz=98,slow=15,SNR=2.8						
ASAR	Alice Springs	43.40	263	P	P	08 04 33.0	-1.1
	0.2nm,0.5s,baz=103,slow=7.5,SNR=5.6						
WRA	Warramunga Arr	44.05	268	P	P	08 04 40.3	+1.0
	0.4nm,0.6s,baz=108,slow=7.7,SNR=6.3						

*IDC **06** 07:59:07.8±6.8, 11.60S×165.57E, h0km, mb4.2/4, mb1 4.4/4, mb1mx4.0/16, mbtmp4.2/4, MS3.5/4, Ms1 3.4/4, ms1mx2.7/25, Error ellipse: s-maj=151.2km s-min=47.9km az=100.0*

*NEIC **06** 07:59:14.3±2.7, 11.58S×165.37E, h35km, mb4.3/1, Error ellipse: s-maj=48.5km s-min=21.5km az=67.0*

ISC 06 07:59:15.1±12.0, 11.6S±0.3×165.3E±0.9, h39km±64km, n11, σ0.28/8, mb4.1/5, MS3.4/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.70	291	ePn	Pn	08 00 37.2	0.0
CTA	Charters Tower	20.19	243	LR	LR	08 10 36.5	
	comp=Z,111nm,18.8s,MS3.2,baz=226,slow=34						
STKA	Stephens Creek	29.78	224	P	P	08 05 18.3	+0.1
	2.2nm,0.6s,mb4.0,baz=40,slow=9.1,SNR=7.6						
STKA				LR	LR	08 16 39.1	
	comp=Z,87nm,20.3s,MS3.4,baz=25,slow=35						
STKA	Stephens Creek	29.78	224	P	P	08 05 18.3	+0.1
STKA				LR	LR	08 16 39.1	
WB2	Warramunga Arr	30.90	250	eP	P	08 05 28.6	+0.3
WRA	Warramunga Arr	30.91	250	P	P	08 05 28.4	0.0
	4.7nm,0.8s,mb4.4,baz=83,slow=8.8,SNR=30						
ASAR	Alice Springs	32.19	244	P	P	08 05 39.1	-0.4
	1.0nm,0.8s,mb3.7,baz=74,slow=9.9,SNR=9.5						
FITZ	Fitzroy Crossi	38.84	256	eP	P	08 06 36.8	0.0
	5.0nm,0.8s,mb4.3						
FITZ	Fitzroy Crossi	38.84	256	LR	LR	08 22 25.8	
	comp=Z,45nm,19.0s,MS3.3,baz=304,slow=36						
CMAR	Chiang Mai Arr	71.94	294	P	P	08 10 35.0	0.0
	0.8nm,0.4s,mb4.0,baz=133,slow=5.0,SNR=6.1						
YKA	Yellowknife Ar	95.63	27	LR	LR	08 54 46.9	
	comp=Z,24nm,18.4s,MS3.7,baz=180,slow=35						

*NEIC **06** 08:13:12.4, 27.55S×70.72W, h46km, MG3.1(GUC), After GUC.*

GUC 06 08:13:12.4±1.4, 27.55S×70.72W, h46km±196km, MD3.5, ML3.1, 2C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDCH	Caldera	0.48	349 ⇓	iP	Pn	08 13 23.3	+0.1
CDCH				iS	Sn	08 13 31.4	+0.5
CDCH				AML	AML	08 13 32.5	
	comp=E,860nm,0.1s						
CDCH	Caldera	0.48	349 ⇓	iP	Pn	08 13 23.3	+0.1
CDCH				iS	Sn	08 13 31.4	+0.5
VACH	Vallenar	1.02	182 ⇓	iP	Pn	08 13 31.6	+1.3
VACH				iS	Sn	08 13 45.3	+1.7
VACH				AML	AML	08 13 46.2	
	comp=E,6μm,0.3s						
VACH	Vallenar	1.02	182 ⇓	iP	Pn	08 13 31.6	+1.3
VACH				iS	Sn	08 13 45.3	+1.7
LCO	Las Campanas	1.46	179	iP	Pn	08 13 37.2	+1.0
LCO				iS	Sn	08 13 55.6	+1.5
LSCH	La Serena	2.39	191	iP	Pn	08 13 48.9	-0.2
LSCH				iS	Sn	08 14 16.8	-0.4
LSCH				AML	AML	08 14 33.6	
	comp=N,37nm,0.4s						
LSCH	La Serena	2.39	191	iP	Pn	08 13 48.9	-0.2
LSCH				iS	Sn	08 14 16.8	-0.4
TLL	Tololo Astrono	2.61	182 ⇑	iP	Pn	08 13 53.7	+1.6
TLL				iS	Sn	08 14 24.4	+1.9
TLL				AML	AML	08 14 27.5	
	comp=N,114nm,0.6s						
TLL	Tololo Astrono	2.61	182 ⇑	iP	Pn	08 13 53.7	+1.6
TLL				iS	Sn	08 14 24.4	+1.9

*ISCJB **06** 08:15:27.9±0.4, 23.98N±0.03×122.44E±0.02, h17km±5km, Error ellipse: s-maj=4.3km s-min=2.8km az=164.0*

*TAP **06** 08:15:28.6, 24.06N×122.43E, h38km, ML3.4, C*

*JMA **06** 08:15:28.5±0.4, 24.16N×122.36E, h33km, M2.8*

ISC 06 08:15:27.9±0.6, 24.01N±0.02×122.43E±0.02, h16km±4km, n42, σ0.81/76, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.70	49	P	Pg	08 15 41.4	-0.2
YOJ				S	Sg	08 15 50.5	-0.3
ENA	Nanau	0.76	304	P	Pg	08 15 42.9	+0.2
	baz=300						
ENA				S	Sg	08 15 53.8	+1.1
	baz=300						
TWD	Chiawan	0.77	275	eP	Pb	08 15 44.2	+1.3
	baz=272						
TWD				eS	Sg	08 15 53.1	+0.1
	baz=272						
TWC	Suao	0.80	319	P	Pb	08 15 43.1	-0.3
	baz=316						
TWC				iS	Sb	08 15 53.4	-0.6
	baz=316						
ESL	Shilin	0.93	258	eP	Pb	08 15 45.6	-0.1
	baz=249						
ESL				eS	Sb	08 15 57.4	-0.4
	baz=249						
TWE	Neicheng	0.99	316	P	Pb	08 15 46.6	-0.2
	baz=313						
TWE				eS	Sb	08 15 60.0	+0.4
	baz=313						
ENTT	Nioudou	1.01	309	P	Pb	08 15 46.8	-0.2
	baz=294						
ENTT				S	Sb	08 16 00.5	+0.5
	baz=294						
NNS	Nan Shan	1.06	294	eP	Pb	08 15 47.7	-0.1
	baz=283						
NNS				eS	Sb	08 16 01.3	-0.1
	baz=283						
TWB1	Santiao Chiao	1.07	338	P	Pb	08 15 47.3	-0.8
	baz=337						
TWB1				S	Sb	08 16 01.2	-0.7
	baz=337						
WHF	Hehuan Shan	1.07	277	P	Pb	08 15 47.7	-0.4
	baz=265						
WHF				eS	Sb	08 16 01.7	-0.2
	baz=265						
EHY	Hungye	1.13	244	eP	Pn	08 15 48.1	-0.9
	baz=255						
EHY				eS	Sb	08 16 02.6	-1.0
	baz=255						
TWT	Tachien	1.17	282	eP	Pn	08 15 50.2	+0.6
	baz=270						
TWT				eS	Sb	08 16 04.9	+0.2
	baz=270						
NSK	Sanguang	1.18	304	eS	Sb	08 16 04.3	-0.7
	baz=290						
NWF	Wu-fen Shan	1.21	331	eP	Pn	08 15 49.2	-1.0
	baz=330						
NWF				eS	Sb	08 16 05.8	-0.1
	baz=330						
TWF1	Yuli	1.23	238	iP	Pn	08 15 49.8	-0.6
	baz=251						
TWF1				S	Sb	08 16 05.7	-0.6
	baz=251						
IRIF	Iriomote-Funau	1.23	74	P	Pn	08 15 50.2	-0.2
IRIF				S	Sb	08 16 06.8	+0.4
TWA	Mucha	1.24	322	eP	Pn	08 15 49.8	-0.7
	baz=335						
TWA				eS	Sb	08 16 06.9	+0.3
	baz=335						
CHKT	Chengkung	1.33	227	eP	Pn	08 15 50.9	-0.9
	baz=226						
CHKT				eS	Sn	08 16 06.8	-2.4
	baz=226						
SMLT	Sun Moon Lake	1.41	265	eP	Pn	08 15 52.5	-0.3
	baz=263						
SMLT				eS	Sn	08 16 10.9	-0.1
	baz=263						
TYC	Yuchr	1.44	266	P	Pn	08 15 53.3	-0.1
	baz=264						
TYC				eS	Sn	08 16 11.1	-0.8
	baz=264						
NSTT	Nanjuang	1.44	296	eP	Pn	08 15 52.9	-0.5
	baz=294						
NSTT				eS	Sn	08 16 11.6	-0.3
	baz=294						
YUS	Yu-Shan	1.45	249	P	Pn	08 15 53.6	+0.2
	baz=248						
YUS				eS	Sn	08 16 11.7	-0.4
	baz=248						
JKRS	Kuro-shima	1.46	81	P	Pn	08 15 54.5	+0.9
JKRS				eS	Sn	08 16 14.0	+1.7
ELDTW	Lidau	1.53	238	eP	Pn	08 15 53.7	-0.9
	baz=237						
TWQ1	Liyutan	1.55	283	eP	Pn	08 15 54.8	0.0
	baz=281						
TWQ1				eS	Sn	08 16 14.7	+0.1
	baz=281						
ALS	Alishan	1.57	252	eP	Pn	08 15 55.6	+0.5
	baz=250						
ALS				eS	Sn	08 16 14.8	-0.2
	baz=250						
JIJ	Ishigaki jima	1.60	77	P	Pn	08 15 55.4	-0.1
JIJ				S	Sn	08 16 15.2	-0.7
TCU	Taichung	1.61	275	eP	Pn	08 15 56.2	+0.6
	baz=274						
TCU				eS	Sn	08 16 16.3	+0.2
	baz=274						
CHN5	Tsauling	1.66	256	eP	Pn	08 15 56.9	+0.6
	baz=255						
CHN5				eS	Sn	08 16 17.0	-0.2
	baz=255						
TWG	Pinlang	1.72	227	eP	Pn	08 15 55.8	-1.3
	baz=237						
TWG				eS	Sn	08 16 16.9	-1.8
	baz=237						
STYT	Tauyuan	1.75	242	P	Pn	08 15 57.8	+0.2
	baz=234						
STYT				S	Sn	08 16 19.6	0.0
	baz=234						
CHN4	Tsaushan	1.81	249	eP	Pn	08 15 59.2	+0.9
	baz=248						
CHN4				eS	Sn	08 16 22.6	+1.7
	baz=248						
WTP	Ta-pu	1.83	246	eP	Pn	08 15 59.6	+1.0
	baz=245						
WTP				eS	Sn	08 16 22.1	+0.6
	baz=245						
CHN1	Nanshi	1.93	245	eP	Pn	08 16 00.9	+0.8
	baz=245						
CHN1				eS	Sn	08 16 25.5	+1.6
	baz=245						
TWK	Hsinying	1.93	248	eP	Pn	08 16 01.6	+1.5
	baz=247						
TWK				eS	Sn	08 16 25.4	+1.5
	baz=247						
SGST	Jiashian	1.93	242	eP	Pn	08 16 00.7	+0.7
	baz=241						
SGST				eS	Sn	08 16 25.0	+1.0
	baz=241						
ECL	Taimali	1.95	224	eP	Pn	08 15 59.2	-1.2
	baz=232						
SSD	Sandimen	2.08	233	eP	Pn	08 16 02.9	+0.8
	baz=227						
LAY	Lan-yu	2.12	203	eP	Pn	08 16 01.3	-1.4
	baz=203						
EAST	Anshuo	2.18	222	eP	Pn	08 16 02.6	-0.8
	baz=223						
TWM1	Shoushan	2.19	238	eP	Pn	08 16 03.8	+0.2
	baz=238						
SCZT	Fangliau	2.33	226	eP	Pn	08 16 07.6	+2.0
	baz=227						

MAN 06 08:18:03, 6.94N×125.10E, h20km, mb3.8, ML2.6, MS2.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	Kidapawan	0.07	355 ⇑	iP	Pb	08 18 06.3	-0.4
KCP				iS	Sb	08 18 10.0	+0.7

*TAP **06** 08:44:50.7, 24.03N×122.45E, h43km±1km, ML3.0, D*

*JMA **06** 08:44:50.9±0.3, 24.02N×122.44E, h18km, M2.5*

*ISCJB **06** 08:44:51.4±0.5, 24.04N±0.03×122.42E±0.02, h29km±4km, Error ellipse: s-maj=5.0km s-min=2.9km az=168.6*

ISC 06 08:44:51.2±0.6, 24.04N±0.03×122.42E±0.02, h22km±5km, n33, σ0.75/62, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.68	52	P	Pb	08 45 04.0	-0.4
YOJ				S	Sb	08 45 13.2	-0.2
ENA	Nanau	0.73	302	eP	Pb	08 45 05.5	+0.3
	baz=302						
ENA				S	Sb	08 45 16.1	+1.3
	baz=302						
TWD	Chiawan	0.76	273	eP	Pb	08 45 06.7	+1.1
	baz=274						
TWD				S	Sb	08 45 15.7	+0.2
	baz=274						
TWC	Suao	0.77	317	iP	Pb	08 45 05.8	-0.1
	baz=317						
TWC				iS	Sb	08 45 17.1	+1.1
	baz=317						
ESL	Shilin	0.93	256	eP	Pb	08 45 08.4	-0.2
	baz=253						
ESL				eS	Sb	08 45 20.7	+0.1
	baz=253						
TWE	Neicheng	0.97	315	eP	Pb	08 45 09.0	-0.3
	baz=314						
TWE				eS	Sb	08 45 21.7	+0.2
	baz=314						
ENTT	Nioudou	0.98	308	P	Pb	08 45 09.2	-0.3
	baz=307						
ENTT				eS	Sb	08 45 21.5	-0.5
	baz=307						
NNS	Nan Shan	1.04	293	eP	Pn	08 45 10.1	-0.3
	baz=293						
NNS				eS	Sb	08 45 23.6	0.0
	baz=293						
WHF	Hehuan Shan	1.06	276	P	Pn	08 45 10.4	-0.3
	baz=277						
WHF				iS	Sb	08 45 24.2	-0.1
	baz=277						
EHY	Hungye	1.14	242	eP	Pn	08 45 10.8	-0.9
	baz=256						
EHY				eS	Sb	08 45 24.8	-1.7
	baz=256						
TWT	Tachien	1.16	281	eP	Pn	08 45 13.0	+1.0
	baz=273						
TWT				eS	Sb	08 45 27.1	+0.1
	baz=273						
NSK	Sanguang	1.16	303	P	Pn	08 45 11.9	-0.1
	baz=292						
NSK				eS	Sb	08 45 26.2	-0.9
	baz=292						
NWF	Wu-fen Shan	1.18	331	P	Pn	08 45 11.9	-0.5
	baz=330						
NWF				eS	Sn	08 45 27.5	-0.3
	baz=330						
TWA	Mucha	1.21	321	eP	Pn	08 45 12.7	0.0
	baz=334						
TWA				eS	Sn	08 45 29.1	+0.7
	baz=334						
IRIF	Iriomote-Funau	1.23	76	P	Pn	08 45 12.7	-0.3
IRIF				eS	Sn	08 45 28.8	-0.1
TWF1	Yuli	1.24	237	P	Pn	08 45 12.3	-0.8
	baz=253						
TWF1				eS	Sn	08 45 28.2	-0.9
	baz=253						
HATJ	Hateruma jima	1.27	89	eS	Sn	08 45 29.5	-0.3
SMLT	Sun Moon Lake	1.40	264	eP	Pn	08 45 15.4	+0.1
	baz=257						
NSTT	Nanjuang	1.42	295	eP	Pn	08 45 14.7	-0.9
	baz=295						
NSTT				eS	Sn	08 45 33.1	-0.6
	baz=295						
TYC	Yuchr	1.44	265	eP	Pn	08 45 14.5	-1.4
	baz=266						
TYC				eS	Sn	08 45 33.5	-0.6
	baz=266						
YUS	Yu-Shan	1.45	248	P	Pn	08 45 16.2	+0.2
	baz=250						
YUS				iS	Sn	08 45 34.2	-0.3
	baz=250						
JKRS	Kuro-shima	1.46	82	P	Pn	08 45 17.1	+0.9
JKRS				eS	Sn	08 45 35.9	+1.2
TWQ1	Liyutan	1.54	282	eP	Pn	08 45 17.2	0.0
	baz=283						
TWQ1				eS	Sn	08 45 35.7	-0.8
	baz=283						
ELDTW	Lidau	1.54	237	eP	Pn	08 45 16.8	-0.5
	baz=239						
ALS	Alishan	1.57	251	eP	Pn	08 45 17.8	+0.1
	baz=253						
ALS				eS	Sn	08 45 36.7	-0.6
	baz=253						
JIJ	Ishigaki jima	1.60	78	P	Pn	08 45 18.0	-0.2
JIJ				eS	Sn	08 45 37.5	-0.7
CHN5	Tsauling	1.66	255	eP	Pn	08 45 19.3	+0.5
	baz=257						
CHN5				eS	Sn	08 45 39.2	-0.3
	baz=257						
STYT	Tauyuan	1.76	241	P	Pn	08 45 20.3	0.0
	baz=237						
STYT				S	Sn	08 45 40.8	-1.2
	baz=237						
CHN4	Tsaushan	1.81	248	eP	Pn	08 45 22.6	+1.6
	baz=251						
CHN4				eS	Sn	08 45 44.9	+1.6
	baz=251						
WTP	Ta-pu	1.84	245	eP	Pn	08 45 21.9	+0.5
	baz=248						
TWK	Hsinying	1.93	247	eP	Pn	08 45 23.2	+0.5
	baz=250						
TWK				eS	Sn	08 45 47.0	+0.7
	baz=250						
CHN1	Nanshi	1.93	244	eP	Pn	08 45 23.1	+0.4
	baz=247						
CHN1				eS	Sn	08 45 47.6	+1.3
	baz=247						
SGST	Jiashian	1.94	241	eP	Pn	08 45 23.6	+0.9
	baz=234						
SGST				eS	Sn	08 45 49.5	+3.1
	baz=234						

*GII **06** 09:05:54.8±1.1, 34.17N×36.69E, h0km, ML2.8/4, EXPLOSION*

*GRAL **06** 09:05:55.5±0.3, 34.09N×36.98E, h10km±4km, MD3.0*

ISC 06 09:05:54.2±1.5, 34.05N±0.05×36.98E±0.09, h0km, n11, σ0.79/19, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FKH	Fakeheh	0.51	291	eP	Pg	09 06 04.6	+0.6
FKH				eS	Sg	09 06 11.3	+0.7
HWQ	Hawqa	0.88	285	eP	Pg	09 06 11.1	-0.1
RCY	Rachaya	1.12	240	eP	Pg	09 06 15.1	-0.6
RCY				eS	Sg	09 06 29.6	-0.6
HRI	Mount Hermon	1.30	233	Pg	Pg	09 06 18.2	-1.0
HRI				Sg	Sg	09 06 36.2	+0.2
KSDI	Kefar Szold	1.40	232	Pg	Pg	09 06 19.9	-1.1
KSDI				Sg	Sg	09 06 38.5	-0.6
KSHT	Keshet	1.45	223	Pn	Pn	09 06 20.9	-0.7
KSHT				Sn	Sn	09 06 40.9	-0.4
MMA1	Mount Meron ar	1.67	232	Sn	Sn	09 06 47.3	+0.5
MMA2	Mount Meron ar	1.67	232	Pn	Pn	09 06 24.2	-0.6
MMA2				Sn	Sn	09 06 46.3	-0.6
MMLI	Mount Malkishu	2.07	219	Pn	Pn	09 06 30.3	0.0
MMLI				Sn	Sn	09 06 58.1	+1.4
HMDT	Nahal Hemdat	2.17	215	Pn	Pn	09 06 32.0	+0.4
HMDT				Sn	Sn	09 07 01.3	+2.2
SLTI	Sal'it	2.43	222	Sn	Sn	09 07 06.3	+0.7

*ISCJB **06** 09:08:13.2±0.7, 12.18N±0.06×88.48W±0.06, h33km, mb4.0/7, Error ellipse: s-maj=10.6km s-min=5.7km az=40.3*

*CASC **06** 09:08:13.3±2.5, 12.16N×88.47W, h21km±17km, MD4.1, ML3.5, mb4.2(NEIC)*

*IDC **06** 09:08:16.6±5.5, 13.26N×87.80W, h0km, mb3.9/3, mb1 4.3/3, mb1mx3.8/20, mbtmp4.0/3, MS3.4/1, Ms1 3.3/1, ms1mx2.7/25, Error ellipse: s-maj=100.7km s-min=86.9km az=29.0*

*NEIC **06** 09:08:27.0±3.6, 13.18N×88.22W, h79km±29km, mb4.2/5, Error ellipse: s-maj=50.0km s-min=30.0km az=51.0*

ISC 06 09:08:15.9±0.8, 12.32N±0.08×88.34W±0.07, h35km, n46, σ0.86/34, mb4.1/6, 12C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	1.07	27 ⇓	eP	x	09 08 35.3	
CNCH				eS	x	09 08 55.9	
VSM	San Miguel	1.10	3 ⇑	eP	x	09 08 36.1	
VSM				eS	x	09 08 55.0	
BLLM	Bellamira	1.12	5 ⇑	iP	x	09 08 36.0	
BLLM				eS	x	09 08 54.8	
SNVI	San Vicente	1.38	339	eP	x	09 08 38.8	
SNVI			⇓	iP	x	09 08 39.0	
SNVI				eS	x	09 08 57.6	
LEON	Leon	1.41	86	eP	Pn	09 08 38.2	-1.0
CAHU	Cacacuatique	1.45	5 ⇑	eP	x	09 08 41.3	
TEL3	Telica 3	1.48	80 ⇓	eP	Pn	09 08 39.7	-0.3
TELN	Telica	1.50	79	eP	Pn	09 08 41.2	+0.8
LBRS	Las Brisas	1.57	334 ⇑	eP	x	09 08 41.6	
LFU	La Fuente	1.61	332 ⇑	eP	x	09 08 42.6	
CNGN	Cerro Negro	1.61	83	eP	Pn	09 08 43.3	+1.4
SNET	Serv Nac Est T	1.61	327	eP	x	09 08 41.5	
SNET				eS	x	09 09 02.0	
SNET				i		09 09 11.8	
	comp=Z,616nm,0.4s						
BOQS	Boqueron	1.68	327	eS	x	09 09 05.0	
COPN	Copaltepe	1.71	94 ⇓	eP	Pn	09 08 42.3	-0.9
COPN				eS	Sn	09 09 10.1	+6.1
MOMN	Momotombo	1.76	87	eP	Pn	09 08 43.5	-0.4
CSAN		1.88	94 ⇑	eP	Pn	09 08 45.4	-0.1
APYN	Apoyeque	1.94	92 ⇑	eP	Pn	09 08 46.2	-0.2
SBLS	San Blas	1.96	320	eP	x	09 08 46.4	
SBLS				eS	x	09 09 13.8	
XAVN	Gruta Xavier	1.97	95	eP	Pn	09 08 46.7	-0.1
SNJE	San Jose	1.97	321	eP	x	09 08 47.0	
SNJE				eS	x	09 09 12.4	
TGUH	Tegucigalpa,Un	2.01	31 ⇑	eP	Pn	09 08 49.3	+1.8
TGUH				eS	Sn	09 09 15.0	+3.6
TGUH	Tegucigalpa,Un	2.01	31	iP	Pn	09 08 49.1	+1.7
TGUH				eS	Sn	09 09 16.1	+4.7
CRUN	El Crucero	2.02	99 ⇑	eP	Pn	09 08 47.6	+0.1
TISN	Laguna Tiscapa	2.03	95	eP	Pn	09 08 47.1	-0.5
MGAN	Managua	2.05	95 ⇑	eP	Pn	09 08 47.1	-0.8
TICN	Ticuantepe	2.08	98	eP	Pn	09 08 48.4	+0.1
HUEN		2.12	89	eP	Pn	09 08 48.3	-0.5
RBDL	Robledal	2.21	324 ⇑	eP	x	09 08 50.7	
RBDL				eS	x	09 09 18.1	
APON	Apoyo	2.26	100	eP	Pn	09 08 50.4	-0.3
MTO2	Montecristo 2	2.30	334	eP	x	09 08 52.5	
CONN	Concepcion	2.76	106	eP	Pn	09 08 57.6	0.0
JCR	Jicaral	4.01	127	eP	Pn	09 09 15.5	+0.7
LCR2	La Lucha 2	4.97	121	eP	Pn	09 09 28.8	+0.7
QCR	Quepos	5.01	125 ⇑	eP	Pn	09 09 28.9	+0.2
BUS	Buena Vista	5.27	121	eP	Pn	09 09 33.2	+1.0
CTCR	Cotoan	6.45	121	eP	Pn	09 09 48.5	-0.1
CTCR			⇓	eP		09 09 48.5	
CHI2		16.32	117	eP	Px	09 08 37.5	
VBMS	Vicksburg	19.91	355	P	Pn	09 12 45.1	-1.2
	comp=Z,18nm,0.7s						
JCT	Junction City	20.96	331	eP	P	09 12 56.1	+0.2
	comp=Z,4.8nm,0.6s						
TXAR	Lajitas Array	22.14	322	P	P	09 13 09.5	+0.9
	comp=Z,2.7nm,0.7s,mb3.8,baz=146,slow=11,SNR=40						
MIAR	Mount Ida	22.63	349	eP	P	09 13 13.9	+0.1
	comp=Z,11nm,1.0s,mb4.3						
WMOK	Wichita Mounta	24.25	339	eP	P	09 13 29.3	-0.4
	comp=Z,4.6nm,1.1s,mb3.8						
PDAR	Pinedale Array	35.48	333	P	P	09 15 11.0	+1.8
	comp=Z,0.5nm,0.9s,mb3.5,baz=144,slow=17,SNR=3.6						
AGMN	Agassiz Refuge	36.41	352	eP	P	09 15 15.6	-1.5
	comp=Z,4.6nm,0.6s,mb4.6						
ULM	Lac du Bonnet	38.32	352	P	P	09 15 31.4	-1.8
	comp=Z,7.2nm,0.7s,mb4.5,baz=174,slow=8.5,SNR=14						
ULM				LR	LR	09 31 45.5	
	comp=Z,54nm,20.2s,baz=61,slow=38						
WRA	Warramunga Arr	138.40	254	PKP	PKPdf	09 27 45.7	+7.1
	comp=Z,0.2nm,0.6s,baz=86,slow=2.2,SNR=4.6						

*NIED **06** 09:16:00, 22.70N×123.60E, h5km, Mw4.1 Best double couple: $M_0$1.48000×10^{15} NP1:ϕ_s303.00000°, δ72.00000°, λ-77.00000°. NP2:ϕ_s85.00000°, δ22.00000°,*

λ-125.00000°.
*IDC **06** 09:16:35.8±1.0, 2266N×12357E, h0km, mb3.9/6, mb1 3.9/8, mb1mx3.8/22, mbtmp3.9/8, ML3.8/2, MS3.2/5, Ms1 3.2/5, ms1mx2.7/39, Error ellipse: s-maj=34.3km s-min=19.3km az=78.0*
*ISCJB **06** 09:16:37.3±2.0, 2270N±004×12353E±005, h22km±16km, mb3.7/6, MS3.3/3, Error ellipse: s-maj=7.8km s-min=6.7km az=146.3*
*NEIC **06** 09:16:37.2±0.9, 2267N×12350E, h10km, MG4.1(JMA), Error ellipse: s-maj=18.5km s-min=13.5km az=46.0*
*JMA **06** 09:16:39.2±0.3, 2275N×12355E, h71km, M4.1*
ISC 06 09:16:38.2±2.0, **2276N**±005×**12353E**±005, **h15**km±14km, **n23**, σ**0s85**/32, **mb3.7**/6, **MS3.3**/3, **Southeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.32**	**11**	P	**Pn**	**09 17 02.1**	**0.0**
HATJ				S	**Sn**	**09 17 18.9**	**-0.5**
JKRS	**Kuro-shima**	**1.54**	**16**	P	**Pn**	**09 17 05.5**	**+0.4**
JKRS				S	**Sn**	**09 17 24.8**	**-0.1**
IRIF	**Iriomote-Funau**	**1.58**	**7**	P	**Pn**	**09 17 06.0**	**+0.3**
IRIF				S	**Sn**	**09 17 25.6**	**-0.3**
JIJ	**Ishigaki jima**	**1.70**	**19**	P	**Pn**	**09 17 07.0**	**-0.3**
JIJ				S	**Sn**	**09 17 28.1**	**-0.6**
YOJ	**Yonaguni jima**	**1.76**	**344**	P	**Pn**	**09 17 08.3**	**+0.1**
YOJ				S	**Sn**	**09 17 30.0**	**-0.4**
JTJ	**Tarama**	**2.16**	**30**	P	**Pn**	**09 17 13.3**	**-0.4**
JTJ				S	**Sn**	**09 17 40.3**	**+0.1**
NACB	**Ninganchiao**	**2.27**	**309**	*e*Pn	**Pn**	**09 17 13.5**	**-1.7**
NACB				*e*Sn	**Sn**	**09 17 39.0**	**-3.9**
JMJ	**Miyako jima 2**	**2.61**	**38**	*e*S	**Sn**	**09 17 51.3**	**0.0**
JOGS	**Gusukube**	**2.63**	**40**	P	**Pn**	**09 17 19.9**	**-0.3**
JOGS				*e*S	**Sn**	**09 17 52.4**	**+0.5**
YHNB	**Yeheng**	**2.74**	**314**	*e*Pn	**Pn**	**09 17 21.7**	**0.0**
YHNB				*e*Sn	**Sn**	**09 17 54.1**	**-0.5**
TATO	**Taipei**	**2.90**	**320**	*e*Pn	**Pn**	**09 17 24.8**	**+1.1**
TATO				*e*Sn	**Sn**	**09 17 58.9**	**+0.6**
JKE	**Kume jima 2**	**4.63**	**39**	P	**Pn**	**09 17 46.8**	**-0.8**
JOW	**Kunigami**	**5.92**	**46**	Pn	**Pn**	**09 18 03.9**	**-1.4**
	6.2nm,0.3s,baz=217,slow=14,SNR=12						
JOW				LR	LR	09 20 28.7	
	comp=Z,191nm,20.2s,baz=171,slow=39						
KSRS	**Korea Array**	**15.13**	**14**	Pn	**Pn**	**09 20 11.6**	**+0.2**
	0.3nm,0.3s,baz=187,slow=13,SNR=5.6						
KSRS				LR	LR	09 26 25.8	
	comp=Z,48nm,20.8s,baz=105,slow=39						
MJAR	**Matsushiro Arr**	**18.71**	**39**	P	**Pn**	**09 20 59.0**	**+2.4**
	0.4nm,0.3s,baz=233,slow=9.4,SNR=14						
MJAR	**Matsushiro Arr**	**18.71**	**39**	P	**Pn**	**09 20 59.0**	**+2.4**
ASAJ	**Asahikawa**	**26.47**	**32**	P	**P**	**09 22 16.2**	**+1.5**
	2.4nm,0.4s,mb4.1,baz=240,slow=9.1,SNR=5.0						
ASAJ				LR	LR	09 34 48.8	
	comp=Z,50nm,18.2s,MS3.1,baz=339,slow=41						
SONM	**Songino Array**	**28.54**	**335**	P	**P**	**09 22 34.5**	**+1.4**
	1.2nm,0.6s,mb3.8,baz=141,slow=7.3,SNR=4.3						
SONM				LR	LR	09 34 43.5	
	comp=Z,49nm,20.8s,MS3.1,baz=84,slow=38						
ZALV	**Zalesovo Beam**	**42.61**	**327**	P	**P**	**09 24 34.1**	**+0.5**
	1.0nm,0.3s,mb4.0,baz=111,slow=8.4,SNR=6.7						
WRA	**Warramunga Arr**	**43.73**	**165**	P	**P**	**09 24 41.3**	**-1.7**
	0.4nm,0.4s,mb3.5,baz=346,slow=9.0,SNR=6.6						
KURK	**Kurchatov**	**44.56**	**320**	P	**P**	**09 24 50.0**	**+0.6**
	0.4nm,0.4s,mb3.6,baz=115,slow=7.9,SNR=6.1						
ASAR	**Alice Springs**	**47.23**	**167**	P	**P**	**09 25 10.7**	**0.0**
	0.2nm,0.4s,mb3.4,baz=354,slow=13,SNR=5.5						
NWAO	**Narrogin (SRO)**	**55.69**	**186**	LR	LR	09 50 24.0	
	comp=Z,49nm,18.3s,MS3.6,baz=84,slow=36						

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*ISCJB **06** 09:40:50.9±1.2, 2835N±006×567E±0.1, h12km±10km, Error ellipse: s-maj=20.1km s-min=8.0km az=19.1*
*CSEM **06** 09:40:51.3±0.1, 2843N×5665E, h5km, ML3.2/1, Error ellipse: s-maj=4.8km s-min=2.9km az=105.0*
*THR **06** 09:40:52.2±0.6, 2838N×5667E, h17km±5km, ML3.0*
ISC 06 09:40:51.8±1.3, **2835N**±006×**568E**±01, **h11**km±10km, **n12**, σ**1s06**/15, **1C-1D**, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**1.08**	**209**	*e*Pg	**Pg**	**09 41 12.1**	**-0.4**
BNDS				*e*Sg	**Sg**	**09 41 27.3**	**+0.8**
BNDS				AML	AML	09 41 35.5	
	comp=N,620nm,0.4s						
BNDS	**Bandar-Abbas**	**1.08**	**209**	*e*Pg	**Pg**	**09 41 12.1**	**-0.4**
	SNR=92						
BNDS				*e*Sg	**Sg**	**09 41 27.3**	**+0.8**
	SNR=92						
KRBR	**Kerman**	**1.63**	**0**	*e*Pg	**Pg**	**09 41 21.7**	**-1.3**
KRBR				AML	AML	09 41 53.3	
	comp=N,160nm,0.6s						
KRBR				AML	AML	09 42 01.4	
	comp=E,154nm,0.6s						
BANOM	**Banah**	**2.45**	**190**	⇓P	**Pn**	**09 41 31.2**	**-0.5**
	SNR=44						
BANOM	**Banah**	**2.45**	**190**	Pn	**Pn**	**09 41 31.2**	**-0.5**
	SNR=16						
BANOM				Sn	**Sn**	**09 41 59.9**	**-1.7**
GHIR	**Ghir-Karzin**	**3.32**	**270**	*e*Pn	**Pn**	**09 41 44.5**	**+0.8**
ASHO	**Ashiyiah**	**3.70**	**190**	⇑P	**Pn**	**09 41 49.5**	**+0.6**
	SNR=9.4						
ASHO	**Ashiyiah**	**3.70**	**190**	Pn	**Pn**	**09 41 48.4**	**-0.5**
	SNR=9.4						
ASHO	**Ashiyiah**	**3.70**	**190**	P	**Pn**	**09 41 49.5**	**+0.6**
	SNR=9.4						
FAQ	**Al Faqa, Dubai**	**3.74**	**196**	Pn	**Pn**	**09 41 49.5**	**+0.1**
	SNR=16						
ZHSF	**Zahedan**	**3.74**	**69**	*e*Pn	**Pn**	**09 41 52.3**	**+2.8**
ASUD	**Al Ashush, Dub**	**3.92**	**199**	Pn	**Pn**	**09 41 52.4**	**+0.5**
	SNR=30						

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*ISCJB **06** 09:41:07.8±0.9, 199N±0.1×9477E±009, h75km±9km, mb3.9/11, Error ellipse: s-maj=23.1km s-min=5.9km az=34.9*
*NEIC **06** 09:41:10.6±2.1, 1987N×9469E, h84km±18km, Error ellipse: s-maj=28.9km s-min=8.6km az=59.0*
*IDC **06** 09:41:10.4±4.4, 1988N×9471E, h80km±38km, mb3.7/11, mb1 3.8/12, mb1mx3.6/25, mbtmp3.6/12, Error ellipse: s-maj=47.3km s-min=12.2km az=58.0*
ISC 06 09:41:09.6±0.7, **199N**±01×**9476E**±008, **h72**km±7km, **n33**, σ**0s84**/33, **mb3.9**/11, **1C**, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHG	**Chiang Mai**	**4.10**	**105**	PG	**Pn**	**09 42 10.7**	**+1.0**
CHG				SG	**Sn**	**09 42 47.9**	**-8.6**
CMAR	**Chiang Mai Arr**	**4.21**	**109**	P	**Pn**	**09 42 13.1**	**+1.8**
	3.0nm,0.3s,baz=282,slow=14,SNR=28						
CMAR				S	**Sn**	**09 42 57.5**	**-1.8**
	2.3nm,0.3s,baz=286,slow=21,SNR=7.5						
IMP	**Imphal**	**4.90**	**351**	*i* P	**Pn**	**09 42 25.0**	**+4.2**
NANT	**Nan**	**5.71**	**100**	⇑P	**Pn**	**09 42 31.0**	**-0.8**
	119nm,0.9s						
SHL	**Shillong**	**6.22**	**335**	*e*PN	**Pn**	**09 42 40.5**	**+1.8**
SHL				*e*SN	**Sn**	**09 43 46.5**	**-1.9**
ODAN	**Odare**	**9.67**	**317**	*e*P	**Pn**	**09 43 26.8**	**+0.9**
	23nm,0.2s						
TAPN	**Taplejung**	**9.82**	**320**	*e*P	**Pn**	**09 43 28.4**	**+0.4**
	61nm,0.4s						
RAMN	**Ramite**	**10.25**	**315**	*e*P	**Pn**	**09 43 34.3**	**+0.5**
	78nm,0.3s						
JIRN	**Jiri**	**11.00**	**316**	*e*P	**Pn**	**09 43 44.9**	**+0.9**
	71nm,0.2s						
GUN	**Gumba**	**11.37**	**316**	*e*P	**Pn**	**09 43 49.4**	**+0.3**
PKI	**Pulchoki**	**11.46**	**313**	*e*P	**Pn**	**09 43 49.9**	**-0.4**
	82nm,0.5s						
PKIN	**Phulchoki**	**11.47**	**313**	*e*P	**Pn**	**09 43 50.1**	**-0.4**
	46nm,0.4s						
KKN	**Kakani**	**11.69**	**314**	*e*P	**Pn**	**09 43 52.8**	**-0.6**
DMN	**Daman**	**11.69**	**313**	*e*P	**Pn**	**09 43 52.9**	**-0.6**
GKN	**Gorkha**	**12.26**	**313**	*e*P	**Pn**	**09 44 01.1**	**-0.1**
KOLN	**Koldanda**	**12.86**	**310**	*e*P	**Pn**	**09 44 08.5**	**-0.8**
	47nm,0.3s						
DANN	**Dangsing**	**13.08**	**312**	*e*P	**Pn**	**09 44 11.5**	**-0.9**
	88nm,0.4s						
MKAR	**Makanchi Array**	**28.68**	**342**	P	**P**	**09 46 59.9**	**+0.3**
	1.0nm,0.5s,mb3.7,baz=146,slow=8.6,SNR=9.1						
SONM	**Songino Array**	**29.41**	**16**	P	**P**	**09 47 06.9**	**+0.9**
	0.5nm,0.3s,mb3.6,baz=219,slow=8.3,SNR=3.4						
SONM	**Songino Array**	**29.41**	**16**	P	**P**	**09 47 06.9**	**+0.9**
KURK	**Kurchatov**	**33.28**	**341**	P	**P**	**09 47 39.8**	**-0.2**
	1.2nm,0.5s,mb4.0,baz=150,slow=8.6,SNR=8.2						
ZALV	**Zalesovo Beam**	**34.82**	**350**	P	**P**	**09 47 53.4**	**+0.2**
	2.7nm,0.5s,mb4.3,baz=174,slow=8.8,SNR=7.2						
BVAR	**Borovoye Array**	**38.04**	**336**	PcP	PcP	09 50 35.0	+0.3
	0.6nm,0.5s,baz=151,slow=3.3,SNR=2.9						
AKTK	**Aktyubinsk**	**42.06**	**325**	P	**P**	**09 48 54.3**	**+0.4**
AKTO	**Aktyubinsk**	**42.06**	**325**	P	**P**	**09 48 54.3**	**+0.3**
	0.6nm,0.3s,mb3.8,baz=168,slow=12,SNR=4.0						
FITZ	**Fitzroy Crossi**	**48.43**	**139**	P	**P**	**09 49 44.5**	**-0.3**
	1.3nm,0.8s,mb3.8,baz=337,slow=15,SNR=2.9						
WRA	**Warramunga Arr**	**55.43**	**133**	P	**P**	**09 50 36.4**	**-0.4**
	1.0nm,0.5s,mb4.2,baz=318,slow=7.6,SNR=35						
WRA				PcP	PcP	09 51 36.1	-0.3
	0.6nm,0.6s,baz=322,slow=3.9,SNR=11						
ASAR	**Alice Springs**	**57.73**	**137**	P	**P**	**09 50 53.2**	**+0.2**
	0.6nm,0.6s,mb3.8,baz=321,slow=7.2,SNR=14						
ASAR				PcP	PcP	09 51 45.5	+0.3
	0.3nm,0.6s,baz=321,slow=3.8,SNR=5.2						
ARCES	**ARCESS Array B**	**64.27**	**339**	P	**P**	**09 51 36.8**	**0.0**
	2.3nm,0.9s,mb4.0,baz=85,slow=6.8,SNR=8.2						
NOA	**NORSAR Array B**	**69.68**	**329**	P	**P**	**09 52 10.2**	**-1.0**
	1.2nm,0.7s,mb3.9,baz=86,slow=6.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**88.43**	**283**	P	**P**	**09 53 54.5**	**+0.1**
	0.3nm,0.6s,mb3.5,baz=60,slow=4.4,SNR=4.2						
TXAR	**Lajitas Array**	**127.91**	**20**	PKP	PKPdf	10 00 08.0	+0.4
	0.2nm,0.5s,baz=157,slow=1.4,SNR=9.3						
TXAR	**Lajitas Array**	**127.91**	**20**	PKP	PKPdf	10 00 08.0	+0.4

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*TEH **06** 09:53:42.6, 3676N×5446E, h5km, ML3.5*
*THR **06** 09:54:30.8±1.1, 3693N×5443E, h14km±12km, ML3.6*
*CSEM **06** 09:54:30.2±0.1, 3671N×5454E, h2km, ML3.5, Error ellipse: s-maj=4.6km s-min=1.9km az=163.0*
*ISCJB **06** 09:54:32.2±0.5, 3667N±006×5461E±004, h10km, Error ellipse: s-maj=8.9km s-min=3.8km az=154.5*
ISC 06 09:54:32.9±0.5, **3674N**±006×**5455E**±004, **h10**km, **n29**, σ**1s38**/37, **1C**, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**0.62**	**248**	*e*Pg	**Pg**	**09 54 42.4**	**-2.5**
IGLO				*e*		09 54 59.9	
IKIA	**Kiasar**	**0.87**	**233**	*e*Pg	**Pg**	**09 54 47.5**	**-2.2**
IKIA				*e*		09 54 50.1	
IANJ	**Anjilo**	**1.36**	**202**	⇑*e*Pg	**Pn**	**09 54 56.2**	**-1.8**
IANJ				*e*		09 54 57.0	
IANJ				*e*Sg	**Sg**	**09 55 15.1**	**-1.7**
ISHM	**Shahmirzad**	**1.37**	**228**	*e*Pn	**Pn**	**09 54 56.7**	**-1.4**
ISHM				*e*Sn	**Sn**	**09 55 17.3**	**+1.0**
ISHM	**Shahmirzad**	**1.37**	**228**	*e*Pn	**Pn**	**09 54 56.7**	**-1.4**
ISHM				*e*Sn	**Sn**	**09 55 17.3**	**+1.0**
ISHM				*e*		09 55 23.3	
MRVT	**Maraveh tapeh**	**1.54**	**53**	*e*Pg	**Pn**	**09 54 58.5**	**-1.8**
MRVT				*e*Sg	**Sn**	**09 55 18.8**	**-1.6**
MRVT				AML	AML	09 55 21.0	
	comp=N,1μm,0.2s						
MRVT				AML	AML	09 55 22.0	
	comp=E,898nm,0.2s						
MRVT	**Maraveh tapeh**	**1.54**	**53**	*e*Pg	**Pn**	**09 54 58.5**	**-1.9**
	SNR=90						
MRVT				*e*Sg	**Sn**	**09 55 18.8**	**-1.6**
	comp=E,898nm,0.2s,SNR=90						
IALA	**Alasht**	**1.54**	**246**	*e*Pn	**Pn**	**09 54 59.0**	**-1.4**
IALA				*e*		09 55 29.5	
IFIR	**Firoozkooh**	**1.81**	**234**	*e*Pn	**Pn**	**09 55 04.9**	**+0.8**
IFIR				*e*		09 55 35.2	
IPRN	**Peran**	**1.85**	**255**	*e*Pn	**Pn**	**09 55 04.4**	**-0.2**
IPRN				*e*Sn	**Sn**	**09 55 29.4**	**+1.4**
IPRN				*e*		09 55 32.8	
ILAS	**Lasjerd**	**1.86**	**224**	*e*Pn	**Pn**	**09 55 05.8**	**+1.0**
ILAS				*e*		09 55 07.3	
IDMV	**Damavand**	**2.34**	**241**	*e*Pn	**Pn**	**09 55 13.6**	**+2.2**
IDMV				*e*		09 55 49.7	
DAMV	**Damavand**	**2.36**	**243**	*e*Pg	**Pn**	**09 55 13.7**	**+2.1**
DAMV				*e*Sg	**Sg**	**09 55 45.1**	**-3.5**
DAMV				AML	AML	09 55 49.1	
	comp=E,293nm,0.4s						
DAMV				AML	AML	09 55 51.1	
	comp=N,344nm,0.6s						
DAMV	**Damavand**	**2.36**	**243**	*e*Pg	**Pn**	**09 55 13.7**	**+2.1**
	SNR=90						
DAMV				*e*Sg	**Sg**	**09 55 45.1**	**-3.5**
	comp=N,344nm,0.6s,SNR=90						
IAFJ	**Afjeh**	**2.45**	**250**	*e*Pn	**Pn**	**09 55 14.7**	**+1.8**
IAFJ				*e*		09 55 51.9	
IVRN	**Varamin**	**2.87**	**234**	*e*Pn	**Pn**	**09 55 18.4**	**-0.3**
IVRN				*e*		09 56 03.0	
ISFB	**Sefidab**	**3.03**	**219**	*e*Pn	**Pn**	**09 55 20.9**	**0.0**
ISFB				*e*		09 55 31.6	
IR3	**Iran Long-Peri**	**3.12**	**247**	*e*Pn	**Pn**	**09 55 23.7**	**+1.7**
IKRD	**Kardeh**	**3.19**	**88**	*e*Pn	**Pg**	**09 55 34.7**	**+0.8**
IMHD	**Mahdasht**	**3.31**	**253**	*e*Pn	**Pn**	**09 55 25.2**	**+0.5**
IMHD				*e*		09 55 37.4	
IAKL	**Akhelmad**	**3.39**	**91**	*e*Pn	**Pn**	**09 55 25.8**	**0.0**
GHVR	**GHOM**	**3.48**	**231**	*e*Pn	**Pn**	**09 55 28.3**	**+1.4**
GHVR				AML	AML	09 56 37.5	
	comp=E,80nm,0.7s						
GHVR				AML	AML	09 56 41.4	
	comp=N,70nm,0.6s						
IPAY	**Payeh**	**3.59**	**93**	*e*Pn	**Pn**	**09 55 28.9**	**+0.3**
IPAY				*e*		09 55 30.3	
IMOG	**Moghan**	**3.92**	**98**	*e*Pn	**Pn**	**09 55 34.5**	**+1.5**
IMOG				*e*		09 55 55.6	
IRAZ	**Razeghan**	**3.97**	**252**	*e*Pn	**Pn**	**09 55 34.3**	**+0.5**
IRAZ				*e*		09 56 44.7	
IKLH	**Kolahrood**	**4.19**	**216**	*e*Pn	**Pn**	**09 55 35.6**	**-1.2**
IKLH				*e*		09 56 55.3	
IMYA	**Miami**	**4.49**	**93**	*e*Pn	**Pn**	**09 55 41.9**	**+1.0**
IBAF	**Bafgh**	**5.20**	**170**	*e*Pn	**Pn**	**09 55 50.9**	**+0.2**
IBAF				*e*		09 56 53.4	
GRMI	**Germi**	**5.66**	**293**	*e*Pn	**Pn**	**09 55 54.7**	**-2.3**

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*MOS **06** 09:58:32.8±1.5, 5179N×17503W, h33km, mb4.5/9, Error ellipse: s-maj=15.0km s-min=14.0km az=22.2*
*ISCJB **06** 09:58:36.3±0.6, 5179N±008×17521W±005, h68km±5km, mb4.2/28, Error ellipse: s-maj=13.3km s-min=4.9km az=174.6*
*NEIC **06** 09:58:37.9, 5156N×175.14W, h43km, mb4.2/11, ML4.0(AEIC), After AEIC.*
*IDC **06** 09:58:42.5±4.2, 5187N×17520W, h112km±37km, mb3.8/16, mb1 4.0/18, mb1mx3.9/26, mbtmp3.8/18, MS3.3/6, Ms1 3.2/6, ms1mx2.9/37, Error ellipse: s-maj=20.3km s-min=11.2km az=179.0*
ISC 06 09:58:37.5±0.6, **5172N**±008×**17522W**±005, **h65**km±5km, **n183**, σ**0s54**/178, **mb4.2**/28, **55C-58D**, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	**Adak**	**0.93**	**281**	P	**Pn**	**09 58 54.6**	**-0.2**
ADK				S	**Sn**	**09 59 08.6**	**+1.0**
AMKA	**Amchitka**	**3.44**	**266**	P	**Pn**	**09 59 28.4**	**-0.2**
AMKA				S	**Sn**	**10 00 07.1**	**-1.0**
NIKO	**Nikolski**	**4.10**	**70**	P	**Pn**	**09 59 36.3**	**-1.2**
OKCD	**Okmok Cone D**	**4.66**	**66**	P	**Pn**	**09 59 45.5**	**+0.3**
UNV	**Unalaska Valle**	**5.70**	**65**	P	**Pn**	**09 59 59.0**	**-0.5**
AKLV	**Akutan Long Va**	**6.11**	**63**	P	**Pn**	**10 00 05.1**	**0.0**
SPIA	**Saint Paul Isl**	**6.19**	**26**	P	**Pn**	**10 00 07.0**	**+0.9**
AKUT	**Akutan**	**6.20**	**63**	*e*P	**Pn**	**10 00 06.0**	**-0.3**
FX1	**Attu Island--F**	**7.22**	**284**	P	**Pn**	**10 00 20.5**	**+0.2**
FALS	**False Pass**	**7.74**	**61**	P	**Pn**	**10 00 26.2**	**-1.1**
SDPT	**Sand Point**	**9.49**	**62**	P	**Pn**	**10 00 49.1**	**-2.2**
CHGN	**Chignik**	**10.89**	**59**	*e*P	**Pn**	**10 01 10.0**	**-0.3**
KDAK	**Kodiak Island**	**14.37**	**56**	P	**Pn**	**10 01 60.0**	**+2.7**
	11nm,0.3s,baz=248,slow=4.3,SNR=61						
KDAK				S	**Sn**	**10 04 39.4**	**+4.5**
	0.2nm,0.3s,baz=319,slow=18,SNR=5.2						
PETK	**Petropavlovsk-**	**16.55**	**285**	P	**Pn**	**10 02 26.6**	**+1.5**
	0.3nm,0.3s,baz=90,slow=16,SNR=8.8						
PETK				LR	LR	10 08 26.6	
	comp=Z,30nm,21.7s,baz=278,slow=35						
IMA2	**Indian Mountai**	**18.02**	**29**	*e*P	**Pn**	**10 02 44.1**	**+1.0**
BILL	**Bilibino**	**18.68**	**338**	*e*P	**Pn**	**10 02 51.7**	**+0.8**
BILL				pmax	pmax		
	comp=Z,17nm,0.6s						
DLBC	**Dease Lake**	**26.30**	**57**	P	**P**	**10 04 06.5**	**0.0**
	baz=342,slow=3.2						
ASAJ	**Asahikawa**	**28.94**	**272**	LR	LR	10 15 26.9	
	comp=Z,82nm,18.0s,baz=339,slow=35						
YKA	**Yellowknife Ar**	**33.36**	**47**	P	**P**	**10 05 08.6**	**-0.3**
	comp=Z,1.1nm,0.6s,mb3.9,baz=280,slow=7.7,SNR=6.1						
YKA				PcP	PcP	10 07 50.1	+1.1
	comp=Z,0.6nm,0.5s,baz=275,slow=2.8,SNR=4.5						
YKA				LR	LR	10 19 15.8	
	comp=Z,24nm,20.5s,baz=200,slow=37						
YKA	**Yellowknife Ar**	**33.36**	**47**	P	**P**	**10 05 08.6**	**-0.4**
YKA						10 07 50.1	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA				MLR	MLR		
	comp=Z,24nm,20.5s						
A07A	**Ashnola River,**	**34.37**	**72**	⇑P	**P**	**10 05 18.0**	**+0.1**
	baz=34						
F04A	**Amboy**	**34.59**	**78**	⇑P	**P**	**10 05 20.1**	**+0.3**
	baz=34						
A08A	**Turner Farm, O**	**35.07**	**72**	⇑P	**P**	**10 05 23.8**	**-0.1**
	baz=35						
B08A	**Colville Reser**	**35.30**	**73**	⇑P	**P**	**10 05 26.3**	**+0.4**
	baz=35,SNR=5.6						
A09A	**Danville**	**35.47**	**71**	⇓P	**P**	**10 05 27.7**	**+0.4**
	baz=35						
G05A	**Wamic**	**35.60**	**79**	⇑P	**P**	**10 05 28.9**	**+0.4**
	baz=36						
HAWA	**Hanford**	**36.11**	**76**	*e*P	**P**	**10 05 33.3**	**+0.4**
	comp=Z,6.0nm,0.9s,mb4.5						
D08A	**Wollman Farm,**	**36.16**	**75**	⇓P	**P**	**10 05 32.9**	**-0.3**
	baz=36						
H06A	**Lindquist Farm**	**36.46**	**79**	⇓P	**P**	**10 05 36.3**	**+0.5**
	baz=36						
YBH	**Yreka Blue Hor**	**36.62**	**85**	P	**P**	**10 05 38.2**	**+1.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=346,slow=4.2,SNR=3.8						
NEW	**Newport**	**36.66**	**72**	*e*P	**P**	**10 05 37.7**	**+0.2**
NEW				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NEW	**Newport**	**36.66**	**72**	*e*P	**P**	**10 05 37.7**	**+0.2**
	comp=Z,7.1nm,0.9s,mb4.6						
EDM	**Edmonton**	**36.68**	**63**	*e*P	**P**	**10 05 37.6**	**0.0**
H07A	**Lands Inn, Kim**	**37.01**	**79**	⇓P	**P**	**10 05 40.8**	**+0.3**
	baz=37						
G08A	**Pilot Rock**	**37.01**	**77**	⇑P	**P**	**10 05 40.5**	**-0.1**
	baz=37						
D10A	**Wagner Farm, O**	**37.14**	**74**	⇑P	**P**	**10 05 41.9**	**+0.3**
	baz=37						
K05A	**Summer Lake**	**37.19**	**82**	⇑P	**P**	**10 05 42.2**	**+0.2**
	baz=37						
I07A	**Izee**	**37.31**	**79**	⇑P	**P**	**10 05 43.3**	**+0.2**
	baz=37						
J06A	**Christmas Vall**	**37.36**	**81**	⇑P	**P**	**10 05 44.0**	**+0.6**
	baz=37						
K06A	**Valley Falls**	**37.54**	**81**	⇓P	**P**	**10 05 45.2**	**+0.2**
	baz=37						
H08A	**Prairie City**	**37.59**	**78**	⇓P	**P**	**10 05 45.3**	**-0.1**
	baz=38						
D11A	**Klaveano Farm,**	**37.71**	**73**	⇑P	**P**	**10 05 46.0**	**-0.4**
	baz=38						
M05C	**Lookout**	**37.80**	**84**	⇑P	**P**	**10 05 47.9**	**+0.7**
	baz=38						
A13A	**Flathead Natio**	**37.94**	**69**	⇓P	**P**	**10 05 47.9**	**-0.4**
	baz=38						
I08A	**Drewsey**	**37.97**	**79**	⇓P	**P**	**10 05 48.4**	**-0.2**
	baz=38,SNR=5.8						
G10A	**Bishop Farm, J**	**38.12**	**76**	⇓P	**P**	**10 05 49.4**	**-0.5**
	baz=38,SNR=8.0						
B13A	**Whitefish**	**38.17**	**70**	⇓P	**P**	**10 05 50.1**	**-0.1**
	baz=38						
K07A	**Rock Creek Ran**	**38.22**	**81**	⇓P	**P**	**10 05 51.3**	**+0.5**
	baz=38						
J08A	**Circle Bar Ran**	**38.33**	**80**	⇑P	**P**	**10 05 51.5**	**-0.2**
	baz=38						
F11A	**Grangeville**	**38.40**	**75**	⇓P	**P**	**10 05 52.4**	**+0.2**
	baz=38						
C13A	**Hot Springs**	**38.44**	**71**	⇑P	**P**	**10 05 52.5**	**0.0**
	baz=38						
E12A	**Beaver Dam Sad**	**38.48**	**74**	⇑P	**P**	**10 05 52.7**	**-0.2**
	baz=38						
L07A	**Adell**	**38.54**	**82**	⇓P	**P**	**10 05 53.7**	**+0.3**
	baz=38						
K08A	**Mann Creek Ran**	**38.67**	**80**	⇑P	**P**	**10 05 54.5**	**0.0**
	baz=38,SNR=5.9						
H10A	**Noah's Angus R**	**38.72**	**77**	⇓P	**P**	**10 05 54.5**	**-0.4**
	baz=39,SNR=7.2						
WVOR	**Wild Horse Val**	**38.74**	**81**	*e*P	**P**	**10 05 55.4**	**+0.3**
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
WVOR	**Wild Horse Val**	**38.74**	**81**	*e*P	**P**	**10 05 55.4**	**+0.3**
	comp=Z,4.2nm,0.8s,mb4.3						
J09A	**Fry Pan Ranch,**	**38.77**	**79**	⇑P	**P**	**10 05 55.1**	**-0.3**
	baz=39						
C14A	**Swan Lake**	**38.88**	**71**	⇑P	**P**	**10 05 56.5**	**+0.3**
	baz=39						
N06A	**Buffalo Meadow**	**38.96**	**84**	⇓P	**P**	**10 05 57.1**	**+0.1**
	baz=39						
M07A	**Soldier Meadow**	**39.00**	**83**	⇓P	**P**	**10 05 57.6**	**+0.3**
	baz=39,SNR=7.6						
F12A	**Elk City**	**39.01**	**74**	⇑P	**P**	**10 05 57.0**	**-0.2**
	baz=39,SNR=7.9						
L08A	**Fields**	**39.05**	**81**	⇑P	**P**	**10 05 57.9**	**+0.1**
	baz=39						
H11A	**Donnelly**	**39.10**	**76**	⇑P	**P**	**10 05 57.8**	**-0.3**
	baz=39						
K09A	**Rome**	**39.15**	**80**	⇑P	**P**	**10 05 58.5**	**0.0**
	baz=39						
O06A	**Flanigan**	**39.30**	**85**	⇓P	**P**	**10 05 59.9**	**0.0**
	baz=39						
D14A	**Greenough**	**39.37**	**72**	⇓P	**P**	**10 06 00.3**	**0.0**
	baz=39,SNR=6.2						
M08A	**Happy Creek Ra**	**39.45**	**82**	⇓P	**P**	**10 06 01.2**	**+0.1**
	baz=39						
N07B	**Gerlach**	**39.48**	**83**	⇓P	**P**	**10 06 01.6**	**+0.3**
	baz=39						
F13A	**Darby**	**39.54**	**74**	⇓P	**P**	**10 06 01.9**	**+0.1**
	baz=39						
I11A	**Placerville**	**39.56**	**77**	⇓P	**P**	**10 06 01.9**	**0.0**
	baz=39						
K10A	**MacKenzie Ranc**	**39.63**	**79**	⇑P	**P**	**10 06 02.5**	**0.0**
	baz=40						
E14A	**Clinton**	**39.72**	**72**	⇓P	**P**	**10 06 02.8**	**-0.4**
	baz=40						
O07A	**Toulon**	**39.90**	**84**	⇑P	**P**	**10 06 05.0**	**+0.2**
	baz=40						
MFID	**Camas Ranch**	**39.91**	**78**	⇑P	**P**	**10 06 05.1**	**+0.2**
	baz=40						
D15A	**Lincoln**	**39.97**	**71**	⇓P	**P**	**10 06 05.1**	**-0.2**
	baz=40						
N08A	**GE Springer Mi**	**39.99**	**83**	⇑P	**P**	**10 06 05.7**	**+0.2**
	baz=40						
K11A	**Parker Ranch,**	**40.15**	**79**	⇑P	**P**	**10 06 06.9**	**+0.1**
	baz=40						
E15A	**Deer Lodge**	**40.22**	**72**	⇑P	**P**	**10 06 07.3**	**0.0**
	baz=40						
H13A	**Challis**	**40.24**	**75**	⇑P	**P**	**10 06 07.3**	**-0.2**
	baz=40						
L10A	**Juniper Basin**	**40.27**	**80**	⇓P	**P**	**10 06 07.8**	**0.0**
	baz=40						
G14A	**Jackson**	**40.35**	**74**	⇓P	**P**	**10 06 08.4**	**0.0**
	baz=40						
J12A	**Stokes Ranch,**	**40.45**	**78**	⇑P	**P**	**10 06 09.3**	**+0.1**
	baz=40						
L11A	**Cat Creek Ranc**	**40.66**	**79**	⇓P	**P**	**10 06 11.0**	**0.0**
	baz=40						
S06C	**San Francisco**	**40.67**	**88**	⇑P	**P**	**10 06 11.1**	**0.0**
	baz=40						
I13A	**Wildhorse Cree**	**40.67**	**76**	⇓P	**P**	**10 06 11.4**	**+0.3**
	baz=41						
HLID	**Hailey**	**40.69**	**77**	⇑P	**P**	**10 06 11.4**	**+0.2**
	baz=41						
HLID	**Hailey**	**40.69**	**77**	*e*P	**P**	**10 06 11.6**	**+0.3**
	comp=Z,2.6nm,0.9s,mb4.1						
H14A	**Leadore**	**40.74**	**75**	⇓P	**P**	**10 06 11.7**	**0.0**
	baz=41						
K12A	**Draper Farm, C**	**40.91**	**78**	⇓P	**P**	**10 06 13.4**	**+0.3**
	baz=41						
J13A	**Cove Ranch, Pi**	**40.92**	**77**	⇑P	**P**	**10 06 12.9**	**-0.3**
	baz=41,SNR=7.4						
MCMT	**McKenzie Canyo**	**40.94**	**74**	*e*P	**P**	**10 06 13.6**	**+0.3**
G15A	**Dillon**	**40.97**	**74**	⇓P	**P**	**10 06 13.3**	**-0.3**
	baz=41						
M11A	**Holland Ranch,**	**41.05**	**80**	⇓P	**P**	**10 06 14.6**	**+0.3**
	baz=41						
I14A	**Mackay**	**41.07**	**76**	⇑P	**P**	**10 06 14.5**	**+0.1**
	baz=41,SNR=6.6						
L12A	**House Creek Ra**	**41.12**	**79**	⇓P	**P**	**10 06 15.4**	**+0.6**
	baz=41						
H15A	**Lima**	**41.17**	**74**	⇓P	**P**	**10 06 15.2**	**0.0**
	baz=41						
BOZ	**Bozeman (W)**	**41.22**	**72**	*e*P	**P**	**10 06 15.8**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
BOZ	**Bozeman (W)**	**41.22**	**72**	*e*P	**P**	**10 06 15.8**	**+0.2**
	comp=Z,4.0nm,1.0s,mb4.2						

Q08A Gabbs 41.26 85 ⇓P P 10 06 16.3 +0.4
baz=41
NVAR Mina Array Bea 41.29 86 P P 10 06 16.5 +0.3
comp=Z,1.2nm,0.8s,mb3.8,baz=289,slow=8.9,SNR=8.7
NVAR Mina Array Bea 41.29 86 P P 10 06 16.5 +0.3
J14A Carey 41.36 76 ⇓P P 10 06 16.9 +0.1
baz=41,SNR=5.3
M12A Wells 41.60 80 ⇓P P 10 06 19.0 +0.2
baz=42
L13A Double Diamond 41.80 78 ⇓P P 10 06 20.6 +0.2
baz=42
N12A Clover Valley, 41.85 81 ⇓P P 10 06 21.0 +0.1
baz=42
KSRS Korea Array 41.86 273 P P 10 06 22.5 +1.5
comp=Z,4.3nm,0.5s,mb4.4,baz=53,slow=7.9,SNR=17
KSRS Korea Array 41.86 273 P P 10 06 22.5 +1.5
KSRS pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
H16A Russell Place, 41.96 73 ⇑P P 10 06 21.8 +0.2
baz=42
M13A Montello 42.09 79 ⇓P P 10 06 23.0 +0.2
baz=42
R09A Tonopah 42.17 85 ⇑P P 10 06 23.5 +0.1
baz=42
L14A Malta 42.27 78 ⇓P P 10 06 24.3 +0.2
baz=42
I16A Newdale 42.28 75 ⇑P P 10 06 24.6 +0.3
baz=42
O12A Currie 42.38 81 ⇑P P 10 06 25.4 +0.3
baz=42
M14A Sheep Mountain 42.51 79 ⇑P P 10 06 26.1 -0.1
baz=42
IMW Indian Meadow 42.59 74 *e*P P 10 06 27.8 +1.0
comp=Z,2.7nm,0.9s,mb4.0
R10A Warm Springs 42.62 84 ⇑P P 10 06 27.1 0.0
baz=42
S10A Tonopah Range, 42.66 85 ⇑P P 10 06 27.3 -0.2
baz=42
RRI2 Red Ridge 42.67 75 *e*P P 10 06 28.8 +1.3
comp=Z,5.8nm,1.1s,mb4.2
P12A McGill 42.76 82 ⇓P P 10 06 28.2 +0.1
baz=43
RLMT Red Lodge 42.91 72 *e*P P 10 06 30.2 +0.9
comp=Z,26nm,1.5s,mb4.7
N14A Grayback Hills 42.99 79 ⇓P P 10 06 30.1 +0.1
baz=43
R11A Troy Canyon, C 43.02 84 ⇓P P 10 06 30.1 -0.2
baz=43
Q12A Willow Creek R 43.07 83 ⇑P P 10 06 30.9 +0.2
baz=43
P13A Bates Ranch, G 43.32 81 ⇓P P 10 06 32.7 0.0
baz=43
FURC Furnace Creek, 43.41 87 ⇑P P 10 06 33.7 +0.2
baz=43
TPNV Topopah Spring 43.49 86 *e*P P 10 06 34.2 +0.1
TPNV pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
TPNV Topopah Spring 43.49 86 ⇑P P 10 06 34.2 +0.1
baz=43
TPNV Topopah Spring 43.49 86 *e*P P 10 06 34.2 +0.1
comp=Z,2.0nm,0.6s,mb4.0
DUG Dugway 43.61 80 *e*P P 10 06 35.3 +0.3
DUG pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
DUG Dugway 43.61 80 ⇓P P 10 06 35.0 -0.1
baz=44
DUG Dugway 43.61 80 *e*P P 10 06 35.3 +0.2
comp=Z,2.7nm,0.9s,mb4.0
R12A Pony Springs, 43.64 83 ⇓P P 10 06 35.2 -0.2
baz=44
M16A Huntsville 43.66 78 ⇓P P 10 06 35.1 -0.4
baz=44,SNR=5.5
T11A Corn Creek, Al 43.94 85 ⇑P P 10 06 37.7 -0.1
baz=44
Q14A Sevier Lake (B 44.06 82 ⇓P P 10 06 38.3 -0.4
baz=44
PDAR Pinedale Array 44.07 75 P P 10 06 38.8 +0.1
comp=Z,3.2nm,0.6s,mb4.2,baz=322,slow=3.5,SNR=34
S13A Holt Ranch, En 44.57 83 ⇓P P 10 06 43.0 +0.2
baz=44
T13A Saint George 44.89 84 ⇓P P 10 06 45.2 -0.1
baz=45
U13A Pakoon Wash 45.24 85 ⇓P P 10 06 48.2 +0.1
baz=45
R16A Teasdale 45.59 81 ⇑P P 10 06 51.0 +0.1
baz=46
SRU San Rafael 45.67 79 ⇓P P 10 06 51.1 -0.4
baz=46
O19A Miners Draw (B 45.80 77 ⇑P P 10 06 52.2 -0.3
baz=46,SNR=6.1
T15A Red Dirt Ranch 45.84 83 ⇓P P 10 06 52.7 -0.1
baz=46
S16A Weppner Ranch, 45.88 82 ⇑P P 10 06 53.2 +0.1
baz=46
Q18A Rafter H Ranch 45.91 79 ⇑P P 10 06 53.3 -0.1
baz=46
R17A Hanksville Air 45.98 80 ⇑P P 10 06 53.6 -0.3
baz=46
U15A North Rim 46.27 84 ⇓P P 10 06 56.0 -0.2
baz=46
P19A Cripple Cowboy 46.29 78 ⇑P P 10 06 55.9 -0.4
baz=46
S17A Black Ridge (B 46.42 81 ⇓P P 10 06 57.3 -0.1
baz=46
Q19A Hogan Spring (46.54 79 ⇓P P 10 06 58.1 -0.2
baz=46
S18A Hurst Farm, Bl 46.88 81 ⇑P P 10 06 59.9 -1.1
baz=47
T18A Mexican Hat 47.31 81 ⇑P P 10 07 03.5 -0.8
baz=47
S19A Harvey Farm, M 47.37 80 ⇑P P 10 07 04.1 -0.7
baz=47
WUAZ Wupatki 47.42 84 ⇑P P 10 07 04.9 -0.3
baz=47
PV01 Paradox Valley 47.47 79 *e*P P 10 07 05.3 -0.2
ULM Lac du Bonnet 47.61 59 P P 10 07 05.3 -1.2
comp=Z,1.8nm,0.5s,mb4.2,baz=288,slow=6.1,SNR=5.5
T19A Beclabito 48.02 81 ⇓P P 10 07 09.5 -0.3
baz=48
SONM Songino Array 48.48 298 P P 10 07 13.1 -0.1
comp=Z,0.6nm,0.5s,mb3.7,baz=42,slow=8.8,SNR=3.3
SONM PcP PcP 10 08 37.3 -1.0
comp=Z,1.7nm,0.7s,baz=78,slow=1.6,SNR=6.7
SONM LR LR 10 27 47.6
comp=Z,48nm,18.9s,baz=77,slow=36
SONM Songino Array 48.48 298 P P 10 07 13.1 -0.1
SONM 10 08 37.3
SPITS Spitsbergen Ar 50.17 357 P P 10 07 24.9 -0.8
comp=Z,5.6nm,0.5s,mb4.7,baz=94,slow=2.5,SNR=20
ZALV Zalesovo Beam 55.40 315 PcP PcP 10 09 04.1 0.0
comp=Z,2.9nm,0.6s,baz=36,slow=4.7,SNR=9.0
ZALV LR LR 10 34 35.5
comp=Z,17nm,18.1s,baz=36,slow=39
TXAR Lajitas Array 56.39 84 P P 10 08 11.1 -0.9
comp=Z,1.8nm,0.8s,mb4.1,baz=298,slow=5.8,SNR=9.8
ARCES ARCESS Array B 58.11 352 P P 10 08 22.1 -1.4
comp=Z,2.9nm,0.7s,mb4.4,baz=16,slow=8.1,SNR=9.0
MIAR Mount Ida 58.90 73 *e*P P 10 08 30.1 +0.6
MIAR pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
MIAR Mount Ida 58.90 73 *e*P P 10 08 30.1 +0.6
comp=Z,4.1nm,0.9s,mb4.5
ALLY Alegheny Colle 61.50 58 *e*P P 10 08 47.1 -0.1
comp=Z,29nm,0.9s,mb5.3
MKAR Makanchi Array 61.55 310 P P 10 08 46.0 -1.4
comp=Z,1.2nm,0.3s,mb4.4,baz=55,slow=6.1,SNR=15
MKAR PcP PcP 10 09 28.3 -0.3
comp=Z,1.1nm,0.5s,baz=46,slow=4.2,SNR=5.3
BVAR Borovoye Array 62.04 321 LR LR 10 38 18.9
comp=Z,66nm,19.0s,baz=291,slow=38
BRVK Borovoye 62.06 322 *e*P P 10 08 51.5 +0.8
NB2 NORSAR Subarra 67.47 357 P P 10 09 24.9 -0.9
comp=Z,2.5nm,0.8s,mb4.1,baz=4.1,slow=6.9
NOA NORSAR Array B 67.47 357 P P 10 09 24.9 -0.9
comp=Z,3.1nm,0.7s,mb4.2,baz=4.8,slow=6.4,SNR=8.5
NOA NORSAR Array B 67.47 357 P P 10 09 24.9 -0.9
CMAR Chiang Mai Arr 73.19 279 P P 10 10 01.3 0.0
comp=Z,1.7nm,0.5s,mb4.2,baz=26,slow=7.3,SNR=13
AKASG Malin Array Be 75.87 344 P P 10 10 14.4 -2.0
comp=Z,1.9nm,0.5s,mb4.1,baz=15,slow=5.6,SNR=10
WRA Warramunga Arr 83.85 227 P P 10 10 58.8 -1.0
comp=Z,0.3nm,0.4s,mb3.5,baz=32,slow=5.8,SNR=6.1
ASAR Alice Springs 87.29 225 P P 10 11 16.4 -0.3
comp=Z,0.9nm,0.7s,mb3.8,baz=27,slow=5.0,SNR=12
ASAR Alice Springs 87.29 225 P P 10 11 16.5 -0.2
ASAR pmax pmax
comp=Z,1.0nm,0.7s
TORD Torodi Ar. Bea 115.35 3 PKP PKPdf 10 17 10.0 -1.8

comp=Z,0.3nm,0.5s,baz=347,slow=2.8,SNR=8.7
MAW Mawson 148.13 218 PKPbc PKPbc 10 18 13.8 -0.5
comp=Z,1.9nm,0.7s,baz=86,slow=8.2,SNR=4.4
MAW Mawson 148.13 218 PKP2 PKPbc 10 18 13.8 -0.4
MAW pmax pmax
comp=Z,2.0nm,0.7s
BOSA Boshof 152.30 319 PKPbc PKPbc 10 18 25.4 -0.2
comp=Z,6.1nm,0.6s,baz=25,slow=5.7,SNR=20
BOSA Boshof 152.30 319 PKIKP PKPbc 10 18 25.4 -0.1
BOSA pmax pmax
comp=Z,6.0nm,0.6s

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*ISCJB **06** 10:14:15.0±1.2, 137S±0.1×760W±02, h70km±13km, mb3.6/5, Error ellipse: s-maj=30.1km s-min=8.1km az=147.7*
*IDC **06** 10:14:15.3±1.7, 1366S×7590W, h52km±16km, mb3.5/5, mb1 3.8/7, mb1mx3.7/19, mbtmp3.5/7, ML3.5/3, Error ellipse: s-maj=42.9km s-min=10.7km az=58.0*
*NEIC **06** 10:14:16.3±1.2, 1365S×7596W, h63km±13km, Error ellipse: s-maj=24.7km s-min=10.2km az=53.0*
ISC 06 10:14:16.0±1.1**, 138S**±01×**761W**±02**, h59**km±12km**, n16,** σ1§**19**/20**, mb3.7**/5**, Near coast of Peru**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NNA Nana 1.94 339 P Pn 10 14 45.5 -1.0
24nm,0.3s,baz=165,slow=10,SNR=68
NNA S Sn 10 15 08.5 -1.3
211nm,0.3s,baz=223,slow=18,SNR=15
NNA Nana 1.94 339 P Pn 10 14 45.5 -1.0
NNA S Sn 10 15 08.5 -1.3
ARE Arequipa 5.20 121 *e*P Pn 10 15 36.0 +4.8
ARE *e*S Sn 10 16 36.0 +6.2
ATAH Atahualpa 7.12 342 P Pn 10 15 59.5 +2.0
1.2nm,0.3s,baz=144,slow=5.5,SNR=4.9
ATAH S Sn 10 17 17.4 +0.3
1.2nm,0.3s,baz=218,slow=19,SNR=2.1
LPAZ La Paz 8.11 109 P Pn 10 16 12.8 +1.8
0.6nm,0.3s,baz=292,slow=11,SNR=26
LPAZ La Paz 8.11 109 P Pn 10 16 12.8 +1.7
LVC Limon Verde 11.12 143 P Pn 10 16 52.7 +0.5
0.4nm,0.3s,baz=302,slow=13,SNR=3.6
LVC S Sn 10 18 53.2 -1.8
0.2nm,0.3s,baz=319,slow=20,SNR=3.5
SIV San Ignacio 14.71 100 P Pn 10 17 37.4 -3.4
0.1nm,0.3s,baz=255,slow=16,SNR=4.5
CFAA Coronel Fontan 19.14 159 P Pn 10 18 35.4 -0.3
0.0nm,0.3s,baz=338,slow=12,SNR=3.1
CFAA Coronel Fontan 19.14 159 P Pn 10 18 35.4 -0.3
PLCA Paso Flores 27.27 171 P P 10 19 55.6 +0.9
0.9nm,0.6s,mb3.5,baz=324,slow=9.2,SNR=3.1
TXAR Lajitas Array 50.46 328 P P 10 23 08.9 +1.0
1.0nm,0.6s,mb4.0,baz=149,slow=8.3,SNR=21
PDAR Pinedale Array 64.11 333 P P 10 24 43.1 -0.8
0.4nm,0.8s,mb3.5,baz=141,slow=5.2,SNR=3.5
NVAR Mina Array Bea 65.25 324 P P 10 24 51.4 0.0
0.2nm,0.6s,mb3.3,baz=162,slow=6.2,SNR=3.1
TORD Torodi Ar. Bea 81.60 74 P P 10 26 27.1 -1.0
2.6nm,0.9s,mb4.2,baz=259,slow=5.3,SNR=7.9
SONM Songino Array 146.01 357 PKPbc PKPbc 10 33 48.9 -0.2
1.8nm,0.9s,baz=343,slow=2.1,SNR=2.0

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*BJI **06** 10:23:29.0, 620S×12802E, h413km, mB4.5, mb4.6*
*ISCJB **06** 10:23:33.9±0.3, 577S±002×12772E±003, h419km±3km, mb4.8/75, Error ellipse: s-maj=5.3km s-min=3.6km az=157.1*
*MOS **06** 10:23:33.4±0.9, 568S×12768E, h408km, mb4.9/17, Error ellipse: s-maj=12.5km s-min=6.8km az=108.0*
*NEIC **06** 10:23:34.8±0.5, 575S×12767E, h413km±5km, mb4.8/30, Error ellipse: s-maj=5.4km s-min=3.6km az=62.0*
*DJA **06** 10:23:34, 590S×12775E, h407km, Mw5.3/16*
*IDC **06** 10:23:34.2±0.9, 579S×12769E, h405km±10km, mb4.4/21, mb1 4.5/23, mb1mx4.4/24, mbtmp4.4/23, Error ellipse: s-maj=11.1km s-min=6.3km az=72.0*
ISC 06 10:23:34.6±0.3**, 579S**±002×**12773E**±003**, h411**km±4km**, h415**km±3.6km**:pP-P, n221,** σ1§**06**/194**, mb4.8**/73**, 14C-9D, Banda Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AAI Ambon 2.14 13 P P 10 24 32.2 -0.4
0.0nm,0.0s
AAI Ambon 2.14 13 P P 10 24 32.3 -0.3
0.0nm,0.0s
AAI Ambon 2.14 13⇑*e*P P 10 24 29.8 -2.8
AAI *e*S S 10 25 29.8 +10
MSAI Masohi 2.71 26 P P 10 24 36.2 -0.3
0.0nm,0.0s
TLE Tual 4.99 88⇑*e*P P 10 24 54.0 -3.1
TLE *e*S S 10 25 55.0 -9.2
LBMI Labuha 5.12 357 P P 10 24 59.0 +0.5
7µm,1.0s
BBSI Bau Bau 5.14 273 P P 10 25 00.7 +2.0
766nm,1.3s
KDI Kendari 5.41 289 P P 10 25 02.0 +0.5
182nm,0.8s
KDI Kendari 5.41 289⇓*e*P P 10 25 01.9 +0.4
KDI *e*S S 10 26 11.1 -1.0
BATI Baumata 5.95 222 P P 10 25 07.2 0.0
3µm,0.6s
BATI Baumata 5.95 222 P P 10 25 07.6 +0.4
826nm,0.3s,baz=108,slow=1.1,SNR=466
BATI S S 10 26 19.8 -2.9
290nm,0.3s,baz=283,slow=4.8,SNR=26
SWI Sorong 6.03 36 P P 10 25 07.9 -0.2
4µm,0.7s
TNE Ternate 6.54 357⇓*e*P P 10 25 13.0 -0.6
KAPI Kappang 7.98 275 P P 10 25 29.4 -0.1
12nm,0.3s,baz=113,slow=7.6,SNR=37
KAPI S S 10 27 01.6 -2.1
baz=180,slow=16,SNR=1.1
KAPI Kappang 7.98 275 *e*Pn P 10 25 28.8 -0.8
MKS Makassar 8.24 274⇓*e*P P 10 25 33.8 +1.4
MKS *e*S S 10 27 10.2 +1.1
KAKA Kakadu 8.30 146 *e*P P 10 25 33.7 +0.6
423nm,0.6s
KAKA *e*S S 10 27 01.2 -9.0
WSI Waingapu 8.31 242⇑*e*P P 10 25 30.5 -2.7
PCI Palu 9.25 301 P P 10 25 46.5 +2.8
385nm,1.0s
MTNI Mataram 11.81 255 P P 10 26 12.4 +0.4
128nm,0.7s
KHKI Kahang-Kahang 12.30 257 P P 10 26 17.2 -0.1
129nm,0.8s
FITZ Fitzroy Crossi 12.40 189⇓*i*P P 10 26 18.9 +0.5
206nm,0.4s
FITZ Fitzroy Crossi 12.40 189 P P 10 26 18.9 +0.5
23nm,0.3s,baz=21,slow=12,SNR=754
FITZ S S 10 28 32.9 -0.9
2.1nm,0.3s,baz=165,slow=17,SNR=4.8
IGBI Denpasar 12.84 256 P P 10 26 22.7 -0.6
520nm,0.9s
DAV Davao City (W) 12.95 350 S S 10 28 43.2 -1.8
78nm,0.3s,baz=24,slow=7.6,SNR=2.5
BBKI Banjar Baru 13.05 280 P P 10 26 27.8 +2.2
455nm,0.8s
JAY Jayapura 13.34 76 P P 10 26 30.7 +1.9
136nm,1.1s
KMMI Kalianget 13.73 264 P P 10 26 36.7 +3.6
512nm,0.9s
TRT Tretes 15.11 262⇓*e*P P 10 26 45.5 -2.5
WRAB Tennant Creek 15.46 156 *e*P P 10 26 52.2 +0.5
WRAB *e*S S 10 29 32.7 -2.0
WRA Warramunga Arr 15.47 156 P P 10 26 51.9 +0.2
78nm,0.3s,baz=333,slow=11,SNR=2928
WRA S S 10 29 33.0 -1.9
17nm,0.3s,baz=332,slow=21,SNR=13
WB2 Warramunga Arr 15.47 156⇑*i*P P 10 26 52.1 +0.3
WB2 *e*S S 10 29 32.6 -2.3
SJI Sawahan 15.97 262 P P 10 26 59.9 +2.7
66nm,0.7s
KKM Kota Kinabalu 16.44 315 *e*P P 10 27 03.5 +1.2
MBWA Marble Bar 17.13 206 *e*P P 10 27 09.1 -0.4
62nm,0.8s
COEN Coen 17.23 119 *e*P P 10 27 11.4 +0.7
10nm,0.6s
COEN *e*S S 10 30 09.4 0.0
BJII Banjamegara 17.97 264 P P 10 27 20.8 +2.3
51nm,1.5s
ASAR Alice Springs 18.74 162 P P 10 27 26.6 +0.2
90nm,0.3s,baz=344,slow=11,SNR=5917
ASAR S S 10 30 37.0 +0.2

6.8nm,0.3s,baz=329,slow=14,SNR=18
KSM Kuching 18.83 292 *e*P P 10 27 26.0 -1.6
PMG Port Moresby 19.59 102 *e*P P 10 27 35.4 +0.7
LEM Lembang 20.02 266 P P 10 27 38.8 +0.2
77nm,1.0s
CBJI Citeko 20.77 267 P P 10 27 47.5 +2.0
251nm,0.6s
CTA Charters Tower 22.94 130 *e*P P 10 28 06.5 +1.4
5.5nm,0.7s,mb4.1
CTA Charters Tower 22.94 130 P P 10 28 06.7 +1.6
7.2nm,0.7s,mb4.2,baz=302,slow=10,SNR=7.9
CTA ScP ScP 10 34 40.5 +0.8
6.7nm,0.7s,baz=208,slow=4.1,SNR=3.8
CTA Charters Tower 22.94 130 *e*P P 10 28 06.5 +1.4
CTA pmax pmax
comp=Z,6.0nm,0.7s
CTAO Charters Tower 22.94 130 *e*P P 10 28 06.6 +1.5
CTAO pmax pmax
comp=Z,135nm,2.6s,mb4.9
CTAO Charters Tower 22.94 130 *e*P P 10 28 06.6 +1.5
comp=Z,135nm,2.6s,mb4.9
FORT Forrest 24.86 179 *e*P P 10 28 22.5 +0.3
comp=Z,272nm,0.6s
GUMO Guam 25.70 41 P P 10 28 28.5 -1.3
comp=Z,42nm,0.7s,mb5.0,baz=191,slow=11,SNR=4.6
KLBR Kellerberrin 27.32 199 *e*P P 10 28 43.7 -0.3
comp=Z,64nm,0.6s,mb5.2
PPI Padang Panjang 27.79 280 P P 10 28 48.2 -0.2
comp=Z,51nm,1.0s,mb4.8
MUN Mundaring 28.19 201 *e*P P 10 28 51.4 -0.3
NWAO Narrogin (SRO) 28.71 199 P P 10 28 56.3 0.0
comp=Z,35nm,0.7s,mb4.8,baz=28,slow=8.5,SNR=36
NWAO ScP ScP 10 34 56.3 0.0
comp=Z,13nm,0.7s,baz=2.7,slow=2.3,SNR=5.0
STKA Stephens Creek 29.02 155⇑*i*P P 10 28 59.7 +0.8
comp=Z,51nm,0.6s,mb5.0
STKA *e*S S 10 33 18.9 -0.8
STKA Stephens Creek 29.02 155 P P 10 28 59.8 +0.8
comp=Z,67nm,0.5s,mb5.2,baz=326,slow=8.7,SNR=171
STKA PP PP 10 30 13.9 -1.5
comp=Z,11nm,0.5s,baz=315,slow=9.7,SNR=3.1
STKA S S 10 33 18.3 -1.4
comp=Z,8.2nm,0.8s,baz=126,slow=18,SNR=3.9
HNR Honiara 32.13 98 P P 10 29 26.4 +0.2
comp=Z,194nm,0.7s,mb5.5,baz=280,slow=1.3,SNR=14
ARMA Armidale 33.25 140 *e*P P 10 29 37.4 +1.8
CAN Canberra 35.32 149 *e*P P 10 29 55.1 +2.0
CNB Canberra Magne 35.51 149 *e*P P 10 29 56.4 +1.7
TOO Toolangi 35.54 155⇑*i*P P 10 29 57.0 +2.1
TOO *e*PP PP 10 31 25.5 -1.2
CMAR Chiang Mai Arr 37.23 311 P P 10 30 09.1 -0.3
comp=Z,5.8nm,0.8s,mb4.0,baz=142,slow=6.9,SNR=7.0
CMAR PcP PcP 10 32 20.2 +1.3
comp=Z,4.0nm,0.6s,baz=164,slow=2.8,SNR=14
CMAR ScP ScP 10 35 27.6 +1.3
comp=Z,3.5nm,0.8s,baz=165,slow=3.2,SNR=13
GYA Guiyang 38.01 328⇑*i*P P 10 30 17.6 +2.0
GYA AP pP 10 31 37.4 +4.4
GYA PP PP 10 31 58.2 +4.6
GYA PCP PcP 10 32 23.0 +1.8
GYA SCP ScP 10 35 30.3 +1.1
GYA S S 10 35 40.4 +3.3
GYA SCS ScS 10 39 40.7 +0.7
GYA AMB AMB
comp=Z,20nm,0.8s,mb4.5
GYA AMB AMB
comp=Z,120nm,4.9s
WHN Wuhan 38.33 341 ⇑P P 10 30 18.5 +0.3
NJ2 Nanjing 38.57 348 *e*P P 10 30 20.7 +0.6
NJ2 AP pP 10 31 39.7 +1.9
NJ2 PP PP 10 32 02.2 +2.7
NJ2 XP sP 10 32 25.8 +0.9
NJ2 S S 10 35 46.0 +0.8
NJ2 XS sS 10 38 06.2 -0.5
NJ2 AMB AMB
comp=Z,30nm,0.8s,mb4.7
NJ2 AMB AMB
comp=Z,110nm,4.7s
KMI Kunming 39.18 323 P P 10 30 25.9 +0.7
KMI AP pP 10 31 47.1 +4.0
KMI XP sP 10 32 33.3 +3.1
KMI S S 10 35 58.6 +4.1
KMI XS sS 10 38 15.1 -1.2
KMI SS SS 10 39 01.9 -6.2
KMI AMB AMB
comp=Z,15nm,0.8s,mb4.4
KMI AMB AMB
comp=Z,100nm,5.7s
KSRS Korea Array 43.02 0 P P 10 30 56.2 +0.4
comp=Z,18nm,0.8s,mb4.5,baz=176,slow=10,SNR=36
KSRS PcP PcP 10 32 38.0 +0.7
comp=Z,4.9nm,0.7s,baz=183,slow=2.8,SNR=9.0
CD2 Chengdu 43.10 329 *e*P P 10 30 55.9 -0.7
CD2 AP pP 10 32 16.4 +0.2
CD2 PP PP 10 32 45.8 -0.9
CD2 XP sP 10 33 02.1 -0.7
CD2 S S 10 36 51.7 +0.2
CD2 XS sS 10 39 14.9 -0.7
CD2 SS SS 10 40 11.6 -5.7
CD2 AMB AMB
comp=Z,20nm,0.6s,mb4.6
CD2 AMB AMB
comp=Z,30nm,5.8s
MJAR Matsushiro Arr 43.24 12 P P 10 30 56.4 -1.2
comp=Z,27nm,0.8s,mb4.6,baz=188,slow=8.9,SNR=41
MJAR PcP PcP 10 32 39.1 +1.0
comp=Z,2.3nm,0.7s,baz=168,slow=4.7,SNR=4.8
MAJO Matsushiro 43.24 12 *e*P P 10 30 56.5 -1.1
MAJO pmax pmax
comp=Z,43nm,0.8s,mb4.8
MAJO Matsushiro 43.24 12 *e*P P 10 30 56.5 -1.1
comp=Z,43nm,0.8s,mb4.8
MAT Matsushiro 43.24 12 P P 10 30 57.3 -0.3
XAN Xi'an 43.43 337 P P 10 30 57.8 -1.3
XAN PP PP 10 32 48.1 -1.5
XAN XP sP 10 33 03.7 -1.7
XAN S S 10 36 52.9 -3.2
XAN AMB AMB
comp=Z,24nm,0.9s,mb4.5
XAN AMB AMB
comp=Z,99nm,8.6s
BJI Beijing 46.83 348 P P 10 31 23.9 -1.5
BJI AMB AMB
comp=Z,26nm,0.9s,mb4.6
BJI AMB AMB
comp=Z,239nm,3.5s
LZH Lanzhou 47.30 333 ⇓P P 10 31 29.9 +0.9
LZH AP pP 10 32 52.2 +1.7
LZH PP PP 10 33 27.0 +2.1
LZH XP sP 10 33 37.6 +1.1
LZH S S 10 37 52.0 +1.1
LZH XS sS 10 40 18.1 +0.6
LZH SS SS 10 41 22.8 -2.2
LZH AMB AMB
comp=Z,45nm,1.5s,mb4.6
LZH AMB AMB
comp=Z,126nm,5.6s
HHC Hu-ho-hao-te 48.73 344 *e*P P 10 31 41.4 +1.7
HHC PCP PcP 10 32 58.4 +0.9
HHC AP pP 10 33 05.3 +3.6
HHC PP PP 10 33 41.2 +3.4
HHC XP sP 10 33 50.4 +2.8
HHC SCP ScP 10 36 12.5 0.0
HHC PCS PcS 10 36 54.3 0.0
HHC S S 10 38 13.2 +2.7
HHC XS sS 10 40 40.4 +2.4
HHC SCS ScS 10 40 46.5 -0.7
HHC SS SS 10 41 49.1 +1.7
HHC AMB AMB
comp=Z,15nm,0.6s,mb4.5
HHC AMB AMB
comp=Z,117nm,6.9s
VLA Vladivostok 48.83 4 *e*P P 10 31 38.5 -1.9
VLA pmax pmax
comp=Z,51nm,1.2s,mb4.7
LSA Lhasa 49.78 317 P P 10 31 48.7 +0.9
LSA AMB AMB
comp=Z,10.0nm,0.9s,mb4.2
LSA Lhasa 49.78 317 *e*P P 10 31 48.8 +1.0
LSA pmax pmax
comp=Z,19nm,0.6s,mb4.6
LSA Lhasa 49.78 317 *e*P P 10 31 48.8 +1.0
comp=Z,19nm,0.6s,mb4.6
MDJ Mudanjiang 50.20 2 P P 10 31 50.6 0.0
MDJ PCP PcP 10 33 02.8 0.0

MDJ PP PP 10 33 50.3 -0.7
MDJ SS SS 10 42 10.1 -0.5
MDJ AMB AMB
comp=Z,34nm,1.1s,mb4.6
MDJ AMB AMB
comp=Z,59nm,5.2s
MDJ Mudanjiang 50.20 2 *e*P **P 10 31 50.8 +0.2**
comp=Z,50nm,1.2s,mb4.7
ODAN Odare 50.77 312 *e*P **P 10 31 54.7 -0.4**
comp=Z,52nm,0.5s,mb5.0
TAPN Taplejung 50.80 312 *e*P **P 10 31 55.2 -0.2**
comp=Z,64nm,0.4s,mb5.2
RAMN Ramite 51.41 311 *e*P **P 10 31 59.7 -0.1**
comp=Z,126nm,0.6s,mb5.3
GTA Gaotai 51.85 333 ⇓P **P 10 32 03.2 +0.4**
GTA PCP PcP 10 33 09.4 +0.2
GTA AP pP 10 33 25.4 -0.7
GTA XP sP 10 34 13.0 +1.4
GTA SCP ScP 10 36 27.3 +1.3
GTA S **S 10 38 52.5 -0.6**
GTA AMB AMB
comp=Z,26nm,0.7s,mb4.6
GUN Gumba 52.47 312 *e*P **P 10 32 07.3 -0.2**
comp=Z,95nm,0.5s,mb5.3
PKI Pulchoki 52.63 311 *e*P **P 10 32 08.0 -0.7**
comp=Z,36nm,0.6s,mb4.8
PKIN Phulchoki 52.65 311 *e*P **P 10 32 07.9 -0.9**
comp=Z,24nm,0.5s,mb4.7
KKN Kakani 52.85 311 *e*P **P 10 32 09.7 -0.6**
comp=Z,41nm,0.5s,mb4.9
DMN Daman 52.88 311 *e*P **P 10 32 10.1 -0.4**
comp=Z,48nm,0.7s,mb4.8
KOLN Koldanda 54.10 310 *e*P **P 10 32 18.7 -0.5**
comp=Z,84nm,0.8s,mb5.0
YSS Yuzh-Sakhalins 54.18 13⇑*e*P **P 10 32 19.6 +0.2**
YSS pmax pmax
comp=Z,34nm,1.2s,mb4.5
YSS Yuzh-Sakhalins 54.18 13 *e*P **P 10 32 19.5 +0.1**
DANN Dangsing 54.28 311 *e*P **P 10 32 19.2 -1.3**
comp=Z,56nm,0.8s,mb4.9
KLR Kul'dur 54.90 3 *e*P **P 10 32 20.6 -3.9**
KLR pmax pmax
comp=Z,43nm,1.4s,mb4.5
URZ Urewera 55.13 133 P **P 10 32 26.2 -0.2**
comp=Z,13nm,0.7s,mb4.3,baz=260,slow=6.1,SNR=5.0
ULN Ulaanbaatar 56.45 343*d i*P **P 10 32 35.9 +0.6**
ULN Ulaanbaatar 56.45 343 *e*P **P 10 32 36.1 +0.8**
comp=Z,43nm,1.1s,mb4.7
SONM Songino Array 56.61 343 P **P 10 32 37.0 +0.5**
comp=Z,22nm,0.8s,mb4.5,baz=161,slow=7.6,SNR=81
SONM PcP PcP 10 33 27.1 -0.2
comp=Z,1.8nm,0.6s,baz=164,slow=3.2,SNR=2.8
ZAK Zakamensk 59.81 342 *e*P **P 10 32 57.9 -0.4**
ZAK *e* 10 33 34.5
ZAK pmax pmax
comp=Z,1.0nm,1.1s
TLY Talaya 60.85 343 *e*P **P 10 33 05.9 +0.7**
TLY pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
TLY Talaya 60.85 343 *e*P **P 10 33 06.0 +0.8**
comp=Z,8.3nm,0.8s,mb4.2
WMQ Urumqi 61.17 328 P **P 10 33 08.2 +0.7**
WMQ AMB AMB
comp=Z,21nm,1.2s,mb4.4
WMQ AMB AMB
comp=Z,156nm,4.8s
CASY Casey 61.56 188 *e*P **P 10 33 10.0 +0.3**
PETK Petropavlovsk- 63.92 20 P **P 10 33 26.0 +0.8**
comp=Z,34nm,0.7s,mb5.0,baz=170,slow=2.9,SNR=75
PETK Petropavlovsk- 63.92 20 P **P 10 33 26.0 +0.8**
PET Petropavlovsk 64.17 20 *e*P **P 10 33 27.7 +0.8**
PET pmax pmax
comp=Z,58nm,0.8s,mb5.2
PET Petropavlovsk 64.17 20 *e*P **P 10 33 27.2 +0.3**
comp=Z,109nm,1.5s,mb5.2
BOD Bodaibo 64.37 352 *e*P **P 10 33 27.9 -0.1**
BOD pmax pmax
comp=Z,21nm,0.9s,mb4.7
MKAR Makanchi Array 65.99 328 P **P 10 33 38.5 0.0**
comp=Z,29nm,0.5s,mb5.2,baz=122,slow=8.0,SNR=336
MKAR PcP PcP 10 34 05.3 -0.2
comp=Z,6.6nm,0.6s,baz=140,slow=3.8,SNR=9.5
TKM2 Tokmak 2 67.63 321 *e*P **P 10 33 49.1 +0.3**
TKM2 pmax pmax
comp=Z,13nm,0.7s,mb4.7
TKM2 Tokmak 2 67.63 321 P **P 10 33 49.3 +0.4**
SNR=18
TKM2 Tokmak 2 67.63 321 *e*P **P 10 33 49.1 +0.2**
comp=Z,13nm,0.7s,mb4.7
YAK Yakutsk 67.64 1 *e*P **P 10 33 47.6 -0.9**
YAK pmax pmax
comp=Z,87nm,0.9s,mb5.4
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=N,28nm,1.2s
YAK Yakutsk 67.64 1 *e*P **P 10 33 48.5 0.0**
comp=N,115nm,0.9s,mb5.5
UCH Uchtor 67.95 320 P **P 10 33 52.1 +1.3**
SNR=14
UCH Uchtor 67.95 320 *e*P **P 10 33 52.1 +1.3**
comp=N,9.4nm,0.8s,mb4.5
AAK Ala-Archa 68.17 320 P **P 10 33 53.1 +0.9**
SNR=5.8
AML Almayashu 68.43 320 P **P 10 33 54.7 +0.9**
SNR=13
AML Almayashu 68.43 320 *e*P **P 10 33 54.5 +0.8**
comp=N,18nm,0.8s,mb4.7
AML *e*PcP PcP 10 34 17.1 +1.3
USP Ospenovka 68.49 321 P **P 10 33 54.4 +0.3**
SNR=12
EKS2 Erkin-Say 68.64 320 P **P 10 33 55.8 +0.7**
SNR=8.1
EKS2 Erkin-Say 68.64 320 *e*P **P 10 33 55.7 +0.6**
comp=N,11nm,0.9s,mb4.5
EKS2 *e*PcP PcP 10 34 18.3 +1.5
ZALV Zalesovo Beam 69.52 335 P **P 10 33 59.5 -0.7**
comp=N,31nm,0.6s,mb5.0,baz=125,slow=4.9,SNR=54
ZAL Zalesovo 69.52 335 P **P 10 33 59.5 -0.6**
KURK Kurchatov 70.32 329 P **P 10 34 04.8 -0.3**
comp=N,25nm,0.5s,mb5.0,baz=130,slow=5.1,SNR=12
KURK Kurchatov 70.32 329*c i*P **P 10 34 04.9 -0.2**
KURK pmax pmax
comp=Z,70nm,1.3s,mb5.0
KURK Kurchatov 70.32 329 *e*P **P 10 34 04.7 -0.3**
comp=Z,47nm,0.9s,mb5.0
NVS Novosibirsk 70.81 335 *i* P **P 10 34 06.6 -1.2**
SBA Scott Base 74.83 172 *e*P **P 10 34 31.8 +0.9**
SBA *e* 10 34 42.8
SBA pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
SBA Scott Base 74.83 172 *e*P **P 10 34 31.8 +1.0**
comp=Z,10nm,0.8s,mb4.5
SBA *e*PcP PcP 10 34 42.8 +0.2
MAW Mawson 75.25 201⇑*i*P **P 10 34 33.6 +0.2**
comp=Z,9.2nm,1.1s,mb4.3
MAW Mawson 75.25 201 P **P 10 34 33.5 +0.1**
comp=Z,22nm,1.2s,mb4.7,baz=54,slow=6.3,SNR=14
MAW Mawson 75.25 201⇑*i*P **P 10 34 33.6 +0.2**
MAW pmax pmax
comp=Z,9.0nm,1.1s
BVAR Borovoye Array 75.85 328 P **P 10 34 36.7 -0.3**
comp=Z,5.4nm,0.4s,mb4.5,baz=130,slow=9.3,SNR=35
BRVK Borovoye 75.92 328 *e*P **P 10 34 37.1 -0.3**
BRVK pmax pmax
comp=Z,17nm,1.0s,mb4.6
BRVK Borovoye 75.92 328 *e*P **P 10 34 37.1 -0.2**
comp=Z,17nm,1.0s,mb4.6
TIXI Tiksi 77.29 0 *e*P **P 10 34 43.8 -0.8**
TIXI pmax pmax
comp=Z,35nm,0.6s,mb5.2
TIXI Tiksi 77.29 0 *e*P **P 10 34 43.8 -0.7**
comp=Z,35nm,0.6s,mb5.2
BILL Bilibino 78.47 14 *i* P **P 10 34 53.0 +2.0**
BILL *e* 10 34 57.5
BILL pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
AKTK Aktyubinsk 81.75 323 P **P 10 35 08.4 -0.3**
AKTO Aktyubinsk 81.75 323 P **P 10 35 08.4 -0.3**
comp=Z,8.7nm,0.7s,mb4.6,baz=106,slow=7.6,SNR=35
SVE Sverdlovsk 82.58 329 *e*P **P 10 35 13.0 +0.2**
SVE pmax pmax
comp=Z,33nm,1.2s,mb4.9
ARU Arti 83.50 328*d i*P **P 10 35 16.9 -0.6**
ARU *e**PP pP 10 36 47.1 -3.6
ARU *e* 10 38 36.2
ARU *e*S S 10 44 59.5 -4.2
ARU *e*SS SS 10 50 40.5 -0.4
ARU pmax pmax
comp=Z,20nm,1.0s,mb4.8
ARU Arti 83.50 328 *e*P **P 10 35 16.5 -1.0**
comp=Z,36nm,1.3s,mb4.9
SYO Syowa Base 83.96 201⇑*e*P **P 10 35 17.4 -2.2**
RDF Al-Radifah 84.23 300 *e*P **P 10 35 20.8 -1.0**
baz=300
RDF AMb AMB 10 35 23.1
comp=Z,43nm,1.2s,mb5.0,baz=300
SDPT Sand Point 84.53 33 *e*P **P 10 35 22.8 +0.1**
NAY Al-Naaiem 84.55 300 *e*P **P 10 35 22.5 -0.9**
baz=300
NAY AMb AMB 10 35 23.5
comp=Z,36nm,0.7s,mb5.2,baz=300
MIB Mutribah 84.56 301 *e*P **P 10 35 22.7 -0.7**
baz=301
MIB AMb AMB 10 35 23.7
comp=Z,43nm,0.8s,mb5.2,baz=301
SVW2 Sparrevohn 88.64 28 *e*P **P 10 35 42.7 +0.5**
TTA Tatalina 88.91 26 *e*P **P 10 35 43.3 -0.1**
TTA pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
TTA Tatalina 88.91 26 *e*P **P 10 35 43.3 0.0**
comp=Z,9.0nm,0.9s,mb4.5
KMBO Kilima Mbogo 90.36 269 P **P 10 35 51.9 +0.7**
comp=Z,5.8nm,1.2s,mb4.3,baz=215,slow=22,SNR=5.2
KMBO Kilima Mbogo 90.36 269 P **P 10 35 51.9 +0.7**
IMA2 Indian Mountai 90.64 24 *e*P **P 10 35 50.3 -1.0**
CHUM Lake Minchumin 90.75 26 *e*P **P 10 35 52.0 +0.1**
comp=Z,16nm,1.0s,mb4.8
CHUM *e*pP pP 10 37 25.6 -1.0
KTH Kantishna Hill 91.30 26 *e*P **P 10 35 53.8 -0.6**
comp=Z,8.3nm,1.1s,mb4.5
PMR Palmer 91.79 28 *e*P **P 10 35 55.6 -1.1**
PMR pmax pmax
comp=Z,19nm,1.0s,mb5.0
PMR Palmer 91.79 28 *e*P **P 10 35 55.6 -1.1**
comp=Z,19nm,1.0s,mb5.0
MCK McKinley 92.20 26 *e*P **P 10 35 57.8 -0.8**
MCK pmax pmax
comp=Z,19nm,1.3s,mb4.9
MCK McKinley 92.20 26 *e*P **P 10 35 57.8 -0.7**
comp=Z,19nm,1.3s,mb4.9
COLA College 92.83 25⇑*e*P **P 10 36 01.4 0.0**
COLA College 92.83 25 *e*P **P 10 36 00.1 -1.3**
comp=Z,3.4nm,0.8s,mb4.3
DIV Divide 93.33 29 *e*P **P 10 36 04.2 +0.4**
comp=Z,51nm,1.3s,mb5.3
DIV *e*pP pP 10 37 42.9 +4.1
DIV *e*sP sP 10 38 15.1 -6.0
OBN Obninsk 95.37 325 *e*P **P 10 36 11.9 -1.4**
OBN pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
EGAK Eagle 95.67 26 *e*P **P 10 36 13.9 -0.5**
SNAA Sanae 96.30 194 *e*P **P 10 36 17.7 +0.5**
DAWY Dawson 96.43 26 *e*P **P 10 36 18.1 +0.2**
VNA2 Neumayer--Watz 97.88 194 *e*P **P 10 36 28.4 +4.1**
BOSA Boshof 98.12 240 P **P 10 36 25.9 -0.4**
comp=Z,2.3nm,0.7s,mb4.5,baz=136,slow=8.2,SNR=5.7
ARCES ARCESS Array B 99.67 340 P Pdif 10 36 30.9 -1.7
comp=Z,3.9nm,0.7s,baz=81,slow=6.7,SNR=20
ARCES PKiKP PKiKP 10 40 58.1 -0.3
comp=Z,0.9nm,0.5s,baz=101,slow=0.9,SNR=8.9
ARCES PKKPbc PKKPbc 10 52 51.4 -3.7
comp=Z,0.8nm,0.4s,baz=251,slow=2.8,SNR=12
AKASG Malin Array Be 99.84 320 P Pdif 10 36 32.1 -1.3
comp=Z,0.5nm,0.3s,baz=73,slow=4.2,SNR=4.7
YKA Yellowknife Ar 107.65 26 PKiKP PKiKP 10 41 12.7 -0.6
comp=Z,0.6nm,0.4s,baz=289,slow=1.9,SNR=6.7
YKA Yellowknife Ar 107.65 26 PKPdf PKiKP 10 41 12.7 -0.6
GERES GERESS Array B 110.05 320 PKiKP PKiKP 10 41 18.1 -0.1
comp=Z,1.4nm,0.5s,baz=66,slow=1.6,SNR=6.6
NVAR Mina Array Bea 112.30 51 PKiKP PKiKP 10 41 23.9 +1.1
comp=Z,0.8nm,0.8s,baz=256,slow=4.1,SNR=4.7
NVAR PP PP 10 42 14.2 -1.2
comp=Z,1.0nm,1.0s,baz=266,slow=8.7,SNR=4.5
NVAR PKKPbc PKKPbc 10 52 15.2 -0.3
comp=Z,0.2nm,0.6s,baz=70,slow=1.1,SNR=4.6
NVAR PKKPab PKKPab 10 52 23.0 -1.3
comp=Z,0.1nm,0.5s,baz=94,slow=2.7,SNR=4.3
NVAR Mina Array Bea 112.30 51 PKPdf PKiKP 10 41 23.9 +1.1
NVAR PP PP 10 42 14.2 -1.2
NVAR PKKPbc PKKPbc 10 52 15.2 -0.3
NVAR PKKPab PKKPab 10 52 23.0 -1.3
HINF Hinteralfeld 114.72 320 *e*PKIKP PKiKP 10 41 26.2 -0.9
comp=Z,5.1nm,0.6s
HAU Haudompre 114.97 321 *e*PKIKP PKPdf 10 41 26.8 -0.8
comp=Z,2.8nm,0.4s
GIVF Givet 115.14 323 *e*PKIKP PKPdf 10 41 28.1 +0.2
LPL La Plagne 115.56 318 *e*PKIKP PKPdf 10 41 28.7 -0.1
comp=Z,4.4nm,0.5s
CABF La Chapelle 115.62 319 *e*PKIKP PKPdf 10 41 28.7 -0.2
comp=Z,12nm,0.6s
FRF La Foret Royal 116.25 316 *e*PKIKP PKPdf 10 41 29.5 -0.7
comp=Z,6.2nm,0.6s
KEST Kesra 116.30 307 PKP PKPdf 10 41 30.8 +0.2
comp=Z,0.5nm,0.5s,baz=72,slow=3.2,SNR=2.2
ORIF Oris-en-Rattie 116.33 318 *e*PKIKP PKPdf 10 41 29.9 -0.4
comp=Z,5.4nm,0.6s
LOHW Long Hollow 116.63 44 *e*PKPdf PKPdf 10 41 31.8 +0.8
LOR Lormes 116.81 321 *e*PKIKP PKPdf 10 41 30.1 -1.1
comp=Z,3.7nm,0.6s
SMRF Simiane la Rot 116.85 317 *e*PKIKP PKPdf 10 41 31.2 -0.2
SMF Signal de Mont 117.06 320 *e*PKIKP PKPdf 10 41 30.9 -0.8
comp=Z,3.9nm,0.6s
SSF Saint Saulge 117.11 321 *e*PKIKP PKPdf 10 41 31.3 -0.5
comp=Z,6.2nm,0.5s
VIVF Saint-Julien-l 117.16 318 *e*PKIKP PKPdf 10 41 31.4 -0.5
AVF Avril sur Loir 117.31 320 *e*PKIKP PKPdf 10 41 31.3 -0.9
comp=Z,4.6nm,0.5s
PDAR Pinedale Array 117.63 44 PKP PKPdf 10 41 33.1 +0.2
comp=Z,1.0nm,0.7s,baz=80,slow=0.4,SNR=9.7
BGF Bois d'Agland 117.72 320 *e*PKIKP PKPdf 10 41 32.1 -0.9
comp=Z,12nm,0.5s
SRU San Rafael 118.05 49 *e*PKIKP PKPdf 10 41 34.4 +0.6
TCF Toulx Ste Croi 118.23 320 *e*PKIKP PKPdf 10 41 33.4 -0.5
comp=Z,7.1nm,0.8s
WUAZ Wupatki 118.34 53 *e*PKPdf PKPdf 10 41 36.0 +1.5
FLN La Foliniere 118.84 324 *e*PKIKP PKPdf 10 41 34.4 -0.6
MTLF Montolieu 119.35 317 *e*PKIKP PKPdf 10 41 35.5 -0.7
comp=Z,8.0nm,0.8s
MFF Saint Martin d 119.59 321 *e*PKIKP PKPdf 10 41 36.0 -0.5
comp=Z,13nm,0.6s
PV01 Paradox Valley 119.80 49 *e*PKPdf PKPdf 10 41 38.4 +1.2
MVCO Mesa Verde 120.13 50 *e*PKPdf PKPdf 10 41 39.1 +1.2
SGMF Saint Gilles 120.30 324 *e*PKIKP PKPdf 10 41 37.1 -0.8
comp=Z,5.0nm,0.4s
ROSF Rostrenen 120.68 324 *e*PKIKP PKPdf 10 41 37.8 -0.8
EPF Esparros 120.74 317 *e*PKIKP PKPdf 10 41 38.7 -0.2
comp=Z,7.8nm,0.7s
QUIF Quistinic 120.82 324 *e*PKIKP PKPdf 10 41 38.2 -0.7
ETSF Etsaut 121.40 317 *e*PKIKP PKPdf 10 41 40.4 +0.3
ULM Lac du Bonnet 122.64 32 PKP PKPdf 10 41 41.6 -0.6
comp=Z,4.0nm,0.6s,baz=325,slow=1.7,SNR=9.6
TXAR Lajitas Array 126.22 58 PKP PKPdf 10 41 50.6 +0.8
comp=Z,1.0nm,0.5s,baz=195,slow=2.2,SNR=32
TXAR SKPab 10 44 28.1
comp=Z,0.8nm,0.8s,baz=239,slow=4.0,SNR=4.8
TORD Torodi Ar. Bea 126.36 282 PKP PKPdf 10 41 50.4 -0.1
comp=Z,5.1nm,0.5s,baz=89,slow=2.2,SNR=54
TORD SKPab 10 44 26.7
comp=Z,1.3nm,0.8s,baz=81,slow=3.9,SNR=4.4
TORD Torodi Ar. Bea 126.36 282 PKP PKPdf 10 41 50.4 -0.1
TORD SKPab 10 44 26.7
JCT Junction City 129.09 55 *e*PKIKP PKPdf 10 41 55.8 +0.6
SCHQ Schefferville 129.71 11 PKP PKPdf 10 41 55.7 0.0
comp=Z,1.7nm,0.4s,baz=0.0,slow=2.0,SNR=6.0
SCHQ Schefferville 129.71 11 PKP PKPdf 10 41 55.7 0.0
PLCA Paso Flores 130.75 162 PKP PKPdf 10 41 59.2 +1.1
comp=Z,1.9nm,0.8s,baz=256,slow=9.9,SNR=4.7
PLCA SKPab 10 44 43.8
comp=Z,4.4nm,1.1s,baz=191,slow=5.3,SNR=4.0
DBIC Dimbokro 132.87 274 PKP PKPdf 10 42 03.1 +0.2
comp=Z,3.2nm,0.5s,baz=131,slow=20,SNR=7.0
DBIC SKPab 10 44 50.5
comp=Z,9.9nm,1.0s,baz=195,slow=2.9,SNR=4.7
DBIC Dimbokro 132.87 274 PKP PKPdf 10 42 03.1 +0.2
DBIC SKPab 10 44 50.5
LVC Limon Verde 147.41 151 *e*PKPbc PKPbc 10 42 33.2 +1.4
CPUP Villa Florida 147.70 171 PKPbc PKPbc 10 42 32.4 0.0
comp=Z,6.6nm,0.4s,baz=178,slow=1.9,SNR=38
LPAZ La Paz 153.03 145 PKP PKPdf 10 42 39.2 +1.7
comp=Z,1.5nm,0.7s,baz=16,slow=1.9,SNR=7.5
LPAZ PKPbc PKPbc 10 42 46.5 +1.3
comp=Z,3.0nm,0.5s,baz=22,slow=3.3,SNR=18
LPAZ PKPab PKPab 10 43 00.7 +2.3
comp=Z,8.1nm,0.7s,baz=226,slow=2.3,SNR=16

ISK ***06*** *11:08:18.4, 37.43N×38.70E, h9km, MD3.0*
CSEM ***06*** *11:08:18.1±0.1, 37.42N×38.70E, h8km, MD3.0, Error ellipse: s-maj=1.7km s-min=1.0km az=152.0*
ISCJB ***06*** *11:08:19.2±0.8, 37.44N±0.04×38.69E±0.03, h3km±6km, Error ellipse: s-maj=7.2km s-min=4.1km az=0.5*
DDA ***06*** *11:08:20.2, 37.47N×38.68E, h7km±4km, Md2.9*
ISC 06 11:08:19.7±0.7**, 37.42N**±0.05×**38.69E**±0.03**, h7**km±5km**, n15,** σ0.75/25**, Turkey**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res ISC
URFA Urfa 0.11 81 *e*PG **Pg 11 08 21.3 -0.8**
URFA *e*SG **Sg 11 08 23.2 -0.5**
ATAB Bozova 0.32 278 *i* P **Pg 11 08 26.4 +0.6**
ATAB *i* S **Sg 11 08 31.5 +1.5**
MALT Malatya 0.91 347 *e*PG **Pg 11 08 36.3 -0.9**
MALT *e*SG **Sg 11 08 49.5 +0.4**
MYA Malataya 0.92 347 *e*PG **Pg 11 08 36.6 -0.8**
AKCD Akcadag 1.06 325 *i* P **Pg 11 08 40.8 +0.8**
AKCD *i* S **Sg 11 08 53.8 0.0**
SVRC Sivrice-ELAZID 1.07 27 *e*PG **Pg 11 08 39.5 -0.7**
SVRC *e*SG **Sg 11 08 54.3 +0.2**
GAZ Gaziantep 1.21 258 *e*PN **Pn 11 08 42.0 -0.9**
GAZ *e*SN **Sn 11 08 59.5 0.0**
DIYA Diyarbakir 1.24 66 *i* P **Pn 11 08 43.9 +0.4**
DIYA *i* S **Sg 11 09 00.9 +1.3**
DIYA Diyarbakir 1.24 66 *i* P **Pn 11 08 43.8 +0.4**
DIYA *i* S **Sg 11 09 00.9 +1.3**
KMRS Kahramanmaras 1.43 274 *e*PN **Pn 11 08 45.0 -1.0**
PTK Pertek 1.57 21 *e*PN **Pn 11 08 47.2 -0.7**
MARD Mardin 1.67 93 *i* P **Pn 11 08 49.6 +0.3**
MARD *i* S **Sn 11 09 11.9 +0.9**
ANDN Andirin 1.87 275 *e*P **Pn 11 08 52.7 +0.6**
ANDN *i* S **Sn 11 09 20.0 +4.1**
SARI SarD1z-Kayseri 2.01 309 *e*PN **Pn 11 08 53.9 -0.2**
KOZT Kozan 2.28 272 *e*PN **Pn 11 08 57.1 -0.6**

ISCJB ***06*** *11:21:10.9±0.3, 53.92N±0.03×159.88E±0.08, h118km±3km, mb4.0/13, Error ellipse: s-maj=8.6km s-min=3.1km az=28.7*
MOS ***06*** *11:21:10.4±1.5, 54.05N×159.66E, h120km, mb4.2/4, Error ellipse: s-maj=20.6km s-min=8.7km az=69.6*
KRSC ***06*** *11:21:10.6±1.0, 53.93N×159.89E, h114km±53km, ML4.3*
NEIC ***06*** *11:21:11.8±0.8, 54.16N×159.40E, h117km±8km, Error ellipse: s-maj=17.5km s-min=11.3km az=161.0*
IDC ***06*** *11:21:12.3±1.1, 54.22N×159.38E, h119km±11km, mb3.6/11, mb1 3.9/12, mb1mx3.7/24, mbtmp3.7/12, Error ellipse: s-maj=21.0km s-min=13.1km az=157.0*
ISC 06 11:21:11.8±0.3**, 53.93N**±0.03×**159.83E**±0.08**, h115**km±3km**, n56,** σ0.91/75**, mb4.0**/13**, 1C-2D, Near east coast of Kamchatka Peninsula**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res ISC
KII Karymskiy 0.25 296 *e*P **Pn 11 21 27.4 -0.5**
NLC Nalytchevo 0.81 201 *e*P **Pn 11 21 31.3 -0.3**
NLC *i* S **Sn 11 21 46.6 +0.1**
SPN Mys Shipunski 0.84 172 *e*P **Pn 11 21 31.3 -0.5**
SPN *i* S **Sn 11 21 46.0 -0.9**
AVH Avacha 0.93 225 *e*P **Pn 11 21 33.0 +0.3**
AVH *i* S **Sn 11 21 49.5 +1.1**
GNL Ganaly 1.15 259 *e*P **Pn 11 21 34.8 -0.1**
GNL *i* S **Sn 11 21 52.6 +0.3**
PET Petropavlovsk 1.15 218⇑*i*PN **Pn 11 21 34.9 0.0**
PET *i* S **Sn 11 21 52.5 +0.1**
PET pmax pmax
comp=Z,665nm,0.3s
PET smax
comp=N,818nm,0.4s
PET smax
comp=E,1μm,0.6s
PET Petropavlovsk 1.15 218 *e*P **Pn 11 21 35.0 +0.1**
PET *i* S **Sn 11 21 52.8 +0.4**
PET Petropavlovsk 1.15 218 *e*Pg **Pn 11 21 34.8 -0.1**
PET *e*Sg **Sn 11 21 52.6 +0.2**
MKZ Mys Kozlova 1.28 60 *e*P **Pn 11 21 35.4 -0.9**
MKZ *i* S **Sn 11 21 53.8 -1.1**
TUMR Tumrok 1.37 7 *e*P **Pn 11 21 37.4 0.0**
TUMR *i* S **Sn 11 21 56.9 +0.1**
PEA0B Petropavlovsk- 1.52 238 *e*Pn **Pn 11 21 39.1 0.0**
PEA0B *e*Sn **Sn 11 22 00.4 +0.7**
PETK Petropavlovsk- 1.52 238 P **Pn 11 21 39.1 0.0**
comp=E,48nm,0.3s,baz=66,slow=15,SNR=1284
PETK S **Sn 11 22 00.3 +0.5**
comp=E,22nm,0.3s,baz=73,slow=31,SNR=21
PETK Petropavlovsk- 1.52 238 P **Pn 11 21 39.1 0.0**
PETK S **Sn 11 22 00.3 +0.5**
RUS Russkaya 1.69 208 *e*P **Pn 11 21 41.2 0.0**
RUS *i* S **Sn 11 22 03.4 -0.2**
KMNR Kamenistaya 1.85 7 *e*P **Pn 11 21 43.1 0.0**
KMNR *i* S **Sn 11 22 06.9 0.0**
BZMR Bezymyannaya 2.05 10 *e*P **Pn 11 21 46.0 +0.4**
KIRR Kirishev 2.05 8 *e*P **Pn 11 21 45.5 -0.1**
KIRR *i* S **Sn 11 22 11.2 -0.3**
KPT Kopyto 2.06 6 *e*P **Pn 11 21 45.5 -0.2**
BZWR Bezymyannyi-We 2.08 10 *e*P **Pn 11 21 46.4 +0.5**
BZWR *i* S **Sn 11 22 12.8 +0.8**
BZGR Bezymyannyi-Gr 2.08 14 *e*P **Pn 11 21 46.3 +0.4**
KOZ Kozyrevsk 2.14 1 *e*P **Pn 11 21 46.2 -0.5**
KOZR Kozyr 2.14 1 PN **Pn 11 21 46.2 -0.6**
ZLN Zelenaya 2.17 15 *e*P **Pn 11 21 47.9 +0.8**
CIRR Tsirk 2.25 13 *e*P **Pn 11 21 49.1 +0.9**
KRSR Krestovskiy 2.33 10 *e*P **Pn 11 21 49.3 +0.1**
KRSR *i* S **Sn 11 22 17.5 -0.4**
SRDR Sredinnyy 2.40 358 *e*P **Pn 11 21 49.4 -0.6**
KLY Klyuchi 2.44 11 *e*P **Pn 11 21 51.0 +0.5**
KLY *i* S **Sn 11 22 20.5 +0.3**
MIPR Malaya Ipel'ka 2.48 230 *e*P **Pn 11 21 51.9 +0.7**
SRKR Sorokina 2.84 15 *e*P **Pn 11 21 57.1 +1.4**
KBTR Krutoberegovo 2.86 36 *e*P **Pn 11 21 55.9 -0.1**
KBTR *i* S **Sn 11 22 28.9 -1.1**
SKR Severo-Kuril's 3.97 217 *e*PN **Pn 11 22 10.5 -0.3**
SKR *e*S **Sn 11 22 54.5 -2.0**
SKR pmax pmax
comp=N,50nm,0.6s
SKR pmax pmax
comp=E,50nm,0.6s
SKR pmax pmax
comp=Z,50nm,0.6s
SKR smax
comp=N,310nm,0.3s
SKR smax
comp=E,120nm,0.3s
YSS Yuzh-Sakhalins 12.91 244 *i* PN **Pn 11 24 12.3 +1.4**
ASAJ Asahikawa 14.94 236 P **Pn 11 24 37.7 +0.8**
comp=E,1.1nm,0.3s,baz=75,slow=8.0,SNR=15
ASAJ Asahikawa 14.94 236 P **Pn 11 24 37.7 +0.8**
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ERM Erimo 16.28 230 *i* P **Pn 11 24 51.9 -1.7**
MAT Matsushiro 22.96 230 P **P 11 26 06.5 +0.3**
MJAR Matsushiro Arr 22.96 230 P **P 11 26 06.3 +0.1**
comp=Z,3.4nm,0.4s,mb4.0,baz=10,slow=14,SNR=9.9
MJAR Matsushiro Arr 22.96 230 *e*P **P 11 26 07.0 +0.8**
MJAR pmax pmax
comp=Z,3.0nm,0.4s
HIA Hailar 25.09 276⇓*e*P **P 11 26 23.4 -2.0**
KSRS Korea Array 27.40 246 P **P 11 26 47.3 +1.0**
comp=Z,2.6nm,1.0s,mb3.7,baz=46,slow=9.0,SNR=5.3
KSRS Korea Array 27.40 246 P **P 11 26 47.3 +1.0**
KSRS pmax pmax
comp=Z,3.0nm,1.0s,mb3.8
KURK Kurchatov 47.17 301 P **P 11 29 29.8 -2.4**
comp=Z,1.3nm,0.4s,mb4.0,baz=58,slow=7.7,SNR=11
KURK Kurchatov 47.17 301⇓*e*P **P 11 29 30.3 -2.0**
KURK pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
MKAR Makanchi Array 47.66 295 P **P 11 29 33.2 -2.9**
comp=Z,1.0nm,0.5s,mb3.9,baz=59,slow=7.8,SNR=11
MKAR Makanchi Array 47.66 295 P **P 11 29 33.2 -2.9**
BVAR Borovoye Array 49.75 308 P **P 11 29 48.9 -3.1**
comp=Z,0.7nm,0.5s,mb3.9,baz=69,slow=7.9,SNR=2.8
NVAR Mina Array Bea 55.61 70 P **P 11 30 37.3 +2.0**
comp=Z,1.3nm,0.8s,mb4.0,baz=300,slow=6.8,SNR=8.3
RLMT Red Lodge 55.74 59 P **P 11 30 37.2 +1.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,4.3nm,0.6s,mb4.7						
PDAR	Pinedale Array	57.25	61	P	P	11 30 48.3	+1.4
	comp=Z,2.1nm,0.8s,mb4.2,baz=323,slow=2.7,SNR=16						
ULM	Lac du Bonnet	58.36	47	P	P	11 30 53.6	-1.0
	comp=Z,0.9nm,0.4s,mb4.1,baz=300,slow=14,SNR=3.5						
OBN	Obninsk	61.73	327	eP	P	11 31 14.2	-3.2
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
TXAR	Lajitas Array	70.45	67	P	P	11 32 14.8	+1.1
	comp=Z,1.2nm,0.4s,mb4.0,baz=294,slow=5.0,SNR=38						
TXAR	Lajitas Array	70.45	67	eP	P	11 32 14.7	+1.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	76.77	205	P	P	11 32 50.6	+0.2
	comp=Z,0.4nm,0.5s,mb3.5,baz=25,slow=6.2,SNR=9.3						
ASAR	Alice Springs	80.46	204	P	P	11 33 11.3	+0.8
	comp=Z,0.3nm,0.5s,mb3.4,baz=18,slow=4.8,SNR=8.9						
PLCA	Paso Flores	144.17	89	PKP	PKPdf	11 40 32.1	-1.1
	comp=Z,0.9nm,0.5s,baz=261,slow=2.2,SNR=5.4						

*ISCJB **06** 11:38:50.6±1.1, 29N±02×665E±02, h10km, mb4.0/8, MS3.5/6, Error ellipse: s-maj=30.6km s-min=22.2km az=154.9*

*IDC **06** 11:38:51.1±1.1, 284N×6652E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.8/22, mbtmp4.0/8, MS3.5/6, Ms1 3.5/6, ms1mx3.2/25, Error ellipse: s-maj=36.2km s-min=23.0km az=61.0*

ISC 06 11:38:52.5±1.1**, 29N**±02×**665E**±02**, h10**km**, n13, σ0ˢ68**/8**, mb4.0**/8**, MS3.5**/6**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	29.49	263	LR	LR	11 56 07.0	
	comp=Z,61nm,18.1s,MS3.3,baz=280,slow=35						
CMAR	Chiang Mai Arr	35.36	62	LR	LR	11 58 38.0	
	comp=Z,60nm,19.2s,MS3.4,baz=48,slow=34						
MKAR	Makanchi Array	45.86	15	P	P	11 47 13.9	-1.0
	0.2nm,0.2s,mb3.6,baz=188,slow=6.5,SNR=3.5						
AKTO	Aktyubinsk	47.94	353	P	P	11 47 32.0	+1.0
	3.5nm,1.0s,mb4.3,baz=155,slow=10,SNR=7.4						
KURK	Kurchatov	48.77	10	P	P	11 47 37.3	-0.2
	0.6nm,0.7s,mb3.8,baz=200,slow=7.1,SNR=3.1						
BOSA	Boshof	50.45	229	LR	LR	12 08 34.7	
	comp=Z,78nm,19.8s,MS3.7,baz=277,slow=35						
ZALV	Zalesovo Beam	53.10	13	P	P	11 48 09.3	-0.7
	0.5nm,0.3s,mb3.9,baz=205,slow=9.0,SNR=4.0						
ZALV				LR	LR	12 10 40.0	
	comp=Z,25nm,18.6s,MS3.3,baz=136,slow=36						
SONM	Songino Array	56.44	31	P	P	11 48 35.5	+1.1
	0.4nm,0.5s,mb3.7,baz=250,slow=4.3,SNR=5.9						
SONM				LR	LR	12 12 45.6	
	comp=Z,81nm,18.5s,MS3.9,baz=78,slow=36						
KSRS	Korea Array	65.79	50	LR	LR	12 21 05.5	
	comp=Z,26nm,19.0s,MS3.5,baz=95,slow=38						
WRA	Warramunga Arr	70.29	112	P	P	11 50 06.7	0.0
	2.2nm,0.9s,mb4.1,baz=291,slow=5.8,SNR=15						
ASAR	Alice Springs	70.62	116	P	P	11 50 08.6	-0.1
	1.4nm,0.9s,mb3.9,baz=284,slow=6.0,SNR=9.9						
DBIC	Dimbokro	71.14	276	P	P	11 50 11.9	-0.1
	7.2nm,1.0s,mb4.5,baz=136,slow=7.1,SNR=3.3						
TXAR	Lajitas Array	146.62	344	PKPbc	PKPbc	11 58 36.0	+0.9
	3.7nm,0.9s,baz=52,slow=3.2,SNR=34						

*ISCJB **06** 11:52:32.3±1.0, 175S±0.1×1790W±0.1, h514km±16km, mb4.0/13, Error ellipse: s-maj=24.5km s-min=11.6km az=144.1*

*IDC **06** 11:52:32.8±1.4, 1747S×17892W, h510km±16km, mb3.5/10, mb1 3.8/11, mb1mx3.6/19, mbtmp3.6/11, Error ellipse: s-maj=21.6km s-min=11.7km az=140.0*

*NEIC **06** 11:52:33.0±1.1, 1747S×17893W, h513km±15km, mb4.3/5, Error ellipse: s-maj=18.6km s-min=9.8km az=144.0*

ISC 06 11:52:33.0±1.0**, 175S**±01×**1789W**±01**, h511**km±16km**, n23, σ0ˢ78**/22**, mb4.0**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.75	64	P	P	11 54 27.4	+0.3
	15nm,0.3s,baz=85,slow=1.9,SNR=19						
AFI				S	S	11 56 00.5	-0.2
	2.0nm,0.3s,baz=330,slow=20,SNR=2.5						
URZ	Urewera	20.99	189	P	P	11 56 38.4	-1.5
	2.3nm,0.3s,baz=311,slow=4.0,SNR=5.7						
RPZ	Rata Peaks	27.50	196	P	P	11 57 37.4	-0.2
	3.7nm,0.6s,mb4.2,baz=7.6,slow=15,SNR=3.7						
ARMA	Armidale	29.73	239	eP	P	11 57 58.7	+1.3
CTA	Charters Tower	33.03	260	eP	P	11 58 26.1	+0.3
	5.5nm,0.8s,mb4.1						
TOO	Toolangi	37.06	230	eP	P	11 59 00.4	+1.2
STKA	Stephens Creek	38.41	241	eP	P	11 59 11.2	+0.9
	7.6nm,0.5s,mb4.5						
STKA	Stephens Creek	38.41	241	P	P	11 59 11.3	+1.0
	8.5nm,0.5s,mb4.6,baz=87,slow=9.8,SNR=18						
WB2	Warramunga Arr	44.21	259	eP	P	11 59 55.6	-1.0
WRA	Warramunga Arr	44.23	259	P	P	11 59 55.8	-0.9
	1.5nm,0.3s,mb4.1,baz=93,slow=7.8,SNR=101						
WRA				ScP	ScP	12 04 32.8	-0.8
	0.6nm,0.9s,baz=92,slow=3.8,SNR=4.4						
ASAR	Alice Springs	44.43	254	P	P	11 59 58.3	0.0
	34nm,0.8s,mb5.0,baz=88,slow=8.1,SNR=444						
ASAR				PcP	PcP	12 01 30.5	-0.6
	1.2nm,0.6s,baz=101,slow=4.1,SNR=4.9						
ASAR				ScP	ScP	12 04 34.0	-0.5
	0.4nm,0.5s,baz=88,slow=2.9,SNR=4.0						
KAKA	Kakadu	47.10	269	eP	P	12 00 18.7	0.0
	20nm,0.4s,mb5.0						
FITZ	Fitzroy Crossi	52.61	260	eP	P	12 00 59.5	+0.2
	7.2nm,0.7s,mb4.1						
KLBR	Kellerberrin	58.58	243	eP	P	12 01 39.7	-0.9
	8.3nm,0.6s,mb4.1						
PETK	Petropavlovsk-	73.14	346	P	P	12 03 10.0	-0.9
	1.7nm,0.8s,mb3.5,baz=171,slow=10,SNR=5.3						
PETK	Petropavlovsk-	73.14	346	P	P	12 03 10.0	-0.9
NVAR	Mina Array Bea	79.46	44	P	P	12 03 45.8	-0.3
	1.0nm,0.8s,mb3.2,baz=229,slow=11,SNR=7.8						
MAW	Mawson	84.09	200	P	P	12 04 09.6	+0.2
	2.2nm,0.5s,mb3.9,baz=137,slow=4.0,SNR=7.7						
TXAR	Lajitas Array	86.18	58	P	P	12 04 21.5	+1.3
	0.6nm,0.8s,mb3.3,baz=222,slow=6.5,SNR=7.8						
TXAR	Lajitas Array	86.18	58	P	P	12 04 21.5	+1.3
PDAR	Pinedale Array	87.38	44	P	P	12 04 25.6	+0.2
	0.7nm,0.5s,mb3.5,baz=209,slow=2.7,SNR=7.4						
CLL	Collm	144.94	347	ePKPdf	PKPdf	12 11 13.0	+1.5
TORD	Torodi Ar. Bea	175.65	188	PKPab	PKPab	12 13 25.7	-0.5
	0.7nm,1.1s,baz=183,slow=2.9,SNR=2.3						

*LDG **06** 12:36:15.5±0.2, 17.17N×6862W, h10km, Mb5.2/29, Ms3.6/8, Error ellipse: s-maj=11.0km s-min=6.1km az=96.0*

*BJI **06** 12:36:21.0, 1730N×6840W, h66km, mB5.3, Ms5.1, Msz4.8*

*SZGRF **06** 12:36:22.1, 1657N×6760W, h33km, mb5.0, Caribbean Sea*

*ISCJB **06** 12:36:22.2±0.2, 1709N±003×6841W±002, h60km, mb4.8/120, MS4.1/34, Error ellipse: s-maj=4.1km s-min=2.7km az=27.1*

*IDC **06** 12:36:22.4±1.5, 17.15N×6854W, h43km±14km, mb4.2/19, mb1 4.4/23, mb1mx4.4/26, mbtmp4.3/23, ML4.8/5, MS4.0/26, Ms1 4.0/26, ms1mx3.9/36, Error ellipse: s-maj=12.3km s-min=10.5km az=81.0*

*NEIC **06** 12:36:24.0, 1731N×6840W, h66km, mb4.8/83, MD4.7(RSPR), After RSPR.*

NEIC Felt at Mayaguez, Puerto Rico.

*TRN **06** 12:36:24.8, 1681N×6787W, h3km, MD5.7, M3.8(FDF)*

ISC 06 12:36:24.3±0.2**, 1708N**±003×**6846W**±002**, h61**km**, h61**km±2.2km**:pP-P, n297, σ1ˢ17**/315**, mb4.8**/120**, 57C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPR	Mayaguez	1.69	48	ePn	Pn	12 36 48.0	-3.5
AGPR	Aguadilla, PR	1.89	43	ePn	Pn	12 36 50.8	-3.4
AGPR				eSn	Sn	12 37 09.8	-7.2
AOPR	Arecibo Observ	2.06	52	ePn	Pn	12 36 53.5	-3.0
AOPR				eSn	Sn	12 37 17.1	-4.1
SJG	San Juan	2.43	65	P	Pn	12 36 59.6	-2.0
	63nm,0.3s,baz=13,slow=22,SNR=23						
SJG				S	Sn	12 37 27.5	-2.7
	372nm,0.3s,baz=276,slow=23,SNR=18						
SJG	San Juan	2.43	65	ePn	Pn	12 36 59.0	-2.5
SJG				eSn	Sn	12 37 25.3	-4.9
CPD	Cerro la Pandu	2.61	68	ePn	Pn	12 37 01.4	-2.6
CPD				eSn	Sn	12 37 26.6	-7.9
HUMP	Col San Antoni	2.70	66	ePn	Pn	12 37 02.6	-2.7
CBYP	Canovanas	2.75	64	ePn	Pn	12 37 03.7	-2.2
MTP	Monte Pirata	2.95	69	ePn	Pn	12 37 06.3	-2.3
MTP				eSn	Sn	12 37 35.5	-7.5
MASC	Masc	6.28	300	eP	Pn	12 37 51.6	-2.8
	baz=124						
MASC				eS	Sn	12 38 56.5	-8.3
	comp=N,4μm,0.5s						
MASC				e			
	comp=E,4μm,0.5s						
BPA	Boggy Peak	6.31	89	eP	Pn	12 37 54.6	-0.1
BPA				eS	Sn	12 38 54.6	-11
LZG	Guadaloupe-1	6.47	97	eP	Pn	12 37 57.3	+0.4
HMG	Houelmont	6.57	99	eP	Pn	12 37 58.5	+0.2
HMG				eS	Sn	12 39 09.0	-2.8
SCG	Saint Claude	6.58	98	eP	Pn	12 37 58.6	+0.2
SCG				eS	Sn	12 39 09.1	-3.0
TBG	Guadaloupe-3	6.65	100	eP	Pn	12 37 59.3	0.0
MGG	Marie-Galante	6.94	99	eP	Pn	12 38 02.6	-0.8
MDN	Morne-Daniel	7.01	103	eP	Pn	12 38 03.2	-1.1
MDN				eS	Sn	12 39 16.2	-6.4
MDN	Morne-Daniel	7.01	103	eP	Pn	12 38 05.6	+1.3
MDN				eS	Sn	12 39 16.2	-6.4
DBCT	Belle View Cho	7.06	104	eP	Pn	12 38 04.8	-0.3
DBCT				eS	Sn	12 39 17.7	-6.3
DBCT	Belle View Cho	7.06	104	eP	Pn	12 38 05.5	+0.4
DBCT				eS	Sn	12 39 17.7	-6.3
FDF	Fort de France	7.40	107	eP	Pn	12 38 08.1	-1.7
FDF				eS	Sn	12 39 24.4	-7.9
FDF	Fort de France	7.40	107	ePn	Pn	12 38 08.1	-1.6
FDF				eSn	Sn	12 39 32.1	-0.2
BIM	Bigot	7.55	109	eP	Pn	12 38 09.6	-2.2
PCRV	Puerto La Cruz	7.80	151	P	Pn	12 38 15.7	+0.6
	comp=E,64nm,0.3s,baz=323,slow=3.8,SNR=131						
PCRV				S	Sn	12 39 40.1	-1.9
	comp=E,24nm,0.3s,baz=21,slow=20,SNR=12						
PCRV				LR	LR	12 41 15.3	
	comp=E,2μm,21.3s,baz=338,slow=37						
SLB	Belfond	7.84	113	eP	Pn	12 38 13.0	-2.7
SLB				eS	Sn	12 39 33.2	-10
SLB	Belfond	7.84	113	eP	Pn	12 38 13.0	-2.7
SLB				eS	Sn	12 39 33.2	-10
SLW	Petit Monier	7.86	112	eP	Pn	12 38 13.5	-2.4
SLW				eS	Sn	12 39 34.0	-9.4
SVB	Belmont	7.92	118	eP	Pn	12 38 14.4	-2.3
SVB				eS	Sn	12 39 37.8	-7.1
SVV	Soufriere Volc	7.92	117	eP	Pn	12 38 14.8	-2.1
SVV				eS	Sn	12 39 36.8	-8.3
SFAN	Fancy Village	7.93	117	eP	Pn	12 38 14.8	-2.1
SFAN				eS	Sn	12 39 36.7	-8.5
SSV	Crater Summit	7.94	117	eP	Pn	12 38 10.2	-6.9
SSV				eS	Sn	12 39 34.2	-11
GWJ	Greenwich	7.95	278⇑	eP	Pn	12 38 15.0	-2.2
HOJ	Hope	7.97	278⇑	eP	Pn	12 38 15.6	-1.8
FCV	Fort Charlotte	7.98	118	eP	Pn	12 38 15.1	-2.5
FCV				eS	Sn	12 39 38.5	-7.9
FCV	Fort Charlotte	7.98	118	eP	Pn	12 38 14.9	-2.6
FCV				eS	Sn	12 39 38.5	-7.9
BHS	Barnard House	8.01	117	eP	Pn	12 38 15.8	-2.2
BHS				eS	Sn	12 39 37.6	-10
BHS	Barnard House	8.01	117	eP	Pn	12 38 15.4	-2.6
BHS				eS	Sn	12 39 37.6	-10
STH	Stony Hill	8.03	278⇑	eP	Pn	12 38 15.6	-2.7
STH				eS	Sn	12 39 35.2	-12
GRW	Mount Saint Ca	8.19	126	eP	Pn	12 38 19.6	-0.9
GRW				eS	Sn	12 39 45.5	-6.2
GRGR	Grenville	8.21	126	ePn	Pn	12 38 18.7	-2.1
	comp=E,656nm,0.8s						
GRGR				eSn	Sn	12 39 42.2	-10
SDV	Santo Domingo	8.41	195	P	Pn	12 38 23.7	+0.2
	comp=E,20nm,0.3s,baz=93,slow=3.0,SNR=22						
SDV				S	Sn	12 39 51.6	-5.4
	comp=E,7.4nm,0.3s,baz=7.7,slow=16,SNR=3.9						
SDV				LR	LR	12 41 53.7	
	comp=E,1μm,21.9s,baz=286,slow=39						
SDV	Santo Domingo	8.41	195	ePn	Pn	12 38 25.2	+1.7
	comp=E,110nm,0.6s						
TCE	Chacachacare	9.08	133	eP	Pn	12 38 32.3	-0.4
TCE				eS	Sn	12 40 08.1	-5.4
TCE	Chacachacare	9.08	133	eP	Pn	12 38 34.3	+1.6
TCE				eS	Sn	12 40 08.1	-5.4
TRN	Trinidad (W)	9.36	132	eP	Pn	12 38 36.2	-0.4
TRN				eS	Sn	12 40 09.1	-11
TRN				eS	Sn	12 40 12.2	-8.2
TRN	Trinidad (W)	9.36	132	eP	Pn	12 38 38.4	+1.8
TRN				eS	Sn	12 40 09.1	-11
TRN				eS	Sn	12 40 12.2	-8.2
TPR	Prospect	9.47	127	eP	Pn	12 38 37.0	-1.1
TPR				eS	Sn	12 40 15.0	-8.0
TPR	Prospect	9.47	127	eP	Pn	12 38 39.0	+1.0
TPR				eS	Sn	12 40 15.0	-8.0
BOT	Bacolet	9.53	127	eP	Pn	12 38 39.1	+0.4
BOT				eS	Sn	12 40 11.4	-13
BOT				eS	Sn	12 40 18.8	-5.6
TPP	Pointe-a-Pierr	9.56	134	eP	Pn	12 38 44.2	+4.9
TOSP	Speyside	9.59	126	eP	Pn	12 38 40.2	+0.6
TOSP				eS	Sn	12 40 07.0	-19
TBH	Brigand Hill	9.71	131	eP	Pn	12 38 44.9	+3.5
TBH				eS	Sn	12 40 10.6	-18
ROSC	El Rosal	13.44	206	P	Pn	12 39 32.3	+0.2
	comp=E,9.8nm,0.3s,baz=98,slow=12,SNR=12						
ROSC				S	Sn	12 41 53.6	-6.3
	comp=E,1.4nm,0.3s,baz=98,slow=21,SNR=2.5						
ROSC				LR	LR	12 45 12.5	
	comp=E,416nm,18.8s,baz=5.2,slow=39						
BCIP	Isla Barro Col	13.58	236	ePn	Pn	12 39 29.2	-5.0
BBSR	BB Station	15.61	12	ePn	Pn	12 39 57.6	-2.8
TEIG	Tepich	19.04	283	P	Pn	12 40 40.9	-1.9
	comp=E,0.4nm,0.3s,baz=27,slow=21,SNR=5.1						
TEIG	Tepich	19.04	283	eP	Pn	12 40 41.6	-1.2
OTAV	Otavalo	19.41	211	eP	Pn	12 40 49.4	+2.1
	comp=E,50nm,1.2s						
JSC	Jenkinsville	20.62	329	eP	P	12 40 56.5	-2.1
GOGA	Godfrey	21.15	323	eP	P	12 41 02.3	-1.9
	comp=E,56nm,1.3s,mb4.7						
URVA	University of	21.93	340	eP	P	12 41 11.3	-1.3
BLA	Blacksburg	22.67	335	eP	P	12 41 18.9	-1.5
	comp=E,14nm,0.9s,mb4.4						
BLA				epP		12 41 33.0	
TKL	Tuckaleechee C	22.99	327	P	P	12 41 21.8	-2.0
	comp=E,4.3nm,0.6s,mb4.1,baz=147,slow=12,SNR=7.2						
TKL				LR	LR	12 50 01.8	
	comp=E,402nm,19.9s,baz=158,slow=36						
TKL	Tuckaleechee C	22.99	327	eP	P	12 41 21.8	-2.0
CPCT	Cooper Cave	23.23	325	eP	P	12 41 24.8	-1.4
CPCT				epP		12 41 37.1	
TZTN	Tazewell	23.55	328	eP	P	12 41 28.4	-0.8
MVL	Millersville	23.85	345	eP	P	12 41 21.9	-10
	comp=E,39nm,1.3s,mb4.7						
SWET	Sewanee	23.86	323	eP	P	12 41 30.4	-1.6
PLAL	Pickwick Lake	25.00	319	eP	P	12 41 41.4	-0.9
	comp=E,30nm,1.3s,mb4.7						
PLAL				epP		12 41 56.2	
PLAL				esP	sP	12 42 03.2	-1.3
HRV	Adam Dziewonsk	25.49	355	eP	P	12 41 47.9	+1.3
	comp=E,44nm,1.2s,mb4.9						
OXF	Oxford	25.55	317	eP	P	12 41 46.6	-0.8
	comp=E,58nm,1.2s,mb5.0						
OXF				epP	pP	12 42 03.9	+1.6
BINY	Binghamton	25.86	347	P	P	12 41 47.1	-2.9
	comp=E,184nm,2.0s,mb5.3						
BINY				epP	pP	12 42 02.6	-2.3
ATAH	Atahualpa	25.86	203	LR	LR	12 53 24.6	
	comp=E,696nm,21.4s,baz=34,slow=39						
NCB	Newcomb	27.25	351	eP	P	12 42 00.9	-1.7
	comp=E,18nm,1.4s,mb4.4						
NCB				epP	pP	12 42 16.1	-1.5
NCB				esP	sP	12 42 23.8	-1.1
LPAZ	La Paz	33.15	179	P	P	12 42 56.5	+1.6
	comp=E,2.9nm,0.7s,mb4.3,baz=12,slow=11,SNR=9.7						
LPAZ				LR	LR	12 57 01.3	
	comp=E,252nm,21.1s,baz=263,slow=37						
SIV	San Ignacio	33.65	167	P	P	12 42 59.3	0.0
	comp=E,3.1nm,0.6s,mb4.4,baz=6.9,slow=11,SNR=18						
SIV				PcP	PcP	12 45 39.6	+1.3
	comp=E,3.0nm,0.8s,baz=48,slow=1.9,SNR=4.4						
TXAR	Lajitas Array	34.45	297	P	P	12 43 05.1	-1.1
	comp=E,0.9nm,0.6s,mb3.9,baz=111,slow=11,SNR=19						
TXAR				PcP	PcP	12 45 40.9	+0.4
	comp=E,0.8nm,0.6s,baz=136,slow=5.5,SNR=4.9						
TXAR				ScP	ScP	12 49 21.7	+1.2
	comp=E,0.5nm,0.9s,baz=118,slow=4.8,SNR=3.9						
TXAR				LR	LR	13 00 33.0	
	comp=E,185nm,19.1s,baz=5.0,slow=42						
TXAR	Lajitas Array	34.45	297	P	P	12 43 05.1	-1.1
TXAR				PcP	PcP	12 45 40.9	+0.4
TXAR				ScP	ScP	12 49 21.7	+1.2
TXAR				LR	LR	13 00 33.0	
CBKS	Cedar Bluff	34.84	315	eP	P	12 43 09.2	-0.2
ECSD	EROS,Sioux Fal	35.68	324	eP	P	12 43 15.0	-1.5
	comp=E,9.0nm,0.8s,mb4.8						
ECSD				epP	pP	12 43 30.3	-1.6
SCHQ	Schefferville	37.70	2	P	P	12 43 33.1	-0.5
	comp=E,7.5nm,0.5s,mb4.7,baz=191,slow=5.4,SNR=14						
SCHQ				LR	LR	12 57 30.8	
	comp=E,206nm,20.5s,baz=136,slow=34						
BNM	Barren Site	38.13	304	eP	P	12 43 37.5	0.0
BNM				epP	pP	12 43 54.2	+1.3
ANMO	Albuquerque	38.23	305	eP	P	12 43 38.2	-0.1
ANMO				epP	pP	12 43 54.2	+0.4
BDFB	Brasilia	38.25	147	P	P	12 43 40.2	+1.5
	comp=E,4.3nm,0.8s,mb4.2,baz=303,slow=21,SNR=4.2						
BDFB				LR	LR	12 59 39.4	
	comp=E,504nm,21.0s,baz=284,slow=36						
SDCO	Great Sand Dun	38.46	310	eP	P	12 43 39.4	-0.9
SDCO				epP	pP	12 43 57.0	+1.3
ISCO	Idaho Springs	39.35	313	eP	P	12 43 47.9	+0.2
LVC	Limon Verde	39.45	181	P	P	12 43 49.3	+0.8
	comp=E,18nm,1.0s,mb4.7,baz=7.2,slow=7.5,SNR=8.8						
LVC	Limon Verde	39.45	181	eP	P	12 43 49.0	+0.5
	comp=E,12nm,0.5s,mb4.9						
ULM	Lac du Bonnet	39.75	332	LR	LR	12 59 50.0	
	comp=E,302nm,19.8s,baz=221,slow=36						
SRU	San Rafael	42.63	310	eP	P	12 44 14.7	+0.1
	comp=E,3.1nm,0.8s,mb4.1						
DGMT	Dagmar	42.74	325	eP	P	12 44 15.3	0.0
	comp=E,24nm,0.6s,mb5.1						
PDAR	Pinedale Array	43.27	315	P	P	12 44 18.6	-1.2
	comp=E,0.7nm,0.5s,mb3.6,baz=113,slow=12,SNR=5.6						
PDAR				PcP	PcP	12 46 07.0	-0.8
	comp=E,1.0nm,0.5s,baz=118,slow=5.7,SNR=4.9						
PDAR				LR	LR	13 04 27.4	
	comp=E,356nm,18.3s,baz=107,slow=39						
DAU	Daniels Canyon	43.59	311	eP	P	12 44 23.9	+1.6
MSU	Marysvale	43.68	308	eP	P	12 44 23.3	+0.2
MSU				epP	pP	12 44 41.2	+2.4
JLU	Jordanelle	43.79	311	eP	P	12 44 25.4	+1.4
JLU				epP	pP	12 44 37.2	-2.5
LOHW	Long Hollow	44.30	316	eP	P	12 44 27.1	-0.9
	comp=E,22nm,1.6s,mb4.6						
REDW	Red Top Meadow	44.37	315	eP	P	12 44 28.8	+0.2
	comp=E,11nm,1.1s,mb4.5						
REDW				epP	pP	12 44 43.6	-0.7
CPUP	Villa Florida	44.48	166	P	P	12 44 29.7	+0.2
	comp=E,4.3nm,0.7s,mb4.3,baz=340,slow=7.3,SNR=13						
CPUP				PcP	PcP	12 46 13.4	+1.2
	comp=E,4.9nm,0.9s,baz=344,slow=5.3,SNR=3.5						
CPUP				LR	LR	13 04 02.4	
	comp=E,202nm,21.6s,baz=333,slow=37						
CPUP	Villa Florida	44.48	166	eP	P	12 44 29.6	0.0
CPUP				epP	pP	12 44 42.9	-2.4
CPUP				esP	sP	12 44 53.0	+0.6
CPUP				PcP	PcP	12 46 13.4	+1.2
CPUP				LR	LR	13 04 02.4	
TPAW	Teton Pass	44.49	315	eP	P	12 44 30.1	+0.6
	comp=E,13nm,1.1s,mb4.6						
DUG	Dugway	44.65	310	eP	P	12 44 30.4	-0.5
	comp=E,3.6nm,0.8s,mb4.2						
DUG				epP	pP	12 44 46.4	-0.2
RRI2	Red Ridge	44.68	315	eP	P	12 44 30.5	-0.5
RRI2				epP	pP	12 44 45.4	-1.4
BGU	Big Grassy Mou	45.03	311	eP	P	12 44 33.8	-0.1
BGU				epP	pP	12 44 49.8	+0.2
QLMT	Earthquake Lak	45.33	317	eP	P	12 44 37.2	+1.0
BOZ	Bozeman (W)	45.79	318	eP	P	12 44 39.7	-0.1
	comp=E,9.8nm,1.4s,mb4.5						
LCO	Las Campanas	45.87	183	eP	P	12 44 41.5	+1.0
	comp=E,13nm,0.7s,mb5.0						
PFO	Pinyon Flat Ob	45.98	300	LR	LR	13 05 55.8	
	comp=E,103nm,18.5s,baz=320,slow=39						
DLMT	Dillon	46.30	317	eP	P	12 44 43.8	0.0
	comp=E,7.4nm,1.0s,mb4.6						
LRM	Limekiln Ridge	46.39	318	eP	P	12 44 45.0	+0.5
TPNV	Topopah Spring	46.42	305	eP	P	12 44 45.8	+1.0
	comp=E,6.8nm,0.9s,mb4.6						
HLID	Hailey	46.86	314	eP	P	12 44 47.0	-1.2
	comp=E,3.9nm,1.4s,mb4.1						
NVAR	Mina Array Bea	48.31	307	P	P	12 44 59.8	+0.2
	comp=E,2.3nm,0.6s,mb4.4,baz=90,slow=6.3,SNR=10.0						
BMO	Blue Mountains	49.25	315	eP	P	12 45 00.1	-6.6
	comp=E,16nm,1.8s,mb4.8						
EDM	Edmonton	50.16	326	eP	P	12 45 12.5	-1.0
NEW	Newport	50.27	319	eP	P	12 45 13.2	-1.2
	comp=E,5.3nm,0.8s,mb4.6						
YBH	Yreka Blue Hor	52.28	310	LR	LR	13 10 00.7	
	comp=E,239nm,18.6s,baz=96,slow=39						
YKA	Yellowknife Ar	55.52	336	P	P	12 45 51.3	-1.4
	comp=E,4.1nm,0.5s,mb4.7,baz=110,slow=7.1,SNR=14						
YKA				LR	LR	13 10 09.1	
	comp=E,224nm,18.0s,baz=150,slow=37						
EVO	Evora	56.56	55	eP	P	12 46 01.3	+0.7
	comp=E,34nm,1.0s,mb5.0						
EVO				eMLR	MLR		
	comp=Z,72nm,22.8s						
EVO	Evora	56.56	55	eP	P	12 46 02.3	+1.7
	comp=Z,29nm,1.3s,mb5.2						
EGRO	El Granado	56.91	56	P	P	12 46 03.4	+0.2
	comp=Z,14nm,0.8s,mb5.0						
PESTR	Estremoz	56.91	54	eP	P	12 46 03.7	+0.6
	comp=Z,35nm,1.5s,mb5.2						
PVRL	Vila Real	57.03	52	eP	P	12 46 03.9	0.0
	comp=Z,52nm,1.2s,mb5.4						
MTE	Manteigas	57.08	53	eP	P	12 46 05.1	+0.8
	comp=Z,23nm,1.4s,mb5.0						
PCBR	Castelo Branco	57.08	53	eP	P	12 46 05.0	+0.7
	comp=Z,20nm,1.2s,mb5.0						
PMRV	Marv??o	57.11	54	eP	P	12 46 05.2	+0.7
	comp=Z,33nm,1.6s,mb5.1						
PBAR	Barrancos	57.30	55	eP	P	12 46 07.8	+1.9
	comp=Z,24nm,1.7s,mb5.0						
EBAD	Badajoz	57.35	55	P	P	12 46 06.6	+0.3
	comp=Z,0.6nm,0.4s,mb4.0						
MVO	Moncorvo	57.54	52	eP	P	12 46 06.4	-1.1
	comp=Z,34nm,1.1s,mb5.3						
PLCA	Paso Flores	57.54	182	P	P	12 46 08.1	+0.8
	comp=Z,2.2nm,0.8s,mb4.2,baz=349,slow=11,SNR=3.9						
PLCA				LR	LR	13 14 37.1	
	comp=Z,123nm,19.7s,baz=11,slow=40						
PBRG	Braganca	57.81	51	eP	P	12 46 06.6	-2.8
	comp=Z,18nm,1.3s,mb4.9						
SUMG	Summit	58.14	10	eP	P	12 46 11.7	+0.5
SUMG				epP	pP	12 46 24.1	-3.4
ESPR	Espera	58.17	57	P	P	12 46 13.0	+1.0
	comp=Z,5.7nm,0.3s,mb5.1						
EADA	Adamuz	59.24	55	P	P	12 46 19.7	+0.3
	comp=Z,11nm,1.0s,mb4.8						
DCN	Croghan	59.34	38	eP	P	12 46 20.3	+0.5
RES	Resolute Bay	59.41	352	eP	P	12 46 17.7	-2.3
GUD	Guadarrama	59.67	53	P	P	12 46 23.7	+1.3
	comp=Z,14nm,1.0s,mb4.9						
DMUB	Kingscourt	59.67	37	eP	P	12 46 22.0	-0.1
DLF	Lyons Farm	59.76	38	eP	P	12 46 23.0	+0.3
ESDC	Sonseca Array	59.77	54	P	P	12 46 24.2	+1.1
	comp=Z,7.9nm,0.8s,mb4.8,baz=268,slow=7.1,SNR=29						
ESDC				LR	LR	13 07 23.9	
	comp=Z,78nm,20.9s,baz=345,slow=31						
ESDC	Sonseca Array	59.77	54	P	P	12 46 24.2	+1.1
	comp=Z,15nm,1.0s,mb5.0						
EBAN	Banos Encina	59.86	55	P	P	12 46 24.6	+0.9
	comp=Z,8.5nm,0.9s,mb4.8						
ECOG	Cogollos-Vega	60.02	57	P	P	12 46 27.0	+2.2
	comp=Z,11nm,0.9s,mb4.9						
EQES	Quesada	60.42	56	P	P	12 46 29.5	+2.0
	comp=Z,2.6nm,0.6s,mb4.4						
EBER	Berja	60.55	57	P	P	12 46 30.6	+2.1
	comp=Z,8.6nm,0.6s,mb5.1						
DLBC	Dease Lake	60.81	328	eP	P	12 46 29.7	-0.1
DLBC				epP	pP	12 46 44.3	-1.9
ROSF	Rostrenen	60.97	44⇑	iP	P	12 46 31.6	+0.5
	comp=Z,57nm,1.2s,mb5.3						
ROSF	Rostrenen	60.97	44⇑	iP	P	12 46 31.6	+0.5
	comp=Z,29nm,1.2s,mb5.3						
QUIF	Quistinic	60.99	44⇑	iP	P	12 46 31.8	+0.6
	comp=Z,35nm,1.1s,mb5.1						
QUIF	Quistinic	60.99	44⇑	iP	P	12 46 31.8	+0.6
	comp=Z,18nm,1.1s,mb5.1						
ETOR	Torete	61.27	52	P	P	12 46 34.2	+1.0
	comp=Z,4.9nm,0.8s,mb4.7						

SGMF **Saint Gilles** 61.44 44 *e*P P 12 46 34.8 +0.6
comp=Z,75nm,1.5s,mb5.3
SGMF **Saint Gilles** 61.44 44 *e*P P 12 46 34.8 +0.6
comp=Z,38nm,1.5s,mb5.3
SJPF **Ste Jean** 61.98 50⇑*i*P P 12 46 39.0 +1.0
comp=Z,80nm,1.3s,mb5.4
SJPF **Ste Jean** 61.98 50⇑*i*P P 12 46 39.0 +1.0
comp=Z,40nm,1.3s,mb5.4
ESK **Eskdalemuir** 62.07 36 *e*P P 12 46 36.6 -1.8
comp=Z,8.0nm,0.7s,mb5.0
ETSF **Etsaut** 62.46 50 *e*P P 12 46 41.5 +0.3
EMOS **Mosqueruela** 62.47 53 P P 12 46 42.6 +1.3
comp=Z,2.5nm,0.4s,mb4.7
ESAC **San Caprasio** 62.49 51 P P 12 46 43.8 +2.4
comp=Z,4.3nm,0.4s,mb4.9
GRR **Gorron** 62.58 44⇑*i*P P 12 46 42.3 +0.4
comp=Z,37nm,0.9s,mb5.2
GRR **Gorron** 62.58 44⇑*i*P P 12 46 42.3 +0.4
comp=Z,19nm,0.9s,mb5.2
EBEN **Beniarda** 62.66 55 P P 12 46 43.0 +0.4
comp=Z,14nm,1.0s,mb5.0
TIC **Toumodi** 62.71 91 *e*P P 12 46 43.7 +0.3
comp=Z,186nm,1.3s,mb6.0
LIC **Lamto** 62.82 92 *e*P P 12 46 44.7 +0.6
comp=Z,42nm,0.9s,mb5.3
LIC **Lamto** 62.82 92 *e*P P 12 46 44.7 +0.6
comp=Z,47nm,0.9s,mb5.6
FLN **La Foliniere** 62.86 44⇑*i*P P 12 46 44.3 +0.5
comp=Z,16nm,0.5s,mb5.1
FLN *e*MLR MLR
comp=Z,109nm,22.2s
FLN **La Foliniere** 62.86 44⇑*i*P P 12 46 44.3 +0.5
comp=Z,8.2nm,0.5s,mb5.1
FLN LR LR
comp=Z,110nm,22.3s
DBIC **Dimbokro** 62.86 91 P P 12 46 45.0 +0.6
comp=Z,11nm,0.8s,mb5.1,baz=284,slow=7.5,SNR=8.0
DBIC **Dimbokro** 62.86 91 P P 12 46 45.0 +0.6
MFF **Saint Martin d** 62.93 46⇑*i*P P 12 46 44.9 +0.6
comp=Z,24nm,0.6s,mb5.2
MFF **Saint Martin d** 62.93 46⇑*i*P P 12 46 44.9 +0.6
comp=Z,12nm,0.6s,mb5.2
EBIE **Bielsa** 62.97 50 P P 12 46 45.5 +0.9
comp=Z,2.1nm,0.7s,mb4.4
KIC **Kosan Boka** 63.06 91 *e*P P 12 46 46.3 +0.6
comp=Z,148nm,0.9s
LDF **La Druitiere** 63.09 44⇑*i*P P 12 46 45.7 +0.5
comp=Z,33nm,1.0s,mb5.1
LDF **La Druitiere** 63.09 44⇑*i*P P 12 46 45.7 +0.5
comp=Z,16nm,1.0s,mb5.1
ERTA **Horta de San J** 63.09 52 P P 12 46 46.5 +1.1
comp=Z,21nm,1.0s,mb5.2
EPF **Esparros** 63.12 50⇑*i*P P 12 46 46.7 +1.1
comp=Z,40nm,0.9s,mb5.3
EPF **Esparros** 63.12 50⇑*i*P P 12 46 46.7 +1.1
comp=Z,20nm,0.9s,mb5.2
LFF **La Frestale** 63.47 48⇑*i*P P 12 46 48.3 +0.5
EPOB **Poblet** 63.65 52 P P 12 46 49.4 +0.2
comp=Z,3.0nm,0.5s,mb4.6
RJF **Les Rejaudoux** 64.03 48⇑*i*P P 12 46 51.9 +0.4
comp=Z,23nm,0.9s,mb4.9
RJF *e*MLR MLR
comp=Z,59nm,22.8s
RJF **Les Rejaudoux** 64.03 48⇑*i*P P 12 46 51.9 +0.4
comp=Z,11nm,0.9s,mb4.9
RJF LR LR
comp=Z,60nm,22.8s
CAF **Calviac** 64.41 48⇑*i*P P 12 46 54.5 +0.5
comp=Z,31nm,1.0s,mb5.0
CAF **Calviac** 64.41 48⇑*i*P P 12 46 54.5 +0.5
comp=Z,15nm,1.0s,mb5.0
MTLF **Montolieu** 64.50 50⇑*i*P P 12 46 55.1 +0.4
comp=Z,32nm,1.0s,mb5.0
MTLF **Montolieu** 64.50 50⇑*i*P P 12 46 55.1 +0.4
comp=Z,16nm,1.0s,mb5.0
TCF **Toulx Ste Croi** 64.54 46⇑*i*P P 12 46 55.2 +0.3
comp=Z,28nm,1.0s,mb5.0
TCF **Toulx Ste Croi** 64.54 46⇑*i*P P 12 46 55.2 +0.3
comp=Z,14nm,1.0s,mb4.9
BGF **Bois d'Agland** 64.99 46⇑*i*P P 12 46 58.0 +0.2
comp=Z,25nm,1.0s,mb4.9
BGF **Bois d'Agland** 64.99 46⇑*i*P P 12 46 58.0 +0.2
comp=Z,12nm,1.0s,mb4.6
ETOS **Mallorca** 65.00 54 P P 12 47 01.2 +3.2
comp=Z,22nm,0.9s,mb5.2
AVF **Avril sur Loir** 65.34 46⇑*i*P P 12 47 00.1 0.0
comp=Z,33nm,1.2s,mb4.9
AVF **Avril sur Loir** 65.34 46⇑*i*P P 12 47 00.1 0.0
comp=Z,16nm,1.2s,mb4.9
SSF **Saint Saulge** 65.45 46 *e*P P 12 47 00.9 +0.1
comp=Z,18nm,0.9s,mb4.8
SSF **Saint Saulge** 65.45 46 *e*P P 12 47 00.9 +0.1
comp=Z,9.1nm,0.9s,mb4.8
SMF **Signal de Mont** 65.68 46⇑*i*P P 12 47 02.4 +0.2
comp=Z,74nm,1.4s,mb5.2
SMF **Signal de Mont** 65.68 46⇑*i*P P 12 47 02.4 +0.2
comp=Z,37nm,1.4s,mb5.2
LOR **Lormes** 65.70 45⇑*i*P P 12 47 02.3 0.0
comp=Z,8.5nm,0.5s,mb4.7
LOR *e*MLR MLR
comp=Z,69nm,19.5s
LOR **Lormes** 65.70 45⇑*i*P P 12 47 02.3 0.0
comp=Z,4.3nm,0.5s,mb4.7
LOR LR LR
comp=Z,70nm,19.5s
VIVF **Saint-Julien-l** 66.26 48⇑*i*P P 12 47 07.3 +1.3
comp=Z,38nm,1.1s,mb5.0
VIVF **Saint-Julien-l** 66.26 48⇑*i*P P 12 47 07.3 +1.3
comp=Z,19nm,1.1s,mb5.0
GIVF **Givet** 66.39 42⇑*i*P P 12 47 06.9 +0.2
comp=Z,48nm,1.1s,mb5.2
GIVF **Givet** 66.39 42⇑*i*P P 12 47 06.9 +0.2
comp=Z,24nm,1.1s,mb5.1
DAWY **Dawson** 66.45 333 *e*P P 12 47 06.2 -0.6
MEZF **Maizieres J'vi** 66.52 44⇑*i*P P 12 47 07.9 +0.3
comp=Z,77nm,0.9s,mb5.4
MEZF **Maizieres J'vi** 66.52 44⇑*i*P P 12 47 07.9 +0.3
comp=Z,77nm,0.9s,mb5.7
SMRF **Simiane la Rot** 66.93 49⇑*i*P P 12 47 11.7 +1.4
ORIF **Oris-en-Rattie** 67.12 48⇑*i*P P 12 47 12.7 +1.2
comp=Z,22nm,1.1s,mb4.8
ORIF *e*MLR MLR
comp=Z,70nm,22.2s
ORIF **Oris-en-Rattie** 67.12 48⇑*i*P P 12 47 12.7 +1.2
comp=Z,11nm,1.0s,mb4.8
WLF **Walferdange** 67.25 43 *e*P P 12 47 12.7 +0.5
comp=Z,15nm,1.0s,mb5.0
EGAK **Eagle** 67.32 334 *e*P P 12 47 11.9 -0.5
comp=Z,6.4nm,0.7s,mb4.8
HAU **Haudompre** 67.38 45⇑*i*P P 12 47 13.1 0.0
HAU *e*MLR MLR
comp=Z,66nm,19.2s
HAU **Haudompre** 67.38 45⇑*i*P P 12 47 13.1 0.0
HAU LR LR
comp=Z,70nm,19.3s
TOA0 **Torodi Ar. Sit** 67.52 83 *e*P P 12 47 14.9 +0.3
TORD **Torodi Ar. Bea** 67.52 83 P P 12 47 14.4 -0.1
comp=Z,9.3nm,0.9s,mb4.8,baz=292,slow=6.5,SNR=35
TORD LR LR 13 13 55.7
comp=Z,170nm,19.5s,baz=275,slow=33
LMR **La Mourre** 67.63 50 *e*P P 12 47 15.2 +0.5
BNI **Bardonecchia** 67.68 48 *e*P P 12 47 14.6 -0.5
comp=Z,20nm,1.4s,mb5.0
LPL **La Plagne** 67.70 47⇑*i*P P 12 47 16.3 +1.2
LPG **La Plagne** 67.72 47⇑*i*P P 12 47 16.4 +1.2
HINF **Hinteralfeld** 67.72 45⇑*i*P P 12 47 14.9 -0.3
MBDF **Montbardon** 67.76 48⇑*i*P P 12 47 16.7 +1.2
comp=Z,36nm,1.2s,mb5.0
MBDF **Montbardon** 67.76 48⇑*i*P P 12 47 16.7 +1.2
comp=Z,18nm,1.2s,mb5.0
ECH **Echery** 67.92 44 *e*P P 12 47 16.8 +0.3
CDF **Champ du Feu** 68.00 44⇑*i*P P 12 47 17.1 +0.2
comp=Z,26nm,1.1s,mb4.9
CDF **Champ du Feu** 68.00 44⇑*i*P P 12 47 17.1 +0.2
comp=Z,13nm,1.1s,mb4.9
IBBN **Ibbenburen** 68.27 40 *e*P P 12 47 19.4 +0.8
comp=Z,18nm,0.8s,mb5.2
BFO **Black Forest** 68.70 44 *e*P P 12 47 20.9 -0.4
comp=Z,9.0nm,1.3s,mb4.5
TNS **Taunus Mts** 68.72 42 *e*P P 12 47 21.8 +0.4
comp=Z,18nm,1.4s,mb4.8
TAM **Tamanrasset** 69.14 72 *e*P P 12 47 26.9 +2.4
UBBA **Unterbreizbach** 69.70 42 *e*P P 12 47 28.0 +0.5
NRDL **Niedersach Rie** 69.70 40 *e*P P 12 47 28.1 +0.6
comp=Z,13nm,1.0s,mb4.8
DAVA **Damuels** 69.79 45⇑*i*P P 12 47 28.7 +0.6
comp=Z,19nm,1.1s,mb4.9
CLZ **Clausthal** 69.89 40 *e*P P 12 47 29.1 +0.5
comp=Z,11nm,1.0s,mb4.7
NB2 **NORSAR Subarra** 70.22 31 P P 12 47 30.9 +0.4
comp=Z,2.5nm,0.8s,mb4.2,baz=270,slow=6.2
NOA **NORSAR Array B** 70.22 31 P P 12 47 31.3 +0.9
comp=Z,6.1nm,0.9s,mb4.5,baz=270,slow=6.3,SNR=9.9
NOA LR LR 13 15 11.8
comp=Z,61nm,18.7s,baz=225,slow=33
RETA **Reutte** 70.38 45⇑*i*P P 12 47 32.2 +0.5
comp=Z,23nm,1.2s,mb5.0
FETA **Feichten** 70.39 46⇑*i*P P 12 47 32.5 +0.8
comp=Z,17nm,1.0s,mb4.9
KEST **Kesra** 70.48 58 P P 12 47 33.6 +1.0
comp=Z,2.9nm,0.8s,mb4.3,baz=268,slow=5.4,SNR=9.1
GRA1 **Grafenberg Arr** 70.54 43 *e*P P 12 47 33.4 +0.8
comp=Z,9.0nm,0.8s,mb4.8
GRF **Grafenberg Arr** 70.54 43 *e*P P 12 47 33.4 +0.8
comp=Z,9.0nm,0.8s,mb4.8
MCK **McKinley** 70.63 332 P P 12 47 31.6 -1.3
comp=Z,3.2nm,0.7s,mb4.4
MANZ **Manzenberg** 71.09 42 *e*P P 12 47 36.6 +0.6
comp=Z,18nm,1.0s,mb5.0
ROTZ **Rotzenmuhle** 71.17 43 *e*P P 12 47 37.2 +0.7
comp=Z,12nm,1.2s,mb4.7
WERD **Werda** 71.18 42 *e*P P 12 47 36.8 +0.3
comp=Z,10.0nm,1.2s,mb4.6
TRF **Thorofare Moun** 71.23 332 *e*P P 12 47 35.9 -0.7
comp=Z,2μm,0.6s
WERN **Wernitzgruen** 71.24 42 *e*P P 12 47 37.2 +0.3
comp=Z,10.0nm,1.4s,mb4.5
CLL **Collm** 71.56 41 *e*P P 12 47 38.9 +0.1
comp=Z,7.0nm,1.0s,mb4.5
CLL **Collm** 71.56 41 *i*P P 12 47 38.9 +0.1
comp=Z,10.0nm,1.2s,mb4.6
CLL *e*pP pP 12 47 53.0 -2.6
FBE **Freiberg** 71.81 41 *e*P P 12 47 40.9 +0.6
comp=Z,14nm,1.1s,mb4.8
KHC **Kasperske Hory** 72.11 43 *e*P P 12 47 43.1 +0.9
KHC *e*pP pP 12 47 52.9 -6.1
BRG **Berggiesshubel** 72.19 41 *e*P P 12 47 42.9 +0.4
comp=Z,11nm,1.0s,mb4.7
BRG **Berggiesshubel** 72.19 41 *e*P P 12 47 43.0 +0.4
comp=Z,11nm,1.0s,mb4.7
BRG *e* pP 12 47 59.4 +0.1
comp=Z,7.0nm,1.1s
GEC2 **GERESS Array S** 72.22 43 *e*P P 12 47 43.1 +0.3
GERES **GERESS Array B** 72.22 43 P P 12 47 43.4 +0.5
comp=Z,2.8nm,0.9s,mb4.2,baz=274,slow=3.9,SNR=16
GERES LR LR 13 13 33.6
comp=Z,69nm,18.5s,baz=105,slow=31
IMA2 **Indian Mountai** 72.61 335 *e*P P 12 47 44.0 -0.8
KDAK **Kodiak Island** 72.61 326 LR LR 13 23 18.6
comp=Z,138nm,18.9s,baz=201,slow=39
PRU **Pruhonice** 72.65 42 *e*P P 12 47 46.2 +0.9
TREC **Trest** 73.34 43 *e*P P 12 47 49.8 +0.4
UPC **Upice** 73.53 42 *e*P P 12 47 51.4 +0.9
DPC **Dobruska-Polom** 73.75 42 *e*P P 12 47 52.9 +1.1
VAE **Valguarnera** 74.26 55 LR LR 13 15 01.0
comp=Z,122nm,19.1s,baz=304,slow=31
ZST **Bratislava** 74.55 44 *e*P P 12 47 57.1 +0.6
ZST **Bratislava** 74.55 44 *e*P P 12 47 57.1 +0.6
comp=Z,14nm,1.2s,mb4.8
MODS **Modra-Piesok** 74.64 44 *e*P P 12 47 58.2 +1.2
MODS **Modra-Piesok** 74.64 44 *e*P P 12 47 58.2 +1.2
OKC **Ostrava-Krasne** 74.98 42 *e*P P 12 47 59.9 +0.9
OKC *ex* x 13 12 40.9
ARCES **ARCESS Array B** 75.53 21 P P 12 48 01.8 0.0
comp=Z,5.4nm,0.6s,mb4.6,baz=290,slow=4.3,SNR=24
ARCES LR LR 13 20 39.3
comp=Z,96nm,18.4s,baz=271,slow=35
VYHS **Vyhne** 75.64 43 *e*P P 12 48 03.4 +0.6
VYHS **Vyhne** 75.64 43 *e*P P 12 48 03.4 +0.6
comp=Z,15nm,2.4s,mb4.5
STHS **Stebnicka Huta** 77.04 42 *e*P P 12 48 12.6 +1.9
STHS **Stebnicka Huta** 77.04 42 *e*P P 12 48 12.6 +1.9
comp=Z,3.4nm,0.8s,mb4.3
CRVS **Cervenica-Dubn** 77.28 43 *e*P P 12 48 13.6 +1.5
CRVS **Cervenica-Dubn** 77.28 43 *e*P P 12 48 13.6 +1.5
JOF **Joensuu** 79.33 27 *e*p P 12 48 14.1 -9.0
comp=Z,2.7nm,0.4s,mb4.5
PMSA **Palmer Station** 81.66 178 *e*P P 12 48 37.0 +1.7
comp=Z,8.1nm,1.4s,mb4.5
AKASG **Malin Array Be** 81.72 40 P P 12 48 33.7 -2.5
comp=Z,0.7nm,0.4s,mb4.0,baz=276,slow=4.4,SNR=4.2
AKASG **Malin Array Be** 81.72 40 P P 12 48 33.7 -2.5
TSUM **Tsumeb** 91.89 109 LR LR 13 24 00.8
comp=Z,60nm,20.1s,baz=304,slow=31
MMAI **Mount Meron Ar** 91.96 55 LR LR 13 24 37.7
comp=Z,28nm,21.4s,baz=115,slow=32
PETK **Petropavlovsk-** 99.59 334 LR LR 13 37 08.1
comp=Z,99nm,18.8s,baz=265,slow=37
WMQ **Urumqi** 115.59 19 *e*PKP PKPdf 12 55 00.0 +0.4
WMQ XPKP 12 55 24.0
WMQ *e*PP PP 12 56 07.0 +5.7
WMQ PKS 12 58 35.0
WMQ PP PP
comp=Z,186nm,5.0s
WMQ LR LR
comp=N,145nm,22.8s
WMQ LR LR
comp=E,118nm,20.4s
WMQ LR LR
comp=Z,127nm,23.6s
MAW **Mawson** 120.77 160 PKP PKPdf 12 55 09.2 +0.4
comp=Z,2.4nm,0.7s,baz=289,slow=1.3,SNR=3.9
HHC **Hu-ho-hao-te** 122.38 360 *e*PKP PKPdf 12 55 06.1 -6.7
HHC XPKP 12 55 31.8
HHC PP PP 12 56 44.4 -3.5
HHC PKS 12 58 41.4
HHC SKS SKSdf 13 02 09.5 -10
HHC SKKS SKKSac 13 03 29.5 -14
HHC PP PP
comp=Z,111nm,8.6s
HHC LR LR
comp=N,186nm,18.6s
HHC LR LR
comp=E,170nm,19.1s
HHC LR LR
comp=Z,143nm,17.8s
BJI **Beijing** 123.02 356 PKP PKPdf 12 55 09.6 -4.4
LZH **Lanzhou** 126.63 8 *e*PKP PKPdf 12 55 12.5 -8.6
LZH XPKP 12 55 40.0
LZH LR LR
comp=N,117nm,18.2s
LZH LR LR
comp=Z,182nm,20.0s
XAN **Xi'an** 129.11 3 PKP PKPdf 12 55 24.4 -1.5
NJ2 **Nanjing** 130.66 352 *e*PKP PKPdf 12 55 23.4 -5.5
CD2 **Chengdu** 131.71 9 *e*PKP PKPdf 12 55 29.6 -1.3
CD2 PP PP 12 57 52.4 +2.8
CD2 PKS 12 59 04.5
CD2 SKKS SKKSac 13 04 38.2 -4.0
CD2 PP PP
comp=Z,230nm,10.2s
CD2 LR LR
comp=N,150nm,15.6s
CD2 LR LR
comp=Z,190nm,15.6s
GYA **Guiyang** 136.47 6 *e*PDIF Pdif 12 52 42.3 -2.4
GYA PKP PKPdf 12 55 38.6 -1.3
GYA XPKP 12 56 04.7
GYA PP PP 12 58 22.0 +2.1
GYA PP PP
comp=Z,80nm,7.2s
KMI **Kunming** 137.19 12 PKP PKPdf 12 55 39.2 -2.1
KMI XPKP 12 56 05.3
KMI PP PP 12 58 25.5 +1.1
KMI SKKS SKKSac 13 05 08.7 -6.7
KMI PP PP
comp=Z,118nm,6.8s
KMI LR LR
comp=Z,33nm,37.6s
CMAR **Chiang Mai Arr** 142.58 20 PKP PKPdf 12 55 52.2 +1.0
comp=Z,1.4nm,0.8s,baz=289,slow=2.0,SNR=8.7
TOO **Toolangi** 143.87 229 *e*PKP PKPdf 12 55 50.9 -2.0
CTA **Charters Tower** 147.00 259 *e*PKP PKPdf 12 55 56.8 -1.9
comp=Z,5.5nm,1.2s
STKA **Stephens Creek** 149.06 236 *e*PKP PKPdf 12 56 02.1 +0.3
comp=Z,4.7nm,1.0s
STKA **Stephens Creek** 149.06 236 PKPbc PKPbc 12 56 04.4 -1.6
comp=Z,8.6nm,1.1s,baz=136,slow=2.6,SNR=7.4
ASAR **Alice Springs** 158.05 249 PKP PKPdf 12 56 14.8 0.0
comp=Z,1.8nm,1.0s,baz=124,slow=2.0,SNR=9.9
ASAR PKPab PKPab 12 56 47.8 -0.8
comp=Z,1.8nm,0.8s,baz=112,slow=4.4,SNR=13
WB2 **Warramunga Arr** 158.19 259 *e*PKP PKPdf 12 56 14.5 -0.6
WRA **Warramunga Arr** 158.20 259 PKP PKPdf 12 56 14.6 -0.5
comp=Z,0.9nm,0.5s,baz=82,slow=0.9,SNR=20
WRA PKPab PKPab 12 56 49.1 -0.3
comp=Z,1.0nm,0.6s,baz=87,slow=4.1,SNR=13

*ISCJB **06** 12:49:04.9±0.8, 22.14S±008×679W±0.1, h112km±13km, mb3.6/2, Error ellipse: s-maj=22.3km s-min=10.4km az=27.4*
*IDC **06** 12:49:05.7±0.8, 22.10S×6799W, h111km±13km, mb3.5/2, mb1 3.6/5, mb1mx3.4/18, mbtmp3.6/5, Error ellipse: s-maj=32.3km s-min=12.0km az=117.0*
ISC 06 12:49:06.2±0.8, 2216S±009×679W±01, h106km±12km, n6, σ0§86/9, mb3.6/2, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	1.05	244	P		Pn		12 49 27.4	-0.2
	141nm,0.3s,baz=21,slow=7.2,SNR=906								
LVC				S		Sn		12 49 43.8	0.0
	239nm,0.3s,baz=294,slow=23,SNR=39								
LPAZ	**La Paz**	5.84	358	P		Pn		12 50 30.0	-0.4
	0.9nm,0.3s,baz=193,slow=7.7,SNR=25								
LPAZ				S		Sn		12 51 36.7	+0.6
	0.1nm,0.3s,baz=9.7,slow=20,SNR=4.8								
SIV	**San Ignacio**	8.90	48	P		Pn		12 51 11.7	-0.2
	4.6nm,0.3s,baz=244,slow=10,SNR=53								
SIV				S		Sn		12 52 50.0	-0.4
	0.4nm,0.3s,baz=306,slow=23,SNR=6.3								
BDFB	**Brasilia**	19.88	74	P		P		12 53 31.0	+1.7
	0.4nm,0.3s,baz=276,slow=9.2,SNR=2.7								
QSPA	**South Pole Qui**	68.04	180	P		P		12 59 54.2	+0.5
	0.8nm,0.7s,mb3.7,baz=165,slow=5.0,SNR=8.4								
TORD	**Torodi Ar. Bea**	76.69	70	P		P		13 00 44.4	-1.7
	0.6nm,0.5s,mb3.6,baz=251,slow=5.4,SNR=12								

*IDC **06** 13:03:01.3±0.9, 3584N×7083E, h0km, mb3.9/8, mb1 4.0/12, mb1mx3.9/26, mbtmp4.0/12, ML4.0/4, Error ellipse: s-maj=21.3km s-min=19.1km az=66.0*
*ISCJB **06** 13:03:13.2±0.6, 3630N±003×7107E±007, h109km±7km, mb4.1/16, Error ellipse: s-maj=9.8km s-min=3.9km az=154.1*
*BJI **06** 13:03:13.6, 3637N×7090E, h125km, mB4.8, mb4.6*
*NEIC **06** 13:03:14.4±2.4, 3629N×7114E, h109km±20km, mb4.4/7, Error ellipse: s-maj=23.0km s-min=14.2km az=207.0*
*NNC **06** 13:03:20.3±4.9, 3675N×7102E, h126km±60km, mb3.6, mpv4.7, Error ellipse: s-maj=39.5km s-min=28.2km az=6.0*
ISC 06 13:03:14.7±0.6, 3630N±003×7112E±007, h107km±6km, h140km±1.9km; pP-P, n73, σ1§11/92, mb4.1/16, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	5.01	49	*e*P		Pn		13 04 31.2	+3.8
KSH				S		Sn		13 05 28.5	+4.4
KSH				Smax					
	comp=N,511nm,1.1s								
KSH				Smax					
	comp=E,508nm,0.5s								
THN	**Thein Dam**	5.41	134	*e*P		Pn		13 04 34.9	+1.9
THN				*e*S		Sn		13 05 35.1	+1.1
AML	**Almayashu**	6.16	18	P		Pn		13 04 44.1	+1.0
	SNR=416								
AML	**Almayashu**	6.16	18	*e*Pn		Pn		13 04 43.6	+0.6
	comp=E,140nm,0.4s								
AML				*e*Sn		Sn		13 05 44.6	-7.5
UCH	**Uchtor**	6.48	23	P		Pn		13 04 48.5	+1.1
	SNR=44								
UCH	**Uchtor**	6.48	23	*e*Pn		Pn		13 04 48.0	+0.6
	comp=E,18nm,0.5s								
UCH				*e*Sn		Sn		13 05 57.6	-2.3
KZA	**Kyzart**	6.60	28	P		Pn		13 04 49.9	+0.8
	SNR=28								
EKS2	**Erkin-Say**	6.68	17	P		Pn		13 04 51.0	+0.9
	SNR=27								
EKS2	**Erkin-Say**	6.68	17	*e*Pn		Pn		13 04 50.7	+0.5
	comp=E,24nm,0.6s								
KK31	**Karatay Array**	6.82	356	⇓P		Pn		13 04 51.8	-0.2
	comp=E,27nm,0.3s,baz=188,slow=13,SNR=353								
KK31				⇑S		Sn		13 06 03.6	-4.4
	comp=E,62nm,0.8s,baz=179,slow=21,SNR=10								
SDNR	**Sundarnagar**	6.82	133	*ex*		x		13 04 58.0	
SDNR				*e*S		Sn		13 06 05.0	-3.2
AAK	**Ala-Archa**	6.85	21	P		Pn		13 04 53.5	+1.1
	SNR=23								
KBK	**Karagaybulak**	7.01	24	P		Pn		13 04 58.9	+4.4
	SNR=8.7								
SMLA	**Simla**	7.20	134	*i*P		Pn		13 04 56.5	-0.8
SMLA				*i*S		Sn		13 06 16.1	-1.4
SMLA				*ex*		x		13 06 19.9	
	comp=E,642nm,0.3s								
SMLA				*ex*		x		13 06 21.6	
	comp=N,778nm,0.2s								
CHMS	**Chumysh**	7.26	22	P		Pn		13 04 59.1	+1.2
	SNR=13								
USP	**Ospenovka**	7.43	19	P		Pn		13 05 01.2	+0.9
	SNR=6.5								
TKM2	**Tokmak 2**	7.46	26	⇑P		Pn		13 05 02.0	+1.3
	comp=N,27nm,0.7s								
TKM2				⇓S		Sn		13 06 20.5	-3.2
	comp=N,16nm,0.7s								
TKM2	**Tokmak 2**	7.46	26	P		Pn		13 05 01.5	+0.8
	SNR=26								
TKM2	**Tokmak 2**	7.46	26	*e*Pn		Pn		13 05 01.2	+0.5
	comp=N,30nm,0.6s								
KLP	**Kalpa**	7.59	127	*e*P		Pn		13 05 02.7	+0.1
KLP				*e*S		Sn		13 06 23.6	-3.4
KLP				AML		AML		13 06 30.2	
	comp=N,342nm,0.7s								
KLP				AML		AML		13 06 37.7	
	comp=E,400nm,0.8s								
DDI	**Dehra Dun**	8.31	134	*e*P		Pn		13 05 12.0	-0.4
RTK	**Rohtak**	8.50	147	*e*P		Pn		13 05 14.3	-0.7
JOSI	**Joshimath**	9.08	127	*e*P		Pn		13 05 24.0	+1.2
JOSI				*e*S		Sn		13 06 59.7	-3.5
AYAN	**Aya Nagar**	9.30	145	*e*P		Pn		13 05 26.0	+0.3
AYAN				*e*S		Sn		13 07 04.0	-4.4
SONA	**Sohna**	9.47	146	*e*P		Pn		13 05 28.5	+0.3
SONA				*e*S		Sn		13 07 06.8	-6.0
SONA				AML		AML		13 07 14.7	
	comp=E,53nm,0.4s								
SONA				AML		AML		13 07 16.2	
	comp=N,33nm,0.7s								
AJM	**Ajmer**	10.24	162	*e*P		Pn		13 05 38.2	-0.4
AJM				*e*S		Sn		13 07 25.2	-6.1
DANN	**Dangsing**	13.29	123	*e*P		Pn		13 06 18.7	-0.4
MK31	**Makanchi Array**	13.40	35	P		Pn		13 06 19.9	-0.5
	comp=N,6.9nm,1.1s,baz=218,slow=14,SNR=13								
MKAR	**Makanchi Array**	13.40	35	Pn		Pn		13 06 19.6	-0.8
	comp=N,0.1nm,0.3s,baz=220,slow=13,SNR=8.4								
MKAR				Sn		Sn		13 09 02.9	+15
	comp=N,0.2nm,0.3s,baz=189,slow=13,SNR=6.2								
MKAR	**Makanchi Array**	13.40	35	Pn		Pn		13 06 19.6	-0.8
MKAR				Sn		Sn		13 09 02.9	+15
KOLN	**Koldanda**	13.56	125	*e*P		Pn		13 06 21.9	-0.8
DMN	**Daman**	14.68	122	*e*P		Pn		13 06 36.4	-0.6
KKN	**Kakani**	14.69	121	*e*P		Pn		13 06 36.7	-0.4
WMQ	**Urumqi**	14.73	54	*e*P		Pn		13 06 37.5	-0.1
WMQ				XP		sP		13 07 15.0	+1.2
WMQ				*e*S		Sn		13 09 14.0	-6.1
WMQ				AMB		AMB			
	comp=Z,9.0nm,0.7s								
WMQ				AMB		AMB			
	comp=Z,200nm,5.2s								
PKI	**Pulchoki**	14.91	122	*e*P		Pn		13 06 39.5	-0.5
	comp=Z,13nm,0.4s								
GUN	**Gumba**	15.03	120	*e*P		Pn		13 06 41.4	0.0
AB31	**Akbulak array**	15.31	331	⇑P		Pn		13 06 43.3	-1.5
	comp=Z,2.7nm,0.3s,baz=148,slow=13								
KURK	**Kurchatov**	15.39	18	Pn		Pn		13 06 43.6	-2.1
	comp=Z,0.2nm,0.3s,baz=208,slow=10,SNR=11								
KURK	**Kurchatov**	15.39	18	*e*Pn		Pn		13 06 44.6	-1.2
	comp=Z,5.0nm,0.8s								
JIRN	**Jiri**	15.40	120	*e*P		Pn		13 06 46.3	+0.2
	comp=Z,40nm,0.5s								
RAMN	**Ramite**	16.13	121	*e*P		Pn		13 06 55.2	+0.1
TAPN	**Taplejung**	16.66	118	*e*P		Pn		13 07 02.9	+1.2
	comp=Z,42nm,0.6s								
ODAN	**Odare**	16.73	120	*e*P		Pn		13 07 02.8	+0.2
	comp=Z,22nm,0.5s								
BVA0	**Borovoye Array**	16.74	358	P		Pn		13 07 01.9	-0.5
	comp=Z,1.0nm,0.9s,baz=174,slow=12,SNR=20								
BVAR	**Borovoye Array**	16.74	358	Pn		Pn		13 06 59.7	-2.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.7nm,0.3s,baz=175,slow=11,SNR=15						
BRVK	**Borovoye**	**16.77**	**358**	*e*Pn	**Pn**	**13 07 02.1**	**-0.7**
	comp=Z,5.5nm,0.6s						
AKTK	**Aktyubinsk**	**17.01**	**330**	P	**Pn**	**13 07 05.4**	**-0.3**
AKTK				S	**S**	**13 10 06.3**	**-9.0**
AKTO	**Aktyubinsk**	**17.01**	**330**	⇑P	**Pn**	**13 07 05.9**	**+0.2**
	comp=Z,3.5nm,1.0s						
AKTO	**Aktyubinsk**	**17.01**	**330**	P	**Pn**	**13 07 05.4**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=141,slow=10,SNR=50						
AKTO				S	**S**	**13 10 06.3**	**-9.0**
	comp=Z,0.6nm,0.3s,baz=19,slow=23,SNR=6.9						
ZAA0	**Zalesovo Array**	**20.06**	**24**	*e*P	**P**	**13 07 38.2**	**-1.0**
ZALV	**Zalesovo Beam**	**20.06**	**24**	P	**P**	**13 07 39.6**	**+0.4**
	comp=Z,7.1nm,0.6s,baz=226,slow=10,SNR=21						
GNI	**Garni**	**21.05**	**289**	P	**P**	**13 07 54.1**	**+4.1**
	comp=Z,4.1nm,0.4s,mb4.1,baz=44,slow=6.8,SNR=3.7						
GNI	**Garni**	**21.05**	**289**	*e*P	**P**	**13 07 54.5**	**+4.5**
	comp=Z,12nm,0.8s,mb4.3						
ARU	**Arti**	**21.86**	**341**	*e*P	**P**	**13 07 59.4**	**+1.1**
	comp=Z,17nm,0.9s,mb4.4						
GTA	**Gaotai**	**22.83**	**73**	*e*P	**P**	**13 08 12.4**	**+3.8**
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb3.8						
LZH	**Lanzhou**	**26.34**	**81**	*e*P	**P**	**13 08 41.5**	**+0.9**
LZH				AP	pP	13 09 10.6	+6.6
LZH				XP	sP	13 09 28.5	+12
LZH				PP		13 09 31.7	
LZH				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.4						
LZH				AMB	AMB		
	comp=Z,51nm,4.3s						
CD2	**Chengdu**	**27.63**	**92**	*e*P	**P**	**13 08 53.4**	**+1.2**
CD2				AP	pP	13 09 22.9	+7.3
CD2				XP	sP	13 09 39.0	+11
CD2				PP	PP	13 09 47.3	-9.1
CD2				S	**S**	**13 13 21.5**	**-4.6**
CD2				XS	sS	13 14 13.5	+6.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
CD2				AMB	AMB		
	comp=Z,20nm,5.2s						
SONM	**Songino Array**	**28.37**	**55**	P	**P**	**13 09 01.6**	**+3.1**
	comp=Z,0.4nm,0.4s,mb3.3,baz=265,slow=10,SNR=3.9						
KMI	**Kunming**	**29.25**	**103**	P	**P**	**13 09 07.5**	**+0.9**
KMI				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.2						
GYA	**Guiyang**	**31.74**	**98**	P	**P**	**13 09 32.0**	**+3.5**
GYA				AP	pP	13 10 02.4	+10
GYA				XP	sP	13 10 17.6	+13
GYA				PP	PP	13 10 40.5	-1.6
GYA				PCP	PcP	13 12 20.4	+2.8
GYA				S	**S**	**13 14 29.0**	**-1.6**
GYA				SCP	ScP	13 15 51.3	+0.2
GYA				SCS	ScS	13 19 47.5	-2.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
HHC	**Hu-ho-hao-te**	**31.74**	**69**	*e*P	**P**	**13 09 26.7**	**-1.7**
HHC				AP	pP	13 09 55.4	+3.3
HHC				XP	sP	13 10 11.8	+7.3
HHC				PP	PP	13 10 34.9	-7.1
HHC				PCP	PcP	13 12 17.7	+0.3
HHC				S	**S**	**13 14 21.7**	**-8.7**
HHC				XS	sS	13 15 13.7	+2.1
HHC				SCP	ScP	13 15 45.8	-5.1
HHC				PCS	PcS	13 16 00.9	-1.0
HHC				SCS	ScS	13 19 42.5	-6.6
HHC				AMB	AMB		
	comp=Z,17nm,0.6s,mb5.0						
HHC				AMB	AMB		
	comp=Z,111nm,6.9s						
HHC				LR	LR		
	comp=N,137nm,14.0s						
HHC				LR	LR		
	comp=E,156nm,13.5s						
HHC				LR	LR		
	comp=Z,98nm,13.1s						
AKASG	**Malin Array Be**	**33.15**	**309**	P	**P**	**13 09 41.0**	**+0.4**
	comp=Z,1.3nm,0.5s,mb4.0,baz=78,slow=7.1,SNR=4.8						
AKASG	**Malin Array Be**	**33.15**	**309**	P	**P**	**13 09 41.0**	**+0.4**
JOF	**Joensuu**	**36.09**	**330**	*e*p	**P**	**13 10 06.4**	**+0.6**
	comp=Z,2.2nm,0.4s,mb4.4						
NJ2	**Nanjing**	**39.41**	**82**	*e*P	**P**	**13 10 35.8**	**+1.8**
ARCES	**ARCESS Array B**	**41.37**	**338**	P	**P**	**13 10 50.4**	**+0.7**
	comp=Z,1.5nm,0.6s,mb4.0,baz=106,slow=8.3,SNR=16						
CN2	**Changchun**	**41.62**	**62**	*e*P	**P**	**13 10 53.0**	**+0.9**
NB2	**NORSAR Subarra**	**44.60**	**323**	P	**P**	**13 11 15.8**	**-0.1**
	comp=Z,1.5nm,0.6s,mb3.9,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.60**	**323**	P	**P**	**13 11 15.9**	**+0.1**
	comp=Z,1.9nm,0.6s,mb4.0,baz=97,slow=7.8,SNR=8.3						
TORD	**Torodi Ar. Bea**	**65.81**	**269**	P	**P**	**13 13 46.8**	**-2.0**
	comp=Z,0.7nm,0.5s,mb3.7,baz=49,slow=5.9,SNR=9.8						
WRA	**Warramunga Arr**	**81.80**	**122**	P	**P**	**13 15 21.7**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.3,baz=329,slow=5.0,SNR=6.3						
ASAR	**Alice Springs**	**84.06**	**125**	P	**P**	**13 15 33.3**	**-0.2**
	comp=Z,0.3nm,0.7s,mb3.2,baz=301,slow=4.9,SNR=6.3						
RPZ	**Rata Peaks**	**120.46**	**124**	PKP	PKPdf	13 21 56.3	+3.1
	comp=Z,3.3nm,0.3s,baz=185,slow=3.4,SNR=13						

NEIC 06 13:19:13.9,3796S×17625E,h155km,MG3.8(WEL),After WEL.,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.74**	**114**	P	Pn	13 19 37.4	+0.3
MWZ	**Matawai**	**1.07**	**111**	P	Pn	13 19 40.0	+0.3
MWZ				S	Sn	13 19 59.5	0.0
BKZ	**Black Stump Fm**	**1.22**	**171**	P	Pn	13 19 41.2	+0.2
WTVZ	**West Tongariro**	**1.27**	**204**	P	Pn	13 19 42.0	+0.5
TWVZ	**Taurewa**	**1.28**	**210**	P	Pn	13 19 41.1	-0.5
NGZ	**Ngauruhoe**	**1.32**	**203**	P	Pn	13 19 42.9	+1.0
WPVZ	**Whakapapa**	**1.36**	**204**	P	Pn	13 19 42.9	+0.5
TUVZ	**Tukino**	**1.39**	**199**	P	Pn	13 19 43.2	+0.6
WNVZ	**Wahianoa**	**1.46**	**200**	P	Pn	13 19 43.8	+0.4
MOVZ	**Moawhango**	**1.50**	**195**	P	Pn	13 19 43.6	-0.1
PUZ	**Puketiti**	**1.59**	**95**	P	Pn	13 19 44.3	-0.4
MXZ	**Matakaoa Point**	**1.68**	**77**	P	Pn	13 19 46.0	+0.3
WAZ	**Wanganui**	**2.05**	**208**	P	Pn	13 19 49.6	-0.2
TSZ	**Takapari Road**	**2.11**	**186**	P	Pn	13 19 49.6	-0.9
PKE	**Pukeiti**	**2.16**	**234**	P	Pn	13 19 50.1	-1.0
MRZ	**Mangatainoka R**	**2.75**	**191**	P	Pn	13 19 56.2	-2.0
MTW	**Mount Morrison**	**3.25**	**190**	P	Pn	13 20 01.5	-3.0
CAW	**Cannon Point**	**3.27**	**196**	P	Pn	13 20 02.1	-2.7
PAWZ	**Paruwai Farm**	**3.48**	**190**	P	Pn	13 20 04.2	-3.2
MRW	**Makara Radio**	**3.48**	**200**	P	Pn	13 20 04.4	-3.0
WEL	**Wellington**	**3.51**	**199**	P	Pn	13 20 05.1	-2.8
MSWZ	**Moikau Station**	**3.54**	**192**	P	Pn	13 20 05.0	-3.2
SNZO	**South Karori**	**3.55**	**199**	P	Pn	13 20 05.1	-3.3
TCW	**Tory Channel**	**3.59**	**205**	P	Pn	13 20 05.9	-3.0
BHW	**Baring Head**	**3.60**	**197**	P	Pn	13 20 05.7	-3.4
NNZ	**Nelson**	**3.94**	**213**	P	Pn	13 20 09.8	-3.6
QRZ	**Quartz Range**	**4.06**	**224**	P	Pn	13 20 11.2	-3.8
THZ	**Tophouse**	**4.59**	**213**	P	Pn	13 20 18.3	-3.6
KHZ	**Kahutara**	**4.91**	**204**	P	Pn	13 20 22.2	-3.9
DSZ	**Denniston Nort**	**5.10**	**221**	P	Pn	13 20 24.8	-3.8
MQZ	**McQueen's Vall**	**6.36**	**204**	P	Pn	13 20 39.4	-5.8

MAN 06 13:32:41,1650N×12048E,h38km,mb4.0,ML2.7,MS2.4, 1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.56**	**258**	*e*P	Pn	13 32 54.7	+2.2
SCZP	**Santa Cruz**	**0.91**	**217**	*e*P	Pn	13 33 01.1	+3.8
PCPH	**Palayan**	**1.11**	**148**⇑	*e*P	Pn	13 33 01.1	+1.1
PCPH				*e*S	Sn	13 33 15.2	+1.1
ABRA	**Dolores**	**1.16**	**11**	*e*P	Pn	13 33 00.9	+0.2
ABRA				*e*S	Sn	13 33 16.8	+1.4
BALP	**Baler**	**1.30**	**126**	*e*P	Pn	13 33 03.2	+0.6
BALP				*e*S	Sn	13 33 19.9	+1.2
CAUP	**Cauayan**	**1.36**	**71**	*e*P	Pn	13 33 05.3	+1.8
CVP	**Callao Caves**	**1.75**	**47**⇓	*i*P	Pn	13 33 11.0	+2.1
PALP	**Palanan**	**1.94**	**73**	*e*P	Pn	13 33 14.5	+3.0
POLP	**Polilio Island**	**2.26**	**141**	*e*P	Sn	13 33 50.0	+7.6

*ISCJB **06** 13:38:49.6±0.8,630S±006×13059E±006,h124km±13km, mb4.4/2,Error ellipse: s-maj=9.9km s-min=9.4km az=26.7*
*NEIC **06** 13:38:55.2±2.2,650S×130.14E,h166km±28km,mb4.8/2, Error ellipse: s-maj=30.0km s-min=11.7km az=52.0*
*IDC **06** 13:38:57.0±4.3,650S×13003E,h176km±54km,mb3.4/1, mb1 3.7/6,mb1mx3.4/17,mbtmp3.6/6,Error ellipse: s-maj=49.1km s-min=17.5km az=80.0*

ISC 06 13:38:51.6±0.9,631S±006×13060E±007,h131km±11km, n11,$\sigma 1^{s}38$/18,mb4.3/2,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	**Tual**	**2.23**	**73**⇑	*e*P	**Pn**	**13 39 28.0**	**-0.5**
TLE				*e*S	**Sn**	**13 39 53.0**	**-3.8**
KAKA	**Kakadu**	**6.62**	**164**	*e*Pn	**Pn**	**13 40 29.8**	**+3.3**
	36nm,0.5s						
KAKA				*e*Sn	**Sn**	**13 41 40.4**	**-0.2**
BATI	**Baumata**	**7.88**	**240**	P	**Pn**	**13 40 42.5**	**-1.1**
	3.1nm,0.3s,baz=135,slow=9.3,SNR=4.1						
BATI				S	**Sn**	**13 42 12.2**	**+1.0**
	4.4nm,0.3s,baz=322,slow=16,SNR=9.5						
KAPI	**Kappang**	**10.87**	**276**	P	**Pn**	**13 41 19.8**	**-3.9**
	0.8nm,0.3s,baz=108,slow=20,SNR=4.2						
FITZ	**Fitzroy Crossi**	**12.68**	**202**	P	**Pn**	**13 41 47.1**	**-0.3**
	0.8nm,0.3s,baz=35,slow=12,SNR=33						
FITZ				S	**Sn**	**13 44 02.7**	**-4.6**
	0.7nm,0.3s,baz=128,slow=21,SNR=5.7						
WRAB	**Tennant Creek**	**14.03**	**165**	*e*Pn	**Pn**	**13 42 05.0**	**+0.3**
WRAB				*e*Sn	**Sn**	**13 44 33.1**	**-6.6**
WRA	**Warramunga Arr**	**14.03**	**165**	P	**Pn**	**13 42 06.5**	**+1.7**
	0.8nm,0.3s,baz=339,slow=13,SNR=39						
WRA				S	**Sn**	**13 44 35.0**	**-4.9**
	1.4nm,0.3s,baz=343,slow=21,SNR=13						
ASAR	**Alice Springs**	**17.55**	**170**	P	**Pn**	**13 42 50.3**	**+2.1**
	0.4nm,0.3s,baz=352,slow=9.8,SNR=54						
ASAR				S	**S**	**13 46 01.5**	**-1.5**
	0.4nm,0.3s,baz=353,slow=27,SNR=7.7						
KKM	**Kota Kinabalu**	**18.89**	**310**	*e*P	**P**	**13 43 01.2**	**-0.9**
TAU	**Tasmania Unive**	**39.33**	**161**	P	**P**	**13 46 07.1**	**-0.9**
	20nm,1.1s,mb4.7						
MJAR	**Matsushiro Arr**	**43.22**	**9**	P	**P**	**13 46 42.7**	**+3.0**
	3.2nm,1.0s,mb3.9,baz=186,slow=6.2,SNR=4.1						

*MOS **06** 13:41:08.8±2.2,1828S×17472W,h78km,mb5.3/29,Error ellipse: s-maj=9.8km s-min=7.7km az=49.8*
*IDC **06** 13:41:11.1±2.6,1849S×17462W,h102km±23km,mb4.6/20, mb1 4.7/22,mb1mx4.6/26,mbtmp4.6/22,MS3.6/5, Ms1 3.6/5,ms1mx3.1/31,Error ellipse: s-maj=17.6km s-min=11.3km az=141.0*
*BJI **06** 13:41:12.4,1869S×17387W,h156km,mB5.0,mb4.8*
*ISCJB **06** 13:41:14.9±0.2,1848S±005×17476W±004,h151km, mb4.7/86,Error ellipse: s-maj=8.1km s-min=3.8km az=149.2*
*GCMT **06** 13:41:16.3±0.4,1852S×17426W,h151km±4km,MW5.0/60, Moment Tensor Solution. s20,c22; s60,c83; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.34±.15; Mθθ0.78±.19; Mφφ-2.12±.18; Mrθ2.31±.12; Mθφ-1.27±.18; Mφr1.39±.12; Best double couple: M0 3.50600×10^16 NP1:φs165.00000°,δ33.00000°,λ25.00000°. NP2: φs53.00000°,δ77.00000°,λ120.00000°. Principal axes: T 3.3950, Plg49.0000°, Azm356.0000°; N 0.2220, Plg29.0000°, Azm226.0000°; P -3.6170, Plg25.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **06** 13:41:16.2,1909S×17473W,h155km,Tonga Islands*
*NEIC **06** 13:41:16.3±0.2,1852S×17465W,mb4.8/63,Error ellipse: s-maj=7.7km s-min=4.0km az=146.0*

ISC 06 13:41:16.7±0.2,1848S±006×17475W±004,h153km, h153km±2.2km:pP-P,n642,$\sigma 0^{s}63$/480,mb4.7/86, 177C-184D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.37**	**33**	P	**Pn**	**13 42 26.4**	**-8.7**
	43nm,0.3s,baz=151,slow=3.9,SNR=55						
AFI				S	**Sn**	**13 43 18.3**	**-18**
	120nm,0.3s,baz=22,slow=23,SNR=13						
AFI	**Afiamalu**	**5.37**	**33**	*e*P	**Pn**	**13 42 25.9**	**-9.2**
AFI				pmax	pmax		
	comp=Z,982nm,0.6s						
AFI	**Afiamalu**	**5.37**	**33**	*e*Pn	**Pn**	**13 42 25.9**	**-9.1**
	comp=Z,982nm,0.6s						
RAO	**Raoul Island**	**11.11**	**195**	*e*Pn	**Pn**	**13 43 45.5**	**-5.7**
RAO				*e*Sn	**Sn**	**13 45 44.2**	**-10**
FUNA	**Funafuti**	**11.51**	**328**	Pn	**Pn**	**13 43 51.9**	**-4.7**
RAR	**Rarotonga**	**14.35**	**103**	P	**Pn**	**13 44 28.9**	**-4.0**
	comp=Z,8.0nm,0.3s,baz=270,slow=11,SNR=13						
RAR				LR	LR	13 49 05.5	
	comp=Z,125nm,19.0s,baz=39,slow=33						
URZ	**Urewera**	**20.95**	**198**	P	**P**	**13 45 46.8**	**-0.6**
	comp=Z,18nm,0.4s,baz=357,slow=1.7,SNR=32						
URZ				S	**S**	**13 49 25.3**	**-6.9**
	comp=Z,8.9nm,0.5s,baz=275,slow=23,SNR=7.9						
PAE	**Paea**	**23.94**	**92**	*e*T		14 10 32.3	
	comp=Z,216nm,0.2s						
PPT	**Papeete**	**23.95**	**92**	*e*LR	LR	13 51 39.1	
	comp=Z,316nm,32.2s						
PPT	**Papeete**	**23.95**	**92**	*e*T		14 10 34.0	
	comp=Z,4.9nm,0.3s						
PPT	**Papeete**	**23.95**	**92**	LR	LR	13 53 12.2	
	comp=Z,152nm,18.6s,baz=296,slow=30						
TVO	**Taravao**	**24.24**	**92**	*e*T		14 10 54.1	
	comp=Z,54nm,0.3s						
SNZO	**South Karori**	**24.48**	**199**	P	**P**	**13 46 22.8**	**+1.3**
HNR	**Honiara**	**26.12**	**287**	P	**P**	**13 46 37.8**	**+1.2**
	comp=Z,13nm,0.3s,mb5.0,baz=168,slow=7.3,SNR=4.9						
HNR	**Honiara**	**26.12**	**287**	P	**P**	**13 46 37.2**	**+0.6**
HNR				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.1						
HNR	**Honiara**	**26.12**	**287**	P	**P**	**13 46 37.2**	**+0.6**
	comp=Z,44nm,0.9s,mb5.1						
RPZ	**Rata Peaks**	**27.86**	**202**	P	**P**	**13 46 52.9**	**+1.1**
	comp=Z,7.0nm,0.4s,mb4.8,baz=24,slow=6.8,SNR=19						
ARMA	**Armidale**	**32.71**	**242**	*e*P	**P**	**13 47 37.2**	**+2.5**
CNB	**Canberra Magne**	**35.89**	**235**	*e*P	**P**	**13 48 01.3**	**-0.8**
CTA	**Charters Tower**	**36.79**	**261**	*e*P	**P**	**13 48 09.9**	**0.0**
	comp=Z,31nm,0.8s,mb5.0						
CTA	**Charters Tower**	**36.79**	**261**	P	**P**	**13 48 10.0**	**+0.1**
	comp=Z,38nm,0.6s,mb5.2,baz=99,slow=9.9,SNR=45						
CTA				S	**S**	**13 53 41.6**	**-1.1**
	comp=Z,5.3nm,1.0s,baz=229,slow=19,SNR=4.1						
CTA	**Charters Tower**	**36.79**	**261**	*e*P	**P**	**13 48 09.9**	**0.0**
CTA				pmax	pmax		
	comp=Z,31nm,0.8s						
CTAO	**Charters Tower**	**36.79**	**261**	*e*P	**P**	**13 48 09.5**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,32nm,0.6s,mb5.1						
CTAO	**Charters Tower**	**36.79**	**261**	*e*P	**P**	**13 48 09.5**	**-0.4**
	comp=Z,32nm,0.6s,mb5.1						
CTAO				*e*pP	pP	13 48 44.3	+1.3
PMG	**Port Moresby**	**37.98**	**278**	*e*P	**P**	**13 48 20.6**	**+0.6**
PMG				pmax	pmax		
	comp=Z,21nm,0.9s						
PMG	**Port Moresby**	**37.98**	**278**	*e*P	**P**	**13 48 20.6**	**+0.6**
	comp=Z,22nm,0.9s,mb4.8						
TOO	**Toolangi**	**39.56**	**233**	*e*P	**P**	**13 48 32.7**	**-0.1**
STKA	**Stephens Creek**	**41.43**	**243**	*e*P	**P**	**13 48 48.1**	**-0.2**
	comp=Z,3.1nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**41.43**	**243**	P	**P**	**13 48 48.3**	**0.0**
	comp=Z,3.5nm,0.4s,mb4.3,baz=83,slow=9.2,SNR=14						
WB2	**Warramunga Arr**	**47.94**	**260**	*e*P	**P**	**13 49 39.2**	**-0.8**
WRAB	**Tennant Creek**	**47.94**	**260***c*	*i*P	**P**	**13 49 39.2**	**-0.8**
WRAB	**Tennant Creek**	**47.94**	**260**	*e*P	**P**	**13 49 39.1**	**-0.9**
	comp=Z,54nm,0.9s,mb5.2						
WRA	**Warramunga Arr**	**47.95**	**260**	P	**P**	**13 49 39.3**	**-0.7**
	comp=Z,21nm,0.4s,mb5.1,baz=98,slow=6.1,SNR=155						
WRA				S	**S**	**13 56 24.4**	**-1.9**
	comp=Z,2.3nm,0.8s,baz=94,slow=14,SNR=10						
ASAR	**Alice Springs**	**47.99**	**255**	P	**P**	**13 49 40.0**	**-0.3**
	comp=Z,35nm,0.8s,mb5.0,baz=88,slow=8.5,SNR=167						
ASAR				S	**S**	**13 56 24.2**	**-2.5**
	comp=Z,2.9nm,0.7s,baz=91,slow=16,SNR=19						
GUMO	**Guam**	**50.99**	**306**	P	**P**	**13 50 04.8**	**+1.7**
	comp=Z,71nm,0.9s,mb5.3,baz=186,slow=16,SNR=3.9						
KAKA	**Kakadu**	**51.05**	**268**	*e*P	**P**	**13 50 03.3**	**-0.3**
	comp=Z,66nm,0.6s,mb5.4						
FORT	**Forrest**	**52.91**	**245**	*e*P	**P**	**13 50 16.2**	**-1.0**
	comp=Z,17nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**56.36**	**260**	*e*P	**P**	**13 50 42.4**	**+0.2**
	comp=Z,7.8nm,0.3s,mb5.0						
FITZ	**Fitzroy Crossi**	**56.36**	**260**	P	**P**	**13 50 42.5**	**+0.2**
	comp=Z,3.9nm,0.3s,mb4.7,baz=82,slow=5.3,SNR=29						
BATI	**Baumata**	**60.00**	**269**	LR	LR	14 15 34.1	
	comp=Z,83nm,18.4s,baz=108,slow=34						
MBWA	**Marble Bar**	**61.31**	**256**	*e*P	**P**	**13 51 15.2**	**-1.2**
	comp=Z,5.1nm,0.8s,mb4.4						
KLBR	**Kellerberrin**	**61.69**	**244**	*e*P	**P**	**13 51 17.9**	**-0.9**
	comp=Z,11nm,1.1s,mb4.6						
MUN	**Mundaring**	**62.97**	**243**	*e*P	**P**	**13 51 27.4**	**+0.2**
KAPI	**Kappang**	**65.20**	**273**	P	**P**	**13 51 41.2**	**-0.9**
	comp=Z,3.0nm,0.4s,mb4.4,baz=210,slow=15,SNR=4.5						
CASY	**Casey**	**67.09**	**205**	*e*P	**P**	**13 51 53.4**	**+0.2**
MJAR	**Matsushiro Arr**	**70.48**	**321**	P	**P**	**13 52 15.2**	**+0.6**
	comp=Z,13nm,0.7s,mb4.8,baz=159,slow=5.3,SNR=24						
MAJO	**Matsushiro**	**70.48**	**321**	*e*P	**P**	**13 52 14.9**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.0						
MAJO	**Matsushiro**	**70.48**	**321**	*e*P	**P**	**13 52 14.9**	**+0.3**
	comp=Z,24nm,0.7s,mb5.0						
MAT	**Matsushiro**	**70.48**	**321**	P	**P**	**13 52 16.2**	**+1.6**
KKM	**Kota Kinabalu**	**72.26**	**283**	*e*P	**P**	**13 52 26.0**	**+0.2**
CIS	**Catalina Islan**	**74.50**	**46**	⇓P	**P**	**13 52 38.2**	**-0.3**
	baz=75						
SMMC	**Simmler**	**74.53**	**44**	⇑P	**P**	**13 52 39.1**	**+0.5**
	baz=75						
PKD	**Parkfield**	**74.56**	**43**	⇑P	**P**	**13 52 39.0**	**+0.2**
	baz=75						
U04C	**Hernandez Rese**	**74.65**	**43**	⇓P	**P**	**13 52 39.5**	**+0.2**
	baz=75						
PACP	**Pacheco Peak**	**74.72**	**42**	⇓P	**P**	**13 52 40.0**	**+0.3**
	baz=75,SNR=6.4						
CVS	**Carmenet Viney**	**74.82**	**40**	⇑P	**P**	**13 52 40.1**	**-0.1**
	baz=75						
MNRC	**McLaughlin Nat**	**75.17**	**40**	⇓P	**P**	**13 52 42.6**	**+0.5**
	baz=75,SNR=8.5						
PEA0B	**Petropavlovsk-**	**75.17**	**343**	*e*P	**P**	**13 52 41.8**	**0.0**
PETK	**Petropavlovsk-**	**75.17**	**343**	P	**P**	**13 52 42.1**	**+0.3**
	comp=Z,21nm,0.6s,mb4.9,baz=106,slow=9.0,SNR=52						
PETK				LR	LR	14 19 23.3	
	comp=Z,42nm,20.4s,baz=328,slow=30						
MWC	**Mount Wilson**	**75.20**	**46**	*e*P	**P**	**13 52 42.2**	**-0.3**
MWC				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
MWC	**Mount Wilson**	**75.20**	**46**	*e*P	**P**	**13 52 42.1**	**-0.3**
	comp=Z,7.7nm,0.9s,mb4.3						
MURC	**Murrieta**	**75.43**	**47**	⇓P	**P**	**13 52 43.5**	**-0.3**
	baz=76						
VES	**Vestal, Richgr**	**75.45**	**44**	⇓P	**P**	**13 52 43.6**	**-0.3**
	baz=76,SNR=5.9						
BFSC	**Mount Baldy St**	**75.48**	**46**	⇑P	**P**	**13 52 43.4**	**-0.7**
	baz=76						
GASB	**Alder Springs**	**75.49**	**39**	⇓P	**P**	**13 52 45.1**	**+1.1**
	baz=76						
YSS	**Yuzh-Sakhalins**	**75.53**	**331**⇑	*e*P	**P**	**13 52 45.1**	**+1.0**
YSS				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.8						
YSS	**Yuzh-Sakhalins**	**75.53**	**331**	*e*P	**P**	**13 52 44.9**	**+0.8**
	comp=Z,28nm,1.0s,mb4.8						
S05C	**Merced**	**75.53**	**42**	⇑P	**P**	**13 52 44.6**	**+0.3**
	baz=76						
MONP	**Monument Peak**	**75.58**	**48**	⇓P	**P**	**13 52 44.9**	**+0.2**
	baz=76						
EDW2	**Edwards Air Fo**	**75.62**	**45**	⇑P	**P**	**13 52 44.3**	**-0.5**
	baz=76,SNR=15						
DVTC	**Desert V Tower**	**75.68**	**48**	⇓P	**P**	**13 52 45.8**	**+0.6**
	baz=76						
T06C	**Millerton Lake**	**75.73**	**43**	⇑P	**P**	**13 52 44.7**	**-0.7**
	baz=76,SNR=7.4						
ISA	**Isabella**	**75.75**	**44**	*e*P	**P**	**13 52 45.2**	**-0.3**
ISA				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
ISA	**Isabella**	**75.75**	**44**	⇑P	**P**	**13 52 45.4**	**-0.1**
	baz=76,SNR=16						
ISA	**Isabella**	**75.75**	**44**	*e*P	**P**	**13 52 45.2**	**-0.3**
	comp=Z,20nm,1.1s,mb4.7						
O02C	**Red Bluff**	**75.78**	**38**	⇑P	**P**	**13 52 46.1**	**+0.5**
	baz=76,SNR=6.3						
N02C	**Big Bar**	**75.89**	**38**	⇑P	**P**	**13 52 46.4**	**+0.2**
	baz=76						
CMB	**Columbia Colle**	**75.92**	**41**	*e*P	**P**	**13 52 46.0**	**-0.5**
CMB				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.7						
CMB	**Columbia Colle**	**75.92**	**41**	⇑P	**P**	**13 52 46.1**	**-0.4**
	baz=76,SNR=6.2						
CMB	**Columbia Colle**	**75.92**	**41**	*e*P	**P**	**13 52 46.0**	**-0.5**
	comp=Z,24nm,1.3s,mb4.7						
PFO	**Pinyon Flat Ob**	**75.95**	**47**	⇓P	**P**	**13 52 46.6**	**-0.2**
	baz=76						
HELL	**Mitchell Peak**	**75.98**	**43**	⇓P	**P**	**13 52 46.3**	**-0.5**
	baz=76,SNR=8.4						
LAVA	**Lava Cap Winer**	**76.13**	**41**	⇑P	**P**	**13 52 47.4**	**-0.3**
	baz=76						
ORV	**Oroville**	**76.16**	**40**	⇓P	**P**	**13 52 47.0**	**-0.8**
	baz=76,SNR=6.0						
LRMC	**Laurel Mountai**	**76.16**	**45**	⇓P	**P**	**13 52 47.6**	**-0.3**
	baz=76,SNR=11						
S06C	**San Francisco**	**76.16**	**42**	⇓P	**P**	**13 52 47.6**	**-0.3**
	baz=76						
WDC	**Whiskeytown Da**	**76.18**	**38**	*e*P	**P**	**13 52 47.4**	**-0.5**
WDC				pmax	pmax		
	comp=Z,27nm,1.3s,mb4.7						
WDC	**Whiskeytown Da**	**76.18**	**38**	⇑P	**P**	**13 52 47.5**	**-0.5**
	baz=76,SNR=5.7						
WDC	**Whiskeytown Da**	**76.18**	**38**	*e*P	**P**	**13 52 47.4**	**-0.5**
	comp=Z,27nm,1.3s,mb4.7						
KSM	**Kuching**	**76.21**	**276**	*e*P	**P**	**13 52 49.5**	**+0.8**
KSM				*e*pP	pP	13 53 27.0	+0.7
KSM				*e*sP	sP	13 53 39.8	-3.0
CWC	**Cottonwood Cre**	**76.45**	**44**	⇑P	**P**	**13 52 49.4**	**-0.1**
	baz=77,SNR=8.6						
BELC	**Belle Mtn.**	**76.49**	**47**	⇑P	**P**	**13 52 49.5**	**-0.2**
	baz=77,SNR=6.8						
R05C	**Kirkwood Meado**	**76.51**	**41**	⇑P	**P**	**13 52 49.6**	**-0.2**
	baz=77,SNR=6.8						
M02C	**Callahan**	**76.52**	**38**	⇓P	**P**	**13 52 50.5**	**+0.7**
	baz=77						
P05C	**Yuba Gap, Truc**	**76.55**	**40**	⇓P	**P**	**13 52 50.2**	**+0.2**
	baz=77						
L02A	**Cave Junction**	**76.58**	**37**	⇑P	**P**	**13 52 50.0**	**-0.1**
	baz=77						
MPMC	**Manual Prospec**	**76.63**	**44**	⇑P	**P**	**13 52 50.5**	**0.0**
	baz=77,SNR=20						
GSC	**Goldstone**	**76.66**	**45**	*e*P	**P**	**13 52 49.9**	**-0.8**
GSC				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.4						
GSC	**Goldstone**	**76.66**	**45**	⇓P	**P**	**13 52 50.3**	**-0.4**
	baz=77,SNR=8.7						
GSC	**Goldstone**	**76.66**	**45**	*e*P	**P**	**13 52 49.9**	**-0.8**
	comp=Z,13nm,1.2s,mb4.4						
BC3	**Big Chuckw Mtn**	**76.68**	**47**	⇓P	**P**	**13 52 51.1**	**+0.3**
	baz=77						
HEC	**Hector,Ludlow**	**76.72**	**46**	⇑P	**P**	**13 52 50.9**	**-0.2**
	baz=77,SNR=6.3						
O05C	**Quincy**	**76.77**	**40**	⇑P	**P**	**13 52 51.5**	**+0.3**
	baz=77						
GLA	**Glamis**	**76.79**	**48**	*e*P	**P**	**13 52 51.4**	**-0.1**
GLA				*e*		13 53 02.5	
GLA				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.5						
GLA	**Glamis**	**76.79**	**48**	⇑P	**P**	**13 52 52.1**	**+0.6**
	baz=77						
GLA	**Glamis**	**76.79**	**48**	*e*P	**P**	**13 52 51.4**	**-0.1**
	comp=Z,14nm,1.1s,mb4.5						
GLA				*e*		13 53 02.5	
R07C	**Lee Vining**	**76.79**	**42**	⇓P	**P**	**13 52 51.5**	**0.0**
	baz=77,SNR=6.0						
R06C	**Coleville**	**76.80**	**41**	⇑P	**P**	**13 52 51.4**	**0.0**
	baz=77,SNR=6.5						
YBH	**Yreka Blue Hor**	**76.82**	**37**	*e*P	**P**	**13 52 51.5**	**0.0**
YBH				pmax	pmax		
	comp=Z,26nm,1.3s						
YBH	**Yreka Blue Hor**	**76.82**	**37**	⇓P	**P**	**13 52 51.5**	**0.0**
	baz=77,SNR=8.0						
YBH	**Yreka Blue Hor**	**76.82**	**37**	*e*P	**P**	**13 52 51.5**	**0.0**
	comp=Z,26nm,1.3s,mb4.7						
O04C	**Chester**	**76.89**	**39**	⇓P	**P**	**13 52 52.1**	**+0.2**
	baz=77						
S08C	**White Mtn Res**	**77.01**	**43**	⇑P	**P**	**13 52 53.3**	**+0.6**
	baz=77,SNR=15						
BEKR	**Beckwourth**	**77.05**	**40**	⇓P	**P**	**13 52 52.5**	**-0.3**
	baz=77,SNR=8.5						
WCN	**Washoe City**	**77.07**	**41**	⇓P	**P**	**13 52 53.3**	**+0.3**
	baz=77						
GMRC	**Granite Mounta**	**77.15**	**46**	⇓P	**P**	**13 52 53.5**	**+0.1**
	baz=77						
IRM	**Iron Mountain**	**77.16**	**47**	⇑P	**P**	**13 52 53.7**	**+0.1**
	baz=77,SNR=9.1						
HUMO	**Hull Mountain**	**77.24**	**36**	⇑P	**P**	**13 52 54.3**	**+0.6**
	baz=77						
HUMO	**Hull Mountain**	**77.24**	**36**	*e*P	**P**	**13 52 53.5**	**-0.3**
	comp=Z,14nm,1.2s,mb4.5						
GRAC	**Grapevine Rang**	**77.24**	**44**	⇓P	**P**	**13 52 54.3**	**+0.3**
	baz=77,SNR=17						
FURC	**Furnace Creek,**	**77.28**	**44**	⇓P	**P**	**13 52 53.9**	**-0.2**
	baz=77						

TUQ	Turquoise Moun	77.33	46	⇑P	P	13 52 54.0	-0.4
	baz=78,SNR=7.2						
M04C	Macdoel	77.35	38	⇓P	P	13 52 54.4	-0.1
	baz=78,SNR=5.6						
Y12C	Blythe	77.38	48	⇓P	P	13 52 54.7	-0.1
	baz=78						
LASM	Arnica Sink	77.39	38	P	P	13 52 55.2	+0.5
113A	Mohawk Valley,	77.40	49	⇑P	P	13 52 54.9	0.0
	baz=78						
NVAR	Mina Array Bea	77.47	42	P	P	13 52 55.2	+0.1
	comp=Z,9.0nm,0.8s,mb4.5,baz=228,slow=9.9,SNR=58						
KSRS	Korea Array	77.47	317	P	P	13 52 57.1	+1.9
	comp=Z,9.1nm,0.8s,mb4.5,baz=135,slow=6.1,SNR=21						
M05C	Lookout	77.49	38	⇓P	P	13 52 55.0	-0.2
	baz=78,SNR=6.2						
OHAK	Old Harbor	77.52	12	*e*P	P	13 52 54.7	-0.3
	comp=Z,37nm,1.0s,mb5.0						
O06A	Flanigan	77.55	40	⇓P	P	13 52 55.4	-0.1
	baz=78,SNR=5.0						
U10A	Ash Meadows, A	77.60	45	⇑P	P	13 52 56.0	0.0
	baz=78,SNR=6.6						
I02A	Mapleton	77.66	35	⇑P	P	13 52 55.9	-0.2
	baz=78						
214A	Organ Pipe Nat	77.67	50	⇓P	P	13 52 56.4	0.0
	baz=78						
LDFC	Landfair	77.69	46	*e*P	P	13 52 56.5	+0.1
	comp=Z,12nm,0.8s,mb4.6						
S09A	Goldfield	77.75	43	⇓P	P	13 52 56.1	-0.6
	baz=78,SNR=9.3						
M06C	Likely Place G	77.79	39	⇑P	P	13 52 56.9	0.0
	baz=78						
N06A	Buffalo Meadow	77.90	39	⇓P	P	13 52 57.5	0.0
	baz=78,SNR=9.6						
Y13A	Salome	77.91	48	⇑P	P	13 52 58.0	+0.3
	baz=78,SNR=6.1						
PDMCI	Parker Dam,Lak	77.94	48	⇑P	P	13 52 57.8	-0.1
	baz=78,SNR=5.8						
TPNV	Topopah Spring	77.95	44	*e*P	P	13 52 57.6	-0.3
TPNV				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.6						
TPNV	Topopah Spring	77.95	44	⇓P	P	13 52 58.1	+0.2
	baz=78						
TPNV	Topopah Spring	77.95	44	*e*P	P	13 52 57.6	-0.3
	comp=Z,14nm,0.8s,mb4.6						
Q08A	Gabbs	77.95	42	⇓P	P	13 52 57.5	-0.3
	baz=78,SNR=6.3						
L05A	Lakeview	78.10	38	⇑P	P	13 52 58.8	+0.2
	baz=78,SNR=5.3						
J04A	Umpqua Nationa	78.12	36	⇑P	P	13 52 58.8	+0.2
	baz=78						
O07A	Toulon	78.13	40	⇑P	P	13 52 58.7	-0.1
	baz=78,SNR=16						
R09A	Tonopah	78.15	43	⇓P	P	13 52 58.9	0.0
	baz=78,SNR=5.1						
V12A	Nelson	78.22	46	⇓P	P	13 52 59.9	+0.5
	baz=78,SNR=7.8						
U11A	Corn Creek	78.24	45	⇓P	P	13 53 00.1	+0.6
	baz=78						
S10A	Tonopah Range,	78.28	43	⇑P	P	13 52 59.4	-0.2
	baz=78,SNR=20						
Z14A	Wintersburg	78.30	49	⇑P	P	13 53 00.2	+0.3
	baz=78						
I04A	Tendick Farm,	78.31	36	⇑P	P	13 52 59.9	+0.3
	baz=78						
X13A	Yucca	78.32	47	⇑P	P	13 52 60.0	0.0
	baz=78						
MOD	Modoc	78.33	38	⇓P	P	13 52 59.8	0.0
	baz=78,SNR=6.0						
MOD	Modoc	78.33	38	*e*P	P	13 52 58.8	-1.1
	comp=Z,16nm,1.2s,mb4.5						
H03A	Soap Creek Ran	78.39	35	⇓P	P	13 52 60.0	-0.1
	baz=79						
Q09A	Carvers	78.42	42	⇓P	P	13 53 00.2	-0.2
	baz=79						
N07B	Gerlach	78.44	40	⇑P	P	13 53 00.7	+0.2
	baz=79						
K05A	Summer Lake	78.49	37	⇓P	P	13 53 00.6	-0.1
	baz=79,SNR=8.6						
W13A	Hualapai Mount	78.55	47	⇑P	P	13 53 01.4	+0.2
	baz=79,SNR=8.8						
Y14A	Wickenburg	78.55	48	⇑P	P	13 53 01.3	+0.1
	baz=79,SNR=9.3						
J05A	Fort Rock	78.64	37	⇑P	P	13 53 01.6	+0.1
	baz=79,SNR=10.0						
O08A	Rochester Mine	78.65	41	⇓P	P	13 53 01.5	-0.1
	baz=79,SNR=6.5						
R10A	Warm Springs	78.67	43	⇓P	P	13 53 02.2	+0.3
	baz=79,SNR=13						
S11A	Rachel	78.67	44	⇑P	P	13 53 01.9	+0.1
	baz=79						
216A	Three Points,	78.68	51	⇓P	P	13 53 02.6	+0.6
	baz=79,SNR=5.2						
M07A	Soldier Meadow	78.69	39	⇓P	P	13 53 01.5	-0.3
	baz=79,SNR=6.2						
116A	Eloy	78.78	50	⇑P	P	13 53 02.8	+0.3
	baz=79						
T11A	Corn Creek, Al	78.80	45	⇑P	P	13 53 02.8	+0.3
	baz=79,SNR=19						
U12A	Valley of Fire	78.81	46	⇑P	P	13 53 02.6	0.0
	baz=79,SNR=10						
V13A	Grand Canyon W	78.88	46	⇓P	P	13 53 02.9	-0.1
	baz=79,SNR=10						
K06A	Valley Falls	78.91	38	⇑P	P	13 53 02.8	-0.2
	baz=79,SNR=7.0						
X14A	Yava	78.91	48	⇓P	P	13 53 03.5	+0.3
	baz=79						
N08A	GE Springer Mi	78.95	40	⇓P	P	13 53 02.8	-0.5
	baz=79,SNR=9.9						
L07A	Adell	78.97	39	⇓P	P	13 53 03.4	+0.1
	baz=79,SNR=10						
H04A	Detroit Lake	79.00	35	⇓P	P	13 53 03.7	+0.3
	baz=79						
Y15A	Casa Rosa Ranc	79.04	49	⇓P	P	13 53 04.1	+0.2
	baz=79,SNR=20						
217A	Green Valley	79.04	51	⇓P	P	13 53 04.7	+0.7
	baz=79,SNR=12						
W14A	Seligman	79.16	47	⇓P	P	13 53 04.9	+0.3
	baz=79,SNR=18						
R11A	Troy Canyon, C	79.17	43	⇑P	P	13 53 04.2	-0.3
	baz=79,SNR=7.8						
O09A	Fish Creek Ran	79.18	41	⇑P	P	13 53 04.6	+0.1
	baz=79						
U13A	Pakoon Wash	79.19	46	⇑P	P	13 53 05.3	+0.6
	baz=79,SNR=23						
M08A	Happy Creek Ra	79.20	40	⇑P	P	13 53 04.5	-0.1
	baz=79,SNR=6.1						
J06A	Christmas Vall	79.24	37	⇓P	P	13 53 04.8	0.0
	baz=79,SNR=6.0						
S12A	Delamar Landin	79.25	44	⇑P	P	13 53 05.5	+0.5
	baz=79,SNR=13						
BMN	Battle Mountai	79.31	41	*e*P	P	13 53 04.6	-0.6
BMN				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.5						
BMN	Battle Mountai	79.31	41	*e*P	P	13 53 04.6	-0.6
	comp=Z,16nm,1.3s,mb4.5						
P10A	Eureka	79.32	42	⇓P	P	13 53 05.4	+0.1
	baz=80						
V14A	Boquillas Ranc	79.37	47	⇓P	P	13 53 05.9	+0.3
	baz=80,SNR=20						
N09A	Rock Creek Ran	79.37	40	⇓P	P	13 53 05.4	-0.1
	baz=80,SNR=5.4						
Z16A	Peralta Trail,	79.38	50	⇓P	P	13 53 06.1	+0.3
	baz=80						
X15A	Humboldt	79.38	48	⇓P	P	13 53 06.4	+0.6
	baz=80,SNR=11						
Q11A	Duckwater	79.41	43	⇓P	P	13 53 05.7	-0.1
	baz=80,SNR=5.3						
K07A	Rock Creek Ran	79.43	38	⇑P	P	13 53 05.9	0.0
	baz=80,SNR=10.0						
117A	Oracle	79.49	51	⇓P	P	13 53 07.1	+0.7
	baz=80,SNR=8.4						
H05A	Madras	79.51	36	⇑P	P	13 53 05.9	-0.3
	baz=80						
T13A	Saint George	79.56	45	⇓P	P	13 53 06.9	+0.3
	baz=80						
Y16A	Circle Bar Ran	79.61	49	⇓P	P	13 53 07.7	+0.7
	baz=80,SNR=6.3						
WVOR	Wild Horse Val	79.63	39	*e*P	P	13 53 06.7	-0.2
WVOR				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.5						
WVOR	Wild Horse Val	79.63	39	*e*P	P	13 53 06.7	-0.2
	comp=Z,14nm,1.1s,mb4.5						
I06A	Prineville	79.64	37	⇑P	P	13 53 06.7	-0.2
	baz=80,SNR=9.0						
L08A	Fields	79.66	39	⇓P	P	13 53 06.7	-0.4
	baz=80,SNR=18						
O10A	Cortez Mining,	79.68	41	⇓P	P	13 53 07.0	-0.2
	baz=80						

218A	Dragoon	79.71	51	⇑P	P	13 53 08.3	+0.7
	baz=80,SNR=11						
W15A	Williams	79.72	48	⇓P	P	13 53 08.4	+0.8
	baz=80						
U14A	Mt Trumbull	79.73	46	⇓P	P	13 53 08.2	+0.6
	baz=80,SNR=25						
P11A	Circle Ranch,	79.74	42	⇑P	P	13 53 07.7	+0.1
	baz=80						
R12A	Pony Springs,	79.80	44	⇓P	P	13 53 08.1	+0.1
	baz=80,SNR=15						
J07A	Hines	79.81	38	⇓P	P	13 53 08.0	+0.2
	baz=80						
G05A	Wamic	79.83	35	⇓P	P	13 53 07.7	-0.2
	baz=80						
NLWA	Neilton Lookou	79.88	32	⇓P	P	13 53 08.3	+0.2
	baz=80						
S13A	Holt Ranch, En	79.89	45	⇓P	P	13 53 08.5	+0.1
	baz=80,SNR=8.1						
K08A	Mann Creek Ran	79.90	38	⇑P	P	13 53 08.4	+0.1
	baz=80,SNR=15						
X16A	Lo Mia Camp, P	79.91	49	⇑P	P	13 53 09.8	+1.2
	baz=80,SNR=17						
Y17A	Roosevelt	79.97	49	⇓P	P	13 53 09.2	+0.3
	baz=80,SNR=5.9						
319A	Douglas	79.99	52	⇓P	P	13 53 09.8	+0.7
	baz=80,SNR=8.6						
Q12A	Willow Creek R	80.05	43	⇓P	P	13 53 09.5	+0.3
	baz=80						
TDL	Tradedollar La	80.06	34	P	P	13 53 09.8	+0.6
H06A	Lindquist Farm	80.06	36	⇑P	P	13 53 08.8	-0.3
	baz=80,SNR=11						
118A	Homack Ranch,	80.09	51	⇓P	P	13 53 10.4	+0.8
	baz=80,SNR=14						
V15A	Kaibab Nationa	80.11	47	⇓P	P	13 53 10.1	+0.4
	baz=80,SNR=18						
I07A	Izee	80.12	37	⇓P	P	13 53 09.6	+0.1
	baz=80						
O11A	Cowboy Ranch,	80.12	42	⇓P	P	13 53 09.8	+0.2
	baz=80						
R13A	O'Grain Ranch,	80.14	44	⇑P	P	13 53 10.0	+0.2
	baz=80,SNR=5.9						
F05A	White Salmon	80.16	35	⇑P	P	13 53 09.4	-0.3
	baz=80						
W16A	Flagstaff	80.19	48	⇓P	P	13 53 11.0	+0.9
	baz=80						
G06A	Carlson Farm,	80.20	36	⇓P	P	13 53 09.0	-1.0
	baz=80						
CCUT	Cedar City	80.21	45	*e*P	P	13 53 19.7	+10
J08A	Circle Bar Ran	80.28	38	⇓P	P	13 53 10.2	-0.2
	baz=80,SNR=5.7						
219A	White Tail Can	80.31	52	⇑P	P	13 53 11.1	+0.3
	baz=80,SNR=9.2						
X17A	Forest Lakes	80.32	49	⇑P	P	13 53 11.7	+0.9
	baz=80,SNR=12						
K09A	Rome	80.33	39	⇑P	P	13 53 10.3	-0.3
	baz=80,SNR=20						
U15A	North Rim	80.35	46	⇑P	P	13 53 11.9	+1.0
	baz=80,SNR=22						
M10A	I.L. Ranch, Tu	80.36	40	⇓P	P	13 53 10.9	+0.1
	baz=80,SNR=14						
H07A	Lands Inn, Kim	80.40	37	⇑P	P	13 53 10.5	-0.5
	baz=81,SNR=9.6						
F06A	Goldendale	80.46	35	⇓P	P	13 53 11.4	+0.2
	baz=81						
WUAZ	Wupatki	80.52	48	⇑P	P	13 53 13.0	+1.2
	baz=81						
WUAZ	Wupatki	80.52	48	*e*P	P	13 53 11.8	0.0
	comp=Z,15nm,1.2s,mb4.5						
WUAZ				*e*	pP	13 53 45.6	-4.3
C04A	Brinnon	80.55	33	⇓P	P	13 53 11.5	-0.3
	baz=81						
I08A	Drewsey	80.56	37	⇓P	P	13 53 11.7	-0.2
	baz=81,SNR=5.8						
T15A	Red Dirt Ranch	80.59	46	⇓P	P	13 53 12.6	+0.4
	baz=81,SNR=12						
Y18A	Canyon Day Jun	80.60	50	⇓P	P	13 53 13.3	+1.0
	baz=81,SNR=7.7						
119A	Ashpeak Ranch,	80.64	51	⇓P	P	13 53 13.1	+0.5
	baz=81,SNR=7.1						
MDJ	Mudanjiang	80.69	323	P	P	13 53 13.6	+1.1
MDJ				AP	pP	13 53 50.7	+0.1
MDJ				PP	PP	13 56 19.8	+1.0
MDJ				S	S	14 03 08.4	+1.2
MDJ				SS	SS	14 08 29.1	+4.9
MDJ				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,118nm,6.7s						
MDJ				LR	LR		
	comp=N,68nm,28.7s						
MDJ				LR	LR		
	comp=E,55nm,27.8s						
MDJ				LR	LR		
	comp=Z,47nm,18.8s						
MDJ	Mudanjiang	80.69	323	*e*P	P	13 53 14.2	+1.7
	comp=Z,20nm,1.1s,mb4.7						
J09A	Fry Pan Ranch,	80.70	38	⇓P	P	13 53 12.1	-0.5
	baz=81,SNR=13						
D05A	Enumclaw	80.72	33	⇓P	P	13 53 12.9	+0.3
	baz=81						
L10A	Juniper Basin	80.72	40	⇓P	P	13 53 12.7	-0.1
	baz=81,SNR=11						
ELK	Elko	80.73	42	*e*P	P	13 53 12.5	-0.4
ELK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ELK	Elko	80.73	42	*e*P	P	13 53 12.5	-0.4
	comp=Z,5.6nm,0.9s,mb4.2						
G07A	Ruggs Ranch, H	80.76	36	⇑P	P	13 53 12.5	-0.4
	baz=81						
M11A	Holland Ranch,	80.77	41	⇑P	P	13 53 13.2	+0.2
	baz=81						
O12A	Currie	80.78	42	⇑P	P	13 53 12.7	-0.4
	baz=81,SNR=5.9						
SVW2	Sparrevohn	80.78	9	*e*P	P	13 53 11.5	-1.2
P13A	Bates Ranch, G	80.80	43	⇑P	P	13 53 12.7	-0.5
	baz=81						
E06A	Yakima	80.84	34	⇓P	P	13 53 12.5	-0.7
	baz=81,SNR=5.8						
H08A	Prairie City	80.87	37	⇓P	P	13 53 12.9	-0.6
	baz=81						
K10A	MacKenzie Ranc	80.89	39	⇑P	P	13 53 13.4	-0.2
	baz=81,SNR=6.9						
N12A	Clover Valley,	80.92	42	⇓P	P	13 53 14.2	+0.3
	baz=81						
Z19A	T-Link Ranch,	80.92	51	⇑P	P	13 53 14.3	+0.3
	baz=81						
SEW	Seward	80.96	13	*e*P	P	13 53 12.9	-0.7
U16A	Tuba City	81.00	47	⇓P	P	13 53 14.8	+0.4
	baz=81						
NJ2	Nanjing	81.01	308	*e*P	P	13 53 14.2	-0.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
X18A	Snowflake	81.03	49	⇑P	P	13 53 15.1	+0.5
	baz=81,SNR=5.1						
Q14A	Sevier Lake (B	81.03	44	⇓P	P	13 53 14.6	+0.1
	baz=81,SNR=12						
I09A	Lost Marbles R	81.08	38	⇓P	P	13 53 14.3	-0.3
	baz=81						
G08A	Pilot Rock	81.17	36	⇑P	P	13 53 15.1	+0.1
	baz=81,SNR=22						
T16A	Glen Canyon Da	81.17	46	⇑P	P	13 53 15.9	+0.6
	baz=81						
C05A	Tolt Reservoir	81.20	33	⇑P	P	13 53 15.0	-0.1
	baz=81						
L11A	Cat Creek Ranc	81.21	40	⇓P	P	13 53 15.3	-0.1
	baz=81,SNR=12						
Y19A	Nutrioso	81.25	50	⇑P	P	13 53 16.8	+1.0
	baz=81,SNR=19						
M12A	Wells	81.31	41	⇓P	P	13 53 15.6	-0.3
	baz=82,SNR=7.4						
B05A	Bryant	81.36	32	⇑P	P	13 53 15.9	0.0
	baz=82						
K11A	Parker Ranch,	81.39	40	⇑P	P	13 53 15.8	-0.5
	baz=82,SNR=7.1						
N13A	Wendover, West	81.45	42	⇓P	P	13 53 17.0	+0.3
	baz=82						
X19A	St. Johns	81.46	49	⇓P	P	13 53 17.8	+1.0
	baz=82,SNR=19						
P14A	Drum Mountains	81.49	43	⇓P	P	13 53 17.4	+0.5
	baz=82,SNR=6.6						
S16A	Weppner Ranch,	81.49	46	⇓P	P	13 53 17.5	+0.5
	baz=82						
RSW	Rattlesnake Hi	81.50	35	P	P	13 53 17.2	+0.4
MSU	Marysvale	81.51	45	*e*P	P	13 53 17.7	+0.7
HAWA	Hanford	81.53	35	*e*P	P	13 53 16.5	-0.4
	comp=Z,28nm,1.4s,mb4.7						
H09A	Durkee	81.53	37	⇓P	P	13 53 16.6	-0.4
	baz=82						

F08A	Pendleton	81.58	36	⇑P	P	13 53 16.5	-0.7
	baz=82,SNR=7.7						
V18A	Ganado	81.63	48	⇑P	P	13 53 18.4	+0.7
	baz=82,SNR=9.3						
L12A	House Creek Ra	81.66	40	⇑P	P	13 53 18.0	+0.3
	baz=82						
T17A	Navajo Res., N	81.66	47	⇑P	P	13 53 18.5	+0.7
	baz=82						
W19A	Sanders	81.72	49	⇓P	P	13 53 18.8	+0.6
	baz=82,SNR=7.1						
M13A	Montello	81.75	41	⇑P	P	13 53 18.4	+0.2
	baz=82						
D07A	Quincy	81.78	34	⇓P	P	13 53 17.7	-0.6
	baz=82						
G09A	Cove	81.83	37	⇑P	P	13 53 18.2	-0.3
	baz=82,SNR=10						
BMO	Blue Mountains	81.85	37	*e*P	P	13 53 18.0	-0.6
BMO				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.4						
BMO	Blue Mountains	81.85	37	*e*P	P	13 53 18.0	-0.6
	comp=Z,13nm,1.4s,mb4.4						
ETW	Entiat	81.85	34	*e*P	P	13 53 17.9	-0.7
R16A	Teasdale	81.86	45	⇑P	P	13 53 19.6	+0.8
	baz=82,SNR=6.4						
MFID	Camas Ranch	81.88	39	⇑P	P	13 53 18.9	0.0
	baz=82						
LNOR	Linction Mounta	81.90	36	*e*P	P	13 53 18.0	-0.9
DUG	Dugway	81.98	43	⇑P	P	13 53 19.4	0.0
	baz=82						
S17A	Black Ridge (B	81.99	46	⇓P	P	13 53 19.4	-0.2
	baz=82,SNR=5.9						
K12A	Draper Farm, C	82.00	40	⇓P	P	13 53 19.5	0.0
	baz=82						
P15A	Leamington	82.00	44	⇓P	P	13 53 19.7	+0.2
	baz=82						
F09A	S2 Ranch, Elgi	82.01	36	⇑P	P	13 53 19.3	-0.1
	baz=82						
H10A	Noah's Angus R	82.01	38	⇓P	P	13 53 19.1	-0.4
	baz=82,SNR=8.5						
U18A	Rough Rock, Ch	82.02	48	⇓P	P	13 53 20.0	+0.2
	baz=82						
C07A	Waterville	82.05	34	⇓P	P	13 53 19.8	+0.2
	baz=82						
EYAK	Cordova Ski Ar	82.17	14	*e*P	P	13 53 18.8	-1.2
	comp=Z,24nm,1.1s,mb4.7						
G10A	Bishop Farm, J	82.21	37	⇓P	P	13 53 19.8	-0.7
	baz=82,SNR=7.3						
J12A	Stokes Ranch,	82.22	40	⇓P	P	13 53 20.2	-0.5
	baz=82,SNR=6.7						
V19A	Window Rock	82.26	48	⇑P	P	13 53 21.5	+0.5
	baz=82						
D08A	Wollman Farm,	82.27	35	⇑P	P	13 53 20.4	-0.3
	baz=82,SNR=7.1						
L13A	Double Diamond	82.29	41	⇑P	P	13 53 21.5	+0.5
	baz=82						
M14A	Sheep Mountain	82.34	42	⇑P	P	13 53 21.2	-0.1
	baz=82,SNR=18						
E09A	Wood Farm, Sta	82.36	36	⇓P	P	13 53 20.9	-0.4
	baz=82,SNR=6.3						
T18A	Mexican Hat	82.38	47	⇑P	P	13 53 22.5	+0.9
	baz=82,SNR=45						
PMR	Palmer	82.38	12	*e*P	P	13 53 19.7	-1.3
PMR				pmax	pmax		
	comp=Z,35nm,1.4s,mb4.8						
PMR	Palmer	82.38	12	*e*P	P	13 53 19.7	-1.3
	comp=Z,35nm,1.4s,mb4.8						
Q16A	Castle Valley	82.39	45	⇓P	P	13 53 22.2	+0.6
	baz=82						
KLR	Kul'dur	82.41	328	*e*P	P	13 53 21.4	0.0
R17A	Hanksville Air	82.45	45	⇓P	P	13 53 22.2	+0.3
	baz=83,SNR=15						
TTA	Tatalina	82.47	9	*e*P	P	13 53 21.4	0.0
TTA				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.0						
TTA	Tatalina	82.47	9	*e*P	P	13 53 21.4	0.0
	comp=Z,56nm,1.4s,mb5.0						
B07A	Winthrop	82.50	33	⇑P	P	13 53 21.5	-0.4
	baz=83						
H11A	Donnelly	82.51	38	⇓P	P	13 53 21.8	-0.3
	baz=83						
K13A	Stover Farm, H	82.51	40	⇓P	P	13 53 22.5	+0.4
	baz=83,SNR=5.8						
F10A	Beach Ranch, E	82.55	36	⇓P	P	13 53 21.3	-0.9
	baz=83,SNR=16						
TMUT	Trail Mountain	82.56	44	*e*P	P	13 53 23.1	+0.6
S18A	Hurst Farm, Bl	82.57	46	⇑P	P	13 53 22.6	0.0
	baz=83						
OD2	Odessa Site #2	82.58	35	*e*P	P	13 53 21.9	-0.5
D09A	Jones Farm, Ri	82.60	35	⇑P	P	13 53 22.0	-0.5
	baz=83,SNR=8.5						
CN2	Changchun	82.63	321	*e*P	P	13 53 23.8	+1.1
CN2				*e*AP	pP	13 54 04.0	+3.0
CN2				*e*S	S	14 03 27.1	-0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
CN2				AMB	AMB		
	comp=Z,370nm,4.0s						
C08A	Higginbotham F	82.64	34	⇑P	P	13 53 23.1	+0.4
	baz=83						
DIV	Divide	82.68	14	*e*P	P	13 53 21.8	-0.7
	comp=Z,13µm,0.6s						
L14A	Malta	82.70	41	⇓P	P	13 53 22.7	-0.4
	baz=83,SNR=5.5						
A07A	Ashnola River,	82.73	33	⇓P	P	13 53 23.0	-0.2
	baz=83						
G11A	Walters Elk Ra	82.76	37	⇓P	P	13 53 23.0	-0.3
	baz=83,SNR=13						
BMRM	Bremner River	82.80	14	*e*P	P	13 53 22.0	-1.2
HLID	Hailey	82.81	40	⇑P	P	13 53 24.1	+0.4
	baz=83,SNR=18						
HLID	Hailey	82.81	40	*e*P	P	13 53 23.3	-0.4
	comp=Z,13nm,1.1s,mb4.6						
T19A	Beclabito	82.82	47	⇓P	P	13 53 24.4	+0.6
	baz=83,SNR=14						
O16A	Springville	82.84	44	⇓P	P	13 53 24.1	+0.2
	baz=83						
B08A	Colville Reser	82.84	34	⇓P	P	13 53 22.8	-0.9
	baz=83,SNR=5.1						
J13A	Cove Ranch, Pi	82.87	40	⇓P	P	13 53 24.1	+0.1
	baz=83,SNR=11						
M15A	Larsen Ranch,	82.89	42	⇑P	P	13 53 24.4	+0.3
	baz=83,SNR=5.9						
SRU	San Rafael	82.93	45	*e*P	P	13 53 24.4	0.0
SRU				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
SRU	San Rafael	82.93	45	⇑P	P	13 53 25.1	+0.7
	baz=83,SNR=14						
SRU	San Rafael	82.93	45	*e*P	P	13 53 24.4	0.0
	comp=Z,14nm,0.9s,mb4.7						
CTU	Camp Tracy	82.93	43	*e*P	P	13 53 24.5	+0.1
	comp=Z,14nm,1.0s,mb4.6						
P17A	Butcher Ranch,	82.97	45	⇓P	P	13 53 25.5	+0.9
	baz=83,SNR=5.8						
R18A	Canyonlands Na	82.99	46	⇓P	P	13 53 24.9	+0.2
	baz=83,SNR=18						
LAZ	Ladron	83.01	50	*e*P	P	13 53 25.5	+0.6
K14A	Jones Ranch, D	83.01	41	⇑P	P	13 53 24.6	-0.2
	baz=83,SNR=6.2						
C09A	Chrisman Ranch	83.07	34	⇓P	P	13 53 24.7	-0.2
	baz=83						
H12A	Diamond D Ranc	83.10	39	⇓P	P	13 53 24.8	-0.3
	baz=83,SNR=10						
DAU	Daniels Canyon	83.11	43	*e*P	P	13 53 25.3	0.0
F11A	Grangeville	83.11	37	⇓P	P	13 53 24.3	-0.8
	baz=83						
D10A	Wagner Farm, O	83.16	35	⇑P	P	13 53 25.0	-0.4
	baz=83						
Q18A	Rafter H Ranch	83.19	45	⇑P	P	13 53 25.6	-0.1
	baz=83,SNR=16						
I13A	Wildhorse Cree	83.19	39	⇓P	P	13 53 25.5	-0.1
	baz=83,SNR=10						
S19A	Harvey Farm, M	83.19	47	⇓P	P	13 53 26.4	+0.6
	baz=83,SNR=13						
L15A	Malad City	83.22	42	⇑P	P	13 53 25.5	-0.3
	baz=83,SNR=8.7						
J14A	Carey	83.23	40	⇓P	P	13 53 26.0	+0.2
	baz=83,SNR=26						
N16A	Rees Ranch, Co	83.24	43	⇑P	P	13 53 26.7	+0.7
	baz=83						
A08A	Turner Farm, O	83.24	33	⇑P	P	13 53 25.0	-0.8
	baz=83,SNR=5.2						
BNM	Barren Site	83.27	51	*e*P	P	13 53 26.5	+0.3
M16A	Huntsville	83.34	43	⇑P	P	13 53 26.3	-0.1
	baz=84,SNR=5.6						
LPM	Los Pinos Moun	83.34	51	*e*P	P	13 53 27.4	+0.7
O17A	Robinson Place	83.34	44	⇓P	P	13 53 27.3	+0.8
	baz=84,SNR=29						

E11A **Bogner Ranch,** 83.35 36 ⇓P P 13 53 25.8 -0.6
baz=84
R19A **Curley Farm, L** 83.37 46 ⇓P P 13 53 27.4 +0.7
baz=84
P18A **Preston Nutter** 83.37 45 ⇑P P 13 53 26.9 +0.2
baz=84,SNR=8.6
TXAR **Lajitas Array** 83.39 56 P P 13 53 27.6 +0.6
comp=Z,7.6nm,0.8s,mb4.5,baz=217,slow=8.6,SNR=89
H13A **Challis** 83.47 39 ⇓P P 13 53 27.3 +0.3
baz=84
K15A **Arbon** 83.49 41 ⇓P P 13 53 27.5 +0.3
baz=84
B09A **Rice** 83.51 34 ⇑P P 13 53 26.6 -0.5
baz=84
F12A **Elk City** 83.55 37 ⇑P P 13 53 26.7 -0.7
baz=84,SNR=30
PV10 **Paradox Valley** 83.56 46 *e*P P 13 53 27.5 -0.1
I14A **Mackay** 83.60 40 ⇓P P 13 53 28.0 +0.3
baz=84,SNR=8.7
A09A **Danville** 83.61 33 ⇓P P 13 53 27.1 -0.5
baz=84
N17A **Moffit Pass** 83.66 43 ⇑P P 13 53 27.8 -0.3
baz=84,SNR=5.5
Q19A **Hogan Spring (** 83.70 46 ⇓P P 13 53 28.7 +0.4
baz=84,SNR=15
E12A **Beaver Dam Sad** 83.75 37 ⇑P P 13 53 28.0 -0.3
baz=84
ANMO **Albuquerque** 83.76 50*c i*P P 13 53 29.2 +0.5
ANMO **Albuquerque** 83.76 50 *e*P P 13 53 28.2 -0.6
comp=Z,23nm,1.3s,mb4.7
WHN **Wuhan** 83.77 305 *e*P P 13 53 32.0 +3.1
PV01 **Paradox Valley** 83.77 47 *e*P P 13 53 28.6 -0.2
L16A **Fish Haven** 83.83 42 ⇑P P 13 53 29.1 +0.2
baz=84
O18A **Roosevelt** 83.85 44 ⇑P P 13 53 29.4 +0.3
baz=84
KTH **Kantishna Hill** 83.86 10 *e*P P 13 53 27.0 -1.5
comp=Z,19nm,0.9s,mb4.8
TRF **Thorofare Moun** 83.87 11 *e*P P 13 53 27.7 -0.9
comp=Z,26nm,0.8s,mb5.0
CHUM **Lake Minchumin** 83.93 10 *e*P P 13 53 27.2 -1.7
comp=Z,24nm,1.1s,mb4.8
J15A **Blackfoot** 83.93 40 ⇑P P 13 53 30.3 +0.9
baz=84,SNR=21
NEW **Newport** 83.96 35 P P 13 53 26.1 -3.3
NEW pmax pmax
comp=Z,7.0nm,1.0s
NEW **Newport** 83.96 35 P P 13 53 26.1 -3.3
comp=Z,7.2nm,1.0s,mb4.4
H14A **Leadore** 84.02 39 ⇑P P 13 53 30.3 +0.4
baz=84,SNR=10
F13A **Darby** 84.10 38 ⇓P P 13 53 29.5 -0.7
baz=84,SNR=9.0
K16A **Soda Springs** 84.16 41 ⇓P P 13 53 30.9 +0.4
baz=84,SNR=10
A10A **Northport** 84.16 34 ⇓P P 13 53 29.8 -0.6
baz=84,SNR=5.3
C11A **Tepee Creek (N** 84.19 35 ⇓P P 13 53 29.8 -0.7
baz=84
I15A **Monteview** 84.22 40 ⇑P P 13 53 31.3 +0.5
baz=84
P19A **Cripple Cowboy** 84.22 45 ⇓P P 13 53 30.9 -0.1
baz=84,SNR=11
D12A **Red Ives Fores** 84.23 36 ⇓P P 13 53 30.4 -0.5
baz=84
G14A **Jackson** 84.31 39 ⇓P P 13 53 31.2 -0.1
baz=84
BPAW **Bear Paw Mtn.** 84.35 10 *e*P P 13 53 29.3 -1.7
comp=Z,13nm,1.2s,mb4.5
BPAW *e* 13 53 45.2
J16A **Bone** 84.37 41 ⇑P P 13 53 32.1 +0.4
baz=84,SNR=7.5
MCK **McKinley** 84.38 11 *e*P P 13 53 30.3 -0.9
MCK pmax pmax
comp=Z,57nm,1.0s,mb5.3
MCK **McKinley** 84.38 11 *e*P P 13 53 30.3 -0.9
comp=Z,57nm,1.0s,mb5.2
N18A **Larsen Ranch,** 84.43 44 ⇓P P 13 53 32.4 +0.4
baz=85,SNR=6.6
MCMT **McKenzie Canyo** 84.45 39 *e*P P 13 53 32.0 0.0
O19A **Miners Draw (B** 84.46 44 ⇑P P 13 53 31.8 -0.4
baz=85,SNR=9.9
H15A **Lima** 84.46 39 ⇑P P 13 53 32.7 +0.7
baz=85,SNR=9.8
B11A **Sandpoint** 84.47 35 ⇑P P 13 53 31.8 -0.2
baz=85
MAW **Mawson** 84.48 199 *e*P P 13 53 32.3 +0.5
comp=Z,2.5nm,0.6s,mb4.1
MAW **Mawson** 84.48 199 P P 13 53 31.9 0.0
comp=Z,2.7nm,0.5s,mb4.2,baz=127,slow=8.9,SNR=7.9
MAW **Mawson** 84.48 199 *e*P P 13 53 32.3 +0.5
MAW pmax pmax
comp=Z,3.0nm,0.6s
HYT **Haines Junctio** 84.52 17 *e*P P 13 53 34.7 +2.8
C12B **Naegeli Ranch,** 84.54 36 ⇓P P 13 53 32.2 -0.2
baz=85
E13A **Victor** 84.55 37 ⇓P P 13 53 32.1 -0.3
baz=85,SNR=7.7
RRI2 **Red Ridge** 84.59 41 *e*P P 13 53 32.7 -0.1
comp=Z,20nm,1.1s,mb4.8
N19A **John Jarvie Ra** 84.72 44 ⇑P P 13 53 33.0 -0.4
baz=85
D13A **Huson** 84.76 37 ⇓P P 13 53 33.5 0.0
baz=85,SNR=6.8
I16A **Newdale** 84.77 40 ⇑P P 13 53 33.8 +0.2
baz=85,SNR=10
A11A **Hall Mountain,** 84.78 34 ⇓P P 13 53 33.5 0.0
baz=85
G15A **Dillon** 84.85 39 ⇑P P 13 53 33.8 -0.2
baz=85,SNR=9.0
DLMT **Dillon** 84.89 39 *e*P P 13 53 34.0 -0.1
comp=Z,9.7nm,1.1s,mb4.5
REDW **Red Top Meadow** 84.89 41 *e*P P 13 53 33.9 -0.4
comp=Z,13nm,1.1s,mb4.6
TPAW **Teton Pass** 84.90 41 *e*P P 13 53 34.0 -0.2
comp=Z,14nm,1.1s,mb4.6
E14A **Clinton** 84.94 38 ⇓P P 13 53 34.1 -0.3
baz=85
SNOW **Snow King Moun** 85.01 41 *e*P P 13 53 34.1 -0.7
comp=Z,21nm,1.0s,mb4.8
DLBC **Dease Lake** 85.02 22 *e*P P 13 53 32.2 -2.3
C13A **Hot Springs** 85.02 36 ⇑P P 13 53 34.9 +0.1
baz=85
IMW **Indian Meadow** 85.12 41 *e*P P 13 53 35.5 +0.1
comp=Z,12nm,1.0s,mb4.6
LOHW **Long Hollow** 85.18 41 *e*P P 13 53 34.2 -1.4
comp=Z,5.8nm,1.1s,mb4.2
F15A **Butte** 85.21 38 ⇓P P 13 53 35.4 -0.3
baz=85
D14A **Greenough** 85.29 37 ⇑P P 13 53 35.7 -0.4
baz=86
QLMT **Earthquake Lak** 85.30 40 *e*P P 13 53 36.8 +0.5
CHMT **Chamberlain Mo** 85.35 37 *e*P P 13 53 35.7 -0.8
H16A **Russell Place,** 85.35 40 ⇓P P 13 53 37.1 +0.6
baz=86,SNR=8.9
PDAR **Pinedale Array** 85.41 42 P P 13 53 36.2 -0.6
comp=Z,7.1nm,0.9s,mb4.4,baz=209,slow=2.7,SNR=29
E15A **Deer Lodge** 85.43 38 ⇓P P 13 53 36.5 -0.4
baz=86
C14A **Swan Lake** 85.54 36 ⇓P P 13 53 36.4 -0.9
baz=86
BOZ **Bozeman (W)** 85.61 39 *e*P P 13 53 37.2 -0.6
BOZ pmax pmax
comp=Z,12nm,1.4s,mb4.4
BOZ **Bozeman (W)** 85.61 39 ⇓P P 13 53 37.4 -0.4
baz=86
BOZ **Bozeman (W)** 85.61 39 *e*P P 13 53 37.2 -0.5
comp=Z,12nm,1.4s,mb4.4
BOZ pP pP 13 54 12.1 -4.1
COLA **College** 85.61 11*c i*P P 13 53 36.8 -0.5
COLA **College** 85.61 11 *e*P P 13 53 36.5 -0.8
comp=Z,94nm,0.8s,mb5.6
SDCO **Great Sand Dun** 85.73 48 *e*P P 13 53 37.8 -0.8
comp=Z,1.4nm,0.8s,mb3.7
IMA2 **Indian Mountai** 85.78 8 *e*P P 13 53 38.1 0.0
A13A **Flathead Natio** 85.82 35 ⇑P P 13 53 38.1 -0.6
baz=86
D15A **Lincoln** 85.84 37 ⇑P P 13 53 38.4 -0.4
baz=86
WALA **Waterton Lakes** 86.16 35 *e*P P 13 53 38.8 -1.6
comp=Z,65nm,2.0s,mb5.0
RWWY **Rawlins** 86.40 44 *e*P P 13 53 41.1 -0.6
comp=Z,6.5nm,0.9s,mb4.4
DAWY **Dawson** 86.71 15 *e*P P 13 53 42.7 0.0
EGAK **Eagle** 86.90 14 *e*P P 13 53 43.0 -0.6
comp=Z,40nm,1.1s,mb5.2
JCT **Junction City** 86.92 57 *e*P P 13 53 44.0 -0.5
JCT pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
JCT **Junction City** 86.92 57 *e*P P 13 53 44.0 -0.5
comp=Z,9.5nm,0.8s,mb4.7
BILL **Bilibino** 87.38 353*d i*P P 13 53 45.6 -0.3
BILL pmax pmax
comp=Z,24nm,0.7s,mb5.1
BILL **Bilibino** 87.38 353 *e*P P 13 53 45.4 -0.5
comp=Z,32nm,0.9s,mb5.2
GYA **Guiyang** 88.35 298 P P 13 53 52.3 +0.8
GYA AP pP 13 54 31.9 +1.7
GYA XP sP 13 54 48.6 +2.3
GYA PP PP 13 57 25.2 +3.7
GYA SKS 14 04 04.6
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
GYA AMB AMB
comp=Z,80nm,5.3s
HIA **Hailar** 88.87 323 *e*P P 13 53 54.3 +1.0
SYO **Syowa Base** 89.34 192⇑ *e*P P 13 53 53.4 -1.9
SYO **Syowa Base** 89.34 192⇓ *e*PcP PcP 13 53 55.5 -1.1
XAN **Xi'an** 89.39 306 P P 13 53 56.4 +0.3
XAN AP pP 13 54 34.3 -0.6
XAN XP sP 13 54 50.3 -0.7
XAN PP PP 13 57 29.8 +0.2
XAN S S 14 04 34.5 +1.2
XAN XS sS 14 05 40.9 +0.3
XAN SS SS 14 10 35.1 +2.6
XAN AMB AMB
comp=Z,11nm,1.3s,mb4.6
XAN AMB AMB
comp=Z,50nm,7.2s
RSSD **Black Hills** 89.59 43 *e*P P 13 53 56.1 -0.7
RSSD pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
RSSD **Black Hills** 89.59 43 *e*P P 13 53 56.1 -0.7
comp=Z,4.8nm,0.8s,mb4.5
SNAA **Sanae** 89.91 177 *e*P P 13 53 57.2 -0.7
SNAA **Sanae** 89.91 177 *e*P P 13 53 56.4 -1.5
SNAA pmax pmax
comp=Z,5.0nm,1.3s
SNAA **Sanae** 89.91 177 *e*P P 13 53 56.4 -1.5
comp=Z,4.9nm,1.3s,mb4.3
VNA3 **Neumayer Olymp** 89.92 175 *e*P P 13 53 57.4 -0.6
HHC **Hu-ho-hao-te** 90.17 313 *e*P P 13 53 59.0 -0.6
HHC AP pP 13 54 38.1 -0.3
HHC XP sP 13 54 54.5 0.0
HHC PP PP 13 57 37.4 +1.7
HHC SKS 14 04 13.6
HHC S S 14 04 36.7 -3.6
HHC XS sS 14 05 46.6 -1.0
HHC AMB AMB
comp=Z,18nm,0.6s,mb5.2
HHC AMB AMB
comp=Z,64nm,6.9s
HHC LR LR
comp=N,139nm,17.7s
HHC LR LR
comp=E,157nm,16.9s
HHC LR LR
comp=Z,92nm,17.3s
CLNS **Chul'man** 90.30 331 *e*P P 13 54 00.0 +0.2
CLNS pmax pmax
comp=Z,30nm,1.2s,mb5.1
CLNS pmax pmax
comp=E,15nm,1.1s
CLNS pmax pmax
comp=N,16nm,1.3s
VNA2 **Neumayer--Watz** 90.40 176 *e*P P 13 54 00.1 -0.1
VNA2 *e* 13 54 08.0
VNA1 **Neumayer--Stat** 90.60 176 *e*P P 13 54 01.8 +0.6
VNA1 *e* 13 54 10.0
KMI **Kunming** 91.20 296 P P 13 54 06.2 +1.4
KMI AP pP 13 54 45.3 +1.7
KMI XP sP 13 55 02.1 +2.5
KMI PP PP 13 57 47.0 +2.9
KMI S S 14 04 50.3 0.0
KMI AMB AMB
comp=Z,6.0nm,0.8s,mb4.7
KMI AMB AMB
comp=Z,43nm,6.8s
KMI LR LR
comp=N,93nm,16.8s
KMI LR LR
comp=E,88nm,14.0s
KMI LR LR
comp=Z,80nm,17.5s
YAK **Yakutsk** 91.42 337 *e*P P 13 54 03.3 -1.6
YAK pmax pmax
comp=Z,16nm,0.9s,mb5.0
YAK pmax pmax
comp=N,2.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.4s
YAK **Yakutsk** 91.42 337 *e*P P 13 54 04.0 -0.9
comp=E,12nm,0.8s,mb5.0
CD2 **Chengdu** 92.31 302 *e*P P 13 54 09.2 -0.6
CD2 AP pP 13 54 48.5 -0.1
CD2 XP sP 13 55 05.8 +1.1
CD2 PP PP 13 57 54.9 +2.1
CD2 SKS 14 04 25.4
CD2 S S 14 04 55.8 -4.3
CD2 XS sS 14 06 08.2 +0.5
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CD2 AMB AMB
comp=Z,40nm,9.2s
CMAR **Chiang Mai Arr** 92.36 289 P P 13 54 12.2 +1.9
comp=Z,3.6nm,1.0s,mb4.4,baz=105,slow=3.0,SNR=17
YKA **Yellowknife Ar** 93.42 24 P P 13 54 14.7 +0.6
comp=Z,1.5nm,0.8s,mb4.2,baz=243,slow=4.0,SNR=3.7
YKA LR LR 14 31 12.9
comp=Z,25nm,18.9s,baz=100,slow=32
LZH **Lanzhou** 94.01 307 *e*P P 13 54 19.5 +2.0
LZH AP pP 13 54 58.6 +2.3
LZH XP sP 13 55 16.4 +4.0
LZH *e*PP PP 13 58 11.3 +5.4
LZH SKS 14 04 37.8
LZH *e*S S 14 05 13.7 -1.0
LZH XS sS 14 06 25.0 +2.4
LZH AMB AMB
comp=Z,17nm,1.1s,mb5.1
LZH AMB AMB
comp=Z,83nm,9.3s
LZH LR LR
comp=E,135nm,18.0s
LZH LR LR
comp=Z,173nm,20.0s
ULN **Ulaanbaatar** 95.87 319⇑ *e*P P 13 54 27.6 +1.9
SONM **Songino Array** 96.27 318 P P 13 54 29.8 +2.3
comp=Z,0.3nm,0.6s,mb3.8,baz=104,slow=4.6,SNR=2.9
MKAR **Makanchi Array** 112.03 314 PKiKP PKiKP 13 59 33.0 -0.7
comp=Z,3.0nm,0.6s,baz=67,slow=1.2,SNR=29
KURK **Kurchatov** 114.58 318*c i*PKiKP PKiKP 13 59 37.6 -0.8
TKM2 **Tokmak 2** 116.63 309 *e*PKiKP PKPdf 13 59 41.8 -0.8
UCH **Uchtor** 117.42 309 *e*PKPdf PKPdf 13 59 44.7 +0.5
AML **Almayashu** 118.03 308 *e*PKPdf PKPdf 13 59 45.8 +0.4
KBL **Kabul** 121.59 300 *e*PKIKP PKPdf 13 59 52.7 +0.3
SVE **Sverdlovsk** 124.03 327 *e*PKIKP PKPdf 13 59 56.7 +0.3
SVE pmax pmax
comp=Z,12nm,0.9s
ARU **Arti** 125.24 327 *i* PKIKP PKPdf 13 59 58.6 -0.1
ARU 14 01 47.1
ARU **Arti** 125.24 327 *e*PKPdf PKPdf 13 59 58.3 -0.5
ARCES **ARCESS Array B** 127.45 351 PKP PKPdf 14 00 02.2 -0.4
comp=Z,7.5nm,0.9s,baz=6.3,slow=1.8,SNR=23
JOF **Joensuu** 132.09 344 *ep* PKPdf 14 00 11.6 0.0
comp=Z,1.1nm,0.4s
KAF **Kangasniemi** 133.99 346 *ep* PKPdf 14 00 15.4 +0.2
comp=Z,1.4nm,0.4s
OBN **Obninsk** 136.36 334⇑ *i*PKIKP PKPdf 14 00 23.0 +3.2
OBN *e* 14 07 16.2
OBN pmax pmax
comp=Z,6.0nm,0.7s
NOA **NORSAR Array B** 137.28 356 PKhKP 14 00 16.8
comp=Z,1.0nm,0.8s,baz=15,slow=1.7,SNR=3.4
AKASG **Malin Array Be** 142.62 335 PKP PKPdf 14 00 27.0 -4.3
comp=Z,2.8nm,0.5s,baz=39,slow=3.9,SNR=18
KMBO **Kilima Mbogo** 142.99 242 PKP PKPdf 14 00 31.5 -1.7
comp=Z,5.7nm,1.0s,baz=78,slow=4.5,SNR=8.4
KMBO **Kilima Mbogo** 142.99 242 *e*PKPdf PKPdf 14 00 31.2 -2.0
SIM **Simferopol'** 144.30 324 PKIKP PKPdf 14 00 34.1 -0.4
SIM 14 04 01.0
SIM pmax pmax
comp=Z,16nm,0.5s

BSEG **Bad Segeberg** 144.40 355 *e*PKPbc PKPdf 14 00 33.5 -0.9
MALT **Malatya** 145.03 311⇓ *i*P PKPbc 14 00 37.8 +2.1
MALT **Malatya** 145.03 311 *e*PKPdf PKPdf 14 00 36.9 +1.0
LVV **L'vov** 145.29 339⇓ *i*PKP2 PKPab 14 00 36.0 -0.4
KIS **Kishinev** 145.60 331 *e*PKP PKPdf 14 00 37.0 +0.3
NRDL **Niedersach Rie** 145.84 355 *e*PKPbc PKPbc 14 00 38.0 +0.3
KWP **Kalwaria** 145.90 340 *e*PKP PKPdf 14 00 38.5 +1.4
KWP **Kalwaria** 145.90 340⇑ *i*P PKPdf 14 00 38.5 +1.4
KWP **Kalwaria** 145.90 340 *e*PKP PKPdf 14 00 38.5 +1.4
OJC **Ojcow** 146.26 343 *e*PKIKP PKPdf 14 00 38.1 +0.4
CLZ **Clausthal** 146.47 354 *e*PKPbc PKPbc 14 00 40.2 +0.6
KSP **Ksiaz** 146.54 347 *e*PKP PKPdf 14 00 40.7 +2.6
KSP **Ksiaz** 146.54 347⇑ *i*PKP PKPdf 14 00 40.6 +2.5
STHS **Stebnicka Huta** 146.56 341 *e*PKP2 PKPab 14 00 42.6 +1.4
STHS **Stebnicka Huta** 146.56 341 *e*PKP PKPab 14 00 42.6 +1.4
STHS **Stebnicka Huta** 146.56 341 *e*P PKPab 14 00 42.6 +1.4
KOLS **Kolonicke sedl** 146.65 339 *e*PKP PKPdf 14 00 38.8 +0.4
CLL **Collm** 146.67 351 *e*PKPbc PKPbc 14 00 40.5 +0.3
CLL **Collm** 146.67 351⇑ *i*PKPbc PKPbc 14 00 40.6 +0.4
comp=Z,71nm,0.9s
NIE **Niedzica** 146.84 342 *e*PKP PKPbc 14 00 41.9 +1.2
UZH **Uzhgorod** 146.90 339⇓ *i*PKP2 PKPab 14 00 41.3 -1.3
UPC **Upice** 146.91 347 *e*PKP PKPbc 14 00 41.7 +0.8
TLCR 146.93 329⇓ *i*P PKPbc 14 00 41.8 +0.7
TLCR 146.93 329 P PKPbc 14 00 42.2 +1.1
CRVS **Cervenica-Dubn** 146.94 340 *e*PKP PKPdf 14 00 40.8 +1.9
BRG **Berggiesshubel** 146.95 350 *e*PKPbc PKPbc 14 00 41.4 +0.4
BRG **Berggiesshubel** 146.95 350 *e*PKP PKPdf 14 00 39.5 +0.7
comp=Z,14nm,1.4s
BRG *i* 14 00 41.5
comp=Z,41nm,1.1s
DPC **Dobruska-Polom** 147.00 347 *e*PKP PKPdf 14 00 40.2 +1.3
DPC *ex* x 14 00 42.1
DPC *e*PKP PKPbc 14 00 42.5 +1.4
DPC **Dobruska-Polom** 147.00 347 *e*PKP PKPdf 14 00 40.2 +1.3
DPC *e* 14 00 42.1
DPC *e* 14 00 42.5
OKC **Ostrava-Krasne** 147.05 345 *e*PKP PKPdf 14 00 39.6 +0.6
OKC *ex* x 14 00 42.0
BUG **Bochum--Univer** 147.07 358 *e*PKPbc PKPbc 14 00 41.4 +0.1
PVCC **Panska Ves** 147.17 349 *e*PKP PKPbc 14 00 42.0 +0.4
TRPA **Tarpa** 147.25 338⇓ *i*P PKPbc 14 00 42.7 +0.8
MORC **Moravsky Berou** 147.25 345⇓ *i*P PKPbc 14 00 42.8 +0.9
MORC **Moravsky Berou** 147.25 345 *e*PKPbc PKPbc 14 00 42.5 +1.2
VRI **Vrincioaia** 147.41 332⇓ *i*P PKPbc 14 00 43.4 +1.0
VRI **Vrincioaia** 147.41 332 P PKPbc 14 00 43.2 +0.8
PLOR **Plostina** 147.45 332⇓ *i*P PKPbc 14 00 43.8 +1.3
MOX **Moxa** 147.51 352 *e*PKP PKPbc 14 00 42.9 +0.4
comp=Z,37nm,1.4s
MOX **Moxa** 147.51 352 *e*PKPbc PKPbc 14 00 42.6 +0.1
UBBA **Unterbreizbach** 147.51 354 *e*PKPbc PKPbc 14 00 42.5 0.0
KECS **Kecovo** 147.62 341 *i* PKP PKPbc 14 00 43.2 +0.3
TIRR **Tirgusor** 147.65 328⇓ *i*P PKPbc 14 00 43.9 +0.8
TIRR **Tirgusor** 147.65 328 *e*PKPbc PKPbc 14 00 42.2 -0.9
PRU **Pruhonice** 147.69 349 *e*PKP PKPbc 14 00 43.5 +0.5
HARR **Harsova** 147.72 329⇓ *i*P PKPbc 14 00 44.3 +1.0
HARR **Harsova** 147.72 329 P PKPbc 14 00 44.6 +1.3
UCC **Uccle** 147.75 1 PKPbc PKPbc 14 00 44.2 +1.1
BEBN **Eben Emael** 147.76 359 PKPbc PKPbc 14 00 44.6 +1.4
BEBN PKPab PKPab 14 00 46.2 +0.3
VRAC **Vranov** 147.91 346⇓ *i*P PKPbc 14 00 44.7 +1.0
VRAC **Vranov** 147.91 346 P PKPbc 14 00 44.6 +1.0
MEM **Membach** 147.94 359 PKPbc PKPbc 14 00 44.0 +0.3
MEM PKPab PKPab 14 00 47.6 +1.0
MLR **Muntele Rosu** 148.04 332⇓ *i*P PKPbc 14 00 45.1 +1.0
MLR **Muntele Rosu** 148.04 332 P PKPbc 14 00 44.9 +0.7
ANTO **Ankara** 148.08 318⇑ *i*P PKPbc 14 00 45.7 +1.3
ANTO **Ankara** 148.08 318 *e*PKPbc PKPbc 14 00 45.2 +0.8
VYHS **Vyhne** 148.09 343 *e*PKP PKPbc 14 00 44.8 +0.7
BCLA **Clavier** 148.13 360 PKPbc PKPbc 14 00 44.4 +0.2
BCLA PKPab PKPab 14 00 47.5 +0.1
KOLL **Kolacno** 148.14 343 *e*PKP PKPbc 14 00 44.7 +0.4
TREC **Trest** 148.17 347 *e*PKP PKPbc 14 00 44.7 +0.4
TNS **Taunus Mts** 148.23 356 *e*PKPbc PKPbc 14 00 45.1 +0.7
ROTZ **Rotzenmuhle** 148.29 351 *e*PKPbc PKPbc 14 00 45.4 +0.8
PSZ **Piszkesteto** 148.30 341⇑ *e* PKPbc 14 00 45.4 +0.7
PSZ **Piszkesteto** 148.30 341⇓ *i*P PKPbc 14 00 45.5 +0.8
PSZ **Piszkesteto** 148.30 341 *e*PKPbc PKPbc 14 00 45.0 +0.3
DRGR 148.32 337⇑ *i*P PKPbc 14 00 45.3 +0.5
DRGR 148.32 337 P PKPbc 14 00 45.6 +0.8
GIVF **Givet** 148.45 1⇑ *i*PKP1 PKPbc 14 00 45.4 +0.4
comp=Z,54nm,1.0s
DOU **Dourbes** 148.46 1 PKPbc PKPbc 14 00 45.4 +0.4
DOU PKPab PKPab 14 00 48.3 -0.5
VOIR 148.48 333⇓ *i*P PKPbc 14 00 46.6 +1.3
VOIR 148.48 333 P PKPbc 14 00 46.8 +1.5
BAIF **Baives** 148.49 1⇑ *i*PKP1 PKPbc 14 00 45.6 +0.5
comp=Z,84nm,1.2s
GRA1 **Grafenberg Arr** 148.50 353 *e*PKPbc PKPbc 14 00 45.9 +0.8
GRF **Grafenberg Arr** 148.50 353 *e*PKPbc PKPbc 14 00 45.9 +0.8
MODS **Modra-Piesok** 148.62 345 *i* PKP PKPbc 14 00 46.7 +1.2
KHC **Kasperske Hory** 148.69 349 *e*PKP PKPbc 14 00 46.4 +0.7
KHC *ex* x 14 00 50.0
ZST **Bratislava** 148.83 345 *e*PKP PKPbc 14 00 46.6 +0.6
WLF **Walferdange** 148.88 359 PKPbc PKPbc 14 00 47.3 +1.2
WLF **Walferdange** 148.88 359 *e*PKPbc PKPbc 14 00 47.0 +0.9
GEC2 **GERESS Array S** 148.95 349 *e*PKPbc PKPbc 14 00 46.6 +0.3
GERES **GERESS Array B** 148.95 349 PKPbc PKPbc 14 00 46.4 0.0
comp=Z,9.0nm,0.7s,baz=29,slow=3.0,SNR=40
BUD **Budapest** 148.95 342⇑ *e* PKPbc 14 00 47.0 +0.6
CONA **Conrad Observa** 149.38 346⇑ *i*P PKPbc 14 00 48.2 +0.8
comp=Z,49nm,1.4s
CSNA **Conrad Observa** 149.38 346⇑ *i*P PKPbc 14 00 48.2 +0.8
comp=Z,46nm,1.4s
FLN **La Foliniere** 149.44 7⇑ *i*PKP1 PKPbc 14 00 47.4 -0.1
comp=Z,35nm,0.8s
GZR **Gura Zlata** 149.46 335⇓ *i*P PKPbc 14 00 48.1 +0.4
GZR **Gura Zlata** 149.46 335 P PKPbc 14 00 48.2 +0.5
SGMF **Saint Gilles** 149.63 10⇑ *i*PKP1 PKPbc 14 00 47.7 -0.3
comp=Z,65nm,1.3s
LDF **La Druitiere** 149.65 7⇑ *i*PKP1 PKPbc 14 00 48.0 -0.1
comp=Z,103nm,1.4s
BZS **Buzias** 149.72 337⇑ *i*P PKPbc 14 00 48.7 +0.4
BZS **Buzias** 149.72 337 P PKPbc 14 00 48.7 +0.3
ZIMR 149.72 330 PKP2 PKPbc 14 00 49.9 +1.5
SZH **Strazhica** 149.74 329 *e*P PKPbc 14 00 48.0 -0.5
GRR **Gorron** 149.76 8⇑ *i*PKP1 PKPbc 14 00 48.3 0.0
comp=Z,30nm,0.7s
QUIF **Quistinic** 149.85 11 *e*PKP1 PKPbc 14 00 48.4 -0.2
FUR **Furstenfeldbru** 149.99 352 *e*PKPbc PKPbc 14 00 49.6 +0.7
MEZF **Maizieres J'vi** 150.05 0⇑ *i*PKP1 PKPbc 14 00 49.7 +0.7
comp=Z,64nm,0.9s
ARSA **Arzberg** 150.09 346⇑ *i*P PKPbc 14 00 49.4 +0.2
comp=Z,10nm,0.9s
CDF **Champ du Feu** 150.10 357⇑ *i*PKP1 PKPbc 14 00 49.6 +0.4
comp=Z,58nm,1.0s
BFO **Black Forest** 150.12 356 *e*PKPbc PKPbc 14 00 49.4 +0.2
CSS **Prodhromos** 150.17 309 *e*PKPbc PKPbc 14 00 49.7 0.0
PKSM **Moragy** 150.21 341⇓ *i*P PKPbc 14 00 49.3 -0.2
PKSM **Moragy** 150.21 341 ⇓P PKPbc 14 00 49.3 -0.2
ECH **Echery** 150.30 357 *e*PKIKP PKPbc 14 00 49.5 -0.1
ECH *e* 14 00 56.2
HAU **Haudompre** 150.54 359⇑ *i*PKP1 PKPbc 14 00 50.5 +0.3
comp=Z,47nm,0.8s
ISP **Isparta** 150.69 316⇓ *i*P PKPbc 14 00 50.3 -0.6
ISP **Isparta** 150.69 316 ⇓P PKPbc 14 00 50.2 -0.7
HINF **Hinteralfeld** 150.71 358⇑ *i*PKP1 PKPbc 14 00 50.7 +0.1
comp=Z,26nm,0.9s
RETA **Reutte** 150.72 352⇑ *i*P PKPbc 14 00 51.1 +0.4
comp=Z,30nm,1.6s
SOKA **Soboth** 150.75 346⇑ *i*P PKPbc 14 00 50.5 -0.2
comp=Z,24nm,1.1s
WATA **Walderalm** 150.76 351⇑ *i*P PKPbc 14 00 50.9 +0.1
comp=Z,21nm,1.1s
PERS **Pernice** 150.77 346 *e*PKPbc PKPbc 14 00 50.5 -0.3
PERS *i* PKPab PKPab 14 00 58.1 -0.2
MOTA **Moosalm** 150.81 352⇑ *i*P PKPbc 14 00 51.0 +0.1
comp=Z,27nm,1.1s
WTTA **Wattenberg** 150.82 351⇑ *i*P PKPbc 14 00 51.3 +0.4
comp=Z,28nm,0.9s
DAVA **Damuels** 151.02 353⇑ *i*P PKPbc 14 00 51.7 +0.3
comp=Z,44nm,1.0s
ABTA **Abfaltersbach** 151.18 350⇑ *i*P PKPbc 14 00 51.6 -0.1
comp=Z,58nm,1.2s
FETA **Feichten** 151.18 352 *i* P PKPbc 14 00 52.3 +0.5
comp=Z,24nm,0.8s,SNR=11
KDZ **Kurdzhali** 151.19 328 *e*P PKPbc 14 00 52.3 +0.3
LOR **Lormes** 151.27 2⇑ *i*PKP1 PKPbc 14 00 52.2 +0.3
comp=Z,59nm,1.1s
LJU **Ljubljana** 151.46 346 *e*PKPbc PKPbc 14 00 52.2 -0.2
SSF **Saint Saulge** 151.46 2⇑ *i*PKP1 PKPbc 14 00 52.7 +0.3
comp=Z,54nm,1.0s

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTS	Vitosha	151.54	331	eP	PKPbc	14 00 53.0	+0.3
MFF	Saint Martin d	151.60	8	⇑iPKP1	PKPbc	14 00 52.6	-0.1
	comp=Z,23nm,0.9s						
JAVS	Javornik	151.70	347	i PKPbc	PKPbc	14 00 52.8	-0.2
JAVS				i PKPab	PKPab	14 01 01.7	-0.5
AVF	Avril sur Loir	151.72	3	⇑iPKP1	PKPbc	14 00 52.8	-0.2
	comp=Z,24nm,0.9s						
BOJS	Bojanci	151.80	345	i PKPdf	PKPdf	14 00 47.4	+0.7
BOJS				i PKPbc	PKPbc	14 00 53.8	+0.6
BOJS				i PKPab	PKPab	14 01 02.9	+0.3
SMF	Signal de Mont	151.89	2	ePKP1	PKPbc	14 00 53.4	0.0
BGF	Bois d'Agland	151.93	4	⇑iPKP1	PKPbc	14 00 53.6	+0.1
	comp=Z,28nm,0.6s						
CABF	La Chapelle	151.94	359	⇑iPKP1	PKPbc	14 00 54.3	+0.8
	comp=Z,58nm,0.9s						
TCF	Toulx Ste Croi	152.16	5	⇑iPKP1	PKPbc	14 00 53.9	-0.1
	comp=Z,19nm,0.7s						
KKB	Krupnik	152.17	331	eP	PKPbc	14 00 54.0	-0.2
RJF	Les Rejaudoux	153.07	6	ePKP1	PKPbc	14 00 56.0	-0.1
KRUS	Krusevo	153.40	332	i PKI	PKPdf	14 00 52.3	+3.1
KRUS				i PKH	PKPbc	14 00 56.9	0.0
BNI	Bardonecchia	153.48	358	ePKIKP	PKPdf	14 00 50.0	+0.8
BNI				e		14 01 10.7	
ORIF	Oris-en-Rattie	153.63	359	ePKP1	PKPbc	14 00 57.8	+0.5
	comp=Z,24nm,1.1s						
VIVF	Saint-Julien-l	153.70	1	⇑iPKP1	PKPbc	14 00 57.9	+0.5
	comp=Z,23nm,1.0s						
MBDF	Montbardon	153.80	358	⇑iPKP1	PKPbc	14 00 58.2	+0.5
	comp=Z,10nm,0.7s						
LASF	Ste Croix	154.46	2	ePKP1	PKPbc	14 00 59.5	+0.4
SMRF	Simiane la Rot	154.58	359	ePKP1	PKPbc	14 01 00.1	+0.8
	comp=Z,42nm,1.2s						
EPF	Esparros	155.18	9	ePKP1	PKPdf	14 01 00.1	+8.5
ESDC	Sonseca Array	157.43	19	PKPab	PKPab	14 01 27.1	+0.3
	comp=Z,1.3nm,0.5s,baz=325,slow=3.2,SNR=12						
TOA0	Torodi Ar. Sit	173.69	147	ePKPdf	PKPdf	14 01 06.6	-2.0
TORD	Torodi Ar. Bea	173.69	147	PKP	PKPdf	14 01 07.5	-1.2
	comp=Z,2.0nm,0.8s,baz=336,slow=1.1,SNR=9.8						

*NEIC **06** 14:01:50.1, 1565N×6142W, h31km, MD3.5(TRN), After TRN.*

TRN 06 14:01:49.8, 1569N×6147W, h22km, MD3.5, 3C-13D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DWS	Wesley	0.20	129	⇑iP	Pb	14 01 57.7	+2.6
DWS				eS	Sb	14 02 01.1	+2.3
TBG	Guadaloupe-3	0.23	313	⇓iP	Pb	14 01 56.7	+1.0
TBG				⇓iS	Sb	14 02 00.2	+0.6
MGG	Marie-Galante	0.27	33	⇑iP	Pb	14 01 58.0	+1.8
MGG				⇑iS	Sb	14 02 02.8	+2.3
HMG	Houelmont	0.36	322	⇓eP	Pb	14 01 59.1	+1.4
MDN	Morne-Daniel	0.38	169	⇓iP	Pb	14 02 00.0	+2.1
MDN				eS	Sb	14 02 06.1	+2.6
SCG	Saint Claude	0.39	329	⇓iP	Pb	14 01 59.7	+1.6
BCG	Bois Riant Cap	0.42	340	eP	Pb	14 02 00.1	+1.5
DBCT	Belle View Cho	0.44	164	eP	Pb	14 02 01.1	+2.2
DPMT	Pointe Michel	0.44	168	⇓iP	Pb	14 02 01.2	+2.3
DPMT				eS	Sb	14 02 08.0	+2.9
DPMT	Pointe Michel	0.44	168	⇓iP	Pb	14 02 01.2	+2.3
DPMT				eS	Sb	14 02 07.5	+2.4
DSHT	Scott's Head	0.49	169	eP	Pb	14 02 01.3	+1.6
DSHT				eS	Sb	14 02 08.3	+1.8
LZG	Guadaloupe-1	0.53	327	⇓iP	Pb	14 02 01.9	+1.4
SFG	Saint Francois	0.62	25	eP	Pb	14 02 03.3	+1.4
DEG	La Desirade	0.73	33	eP	Pb	14 02 04.8	+0.9
FDF	Fort de France	1.00	162	eP	Pb	14 02 10.1	+1.6
FDF				eS	Sb	14 02 24.5	+3.3
FDF	Fort de France	1.00	162	ePn	Pn	14 02 10.1	+1.5
FDF				eSn	Sn	14 02 23.5	+1.5
MBRY		1.20	327	⇓iP	Pn	14 02 13.4	+2.1
MBRY				i S	Sn	14 02 30.4	+3.5
MBLG		1.22	327	⇓eP	Pn	14 02 13.6	+2.0
MBLG				eS	Sn	14 02 30.3	+2.8
MLYT	Lee's Yard	1.23	326	⇓iP	Pn	14 02 13.9	+2.2
MLYT				i S	Sn	14 02 30.9	+3.1
MBWH		1.25	327	⇓iP	Pn	14 02 13.8	+1.9
MBWH				eS	Sn	14 02 30.7	+2.5
MBGB		1.26	325	⇓iP	Pn	14 02 14.2	+2.0
MBGB				eS	Sn	14 02 31.2	+2.7
BPA	Boggy Peak	1.40	345	eP	Pn	14 02 15.9	+1.9
BPA				eS	Sn	14 02 34.0	+2.3

*IDC **06** 14:22:05.6±2.1, 151N×127.17E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/15, mbtmp3.7/4, Error ellipse: s-maj=171.7km s-min=25.8km az=66.0*
*ISCJB **06** 14:22:11.9±1.0, 10N±02×12637E±008, h54km±13km, mb3.7/4, Error ellipse: s-maj=32.0km s-min=9.0km az=20.6*

ISC 06 14:22:12.9±1.1, 10N±02×12633E±008, h41km±17km, n8, σ0s76/10, mb3.7/4, 1C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNE	Ternate	1.05	99	⇑eP	Pn	14 22 27.0	-4.2
TNE				eS	Sn	14 22 45.0	+0.4
MNI	Manado	1.57	288	⇓eP	Pn	14 22 37.0	-1.3
MNI				eS	Sn	14 22 58.5	+1.1
WRA	Warramunga Arr	22.20	160	P	P	14 27 05.5	-0.4
	0.7nm,0.3s,mb3.5,baz=340,slow=9.7,SNR=34						
WB2	Warramunga Arr	22.21	160	eP	P	14 27 05.5	-0.4
ASAR	Alice Springs	25.56	164	P	P	14 27 39.0	+0.9
	0.6nm,0.3s,mb3.6,baz=345,slow=11,SNR=19						
STKA	Stephens Creek	35.71	157	eP	P	14 29 07.5	-0.1
	1.8nm,1.8s,mb3.7						
STKA	Stephens Creek	35.71	157	P	P	14 29 08.0	+0.3
	0.8nm,0.5s,mb4.0,baz=341,slow=9.5,SNR=3.4						
MKAR	Makanchi Array	59.61	326	P	P	14 32 12.5	-0.2
	0.5nm,0.5s,mb3.8,baz=120,slow=8.5,SNR=3.6						

*ISCJB **06** 14:38:49.7±0.7, 934S±007×12401E±006, h108km±7km, mb4.7/25, Error ellipse: s-maj=14.4km s-min=5.6km az=39.2*
*IDC **06** 14:38:49.7±3.5, 904S×124.18E, h78km±37km, mb4.0/7, mb1 4.1/10, mb1mx3.9/17, mbtmp4.0/10, MS3.1/2, Ms1 3.2/2, ms1mx2.8/20, Error ellipse: s-maj=73.6km s-min=17.4km az=54.0*
*NEIC **06** 14:38:50.4±0.9, 932S×12404E, h93km±10km, mb4.3/8, Error ellipse: s-maj=15.0km s-min=6.1km az=52.0*
*DJA **06** 14:38:50, 960S×12353E, h127km, MLv3.9/2*

ISC 06 14:38:50.2±0.7, 926S±006×12410E±006, h93km±8km, n44, σ0s85/55, mb4.7/25, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	1.03	204	P	Pn	14 39 11.4	+0.9
	421nm,0.3s,baz=23,slow=3.5,SNR=557						
BATI				S	Sn	14 39 24.9	-0.8
	360nm,0.3s,baz=15,slow=12,SNR=48						
KAPI	Kappang	6.03	314	P	Pn	14 40 16.5	-0.5
	1.4nm,0.3s,baz=184,slow=7.2,SNR=6.7						
KAPI	Kappang	6.03	314	P	Pn	14 40 16.5	-0.5
KAKA	Kakadu	8.88	113	eP	Pn	14 40 59.5	+3.8
	13nm,0.2s						
KAKA				eS	Sn	14 42 35.1	+1.0
FITZ	Fitzroy Crossi	8.91	170	eP	Pn	14 40 55.2	-1.0
	29nm,0.3s						
FITZ				eS	Sn	14 42 27.9	-7.0
FITZ	Fitzroy Crossi	8.91	170	P	Pn	14 40 55.4	-0.8
	6.5nm,0.3s,baz=359,slow=11,SNR=283						
FITZ				S	Sn	14 42 28.3	-6.6
	20nm,0.3s,baz=136,slow=21,SNR=15						
MBWA	Marble Bar	12.55	199	ePn	Pn	14 41 45.4	-0.1
MBWA				eSn	Sn	14 43 46.7	-17
WRA	Warramunga Arr	14.52	138	P	Pn	14 42 10.9	-0.3
	2.0nm,0.3s,baz=313,slow=15,SNR=100						
WRA				S	Sn	14 44 42.5	-8.6
	3.2nm,0.3s,baz=310,slow=24,SNR=17						
WRAB	Tennant Creek	14.52	138	ePn	Pn	14 42 10.2	-0.9
	14nm,0.6s						
WRAB				eSn	Sn	14 44 43.1	-8.1
WB2	Warramunga Arr	14.52	138	eP	Pn	14 42 10.7	-0.6
WB2				eS	Sn	14 44 43.0	-8.3
KKM	Kota Kinabalu	17.11	332	ePn	Pn	14 42 46.3	+2.5
ASAR	Alice Springs	17.12	148	P	Pn	14 42 44.8	+1.0
	1.7nm,0.3s,baz=322,slow=11,SNR=92						
ASAR				S	S	14 45 47.0	-11
	1.6nm,0.3s,baz=317,slow=22,SNR=13						
KSM	Kuching	17.39	307	Pn	Pn	14 42 46.7	-0.4
COEN	Coen	19.26	106	eP	Pn	14 43 09.7	+0.3
COEN				eS	S	14 46 37.5	-3.3
FORT	Forrest	21.73	171	eP	P	14 43 37.1	+3.2
	26nm,1.3s,mb4.4						
FORT				eS	S	14 47 30.5	+1.5
PMG	Port Moresby	22.76	92	P	P	14 43 38.7	-6.4
	23nm,1.1s,mb4.4						
KLBR	Kellerberrin	22.99	194	eP	P	14 43 47.7	+0.6
	24nm,1.2s,mb4.4						
KLBR				eS	S	14 47 54.2	+3.9
CTA	Charters Tower	23.95	119	LR	LR	14 53 38.9	
	comp=Z,70nm,19.9s,baz=230,slow=37						
STKA	Stephens Creek	27.75	147	eP	P	14 44 35.1	+4.9
	2.0nm,0.9s,mb3.6						
STKA				eS	S	14 49 50.6	+45
STKA	Stephens Creek	27.75	147	P	P	14 44 34.0	+3.9
	2.3nm,0.7s,mb3.8,baz=300,slow=7.5,SNR=5.1						
CMAR	Chiang Mai Arr	37.08	318	P	P	14 45 52.2	+0.5
	2.9nm,0.7s,mb4.3,baz=145,slow=6.9,SNR=23						
CMAR				LR	LR	15 01 55.7	
	comp=Z,19nm,18.8s,baz=65,slow=38						
LSA	Lhasa	50.06	322	eP	P	14 47 37.1	+1.3
	5.3nm,0.6s,mb4.7						
ODAN	Odare	50.57	316	eP	P	14 47 39.2	-0.4
	11nm,0.6s,mb5.1						
TAPN	Taplejung	50.67	317	eP	P	14 47 40.6	+0.2
	13nm,0.4s,mb5.3						
RAMN	Ramite	51.17	316	eP	P	14 47 44.2	+0.1
	25nm,0.5s,mb5.5						
JIRN	Jiri	51.90	316	eP	P	14 47 49.0	-0.6
	23nm,0.6s,mb5.4						
GUN	Gumba	52.27	316	eP	P	14 47 52.8	+0.5
	21nm,0.4s,mb5.5						
PKI	Pulchoki	52.38	316	eP	P	14 47 52.4	-0.7
	18nm,0.5s,mb5.4						
PKIN	Phulchoki	52.40	316	eP	P	14 47 52.2	-1.0
	20nm,0.5s,mb5.4						
KKN	Kakani	52.61	316	eP	P	14 47 54.6	-0.2
	7.2nm,0.4s,mb5.0						
DMN	Daman	52.62	315	eP	P	14 47 54.4	-0.5
	12nm,0.6s,mb5.1						
KOLN	Koldanda	53.77	314	eP	P	14 48 02.5	-0.8
	16nm,0.7s,mb5.2						
DANN	Dangsing	54.01	315	eP	P	14 48 04.5	-0.6
	44nm,0.5s,mb5.7						
SONM	Songino Array	58.97	346	P	P	14 48 40.2	+0.4
	0.7nm,0.6s,mb3.9,baz=165,slow=9.4,SNR=5.9						
MKAR	Makanchi Array	67.08	330	P	P	14 49 34.2	+0.5
	4.5nm,0.5s,mb4.6,baz=134,slow=7.6,SNR=39						
MKAR	Makanchi Array	67.08	330	P	P	14 49 34.2	+0.5
KBL	Kabul	67.88	313	eP	P	14 49 38.4	-0.5
	3.8nm,0.7s,mb4.3						
TKM2	Tokmak 2	68.16	324	eP	P	14 49 40.6	+0.1
	1.6nm,0.6s,mb4.0						
UCH	Uchtor	68.39	323	P	P	14 49 42.1	+0.2
EKS2	Erkin-Say	69.09	323	eP	P	14 49 46.8	+0.6
	2.4nm,1.0s,mb4.0						
ZALV	Zalesovo Beam	71.17	337	P	P	14 49 58.4	-0.4
	1.6nm,0.4s,mb4.2,baz=126,slow=5.5,SNR=10.0						
KURK	Kurchatov	71.54	331	P	P	14 50 00.6	-0.4
	3.2nm,0.7s,mb4.3,baz=144,slow=5.3,SNR=13						
AKTK	Aktyubinsk	82.36	324	P	P	14 51 01.9	+0.1
AKTO	Aktyubinsk	82.36	324	P	P	14 51 01.9	+0.1
	1.6nm,0.6s,mb4.0,baz=113,slow=5.9,SNR=7.2						

MAN 06 14:41:04, 1355N×12064E, h102km, mb4.0, ML2.8, MS2.5, Mindoro

*THE **06** 14:45:28.9, 40.16N×2051E, h2km, ML3.3*
*ISCJB **06** 14:45:29.2±0.8, 4005N±003×2052E±006, h9km±6km, Error ellipse: s-maj=7.6km s-min=5.0km az=21.5*
*ATH **06** 14:45:29.1, 40.11N×2055E, h25km±1km, MD3.3/5*
*NEIC **06** 14:45:29.4, 40.10N×2056E, h21km, MD3.3(ATH), After ATH.*
*CSEM **06** 14:45:29.0±0.2, 40.16N×2056E, h8km, MD3.3, Error ellipse: s-maj=4.8km s-min=2.6km az=159.0*

ISC 06 14:45:30.7±0.6, 4006N±003×2061E±006, h9km±5km, n16, σ1s04/27, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.45	155	ePN	Pg	14 45 39.3	-0.1
JAN				eSN	Sg	14 45 46.8	+1.5
MEV	Metsovon	0.55	120	ePg	Pg	14 45 41.5	0.0
IGT	Igoumenitsa	0.57	202	ePg	Pg	14 45 40.9	-0.9
KEK	Kerkira	0.71	241	ePN	Pn	14 45 42.6	-4.3
KEK				eSN	Sg	14 45 53.2	-0.5
KZN	Kozani	0.93	74	ePN	Pn	14 45 47.9	-2.0
KZN				eSN	Sn	14 46 01.4	-1.9
OHR	Ohrid	1.06	8	i Pg	Pg	14 45 51.4	+0.4
OHR				i Sg	Sg	14 46 05.5	+0.7
BIA	Bitola	1.10	30	i Pg	Pg	14 45 50.6	-1.3
BIA				i Sg	Sg	14 46 07.1	+0.9
BIA	Bitola	1.10	30	i Pg	Pg	14 45 50.5	-1.4
BIA				i Sg	Sg	14 46 07.1	+0.9
THL	Klokotos Trika	1.19	114	ePN	Pn	14 45 52.2	-1.4
THL				eSN	Sn	14 46 09.6	-0.3
KRUS	Krusevo	1.39	20	i Pn	Pn	14 45 56.4	+0.1
KRUS				i Sn	Sn	14 46 16.6	+1.8
EVR	Evrytania	1.48	140	ePN	Pn	14 45 57.1	-0.3
EVR	Evrytania	1.48	140	ePn	Pn	14 45 57.8	+0.4
EVR				eSn	Sn	14 46 18.3	+1.5
VLS	Valsamata	1.88	180	ePN	Pn	14 46 03.0	0.0
VLS				eSN	Sn	14 46 27.6	+0.7
VLS	Valsamata	1.88	180	ePn	Pn	14 46 04.0	+1.0
VLS				eSn	Sn	14 46 27.6	+0.7
VAY	Valandovo	1.95	49	i Pn	Pn	14 46 04.3	+0.3
VAY	Valandovo	1.95	49	i Pn	Pn	14 46 04.2	+0.2

*IDC **06** 15:10:55.1±1.7, 232S×13942E, h0km, mb4.0/6, mb1 4.3/8, mb1mx4.1/15, mbtmp4.2/8, MS3.2/2, Ms1 3.2/2, ms1mx2.7/20, Error ellipse: s-maj=46.6km s-min=13.2km az=91.0*
*NEIC **06** 15:10:56.9±1.0, 234S×139.17E, h10km, mb4.3/11, Error ellipse: s-maj=32.2km s-min=7.4km az=89.0*
*ISCJB **06** 15:10:58.0±1.0, 239S±006×1394E±02, h33km, mb4.2/13, MS3.1/2, Error ellipse: s-maj=28.5km s-min=8.6km az=178.8*

ISC 06 15:11:00.4±1.0, 240S±005×1393E±02, h35km, n28, σ1s07/30, mb4.2/13, MS3.1/2, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	12.29	213	eP	Pn	15 13 51.4	-1.7
	5.8nm,0.4s						
BATI	Baumata	17.37	243	P	Pn	15 15 02.6	+2.4
	2.5nm,0.3s,baz=98,slow=1.7,SNR=7.8						
WRAB	Tennant Creek	18.08	195	ePn	Pn	15 15 08.5	-0.4
	3.8nm,0.6s						
WB2	Warramunga Arr	18.09	195	eP	Pn	15 15 08.6	-0.5
WB2	Warramunga Arr	18.09	195	ePn	Pn	15 15 08.3	-0.8
WB2				eSn	Sn	15 18 21.2	-8.8
WRA	Warramunga Arr	18.09	195	P	Pn	15 15 09.1	0.0
	0.6nm,0.3s,baz=21,slow=11,SNR=31						
WRA				S	S	15 18 34.4	-0.5
	0.1nm,0.3s,baz=4.0,slow=23,SNR=4.5						
FITZ	Fitzroy Crossi	20.57	220	eP	P	15 15 34.4	-2.0
	4.3nm,0.6s						
FITZ	Fitzroy Crossi	20.57	220	P	P	15 15 38.4	+2.0
	3.0nm,0.9s,baz=58,slow=17,SNR=3.1						
FITZ				LR	LR	15 24 11.4	
	comp=Z,60nm,20.5s,MS3.0,baz=217,slow=38						
ASAR	Alice Springs	21.77	193	P	P	15 15 49.0	-0.3
	3.0nm,0.6s,mb3.9,baz=24,slow=10,SNR=49						
MBWA	Marble Bar	26.67	224	eP	P	15 16 36.5	+0.3
STKA	Stephens Creek	29.39	176	eP	P	15 17 01.5	+1.0
	1.6nm,0.7s,mb3.9						
STKA	Stephens Creek	29.39	176	P	P	15 17 01.6	+1.1
	1.7nm,0.7s,mb3.9,baz=1.4,slow=16,SNR=7.9						
STKA				LR	LR	15 28 43.0	
	comp=Z,56nm,20.4s,MS3.2,baz=26,slow=36						
STKA	Stephens Creek	29.39	176	eP	P	15 17 01.2	+0.7
	2.1nm,0.7s,mb4.0						
FORT	Forrest	30.16	200	eP	P	15 17 08.9	+1.6
	6.9nm,0.8s,mb4.4						
NACB	Ninganchiao	31.54	328	eP	P	15 17 16.9	-2.6
	18nm,0.7s,mb5.0						
NWAO	Narrogin (SRO)	36.75	212	P	P	15 18 05.0	+0.4
	4.2nm,0.8s,mb4.3						
CMAR	Chiang Mai Arr	44.81	299	P	P	15 19 10.8	-0.5
	2.6nm,0.9s,mb4.0,baz=120,slow=6.3,SNR=13						
ULN	Ulaanbaatar	57.44	335	P	P	15 20 42.3	-3.3
MK31	Makanchi Array	69.92	322	eP	P	15 22 07.7	-0.3
MKAR	Makanchi Array	69.92	322	P	P	15 22 08.6	+0.6
	3.4nm,0.9s,mb4.3,baz=116,slow=8.2,SNR=11						
MKAR	Makanchi Array	69.92	322	P	P	15 22 08.6	+0.6
ZALV	Zalesovo Beam	71.97	330	P	P	15 22 20.2	-0.1
	0.4nm,0.5s,mb3.6,baz=119,slow=5.6,SNR=3.8						
TKM2	Tokmak 2	72.74	316	eP	P	15 22 25.2	0.0
	2.4nm,0.7s,mb4.2						
UCH	Uchtor	73.25	315	eP	P	15 22 29.4	+1.2
	2.2nm,0.8s,mb4.1						
AML	Almayashu	73.80	315	eP	P	15 22 32.3	+0.9
	3.1nm,0.8s,mb4.3						
KURK	Kurchatov	73.81	325	eP	P	15 22 30.4	-0.8
	3.1nm,0.9s,mb4.2						
EKS2	Erkin-Say	73.91	316	P	P	15 22 32.6	+0.5
	2.5nm,0.9s,mb4.1						
KBL	Kabul	75.23	307	P	P	15 22 39.8	-0.1

*ISCJB **06** 15:43:47.7±0.5, 3569N±003×2889E±006, h33km, Error ellipse: s-maj=6.7km s-min=4.8km az=179.9*
*ATH **06** 15:43:49.3, 3591N×2869E, h44km±4km, MD3.2/3*
*CSEM **06** 15:43:49.4±0.3, 3589N×2867E, h20km, MD2.6, Error ellipse: s-maj=7.5km s-min=3.9km az=149.0*
*DDA **06** 15:43:52.0, 36.17N×2869E, h7km±6km, Md2.6*
*HLW **06** 15:43:56.4, 3526N×2865E, h35km, Mb3.4*

ISC 06 15:43:49.0±0.8, 3574N±003×2877E±005, h30km±8km, n15, σ1s09/25, 4C-1D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.71	312	eP	Pb	15 44 01.7	-1.2
ARG				eS	Sb	15 44 10.8	-1.5
AKAS	Kas	0.83	54	i P	Pb	15 44 06.5	+1.5
AKAS				i S	Sb	15 44 17.6	+1.7
TURN	Turunc	1.14	353	i P	Pn	15 44 07.1	-1.8
TURN				i S	Sn	15 44 23.1	-0.5
KARP	Karpathos	1.33	262	eP	Pn	15 44 12.1	+0.6
KARP				eS	Sn	15 44 28.8	+0.6
GOLH	Golhisar	1.62	23	i P	Pn	15 44 16.0	+0.4
GOLH				i S	Sn	15 44 34.5	-1.0
BDRM	Kayabasi	1.70	321	i P	Pn	15 44 18.1	+1.4
BDRM				i S	Sn	15 44 40.4	+3.0
DNZL	Cakiroluk	1.96	6	i P	Pn	15 44 20.2	0.0
DNZL				i S	Sn	15 44 43.4	-0.4
AYDN	Tasoluk	2.05	340	i P	Pn	15 44 21.3	-0.1
AYDN				i S	Sn	15 44 35.8	-10
NPS	Neapolis	2.62	260	eP	Pn	15 44 30.1	+0.7
NPS	Neapolis	2.62	260	eP	Pn	15 44 31.3	+1.9
HMAT	Matruh	4.84	197	⇑eP	Pn	15 44 59.5	-0.4
HMAT				S	Sn	15 45 47.3	-7.6
SLUM		5.18	216	⇑P	Pn	15 45 05.2	+0.7
SLUM				S	Sn	15 45 57.5	-5.7
AMAG	Maghara	6.30	143	⇑eP	Pn	15 45 19.1	-0.7
GLL	Jalalah	6.62	157	⇓eP	Pn	15 45 23.4	-0.9
SUZ		6.80	149	⇑eP	Pn	15 45 26.0	-0.8

*CSEM **06** 15:51:57.6±0.3, 3659N×4244E, h5km, MD3.1, Error ellipse: s-maj=13.5km s-min=7.9km az=17.0*

DDA 06 15:51:55.9, 3658N×4235E, h2km±1km, Md3.1, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSL	Mosul	0.66	116	i x	x	15 52 08.5	
MSL				i x	x	15 52 18.5	
HAKT	HAKKARI	1.46	48	i P	Pn	15 52 24.0	+0.8
HAKT				i S	Sb	15 52 44.2	+1.6
MARD	Mardin	1.46	301	i P	Pn	15 52 23.6	+0.5
MARD				i S	Sb	15 52 44.5	+1.8
BEST	Besiri	1.57	327	i P	Pn	15 52 25.7	+1.1
BEST				i S	Sn	15 52 48.9	+3.4
BHD	Baghdad	3.70	153	ex	x	15 52 53.0	
BHD				ex	x	15 53 38.0	
GZT	Gaziantep	3.91	283	i P	Pn	15 53 05.9	+9.0
GZT				i S	Sn	15 53 59.5	+16
AKCD	Akcadag	3.92	297	i P	Pn	15 53 00.2	+3.3
AKCD				i S	Sn	15 53 58.5	+15
AKCD	Akcadag	3.92	297	i P	Pn	15 53 00.2	+3.2
AKCD				i S	Sn	15 53 58.5	+15

*IGQ **06** 16:04:59.6, 143S×7781W, h212km±3km, Mb4.0, Ms3.8, Error ellipse: s-maj=4.6km s-min=2.8km az=39.3*
*ISCJB **06** 16:05:02.4±0.6, 132S±005×7800W±008, h200km±5km, mb3.6/2, Error ellipse: s-maj=13.0km s-min=8.1km az=166.4*
*IDC **06** 16:05:04.4±6.1, 159S×7848W, h242km±63km, mb3.3/2, mb1 3.5/4, mb1mx3.1/19, mbtmp3.4/4, Error ellipse: s-maj=80.8km s-min=48.6km az=50.0*

ISC 06 16:05:02.9±0.6, 132S±005×7799W±008, h199km±5km, n37, σ0s81/36, mb3.6/2, 10C-10D, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULBA	Ulba	0.43	253	⇑P	Pn	16 05 29.1	-0.5
ULBA	Ulba	0.43	253	⇑S	Sn	16 05 48.6	-1.6
RUN5	Runtun	0.44	258	⇑P	Pn	16 05 29.1	-0.5
RUN5	Runtun	0.44	258	⇑S	Sn	16 05 49.9	-0.4
PISA	Pisayambo	0.47	303	⇑P	Pn	16 05 29.8	+0.1
PISA	Pisayambo	0.47	303	⇑S	Sn	16 05 53.2	+2.7
RETU	Refugio	0.47	254	P	Pn	16 05 29.9	+0.1
PATA	Patacocha	0.48	248	⇑P	Pn	16 05 29.6	-0.2
PATA	Patacocha	0.48	248	⇑S	Sn	16 05 51.0	+0.5
JUI6	Juive	0.49	258	P	Pn	16 05 29.2	-0.6
ARRY	Arrayan	0.50	248	⇑P	Pn	16 05 29.3	-0.5
ARRY	Arrayan	0.50	248	⇑S	Sn	16 05 49.6	-1.0
IGUA	Igualata	0.67	255	P	Pn	16 05 30.8	+0.2
TAMB	Tambo	0.73	329	⇓P	Pn	16 05 31.1	+0.2
VC1	Cotopaxi 1	0.79	329	⇓P	Pn	16 05 31.6	+0.4
CAMI	Rancho Maria	0.82	321	⇓P	Pn	16 05 32.2	+0.8
ANTI	Antisana	0.88	349	⇓P	Pn	16 05 31.9	+0.1
QIL2	Quilotoa	1.03	296	P	Pn	16 05 34.1	+1.4
JUA2	San Juan 2	1.26	331	⇓P	Pn	16 05 34.8	+0.3
LAV3	Lava3-Reventad	1.27	16	P	Pn	16 05 33.7	-0.8
GGP	Refugio Guagua	1.29	332	⇓P	Pn	16 05 35.1	+0.4
CONE	Cono NE Rev Vo	1.29	16	⇓P	Pn	16 05 34.1	-0.7
TERV	Terraza Guagua	1.29	332	P	Pn	16 05 35.3	+0.6
PINO	Pino	1.31	332	⇓P	Pn	16 05 35.4	+0.5
CAYA	Cayambe	1.38	0	⇓P	Pn	16 05 36.0	+0.5
COTA	Cotacachi	1.68	348	⇓P	Pn	16 05 38.8	+0.6
MAG1	Magdalena	2.17	305	P	Pn	16 05 43.4	+0.3
MAG1	Magdalena	2.17	305	S	Sn	16 06 12.4	-2.0
JAMA	Jama	2.45	295	P	Pn	16 05 46.4	+0.2
JAMA	Jama	2.45	295	S	Sn	16 06 19.4	-0.5
CHIS	Cerro-Chispas-	2.75	276	P	Pn	16 05 50.0	+0.4
ATAH	Atahualpa	5.66	184	P	Pn	16 06 27.7	+1.9
	8.5nm,0.3s,baz=4.3,slow=7.2,SNR=36						
ATAH				S	Sn	16 07 31.3	0.0
	6.4nm,0.3s,baz=218,slow=6.6,SNR=9.9						
LPAZ	La Paz	17.77	147	P	Pn	16 08 57.9	-0.5
	0.8nm,0.3s,baz=333,slow=10.0,SNR=19						
SIV	San Ignacio	22.15	132	P	P	16 09 42.0	-0.7
	3.1nm,0.7s,mb4.0,baz=310,slow=9.5,SNR=20						
TORD	Torodi Ar. Bea	80.26	77	P	P	16 16 51.5	-0.7
	0.4nm,0.6s,mb3.2,baz=278,slow=7.0,SNR=4.2						
ASAR	Alice Springs	140.27	229	PKP	PKPdf	16 24 02.4	-6.5
	0.2nm,0.4s,baz=126,slow=3.6,SNR=7.6						
WRA	Warramunga Arr	141.90	235	PKP	PKPdf	16 24 09.1	-2.9
	0.4nm,0.6s,baz=113,slow=2.5,SNR=11						

IDC 06 16:05:31.4±2.1, 249N×12649E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.4/15, mbtmp3.4/3, Error ellipse: s-maj=176.6km s-min=24.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.59	161	P	P	16 10 43.9	-0.2
	1.3nm,0.7s,baz=340,slow=11,SNR=15						
ASAR	Alice Springs	26.98	165	P	P	16 11 15.3	+0.3
	0.3nm,0.8s,baz=345,slow=7.0,SNR=4.8						
MKAR	Makanchi Array	58.44	326	P	P	16 15 28.9	-0.1
	0.2nm,0.5s,baz=130,slow=8.1,SNR=2.8						

NEIC ***06*** *16:06:13.8, 3745N×2740E, h58^{km}, MD3.1(ISK), MD3.3(ATH), After ATH.*
ATH ***06*** *16:06:13.6, 3744N×2740E, h61^{km}±2^{km}*
CSEM ***06*** *16:06:16.5±0.1, 3726N×2701E, h2^{km}, MD3.1, Error ellipse: s-maj=2.1km s-min=1.8km az=40.0*
ISCJB ***06*** *16:06:17.1±0.8, 3724N±003×2700E±005, h1^{km}±7^{km}, Error ellipse: s-maj=6.4km s-min=4.9km az=4.9*
ISK ***06*** *16:06:17.5, 3725N×2707E, h3^{km}, MD3.1*
DDA ***06*** *16:06:23.7, 3714N×2753E, h7^{km}±6^{km}, Md3.1*
ISC 06 16:06:17.5±0.7**, 3725N**±003×**2699E**±004**, h1**^{km}±6^{km}**, n24, σ0^{s}89**/34**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.32**	**126**	ePG	**Pg**	**16 06 23.7**	**+0.2**
BODT				eSG	**Sg**	**16 06 28.2**	**+0.6**
BDRM	**Kayabasi**	**0.41**	**116**	i P	**Pg**	**16 06 25.1**	**-0.2**
BDRM				i S	**Sg**	**16 06 29.2**	**-1.2**
BDRM	**Kayabasi**	**0.41**	**116**	i P	**Pg**	**16 06 25.0**	**-0.2**
SMG	**Samos**	**0.48**	**345**	eP	**Pg**	**16 06 26.5**	**-0.1**
GCAM	**G?zelcaml?**	**0.49**	**23**	i P	**Pg**	**16 06 26.9**	**0.0**
GCAM				i S	**Sg**	**16 06 35.0**	**+1.6**
MLSB	**Milas**	**0.63**	**85**	ePG	**Pg**	**16 06 29.2**	**-0.4**
MLSB				eSG	**Sg**	**16 06 37.8**	**+0.1**
NISR	**Nisiros**	**0.64**	**170**	eP	**Pg**	**16 06 30.5**	**+0.7**
AYDN	**Tasoluk**	**0.82**	**59**	i P	**Pg**	**16 06 32.2**	**-1.0**
AYDN				i S	**Sg**	**16 06 44.2**	**+0.3**
YER	**Yerkesik**	**1.04**	**96**	ePG	**Pg**	**16 06 37.3**	**-0.1**
BLCB	**Balcova**	**1.14**	**2**	ePN	**Pn**	**16 06 39.5**	**-1.1**
BLCB				eSN	**Sn**	**16 06 56.4**	**-0.5**
IZM	**Izmir**	**1.17**	**11**	ePN	**Pn**	**16 06 40.3**	**-0.7**
APE	**Apeiranthos**	**1.18**	**262**	eP	**Pg**	**16 06 40.0**	**-0.1**
TURN	**Turunc**	**1.34**	**106**	eP	**Pg**	**16 06 38.7**	**-4.5**
TURN				i S	**Sg**	**16 06 54.1**	**-6.5**
ARG	**Arkhangelos**	**1.38**	**138**	eP	**Pn**	**16 06 37.5**	**-6.3**
SANT	**Santorini**	**1.51**	**235**	ePn	**Pn**	**16 06 44.9**	**-0.8**
SANT				eSn	**Sn**	**16 07 07.4**	**+1.5**
SANT	**Santorini**	**1.51**	**235**	ePn	**Pn**	**16 06 44.9**	**-0.8**
SANT				eSn	**Sn**	**16 07 07.4**	**+1.5**
KARP	**Karpathos**	**1.70**	**175**	eP	**Pn**	**16 06 45.2**	**-3.1**
KARP	**Karpathos**	**1.70**	**175**	eP	**Pn**	**16 06 46.5**	**-1.8**
AKS	**Akhisar**	**1.75**	**21**	ePN	**Pn**	**16 06 49.4**	**+0.4**
KULA	**Kula-Manisa**	**1.83**	**46**	ePN	**Pn**	**16 06 49.9**	**-0.2**
PRK	**Paraskevi**	**2.08**	**344**	eP	**Pn**	**16 06 46.5**	**-7.0**
KHL	**Karahalli**	**2.28**	**61**	ePN	**Pn**	**16 06 56.8**	**+0.6**
AKAS	**Kas**	**2.33**	**115**	eP	**Pn**	**16 06 59.5**	**+2.5**
AKAS				eS	**Sn**	**16 07 34.8**	**+8.6**
ELL	**Elmali**	**2.39**	**101**	ePN	**Pn**	**16 06 58.0**	**+0.3**

ISK ***06*** *16:19:51.2, 3746N×4404E, h5^{km}, MD3.1*
CSEM ***06*** *16:19:53.6±0.6, 3764N×4393E, h2^{km}, MD3.2, Error ellipse: s-maj=15.7km s-min=6.3km az=109.0*
DDA ***06*** *16:19:56.9, 3753N×4376E, h5^{km}±5^{km}, Md3.2*
ISC 06 16:19:48.3±1.6**, 3749N**±007×**4430E**±008**, h10**^{km}**, n14, σ1^{s}35**/22**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.46**	**281**	ePG	**Pg**	**16 19 57.3**	**+0.1**
HKR				eSG	**Sg**	**16 20 02.6**	**-0.6**
HAKT	**HAKKARI**	**0.48**	**278**	i P	**Pg**	**16 19 57.7**	**+0.1**
HAKT				i S	**Sg**	**16 20 03.8**	**-0.2**
VANT	**Van**	**1.20**	**323**	ePN	**Pn**	**16 20 13.8**	**+2.8**
VANT				eSN	**Sn**	**16 20 31.3**	**+4.0**
SIRT	**Sirnak**	**1.48**	**271**	ePN	**Pn**	**16 20 16.9**	**+1.9**
MSL	**Mosul**	**1.54**	**219**	i x	x	16 20 21.0	
MSL				i x	x	16 20 40.0	
CLDR	**Caldiran**	**1.68**	**350**	ePN	**Pg**	**16 20 22.9**	**+2.4**
AGRB	**Hanur-Agry**	**2.32**	**334**	ePN	**Pg**	**16 20 31.3**	**-1.5**
BEST	**Besiri**	**2.44**	**280**	i P	**Pg**	**16 20 33.7**	**-1.4**
BEST				i S	**Sg**	**16 21 06.6**	**0.0**
GNI	**Garni**	**2.68**	**7**	ePN	**Pg**	**16 20 38.4**	**-1.2**
MARD	**Mardin**	**2.81**	**267**	eP	**Pg**	**16 20 41.5**	**-0.7**
MARD				i S	**Sg**	**16 21 23.8**	**+5.2**
BNGL	**BINGOL**	**2.88**	**301**	eP	**Pg**	**16 20 40.8**	**-2.7**
BNGL				eS	**Sn**	**16 21 11.9**	**+3.0**
HOMI	**Horasan**	**3.17**	**324**	eP	**Pg**	**16 20 49.0**	**0.0**
HOMI				eS	**Sg**	**16 21 30.0**	**0.0**
AKCD	**Akcadag**	**5.11**	**281**	eP	**Pg**	**16 21 25.4**	**-0.8**
AKCD				eS	**Sg**	**16 22 38.3**	**+6.0**
GZT	**Gaziantep**	**5.37**	**271**	eP	**Pg**	**16 21 26.9**	**-4.1**
GZT				eS	**Sg**	**16 22 41.7**	**+1.2**

ISCJB ***06*** *16:36:51.6±0.6, 3276N±002×11736W±003, h4^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=3.1km az=148.3*
NEIC ***06*** *16:36:52.9, 3277N×11734W, h11^{km}, ML2.6(PAS), After PAS.*
NEIC Felt at San Diego.
ECX ***06*** *16:36:53.8±0.3, 3279N×11731W, h5^{km}±2^{km}, MD2.4, ML2.5*
ISC 06 16:36:51.9±0.4**, 3276N**±002×**11736W**±002**, h4**^{km}±4^{km}**, n31, σ0^{s}59**/55**, 14C-18D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
109C	**Camp Elliot, M**	**0.25**	**59**	⇓P	**Pg**	**16 36 57.4**	**+0.6**
	baz=0.2,SNR=19						
109C				⇓S	**Sg**	**16 37 01.1**	**+1.0**
	baz=0.2						
BAR	**Barrett**	**0.59**	**98**	⇓eP	**Pg**	**16 37 03.5**	**+0.3**
BAR	**Barrett**	**0.59**	**98**	P	**Pg**	**16 37 03.4**	**+0.2**
BAR				eS	**Sg**	**16 37 11.2**	**+0.4**
PLM	**Palomar**	**0.73**	**35**	⇑iP	**Pg**	**16 37 05.9**	**+0.1**
PLM				eS	**Sg**	**16 37 15.6**	**+0.4**
CBX	**Cerro Bola**	**0.74**	**127**	⇑eP	**Pg**	**16 37 06.5**	**+0.3**
CBX				eS	**Sg**	**16 37 16.3**	**+0.6**
MONP	**Monument Peak**	**0.81**	**81**	P	**Pg**	**16 37 07.2**	**-0.1**
	baz=0.8,SNR=57						
MONP				⇓S	**Sg**	**16 37 17.6**	**-0.2**
	baz=0.8						
MURC	**Murrieta**	**0.85**	**9**	P	**Pg**	**16 37 08.2**	**0.0**
	baz=0.8,SNR=22						
MURC				⇑S	**Sg**	**16 37 19.6**	**+0.4**
	baz=0.8						
DGR	**Domenigoni Val**	**0.94**	**18**	eP	**Pg**	**16 37 09.3**	**-0.5**
DGR				eS	**Sg**	**16 37 21.6**	**-0.4**
BORC	**Borrego Spring**	**0.94**	**57**	⇓iP	**Pg**	**16 37 09.7**	**-0.3**
BORC				eS	**Sg**	**16 37 21.8**	**-0.4**
CBKC	**Canebrake**	**0.95**	**81**	eP	**Pg**	**16 37 10.1**	**0.0**
POB	**Polly Butte**	**0.99**	**22**	⇑iP	**Pg**	**16 37 10.6**	**-0.4**
SCI	**San Clemente I**	**1.02**	**283**	⇑P	**Pg**	**16 37 11.1**	**-0.3**
	baz=1.0						
SCI				⇓S	**Sg**	**16 37 25.6**	**+0.9**
	baz=1.0						
ENX	**Ensenada**	**1.06**	**146**	eP	**Pg**	**16 37 12.0**	**-0.1**
ENX				eS	**Sg**	**16 37 26.5**	**+0.7**
ENX				⇓e		16 37 27.5	
	comp=N,161nm,0.4s						
ENX	**Ensenada**	**1.06**	**146**	eP	**Pg**	**16 37 12.0**	**-0.1**
ENX				eS	**Sg**	**16 37 26.5**	**+0.7**
DVTC	**Desert V Tower**	**1.07**	**95**	⇓P	**Pg**	**16 37 11.9**	**-0.5**
	baz=1.1,SNR=15						
DVTC				⇑S	**Sg**	**16 37 26.1**	**-0.2**
	baz=1.1						
CIS	**Catalina Islan**	**1.08**	**307**	⇑P	**Pg**	**16 37 12.0**	**-0.7**
	baz=1.1,SNR=25						
CIS				⇓S	**Sg**	**16 37 26.8**	**0.0**
	baz=1.1						
RMX	**La Rumorosa**	**1.10**	**98**	eP	**Pg**	**16 37 12.3**	**-0.6**
RMX				eS	**Sg**	**16 37 26.7**	**-0.4**
PFO	**Pinyon Flat Ob**	**1.14**	**42**	P	**Pg**	**16 37 13.4**	**-0.3**
	baz=1.1,SNR=58						
PFO				⇓S	**Sg**	**16 37 28.3**	**-0.2**
	baz=1.1						
PFO	**Pinyon Flat Ob**	**1.14**	**42**	P	**Pg**	**16 37 13.3**	**-0.4**
PBX	**Punta Banda**	**1.15**	**152**	eP	**Pg**	**16 37 13.8**	**-0.1**
PBX				eS	**Sg**	**16 37 29.4**	**+0.5**
PBX				⇑e		16 37 30.5	
	comp=N,108nm,0.3s						
PBX	**Punta Banda**	**1.15**	**152**	eP	**Pg**	**16 37 13.8**	**-0.1**
PBX				eS	**Sg**	**16 37 29.4**	**+0.5**
ECNX	**Esteban Cantu**	**1.28**	**149**	eP	**Pg**	**16 37 16.0**	**-0.4**
ECNX				eP		16 37 12.3	
ECNX				eS	**Sg**	**16 37 26.5**	**-6.5**
ECNX				eS	**Sg**	**16 37 33.3**	**+0.3**
SWSC	**Sam W. Stewart**	**1.33**	**82**	⇓Pb	**Pb**	**16 37 17.1**	**-0.4**
	baz=1.3,SNR=37						
SWSC				⇓S	**Sg**	**16 37 34.4**	**-0.3**
	baz=1.3						
BFSC	**Mount Baldy St**	**1.50**	**351**	⇑Pb	**Pb**	**16 37 19.6**	**-0.6**
	baz=1.5,SNR=15						
BFSC				⇓S	**Sn**	**16 37 39.3**	**-0.2**
	baz=1.5						
BBRC	**Big Bear Sol-O**	**1.54**	**14**	⇓S	**Sn**	**16 37 40.7**	**-0.1**
	baz=1.5						
BELC	**Belle Mtn.**	**1.68**	**42**	⇑Pb	**Pb**	**16 37 23.2**	**-0.3**
	baz=1.7,SNR=36						
BELC				⇑S	**Sn**	**16 37 44.3**	**+0.1**
	baz=1.7						
BC3	**Big Chuckw Mtn**	**1.83**	**60**	⇓Pb	**Pb**	**16 37 25.6**	**-0.4**
	baz=1.8,SNR=9.2						
BC3				⇓S	**Sn**	**16 37 46.8**	**-1.1**
	baz=1.8						
EDW2	**Edwards Air Fo**	**2.18**	**346**	⇓Sb	**Sb**	**16 38 00.3**	**+1.1**
	baz=2.2						
IRM	**Iron Mountain**	**2.32**	**52**	⇓P	**Pn**	**16 37 30.4**	**-0.5**
	baz=2.3,SNR=6.0						
IRM				⇑Sb	**Sb**	**16 38 04.6**	**+1.3**
	baz=2.3						
GMRC	**Granite Mounta**	**2.46**	**35**	⇑P	**Pn**	**16 37 32.8**	**-0.1**
	baz=2.5,SNR=5.8						
TUQ	**Turquoise Moun**	**2.92**	**24**	⇑Sb	**Sb**	**16 38 23.2**	**+2.5**
	baz=2.9						

NIED ***06*** *17:51:00, 2440N×12230E, h65^{km}, Mw6.2 Best double couple: M$_0$2.26000×10^{18} NP1:φ$_s$49.00000°, δ62.00000°, λ133.00000°. NP2:φ$_s$166.00000°, δ50.00000°, λ38.00000°.*
SZGRF ***06*** *17:51:22.6, 2422N×12234E, h33^{km}, mb6.4, MS6.1, Taiwan region*
BGS ***06*** *17:51:22.6±1.3, 2434N×12222E, h33^{km}, mb5.8*
MOS ***06*** *17:51:23.5±0.8, 2446N×12230E, h39^{km}, mb6.3/110, MS5.9/52, Error ellipse: s-maj=6.8km s-min=3.4km az=118.5*
ISCJB ***06*** *17:51:25.7±0.1, 2435N±001×12224E±001, h56^{km}, mb6.0/344, MS5.9/93, Error ellipse: s-maj=1.7km s-min=1.2km az=156.0*
BJI ***06*** *17:51:25.5, 2434N×12228E, h56^{km}, mB6.3, mb5.6, ML6.5, Ms6.1, Msz6.0*
TAP ***06*** *17:51:26.9, 2428N×12225E, h54^{km}, ML6.6, B*
JMA ***06*** *17:51:26.7±0.2, 2441N×12227E, h66^{km}±2^{km}, M6.6*
JMA Felt III J1.
GCMT ***06*** *17:51:26.2±0.1, 2423N×12235E, h61^{km}, MW6.2/107, Moment Tensor Solution. s107,c256; s106,c393; Duration: 3^{s}2 Moment tensor: Scale 10^{18}Nm; M$_{rr}$2.66±.02; M$_{\theta\theta}$-0.02±.01; M$_{\phi\phi}$-2.64±.01; M$_{r\theta}$0.41±.01; M$_{\theta\phi}$-1.01±.01; M$_{\phi r}$0.70±.01; Best double couple: M$_0$2.93700×10^{18} NP1:φ$_s$195.00000°, δ37.00000°, λ84.00000°. NP2:φ$_s$22.00000°, δ53.00000°, λ94.00000°. Principal axes: T 2.7800, Plg81.0000°, Azm314.0000°; N 0.3120, Plg4.0000°, Azm200.0000°; P -3.0940, Plg8.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
NEIC ***06*** *17:51:26.2±0.1, 2434N×12222E, h53^{km}, mb6.1/219, ME5.8 Error ellipse: s-maj=3.1km s-min=2.7km az=29.0, Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC One building damaged at Lo-tung. Felt [V] at Ts'ao-kang; [IV] at Chia-i, Taipei, T'ao-yuan and Yung-ho; [III] at T'ai-chung. Felt at Chang-hua, Ch'i-chiao, Chung-ho, Chu-pei, Feng-yuan, Hsi-chih, Hsin-chuang, Hsin-tien, Hua-lien, Kao-hsiung, Lu-chou, Miao-li, Nan-t'ou, Pan-ch'iao, P'ing-chen, P'ing-tung, San-hsia, T'ai-nan, Tou-liu and Wu-chiu. Recorded [5 TAP] in Hua-lien, I-lan and T'ai-tung; [4 TAP] in Chang-hua, Nan-t'ou and T'ai-chung; [3 TAP] in Chia-i, Hsin-chu, Kao-hsiung, Miao-li, T'ai-pei, T'ao-yuan and Yun-lin; [2 TAP] in P'eng-hu, P'ing-tung and T'ai-nan; [1 TAP] in Lien-chiang Counties. Recorded [3 JMA] on Yonaguni-jima; [2 JMA] on Iriomote-jima and Ishigaki-jima; [1 JMA] on Miyako-jima and Tarama-shima, Ryukyu Islands.
IDC ***06*** *17:51:27.0±1.1, 2437N×12231E, h59^{km}±8^{km}, mb5.5/35, mb1 5.4/40, mb1mx5.4/41, mbtmp5.5/40, MS5.7/32, Ms1 5.7/32, ms1mx5.5/39, Error ellipse: s-maj=7.6km s-min=5.9km az=46.0*
IGIL ***06*** *17:51:29.9, 2433N×12232E, h63^{km}, MS6.1*
DJA ***06*** *17:51:33, 2423N×12227E, h109^{km}, Mw6.4/50*
ISC 06 17:51:27.2±0.1**, 2434N**±001×**122254E**±0010**, h58**^{km}**, h58**^{km}±1.5^{km}**:pP-P, n1878, σ0^{s}99**/1772**, mb6.0**/341**, MS5.9**/93**, 529C-283D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.46**	**306**	⇑iP	**Pn**	**17 51 38.7**	**+0.1**
	baz=315						
EHP	**Heping Village**	**0.47**	**267**	P	**Pn**	**17 51 38.4**	**-0.3**
	baz=277						
EHP				eS	**Sn**	**17 51 47.2**	**+0.3**
	baz=277						
ENA	**Nanau**	**0.48**	**281**	⇑iP	**Pn**	**17 51 38.7**	**0.0**
	baz=291						
NACB	**Ninganchiao**	**0.62**	**255**	eP	**Pn**	**17 51 38.5**	**-1.9**
ILA	**Ilan**	**0.63**	**313**	⇑iP	**Pn**	**17 51 41.5**	**+1.1**
	baz=326						
ILA				eS	**Sn**	**17 51 52.1**	**+2.0**
	baz=326						
TWD	**Chiawan**	**0.65**	**247**	⇑iP	**Pn**	**17 51 39.9**	**-0.9**
	baz=243						
TWD				eS	**Sn**	**17 51 49.7**	**-0.9**
	baz=243						
TWE	**Neicheng**	**0.66**	**306**	⇑iP	**Pn**	**17 51 41.7**	**+0.9**
	baz=316						
ENTT	**Nioudou**	**0.69**	**296**	⇑iP	**Pn**	**17 51 42.1**	**+0.8**
	baz=293						
HWA	**Hwalien**	**0.69**	**239**	⇑iP	**Pn**	**17 51 40.6**	**-0.6**
	baz=243						
YOJ	**Yonaguni jima**	**0.70**	**80**	⇓P	**Pn**	**17 51 41.1**	**-0.2**
YOJ				S	**Sn**	**17 51 51.5**	**-0.2**
YOJ	**Yonaguni jima**	**0.70**	**80**	⇓iP	**Pn**	**17 51 41.2**	**-0.1**
	baz=64						
YOJ				i S	**Sn**	**17 51 50.9**	**-0.8**
	baz=64						
TWB1	**Santiao Chiao**	**0.71**	**340**	⇓iP	**Pn**	**17 51 41.9**	**+0.5**
	baz=341						
NNS	**Nan Shan**	**0.81**	**277**	⇑iP	**Pn**	**17 51 42.9**	**+0.2**
	baz=272						
ESF	**Shoufeng Towns**	**0.83**	**236**	P	**Pn**	**17 51 41.8**	**-1.1**
	baz=240						
ESF				eS	**Sn**	**17 51 53.6**	**-0.8**
	baz=240						
NWF	**Wu-fen Shan**	**0.85**	**330**	⇑iP	**Pn**	**17 51 44.0**	**+0.9**
	baz=340						
YHNB	**Yeheng**	**0.86**	**293**	eP	**Pn**	**17 51 43.0**	**-0.4**
TWA	**Mucha**	**0.88**	**316**	⇑iP	**Pn**	**17 51 44.7**	**+1.1**
	baz=329						
TWA				eS	**Sn**	**17 51 58.5**	**+2.7**
	baz=329						
TEGC	**Jichi Village**	**0.91**	**226**	⇓P	**Pn**	**17 51 42.9**	**-1.0**
	baz=230						
TEGC				eS	**Sn**	**17 51 55.0**	**-1.3**
	baz=230						
ESL	**Shilin**	**0.91**	**235**	⇑iP	**Pn**	**17 51 42.9**	**-1.1**
	baz=239						
WHF	**Hehuan Shan**	**0.92**	**258**	⇑iP	**Pn**	**17 51 44.1**	**0.0**
	baz=255						
TATO	**Taipei**	**0.94**	**312**	ePn	**Pn**	**17 51 45.5**	**+1.1**
TAP1	**Taipei**	**0.96**	**316**	P	**Pn**	**17 51 45.5**	**+0.8**
	baz=331						
TWT	**Tachien**	**0.99**	**265**	⇑iP	**Pn**	**17 51 45.7**	**+0.8**
	baz=269						
TWS1	**Kuangyinshan**	**1.07**	**315**	⇑iP	**Pn**	**17 51 47.2**	**+1.1**
	baz=328						
TWY	**Chenhua**	**1.11**	**328**	eP	**Pn**	**17 51 47.4**	**+0.9**
	baz=330						
NCU	**National Centr**	**1.16**	**303**	⇑iP	**Pn**	**17 51 48.5**	**+1.3**
	baz=306						
NSTT	**Nanjuang**	**1.18**	**285**	⇑iP	**Pn**	**17 51 48.8**	**+1.3**
	baz=287						
EHY	**Hungye**	**1.19**	**226**	⇑iP	**Pn**	**17 51 46.3**	**-1.3**
	baz=237						
HSN	**Hsinchu**	**1.26**	**292**	⇑iP	**Pn**	**17 51 49.4**	**+0.9**
	baz=306						
HSN				eS	**Sn**	**17 52 07.6**	**+3.1**
	baz=306						
PCYT	**Pengchaiyu**	**1.29**	**353**	⇓iP	**Pn**	**17 51 50.0**	**+0.9**
	baz=345						
TWF1	**Yuli**	**1.32**	**222**	⇑iP	**Pn**	**17 51 48.1**	**-1.2**
	baz=234						
SMLT	**Sun Moon Lake**	**1.32**	**250**	⇑iP	**Pn**	**17 51 49.7**	**+0.4**
	baz=247						
SMLT				S	**Sn**	**17 52 06.5**	**+0.6**
	baz=247						
IRIF	**Iriomote-Funau**	**1.35**	**90**	⇓P	**Pn**	**17 51 49.3**	**-0.4**
IRIF				S	**Sn**	**17 52 07.0**	**+0.3**
TYC	**Yuchr**	**1.35**	**252**	⇑iP	**Pn**	**17 51 50.1**	**+0.3**
	baz=247						
TWQ1	**Liyutan**	**1.35**	**271**	⇑iP	**Pn**	**17 51 51.1**	**+1.3**
	baz=273						
TWQ1				eS	**Sn**	**17 52 09.3**	**+2.5**
	baz=273						
NSY	**Sanyi**	**1.36**	**274**	⇑iP	**Pn**	**17 51 51.4**	**+1.4**
	baz=276						
HATJ	**Hateruma jima**	**1.44**	**101**	⇓P	**Pn**	**17 51 51.2**	**+0.1**
HATJ				S	**Sn**	**17 52 09.5**	**+0.5**
TCU	**Taichung**	**1.45**	**263**	⇑iP	**Pn**	**17 51 52.5**	**+1.4**
	baz=265						
YUS	**Yu-Shan**	**1.46**	**235**	⇑iP	**Pn**	**17 51 51.8**	**+0.5**
	baz=237						
CHKT	**Chengkung**	**1.48**	**214**	⇑iP	**Pn**	**17 51 49.7**	**-1.8**
	baz=208						
CHKT				eS	**Sn**	**17 52 05.5**	**-4.3**
	baz=208						
WNT	**Mingjian**	**1.51**	**253**	⇑iP	**Pn**	**17 51 53.4**	**+1.5**
	baz=255						
ALS	**Alishan**	**1.56**	**238**	⇑iP	**Pn**	**17 51 53.4**	**+0.7**
	baz=232						
JKRS	**Kuro-shima**	**1.60**	**93**	⇓P	**Pn**	**17 51 53.3**	**+0.1**
JKRS				S	**Sn**	**17 52 13.2**	**+0.3**
ELDTW	**Lidau**	**1.61**	**225**	⇑iP	**Pn**	**17 51 52.2**	**-1.1**
	baz=227						
CHN5	**Tsauling**	**1.62**	**243**	⇑iP	**Pn**	**17 51 54.4**	**+0.9**
	baz=245						
WGK	**Gukeng**	**1.68**	**248**	⇑iP	**Pn**	**17 51 55.6**	**+1.3**
	baz=250						
JIJ	**Ishigaki jima**	**1.72**	**89**	⇓P	**Pn**	**17 51 54.2**	**-0.6**
JIJ				S	**Sn**	**17 52 15.2**	**-0.6**
STYT	**Tauyuan**	**1.80**	**230**	⇑iP	**Pn**	**17 51 56.3**	**+0.4**
	baz=224						
CHN4	**Tsaushan**	**1.81**	**237**	⇑iP	**Pn**	**17 51 56.8**	**+0.8**
	baz=239						
WTP	**Ta-pu**	**1.85**	**234**	⇑iP	**Pn**	**17 51 57.4**	**+0.8**
	baz=236						
TWG	**Pinlang**	**1.86**	**216**	⇑iP	**Pn**	**17 51 55.1**	**-1.6**
	baz=217						
WTCT	**Ta-ch'eng**	**1.86**	**256**	⇑iP	**Pn**	**17 51 57.4**	**+0.7**
	baz=257						
CHY	**Chiayi**	**1.87**	**244**	⇑iP	**Pn**	**17 51 58.1**	**+1.3**
	baz=246						
TTN	**Taitung**	**1.88**	**213**	P	**Pn**	**17 51 55.6**	**-1.3**
	baz=209						
TTN				eS	**Sn**	**17 52 18.3**	**-1.2**
	baz=209						
TWK	**Hsinying**	**1.94**	**237**	⇑iP	**Pn**	**17 51 58.6**	**+0.8**
	baz=239						
TWK				eS	**Sn**	**17 52 21.2**	**+0.2**
	baz=239						
CHN1	**Nanshi**	**1.95**	**234**	⇑iP	**Pn**	**17 51 58.8**	**+0.8**
	baz=236						
SGST	**Jiashian**	**1.98**	**231**	⇑iP	**Pn**	**17 51 59.5**	**+1.2**
	baz=233						
SGST				eS	**Sn**	**17 52 23.0**	**+1.0**
	baz=233						
WSF	**Szhu**	**1.98**	**250**	⇑iP	**Pn**	**17 51 59.1**	**+0.8**
	baz=252						
WSF				eS	**Sn**	**17 52 22.8**	**+0.7**
	baz=252						
ECL	**Taimali**	**2.10**	**215**	⇑P	**Pn**	**17 51 58.1**	**-1.9**
	baz=221						
CHN8	**Yiju**	**2.12**	**243**	⇑iP	**Pn**	**17 52 00.9**	**+0.8**
	baz=244						
SSD	**Sandimen**	**2.17**	**224**	⇑iP	**Pn**	**17 52 00.8**	**-0.2**
	baz=218						
SSD				eS	**Sn**	**17 52 27.6**	**+0.8**
	baz=218						
SCLT	**Jiali**	**2.21**	**239**	⇑iP	**Pn**	**17 52 02.5**	**+1.0**
	baz=241						
SCLT				eS	**Sn**	**17 52 28.6**	**+0.8**
	baz=241						
JTJ	**Tarama**	**2.25**	**82**	⇓P	**Pn**	**17 52 02.2**	**+0.2**
JTJ				S	**Sn**	**17 52 28.8**	**+0.1**
TWM1	**Shoushan**	**2.26**	**228**	⇑P	**Pn**	**17 52 03.7**	**+1.5**
	baz=230						
TAW	**Tawu**	**2.33**	**213**	eP	**Pn**	**17 52 01.3**	**-1.9**
	baz=214						
EAST	**Anshuo**	**2.34**	**214**	⇑iP	**Pn**	**17 52 01.8**	**-1.4**
	baz=209						
LAY	**Lan-yu**	**2.38**	**196**	eP	**Pn**	**17 52 01.4**	**-2.4**
	baz=197						
SCZT	**Fangliau**	**2.47**	**218**	⇑iP	**Pn**	**17 52 04.8**	**-0.1**
	baz=217						
SCZT				eS	**Sn**	**17 52 34.9**	**+0.9**
	baz=217						
KAU	**Kaohsiung**	**2.51**	**226**	eP	**Pn**	**17 52 06.2**	**+0.6**
	baz=241						
PNG	**Penghu**	**2.59**	**253**	⇑iP	**Pn**	**17 52 06.1**	**-0.5**
	baz=254						
TWP	**Hsiaoliuchiu**	**2.64**	**222**	⇑P	**Pn**	**17 52 09.2**	**+1.8**
	baz=223						
HEN	**Hengchun**	**2.71**	**211**	⇑iP	**Pn**	**17 52 07.9**	**-0.4**
	baz=204						
TWK1	**Hengchun**	**2.73**	**209**	⇑iP	**Pn**	**17 52 07.7**	**-0.9**
	baz=212						
TWK1				eS	**Sn**	**17 52 38.7**	**-1.8**
	baz=212						
JMJ	**Miyako jima 2**	**2.81**	**80**	⇓P	**Pn**	**17 52 10.3**	**+0.7**
JMJ				S	**Sn**	**17 52 43.4**	**+1.1**
JMJ	**Miyako jima 2**	**2.81**	**80**	⇓iP	**Pn**	**17 52 09.9**	**+0.3**
	baz=79						
JMJ				eS	**Sn**	**17 52 42.1**	**-0.2**
	baz=79						
JOGS	**Gusukube**	**2.90**	**81**	P	**Pn**	**17 52 11.7**	**+0.8**
JOGS				S	**Sn**	**17 52 46.3**	**+1.7**
QZH	**Quanzhou**	**3.39**	**281**	⇓iP	**Pn**	**17 52 17.1**	**-0.4**
QZH				S	**Sn**	**17 52 54.6**	**-1.9**
QZH				Smax			
	comp=N,60μm,0.8s						
QZH				Smax			
	comp=E,34μm,0.9s						
QZH				LR	LR		
	comp=N,328μm,11.1s						
QZH				LR	LR		
	comp=E,257μm,9.6s						
QZH				LR	LR		
	comp=Z,539μm,23.5s						
KNM	**Kinmen**	**3.48**	**272**	⇑iP	**Pn**	**17 52 20.1**	**+1.2**
	baz=271						
JKE	**Kume jima 2**	**4.55**	**63**	⇓P	**Pn**	**17 52 34.0**	**+0.5**
JKE				eS	**Sn**	**17 53 27.8**	**+2.6**
JAGN	**Aguni-jima**	**5.04**	**63**	⇓P	**Pn**	**17 52 40.5**	**+0.4**
JAGN				eS	**Sn**	**17 53 37.3**	**+0.3**
NAH1	**Naha**	**5.26**	**68**	P	**Pn**	**17 52 43.7**	**+0.5**
NAH1				eS	**Sn**	**17 53 42.8**	**+0.3**
JJT2	**Tamagusuku 2**	**5.29**	**69**	P	**Pn**	**17 52 43.8**	**+0.2**
JJT2				eS	**Sn**	**17 53 43.7**	**+0.5**
JIH	**Iheya**	**5.81**	**61**	⇓P	**Pn**	**17 52 50.8**	**0.0**
JIH				S	**Sn**	**17 53 54.3**	**-1.8**
JOW	**Kunigami**	**5.98**	**64**	P	**Pn**	**17 52 52.2**	**-0.8**
	comp=Z,643nm,0.3s,baz=232,slow=8.9,SNR=1502						
JOW				S	**Sn**	**17 53 58.8**	**-1.3**
	comp=Z,88nm,0.3s,baz=114,slow=19,SNR=2.5						
JOW				LR	LR	17 55 42.1	
	comp=Z,61μm,19.1s,baz=235,slow=43						
JOW	**Kunigami**	**5.98**	**64**	P	**Pn**	**17 52 52.3**	**-0.7**
JOW				S	**Sn**	**17 54 00.3**	**+0.2**
JOW	**Kunigami**	**5.98**	**64**	⇓eP	**Pn**	**17 52 52.1**	**-0.9**
	baz=64						
APYP	**Conner**	**6.51**	**189**	eP	**Pn**	**17 53 00.2**	**-0.2**
CVP	**Callao Caves**	**6.62**	**184**	⇓iP	**Pn**	**17 53 00.9**	**-1.0**
CVP				i S	**Sn**	**17 54 13.7**	**-2.2**
SSE	**Sheshan**	**6.80**	**352**	P	**Pn**	**17 53 04.2**	**-0.1**
SSE				XP		17 53 21.8	
SSE				S	**Sn**	**17 54 21.2**	**+1.0**
SSE				AMB	AMB		
	comp=Z,580nm,0.6s						
SSE				AMB	AMB		
	comp=Z,539nm,2.9s						
SSE				LR	LR		
	comp=N,72μm,16.9s						
SSE				LR	LR		
	comp=E,64μm,16.9s						
SSE				LR	LR		
	comp=Z,97μm,14.5s						
ABRA	**Dolores**	**6.81**	**192**	eP	**Pn**	**17 53 05.1**	**+0.6**

Sta	Name	Dist	Az	Phase	ISC phase	Time	Res
JTK	Tokunoshima	6.93	59	P	Pn	17 53 04.5	-1.6
JTK				S	Sn	17 54 21.1	-2.5
PALP	Palanan	7.24	179	⇑ iP	Pn	17 53 11.0	+0.6
PALP				iS	Sn	17 54 29.5	-1.8
CAUP	Cauayan	7.37	183	eP	Pn	17 53 13.7	+1.6
HKC	Hong Kong Obse	7.70	256	⇓ iP	Pn	17 53 18.0	+1.4
HKC				iS	Sn	17 54 42.0	-0.4
JAM	Amami Oshima	7.74	57	P	Pn	17 53 15.2	-2.0
JAM				S	Sn	17 54 39.6	-3.8
JZK	Kikaishima	7.98	59	P	Pn	17 53 18.8	-1.6
JZK				eS	Sn	17 54 47.5	-1.7
BCPH	Baguio City Da	8.07	192	⇓ iP	Pn	17 53 21.6	-0.2
BCPH				iS	Sn	17 54 27.6	-24
BOLP	Bolinao	8.22	196	eP	Pn	17 53 24.9	+1.2
NJ2	Nanjing	8.25	339	⇓ iP	Pn	17 53 24.8	+0.7
NJ2				XP		17 53 42.4	
NJ2				S	Sn	17 54 53.2	-2.6
NJ2				AMB	AMB		
	comp=Z,140nm,0.5s						
NJ2				Smax			
	comp=N,3µm,1.1s						
NJ2				Smax			
	comp=E,4µm,1.2s						
NJ2				LR	LR		
	comp=N,40µm,19.5s						
NJ2				LR	LR		
	comp=E,77µm,18.0s						
NJ2				LR	LR		
	comp=Z,76µm,18.0s						
JMZ	Minamidaito 2	8.26	78	P	Pn	17 53 20.2	-4.2
JMZ				S	Sn	17 54 46.6	-10
BALP	Baler	8.58	184	eP	Pn	17 53 28.2	-0.5
JNN	Nakanoshima	8.72	49	P	Pn	17 53 30.0	-0.7
PCPH	Palayan	8.80	187	⇑ eP	Pn	17 53 31.7	-0.1
PCPH				eS	Sn	17 55 09.1	-0.4
WHN	Wuhan	9.35	313	⇑P	Pn	17 53 37.7	-1.5
WHN				S	Sn	17 55 20.8	-2.1
WHN				AMB	AMB		
	comp=Z,207nm,0.6s						
WHN				LR	LR		
	comp=N,165µm,8.1s						
WHN				LR	LR		
	comp=E,174µm,4.7s						
WHN				LR	LR		
	comp=Z,240µm,18.5s						
NBP	Mount Natib	9.70	191	⇑ iP	Pn	17 53 45.0	+0.9
LBPH	Los Banos	10.18	186	⇑ eP	Pn	17 53 51.2	+0.5
GQP	Guinayangan	10.38	179	⇓ eP	Pn	17 53 55.6	+2.2
GQP				eS	Sn	17 55 42.7	-5.5
JHD	Hondo	10.66	39	P	Pn	17 54 00.7	+3.6
PVCP	Virac	10.84	170	⇑ iP	Pn	17 54 00.2	+0.6
PVCP				iS	Sn	17 55 48.7	-11
JUR	Ureshino	11.03	36	P	Pn	17 54 06.6	+4.5
KALP	Kalibo	12.59	180	⇑ eP	Pn	17 54 23.5	-0.1
TIA	Tai'an	12.63	341	eP	Pn	17 54 23.7	-0.3
TIA				AP		17 54 30.7	
TIA				XS		17 57 02.0	
TIA				AMB	AMB		
	comp=Z,53nm,0.9s						
TIA				AMB	AMB		
	comp=Z,699nm,6.0s						
TIA				LR	LR		
	comp=N,18µm,8.0s						
TIA				LR	LR		
	comp=E,53µm,8.0s						
QIZ	Qiongzhong	12.69	248	⇓P	Pn	17 54 25.1	+0.2
QIZ				S	Sn	17 56 46.4	+1.9
QIZ				AMB	AMB		
	comp=Z,259nm,1.6s						
QIZ				AMB	AMB		
	comp=Z,4µm,7.3s						
QIZ				LR	LR		
	comp=N,63µm,22.7s						
QIZ				LR	LR		
	comp=E,39µm,24.4s						
QIZ				LR	LR		
	comp=Z,64µm,32.8s						
QIZ	Qiongzhong	12.69	248	eP	Pn	17 54 24.6	-0.3
	comp=Z,351nm,0.9s						
RCP	Roxas	12.72	178	⇓ eP	Pn	17 54 26.3	+0.9
PLP	Palo	13.36	168	⇓ eP	Pn	17 54 35.1	+1.1
INCN	Inchon	13.63	15	ePn	Pn	17 54 40.4	+2.8
KSRS	Korea Array	13.94	19	P	Pn	17 54 44.2	+2.5
	comp=Z,12nm,0.3s,baz=201,slow=12,SNR=112						
KSRS				LR	LR	18 00 18.5	
	comp=Z,26µm,21.1s,baz=196,slow=38						
KSRS	Korea Array	13.94	19	P	Pn	17 54 44.3	+2.5
KSRS				pmax	pmax		
	comp=Z,12nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,26µm,21.1s						
LLP	Lapu-Lapu	14.04	173	⇑ iP	Pn	17 54 43.3	+0.1
GYA	Guiyang	14.25	282	⇓ iP	Pn	17 54 45.9	0.0
GYA				PP		17 54 57.9	
GYA				XP		17 55 07.6	
GYA				S	Sn	17 57 24.4	+1.9
GYA				SS		17 57 43.8	
GYA				AMB	AMB		
	comp=Z,660nm,0.8s						
GYA				AMB	AMB		
	comp=Z,10µm,13.2s						
GYA				LR	LR		
	comp=N,71µm,9.9s						
GYA				LR	LR		
	comp=E,77µm,17.4s						
GYA				LR	LR		
	comp=Z,69µm,16.4s						
DL2	Dalian	14.53	358	⇑ iP	Pn	17 54 51.9	+2.4
DL2				XP	sP	17 55 08.6	-6.0
DL2				S	Sn	17 57 35.9	+6.7
DL2				LG1		17 59 17.6	
DL2				LG2		17 59 45.4	
DL2				SCS	ScS	18 07 05.5	-1.3
DL2				AMB	AMB		
	comp=Z,300nm,0.9s						
DL2				AMB	AMB		
	comp=Z,6µm,7.7s						
DL2				LR	LR		
	comp=N,16µm,18.0s						
DL2				LR	LR		
	comp=E,18µm,19.2s						
DL2				LR	LR		
	comp=Z,22µm,19.0s						
TBP	Tagbilaran	14.65	174	eP	Pn	17 54 51.2	0.0
SCPH	Surigao	14.80	167	eP	Pn	17 54 52.6	-0.6
PPR	Puerto Princes	14.87	194	⇑ iP	Pn	17 54 55.6	+1.5
XAN	Xi'an	15.12	313	P	Pn	17 54 57.6	+0.4
XAN				AP	pP	17 55 02.5	-11
XAN				PP		17 55 10.5	
XAN				S	S	17 57 43.3	-15
XAN				XS	sS	17 58 00.9	-17
XAN				AMB	AMB		
	comp=Z,196nm,0.8s						
XAN				AMB	AMB		
	comp=Z,7µm,7.9s						
XAN				LR	LR		
	comp=N,24µm,10.0s						
XAN				LR	LR		
	comp=E,42µm,16.6s						
XAN				LR	LR		
	comp=Z,85µm,17.8s						
DCPH	Dipolog City	15.70	176	⇓ eP	Pn	17 55 13.4	+8.6
TIY	Taiyuan	15.75	330	⇑ iP	Pn	17 55 09.2	+3.9
TIY				PPP		17 55 28.8	
TIY				S	S	17 58 02.9	-7.8
TIY				AMB	AMB		
	comp=Z,8µm,4.3s						
TIY				LR	LR		
	comp=N,36µm,8.9s						
TIY				LR	LR		
	comp=E,19µm,7.0s						
TIY				LR	LR		
	comp=Z,46µm,16.7s						
BJT	Baijiatuau	16.45	343	eP	Pn	17 55 16.5	+2.4
BJT				pmax	pmax		
	comp=Z,355nm,1.1s						
BJT	Baijiatuau	16.45	343	eP	Pn	17 55 16.5	+2.4
	comp=Z,355nm,1.1s						
BJI	Beijing	16.47	343	P	Pn	17 55 16.4	+2.1
BJI				S	S	17 58 22.1	-3.3
BJI				AMB	AMB		
	comp=Z,273nm,2.3s						
BJI				AMB	AMB		
	comp=Z,12µm,5.9s						
BJI				LR	LR		
	comp=N,22µm,30.9s						
BJI				LR	LR		
	comp=E,52µm,26.2s						
BJI				LR	LR		
	comp=Z,59µm,27.2s						
BIPH	Bislig	16.54	166	⇓ iP	Pn	17 55 13.4	-1.9
KCP	Kidapawan	17.45	171	⇓ eP	Pn	17 55 27.9	+1.3
DAV	Davao City (W)	17.46	169	⇓P	Pn	17 55 27.8	+1.0
	SNR=31						
DAV	Davao City (W)	17.46	169	P	Pn	17 55 26.9	+0.1
	comp=Z,10nm,0.3s,baz=264,slow=5.1,SNR=13						
DAV				S	S	17 58 42.1	-3.9
	comp=Z,29nm,0.3s,baz=66,slow=18,SNR=1.9						
DAV				LR	LR	18 01 39.9	
	comp=Z,15µm,21.3s,baz=152,slow=35						
DAV	Davao City (W)	17.46	169	⇓ eP	Pn	17 55 27.0	+0.2
SNY	Shenyang	17.48	3	⇑P	Pn	17 55 28.3	+1.5
SNY				AP	pP	17 55 38.8	-1.0
SNY				XP	sP	17 55 46.2	-1.0
SNY				AMB	AMB		
	comp=Z,427nm,2.5s						
SNY				AMB	AMB		
	comp=Z,18µm,7.1s						
SNY				LR	LR		
	comp=N,25µm,22.6s						
SNY				LR	LR		
	comp=E,39µm,13.9s						
SNY				LR	LR		
	comp=Z,32µm,27.0s						
CD2	Chengdu	17.64	296	⇓ iP	Pn	17 55 29.4	+0.5
CD2				AP	pP	17 55 37.2	-4.5
CD2				XP	sP	17 55 42.4	-6.7
CD2				PP		17 55 48.6	
CD2				S	S	17 58 40.2	-9.1
CD2				XS	sS	17 58 57.2	-12
CD2				SS		17 59 07.7	
CD2				AMB	AMB		
	comp=Z,570nm,0.8s						
CD2				AMB	AMB		
	comp=Z,9µm,5.5s						
CD2				LR	LR		
	comp=N,74µm,19.2s						
CD2				LR	LR		
	comp=E,95µm,18.0s						
CD2				LR	LR		
	comp=Z,95µm,20.4s						
JHJ	Hachijo jima 2	17.67	56	P	Pn	17 55 29.4	+0.2
	comp=Z,134nm,0.3s,baz=196,slow=2.4,SNR=19						
JHJ				LR	LR	18 02 02.1	
	comp=Z,30µm,21.3s,baz=275,slow=36						
KMI	Kunming	17.75	277	⇓P	Pn	17 55 31.7	+1.5
KMI				AP	pP	17 55 42.9	-0.1
KMI				PP		17 55 48.0	
KMI				XP	sP	17 55 51.9	+1.6
KMI				PPP		17 55 56.6	
KMI				S	S	17 58 45.0	-6.6
KMI				XS	sS	17 59 02.7	-9.2
KMI				SS		17 59 08.9	
KMI				SSS		17 59 22.6	
KMI				AMB	AMB		
	comp=Z,214nm,2.0s						
KMI				AMB	AMB		
	comp=Z,8µm,6.4s						
KMI				LR	LR		
	comp=N,28µm,8.7s						
KMI				LR	LR		
	comp=E,56µm,15.5s						
KMI				LR	LR		
	comp=Z,70µm,14.6s						
KDM	Kudat	18.09	198	⇓P	Pn	17 55 36.0	+1.5
CBIJ	Chichi jima	18.17	77	P	Pn	17 55 35.0	-0.4
	comp=Z,38nm,0.3s,baz=219,slow=3.0,SNR=42						
CBIJ				S	S	17 58 56.6	-3.4
	comp=Z,1.2nm,0.3s,baz=287,slow=19,SNR=2.3						
CBIJ				LR	LR	18 02 02.3	
	comp=Z,41µm,21.3s,baz=250,slow=35						
MAT	Matsushiro	18.33	45	P	Pn	17 55 35.5	-1.7
MAT				S	S	17 58 59.0	-3.3
MAJO	Matsushiro	18.33	45	eP	Pn	17 55 34.9	-2.3
MJAR	Matsushiro Arr	18.33	45	P	Pn	17 55 35.4	-1.8
	comp=Z,3.9nm,0.3s,baz=229,slow=9.8,SNR=26						
MJAR				S	S	17 59 05.0	+2.7
	comp=Z,0.1nm,0.3s,baz=244,slow=25,SNR=2.5						
MJAR				ScP	ScP	18 03 35.5	-1.3
	comp=Z,0.2nm,0.3s,baz=209,slow=2.3,SNR=7.2						
UBT	Ubonrachathani	18.55	244	⇑P	Pn	17 55 42.0	+1.9
	comp=Z,278nm,1.0s						
HHC	Hu-ho-hao-te	18.74	334	⇑ iP	Pn	17 55 43.8	+1.7
HHC				AP	pP	17 55 55.6	+1.8
HHC				PP		17 56 01.6	
HHC				XP	sP	17 56 03.8	+2.6
HHC				S	S	17 59 10.4	-0.9
HHC				XS	sS	17 59 26.8	-5.0
HHC				SS		17 59 35.3	
HHC				AMB	AMB		
	comp=Z,183nm,1.0s						
HHC				AMB	AMB		
	comp=Z,14µm,7.8s						
HHC				LR	LR		
	comp=N,41µm,12.9s						
HHC				LR	LR		
	comp=E,24µm,12.3s						
HHC				LR	LR		
	comp=Z,57µm,12.7s						
KKM	Kota Kinabalu	19.09	199	⇓P	Pn	17 55 46.4	-0.1
KKM	Kota Kinabalu	19.09	199	⇑ iP	Pn	17 55 45.6	-1.0
BTO	Baotou	19.19	331	eP	Pn	17 55 47.8	+0.3
BTO				S	S	17 59 15.3	-5.1
BTO				AMB	AMB		
	comp=Z,102nm,1.0s						
BTO				LR	LR		
	comp=N,11µm,12.0s						
BTO				LR	LR		
	comp=E,18µm,18.6s						
SDKM	Sandakan	19.22	195	⇓P	Pn	17 55 48.2	+0.2
MYLDM	Lahad Datu	19.39	191	⇓P	Pn	17 55 51.6	+1.5
CN2	Changchun	19.59	7	⇑P	Pn	17 55 50.9	-1.3
CN2				eS	S	17 59 30.2	+1.9
CN2				AMB	AMB		
	comp=Z,130nm,1.0s						
CN2				AMB	AMB		
	comp=Z,9µm,7.0s						
CN2				LR	LR		
	comp=N,32µm,20.0s						
CN2				LR	LR		
	comp=E,21µm,20.0s						
CN2				LR	LR		
	comp=Z,30µm,21.0s						
LZH	Lanzhou	19.71	311	⇑P	Pn	17 55 54.7	+0.9
LZH				AP	pP	17 56 03.5	-1.1
LZH				XP	sP	17 56 07.8	-4.1
LZH				S	S	17 59 31.2	+0.2
LZH				XS	sS	17 59 42.5	-9.1
LZH				SS		17 59 53.0	
LZH				AMB	AMB		
	comp=Z,1µm,1.2s						
LZH				AMB	AMB		
	comp=Z,7µm,5.5s						
LZH				LR	LR		
	comp=E,85µm,14.0s						
LZH				LR	LR		
	comp=Z,98µm,15.0s						
KKTK	Khon Kaen	19.87	250	⇑P	Pn	17 55 55.6	-0.1
	comp=Z,3µm,0.6s						
VLA	Vladivostok	20.35	21	eP	P	17 55 56.7	-2.0
VLA				e*PP		17 56 12.8	
VLA				e*SP	sP	17 56 23.0	+4.2
VLA				eS	S	17 59 42.4	-1.0
VLA				e*SS	sS	18 00 08.5	+4.3
VLA				pmax	pmax		
	comp=Z,606nm,1.9s						
VLA				MLR	MLR		
	comp=Z,24µm,13.7s,MS5.7						
VLA	Vladivostok	20.35	21	iP	P	17 55 58.0	-0.7
TSM	Tawau	20.37	193	⇓P	P	17 55 59.8	+0.6
NANT	Nan	20.78	259	⇓P	P	17 56 03.5	0.0
	comp=Z,1µm,1.0s						
MDJ	Mudanjiang	21.09	15	P	P	17 56 06.5	-0.2
MDJ				AP		17 56 19.7	
MDJ				XP	sP	17 56 27.1	+0.2
MDJ				S	S	17 59 58.6	+0.5
MDJ				SCS	ScS	18 07 25.5	-1.0
MDJ				AMB	AMB		
	comp=Z,87nm,0.9s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,4µm,7.2s						
MDJ				LR	LR		
	comp=N,17µm,20.6s,MS5.7						
MDJ				LR	LR		
	comp=E,23µm,16.0s,MS5.7						
MDJ				LR	LR		
	comp=Z,25µm,23.6s						
MDJ	Mudanjiang	21.09	15	eP	P	17 56 07.0	+0.4
	comp=Z,392nm,1.1s,mb5.7						
CHRT	Chiangrai	21.28	262	⇑P	P	17 56 11.0	+2.1
	comp=Z,2µm,0.8s,mb6.6						
CHG	Chiang Mai	22.35	260	⇑P	P	17 56 21.5	+1.2
	comp=Z,287nm,0.9s,mb5.7						
CMAR	Chiang Mai Arr	22.46	259	P	P	17 56 23.2	+1.7
	comp=Z,62nm,0.8s,mb5.1,baz=63,slow=8.4,SNR=219						
CMAR				PcP	PcP	18 00 15.0	+0.8
	comp=Z,18nm,0.6s,baz=45,slow=0.6,SNR=16						
CMAR				S	S	18 00 26.9	+2.3
	comp=Z,2.7nm,0.9s,baz=268,slow=20,SNR=3.2						
CMAR				LR	LR	18 05 49.4	
	comp=Z,22µm,21.1s,MS5.6,baz=178,slow=38						
CMAR				PKiKP	PKiKP	18 07 58.5	-1.1
	comp=Z,1.3nm,0.8s,baz=278,slow=1.4,SNR=6.2						
CMAR				P3KP		18 30 47.0	
	comp=Z,1.1nm,0.9s,baz=302,slow=3.7,SNR=7.8						
CMAR	Chiang Mai Arr	22.46	259	P	P	17 56 23.3	+1.7
CMAR						18 00 15.0	
CMAR				S	S	18 00 26.9	+2.2
CMAR	Chiang Mai Arr	22.46	259	P	P	17 56 23.2	+1.7
CMAR				PcP	PcP	18 00 15.0	+0.8
CMAR				S	S	18 00 26.9	+2.3
CMAR				LR	LR	18 05 49.4	
NST	Nakhon Sawan	22.48	252	P	P	17 56 21.5	-0.2
	comp=Z,338nm,1.3s,mb5.6						
BTM	Bintulu	22.80	204	⇑P	P	17 56 24.1	-1.0
BDT	Bhumibol Dam	22.84	256	⇓P	P	17 56 27.0	+1.5
	comp=Z,76nm,1.2s,mb5.0						
MNI	Manado	22.90	173	⇓ eP	P	17 56 24.5	-1.6
SBUM	Sibu	23.82	206	⇑P	P	17 56 34.7	-0.3
GUMO	Guam	23.87	113	P	P	17 56 34.8	-0.6
	comp=Z,880nm,1.0s,mb6.1,baz=226,slow=2.4,SNR=38						
GUMO				S	S	18 00 47.9	+0.2
	comp=Z,85nm,1.0s,baz=342,slow=20,SNR=4.2						
GUMO				LR	LR	18 04 11.4	
	comp=Z,34µm,20.4s,MS5.8,baz=117,slow=32						
GUMO	Guam	23.87	113	P	P	17 56 34.8	-0.7
GUMO				S	S	18 00 47.9	+0.3
GUMO				pmax	pmax		
	comp=Z,880nm,1.0s,mb6.1						
GUMO				smax			
	comp=N,85nm,1.0s						
GUMO				MLR	MLR		
	comp=Z,34µm,20.4s,MS5.8						
GUMO	Guam	23.87	113	eP	P	17 56 34.2	-1.2
TNE	Ternate	23.93	167	⇓ eP	P	17 56 35.0	-1.0
GTA	Gaotai	24.18	314	⇑P	P	17 56 38.8	+0.8
GTA				AP		17 56 55.3	
GTA				PCP	PcP	18 00 19.2	+1.7
GTA				S	S	18 00 52.7	+0.6
GTA				XS	sS	18 01 16.9	+0.6
GTA				SCP	ScP	18 03 51.9	+0.8
GTA				SCS	ScS	18 07 38.1	-0.3
GTA				AMB	AMB		
	comp=Z,70nm,1.7s,mb4.8						
GTA				AMB	AMB		
	comp=Z,9µm,8.6s						
GTA				LR	LR		
	comp=N,23µm,18.1s,MS6.0						
GTA				LR	LR		
	comp=E,34µm,17.7s,MS6.0						
GTA				LR	LR		
	comp=Z,45µm,21.7s,MS5.9						
NNT	Nongplab	24.30	245	⇑P	P	17 56 41.5	+2.1
	comp=Z,902nm,1.1s,mb6.1						
ERM	Erimo	24.73	39	P	P	17 56 40.4	-2.6
	comp=Z,1µm,0.6s,mb6.6,SNR=28						
ERM	Erimo	24.73	39	c iP	P	17 56 40.1	-2.9
ERM	Erimo	24.73	39	eP	P	17 56 39.4	-3.6
	comp=Z,121nm,0.6s,mb5.6						
HIA	Hailar	24.96	356	eP	P	17 56 43.5	-1.5
HIA				pmax	pmax		
	comp=Z,148nm,0.6s						
HIA	Hailar	24.96	356	eP	P	17 56 43.5	-1.5
	comp=Z,148nm,0.6s,mb5.7						
KSM	Kuching	25.50	209	⇓P	P	17 56 50.6	+0.4
KSM	Kuching	25.50	209	eP	P	17 56 49.3	-1.0
IMP	Imphal	25.75	277	eP	P	17 56 52.0	-0.4
IMP				ex	x	18 03 58.0	
ASAJ	Asahikawa	25.80	35	P	P	17 56 50.6	-2.1
	comp=Z,60nm,0.4s,mb5.4,baz=242,slow=11,SNR=86						
ASAJ				LR	LR	18 06 32.5	
	comp=Z,14µm,21.7s,MS5.5,baz=234,slow=35						
ASAJ	Asahikawa	25.80	35	P	P	17 56 50.6	-2.1
ASAJ				pmax	pmax		
	comp=Z,60nm,0.4s						
ASAJ				MLR	MLR		
	comp=Z,14µm,21.7s						
KLR	Kul'dur	25.94	14	⇓ eP	P	17 56 49.0	-4.9
KLR				e		17 57 49.5	
KLR				pmax	pmax		
	comp=N,460nm,2.8s						
KLR				pmax	pmax		
	comp=E,370nm,2.8s						
KLR				pmax	pmax		
	comp=Z,1µm,2.8s,mb6.0						
KLR				pmax	pmax		
	comp=N,4µm,8.5s						
KLR				pmax	pmax		
	comp=E,1µm,8.5s						
KLR				pmax	pmax		
	comp=Z,5µm,8.5s						
KLR				MLR	MLR		
	comp=Z,32µm,12.0s,MS6.1						
KTGM	Kuala Trenggan	26.37	227	⇓P	P	17 56 59.2	+1.1
ULN	Ulaanbaatar	26.40	337	⇑P	P	17 56 58.7	+0.6
	SNR=199						
ULN	Ulaanbaatar	26.40	337	c iP	P	17 56 58.5	+0.5
ULN	Ulaanbaatar	26.40	337	eP	P	17 56 58.6	+0.5
	comp=Z,342nm,0.8s,mb5.9						
SONM	Songino Array	26.62	336	P	P	17 57 00.4	+0.4
	comp=Z,541nm,0.8s,mb6.2,baz=151,slow=10,SNR=1188						
SONM				PcP	PcP	18 00 23.0	+0.2
	comp=Z,9.7nm,0.4s,baz=170,slow=3.9,SNR=26						
SONM				ScP	ScP	18 03 56.7	-1.2
	comp=Z,15nm,0.9s,baz=165,slow=4.1,SNR=5.8						
SONM				PKiKP	PKiKP	18 08 00.1	-1.0
	comp=Z,1.8nm,0.6s,baz=210,slow=1.2,SNR=7.8						
SONM				LR	LR	18 08 48.0	
	comp=Z,55µm,20.0s,MS6.1,baz=145,slow=39						
SONM				P3KPbc		18 29 41.7	
	comp=Z,1.5nm,1.1s,baz=312,slow=5.1,SNR=9.0						
SONM	Songino Array	26.62	336	P	P	17 57 00.4	+0.4
SONM						18 00 23.0	
SONM	Songino Array	26.62	336	P	P	17 57 00.4	+0.4
SONM				PcP	PcP	18 00 23.0	+0.2
SONM				ScP	ScP	18 03 56.7	-1.2
SNG	Songkhla	26.85	234	P	P	17 57 03.0	+0.5
	comp=Z,560nm,1.0s,mb6.0						
SHL	Shillong	27.54	279	eP	P	17 57 11.0	+2.5
YUK	Yuzh-Kuril'sk	27.54	39	eP	P	17 57 08.0	-0.3
YUK				iS	S	18 01 48.0	+2.7
YUK				pmax	pmax		
	comp=Z,170nm,0.5s,mb5.9						
YUK				pmax	pmax		
	comp=Z,4µm,12.0s						
YUK				smax			
	comp=E,6µm,14.0s						
YUK				smax			
	comp=N,5µm,6.4s						
YSS	Yuzh-Sakhalins	27.89	31	eP	P	17 57 09.6	-1.8
	comp=N,619nm,1.4s,mb6.0						
KULM	Kulim	28.11	231	⇓P	P	17 57 15.0	+1.2
KDI	Kendari	28.13	179	⇑ eP	P	17 57 11.8	-2.0
KDI				eS	S	18 01 46.1	-8.9
LSA	Lhasa	28.17	288	⇑P	P	17 57 16.0	+1.9
LSA				AP	pP	17 57 27.6	-1.0
LSA				XP	sP	17 57 37.7	+2.2
LSA				S	S	18 01 49.2	-6.4
LSA				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.2						
LSA				AMB	AMB		
	comp=Z,4µm,10.0s						
LSA				LR	LR		
	comp=N,10µm,19.0s,MS6.0						
LSA				LR	LR		

comp=E,45µm,23.0s,MS6.0
LSA LR LR
comp=E,66µm,25.0s,MS6.1
LSA Lhasa 28.17 288 *e*P **P 17 57 16.1 +2.0**
LSA pmax pmax
comp=Z,165nm,0.7s,mb5.8
LSA Lhasa 28.17 288 *e*P **P 17 57 16.1 +2.0**
comp=Z,165nm,0.7s,mb5.8
IPM Ipoh 28.42 229 ⇑P **P 17 57 17.1 +0.6**
CIT Chita 28.43 349 *e*P **P 17 57 15.2 -1.0**
CIT *e* 17 57 34.4
CIT *e* 18 00 25.8
CIT *e* 18 01 54.1
CIT pmax pmax
comp=Z,860nm,2.5s,mb5.9
AAI Ambon 28.45 167⇑ *e*P **P 17 57 13.5 -3.2**
MYKOM Kota Tinggi 28.62 221 ⇓P **P 17 57 19.0 +0.7**
KGM Kluang 28.77 222 ⇑P **P 17 57 20.2 +0.6**
FRIM Kepong 28.92 227 ⇓P **P 17 57 21.3 +0.4**
TURI Tura 28.93 279 *ex* x 17 58 25.0
KAPI Kappang 29.28 185 P **P 17 57 21.6 -2.4**
comp=Z,119nm,0.8s,mb5.7,baz=19,slow=6.0,SNR=54
KAPI LR LR 18 10 07.3
comp=Z,5µm,20.6s,MS5.1,baz=1.4,slow=38
KAPI Kappang 29.28 185 *e*P **P 17 57 21.5 -2.6**
KUR Kuril'sk 29.40 38 *e*P **P 17 57 20.5 -4.4**
KUR *e*S **S 18 02 04.0 -11**
KUR pmax pmax
comp=Z,110nm,0.8s,mb5.6
KUR pmax pmax
comp=Z,3µm,7.0s
KUR smax
comp=N,3µm,16.0s
KUR smax
comp=E,6µm,16.0s
MKS Makassar 29.50 186⇑ *e*P **P 17 57 23.4 -2.6**
MKS *e*S **S 18 02 12.3 -4.3**
ZAK Zakamensk 29.88 335 *e*P **P 17 57 28.3 -0.7**
ZAK *e* pP 17 57 44.3 +0.8
ZAK *e* 18 00 30.0
ZAK pmax pmax
comp=E,85nm,1.1s,mb5.4
TPI Tanjungpandan 30.45 210⇑ *e*P **P 17 57 35.0 +0.6**
TLY Talaya 30.80 337 P **P 17 57 37.0 -0.2**
comp=Z,2µm,0.7s,mb7.1
TLY Talaya 30.80 337 ⇓P **P 17 57 37.3 +0.1**
SNR=141
TLY Talaya 30.80 337*c i*P **P 17 57 37.3 +0.1**
TLY *e* pP 17 57 55.2 +3.5
TLY *e* 17 58 38.1
TLY *e* 18 00 33.3
TLY *e*S **S 18 02 37.4 +1.0**
TLY pmax pmax
comp=Z,293nm,0.7s,mb6.2
TLY MLR MLR
comp=Z,29µm,18.0s,MS6.0
TLY Talaya 30.80 337 *e*P **P 17 57 37.3 +0.2**
comp=Z,302nm,0.8s,mb6.2
IRK Irkutsk 31.05 338⇑ *i*P **P 17 57 39.0 -0.4**
IRK *e* 18 00 33.6
IRK *e*S **S 18 02 40.1 -0.2**
IRK pmax pmax
comp=Z,865nm,2.6s,mb6.1
PSI Prapat 31.07 230⇑ *e*P **P 17 57 40.0 0.0**
CAL Calcutta 31.13 274 *e*P **P 17 57 40.2 -0.3**
CAL AMb AMB 17 57 46.0
comp=Z,2µm,0.4s,mb7.3
CAL *e*S **S 18 02 44.6 +2.3**
TAPN Taplejung 31.18 283 *e*P **P 17 57 42.5 +1.7**
comp=Z,541nm,0.8s,mb6.4
ODAN Odare 31.48 282 *e*P **P 17 57 44.8 +1.3**
comp=Z,697nm,0.9s,mb6.5
MOY Mondy 31.78 335 *e*P **P 17 57 45.2 -0.6**
MOY *e* 18 00 35.4
MOY pmax pmax
comp=Z,40nm,3.3s
RAMN Ramite 32.18 282 *e*P **P 17 57 51.1 +1.4**
comp=Z,360nm,0.7s,mb6.3
JIRN Jiri 32.51 284 *e*P **P 17 57 54.7 +2.2**
comp=Z,480nm,0.8s,mb6.5
CLNS Chul'man 32.52 3 *e*P **P 17 57 50.7 -1.5**
CLNS *e**PP pP 17 58 01.7 -5.1
CLNS *e* 17 58 53.6
CLNS *e* 18 00 38.9
CLNS *e*S **S 18 02 58.3 -4.8**
CLNS *e*SS SS 18 04 55.9 -29
CLNS pmax pmax
comp=Z,16nm,1.2s,mb4.8
CLNS pmax pmax
comp=E,6.0nm,0.7s
CLNS pmax pmax
comp=N,11nm,1.1s
CLNS smax
comp=E,806µm,12.6s
CLNS smax
comp=N,1355µm,13.5s
CLNS MLR MLR
comp=E,11µm,17.0s,MS5.8
CLNS MLR MLR
comp=Z,23µm,23.0s
CLNS MLR MLR
comp=N,14µm,18.0s,MS5.8
GUN Gumba 32.78 284 *e*P **P 17 57 56.9 +2.1**
comp=N,500nm,0.8s,mb6.5
BOK Bokaro 33.15 277 *e*P **P 17 57 58.0 -0.2**
BOK *ex* x 18 03 08.8
TRT Tretes 33.20 198⇑ *e*P **P 17 57 56.0 -2.6**
PKI Pulchoki 33.21 284 *e*P **P 17 57 59.9 +1.3**
comp=N,248nm,0.8s,mb6.2
PKIN Phulchoki 33.22 284 *e*P **P 17 57 59.8 +1.1**
comp=N,235nm,0.9s,mb6.1
KKN Kakani 33.31 284 *e*P **P 17 58 00.5 +1.0**
comp=N,468nm,0.8s,mb6.5
DMN Daman 33.47 284 *e*P **P 17 58 01.8 +0.9**
comp=N,411nm,0.8s,mb6.4
KRKI Karangkates 33.69 198⇑ *e*P **P 17 58 01.9 -0.9**
GKN Gorkha 33.87 284 *e*P **P 17 58 05.9 +1.5**
comp=N,26nm,1.0s,mb5.1
BWNR Bhubaneshwar 33.90 271 *e*P **P 17 58 00.0 -4.7**
BWNR *e*S **S 18 03 23.0 -2.2**
BOD Bodaibo 33.97 352 *e*P **P 17 58 03.5 -1.3**
BOD pmax pmax
comp=Z,47nm,1.8s,mb5.1
WMQ Urumqi 34.26 313⇑ *i*P **P 17 58 08.3 +0.8**
WMQ AP pP 17 58 22.5 +0.4
WMQ XP sP 17 58 30.0 +1.0
WMQ PCP PcP 18 00 43.7 +0.8
WMQ S **S 18 03 31.0 +0.7**
WMQ XS sS 18 03 56.5 +1.4
WMQ SS SS 18 05 45.0 -15
WMQ SCS ScS 18 08 23.0 -2.4
WMQ AMB AMB
comp=Z,205nm,1.6s,mb5.8
WMQ AMB AMB
comp=Z,4µm,4.4s
WMQ LR LR
comp=N,32µm,12.4s,MS6.4
WMQ LR LR
comp=E,26µm,10.8s,MS6.4
WMQ LR LR
comp=Z,24µm,17.6s
BATI Baumata 34.36 178 P **P 17 58 05.4 -3.2**
comp=Z,271nm,0.8s,mb6.2,baz=270,slow=1.3,SNR=33
BATI PcP PcP 18 00 44.0 +0.4
comp=Z,49nm,0.5s,baz=241,slow=3.9,SNR=6.2
BATI LR LR 18 15 07.1
comp=Z,3µm,19.5s,MS5.0,baz=90,slow=41
DANN Dangsing 34.63 285 *e*P **P 17 58 12.9 +2.0**
comp=Z,485nm,0.8s,mb6.5
KOLN Koldanda 34.80 284 *e*P **P 17 58 13.3 +0.9**
comp=Z,579nm,0.9s,mb6.5
VIS Vishakhapatnam 36.84 267 *e*P **P 17 58 28.5 -1.5**
VIS AMb AMB 17 58 41.9
comp=Z,194nm,1.1s,mb5.8
VIS *e*S **S 18 04 12.1 +1.7**
SKR Severo-Kuril's 37.05 36 *e*P **P 17 58 28.5 -2.9**
SKR *e* 17 58 37.0
SKR *e*PPP 17 59 52.0
SKR *e* 18 00 47.0
SKR pmax pmax
comp=Z,80nm,0.5s,mb5.8
SKR pmax pmax
comp=N,1µm,10.0s
SKR pmax pmax
comp=E,2µm,10.0s
SKR pmax pmax
comp=Z,2µm,10.0s
SKR MLR MLR
comp=N,15µm,24.0s,MS5.8
SKR MLR MLR
comp=E,9µm,24.0s,MS5.8
SKR MLR MLR
comp=Z,26µm,24.0s,MS5.9
PTH Pithoragarh 37.68 287 *e*P **P 17 58 39.8 +2.8**
PTH *e*S **S 18 04 28.2 +5.1**
YAK Yakutsk 38.01 6 *e*P **P 17 58 37.6 -1.7**
YAK *e**PP pP 17 58 52.1 -2.0
YAK *e* 18 00 07.5
YAK *e* 18 00 29.2
YAK *e*S **S 18 04 20.7 -6.5**
YAK *e* 18 04 38.4
YAK *e* 18 08 41.1
YAK pmax pmax
comp=E,18nm,1.2s
YAK pmax pmax
comp=Z,164nm,1.0s,mb5.7
YAK pmax pmax
comp=N,97nm,1.4s
YAK pmax pmax
comp=Z,2µm,5.1s
YAK pmax pmax
comp=N,1µm,4.4s
YAK pmax pmax
comp=E,309nm,3.9s
YAK smax
comp=E,1196µm,4.9s
YAK smax
comp=N,1626µm,4.8s
YAK MLR MLR
comp=Z,21µm,20.0s,MS6.0
YAK MLR MLR
comp=N,15µm,18.0s,MS5.9
YAK MLR MLR
comp=E,6µm,15.0s,MS5.9
YAK Yakutsk 38.01 6 *e*P **P 17 58 37.1 -2.2**
comp=E,207nm,1.0s,mb5.8
KAKA Kakadu 38.14 164 *e*P **P 17 58 38.9 -2.0**
comp=E,194nm,0.8s,mb5.9
KAKA *e*S **S 18 04 24.4 -5.7**
KRAR Krasnoyarsk 38.23 334*c i*P **P 17 58 40.1 -1.2**
KRAR pmax pmax
comp=Z,305nm,1.3s,mb5.9
KRAR MLR MLR
comp=Z,28µm,16.0s,MS6.2
JBP Jabalpur 38.60 277 *e*P **P 17 58 46.4 +1.6**
JBP *e*S **S 18 04 38.9 +1.8**
MK31 Makanchi Array 38.91 315 P **P 17 58 47.5 +0.4**
MK31 pmax pmax
comp=Z,387nm,0.9s,mb6.1
MK31 Makanchi Array 38.91 315 *i* P **P 17 58 47.5 +0.4**
MKAR Makanchi Array 38.91 315 P **P 17 58 47.4 +0.3**
comp=Z,303nm,0.9s,mb6.0,baz=105,slow=11,SNR=374
MKAR PcP PcP 18 00 56.6 -0.2
comp=Z,9.8nm,0.6s,baz=140,slow=4.0,SNR=4.2
MKAR ScP ScP 18 04 40.4 +0.2
comp=Z,20nm,1.0s,baz=96,slow=6.7,SNR=4.1
MKAR PKiKP PKiKP 18 08 08.1 -1.9
comp=Z,0.9nm,0.5s,baz=164,slow=2.2,SNR=4.5
MKAR LR LR 18 16 06.1
comp=Z,23µm,21.2s,MS6.0,baz=104,slow=38
MKAR Makanchi Array 38.91 315 P **P 17 58 47.4 +0.3**
MKAR PcP PcP 18 00 56.6 -0.2
MKAR ScP ScP 18 04 40.4 +0.2
PEA0B Petropavlovsk- 39.20 34 *e*P **P 17 58 44.3 -5.0**
PETK Petropavlovsk- 39.20 34 P **P 17 58 47.9 -1.5**
comp=Z,6.7nm,0.7s,baz=86,slow=3.3,SNR=20
PETK LR LR 18 14 57.5
comp=Z,13µm,21.8s,MS5.7,baz=228,slow=36
DDI Dehra Dun 39.53 289 *e*P **P 17 58 51.0 -1.5**
DDI *e*S **S 18 04 51.0 +0.1**
PET Petropavlovsk 39.64 34*c i*P **P 17 58 49.7 -3.3**
PET *e* 18 00 55.9
PET *e*S **S 18 04 45.4 -6.5**
PET pmax pmax
comp=Z,2µm,17.4s
PET pmax pmax
comp=Z,2µm,17.1s
PET pmax pmax
comp=Z,133nm,1.3s,mb5.5
PET MLR MLR
comp=Z,20µm,22.0s,MS5.9
PET MLR MLR
comp=Z,14µm,22.0s
PET Petropavlovsk 39.64 34 *e*P **P 17 58 51.3 -1.7**
SMLA Simla 40.26 290 *i* P **P 17 58 59.5 +1.0**
SMLA *ex* x 17 59 02.9
comp=Z,1µm,0.9s
SMLA *i* S **S 18 05 03.5 +1.7**
NDI New Delhi 40.35 286⇑ *i*P **P 17 58 58.0 -1.4**
NDI *ex* x 18 05 00.0
SDNR Sundarnagar 40.42 291 *e*P **P 17 59 01.0 +1.1**
SDNR *ex* x 18 04 51.0
ZAA0 Zalesovo Array 40.65 327 *e*P **P 17 59 00.8 -0.7**
ZALV Zalesovo Beam 40.65 327 P **P 17 59 00.7 -0.7**
comp=Z,472nm,0.8s,mb6.2,baz=110,slow=8.3,SNR=532
ZALV ScP ScP 18 04 46.0 -0.8
comp=Z,7.1nm,0.8s,baz=89,slow=4.6,SNR=3.9
ZALV LR LR 18 17 18.2
comp=Z,22µm,21.3s,MS6.0,baz=124,slow=38
ZAL Zalesovo 40.65 326 P **P 17 59 00.7 -0.7**
BHK Bhakra 40.90 290 *ex* x 17 59 07.6
MDRS Chennai 41.19 262 *e*P **P 17 59 05.0 -1.4**
MDRS AMb AMB 17 59 11.4
comp=Z,268nm,0.7s,mb6.0
HYB Hyderabad 41.28 269 *e*P **P 17 59 08.0 +0.9**
HYB *e*S **S 18 05 20.0 +2.8**
HYB pmax pmax
comp=Z,160nm,1.0s,mb5.6
HYB Hyderabad 41.28 269⇓ *i*P **P 17 59 08.0 +0.9**
comp=Z,160nm,1.0s,mb5.6
HYB *e*S **S 18 05 20.0 +2.8**
HYB LR LR 18 14 26.0
comp=Z,16nm,28.0s
HYB Hyderabad 41.28 269 *e*P **P 17 59 08.0 +0.9**
comp=Z,160nm,1.0s,mb5.6
HYB *e*S **S 18 05 20.0 +2.8**
HYB *e* 18 14 26.0
PMG Port Moresby 41.43 141*c i*P **P 17 59 08.2 0.0**
PMG Port Moresby 41.43 141 *e*P **P 17 59 08.6 +0.4**
THN Thein Dam 41.47 292 *e*P **P 17 59 08.0 -0.4**
AAA Alma-Ata 41.54 308 *e*P **P 17 59 09.6 +0.7**
AAA *e*S **S 18 05 24.4 +3.9**
AAA pmax pmax
comp=Z,7µm,10.2s
AAA smax
comp=E,11µm,13.0s
AAA MLR MLR
comp=Z,14µm,11.0s,MS6.1
KSH Kashi 41.63 303⇑ *i*P **P 17 59 12.6 +2.9**
KSH AP pP 17 59 27.5 +2.8
KSH XP sP 17 59 35.1 +3.7
KSH PP PP 18 00 53.0 +6.2
KSH PCP PcP 18 01 08.1 +2.3
KSH PPP 18 01 25.1
KSH SCP ScP 18 04 52.0 +0.9
KSH PCS PcS 18 04 58.5 +1.3
KSH S **S 18 05 24.5 +2.5**
KSH XS sS 18 05 51.6 +4.3
KSH SS SS 18 08 27.4 -1.6
KSH SCS ScS 18 09 07.0 -0.7
KSH AMB AMB
comp=Z,656nm,0.7s,mb6.4
KSH LR LR
comp=N,20µm,10.0s
KSH LR LR
comp=E,31µm,8.8s
KSH LR LR
comp=Z,64µm,18.4s
AKL Akola 41.81 274 *i* P **P 17 59 10.3 -1.1**
comp=Z,284nm,0.0s
ULHL Ulahol 41.85 307 P **P 17 59 13.5 +2.1**
SNR=27
NVS Novosibirsk 41.91 327 *i* P **P 17 59 10.7 -1.0**
NVS *i* PPP 18 01 07.0
NVS *i* 18 05 23.0
NVS *i* SSS 18 09 03.0
NVS pmax pmax
comp=N,123nm,0.9s
NVS pmax pmax
comp=Z,212nm,0.9s,mb5.8
NVS pmax pmax
comp=E,151nm,0.8s
FITZ Fitzroy Crossi 42.31 175 *e*P **P 17 59 13.3 -2.1**
comp=E,116nm,1.0s,mb5.5
FITZ *e*PCP PcP 18 01 08.1 -0.1
FITZ *e*S **S 18 05 27.6 -4.6**
FITZ *e*SCS ScS 18 09 07.7 -4.5
FITZ Fitzroy Crossi 42.31 175 P **P 17 59 13.5 -1.9**
comp=E,69nm,1.1s,mb5.2,baz=0.3,slow=9.7,SNR=71
FITZ PcP PcP 18 01 07.0 -1.2
comp=E,37nm,0.8s,baz=14,slow=8.3,SNR=5.6
FITZ S **S 18 05 27.5 -4.7**
comp=E,6.0nm,0.8s,baz=6.3,slow=18,SNR=3.1
TKM2 Tokmak 2 42.44 308 P **P 17 59 17.9 +1.7**
TKM2 pmax pmax
comp=Z,959nm,1.3s,mb6.3
TKM2 Tokmak 2 42.44 308 P **P 17 59 18.0 +1.8**
SNR=396
TKM2 Tokmak 2 42.44 308 *e*P **P 17 59 17.9 +1.6**
comp=Z,284nm,0.9s,mb5.9
KZA Kyzart 42.55 306 P **P 17 59 19.6 +2.5**
SNR=188
KURK Kurchatov 42.60 320 P **P 17 59 17.7 +0.3**
comp=Z,2µm,0.8s,mb6.8
KURK Kurchatov 42.60 320 ⇓P **P 17 59 17.3 -0.2**
SNR=112
KURK Kurchatov 42.60 320 P **P 17 59 17.2 -0.2**
comp=Z,64nm,0.6s,mb5.5,baz=109,slow=11,SNR=69
KURK PcP PcP 18 01 08.7 0.0
comp=Z,12nm,0.7s,baz=115,slow=3.4,SNR=2.8
KURK ScP ScP 18 04 55.1 +0.4
comp=Z,3.0nm,0.2s,baz=97,slow=3.3,SNR=3.7
KURK S **S 18 05 34.6 -1.4**
comp=Z,1.9nm,0.5s,baz=289,slow=30,SNR=2.8
KURK LR LR 18 19 03.9
comp=Z,8µm,19.3s,MS5.7,baz=75,slow=39
KURK PKPPKP 18 31 15.5
comp=Z,0.6nm,0.8s,baz=261,slow=2.3,SNR=7.2
KURK Kurchatov 42.60 320 *e*P **P 17 59 17.2 -0.2**
KURK pmax pmax
comp=Z,407nm,1.2s,mb6.0
KURK Kurchatov 42.60 320 *e*P **P 17 59 17.2 -0.3**
comp=Z,407nm,1.2s,mb6.0
LATR Latur 42.81 271 *e*P **P 17 59 19.6 0.0**
LATR AMb AMB 17 59 23.4
comp=Z,569nm,0.8s,mb6.3
KBK Karagaybulak 42.86 307 P **P 17 59 21.6 +1.9**
SNR=164
AJM Ajmer 42.87 283 *e*P **P 17 59 19.8 -0.1**
AJM AMb AMB 17 59 23.9
comp=Z,424nm,0.6s,mb6.4
CHMS Chumysh 43.06 308 P **P 17 59 22.4 +1.1**
SNR=122
UCH Uchtor 43.11 306 P **P 17 59 24.3 +2.6**
SNR=519
UCH Uchtor 43.11 306 *e*P **P 17 59 24.1 +2.4**
comp=Z,987nm,0.9s,mb6.5
FRU Bishkek 43.13 307 *i* P **P 17 59 22.5 +0.6**
FRU *e* 18 01 10.0
FRU *e*S **S 18 05 43.0 -1.0**
FRU *e*SS SS 18 09 13.0 +15
FRU pmax pmax
comp=Z,2µm,3.0s
FRU pmax pmax
comp=Z,4µm,8.0s
FRU smax
comp=E,8µm,11.0s
AAK Ala-Archa 43.19 307 P **P 17 59 24.0 +1.7**
SNR=61
COEN Coen 43.20 150 *e*P **P 17 59 22.6 0.0**
comp=E,228nm,0.9s,mb5.9
PALK Pallekele 43.22 254 P **P 17 59 24.6 +1.7**
comp=E,635nm,1.0s,mb6.3,SNR=10.0
PALK Pallekele 43.22 254 ⇑P **P 17 59 23.7 +0.8**
SNR=6.0
PALK Pallekele 43.22 254 *e*P **P 17 59 24.1 +1.2**
USP Ospenovka 43.29 308 P **P 17 59 24.1 +1.0**
SNR=69
AML Almayashu 43.70 306 P **P 17 59 28.7 +2.3**
SNR=356
AML Almayashu 43.70 306 *e*P **P 17 59 28.7 +2.2**
comp=E,351nm,1.0s,mb6.0
EKS2 Erkin-Say 43.72 307 P **P 17 59 28.1 +1.5**
SNR=128
EKS2 Erkin-Say 43.72 307 *e*P **P 17 59 27.8 +1.2**
comp=E,105nm,0.9s,mb5.6
KOD Kodaikanal 44.80 260 *e*P **P 17 59 37.3 +1.7**
KOD AMb AMB 17 59 40.7
comp=Z,349nm,1.3s,mb6.0
POO Poona 45.25 272 *e*P **P 17 59 37.4 -1.7**
POO AMb AMB 17 59 42.2
comp=Z,282nm,1.4s,mb5.9
MBWA Marble Bar 45.29 183 *e*P **P 17 59 37.1 -2.2**
comp=Z,173nm,0.8s,mb5.9
KAD Karad 45.30 271 *e*P **P 17 59 38.7 -0.7**
KAD *e*P 17 59 39.4
WRAB Tennant Creek 45.55 164 P **P 17 59 41.4 +0.1**
comp=Z,6µm,0.8s
WRAB Tennant Creek 45.55 164 *e*P **P 17 59 40.9 -0.5**
WRA Warramunga Arr 45.56 164 P **P 17 59 40.9 -0.5**
comp=Z,766nm,0.8s,mb6.7,baz=346,slow=8.7,SNR=276
WRA PcP PcP 18 01 18.6 -0.6
comp=Z,30nm,0.5s,baz=351,slow=3.7,SNR=7.2
WRA S **S 18 06 16.1 -3.4**
comp=Z,31nm,1.2s,baz=343,slow=14,SNR=18
WRA PKP2ab 18 32 15.8
comp=Z,3.9nm,1.2s,baz=176,slow=3.2,SNR=4.6
WRA P4KPbc 18 37 29.1
comp=Z,0.4nm,0.5s,baz=336,slow=4.3,SNR=6.6
WRA Warramunga Arr 45.56 164 P **P 17 59 40.9 -0.5**
WRA 18 01 18.6
WRA S **S 18 06 16.1 -3.4**
WRA Warramunga Arr 45.56 164 P **P 17 59 40.9 -0.5**
WRA PcP PcP 18 01 18.6 -0.6
WRA S **S 18 06 16.1 -3.4**
WRA P'P'ab 18 32 15.8
WB2 Warramunga Arr 45.56 164⇑ *i*P **P 17 59 40.9 -0.5**
WB2 *e*S **S 18 06 16.3 -3.3**
WB2 *e*SCS ScS 18 09 28.3 -4.3
TRD Trivandrum 45.98 258 *e*P **P 17 59 44.4 -0.6**
TRD AMb AMB 17 59 49.4
comp=Z,149nm,0.4s,mb6.2
BOM Bombay 46.09 273 *ex* x 17 59 42.7
BOM *ex* x 17 59 44.9
comp=Z,2µm,0.9s
BOM *ex* x 18 06 24.1
KK31 Karatay Array 46.15 307 P **P 17 59 46.5 +0.6**
KK31 pmax pmax
comp=Z,31nm,0.5s,mb5.5
KK31 Karatay Array 46.15 307 *i* P **P 17 59 46.6 +0.7**
GOA Goa 46.19 268 *e*P **P 17 59 46.4 -0.1**
GOA *i* x x 18 06 19.6
TIXI Tiksi 47.49 3*c i*P **P 17 59 54.0 -1.9**
TIXI *e**PP pP 18 00 09.4 -1.7
TIXI *e* 18 01 23.8
TIXI *e* 18 01 41.1
TIXI *i* S **S 18 06 41.9 -4.1**
TIXI *e* 18 09 39.8
TIXI *e*SS SS 18 10 06.7 -7.5
TIXI pmax pmax
comp=N,179nm,1.8s
TIXI pmax pmax
comp=E,42nm,1.6s
TIXI pmax pmax
comp=Z,555nm,2.0s,mb6.1
TIXI pmax pmax
comp=Z,1957µm,9.4s
TIXI smax
comp=E,489µm,5.3s
TIXI smax
comp=N,1846µm,6.6s
TIXI MLR MLR
comp=E,4µm,12.0s,MS5.9
TIXI MLR MLR
comp=N,7µm,12.0s,MS5.9
TIXI MLR MLR
comp=Z,12µm,13.0s,MS6.1
TIXI Tiksi 47.49 3 *e*P **P 17 59 54.4 -1.5**
comp=Z,623nm,1.7s,mb6.3
VOSK Vostochnaya 47.75 320 P **P 17 59 57.7 -0.5**
VOSK pmax pmax
comp=Z,394nm,1.1s,mb6.3
BHJ Bhuj 47.90 280 *e*P **P 17 59 59.4 -0.4**
BHJ AMb AMB 18 00 03.8
comp=Z,290nm,1.2s,mb6.2
BVA0 Borovoye Array 48.17 320 *i* P **P 18 00 01.3 -0.2**

BVA0 pmax pmax
comp=Z,96nm,1.2s,mb5.7
BVAR Borovoye Array 48.17 320 P **P** **18 00 01.5 0.0**
comp=Z,147nm,0.7s,mb6.1,baz=105,slow=7.9,SNR=448
BVAR PcP PcP 18 01 27.4 -0.7
comp=Z,30nm,0.7s,baz=72,slow=5.1,SNR=2.4
BVAR ScP ScP 18 05 17.0 -0.7
comp=Z,6.0nm,0.7s,baz=122,slow=5.6,SNR=3.5
BVAR S **S** **18 06 55.6 -0.6**
comp=Z,3.8nm,1.1s,baz=150,slow=12,SNR=2.4
BVAR LR LR 18 22 45.8
comp=Z,6μm,18.6s,MS5.6,baz=103,slow=39
BVAR PKPPKP 18 31 11.9
comp=Z,1.0nm,0.9s,baz=310,slow=5.6,SNR=4.2
BVAR Borovoye Array 48.17 320 P **P** **18 00 01.5 0.0**
BVAR 18 01 27.4
BVAR S **S** **18 06 55.6 -0.6**
BRVK Borovoye 48.24 320 ⇑P **P** **18 00 02.0 0.0**
SNR=113
BRVK Borovoye 48.24 320 *e*P **P** **18 00 02.2 +0.2**
ASAR Alice Springs 49.04 166 P **P** **18 00 08.3 0.0**
comp=Z,342nm,0.8s,mb6.5,baz=341,slow=7.6,SNR=1467
ASAR S **S** **18 07 10.3 +1.4**
comp=Z,18nm,1.1s,baz=354,slow=20,SNR=11
ASAR P4KPbc 18 37 44.8
comp=Z,2.3nm,0.7s,baz=350,slow=4.5,SNR=21
ASAR Alice Springs 49.04 166 P **P** **18 00 08.3 0.0**
ASAR S **S** **18 07 10.3 +1.4**
MNCY Minicoy 49.59 260 *e*P **P** **18 00 13.0 +0.1**
HNR Honiara 49.80 128 P **P** **18 00 13.7 -0.7**
comp=Z,35nm,0.7s,mb5.5,baz=185,slow=8.0,SNR=12
HNR S **S** **18 07 19.4 -0.6**
comp=Z,5.7nm,0.4s,baz=210,slow=20,SNR=3.8
HNR LR LR 18 20 13.6
comp=Z,7μm,18.6s,MS5.7,baz=268,slow=35
HNR Honiara 49.80 128 P **P** **18 00 13.7 -0.7**
HNR S **S** **18 07 19.4 -0.6**
HNR pmax pmax
comp=Z,35nm,0.7s,mb5.5
HNR smax
comp=N,6.0nm,0.4s
HNR MLR MLR
comp=Z,7μm,18.6s,MS5.7
HNR Honiara 49.80 128 *e*P **P** **18 00 13.4 -1.0**
comp=Z,374nm,1.1s,mb6.3
CTA Charters Tower 49.96 150 ⇑*i*P **P** **18 00 16.0 +0.5**
comp=Z,143nm,1.3s,mb5.8
CTA *e*PCP PcP 18 01 35.7 +0.7
CTA *e*S S **18 07 23.4 +1.5**
CTA *e*SCS ScS 18 10 02.5 +0.7
CTA Charters Tower 49.96 150 P **P** **18 00 16.1 +0.6**
comp=Z,141nm,0.9s,mb6.0,baz=329,slow=8.8,SNR=114
CTA S **S** **18 07 22.7 +0.8**
comp=Z,2.3nm,0.6s,baz=147,slow=16,SNR=5.2
CTA LR LR 18 20 51.7
comp=Z,4μm,18.3s,MS5.5,baz=333,slow=35
CTA Charters Tower 49.96 150 P **P** **18 00 16.1 +0.6**
CTA S **S** **18 07 22.7 +0.8**
CTA pmax pmax
comp=Z,141nm,0.9s
CTA smax
comp=N,2.0nm,0.6s
CTA MLR MLR
comp=Z,4μm,18.3s
CTAO Charters Tower 49.96 150 *e*P **P** **18 00 16.1 +0.6**
CTAO pmax pmax
comp=Z,194nm,1.0s,mb6.1
CTAO Charters Tower 49.96 150 *e*P **P** **18 00 16.1 +0.6**
comp=Z,194nm,1.0s,mb6.1
AMKA Amchitka 50.93 43 *e*P **P** **18 00 21.9 -0.6**
BILL Bilibino 51.21 20*c* *i*P **P** **18 00 22.9 -1.4**
BILL *e**PP pP 18 00 38.7 -0.9
BILL *e*S **S** **18 07 35.9 -2.3**
BILL *e*SS SS 18 11 12.7 -1.1
BILL pmax pmax
comp=Z,60nm,1.4s,mb5.3
BILL MLR MLR
comp=Z,19μm,23.0s,MS6.0
MIDW Midway 53.80 72 *e*P **P** **18 00 43.2 -0.9**
comp=Z,122nm,0.6s,mb6.0
AB31 Akbulak array 54.03 314 P **P** **18 00 45.8 +0.3**
AB31 pmax pmax
comp=Z,185nm,0.6s,mb6.2
AB31 Akbulak array 54.03 314 *i* P **P** **18 00 45.9 +0.4**
SVE Sverdlovsk 54.50 324⇓*e*P **P** **18 00 48.7 0.0**
SVE *e* 18 01 53.2
SVE *e*PPP 18 04 01.7
SVE *e*S **S** **18 08 22.6 -0.7**
SVE pmax pmax
comp=Z,224nm,0.9s,mb6.1
SVE MLR MLR
comp=Z,26μm,20.0s,MS6.3
FORT Forrest 55.09 174⇑*i*P **P** **18 00 52.6 -0.6**
comp=Z,316nm,0.6s,mb6.5
FORT *e*S **S** **18 08 30.4 -1.2**
FORT *e*SCS ScS 18 10 33.2 -4.0
ARU Arti 55.57 323 P **P** **18 00 55.1 -1.4**
comp=Z,1μm,0.7s,mb7.0,SNR=78
ARU Arti 55.57 323*c* *i*P **P** **18 00 55.9 -0.6**
ARU *e**PP pP 18 01 12.2 +0.2
ARU *e* 18 01 52.6
ARU *e* 18 03 01.7
ARU *e*S **S** **18 08 37.5 -0.2**
ARU *e**SS sS 18 09 01.3 -2.5
ARU *e* 18 10 36.1
ARU *e*SS SS 18 12 20.2 -2.8
ARU pmax pmax
comp=Z,227nm,1.0s,mb6.2
ARU MLR MLR
comp=Z,15μm,22.0s,MS6.0
ARU Arti 55.57 323 *e*P **P** **18 00 55.5 -1.0**
comp=Z,165nm,0.8s,mb6.1
KLBR Kellerberrin 55.78 185⇑*i*P **P** **18 00 56.3 -1.9**
comp=Z,111nm,0.9s,mb5.9
KLBR *e*PCP PcP 18 01 55.3 -1.4
MUN Mundaring 56.30 186⇑*i*P **P** **18 01 00.1 -1.8**
MUN *e*PCP PcP 18 01 57.9 -0.8
EIDS Eidsvold 56.75 149 *e*P **P** **18 01 11.8 +6.6**
NWAO Narrogin (SRO) 57.15 185 P **P** **18 01 07.9 0.0**
SNR=14
NWAO Narrogin (SRO) 57.15 185 P **P** **18 01 06.9 -1.0**
comp=Z,138nm,0.8s,mb6.0,baz=8.5,slow=7.6,SNR=64
NWAO LR LR 18 28 54.6
comp=Z,2μm,18.8s,MS5.2,baz=12,slow=39
NWAO Narrogin (SRO) 57.15 185 P **P** **18 01 06.9 -1.0**
NWAO pmax pmax
comp=Z,138nm,0.8s
NWAO MLR MLR
comp=Z,2μm,18.8s
NWAO Narrogin (SRO) 57.15 185 *e*P **P** **18 01 07.2 -0.7**
comp=Z,216nm,1.2s,mb6.0
WBK Wadi Bani Khal 57.62 282⇓P **P** **18 01 12.7 +1.2**
SNR=26
BIDO Bidbid 58.13 283⇑P **P** **18 01 16.6 +1.5**
SNR=21
SMDO Samad 58.32 283 P **P** **18 01 18.5 +2.1**
SNR=15
JMDO Jabal Madar 58.45 282⇓P **P** **18 01 18.6 +1.2**
SNR=15
HOQ Hoqain 58.84 284⇓P **P** **18 01 21.1 +1.0**
SNR=37
STKA Stephens Creek 58.88 161 *e*P **P** **18 01 19.8 -0.2**
comp=Z,128nm,0.6s,mb6.1
STKA *e*S **S** **18 09 20.3 -1.2**
STKA *e*PKPPKP 18 31 03.1
STKA Stephens Creek 58.88 161 P **P** **18 01 19.9 -0.1**
comp=Z,164nm,0.8s,mb6.1,baz=338,slow=6.8,SNR=280
STKA S **S** **18 09 20.1 -1.4**
comp=Z,9.6nm,1.3s,baz=52,slow=24,SNR=3.8
STKA LR LR 18 29 49.2
comp=Z,3μm,18.9s,MS5.5,baz=345,slow=39
BANOM Banah 59.14 287⇑P **P** **18 01 23.5 +1.4**
SNR=23
BSY Bisya 59.16 283⇓P **P** **18 01 23.3 +1.0**
SNR=30
HATD Hatta, Dubai 59.56 285⇑P **P** **18 01 26.2 +1.1**
SNR=32
ASHO Ashiyiah 59.66 285 P **P** **18 01 27.1 +1.3**
SNR=26
ARMA Armidale 61.30 151⇑*i*P **P** **18 01 37.4 +0.7**
ARMA *e*S **S** **18 09 56.3 +3.6**
ARMA *e*SCS ScS 18 11 28.3 +5.3
MAK Makhachkala 62.97 307*c* *i*P **P** **18 01 48.7 +0.9**
MAK *e**PP pP 18 02 04.2 +0.6
MAK *e* 18 02 22.6
MAK *e* 18 04 11.4
MAK *i*S **S** **18 10 15.8 +2.1**
MAK *e**SS sS 18 10 39.0 -1.3
MAK *i* 18 11 34.8
MAK pmax pmax
comp=Z,189nm,0.8s,mb6.3
MAK MLR MLR
comp=Z,10μm,18.0s,MS6.0
DZM Mont Dzumac 63.03 133 *e*P **P** **18 01 49.0 +0.6**
DZM Mont Dzumac 63.03 133 *e*P **P** **18 01 48.6 +0.2**
SDPT Sand Point 63.18 39 *e*P **P** **18 01 46.8 -2.2**
comp=Z,88nm,0.6s,mb6.1
RBK Rabkut 63.39 278⇑P **P** **18 01 51.5 +0.5**
SNR=12
WHFO Wadi Hawf 63.65 279 P **P** **18 01 53.3 +0.6**
SNR=10.0
RIV Riverview 64.05 153 *e*P **P** **18 01 56.2 +1.3**
CHGN Chignik 64.25 37 *e*P **P** **18 01 55.2 -0.8**
ABTO Aybut 64.26 278⇓P **P** **18 01 56.9 +0.2**
SNR=11
CAN Canberra 64.52 156 *e*P **P** **18 01 58.5 +0.6**
CNB Canberra Magne 64.65 156⇑*i*P **P** **18 01 59.3 +0.5**
CNB *e*sP sP 18 02 20.7 -0.4
CNB *e*S **S** **18 10 35.5 +1.1**
DGRG David-gareji 64.79 306 P **P** **18 02 00.6 +0.8**
TTA Tatalina 64.89 30 *e*P **P** **18 01 59.5 -0.5**
MTA Mtatsminda 65.17 306 P **P** **18 02 01.3 -1.0**
TBLG Delisi 65.20 306 P **P** **18 02 02.7 +0.2**
SVW2 Sparrevohn 65.25 32 *e*P **P** **18 02 02.7 +0.3**
TOO Toolangi 65.35 160⇑*i*P **P** **18 02 03.7 +0.5**
TOO *e*S S 18 10 42.8 0.0
TOO *e*PKPPKP 18 30 45.1
TOO Toolangi 65.35 160⇑*i*P **P** **18 02 03.7 +0.5**
TOO *e*S S 18 10 42.8 0.0
GNI Garni 65.52 305⇑P **P** **18 02 05.9 +1.3**
SNR=25
GNI Garni 65.52 305 P **P** **18 02 05.8 +1.3**
comp=Z,70nm,0.9s,mb5.7,baz=109,slow=0.4,SNR=21
GNI Garni 65.52 305*c* *i*P **P** **18 02 05.6 +1.0**
GNI pmax pmax
comp=Z,108nm,1.2s
GNI MLR MLR
comp=Z,12μm,29.0s
GNI Garni 65.52 305 *e*P **P** **18 02 06.2 +1.6**
UMR Umm Al-Rimmam baz=293 65.61 293 *e*P **P** **18 02 05.2 -0.2**
UMR AMb AMB 18 02 07.7
comp=Z,600nm,1.0s,mb6.6,baz=293
IMA2 Indian Mountai 65.63 26 *e*P **P** **18 02 04.6 -0.2**
VRHR Novokhopersk 65.69 317 *e*P **P** **18 02 04.6 -0.8**
VRHR *i**PP pP 18 02 20.4 -0.9
VRHR *e*S S 18 10 45.6 -1.3
VRHR pmax pmax
comp=Z,110nm,0.6s,mb6.1
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=E,50nm,0.6s
VRHR smax
comp=N,1μm,2.7s
VRHR smax
comp=Z,810nm,4.1s
VRHR MLR MLR
comp=Z,5μm,19.0s,MS5.8
VRHR MLR MLR
comp=N,9μm,28.0s
VRHR MLR MLR
comp=E,4μm,20.0s
KBD Kabd baz=292 65.72 292 *e*P **P** **18 02 06.1 +0.1**
KBD AMb AMB 18 02 08.9
comp=Z,567nm,0.9s,mb6.6,baz=292
MIB Mutribah baz=293 65.86 293 *e*P **P** **18 02 07.0 +0.1**
MIB AMb AMB 18 02 10.0
comp=Z,1μm,0.7s,mb7.1,baz=293
RDF Al-Radifah baz=292 65.91 292 *e*P **P** **18 02 08.1 +0.8**
RDF AMb AMB 18 02 11.3
comp=Z,2μm,0.8s,mb7.2,baz=292
ONI Oni 65.98 308 P **P** **18 02 08.5 +1.1**
NAY Al-Naaiem baz=293 66.08 293 *e*P **P** **18 02 08.3 -0.1**
NAY AMb AMB 18 02 11.0
comp=Z,725nm,0.8s,mb6.8,baz=293
RST Umm Al-Ruwaisa baz=293 66.22 293 *e*P **P** **18 02 09.1 -0.2**
RST AMb AMB 18 02 12.0
comp=Z,19nm,0.8s,mb5.2,baz=293
KIV Kislovodsk SNR=93 66.25 309⇑P **P** **18 02 10.0 +0.9**
KIV Kislovodsk 66.25 309*c* *i*P **P** **18 02 09.8 +0.6**
KIV *e*S S 18 10 58.6 +4.6
KIV pmax pmax
comp=Z,872nm,2.8s,mb6.3
KIV MLR MLR
comp=Z,17μm,24.0s,MS6.2
KIV Kislovodsk 66.25 309⇓*i*P **P** **18 02 10.0 +0.8**
KIV Kislovodsk 66.25 309 *e*P **P** **18 02 10.0 +0.8**
CLDR Caldiran 66.36 304 *e*P **P** **18 02 11.7 +1.8**
DYDN Diyadin 66.44 304 *i*P **P** **18 02 11.9 +1.5**
CHUM Lake Minchumin 66.44 29 *e*P **P** **18 02 10.1 +0.1**
comp=Z,66nm,0.7s,mb5.8
PPLA Purkeypile 66.63 30 *e*P **P** **18 02 11.3 +0.1**
comp=Z,57nm,0.6s,mb5.8
KARS Kars 66.65 305 *e*P **P** **18 02 13.8 +2.0**
HKR Hakkari 66.85 302 *e*P **P** **18 02 15.3 +2.2**
HAKT HAKKARI 66.88 302 *i*P **P** **18 02 14.6 +1.3**
VANB Van 66.88 303 *e*P **P** **18 02 15.2 +1.9**
OHAK Old Harbor 66.93 36 *e*P **P** **18 02 12.6 -0.7**
comp=Z,554nm,1.8s,mb6.3
OHAK LR LR
comp=Z,8μm,22.0s,MS5.9
AGRB Hanur-Agry 66.96 304 *e*P **P** **18 02 15.6 +1.8**
KTH Kantishna Hill 67.10 29 *e*P **P** **18 02 13.5 -0.8**
comp=Z,2μm,0.6s,mb7.3
VRSR Storozhevoye 67.18 317 *e*P **P** **18 02 14.1 -0.8**
VRSR *e**PP pP 18 02 30.4 -0.4
VRSR *i**SP sP 18 02 37.3 -0.1
VRSR *i*PPP 18 06 19.9
VRSR *e*S S 18 11 03.3 -1.7
VRSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VRSR pmax pmax
comp=N,10.0nm,1.2s
VRSR pmax pmax
comp=E,50nm,1.4s
VRSR smax
comp=N,600nm,3.4s
VRSR smax
comp=Z,260nm,4.8s
VRSR smax
comp=E,600nm,4.5s
VRSR MLR MLR
comp=Z,2μm,19.0s,MS5.3
VRSR MLR MLR
comp=N,3μm,29.0s
VRSR MLR MLR
comp=E,1μm,15.0s
KDAK Kodiak Island 67.22 35 P **P** **18 02 14.6 -0.5**
comp=E,853nm,0.9s,mb6.8,SNR=37
KDAK Kodiak Island 67.22 35 P **P** **18 02 14.7 -0.4**
comp=E,61nm,0.5s,mb5.9,baz=311,slow=3.4,SNR=53
KDAK Kodiak Island 67.22 35 *e*P **P** **18 02 14.3 -0.8**
MOS Moscow 67.28 322 *e*P **P** **18 02 12.4 -3.1**
MOS *e* 18 02 42.5
MOS *i*S S 18 11 02.0 -4.0
MOS *e* 18 12 08.9
MOS pmax pmax
comp=Z,3μm,3.5s
MOS pmax pmax
comp=Z,412μm,2.0s
APA Apatity 67.33 335⇓*i*P **P** **18 02 15.0 -0.6**
APA *i* pP 18 02 28.0 -3.5
APA *i* 18 04 40.0
APA *i*S S 18 11 04.0 -2.2
APA *i*PS 18 11 36.0
APA *i*SS SS 18 15 23.0 -3.2
APA pmax pmax
comp=Z,81nm,0.6s,mb5.9
APA MLR MLR
comp=Z,13μm,18.0s,MS6.2
ARTV Artvin 67.38 306 *i*P **P** **18 02 17.8 +1.3**
BHD Baghdad 67.40 297 *i*x x 18 02 15.0
BHD *i*x x 18 11 07.0
TRF Thorofare Moun 67.40 29 *e*P **P** **18 02 16.1 -0.1**
comp=Z,81nm,0.9s,mb5.8
BCA Borcka 67.55 307 *e*P **P** **18 02 18.3 +0.8**
MSL Mosul 67.62 301 *i*x x 18 02 20.0
MSL *e*x x 18 02 37.0
MSL *i*x x 18 02 45.0
MSL *i*x x 18 11 13.0
MSL *e*x x 18 11 32.5
MSL *e*x x 18 11 47.0
MSL *e*x x 18 12 10.0
HOMI Horasan 67.66 305 *i*P **P** **18 02 19.5 +1.3**
FIB Fire Island 67.84 32 *e*P **P** **18 02 18.8 -0.1**
SIRT Sirnak 67.87 302 *e*P **P** **18 02 22.2 +2.6**
SLKM Sklak Lake 67.94 32 *e*P **P** **18 02 18.8 -0.8**
MCK McKinley 67.95 29 *e*P **P** **18 02 19.1 -0.5**
OBN Obninsk 67.98 322 P **P** **18 02 19.4 -0.5**
comp=Z,609nm,0.5s,mb6.9,SNR=8.9
OBN Obninsk 67.98 322*c* *i*P **P** **18 02 19.0 -0.9**
OBN *e* pP 18 02 32.7 -3.2
OBN *e* 18 02 45.8
OBN *e* 18 04 50.4
OBN *e*S S 18 11 12.0 -2.5
OBN *e*SS SS 18 15 38.7 +1.8
OBN pmax pmax
comp=Z,317nm,2.0s,mb6.0
OBN MLR MLR
comp=Z,15μm,23.0s,MS6.2
OBN Obninsk 67.98 322 *e*P **P** **18 02 19.1 -0.9**
RC01 Rabbit Creek A 68.06 32 *e*P **P** **18 02 19.3 -1.1**
comp=Z,2μm,0.8s,mb7.2
ERZM Erzurum 68.10 305 *i*P **P** **18 02 22.4 +1.4**
EZM Erzurum 68.10 305 *e*P **P** **18 02 22.8 +1.8**
COLA College 68.20 27*c* *i*P **P** **18 02 20.9 -0.3**
COLA College 68.20 27 *e*P **P** **18 02 20.8 -0.4**
comp=Z,97nm,1.0s,mb5.8
PMR Palmer 68.25 31 *e*P **P** **18 02 20.2 -1.3**
PMR pmax pmax
comp=Z,42nm,0.5s,mb5.7
PMR MLR MLR
comp=Z,5μm,23.0s,MS5.7
PMR Palmer 68.25 31 *e*P **P** **18 02 20.2 -1.3**
comp=Z,42nm,0.5s,mb5.7
PMR *e*P 18 02 20.5
PMR LR LR
comp=Z,5μm,23.0s,MS5.7
SEW Seward 68.39 33 *e*P **P** **18 02 21.0 -1.4**
SOC Sochi 68.43 309*c* *i*P **P** **18 02 22.9 -0.1**
SOC *e**PP pP 18 02 37.4 -1.5
SOC *e* 18 02 45.8
SOC *e* 18 04 53.0
SOC *i*S S 18 11 19.7 -0.5
SOC *e**SS sS 18 11 48.4 +1.3
SOC *e* 18 12 09.7
SOC *e*SS SS 18 15 38.6 -5.8
SOC pmax pmax
comp=Z,90nm,0.5s,mb6.1
SOC pmax pmax
comp=Z,969nm,4.0s
SOC MLR MLR
comp=Z,2μm,18.0s,MS5.3
SOC Sochi 68.43 309 *i*P **P** **18 02 23.0 0.0**
BNGL BINGOL 68.49 304 *i*P **P** **18 02 25.2 +1.8**
BEST Besiri 68.67 303 *i*P **P** **18 02 26.5 +1.9**
KOPT Kop Dagi 68.72 305 *i*P **P** **18 02 26.2 +1.3**
KTUT Trabzon 69.02 307 *e*P **P** **18 02 27.3 +0.6**
MACK Trabzon 69.03 306 *i*P **P** **18 02 27.2 +0.4**
JOF Joensuu 69.05 331 *ep* **P** **18 02 25.0 -1.5**
comp=Z,18nm,0.4s,mb5.4
JOF Joensuu 69.05 331 *e*P **P** **18 02 25.0 -1.5**
JOF pmax pmax
comp=Z,18nm,0.4s,mb5.3
MARD Mardin 69.19 302 *i*P **P** **18 02 28.9 +1.0**
KEV Kevo 69.20 338 *ep* **P** **18 02 26.1 -1.2**
comp=Z,20nm,0.4s,mb5.4
KEV Kevo 69.20 338 *e*P **P** **18 02 26.1 -1.2**
KEV pmax pmax
comp=Z,20nm,0.4s,mb5.4
SPITS Spitsbergen Ar 69.54 348 P **P** **18 02 29.1 -0.2**
comp=Z,72nm,0.5s,mb5.8,baz=2.8,slow=8.0,SNR=7.6
ANN Anapa 69.73 311*c* *i*P **P** **18 02 30.2 -0.8**
ANN *i* 18 02 52.1
ANN *i* 18 05 09.8
ANN *i*PPP 18 06 46.8
ANN *i*S S 18 11 34.9 -0.6
ANN pmax pmax
comp=N,102nm,1.0s
ANN pmax pmax
comp=E,70nm,1.0s
ANN pmax pmax
comp=Z,330nm,1.0s,mb6.2
ANN pmax pmax
comp=N,935nm,2.9s
ANN pmax pmax
comp=E,540nm,2.9s
ANN pmax pmax
comp=Z,3μm,2.9s,mb6.7
ANN MLR MLR
comp=N,8μm,21.0s,MS6.0
ANN MLR MLR
comp=E,6μm,21.0s,MS6.0
ANN MLR MLR
comp=Z,6μm,21.0s,MS5.8
ANN Anapa 69.73 311 *i*P **P** **18 02 29.9 -1.1**
ARCES ARCESS Array B 69.76 338 P **P** **18 02 30.3 -0.4**
comp=Z,21nm,0.5s,mb5.3,baz=66,slow=8.4,SNR=75
ARCES LR LR 18 36 00.2
comp=Z,7μm,21.7s,MS5.8,baz=71,slow=38
ESPY Espiye-Giresun 69.80 307 *e*P **P** **18 02 31.1 -0.4**
PTK Pertek 69.83 304 *e*P **P** **18 02 33.2 +1.5**
DIV Divide 69.94 31 *e*P **P** **18 02 31.2 -0.7**
comp=Z,19μm,0.8s
SVRC Sivrice-ELAZID 70.04 304 *e*P **P** **18 02 34.5 +1.4**
KBS Kingsbay 70.07 349⇑*i*P **P** **18 02 31.1 -1.5**
KBS *e*S S 18 11 33.5 -5.0
KBS AMS AMS 18 36 09.0
comp=Z,12μm,24.0s,MS6.1
KBS Kingsbay 70.07 349 *e*P **P** **18 02 31.6 -0.9**
HSP Hornsund 70.13 347 *e*P **P** **18 02 32.5 -0.4**
GRSN GIRESUNGRSN 70.13 307 *i*P **P** **18 02 32.5 -1.0**
BJO Bjornoya 70.17 344 *e*P **P** **18 02 32.8 -0.4**
BJO *e*S S 18 11 39.7 0.0
BJO AMS AMS 18 36 13.5
comp=Z,6μm,23.1s,MS5.8
BJO1 Bjornoya 70.21 344 *e*P **P** **18 02 32.8 -0.7**
BJO1 LR LR
comp=Z,6μm,23.1s,MS5.8
MENT Mentasta 70.42 29 *e*P **P** **18 02 35.4 +0.5**
BMRM Bremner River 70.53 31⇑*i*P **P** **18 02 35.5 -0.1**
RAGM Ragged Mountai 70.64 32 *e*P **P** **18 02 35.7 -0.6**
URFA Urfa 70.66 303 *e*P **P** **18 02 37.6 +0.7**
KTK1 Kautokeino 70.68 338⇑*i*P **P** **18 02 35.9 -0.5**
KTK1 AMb AMB 18 02 41.2
comp=Z,179nm,2.3s,mb5.6
KTK1 Kautokeino 70.68 338⇑*i*P **P** **18 02 35.9 -0.5**
comp=Z,179nm,2.3s,mb5.6
MALT Malatya 70.72 304 *e*P **P** **18 02 38.0 +0.8**
MALT Malatya 70.72 304⇑*i*P **P** **18 02 38.7 +1.5**
TAU Tasmania Unive 70.79 161 *e*P **P** **18 02 37.7 +0.4**
TAU pmax pmax
comp=Z,299nm,1.2s,mb6.1
TAU Tasmania Unive 70.79 161 *e*P **P** **18 02 37.7 +0.4**
comp=Z,299nm,1.2s,mb6.1
RSDY Resadiye-TOKAT 70.96 306 *e*P **P** **18 02 39.3 +0.6**
EGAK Eagle 71.01 27 *e*P **P** **18 02 38.0 -0.4**
DARE Darende-Malaty 71.01 305 *e*P **P** **18 02 42.8 +3.9**
MSEY Mahe Island 71.01 256⇓P **P** **18 02 39.7 +0.4**
ATAB Bozova 71.06 303 *i*P **P** **18 02 40.2 +0.9**
AKCD Akcadag 71.11 304 *i*P **P** **18 02 41.0 +1.4**
SVSK Karacayir 71.34 306 *e*P **P** **18 02 42.1 +1.2**
KAF Kangasniemi 71.50 330 *ep* **P** **18 02 40.1 -1.4**
comp=Z,8.5nm,0.4s,mb5.0,baz=72,slow=5.6
KAF Kangasniemi 71.50 330 *e*P **P** **18 02 40.1 -1.4**
KAF pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
GZT Gaziantep 71.65 303 *i*P **P** **18 02 44.0 +1.2**
KVT Kavak 71.71 307 *e*P **P** **18 02 44.1 +1.0**
SARI SarD1z-Kayseri 71.92 305 *e*P **P** **18 02 47.4 +3.0**
TRO Tromso 71.92 339 *e*P **P** **18 02 41.2 -2.6**
TRO AMb AMB 18 02 48.6
comp=Z,83nm,2.0s,mb5.3
TRO *e*S S 18 12 00.9 +0.7
TRO AMS AMS 18 37 10.4
comp=Z,6μm,23.3s,MS5.8
TRO Tromso 71.92 339 *e*P **P** **18 02 41.2 -2.7**
TRO pmax pmax

comp=Z,83nm,2.0s,mb5.3
TRO MLR MLR
comp=Z,6µm,23.3s,MS5.8
TRO Tromso 71.92 339 *e*P **P 18 02 41.2 -2.6**
comp=Z,83nm,2.0s,mb5.3
TRO LR LR
comp=Z,6µm,23.3s,MS5.8
DAWY Dawson 71.95 27 *e*P **P 18 02 43.8 -0.3**
SIM Simferopol' 71.96 312 *c*P **P 18 02 44.2 -0.4**
SIM *e* 18 03 09.0
SIM *e* 18 07 14.0
SIM *i*S S 18 12 01.0 -0.5
SIM *e*PS 18 12 28.0
SIM pmax pmax
comp=Z,132nm,0.9s,mb5.9
SIM pmax pmax
comp=Z,1µm,10.4s
SIM MLR MLR
comp=Z,11µm,22.5s,MS6.1
GAZ Gaziantep 71.97 303 *e*P **P 18 02 46.0 +1.3**
KMRS Kahramanmaras 72.11 304 *e*P **P 18 02 46.5 +1.0**
DIKM Dikmen 72.11 308 *e*P **P 18 02 45.9 +0.4**
PINB Pinarbasi 72.14 305 *i*P **P 18 02 47.0 +1.3**
VSU Vasula 72.39 327⇑ *i*P **P 18 02 46.9 +0.1**
BOYT Boyabat 72.43 308 *i*P **P 18 02 48.6 +1.2**
BNN Bunyan 72.50 305 *e*P **P 18 02 48.7 +0.8**
ANDN Andirin 72.51 304 *i*P **P 18 02 48.9 +1.0**
BYBT Boyabat 72.52 308 *e*P **P 18 02 49.1 +1.2**
KIP Kipapa 72.52 74 *e*P **P 18 02 49.5 +1.2**
KIP pmax pmax
comp=Z,54nm,0.8s,mb5.5
KIP Kipapa 72.52 74 *e*P **P 18 02 49.5 +1.2**
comp=Z,54nm,0.8s,mb5.5
LBOS 72.73 278⇑ *e*P **P 18 02 50.6 +1.0**
CTKT Corum 72.75 307 *i*P **P 18 02 50.0 +0.7**
COBT Iskenderun 72.90 303 *i*P **P 18 02 51.3 +1.0**
BZK Bozkurt 72.92 309 *e*P **P 18 02 50.8 +0.5**
KOZT Kozan 72.93 304 *e*P **P 18 02 53.2 +2.8**
CORM Corum 73.00 307 *e*P **P 18 02 51.8 +0.9**
MNK Minsk 73.03 323 *e*P **P 18 02 47.0 -3.7**
MNK *e* 18 03 08.0
MNK *e* 18 05 36.0
MNK *e*S S 18 12 09.0 -4.3
MNK pmax pmax
comp=Z,150nm,1.2s,mb5.8
MNK MLR MLR
comp=Z,12µm,20.0s,MS6.2
HTY Hatay 73.11 302 *e*P **P 18 02 52.3 +0.8**
TOS Tosya 73.18 308 *e*P **P 18 02 53.0 +1.1**
DHBB Dhamar BB 73.25 279⇑ *e*P **P 18 02 53.7 +1.0**
DHBB AMb AMB 18 02 54.8
comp=Z,765nm,1.9s,mb6.3
YURE YUREGIR 73.28 303 *i*P **P 18 02 53.5 +1.0**
CDAG Cicekdag 73.36 306 *i*P **P 18 02 55.2 +2.2**
PNL Peninsula 73.39 32 *e*P **P 18 02 53.9 +1.1**
comp=Z,979nm,1.9s,mb6.4
ILGA Ilgaz 73.40 308 *i*P **P 18 02 53.9 +0.8**
AKASG Malin Array Be 73.40 318 P **P 18 02 51.8 -1.2**
comp=Z,28nm,0.7s,mb5.3,baz=58,slow=6.2,SNR=58
AKASG LR LR 18 38 58.7
comp=Z,6µm,19.3s,MS5.9,baz=50,slow=39
BALT Daday 73.49 308 *i*P **P 18 02 54.5 +0.8**
FKH Fakeheh 73.49 300⇑ *e*P **P 18 02 54.8 +1.0**
KARA Karaisali 73.58 304 *e*P **P 18 02 55.1 +0.8**
CANT Cankiri 73.61 307 *e*P **P 18 02 55.1 +0.8**
NIG Nigde 73.65 305 *e*P **P 18 02 56.1 +1.4**
ELDT Eldivan 73.78 307 *i*P **P 18 02 55.8 +0.4**
HYT Haines Junctio 73.87 30 *e*P **P 18 02 58.7 +3.1**
KAMT Kaman 73.92 306 *e*P **P 18 02 56.4 +0.2**
TRBA At Turbah 73.99 277⇑ *e*P **P 18 02 58.0 +0.9**
SAFT Safranbolu 74.08 308 *e*P **P 18 02 58.4 +1.3**
MERS Mersin 74.11 304 *e*P **P 18 02 57.7 +0.3**
BHL Bhannes 74.19 300⇑ *e*P **P 18 02 57.5 -0.4**
RCY Rachaya 74.19 300⇑ *e*P **P 18 02 58.9 +0.9**
LOF Lofoten 74.31 338 *e*P **P 18 02 59.4 +1.4**
LOF AMb AMB 18 03 02.3
comp=Z,186nm,1.2s,mb5.9
LOF Lofoten 74.31 338 *e*P **P 18 02 59.4 +1.4**
comp=Z,186nm,1.2s,mb5.9
ANTO Ankara 74.44 307 *e*P **P 18 02 59.6 +0.4**
ANTO Ankara 74.44 307 ⇓*i*P **P 18 02 59.6 +0.3**
SNR=34
ANTO Ankara 74.44 307 *e*P **P 18 02 59.4 +0.1**
ANTO pmax pmax
comp=Z,213nm,0.8s,mb6.1
ANTO Ankara 74.44 307⇑ *i*P **P 18 02 59.6 +0.3**
ANTO Ankara 74.44 307 *e*P **P 18 02 59.4 +0.1**
comp=Z,213nm,0.8s,mb6.1
LOD Lodumlu 74.45 307 *e*P **P 18 02 58.8 -0.5**
MEST Erdemli 74.49 303 *i*P **P 18 02 59.3 -0.3**
SGKT Sivrigoynuk 74.74 308 *i*P **P 18 03 00.8 -0.3**
AFI Afiamalu 74.76 113 P **P 18 03 02.6 +1.1**
comp=Z,58nm,1.1s,mb5.4,baz=12,slow=8.1,SNR=6.1
EREN Erenkoy 74.81 302 *e*P **P 18 03 00.7 -0.8**
KIS Kishinev 74.85 315α *i*P **P 18 03 00.0 -1.5**
KIS *e* 18 05 46.0
KIS *e*PPP 18 07 30.0
KIS *i*S S 18 12 37.0 +3.0
KIS *i* *SS sS 18 13 06.0 +4.7
KIS pmax pmax
comp=Z,600nm,2.0s,mb6.2
KIS pmax pmax
comp=Z,6µm,10.0s
KIS pmax pmax
comp=Z,5µm,8.0s
KIS MLR MLR
comp=N,5µm,18.0s,MS6.1
KIS MLR MLR
comp=Z,7µm,18.0s,MS6.0
KIS MLR MLR
comp=E,6µm,17.0s,MS6.1
KIS MLR MLR
comp=Z,13µm,25.0s
KIS Kishinev 74.85 315 ⇓*i*P **P 18 03 00.0 -1.5**
comp=Z,600nm,2.0s,mb6.2
KIS *e*pP pP 18 03 26.0 +8.4
KIS Kishinev 74.85 315 *e*PP PP 18 05 46.0 -3.2
KIS Kishinev 74.85 315 *e*PPP 18 07 30.0
KIS ⇓*i*S S 18 12 36.0 +2.0
KIS *i* sS sS 18 13 06.0 +4.7
MOR8 Moi Rana 74.86 336 *e*P **P 18 02 59.9 -1.3**
MOR8 AMb AMB 18 03 04.5
comp=Z,120nm,1.0s,mb5.8
MOR8 Moi Rana 74.86 336 *e*P **P 18 02 59.9 -1.3**
comp=Z,120nm,1.0s,mb5.8
KDZE Karadeniz Ereo 74.94 309 *e*P **P 18 03 01.3 -0.8**
IKL Isikli 74.95 303 *e*P **P 18 03 02.2 -0.1**
PHNC Paralimni 75.09 302 P **P 18 03 03.5 +0.4**
FLOS Flostrand 75.18 337 *e*P **P 18 03 02.3 -0.8**
KONS Konsvik 75.19 337 *e*P **P 18 03 03.3 +0.2**
KONS AMb AMB 18 03 07.8
comp=Z,294nm,1.7s,mb6.0
POHA Pohakuloa 75.28 75 *e*P **P 18 03 05.3 +0.9**
comp=Z,347nm,1.5s,mb6.1
LADK Ladik-KONYA 75.30 305 *e*P **P 18 03 04.0 -0.2**
STOK Stokkvaagen 75.31 337 *e*P **P 18 03 02.6 -1.1**
STOK AMb AMB 18 03 06.4
comp=Z,241nm,2.0s,mb5.8
STOK Stokkvaagen 75.31 337 *e*P **P 18 03 02.6 -1.1**
comp=Z,241nm,2.0s,mb5.8
KDHN Kadinhani 75.38 306 *i*P **P 18 03 04.5 -0.2**
KHU Kahuku 75.39 75 *e*P **P 18 03 05.9 +0.8**
MDU Mudurnu 75.39 308 *e*P **P 18 03 05.9 +1.1**
KONT Konya--Tatoy 75.39 305 *e*P **P 18 03 04.6 -0.2**
LFK Lefkose 75.39 302 *e*P **P 18 03 05.4 +0.5**
SKAG Skagway 75.39 31 *e*P **P 18 03 04.5 +0.2**
comp=Z,780nm,1.2s,mb6.5
ERMK Ermenek 75.41 304 *i*P **P 18 03 05.3 +0.4**
KIZT Kizilcal 75.43 306 *e*P **P 18 03 05.8 +0.8**
TLCR 75.46 313 ⇓*i*P **P 18 03 04.9 -0.1**
TLCR 75.46 313 ⇓P **P 18 03 04.9 -0.1**
HDMB Hadim 75.62 304 *e*P **P 18 03 06.0 -0.1**
CSS Prodhromos 75.65 302 P **P 18 03 06.5 +0.2**
comp=Z,5.7nm,0.8s
CSS Prodhromos 75.65 302 *e*P **P 18 03 06.1 -0.2**
MAMC Mammari 75.67 302 P **P 18 03 06.5 +0.1**
SUW Suwalki 75.76 323 *e*P **P 18 03 05.6 -1.0**
comp=Z,4µm,4.1s
SUW *e*S S 18 12 41.8 -2.0
SUW *e*SKSac SKSac 18 13 06.8 -5.0
SUW LMZ 18 45 17.0
comp=Z,9µm,22.7s
SUW Suwalki 75.76 323⇑ *e*P **P 18 03 05.6 -1.0**
SUW *e*S S 18 12 41.8 -2.0
SUW *e* 18 13 06.8
SUW pmax pmax
comp=Z,4µm,4.1s
SUW MLR MLR
comp=Z,9µm,22.7s,MS6.0
SUW Suwalki 75.76 323⇑ *e*P **P 18 03 05.6 -1.0**
SUW *e*S S 18 12 41.8 -2.0
SUW *e*SKSac SKSac 18 13 06.8 -5.0
STCH Steam Cracks 75.77 75 *e*P **P 18 03 08.1 +0.8**
LEF Lefka 75.94 302 *e*P **P 18 03 08.1 +0.2**
ESKT Eskisehir 75.97 307 *i*P **P 18 03 07.5 -0.5**
TIRR Tirgusor 75.98 313 *e*P **P 18 03 07.2 -0.8**
TIRR pmax pmax
comp=Z,38nm,0.8s,mb5.4
TIRR Tirgusor 75.98 313⇑ *i*P **P 18 03 07.7 -0.3**
TIRR Tirgusor 75.98 313 *e*P **P 18 03 07.2 -0.8**
comp=Z,38nm,0.8s,mb5.4
ALFC Alevga 76.15 302 P **P 18 03 08.8 -0.4**
HARR Harsova 76.22 313 ⇓*i*P **P 18 03 09.2 -0.2**
HARR Harsova 76.22 313 P **P 18 03 09.4 0.0**
SILT Sile 76.27 309 *e*P **P 18 03 11.6 +1.8**
SIT Sitka 76.35 33 *e*P **P 18 03 10.2 +0.4**
SIT pmax pmax
comp=Z,659nm,1.4s,mb6.4
SIT MLR MLR
comp=Z,3µm,23.0s,MS5.5
SIT Sitka 76.35 33 *e*P **P 18 03 10.2 +0.4**
comp=Z,659nm,1.4s,mb6.4
SIT LR LR
comp=Z,3µm,23.0s,MS5.5
DAG Danmarks Havn 76.36 351 ⇓*i*P **P 18 03 06.2 -3.4**
DAG pmax pmax
comp=Z,25nm,0.6s,mb5.3
DAG Danmarks Havn 76.36 351 ⇓*i*P **P 18 03 06.2 -3.4**
comp=Z,25nm,0.6s,mb5.3
HRT Hereke 76.37 309 *e*P **P 18 03 09.9 -0.4**
AKMC Akamas 76.40 302⇑ P **P 18 03 10.3 -0.3**
PSN Preselentsi 76.40 312 *i*P **P 18 03 10.3 -0.1**
ODB Odobesti 76.42 314 ⇓*i*P **P 18 03 11.6 +1.1**
ODB Odobesti 76.42 314 ⇓P **P 18 03 11.6 +1.1**
PPCY Paphos 76.44 302⇑ P **P 18 03 09.5 -1.3**
ADVT Abdulvahap 76.45 308 *e*P **P 18 03 09.7 -1.2**
SHUT Suhut-Afyon 76.52 306 *e*P **P 18 03 11.7 +0.5**
NSS Namsos 76.54 335 *e*P **P 18 03 08.8 -2.0**
NSS *e*S S 18 12 51.5 -0.5
NSS AMS AMS 18 41 48.0
comp=Z,6µm,16.1s,MS6.0
VRI Vrincioaia 76.60 314⇑ *i*P **P 18 03 11.8 +0.3**
VRI Vrincioaia 76.60 314 P **P 18 03 11.8 +0.3**
PLOR Plostina 76.65 314⇑ *i*P **P 18 03 11.8 0.0**
KLYT Kilyos 76.66 309 *e*P **P 18 03 12.2 +0.3**
ALT Altintas 76.67 307 *e*P **P 18 03 12.3 +0.3**
ALT Altintas 76.67 307 *i*P **P 18 03 13.2 +1.1**
YLV Yalova 76.67 309 *e*P **P 18 03 11.1 -0.9**
ISP Isparta 76.80 306 *e*P **P 18 03 12.3 -0.5**
ISP Isparta 76.80 306 *e*P **P 18 03 12.3 -0.5**
ISP Isparta 76.80 306 ⇓*i*P **P 18 03 12.2 -0.6**
LVV L'vov 76.84 319 *d*P **P 18 03 11.8 -1.0**
LVV *i*S S 18 12 53.8 -2.0
LVV MLR MLR
comp=Z,4µm,20.6s,MS5.7
GEMT Gemlik 76.85 308 *e*P **P 18 03 11.6 -1.4**
TKTP Tekketepe 76.87 306 *i*P **P 18 03 12.7 -0.5**
BCK Bucak 76.87 305 *e*P **P 18 03 12.2 -1.0**
BGKT Bogazkoy 76.88 309 *e*P **P 18 03 12.2 -1.0**
ANTB Antalya 77.02 305 *e*P **P 18 03 14.8 +0.7**
PRD Provadia 77.11 312 *i*P **P 18 03 14.0 -0.4**
GDZ Gediz 77.11 307 *i*P **P 18 03 14.3 -0.2**
MLR Muntele Rosu 77.24 314 ⇓*i*P **P 18 03 14.9 -0.2**
MLR Muntele Rosu 77.24 314 P **P 18 03 15.4 +0.2**
SLVT Silivri 77.26 310 *e*P **P 18 03 14.8 -0.5**
KHAL Karahalli 77.36 306 *i*P **P 18 03 15.3 -0.6**
CRLT Corlu 77.63 310 *e*P **P 18 03 17.4 0.0**
ELL Elmali 77.63 305 *e*P **P 18 03 17.5 0.0**
WAR Warsaw 77.64 322 *e*P **P 18 03 17.1 -0.1**
comp=Z,4µm,2.9s,mb6.8
WAR *e*S S 18 13 04.2 -0.2
WAR LMZ 18 41 25.0
comp=Z,11µm,21.8s
WAR Warsaw 77.64 322⇑ *e*P **P 18 03 17.2 0.0**
WAR *e*S S 18 13 04.3 -0.2
WAR pmax pmax
comp=Z,4µm,2.9s,mb6.8
WAR MLR MLR
comp=Z,11µm,21.8s,MS6.1
WAR Warsaw 77.64 322⇑ *e*P **P 18 03 17.2 0.0**
comp=Z,3.8nm,2.9s
WAR *e*S S 18 13 04.3 -0.2
WAR LR LR
comp=Z,11µm,21.8s,MS6.1
DURS Dursunbey 77.66 308 *i*P **P 18 03 17.2 -0.4**
DEMI Demirci 77.69 307 *i*P **P 18 03 17.5 -0.3**
KWP Kalwaria 77.70 319 *i*P **P 18 03 17.5 -0.1**
comp=Z,4µm,3.8s
KWP *e*S S 18 13 04.8 -0.3
KWP LMZ 18 38 29.0
comp=Z,9µm,26.2s
KWP Kalwaria 77.70 319⇑ *i*P **P 18 03 17.5 -0.1**
KWP *e*S S 18 13 04.8 -0.4
KWP pmax pmax
comp=Z,4µm,3.8s
KWP MLR MLR
comp=Z,9µm,26.2s,MS6.0
KWP Kalwaria 77.70 319⇑ *i*P **P 18 03 17.7 +0.1**
KWP Kalwaria 77.70 319⇑ *i*P **P 18 03 17.5 -0.1**
KWP *e*S S 18 13 04.8 -0.4
GOLH Golhisar 77.72 305 *i*P **P 18 03 17.2 -0.8**
TKR Tekirdag 77.82 309 *e*P **P 18 03 18.0 -0.5**
VOIR 77.85 314⇑ *i*P **P 18 03 18.0 -0.5**
VOIR 77.85 314 P **P 18 03 19.2 +0.7**
BTOK Tokmak 77.92 308 *i*P **P 18 03 18.6 -0.5**
KULA Kula-Manisa 77.92 307 *e*P **P 18 03 18.6 -0.4**
DENT Denizli 77.92 306 *e*P **P 18 03 21.8 +2.8**
DNZL Cakiroluk 77.94 306 *i*P **P 18 03 19.1 -0.1**
JMB Yambol 77.94 311 *e*P **P 18 03 19.5 +0.4**
AKAS Kas 78.05 304 *i*P **P 18 03 18.3 -1.5**
EDRB Edirne 78.06 311 *e*P pP 18 03 36.0 0.0
BALB Balikesir 78.07 308 *e*P **P 18 03 19.9 0.0**
MFT Murefte 78.07 309 *e*P **P 18 03 19.8 -0.1**
SZH Strazhica 78.08 312 *i*P **P 18 03 19.2 -0.6**
WRAK Wrangell Islan 78.11 33 *e*P **P 18 03 20.1 +0.4**
comp=Z,138nm,1.0s,mb5.8
CRAG Craig 78.13 34 *e*P **P 18 03 20.3 +0.5**
comp=Z,1µm,1.7s,mb6.6
SART Tekirdag 78.18 309 *i*P **P 18 03 19.9 -0.6**
RKY Sarkoy-Tekirda 78.18 309 *e*P **P 18 03 20.6 +0.1**
BALY Balya 78.22 308 *i*P **P 18 03 20.0 -0.3**
KOLS Kolonicke sedl 78.24 318 *e*P **P 18 03 23.3 +1.7**
KOLS *e*S S 18 13 08.2 -2.8
KOLS *e*pS 18 13 27.0
DLBC Dease Lake 78.31 31 P **P 18 03 21.9 +1.1**
baz=306,slow=6.5
DLBC Dease Lake 78.31 31 P **P 18 03 21.9 +1.1**
ZIMR 78.31 313 P **P 18 03 21.7 +0.6**
UZH Uzhgorod 78.35 318 *e*P **P 18 03 21.0 -0.2**
UZH *e* pP 18 03 34.0 -3.5
UZH *e* 18 06 19.0
UZH *e* 18 08 12.0
UZH *e*S S 18 13 09.0 -3.2
UZH *e* 18 18 12.0
UZH MLR MLR
comp=N,1µm,15.0s,MS5.7
UZH MLR MLR
comp=E,2µm,15.0s,MS5.7
UZH MLR MLR
comp=Z,3µm,15.0s,MS5.7
RES Resolute Bay 78.35 9 *e*P **P 18 03 19.6 -1.2**
TRPA Tarpa 78.39 318⇑ *i*P **P 18 03 21.5 0.0**
AKHS Akhisar 78.40 307 *i*P **P 18 03 21.4 -0.3**
AKS Akhisar 78.40 307 *e*P **P 18 03 20.6 -1.1**
NB2 NORSAR Subarra 78.54 332 P **P 18 03 21.0 -1.0**
comp=Z,88nm,0.9s,mb5.7,baz=60,slow=5.6
NOA NORSAR Array B 78.54 332 P **P 18 03 21.2 -0.8**
comp=Z,43nm,0.7s,mb5.5,baz=58,slow=5.7,SNR=86
NOA LR LR 18 41 43.0
comp=Z,15µm,20.4s,MS6.3,baz=75,slow=38
TURN Turunc 78.56 305 *i*P **P 18 03 24.2 +1.6**
DALT Dalyan (Mudla) 78.58 305 *e*P **P 18 03 20.6 -2.2**
STHS Stebnicka Huta 78.66 319 *e*P **P 18 03 22.4 -0.5**
STHS pmax pmax
comp=Z,26nm,0.8s,mb5.2
STHS Stebnicka Huta 78.66 319 *e*P **P 18 03 22.4 -0.5**
comp=Z,26nm,0.8s,mb5.2
STHS *e*ScS ScS 18 13 35.1 -4.2
YER Yerkesik 78.70 306 *e*P **P 18 03 23.7 +0.3**
CRVS Cervenica-Dubn 78.74 319 *e*P **P 18 03 22.9 -0.5**
CRVS *e*S S 18 13 13.4 -3.0
CRVS *e*pS 18 13 39.3
AYDN Tasoluk 78.81 306 *i*P **P 18 03 24.6 +0.7**
DIM Dimitrovgrad 78.81 311 *i*P **P 18 03 23.9 0.0**
DRGR 78.82 316 ⇓*i*P **P 18 03 23.9 0.0**
DRGR 78.82 316 P **P 18 03 24.1 +0.3**
JNW Jan Mayen West 78.88 345 *e*P **P 18 03 24.5 +0.8**
ENEZ Enez 78.89 310 *e*P **P 18 03 23.8 -0.6**
ALN Alexandroupoli 78.90 310 *e*P **P 18 03 23.4 -1.0**
RER Riviere de l'E 78.91 241 *e*P **P 18 03 24.1 -0.6**
DOMB Dombas 78.92 334⇑ *i*P **P 18 03 23.5 -0.5**
DOMB AMb AMB 18 03 28.9
comp=Z,245nm,1.7s,mb5.9
DOMB Dombas 78.92 334⇑ *i*P **P 18 03 23.5 -0.5**
comp=Z,245nm,1.7s,mb5.9
JMIC Jan Mayen 78.93 345 *e*P **P 18 03 25.0 +1.0**
JMIC AMb AMB 18 03 29.7
comp=Z,382nm,1.3s,mb6.2
JMIC *e*S S 18 13 19.6 +2.0
JMIC *e*SS SS 18 18 19.8 -2.9
JMIC AMS AMS 18 39 53.5
comp=Z,5µm,21.8s,MS5.8
JMIC Jan Mayen 78.93 345 *e*P **P 18 03 25.0 +1.0**
comp=Z,382nm,1.3s,mb6.2
JMIC LR LR
comp=Z,5µm,21.8s,MS5.8
KDAG Bornova 78.97 307 *i*P **P 18 03 21.3 -3.6**
IZM Izmir 78.98 307 *e*P **P 18 03 25.1 +0.1**
MLSB Milas 79.02 306 *e*P **P 18 03 25.6 +0.4**
AYVA Ayvalik 79.05 308 *i*P **P 18 03 24.4 -0.8**
KDZ Kurdzhali 79.05 311 *i*P **P 18 03 25.6 +0.4**
CRAR CRAIOVA 79.10 314⇑ *i*P **P 18 03 25.0 -0.4**
EZN Ezine 79.11 309 *e*P **P 18 03 25.5 -0.1**
BLCB Balcova 79.14 307 *e*P **P 18 03 25.9 +0.1**
RDO Rodhopi 79.16 310 *e*P **P 18 03 25.2 -0.6**
ARG Arkhangelos 79.17 305 *e*P **P 18 03 25.7 -0.3**
OJC Ojcow 79.18 320⇑ *i*P **P 18 03 25.7 -0.1**
OJC *e* 18 03 33.2
OJC *e**PP pP 18 03 42.3 +0.3
OJC *i*S S 18 13 19.7 -1.3
OJC *e* 18 13 35.4
OJC MLR MLR
comp=Z,6µm,22.1s,MS5.9
NIE Niedzica 79.22 319 *e*P **P 18 03 26.3 +0.3**
MOL Molde 79.24 335 *e*P **P 18 03 25.8 -0.1**
MOL AMb AMB 18 03 31.5
comp=Z,221nm,2.0s,mb5.7
MOL *e*S S 18 13 21.6 +0.5
MOL AMS AMS 18 42 59.1
comp=Z,10µm,13.1s,MS6.3
MOL Molde 79.24 335 *e*P **P 18 03 25.8 -0.1**
comp=Z,221nm,2.0s,mb5.7
MOL LR LR
comp=Z,10µm,13.1s,MS6.3
GCAM G?zelcaml? 79.27 306 *i*P **P 18 03 26.6 +0.1**
GADA Gvkgeada 79.28 309 *e*P **P 18 03 25.1 -1.4**
GKP Gorka Klasztor 79.30 324 *e*P **P 18 03 25.8 -0.5**
comp=Z,2µm,2.8s,mb6.5
GKP *e*S S 18 13 21.5 -0.6
GKP LMZ 18 42 30.0
comp=Z,12µm,22.5s
GKP Gorka Klasztor 79.30 324⇑ *e*P **P 18 03 25.8 -0.5**
GKP *e*S S 18 13 21.5 -0.6
GKP pmax pmax
comp=Z,2µm,2.8s,mb6.5
GKP MLR MLR
comp=Z,12µm,22.5s,MS6.2
GKP Gorka Klasztor 79.30 324⇑ *e*P **P 18 03 25.8 -0.5**
comp=Z,2.0nm,2.8s
GKP *e*S S 18 13 21.5 -0.6
GKP LR LR
comp=Z,12µm,22.5s,MS6.2
BOZC Bozcaada 79.30 309 *i*P **P 18 03 26.0 -0.6**
GZR Gura Zlata 79.34 315 P **P 18 03 27.4 +0.7**
BDRM Kayabasi 79.35 306 *i*P **P 18 03 26.3 -0.6**
PLD Plovdiv 79.36 311 *e*P **P 18 03 26.7 -0.3**
PRK Paraskevi 79.37 308 *e*P **P 18 03 26.0 -1.0**
PRK Paraskevi 79.37 308 *e*P **P 18 03 26.5 -0.5**
BODT Bodrum 79.45 306 *e*P **P 18 03 27.2 -0.3**
KECS Kecovo 79.50 319 *e*P **P 18 03 25.1 -2.4**
KECS pmax pmax
comp=Z,19nm,0.9s,mb5.0
KECS Kecovo 79.50 319 *e*P **P 18 03 25.1 -2.4**
comp=Z,19nm,0.9s,mb5.0
KECS *e*S S 18 13 25.1 +0.6
RZN Rozhen 79.52 311 *i*P **P 18 03 27.7 -0.1**
SMG Samos 79.55 307 *e*P **P 18 03 27.7 -0.3**
PGB Panagyurishte 79.55 312 *i*P **P 18 03 27.9 0.0**
CHOS Chios island 79.86 307 *e*P **P 18 03 28.6 -1.1**
LIA Limnos Island 79.89 309 *e*P **P 18 03 28.9 -1.0**
KONO Kongsberg 79.94 332⇑ *i*P **P 18 03 29.0 -0.7**
KONO AMb AMB 18 03 34.8
comp=Z,122nm,1.9s,mb5.5
KONO *e*S S 18 13 29.0 +0.3
KONO *e*SS SS 18 18 40.2 +1.8
KONO AMS AMS 18 42 47.4
comp=Z,21µm,19.2s,MS6.5
KONO Kongsberg 79.94 332 *c*P **P 18 03 28.5 -1.2**
KONO Kongsberg 79.94 332⇑ *i*P **P 18 03 28.6 -1.1**
BZS Buzias 79.99 316 ⇓*i*P **P 18 03 29.7 -0.6**
BZS Buzias 79.99 316 P **P 18 03 29.8 -0.5**
PSZ Piszkesteto 80.10 318 *e*P **P 18 03 30.5 -0.3**
PSZ pmax pmax
comp=Z,350nm,2.0s,mb5.9
PSZ Piszkesteto 80.10 318⇑ *e*P **P 18 03 30.8 0.0**
PSZ Piszkesteto 80.10 318⇑ *i*P **P 18 03 31.0 +0.2**
PSZ Piszkesteto 80.10 318 *e*P **P 18 03 30.5 -0.3**
comp=Z,350nm,2.0s,mb5.9
KARP Karpathos 80.14 304 *e*P **P 18 03 31.0 -0.3**
RAC Raciborz 80.17 321 *e*P **P 18 03 31.5 +0.4**
RAC *e* 18 03 38.4
RAC *e* 18 06 34.4
RAC *e*S S 18 13 32.2 +0.8
RAC MLR MLR
comp=Z,7µm,20.0s,MS6.0
TIM Timisoara 80.20 316 ⇓*i*P **P 18 03 31.4 0.0**
MMB Musomiste 80.24 311 *i*P **P 18 03 30.9 -0.8**
NVR Nevrokopi 80.24 311 *e*P **P 18 03 30.9 -0.8**
OKC Ostrava-Krasne 80.31 320 *e*P **P 18 03 31.1 -0.8**
OKC *e*pP pP 18 03 46.2 -2.0
OKC *e*PP PP 18 06 32.7 -2.0
OKC *e*S S 18 13 30.5 -2.4
OKC AMS AMS 18 38 20.0
comp=Z,5µm,20.6s
OKC Ostrava-Krasne 80.31 320 *e*P **P 18 03 31.1 -0.8**
OKC *e* pP 18 03 46.2 -2.0
OKC *e*PP PP 18 06 32.7 -2.0
OKC *e*S S 18 13 30.5 -2.4
XMAS Kiritimati 80.32 92 *e*P **P 18 03 31.6 -1.0**
comp=Z,649nm,1.3s,mb6.4
VYHS Vyhne 80.49 319 *e*P **P 18 03 32.9 0.0**
VYHS *e*PP PP 18 06 36.8 +0.5
VYHS *e* 18 13 31.9
VYHS *e*S S 18 13 39.0 +4.1
VYHS *e* 18 19 21.6
VYHS Vyhne 80.49 319 *e*P **P 18 03 32.9 0.0**
comp=Z,16nm,0.8s,mb5.0
VYHS *e*PP PP 18 06 36.8 +0.5
VYHS *e*S S 18 13 31.9 -3.0
VYHS *e*S S 18 13 39.0 +4.1
VYHS *e*SS SS 18 19 21.6 +34
VYHS LR LR
comp=Z,5µm,35.5s,MS5.6
HYA Hoyanger 80.55 334 *e*P **P 18 03 33.4 +0.4**
HYA AMb AMB 18 03 38.7
comp=Z,177nm,2.0s,mb5.6
HYA Hoyanger 80.55 334 *e*P **P 18 03 33.4 +0.4**
comp=Z,177nm,2.0s,mb5.7
KKB Krupnik 80.56 312 *i*P **P 18 03 33.2 -0.2**
FURI Furi 80.57 276 *e*P **P 18 03 34.3 +0.4**
FURI S S 18 13 17.4 -19
COP Copenhagen 80.64 327⇑ *e*P **P 18 03 33.5 0.0**
COP *i* 18 06 39.0
COP *i*S S 18 13 36.6 +0.4
COP pmax pmax
comp=Z,31nm,1.0s,mb5.2
COP MLR MLR
comp=Z,5µm,19.0s,MS5.9
COP Copenhagen 80.64 327⇑ *i*P **P 18 03 33.5 0.0**

comp=Z,31nm,1.0s,mb5.2
COP *e* 18 04 03.0
COP *i* 18 06 39.0
COP *i* S S 18 13 36.6 +0.4
COP
comp=Z,5µm,19.0s
COP Copenhagen 80.64 327⇑ eP P 18 03 33.5 0.0
comp=Z,31nm,1.0s,mb5.2
COP *e* 18 04 03.0
COP *i* 18 06 39.0
COP *i* S S 18 13 36.6 +0.4
COP LR LR
comp=Z,5µm,19.0s,MS5.9
MORC Moravsky Berou 80.68 321 eP P 18 03 33.7 -0.2
MORC pmax pmax
comp=Z,32nm,1.0s,mb5.2
MORC Moravsky Berou 80.68 321⇑ iP P 18 03 33.6 -0.3
MORC Moravsky Berou 80.68 321 eP P 18 03 33.6 -0.2
comp=Z,32nm,1.0s,mb5.2
KOLL Kolacno 80.71 319 eP P 18 03 34.1 0.0
URZ Urewera 80.76 139 P P 18 03 33.2 -1.1
comp=Z,18nm,0.5s,mb5.3,baz=344,slow=1.2,SNR=24
APE Apeiranthos 80.76 306 eP P 18 03 32.7 -1.9
APE Apeiranthos 80.76 306⇑ iP P 18 03 32.7 -1.9
BUD Budapest 80.82 318⇑ eP P 18 03 34.8 +0.1
BUD Budapest 80.82 318⇑ eP P 18 03 34.8 +0.1
KSP Ksiaz 80.91 322 iP P 18 03 34.9 -0.2
comp=Z,3µm,3.2s
KSP *e*S S 18 13 38.4 -0.8
KSP *es*S sS 18 14 03.1 -3.7
KSP LMZ 18 42 57.6
comp=Z,21µm,21.1s
KSP Ksiaz 80.91 322⇑ eP P 18 03 35.0 -0.1
KSP *e**PP pP 18 03 49.9 -1.5
KSP *e* 18 06 36.5
KSP *e*S S 18 13 37.0 -2.2
KSP MLR MLR
comp=Z,24µm,21.1s,MS6.5
KSP Ksiaz 80.91 322⇑ eP P 18 03 35.0 -0.1
KSP *ep*P pP 18 03 49.9 -1.5
KSP *e*PP PP 18 06 36.5 -3.2
PLG Polygyros 80.92 310 eP P 18 03 34.2 -1.2
PLG Polygyros 80.92 310 eP P 18 03 34.5 -0.9
PAIG Paliouri 80.94 310 eP P 18 03 33.9 -1.6
KNT Kendrikon 80.98 311 eP P 18 03 34.8 -0.8
ZKR Zakros 81.02 304 eP P 18 03 35.6 -0.4
ODD1 Odda 81.07 333 eP P 18 03 35.9 +0.2
ODD1 AMb AMB 18 03 40.1
comp=Z,109nm,2.1s,mb5.4
ODD1 Odda 81.07 333 eP P 18 03 35.9 +0.2
comp=Z,109nm,2.1s,mb5.4
HORT Hortiatis 81.07 310 eP P 18 03 35.1 -1.0
SANT Santorini 81.09 306 eP P 18 03 34.2 -2.2
SANT Santorini 81.09 306 eP P 18 03 34.2 -2.1
comp=Z,401nm,1.1s,mb6.3
THR1 Thera Island 81.09 306 eP P 18 03 34.9 -1.4
THR3 Thira Island, 81.12 306 eP P 18 03 34.6 -1.9
DPC Dobruska-Polom 81.12 321 eP P 18 03 36.1 -0.1
DPC *ep*P pP 18 03 53.2 +0.6
DPC *e*S S 18 13 41.2 -0.2
DPC AMS AMS 18 42 40.0
comp=Z,8µm,22.3s
VAY Valandovo 81.14 311 eP P 18 03 35.3 -1.2
VAY Valandovo 81.14 311⇑ iP P 18 03 35.2 -1.3
VAY Valandovo 81.14 311⇑ iP P 18 03 35.2 -1.3
VAY *i* S S 18 13 38.5 -3.4
THR6 Thira Island, 81.14 306 eP P 18 03 34.9 -1.7
RPZ Rata Peaks 81.17 146 P P 18 03 36.0 -0.4
comp=Z,148nm,0.9s,mb5.9,baz=21,slow=1.6,SNR=62
RPZ LR LR 18 36 20.0
comp=Z,3µm,19.2s,MS5.7,baz=317,slow=33
UPC Upice 81.23 322 eP P 18 03 37.1 +0.3
STIP Stip 81.25 312 iP P 18 03 35.7 -1.4
STIP Stip 81.25 312 iP P 18 03 35.7 -1.4
RUND Rundenannen 81.31 333 eP P 18 03 38.8 +1.8
RUND AMb AMB 18 03 44.5
comp=Z,160nm,1.7s,mb5.7
RUND Rundenannen 81.31 333 eP P 18 03 38.8 +1.8
comp=Z,160nm,1.7s,mb5.7
ASK Askoy 81.34 334 eP P 18 03 35.8 -1.3
ASK AMb AMB 18 03 41.6
comp=Z,196nm,1.5s,mb5.8
ASK Askoy 81.34 334 eP P 18 03 35.8 -1.3
comp=Z,196nm,1.5s,mb5.8
BER Bergen 81.34 333⇑ iP P 18 03 36.5 -0.7
BER AMb AMB 18 03 42.6
comp=Z,116nm,1.7s,mb5.5
BER *e*S S 18 13 44.8 +1.6
BER *e*SS SS 18 19 00.1 +1.0
BER AMS AMS 18 43 38.9
comp=Z,17µm,20.3s,MS6.4
BER Bergen 81.34 333⇑ iP P 18 03 36.5 -0.7
BER pmax pmax
comp=Z,116nm,1.7s,mb5.5
BER MLR MLR
comp=Z,17µm,20.3s,MS6.4
BER Bergen 81.34 333⇑ iP P 18 03 36.5 -0.7
comp=Z,116nm,1.7s,mb5.5
BER LR LR
comp=Z,17µm,20.3s,MS6.4
GRG Griva 81.41 311 eP P 18 03 36.1 -1.8
BLS5 Blasjo 81.42 332 eP P 18 03 38.1 +0.5
BLS5 AMb AMB 18 03 43.5
comp=Z,66nm,2.0s,mb5.2
BLS5 Blasjo 81.42 332 eP P 18 03 38.1 +0.5
comp=Z,66nm,2.0s,mb5.2
NPS Neapolis 81.42 305 eP P 18 03 37.3 -0.8
EGD Espegrend 81.45 333 eP P 18 03 36.6 -1.1
EGD AMb AMB 18 03 40.4
comp=Z,166nm,1.9s,mb5.6
EGD Espegrend 81.45 333 eP P 18 03 36.6 -1.1
comp=Z,166nm,1.9s,mb5.6
VRAC Vranov 81.45 320⇑ iP P 18 03 38.2 +0.2
VRAC Vranov 81.45 320 P P 18 03 38.2 +0.3
MODS Modra-Piesok 81.47 319 eP P 18 03 38.1 0.0
MODS *e*PP PP 18 06 45.2 +0.8
MODS *e*S S 18 13 42.1 -3.0
MODS *e*SS SS 18 19 02.7 +0.9
NEO Neokhori 81.52 309 eP P 18 03 36.9 -1.6
RUE Ruedersdorf 81.52 324 eP P 18 03 37.8 -0.5
comp=Z,826nm,2.3s,mb6.3
LAST Lasithi 81.56 305 eP P 18 03 38.4 -0.4
PKSM Moragy 81.61 317⇓ iP P 18 03 38.3 -0.6
PKSM Moragy 81.61 317 P P 18 03 38.6 -0.3
SKO Skopje 81.64 312⇑ iP P 18 03 39.4 +0.3
SKO Skopje 81.64 312⇑ iP P 18 03 39.4 +0.3
SKO *i* S S 18 13 47.2 +0.2
ZST Bratislava 81.66 319 eP P 18 03 39.2 +0.1
ZST *e*PP PP 18 06 45.2 -0.7
ZST *e* 18 13 28.4
ZST *e*S S 18 13 50.8 +3.8
ZST *e* 18 20 22.2
ZST Bratislava 81.66 319 eP P 18 03 39.2 +0.1
comp=Z,1µm,3.0s
ZST *e*PP PP 18 06 45.2 -0.7
ZST *e*S S 18 13 28.5 -19
ZST *e*S S 18 13 50.8 +3.8
ZST LR LR
comp=Z,900nm,21.5s,MS5.1
DIVS Divibare 81.68 315 eP P 18 03 38.4 -0.9
LIT Litokhoron 81.70 310 eP P 18 03 38.1 -1.4
ATH Athens Observa 81.72 308 eP P 18 03 37.6 -2.0
MUD Monsted U'grnd 81.82 329⇑ eP P 18 03 38.0 -1.7
MUD *e* 18 06 48.2
MUD *i* S S 18 13 48.8 +0.5
MUD pmax pmax
comp=Z,38nm,0.9s,mb5.3
MUD MLR MLR
comp=Z,22µm,20.0s,MS6.5
MUD Monsted U'grnd 81.82 329⇑ iP P 18 03 38.0 -1.7
comp=Z,38nm,0.9s,mb5.3
MUD *i* 18 03 59.2
MUD *e* 18 06 48.2
MUD *i* S S 18 13 48.8 +0.5
MUD
comp=Z,22µm,20.0s
MUD Monsted U'grnd 81.82 329⇑ eP P 18 03 38.0 -1.7
comp=Z,38nm,0.9s,mb5.3
MUD *i* 18 03 59.2
MUD *e* 18 06 48.2
MUD *i* S S 18 13 48.8 +0.5
LKR Lokris 81.95 309 eP P 18 03 39.0 -1.8
NAIG Nisos Aigina 81.97 308 eP P 18 03 38.0 -2.9

KRUS Krusevo 82.02 312 iP P 18 03 40.5 -0.7
KRUS Krusevo 82.02 312 iP P 18 03 40.5 -0.7
KRUS *i* S S 18 13 48.8 -2.3
PVCC Panska Ves 82.03 322 eP P 18 03 40.8 -0.2
PVCC *e*PP PP 18 06 47.3 -1.6
PVCC AMS AMS 18 44 40.0
comp=Z,9µm,18.4s
TREC Trest 82.09 321 eP P 18 03 41.3 -0.1
TREC *ep*P pP 18 03 58.2 +0.5
TREC *e*S S 18 13 51.8 +0.3
TREC AMS AMS 18 43 00.0
comp=Z,9µm,19.8s
KZN Kozani 82.12 311 eP P 18 03 40.3 -1.4
SIVA Sivas 82.12 305 eP P 18 03 41.4 -0.4
BIA Bitola 82.12 311 iP P 18 03 37.6 -4.1
BIA Bitola 82.12 311 iP P 18 03 37.6 -4.1
FNA Florina 82.19 311 eP P 18 03 40.0 -2.0
BRG Berggiesshubel 82.21 323⇑ iP P 18 03 41.5 -0.4
BRG *e* pP 18 03 59.7 +1.4
BRG 18 06 51.0
BRG S S 18 13 55.0 +2.4
BRG PS 18 15 01.0
BRG SS SS 18 19 15.0 +2.4
BRG pmax pmax
comp=Z,447nm,2.7s,mb5.9
BRG pmax pmax
comp=Z,30nm,1.4s,mb5.0
BRG pmax pmax
comp=Z,15nm,1.8s,mb4.6
BRG MLR MLR
comp=Z,5µm,17.1s,MS5.9
BRG MLR MLR
comp=N,3µm,17.9s,MS6.0
BRG MLR MLR
comp=E,4µm,17.9s,MS6.0
BRG Berggiesshubel 82.21 323 eP P 18 03 41.5 -0.4
comp=Z,747nm,2.7s,mb6.1
BRG Berggiesshubel 82.21 323⇑ iP P 18 03 41.5 -0.5
comp=Z,746nm,2.7s,mb6.2
BRG *e* pP 18 03 59.7 +1.4
comp=Z,50nm,1.4s
BRG PP PP 18 06 51.0 +0.6
BRG S S 18 13 55.0 +2.4
BRG PS 18 15 01.0
BRG SS SS 18 19 15.0 +2.4
BRG PKKP PKKPbc 18 22 09.7 -0.6
comp=Z,25nm,1.8s
BRG
comp=Z,8µm,17.1s
BRG
comp=N,5µm,17.9s
BRG
comp=E,7µm,17.9s
BRG Berggiesshubel 82.21 323⇑ iP P 18 03 41.5 -0.5
comp=E,447nm,2.7s,mb5.9
BRG *e* pP 18 03 59.7 +1.4
BRG PP PP 18 06 51.0 +0.6
BRG S S 18 13 55.0 +2.4
BRG PS 18 15 01.0
BRG SS SS 18 19 15.0 +2.4
BRG PKKP PKKPbc 18 22 09.7 -0.6
BRG LR LR
comp=Z,5µm,17.1s,MS5.9
THL Klokotos Trika 82.26 310 eP P 18 03 39.7 -2.7
THL Klokotos Trika 82.26 310 eP P 18 03 40.2 -2.2
AGG Agios Georgios 82.27 309 eP P 18 03 39.7 -2.8
IVA Berane 82.28 314⇑ iP P 18 03 43.3 +0.8
BBB Bella Bella 82.28 36 P P 18 03 41.9 -0.4
comp=Z,49nm,1.1s,mb5.4,baz=319,slow=5.5,SNR=22
BBB Bella Bella 82.28 36 P P 18 03 41.9 -0.4
PRU Pruhonice 82.31 322 eP P 18 03 42.3 -0.1
PRU *ep*P pP 18 03 59.7 +0.9
PRU *e*PP PP 18 06 48.4 -2.8
PRU *e*S S 18 13 50.2 -3.4
PRU AMS AMS 18 43 40.0
comp=Z,9µm,25.0s
PVY Plav 82.35 313⇑ iP P 18 03 42.8 0.0
PLE Pljevlja 82.41 314⇑ iP P 18 03 44.9 +1.8
VAM Vamos 82.42 305 eP P 18 03 43.0 -0.3
OHR Ohrid 82.44 312⇑ iP P 18 03 41.3 -2.0
OHR Ohrid 82.44 312⇑ iP P 18 03 41.3 -2.0
OHR *i* S S 18 13 50.6 -4.7
YKA Yellowknife Ar 82.45 23 P P 18 03 42.5 -0.4
comp=Z,65nm,0.7s,mb5.7,baz=314,slow=4.8,SNR=92
YKA PKKPbc PKKPbc 18 22 06.9 -3.2
comp=Z,1.8nm,0.5s,baz=129,slow=2.4,SNR=9.7
YKA LR LR 18 43 06.0
comp=Z,4µm,21.9s,MS5.7,baz=210,slow=38
YKA Yellowknife Ar 82.45 23 P P 18 03 42.5 -0.4
YKA PKKPbc PKKPbc 18 22 06.9 -3.2
YKA LR LR 18 43 06.0
SUMG Summit 82.45 354 eP P 18 03 42.6 -0.2
comp=Z,84nm,1.2s,mb5.5
FBE Freiberg 82.51 323 eP P 18 03 43.0 -0.5
comp=Z,912nm,2.4s,mb6.4
FBE *ep*P pP 18 06 53.6 +0.7
CLL Collm 82.52 323⇑ iP P 18 03 42.8 -0.7
CLL *i* *PP pP 18 03 58.2 -1.7
CLL *e* 18 06 53.0
CLL *e*S S 18 13 54.0 -1.7
CLL pmax pmax
comp=Z,533nm,2.5s,mb6.1
CLL pmax pmax
comp=Z,35nm,2.0s,mb5.0
CLL MLR MLR
comp=Z,11µm,21.5s,MS6.2
CLL Collm 82.52 323 eP P 18 03 42.6 -0.9
comp=Z,198nm,1.7s,mb5.9
CLL Collm 82.52 323⇑ iP P 18 03 42.8 -0.7
comp=Z,533nm,2.5s,mb6.1
CLL *i* pP pP 18 03 58.2 -1.7
CLL *es*P sP 18 04 06.0 -0.3
CLL *e*PP PP 18 06 53.0 +0.1
CLL *e*(PPP) 18 09 18.0
CLL *e*(PPPP) 18 10 42.0
CLL *e*S S 18 13 54.0 -1.7
CLL *e*PS 18 14 52.0
CLL *e*PPS 18 15 18.0
CLL *e*SS SS 18 19 19.0 +1.9
CLL *ex* x 18 20 29.0
CLL *e*PKKPbc PKKPbc 18 22 09.0 -0.6
CLL *ex* x 18 22 28.0
comp=Z,21nm,1.7s
CLL *e*SSSS 18 25 30.0
CLL *e*SKKPbc 18 25 42.0
CLL *e*PKPPKPdf 18 30 11.0
comp=Z,35nm,2.0s
CLL Collm 82.52 323⇑ iP P 18 03 42.8 -0.7
comp=Z,533nm,2.5s,mb6.1
CLL *i* pP pP 18 03 58.2 -1.7
CLL *e*PP PP 18 06 53.0 +0.1
CLL *e*PKKP PKKPbc 18 22 09.0 -0.6
CLL *e*P'P' 18 30 11.0
CLL LR LR
comp=Z,11µm,21.5s,MS6.2
CONA Conrad Observa 82.52 319 *i* P P **18 03 43.8 +0.2**
comp=Z,3µm,3.5s,SNR=42
CSNA Conrad Observa 82.52 319⇑ *iP* P **18 03 43.8 +0.2**
comp=Z,3µm,3.5s
BSEG Bad Segeberg 82.59 326 *eP* P **18 03 44.1 +0.3**
BSEG *e* 18 06 53.7
BSEG pmax pmax
comp=Z,3µm,3.8s
BSEG Bad Segeberg 82.59 326 *eP* P **18 03 44.1 +0.3**
comp=Z,3µm,3.8s
BSEG *e*PP PP 18 06 53.7 +0.3
KARN Karanos 82.63 305 *eP* P **18 03 43.0 -1.5**
EVR Evrytania 82.68 309 *eP* P **18 03 43.1 -1.5**
GVD Gavdhos 82.73 305 *eP* P **18 03 44.0 -1.0**
UPM Unac-Piva 82.78 314⇑ *iP* P **18 03 44.6 -0.5**
VLI Veliai 82.80 307 *eP* P **18 03 43.5 -1.8**
TTG Podgorica 82.90 313⇑ *iP* P **18 03 45.1 -0.6**
NKY Niksic 82.90 314⇑ *iP* P **18 03 45.0 -0.7**
KYTH Kithira 82.91 307 *eP* P **18 03 44.0 -1.9**
VLX Vlachokerasia 82.93 308 *eP* P **18 03 44.0 -1.9**
TIR Tirane 82.97 312 *eP* P **18 03 45.4 -0.7**
TIR pmax pmax
comp=Z,328nm,1.4s,mb6.2
TIR Tirane 82.97 312 *eP* P **18 03 45.4 -0.7**
comp=Z,328nm,1.4s,mb6.2
KOGS Kog 82.98 318 *eP* P **18 03 45.3 -0.8**
JAN Janina 83.03 310 *eP* P **18 03 45.6 -0.9**

ARSA Arzberg 83.04 319⇑ *iP* P **18 03 46.0 -0.3**
comp=Z,2µm,3.5s,SNR=24
ULC Ulcinj 83.11 313⇑ *iP* P **18 03 46.7 -0.1**
BRY Bratogost 83.16 314⇑ *iP* P **18 03 45.6 -1.4**
BUM Brajici-Budva 83.19 313⇑ *iP* P **18 03 46.8 -0.4**
SLAT Slait 83.23 284 *iP* P **18 03 48.2 +0.3**
SLAT AMb AMB 18 04 08.3
comp=Z,160nm,1.2s,mb5.9
SLAT *i* S S 18 14 03.2 -0.9
KHC Kasperske Hory 83.27 321 *eP* P **18 03 47.3 -0.2**
KHC *x* x 18 03 55.0
KHC *ep*P pP 18 04 04.2 +0.3
KHC *e*PP PP 18 06 58.1 -1.0
KHC *e*S S 18 14 03.6 +0.2
KHC AMS AMS 18 44 10.0
comp=Z,7µm,19.4s
KHC Kasperske Hory 83.27 321 *eP* P **18 03 47.3 -0.2**
KHC *e* 18 03 55.0
KHC *e* pP 18 04 04.2 +0.3
KHC *e*PP PP 18 06 58.1 -1.0
KHC *e*S S 18 14 03.6 +0.2
KHC LR LR
comp=Z,7µm,19.4s,MS6.0
RLS Riolos of Patr 83.29 309 *eP* P **18 03 47.2 -0.6**
WERD Werda 83.33 323 *eP* P **18 03 47.2 -0.5**
comp=Z,310nm,2.1s,mb6.0
ITM Ithomi 83.34 308 *eP* P **18 03 46.7 -1.4**
GEC2 GERESS Array S 83.34 321 *eP* P **18 03 47.4 -0.4**
GEC2 *e* 18 07 00.4
GEC2 pmax pmax
comp=Z,218nm,1.7s,mb5.9
GEC2 GERESS Array S 83.34 321 *eP* P **18 03 47.3 -0.5**
comp=Z,218nm,1.7s,mb5.9
GEC2 *e*PP PP 18 07 00.4 +0.7
GEC2 GERESS Array S 83.34 321 *eP* P **18 03 47.4 -0.4**
comp=Z,218nm,1.7s,mb5.9
GEC2 *e*PP PP 18 07 00.4 +0.7
GERES GERESS Array B 83.34 321 P P **18 03 47.4 -0.5**
comp=Z,10nm,0.7s,mb5.0,baz=58,slow=5.6,SNR=34
GERES PKKPbc PKKPbc 18 22 07.3 -0.4
comp=Z,1.2nm,0.5s,baz=204,slow=2.9,SNR=8.9
GERES LR LR 18 45 10.7
comp=Z,8µm,19.7s,MS6.1,baz=55,slow=39
GUNZ Gunzen 83.36 323 *eP* P **18 03 47.4 -0.5**
comp=Z,361nm,2.0s,mb6.1
GUNZ *e*PP PP 18 07 00.5 +0.7
NKC Novy Kostel 83.36 323 *eP* P **18 03 47.6 -0.3**
NKC *ep*P pP 18 04 02.5 -1.8
NKC *e*PP PP 18 06 57.5 -2.3
NKC *e*S S 18 14 03.9 -0.4
NKC AMS AMS 18 44 20.0
comp=Z,9µm,18.6s
NKC Novy Kostel 83.36 323 *eP* P **18 03 47.6 -0.3**
NKC *e* pP 18 04 02.5 -1.8
NKC *e*PP PP 18 06 57.5 -2.3
NKC *e*S S 18 14 03.9 -0.4
SISC Sisak 83.36 317 P P **18 03 48.3 +0.3**
WERN Wernitzgruen 83.37 323 *eP* P **18 03 47.5 -0.5**
comp=Z,305nm,2.0s,mb6.0
HCY Herceg Novi 83.39 314⇑ *iP* P **18 03 47.7 -0.5**
NRDL Niedersach Rie 83.45 325 *eP* P **18 03 48.3 0.0**
comp=Z,1µm,2.7s,mb6.5
NRDL *e*PP PP 18 07 00.5 0.0
MOA Molln 83.50 320 *iP* P **18 03 48.6 -0.1**
comp=Z,3µm,3.6s,SNR=20
MRKH Merkhyat 83.57 284 *iP* P **18 03 50.0 +0.4**
MRKH AMb AMB 18 03 54.8
comp=Z,295nm,1.9s,mb6.1
MRKH *i* S S 18 14 05.1 -2.5
PERS Pernice 83.58 318 *iP* P **18 03 48.6 -0.5**
LKD Levkas 83.59 310 *eP* P **18 03 47.9 -1.4**
MOX Moxa 83.61 323 *ePKP* P **18 03 48.8 -0.4**
comp=Z,776nm,2.7s,mb6.4
MOX
comp=Z,9µm,22.0s
MOX Moxa 83.61 323 *eP* P **18 03 48.8 -0.4**
MOX pmax pmax
comp=Z,776nm,2.7s,mb6.4
MOX MLR MLR
comp=Z,9µm,22.0s,MS6.1
MOX Moxa 83.61 323 *eP* P **18 03 48.7 -0.5**
comp=Z,817nm,2.7s,mb6.4
SOKA Soboth 83.61 319⇑ *iP* P **18 03 49.1 -0.2**
comp=Z,2µm,3.5s
JAWL J.Aulia 83.65 284 AMb AMB 18 03 47.2
comp=Z,186nm,1.8s,mb5.9
CLZ Clausthal 83.66 325 *eP* P **18 03 49.3 -0.1**
CLZ *e* 18 07 02.3
CLZ pmax pmax
comp=Z,1µm,2.5s,mb6.5
CLZ Clausthal 83.66 325 *eP* P **18 03 49.3 -0.1**
comp=Z,1µm,2.5s,mb6.5
CLZ *e*PP PP 18 07 02.3 +0.1
WET Wettzell 83.66 321 *eP* P **18 03 49.3 -0.2**
WET *e* 18 07 03.0
WET pmax pmax
comp=Z,674nm,2.4s,mb6.3
WET Wettzell 83.66 321 *eP* P **18 03 49.3 -0.2**
comp=Z,674nm,2.4s,mb6.3
WET *e*PP PP 18 07 03.0 +0.7
MANZ Manzenberg 83.67 322 *eP* P **18 03 49.3 -0.2**
comp=Z,932nm,2.8s,mb6.4
MANZ *e*PP PP 18 07 02.6 +0.2
STON Ston 83.72 314 P P **18 03 48.8 -1.1**
ROTZ Rotzenmuhle 83.73 322 *eP* P **18 03 49.8 0.0**
ROTZ *e*PP PP 18 07 02.3 -0.5
KEK Kerkira 83.74 311 *eP* P **18 03 47.6 -2.5**
VLS Valsamata 83.86 309 *eP* P **18 03 49.4 -1.4**
VLS Valsamata 83.86 309 *eP* P **18 03 49.4 -1.3**
OBKA Obir 83.98 319⇑ *iP* P **18 03 50.8 -0.4**
comp=Z,2µm,3.5s,SNR=7.6
BOJS Bojanci 84.04 317 *iP* P **18 03 51.5 0.0**
BOJS *e*PP PP 18 07 07.0 +1.4
BOJS *e*S S 18 14 07.8 -3.6
LRW Lerwick 84.07 335 *eP* P **18 03 50.5 -0.8**
LRW AMb AMB 18 03 55.1
comp=Z,248nm,2.0s,mb6.0
LJU Ljubljana 84.22 318 *iP* P **18 03 51.9 -0.6**
LJU *i* S S 18 14 07.3 -5.8
LJU *e*SS SS 18 19 50.3 +7.6
GRA1 Grafenberg Arr 84.32 322 *eP* P **18 03 52.6 -0.2**
comp=Z,716nm,2.1s,mb6.4
GRA1 *e*PP PP 18 07 06.7 -0.9
GRA1 *e*S S 18 14 14.3 +0.4
GRA1 *e*PKKP PKKPbc 18 22 05.3 -0.1
GRA1 *eP'P'* 18 30 12.5
GRA1 LR LR
comp=Z,9µm,21.8s,MS6.1
GRF Grafenberg Arr 84.32 322 *eP* P **18 03 52.6 -0.2**
GRF *e* 18 07 06.7
GRF *e*S S 18 14 14.3 +0.4
GRF pmax pmax
comp=Z,716nm,2.1s,mb6.4
GRF MLR MLR
comp=Z,9µm,21.8s,MS6.1
GRF Grafenberg Arr 84.32 322 *eP* P **18 03 52.6 -0.2**
GRF *e* 18 07 06.7
GRF *e*S S 18 14 14.3 +0.4
GRF pmax pmax
comp=Z,716nm,2.1s,mb6.4
GRF Grafenberg Arr 84.32 322 *eP* P **18 03 52.6 -0.2**
comp=Z,716nm,2.1s,mb6.4
GRF *e*PP PP 18 07 06.7 -0.9
GRF *e*S S 18 14 14.3 +0.4
GRF *e*PKKP PKKPbc 18 22 05.3 -0.1
GRF *e*PKPPKP 18 30 12.5
GRF *e*L 18 46 23.8
comp=Z,9µm,21.8s
GRF Grafenberg Arr 84.32 322 *eP* P **18 03 52.6 -0.2**
comp=Z,716nm,2.1s,mb6.4
GRF *e*PP PP 18 07 06.7 -0.9
GRF *e*S S 18 14 14.3 +0.4
GRF *e*PKKP PKKPbc 18 22 05.3 -0.1
UBBA Unterbreizbach 84.39 324 *eP* P **18 03 52.5 -0.7**
comp=Z,945nm,2.7s,mb6.4
UBBA *e*PP PP 18 07 06.3 -1.9
RJOB Jochberg 84.42 320 *eP* P **18 03 53.0 -0.4**
comp=Z,921nm,2.6s,mb6.5
RJOB *e*PP PP 18 07 07.8 -0.7
KBA Koelnbreinsper 84.42 319⇑ *iP* P **18 03 52.8 -0.6**
comp=Z,2µm,3.7s,SNR=8.6
KBA Koelnbreinsper 84.42 319⇑ *iP* P **18 03 52.8 -0.6**
KBA pmax pmax
comp=Z,2µm,3.7s

KBA **Koelnbreinsper** **84.42 319**⇑ *i*P **P** **18 03 52.8 -0.6**
comp=Z,2µm,3.7s
MYKA **Terra Mystica** **84.47 319**⇑ *i*P **P** **18 03 52.8 -0.9**
comp=Z,28µm,4.0s
JAVS **Javornik** **84.58 318** *i* P **P** **18 03 53.4 -0.8**
VOY **Vojsko** **84.61 318** *e*P **P** **18 03 53.5 -0.9**
VOY *e* pP 18 04 10.9 +0.1
VOY *e* 18 04 15.9
VOY *e* 18 04 22.5
OPO **Ambohidratompo** **84.65 247** P **P** **18 03 55.0 +0.1**
comp=Z,72nm,0.8s,mb5.9
PTCC **Patoco-Chiusa** **84.76 319** P **P** **18 03 53.9 -1.2**
comp=Z,118nm,1.6s,mb5.8
IBBN **Ibbenburen** **84.76 326** *e*P **P** **18 03 54.5 -0.5**
comp=Z,710nm,2.0s,mb6.5
IBBN *e*PP PP 18 07 11.5 +0.3
ABPO **Ambohimpanom** **84.82 247** *e*P **P** **18 03 55.9 +0.1**
comp=Z,121nm,0.8s,mb6.1
GMNA **Gemona** **84.89 319** P **P** **18 03 54.8 -1.0**
comp=Z,157nm,1.1s,mb6.0
FVI **Forni Avoltri** **85.00 319** P **P** **18 03 54.5 -1.8**
FVI pmax pmax
comp=Z,58nm,1.2s,mb5.6
FVI **Forni Avoltri** **85.00 319** P **P** **18 03 54.5 -1.8**
comp=Z,58nm,1.2s,mb5.6
FUR **Furstenfeldbru** **85.08 321** *e*P **P** **18 03 56.4 -0.3**
FUR *e* 18 07 14.3
FUR pmax pmax
comp=Z,1µm,2.1s,mb6.6
FUR **Furstenfeldbru** **85.08 321** *e*P **P** **18 03 56.3 -0.4**
comp=Z,1µm,2.1s,mb6.6
FUR *e*PP PP 18 07 14.3 +0.4
FUR **Furstenfeldbru** **85.08 321** *e*P **P** **18 03 56.4 -0.3**
comp=Z,1µm,2.1s,mb6.6
FUR *e*PP PP 18 07 14.3 +0.4
ABTA **Abfaltersbach** **85.08 319**⇑ *i*P **P** **18 03 55.2 -1.6**
comp=Z,688nm,3.3s,SNR=11
WATA **Walderalm** **85.33 320**⇓ *i*P **P** **18 03 57.2 -0.7**
comp=Z,418nm,2.6s,mb6.1
WATA **Walderalm** **85.33 320**⇓ *i*P **P** **18 03 57.2 -0.8**
WATA pmax pmax
comp=Z,418nm,2.6s,mb6.1
WTTA **Wattenberg** **85.33 320** *i* P **P** **18 03 57.5 -0.5**
comp=Z,2µm,3.4s,SNR=26
WTTA **Wattenberg** **85.33 320** *i* P **P** **18 03 57.5 -0.5**
WTTA pmax pmax
comp=Z,2µm,3.4s
WTSB **Winterswijk** **85.44 326**⇑ *e*P **P** **18 03 57.4 -1.0**
comp=Z,309nm,3.5s
BUG **Bochum--Univer** **85.50 325** *e*P **P** **18 03 58.0 -0.7**
comp=Z,508nm,2.0s,mb6.3
BUG *e*PP PP 18 07 17.0 -0.2
TNS **Taunus Mts** **85.55 324** *e*P **P** **18 03 58.7 -0.3**
TNS *e* 18 07 17.8
TNS pmax pmax
comp=Z,896nm,2.5s,mb6.5
TNS **Taunus Mts** **85.55 324** *e*P **P** **18 03 58.7 -0.3**
comp=Z,896nm,2.5s,mb6.5
TNS *e*PP PP 18 07 17.8 +0.2
MOTA **Moosalm** **85.60 320**⇓ *i*P **P** **18 03 58.2 -1.1**
comp=Z,215nm,2.0s,mb6.0,SNR=6.4
MOTA **Moosalm** **85.60 320**⇓ *i*P **P** **18 03 58.2 -1.1**
MOTA pmax pmax
comp=Z,215nm,2.0s,mb6.0
MOTA **Moosalm** **85.60 320**⇓ *i*P **P** **18 03 58.2 -1.1**
comp=Z,215nm,2.0s,mb6.0
RGNG **Rignano Grg** **85.67 314** P **P** **18 03 59.0 -0.8**
TOD **Tromm** **85.69 323** *e*P **P** **18 03 59.2 -0.5**
RETA **Reutte** **85.73 321** *i* P **P** **18 03 59.3 -0.6**
comp=Z,2µm,3.9s,SNR=13
ORI **Oriolo Calabro** **85.87 312** P **P** **18 04 01.0 +0.2**
KMBO **Kilima Mbogo** **85.90 267** P **P** **18 04 02.8 +1.4**
comp=Z,102nm,1.0s,mb6.0,baz=43,slow=6.7,SNR=122
KMBO LR LR 18 42 10.4
comp=Z,3µm,21.8s,MS5.6,baz=74,slow=35
KMBO **Kilima Mbogo** **85.90 267** *e*P **P** **18 04 02.7 +1.3**
KMBO pmax pmax
comp=Z,210nm,1.2s
KMBO **Kilima Mbogo** **85.90 267** *e*P **P** **18 04 02.7 +1.3**
comp=Z,210nm,1.2s,mb6.2
PTRP **Pietrapertosa** **85.91 313** P **P** **18 04 00.6 -0.4**
comp=Z,323nm,1.4s,mb6.4
STU **Stuttgart** **85.93 322** *e*P **P** **18 04 00.4 -0.5**
STU pmax pmax
comp=Z,21nm,0.8s,mb5.4
STU **Stuttgart** **85.93 322** *e*P **P** **18 04 00.2 -0.7**
comp=Z,918nm,2.6s,mb6.5
STU *e*PP PP 18 07 20.6 -0.1
STU **Stuttgart** **85.93 322** *e*P **P** **18 04 00.4 -0.5**
comp=Z,21nm,0.8s,mb5.4
CTI **Castel Tesino** **85.96 319** P **P** **18 03 59.6 -1.5**
CTI pmax pmax
comp=Z,262nm,3.2s
CTI **Castel Tesino** **85.96 319** P **P** **18 03 59.6 -1.5**
comp=Z,262nm,3.2s
FG4 **Candela** **85.98 314** P **P** **18 04 01.5 +0.2**
FG4 pmax pmax
comp=Z,3µm,2.3s,mb7.1
FG4 **Candela** **85.98 314** P **P** **18 04 01.5 +0.2**
comp=Z,3µm,2.3s,mb7.0
FETA **Feichten** **85.99 320**⇑ *i*P **P** **18 04 00.7 -0.6**
comp=Z,1µm,3.4s,SNR=20
FG5 **Orsara di Pugl** **86.07 314** P **P** **18 04 01.3 -0.4**
FG5 pmax pmax
comp=Z,903nm,2.2s,mb6.6
FG5 **Orsara di Pugl** **86.07 314** P **P** **18 04 01.3 -0.4**
comp=Z,903nm,2.2s,mb6.6
TIP **Timpagrande** **86.08 311** *e*P **P** **18 04 01.2 -0.6**
comp=Z,645nm,2.1s,mb6.5
CIGN **Sant'Elia a Pi** **86.13 314** P **P** **18 04 01.6 -0.4**
comp=Z,546nm,1.9s,mb6.5
KTD **Kalmit** **86.24 323** *e*P **P** **18 04 02.4 0.0**
DAVA **Damuels** **86.34 321**⇑ *i*P **P** **18 04 02.4 -0.5**
comp=Z,2µm,3.7s
CING **Cingoli** **86.37 316** P **P** **18 04 02.0 -1.2**
comp=Z,471nm,2.8s,mb6.2
SGO **Sicignano** **86.39 313** P **P** **18 04 02.7 -0.7**
SGO pmax pmax
comp=Z,1µm,2.9s,mb6.7
SGO **Sicignano** **86.39 313** P **P** **18 04 02.7 -0.7**
comp=Z,1µm,2.9s,mb6.7
PSB1 **Pescosannita** **86.40 314** P **P** **18 04 01.9 -1.5**
comp=Z,193nm,1.9s,mb6.0
CSSN **Cassano Irpino** **86.44 313** P **P** **18 04 02.8 -0.8**
comp=Z,213nm,1.8s,mb6.1
C03A **Quillayute Air** **86.44 38**⇑ P **P** **18 04 04.6 +1.2**
baz=86
FSSB **Fossombrone** **86.47 317** P **P** **18 04 03.6 -0.1**
comp=Z,504nm,2.1s,mb6.4
GRI **Girifalco** **86.48 311** P **P** **18 04 03.9 +0.1**
GRI pmax pmax
comp=Z,1µm,2.8s,mb6.6
GRI **Girifalco** **86.48 311** P **P** **18 04 03.9 +0.1**
comp=Z,1µm,2.8s,mb6.6
BRMO **Bormio** **86.49 320** P **P** **18 04 02.1 -1.6**
comp=Z,308nm,3.0s
TERO **Teramo** **86.49 316** P **P** **18 04 03.2 -0.6**
SPAK **Spaichingen-Ko** **86.52 322** *e*P **P** **18 04 03.0 -0.8**
RSM **Repubblica di** **86.56 317** P **P** **18 04 03.3 -0.8**
RSM pmax pmax
comp=Z,184nm,2.3s,mb5.9
RSM **Repubblica di** **86.56 317** P **P** **18 04 03.3 -0.8**
comp=Z,184nm,2.3s,mb5.9
MIDA **Miranda** **86.56 314** P **P** **18 04 03.0 -1.1**
comp=Z,1µm,3.2s
MCD **Coleburn Disti** **86.56 334**⇑ *e*P **P** **18 04 02.3 -1.5**
HGN **Heimansgroeve** **86.58 325**⇑ *e*P **P** **18 04 02.7 -1.4**
HGN **Heimansgroeve** **86.58 325**⇑ *e*P **P** **18 04 03.2 -0.8**
comp=Z,224nm,3.5s
HGN **Heimansgroeve** **86.58 325** *e*PP PP 18 07 29.6 +3.7
HGN **Heimansgroeve** **86.58 325** *e*SS SS 18 20 33.1 +16
LANF **Langenberg** **86.58 323** *e*P **P** **18 04 03.6 -0.5**
RUP **Ruppelstein** **86.58 324** *e*P **P** **18 04 03.6 -0.5**
SNTG **Esanatoglia** **86.59 316** P **P** **18 04 04.5 +0.2**
comp=Z,2µm,3.2s
RNI2 **Rionero Sannit** **86.59 315** P **P** **18 04 04.3 0.0**
comp=Z,2µm,3.0s
INTR **Introdacqua** **86.60 315** P **P** **18 04 03.2 -1.1**
comp=Z,875nm,2.6s,mb6.5
SGG **Gregorio Mates** **86.60 314** P **P** **18 04 02.9 -1.5**
comp=Z,181nm,2.1s,mb5.9
MABI **Malga Bissina** **86.63 320** P **P** **18 04 02.8 -1.6**
comp=Z,248nm,3.3s
MEM **Membach** **86.63 325** P **P** **18 04 03.5 -0.8**
comp=Z,116nm,2.9s,mb5.6
MME1 **Meikle Cairn** **86.63 334**⇑ *e*P **P** **18 04 03.2 -0.9**

BFO **Black Forest** **86.65 322** P **P** **18 04 03.8 -0.7**
comp=Z,211nm,2.1s,mb6.0,SNR=24
BFO **Black Forest** **86.65 322** *e*P **P** **18 04 03.4 -1.1**
BFO *e* 18 07 26.2
BFO pmax pmax
comp=Z,753nm,2.6s,mb6.5
BFO **Black Forest** **86.65 322** *e*P **P** **18 04 03.5 -1.0**
comp=Z,753nm,2.6s,mb6.5
BFO *e*PP PP 18 07 26.2 -0.4
BFO **Black Forest** **86.65 322** *e*P **P** **18 04 03.4 -1.1**
comp=Z,753nm,2.6s,mb6.5
BFO *e*PP PP 18 07 26.2 -0.4
PGC **Sidney** **86.68 37** *e*P **P** **18 04 04.3 -0.3**
comp=Z,188nm,0.8s,mb6.4
BEBN **Eben Emael** **86.69 325** P **P** **18 04 04.2 -0.4**
comp=Z,92nm,3.2s
NRCA **Norcia** **86.70 316** P **P** **18 04 04.5 -0.3**
comp=Z,517nm,2.1s,mb6.4
MVH1 **Achvaich** **86.70 335** *e*P **P** **18 04 03.0 -1.5**
AQU **L'Aquila** **86.75 315** P **P** **18 04 04.6 -0.5**
AQU pmax pmax
comp=Z,3µm,2.9s,mb7.0
AQU **L'Aquila** **86.75 315** P **P** **18 04 04.6 -0.5**
comp=Z,3µm,2.9s,mb7.0
SNB **Saturna Island** **86.77 37** P **P** **18 04 06.0 +1.0**
SDI **San Donato** **86.81 315** P **P** **18 04 04.2 -1.2**
SDI pmax pmax
comp=Z,289nm,1.9s,mb6.2
SDI **San Donato** **86.81 315** P **P** **18 04 04.2 -1.2**
comp=Z,289nm,1.9s,mb6.2
STR **Strasbourg** **86.83 323** *e*P **P** **18 04 05.2 -0.1**
MURB **Monte Urbino** **86.85 316** P **P** **18 04 05.2 -0.3**
comp=Z,1µm,3.1s
VVLD **Villa Vallelon** **86.86 315** P **P** **18 04 04.9 -0.7**
comp=Z,774nm,2.7s,mb6.5
VGZ **Gonzales** **86.88 37** P **P** **18 04 06.0 +0.4**
BADI **Badiali** **86.90 317** P **P** **18 04 06.0 +0.2**
comp=Z,622nm,2.6s,mb6.4
RFI **Roccamonfina** **86.90 314** P **P** **18 04 05.2 -0.6**
comp=Z,309nm,3.3s
PTQR **Pietraqaria** **86.92 315** P **P** **18 04 05.6 -0.3**
comp=Z,354nm,1.4s,mb6.4
SFI **Santa Sofia** **86.94 317** P **P** **18 04 06.2 +0.2**
SFI pmax pmax
comp=Z,776nm,2.2s,mb6.5
SFI **Santa Sofia** **86.94 317** P **P** **18 04 06.2 +0.2**
comp=Z,776nm,2.2s,mb6.5
RAVA **Ravarino** **86.95 318** P **P** **18 04 07.7 +1.7**
comp=Z,2µm,2.8s,mb7.0
B04A **Port Angeles** **86.98 38**⇑ P **P** **18 04 06.8 +0.8**
baz=87,SNR=19
A04A **Legoe Bay, Lum** **87.05 37**⇑ P **P** **18 04 07.1 +0.7**
baz=87
FELD **Feldberg im Sc** **87.09 322** *e*P **P** **18 04 05.0 -1.6**
SOI **Samo** **87.09 311** P **P** **18 04 06.6 -0.2**
SOI pmax pmax
comp=Z,498nm,1.7s,mb6.5
SOI **Samo** **87.09 311** P **P** **18 04 06.6 -0.2**
comp=Z,498nm,1.7s,mb6.5
TUE **Stuetta** **87.09 320** *e*P **P** **18 04 06.0 -0.7**
comp=Z,53nm,1.0s,mb5.7
WLF **Walferdange** **87.09 324** P **P** **18 04 06.7 +0.2**
comp=Z,216nm,2.6s,mb5.9
WLF PP PP 18 07 32.0 +1.9
WLF **Walferdange** **87.09 324** *e*P **P** **18 04 05.8 -0.8**
WLF pmax pmax
comp=Z,740nm,2.0s,mb6.6
WLF **Walferdange** **87.09 324** *e*P **P** **18 04 06.2 -0.4**
comp=Z,1µm,2.5s,mb6.6
WLF *e*PP PP 18 07 30.3 +0.2
WLF **Walferdange** **87.09 324** *e*P **P** **18 04 05.8 -0.8**
comp=Z,740nm,2.0s,mb6.6
VMG **Vicchio** **87.10 317** P **P** **18 04 07.5 +0.8**
comp=Z,1µm,2.4s,mb6.7
BCLA **Clavier** **87.10 325** P **P** **18 04 06.3 -0.3**
comp=Z,138nm,2.9s,mb5.7
BCLA PP PP 18 07 32.9 +2.8
MDO **Dochfour** **87.10 334** *e*P **P** **18 04 04.6 -1.9**
CEL **Celeste** **87.11 311** *e*P **P** **18 04 06.4 -0.5**
comp=Z,330nm,1.4s,mb6.4
NLWA **Neilton Lookou** **87.14 38**⇑ P **P** **18 04 07.7 +0.9**
baz=87,SNR=32
NLWA **Neilton Lookou** **87.14 38** *e*P **P** **18 04 07.4 +0.5**
comp=Z,897nm,1.8s,mb6.7
LIBD **Limburg** **87.16 322** *e*P **P** **18 04 05.8 -1.1**
SEI **Scarperia** **87.17 318** P **P** **18 04 08.0 +0.9**
CDF **Champ du Feu** **87.19 323**⇑ *i*P **P** **18 04 06.4 -0.7**
comp=Z,741nm,1.8s,mb6.3
CDF **Champ du Feu** **87.19 323**⇑ *i*P **P** **18 04 06.4 -0.7**
CDF pmax pmax
comp=Z,370nm,1.8s,mb6.3
CDF **Champ du Feu** **87.19 323**⇑ *i*P **P** **18 04 06.4 -0.7**
comp=Z,370nm,1.8s,mb6.3
CERT **Cerreto** **87.23 315** P **P** **18 04 06.0 -1.4**
comp=Z,426nm,2.8s,mb6.2
A05A **Maple Falls** **87.23 36**⇓ P **P** **18 04 07.2 -0.1**
baz=87,SNR=15
ZCCA **Zocca** **87.25 318** P **P** **18 04 07.9 +0.5**
FNVD **Fontana Vidola** **87.25 318** P **P** **18 04 07.6 +0.1**
comp=Z,1µm,2.7s,mb6.7
MTCE **Montecelio** **87.34 315** P **P** **18 04 05.4 -2.6**
comp=Z,310nm,2.1s,mb6.2
D03A **Wishkah Elem.** **87.35 39**⇑ P **P** **18 04 08.9 +1.0**
baz=87,SNR=16
ECH **Echery** **87.37 323** *e*P **P** **18 04 06.4 -1.5**
ECH **Echery** **87.37 323** *e*P **P** **18 04 07.2 -0.8**
UCC **Uccle** **87.37 326** P **P** **18 04 06.9 -1.0**
comp=Z,246nm,3.2s
MTTG **Motta San Giov** **87.37 311** P **P** **18 04 07.2 -1.0**
comp=Z,2µm,3.5s
ESY **Stoneypath** **87.41 332**⇑ *e*P **P** **18 04 06.5 -1.5**
KAC **Achnashellach** **87.43 335** *e*P **P** **18 04 06.3 -1.7**
C04A **Brinnon** **87.47 38**⇑ P **P** **18 04 09.3 +0.9**
baz=87,SNR=24
GSCL **Gusciola** **87.48 318** P **P** **18 04 09.0 +0.4**
comp=Z,2µm,3.3s
RDP **Rocca di Papa** **87.50 315** P **P** **18 04 07.1 -1.6**
RDP pmax pmax
comp=Z,599nm,2.3s,mb6.4
RDP **Rocca di Papa** **87.50 315** P **P** **18 04 07.1 -1.6**
comp=Z,599nm,2.3s,mb6.4
A06A **Chilliwack** **87.50 36**⇓ P **P** **18 04 08.5 -0.1**
baz=87,SNR=26
CSNT **Castellina Chi** **87.51 317** P **P** **18 04 07.1 -1.6**
comp=Z,359nm,2.8s,mb6.1
GIVF **Givet** **87.54 325**⇑ *i*P **P** **18 04 07.9 -0.8**
comp=Z,508nm,1.8s,mb6.2
GIVF **Givet** **87.54 325**⇑ *i*P **P** **18 04 07.9 -0.8**
GIVF pmax pmax
comp=Z,254nm,1.8s,mb6.2
GIVF **Givet** **87.54 325**⇑ *i*P **P** **18 04 07.9 -0.8**
comp=Z,254nm,1.8s,mb6.2
XSO **Sourhope Farm** **87.54 332**⇑ *e*P **P** **18 04 06.9 -1.7**
ERBM **Eremo** **87.55 318** P **P** **18 04 09.0 +0.1**
MOF **Molkenrain** **87.59 322** *e*P **P** **18 04 08.0 -1.0**
BBS **Basel-Blauen** **87.59 322** *e*P **P** **18 04 07.7 -1.3**
BDI **Bagni Di Lucca** **87.63 318** P **P** **18 04 07.9 -1.4**
BDI pmax pmax
comp=Z,590nm,3.4s
BDI **Bagni Di Lucca** **87.63 318** P **P** **18 04 07.9 -1.4**
comp=Z,590nm,3.4s
B05A **Bryant** **87.65 37**⇓ P **P** **18 04 09.9 +0.6**
baz=88,SNR=23
EDI **Edinburgh** **87.65 333**⇑ *e*P **P** **18 04 07.7 -1.4**
EDI AMb AMB 18 04 12.8
comp=Z,114nm,1.7s,mb5.8
DOU **Dourbes** **87.66 325** P **P** **18 04 08.4 -0.9**
comp=Z,102nm,2.9s,mb5.5
DOU PP PP 18 07 37.1 +2.5
KPL **Plockton** **87.68 335** *e*P **P** **18 04 08.0 -1.3**
SLNA **Salina** **87.69 312** P **P** **18 04 09.1 -0.6**
comp=Z,89nm,0.8s,mb6.0
EBL **Broad Law** **87.69 333**⇑ *e*P **P** **18 04 07.9 -1.4**
VLC **Villacollemand** **87.71 318** P **P** **18 04 08.3 -1.4**
comp=Z,561nm,2.8s,mb6.3
VAI **Varese** **87.75 320** P **P** **18 04 08.1 -1.7**
VAI pmax pmax
comp=Z,721nm,2.5s,mb6.5
VAI **Varese** **87.75 320** P **P** **18 04 08.1 -1.7**
comp=Z,721nm,2.5s,mb6.5
HINF **Hinteralfeld** **87.76 322**⇑ *i*P **P** **18 04 08.8 -1.0**
comp=Z,431nm,1.9s,mb6.1
HINF **Hinteralfeld** **87.76 322**⇑ *i*P **P** **18 04 08.8 -1.0**
HINF pmax pmax
comp=Z,216nm,1.9s,mb6.1
HINF **Hinteralfeld** **87.76 322**⇑ *i*P **P** **18 04 08.8 -1.0**
comp=Z,216nm,1.9s,mb6.0
MAIM **Mastiano** **87.77 318** P **P** **18 04 08.4 -1.6**
comp=Z,200nm,2.0s,mb6.0
JCW **Jim Creek** **87.78 37** *e*P **P** **18 04 10.5 +0.6**
E03A **Lebam** **87.78 39**⇑ P **P** **18 04 10.5 +0.6**
baz=88,SNR=14
EAU **Auchinoon** **87.81 333**⇑ *e*P **P** **18 04 08.6 -1.3**
B06A **Marblemount** **87.83 37**⇑ P **P** **18 04 10.5 +0.3**
baz=88,SNR=36
PII **Pisa** **87.86 318** P **P** **18 04 10.2 -0.2**
PII pmax pmax
comp=Z,175nm,1.8s,mb6.0
PII **Pisa** **87.86 318** P **P** **18 04 10.2 -0.2**
comp=Z,174nm,1.8s,mb6.0
RPW **Rockport** **87.86 37** *e*P **P** **18 04 10.4 +0.1**
BAIF **Baives** **87.88 325**⇑ *i*P **P** **18 04 09.6 -0.8**
comp=Z,228nm,1.6s,mb5.9
BAIF **Baives** **87.88 325**⇑ *i*P **P** **18 04 09.6 -0.8**
BAIF pmax pmax
comp=Z,114nm,1.6s,mb5.8
BAIF **Baives** **87.88 325**⇑ *i*P **P** **18 04 09.6 -0.8**
comp=Z,114nm,1.6s,mb5.8
D04A **Dobbs Creek Ra** **87.90 38**⇓ P **P** **18 04 11.6 +1.1**
baz=88
HAU **Haudompre** **87.93 323** *e*P **P** **18 04 09.4 -1.2**
HAU *e*MLR MLR
comp=Z,10µm,21.5s,MS5.9
HAU **Haudompre** **87.93 323** *e*P **P** **18 04 09.4 -1.2**
HAU LR LR
comp=Z,10µm,21.5s,MS6.2
EAB **Aberfoyle** **87.95 333**⇑ *e*P **P** **18 04 08.9 -1.7**
BOB **Bobbio (Coli)** **87.95 319** P **P** **18 04 10.3 -0.5**
BOB pmax pmax
comp=Z,845nm,3.2s
BOB **Bobbio (Coli)** **87.95 319** P **P** **18 04 10.3 -0.5**
comp=Z,844nm,3.2s
THEF **They Montfort** **88.01 323** *e*P **P** **18 04 10.3 -0.7**
BMW **Boistfort Moun** **88.02 39** *e*P **P** **18 04 11.6 +0.5**
LOMF **Lomont** **88.04 322** *e*P **P** **18 04 09.5 -1.7**
KAR1 **Arisaig** **88.04 334** *e*P **P** **18 04 09.3 -1.7**
AGST **Augusta-Monte** **88.06 310** P **P** **18 04 10.6 -0.8**
ESK **Eskdalemuir** **88.06 332** P **P** **18 04 10.9 -0.2**
comp=Z,187nm,0.9s,mb6.3,SNR=11
ESK **Eskdalemuir** **88.06 332**⇑ *e*P **P** **18 04 10.1 -1.0**
ESK AMb AMB 18 04 14.8
comp=Z,190nm,1.9s,mb6.0
ESK **Eskdalemuir** **88.06 332** *e*P **P** **18 04 10.0 -1.1**
ESK pmax pmax
comp=Z,96nm,1.4s,mb5.8
ESK **Eskdalemuir** **88.06 332** *e*P **P** **18 04 10.0 -1.1**
comp=Z,96nm,1.4s,mb5.8
A07A **Ashnola River,** **88.12 36**⇑ P **P** **18 04 11.7 +0.2**
baz=88,SNR=71
ECK **Cauldkaine Hil** **88.12 332**⇑ *e*P **P** **18 04 09.9 -1.4**
F03A **Seaside** **88.13 40**⇓ P **P** **18 04 12.6 +0.9**
baz=88,SNR=18
C05A **Tolt Reservoir** **88.19 37**⇓ P **P** **18 04 12.3 +0.5**
baz=88,SNR=24
SSY **Sortino** **88.21 310** P **P** **18 04 11.5 -0.7**
comp=Z,711nm,2.7s,mb6.4
E04A **Onalaska** **88.24 39**⇓ P **P** **18 04 13.6 +1.4**
baz=88
PGBU **Glenifferbraes** **88.26 333**⇑ *e*P **P** **18 04 10.9 -1.2**
PGBU AMb AMB 18 04 16.7
comp=Z,169nm,2.1s,mb5.9
HPK **Haverah Park** **88.27 331**⇑ *e*P **P** **18 04 10.6 -1.5**
HPK AMb AMB 18 04 17.1
comp=Z,205nm,2.2s,mb6.0
RAR **Rarotonga** **88.29 114** LR LR 18 38 38.0
comp=Z,5µm,20.8s,MS5.9,baz=183,slow=32
D05A **Enumclaw** **88.32 38**⇑ P **P** **18 04 13.7 +1.3**
baz=88,SNR=46
ORO **Oropa** **88.35 320** P **P** **18 04 10.5 -2.1**
MEZF **Maizieres J'vi** **88.35 324**⇑ *i*P **P** **18 04 12.0 -0.6**
comp=Z,903nm,1.9s,mb6.4
MEZF **Maizieres J'vi** **88.35 324**⇑ *i*P **P** **18 04 12.0 -0.6**
comp=Z,903nm,1.9s,mb6.7
HEBO **Mount Hebo** **88.41 40** *e*P **P** **18 04 12.6 -0.4**
comp=Z,318nm,1.2s,mb6.4
HVZN **Vizzini** **88.45 310** P **P** **18 04 12.6 -0.7**
C06A **Tall Timber Ra** **88.50 37**⇑ P **P** **18 04 13.9 +0.5**
baz=88,SNR=14
CSLB **Castelbuono** **88.53 311** P **P** **18 04 12.1 -1.6**
comp=Z,18nm,0.8s,mb5.5
TRAV **Traversella** **88.55 320** P **P** **18 04 10.6 -3.0**
H02A **Toledo** **88.56 41**⇑ P **P** **18 04 14.6 +1.0**
baz=88
B07A **Winthrop** **88.61 36**⇓ P **P** **18 04 14.5 +0.7**
baz=88,SNR=77
MENF **Mencas** **88.63 326** *e*P **P** **18 04 12.4 -1.5**
G03A **Yamhill** **88.63 40**⇑ P **P** **18 04 14.8 +0.8**
baz=88,SNR=14
LHO **Holmfirth** **88.65 330**⇑ *e*P **P** **18 04 12.6 -1.3**
RAFF **Raffo Rosso** **88.67 311** P **P** **18 04 14.7 +0.3**
KBI1 **Birley Grange** **88.69 330**⇑ *e*P **P** **18 04 12.3 -1.8**
OG01 **Vacheresse** **88.70 321** *e*P **P** **18 04 14.1 -0.2**
USI **Ustica** **88.74 312** P **P** **18 04 13.5 -1.1**
comp=Z,2µm,2.6s,mb6.9
A08A **Turner Farm, O** **88.77 35**⇑ P **P** **18 04 15.0 +0.4**
baz=89,SNR=66
F04A **Amboy** **88.79 39**⇑ P **P** **18 04 14.8 +0.1**
baz=89,SNR=52
SFJD **Kangerlussuaq** **88.79 357**⇑ *i*P **P** **18 04 13.1 -1.2**
SFJD *i* S S 18 14 34.8 -22
SFJD *i* 18 14 53.4
SFJD pmax pmax
comp=Z,58nm,0.9s,mb5.9
SFJD MLR MLR
comp=Z,2µm,21.0s,MS5.6
SFJD **Kangerlussuaq** **88.79 357**⇑ *i*P **P** **18 04 13.1 -1.2**
comp=Z,58nm,0.9s,mb5.9
SFJD *i* S S 18 14 34.8 -22
SFJD *i* 18 14 53.4
SFJD
comp=Z,2µm,21.0s
SFJD **Kangerlussuaq** **88.79 357** *e*P **P** **18 04 12.9 -1.4**
comp=Z,106nm,0.9s,mb6.2
E05A **Randle** **88.81 38**⇑ P **P** **18 04 15.0 +0.2**
baz=89,SNR=55
CABF **La Chapelle** **88.88 322**⇑ *i*P **P** **18 04 14.2 -0.9**
comp=Z,454nm,1.9s,mb6.2
CABF **La Chapelle** **88.88 322**⇑ *i*P **P** **18 04 14.2 -0.9**
CABF pmax pmax
comp=Z,227nm,1.9s,mb6.2
CABF **La Chapelle** **88.88 322**⇑ *i*P **P** **18 04 14.2 -0.9**
comp=Z,227nm,1.9s,mb6.2
CWF **Charnwood Fore** **88.92 330**⇑ *e*P **P** **18 04 12.8 -2.4**
CWF AMb AMB 18 04 18.8
comp=Z,120nm,2.1s,mb5.9
LSD **Lago del Serru** **88.93 320** P **P** **18 04 14.8 -0.6**
LSD pmax pmax
comp=Z,775nm,3.7s
LSD **Lago del Serru** **88.93 320** P **P** **18 04 14.8 -0.6**
comp=Z,775nm,3.7s
D06A **Cle Elum** **88.95 37**⇓ P **P** **18 04 16.0 +0.6**
baz=89,SNR=6.7
H03A **Soap Creek Ran** **88.98 41**⇓ P **P** **18 04 16.9 +1.3**
baz=89,SNR=23
KWE **Weaver Farm** **88.99 330**⇑ *e*P **P** **18 04 13.8 -1.7**
EDM **Edmonton** **88.99 30** *e*P **P** **18 04 15.0 -0.5**
ETW **Entiat** **89.00 37** *e*P **P** **18 04 16.1 +0.4**
FIN **Finale Ligure** **89.00 319** P **P** **18 04 14.9 -0.8**
GAL1 **Galloway** **89.01 332**⇑ *e*P **P** **18 04 14.4 -1.1**
GAL1 AMb AMB 18 04 20.1
comp=Z,191nm,2.4s,mb6.0
LTY **Liberty** **89.01 37** P **P** **18 04 16.1 +0.3**
COR **Corvallis** **89.03 41** *e*P **P** **18 04 17.4 +1.5**
COR pmax pmax
comp=Z,398nm,1.1s,mb6.7
COR **Corvallis** **89.03 41** *e*P **P** **18 04 17.4 +1.5**
comp=Z,398nm,1.1s,mb6.7
RSP **Reno Superiore** **89.03 320** P **P** **18 04 12.3 -3.6**
I02A **Mapleton** **89.03 41**⇓ P **P** **18 04 16.8 +0.9**
baz=89,SNR=6.9
B08A **Colville Reser** **89.09 36**⇑ P **P** **18 04 16.7 +0.6**
baz=89,SNR=111
C07A **Waterville** **89.09 37**⇓ P **P** **18 04 16.3 +0.1**
baz=89,SNR=51
RSL **Roselend** **89.10 321** *e*P **P** **18 04 15.5 -0.7**
TBM **Table Mountain** **89.10 37** P **P** **18 04 16.9 +0.7**
STNC **Stoke** **89.11 330** *e*P **P** **18 04 14.4 -1.7**
STNC AMb AMB 18 04 21.1
comp=Z,136nm,1.8s,mb6.0
A09A **Danville** **89.12 35**⇓ P **P** **18 04 16.8 +0.6**
baz=89,SNR=61
LPG **La Plagne** **89.13 321**⇑ *i*P **P** **18 04 16.2 -0.2**

comp=Z,74nm,0.8s,mb5.8
LPG La Plagne 89.13 321⇑*iP* P 18 04 16.2 -0.2
LPG pmax pmax
comp=Z,37nm,0.8s,mb5.8
LPG La Plagne 89.13 321⇑*iP* P 18 04 16.2 -0.2
comp=Z,37nm,0.8s,mb5.8
LPL La Plagne 89.13 321⇑*iP* P 18 04 16.1 -0.3
comp=Z,80nm,0.9s,mb5.7
LPL La Plagne 89.13 321⇑*iP* P 18 04 16.1 -0.3
LPL pmax pmax
comp=Z,40nm,0.9s,mb5.8
LPL La Plagne 89.13 321⇑*iP* P 18 04 16.1 -0.3
comp=Z,40nm,0.9s,mb5.8
G04A Mulino 89.16 40 ⇓P P 18 04 16.8 +0.3
baz=89,SNR=16
E06A Yakima 89.26 38 ⇑P P 18 04 17.8 +0.9
baz=89,SNR=124
EBG Ellensburg 89.27 38 P P 18 04 18.0 +1.0
GIM North Isle of 89.30 332 *eP* P 18 04 15.0 -2.0
K01A Sixes 89.30 43 ⇑P P 18 04 18.1 +0.9
baz=89
KEBM Edson Butte 89.35 42 *eP* P 18 04 18.5 +1.1
F05A White Salmon 89.36 39 ⇓P P 18 04 18.2 +0.8
baz=89,SNR=42
I03A Eugene 89.38 41 ⇑P P 18 04 18.6 +1.0
baz=89,SNR=18
OG22 Abries 89.40 320 *eP* P 18 04 16.6 -1.0
PGF Pioggiola 89.43 317⇑*iP* P 18 04 17.3 -0.5
comp=Z,76nm,0.8s,mb5.8
PGF Pioggiola 89.43 317⇑*iP* P 18 04 17.3 -0.5
PGF pmax pmax
comp=Z,38nm,0.8s,mb5.8
PGF Pioggiola 89.43 317⇑*iP* P 18 04 17.3 -0.5
comp=Z,38nm,0.8s,mb5.8
BNI Bardonecchia 89.43 320 *eP* P 18 04 16.8 -0.9
BNI pmax pmax
comp=Z,28nm,0.9s,mb5.6
BNI Bardonecchia 89.43 320 *eP* P 18 04 16.8 -0.9
comp=Z,28nm,0.9s,mb5.6
D07A Quincy 89.44 37 ⇓P P 18 04 18.4 +0.6
baz=89,SNR=46
CORF Corte 89.47 317 *eP* P 18 04 17.1 -0.9
WIM Isle of Man 89.48 332⇑*eP* P 18 04 16.3 -1.5
SAOF Saorge 89.51 319 *eP* P 18 04 17.3 -0.9
J02A Umpqua 89.54 42 ⇓P P 18 04 19.0 +0.7
baz=89,SNR=9.9
OG05 Jujurieux 89.56 322 *eP* P 18 04 17.1 -1.3
HOOD Mount Hood Mea 89.58 39 *eP* P 18 04 19.4 +1.0
comp=Z,868nm,1.6s,mb6.8
AUTN L'Aution 89.58 319 *eP* P 18 04 18.0 -0.5
C08A Higginbotham F 89.59 36 ⇑P P 18 04 18.6 +0.2
baz=89,SNR=64
H04A Detroit Lake 89.63 40 ⇓P P 18 04 18.9 +0.2
baz=89,SNR=64
A10A Northport 89.65 35 ⇑P P 18 04 19.4 +0.7
baz=90,SNR=66
SBF Sospel 89.65 319⇑*iP* P 18 04 17.7 -1.1
comp=Z,75nm,0.9s,mb5.7
SBF Sospel 89.65 319⇑*iP* P 18 04 17.7 -1.1
SBF pmax pmax
comp=Z,38nm,0.9s,mb5.7
SBF Sospel 89.65 319⇑*iP* P 18 04 17.7 -1.1
comp=Z,38nm,0.9s,mb5.7
TOUF Mont Tournerai 89.68 319 *eP* P 18 04 18.0 -0.9
B09A Rice 89.68 35 ⇑P P 18 04 19.6 +0.7
baz=90,SNR=61
LUCF Luceram 89.69 319 *eP* P 18 04 18.2 -0.8
SBD1 Bryn Du 89.70 330⇑*eP* P 18 04 17.6 -1.3
LOR Lormes 89.73 323⇑*iP* P 18 04 18.0 -1.1
comp=Z,361nm,1.8s,mb6.1
LOR *e*MLR MLR
comp=Z,10µm,22.8s,MS5.9
LOR Lormes 89.73 323⇑*iP* P 18 04 18.0 -1.1
LOR pmax pmax
comp=Z,181nm,1.8s,mb6.1
LOR MLR MLR
comp=Z,10µm,22.8s,MS6.2
LOR Lormes 89.73 323⇑*iP* P 18 04 18.0 -1.1
comp=Z,181nm,1.8s,mb6.1
LOR LR LR
comp=Z,10µm,22.8s,MS6.2
WPM1 Penmaenmawr 89.75 331⇑*eP* P 18 04 17.6 -1.4
REVF Revere 89.76 319 *eP* P 18 04 18.2 -1.1
OSPF L'Ospedale 89.79 316 *eP* P 18 04 18.8 -0.7
HLM1 Long Mynd 89.79 330 *eP* P 18 04 17.5 -1.7
MVIF Mont Vial 89.80 319 *eP* P 18 04 18.2 -1.3
WOL Wolverton 89.81 328⇑*eP* P 18 04 18.3 -1.1
WOL AMb AMB 18 04 25.1
comp=Z,146nm,1.9s,mb6.0
G05A Wamic 89.82 39 ⇑P P 18 04 20.2 +0.7
baz=90,SNR=16
F06A Goldendale 89.82 39 ⇑P P 18 04 20.4 +0.8
baz=90,SNR=12
WME Myndd Eilian 89.84 331 *eP* P 18 04 17.6 -1.9
E07A Sunnyside 89.88 38 ⇑P P 18 04 20.5 +0.7
baz=90,SNR=60
J03A Ideyld Park 89.91 41 ⇑P P 18 04 20.7 +0.7
baz=90
K02A Glendale 89.92 42 ⇓P P 18 04 20.5 +0.3
baz=90
WLF1 Llynfaes 89.95 331 *eP* P 18 04 17.5 -2.5
WLF1 AMb AMB 18 04 23.8
comp=Z,147nm,1.9s,mb6.0
YLL Llanberis 89.95 331⇑*eP* P 18 04 18.9 -1.1
SWN1 Swindon 89.96 329⇑*eP* P 18 04 18.9 -1.1
SWN1 AMb AMB 18 04 24.8
comp=Z,274nm,1.7s,mb6.3
HAE Alders End 89.96 330 *eP* P 18 04 18.4 -1.6
ORIF Oris-en-Rattie 89.97 320⇑*iP* P 18 04 19.7 -0.6
comp=Z,68nm,0.9s,mb5.7
ORIF *e*MLR MLR
comp=Z,9µm,20.8s,MS5.9
ORIF Oris-en-Rattie 89.97 320⇑*iP* P 18 04 19.7 -0.6
ORIF pmax pmax
comp=Z,34nm,0.9s,mb5.7
ORIF Oris-en-Rattie 89.97 320⇑*iP* P 18 04 19.7 -0.6
comp=Z,34nm,0.9s,mb5.7
C09A Chrisman Ranch 89.99 36 ⇓P P 18 04 21.0 +0.6
baz=90,SNR=51
I04A Tendick Farm, 90.00 41 ⇓P P 18 04 20.8 +0.4
baz=90,SNR=48
OD2 Odessa Site #2 90.01 36 *eP* P 18 04 20.6 +0.2
M01C Crescent City 90.04 43 ⇑P P 18 04 21.9 +1.2
baz=90
SSF Saint Saulge 90.05 323⇑*iP* P 18 04 19.6 -1.0
comp=Z,340nm,1.9s,mb6.0
SSF Saint Saulge 90.05 323⇑*iP* P 18 04 19.6 -1.0
SSF pmax pmax
comp=Z,170nm,1.9s,mb6.0
SSF Saint Saulge 90.05 323⇑*iP* P 18 04 19.6 -1.0
comp=Z,170nm,1.9s,mb6.0
YRC Rhoscolyn 90.06 331 *eP* P 18 04 19.1 -1.4
D08A Wollman Farm, 90.09 37 ⇑P P 18 04 21.2 +0.4
baz=90,SNR=67
SMF Signal de Mont 90.11 323⇑*iP* P 18 04 19.9 -1.0
comp=Z,251nm,1.2s,mb6.1
SMF Signal de Mont 90.11 323⇑*iP* P 18 04 19.9 -1.0
SMF pmax pmax
comp=Z,125nm,1.2s,mb6.1
SMF Signal de Mont 90.11 323⇑*iP* P 18 04 19.9 -1.0
comp=Z,125nm,1.2s,mb6.1
RSW Rattlesnake Hi 90.12 38 *eP* P 18 04 21.7 +0.8
HAWA Hanford 90.15 38 *eP* P 18 04 21.7 +0.6
comp=Z,234nm,1.2s,mb6.4
HAWA *e* pP 18 04 37.7 0.0
YRE Yr Eifl 90.17 331⇑*eP* P 18 04 19.5 -1.6
L02A Cave Junction 90.19 43 ⇑P P 18 04 21.9 +0.6
baz=90,SNR=7.5
MCH1 Michaelchurch 90.19 330⇑*eP* P 18 04 19.6 -1.6
MCH1 AMb AMB 18 04 24.9
comp=Z,131nm,1.8s,mb6.0
G06A Carlson Farm, 90.21 39 ⇓P P 18 04 22.2 +0.8
baz=90,SNR=82
H05A Madras 90.21 40 ⇓P P 18 04 22.1 +0.7
baz=90,SNR=22
F07A Phinny Hill Vi 90.23 38 ⇑P P 18 04 22.6 +1.1
baz=90,SNR=16
B10A Chitwood Farm, 90.24 35 ⇑P P 18 04 22.3 +0.8
baz=90
HTR Trewern Hill 90.26 330 *eP* P 18 04 20.2 -1.3
A11A Hall Mountain, 90.28 34 ⇑P P 18 04 23.2 +1.5
baz=90,SNR=103
AVF Avril sur Loir 90.30 323⇑*iP* P 18 04 20.7 -1.1
comp=Z,255nm,1.4s,mb6.1
AVF Avril sur Loir 90.30 323⇑*iP* P 18 04 20.7 -1.1
AVF pmax pmax
comp=Z,127nm,1.4s,mb6.1
AVF Avril sur Loir 90.30 323⇑*iP* P 18 04 20.7 -1.1
comp=Z,127nm,1.4s,mb6.1
FRF La Foret Royal 90.30 319 *eP* P 18 04 20.9 -0.9
comp=Z,30nm,0.7s,mb5.4
FRF La Foret Royal 90.30 319 *eP* P 18 04 20.9 -0.9
FRF pmax pmax
comp=Z,15nm,0.7s,mb5.4
FRF La Foret Royal 90.30 319 *eP* P 18 04 20.9 -0.9
comp=Z,15nm,0.7s,mb5.4
NEW Newport 90.32 35 *eP* P 18 04 22.5 +0.7
NEW pmax pmax
comp=Z,106nm,0.8s
NEW Newport 90.32 35 *eP* P 18 04 22.5 +0.7
comp=Z,106nm,0.8s,mb6.2
HUMO Hull Mountain 90.34 42 ⇓P P 18 04 22.9 +0.8
baz=90,SNR=31
HUMO Hull Mountain 90.34 42 *eP* P 18 04 22.8 +0.8
comp=Z,44nm,0.7s,mb5.9
KRMB Red Mountain 90.35 43 *eP* P 18 04 23.1 +0.9
E08A Dider Farm, El 90.36 37 ⇑P P 18 04 22.4 +0.4
baz=90,SNR=34
D09A Jones Farm, Ri 90.42 37 ⇑P P 18 04 22.9 +0.6
baz=90,SNR=51
I05A Bend 90.47 40 ⇓P P 18 04 23.2 +0.6
baz=90,SNR=8.8
J04A Umpqua Nationa 90.50 41 ⇑P P 18 04 23.7 +0.9
baz=90,SNR=60
C10A Spilker Farm, 90.50 36 ⇓P P 18 04 23.5 +0.8
baz=90
OCF Saint Nazaire 90.50 320 *eP* P 18 04 22.6 -0.2
OG26 St.-Nazaire-De 90.50 320 *eP* P 18 04 22.6 -0.2
LMR La Mourre 90.51 319⇑*iP* P 18 04 22.0 -0.8
comp=Z,446nm,1.9s,mb6.2
LMR La Mourre 90.51 319⇑*iP* P 18 04 22.0 -0.8
LMR pmax pmax
comp=Z,223nm,1.9s,mb6.2
LMR La Mourre 90.51 319⇑*iP* P 18 04 22.0 -0.8
comp=Z,223nm,1.9s,mb6.2
SSB Saint Sauveur 90.53 321 *eP* P 18 04 22.1 -0.8
SSB Saint Sauveur 90.53 321 *eP* P 18 04 22.0 -0.9
B11A Sandpoint 90.61 35 ⇑P P 18 04 24.2 +1.1
baz=90,SNR=60
TAVF Tavernes 90.61 319 *eP* P 18 04 24.4 +1.1
PLDF La Plantade 90.64 322 *eP* P 18 04 23.0 -0.4
A12A Yaak River Ran 90.66 34 ⇓P P 18 04 24.6 +1.2
baz=90,SNR=29
JCC Jacoby Creek 90.67 44 ⇑P P 18 04 24.5 +0.9
baz=90
H06A Linquist Farm 90.68 39 ⇑P P 18 04 24.2 +0.6
baz=90,SNR=70
VILF Villemus 90.68 320 *eP* P 18 04 24.6 +1.0
SMRF Simiane la Rot 90.69 320 *eP* P 18 04 23.3 -0.4
VIVF Saint-Julien-l 90.70 321⇑*iP* P 18 04 22.9 -0.8
comp=Z,84nm,1.1s,mb5.7
VIVF Saint-Julien-l 90.70 321⇑*iP* P 18 04 22.9 -0.8
VIVF pmax pmax
comp=Z,42nm,1.1s,mb5.7
VIVF Saint-Julien-l 90.70 321⇑*iP* P 18 04 22.9 -0.8
comp=Z,42nm,1.1s,mb5.7
BGF Bois d'Agland 90.71 323⇑*iP* P 18 04 22.8 -0.9
comp=Z,288nm,1.7s,mb6.0
BGF Bois d'Agland 90.71 323⇑*iP* P 18 04 22.8 -0.9
BGF pmax pmax
comp=Z,144nm,1.7s,mb6.0
BGF Bois d'Agland 90.71 323⇑*iP* P 18 04 22.8 -0.9
comp=Z,144nm,1.7s,mb6.0
G07A Ruggs Ranch, H 90.75 39 ⇓P P 18 04 24.5 +0.6
baz=91
CASY Casy 90.77 185⇑*iP* P 18 04 22.6 -0.6
DSB Dublin 90.84 332 *eP* P 18 04 23.1 -1.1
comp=Z,32nm,0.9s,mb5.7
VSL Villasalto 90.84 315 *eP* P 18 04 23.7 -0.7
comp=Z,20nm,0.7s,mb5.6
E09A Wood Farm, Sta 90.85 37 ⇑P P 18 04 25.1 +0.7
baz=91,SNR=91
AGO Saint Agoulin 90.86 323 *eP* P 18 04 24.0 -0.4
COLF Collangettes 90.87 322 *eP* P 18 04 24.0 -0.4
DLF Lyons Farm 90.87 332 *eP* P 18 04 23.5 -0.8
PUYF Puyloubier 90.88 319 *eP* P 18 04 25.3 +0.8
F08A Pendleton 90.93 38 ⇑P P 18 04 25.6 +0.9
baz=91,SNR=82
YBH Yreka Blue Hor 90.98 43 P P 18 04 25.7 +0.6
comp=Z,26nm,0.9s,mb5.6,baz=346,slow=1.5,SNR=28
YBH Yreka Blue Hor 90.98 43 *eP* P 18 04 25.6 +0.5
YBH pmax pmax
comp=Z,86nm,1.1s
YBH Yreka Blue Hor 90.98 43 ⇑P P 18 04 25.7 +0.7
baz=91,SNR=25
YBH Yreka Blue Hor 90.98 43 *eP* P 18 04 25.6 +0.5
comp=Z,86nm,1.1s,mb6.0
D10A Wagner Farm, O 90.99 36 ⇓P P 18 04 25.3 +0.3
baz=91,SNR=17
B12A Libby 90.99 34 ⇓P P 18 04 26.1 +1.2
baz=91,SNR=12
J05A Fort Rock 90.99 41 ⇓P P 18 04 25.8 +0.8
baz=91,SNR=67
BERF Bertagne 91.01 319 *eP* P 18 04 26.0 +0.9
TREF Trevaresse 91.01 320 *eP* P 18 04 25.6 +0.5
LDF La Druitiere 91.02 326 *eP* P 18 04 23.7 -1.4
comp=Z,276nm,1.9s,mb6.0
LDF La Druitiere 91.02 326 *eP* P 18 04 23.7 -1.4
LDF pmax pmax
comp=Z,138nm,1.8s,mb6.0
LDF La Druitiere 91.02 326 *eP* P 18 04 23.7 -1.4
comp=Z,138nm,1.8s,mb6.0
PRAF Pradon 91.03 320 *eP* P 18 04 26.0 +0.8
C11A Tepee Creek (N 91.04 35 ⇑P P 18 04 26.1 +0.9
baz=91
K04A Chilquin 91.08 42 ⇓P P 18 04 26.2 +0.7
baz=91,SNR=7.7
M02C Callahan 91.08 43 ⇓P P 18 04 25.6 +0.1
baz=91,SNR=14
FLN La Foliniere 91.09 326 *eP* P 18 04 23.8 -1.6
comp=Z,168nm,1.6s,mb5.8
FLN *e*MLR MLR
comp=Z,24µm,22.2s,MS6.3
FLN La Foliniere 91.09 326 *eP* P 18 04 23.8 -1.6
FLN pmax pmax
comp=Z,84nm,1.6s,mb5.8
FLN MLR MLR
comp=Z,24µm,22.3s,MS6.6
FLN La Foliniere 91.09 326 *eP* P 18 04 23.8 -1.6
comp=Z,84nm,1.6s,mb5.8
FLN LR LR
comp=Z,24µm,22.3s,MS6.6
PYM Petit Puy Mans 91.11 322 *eP* P 18 04 24.9 -0.7
N02C Big Bar 91.12 44 ⇑P P 18 04 25.7 0.0
baz=91,SNR=9.4
G08A Pilot Rock 91.13 38 ⇓P P 18 04 26.4 +0.7
baz=91,SNR=76
DCN Croghan 91.15 332 *eP* P 18 04 24.8 -0.8
LNOR Lincton Mounta 91.16 37 *eP* P 18 04 26.3 +0.5
O01C Eel River Cons 91.17 44 ⇓P P 18 04 26.9 +0.9
baz=91
H07A Lands Inn, Kim 91.21 39 ⇑P P 18 04 26.7 +0.7
baz=91,SNR=52
I06A Prineville 91.22 40 ⇑P P 18 04 27.0 +0.9
baz=91,SNR=66
TCF Toulx Ste Croi 91.23 323⇑*iP* P 18 04 25.4 -0.7
comp=Z,579nm,1.9s,mb6.3
TCF Toulx Ste Croi 91.23 323⇑*iP* P 18 04 25.4 -0.7
TCF pmax pmax
comp=Z,289nm,1.9s,mb6.3
TCF Toulx Ste Croi 91.23 323⇑*iP* P 18 04 25.4 -0.7
comp=Z,290nm,1.9s,mb6.3
L04A Klamath Falls 91.23 42 ⇓P P 18 04 26.8 +0.6
baz=91,SNR=24
A13A Flathead Natio 91.29 33 ⇑P P 18 04 27.0 +0.7
baz=91
LBL Lubilhac 91.29 322 *eP* P 18 04 26.0 -0.4
VERF Verneugheol 91.41 323 *eP* P 18 04 26.2 -0.7
E10A Myers Farm, Un 91.43 36 ⇓P P 18 04 27.3 +0.3
baz=91,SNR=18
WALA Waterton Lakes 91.46 33 *eP* P 18 04 27.7 +0.6
comp=Z,948nm,1.9s,mb6.8
F09A S2 Ranch, Elgi 91.47 37 ⇓P P 18 04 27.7 +0.5
baz=91,SNR=51
M04C Macdoel 91.49 42 ⇑P P 18 04 27.7 +0.3
baz=91,SNR=42
D11A Klaveano Farm, 91.49 36 ⇑P P 18 04 27.5 +0.2
baz=91,SNR=40
K05A Summer Lake 91.52 41 ⇓P P 18 04 28.4 +0.9
baz=91,SNR=57
GRR Gorron 91.53 326⇑*iP* P 18 04 26.2 -1.2
comp=Z,242nm,1.8s,mb5.9
GRR Gorron 91.53 326⇑*iP* P 18 04 26.2 -1.2
GRR pmax pmax
comp=Z,121nm,1.8s,mb5.9
GRR Gorron 91.53 326⇑*iP* P 18 04 26.2 -1.2
comp=Z,121nm,1.8s,mb5.9
C12B Naegeli Ranch, 91.53 35 ⇓P P 18 04 28.4 +0.9
baz=91
I07A Izee 91.54 39 ⇓P P 18 04 28.5 +0.8
baz=91,SNR=64
FRNF Fournols 91.58 322 *eP* P 18 04 27.0 -0.8
M03C McCloud 91.61 43 ⇓P P 18 04 28.0 +0.1
baz=91,SNR=7.5
B13A Whitefish 91.62 34 ⇓P P 18 04 28.7 +0.8
baz=91,SNR=65
LASF Ste Croix 91.64 321⇑*iP* P 18 04 27.5 -0.5
comp=Z,498nm,1.9s,mb6.2
J06A Christmas Vall 91.66 40 ⇑P P 18 04 28.8 +0.7
baz=92,SNR=95
JSA Saint Aubin 91.66 327⇑*eP* P 18 04 26.6 -1.5
JSA AMb AMB 18 04 31.5
comp=Z,155nm,1.8s,mb6.0
DYA Yadsworthy 91.68 329 *eP* P 18 04 26.5 -1.6
DYA AMb AMB 18 04 32.3
comp=Z,186nm,1.9s,mb6.1
F10A Beach Ranch, E 91.68 37 ⇑P P 18 04 28.8 +0.6
baz=92,SNR=46
DRV Dumont d'Urvil 91.71 173 P P 18 04 30.0 +2.4
DRV Dumont d'Urvil 91.71 173 PP PP 18 08 10.0 +2.7
DRV S S 18 14 58.0 -25
DRV SP SP 18 16 39.0 +6.2
DRV SS SS 18 21 43.0 +11
DRV R 18 36 00.0
WDC Whiskeytown Da 91.74 44 *eP* P 18 04 28.6 0.0
WDC pmax pmax
comp=Z,69nm,1.2s,mb5.9
WDC Whiskeytown Da 91.74 44 ⇓P P 18 04 28.5 -0.1
baz=92,SNR=18
WDC Whiskeytown Da 91.74 44 *eP* P 18 04 28.6 0.0
comp=Z,69nm,1.2s,mb5.9
H08A Prairie City 91.76 39 ⇑P P 18 04 29.5 +0.9
baz=92,SNR=79
G09A Cove 91.80 38 ⇓P P 18 04 29.4 +0.7
baz=92,SNR=64
O02C Red Bluff 91.81 44 ⇓P P 18 04 29.4 +0.4
baz=92,SNR=15
K06A Valley Falls 91.86 41 ⇓P P 18 04 30.0 +0.9
baz=92,SNR=101
FCC Fort Churchill 91.90 18 *eP* P 18 04 27.2 -1.7
FCC pmax pmax
comp=Z,90nm,0.8s,mb6.2
FCC Fort Churchill 91.90 18 *eP* P 18 04 27.1 -1.8
comp=Z,90nm,0.8s,mb6.2
L05A Lakeview 91.95 42 ⇓P P 18 04 30.4 +0.9
baz=92,SNR=49
E11A Bogner Ranch, 92.00 36 ⇑P P 18 04 29.6 -0.1
baz=92,SNR=64
D12A Red Ives Fores 92.01 35 ⇑P P 18 04 30.2 +0.4
baz=92
C13A Hot Springs 92.02 34 ⇓P P 18 04 30.5 +0.8
baz=92,SNR=36
J07A Hines 92.08 40 ⇑P P 18 04 31.4 +1.3
baz=92,SNR=74
CAF Calviac 92.14 322⇑*iP* P 18 04 30.1 -0.3
comp=Z,192nm,1.3s,mb6.0
CAF Calviac 92.14 322⇑*iP* P 18 04 30.1 -0.3
CAF pmax pmax
comp=Z,96nm,1.3s,mb6.0
CAF Calviac 92.14 322⇑*iP* P 18 04 30.1 -0.3
comp=Z,96nm,1.3s,mb6.0
GASB Alder Springs 92.15 44 ⇑P P 18 04 31.4 +0.9
baz=92,SNR=22
M05C Lookout 92.16 42 ⇑P P 18 04 30.8 +0.3
baz=92,SNR=34
G10A Bishop Farm, J 92.16 37 ⇑P P 18 04 30.8 +0.4
baz=92,SNR=115
I08A Drewsey 92.19 39 ⇑P P 18 04 31.4 +0.8
baz=92,SNR=21
RJF Les Rejaudoux 92.22 323⇑*iP* P 18 04 30.4 -0.3
comp=Z,443nm,1.4s,mb6.3
RJF *e*MLR MLR
comp=Z,7µm,22.2s,MS5.7
RJF Les Rejaudoux 92.22 323⇑*iP* P 18 04 30.4 -0.3
RJF pmax pmax
comp=Z,221nm,1.4s,mb6.3
RJF MLR MLR
comp=Z,7µm,22.3s,MS6.0
RJF Les Rejaudoux 92.22 323⇑*iP* P 18 04 30.4 -0.3
comp=Z,221nm,1.4s,mb6.3
RJF LR LR
comp=Z,7µm,22.3s,MS6.0
H09A Durkee 92.24 38 ⇓P P 18 04 31.8 +1.0
baz=92,SNR=40
HATC Hat Creek Radi 92.28 43 ⇓P P 18 04 31.3 +0.3
baz=92,SNR=16
HOPS Hopland 92.29 45 ⇓P P 18 04 31.5 +0.4
baz=92
E12A Beaver Dam Sad 92.30 36 ⇓P P 18 04 31.7 +0.7
baz=92
MFF Saint Martin d 92.30 324 *eP* P 18 04 30.2 -0.9
comp=Z,317nm,1.8s,mb6.0
MFF Saint Martin d 92.30 324 *eP* P 18 04 30.2 -0.9
MFF pmax pmax
comp=Z,158nm,1.8s,mb6.0
MFF Saint Martin d 92.30 324 *eP* P 18 04 30.2 -0.9
comp=Z,158nm,1.8s,mb6.0
F11A Grangeville 92.32 37 ⇓P P 18 04 30.8 -0.3
baz=92,SNR=18
BMO Blue Mountains 92.33 38 *eP* P 18 04 31.3 +0.1
comp=Z,91nm,1.0s,mb6.1
MOD Modoc 92.36 42 ⇓P P 18 04 32.2 +0.8
baz=92,SNR=93
MOD Modoc 92.36 42 *eP* P 18 04 32.1 +0.7
comp=Z,188nm,1.1s,mb6.3
C14A Swan Lake 92.38 34 ⇓P P 18 04 32.1 +0.7
baz=92
O03C Acorn Hollow, 92.39 44 ⇑P P 18 04 31.1 -0.5
baz=92
D13A Huson 92.45 35 ⇓P P 18 04 31.3 -0.4
baz=92,SNR=22
SGMF Saint Gilles 92.47 327 *eP* P 18 04 30.3 -1.5
comp=Z,103nm,1.3s,mb5.7
SGMF Saint Gilles 92.47 327 *eP* P 18 04 30.3 -1.5
SGMF pmax pmax
comp=Z,51nm,1.3s,mb5.7
SGMF Saint Gilles 92.47 327 *eP* P 18 04 30.3 -1.5
comp=Z,51nm,1.3s,mb5.7
K07A Rock Creek Ran 92.52 40 ⇑P P 18 04 33.3 +1.1
baz=92
G11A Walters Elk Ra 92.56 37 ⇓P P 18 04 32.0 -0.3
baz=92,SNR=49
J08A Circle Bar Ran 92.58 40 ⇓P P 18 04 33.2 +0.8
baz=92,SNR=57
FFC Flin Flon 92.60 24 P P 18 04 31.9 -0.3
comp=Z,824nm,1.0s,mb7.1,SNR=33
FFC Flin Flon 92.60 24 *eP* P 18 04 31.6 -0.6
FFC pmax pmax
comp=Z,554nm,1.6s,mb6.7
FFC Flin Flon 92.60 24 *eP* P 18 04 31.6 -0.7
comp=Z,554nm,1.6s,mb6.7
I09A Lost Marbles R 92.62 39 ⇓P P 18 04 33.2 +0.6
baz=92,SNR=74
M06C Likely Place G 92.66 42 ⇑P P 18 04 33.4 +0.6
baz=92,SNR=18
MNRC McLaughlin Nat 92.76 45 ⇑P P 18 04 33.8 +0.5
baz=93,SNR=17
ROSF Rostrenen 92.78 327⇑*iP* P 18 04 31.8 -1.4
comp=Z,100nm,1.3s,mb5.8
ROSF Rostrenen 92.78 327⇑*iP* P 18 04 31.8 -1.4
ROSF pmax pmax
comp=Z,50nm,1.3s,mb5.8
ROSF Rostrenen 92.78 327⇑*iP* P 18 04 31.8 -1.4
comp=Z,50nm,1.3s,mb5.8
O04C Chester 92.80 43 ⇑P P 18 04 33.8 +0.3
baz=93,SNR=18
H10A Noah's Angus R 92.81 38 ⇑P P 18 04 33.3 -0.2
baz=93,SNR=67
ELFS Eagle Lake Fie 92.85 43 ⇑P P 18 04 33.0 -0.7
baz=93,SNR=19
NSHM Saint Helena R 92.85 45 *eP* P 18 04 34.5 +0.7
L07A Adell 92.87 41 ⇓P P 18 04 35.1 +1.3
baz=93,SNR=58
LFF La Frestale 92.87 323⇑*iP* P 18 04 33.5 -0.2
comp=Z,723nm,1.9s,mb6.5
LFF La Frestale 92.87 323⇑*iP* P 18 04 33.5 -0.2
LFF pmax pmax
comp=Z,362nm,1.9s,mb6.5
LFF La Frestale 92.87 323⇑*iP* P 18 04 33.5 -0.2
comp=Z,362nm,1.9s,mb6.5

MCCM	**Marconi Confer** baz=93	92.89	46	⇑P		P	18 04 32.8	-1.1
F12A	**Elk City** baz=93,SNR=55	92.89	36	⇑P		P	18 04 33.8	0.0
MSO	**Missoula** comp=Z,66nm,1.2s,mb5.9	92.89	35	*e*P		P	18 04 33.6	-0.1
KEST	**Kesra** comp=Z,10nm,0.8s,mb5.3,baz=314,slow=2.2,SNR=30	92.90	311	P		P	18 04 34.0	0.0
KEST	comp=Z,2μm,21.0s,MS5.5,baz=353,slow=40			LR		LR	18 53 24.2	
K08A	**Mann Creek Ran** baz=93,SNR=60	92.95	40	⇓P		P	18 04 35.2	+1.0
D14A	**Greenough** baz=93,SNR=31	92.96	34	⇑P		P	18 04 34.1	0.0
ORV	**Oroville** baz=93,SNR=37	92.98	44	⇑P		P	18 04 33.2	-1.1
J09A	**Fry Pan Ranch,** baz=93,SNR=40	93.00	39	⇓P		P	18 04 34.8	+0.4
E13A	**Victor** baz=93,SNR=9.2	93.02	35	⇓P		P	18 04 33.4	-1.0
MTLF	**Montolieu** comp=Z,309nm,1.9s,mb6.1	93.03	321	⇑*i*P		P	18 04 33.9	-0.6
MTLF	**Montolieu** comp=Z,154nm,1.9s,mb6.1	93.03	321	⇑*i*P	pmax	P pmax	18 04 33.9	-0.6
MTLF	**Montolieu** comp=Z,154nm,1.9s,mb6.1	93.03	321	⇑*i*P		P	18 04 33.9	-0.6
WVOR	**Wild Horse Val** comp=Z,314nm,1.7s,mb6.5	93.04	40	*e*P		P	18 04 35.3	+0.7
WVOR	**Wild Horse Val** comp=Z,314nm,1.7s,mb6.5	93.04	40	*e*P	pmax	P pmax	18 04 35.3	+0.7
CVS	**Carmenet Viney** baz=93	93.05	45	⇑P		P	18 04 34.8	+0.1
FARB	**Farallon Islan** baz=93	93.06	46	⇑P		P	18 04 34.6	-0.1
I10A	**Payette** baz=93,SNR=21	93.09	38	⇓P		P	18 04 35.3	+0.6
O05C	**Quincy** baz=93,SNR=11	93.11	43	⇑P		P	18 04 35.2	+0.2
OHCM	**Honcut**	93.11	44	*e*P		P	18 04 34.5	-0.5
H11A	**Donnelly** baz=93,SNR=8.6	93.14	37	⇑P		P	18 04 34.8	-0.1
Q03C	**Winters** baz=93	93.17	45	⇓P		P	18 04 35.6	+0.3
CHMT	**Chamberlain Mo**	93.20	34	*e*P		P	18 04 34.9	-0.3
N06A	**Buffalo Meadow** baz=93,SNR=46	93.32	42	⇓P		P	18 04 36.4	+0.5
M07A	**Soldier Meadow** baz=93	93.34	41	⇑P		P	18 04 36.9	+0.9
L08A	**Fields** baz=93,SNR=184	93.36	40	⇓P		P	18 04 37.1	+1.0
F13A	**Darby** baz=93,SNR=27	93.36	36	⇑P		P	18 04 35.6	-0.3
E14A	**Clinton** baz=93,SNR=58	93.40	35	⇑P		P	18 04 36.3	+0.2
K09A	**Rome** baz=93,SNR=122	93.41	40	⇑P		P	18 04 37.0	+0.7
Q04C	**Lincoln** baz=93	93.47	45	⇑P		P	18 04 36.5	-0.1
D15A	**Lincoln** baz=93,SNR=14	93.49	34	⇑P		P	18 04 36.8	+0.3
BEKR	**Beckwourth** baz=93,SNR=38	93.51	43	⇑P		P	18 04 37.1	+0.3
J10A	**Berg Farm, Mel** baz=93	93.52	39	⇑P		P	18 04 37.2	+0.4
BDM	**Black Diamond** baz=94	93.66	45	⇓P		P	18 04 37.0	-0.5
O06A	**Flanigan** baz=94,SNR=33	93.67	43	⇓P		P	18 04 37.8	+0.3
I11A	**Placerville** baz=94,SNR=37	93.67	38	⇓P		P	18 04 37.9	+0.4
P05C	**Yuba Gap, Truc** baz=94,SNR=15	93.69	44	⇑P		P	18 04 37.6	0.0
M08A	**Happy Creek Ra** baz=94,SNR=53	93.79	41	⇓P		P	18 04 39.3	+1.3
N07B	**Gerlach** baz=94,SNR=49	93.83	42	⇓P		P	18 04 39.1	+0.8
E15A	**Deer Lodge** baz=94,SNR=28	93.84	35	⇓P		P	18 04 38.6	+0.5
F14A	**Wisdom** baz=94,SNR=10	93.86	35	⇑P		P	18 04 38.4	+0.2
K10A	**MacKenzie Ranc** baz=94	93.86	39	⇓P		P	18 04 39.9	+1.6
L09A	**Wilkinson Ranc** baz=94,SNR=6.9	93.86	40	⇑P		P	18 04 39.2	+0.9
H12A	**Diamond D Ranc** baz=94,SNR=70	93.88	37	⇓P		P	18 04 38.6	+0.2
P06A	**Stead Airport,** baz=94	93.91	43	⇓P		P	18 04 38.8	+0.1
WENL	**Wente Vineyard** baz=94	93.91	46	⇑P		P	18 04 38.9	+0.2
LAVA	**Lava Cap Winer** baz=94,SNR=21	93.92	44	⇓P		P	18 04 38.7	0.0
MFID	**Camas Ranch** baz=94,SNR=58	94.06	38	⇓P		P	18 04 40.0	+0.8
R04C	**Big Horse Ranc** baz=94	94.08	45	⇑P		P	18 04 38.9	-0.5
G14A	**Jackson** baz=94	94.19	36	⇓P		P	18 04 39.3	-0.4
EGMT	**Eagleton** baz=94	94.20	32	⇑P		P	18 04 39.7	0.0
EGMT	**Eagleton** comp=Z,47nm,0.9s,mb5.9	94.20	32	*e*P		P	18 04 39.4	-0.4
H13A	**Challis** baz=94,SNR=38	94.20	37	⇑P		P	18 04 39.3	-0.6
PAHR	**Pah Rah Range** comp=Z,137nm,1.2s,mb6.3	94.22	43	*e*P		P	18 04 40.2	+0.2
WCN	**Washoe City** baz=94,SNR=14	94.22	43	⇓P		P	18 04 40.7	+0.7
O07A	**Toulon** baz=94,SNR=38	94.26	42	⇑P		P	18 04 40.7	+0.5
EPF	**Esparros**	94.30	321	*e*P		P	18 04 39.4	-0.9
F15A	**Butte** baz=94,SNR=46	94.30	35	⇓P		P	18 04 40.9	+0.6
N08A	**GE Springer Mi** baz=94,SNR=35	94.34	41	⇓P		P	18 04 41.5	+0.9
K11A	**Parker Ranch,** baz=94,SNR=42	94.35	39	⇑P		P	18 04 41.2	+0.6
M09A	**Marrel Ranch,** baz=94,SNR=5.3	94.36	41	⇓P		P	18 04 41.4	+0.8
R05C	**Kirkwood Meado** baz=94,SNR=17	94.37	44	⇑P		P	18 04 40.8	0.0
L10A	**Juniper Basin** baz=94,SNR=89	94.53	40	⇓P		P	18 04 42.3	+0.9
CMB	**Columbia Colle** comp=Z,37nm,0.7s,mb5.9	94.56	45	*e*P		P	18 04 41.5	-0.2
CMB	**Columbia Colle** comp=Z,37nm,0.7s,mb5.9	94.56	45	⇑P	pmax	P pmax	18 04 41.3	-0.4
CMB	**Columbia Colle** baz=94,SNR=34	94.56	45	*e*P		P	18 04 41.5	-0.1
DLMT	**Dillon** comp=Z,77nm,0.9s,mb6.1	94.56	35	*e*P		P	18 04 41.8	+0.3
PACP	**Pacheco Peak** baz=94,SNR=9.3	94.57	46	⇓P		P	18 04 41.7	0.0
J12A	**Stokes Ranch,** baz=94,SNR=36	94.57	38	⇓P		P	18 04 42.2	+0.6
O08A	**Rochester Mine** baz=94,SNR=5.6	94.62	42	⇓P		P	18 04 42.8	+0.9
P07A	**Fallon** baz=94	94.62	43	⇓P		P	18 04 43.0	+1.1
H14A	**Leadore** baz=94,SNR=10.0	94.64	36	⇑P		P	18 04 41.8	-0.1
N09A	**Rock Creek Ran** baz=94,SNR=16	94.66	41	⇑P		P	18 04 43.0	+1.0
I13A	**Wildhorse Cree** baz=94,SNR=70	94.69	37	⇑P		P	18 04 43.1	+1.0
G15A	**Dillon** baz=94,SNR=75	94.75	35	⇑P		P	18 04 42.8	+0.5
HLID	**Hailey** baz=95,SNR=54	94.76	38	⇓P		P	18 04 43.4	+1.0
HLID	**Hailey** comp=Z,422nm,2.0s,mb6.5	94.76	38	*e*P		P	18 04 43.4	+1.0
MCMT	**McKenzie Canyo**	94.78	36	*e*P		P	18 04 43.3	+0.7
M10A	**I.L. Ranch, Tu** baz=95,SNR=37	94.83	40	⇑P		P	18 04 43.5	+0.6
R06C	**Coleville** baz=95,SNR=23	94.87	44	⇑P		P	18 04 43.7	+0.6
BOZ	**Bozeman (W)** comp=Z,29nm,1.1s,mb5.6	94.88	35	*e*P		P	18 04 43.2	+0.3
BOZ	**Bozeman (W)** baz=95	94.88	35	⇓P	pmax	P pmax	18 04 43.1	+0.2
BOZ	**Bozeman (W)** comp=Z,29nm,1.1s,mb5.6	94.88	35	*e*P		P	18 04 43.2	+0.3
L11A	**Cat Creek Ranc** baz=95,SNR=114	94.89	39	⇑P		P	18 04 43.9	+0.8
ETSF	**Etsaut**	94.89	322	⇑*i*P		P	18 04 43.0	-0.1
J13A	**Cove Ranch, Pi** baz=95,SNR=24	95.00	38	⇑P		P	18 04 44.3	+0.8
S06C	**San Francisco** baz=95,SNR=31	95.00	45	⇓P		P	18 04 43.2	-0.4
S05C	**Merced** baz=95,SNR=16	95.00	45	⇓P		P	18 04 43.5	-0.1
P08A	**Dixie Valley** baz=95	95.03	42	⇓P		P	18 04 44.8	+1.1
Q07A	**Schurz** baz=95	95.03	43	⇓P		P	18 04 44.0	+0.2
H15A	**Lima** baz=95,SNR=16	95.03	36	⇑P		P	18 04 44.1	+0.4
I14A	**Mackay** baz=95,SNR=45	95.05	37	⇑P		P	18 04 44.8	+1.0
K12A	**Draper Farm, C** baz=95,SNR=10	95.08	38	⇑P		P	18 04 44.4	+0.5
BMN	**Battle Mountai** comp=Z,139nm,1.5s,mb6.2	95.10	41	⇑*i*P		P	18 04 44.7	+0.6
BMN	**Battle Mountai** comp=Z,139nm,1.5s,mb6.2	95.10	41	⇑*i*P	pmax	P pmax	18 04 44.7	+0.6
SJPF	**Ste Jean**	95.13	322	⇑*i*P		P	18 04 44.0	-0.1
V03C	**Hunter Liggett** baz=95	95.17	47	⇑P		P	18 04 44.5	+0.1
O09A	**Fish Creek Ran** baz=95,SNR=11	95.28	42	⇓P		P	18 04 45.3	+0.4
SET	**Setif**	95.30	314	P		P	18 04 46.0	+1.0
L12A	**House Creek Ra** baz=95,SNR=41	95.32	39	⇓P		P	18 04 46.1	+1.0
M11A	**Holland Ranch,** baz=95,SNR=45	95.33	40	⇓P		P	18 04 46.3	+1.2
N10A	**Dunphy** baz=95	95.35	41	⇓P		P	18 04 46.3	+1.1
R07C	**Lee Vining** baz=95,SNR=20	95.39	44	⇓P		P	18 04 45.7	+0.3
J14A	**Carey** baz=95,SNR=13	95.41	37	⇓P		P	18 04 46.7	+1.3
PPT	**Papeete** comp=Z,669nm,30.8s	95.46	107	*e*PP		PP	18 08 39.3	+1.6
PPT	comp=Z,4μm,27.0s			*e*S		S	18 16 01.6	+3.4
PPT	comp=Z,2μm,27.2s			*e*SS		SS	18 22 29.8	+2.2
PPT	comp=Z,8μm,29.8s			*e*LQ			18 31 36.9	
PPT	comp=Z,21μm,23.2s,baz=290	95.46	107	LR		LR	18 35 38.6	
I15A	**Papeete** comp=Z,5μm,20.6s,MS6.0,baz=291,slow=31						18 40 14.0	
K13A	**Monteview** baz=95,SNR=7.0	95.53	36	⇓P		P	18 04 46.5	+0.6
QLMT	**Stover Farm, H** baz=95,SNR=9.0	95.53	38	⇓P		P	18 04 46.9	+0.9
AKF	**Earthquake Lak**	95.53	35	*e*P		P	18 04 46.3	+0.4
T06C	**Akfadou**	95.59	314	P		P	18 04 47.5	+1.1
O10A	**Millerton Lake** baz=95,SNR=19	95.60	45	⇑P		P	18 04 45.7	-0.7
Q08A	**Cortez Mining,** baz=95,SNR=8.7	95.62	41	⇓P		P	18 04 47.3	+0.9
NVAR	**Gabbs** baz=95,SNR=14	95.62	43	⇑P		P	18 04 46.4	-0.1
NVAR	**Mina Array Bea** comp=Z,38nm,0.7s,mb5.9,baz=294,slow=5.4,SNR=152	95.65	43	P	PKKPbc	P PKKPbc	18 04 47.2	+0.6
NVAR	comp=Z,0.7nm,0.6s,baz=132,slow=2.0,SNR=6.0				PKKPbc	PKKPbc	18 21 38.1	+1.1
PKD	**Parkfield** baz=96,SNR=7.1	95.67	46	⇑P		P	18 04 46.6	-0.2
P09A	**Austin** baz=96	95.69	42	⇑P		P	18 04 46.5	-0.3
H16A	**Russell Place,** baz=96,SNR=25	95.72	35	⇓P		P	18 04 47.7	+0.9
U05C	**Westside ANR,** baz=96	95.72	46	⇓P		P	18 04 47.5	+0.5
N11A	**Elko Archery C** baz=96	95.75	40	⇓P		P	18 04 48.4	+1.4
GCMT	**Greycliff**	95.79	34	*e*P		P	18 04 46.9	-0.2
MLAC	**Mammoth Lakes** baz=96	95.79	44	⇑P		P	18 04 47.8	+0.5
R08A	**Mina** baz=96	95.82	43	⇑P		P	18 04 47.9	+0.5
M12A	**Wells** baz=96,SNR=24	95.85	39	⇓P		P	18 04 48.2	+0.7
YMR	**Madison River** comp=Z,22nm,0.4s,mb6.0	95.89	35	*e*P		P	18 04 48.3	+0.7
J15A	**Blackfoot** baz=96,SNR=22	95.95	37	⇓P		P	18 04 48.6	+0.7
L13A	**Double Diamond** baz=96,SNR=18	95.97	38	⇑P		P	18 04 49.3	+1.3
YNR	**Norris Junctio**	96.01	35	*e*P		P	18 04 50.9	+2.8
P10A	**Eureka** baz=96	96.06	42	⇑P		P	18 04 49.0	+0.5
PTRM	**Twissleman Ran**	96.06	47	*e*P		P	18 04 48.6	+0.1
ELK	**Elko** comp=Z,7.5nm,0.9s,mb5.1,baz=306,slow=2.6,SNR=49	96.08	40	P	PKKPbc	P PKKPbc	18 04 49.4	+0.8
ELK	comp=Z,2.1nm,0.8s,baz=295,slow=1.7,SNR=8.4				PKKPbc	PKKPbc	18 21 36.0	0.0
ELK	**Elko** comp=Z,8.0nm,0.9s	96.08	40	P	pmax	P pmax	18 04 49.4	+0.9
ELK	comp=Z,2.0nm,0.8s				pmax	pmax		
ELK	**Elko** comp=Z,262nm,2.0s,mb6.3	96.08	40	*e*P		P	18 04 49.0	+0.5
Q09A	**Carvers** baz=96	96.10	43	⇑P		P	18 04 49.3	+0.7
YFT	**Old Faithful**	96.10	35	*e*P		P	18 04 50.7	+2.2
K14A	**Jones Ranch, D** baz=96,SNR=7.9	96.11	38	⇑P		P	18 04 49.4	+0.7
MTUM	**Tungsten Hills**	96.13	44	*e*P		P	18 04 48.8	-0.1
N12A	**Clover Valley,** baz=96,SNR=18	96.13	40	⇑P		P	18 04 49.6	+0.8
V05C	**Boulder Hill,** baz=96	96.14	46	⇑P		P	18 04 49.0	+0.1
I16A	**Newdale** baz=96,SNR=11	96.15	36	⇓P		P	18 04 49.6	+0.9
O11A	**Cowboy Ranch,** baz=96,SNR=21	96.22	41	⇓P		P	18 04 49.7	+0.5
HELL	**Mitchell Peak** baz=96,SNR=24	96.24	45	⇑P		P	18 04 49.0	-0.3
LKWY	**Lake** comp=Z,36nm,1.0s,mb5.8	96.25	35	*e*P		P	18 04 51.5	+2.3
LKWY	**Lake** comp=Z,36nm,1.0s,mb5.8	96.25	35	*e*P	pmax	P pmax	18 04 51.5	+2.3
S08C	**White Mtn Res** baz=96,SNR=28	96.30	44	⇑P		P	18 04 50.4	+0.8
M13A	**Montello** baz=96	96.32	39	⇓P		P	18 04 50.5	+0.9
RCTC	**Rector, Farmer** baz=96	96.32	46	⇑P		P	18 04 49.0	-0.7
K15A	**Arbon** baz=96	96.37	37	⇑P		P	18 04 50.6	+0.8
SMMC	**Simmler** baz=96	96.40	47	⇓P		P	18 04 50.7	+0.6
L14A	**Malta** baz=96,SNR=9.9	96.41	38	⇑P		P	18 04 50.9	+0.9
IMW	**Indian Meadow** comp=Z,31nm,1.0s,mb5.7	96.42	36	*e*P		P	18 04 50.1	+0.1
FLWY	**Flagg Ranch** comp=Z,191nm,1.8s,mb6.2	96.43	35	*e*P		P	18 04 51.2	+1.1
DGMT	**Dagmar** comp=Z,552nm,1.8s,mb6.7	96.45	29	*e*P		P	18 04 49.7	-0.4
RLMT	**Red Lodge** comp=Z,85nm,1.4s,mb6.0	96.45	34	*e*P		P	18 04 49.9	-0.2
J16A	**Bone** baz=96,SNR=12	96.48	36	⇓P		P	18 04 51.0	+0.7
TIN	**Tinemaha** baz=96	96.53	44	⇓P		P	18 04 51.5	+0.8
P11A	**Circle Ranch,** baz=96,SNR=8.7	96.53	41	⇓P		P	18 04 51.1	+0.5
R09A	**Tonopah** baz=96,SNR=58	96.54	43	⇑P		P	18 04 50.2	-0.4
Q10A	**Clear Creek Ra** baz=96	96.59	42	⇑P		P	18 04 51.2	+0.3
RRI2	**Red Ridge** comp=Z,120nm,1.9s,mb6.0	96.59	36	*e*P		P	18 04 51.5	+0.7
ADJB	**Djebel Djouab**	96.61	314	P		P	18 04 42.4	-8.6
N13A	**Wendover, West** baz=96,SNR=7.6	96.62	40	⇑P		P	18 04 51.7	+0.8
O12A	**Currie** baz=96,SNR=41	96.68	40	⇓P		P	18 04 51.8	+0.6
M14A	**Sheep Mountain** baz=96,SNR=55	96.69	39	⇓P		P	18 04 52.2	+0.9
TPAW	**Teton Pass** comp=Z,11nm,0.8s,mb5.3	96.69	36	*e*P		P	18 04 51.9	+0.6
VES	**Vestal, Richgr** baz=96	96.70	46	⇑P		P	18 04 50.4	-1.0
S09A	**Goldfield** baz=97,SNR=34	96.76	43	⇓P		P	18 04 51.4	-0.2
PKM	**Peak Mountain** baz=97,SNR=11	96.76	47	⇓P		P	18 04 52.5	+0.8
K16A	**Soda Springs** baz=97,SNR=14	96.79	37	⇓P		P	18 04 52.4	+0.7
LOHW	**Long Hollow** comp=Z,92nm,2.0s,mb5.9	96.80	36	*e*P		P	18 04 52.0	+0.3
REDW	**Red Top Meadow** comp=Z,25nm,1.3s,mb5.5	96.83	36	*e*P		P	18 04 54.3	+2.5
HVU	**Hansel Valley**	96.83	38	*e*P		P	18 04 52.6	+0.7
HVU	**Hansel Valley** comp=Z,14nm,0.8s,mb5.4	96.83	38	*e*P	pmax	P pmax	18 04 52.6	+0.7
L15A	**Malad City** baz=97,SNR=11	96.91	38	⇑P		P	18 04 52.6	+0.4
R10A	**Warm Springs** baz=97	96.98	43	⇓P		P	18 04 53.4	+0.7
CWC	**Cottonwood Cre** baz=97	96.99	45	⇑P		P	18 04 52.9	+0.2
S10A	**Tonopah Range,** baz=97,SNR=25	97.03	43	⇓P		P	18 04 53.2	+0.3
Q11A	**Duckwater** baz=97	97.03	42	⇑P		P	18 04 53.4	+0.6
P12A	**McGill** baz=97,SNR=29	97.09	41	⇓P		P	18 04 53.8	+0.7
GRAC	**Grapevine Rang** baz=97,SNR=11	97.11	44	⇑P		P	18 04 53.2	0.0
ISA	**Isabella** comp=Z,19nm,1.1s,mb5.4	97.20	46	*e*P		P	18 04 52.8	-0.9
ISA	**Isabella** comp=Z,19nm,1.1s,mb5.4	97.20	46	*e*P	pmax	P pmax	18 04 52.8	-0.9
ISA	**Isabella** baz=97,SNR=11	97.20	46	⇓P		P	18 04 52.8	-0.9
N14A	**Grayback Hills** baz=97	97.21	39	⇓P		P	18 04 54.6	+0.9
O13A	**Hicks Ranch, I** baz=97,SNR=8.1	97.21	40	⇑P		P	18 04 54.3	+0.6
M15A	**Larsen Ranch,** baz=97	97.23	38	⇓P		P	18 04 54.1	+0.4
BGU	**Big Grassy Mou**	97.25	39	*e*P		P	18 04 54.1	+0.3
ARVC	**Arvin** baz=97	97.28	46	⇑P		P	18 04 53.9	-0.2
R11A	**Troy Canyon, C** baz=97,SNR=12	97.39	42	⇑P		P	18 04 55.1	+0.6
Q12A	**Willow Creek R** baz=97	97.41	41	⇑P		P	18 04 54.9	+0.3
BSC	**Santa Cruz Isl** baz=97	97.41	48	⇓P		P	18 04 54.9	+0.2
L16A	**Fish Haven** baz=97	97.43	37	⇑P		P	18 04 55.1	+0.6
N15A	**Stansbury Isla** baz=97,SNR=5.4	97.56	39	⇓P		P	18 04 56.0	+0.8
MPMC	**Manual Prospec** baz=97,SNR=33	97.60	45	⇓P		P	18 04 55.3	-0.2
P13A	**Bates Ranch, G** baz=97,SNR=26	97.63	41	⇑P		P	18 04 56.0	+0.5
OSI	**Osito Adit** baz=98	97.66	47	⇑P		P	18 04 55.4	-0.4
S11A	**Rachel** baz=98	97.73	43	⇑P		P	18 04 56.3	+0.2
BLG	**Laguna Peak** baz=98	97.73	47	⇓P		P	18 04 56.1	0.0
FURC	**Furnace Creek,** baz=98,SNR=9.1	97.75	44	⇑P		P	18 04 56.3	+0.1
M16A	**Huntsville** baz=98,SNR=8.0	97.79	38	⇑P		P	18 04 56.4	+0.2
LRMC	**Laurel Mountai** baz=98,SNR=12	97.82	45	⇑P		P	18 04 56.5	0.0
TPNV	**Topopah Spring** comp=Z,171nm,1.8s,mb6.3	97.84	44	*e*P	pmax	P pmax	18 04 56.7	+0.1
TPNV	**Topopah Spring** baz=98	97.84	44	⇑P		P	18 04 56.5	-0.1
TPNV	**Topopah Spring** comp=Z,171nm,1.8s,mb6.3	97.84	44	*e*P		P	18 04 56.6	+0.1
DUG	**Dugway** comp=Z,186nm,2.0s,mb6.3	97.85	39	*e*P	pmax	P pmax	18 04 56.9	+0.4
DUG	**Dugway** baz=98	97.85	39	⇑P		P	18 04 57.2	+0.7
DUG	**Dugway** comp=Z,186nm,2.0s,mb6.3	97.85	39	*e*P		P	18 04 56.9	+0.4
SNCC	**San Nicolas Is** baz=98	97.92	48	⇓P		P	18 04 55.7	-1.3
PDAR	**Pinedale Array** comp=Z,2.3nm,0.4s,mb5.0,baz=91,slow=0.9,SNR=10	97.93	36	P	PKKPbc	P PKKPbc	18 04 56.9	+0.1
PDAR	comp=Z,0.8nm,0.5s,baz=141,slow=3.1,SNR=6.8				PKKPbc	PKKPbc	18 21 29.6	-1.5
Q13A	**Wheeler Ranch,** baz=98	97.95	41	⇓P		P	18 04 57.7	+0.7
NOQ	**North Oquirrh** comp=Z,89nm,1.3s,mb6.1	97.95	39	*e*P		P	18 04 57.7	+0.8
EDW2	**Edwards Air Fo** baz=98,SNR=12	97.98	46	⇓P		P	18 04 57.1	-0.2
O15A	**The Old Anders** baz=98	98.00	39	⇑P		P	18 04 57.7	+0.5
R12A	**Pony Springs,** baz=98,SNR=11	98.00	42	⇓P		P	18 04 57.2	0.0
P14A	**Trum Mountains** baz=98,SNR=12	98.10	40	⇓P		P	18 04 58.2	+0.6
U10A	**Ash Meadows, A** baz=98,SNR=8.3	98.12	44	⇑P		P	18 04 58.3	+0.5
DECC	**Green Verdugo** baz=98	98.14	47	⇓P		P	18 04 57.4	-0.5
N16A	**Rees Ranch, Co** baz=98	98.18	38	⇑P		P	18 04 58.4	+0.4
S12A	**Delamar Landin** baz=98	98.30	42	⇑P		P	18 04 59.5	+0.8
T11A	**Corn Creek, Al** baz=98,SNR=15	98.31	43	⇓P		P	18 04 58.8	+0.2
JLU	**Jordanelle**	98.36	38	*e*P		P	18 04 59.0	+0.2
Q14A	**Sevier Lake (B** baz=98,SNR=15	98.37	40	⇑P		P	18 04 59.1	+0.2
ULM	**Lac du Bonnet** comp=Z,14nm,0.9s,mb5.5,baz=319,slow=3.3,SNR=13	98.42	24	P	PKKPbc	P PKKPbc	18 04 57.5	-1.4
ULM	comp=Z,3.2nm,0.7s,baz=57,slow=4.0,SNR=3.8				LR	LR	18 21 26.2	-3.7
ULM	comp=Z,2μm,18.4s,MS5.7,baz=332,slow=41				LR	LR	18 58 40.4	
ULM	**Lac du Bonnet**	98.42	24	P	PKKPbc	P PKKPbc	18 04 57.5	-1.4
ULM					LR	LR	18 21 26.2	-3.7
NLU	**North Lily Min**	98.44	39	*e*P		P	18 58 40.4	
SHOC	**Shoshone** baz=98	98.47	44	⇓P		P	18 04 59.7	+0.6
R13A	**O'Grain Ranch,** baz=98	98.48	41	⇓P		P	18 04 58.9	-0.6
FMP	**Fort Macarthur** baz=98	98.48	47	⇑P		P	18 04 59.8	+0.4
N17A	**Moffit Pass** baz=98	98.48	38	⇓P		P	18 04 60.0	+0.5
GSC	**Goldstone** comp=Z,154nm,1.8s,mb6.2	98.50	45	*e*P		P	18 04 59.5	+0.1
GSC	**Goldstone** comp=Z,154nm,1.8s,mb6.2	98.50	45	*e*P	pmax	P pmax	18 04 59.6	0.0
GSC	**Goldstone** baz=98,SNR=12	98.50	45	⇑P		P	18 04 59.2	-0.3
GSC	**Goldstone** comp=Z,154nm,1.8s,mb6.2	98.50	45	*e*P		P	18 04 59.6	0.0
P15A	**Leamington** baz=98	98.57	40	⇑P		P	18 05 00.1	+0.4
BFSC	**Mount Baldy St** baz=98	98.59	46	⇓P		P	18 04 59.9	-0.1
CIS	**Catalina Islan** baz=98	98.59	48	⇑P		P	18 05 00.4	+0.4
O16A	**Springville** baz=98	98.60	39	⇑P		P	18 05 00.1	+0.3
DAU	**Daniels Canyon**	98.60	38	*e*P		P	18 05 00.3	+0.4
RRX	**Edison Barstow** baz=98	98.63	46	⇑P		P	18 05 00.2	+0.1
U11A	**Corn Creek** baz=98	98.72	44	⇑P		P	18 05 00.8	+0.3
Q15A	**Fillmore** baz=99	98.89	40	⇑P		P	18 05 02.3	+1.1
P16A	**Fountain Green** baz=99	98.91	39	⇓P		P	18 05 01.9	+0.6
S13A	**Holt Ranch, En** baz=99	98.93	42	⇓P		P	18 05 01.9	+0.5
ESDC	**Sonseca Array** comp=Z,0.2nm,0.5s,baz=319,slow=31,SNR=3.1	98.94	321	P	LR	P LR	18 04 59.6	-1.8
ESDC	comp=Z,4μm,20.6s,MS5.9,baz=40,slow=39				LR	LR	18 55 02.5	
ESDC	**Sonseca Array**	98.94	321	P	LR	P LR	18 04 59.6	-1.8
T12A	**Moapa** baz=99	98.94	43	⇑P		P	18 55 02.5	
							18 05 01.8	+0.3

R14A	James Farms, M	98.97	41	⇑P	P	18 05 01.5	-0.1
	baz=99						
TUQ	Turquoise Moun	98.99	45	⇓P	P	18 05 02.4	+0.6
	baz=99,SNR=13						
O17A	Robinson Place	99.04	38	⇓P	P	18 05 02.6	+0.8
	baz=99,SNR=9.0						
V11A	Goodsprings	99.05	44	⇓P	P	18 05 01.7	-0.3
	baz=99						
BBRC	Big Bear Sol-O	99.06	46	⇓P	P	18 05 02.6	+0.5
	baz=99						
HEC	Hector,Ludlow	99.10	45	⇓P	P	18 05 02.0	-0.2
	baz=99						
N18A	Larsen Ranch,	99.10	37	⇑P	P	18 05 01.9	-0.3
	baz=99						
S14A	Cedar City	99.23	41	⇑P	P	18 05 04.0	+1.3
	baz=99						
U12A	Valley of Fire	99.24	43	⇓P	P	18 05 03.0	+0.2
	baz=99						
T13A	Saint George	99.26	42	⇓P	P	18 05 03.8	+0.9
	baz=99,SNR=6.5						
MURC	Murrieta	99.28	47	⇓P	P	18 05 02.8	-0.2
	baz=99						
MSU	Marysvale	99.33	40	*e*P	P	18 05 04.0	+0.8
TMUT	Trail Mountain	99.37	39	*e*P	P	18 05 04.2	+0.9
O18A	Roosevelt	99.40	38	⇑P	P	18 05 04.0	+0.5
	baz=99						
N19A	John Jarvie Ra	99.43	37	⇓P	P	18 05 03.6	0.0
	baz=99						
R15A	Junction	99.47	41	⇓P	P	18 05 04.8	+0.9
	baz=99						
V12A	Nelson	99.49	44	⇓P	P	18 05 04.7	+0.8
	baz=99						
P17A	Butcher Ranch,	99.53	39	⇑P	Pdif	18 05 04.5	+0.7
	baz=99,SNR=11						
GMRC	Granite Mounta	99.56	45	⇓P	Pdif	18 05 04.7	+0.8
	baz=99,SNR=9.0						
U13A	Pakoon Wash	99.61	43	⇑P	Pdif	18 05 04.8	+0.7
	baz=99,SNR=9.0						
MVO	Moncorvo	99.63	324	*e*P	Pdif	18 05 04.0	-0.3
MVO	Moncorvo	99.63	324	*e*PP	PP	18 09 09.1	+0.8
MVO	Moncorvo	99.63	324	*e*LR	LR	18 44 07.1	
	comp=Z,8µm,26.6s						
Q16A	Castle Valley	99.65	39	⇑P	Pdif	18 05 04.9	+0.6
	baz=100,SNR=8.0						
P18A	Preston Nutter	99.70	38	⇓P	Pdif	18 05 05.3	+0.8
	baz=100,SNR=15						
T14A	Hurricane	99.73	42	⇑P	Pdif	18 05 06.1	+1.4
	baz=100						
W12A	Cal Nev Ari	99.74	44	⇓P	Pdif	18 05 05.5	+0.7
	baz=100						
PFO	Pinyon Flat Ob	99.76	46	P	Pdif	18 05 03.7	-1.2
	comp=Z,7.6nm,0.8s,baz=292,slow=5.7,SNR=11						
PFO	Pinyon Flat Ob	99.76	46	P	Pdif	18 05 03.7	-1.2
PFO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.2						
PFO	Pinyon Flat Ob	99.76	46	⇑P	Pdif	18 05 05.5	+0.7
	baz=100						
PFO	Pinyon Flat Ob	99.76	46	*e*P	Pdif	18 05 05.3	+0.4
	comp=Z,20nm,1.0s						
RSSD	Black Hills	99.77	32	*e*P	Pdif	18 05 04.8	-0.1
	comp=Z,128nm,1.9s						
S15A	Panguitch	99.77	41	⇑P	Pdif	18 05 05.7	+0.8
	baz=100						
109C	Camp Elliot, M	99.77	47	⇑P	Pdif	18 05 05.0	+0.1
	baz=100						
LSZ	Lusaka	99.77	258	⇑P	Pdif	18 05 04.5	-0.4
	SNR=7.7						
LSZ	Lusaka	99.77	258	*e*P	Pdif	18 05 04.2	-0.7
	comp=Z,30nm,1.0s						
PCAB	Cabril	99.78	325	*e*P	Pdif	18 05 05.7	+0.8
PCAB	Cabril	99.78	325	*e*PP	PP	18 09 11.0	+1.6
BELC	Belle Mtn.	99.82	46	⇑P	Pdif	18 05 05.1	0.0
	baz=100,SNR=5.1						
O19A	Miners Draw (B	99.87	37	⇓P	Pdif	18 05 04.9	-0.4
	baz=100						
R16A	Teasdale	99.89	40	⇑P	Pdif	18 05 06.8	+1.4
	baz=100						
SRU	San Rafael	99.89	39	⇓P	Pdif	18 05 05.2	-0.2
	baz=100,SNR=15						
SRU	San Rafael	99.89	39	*e*P	Pdif	18 05 05.7	+0.3
	comp=Z,8.0nm,0.7s						
V13A	Grand Canyon W	99.95	43	⇓P	Pdif	18 05 05.6	-0.1
	baz=100,SNR=6.8						
U14A	Mt Trumbull	100.09	42	⇑P	Pdif	18 05 07.1	+0.8
	baz=100,SNR=9.2						
Q18A	Rafter H Ranch	100.12	39	⇓P	Pdif	18 05 06.3	-0.1
	baz=100,SNR=6.1						
T15A	Red Dirt Ranch	100.19	42	⇓P	Pdif	18 05 07.9	+1.2
	baz=100						
S16A	Weppner Ranch,	100.19	41	⇓P	Pdif	18 05 07.5	+0.7
	baz=100,SNR=6.0						
MONP	Monument Peak	100.23	47	⇑P	Pdif	18 05 07.6	+0.7
	baz=100						
NEE2	Needles Airpor	100.24	44	⇓P	Pdif	18 05 07.1	+0.1
	baz=100						
R17A	Hanksville Air	100.25	40	⇓P	Pdif	18 05 07.1	+0.1
	baz=100,SNR=14						
IRM	Iron Mountain	100.28	45	⇓P	Pdif	18 05 07.3	+0.1
	baz=100,SNR=7.2						
BC3	Big Chuckw Mtn	100.39	46	⇓P	Pdif	18 05 08.4	+0.7
	baz=100						
P19A	Cripple Cowboy	100.41	38	⇑P	Pdif	18 05 08.1	+0.4
	baz=100,SNR=12						
PVIS	Viseu	100.41	324	*e*P	Pdif	18 05 08.7	+1.0
PVIS	Viseu	100.41	324	*e*PP	PP	18 09 14.4	+0.2
MTE	Manteigas	100.45	323	*e*P	Pdif	18 05 08.2	+0.3
MTE	Manteigas	100.45	323	*e*PP	PP	18 09 15.5	+1.0
MTE				*e*SKS		18 18 21.4	
MTE	Manteigas	100.45	323	*e*LQ		18 36 14.4	
MTE				*e*LR	LR	18 44 50.3	
	comp=Z,7µm,23.0s						
TAOE	Nuku Hiva Isla	100.48	95	*e*PP	PP	18 09 15.8	-0.4
	comp=Z,2µm,26.4s						
TAOE				*e*SP	SP	18 18 09.7	-1.0
	comp=Z,8µm,28.8s						
TAOE	Nuku Hiva Isla	100.48	95	*e*LR	LR	18 38 08.8	
	comp=Z,20µm,22.9s,baz=296						
W13A	Hualapai Mount	100.50	44	⇑P	Pdif	18 05 09.1	+1.0
	baz=100,SNR=9.1						
DVTC	Desert V Tower	100.58	47	⇑P	Pdif	18 05 10.2	+1.7
	baz=100						
SWSC	Sam W. Stewart	100.61	47	⇑P	Pdif	18 05 09.3	+0.7
	baz=100						
U15A	North Rim	100.63	42	⇑P	Pdif	18 05 10.1	+1.4
	baz=100,SNR=18						
V14A	Boquillas Ranc	100.64	43	⇓P	Pdif	18 05 09.9	+1.1
	baz=100,SNR=14						
Q19A	Hogan Spring (	100.72	38	⇓P	Pdif	18 05 09.4	+0.4
	baz=100						
S17A	Black Ridge (B	100.72	40	⇓P	Pdif	18 05 09.3	+0.2
	baz=100						
T16A	Glen Canyon Da	100.74	41	⇓P	Pdif	18 05 09.3	+0.1
	baz=100						
R18A	Canyonlands Na	100.75	39	⇑P	Pdif	18 05 09.5	+0.3
	baz=100,SNR=10						
SCHQ	Schefferville	100.77	5	P	Pdif	18 05 08.6	-0.8
	comp=Z,15nm,0.9s,baz=13,slow=4.2,SNR=7.4						
PCBR	Castelo Branco	100.80	323	*e*P	Pdif	18 05 10.5	+1.0
PCBR	Castelo Branco	100.80	323	*e*PP	PP	18 09 19.8	+2.6
PDMCI	Parker Dam,Lak	100.84	45	⇑P	Pdif	18 05 09.7	+0.1
	baz=101						
X13A	Yucca	100.85	44	⇓P	Pdif	18 05 09.9	+0.2
	baz=101						
W14A	Seligman	100.93	43	⇓P	Pdif	18 05 11.1	+1.1
	baz=101,SNR=6.4						
Y12C	Blythe	100.94	45	⇑P	Pdif	18 05 10.7	+0.6
	baz=101						
PMRV	Marv??o	101.04	323	*e*P	Pdif	18 05 10.5	0.0
PMRV	Marv??o	101.04	323	*e*PP	PP	18 09 19.8	+0.8
PMRV	Marv??o	101.04	323	*e*LQ		18 37 17.9	
PMRV				*e*LR	LR	18 44 10.6	
	comp=Z,7µm,26.6s						
V15A	Kaibab Nationa	101.10	42	⇓P	Pdif	18 05 11.8	+1.0
	baz=101,SNR=9.9						
T17A	Navajo Res., N	101.15	41	⇓P	Pdif	18 05 11.0	0.0
	baz=101						
S18A	Hurst Farm, Bl	101.16	40	⇓P	Pdif	18 05 11.4	+0.4
	baz=101,SNR=7.6						
R19A	Curley Farm, L	101.17	39	⇓P	Pdif	18 05 12.1	+1.0
	baz=101						
GLA	Glamis	101.18	46	⇓P	Pdif	18 05 12.5	+1.3
	baz=101						
PV10	Paradox Valley	101.24	39	*e*Pdif	Pdif	18 05 13.2	+1.7
Y13A	Salome	101.35	45	⇑P	Pdif	18 05 13.2	+1.3
	baz=101						
W15A	Williams	101.46	43	⇓P	Pdif	18 05 14.2	+1.8
	baz=101						
U17A	Shonto	101.50	41	⇑P	Pdif	18 05 13.6	+1.1
	baz=101						
U16A	Tuba City	101.52	42	⇑P	Pdif	18 05 13.9	+1.2
	baz=101,SNR=7.6						
X14A	Yava	101.53	44	⇓P	Pdif	18 05 13.9	+1.2
	baz=101						
PESTR	Estremoz	101.54	322	*e*P	Pdif	18 05 12.6	-0.2
PESTR	Estremoz	101.54	322	*e*PP	PP	18 09 23.2	+0.4
PESTR	Estremoz	101.54	322	*e*LR	LR	18 44 22.8	
	comp=Z,7µm,24.4s						
MAW	Mawson	101.57	200	*e*P	Pdif	18 05 11.1	-1.8
	comp=Z,5.1nm,0.6s						
MAW				*e*PP	PP	18 09 21.3	-1.9
MAW	Mawson	101.57	200	P	Pdif	18 05 11.5	-1.4
	comp=Z,6.6nm,0.6s,baz=53,slow=3.9,SNR=18						
MAW				PKiKP	PKiKP	18 09 34.9	-0.8
	comp=Z,3.2nm,0.6s,baz=13,slow=6.1,SNR=7.5						
T18A	Mexican Hat	101.60	40	⇓P	Pdif	18 05 13.0	0.0
	baz=101,SNR=10						
S19A	Harvey Farm, M	101.62	39	⇓P	Pdif	18 05 13.9	+0.8
	baz=101						
112A	Yuma	101.66	46	⇑P	Pdif	18 05 14.2	+0.9
	baz=102						
PV01	Paradox Valley	101.68	39	*e*Pdif	Pdif	18 05 13.8	+0.5
PBAR	Barrancos	101.71	321	*e*P	Pdif	18 05 13.8	+0.3
PBAR	Barrancos	101.71	321	*e*PP	PP	18 09 24.5	+0.4
PBAR	Barrancos	101.71	321	*e*LQ		18 44 09.3	
PBAR				*e*LR	LR	18 45 42.3	
	comp=Z,7µm,19.7s						
WUAZ	Wupatki	101.79	42	⇑P	Pdif	18 05 14.0	+0.2
	baz=102						
WUAZ	Wupatki	101.79	42	*e*Pdif	Pdif	18 05 16.5	+2.6
	comp=Z,20nm,1.1s						
Y14A	Wickenburg	101.80	44	⇓P	Pdif	18 05 14.4	+0.5
	baz=102						
X15A	Humboldt	101.93	43	⇑P	Pdif	18 05 15.4	+0.9
	baz=102,SNR=6.3						
W16A	Flagstaff	101.97	43	⇓P	Pdif	18 05 15.9	+1.3
	baz=102						
EVO	Evora	102.01	322	*e*P	Pdif	18 05 11.7	-3.2
EVO	Evora	102.01	322	*e*PP	PP	18 09 27.1	+0.8
113A	Mohawk Valley,	102.05	46	⇓P	Pdif	18 05 15.2	+0.2
	baz=102						
U18A	Rough Rock, Ch	102.09	41	⇓P	Pdif	18 05 16.1	+0.8
	baz=102						
Z14A	Wintersburg	102.20	45	⇑P	Pdif	18 05 16.8	+1.1
	baz=102						
Y15A	Casa Rosa Ranc	102.21	44	⇑P	Pdif	18 05 15.7	0.0
	baz=102						
PBEJ	Beja	102.29	322	*e*P	Pdif	18 05 17.0	+0.9
PBEJ	Beja	102.29	322	*e*PP	PP	18 09 28.7	+0.3
T19A	Beclabito	102.31	40	⇑P	Pdif	18 05 16.4	+0.2
	baz=102						
MVCO	Mesa Verde	102.36	39	⇓P	Pdif	18 05 17.2	+0.8
	baz=102						
PMAFR	Mafra	102.41	323	*e*LR	LR	18 34 59.9	
	comp=Z,8µm,26.4s						
X16A	Lo Mia Camp, P	102.47	43	⇑P	Pdif	18 05 18.7	+1.8
	baz=102						
W17A	Winslow	102.48	42	⇑P	Pdif	18 05 18.6	+1.6
	baz=102						
LIS	Lisbon	102.51	323	*e*P	Pdif	18 05 16.9	-0.2
LIS				*e*S	SKSac	18 15 55.2	+3.0
LIS				*e*S	SKSac	18 15 55.4	+3.2
LIS				AMS	AMS	18 55 54.8	
	comp=Z,7µm,25.9s,MS6.1						
V18A	Ganado	102.53	41	⇑P	Pdif	18 05 17.9	+0.8
	baz=102						
PVAQ	Vaqueiros	102.64	321	*e*P	Pdif	18 05 17.5	-0.1
PVAQ	Vaqueiros	102.64	321	*e*PP	PP	18 09 32.0	+1.0
PVAQ	Vaqueiros	102.64	321	*e*LQ		18 37 01.1	
PVAQ				*e*LR	LR	18 43 40.1	
	comp=Z,4µm,18.6s						
Z15A	Gila River Ind	102.75	44	⇑P	Pdif	18 05 19.3	+1.2
	baz=103						
TAM	Tamanrasset	102.75	302	*e*Pdif	Pdif	18 05 18.5	+0.4
Y16A	Circle Bar Ran	102.80	43	⇑P	Pdif	18 05 19.6	+1.3
	baz=103						
PBDV	Barranco-do-Ve	102.87	321	*e*P	Pdif	18 05 19.3	+0.6
PBDV	Barranco-do-Ve	102.87	321	*e*PP	PP	18 09 34.2	+1.4
PBDV	Barranco-do-Ve	102.87	321	*e*LQ		18 39 00.4	
PBDV				*e*LR	LR	18 44 54.4	
	comp=Z,4µm,21.6s						
X17A	Forest Lakes	102.92	43	⇑P	Pdif	18 05 20.3	+1.4
	baz=103						
W18A	Petrified Fore	103.05	42	⇓P	Pdif	18 05 20.3	+0.8
	baz=103						
V19A	Window Rock	103.06	41	⇑P	Pdif	18 05 20.2	+0.7
	baz=103						
115A	Sonoran Desert	103.09	45	⇓P	Pdif	18 05 21.2	+1.6
	baz=103						
Z16A	Peralta Trail,	103.18	44	⇓P	Pdif	18 05 20.4	+0.3
	baz=103						
214A	Organ Pipe Nat	103.19	46	⇑P	Pdif	18 05 20.7	+0.6
	baz=103						
MORF	Marmelete	103.23	322	*e*SKS	PS	18 18 47.3	+1.6
W19A	Sanders	103.26	41	⇓P	Pdif	18 05 21.1	+0.7
	baz=103						
X18A	Snowflake	103.31	42	⇓P	Pdif	18 05 21.2	+0.5
	baz=103						
Y17A	Roosevelt	103.32	43	⇓P	Pdif	18 05 20.9	+0.3
	baz=103						
PFVI	Vila Bisbo	103.45	322	*e*LR	LR	18 47 23.8	
	comp=Z,6µm,20.4s						
116A	Eloy	103.52	45	⇓P	Pdif	18 05 22.4	+0.8
	baz=103						
SDCO	Great Sand Dun	103.67	37	*e*Pdif	Pdif	18 05 21.4	-0.8
	comp=Z,3.3nm,0.9s						
Y18A	Canyon Day Jun	103.77	43	⇓P	Pdif	18 05 24.2	+1.5
	baz=104						
X19A	St. Johns	103.78	42	⇑P	Pdif	18 05 24.4	+1.7
	baz=104						
Z17A	San Carlos Hig	103.81	43	⇓P	Pdif	18 05 24.2	+1.3
	baz=104						
MDT	Midelt	103.87	316	PKKPbc	PKKPbc	18 21 15.0	+1.3
	comp=Z,2.8nm,0.8s,baz=250,slow=6.6,SNR=3.9						
117A	Oracle	104.12	44	⇓P	Pdif	18 05 25.9	+1.6
	baz=104						
Y19A	Nutrioso	104.12	42	⇓P	Pdif	18 05 25.3	+1.0
	baz=104						
Z18A	Geronimo	104.23	43	⇑P	Pdif	18 05 26.2	+1.5
	baz=104						
118A	Homack Ranch,	104.56	44	⇑P	Pdif	18 05 27.7	+1.5
	baz=104						
Z19A	T-Link Ranch,	104.57	43	⇓P	Pdif	18 05 26.8	+0.6
	baz=104						
217A	Green Valley	104.60	45	⇑P	Pdif	18 05 28.4	+2.0
	baz=104						
119A	Ashpeak Ranch,	104.90	43	⇓P	Pdif	18 05 29.2	+1.5
	baz=105						
218A	Dragoon	104.96	44	⇓P	Pdif	18 05 30.0	+2.0
	baz=105						
ANMO	Albuquerque	105.11	40	Pdiff	Pdif	18 05 31.5	+2.8
	comp=Z,0.6nm,0.3s,baz=66,slow=23,SNR=6.1						
ANMO	Albuquerque	105.11	40	Pdif	Pdif	18 05 28.5	-0.1
	comp=Z,2.1nm,0.4s						
LBTB	Lobatse	105.56	249	PKKPab	PKKPab	18 21 25.2	+0.3
	comp=Z,1.5nm,0.6s,baz=189,slow=12,SNR=4.1						
BNM	Barren Site	105.57	40	*e*Pdif	Pdif	18 05 33.5	+2.8
BOSA	Boshof	107.03	246	Pdiff	Pdif	18 05 36.9	-0.3
	comp=Z,4.2nm,0.9s,baz=126,slow=5.7,SNR=4.5						
BOSA				PKiKP	PKiKP	18 09 46.0	-0.9
	comp=Z,4.1nm,0.9s,baz=194,slow=11,SNR=5.6						
BOSA				PKKPab	PKKPab	18 21 19.1	+1.0
	comp=Z,4.3nm,0.8s,baz=249,slow=18,SNR=5.7						
SYO	Syowa Base	109.90	202	⇑*e*P	PKiKP	18 09 46.6	-4.4
SYO	Syowa Base	109.90	202	⇑*e*PKiKP	PKiKP	18 09 49.6	-1.4
RKT	Rikitea	110.22	107	*e*PP	PP	18 10 28.1	-0.1
	comp=Z,584nm,28.5s						
RKT				*e*SP	SP	18 19 52.7	+1.2
	comp=Z,5µm,31.2s						
RKT				*e*SS	SS	18 25 58.3	+7.0
	comp=Z,2µm,33.0s						
RKT	Rikitea	110.22	107	*e*LR	LR	18 42 31.9	
	comp=Z,16µm,25.2s,baz=295						
TXAR	Lajitas Array	110.75	42	Pdiff	Pdif	18 05 56.4	+2.6
	comp=Z,1.3nm,0.8s,baz=289,slow=3.8,SNR=14						
TXAR				PKiKP	PKiKP	18 09 52.8	-1.1
	comp=Z,2.4nm,0.5s,baz=224,slow=0.9,SNR=23						
TXAR				PKKPbc	PKKPbc	18 20 52.4	0.0
	comp=Z,2.1nm,0.9s,baz=147,slow=8.1,SNR=10						
TOA0	Torodi Ar. Sit	111.05	296	*e*PKiKP	PKiKP	18 09 53.2	-1.7
TORD	Torodi Ar. Bea	111.05	296	Pdiff	Pdif	18 05 55.2	+0.2
	comp=Z,0.7nm,0.7s,baz=49,slow=3.5,SNR=3.9						
TORD				PKiKP	PKiKP	18 09 53.7	-1.1
	comp=Z,4.8nm,0.6s,baz=25,slow=2.8,SNR=30						
TORD				PKKPbc	PKKPbc	18 20 49.6	-1.5
	comp=Z,1.1nm,0.6s,baz=231,slow=2.4,SNR=8.1						
TORD	Torodi Ar. Bea	111.05	296	Pdif	Pdif	18 05 55.2	+0.2
TORD				PKPdf	PKiKP	18 09 53.7	-1.1
TORD				PKKPbc	PKKPbc	18 20 49.6	-1.5
CMLA	Cha da Macela	111.20	333	*e*SS	SS	18 25 42.4	-19
CMLA	Cha da Macela	111.20	333	*e*LQ		18 36 50.9	
CMLA				*e*LR	LR	18 43 51.1	
JCT	Junction City	112.20	39	*e*PKiKP	PKiKP	18 09 56.6	-0.1
QSPA	South Pole Qui	114.13	180	PKiKP	PKiKP	18 09 58.1	-0.7
	comp=Z,5.5nm,0.5s,baz=281,slow=1.9,SNR=46						
QSPA	South Pole Qui	114.13	180	PKPdf	PKiKP	18 09 58.1	-0.7
PLAL	Pickwick Lake	114.37	27	*e*PKiKP	PKiKP	18 09 58.0	-2.7
HKT	Hockley	114.81	36	*e*PKiKP	PKiKP	18 10 03.3	+1.6
MAIT	Maitri	119.51	201	*e*PKPab	PKPdf	18 10 08.7	-0.7
DBIC	Dimbokro	119.96	294	PKP	PKPdf	18 10 11.0	-1.0
	comp=Z,20nm,0.6s,baz=10.0,slow=1.2,SNR=28						
DBIC				PKKPbc	PKKPbc	18 20 21.4	+1.2
	comp=Z,3.7nm,0.6s,baz=236,slow=4.0,SNR=6.7						
KIC	Kosan Boka	120.03	294	*e*PKIKP	PKPdf	18 10 11.2	-0.9
	comp=Z,117nm,0.6s						
TIC	Toumodi	120.11	294	*e*PKIKP	PKPdf	18 10 11.3	-1.0
	comp=Z,89nm,0.6s						
LIC	Lamto	120.34	294	*e*PKIKP	PKPdf	18 10 11.8	-0.9
	comp=Z,53nm,0.7s						
LIC				*e*MLR	MLR		
	comp=Z,4µm,22.0s,MS5.7						
LIC	Lamto	120.34	294	*e*PKIKP	PKPdf	18 10 11.7	-1.0
	comp=Z,144nm,1.1s						
LIC	Lamto	120.34	294	*e*PKPdf	PKPdf	18 10 11.8	-0.9
LIC				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
SNAA	Sanae	123.69	198	*e*PKPdf	PKPdf	18 10 15.9	-1.5
SNAA				*e*		18 10 17.3	
SNAA				*e*		18 10 36.2	
SNAA				*e*		18 10 44.0	
SNAA				*e*		18 23 50.6	
SNAA				*e*		18 23 56.8	
SNAA				*e*		18 24 15.9	
SNAA	Sanae	123.69	198	*e*PKPdf	PKPdf	18 10 16.0	-1.4
CMIG	Matias Romero	125.15	45	PKP	PKPdf	18 10 21.4	-0.5
	comp=Z,12nm,0.7s,baz=346,slow=3.2,SNR=15						
VNA2	Neumayer--Watz	125.34	198	*e*PKPdf	PKPdf	18 10 20.2	-0.4
VNA2				*e*		18 10 21.1	
VNA2				*e*		18 10 38.8	
VNA2				*e*		18 10 44.6	
VNA2				*e*		18 23 49.9	
VNA1	Neumayer--Stat	125.73	198	*e*PKPdf	PKPdf	18 10 21.4	+0.1
VNA1				*e*		18 10 22.2	
VNA1				*e*		18 10 39.7	
VNA1				*e*		18 10 46.3	
VNA1				*e*		18 23 43.4	
VNA1				*e*		18 23 49.2	
VNA1				*e*		18 23 59.9	
VNA3	Neumayer Olymp	125.80	197	*e*PKPdf	PKPdf	18 10 20.4	-1.0
VNA3				*e*		18 10 21.6	
VNA3				*e*		18 10 39.3	
VNA3				*e*		18 10 45.1	
VNA3				*e*		18 23 50.4	
VNA3				*e*		18 24 00.6	
SJG	San Juan	137.02	12	PKP	PKPdf	18 10 42.8	-1.5
	comp=Z,11nm,0.3s,baz=313,slow=20,SNR=8.4						
HUMP	Col San Antoni	137.04	11	*e*PKPdf	PKPdf	18 10 43.0	-1.3
CPD	Cerro la Pandu	137.13	11	*e*PKPpre		18 10 37.1	
PMSA	Palmer Station	139.36	176	*e*PKPpre		18 10 37.5	
BCIP	Isla Barro Col	140.33	36	*e*PKPpre		18 10 43.2	
FDF	Fort de France	141.03	5	*e*PKPpre		18 10 46.7	
GRGR	Grenville	143.55	6	*e*PKPpre		18 10 50.8	
TPR	Prospect	144.57	5	*e*P	PKPdf	18 10 57.2	-0.8
TPR	Prospect	144.57	5	*e*	pPKPdf	18 11 15.8	+0.7
BOT	Bacolet	144.59	5	*e*P	PKPdf	18 10 58.0	0.0
BOT	Bacolet	144.59	5	*e*	pPKPdf	18 11 16.4	+1.2
SDV	Santo Domingo	144.66	22	PKP	PKPdf	18 10 56.2	-1.9
	comp=Z,82nm,0.6s,baz=355,slow=3.5,SNR=44						
SDV	Santo Domingo	144.66	22	*e*PKPpre	PKPdf	18 10 56.3	-1.9
TCE	Chacachacare	144.96	7	*e*P	PKPdf	18 10 55.8	-2.9
PCRV	Puerto La Cruz	145.04	12	PKPbc	PKPbc	18 10 56.0	-2.2
	comp=Z,51nm,0.7s,baz=331,slow=1.8,SNR=25						
TRN	Trinidad (W)	145.04	6	*e*P	PKPbc	18 10 57.3	-0.9
TRN	Trinidad (W)	145.04	6	*e*	pPKPdf	18 11 15.9	-0.1
TBH	Brigand Hill	145.24	6	*e*P	PKPbc	18 10 59.6	+0.8
TBH	Brigand Hill	145.24	6	*e*	pPKPdf	18 11 17.2	+0.9
TPP	Pointe-a-Pierr	145.37	6	*e*P	PKPbc	18 10 58.9	-0.4
TPP	Pointe-a-Pierr	145.37	6	*e*	pPKPdf	18 11 15.6	-0.9
ROSC	El Rosal	146.79	31	PKPbc	PKPbc	18 11 02.6	-1.0
	comp=Z,44nm,0.6s,baz=25,slow=4.5,SNR=24						
ROSC	El Rosal	146.79	31	*e*PKPdf	PKPdf	18 11 03.0	+1.1
OTAV	Otavalo	148.38	42	*e*PKPdf	PKPdf	18 11 04.8	+0.4
USHA	Ushuaia	148.53	168	PKPbc	PKPbc	18 11 05.1	-1.9
	comp=Z,179nm,1.0s,baz=203,slow=1.9,SNR=46						
EFI	East Falkland	152.71	180	*e*PKPbc	PKPbc	18 11 16.5	-0.5
ATAH	Atahualpa	153.75	52	PKP	PKPdf	18 11 14.5	+1.9
	comp=Z,15nm,1.0s,baz=355,slow=4.4,SNR=24						
ATAH				PKPbc	PKPbc	18 11 22.5	+2.0
	comp=Z,33nm,0.8s,baz=348,slow=2.5,SNR=11						
ATAH				PKPab	PKPab	18 11 33.9	+0.4
	comp=Z,22nm,0.5s,baz=99,slow=5.6,SNR=8.0						
NNA	Nana	158.12	59	PKP	PKPdf	18 11 19.4	+1.0
	comp=Z,10nm,0.7s,baz=346,slow=3.9,SNR=4.9						
NNA				PKPab	PKPab	18 11 51.1	-1.1
	comp=Z,14nm,0.7s,baz=282,slow=4.1,SNR=4.3						
PLCA	Paso Flores	160.45	150	PKP	PKPdf	18 11 20.1	-0.1
	comp=Z,15nm,1.3s,baz=208,slow=0.6,SNR=10						
PLCA				PKPab	PKPab	18 12 02.3	+0.8
	comp=Z,8.2nm,0.5s,baz=213,slow=3.3,SNR=21						
TRQA	Tornquist	165.86	166	*e*PKPdf	PKPdf	18 11 24.5	-1.0
LPAZ	La Paz	167.39	52	PKP	PKPdf	18 11 28.6	+1.2
	comp=Z,73nm,1.3s,baz=20,slow=2.6,SNR=44						
LPAZ				PKPab	PKPab	18 12 32.1	-0.7
	comp=Z,26nm,0.8s,baz=19,slow=10,SNR=8.5						
LPAZ	La Paz	167.39	52	*e*PKPdf	PKPdf	18 11 28.6	+1.3
BDFB	Brasilia	167.41	312	PKP	PKPdf	18 11 26.9	-0.5
	comp=Z,11nm,0.7s,baz=334,slow=1.8,SNR=10						
BDFB				PKPab	PKPab	18 12 32.6	-0.2
	comp=Z,17nm,0.7s,baz=11,slow=5.5,SNR=5.7						
LCO	Las Campanas	167.52	115	*e*PKPdf	PKPdf	18 11 27.5	+0.4
CFAA	Coronel Fontan	168.24	130	PKP	PKPdf	18 11 27.3	-0.2
	comp=Z,2.0nm,1.1s,baz=201,slow=0.9,SNR=18						
CFAA				PKPab	PKPab	18 12 35.5	-0.6
LVC	Limon Verde	169.61	83	PKP	PKPdf	18 11 30.2	+1.6
	comp=Z,46nm,1.3s,baz=95,slow=1.5,SNR=24						
LVC				PKPab	PKPab	18 12 42.9	+0.3
	comp=Z,16nm,0.8s,baz=293,slow=4.4,SNR=5.7						
LVC	Limon Verde	169.61	83	*e*PKPdf	PKPdf	18 11 30.0	+1.4
VAO	Valinhos	170.03	275	⇑*e*P	PKPdf	18 11 25.1	-3.8
VAO				*i*		18 11 47.9	
VAO				*i*		18 11 58.9	
VAO				*i*		18 12 47.0	
SPB	Sao Paulo	170.54	272	*e*PKPdf	PKPdf	18 11 28.5	-0.7
SIV	San Ignacio	171.13	21	PKP	PKPdf	18 11 29.6	-0.1
	comp=Z,21nm,0.9s,baz=293,slow=1.2,SNR=36						
SIV				PKPab	PKPab	18 12 47.6	-1.4
	comp=Z,21nm,0.7s,baz=345,slow=3.7,SNR=16						
CPUP	Villa Florida	177.98	191	PKP	PKPdf	18 11 31.1	-0.5
	comp=Z,2.2nm,0.6s,baz=316,slow=0.7,SNR=9.0						
CPUP				PKPab	PKPab	18 13 18.1	-1.2
	comp=Z,5.4nm,0.5s,baz=160,slow=4.0,SNR=8.6						
CPUP	Villa Florida	177.98	191	PKIKP	PKPdf	18 11 31.1	-0.4
CPUP						18 13 18.1	
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CPUP				pmax	pmax		
	comp=Z,5.0nm,0.5s						

*CSEM **06** 17:52:09.5±0.1, 3737N×3878E, h10km, MD3.2, Error ellipse: s-maj=3.6km s-min=1.9km az=136.0*
*ISK **06** 17:52:10.0, 3738N×3874E, h5km, MD3.2*
*ISCJB **06** 17:52:11.3±0.8, 3743N±005×3874E±004, h5km±5km, Error ellipse: s-maj=7.9km s-min=5.0km az=168.7*
*DDA **06** 17:52:11.7, 3743N×3873E, h7km±4km, Md2.9*
ISC 06 17:52:11.6±0.9, **3741N**±005×**3876E**±005, **h10**km±5km, **n13**, σ1§**07**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	Urfa	0.06	62	*e*PG	Pg	17 52 12.3	-1.3
ATAB	Bozova	0.37	279	*i* P	Pg	17 52 18.6	-0.3
ATAB				*i* S	Sg	17 52 23.6	-0.2
MALT	Malatya	0.94	344	*e*PG	Pg	17 52 29.0	-0.6
MALT				*e*SG	Sg	17 52 42.6	+0.8
GZT	Gaziantep	0.95	267	*i* P	Pg	17 52 29.6	-0.2
GZT				*i* S	Sg	17 52 43.8	+1.5
SVRC	Sivrice-ELAZID	1.06	24	*e*PN	Pn	17 52 31.6	-0.8

SVRC				eSN	Sn	17 52 46.3	-1.0
AKCD	**Akcadag**	**1.10**	**323**	i P	**Pb**	**17 52 33.2**	**+0.5**
AKCD				i S	**Sg**	**17 52 48.1**	**+1.0**
GAZ	**Gaziantep**	**1.25**	**259**	ePN	**Pn**	**17 52 34.0**	**-1.1**
GAZ				eSN	**Sn**	**17 52 51.2**	**-0.8**
KMRS	**Kahramanmaras**	**1.48**	**274**	ePN	**Pn**	**17 52 37.5**	**-0.8**
PTK	**Pertek**	**1.56**	**19**	ePN	**Pn**	**17 52 39.6**	**+0.3**
MARD	**Mardin**	**1.61**	**93**	i P	**Pn**	**17 52 42.1**	**+2.0**
MARD				i S	**Sn**	**17 53 04.3**	**+3.3**
DARE	**Darende-Malaty**	**1.71**	**334**	ePN	**Pn**	**17 52 39.6**	**-1.8**
SARI	**SarD1z-Kayseri**	**2.06**	**309**	ePN	**Pn**	**17 52 47.3**	**+1.1**
KOZT	**Kozan**	**2.33**	**273**	ePN	**Pn**	**17 52 50.8**	**+0.8**

*MOS **06** 17:55:16.6±1.3, 24.44N×122.42E, h31km, mb5.4/16, Error ellipse: s-maj=18.1km s-min=9.5km az=108.9*
*BJI **06** 17:55:20.9, 24.38N×122.36E, h69km, mb5.3, ML5.0*
*IDC **06** 17:55:20.6±3.1, 24.38N×122.36E, h49km±29km, mb4.8/17, mb1 4.9/18, mb1mx4.7/26, mbtmp4.8/18, ML4.8/1, Error ellipse: s-maj=20.0km s-min=13.9km az=61.0*
*ISCJB **06** 17:55:21.3±0.2, 24.30N±0.02×122.34E±0.01, h71km±1km, mb5.0/50, Error ellipse: s-maj=3.1km s-min=2.0km az=156.2*
*NEIC **06** 17:55:21.7±0.7, 24.37N×122.34E, h60km±6km, mb5.2/28, Error ellipse: s-maj=8.6km s-min=8.0km az=182.0*
NEIC Recorded [4 TAP] in I-lan; [3 TAP] in Hua-lien, [2 TAP] in Chang-hua, Nan-t'ou, T'ai-chung, T'ai-pei and T'ai-tung; [1 TAP] in Chia-i, Hsin-chu, Miao-li and T'ao-yuan Counties. Recorded [1 JMA] on Iriomote-jima and Yonaguni-jima, Ryukyu Islands.
*TAP **06** 17:55:21.9, 24.27N×122.32E, h58km, ML5.5, B*
*JMA **06** 17:55:22.2±0.2, 24.35N×122.35E, h66km±2km, M4.8*
JMA Felt I J1.
ISC 06 17:55:22.1±0.1, **24.29N**±0.02×**122.34E**±0.01, **h65**km±1km, **n182**, σ1.01/243, **mb5.2**/50, **19C-6D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.55**	**272**	P	**Pn**	**17 55 34.3**	**-0.6**
	baz=277						
EHP				S	**Sn**	**17 55 43.6**	**-0.7**
	baz=277						
TWC	**Suao**	**0.55**	**306**	⇑iP	**Pn**	**17 55 34.5**	**-0.4**
	baz=311						
ENA	**Nanau**	**0.56**	**284**	⇑iP	**Pn**	**17 55 34.7**	**-0.4**
	baz=292						
ENA				eS	**Sn**	**17 55 43.9**	**-0.7**
	baz=292						
YOJ	**Yonaguni jima**	**0.64**	**74**	P	**Pn**	**17 55 35.9**	**0.0**
YOJ				S	**Sn**	**17 55 45.9**	**-0.2**
YOJ	**Yonaguni jima**	**0.64**	**74**	⇑P	**Pn**	**17 55 35.9**	**0.0**
	baz=63						
YOJ				i S	**Sn**	**17 55 46.0**	**-0.1**
	baz=63						
NACB	**Ninganchiao**	**0.69**	**261**	eP	**Pn**	**17 55 35.3**	**-1.2**
NACB				eSn	**Sn**	**17 55 45.0**	**-2.1**
TWD	**Chiawan**	**0.71**	**253**	⇓iP	**Pn**	**17 55 35.8**	**-1.0**
	baz=254						
TWD				S	**Sn**	**17 55 45.8**	**-1.7**
	baz=254						
ILA	**Ilan**	**0.72**	**312**	⇑iP	**Pn**	**17 55 37.2**	**+0.4**
	baz=323						
ILA				S	**Sn**	**17 55 48.4**	**+0.7**
	baz=323						
HWA	**Hwalien**	**0.74**	**245**	⇓P	**Pn**	**17 55 36.5**	**-0.6**
	baz=246						
TWE	**Neicheng**	**0.75**	**305**	⇑iP	**Pn**	**17 55 37.6**	**+0.3**
	baz=313						
TWB1	**Santiao Chiao**	**0.78**	**336**	⇑iP	**Pn**	**17 55 37.4**	**-0.3**
	baz=328						
TWB1				eS	**Sn**	**17 55 48.1**	**-1.0**
	baz=328						
ENTT	**Nioudou**	**0.79**	**297**	⇑iP	**Pn**	**17 55 38.0**	**+0.3**
	baz=292						
ESF	**Shoufeng Towns**	**0.87**	**241**	eP	**Pn**	**17 55 37.6**	**-1.1**
	baz=242						
ESF				eS	**Sn**	**17 55 49.5**	**-1.4**
	baz=242						
NNS	**Nan Shan**	**0.89**	**280**	⇑iP	**Pn**	**17 55 38.8**	**-0.2**
	baz=272						
NNS				eS	**Sn**	**17 55 51.2**	**-0.3**
	baz=272						
NWF	**Wu-fen Shan**	**0.93**	**327**	⇑iP	**Pn**	**17 55 39.6**	**+0.1**
	baz=329						
NWF				eS	**Sn**	**17 55 51.9**	**-0.4**
	baz=329						
TEGC	**Jichi Village**	**0.93**	**232**	eP	**Pn**	**17 55 38.6**	**-0.9**
	baz=227						
TEGC				eS	**Sn**	**17 55 51.1**	**-1.2**
	baz=227						
ESL	**Shilin**	**0.95**	**240**	⇓P	**Pn**	**17 55 38.6**	**-1.2**
	baz=241						
YHNB	**Yeheng**	**0.95**	**294**	eP	**Pn**	**17 55 39.5**	**-0.3**
TWA	**Mucha**	**0.97**	**315**	⇑iP	**Pn**	**17 55 40.3**	**+0.3**
	baz=327						
TWA				eS	**Sn**	**17 55 53.7**	**+0.5**
	baz=327						
WHF	**Hehuan Shan**	**0.99**	**262**	P	**Pn**	**17 55 40.1**	**-0.1**
	baz=257						
TATO	**Taipei**	**1.03**	**312**	eP	**Pn**	**17 55 40.8**	**0.0**
TAP1	**Taipei**	**1.05**	**315**	⇑iP	**Pn**	**17 55 41.1**	**+0.1**
	baz=329						
TWT	**Tachien**	**1.06**	**268**	⇑P	**Pn**	**17 55 41.7**	**+0.5**
	baz=269						
TWT				eS	**Sn**	**17 55 55.1**	**-0.2**
	baz=269						
TWS1	**Kuangyinshan**	**1.16**	**314**	⇑iP	**Pn**	**17 55 42.8**	**+0.3**
	baz=327						
TWS1				eS	**Sn**	**17 55 58.3**	**+0.6**
	baz=327						
TWY	**Chenhua**	**1.19**	**326**	eP	**Pn**	**17 55 43.0**	**+0.1**
	baz=328						
TWY				eS	**Sn**	**17 55 58.6**	**+0.3**
	baz=328						
EHY	**Hungye**	**1.21**	**230**	eP	**Pn**	**17 55 42.1**	**-1.1**
	baz=230						
EHY				eS	**Sn**	**17 55 57.1**	**-1.8**
	baz=230						
NCU	**National Centr**	**1.25**	**303**	⇑iP	**Pn**	**17 55 44.2**	**+0.6**
	baz=305						
NCU				eS	**Sn**	**17 56 00.2**	**+0.6**
	baz=305						
NSTT	**Nanjuang**	**1.27**	**286**	⇑iP	**Pn**	**17 55 44.7**	**+0.9**
	baz=277						
NSTT				eS	**Sn**	**17 56 00.4**	**+0.4**
	baz=277						
IRIF	**Iriomote-Funau**	**1.27**	**88**	P	**Pn**	**17 55 43.9**	**0.0**
IRIF				S	**Sn**	**17 56 00.0**	**-0.2**
TWF1	**Yuli**	**1.33**	**226**	eP	**Pn**	**17 55 43.7**	**-1.0**
	baz=235						
TWF1				eS	**Sn**	**17 55 59.2**	**-2.5**
	baz=235						
HSN	**Hsinchu**	**1.35**	**293**	⇑P	**Pn**	**17 55 45.1**	**+0.2**
	baz=306						
HSN				eS	**Sn**	**17 56 01.4**	**-0.6**
	baz=306						
PCYT	**Pengchaiyu**	**1.36**	**350**	i P	**Pn**	**17 55 45.4**	**+0.3**
	baz=342						
PCYT				eS	**Sn**	**17 56 01.5**	**-0.7**
	baz=342						
HATJ	**Hateruma jima**	**1.36**	**100**	P	**Pn**	**17 55 45.3**	**+0.2**
HATJ				S	**Sn**	**17 56 03.1**	**+0.8**
SMLT	**Sun Moon Lake**	**1.38**	**253**	⇑iP	**Pn**	**17 55 45.7**	**+0.5**
	baz=248						
SMLT				S	**Sn**	**17 56 01.7**	**-1.0**
	baz=248						
TYC	**Yuchr**	**1.41**	**254**	⇑iP	**Pn**	**17 55 46.1**	**+0.5**
	baz=248						
TYC				eS	**Sn**	**17 56 03.1**	**-0.3**
	baz=248						
TWQ1	**Liyutan**	**1.43**	**273**	P	**Pn**	**17 55 46.9**	**+0.9**
	baz=274						
TWQ1				eS	**Sn**	**17 56 05.0**	**+1.1**
	baz=274						
NSY	**Sanyi**	**1.44**	**275**	eP	**Pn**	**17 55 47.3**	**+1.1**
	baz=276						
NSY				eS	**Sn**	**17 56 05.7**	**+1.4**
	baz=276						
CHKT	**Chengkung**	**1.48**	**217**	eP	**Pn**	**17 55 45.1**	**-1.6**
	baz=209						
YUS	**Yu-Shan**	**1.50**	**238**	⇓iP	**Pn**	**17 55 47.4**	**+0.5**
	baz=238						
YUS				S	**Sn**	**17 56 04.7**	**-0.8**
	baz=238						
TCU	**Taichung**	**1.52**	**265**	eP	**Pn**	**17 55 48.1**	**+0.9**
	baz=266						
TCU				eS	**Sn**	**17 56 07.7**	**+1.5**
	baz=266						
JKRS	**Kuro-shima**	**1.53**	**92**	P	**Pn**	**17 55 48.2**	**+0.9**
JKRS				S	**Sn**	**17 56 07.3**	**+1.1**
WNT	**Mingjian**	**1.57**	**255**	⇑iP	**Pn**	**17 55 49.3**	**+1.5**
	baz=256						
WNT				eS	**Sn**	**17 56 07.9**	**+0.7**
	baz=256						
ALS	**Alishan**	**1.60**	**241**	eP	**Pn**	**17 55 49.1**	**+0.7**
	baz=233						
ALS				eS	**Sn**	**17 56 07.1**	**-1.0**
	baz=233						
ELDTW	**Lidau**	**1.63**	**228**	eP	**Pn**	**17 55 47.8**	**-0.9**
	baz=227						
ELDTW				eS	**Sn**	**17 56 07.0**	**-1.8**
	baz=227						
JIJ	**Ishigaki jima**	**1.65**	**87**	P	**Pn**	**17 55 48.9**	**0.0**
JIJ				S	**Sn**	**17 56 08.6**	**-0.6**
CHN5	**Tsauling**	**1.67**	**246**	eP	**Pn**	**17 55 50.2**	**+1.0**
	baz=246						
WGK	**Gukeng**	**1.73**	**250**	⇓iP	**Pn**	**17 55 51.3**	**+1.3**
	baz=240						
WGK				eS	**Sn**	**17 56 11.8**	**+0.6**
	baz=240						
STYT	**Tauyuan**	**1.83**	**233**	P	**Pn**	**17 55 52.0**	**+0.6**
	baz=226						
STYT				eS	**Sn**	**17 56 13.7**	**+0.1**
	baz=226						
CHN4	**Tsaushan**	**1.85**	**240**	eP	**Pn**	**17 55 52.6**	**+1.0**
	baz=240						
CHN4				eS	**Sn**	**17 56 14.3**	**+0.2**
	baz=240						
TWG	**Pinlang**	**1.87**	**219**	eP	**Pn**	**17 55 50.9**	**-1.0**
	baz=217						
TWG				eS	**Sn**	**17 56 12.1**	**-2.3**
	baz=217						
TTN	**Taitung**	**1.88**	**216**	eP	**Pn**	**17 55 51.6**	**-0.5**
	baz=208						
WTP	**Ta-pu**	**1.89**	**237**	eP	**Pn**	**17 55 53.1**	**+0.9**
	baz=237						
WTP				eS	**Sn**	**17 56 15.3**	**+0.2**
	baz=237						
CHY	**Chiayi**	**1.92**	**246**	eP	**Pn**	**17 55 53.7**	**+1.1**
	baz=236						
WTCT	**Ta-ch'eng**	**1.93**	**258**	P	**Pn**	**17 55 53.1**	**+0.4**
	baz=258						
WTCT				eS	**Sn**	**17 56 15.9**	**0.0**
	baz=258						
TWK	**Hsinying**	**1.98**	**239**	P	**Pn**	**17 55 54.5**	**+1.1**
	baz=239						
TWK				eS	**Sn**	**17 56 17.1**	**0.0**
	baz=239						
CHN1	**Nanshi**	**1.99**	**237**	eP	**Pn**	**17 55 54.2**	**+0.7**
	baz=237						
CHN1				eS	**Sn**	**17 56 18.3**	**+0.9**
	baz=237						
SGST	**Jiashian**	**2.01**	**234**	eP	**Pn**	**17 55 54.9**	**+1.1**
	baz=226						
SGST				eS	**Sn**	**17 56 18.8**	**+0.9**
	baz=226						
WSF	**Szhu**	**2.04**	**252**	eP	**Pn**	**17 55 55.1**	**+0.9**
	baz=264						
WSF				eS	**Sn**	**17 56 19.6**	**+0.9**
	baz=264						
ECL	**Taimali**	**2.11**	**217**	eP	**Pn**	**17 55 54.0**	**-1.2**
	baz=222						
CHN8	**Yiju**	**2.16**	**245**	⇓iP	**Pn**	**17 55 56.7**	**+0.8**
	baz=233						
CHN8				eS	**Sn**	**17 56 22.1**	**+0.4**
	baz=233						
JTJ	**Tarama**	**2.18**	**80**	P	**Pn**	**17 55 57.1**	**+1.0**
JTJ				S	**Sn**	**17 56 22.1**	**0.0**
SSD	**Sandimen**	**2.19**	**226**	eP	**Pn**	**17 55 57.0**	**+0.7**
	baz=217						
SSD				eS	**Sn**	**17 56 22.4**	**0.0**
	baz=217						
SCLT	**Jiali**	**2.26**	**241**	eP	**Pn**	**17 55 58.0**	**+0.8**
	baz=241						
SCLT				eS	**Sn**	**17 56 25.8**	**+1.8**
	baz=241						
TWM1	**Shoushan**	**2.28**	**231**	eP	**Pn**	**17 55 59.5**	**+1.9**
	baz=230						
TAW	**Tawu**	**2.33**	**215**	eP	**Pn**	**17 55 58.1**	**-0.1**
	baz=214						
EAST	**Anshuo**	**2.34**	**216**	eP	**Pn**	**17 55 58.6**	**+0.3**
	baz=208						
SCZT	**Fangliau**	**2.48**	**220**	eP	**Pn**	**17 56 01.3**	**+1.2**
	baz=218						
SCZT				eS	**Sn**	**17 56 29.8**	**+0.5**
	baz=218						
PNG	**Penghu**	**2.65**	**255**	eP	**Pn**	**17 56 02.1**	**-0.4**
	baz=255						
TWP	**Hsiaoliuchiu**	**2.65**	**224**	eP	**Pn**	**17 56 05.0**	**+2.4**
	baz=223						
TWK1	**Hengchun**	**2.73**	**211**	eP	**Pn**	**17 56 04.2**	**+0.6**
	baz=209						
TWK1				eS	**Sn**	**17 56 33.5**	**-1.9**
	baz=209						
JMJ	**Miyako jima 2**	**2.74**	**78**	S	**Sn**	**17 56 36.2**	**+0.4**
JMJ	**Miyako jima 2**	**2.74**	**78**	eP	**Pn**	**17 56 05.2**	**+1.4**
	baz=78						
JMJ				eS	**Sn**	**17 56 37.0**	**+1.2**
	baz=78						
JOGS	**Gusukube**	**2.83**	**80**	P	**Pn**	**17 56 06.6**	**+1.6**
JOGS				eS	**Sn**	**17 56 38.3**	**+0.3**
QZH	**Quanzhou**	**3.47**	**282**	P	**Pn**	**17 56 13.0**	**-0.7**
QZH				S	**Sn**	**17 56 49.6**	**-4.0**
QZH				Smax			
	comp=N,7μm,1.1s						
QZH				Smax			
	comp=E,3μm,0.9s						
KNM	**Kinmen**	**3.56**	**273**	eP	**Pn**	**17 56 15.9**	**+1.0**
	baz=272						
JKE	**Kume jima 2**	**4.51**	**62**	P	**Pn**	**17 56 29.1**	**+1.2**
JAGN	**Aguni-jima**	**4.99**	**62**	P	**Pn**	**17 56 35.3**	**+0.8**
NAH1	**Naha**	**5.21**	**67**	P	**Pn**	**17 56 38.7**	**+1.2**
NAH1				eS	**Sn**	**17 57 36.9**	**+0.7**
JJT2	**Tamagusuku 2**	**5.24**	**68**	P	**Pn**	**17 56 38.3**	**+0.5**
JJT2				eS	**Sn**	**17 57 37.5**	**+0.6**
JIH	**Iheya**	**5.77**	**61**	P	**Pn**	**17 56 45.6**	**+0.5**
JIH				eS	**Sn**	**17 57 47.8**	**-2.2**
JOW	**Kunigami**	**5.93**	**63**	P	**Pn**	**17 56 46.0**	**-1.3**
	comp=E,59nm,0.3s,baz=137,slow=16,SNR=15						
JOW				S	**Sn**	**17 57 52.1**	**-1.8**
	comp=E,21nm,0.3s,baz=126,slow=19,SNR=2.3						
JOW	**Kunigami**	**5.93**	**63**	P	**Pn**	**17 56 46.7**	**-0.6**
JOW				eS	**Sn**	**17 57 51.0**	**-2.9**
JOW	**Kunigami**	**5.93**	**63**	eP	**Pn**	**17 56 46.8**	**-0.6**
	baz=64						
JTK	**Tokunoshima**	**6.89**	**58**	P	**Pn**	**17 56 59.4**	**-1.1**
JTK				eS	**Sn**	**17 58 14.0**	**-3.5**
JAM	**Amami Oshima**	**7.70**	**56**	P	**Pn**	**17 57 09.9**	**-1.7**
JAM				eS	**Sn**	**17 58 33.3**	**-4.1**
JZK	**Kikaishima**	**7.94**	**58**	P	**Pn**	**17 57 13.3**	**-1.5**
JZK				eS	**Sn**	**17 58 41.6**	**-1.5**
JMZ	**Minamidaito 2**	**8.20**	**77**	P	**Pn**	**17 57 14.7**	**-3.7**
NJ2	**Nanjing**	**8.32**	**339**	eP	**Pn**	**17 57 21.8**	**+1.7**
NJ2				AMB	AMB		
	comp=Z,80nm,0.8s						
KSRS	**Korea Array**	**13.97**	**19**	P	**Pn**	**17 58 39.4**	**+2.6**
	comp=Z,1.4nm,0.3s,baz=200,slow=13,SNR=3.7						
MAT	**Matsushiro**	**18.31**	**44**	P	**Pn**	**17 59 27.7**	**-3.9**
MAT				S	**S**	**18 02 57.5**	**+1.1**
HHC	**Hu-ho-hao-te**	**18.82**	**334**	eP	**Pn**	**17 59 36.1**	**-1.6**
HHC				S	**S**	**18 02 59.1**	**-8.0**
HHC				AMB	AMB		
	comp=Z,93nm,0.6s						
KKM	**Kota Kinabalu**	**19.07**	**199**	P	**Pn**	**17 59 39.8**	**-1.1**
ERM	**Erimo**	**24.72**	**39**	eP	**P**	**18 00 34.4**	**-2.9**
ERM				pmax	pmax		
	comp=Z,57nm,1.1s,mb5.0						
ERM	**Erimo**	**24.72**	**39**	eP	**P**	**18 00 34.4**	**-2.9**
	comp=Z,57nm,1.1s,mb5.0						
ASAJ	**Asahikawa**	**25.80**	**35**	P	**P**	**18 00 45.1**	**-1.9**
	comp=Z,10nm,0.3s,mb4.8,baz=233,slow=7.7,SNR=9.9						
SONM	**Songino Array**	**26.69**	**336**	P	**P**	**18 00 55.5**	**+0.4**
	comp=Z,68nm,1.0s,mb5.2,baz=147,slow=9.3,SNR=10.0						
SONM				PcP	PcP	18 04 17.4	+0.2
	comp=Z,7.0nm,1.0s,baz=172,slow=4.1,SNR=5.4						
TLY	**Talaya**	**30.88**	**337**	eP	**P**	**18 01 30.3**	**-1.9**
TLY				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
TLY	**Talaya**	**30.88**	**337**	eP	**P**	**18 01 30.3**	**-1.9**
	comp=Z,20nm,0.8s,mb5.0						
MKAR	**Makanchi Array**	**39.00**	**315**	P	**P**	**18 02 42.4**	**+0.2**
	comp=Z,14nm,0.6s,mb4.9,baz=119,slow=7.4,SNR=5.9						
ZAA0	**Zalesovo Array**	**40.73**	**327**	eP	**P**	**18 02 55.6**	**-0.9**
ZALV	**Zalesovo Beam**	**40.73**	**327**	P	**P**	**18 02 55.3**	**-1.1**
	comp=Z,42nm,0.8s,mb5.1,baz=113,slow=8.3,SNR=5.5						
ZAL	**Zalesovo**	**40.74**	**326**	P	**P**	**18 02 55.3**	**-1.2**
TKM2	**Tokmak 2**	**42.53**	**308**	eP	**P**	**18 03 12.8**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
TKM2	**Tokmak 2**	**42.53**	**308**	eP	**P**	**18 03 12.8**	**+1.5**
	comp=Z,23nm,0.8s,mb5.0						
KURK	**Kurchatov**	**42.69**	**320**	P	**P**	**18 03 11.9**	**-0.6**
	comp=Z,25nm,0.9s,mb4.9,baz=109,slow=8.4,SNR=4.3						
KURK	**Kurchatov**	**42.69**	**320**	eP	**P**	**18 03 11.2**	**-1.3**
KURK				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.9						
KURK	**Kurchatov**	**42.69**	**320**	eP	**P**	**18 03 11.2**	**-1.2**
	comp=Z,18nm,0.7s,mb4.9						
WRA	**Warramunga Arr**	**45.49**	**164**	P	**P**	**18 03 35.5**	**+0.3**
	comp=Z,29nm,0.9s,mb5.1,baz=345,slow=8.6,SNR=7.5						
TIXI	**Tiksi**	**47.53**	**3**	eP	**P**	**18 03 48.3**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
TIXI	**Tiksi**	**47.53**	**3**	eP	**P**	**18 03 48.3**	**-2.3**
	comp=Z,24nm,0.8s,mb5.3						
BVAR	**Borovoye Array**	**48.26**	**320**	P	**P**	**18 03 57.2**	**+0.7**
	comp=Z,9.5nm,0.6s,mb5.0,baz=104,slow=9.4,SNR=5.5						
BRVK	**Borovoye**	**48.33**	**320**	eP	**P**	**18 03 56.6**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
BRVK	**Borovoye**	**48.33**	**320**	eP	**P**	**18 03 56.6**	**-0.4**
	comp=Z,23nm,0.9s,mb5.2						
ASAR	**Alice Springs**	**48.97**	**166**	P	**P**	**18 04 03.4**	**+1.2**
	comp=Z,18nm,0.9s,mb5.1,baz=345,slow=6.7,SNR=5.9						
ARU	**Arti**	**55.66**	**323**	eP	**P**	**18 04 50.1**	**-1.3**
ARU				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.3						
ARU	**Arti**	**55.66**	**323**	eP	**P**	**18 04 50.1**	**-1.3**
	comp=Z,26nm,0.8s,mb5.3						
UMR	**Umm Al-Rimmam**	**65.70**	**293**	eP	**P**	**18 05 60.0**	**-0.2**
	baz=298						
UMR				AMb	AMB	18 06 01.3	
	comp=Z,82nm,1.3s,mb5.6,baz=298						
MIB	**Mutribah**	**65.95**	**293**	eP	**P**	**18 06 01.7**	**-0.1**
	baz=299						
MIB				AMb	AMB	18 06 02.9	
	comp=Z,127nm,0.8s,mb6.0,baz=299						
RDF	**Al-Radifah**	**66.00**	**292**	eP	**P**	**18 06 02.8**	**+0.7**
	baz=298						
RDF				AMb	AMB	18 06 04.2	
	comp=Z,205nm,0.8s,mb6.2,baz=298						
NAY	**Al-Naaiem**	**66.17**	**293**	eP	**P**	**18 06 02.8**	**-0.5**
	baz=298						
NAY				AMb	AMB	18 06 04.2	
	comp=Z,77nm,0.8s,mb5.8,baz=298						
RST	**Umm Al-Ruwaisa**	**66.31**	**293**	eP	**P**	**18 06 03.1**	**-1.0**
	baz=298						
RST				AMb	AMB	18 06 04.8	
	comp=Z,2.0nm,1.0s,mb4.1,baz=298						
PPLA	**Purkeypile**	**66.64**	**30**	eP	**P**	**18 06 05.0**	**-0.6**
	comp=Z,38nm,1.1s,mb5.3						
BPAW	**Bear Paw Mtn.**	**67.00**	**28**	eP	**P**	**18 06 08.1**	**+0.3**
	comp=Z,28nm,1.1s,mb5.2						
TRF	**Thorofare Moun**	**67.41**	**29**	eP	**P**	**18 06 10.5**	**0.0**
	comp=Z,16nm,1.0s,mb5.0						
MSL	**Mosul**	**67.71**	**301**	ex	x	18 06 15.0	
MSL				ex	x	18 15 10.0	
JOF	**Joensuu**	**69.13**	**331**	ep	**P**	**18 06 20.4**	**-0.8**
	comp=Z,2.3nm,0.4s,mb4.5						
JOF	**Joensuu**	**69.13**	**331**	eP	**P**	**18 06 20.4**	**-0.8**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
KEV	**Kevo**	**69.27**	**338**	ep	**P**	**18 06 21.2**	**-0.8**
	comp=Z,1.9nm,0.3s,mb4.5						
KEV	**Kevo**	**69.27**	**338**	eP	**P**	**18 06 21.2**	**-0.8**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
SPITS	**Spitsbergen Ar**	**69.61**	**348**	P	**P**	**18 06 23.4**	**-0.6**
	comp=Z,7.9nm,0.4s,mb5.0,baz=23,slow=11,SNR=28						
ARCES	**ARCESS Array B**	**69.83**	**338**	P	**P**	**18 06 24.9**	**-0.5**
	comp=Z,12nm,0.9s,mb4.8,baz=60,slow=6.6,SNR=7.3						
AKASG	**Malin Array Be**	**73.49**	**319**	P	**P**	**18 06 46.0**	**-1.8**
	comp=Z,4.3nm,0.8s,mb4.5,baz=64,slow=5.8,SNR=3.7						
HYT	**Haines Junctio**	**73.88**	**30**	eP	**P**	**18 06 52.4**	**+2.6**
ANTO	**Ankara**	**74.53**	**307**	eP	**P**	**18 06 53.0**	**-1.0**
ANTO				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
ANTO	**Ankara**	**74.53**	**307**	eP	**P**	**18 06 53.0**	**-1.0**
	comp=Z,25nm,1.0s,mb5.1						
DLBC	**Dease Lake**	**78.32**	**31**	P	**P**	**18 07 16.3**	**+1.2**
	baz=337,slow=7.3						
NOA	**NORSAR Array B**	**78.62**	**332**	P	**P**	**18 07 15.9**	**-0.8**
	baz=61,slow=5.4						
RPZ	**Rata Peaks**	**81.09**	**147**	P	**P**	**18 07 30.0**	**-0.2**
	comp=Z,20nm,0.9s,mb5.0,baz=316,slow=4.5,SNR=4.5						
RPZ	**Rata Peaks**	**81.09**	**147**	P	**P**	**18 07 30.0**	**-0.2**
YKA	**Yellowknife Ar**	**82.46**	**23**	P	**P**	**18 07 36.9**	**-0.3**
	comp=Z,22nm,0.9s,mb5.1,baz=306,slow=4.8,SNR=10.0						
YKA	**Yellowknife Ar**	**82.46**	**23**	P	**P**	**18 07 36.9**	**-0.3**
SUMG	**Summit**	**82.51**	**354**	eP	**P**	**18 07 37.1**	**-0.2**
	comp=Z,11nm,1.0s,mb4.9						
OPO	**Ambohidratompo**	**84.70**	**247**	P	**P**	**18 07 50.0**	**+0.5**
	comp=Z,7.5nm,0.9s,mb4.8,baz=63,slow=4.2,SNR=6.9						
ABPO	**Ambohimpanom**	**84.87**	**247**	eP	**P**	**18 07 50.6**	**+0.3**
	comp=Z,24nm,1.1s,mb5.2						
KMBO	**Kilima Mbogo**	**85.98**	**267**	P	**P**	**18 07 57.9**	**+1.9**
	comp=Z,16nm,1.1s,mb5.2,baz=58,slow=3.7,SNR=4.6						
KMBO	**Kilima Mbogo**	**85.98**	**267**	eP	**P**	**18 07 57.4**	**+1.4**
KMBO				pmax	pmax		
	comp=Z,28nm,1.2s						
KMBO	**Kilima Mbogo**	**85.98**	**267**	eP	**P**	**18 07 57.4**	**+1.4**
	comp=Z,28nm,1.2s,mb5.4						
NLWA	**Neilton Lookou**	**87.14**	**38**	eP	**P**	**18 08 01.6**	**+0.5**
JCW	**Jim Creek**	**87.77**	**37**	eP	**P**	**18 08 04.8**	**+0.7**
RPW	**Rockport**	**87.85**	**37**	eP	**P**	**18 08 04.1**	**-0.4**
BMW	**Boistfort Moun**	**88.01**	**39**	eP	**P**	**18 08 05.9**	**+0.7**
SFJD	**Kangerlussuaq**	**88.84**	**357**	eP	**P**	**18 08 07.8**	**-1.0**
SFJD				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.5						
SFJD	**Kangerlussuaq**	**88.84**	**357**	eP	**P**	**18 08 07.8**	**-0.9**
	comp=Z,27nm,1.0s,mb5.5						
ETW	**Entiat**	**88.99**	**37**	eP	**P**	**18 08 10.3**	**+0.4**
EDM	**Edmonton**	**89.00**	**30**	eP	**P**	**18 08 09.6**	**-0.2**
HOOD	**Mount Hood Mea**	**89.57**	**39**	eP	**P**	**18 08 14.3**	**+1.7**
	comp=Z,41nm,1.0s,mb5.7						
OD2	**Odessa Site #2**	**90.00**	**36**	eP	**P**	**18 08 15.0**	**+0.4**
RSW	**Rattlesnake Hi**	**90.11**	**38**	eP	**P**	**18 08 16.0**	**+0.9**
NEW	**Newport**	**90.31**	**35**	eP	**P**	**18 08 14.9**	**-1.1**
NEW				pmax	pmax		
	comp=Z,46nm,1.2s						
NEW	**Newport**	**90.31**	**35**	eP	**P**	**18 08 14.9**	**-1.2**
	comp=Z,46nm,1.2s,mb5.7						
NEW				e	pP	18 08 33.7	-0.4
HUMO	**Hull Mountain**	**90.33**	**42**	eP	**P**	**18 08 17.8**	**+1.6**
	comp=Z,17nm,1.1s,mb5.3						
YBH	**Yreka Blue Hor**	**90.97**	**43**	eP	**P**	**18 08 18.9**	**-0.3**
YBH				pmax	pmax		
	comp=Z,18nm,1.3s						
YBH	**Yreka Blue Hor**	**90.97**	**43**	eP	**P**	**18 08 18.9**	**-0.3**
	comp=Z,18nm,1.3s,mb5.2						
LNOR	**Lincton Mounta**	**91.15**	**38**	eP	**P**	**18 08 21.3**	**+1.3**
WALA	**Waterton Lakes**	**91.46**	**33**	eP	**P**	**18 08 19.5**	**-1.9**
	comp=Z,113nm,1.5s,mb6.0						
BMO	**Blue Mountains**	**92.32**	**38**	eP	**P**	**18 08 25.9**	**+0.5**
BMO				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.1						
BMO	**Blue Mountains**	**92.32**	**38**	eP	**P**	**18 08 25.9**	**+0.5**
	comp=Z,10.0nm,1.1s,mb5.1						
MOD	**Modoc**	**92.34**	**42**	eP	**P**	**18 08 26.1**	**+0.5**
	comp=Z,18nm,1.1s,mb5.3						
FFC	**Flin Flon**	**92.61**	**24**	eP	**P**	**18 08 24.8**	**-1.7**
FFC				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.8						
FFC	**Flin Flon**	**92.61**	**24**	eP	**P**	**18 08 24.8**	**-1.8**
	comp=Z,46nm,1.1s,mb5.8						
WVOR	**Wild Horse Val**	**93.03**	**40**	eP	**P**	**18 08 25.3**	**-3.4**
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.2						
WVOR	**Wild Horse Val**	**93.03**	**40**	eP	**P**	**18 08 25.3**	**-3.4**
	comp=Z,9.7nm,1.1s,mb5.2						
PAHR	**Pah Rah Range**	**94.20**	**43**	eP	**P**	**18 08 34.5**	**+0.3**
	comp=Z,9.6nm,0.8s,mb5.3						
CMB	**Columbia Colle**	**94.55**	**45**	eP	**P**	**18 08 36.2**	**+0.4**
CMB				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.2						
CMB	**Columbia Colle**	**94.55**	**45**	eP	**P**	**18 08 36.1**	**+0.3**
	comp=Z,9.6nm,1.0s,mb5.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DLMT	**Dillon**	**94.56**	**35**	*e*P	**P**	**18 08 34.9**	**-0.8**
	comp=Z,10.0nm,1.0s,mb5.2						
NVAR	**Mina Array Bea**	**95.64**	**43**	P	**P**	**18 08 41.5**	**+0.8**
	comp=Z,3.8nm,0.7s,mb4.9,baz=280,slow=5.8,SNR=6.1						
ISA	**Isabella**	**97.18**	**46**	*e*P	**P**	**18 08 44.1**	**-3.7**
ISA				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb5.0						
ISA	**Isabella**	**97.18**	**46**	*e*P	**P**	**18 08 44.1**	**-3.7**
	comp=Z,7.2nm,1.2s,mb5.0						
ESDC	**Sonseca Array**	**99.02**	**321**	P	**P**	**18 08 56.6**	**+0.6**
	comp=Z,7.4nm,1.1s,mb5.1,baz=49,slow=7.9,SNR=5.3						
PCRV	**Puerto La Cruz**	**145.07**	**12**	PKPbc	PKPbc	18 14 51.3	-1.2
	comp=Z,14nm,0.7s,baz=353,slow=6.2,SNR=4.4						
USHA	**Ushuaia**	**148.46**	**168**	PKPbc	PKPbc	18 15 02.0	+1.0
	comp=Z,25nm,1.1s,baz=86,slow=2.0,SNR=3.6						

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*MOS **06** 18:00:37.0±2.6, 56.12N×11354E, h16km, mb4.3/1, Error ellipse: s-maj=12.6km s-min=0.0km az=132.6*

BYKL 06 18:00:36.5±0.3, 5615N×11359E, h12km±3km, 3C-1D, FELT I=II-III MSK at Severomuisk, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.04**	**208**	*e*PG	Pg	18 00 38.0	-0.7
SVKR				pmax	pmax		
	comp=Z,14µm,0.2s						
SVKR	**Severomuysk**	**0.04**	**208**	⇓*i*Pg	Pg	18 00 38.1	-0.6
SVKR				*i* Sg	Sg	18 00 39.7	-0.5
UKT	**Uakit**	**0.66**	**178**	⇑*i*Pg	Pg	18 00 48.3	-1.0
UKT				*e*Sg	Sg	18 00 58.7	+0.7
UKT				Pmax			
	comp=Z,174nm,0.1s						
UKT				Smax			
	comp=Z,452nm,0.2s						
YOA	**Uoyan**	**1.04**	**270**	*e*Pg	Pg	18 00 55.2	-1.4
YOA				*e*Pb	Pb	18 00 57.1	+0.6
YOA				*e*Sg	Sg	18 01 09.7	-0.5
YOA				max			
	comp=Z,432nm,0.2s						
YOA				Smax			
	comp=Z,901nm,0.4s						
NLYR	**Nelyaty**	**1.23**	**73**	*e*Pg	Pg	18 00 58.6	-1.4
NLYR				*e*		18 01 02.7	
NLYR				*e*Sg	Sg	18 01 15.2	-0.8
NLYR				max			
	comp=Z,120nm,0.4s						
NLYR				Smax			
	comp=Z,225nm,0.8s						
KMO	**Kumora**	**1.37**	**260**	*e*PG	Pg	18 01 00.7	-2.0
KMO				*e*		18 01 19.0	
KMO				pmax	pmax		
	comp=Z,166nm,0.4s						
KMO				smax			
	comp=N,740nm,0.6s						
KMO	**Kumora**	**1.37**	**260**	⇑*i*Pg	Pg	18 01 00.8	-1.9
KMO				*e*Pb	Pb	18 01 01.8	-0.2
KMO				*e*Sg	Sg	18 01 19.2	-1.3
KMO				*e*Sb	Sb	18 01 21.1	+1.7
KMO				max			
	comp=N,170nm,0.4s						
KMO				max			
	comp=N,739nm,0.6s						
BOD	**Bodaibo**	**1.69**	**8**	*e*PN	Pn	18 01 05.9	+0.1
BOD				*e*		18 01 27.5	
BOD				pmax	pmax		
	comp=Z,228nm,0.3s						
BOD				smax			
	comp=E,394nm,0.5s						
BOD	**Bodaibo**	**1.69**	**8**	⇑*i*Pg	Pg	18 01 06.2	-2.7
BOD				*e*Sg	Sg	18 01 27.9	-2.9
BOD				Pmax			
	comp=E,152nm,0.2s						
BOD				Smax			
	comp=E,281nm,0.2s						
YLYR	**Ulyunkhan**	**1.88**	**228**	*e*PN	Pn	18 01 09.1	+0.7
YLYR				*e*		18 01 09.9	
YLYR				*e*S	Sn	18 01 33.4	+1.4
YLYR				*e*		18 01 34.9	
YLYR				pmax	pmax		
	comp=Z,69nm,0.2s						
YLYR				smax			
	comp=E,565nm,0.3s						
YLYR	**Ulyunkhan**	**1.88**	**228**	*e*Pg	Pg	18 01 09.4	-3.1
YLYR				*e*Sg	Sg	18 01 35.0	-1.9
YLYR				Pmax			
	comp=E,61nm,0.2s						
YLYR				Smax			
	comp=E,517nm,0.2s						
NIZ	**Nizh Angarsk**	**2.31**	**262**	*e*PN	Pn	18 01 14.9	+0.6
NIZ				*e*		18 01 18.3	
NIZ				*e*		18 01 48.4	
NIZ				pmax	pmax		
	comp=Z,30nm,1.0s						
NIZ				smax			
	comp=N,172nm,0.9s						
NIZ	**Nizh Angarsk**	**2.31**	**262**	*e*Pn	Pn	18 01 14.8	+0.5
NIZ				*e*Pg	Pg	18 01 17.6	-3.1
NIZ				*e*Sn	Sn	18 01 44.6	+2.1
NIZ				*i* Sg	Sg	18 01 48.5	-2.1
NIZ				Pmax			
	comp=N,25nm,0.8s						
NIZ				Smax			
	comp=N,172nm,0.8s						
CRS	**Chara**	**2.70**	**72**	*e*PN	Pn	18 01 25.3	+5.7
CRS				*e*		18 02 00.7	
CRS				pmax	pmax		
	comp=Z,74nm,1.1s						
CRS				smax			
	comp=E,161nm,1.6s						
CRS	**Chara**	**2.70**	**72**	*e*Pn	Pn	18 01 20.4	+0.8
CRS				*e*Pg	Pg	18 01 24.9	-3.3
CRS				*e*Sg	Sg	18 02 00.8	-2.3
CRS				Pmax			
	comp=E,21nm,0.5s						
CRS				Smax			
	comp=E,177nm,1.8s						
SYVR	**Suvo**	**3.25**	**221**	*e*Pn	Pn	18 01 27.2	+0.1
SYVR				*e*Pg	Pg	18 01 33.2	-5.4
SYVR				*e*Sn	Sn	18 02 05.4	-0.3
SYVR				*e*Sg	Sg	18 02 15.9	-4.7
SYVR				Pmax			
	comp=E,29nm,1.4s						
SYVR				Smax			
	comp=E,148nm,1.1s						
KHNR	**Khani**	**3.62**	**75**	*e*Pn	Pn	18 01 32.7	+0.4
KHNR				*e*Pg	Pg	18 01 41.2	-4.6
KHNR				*e*Sg	Sg	18 02 29.4	-3.3
TUP	**Tupik**	**4.03**	**113**	*e*Pn	Pn	18 01 37.2	-0.7
TUP				*e*Pg	Pg	18 01 48.8	-4.8
TUP				*e*Sn	Sn	18 02 23.7	-1.2
TUP				*e*Sg	Sg	18 02 41.0	-4.7
TUP				Pmax			
	comp=E,16nm,1.2s						
TUP				Smax			
	comp=E,80nm,1.0s						
CIT	**Chita**	**4.14**	**180**	*e*Sg	Sg	18 02 43.9	-5.3
CIT				Smax			
	comp=E,138nm,0.2s						
TRG	**Tyrgan**	**5.42**	**234**	*e*Sg	Sg	18 03 22.5	-7.8
TRG				Smax			
	comp=E,14nm,0.4s						
HRMR	**Khuramsha**	**5.99**	**224**	*e*Sg	Sg	18 03 42.8	-5.8
HRMR				Smax			
	comp=E,140nm,0.9s						
KPC	**Khapcheranga**	**6.50**	**187**	*e*Sg	Sg	18 03 58.6	-6.3
KPC				Smax			
	comp=E,20nm,1.0s						

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*ISCJB **06** 18:10:49.5±0.4, 2424N±003×12234E±002, h50km±11km, Error ellipse: s-maj=5.1km s-min=3.0km az=162.2*
*TAP **06** 18:10:49.8, 2431N×12226E, h59km, ML3.0, C*
*JMA **06** 18:10:50.1±0.1, 2445N×12239E, h67km, M2.0*

ISC 06 18:10:50.1±0.4, 2425N±003×12234E±002, h44km±16km, n40, σ0.69/68, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.57**	**288**	*e*P	**Pn**	**18 11 01.9**	**0.0**
	baz=287						
ENA				*e*S	**Sn**	**18 11 10.9**	**+0.6**
	baz=287						
TWC	**Suao**	**0.57**	**309**	P	**Pn**	**18 11 02.0**	**0.0**
	baz=309						
TWC				*e*S	**Sn**	**18 11 10.5**	**+0.1**
	baz=309						
YOJ	**Yonaguni jima**	**0.65**	**71**	P	**Pn**	**18 11 03.3**	**+0.3**
YOJ				S	**Sn**	**18 11 13.1**	**+0.8**
TWD	**Chiawan**	**0.69**	**256**	*i* P	**Pn**	**18 11 03.3**	**-0.3**
	baz=242						
TWD				S	**Sn**	**18 11 13.3**	**0.0**
	baz=242						
HWA	**Hwalien**	**0.72**	**248**	*e*P	**Pn**	**18 11 03.9**	**0.0**
	baz=241						
TWE	**Neicheng**	**0.77**	**308**	P	**Pn**	**18 11 04.8**	**+0.2**
	baz=316						
TWE				*i* S	**Sn**	**18 11 15.5**	**+0.5**
	baz=316						
ENTT	**Nioudou**	**0.80**	**299**	*i* P	**Pn**	**18 11 05.4**	**+0.4**
	baz=293						
ENTT				*e*S	**Sn**	**18 11 16.0**	**+0.2**
	baz=293						
TWB1	**Santiao Chiao**	**0.82**	**337**	*e*P	**Pn**	**18 11 04.6**	**-0.7**
	baz=341						
TWB1				*e*S	**Sn**	**18 11 15.1**	**-1.2**
	baz=341						
NNS	**Nan Shan**	**0.90**	**283**	*e*P	**Pn**	**18 11 06.3**	**0.0**
	baz=271						
NNS				*e*S	**Sn**	**18 11 18.4**	**+0.2**
	baz=271						
ESL	**Shilin**	**0.93**	**243**	P	**Pn**	**18 11 06.3**	**-0.4**
	baz=247						
ESL				*e*S	**Sn**	**18 11 18.9**	**-0.1**
	baz=247						
NWF	**Wu-fen Shan**	**0.96**	**329**	*e*P	**Pn**	**18 11 06.7**	**-0.5**
	baz=331						
NWF				*e*S	**Sn**	**18 11 18.7**	**-1.0**
	baz=331						
WHF	**Hehuan Shan**	**0.98**	**264**	*e*P	**Pn**	**18 11 07.4**	**-0.1**
	baz=253						
WHF				*e*S	**Sn**	**18 11 20.1**	**-0.1**
	baz=253						
NSK	**Sanguang**	**0.99**	**296**	*e*P	**Pn**	**18 11 07.4**	**-0.2**
	baz=286						
TWA	**Mucha**	**1.00**	**317**	*e*P	**Pn**	**18 11 07.0**	**-0.7**
	baz=328						
TWA				*e*S	**Sn**	**18 11 19.7**	**-0.9**
	baz=328						
TWT	**Tachien**	**1.06**	**271**	*e*P	**Pn**	**18 11 08.9**	**+0.4**
	baz=260						
TWT				S	**Sn**	**18 11 22.8**	**+0.7**
	baz=260						
EHY	**Hungye**	**1.19**	**232**	*e*P	**Pn**	**18 11 09.5**	**-0.7**
	baz=227						
EHY				*e*S	**Sn**	**18 11 24.6**	**-0.6**
	baz=227						
TWS1	**Kuangyinshan**	**1.19**	**316**	*e*P	**Pn**	**18 11 09.6**	**-0.7**
	baz=327						
TWS1				*e*S	**Sn**	**18 11 24.7**	**-0.6**
	baz=327						
NSTT	**Nanjuang**	**1.27**	**288**	*e*P	**Pn**	**18 11 11.8**	**+0.4**
	baz=276						
NSTT				*e*S	**Sn**	**18 11 27.7**	**+0.3**
	baz=276						
IRIF	**Iriomote-Funau**	**1.28**	**86**	P	**Pn**	**18 11 11.4**	**-0.1**
IRIF				S	**Sn**	**18 11 27.5**	**+0.1**
TWF1	**Yuli**	**1.30**	**227**	P	**Pn**	**18 11 11.3**	**-0.5**
	baz=232						
TWF1				*e*S	**Sn**	**18 11 27.1**	**-0.9**
	baz=232						
SMLT	**Sun Moon Lake**	**1.36**	**255**	*e*P	**Pn**	**18 11 13.0**	**+0.4**
	baz=242						
TYC	**Yuchr**	**1.39**	**256**	*e*P	**Pn**	**18 11 13.1**	**0.0**
	baz=245						
TYC				*e*S	**Sn**	**18 11 30.4**	**+0.1**
	baz=245						
TWQ1	**Liyutan**	**1.43**	**274**	*e*P	**Pn**	**18 11 15.0**	**+1.4**
	baz=272						
CHKT	**Chengkung**	**1.45**	**218**	*e*P	**Pn**	**18 11 13.0**	**-0.9**
	baz=207						
CHKT				*e*S	**Sn**	**18 11 29.8**	**-1.8**
	baz=207						
YUS	**Yu-Shan**	**1.47**	**239**	*e*P	**Pn**	**18 11 15.0**	**+0.8**
	baz=235						
JKRS	**Kuro-shima**	**1.53**	**90**	P	**Pn**	**18 11 15.5**	**+0.6**
JKRS				S	**Sn**	**18 11 34.3**	**+0.7**
WNT	**Mingjian**	**1.55**	**257**	*e*P	**Pn**	**18 11 16.6**	**+1.4**
	baz=253						
ALS	**Alishan**	**1.58**	**243**	*e*P	**Pn**	**18 11 16.2**	**+0.6**
	baz=232						
ELDTW	**Lidau**	**1.60**	**229**	P	**Pn**	**18 11 15.5**	**-0.5**
	baz=221						
ELDTW				*e*S	**Sn**	**18 11 34.7**	**-0.7**
	baz=221						
CHN5	**Tsauling**	**1.65**	**247**	*e*P	**Pn**	**18 11 17.3**	**+0.8**
	baz=235						
CHN5				*e*S	**Sn**	**18 11 38.2**	**+1.7**
	baz=235						
JIJ	**Ishigaki jima**	**1.65**	**86**	P	**Pn**	**18 11 16.7**	**+0.1**
JIJ				S	**Sn**	**18 11 35.9**	**-0.8**
STYT	**Tauyuan**	**1.80**	**234**	*e*P	**Pn**	**18 11 18.9**	**+0.2**
	baz=222						
CHN4	**Tsaushan**	**1.83**	**241**	*e*P	**Pn**	**18 11 20.4**	**+1.4**
	baz=238						
TWG	**Pinlang**	**1.83**	**219**	*e*P	**Pn**	**18 11 18.8**	**-0.3**
	baz=217						
TWG				*e*S	**Sn**	**18 11 39.1**	**-2.0**
	baz=217						
WTP	**Ta-pu**	**1.86**	**238**	*e*P	**Pn**	**18 11 20.1**	**+0.6**
	baz=235						
WTP				*e*S	**Sn**	**18 11 41.5**	**-0.4**
	baz=235						
TWK	**Hsinying**	**1.95**	**240**	*e*P	**Pn**	**18 11 20.6**	**-0.2**
	baz=237						
CHN1	**Nanshi**	**1.96**	**238**	*e*P	**Pn**	**18 11 21.0**	**0.0**
	baz=235						
CHN1				*e*S	**Sn**	**18 11 44.8**	**+0.4**
	baz=235						
SGST	**Jiashian**	**1.98**	**235**	*e*P	**Pn**	**18 11 21.5**	**+0.4**
	baz=231						
SSD	**Sandimen**	**2.16**	**227**	*e*P	**Pn**	**18 11 24.7**	**+1.1**
	baz=217						
JTJ	**Tarama**	**2.19**	**79**	P	**Pn**	**18 11 24.2**	**+0.2**
JTJ				*e*S	**Sn**	**18 11 49.4**	**-0.6**

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*JMA **06** 18:25:50.8±0.4, 2758N×12681E, h4km, M3.3*
*ISCJB **06** 18:25:51.9±2.3, 2756N±005×12685E±006, h11km±16km, mb3.4/5, Error ellipse: s-maj=9.8km s-min=6.6km az=143.3*
*IDC **06** 18:25:51.5±1.1, 2761N×12706E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/21, mbtmp3.5/5, Error ellipse: s-maj=51.9km s-min=15.5km az=47.0*

ISC 06 18:25:52.2±1.2, 2753N±005×12689E±006, h4km±7km, n13, σ0.75/20, mb3.4/5, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.99**	**161**	P	**Pg**	**18 26 11.0**	**-0.2**
JAGN				S	**Sg**	**18 26 24.6**	**+0.5**
JIH	**Iheya**	**1.08**	**117**	P	**Pg**	**18 26 12.8**	**-0.1**
JIH				S	**Sg**	**18 26 27.9**	**+1.0**
JKE	**Kume jima 2**	**1.21**	**184**	P	**Pg**	**18 26 13.7**	**-1.6**
JKE				S	**Sg**	**18 26 31.1**	**+0.2**
JOW	**Kunigami**	**1.42**	**119**	Pn	**Pn**	**18 26 18.2**	**-0.6**
	19nm,0.3s,baz=311,slow=11,SNR=43						
JOW				Sn	**Sn**	**18 26 35.0**	**-2.9**
	24nm,0.3s,baz=138,slow=23,SNR=12						
JOW	**Kunigami**	**1.42**	**119**	P	**Pn**	**18 26 17.8**	**-1.0**
JOW				*e*S	**Sb**	**18 26 37.9**	**+0.2**
NAH1	**Naha**	**1.50**	**151**	P	**Pn**	**18 26 19.9**	**-0.1**
NAH1				S	**Sn**	**18 26 40.2**	**+0.1**
JJT2	**Tamagusuku 2**	**1.59**	**151**	P	**Pn**	**18 26 21.8**	**+0.7**
JJT2				S	**Sn**	**18 26 42.4**	**+0.3**
JTK	**Tokunoshima**	**1.85**	**82**	P	**Pn**	**18 26 24.5**	**-0.2**
SONM	**Songino Array**	**25.81**	**327**	P	**P**	**18 31 23.9**	**-0.4**
	1.1nm,0.8s,mb3.4,baz=140,slow=7.0,SNR=5.0						
MKAR	**Makanchi Array**	**39.78**	**311**	P	**P**	**18 33 26.6**	**+0.4**
	0.6nm,0.7s,mb3.4,baz=93,slow=10,SNR=4.0						
KURK	**Kurchatov**	**43.05**	**316**	P	**P**	**18 33 53.9**	**+0.9**
	0.2nm,0.5s,mb3.1,baz=99,slow=9.3,SNR=2.6						
WRA	**Warramunga Arr**	**47.74**	**171**	P	**P**	**18 34 30.2**	**-0.2**
	0.8nm,0.8s,mb3.8,baz=350,slow=8.3,SNR=4.5						
ASAR	**Alice Springs**	**51.35**	**172**	P	**P**	**18 34 58.3**	**+0.4**
	0.3nm,0.8s,mb3.3,baz=349,slow=6.3,SNR=6.0						

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*ISCJB **06** 18:30:54.8±0.4, 2424N±003×12234E±002, h47km±11km, Error ellipse: s-maj=4.8km s-min=2.8km az=161.1*
*TAP **06** 18:30:55.1, 2431N×12225E, h57km, ML3.0, C*
*JMA **06** 18:30:55.4±0.2, 2437N×12240E, h67km, M1.9*

ISC 06 18:30:55.3±0.4, 2424N±003×12233E±002, h41km±20km, n38, σ0.54/73, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.57**	**289**	*e*P	**Pn**	**18 31 06.9**	**-0.2**
	baz=288						
ENA				*i* S	**Sn**	**18 31 15.5**	**+0.2**
	baz=288						
TWC	**Suao**	**0.57**	**310**	*i* P	**Pn**	**18 31 07.0**	**-0.1**
	baz=309						
TWC				*i* S	**Sn**	**18 31 15.2**	**-0.2**
	baz=309						
YOJ	**Yonaguni jima**	**0.65**	**70**	P	**Pn**	**18 31 08.7**	**+0.5**
YOJ				S	**Sn**	**18 31 18.3**	**+0.9**
TWD	**Chiawan**	**0.69**	**257**	*i* P	**Pn**	**18 31 08.3**	**-0.4**
	baz=242						
TWD				*i* S	**Sn**	**18 31 18.4**	**+0.1**
	baz=242						
HWA	**Hwalien**	**0.72**	**248**	P	**Pn**	**18 31 08.9**	**-0.1**
	baz=241						
HWA				S	**Sn**	**18 31 19.0**	**+0.1**
	baz=241						
ILA	**Ilan**	**0.74**	**314**	*e*P	**Pn**	**18 31 09.2**	**-0.2**
	baz=323						
ILA				*e*S	**Sn**	**18 31 19.6**	**+0.1**
	baz=323						
TWE	**Neicheng**	**0.77**	**308**	⇑*i*P	**Pn**	**18 31 09.8**	**0.0**
	baz=306						
TWE				S	**Sn**	**18 31 20.5**	**+0.3**
	baz=306						
ENTT	**Nioudou**	**0.80**	**300**	⇑*i*P	**Pn**	**18 31 10.3**	**+0.1**
	baz=292						
ENTT				*i* S	**Sn**	**18 31 21.0**	**0.0**
	baz=292						
TWB1	**Santiao Chiao**	**0.82**	**338**	P	**Pn**	**18 31 09.7**	**-0.8**
	baz=341						
TWB1				*e*S	**Sn**	**18 31 20.3**	**-1.2**
	baz=341						
NNS	**Nan Shan**	**0.90**	**283**	P	**Pn**	**18 31 11.2**	**-0.3**
	baz=270						
NNS				*e*S	**Sn**	**18 31 23.2**	**-0.1**
	baz=270						
TEGC	**Jichi Village**	**0.90**	**234**	*e*P	**Pn**	**18 31 12.7**	**+1.2**
	baz=221						
ESL	**Shilin**	**0.93**	**243**	*e*P	**Pn**	**18 31 11.2**	**-0.7**
	baz=247						
ESL				*e*S	**Sn**	**18 31 23.9**	**-0.1**
	baz=247						
NWF	**Wu-fen Shan**	**0.97**	**329**	*e*P	**Pn**	**18 31 12.2**	**-0.2**
	baz=331						
WHF	**Hehuan Shan**	**0.98**	**264**	P	**Pn**	**18 31 12.3**	**-0.3**
	baz=253						
WHF				S	**Sn**	**18 31 25.5**	**+0.1**
	baz=253						
TWA	**Mucha**	**1.00**	**317**	*e*P	**Pn**	**18 31 12.8**	**-0.1**
	baz=328						
TWA				*e*S	**Sn**	**18 31 25.6**	**-0.3**
	baz=328						
TWT	**Tachien**	**1.06**	**271**	*e*P	**Pn**	**18 31 14.2**	**+0.5**
	baz=260						
TWT				*e*S	**Sn**	**18 31 27.8**	**+0.6**
	baz=260						
TAP1	**Taipei**	**1.08**	**317**	*e*P	**Pn**	**18 31 14.1**	**+0.1**
	baz=328						
TAP1				*e*S	**Sn**	**18 31 28.1**	**+0.3**
	baz=328						
EHY	**Hungye**	**1.18**	**232**	*e*P	**Pn**	**18 31 14.8**	**-0.6**
	baz=227						
EHY				*e*S	**Sn**	**18 31 30.2**	**0.0**
	baz=227						
TWS1	**Kuangyinshan**	**1.19**	**316**	*e*P	**Pn**	**18 31 15.0**	**-0.6**
	baz=327						
TWS1				*e*S	**Sn**	**18 31 30.5**	**-0.1**
	baz=327						
NSTT	**Nanjuang**	**1.27**	**288**	*e*P	**Pn**	**18 31 16.8**	**+0.1**
	baz=276						
NSTT				*e*S	**Sn**	**18 31 32.5**	**-0.1**
	baz=276						
IRIF	**Iriomote-Funau**	**1.28**	**86**	P	**Pn**	**18 31 16.5**	**-0.2**
IRIF				S	**Sn**	**18 31 32.6**	**0.0**
TWF1	**Yuli**	**1.30**	**227**	*e*P	**Pn**	**18 31 16.2**	**-0.8**
	baz=233						
TWF1				*e*S	**Sn**	**18 31 31.7**	**-1.4**
	baz=233						
SMLT	**Sun Moon Lake**	**1.36**	**255**	*e*P	**Pn**	**18 31 17.8**	**0.0**
	baz=247						
SMLT				*e*S	**Sn**	**18 31 35.0**	**+0.3**
	baz=247						
TYC	**Yuchr**	**1.39**	**256**	*e*P	**Pn**	**18 31 18.3**	**+0.1**
	baz=245						
TYC				*e*S	**Sn**	**18 31 35.5**	**+0.1**
	baz=245						
TWQ1	**Liyutan**	**1.43**	**275**	*e*P	**Pn**	**18 31 19.3**	**+0.5**
	baz=272						
TWQ1				*e*S	**Sn**	**18 31 36.5**	**+0.2**
	baz=272						
CHKT	**Chengkung**	**1.44**	**218**	*e*P	**Pn**	**18 31 18.9**	**-0.1**
	baz=207						
CHKT				*e*S	**Sn**	**18 31 34.8**	**-2.0**
	baz=207						
YUS	**Yu-Shan**	**1.47**	**240**	*e*P	**Pn**	**18 31 19.9**	**+0.5**
	baz=236						
YUS				*e*S	**Sn**	**18 31 37.8**	**+0.4**
	baz=236						
JKRS	**Kuro-shima**	**1.53**	**90**	P	**Pn**	**18 31 20.5**	**+0.3**
JKRS				S	**Sn**	**18 31 39.6**	**+0.8**
WNT	**Mingjian**	**1.55**	**257**	*e*P	**Pn**	**18 31 21.0**	**+0.6**
	baz=244						
WNT				*e*S	**Sn**	**18 31 40.5**	**+1.1**
	baz=244						
ALS	**Alishan**	**1.58**	**243**	*e*P	**Pn**	**18 31 21.3**	**+0.5**
	baz=232						
ALS				*e*S	**Sn**	**18 31 40.3**	**+0.3**
	baz=232						
ELDTW	**Lidau**	**1.60**	**229**	*e*P	**Pn**	**18 31 20.6**	**-0.5**
	baz=221						
ELDTW				*e*S	**Sn**	**18 31 39.8**	**-0.8**
	baz=221						
CHN5	**Tsauling**	**1.65**	**247**	*e*P	**Pn**	**18 31 22.2**	**+0.4**
	baz=235						
CHN5				*e*S	**Sn**	**18 31 41.9**	**+0.2**
	baz=235						
JIJ	**Ishigaki jima**	**1.66**	**85**	P	**Pn**	**18 31 21.6**	**-0.3**
JIJ				S	**Sn**	**18 31 41.2**	**-0.7**
STYT	**Tauyuan**	**1.80**	**234**	*e*P	**Pn**	**18 31 24.2**	**+0.3**
	baz=226						
STYT				*e*S	**Sn**	**18 31 45.6**	**0.0**
	baz=226						
CHN4	**Tsaushan**	**1.82**	**241**	*e*P	**Pn**	**18 31 25.1**	**+0.8**
	baz=238						
WTP	**Ta-pu**	**1.86**	**238**	*e*P	**Pn**	**18 31 25.8**	**+1.1**
	baz=235						
WTP				*e*S	**Sn**	**18 31 46.7**	**-0.4**
	baz=235						
CHN1	**Nanshi**	**1.96**	**238**	*e*P	**Pn**	**18 31 26.3**	**+0.2**
	baz=235						
CHN1				*e*S	**Sn**	**18 31 49.5**	**0.0**
	baz=235						
JTJ	**Tarama**	**2.19**	**79**	P	**Pn**	**18 31 29.5**	**+0.2**
JTJ				*e*S	**Sn**	**18 31 54.8**	**-0.4**

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*NEIC **06** 18:40:42.0, 1571N×6147W, h22km, MD3.5(TRN), After TRN.*
NEIC Felt [III] on Dominica.

TRN 06 18:40:41.9, 1571N×6148W, h21km, MD3.5, M3.2(FDF), 4C-12D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBG	**Guadaloupe-3**	**0.21**	**312**	⇓*i*P	Pb	18 40 48.4	+1.1
DWS	**Wesley**	**0.22**	**130**	⇑*i*P	Pb	18 40 49.6	+2.2
DWS				*e*S	Sb	18 40 53.0	+1.8
MGG	**Marie-Galante**	**0.26**	**38**	⇑*i*P	Pb	18 40 49.8	+1.6
HMG	**Houelmont**	**0.34**	**323**	⇓*i*P	Pb	18 40 50.9	+1.5
SCG	**Saint Claude**	**0.37**	**329**	⇓*i*P	Pb	18 40 51.5	+1.6
SCG				⇓*i*S	Sb	18 40 56.5	+1.2
BCG	**Bois Riant Cap**	**0.40**	**341**	⇓*i*P	Pb	18 40 51.8	+1.5
DBCT	**Belle View Cho**	**0.46**	**163**	*e*P	Pb	18 40 53.4	+2.1
DBCT				*e*S	Sb	18 41 00.7	+3.1
DPMT	**Pointe Michel**	**0.46**	**167**	⇓*e*P	Pb	18 40 54.0	+2.7
DPMT				*e*S	Sb	18 41 00.5	+2.8
LZG	**Guadaloupe-1**	**0.51**	**327**	⇓*i*P	Pb	18 40 53.7	+1.4
FDF	**Fort de France**	**1.02**	**162**	⇑*i*P	Pb	18 41 01.9	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FDF				⇑*i*S	Sb	18 41 16.4	+2.4
FDF	**Fort de France**	**1.02**	**162**	*e*P	Pb	18 41 01.9	+0.9
MBRY		**1.18**	**327**	⇓*i*P	Pn	18 41 05.1	+1.8
MBRY				*e*S	Sb	18 41 22.2	+3.7
MBLG		**1.20**	**327**	⇓*i*P	Pn	18 41 05.4	+1.8
MBLG				*i* S	Sb	18 41 21.8	+2.6
MLYT	**Lee's Yard**	**1.21**	**326**	⇓*i*P	Pn	18 41 05.7	+1.9
MBWH		**1.23**	**327**	⇓*i*P	Pn	18 41 05.6	+1.7
MBGB		**1.24**	**325**	⇓*i*P	Pn	18 41 05.9	+1.8
MBGB				*e*S	Sn	18 41 21.8	+1.5
BIM	**Bigot**	**1.25**	**161**	*e*P	Pn	18 41 05.7	+1.5
BPA	**Boggy Peak**	**1.38**	**345**	*e*P	Pn	18 41 07.6	+1.6
BPA				*e*S	Sn	18 41 25.6	+2.1
SLB	**Belfond**	**1.92**	**167**	*e*P	Pn	18 41 15.8	+2.3
SLB				*e*S	Sn	18 41 39.5	+2.5
SLB	**Belfond**	**1.92**	**167**	*e*P	Pn	18 41 15.8	+2.3
SLB				*e*S	Sn	18 41 36.6	-0.3
SSV	**Crater Summit**	**2.38**	**173**	*e*P	Pn	18 41 21.9	+2.0
SSV				*e*S	Sn	18 41 51.0	+2.6
SSV	**Crater Summit**	**2.38**	**173**	*e*P	Pn	18 41 23.3	+3.4
SSV				*e*S	Sn	18 41 51.0	+2.6
SVV	**Soufriere Volc**	**2.39**	**174**	*e*P	Pn	18 41 22.2	+2.3
SVV				*e*S	Sn	18 41 50.9	+2.2
SVV	**Soufriere Volc**	**2.39**	**174**	*e*P	Pn	18 41 23.1	+3.2
SVV				*e*S	Sn	18 41 46.7	-1.9
BHS	**Barnard House**	**2.42**	**172**	*e*P	Pn	18 41 18.2	-2.2
SVB	**Belmont**	**2.43**	**175**	*e*P	Pn	18 41 23.4	+2.9
SVB				*e*S	Sn	18 41 57.6	+8.0

*ISCJB **06** 18:51:44.0±0.5, 2341N±004×10555E±005, h10km, mb4.0/8, Error ellipse: s-maj=7.0km s-min=4.9km az=26.9*
*IDC **06** 18:51:45.0±1.0, 2339N×10561E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.8/21, mbtmp3.9/7, ML4.3/1, Error ellipse: s-maj=27.9km s-min=17.4km az=72.0*
*NEIC **06** 18:51:46.6±0.6, 2339N×10560E, h10km, mb4.3/1, Error ellipse: s-maj=16.9km s-min=10.9km az=87.0*
*BJI **06** 18:51:46.2, 2350N×10564E, h15km, mB4.9, mb4.4, ML4.4, Ms4.4, Msz3.9*
ISC 06 18:51:46.3±0.5**, 2345N**±003×**10563E**±004**, h10**km**, n22, σ1.22**/36**, mb4.0**/8**, 2D, Yunnan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.12**	**303**	P	**Pn**	**18 52 37.4**	**+1.8**
KMI				PG	**Pg**	**18 52 45.5**	**-0.7**
KMI				S	**Sn**	**18 53 15.0**	**+2.0**
KMI				SG	**Sg**	**18 53 26.0**	**-0.7**
KMI				Smax			
	comp=N,823nm,1.0s						
KMI				Smax			
	comp=E,1μm,0.8s						
KMI				LR	LR		
	comp=N,2μm,3.8s						
KMI				LR	LR		
	comp=E,2μm,3.8s						
KMI				LR	LR		
	comp=Z,802nm,3.9s						
GYA	**Guiyang**	**3.14**	**17**	P	**Pn**	**18 52 36.0**	**+0.1**
GYA				PG	**Pg**	**18 52 45.9**	**-0.7**
GYA				S	**Sn**	**18 53 10.2**	**-3.3**
GYA				SG	**Sg**	**18 53 26.0**	**-1.3**
GYA				Smax			
	comp=N,2μm,0.7s						
GYA				Smax			
	comp=E,2μm,0.8s						
GYA				LR	LR		
	comp=N,2μm,2.7s						
GYA				LR	LR		
	comp=E,5μm,3.0s						
GYA				LR	LR		
	comp=Z,3μm,3.4s						
CHRT	**Chiangrai**	**6.50**	**238**	⇓PN	**Pn**	**18 53 21.5**	**-0.6**
CHRT				PG	**Pg**	**18 53 51.0**	**+0.2**
CHRT				SG	**Sg**	**18 55 14.0**	**-1.1**
NANT	**Nan**	**6.52**	**226**	⇓P	**Pn**	**18 53 19.0**	**-3.4**
	comp=Z,1μm,1.0s						
KKTK	**Khon Kaen**	**7.55**	**201**	PN	**Pn**	**18 53 36.6**	**+0.1**
KKTK				SG	**Sg**	**18 55 44.5**	**-4.2**
CD2	**Chengdu**	**7.62**	**348**	*e*P	**Pn**	**18 53 37.4**	**0.0**
CD2				S	**Sn**	**18 54 57.6**	**-6.3**
CD2				LR	LR		
	comp=N,920nm,10.8s						
CD2				LR	LR		
	comp=E,1μm,10.8s						
CD2				LR	LR		
	comp=Z,920nm,11.2s						
CHG	**Chiang Mai**	**7.76**	**235**	PG	**Pn**	**18 53 39.4**	**0.0**
CHG				SG		18 55 50.7	
CMAR	**Chiang Mai Arr**	**7.98**	**233**	Pn	**Pn**	**18 53 42.4**	**0.0**
	comp=Z,1.2nm,0.3s,baz=48,slow=11,SNR=49						
CMAR				Sn	**Sn**	**18 55 08.0**	**-4.8**
	comp=Z,0.6nm,0.3s,baz=35,slow=16,SNR=6.8						
CMAR				Lg		18 55 57.0	
	baz=66,slow=32,SNR=3.4						
WHN	**Wuhan**	**10.50**	**46**	P	**Pn**	**18 54 19.0**	**+2.0**
XAN	**Xi'an**	**10.94**	**15**	P	**Pn**	**18 54 21.6**	**-1.4**
XAN				S	**Sn**	**18 56 17.7**	**-7.8**
LZH	**Lanzhou**	**12.69**	**353**	*e*P	**Pn**	**18 54 49.5**	**+2.6**
LZH				AP		18 54 52.0	
LZH				XP		18 54 54.1	
LZH				*e*PP		18 55 00.0	
LZH				*e*S	**Sn**	**18 57 13.5**	**+5.2**
LZH				XS		18 57 18.2	
LZH				*e*SS		18 57 28.0	
LZH				AMB	AMB		
	comp=Z,25nm,1.3s						
LZH				AMB	AMB		
	comp=Z,83nm,4.2s						
LZH				LR	LR		
	comp=E,1μm,10.5s						
LZH				LR	LR		
	comp=Z,2μm,13.2s						
GTA	**Gaotai**	**16.67**	**344**	*e*P	**Pn**	**18 55 40.2**	**+0.2**
GTA				AP	pP	18 55 43.0	-2.1
GTA				XP	sP	18 55 45.4	-1.1
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**18.06**	**15**	*e*P	**Pn**	**18 55 55.9**	**-1.4**
HHC				S	**Sn**	**18 59 16.0**	**-2.8**
HHC				AMB	AMB		
	comp=Z,13nm,0.6s						
HHC				AMB	AMB		
	comp=Z,692nm,4.2s						
SONM	**Songino Array**	**24.35**	**1**	P	**P**	**18 57 06.0**	**+1.8**
	comp=Z,2.5nm,0.7s,mb3.7,baz=181,slow=11,SNR=15						
ULN	**Ulaanbaatar**	**24.39**	**2**	*e*P	**P**	**18 57 06.4**	**+1.7**
	comp=Z,11nm,1.4s,mb4.1						
WMQ	**Urumqi**	**25.12**	**328**	*e*P	**P**	**18 57 15.5**	**+4.2**
WMQ				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb4.4						
MKAR	**Makanchi Array**	**29.91**	**327**	P	**P**	**18 57 54.6**	**+0.3**
	comp=Z,0.6nm,0.7s,mb3.5,baz=134,slow=8.3,SNR=3.4						
ZALV	**Zalesovo Beam**	**34.25**	**338**	P	**P**	**18 58 32.4**	**+0.1**
	comp=Z,1.9nm,0.5s,mb4.2,baz=135,slow=8.8,SNR=10						
KURK	**Kurchatov**	**34.36**	**329**	P	**P**	**18 58 33.5**	**+0.3**
	comp=Z,1.3nm,0.8s,mb3.9,baz=134,slow=9.1,SNR=9.1						
KURK	**Kurchatov**	**34.36**	**329**	P	**P**	**18 58 33.5**	**+0.3**
WRA	**Warramunga Arr**	**51.41**	**145**	P	**P**	**19 00 51.7**	**0.0**
	comp=Z,3.3nm,0.8s,mb4.3,baz=332,slow=8.2,SNR=15						
ASAR	**Alice Springs**	**54.29**	**148**	P	**P**	**19 01 12.8**	**-0.1**
	comp=Z,1.2nm,0.8s,mb3.9,baz=324,slow=6.0,SNR=7.9						

*ISCJB **06** 19:16:10.2±1.3, 3484N±007×2586E±005, h9km±7km, Error ellipse: s-maj=12.6km s-min=6.8km az=174.6*
*THE **06** 19:16:10.1, 3486N×2587E, h0km, ML3.3*
*ATH **06** 19:16:11.0, 3490N×2588E, h27km±3km, MD3.6/7*
*CSEM **06** 19:16:11.5±0.2, 3491N×2585E, h20km, ML3.3, Error ellipse: s-maj=5.7km s-min=2.6km az=174.0*
ISC 06 19:16:10.3±1.7**, 3482N**±009×**2587E**±005**, h9**km±8km**, n15, σ0.66**/18**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.41**	**43**	*e*Pg	**Pg**	**19 16 17.8**	**-0.5**
ZKR				*e*Sg	**Sg**	**19 16 24.3**	**+0.6**
LAST	**Lasithi**	**0.47**	**317**	*e*Pg	**Pg**	**19 16 19.1**	**-0.4**
LAST				*e*Sg	**Sg**	**19 16 26.3**	**+0.6**
NPS	**Neapolis**	**0.50**	**334**	*e*PB	**Pg**	**19 16 19.4**	**-0.5**
NPS				*e*SB	**Sg**	**19 16 26.9**	**+0.5**
SIVA	**Sivas**	**0.90**	**283**	*e*Pg	**Pg**	**19 16 27.0**	**-0.5**
KARP	**Karpathos**	**1.28**	**55**	*e*PN	**Pn**	**19 16 34.0**	**-0.4**
GVD	**Gavdhos**	**1.47**	**271**	*e*PN	**Pn**	**19 16 38.0**	**+1.1**
VAM	**Vamos**	**1.50**	**294**	*e*PN	**Pn**	**19 16 37.5**	**+0.2**
SANT	**Santorini**	**1.59**	**348**	*e*Pg	**Pn**	**19 16 37.7**	**-0.9**
THR1	**Thera Island**	**1.59**	**348**	*e*Pg	**Pn**	**19 16 37.8**	**-0.8**
THR5	**Thira Island,**	**1.66**	**345**	*e*Pg	**Pn**	**19 16 39.0**	**-0.5**
KARN	**Karanos**	**1.71**	**291**	*e*Pb	**Pn**	**19 16 40.0**	**-0.2**
APE	**Apeiranthos**	**2.27**	**353**	*e*PN	**Pn**	**19 16 47.6**	**-0.3**
ARG	**Arkhangelos**	**2.31**	**52**	*e*PB	**Pn**	**19 16 49.3**	**+0.8**
ARG	**Arkhangelos**	**2.31**	**52**	*e*Pb	**Pn**	**19 16 50.3**	**+1.8**
VLI	**Veliai**	**3.05**	**309**	*e*PN	**Pn**	**19 16 59.5**	**+0.8**

*THE **06** 19:26:36.5, 3481N×2588E, h0km, ML3.0*
*ISCJB **06** 19:26:37.1±1.3, 3482N±008×2585E±005, h6km±7km, Error ellipse: s-maj=13.1km s-min=6.7km az=172.6*
*CSEM **06** 19:26:37.7±0.3, 3482N×2589E, h2km, ML3.0, Error ellipse: s-maj=7.1km s-min=3.6km az=169.0*
*ATH **06** 19:26:38.3, 3484N×2585E, h18km±4km, MD3.3/4*
*NEIC **06** 19:26:38.3, 3484N×2585E, h18km, MD3.3(ATH), After ATH.*
ISC 06 19:26:37.1±1.6**, 3479N**±008×**2588E**±006**, h4**km±9km**, n10, σ0.75**/14**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.43**	**40**	*e*Pg	**Pg**	**19 26 44.9**	**-0.6**
ZKR				*e*Sg	**Sg**	**19 26 51.6**	**+0.6**
LAST	**Lasithi**	**0.50**	**319**	*e*Pg	**Pg**	**19 26 46.2**	**-0.5**
LAST				*e*Sg	**Sg**	**19 26 54.1**	**+1.0**
NPS	**Neapolis**	**0.52**	**336**	*e*PB	**Pg**	**19 26 46.8**	**-0.4**
NPS				*e*SB	**Sg**	**19 26 54.0**	**0.0**
SIVA	**Sivas**	**0.91**	**285**	*e*Pg	**Pg**	**19 26 54.2**	**-0.3**
KARP	**Karpathos**	**1.30**	**54**	*e*PN	**Pn**	**19 27 02.3**	**+0.3**
KARP				*e*SN	**Sn**	**19 27 20.5**	**+0.7**
GVD	**Gavdhos**	**1.47**	**273**	*e*PN	**Pg**	**19 27 06.0**	**+0.6**
VAM	**Vamos**	**1.51**	**295**	*e*PN	**Pn**	**19 27 06.0**	**+1.1**
SANT	**Santorini**	**1.62**	**348**	*e*P	**Pn**	**19 27 05.4**	**-1.0**
SANT	**Santorini**	**1.62**	**348**	*e*P	**Pn**	**19 27 05.4**	**-1.0**
THR1	**Thera Island**	**1.62**	**348**	*e*Pg	**Pn**	**19 27 05.0**	**-1.4**

*THE **06** 19:27:56.8, 3476N×2587E, h5km, ML2.9*
*ISCJB **06** 19:27:57.6±1.4, 3480N±008×2584E±006, h12km±8km, Error ellipse: s-maj=13.7km s-min=7.6km az=170.2*
*CSEM **06** 19:27:58.7±0.4, 3482N×2589E, h2km, ML2.9, Error ellipse: s-maj=8.9km s-min=4.1km az=2.0*
*ATH **06** 19:28:00.7, 3498N×2587E, h27km±4km, MD3.2/4*
*NEIC **06** 19:28:00.7, 3498N×2587E, h27km, MD3.2(ATH), After ATH.*
ISC 06 19:27:58.6±1.4**, 3485N**±009×**2585E**±005**, h16**km±7km**, n8, σ0.94**/11**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.40**	**49**	*e*Pg	**Pg**	**19 28 05.9**	**-1.0**
ZKR				*e*Sg	**Sg**	**19 28 12.5**	**+0.1**
LAST	**Lasithi**	**0.43**	**316**	*e*Pg	**Pg**	**19 28 07.2**	**-0.3**
LAST				*e*Sg	**Sg**	**19 28 14.6**	**+1.3**
NPS	**Neapolis**	**0.46**	**335**	*e*PB	**Pb**	**19 28 08.1**	**-0.1**
NPS				*e*SB	**Sb**	**19 28 14.3**	**-0.4**
SIVA	**Sivas**	**0.87**	**281**	*e*Pg	**Pg**	**19 28 13.6**	**-1.9**
KARP	**Karpathos**	**1.28**	**57**	*e*PN	**Pn**	**19 28 23.3**	**+1.5**
GVD	**Gavdhos**	**1.45**	**270**	*e*PN	**Pg**	**19 28 27.5**	**+1.0**
VAM	**Vamos**	**1.46**	**293**	*e*PN	**Pg**	**19 28 27.0**	**+0.3**
THR1	**Thera Island**	**1.55**	**348**	*e*Pb	**Pn**	**19 28 24.9**	**-0.6**

*ISCJB **06** 19:32:28.6±0.4, 2288N±002×12137E±002, h15km±5km, Error ellipse: s-maj=3.7km s-min=2.9km az=15.3*
*TAP **06** 19:32:29.1, 2294N×12126E, h12km, ML3.5, B*
*JMA **06** 19:32:30.0±0.3, 23.14N×12128E, h118km, M2.7*
ISC 06 19:32:28.7±0.4**, 2290N**±002×**12134E**±002**, h10**km±2km**, n58, σ0.94**/94**, 1C-17D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.20**	**6**	⇓*i*P	**Pg**	**19 32 34.1**	**+1.3**
	baz=42						
CHKT				*i* S	**Sg**	**19 32 37.2**	**+1.5**
	baz=42						
TTN	**Taitung**	**0.23**	**231**	⇑*i*P	**Pg**	**19 32 34.9**	**+1.4**
	baz=195						
TTN				S	**Sg**	**19 32 39.2**	**+2.6**
	baz=195						
TWG	**Pinlang**	**0.26**	**252**	⇓*i*P	**Pg**	**19 32 34.4**	**+0.4**
	baz=243						
TWG				S	**Sg**	**19 32 38.3**	**+0.7**
	baz=243						
ELDTW	**Lidau**	**0.41**	**314**	⇓*i*P	**Pg**	**19 32 36.0**	**-0.8**
	baz=320						
ELDTW				S	**Sg**	**19 32 40.9**	**-1.4**
	baz=320						
TWF1	**Yuli**	**0.45**	**355**	⇓*i*P	**Pg**	**19 32 37.5**	**0.0**
	baz=353						
TWF1				*e*S	**Sg**	**19 32 44.0**	**+0.5**
	baz=353						
ECL	**Taimali**	**0.47**	**230**	⇓*i*P	**Pg**	**19 32 37.8**	**-0.1**
	baz=218						
ECL				S	**Sg**	**19 32 44.1**	**+0.1**
	baz=218						
STYT	**Tauyuan**	**0.60**	**296**	⇓*i*P	**Pg**	**19 32 39.4**	**-0.9**
	baz=305						
STYT				*e*S	**Sg**	**19 32 46.5**	**-1.6**
	baz=305						
EHY	**Hungye**	**0.60**	**358**	*e*P	**Pg**	**19 32 39.9**	**-0.5**
	baz=5.0						
SSD	**Sandimen**	**0.67**	**257**	⇓*i*P	**Pg**	**19 32 40.6**	**-1.1**
	baz=250						
SSD				*e*S	**Sg**	**19 32 48.0**	**-2.4**
	baz=250						
TAW	**Tawu**	**0.68**	**217**	*e*P	**Pg**	**19 32 41.7**	**-0.1**
	baz=208						
TAW				*e*S	**Sg**	**19 32 50.6**	**-0.1**
	baz=208						
YUS	**Yu-Shan**	**0.69**	**329**	⇓*i*P	**Pg**	**19 32 41.4**	**-0.6**
	baz=334						
YUS				S	**Sg**	**19 32 49.9**	**-1.0**
	baz=334						
EAST	**Anshuo**	**0.69**	**222**	⇓P	**Pg**	**19 32 41.7**	**-0.3**
	baz=212						
EAST				*e*S	**Sg**	**19 32 50.6**	**-0.4**
	baz=212						
SGST	**Jiashian**	**0.72**	**285**	⇓*i*P	**Pg**	**19 32 42.2**	**-0.4**
	baz=283						
SGST				*e*S	**Sg**	**19 32 51.6**	**-0.5**
	baz=283						
WTP	**Ta-pu**	**0.75**	**297**	⇓*i*P	**Pg**	**19 32 42.6**	**-0.6**
	baz=298						
WTP				*e*S	**Sg**	**19 32 52.6**	**-0.4**
	baz=298						
ALS	**Alishan**	**0.78**	**321**	⇓*i*P	**Pg**	**19 32 43.2**	**-0.5**
	baz=326						
ALS				S	**Sg**	**19 32 53.7**	**-0.3**
	baz=326						
CHN1	**Nanshi**	**0.80**	**291**	⇓*i*P	**Pg**	**19 32 43.9**	**-0.2**
	baz=290						
CHN1				*e*S	**Sg**	**19 32 54.9**	**+0.3**
	baz=290						
CHN4	**Tsaushan**	**0.82**	**303**	⇓*i*P	**Pg**	**19 32 44.0**	**-0.5**
	baz=305						
CHN4				S	**Sg**	**19 32 55.1**	**-0.1**
	baz=305						
SCZT	**Fangliau**	**0.85**	**232**	⇓P	**Pg**	**19 32 44.7**	**-0.4**
	baz=227						
TWM1	**Shoushan**	**0.85**	**265**	*e*P	**Pg**	**19 32 45.4**	**+0.3**
	baz=262						
TWK	**Hsinying**	**0.87**	**295**	⇓*i*P	**Pg**	**19 32 44.8**	**-0.5**
	baz=295						
TWK				*e*S	**Sg**	**19 32 56.7**	**0.0**
	baz=295						
LAY	**Lan-yu**	**0.88**	**167**	*e*P	**Pg**	**19 32 45.6**	**0.0**
	baz=151						
ESL	**Shilin**	**0.91**	**5**	*e*P	**Pg**	**19 32 46.9**	**+0.6**
	baz=8.0						
CHN5	**Tsauling**	**0.92**	**319**	⇓*i*P	**Pg**	**19 32 46.0**	**-0.5**
	baz=323						
CHN5				*e*S	**Sg**	**19 32 58.0**	**-0.5**
	baz=323						
KAU	**Kaohsiung**	**1.01**	**251**	*e*P	**Pg**	**19 32 48.6**	**+0.5**
	baz=251						
CHY	**Chiayi**	**1.03**	**305**	P	**Pg**	**19 32 48.1**	**-0.4**
	baz=307						
CHY				*e*S	**Sg**	**19 33 02.0**	**0.0**
	baz=307						
HEN	**Hengchun**	**1.05**	**212**	*e*P	**Pg**	**19 32 50.7**	**+1.8**
	baz=193						
SMLT	**Sun Moon Lake**	**1.06**	**337**	*e*P	**Pb**	**19 32 48.2**	**-0.9**
	baz=350						
SMLT				*e*S	**Sg**	**19 33 03.0**	**+0.2**
	baz=350						
WGK	**Gukeng**	**1.06**	**318**	*e*P	**Pb**	**19 32 49.0**	**-0.1**
	baz=320						
WGK				S	**Sg**	**19 33 03.6**	**+0.7**
	baz=320						
TWP	**Hsiaoliuchiu**	**1.06**	**239**	*e*P	**Pb**	**19 32 51.0**	**+1.9**
	baz=237						
TWP				*e*S	**Sg**	**19 33 09.6**	**+6.7**
	baz=237						
TWK1	**Hengchun**	**1.08**	**208**	*e*P	**Pb**	**19 32 49.4**	**0.0**
	baz=189						
SCLT	**Jiali**	**1.09**	**285**	*e*P	**Pb**	**19 32 49.5**	**-0.1**
	baz=283						
SCLT				*e*S	**Sb**	**19 33 05.2**	**+1.2**
	baz=283						
TYC	**Yuchr**	**1.09**	**336**	*e*P	**Pb**	**19 32 49.2**	**-0.5**
	baz=354						
TYC				*e*S	**Sb**	**19 33 05.2**	**+1.2**
	baz=354						
CHN8	**Yiju**	**1.13**	**293**	*e*P	**Pb**	**19 32 49.5**	**-0.8**
	baz=307						
CHN8				*e*S	**Sb**	**19 33 05.4**	**+0.3**
	baz=307						
WNT	**Mingjian**	**1.14**	**328**	P	**Pb**	**19 32 50.7**	**+0.1**
	baz=332						
WNT				*e*S	**Sb**	**19 33 06.0**	**+0.5**
	baz=332						
TWD	**Chiawan**	**1.20**	**11**	*e*P	**Pn**	**19 32 50.1**	**-1.3**
	baz=11						
WHF	**Hehuan Shan**	**1.24**	**357**	*e*P	**Pn**	**19 32 50.6**	**-1.5**
	baz=2.0						
WHF				*e*S	**Sb**	**19 33 08.4**	**+0.2**
	baz=2.0						
WSF	**Szhu**	**1.26**	**306**	P	**Pn**	**19 32 51.8**	**-0.6**
	baz=306						
WSF				*e*S	**Sb**	**19 33 08.7**	**-0.2**
	baz=306						
TWT	**Tachien**	**1.35**	**354**	*e*P	**Pn**	**19 32 53.5**	**-0.2**
	baz=4.0						
TCU	**Taichung**	**1.38**	**334**	*e*P	**Pn**	**19 32 55.2**	**+1.1**
	baz=337						
TCU				*e*S	**Sb**	**19 33 14.2**	**+1.8**
	baz=337						
NNS	**Nan Shan**	**1.53**	**1**	*e*P	**Pn**	**19 32 56.6**	**+0.5**
	baz=13						
TWQ1	**Liyutan**	**1.53**	**340**	*e*P	**Pn**	**19 32 57.1**	**+1.0**
	baz=343						
TWQ1				*e*S	**Sn**	**19 33 17.5**	**+1.4**
	baz=343						
ENA	**Nanau**	**1.56**	**13**	*e*P	**Pn**	**19 32 55.5**	**-1.1**
	baz=2.0						
NSY	**Sanyi**	**1.60**	**341**	*e*P	**Pn**	**19 32 58.6**	**+1.6**
	baz=341						
NSY				*e*S	**Sn**	**19 33 19.7**	**+2.0**
	baz=341						
ENTT	**Nioudou**	**1.74**	**7**	*e*P	**Pn**	**19 32 59.2**	**+0.2**
	baz=16						
NSTT	**Nanjuang**	**1.75**	**350**	*e*P	**Pn**	**19 32 59.9**	**+0.8**
	baz=357						
TWC	**Suao**	**1.76**	**15**	*e*P	**Pn**	**19 32 59.7**	**+0.4**
	baz=2.0						
PNG	**Penghu**	**1.77**	**292**	*e*P	**Pn**	**19 32 57.9**	**-1.4**
	baz=275						
PNG				*e*S	**Sn**	**19 33 19.4**	**-2.6**
	baz=275						
TWE	**Neicheng**	**1.83**	**9**	*e*P	**Pn**	**19 33 01.2**	**+1.0**
	baz=5.0						
TWA	**Mucha**	**2.08**	**6**	*e*P	**Pn**	**19 33 05.2**	**+1.6**
	baz=13						
YOJ	**Yonaguni jima**	**2.18**	**44**	S	**Sn**	**19 33 30.7**	**-1.4**
TWS1	**Kuangyinshan**	**2.19**	**2**	*e*P	**Pn**	**19 33 07.0**	**+1.8**
	baz=8.0						
NWF	**Wu-fen Shan**	**2.20**	**10**	*e*P	**Pn**	**19 33 06.4**	**+1.2**
	baz=1.0						
HATJ	**Hateruma jima**	**2.54**	**63**	*e*S	**Sn**	**19 33 41.0**	**+0.1**
IRIF	**Iriomote-Funau**	**2.61**	**56**	P	**Pn**	**19 33 10.8**	**-0.2**
IRIF				S	**Sn**	**19 33 42.5**	**-0.3**
JKRS	**Kuro-shima**	**2.79**	**61**	P	**Pn**	**19 33 13.1**	**-0.2**
JKRS				*e*S	**Sn**	**19 33 45.7**	**-1.3**
JIJ	**Ishigaki jima**	**2.95**	**60**	P	**Pn**	**19 33 15.3**	**-0.3**
JIJ				S	**Sn**	**19 33 49.3**	**-1.8**
KNM	**Kinmen**	**3.06**	**300**	*e*P	**Pn**	**19 33 17.4**	**+0.3**
	baz=314						
JTJ	**Tarama**	**3.53**	**60**	P	**Pn**	**19 33 23.3**	**-0.3**
JTJ				*e*S	**Sn**	**19 34 04.4**	**-1.0**

*MOS **06** 20:20:39.7±1.2, 581N×12542E, h33km, mb5.2/20, Error ellipse: s-maj=12.7km s-min=6.8km az=103.1*
*BJI **06** 20:20:42.9, 556N×12576E, h78km, mB5.1, mb4.8, Ms4.4, Msz4.3*
*IDC **06** 20:20:45.8±0.7, 573N×12541E, h74km±5km, mb4.4/23, mb1 4.5/24, mb1mx4.5/27, mbtmp4.4/24, MS4.1/4, Ms1 4.0/4, ms1mx3.4/26, Error ellipse: s-maj=16.8km s-min=6.8km az=88.0*
*ISCJB **06** 20:20:45.6±0.4, 578N±002×12555E±003, h83km±3km, mb4.8/85, Error ellipse: s-maj=5.6km s-min=3.7km az=179.4*
*MAN **06** 20:20:45, 579N×12554E, h63km, mb5.3, ML4.3, MS4.7*
MAN INTENSITY II - GENERAL SANTOS CITY, KIDAPAWAN CITY.
*NEIC **06** 20:20:47.4±0.8, 577N×12554E, h85km±7km, mb4.9/34, Error ellipse: s-maj=7.7km s-min=4.7km az=82.0*
NEIC Felt [II PIVS] at General Santos and Kidapawan.
*DJA **06** 20:20:49, 576N×12562E, h73km, Mw5.3/29*
ISC 06 20:20:46.7±0.4**, 578N**±002×**12555E**±003**, h77**km±3km**, h76**km±1.6km**:pP-P, n182, σ1.23**/189**, mb4.8**/85**, 17C-16D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.67**	**297**	*e*P	**Pn**	**20 20 59.2**	**-2.7**
GSPH				*i* S	**Sn**	**20 21 09.3**	**-3.9**
DAV	**Davao City (W)**	**1.28**	**1**	P	**Pn**	**20 21 09.3**	**+0.1**
	708nm,0.3s,baz=231,slow=2.7,SNR=73						
DAV				S	**Sn**	**20 21 26.2**	**+0.2**
	3μm,0.3s,baz=270,slow=22,SNR=25						
DAV	**Davao City (W)**	**1.28**	**1**	*e*P	**Pn**	**20 21 08.8**	**-0.4**
DMPH	**Davao City--Mi**	**1.30**	**358**	⇑*i*P	**Pn**	**20 21 09.3**	**0.0**
DMPH				*i* S	**Sn**	**20 21 28.2**	**+1.9**
KCP	**Kidapawan**	**1.31**	**339**	⇓*e*P	**Pn**	**20 21 09.0**	**-0.5**
KCP				*i* S	**Sn**	**20 21 28.8**	**+2.2**
CTBH	**Cotabato--PC H**	**1.93**	**318**	⇑*e*P	**Pn**	**20 21 16.6**	**-1.1**
CTBH				*i* S	**Sn**	**20 21 40.3**	**-0.9**
BIPH	**Bislig**	**2.52**	**19**	⇑*i*P	**Pn**	**20 21 25.3**	**-0.3**
BIPH				*i* S	**Sn**	**20 21 54.5**	**-0.8**
DCPH	**Dipolog City**	**3.54**	**322**	⇑*e*P	**Pn**	**20 21 42.5**	**+3.1**
IPIL	**Ipil**	**3.57**	**304**	⇓*i*P	**Pn**	**20 21 40.8**	**+0.9**
IPIL				*i* S	**Sn**	**20 22 19.5**	**-1.4**
ZMPH	**Zamboanga City**	**3.66**	**289**	⇑*i*P	**Pn**	**20 21 40.1**	**-0.9**
ZMPH				*i* S	**Sn**	**20 22 17.4**	**-5.6**
SCPH	**Surigao**	**3.98**	**359**	*e*P	**Pn**	**20 21 43.7**	**-1.6**
SCPH				*e*S	**Sn**	**20 22 22.3**	**-8.5**
TBP	**Tagbilaran**	**4.23**	**337**	*e*P	**Pn**	**20 21 48.8**	**-0.1**
MNI	**Manado**	**4.37**	**189**	⇓*e*P	**Pn**	**20 21 50.0**	**-0.7**
MNI				*e*S	**Sn**	**20 22 37.0**	**-3.3**
LLP	**Lapu-Lapu**	**4.78**	**341**	⇓*e*P	**Pn**	**20 21 56.9**	**+0.6**
LLP				*e*S	**Sn**	**20 22 44.3**	**-6.0**
TNE	**Ternate**	**5.28**	**160**	⇓*e*P	**Pn**	**20 22 06.0**	**+2.8**
PLP	**Palo**	**5.38**	**354**	⇓*e*P	**Pn**	**20 22 04.7**	**+0.2**
PLP				*e*S	**Sn**	**20 23 02.6**	**-2.5**
SDKM	**Sandakan**	**8.32**	**269**	⇑P	**Pn**	**20 22 46.9**	**+2.2**
KDM	**Kudat**	**8.74**	**278**	⇓P	**Pn**	**20 22 53.3**	**+2.9**
KKM	**Kota Kinabalu**	**9.29**	**272**	⇓P	**Pn**	**20 22 53.3**	**-4.7**
KKM	**Kota Kinabalu**	**9.29**	**272**	*e*P	**Pn**	**20 23 00.3**	**+2.3**
KDI	**Kendari**	**10.11**	**197**	⇓*e*P	**Pn**	**20 23 10.3**	**+1.2**
KDI				*e*S	**Sn**	**20 25 03.1**	**+2.3**
KAPI	**Kappang**	**12.19**	**208**	P	**Pn**	**20 23 38.2**	**+0.8**
	5.9nm,0.3s,baz=47,slow=2.4,SNR=21						
KAPI	**Kappang**	**12.19**	**208**	*e*P	**Pn**	**20 23 37.7**	**+0.2**
	63nm,0.9s						
BTM	**Bintulu**	**12.69**	**259**	⇓P	**Pn**	**20 23 46.1**	**+1.7**
KSM	**Kuching**	**15.80**	**255**	*e*P	**Pn**	**20 24 26.9**	**+2.1**
BATI	**Baumata**	**15.99**	**187**	P	**Pn**	**20 24 26.7**	**-0.5**
	4.8nm,0.3s,baz=186,slow=2.6,SNR=11						
BATI				LR	LR	20 30 37.9	

comp=Z,998nm,19.6s,baz=346,slow=37
YHNB Yeheng 19.21 348 *e*P P **20 25 04.2 -2.1**
15nm,0.7s
KAKA Kakadu 19.60 160 *e*P P **20 25 08.9 -2.1**
73nm,0.5s
TPI Tanjungpandan 19.79 245⇓*e*P P **20 25 14.0 +0.8**
QZH Quanzhou 20.19 341⇑*i*P P **20 25 16.6 +1.3**
QZH S S **20 29 01.1 +3.3**
QZH AMB AMB
comp=Z,150nm,0.8s
QZH LR LR
comp=Z,2μm,38.5s
QIZ Qiongzhong 20.19 312 P P **20 25 16.4 +1.0**
QIZ AP 20 25 31.3
QIZ XP sP 20 25 40.2 -0.5
QIZ S S **20 29 00.1 +2.2**
QIZ AMB AMB
comp=Z,18nm,1.5s
QIZ LR LR
comp=E,395nm,17.7s
QIZ LR LR
comp=Z,355nm,19.7s
GUMO Guam 20.55 66 P P **20 25 19.8 +0.6**
comp=Z,46nm,0.8s,baz=142,slow=6.6,SNR=3.9
GZH Guangzhou 20.85 327 P P **20 25 26.9 +4.5**
GZH LR LR
comp=N,728nm,18.5s
GZH LR LR
comp=E,455nm,14.8s
GZH LR LR
comp=Z,611nm,24.1s
JOW Kunigami 21.10 7 P P **20 25 26.2 +1.2**
comp=Z,202nm,0.8s,mb5.5,baz=195,slow=8.3,SNR=38
FITZ Fitzroy Crossi 23.73 180 *e*P P **20 25 52.1 +0.2**
comp=Z,26nm,0.6s,mb4.7
FITZ Fitzroy Crossi 23.73 180 P P **20 25 51.0 -0.9**
comp=Z,6.5nm,0.5s,mb4.2,baz=5.0,slow=9.4,SNR=64
FITZ pP 20 26 07.2
comp=Z,16nm,0.8s,baz=38,slow=5.7,SNR=8.4
KKTK Khon Kaen 24.62 297 P P **20 26 02.0 +1.9**
COEN Coen 26.27 138 *e*P P **20 26 15.4 +0.3**
comp=Z,15nm,1.0s,mb4.4
PMG Port Moresby 26.29 125 *i*P P **20 26 16.4 +1.1**
CBIJ Chichi jima 26.46 35 P P **20 26 15.7 -1.0**
comp=Z,140nm,0.8s,mb5.4,baz=234,slow=6.1,SNR=6.4
WHN Wuhan 26.79 338 P P **20 26 20.0 +0.4**
NST Nakhon Sawan 26.81 294 P P **20 26 17.0 -2.9**
comp=Z,50nm,0.9s,mb5.0
NJ2 Nanjing 26.88 347 *e*P P **20 26 22.1 +1.7**
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
WRAB Tennant Creek 26.98 162⇑*e*P P **20 26 21.2 -0.1**
WRAB Tennant Creek 26.98 162 *e*P P **20 26 20.0 -1.4**
comp=Z,21nm,0.6s,mb4.8
WRA Warramunga Arr 26.98 162 P P **20 26 20.5 -0.9**
comp=Z,6.9nm,0.4s,mb4.6,baz=331,slow=11,SNR=90
WB2 Warramunga Arr 26.98 162⇑*i*P P **20 26 20.3 -1.1**
GYA Guiyang 27.35 321 P P **20 26 27.8 +3.1**
GYA AP pP 20 26 46.2 +3.6
GYA XP sP 20 26 55.8 +4.1
GYA PP 20 27 16.4
GYA PCP PcP 20 29 44.6 +2.3
GYA AMB AMB
comp=Z,20nm,0.8s,mb4.7
GYA AMB AMB
comp=Z,130nm,4.6s
GYA LR LR
comp=N,480nm,16.4s
GYA LR LR
comp=E,460nm,17.0s
GYA LR LR
comp=Z,450nm,15.7s
MBWA Marble Bar 27.37 192 *e*P P **20 26 24.1 -0.8**
comp=Z,29nm,1.1s,mb4.7
NANT Nan 27.46 300⇑P P **20 26 23.0 -2.8**
comp=Z,131nm,0.9s,mb5.5
BDT Bhumibol Dam 28.36 296 P P **20 26 40.0 +6.2**
CHRT Chiangrai 28.70 302 P P **20 26 37.0 +0.2**
CMAR Chiang Mai Arr 28.85 298 P P **20 26 38.6 +0.4**
comp=Z,3.2nm,1.0s,mb3.9,baz=119,slow=7.3,SNR=17
CMAR ScP ScP 20 33 19.4 -1.6
comp=Z,2.9nm,1.0s,baz=225,slow=0.3,SNR=5.3
CHG Chiang Mai 28.99 299⇑P P **20 26 41.0 +1.6**
comp=Z,10nm,1.0s,mb4.4
KMI Kunming 29.12 314 P P **20 26 44.1 +3.7**
KMI AP pP 20 27 00.0 +1.5
KMI XP sP 20 27 07.7 +0.2
KMI PP PP 20 27 38.3 -9.2
KMI PPP 20 27 55.4
KMI AMB AMB
comp=Z,44nm,1.4s,mb4.9
KMI AMB AMB
comp=Z,165nm,3.1s
KMI LR LR
comp=N,165nm,20.1s
KMI LR LR
comp=E,259nm,23.1s
KMI LR LR
comp=Z,379nm,30.9s
ASAR Alice Springs 30.38 165 P P **20 26 51.2 -0.3**
comp=Z,3.7nm,0.4s,mb4.3,baz=337,slow=7.4,SNR=78
ASAR ScP ScP 20 33 25.4 -0.3
comp=Z,5.6nm,0.7s,baz=340,slow=2.1,SNR=6.7
KSRS Korea Array 31.60 4 P P **20 27 02.5 +0.3**
comp=Z,10nm,0.7s,mb4.7,baz=185,slow=10.0,SNR=25
KSRS ScP ScP 20 33 29.4 -0.1
comp=Z,3.7nm,0.8s,baz=188,slow=2.4,SNR=6.3
XAN Xi'an 32.07 333 P P **20 27 05.3 -1.1**
XAN AP pP 20 27 23.0 -1.5
XAN XP sP 20 27 32.4 -1.1
XAN PP PP 20 28 11.4 -8.8
XAN AMB AMB
comp=Z,21nm,1.0s,mb4.8
XAN AMB AMB
comp=Z,40nm,5.0s
XAN LR LR
comp=N,135nm,25.0s
XAN LR LR
comp=E,216nm,26.4s
XAN LR LR
comp=Z,450nm,32.0s
CD2 Chengdu 32.31 323 *e*P P **20 27 09.4 +0.9**
CD2 AP pP 20 27 26.8 +0.1
CD2 XP sP 20 27 36.2 +0.5
CD2 PP PP 20 28 19.4 -3.5
CD2 AMB AMB
comp=Z,30nm,1.0s,mb5.0
CD2 AMB AMB
comp=Z,120nm,8.2s
CD2 LR LR
comp=N,340nm,18.0s
CD2 LR LR
comp=E,320nm,18.0s
CD2 LR LR
comp=Z,380nm,18.0s
MAJO Matsushiro 32.74 19 *e*P P **20 27 11.4 -0.8**
MAJO pmax pmax
comp=Z,11nm,0.6s,mb4.9
MAJO Matsushiro 32.74 19 *e*P P **20 27 11.4 -0.8**
comp=Z,11nm,0.6s,mb4.8
MAT Matsushiro 32.74 19 P P **20 27 12.4 +0.2**
MAT *e*S S **20 32 25.8 +2.5**
MJAR Matsushiro Arr 32.74 19 P P **20 27 11.5 -0.7**
comp=Z,14nm,0.8s,mb4.8,baz=194,slow=9.3,SNR=21
CTA Charters Tower 32.79 142 *e*P P **20 27 12.2 -0.6**
comp=Z,4.3nm,0.8s,mb4.3
CTA Charters Tower 32.79 142 P P **20 27 12.2 -0.6**
comp=Z,9.5nm,0.8s,mb4.7,baz=327,slow=10,SNR=8.4
CTA Charters Tower 32.79 142 *e*P P **20 27 12.2 -0.6**
CTA pmax pmax
comp=Z,4.0nm,0.8s
CTAO Charters Tower 32.79 142 *e*P P **20 27 11.9 -0.9**
BJI Beijing 35.14 347 P P **20 27 31.3 -1.6**
BJI AMB AMB
comp=Z,17nm,0.9s,mb4.9
BJI LR LR
comp=N,167nm,24.4s
BJI LR LR
comp=E,245nm,25.8s
BJI LR LR
comp=Z,252nm,35.3s
SNY Shenyang 35.94 357⇓P P **20 27 39.6 -0.2**
SNY AMB AMB
comp=Z,24nm,0.9s,mb5.1
LZH Lanzhou 36.15 329⇓P P **20 27 42.5 +0.8**
LZH AP pP 20 28 00.7 +0.6
LZH XP sP 20 28 10.5 +1.5
LZH PP PP 20 29 07.6 +2.3
LZH AMB AMB
comp=Z,31nm,1.1s,mb5.2
LZH AMB AMB
comp=Z,143nm,5.5s
LZH LR LR
comp=E,539nm,14.0s
LZH LR LR
comp=Z,826nm,17.2s
FORT Forrest 36.43 176 *e*P P **20 27 43.8 -0.3**
comp=Z,29nm,0.7s,mb5.3
HHC Hu-ho-hao-te 37.10 342 *e*P P **20 27 53.2 +3.5**
HHC AP pP 20 28 12.6 +4.5
HHC XP sP 20 28 22.1 +5.1
HHC PP PP 20 29 22.5 +6.8
HHC PCP PcP 20 30 11.6 +2.9
HHC AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
HHC AMB AMB
comp=Z,126nm,5.7s
HHC LR LR
comp=N,303nm,14.0s
HHC LR LR
comp=E,247nm,14.0s
HHC LR LR
comp=Z,452nm,14.0s
VLA Vladivostok 37.61 8 *e*P P **20 27 51.7 -2.2**
VLA pmax pmax
comp=Z,88nm,1.5s,mb5.4
CN2 Changchun 37.87 360 *e*P P **20 27 59.3 +3.2**
KLBR Kellerberrin 37.90 191 *e*P P **20 27 55.9 -0.6**
comp=Z,25nm,1.0s,mb5.0
MUN Mundaring 38.59 193 *e*P P **20 28 02.2 -0.1**
MDJ Mudanjiang 38.84 5 P P **20 28 04.9 +0.6**
MDJ AP pP 20 28 23.0 +0.2
MDJ XP sP 20 28 30.9 -0.8
MDJ PP PP 20 29 34.6 -0.1
MDJ AMB AMB
comp=Z,30nm,0.9s,mb5.1
MDJ AMB AMB
comp=Z,153nm,3.5s
MDJ LR LR
comp=N,386nm,26.5s
MDJ LR LR
comp=Z,354nm,22.1s
NWAO Narrogin (SRO) 39.30 191 P P **20 28 06.5 -1.7**
comp=Z,28nm,1.0s,mb5.0,baz=14,slow=8.6,SNR=8.0
NWAO Narrogin (SRO) 39.30 191 *e*P P **20 28 06.5 -1.7**
NWAO pmax pmax
comp=Z,62nm,1.5s
NWAO Narrogin (SRO) 39.30 191 *e*P P **20 28 06.5 -1.7**
comp=Z,62nm,1.5s,mb5.2
LSA Lhasa 40.22 310 *e*P P **20 28 18.2 +2.2**
LSA pmax pmax
comp=Z,29nm,1.3s,mb5.0
LSA Lhasa 40.22 310 *e*P P **20 28 18.1 +2.2**
comp=Z,29nm,1.3s,mb5.0
STKA Stephens Creek 40.45 159 *e*P P **20 28 18.3 +0.5**
comp=Z,10nm,0.7s,mb4.8
STKA Stephens Creek 40.45 159 P P **20 28 18.2 +0.4**
comp=Z,18nm,0.9s,mb4.9,baz=333,slow=6.9,SNR=28
GTA Gaotai 40.75 329⇑P P **20 28 20.7 +0.5**
GTA AP pP 20 28 40.4 +1.6
GTA XP sP 20 28 50.0 +2.3
GTA AMB AMB
comp=Z,11nm,0.9s,mb4.7
GTA AMB AMB
comp=Z,165nm,5.1s
GTA LR LR
comp=N,301nm,22.5s
GTA LR LR
comp=E,306nm,19.2s
GTA LR LR
comp=Z,566nm,25.8s
ASAJ Asahikawa 41.01 19 P P **20 28 23.6 +1.4**
comp=Z,50nm,0.9s,mb5.3,baz=237,slow=15,SNR=16
TAPN Taplejung 41.88 305 *e*P P **20 28 29.5 -0.1**
comp=Z,6.9nm,0.4s,mb4.7
ODAN Odare 41.94 304 *e*P P **20 28 30.3 +0.1**
comp=Z,11nm,0.5s,mb4.8
RAMN Ramite 42.63 304 *e*P P **20 28 36.6 +0.9**
comp=Z,19nm,0.8s,mb4.9
GUN Gumba 43.59 305 *e*P P **20 28 42.5 -1.0**
comp=Z,18nm,0.4s,mb5.2
YSS Yuzh-Sakhalins 43.62 17*c i*P P **20 28 45.2 +1.8**
YSS pmax pmax
comp=Z,32nm,0.9s,mb5.0
YSS MLR MLR
comp=Z,100nm,21.0s
YSS Yuzh-Sakhalins 43.62 17 *e*P P **20 28 44.0 +0.6**
comp=Z,28nm,0.8s,mb5.0
KLR Kul'dur 43.62 6 *e*P P **20 28 38.3 -5.0**
KLR pmax pmax
comp=Z,74nm,1.8s,mb5.1
PKI Pulchoki 43.84 304 *e*P P **20 28 46.1 +0.6**
PKIN Phulchoki 43.86 304 *e*P P **20 28 45.4 -0.2**
comp=Z,2.1nm,0.3s,mb4.3
KKN Kakani 44.03 305 *e*P P **20 28 47.1 +0.1**
comp=Z,21nm,0.9s,mb4.9
DMN Daman 44.11 304 *e*P P **20 28 47.7 +0.1**
ULN Ulaanbaatar 44.82 342 *e*P P **20 28 52.5 -0.5**
ULN pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
ULN Ulaanbaatar 44.82 342 *e*P P **20 28 52.5 -0.5**
comp=Z,9.2nm,1.0s,mb4.5
SONM Songino Array 44.99 342 P P **20 28 52.9 -1.4**
comp=Z,2.6nm,0.8s,mb4.0,baz=150,slow=9.0,SNR=20
SONM LR LR 20 49 51.6
comp=Z,244nm,20.6s,baz=189,slow=39
KOLN Koldanda 45.41 304 *e*P P **20 28 58.4 +0.4**
comp=Z,30nm,0.8s,mb5.1
DANN Dangsing 45.49 305 *e*P P **20 28 58.1 -0.5**
comp=Z,22nm,0.5s,mb5.2
CNB Canberra Magne 46.62 153 *e*P P **20 29 08.9 +1.6**
TOO Toolangi 46.96 158 *e*P P **20 29 11.6 +1.6**
HYB Hyderabad 47.34 288 *i*P P **20 29 14.0 +0.7**
HYB Hyderabad 47.34 288 *e*P P **20 29 14.0 +0.7**
ZAK Zakamensk 48.22 341 *e*P P **20 29 16.7 -2.8**
TLY Talaya 49.23 342 *e*P P **20 29 26.8 -0.4**
TLY pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
WMQ Urumqi 50.38 325 *e*P P **20 29 36.8 +0.7**
WMQ AP pP 20 29 55.0 -0.4
WMQ XP sP 20 30 04.5 +0.4
WMQ PCP PcP 20 30 53.0 -0.6
WMQ PPP 20 32 19.5
WMQ AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
WMQ AMB AMB
comp=Z,173nm,5.6s
WMQ LR LR
comp=N,446nm,20.6s
WMQ LR LR
comp=E,531nm,25.8s
WMQ LR LR
comp=Z,539nm,21.7s
BOD Bodaibo 52.69 352 *e*P P **20 29 51.3 -1.7**
BOD pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
PEA0B Petropavlovsk- 54.01 23 *e*P P **20 30 03.5 +0.7**
PETK Petropavlovsk- 54.01 23 P P **20 30 04.2 +1.3**
comp=Z,17nm,0.6s,mb5.2,baz=190,slow=3.0,SNR=29
PETK pP pP 20 30 21.1 -1.1
comp=Z,6.7nm,0.7s,baz=177,slow=4.2,SNR=3.1
PET Petropavlovsk 54.32 24 *e*P P **20 30 07.1 +2.0**
PET pmax pmax
comp=Z,73nm,1.8s,mb5.4
PET Petropavlovsk 54.32 24 *e*P P **20 30 06.8 +1.7**
comp=Z,162nm,1.5s,mb5.8
MKAR Makanchi Array 55.21 325 P P **20 30 11.0 -0.7**
comp=Z,4.3nm,0.6s,mb4.6,baz=121,slow=8.5,SNR=34
YAK Yakutsk 56.21 2 *e*P P **20 30 17.5 -1.1**
YAK *e**PP pP 20 30 26.4 -12
YAK *e* 20 31 15.4
YAK *e* 20 32 26.0
YAK *e*S S **20 38 01.1 -1.0**
YAK *e* 20 39 56.6
YAK pmax pmax
comp=Z,55nm,0.9s,mb5.6
YAK pmax pmax
comp=N,17nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,95nm,3.1s
YAK pmax pmax
comp=N,102nm,3.5s
YAK pmax pmax
comp=E,46nm,3.7s
YAK smax
comp=N,35μm,2.0s
YAK smax
comp=E,69μm,3.8s
YAK Yakutsk 56.21 2 *e*P P **20 30 17.8 -0.8**
comp=E,91nm,0.8s,mb5.9
TKM2 Tokmak 2 57.45 318 *e*P P **20 30 27.9 +0.3**
TKM2 pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
TKM2 Tokmak 2 57.45 318 *e*P P **20 30 27.9 +0.2**
comp=Z,7.0nm,1.0s,mb4.7
UCH Uchtor 57.88 317 *e*P P **20 30 31.7 +1.0**
comp=Z,14nm,1.0s,mb4.9
ZALV Zalesovo Beam 58.24 333 P P **20 30 30.8 -2.2**
comp=Z,0.9nm,0.4s,mb4.1,baz=124,slow=7.4,SNR=8.0
ZAL Zalesovo 58.24 333 P P **20 30 30.8 -2.2**
AML Almayashu 58.40 317 *e*P P **20 30 34.6 +0.2**
comp=Z,12nm,0.9s,mb4.9
EKS2 Erkin-Say 58.56 317 *e*P P **20 30 35.7 +0.3**
comp=Z,9.6nm,0.9s,mb4.8
KURK Kurchatov 59.39 327*d i*P P **20 30 39.7 -1.3**
KURK pmax pmax
comp=Z,13nm,1.3s,mb4.8
KURK Kurchatov 59.39 327 *e*P P **20 30 40.0 -1.1**
comp=Z,19nm,1.1s,mb5.0
NVS Novosibirsk 59.52 333 *e*P P **20 30 35.4 -6.5**
SEY Seymchan 60.32 14*c i*P P **20 30 48.9 +1.7**
RPZ Rata Peaks 64.10 145 P P **20 31 12.7 -0.1**
comp=Z,6.0nm,0.7s,mb4.5,baz=281,slow=5.2,SNR=3.9
BRVK Borovoye 65.05 327 *e*P P **20 31 17.6 -1.2**
BRVK pmax pmax
comp=Z,15nm,1.0s,mb4.8
BRVK Borovoye 65.05 327 *e*P P **20 31 17.6 -1.2**
comp=Z,15nm,1.0s,mb4.8
TIXI Tiksi 65.83 1 *e*P P **20 31 20.8 -2.7**
TIXI pmax pmax
comp=Z,37nm,1.6s,mb5.0
TIXI Tiksi 65.83 1 *e*P P **20 31 20.4 -3.1**
comp=Z,10.0nm,0.8s,mb4.7
BILL Bilibino 67.89 15 *i*P P **20 31 37.0 +0.3**
BILL *e* 20 32 02.7
BILL pmax pmax
comp=Z,15nm,0.8s,mb4.9
AKTK Aktyubinsk 71.34 321 P P **20 31 57.2 -1.0**
AKTO Aktyubinsk 71.34 321 P P **20 31 57.2 -1.0**
comp=Z,3.0nm,0.7s,mb4.3,baz=97,slow=6.7,SNR=13
SVE Sverdlovsk 71.61 328⇑*e*P P **20 31 58.8 -0.9**
SVE pmax pmax
comp=Z,15nm,0.9s,mb4.8
ARU Arti 72.59 328*d i*P P **20 32 04.2 -1.4**
ARU *e* 20 34 46.2
ARU *e*S S 20 41 26.6 +2.4
ARU *e*SS SS 20 46 03.6 -1.0
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.6
ARU Arti 72.59 328 *e*P P **20 32 03.5 -2.1**
comp=Z,9.5nm,0.9s,mb4.6
CASY Casey 72.70 186 *e*P P **20 32 05.9 -0.1**
MIB Mutribah 76.93 299 *e*P P **20 32 30.7 -0.6**
MIB AMb AMB 20 32 51.9
comp=Z,31nm,0.7s,mb5.2
NAY Al-Naaiem 77.01 299 *e*P P **20 32 30.2 -1.5**
NAY AMb AMB 20 32 53.8
comp=Z,14nm,1.4s,mb4.5
SVW2 Sparrevohn 79.58 29 *e*P P **20 32 46.2 +1.0**
OHAK Old Harbor 80.38 33 *e*P P **20 32 50.7 +1.1**
KDAK Kodiak Island 80.80 32 *e*P P **20 32 52.8 +1.0**
KDAK pmax pmax
comp=Z,28nm,0.8s,mb5.1
KDAK Kodiak Island 80.80 32 *e*P P **20 32 52.8 +1.0**
comp=Z,28nm,0.8s,mb5.1
KIV Kislovodsk 80.89 313 *i*P P **20 32 51.2 -1.4**
KIV *e* 20 32 57.2
KIV pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
IMA2 Indian Mountai 81.00 24 *e*P P **20 32 53.8 +1.0**
CHUM Lake Minchumin 81.37 26 *e*P P **20 32 56.2 +1.4**
comp=Z,20nm,0.9s,mb4.9
KTH Kantishna Hill 81.97 27 *e*P P **20 32 59.1 +1.2**
comp=Z,25nm,1.1s,mb5.0
SLKM Skilak Lake 82.16 30 *e*P P **20 32 58.0 -0.9**
RC01 Rabbit Creek A 82.42 29 *e*P P **20 32 59.9 -0.4**
comp=Z,16nm,0.9s,mb4.8
SEW Seward 82.53 30 *e*P P **20 33 01.5 +0.6**
MCK McKinley 82.86 27 *e*P P **20 33 03.0 +0.5**
MCK pmax pmax
comp=Z,57nm,1.2s,mb5.3
MCK McKinley 82.86 27 *e*P P **20 33 03.0 +0.5**
comp=Z,56nm,1.2s,mb5.3
COLA College 83.36 25 *e*P P **20 33 05.2 +0.1**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
COLA College 83.36 25 *e*P P **20 33 05.2 +0.2**
comp=Z,6.2nm,0.8s,mb4.5
MALT Malatya 84.20 308 P P **20 33 11.0 +1.0**
MALT pmax pmax
comp=Z,6.0nm,1.3s,mb4.3
MALT Malatya 84.20 308 P P **20 33 11.0 +1.0**
comp=Z,5.9nm,1.3s,mb4.3
DIV Divide 84.34 29 *e*P P **20 33 11.4 +1.2**
comp=Z,41nm,1.3s,mb5.1
OBN Obninsk 84.72 325⇓*e*P P **20 33 11.2 -1.0**
OBN pmax pmax
comp=Z,13nm,0.8s,mb4.9
BMRM Bremner River 84.92 29 *e*P P **20 33 13.3 +0.2**
MAW Mawson 85.26 200 P P **20 33 13.9 -0.7**
comp=Z,1.2nm,0.5s,mb4.1,baz=82,slow=4.1,SNR=8.9
APA Apatity 85.52 337 *e*P P **20 33 16.0 0.0**
APA pmax pmax
comp=Z,11nm,0.8s,mb4.8
APA MLR MLR
comp=Z,700nm,21.0s
ASF Jabal al Asfar 85.83 302 pP pP 20 33 38.6 -0.5
EGAK Eagle 86.22 25 *e*P P **20 33 19.7 +0.3**
comp=Z,12nm,1.2s,mb4.7
DAWY Dawson 87.06 26 *e*P P **20 33 24.2 +0.7**
DAWY *e* pP 20 33 44.2 -0.3
ARCES ARCESS Array B 88.13 340 P P **20 33 26.8 -1.8**
comp=Z,2.4nm,0.6s,mb4.4,baz=88,slow=4.8,SNR=14
HYT Haines Junctio 88.38 29 *e*P P **20 33 33.3 +3.4**
AKASG Malin Array Be 89.57 321 P P **20 33 34.0 -1.7**
comp=Z,1.1nm,0.5s,mb4.3,baz=330,slow=9.4,SNR=4.3
AKASG LR LR 21 20 43.4
comp=Z,61nm,20.6s,baz=75,slow=40
SYO Syowa Base 93.90 201⇑*e*P P **20 33 54.0 -1.3**
SYO Syowa Base 93.90 201⇑*e*X 20 34 14.8
NOA NORSAR Array B 96.44 333 P P **20 34 06.8 -0.4**
comp=Z,1.1nm,0.8s,mb4.4,baz=66,slow=4.7,SNR=4.3
YKA Yellowknife Ar 98.12 24 P P **20 34 13.8 -0.9**
comp=Z,3.2nm,0.9s,mb4.9,baz=299,slow=4.2,SNR=4.6
YKA LR LR 21 24 27.5
comp=Z,53nm,18.7s,baz=255,slow=39
NVAR Mina Array Bea 106.40 47 PKiKP PKiKP 20 39 02.1 -0.9
comp=Z,0.5nm,0.6s,baz=255,slow=6.4,SNR=3.0
NVAR pPKiKP 20 39 24.9
comp=Z,1.0nm,0.8s,baz=271,slow=7.9,SNR=3.7
PV10 Paradox Valley 113.03 44 *e*PKPdf PKiKP 20 39 16.6 +1.0
TORD Torodi Ar. Bea 121.16 289 PKP PKPdf 20 39 30.4 -1.3
comp=Z,1.0nm,0.7s,baz=65,slow=1.1,SNR=6.0
TORD pPKP pPKPdf 20 39 50.7 -2.9
comp=Z,1.2nm,0.7s,baz=46,slow=1.9,SNR=5.7
TORD Torodi Ar. Bea 121.16 289 PKP PKPdf 20 39 30.4 -1.3
TORD pPKP pPKPdf 20 39 50.7 -2.9
TXAR Lajitas Array 121.25 51 PKP PKPdf 20 39 31.7 +0.1
comp=Z,0.3nm,0.7s,baz=298,slow=2.7,SNR=4.3
TXAR pPKP pPKPdf 20 39 52.9 -0.6
comp=Z,0.7nm,0.7s,baz=222,slow=1.0,SNR=6.3
TXAR PP PP 20 41 01.8 -0.7
comp=Z,1.2nm,1.0s,baz=302,slow=2.4,SNR=5.8
TXAR Lajitas Array 121.25 51 PKP PKPdf 20 39 31.7 +0.1
TXAR pPKP pPKPdf 20 39 52.9 -0.6
TXAR PP PP 20 41 01.8 -0.8
PLCA Paso Flores 142.32 160 pPKP pPKPdf 20 40 31.7 -0.9
comp=Z,4.8nm,1.1s,baz=237,slow=2.4,SNR=4.3
CPUP Villa Florida 159.38 173 pPKP pPKPdf 20 40 58.0 -1.1
comp=Z,1.6nm,0.8s,baz=12,slow=4.6,SNR=2.3

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*BJI **06** 20:24:18.5,225N×12791E,h10km,mB5.1,mb4.8,Ms4.6, Msz4.4*
*ISCJB **06** 20:24:23.8±0.2,276N±003×12771E±003,h15km,*

mb5.0/78, MS4.2/19, Error ellipse: s-maj=5.2km s-min=3.4km az=161.4
NEIC **06** 20:24:24.5±0.2, 275N×12754E, h10km, mb5.2/28, Error ellipse: s-maj=9.2km s-min=4.7km az=80.0
MOS **06** 20:24:26.4±1.4, 278N×12749E, h33km, mb5.3/22, Error ellipse: s-maj=14.5km s-min=7.1km az=106.0
IDC **06** 20:24:29.5±1.4, 275N×12761E, h45km±13km, mb4.6/25, mb1 4.6/27, mb1mx4.6/28, mbtmp4.6/27, ML4.6/2, MS4.1/7, Ms1 4.1/7, ms1mx3.8/23, Error ellipse: s-maj=16.1km s-min=7.8km az=78.0
DJA **06** 20:24:35, 279N×12760E, h54km, Mw5.4/15
ISC 06 20:24:25.6±0.2, **275N**±003×**12774E**±004, **h16**km, **h16**km±2.0km**:pP-P, n189,** σ1.20/200, **mb5.0**/78, **MS4.2**/19, **20C-17D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	Ternate	1.98	191⇓	eP	Pn	20 25 04.0	+5.4
TNE				eS	Sn	20 25 30.5	+7.3
LBMI	Labuha	3.37	184	P	Pn	20 25 23.3	+5.6
	0.0nm,0.0s						
DAV	Davao City (W)	4.80	333	P	Pn	20 25 39.8	+2.5
	36nm,0.3s,baz=60,slow=6.5,SNR=2.7						
DAV				S	Sn	20 26 34.8	+2.1
	67nm,0.3s,baz=61,slow=22,SNR=2.7						
DAV				LR	LR	20 27 32.5	
	comp=Z,2µm,18.7s,baz=138,slow=39						
DAV	Davao City (W)	4.80	333	P	Pn	20 25 39.8	+2.4
DAV				S	Sn	20 26 34.8	+2.1
DAV				LR	LR	20 27 32.5	
KCP	Kidapawan	4.99	328⇓	eP	Pn	20 25 42.3	+2.4
KCP				i S	Sn	20 26 40.7	+3.3
BIPH	Bislig	5.57	346⇑	eP	Pn	20 25 54.0	+6.0
BIPH				eS	Sn	20 26 49.9	-1.8
AAI	Ambon	6.41	176⇓	eP	Pn	20 26 05.8	+6.3
ZMPH	Zamboanga City	7.03	307⇑	eP	Pn	20 26 07.6	-0.4
SCPH	Surigao	7.33	342	eP	Pn	20 26 16.1	+3.9
TBP	Tagbilaran	7.90	331	eP	Pn	20 26 20.6	+0.6
KDI	Kendari	8.40	218	P	Sn	20 27 56.6	-4.8
	0.0nm,0.0s						
KDI	Kendari	8.40	218⇑	eP	Pn	20 26 29.2	+2.4
KDI				eS	Sn	20 27 52.0	-9.4
MYLDM	Lahad Datu	9.53	285	⇑P	Pn	20 26 44.8	+2.5
TLE	Tual	9.71	149⇑	eP	Pn	20 26 48.0	+3.1
TSM	Tawau	9.96	279	⇓P	Pn	20 26 49.2	+0.8
SDKM	Sandakan	10.90	286	⇑P	Pn	20 27 03.0	+1.8
KAPI	Kappang	11.10	226	P	Pn	20 27 05.7	+1.9
	2.8nm,0.3s,baz=357,slow=9.1,SNR=4.4						
KDM	Kudat	11.62	291	⇓P	Pn	20 27 14.4	+3.3
KKM	Kota Kinabalu	11.95	286	⇓P	Pn	20 27 18.4	+3.0
BATI	Baumata	13.49	197	P	Pn	20 27 40.6	+4.0
	1.1nm,0.3s,baz=335,slow=22,SNR=3.5						
BTM	Bintulu	14.64	272	⇓P	Pn	20 27 52.4	+0.1
SBUM	Sibu	15.50	269	⇑P	Pn	20 28 04.4	+0.5
KAKA	Kakadu	16.05	163	eP	Pn	20 28 12.7	+1.8
	103nm,0.9s						
KSM	Kuching	17.46	266	⇑P	Pn	20 28 29.5	+0.7
TRT	Tretes	18.30	235⇑	eP	Pn	20 28 38.0	-1.1
GUMO	Guam	20.07	57	P	P	20 29 01.3	+2.7
	62nm,0.8s,baz=94,slow=7.8,SNR=3.8						
GUMO				LR	LR	20 35 32.8	
	comp=Z,728nm,19.5s,MS4.0,baz=225,slow=33						
TPI	Tanjungpandan	20.81	255⇑	eP	P	20 29 07.0	+0.4
FITZ	Fitzroy Crossi	20.82	186	eP	P	20 29 06.6	-0.1
	20nm,0.6s						
FITZ	Fitzroy Crossi	20.82	186	P	P	20 29 06.3	-0.4
	10.0nm,0.7s,baz=358,slow=10,SNR=11						
COEN	Coen	22.58	138	eP	P	20 29 27.8	+2.2
	51nm,1.5s,mb4.7						
YHNB	Yeheng	22.64	345	eP	P	20 29 27.2	+1.1
	40nm,0.8s,mb4.9						
PMG	Port Moresby	22.81	122	eP	pP	20 29 40.4	+7.9
WRAB	Tennant Creek	23.46	164	P	P	20 29 35.2	+0.4
	538nm,1.0s,mb5.9,SNR=9.5						
WRAB	Tennant Creek	23.46	164c	iP	P	20 29 34.5	-0.3
WRA	Warramunga Arr	23.46	164	P	P	20 29 34.5	-0.4
	43nm,0.8s,mb4.9,baz=344,slow=10,SNR=14						
WRA				S	S	20 33 47.6	0.0
	3.7nm,1.1s,baz=4.7,slow=16,SNR=3.5						
WB2	Warramunga Arr	23.47	164	eP	P	20 29 34.4	-0.5
QZH	Quanzhou	23.76	339⇓	iP	P	20 29 37.6	0.0
QZH				S	S	20 33 46.9	-5.5
QZH				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.1						
QZH				LR	LR		
	comp=Z,1µm,18.6s,MS4.5						
QIZ	Qiongzhong	23.84	314	P	P	20 29 37.7	-0.7
MYKOM	Kota Tinggi	23.89	268	⇓P	P	20 29 36.9	-2.0
JOW	Kunigami	23.95	1	P	P	20 29 39.5	+0.1
	comp=Z,14nm,1.0s,mb4.3,baz=227,slow=18,SNR=2.3						
JOW				LR	LR	20 37 55.9	
	comp=Z,340nm,21.1s,MS3.8,baz=236,slow=34						
KGM	Kluang	24.41	269	⇑P	P	20 29 44.6	+0.9
GZH	Guangzhou	24.56	327	P	P	20 29 46.9	+1.9
GZH				S	S	20 34 10.6	+5.2
GZH				LR	LR		
	comp=N,439nm,20.4s,MS4.1						
GZH				LR	LR		
	comp=E,364nm,18.8s,MS4.1						
GZH				LR	LR		
	comp=Z,611nm,24.1s						
KTGM	Kuala Trenggan	24.67	277	⇓P	P	20 29 45.1	-1.1
MBWA	Marble Bar	25.02	198	⇓P	P	20 29 49.2	0.0
	SNR=16						
MBWA	Marble Bar	25.02	198	eP	P	20 29 48.2	-0.9
ASAR	Alice Springs	26.93	167	P	P	20 30 06.2	-0.3
	comp=Z,3.9nm,0.5s,mb4.2,baz=344,slow=7.0,SNR=8.0						
ASAR				S	S	20 34 43.1	+0.1
	comp=Z,0.9nm,0.8s,baz=355,slow=20,SNR=2.3						
ASAR				ScP	ScP	20 37 05.1	-3.3
	comp=Z,0.8nm,0.7s,baz=2.3,slow=4.6,SNR=3.3						
ASAR	Alice Springs	26.93	167	P	P	20 30 06.2	-0.2
ASAR				S	S	20 34 43.2	+0.2
CBIJ	Chichi jima	27.88	28	P	P	20 30 14.0	-1.0
	comp=Z,83nm,0.7s,mb5.5,baz=262,slow=18,SNR=3.7						
CBIJ				LR	LR	20 39 10.1	
	comp=Z,391nm,21.3s,MS4.0,baz=243,slow=32						
CTA	Charters Tower	29.08	142	P	P	20 30 25.6	0.0
	comp=Z,5.2nm,0.9s,mb4.2,baz=47,slow=9.1,SNR=2.0						
NJ2	Nanjing	30.32	345	eP	P	20 30 37.3	+0.7
NJ2				AP	pP	20 30 41.7	+0.4
NJ2				XP	sP	20 30 44.3	+1.0
NJ2				PP	PP	20 31 36.0	-9.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,140nm,5.0s						
NJ2				LR	LR		
	comp=N,150nm,17.8s,MS3.8						
NJ2				LR	LR		
	comp=E,160nm,22.3s,MS3.8						
NJ2				LR	LR		
	comp=Z,120nm,10.4s						
WHN	Wuhan	30.41	337	P	P	20 30 39.0	+1.6
GYA	Guiyang	31.06	321⇑	iP	P	20 30 45.8	+2.7
GYA				PP	PP	20 31 47.9	-5.5
GYA				S	S	20 35 49.2	+1.3
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2						
GYA				AMB	AMB		
	comp=Z,160nm,4.8s						
GYA				LR	LR		
	comp=N,580nm,18.4s,MS4.4						
GYA				LR	LR		
	comp=E,490nm,19.2s,MS4.4						
GYA				LR	LR		
	comp=Z,470nm,18.7s,MS4.2						
CMAR	Chiang Mai Arr	32.23	301	P	P	20 30 51.9	-1.7
	comp=Z,7.0nm,0.8s,mb4.5,baz=122,slow=7.6,SNR=20						
CMAR				PcP	PcP	20 33 42.0	-0.1
	comp=Z,2.4nm,0.9s,baz=160,slow=2.0,SNR=4.7						
CMAR				ScP	ScP	20 37 20.5	-5.0
	comp=Z,1.1nm,0.8s,baz=116,slow=2.1,SNR=4.6						
CMAR	Chiang Mai Arr	32.23	301	P	P	20 30 51.9	-1.7
CMAR						20 33 42.0	
CMAR	Chiang Mai Arr	32.23	301	P	P	20 30 51.9	-1.7
CMAR				PcP	PcP	20 33 42.0	-0.1
CMAR				ScP	ScP	20 37 20.5	-5.0
KMI	Kunming	32.78	315	P	P	20 30 58.6	+0.3
KMI				S	S	20 36 14.3	-0.5
KMI				LR	LR		
	comp=N,171nm,18.0s,MS4.0						
KMI				LR	LR		
	comp=E,179nm,15.3s,MS4.0						
KMI				LR	LR		
	comp=Z,249nm,26.5s						
FORT	Forrest	33.34	179	eP	P	20 31 02.3	-0.8
	comp=Z,19nm,0.5s,mb5.3						
KSRS	Korea Array	34.54	0	P	P	20 31 13.3	-0.1
	comp=Z,13nm,0.8s,mb4.9,baz=178,slow=9.8,SNR=21						
KSRS				PcP	PcP	20 33 48.3	+0.1
	comp=Z,1.8nm,0.8s,baz=177,slow=4.4,SNR=2.9						
KSRS				LR	LR	20 44 19.7	
	comp=Z,190nm,20.5s,MS3.8,baz=175,slow=34						
MJAR	Matsushiro Arr	34.99	15	P	P	20 31 16.5	-0.9
	comp=Z,3.8nm,0.7s,mb4.5,baz=189,slow=9.3,SNR=7.4						
MJAR				LR	LR	20 43 25.3	
	comp=Z,534nm,21.7s,MS4.2,baz=200,slow=32						
KLBR	Kellerberrin	35.45	195	eP	P	20 31 19.6	-1.7
	comp=Z,51nm,0.9s,mb5.5						
XAN	Xi'an	35.74	333	P	P	20 31 23.4	-0.5
XAN				AP	pP	20 31 27.6	-1.1
XAN				XP	sP	20 31 30.0	-0.6
XAN				PP	PP	20 32 42.9	-2.3
XAN				S	S	20 36 57.6	-2.8
XAN				AMB	AMB		
	comp=Z,26nm,1.2s,mb5.0						
XAN				AMB	AMB		
	comp=Z,77nm,5.5s						
XAN				LR	LR		
	comp=N,75nm,24.2s,MS3.7						
XAN				LR	LR		
	comp=E,145nm,21.8s,MS3.7						
XAN				LR	LR		
	comp=Z,274nm,24.0s,MS3.9						
CD2	Chengdu	36.02	324	eP	P	20 31 26.3	0.0
CD2				AP	pP	20 31 31.1	-0.1
CD2				XP	sP	20 31 34.0	+0.9
CD2				PP	PP	20 32 48.5	+0.1
CD2				PCP	PcP	20 33 53.4	+0.7
CD2				S	S	20 37 04.3	-0.5
CD2				SCS	ScS	20 41 41.9	-2.3
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				LR	LR		
	comp=N,350nm,14.8s						
CD2				LR	LR		
	comp=Z,210nm,16.4s,MS4.0						
MUN	Mundaring	36.23	197	eP	P	20 31 27.4	-0.7
DL2	Dalian	36.42	352	P	P	20 31 29.9	+0.3
DL2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
NWAO	Narrogin (SRO)	36.85	195	P	P	20 31 32.3	-1.0
	comp=Z,34nm,0.9s,mb5.2,baz=29,slow=9.6,SNR=13						
STKA	Stephens Creek	36.87	160	eP	P	20 31 33.5	0.0
	comp=Z,39nm,0.8s,mb5.3						
STKA	Stephens Creek	36.87	160	P	P	20 31 33.9	+0.4
	comp=Z,50nm,0.7s,mb5.4,baz=338,slow=8.2,SNR=15						
BJT	Baijiatuau	38.55	346	eP	P	20 31 47.4	-0.3
BJT				pmax	pmax		
	comp=Z,45nm,0.8s						
BJT	Baijiatuau	38.55	346	eP	P	20 31 47.4	-0.3
	comp=Z,46nm,0.8s,mb5.2						
BJI	Beijing	38.57	346	P	P	20 31 47.7	-0.1
BJI				PP	PP	20 33 17.3	+1.0
BJI				S	S	20 37 44.9	+1.6
BJI				SS	SS	20 40 32.3	-1.2
BJI				AMB	AMB		
	comp=Z,49nm,0.9s,mb5.2						
BJI				LR	LR		
	comp=N,200nm,16.9s						
BJI				LR	LR		
	comp=E,176nm,23.2s						
BJI				LR	LR		
	comp=Z,322nm,29.7s						
LZH	Lanzhou	39.85	329	⇑P	P	20 31 59.7	+1.1
LZH				AP	pP	20 32 10.3	+6.8
LZH				PP	PP	20 33 36.0	+5.7
LZH				eS	S	20 38 02.2	-0.5
LZH				XS	sS	20 38 18.9	+8.2
LZH				eSS	SS	20 40 54.0	-5.3
LZH				AMB	AMB		
	comp=Z,35nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,175nm,4.8s						
LZH				LR	LR		
	comp=E,512nm,13.7s						
LZH				LR	LR		
	comp=Z,723nm,17.5s,MS4.6						
ARMA	Armidale	40.10	147	eP	P	20 32 01.7	+1.0
HHC	Hu-ho-hao-te	40.64	341	eP	P	20 32 04.7	-0.4
HHC				AP	pP	20 32 08.2	-1.7
HHC				XP	sP	20 32 10.4	-1.4
HHC				PP	PP	20 33 42.0	+3.1
HHC				PCP	PcP	20 34 06.4	-0.4
HHC				SCP	ScP	20 37 53.9	-2.1
HHC				PCS	PcS	20 37 56.4	-1.0
HHC				S	S	20 38 14.0	-0.4
HHC				SCS	ScS	20 42 07.8	-2.5
HHC				AMB	AMB		
	comp=Z,22nm,0.5s,mb5.0						
HHC				AMB	AMB		
	comp=Z,127nm,6.3s						
HHC				LR	LR		
	comp=N,315nm,14.3s,MS4.4						
HHC				LR	LR		
	comp=E,285nm,14.9s,MS4.4						
HHC				LR	LR		
	comp=Z,400nm,14.1s,MS4.4						
CN2	Changchun	40.93	357	eP	P	20 32 10.0	+2.6
MDJ	Mudanjiang	41.73	2	P	P	20 32 14.0	+0.1
MDJ				AP	pP	20 32 16.9	-1.9
MDJ				S	S	20 38 34.0	+3.7
MDJ				AMB	AMB		
	comp=Z,19nm,1.2s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,71nm,3.4s						
MDJ				LR	LR		
	comp=N,191nm,22.1s						
MDJ				LR	LR		
	comp=Z,344nm,22.9s,MS4.2						
MDJ	Mudanjiang	41.73	2	eP	P	20 32 14.1	+0.2
	comp=Z,22nm,1.0s,mb4.7						
ASAJ	Asahikawa	43.24	16	P	P	20 32 27.0	+0.7
	comp=Z,13nm,0.7s,mb4.8,baz=237,slow=13,SNR=8.7						
TOO	Toolangi	43.37	159	eP	P	20 32 29.6	+2.2
LSA	Lhasa	43.84	312	eP	P	20 32 31.9	+0.6
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
LSA	Lhasa	43.84	312	eP	P	20 32 31.9	+0.6
	comp=Z,8.4nm,0.6s,mb4.7						
GTA	Gaotai	44.45	329	eP	P	20 32 37.1	+1.0
GTA				AP	pP	20 32 46.1	+5.1
GTA				S	S	20 39 13.4	+2.9
GTA				XS	sS	20 39 22.6	+4.0
GTA				SS	SS	20 42 25.6	-4.3
GTA				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.3						
GTA				AMB	AMB		
	comp=Z,97nm,4.5s						
GTA				LR	LR		
	comp=N,303nm,22.8s,MS4.3						
GTA				LR	LR		
	comp=E,306nm,21.9s,MS4.3						
GTA				LR	LR		
	comp=Z,561nm,25.5s,MS4.4						
TAPN	Taplejung	45.40	307	eP	P	20 32 43.3	-0.6
	comp=Z,10nm,0.5s,mb4.9						
ODAN	Odare	45.45	306	eP	P	20 32 43.8	-0.5
	comp=Z,35nm,0.8s,mb5.3						
YSS	Yuzh-Sakhalins	45.92	14	i P	P	20 32 50.8	+3.2
RAMN	Ramite	46.13	305	eP	P	20 32 49.5	-0.2
	comp=Z,38nm,0.9s,mb5.3						
KLR	Kul'dur	46.44	4	eP	P	20 32 46.8	-4.8
JIRN	Jiri	46.76	306	eP	P	20 32 53.6	-0.9
	comp=Z,6.4nm,0.2s,mb5.1						
GUN	Gumba	47.11	306	eP	P	20 32 56.3	-1.0
	comp=Z,34nm,0.4s,mb5.6						
PKI	Pulchoki	47.35	306	eP	P	20 32 59.1	-0.1
PKIN	Phulchoki	47.37	306	eP	P	20 32 58.6	-0.7
KKN	Kakani	47.55	306	eP	P	20 33 00.6	-0.1
DMN	Daman	47.62	306	eP	P	20 33 00.1	-1.1
	comp=Z,29nm,1.0s,mb5.3						
ULN	Ulaanbaatar	48.36	341	⇓P	P	20 33 07.2	+0.6
	SNR=7.0						
ULN	Ulaanbaatar	48.36	341	eP	P	20 33 06.6	0.0
ULN				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.1						
ULN	Ulaanbaatar	48.36	341	eP	P	20 33 06.6	-0.1
	comp=Z,25nm,1.2s,mb5.1						
SONM	Songino Array	48.54	341	P	P	20 33 08.5	+0.4
	comp=Z,5.6nm,0.8s,mb4.7,baz=155,slow=8.1,SNR=15						
KOLN	Koldanda	48.91	305	eP	P	20 33 11.1	-0.1
	comp=Z,59nm,0.7s,mb5.7						
DANN	Dangsing	49.00	306	eP	P	20 33 11.0	-0.9
	comp=Z,51nm,0.6s,mb5.7						
ZAK	Zakamensk	51.78	340	eP	P	20 33 31.0	-1.5
ZAK				e		20 34 44.7	
ZAK				e		20 36 30.4	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
TLY	Talaya	52.77	341	eP	P	20 33 40.2	+0.3
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WMQ	Urumqi	54.10	325⇓	iP	P	20 33 50.5	+0.7
WMQ				AP	pP	20 33 55.0	+0.2
WMQ				XP	sP	20 33 58.0	+1.3
WMQ				PCP	PcP	20 34 56.0	+1.5
WMQ				PP	PP	20 35 54.0	+2.5
WMQ				S	S	20 41 24.0	-1.8
WMQ				AMB	AMB		
	comp=Z,31nm,1.0s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,312nm,4.5s						
WMQ				LR	LR		
	comp=N,651nm,25.0s,MS4.7						
WMQ				LR	LR		
	comp=E,525nm,26.4s,MS4.7						
WMQ				LR	LR		
	comp=Z,728nm,25.8s,MS4.6						
SMLA	Simla	55.35	306	i P	P	20 33 59.8	+0.6
SMLA				ex	x	20 34 01.0	
	comp=Z,39nm,0.4s						
SMLA				i S	S	20 41 33.5	-10
SMLA				i S	S	20 41 33.5	-10
PETK	Petropavlovsk-	55.96	21	P	P	20 34 03.8	+0.7
	comp=Z,13nm,0.8s,mb5.0,baz=198,slow=4.2,SNR=10						
BOD	Bodaibo	55.98	351	eP	P	20 34 02.2	-0.9
BOD				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
THN	Thein Dam	56.96	307	eP	P	20 34 08.9	-1.7
MKAR	Makanchi Array	58.93	325	P	P	20 34 24.6	+0.5
	comp=Z,29nm,0.8s,mb5.4,baz=124,slow=8.2,SNR=67						
YAK	Yakutsk	59.16	1	eP	P	20 34 24.0	-1.4
YAK				e		20 34 36.3	
YAK				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
YAK				pmax	pmax		
	comp=N,13nm,1.4s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
KSH	Kashi	59.44	315	eP	P	20 34 30.0	+2.1
KSH				eAP	pP	20 34 34.0	+1.1
KSH				eXP	sP	20 34 37.1	+2.3
KSH				ePCP	PcP	20 35 16.2	+0.7
KSH				ePP	PP	20 36 43.2	+3.9
KSH				ePPP		20 38 09.1	
KSH				eSCP	ScP	20 39 15.1	-0.9
KSH				eS	S	20 42 36.5	-0.2
KSH				eXS	sS	20 42 45.3	+0.4
KSH				ePS		20 42 54.3	
KSH				eSCS	ScS	20 44 16.2	-1.6
KSH				eSS	SS	20 46 34.0	+2.1
KSH				AMB	AMB		
	comp=Z,110nm,1.8s,mb5.6						
KSH				LR	LR		
	comp=N,465nm,6.2s						
KSH				LR	LR		
	comp=E,773nm,5.3s						
KSH				LR	LR		
	comp=Z,439nm,7.7s						
RPZ	Rata Peaks	60.39	145	P	P	20 34 36.5	+2.2
	comp=Z,19nm,0.9s,mb5.1,baz=60,slow=5.0,SNR=6.2						
KZA	Kyzart	61.01	318	P	P	20 34 39.8	+1.2
	SNR=15						
TKM2	Tokmak 2	61.14	319	eP	P	20 34 39.4	0.0
TKM2				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.2						
TKM2	Tokmak 2	61.14	319	P	P	20 34 39.5	+0.1
	SNR=19						
TKM2	Tokmak 2	61.14	319	eP	P	20 34 39.4	-0.1
	comp=Z,18nm,0.9s,mb5.2						
KBK	Karagaybulak	61.46	318	P	P	20 34 42.2	+0.7
	SNR=8.3						
UCH	Uchtor	61.57	317	P	P	20 34 43.5	+1.1
	SNR=28						
CHMS	Chumysh	61.74	318	P	P	20 34 43.6	+0.1
	SNR=8.0						
FRU	Bishkek	61.76	318	P	P	20 34 43.5	-0.1
ZALV	Zalesovo Beam	61.91	333	P	P	20 34 43.3	-1.1
	comp=Z,6.6nm,0.9s,mb4.8,baz=114,slow=6.6,SNR=16						
ZAL	Zalesovo	61.91	333	P	P	20 34 43.3	-1.1
USP	Ospenovka	62.02	318	P	P	20 34 45.2	-0.1
	SNR=23						
AML	Almayashu	62.09	317	P	P	20 34 47.0	+1.2
	SNR=26						
AML	Almayashu	62.09	317	eP	P	20 34 46.4	+0.6
	comp=Z,307nm,1.3s						
EKS2	Erkin-Say	62.25	318	P	P	20 34 47.8	+0.9
	SNR=40						
EKS2	Erkin-Say	62.25	318	eP	P	20 34 46.6	-0.3
	comp=Z,25nm,0.8s,mb5.4						
SEY	Seymchan	62.76	12⇓	eP	P	20 34 50.3	+0.4
KURK	Kurchatov	63.10	327	P	P	20 34 51.0	-1.4
	comp=Z,267nm,0.7s,SNR=19						
KURK	Kurchatov	63.10	327	⇓P	P	20 34 52.1	-0.3
	SNR=18						
KURK	Kurchatov	63.10	327c	iP	P	20 34 51.6	-0.8
KURK				pmax	pmax		
	comp=Z,35nm,0.7s,mb5.6						
KURK				MLR	MLR		
	comp=Z,100nm,22.0s,MS4.0						
KURK	Kurchatov	63.10	327	eP	P	20 34 51.3	-1.2
	comp=Z,42nm,0.9s,mb5.6						
NVS	Novosibirsk	63.20	333	eP	P	20 34 50.7	-2.3
NVS				pmax	pmax		
	comp=N,13nm,1.2s						
NVS				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.2						
NVS				pmax	pmax		
	comp=E,27nm,1.8s						
TIXI	Tiksi	68.81	0	eP	P	20 35 26.6	-2.2
TIXI				pmax	pmax		
	comp=Z,29nm,1.5s,mb5.0						
TIXI	Tiksi	68.81	0	eP	P	20 35 27.3	-1.5
	comp=Z,13nm,0.9s,mb4.9						
CASY	Casey	69.97	187	eP	P	20 35 35.7	-0.3
CASY				e		20 35 52.0	
BIDO	Bidbid	70.22	294	⇑P	P	20 35 37.8	-0.7
	SNR=6.1						
BILL	Bilibino	70.24	14	eP	P	20 35 40.0	+2.3
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
HATD	Hatta, Dubai	72.16	295	⇑P	P	20 35 49.6	-0.6
	SNR=5.7						
WHFO	Wadi Hawf	73.91	288	⇑P	P	20 35 59.4	-1.2
	SNR=6.1						
AKTK	Aktyubinsk	75.05	322	P	P	20 36 05.9	-0.7
AKTO	Aktyubinsk	75.05	322	P	P	20 36 05.9	-0.7
	comp=Z,7.1nm,0.8s,mb4.6,baz=104,slow=6.9,SNR=16						
SVE	Sverdlovsk	75.32	328⇑	eP	P	20 36 07.1	-0.9
SVE				eS	S	20 45 38.8	-8.1
SVE				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.2						
ARU	Arti	76.30	328	P	P	20 36 12.9	-0.8
	comp=Z,86nm,0.7s,mb5.8,SNR=5.6						
ARU	Arti	76.30	328c	iP	P	20 36 11.9	-1.8
ARU				e		20 36 21.4	
ARU				e		20 39 00.4	
ARU				ePPP		20 40 47.6	
ARU				eS	S	20 45 54.8	-2.9
ARU				eSS	SS	20 50 43.9	-7.8
ARU				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
ARU	Arti	76.30	328	eP	P	20 36 11.5	-2.1
	comp=Z,12nm,0.8s,mb4.9						
TTA	Tatalina	81.32	27	eP	P	20 36 41.8	+0.7
TTA				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.2						
TTA	Tatalina	81.32	27	eP	P	20 36 41.8	+0.7
	comp=Z,40nm,1.4s,mb5.2						
OPO	Ambohidratompo	81.92	251	P	P	20 36 44.6	-0.6
	comp=Z,6.9nm,0.9s,mb4.6,baz=99,slow=5.3,SNR=6.7						
KDAK	Kodiak Island	82.18	32	eP	P	20 36 46.1	+0.3
	comp=Z,17nm,0.8s,mb5.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMA2	Indian Mountai	82.86	24	eP	P	20 36 49.8	+0.6
PPLA	Purkeypile	83.04	27	eP	P	20 36 50.2	0.0
	comp=Z,75nm,1.4s,mb5.5						
CHUM	Lake Minchumin	83.11	26	eP	P	20 36 51.2	+0.7
	comp=Z,78nm,1.4s,mb5.5						
MAW	Mawson	83.19	200	eP	P	20 36 50.2	-0.6
	comp=Z,14nm,1.0s,mb4.9						
MAW				e		20 37 06.1	
MAW	Mawson	83.19	200	P	P	20 36 50.6	-0.2
	comp=Z,15nm,0.9s,mb5.0,baz=57,slow=5.3,SNR=22						
MAW	Mawson	83.19	200	eP	P	20 36 50.2	-0.6
MAW				e		20 37 06.1	
MAW				pmax	pmax		
	comp=Z,14nm,1.0s						
SBA	Scott Base	83.23	172	eP	P	20 36 51.1	+0.2
KTH	Kantishna Hill	83.69	26	eP	P	20 36 51.8	-1.7
	comp=Z,66nm,1.4s,mb5.6						
SLKM	Skilak Lake	83.69	30	eP	P	20 36 53.2	-0.4
BPAW	Bear Paw Mtn.	83.72	26	eP	P	20 36 53.4	-0.2
	comp=Z,54nm,1.5s,mb5.5						
PPT	Papeete	83.86	108	eLR	LR	21 03 22.9	
	comp=Z,348nm,26.2s						
PPT	Papeete	83.86	108	LR	LR	21 07 02.4	
	comp=Z,181nm,21.1s,MS4.4,baz=138,slow=30						
TRF	Thorofare Moun	83.96	27	eP	P	20 36 54.6	-0.3
	comp=Z,4µm,1.0s						
RC01	Rabbit Creek A	83.99	29	eP	P	20 36 54.8	-0.3
	comp=Z,54nm,1.1s,mb5.6						
SEW	Seward	84.04	30	eP	P	20 36 54.8	-0.5
PMR	Palmer	84.32	28	eP	P	20 36 59.5	+2.8
PMR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
PMR	Palmer	84.32	28	eP	P	20 36 59.5	+2.8
	comp=Z,10nm,0.7s,mb5.1						
KIV	Kislovodsk	84.54	314⇓	eP	P	20 36 57.7	-0.5
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
MCK	McKinley	84.59	26	eP	P	20 36 57.6	-0.5
MCK				e		20 37 08.9	
MCK				pmax	pmax		
	comp=Z,71nm,1.5s,mb5.6						
MCK	McKinley	84.59	26	eP	P	20 36 57.6	-0.4
	comp=Z,71nm,1.5s,mb5.6						
MCK				e		20 37 08.9	
VRHR	Novokhopersk	85.43	321	eP	P	20 37 00.5	-2.1
VRHR				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.4						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,30nm,0.6s						
VRSR	Storozhevoye	86.96	321	eP	P	20 37 08.0	-2.1
VRSR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
VRSR				pmax	pmax		
	comp=N,5.0nm,1.1s						
VRSR				pmax	pmax		
	comp=E,8.0nm,0.9s						
MALT	Malatya	87.77	308	eP	P	20 37 13.7	-0.6
MALT				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.9						
MALT	Malatya	87.77	308	eP	P	20 37 13.7	-0.7
	comp=Z,10nm,1.2s,mb4.9						
ANN	Anapa	88.30	315	eP	P	20 37 14.5	-2.2
ANN				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.2						
OBN	Obninsk	88.44	325⇓	eP	P	20 37 15.0	-2.1
OBN				pmax	pmax		
	comp=Z,42nm,1.9s,mb5.3						
ASF	Jabal al Asfar	89.27	302	P	P	20 37 21.0	-0.6
	comp=Z,3.8nm,0.9s,mb4.8						
KMBO	Kilima Mbogo	90.54	269	P	P	20 37 27.6	-0.3
	comp=Z,4.2nm,0.8s,mb4.8,baz=67,slow=6.9,SNR=7.0						
KMBO	Kilima Mbogo	90.54	269	eP	P	20 37 27.5	-0.4
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KMBO	Kilima Mbogo	90.54	269	eP	P	20 37 27.5	-0.4
	comp=Z,7.5nm,1.1s,mb4.9						
ARCES	ARCESS Array B	91.71	340	P	P	20 37 29.6	-2.4
	comp=Z,3.8nm,0.8s,mb4.8,baz=79,slow=6.8,SNR=8.4						
AKASG	Malin Array Be	93.28	321	P	P	20 37 37.3	-2.5
	comp=Z,0.2nm,0.3s,baz=72,slow=4.5,SNR=7.7						
NOA	NORSAR Array B	100.11	334	P	Pdif	20 38 07.9	-2.7
	comp=Z,2.1nm,0.9s,baz=67,slow=4.5,SNR=3.7						
PDAR	Pinedale Array	111.42	42	PKKPbc	PKKPbc	20 53 53.9	-1.8
	comp=Z,0.8nm,0.8s,baz=145,slow=5.4,SNR=4.3						
PDAR				PKKPab	PKKPab	20 54 02.4	-2.4
	comp=Z,1.0nm,0.8s,baz=124,slow=7.4,SNR=4.8						
TXAR	Lajitas Array	121.39	53	PKP	PKPdf	20 43 19.6	+0.5
	comp=Z,1.2nm,0.8s,baz=218,slow=1.2,SNR=11						
JCT	Junction City	123.92	50	eP	Pdif	20 39 54.5	-1.9
JCT				e		20 43 23.7	
TORD	Torodi Ar. Bea	124.18	288	PKP	PKPdf	20 43 23.4	-1.3
	comp=Z,2.0nm,0.8s,baz=95,slow=1.5,SNR=8.1						
TORD	Torodi Ar. Bea	124.18	288	PKP	PKPdf	20 43 23.4	-1.3
PLCA	Paso Flores	138.74	159	PKP	PKPdf	20 43 52.1	+0.6
	comp=Z,3.4nm,1.0s,baz=135,slow=1.8,SNR=4.5						
CPUP	Villa Florida	156.05	169	PKP	PKPdf	20 44 19.7	-0.5
	comp=Z,1.3nm,0.7s,baz=231,slow=0.6,SNR=4.2						
CPUP				PKPab	PKPab	20 44 47.4	+0.1
	comp=Z,2.5nm,0.7s,baz=176,slow=3.7,SNR=4.7						
ROSC	El Rosal	156.69	71	PKPab	PKPab	20 44 51.1	+0.5
	comp=Z,5.8nm,0.3s,baz=101,slow=21,SNR=4.3						
LPAZ	La Paz	159.39	132	PKP	PKPdf	20 44 25.6	+1.1
	comp=Z,4.1nm,1.1s,baz=40,slow=3.1,SNR=8.4						

IDC 06 20:28:38.1±5.7**,793S**×**12912E,h70**^{km}±62^{km}**,mb3.6**/1**, mb1 4.0**/5**,mb1mx3.6**/16**,mbtmp3.8**/5**,ML4.1**/2**,Error ellipse: s-maj=47.9km s-min=22.2km az=27.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.84	247	P	Pn	20 30 01.5	-0.7
	5.0nm,0.3s,baz=285,slow=5.4,SNR=9.3						
BATI				S	Sn	20 31 08.7	+0.8
	3.7nm,0.3s,baz=104,slow=22,SNR=2.8						
FITZ	Fitzroy Crossi	10.67	198	P	Pn	20 31 09.6	+1.5
	baz=124,slow=20,SNR=1.6						
FITZ				S	Sn	20 33 05.5	-0.4
	0.1nm,0.3s,baz=105,slow=18,SNR=2.4						
WRA	Warramunga Arr	12.97	158	P	Pn	20 31 39.8	+0.2
	baz=344,slow=13,SNR=2.2						
WRA				S	Sn	20 34 04.4	+2.2
	0.3nm,0.3s,baz=333,slow=21,SNR=5.1						
ASAR	Alice Springs	16.31	164	P	Pn	20 32 21.0	-1.8
	0.6nm,0.3s,baz=346,slow=10,SNR=4.5						
MKAR	Makanchi Array	68.52	327	P	P	20 39 33.3	+0.3
	1.0nm,0.8s,baz=116,slow=3.4,SNR=4.3						

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*ISCJB **06** 20:46:54.9±1.3,3482N±008×2588E±005,h10^{km}±7^{km}, Error ellipse: s-maj=13.1km s-min=6.3km az=169.2*
*THE **06** 20:46:54.9,3486N×2587E,h0^{km},ML3.2*
*ATH **06** 20:46:55.0,3483N×2590E,h23^{km}±1^{km},MD3.4/6*
*NEIC **06** 20:46:55.0,3483N×2590E,h23^{km},MD3.4(ATH),After ATH.*
*CSEM **06** 20:46:56.3±0.3,3489N×2589E,h20^{km},ML3.2,Error ellipse: s-maj=8.0km s-min=3.9km az=167.0*
ISC 06 20:46:54.6±1.8**,3478N**±010×**2590E**±005**,h6**^{km}±10^{km}**,n13,** σ**0**^{s}**93**/17**,Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZKR	Zakros	0.42	38	ePg	Pg	20 47 02.8	+0.1
ZKR				eSg	Sg	20 47 09.3	+1.1
LAST	Lasithi	0.51	317	ePg	Pg	20 47 03.9	-0.6
LAST				eSg	Sg	20 47 11.3	+0.1
NPS	Neapolis	0.53	334	ePB	Pg	20 47 04.6	-0.3
NPS				eSB	Sg	20 47 11.8	-0.1
SIVA	Sivas	0.93	285	ePg	Pg	20 47 11.8	-0.6
SIVA				eSg	Sg	20 47 26.3	+1.8
KARP	Karpathos	1.28	53	ePN	Pn	20 47 18.9	-0.1
GVD	Gavdhos	1.49	273	ePN	Pn	20 47 22.5	+0.6
VAM	Vamos	1.53	295	ePN	Pn	20 47 22.5	+0.2
THR1	Thera Island	1.62	347	ePg	Pg	20 47 22.7	-3.1
SANT	Santorini	1.62	347	eP	Pn	20 47 23.1	-0.6
SANT	Santorini	1.62	347	eP	Pn	20 47 23.1	-0.5
KARN	Karanos	1.74	291	ePb	Pb	20 47 25.0	-1.8
APE	Apeiranthos	2.30	353	ePN	Pn	20 47 33.3	+0.3
VLI	Veliai	3.09	310	ePN	Pn	20 47 44.8	+1.0

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*JMA **06** 21:06:18.3±0.3,2438N×12234E,h67^{km}*
TAP 06 21:06:18.3,2426N×12225E,h50^{km}**,ML3.0,1D,C, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.49	290⇓	iP	Pn	21 06 29.8	+0.4
	baz=296						
ENA				eS	Sn	21 06 38.4	+1.0
	baz=296						
TWC	Suao	0.50	314	i P	Pn	21 06 29.8	+0.3
	baz=317						
TWC				S	Sn	21 06 38.0	+0.3
	baz=317						
TWD	Chiawan	0.62	253	i P	Pn	21 06 30.9	-0.1
	baz=244						
TWD				i S	Sn	21 06 40.4	+0.2
	baz=244						
HWA	Hwalien	0.65	244	eP	Pn	21 06 31.4	0.0
	baz=245						
HWA				eS	Sn	21 06 40.2	-0.7
	baz=245						
ILA	Ilan	0.68	318	eP	Pn	21 06 33.8	+2.1
	baz=327						
ILA				eS	Sn	21 06 43.1	+1.6
	baz=327						
TWE	Neicheng	0.70	311	i P	Pn	21 06 32.9	+0.9
	baz=307						
TWE				S	Sn	21 06 43.3	+1.4
	baz=307						
ENTT	Nioudou	0.72	301	i P	Pn	21 06 33.3	+0.9
	baz=294						
ENTT				i S	Sn	21 06 43.8	+1.3
	baz=294						
YOJ	Yonaguni jima	0.73	74	P	Pn	21 06 32.2	-0.2
YOJ				eS	Sn	21 06 42.2	-0.4
NNS	Nan Shan	0.81	283	P	Pn	21 06 34.0	+0.5
	baz=283						
NNS				i S	Sn	21 06 45.9	+1.2
	baz=283						
ESL	Shilin	0.87	239	P	Pn	21 06 33.9	-0.3
	baz=251						
ESL				eS	Sn	21 06 46.0	+0.1
	baz=251						
WHF	Hehuan Shan	0.90	263	P	Pn	21 06 35.1	+0.5
	baz=254						
WHF				S	Sn	21 06 47.5	+0.8
	baz=254						
NSK	Sanguang	0.91	297	eP	Pn	21 06 35.5	+0.7
	baz=286						
NSK				eS	Sn	21 06 48.2	+1.4
	baz=286						
NWF	Wu-fen Shan	0.91	332	eP	Pn	21 06 36.9	+2.1
	baz=332						
NWF				eS	Sn	21 06 47.5	+0.6
	baz=332						
TWA	Mucha	0.94	320	eP	Pn	21 06 36.5	+1.4
	baz=331						
TWA				eS	Sn	21 06 49.7	+2.2
	baz=331						
TWT	Tachien	0.98	270	eP	Pn	21 06 36.1	+0.5
	baz=270						
TWT				eS	Sn	21 06 50.0	+1.5
	baz=270						
TWS1	Kuangyinshan	1.12	318	eP	Pn	21 06 39.0	+1.3
	baz=329						
TWS1				eS	Sn	21 06 54.0	+2.0
	baz=329						
EHY	Hungye	1.13	228	eP	Pn	21 06 38.0	+0.2
	baz=229						
EHY				eS	Sn	21 06 51.1	-1.1
	baz=229						
NSTT	Nanjuang	1.19	288	eP	Pn	21 06 39.4	+0.8
	baz=281						
NSTT				eS	Sn	21 06 55.2	+1.5
	baz=281						
TWF1	Yuli	1.25	224	eP	Pn	21 06 39.2	-0.3
	baz=236						
TWF1				eS	Sn	21 06 54.1	-1.1
	baz=236						
SMLT	Sun Moon Lake	1.29	253	eP	Pn	21 06 40.7	+0.8
	baz=248						
SMLT				eS	Sn	21 06 56.7	+0.7
	baz=248						
TYC	Yuchr	1.32	255	eP	Pn	21 06 40.7	+0.5
	baz=247						
TYC				eS	Sn	21 06 57.2	+0.5
	baz=247						
TWQ1	Liyutan	1.35	274	eP	Pn	21 06 41.5	+0.8
	baz=274						
TWQ1				eS	Sn	21 06 58.7	+1.3
	baz=274						
IRIF	Iriomote-Funau	1.36	87	P	Pn	21 06 40.1	-0.7
IRIF				S	Sn	21 06 56.9	-0.8
CHKT	Chengkung	1.41	215	eP	Pn	21 06 41.2	-0.3
	baz=209						
CHKT				eS	Sn	21 06 56.5	-2.5
	baz=209						
YUS	Yu-Shan	1.41	237	eP	Pn	21 06 42.8	+1.2
	baz=238						
YUS				eS	Sn	21 06 59.4	+0.3
	baz=238						
TCU	Taichung	1.44	266	eP	Pn	21 06 42.5	+0.6
	baz=266						
ALS	Alishan	1.52	241	eP	Pn	21 06 44.3	+1.3
	baz=234						
ALS				eS	Sn	21 07 01.9	+0.3
	baz=234						
ELDTW	Lidau	1.55	227	eP	Pn	21 06 43.5	0.0
	baz=228						
ELDTW				eS	Sn	21 07 01.8	-0.6
	baz=228						
CHN5	Tsauling	1.58	246	eP	Pn	21 06 44.8	+0.9
	baz=237						
CHN5				eS	Sn	21 07 03.6	+0.4
	baz=237						
JKRS	Kuro-shima	1.61	91	P	Pn	21 06 44.4	+0.1
JKRS				S	Sn	21 07 03.9	0.0
JIJ	Ishigaki jima	1.73	86	P	Pn	21 06 45.2	-0.8
JIJ				eS	Sn	21 07 05.6	-1.3
STYT	Tauyuan	1.75	232	eP	Pn	21 06 47.1	+1.0
	baz=227						
STYT				eS	Sn	21 07 08.3	+1.0
	baz=227						
CHN4	Tsaushan	1.76	239	eP	Pn	21 06 47.9	+1.5
	baz=240						
CHN4				eS	Sn	21 07 09.2	+1.5
	baz=240						
TWG	Pinlang	1.79	217	eP	Pn	21 06 46.9	+0.1
	baz=219						
TWG				eS	Sn	21 07 07.5	-0.9
	baz=219						
WTP	Ta-pu	1.80	236	eP	Pn	21 06 47.5	+0.6
	baz=237						
WTP				eS	Sn	21 07 09.1	+0.5
	baz=237						
CHN1	Nanshi	1.90	236	eP	Pn	21 06 49.5	+1.2
	baz=237						
CHN1				eS	Sn	21 07 12.3	+1.2
	baz=237						
SGST	Jiashian	1.92	233	eP	Pn	21 06 49.1	+0.6
	baz=233						
ECL	Taimali	2.04	216	eP	Pn	21 06 50.2	+0.1
	baz=217						
ECL				eS	Sn	21 07 12.5	-1.9
	baz=217						
SSD	Sandimen	2.11	225	eP	Pn	21 06 51.4	+0.3
	baz=217						
SSD				eS	Sn	21 07 16.1	-0.2
	baz=217						
JTJ	Tarama	2.27	80	P	Pn	21 06 53.3	0.0
JTJ				eS	Sn	21 07 19.7	-0.4

IDC 06 21:20:11.8±64.0**,1394S**×**17220E,h0**^{km}**,mb3.7**/3**, mb1 3.9**/3**,mb1mx3.6**/16**,mbtmp3.7**/3**,Error ellipse: s-maj=1105.0km s-min=136.5km az=68.0,Low Confidence Location,Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	33.20	232	P	P	21 26 50.4	0.0
	1.4nm,1.0s,baz=22,slow=11,SNR=3.4						
WRA	Warramunga Arr	36.65	255	P	P	21 27 20.6	+0.2
	0.4nm,0.5s,baz=89,slow=8.1,SNR=12						
ASAR	Alice Springs	37.42	249	P	P	21 27 26.6	-0.3
	0.6nm,0.4s,baz=76,slow=9.5,SNR=16						

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*ISCJB **06** 21:26:14.6±0.8,2961S±008×1794W±03,h311^{km}±14^{km}, mb3.6/5,Error ellipse: s-maj=35.4km s-min=12.4km az=8.8*
*IDC **06** 21:26:14.7±0.7,2920S×17905W,h326^{km}±8^{km},mb3.4/4, mb1 3.5/5,mb1mx3.3/16,mbtmp3.3/5,Error ellipse: s-maj=33.1km s-min=22.0km az=29.0*
*NEIC **06** 21:26:14.9±0.8,2923S×17907W,h329^{km}±10^{km},mb3.6/1, Error ellipse: s-maj=23.8km s-min=19.6km az=60.0*
ISC 06 21:26:15.6±0.8**,2972S**±008×**1795W**±02**,h301**^{km}±14^{km}**, n12,**σ**0**^{s}**89**/13**,mb3.6**/5**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.45	72	P	Pn	21 26 58.4	-0.1
	274nm,0.3s,baz=269,slow=23,SNR=12						
RAO				S	S	21 27 32.4	-0.2
	135nm,0.3s,baz=112,slow=22,SNR=5.6						
URZ	Urewera	8.97	197	P	Pn	21 28 20.6	-0.4
	0.7nm,0.3s,baz=314,slow=6.8,SNR=3.0						
URZ				S	S	21 30 03.9	+0.9
	6.4nm,0.3s,baz=97,slow=23,SNR=11						
RPZ	Rata Peaks	15.88	206	P	P	21 29 46.0	+3.9
	0.3nm,0.3s,baz=311,slow=19,SNR=2.5						
RPZ				S	S	21 32 32.0	-1.5
	0.5nm,0.3s,baz=230,slow=19,SNR=4.1						
STKA	Stephens Creek	33.37	256	P	P	21 32 28.3	+1.9
	1.3nm,0.4s,mb3.8,baz=105,slow=13,SNR=3.3						
STKA	Stephens Creek	33.37	256	P	P	21 32 28.3	+1.9
ASAR	Alice Springs	41.85	267	P	P	21 33 37.1	+0.2
	2.1nm,0.5s,mb3.6,baz=101,slow=6.8,SNR=36						
WB2	Warramunga Arr	42.76	272	eP	P	21 33 43.9	-0.5
WRAB	Tennant Creek	42.77	272	eP	P	21 33 44.0	-0.3
	1.8nm,0.4s,mb3.6						
WRA	Warramunga Arr	42.77	272	P	P	21 33 43.8	-0.7
	2.2nm,0.5s,mb3.7,baz=110,slow=7.5,SNR=53						
QSPA	South Pole Qui	60.39	180	P	P	21 35 53.7	+0.6
	0.5nm,0.7s,mb3.2,baz=313,slow=3.1,SNR=5.9						
AKASG	Malin Array Be	149.97	322	PKPbc	PKPdf	21 45 25.6	+0.7
	0.3nm,0.3s,baz=50,slow=2.9,SNR=3.5						
TORD	Torodi Ar. Bea	163.47	184	PKPab	PKPab	21 46 33.9	-1.9
	0.2nm,0.5s,baz=188,slow=3.3,SNR=9.9						

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*NEIC **06** 21:32:02.0±2.2,763S×12942E,h66^{km}±21^{km},mb4.5/2, Error ellipse: s-maj=36.8km s-min=9.3km az=46.0*
*ISCJB **06** 21:32:05.0±1.8,786S±009×12926E±008,h112^{km}±18^{km}, mb4.1/3,Error ellipse: s-maj=17.4km s-min=7.6km az=39.7*
*IDC **06** 21:32:07.7±6.0,801S×12925E,h107^{km}±60^{km},mb3.4/1, mb1 3.7/5,mb1mx3.4/15,mbtmp3.6/5,Error ellipse: s-maj=53.7km s-min=26.4km az=30.0*
ISC 06 21:32:04.9±1.9**,78S**±01×**12932E**±009**,h93**^{km}±20^{km}**,n12,** σ**0**^{s}**91**/19**,mb4.1**/3**,Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	5.75	148	ePn	Pn	21 33 32.4	+4.5
	50nm,0.5s						
KAKA				eSn	Sn	21 34 34.4	+1.9
BATI	Baumata	6.07	247	P	Pn	21 33 33.1	+0.9
	8.3nm,0.3s,baz=102,slow=4.5,SNR=11						
BATI				S	Sn	21 34 41.0	+0.6
	4.2nm,0.3s,baz=125,slow=13,SNR=5.0						
KAPI	Kappang	9.91	286	P	Pn	21 34 22.2	-2.3
	0.7nm,0.3s,baz=222,slow=23,SNR=2.3						
FITZ	Fitzroy Crossi	10.84	199	P	Pn	21 34 36.6	-0.5
	0.2nm,0.3s,baz=24,slow=9.5,SNR=7.3						
FITZ				S	Sn	21 36 36.3	-0.2
	0.8nm,0.3s,baz=314,slow=18,SNR=6.1						
FITZ	Fitzroy Crossi	10.84	199	ePn	Pn	21 34 37.1	+0.1
FITZ				eSn	Sn	21 36 32.5	-4.0
WRAB	Tennant Creek	13.00	158	ePn	Pn	21 35 06.0	-0.1
	3.6nm,0.6s						
WRAB				eSn	Sn	21 37 28.5	-0.5
WRA	Warramunga Arr	13.00	159	P	Pn	21 35 05.3	-0.8
	1.6nm,0.3s,baz=334,slow=13,SNR=40						
WRA				S	Sn	21 37 28.4	-0.7
	0.9nm,0.3s,baz=330,slow=23,SNR=7.4						
WB2	Warramunga Arr	13.01	158	ePn	Pn	21 35 05.9	-0.3
WB2				eSn	Sn	21 37 28.6	-0.6
ASAR	Alice Springs	16.36	165	P	Pn	21 35 50.2	+1.0
	0.5nm,0.3s,baz=343,slow=9.7,SNR=30						
ASAR				S	Sx	21 38 49.2	
	0.1nm,0.3s,baz=330,slow=16,SNR=3.2						
STKA	Stephens Creek	26.53	156	P	P	21 37 34.1	+0.2
	0.5nm,0.4s,mb3.4,baz=323,slow=10,SNR=3.6						
AML	Almayashu	70.98	320	P	P	21 43 12.3	-0.3
	13nm,0.6s,mb4.9						
EKS2	Erkin-Say	71.20	320	eP	P	21 43 14.6	+0.7
	1.1nm,0.6s,mb3.9						

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*IDC **06** 21:37:49.1±2.0,828S×13040E,h0^{km},mb4.1/1,mb1 3.8/4, mb1mx3.6/14,mbtmp3.7/4,ML3.4/3,Error ellipse: s-maj=80.1km s-min=27.4km az=78.0*
*NEIC **06** 21:37:54.7±1.3,839S×13021E,h35^{km},Error ellipse: s-maj=30.1km s-min=14.7km az=64.0*
*ISCJB **06** 21:37:55.4±1.9,87S±0.1×13038E±008,h33^{km},mb3.7/2, Error ellipse: s-maj=17.9km s-min=10.6km az=18.2*
ISC 06 21:37:55.4±1.3**,847S**±008×**1303E**±01**,h35**^{km}**,n9,** σ**1**^{s}**20**/13**,mb3.7**/2**,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	4.70	154	ePn	Pn	21 39 06.3	+2.5
KAKA				eSn	Sn	21 40 03.3	+6.2
BATI	Baumata	6.80	255	Sn	Sn	21 40 53.7	+4.8
	3.9nm,0.3s,baz=109,slow=20,SNR=7.6						
FITZ	Fitzroy Crossi	10.60	205	Pn	Pn	21 40 24.9	0.0
	0.2nm,0.3s,baz=23,slow=14,SNR=4.5						
FITZ				Sn	Sn	21 42 22.9	+0.5
	0.3nm,0.3s,baz=146,slow=17,SNR=5.7						
WRAB	Tennant Creek	12.04	162	eP	Pn	21 40 45.6	+1.1
	9.3nm,1.1s						
WRA	Warramunga Arr	12.05	162	Pn	Pn	21 40 44.5	-0.2
	0.3nm,0.3s,baz=346,slow=13,SNR=5.2						
WRA				Sn	Sn	21 42 56.1	-1.7
	0.7nm,0.3s,baz=28,slow=20,SNR=6.0						
WB2	Warramunga Arr	12.05	162	ePn	Pn	21 40 45.0	+0.3
ASAR	Alice Springs	15.49	168	Pn	Pn	21 41 31.9	+0.6
	0.2nm,0.3s,baz=341,slow=8.3,SNR=3.6						
ASAR				Sn	Sn	21 44 20.2	-1.7
	0.1nm,0.3s,baz=185,slow=12,SNR=3.4						
STKA	Stephens Creek	25.54	157	P	P	21 43 27.0	+6.1
	1.4nm,1.1s,mb3.4,baz=333,slow=14,SNR=2.4						
MKAR	Makanchi Array	69.63	327	P	P	21 48 59.6	-1.5
	0.8nm,0.5s,mb3.9,baz=114,slow=6.6,SNR=17						

IDC 06 22:05:12.6±17.0**,2066S**×**17704W,h436**^{km}±157^{km}**, mb3.6**/7**,mb1 3.7**/7**,mb1mx3.4**/16**,mbtmp3.6**/7**,Error ellipse: s-maj=110.6km s-min=31.9km az=106.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	34.37	264	P	P	22 11 21.4	-0.1
	1.7nm,0.4s,baz=121,slow=11,SNR=5.0						
ASAR	Alice Springs	45.35	257	P	P	22 12 50.8	+0.4
	2.3nm,0.5s,baz=93,slow=7.7,SNR=31						
ASAR				PcP	PcP	22 14 21.8	+0.6
	0.3nm,0.5s,baz=96,slow=4.2,SNR=4.1						
WB2	Warramunga Arr	45.45	262	eP	P	22 12 50.5	-0.7
WRA	Warramunga Arr	45.47	262	P	P	22 12 50.8	-0.5
	1.9nm,0.3s,baz=97,slow=7.7,SNR=97						
KAKA	Kakadu	48.87	271	eP	P	22 13 16.1	-1.1
	4.2nm,0.6s						
MJAR	Matsushiro Arr	70.87	323	P	P	22 15 43.7	-0.5
	1.1nm,0.5s,baz=148,slow=4.5,SNR=3.1						
PETK	Petropavlovsk-	76.66	345	P	P	22 16 17.9	+1.1
	6.3nm,1.1s,baz=128,slow=6.4,SNR=4.5						
KSRS	Korea Array	77.60	318	P	P	22 16 22.6	+0.1
	0.5nm,0.4s,baz=139,slow=2.9,SNR=2.8						
CMAR	Chiang Mai Arr	91.01	289	P	P	22 17 30.2	+0.7
	0.5nm,0.4s,baz=106,slow=3.2,SNR=5.3						
MKAR	Makanchi Array	111.96	313	PKiKP	PKiKP	22 22 56.4	-0.5
	0.2nm,0.6s,baz=239,slow=4.0,SNR=2.4						
AKASG	Malin Array Be	143.58	332	PKP	PKPdf	22 23 53.8	-2.6
	0.5nm,0.3s,baz=40,slow=4.2,SNR=5.6						
TORD	Torodi Ar. Bea	172.43	171	PKP	PKPdf	22 24 31.1	-0.1
	0.4nm,0.8s,baz=48,slow=2.1,SNR=2.6						

*NNC **06** 22:05:51.4±1.4, 4390N×8459E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=31.0km s-min=11.1km az=61.0*

BJI 06 22:05:47.5, 4373N×8382E, h20km, ML2.5, 2C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	2.81	87	P	Pn	22 06 32.1	+0.9
WMQ				S	Sn	22 07 03.5	-1.0
WMQ				Smax			
	comp=N,37nm,0.3s						
WMQ				Smax			
	comp=E,27nm,0.3s						
MK31	Makanchi Array	3.25	341	⇓Pn	Pn	22 06 44.4	+7.2
	comp=E,0.2nm,0.3s,baz=150,slow=15,SNR=42						
MK31				⇓Pg	Pn	22 06 52.5	+15
	comp=E,0.8nm,0.3s,baz=149,slow=17,SNR=8.3						
MK31				⇓Lg		22 07 36.6	
	comp=E,3.7nm,0.4s,baz=150,slow=29,SNR=8.1						
KURBB	Kurchatov Arra	7.78	334	⇑Lg		22 10 02.6	
	comp=E,0.9nm,0.7s						
KURK	Kurchatov	7.83	335	⇑Lg		22 10 02.6	
	comp=E,2.6nm,0.9s						

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*JMA **06** 22:24:11.3±0.2, 2392N×12276E, h9km, M2.0*
*ISCJB **06** 22:24:12.5±0.8, 2398N±009×12272E±003, h33km, Error ellipse: s-maj=12.4km s-min=3.8km az=4.0*
*TAP **06** 22:24:16.9, 2379N×122.17E, h45km±2km, ML2.5, C*

ISC 06 22:24:11.0±1.7**, 2393N**±009×**12271E**±003**, h18**km±9km**, n12, σ0ˢ93**/21**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.60	27	P	Pg	22 24 22.8	-0.1
YOJ				eS	Sg	22 24 31.0	0.0
HATJ	Hateruma jima	1.01	82	eS	Sb	22 24 42.1	-0.8
ENA	Nanau	1.02	300	eP	Pb	22 24 30.2	+0.2
	baz=316						
IRIF	Iriomote-Funau	1.02	66	P	Pb	22 24 29.9	-0.1
IRIF				eS	Sb	22 24 43.0	-0.1
TWD	Chiawan	1.03	279	eP	Pb	22 24 28.7	-1.5
	baz=290						
TWD				eS	Sb	22 24 37.6	-5.8
	baz=290						
TWC	Suao	1.04	311	eP	Pb	22 24 31.3	+0.9
	baz=347						
TWC				S	Sb	22 24 44.6	+0.8
	baz=347						
JKRS	Kuro-shima	1.23	75	P	Pn	22 24 33.7	+0.5
JKRS				eS	Sb	22 24 49.0	-0.1
TWE	Neicheng	1.24	310	eP	Pn	22 24 35.5	+2.1
	baz=324						
TWE				eS	Sb	22 24 48.5	-1.0
	baz=324						
ENTT	Nioudou	1.26	304	eP	Pn	22 24 35.0	+1.3
	baz=317						
ENTT				eS	Sb	22 24 48.1	-2.1
	baz=317						
WHF	Hehuan Shan	1.34	280	eP	Pn	22 24 33.9	-0.9
	baz=293						
WHF				eS	Sn	22 24 45.7	-6.4
	baz=293						
JIJ	Ishigaki jima	1.38	71	P	Pn	22 24 35.6	+0.3
JIJ				S	Sn	22 24 52.8	-0.3
NSK	Sanguang	1.44	301	eP	Pn	22 24 37.0	+0.8
	baz=319						

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*MOS **06** 23:03:41.6±0.6, 4866N×15541E, h43km, mb3.7/1, Error ellipse: s-maj=67.7km s-min=26.5km az=66.0*
*ISCJB **06** 23:03:44.4±3.3, 490N±03×1550E±04, h65km±32km, mb3.5/4, Error ellipse: s-maj=73.2km s-min=12.4km az=139.8*
*IDC **06** 23:03:46.9±5.5, 4898N×15496E, h77km±54km, mb3.2/4, mb1 3.7/6, mb1mx3.3/22, mbtmp3.4/6, ML3.7/2, MS2.4/1, Ms1 2.4/1, ms1mx1.7/16, Error ellipse: s-maj=119.7km s-min=20.4km az=145.0*

ISC 06 23:03:46.7±2.8**, 491N**±04×**1549E**±05**, h70**km±29km**, n10, σ0ˢ81**/11**, mb3.5**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.74	27	ePN	Pn	23 04 15.0	+0.1
SKR				eS	Sn	23 04 35.0	-1.2
SKR				pmax	pmax		
	comp=Z,180nm,1.0s						
SKR				smax			
	comp=N,590nm,0.2s						
SKR				smax			
	comp=E,280nm,0.2s						
SKR				smax			
	comp=Z,120nm,0.2s						
PETK	Petropavlovsk-	4.36	23	P	Pn	23 04 52.3	+2.0
	comp=Z,2.2nm,0.3s,baz=179,slow=12,SNR=36						
PET	Petropavlovsk	4.56	30	ePN	Pn	23 04 53.2	+0.1
PET				pmax	pmax		
	comp=Z,20nm,1.2s						
ASAJ	Asahikawa	9.83	244	P	Pn	23 06 04.5	-0.5
	comp=Z,1.1nm,0.3s,baz=82,slow=12,SNR=5.1						
ASAJ				LR	LR	23 09 58.0	
	comp=Z,22nm,18.7s,baz=210,slow=38						
ASAJ	Asahikawa	9.83	244	PN	Pn	23 06 04.6	-0.5
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,22nm,18.7s						
KSRS	Korea Array	22.70	249	P	P	23 08 42.6	+0.2
	comp=Z,0.8nm,0.4s,mb3.4,baz=53,slow=12,SNR=3.0						
KSRS	Korea Array	22.70	249	P	P	23 08 42.6	+0.2
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
NVAR	Mina Array Bea	60.30	65	P	P	23 13 48.3	+0.4
	comp=Z,0.5nm,0.6s,mb3.7,baz=292,slow=8.6,SNR=4.3						
PDAR	Pinedale Array	62.40	56	P	P	23 14 01.8	-0.2
	comp=Z,0.4nm,0.7s,mb3.6,baz=347,slow=3.7,SNR=2.6						
TXAR	Lajitas Array	75.31	62	P	P	23 15 21.6	-0.7
	comp=Z,0.2nm,0.4s,mb3.2,baz=316,slow=5.1,SNR=6.7						

NEIC 06 23:06:28.4, 3538S×17854E, h245km**, MG4.3**(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.19	185	P	Pn	23 07 12.3	+0.2
MXZ				S	S	23 07 45.8	-0.9
PUZ	Puketiti	2.70	185	P	Pn	23 07 17.5	+0.3
PUZ				S	S	23 07 53.5	-2.4
MWZ	Matawai	3.06	195	P	Pn	23 07 21.5	+0.4
MWZ				S	S	23 08 02.8	-0.1
URZ	Urewera	3.10	201	P	Pn	23 07 21.4	-0.1
KNZ	Kokohu	3.70	191	P	Pn	23 07 28.1	-0.2
BKZ	Black Stump Fm	4.12	203	P	Pn	23 07 32.5	-0.7
TWVZ	Taurewa	4.44	213	P	Pn	23 07 37.7	+0.6
NGZ	Ngauruhoe	4.46	211	P	Pn	23 07 37.9	+0.6
TUVZ	Tukino	4.51	210	P	Pn	23 07 38.1	+0.1
WNVZ	Wahianoa	4.58	210	P	Pn	23 07 38.7	-0.2
MOVZ	Moawhango	4.59	208	P	Pn	23 07 37.9	-1.0
TSZ	Takapari Road	5.10	203	P	Pn	23 07 43.6	-1.5
WAZ	Wanganui	5.20	212	P	Pn	23 07 45.8	-0.6
MRZ	Mangatainoka R	5.77	203	P	Pn	23 07 51.1	-2.3
KIW	Kapiti Island	6.18	207	P	Pn	23 07 55.9	-2.6
MTW	Mount Morrison	6.25	202	P	Pn	23 07 56.8	-2.6
CAW	Cannon Point	6.34	204	P	Pn	23 07 57.7	-2.8
PAWZ	Paruwai Farm	6.47	201	P	Pn	23 07 59.5	-2.7
MSWZ	Moikau Station	6.56	202	P	Pn	23 08 00.7	-2.6
MRW	Makara Radio	6.57	206	P	Pn	23 08 00.6	-2.9
SNZO	South Karori	6.64	206	P	Pn	23 08 01.3	-3.1
TCW	Tory Channel	6.72	209	P	Pn	23 08 02.1	-3.2
QRZ	Quartz Range	7.21	219	P	Pn	23 08 08.1	-3.5
BSWZ	Blackbirch Sta	7.30	209	P	Pn	23 08 10.3	-2.4
THZ	Tophouse	7.75	213	P	Pn	23 08 15.5	-2.9
KHZ	Kahutara	8.04	208	P	Pn	23 08 19.0	-3.0
DSZ	Denniston Nort	8.26	218	P	Pn	23 08 21.8	-3.0
LTZ	Lake Taylor	8.85	212	P	Pn	23 08 28.8	-3.5
MQZ	McQueen's Vall	9.47	207	P	Pn	23 08 36.2	-4.0
RPZ	Rata Peaks	10.13	212	P	Pn	23 08 44.8	-3.7
ODZ	Otahua Downs	11.38	210	P	Pn	23 09 01.8	-2.4
JCZ	Jackson Bay	11.49	218	P	Pn	23 09 02.4	-3.1

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*ISK **06** 23:06:44.3, 3585N×2733E, h4km, MD3.2*
*ATH **06** 23:06:45.5, 3599N×2728E, h14km±2km, MD3.2/3*
*DDA **06** 23:06:45.2, 3590N×2726E, h25km±2km, Md3.3*
*NEIC **06** 23:06:45.5, 3599N×2728E, h14km, MD3.2(ATH), After ATH.*
*CSEM **06** 23:06:45.9±0.1, 3598N×2727E, h5km, MD3.2, Error ellipse: s-maj=2.4km s-min=1.4km az=125.0*
*ISCJB **06** 23:06:46.0±0.6, 3589N±004×2746E±005, h14km, Error ellipse: s-maj=6.5km s-min=4.3km az=41.4*

ISC 06 23:06:45.3±0.6**, 3595N**±004×**2735E**±005**, h0**km±7km**, n17, σ1ˢ08**/30**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.43	201	ePB	Pg	23 06 54.3	+0.8
KARP				eSB	Sg	23 07 00.9	+1.9
ARG	Arkhangelos	0.69	67	ePB	Pg	23 06 59.5	+1.0
BODT	Bodrum	1.11	359	ePN	Pn	23 07 08.1	0.0
BODT				eSN	Sn	23 07 25.2	+1.1
BDRM	Kayabasi	1.12	4	iP	Pn	23 07 07.5	-0.7
BDRM				iS	Sn	23 07 24.1	-0.2
DALT	Dalyan (Mudla)	1.33	51	ePN	Pn	23 07 11.2	+0.1
DALT				eSN	Sg	23 07 31.1	+3.1
TURN	Turunc	1.37	47	iP	Pn	23 07 06.5	-5.1
TURN				iS	Sn	23 07 22.1	-8.5
MLSB	Milas	1.39	14	ePN	Pn	23 07 12.4	+0.5
YER	Yerkesik	1.40	32	ePN	Pg	23 07 12.4	+0.1
YER				eSN	Sg	23 07 33.0	+2.6
NPS	Neapolis	1.57	245	ePG	Pg	23 07 14.3	-1.1
NPS				eSB	Sg	23 07 34.6	-1.2
AYDN	Tasoluk	1.76	14	iP	Pn	23 07 17.6	+0.5
AYDN				iS	Sg	23 07 42.9	+0.9
AYDN	Tasoluk	1.76	14	iP	Pn	23 07 17.5	+0.4
AYDN				iS	Sg	23 07 42.9	+0.9
APE	Apeiranthos	1.84	308	ePN	Pn	23 07 18.0	-0.1
AKAS	Kas	1.85	80	iP	Pg	23 07 19.5	-1.4
AKAS				iS	Sg	23 07 44.5	-0.3
AKAS	Kas	1.85	80	iP	Pg	23 07 19.5	-1.3
AKAS				iS	Sg	23 07 44.5	-0.3
GOLH	Golhisar	2.20	54	iP	Pb	23 07 25.2	-0.7
GOLH				iS	Sg	23 07 54.9	-1.1
DNZL	Cakiroluk	2.21	38	iP	Pb	23 07 24.8	-1.3
DNZL				iS	Sg	23 07 54.5	-1.9
ELL	Elmali	2.22	68	ePN	Pn	23 07 23.5	+0.2

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*ISCJB **06** 23:13:55.7±0.8, 2066S±006×69.1W±0.1, h108km±7km, mb3.9/7, Error ellipse: s-maj=15.9km s-min=9.0km az=174.3*
*IDC **06** 23:13:56.1±0.5, 2063S×69.18W, h91km±4km, mb3.7/9, mb1 3.9/12, mb1mx3.8/19, mbtmp3.8/12, Error ellipse: s-maj=18.3km s-min=6.8km az=84.0*
*NEIC **06** 23:13:56.4±0.6, 2066S×69.16W, h95km±5km, mb3.9/1, Error ellipse: s-maj=9.7km s-min=6.3km az=81.0*

ISC 06 23:13:55.8±0.9**, 2076S**±006×**692W**±01**, h92**km±9km**, h91**km±1.0km**:pP-P, n28, σ1ˢ15**/28**, mb3.9**/7**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.86	172	P	Pn	23 14 28.5	+2.2
	148nm,0.3s,baz=340,slow=11,SNR=471						
LVC				S	Sn	23 14 53.5	+3.9
	355nm,0.3s,baz=21,slow=23,SNR=45						
LVC	Limon Verde	1.86	172	P	Pn	23 14 28.5	+2.2
LVC				S	Sn	23 14 53.5	+3.9
LPAZ	La Paz	4.56	13	P	Pn	23 15 02.2	-0.2
	5.6nm,0.3s,baz=196,slow=6.9,SNR=119						
ARE	Arequipa	4.79	333	eP	Pn	23 15 06.0	+0.3
ARE				eS	Sn	23 16 09.0	+9.0
LCO	Las Campanas	8.33	189	ePn	Pn	23 15 49.5	-4.3
	18nm,0.6s						
LCO				eSn	Sn	23 17 17.8	-8.3
SIV	San Ignacio	9.05	60	P	Pn	23 16 03.1	-0.6
	8.0nm,0.3s,baz=252,slow=11,SNR=175						
CFAA	Coronel Fontan	10.84	176	P	Pn	23 16 24.3	-3.6
	0.1nm,0.3s,baz=354,slow=14,SNR=6.9						
CFAA				S	Sn	23 18 18.1	-9.1
	0.1nm,0.3s,baz=12,slow=22,SNR=3.0						
CFAA	Coronel Fontan	10.84	176	P	Pn	23 16 24.3	-3.6
CFAA				S	Sn	23 18 18.1	-9.1
CPUP	Villa Florida	12.21	119	P	Pn	23 16 47.9	+1.4
	0.4nm,0.3s,baz=280,slow=11,SNR=4.7						
CPUP	Villa Florida	12.21	119	P	Pn	23 16 47.9	+1.4
TRQA	Tornquist	18.34	162	eP	Pn	23 18 03.4	-0.5
	6.3nm,0.8s						
PLCA	Paso Flores	19.95	183	P	Pn	23 18 21.4	-1.5
	5.1nm,0.8s,baz=5.3,slow=14,SNR=7.5						
BDFB	Brasilia	20.75	79	P	P	23 18 29.0	-0.3
	3.0nm,0.4s,baz=230,slow=11,SNR=4.1						
TXAR	Lajitas Array	59.87	325	P	P	23 23 52.1	+0.2
	0.2nm,0.6s,mb3.3,baz=155,slow=8.9,SNR=3.0						
TXAR				pP	pP	23 24 13.9	-1.1
	0.4nm,0.7s,baz=145,slow=8.9,SNR=5.0						
SNAA	Sanae	63.06	161	e	P	23 24 11.8	-1.1
SNAA				e		23 24 18.9	
DBIC	Dimbokro	68.78	74	P	P	23 24 50.2	-0.3
	4.1nm,0.7s,mb4.4,baz=287,slow=9.4,SNR=4.7						
QSPA	South Pole Qui	69.43	180	P	P	23 24 55.5	+2.1
	1.5nm,0.4s,mb4.2,baz=174,slow=5.5,SNR=30						
QSPA				pP	pP	23 25 18.9	+1.9
	0.6nm,0.5s,baz=245,slow=2.9,SNR=1.9						
QSPA	South Pole Qui	69.43	180	P	P	23 24 55.5	+2.1
QSPA				pP	pP	23 25 18.9	+1.9
PDAR	Pinedale Array	73.34	330	P	P	23 25 18.2	+0.9
	0.3nm,0.4s,mb3.5,baz=124,slow=7.9,SNR=2.3						
PDAR				pP	pP	23 25 41.3	+0.1
	0.3nm,0.5s,baz=126,slow=4.6,SNR=2.1						
ULM	Lac du Bonnet	74.53	343	P	P	23 25 23.0	-1.2
	4.2nm,1.0s,mb4.1,baz=162,slow=9.6,SNR=2.8						
ULM				pP	pP	23 25 46.3	-1.7
	2.1nm,0.6s,baz=146,slow=7.3,SNR=2.4						
NVAR	Mina Array Bea	74.75	322	pP	pP	23 25 51.0	+1.5
	0.6nm,0.8s,baz=147,slow=7.5,SNR=2.1						
TORD	Torodi Ar. Bea	77.36	71	P	P	23 25 40.9	-0.2
	1.4nm,0.5s,mb4.0,baz=256,slow=5.4,SNR=21						
TORD				pP	pP	23 26 05.0	0.0
	4.1nm,1.1s,baz=248,slow=5.4,SNR=4.0						
MAW	Mawson	85.11	163	P	P	23 26 22.6	+1.5
	1.5nm,0.7s,mb4.0,baz=235,slow=8.2,SNR=4.2						
ASAR	Alice Springs	130.44	208	PKP	PKPdf	23 32 56.4	0.0
	0.3nm,0.6s,baz=110,slow=1.6,SNR=3.3						
WRA	Warramunga Arr	133.45	211	PKP	PKPdf	23 33 02.5	+0.4
	1.9nm,0.9s,baz=207,slow=1.9,SNR=4.6						
ZALV	Zalesovo Beam	141.40	25	PKP	PKPdf	23 33 16.7	+1.1
	1.1nm,0.5s,baz=292,slow=2.1,SNR=5.7						
ZALV				pPKP	pPKPdf	23 33 41.8	+0.5
	0.5nm,0.4s,baz=98,slow=6.1,SNR=2.2						
MKAR	Makanchi Array	145.19	35	PKPbc	PKPbc	23 33 23.1	+0.8
	0.6nm,0.5s,baz=325,slow=4.3,SNR=7.6						
MKAR				pPKPbc	pPKPbc	23 33 47.5	-0.1
	0.5nm,0.6s,baz=335,slow=3.7,SNR=2.6						
SONM	Songino Array	152.75	6	PKPbc	PKPbc	23 33 42.5	+0.7
	0.4nm,0.6s,baz=349,slow=1.5,SNR=3.5						
SONM				pPKPbc	pPKPbc	23 34 07.1	-0.2
	0.6nm,0.6s,baz=300,slow=2.4,SNR=3.0						

IDC 06 23:24:52.8±3.7**, 468S×14753E, h0**km**, mb3.8**/2**, mb1 4.1**/3**, mb1mx3.7**/15**, mbtmp3.9**/3**, MS4.5**/2**, Ms1 4.5**/2**, ms1mx3.1**/25**, Error ellipse: s-maj=114.4km s-min=44.1km az=109.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	Warramunga Arr	19.87	219	eP	Pn	23 29 26.2	-1.1
WRA	Warramunga Arr	19.88	219	P	Pn	23 29 26.3	-1.1
	0.6nm,0.3s,baz=44,slow=12,SNR=19						
ASAR	Alice Springs	23.00	214	P	P	23 29 59.5	+0.1
	1.8nm,0.5s,baz=44,slow=9.1,SNR=23						
FITZ	Fitzroy Crossi	25.22	236	eP	P	23 30 21.2	+0.6
	5.2nm,1.6s						
FITZ	Fitzroy Crossi	25.22	236	P	P	23 30 20.3	-0.3
	0.7nm,0.4s,baz=60,slow=11,SNR=6.5						
AFI	Afiamalu	41.13	106	LR	LR	23 46 33.5	
	comp=Z,725nm,19.3s,baz=142,slow=32						
PPT	Papeete	62.77	107	LR	LR	23 55 03.0	
	comp=Z,298nm,21.2s,baz=329,slow=29						
TORD	Torodi Ar. Bea	145.25	286	PKPbc	PKPbc	23 44 32.5	-0.8
	1.2nm,0.7s,baz=72,slow=3.6,SNR=13						

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*SZGRF **06** 23:43:25.9, 1803S×17427W, h33km, Tonga Islands*
*MOS **06** 23:43:40.4±0.9, 1772S×17495W, h157km, mb5.2/23, Error ellipse: s-maj=8.6km s-min=6.7km az=138.0*
*BJI **06** 23:43:41.9, 1728S×17485W, h159km, mB5.4, mb5.5*
*ISCJB **06** 23:43:43.8±0.1, 1786S±004×17489W±003, h194km, mb5.1/116, Error ellipse: s-maj=6.1km s-min=3.0km az=157.9*
*IDC **06** 23:43:43.9±0.6, 1790S×17487W, h184km±5km, mb4.8/27, mb1 4.9/28, mb1mx4.9/30, mbtmp4.9/28, MS3.8/5, Ms1 3.8/5, ms1mx3.5/28, Error ellipse: s-maj=12.4km s-min=7.5km az=153.0*
*NEIC **06** 23:43:44.9±0.1, 1788S×17491W, mb5.2/69, Error ellipse: s-maj=4.4km s-min=2.7km az=156.0*
*BGS **06** 23:43:44.8±5.5, 1779S×17491W, h194km, mb5.2(NEIC)*
*GCMT **06** 23:43:44.9±0.2, 1781S×17456W, h211km±1km, MW5.4/97, Moment Tensor Solution. s82,c140; s97,c170; Duration: 1ˢ2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.86±.02; $M_{\theta\theta}$-0.04±.02; $M_{\phi\phi}$0.89±.03; $M_{r\theta}$-0.41±.02; $M_{\theta\phi}$0.21±.03; $M_{\phi r}$-1.10±.02; Best double couple: $M_0$1.47800×10^{17} NP1:ϕ_s185.00000°, δ19.00000°, λ-104.00000°. NP2:ϕ_s19.00000°, δ71.00000°, λ-85.00000°. Principal axes: T 1.5130, Plg26.0000°, Azm105.0000°; N -0.0700, Plg4.0000°, Azm197.0000°; P -1.4430, Plg63.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **06** 23:43:51, 18.15S×17541W, h223km, Mw5.6/17*

ISC 06 23:43:45.4±0.1**, 1787S**±004×**17488W**±003**, h196**km**, h196**km±2.5km**:pP-P, n993, σ0ˢ67**/647**, mb5.1**/116**, 190C-289D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.95	38	P	Pn	23 44 53.4	-5.7
	67nm,0.3s,baz=50,slow=1.3,SNR=54						
AFI				S	Sn	23 45 44.3	-13
	257nm,0.3s,baz=44,slow=23,SNR=15						
AFI	Afiamalu	4.95	38	ePn	Pn	23 44 53.1	-6.0
AFI				eSn	Sn	23 45 47.4	-10
FUNA	Funafuti	10.93	327	ePn	Pn	23 46 16.1	-0.7
	718nm,1.2s						
RAO	Raoul Island	11.66	193	S	Sn	23 48 26.9	-9.2
	12nm,0.3s,baz=93,slow=24,SNR=2.1						
RAR	Rarotonga	14.63	106	P	Pn	23 47 01.2	-2.0
	6.1nm,0.3s,baz=270,slow=8.1,SNR=40						
RAR				S	Sn	23 49 46.3	-0.6
	1.1nm,0.3s,baz=90,slow=21,SNR=3.1						
RAR				LR	LR	23 51 27.6	
	comp=Z,195nm,20.0s,baz=249,slow=32						
RAR	Rarotonga	14.63	106	P	Pn	23 47 01.3	-2.0
RAR				S	Sn	23 49 46.4	-0.5
DZM	Mont Dzumac	18.04	254	eP	P	23 47 44.6	+2.6
DZM	Mont Dzumac	18.04	254	ePn	Pn	23 47 43.2	-1.0
URZ	Urewera	21.49	197	P	P	23 48 18.4	-0.4
	47nm,0.4s,mb5.3,baz=19,slow=4.1,SNR=36						
URZ				S	S	23 51 58.3	-5.7
	7.2nm,0.9s,baz=334,slow=23,SNR=2.7						
PAE	Paea	24.09	93	eP	P	23 48 42.7	-0.5
	1µm,1.1s						
PAE	Paea	24.09	93	eP	P	23 48 42.7	-0.5
PAE				pmax	pmax		
	comp=Z,1µm,1.1s						
PPT	Papeete	24.11	93	eP	P	23 48 43.0	-0.3
	comp=Z,152nm,1.3s,mb5.5						
PPT	Papeete	24.11	93	P	P	23 48 42.1	-1.2
	comp=Z,66nm,0.5s,mb5.5,baz=276,slow=6.0,SNR=5.7						
TIAR	Tiarei	24.33	93	eP	P	23 48 44.8	-0.5
	comp=Z,472nm,1.0s,mb6.1						
TVO	Taravao	24.40	94	eP	P	23 48 45.8	-0.2
	comp=Z,1µm,1.0s						
TVO	Taravao	24.40	94	eP	P	23 48 45.8	-0.2
TVO				pmax	pmax		
	comp=Z,1µm,1.0s						
SNZO	South Karori	25.01	199	eP	P	23 48 51.4	+0.1
	comp=Z,62nm,0.7s,mb5.3						
MEH	Mehetia	25.52	94	eP	P	23 48 55.6	-0.5
	comp=Z,5µm,1.1s						
HNR	Honiara	25.83	286	P	P	23 48 59.0	+0.1
	comp=Z,192nm,0.6s,mb5.9,baz=200,slow=2.9,SNR=27						
HNR	Honiara	25.83	286	eP	P	23 48 58.3	-0.6
HNR				pmax	pmax		
	comp=Z,208nm,1.0s,mb5.7						
HNR	Honiara	25.83	286	eP	P	23 48 58.3	-0.6
	comp=Z,208nm,1.0s,mb5.7						
PMOR	Pomariorio Ree	26.04	88	eP	P	23 49 00.4	-0.4
	comp=Z,420nm,1.3s,mb5.9						
VAH	Vaihoa	26.25	88	eP	P	23 49 01.9	-0.8
	comp=Z,238nm,1.2s,mb5.7						
RPZ	Rata Peaks	28.37	202	P	P	23 49 19.8	-1.4
	comp=Z,45nm,0.6s,mb5.3,baz=6.1,slow=2.2,SNR=25						
EIDS	Eidsvold	32.44	251	eP	P	23 50 03.6	+6.3
ARMA	Armidale	32.88	241	⇓iP	P	23 50 01.4	+0.4
CNB	Canberra Magne	36.14	234	eP	P	23 50 28.7	-0.2
CTA	Charters Tower	36.76	260	eP	P	23 50 33.1	-1.3
	comp=Z,71nm,0.6s,mb5.4						
CTA				e		23 50 47.4	
CTA				ePCP	PcP	23 52 53.0	+0.6
CTA				eS	sS	23 57 04.0	-12
CTA	Charters Tower	36.76	260	P	P	23 50 33.1	-1.3
	comp=Z,72nm,0.6s,mb5.4,baz=91,slow=11,SNR=76						
CTA				PcP	PcP	23 52 53.0	+0.6
	comp=Z,16nm,0.9s,baz=22,slow=3.6,SNR=4.1						
CTA	Charters Tower	36.76	260	eP	P	23 50 33.1	-1.3
CTA				e		23 52 53.0	
CTA				pmax	pmax		
	comp=Z,71nm,0.6s						
CTAO	Charters Tower	36.76	260	eP	P	23 50 33.6	-0.8
CTAO				pmax	pmax		
	comp=Z,68nm,0.6s,mb5.3						
CTAO	Charters Tower	36.76	260	eP	P	23 50 33.6	-0.8
	comp=Z,68nm,0.6s,mb5.3						
RKT	Rikitea	37.66	105	eP	P	23 50 42.3	+0.4
	comp=Z,130nm,1.2s,mb5.3						
RKT	Rikitea	37.66	105	eP	P	23 50 42.3	+0.4
RKT				pmax	pmax		
	comp=Z,130nm,1.2s,mb5.3						
PMG	Port Moresby	37.77	278	d iP	P	23 50 42.9	0.0
PMG	Port Moresby	37.77	278	eP	P	23 50 42.4	-0.5
	comp=Z,99nm,1.1s,mb5.2						
TOO	Toolangi	39.82	232	⇓iP	P	23 50 59.0	-0.7
TOO				ePCP	PcP	23 53 03.1	+1.4
COEN	Coen	40.46	269	eP	P	23 51 04.3	-0.9
STKA	Stephens Creek	41.60	242	⇓iP	P	23 51 13.9	-0.4
	comp=Z,121nm,0.9s,mb5.3						
STKA				ePCP	PcP	23 53 08.5	+0.9
STKA	Stephens Creek	41.60	242	P	P	23 51 13.9	-0.3
	comp=Z,153nm,1.0s,mb5.4,baz=89,slow=9.1,SNR=38						
STKA				S	S	23 57 12.8	-2.8
	comp=Z,3.3nm,1.0s,baz=357,slow=22,SNR=2.0						
KKH	Kailua Kona	41.64	27	P	P	23 51 14.4	-0.3
KIP	Kipapa	42.41	24	eP	P	23 51 20.7	-0.1
KIP				pmax	pmax		
	comp=Z,126nm,1.3s,mb5.2						
KIP	Kipapa	42.41	24	eP	P	23 51 20.7	-0.1
	comp=Z,126nm,1.3s,mb5.2						
WB2	Warramunga Arr	47.92	259	⇓iP	P	23 52 02.5	-1.9
WB2				ePCP	PcP	23 53 30.5	+0.8
WB2	Warramunga Arr	47.92	259	eP	P	23 52 03.1	-1.3
WB2				ePcP	PcP	23 53 30.2	+0.6
WRAB	Tennant Creek	47.93	259	P	P	23 52 02.0	-2.4
	comp=Z,1µm,0.6s,SNR=84						
WRAB	Tennant Creek	47.93	259	d iP	P	23 52 02.5	-1.9
WRAB	Tennant Creek	47.93	259	eP	P	23 52 03.3	-1.1
WRA	Warramunga Arr	47.94	259	P	P	23 52 03.0	-1.5
	comp=Z,106nm,0.5s,mb5.4,baz=97,slow=7.6,SNR=459						
WRA				PcP	PcP	23 53 29.9	+0.2
	comp=Z,20nm,0.9s,baz=93,slow=4.0,SNR=7.6						
WRA				ScP	ScP	23 57 08.2	+2.7
	comp=Z,4.8nm,1.1s,baz=88,slow=3.5,SNR=4.9						
WRA				S	S	23 58 41.4	-5.8
	comp=Z,0.5nm,0.4s,baz=270,slow=20,SNR=6.1						
WRA	Warramunga Arr	47.94	259	P	P	23 52 03.0	-1.5
WRA						23 53 29.9	
WRA				S	S	23 58 41.4	-5.8
ASAR	Alice Springs	48.03	254	P	P	23 52 04.8	-0.3
	comp=Z,612nm,0.7s,mb6.0,baz=89,slow=8.2,SNR=3872						
ASAR				PcP	PcP	23 53 30.5	+0.5
	comp=Z,21nm,0.6s,baz=112,slow=4.1,SNR=4.9						
ASAR				ScP	ScP	23 57 09.5	+3.7
	comp=Z,3.8nm,1.0s,baz=117,slow=5.3,SNR=4.9						
ASAR				S	S	23 58 44.6	-3.8
	comp=Z,4.6nm,0.7s,baz=91,slow=15,SNR=10						
ASAR	Alice Springs	48.03	254	P	P	23 52 04.8	-0.3
ASAR						23 53 30.5	

ASAR S **S** 23 58 44.6 -3.8
GUMO Guam 50.54 306 PcP PcP 23 53 39.6 +0.4
comp=Z,75nm,0.8s,baz=8.3,slow=23,SNR=4.2
KAKA Kakadu 50.94 268 *eP* **P** 23 52 26.2 -1.0
comp=Z,88nm,0.8s,mb5.2
FORT Forrest 53.06 245⇓ *i*P **P** 23 52 41.4 -1.2
comp=Z,147nm,0.7s,mb5.5
FORT *e*PCP PcP 23 53 46.9 -1.6
FITZ Fitzroy Crossi 56.34 260⇓ *i*P **P** 23 53 05.8 -0.6
comp=Z,73nm,0.5s,mb5.5
FITZ *e*PCP pP 23 53 34.3 -17
FITZ Fitzroy Crossi 56.34 260 P **P** 23 53 06.1 -0.3
comp=Z,36nm,0.6s,mb5.1,baz=102,slow=5.7,SNR=83
FITZ S **S** 00 00 39.1 -2.5
comp=Z,1.9nm,0.9s,baz=248,slow=20,SNR=3.4
BATI Baumata 59.89 268 P **P** 23 53 32.0 +0.9
comp=Z,76nm,0.7s,mb5.5,baz=218,slow=1.8,SNR=17
SBA Scott Base 60.69 184 *eP* **P** 23 53 38.3 +2.8
SBA pmax pmax
comp=Z,22nm,0.8s,mb4.8
SBA Scott Base 60.69 184 *eP* **P** 23 53 38.3 +2.8
comp=Z,22nm,0.8s,mb4.8
MBWA Marble Bar 61.33 255 *eP* **P** 23 53 39.8 -0.9
KLBR Kellerberrin 61.85 243 *eP* **P** 23 53 43.0 -1.0
comp=Z,138nm,0.6s,mb5.8
NWAO Narrogin (SRO) 62.19 242 *eP* **P** 23 53 45.8 -0.5
KDI Kendari 62.63 275⇓ *eP* **P** 23 53 48.6 -0.9
MUN Mundaring 63.13 243 *eP* **P** 23 53 51.9 -0.6
DAV Davao City (W) 63.77 288 *eP* **P** 23 53 57.0 0.0
KAPI Kappang 65.04 273 P **P** 23 54 03.7 -1.6
comp=Z,19nm,0.7s,mb4.8,baz=232,slow=1.8,SNR=9.9
KAPI Kappang 65.04 273 *eP* **P** 23 54 03.7 -1.6
CASY Casey 67.58 205 *eP* **P** 23 54 20.9 +0.5
CASY Casey 67.58 205 *eP* **P** 23 54 16.5 -4.0
comp=Z,59nm,1.0s,mb5.2
ADK Adak 69.47 359 *eP* **P** 23 54 31.2 -1.0
MYLDM Lahad Datu 69.57 283⇓ **P** 23 54 35.9 +2.2
MYLDM Lahad Datu 69.57 283⇓ **P** 23 54 36.2 +2.6
TSM Tawau 69.84 282⇑ **P** 23 54 36.2 +0.9
MJAR Matsushiro Arr 69.93 321 P **P** 23 54 34.8 -0.5
comp=Z,51nm,0.8s,mb5.2,baz=159,slow=5.6,SNR=70
MAJO Matsushiro 69.93 321 *eP* **P** 23 54 35.0 -0.4
JOW Kunigami 70.82 308 P **P** 23 54 41.8 +0.8
comp=Z,71nm,0.7s,mb5.4,baz=111,slow=9.0,SNR=13
SDKM Sandakan 70.94 283⇓ **P** 23 54 42.7 +0.7
TRT Tretes 71.05 268⇑ *eP* **P** 23 54 40.0 -2.7
KDM Kudat 71.74 284⇑ **P** 23 54 48.3 +1.5
UNV Unalaska Valle 71.78 5 *eP* **P** 23 54 44.2 -1.9
comp=Z,38nm,0.8s,mb5.1
KKM Kota Kinabalu 72.00 283⇓ **P** 23 54 49.0 +0.7
KKM Kota Kinabalu 72.00 283 *eP* **P** 23 54 48.6 +0.3
ASAJ Asahikawa 72.90 329 LR LR 00 20 14.3
comp=Z,92nm,21.3s,baz=2.3,slow=30
BSC Santa Cruz Isl 73.67 45⇓ **P** 23 54 58.0 +0.3
baz=74
FARB Farallon Islan 73.70 41⇓ **P** 23 54 57.6 -0.2
baz=74
V03C Hunter Liggett 73.80 43⇑ **P** 23 54 58.4 0.0
baz=74
SCI San Clemente I 73.83 47⇑ **P** 23 54 59.7 +1.0
baz=74
BTM Bintulu 73.95 279⇑ **P** 23 55 01.0 +1.2
JRSC Jasper Ridge 74.00 41⇑ **P** 23 54 59.3 -0.2
baz=74
MCCM Marconi Confer 74.06 40⇓ **P** 23 54 59.6 -0.3
baz=74
PKM Peak Mountain 74.06 44⇓ **P** 23 55 00.8 +0.9
baz=74
SAO San Andreas Ge 74.11 42 *eP* **P** 23 55 00.9 +0.7
PKD Parkfield 74.20 43⇑ **P** 23 55 00.5 -0.3
baz=74
PET Petropavlovsk 74.22 344 *eP* **P** 23 54 59.5 -0.9
PET pmax pmax
comp=Z,31nm,0.8s,mb5.0
PET Petropavlovsk 74.22 344 *i*P **P** 23 54 59.7 -0.7
U04C Hernandez Rese 74.30 43⇓ **P** 23 55 01.6 +0.3
baz=74
PACP Pacheco Peak 74.36 42⇓ **P** 23 55 01.9 +0.3
baz=74,SNR=6.1
SBUM Sibu 74.52 278⇓ **P** 23 55 04.4 +1.3
PEA0B Petropavlovsk- 74.55 343 *eP* **P** 23 55 01.7 -0.6
PETK Petropavlovsk- 74.55 343 P **P** 23 55 01.9 -0.5
comp=Z,51nm,0.8s,mb5.2,baz=114,slow=8.4,SNR=88
PETK PKiKP PKiKP 00 00 52.1 -0.8
comp=Z,1.6nm,0.8s,baz=180,slow=1.0,SNR=2.6
PETK LR LR 00 27 08.9
comp=Z,44nm,18.2s,baz=270,slow=35
OSI Osito Adit 74.64 45⇓ **P** 23 55 03.4 +0.1
baz=75
NACB Ninganchiao 74.72 302 *eP* **P** 23 55 03.3 -0.7
comp=Z,174nm,1.3s,mb5.5
MNRC McLaughlin Nat 74.78 40⇓ **P** 23 55 04.5 +0.4
baz=75,SNR=6.3
ARVC Arvin 74.86 45⇓ **P** 23 55 04.1 -0.5
baz=75
MWC Mount Wilson 74.87 46 *eP* **P** 23 55 04.7 +0.1
MWC pmax pmax
comp=Z,21nm,0.8s,mb4.8
MWC Mount Wilson 74.87 46 *eP* **P** 23 55 04.7 +0.1
comp=Z,22nm,0.8s,mb4.8
YSS Yuzh-Sakhalins 74.94 331⇓ *i*P **P** 23 55 05.0 +0.3
YSS pmax pmax
comp=Z,190nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 74.94 331 *i*P **P** 23 55 05.2 +0.5
VES Vestal, Richgr 75.10 44⇓ **P** 23 55 05.5 -0.4
baz=75,SNR=6.1
GASB Alder Springs 75.10 39⇑ **P** 23 55 06.6 +0.8
baz=75
MURC Murrieta 75.11 47⇓ **P** 23 55 05.7 -0.4
baz=75
YHNB Yeheng 75.12 302 *eP* **P** 23 55 06.0 -0.3
comp=Z,130nm,1.1s,mb5.5
BFSC Mount Baldy St 75.15 46⇑ **P** 23 55 05.8 -0.4
baz=75,SNR=6.2
S05C Merced 75.17 42⇑ **P** 23 55 05.9 -0.4
baz=75
TATO Taipei 75.17 303 *eP* **P** 23 55 06.7 +0.1
CHGN Chignik 75.18 9 *eP* **P** 23 55 05.1 -0.8
MONP Monument Peak 75.27 48⇑ **P** 23 55 07.6 +0.6
baz=75
EDW2 Edwards Air Fo 75.28 45⇓ **P** 23 55 07.1 +0.2
baz=75,SNR=20
R04C Big Horse Ranc 75.33 41⇑ **P** 23 55 06.6 -0.6
baz=76
T06C Millerton Lake 75.37 43⇑ **P** 23 55 07.0 -0.4
baz=76,SNR=11
DVTC Desert V Tower 75.37 48⇑ **P** 23 55 07.9 +0.4
baz=76
O02C Red Bluff 75.39 39⇑ **P** 23 55 07.9 +0.5
baz=76,SNR=5.7
ISA Isabella 75.40 45 *eP* **P** 23 55 07.9 +0.3
ISA pmax pmax
comp=Z,26nm,1.0s,mb4.8
ISA Isabella 75.40 45⇓ **P** 23 55 07.9 +0.2
baz=75,SNR=7.4
ISA Isabella 75.40 45 *eP* **P** 23 55 07.9 +0.2
comp=Z,26nm,1.0s,mb4.8
N02C Big Bar 75.49 38⇑ **P** 23 55 07.6 -0.4
baz=76
CMB Columbia Colle 75.55 42⇓ **P** 23 55 08.2 -0.3
baz=76,SNR=9.6
CMB Columbia Colle 75.55 42 *eP* **P** 23 55 08.3 -0.1
PFO Pinyon Flat Ob 75.64 47 P **P** 23 55 08.7 -0.3
comp=Z,5.6nm,0.9s,mb4.2,baz=268,slow=5.5,SNR=7.3
PFO LR LR 00 21 34.6
comp=Z,82nm,19.8s,baz=291,slow=30
PFO Pinyon Flat Ob 75.64 47⇓ **P** 23 55 08.9 -0.1
baz=76
PFO Pinyon Flat Ob 75.64 47 *eP* **P** 23 55 08.6 -0.4
OHCM Honcut 75.65 40 *eP* **P** 23 55 09.1 +0.1
M01C Crescent City 75.68 37⇑ **P** 23 55 09.3 +0.2
baz=76
LAVA Lava Cap Winer 75.76 41⇓ **P** 23 55 08.7 -0.9
baz=76
ORV Oroville 75.78 40⇑ **P** 23 55 09.1 -0.6
baz=76,SNR=9.0
WDC Whiskeytown Da 75.79 38 *eP* **P** 23 55 10.2 +0.5
WDC pmax pmax
comp=Z,83nm,1.8s,mb5.1
WDC Whiskeytown Da 75.79 38⇑ **P** 23 55 09.5 -0.2
baz=76
WDC Whiskeytown Da 75.79 38 *eP* **P** 23 55 10.2 +0.5
comp=Z,83nm,1.8s,mb5.1
S06C San Francisco 75.80 42⇑ **P** 23 55 09.4 -0.5
baz=76,SNR=5.0
LRMC Laurel Mountai 75.83 45⇑ **P** 23 55 09.9 -0.2
baz=76,SNR=11
KSM Kuching 76.01 276⇓ **P** **P** 23 55 12.8 +1.2
KSM Kuching 76.01 276 *eP* **P** 23 55 12.1 +0.5
CWC Cottonwood Cre 76.11 44⇑ **P** **P** 23 55 11.5 -0.1
baz=76
M02C Callahan 76.12 38⇓ **P** **P** 23 55 11.8 +0.2
baz=76,SNR=5.3
R05C Kirkwood Meado 76.14 41⇑ **P** **P** 23 55 11.6 -0.1
baz=76,SNR=7.3
BELC Belle Mtn. 76.17 47⇓ **P** **P** 23 55 12.2 +0.2
baz=76,SNR=6.9
P05C Yuba Gap, Truc 76.17 40⇓ **P** **P** 23 55 12.0 +0.1
baz=76,SNR=6.4
MPMC Manual Prospec 76.29 45⇑ **P** **P** 23 55 12.8 +0.2
baz=76,SNR=25
MTUM Tungsten Hills 76.31 43 *eP* **P** 23 55 13.3 +0.5
GSC Goldstone 76.33 46⇓ **P** 23 55 13.1 +0.2
baz=76,SNR=13
GSC Goldstone 76.33 46 *eP* **P** 23 55 13.1 +0.2
BC3 Big Chuckw Mtn 76.36 48⇑ **P** 23 55 13.6 +0.4
baz=76,SNR=6.0
O05C Quincy 76.38 40⇑ **P** **P** 23 55 13.3 +0.2
baz=76
HEC Hector,Ludlow 76.39 46⇓ **P** **P** 23 55 13.1 -0.2
baz=76,SNR=7.4
YBH Yreka Blue Hor 76.42 37 P **P** 23 55 13.7 +0.4
comp=Z,14nm,0.6s,mb4.8,baz=184,slow=1.0,SNR=24
YBH Yreka Blue Hor 76.42 37 *eP* **P** 23 55 13.9 +0.7
YBH pmax pmax
comp=Z,213nm,2.3s
YBH Yreka Blue Hor 76.42 37⇓ **P** **P** 23 55 13.4 +0.2
baz=77,SNR=10
YBH Yreka Blue Hor 76.42 37 *eP* **P** 23 55 13.9 +0.7
comp=Z,213nm,2.3s,mb5.4
WAKR Walker 76.43 42 *eP* **P** 23 55 13.9 +0.5
R06C Coleville 76.43 42⇑ **P** 23 55 13.7 +0.3
baz=77,SNR=9.6
R07C Lee Vining 76.43 42⇓ **P** **P** 23 55 13.6 +0.2
baz=77,SNR=14
M03C McCloud 76.47 38⇓ **P** **P** 23 55 13.5 0.0
baz=77
GLA Glamis 76.49 48⇓ **P** **P** 23 55 14.3 +0.5
baz=77,SNR=5.1
GLA Glamis 76.49 48 *eP* **P** 23 55 14.7 +0.8
O04C Chester 76.50 39⇓ **P** 23 55 13.7 -0.1
baz=77,SNR=6.6
HATC Hat Creek Radi 76.58 39⇓ **P** **P** 23 55 14.2 +0.1
baz=77
K02A Glendale 76.63 36⇑ **P** **P** 23 55 14.6 +0.2
baz=77
S08C White Mtn Res 76.66 43⇓ **P** **P** 23 55 15.3 +0.6
baz=77,SNR=16
BEKR Beckwourth 76.67 40⇑ **P** **P** 23 55 14.6 -0.1
baz=77,SNR=13
WCN Washoe City 76.70 41⇓ **P** **P** 23 55 15.1 +0.2
baz=77,SNR=6.3
GMRC Granite Mounta 76.83 47⇓ **P** **P** 23 55 15.9 +0.3
baz=77,SNR=9.5
HUMO Hull Mountain 76.83 37⇑ **P** **P** 23 55 15.9 +0.4
baz=77
HUMO Hull Mountain 76.83 37 *eP* **P** 23 55 16.0 +0.5
comp=Z,212nm,2.6s,mb5.3
P06A Stead Airport, 76.84 40⇓ **P** **P** 23 55 15.8 +0.2
baz=77
IRM Iron Mountain 76.85 47⇓ **P** **P** 23 55 15.9 +0.1
baz=77,SNR=12
ELFS Eagle Lake Fie 76.90 39⇓ **P** **P** 23 55 16.3 +0.4
baz=77,SNR=5.5
GRAC Grapevine Rang 76.90 44⇑ **P** **P** 23 55 16.1 +0.1
baz=77,SNR=14
FURC Furnace Creek, 76.94 45⇑ **P** **P** 23 55 16.1 -0.2
baz=77,SNR=9.7
KSRS Korea Array 76.94 317 P **P** 23 55 17.4 +1.1
comp=Z,62nm,0.9s,mb5.2,baz=134,slow=6.3,SNR=103
M04C Macdoel 76.95 38⇑ **P** **P** 23 55 16.3 0.0
baz=77
OHAK Old Harbor 76.95 12 *eP* **P** 23 55 15.0 -0.8
OHAK *ep*P pP 23 56 00.6 -2.5
J02A Umpqua 76.97 36⇓ **P** **P** 23 55 16.4 +0.1
baz=77
TUQ Turquoise Moun 77.00 46⇓ **P** **P** 23 55 16.6 -0.1
baz=77
SHOC Shoshone 77.01 45⇓ **P** **P** 23 55 16.1 -0.6
baz=77
Y12C Blythe 77.07 48⇑ **P** **P** 23 55 17.0 -0.1
baz=77
113A Mohawk Valley, 77.10 49⇓ **P** **P** 23 55 16.9 -0.3
baz=77
M05C Lookout 77.10 39⇑ **P** **P** 23 55 17.1 0.0
baz=77,SNR=8.4
NVAR Mina Array Bea 77.11 42 P **P** 23 55 17.5 +0.3
comp=Z,13nm,0.7s,mb4.7,baz=228,slow=9.9,SNR=76
NVAR pP pP 23 56 02.3 -2.1
comp=Z,7.0nm,1.1s,baz=223,slow=10,SNR=1.7
L04A Klamath Falls 77.17 38⇓ **P** **P** 23 55 17.2 -0.2
baz=77
O06A Flanigan 77.17 40⇓ **P** **P** 23 55 17.4 -0.1
baz=77,SNR=18
PAHR Pah Rah Range 77.17 41 *eP* **P** 23 55 18.1 +0.6
comp=Z,196nm,2.6s,mb5.3
R08A Mina 77.19 42⇓ **P** **P** 23 55 17.6 0.0
baz=77
TPI Tanjungpandan 77.23 271⇓ *eP* **P** 23 55 19.0 +0.5
I02A Mapleton 77.24 35⇓ **P** **P** 23 55 17.5 -0.3
baz=77
U10A Ash Meadows, A 77.27 45⇓ **P** **P** 23 55 18.3 +0.2
baz=77,SNR=11
LDFC Landfair 77.37 47 *eP* **P** 23 55 18.9 +0.2
comp=Z,9.9nm,0.5s,mb4.7
LDFC *e* pP 23 56 05.5 -0.4
214A Organ Pipe Nat 77.38 50⇑ **P** **P** 23 55 19.4 +0.6
baz=78
S09A Goldfield 77.40 43⇓ **P** **P** 23 55 18.6 -0.3
baz=78,SNR=9.4
M06C Likely Place G 77.40 39⇓ **P** **P** 23 55 18.7 0.0
baz=78,SNR=7.1
QZH Quanzhou 77.50 301⇓ *i*P **P** 23 55 20.2 +0.6
QZH AMB AMB
comp=Z,530nm,1.6s,mb5.9
N06A Buffalo Meadow 77.52 40⇓ **P** **P** 23 55 19.1 -0.3
baz=78,SNR=9.6
I03A Eugene 77.53 35⇓ **P** **P** 23 55 19.0 -0.3
baz=78
Q08A Gabbs 77.59 42⇓ **P** **P** 23 55 19.7 -0.1
baz=78,SNR=8.7
Y13A Salome 77.60 48⇑ **P** **P** 23 55 20.5 +0.5
baz=78
TPNV Topopah Spring 77.61 44 *eP* **P** 23 55 20.3 +0.3
TPNV pmax pmax
comp=Z,21nm,0.8s,mb4.8
TPNV Topopah Spring 77.61 44⇓ **P** **P** 23 55 20.5 +0.5
baz=78
TPNV Topopah Spring 77.61 44 *eP* **P** 23 55 20.2 +0.2
comp=Z,21nm,0.8s,mb4.8
TPNV *ep*P pP 23 56 07.8 +0.5
KDAK Kodiak Island 77.62 12 P **P** 23 55 19.0 -0.5
comp=Z,404nm,0.6s,mb6.2,SNR=18
KDAK Kodiak Island 77.62 12 P **P** 23 55 19.2 -0.3
comp=Z,34nm,0.5s,mb5.2,baz=216,slow=3.2,SNR=54
KDAK Kodiak Island 77.62 12 *eP* **P** 23 55 19.1 -0.5
KDAK P 23 55 19.2
PDMCI Parker Dam,Lak 77.63 48⇑ **P** **P** 23 55 20.5 +0.3
baz=78
W12A Cal Nev Ari 77.65 46⇓ **P** **P** 23 55 21.1 +0.8
baz=78
L05A Lakeview 77.71 38⇓ **P** **P** 23 55 20.6 +0.2
baz=78,SNR=5.9
J04A Umpqua Nationa 77.71 37⇑ **P** **P** 23 55 20.7 +0.3
baz=78
O07A Toulon 77.75 41⇓ **P** **P** 23 55 20.5 -0.2
baz=78,SNR=19
R09A Tonopah 77.79 43⇑ **P** **P** 23 55 20.9 0.0
baz=78,SNR=12
INCN Inchon 77.81 316 *eP* **P** 23 55 22.4 +1.3
V12A Nelson 77.89 46⇑ **P** 23 55 21.9 +0.3
baz=78,SNR=14
I04A Tendick Farm, 77.89 36⇓ **P** **P** 23 55 20.9 -0.5
baz=78
U11A Corn Creek 77.91 45⇓ **P** **P** 23 55 21.8 +0.1
baz=78,SNR=5.7
S10A Tonopah Range, 77.92 43⇑ **P** **P** 23 55 21.7 0.0
baz=78,SNR=27
MOD Modoc 77.93 38⇓ **P** **P** 23 55 21.6 -0.1
baz=78,SNR=14
MOD Modoc 77.93 38 *eP* **P** 23 55 21.8 +0.1
H03A Soap Creek Ran 77.97 35⇑ **P** **P** 23 55 22.4 +0.6
baz=78
P08A Dixie Valley 77.98 41⇓ **P** **P** 23 55 22.2 +0.3
baz=78
Z14A Wintersburg 78.00 49⇑ **P** **P** 23 55 23.0 +0.8
baz=78
X13A Yucca 78.00 48⇓ **P** **P** 23 55 22.5 +0.3
baz=78
Q09A Carvers 78.06 42⇓ **P** **P** 23 55 22.4 0.0
baz=78
N07B Gerlach 78.06 40⇑ **P** **P** 23 55 22.6 +0.2
baz=78,SNR=13
K05A Summer Lake 78.09 38⇑ **P** **P** 23 55 22.6 +0.1
baz=78,SNR=12
SHPR Sheep Range 78.10 45 *eP* **P** 23 55 23.2 +0.5
115A Sonoran Desert 78.18 50⇓ **P** **P** 23 55 23.6 +0.3
baz=78
W13A Hualapai Mount 78.23 47⇑ **P** **P** 23 55 23.8 +0.4
baz=78,SNR=11
J05A Fort Rock 78.24 37⇓ **P** **P** 23 55 23.3 0.0
baz=78,SNR=20
Y14A Wickenburg 78.25 48⇑ **P** **P** 23 55 23.8 +0.2
baz=78,SNR=8.1
O08A Rochester Mine 78.28 41⇓ **P** **P** 23 55 23.5 -0.1
baz=78,SNR=14
M07A Soldier Meadow 78.30 39⇓ **P** **P** 23 55 24.2 +0.5
baz=78
R10A Warm Springs 78.32 43⇑ **P** **P** 23 55 24.0 +0.1
baz=78,SNR=18
S11A Rachel 78.33 44⇓ **P** **P** 23 55 24.0 +0.1
baz=78
216A Three Points, 78.40 51⇓ **P** **P** 23 55 25.3 +0.8
baz=78
T11A Corn Creek, Al 78.46 45⇑ **P** **P** 23 55 25.1 +0.4
baz=79,SNR=38
U12A Valley of Fire 78.48 46⇑ **P** **P** 23 55 24.9 +0.1
baz=79,SNR=12
K06A Valley Falls 78.51 38⇓ **P** **P** 23 55 24.5 -0.3
baz=79,SNR=12
T12A Moapa 78.52 45⇓ **P** **P** 23 55 24.7 -0.4
baz=79
Q10A Clear Creek Ra 78.56 43⇑ **P** **P** 23 55 25.0 -0.2
baz=79
V13A Grand Canyon W 78.56 46⇓ **P** **P** 23 55 25.5 +0.2
baz=79,SNR=15
L07A Adell 78.58 39⇓ **P** **P** 23 55 25.4 +0.3
baz=79
N08A GE Springer Mi 78.58 40⇑ **P** **P** 23 55 25.5 +0.3
baz=79,SNR=18
H04A Detroit Lake 78.58 35⇓ **P** **P** 23 55 24.9 -0.3
baz=79,SNR=6.2
X14A Yava 78.60 48⇓ **P** **P** 23 55 26.3 +0.8
baz=79,SNR=11
Y15A Casa Rosa Ranc 78.74 49⇓ **P** **P** 23 55 26.5 +0.2
baz=79,SNR=11
O09A Fish Creek Ran 78.81 41⇑ **P** **P** 23 55 26.7 +0.1
baz=79,SNR=15
M08A Happy Creek Ra 78.82 40⇓ **P** **P** 23 55 26.6 +0.1
baz=79,SNR=9.0
R11A Troy Canyon, C 78.82 44⇓ **P** **P** 23 55 26.5 -0.1
baz=79,SNR=14
J06A Christmas Vall 78.84 37⇓ **P** **P** 23 55 26.0 -0.6
baz=79,SNR=9.6
W14A Seligman 78.85 47⇑ **P** **P** 23 55 27.4 +0.6
baz=79,SNR=16
U13A Pakoon Wash 78.87 46⇓ **P** **P** 23 55 27.6 +0.6
baz=79,SNR=33
S12A Delamar Landin 78.91 45⇓ **P** **P** 23 55 28.1 +1.0
baz=79,SNR=26
BMN Battle Mountai 78.94 41 *eP* **P** 23 55 27.5 +0.3
P10A Eureka 78.96 42⇓ **P** **P** 23 55 27.1 -0.2
baz=79,SNR=7.8
N09A Rock Creek Ran 78.99 41⇑ **P** **P** 23 55 27.2 -0.3
baz=79,SNR=13
K07A Rock Creek Ran 79.03 38⇓ **P** **P** 23 55 27.8 +0.1
baz=79,SNR=21
E03A Lebam 79.04 33⇑ **P** **P** 23 55 28.1 +0.5
baz=79
Q11A Duckwater 79.05 43⇓ **P** **P** 23 55 27.9 0.0
baz=79,SNR=20
V14A Boquillas Ranc 79.05 47⇑ **P** **P** 23 55 28.7 +0.8
baz=79,SNR=13
X15A Humboldt 79.07 48⇓ **P** **P** 23 55 29.0 +0.9
baz=79,SNR=9.6
Z16A Peralta Trail, 79.08 50⇑ **P** **P** 23 55 28.4 +0.2
baz=79
117A Oracle 79.21 51⇓ **P** **P** 23 55 29.9 +1.0
baz=79
T13A Saint George 79.22 45⇑ **P** **P** 23 55 29.2 +0.4
baz=79,SNR=6.9
I06A Prineville 79.23 37⇓ **P** **P** 23 55 28.7 0.0
baz=79,SNR=10
WVOR Wild Horse Val 79.24 39 *eP* **P** 23 55 28.5 -0.3
WVOR pmax pmax
comp=Z,26nm,1.0s,mb4.8
WVOR Wild Horse Val 79.24 39 *eP* **P** 23 55 28.5 -0.3
comp=Z,26nm,1.0s,mb4.8
F04A Amboy 79.25 34⇑ **P** **P** 23 55 28.4 -0.4
baz=79
L08A Fields 79.27 39⇓ **P** **P** 23 55 29.0 0.0
baz=79,SNR=25
D03A Wishkah Elem. 79.31 33⇓ **P** **P** 23 55 28.7 -0.3
baz=80
Y16A Circle Bar Ran 79.31 49⇓ **P** **P** 23 55 29.9 +0.5
baz=80,SNR=5.8
O10A Cortez Mining, 79.32 42⇓ **P** **P** 23 55 29.3 +0.1
baz=80
M09A Marrel Ranch, 79.37 40⇓ **P** **P** 23 55 29.6 +0.1
baz=80
P11A Circle Ranch, 79.38 42⇓ **P** **P** 23 55 29.5 -0.1
baz=80,SNR=5.9
J07A Hines 79.40 38⇑ **P** **P** 23 55 29.8 +0.2
baz=80,SNR=9.1
W15A Williams 79.40 48⇑ **P** **P** 23 55 30.6 +0.8
baz=80
U14A Mt Trumbull 79.41 46⇑ **P** **P** 23 55 30.4 +0.5
baz=80,SNR=28
G05A Wamic 79.41 35⇑ **P** **P** 23 55 29.2 -0.5
baz=80
218A Dragoon 79.43 51⇑ **P** **P** 23 55 30.3 +0.3
baz=80,SNR=6.6
NLWA Neilton Lookou 79.44 32⇓ **P** **P** 23 55 29.2 -0.5
baz=80
R12A Pony Springs, 79.45 44⇑ **P** **P** 23 55 30.1 0.0
baz=80,SNR=6.7
FL2 Flat Top 2 79.46 34 P **P** 23 55 30.5 +0.6
K08A Mann Creek Ran 79.51 39⇓ **P** **P** 23 55 30.2 0.0
baz=80,SNR=18
N10A Dunphy 79.55 41⇓ **P** **P** 23 55 30.4 -0.1
baz=80
S13A Holt Ranch, En 79.55 45⇑ **P** **P** 23 55 31.1 +0.5
baz=80,SNR=6.7
X16A Lo Mia Camp, P 79.61 49⇓ **P** **P** 23 55 32.0 +1.0
baz=80,SNR=12
H06A Lindquist Farm 79.64 36⇓ **P** **P** 23 55 30.4 -0.6
baz=80,SNR=14
Y17A Roosevelt 79.68 50⇓ **P** **P** 23 55 31.8 +0.4
baz=80
Q12A Willow Creek R 79.69 43⇓ **P** **P** 23 55 31.5 +0.1
baz=80
I07A Izee 79.72 37⇓ **P** **P** 23 55 31.0 -0.3
baz=80,SNR=18
319A Douglas 79.72 52⇑ **P** **P** 23 55 32.7 +1.1
baz=80
F05A White Salmon 79.74 35⇑ **P** **P** 23 55 30.8 -0.6
baz=80
O11A Cowboy Ranch, 79.76 42⇓ **P** **P** 23 55 32.1 +0.5
baz=80,SNR=10
G06A Carlson Farm, 79.79 36⇓ **P** **P** 23 55 30.8 -0.9
baz=80,SNR=8.4
V15A Kaibab Nationa 79.80 47⇓ **P** **P** 23 55 32.9 +0.9
baz=80,SNR=5.1
R13A O'Grain Ranch, 79.80 44⇓ **P** **P** 23 55 32.6 +0.7
baz=80,SNR=7.8
T14A Hurricane 79.81 46⇑ **P** **P** 23 55 32.2 +0.2
baz=80,SNR=5.5
P12A McGill 79.88 43⇑ **P** **P** 23 55 32.4 +0.1
baz=80,SNR=5.5
W16A Flagstaff 79.88 48⇑ **P** **P** 23 55 33.5 +1.0
baz=80,SNR=5.3
J08A Circle Bar Ran 79.88 38⇑ **P** **P** 23 55 31.9 -0.4
baz=80,SNR=7.5
K09A Rome 79.94 39⇑ **P** **P** 23 55 32.5 0.0
baz=80,SNR=36
Z18A Geronimo 79.97 51⇓ **P** **P** 23 55 34.3 +1.3
baz=80
M10A I.L. Ranch, Tu 79.99 40⇓ **P** **P** 23 55 33.0 +0.1
baz=80,SNR=25
H07A Lands Inn, Kim 79.99 37⇑ **P** **P** 23 55 32.3 -0.5
baz=80,SNR=16

E05A	Randle	80.00	34	⇓P	P	23 55 32.3	-0.5
	baz=80,SNR=6.5						
X17A	Forest Lakes	80.02	49	⇓P	P	23 55 34.5	+1.3
	baz=80						
U15A	North Rim	80.03	47	⇓P	P	23 55 33.8	+0.7
	baz=80,SNR=23						
219A	White Tail Can	80.03	52	⇑P	P	23 55 33.4	+0.1
	baz=80						
F06A	Goldendale	80.03	35	⇑P	P	23 55 32.5	-0.5
	baz=80						
B04A	Port Angeles	80.06	32	⇑P	P	23 55 33.0	-0.1
	baz=80						
N11A	Elko Archery C	80.09	41	⇑P	P	23 55 33.3	-0.2
	baz=80						
LON	Longmire	80.10	34	eP	P	23 55 32.7	-0.6
LON				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
LON	Longmire	80.10	34	eP	P	23 55 32.7	-0.6
	comp=Z,4.9nm,0.8s,mb4.2						
C04A	Brinnon	80.11	33	⇓P	P	23 55 33.0	-0.3
	baz=80,SNR=6.1						
MDJ	Mudanjiang	80.12	323	P	P	23 55 34.6	+1.1
MDJ				XP	pP	23 56 28.7	+7.6
MDJ				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,397nm,4.2s						
MDJ				LR	LR		
	comp=Z,52nm,19.5s						
MDJ	Mudanjiang	80.12	323	eP	P	23 55 33.8	+0.3
	comp=Z,58nm,1.1s,mb5.1						
I08A	Drewsey	80.16	38	⇓P	P	23 55 33.5	-0.2
	baz=80,SNR=20						
Q13A	Wheeler Ranch,	80.18	44	⇑P	P	23 55 33.6	-0.3
	baz=80						
WUAZ	Wupatki	80.20	48	⇑P	P	23 55 34.8	+0.6
	baz=80						
WUAZ	Wupatki	80.20	48	eP	P	23 55 35.4	+1.2
	comp=Z,53nm,1.9s,mb4.8						
SVW2	Sparrevohn	80.21	9	eP	P	23 55 32.6	-0.9
T15A	Red Dirt Ranch	80.27	46	⇑P	P	23 55 35.1	+0.6
	baz=80,SNR=8.3						
D05A	Enumclaw	80.28	33	⇓P	P	23 55 34.0	-0.3
	baz=80						
J09A	Fry Pan Ranch,	80.30	38	⇓P	P	23 55 34.6	+0.1
	baz=80,SNR=18						
Y18A	Canyon Day Jun	80.31	50	⇑P	P	23 55 35.4	+0.7
	baz=80,SNR=5.9						
G07A	Ruggs Ranch, H	80.34	36	⇑P	P	23 55 34.2	-0.5
	baz=80,SNR=13						
L10A	Juniper Basin	80.34	40	⇑P	P	23 55 34.7	0.0
	baz=80,SNR=22						
119A	Ashpeak Ranch,	80.36	51	⇓P	P	23 55 35.3	+0.3
	baz=80						
ELK	Elko	80.37	42	P	P	23 55 35.0	+0.1
	comp=Z,8.5nm,0.8s,mb4.4,baz=249,slow=6.0,SNR=34						
ELK				pP	pP	23 56 20.2	-2.3
	comp=Z,2.0nm,0.9s,baz=238,slow=9.5,SNR=1.6						
ELK	Elko	80.37	42	P	P	23 55 35.0	+0.1
ELK				pP	pP	23 56 20.2	-2.2
M11A	Holland Ranch,	80.40	41	⇑P	P	23 55 34.8	-0.3
	baz=80						
E06A	Yakima	80.41	34	⇑P	P	23 55 34.5	-0.5
	baz=81,SNR=8.5						
O12A	Currie	80.42	42	⇓P	P	23 55 35.3	+0.1
	baz=81,SNR=7.2						
P13A	Bates Ranch, G	80.45	43	⇓P	P	23 55 35.4	0.0
	baz=81,SNR=7.7						
H08A	Prairie City	80.46	37	⇑P	P	23 55 34.7	-0.6
	baz=81,SNR=9.6						
PGC	Sidney	80.48	32	eP	P	23 55 34.8	-0.5
	comp=Z,44nm,1.0s,mb5.0						
PGC				epP	pP	23 56 23.1	+0.2
K10A	MacKenzie Ranc	80.50	39	⇓P	P	23 55 35.2	-0.3
	baz=81,SNR=16						
NJ2	Nanjing	80.53	308	eP	P	23 55 36.7	+0.7
NJ2				AP	pP	23 56 16.4	-7.2
NJ2				XP	sP	23 56 33.7	-11
NJ2				PP	PP	23 58 41.8	-0.7
NJ2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,40nm,5.1s						
NJ2				LR	LR		
	comp=N,250nm,18.2s						
NJ2				LR	LR		
	comp=E,230nm,22.0s						
NJ2				LR	LR		
	comp=Z,170nm,26.9s						
N12A	Clover Valley,	80.55	42	⇓P	P	23 55 35.6	-0.3
	baz=81,SNR=13						
F07A	Phinny Hill Vi	80.58	35	⇑P	P	23 55 35.4	-0.6
	baz=81						
SLKM	Skilak Lake	80.61	12	eP	P	23 55 34.7	-1.0
SLKM				epP	pP	23 56 22.1	-1.2
S15A	Panguitch	80.62	46	⇑P	P	23 55 37.4	+1.1
	baz=81						
Z19A	T-Link Ranch,	80.64	51	⇓P	P	23 55 36.7	+0.2
	baz=81						
I09A	Lost Marbles R	80.68	38	⇑P	P	23 55 35.8	-0.7
	baz=81						
Q14A	Sevier Lake (B	80.69	44	⇓P	P	23 55 36.8	+0.2
	baz=81,SNR=24						
U16A	Tuba City	80.69	47	⇑P	P	23 55 37.4	+0.6
	baz=81,SNR=6.8						
BBB	Bella Bella	80.72	27	P	P	23 55 36.0	-0.5
	comp=Z,7.2nm,0.6s,mb4.5,baz=218,slow=9.3,SNR=6.1						
BBB	Bella Bella	80.72	27	P	P	23 55 36.0	-0.5
X18A	Snowflake	80.73	49	⇓P	P	23 55 37.6	+0.6
	baz=81						
G08A	Pilot Rock	80.76	36	⇑P	P	23 55 36.4	-0.4
	baz=81,SNR=25						
C05A	Tolt Reservoir	80.76	33	⇑P	P	23 55 36.0	-0.8
	baz=81,SNR=8.9						
L11A	Cat Creek Ranc	80.83	40	⇑P	P	23 55 37.4	0.0
	baz=81,SNR=29						
O13A	Hicks Ranch, I	80.84	43	⇓P	P	23 55 37.4	0.0
	baz=81						
T16A	Glen Canyon Da	80.85	46	⇓P	P	23 55 38.0	+0.5
	baz=81						
D06A	Cle Elum	80.89	34	⇑P	P	23 55 37.5	0.0
	baz=81						
A04A	Legoe Bay, Lum	80.90	32	⇓P	P	23 55 37.8	+0.3
	baz=81,SNR=5.2						
B05A	Bryant	80.91	33	⇓P	P	23 55 37.0	-0.6
	baz=81,SNR=7.6						
J10A	Berg Farm, Mel	80.94	39	⇑P	P	23 55 37.1	-0.7
	baz=81						
M12A	Wells	80.94	41	⇑P	P	23 55 37.8	-0.2
	baz=81,SNR=9.6						
R15A	Junction	80.95	45	⇑P	P	23 55 38.9	+0.8
	baz=81						
JCW	Jim Creek	80.95	33	eP	P	23 55 37.8	0.0
Y19A	Nutrioso	80.97	50	⇑P	P	23 55 39.2	+1.0
	baz=81,SNR=12						
K11A	Parker Ranch,	81.00	40	⇑P	P	23 55 38.0	-0.3
	baz=81,SNR=17						
E07A	Sunnyside	81.03	35	⇑P	P	23 55 37.6	-0.6
	baz=81						
RSW	Rattlesnake Hi	81.07	35	eP	P	23 55 38.8	+0.3
RSW				epP	pP	23 56 27.2	+1.1
N13A	Wendover, West	81.08	42	⇑P	P	23 55 38.4	-0.3
	baz=81						
HAWA	Hanford	81.11	35	eP	P	23 55 38.6	-0.1
	comp=Z,84nm,1.8s,mb5.1						
H09A	Durkee	81.13	37	⇑P	P	23 55 38.4	-0.4
	baz=81,SNR=7.4						
P14A	Drum Mountains	81.14	44	⇓P	P	23 55 39.1	+0.1
	baz=81,SNR=18						
S16A	Weppner Ranch,	81.16	46	⇓P	P	23 55 39.1	0.0
	baz=81,SNR=7.0						
F08A	Pendleton	81.16	36	⇑P	P	23 55 38.7	-0.3
	baz=81,SNR=12						
MSU	Marysvale	81.17	45	eP	P	23 55 40.1	+0.9
RC01	Rabbit Creek A	81.24	12	eP	P	23 55 37.8	-1.2
	comp=Z,57nm,1.1s,mb5.1						
U17A	Shonto	81.24	47	⇓P	P	23 55 40.5	+0.8
	baz=81						
L12A	House Creek Ra	81.28	41	⇑P	P	23 55 39.4	-0.3
	baz=81,SNR=7.3						
Q15A	Fillmore	81.29	44	⇑P	P	23 55 39.9	+0.1
	baz=81						
I10A	Payette	81.29	38	⇑P	P	23 55 39.8	+0.1
	baz=81						
V18A	Ganado	81.32	48	⇓P	P	23 55 40.8	+0.8
	baz=82,SNR=8.5						
RPW	Rockport	81.33	33	eP	P	23 55 38.7	-1.1
T17A	Navajo Res., N	81.34	47	⇑P	P	23 55 40.8	+0.7
	baz=82,SNR=9.7						
D07A	Quincy	81.36	34	⇑P	P	23 55 39.7	-0.2
	baz=82,SNR=5.1						
M13A	Montello	81.38	42	⇑P	P	23 55 40.1	-0.2
	baz=82,SNR=6.4						
A05A	Maple Falls	81.39	32	⇓P	P	23 55 39.8	-0.3
	baz=82						
G09A	Cove	81.42	37	⇓P	P	23 55 39.9	-0.5
	baz=82,SNR=19						
ETW	Entiat	81.42	34	eP	P	23 55 40.1	-0.2
ETW				e	pP	23 56 29.5	+1.5
W19A	Sanders	81.42	49	⇓P	P	23 55 41.2	+0.6
	baz=82,SNR=6.1						
E08A	Dider Farm, El	81.42	35	⇑P	P	23 55 39.9	-0.4
	baz=82						
BMO	Blue Mountains	81.44	37	eP	P	23 55 40.2	-0.3
BMO				pmax	pmax		
	comp=Z,67nm,1.8s,mb5.0						
BMO	Blue Mountains	81.44	37	eP	P	23 55 40.2	-0.3
	comp=Z,67nm,1.8s,mb5.0						
LNOR	Lincton Mounta	81.48	36	eP	P	23 55 40.1	-0.6
LNOR				e	pP	23 56 31.8	+3.4
MFID	Camas Ranch	81.49	39	⇑P	P	23 55 40.4	-0.4
	baz=82,SNR=11						
R16A	Teasdale	81.53	45	⇑P	P	23 55 41.4	+0.4
	baz=82,SNR=8.7						
F09A	S2 Ranch, Elgi	81.60	36	⇑P	P	23 55 40.8	-0.5
	baz=82,SNR=8.1						
H10A	Noah's Angus R	81.61	38	⇑P	P	23 55 40.6	-0.8
	baz=82,SNR=26						
C07A	Waterville	81.62	34	⇑P	P	23 55 40.6	-0.7
	baz=82,SNR=8.4						
K12A	Draper Farm, C	81.62	40	⇓P	P	23 55 41.5	+0.1
	baz=82						
DUG	Dugway	81.63	43	eP	P	23 55 41.4	-0.2
P15A	Leamington	81.65	44	⇓P	P	23 55 42.2	+0.5
	baz=82						
S17A	Black Ridge (B	81.66	46	⇓P	P	23 55 41.8	0.0
	baz=82						
WTV	Waterville	81.68	34	P	P	23 55 41.2	-0.4
I11A	Placerville	81.69	39	⇑P	P	23 55 41.4	-0.4
	baz=82,SNR=16						
U18A	Rough Rock, Ch	81.71	48	⇓P	P	23 55 42.8	+0.7
	baz=82,SNR=8.4						
N14A	Grayback Hills	81.73	42	⇑P	P	23 55 42.2	+0.1
	baz=82,SNR=6.0						
A06A	Chilliwack	81.76	32	⇓P	P	23 55 41.0	-1.0
	baz=82						
G10A	Bishop Farm, J	81.81	37	⇑P	P	23 55 42.1	-0.2
	baz=82,SNR=12						
PMR	Palmer	81.82	12	eP	P	23 55 40.9	-1.1
PMR				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.9						
PMR	Palmer	81.82	12	eP	P	23 55 40.9	-1.1
	comp=Z,35nm,1.0s,mb5.0						
J12A	Stokes Ranch,	81.84	40	⇓P	P	23 55 42.5	-0.1
	baz=82,SNR=20						
D08A	Wollman Farm,	81.84	35	⇓P	P	23 55 42.2	-0.3
	baz=82,SNR=12						
BGU	Big Grassy Mou	81.87	42	eP	P	23 55 42.6	-0.2
BGU				e	pP	23 56 28.8	-1.8
TTA	Tatalina	81.89	9	eP	P	23 55 42.5	+0.1
TTA				e	pP	23 56 33.9	+3.7
DL2	Dalian	81.90	315	P	P	23 55 43.5	+0.5
DL2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.2						
L13A	Double Diamond	81.92	41	⇑P	P	23 55 42.9	-0.1
	baz=82,SNR=5.8						
E09A	Wood Farm, Sta	81.94	36	⇓P	P	23 55 42.1	-1.0
	baz=82,SNR=12						
V19A	Window Rock	81.95	49	⇑P	P	23 55 43.9	+0.6
	baz=82						
M14A	Sheep Mountain	81.98	42	⇑P	P	23 55 43.2	-0.1
	baz=82,SNR=22						
Q16A	Castle Valley	82.06	45	⇑P	P	23 55 44.6	+0.7
	baz=82,SNR=6.3						
T18A	Mexican Hat	82.06	47	⇓P	P	23 55 44.6	+0.7
	baz=82,SNR=69						
B07A	Winthrop	82.06	33	⇓P	P	23 55 43.2	-0.4
	baz=82,SNR=9.8						
CN2	Changchun	82.08	321	⇓P	P	23 55 44.0	+0.2
CN2				eAP	pP	23 56 24.1	-7.5
CN2				eXP	sP	23 56 43.3	-9.0
CN2				AMB	AMB		
	comp=Z,80nm,0.9s,mb5.3						
CN2				AMB	AMB		
	comp=Z,440nm,3.0s						
H11A	Donnelly	82.11	38	⇓P	P	23 55 43.3	-0.6
	baz=82,SNR=13						
R17A	Hanksville Air	82.12	46	⇓P	P	23 55 44.3	+0.1
	baz=82,SNR=5.5						
DIV	Divide	82.12	14	eP	P	23 55 42.1	-1.5
	comp=Z,13μm,0.6s						
K13A	Stover Farm, H	82.13	41	⇑P	P	23 55 43.9	-0.2
	baz=82,SNR=8.2						
F10A	Beach Ranch, E	82.14	36	⇑P	P	23 55 43.2	-0.8
	baz=82,SNR=15						
D09A	Jones Farm, Ri	82.18	35	⇓P	P	23 55 43.8	-0.5
	baz=82,SNR=5.3						
N15A	Stansbury Isla	82.18	43	⇓P	P	23 55 44.1	-0.3
	baz=82,SNR=12						
C08A	Higginbotham F	82.22	34	⇓P	P	23 55 43.5	-0.9
	baz=82,SNR=7.4						
TMUT	Trail Mountain	82.22	45	eP	P	23 55 46.1	+1.4
MYKOM	Kota Tinggi	82.24	274	⇑P	P	23 55 46.4	+1.0
S18A	Hurst Farm, Bl	82.25	46	⇓P	P	23 55 45.4	+0.5
	baz=82,SNR=5.5						
A07A	Ashnola River,	82.29	33	⇓P	P	23 55 44.4	-0.4
	baz=82,SNR=9.0						
L14A	Malta	82.33	41	⇑P	P	23 55 44.9	-0.3
	baz=82,SNR=6.8						
G11A	Walters Elk Ra	82.36	37	⇑P	P	23 55 45.0	-0.3
	baz=82,SNR=62						
B08A	Colville Reser	82.41	34	⇓P	P	23 55 44.3	-1.2
	baz=83,SNR=8.8						
HLID	Hailey	82.43	40	⇓P	P	23 55 45.9	+0.2
	baz=83						
HLID	Hailey	82.43	40	eP	P	23 55 46.1	+0.4
	comp=Z,219nm,2.3s,mb5.4						
SPUT	South Promonto	82.45	42	eP	P	23 55 46.3	+0.5
PPLA	Purkeypile	82.46	10	eP	P	23 55 43.8	-1.5
	comp=Z,12nm,0.9s,mb4.5						
J13A	Cove Ranch, Pi	82.48	40	⇓P	P	23 55 46.2	+0.2
	baz=83,SNR=28						
HVU	Hansel Valley	82.49	42	eP	P	23 55 46.5	+0.5
O16A	Springville	82.49	44	⇓P	P	23 55 46.5	+0.5
	baz=83						
T19A	Beclabito	82.50	48	⇑P	P	23 55 46.6	+0.4
	baz=83,SNR=9.9						
E10A	Myers Farm, Un	82.51	36	⇓P	P	23 55 46.0	+0.1
	baz=83						
PMSA	Palmer Station	82.51	156	eP	P	23 55 45.5	-0.3
	comp=Z,10nm,1.0s,mb4.5						
QIZ	Qiongzhong	82.52	293	P	P	23 55 46.8	+0.1
QIZ				AP	pP	23 56 22.6	-12
QIZ				XP	sP	23 56 40.4	-15
QIZ				AMB	AMB		
	comp=Z,17nm,0.9s,mb4.8						
QIZ				AMB	AMB		
	comp=Z,240nm,4.9s						
M15A	Larsen Ranch,	82.53	42	⇓P	P	23 55 45.9	-0.4
	baz=83,SNR=26						
CTU	Camp Tracy	82.58	43	eP	P	23 55 46.7	+0.2
SRU	San Rafael	82.59	45	⇑P	P	23 55 46.9	+0.3
	baz=83,SNR=20						
SRU	San Rafael	82.59	45	eP	P	23 55 47.1	+0.5
P17A	Butcher Ranch,	82.63	45	⇓P	P	23 55 46.8	+0.1
	baz=83,SNR=5.3						
C09A	Chrisman Ranch	82.64	35	⇑P	P	23 55 45.7	-0.9
	baz=83						
K14A	Jones Ranch, D	82.64	41	⇓P	P	23 55 46.8	0.0
	baz=83,SNR=14						
R18A	Canyonlands Na	82.66	46	⇓P	P	23 55 47.0	0.0
	baz=83,SNR=23						
F11A	Grangeville	82.70	37	⇑P	P	23 55 45.1	-1.9
	baz=83,SNR=7.2						
H12A	Diamond D Ranc	82.71	39	⇓P	P	23 55 47.0	-0.1
	baz=83,SNR=22						
LAZ	Ladron	82.72	50	eP	P	23 55 48.0	+0.6
LAZ				epP	pP	23 56 37.2	+1.9
JLU	Jordanelle	82.73	43	eP	P	23 55 47.8	+0.6
DAU	Daniels Canyon	82.76	44	eP	P	23 55 48.0	+0.6
I13A	Wildhorse Cree	82.80	39	⇑P	P	23 55 47.6	0.0
	baz=83,SNR=16						
A08A	Turner Farm, O	82.81	33	⇑P	P	23 55 46.9	-0.5
	baz=83,SNR=17						
KGM	Kluang	82.81	274	⇓P	P	23 55 49.4	+1.0
J14A	Carey	82.85	40	⇑P	P	23 55 48.3	+0.5
	baz=83,SNR=34						
Q18A	Rafter H Ranch	82.85	45	⇓P	P	23 55 47.7	-0.2
	baz=83,SNR=19						
L15A	Malad City	82.85	42	⇑P	P	23 55 47.4	-0.4
	baz=83,SNR=16						
S19A	Harvey Farm, M	82.87	47	⇑P	P	23 55 48.4	+0.4
	baz=83,SNR=9.6						
N16A	Rees Ranch, Co	82.88	43	⇑P	P	23 55 48.4	+0.3
	baz=83						
M16A	Huntsville	82.98	43	⇑P	P	23 55 48.1	-0.5
	baz=83,SNR=11						
BNM	Barren Site	82.98	51	eP	P	23 55 49.1	+0.4
BNM				epP	pP	23 56 38.4	+1.7
O17A	Robinson Place	82.99	44	⇑P	P	23 55 49.1	+0.4
	baz=83,SNR=40						
P18A	Preston Nutter	83.03	45	⇑P	P	23 55 49.3	+0.5
	baz=83,SNR=10						
R19A	Curley Farm, L	83.05	46	⇓P	P	23 55 49.3	+0.4
	baz=83,SNR=6.3						
LPM	Los Pinos Moun	83.05	51	eP	P	23 55 50.2	+1.1
H13A	Challis	83.07	39	⇑P	P	23 55 48.7	-0.2
	baz=83,SNR=16						
B09A	Rice	83.08	34	⇓P	P	23 55 48.1	-0.7
	baz=83,SNR=6.0						
K15A	Arbon	83.12	41	⇑P	P	23 55 49.0	-0.3
	baz=83,SNR=9.2						
F12A	Elk City	83.15	37	⇓P	P	23 55 48.6	-0.7
	baz=83,SNR=53						
TXAR	Lajitas Array	83.16	56	P	P	23 55 50.7	+0.9
	comp=Z,1.9nm,0.6s,mb4.0,baz=222,slow=8.4,SNR=17						
TXAR				pP	pP	23 56 34.6	-3.1
	comp=Z,1.0nm,1.0s,baz=205,slow=2.6,SNR=1.1						
TXAR				LR	LR	00 28 28.9	
	comp=Z,64nm,18.9s,baz=180,slow=32						
TXAR	Lajitas Array	83.16	56	P	P	23 55 50.7	+0.9
TXAR				*PP	pP	23 56 34.6	-3.1
TXAR	Lajitas Array	83.16	56	P	P	23 55 50.7	+0.9
TXAR				pP	pP	23 56 34.6	-3.1
TXAR				LR	LR	00 28 28.9	
A09A	Danville	83.18	34	⇑P	P	23 55 48.7	-0.7
	baz=83,SNR=9.0						
I14A	Mackay	83.21	40	⇓P	P	23 55 50.2	+0.5
	baz=83,SNR=14						
PV10	Paradox Valley	83.24	46	eP	P	23 55 50.2	+0.3
D11A	Klaveano Farm,	83.27	36	⇓P	P	23 55 48.8	-1.1
	baz=83,SNR=14						
KTH	Kantishna Hill	83.28	11	eP	P	23 55 48.1	-1.5
	comp=Z,65nm,1.3s,mb5.2						
N17A	Moffit Pass	83.31	43	⇑P	P	23 55 50.4	+0.2
	baz=83,SNR=11						
WHN	Wuhan	83.31	305	⇓P	P	23 55 51.2	+0.7
E12A	Beaver Dam Sad	83.34	37	⇑P	P	23 55 49.7	-0.6
	baz=84						
TNA	Tin City	83.34	3	eP	P	23 55 50.0	+0.2
	comp=Z,283nm,1.6s,mb5.8						
CHUM	Lake Minchumin	83.36	10	eP	P	23 55 47.6	-2.3
	comp=Z,30nm,0.9s,mb5.0						
Q19A	Hogan Spring (	83.37	46	⇓P	P	23 55 50.8	+0.2
	baz=84,SNR=17						
PV01	Paradox Valley	83.45	47	eP	P	23 55 51.2	+0.2
PV01				epP	pP	23 56 38.1	-0.8
L16A	Fish Haven	83.47	42	⇑P	P	23 55 50.9	-0.1
	baz=84,SNR=20						
ANMO	Albuquerque	83.47	50	P	P	23 55 51.3	+0.1
	comp=Z,7.1nm,1.0s,mb4.4,baz=231,slow=5.7,SNR=20						
ANMO				pP	pP	23 56 37.0	-2.1
	comp=Z,0.7nm,0.5s,baz=324,slow=12,SNR=1.3						
ANMO	Albuquerque	83.47	50	diP	P	23 55 51.7	+0.5
ANMO	Albuquerque	83.47	50	eP	P	23 55 52.0	+0.8
	comp=Z,45nm,1.8s,mb4.9						
O18A	Roosevelt	83.51	44	⇑P	P	23 55 51.5	+0.2
	baz=84						
SKAG	Skagway	83.53	19	eP	P	23 55 51.3	+0.4
NEW	Newport	83.54	35	eP	P	23 55 50.4	-0.8
NEW				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NEW	Newport	83.54	35	eP	P	23 55 50.4	-0.8
	comp=Z,8.1nm,1.1s,mb4.4						
J15A	Blackfoot	83.56	41	⇓P	P	23 55 52.2	+0.8
	baz=84,SNR=49						
H14A	Leadore	83.64	39	⇑P	P	23 55 52.2	+0.4
	baz=84,SNR=22						
F13A	Darby	83.70	38	⇑P	P	23 55 51.7	-0.4
	baz=84,SNR=28						
A10A	Northport	83.73	34	⇓P	P	23 55 51.7	-0.5
	baz=84,SNR=9.6						
TIA	Tai'an	83.73	311	⇓P	P	23 55 53.0	+0.5
TIA				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.5						
C11A	Tepee Creek (N	83.77	35	⇓P	P	23 55 52.3	-0.1
	baz=84						
BPAW	Bear Paw Mtn.	83.78	10	eP	P	23 55 50.0	-2.1
	comp=Z,33nm,1.4s,mb4.9						
K16A	Soda Springs	83.79	41	⇓P	P	23 55 52.7	+0.1
	baz=84,SNR=20						
D12A	Red Ives Fores	83.82	36	⇑P	P	23 55 52.2	-0.5
	baz=84						
GDL2	Guadalupe Moun	83.83	54	eP	P	23 55 54.5	+1.4
I15A	Monteview	83.84	40	⇑P	P	23 55 53.6	+0.8
	baz=84						
P19A	Cripple Cowboy	83.89	45	⇑P	P	23 55 53.4	+0.2
	baz=84,SNR=12						
G14A	Jackson	83.92	39	⇓P	P	23 55 53.0	-0.2
	baz=84,SNR=5.9						
HYT	Haines Junctio	83.98	17	eP	P	23 55 55.1	+2.0
J16A	Bone	84.00	41	⇓P	P	23 55 54.1	+0.4
	baz=84,SNR=12						
KTGM	Kuala Trenggan	84.02	278	⇓P	P	23 55 56.0	+1.4
B11A	Sandpoint	84.05	35	⇓P	P	23 55 53.1	-0.7
	baz=84,SNR=10						
MCMT	McKenzie Canyo	84.06	39	P	P	23 55 54.4	+0.5
H15A	Lima	84.07	39	⇑P	P	23 55 54.2	+0.2
	baz=84,SNR=13						
N18A	Larsen Ranch,	84.08	44	⇑P	P	23 55 53.6	-0.6
	baz=84						
O19A	Miners Draw (B	84.11	45	⇑P	P	23 55 53.9	-0.4
	baz=84						
C12B	Naegeli Ranch,	84.12	36	⇓P	P	23 55 53.5	-0.7
	baz=84						
E13A	Victor	84.15	37	⇑P	P	23 55 53.4	-0.9
	baz=84,SNR=12						
RRI2	Red Ridge	84.22	41	eP	P	23 55 55.1	+0.3
	comp=Z,36nm,1.1s,mb5.0						
F14A	Wisdom	84.28	38	⇓P	P	23 55 54.7	-0.3
	baz=84						
D13A	Huson	84.35	37	⇑P	P	23 55 54.3	-1.1
	baz=84						
A11A	Hall Mountain,	84.35	34	⇑P	P	23 55 55.0	-0.3
	baz=84,SNR=6.7						
N19A	John Jarvie Ra	84.37	44	⇑P	P	23 55 55.2	-0.4
	baz=84,SNR=7.0						
I16A	Newdale	84.39	41	⇑P	P	23 55 56.2	+0.5
	baz=84,SNR=18						
G15A	Dillon	84.46	39	⇑P	P	23 55 56.0	0.0
	baz=85,SNR=32						
B12A	Libby	84.49	35	⇓P	P	23 55 55.5	-0.5
	baz=85						
DLMT	Dillon	84.50	39	eP	P	23 55 56.2	+0.1
MSO	Missoula	84.50	37	eP	P	23 55 55.3	-0.8
DLBC	Dease Lake	84.51	22	P	P	23 55 55.8	0.0
REDW	Red Top Meadow	84.52	41	eP	P	23 55 56.6	+0.3
	comp=Z,28nm,1.2s,mb4.9						
TPAW	Teton Pass	84.53	41	eP	P	23 55 56.6	+0.3
	comp=Z,126nm,2.1s,mb5.3						
E14A	Clinton	84.53	38	⇓P	P	23 55 55.7	-0.5
	baz=85,SNR=18						
SEY	Seymchan	84.53	346	diP	P	23 55 55.2	-0.7
SEY	Seymchan	84.53	346	iP	P	23 55 55.3	-0.6
C13A	Hot Springs	84.61	36	⇑P	P	23 55 55.5	-1.2
	baz=85						
SNOW	Snow King Moun	84.63	41	eP	P	23 55 57.7	+0.8
	comp=Z,28nm,1.0s,mb5.0						
A12A	Yaak River Ran	84.72	35	⇓P	P	23 55 57.0	-0.2
	baz=85						
IMW	Indian Meadow	84.74	41	eP	P	23 55 57.8	+0.4
	comp=Z,16nm,0.8s,mb4.8						
FRIM	Kepong	84.80	275	⇓P	P	23 55 59.5	+1.1
LOHW	Long Hollow	84.81	41	eP	P	23 55 57.7	0.0
F15A	Butte	84.81	38	⇑P	P	23 55 57.3	-0.4
	baz=85,SNR=8.4						
LRM	Limekiln Ridge	84.83	38	eP	P	23 55 57.7	0.0
D14A	Greenough	84.89	37	⇑P	P	23 55 57.1	-0.9
	baz=85,SNR=7.0						
QLMT	Earthquake Lak	84.92	40	eP	P	23 55 59.1	+0.8
CHMT	Chamberlain Mo	84.94	37	eP	P	23 55 57.8	-0.6

H16A Russell Place, 84.97 40 ⇑P P 23 55 59.4 +0.9
baz=85,SNR=13
FLWY Flagg Ranch 84.98 41 eP P 23 55 59.6 +1.0
comp=Z,32nm,1.1s,mb5.0
MAW Mawson 85.01 199⇓iP P 23 55 58.9 +0.5
comp=Z,18nm,0.5s,mb5.0
MAW Mawson 85.01 199⇓iP P 23 55 58.9 +0.5
MAW pmax pmax
comp=Z,18nm,0.5s
E15A Deer Lodge 85.03 38 ⇓P P 23 55 58.5 -0.3
baz=85,SNR=10
BW06 Boulder Array 85.04 42 eP P 23 55 58.5 -0.4
PDAR Pinedale Array 85.04 42 P P 23 55 58.4 -0.5
comp=Z,6.6nm,0.8s,mb4.4,baz=211,slow=3.0,SNR=45
PDAR pP pP 23 56 46.2 -0.8
comp=Z,2.5nm,0.7s,baz=194,slow=5.4,SNR=1.8
PDAR PKKPbc PKKPbc 00 14 04.8 -1.9
comp=Z,1.1nm,0.8s,baz=88,slow=4.7,SNR=6.9
COLA College 85.05 11 d iP P 23 55 57.4 -1.0
COLA College 85.05 11 eP P 23 55 57.2 -1.2
B13A Whitefish 85.06 36 ⇓P P 23 55 58.1 -0.7
baz=85
YMR Madison River 85.12 40 eP P 23 55 58.9 -0.4
comp=Z,32nm,0.4s,mb5.4
C14A Swan Lake 85.13 36 ⇓P P 23 55 58.4 -0.9
baz=85
IMA2 Indian Mountai 85.20 9 eP P 23 55 59.0 -0.1
BOZ Bozeman (W) 85.22 39 ⇑P P 23 55 59.8 +0.1
baz=85
BOZ Bozeman (W) 85.22 39 eP P 23 55 59.8 0.0
YNR Norris Junctio 85.32 40 eP P 23 55 59.6 -0.6
A13A Flathead Natio 85.40 35 ⇓P P 23 56 00.2 -0.3
baz=86
SDCO Great Sand Dun 85.42 48 eP P 23 56 00.9 0.0
comp=Z,6.2nm,1.0s,mb4.3
D15A Lincoln 85.43 37 ⇓P P 23 56 00.6 -0.2
baz=86,SNR=8.2
WALA Waterton Lakes 85.74 35 eP P 23 56 01.6 -0.6
comp=Z,18nm,1.1s,mb4.7
IPM Ipoh 85.75 276 ⇓P P 23 56 04.4 +1.3
BJT Baijiatuau 86.14 314 eP P 23 56 04.9 +0.5
BJT pmax pmax
comp=Z,38nm,0.9s
BJT Baijiatuau 86.14 314 eP P 23 56 04.9 +0.5
comp=Z,38nm,0.9s,mb5.1
BJI Beijing 86.14 314 P P 23 56 05.1 +0.7
BJI AMB AMB
comp=Z,59nm,1.2s,mb5.2
DAWY Dawson 86.16 15 eP P 23 56 03.6 -0.3
ISCO Idaho Springs 86.26 46 eP P 23 56 05.4 +0.4
EGAK Eagle 86.34 14 eP P 23 56 04.4 -0.4
comp=Z,37nm,0.8s,mb5.2
KULM Kulim 86.36 277 ⇑P P 23 56 07.5 +1.4
RLMT Red Lodge 86.39 40 eP P 23 56 05.5 0.0
comp=Z,13nm,1.4s,mb4.5
RLMT epP pP 23 56 54.3 +0.6
GCMT Greycliff 86.48 40 eP P 23 56 06.6 +0.7
JCT Junction City 86.69 57 eP P 23 56 07.2 -0.1
BILL Bilibino 86.77 353 d iP P 23 56 06.4 -0.4
BILL pmax pmax
comp=Z,103nm,1.1s,mb5.5
BILL Bilibino 86.77 353 i P P 23 56 06.4 -0.4
SNG Songkhla 86.98 278 P P 23 56 11.0 +1.9
comp=Z,520nm,1.0s,mb6.2
PSI Prapat 87.23 274⇓eP P 23 56 10.3 0.0
EGMT Eagleton 87.55 38 ⇑P P 23 56 10.8 -0.2
baz=88
EGMT Eagleton 87.55 38 eP P 23 56 10.4 -0.5
comp=Z,9.4nm,1.0s,mb4.6
GYA Guiyang 87.95 298 P P 23 56 15.0 +1.6
GYA AP pP 23 56 54.6 -7.3
GYA XP sP 23 57 10.4 -12
GYA PP PP 23 59 44.8 +1.9
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,140nm,5.7s
HIA Hailar 88.31 323 i P P 23 56 14.9 +0.4
HIA Hailar 88.31 323 i P P 23 56 14.9 +0.4
PLCA Paso Flores 88.91 133 P P 23 56 18.4 +0.7
comp=Z,1.7nm,0.7s,mb4.0,baz=336,slow=4.2,SNR=3.9
PLCA PKKPbc PKKPbc 00 13 56.0 -0.5
comp=Z,2.1nm,0.9s,baz=320,slow=7.2,SNR=3.8
PLCA Paso Flores 88.91 133 P P 23 56 18.4 +0.7
PLCA PKKPbc PKKPbc 00 13 56.0 -0.5
XAN Xi'an 88.92 306 P P 23 56 18.4 +0.6
XAN AP pP 23 56 56.3 -10
XAN XP sP 23 57 12.3 -15
XAN PP PP 23 59 49.6 -0.9
XAN AMB AMB
comp=Z,103nm,1.4s,mb5.5
XAN AMB AMB
comp=Z,223nm,7.4s
RSSD Black Hills 89.23 43 eP P 23 56 18.1 -0.9
RSSD pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
RSSD Black Hills 89.23 43 eP P 23 56 18.1 -0.9
comp=Z,3.8nm,0.6s,mb4.4
HHC Hu-ho-hao-te 89.67 313⇑iP P 23 56 22.2 +1.1
HHC AP pP 23 57 01.7 -8.0
HHC XP sP 23 57 18.7 -11
HHC PP PP 23 59 58.6 +2.4
HHC AMB AMB
comp=Z,106nm,0.9s,mb5.7
HHC AMB AMB
comp=Z,540nm,6.8s
HHC LR LR
comp=N,108nm,15.4s
HHC LR LR
comp=E,135nm,16.5s
HHC LR LR
comp=Z,105nm,15.4s
HKT Hockley 89.69 58 eP P 23 56 22.5 +1.0
HKT pmax pmax
comp=Z,13nm,1.5s,mb4.5
HKT Hockley 89.69 58 eP P 23 56 22.5 +1.0
comp=Z,13nm,1.5s,mb4.5
CLNS Chul'man 89.71 332 d iP P 23 56 21.3 +0.4
CLNS e 00 00 01.3
CLNS eS S 00 06 35.4 -20
CLNS e*SS sS 00 09 01.5 +41
CLNS pmax pmax
comp=Z,146nm,1.4s,mb5.6
CLNS smax
comp=N,124μm,19.6s
CLNS smax
comp=E,106μm,11.7s
CLNS Chul'man 89.71 332⇓iP P 23 56 21.4 +0.5
SYO Syowa Base 89.91 192⇑eP P 23 56 20.0 -1.8
SYO Syowa Base 89.91 192⇓ePcP PcP 23 56 22.1 -0.8
NST Nakhon Sawan 90.09 286 P P 23 56 24.6 +0.9
comp=E,48nm,1.1s,mb5.2
SNAA Sanae 90.52 177⇑eP P 23 56 24.9 +0.3
SNAA Sanae 90.52 177 eP P 23 56 24.6 0.0
comp=E,29nm,1.4s,mb5.0
NANT Nan 90.57 289 ⇓P P 23 56 25.0 -0.8
comp=E,50nm,1.0s,mb5.4
BTO Baotou 90.64 313 eP P 23 56 25.1 -0.6
KMI Kunming 90.82 296 P P 23 56 28.8 +1.9
KMI AMB AMB
comp=Z,51nm,1.2s,mb5.3
KMI LR LR
comp=Z,88nm,29.3s
YAK Yakutsk 90.82 337 eP P 23 56 23.8 -2.1
YAK pmax pmax
comp=Z,36nm,0.9s,mb5.3
YAK Yakutsk 90.82 337⇓eP P 23 56 24.5 -1.4
DGMT Dagmar 91.03 39 eP P 23 56 27.8 +0.5
comp=Z,124nm,1.5s,mb5.6
MAIT Maitri 91.47 182 eP P 23 56 28.3 -0.7
BDT Bhumibol Dam 91.61 287 ⇑P P 23 56 32.5 +1.8
comp=Z,60nm,1.1s,mb5.4
CHRT Chiangrai 91.73 290 ⇓P P 23 56 32.0 +0.8
comp=Z,426nm,0.9s
CD2 Chengdu 91.89 302⇓iP P 23 56 32.3 +0.6
CD2 AP pP 23 57 12.8 -7.5
CD2 XP sP 23 57 29.8 -11
CD2 AMB AMB
comp=Z,40nm,1.6s,mb5.1
CD2 AMB AMB
comp=Z,160nm,8.4s
CM31 Chiang Mai Arr 92.04 289 eP P 23 56 33.7 +1.0
comp=Z,17nm,0.7s,mb5.1
CMAR Chiang Mai Arr 92.04 289 P P 23 56 34.1 +1.4
comp=Z,43nm,0.9s,mb5.4,baz=102,slow=2.8,SNR=171
CHG Chiang Mai 92.15 289 ⇓P P 23 56 34.3 +1.1
comp=Z,74nm,0.9s,mb5.6
YKA Yellowknife Ar 92.92 24 P P 23 56 35.0 -0.7
comp=Z,3.3nm,0.5s,mb4.6,baz=234,slow=4.5,SNR=13
YKA Yellowknife Ar 92.92 24 P P 23 56 35.0 -0.7
MIAR Mount Ida 93.06 55 eP P 23 56 37.2 +0.2
MIAR pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
MIAR Mount Ida 93.06 55 eP P 23 56 37.2 +0.2
comp=Z,6.8nm,1.0s,mb4.6
LZH Lanzhou 93.54 307 eP P 23 56 40.5 +1.3
LZH AP pP 23 57 21.3 -6.5
LZH XP sP 23 57 39.0 -9.3
LZH AMB AMB
comp=Z,92nm,1.1s,mb5.7
LZH AMB AMB
comp=Z,425nm,8.6s
LZH LR LR
comp=N,512nm,17.5s
LZH LR LR
comp=Z,837nm,19.8s
ECSD EROS,Sioux Fal 94.00 45 eP P 23 56 40.4 -0.7
comp=Z,33nm,1.8s,mb5.1
BOD Bodaibo 95.32 329 eP P 23 56 45.3 -1.5
BOD pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
ULN Ulaanbaatar 95.33 319 d iP P 23 56 46.8 -0.3
ULN Ulaanbaatar 95.33 319 eP P 23 56 47.3 +0.2
comp=Z,13nm,0.9s,mb5.0
SONM Songino Array 95.73 318 P P 23 56 48.9 0.0
comp=Z,4.1nm,0.8s,mb4.7,baz=98,slow=2.5,SNR=18
SONM PP PP 00 00 38.7 -4.8
comp=Z,0.3nm,0.3s,baz=103,slow=6.5,SNR=3.5
TIXI Tiksi 96.99 345⇑eP P 23 56 53.1 -1.0
TIXI pmax pmax
comp=Z,19nm,0.9s,mb5.3
TIXI Tiksi 96.99 345⇑eP P 23 56 53.2 -0.9
LVC Limon Verde 97.21 116 PKKPbc PKKPbc 00 13 34.2 -0.3
comp=Z,4.2nm,0.7s,baz=26,slow=4.6,SNR=6.2
GTA Gaotai 97.61 309 P P 23 56 58.2 +0.6
GTA XP sP 23 57 59.8 -7.0
GTA AMB AMB
comp=Z,12nm,1.5s,mb5.0
IMP Imphal 98.34 293 ex x 23 57 01.0
ZAK Zakamensk 98.50 320 eP P 23 57 00.6 -0.7
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.5
TLY Talaya 98.67 321⇓eP P 23 57 01.3 -0.7
LPAZ La Paz 100.29 111 PP PP 00 01 20.2 +1.5
comp=Z,2.7nm,1.1s,baz=248,slow=9.0,SNR=6.7
SIV San Ignacio 106.64 113 PKKPbc PKKPbc 00 13 06.2 -1.0
comp=Z,2.7nm,0.8s,baz=87,slow=4.8,SNR=12
SIV PKKPab PKKPab 00 13 23.9 -0.7
comp=Z,2.8nm,0.8s,baz=89,slow=6.1,SNR=9.9
ZALV Zalesovo Beam 110.28 322 PKiKP PKiKP 00 01 52.6 -1.1
comp=Z,4.1nm,0.6s,baz=145,slow=1.2,SNR=23
ZALV PP PP 00 02 29.3 -2.4
comp=Z,3.0nm,0.9s,baz=73,slow=5.1,SNR=4.6
ZAL Zalesovo 110.29 322 PKIKP PKiKP 00 01 52.6 -1.1
ZAL 00 02 29.3
NVS Novosibirsk 111.24 323 i PKIKP PKiKP 00 01 53.4 -2.1
MKAR Makanchi Array 111.52 314 Pdiff Pdif 23 58 00.1 +0.8
comp=Z,1.0nm,0.7s,baz=74,slow=5.2,SNR=9.1
MKAR PKiKP PKiKP 00 01 55.3 -1.0
comp=Z,4.5nm,0.5s,baz=111,slow=0.5,SNR=11
MKAR PKKPbc PKKPbc 00 12 51.3 -1.2
comp=Z,0.9nm,0.8s,baz=294,slow=3.9,SNR=5.2
MKAR Makanchi Array 111.52 314 P Pdif 23 58 00.1 +0.8
MKAR 00 01 55.3
KURK Kurchatov 114.04 318 PKP PKiKP 00 01 60.0 -1.0
comp=Z,5.4nm,0.6s,baz=95,slow=1.7,SNR=36
KURK PP PP 00 02 51.1 -7.4
comp=Z,1.2nm,0.8s,baz=51,slow=14,SNR=4.6
KURK PKKPbc PKKPbc 00 12 42.5 -1.8
comp=Z,0.7nm,0.8s,baz=265,slow=4.4,SNR=5.5
KURK Kurchatov 114.04 318 eP Pdif 23 58 10.9 +0.4
KURK 00 02 00.0
KURK 00 12 42.5
KURK Kurchatov 114.04 318 ePdif Pdif 23 58 10.9 +0.4
KURK PKP PKiKP 00 01 60.0 -1.0
KURK PP PP 00 02 51.1 -7.4
KURK PKKPbc PKKPbc 00 12 42.5 -1.8
TKM2 Tokmak 2 116.15 310 P PKPdf 00 02 04.8 -0.5
SNR=11
TKM2 Tokmak 2 116.15 310 ePKPdf PKPdf 00 02 05.9 +0.6
KBK Karagaybulak 116.62 309 P PKPdf 00 02 06.0 -0.2
SNR=6.3
CHMS Chumysh 116.77 310 P PKPdf 00 02 05.8 -0.6
SNR=7.6
UCH Uchtor 116.94 309 P PKPdf 00 02 07.1 +0.3
SNR=7.9
USP Ospenovka 116.95 310 P PKPdf 00 02 06.2 -0.6
SNR=7.3
EKS2 Erkin-Say 117.49 309 P PKPdf 00 02 08.0 +0.2
SNR=6.0
AML Almayashu 117.55 309 P PKPdf 00 02 08.0 0.0
SNR=8.2
BDFB Brasilia 117.96 119 PKKPbc PKKPbc 00 12 29.6 -0.2
comp=Z,1.8nm,0.7s,baz=159,slow=5.6,SNR=4.5
SFJD Kangerlussuaq 119.42 22 PKP PKPdf 00 02 09.6 -1.2
comp=Z,6.5nm,0.7s,baz=74,slow=3.0,SNR=3.2
SVE Sverdlovsk 123.45 327 ePKIKP PKPdf 00 02 18.6 -0.3
SVE pmax pmax
comp=Z,20nm,0.8s
ARU Arti 124.66 327 i PKIKP PKPdf 00 02 20.7 -0.5
ARU 00 09 07.5
ARU Arti 124.66 327 ePKPdf PKPdf 00 02 20.8 -0.5
KEV Kevo 126.41 351 epkp PKPdf 00 02 23.1 -1.1
comp=Z,9.9nm,0.7s
KEV Kevo 126.41 351 ePKPdf PKPdf 00 02 23.5 -0.7
ARCES ARCESS Array B 126.83 351 PKP PKPdf 00 02 24.4 -0.6
comp=Z,18nm,0.6s,baz=344,slow=0.6,SNR=100
AKTK Aktyubinsk 127.00 320 PKP PKPdf 00 02 25.9 0.0
AKTO Aktyubinsk 127.00 320 PKP PKPdf 00 02 25.9 0.0
comp=Z,6.9nm,0.9s,baz=60,slow=2.4,SNR=16
BOSA Boshof 129.85 203 PKP PKPdf 00 02 33.1 +1.0
comp=Z,5.1nm,0.6s,baz=139,slow=5.9,SNR=4.8
JOF Joensuu 131.48 344 epkp PKPdf 00 02 32.8 -1.2
comp=Z,18nm,0.5s
JOF Joensuu 131.48 344 ePKIKP PKPdf 00 02 32.8 -1.2
JOF pmax pmax
comp=Z,18nm,0.5s
KAF Kangasniemi 133.37 346 epkp PKPdf 00 02 35.6 -2.0
comp=Z,14nm,0.5s,baz=18,slow=1.9
KAF Kangasniemi 133.37 346 ePKIKP PKPdf 00 02 35.6 -2.0
KAF pmax pmax
comp=Z,14nm,0.5s
OBN Obninsk 135.76 335⇓iPKIKP PKPdf 00 02 41.7 -0.6
OBN pmax pmax
comp=Z,15nm,0.8s
VRHR Novokhopersk 136.01 327 ePKIKP PKPdf 00 02 42.0 -0.9
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR pmax pmax
comp=N,9.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,1.4s
VSU Vasula 136.46 344 i PKIKP PKPdf 00 02 44.4 +0.9
NB2 NORSAR Subarra 136.66 356 PKP PKPdf 00 02 33.4 -10
comp=Z,2.8nm,0.7s,baz=17,slow=2.6
NOA NORSAR Array B 136.66 356 PKP PKPdf 00 02 43.2 -0.6
comp=Z,4.6nm,0.7s,baz=14,slow=4.0,SNR=12
NOA PP PP 00 05 23.8 -3.9
comp=Z,2.1nm,0.9s,baz=11,slow=6.3,SNR=5.0
NOA SKPbc SKPbc 00 05 57.8 -0.1
comp=Z,2.5nm,1.0s,baz=6.3,slow=4.0,SNR=3.6
NOA NORSAR Array B 136.66 356 PKP PKPdf 00 02 43.2 -0.6
NOA PP PP 00 05 23.8 -3.9
NOA SKPbc SKPbc 00 05 57.8 -0.1
VRSR Storozhevoye 137.16 329 ePKIKP PKPdf 00 02 43.4 -1.6
VRSR pmax pmax
comp=Z,10.0nm,1.3s
VRSR pmax pmax
comp=N,3.0nm,0.7s
VRSR pmax pmax
comp=E,5.0nm,1.0s
KIV Kislovodsk 139.12 318⇓iPKIKP PKPdf 00 02 51.6 +2.8
KIV e 00 05 42.8
KIV pmax pmax
comp=Z,8.0nm,0.9s
GNI Garni 139.30 311 c iPKIKP PKPdf 00 02 52.2 +2.9
RDF Al-Radifah 139.72 294 eP PKPdf 00 02 42.8 -7.7
baz=294
RDF AMb AMB 00 02 53.5
comp=Z,56nm,1.1s,baz=294
MIB Mutribah 139.80 295 eP PKPdf 00 02 41.5 -9.0
baz=295
MIB AMb AMB 00 02 51.7
comp=Z,81nm,1.0s,baz=295
NAY Al-Naaiem 139.95 294 eP PKPdf 00 02 41.9 -8.9
baz=294
NAY AMb AMB 00 02 54.0
comp=Z,31nm,1.3s,baz=294
HAKT HAKKARI 140.96 308 i P PKPdf 00 02 45.9 -6.5
SOC Sochi 141.19 319 i PKIKP PKPdf 00 02 52.7 +0.1
SOC e 00 05 53.6
SOC e 00 09 50.0
SOC eSS SS 00 24 05.3 -3.6
SOC pmax pmax
comp=Z,14nm,0.9s
ERZM Erzurum 141.78 313 i P PKPdf 00 02 49.7 -4.1
AKASG Malin Array Be 142.02 335 PKhKP 00 02 48.1
comp=Z,4.2nm,0.4s,baz=37,slow=4.0,SNR=35
AKASG PP PP 00 06 01.5 +0.6
comp=Z,1.0nm,0.7s,baz=32,slow=5.8,SNR=3.8
GAL1 Galloway 142.31 9 eP PKPdf 00 02 48.6 -5.6
GAL1 AMb AMB 00 02 50.4
comp=Z,26nm,1.6s
BNGL BINGOL 142.32 311 i P PKPdf 00 02 51.3 -3.5
WIM Isle of Man 143.01 10 eP PKPdf 00 02 50.9 -4.6
KMBO Kilima Mbogo 143.16 243 PKP PKPdf 00 02 55.5 -1.6
comp=Z,25nm,0.8s,baz=70,slow=4.7,SNR=61
MARD Mardin 143.23 309 i P PKPdf 00 02 53.3 -3.1
GRSN GIRESUNGRSN 143.44 316 i P PKPdf 00 02 52.4 -4.3
HPK Haverah Park 143.61 7⇓eP PKPdf 00 02 53.1 -3.5
HPK AMb AMB 00 02 55.5
comp=Z,63nm,1.1s
SIM Simferopol' 143.73 324 d ePKIKP PKPdf 00 02 54.7 -2.4
SIM e 00 06 15.0
SIM pmax pmax
comp=Z,30nm,0.9s
WME Myndd Eilian 143.79 10 eP PKPdf 00 02 54.2 -2.7
YRC Rhoscolyn 143.89 10 eP PKPdf 00 02 53.8 -3.3
LHO Holmfirth 143.99 7 eP PKPdf 00 02 53.5 -3.7
WPM1 Penmaenmawr 143.99 9 eP PKPdf 00 02 54.6 -2.7
YRE Yr Eifl 144.18 10 eP PKPdf 00 02 55.4 -2.2
KBI1 Birley Grange 144.31 7⇓eP PKPdf 00 02 55.1 -2.7
STNC Stoke 144.39 8 eP PKPdf 00 02 56.4 -1.5
STNC AMb AMB 00 02 59.5
comp=Z,81nm,1.6s
SBD1 Bryn Du 144.43 9 eP PKPdf 00 02 56.2 -1.8
KWE Weaver Farm 144.51 7⇓eP PKPdf 00 02 56.4 -1.7
MALT Malatya 144.53 312⇓iP PKPdf 00 02 58.8 +0.1
LVV L'vov 144.68 339 i PKIKP PKPdf 00 02 56.5 -2.1
CWF Charnwood Fore 144.84 7⇓eP PKPdf 00 02 57.3 -1.5
CWF AMb AMB 00 02 58.5
comp=Z,73nm,0.7s
HLM1 Long Mynd 144.86 8⇓eP PKPdf 00 02 57.3 -1.5
AKCD Akcadag 144.89 312 i P PKPdf 00 03 00.1 +0.8
KIS Kishinev 145.01 331 κ ePKHKP 00 02 56.0
KIS pmax pmax
comp=Z,400nm,1.4s
KIS pmax pmax
comp=Z,500nm,2.0s
KIS Kishinev 145.01 331⇓iPKP PKPdf 00 02 56.0 -3.2
KIS M 00 02 58.0
comp=Z,400nm,1.4s
AEU East Anglia Un 145.19 4⇓eP PKPdf 00 02 58.4 -0.9
HTR Trewern Hill 145.23 9⇓iP PKPdf 00 02 58.9 -0.5
KWP Kalwaria 145.29 340 ePKP PKPdf 00 02 59.9 +0.3
KWP Kalwaria 145.29 340⇓iP PKPdf 00 02 59.8 +0.2
KWP Kalwaria 145.29 340 ePKP PKPdf 00 02 59.9 +0.3
BOYT Boyabat 145.35 319 i P PKPdf 00 03 02.0 +2.0
MCH1 Michaelchurch 145.35 9⇓eP PKPdf 00 02 59.1 -0.5
MCH1 AMb AMB 00 03 00.1
comp=Z,168nm,0.9s
IAS Iasi 145.42 333⇑iP PKPdf 00 03 00.0 +0.1
SSW Stow on the Wo 145.54 8⇓iP PKPdf 00 03 00.5 +0.5
GZT Gaziantep 145.56 311 i P PKPdf 00 03 02.3 +1.8
IBBN Ibbenburen 145.58 357 ePKPbc PKPbc 00 03 00.7 +0.1
OJC Ojcow 145.65 343 ePKIKP PKPdf 00 03 00.0 -0.2
HGH Gray Hill 145.73 9⇓iP PKPdf 00 03 00.5 +0.2
PINB Pinarbasi 145.78 314 i P PKPdf 00 03 01.4 +0.6
CLZ Clausthal 145.85 354 ePKP2 PKPab 00 03 01.7 -0.5
CLZ e 00 06 25.4
CLZ Clausthal 145.85 354 ePKPbc PKPbc 00 03 01.7 +0.3
CLZ ePP PP 00 06 25.4 +2.0
CTKT Corum 145.86 318 i P PKPdf 00 03 01.6 +0.7
SKP1 Kophill 145.90 7⇓iP PKPdf 00 03 00.9 +0.3
KSP Ksiaz 145.92 347 ePKP PKPdf 00 03 02.2 +1.6
KSP Ksiaz 145.92 347 ePKP2 PKPab 00 03 00.8 -1.6
KSP i 00 03 02.0
KSP Ksiaz 145.92 347 ePKP PKPdf 00 03 00.8 +0.2
KSP i 00 03 02.0
KSP epPKP pPKPdf 00 03 52.3 +0.6
STHS Stebnicka Huta 145.94 341 ePKP2 PKPab 00 03 01.3 -1.3
WTSB Winterswijk 145.95 358 eP PKPdf 00 03 01.4 +0.8
comp=Z,239nm,1.1s
SWN1 Swindon 145.99 8⇓eP PKPdf 00 03 01.4 +0.7
SWN1 AMb AMB 00 03 04.8
comp=Z,334nm,1.4s
KOLS Kolonicke sedl 146.03 340 ePKP2 PKPab 00 03 01.7 -1.3
CLL Collm 146.06 351⇓ePKIKP PKPdf 00 03 01.0 +0.1
CLL i 00 03 02.0
CLL i 00 03 56.2
CLL pmax pmax
comp=Z,278nm,1.5s
CLL Collm 146.06 351 ePKPbc PKPbc 00 03 01.9 -0.2
CLL esPKPbc 00 03 55.7
CLL Collm 146.06 351 ePKPdf PKPdf 00 03 01.0 +0.1
CLL ⇓iPKPbc PKPbc 00 03 02.0 -0.1
comp=Z,278nm,1.5s
CLL i PKiKP PKiKP 00 03 04.2 -0.9
CLL ex x 00 03 19.0
CLL i pPKiKP 00 03 56.2
CLL Collm 146.06 351 ePKP PKPdf 00 03 01.0 +0.1
CLL ⇓iPKP PKPdf 00 03 02.0 +1.1
CLL i pPKP pPKPdf 00 03 56.2 +4.3
HTL Hartland 146.08 11 eP PKPdf 00 03 01.3 +0.4
HTL AMb AMB 00 03 03.3
comp=Z,108nm,1.1s
RAC Raciborz 146.19 345 ePKP2 PKPab 00 03 02.5 -1.0
NIE Niedzica 146.22 342 ePKPdf PKPdf 00 03 02.2 +1.0
WOL Wolverton 146.26 7 eP PKPdf 00 03 01.8 +0.6
WOL AMb AMB 00 03 04.4
comp=Z,351nm,2.2s
UZH Uzhgorod 146.29 339⇑ePKIKP PKPdf 00 03 00.2 -1.1
UZH i 00 03 03.0
UZH e 00 03 53.2
UPC Upice 146.29 347 ePKP PKPdf 00 03 01.7 +0.4
UPC ex x 00 03 03.2
ILGA Ilgaz 146.30 319 i P PKPbc 00 03 03.6 +0.5
CRVS Cervenica-Dubn 146.33 340 ePKIKP PKPdf 00 03 01.3 -0.1
ANDN Andirin 146.33 312 i P PKPbc 00 03 03.9 +0.6
BRG Berggiesshubel 146.33 350 ePKPbc PKPbc 00 03 02.9 0.0
BRG esPKPbc 00 03 56.2
BRG Berggiesshubel 146.33 350⇑iPKP PKPdf 00 03 01.5 +0.1
comp=Z,129nm,1.4s
BRG e 00 06 18.8
comp=Z,5.0nm,1.4s
BRG e 00 55 35.7
comp=Z,2.8nm,0.9s
BRG Berggiesshubel 146.33 350⇑iPKP PKPdf 00 03 01.5 +0.1
BRG e 00 06 18.8
TLCR 146.34 329⇓iP PKPdf 00 03 03.2 +1.7
DPC Dobruska-Polom 146.38 347 ePKP PKPdf 00 03 02.1 +0.7
OKC Ostrava-Krasne 146.43 345 ePKP PKPdf 00 03 01.7 +0.2
OKC ex x 00 03 03.2
BUG Bochum--Univer 146.46 358 ePKPbc PKPbc 00 03 03.0 -0.2
BUG esPKPbc 00 03 58.0
PVCC Panska Ves 146.55 349 ePKP PKPdf 00 03 02.1 +0.4
PVCC ex x 00 03 03.9
CSA1 St Austell 146.62 12⇓eP PKPdf 00 03 03.0 +1.1
MORC Moravsky Berou 146.63 345⇓iP PKPbc 00 03 04.0 +0.2
TRPA Tarpa 146.63 339⇓iP PKPdf 00 03 03.8 +1.9
CDAG Cicekdag 146.66 317 i P PKPbc 00 03 04.6 +0.4
CDAG Cicekdag 146.66 317 i P PKPab 00 03 06.5 +0.7
TFO1 Folkestone 146.68 5⇓eP PKPbc 00 03 03.9 0.0
TFO1 AMb AMB 00 03 05.3
comp=Z,282nm,0.9s
CCA1 Carnmenellis 146.71 12⇓eP PKPdf 00 03 03.4 +1.4
DYA Yadsworthy 146.71 11⇓eP PKPdf 00 03 03.3 +1.3
DYA AMb AMB 00 03 04.2
comp=Z,71nm,1.3s
ODB Odobesti 146.73 332⇓iP PKPbc 00 03 05.2 +1.0
ELDT Eldivan 146.80 319 i P PKPbc 00 03 05.3 +0.8
VRI Vrincioaia 146.81 332⇓iP PKPbc 00 03 04.4 0.0
CMA1 Manaccan 146.83 12⇓eP PKPdf 00 03 03.7 +1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PLOR	Plostina	146.86	332	⇓iP	PKPdf	00 03 04.3	+1.9
COBT	Iskenderun	146.86	310	i P	PKPbc	00 03 05.7	+0.9
MOX	Moxa	146.89	352	ePKP	PKPdf	00 03 02.4	+0.1
MOX				e		00 03 04.4	
	comp=Z,118nm,1.6s						
MOX	Moxa	146.89	352	ePKIKP	PKPdf	00 03 02.4	+0.1
MOX				e		00 03 04.4	
MOX				pmax	pmax		
	comp=Z,118nm,1.6s						
MOX	Moxa	146.89	352	ePKPbc	PKPbc	00 03 04.4	-0.1
UBBA	Unterbreizbach	146.90	354	ePKPbc	PKPbc	00 03 04.1	-0.4
UBBA				ePP	PP	00 06 33.6	+4.1
KECS	Kecovo	147.00	341	ePKP2	PKPab	00 03 05.0	-1.8
TIRR	Tirgusor	147.06	329	⇓iP	PKPbc	00 03 05.1	-0.1
PRU	Pruhonice	147.08	349	ePKP	PKPdf	00 03 02.7	+0.1
PRU				ex	x	00 03 04.9	
HARR	Harsova	147.13	329	⇓iP	PKPbc	00 03 05.8	+0.5
UCC	Uccle	147.15	1	PKP	PKPbc	00 03 05.0	-0.1
BEBN	Eben Emael	147.15	359	PKPbc	PKPbc	00 03 05.1	-0.1
BEBN				PKPab	PKPab	00 03 07.1	-0.1
HGN	Heimansgroeve	147.18	359	eP	PKPbc	00 03 05.1	-0.1
	comp=Z,73nm,2.0s						
NKC	Novy Kostel	147.18	351	ePKP	PKPdf	00 03 03.2	+0.4
NKC				ex	x	00 03 05.4	
VRAC	Vranov	147.29	346	⇓iP	PKPbc	00 03 05.8	+0.2
MENF	Mencas	147.31	3	PKP	PKPdf	00 03 00.8	-2.2
MLR	Muntele Rosu	147.45	332	⇓iP	PKPbc	00 03 06.0	-0.2
MANZ	Manzenberg	147.47	352	ePKPdf	PKPdf	00 03 03.5	+0.2
MANZ				ePKPbc	PKPbc	00 03 06.3	+0.2
VYHS	Vyhne	147.48	343	ePKIKP	PKPdf	00 03 02.4	-0.9
KOLL	Kolacno	147.52	343	ePKIKP	PKPdf	00 03 03.7	+0.3
KOLL				e		00 03 06.6	
BCLA	Clavier	147.53	360	PKPbc	PKPbc	00 03 06.0	-0.2
BCLA				PKPab	PKPab	00 03 08.4	-0.3
ANTO	Ankara	147.55	318	⇓iP	PKPbc	00 03 07.2	+0.6
TREC	Trest	147.55	347	ePKP	PKPdf	00 03 03.6	+0.2
TREC				ex	x	00 03 06.3	
SGKT	Sivrigoynuk	147.60	320	i P	PKPdf	00 03 05.0	+1.2
TNS	Taunus Mts	147.62	356	ePKPbc	PKPbc	00 03 06.6	+0.1
TNS				esPKPbc		00 04 00.4	
TNS				ePP	PP	00 06 37.1	+3.4
TNS	Taunus Mts	147.62	356	ePKPbc	PKPbc	00 03 06.6	+0.1
TNS				esPKPbc		00 04 00.4	
TNS				ePP	PP	00 06 37.1	+3.4
ROTZ	Rotzenmuhle	147.67	351	ePKPdf	PKPdf	00 03 03.7	+0.1
ROTZ				ePKPbc	PKPbc	00 03 07.1	+0.5
PSZ	Piszkesteto	147.69	341	⇓ePKP	PKPbc	00 03 06.9	+0.2
PSZ	Piszkesteto	147.69	341	⇓iP	PKPbc	00 03 06.9	+0.2
DRGR		147.71	337	⇓iP	PKPbc	00 03 06.9	+0.1
DOU	Dourbes	147.85	1	PKP	PKPbc	00 03 07.2	+0.1
GRA1	Grafenberg Arr	147.88	353	ePKPdf	PKPdf	00 03 04.1	+0.1
GRA1				ePKPbc	PKPbc	00 03 07.6	+0.4
GRF	Grafenberg Arr	147.88	353	ePKIKP	PKPdf	00 03 04.1	+0.1
GRF				e		00 03 07.6	
GRF	Grafenberg Arr	147.88	353	ePKPdf	PKPdf	00 03 04.1	+0.1
GRF				ePKPbc	PKPbc	00 03 07.6	+0.4
VOIR		147.88	333	⇑iP	PKPbc	00 03 07.6	+0.3
MODS	Modra-Piesok	148.00	345	ePKIKP	PKPdf	00 03 04.7	+0.5
MODS				e		00 03 07.9	
KHC	Kasperske Hory	148.07	349	ePKIKP	PKPdf	00 03 04.5	+0.2
KHC				e		00 03 08.0	
KHC	Kasperske Hory	148.07	349	ePKP	PKPdf	00 03 04.5	+0.2
KHC				ex	x	00 03 08.0	
KHC				ex	x	00 03 32.0	
HENT	Hendek	148.15	321	i P	PKPdf	00 03 04.2	-0.5
WET	Wettzell	148.18	350	ePKIKP	PKPdf	00 03 04.6	+0.1
WET	Wettzell	148.18	350	ePKPdf	PKPdf	00 03 04.6	+0.1
TOD	Tromm	148.20	355	PKIKP	PKPdf	00 03 05.0	+0.5
RUP	Ruppelstein	148.21	358	PKIKP	PKPdf	00 03 05.1	+0.6
ZST	Bratislava	148.21	345	ePKP2	PKPbc	00 03 08.5	+0.4
WLF	Walferdange	148.27	359	PKPbc	PKPbc	00 03 08.8	+0.6
WLF				PKPab	PKPab	00 03 11.7	-0.1
WLF	Walferdange	148.27	359	ePKPbc	PKPbc	00 03 08.8	+0.6
WLF				esPKPbc		00 04 02.8	
WLF				ePP	PP	00 06 41.2	+3.6
GEC2	GERESS Array S	148.33	349	ePKIKP	PKPdf	00 03 04.3	-0.4
GEC2				e		00 03 08.6	
GEC2	GERESS Array S	148.33	349	ePKPdf	PKPdf	00 03 04.3	-0.4
GEC2				ePKPbc	PKPbc	00 03 08.6	+0.2
GERES	GERESS Array B	148.33	349	PKP	PKPdf	00 03 04.8	+0.1
	comp=Z,28nm,0.8s,baz=3.8,slow=2.0,SNR=57						
GERES				PKPbc	PKPbc	00 03 08.6	+0.2
	comp=Z,29nm,0.8s,baz=24,slow=2.5,SNR=113						
BUD	Budapest	148.34	342	⇓ePKP	PKPbc	00 03 08.5	+0.1
MEST	Erdemli	148.35	312	i P	PKPbc	00 03 09.0	+0.1
BHL	Bhannes	148.38	306	⇓eP	PKPbc	00 03 09.3	+0.3
RCY	Rachaya	148.41	305	⇓eP	PKPbc	00 03 09.5	+0.4
KDHN	Kadinhani	148.74	317	i P	PKPbc	00 03 09.3	-0.5
CONA	Conrad Observa	148.76	346	P	PKPbc	00 03 10.0	+0.5
	comp=Z,282nm,1.7s						
CONA	Conrad Observa	148.76	346	⇓iPKPdf	PKPdf	00 03 05.4	-0.1
	comp=Z,45nm,1.8s						
CONA				⇓iPKiKP	PKiKP	00 03 10.0	-0.8
	comp=Z,282nm,1.7s						
CSNA	Conrad Observa	148.76	346	⇑iPKPdf	PKPdf	00 03 05.3	-0.1
	comp=Z,44nm,1.9s						
CSNA				⇓iPKiKP	PKiKP	00 03 10.0	-0.9
	comp=Z,273nm,1.7s						
ROSF	Rostrenen	148.85	11	ePKIKP	PKPdf	00 03 05.1	-0.5
	comp=Z,12nm,0.9s						
FLN	La Foliniere	148.85	7	ePKIKP	PKPdf	00 03 05.3	-0.3
	comp=Z,50nm,0.9s						
GZR	Gura Zlata	148.85	336	⇓iP	PKPbc	00 03 09.5	-0.3
LANF	Langenberg	148.89	357	PKIKP	PKPdf	00 03 06.4	+0.8
ESKT	Eskisehir	148.97	319	i P	PKPdf	00 03 05.1	-1.0
STU	Stuttgart	149.00	355	ePKPdf	PKPdf	00 03 06.1	+0.3
STU				ePKPbc	PKPbc	00 03 10.4	+0.3
SGMF	Saint Gilles	149.06	10	ePKIKP	PKPdf	00 03 05.4	-0.5
	comp=Z,25nm,1.0s						
LDF	La Druitiere	149.06	7	ePKIKP	PKPdf	00 03 05.5	-0.4
	comp=Z,32nm,0.8s						
BZS	Buzias	149.11	337	⇑iP	PKPbc	00 03 10.0	-0.5
ZIMR		149.13	331	⇑iP	PKPbc	00 03 10.4	-0.2
TIM	Timisoara	149.15	338	⇓iP	PKPbc	00 03 11.2	+0.6
SZH	Strazhica	149.16	330	eP	PKPbc	00 03 10.0	-0.7
GRR	Gorron	149.18	8	ePKIKP	PKPdf	00 03 05.9	-0.2
	comp=Z,32nm,0.9s						
ERMK	Ermenek	149.19	313	i P	PKPbc	00 03 11.8	+0.8
QUIF	Quistinic	149.28	11	ePKIKP	PKPdf	00 03 05.8	-0.5
CRAR	CRAIOVA	149.31	333	⇓iP	PKPbc	00 03 11.2	+0.2
FUR	Furstenfeldbru	149.37	352	ePKP2	PKPbc	00 03 11.2	+0.2
FUR	Furstenfeldbru	149.37	352	ePKPbc	PKPbc	00 03 11.2	+0.2
MEZF	Maizieres J'vi	149.45	0	ePKIKP	PKPdf	00 03 06.6	+0.1
ARSA	Arzberg	149.47	346	P	PKPbc	00 03 10.8	-0.5
	comp=Z,198nm,2.1s						
ARSA	Arzberg	149.47	346	⇓iPKPdf	PKPdf	00 03 06.1	-0.5
	comp=Z,37nm,2.3s						
ARSA				⇓iPKPbc	PKPbc	00 03 10.8	-0.5
	comp=Z,198nm,2.1s						
PVL	Pavlikeni	149.48	330	eP	PKPbc	00 03 12.0	+0.5
CDF	Champ du Feu	149.49	357	ePKIKP	PKPdf	00 03 06.2	-0.4
BFO	Black Forest	149.51	356	ePKPbc	PKPbc	00 03 11.5	+0.2
BFO				esPKPbc		00 04 06.7	
BFO	Black Forest	149.51	356	ePKPbc	PKPbc	00 03 11.5	+0.2
BFO				esPKPbc		00 04 06.7	
RJOB	Jochberg	149.56	350	ePKPdf	PKPdf	00 03 06.6	-0.1
RJOB				ePKPbc	PKPbc	00 03 11.5	0.0
PKSM	Moragy	149.59	341	⇑iP	PKPbc	00 03 10.8	-0.8
ULDT	Uludag	149.62	322	i P	PKPdf	00 03 07.2	+0.1
CSS	Prodhromos	149.68	310	eP	PKPbc	00 03 12.1	-0.2
ECH	Echery	149.69	357	PKHKP	PKPdf	00 03 07.1	+0.2
SPAK	Spaichingen-Ko	149.70	355	PKP	PKPdf	00 03 07.8	+0.8
THEF	They Montfort	149.72	359	PKHKP	PKPdf	00 03 07.6	+0.6
LIBD	Limburg	149.73	357	PKHKP	PKPdf	00 03 07.6	+0.6
HAU	Haudompre	149.93	358	ePKIKP	PKPdf	00 03 07.5	+0.2
FELD	Feldberg im Sc	149.98	356	PKP	PKPdf	00 03 07.6	+0.2
KOGS	Kog	150.05	344	i PKPdf	PKPbc	00 03 12.2	-0.5
KOGS				ePKPbc	PKPab	00 03 18.3	-0.8
MOF	Molkenrain	150.05	357	PKHKP	PKPdf	00 03 07.6	+0.1
GDZ	Gediz	150.08	320	i P	PKPbc	00 03 13.1	+0.1
HINF	Hinteralfeld	150.10	358	ePKIKP	PKPdf	00 03 07.1	-0.5
SOKA	Soboth	150.13	346	P	PKPbc	00 03 12.4	-0.5
SOKA	Soboth	150.13	346	⇓iPKPdf	PKPdf	00 03 06.8	-0.9
SOKA				⇓iPKPbc	PKPbc	00 03 12.4	-0.5
WATA	Walderalm	150.14	351	P	PKPbc	00 03 12.7	-0.2
	comp=Z,43nm,1.1s						
WATA	Walderalm	150.14	351	⇓iPKPdf	PKPdf	00 03 07.3	-0.4
	comp=Z,13nm,1.4s						
WATA				⇓iPKiKP	PKiKP	00 03 12.7	-0.9
	comp=Z,43nm,1.1s						
PERS	Pernice	150.15	346	i PKPbc	PKPbc	00 03 12.4	-0.5
PERS				ePKPab	PKPab	00 03 18.7	-0.9
ISP	Isparta	150.16	317	⇓iP	PKPbc	00 03 12.6	-0.7
TKTP	Tekketepe	150.17	317	i P	PKPbc	00 03 13.0	-0.3
TKTP	Tekketepe	150.17	317	i P	PKPbc	00 03 13.1	-0.2
MOTA	Moosalm	150.20	352	P	PKPbc	00 03 12.9	-0.1
	comp=Z,68nm,1.1s						
MOTA	Moosalm	150.20	352	⇓iPKPdf	PKPdf	00 03 07.3	-0.4
	comp=Z,15nm,1.3s						
MOTA				⇓iPKiKP	PKiKP	00 03 12.9	-0.9
	comp=Z,68nm,1.1s						
WTTA	Wattenberg	150.20	351	P	PKPbc	00 03 13.3	+0.2
	comp=Z,316nm,2.2s						
WTTA	Wattenberg	150.20	351	⇓iPKPdf	PKPdf	00 03 07.4	-0.4
	comp=Z,152nm,3.0s						
WTTA				⇓iPKiKP	PKiKP	00 03 13.3	-0.5
	comp=Z,316nm,2.2s						
DIM	Dimitrovgrad	150.26	328	eP	PKPbc	00 03 13.7	+0.3
DURS	Dursunbey	150.36	322	i P	PKPdf	00 03 02.0	-6.3
SART	Tekirdag	150.37	325	i P	PKPbc	00 03 12.9	-0.7
DAVA	Damuels	150.40	353	P	PKPbc	00 03 13.6	0.0
	comp=Z,150nm,1.2s						
DAVA	Damuels	150.40	353	⇓iPKPdf	PKPdf	00 03 07.4	-0.6
	comp=Z,89nm,2.5s						
DAVA				⇑iPKiKP	PKiKP	00 03 13.6	-0.6
	comp=Z,150nm,1.2s						
BBS	Basel-Blauen	150.42	357	PKIKP	PKPdf	00 03 07.8	-0.3
MYKA	Terra Mystica	150.47	348	P	PKPbc	00 03 13.0	-0.7
	comp=Z,476nm,1.8s						
MYKA	Terra Mystica	150.47	348	⇓iPKPdf	PKPdf	00 03 07.0	-1.2
	comp=Z,344nm,2.4s						
MYKA				⇑iPKPbc	PKPbc	00 03 13.0	-0.7
	comp=Z,476nm,1.8s						
KHAL	Karahalli	150.51	319	i P	PKPbc	00 03 13.8	-0.3
BTOK	Tokmak	150.51	322	i P	PKPbc	00 03 13.8	-0.2
PGB	Panagyurishte	150.54	331	eP	PKPbc	00 03 14.0	0.0
ABTA	Abfaltersbach	150.56	350	P	PKPbc	00 03 13.3	-0.7
	comp=Z,109nm,1.2s						
ABTA	Abfaltersbach	150.56	350	⇓iPKPdf	PKPdf	00 03 07.5	-0.8
	comp=Z,27nm,1.2s						
ABTA				⇓iPKPbc	PKPbc	00 03 13.3	-0.7
	comp=Z,109nm,1.2s						
FETA	Feichten	150.56	352	P	PKPbc	00 03 14.2	+0.3
	comp=Z,111nm,1.2s						
FETA	Feichten	150.56	352	⇓iPKPdf	PKPdf	00 03 08.3	-0.1
	comp=Z,24nm,1.4s						
FETA				⇓iPKiKP	PKiKP	00 03 14.2	-0.4
	comp=Z,111nm,1.2s						
LOMF	Lomont	150.57	358	PKIKP	PKPdf	00 03 08.8	+0.5
DEMI	Demirci	150.57	321	i P	PKPbc	00 03 14.1	-0.1
SEST	Monte Rota	150.61	350	PKP	PKPbc	00 03 12.6	-1.4
KDZ	Kurdzhali	150.61	328	eP	PKPbc	00 03 14.2	0.0
PLD	Plovdiv	150.63	329	eP	PKPbc	00 03 13.8	-0.4
FVI	Forni Avoltri	150.66	349	PKIKP	PKPbc	00 03 13.2	-1.0
LOR	Lormes	150.66	2	ePKIKP	PKPdf	00 03 08.5	0.0
	comp=Z,63nm,1.4s						
PTCC	Patocco-Chiusa	150.74	348	PKP	PKPdf	00 03 08.1	-0.5
BALY	Balya	150.76	323	i P	PKPbc	00 03 15.1	+0.5
LJU	Ljubljana	150.84	346	ePKPdf	PKPdf	00 03 08.6	-0.3
LJU				i PKPbc	PKPbc	00 03 14.4	-0.2
SSF	Saint Saulge	150.86	2	ePKIKP	PKPdf	00 03 08.8	0.0
	comp=Z,44nm,1.3s						
GMNA	Gemona	150.89	348	PKP	PKPdf	00 03 08.4	-0.5
RZN	Rozhen	150.94	329	eP	PKPbc	00 03 14.0	-1.0
VTS	Vitosha	150.95	332	eP	PKPbc	00 03 15.0	0.0
VOY	Vojsko	150.99	347	ePKPdf	PKPdf	00 03 08.8	-0.2
VOY				ePKPbc	PKPbc	00 03 14.2	-0.8
VOY				ePKPab	PKPab	00 03 21.1	-1.9
MFF	Saint Martin d	151.02	7	ePKIKP	PKPdf	00 03 08.8	-0.3
	comp=Z,44nm,1.1s						
APPI	Appiano	151.03	351	PKP	PKPbc	00 03 14.0	-1.0
AVF	Avril sur Loir	151.12	3	ePKIKP	PKPdf	00 03 08.8	-0.4
	comp=Z,15nm,1.2s						
GOLH	Golhisar	151.13	317	i P	PKPbc	00 03 15.3	-0.3
BOJS	Bojanci	151.18	345	ePKPdf	PKPdf	00 03 09.3	0.0
BOJS				i PKPbc	PKPbc	00 03 15.6	+0.1
BOJS				e		00 04 09.5	
DNZL	Cakiroluk	151.19	318	i P	PKPbc	00 03 15.7	0.0
SMF	Signal de Mont	151.29	2	ePKIKP	PKPdf	00 03 09.2	-0.3
	comp=Z,21nm,1.1s						
CABF	La Chapelle	151.33	359	ePKIKP	PKPdf	00 03 09.9	+0.4
BGF	Bois d'Agland	151.33	3	ePKIKP	PKPdf	00 03 09.4	-0.1
	comp=Z,18nm,0.9s						
SKDS	Skadanscina	151.43	347	ePKPab	PKPdf	00 03 03.6	-6.1
SKDS				i PKPbc	PKPbc	00 03 15.5	-0.4
TCF	Toulx Ste Croi	151.56	4	ePKIKP	PKPdf	00 03 09.7	-0.2
	comp=Z,48nm,1.2s						
KKB	Krupnik	151.58	331	eP	PKPbc	00 03 16.0	-0.4
BOZC	Bozcaada	151.58	325	i P	PKPbc	00 03 15.3	-1.2
AYVA	Ayvalik	151.59	323	i P	PKPbc	00 03 16.2	-0.4
OG01	Vacheresse	151.59	358	PKP	PKPdf	00 03 10.6	+0.7
AKAS	Kas	151.67	315	i P	PKPbc	00 03 16.3	-0.6
KDAG	Bornova	151.85	321	i P	PKPbc	00 03 16.8	-0.4
AGO	Saint Agoulin	151.85	3	PKP	PKPdf	00 03 09.7	-0.6
PRK	Paraskevi	151.87	324	eP	PKPbc	00 03 16.8	-0.4
VAI	Varese	151.92	355	PKIKP	PKPdf	00 03 10.0	-0.4
PLDF	La Plantade	151.96	2	PKIKP	PKPdf	00 03 10.2	-0.3
TURN	Turunc	151.96	317	i P	PKPbc	00 03 18.1	+0.6
LIA	Limnos Island	152.01	326	eP	PKPbc	00 03 16.9	-0.6
LOS	Limnos	152.04	326	eP	PKPbc	00 03 17.0	-0.6
VERF	Verneugheol	152.12	4	PKP	PKPdf	00 03 08.2	-2.5
STIP	Stip	152.12	332	ePKP	PKPdf	00 03 09.5	-1.4
STIP				ePKP	PKPbc	00 03 16.2	-1.5
PYM	Petit Puy Mans	152.15	3	PKIKP	PKPdf	00 03 09.3	-1.5
KNT	Kendrikon	152.22	330	eP	PKPbc	00 03 16.8	-1.1
SKO	Skopje	152.22	333	ePKP	PKPdf	00 03 10.2	-0.9
RSL	Roselend	152.24	358	PKIKP	PKPdf	00 03 10.4	-0.5
VAY	Valandovo	152.24	331	ePKP	PKPdf	00 03 09.4	-1.6
VAY				ePKP	PKPbc	00 03 16.2	-1.8
OUR	Ouranopolis	152.32	328	eP	PKPbc	00 03 16.9	-1.2
GCAM	G?zelcaml?	152.32	320	i P	PKPbc	00 03 18.1	-0.1
LPL	La Plagne	152.40	358	ePKIKP	PKPdf	00 03 11.6	+0.4
	comp=Z,12nm,1.1s						
LPG	La Plagne	152.42	358	ePKIKP	PKPdf	00 03 11.8	+0.6
	comp=Z,7.5nm,0.9s						
RJF	Les Rejaudoux	152.48	6	ePKIKP	PKPdf	00 03 11.2	-0.1
	comp=Z,31nm,1.1s						
PLG	Polygyros	152.56	329	eP	PKPbc	00 03 17.2	-1.5
CHOS	Chios island	152.57	322	eP	PKPbc	00 03 18.5	-0.3
BDRM	Kayabasi	152.59	319	i P	PKPbc	00 03 18.2	-0.6
SSB	Saint Sauveur	152.67	1	PKIKP	PKPdf	00 03 11.4	-0.2
LBL	Lubilhac	152.68	3	PKIKP	PKPdf	00 03 11.2	-0.4
LFF	La Frestale	152.76	7	ePKIKP	PKPdf	00 03 11.6	-0.1
	comp=Z,40nm,1.3s						
KRUS	Krusevo	152.80	333	ePKP	PKPdf	00 03 11.0	-0.9
KRUS				ePKP	PKPbc	00 03 18.3	-0.9
CAF	Calviac	152.91	5	ePKIKP	PKPdf	00 03 11.9	0.0
	comp=Z,24nm,1.2s						
ORIF	Oris-en-Rattie	153.03	359	ePKIKP	PKPdf	00 03 12.3	+0.2
	comp=Z,22nm,1.1s						
BIA	Bitola	153.05	332	ePKP	PKPdf	00 03 11.7	-0.6
BIA				ePKP	PKPbc	00 03 17.4	-2.3
VIVF	Saint-Julien-l	153.09	1	ePKIKP	PKPdf	00 03 12.5	+0.3
	comp=Z,29nm,1.3s						
MBDF	Montbardon	153.19	357	ePKIKP	PKPdf	00 03 12.5	+0.2
	comp=Z,18nm,1.1s						
OHR	Ohrid	153.20	333	ePKP	PKPbc	00 03 18.7	-1.4
FNA	Florina	153.22	332	eP	PKPbc	00 03 19.5	-0.6
PCAB	Cabril	153.71	23	ePKPbc	PKPbc	00 03 21.2	0.0
PCAB	Cabril	153.71	23	ePKPab	PKPab	00 03 34.6	-0.1
APE	Apeiranthos	153.76	321	⇓iP	PKPbc	00 03 19.8	-1.6
LASF	Ste Croix	153.85	2	ePKIKP	PKPdf	00 03 13.6	+0.3
	comp=Z,72nm,1.4s						
MURB	Monte Urbino	153.92	348	PKP	PKPbc	00 03 18.3	-3.3
SMRF	Simiane la Rot	153.97	359	ePKIKP	PKPdf	00 03 14.0	+0.5
	comp=Z,59nm,1.4s						
PBRG	Braganca	154.08	21	ePKPbc	PKPbc	00 03 21.7	-0.2
PVRL	Vila Real	154.20	23	ePKPbc	PKPbc	00 03 22.3	+0.1
PVRL	Vila Real	154.20	23	i PKPab	PKPab	00 03 36.1	-0.7
MVO	Moncorvo	154.55	22	ePKPdf	PKPdf	00 03 15.2	+0.8
MVO	Moncorvo	154.55	22	ePKPbc	PKPbc	00 03 23.3	+0.3
EPF	Esparros	154.59	8	ePKIKP	PKPdf	00 03 15.1	+0.7
PVIS	Viseu	154.62	24	i PKPab	PKPab	00 03 38.5	-0.1
PTQR	Pietraquaria	154.91	345	PKP	PKPdf	00 03 14.5	-0.4
MTE	Manteigas	155.03	23	ePKPdf	PKPdf	00 03 15.1	0.0
MTE	Manteigas	155.03	23	ePKPbc	PKPdf	00 03 23.9	+8.8
PGF	Pioggiola	155.18	353	ePKIKP	PKPdf	00 03 15.9	+0.7
	comp=Z,23nm,0.9s						
PTOM	Tomar	155.36	26	ePKPdf	PKPdf	00 03 16.5	+1.0
PTOM	Tomar	155.36	26	i PKPab	PKPab	00 03 40.4	-1.4
PCBR	Castelo Branco	155.54	24	ePKPdf	PKPdf	00 03 16.3	+0.5
PMRV	Marv??o	155.93	24	ePKPdf	PKPdf	00 03 16.7	+0.4
PMRV	Marv??o	155.93	24	ePKPbc	PKPdf	00 03 25.9	+10
PMRV	Marv??o	155.93	24	i PKPab	PKPab	00 03 44.6	+0.4
EVO	Evora	156.44	26	ePKIKP	PKPdf	00 03 17.1	+0.1
	comp=Z,25nm,1.2s						
EVO	Evora	156.44	26	ePKPdf	PKPdf	00 03 16.1	-0.9
EVO	Evora	156.44	26	ePKPab	PKPab	00 03 45.0	-1.4
ESDC	Sonseca Array	156.89	18	PKP	PKPdf	00 03 17.9	+0.4
	comp=Z,1.8nm,0.7s,baz=337,slow=2.3,SNR=13						
ESDC				PKPab	PKPab	00 03 48.2	-0.1
	comp=Z,8.9nm,0.8s,baz=330,slow=3.7,SNR=27						
ESDC				PP	PP	00 07 22.7	-3.8
	comp=Z,0.1nm,0.3s,baz=135,slow=36,SNR=3.5						
PBEJ	Beja	156.93	27	ePKPdf	PKPdf	00 03 18.5	+0.9
PTEO	Sao Teotonio	156.94	29	ePKPdf	PKPdf	00 03 18.9	+1.2
PBAR	Barrancos	157.15	25	ePKPdf	PKPdf	00 03 18.6	+0.7
KEST	Kesra	161.82	349	PKP	PKPdf	00 03 23.7	+0.4
	comp=Z,2.9nm,1.0s,baz=12,slow=8.7,SNR=4.5						
KEST				PKPab	PKPab	00 04 09.4	-0.4
	comp=Z,1.9nm,0.7s,baz=343,slow=6.4,SNR=5.5						
DBIC	Dimbokro	165.22	138	PKP	PKPdf	00 03 26.0	-1.2
	comp=Z,2.8nm,0.5s,baz=181,slow=1.0,SNR=5.6						
TORD	Torodi Ar. Bea	174.26	144	PKP	PKPdf	00 03 30.6	-1.8
	comp=Z,7.7nm,1.0s,baz=356,slow=0.8,SNR=38						
TORD				pPKP	pPKPdf	00 04 20.7	-3.1
	comp=Z,1.0nm,1.1s,baz=60,slow=34,SNR=1.4						
TORD				PKPab	PKPab	00 05 05.3	-0.1
	comp=Z,1.4nm,0.7s,baz=201,slow=4.6,SNR=9.8						

*IDC **06** 23:47:07.6±2.5, 25.11N×95.21E, h0km, mb3.8/2, mb1 3.8/3, mb1mx3.5/22, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=73.8km s-min=32.2km az=69.0*

*ISCJB **06** 23:47:11.2±1.1, 25.1N±0.1×95.43E±0.08, h33km, mb3.6/2, Error ellipse: s-maj=15.8km s-min=10.8km az=173.2*

ISC 06 23:47:13.0±1.1, **25.1N**±0.1×**95.34E**±0.08, **h35**km, **n6**, σ1.13/8, **mb3.6**/2, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.32**	**256**	i P	**Pn**	**23 47 36.0**	**+1.1**
IMP				i S	**Sn**	**23 47 51.0**	**-0.2**
SHL	**Shillong**	**3.16**	**279**	eP	**Pn**	**23 48 02.5**	**+2.3**
SHL				eS	**Sn**	**23 48 35.0**	**-1.6**
CMAR	**Chiang Mai Arr**	**7.42**	**152**	Pn	**Pn**	**23 48 58.1**	**-0.7**
	0.3nm,0.3s,baz=326,slow=13,SNR=5.3						
MKAR	**Makanchi Array**	**24.01**	**338**	P	**P**	**23 52 24.0**	**-0.4**
	3.6nm,0.5s,mb4.1,baz=148,slow=9.7,SNR=46						
SONM	**Songino Array**	**24.30**	**18**	P	**P**	**23 52 27.0**	**-0.1**
	0.4nm,0.4s,mb3.2,baz=191,slow=11,SNR=3.5						
MAT	**Matsushiro**	**38.25**	**62**	P	**P**	**23 54 35.8**	**+6.0**

*IDC **06** 23:58:59.6±1.2, 39.04N×110.43E, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.7/21, mbtmp3.7/7, ML3.2/1, MS3.5/2, Ms1 3.5/2, ms1mx2.6/28, Error ellipse: s-maj=42.9km s-min=15.9km az=64.0*

*ISCJB **06** 23:59:02.1±3.5, 39.1N±0.1×110.6E±0.2, h34km±33km, mb3.7/8, MS3.4/2, Error ellipse: s-maj=33.9km s-min=15.1km az=158.9*

*NEIC **06** 23:59:04.8±2.4, 39.05N×110.38E, h37km±22km, mb4.3/3, Error ellipse: s-maj=28.7km s-min=13.8km az=65.0*

ISC 06 23:59:04.1±5.6, **39.01N**±0.08×**110.4E**±0.2, **h30**km±40km, **n24**, σ0.96/20, **mb3.7**/8, **MS3.4**/2, **Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.28**	**343**	Pn	**Pn**	**00 01 15.5**	**-0.3**
	0.2nm,0.3s,baz=158,slow=14,SNR=16						
SONM				Sn	**Sn**	**00 02 59.6**	**+0.6**
	baz=153,slow=23,SNR=7.3						
SONM				Lg		00 03 51.2	
	0.4nm,0.3s,baz=148,slow=24,SNR=8.4						
MKAR	**Makanchi Array**	**21.91**	**300**	P	**P**	**00 03 54.2**	**-0.4**
	2.7nm,0.8s,mb3.7,baz=96,slow=11,SNR=5.7						
MKAR	**Makanchi Array**	**21.91**	**300**	P	**P**	**00 03 54.2**	**-0.4**
MJAR	**Matsushiro Arr**	**22.11**	**88**	LR	LR	00 13 40.8	
	comp=Z,175nm,18.9s,MS3.5,baz=85,slow=40						
CMAR	**Chiang Mai Arr**	**22.75**	**209**	P	**P**	**00 04 03.9**	**+0.1**
	2.2nm,0.4s,mb3.9,baz=15,slow=9.3,SNR=16						
ZALV	**Zalesovo Beam**	**22.91**	**319**	P	**P**	**00 04 05.3**	**+0.2**
	0.6nm,0.6s,mb3.2,baz=115,slow=9.7,SNR=2.3						
KURK	**Kurchatov**	**25.16**	**308**	P	**P**	**00 04 27.1**	**+0.5**
	1.5nm,0.8s,mb3.6,baz=108,slow=10,SNR=4.5						
KURK				LR	LR	00 14 02.4	
	comp=Z,78nm,20.2s,MS3.2,baz=75,slow=36						
UCH	**Uchtor**	**27.28**	**288**	eP	**P**	**00 04 46.6**	**+0.9**
	1.9nm,0.8s,mb3.7						
KOLS	**Kolonicke sedl**	**60.77**	**311**	eP	Px	00 09 18.1	
KOLS	**Kolonicke sedl**	**60.77**	**311**	eP	Px	00 09 18.1	
STHS	**Stebnicka Huta**	**61.15**	**312**	eP	Px	00 09 21.3	
STHS				epP	pP	00 09 31.2	+6.5
STHS	**Stebnicka Huta**	**61.15**	**312**	eP	Px	00 09 21.3	
	4.3nm,1.0s						
STHS				e		00 09 31.2	
CRVS	**Cervenica-Dubn**	**61.26**	**311**	eP	**P**	**00 09 20.2**	**+4.0**
CRVS				e		00 13 03.3	
CRVS	**Cervenica-Dubn**	**61.26**	**311**	eP	**P**	**00 09 20.2**	**+4.0**
KECS	**Kecovo**	**62.03**	**311**	eP	**P**	**00 09 22.9**	**+1.5**
KECS				epP	pP	00 09 31.8	+1.2
KECS	**Kecovo**	**62.03**	**311**	eP	**P**	**00 09 22.9**	**+1.5**
	2.6nm,0.9s,mb4.4						
KECS				e	pP	00 09 31.8	+1.2
WRA	**Warramunga Arr**	**62.79**	**155**	P	**P**	**00 09 26.5**	**-0.1**
	0.5nm,0.8s,mb3.7,baz=343,slow=7.8,SNR=4.1						
VYHS	**Vyhne**	**62.99**	**312**	eP	**P**	**00 09 26.1**	**-1.7**
VYHS	**Vyhne**	**62.99**	**312**	eP	**P**	**00 09 26.1**	**-1.7**
KOLL	**Kolacno**	**63.20**	**312**	eP	**P**	**00 09 28.7**	**-0.5**
KOLL	**Kolacno**	**63.20**	**312**	eP	**P**	**00 09 28.7**	**-0.5**
MODS	**Modra-Piesok**	**63.95**	**312**	eP	**P**	**00 09 32.0**	**-2.1**
MODS	**Modra-Piesok**	**63.95**	**312**	eP	**P**	**00 09 32.0**	**-2.1**
ASAR	**Alice Springs**	**66.12**	**156**	P	**P**	**00 09 49.2**	**+0.7**
	0.5nm,0.9s,mb3.5,baz=358,slow=7.4,SNR=3.9						

JMA 07 00:18:57.0±0.1, **27.52N**×**140.75E**, **h461**km, **M3.9**, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.34**	**108**	P	P	00 19 55.8	+0.3
CBIJ				eS	S	00 20 42.0	-0.9
JHHJ	**Haha-jima-NKT**	**1.55**	**125**	P	P	00 19 56.9	+0.5
JHHJ				eS	S	00 20 44.3	-0.1
BSO1	**Boso 1**	**7.11**	**2**	P	P	00 20 45.2	+2.2
BSO3	**Boso 3**	**7.26**	**358**	P	P	00 20 46.1	+1.5
BSO3				eS	S	00 22 13.3	+0.5
BSO4	**Boso 4**	**7.46**	**357**	P	P	00 20 48.7	+2.1
JIE	**Ise**	**7.68**	**334**	P	P	00 20 50.7	+1.7
JEG	**Eigenji**	**8.46**	**335**	P	P	00 20 59.7	+2.4
JAG	**Ashikaga**	**8.95**	**353**	P	P	00 21 03.5	+0.9
JHO	**Hitachi**	**9.06**	**359**	P	P	00 21 05.8	+2.0

NEIC 07 00:34:52.8, **61.68N**×**147.54W**, **h26**km, **ML3.5**(AEIC), **ML3.7**(PMR), **After AEIC.**, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMR	**Palmer**	**0.76**	**264**	P	Pb	00 35 05.4	-2.1
PMR				S	Sb	00 35 15.7	-1.7
DIV	**Divide**	**1.01**	**122**	P	Pn	00 35 08.5	-2.8
DIV				S	Sb	00 35 22.4	-2.2
RC01	**Rabbit Creek A**	**1.21**	**242**	P	Pn	00 35 12.9	-1.2
RC01				S	Sn	00 35 28.4	-1.1
HARP	**HAARP**	**1.34**	**56**	P	Pn	00 35 14.8	-1.1
HARP				S	Sn	00 35 32.8	-0.1
FIB	**Fire Island**	**1.36**	**249**	P	Pn	00 35 15.8	-0.4
FIB				eSn	Sn	00 35 34.7	+1.3
EYAK	**Cordova Ski Ar**	**1.43**	**142**	P	Pn	00 35 15.7	-1.3
BMRM	**Bremner River**	**1.58**	**115**	P	Pn	00 35 17.8	-1.4
BMRM				S	Sn	00 35 38.2	-0.6
SLKM	**Skilak Lake**	**1.75**	**229**	P	Pn	00 35 20.8	-0.7
SLKM				eSn	Sn	00 35 43.0	0.0
SEW	**Seward**	**1.83**	**211**	P	Pn	00 35 20.9	-1.6
SEW				eSn	Sn	00 35 44.5	-0.4
SEW				eSn	Sn	00 35 44.5	-0.4
MENT	**Mentasta**	**2.19**	**53**	eP	Pn	00 35 33.1	+5.6
MID	**Middleton Isla**	**2.33**	**165**	eP	Pn	00 35 32.6	+3.1
KTH	**Kantishna Hill**	**2.45**	**322**	P	Pn	00 35 30.7	-0.4
KTH				S	Sn	00 35 59.9	-0.2
PPLA	**Purkeypile**	**2.49**	**301**	P	Pn	00 35 30.9	-0.8
PPLA				Sn	Sn	00 36 01.0	-0.2
BPAW	**Bear Paw Mtn.**	**2.90**	**329**	P	Pn	00 35 36.3	-0.9
BPAW				Sn	Sn	00 36 10.2	-1.0
CHUM	**Lake Minchumin**	**3.12**	**317**	ePn	Pn	00 35 39.4	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHUM				eSn	Sn	00 36 17.4	+0.8
IL1	Eielson Array	3.12	5	P	Pn	00 35 39.2	-1.1
COLA	College	3.21	358	P	Pn	00 35 41.0	-0.6
COLA				S	Sn	00 36 19.0	0.0
AUL	Augustine Lava	3.71	234	P	Pn	00 35 47.9	-0.5
SVW2	Sparrevohn	3.91	265	P	Pn	00 35 49.6	-1.5
SVW2				eSn	Sn	00 36 36.2	0.0
TT01	Tatalina	4.15	291	P	Pn	00 35 52.5	-1.9
TTA	Tatalina	4.15	291	eP	Pn	00 35 52.5	-1.9
EGAK	Eagle	4.25	40	ePn	Pn	00 35 55.2	-0.5
EGAK				eSn	Sn	00 36 47.1	+2.7
DAWY	Dawson	4.44	54	P	Pn	00 35 57.9	-0.5
PNL	Peninsula	4.48	113	P	Pn	00 35 58.2	-0.8
KDAK	Kodiak Island	4.66	215	P	Pn	00 35 59.6	-1.8
HYT	Haines Junctio	4.92	96	Sn	Sn	00 36 59.5	-1.6
IM3	Indian Mountai	5.12	330	P	Pn	00 36 07.0	-0.8
IMA2	Indian Mountai	5.18	331	eP	Pn	00 36 08.1	-0.4
IMA2				eSn	Sn	00 37 06.3	-1.0
DHAK	Deception Hill	5.30	115	ePn	Pn	00 36 10.3	+0.1
BM3	Burnt Mountain	5.91	11	P	Pn	00 36 17.4	-1.1

IDC 07 01:01:33.1±4.9, 2977S×17679W, h0km, mb4.1/3, mb1 4.3/3, mb1mx4.0/14, mbtmp4.1/3, Error ellipse: s-maj=165.1km s-min=44.1km az=24.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.65	256	eP	P	01 08 33.6	+0.7
	3.8nm,0.8s						
STKA	Stephens Creek	35.65	256	P	P	01 08 33.0	0.0
	4.6nm,0.7s,baz=102,slow=9.0,SNR=12						
ASAR	Alice Springs	44.20	266	P	P	01 09 43.9	-0.3
	0.5nm,0.6s,baz=107,slow=7.1,SNR=7.9						
WB2	Warramunga Arr	45.12	271	eP	P	01 09 51.1	-0.4
WRA	Warramunga Arr	45.13	271	P	P	01 09 51.7	+0.1
	2.9nm,0.7s,baz=112,slow=8.0,SNR=13						
TORD	Torodi Ar. Bea	163.40	175	PKPab	PKPab	01 22 28.7	-0.4
	0.5nm,0.9s,baz=189,slow=3.1,SNR=7.6						

MAN 07 01:22:05, 704N×12503E, h19km, mb4.0, ML2.7, MS2.4, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KCP	Kidapawan	0.07	122⇑	iP	Pg	01 22 09.5	+0.9
KCP				iS	Sg	01 22 12.0	+1.0
DMPH	Davao City--Mi	0.47	85⇓	iP	Pg	01 22 15.5	+0.8
DMPH				iS	Sg	01 22 26.5	+5.3
GSPH	General Santos	0.95	185⇑	eP	Pb	01 22 22.7	-0.2
GSPH				eS	Sb	01 22 36.4	+1.2

IDC 07 01:38:05.9±1.6, 5124N×94.17E, h0km, mb3.7/4, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, ML3.2/3, Error ellipse: s-maj=26.4km s-min=18.8km az=179.0
MOS 07 01:38:10.0±1.6, 5164N×9386E, h14km, mb4.0/4, Error ellipse: s-maj=15.1km s-min=12.4km az=127.0
MOS Felt (IV) at Khovu-Aksy.
ISCJB 07 01:38:11.6±0.4, 5161N±007×9394E±005, h33km, mb3.7/5, Error ellipse: s-maj=10.2km s-min=4.1km az=2.7
NEIC 07 01:38:12.0±0.8, 5166N×9378E, h10km, mb3.8/4, Error ellipse: s-maj=13.8km s-min=9.8km az=158.0
ISC 07 01:38:11.7±0.8, 5158N±006×9396E±005, h16km±6km, n35, σ1s13/39, mb3.7/5, 4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KZLR	Kyzyl	0.33	68	dePG	Pg	01 38 18.6	0.0
KZLR						01 38 25.2	
HVS	Khovu-Aksy	0.47	200⇓	ePG	Pg	01 38 21.1	0.0
BLRR	Bol'shaya Rech	1.73	328κ	ePN	Pg	01 38 45.7	+0.7
BLRR				e		01 38 46.8	
CERR	Cheremushki	2.02	310	ePN	Pn	01 38 48.5	+3.5
CERR				i		01 38 50.5	
CERR				i		01 39 20.6	
TASR	Tashtagol	3.92	290	ePN	Pn	01 39 13.3	+2.2
TASR				e		01 39 24.7	
AKAR	Aktash	4.20	255	ePN	Pn	01 39 24.8	+10
AKAR				e		01 40 17.8	
KRAR	Krasnoyarsk	4.49	352	PN	Pn	01 39 19.3	+0.4
ELT	Yel'tsovka	5.01	293	ePN	Pn	01 39 17.6	-8.5
ELT				e		01 39 41.1	
ELT				e		01 40 23.9	
UKR	Ust'-Kan	5.80	267	ePN	Pg	01 39 56.0	-6.7
ZAK	Zakamensk	6.01	98	ePN	Pb	01 39 53.0	-2.9
ZAK				eS	Sb	01 41 08.9	+1.3
ZAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZAK				smax			
	comp=N,112nm,1.1s						
ZAA0	Zalesovo Array	6.03	297	ePn	Pn	01 39 40.1	0.0
ZALV	Zalesovo Beam	6.03	297	Pn	Pn	01 39 40.4	+0.3
	comp=N,0.7nm,0.3s,baz=114,slow=12,SNR=6.7						
ZALV				Sn	Sb	01 41 03.4	-4.7
	comp=N,1.6nm,0.3s,baz=112,slow=24,SNR=5.1						
ZALV				Lg		01 41 27.7	
	comp=N,3.7nm,0.3s,baz=104,slow=26,SNR=6.7						
TLY	Talaya	6.04	85	PN	Pn	01 39 43.3	+3.2
TLY				e		01 41 09.3	
TLY				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TLY	Talaya	6.04	85	Pn	Pn	01 39 43.3	+3.2
	comp=Z,5.1nm,0.5s						
TLY				ePb	Pb	01 39 55.4	-0.9
TLY				ePg	Pg	01 40 06.2	-0.9
TLY				eSg	Sb	01 41 09.3	+1.0
ZAL	Zalesovo	6.04	297	PN	Pn	01 39 40.4	+0.2
ZAL						01 41 03.4	
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL				smax			
	comp=N,2.0nm,0.3s						
IRK	Irkutsk	6.42	80	ePN	Pb	01 40 02.1	-0.7
IRK				e		01 41 23.1	
IRK				pmax	pmax		
	comp=Z,97nm,0.1s						
IRK				smax			
	comp=N,228nm,0.4s						
SONM	Songino Array	8.89	110	Pg	Px	01 40 45.2	
	comp=N,0.3nm,0.3s,baz=295,slow=17,SNR=3.6						
SONM				Lg		01 42 41.4	
	comp=N,1.9nm,0.3s,baz=297,slow=31,SNR=12						
MKAR	Makanchi Array	9.01	242	Pn	Pn	01 40 17.3	-3.7
	comp=N,0.3nm,0.3s,baz=64,slow=11,SNR=4.0						
MKAR				Pg	Pn	01 40 46.7	+26
	comp=N,0.5nm,0.3s,baz=58,slow=12,SNR=3.9						
MKAR				Lg		01 42 51.1	
	comp=N,1.0nm,0.3s,baz=43,slow=32,SNR=5.8						
KURK	Kurchatov	9.68	271	Pn	Pn	01 40 29.4	-0.8
	comp=N,0.0nm,0.3s,baz=84,slow=15,SNR=5.2						
KURK				Lg		01 43 15.1	
	comp=N,0.1nm,0.3s,baz=77,slow=30,SNR=4.6						
BVAR	Borovoye Array	14.48	285	Pn	Pn	01 41 36.5	+0.9
	comp=N,0.1nm,0.3s,baz=107,slow=20,SNR=2.3						
TKM2	Tokmak 2	15.15	242	eP	Pn	01 41 46.3	+1.6
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TKM2	Tokmak 2	15.15	242	eP	Pn	01 41 46.3	+1.5
	comp=Z,2.7nm,0.7s						
UCH	Uchtor	16.21	242	eP	Pn	01 41 59.3	+0.8
	comp=Z,5.3nm,0.9s						
EKS2	Erkin-Say	16.33	245	eP	Pn	01 42 00.3	+0.2
	comp=Z,9.6nm,0.9s						
ARU	Arti	21.20	297	eP	P	01 42 55.6	-0.6
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.8						
ARU	Arti	21.20	297	eP	P	01 42 55.6	-0.5
	comp=Z,2.8nm,0.6s,mb3.8						
AKTK	Aktyubinsk	22.51	281	P	P	01 43 08.8	-1.4
AKTO	Aktyubinsk	22.51	281	P	P	01 43 08.8	-1.4
	comp=Z,1.5nm,0.6s,mb3.6,baz=84,slow=9.7,SNR=6.8						
AKTO	Aktyubinsk	22.51	281	P	P	01 43 08.8	-1.4
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
ARCES	ARCESS Array B	35.70	326	P	P	01 45 08.4	-0.3
	comp=Z,2.9nm,0.9s,mb4.2,baz=75,slow=9.2,SNR=5.6						
ARCES	ARCESS Array B	35.70	326	P	P	01 45 08.4	-0.3
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	39.42	295	P	P	01 45 38.8	-1.6
	comp=Z,0.3nm,0.4s,mb3.4,baz=56,slow=9.9,SNR=2.9						
NB2	NORSAR Subarra	43.86	316	P	P	01 46 15.8	-0.8
	comp=Z,0.8nm,0.6s,mb3.6,baz=58,slow=6.9						
NOA	NORSAR Array B	43.86	316	P	P	01 46 15.9	-0.7
	comp=Z,0.5nm,0.6s,mb3.4,baz=65,slow=8.0,SNR=3.9						
NOA	NORSAR Array B	43.86	316	P	P	01 46 15.9	-0.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

IDC 07 01:57:50.4±1.3, 536N×12438E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/17, mbtmp3.5/4, ML4.0/1, Error ellipse: s-maj=46.9km s-min=22.9km az=80.0
ISCJB 07 01:58:01.4±0.8, 6.12N±008×126.17E±0.10, h135km±9km, mb3.1/3, Error ellipse: s-maj=17.4km s-min=12.1km az=33.1
MAN 07 01:58:04, 634N×126.15E, h124km, mb4.6, ML3.5, MS3.4
ISC 07 01:58:02.8±0.8, 614N±009×12617E±010, h130km±9km, n11, σ0s85/17, mb3.1/3, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	Mati	0.81	6	eP	Px	01 58 00.0	
MATI				eS	Sn	01 58 41.0	+0.8
DAV	Davao City (W)	1.09	328	Pn	Pn	01 58 27.0	+0.4
	56nm,0.3s,baz=0.0,slow=4.0,SNR=4.3						
DAV				Sn	Sn	01 58 46.4	+1.6
	259nm,0.3s,baz=241,slow=23,SNR=13						
DMPH	Davao City--Mi	1.14	325⇓	iP	Pn	01 58 27.5	+0.4
DMPH				iS	Sn	01 58 44.0	-1.6
GSPH	General Santos	1.21	268	eP	Pn	01 58 27.3	-0.5
GSPH				iS	Sn	01 58 46.2	-0.6
KCP	Kidapawan	1.38	309⇑	eP	Pn	01 58 29.9	+0.4
KCP				iS	Sn	01 58 49.5	-0.4
BIPH	Bislig	2.04	5⇓	iP	Pn	01 58 37.4	0.0
BIPH				iS	Sn	01 59 02.1	-1.6
BUKP	Musuan	2.05	328	eP	Sn	01 59 00.0	-3.9
BUKP				eS	Sn	01 59 05.2	+1.3
PAGZ	Pagadian	3.24	302	eP	Pn	01 58 53.3	+0.7
WRA	Warramunga Arr	27.14	163	P	P	02 03 33.7	-0.1
	0.1nm,0.4s,mb2.8,baz=341,slow=9.1,SNR=6.7						
ASAR	Alice Springs	30.57	166	P	P	02 04 04.2	-0.1
	0.2nm,0.3s,mb3.3,baz=339,slow=7.9,SNR=3.9						
MKAR	Makanchi Array	55.27	325	P	P	02 07 22.6	+0.1
	0.2nm,0.3s,mb3.3,baz=110,slow=7.3,SNR=3.5						

CSEM 07 02:06:29.1±0.7, 3950N×1259W, h10km, ML2.6/7, Error ellipse: s-maj=13.5km s-min=8.4km az=76.0
MDD 07 02:06:32.5±2.1, 3930N×1223W, h0km, mb3.5/5, Error ellipse: s-maj=19.1km s-min=13.7km az=72.0, PRIMO
NEIC 07 02:06:32.2, 3939N×1225W, h0km, MG3.3(MDD), After MDD.
INMG 07 02:06:34.8±1.1, 3924N×1264W, h10km, ML1.7, Error ellipse: s-maj=7.9km s-min=4.8km az=93.0
ISC 07 02:06:33.9±1.0, 3933N±004×1205W±007, h10km, n46, σ1s16/81, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMAFR	Mafra	2.19	99	ePn	Pn	02 07 11.7	+1.4
PMAFR				eSn	Sn	02 07 39.0	+1.6
PMAFR				A		02 07 41.4	
	6.1nm,0.2s						
MOE	Montemor	3.00	104	eSn	Sn	02 07 59.5	+2.1
PTEO	Sao Teotonio	3.17	123	ePn	Pn	02 07 23.0	-0.7
PTEO				eSn	Sn	02 07 58.5	-3.0
PTEO				A		02 08 01.3	
	1.5nm,0.2s						
PTEO	Sao Teotonio	3.17	123	Pn	Pn	02 07 23.0	-0.7
PTEO				Sn	Sn	02 07 58.5	-3.0
	0.8nm,0.2s						
EVO	Evora	3.25	103	ePn	Pn	02 07 26.1	+1.2
EVO				eSn	Sn	02 08 04.0	+0.4
EVO				A		02 08 07.7	
	1.4nm,0.1s						
EVO	Evora	3.25	103	ePn	Pn	02 07 26.1	+1.2
EVO				eSn	Sn	02 08 04.0	+0.4
	1.4nm,0.1s						
PFVI	Vila Bisbo	3.36	130	ePn	Pn	02 07 24.9	-1.5
PFVI				eSn	Sn	02 08 02.0	-4.3
PVIS	Viseu	3.48	65	eSn	Sn	02 08 10.0	+0.7
PESTR	Estremoz	3.50	96	ePn	Pn	02 07 29.9	+1.5
PESTR				eSn	Sn	02 08 10.5	+0.6
PESTR				A		02 08 14.6	
	0.5nm,0.2s						
PESTR	Estremoz	3.50	96	ePn	Pn	02 07 29.9	+1.5
PESTR				eSn	Sn	02 08 10.5	+0.6
	0.5nm,0.2s						
PBEJ	Beja	3.53	110	eSn	Sn	02 08 10.3	-0.1
PBEJ				A		02 08 12.8	
	0.5nm,0.1s						
PBEJ	Beja	3.53	110	eSn	Sn	02 08 10.3	-0.1
	0.5nm,0.1s						
PCBR	Castelo Branco	3.57	80	ePn	Pn	02 07 30.9	+1.6
PCBR				eSn	Sn	02 08 11.2	-0.4
PCBR				A		02 08 16.4	
	0.5nm,0.1s						
PCBR	Castelo Branco	3.57	80	ePn	Pn	02 07 30.9	+1.6
PCBR				eSn	Sn	02 08 11.2	-0.4
	0.5nm,0.1s						
PMRV	Marv??o	3.61	87	ePn	Pn	02 07 31.0	+1.1
PMRV				eSn	Sn	02 08 12.5	-0.1
PMRV				A		02 08 16.7	
	0.9nm,0.1s						
PMRV	Marv??o	3.61	87	ePn	Pn	02 07 31.0	+1.1
PMRV				eSn	Sn	02 08 12.5	-0.1
	0.9nm,0.1s						
MTE	Manteigas	3.63	71	eSn	Sn	02 08 14.4	+1.4
MTE				A		02 08 19.9	
	0.8nm,0.3s						
MTE	Manteigas	3.63	71	eSn	Sn	02 08 14.4	+1.4
	0.8nm,0.3s						
PBDV	Barranco-do-Ve	3.86	121	ePn	Pn	02 07 33.3	+0.1
PBDV				eSn	Sn	02 08 16.2	-2.4
PBDV				A		02 08 19.7	
	1.6nm,0.4s						
PBDV	Barranco-do-Ve	3.86	121	ePn	Pn	02 07 33.3	+0.1
PBDV				eSn	Sn	02 08 16.2	-2.4
	1.6nm,0.4s						
PVAQ	Vaqueiros	3.91	118	ePn	Pn	02 07 34.1	+0.1
PVAQ				eSn	Sn	02 08 17.9	-2.1
PVAQ				A		02 08 21.7	
	1.0nm,0.1s						
PVAQ	Vaqueiros	3.91	118	ePn	Pn	02 07 34.1	+0.1
PVAQ				eSn	Sn	02 08 17.9	-2.1
	1.0nm,0.1s						
ELOB	Lobios	3.96	49	P	Pn	02 07 35.5	+0.9
	0.5nm,0.1s,SNR=4.0						
ELOB				S	Sn	02 08 20.4	-0.6
	0.5nm,0.1s,SNR=7.9						
ELOB	Lobios	3.96	49	P	Pn	02 07 35.1	+0.5
ELOB				S	Sn	02 08 20.5	-0.5
	1.7nm,1.0s,SNR=7.9						
ELOB	Lobios	3.96	49	P	Pn	02 07 35.1	+0.5
ELOB				S	Sn	02 08 20.4	-0.6
EBAD	Badajoz	3.97	97	P	Pn	02 07 35.5	+0.8
	0.1nm,0.1s,SNR=7.9						
EBAD				S	Sn	02 08 22.1	+0.8
	0.5nm,0.0s,SNR=6.0						
EBAD	Badajoz	3.97	97	P	Pn	02 07 35.6	+0.9
	0.2nm,0.1s,SNR=7.9						
EBAD				S	Sn	02 08 21.8	+0.5
	6.2nm,0.7s,SNR=6.0						
EBAD	Badajoz	3.97	97	P	Pn	02 07 35.6	+0.9
EBAD				S	Sn	02 08 21.8	+0.5
EGRO	El Granado	4.01	115	P	Pn	02 07 35.1	-0.2
	0.3nm,0.0s,SNR=7.9						
EGRO				S	Sn	02 08 21.7	-0.7
	0.4nm,0.2s,SNR=7.9						
EGRO	El Granado	4.01	115	P	Pn	02 07 35.5	+0.1
	2.5nm,0.4s,SNR=7.9						
EGRO				S	Sn	02 08 21.7	-0.7
	14nm,1.0s,SNR=7.9						
EGRO	El Granado	4.01	115	P	Pn	02 07 35.5	+0.2
EGRO				S	Sn	02 08 21.7	-0.7
PBAR	Barrancos	4.09	105	eSn	Sn	02 08 23.5	-0.8
PBAR				A		02 08 26.9	
	0.9nm,0.3s						
PBAR	Barrancos	4.09	105	eSn	Sn	02 08 23.5	-0.8
	0.9nm,0.3s						
MVO	Moncorvo	4.26	63	ePn	Pn	02 07 39.7	+1.0
MVO				eSn	Sn	02 08 28.2	-0.3
EMAZ	Mazaricos	4.29	32	P	Pn	02 07 37.7	-1.5
	0.5nm,0.1s,SNR=4.0						
EMAZ				S	Sn	02 08 24.0	-5.4
	1.1nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	4.29	32	P	Pn	02 07 37.7	-1.6
	0.2nm,0.2s,SNR=4.0						
EMAZ				S	Sn	02 08 26.8	-2.6
EMAZ	Mazaricos	4.29	32	P	Pn	02 07 37.7	-1.5
EMAZ				S	Sn	02 08 26.8	-2.6
EMIN	Mina Concepcio	4.50	109	P	Pn	02 07 42.7	+0.6
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	02 08 33.7	-0.7
	0.2nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	4.50	109	P	Pn	02 07 42.9	+0.8
	0.5nm,0.2s,SNR=7.9						
EMIN				S	Sn	02 08 34.6	+0.2
	6.1nm,1.2s,SNR=7.9						
EMIN	Mina Concepcio	4.50	109	P	Pn	02 07 42.9	+0.9
EMIN				S	Sn	02 08 34.6	+0.2
ECAL	Calabor	4.81	56	P	Pn	02 07 46.6	+0.3
ECAL				S	Sn	02 08 40.5	-1.6
ECAL	Calabor	4.81	56	P	Pn	02 07 46.6	+0.2
ECAL				S	Sn	02 08 40.5	-1.6
EPON	Pontenova	5.44	41	P	Pn	02 07 54.3	-0.6
EPON				S	Sn	02 08 54.5	-3.0
ESPR	Espera	5.47	115	S	Sn	02 08 57.5	-0.9
	1.6nm,0.2s,SNR=7.9						
EARI	Arriondas	6.50	50	P	Pn	02 08 09.4	-0.1
EARI	Arriondas	6.50	50	P	Pn	02 08 09.3	-0.2

ISCJB 07 02:12:49.0±1.2, 244N±0.1×10975W±0.10, h10km, Error ellipse: s-maj=17.9km s-min=9.5km az=147.4
IDC 07 02:12:49.0±1.9, 2445N×10975W, h0km, mb1 3.7/5, mb1mx3.6/22, mbtmp3.4/5, ML3.5/5, Error ellipse: s-maj=40.5km s-min=8.5km az=135.0
NEIC 07 02:12:50.6±1.1, 2436N×10980W, h10km, mb3.3/3, Error ellipse: s-maj=15.9km s-min=8.5km az=150.0
ISC 07 02:12:50.8±1.3, 244N±01×10980W±009, h10km, n18, σ0s94/22, Gulf of California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	La Paz	0.53	241	Pg	Pg	02 13 01.0	0.0
	570nm,0.3s,baz=24,slow=7.8,SNR=320						
LPIG				Lg		02 13 09.5	
	1µm,0.3s,baz=265,slow=22,SNR=52						
TXAR	Lajitas Array	7.39	47	Pn	Pn	02 14 36.2	-2.4
	0.6nm,0.3s,baz=225,slow=12,SNR=32						
TXAR				Pg	Pg	02 15 05.0	-7.2
	0.2nm,0.3s,baz=216,slow=17,SNR=4.4						
TXAR				Sn	Sn	02 15 58.0	-4.6
	baz=225,slow=27,SNR=2.4						
TXAR				Lg		02 16 42.7	
	0.1nm,0.3s,baz=223,slow=27,SNR=3.5						
TXAR	Lajitas Array	7.39	47	Pn	Pn	02 14 36.2	-2.5
TXAR				Pg	Pg	02 15 05.0	-7.2
TXAR				Sn	Sn	02 15 58.0	-4.6
TXAR				Lg		02 16 42.7	
BNM	Barren Site	10.14	15	ePn	Pn	02 15 17.5	+1.0
BAR	Barrett	10.26	325	ePn	Pn	02 15 17.1	-0.9
	3.4nm,1.1s						
LAZ	Ladron	10.28	12	ePn	Pn	02 15 18.6	+0.3
JCT	Junction City	10.77	53	ePn	Pn	02 15 25.9	+0.8
	3.6nm,0.7s						
PFO	Pinyon Flat Ob	10.90	329	Pn	Pn	02 15 19.4	-7.5
	0.2nm,0.3s,baz=129,slow=6.5,SNR=2.2						
PFO	Pinyon Flat Ob	10.90	329	ePn	Pn	02 15 26.8	-0.1
	23nm,1.6s						
ANMO	Albuquerque	10.95	15	Pn	Pn	02 15 27.6	+0.2
	0.1nm,0.3s,baz=199,slow=13,SNR=5.6						
WMOK	Wichita Mounta	14.10	40	ePn	Pn	02 16 11.7	+1.2
NVAR	Mina Array Bea	15.78	335	Pn	Pn	02 16 34.9	+1.8
	0.2nm,0.3s,baz=165,slow=13,SNR=15						
ISCO	Idaho Springs	15.80	12	eP	Pn	02 16 33.4	+0.1
	0.7nm,0.6s						
DUG	Dugway	15.99	352	eP	Pn	02 16 35.1	-0.7
	3.5nm,1.1s						
ELK	Elko	16.96	346	Pn	Pn	02 16 48.2	0.0
	0.1nm,0.3s,baz=163,slow=16,SNR=3.2						
PDAR	Pinedale Array	18.36	1	P	Pn	02 17 04.6	-0.8
	0.0nm,0.3s,baz=161,slow=9.4,SNR=5.0						
LOHW	Long Hollow	19.22	358	eP	Pn	02 17 15.0	-0.9
	1.0nm,0.6s						
MCMT	McKenzie Canyo	20.57	354	eP	P	02 17 29.9	+0.2

BEO 07 02:29:30.2±4.3, 3953N×1833E, ML3.4/1
TIR 07 02:29:32.7±3.2, 4066N×1889E, h7km±12km
ISCJB 07 02:29:35.9±0.2, 4064N±002×19.12E±002, h10km, Error ellipse: s-maj=2.5km s-min=2.3km az=38.9
CSEM 07 02:29:35.5±0.1, 4047N×1924E, h8km, MD3.3/24, Error ellipse: s-maj=2.1km s-min=1.0km az=151.0
SKO 07 02:29:36.9, 4047N×1929E, h7km
ROM 07 02:29:36.8±0.2, 4068N×1907E, h10km, Md3.3/24, Ml3.2/12, Error ellipse: s-maj=2.7km s-min=2.2km az=46.0
NEIC 07 02:29:36.8, 4068N×1907E, h10km, ML3.2(ROM), After ROM.
PDG 07 02:29:38.9±1.4, 4084N×19.13E, h14km±4km, ML3.0/10, Error ellipse: s-maj=2.9km s-min=4.3km az=0.0
ISC 07 02:29:35.9±0.5, 4067N±002×1912E±002, h2km±4km, n90, σ1s06/131, 5C-6D, Albania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VLO	Vlora	0.35	124	i SG	Sg	02 29 49.2	+2.1
SCTE	Santa Cesarea	0.77	220	Pg	Pg	02 29 51.5	+0.8
SCTE				Sg	Sg	02 30 02.7	+1.9
TIR	Tirane	0.89	39	i PG	Pg	02 29 54.5	+1.6
TIR				i SG	Sg	02 30 08.4	+4.1
TIR	Tirane	0.89	39	Pg	Pg	02 29 54.4	+1.5
	1µm,0.5s						
TIR	Tirane	0.89	39	eP	Pg	02 29 55.6	+2.7
SRN	Sarande	1.04	139	i PG	Pg	02 29 56.4	+0.7
SRN				i SG	Sg	02 30 10.6	+1.4
QSH	Qafa e Shtames	1.04	35	ePG	Pg	02 29 56.2	+0.3
KEK	Kerkira	1.09	151	Pg	Pg	02 29 57.1	+0.4
KEK				Sg	Sg	02 30 12.4	+1.6
PE1	Pezze di Greco	1.30	277	ePn	Pn	02 30 00.7	-0.4
PE1				eSn	Sn	02 30 21.7	+2.7
ULC	Ulcinj	1.30	4⇓	iPg	Pg	02 30 00.3	-0.5
ULC				eSg	Sg	02 30 17.8	+0.1
ULC	Ulcinj	1.30	4	i PG	Pg	02 30 00.3	-0.5
ULC				i SG	Sg	02 30 17.8	+0.1
OHR	Ohrid	1.35	70	eP	Pn	02 30 01.0	-0.8
OHR	Ohrid	1.35	70	ePg	Pg	02 30 00.7	-1.1
OHR				eSg	Sg	02 30 19.7	+0.5
OHR	Ohrid	1.35	70	ePg	Pg	02 30 00.6	-1.2
OHR	Ohrid	1.35	70	eP	Pn	02 30 01.0	-0.8
OHR				eSg	Sg	02 30 19.7	+0.4
IGT	Igoumenitsa	1.47	140	eP	Pn	02 30 02.3	-1.1
PUK	Puka	1.49	23	ePN	Pn	02 30 03.9	+0.1
PUK				i SN	Sn	02 30 25.1	+1.2
NOCI	Noci	1.57	275	Pn	Pn	02 30 05.1	+0.3
BUM	Brajici-Budva	1.64	354⇑	iPg	Pg	02 30 05.9	-1.5
BUM				eSg	Sg	02 30 28.3	-0.3
BUM	Brajici-Budva	1.64	354	i PG	Pg	02 30 05.9	-1.5
BUM				i SG	Sg	02 30 28.3	-0.3
BIA	Bitola	1.71	77	ePg	Pg	02 30 06.4	-2.3
BIA				eSg	Sg	02 30 29.5	-1.3
BIA	Bitola	1.71	77	ePg	Pg	02 30 06.4	-2.3
BIA				eSg	Sg	02 30 29.4	-1.4
FNA	Florina	1.72	85	eP	Pn	02 30 07.1	+0.2
BAI	Bari	1.75	285	ePn	Pn	02 30 08.2	+0.8
BAI				eSn	Sn	02 30 36.3	+6.0
KRUS	Krusevo	1.76	66	ePg	Pg	02 30 07.3	-2.3
KRUS				eSg	Sg	02 30 32.1	-0.3
KRUS	Krusevo	1.76	66	ePg	Pg	02 30 07.2	-2.4
KRUS				eSg	Sg	02 30 32.0	-0.4
PDG	Podgorica	1.77	3	i PG	Pn	02 30 07.4	-0.1
PDG				i SG	Sn	02 30 31.0	+0.4
PDG	Podgorica	1.77	3⇓	iPn	Pn	02 30 07.4	-0.1
PDG				eSn	Sn	02 30 31.0	+0.4
TTG	Podgorica	1.77	3⇓	iPn	Pn	02 30 07.4	-0.1
TTG				eSn	Sn	02 30 31.0	+0.4
HCY	Herceg Novi	1.84	346⇑	iPn	Pn	02 30 09.2	+0.7
HCY				eSn	Sn	02 30 33.3	+0.9
HCY	Herceg Novi	1.84	346	i PG	Pn	02 30 09.2	+0.7
HCY				i SG	Sn	02 30 33.3	+0.9
MEV	Metsovon	1.84	118	eP	Pn	02 30 06.6	-1.9
BCI	Bajram Curri	1.84	22	ePN	Pn	02 30 09.5	+0.9

BCI				eSN	Sn	02 30 35.4	+2.9
SG1	**Sgolgore (BA)**	**1.86**	**276**	ePn	**Pn**	**02 30 08.7**	**-0.1**
SG1				eSn	Sn	02 30 38.3	+5.4
AMUR	**Altamura**	**1.92**	**278**	Pn	**Pn**	**02 30 08.7**	**-1.0**
	167nm,0.6s						
PVY	**Plav**	**2.03**	**18**	⇓iPn	**Pn**	**02 30 12.3**	**+1.1**
PVY				eSn	Sn	02 30 37.7	+0.6
CRAC	**Craco**	**2.07**	**262**	Pn	**Pn**	**02 30 12.7**	**+1.0**
	1μm,1.2s						
ORI	**Oriolo Calabro**	**2.13**	**254**	Pn	**Pn**	**02 30 13.1**	**+0.6**
	537nm,0.6s						
TREB	**Trebinje**	**2.13**	**345**	ePn	**Pn**	**02 30 15.6**	**+3.1**
TREB				eSn	Sn	02 30 44.4	+4.9
TREB	**Trebinje**	**2.13**	**345**	ePn	**Pn**	**02 30 12.4**	**-0.1**
TREB				eSn	Sn	02 30 37.7	-1.8
NKY	**Niksic**	**2.15**	**358**	⇑iPn	**Pn**	**02 30 13.5**	**+0.7**
NKY				eSn	Sn	02 30 40.1	+0.1
SKO	**Skopje**	**2.18**	**53**	ePn	**Pn**	**02 30 14.7**	**+1.5**
SKO				eSg	Sg	02 30 45.2	-0.7
SKO	**Skopje**	**2.18**	**53**	ePn	**Pn**	**02 30 14.6**	**+1.4**
SKO				eSg	Sg	02 30 45.2	-0.8
MRVN	**Minervino Murg**	**2.25**	**281**	Pn	**Pn**	**02 30 13.0**	**-1.2**
	144nm,0.7s						
BRY	**Bratogost**	**2.27**	**349**	⇓iPn	**Pn**	**02 30 15.4**	**+0.9**
BRY				eSn	Sn	02 30 43.5	+0.4
BEY	**Berane**	**2.28**	**15**	i PG	**Pn**	**02 30 15.6**	**+1.0**
IVA	**Berane**	**2.28**	**15**	⇑iPn	**Pn**	**02 30 15.6**	**+1.0**
IVA				eSn	Sn	02 30 43.9	+0.6
LKD	**Levkas**	**2.29**	**148**	eP	**Pn**	**02 30 13.6**	**-1.0**
SCHR	**S. Chirico Rap**	**2.37**	**260**	Pn	**Pn**	**02 30 15.6**	**-0.2**
	139nm,1.1s						
PALZ	**Palazzo San Ge**	**2.41**	**278**	Pn	**Pn**	**02 30 17.0**	**+0.6**
SERS	**Sersale**	**2.48**	**230**	Pn	**Pn**	**02 30 15.6**	**-1.7**
	103nm,1.0s						
SIRI	**Monte Sirino -**	**2.53**	**260**	Pn	**Pn**	**02 30 18.0**	**0.0**
	69nm,0.5s						
STIP	**Stip**	**2.53**	**65**	ePn	**Pn**	**02 30 17.9**	**-0.2**
STIP	**Stip**	**2.53**	**65**	ePn	**Pn**	**02 30 17.8**	**-0.3**
UPM	**Unac-Piva**	**2.54**	**357**	⇓iPn	**Pn**	**02 30 18.4**	**+0.2**
UPM				eSn	Sn	02 30 50.2	+0.5
MCEL	**Monticello**	**2.55**	**263**	Pn	**Pn**	**02 30 17.9**	**-0.4**
	82nm,0.7s						
MTSN	**Montesano sull**	**2.60**	**262**	Pn	**Pn**	**02 30 18.9**	**-0.1**
	104nm,0.6s						
CARO	**Carolei**	**2.64**	**239**	Pn	**Pn**	**02 30 19.0**	**-0.5**
PLE	**Pljevlja**	**2.67**	**4**	⇑iPn	**Pn**	**02 30 21.3**	**+1.4**
PLE				eSn	Sn	02 30 52.9	0.0
SJES	**Sjenica**	**2.67**	**14**	ePn	**Pn**	**02 30 26.9**	**+7.0**
SJES				eSn	Sn	02 31 00.9	+8.0
VAY	**Valandovo**	**2.69**	**75**	ePn	**Pn**	**02 30 19.2**	**-1.0**
VAY	**Valandovo**	**2.69**	**75**	ePn	**Pn**	**02 30 19.2**	**-1.1**
RGNG	**Rignano Grg**	**2.85**	**292**	Pn	**Pn**	**02 30 20.5**	**-1.9**
SGTA	**Sant Agata di**	**2.88**	**281**	Pn	**Pn**	**02 30 20.5**	**-2.4**
SGO	**Sicignano**	**2.90**	**269**	Pn	**Pn**	**02 30 22.2**	**-0.9**
KNT	**Kendrikon**	**2.91**	**79**	eP	**Pn**	**02 30 22.5**	**-0.7**
BULG	**Bulgheria - Ca**	**2.92**	**260**	Pn	**Pn**	**02 30 22.6**	**-0.7**
BARS	**Barje**	**2.95**	**42**	ePn	**Pn**	**02 30 29.9**	**+6.1**
FG5	**Orsara di Pugl**	**2.98**	**283**	Pn	**Pn**	**02 30 24.6**	**+0.4**
BBLS	**Lazići**	**3.20**	**4**	ePn	**Pn**	**02 30 32.7**	**+5.4**
BBLS				eSn	Sn	02 31 13.9	+7.8
KKB	**Krupnik**	**3.22**	**67**	i P	**Pn**	**02 30 26.0**	**-1.5**
GRUS	**Gruza**	**3.43**	**20**	ePn	**Pn**	**02 30 37.2**	**+6.8**
DIVS	**Divibare**	**3.49**	**10**	ePn	**Pn**	**02 30 37.1**	**+5.9**
DIVS				eSn	Sn	02 31 20.1	+7.0
DIVS	**Divibare**	**3.49**	**10**	ePn	**Pn**	**02 30 32.6**	**+1.4**
DIVS				eSn	Sn	02 31 20.1	+7.0
SOI	**Samo**	**3.51**	**223**	Pn	**Pn**	**02 30 29.4**	**-2.1**
	27nm,0.8s						
MMB	**Musomiste**	**3.60**	**74**	i P	**Pn**	**02 30 32.4**	**-0.3**
VTS	**Vitosha**	**3.62**	**57**	i P	**Pn**	**02 30 33.0**	**0.0**
SGG	**Gregorio Mates**	**3.66**	**283**	Pn	**Pn**	**02 30 33.8**	**+0.3**
BOLS	**Boljevac**	**3.80**	**33**	ePn	**Pn**	**02 30 41.9**	**+6.5**
SVIS	**Svilajnac**	**3.92**	**23**	ePn	**Pn**	**02 30 44.4**	**+7.3**
SVIS				eSn	Sn	02 31 33.3	+10
SDI	**San Donato**	**4.14**	**286**	Pn	**Pn**	**02 30 39.8**	**-0.3**
VVLD	**Villa Vallelon**	**4.31**	**288**	Pn	**Pn**	**02 30 42.5**	**0.0**
BLY	**Banja Luka**	**4.32**	**341**	ePn	**Pn**	**02 30 42.4**	**-0.2**
BLY				eSn	Sn	02 31 30.9	-2.7
RZN	**Rozhen**	**4.35**	**75**	i P	**Pn**	**02 30 43.0**	**0.0**
FAGN	**Fagnano**	**4.46**	**293**	Pn	**Pn**	**02 30 44.5**	**0.0**
	36nm,0.5s						
FGSL	**Fruska Gora**	**4.52**	**6**	ePn	**Pn**	**02 30 46.4**	**+1.1**
FGSL				eSn	Sn	02 31 37.2	-1.2
LNSS	**Leonessa**	**4.95**	**295**	Pn	**Pn**	**02 30 51.8**	**+0.5**
NRCA	**Norcia**	**4.99**	**298**	Pn	**Pn**	**02 30 51.6**	**-0.2**
BZS	**Buzias**	**5.27**	**19**	ePn	**Pn**	**02 31 01.2**	**+5.5**
VYHS	**Vyhne**	**7.83**	**359**	eSN	**Sn**	**02 32 43.9**	**-16**

*MOS **07** 02:39:55.6±1.7, 1750S×17773W, h437km, mb4.5/18, Error ellipse: s-maj=20.6km s-min=11.9km az=61.2*
*IDC **07** 02:39:58.7±2.4, 1928S×17779W, h538km±27km, mb3.8/13, mb1 4.0/14, mb1mx3.8/20, mbtmp3.8/14, Error ellipse: s-maj=22.9km s-min=11.0km az=152.0*
*BJI **07** 02:39:58.4, 1920S×17780W, h545km, mB4.7, mb4.5*
*NEIC **07** 02:39:58.4±0.9, 1921S×17784W, h532km±9km, mb4.5/40, Error ellipse: s-maj=11.7km s-min=5.0km az=151.0*
*ISCJB **07** 02:39:59.4±1.8, 189S±0.1×17801W±007, h538km±19km, mb4.3/57, Error ellipse: s-maj=21.8km s-min=7.6km az=160.2*
*SZGRF **07** 02:40:01.7, 19.18S×177.12W, h33km, Fiji Islands region*
ISC 07 02:40:00.5±1.7**, 189S**±01×**17799W**±007**, h539**km±17km**, n531, σ0s45**/396**, mb4.3**/57**, 150C-166D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNA	**Funafuti**	**10.63**	**345**	ePn	**P**	**02 42 24.5**	**-0.5**
	96nm,0.5s						
URZ	**Urewera**	**19.79**	**191**	P	**P**	**02 43 48.6**	**-6.4**
	4.0nm,0.3s,baz=317,slow=8.0,SNR=6.7						
CTA	**Charters Tower**	**33.69**	**262**	eP	**P**	**02 45 57.4**	**+0.3**
	14nm,0.6s,mb4.7						
CTA	**Charters Tower**	**33.69**	**262**	P	**P**	**02 45 56.8**	**-0.4**
	17nm,0.6s,mb4.7,baz=91,slow=11,SNR=20						
CTA	**Charters Tower**	**33.69**	**262**	eP	**P**	**02 45 57.4**	**+0.3**
CTA				pmax	pmax		
	comp=Z,14nm,0.6s						
CTAO	**Charters Tower**	**33.69**	**262**	eP	**P**	**02 45 57.4**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.7						
CTAO	**Charters Tower**	**33.69**	**262**	eP	**P**	**02 45 57.4**	**+0.3**
	comp=Z,18nm,0.8s,mb4.7						
PMG	**Port Moresby**	**35.02**	**281**	eP	**P**	**02 46 09.6**	**+1.3**
COEN	**Coen**	**37.52**	**272**	eP	**P**	**02 46 29.6**	**+0.7**
	comp=Z,4.3nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**38.53**	**242**	P	**P**	**02 46 35.2**	**-1.7**
	comp=Z,1.4nm,0.4s,mb3.8,baz=290,slow=1.5,SNR=3.9						
STKA	**Stephens Creek**	**38.53**	**242**	P	**P**	**02 46 35.2**	**-1.7**
WB2	**Warramunga Arr**	**44.84**	**260**	⇓iP	**P**	**02 47 26.7**	**-0.3**
WRA	**Warramunga Arr**	**44.85**	**260**	P	**P**	**02 47 26.5**	**-0.5**
	comp=Z,2.3nm,0.3s,mb4.1,baz=98,slow=6.0,SNR=28						
ASAR	**Alice Springs**	**44.92**	**255**	P	**P**	**02 47 27.2**	**-0.3**
	comp=Z,7.6nm,0.6s,mb4.4,baz=90,slow=8.3,SNR=71						
ASAR				S	**S**	**02 53 26.4**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=91,slow=15,SNR=10						
KAKA	**Kakadu**	**47.97**	**270**	eP	**P**	**02 47 50.6**	**-0.1**
	comp=Z,5.0nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**53.27**	**261**	eP	**P**	**02 48 29.4**	**+0.1**
	comp=Z,3.8nm,1.4s,mb3.5						
MJAR	**Matsushiro Arr**	**68.91**	**323**	P	**P**	**02 50 11.7**	**+0.3**
	comp=Z,1.0nm,0.3s,mb3.8,baz=162,slow=5.8,SNR=4.0						
PETK	**Petropavlovsk-**	**74.70**	**345**	P	**P**	**02 50 45.0**	**+0.2**
	comp=Z,4.5nm,0.5s,mb4.2,baz=112,slow=7.3,SNR=26						
PETK	**Petropavlovsk-**	**74.70**	**345**	P	**P**	**02 50 45.0**	**+0.2**
PKD	**Parkfield**	**76.96**	**45**	⇓P	**P**	**02 50 58.1**	**+0.4**
	baz=77						
U04C	**Hernandez Rese**	**77.04**	**44**	⇑P	**P**	**02 50 58.9**	**+0.8**
	baz=77						
PACP	**Pacheco Peak**	**77.09**	**43**	⇑P	**P**	**02 50 58.9**	**+0.5**
	baz=77						
MNRC	**McLaughlin Nat**	**77.46**	**41**	⇓P	**P**	**02 51 01.0**	**+0.7**
	baz=78						
VES	**Vestal, Richgr**	**77.88**	**45**	⇓P	**P**	**02 51 02.3**	**-0.5**
	baz=78,SNR=6.0						
S05C	**Merced**	**77.91**	**44**	⇑P	**P**	**02 51 03.3**	**+0.5**
	baz=78						
MURC	**Murrieta**	**77.96**	**48**	⇓P	**P**	**02 51 02.9**	**-0.2**
	baz=78						
BFSC	**Mount Baldy St**	**77.98**	**47**	⇓P	**P**	**02 51 03.1**	**-0.2**
	baz=78						
O02C	**Red Bluff**	**78.03**	**40**	⇓P	**P**	**02 51 04.0**	**+0.6**
	baz=78						
EDW2	**Edwards Air Fo**	**78.10**	**47**	⇓P	**P**	**02 51 03.7**	**-0.2**
	baz=78,SNR=8.0						
T06C	**Millerton Lake**	**78.12**	**44**	⇓P	**P**	**02 51 03.6**	**-0.3**
	baz=78,SNR=5.7						
MONP	**Monument Peak**	**78.14**	**49**	⇑P	**P**	**02 51 04.2**	**0.0**
	baz=78,SNR=9.1						
ISA	**Isabella**	**78.19**	**46**	eP	**P**	**02 51 04.0**	**-0.4**
ISA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.0						
ISA	**Isabella**	**78.19**	**46**	⇓P	**P**	**02 51 04.3**	**-0.1**
	baz=78,SNR=8.3						
ISA	**Isabella**	**78.19**	**46**	eP	**P**	**02 51 04.0**	**-0.4**
	comp=Z,7.8nm,0.9s,mb4.0						
DVTC	**Desert V Tower**	**78.25**	**49**	⇑P	**P**	**02 51 05.0**	**+0.2**
	baz=78						
CMB	**Columbia Colle**	**78.27**	**43**	eP	**P**	**02 51 04.3**	**-0.4**
CMB				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.3						
CMB	**Columbia Colle**	**78.27**	**43**	⇑P	**P**	**02 51 04.5**	**-0.2**
	baz=78,SNR=5.9						
CMB	**Columbia Colle**	**78.27**	**43**	eP	**P**	**02 51 04.3**	**-0.4**
	comp=Z,20nm,1.3s,mb4.3						
WDC	**Whiskeytown Da**	**78.42**	**40**	⇓P	**P**	**02 51 05.4**	**-0.1**
	baz=78						
ORV	**Oroville**	**78.45**	**41**	⇓P	**P**	**02 51 05.5**	**-0.2**
	baz=79						
LAVA	**Lava Cap Winer**	**78.46**	**42**	⇑P	**P**	**02 51 05.2**	**-0.5**
	baz=79						
PFO	**Pinyon Flat Ob**	**78.49**	**48**	⇓P	**P**	**02 51 05.9**	**-0.2**
	baz=79						
S06C	**San Francisco**	**78.53**	**43**	⇑P	**P**	**02 51 06.0**	**-0.1**
	baz=79						
OHAK	**Old Harbor**	**78.56**	**13**	eP	**P**	**02 51 05.1**	**-0.8**
	comp=Z,20nm,0.6s,mb4.6						
NJ2	**Nanjing**	**78.85**	**309**	eP	**P**	**02 51 09.8**	**+1.8**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.6						
R05C	**Kirkwood Meado**	**78.85**	**43**	⇑P	**P**	**02 51 07.7**	**-0.2**
	baz=79						
P05C	**Yuba Gap, Truc**	**78.86**	**42**	⇓P	**P**	**02 51 08.1**	**+0.2**
	baz=79,SNR=5.2						
CWC	**Cottonwood Cre**	**78.89**	**45**	⇑P	**P**	**02 51 08.2**	**+0.1**
	baz=79						
YBH	**Yreka Blue Hor**	**79.02**	**39**	P	**P**	**02 51 08.7**	**+0.1**
	comp=Z,5.4nm,0.6s,mb4.0,baz=219,slow=1.8,SNR=7.2						
YBH	**Yreka Blue Hor**	**79.02**	**39**	⇑P	**P**	**02 51 09.0**	**+0.3**
	baz=79						
BELC	**Belle Mtn.**	**79.02**	**48**	⇓P	**P**	**02 51 08.8**	**0.0**
	baz=79,SNR=6.1						
O05C	**Quincy**	**79.05**	**41**	⇓P	**P**	**02 51 09.0**	**+0.1**
	baz=79						
MTUM	**Tungsten Hills**	**79.07**	**44**	eP	**P**	**02 51 08.8**	**-0.2**
MPMC	**Manual Prospec**	**79.08**	**46**	⇑P	**P**	**02 51 08.8**	**-0.3**
	baz=79						
M03C	**McCloud**	**79.09**	**39**	⇑P	**P**	**02 51 09.3**	**+0.3**
	baz=79						
GSC	**Goldstone**	**79.14**	**47**	⇑P	**P**	**02 51 09.4**	**-0.1**
	baz=79						
R06C	**Coleville**	**79.15**	**43**	⇑P	**P**	**02 51 09.5**	**+0.1**
	baz=79						
O04C	**Chester**	**79.16**	**41**	⇑P	**P**	**02 51 09.4**	**0.0**
	baz=79,SNR=7.0						
MDJ	**Mudanjiang**	**79.19**	**325**	P	**P**	**02 51 09.9**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,168nm,4.3s						
HATC	**Hat Creek Radi**	**79.22**	**40**	⇓P	**P**	**02 51 10.1**	**+0.3**
	baz=79						
HEC	**Hector,Ludlow**	**79.22**	**47**	⇑P	**P**	**02 51 09.6**	**-0.3**
	baz=79						
BC3	**Big Chuckw Mtn**	**79.23**	**49**	⇓P	**P**	**02 51 10.3**	**+0.3**
	baz=79						
KDAK	**Kodiak Island**	**79.23**	**14**	P	**P**	**02 51 08.8**	**-0.5**
	comp=Z,9.1nm,0.6s,mb4.3,baz=180,slow=2.6,SNR=9.7						
LBCM	**Butte Creek Ri**	**79.30**	**40**	P	**P**	**02 51 10.4**	**+0.3**
BEKR	**Beckwourth**	**79.34**	**41**	⇓P	**P**	**02 51 10.4**	**0.0**
	baz=80						
GLA	**Glamis**	**79.37**	**50**	⇓P	**P**	**02 51 10.9**	**+0.2**
	baz=80						
WCN	**Washoe City**	**79.40**	**42**	⇓P	**P**	**02 51 10.9**	**+0.2**
	baz=80						
HUMO	**Hull Mountain**	**79.41**	**38**	⇑P	**P**	**02 51 11.2**	**+0.5**
	baz=80						
S08C	**White Mtn Res**	**79.41**	**44**	⇑P	**P**	**02 51 11.1**	**+0.3**
	baz=80,SNR=8.4						
ELFS	**Eagle Lake Fie**	**79.55**	**41**	⇑P	**P**	**02 51 12.6**	**+1.1**
	baz=80						
M04C	**Macdoel**	**79.57**	**39**	⇓P	**P**	**02 51 11.7**	**+0.1**
	baz=80						
GMRC	**Granite Mounta**	**79.66**	**48**	⇓P	**P**	**02 51 12.0**	**-0.2**
	baz=80						
GRAC	**Grapevine Rang**	**79.67**	**45**	⇓P	**P**	**02 51 12.4**	**+0.1**
	baz=80,SNR=6.3						
IRM	**Iron Mountain**	**79.70**	**49**	⇑P	**P**	**02 51 12.8**	**+0.4**
	baz=80						
FURC	**Furnace Creek,**	**79.73**	**46**	⇑P	**P**	**02 51 12.6**	**0.0**
	baz=80						
M05C	**Lookout**	**79.73**	**40**	⇓P	**P**	**02 51 12.6**	**+0.2**
	baz=80						
L04A	**Klamath Falls**	**79.77**	**39**	⇑P	**P**	**02 51 12.8**	**+0.2**
	baz=80						
SHOC	**Shoshone**	**79.82**	**47**	⇑P	**P**	**02 51 12.7**	**-0.3**
	baz=80						
TUQ	**Turquoise Moun**	**79.82**	**47**	⇑P	**P**	**02 51 12.9**	**-0.1**
	baz=80						
NVAR	**Mina Array Bea**	**79.84**	**44**	P	**P**	**02 51 13.1**	**0.0**
	comp=Z,4.9nm,0.7s,mb3.9,baz=226,slow=9.4,SNR=40						
O06A	**Flanigan**	**79.85**	**41**	⇑P	**P**	**02 51 13.1**	**0.0**
	baz=80,SNR=10.0						
Y12C	**Blythe**	**79.94**	**49**	⇓P	**P**	**02 51 13.8**	**+0.1**
	baz=80						
113A	**Mohawk Valley,**	**79.99**	**50**	⇓P	**P**	**02 51 14.0**	**0.0**
	baz=80						
M06C	**Likely Place G**	**80.05**	**40**	⇑P	**P**	**02 51 14.3**	**+0.2**
	baz=80						
U10A	**Ash Meadows, A**	**80.06**	**46**	⇓P	**P**	**02 51 14.3**	**0.0**
	baz=80						
S09A	**Goldfield**	**80.16**	**45**	⇑P	**P**	**02 51 14.8**	**+0.1**
	baz=80						
N06A	**Buffalo Meadow**	**80.18**	**41**	⇑P	**P**	**02 51 14.7**	**-0.1**
	baz=80,SNR=5.4						
LDFC	**Landfair**	**80.20**	**48**	eP	**P**	**02 51 15.2**	**+0.2**
	comp=Z,32nm,1.1s,mb4.6						
J04A	**Umpqua Nationa**	**80.29**	**38**	⇓P	**P**	**02 51 15.7**	**+0.5**
	baz=80,SNR=6.2						
214A	**Organ Pipe Nat**	**80.29**	**52**	⇑P	**P**	**02 51 15.5**	**-0.1**
	baz=80						
Q08A	**Gabbs**	**80.32**	**43**	⇓P	**P**	**02 51 15.7**	**+0.1**
	baz=80						
L05A	**Lakeview**	**80.33**	**39**	⇓P	**P**	**02 51 16.0**	**+0.5**
	baz=80						
O07A	**Toulon**	**80.44**	**42**	⇓P	**P**	**02 51 16.1**	**0.0**
	baz=81,SNR=14						
I04A	**Tendick Farm,**	**80.45**	**37**	⇑P	**P**	**02 51 15.9**	**-0.2**
	baz=81						
Y13A	**Salome**	**80.47**	**49**	⇓P	**P**	**02 51 16.7**	**+0.2**
	baz=81,SNR=6.3						
PDMCI	**Parker Dam,Lak**	**80.49**	**49**	⇑P	**P**	**02 51 16.7**	**+0.1**
	baz=81						
R09A	**Tonopah**	**80.54**	**44**	⇓P	**P**	**02 51 16.7**	**-0.1**
	baz=81						
MOD	**Modoc**	**80.56**	**40**	⇑P	**P**	**02 51 16.7**	**-0.1**
	baz=81,SNR=10						
MOD	**Modoc**	**80.56**	**40**	eP	**P**	**02 51 16.9**	**+0.2**
	comp=Z,9.1nm,0.8s,mb4.3						
S10A	**Tonopah Range,**	**80.69**	**45**	⇓P	**P**	**02 51 17.5**	**0.0**
	baz=81,SNR=17						
K05A	**Summer Lake**	**80.69**	**39**	⇑P	**P**	**02 51 17.9**	**+0.5**
	baz=81,SNR=7.4						
V12A	**Nelson**	**80.72**	**47**	⇓P	**P**	**02 51 17.6**	**-0.1**
	baz=81						
N07B	**Gerlach**	**80.73**	**41**	⇓P	**P**	**02 51 17.6**	**-0.1**
	baz=81,SNR=6.8						
J05A	**Fort Rock**	**80.82**	**38**	⇓P	**P**	**02 51 18.5**	**+0.5**
	baz=81,SNR=15						
M07A	**Soldier Meadow**	**80.96**	**41**	⇑P	**P**	**02 51 19.0**	**+0.2**
	baz=81,SNR=5.8						
O08A	**Rochester Mine**	**80.97**	**42**	⇓P	**P**	**02 51 19.2**	**+0.3**
	baz=81,SNR=14						
CN2	**Changchun**	**81.02**	**322**	eP	**P**	**02 51 18.8**	**-0.2**
W13A	**Hualapai Mount**	**81.08**	**48**	⇓P	**P**	**02 51 19.6**	**0.0**
	baz=81						
R10A	**Warm Springs**	**81.08**	**45**	⇓P	**P**	**02 51 19.8**	**+0.3**
	baz=81,SNR=17						
115A	**Sonoran Desert**	**81.09**	**51**	⇓P	**P**	**02 51 19.7**	**0.0**
	baz=81						
S11A	**Rachel**	**81.11**	**45**	⇑P	**P**	**02 51 19.6**	**0.0**
	baz=81,SNR=6.8						
K06A	**Valley Falls**	**81.12**	**39**	⇓P	**P**	**02 51 19.8**	**+0.2**
	baz=81,SNR=12						
H04A	**Detroit Lake**	**81.12**	**37**	⇑P	**P**	**02 51 19.5**	**-0.1**
	baz=81						
Y14A	**Wickenburg**	**81.13**	**50**	⇓P	**P**	**02 51 19.9**	**0.0**
	baz=81,SNR=6.6						
L07A	**Adell**	**81.21**	**40**	⇓P	**P**	**02 51 20.5**	**+0.4**
	baz=81,SNR=12						
T11A	**Corn Creek, Al**	**81.25**	**46**	⇑P	**P**	**02 51 20.6**	**+0.1**
	baz=81,SNR=8.3						
N08A	**GE Springer Mi**	**81.26**	**42**	⇑P	**P**	**02 51 20.4**	**0.0**
	baz=81,SNR=13						
U12A	**Valley of Fire**	**81.30**	**47**	⇓P	**P**	**02 51 20.8**	**+0.1**
	baz=81						
216A	**Three Points,**	**81.32**	**52**	⇓P	**P**	**02 51 21.4**	**+0.5**
	baz=81,SNR=7.1						
V13A	**Grand Canyon W**	**81.39**	**48**	⇑P	**P**	**02 51 20.9**	**-0.3**
	baz=82						
116A	**Eloy**	**81.41**	**51**	⇑P	**P**	**02 51 21.6**	**+0.2**
	baz=82,SNR=9.7						
J06A	**Christmas Vall**	**81.44**	**39**	⇑P	**P**	**02 51 21.2**	**-0.1**
	baz=82,SNR=8.4						
X14A	**Yava**	**81.47**	**49**	⇓P	**P**	**02 51 22.0**	**+0.4**
	baz=82,SNR=9.1						
M08A	**Happy Creek Ra**	**81.48**	**41**	⇑P	**P**	**02 51 21.7**	**+0.2**
	baz=82,SNR=6.2						
O09A	**Fish Creek Ran**	**81.52**	**43**	⇓P	**P**	**02 51 21.7**	**0.0**
	baz=82,SNR=6.7						
R11A	**Troy Canyon, C**	**81.59**	**45**	⇑P	**P**	**02 51 21.8**	**-0.4**
	baz=82,SNR=8.8						
Y15A	**Casa Rosa Ranc**	**81.62**	**50**	⇓P	**P**	**02 51 22.6**	**+0.2**
	baz=82,SNR=15						
H05A	**Madras**	**81.64**	**37**	⇑P	**P**	**02 51 22.3**	**0.0**
	baz=82						
BMN	**Battle Mountai**	**81.64**	**42**	eP	**P**	**02 51 22.2**	**-0.2**
BMN				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.3						
BMN	**Battle Mountai**	**81.64**	**42**	eP	**P**	**02 51 22.2**	**-0.2**
	comp=Z,14nm,1.1s,mb4.3						
K07A	**Rock Creek Ran**	**81.66**	**40**	⇓P	**P**	**02 51 22.7**	**+0.3**
	baz=82,SNR=13						
N09A	**Rock Creek Ran**	**81.68**	**42**	⇑P	**P**	**02 51 22.7**	**+0.1**
	baz=82,SNR=7.9						
U13A	**Pakoon Wash**	**81.69**	**47**	⇓P	**P**	**02 51 22.9**	**+0.2**
	baz=82,SNR=10.0						
P10A	**Eureka**	**81.69**	**43**	⇓P	**P**	**02 51 22.7**	**0.0**
	baz=82						
S12A	**Delamar Landin**	**81.70**	**46**	⇓P	**P**	**02 51 23.3**	**+0.6**
	baz=82,SNR=11						
217A	**Green Valley**	**81.70**	**52**	⇓P	**P**	**02 51 23.3**	**+0.5**
	baz=82,SNR=7.7						
W14A	**Seligman**	**81.70**	**49**	⇑P	**P**	**02 51 23.1**	**+0.4**
	baz=82,SNR=9.9						
F04A	**Amboy**	**81.75**	**36**	⇓P	**P**	**02 51 22.7**	**-0.1**
	baz=82						
Q11A	**Duckwater**	**81.81**	**44**	⇓P	**P**	**02 51 23.1**	**-0.1**
	baz=82,SNR=9.2						
I06A	**Prineville**	**81.81**	**38**	⇑P	**P**	**02 51 23.5**	**+0.3**
	baz=82,SNR=13						
WVOR	**Wild Horse Val**	**81.88**	**40**	eP	**P**	**02 51 23.4**	**-0.1**
WVOR				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.4						
WVOR	**Wild Horse Val**	**81.88**	**40**	eP	**P**	**02 51 23.4**	**-0.1**
	comp=Z,16nm,1.0s,mb4.4						
NLWA	**Neilton Lookou**	**81.88**	**34**	⇑P	**P**	**02 51 23.8**	**+0.4**
	baz=82						
NLWA	**Neilton Lookou**	**81.88**	**34**	eP	**P**	**02 51 23.4**	**0.0**
	comp=Z,13nm,1.0s,mb4.3						
V14A	**Boquillas Ranc**	**81.90**	**48**	⇓P	**P**	**02 51 24.0**	**+0.2**
	baz=82,SNR=13						
L08A	**Fields**	**81.92**	**40**	⇓P	**P**	**02 51 24.0**	**+0.2**
	baz=82,SNR=19						
G05A	**Wamic**	**81.95**	**37**	⇓P	**P**	**02 51 24.0**	**+0.3**
	baz=82						
X15A	**Humboldt**	**81.95**	**50**	⇓P	**P**	**02 51 24.5**	**+0.4**
	baz=82,SNR=8.8						
FL2	**Flat Top 2**	**81.95**	**35**	P	**P**	**02 51 24.5**	**+0.7**
Z16A	**Peralta Trail,**	**81.98**	**51**	⇑P	**P**	**02 51 24.5**	**+0.3**
	baz=82,SNR=5.8						
J07A	**Hines**	**82.01**	**39**	⇑P	**P**	**02 51 24.3**	**+0.2**
	baz=82						
O10A	**Cortez Mining,**	**82.03**	**43**	⇑P	**P**	**02 51 24.5**	**+0.2**
	baz=82						
T13A	**Saint George**	**82.04**	**47**	⇑P	**P**	**02 51 24.6**	**+0.1**
	baz=82,SNR=9.7						
P11A	**Circle Ranch,**	**82.12**	**44**	⇓P	**P**	**02 51 24.7**	**-0.1**
	baz=82						
TDL	**Tradedollar La**	**82.12**	**35**	P	**P**	**02 51 25.1**	**+0.4**
117A	**Oracle**	**82.13**	**52**	⇓P	**P**	**02 51 25.5**	**+0.5**
	baz=82,SNR=9.8						
K08A	**Mann Creek Ran**	**82.14**	**40**	⇓P	**P**	**02 51 25.0**	**+0.2**
	baz=82,SNR=10						
H06A	**Lindquist Farm**	**82.21**	**37**	⇓P	**P**	**02 51 25.2**	**+0.1**
	baz=82,SNR=17						
Y16A	**Circle Bar Ran**	**82.21**	**50**	⇓P	**P**	**02 51 25.8**	**+0.4**
	baz=82,SNR=9.3						
R12A	**Pony Springs,**	**82.23**	**45**	⇓P	**P**	**02 51 25.4**	**0.0**
	baz=82,SNR=7.3						
U14A	**Mt Trumbull**	**82.24**	**47**	⇑P	**P**	**02 51 26.0**	**+0.5**
	baz=82,SNR=18						
OSD	**Olympics--Snow**	**82.24**	**34**	P	**P**	**02 51 25.9**	**+0.7**
F05A	**White Salmon**	**82.25**	**36**	⇓P	**P**	**02 51 25.8**	**+0.5**
	baz=82						
N10A	**Dunphy**	**82.26**	**42**	⇑P	**P**	**02 51 25.5**	**0.0**
	baz=82						
I07A	**Izee**	**82.31**	**38**	⇑P	**P**	**02 51 25.9**	**+0.3**
	baz=82,SNR=10						
G06A	**Carlson Farm,**	**82.33**	**37**	⇓P	**P**	**02 51 25.4**	**-0.3**
	baz=82						
VTHM	**Trough**	**82.34**	**37**	P	**P**	**02 51 25.9**	**+0.1**
S13A	**Holt Ranch, En**	**82.36**	**46**	⇑P	**P**	**02 51 26.2**	**+0.1**
	baz=82,SNR=7.9						
218A	**Dragoon**	**82.37**	**53**	⇑P	**P**	**02 51 26.9**	**+0.7**
	baz=82,SNR=9.2						
Q12A	**Willow Creek R**	**82.45**	**45**	⇓P	**P**	**02 51 26.4**	**-0.1**
	baz=83,SNR=5.4						
O11A	**Cowboy Ranch,**	**82.49**	**43**	⇑P	**P**	**02 51 26.8**	**+0.1**
	baz=83,SNR=8.8						
X16A	**Lo Mia Camp, P**	**82.49**	**50**	⇑P	**P**	**02 51 27.3**	**+0.5**
	baz=83,SNR=11						
E05A	**Randle**	**82.50**	**35**	⇑P	**P**	**02 51 26.3**	**-0.3**
	baz=83,SNR=5.9						
J08A	**Circle Bar Ran**	**82.50**	**39**	⇑P	**P**	**02 51 26.5**	**-0.1**
	baz=83,SNR=6.6						
C04A	**Brinnon**	**82.56**	**34**	⇑P	**P**	**02 51 26.9**	**+0.1**
	baz=83						
F06A	**Goldendale**	**82.56**	**36**	⇑P	**P**	**02 51 26.9**	**0.0**
	baz=83						
H07A	**Lands Inn, Kim**	**82.57**	**38**	⇓P	**P**	**02 51 26.8**	**-0.1**
	baz=83,SNR=16						
Y17A	**Roosevelt**	**82.58**	**51**	⇓P	**P**	**02 51 27.6**	**+0.3**
	baz=83						
K09A	**Rome**	**82.59**	**40**	⇑P	**P**	**02 51 27.3**	**+0.2**
	baz=83,SNR=22						
R13A	**O'Grain Ranch,**	**82.59**	**46**	⇓P	**P**	**02 51 27.6**	**+0.4**
	baz=83						
T14A	**Hurricane**	**82.63**	**47**	⇑P	**P**	**02 51 27.4**	**0.0**
	baz=83,SNR=8.5						
P12A	**McGill**	**82.63**	**44**	⇑P	**P**	**02 51 27.3**	**0.0**
	baz=83,SNR=7.0						
V15A	**Kaibab Nationa**	**82.65**	**48**	⇓P	**P**	**02 51 28.2**	**+0.6**
	baz=83,SNR=8.8						
M10A	**I.L. Ranch, Tu**	**82.67**	**42**	⇓P	**P**	**02 51 27.9**	**+0.3**
	baz=83,SNR=14						
319A	**Douglas**	**82.67**	**53**	⇓P	**P**	**02 51 28.5**	**+0.7**
	baz=83,SNR=11						
118A	**Homack Ranch,**	**82.73**	**52**	⇓P	**P**	**02 51 28.5**	**+0.5**
	baz=83,SNR=8.6						
W16A	**Flagstaff**	**82.75**	**49**	⇑P	**P**	**02 51 28.5**	**+0.4**
	baz=83						
D05A	**Enumclaw**	**82.76**	**35**	⇑P	**P**	**02 51 28.4**	**+0.5**
	baz=83						
I08A	**Drewsey**	**82.76**	**39**	⇓P	**P**	**02 51 28.0**	**0.0**
	baz=83,SNR=11						
N11A	**Elko Archery C**	**82.80**	**43**	⇑P	**P**	**02 51 28.3**	**0.0**
	baz=83						
U15A	**North Rim**	**82.86**	**48**	⇓P	**P**	**02 51 29.3**	**+0.7**
	baz=83,SNR=26						
G07A	**Ruggs Ranch, H**	**82.90**	**37**	⇓P	**P**	**02 51 28.5**	**0.0**
	baz=83,SNR=6.5						
X17A	**Forest Lakes**	**82.91**	**50**	⇑P	**P**	**02 51 29.6**	**+0.6**
	baz=83,SNR=8.3						
E06A	**Yakima**	**82.92**	**36**	⇓P	**P**	**02 51 28.7**	**0.0**
	baz=83						
S14A	**Cedar City**	**82.92**	**46**	⇑P	**P**	**02 51 29.1**	**+0.2**
	baz=83						

J09A	Fry Pan Ranch,	82.93	40	⇑P	P	02 51 28.8	0.0
	baz=83,SNR=8.6						
Q13A	Wheeler Ranch,	82.95	45	⇓P	P	02 51 28.9	-0.2
	baz=83,SNR=14						
219A	White Tail Can	82.97	53	⇑P	P	02 51 29.7	+0.4
	baz=83,SNR=8.9						
L10A	Juniper Basin	83.02	41	⇓P	P	02 51 29.3	+0.1
	baz=83,SNR=18						
RMW	Rattlesnake Mo	83.02	35	P	P	02 51 29.4	+0.3
H08A	Prairie City	83.05	38	⇑P	P	02 51 29.1	-0.2
	baz=83,SNR=5.4						
WUAZ	Wupatki	83.07	49	⇓P	P	02 51 30.0	+0.3
	baz=83						
WUAZ	Wupatki	83.07	49	eP	P	02 51 29.9	+0.2
	comp=Z,5.1nm,1.0s,mb4.0						
ELK	Elko	83.08	43	eP	P	02 51 29.7	+0.1
ELK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ELK	Elko	83.08	43	eP	P	02 51 29.7	+0.1
	comp=Z,10nm,1.0s,mb4.3						
T15A	Red Dirt Ranch	83.09	47	⇑P	P	02 51 30.1	+0.3
	baz=83,SNR=15						
M11A	Holland Ranch,	83.10	42	⇓P	P	02 51 30.1	+0.4
	baz=83,SNR=9.9						
K10A	MacKenzie Ranc	83.15	40	⇓P	P	02 51 30.1	+0.2
	baz=83,SNR=8.9						
O12A	Currie	83.15	43	⇑P	P	02 51 29.7	-0.2
	baz=83,SNR=12						
P13A	Bates Ranch, G	83.21	44	⇑P	P	02 51 30.3	0.0
	baz=83,SNR=14						
Y18A	Canyon Day Jun	83.22	51	⇑P	P	02 51 31.1	+0.6
	baz=83,SNR=9.4						
C05A	Tolt Reservoir	83.23	34	⇓P	P	02 51 29.9	-0.3
	baz=83,SNR=7.0						
N12A	Clover Valley,	83.27	43	⇑P	P	02 51 30.8	+0.2
	baz=83,SNR=9.3						
119A	Ashpeak Ranch,	83.29	52	⇓P	P	02 51 31.2	+0.3
	baz=83						
A04A	Legoe Bay, Lum	83.32	33	⇓P	P	02 51 30.9	+0.3
	baz=83,SNR=6.3						
G08A	Pilot Rock	83.32	38	⇑P	P	02 51 30.6	-0.1
	baz=83,SNR=14						
B05A	Bryant	83.36	34	⇓P	P	02 51 30.7	-0.1
	baz=84,SNR=5.7						
D06A	Cle Elum	83.38	35	⇓P	P	02 51 31.1	+0.1
	baz=84						
S15A	Panguitch	83.43	47	⇓P	P	02 51 32.1	+0.7
	baz=84						
PMR	Palmer	83.44	13	eP	P	02 51 29.9	-1.0
PMR				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.6						
PMR	Palmer	83.44	13	eP	P	02 51 29.9	-1.0
	comp=Z,12nm,0.6s,mb4.6						
Q14A	Sevier Lake (B	83.47	45	⇑P	P	02 51 31.6	+0.1
	baz=84,SNR=18						
L11A	Cat Creek Ranc	83.52	41	⇑P	P	02 51 31.8	+0.1
	baz=84,SNR=12						
U16A	Tuba City	83.54	49	⇓P	P	02 51 32.4	+0.4
	baz=84,SNR=7.1						
E07A	Sunnyside	83.55	36	⇓P	P	02 51 31.7	-0.1
	baz=84						
Z19A	T-Link Ranch,	83.56	52	⇓P	P	02 51 32.6	+0.4
	baz=84						
O13A	Hicks Ranch, I	83.58	44	⇓P	P	02 51 32.4	+0.3
	baz=84						
HAWA	Hanford	83.64	36	eP	P	02 51 32.1	-0.1
	comp=Z,16nm,1.3s,mb4.4						
K11A	Parker Ranch,	83.67	41	⇓P	P	02 51 32.6	+0.1
	baz=84,SNR=8.4						
T16A	Glen Canyon Da	83.69	48	⇑P	P	02 51 33.0	+0.3
	baz=84						
F08A	Pendleton	83.72	37	⇑P	P	02 51 32.6	-0.1
	baz=84,SNR=7.0						
H09A	Durkee	83.72	39	⇑P	P	02 51 32.7	-0.1
	baz=84						
R15A	Junction	83.75	46	⇑P	P	02 51 33.5	+0.5
	baz=84						
RPW	Rockport	83.78	34	P	P	02 51 32.3	-0.6
N13A	Wendover, West	83.81	43	⇑P	P	02 51 33.3	0.0
	baz=84						
D07A	Quincy	83.86	36	⇑P	P	02 51 33.3	0.0
	baz=84						
Y19A	Nutrioso	83.87	51	⇑P	P	02 51 34.5	+0.8
	baz=84,SNR=6.9						
ETW	Entiat	83.91	35	P	P	02 51 33.6	+0.1
P14A	Drum Mountains	83.91	45	⇓P	P	02 51 34.0	+0.2
	baz=84,SNR=5.2						
I10A	Payette	83.91	39	⇓P	P	02 51 33.8	+0.2
	baz=84						
L12A	House Creek Ra	83.97	42	⇑P	P	02 51 34.2	+0.3
	baz=84						
MSU	Marysvale	83.97	46	eP	P	02 51 34.4	+0.3
G09A	Cove	84.00	38	⇓P	P	02 51 33.8	-0.2
	baz=84,SNR=7.4						
BMO	Blue Mountains	84.04	39	eP	P	02 51 33.7	-0.6
BMO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
BMO	Blue Mountains	84.04	39	eP	P	02 51 33.7	-0.5
	comp=Z,2.9nm,0.7s,mb3.9						
X19A	St. Johns	84.06	51	⇑P	P	02 51 35.0	+0.3
	baz=84						
Q15A	Fillmore	84.08	46	⇓P	P	02 51 34.6	0.0
	baz=84						
M13A	Montello	84.10	43	⇑P	P	02 51 34.6	-0.1
	baz=84,SNR=12						
C07A	Waterville	84.11	35	⇑P	P	02 51 33.9	-0.6
	baz=84,SNR=6.1						
MFID	Camas Ranch	84.14	40	⇑P	P	02 51 34.7	-0.1
	baz=84,SNR=6.3						
EPH	Ephrata	84.16	36	P	P	02 51 34.6	-0.2
F09A	S2 Ranch, Elgi	84.17	38	⇑P	P	02 51 34.7	-0.2
	baz=84						
WTV	Waterville	84.17	35	P	P	02 51 34.5	-0.3
T17A	Navajo Res., N	84.18	48	⇓P	P	02 51 35.5	+0.3
	baz=84,SNR=8.4						
A06A	Chilliwack	84.19	33	⇓P	P	02 51 34.7	-0.2
	baz=84						
V18A	Ganado	84.19	49	⇓P	P	02 51 35.4	+0.2
	baz=84						
H10A	Noah's Angus R	84.22	39	⇑P	P	02 51 34.8	-0.4
	baz=84,SNR=15						
I11A	Placerville	84.33	40	⇑P	P	02 51 35.5	-0.2
	baz=84,SNR=7.9						
R16A	Teasdale	84.33	46	⇑P	P	02 51 36.1	+0.3
	baz=84						
D08A	Wollman Farm,	84.36	36	⇑P	P	02 51 35.8	0.0
	baz=84						
DUG	Dugway	84.38	44	eP	P	02 51 34.8	-1.3
DUG				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
DUG	Dugway	84.38	44	eP	P	02 51 34.8	-1.3
	comp=Z,1.2nm,0.6s,mb3.6						
G10A	Bishop Farm, J	84.39	38	⇑P	P	02 51 35.7	-0.3
	baz=84,SNR=10						
E09A	Wood Farm, Sta	84.49	37	⇓P	P	02 51 36.2	-0.2
	baz=85						
S17A	Black Ridge (B	84.49	47	⇑P	P	02 51 36.1	-0.6
	baz=85,SNR=6.3						
J12A	Stokes Ranch,	84.50	41	⇑P	P	02 51 36.6	0.0
	baz=85,SNR=6.1						
B07A	Winthrop	84.53	34	⇓P	P	02 51 36.2	-0.4
	baz=85,SNR=7.4						
U18A	Rough Rock, Ch	84.57	49	⇑P	P	02 51 37.0	-0.1
	baz=85						
L13A	Double Diamond	84.62	42	⇓P	P	02 51 37.3	+0.1
	baz=85						
OD2	Odessa Site #2	84.67	36	eP	P	02 51 36.7	-0.6
M14A	Sheep Mountain	84.70	43	⇓P	P	02 51 37.4	-0.2
	baz=85						
D09A	Jones Farm, Ri	84.71	36	⇓P	P	02 51 37.3	-0.2
	baz=85,SNR=8.1						
F10A	Beach Ranch, E	84.71	38	⇓P	P	02 51 37.0	-0.5
	baz=85,SNR=17						
C08A	Higginbotham F	84.72	35	⇓P	P	02 51 37.0	-0.5
	baz=85,SNR=6.7						
H11A	Donnelly	84.73	39	⇓P	P	02 51 37.5	-0.1
	baz=85,SNR=16						
A07A	Ashnola River,	84.74	34	⇑P	P	02 51 37.3	-0.3
	baz=85,SNR=5.7						
K13A	Stover Farm, H	84.82	42	⇓P	P	02 51 38.4	+0.2
	baz=85						
B08A	Colville Reser	84.89	35	⇓P	P	02 51 37.5	-0.8
	baz=85,SNR=7.8						
T18A	Mexican Hat	84.90	48	⇓P	P	02 51 38.7	0.0
	baz=85,SNR=19						
N15A	Stansbury Isla	84.93	44	⇓P	P	02 51 38.3	-0.4
	baz=85						
R17A	Hanksville Air	84.93	47	⇑P	P	02 51 38.2	-0.6

	baz=85,SNR=5.4						
G11A	Walters Elk Ra	84.95	39	⇓P	P	02 51 38.4	-0.4
	baz=85,SNR=25						
TMUT	Trail Mountain	85.01	46	eP	P	02 51 38.6	-0.5
L14A	Malta	85.04	43	⇓P	P	02 51 38.9	-0.3
	baz=85						
E10A	Myers Farm, Un	85.06	37	⇑P	P	02 51 39.1	-0.1
	baz=85						
S18A	Hurst Farm, Bl	85.08	48	⇓P	P	02 51 39.3	-0.3
	baz=85						
HLID	Hailey	85.09	41	⇑P	P	02 51 39.8	+0.4
	baz=85,SNR=14						
HLID	Hailey	85.09	41	eP	P	02 51 39.2	-0.3
	comp=Z,5.2nm,0.7s,mb4.2						
C09A	Chrisman Ranch	85.15	36	⇓P	P	02 51 39.6	-0.1
	baz=85						
J13A	Cove Ranch, Pi	85.15	41	⇓P	P	02 51 40.4	+0.6
	baz=85						
M15A	Larsen Ranch,	85.26	43	⇓P	P	02 51 39.8	-0.6
	baz=85,SNR=5.8						
O16A	Springville	85.26	45	⇓P	P	02 51 40.5	+0.2
	baz=85						
A08A	Turner Farm, O	85.27	34	⇓P	P	02 51 39.8	-0.4
	baz=85,SNR=12						
D10A	Wagner Farm, O	85.29	37	⇑P	P	02 51 39.9	-0.5
	baz=85						
F11A	Grangeville	85.29	38	⇓P	P	02 51 38.8	-1.6
	baz=85,SNR=6.2						
K14A	Jones Ranch, D	85.34	42	⇓P	P	02 51 40.9	+0.2
	baz=85						
H12A	Diamond D Ranc	85.34	40	⇓P	P	02 51 40.6	0.0
	baz=86,SNR=21						
T19A	Beclabito	85.36	49	⇓P	P	02 51 40.9	0.0
	baz=86						
SRU	San Rafael	85.39	46	eP	P	02 51 40.5	-0.5
SRU				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
SRU	San Rafael	85.39	46	⇑P	P	02 51 40.8	-0.2
	baz=86,SNR=8.6						
SRU	San Rafael	85.39	46	eP	P	02 51 40.5	-0.5
	comp=Z,4.0nm,0.6s,mb4.1						
I13A	Wildhorse Cree	85.46	41	⇑P	P	02 51 41.4	+0.1
	baz=86,SNR=5.8						
R18A	Canyonlands Na	85.48	47	⇑P	P	02 51 40.9	-0.6
	baz=86,SNR=6.0						
E11A	Bogner Ranch,	85.51	38	⇓P	P	02 51 39.8	-1.6
	baz=86						
J14A	Carey	85.52	41	⇓P	P	02 51 42.0	+0.5
	baz=86,SNR=8.2						
L15A	Malad City	85.57	43	⇓P	P	02 51 41.5	-0.3
	baz=86						
B09A	Rice	85.58	35	⇑P	P	02 51 41.2	-0.4
	baz=86,SNR=7.5						
Q18A	Rafter H Ranch	85.65	46	⇑P	P	02 51 41.7	-0.6
	baz=86						
A09A	Danville	85.66	35	⇓P	P	02 51 41.8	-0.2
	baz=86,SNR=7.8						
S19A	Harvey Farm, M	85.71	48	⇓P	P	02 51 42.1	-0.4
	baz=86,SNR=5.3						
H13A	Challis	85.71	40	⇑P	P	02 51 42.5	+0.1
	baz=86						
M16A	Huntsville	85.72	44	⇑P	P	02 51 42.6	+0.1
	baz=86						
F12A	Elk City	85.75	39	⇑P	P	02 51 42.2	-0.3
	baz=86,SNR=28						
O17A	Robinson Place	85.77	45	⇑P	P	02 51 42.9	+0.1
	baz=86,SNR=7.6						
D11A	Klaveano Farm,	85.82	37	⇓P	P	02 51 42.0	-0.9
	baz=86,SNR=5.8						
K15A	Arbon	85.82	42	⇓P	P	02 51 43.2	+0.2
	baz=86						
P18A	Preston Nutter	85.83	46	⇑P	P	02 51 43.1	0.0
	baz=86						
HYT	Haines Junctio	85.83	19	eP	P	02 51 45.0	+2.5
GYA	Guiyang	85.85	300	P	P	02 51 44.2	+0.7
GYA				AP	pP	02 53 46.8	+5.8
GYA				PP	PP	02 55 15.6	+2.3
GYA				SKS		03 01 14.7	
GYA				S	S	03 01 29.4	-2.7
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
R19A	Curley Farm, L	85.87	47	⇓P	P	02 51 42.6	-0.7
	baz=86						
I14A	Mackay	85.88	41	⇑P	P	02 51 43.6	+0.4
	baz=86,SNR=12						
E12A	Beaver Dam Sad	85.92	38	⇑P	P	02 51 42.6	-0.7
	baz=86						
NEW	Newport	86.05	36	eP	P	02 51 43.2	-0.7
NEW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NEW	Newport	86.05	36	eP	P	02 51 43.2	-0.8
	comp=Z,3.2nm,0.7s,mb4.1						
TXAR	Lajitas Array	86.17	57	P	P	02 51 45.3	+0.3
	comp=Z,7.5nm,0.8s,mb4.4,baz=218,slow=6.5,SNR=94						
Q19A	Hogan Spring (	86.18	47	⇓P	P	02 51 44.3	-0.5
	baz=86,SNR=5.1						
L16A	Fish Haven	86.19	43	⇑P	P	02 51 44.5	-0.3
	baz=86						
A10A	Northport	86.21	35	⇑P	P	02 51 44.5	-0.2
	baz=86						
J15A	Blackfoot	86.24	42	⇑P	P	02 51 45.5	+0.5
	baz=86,SNR=9.9						
H14A	Leadore	86.28	40	⇓P	P	02 51 45.4	+0.3
	baz=86,SNR=7.8						
C11A	Tepee Creek (N	86.30	36	⇓P	P	02 51 45.1	0.0
	baz=86						
F13A	Darby	86.31	39	⇑P	P	02 51 44.8	-0.4
	baz=86,SNR=17						
ANMO	Albuquerque	86.38	51	eP	P	02 51 45.2	-0.6
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ANMO	Albuquerque	86.38	51	eP	P	02 51 45.2	-0.7
	comp=Z,6.3nm,1.0s,mb4.2						
D12A	Red Ives Fores	86.39	37	⇑P	P	02 51 45.0	-0.5
	baz=86						
K16A	Soda Springs	86.50	42	⇓P	P	02 51 46.7	+0.5
	baz=87						
I15A	Monteview	86.51	41	⇓P	P	02 51 46.6	+0.4
	baz=87						
G14A	Jackson	86.55	40	⇑P	P	02 51 46.6	+0.3
	baz=87,SNR=6.1						
B11A	Sandpoint	86.56	36	⇑P	P	02 51 46.0	-0.4
	baz=87						
COLA	College	86.62	12	eP	P	02 51 45.0	-1.2
COLA				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.8						
COLA	College	86.62	12	eP	P	02 51 45.0	-1.3
	comp=Z,14nm,0.6s,mb4.8						
C12B	Naegeli Ranch,	86.67	37	⇓P	P	02 51 46.7	-0.2
	baz=87						
J16A	Bone	86.70	42	⇓P	P	02 51 47.5	+0.4
	baz=87,SNR=7.7						
MCMT	McKenzie Canyo	86.71	40	eP	P	02 51 47.1	0.0
H15A	Lima	86.73	41	⇑P	P	02 51 47.6	+0.4
	baz=87,SNR=10						
N18A	Larsen Ranch,	86.85	45	⇑P	P	02 51 47.8	-0.1
	baz=87						
A11A	Hall Mountain,	86.86	36	⇑P	P	02 51 47.8	+0.1
	baz=87						
F14A	Wisdom	86.90	39	⇑P	P	02 51 47.6	-0.4
	baz=87						
O19A	Miners Draw (B	86.90	46	⇓P	P	02 51 47.9	-0.3
	baz=87						
RRI2	Red Ridge	86.92	42	eP	P	02 51 48.2	0.0
	comp=Z,8.6nm,0.9s,mb4.4						
D13A	Huson	86.92	38	⇑P	P	02 51 47.3	-0.7
	baz=87,SNR=6.1						
I16A	Newdale	87.08	42	⇓P	P	02 51 49.3	+0.4
	baz=87,SNR=11						
G15A	Dillon	87.10	40	⇓P	P	02 51 48.9	0.0
	baz=87,SNR=20						
DLMT	Dillon	87.13	40	eP	P	02 51 49.0	-0.1
	comp=Z,16nm,1.2s,mb4.5						
E14A	Clinton	87.14	39	⇓P	P	02 51 48.7	-0.4
	baz=87,SNR=9.0						
C13A	Hot Springs	87.17	37	⇓P	P	02 51 48.3	-0.9
	baz=87						
REDW	Red Top Meadow	87.23	42	eP	P	02 51 49.8	+0.2
	comp=Z,13nm,1.2s,mb4.4						
TPAW	Teton Pass	87.23	42	eP	P	02 51 49.6	0.0
	comp=Z,8.7nm,1.3s,mb4.2						
A12A	Yaak River Ran	87.23	36	⇓P	P	02 51 49.4	0.0
	baz=87						
SNOW	Snow King Moun	87.34	42	eP	P	02 51 50.4	+0.3
	comp=Z,10.0nm,1.1s,mb4.4						
BILL	Bilibino	87.42	354	eP	P	02 51 48.6	-1.3
BILL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						

IMW	Indian Meadow	87.43	42	eP	P	02 51 50.8	+0.2
	comp=Z,13nm,1.1s,mb4.5						
F15A	Butte	87.44	40	⇓P	P	02 51 50.3	-0.2
	baz=88,SNR=7.8						
D14A	Greenough	87.47	38	⇓P	P	02 51 49.6	-1.1
	baz=88,SNR=5.9						
LOHW	Long Hollow	87.51	42	eP	P	02 51 50.6	-0.3
	comp=Z,2.5nm,0.7s,mb4.0						
QLMT	Earthquake Lak	87.58	41	eP	P	02 51 51.5	+0.2
B13A	Whitefish	87.60	37	⇓P	P	02 51 50.3	-0.9
	baz=88						
H16A	Russell Place,	87.63	41	⇑P	P	02 51 52.3	+0.8
	baz=88,SNR=14						
C14A	Swan Lake	87.69	37	⇑P	P	02 51 51.6	-0.1
	baz=88						
BW06	Boulder Array	87.77	43	eP	P	02 51 51.5	-0.7
	comp=Z,5.0nm,1.0s,mb4.2						
PDAR	Pinedale Array	87.77	43	P	P	02 51 51.9	-0.3
	comp=Z,4.0nm,0.9s,mb4.2,baz=208,slow=3.3,SNR=24						
LCCM	Lewis and Clar	87.81	40	P	P	02 51 52.3	0.0
BOZ	Bozeman (W)	87.86	40	eP	P	02 51 52.3	-0.2
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
BOZ	Bozeman (W)	87.86	40	⇑P	P	02 51 52.7	+0.2
	baz=88						
BOZ	Bozeman (W)	87.86	40	eP	P	02 51 52.3	-0.3
	comp=Z,6.8nm,0.9s,mb4.4						
DAWY	Dawson	87.89	16	eP	P	02 51 51.6	-0.6
A13A	Flathead Natio	87.92	36	⇑P	P	02 51 52.4	-0.3
	baz=88						
D15A	Lincoln	88.03	39	⇓P	P	02 51 52.9	-0.3
	baz=88,SNR=5.1						
HHC	Hu-ho-hao-te	88.22	314	eP	P	02 51 55.1	+0.8
HHC				S	S	03 01 53.1	-0.5
HHC				AMB	AMB		
	comp=Z,14nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,61nm,6.8s						
SDCO	Great Sand Dun	88.29	49	eP	P	02 51 54.0	-0.7
	comp=Z,2.3nm,0.9s,mb3.9						
KMI	Kunming	88.62	297	P	P	02 51 56.6	+0.1
KMI				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.6						
CMAR	Chiang Mai Arr	89.58	290	P	P	02 52 01.1	0.0
	comp=Z,1.5nm,0.4s,mb4.2,baz=100,slow=1.7,SNR=8.6						
JCT	Junction City	89.71	58	eP	P	02 52 00.3	-1.2
JCT				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.7						
JCT	Junction City	89.71	58	eP	P	02 52 00.3	-1.2
	comp=Z,3.9nm,0.3s,mb4.7						
CD2	Chengdu	89.92	303	eP	P	02 52 03.8	+1.4
CD2				AP	pP	02 54 03.3	+2.1
CD2				XP	sP	02 54 56.7	+1.3
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
CD2				AMB	AMB		
	comp=Z,20nm,6.2s						
EDM	Edmonton	90.74	33	eP	P	02 52 04.3	-1.4
LAO	LASA Array	91.67	41	eP	P	02 52 10.5	+0.3
	comp=Z,4.6nm,0.7s,mb4.6						
RSSD	Black Hills	91.98	44	eP	P	02 52 10.6	-1.0
RSSD				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
RSSD	Black Hills	91.98	44	eP	P	02 52 10.6	-1.0
	comp=Z,9.3nm,1.0s,mb4.8						
HKT	Hockley	92.72	59	eP	P	02 52 15.5	+0.1
HKT				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
HKT	Hockley	92.72	59	eP	P	02 52 15.5	+0.1
	comp=Z,3.7nm,0.8s,mb4.5						
CBKS	Cedar Bluff	92.87	50	eP	P	02 52 15.2	-0.7
CBKS				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
CBKS	Cedar Bluff	92.87	50	eP	P	02 52 15.2	-0.7
	comp=Z,11nm,0.9s,mb4.9						
YKA	Yellowknife Ar	95.03	25	P	P	02 52 24.3	-0.8
	comp=Z,1.1nm,0.6s,mb4.2,baz=238,slow=4.8,SNR=4.2						
YKA	Yellowknife Ar	95.03	25	P	P	02 52 24.3	-0.8
ZALV	Zalesovo Beam	109.23	322	PKiKP	PKiKP	02 57 27.0	-1.9
	comp=Z,1.0nm,0.5s,baz=230,slow=0.7,SNR=4.4						
ZALV	Zalesovo Beam	109.23	322	PKPdf	PKiKP	02 57 27.0	-1.9
MKAR	Makanchi Array	110.08	314	PKiKP	PKiKP	02 57 29.2	-1.6
	comp=Z,1.2nm,0.5s,baz=162,slow=0.7,SNR=23						
MKAR				PKKPbc	PKKPbc	03 08 31.5	-3.7
	comp=Z,1.1nm,1.1s,baz=328,slow=4.3,SNR=4.6						
MKAR	Makanchi Array	110.08	314	PKPdf	PKiKP	02 57 29.2	-1.6
MKAR				PKKPbc	PKKPbc	03 08 31.5	-3.7
TKM2	Tokmak 2	114.49	309	ePKIKP	PKiKP	02 57 37.5	-1.8
UCH	Uchtor	115.25	308	ePKP	PKPdf	02 57 40.6	-0.3
KBL	Kabul	119.10	300	ePKIKP	PKPdf	02 57 48.0	-0.5
ARU	Arti	123.86	326	i PKIKP	PKPdf	02 57 56.1	-0.8
ARU						02 59 48.0	
ARU	Arti	123.86	326	ePKPdf	PKPdf	02 57 55.8	-1.1
ARCES	ARCESS Array B	127.32	350	PKP	PKPdf	02 58 02.3	-0.9
	comp=Z,2.7nm,0.5s,baz=13,slow=1.9,SNR=24						
NB2	NORSAR Subarra	137.37	353	PKP	PKPdf	02 58 10.9	-11
	comp=Z,0.4nm,0.5s,baz=28,slow=4.0						
NOA	NORSAR Array B	137.37	353	PKP	PKPdf	02 58 22.0	-0.3
	comp=Z,1.4nm,0.7s,baz=14,slow=4.0,SNR=5.2						
NOA	NORSAR Array B	137.37	353	PKP	PKPdf	02 58 22.0	-0.3
AKASG	Malin Array Be	141.59	332	PKhKP		02 58 24.8	
	comp=Z,3.6nm,0.5s,baz=38,slow=4.1,SNR=13						
MALT	Malatya	142.93	309	⇓iP	PKPdf	02 58 31.7	-1.3
MALT	Malatya	142.93	309	ePKPdf	PKPdf	02 58 31.3	-1.7
ESK	Eskdalemuir	143.40	5	ePKHKP		02 58 30.2	
GKP	Gorka Klasztor	143.69	345	ePKP	PKPdf	02 58 32.7	-1.2
GKP	Gorka Klasztor	143.69	345	ePKP	PKPdf	02 58 32.7	-1.2
DMUB	Kingscourt	144.36	9	eP	PKPdf	02 58 34.2	-0.8
BSEG	Bad Segeberg	144.41	352	ePKPbc	PKPdf	02 58 35.0	-0.1
LVV	L'vov	144.44	335	i PKHKP		02 58 34.3	
DCN	Croghan	144.84	10	eP	PKPdf	02 58 35.6	-0.3
DLF	Lyons Farm	145.00	9	eP	PKPdf	02 58 36.1	0.0
DSB	Dublin	145.07	9	ePKPbc	PKPbc	02 58 36.2	-0.9
KWP	Kalwaria	145.10	336	ePKP	PKPdf	02 58 37.4	+1.0
KWP	Kalwaria	145.10	336	ePKP	PKPdf	02 58 37.4	+1.0
TLCR		145.58	326	⇓iP	PKPdf	02 58 38.2	+0.8
OJC	Ojcow	145.64	340	ePKHKP		02 58 37.5	
STHS	Stebnicka Huta	145.82	337	ePKIKP	PKPbc	02 58 39.8	+0.4
STHS	Stebnicka Huta	145.82	337	ePKP	PKPbc	02 58 39.8	+0.4
STHS	Stebnicka Huta	145.82	337	ePKP	PKPbc	02 58 39.8	+0.4
KOLS	Kolonicke sedl	145.84	336	ePKP	PKPbc	02 58 39.7	+0.3
NRDL	Niedersach Rie	145.85	351	ePKPbc	PKPbc	02 58 38.9	-0.4
UZH	Uzhgorod	146.07	336	⇓iPKHKP	PKPbc	02 58 40.0	-0.1
KSP	Ksiaz	146.14	344	ePKP	PKPbc	02 58 40.5	+0.3
KSP	Ksiaz	146.14	344	ePKP	PKPbc	02 58 40.4	+0.2
CRVS	Cervenica-Dubn	146.17	337	ePKP	PKPdf	02 58 40.0	+1.7
VRI	Vrincioaia	146.20	328	⇑iP	PKPbc	02 58 40.8	+0.3
ANTO	Ankara	146.23	315	⇓iP	PKPbc	02 58 41.1	+0.2
ANTO	Ankara	146.23	315	ePKPbc	PKPbc	02 58 40.7	-0.1
PLOR	Plostina	146.25	328	⇑iP	PKPbc	02 58 40.5	-0.2
TRPA	Tarpa	146.38	335	⇑iP	PKPbc	02 58 41.0	0.0
HARR	Harsova	146.38	326	⇑iP	PKPbc	02 58 41.2	+0.1
CLZ	Clausthal	146.44	351	ePKPbc	PKPbc	02 58 41.1	+0.1
CLL	Collm	146.48	347	ePKPbc	PKPbc	02 58 40.9	-0.2
CLL	Collm	146.48	347	⇓iPKPbc	PKPbc	02 58 40.9	-0.2
	comp=Z,17nm,0.6s						
CLL				i PKPab	PKPab	02 58 43.2	-0.4
	comp=Z,17nm,1.3s						
UPC	Upice	146.52	344	ePKPbc	PKPbc	02 58 41.4	+0.1
DPC	Dobruska-Polom	146.57	343	ePKPbc	PKPbc	02 58 41.3	-0.1
DPC				ePKPab	PKPab	02 58 44.7	+0.7
BRG	Berggiesshubel	146.69	346	ePKPbc	PKPbc	02 58 41.6	-0.1
BRG	Berggiesshubel	146.69	346	ePKP	PKPbc	02 58 41.7	0.0
	comp=Z,7.0nm,0.7s						
MORC	Moravsky Berou	146.74	342	⇑iP	PKPbc	02 58 42.1	+0.2
MORC	Moravsky Berou	146.74	342	ePKPbc	PKPbc	02 58 41.3	-0.6
MLR	Muntele Rosu	146.85	329	PKPbc	PKPbc	02 58 41.7	-0.7
	comp=Z,5.1nm,0.6s,baz=101,slow=5.2,SNR=15						
MLR	Muntele Rosu	146.85	329	⇑iP	PKPbc	02 58 42.1	-0.2
PVCC	Panska Ves	146.86	345	ePKPbc	PKPbc	02 58 42.5	+0.3
KECS	Kecovo	146.88	337	ePKP	PKPbc	02 58 41.8	-0.5
BUG	Bochum--Univer	147.23	354	ePKPbc	PKPbc	02 58 42.8	-0.3
VOIR		147.33	329	⇓iP	PKPbc	02 58 43.9	+0.3
DRGR		147.37	333	⇑iP	PKPbc	02 58 43.6	-0.1
PRU	Pruhonice	147.37	345	ePKPbc	PKPbc	02 58 43.4	-0.1
PRU				ePKPab	PKPab	02 58 47.5	+0.3
MOX	Moxa	147.38	349	ePKP	PKPbc	02 58 43.5	-0.1
MOX	Moxa	147.38	349	ePKPbc	PKPbc	02 58 43.4	-0.2
VRAC	Vranov	147.44	342	⇓iP	PKPbc	02 58 44.3	+0.5
VYHS	Vyhne	147.45	339	ePKP	PKPbc	02 58 43.9	+0.1
VYHS				e	PKPab	02 58 48.9	+1.3
KOLL	Kolacno	147.52	340	i PKP	PKPbc	02 58 44.6	+0.6
PSZ	Piszkesteto	147.57	337	⇑iP	PKPbc	02 58 44.3	+0.2
PSZ	Piszkesteto	147.57	337	ePKPbc	PKPbc	02 58 43.9	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NKC	**Novy Kostel**	**147.61**	**347**	*e*PKPbc	PKPbc	02 58 44.1	-0.1
MANZ	**Manzenberg**	**147.92**	**348**	*e*PKPdf	PKPdf	02 58 41.0	-0.1
MANZ				*e*PKPbc	PKPbc	02 58 44.8	-0.1
MODS	**Modra-Piesok**	**148.06**	**341**	*e*PKP	PKPbc	02 58 45.8	+0.4
ROTZ	**Rotzenmuhle**	**148.10**	**347**	*e*PKPbc	PKPbc	02 58 45.5	+0.1
MEM	**Membach**	**148.17**	**355**	PKP	PKPbc	02 58 45.5	0.0
ZST	**Bratislava**	**148.28**	**341**	*e*PKP	PKPbc	02 58 46.3	+0.4
TNS	**Taunus Mts**	**148.29**	**352**	*e*PKPbc	PKPbc	02 58 45.8	-0.1
TNS				*e*PKPab	PKPab	02 58 51.0	0.0
GRA1	**Grafenberg Arr**	**148.37**	**349**	*e*PKP	PKPbc	02 58 46.4	+0.3
GRA1				*e*PKPab	PKPab	02 58 51.7	+0.4
GRF	**Grafenberg Arr**	**148.37**	**349**	*e*PKP	PKPbc	02 58 46.4	+0.3
GRF				*e*PKPab	PKPab	02 58 51.7	+0.4
KHC	**Kasperske Hory**	**148.40**	**345**	*e*PKPbc	PKPbc	02 58 46.2	0.0
KHC				*e*PKPab	PKPab	02 58 51.6	+0.1
BCLA	**Clavier**	**148.41**	**356**	PKP	PKPbc	02 58 48.1	+1.9
GZR	**Gura Zlata**	**148.42**	**331**	⇓*i*P	PKPbc	02 58 45.4	-1.0
WET	**Wettzell**	**148.55**	**346**	*e*PKPbc	PKPbc	02 58 46.7	+0.1
GEC2	**GERESS Array S**	**148.63**	**345**	*e*PKPbc	PKPbc	02 58 46.4	-0.4
GERES	**GERESS Array B**	**148.63**	**345**	PKPbc	PKPbc	02 58 46.6	-0.2
	comp=Z,5.9nm,0.8s,baz=42,slow=2.2,SNR=34						
GIVF	**Givet**	**148.75**	**357**	*e*PKP1	PKPbc	02 58 46.5	-0.5
	comp=Z,17nm,0.6s						
BZS	**Buzias**	**148.76**	**333**	⇓*i*P	PKPbc	02 58 46.9	-0.3
DOU	**Dourbes**	**148.77**	**357**	PKPbc	PKPbc	02 58 46.9	-0.2
DOU				PKPab	PKPab	02 58 52.1	-0.9
BAIF	**Baives**	**148.83**	**357**	*e*PKP1	PKPbc	02 58 46.8	-0.4
	comp=Z,16nm,0.8s						
CONA	**Conrad Observa**	**148.89**	**342**	⇓*i*P	PKPbc	02 58 47.6	+0.1
	comp=Z,11nm,0.8s						
CSNA	**Conrad Observa**	**148.89**	**342**	⇑*i*P	PKPbc	02 58 47.5	0.0
	comp=Z,9.7nm,0.8s						
WLF	**Walferdange**	**149.09**	**355**	PKP	PKPbc	02 58 48.0	+0.2
WLF	**Walferdange**	**149.09**	**355**	*e*PKPbc	PKPbc	02 58 47.7	-0.2
WLF	**Walferdange**	**149.09**	**355**	*e*PKPbc	PKPbc	02 58 48.1	+0.2
PKSM	**Moragy**	**149.47**	**337**	⇑*i*P	PKPdf	02 58 43.8	+0.1
STU	**Stuttgart**	**149.61**	**351**	*e*PKPbc	PKPbc	02 58 49.0	-0.1
FUR	**Furstenfeldbru**	**149.82**	**348**	*e*PKPbc	PKPbc	02 58 49.4	-0.2
FUR				*e*PKPab	PKPab	02 58 57.7	+0.3
RJOB	**Jochberg**	**149.89**	**345**	*e*PKPbc	PKPbc	02 58 49.5	-0.3
RJOB				*e*PKPab	PKPab	02 58 59.0	+1.3
FLN	**La Foliniere**	**150.11**	**3**	*e*PKP1	PKPbc	02 58 49.4	-0.9
	comp=Z,26nm,0.6s						
BFO	**Black Forest**	**150.16**	**352**	*e*PKPbc	PKPbc	02 58 50.1	-0.4
CDF	**Champ du Feu**	**150.22**	**353**	*e*PKP1	PKPbc	02 58 50.0	-0.6
	comp=Z,20nm,0.8s						
SOKA	**Soboth**	**150.26**	**342**	⇑*i*P	PKPbc	02 58 49.9	-0.8
PERS	**Pernice**	**150.28**	**342**	*i* PKPbc	PKPbc	02 58 49.9	-0.8
ROSF	**Rostrenen**	**150.29**	**7**	*e*PKP1	PKPbc	02 58 49.5	-1.3
	comp=Z,11nm,0.7s						
LDF	**La Druitiere**	**150.30**	**3**	*e*PKP1	PKPbc	02 58 49.8	-1.0
	comp=Z,15nm,0.6s						
MEZF	**Maizieres J'vi**	**150.34**	**356**	*e*PKP1	PKPbc	02 58 50.5	-0.3
SGMF	**Saint Gilles**	**150.45**	**6**	*e*PKP1	PKPbc	02 58 50.0	-1.1
	comp=Z,26nm,0.7s						
GRR	**Gorron**	**150.46**	**4**	*e*PKP1	PKPbc	02 58 50.4	-0.7
	comp=Z,17nm,0.5s						
WATA	**Walderalm**	**150.54**	**347**	⇓*i*P	PKPbc	02 58 50.9	-0.5
	comp=Z,12nm,0.5s,SNR=9.2						
WTTA	**Wattenberg**	**150.60**	**347**	⇓*i*P	PKPbc	02 58 51.3	-0.2
	comp=Z,24nm,0.5s						
MOTA	**Moosalm**	**150.64**	**347**	⇑*i*P	PKPbc	02 58 51.0	-0.6
	comp=Z,7.1nm,0.6s						
QUIF	**Quistinic**	**150.72**	**7**	*e*PKP1	PKPbc	02 58 50.6	-1.1
	comp=Z,12nm,0.8s						
HAU	**Haudompre**	**150.72**	**354**	*e*PKP1	PKPbc	02 58 51.1	-0.7
	comp=Z,22nm,0.7s						
HINF	**Hinteralfeld**	**150.85**	**353**	*e*PKP1	PKPbc	02 58 51.2	-0.9
	comp=Z,10nm,0.7s						
ABTA	**Abfaltersbach**	**150.88**	**345**	*i* P	PKPbc	02 58 51.2	-1.0
	comp=Z,19nm,0.6s,SNR=27						
DAVA	**Damuels**	**150.93**	**349**	⇑*i*P	PKPbc	02 58 52.1	-0.1
	comp=Z,6.2nm,0.5s,SNR=6.0						
LJU	**Ljubljana**	**150.99**	**342**	*i* PKPbc	PKPbc	02 58 52.0	-0.4
FETA	**Feichten**	**151.02**	**348**	⇓*i*P	PKPbc	02 58 52.2	-0.3
	comp=Z,9.6nm,0.6s,SNR=7.9						
VISS	**Visnje**	**151.11**	**341**	*e*PKPbc	PKPbc	02 58 52.1	-0.6
VOY	**Vojsko**	**151.18**	**343**	*e*PKPbc	PKPbc	02 58 51.9	-1.0
BOJS	**Bojanci**	**151.25**	**340**	*i* PKPbc	PKPbc	02 58 52.9	-0.2
CEY	**Cerknica**	**151.29**	**342**	*i* PKPbc	PKPbc	02 58 52.5	-0.6
LOR	**Lormes**	**151.63**	**357**	*e*PKP1	PKPbc	02 58 53.3	-0.5
	comp=Z,20nm,0.8s						
SSF	**Saint Saulge**	**151.85**	**358**	*e*PKP1	PKPbc	02 58 53.8	-0.5
	comp=Z,16nm,0.8s						
CABF	**La Chapelle**	**152.13**	**354**	*e*PKP1	PKPbc	02 58 54.9	-0.1
	comp=Z,18nm,0.8s						
MFF	**Saint Martin d**	**152.28**	**3**	*e*PKP1	PKPbc	02 58 54.4	-0.9
	comp=Z,12nm,0.6s						
BGF	**Bois d'Agland**	**152.38**	**359**	*e*PKP1	PKPbc	02 58 54.7	-0.8
	comp=Z,11nm,0.7s						
TCF	**Toulx Ste Croi**	**152.65**	**360**	*e*PKP1	PKPbc	02 58 55.2	-0.9
	comp=Z,14nm,0.9s						
LPL	**La Plagne**	**153.14**	**353**	*e*PKP1	PKPbc	02 58 57.3	+0.1
LPG	**La Plagne**	**153.15**	**353**	*e*PKP1	PKPbc	02 58 57.5	+0.3
BNI	**Bardonecchia**	**153.60**	**353**	*e*PKIKP	PKPbc	02 58 57.7	-0.5
BNI				*e*	PKPab	02 59 13.8	+0.4
ORIF	**Oris-en-Rattie**	**153.82**	**354**	*e*PKP1	PKPbc	02 58 58.3	-0.4
	comp=Z,4.3nm,0.7s						
MBDF	**Montbardon**	**153.91**	**352**	*e*PKP1	PKPbc	02 58 58.5	-0.4
	comp=Z,12nm,0.7s						
EVO	**Evora**	**158.55**	**22**	*e*PKP2	PKPab	02 59 33.7	-1.4
	comp=Z,11nm,0.9s						
ESDC	**Sonseca Array**	**158.63**	**13**	PKPab	PKPab	02 59 34.3	-1.1
	comp=Z,1.3nm,0.8s,baz=336,slow=6.1,SNR=5.5						
DBIC	**Dimbokro**	**166.16**	**150**	PKP	PKPdf	02 59 01.4	-3.3
	comp=Z,3.9nm,0.8s,baz=120,slow=4.7,SNR=3.3						
TORD	**Torodi Ar. Bea**	**174.31**	**177**	PKP	PKPdf	02 59 06.2	-2.9
	comp=Z,0.4nm,0.9s,baz=336,slow=0.9,SNR=5.1						
TORD	**Torodi Ar. Bea**	**174.31**	**177**	PKP	PKPdf	02 59 06.2	-2.9

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*IDC **07** 02:40:27.3±2.3, 2987S×67.18W, h24^{km}±17^{km}, mb3.6/2, mb1 3.7/7, mb1mx3.6/19, mbtmp3.6/7, ML3.7/4, MS3.3/1, Ms1 3.2/1, ms1mx2.7/21, Error ellipse: s-maj=26.2km s-min=13.8km az=115.0*
*ISCJB **07** 02:40:28.3±0.8, 2958S±004×67.15W±005, h40^{km}±18^{km}, mb3.7/2, Error ellipse: s-maj=8.0km s-min=5.9km az=25.7*
*GUC **07** 02:40:28.3±0.7, 2948S×6725W, h33^{km}, ML4.5*
*NEIC **07** 02:40:30.2±0.5, 2962S×67.17W, h44^{km}±7^{km}, MG4.5(GUC), Error ellipse: s-maj=8.0km s-min=5.4km az=116.0*
ISC 07 02:40:30.8±0.6**, 2959S**±004×**6719W**±005**, h48**^{km}±17^{km}**, n25,** σ**0^{s}80**/31**, mb3.7**/2**, 1C-4D, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**2.21**	**204**	Pg	**Pn**	**02 41 03.3**	**-1.7**
	19nm,0.3s,baz=19,slow=16,SNR=879						
CFAA				Lg		02 41 29.6	
	71nm,0.3s,baz=78,slow=2.9,SNR=24						
LCO	**Las Campanas**	**3.12**	**280**	⇓*e*P	**Pn**	**02 41 16.4**	**-1.1**
LCO				*i* S	**Sn**	**02 41 52.4**	**-1.2**
TLL	**Tololo Astrono**	**3.19**	**259**	⇓*i*P	**Pn**	**02 41 18.0**	**-0.5**
TLL				*i* S	**Sn**	**02 41 55.6**	**+0.3**
TLL				AML	AML	02 42 02.2	
	comp=N,927nm,0.6s						
TLL	**Tololo Astrono**	**3.19**	**259**	⇓*i*P	**Pn**	**02 41 18.0**	**-0.5**
TLL				*i* S	**Sn**	**02 41 55.6**	**+0.3**
JACH	**Jahuel**	**4.25**	**223**	*e*P	**Pn**	**02 41 32.7**	**-0.3**
FCH	**Farellones**	**4.58**	**215**	*e*P	**Pn**	**02 41 37.9**	**+0.4**
PEL	**Peldehue**	**4.64**	**219**	⇓*e*P	**Pn**	**02 41 39.8**	**+1.4**
PEL				*e*S	**Sn**	**02 42 31.3**	**+0.4**
CLCH	**Cerro Calan**	**4.75**	**216**	*e*P	**Pn**	**02 41 40.5**	**+0.6**
CLCH				*e*S	**Sn**	**02 42 34.3**	**+0.5**
PCH	**Pirque**	**4.92**	**214**	*e*P	**Pn**	**02 41 42.3**	**+0.1**
PCH				*i* S	**Sn**	**02 42 38.9**	**+1.0**
CHCH	**Chadas Angostu**	**5.24**	**213**	*e*P	**Pn**	**02 41 46.2**	**-0.4**
LVC	**Limon Verde**	**7.12**	**347**	Pn	**Pn**	**02 42 13.3**	**+0.9**
	comp=N,3.8nm,0.3s,baz=191,slow=5.8,SNR=28						
LVC				Sn	**Sn**	**02 43 32.4**	**+0.5**
	comp=N,0.8nm,0.3s,baz=238,slow=19,SNR=2.0						
LVC				Lg		02 44 24.8	
	comp=N,1.4nm,0.3s,baz=66,slow=20,SNR=3.4						
CPUP	**Villa Florida**	**9.30**	**72**	Pn	**Pn**	**02 42 41.4**	**-0.9**
	comp=N,1.4nm,0.3s,baz=233,slow=11,SNR=13						
CPUP				Sn	**Sn**	**02 44 26.4**	**+0.9**
	comp=N,3.3nm,0.3s,baz=222,slow=13,SNR=3.4						
CPUP				Lg		02 45 28.4	
	comp=N,5.4nm,0.3s,baz=162,slow=20,SNR=3.3						
CPUP	**Villa Florida**	**9.30**	**72**	Pn	**Pn**	**02 42 41.4**	**-0.9**
CPUP				Sn	**Sn**	**02 44 26.4**	**+0.9**
CPUP				Lg		02 45 28.4	
TRQA	**Tornquist**	**9.49**	**154**	*e*Pn	**Pn**	**02 42 43.6**	**-1.2**
	comp=N,5.1nm,0.4s						
PLCA	**Paso Flores**	**11.46**	**193**	Pn	**Pn**	**02 43 04.7**	**-6.9**
	comp=N,0.1nm,0.3s,baz=354,slow=10,SNR=1.9						
PLCA				Lg		02 46 23.8	
	comp=N,0.3nm,0.3s,baz=172,slow=8.2,SNR=4.6						
PLCA	**Paso Flores**	**11.46**	**193**	Pn	**Pn**	**02 43 04.7**	**-6.9**
PLCA				Lg		02 46 23.8	
LPAZ	**La Paz**	**13.27**	**356**	Pn	**Pn**	**02 43 36.9**	**+0.4**
	comp=N,0.1nm,0.3s,baz=170,slow=6.1,SNR=4.1						
LPAZ	**La Paz**	**13.27**	**356**	Pn	**Pn**	**02 43 36.9**	**+0.4**
SIV	**San Ignacio**	**14.65**	**24**	Pn	**Pn**	**02 43 55.5**	**+0.2**
	comp=N,0.2nm,0.3s,baz=201,slow=12,SNR=7.8						
SIV				Lg		02 48 34.0	
	comp=N,0.1nm,0.3s,baz=246,slow=19,SNR=2.1						
BDFB	**Brasilia**	**22.44**	**56**	P	**P**	**02 45 25.0**	**-0.7**
	comp=N,2.1nm,0.7s,mb3.7,baz=186,slow=10,SNR=2.7						
BDFB				LR	LR	02 55 17.9	
	comp=N,73nm,19.2s,baz=20,slow=39						
SYO	**Syowa Base**	**68.43**	**158**	⇑*e*P	**P**	**02 51 34.8**	**+7.5**
TORD	**Torodi Ar. Bea**	**78.77**	**68**	P	**P**	**02 52 28.8**	**0.0**
	comp=N,0.6nm,0.6s,mb3.7,baz=277,slow=6.6,SNR=8.4						
WRA	**Warramunga Arr**	**126.56**	**205**	PKP	PKPdf	02 59 28.9	-0.4
	comp=N,0.4nm,0.7s,baz=163,slow=1.6,SNR=4.8						
ZALV	**Zalesovo Beam**	**148.30**	**32**	PKPbc	PKPbc	03 00 11.7	+0.5
	comp=N,1.1nm,0.4s,baz=319,slow=4.3,SNR=5.3						
MKAR	**Makanchi Array**	**150.75**	**46**	PKPbc	PKPbc	03 00 17.5	0.0
	comp=N,1.3nm,0.8s,baz=292,slow=2.6,SNR=8.4						

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*CSEM **07** 03:11:05.9±0.4, 3983N×4170E, h2^{km}, MD2.9, Error ellipse: s-maj=11.5km s-min=6.4km az=21.0*
*ISK **07** 03:11:06.2, 3992N×4176E, h5^{km}, MD2.9*
*DDA **07** 03:11:06.6, 3981N×4178E, h6^{km}±2^{km}, Md2.9*
*ISCJB **07** 03:11:07.7±0.8, 3981N±005×4174E±004, h9^{km}±6^{km}, Error ellipse: s-maj=8.7km s-min=5.4km az=4.7*
ISC 07 03:11:08.4±0.8**, 3984N**±005×**4173E**±004**, h10**^{km}±6^{km}**, n8,** σ**1^{s}03**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.25**	**32**	*i* P	**Pg**	**03 11 12.4**	**-1.0**
HOMI				*i* S	**Sg**	**03 11 17.9**	**+1.1**
ERZM	**Erzurum**	**0.29**	**284**	*i* P	**Pg**	**03 11 12.9**	**-1.3**
ERZM				*i* S	**Sg**	**03 11 19.0**	**+0.8**
ERZM	**Erzurum**	**0.29**	**284**	*i* P	**Pg**	**03 11 12.9**	**-1.3**
ERZM				*i* S	**Sg**	**03 11 19.0**	**+0.8**
EZM	**Erzurum**	**0.29**	**284**	*e*PG	**Pg**	**03 11 13.2**	**-1.0**
EZM				*e*SG	**Sg**	**03 11 18.9**	**+0.7**
AGRB	**Hanur-Agry**	**1.00**	**105**	*e*PG	**Pg**	**03 11 26.4**	**-1.3**
AGRB				*e*SG	**Sg**	**03 11 42.0**	**+1.2**
ARTV	**Artvin**	**1.36**	**6**	*i* P	**Pn**	**03 11 32.7**	**-0.7**
ARTV				*i* S	**Sb**	**03 11 52.2**	**+1.0**
BCA	**Borcka**	**1.61**	**357**	*e*PN	**Pn**	**03 11 36.1**	**-0.7**
BCA				*e*SN	**Sn**	**03 11 57.2**	**-0.4**
PTK	**Pertek**	**2.04**	**243**	*e*PN	**Pn**	**03 11 44.5**	**+1.7**

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*TRN **07** 03:20:13.6, 1880N×6440W, h33^{km}*
*RSPR **07** 03:20:14.0, 1892N×6432W, h39^{km}±3^{km}, MD3.6/15, MD3.6/15*
*NEIC **07** 03:20:14.0, 1892N×6432W, h39^{km}, MD3.6(RSPR), After RSPR.*
ISC 07 03:20:14.4±1.3**, 189N**±01×**6434W**±008**, h37**^{km}±12^{km}**, n25,** σ**0^{s}47**/47**, 23C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.12**	**177**	⇑*i*P	**Pn**	**03 20 20.4**	**-0.4**
ABV				*e*S	**Sn**	**03 20 25.4**	**+0.2**
TBVI	**Tortola**	**0.50**	**212**	⇑*e*P	**Pn**	**03 20 24.7**	**-0.5**
TBVI				*e*S	**Sn**	**03 20 33.0**	**+0.4**
MTP	**Monte Pirata**	**1.37**	**237**	⇑*e*P	**Pn**	**03 20 36.8**	**-0.4**
MTP				*e*S	**Sn**	**03 20 54.9**	**+0.8**
MTP	**Monte Pirata**	**1.37**	**237**	⇑*e*P	**Pn**	**03 20 36.8**	**-0.4**
MTP				*e*S	**Sn**	**03 20 54.1**	**0.0**
CBYP	**Canovanas**	**1.55**	**249**	⇑*e*P	**Pn**	**03 20 39.1**	**-0.4**
CBYP				*e*S	**Sn**	**03 20 58.5**	**+0.1**
HUMP	**Col San Antoni**	**1.60**	**244**	⇑*e*P	**Pn**	**03 20 39.6**	**-0.5**
HUMP				*e*S	**Sn**	**03 20 59.5**	**-0.1**
CPD	**Cerro la Pandu**	**1.70**	**242**	⇑*e*P	**Pn**	**03 20 41.8**	**+0.2**
CPD				*e*S	**Sn**	**03 21 02.1**	**0.0**
SJG	**San Juan**	**1.87**	**247**	⇑*e*P	**Pn**	**03 20 43.8**	**-0.2**
SJG	**San Juan**	**1.87**	**247**	⇑*e*P	**Pn**	**03 20 43.8**	**-0.1**
SJG				*e*S	**Sn**	**03 21 05.8**	**-0.5**
SJG	**San Juan**	**1.87**	**247**	⇑*e*P	**Pn**	**03 20 43.8**	**-0.1**
SJG				*e*S	**Sn**	**03 21 05.8**	**-0.5**
SJG				*e*S	**Sn**	**03 21 06.2**	**-0.1**
SJG	**San Juan**	**1.87**	**247**	⇑*e*P	**Pn**	**03 20 43.8**	**-0.2**
SJG				*e*S	**Sn**	**03 21 06.2**	**-0.1**
CELP	**Cerrillos**	**2.26**	**250**	⇑*e*P	**Pn**	**03 20 49.5**	**+0.2**
CELP				*e*S	**Sn**	**03 21 15.6**	**-0.4**
ICM	**Isla Caja Muer**	**2.28**	**246**	⇑*e*P	**Pn**	**03 20 49.6**	**+0.1**
ICM				*e*S	**Sn**	**03 21 16.2**	**-0.2**
OBIP	**Obispado Ponce**	**2.30**	**250**	⇑*e*P	**Pn**	**03 20 49.9**	**+0.1**
OBIP				*e*S	**Sn**	**03 21 15.9**	**-1.0**
AOPR	**Arecibo Observ**	**2.34**	**258**	⇑*e*P	**Pn**	**03 20 50.4**	**-0.1**
AOPR				*e*S	**Sn**	**03 21 17.6**	**-0.4**
AOPR	**Arecibo Observ**	**2.34**	**258**	⇑*e*P	**Pn**	**03 20 50.4**	**-0.1**
AOPR				*e*S	**Sn**	**03 21 17.6**	**-0.4**
LRS	**Lares**	**2.44**	**257**	⇑*e*P	**Pn**	**03 20 51.6**	**-0.1**
LRS				*e*S	**Sn**	**03 21 20.3**	**-0.1**
LRS	**Lares**	**2.44**	**257**	⇑*e*P	**Pn**	**03 20 51.6**	**-0.1**
LRS				*e*S	**Sn**	**03 21 20.3**	**-0.1**
LRS	**Lares**	**2.44**	**257**	⇑*e*P	**Pn**	**03 20 51.6**	**-0.1**
LRS				*e*S	**Sn**	**03 21 20.3**	**-0.1**
GBPR	**Guanica, Bosqu**	**2.56**	**251**	*e*S	**Sn**	**03 21 23.9**	**+0.5**
GBPR	**Guanica, Bosqu**	**2.56**	**251**	*e*S	**Sn**	**03 21 23.9**	**+0.5**
LSP	**Las Mesas**	**2.69**	**256**	⇑*e*P	**Pn**	**03 20 56.0**	**+0.8**
LSP	**Las Mesas**	**2.69**	**256**	⇑*e*P	**Pn**	**03 20 56.3**	**+1.1**
LSP				*e*S	**Sn**	**03 21 26.5**	**-0.1**
LSP	**Las Mesas**	**2.69**	**256**	⇑*e*P	**Pn**	**03 20 56.0**	**+0.8**
LSP				*e*S	**Sn**	**03 21 26.5**	**-0.1**
CRPR	**Cabo Rojo, PR**	**2.76**	**253**	⇑*e*P	**Pn**	**03 20 57.4**	**+1.2**
CRPR				*e*S	**Sn**	**03 21 29.3**	**+1.0**

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*ISCJB **07** 03:25:38.1±1.0, 2420N±008×10991W±005, h10^{km}, mb4.0/6, Error ellipse: s-maj=11.6km s-min=6.8km az=175.9*
*IDC **07** 03:25:39.7±1.7, 2452N×10981W, h0^{km}, mb1 4.2/5, mb1mx3.9/22, mbtmp3.9/5, ML3.4/4, Error ellipse: s-maj=32.3km s-min=8.4km az=129.0*
*MEX **07** 03:25:41.0±0.7, 2436N×11099W, h18^{km}±35^{km}, MD4.6*
*NEIC **07** 03:25:41.9±1.0, 2436N×10986W, h10^{km}, mb4.0/23, MD4.6(MEX), Error ellipse: s-maj=14.0km s-min=8.7km az=150.0*
ISC 07 03:25:37.9±1.1**, 2401N**±009×**10985W**±005**, h10**^{km}**, n224,** σ**0^{s}80**/232**, mb4.0**/6**, 90C-82D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.43**	**282**	Pg	**Pg**	**03 25 51.9**	**+5.6**
	516nm,0.3s,baz=30,slow=2.6,SNR=211						
LPIG				Lg		03 25 59.9	
	648nm,0.3s,baz=62,slow=23,SNR=48						
LPIG	**La Paz**	**0.43**	**282**	*i* P	**Pg**	**03 25 52.0**	**+5.7**
LPIG				*i* S	**Sg**	**03 26 00.1**	**+8.1**
LPIG	**La Paz**	**0.43**	**282**	Pg	**Pg**	**03 25 52.0**	**+5.6**
LPIG				Lg		03 25 59.9	
LPIG				*i* S	**Sg**	**03 26 00.1**	**+8.1**
HPIG		**4.77**	**52**	*i* P	**Pn**	**03 27 00.8**	**+11**
HPIG				*i* S	**Sn**	**03 28 01.0**	**+16**
HSIG		**5.08**	**349**	*i* P	**Pn**	**03 26 48.6**	**-5.6**
CGIG		**6.54**	**14**	*i* P	**Pn**	**03 27 12.9**	**-1.3**
CGIG				*i* S	**Sn**	**03 28 27.5**	**-1.5**
319A	**Douglas**	**7.35**	**4**	⇓P	**Pn**	**03 27 22.4**	**-3.0**
	baz=7.2						
TXAR	**Lajitas Array**	**7.66**	**45**	Pn	**Pn**	**03 27 27.1**	**-2.5**
	0.2nm,0.3s,baz=229,slow=13,SNR=9.2						
TXAR				Pg	**Pg**	**03 27 56.3**	**-8.3**
	0.1nm,0.3s,baz=225,slow=14,SNR=8.2						
TXAR				Sn	**Sn**	**03 28 50.0**	**-6.5**
	0.2nm,0.3s,baz=230,slow=25,SNR=3.7						
TXAR				Lg		03 29 31.2	
	0.2nm,0.3s,baz=220,slow=19,SNR=3.4						
TXAR	**Lajitas Array**	**7.66**	**45**	Pn	**Pn**	**03 27 27.1**	**-2.5**
TXAR				Pg	**Pg**	**03 27 56.3**	**-8.3**
TXAR				Sn	**Sn**	**03 28 50.0**	**-6.5**
TXAR				Lg		03 29 31.2	
219A	**White Tail Can**	**7.97**	**4**	⇓P	**Pn**	**03 27 31.3**	**-2.6**
	baz=7.8						
117A	**Oracle**	**8.56**	**355**	⇑P	**Pn**	**03 27 39.1**	**-2.8**
	baz=8.4						
118A	**Homack Ranch,**	**8.60**	**359**	⇑P	**Pn**	**03 27 39.7**	**-2.7**
	baz=8.4						
116A	**Eloy**	**8.67**	**350**	⇓P	**Pn**	**03 27 41.0**	**-2.5**
	baz=8.5						
113A	**Mohawk Valley,**	**9.38**	**339**	⇓P	**Pn**	**03 27 52.8**	**-0.4**
	baz=9.2						
Z14A	**Wintersburg**	**9.70**	**344**	⇓P	**Pn**	**03 27 57.8**	**+0.1**
	baz=9.5						
Y18A	**Canyon Day Jun**	**9.73**	**359**	⇓P	**Pn**	**03 27 56.8**	**-1.2**
	baz=9.6						
Y19A	**Nutrioso**	**9.92**	**3**	⇑P	**Pn**	**03 28 00.1**	**-0.6**
	baz=9.8,SNR=9.8						
Y16A	**Circle Bar Ran**	**9.94**	**352**	⇓P	**Pn**	**03 28 00.5**	**-0.3**
	baz=9.8						
GLA	**Glamis**	**10.01**	**335**	⇑P	**Pn**	**03 28 00.9**	**-0.9**
	baz=9.8						
Y15A	**Casa Rosa Ranc**	**10.14**	**348**	⇑P	**Pn**	**03 28 03.0**	**-0.6**
	baz=10.0,SNR=11						
DVTC	**Desert V Tower**	**10.22**	**329**	⇑P	**Pn**	**03 28 04.5**	**-0.2**
	baz=10.0						
Y14A	**Wickenburg**	**10.27**	**345**	⇓P	**Pn**	**03 28 05.8**	**+0.4**
	baz=10,SNR=6.5						
Y13A	**Salome**	**10.37**	**341**	⇓P	**Pn**	**03 28 06.4**	**-0.3**
	baz=10						
X19A	**St. Johns**	**10.39**	**3**	⇓P	**Pn**	**03 28 07.1**	**+0.1**
	baz=10						
X16A	**Lo Mia Camp, P**	**10.46**	**353**	⇓P	**Pn**	**03 28 08.4**	**+0.4**
	baz=10,SNR=17						
X18A	**Snowflake**	**10.48**	**360**	⇓P	**Pn**	**03 28 08.2**	**0.0**
	baz=10						
BNM	**Barren Site**	**10.49**	**15**	*e*Pn	**Pn**	**03 28 08.7**	**+0.3**
Y12C	**Blythe**	**10.53**	**338**	⇓P	**Pn**	**03 28 08.7**	**-0.2**
	baz=10						
MONP	**Monument Peak**	**10.56**	**328**	⇑P	**Pn**	**03 28 08.9**	**-0.5**
	baz=10						
LAZ	**Ladron**	**10.62**	**12**	*e*Pn	**Pn**	**03 28 10.4**	**+0.3**
X15A	**Humboldt**	**10.64**	**349**	⇑P	**Pn**	**03 28 10.6**	**+0.2**
	baz=10,SNR=11						
X14A	**Yava**	**10.75**	**346**	⇑P	**Pn**	**03 28 11.8**	**-0.1**
	baz=11,SNR=11						
BC3	**Big Chuckw Mtn**	**10.79**	**334**	⇓P	**Pn**	**03 28 12.4**	**-0.1**
	baz=11						
PDMCI	**Parker Dam,Lak**	**10.91**	**341**	⇓P	**Pn**	**03 28 14.8**	**+0.6**
	baz=11						
JCT	**Junction City**	**11.02**	**52**	*e*Pn	**Pn**	**03 28 19.0**	**+3.4**
	4.7nm,0.6s						
W19A	**Sanders**	**11.07**	**2**	⇓P	**Pn**	**03 28 16.8**	**+0.5**
	baz=11						
W16A	**Flagstaff**	**11.14**	**353**	⇑P	**Pn**	**03 28 17.7**	**+0.4**
	baz=11						
PFO	**Pinyon Flat Ob**	**11.18**	**330**	Pn	**Pn**	**03 28 17.4**	**-0.3**
	0.2nm,0.3s,baz=156,slow=14,SNR=7.0						
PFO	**Pinyon Flat Ob**	**11.18**	**330**	⇓P	**Pn**	**03 28 18.1**	**+0.3**
	baz=11						
PFO	**Pinyon Flat Ob**	**11.18**	**330**	*e*Pn	**Pn**	**03 28 17.7**	**0.0**
	10nm,1.1s						
ANMO	**Albuquerque**	**11.29**	**14**	Pn	**Pn**	**03 28 20.0**	**+0.6**
	0.1nm,0.3s,baz=208,slow=12,SNR=5.7						
ANMO	**Albuquerque**	**11.29**	**14**	*e*Pn	**Pn**	**03 28 20.2**	**+0.8**
	6.0nm,1.5s						
BELC	**Belle Mtn.**	**11.31**	**333**	⇑P	**Pn**	**03 28 19.5**	**-0.1**
	baz=11						
W15A	**Williams**	**11.32**	**350**	⇑P	**Pn**	**03 28 20.9**	**+1.1**
	baz=11						
W14A	**Seligman**	**11.51**	**347**	⇓P	**Pn**	**03 28 22.7**	**+0.4**
	baz=11,SNR=8.4						
WUAZ	**Wupatki**	**11.54**	**354**	⇑P	**Pn**	**03 28 23.0**	**+0.2**
	baz=11						
W13A	**Hualapai Mount**	**11.59**	**343**	⇑P	**Pn**	**03 28 23.6**	**+0.2**
	baz=11,SNR=12						
V14A	**Boquillas Ranc**	**11.92**	**347**	⇑P	**Pn**	**03 28 28.2**	**+0.3**
	baz=12						
LDFC	**Landfair**	**11.94**	**339**	*e*Pn	**Pn**	**03 28 30.1**	**+2.0**
	26nm,1.3s						
V15A	**Kaibab Nationa**	**11.94**	**351**	⇑P	**Pn**	**03 28 28.8**	**+0.6**
	baz=12						
U16A	**Tuba City**	**12.14**	**355**	⇓P	**Pn**	**03 28 31.6**	**+0.6**
	baz=12						
V13A	**Grand Canyon W**	**12.33**	**344**	⇑P	**Pn**	**03 28 33.4**	**-0.2**
	baz=12,SNR=7.2						
V12A	**Nelson**	**12.45**	**341**	⇑P	**Pn**	**03 28 35.2**	**0.0**
	baz=12,SNR=10						
U15A	**North Rim**	**12.55**	**351**	⇑P	**Pn**	**03 28 36.7**	**+0.2**
	baz=12						
U14A	**Mt Trumbull**	**12.69**	**348**	⇓P	**Pn**	**03 28 38.7**	**+0.2**
	baz=12						
GSC	**Goldstone**	**12.77**	**333**	⇑P	**Pn**	**03 28 39.5**	**0.0**
	baz=13						
T19A	**Beclabito**	**12.80**	**3**	⇓P	**Pn**	**03 28 40.7**	**+0.8**
	baz=13						
U13A	**Pakoon Wash**	**12.86**	**345**	⇑P	**Pn**	**03 28 40.9**	**+0.1**
	baz=13						
T18A	**Mexican Hat**	**13.08**	**360**	⇑P	**Pn**	**03 28 44.8**	**+0.9**
	baz=13						
SHOC	**Shoshone**	**13.09**	**336**	⇑P	**Pn**	**03 28 44.2**	**+0.3**
	baz=13						
T15A	**Red Dirt Ranch**	**13.15**	**351**	⇑P	**Pn**	**03 28 45.7**	**+1.1**
	baz=13						
U11A	**Corn Creek**	**13.26**	**340**	⇓P	**Pn**	**03 28 47.0**	**+0.8**
	baz=13						
T14A	**Hurricane**	**13.30**	**349**	⇑P	**Pn**	**03 28 47.5**	**+0.7**
	baz=13						
T13A	**Saint George**	**13.43**	**346**	⇓P	**Pn**	**03 28 48.7**	**+0.2**
	baz=13						
ARVC	**Arvin**	**13.54**	**327**	⇑P	**Pn**	**03 28 50.4**	**+0.2**
	baz=13						
U10A	**Ash Meadows, A**	**13.57**	**337**	⇑P	**Pn**	**03 28 50.9**	**+0.4**
	baz=13						
S17A	**Black Ridge (B**	**13.61**	**357**	⇑P	**Pn**	**03 28 51.8**	**+0.9**
	baz=14						
MPMC	**Manual Prospec**	**13.70**	**333**	⇑P	**Pn**	**03 28 52.2**	**-0.1**
	baz=14,SNR=11						
S16A	**Weppner Ranch,**	**13.75**	**354**	⇑P	**Pn**	**03 28 53.8**	**+0.9**
	baz=14						
ISA	**Isabella**	**13.80**	**329**	⇓P	**Pn**	**03 28 53.5**	**-0.2**
	baz=14						
FURC	**Furnace Creek,**	**13.81**	**336**	⇓P	**Pn**	**03 28 53.5**	**-0.2**
	baz=14,SNR=7.5						
S13A	**Holt Ranch, En**	**13.96**	**347**	⇑P	**Pn**	**03 28 56.2**	**+0.5**
	baz=14,SNR=6.5						
T11A	**Corn Creek, Al**	**13.97**	**342**	⇓P	**Pn**	**03 28 56.1**	**+0.2**
	baz=14						
SDCO	**Great Sand Dun**	**14.19**	**14**	*e*Pn	**Pn**	**03 28 59.4**	**+0.5**
VES	**Vestal, Richgr**	**14.24**	**328**	⇓P	**Pn**	**03 28 59.5**	**-0.1**
	baz=14						
CWC	**Cottonwood Cre**	**14.27**	**332**	⇓P	**Pn**	**03 29 00.1**	**0.0**
	baz=14						
R18A	**Canyonlands Na**	**14.33**	**360**	⇑P	**Pn**	**03 29 01.4**	**+0.6**
	baz=14						
R17A	**Hanksville Air**	**14.38**	**357**	⇓P	**Pn**	**03 29 02.6**	**+1.0**
	baz=14						
WMOK	**Wichita Mounta**	**14.39**	**40**	*e*Pn	**Pn**	**03 29 01.9**	**+0.2**
	10nm,1.2s						
WMOK				*e*P		03 29 09.2	
GRAC	**Grapevine Rang**	**14.47**	**335**	⇑P	**Pn**	**03 29 03.3**	**+0.6**
	baz=14						
R13A	**O'Grain Ranch,**	**14.55**	**347**	⇑P	**Pn**	**03 29 04.6**	**+0.7**
	baz=14						
MSU	**Marysvale**	**14.59**	**353**	*e*Pn	**Pn**	**03 29 05.0**	**+0.6**
RCTC	**Rector, Farmer**	**14.69**	**329**	⇑P	**Pn**	**03 29 06.2**	**+0.4**
	baz=14						
R12A	**Pony Springs,**	**14.84**	**345**	⇓P	**Pn**	**03 29 08.1**	**+0.3**
	baz=15,SNR=13						
Q16A	**Castle Valley**	**14.90**	**356**	⇑P	**Pn**	**03 29 09.0**	**+0.4**
	baz=15						
S10A	**Tonopah Range,**	**15.02**	**339**	⇓P	**Pn**	**03 29 10.2**	**0.0**
	baz=15,SNR=8.8						
Q18A	**Rafter H Ranch**	**15.05**	**359**	⇓P	**Pn**	**03 29 11.0**	**+0.4**
	baz=15						
S09A	**Goldfield**	**15.05**	**337**	⇓P	**Pn**	**03 29 10.9**	**+0.2**
	baz=15,SNR=5.8						
SRU	**San Rafael**	**15.06**	**358**	⇓P	**Pn**	**03 29 11.2**	**+0.3**
	baz=15						
R11A	**Troy Canyon, C**	**15.11**	**342**	⇑P	**Pn**	**03 29 11.2**	**-0.2**
	baz=15						
Q14A	**Sevier Lake (B**	**15.21**	**350**	⇑P	**Pn**	**03 29 13.2**	**+0.4**
	baz=15						
S08C	**White Mtn Res**	**15.22**	**334**	⇑P	**Pn**	**03 29 13.0**	**+0.1**
	baz=15						
R10A	**Warm Springs**	**15.26**	**340**	⇑P	**Pn**	**03 29 13.7**	**+0.3**
	baz=15						
Q13A	**Wheeler Ranch,**	**15.31**	**348**	⇓P	**Pn**	**03 29 14.1**	**0.0**
	baz=15,SNR=7.7						
R09A	**Tonopah**	**15.46**	**338**	⇓P	**Pn**	**03 29 16.3**	**+0.2**
	baz=15,SNR=6.2						
T06C	**Millerton Lake**	**15.47**	**329**	⇑P	**Pn**	**03 29 15.9**	**-0.3**
	baz=15,SNR=5.4						

Q12A	Willow Creek R baz=15,SNR=14	15.57	345	⇓P	Pn	03 29 17.6	+0.2
P18A	Preston Nutter baz=15	15.57	359	⇑P	Pn	03 29 18.2	+0.7
Q11A	Duckwater baz=15	15.59	343	⇑P	Pn	03 29 17.6	-0.1
P19A	Cripple Cowboy baz=16	15.59	2	⇓P	Pn	03 29 18.3	+0.6
P14A	Drum Mountains baz=16,SNR=13	15.77	351	⇑P	Pn	03 29 20.4	+0.4
P13A	Bates Ranch, G baz=16	15.80	348	⇑P	Pn	03 29 19.9	-0.5
NVAR	Mina Array Bea 0.2nm,0.3s,baz=161,slow=11,SNR=27	16.08	335	Pn	Pn	03 29 24.7	+0.7
ISCO	Idaho Springs 6.3nm,1.1s	16.14	12	ePn	Pn	03 29 25.4	+0.5
O18A	Roosevelt baz=16	16.21	360	⇓P	Pn	03 29 26.3	+0.6
O16A	Springville baz=16	16.21	355	⇓P	Pn	03 29 26.6	+0.9
O19A	Miners Draw (B baz=16,SNR=7.4	16.25	2	⇓P	Pn	03 29 28.2	+1.9
S06C	San Francisco baz=16	16.25	331	⇑P	Pn	03 29 27.1	+0.7
P11A	Circle Ranch, baz=16	16.28	344	⇓P	Pn	03 29 27.5	+0.8
Q08A	Gabbs baz=16	16.32	337	⇑P	Pn	03 29 27.4	+0.3
DUG	Dugway baz=16	16.33	352	⇓P	Pn	03 29 27.8	+0.5
DUG	Dugway 11nm,1.0s	16.33	352	ePn	Pn	03 29 27.3	0.0
DUG				eP		03 29 30.6	
DAU	Daniels Canyon DAU	16.40	356	ePn eP	Pn	03 29 27.4 03 29 31.3	-0.7
P10A	Eureka baz=16	16.54	342	⇑P	Pn	03 29 30.3	+0.4
JLU	Jordanelle JLU	16.60	356	ePn eP	Pn	03 29 31.3 03 29 34.3	+0.6
R06C	Coleville baz=16	16.61	333	⇑P	Pn	03 29 31.5	+0.6
CMB	Columbia Colle baz=16	16.62	330	⇓P	Pn	03 29 30.5	-0.5
CTU	Camp Tracy 13nm,1.2s	16.71	355	ePn	Pn	03 29 31.6	-0.5
O12A	Currie baz=17	16.73	347	⇑P	Pn	03 29 33.1	+0.8
O11A	Cowboy Ranch, baz=17	16.80	344	⇓P	Pn	03 29 33.9	+0.6
N19A	John Jarvie Ra baz=17	16.84	2	⇑P	Pn	03 29 35.2	+1.4
N15A	Stansbury Isla baz=17	16.98	353	⇑P	Pn	03 29 35.9	+0.4
N14A	Grayback Hills baz=17,SNR=11	17.02	351	⇓P	Pn	03 29 36.4	+0.3
CBKS	Cedar Bluff 30nm,1.0s	17.08	28	ePn	Pn	03 29 39.2	+2.4
ELK	Elko 0.1nm,0.3s,baz=177,slow=18,SNR=3.1	17.29	346	Pn	Pn	03 29 37.1	-2.2
ELK	Elko 5.4nm,1.1s	17.29	346	eP	Pn	03 29 38.6	-0.8
M16A	Huntsville baz=17,SNR=9.1	17.32	355	⇑P	Pn	03 29 39.7	0.0
SPUT	South Promonto	17.39	353	eP	Pn	03 29 40.5	-0.1
WCN	Washoe City baz=17	17.40	333	⇓P	Pn	03 29 40.8	0.0
M15A	Larsen Ranch, baz=17,SNR=14	17.54	354	⇓P	Pn	03 29 42.3	-0.2
M13A	Montello baz=18	17.67	349	⇓P	Pn	03 29 44.0	-0.2
M14A	Sheep Mountain baz=18	17.69	351	⇑P	Pn	03 29 44.2	-0.1
P05C	Yuba Gap, Truc baz=18	17.76	332	⇓P	Pn	03 29 46.2	+1.0
HVU	Hansel Valley 17nm,1.3s	17.89	353	eP	Pn	03 29 46.7	-0.1
N09A	Rock Creek Ran baz=18	17.98	341	⇑P	Pn	03 29 48.2	+0.2
L16A	Fish Haven baz=18	18.00	356	⇑P	Pn	03 29 48.7	+0.5
M11A	Holland Ranch, baz=18	18.07	345	⇓P	Pn	03 29 49.7	+0.7
L15A	Malad City baz=18	18.07	354	⇑P	Pn	03 29 49.5	+0.5
BEKR	Beckwourth baz=18	18.13	333	⇑P	Pn	03 29 50.2	+0.4
O06A	Flanigan baz=18	18.17	335	⇓P	Pn	03 29 50.8	+0.6
L14A	Malta baz=18,SNR=12	18.19	352	⇑P	Pn	03 29 51.0	+0.4
M10A	I.L. Ranch, Tu baz=18	18.33	344	⇑P	Pn	03 29 52.8	+0.6
L13A	Double Diamond baz=18	18.35	350	⇓P	Pn	03 29 52.9	+0.5
ORV	Oroville baz=18	18.36	330	⇓P	Pn	03 29 53.0	+0.4
L12A	House Creek Ra baz=18	18.59	348	⇑P	Pn	03 29 55.4	0.0
K14A	Jones Ranch, D baz=18	18.69	352	⇓P	Pn	03 29 56.6	0.0
BW06	Boulder Array 8.4nm,1.0s	18.71	1	eP	Pn	03 29 55.3	-1.5
PDAR	Pinedale Array 0.0nm,0.3s,baz=170,slow=11,SNR=36	18.71	1	P	Pn	03 29 55.6	-1.2
K15A	Arbon baz=19	18.76	354	⇑P	Pn	03 29 57.4	0.0
L11A	Cat Creek Ranc baz=19,SNR=8.5	18.76	346	⇑P	Pn	03 29 57.1	-0.3
M08A	Happy Creek Ra baz=19	18.79	340	⇑P	Pn	03 29 57.7	-0.2
O04C	Chester baz=19	18.81	332	⇑P	Pn	03 29 57.9	-0.2
K16A	Soda Springs baz=19	18.83	356	⇓P	Pn	03 29 58.6	+0.3
L10A	Juniper Basin baz=19,SNR=6.4	18.84	345	⇑P	Pn	03 29 58.2	-0.2
K13A	Stover Farm, H baz=19	18.92	350	⇓P	Pn	03 29 59.6	+0.2
K12A	Draper Farm, C baz=19	19.04	349	⇑P	Pn	03 30 00.8	-0.1
J16A	Bone baz=19,SNR=5.5	19.27	356	⇑P	Pn	03 30 03.0	-0.6
REDW	Red Top Meadow 10nm,1.2s	19.32	358	eP	Pn	03 30 04.2	0.0
RRI2	Red Ridge 16nm,1.3s	19.32	357	eP	Pn	03 30 03.0	-1.3
K11A	Parker Ranch, baz=19	19.40	346	⇓P	Pn	03 30 03.8	-1.4
SNOW	Snow King Moun 29nm,1.5s	19.42	358	eP	Pn	03 30 05.1	-0.2
TPAW	Teton Pass 13nm,1.4s	19.45	358	eP	Pn	03 30 05.9	+0.1
L08A	Fields baz=19,SNR=6.7	19.45	341	⇓P	Pn	03 30 04.5	-1.3
J15A	Blackfoot baz=19,SNR=5.7	19.46	354	⇑P	Pn	03 30 04.6	-1.2
J14A	Carey baz=19	19.50	352	⇓P	Pn	03 30 05.3	-1.1
LOHW	Long Hollow 7.5nm,1.3s	19.56	358	eP	Pn	03 30 05.4	-1.7
K10A	MacKenzie Ranc baz=19	19.60	344	⇑P	Pn	03 30 06.3	-1.3
J13A	Cove Ranch, Pi baz=20	19.66	351	⇓P	Pn	03 30 07.3	-1.0
J12A	Stokes Ranch, baz=20	19.67	349	⇓P	Pn	03 30 07.1	-1.4
K09A	Rome baz=20,SNR=8.5	19.75	343	⇓P	Pn	03 30 07.9	-1.5
WVOR	Wild Horse Val 2.7nm,0.8s	19.77	340	eP	Pn	03 30 09.9	+0.3
IMW	Indian Meadow 14nm,1.3s	19.86	358	eP	Pn	03 30 09.0	-1.6
HLID	Hailey baz=20	19.86	350	⇓P	Pn	03 30 08.8	-1.9
HLID	Hailey 2.0nm,1.0s	19.86	350	eP	Pn	03 30 09.1	-1.6
I16A	Newdale baz=20,SNR=6.6	19.86	357	⇑P	Pn	03 30 08.8	-1.8
K08A	Mann Creek Ran baz=20	19.99	341	⇑P	Pn	03 30 10.4	-1.8
FLWY	Flagg Ranch 14nm,1.2s	20.03	358	eP	P	03 30 12.0	+1.0
I15A	Monteview baz=20	20.05	354	⇓P	P	03 30 12.0	+0.8
I14A	Mackay baz=20	20.09	352	⇑P	P	03 30 12.2	+0.7
I13A	Wildhorse Cree baz=20	20.16	351	⇑P	P	03 30 12.8	+0.5
L05A	Lakeview baz=20	20.17	336	⇓P	P	03 30 12.8	+0.2
K07A	Rock Creek Ran baz=20	20.19	340	⇓P	P	03 30 11.8	-0.9
J09A	Fry Pan Ranch, baz=20	20.36	343	⇑P	P	03 30 14.8	+0.3
RSSD	Black Hills 2.3nm,0.9s	20.62	12	eP	P	03 30 18.2	+0.9
K06A	Valley Falls baz=20	20.62	338	⇑P	P	03 30 17.3	-0.1
H16A	Russell Place, baz=20	20.67	357	⇑P	P	03 30 18.2	+0.3
H15A	Lima baz=20	20.68	354	⇑P	P	03 30 18.8	+0.8
H14A	Leadore baz=21,SNR=7.0	20.75	353	⇑P	P	03 30 19.2	+0.4
QLMT	Earthquake Lak	20.81	357	eP	P	03 30 20.7	+1.3
H13A	Challis baz=21	20.82	351	⇑P	P	03 30 19.8	+0.4
H12A	Diamond D Ranc baz=21,SNR=7.6	20.89	350	⇓P	P	03 30 20.4	+0.1
MCMT	McKenzie Canyo	20.91	354	eP	P	03 30 21.1	+0.7
J06A	Christmas Vall baz=21	20.99	339	⇓P	P	03 30 21.5	+0.2
I08A	Drewsey baz=21	21.10	342	⇑P	P	03 30 23.0	+0.4
H11A	Donnelly baz=21	21.25	348	⇓P	P	03 30 24.2	+0.1
H10A	Noah's Angus R baz=21,SNR=7.2	21.29	346	⇓P	P	03 30 23.9	-0.6
J05A	Fort Rock baz=21	21.39	337	⇑P	P	03 30 25.2	-0.4
DLMT	Dillon 10.0nm,1.4s,mb4.0	21.42	355	eP	P	03 30 27.9	+2.0
BOZ	Bozeman (W) baz=22	21.63	357	⇓P	P	03 30 27.9	-0.3
BOZ	Bozeman (W) 7.8nm,1.4s,mb4.0	21.63	357	eP	P	03 30 26.5	-1.7
H08A	Prairie City baz=22	21.69	343	⇓P	P	03 30 28.3	-0.5
GCMT	Greycliff	21.73	0	eP	P	03 30 28.6	-0.7
G11A	Walters Elk Ra baz=22,SNR=7.0	21.96	348	⇓P	P	03 30 31.3	-0.5
F13A	Darby baz=22,SNR=17	22.03	352	⇓P	P	03 30 32.0	-0.4
G10A	Bishop Farm, J baz=22	22.04	346	⇓P	P	03 30 32.1	-0.4
F12A	Elk City baz=22	22.13	350	⇓P	P	03 30 33.2	-0.3
G09A	Cove baz=22,SNR=7.6	22.17	345	⇑P	P	03 30 33.4	-0.6
F11A	Grangeville baz=22,SNR=6.0	22.41	348	⇓P	P	03 30 36.0	-0.6
WVT	Waverly 3.4nm,0.8s,mb3.8	22.50	52	eP	P	03 30 39.8	+2.2
E14A	Clinton baz=22	22.55	353	⇓P	P	03 30 37.9	-0.1
E13A	Victor baz=22	22.65	352	⇑P	P	03 30 38.8	-0.3
F10A	Beach Ranch, E baz=22	22.71	347	⇓P	P	03 30 39.3	-0.4
LAO	LASA Array 11nm,1.0s,mb4.2	22.82	6	eP	P	03 30 39.8	-1.1
E11A	Bogner Ranch, baz=23	22.88	349	⇑P	P	03 30 40.7	-0.7
G06A	Carlson Farm, baz=23	22.92	340	⇑P	P	03 30 41.5	-0.4
D14A	Greenough baz=23	23.21	354	⇑P	P	03 30 44.9	-0.1
D12A	Red Ives Fores baz=23	23.41	351	⇓P	P	03 30 46.3	-0.8
D11A	Klaveano Farm, baz=23	23.57	349	⇑P	P	03 30 47.4	-1.3
C11A	Tepee Creek (N baz=24	24.32	349	⇑P	P	03 30 55.1	-0.5
B13A	Whitefish baz=24	24.59	353	⇓P	P	03 30 57.5	-0.5
NEW	Newport 2.5nm,0.8s,mb3.8	24.88	348	eP	P	03 31 00.2	-0.5
WALA	Waterton Lakes 11nm,1.3s,mb4.2	25.20	354	eP	P	03 31 03.5	-0.1
A11A	Hall Mountain, baz=25	25.42	350	⇑P	P	03 31 05.4	-0.2
DAWY	Dawson	44.50	342	eP	P	03 33 50.3	+1.1

*IDC **07** 03:44:20.7±3.1, 2513N×8839E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/21, mbtmp3.6/4, Error ellipse: s-maj=113.2km s-min=27.0km az=72.0*
*DMN **07** 03:44:22.3±0.6, 2568N×9121E, h10km, Ml4.6/3, Error ellipse: s-maj=37.9km s-min=13.2km az=22.0*
*ISCJB **07** 03:44:30.8±0.8, 264N±02×906E±0.1, h33km, mb3.5/3, Error ellipse: s-maj=26.2km s-min=6.2km az=28.6*

ISC 07 03:44:30.2±1.7, 264N±02×9076E±009, h18km±13km, n17, σ1º08/21, mb3.5/3, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	1.33	130	ex	Pn	03 44 55.0	+1.0
SHL				ex	Sn	03 45 12.0	+0.7
TAPN	Taplejung	2.87	289	ePn	Pn	03 45 15.7	+0.6
TAPN	445nm,0.5s			eSn	Sn	03 45 55.1	+5.9
ODAN	Odare	3.04	279	ePn	Pn	03 45 16.9	-0.6
ODAN	628nm,0.3s			eSn	Sn	03 45 57.5	+4.0
IMP	Imphal	3.31	119	ex	Pg	03 45 43.0	+9.4
IMP				ex	Sg	03 46 17.0	+0.5
RAMN	Ramite	3.75	279	ePn	Pn	03 45 26.8	-0.5
RAMN	171nm,0.3s			eSn	Sn	03 46 13.8	+2.8
JIRN	Jiri	4.25	288	ePn	Pn	03 45 34.6	+0.5
GUN	Gumba	4.59	290	ePn	Pn	03 45 39.7	+1.0
PKI	Pulchoki	4.90	284	ePn	Pn	03 45 42.7	-0.4
PKIN	Phulchoki	4.92	285	ePn	Pn	03 45 42.8	-0.4
KKN	Kakani	5.06	287	ePn	Pn	03 45 45.8	+0.5
DMN	Daman	5.17	284	ePn	Pn	03 45 45.6	-1.2
DANN	Dangsing	6.50	289	ePn	Pn	03 46 04.6	-0.5
KOLN	Koldanda	6.52	283	ePn	Pn	03 46 04.3	-0.9
MKAR	Makanchi Array 1.8nm,0.6s,mb3.6,baz=158,slow=10,SNR=6.4	21.40	344	P	P	03 49 17.7	+0.9
SONM	Songino Array 0.5nm,0.6s,baz=210,slow=10,SNR=2.4	24.64	26	P	sP	03 50 03.0	+5.8
WRA	Warramunga Arr 0.1nm,0.4s,mb3.3,baz=326,slow=6.9,SNR=5.7	62.56	133	P	P	03 54 50.7	-2.6
ASAR	Alice Springs 0.2nm,0.4s,mb3.5,baz=315,slow=6.9,SNR=2.7	64.97	136	P	P	03 55 07.4	-1.8

IDC 07 04:00:01.0±2.0, 2455N×10962W, h0km, mb1 3.9/3, mb1mx3.6/20, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=44.3km s-min=9.6km az=137.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz 189nm,0.3s,baz=55,slow=3.3,SNR=4.2	0.77	235	Pg	Pg	04 00 16.3	+0.6
LPIG	869nm,0.3s,baz=314,slow=17,SNR=56			Lg		04 00 26.2	
TXAR	Lajitas Array 0.3nm,0.3s,baz=228,slow=13,SNR=26	7.14	47	Pn	Pn	04 01 47.6	+1.0
TXAR				Pg	Pg	04 02 22.7	+5.0
TXAR	0.1nm,0.3s,baz=229,slow=16,SNR=11			Sn	Sn	04 03 07.7	-0.8
TXAR	0.9nm,0.3s,baz=224,slow=24,SNR=16			Lg		04 03 45.2	
NVAR	Mina Array Bea 0.1nm,0.3s,baz=134,slow=19,SNR=7.8	15.69	334	Pn	Pn	04 03 45.7	+2.4
PDAR	Pinedale Array 0.1nm,0.3s,baz=165,slow=11,SNR=12	18.17	0	P	Pn	04 04 16.4	+1.8

*CSEM **07** 04:09:26.0±0.2, 3810N×3864E, h0km±1km, MD2.9, Error ellipse: s-maj=2.1km s-min=1.9km az=30.0*
*ISCJB **07** 04:09:27.8±0.5, 3812N±003×3863E±003, h10km, Error ellipse: s-maj=4.4km s-min=3.8km az=176.8*
*ISK **07** 04:09:27.1, 3810N×3863E, h9km, MD2.9*
*DDA **07** 04:09:27.1, 3819N×3861E, h11km±2km, Md2.9*

ISC 07 04:09:28.1±0.5, 3811N±003×3862E±003, h4km±11km, n11, σ0º85/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	Malatya	0.26	323	ePG	Pg	04 09 32.8	-0.2
MALT				eSG	Sg	04 09 37.2	+0.8
MYA	Malataya	0.27	325	ePG	Pg	04 09 33.2	-0.1
AKCD	Akcadag	0.58	289	iP	Pg	04 09 38.6	-0.6
AKCD				iS	Sg	04 09 47.0	+0.2
SVRC	Sivrice-ELAZID	0.60	63	ePG	Pg	04 09 39.1	-0.5
SVRC				eSG	Sg	04 09 47.9	+0.4
URFA	Urfa	0.69	167	ePG	Pg	04 09 40.7	-0.5
URFA				eSG	Sg	04 09 50.5	+0.4
PTK	Pertek	0.99	37	ePG	Pg	04 09 46.1	-1.0
PTK				eSG	Sg	04 10 01.5	+1.6
DARE	Darende-Malaty	1.06	323	ePG	Pg	04 09 47.0	-1.4
GZT	Gaziantep	1.13	228	iP	Pg	04 09 49.8	+0.1
GZT				iS	Sg	04 10 05.4	+1.1
DIYA	Diyarbakir	1.20	98	iP	Pg	04 09 49.6	-1.4
DIYA				iS	Sg	04 10 07.5	+0.9
KMRS	Kahramanmaras	1.49	247	ePN	Pn	04 09 54.9	-0.7
SARI	SarD1z-Kayseri	1.62	291	ePN	Pn	04 09 58.3	+1.0

*ISCJB **07** 04:15:39.4±2.9, 1015±02×1613E±02, h112km±22km, mb3.9/5, Error ellipse: s-maj=50.4km s-min=24.9km az=136.2*
*IDC **07** 04:15:40.6±4.7, 1003S×16123E, h112km±44km, mb3.6/3, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, MS3.3/5, Ms1 3.3/5, ms1mx2.9/20, Error ellipse: s-maj=73.8km s-min=27.4km az=135.0*
*NEIC **07** 04:15:40.6±2.5, 991S×16122E, h110km±19km, mb4.2/3, Error ellipse: s-maj=44.3km s-min=19.1km az=135.0*

ISC 07 04:15:39.8±3.0, 1015±02×1613E±02, h102km±24km, n14, σ0º86/12, mb3.9/5, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara 163nm,0.3s,baz=134,slow=3.1,SNR=19	1.48	294	P	Pn	04 16 05.4	-0.5
HNR	187nm,0.3s,baz=204,slow=20,SNR=5.6			S	Sn	04 16 25.9	+0.2
CTA	Charters Tower 14nm,0.8s	17.62	234	eP	Pn	04 19 39.7	+0.8
CTA	Charters Tower 0.5nm,0.3s,baz=57,slow=12,SNR=15	17.62	234	P	Pn	04 19 39.5	+0.6
CTA	comp=Z,44nm,19.6s,baz=52,slow=29			LR	LR	04 24 04.9	
CTAO	Charters Tower 7.7nm,0.6s	17.62	234	eP	Pn	04 19 39.7	+0.8
COEN	Coen 23nm,1.5s	18.16	256	eP	P	04 19 47.4	+3.0
AFI	Afiamalu comp=Z,96nm,21.9s,baz=324,slow=30	26.59	101	LR	LR	04 28 59.6	
WB2	Warramunga Arr	27.80	246	eP	P	04 21 19.3	-0.2
STKA	Stephens Creek 1.1nm,0.6s,mb3.6,baz=18,slow=11,SNR=3.3	28.37	217	P	P	04 21 24.3	-0.1
STKA	comp=Z,84nm,21.0s,baz=27,slow=33			LR	LR	04 31 04.7	
KAKA	Kakadu 8.2nm,0.9s,mb4.3	28.42	262	eP	P	04 21 25.2	+0.1
ASAR	Alice Springs 0.9nm,0.6s,mb3.6,baz=61,slow=10.0,SNR=17	29.44	239	P	P	04 21 32.9	-1.2
FITZ	Fitzroy Crossi 2.7nm,0.4s,mb4.4	35.47	253	eP	P	04 22 25.8	-0.9
KSRS	Korea Array comp=Z,21nm,18.4s,baz=61,slow=35	56.68	328	LR	LR	04 48 43.1	
YBH	Yreka Blue Hor comp=Z,38nm,21.1s,baz=59,slow=29	86.35	47	LR	LR	04 57 01.7	
NVAR	Mina Array Bea 0.9nm,0.9s,mb3.8,baz=245,slow=7.8,SNR=5.7	88.75	51	P	P	04 28 22.6	+0.5

*ISCJB **07** 04:36:35.0±1.3, 1705±02×1754W±0.1, h258km±17km, mb4.0/9, Error ellipse: s-maj=28.2km s-min=17.1km az=140.4*
*IDC **07** 04:36:35.4±1.5, 1717S×17517W, h252km±19km, mb3.7/4, mb1 3.8/5, mb1mx3.6/16, mbtmp3.8/5, Error ellipse: s-maj=25.3km s-min=15.1km az=137.0*
*NEIC **07** 04:36:40.1±0.6, 1723S×17528W, h300km, mb4.1/4, Error ellipse: s-maj=25.2km s-min=13.6km az=151.0*

ISC 07 04:36:35.4±1.4, 171S±02×1753W±01, h252km±18km, n13, σ0º73/14, mb4.1/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu 38nm,0.3s,baz=257,slow=18,SNR=24	4.63	47	P	Pn	04 37 48.6	+1.8
AFI	148nm,0.3s,baz=41,slow=23,SNR=20			S	S	04 38 42.4	-1.3
URZ	Urewera 9.7nm,0.4s,mb4.7,baz=31,slow=3.9,SNR=17	22.10	196	P	P	04 41 09.9	-0.2
URZ	1.6nm,0.3s,baz=287,slow=19,SNR=4.3			S	S	04 44 54.9	-0.2
CTA	Charters Tower 3.8nm,0.7s,mb4.1,baz=94,slow=8.6,SNR=3.6	36.55	259	P	P	04 43 17.6	0.0
STKA	Stephens Creek 6.1nm,0.9s,mb4.0	41.64	241	eP	P	04 44 00.1	+0.6
STKA	Stephens Creek 2.9nm,0.3s,mb4.2,baz=86,slow=9.3,SNR=14	41.64	241	P	P	04 44 00.1	+0.6
WB2	Warramunga Arr	47.73	258	eP	P	04 44 47.3	-0.2
ASAR	Alice Springs 50nm,0.5s,mb5.1,baz=88,slow=8.5,SNR=798	47.90	253	P	P	04 44 49.0	+0.2
KAKA	Kakadu 11nm,0.6s,mb4.5	50.62	267	eP	P	04 45 09.5	+0.1
FORT	Forrest 7.6nm,0.6s,mb4.3	53.06	244	eP	P	04 45 26.0	-1.2
FITZ	Fitzroy Crossi 2.3nm,0.7s,mb3.8	56.13	259	eP	P	04 45 49.5	+0.1
TXAR	Lajitas Array 0.2nm,0.6s,mb3.1,baz=214,slow=6.2,SNR=3.0	83.04	57	P	P	04 48 33.5	+0.4
PDAR	Pinedale Array 0.3nm,0.7s,mb3.2,baz=215,slow=4.2,SNR=3.1	84.73	42	P	P	04 48 41.3	0.0
CLL	Collm	145.26	351	ePKPbc	PKPbc	04 55 42.0	-1.2

*ISCJB **07** 04:42:53.2±0.4, 5139N±002×16.10E±002, h0km, Error ellipse: s-maj=3.4km s-min=1.8km az=14.6*
*NEIC **07** 04:42:53.3±0.4, 5160N×1613E, h5km, ML2.7(BRA), ML3.1(SZGRF), Error ellipse: s-maj=5.8km s-min=4.5km az=214.0*
*IPEC **07** 04:42:53.2±0.3, 5153N×1621E, h0km, ML2.9/4, Error ellipse: s-maj=1.9km s-min=1.5km az=39.0*
*BGR **07** 04:42:54.3±0.4, 5148N×1612E, h1km, ML3.1/16, Error ellipse: s-maj=6.7km s-min=2.2km az=21.0*
*IDC **07** 04:42:54.9±0.7, 5148N×1594E, h0km, mb3.2/1, mb1 3.3/8, mb1mx3.3/26, mbtmp3.2/8, ML3.3/7, Error ellipse: s-maj=10.1km s-min=6.4km az=104.0*
*PRU **07** 04:42:55.5, 5143N×1608E, h0km*
*WAR **07** 04:42:55.5, 5146N×1610E, ML3.0, Mining Induced*
*CSEM **07** 04:42:56.3±0.1, 5142N×1603E, h1km, ML3.7/10, Error ellipse: s-maj=2.3km s-min=1.4km az=17.0*
*VIE **07** 04:42:56.1±0.4, 5129N×1610E, h0km, mb2.7/6, ML3.1/6, Error ellipse: s-maj=2.9km s-min=1.9km az=25.0, Suspected Mining induced.*

ISC 07 04:42:53.7±0.3, 5148N±002×1611E±002, h0km, n82, σ0º98/165, 1C-9D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	170	ePg	Pg	04 43 06.9	+0.8
KSP				eSg	Sg	04 43 15.5	+1.0
KSP	Ksiaz	0.65	170	ePn	Pg	04 43 06.7	+0.6
KSP				eSg	Sg	04 43 15.5	+1.0
KSP	Ksiaz	0.65	170	ePg	Pg	04 43 06.4	+0.3
KSP				eSg	Sg	04 43 14.7	+0.2
KSP	Ksiaz	0.65	170	⇓iPg	Pg	04 43 06.9	+0.8
KSP				i		04 43 08.2	
KSP				eSg	Sg	04 43 15.4	+0.9
UPC	Upice	0.98	184	ePG	Pg	04 43 12.9	+0.5
DPC	Dobruska-Polom	1.14	173	ePn	Pn	04 43 15.7	-1.2
DPC				eSg	Sg	04 43 32.2	+1.9
DPC	Dobruska-Polom	1.14	173	Pg	Pg	04 43 15.7	+0.2
DPC				eSg	Sg	04 43 30.2	-0.1
DPC	Dobruska-Polom	1.14	173	ePG	Pg	04 43 15.7	+0.2
DPC	comp=Z,80nm,0.4s			eSG	Sg	04 43 30.3	0.0
PVCC	Panska Ves	1.36	226	Pg	Pg	04 43 20.0	+0.2
PVCC				eSg	Sg	04 43 38.3	+0.8
PVCC	Panska Ves	1.36	226	ePG	Pg	04 43 20.0	+0.2
PVCC				eSG	Sg	04 43 38.6	+1.1
BRG	Berggiesshubel	1.50	247	ePn	Pn	04 43 21.7	-0.4
BRG				eSg	Sg	04 43 41.7	-0.1
BRG	Berggiesshubel	1.50	247	Pg	Pg	04 43 22.6	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRG				Sg	Sg	04 43 41.7	0.0
BRG	**Berggiesshubel**	**1.50**	**247**	PN	**Pn**	**04 43 21.3**	**-0.5**
BRG				PG	**Pg**	**04 43 22.6**	**+0.2**
BRG				SG	**Sg**	**04 43 42.9**	**+1.2**
	comp=Z,117nm,0.3s						
RUE	**Ruedersdorf**	**1.76**	**306**	*e*Pg	**Pg**	**04 43 24.6**	**-2.8**
RUE				*e*Sg	**Sg**	**04 43 48.9**	**-1.2**
PRU	**Pruhonice**	**1.80**	**214**	*e*PN	**Pn**	**04 43 25.8**	**-0.1**
PRU				*e*PG	**Pg**	**04 43 27.4**	**-0.7**
PRU				*e*SG	**Sg**	**04 43 50.8**	**-0.6**
	comp=Z,68nm,0.6s						
FBE	**Freiberg**	**1.82**	**253**	*e*Pn	**Pn**	**04 43 27.6**	**+1.3**
FBE				*e*Sg	**Sg**	**04 43 52.1**	**-0.2**
RAC	**Raciborz**	**1.92**	**136**	*e*Pg	**Pg**	**04 43 29.6**	**-1.0**
RAC				*e*Sg	**Sg**	**04 43 55.3**	**-0.2**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**04 43 27.7**	**-0.1**
MORC				*e*Sg	**Sg**	**04 43 54.8**	**-1.0**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**04 43 27.5**	**-0.3**
MORC				*e*Sg	**Sg**	**04 43 55.0**	**-0.8**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**04 43 27.6**	**-0.2**
MORC				*e*Sg	**Sg**	**04 43 55.0**	**-0.8**
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**04 43 27.8**	**-0.3**
CLL				*e*Sg	**Sg**	**04 43 57.0**	**+0.5**
CLL	**Collm**	**1.96**	**266**	*i* Pn	**Pn**	**04 43 27.7**	**-0.4**
CLL				*i* Pg	**Pg**	**04 43 30.4**	**-0.8**
CLL				*i* x	x	04 43 34.6	
CLL				*i* x	x	04 43 45.4	
CLL				*e*Sg	**Sg**	**04 43 57.0**	**+0.5**
	comp=Z,45nm,0.4s						
CLL	**Collm**	**1.96**	**266**	*i* Pn	**Pn**	**04 43 27.7**	**-0.4**
CLL				*i* Pg	**Pg**	**04 43 30.4**	**-0.8**
CLL				*e*Sg	**Sg**	**04 43 57.0**	**+0.5**
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*Pn	**Pn**	**04 43 30.0**	**0.0**
OKC				*e*Sg	**Sg**	**04 43 59.7**	**-1.2**
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*PN	**Pn**	**04 43 29.9**	**-0.1**
OKC				*e*PG	**Pg**	**04 43 32.8**	**-1.0**
OKC				*e*SG	**Sg**	**04 43 59.3**	**-1.6**
	comp=Z,112nm,0.7s						
VRAC	**Vranov**	**2.20**	**172**	Pn	**Pn**	**04 43 32.7**	**+1.3**
	comp=Z,4.1nm,0.3s,baz=345,slow=15,SNR=19						
VRAC				Lg		04 44 03.5	
	comp=Z,10.0nm,0.3s,baz=88,slow=23,SNR=12						
VRAC	**Vranov**	**2.20**	**172**	*e*Pn	**Pn**	**04 43 31.6**	**+0.2**
VRAC				*e*Sg	**Sg**	**04 44 03.1**	**-1.1**
	comp=Z,30nm,0.3s						
TREC	**Trest**	**2.23**	**191**	*e*PN	**Pn**	**04 43 33.2**	**+1.4**
TREC				*e*PG	**Pg**	**04 43 36.0**	**-0.3**
KRUC	**Moravsky**	**2.43**	**176**	*e*Pn	**Pn**	**04 43 34.7**	**+0.1**
KRUC				*e*Sg	**Sg**	**04 44 10.7**	**-1.0**
	comp=Z,52nm,0.5s						
WERD	**Werda**	**2.62**	**248**	*e*Pn	**Pn**	**04 43 37.7**	**+0.5**
WERD				*e*Sg	**Sg**	**04 44 17.9**	**+0.1**
NKC	**Novy Kostel**	**2.64**	**243**	*e*PN	**Pn**	**04 43 37.8**	**+0.3**
NKC				*e*PG	**Pg**	**04 43 44.4**	**+0.2**
NKC				*e*SG	**Sg**	**04 44 18.9**	**+0.5**
	comp=Z,82nm,0.3s						
OJC	**Ojcow**	**2.66**	**117**	*e*Pn	**Pn**	**04 43 36.3**	**-1.4**
OJC				*e*Pg	**Pg**	**04 43 45.3**	**+0.7**
OJC				*e*Sg	**Sg**	**04 44 20.5**	**+1.5**
JAVC	**Velka Javorina**	**2.81**	**159**	*e*Pn	**Pn**	**04 43 41.0**	**+1.2**
JAVC				*e*Sg	**Sg**	**04 44 24.4**	**+0.5**
	comp=Z,68nm,0.8s						
KHC	**Kasperske Hory**	**2.86**	**216**	*e*PN	**Pn**	**04 43 41.2**	**+0.7**
KHC				*e*PG	**Pg**	**04 43 47.0**	**-1.5**
KHC				*e*SN	**Sn**	**04 44 15.3**	**-0.3**
KHC				*e*SG	**Sg**	**04 44 24.5**	**-1.0**
	comp=Z,33nm,0.4s						
MANZ	**Manzenberg**	**2.95**	**241**	*e*Pn	**Pn**	**04 43 42.3**	**+0.5**
MOX	**Moxa**	**2.96**	**255**	*e*Pn	**Pn**	**04 43 42.5**	**+0.6**
MOX	**Moxa**	**2.96**	**255**	*e*PN	**Pn**	**04 43 42.5**	**+0.6**
MOX				*e*PG	**Pg**	**04 43 50.4**	**0.0**
MOX				*e*SG	**Sg**	**04 44 30.5**	**+1.8**
ROTZ	**Rotzenmuhle**	**3.02**	**237**	*e*Pn	**Pn**	**04 43 42.4**	**-0.3**
GEC2	**GERESS Array S**	**3.06**	**211**	*e*Pn	**Pn**	**04 43 44.3**	**+1.0**
GEC2	**GERESS Array S**	**3.06**	**211**	*e*Pn	**Pn**	**04 43 44.3**	**+1.0**
GERES	**GERESS Array B**	**3.06**	**211**	Pn	**Pn**	**04 43 44.0**	**+0.8**
	comp=Z,2.0nm,0.3s,baz=28,slow=12,SNR=42						
GERES				Pg	**Pg**	**04 43 50.0**	**-2.4**
	comp=Z,7.9nm,0.3s,baz=31,slow=18,SNR=62						
GERES				Sn	**Sn**	**04 44 19.5**	**-1.1**
	comp=Z,4.5nm,0.3s,baz=24,slow=25,SNR=5.2						
GERES				Lg		04 44 32.0	
	comp=Z,7.3nm,0.3s,baz=30,slow=27,SNR=6.6						
GERES	**GERESS Array B**	**3.06**	**211**	Pg	**Pg**	**04 43 50.0**	**-2.3**
GERES	**GERESS Array B**	**3.06**	**211**	Pn	**Pn**	**04 43 44.0**	**+0.8**
GERES				Pg	**Pg**	**04 43 50.0**	**-2.4**
GERES				Sn	**Sn**	**04 44 19.4**	**-1.1**
GERES				Lg		04 44 32.0	
WET	**Wettzell**	**3.13**	**223**	*e*Pn	**Pn**	**04 43 44.7**	**+0.5**
WET	**Wettzell**	**3.13**	**223**	*e*Pn	**Pn**	**04 43 44.7**	**+0.5**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*PN	**Pn**	**04 43 46.4**	**+1.2**
MODS				*e*PG	**Pg**	**04 43 55.3**	**+0.3**
MODS				*e*SG	**Sg**	**04 44 34.9**	**-1.6**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*Pn	**Pn**	**04 43 46.4**	**+1.2**
MODS				*e*Pg	**Pg**	**04 43 55.3**	**+0.3**
MODS				*e*Sg	**Sg**	**04 44 34.9**	**-1.6**
KOLL	**Kolacno**	**3.26**	**152**	*e*PN	**Pn**	**04 43 48.1**	**+2.1**
KOLL				*e*PG	**Pg**	**04 43 56.0**	**-0.1**
KOLL				*e*SG	**Sg**	**04 44 38.2**	**-0.1**
KOLL	**Kolacno**	**3.26**	**152**	*e*Pn	**Pn**	**04 43 48.1**	**+2.1**
KOLL				*e*Pg	**Pg**	**04 43 56.0**	**-0.1**
KOLL				*e*Sg	**Sg**	**04 44 38.2**	**-0.1**
ZST	**Bratislava**	**3.35**	**169**	*e*SG	**Sg**	**04 44 40.8**	**-0.5**
ZST	**Bratislava**	**3.35**	**169**	*e*Sg	**Sg**	**04 44 40.8**	**-0.5**
NIE	**Niedzica**	**3.39**	**126**	*e*P	**Pn**	**04 43 56.8**	**+9.1**
NIE				*e*S	**Sn**	**04 44 41.4**	**+13**
VYHS	**Vyhne**	**3.47**	**149**	*e*PN	**Pn**	**04 43 48.4**	**-0.5**
VYHS				*e*PG	**Pg**	**04 43 58.3**	**-1.8**
VYHS				*e*SG	**Sg**	**04 44 48.0**	**+2.9**
VYHS	**Vyhne**	**3.47**	**149**	*e*Pn	**Pn**	**04 43 48.4**	**-0.5**
VYHS	**Vyhne**	**3.47**	**149**	*e*Pn	**Pn**	**04 43 48.4**	**-0.5**
VYHS				*e*Pg	**Pg**	**04 43 58.3**	**-1.8**
VYHS				*e*Sg	**Sg**	**04 44 48.0**	**+2.9**
CONA	**Conrad Observa**	**3.56**	**183**	⇓*i*Pn	**Pn**	**04 43 50.3**	**+0.2**
CONA				⇓*i*Sg	**Sg**	**04 44 47.7**	**-0.3**
	comp=Z,22nm,0.4s						
CSNA	**Conrad Observa**	**3.56**	**183**	⇓*i*Pn	**Pn**	**04 43 50.4**	**+0.2**
CSNA				⇓*i*Sg	**Sg**	**04 44 47.7**	**-0.3**
	comp=Z,20nm,0.3s						
CLZ	**Clausthal**	**3.59**	**278**	*e*Pn	**Pn**	**04 43 51.8**	**+1.2**
CLZ	**Clausthal**	**3.59**	**278**	*e*Pn	**Pn**	**04 43 51.8**	**+1.2**
GRA1	**Grafenberg Arr**	**3.59**	**242**	Pn	**Pn**	**04 43 51.5**	**+0.9**
GRA1				Sg	**Sg**	**04 44 49.0**	**-0.1**
GRA1	**Grafenberg Arr**	**3.59**	**242**	*e*Pn	**Pn**	**04 43 51.5**	**+0.9**
GRA1				*e*Sg	**Sg**	**04 44 49.0**	**-0.1**
GRF	**Grafenberg Arr**	**3.59**	**242**	*e*Pn	**Pn**	**04 43 51.5**	**+0.9**
GRF				*e*Sg	**Sg**	**04 44 49.0**	**-0.1**
MOA	**Molln**	**3.83**	**199**	⇓*i*Pn	**Pn**	**04 43 54.7**	**+0.8**
MOA				⇓*i*Sg	**Sg**	**04 44 55.9**	**-0.8**
	comp=Z,44nm,0.6s						
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*PN	**Pn**	**04 43 55.1**	**+0.6**
STHS				*e*PG	**Pg**	**04 44 09.5**	**+1.6**
STHS				*e*SG	**Sg**	**04 45 01.8**	**+3.7**
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*Pn	**Pn**	**04 43 55.1**	**+0.6**
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*Pn	**Pn**	**04 43 55.1**	**+0.6**
STHS				*e*Pg	**Pg**	**04 44 09.5**	**+1.6**
STHS				*e*Sg	**Sg**	**04 45 01.8**	**+3.7**
KECS	**Kecovo**	**4.12**	**135**	*e*PN	**Pn**	**04 43 57.4**	**-0.4**
KECS				*e*PG	**Pg**	**04 44 11.6**	**-1.0**
KECS				*e*SG	**Sg**	**04 45 05.3**	**-0.6**
KECS	**Kecovo**	**4.12**	**135**	*e*Pn	**Pn**	**04 43 57.4**	**-0.4**
KECS				*e*Pg	**Pg**	**04 44 11.6**	**-1.0**
KECS				*e*Sg	**Sg**	**04 45 05.3**	**-0.6**
ARSA	**Arzberg**	**4.25**	**185**	⇓*i*Pn	**Pn**	**04 43 59.6**	**-0.1**
ARSA				⇓*i*Sg	**Sg**	**04 45 10.3**	**0.0**
	comp=Z,23nm,0.7s						
CRVS	**Cervenica-Dubn**	**4.30**	**125**	*e*PN	**Pn**	**04 44 01.0**	**+0.7**
CRVS				*e*PG	**Pg**	**04 44 16.4**	**+0.4**
CRVS				*e*SG	**Sg**	**04 45 16.1**	**+4.4**
CRVS	**Cervenica-Dubn**	**4.30**	**125**	*e*Pn	**Pn**	**04 44 01.0**	**+0.7**
CRVS				*e*Pg	**Pg**	**04 44 16.4**	**+0.4**
CRVS				*e*Sg	**Sg**	**04 45 16.1**	**+4.4**
KOLS	**Kolonicke sedl**	**4.71**	**120**	*e*Pn	**Pn**	**04 44 06.1**	**+0.2**
KOLS				*e*Sg	**Sg**	**04 45 27.7**	**+2.9**
WTTA	**Wattenberg**	**5.13**	**216**	⇑*i*Pn	**Pn**	**04 44 13.4**	**+1.6**
DAVOX	**Davos/Dischmat**	**6.23**	**223**	Pn	**Pn**	**04 44 27.6**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=39,slow=13,SNR=3.7						
DAVOX				Lg		04 46 12.1	
	comp=Z,0.4nm,0.3s,baz=216,slow=19,SNR=3.0						
AKASG	**Malin Array Be**	**8.29**	**90**	Pn	**Pn**	**04 44 54.5**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=277,slow=12,SNR=7.1						
AKASG				Sn	**Sn**	**04 46 26.0**	**-3.4**
	comp=Z,1.0nm,0.3s,baz=280,slow=23,SNR=2.9						
AKASG	**Malin Array Be**	**8.29**	**90**	Pn	**Pn**	**04 44 54.5**	**-0.6**
AKASG				Sn	**Sn**	**04 46 26.0**	**-3.4**
HFS	**Hagfors**	**8.78**	**352**	Pn	**Pn**	**04 45 01.0**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=165,slow=14,SNR=7.3						
HFS				Sn	**Sn**	**04 46 37.0**	**-4.3**
	comp=Z,0.3nm,0.3s,baz=174,slow=22,SNR=3.3						
NOA	**NORSAR Array B**	**9.96**	**346**	Pn	**Pn**	**04 45 15.4**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=167,slow=12,SNR=4.0						
EKA	**Eskdalemuir Ar**	**12.12**	**296**	Pn	**Pn**	**04 45 44.1**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=103,slow=13,SNR=4.3						
ARCES	**ARCESS Array B**	**18.65**	**10**	Pn	**Pn**	**04 47 08.2**	**-4.7**
	comp=Z,0.4nm,0.3s,baz=197,slow=12,SNR=12						
TORD	**Torodi Ar. Bea**	**39.97**	**202**	P	**P**	**04 50 29.8**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=360,slow=6.4,SNR=4.1						
TORD	**Torodi Ar. Bea**	**39.97**	**202**	P	**P**	**04 50 29.8**	**-0.1**

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*MOS **07** 04:46:43.9±2.3, 56.19S×123.33W, h10km, mb5.1/9, MS5.2/11, Error ellipse: s-maj=29.3km s-min=17.4km az=77.5*

*BJI **07** 04:46:43.1, 56.10S×123.30W, h10km, mB5.6, Ms5.8, Msz5.4*

*IDC **07** 04:46:44.4±0.6, 56.04S×124.05W, h0km, mb4.3/11, mb1 4.4/11, mb1mx4.4/13, mbtmp4.2/11, MS5.0/18, Ms1 5.0/18, ms1mx4.9/20, Error ellipse: s-maj=29.8km s-min=18.4km az=144.0*

*ISCJB **07** 04:46:44.5±0.4, 56.16S±0.07×123.6W±0.1, h10km, mb4.6/25, MS5.3/116, Error ellipse: s-maj=11.2km s-min=10.2km az=1.7*

*NEIC **07** 04:46:45.2±0.3, 56.08S×123.31W, h10km, mb5.0/16, MS5.3/98, Error ellipse: s-maj=15.2km s-min=11.4km az=151.0*

*GCMT **07** 04:46:45.2±0.1, 55.92S×123.73W, h23km, MW6.0/110, Moment Tensor Solution. s104,c229; s110,c373; Duration: 2.3 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.08±.01; $M_{\theta\theta}$0.60±.01; $M_{\phi\phi}$-0.52±.01; $M_{r\theta}$-0.08±.01; $M_{\theta\phi}$0.87±.01; $M_{\phi r}$-0.05±.01; Best double couple: $M_0$1.03600×10^{18} NP1:ϕ_s287.00000°, δ87.00000°, λ3.00000°. NP2:ϕ_s196.00000°, δ87.00000°, λ177.00000°. Principal axes: T 1.0810, Plg5.0000°, Azm151.0000°; N -0.0890, Plg85.0000°, Azm335.0000°; P -0.9920, Plg0.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 07 04:46:46.4±0.4**, 56.18S**±0.07×**123.7W**±0.1**, h10km, (h25km**±2.0km**:pP-P), n205,** σ**1.49**/54**, mb4.6**/25**, MS5.3**/116**, 2D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**29.51**	**131**	LR	LR	05 01 53.0	
	comp=Z,2µm,20.6s,MS4.7,baz=282,slow=30						
PMSA	**Palmer Station**	**29.51**	**131**	*e*P	**P**	**04 52 49.3**	**-1.0**
	7.7nm,0.9s,mb4.4						
USHA	**Ushuaia**	**30.61**	**111**	LR	LR	05 02 24.0	
	comp=Z,2µm,18.6s,MS4.8,baz=222,slow=30						
SBA	**Scott Base**	**31.62**	**202**	PFAKE		04 53 20.0	+11
SBA				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
QSPA	**South Pole Qui**	**34.00**	**180**	P	**P**	**04 53 31.4**	**+1.8**
	comp=Z,2.8nm,0.9s,mb4.2,baz=100,slow=9.0,SNR=8.3						
QSPA				LR	LR	05 08 13.0	
	comp=Z,1µm,19.4s,MS4.6,baz=92,slow=38						
RKT	**Rikitea**	**34.06**	**341**	*e*S	**S**	**04 58 58.6**	**+2.6**
	comp=Z,1µm,24.8s						
RKT				*e*LQ		05 00 53.9	
	comp=Z,3µm,30.2s						
RKT				*e*LR	LR	05 02 23.6	
	comp=Z,23µm,28.8s,baz=170						
PLCA	**Paso Flores**	**37.45**	**89**	P	**P**	**04 53 56.0**	**-3.6**
	comp=Z,1.8nm,0.9s,mb3.9,baz=248,slow=5.4,SNR=3.6						
PLCA				LR	LR	05 06 05.0	
	comp=Z,787nm,20.3s,MS4.5,baz=226,slow=31						
PLCA	**Paso Flores**	**37.45**	**89**	*e*P	**P**	**04 53 55.9**	**-3.7**
PLCA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PLCA				MLR	MLR		
	comp=Z,1µm,19.0s						
PLCA	**Paso Flores**	**37.45**	**89**	*e*P	**P**	**04 53 55.9**	**-3.7**
	comp=Z,7.7nm,1.1s,mb4.5						
PLCA				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
EFI	**East Falkland**	**37.58**	**112**	PFAKE		04 54 10.0	+9.5
EFI				LR	LR		
	comp=Z,3µm,21.0s,MS5.1						
URZ	**Urewera**	**42.56**	**269**	LR	LR	05 08 05.2	
	comp=Z,6µm,19.7s,MS5.5,baz=134,slow=30						
PPT	**Papeete**	**43.24**	**323**	*e*S	**S**	**05 01 15.3**	**+0.8**
	comp=Z,4µm,27.8s						
PPT				*e*LQ		05 04 36.2	
	comp=Z,12µm,27.8s						
PPT				*e*LR	LR	05 06 45.9	
	comp=Z,20µm,25.8s,baz=164						
PPT	**Papeete**	**43.24**	**323**	LR	LR	05 08 27.8	
	comp=Z,6µm,18.1s,MS5.5,baz=153,slow=30						
TRQA	**Tornquist**	**44.09**	**93**	*e*P	**P**	**04 54 49.9**	**-4.4**
	comp=Z,35nm,1.6s,mb4.8						
VNA1	**Neumayer--Stat**	**45.44**	**155**	*e*	**P**	**04 55 04.8**	**+0.1**
VNA1				*e*		04 55 14.7	
VNA2	**Neumayer--Watz**	**45.45**	**156**	*e*	**P**	**04 55 05.0**	**+0.2**
VNA2				*e*		04 55 14.9	
SNAA	**Sanae**	**45.91**	**158**	*e*	**P**	**04 55 09.7**	**+1.3**
SNAA				*e*		04 55 19.0	
SNAA	**Sanae**	**45.91**	**158**	*e*P	**P**	**04 55 08.2**	**-0.2**
SNAA				pmax	pmax		
	comp=Z,12nm,0.9s						
SNAA	**Sanae**	**45.91**	**158**	*e*P	**P**	**04 55 08.2**	**-0.2**
	comp=Z,12nm,0.9s,mb4.8						
LCO	**Las Campanas**	**45.98**	**77**	PFAKE		04 55 20.0	+11
LCO				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
TAOE	**Nuku Hiva Isla**	**48.95**	**338**	*e*S	**S**	**05 02 39.3**	**+2.6**
	comp=Z,24µm,25.4s						
TAOE				*e*LR	LR	05 09 15.8	
	comp=Z,48µm,28.3s,baz=185						
NVL	**N'lazarevskaya**	**49.46**	**162**	*e*P	**P**	**04 55 38.5**	**+2.5**
NVL				*e**PP	pP	04 55 44.3	+5.2
NVL				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
NVL				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.3						
NVL				MLR	MLR		
	comp=N,1µm,15.0s						
NVL				MLR	MLR		
	comp=E,1µm,22.0s						
CASY	**Casey**	**51.26**	**205**	PFAKE		04 56 00.0	+10
CASY				LR	LR		
	comp=Z,3µm,22.0s,MS5.2						
LVC	**Limon Verde**	**52.04**	**73**	*e*P	**P**	**04 55 56.4**	**+0.4**
	comp=Z,4.8nm,0.6s,mb4.6						
LVC				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
SYO	**Syowa Base**	**54.52**	**173**	⇓*e*P	**P**	**04 56 14.4**	**+0.7**
SYO	**Syowa Base**	**54.52**	**173**	⇓*e*P	**P**	**04 56 22.6**	**+8.9**
CPUP	**Villa Florida**	**55.45**	**86**	P	**P**	**04 56 21.8**	**+0.8**
	comp=Z,2.9nm,0.9s,mb4.3,baz=228,slow=7.1,SNR=3.7						
CPUP				LR	LR	05 16 08.7	
	comp=Z,654nm,19.1s,MS4.7,baz=208,slow=32						
AFI	**Afiamalu**	**55.90**	**299**	PFAKE		04 56 40.0	+16
AFI				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
MAW	**Mawson**	**56.44**	**183**	*e*P	**P**	**04 56 31.9**	**+4.4**
	comp=Z,4.4nm,0.5s,mb4.7						
MAW	**Mawson**	**56.44**	**183**	P	**P**	**04 56 26.8**	**-0.6**
	comp=Z,1.5nm,0.9s,mb4.0,baz=160,slow=12,SNR=3.1						
MAW				LR	LR	05 20 00.3	
	comp=Z,2µm,18.0s,MS5.2,baz=166,slow=35						
MAW	**Mawson**	**56.44**	**183**	P	**P**	**04 56 26.8**	**-0.7**
MAW				*e*		04 56 31.9	
MAW	**Mawson**	**56.44**	**183**	P	**P**	**04 56 26.8**	**-0.6**
MAW				*e*P		04 56 31.9	
MAW				LR	LR	05 20 00.3	
NNA	**Nana**	**56.95**	**58**	PFAKE		04 56 40.0	+8.3
NNA				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
LPAZ	**La Paz**	**57.66**	**70**	P	**P**	**04 56 38.8**	**+2.0**
	comp=Z,4.3nm,1.0s,mb4.4,baz=209,slow=4.0,SNR=9.5						
LPAZ				LR	LR	05 13 36.9	
	comp=Z,205nm,21.6s,MS4.2,baz=208,slow=28						
TOO	**Toolangi**	**60.21**	**246**	*e*P	**P**	**04 56 56.7**	**+2.5**
STKA	**Stephens Creek**	**66.65**	**247**	*e*P	**P**	**04 57 45.5**	**+8.6**
	comp=Z,4.0nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**66.65**	**247**	P	**P**	**04 57 36.9**	**-0.1**
	comp=Z,3.3nm,0.9s,mb4.4,baz=100,slow=6.1,SNR=4.3						
STKA				LR	LR	05 22 26.1	
	comp=Z,2µm,18.3s,MS5.4,baz=140,slow=32						
STKA	**Stephens Creek**	**66.65**	**247**	*e*P	**P**	**04 57 37.5**	**+0.5**
	comp=Z,18nm,1.3s,mb4.9						
OTAV	**Otavalo**	**67.02**	**50**	*e*P	**P**	**04 57 36.9**	**-2.5**
	comp=Z,36nm,1.4s,mb5.2						
OTAV				LR	LR		
	comp=Z,636nm,21.0s,MS4.8						
BDFB	**Brasilia**	**69.17**	**87**	LR	LR	05 25 27.9	
	comp=Z,798nm,18.3s,MS5.0,baz=27,slow=34						
ROSC	**El Rosal**	**72.94**	**52**	P	**P**	**04 58 17.7**	**+1.9**
	comp=Z,4.1nm,0.8s,mb4.4,baz=206,slow=6.1,SNR=5.1						
ROSC				LR	LR	05 26 14.8	
	comp=Z,344nm,18.1s,MS4.7,baz=22,slow=32						
ROSC	**El Rosal**	**72.94**	**52**	*e*P	**P**	**04 58 15.8**	**-0.1**
CTA	**Charters Tower**	**73.60**	**258**	*e*P	**P**	**04 58 20.5**	**+0.8**
	comp=Z,15nm,0.9s,mb4.9						
CTA	**Charters Tower**	**73.60**	**258**	LR	LR	05 25 47.5	
	comp=Z,2µm,20.3s,MS5.5,baz=137,slow=32						
CTA	**Charters Tower**	**73.60**	**258**	*e*P	**P**	**04 58 20.5**	**+0.8**
CTA				pmax	pmax		
	comp=Z,15nm,0.9s						
CTAO	**Charters Tower**	**73.60**	**258**	*e*P	**P**	**04 58 20.4**	**+0.7**
CTAO				*e**PP	pP	04 58 28.3	+5.3
CTAO				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
CTAO				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
CTAO	**Charters Tower**	**73.60**	**258**	*e*P	**P**	**04 58 20.4**	**+0.7**
	comp=Z,25nm,1.0s,mb5.1						
CTAO				*e*pP	pP	04 58 28.3	+5.4
CTAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
JTS	**JuntasAbangare**	**73.61**	**40**	*e*P	**P**	**04 58 17.1**	**-2.6**
JTS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JTS				MLR	MLR		
	comp=Z,1µm,21.0s						
JTS	**JuntasAbangare**	**73.61**	**40**	*e*P	**P**	**04 58 17.1**	**-2.5**
	comp=Z,4.5nm,0.9s,mb4.4						
JTS				LR	LR		
	comp=Z,1µm,21.0s,MS5.1						
HNR	**Honiara**	**74.64**	**276**	LR	LR	05 24 43.4	
	comp=Z,909nm,20.9s,MS5.0,baz=144,slow=31						
HNR	**Honiara**	**74.64**	**276**	PFAKE		04 58 40.0	+14
HNR				LR	LR		
	comp=Z,970nm,20.0s,MS5.1						
ASAR	**Alice Springs**	**77.26**	**247**	P	**P**	**04 58 39.1**	**-1.6**
	comp=Z,3.1nm,0.8s,mb4.3,baz=144,slow=5.4,SNR=22						
NWAO	**Narrogin (SRO)**	**77.30**	**229**	LR	LR	05 26 30.6	
	comp=Z,538nm,19.5s,MS4.9,baz=272,slow=31						
NWAO	**Narrogin (SRO)**	**77.30**	**229**	PFAKE		04 58 50.0	+9.2
NWAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
WB2	**Warramunga Arr**	**80.10**	**249**	*e*P	**P**	**04 58 55.4**	**-1.0**
WRAB	**Tennant Creek**	**80.11**	**249**	*e*P	**P**	**04 58 54.8**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.1						
WRAB				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.7						
WRAB	**Tennant Creek**	**80.11**	**249**	*e*P	**P**	**04 58 54.8**	**-1.6**
	comp=Z,33nm,1.3s,mb5.1						
WRAB				LR	LR		
	comp=Z,4µm,20.0s,MS5.7						
KIP	**Kipapa**	**82.58**	**328**	PFAKE		04 59 20.0	+11
KIP				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
FITZ	**Fitzroy Crossi**	**86.09**	**243**	*e*P	**P**	**04 59 26.8**	**-0.6**
	comp=Z,5.6nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**86.09**	**243**	P	**P**	**04 59 25.3**	**-2.1**
	comp=Z,4.1nm,1.2s,mb4.5,baz=152,slow=5.1,SNR=3.4						
FITZ				LR	LR	05 32 14.5	
	comp=Z,2µm,21.6s,MS5.4,baz=131,slow=32						
MBWA	**Marble Bar**	**86.34**	**237**	*e*P	**P**	**04 59 27.7**	**-0.9**
	comp=Z,31nm,1.1s,mb5.5						
MBWA				*e*pP	pP	04 59 35.6	+3.7
MBWA				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
TXAR	**Lajitas Array**	**86.86**	**17**	P	**P**	**04 59 28.8**	**-1.9**
	comp=Z,1.8nm,0.9s,mb4.3,baz=186,slow=6.9,SNR=15						
TXAR				LR	LR	05 30 04.5	
	comp=Z,640nm,21.1s,MS5.0,baz=255,slow=30						
JCT	**Junction City**	**88.68**	**20**	*e*P	**P**	**04 59 37.7**	**-1.6**
JCT				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.4						
JCT	**Junction City**	**88.68**	**20**	*e*P	**P**	**04 59 37.7**	**-1.6**
	comp=Z,21nm,1.1s,mb5.4						
BAR	**Barrett**	**88.71**	**6**	PFAKE		04 59 50.0	+11
BAR				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
HKT	**Hockley**	**89.00**	**24**	PFAKE		04 59 50.0	+9.1
HKT				LR	LR		
	comp=Z,651nm,19.0s,MS5.1						
GLA	**Glamis**	**89.20**	**7**	PFAKE		04 59 50.0	+8.3
GLA				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
MWC	**Mount Wilson**	**90.17**	**5**	PFAKE		05 00 00.0	+14
MWC				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
NATX	**Nacogdoches**	**91.01**	**24**	PFAKE		05 00 00.0	+10
NATX				LR	LR		
	comp=Z,427nm,19.0s,MS4.9						
GSC	**Goldstone**	**91.31**	**6**	PFAKE		05 00 00.0	+8.5
GSC				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
DWPF	**Disney**	**91.31**	**36**	PFAKE		05 00 00.0	+8.3
DWPF				LR	LR		
	comp=Z,585nm,20.0s,MS5.0						
ISA	**Isabella**	**91.59**	**4**	PFAKE		05 00 00.0	+7.2
ISA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
ANMO	**Albuquerque**	**91.95**	**14**	*e*P	**P**	**04 59 56.1**	**+1.6**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,760nm,20.0s						
ANMO	**Albuquerque**	**91.95**	**14**	*e*P	**P**	**04 59 56.1**	**+1.6**
	comp=Z,7.7nm,1.2s,mb4.9						
ANMO				LR	LR		
	comp=Z,760nm,20.0s,MS5.1						
DAC	**Darwin (Calif)**	**92.24**	**5**	PFAKE		05 00 10.0	+14
DAC				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
AMTX	**Amarillo**	**92.62**	**18**	PFAKE		05 00 10.0	+12
AMTX				LR	LR		
	comp=Z,448nm,21.0s,MS4.9						
TPNV	**Topopah Spring**	**92.98**	**6**	*e*P	**P**	**04 59 59.4**	**+0.2**
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.8						
TPNV				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.6						
TPNV	**Topopah Spring**	**92.98**	**6**	*e*P	**P**	**04 59 59.4**	**+0.2**
	comp=Z,3.9nm,1.0s,mb4.8						
TPNV				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
CMB	**Columbia Colle**	**93.89**	**3**	PFAKE		05 00 10.0	+6.6
CMB				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
MCCM	**Marconi Confer**	**93.96**	**1**	PFAKE		05 00 10.0	+6.3
MCCM				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
NVAR	**Mina Array Bea**	**94.35**	**4**	P	**P**	**05 00 03.8**	**-1.7**
	comp=Z,0.5nm,0.6s,mb4.1,baz=184,slow=5.9,SNR=3.4						
HOPS	**Hopland**	**94.81**	**0**	PFAKE		05 00 20.0	+12
HOPS				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
MVU	**Marysvale**	**94.82**	**9**	PFAKE		05 00 20.0	+12
MVU				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
MSU	**Marysvale**	**94.83**	**9**	*e*P	**P**	**05 00 10.4**	**+2.7**
OXF	**Oxford**	**94.93**	**28**	PFAKE		05 00 20.0	+12
OXF				LR	LR		
	comp=Z,177nm,20.0s,MS4.5						
LBTB	**Lobatse**	**95.02**	**152**	PFAKE		05 00 20.0	+11
LBTB				LR	LR		
	comp=Z,765nm,20.0s,MS5.2						
MIDW	**Midway**	**95.61**	**314**	PFAKE		05 00 20.0	+8.5
MIDW				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
NHSC	**New Hope**	**96.33**	**36**	PFAKE		05 00 20.0	+5.3
NHSC				LR	LR		
	comp=Z,561nm,19.0s,MS5.1						
MPU	**Maple Canyon**	**96.37**	**9**	PFAKE		05 00 20.0	+5.3

MPU LR LR
comp=Z,4μm,22.0s,MS5.8
BMN Battle Mountai 96.40 5 PFAKE 05 00 20.0 +5.2
BMN LR LR
comp=Z,2μm,20.0s,MS5.6
CBKS Cedar Bluff 96.79 19 PFAKE 05 00 30.0 +13
CBKS LR LR
comp=Z,504nm,19.0s,MS5.0
ELK Elko 96.82 6 PFAKE 05 00 30.0 +13
ELK LR LR
comp=Z,1μm,20.0s,MS5.4
MOD Modoc 97.75 3 PFAKE 05 00 30.0 +9.1
MOD LR LR
comp=Z,1μm,21.0s,MS5.4
HUMO Hull Mountain 98.42 1 PFAKE 05 00 30.0 +6.2
HUMO LR LR
comp=Z,2μm,22.0s,MS5.6
AHID Auburn Hatcher 99.15 9 PFAKE 05 00 40.0 +13
AHID LR LR
comp=Z,1μm,20.0s,MS5.4
BW06 Boulder Array 99.30 10 PFAKE 05 00 40.0 +12
BW06 LR LR
comp=Z,2μm,20.0s,MS5.5
PDAR Pinedale Array 99.30 10 P **P** **05 00 28.0 +0.3**
comp=Z,0.1nm,0.3s,mb3.8,baz=191,slow=4.7,SNR=1.8
PDAR LR LR 05 36 54.8
comp=Z,2μm,20.0s,MS5.5,baz=206,slow=30
KAPI Kappang 100.21 245 PFAKE 05 00 40.0 +7.3
KAPI LR LR
comp=Z,2μm,21.0s,MS5.5
COR Corvallis 100.39 0 PFAKE 05 00 40.0 +6.5
COR LR LR
comp=Z,2μm,20.0s,MS5.6
BMO Blue Mountains 100.80 5 PFAKE 05 00 40.0 +4.7
BMO LR LR
comp=Z,2μm,22.0s,MS5.5
LKWY Lake 101.00 10 PFAKE 05 00 50.0 +14
LKWY LR LR
comp=Z,1μm,20.0s,MS5.4
BBSR BB Station 101.41 48 PFAKE 05 00 50.0 +12
BBSR LR LR
comp=Z,497nm,22.0s,MS5.0
BOZ Bozeman (W) 101.96 9 PFAKE 05 00 50.0 +10
BOZ LR LR
comp=Z,1μm,19.0s,MS5.5
GUMO Guam 101.97 276 PFAKE 05 00 50.0 +9.5
GUMO LR LR
comp=Z,724nm,19.0s,MS5.2
MCWV Mont Chateau 102.45 33 PFAKE 05 00 50.0 +7.4
MCWV LR LR
comp=Z,365nm,20.0s,MS4.9
MSO Missoula 102.96 7 PFAKE 05 00 50.0 +5.1
MSO LR LR
comp=Z,1μm,20.0s,MS5.5
NLWA Neilton Lookou 103.20 360 PFAKE 05 00 50.0 +4.0
NLWA LR LR
comp=Z,1μm,19.0s,MS5.4
LAO LASA Array 103.54 12 PFAKE 05 01 00.0 +13
LAO LR LR
comp=Z,664nm,22.0s,MS5.1
COCO West Island 103.99 221 PFAKE 05 01 00.0 +10
COCO LR LR
comp=Z,639nm,21.0s,MS5.1
ABPO Ambohimpanom 104.71 171 PFAKE 05 01 00.0 +7.3
ABPO LR LR
comp=Z,976nm,20.0s,MS5.3
LSZ Lusaka 105.00 152 PFAKE 05 01 00.0 +6.0
LSZ LR LR
comp=Z,1μm,20.0s,MS5.4
GLMI Grayling 105.87 28 PFAKE 05 05 20.0 +11
GLMI LR LR
comp=Z,554nm,20.0s,MS5.1
COWI Conover 105.96 24 PFAKE 05 05 20.0 +11
COWI LR LR
comp=Z,394nm,19.0s,MS5.0
BINY Binghamton 105.97 35 PFAKE 05 05 20.0 +10
BINY LR LR
comp=Z,564nm,19.0s,MS5.1
DAV Davao City (W) 107.34 256 PFAKE 05 05 20.0 +7.0
DAV LR LR
comp=Z,645nm,20.0s,MS5.2
HRV Adam Dziewonsk 107.71 38 PFAKE 05 05 20.0 +7.2
HRV LR LR
comp=Z,476nm,20.0s,MS5.0
NCB Newcomb 108.12 35 PFAKE 05 05 20.0 +6.5
NCB LR LR
comp=Z,553nm,21.0s,MS5.1
LBNH Lisbon 109.12 37 PFAKE 05 05 30.0 +15
LBNH LR LR
comp=Z,519nm,20.0s,MS5.1
KKM Kota Kinabalu 111.45 248 PFAKE 05 05 30.0 +9.2
KKM LR LR
comp=Z,794nm,20.0s,MS5.3
FFC Flin Flon 111.96 13 PFAKE 05 05 30.0 +10
FFC LR LR
comp=Z,1μm,22.0s,MS5.5
KDAK Kodiak Island 115.97 343 PFAKE 05 05 40.0 +12
KDAK LR LR
comp=Z,818nm,20.0s,MS5.3
ADK Adak 116.23 326 PFAKE 05 05 40.0 +11
ADK LR LR
comp=Z,3μm,21.0s,MS5.8
MSEY Mahe Island 119.35 179 PFAKE 05 05 50.0 +14
MSEY LR LR
comp=Z,628nm,21.0s,MS5.2
KMBO Kilima Mbogo 120.81 158 PFAKE 05 05 50.0 +11
KMBO LR LR
comp=Z,665nm,19.0s,MS5.3
EGAK Eagle 121.37 351 PFAKE 05 05 50.0 +12
EGAK LR LR
comp=Z,2μm,20.0s,MS5.8
COLA College 122.13 348 PFAKE 05 05 50.0 +10
COLA LR LR
comp=Z,2μm,20.0s,MS5.7
MAJO Matsushiro 123.72 287 PFAKE 05 05 50.0 +6.4
MAJO LR LR
comp=Z,1μm,20.0s,MS5.5
ERM Erimo 125.16 294 PFAKE 05 06 00.0 +14
ERM LR LR
comp=Z,911nm,22.0s,MS5.4
PET Petropavlovsk 126.06 313 PFAKE 05 06 00.0 +13
PET LR LR
comp=Z,2μm,19.0s,MS5.7
PETK Petropavlovsk- 126.51 313 PKP PKPdf 05 05 49.1 +0.8
comp=Z,1.7nm,0.8s,baz=132,slow=2.7,SNR=2.8
CM31 Chiang Mai Arr 130.66 238 PFAKE 05 06 10.0 +13
CM31 LR LR
comp=Z,216nm,20.0s,MS4.8
INCN Inchon 130.71 279 PFAKE 05 06 10.0 +13
INCN LR LR
comp=Z,582nm,20.0s,MS5.3
CHTO Chiang Mai 130.96 238 PFAKE 05 06 10.0 +12
CHTO LR LR
comp=Z,760nm,21.0s,MS5.4
NJ2 Nanjing 131.06 268 *e*PKP PKPdf 05 05 53.4 -4.3
NJ2 PP PP 05 08 17.5 +2.2
NJ2 PP PP
comp=Z,160nm,5.8s
NJ2 LR LR
comp=N,660nm,34.6s,MS5.2
NJ2 LR LR
comp=E,610nm,35.1s,MS5.2
NJ2 LR LR
comp=Z,600nm,35.1s,MS5.0
MDJ Mudanjiang 134.05 288 PFAKE 05 06 10.0 +7.1
MDJ LR LR
comp=Z,504nm,19.0s,MS5.2
BILL Bilibino 134.14 330 PFAKE 05 06 10.0 +7.6
BILL LR LR
comp=Z,1μm,20.0s,MS5.6
KMI Kunming 134.39 247 PKP PKPdf 05 05 59.3 -4.9
KMI XPKP 05 06 11.8
KMI SKS SKSdf 05 13 06.0 -9.2
KMI PP PP
comp=Z,169nm,6.4s
KMI LR LR
comp=N,213nm,27.5s,MS5.0
KMI LR LR
comp=E,363nm,24.3s,MS5.0
KMI LR LR
comp=Z,938nm,51.8s
MTE Manteigas 136.32 83 PFAKE 05 06 20.0 +13
MTE LR LR
comp=Z,376nm,21.0s,MS5.1
PAB San Pablo 137.52 87 PFAKE 05 06 20.0 +10
PAB LR LR
comp=Z,331nm,20.0s,MS5.1
ESLA Sonseca Array 137.82 87 PFAKE 05 06 20.0 +10
ESLA LR LR
comp=Z,2μm,22.0s,MS5.7
BJT Baijiatuan 138.31 273 PFAKE 05 06 20.0 +9.0
BJT LR LR
comp=Z,557nm,21.0s,MS5.3
CD2 Chengdu 138.50 253 *e*PKP PKPdf 05 06 11.2 -0.5
CD2 PP PP 05 09 07.1 +4.9
CD2 PKS 05 09 46.1
CD2 SKS SKSdf 05 13 16.2 -5.8
CD2 SKKS SKKSac 05 15 53.0 -3.0
CD2 PP PP
comp=Z,150nm,9.6s
CD2 LR LR
comp=N,400nm,19.2s
CD2 LR LR
comp=Z,320nm,20.4s,MS5.0
HIA Hailar 142.22 287 PFAKE 05 06 30.0 +12
HIA LR LR
comp=Z,853nm,19.0s,MS5.5
TAPN Taplejung 143.47 231 *e*P PKPdf 05 06 22.6 +1.9
RAMN Ramite 143.59 229 *e*P PKPdf 05 06 20.8 -0.2
comp=Z,28nm,0.9s
LSA Lhasa 143.91 237 PFAKE 05 06 30.0 +8.6
LSA LR LR
comp=Z,387nm,20.0s,MS5.2
PKI Pulchoki 144.64 228 *e*P PKPdf 05 06 21.5 -1.3
comp=Z,98nm,1.2s
PKIN Phulchoki 144.65 228 *e*P PKPdf 05 06 22.6 -0.2
comp=Z,59nm,1.1s
GUN Gumba 144.74 229 *e*P PKPdf 05 06 24.7 +1.8
comp=Z,160nm,1.3s
DSB Dublin 144.76 68 *e*PKPdf PKPdf 05 06 19.7 -2.4
DMN Daman 144.80 228 *e*P PKPdf 05 06 21.7 -1.3
comp=Z,179nm,1.1s
KKN Kakani 144.88 228 *e*P PKPdf 05 06 22.1 -1.1
FLN La Foliniere 145.50 78 *e*PKP1 PKPbc 05 06 16.7 -7.0
comp=Z,27nm,0.7s
TCF Toulx Ste Croi 145.55 83 *e*PKP1 PKPbc 05 06 16.9 -7.0
comp=Z,49nm,1.3s
KOLN Koldanda 145.55 226 *e*P PKPdf 05 06 21.4 -2.9
comp=Z,138nm,1.2s
LDF La Druitiere 145.60 78 *e*PKP1 PKPbc 05 06 16.9 -7.1
DANN Dangsing 146.00 227 *e*P PKPdf 05 06 24.6 -0.5
comp=Z,90nm,0.8s
BGF Bois d'Agland 146.06 83 *e*PKP1 PKPbc 05 06 18.7 -6.8
FRF La Foret Royal 146.34 91 *e*PKP1 PKPbc 05 06 19.6 -6.8
comp=Z,26nm,1.0s
AVF Avril sur Loir 146.48 83 *e*PKP1 PKPbc 05 06 19.6 -7.1
comp=Z,37nm,1.2s
SMF Signal de Mont 146.67 84 *e*PKP1 PKPbc 05 06 20.3 -7.0
comp=Z,47nm,1.3s
SSF Saint Saulge 146.72 83 *e*PKP1 PKPbc 05 06 20.2 -7.2
comp=Z,19nm,1.1s
CIT Chita 147.02 287 *e*PKP2 PKPbc 05 06 26.6 -1.5
LOR Lormes 147.04 83 *e*PKP1 PKPbc 05 06 21.2 -7.1
comp=Z,35nm,1.0s
TIXI Tiksi 147.09 326 *i* PKP2 PKPab 05 06 33.4 +4.0
TIXI pmax pmax
comp=Z,61nm,1.4s
TIXI Tiksi 147.09 326 *e*PKP PKPab 05 06 32.5 +3.1
TIXI LR LR
comp=Z,866nm,20.0s,MS5.5
BNI Bardonecchia 147.29 89 *e*PKP2 PKPbc 05 06 27.5 -1.6
BNI MLR MLR
comp=Z,693nm,22.0s,MS5.4
ESK Eskdalemuir 147.38 66 PFAKE 05 06 40.0 +14
ESK LR LR
comp=Z,383nm,20.0s,MS5.2
LPG La Plagne 147.60 88 *e*PKP1 PKPbc 05 06 23.2 -6.7
comp=Z,43nm,1.1s
LPL La Plagne 147.60 88 *e*PKP1 PKPbc 05 06 23.1 -6.8
ULN Ulaanbaatar 148.35 277 *e*PKPbc PKPbc 05 06 30.1 -1.7
ULN *e*PKPab PKPab 05 06 34.7 -0.4
ULN LR LR
comp=Z,607nm,21.0s,MS5.4
SONM Songino Array 148.70 276 PKP PKPdf 05 06 26.8 -2.1
comp=Z,1.0nm,0.5s,baz=122,slow=1.9,SNR=2.2
SONM PKPbc PKPbc 05 06 33.1 +0.3
comp=Z,1.2nm,0.6s,baz=116,slow=3.4,SNR=2.8
BAIF Baives 148.78 79 *e*PKP1 PKPbc 05 06 26.0 -6.8
DOU Dourbes 149.01 79 PKP PKPbc 05 06 34.4 +0.9
BOD Bodaibo 149.36 297 *e*PKP2 PKPab 05 06 38.9 0.0
BOD pmax pmax
comp=Z,20nm,1.0s
ECH Echery 149.41 84 PKIKP PKPdf 05 06 28.1 -1.9
ECH *e* 05 06 34.7
BCLA Clavier 149.56 79 PKP PKPbc 05 06 36.3 +1.5
TUE Stuetta 149.63 89 PKPab PKPab 05 06 38.8 -1.6
BFO Black Forest 150.13 85 *e*PKP2 PKPbc 05 06 38.0 +1.8
BFO Black Forest 150.13 85 PFAKE 05 06 40.0 +8.8
BFO LR LR
comp=Z,377nm,21.0s,MS5.2
ZAK Zakamensk 151.79 278 *e*PKIKP PKPbc 05 06 42.3 +2.2
ZAK pmax pmax
comp=Z,13nm,1.6s
IRK Irkutsk 152.15 282 *e*PKIKP PKPbc 05 06 47.2 +6.4
IRK pmax pmax
comp=Z,33nm,1.5s
TLY Talaya 152.23 281 *e*PKIKP PKPbc 05 06 40.4 -0.6
TLY *e* 05 06 47.5
TLY MLR MLR
comp=Z,589nm,19.0s,MS5.4
GRF Grafenberg Arr 152.46 84 *e*PKIKP PKPbc 05 06 39.9 -1.7
KBS Kingsbay 152.96 17 PFAKE 05 06 40.0 +5.4
KBS LR LR
comp=Z,840nm,20.0s,MS5.5
GERES GERESS Array B 153.40 88 PKPbc PKPbc 05 06 42.0 -1.7
comp=Z,1.8nm,0.8s,baz=308,slow=2.4,SNR=8.1
GERES PKPab PKPab 05 06 56.5 +0.5
comp=Z,2.4nm,0.8s,baz=198,slow=2.1,SNR=6.8
CLL Collm 154.25 82 *e*PKPbc PKPbc 05 06 47.0 +1.6
CLL *e*PP PP 05 10 39.0 +3.7
CLL *e*SKSP 05 21 01.0
CLL *e*(SS) 05 29 55.0
CLL *e*SSP 05 31 03.0
CLL *e*SSS 05 35 57.0
CLL *e*SSSS 05 40 01.0
CLL Lm 06 31 00.0
comp=N,400nm,21.0s
CLL Lm 06 31 00.0
comp=E,300nm,21.7s
CLL Lm 06 31 00.0
comp=Z,500nm,21.4s
BRG Berggiesshubel 154.57 84 *e*PKIKP PKPab 05 06 54.1 -6.8
BRG pmax pmax
comp=Z,1.0nm,0.5s
BRG Berggiesshubel 154.57 84 *e*(P) PKPab 05 06 54.1 -6.8
comp=Z,1.8nm,0.5s
ISP Isparta 154.82 126 PFAKE 05 06 50.0 +12
ISP LR LR
comp=Z,560nm,22.0s,MS5.3
ANTO Ankara 157.50 127 PFAKE 05 06 50.0 +8.1
ANTO LR LR
comp=Z,636nm,21.0s,MS5.4
MALT Malatya 158.50 139 PFAKE 05 06 50.0 +6.8
MALT LR LR
comp=Z,531nm,21.0s,MS5.3
KWP Kalwaria 158.85 94 PFAKE 05 06 50.0 +6.8
KWP LR LR
comp=Z,904nm,21.0s,MS5.6
KEV Kevo 161.25 32 PFAKE 05 06 50.0 +4.7
KEV LR LR
comp=Z,2μm,22.0s
MKAR Makanchi Array 161.41 251 PKPab PKPab 05 07 29.6 -1.0
comp=Z,0.7nm,0.6s,baz=111,slow=6.6,SNR=6.0
AML Almayashu 162.00 226 PFAKE 05 07 00.0 +13
AML LR LR
comp=Z,484nm,20.0s
FRU Bishkek 162.21 229 *e*PKP2 PKPab 05 07 45.0 +11
GNI Garni 162.24 150 PFAKE 05 07 00.0 +13
GNI LR LR
comp=Z,819nm,20.0s
EKS2 Erkin-Say 162.41 227 PFAKE 05 07 00.0 +13
EKS2 LR LR
comp=Z,669nm,20.0s
LVZ Lovozero 164.59 32 PFAKE 05 07 00.0 +11
LVZ LR LR
comp=Z,943nm,20.0s
NVS Novosibirsk 164.73 276 *i* PKP2 PKPab 05 07 53.5 +8.5
KIV Kislovodsk 164.99 139 PFAKE 05 07 00.0 +10
KIV LR LR
comp=Z,839nm,21.0s
KURK Kurchatov 165.67 257 PFAKE 05 07 00.0 +10
KURK LR LR
comp=Z,1μm,20.0s
OBN Obninsk 168.78 87 PFAKE 05 07 00.0 +7.8
OBN LR LR
comp=Z,2μm,22.0s
ARU Arti 178.73 282 PFAKE 05 07 10.0 +14
ARU LR LR
comp=Z,1μm,20.0s

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*BJI **07** 05:12:36.3, 1806N×14746E, h41km, mB4.9, mb4.8, Ms4.5, Msz4.1*
*MOS **07** 05:12:38.4±0.9, 1843N×14701E, h30km, mb4.9/32, Error ellipse: s-maj=11.4km s-min=7.1km az=105.8*
*ISCJB **07** 05:12:39.7±0.9, 1836N±004×14698E±003, h39km±8km, mb4.6/78, MS4.2/12, Error ellipse: s-maj=6.2km s-min=4.5km az=3.5*
*NEIC **07** 05:12:42.5±1.3, 1836N×14703E, h52km±11km, mb4.7/42, Error ellipse: s-maj=5.9km s-min=5.1km az=76.0*
*IDC **07** 05:12:42.6±1.6, 1832N×14705E, h52km±12km, mb4.2/19, mb1 4.3/23, mb1mx4.3/26, mbtmp4.3/23, ML4.4/4, MS4.0/6, Ms1 4.0/6, ms1mx3.7/27, Error ellipse: s-maj=16.5km s-min=9.6km az=96.0*
ISC 07 05:12:42.6±0.8, 1835N±004×14702E±003, h51km±7km, h48km±3.3km; pP-P, n406, σ0.55/408, mb4.6/78, MS4.2/12, 127C-123D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.16**	**204**	P		**Pn**	**05 13 57.6**	**+0.2**
	32nm,0.3s,baz=133,slow=7.1,SNR=7.5							
GUMO				S		**Sn**	**05 14 56.2**	**+0.5**
	48nm,0.3s,baz=180,slow=20,SNR=4.1							
GUMO				LR	LR		05 15 28.5	
	comp=Z,228nm,18.0s,baz=16,slow=32							
GUMO	**Guam**	**5.16**	**204**	*e*P		**Pn**	**05 13 57.0**	**-0.4**
GUMO				*e*			05 14 53.4	
GUMO				pmax	pmax			
	comp=Z,170nm,0.7s							
GUMO	**Guam**	**5.16**	**204**	*e*Pn		**Pn**	**05 13 57.0**	**-0.4**
	comp=Z,170nm,0.7s							
GUMO				*e*Sn		**Sn**	**05 14 53.4**	**-2.3**
CBIJ	**Chichi jima**	**9.78**	**334**	P		**Pn**	**05 15 01.4**	**+0.9**
	comp=Z,6.1nm,0.3s,baz=287,slow=19,SNR=2.2							
JOW	**Kunigami**	**19.24**	**299**	P		**Pn**	**05 17 04.7**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=110,slow=12,SNR=3.7							
JOW				LR	LR		05 23 23.0	
	comp=Z,424nm,19.4s,baz=57,slow=33							
MJAR	**Matsushiro Arr**	**19.72**	**339**	P		**Pn**	**05 17 08.2**	**-1.4**
	comp=Z,1.3nm,0.3s,baz=165,slow=10,SNR=14							
MAJO	**Matsushiro**	**19.72**	**339**	*e*P		**Pn**	**05 17 07.5**	**-2.2**
MAJO				pmax	pmax			
	comp=Z,19nm,0.6s							
MAJO	**Matsushiro**	**19.72**	**339**	*e*P		**Pn**	**05 17 07.5**	**-2.2**
	comp=Z,19nm,0.6s							
MAT	**Matsushiro**	**19.72**	**339**	P		**Pn**	**05 17 10.8**	**+1.1**
MAT				*e*S		**S**	**05 20 53.6**	**+6.2**
YHNB	**Yeheng**	**24.65**	**289**	P		**P**	**05 17 58.2**	**-0.4**
	comp=Z,19nm,0.8s,mb4.7							
GUIM	**Jordan**	**24.84**	**255**	*e*P		**P**	**05 18 00.5**	**+0.1**
KSRS	**Korea Array**	**25.34**	**323**	P		**P**	**05 18 05.3**	**+0.6**
	comp=Z,16nm,0.8s,mb4.6,baz=148,slow=9.3,SNR=46							
ASAJ	**Asahikawa**	**25.96**	**353**	LR	LR		05 27 47.9	
	comp=Z,145nm,21.6s,MS3.5,baz=273,slow=35							
SSE	**Sheshan**	**26.60**	**303**	P		**P**	**05 18 17.1**	**+0.9**
SSE				AP		pP	05 18 29.9	+0.7
SSE				S		**S**	**05 22 46.4**	**-1.1**
SSE				XS		sS	05 23 08.7	-0.9
SSE				AMB	AMB			
	comp=Z,29nm,0.7s,mb4.9							
SSE				AMB	AMB			
	comp=Z,45nm,4.5s							
SSE				LR	LR			
	comp=N,168nm,15.8s,MS4.1							
SSE				LR	LR			
	comp=E,383nm,15.8s,MS4.1							
SSE				LR	LR			
	comp=Z,269nm,13.4s,MS4.0							
PMG	**Port Moresby**	**27.58**	**180**	*e*P		**P**	**05 18 25.8**	**+0.7**
PMG				pmax	pmax			
	comp=Z,33nm,1.1s							
PMG	**Port Moresby**	**27.58**	**180**	*e*P		**P**	**05 18 25.8**	**+0.7**
	comp=Z,33nm,1.1s,mb4.9							
NJ2	**Nanjing**	**28.80**	**304**	*e*P		**P**	**05 18 38.1**	**+2.2**
NJ2				AMB	AMB			
	comp=Z,20nm,0.8s,mb4.9							
MDJ	**Mudanjiang**	**29.98**	**335**	P		**P**	**05 18 45.7**	**-0.4**
MDJ				AP		pP	05 18 56.6	-2.6
MDJ				XP		sP	05 19 01.8	-3.5
MDJ				PCP		PcP	05 21 45.2	-2.3
MDJ				S		**S**	**05 23 42.7**	**+2.4**
MDJ				SCP		ScP	05 25 19.2	-6.4
MDJ				PCS		PcS	05 25 26.6	-4.2
MDJ				SCS		ScS	05 29 22.8	+2.0
MDJ				AMB	AMB			
	comp=Z,9.0nm,1.6s,mb4.2							
MDJ				AMB	AMB			
	comp=Z,72nm,5.1s							
MDJ				LR	LR			
	comp=N,614nm,25.9s,MS4.2							
MDJ				LR	LR			
	comp=E,546nm,30.2s,MS4.2							
MDJ				LR	LR			
	comp=Z,172nm,30.2s,MS3.5							
CN2	**Changchun**	**31.20**	**329**	*e*P		**P**	**05 18 56.8**	**-0.1**
KKM	**Kota Kinabalu**	**32.43**	**252**	P		**P**	**05 19 06.2**	**-1.9**
KLR	**Kul'dur**	**33.18**	**342**	*e*P		**P**	**05 19 10.2**	**-4.0**
KAKA	**Kakadu**	**34.05**	**206**	*e*P		**P**	**05 19 23.4**	**+1.3**
	comp=Z,7.8nm,0.9s,mb4.6							
BJT	**Baijiatuan**	**34.25**	**316**	P		**P**	**05 19 22.5**	**-1.1**
BJT				pmax	pmax			
	comp=Z,20nm,1.1s							
BJT	**Baijiatuan**	**34.25**	**316**	P		**P**	**05 19 22.5**	**-1.1**
	comp=Z,20nm,1.1s,mb5.0							
BJI	**Beijing**	**34.25**	**316**	P		**P**	**05 19 23.4**	**-0.3**
BJI				AMB	AMB			
	comp=Z,14nm,1.2s,mb4.8							
BJI				LR	LR			
	comp=N,635nm,48.6s							
BJI				LR	LR			
	comp=E,372nm,38.8s							
QIZ	**Qiongzhong**	**35.18**	**277**	P		**P**	**05 19 31.3**	**-0.6**
QIZ				XP		sP	05 19 48.1	-3.1
QIZ				S		**S**	**05 25 02.5**	**+0.7**
QIZ				XS		sS	05 25 19.9	-4.2
QIZ				AMB	AMB			
	comp=Z,6.0nm,1.3s,mb4.4							
QIZ				LR	LR			
	comp=N,262nm,25.4s							
QIZ				LR	LR			
	comp=Z,474nm,47.0s							
HHC	**Hu-ho-hao-te**	**37.74**	**314**	*e*P		**P**	**05 19 53.2**	**-0.3**
HHC				AP		pP	05 20 06.2	-0.6
HHC				XP		sP	05 20 11.9	-0.9
HHC				PP		PP	05 21 22.3	+1.9
HHC				PCP		PcP	05 22 10.9	+1.2
HHC				S		**S**	**05 25 39.4**	**-1.0**
HHC				SCP		ScP	05 25 52.4	-0.6
HHC				PCS		PcS	05 25 57.9	-0.4
HHC				XS		sS	05 26 01.7	-1.2
HHC				SCS		ScS	05 29 59.3	-2.5
HHC				AMB	AMB			
	comp=Z,11nm,0.7s,mb4.7							
HHC				AMB	AMB			
	comp=Z,193nm,7.4s							
HHC				LR	LR			
	comp=N,278nm,14.9s,MS4.4							
HHC				LR	LR			
	comp=E,351nm,15.1s,MS4.4							
HHC				LR	LR			
	comp=Z,261nm,14.9s,MS4.2							
HIA	**Hailar**	**37.87**	**331**	*e*P		**P**	**05 19 54.7**	**+0.3**
HIA				pmax	pmax			
	comp=Z,12nm,0.7s							
HIA	**Hailar**	**37.87**	**331**	*e*P		**P**	**05 19 54.7**	**+0.3**
	comp=Z,12nm,0.7s,mb4.8							
GYA	**Guiyang**	**38.05**	**290**	*e*P		**P**	**05 19 57.8**	**+1.5**
GYA				AP		pP	05 20 11.0	+1.4
GYA				XP		sP	05 20 17.5	+1.9
GYA				PP		PP	05 21 27.8	+3.8
GYA				PCP		PcP	05 22 13.4	+2.5
GYA				S		**S**	**05 25 45.2**	**-0.2**

GYA SCP ScP 05 25 54.6 +0.1
GYA SCS ScS 05 30 02.1 -1.9
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
GYA AMB AMB
comp=Z,90nm,4.9s
GYA LR LR
comp=N,480nm,17.4s,MS4.5
GYA LR LR
comp=E,450nm,18.2s,MS4.5
GYA LR LR
comp=Z,430nm,17.7s,MS4.3
CTAO Charters Tower 38.21 181 P **P** **05 19 59.7 +2.1**
CTAO pmax pmax
comp=Z,12nm,1.2s,mb4.5
CTAO Charters Tower 38.21 181 P **P** **05 19 59.7 +2.1**
comp=Z,12nm,1.2s,mb4.5
WRAB Tennant Creek 40.02 199 *e*P **P** **05 20 11.9 -0.8**
WRAB pmax pmax
comp=Z,18nm,1.0s,mb4.8
WRAB Tennant Creek 40.02 199 *e*P **P** **05 20 11.9 -0.9**
comp=Z,18nm,1.0s,mb4.8
WB2 Warramunga Arr 40.03 199 *e*P **P** **05 20 12.3 -0.5**
CD2 Chengdu 41.02 296 *e*P **P** **05 20 22.0 +1.0**
CD2 AP pP 05 20 35.0 +0.5
CD2 XP sP 05 20 41.2 +0.8
CD2 PP PP 05 22 00.5 +4.1
CD2 S **S** **05 26 30.8 +0.8**
CD2 XS sS 05 26 51.5 -1.1
CD2 SS SS 05 29 29.7 -3.9
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
CD2 AMB AMB
comp=Z,20nm,4.8s
CD2 LR LR
comp=N,150nm,14.2s
CD2 LR LR
comp=Z,130nm,15.2s,MS3.9
KMI Kunming 41.53 287 P **P** **05 20 25.5 +0.2**
KMI AP pP 05 20 33.6 -5.2
KMI XP sP 05 20 37.7 -7.0
KMI AMB AMB
comp=Z,6.0nm,1.0s,mb4.2
CLNS Chul'man 41.84 342 *e*P **P** **05 20 25.2 -2.1**
CLNS pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
CLNS pmax pmax
comp=N,6.0nm,0.5s
CLNS pmax pmax
comp=E,8.0nm,1.0s
FITZ Fitzroy Crossi 41.88 211 *e*P **P** **05 20 27.1 -0.9**
comp=E,5.3nm,0.9s,mb4.2
FITZ Fitzroy Crossi 41.88 211 P **P** **05 20 28.0 0.0**
comp=E,1.6nm,0.5s,mb3.9,baz=5.5,slow=5.6,SNR=20
LZH Lanzhou 41.88 304 *e*P **P** **05 20 30.2 +2.2**
LZH AP pP 05 20 41.0 -0.4
LZH XP sP 05 20 47.3 -0.1
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.6
LZH AMB AMB
comp=Z,78nm,4.6s
LZH LR LR
comp=N,182nm,10.4s
LZH LR LR
comp=Z,335nm,18.0s
ASAR Alice Springs 43.68 198 P **P** **05 20 42.4 -0.1**
comp=Z,4.6nm,0.9s,mb4.2,baz=22,slow=9.2,SNR=22
ASAR ScP ScP 05 26 16.8 +0.3
comp=Z,1.1nm,0.9s,baz=16,slow=4.1,SNR=5.6
ASAR S **S** **05 27 07.8 -1.1**
comp=Z,0.6nm,0.8s,baz=15,slow=20,SNR=4.7
ULN Ulaanbaatar 43.82 321 *e*P **P** **05 20 43.4 -0.1**
ULN pmax pmax
comp=Z,11nm,1.0s,mb4.5
ULN Ulaanbaatar 43.82 321 *e*P **P** **05 20 43.4 -0.1**
comp=Z,11nm,1.0s,mb4.5
SONM Songino Array 44.20 321 P **P** **05 20 47.0 +0.5**
comp=Z,3.6nm,0.6s,mb4.3,baz=140,slow=9.4,SNR=8.4
YAK Yakutsk 45.30 349 *e*P pP 05 21 09.3 +0.6
YAK pmax pmax
comp=Z,21nm,0.9s,mb5.0
CMAR Chiang Mai Arr 45.50 278 P **P** **05 20 57.8 +0.4**
comp=Z,1.4nm,0.3s,mb4.3,baz=71,slow=7.0,SNR=13
GTA Gaotai 45.75 307 *e*P **P** **05 20 59.6 +0.6**
GTA AP pP 05 21 12.3 -0.3
GTA XP sP 05 21 17.2 -1.4
GTA PCP PcP 05 22 37.8 +1.7
GTA PP PP 05 22 46.9 0.0
GTA SCP ScP 05 26 27.6 +2.7
GTA S **S** **05 27 38.4 -0.5**
GTA XS sS 05 27 59.8 -2.0
GTA SS SS 05 30 56.1 -7.7
GTA AMB AMB
comp=Z,3.0nm,1.1s,mb4.1
GTA AMB AMB
comp=Z,109nm,7.2s
GTA LR LR
comp=N,192nm,15.0s,MS4.2
GTA LR LR
comp=E,144nm,17.1s,MS4.2
GTA LR LR
comp=Z,198nm,17.4s,MS4.1
BOD Bodaibo 46.33 336 *e*P **P** **05 21 03.0 -0.2**
ZAK Zakamensk 47.18 323 *e*P **P** **05 21 09.8 -0.2**
ZAK pmax pmax
comp=Z,16nm,1.2s,mb4.8
MBWA Marble Bar 47.50 215 *e*P **P** **05 21 11.7 -1.1**
comp=Z,23nm,1.3s,mb5.0
TLY Talaya 47.57 325 *e*P **P** **05 21 12.8 -0.2**
TLY *e* 05 30 54.5
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TLY MLR MLR
comp=Z,208nm,25.0s,MS4.0
TLY Talaya 47.57 325 *e*P **P** **05 21 13.0 0.0**
comp=Z,3.4nm,0.6s,mb4.5
STKA Stephens Creek 50.21 186 *e*P **P** **05 21 33.6 +0.2**
comp=Z,2.5nm,0.6s,mb4.4
STKA Stephens Creek 50.21 186 P **P** **05 21 33.1 -0.3**
comp=Z,1.9nm,0.8s,mb4.2,baz=338,slow=7.5,SNR=5.8
BILL Bilibino 51.16 9 *e*P **P** **05 21 39.7 -0.4**
BILL pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
LSA Lhasa 51.83 294 *e*P **P** **05 21 47.2 +1.4**
LSA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LSA Lhasa 51.83 294 *e*P **P** **05 21 47.2 +1.4**
comp=Z,8.4nm,0.8s,mb4.7
WMQ Urumqi 55.48 311 P **P** **05 22 13.0 +0.7**
WMQ XP sP 05 22 25.5 -6.6
WMQ AP pP 05 22 30.0 +3.7
WMQ PP PP 05 24 20.0 +3.5
WMQ S **S** **05 29 53.0 -0.7**
WMQ XS sS 05 30 14.0 -3.1
WMQ SS SS 05 33 37.0 -1.9
WMQ AMB AMB
comp=Z,15nm,0.9s,mb5.0
WMQ AMB AMB
comp=Z,176nm,4.4s
WMQ LR LR
comp=N,937nm,33.0s
WMQ LR LR
comp=E,620nm,27.4s
WMQ LR LR
comp=Z,706nm,29.2s,MS4.6
RAO Raoul Island 58.18 144 LR LR 05 41 51.8
comp=Z,708nm,21.3s,MS4.8,baz=54,slow=30
KDAK Kodiak Island 58.97 33 P **P** **05 22 36.0 -0.6**
comp=Z,2.7nm,0.4s,mb4.6,baz=214,slow=5.4,SNR=4.3
ZAA0 Zalesovo Array 59.05 322 *e*P **P** **05 22 36.1 -1.1**
ZALV Zalesovo Beam 59.05 322 P **P** **05 22 37.0 -0.2**
comp=Z,9.4nm,0.6s,mb5.0,baz=105,slow=6.5,SNR=33
ZAL Zalesovo 59.06 322 P **P** **05 22 37.1 -0.3**
MK31 Makanchi Array 59.60 314 *i* P **P** **05 22 41.6 +0.4**
MK31 pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
MKAR Makanchi Array 59.60 314 P **P** **05 22 41.2 0.0**
comp=Z,4.2nm,0.6s,mb4.7,baz=91,slow=9.0,SNR=37
MKAR ScP ScP 05 27 24.9 +0.2
comp=Z,0.2nm,0.2s,baz=106,slow=5.1,SNR=3.5
NVS Novosibirsk 60.13 323 *i* P **P** **05 22 44.1 -0.6**
IMA2 Indian Mountai 61.09 24 *e*P **P** **05 22 51.2 +0.2**
KTH Kantishna Hill 61.38 27 *e*P **P** **05 22 52.3 -0.7**
comp=Z,18nm,1.0s,mb5.2
PMR Palmer 61.64 29 *e*P **P** **05 23 00.1 +5.3**
PMR pmax pmax
comp=Z,16nm,1.3s,mb5.0
PMR Palmer 61.64 29 *e*P **P** **05 23 00.1 +5.2**
comp=Z,16nm,1.3s,mb5.0
KURK Kurchatov 62.36 318 P **P** **05 22 59.7 -0.2**
comp=Z,7.3nm,0.6s,mb5.0,baz=96,slow=7.3,SNR=32
KURK LR LR 05 52 13.3
comp=Z,263nm,18.6s,MS4.4,baz=105,slow=38
KURK Kurchatov 62.36 318 *e*P **P** **05 22 58.9 -1.0**
KURK pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
KURK Kurchatov 62.36 318 *e*P **P** **05 22 58.9 -1.0**
comp=Z,10nm,0.9s,mb5.0
URZ Urewera 63.00 154 LR LR 05 48 24.0
comp=Z,245nm,18.2s,MS4.4,baz=206,slow=34
TKM2 Tokmak 2 64.24 309 *e*P **P** **05 23 12.8 +0.4**
TKM2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
TKM2 Tokmak 2 64.24 309 *e*P **P** **05 23 12.8 +0.3**
comp=Z,2.1nm,0.6s,mb4.3
UCH Uchtor 65.06 309 *e*P **P** **05 23 19.1 +1.3**
comp=Z,5.4nm,1.0s,mb4.5
EKS2 Erkin-Say 65.59 309 P **P** **05 23 20.5 -0.7**
comp=Z,3.2nm,0.9s,mb4.3
AML Almayashu 65.68 309 *e*P **P** **05 23 23.1 +1.3**
comp=Z,4.3nm,0.9s,mb4.5
EGAK Eagle 65.82 27 *e*P **P** **05 23 20.4 -1.9**
comp=Z,4.0nm,0.9s,mb4.5
DAWY Dawson 66.48 27 *e*P **P** **05 23 26.2 -0.4**
HYT Haines Junctio 67.08 31 *e*P **P** **05 23 33.8 +3.4**
BVAR Borovoye Array 67.54 321 P **P** **05 23 33.4 0.0**
comp=Z,8.6nm,0.5s,mb5.0,baz=94,slow=7.7,SNR=38
BRVK Borovoye 67.60 321 *e*P **P** **05 23 33.6 -0.3**
BRVK pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
BRVK Borovoye 67.60 321 *e*P **P** **05 23 33.6 -0.2**
comp=Z,6.8nm,0.6s,mb4.8
KK31 Karatay Array 67.95 310 *i* P **P** **05 23 36.4 +0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KBL Kabul 70.12 301 P **P** **05 23 49.1 -0.8**
KBL pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KBL Kabul 70.12 301 P **P** **05 23 49.1 -0.8**
comp=Z,5.4nm,0.8s,mb4.5
ARU Arti 74.07 325 *c i* P **P** **05 24 12.7 -0.4**
ARU *e* 05 27 06.4
ARU *e*PPP 05 28 45.4
ARU pmax pmax
comp=Z,18nm,1.2s,mb4.9
ARU Arti 74.07 325 *e*P **P** **05 24 12.6 -0.4**
comp=Z,12nm,0.8s,mb4.9
AB31 Akbulak array 74.44 317 *i* P **P** **05 24 14.6 -0.8**
AB31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
AKTK Aktyubinsk 75.45 319 P **P** **05 24 20.5 -0.7**
AKTO Aktyubinsk 75.45 319 P **P** **05 24 20.5 -0.7**
comp=Z,1.8nm,0.5s,mb4.3,baz=66,slow=9.3,SNR=4.2
AKTO Aktyubinsk 75.45 319 P **P** **05 24 21.5 +0.3**
AKTO pmax pmax
comp=Z,1.0nm,0.9s,mb3.8
HDW Hoodsport 76.62 44 P **P** **05 24 28.9 +1.0**
CMW Cultus Mountai 77.07 43 P **P** **05 24 30.8 +0.4**
B05A Bryant 77.12 43 ⇓P **P** **05 24 30.9 +0.2**
baz=77
JCW Jim Creek 77.24 43 P **P** **05 24 32.0 +0.6**
A06A Chilliwack 77.32 42 ⇓P **P** **05 24 31.8 0.0**
baz=77
D05A Enumclaw 77.43 44 ⇓P **P** **05 24 32.8 +0.3**
baz=77
F04A Amboy 77.43 46 ⇑P **P** **05 24 32.7 +0.2**
baz=77
TDL Tradedollar La 77.47 45 P **P** **05 24 33.4 +0.7**
C05A Tolt Reservoir 77.51 44 ⇓P **P** **05 24 33.2 +0.3**
baz=77
YKA Yellowknife Ar 77.71 28 P **P** **05 24 33.1 -0.6**
comp=Z,3.7nm,0.7s,mb4.4,baz=290,slow=5.3,SNR=5.6
O01C Eel River Cons 77.79 52 ⇓P **P** **05 24 35.1 +0.5**
baz=78
HUMO Hull Mountain 77.84 49 ⇑P **P** **05 24 35.1 +0.3**
baz=78
H04A Detroit Lake 77.89 47 ⇑P **P** **05 24 35.2 +0.2**
baz=78
I04A Tendick Farm, 77.94 48 ⇓P **P** **05 24 35.5 +0.2**
baz=78
A07A Ashnola River, 78.04 42 ⇑P **P** **05 24 35.9 +0.1**
baz=78,SNR=6.8
D06A Cle Elum 78.19 44 ⇑P **P** **05 24 36.8 +0.1**
baz=78
M02C Callahan 78.20 50 ⇑P **P** **05 24 37.3 +0.4**
baz=78
YBH Yreka Blue Hor 78.22 50 ⇑P **P** **05 24 37.2 +0.2**
baz=78
E06A Yakima 78.26 45 ⇑P **P** **05 24 37.0 -0.1**
baz=78
B07A Winthrop 78.35 43 ⇑P **P** **05 24 37.5 0.0**
baz=78
ETW Entiat 78.43 44 P **P** **05 24 38.1 +0.2**
EBG Ellensburg 78.44 44 P **P** **05 24 38.5 +0.4**
C07A Waterville 78.58 44 ⇓P **P** **05 24 39.0 +0.2**
baz=78
M03C McCloud 78.76 50 ⇑P **P** **05 24 40.2 +0.2**
baz=79
D07A Quincy 78.77 44 ⇑P **P** **05 24 39.7 -0.2**
baz=79
A08A Turner Farm, O 78.77 42 ⇑P **P** **05 24 40.1 +0.3**
baz=79,SNR=6.3
G06A Carlson Farm, 78.82 46 ⇓P **P** **05 24 39.9 -0.2**
baz=79
B08A Colville Reser 78.88 43 ⇓P **P** **05 24 40.2 -0.3**
baz=79,SNR=7.8
J05A Fort Rock 78.89 48 ⇓P **P** **05 24 40.6 -0.1**
baz=79,SNR=6.2
E07A Sunnyside 79.01 45 ⇑P **P** **05 24 41.3 +0.1**
baz=79
VIPM Ingram Point 79.02 47 P **P** **05 24 41.2 -0.1**
MDW Midway 79.06 45 P **P** **05 24 41.7 +0.2**
MNRC McLaughlin Nat 79.13 53 ⇓P **P** **05 24 42.2 +0.1**
baz=79
H06A Linquist Farm 79.15 46 ⇑P **P** **05 24 42.0 -0.1**
baz=79
A09A Danville 79.20 42 ⇓P **P** **05 24 42.2 0.0**
baz=79
C08A Higginbotham F 79.22 43 ⇑P **P** **05 24 42.4 +0.1**
baz=79
RSW Rattlesnake Hi 79.23 45 *e*P **P** **05 24 41.9 -0.5**
K05A Summer Lake 79.28 49 ⇑P **P** **05 24 43.3 +0.6**
baz=79
REDWA Red Mountain 79.35 45 P **P** **05 24 43.4 +0.3**
I06A Prineville 79.44 47 ⇑P **P** **05 24 43.7 +0.1**
baz=79
G07A Ruggs Ranch, H 79.47 46 ⇓P **P** **05 24 43.4 -0.3**
baz=79
D08A Wollman Farm, 79.50 44 ⇓P **P** **05 24 43.6 -0.3**
baz=79
OD2 Odessa Site #2 79.54 44 P **P** **05 24 43.9 -0.2**
B09A Rice 79.63 42 ⇑P **P** **05 24 44.3 -0.2**
baz=80,SNR=6.6
ORV Oroville 79.66 52 ⇑P **P** **05 24 44.5 -0.4**
baz=80
J06A Christmas Vall 79.67 48 ⇓P **P** **05 24 44.4 -0.4**
baz=80
C09A Chrisman Ranch 79.72 43 ⇓P **P** **05 24 45.1 +0.1**
baz=80
K06A Valley Falls 79.72 48 ⇓P **P** **05 24 45.3 +0.2**
baz=80
O04C Chester 79.77 51 ⇑P **P** **05 24 45.7 +0.2**
baz=80
A10A Northport 79.85 42 ⇑P **P** **05 24 45.9 +0.1**
baz=80,SNR=6.1
D09A Jones Farm, Ri 79.90 44 ⇓P **P** **05 24 45.9 -0.2**
baz=80
I07A Izee 79.90 47 ⇑P **P** **05 24 45.9 -0.2**
baz=80
MOD Modoc 79.92 49 ⇓P **P** **05 24 46.3 +0.1**
baz=80
F08A Pendleton 79.93 45 ⇓P **P** **05 24 46.4 +0.2**
baz=80,SNR=6.7
G08A Pilot Rock 79.95 46 ⇓P **P** **05 24 46.4 +0.1**
baz=80
M06C Likely Place G 79.98 50 ⇑P **P** **05 24 46.9 +0.3**
baz=80
E09A Wood Farm, Sta 80.16 44 ⇓P **P** **05 24 47.4 0.0**
baz=80,SNR=6.8
J07A Hines 80.23 48 ⇓P **P** **05 24 48.1 +0.2**
baz=80
NEW Newport 80.33 42 *e*P **P** **05 24 47.8 -0.5**
NEW pmax pmax
comp=Z,9.0nm,1.0s
NEW Newport 80.33 42 *e*P **P** **05 24 47.8 -0.5**
comp=Z,9.2nm,1.0s,mb4.7
H08A Prairie City 80.36 46 ⇓P **P** **05 24 48.1 -0.4**
baz=80
P05C Yuba Gap, Truc 80.40 52 ⇓P **P** **05 24 48.8 -0.1**
baz=80
BEKR Beckwourth 80.43 51 ⇑P **P** **05 24 48.9 -0.1**
baz=80,SNR=5.8
LAVA Lava Cap Winer 80.44 52 ⇓P **P** **05 24 48.9 -0.2**
baz=80
K07A Rock Creek Ran 80.46 48 ⇑P **P** **05 24 49.1 -0.1**
baz=80,SNR=8.5
N06A Buffalo Meadow 80.57 50 ⇑P **P** **05 24 50.0 +0.2**
baz=80
D10A Wagner Farm, O 80.58 44 ⇓P **P** **05 24 49.7 0.0**
baz=80
L07A Adell 80.58 49 ⇓P **P** **05 24 50.1 +0.3**
baz=80,SNR=11
I08A Drewsey 80.59 47 ⇑P **P** **05 24 49.9 +0.1**
baz=80
A11A Hall Mountain, 80.61 42 ⇓P **P** **05 24 50.2 +0.4**
baz=80
O06A Flanigan 80.74 51 ⇓P **P** **05 24 50.3 -0.4**
baz=81
G09A Cove 80.75 45 ⇑P **P** **05 24 50.7 +0.1**
baz=81
B11A Sandpoint 80.76 42 ⇓P **P** **05 24 50.8 +0.1**
baz=81
J08A Circle Bar Ran 80.82 47 ⇑P **P** **05 24 51.0 -0.1**
baz=81,SNR=7.2
E10A Myers Farm, Un 80.85 44 ⇓P **P** **05 24 51.1 0.0**
baz=81
M07A Soldier Meadow 80.88 50 ⇓P **P** **05 24 51.2 -0.2**
baz=81,SNR=5.2
CMB Columbia Colle 80.91 53 *e*P **P** **05 24 51.5 -0.2**
CMB pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
CMB Columbia Colle 80.91 53 ⇑P **P** **05 24 51.6 -0.1**
baz=81
CMB Columbia Colle 80.91 53 *e*P **P** **05 24 51.5 -0.2**
comp=Z,9.6nm,1.2s,mb4.6
F10A Beach Ranch, E 80.92 45 ⇑P **P** **05 24 51.5 0.0**
baz=81
WVOR Wild Horse Val 80.96 48 *e*P **P** **05 24 51.2 -0.7**
WVOR pmax pmax
comp=Z,16nm,1.4s,mb4.8
WVOR Wild Horse Val 80.96 48 *e*P **P** **05 24 51.2 -0.7**
comp=Z,16nm,1.4s,mb4.8
K08A Mann Creek Ran 80.99 48 ⇑P **P** **05 24 51.9 -0.1**
baz=81,SNR=14
C11A Tepee Creek (N 81.01 43 ⇑P **P** **05 24 51.9 -0.1**
baz=81
WCN Washoe City 81.03 52 ⇑P **P** **05 24 52.7 +0.4**
baz=81
A12A Yaak River Ran 81.07 41 ⇑P **P** **05 24 52.7 +0.4**
baz=81
U04C Hernandez Rese 81.07 55 ⇑P **P** **05 24 52.9 +0.4**
baz=81
EDM Edmonton 81.12 37 *e*P **P** **05 24 51.8 -0.6**
I09A Lost Marbles R 81.15 47 ⇑P **P** **05 24 52.5 -0.3**
baz=81
G10A Bishop Farm, J 81.19 45 ⇓P **P** **05 24 52.7 -0.3**
baz=81,SNR=6.0
D11A Klaveano Farm, 81.19 43 ⇑P **P** **05 24 52.5 -0.5**
baz=81
BMO Blue Mountains 81.19 46 *e*P **P** **05 24 52.1 -0.9**
BMO pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
BMO Blue Mountains 81.19 46 *e*P **P** **05 24 52.1 -0.9**
comp=Z,7.6nm,1.1s,mb4.5
L08A Fields 81.24 49 ⇓P **P** **05 24 53.7 +0.3**
baz=81,SNR=9.3
J09A Fry Pan Ranch, 81.32 47 ⇓P **P** **05 24 53.6 -0.2**
baz=81,SNR=8.5
PKD Parkfield 81.37 55 ⇑P **P** **05 24 54.0 -0.1**
baz=81
M08A Happy Creek Ra 81.43 49 ⇑P **P** **05 24 54.6 +0.2**
baz=81
O07A Toulon 81.44 51 ⇑P **P** **05 24 54.4 0.0**
baz=81
R06C Coleville 81.48 52 ⇓P **P** **05 24 54.3 -0.4**
baz=81
E11A Bogner Ranch, 81.48 44 ⇓P **P** **05 24 53.9 -0.6**
baz=81,SNR=6.0
K09A Rome 81.53 48 ⇓P **P** **05 24 54.9 +0.1**
baz=81,SNR=5.9
H10A Noah's Angus R 81.65 46 ⇓P **P** **05 24 54.9 -0.5**
baz=82,SNR=5.9
F11A Grangeville 81.66 45 ⇑P **P** **05 24 55.1 -0.4**
baz=82
T06C Millerton Lake 81.72 54 ⇑P **P** **05 24 55.5 -0.4**
baz=82,SNR=8.3
G11A Walters Elk Ra 81.73 45 ⇑P **P** **05 24 55.5 -0.4**
baz=82,SNR=10
N08A GE Springer Mi 81.80 50 ⇓P **P** **05 24 56.5 +0.2**
baz=82
D12A Red Ives Fores 81.83 43 ⇓P **P** **05 24 56.0 -0.4**
baz=82
A13A Flathead Natio 81.84 41 ⇑P **P** **05 24 55.9 -0.4**
baz=82
E12A Beaver Dam Sad 81.89 44 ⇑P **P** **05 24 56.9 +0.2**
baz=82
R07C Lee Vining 81.91 53 ⇓P **P** **05 24 57.1 +0.2**
baz=82
KCC Kaiser Creek 81.92 53 ⇓P **P** **05 24 56.5 -0.5**
baz=82
O08A Rochester Mine 81.93 50 ⇑P **P** **05 24 57.1 +0.1**
baz=82,SNR=6.6
B13A Whitefish 81.99 42 ⇑P **P** **05 24 56.9 -0.2**
baz=82
M09A Marrel Ranch, 82.11 49 ⇓P **P** **05 24 58.1 +0.2**
baz=82
K10A MacKenzie Ranc 82.11 48 ⇓P **P** **05 24 57.9 0.0**
baz=82,SNR=9.1
H11A Donnelly 82.12 46 ⇓P **P** **05 24 57.5 -0.4**
baz=82
C13A Hot Springs 82.14 42 ⇑P **P** **05 24 57.8 -0.1**
baz=82,SNR=8.5
N09A Rock Creek Ran 82.22 50 ⇓P **P** **05 24 58.5 0.0**
baz=82,SNR=6.3
PKM Peak Mountain 82.24 56 ⇓P **P** **05 24 59.0 +0.2**
baz=82,SNR=5.1
RCTC Rector, Farmer 82.28 54 ⇑P **P** **05 24 58.6 -0.3**
baz=82
F12A Elk City 82.30 44 ⇓P **P** **05 24 58.8 0.0**
baz=82
NVAR Mina Array Bea 82.37 52 P **P** **05 24 59.6 +0.3**
comp=Z,4.4nm,0.8s,mb4.5,baz=260,slow=7.4,SNR=32
I11A Placerville 82.40 46 ⇑P **P** **05 24 59.2 -0.2**
baz=82
D13A Huson 82.40 43 ⇑P **P** **05 24 59.6 +0.3**
baz=82
Q08A Gabbs 82.52 52 ⇓P **P** **05 24 59.8 -0.3**
baz=82,SNR=6.0
VES Vestal, Richgr 82.54 55 ⇑P **P** **05 24 59.5 -0.7**
baz=82
L10A Juniper Basin 82.61 48 ⇑P **P** **05 24 59.9 -0.6**
baz=82,SNR=6.8
C14A Swan Lake 82.64 42 ⇓P **P** **05 25 00.5 -0.1**
baz=82
MFID Camas Ranch 82.64 47 ⇑P **P** **05 25 00.8 +0.1**
baz=82
KEV Kevo 82.65 342 *ep* **P** **05 25 00.2 0.0**
O09A Fish Creek Ran 82.67 50 ⇑P **P** **05 25 00.5 -0.4**
baz=82
K11A Parker Ranch, 82.70 47 ⇓P **P** **05 25 00.6 -0.4**
baz=83,SNR=7.2
S08C White Mtn Res 82.75 53 ⇑P **P** **05 25 01.8 +0.5**
baz=83
E13A Victor 82.78 44 ⇓P **P** **05 25 01.5 +0.1**
baz=83
P09A Austin 82.90 51 ⇓P **P** **05 25 01.8 -0.2**
baz=83
F13A Darby 82.90 44 ⇑P **P** **05 25 01.3 -0.6**
baz=83,SNR=9.6
H12A Diamond D Ranc 82.95 45 ⇑P **P** **05 25 01.5 -0.8**
baz=83
ISA Isabella 83.06 55 ⇓P **P** **05 25 03.0 0.0**
baz=83
L11A Cat Creek Ranc 83.08 48 ⇓P **P** **05 25 02.7 -0.3**
baz=83,SNR=6.4
J12A Stokes Ranch, 83.20 47 ⇓P **P** **05 25 03.4 -0.1**
baz=83
ARCES ARCESS Array B 83.20 342 P **P** **05 25 04.6 +1.6**
comp=Z,2.9nm,0.7s,mb4.4,baz=71,slow=7.8,SNR=12
M11A Holland Ranch, 83.29 49 ⇑P **P** **05 25 03.8 -0.3**
baz=83

R09A **Tonopah** 83.35 52 ⇓P P 05 25 04.5 +0.1
baz=83,SNR=7.0
H13A **Challis** 83.35 45 ⇑P P 05 25 04.2 -0.1
baz=83
P10A **Eureka** 83.37 51 ⇓P P 05 25 04.8 +0.3
baz=83
S09A **Goldfield** 83.39 53 ⇓P P 05 25 04.2 -0.4
baz=83,SNR=5.4
N11A **Elko Archery C** 83.52 49 ⇓P P 05 25 05.7 +0.4
baz=83
K12A **Draper Farm, C** 83.53 47 ⇓P P 05 25 05.1 -0.1
baz=83,SNR=6.0
HLID **Hailey** 83.57 46 ⇓P P 05 25 05.4 0.0
baz=83,SNR=5.2
L12A **House Creek Ra** 83.61 48 ⇓P P 05 25 05.9 +0.2
baz=84,SNR=8.6
I13A **Wildhorse Cree** 83.66 46 ⇑P P 05 25 06.1 +0.2
baz=84
D15A **Lincoln** 83.67 43 ⇑P P 05 25 06.0 +0.2
baz=84
Q10A **Clear Creek Ra** 83.67 51 ⇑P P 05 25 06.4 +0.3
baz=84
EDW2 **Edwards Air Fo** 83.68 55 ⇑P P 05 25 06.4 +0.2
baz=84
MPMC **Manual Prospec** 83.70 54 ⇓P P 05 25 06.1 -0.2
baz=84,SNR=7.6
J13A **Cove Ranch, Pi** 83.79 46 ⇑P P 05 25 06.5 -0.1
baz=84
O11A **Cowboy Ranch,** 83.80 50 ⇓P P 05 25 06.7 0.0
baz=84
E15A **Deer Lodge** 83.80 43 ⇓P P 05 25 06.6 0.0
baz=84
S10A **Tonopah Range,** 83.81 52 ⇓P P 05 25 06.9 +0.1
baz=84,SNR=11
ELK **Elko** 83.91 49 *e*P P 05 25 06.8 -0.4
ELK pmax pmax
comp=Z,9.0nm,1.0s
ELK **Elko** 83.91 49 *e*P P 05 25 06.8 -0.4
comp=Z,9.3nm,1.0s,mb4.9
R10A **Warm Springs** 83.91 52 ⇓P P 05 25 07.4 +0.1
baz=84,SNR=6.3
M12A **Wells** 83.92 48 ⇓P P 05 25 07.2 -0.1
baz=84,SNR=6.1
H14A **Leadore** 83.93 45 ⇑P P 05 25 07.2 -0.1
baz=84,SNR=8.4
N12A **Clover Valley,** 84.01 49 ⇑P P 05 25 07.7 -0.1
baz=84
FURC **Furnace Creek,** 84.06 54 ⇑P P 05 25 08.0 -0.1
baz=84
F15A **Butte** 84.10 44 ⇓P P 05 25 08.0 -0.1
baz=84
K13A **Stover Farm, H** 84.10 47 ⇓P P 05 25 08.4 +0.3
baz=84
I14A **Mackay** 84.11 46 ⇑P P 05 25 08.3 +0.1
baz=84,SNR=6.0
MCMT **McKenzie Canyo** 84.21 45 *e*P P 05 25 08.6 -0.1
Q11A **Duckwater** 84.21 51 ⇑P P 05 25 08.8 -0.1
baz=84
J14A **Carey** 84.27 46 ⇑P P 05 25 09.5 +0.5
baz=84,SNR=8.7
G15A **Dillon** 84.33 44 ⇑P P 05 25 09.5 +0.2
baz=84
TPNV **Topopah Spring** 84.37 53 *e*P P 05 25 08.8 -0.9
TPNV pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
TPNV **Topopah Spring** 84.37 53 ⇓P P 05 25 09.4 -0.3
baz=84
TPNV **Topopah Spring** 84.37 53 *e*P P 05 25 08.8 -0.9
comp=Z,3.5nm,0.9s,mb4.5
L13A **Double Diamond** 84.38 48 ⇓P P 05 25 09.8 +0.1
baz=84,SNR=6.1
O12A **Currie** 84.42 50 ⇑P P 05 25 09.7 -0.1
baz=84,SNR=7.5
H15A **Lima** 84.42 45 ⇑P P 05 25 09.7 -0.1
baz=84
R11A **Troy Canyon, C** 84.42 52 ⇓P P 05 25 09.6 -0.3
baz=84,SNR=6.3
GSC **Goldstone** 84.47 55 ⇑P P 05 25 10.0 -0.2
baz=84
M13A **Montello** 84.47 48 ⇑P P 05 25 10.1 0.0
baz=84
U10A **Ash Meadows, A** 84.48 54 ⇑P P 05 25 10.3 0.0
baz=84
S11A **Rachel** 84.53 52 ⇑P P 05 25 10.7 +0.2
baz=84
P12A **McGill** 84.56 50 ⇑P P 05 25 10.6 +0.1
baz=84
SHOC **Shoshone** 84.68 54 ⇑P P 05 25 11.3 +0.1
baz=85
BOZ **Bozeman (W)** 84.73 44 *e*P P 05 25 10.9 -0.4
BOZ pmax pmax
comp=Z,6.0nm,1.3s,mb4.6
BOZ **Bozeman (W)** 84.73 44 ⇓P P 05 25 11.0 -0.3
baz=85
BOZ **Bozeman (W)** 84.73 44 *e*P P 05 25 10.9 -0.4
comp=Z,5.9nm,1.3s,mb4.6
Q12A **Willow Creek R** 84.76 51 ⇑P P 05 25 11.4 -0.2
baz=85
K14A **Jones Ranch, D** 84.77 47 ⇑P P 05 25 11.4 -0.1
baz=85
JOF **Joensuu** 84.86 336 *e*p P 05 25 10.5 -1.1
comp=Z,7.8nm,0.6s,mb5.0
L14A **Malta** 84.89 47 ⇑P P 05 25 12.6 +0.4
baz=85,SNR=5.3
J15A **Blackfoot** 84.98 46 ⇑P P 05 25 13.3 +0.7
baz=85,SNR=12
HEC **Hector,Ludlow** 84.99 55 ⇓P P 05 25 13.2 +0.3
baz=85
M14A **Sheep Mountain** 85.00 48 ⇑P P 05 25 13.2 +0.4
baz=85,SNR=6.9
T11A **Corn Creek, Al** 85.06 53 ⇑P P 05 25 13.1 0.0
baz=85
EGMT **Eagleton** 85.07 41 ⇓P P 05 25 12.2 -0.7
baz=85
TUQ **Turquoise Moun** 85.11 54 ⇑P P 05 25 13.1 -0.3
baz=85
QLMT **Earthquake Lak** 85.15 44 *e*P P 05 25 13.8 +0.3
R12A **Pony Springs,** 85.16 51 ⇓P P 05 25 13.4 -0.2
baz=85,SNR=6.4
K15A **Arbon** 85.16 47 ⇑P P 05 25 13.8 +0.3
baz=85
P13A **Bates Ranch, G** 85.22 50 ⇑P P 05 25 13.7 -0.2
baz=85,SNR=7.3
S12A **Delamar Landin** 85.22 52 ⇓P P 05 25 14.2 +0.2
baz=85
H16A **Russell Place,** 85.32 44 ⇓P P 05 25 14.8 +0.6
baz=85
N14A **Grayback Hills** 85.34 49 ⇑P P 05 25 14.4 -0.1
baz=85
V11A **Goodsprings** 85.36 54 ⇑P P 05 25 14.5 -0.2
baz=85
Q13A **Wheeler Ranch,** 85.38 51 ⇓P P 05 25 14.9 +0.2
baz=85
I16A **Newdale** 85.46 45 ⇓P P 05 25 15.5 +0.6
baz=85
L15A **Malad City** 85.50 47 ⇑P P 05 25 15.2 -0.1
baz=85
BELC **Belle Mtn.** 85.52 56 ⇓P P 05 25 14.7 -0.8
baz=85
YMR **Madison River** 85.52 44 *e*P P 05 25 16.2 +0.9
comp=Z,6.4nm,0.9s,mb4.8
MONP **Monument Peak** 85.54 57 ⇓P P 05 25 15.5 -0.2
baz=85
J16A **Bone** 85.59 46 ⇓P P 05 25 15.8 +0.2
baz=85,SNR=6.6
M15A **Larsen Ranch,** 85.65 48 ⇑P P 05 25 15.5 -0.4
baz=86
R13A **O'Grain Ranch,** 85.68 51 ⇑P P 05 25 16.6 +0.4
baz=86
RRI2 **Red Ridge** 85.76 46 *e*P P 05 25 16.3 -0.2
comp=Z,10nm,1.2s,mb4.9
K16A **Soda Springs** 85.76 46 ⇑P P 05 25 16.9 +0.4
baz=86
N15A **Stansbury Isla** 85.80 48 ⇓P P 05 25 16.7 -0.1
baz=86
IMW **Indian Meadow** 85.82 45 *e*P P 05 25 17.5 +0.7
comp=Z,9.9nm,0.7s,mb4.8
DUG **Dugway** 85.83 49 *e*P P 05 25 16.7 -0.2
DUG pmax pmax
comp=Z,10.0nm,1.3s,mb4.9
DUG **Dugway** 85.83 49 ⇑P P 05 25 16.7 -0.2
baz=86
DUG **Dugway** 85.83 49 *e*P P 05 25 16.7 -0.2
comp=Z,10nm,1.3s,mb4.9
V12A **Nelson** 85.84 54 ⇑P P 05 25 17.0 -0.1
baz=86
P14A **Drum Mountains** 85.86 50 ⇑P P 05 25 17.0 0.0
baz=86,SNR=6.2
FLWY **Flagg Ranch** 85.91 45 *e*P P 05 25 17.8 +0.5
comp=Z,7.8nm,0.7s,mb5.0
Q14A **Sevier Lake (B** 85.91 50 ⇓P P 05 25 17.2 -0.2
baz=86,SNR=8.7
TPAW **Teton Pass** 85.96 46 *e*P P 05 25 17.2 -0.3
comp=Z,11nm,1.5s,mb4.9
S13A **Holt Ranch, En** 85.97 52 ⇑P P 05 25 17.3 -0.4
baz=86
T13A **Saint George** 86.12 52 ⇓P P 05 25 18.6 +0.1
baz=86,SNR=5.2
IRM **Iron Mountain** 86.13 55 ⇓P P 05 25 18.4 -0.1
baz=86
L16A **Fish Haven** 86.16 47 ⇑P P 05 25 18.3 -0.2
baz=86,SNR=5.9
OBN **Obninsk** 86.25 327 *e*P P 05 25 15.9 -2.7
OBN pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
U13A **Pakoon Wash** 86.28 53 ⇑P P 05 25 19.2 -0.1
baz=86,SNR=6.1
V13A **Grand Canyon W** 86.46 54 ⇑P P 05 25 19.6 -0.5
baz=86
RLMT **Red Lodge** 86.47 44 *e*P P 05 25 20.7 +0.7
comp=Z,4.5nm,0.7s,mb4.8
Q15A **Fillmore** 86.56 50 ⇑P P 05 25 20.5 0.0
baz=86
N16A **Rees Ranch, Co** 86.57 48 ⇑P P 05 25 20.5 0.0
baz=86
JLU **Jordanelle** 86.66 48 *e*P P 05 25 21.0 0.0
FFC **Flin Flon** 86.71 33 *e*P P 05 25 20.1 -0.8
FFC pmax pmax
comp=Z,13nm,0.8s,mb5.2
FFC **Flin Flon** 86.71 33 *e*P P 05 25 20.1 -0.9
comp=Z,13nm,0.8s,mb5.2
O16A **Springville** 86.77 49 ⇓P P 05 25 21.4 -0.2
baz=87
W13A **Hualapai Mount** 86.79 54 ⇑P P 05 25 22.1 +0.4
baz=86
DAU **Daniels Canyon** 86.87 48 *e*P P 05 25 22.1 +0.1
U14A **Mt Trumbull** 86.88 53 ⇑P P 05 25 22.4 +0.3
baz=87,SNR=6.5
MSU **Marysvale** 86.89 51 *e*P P 05 25 22.4 +0.3
N17A **Moffit Pass** 86.97 48 ⇑P P 05 25 22.5 0.0
baz=87
X13A **Yucca** 87.01 55 ⇓P P 05 25 22.3 -0.5
baz=87
PDAR **Pinedale Array** 87.17 46 P P 05 25 23.0 -0.4
comp=Z,1.0nm,0.6s,mb4.2,baz=246,slow=2.9,SNR=9.8
V14A **Boquillas Ranc** 87.21 53 ⇓P P 05 25 24.0 +0.2
baz=87,SNR=8.5
T15A **Red Dirt Ranch** 87.27 52 ⇑P P 05 25 23.9 -0.1
baz=87
O17A **Robinson Place** 87.32 49 ⇓P P 05 25 24.1 -0.1
baz=87,SNR=6.1
W14A **Seligman** 87.37 54 ⇓P P 05 25 24.7 +0.1
baz=87
Q16A **Castle Valley** 87.47 50 ⇓P P 05 25 25.1 +0.1
baz=87
R16A **Teasdale** 87.48 51 ⇑P P 05 25 25.4 +0.4
baz=87,SNR=7.8
U15A **North Rim** 87.54 52 ⇓P P 05 25 25.6 +0.2
baz=87,SNR=8.1
S16A **Weppner Ranch,** 87.60 51 ⇑P P 05 25 25.5 -0.1
baz=88,SNR=7.1
N18A **Larsen Ranch,** 87.78 48 ⇑P P 05 25 26.0 -0.4
baz=88
X14A **Yava** 87.78 54 ⇓P P 05 25 26.5 -0.1
baz=88,SNR=6.8
O18A **Roosevelt** 87.81 48 ⇓P P 05 25 26.7 +0.2
baz=88
V15A **Kaibab Nationa** 87.85 53 ⇓P P 05 25 27.2 +0.4
baz=88,SNR=6.8
SRU **San Rafael** 87.87 49 *e*P P 05 25 26.2 -0.7
SRU pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
SRU **San Rafael** 87.87 49 ⇓P P 05 25 26.8 -0.1
baz=88
SRU **San Rafael** 87.87 49 *e*P P 05 25 26.2 -0.7
comp=Z,3.1nm,0.7s,mb4.7
Y14A **Wickenburg** 87.88 55 ⇓P P 05 25 26.8 -0.2
baz=88
T16A **Glen Canyon Da** 87.93 52 ⇑P P 05 25 26.6 -0.6
baz=88
R17A **Hanksville Air** 87.99 50 ⇓P P 05 25 27.5 +0.1
baz=88,SNR=12
W15A **Williams** 88.01 54 ⇓P P 05 25 28.6 +1.0
baz=88
N19A **John Jarvie Ra** 88.15 47 ⇓P P 05 25 28.0 -0.2
baz=88
Q18A **Rafter H Ranch** 88.16 49 ⇑P P 05 25 28.3 +0.1
baz=88
X15A **Humboldt** 88.28 54 ⇑P P 05 25 29.0 +0.1
baz=88,SNR=5.6
Y15A **Casa Rosa Ranc** 88.39 55 ⇑P P 05 25 29.8 +0.4
baz=88
O19A **Miners Draw (B** 88.42 48 ⇑P P 05 25 29.3 -0.2
baz=88
T17A **Navajo Res., N** 88.45 52 ⇓P P 05 25 29.5 -0.1
baz=88,SNR=6.0
U16A **Tuba City** 88.52 52 ⇓P P 05 25 30.3 +0.3
baz=88,SNR=6.1
WUAZ **Wupatki** 88.57 53 ⇓P P 05 25 30.4 +0.2
baz=88,SNR=5.4
WUAZ **Wupatki** 88.57 53 *e*P P 05 25 30.5 +0.3
comp=Z,10.0nm,1.1s,mb5.1
WUAZ *e* 05 25 37.7
R18A **Canyonlands Na** 88.60 50 ⇓P P 05 25 30.1 -0.3
baz=88
U17A **Shonto** 88.70 52 ⇓P P 05 25 31.0 +0.1
baz=89
P19A **Cripple Cowboy** 88.78 49 ⇓P P 05 25 31.4 +0.2
baz=89
S18A **Hurst Farm, Bl** 88.79 51 ⇑P P 05 25 30.9 -0.4
baz=89
X16A **Lo Mia Camp, P** 88.92 54 ⇓P P 05 25 32.4 +0.5
baz=89
Y16A **Circle Bar Ran** 89.08 55 ⇓P P 05 25 33.2 +0.5
baz=89
T18A **Mexican Hat** 89.09 51 ⇓P P 05 25 32.3 -0.4
baz=89
U18A **Rough Rock, Ch** 89.36 52 ⇓P P 05 25 34.4 +0.4
baz=89
X17A **Forest Lakes** 89.43 54 ⇓P P 05 25 35.1 +0.7
baz=89
V18A **Ganado** 89.58 52 ⇑P P 05 25 35.6 +0.5
baz=89
Y17A **Roosevelt** 89.64 55 ⇑P P 05 25 35.7 +0.4
baz=90
PV01 **Paradox Valley** 89.66 50 *e*P P 05 25 34.7 -0.6
216A **Three Points,** 89.78 56 ⇑P P 05 25 36.7 +0.7
baz=90
T19A **Beclabito** 89.83 51 ⇓P P 05 25 36.5 +0.4
baz=90
X18A **Snowflake** 90.02 54 ⇑P P 05 25 37.3 +0.2
baz=90
MVCO **Mesa Verde** 90.07 51 ⇑P P 05 25 37.2 0.0
baz=90
117A **Oracle** 90.14 56 ⇑P P 05 25 38.0 +0.3
baz=90
Y18A **Canyon Day Jun** 90.24 54 ⇑P P 05 25 38.8 +0.7
baz=90
X19A **St. Johns** 90.56 53 ⇓P P 05 25 39.8 +0.2
baz=90
118A **Homack Ranch,** 90.72 55 ⇑P P 05 25 40.5 +0.2
baz=91
Y19A **Nutrioso** 90.77 54 ⇓P P 05 25 41.4 +0.8
baz=91
218A **Dragoon** 90.91 56 ⇓P P 05 25 42.1 +0.8
baz=91
119A **Ashpeak Ranch,** 91.19 55 ⇓P P 05 25 43.3 +0.8
baz=91
319A **Douglas** 91.74 56 ⇓P P 05 25 46.1 +0.9
baz=92
ULM **Lac du Bonnet** 92.17 35 P P 05 25 46.1 -0.6
comp=Z,3.3nm,0.8s,mb4.7,baz=24,slow=3.7,SNR=4.4
HFS **Hagfors** 93.17 339 P P 05 25 52.7 +1.6
comp=Z,1.7nm,0.6s,mb4.7,baz=96,slow=6.0,SNR=6.1
TXAR **Lajitas Array** 97.00 56 P P 05 26 08.3 -0.9
comp=Z,0.4nm,0.9s,mb3.9,baz=274,slow=3.4,SNR=3.8
TXAR **Lajitas Array** 97.00 56 P P 05 26 08.3 -1.0
SNAA **Sanae** 123.83 191 *e*PKPdf PKPdf 05 31 33.5 -0.6
SNAA *e* 05 31 40.1
VNA2 **Neumayer--Watz** 125.25 190 *e*PKPdf PKPdf 05 31 37.2 +0.3
VNA2 *e* 05 31 43.6
TORD **Torodi Ar. Bea** 133.64 310 PKP PKPdf 05 31 55.0 +0.5
comp=Z,0.3nm,0.5s,baz=33,slow=1.5,SNR=7.6
TORD SKPbc SKPbc 05 35 18.6 -0.4
comp=Z,1.6nm,0.9s,baz=7.2,slow=1.6,SNR=6.1
LVC **Limon Verde** 146.13 103 PKPbc PKPbc 05 32 19.1 +1.2
comp=Z,12nm,0.9s,baz=296,slow=3.5,SNR=6.9
LVC **Limon Verde** 146.13 103 *e*PKPbc PKPbc 05 32 18.4 +0.6
LPAZ **La Paz** 146.41 92 PKPbc PKPbc 05 32 19.5 +0.7
comp=Z,4.5nm,0.8s,baz=295,slow=4.7,SNR=11

MAN 07 05:17:42, 1126N×12461E, h7km, mb4.2, ML3.0, MS2.8, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.37**	**104**	⇓*i*P			Pg	05 17 50.1	+0.8
PLP				*i* S			Sg	05 17 56.2	+2.0
MSLP	**Maasin**	**1.14**	**168**	*e*P			Pg	05 18 00.0	-3.9
MSLP				*e*S			Sg	05 18 21.7	+2.9
CNP	**Catarman**	**1.25**	**2**	*e*P			Pn	05 18 00.0	-5.9
CNP				*e*S			Sg	05 18 23.2	+1.1
TBP	**Tagbilaran**	**1.72**	**205**	*e*P			Pn	05 18 12.5	+0.1
TBP				*e*S			Sn	05 18 31.7	-3.0
RCP	**Roxas**	**1.85**	**280**	⇑*e*P			Pn	05 18 15.0	+0.8
RCP				*e*S			Sn	05 18 41.1	+3.2

*ISK **07** 05:21:21.8, 37.13N×2829E, h14km, MD2.6*
*DDA **07** 05:21:21.8, 3695N×2824E, h7km±4km, Md2.3*
*CSEM **07** 05:21:21.6±0.1, 3703N×2827E, h2km, MD2.6, Error ellipse: s-maj=3.5km s-min=2.9km az=30.0*
*ISCJB **07** 05:21:22.4±0.6, 3705N±005×2826E±004, h10km, Error ellipse: s-maj=7.7km s-min=4.1km az=21.1*

ISC 07 05:21:22.7±0.6, 3706N±005×2828E±004, h10km, n7, σ0§85/13, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.07**	**3**	PG			**Pg**	**05 21 24.7**	**-0.2**
YER				SG			**Sg**	**05 21 26.5**	**0.0**
TURN	**Turunc**	**0.32**	**126**	*i* P			**Pg**	**05 21 27.9**	**-1.2**
TURN				*i* S			**Sg**	**05 21 32.4**	**-1.1**
DALT	**Dalyan (Mudla)**	**0.41**	**135**	*e*PG			**Pg**	**05 21 30.8**	**+0.1**
DALT				*e*SG			**Sg**	**05 21 38.4**	**+2.1**
BDRM	**Kayabasi**	**0.67**	**270**	*i* P			**Pg**	**05 21 35.3**	**-0.3**
BDRM				*i* S			**Sg**	**05 21 43.5**	**-0.8**
AYDN	**Tasoluk**	**0.68**	**332**	*i* P			**Pg**	**05 21 36.4**	**+0.6**
BODT	**Bodrum**	**0.77**	**270**	*e*PG			**Pg**	**05 21 37.7**	**0.0**
BODT				*e*SG			**Sg**	**05 21 48.6**	**+0.9**
GOLH	**Golhisar**	**1.04**	**80**	*i* P			**Pg**	**05 21 43.1**	**+0.4**
GOLH				*i* S			**Sg**	**05 22 03.4**	**+7.2**

*NEIC **07** 05:27:45.4, 3639S×6935W, h0km, ML3.4(GUC), After GUC.*

GUC 07 05:27:45.4±0.9, 3639S×6935W, h0km±8km, MD4.0, ML3.4, 1C-4D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LNCH	**Linares**	**1.90**	**286**	⇓*e*P			Pn	05 28 19.1	+0.1
LNCH				*i* S			Sn	05 28 44.6	+1.0
LNCH				AML			AML	05 28 48.8	
	comp=N,329nm,0.7s								
LNCH	**Linares**	**1.90**	**286**	⇓*e*P			Pn	05 28 19.1	+0.1
LNCH				*i* S			Sn	05 28 44.6	+1.0
NICH	**Los Niches**	**2.06**	**312**	⇓*e*P			Pn	05 28 21.6	+0.4
NICH				*e*S			Sn	05 28 49.1	+1.5
NICH				AML			AML	05 28 57.9	
	comp=Z,427nm,0.8s								
CCHI	**Chillan**	**2.21**	**264**	*e*P			Pn	05 28 24.1	+0.9
CCHI				AML			AML	05 28 55.4	
	comp=N,189nm,0.5s								
SFDO	**San Fernando**	**2.23**	**322**	⇑*i*P			Pn	05 28 24.1	+0.5
SFDO				*e*S			Sn	05 28 53.6	+1.8
CACH	**El Canelo**	**2.48**	**335**	⇓*e*P			Pn	05 28 28.4	+1.4
CACH				*e*S			Sn	05 29 00.8	+2.7
CHCH	**Chadas Angostu**	**2.67**	**336**	*e*P			Pn	05 28 31.7	+2.0
PCH	**Pirque**	**2.92**	**341**	*e*P			Pn	05 28 34.6	+1.5
LNV	**Longovilo**	**2.95**	**325**	*e*P			Pn	05 28 36.0	+2.4
LNV				*e*S			Sn	05 29 13.3	+3.6
TACH	**Talagante**	**3.02**	**334**	*e*P			Pn	05 28 37.2	+2.7
CLCH	**Cerro Calan**	**3.14**	**342**	*e*P			Pn	05 28 39.1	+3.0
CLCH				*e*S			Sn	05 29 21.0	+6.8
CLCH				AML			AML	05 29 24.2	
	comp=E,186nm,0.5s								
FCH	**Farellones**	**3.15**	**346**	*e*P			Pn	05 28 41.0	+4.8
FCH				*e*S			Sn	05 29 21.5	+7.1
PLCA	**Paso Flores**	**4.44**	**192**	*e*Pn			Pn	05 29 06.0	+12
PLCA				*e*Sn			Sn	05 30 00.5	+14
TRQA	**Tornquist**	**6.12**	**108**	*e*Pn			Pn	05 29 16.5	-0.5
	comp=E,13nm,0.8s								
TRQA				*e*Sg			Sg	05 30 59.5	-2.3

*ISCJB **07** 05:40:58.1±0.9, 285S±0.1×1778W±0.1, h131km±6km, mb4.4/13, Error ellipse: s-maj=19.4km s-min=16.5km az=0.7*
*NEIC **07** 05:40:59.8±1.0, 2853S×17779W, h130km±9km, mb4.6/10, Error ellipse: s-maj=17.6km s-min=14.5km az=122.0*
*IDC **07** 05:41:01.1±0.9, 2883S×17786W, h131km±6km, mb4.0/5, mb1 4.1/5, mb1mx3.8/14, mbtmp4.0/5, Error ellipse: s-maj=32.7km s-min=25.9km az=179.0*

ISC 07 05:40:59.3±0.9, 285S±01×1778W±01, h127km±6km, n32, σ1§07/31, mb4.6/13, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.72**	**190**	P			**Pn**	**05 41 21.2**	**+1.7**
	834nm,0.3s,baz=245,slow=22,SNR=36								
RAO				S			**Sn**	**05 41 35.7**	**+0.8**
	7µm,0.3s,baz=108,slow=20,SNR=40								
RAO	**Raoul Island**	**0.72**	**190**	*e*Pn			**Pn**	**05 41 20.9**	**+1.4**
RAO				P				05 41 21.2	
RAO				*e*Sn			**Sn**	**05 41 32.6**	**-2.2**
URZ	**Urewera**	**10.60**	**202**	P			**Pn**	**05 43 18.1**	**-9.5**
	2.1nm,0.3s,baz=297,slow=3.2,SNR=13								
URZ				S			**Sn**	**05 45 10.9**	**-13**
	11nm,0.3s,baz=174,slow=23,SNR=14								
SNZO	**South Karori**	**14.15**	**204**	*e*Pn			**Pn**	**05 44 08.1**	**-5.8**
SNZO				*e*Sn			**Sn**	**05 46 30.0**	**-20**
AFI	**Afiamalu**	**15.59**	**22**	P			**Pn**	**05 44 31.6**	**-0.5**
	2.1nm,0.3s,baz=49,slow=20,SNR=3.6								
AFI				S			**S**	**05 47 17.2**	**-14**
	2.3nm,0.3s,baz=128,slow=19,SNR=2.9								
AFI	**Afiamalu**	**15.59**	**22**	*e*Pn			**Pn**	**05 44 31.2**	**-0.9**
AFI				*e*Sn			**Sn**	**05 47 16.7**	**-8.4**
CTA	**Charters Tower**	**33.74**	**276**	P			**P**	**05 47 30.2**	**+1.4**
	6.4nm,0.6s,mb4.6,baz=100,slow=11,SNR=11								
CTAO	**Charters Tower**	**33.74**	**276**	*e*P			**P**	**05 47 30.2**	**+1.4**
	6.3nm,0.7s,mb4.5								
STKA	**Stephens Creek**	**35.13**	**254**	P			**P**	**05 47 40.9**	**+0.2**
	3.3nm,0.5s,mb4.4,baz=91,slow=11,SNR=10								
STKA	**Stephens Creek**	**35.13**	**254**	*e*P			**P**	**05 47 40.7**	**+0.1**
	3.9nm,0.6s,mb4.4								
ASAR	**Alice Springs**	**43.44**	**265**	P			**P**	**05 48 49.5**	**-0.3**
	2.5nm,0.5s,mb4.2,baz=100,slow=6.8,SNR=49								
WB2	**Warramunga Arr**	**44.24**	**270**	*e*P			**P**	**05 48 56.7**	**+0.5**
WRAB	**Tennant Creek**	**44.25**	**270**	*e*P			**P**	**05 48 55.3**	**-1.0**
	9.1nm,0.8s,mb4.6								
FORT	**Forrest**	**46.74**	**253**	*e*P			**P**	**05 49 14.2**	**-1.6**
	9.2nm,0.5s,mb4.8								
KAKA	**Kakadu**	**48.83**	**278**	P			**P**	**05 49 32.1**	**0.0**
	8.4nm,0.6s,mb4.8								
SBA	**Scott Base**	**49.91**	**184**	*e*P			**P**	**05 49 41.1**	**+1.8**
	11nm,1.0s,mb4.7								
FITZ	**Fitzroy Crossi**	**52.58**	**268**	*e*P			**P**	**05 50 00.5**	**+0.3**
	8.5nm,0.8s,mb4.8								
MBWA	**Marble Bar**	**56.64**	**262**	*e*P			**P**	**05 50 28.8**	**-0.7**
	15nm,0.9s,mb5.0								
CASY	**Casey**	**56.88**	**207**	*e*P			**P**	**05 50 28.9**	**-1.5**
	16nm,0.6s,mb5.2								
MAW	**Mawson**	**74.12**	**200**	P			**P**	**05 52 20.9**	**-0.3**
	1.2nm,0.6s,mb3.8,baz=175,slow=7.0,SNR=4.0								
SNAA	**Sanae**	**80.01**	**178**	*e*			**P**	**05 52 53.9**	**-0.2**
SNAA				*e*				05 52 58.7	
SNAA	**Sanae**	**80.01**	**178**	*e*P			**P**	**05 52 53.5**	**-0.6**
	2.2nm,0.9s,mb4.0								
VNA2	**Neumayer--Watz**	**80.59**	**177**	*e*			**P**	**05 52 57.2**	**0.0**
VNA2				*e*				05 53 01.0	
VNA1	**Neumayer--Stat**	**80.81**	**176**	*e*			**P**	**05 52 58.5**	**+0.1**
VNA1				*e*				05 53 02.4	
CMAR	**Chiang Mai Arr**	**92.97**	**289**	P			**P**	**05 54 01.2**	**+2.7**
	1.0nm,0.3s,mb4.6,baz=166,slow=2.7,SNR=4.8								
MKAR	**Makanchi Array**	**116.72**	**311**	PKP			PKPdf	05 59 30.4	+2.1
	0.5nm,0.4s,baz=101,slow=1.2,SNR=5.2								
AKTK	**Aktyubinsk**	**132.97**	**314**	PKP			PKPdf	06 00 00.7	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKTO	**Aktyubinsk**	**132.97**	**314**	PKP	PKPdf	06 00 00.7	+1.5
	1.5nm,0.7s,baz=47,slow=3.0,SNR=4.7						
NB2	**NORSAR Subarra**	**146.94**	**352**	PKP	PKPbc	06 00 27.0	+0.8
	comp=Z,1.0nm,0.6s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**146.94**	**352**	PKPbc	PKPbc	06 00 26.4	+0.2
	comp=Z,1.9nm,0.8s,baz=15,slow=4.6,SNR=5.3						
AKASG	**Malin Array Be**	**149.91**	**325**	PKPbc	PKPbc	06 00 34.9	+0.6
	comp=Z,9.9nm,0.7s,baz=46,slow=3.0,SNR=32						
AKASG				PKPab	PKPab	06 00 42.2	+1.9
	comp=Z,1.1nm,0.4s,baz=47,slow=4.6,SNR=7.6						
TORD	**Torodi Ar. Bea**	**164.68**	**178**	PKPab	PKPab	06 01 44.2	-0.2
	comp=Z,0.6nm,0.5s,baz=170,slow=3.0,SNR=9.9						

*MOS **07** 05:57:18.0±1.7, 5536N×11033E, h8km, mb4.3/1, Error ellipse: s-maj=18.1km s-min=8.7km az=64.4*

BYKL 07 05:57:18.0±0.2**, 5537N×11036E, h7km**±11km**, 7C-2D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
NIZ	**Nizh Angarsk**	**0.62**	**311**	⇑*i*Pg	Pg	05 57 29.4	-0.5
NIZ				*e*		05 57 30.0	
NIZ				*e*Sg	Sg	05 57 38.5	+0.6
NIZ				*e*		05 57 39.2	
NIZ				max			
	116nm,0.2s						
NIZ				max			
	354nm,0.2s						
YLYR	**Ulyunkhan**	**0.68**	**137**	⇑*i*PG	Pg	05 57 30.0	-1.0
YLYR				*e*		05 57 39.2	
YLYR				pmax	pmax		
	comp=Z,175nm,0.3s						
YLYR				smax			
	comp=N,350nm,0.2s						
YLYR	**Ulyunkhan**	**0.68**	**137**	⇓*i*Pg	Pg	05 57 30.0	-1.0
	comp=N,114nm,0.6s						
YLYR				⇑*i*Pg	Pg	05 57 30.0	-1.0
	comp=N,98nm,0.6s						
YLYR				⇑*i*Pg	Pg	05 57 30.0	-1.0
	comp=N,152nm,0.6s						
YLYR				*e*Sg	Sg	05 57 39.7	-0.1
YLYR				Pmax			
	comp=N,178nm,0.3s						
YLYR				Smax			
	comp=N,539nm,1.0s						
KMO	**Kumora**	**0.70**	**42**	*e*PG	Pg	05 57 30.4	-1.1
KMO				*e*		05 57 39.1	
KMO				pmax	pmax		
	comp=Z,183nm,0.3s						
KMO				smax			
	comp=N,721nm,0.8s						
KMO	**Kumora**	**0.70**	**42**	⇑*i*Pg	Pg	05 57 30.4	-1.1
KMO				*e*Sg	Sg	05 57 39.9	-0.8
KMO				Pmax			
	comp=N,285nm,0.4s						
KMO				Smax			
	comp=N,857nm,1.5s						
YOA	**Uoyan**	**1.09**	**45**	⇑*i*PG	Pg	05 57 38.6	-0.2
YOA				*i*		05 57 53.0	
YOA				pmax	pmax		
	comp=Z,489nm,0.3s						
YOA				smax			
	comp=E,1μm,0.5s						
YOA	**Uoyan**	**1.09**	**45**	*e*Pg	Pg	05 57 37.8	-1.0
YOA				*e*Sg	Sg	05 57 53.2	+0.3
YOA				Pmax			
	comp=E,449nm,0.2s						
YOA				Smax			
	comp=E,1μm,0.4s						
SYVR	**Suvo**	**1.73**	**187**	*e*PN	Pn	05 57 49.3	+0.9
SYVR				*e*S	Sn	05 58 11.4	+0.7
SYVR	**Suvo**	**1.73**	**187**	⇓*i*Pg	Pg	05 57 49.2	-1.9
SYVR				*e*Sg	Sg	05 58 12.2	-1.3
SYVR				Pmax			
	comp=E,72nm,0.6s						
SYVR				Smax			
	comp=E,473nm,0.7s						
UKT	**Uakit**	**1.87**	**85**	⇑*i*Pg	Pg	05 57 50.9	-2.8
UKT				*e*Sg	Sg	05 58 16.6	-1.3
UKT				Pmax			
	comp=E,164nm,0.7s						
UKT				Smax			
	comp=E,334nm,0.7s						
SVKR	**Severomuysk**	**1.96**	**66**	*e*Pg	Pg	05 57 52.8	-2.7
SVKR				*e*Sg	Sg	05 58 19.1	-1.7
SVKR				Pmax			
	comp=E,158nm,0.5s						
SVKR				Smax			
	comp=E,643nm,0.8s						
SVK	**Severo-Muysk**	**1.96**	**64**	*e*PN	Pn	05 57 52.7	+1.1
SVK				*e*		05 58 17.8	
SVK				pmax	pmax		
	comp=Z,153nm,1.2s						
SVK				smax			
	comp=N,668nm,0.8s						
MXMB	**Maximikha**	**2.31**	**205**	*e*Pg	Pg	05 57 59.8	-2.5
MXMB				*e*Sg	Sg	05 58 31.7	-0.5
MXMB				Pmax			
	comp=N,62nm,0.8s						
MXMB				Smax			
	comp=N,625nm,0.7s						
OGRR	**Ongureny**	**2.37**	**224**	*e*PN	Pn	05 57 58.5	+1.3
OGRR				*e*		05 58 01.6	
OGRR				*e*		05 58 31.4	
OGRR				pmax	pmax		
	comp=Z,51nm,0.7s						
OGRR				smax			
	comp=N,190nm,0.7s						
OGRR	**Ongureny**	**2.37**	**224**	*e*Pn	Pn	05 57 58.7	+1.5
OGRR				*e*Pg	Pg	05 58 00.3	-3.0
OGRR				*e*Sn	Sn	05 58 27.5	+1.1
OGRR				*e*Sg	Sg	05 58 30.8	-3.1
OGRR				Pmax			
	comp=N,48nm,0.4s						
OGRR				Smax			
	comp=N,193nm,0.5s						
BOD	**Bodaibo**	**3.18**	**38**	*e*Pn	Pn	05 58 08.8	+0.5
BOD				*e*Pg	Pg	05 58 14.9	-3.9
BOD				*e*Sn	Sn	05 58 46.8	+0.4
BOD				*e*Sg	Sg	05 58 55.3	-4.6
BOD				Pmax			
	comp=N,21nm,0.5s						
BOD				Smax			
	comp=N,93nm,1.3s						
NLYR	**Nelyaty**	**3.21**	**67**	*e*PN	Pn	05 58 09.3	+0.6
NLYR				*e*		05 58 15.9	
NLYR				*e*		05 58 57.6	
NLYR				pmax	pmax		
	comp=Z,38nm,1.2s						
NLYR				smax			
	comp=N,154nm,1.1s						
NLYR	**Nelyaty**	**3.21**	**67**	*e*Pn	Pn	05 58 09.5	+0.8
NLYR				*e*Pg	Pg	05 58 16.3	-3.1
NLYR				*e*Sn	Sn	05 58 49.0	+1.8
NLYR				*e*Sg	Sg	05 58 58.7	-2.3
NLYR				Pmax			
	comp=N,29nm,0.8s						
NLYR				Smax			
	comp=N,155nm,1.0s						
TRG	**Tyrgan**	**3.52**	**224**	*e*Pn	Pn	05 58 13.8	+0.7
TRG				*e*Pg	Pg	05 58 21.3	-4.2
TRG				*e*Sn	Sn	05 58 54.2	-0.8
TRG				*e*Sg	Sg	05 59 06.8	-4.3
TRG				Pmax			
	comp=N,11nm,0.7s						
TRG				Smax			
	comp=N,94nm,1.0s						
HRMR	**Khuramsha**	**4.26**	**210**	*e*Pn	Pn	05 58 22.6	-0.6
HRMR				*e*Pg	Pg	05 58 34.2	-5.4
HRMR				*e*Sg	Sg	05 59 31.0	-3.8
HRMR				Pmax			
	comp=N,32nm,0.7s						
HRMR				Smax			
	comp=N,205nm,0.8s						
CRS	**Chara**	**4.68**	**68**	*e*PN	Pg	05 58 42.3	-5.3
CRS				*e*		05 59 43.7	
CRS				pmax	pmax		
	comp=Z,42nm,0.9s						
CRS				smax			
	comp=E,105nm,1.0s						
CRS	**Chara**	**4.68**	**68**	*e*Pn	Pn	05 58 29.4	+0.4
CRS				*e*Pg	Pg	05 58 42.4	-5.2
CRS				*e*		05 59 28.7	
CRS				*e*Sg	Sg	05 59 43.6	-4.6
CRS				Pmax			
	comp=E,41nm,1.3s						
CRS				Smax			
	comp=E,104nm,1.4s						
IRK	**Irkutsk**	**4.78**	**232**	*e*PN	Pg	05 58 45.0	-4.5
IRK				*e*		05 59 44.2	
IRK				pmax	pmax		
	comp=Z,126nm,0.1s						
IRK				smax			
	comp=N,250nm,0.4s						
LSTR	**Listvyanka**	**4.81**	**225**	*e*Pn	Pn	05 58 30.9	+0.2
LSTR				*e*Pg	Pg	05 58 43.6	-6.5
LSTR				*e*		05 59 28.8	
LSTR				*e*Sg	Sg	05 59 46.4	-5.9
LSTR				Pmax			
	comp=N,11nm,1.1s						
LSTR				Smax			
	comp=N,86nm,1.5s						
TLY	**Talaya**	**5.45**	**230**	*e*PN	Pn	05 58 38.5	-1.0
TLY				*e*		05 58 54.8	
TLY				*e*S	Sn	05 59 40.6	-1.8
TLY				*e*		06 00 05.2	
TLY				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TLY				smax			
	comp=E,80nm,1.0s						
TLY	**Talaya**	**5.45**	**230**	*e*Pg	Pg	05 58 55.2	-7.1
TLY				*e*Sn	Sn	05 59 42.2	-0.2
TLY				*e*Sg	Sg	06 00 05.4	-7.4
TLY				Pmax			
	comp=E,10.0nm,0.5s						
TLY				Smax			
	comp=E,80nm,0.9s						
TUP	**Tupik**	**5.62**	**96**	*e*PN	Pn	05 58 42.0	+0.2
TUP				*e*		05 58 59.1	
TUP				*e*S	Sn	05 59 44.9	-1.6
TUP				*e*		06 00 12.3	
TUP				smax			
	comp=N,54nm,1.0s						
TUP	**Tupik**	**5.62**	**96**	*e*Pn	Pn	05 58 42.1	+0.3
TUP				*e*Pg	Pg	05 58 57.6	-7.9
TUP				*e*Sn	Sn	05 59 44.7	-1.8
TUP				*e*Sg	Sg	06 00 09.3	-8.9
TUP				Pmax			
	comp=N,8.0nm,0.7s						
TUP				Smax			
	comp=N,54nm,1.0s						
KPC	**Khapcheranga**	**5.81**	**167**	*e*PN	Pn	05 58 43.2	-1.2
KPC				*e*		05 59 01.9	
KPC				*e*		06 00 18.5	
KPC				pmax	pmax		
	comp=Z,14nm,0.8s						
KPC				smax			
	comp=E,44nm,1.3s						
KPC	**Khapcheranga**	**5.81**	**167**	*e*Pn	Pn	05 58 44.8	+0.4
KPC				*e*Pg	Pg	05 59 02.6	-6.6
KPC				*e*Sg	Sg	06 00 18.4	-5.9
KPC				Pmax			
	comp=E,8.0nm,0.7s						
KPC				Smax			
	comp=E,43nm,1.4s						
ARS	**Arshan**	**5.85**	**237**	*e*Pn	Pn	05 58 45.5	+0.5
ARS				*e*Pg	Pg	05 59 03.3	-6.6
ARS				*e*Sn	Sn	05 59 51.9	-0.3
ARS				*e*Sg	Sg	06 00 18.7	-6.9
ARS				Pmax			
	comp=E,34nm,0.4s						
ARS				Smax			
	comp=E,189nm,0.6s						
ZAK	**Zakamensk**	**6.58**	**224**	*e*PN	Pg	05 59 13.0	-11
ZAK				*e*S	Sg	06 00 42.1	-7.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ZAK				smax			
	comp=E,28nm,1.5s						
ZAK	**Zakamensk**	**6.58**	**224**	*e*Sg	Sg	06 00 43.5	-5.6
ZAK				Smax			
	comp=E,28nm,1.1s						
MOY	**Mondy**	**6.70**	**240**	*e*PN	Pn	05 58 58.5	+1.8
MOY				*e*S	Sg	06 00 43.1	-10
MOY				smax			
	comp=E,74nm,1.6s						
MOY	**Mondy**	**6.70**	**240**	*e*Pn	Pn	05 58 57.9	+1.2
MOY				*e*Pg	Pg	05 59 18.6	-7.7
MOY				*e*		06 00 13.4	
MOY				*e*Sg	Sg	06 00 47.1	-5.9
MOY				max			
	comp=E,10.0nm,0.5s						
MOY				Smax			
	comp=E,33nm,0.8s						
ORL	**Orlik**	**6.84**	**250**	*e*PN	Pn	05 59 00.5	+1.9
ORL				*e*S	Sg	06 00 49.8	-7.6
ORL				smax			
	comp=N,123nm,1.5s						
ORL	**Orlik**	**6.84**	**250**	*e*Pn	Pn	05 58 59.9	+1.3
ORL				*e*Sn	Sn	06 00 14.6	-2.0
ORL				*e*Sg	Sg	06 00 48.7	-8.7
ORL				max			
	comp=N,11nm,1.0s						
ORL				Smax			
	comp=N,123nm,0.9s						

JMA 07 06:54:58.7±0.3**, 3398N×14281E, h57km, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
BSO1	**Boso 1**	**1.66**	**294**	P	Pn	06 55 26.0	+0.6
BSO1				*e*S	Sn	06 55 46.7	+1.0
BSO2	**Boso 2**	**1.87**	**295**	*e*S	Sn	06 55 52.3	+1.6
BSO3	**Boso 3**	**2.07**	**294**	*e*S	Sn	06 55 58.4	+2.7
BSO4	**Boso 4**	**2.28**	**297**	P	Pn	06 55 35.4	+1.5
BSO4				*e*S	Sn	06 56 01.2	+0.4
JHJ2	**Mitsune**	**2.65**	**252**	P	Pn	06 55 39.9	+1.0
JHJ2				*e*S	Sn	06 56 10.7	+0.9
JHO	**Hitachi**	**3.20**	**326**	*e*S	Sn	06 56 20.5	-2.9
JHU	**Hanno**	**3.45**	**304**	*e*S	Sn	06 56 30.5	+1.0
JAG	**Ashikaga**	**3.67**	**313**	*e*S	Sn	06 56 34.6	-0.4
JYN	**Shimob**	**3.83**	**295**	P	Pn	06 55 57.0	+2.0
JYN				*e*S	Sn	06 56 40.5	+1.8

*THE **07** 07:02:45.1, 4167N×2374E, h10km, ML3.1*
*CSEM **07** 07:02:45.0±0.1, 4169N×2374E, h12km, ML2.5, Error ellipse: s-maj=2.8km s-min=1.7km az=122.0*
*ISCJB **07** 07:02:46.3±0.7, 4162N±004×2380E±005, h22km±9km, Error ellipse: s-maj=7.7km s-min=5.5km az=135.5*
*SKO **07** 07:02:46.7, 4164N×2374E, h0km*
*BEO **07** 07:02:48.2±2.4, 4179N×2382E, h19km, ML2.5/1*

ISC 07 07:02:45.3±0.6**, 4165N**±003×**2376E**±005**, h5km**±9km**, n13, σ0.s76**/21**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
KNT	**Kendrikon**	**0.81**	**233**	*e*Pg	**Pg**	**07 03 00.7**	**-0.2**
KNT				*e*Sg	**Sg**	**07 03 11.7**	**+0.2**
PLD	**Plovdiv**	**0.83**	**57**	*e*Pg	**Pg**	**07 03 01.1**	**-0.2**
PLD				*e*Sg	**Sg**	**07 03 13.1**	**+0.9**
PLD	**Plovdiv**	**0.83**	**57**	*e*Pg	**Pg**	**07 03 02.3**	**+1.0**
PLD				*e*Sg	**Sg**	**07 03 12.5**	**+0.3**
SOH	**Sokhos**	**0.89**	**200**	*e*Pg	**Pg**	**07 03 02.1**	**-0.2**
SOH				*e*Sg	**Sg**	**07 03 14.9**	**+1.1**
VAY	**Valandovo**	**0.95**	**250**	*e*Pg	**Pg**	**07 03 04.2**	**+0.6**
VAY				*e*Sg	**Sg**	**07 03 16.7**	**+0.7**
HORT	**Hortiatis**	**1.17**	**206**	*e*Pg	**Pg**	**07 03 07.0**	**-0.6**
HORT				*e*Sg	**Sg**	**07 03 23.2**	**+0.4**
STIP	**Stip**	**1.18**	**273**	*e*Sg	**Sg**	**07 03 23.5**	**+0.2**
STIP	**Stip**	**1.18**	**273**	*e*Sg	**Sg**	**07 03 23.4**	**+0.1**
GRG	**Griva**	**1.24**	**236**	*e*Pg	**Pg**	**07 03 07.5**	**-1.6**
OUR	**Ouranopolis**	**1.33**	**173**	*e*Pg	**Pg**	**07 03 09.0**	**-1.8**
ZAPS	**Zavoj**	**1.82**	**333**	*e*Pn	**Pn**	**07 03 17.7**	**+0.4**
ZAPS				*e*Sg	**Sg**	**07 03 43.2**	**-0.6**
BARS	**Barje**	**1.85**	**309**	*e*Pn	**Pn**	**07 03 18.5**	**+0.7**
BARS				*e*Sn	**Sn**	**07 03 41.0**	**-0.6**
GRUS	**Gruza**	**3.17**	**316**	*e*Pn	**Pn**	**07 03 35.7**	**-0.1**

*NEIC **07** 07:22:22.3, 1677N×9499W, h5km, MD4.4(MEX), After MEX.*

MEX 07 07:22:21.5±1.3**, 1673N×9498W, h6km**±11km**, MD4.4, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
CMIG	**Matias Romero**	**0.37**	**15**	*i* P	Pg	07 22 27.4	-1.3
CMIG				*i* S	Sg	07 22 33.9	+0.3
TUIG	**Tuzandepetl**	**1.40**	**22**	*i* P	Pn	07 22 44.8	-2.9
TUIG				*i* S	Sb	07 23 01.4	-4.9
HUIG	**Huatulco**	**1.44**	**229**	*e*P	Pn	07 22 43.5	-4.7
HUIG	**Huatulco**	**1.44**	**229**	*e*P	Pn	07 22 43.1	-5.0
OXX	**Oaxaca**	**1.70**	**282**	*i* P	Pn	07 22 49.7	-2.0
OXX				*i* S	Sn	07 23 09.5	-4.3
VHO	**Vista Hermosa**	**1.71**	**282**	*i* P	Pn	07 22 48.8	-3.0
VHO				*i* S	Sn	07 23 09.0	-5.0
VHO	**Vista Hermosa**	**1.71**	**282**	*i* P	Pn	07 22 48.8	-3.0
VHO				*i* S	Sn	07 23 10.7	-3.3
TGIG		**1.78**	**88**	*e*P	Pn	07 22 50.9	-1.9
TGIG				*i* S	Sn	07 23 10.2	-5.6
SCX	**San Cristobal**	**2.25**	**90**	*i* P	Pn	07 22 56.5	-2.8
SCX				*i* S	Sn	07 23 23.3	-4.1
CCIG	**Comitan**	**2.77**	**99**	*e*P	Pn	07 23 04.5	-1.9
CCIG				*i* S	Sn	07 23 35.4	-4.7
CCIG	**Comitan**	**2.77**	**99**	*e*P	Pn	07 23 04.5	-1.9
CCIG				*i* S	Sn	07 23 38.2	-1.9
TPIG	**Tehuac#an**	**2.82**	**307**	*i* P	Pn	07 23 05.8	-1.3
TPIG				*e*S	Sn	07 23 37.7	-3.8
PNIG	**Pinotepa**	**3.03**	**264**	*i* P	Pn	07 23 06.2	-3.8
PNIG				*i* S	Sn	07 23 41.3	-5.4
PNIG	**Pinotepa**	**3.03**	**264**	*i* P	Pn	07 23 06.2	-3.8
PNIG				*e*S	Sn	07 23 46.0	-0.8
YAIG	**Yautepec**	**4.43**	**299**	*i* P	Pb	07 23 39.8	0.0
MEIG	**Mezcala**	**4.59**	**286**	*i* P	Pn	07 23 29.9	-1.5
MEIG				*e*S	Sn	07 24 22.9	-2.2
PLIG	**Platanillo**	**4.62**	**292**	*i* P	Pn	07 23 36.7	+4.9
PLIG				*e*S	Sn	07 24 28.6	+2.8
CAIG	**El Cayaco**	**5.07**	**274**	*i* P	Pn	07 23 37.9	-0.2

CASC 07 07:24:02.6±2.2**, 1218N×8874W, h36km**±7km**, MD4.1, ML3.2, 5C-3D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
VSM	**San Miguel**	**1.33**	**20**	⇑*e*P	x	07 24 25.2	
VSM				*e*S	x	07 24 43.0	
BLLM	**Bellamira**	**1.35**	**21**	⇑*e*P	x	07 24 25.1	
CNCH	**Conchagua**	**1.41**	**39**	*e*P	x	07 24 25.6	
CNCH				*e*S	x	07 24 44.6	
SNVI	**San Vicente**	**1.43**	**356**	*e*P	x	07 24 25.9	
SNVI				*e*S	x	07 24 44.5	
LFRS	**El Faro**	**1.47**	**348**	*e*P	x	07 24 26.3	
LFRS				*e*S	x	07 24 45.1	
SNET	**Serv Nac Est T**	**1.57**	**342**	*e*P	x	07 24 26.9	
SNET				*e*S	x	07 24 47.6	
SNET				*i*		07 24 49.9	
	comp=Z,287nm,0.3s						
LBRS	**Las Brisas**	**1.58**	**349**	*e*P	x	07 24 28.3	
LFU	**La Fuente**	**1.60**	**347**	*e*P	x	07 24 29.9	
BOQS	**Boqueron**	**1.64**	**341**	*e*P	x	07 24 29.3	
BOQS				*e*S	x	07 24 50.6	
CAHU	**Cacacuatique**	**1.67**	**18**	⇑*e*P	x	07 24 30.5	
CAHU				*e*S	x	07 24 51.3	
LEON	**Leon**	**1.82**	**82**	⇑*e*P	Pn	07 24 30.7	-0.8
LEON				*e*S	Sn	07 24 54.5	+1.1
SNJE	**San Jose**	**1.88**	**334**	*e*P	x	07 24 33.0	
COPN	**Copaltepe**	**2.10**	**90**	⇓*e*P	Pn	07 24 34.9	-0.5
COPN				*e*P		07 24 35.0	
RBDL	**Robledal**	**2.13**	**335**	*e*P	x	07 24 37.3	
TGUH	**Tegucigalpa,Un**	**2.36**	**37**	*e*P	Pn	07 24 38.9	+0.1
TGUH				*e*S	Sn	07 25 09.0	+2.5
HUEN		**2.52**	**86**	*e*P	Pn	07 24 40.5	-0.6
JCR	**Jicaral**	**4.25**	**123**	*e*P	Pn	07 25 06.0	+1.2
JCR				*e*S	Sn	07 25 54.8	+1.6
CGA2	**Cerro Gallo 2**	**4.72**	**117**	*e*P	Pn	07 25 13.9	+2.7
PRS1	**Puriscal**	**4.87**	**116**	*e*P	Pn	07 25 15.4	+2.1
PRS1				*e*S	Sn	07 26 09.9	+1.4
LCR2	**La Lucha 2**	**5.25**	**117**	⇑*e*P	Pn	07 25 21.2	+2.6
LCR2				*e*S	Sn	07 26 17.7	-0.2
QCR	**Quepos**	**5.26**	**121**	⇓*e*P	Pn	07 25 20.7	+1.9
QCR				*e*S	Sn	07 26 17.2	-1.1
BUS	**Buena Vista**	**5.55**	**118**	⇓*e*P	Pn	07 25 25.2	+2.5
BUS				*e*S	Sn	07 26 26.7	+1.4
CHI2		**16.61**	**116**	*e*P		07 24 29.7	

*ISCJB **07** 07:42:20.9±1.3, 246N±0.1×10959W±009, h10km, Error ellipse: s-maj=17.1km s-min=8.5km az=148.0*
*IDC **07** 07:42:21.8±1.4, 2470N×10975W, h0km, mb1 4.0/6, mb1mx3.8/24, mbtmp3.7/6, ML3.4/6, Error ellipse: s-maj=27.7km s-min=8.4km az=124.0*
*NEIC **07** 07:42:22.5±1.3, 2451N×10961W, h10km, mb3.5/2, Error ellipse: s-maj=16.8km s-min=9.2km az=135.0*

ISC 07 07:42:22.2±1.4**, 245N**±01×**10958W**±008**, h10km, n14, σ0.s92**/16**, Gulf of California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
LPIG	**La Paz**	**0.77**	**241**	Pg	**Pg**	**07 42 37.1**	**+0.1**
	265nm,0.3s,baz=42,slow=19,SNR=399						
LPIG				Lg		07 42 47.9	
	513nm,0.3s,baz=308,slow=19,SNR=70						
TXAR	**Lajitas Array**	**7.15**	**46**	Pn	**Pn**	**07 44 07.2**	**+0.3**
	0.2nm,0.3s,baz=229,slow=13,SNR=19						
TXAR				Pg	**Pg**	**07 44 36.3**	**-2.9**
	0.2nm,0.3s,baz=221,slow=15,SNR=3.9						
TXAR				Sn	**Sn**	**07 45 28.9**	**+0.7**
	1.1nm,0.3s,baz=217,slow=24,SNR=14						
TXAR				Lg		07 46 07.6	
	0.2nm,0.3s,baz=223,slow=25,SNR=3.2						
GLA	**Glamis**	**9.70**	**333**	P	**Pn**	**07 44 41.5**	**-0.4**
	6.8nm,0.9s						
ANMO	**Albuquerque**	**10.78**	**14**	Pn	**Pn**	**07 44 56.7**	**+0.1**
	0.0nm,0.3s,baz=199,slow=12,SNR=2.4						
PFO	**Pinyon Flat Ob**	**10.90**	**328**	Pn	**Pn**	**07 44 57.7**	**-0.7**
	0.1nm,0.3s,baz=150,slow=14,SNR=5.5						
PFO	**Pinyon Flat Ob**	**10.90**	**328**	Pn	**Pn**	**07 44 57.7**	**-0.7**
GSC	**Goldstone**	**12.47**	**332**	*e*P	**Pn**	**07 45 20.4**	**+0.6**
	5.6nm,1.1s						
ISA	**Isabella**	**13.54**	**327**	*e*P	**Pn**	**07 45 32.5**	**-1.9**
	5.7nm,1.2s						
TPNV	**Topopah Spring**	**13.68**	**337**	*e*P	**Pn**	**07 45 36.9**	**+0.6**
	8.7nm,1.5s						
NVAR	**Mina Array Bea**	**15.76**	**334**	Pn	**Pn**	**07 46 05.3**	**+1.0**
	0.2nm,0.3s,baz=150,slow=14,SNR=22						
ELK	**Elko**	**16.90**	**345**	Pn	**Pn**	**07 46 18.6**	**-0.1**
	0.1nm,0.3s,baz=162,slow=13,SNR=7.8						
ELK	**Elko**	**16.90**	**345**	Pn	**Pn**	**07 46 17.7**	**-1.1**
	4.2nm,1.3s						
BMN	**Battle Mountai**	**17.15**	**340**	Pn	**Pn**	**07 46 22.9**	**+0.9**
	4.5nm,1.0s						
PDAR	**Pinedale Array**	**18.24**	**0**	Pn	**Pn**	**07 46 35.8**	**+0.4**
	0.1nm,0.3s,baz=165,slow=9.5,SNR=21						

*ISCJB **07** 08:03:48.5±1.3, 3425N±004×2511E±008, h7km±10km, mb3.6/3, Error ellipse: s-maj=11.5km s-min=5.7km az=166.5*
*IDC **07** 08:03:48.9±1.5, 3426N×2512E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.6/22, mbtmp3.7/5, ML4.1/2, Error ellipse: s-maj=45.1km s-min=25.1km az=134.0*
*HLW **07** 08:03:50.5, 3446N×2498E, h26km, Mb3.5*
*ATH **07** 08:03:52.7, 3438N×2500E, h19km±2km, MD3.6/5*
*CSEM **07** 08:03:52.4±0.1, 3422N×2519E, h40km, MD3.6, Error ellipse: s-maj=5.0km s-min=2.2km az=73.0*
*NEIC **07** 08:03:52.7, 3438N×2500E, h19km, MD3.6(ATH), After ATH.*

ISC 07 08:03:50.9±1.4**, 3427N**±004×**2506E**±008**, h14km**±10km**, n18, σ0.s91**/22**, mb3.6**/3**, 2C-4D, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
GVD	**Gavdhos**	**0.98**	**305**	*e*PN	**Pn**	**08 04 09.5**	**-0.7**
NPS	**Neapolis**	**1.09**	**25**	*e*PN	**Pn**	**08 04 11.7**	**0.0**
NPS				*e*SN	**Sn**	**08 04 25.3**	**-1.3**
VAM	**Vamos**	**1.33**	**328**	*e*PN	**Pg**	**08 04 15.7**	**-0.8**
VAM				*e*SN	**Sg**	**08 04 33.1**	**-0.8**
KARP	**Karpathos**	**2.15**	**53**	*e*PN	**Pn**	**08 04 29.5**	**+3.2**
SLUM		**2.78**	**177**	⇑*e*P	**Pn**	**08 04 35.0**	**0.0**
SLUM				S	**Sn**	**08 05 07.1**	**-1.2**
VLI	**Veliai**	**2.99**	**325**	*e*PN	**Pn**	**08 04 39.7**	**+1.8**
HMAT	**Matruh**	**3.61**	**151**	P	**Pn**	**08 04 46.6**	**+0.2**
HMAT				S	**Sn**	**08 05 27.6**	**-1.2**
AWBH		**6.79**	**150**	⇑*e*P	**Pn**	**08 05 30.4**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GLL	Jalalah	7.34	128⇓	eP	Pn	08 05 38.0	+0.4
HFRF	Wahat Farafira	7.63	158⇓	eP	Pn	08 05 42.6	+0.9
AMAG	Maghara	7.78	115⇓	eP	Pn	08 05 43.7	0.0
SUZ		7.94	122⇓	eP	Pn	08 05 46.2	+0.3
SUZ		7.94	122	P	Pn	08 05 46.2	+0.3
AKASG	Malin Array Be	16.70	9	Pn	Pn	08 07 44.2	-0.1
	0.5nm,0.3s,baz=200,slow=10,SNR=2.7						
GERES	GERESS Array B	16.83	333	Pn	Pn	08 07 47.5	+1.5
	0.3nm,0.3s,baz=146,slow=12,SNR=8.2						
TORD	Torodi Ar. Bea	29.86	231	P	P	08 09 58.5	+0.4
	0.4nm,0.4s,mb3.5,baz=32,slow=9.0,SNR=7.3						
MKAR	Makanchi Array	44.34	56	P	P	08 12 00.9	+0.4
	0.2nm,0.5s,mb3.1,baz=258,slow=9.8,SNR=3.8						
ZALV	Zalesovo Beam	45.68	46	P	P	08 12 10.2	-0.9
	1.2nm,0.4s,mb4.2,baz=264,slow=9.4,SNR=3.7						

*IDC **07** 08:08:07.2±0.6, 23.36S×171.10E, h0km, mb4.5/13, mb1 4.6/14, mb1mx4.6/17, mbtmp4.5/14, ML2.7/1, MS3.7/5, Ms1 3.7/5, ms1mx3.3/18, Error ellipse: s-maj=20.3km s-min=17.8km az=106.0*

*NEIC **07** 08:08:09.2±3.6, 23.32S×171.06E, h12km±21km, mb4.8/15, Error ellipse: s-maj=9.8km s-min=8.3km az=141.0*

*BJI **07** 08:08:09.2, 23.30S×171.10E, h11km, mB5.0, mb4.9*

*ISCJB **07** 08:08:09.3±3.1, 23.33S±0.07×170.98E±0.05, h22km±21km, mb4.7/29, Error ellipse: s-maj=11.4km s-min=8.2km az=13.2*

*SZGRF **07** 08:08:09.4, 24.44S×172.35E, h33km, Southeast of Loyalty Islands*

*MOS **07** 08:08:13.4±2.4, 23.37S×170.79E, h33km, mb4.8/12, Error ellipse: s-maj=13.6km s-min=12.2km az=23.3*

ISC 07 08:08:12.7±3.0**, 23.30S**±0.07×**171.00E**±0.05**, h33**km±21km**, h26**km±5.0km**:pP-P, n164,** σ1.11/64**, mb4.7**/29**, 15C-15D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.38	285	eP	Pn	08 09 17.2	+0.3
DZM				eS	Sn	08 10 05.0	-1.8
DZM	Mont Dzumac	4.38	285	ePn	Pn	08 09 17.0	+0.2
DZM				eSn	Sn	08 10 06.0	-0.8
NOUC	Port Laguerre	4.50	284	eP	Pn	08 09 18.7	+0.3
NOUC				eS	Sn	08 10 09.5	-0.1
RAO	Raoul Island	11.58	123	LR	LR	08 14 15.6	
	comp=Z,634nm,21.9s,baz=71,slow=32						
URZ	Urewera	15.80	162	Pn	Pn	08 11 55.3	+2.6
	0.3nm,0.3s,baz=360,slow=6.7,SNR=3.5						
URZ				LR	LR	08 16 42.7	
	comp=Z,357nm,19.2s,baz=14,slow=33						
HNR	Honiara	17.38	321	P	Pn	08 12 20.7	+7.9
	17nm,0.3s,baz=198,slow=9.6,SNR=3.7						
HNR	Honiara	17.38	321	Pn	Pn	08 12 10.8	-1.9
HNR				P		08 12 20.7	
AFI	Afiamalu	18.79	63	P	Pn	08 12 29.0	-1.1
	1.4nm,0.3s,baz=256,slow=4.2,SNR=3.1						
AFI				LR	LR	08 18 19.1	
	comp=Z,148nm,20.3s,baz=208,slow=33						
AFI	Afiamalu	18.79	63	eP	Pn	08 12 28.8	-1.3
AFI				pmax	pmax		
	comp=Z,48nm,1.0s						
AFI	Afiamalu	18.79	63	ePn	Pn	08 12 28.8	-1.2
	comp=Z,48nm,1.0s						
AFI				LR	LR	08 18 19.1	
RPZ	Rata Peaks	20.36	180	P	P	08 12 45.5	-0.8
	comp=Z,9.8nm,0.7s,baz=200,slow=3.5,SNR=5.8						
RPZ				LR	LR	08 19 11.6	
	comp=Z,199nm,20.8s,baz=3.3,slow=33						
CNB	Canberra Magne	22.29	233	eP	P	08 13 08.8	+1.6
CTA	Charters Tower	23.20	273	eP	P	08 13 18.4	+1.4
	comp=Z,12nm,0.8s,mb4.4						
CTA	Charters Tower	23.20	273	P	P	08 13 18.1	+1.1
	comp=Z,13nm,0.8s,mb4.4,baz=98,slow=13,SNR=22						
CTA	Charters Tower	23.20	273	eP	P	08 13 18.4	+1.4
CTA				pmax	pmax		
	comp=Z,12nm,0.8s						
CTAO	Charters Tower	23.20	273	eP	P	08 13 18.3	+1.3
CTAO				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.4						
CTAO	Charters Tower	23.20	273	eP	P	08 13 18.3	+1.4
	comp=Z,13nm,0.8s,mb4.4						
TOO	Toolangi	26.09	231	eP	P	08 13 44.0	+0.7
STKA	Stephens Creek	27.36	245	eP	P	08 13 55.3	+0.4
	comp=Z,6.0nm,1.8s,mb3.8						
STKA	Stephens Creek	27.36	245	P	P	08 13 54.9	0.0
	comp=Z,2.8nm,0.5s,mb4.0,baz=86,slow=10.0,SNR=18						
STKA	Stephens Creek	27.36	245	eP	P	08 13 54.7	-0.2
ASAR	Alice Springs	33.96	262	P	P	08 14 53.1	-0.1
	comp=Z,10nm,0.9s,mb4.8,baz=94,slow=9.1,SNR=86						
ASAR				PcP	PcP	08 17 31.1	0.0
	comp=Z,1.1nm,0.7s,baz=106,slow=2.8,SNR=4.2						
WRAB	Tennant Creek	34.18	268	eP	P	08 14 53.3	-1.8
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
WRAB	Tennant Creek	34.18	268	eP	P	08 14 53.3	-1.8
	comp=Z,4.2nm,0.9s,mb4.4						
FORT	Forrest	38.78	249	eP	P	08 15 34.1	-0.2
	comp=Z,37nm,0.5s,mb5.4						
FITZ	Fitzroy Crossi	42.61	268⇓	iP	P	08 16 06.4	+0.3
	comp=Z,22nm,0.9s,mb4.9						
MBWA	Marble Bar	47.30	262	eP	P	08 16 43.1	-0.3
	comp=Z,16nm,0.9s,mb5.0						
KLBR	Kellerberrin	47.58	248	eP	P	08 16 44.9	-0.5
	comp=Z,16nm,0.5s,mb5.3						
NWAO	Narrogin (SRO)	47.94	246	eP	P	08 16 47.7	-0.5
NWAO				pmax	pmax		
	comp=Z,20nm,0.8s						
NWAO	Narrogin (SRO)	47.94	246	eP	P	08 16 47.7	-0.5
	comp=Z,20nm,0.8s,mb5.2						
MUN	Mundaring	48.87	247	eP	P	08 16 54.7	-0.7
POHA	Pohakuloa	53.83	40	eP	P	08 17 27.1	-5.5
SBA	Scott Base	54.65	181	eP	P	08 17 38.2	+0.4
SBA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
SBA	Scott Base	54.65	181	eP	P	08 17 38.2	+0.4
	comp=Z,8.0nm,0.8s,mb4.8						
KSM	Kuching	63.90	284	eP	P	08 18 40.7	-2.1
QSPA	South Pole Qui	66.78	180	P	P	08 18 59.7	-0.6
	comp=Z,4.3nm,0.7s,mb4.6,baz=32,slow=1.7,SNR=27						
MJAR	Matsushiro Arr	67.09	332	P	P	08 19 02.0	-0.8
	comp=Z,2.2nm,0.6s,mb4.3,baz=174,slow=7.3,SNR=4.5						
KSRS	Korea Array	72.76	325	P	P	08 19 37.2	-0.5
	comp=Z,3.0nm,0.9s,mb4.2,baz=140,slow=5.8,SNR=6.1						
MAW	Mawson	75.31	202	P	P	08 19 51.4	-0.7
	comp=Z,3.3nm,0.9s,mb4.2,baz=123,slow=7.2,SNR=9.8						
PETK	Petropavlovsk-	76.96	352	P	P	08 20 01.9	+0.4
	comp=Z,12nm,0.8s,mb4.9,baz=139,slow=6.5,SNR=9.5						
PETK				LR	LR	08 46 55.0	
	comp=Z,39nm,20.3s,baz=239,slow=30						
CMAR	Chiang Mai Arr	81.65	294	P	P	08 20 29.4	+1.4
	comp=Z,5.2nm,0.6s,mb4.6,baz=138,slow=4.0,SNR=23						
KMI	Kunming	81.80	302	P	P	08 20 31.3	+2.7
KMI				AMB	AMB		
	comp=Z,15nm,1.4s,mb4.7						
XAN	Xi'an	82.04	312	P	P	08 20 31.3	+1.6
XAN				AP	pP	08 20 39.5	-0.6
XAN				XP	sP	08 20 43.6	-0.2
XAN				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
XAN				AMB	AMB		
	comp=Z,53nm,5.2s						
SNAA	Sanae	85.19	182	eP	P	08 20 39.5	-5.8
SNAA				e		08 20 43.4	
SNAA				e		08 20 53.3	
SNAA				e		08 21 02.0	
SNAA	Sanae	85.19	182	eP	P	08 20 43.3	-2.0
SNAA				pmax	pmax		
	comp=Z,11nm,1.4s						
SNAA	Sanae	85.19	182	eP	P	08 20 43.2	-2.0
	comp=Z,11nm,1.4s,mb4.8						
VNA2	Neumayer--Watz	86.03	181	eP	P	08 20 44.4	-5.1
VNA2				e		08 20 48.0	
VNA2				e		08 20 57.8	
VNA2				e		08 21 05.7	
VNA1	Neumayer--Stat	86.31	180	eP	P	08 20 49.4	-1.5
VNA1				e		08 20 52.8	
VNA1				e		08 21 03.3	
VNA1				e		08 21 11.7	
LZH	Lanzhou	86.64	312	eP	P	08 20 55.3	+2.3
LZH				AP	pP	08 21 05.5	+2.1
LZH				XP	sP	08 21 09.5	+2.3
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.5						
LZH				AMB	AMB		
	comp=Z,117nm,5.3s						
CMB	Columbia Colle	88.66	47	P	P	08 21 02.2	-0.4
CMB				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.8						
CMB	Columbia Colle	88.66	47	P	P	08 21 02.2	-0.5
	comp=Z,4.7nm,1.0s,mb4.8						
ISA	Isabella	88.78	50	eP	P	08 21 02.8	-0.5
ISA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
ISA	Isabella	88.78	50	eP	P	08 21 02.8	-0.5
	comp=Z,2.9nm,0.8s,mb4.7						
NVAR	Mina Array Bea	90.27	48	P	P	08 21 10.2	+0.1
	comp=Z,2.6nm,0.7s,mb4.7,baz=228,slow=9.3,SNR=23						
TPNV	Topopah Spring	90.98	50	eP	P	08 21 13.7	+0.2
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.7						
TPNV	Topopah Spring	90.98	50	eP	P	08 21 13.7	+0.3
	comp=Z,3.9nm,1.0s,mb4.7						
GTA	Gaotai	91.08	313	eP	P	08 21 15.5	+1.6
GTA				AP	pP	08 21 19.8	-4.6
GTA				XP	sP	08 21 23.2	-4.9
GTA				AMB	AMB		
	comp=Z,3.0nm,1.5s,mb4.4						
BILL	Bilibino	91.13	358	eP	P	08 21 14.7	+1.3
BILL				e		08 24 54.5	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb5.2						
SONM	Songino Array	91.43	322	P	P	08 21 16.6	+1.3
	comp=Z,1.1nm,0.7s,mb4.3,baz=145,slow=8.8,SNR=3.6						
COLA	College	93.44	16	eP	P	08 21 23.1	-1.1
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
COLA	College	93.44	16	eP	P	08 21 23.1	-1.1
	comp=Z,3.6nm,0.9s,mb4.8						
PLCA	Paso Flores	94.43	138	P	P	08 21 29.6	+0.1
	comp=Z,0.8nm,0.7s,mb4.2,baz=273,slow=1.3,SNR=2.3						
BVAR	Borovoye Array	114.56	319	PKP	PKiKP	08 26 48.6	-0.5
	comp=Z,1.2nm,0.7s,baz=11,slow=0.8,SNR=5.6						
ARU	Arti	121.46	323	i PKIKP	PKPdf	08 27 00.9	-1.3
ARCES	ARCESS Array B	129.39	345	PKP	PKPdf	08 27 16.2	-0.9
	comp=Z,2.5nm,0.6s,baz=80,slow=1.4,SNR=8.8						
KIV	Kislovodsk	133.13	309	i PKIKP	PKPdf	08 27 23.3	-1.6
KIV				pmax	pmax		
	comp=Z,5.0nm,1.4s						
OBN	Obninsk	133.76	325	i PKIKP	PKPdf	08 27 27.7	+2.0
OBN				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	139.71	323	PKP	PKPdf	08 27 37.1	+0.2
	comp=Z,1.5nm,0.6s,baz=64,slow=2.1,SNR=5.4						
NOA	NORSAR Array B	139.77	345	PKP	PKPdf	08 27 36.3	-0.4
	comp=Z,1.2nm,0.8s,baz=324,slow=2.9,SNR=3.5						
TIRR	Tirgusor	142.89	314⇑	iP	PKPdf	08 27 40.7	-2.1
LVV	L'vov	143.03	324	ePKHKP		08 27 29.3	
VRI	Vrincioaia	143.40	317⇑	iP	PKPdf	08 27 42.4	-1.3
VRI	Vrincioaia	143.40	317	⇑P	PKPdf	08 27 42.4	-1.3
PLOR	Plostina	143.46	317⇓	iP	PKPdf	08 27 41.9	-1.9
BURAR	Bucovina Array	143.51	320⇑	iP	PKPdf	08 27 42.0	-1.8
BURAR	Bucovina Array	143.51	320	⇑P	PKPdf	08 27 42.0	-1.8
MLR	Muntele Rosu	144.06	317⇓	iP	PKPdf	08 27 44.4	-0.4
MLR	Muntele Rosu	144.06	317	⇓P	PKPdf	08 27 44.4	-0.4
KOLS	Kolonicke sedl	144.47	324	ePKP	PKPdf	08 27 45.7	+0.3
UZH	Uzhgorod	144.63	323⇓	iPKIKP	PKPdf	08 27 46.0	+0.3
UZH				i		08 27 56.2	
VOIR		144.65	317⇑	iP	PKPdf	08 27 45.9	0.0
VOIR		144.65	317	⇑P	PKPdf	08 27 45.9	+0.1
STHS	Stebnicka Huta	144.74	325	ePKP	PKPdf	08 27 46.4	+0.5
TRPA	Tarpa	144.78	323⇓	iP	PKPdf	08 27 46.4	+0.4
CRVS	Cervenica-Dubn	144.93	324	ePKP	PKPdf	08 27 47.0	+0.8
DRGR		145.40	320⇑	iP	PKPbc	08 27 48.3	+1.2
DRGR		145.40	320	⇑P	PKPbc	08 27 48.3	+1.3
KECS	Kecovo	145.70	324	ePKP	PKPbc	08 27 49.0	+1.0
OKC	Ostrava-Krasne	146.04	328	ePKP	PKPbc	08 27 49.9	+0.9
OKC				ex	x	08 27 59.8	
RUE	Ruedersdorf	146.06	335	ePKPbc	PKPbc	08 27 49.9	+1.0
GZR	Gura Zlata	146.08	318⇑	iP	PKPbc	08 27 50.1	+0.9
GZR	Gura Zlata	146.08	318	⇑P	PKPbc	08 27 50.1	+0.9
BSEG	Bad Segeberg	146.12	339	ePKPbc	PKPbc	08 27 49.5	+0.4
KSP	Ksiaz	146.22	331	ePKIKP	PKPbc	08 27 49.7	+0.2
KSP				e		08 27 58.6	
PSZ	Piszkesteto	146.35	324⇑	ePKP	PKPbc	08 27 51.0	+1.0
MORC	Moravsky Berou	146.37	328⇓	iP	PKPbc	08 27 51.5	+1.5
MORC	Moravsky Berou	146.37	328	⇓P	PKPbc	08 27 51.5	+1.5
DPC	Dobruska-Polom	146.55	330	ePKP	PKPbc	08 27 51.6	+1.1
VYHS	Vyhne	146.56	326	ePKP	PKPbc	08 27 51.0	+0.5
UPC	Upice	146.58	331	ePKP	PKPbc	08 27 51.2	+0.7
KOLL	Kolacno	146.73	326	ePKP	PKPbc	08 27 52.4	+1.4
KOLL				e		08 28 02.0	
BUD	Budapest	147.08	324	ePKP	PKPbc	08 27 53.2	+1.1
VRAC	Vranov	147.15	329	PKPbc	PKPbc	08 27 51.7	-0.5
	comp=Z,12nm,1.0s,baz=27,slow=14,SNR=9.5						
VRAC	Vranov	147.15	329⇑	iP	PKPbc	08 27 53.5	+1.3
VRAC	Vranov	147.15	329	⇑P	PKPbc	08 27 53.5	+1.3
PVCC	Panska Ves	147.21	332	ePKP	PKPbc	08 27 53.4	+1.1
BRG	Berggiesshubel	147.22	333	ePKPbc	PKPbc	08 27 52.9	+0.6
BRG	Berggiesshubel	147.22	333	eP	PKPbc	08 27 53.3	+0.9
	comp=Z,7.5nm,1.2s						
CLL	Collm	147.27	334	ePKPbc	PKPbc	08 27 53.2	+0.7
CLL	Collm	147.27	334⇓	iPKPbc	PKPbc	08 27 52.8	+0.3
	comp=Z,26nm,1.6s						
CLL				i PKPab	PKPab	08 27 54.9	+0.6
	comp=Z,8.0nm,0.7s						
CLL				ex	x	08 28 03.0	
NRDL	Niedersach Rie	147.39	338	ePKPbc	PKPbc	08 27 53.6	+0.8
MODS	Modra-Piesok	147.43	327	ePKP	PKPbc	08 27 53.9	+0.9
MODS				e		08 28 04.6	
MODS				e		08 28 10.8	
PRU	Pruhonice	147.61	331	ePKP	PKPbc	08 27 54.1	+0.6
PRU				ex	x	08 28 04.2	
TREC	Trest	147.68	329	ePKP	PKPbc	08 27 54.4	+0.7
CLZ	Clausthal	147.84	337	ePKPbc	PKPbc	08 27 54.8	+0.8
PKSM	Moragy	148.06	322⇓	iP	PKPbc	08 27 55.1	+0.3
IBBN	Ibbenburen	148.32	340	ePKPbc	PKPbc	08 27 55.8	+0.5
NKC	Novy Kostel	148.32	333	ePKP	PKPbc	08 27 56.1	+0.8
MOX	Moxa	148.34	335	ePKPbc	PKPbc	08 27 55.8	+0.4
CONA	Conrad Observa	148.44	327⇑	iP	PKPbc	08 27 56.6	+0.9
	comp=Z,11nm,0.8s						
CSNA	Conrad Observa	148.44	327⇓	iP	PKPbc	08 27 56.6	+0.9
	comp=Z,10nm,0.8s						
MANZ	Manzenberg	148.65	333	ePKPbc	PKPbc	08 27 57.0	+0.8
KHC	Kasperske Hory	148.67	331	ePKP	PKPbc	08 27 56.9	+0.6
KHC				epPKP	pPKPdf	08 28 04.5	+1.2
ROTZ	Rotzenmuhle	148.78	333	ePKPbc	PKPbc	08 27 57.4	+0.9
UBBA	Unterbreizbach	148.81	336	ePKPbc	PKPbc	08 27 56.4	-0.2
GEC2	GERESS Array S	148.82	330	ePKPbc	PKPbc	08 27 57.4	+0.7
GERES	GERESS Array B	148.82	330	PKPbc	PKPbc	08 27 57.2	+0.6
	comp=Z,6.7nm,0.8s,baz=50,slow=2.3,SNR=44						
WET	Wettzell	148.97	332	ePKPbc	PKPbc	08 27 57.9	+0.9
KOGS	Kog	149.22	325	i PKPbc	PKPbc	08 27 57.9	+0.1
BUG	Bochum--Univer	149.22	340	ePKPbc	PKPbc	08 27 58.1	+0.5
GRA1	Grafenberg Arr	149.24	334	ePKPbc	PKPbc	08 27 58.4	+0.7
GRF	Grafenberg Arr	149.24	334	ePKPbc	PKPbc	08 27 58.4	+0.7
PERS	Pernice	149.68	326	i PKPbc	PKPbc	08 27 59.0	+0.1
PERS				i		08 28 08.8	
SOKA	Soboth	149.70	326⇓	iP	PKPbc	08 27 59.0	+0.1
TNS	Taunus Mts	149.86	337	ePKPbc	PKPbc	08 27 59.6	+0.4
RJOB	Jochberg	150.04	330	ePKPbc	PKPbc	08 28 00.1	+0.4
BOJS	Bojanci	150.36	324	i PKPbc	PKPbc	08 28 01.2	+0.7
BOJS				e		08 28 11.3	
VISS	Visnje	150.38	325	i PKPbc	PKPbc	08 28 00.9	+0.3
VISS				e		08 28 11.1	
LJU	Ljubljana	150.38	326	i PKPbc	PKPbc	08 28 01.0	+0.4
LJU				i		08 28 11.1	
FUR	Furstenfeldbru	150.40	332	ePKPbc	PKPbc	08 28 01.3	+0.7
STU	Stuttgart	150.78	335	ePKPbc	PKPbc	08 28 01.7	+0.2
ABTA	Abfaltersbach	150.90	329	i P	PKPbc	08 28 01.4	-0.4
	comp=Z,16nm,0.7s,SNR=6.0						
WTTA	Wattenberg	150.92	330⇓	iP	PKPbc	08 28 02.2	+0.3
	comp=Z,32nm,1.1s,SNR=6.1						
MOTA	Moosalm	151.10	331⇓	iP	PKPbc	08 28 02.5	+0.2
	comp=Z,15nm,0.9s,SNR=7.4						
WLF	Walferdange	151.12	339	ePKPbc	PKPbc	08 28 03.3	+1.1
GIVF	Givet	151.14	341	ePKP1	PKPbc	08 28 02.0	-0.2
	comp=Z,36nm,0.9s						
BAIF	Baives	151.36	342	ePKP1	PKPbc	08 28 02.6	-0.2
	comp=Z,15nm,0.9s						
BFO	Black Forest	151.47	335	ePKPbc	PKPbc	08 28 03.1	0.0
FETA	Feichten	151.51	331⇓	iP	PKPbc	08 28 03.8	+0.5
	comp=Z,19nm,0.9s,SNR=10						
CDF	Champ du Feu	151.80	337	ePKP1	PKPbc	08 28 03.4	-0.4
	comp=Z,27nm,1.0s						
HINF	Hinteralfeld	152.45	337	ePKP1	PKPbc	08 28 04.7	-0.6
	comp=Z,12nm,0.8s						
HAU	Haudompre	152.48	337	ePKP1	PKPbc	08 28 04.9	-0.5
	comp=Z,17nm,0.8s						
MEZF	Maizieres J'vi	152.49	340	ePKP1	PKPbc	08 28 05.4	0.0
	comp=Z,42nm,1.0s						
FLN	La Foliniere	153.71	347	ePKP1	PKPbc	08 28 07.3	-0.7
CABF	La Chapelle	153.75	336	ePKP1	PKPbc	08 28 08.2	0.0
LOR	Lormes	153.95	340	ePKP1	PKPbc	08 28 08.1	-0.5
SMF	Signal de Mont	154.51	339	ePKP1	PKPbc	08 28 10.2	+0.4
ORIF	Oris-en-Rattie	155.24	334	ePKP1	PKPdf	08 28 11.9	+9.4
	comp=Z,9.6nm,0.8s						
TCF	Toulx Ste Croi	155.34	341	ePKP1	PKPdf	08 28 11.0	+8.4
PGF	Pioggiola	155.66	326	ePKP1	PKPdf	08 28 11.9	+8.8
	comp=Z,16nm,1.0s						
FRF	La Foret Royal	156.02	331	ePKP1	PKPdf	08 28 11.5	+7.9
	comp=Z,20nm,1.1s						
SMRF	Simiane la Rot	156.14	333	ePKP1	PKPdf	08 28 11.4	+7.7
LMR	La Mourre	156.26	331	ePKP1	PKPdf	08 28 11.7	+7.8
TORD	Torodi Ar. Bea	165.68	227	PKP	PKPdf	08 28 13.8	-1.0
	comp=Z,1.5nm,0.8s,baz=98,slow=0.4,SNR=7.3						
TORD				PKPab	PKPab	08 29 12.2	-1.5
	comp=Z,1.0nm,0.8s,baz=138,slow=3.3,SNR=4.2						

*ISCJB **07** 08:41:29.1±1.6, 22.24S±0.09×179.5W±0.1, h554km±23km, mb4.2/15, Error ellipse: s-maj=16.8km s-min=11.5km az=42.6*

*NEIC **07** 08:41:29.3±1.4, 22.33S×179.39W, h547km±19km, mb4.4/13, Error ellipse: s-maj=19.5km s-min=10.3km az=151.0*

*IDC **07** 08:41:32.6±10.0, 22.41S×179.42W, h581km±133km, mb3.4/4, mb1 3.7/5, mb1mx3.3/15, mbtmp3.4/5, Error ellipse: s-maj=61.0km s-min=33.3km az=5.0*

ISC 07 08:41:29.3±1.6**, 22.40S**±0.10×**179.4W**±0.1**, h546**km±21km**, n21,** σ1.02/22**, mb4.2**/15**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	11.11	42	eP	P	08 43 58.0	-0.8
URZ	Urewera	16.09	190	P	P	08 44 50.6	+1.0
	0.8nm,0.3s,baz=189,slow=3.4,SNR=7.1						
URZ				S	S	08 47 32.4	-0.9
	0.4nm,0.3s,baz=354,slow=13,SNR=6.3						
CNB	Canberra Magne	30.11	238	eP	P	08 46 57.2	+2.3
CTA	Charters Tower	32.08	268	eP	P	08 47 12.2	+0.3
	4.1nm,0.3s,mb4.4						
CTAO	Charters Tower	32.08	268	eP	P	08 47 11.9	0.0
	6.5nm,0.4s,mb4.5						
TOO	Toolangi	33.75	235	eP	P	08 47 27.6	+1.8
TAU	Tasmania Unive	34.38	226	P	P	08 47 29.5	-1.4
	20nm,1.2s,mb4.5						
PMG	Port Moresby	34.58	287	eP	P	08 47 32.2	-0.8
	19nm,0.8s,mb4.7						
STKA	Stephens Creek	35.83	246⇓	iP	P	08 47 44.5	+1.3
	6.2nm,0.5s,mb4.4						
STKA	Stephens Creek	35.83	246	P	P	08 47 44.6	+1.4
	7.9nm,0.5s,mb4.5,baz=91,slow=9.9,SNR=38						
ASAR	Alice Springs	42.86	259	P	P	08 48 40.0	+0.1
	7.8nm,0.6s,mb4.4,baz=94,slow=7.8,SNR=83						
WRAB	Tennant Creek	43.09	264	eP	P	08 48 40.4	-1.4
	6.4nm,0.9s,mb4.2						
KAKA	Kakadu	46.77	273	eP	P	08 49 09.2	-0.8
	5.0nm,0.3s,mb4.5						
FORT	Forrest	47.38	248	eP	P	08 49 14.5	+0.1
	22nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	51.53	264	eP	P	08 49 45.1	0.0
	4.3nm,0.6s,mb4.0						
MBWA	Marble Bar	56.21	259	eP	P	08 50 17.3	-0.8
	13nm,0.5s,mb4.4						
PMSA	Palmer Station	80.06	157	P	P	08 52 40.5	-1.5
	15nm,1.4s,mb4.1						
CMB	Columbia Colle	81.72	43	P	P	08 52 51.8	+0.8
	2.1nm,0.7s,mb3.7						
NVAR	Mina Array Bea	83.28	44	P	P	08 52 59.4	+0.5
	1.0nm,0.9s,mb3.4,baz=219,slow=6.9,SNR=6.1						
TXAR	Lajitas Array	89.16	58	P	P	08 53 27.6	+0.6
	0.8nm,0.9s,mb3.5,baz=208,slow=5.8,SNR=6.9						
ANMO	Albuquerque	89.59	52	P	P	08 53 29.1	+0.2
	0.7nm,0.8s,mb3.5						

*BJI **07** 08:52:30.2, 2.73S×134.38E, h13km, mB5.1, mb5.0, Ms4.6, Msz4.1*

*NEIC **07** 08:52:31.1±3.1, 2.61S×134.12E, h1km±19km, mb5.2/29, Error ellipse: s-maj=8.3km s-min=5.4km az=59.0*

*ISCJB **07** 08:52:31.3±1.2, 2.74S±0.03×134.09E±0.04, h12km±7km, mb5.1/71, MS4.1/23, Error ellipse: s-maj=7.1km s-min=5.6km az=2.7*

*IDC **07** 08:52:31.2±0.4, 2.61S×134.08E, h0km, mb4.9/19, mb1 5.0/20, mb1mx5.0/22, mbtmp5.0/20, ML5.5/1, MS3.9/11, Ms1 3.9/11, ms1mx3.8/23, Error ellipse: s-maj=20.2km s-min=11.5km az=70.0*

*MOS **07** 08:52:35.2±1.5, 2.71S×134.01E, h34km, mb5.3/31, MS4.0/5, Error ellipse: s-maj=13.4km s-min=6.6km az=112.2*

*DJA **07** 08:52:38, 2.77S×134.04E, h33km, Mw5.3/16*

ISC 07 08:52:34.5±1.3**, 2.71S**±0.03×**134.13E**±0.04**, h21**km±9km**, h13**km±.9km**:pP-P, n227,** σ1.23/199**, mb5.1**/71**, MS4.1**/23**, 12C-10D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	Tual	3.23	205⇑	eP	Pn	08 53 20.5	-3.5
AAI	Ambon	6.00	261⇑	eP	Pn	08 54 00.5	-1.7
KAKA	Kakadu	10.08	189	eP	Pn	08 54 57.5	-0.7
	161nm,0.6s						
BATI	Baumata	12.79	234	Pn	Pn	08 55 34.5	-0.8
	26nm,0.3s,baz=118,slow=4.3,SNR=12						
BATI				Sn	Sn	08 57 56.6	-0.5
	1.4nm,0.3s,baz=282,slow=23,SNR=3.2						
DAV	Davao City (W)	12.93	319	LR	LR	09 01 23.4	
	comp=Z,881nm,18.2s,baz=132,slow=42						
COEN	Coen	14.31	142	ePn	Pn	08 55 54.9	-1.2
	37nm,0.9s						
KAPI	Kappang	14.53	260	Pn	Pn	08 56 00.2	+1.1
	1.6nm,0.3s,baz=128,slow=9.9,SNR=12						
KAPI				LR	LR	09 02 27.2	
	comp=Z,179nm,18.8s,baz=256,slow=41						
KAPI	Kappang	14.53	260	ePn	Pn	08 55 59.9	+0.8
PMG	Port Moresby	14.56	118	eP	Pn	08 56 02.3	+2.8
WRAB	Tennant Creek	17.12	179	Pn	Pn	08 56 29.9	-2.8
	620nm,1.0s,SNR=10						
WRAB	Tennant Creek	17.12	179	eP	Pn	08 56 29.2	-3.5
WRAB				e		08 59 34.8	
WRAB				pmax	pmax		
	comp=Z,169nm,1.3s						
WRAB	Tennant Creek	17.12	179	ePn	Pn	08 56 29.2	-3.5
	comp=Z,169nm,1.3s						
WRAB				eSn	Sn	08 59 34.8	-7.8
FITZ	Fitzroy Crossi	17.42	208	eP	Pn	08 56 31.7	-4.7
	comp=Z,87nm,0.6s						
FITZ				eS	Sn	08 59 34.2	-16
FITZ	Fitzroy Crossi	17.42	208	P	Pn	08 56 33.6	-2.8
	comp=Z,1.6nm,0.3s,baz=33,slow=14,SNR=34						
FITZ				S	Sn	08 59 33.6	-16
	comp=Z,0.5nm,0.3s,baz=119,slow=17,SNR=3.6						
FITZ				LR	LR	09 03 36.8	
	comp=Z,154nm,20.9s,baz=166,slow=38						
MYLDM	Lahad Datu	17.47	297	⇑P	Pn	08 56 42.9	+5.8
SDKM	Sandakan	18.84	296	⇑P	Pn	08 56 58.9	+5.0
GUMO	Guam	19.38	33	LR	LR	09 03 14.8	
	comp=Z,187nm,18.1s,baz=222,slow=33						
KKM	Kota Kinabalu	19.89	296	⇑P	Pn	08 57 12.5	+6.0
KKM	Kota Kinabalu	19.89	296	eP	Pn	08 57 06.3	-0.2
ASAR	Alice Springs	20.84	181	P	P	08 57 16.4	+1.4
	comp=Z,178nm,0.8s,baz=5.6,slow=12,SNR=1423						
ASAR				S	S	09 01 06.3	-0.3
	comp=Z,6.4nm,0.9s,baz=2.1,slow=28,SNR=4.0						
ASAR	Alice Springs	20.84	181	P	P	08 57 16.4	+1.4
ASAR				S	S	09 01 06.4	-0.3
ASAR				pmax	pmax		
	comp=Z,178nm,0.8s						
ASAR				smax			
	comp=N,6.0nm,0.9s						
CTA	Charters Tower	20.94	146	eP	P	08 57 17.6	+1.4
	comp=N,31nm,0.9s						
CTA				eS	S	09 01 16.0	+7.2
CTA	Charters Tower	20.94	146	P	P	08 57 18.4	+2.3
	comp=N,33nm,0.8s,baz=325,slow=12,SNR=20						
CTA				LR	LR	09 06 35.3	
	comp=N,687nm,18.5s,MS4.1,baz=321,slow=40						
CTA	Charters Tower	20.94	146	eP	P	08 57 17.6	+1.4
CTA				pmax	pmax		
	comp=Z,31nm,0.9s						
CTAO	Charters Tower	20.94	146	eP	P	08 57 17.0	+0.8
CTAO				pmax	pmax		

comp=Z,135nm,1.4s
CTAO Charters Tower 20.94 146 *e*P **P 08 57 17.0 +0.9**
comp=Z,135nm,1.4s
TRT Tretes 21.97 256⇓*e*P **P 08 57 24.0 -3.3**
MBWA Marble Bar 23.09 216 *e*P **P 08 57 38.7 -0.4**
KSM Kuching 24.17 280 *e*P **P 08 57 49.3 -0.4**
HNR Honiara 26.51 106 P **P 08 58 10.2 -0.7**
comp=Z,43nm,0.4s,mb5.3,baz=185,slow=4.5,SNR=3.4
HNR Honiara 26.51 106 P **P 08 58 10.2 -0.7**
EIDS Eidsvold 27.82 146 *e*P **P 08 58 28.1 +5.6**
FORT Forrest 28.50 191 *e*P **P 08 58 29.0 +0.4**
comp=E,89nm,0.6s,mb5.7
STKA Stephens Creek 29.86 167 *e*P **P 08 58 40.1 -0.5**
comp=Z,8.3nm,0.9s,mb4.5
STKA Stephens Creek 29.86 167 P **P 08 58 39.9 -0.7**
comp=Z,8.9nm,0.8s,mb4.6,baz=339,slow=7.4,SNR=21
STKA LR LR 09 12 00.0
comp=Z,591nm,18.3s,MS4.3,baz=358,slow=39
JOW Kunigami 29.91 349 LR LR 09 08 60.0
comp=Z,346nm,19.6s,MS4.0,baz=143,slow=33
MYKOM **Kota Tinggi 30.60 278** ⇓P **P 08 58 52.7 +5.3**
KGM Kluang 31.16 278 ⇑P **P 08 58 57.5 +5.2**
QIZ Qiongzhong 32.20 313 P **P 08 59 01.0 -0.4**
QIZ S **S 09 04 12.6 -1.0**
QIZ AMB AMB
comp=Z,15nm,1.3s,mb4.7
QIZ LR LR
comp=N,158nm,21.6s
QIZ LR LR
comp=Z,208nm,28.1s
QIZ Qiongzhong 32.20 313 *e*P **P 08 58 57.5 -4.0**
comp=Z,19nm,0.9s,mb4.9
KLBR Kellerberrin 32.61 207 *e*P **P 08 59 05.2 +0.3**
comp=Z,88nm,1.2s,mb5.6
IPM Ipoh 33.84 282 ⇓P **P 08 59 19.9 +4.1**
NWAO Narrogin (SRO) 33.98 206 P **P 08 59 17.1 +0.3**
comp=Z,19nm,0.6s,mb5.2,baz=27,slow=6.4,SNR=7.5
NWAO Narrogin (SRO) 33.98 206 *e*P **P 08 59 16.9 +0.1**
NWAO pmax pmax
comp=Z,77nm,1.2s
NWAO Narrogin (SRO) 33.98 206 *e*P **P 08 59 16.9 +0.1**
comp=Z,77nm,1.2s,mb5.5
SNG Songkhla 34.86 287 P **P 08 59 27.0 +2.3**
SSE Sheshan 35.80 341 P **P 08 59 33.5 +1.0**
SSE XP sP 08 59 38.1 -3.3
SSE S **S 09 05 10.5 +1.5**
SSE XS sS 09 05 15.9 -3.5
SSE AMB AMB
comp=Z,58nm,0.8s,mb5.6
SSE AMB AMB
comp=Z,85nm,4.8s
SSE LR LR
comp=N,51nm,15.0s,MS4.1
SSE LR LR
comp=E,241nm,14.9s,MS4.1
SSE LR LR
comp=Z,134nm,15.4s,MS3.8
TOO Toolangi 36.23 165 *e*P **P 08 59 37.1 +1.0**
NJ2 Nanjing 37.49 338 *e*P **P 08 59 46.2 -0.7**
NJ2 AP pP 08 59 50.7 -2.5
NJ2 XP sP 08 59 53.3 -2.5
NJ2 PP PP 09 01 14.0 +1.3
NJ2 S **S 09 05 34.0 -0.7**
NJ2 XS sS 09 05 42.0 -3.1
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb5.0
NJ2 AMB AMB
comp=Z,90nm,7.3s
NJ2 LR LR
comp=N,250nm,21.2s,MS4.1
NJ2 LR LR
comp=E,270nm,23.1s,MS4.1
NJ2 LR LR
comp=Z,260nm,20.7s,MS4.0
WHN Wuhan 38.07 332 P **P 08 59 54.5 +2.6**
NST Nakhon Sawan 38.26 300 P **P 08 59 55.0 +1.3**
MJAR Matsushiro Arr 39.23 5 P **P 09 00 00.1 -1.4**
comp=Z,3.9nm,0.9s,mb4.2,baz=186,slow=8.8,SNR=6.4
MJAR PcP PcP 09 02 12.1 +1.6
comp=Z,2.9nm,0.8s,baz=155,slow=3.9,SNR=4.4
MJAR LR LR 09 13 17.9
comp=Z,144nm,19.1s,MS3.8,baz=200,slow=32
MJAR Matsushiro Arr 39.23 5 P **P 09 00 00.1 -1.4**
MJAR 09 02 12.1
MJAR pmax pmax
comp=Z,4.0nm,0.9s
MJAR pmax pmax
comp=Z,3.0nm,0.8s
MJAR Matsushiro Arr 39.23 5 P **P 09 00 00.1 -1.4**
MJAR PcP PcP 09 02 12.1 +1.6
MJAR LR LR 09 13 17.9
MAJO Matsushiro 39.23 5 P **P 08 59 59.9 -1.6**
comp=Z,13nm,0.9s,mb4.7
MAT Matsushiro 39.23 5 P **P 09 00 00.1 -1.4**
GYA Guiyang 39.31 319 P **P 09 00 04.2 +1.9**
GYA AMB AMB
comp=Z,20nm,0.8s,mb4.9
GYA AMB AMB
comp=Z,120nm,4.9s
GYA LR LR
comp=N,530nm,19.0s,MS4.5
GYA LR LR
comp=E,490nm,18.6s,MS4.5
GYA LR LR
comp=Z,500nm,18.7s,MS4.4
KSRS Korea Array 40.37 352 P **P 09 00 10.1 -0.9**
comp=Z,4.5nm,0.9s,mb4.2,baz=172,slow=11,SNR=9.5
KSRS LR LR 09 15 26.2
comp=Z,99nm,20.1s,MS3.7,baz=180,slow=34
CHRT Chiangrai 40.50 305 P **P 09 00 14.0 +1.7**
CMAR Chiang Mai Arr 40.52 303 P **P 09 00 12.1 -0.4**
comp=Z,11nm,0.8s,mb4.5,baz=126,slow=6.9,SNR=31
CMAR PcP PcP 09 02 16.2 +1.3
comp=Z,3.1nm,0.7s,baz=159,slow=1.9,SNR=6.6
CMAR LR LR 09 15 19.8
comp=Z,111nm,21.6s,MS3.7,baz=139,slow=34
CMAR Chiang Mai Arr 40.52 303 P **P 09 00 12.1 -0.4**
CMAR 09 02 16.3
CMAR pmax pmax
comp=Z,11nm,0.8s
CMAR pmax pmax
comp=Z,3.0nm,0.7s
CHG Chiang Mai 40.69 303 ⇑P **P 09 00 15.7 +1.8**
comp=Z,14nm,0.9s,mb4.6
CHTO Chiang Mai 40.69 303 *e*P **P 09 00 12.0 -1.9**
CHTO *e* 09 00 25.0
CHTO pmax pmax
comp=Z,21nm,1.1s,mb4.7
CHTO Chiang Mai 40.69 303 *e*P **P 09 00 12.0 -1.9**
comp=Z,20nm,1.1s,mb4.7
CHTO *e* 09 00 25.0
KMI Kunming 41.13 314 P **P 09 00 18.0 +0.5**
KMI AP pP 09 00 22.4 -1.5
KMI XP sP 09 00 23.8 -2.6
KMI PP PP 09 01 54.0 +1.4
KMI PPP 09 02 26.3
KMI S **S 09 06 32.6 +2.8**
KMI XS sS 09 06 38.6 -1.7
KMI SS SS 09 09 29.6 -3.3
KMI SSS 09 10 09.1
KMI AMB AMB
comp=Z,11nm,1.4s,mb4.3
KMI AMB AMB
comp=Z,77nm,3.1s
KMI LR LR
comp=N,127nm,23.5s,MS3.9
KMI LR LR
comp=E,143nm,22.8s,MS3.9
KMI LR LR
comp=Z,211nm,22.0s,MS4.0
TAU Tasmania Unive 41.72 165 P **P 09 00 21.9 -0.1**
TAU pmax pmax
comp=Z,39nm,1.4s,mb4.8
TAU Tasmania Unive 41.72 165 P **P 09 00 21.9 -0.1**
comp=Z,39nm,1.4s,mb4.8
TIA Tai'an 41.85 339 ⇑P **P 09 00 22.2 -0.9**
XAN Xi'an 43.59 329 P **P 09 00 36.2 -1.1**
XAN AP pP 09 00 39.2 -4.5
XAN XP sP 09 00 42.9 -3.4
XAN PP PP 09 02 20.2 +1.3
XAN S **S 09 07 04.2 -1.4**
XAN SS SS 09 10 09.0 -12
XAN AMB AMB
comp=Z,26nm,1.1s,mb4.9
XAN AMB AMB
comp=Z,54nm,12.5s
XAN LR LR
comp=N,50nm,16.1s,MS3.8
XAN LR LR
comp=E,96nm,17.9s,MS3.8
XAN LR LR
comp=Z,167nm,21.3s,MS3.9
CD2 Chengdu 44.21 321 P **P 09 00 44.0 +1.6**
CD2 AP pP 09 00 47.8 -1.0
CD2 XP sP 09 00 50.8 -0.6
CD2 PP PP 09 02 28.1 +2.4
CD2 PCS PcS 09 06 18.6 -1.6
CD2 S **S 09 07 16.9 +2.0**
CD2 XS sS 09 07 24.3 -1.2
CD2 SS SS 09 10 27.4 -6.0
CD2 SCS ScS 09 10 38.5 -1.7
CD2 AMB AMB
comp=Z,30nm,1.1s,mb4.9
CD2 AMB AMB
comp=Z,70nm,6.2s
CD2 LR LR
comp=N,430nm,14.4s,MS4.5
CD2 LR LR
comp=E,290nm,18.0s,MS4.5
CD2 LR LR
comp=Z,180nm,18.0s,MS4.0
BJT Baijiatuao 45.60 341 *e*P **P 09 00 52.7 -0.6**
BJT pmax pmax
comp=Z,161nm,1.1s
BJT Baijiatuao 45.60 341 *e*P **P 09 00 52.7 -0.5**
comp=Z,161nm,1.1s,mb5.9
BJI Beijing 45.62 341 P **P 09 00 53.1 -0.3**
BJI S **S 09 07 33.1 -1.8**
BJI AMB AMB
comp=Z,98nm,1.1s,mb5.7
BJI LR LR
comp=N,146nm,29.2s
BJI LR LR
comp=E,312nm,20.8s
BJI LR LR
comp=Z,98nm,27.5s,MS3.6
VLA Vladivostok 45.66 358 *e*P **P 09 00 55.7 +2.0**
CN2 Changchun 46.95 351 *e*P **P 09 01 03.8 0.0**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
MDJ Mudanjiang 47.29 356 P **P 09 01 06.6 +0.2**
MDJ AP pP 09 01 09.7 -3.2
MDJ XP sP 09 01 11.0 -4.4
MDJ PCP PcP 09 02 34.4 -2.9
MDJ PP PP 09 02 55.4 -2.3
MDJ SCP ScP 09 06 30.7 +0.3
MDJ PCS PcS 09 06 32.6 +0.2
MDJ S **S 09 08 06.7 +8.0**
MDJ SCS ScS 09 11 00.6 +1.2
MDJ AMB AMB
comp=Z,38nm,0.8s,mb5.4
MDJ AMB AMB
comp=Z,161nm,4.0s
MDJ LR LR
comp=N,27nm,31.1s
MDJ LR LR
comp=E,119nm,26.0s
MDJ LR LR
comp=Z,67nm,34.4s,MS3.4
MDJ Mudanjiang 47.29 356 P **P 09 01 05.3 -1.2**
comp=Z,38nm,1.0s,mb5.3
LZH Lanzhou 47.84 327 *e*P **P 09 01 11.0 +0.1**
LZH AP pP 09 01 14.2 -3.2
LZH XP sP 09 01 16.5 -3.4
LZH PP PP 09 03 02.2 -0.8
LZH S **S 09 08 07.1 +0.2**
LZH XS sS 09 08 17.0 -0.6
LZH SS SS 09 11 31.0 -4.8
LZH AMB AMB
comp=Z,60nm,1.3s,mb5.5
LZH AMB AMB
comp=Z,217nm,4.3s
LZH LR LR
comp=E,1μm,14.4s
LZH LR LR
comp=Z,2μm,16.6s,MS5.1
HHC Hu-ho-hao-te 47.99 337 *e*P **P 09 01 12.3 +0.3**
HHC AP pP 09 01 23.7 +5.2
HHC PCP PcP 09 02 39.6 -0.4
HHC PP PP 09 03 04.2 -0.1
HHC SCP ScP 09 06 28.3 -5.2
HHC PCS PcS 09 06 33.9 -1.6
HHC S **S 09 08 07.6 -1.3**
HHC XS sS 09 08 26.6 +7.0
HHC SCS ScS 09 10 58.8 -5.5
HHC SS SS 09 11 32.1 -6.1
HHC AMB AMB
comp=Z,22nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,135nm,6.2s
HHC LR LR
comp=N,159nm,16.1s,MS4.2
HHC LR LR
comp=E,154nm,15.5s,MS4.2
HHC LR LR
comp=Z,162nm,16.3s,MS4.1
SHL Shillong 49.63 307 *e*P **P 09 01 27.0 +2.1**
YSS Yuzh-Sakhalins 50.03 8 *e*P **P 09 01 30.2 +2.7**
KLR Kul'dur 51.77 358 *e*P **P 09 01 36.4 -4.1**
KLR pmax pmax
comp=Z,56nm,1.8s,mb5.2
LSA Lhasa 52.21 311 P **P 09 01 48.0 +3.7**
LSA Lhasa 52.21 311 *e*P **P 09 01 46.9 +2.6**
LSA pmax pmax
comp=Z,14nm,0.8s,mb4.9
LSA Lhasa 52.21 311 *e*P **P 09 01 46.9 +2.6**
comp=Z,14nm,0.8s,mb4.9
RPZ Rata Peaks 52.31 147 P **P 09 01 46.9 +2.2**
comp=Z,20nm,1.2s,mb4.9,baz=297,slow=4.5,SNR=3.6
GTA Gaotai 52.45 327 P **P 09 01 45.8 0.0**
GTA AP pP 09 01 49.5 -2.8
GTA XP sP 09 01 52.5 -2.3
GTA PCP PcP 09 03 00.6 +4.2
GTA PP PP 09 03 46.9 +2.1
GTA S **S 09 09 12.2 +1.2**
GTA SS SS 09 12 48.0 -1.4
GTA AMB AMB
comp=Z,7.0nm,1.1s,mb4.5
GTA AMB AMB
comp=Z,103nm,6.0s
GTA LR LR
comp=N,72nm,10.8s,MS4.2
GTA LR LR
comp=E,105nm,12.0s,MS4.2
GTA LR LR
comp=Z,133nm,16.2s,MS4.1
ODAN Odare 53.81 306 *e*P **P 09 01 55.3 -0.8**
comp=Z,57nm,0.8s,mb5.6
PALK Pallekele 54.23 281 P **P 09 01 58.4 -1.0**
comp=Z,24nm,1.2s,mb5.0
RAMN Ramite 54.48 306 *e*P **P 09 02 00.1 -0.9**
comp=Z,57nm,0.9s,mb5.5
JIRN Jiri 55.12 307 *e*P **P 09 02 04.9 -0.7**
comp=Z,22nm,0.7s,mb5.3
GUN Gumba 55.47 307 *e*P **P 09 02 07.5 -0.6**
comp=Z,53nm,0.9s,mb5.6
ULN Ulaanbaatar 55.65 338 *e*P **P 09 02 07.1 -1.9**
ULN *e* 09 03 09.0
ULN pmax pmax
comp=Z,40nm,1.6s,mb5.2
ULN Ulaanbaatar 55.65 338 *e*P **P 09 02 07.1 -1.9**
comp=Z,40nm,1.6s,mb5.2
ULN *e*PcP PcP 09 03 09.0 +0.6
PKI Pulchoki 55.71 306 *e*P **P 09 02 10.8 +1.0**
SONM Songino Array 55.87 338 P **P 09 02 10.9 +0.3**
comp=Z,5.9nm,1.1s,mb4.5,baz=154,slow=6.3,SNR=11
SONM PcP PcP 09 03 10.1 +0.9
comp=Z,2.2nm,0.7s,baz=129,slow=3.9,SNR=3.3
SONM LR LR 09 28 40.9
comp=Z,135nm,19.4s,MS4.0,baz=90,slow=39
SONM Songino Array 55.87 338 P **P 09 02 10.9 +0.3**
SONM 09 03 10.1
SONM pmax pmax
comp=Z,6.0nm,1.1s
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM MLR MLR
comp=Z,135nm,19.4s
KKN Kakani 55.90 306 *e*P **P 09 02 12.1 +0.9**
comp=Z,26nm,0.8s,mb5.3
DMN Daman 55.97 306 *e*P **P 09 02 12.6 +0.9**
comp=Z,42nm,1.0s,mb5.4
GKN Gorkha 56.51 306 *e*P **P 09 02 17.4 +1.8**
CIT Chita 57.25 345 *e*P **P 09 02 21.0 +0.7**
KOLN Koldanda 57.25 306 *e*P **P 09 02 23.1 +2.2**
comp=Z,70nm,0.9s,mb5.7
DANN Dangsing 57.36 306 *e*P **P 09 02 23.7 +2.1**
comp=Z,77nm,0.8s,mb5.8
HYB Hyderabad 58.32 292 *i*P **P 09 02 30.0 +1.5**
HYB Hyderabad 58.32 292 *e*P **P 09 02 30.5 +2.0**
PETK Petropavlovsk- 59.03 16 P **P 09 02 32.1 -0.7**
comp=Z,6.9nm,0.9s,mb4.7,baz=180,slow=2.7,SNR=5.5
ZAK Zakamensk 59.14 338 *e*P **P 09 02 32.5 -1.1**
ZAK *e* 09 03 21.7
ZAK pmax pmax
comp=Z,10.0nm,1.6s,mb4.6
PET Petropavlovsk 59.23 17 *e*P **P 09 02 38.8 +4.6**
CLNS Chul'man 59.82 354 *e*P **P 09 02 39.9 +1.7**
CLNS pmax pmax
comp=Z,23nm,0.8s,mb5.3
CLNS pmax pmax
comp=N,8.0nm,0.6s
CLNS pmax pmax
comp=E,4.0nm,0.6s
TLY Talaya 60.05 339 *e*P **P 09 02 43.4 +3.6**
TLY pmax pmax
comp=Z,11nm,1.8s,mb4.6
TLY MLR MLR
comp=Z,54nm,15.0s,MS3.8
TLY Talaya 60.05 339⇑*i*P **P 09 02 41.0 +1.2**
WMQ Urumqi 62.23 324⇑*i*P **P 09 02 54.8 0.0**
WMQ AP pP 09 02 58.4 -3.0
WMQ XP sP 09 03 01.4 -2.5
WMQ PP PP 09 05 14.0 +2.1
WMQ *e*S **S 09 11 18.0 -1.6**
WMQ AMB AMB
comp=Z,56nm,0.9s,mb5.7
WMQ AMB AMB
comp=Z,184nm,4.7s
WMQ LR LR
comp=N,674nm,15.4s,MS5.0
WMQ LR LR
comp=E,518nm,16.5s,MS5.0
WMQ LR LR
comp=Z,680nm,24.5s
BOD Bodaibo 62.46 348 *e*P **P 09 02 55.0 -1.1**
BOD pmax pmax
comp=Z,18nm,1.1s,mb5.1
SMLA Simla 63.71 307 *i*P **P 09 03 04.4 -0.6**
YAK Yakutsk 64.65 358 *e*P **P 09 03 12.7 +2.3**
YAK pmax pmax
comp=N,11nm,0.9s
YAK pmax pmax
comp=Z,33nm,0.7s,mb5.5
YAK Yakutsk 64.65 358 *e*P **P 09 03 10.1 -0.3**
MKAR Makanchi Array 67.05 324 P **P 09 03 25.9 -0.3**
comp=Z,27nm,0.7s,mb5.4,baz=112,slow=8.1,SNR=67
MKAR Makanchi Array 67.05 324 P **P 09 03 25.9 -0.3**
MKAR pmax pmax
comp=Z,27nm,0.7s
KSH Kashi 67.79 315 *e*P **P 09 03 35.0 +3.9**
KSH *e*AP pP 09 03 40.1 +2.3
KSH *e*XP sP 09 03 42.5 +2.2
KSH *e*PCP PcP 09 04 01.1 +3.4
KSH *e*PP PP 09 06 08.2 +7.4
KSH *e*PPP 09 07 46.2
KSH *e*SCP 09 08 02.1
KSH *e*PCS 09 08 04.1
KSH *e*S S 09 12 34.1 +5.9
KSH *e*XS sS 09 12 42.1 +2.9
KSH *e*PS 09 13 01.2
KSH *e*SCS ScS 09 13 30.3 +1.4
KZA Kyzart 69.33 317 P **P 09 03 45.4 +4.7**
SNR=6.0
TKM2 Tokmak 2 69.44 318 *e*P **P 09 03 41.2 -0.1**
TKM2 pmax pmax
comp=Z,23nm,0.9s,mb5.1
TKM2 Tokmak 2 69.44 318 P **P 09 03 44.6 +3.3**
SNR=8.7
TKM2 Tokmak 2 69.44 318 *e*P **P 09 03 41.2 -0.1**
comp=Z,23nm,0.9s,mb5.1
ZAA0 Zalesovo Array 69.69 331 *e*P **P 09 03 41.0 -1.6**
ZALV Zalesovo Beam 69.69 331 P **P 09 03 41.3 -1.3**
comp=Z,11nm,1.0s,mb4.8,baz=103,slow=6.7,SNR=8.5
ZAL Zalesovo 69.69 331 P **P 09 03 41.3 -1.3**
ZAL pmax pmax
comp=Z,11nm,1.0s
MIR Mirnyy 69.87 196⇓*i*P **P 09 03 43.0 -0.5**
MIR pmax pmax
comp=Z,100nm,2.0s,mb5.4
UCH Uchtor 69.89 317 P **P 09 03 44.8 +0.7**
SNR=32
UCH Uchtor 69.89 317 *e*P **P 09 03 44.6 +0.5**
comp=Z,32nm,1.0s,mb5.2
FRU Bishkek 70.06 318 *e*P **P 09 03 48.0 +2.9**
AAK Ala-Archa 70.06 317 P **P 09 03 45.4 +0.2**
SNR=5.9
USP Ospenovka 70.31 318 P **P 09 03 46.5 -0.2**
SNR=30
AML Almayashu 70.41 317 P **P 09 03 51.8 +4.5**
SNR=7.3
AML Almayashu 70.41 317 *e*P **P 09 03 47.7 +0.4**
comp=Z,129nm,0.6s,mb6.0
EKS2 Erkin-Say 70.56 317 P **P 09 03 48.3 +0.1**
SNR=27
EKS2 Erkin-Say 70.56 317 *e*P **P 09 03 47.6 -0.6**
comp=Z,24nm,0.8s,mb5.2
KURK Kurchatov 71.13 326 P **P 09 03 51.8 +0.3**
comp=Z,196nm,1.0s,mb6.0,SNR=12
KURK Kurchatov 71.13 326 ⇓Pn **P 09 03 50.4 -1.1**
comp=Z,40nm,1.0s,mb5.3
KURK Kurchatov 71.13 326 P **P 09 03 50.5 -1.0**
comp=Z,4.1nm,0.3s,mb4.8,baz=92,slow=5.2,SNR=3.6
KURK Kurchatov 71.13 326 *e*P **P 09 03 50.3 -1.2**
KURK pmax pmax
comp=Z,38nm,1.0s,mb5.3
KURK Kurchatov 71.13 326 *e*P **P 09 03 50.3 -1.2**
comp=Z,38nm,1.0s,mb5.3
KURBB **Kurchatov Arra 71.14 326** ⇓Pn **P 09 03 50.7 -0.8**
comp=Z,7.3nm,1.1s,mb4.5
BILL Bilibino 74.06 12 *i*P **P 09 04 11.2 +2.6**
BILL *e* 09 04 22.3
BILL *e* 09 06 57.8
BILL pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
BILL MLR MLR
comp=Z,100nm,18.0s,MS4.2
TIXI Tiksi 74.30 358⇑*i*P **P 09 04 11.5 +1.6**
BVAR Borovoye Array 76.73 326 P **P 09 04 23.0 -1.2**
comp=Z,27nm,1.0s,mb5.2,baz=123,slow=7.3,SNR=21
BVAR Borovoye Array 76.73 326 P **P 09 04 23.0 -1.2**
BVAR pmax pmax
comp=Z,27nm,1.0s
BRVK Borovoye 76.80 326 P **P 09 04 24.2 -0.4**
comp=Z,214nm,1.0s,mb6.0,SNR=10
BRVK Borovoye 76.80 326 *e*P **P 09 04 23.9 -0.7**
BRVK pmax pmax
comp=Z,51nm,1.1s,mb5.4
BRVK Borovoye 76.80 326 *e*P **P 09 04 23.9 -0.7**
comp=Z,51nm,1.1s,mb5.4
SBA Scott Base 77.05 173 *e*P **P 09 04 25.5 -0.1**
SBA pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
SBA Scott Base 77.05 173 *e*P **P 09 04 25.5 -0.1**
comp=Z,7.3nm,1.1s,mb4.5
MAW Mawson 80.43 202 *e*P **P 09 04 45.1 +0.8**
comp=Z,4.1nm,0.6s,mb4.5
MAW *e* 09 04 48.8
MAW Mawson 80.43 202 P **P 09 04 44.2 -0.1**
comp=Z,12nm,0.6s,mb5.0,baz=69,slow=3.3,SNR=11
MAW Mawson 80.43 202 *e*P **P 09 04 45.1 +0.8**
MAW pmax pmax
comp=Z,4.0nm,0.6s
OHAK Old Harbor 82.92 32 *e*P **P 09 04 57.9 +0.2**
comp=Z,16nm,0.8s,mb5.1
SVW2 Sparrevohn 82.95 27 *e*P **P 09 04 58.1 +0.4**
AKTK Aktyubinsk 83.27 321 P **P 09 04 59.2 -0.4**
AKTO Aktyubinsk 83.27 321 P **P 09 04 59.2 -0.4**
comp=Z,10nm,0.8s,mb4.9,baz=90,slow=5.4,SNR=14
AKTO Aktyubinsk 83.27 321 P **P 09 04 59.3 -0.3**
AKTO pmax pmax
comp=Z,11nm,0.9s,mb4.9
SVE Sverdlovsk 83.29 328⇓*e*P **P 09 04 59.3 -0.3**
SVE *e*S S 09 15 22.9 +3.9
SVE pmax pmax

comp=Z,63nm,1.1s,mb5.6
TTA Tatalina 83.36 26 eP P 09 05 00.4 +0.6
KDAK Kodiak Island 83.44 31 P P 09 05 00.0 -0.3
comp=Z,110nm,0.8s,mb5.9,SNR=6.4
KDAK Kodiak Island 83.44 31 P P 09 04 59.8 -0.6
comp=Z,7.4nm,0.5s,mb5.0,baz=261,slow=3.2,SNR=11
KDAK Kodiak Island 83.44 31 eP P 09 05 00.1 -0.2
ARU Arti 84.30 327 d iP P 09 05 03.9 -0.9
ARU e*PP pP 09 05 19.9 +8.3
ARU pmax pmax
comp=Z,80nm,1.0s,mb5.8
ARU Arti 84.30 327 eP P 09 05 03.5 -1.3
comp=Z,60nm,0.8s,mb5.8
IMA2 Indian Mountai 85.31 23 eP P 09 05 09.8 +0.2
SLKM Skilak Lake 85.31 29 eP P 09 05 09.2 -0.6
PMR Palmer 86.08 28 eP P 09 05 13.4 -0.2
PMR pmax pmax
comp=Z,25nm,1.1s,mb5.4
PMR Palmer 86.08 28 eP P 09 05 13.4 -0.2
comp=Z,25nm,1.1s,mb5.4
COLA College 87.36 25 ⇑iP P 09 05 19.6 -0.2
COLA College 87.36 25 eP P 09 05 18.5 -1.2
comp=Z,12nm,0.8s,mb5.2
BMRM Bremner River 88.11 29 eP P 09 05 23.0 -0.4
SYO Syowa Base 89.12 201 ⇓eP P 09 05 30.0 +1.9
SYO Syowa Base 89.12 201 ⇓epP pP 09 05 32.0 -3.0
EGAK Eagle 90.17 25 eP P 09 05 32.3 -0.8
comp=Z,7.8nm,0.9s,mb5.0
DAWY Dawson 90.87 26 eP P 09 05 36.2 -0.1
KIV Kislovodsk 92.90 314 eP P 09 05 43.7 -2.5
KIV pmax pmax
comp=Z,3.0nm,0.4s,mb5.1
KIV MLR MLR
comp=Z,100nm,24.0s,MS4.2
OBN Obninsk 96.54 325 eP P 09 06 01.9 -0.7
OBN e 09 16 30.8
OBN eSS SS 09 23 55.5 -0.5
OBN pmax pmax
comp=Z,7.0nm,0.5s,mb5.3
OBN MLR MLR
comp=Z,100nm,22.0s,MS4.2
OBN Obninsk 96.54 325 eP P 09 06 01.0 -1.6
KMBO Kilima Mbogo 96.81 269 P P 09 06 08.1 +3.3
KBS Kingsbay 98.56 350 eP P 09 06 09.9 -1.4
ARCES ARCESS Array B 98.98 340 P P 09 06 11.4 -1.9
comp=Z,4.5nm,0.7s,mb5.1,baz=69,slow=6.6,SNR=9.1
ARCES ARCESS Array B 98.98 340 P P 09 06 11.4 -1.9
ARCES pmax pmax
comp=Z,5.0nm,0.7s
AKASG Malin Array Be 101.51 321 P Pdif 09 06 23.2 -1.6
comp=Z,0.3nm,0.3s,baz=65,slow=3.7,SNR=5.4
NVAR Mina Array Bea 105.42 51 Pdiff Pdif 09 06 44.1 +1.9
comp=Z,0.7nm,0.8s,baz=262,slow=6.3,SNR=3.5
MVCO Mesa Verde 113.26 51 ePKPdf PKiKP 09 11 12.2 +1.1
GIVF Givet 116.32 326 ePKIKP PKPdf 09 11 17.3 +0.7
ULM Lac du Bonnet 116.62 33 PKP PKPdf 09 11 18.8 +1.6
comp=Z,3.6nm,0.7s,baz=299,slow=1.6,SNR=6.2
ULM Lac du Bonnet 116.62 33 PKP PKPdf 09 11 18.8 +1.6
BAIF Baives 116.68 326 ePKIKP PKPdf 09 11 18.1 +0.8
comp=Z,3.0nm,0.4s
CABF La Chapelle 117.28 322 ePKIKP PKPdf 09 11 19.1 +0.5
comp=Z,11nm,0.8s
LPG La Plagne 117.38 321 ePKIKP PKPdf 09 11 19.5 +0.7
SBF Sospel 117.65 319 ePKIKP PKPdf 09 11 20.0 +0.6
ORIF Oris-en-Rattie 118.19 321 ePKIKP PKPdf 09 11 21.0 +0.6
comp=Z,7.5nm,0.8s
LOR Lormes 118.30 324 ePKIKP PKPdf 09 11 21.2 +0.7
SSF Saint Saulge 118.61 324 ePKIKP PKPdf 09 11 21.9 +0.8
comp=Z,11nm,0.8s
VIVF Saint-Julien-l 118.98 321 ePKIKP PKPdf 09 11 22.4 +0.5
TXAR Lajitas Array 119.19 58 PKP PKPdf 09 11 22.7 -0.1
comp=Z,2.1nm,0.7s,baz=206,slow=1.8,SNR=15
TXAR PKKPbc PKKPbc 09 21 36.6 +0.2
comp=Z,0.3nm,0.8s,baz=122,slow=4.5,SNR=3.4
TXAR Lajitas Array 119.19 58 PKP PKPdf 09 11 22.7 -0.1
TXAR PKKPbc PKKPbc 09 21 36.6 +0.2
ECSD EROS,Sioux Fal 119.38 40 ePKPdf PKPdf 09 11 21.8 -0.9
TCF Toulx Ste Croi 119.77 324 ePKIKP PKPdf 09 11 24.0 +0.6
comp=Z,14nm,0.9s
MTLF Montolieu 121.26 321 ePKIKP PKPdf 09 11 26.9 +0.6
WMOK Wichita Mounta 121.52 50 ePKIKP PKPdf 09 11 26.1 -1.0
ROSF Rostrenen 121.71 328 ePKIKP PKPdf 09 11 27.8 +0.7
JCT Junction City 122.10 55 ePKIKP PKPdf 09 11 28.6 +0.2
MIAR Mount Ida 125.55 49 ePKIKP PKPdf 09 11 35.3 +0.4
ESDC Sonseca Array 127.13 320 PKP PKPdf 09 11 38.4 +0.7
comp=Z,0.3nm,0.3s,baz=98,slow=3.2,SNR=2.9
OLIL Olney 127.43 41 ePKPdf PKPdf 09 11 35.8 -2.5
PAB San Pablo 127.45 320 ePKIKP PKPdf 09 11 42.4 +4.1
BLO Bloomington 128.22 40 ePKIKP PKPdf 09 11 38.9 -0.9
ACSO Alum Creek Sta 129.79 37 ePKPdf PKPdf 09 11 42.0 -0.8
TORD Torodi Ar. Bea 131.85 285 PKP PKPdf 09 11 46.9 -0.5
comp=Z,5.9nm,0.7s,baz=55,slow=1.6,SNR=15
TKL Tuckaleechee C 132.00 42 PKP PKPdf 09 11 47.4 +0.3
comp=Z,11nm,0.8s,baz=178,slow=3.5,SNR=6.4
TKL Tuckaleechee C 132.00 42 PKIKP PKPdf 09 11 47.4 +0.3
TKL pmax pmax
comp=Z,11nm,0.9s
MVL Millersville 133.74 33 ePKPpre 09 11 38.7
DBIC Dimbokro 138.95 277 PKP PKPdf 09 11 58.9 -1.8
comp=Z,7.5nm,1.1s,baz=134,slow=4.4,SNR=3.7
DBIC Dimbokro 138.95 277 PKIKP PKPdf 09 11 58.9 -1.8
DBIC pmax pmax
comp=Z,8.0nm,1.1s
ATAH Atahualpa 146.14 107 PKPbc PKPbc 09 12 15.2 +0.9
comp=Z,23nm,0.8s,baz=74,slow=1.2,SNR=9.7
LVC Limon Verde 146.25 139 ePKPdf PKPdf 09 12 15.6 +2.2
OTAV Otavalo 147.34 94 ePKPdf PKPdf 09 12 18.3 +2.8
CPUP Villa Florida 149.08 160 PKPbc PKPbc 09 12 21.5 -0.6
comp=Z,3.3nm,0.8s,baz=165,slow=0.7,SNR=6.7
LPAZ La Paz 151.01 131 PKP PKPdf 09 12 22.1 +0.9
comp=Z,1.3nm,0.9s,baz=323,slow=4.2,SNR=3.3
LPAZ PKPbc PKPbc 09 12 27.1 +0.1
comp=Z,5.3nm,0.9s,baz=31,slow=1.8,SNR=18
LPAZ La Paz 151.01 131 PKIKP PKPdf 09 12 22.1 +0.9
LPAZ 09 12 27.1
LPAZ pmax pmax
comp=Z,1.0nm,0.9s
LPAZ pmax pmax
comp=Z,5.0nm,0.9s
LPAZ La Paz 151.01 131 ePKPdf PKPdf 09 12 23.3 +2.0
LPAZ ePKPbc PKPbc 09 12 28.8 +1.8
ROSC El Rosal 151.53 85 PKPbc PKPbc 09 12 28.8 +0.5
comp=Z,26nm,0.6s,baz=82,slow=11,SNR=9.1
ROSC El Rosal 151.53 85 ePKPbc PKPbc 09 12 29.1 +0.8

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*NEIC **07** 08:59:06.0±3.7,2673N×10809W,h10km,mb3.6/6,Error ellipse: s-maj=43.1km s-min=17.2km az=175.0*

ISC 07 08:59:09.4±0.9**,2702N**±006×**10833W**±006**,h10**km**,n37,** σ**1§07**/50**,12C-8D,Sonora**

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

319A Douglas 4.42 349 ⇓P Pn 09 00 15.4 -1.1
baz=4.7,SNR=13
219A White Tail Can 5.03 351 ⇓P Pn 09 00 23.8 -1.0
baz=5.4,SNR=21
219A ⇓S Sn 09 01 22.4 -0.5
baz=5.4
218A Dragoon 5.16 344 ⇑P Pn 09 00 25.6 -1.0
baz=5.5
217A Green Valley 5.21 336 P Pn 09 00 26.6 -0.7
baz=5.6,SNR=26
216A Three Points, 5.66 332 ⇑P Pn 09 00 32.9 -0.7
baz=6.0,SNR=7.6
118A Homack Ranch, 5.78 346 ⇓P Pn 09 00 34.5 -0.6
baz=6.1,SNR=16
118A ⇑S Sn 09 01 41.1 -0.4
baz=6.1
119A Ashpeak Ranch, 5.79 352 ⇑P Pn 09 00 34.6 -0.7
baz=6.1
117A Oracle 5.91 340 ⇑P Pn 09 00 36.3 -0.7
baz=6.3,SNR=16
116A Eloy 6.25 333 ⇑P Pn 09 00 40.9 -0.7
baz=6.6,SNR=20
116A ⇓S Sn 09 01 52.6 -0.5
baz=6.6
214A Organ Pipe Nat 6.28 323 ⇑S Sn 09 01 53.3 -0.5
baz=6.6
Z16A Peralta Trail, 6.84 338 ⇑P Pn 09 00 49.4 -0.4
baz=7.2,SNR=19
Z16A ⇓S Sn 09 02 07.5 -0.2
baz=7.2
Y17A Roosevelt 7.00 343 ⇑P Pn 09 00 51.7 -0.2
baz=7.3
Y17A ⇓S Sn 09 02 12.2 +0.7
baz=7.3
BNM Barren Site 7.25 11 ePn Pn 09 00 54.6 -0.8
BNM ePg Pg 09 01 27.1 -1.1
BNM eSg Sg 09 02 54.6 -7.6
Y16A Circle Bar Ran 7.35 339 ⇑P Pn 09 00 56.6 -0.2
baz=7.7,SNR=10
Y16A ⇓S Sn 09 02 21.6 +1.3
baz=7.7
LPM Los Pinos Moun 7.41 11 ePb Pb 09 01 17.7 -0.3
LPM ePg Pg 09 01 30.5 -0.8
LPM eSg Sg 09 03 01.5 -5.7
LAZ Ladron 7.43 8 ePn Pn 09 00 57.4 -0.4
LAZ eSn Sn 09 02 18.0 -4.1
LAZ eSg Sg 09 03 08.8 +1.1
X16A Lo Mia Camp, P 7.84 341 ⇑P Pn 09 01 03.8 +0.3
baz=8.2,SNR=12
ANMO Albuquerque 8.06 11 ePn Pn 09 01 07.9 +1.4
2.2nm,1.1s
ANMO ePg Pn 09 01 43.0 +37
ANMO eSg Sn 09 03 18.8 +41
X15A Humboldt 8.16 337 ⇑P Pn 09 01 08.2 +0.3
baz=8.5,SNR=6.4
GLA Glamis 8.23 318 ePn Pn 09 01 08.1 -0.7
GLA eSn Sn 09 02 41.7 -0.2
GLA eSg Sn 09 03 30.4 +49
JCT Junction City 8.24 63 ePn Pn 09 01 09.4 +0.5
8.1nm,1.1s
JCT ePg Pn 09 01 42.3 +33
JCT eSg Sn 09 03 23.1 +41
WUAZ Wupatki 8.86 344 ePn Pn 09 01 20.1 +2.7
6.0nm,0.8s
WUAZ eSg Sn 09 03 55.1 +58
AMTX Amarillo 9.69 34 ePn Pn 09 01 27.2 -1.7
AMTX ePg Pn 09 02 07.6 +39
AMTX eLg 09 04 10.8
WMOK Wichita Mounta 11.24 45 ePn Pn 09 01 46.9 -3.2
PV10 Paradox Valley 11.34 357 ePn Pn 09 01 52.2 +0.8
PV10 eLg 09 05 00.8
MSU Marysvale 11.90 345 Pn Pn 09 02 04.2 +5.1
TPNV Topopah Spring 11.96 328 Pn Pn 09 02 03.6 +3.8
TMUT Trail Mountain 12.47 350 Pn Pn 09 02 07.0 +0.1
BW06 Boulder Array 15.74 357 Pn Pn 09 02 53.1 +2.0
2.1nm,0.9s
SNOW Snow King Moun 16.52 354 ePn Pn 09 03 01.8 +0.7
23nm,1.8s
TPAW Teton Pass 16.57 353 Pn Pn 09 03 04.3 +2.6
6.3nm,1.3s
LOHW Long Hollow 16.66 354 ePn Pn 09 03 04.1 +1.3
2.3nm,1.0s
IMW Indian Meadow 16.97 354 ePn Pn 09 03 08.0 +1.2
13nm,1.6s
MCMT McKenzie Canyo 18.14 350 ePn Pn 09 03 24.1 +2.9
CHMT Chamberlain Mo 20.23 350 eP P 09 03 45.3 +0.8
LNOR Lincton Mounta 20.41 340 eP P 09 03 48.1 +1.7
HAWA Hanford 21.27 338 eP P 09 03 54.5 -1.3
2.8nm,0.7s

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*CSEM **07** 09:10:51.3±1.0,3690N×3750E,h2km,MD2.9,Error ellipse: s-maj=25.1km s-min=9.7km az=5.0*
*ISK **07** 09:10:52.5,3683N×3743E,h18km,MD2.7*
*ISCJB **07** 09:10:54.5±1.8,3701N±009×3750E±006,h13km±7km, Error ellipse: s-maj=14.9km s-min=7.9km az=172.6*
*DDA **07** 09:10:56.4,3735N×3749E,h7km±2km,Md2.9*

ISC 07 09:10:55.4±1.7**,370N**±01×**3747E**±006**,h18**km±6km**,n7,** σ**0§99**/12**,Turkey**

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

GAZ Gaziantep 0.24 302 ePG Pg 09 11 00.6 -0.4
GAZ eSG Sg 09 11 07.0 +2.1
GZT Gaziantep 0.32 13 i P Pg 09 10 58.4 -3.9
GZT i S Sg 09 11 06.4 -0.6
ANDN Andirin 1.04 301 i P Pb 09 11 14.3 -0.7
ANDN i S Sb 09 11 28.7 +0.4
URFA Urfa 1.15 69 ePN Pn 09 11 16.2 -0.3
URFA eSN Sn 09 11 33.0 +1.2
AKCD Akcadag 1.30 16 i P Pn 09 11 18.4 -0.2
AKCD i S Sn 09 11 36.0 +0.5
MALT Malatya 1.48 31 ePN Pn 09 11 21.5 +0.5
SARI SarD1z-Kayseri 1.74 340 ePN Pn 09 11 22.9 -1.8

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*MOS **07** 09:19:51.2±1.3,269N×66.19E,h10km,mb5.2/13,Error ellipse: s-maj=12.1km s-min=10.1km az=81.7*
*IDC **07** 09:19:51.6±0.6,276N×6622E,h0km,mb4.4/15, mb1 4.4/15,mb1mx4.3/21,mbtmp4.4/15,MS4.2/17, Ms1 4.2/17,ms1mx4.0/28,Error ellipse: s-maj=17.4km s-min=15.9km az=154.0*
*ISCJB **07** 09:19:51.5±0.3,275N±006×66.19E±005,h10km,mb4.6/45, MS4.3/19,Error ellipse: s-maj=9.7km s-min=7.5km az=155.7*
*BJI **07** 09:19:52.9,229N×6639E,h25km,mB5.1,mb4.7,Ms4.6, Msz4.6*
*NEIC **07** 09:19:53.2±0.4,271N×66.19E,h10km,mb4.9/12,Error ellipse: s-maj=11.5km s-min=9.6km az=142.0*
*GCMT **07** 09:19:53.2±0.3,266N×6626E,h12km,MW5.0/66, Moment Tensor Solution. s18,c21; s66,c91; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.14±.12; Mθθ-2.15±.10; Mφφ-0.99±.11; Mrθ-0.70±.42; Mθφ1.04±.11; Mφr1.75±.48; Best double couple: M0 3.47100×10^16 NP1:φs109.00000°,δ33.00000°,λ65.00000°. NP2: φs318.00000°,δ61.00000°,λ105.00000°. Principal axes: T 3.7970, Plg70.0000°, Azm261.0000°; N -0.6550, Plg13.0000°, Azm130.0000°; P -3.1440, Plg14.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 09:19:53.5±0.3**,272N**±006×**6620E**±006**,h10**km**, (h21**km±4.6km**:pP-P),n88,** σ**1§15**/78**,mb4.6**/45**,MS4.3**/19**, 1C-3D,Carlsberg Ridge**

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

HYB Hyderabad 18.98 39 i P Pn 09 24 17.5 +1.6
HYB Hyderabad 18.98 39 eP Pn 09 24 17.5 +1.6
KMBO Kilima Mbogo 29.19 263 P P 09 25 56.3 +0.8
2.8nm,0.9s,mb4.0,baz=53,slow=15,SNR=4.9
KMBO LR LR 09 35 47.6
comp=Z,318nm,20.4s,MS3.9,baz=89,slow=33
CMAR Chiang Mai Arr 35.67 62 P P 09 26 52.4 +0.1
5.0nm,0.9s,mb4.4,baz=247,slow=9.4,SNR=20
CMAR LR LR 09 41 10.1
comp=Z,354nm,18.9s,MS4.2,baz=256,slow=36
LSA Lhasa 35.78 39 P P 09 26 55.4 +2.4
LSA XP sP 09 27 10.3 +13
LSA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
LSA LR LR
comp=N,420nm,18.0s,MS4.4
LSA LR LR
comp=E,410nm,16.0s,MS4.4
LSA LR LR
comp=Z,810nm,16.0s,MS4.6
LSA Lhasa 35.78 39 eP P 09 26 55.3 +2.3
LSA pmax pmax
comp=Z,29nm,1.1s,mb5.1
LSA Lhasa 35.78 39 eP P 09 26 55.3 +2.3
comp=Z,29nm,1.1s,mb5.1
CHTO Chiang Mai 35.81 61 eP P 09 26 51.6 -1.8
CHTO pmax pmax
comp=Z,69nm,1.7s,mb5.3
CHTO Chiang Mai 35.81 61 eP P 09 26 51.6 -1.8
comp=Z,69nm,1.7s,mb5.3
UCH Uchtor 40.03 10 eP P 09 27 30.3 +1.6
comp=Z,17nm,1.3s,mb4.6
EKS2 Erkin-Say 40.34 9 eP P 09 27 33.4 +2.2
comp=Z,20nm,1.3s,mb4.7
FRU Bishkek 40.63 10 eP P 09 27 37.0 +3.3
FRU pmax pmax
comp=Z,40nm,2.0s,mb4.7
KMI Kunming 41.63 54 P P 09 27 38.6 -3.6
KMI AMB AMB
comp=Z,11nm,1.2s,mb4.4
LSZ Lusaka 41.66 243 P P 09 27 46.0 +3.5
comp=Z,2.9nm,0.8s,mb4.0,baz=187,slow=2.3,SNR=3.5
LSZ PcP PcP 09 29 40.3 +0.8
comp=Z,4.1nm,0.7s,baz=79,slow=2.4,SNR=7.2
GNI Garni 42.02 335 eP P 09 27 46.6 +1.5
GNI pmax pmax
comp=Z,58nm,1.4s
GNI Garni 42.02 335 eP P 09 27 46.5 +1.4
comp=Z,58nm,1.4s,mb5.0
GYA Guiyang 45.40 55 P P 09 28 12.7 +0.1
GYA AMB AMB
comp=Z,30nm,1.2s,mb5.0
QIZ Qiongzhong 45.64 66 P P 09 28 14.0 -0.6
QIZ S S 09 34 54.6 -3.1
QIZ XS sS 09 35 11.8 +9.0
QIZ AMB AMB
comp=Z,88nm,2.5s,mb5.2
QIZ LR LR
comp=E,310nm,20.9s
QIZ LR LR
comp=Z,448nm,18.8s,MS4.4
KIV Kislovodsk 46.04 336 eP P 09 28 17.7 +0.4
KIV pmax pmax
comp=Z,17nm,1.7s,mb4.7
MKAR Makanchi Array 46.07 15 P P 09 28 17.1 -0.4
comp=Z,1.4nm,0.8s,mb3.9,baz=198,slow=7.6,SNR=8.0
MKAR PcP PcP 09 29 54.4 +0.5
comp=Z,0.5nm,0.7s,baz=204,slow=2.7,SNR=3.7
MKAR LR LR 09 47 15.7
comp=Z,218nm,20.4s,MS4.1,baz=211,slow=36
MKAR Makanchi Array 46.07 15 P P 09 28 17.1 -0.4
MKAR 09 29 54.4
GTA Gaotai 47.60 36 P P 09 28 31.4 +1.8
GTA AP pP 09 28 35.5 +2.7
GTA XP sP 09 28 39.3 +5.3
GTA AMB AMB
comp=Z,6.0nm,1.2s,mb4.5
LZH Lanzhou 48.06 42 eP P 09 28 36.0 +2.7
LZH AP pP 09 28 43.5 +7.1
LZH XP sP 09 28 46.1 +8.4
LZH AMB AMB
comp=Z,30nm,1.5s,mb5.1
LZH AMB AMB
comp=Z,80nm,4.0s
LBTB Lobatse 48.07 233 P P 09 28 33.7 +0.2
comp=Z,4.2nm,0.7s,mb4.5,baz=95,slow=11,SNR=6.0
LBTB Lobatse 48.07 233 P P 09 28 33.7 +0.2
KURK Kurchatov 48.96 10 eP P 09 28 39.3 -0.6
KURK pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
KURK Kurchatov 48.96 10 eP P 09 28 39.3 -0.6
comp=Z,6.2nm,1.0s,mb4.6
XAN Xi'an 50.53 47 P P 09 28 51.7 -0.5
XAN AP pP 09 29 03.4 +8.0
XAN XP sP 09 29 09.2 +13
XAN AMB AMB
comp=Z,18nm,1.5s,mb4.8
XAN AMB AMB
comp=Z,130nm,4.4s
WHN Wuhan 53.21 53 P P 09 29 13.7 +1.4
ZAL Zalesovo 53.28 14 P P 09 29 10.7 -1.7
ZAA0 Zalesovo Array 53.30 14 eP P 09 29 11.0 -1.4
ZALV Zalesovo Beam 53.30 14 P P 09 29 10.7 -1.8
comp=Z,5.0nm,0.8s,mb4.5,baz=218,slow=6.3,SNR=12
ZALV LR LR 09 51 36.8
comp=Z,213nm,21.2s,MS4.2,baz=229,slow=36
ARU Arti 53.90 355 c iP P 09 29 18.2 +1.4
ARU Arti 53.90 355 eP P 09 29 15.8 -1.0
comp=Z,7.8nm,1.0s,mb4.6
SUR Sutherland 55.36 227 P P 09 29 28.2 +0.3
comp=Z,13nm,0.9s,mb5.0,baz=37,slow=4.6,SNR=5.3
SONM Songino Array 56.70 31 P P 09 29 37.5 +0.3
comp=Z,2.6nm,1.1s,mb4.2,baz=224,slow=7.6,SNR=9.2
SONM LR LR 09 54 05.1
comp=Z,611nm,20.2s,MS4.7,baz=260,slow=36
ZAK Zakamensk 56.88 27 eP P 09 29 37.4 -1.0
ZAK pmax pmax
comp=Z,4.0nm,1.9s,mb4.1
OBN Obninsk 57.49 340 eP P 09 29 43.2 +0.6
OBN e 09 30 38.5
OBN pmax pmax
comp=Z,65nm,2.5s,mb5.2
MOS Moscow 57.65 341 eP P 09 29 39.2 -4.6
TLY Talaya 57.95 27 eP P 09 29 48.9 +3.0
TLY pmax pmax
comp=Z,11nm,1.4s,mb4.7
NWAO Narrogin (SRO) 59.82 131 P P 09 29 59.2 -0.1
comp=Z,11nm,0.9s,mb4.9,baz=293,slow=8.9,SNR=3.4
NWAO Narrogin (SRO) 59.82 131 P P 09 29 59.2 -0.1
TAM Tamanrasset 61.99 294 eP P 09 30 14.4 +0.1
JOW Kunigami 63.95 61 LR LR 09 56 25.4
comp=Z,305nm,21.7s,MS4.4,baz=271,slow=34
KHC Kasperske Hory 64.28 325 eP P 09 30 27.0 -2.0
TORD Torodi Ar. Bea 64.57 283 P P 09 30 30.7 -0.8
comp=Z,2.8nm,1.1s,mb4.2,baz=102,slow=6.1,SNR=9.3
TORD Torodi Ar. Bea 64.57 283 P P 09 30 30.7 -0.9
FBE Freiberg 65.27 326 eP P 09 30 35.2 -0.2
comp=Z,37nm,1.9s,mb5.1
NKC Novy Kostel 65.45 325 eP P 09 30 35.9 -0.7
comp=Z,13nm,1.5s,mb4.7
WERN Wernitzgruen 65.52 325 eP P 09 30 36.5 -0.5
comp=Z,10.0nm,1.2s,mb4.7
GUNZ Gunzen 65.58 325 eP P 09 30 37.2 -0.2
comp=Z,14nm,1.3s,mb4.8
CLL Collm 65.65 327 ⇓iP P 09 30 37.8 -0.1
CLL pmax pmax
comp=Z,40nm,1.9s,mb5.1
CLL Collm 65.65 327 eP P 09 30 37.5 -0.4
comp=Z,41nm,1.9s,mb5.1
CLL Collm 65.65 327 ⇓iP P 09 30 37.8 -0.1
comp=Z,40nm,1.9s,mb5.1
CLL Collm 65.65 327 ⇓iP P 09 30 37.8 -0.1
comp=Z,40nm,1.9s,mb5.1
KSRS Korea Array 66.10 50 LR LR 10 01 43.8
comp=Z,240nm,18.3s,MS4.4,baz=252,slow=38
MOX Moxa 66.11 325 eP P 09 30 41.1 +0.2
comp=Z,8.0nm,1.2s,mb4.6
CN2 Changchun 66.27 43 eP P 09 30 45.5 +3.5
BFO Black Forest 67.07 322 eP P 09 30 46.5 -0.5
BFO pmax pmax
comp=Z,21nm,1.4s,mb5.0
BFO Black Forest 67.07 322 eP P 09 30 46.5 -0.5
comp=Z,21nm,1.4s,mb5.0
TNS Taunus Mts 67.76 324 eP P 09 30 51.2 -0.2
TNS pmax pmax
comp=Z,50nm,2.1s,mb5.2
TNS Taunus Mts 67.76 324 eP P 09 30 51.2 -0.2
comp=Z,50nm,2.1s,mb5.2
MAW Mawson 70.21 181 P P 09 31 06.5 +0.3
comp=Z,0.8nm,0.4s,mb4.0,baz=307,slow=11,SNR=4.7
WRA Warramunga Arr 70.49 112 LR LR 09 55 40.7
comp=Z,72nm,20.3s,MS3.9,baz=235,slow=30
WRAB Tennant Creek 70.50 112 eP P 09 31 08.1 -0.9
WRAB pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
WRAB Tennant Creek 70.50 112 eP P 09 31 08.1 -0.9
comp=Z,5.7nm,0.8s,mb4.5
KIC Kosan Boka 70.77 276 eP P 09 31 11.1 +0.3
ASAR Alice Springs 70.81 116 P P 09 31 10.3 -0.5
comp=Z,3.5nm,0.8s,mb4.3,baz=287,slow=6.2,SNR=35
DBIC Dimbokro 70.88 276 P P 09 31 11.7 +0.3
comp=Z,8.1nm,1.1s,mb4.6,baz=50,slow=7.6,SNR=3.1
DBIC LR LR 10 02 34.1
comp=Z,143nm,18.2s,MS4.3,baz=18,slow=36
TIC Toumodi 71.05 276 eP P 09 31 12.5 +0.1
TIC Toumodi 71.05 276 eP P 09 31 12.5 +0.1
LIC Lamto 71.06 276 eP P 09 31 12.7 +0.2
NOA NORSAR Array B 71.33 335 P P 09 31 12.5 -0.7
comp=Z,1.4nm,0.8s,mb3.9,baz=112,slow=6.3,SNR=3.8
ARCES ARCESS Array B 71.91 346 P P 09 31 15.6 -0.9
comp=Z,4.9nm,0.9s,mb4.4,baz=121,slow=5.8,SNR=4.7
ESDC Sonseca Array 73.05 311 P P 09 31 24.0 0.0
comp=Z,1.0nm,0.5s,mb4.0,baz=81,slow=5.4,SNR=6.7
PAB San Pablo 73.31 310 eP P 09 31 23.1 -2.4
PAB pmax pmax
comp=Z,19nm,1.5s,mb4.8
PAB San Pablo 73.31 310 eP P 09 31 23.1 -2.5
comp=Z,18nm,1.5s,mb4.8
MJAR Matsushiro Arr 73.95 53 LR LR 10 05 16.9
comp=Z,176nm,18.7s,MS4.4,baz=285,slow=37
CBIJ Chichi jima 76.28 63 LR LR 10 01 13.0
comp=Z,107nm,20.9s,MS4.1,baz=177,slow=32
ASAJ Asahikawa 78.35 46 LR LR 10 07 43.8
comp=Z,109nm,18.6s,MS4.2,baz=254,slow=37
GUMO Guam 78.35 77 LR LR 10 00 41.6
comp=Z,93nm,22.0s,MS4.1,baz=255,slow=31
STKA Stephens Creek 79.08 123 P P 09 31 57.6 -0.9
comp=Z,2.3nm,0.6s,mb4.3,baz=292,slow=12,SNR=5.5
STKA LR LR 10 02 49.1
comp=Z,162nm,19.7s,MS4.4,baz=204,slow=33
CTA Charters Tower 81.60 111 LR LR 10 06 08.1
comp=Z,125nm,19.7s,MS4.3,baz=116,slow=34

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VNA2	**Neumayer--Watz**	**87.24**	**198**	*e*P	**P**	**09 32 40.8**	**+1.0**
VNA2				*e*	pP	09 32 45.8	+2.6
VNA3	**Neumayer Olymp**	**88.04**	**198**	*e*P	**P**	**09 32 44.5**	**+0.9**
VNA3				*e*		09 32 49.9	
QSPA	**South Pole Qui**	**92.69**	**180**	LR	LR	10 10 32.7	
	comp=Z,265nm,19.5s,MS4.7,baz=4.6,slow=33						
HNR	**Honiara**	**94.13**	**99**	LR	LR	10 09 59.0	
	comp=Z,36nm,22.0s,MS3.8,baz=149,slow=32						
TXAR	**Lajitas Array**	**146.68**	**344**	PKPbc	PKPbc	09 39 36.9	+0.6
	comp=Z,4.2nm,0.8s,baz=55,slow=2.4,SNR=12						

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*SZGRF **07** 09:25:12.9, 6.17N×34.86W, h33km, mb5.3, Central Mid-Atlantic Ridge*

*BJI **07** 09:25:14.9, 7.30N×34.70W, h10km, mB5.6, Ms5.5, Msz5.1*

*ISCJB **07** 09:25:16.4±0.2, 7.34N±0.03×34.63W±0.02, h10km, mb5.2/248, MS4.9/54, Error ellipse: s-maj=5.2km s-min=1.9km az=165.9*

*IDC **07** 09:25:16.2±0.4, 7.44N×34.74W, h0km, mb5.0/28, mb1 5.1/29, mb1mx5.1/30, mbtmp5.0/29, ML5.1/1, MS4.8/28, Ms1 4.8/28, ms1mx4.8/29, Error ellipse: s-maj=12.3km s-min=10.4km az=170.0*

*MOS **07** 09:25:16.1±0.9, 7.38N×34.69W, h10km, mb5.4/101, MS4.8/24, Error ellipse: s-maj=6.3km s-min=3.1km az=55.1*

*NEIC **07** 09:25:18.0±0.2, 7.32N×34.68W, h10km, mb5.3/167, MS4.9/9, Error ellipse: s-maj=4.8km s-min=2.2km az=165.0*

*IGIL **07** 09:25:17.3, 7.34N×34.68W, h10km, mb5.5*

*GCMT **07** 09:25:18.0±0.1, 7.46N×34.71W, h12km, MW5.4/95, Moment Tensor Solution. s69,c114; s95,c195; Duration: 1.2 Moment tensor: Scale 10^17Nm; Mrr-0.03±.02; Mθθ0.14±.02; Mφφ-0.11±.02; Mrθ-0.35±.05; Mθφ-1.35±.02; Mφr0.09±.05; Best double couple: Mo1.40300×10^17 NP1:φs358.00000°, δ76.00000°, λ4.00000°. NP2:φs267.00000°, δ87.00000°, λ166.00000°. Principal axes: T 1.4400, Plg12.0000°, Azm222.0000°; N -0.0750, Plg75.0000°, Azm73.0000°; P -1.3650, Plg7.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 09:25:18.2±0.2**, 7.32N**±0.03×**34.67W**±0.02**, h10km, (h17km**±2.4km**:pP-P), n1157, σ0.72**/1144**, mb5.2**/248**, MS4.9**/54**, 301C-200D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	**19.23**	**66**	P	**Pn**	**09 29 43.2**	**-0.5**
	6.1nm,0.3s,baz=266,slow=2.7,SNR=15						
BBTS				S	**Sn**	**09 33 03.5**	**-16**
	1.0nm,0.3s,baz=307,slow=21,SNR=3.6						
BBTS				LR	LR	09 35 11.9	
	comp=Z,5μm,19.9s,baz=56,slow=31						
BBTS	**Babate**	**19.23**	**66**	P	**Pn**	**09 29 43.2**	**-0.5**
BBTS				S	**Sn**	**09 33 03.5**	**-16**
BBTS				LR	LR	09 35 11.9	
CHIE	**El Hierro**	**25.74**	**36**	P	**P**	**09 30 49.3**	**+0.3**
	17nm,0.6s,mb4.8						
BDFB	**Brasilia**	**26.37**	**210**	P	**P**	**09 30 54.2**	**-0.5**
	60nm,0.7s,mb5.2,baz=29,slow=10,SNR=22						
BDFB				LR	LR	09 40 35.9	
	comp=Z,6μm,18.5s,MS5.2,baz=192,slow=35						
BDFB	**Brasilia**	**26.37**	**210**	P	**P**	**09 30 54.3**	**-0.5**
BDFB				pmax	pmax		
	comp=Z,60nm,0.7s						
BDFB				MLR	MLR		
	comp=Z,6μm,18.5s						
BDFB	**Brasilia**	**26.37**	**210**	P	**P**	**09 30 54.2**	**-0.5**
BDFB				LR	LR	09 40 35.9	
EHIG	**Higuera**	**26.45**	**35**	P	**P**	**09 30 54.6**	**-0.9**
	comp=Z,100nm,0.8s,mb5.4						
EGOM	**La Gomera**	**26.50**	**36**	P	**P**	**09 30 55.1**	**-0.8**
	comp=Z,129nm,1.0s,mb5.4						
FDF	**Fort de France**	**26.99**	**288**	*e*P	**P**	**09 30 56.8**	**-3.7**
EBAJ	**Bajamar**	**27.30**	**37**	P	**P**	**09 31 00.5**	**-2.6**
	comp=Z,277nm,2.3s,mb5.4						
EOSO	**Osorio**	**27.44**	**39**	P	**P**	**09 31 02.5**	**-1.9**
	comp=Z,295nm,2.6s,mb5.4						
CFTV	**Fuerteventura**	**28.61**	**40**	P	**P**	**09 31 14.3**	**-0.5**
TIC	**Toumodi**	**29.44**	**89**	*e*PcP		09 31 21.0	
	comp=Z,6.4nm,0.4s						
TIC	**Toumodi**	**29.44**	**89**	*e*PcP	**P**	**09 31 21.0**	**-1.4**
EFAM	**Famara**	**29.45**	**40**	P	**P**	**09 31 21.2**	**-1.1**
	comp=Z,316nm,2.0s,mb5.7						
LIC	**Lamto**	**29.45**	**90**	*e*P	**P**	**09 31 21.7**	**-0.8**
	comp=Z,169nm,1.1s,mb5.4,baz=270						
LIC				*e*MLR	MLR		
	comp=Z,2μm,20.8s,MS4.5						
LIC	**Lamto**	**29.45**	**90**	*e*PcP	**P**	**09 31 21.7**	**-0.8**
	comp=Z,27nm,0.4s,mb5.3						
LIC	**Lamto**	**29.45**	**90**	*e*PcP	**P**	**09 31 21.7**	**-0.8**
DBIC	**Dimbokro**	**29.60**	**89**	P	**P**	**09 31 23.0**	**-0.8**
	comp=Z,38nm,0.9s,mb5.1,baz=262,slow=9.6,SNR=38						
DBIC				LR	LR	09 40 15.6	
	comp=Z,1μm,20.1s,MS4.5,baz=252,slow=30						
KIC	**Kosan Boka**	**29.73**	**90**	*e*PcP		09 31 23.8	
	comp=Z,7.0nm,0.4s						
KIC	**Kosan Boka**	**29.73**	**90**	*e*PcP	**P**	**09 31 23.8**	**-1.2**
PCRV	**Puerto La Cruz**	**29.75**	**278**	LR	LR	09 41 23.3	
	comp=Z,857nm,21.9s,MS4.3,baz=74,slow=33						
PMAR	**Madeira**	**30.18**	**31**	*e*T		10 02 32.3	
PDA	**Ponta Delgada**	**31.37**	**14**	*i* LQ		09 38 11.0	
PDA				*i* LR	LR	09 39 39.0	
CMLA	**Cha da Macela**	**31.42**	**14**	*e*P	**P**	**09 31 34.3**	**-5.3**
	comp=Z,28nm,0.5s,mb5.3						
CMLA				*e*S	**S**	**09 36 52.0**	**+4.7**
CMLA				*e*SS	ScP	09 38 05.7	-11
CMLA				*e*LQ		09 38 07.5	
CMLA				*i* LR	LR	09 39 15.3	
MTP	**Monte Pirata**	**31.92**	**293**	*e*P	**P**	**09 31 43.2**	**-1.0**
HUMP	**Col San Antoni**	**32.20**	**293**	*e*P	**P**	**09 31 45.9**	**-0.9**
	comp=Z,50nm,0.8s,mb5.4						
CPD	**Cerro la Pandu**	**32.23**	**292**	*e*P	**P**	**09 31 46.1**	**-0.9**
CPD				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.5						
CPD	**Cerro la Pandu**	**32.23**	**292**	*e*P	**P**	**09 31 46.1**	**-0.9**
	comp=Z,58nm,0.8s,mb5.5						
SJG	**San Juan**	**32.47**	**292**	*e*P	**P**	**09 31 47.9**	**-1.2**
AOPR	**Arecibo Observ**	**33.08**	**292**	*e*P	**P**	**09 31 53.2**	**-1.2**
	comp=Z,22nm,0.6s,mb5.3						
SPB	**Sao Paulo**	**33.16**	**202**	*e*P	**P**	**09 31 56.1**	**+1.1**
MPR	**Mayaguez**	**33.40**	**292**	*e*P	**P**	**09 31 56.0**	**-1.2**
AGPR	**Aguadilla, PR**	**33.44**	**293**	*e*P	**P**	**09 31 56.1**	**-1.5**
TOA0	**Torodi Ar. Sit**	**36.22**	**78⇑**	*i*P	**P**	**09 32 20.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**36.22**	**78**	P	**P**	**09 32 21.0**	**-0.7**
	comp=Z,85nm,1.0s,mb5.6,baz=272,slow=8.7,SNR=208						
TORD				PcP	PcP	09 34 47.0	-0.1
	comp=Z,3.6nm,0.8s,baz=287,slow=3.2,SNR=5.1						
TORD				LR	LR	09 45 31.3	
	comp=Z,3μm,18.4s,MS5.1,baz=260,slow=34						
PFVI	**Vila Bisbo**	**37.85**	**35**	*e*P	**P**	**09 32 35.0**	**-0.3**
	comp=Z,102nm,1.8s,mb5.3						
PFVI				*e*S	**S**	**09 38 29.5**	**+2.9**
PFVI				*e*LQ		09 41 22.6	
PFVI				*e*LR	LR	09 42 39.8	
	comp=Z,2μm,19.6s						
PFVI	**Vila Bisbo**	**37.85**	**35**	*e*T		10 12 09.6	
MORF	**Marmelete**	**38.08**	**35**	*i* P	**P**	**09 32 37.2**	**+0.1**
	comp=Z,116nm,1.6s,mb5.4						
MORF				*e*S	**S**	**09 38 32.8**	**+2.9**
MORF				*e*LQ		09 41 33.4	
MORF				*e*LR	LR	09 42 47.6	
	comp=Z,2μm,19.5s						
PTEO	**Sao Teotonio**	**38.21**	**34**	*e*T		10 12 11.8	
PBDV	**Barranco-do-Ve**	**38.44**	**35**	*i* P	**P**	**09 32 40.4**	**+0.2**
	comp=Z,125nm,1.3s,mb5.5						
PBDV				*e*S	**S**	**09 38 40.6**	**+5.2**
PBDV				*e*LQ		09 41 34.9	
PBDV				*e*LR	LR	09 42 58.2	
	comp=Z,2μm,19.6s						
PBDV	**Barranco-do-Ve**	**38.44**	**35**	*e*T		10 12 32.7	
PVAQ	**Vaqueiros**	**38.68**	**35**	*i* P	**P**	**09 32 42.3**	**+0.1**
	comp=Z,103nm,1.9s,mb5.2						
PVAQ				*e*S	**S**	**09 38 42.6**	**+3.6**
PVAQ				*e*LR	LR	09 43 04.6	
	comp=Z,2μm,19.3s						
PVAQ	**Vaqueiros**	**38.68**	**35**	*e*T		10 12 37.8	
LIS	**Lisbon**	**38.82**	**33**	*e*P	**P**	**09 32 42.7**	**-0.7**
LIS				AMb	AMB	09 32 44.5	
	comp=Z,58nm,0.6s,mb5.5						
LIS				*e*S	**S**	**09 38 40.6**	**-0.5**
LIS				*e*S	**S**	**09 38 40.7**	**-0.4**
EGRO	**El Granado**	**38.90**	**35**	P	**P**	**09 32 42.9**	**-1.2**
	comp=Z,150nm,1.5s,mb5.5						
PMAFR	**Mafra**	**38.92**	**32**	*e*S	**S**	**09 38 45.6**	**+3.0**
PMAFR				*e*LQ		09 41 35.8	
PMAFR				*e*LR	LR	09 43 08.5	
	comp=Z,2μm,19.6s						
PBEJ	**Beja**	**39.03**	**34**	*e*P	**P**	**09 32 45.2**	**+0.1**
	comp=Z,51nm,1.3s,mb5.1						
MOE	**Montemor**	**39.11**	**33**	*e*T		10 12 46.4	
EVO	**Evora**	**39.30**	**34⇑**	*i*P	**P**	**09 32 46.8**	**-0.6**
	comp=Z,89nm,1.1s,mb5.1						
EVO				*e*MLR	MLR		
	comp=Z,3μm,23.0s,MS4.8						
EVO	**Evora**	**39.30**	**34**	*i* P	**P**	**09 32 47.5**	**+0.1**
	comp=Z,58nm,1.0s,mb5.3						
EVO	**Evora**	**39.30**	**34**	*e*T		10 12 55.6	
EJIF	**Jimena Fronter**	**39.37**	**38**	P	**P**	**09 32 49.4**	**+1.4**
EJIF				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.2						
EJIF	**Jimena Fronter**	**39.37**	**38**	P	**P**	**09 32 49.4**	**+1.3**
	comp=Z,49nm,0.9s,mb5.2						
ESPR	**Espera**	**39.41**	**38**	P	**P**	**09 32 49.3**	**+1.0**
	comp=Z,36nm,1.1s,mb5.0						
ROSC	**El Rosal**	**39.50**	**269**	P	**P**	**09 32 49.6**	**+0.2**
	comp=Z,66nm,0.7s,mb5.5,baz=105,slow=7.7,SNR=48						
ROSC				LR	LR	09 48 08.2	
	comp=Z,985nm,21.7s,MS4.6,baz=59,slow=35						
EMIN	**Mina Concepcio**	**39.53**	**36**	P	**P**	**09 32 49.7**	**+0.4**
	comp=Z,64nm,2.6s,mb4.9						
PBAR	**Barrancos**	**39.60**	**35**	*i* P	**P**	**09 32 49.9**	**0.0**
	comp=Z,81nm,1.5s,mb5.2						
PBAR				*e*S	**S**	**09 38 56.9**	**+4.1**
PBAR				*e*LQ		09 42 22.8	
PBAR				*e*LR	LR	09 43 27.1	
	comp=Z,2μm,21.5s						
PBAR	**Barrancos**	**39.60**	**35**	*e*T		10 13 18.6	
PESTR	**Estremoz**	**39.77**	**34**	*e*P	**P**	**09 32 51.5**	**+0.2**
	comp=Z,52nm,1.5s,mb5.0						
PESTR				*e*S	**S**	**09 39 00.2**	**+4.8**
PESTR				*e*LQ		09 41 53.4	
PESTR				*e*LR	LR	09 43 38.8	
	comp=Z,2μm,20.3s						
EMIJ	**Mijas**	**39.88**	**39**	P	**P**	**09 32 52.6**	**+0.4**
	comp=Z,61nm,1.5s,mb5.1						
EBAD	**Badajoz**	**40.01**	**34**	P	**P**	**09 32 53.7**	**+0.4**
	comp=Z,212nm,2.2s,mb5.5						
CPUP	**Villa Florida**	**40.03**	**213**	P	**P**	**09 32 53.8**	**+0.2**
	comp=Z,9.5nm,0.8s,mb4.6,baz=14,slow=9.1,SNR=33						
CPUP				PcP	PcP	09 34 59.1	+0.4
	comp=Z,3.2nm,0.6s,baz=68,slow=4.2,SNR=2.9						
CPUP				LR	LR	09 49 01.0	
	comp=Z,2μm,19.6s,MS5.0,baz=16,slow=36						
CPUP	**Villa Florida**	**40.03**	**213**	P	**P**	**09 32 53.8**	**+0.2**
CPUP						09 34 59.1	
CPUP				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CPUP				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CPUP				MLR	MLR		
	comp=Z,2μm,19.6s						
PMRV	**Marv??o**	**40.28**	**33**	*i* P	**P**	**09 32 55.9**	**+0.4**
	comp=Z,152nm,1.2s,mb5.6						
PMRV				*e*S	**S**	**09 39 00.6**	**-2.4**
PMRV				*e*LQ		09 42 01.5	
PMRV				*e*LR	LR	09 43 50.9	
	comp=Z,1μm,19.3s						
PMRV	**Marv??o**	**40.28**	**33**	*e*T		10 13 17.0	
ECAB	**El Cabril**	**40.47**	**36**	P	**P**	**09 32 57.2**	**+0.1**
	comp=Z,64nm,1.5s,mb5.1						
PCBR	**Castelo Branco**	**40.53**	**33**	*e*P	**P**	**09 32 57.5**	**-0.1**
	comp=Z,34nm,1.0s,mb4.9						
PCBR	**Castelo Branco**	**40.53**	**33**	*e*T		10 13 45.5	
LPAZ	**La Paz**	**40.58**	**234**	P	**P**	**09 32 58.9**	**+0.6**
	comp=Z,35nm,0.8s,mb5.0,baz=62,slow=7.3,SNR=91						
LPAZ				LR	LR	09 49 17.4	
	comp=Z,2μm,19.1s,MS4.9,baz=65,slow=36						
LPAZ	**La Paz**	**40.58**	**234**	P	**P**	**09 32 58.9**	**+0.6**
LPAZ				pmax	pmax		
	comp=Z,35nm,0.8s						
LPAZ				MLR	MLR		
	comp=Z,2μm,19.1s						
LPAZ	**La Paz**	**40.58**	**234**	P	**P**	**09 32 58.9**	**+0.6**
LPAZ				LR	LR	09 49 17.4	
ELOJ	**Sierra Loja**	**40.63**	**39**	P	**P**	**09 32 59.6**	**+1.1**
ELOJ				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.9						
ELOJ	**Sierra Loja**	**40.63**	**39**	P	**P**	**09 32 59.6**	**+1.1**
	comp=Z,24nm,0.8s,mb4.9						
ERON	**Agron**	**40.77**	**39**	P	**P**	**09 33 00.1**	**+0.6**
ELUQ	**Luque**	**40.82**	**38**	P	**P**	**09 33 00.9**	**+0.8**
ELUQ				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb4.7						
ELUQ	**Luque**	**40.82**	**38**	P	**P**	**09 33 00.9**	**+0.8**
	comp=Z,6.4nm,0.3s,mb4.7						
MTE	**Manteigas**	**40.89**	**32**	*e*P	**P**	**09 33 00.7**	**+0.1**
	comp=Z,68nm,1.9s,mb5.0						
MTE				*e*S	**S**	**09 39 17.3**	**+5.2**
MTE				*e*LQ		09 42 21.9	
MTE				*e*LR	LR	09 44 11.9	
	comp=Z,2μm,19.9s						
MTE	**Manteigas**	**40.89**	**32**	*e*T		10 13 50.1	
MTE	**Manteigas**	**40.89**	**32**	*e*P	**P**	**09 33 00.2**	**-0.3**
PVIS	**Viseu**	**40.94**	**32**	*e*P	**P**	**09 33 01.2**	**+0.3**
	comp=Z,69nm,1.5s,mb5.1						
EADA	**Adamuz**	**41.03**	**37**	P	**P**	**09 33 02.4**	**+0.6**
	comp=Z,28nm,1.8s,mb4.6						
ECOG	**Cogollos-Vega**	**41.08**	**39**	P	**P**	**09 33 02.8**	**+0.7**
ECOG				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.7						
ECOG	**Cogollos-Vega**	**41.08**	**39**	P	**P**	**09 33 02.8**	**+0.7**
	comp=Z,12nm,0.6s,mb4.7						
EBER	**Berja**	**41.27**	**40**	P	**P**	**09 33 04.8**	**+1.1**
	comp=Z,56nm,1.0s,mb5.2						
EBAN	**Banos Encina**	**41.50**	**38**	P	**P**	**09 33 06.2**	**+0.6**
EBAN				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.6						
EBAN	**Banos Encina**	**41.50**	**38**	P	**P**	**09 33 06.2**	**+0.6**
	comp=Z,13nm,0.9s,mb4.5						
TAM	**Tamanrasset**	**41.58**	**64**	*e*P	**P**	**09 33 07.3**	**+0.8**
PCAB	**Cabril**	**41.60**	**30**	*e*P	**P**	**09 33 06.0**	**-0.4**
	comp=Z,55nm,1.8s,mb4.9						
ELOB	**Lobios**	**41.70**	**30**	P	**P**	**09 33 07.7**	**+0.5**
	comp=Z,142nm,2.4s,mb5.2						
EQES	**Quesada**	**41.71**	**39**	P	**P**	**09 33 07.6**	**+0.3**
	comp=Z,112nm,1.0s,mb5.5						
MVO	**Moncorvo**	**41.72**	**32**	*i* P	**P**	**09 33 07.2**	**-0.1**
	comp=Z,58nm,1.3s,mb5.0						
MVO				*e*S	**S**	**09 39 22.8**	**-1.5**
MVO				*e*LR	LR	09 44 26.9	
	comp=Z,2μm,19.3s						
MVO	**Moncorvo**	**41.72**	**32**	*e*T		10 14 46.0	
EHUE	**Huescar**	**42.02**	**39**	P	**P**	**09 33 09.6**	**-0.2**
EHUE				pmax	pmax		
	comp=Z,70nm,1.4s,mb5.1						
EHUE	**Huescar**	**42.02**	**39**	P	**P**	**09 33 09.6**	**-0.2**
	comp=Z,70nm,1.4s,mb5.1						
STS	**Santiago**	**42.23**	**29**	P	**P**	**09 33 10.6**	**-0.9**
STS				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
STS	**Santiago**	**42.23**	**29**	P	**P**	**09 33 10.6**	**-0.9**
	comp=Z,32nm,0.9s,mb4.9						
ESLA	**Sonseca Array**	**42.38**	**36**	*e*P	**P**	**09 33 12.6**	**-0.2**
	comp=Z,11nm,1.3s,mb4.3						
ESDC	**Sonseca Array**	**42.38**	**36**	P	**P**	**09 33 12.7**	**-0.1**
	comp=Z,5.1nm,0.8s,mb4.2,baz=233,slow=8.8,SNR=30						
ESDC	**Sonseca Array**	**42.38**	**36**	P	**P**	**09 33 11.3**	**-1.4**
	comp=Z,22nm,1.3s,mb4.6						
ECAL	**Calabor**	**42.43**	**31**	P	**P**	**09 33 13.4**	**+0.2**
	comp=Z,114nm,1.2s,mb5.4						
EVIA	**Vianos**	**42.58**	**38**	P	**P**	**09 33 15.2**	**+0.8**
EVIA				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.4						
EVIA	**Vianos**	**42.58**	**38**	P	**P**	**09 33 15.2**	**+0.8**
	comp=Z,60nm,0.8s,mb5.4						
GUD	**Guadarrama**	**42.91**	**35**	P	**P**	**09 33 17.4**	**+0.3**
GUD				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.1						
GUD	**Guadarrama**	**42.91**	**35**	P	**P**	**09 33 17.4**	**+0.3**
	comp=Z,37nm,1.0s,mb5.1						
ETOB	**Tobarra**	**43.17**	**39**	P	**P**	**09 33 20.4**	**+1.2**
	comp=Z,15nm,0.7s,mb4.8						
ETRT	**Tiaret**	**43.20**	**45**	P	**P**	**09 33 20.5**	**+1.0**
EPON	**Pontenova**	**43.24**	**29**	P	**P**	**09 33 19.6**	**0.0**
	comp=Z,177nm,2.0s,mb5.5						
EANR	**'Ain N'Sour**	**43.36**	**44**	P	**P**	**09 33 16.4**	**-4.4**
ARE	**Arequipa**	**43.42**	**237**	*e*P	**P**	**09 33 19.0**	**-2.5**
EBEN	**Beniarda**	**44.04**	**40**	P	**P**	**09 33 26.2**	**0.0**
	comp=Z,99nm,1.1s,mb5.5						
ECHE	**Chera**	**44.11**	**38**	P	**P**	**09 33 26.6**	**-0.2**
ECHE				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.2						
ECHE	**Chera**	**44.11**	**38**	P	**P**	**09 33 26.6**	**-0.2**
	comp=Z,60nm,1.3s,mb5.2						
OTAV	**Otavalo**	**44.22**	**263**	*e*P	**P**	**09 33 27.8**	**-0.2**
ETOR	**Torete**	**44.23**	**36**	P	**P**	**09 33 28.6**	**+0.9**
ETOR				pmax	pmax		
	comp=Z,26nm,1.1s,mb4.9						
ETOR	**Torete**	**44.23**	**36**	P	**P**	**09 33 28.6**	**+0.9**
	comp=Z,26nm,1.1s,mb4.9						
BCIP	**Isla Barro Col**	**44.72**	**276**	*e*P	**P**	**09 33 32.1**	**+0.1**
	comp=Z,48nm,1.0s,mb5.3						
EMHD	**Djebel Mahouad**	**44.77**	**45**	P	**P**	**09 33 33.0**	**+0.9**
LVC	**Limon Verde**	**44.82**	**228**	*e*P	**P**	**09 33 31.1**	**-1.5**
	comp=Z,77nm,1.5s,mb5.3						
EMOS	**Mosqueruela**	**44.88**	**37**	P	**P**	**09 33 34.2**	**+1.3**
	comp=Z,49nm,1.2s,mb5.2						
ELAN	**Lanestosa**	**45.06**	**32**	P	**P**	**09 33 35.2**	**+0.9**
	comp=Z,30nm,0.7s,mb5.2						
EIBI	**Ibiza**	**45.22**	**40**	P	**P**	**09 33 36.1**	**+0.4**
	comp=Z,86nm,1.3s,mb5.4						
ESAC	**San Caprasio**	**45.73**	**36**	P	**P**	**09 33 40.8**	**+1.2**
	comp=Z,172nm,1.5s,mb5.8						
ERTA	**Horta de San J**	**45.73**	**37**	P	**P**	**09 33 39.9**	**+0.3**
	comp=Z,123nm,1.4s,mb5.6						
AKF	**Akfadou**	**46.12**	**45**	P	**P**	**09 33 44.8**	**+2.0**
SJPF	**Ste Jean**	**46.19**	**34⇑**	*i*P	**P**	**09 33 43.6**	**+0.4**
	comp=Z,59nm,1.3s,mb5.1						
SJPF	**Ste Jean**	**46.19**	**34⇑**	*i*P	**P**	**09 33 43.6**	**+0.4**
SJPF				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
SJPF	**Ste Jean**	**46.19**	**34⇑**	*i*P	**P**	**09 33 43.6**	**+0.4**
	comp=Z,30nm,1.3s,mb5.1						
EPOB	**Poblet**	**46.42**	**37**	P	**P**	**09 33 44.5**	**-0.5**
	comp=Z,148nm,1.2s,mb5.8						
ETSF	**Etsaut**	**46.42**	**35⇑**	*i*P	**P**	**09 33 45.9**	**+0.8**
	comp=Z,125nm,1.3s,mb5.4						
ETSF	**Etsaut**	**46.42**	**35⇑**	*i*P	**P**	**09 33 45.9**	**+0.8**
ETSF				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.4						
ETSF	**Etsaut**	**46.42**	**35⇑**	*i*P	**P**	**09 33 45.9**	**+0.8**
	comp=Z,62nm,1.3s,mb5.4						
ATE	**Arette**	**46.46**	**34**	*e*P	**P**	**09 33 46.1**	**+0.7**
CKHR	**Kef el Ahmar**	**46.49**	**46**	P	**P**	**09 33 46.5**	**+0.8**
SET	**Setif**	**46.49**	**46**	P	**P**	**09 33 47.0**	**+1.2**
ETOS	**Mallorca**	**46.58**	**40**	P	**P**	**09 33 47.1**	**+0.7**
	comp=Z,64nm,1.2s,mb5.4						
REYF	**Montagne du Re**	**46.62**	**35**	*e*P	**P**	**09 33 47.6**	**+0.9**
EBIE	**Bielsa**	**46.68**	**35**	P	**P**	**09 33 48.2**	**+1.1**
	comp=Z,97nm,1.5s,mb5.5						
VIEF	**Viey**	**46.74**	**35**	*e*P	**P**	**09 33 48.3**	**+0.7**
LABF	**Labassere**	**46.87**	**35**	*e*P	**P**	**09 33 49.6**	**+1.0**
DFRA	**Djebel Bou Aff**	**47.00**	**46**	P	**P**	**09 33 51.4**	**+1.7**
EPF	**Esparros**	**47.01**	**35⇑**	*i*P	**P**	**09 33 50.7**	**+1.0**
	comp=Z,167nm,1.2s,mb5.5						
EPF	**Esparros**	**47.01**	**35⇑**	*i*P	**P**	**09 33 50.7**	**+1.0**
EPF				pmax	pmax		
	comp=Z,83nm,1.2s,mb5.5						
EPF	**Esparros**	**47.01**	**35⇑**	*i*P	**P**	**09 33 50.7**	**+1.0**
	comp=Z,83nm,1.2s,mb5.5						
EMIR	**Miracle**	**47.02**	**37**	P	**P**	**09 33 50.5**	**+0.7**
	comp=Z,50nm,1.0s,mb5.4						
CTEI	**Djebel Teioual**	**47.15**	**47**	P	**P**	**09 33 51.6**	**+0.7**
CASM	**Ain Smara**	**47.30**	**46**	P	**P**	**09 33 54.0**	**+1.9**
SALF	**Salau**	**47.34**	**36**	*e*P	**P**	**09 33 53.4**	**+1.2**
MLS	**Moulis**	**47.40**	**36**	*e*P	**P**	**09 33 53.7**	**+1.0**
BRYW	**Bryant College**	**47.43**	**323**	*e*P	**P**	**09 33 54.2**	**+1.2**
CKFL	**Kef-Lekhel**	**47.53**	**46**	P	**P**	**09 33 54.0**	**+0.1**
VALF	**Valcebollere**	**47.61**	**37**	*e*P	**P**	**09 33 55.0**	**+0.7**
HRV	**Adam Dziewonsk**	**47.79**	**323**	*e*P	**P**	**09 33 56.3**	**+0.6**
CAEH	**'Ain El Ouahch**	**47.80**	**46**	P	**P**	**09 33 56.4**	**+0.5**
CARF	**Carcanieres**	**47.85**	**37**	*e*P	**P**	**09 33 56.9**	**+0.7**
ABSA	**Djebel Ababsia**	**48.02**	**47**	P	**P**	**09 33 58.0**	**+0.3**
FILF	**Fillols**	**48.02**	**37**	*e*P	**P**	**09 33 57.4**	**-0.2**
QUA2	**Belchertown**	**48.13**	**322**	*e*P	**P**	**09 33 56.7**	**-1.7**
CMAH	**Djebel Manchou**	**48.13**	**46**	P	**P**	**09 33 59.3**	**+0.7**
EJON	**La Jonquera**	**48.15**	**37**	P	**P**	**09 33 59.3**	**+0.7**
	comp=Z,41nm,1.1s,mb5.4						
SJAF	**Saint Jean de**	**48.17**	**37**	*e*P	**P**	**09 33 58.8**	**+0.1**
PKME	**Peaks-Kenny Pk**	**48.23**	**327**	*e*P	**P**	**09 33 57.5**	**-1.7**
	comp=Z,28nm,1.1s,mb5.2						
PKME				*e*PcP	PcP	09 35 25.2	-1.1
LRDF	**Laroque-de-Fa**	**48.23**	**37**	*e*P	**P**	**09 33 59.5**	**+0.3**
MTLF	**Montolieu**	**48.29**	**36⇑**	*i*P	**P**	**09 33 59.5**	**-0.1**
	comp=Z,164nm,1.2s,mb5.6						
MTLF	**Montolieu**	**48.29**	**36⇑**	*i*P	**P**	**09 33 59.5**	**-0.1**
MTLF				pmax	pmax		
	comp=Z,82nm,1.2s,mb5.6						
MTLF	**Montolieu**	**48.29**	**36⇑**	*i*P	**P**	**09 33 59.5**	**-0.1**
	comp=Z,82nm,1.2s,mb5.6						
PAL	**Palisades**	**48.38**	**320**	*e*P	**P**	**09 34 02.1**	**+1.7**
PAL				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
PAL	**Palisades**	**48.38**	**320**	*e*P	**P**	**09 34 02.0**	**+1.7**
	comp=Z,24nm,0.8s,mb5.3						
FFD	**Franklin Falls**	**48.42**	**324**	*e*P	**P**	**09 34 00.5**	**-0.1**
	comp=Z,40nm,0.8s,mb5.5						
LFF	**La Frestale**	**48.45**	**33⇑**	*i*P	**P**	**09 34 01.0**	**+0.2**
	comp=Z,174nm,1.2s,mb5.7						
LFF	**La Frestale**	**48.45**	**33⇑**	*i*P	**P**	**09 34 01.0**	**+0.2**
LFF				pmax	pmax		
	comp=Z,87nm,1.2s,mb5.7						
LFF	**La Frestale**	**48.45**	**33⇑**	*i*P	**P**	**09 34 01.0**	**+0.2**
	comp=Z,87nm,1.2s,mb5.7						
QUIF	**Quistinic**	**48.50**	**28⇑**	*i*P	**P**	**09 34 00.6**	**-0.6**
ROSF	**Rostrenen**	**48.76**	**28⇑**	*i*P	**P**	**09 34 02.9**	**-0.2**
	comp=Z,100nm,1.3s,mb5.4						
ROSF	**Rostrenen**	**48.76**	**28⇑**	*i*P	**P**	**09 34 02.9**	**-0.2**
ROSF				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.4						
ROSF	**Rostrenen**	**48.76**	**28⇑**	*i*P	**P**	**09 34 02.9**	**-0.2**
	comp=Z,50nm,1.3s,mb5.4						
HNH	**Hanover**	**48.93**	**324**	*e*P	**P**	**09 34 05.5**	**+1.0**
SGMF	**Saint Gilles**	**49.03**	**28⇑**	*i*P	**P**	**09 34 05.1**	**-0.1**
	comp=Z,184nm,1.4s,mb5.6						
SGMF	**Saint Gilles**	**49.03**	**28⇑**	*i*P	**P**	**09 34 05.1**	**-0.1**
SGMF				pmax	pmax		
	comp=Z,92nm,1.4s,mb5.6						
SGMF	**Saint Gilles**	**49.03**	**28⇑**	*i*P	**P**	**09 34 05.1**	**-0.1**
	comp=Z,92nm,1.4s,mb5.6						
LBNH	**Lisbon**	**49.04**	**325**	*e*P	**P**	**09 34 08.0**	**+2.6**
MFF	**Saint Martin d**	**49.07**	**31⇑**	*i*P	**P**	**09 34 05.1**	**-0.4**
	comp=Z,57nm,1.2s,mb5.2						
MFF	**Saint Martin d**	**49.07**	**31⇑**	*i*P	**P**	**09 34 05.1**	**-0.4**
MFF				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.2						
MFF	**Saint Martin d**	**49.07**	**31⇑**	*i*P	**P**	**09 34 05.1**	**-0.4**
	comp=Z,28nm,1.2s,mb5.2						
RJF	**Les Rejaudoux**	**49.10**	**33⇑**	*i*P	**P**	**09 34 05.5**	**-0.4**
	comp=Z,100nm,1.2s,mb5.4						
RJF				*e*MLR	MLR		
	comp=Z,3μm,21.8s,MS4.9						
RJF	**Les Rejaudoux**	**49.10**	**33⇑**	*i*P	**P**	**09 34 05.5**	**-0.4**
RJF				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.4						
RJF				MLR	MLR		
	comp=Z,3μm,21.8s,MS5.2						
RJF	**Les Rejaudoux**	**49.10**	**33⇑**	*i*P	**P**	**09 34 05.5**	**-0.4**
	comp=Z,50nm,1.2s,mb5.4						
RJF				LR	LR		
	comp=Z,3μm,21.8s,MS5.2						
URVA	**University of**	**49.11**	**314**	*e*P	**P**	**09 34 04.8**	**-1.2**
KEST	**Kesra**	**49.16**	**48**	P	**P**	**09 34 06.6**	**+0.2**
	comp=Z,35nm,0.8s,mb5.5,baz=210,slow=3.5,SNR=49						
CAF	**Calviac**	**49.17**	**34**	*e*P	**P**	**09 34 06.4**	**0.0**
	comp=Z,192nm,1.1s,mb5.8						
CAF	**Calviac**	**49.17**	**34**	*e*P	**P**	**09 34 06.4**	**0.0**
CAF				pmax	pmax		
	comp=Z,96nm,1.1s,mb5.7						
CAF	**Calviac**	**49.17**	**34**	*e*P	**P**	**09 34 06.4**	**0.0**
	comp=Z,96nm,1.1s,mb5.7						
NHSC	**New Hope**	**49.28**	**308**	*e*P	**P**	**09 34 08.1**	**+0.6**
SDMD	**Soldier's Deli**	**49.49**	**317**	*e*P	**P**	**09 34 10.3**	**+1.4**
ACCN	**Adirondack Com**	**49.56**	**323**	*e*P	**P**	**09 34 11.7**	**+2.4**
	comp=Z,33nm,1.4s,mb5.2						
MDV	**Middlebury**	**49.62**	**324**	*e*P	**P**	**09 34 10.8**	**+1.0**
LASF	**Ste Croix**	**49.68**	**36⇑**	*i*P	**P**	**09 34 10.6**	**+0.3**
	comp=Z,196nm,1.2s,mb5.7						
VERF	**Verneugheol**	**49.91**	**34**	*e*P	**P**	**09 34 12.3**	**+0.3**
GRR	**Gorron**	**49.93**	**29⇑**	*i*P	**P**	**09 34 11.6**	**-0.5**
	comp=Z,63nm,1.1s,mb5.2						
GRR	**Gorron**	**49.93**	**29⇑**	*i*P	**P**	**09 34 11.6**	**-0.5**
GRR				pmax	pmax		

comp=Z,31nm,1.1s,mb5.2
GRR Gorron 49.93 29⇑iP P 09 34 11.6 -0.5
comp=Z,31nm,1.1s,mb5.2
LBL Lubilhac 50.02 35 eP P 09 34 13.2 +0.4
LCO Las Campanas 50.09 222 eP P 09 34 12.7 -0.9
comp=Z,22nm,1.0s,mb5.2
TCF Toulx Ste Croi 50.10 33⇑iP P 09 34 13.3 -0.1
comp=Z,73nm,1.3s,mb5.3
TCF Toulx Ste Croi 50.10 33⇑iP P 09 34 13.3 -0.1
TCF pmax pmax
comp=Z,37nm,1.3s,mb5.2
TCF Toulx Ste Croi 50.10 33⇑iP P 09 34 13.3 -0.1
comp=Z,36nm,1.3s,mb5.2
PYM Petit Puy Mans 50.20 34 eP P 09 34 14.5 +0.3
GELF Grande-Etoile 50.22 38 eP P 09 34 14.8 +0.4
NCB Newcomb 50.22 323 eP P 09 34 14.5 +0.1
PRAF Pradon 50.30 37 eP P 09 34 15.6 +0.6
TREF Trevaresse 50.33 37 eP P 09 34 14.9 -0.3
BINY Binghamton 50.33 320 eP P 09 34 20.6 +5.3
BERF Bertagne 50.34 38 eP P 09 34 15.1 -0.2
FRNY Flat Rock 50.35 325 eP P 09 34 15.4 0.0
comp=Z,32nm,1.0s,mb5.3
FLN La Foliniere 50.37 29⇑iP P 09 34 14.9 -0.5
comp=Z,120nm,1.3s,mb5.5
FLN eMLR MLR
comp=Z,1μm,20.8s,MS4.6
FLN La Foliniere 50.37 29⇑iP P 09 34 14.9 -0.5
FLN pmax pmax
comp=Z,60nm,1.3s,mb5.5
FLN MLR MLR
comp=Z,1μm,20.8s,MS4.9
FLN La Foliniere 50.37 29⇑iP P 09 34 14.9 -0.5
comp=Z,60nm,1.3s,mb5.5
FLN LR LR
comp=Z,1μm,20.8s,MS4.9
LDF La Druitiere 50.42 29⇑iP P 09 34 15.4 -0.5
comp=Z,126nm,1.3s,mb5.5
LDF La Druitiere 50.42 29⇑iP P 09 34 15.4 -0.5
LDF pmax pmax
comp=Z,63nm,1.3s,mb5.5
LDF La Druitiere 50.42 29⇑iP P 09 34 15.4 -0.5
comp=Z,63nm,1.3s,mb5.5
COLF Collangettes 50.44 34 eP P 09 34 16.9 +0.9
AGO Saint Agoulin 50.45 34 eP P 09 34 16.3 +0.2
PUYF Puyloubier 50.47 38 eP P 09 34 15.4 -0.9
VIVF Saint-Julien-l 50.61 36⇑iP P 09 34 17.9 +0.6
comp=Z,209nm,1.1s,mb5.7
VIVF Saint-Julien-l 50.61 36⇑iP P 09 34 17.9 +0.6
VIVF pmax pmax
comp=Z,105nm,1.1s,mb5.7
VIVF Saint-Julien-l 50.61 36⇑iP P 09 34 17.9 +0.6
comp=Z,104nm,1.1s,mb5.7
BGF Bois d'Agland 50.61 33⇑iP P 09 34 17.3 0.0
comp=Z,144nm,1.2s,mb5.5
BGF Bois d'Agland 50.61 33⇑iP P 09 34 17.3 0.0
BGF pmax pmax
comp=Z,72nm,1.2s,mb5.5
BGF Bois d'Agland 50.61 33⇑iP P 09 34 17.3 0.0
comp=Z,72nm,1.2s,mb5.5
SMRF Simiane la Rot 50.64 37⇑iP P 09 34 18.1 +0.5
comp=Z,163nm,1.3s,mb5.5
SMRF Simiane la Rot 50.64 37⇑iP P 09 34 18.1 +0.5
comp=Z,163nm,1.3s,mb5.8
VILF Villemus 50.65 37 eP P 09 34 17.4 -0.3
PLDF La Plantade 50.67 34 eP P 09 34 18.0 +0.2
TAVF Tavernes 50.73 38 eP P 09 34 18.2 -0.1
SSB Saint Sauveur 50.78 35 eP P 09 34 19.5 +0.9
VSL Villasalto 50.81 44 eP P 09 34 19.3 +0.3
OCF Saint Nazaire 50.82 36 eP P 09 34 19.8 +0.9
OG26 St.-Nazaire-De 50.82 36 eP P 09 34 19.8 +0.9
STOF St-Etienne Org 50.85 37 eP P 09 34 19.1 -0.1
LMR La Mourre 50.85 38⇑iP P 09 34 18.7 -0.5
comp=Z,94nm,1.2s,mb5.3
LMR La Mourre 50.85 38⇑iP P 09 34 18.7 -0.5
LMR pmax pmax
comp=Z,47nm,1.2s,mb5.3
LMR La Mourre 50.85 38⇑iP P 09 34 18.7 -0.5
comp=Z,47nm,1.2s,mb5.3
TLL Tololo Astrono 50.91 221⇑iP P 09 34 19.4 -0.4
HYF Humbligny 50.95 32⇑iP P 09 34 19.9 +0.1
AVF Avril sur Loir 51.03 33⇑iP P 09 34 20.2 -0.3
comp=Z,72nm,1.2s,mb5.2
AVF Avril sur Loir 51.03 33⇑iP P 09 34 20.2 -0.3
AVF pmax pmax
comp=Z,36nm,1.2s,mb5.2
AVF Avril sur Loir 51.03 33⇑iP P 09 34 20.2 -0.3
comp=Z,36nm,1.2s,mb5.2
BLA Blacksburg 51.04 313 eP P 09 34 18.2 -2.5
BLA pmax pmax
comp=Z,51nm,1.0s,mb5.4
BLA Blacksburg 51.04 313 eP P 09 34 18.2 -2.5
comp=Z,51nm,1.0s,mb5.4
FRF La Foret Royal 51.06 38⇑iP P 09 34 20.4 -0.3
comp=Z,60nm,0.9s,mb5.2
FRF La Foret Royal 51.06 38⇑iP P 09 34 20.4 -0.3
FRF pmax pmax
comp=Z,30nm,0.9s,mb5.2
FRF La Foret Royal 51.06 38⇑iP P 09 34 20.4 -0.3
comp=Z,30nm,0.9s,mb5.2
OG25 Le Caire 51.16 37 eP P 09 34 22.2 +0.8
SMF Signal de Mont 51.21 33⇑iP P 09 34 21.7 -0.1
comp=Z,64nm,1.3s,mb5.1
SMF Signal de Mont 51.21 33⇑iP P 09 34 21.7 -0.1
SMF pmax pmax
comp=Z,32nm,1.3s,mb5.1
SMF Signal de Mont 51.21 33⇑iP P 09 34 21.7 -0.1
comp=Z,32nm,1.3s,mb5.1
DSB Dublin 51.24 21 eP P 09 34 21.4 -0.5
comp=Z,47nm,1.5s,mb5.2
SSF Saint Saulge 51.28 33⇑iP P 09 34 22.1 -0.2
comp=Z,62nm,1.2s,mb5.1
SSF Saint Saulge 51.28 33⇑iP P 09 34 22.1 -0.2
SSF pmax pmax
comp=Z,31nm,1.2s,mb5.1
SSF Saint Saulge 51.28 33⇑iP P 09 34 22.1 -0.2
comp=Z,163nm,1.2s,mb5.1
ELN Prospectdale 51.28 313 eP P 09 34 22.6 +0.1
CALN Calern 51.31 38 eP P 09 34 23.0 +0.4
ORIF Oris-en-Rattie 51.35 36⇑iP P 09 34 23.5 +0.6
comp=Z,21nm,0.9s,mb4.8
ORIF eMLR MLR
comp=Z,1μm,21.8s,MS4.7
ORIF Oris-en-Rattie 51.35 36⇑iP P 09 34 23.5 +0.6
ORIF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ORIF Oris-en-Rattie 51.35 36⇑iP P 09 34 23.5 +0.6
comp=Z,10nm,0.9s,mb4.8
MVIF Mont Vial 51.55 38 eP P 09 34 25.1 +0.7
REVF Revere 51.60 38 eP P 09 34 24.9 +0.1
LOR Lormes 51.60 33⇑iP P 09 34 24.4 -0.3
comp=Z,87nm,1.1s,mb5.3
LOR eMLR MLR
comp=Z,2μm,20.0s,MS4.8
LOR Lormes 51.60 33⇑iP P 09 34 24.4 -0.3
LOR pmax pmax
comp=Z,44nm,1.1s,mb5.3
LOR MLR MLR
comp=Z,2μm,20.0s,MS5.1
LOR Lormes 51.60 33⇑iP P 09 34 24.4 -0.3
comp=Z,44nm,1.1s,mb5.3
LOR LR LR
comp=Z,2μm,20.0s,MS5.1
MCWV Mont Chateau 51.66 316 eP P 09 34 25.8 +0.4
LUCF Luceram 51.66 38 eP P 09 34 25.7 +0.4
TOUF Mont Tournerai 51.67 38 eP P 09 34 25.7 +0.4
SBF Sospel 51.70 38⇑iP P 09 34 25.7 +0.1
comp=Z,231nm,1.0s,mb5.8
SBF Sospel 51.70 38⇑iP P 09 34 25.7 +0.1
SBF pmax pmax
comp=Z,115nm,1.0s,mb5.8
SBF Sospel 51.70 38⇑iP P 09 34 25.7 +0.1
comp=Z,115nm,1.0s,mb5.8
OG05 Jujurieux 51.75 35 eP P 09 34 26.3 +0.5
AUTN L'Aution 51.77 38 eP P 09 34 26.7 +0.7
MBDF Montbardon 51.77 37⇑iP P 09 34 26.7 +0.7
comp=Z,48nm,0.8s,mb5.2
MBDF Montbardon 51.77 37⇑iP P 09 34 26.7 +0.7
MBDF pmax pmax
comp=Z,24nm,0.8s,mb5.2
MBDF Montbardon 51.77 37⇑iP P 09 34 26.7 +0.7
comp=Z,24nm,0.8s,mb5.2
TRQA Tornquist 51.82 207 eP P 09 34 26.2 -0.3
comp=Z,29nm,1.0s,mb5.2
STV Sant Anna di V 51.84 38 P P 09 34 27.1 +0.5
SAOF Saorge 51.84 38 eP P 09 34 27.0 +0.4
BNI Bardonecchia 51.89 37 eP P 09 34 28.1 +1.1
BNI pmax pmax
comp=Z,78nm,1.1s,mb5.5
BNI Bardonecchia 51.89 37 eP P 09 34 28.1 +1.1
comp=Z,78nm,1.1s,mb5.5
OG22 Abries 51.92 37 eP P 09 34 28.0 +0.8
DOI San Damiano 51.93 37 P P 09 34 27.5 +0.2
GOGA Godfrey 51.98 307 eP P 09 34 28.0 +0.2
GOGA pmax pmax
comp=Z,55nm,1.5s,mb5.3
GOGA Godfrey 51.98 307 eP P 09 34 28.0 +0.2
comp=Z,55nm,1.5s,mb5.3
CORF Corte 51.99 41 eP P 09 34 27.4 -0.3
PGF Pioggiola 52.01 40⇑iP P 09 34 27.6 -0.3
comp=Z,135nm,0.9s,mb5.6
PGF Pioggiola 52.01 40⇑iP P 09 34 27.6 -0.3
PGF pmax pmax
comp=Z,67nm,0.9s,mb5.6
PGF Pioggiola 52.01 40⇑iP P 09 34 27.6 -0.3
comp=Z,67nm,0.9s,mb5.6
TGUH Tegucigalpa,Un 52.03 282 eP P 09 34 28.6 +0.1
comp=Z,52nm,0.9s,mb5.5
LPL La Plagne 52.18 36⇑iP P 09 34 29.8 +0.7
comp=Z,81nm,1.2s,mb5.2
LPL La Plagne 52.18 36⇑iP P 09 34 29.8 +0.7
LPL pmax pmax
comp=Z,40nm,1.2s,mb5.2
LPL La Plagne 52.18 36⇑iP P 09 34 29.8 +0.7
comp=Z,40nm,1.2s,mb5.2
LPG La Plagne 52.18 36⇑iP P 09 34 30.0 +0.9
comp=Z,78nm,1.1s,mb5.3
LPG La Plagne 52.18 36⇑iP P 09 34 30.0 +0.9
LPG pmax pmax
comp=Z,39nm,1.1s,mb5.2
LPG La Plagne 52.18 36⇑iP P 09 34 30.0 +0.9
comp=Z,39nm,1.1s,mb5.2
RSL Roselend 52.22 36 eP P 09 34 29.7 +0.4
RSP Reno Superiore 52.29 37 P P 09 34 30.5 +0.6
FIN Finale Ligure 52.36 38 P P 09 34 30.5 +0.1
LSD Lago del Serru 52.39 36 P P 09 34 31.3 +0.7
CABF La Chapelle 52.43 35⇑iP P 09 34 31.0 +0.1
comp=Z,55nm,1.1s,mb5.1
CABF La Chapelle 52.43 35⇑iP P 09 34 31.0 +0.1
CABF pmax pmax
comp=Z,27nm,1.1s,mb5.1
CABF La Chapelle 52.43 35⇑iP P 09 34 31.0 +0.1
comp=Z,27nm,1.1s,mb5.1
ALLY Alegheny Colle 52.76 318 eP P 09 34 34.0 +0.5
comp=Z,58nm,1.3s,mb5.3
TRAV Traversella 52.78 37 P P 09 34 33.1 -0.4
MENF Mencas 52.85 29 eP P 09 34 33.5 -0.4
TKL Tuckaleechee C 52.96 310 eP P 09 34 34.3 -0.8
ORO Oropa 52.98 37 P P 09 34 34.5 -0.5
MEZF Maizieres J'vi 52.99 32⇑iP P 09 34 34.7 -0.3
comp=Z,163nm,1.4s,mb5.5
MEZF Maizieres J'vi 52.99 32⇑iP P 09 34 34.7 -0.3
comp=Z,163nm,1.4s,mb5.8
TZTN Tazewell 53.10 311 eP P 09 34 36.3 +0.2
comp=Z,123nm,1.8s,mb5.5
LOMF Lomont 53.27 34 eP P 09 34 37.6 +0.5
HAU Haudompre 53.39 33⇑iP P 09 34 37.6 -0.4
comp=Z,134nm,1.3s,mb5.4
HAU eMLR MLR
comp=Z,1μm,22.5s,MS4.7
HAU Haudompre 53.39 33⇑iP P 09 34 37.6 -0.4
HAU pmax pmax
comp=Z,67nm,1.3s,mb5.4
HAU MLR MLR
comp=Z,1μm,22.5s,MS5.0
HAU Haudompre 53.39 33⇑iP P 09 34 37.6 -0.4
comp=Z,67nm,1.3s,mb5.4
HAU LR LR
comp=Z,1μm,22.5s,MS5.0
TEIG Tepich 53.40 290 eP P 09 34 37.8 -0.8
comp=Z,23nm,0.8s,mb5.2
BOB Bobbio (Coli) 53.41 38 P P 09 34 38.3 +0.1
CPCT Cooper Cave 53.47 309 eP P 09 34 39.2 +0.4
CSLB Castelbuono 53.50 48 P P 09 34 39.6 +0.6
BAIF Baives 53.52 30⇑iP P 09 34 38.3 -0.6
comp=Z,126nm,1.2s,mb5.4
BAIF Baives 53.52 30⇑iP P 09 34 38.3 -0.6
BAIF pmax pmax
comp=Z,63nm,1.2s,mb5.4
BAIF Baives 53.52 30⇑iP P 09 34 38.3 -0.6
comp=Z,63nm,1.2s,mb5.4
HINF Hinteralfeld 53.55 34⇑iP P 09 34 38.8 -0.4
comp=Z,101nm,1.4s,mb5.2
HINF Hinteralfeld 53.55 34⇑iP P 09 34 38.8 -0.4
HINF pmax pmax
comp=Z,51nm,1.4s,mb5.3
HINF Hinteralfeld 53.55 34⇑iP P 09 34 38.8 -0.4
comp=Z,51nm,1.4s,mb5.3
VAI Varese 53.57 37 P P 09 34 38.2 -1.2
GRFL Gerfalco 53.57 41 P P 09 34 39.8 +0.4
MAIM Maiano 53.63 40 P P 09 34 38.7 -1.1
BBS Basel-Blauen 53.72 34 eP P 09 34 40.3 -0.1
MOF Molkenrain 53.73 34 eP P 09 34 40.0 -0.5
DOU Dourbes 53.74 30 P P 09 34 40.0 -0.5
comp=Z,32nm,1.4s,mb5.0
TOLF Tolfa 53.75 42 P P 09 34 40.2 -0.5
BDI Bagni Di Lucca 53.77 39 P P 09 34 40.2 -0.7
ERBM Eremo 53.83 39 P P 09 34 41.8 +0.5
GIVF Givet 53.86 30⇑iP P 09 34 40.7 -0.7
comp=Z,155nm,1.2s,mb5.5
GIVF Givet 53.86 30⇑iP P 09 34 40.7 -0.7
GIVF pmax pmax
comp=Z,78nm,1.2s,mb5.5
GIVF Givet 53.86 30⇑iP P 09 34 40.7 -0.7
comp=Z,78nm,1.2s,mb5.5
GSCL Gusciola 53.91 39 P P 09 34 42.3 +0.5
SCHQ Schefferville 53.91 338 P P 09 34 40.5 -1.1
comp=Z,12nm,0.5s,mb5.1,baz=137,slow=6.7,SNR=26
SCHQ LR LR 09 52 52.8
comp=Z,655nm,19.8s,MS4.7,baz=134,slow=31
CSNT Castellina Chi 53.93 40 P P 09 34 42.1 +0.1
ECH Echery 53.95 33 eP P 09 34 41.5 -0.6
ESK Eskdalemuir 54.02 22 eP P 09 34 41.3 -1.2
ACSO Alum Creek Sta 54.09 315 eP P 09 34 43.2 -0.1
CDF Champ du Feu 54.13 33⇑iP P 09 34 42.8 -0.6
comp=Z,79nm,1.4s,mb5.2
CDF Champ du Feu 54.13 33⇑iP P 09 34 42.8 -0.6
CDF pmax pmax
comp=Z,40nm,1.4s,mb5.2
CDF Champ du Feu 54.13 33⇑iP P 09 34 42.8 -0.6
comp=Z,40nm,1.4s,mb5.2
ZCCA Zocca 54.15 39 P P 09 34 44.1 +0.5
FELD Feldberg im Sc 54.23 34 eP P 09 34 43.0 -1.1
TUE Stuetta 54.23 36 P P 09 34 43.3 -0.9
WLF Walferdange 54.27 32 P P 09 34 44.2 -0.2
comp=Z,121nm,1.5s,mb4.8
WLF Walferdange 54.27 32 eP P 09 34 43.9 -0.5
WLF pmax pmax
comp=Z,26nm,1.1s,mb5.1
WLF Walferdange 54.27 32 eP P 09 34 43.9 -0.5
comp=Z,30nm,1.1s,mb5.1
WLF eS S 09 42 23.0 +1.1
WLF Walferdange 54.27 32 eP P 09 34 43.9 -0.5
comp=Z,26nm,1.1s,mb5.1
BCLA Clavier 54.30 30 P P 09 34 44.3 -0.2
comp=Z,29nm,1.6s,mb5.0
SWET Sewanee 54.48 308 eP P 09 34 46.4 +0.2
SFI Santa Sofia 54.49 40 P P 09 34 45.8 -0.3
MURB Monte Urbino 54.63 41 P P 09 34 46.7 -0.5
BFO Black Forest 54.66 34 P P 09 34 46.1 -1.2
comp=Z,120nm,1.0s,mb5.9,SNR=7.7
BFO Black Forest 54.66 34 eP P 09 34 46.8 -0.5
BFO eS S 09 42 27.7 +0.4
BFO pmax pmax
comp=Z,44nm,1.3s,mb5.3
BFO Black Forest 54.66 34 eP P 09 34 46.8 -0.5
comp=Z,44nm,1.3s,mb5.3
BFO eS S 09 42 27.7 +0.4
PTQR Pietraquaria 54.67 43 P P 09 34 47.7 +0.3
MABI Malga Bissina 54.71 37 P P 09 34 46.0 -1.7
BEBN Eben Emael 54.72 30 P P 09 34 47.1 -0.5
MTTG Motta San Giov 54.73 48 P P 09 34 48.6 +0.7
LANF Langenberg 54.74 33 eP P 09 34 47.2 -0.6
VVLD Villa Vallelon 54.75 43 P P 09 34 47.7 -0.4
RFI Roccamonfina 54.76 44 P P 09 34 48.6 +0.4
RUP Ruppelstein 54.76 32 eP P 09 34 47.4 -0.6
MEM Membach 54.77 31 P P 09 34 47.0 -1.0
comp=Z,35nm,1.4s,mb5.2
SPAK Spaichingen-Ko 54.79 34 eP P 09 34 47.9 -0.3
AQU L'Aquila 54.81 42 P P 09 34 48.8 +0.3
SDI San Donato 54.81 43 P P 09 34 48.3 -0.2
HGN Heimansgroeve 54.83 30 eP P 09 34 47.9 -0.5
comp=Z,39nm,1.5s,mb5.2
HGN Heimansgroeve 54.83 30 ePP PP 09 36 50.3 -0.9
HGN Heimansgroeve 54.83 30 eS S 09 42 30.9 +1.5
NRCA Norcia 54.83 42 P P 09 34 48.2 -0.4
BRMO Bormio 54.84 37 P P 09 34 47.9 -0.7
SNTG Esanatoglia 54.90 41 P P 09 34 48.5 -0.6
DAVA Damuels 54.97 36⇑iP P 09 34 49.1 -0.5
comp=Z,69nm,1.3s,mb5.5,SNR=15
FSSB Fossombrone 54.99 41 P P 09 34 48.7 -1.0
SOI Samo 55.02 48 P P 09 34 50.2 +0.1
RNI2 Rionero Sannit 55.04 43 P P 09 34 51.8 +1.6
SGG Gregorio Mates 55.07 44 P P 09 34 50.8 +0.4
MIDA Miranda 55.09 44 P P 09 34 51.0 +0.5
PSB1 Pescosannita 55.30 44 P P 09 34 52.3 +0.2
CSSN Cassano Irpino 55.31 45 P P 09 34 52.3 +0.2
FETA Feichten 55.33 36⇓iP P 09 34 51.1 -1.1
comp=Z,56nm,1.4s,mb5.4,SNR=22
STU Stuttgart 55.38 34 eS S 09 42 36.3 -0.7
SGO Sicignano 55.39 45 P P 09 34 53.0 +0.3
CTI Castel Tesino 55.39 38 P P 09 34 51.8 -0.8
RETA Reutte 55.59 36⇑iP P 09 34 53.3 -0.7
comp=Z,76nm,1.5s,mb5.5,SNR=11
MOTA Moosalm 55.71 36⇑iP P 09 34 54.0 -0.9
comp=Z,37nm,1.4s,mb5.2,SNR=6.5
WCI Wyandotte Cave 55.73 312 eP P 09 34 54.8 -0.4
WCI pmax pmax
comp=Z,22nm,0.8s,mb5.2
WCI Wyandotte Cave 55.73 312 eP P 09 34 54.8 -0.4
comp=Z,22nm,0.8s,mb5.2
TNS Taunus Mts 55.80 32 eP P 09 34 54.8 -0.6
TNS eS S 09 42 45.0 +2.6
TNS pmax pmax
comp=Z,30nm,1.2s,mb5.2
TNS Taunus Mts 55.80 32 eP P 09 34 54.8 -0.6
comp=Z,30nm,1.2s,mb5.2
TNS eS S 09 42 45.0 +2.6
BUG Bochum--Univer 55.91 30 eP P 09 34 55.9 -0.3
comp=Z,55nm,1.4s,mb5.4
BUG eS S 09 42 54.8 +11
TIP Timpagrande 55.92 47 eP P 09 34 55.3 -1.2
comp=Z,44nm,0.8s,mb5.5
WTTA Wattenberg 55.99 36⇑iP P 09 34 55.9 -1.0
comp=Z,116nm,2.2s,mb5.5,SNR=10
WATA Walderalm 55.99 36⇑iP P 09 34 55.9 -0.9
comp=Z,32nm,1.2s,mb5.2
WTSB Winterswijk 55.99 30 eP P 09 34 56.4 -0.4
comp=Z,69nm,1.4s,mb5.5
PLAL Pickwick Lake 56.09 307 eP P 09 34 56.9 -1.0
BLO Bloomington 56.23 313 eP P 09 34 58.5 -0.2
WVT Waverly 56.23 309 eP P 09 34 58.2 -0.6
WVT pmax pmax
comp=Z,42nm,1.2s,mb5.3
WVT Waverly 56.23 309 eP P 09 34 58.2 -0.6
comp=Z,42nm,1.2s,mb5.3
FUR Furstenfeldbru 56.23 35 eP P 09 34 58.3 -0.3
FUR pmax pmax
comp=Z,42nm,1.1s,mb5.4
FUR Furstenfeldbru 56.23 35 eP P 09 34 58.3 -0.3
comp=Z,42nm,1.1s,mb5.4
ABTA Abfaltersbach 56.25 37⇑iP P 09 34 58.2 -0.5
comp=Z,121nm,1.4s,mb5.7,SNR=26
FVI Forni Avoltri 56.34 38 P P 09 34 58.8 -0.6
GMNA Gemona 56.47 38 P P 09 34 59.8 -0.5
PTCC Patocco-Chiusa 56.60 38 P P 09 35 00.8 -0.5
IBBN Ibbenburen 56.67 30 eP P 09 35 01.3 -0.3
comp=Z,50nm,1.0s,mb5.5
USIN University of 56.67 311 eP P 09 35 01.4 -0.5
comp=Z,11nm,0.3s,mb5.3
VOY Vojsko 56.76 39 eP P 09 35 02.2 -0.2
VOY e 09 35 08.3
VOY e 09 35 27.7
JAVS Javornik 56.80 39 eP P 09 35 02.5 -0.2
MYKA Terra Mystica 56.88 38⇑iP P 09 35 03.1 -0.2
comp=Z,296nm,1.4s,mb6.1
RJOB Jochberg 56.90 36 eP P 09 35 02.3 -1.1
comp=Z,30nm,1.2s,mb5.2
UBBA Unterbreitzbach 56.95 32 eP P 09 35 02.8 -0.9
comp=Z,20nm,1.3s,mb5.0
GRA1 Grafenberg Arr 57.00 34 eP P 09 35 03.6 -0.4
comp=Z,98nm,1.3s,mb5.7
GRF Grafenberg Arr 57.00 34 eP P 09 35 03.6 -0.4
comp=Z,98nm,1.3s,mb5.7
OXF Oxford 57.02 307 eP P 09 35 03.1 -1.4
OXF pmax pmax
comp=Z,39nm,0.8s,mb5.5
OXF Oxford 57.02 307 eP P 09 35 03.1 -1.4
comp=Z,39nm,0.8s,mb5.5
UTMT University of 57.09 309 eP P 09 35 05.0 0.0
LJU Ljubljana 57.16 39 eP P 09 35 05.0 -0.2
OLIL Olney 57.24 312 eP P 09 35 05.7 -0.3
comp=Z,63nm,1.0s,mb5.6
VISS Visnje 57.25 39 eP P 09 35 05.7 -0.1
VBMS Vicksburg 57.37 304 eP P 09 35 06.5 -0.5
BOJS Bojanci 57.38 40 eP P 09 35 06.8 +0.1
OBKA Obir 57.38 38⇑iP P 09 35 06.7 -0.1
comp=Z,169nm,1.8s,mb5.8,SNR=19
ROTZ Rotzenmuhle 57.59 34 eP P 09 35 07.5 -0.7
comp=Z,29nm,1.2s,mb5.2
ROTZ eS S 09 43 09.1 +3.0
MANZ Manzenberg 57.64 34 eP P 09 35 08.1 -0.5
comp=Z,17nm,1.1s,mb5.0
MANZ eS S 09 43 08.8 +1.9
WET Wettzell 57.65 35 eP P 09 35 07.8 -0.8
WET pmax pmax
comp=Z,60nm,2.2s,mb5.2
WET Wettzell 57.65 35 eP P 09 35 07.8 -0.8
comp=Z,60nm,2.2s,mb5.2
CLZ Clausthal 57.72 31 eP P 09 35 08.5 -0.5
CLZ pmax pmax
comp=Z,17nm,1.1s,mb5.0
CLZ Clausthal 57.72 31 eP P 09 35 08.5 -0.5
comp=Z,17nm,1.1s,mb5.0
MOX Moxa 57.72 33 eP P 09 35 08.6 -0.5
comp=Z,32nm,1.7s,mb5.1
MOX comp=Z,500nm,18.0s
MOX Moxa 57.72 33 eP P 09 35 08.6 -0.5
MOX pmax pmax
comp=Z,32nm,1.7s,mb5.1
MOX MLR MLR
comp=Z,500nm,18.0s,MS4.7
MOX Moxa 57.72 33 eP P 09 35 08.5 -0.6
comp=Z,18nm,1.2s,mb5.0
MOX eS S 09 43 11.6 +3.7
SOKA Soboth 57.76 38⇑iP P 09 35 09.0 -0.4
SIUC Southern Illin 57.76 310 eP P 09 35 09.1 -0.6
comp=Z,35nm,0.8s,mb5.4
PERS Pernice 57.79 38 eP P 09 35 09.3 -0.3
TSUM Tsumeb 57.83 118 P P 09 35 11.3 +0.9
comp=Z,7.2nm,0.7s,mb4.8,baz=273,slow=5.8,SNR=8.5
TSUM Tsumeb 57.83 118 eP P 09 35 11.7 +1.4
comp=Z,60nm,1.5s,mb5.4
MOA Molln 57.83 37⇑iP P 09 35 09.0 -0.9
comp=Z,60nm,1.4s,mb5.4,SNR=7.1
PARMO Parma 57.87 309 eP P 09 35 08.9 -1.5
NRDL Niedersach Rie 57.95 31 eP P 09 35 10.5 -0.2
comp=Z,36nm,1.2s,mb5.3
NKC Novy Kostel 57.96 34 eP P 09 35 10.3 -0.5
NKC ex x 09 35 18.9
NKC AMS AMS 09 56 40.0
comp=Z,1μm,16.0s
NKC Novy Kostel 57.96 34 eP P 09 35 10.3 -0.5
NKC e 09 35 18.9
GEC2 GERESS Array S 57.97 36 eP P 09 35 09.9 -1.0
GEC2 eS S 09 43 12.0 +0.8
GEC2 pmax pmax
comp=Z,14nm,1.1s,mb4.9
GEC2 GERESS Array S 57.97 36 eP P 09 35 09.9 -1.0
comp=Z,14nm,1.1s,mb4.9
GEC2 eS S 09 43 12.0 +0.8
GERES GERESS Array B 57.97 36 P P 09 35 09.7 -1.2
comp=Z,3.5nm,0.8s,mb4.5,baz=243,slow=5.8,SNR=25
GERES GERESS Array B 57.97 36 P P 09 35 09.7 -1.2
GERES pmax pmax
comp=Z,4.0nm,0.8s
KHC Kasperske Hory 58.04 35 eP P 09 35 10.4 -1.0
KHC epP pP 09 35 18.1 +3.5
KHC eS S 09 43 14.1 +2.0
KHC AMS AMS 09 55 20.0
comp=Z,1μm,23.6s
PLCA Paso Flores 58.10 212 P P 09 35 11.6 -0.3
comp=Z,14nm,1.1s,mb4.9,baz=44,slow=8.6,SNR=12
PLCA LR LR 10 00 41.4
comp=Z,7μm,18.1s,MS5.8,baz=51,slow=36
PLCA Paso Flores 58.10 212 P P 09 35 11.6 -0.2

PLCA pmax pmax
comp=Z,14nm,1.1s
PLCA MLR MLR
comp=Z,7µm,18.1s
PLCA Paso Flores 58.10 212 P **P** **09 35 11.6 -0.3**
PLCA LR LR 10 00 41.4
HBAR Harrisburg 58.28 307 *eP* **P** **09 35 12.4 -0.9**
ARSA Arzberg 58.31 38⇑*iP* **P** **09 35 12.1 -1.3**
comp=Z,170nm,2.7s,mb5.6,SNR=13
HCY Herceg Novi 58.32 44⇓*iP* **P** **09 35 13.8 +0.4**
KEK Kerkira 58.32 48 *eP* **P** **09 35 14.4 +0.9**
KOGS Kog 58.41 39 *eP* **P** **09 35 13.7 -0.3**
BRY Bratogost 58.51 44⇓*iP* **P** **09 35 13.9 -0.9**
BUM Brajici-Budva 58.54 44⇓*iP* **P** **09 35 15.4 +0.4**
ULC Ulcinj 58.67 45⇓*iP* **P** **09 35 16.0 +0.1**
FVM French Village 58.76 310 *eP* **P** **09 35 15.3 -1.3**
NKY Niksic 58.79 44⇓*iP* **P** **09 35 16.3 -0.4**
CLL Collm 58.81 33 *eP* **P** **09 35 16.4 -0.3**
comp=Z,11nm,0.8s,mb4.9
CLL *eS* **S** **09 43 31.5 +9.4**
CLL Collm 58.81 33 *iP* **P** **09 35 16.5 -0.2**
CLL *ex* x 09 36 13.0
CLL *eS* **S** **09 43 26.0 +3.9**
CLL *e*SSS 09 49 57.0
CLL Lm 09 56 00.0
comp=N,400nm,21.3s
CLL Lm 09 56 00.0
comp=E,900nm,21.1s
CLL Collm 58.81 33 *iP* **P** **09 35 16.5 -0.2**
CLL *eS* **S** **09 43 26.0 +3.9**
CLL LR LR
comp=Z,1µm,16.5s,MS5.0
CSNA Conrad Observa 58.82 37⇓*iP* **P** **09 35 16.2 -0.7**
comp=Z,94nm,1.6s,mb5.6
CONA Conrad Observa 58.82 37⇑*iP* **P** **09 35 16.2 -0.6**
comp=Z,98nm,1.6s,mb5.6,SNR=17
TTG Podgorica 58.84 44⇓*iP* **P** **09 35 17.4 +0.3**
UPM Unac-Piva 58.87 43⇓*iP* **P** **09 35 17.3 0.0**
BSEG Bad Segeberg 58.87 29 *eP* **P** **09 35 16.7 -0.4**
BSEG *eS* **S** **09 43 28.4 +5.6**
BSEG pmax pmax
comp=Z,108nm,1.0s,mb5.8
BSEG Bad Segeberg 58.87 29 *eP* **P** **09 35 16.7 -0.4**
comp=Z,108nm,1.0s,mb5.8
BSEG *eS* **S** **09 43 28.4 +5.6**
PRU Pruhonice 59.01 35 *eP* **P** **09 35 17.4 -0.7**
PRU *epP* pP 09 35 24.5 +3.2
PRU *eS* S **09 43 28.0 +3.4**
PRU AMS AMS 09 55 20.0
comp=Z,800nm,22.2s
JAN Janina 59.07 48 *eP* **P** **09 35 20.0 +1.2**
BRG Berggiesshubel 59.11 34 *eP* **P** **09 35 18.5 -0.3**
BRG 09 37 29.8
BRG S **S** **09 43 28.0 +2.1**
BRG pmax pmax
comp=Z,15nm,1.2s,mb4.9
BRG pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
BRG MLR MLR
comp=N,286nm,15.7s,MS4.7
BRG MLR MLR
comp=E,307nm,16.1s,MS4.7
BRG MLR MLR
comp=Z,524nm,18.2s,MS4.7
BRG Berggiesshubel 59.11 34 *eP* **P** **09 35 18.4 -0.4**
comp=Z,143nm,2.5s,mb5.6
BRG *eS* **S** **09 43 32.3 +6.4**
BRG Berggiesshubel 59.11 34 *eP* **P** **09 35 18.5 -0.3**
comp=Z,25nm,1.2s,mb5.1
BRG PP PP 09 37 29.8 +0.4
comp=Z,1.8nm,1.0s
BRG S **S** **09 43 28.0 +2.1**
BRG
comp=N,478nm,15.7s
BRG
comp=E,513nm,16.1s
BRG
comp=Z,875nm,18.2s
TREC Trest 59.22 36 *eP* **P** **09 35 19.2 -0.4**
TREC *epP* pP 09 35 27.5 +4.7
TREC AMS AMS 09 56 30.0
comp=Z,1µm,20.8s
PLE Pljevlja 59.25 43⇓*iP* **P** **09 35 20.6 +0.7**
PVCC Panska Ves 59.28 34 *eP* **P** **09 35 19.8 -0.2**
PVCC *ex* x 09 35 28.2
PVCC AMS AMS 09 55 00.0
comp=Z,800nm,22.2s
PVY Plav 59.39 44⇓*iP* **P** **09 35 21.4 +0.5**
IVA Berane 59.43 44⇓*iP* **P** **09 35 22.1 +0.9**
UALR University of 59.43 306 *eP* **P** **09 35 20.5 -0.9**
comp=Z,31nm,0.8s,mb5.4
EVR Evrytania 59.57 49 *eP* **P** **09 35 24.1 +1.9**
ZST Bratislava 59.69 38 *eP* **P** **09 35 22.5 -0.3**
comp=Z,38nm,1.2s,mb5.3
ZST LR LR
comp=Z,200nm,16.7s,MS4.3
PKSM Moragy 59.83 40⇑*iP* **P** **09 35 23.4 -0.4**
PKSM Moragy 59.83 40 P **P** **09 35 23.8 0.0**
BIA Bitola 59.83 47 *eP* **P** **09 35 23.4 -0.6**
MODS Modra-Piesok 59.87 37 *iP* **P** **09 35 23.5 -0.6**
VRAC Vranov 59.87 36⇓*iP* **P** **09 35 23.7 -0.4**
VRAC Vranov 59.87 36 P **P** **09 35 23.9 -0.2**
KRUS Krusevo 59.89 46 *eP* **P** **09 35 24.8 +0.5**
THL Klokotos Trika 59.90 48 *eP* **P** **09 35 24.9 +0.4**
THL Klokotos Trika 59.90 48 *eP* **P** **09 35 25.5 +1.0**
KZN Kozani 59.94 47 *eP* **P** **09 35 24.9 +0.2**
AGG Agios Georgios 59.99 49 *eP* **P** **09 35 25.7 +0.6**
UPC Upice 60.08 35 *eP* **P** **09 35 25.5 0.0**
UPC *epP* pP 09 35 33.5 +4.8
JFWS Jewell Farm 60.14 316 *eP* **P** **09 35 25.3 -0.8**
DPC Dobruska-Polom 60.19 35 *eP* **P** **09 35 25.8 -0.4**
DPC *epP* pP 09 35 31.9 +2.5
DPC *eS* **S** **09 43 43.9 +4.0**
DPC AMS AMS 09 55 50.0
comp=Z,800nm,19.5s
SKO Skopje 60.21 46 *eP* **P** **09 35 27.1 +0.5**
MIAR Mount Ida 60.37 306 *eP* **P** **09 35 26.9 -0.9**
LKR Lokris 60.39 50 *eP* **P** **09 35 28.5 +0.6**
KSP Ksiaz 60.40 34 *eP* **P** **09 35 27.7 +0.1**
KSP *eS* **S** **09 43 51.6 +9.0**
KSP LMZ 09 55 07.5
comp=Z,1µm,27.4s
KSP Ksiaz 60.40 34⇑*eP* **P** **09 35 27.4 -0.3**
KSP *eS* **S** **09 43 44.0 +1.4**
KSP Ksiaz 60.40 34⇑*eP* **P** **09 35 27.4 -0.3**
KSP *eS* **S** **09 43 44.0 +1.4**
KSP LR LR
comp=Z,2µm,19.3s,MS5.2
LIT Litokhoron 60.41 48 *eP* **P** **09 35 27.6 -0.4**
COWI Conover 60.52 319 *eP* **P** **09 35 28.0 -0.6**
comp=Z,23nm,0.8s,mb5.4
BUD Budapest 60.57 39⇑*eP* **P** **09 35 28.6 -0.3**
SFJD Kangerlussuaq 60.58 353 P **P** **09 35 26.5 -2.1**
comp=Z,22nm,0.9s,mb5.3,baz=177,slow=5.7,SNR=6.5
SFJD Kangerlussuaq 60.58 353 *iP* **P** **09 35 26.9 -1.7**
SFJD pmax pmax
comp=Z,27nm,0.9s,mb5.4
SFJD MLR MLR
comp=Z,290nm,16.0s,MS4.5
SFJD Kangerlussuaq 60.58 353 *iP* **P** **09 35 26.9 -1.7**
comp=Z,27nm,0.9s,mb5.4
SFJD
comp=Z,280nm,16.0s
GRG Griva 60.59 47 *eP* **P** **09 35 29.2 0.0**
KOLL Kolacno 60.63 38 *eP* **P** **09 35 28.8 -0.5**
MORC Moravsky Berou 60.63 36⇑*eP* **P** **09 35 29.7 +0.4**
MORC Moravsky Berou 60.63 36⇑*iP* **P** **09 35 29.6 +0.3**
MORC Moravsky Berou 60.63 36 *eP* **P** **09 35 28.5 -0.8**
NATX Nacogdoches 60.73 302 *eP* **P** **09 35 29.8 -0.5**
NEO Neokhori 60.73 49 *eP* **P** **09 35 22.4 -7.8**
VAY Valandovo 60.82 47 *eP* **P** **09 35 30.1 -0.7**
VYHS Vyhne 60.86 38 *eP* **P** **09 35 29.9 -1.0**
VYHS pmax pmax
comp=Z,19nm,2.0s,mb4.9
VYHS Vyhne 60.86 38 *eP* **P** **09 35 29.9 -1.0**
comp=Z,18nm,2.0s,mb4.9
COP Copenhagen 60.88 28 *eP* **P** **09 35 30.2 -0.6**
COP pmax pmax
comp=Z,38nm,1.2s,mb5.4
COP MLR MLR
comp=Z,220nm,20.0s,MS4.3
COP Copenhagen 60.88 28 *iP* **P** **09 35 30.2 -0.6**
comp=Z,38nm,1.2s,mb5.4
COP LR LR
comp=Z,220nm,20.0s,MS4.3
KNT Kendrikon 61.01 47 *eP* **P** **09 35 32.3 +0.3**
OKC Ostrava-Krasne 61.01 36 *eP* **P** **09 35 31.1 -0.8**
OKC *ex* x 09 35 39.5
OKC AMS AMS 09 57 50.0
comp=Z,700nm,17.5s
OKC Ostrava-Krasne 61.01 36 *eP* **P** **09 35 31.1 -0.8**
OKC *e* 09 35 39.5
PLG Polygyros 61.19 48 *eP* **P** **09 35 34.0 +0.7**
PSZ Piszkesteto 61.28 39 *eP* **P** **09 35 33.6 -0.1**
PSZ pmax pmax
comp=Z,51nm,1.2s,mb5.5
PSZ Piszkesteto 61.28 39⇑*eP* **P** **09 35 33.7 0.0**
PSZ Piszkesteto 61.28 39⇓*iP* **P** **09 35 34.0 +0.3**
PSZ Piszkesteto 61.28 39 *eP* **P** **09 35 33.6 -0.1**
comp=Z,51nm,1.2s,mb5.5
KKB Krupnik 61.35 46 P **P** **09 35 35.0 +0.7**
HKT Hockley 61.44 300 *eP* **P** **09 35 33.7 -1.5**
HKT pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
HKT Hockley 61.44 300 *eP* **P** **09 35 33.7 -1.5**
comp=Z,9.0nm,1.0s,mb4.8
BZS Buzias 61.54 42⇑*iP* **P** **09 35 35.8 +0.3**
BZS Buzias 61.54 42 P **P** **09 35 36.0 +0.4**
MMB Musomiste 61.73 47 P **P** **09 35 37.4 +0.5**
SANT Santorini 61.74 53 *eP* **P** **09 35 36.9 -0.2**
NVR Nevrokopi 61.76 47 *eP* **P** **09 35 38.3 +1.2**
KECS Kecovo 61.86 38 *eP* **P** **09 35 35.7 -2.0**
KECS pmax pmax
comp=Z,5.0nm,1.4s,mb4.5
KECS Kecovo 61.86 38 *eP* **P** **09 35 35.7 -2.0**
comp=Z,5.3nm,1.4s,mb4.5
SCIA State Center 61.92 314 *eP* **P** **09 35 37.2 -1.1**
APE Apeiranthos 61.95 52⇑*iP* **P** **09 35 38.8 +0.3**
APE Apeiranthos 61.95 52⇑P **P** **09 35 38.8 +0.3**
KONO Kongsberg 61.98 24 AMS AMS 10 00 28.5
comp=Z,1µm,23.8s,MS5.0
KONO Kongsberg 61.98 24 *eP* **P** **09 35 36.6 -1.6**
NIE Niedzica 62.12 37 *eP* **P** **09 35 40.2 +0.8**
OJC Ojcow 62.14 36⇑*iP* **P** **09 35 39.6 +0.1**
OJC *e**PP pP 09 35 45.4 +2.7
OJC *eS* S **09 44 08.1 +3.3**
OJC MLR MLR
comp=Z,500nm,19.0s,MS4.7
LIA Limnos Island 62.35 49 *eP* **P** **09 35 41.4 +0.3**
LIA Limnos Island 62.35 49 *eP* **P** **09 35 41.6 +0.5**
CHOS Chios island 62.65 51 *eP* **P** **09 35 43.4 +0.3**
DRGR 62.65 41⇑*iP* **P** **09 35 43.3 +0.3**
DRGR 62.65 41 P **P** **09 35 43.2 +0.2**
STHS Stebnicka Huta 62.68 38 *eP* **P** **09 35 43.4 +0.3**
STHS pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
STHS Stebnicka Huta 62.68 38 *eP* **P** **09 35 43.4 +0.3**
comp=Z,6.4nm,0.6s,mb4.9
EYMN Ely 62.70 321 *eP* **P** **09 35 42.2 -1.1**
comp=Z,17nm,0.9s,mb5.2
RDO Rodhopi 62.92 47 *eP* **P** **09 35 45.2 +0.3**
KDZ Kurdzhali 62.97 47 P **P** **09 35 44.9 -0.3**
BOZC Bozcaada 62.98 49⇑*iP* **P** **09 35 45.4 +0.1**
TRPA Tarpa 63.01 39⇑*iP* **P** **09 35 45.2 -0.1**
UZH Uzhgorod 63.03 39⇓*iP* **P** **09 35 44.8 -0.7**
UZH *i* 09 35 51.2
UZH *e* 09 38 09.0
UZH *eS* S **09 44 14.0 -2.1**
UZH MLR MLR
comp=N,130nm,14.0s,MS4.8
UZH MLR MLR
comp=E,470nm,14.0s,MS4.8
UZH MLR MLR
comp=Z,480nm,14.0s,MS4.8
KOLS Kolonicke sedl 63.13 38 *eP* **P** **09 35 46.0 -0.1**
DIM Dimitrovgrad 63.15 46 P **P** **09 35 46.7 +0.3**
BDRM Kayabasi 63.44 52⇑*iP* **P** **09 35 48.1 -0.3**
NB2 NORSAR Subarra 63.47 23 P **P** **09 35 47.6 -0.5**
comp=Z,2.1nm,0.7s,mb4.4,baz=226,slow=6.9
NOA NORSAR Array B 63.47 23 P **P** **09 35 47.6 -0.5**
comp=Z,22nm,0.8s,mb5.3,baz=233,slow=6.6,SNR=36
NOA LR LR 10 00 40.1
comp=Z,1µm,19.5s,MS5.1,baz=256,slow=34
KWP Kalwaria 63.65 38 *eP* **P** **09 35 49.8 +0.2**
KWP *epP* pP 09 35 52.3 -0.5
KWP LMZ 10 00 16.6
comp=Z,1µm,22.1s
KWP Kalwaria 63.65 38 *eP* **P** **09 35 49.8 +0.3**
KWP *epP* pP 09 35 52.3 -0.5
KSU1 Kansas State U 63.73 310 *eP* **P** **09 35 48.4 -1.9**
VOIR 63.77 43⇓*iP* **P** **09 35 51.4 +1.0**
VOIR 63.77 43 P **P** **09 35 50.6 +0.2**
AYDN Tasoluk 63.90 52⇑*iP* **P** **09 35 51.8 +0.4**
BALY Balya 64.14 49⇑*iP* **P** **09 35 53.0 0.0**
TURN Turunc 64.32 53⇑*iP* **P** **09 35 51.4 -2.8**
MLR Muntele Rosu 64.38 43⇑*iP* **P** **09 35 54.8 +0.3**
MLR Muntele Rosu 64.38 43 P **P** **09 35 54.8 +0.3**
BTOK Tokmak 64.45 49⇑*iP* **P** **09 35 54.6 -0.4**
LVV L'vov 64.52 38⇓*iP* **P** **09 35 54.3 -1.0**
LVV *e* 09 36 02.5
BURAR Bucovina Array 64.54 40⇑*iP* **P** **09 35 55.7 +0.3**
BURAR Bucovina Array 64.54 40⇑P **P** **09 35 55.7 +0.3**
WMOK Wichita Mounta 64.63 305 *eP* **P** **09 35 54.2 -2.1**
DURS Dursunbey 64.75 50⇑*iP* **P** **09 35 56.9 -0.1**
PRD Provadia 64.78 46 P **P** **09 35 56.2 -0.9**
JCT Junction City 64.91 300 *eP* **P** **09 35 57.1 -1.1**
JCT pmax pmax
comp=Z,22nm,0.6s,mb5.4
JCT Junction City 64.91 300 *eP* **P** **09 35 57.1 -1.1**
comp=Z,22nm,0.6s,mb5.3
VRI Vrincioaia 65.02 43⇑*iP* **P** **09 35 58.7 +0.1**
VRI Vrincioaia 65.02 43 P **P** **09 35 58.2 -0.3**
SUMG Summit 65.23 359 *eP* **P** **09 35 59.5 0.0**
KHAL Karahalli 65.29 51⇑*iP* **P** **09 36 00.6 +0.1**
ULDT Uludag 65.36 49⇑*iP* **P** **09 36 00.7 -0.2**
GDZ Gediz 65.41 50⇑*iP* **P** **09 36 01.0 -0.3**
PSN Preselentsi 65.45 45 P **P** **09 36 00.0 -1.5**
HARR Harsova 65.52 44 P **P** **09 36 01.8 -0.1**
SUW Suwalki 65.56 33 *eP* **P** **09 36 01.7 -0.3**
SUW LMZ 09 58 59.6
comp=Z,1µm,24.4s
AGMN Agassiz Refuge 65.58 320 *eP* **P** **09 36 00.4 -1.8**
TIRR Tirgusor 65.80 44⇑*iP* **P** **09 36 03.0 -0.7**
TIRR Tirgusor 65.80 44⇑P **P** **09 36 03.0 -0.7**
TKTP Tekketepe 65.87 52⇑*iP* **P** **09 36 04.4 +0.1**
NSS Namsos 65.88 20 *eP* **P** **09 36 02.6 -1.2**
SUR Sutherland 65.91 130 P **P** **09 36 04.6 0.0**
comp=Z,111nm,0.9s,mb4.9,baz=252,slow=6.1,SNR=6.1
ISP Isparta 65.98 52 *eP* **P** **09 36 05.1 +0.1**
ISP pmax pmax
comp=Z,26nm,1.0s,mb5.2
ISP Isparta 65.98 52 *eP* **P** **09 36 05.1 +0.1**
comp=Z,26nm,1.0s,mb5.2
CBKS Cedar Bluff 66.06 309 *eP* **P** **09 36 05.1 -0.4**
ULM Lac du Bonnet 66.18 322 P **P** **09 36 03.7 -2.4**
comp=Z,8.8nm,0.5s,mb5.0,baz=104,slow=6.0,SNR=12
ULM LR LR 10 00 08.7
comp=Z,831nm,20.4s,MS4.9,baz=75,slow=32
ULM Lac du Bonnet 66.18 322 P **P** **09 36 03.7 -2.4**
ULM LR LR 10 00 08.7
LSZ Lusaka 66.20 110 P **P** **09 36 06.9 +0.2**
comp=Z,6.4nm,0.8s,mb4.7,baz=290,slow=2.8,SNR=12
LSZ Lusaka 66.20 110 P **P** **09 36 06.9 +0.2**
LSZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
LSZ Lusaka 66.20 110 *eP* **P** **09 36 07.7 +0.9**
comp=Z,29nm,1.1s,mb5.2
ESKT Eskisehir 66.54 50⇑*iP* **P** **09 36 08.3 -0.2**
KIS Kishinev 66.71 42 *eP* **P** **09 36 08.0 -1.5**
KIS *e* 09 36 16.0
KIS pmax pmax
comp=Z,180nm,1.5s,mb5.9
KIS MLR MLR
comp=Z,600nm,19.0s,MS4.8
KIS MLR MLR
comp=Z,600nm,19.0s
KIS Kishinev 66.71 42 *eP* **P** **09 36 08.0 -1.5**
comp=Z,200nm,1.5s,mb5.9
KIS eL 09 57 20.0
KIS LRM 10 08 04.0
comp=Z,600nm,19.0s
LBTB Lobatse 66.85 121 P **P** **09 36 10.5 -0.3**
comp=Z,10.0nm,0.9s,mb4.9,baz=303,slow=5.5,SNR=13
LBTB LR LR 10 00 17.4
comp=Z,774nm,19.6s,MS4.9,baz=306,slow=31
STOK Stokkvaagen 67.33 19 *eP* **P** **09 36 13.0 -0.1**
STOK AMb AMB 09 36 14.8
comp=Z,141nm,1.6s,mb5.8
STOK Stokkvaagen 67.33 19 *eP* **P** **09 36 13.0 -0.1**
comp=Z,141nm,1.6s,mb5.7
KDHN Kadinhani 67.34 51⇑*iP* **P** **09 36 13.7 0.0**
SGKT Sivrigoynuk 67.63 49 *iP* **P** **09 36 14.3 -1.1**
MOR8 Moi Rana 67.70 19 *eP* **P** **09 36 15.6 +0.2**
MOR8 AMb AMB 09 36 17.7
comp=Z,63nm,1.4s,mb5.4
MOR8 Moi Rana 67.70 19 *eP* **P** **09 36 15.6 +0.2**
comp=Z,63nm,1.4s,mb5.5
CSS Prodhromos 67.83 55 *eP* **P** **09 36 16.9 +0.1**
comp=Z,48nm,1.3s,mb5.4
AKASG Malin Array Be 67.96 38 P **P** **09 36 15.9 -1.4**
comp=Z,20nm,0.8s,mb5.2,baz=250,slow=6.1,SNR=14
AKASG LR LR 10 04 55.0
comp=Z,349nm,18.7s,MS4.6,baz=255,slow=35
USHA Ushuaia 68.05 200 LR LR 10 04 04.4
comp=Z,489nm,20.3s,MS4.7,baz=7.1,slow=34
ANTO Ankara 68.07 50⇓*iP* **P** **09 36 19.4 +1.1**
ANTO Ankara 68.07 50⇓P **P** **09 36 19.4 +1.1**
TXAR Lajitas Array 68.15 299 P **P** **09 36 18.1 -0.9**
comp=Z,8.0nm,0.6s,mb4.9,baz=106,slow=4.4,SNR=100
TXAR LR LR 10 03 06.2
comp=Z,760nm,21.9s,MS4.9,baz=45,slow=33
TXAR PKPPKP 10 04 33.7
comp=Z,0.2nm,0.7s,baz=331,slow=8.7,SNR=2.4
TXAR Lajitas Array 68.15 299 P **P** **09 36 18.1 -0.8**
TXAR LR LR 10 03 06.2
TXAR P'P' 10 04 33.7
FCC Fort Churchill 68.22 331 *eP* **P** **09 36 17.4 -1.4**
MNK Minsk 68.29 34⇓*eP* **P** **09 36 16.0 -3.3**
ELDT Eldivan 68.65 49⇑*iP* **P** **09 36 21.8 0.0**
EIL Elat 68.72 61 P **P** **09 36 22.3 -0.2**
comp=Z,15nm,0.9s,mb4.9,baz=303,slow=4.1,SNR=7.4
EIL LR LR 10 07 25.8
comp=Z,3µm,19.4s,MS5.5,baz=278,slow=37
EIL Elat 68.72 61 P **P** **09 36 22.3 -0.2**
EIL LR LR 10 07 25.8
BALT Daday 68.78 48 *iP* **P** **09 36 22.5 -0.2**
GDL2 Guadalupe Moun 68.96 302 *eP* **P** **09 36 24.0 0.0**
VSU Vasula 69.07 30⇑*iP* **P** **09 36 23.3 -0.8**
MMAI Mount Meron Ar 69.35 58 LR LR 10 10 06.0
comp=Z,368nm,18.4s,MS4.7,baz=225,slow=39
CTKT Corum 69.70 49⇑*iP* **P** **09 36 28.1 -0.3**
KAF Kangasniemi 70.25 26 *ep* **P** **09 36 29.8 -1.5**
comp=Z,22nm,0.6s,mb5.3,baz=249,slow=6.0
KAF Kangasniemi 70.25 26 *eP* **P** **09 36 29.8 -1.5**
KAF pmax pmax
comp=Z,22nm,0.6s,mb5.3
SDCO Great Sand Dun 70.41 307 *eP* **P** **09 36 33.2 +0.5**
ANDN Andirin 70.53 53⇑*iP* **P** **09 36 34.0 +0.4**
ASF Jabal al Asfar 70.55 59 P **P** **09 36 34.3 +0.6**
comp=Z,24nm,1.2s,mb5.0,baz=130,slow=2.9,SNR=13
ASF LR LR 10 11 19.9
comp=Z,394nm,18.5s,MS4.7,baz=124,slow=39
ASF Jabal al Asfar 70.55 59 P **P** **09 36 34.3 +0.5**
ASF pmax pmax
comp=Z,24nm,1.2s
ASF MLR MLR
comp=Z,394nm,18.5s
ISCO Idaho Springs 70.72 310 *eP* **P** **09 36 35.3 +0.7**
PHWY Pilot Hill 70.78 311 *eP* **P** **09 36 34.9 -0.1**
ANMO Albuquerque 70.92 304 *eP* **P** **09 36 36.2 +0.2**
BNM Barren Site 71.00 303 *eP* **P** **09 36 36.1 -0.4**
DGMT Dagmar 71.01 319 *eP* **P** **09 36 36.5 +0.2**
LPM Los Pinos Moun 71.02 304 *eP* **P** **09 36 37.3 +0.7**
FFC Flin Flon 71.03 326 P **P** **09 36 35.5 -0.7**
comp=Z,166nm,1.2s,mb5.8,SNR=5.7
FFC Flin Flon 71.03 326 *eP* **P** **09 36 35.0 -1.2**
TRO Tromso 71.06 17 *eP* **P** **09 36 35.5 -0.6**
TRO AMb AMB 09 36 37.4
comp=Z,63nm,1.6s,mb5.3
TRO *eS* S 09 45 54.0 +1.9
TRO Tromso 71.06 17 *eP* **P** **09 36 35.5 -0.6**
TRO pmax pmax
comp=Z,63nm,1.5s,mb5.3
TRO Tromso 71.06 17 *eP* **P** **09 36 35.5 -0.6**
comp=Z,63nm,1.5s,mb5.3
LAZ Ladron 71.44 304 *eP* **P** **09 36 39.7 +0.5**
GZT Gaziantep 71.48 53⇑*iP* **P** **09 36 40.1 +0.8**
KTK1 Kautokeino 72.06 19 *eP* **P** **09 36 42.4 +0.2**
KTK1 AMb AMB 09 36 44.2
comp=Z,79nm,1.1s,mb5.6
KTK1 *epP* pP 09 36 45.2 -0.3
KTK1 Kautokeino 72.06 19 *eP* **P** **09 36 42.4 +0.2**
comp=Z,79nm,1.1s,mb5.6
LAO LASA Array 72.07 317 *eP* **P** **09 36 43.1 +0.4**
RWWY Rawlins 72.13 311 *eP* **P** **09 36 44.5 +1.3**
comp=Z,52nm,1.6s,mb5.2
ANN Anapa 72.19 45 *eP* **P** **09 36 42.1 -1.3**
ANN *eS* S 09 46 02.9 -3.2
ANN pmax pmax
comp=Z,74nm,1.6s,mb5.4
ANN MLR MLR
comp=Z,486nm,18.0s,MS4.8
KMBO Kilima Mbogo 72.23 94 P **P** **09 36 46.4 +2.1**
comp=Z,0.9nm,0.5s,mb4.0,baz=0.0,slow=6.1,SNR=3.2
KMBO LR LR 10 06 33.3
comp=Z,537nm,18.9s,MS4.8,baz=284,slow=34
KMBO Kilima Mbogo 72.23 94 *eP* **P** **09 36 49.3 +5.1**
comp=Z,34nm,1.7s,mb5.0
MALT Malatya 72.24 52⇓*iP* **P** **09 36 44.1 +0.2**
MALT Malatya 72.24 52 *eP* **P** **09 36 44.0 +0.2**
comp=Z,25nm,1.3s,mb5.0
JOF Joensuu 72.70 26 *ep* **P** **09 36 44.6 -1.5**
comp=Z,29nm,0.7s,mb5.3
JOF Joensuu 72.70 26 *eP* **P** **09 36 44.6 -1.5**
JOF pmax pmax
comp=Z,29nm,0.7s,mb5.3
MVCO Mesa Verde 72.73 307 *eP* **P** **09 36 47.5 +0.7**
comp=Z,90nm,1.9s,mb5.4
PV01 Paradox Valley 72.86 308 *eP* **P** **09 36 48.3 +0.7**
PV01 *e*PP PP 09 39 27.1 -2.6
ARCES ARCESS Array B 73.02 19 P **P** **09 36 46.8 -1.1**
comp=Z,34nm,0.7s,mb5.4,baz=242,slow=5.4,SNR=87
ARCES ARCESS Array B 73.02 19 P **P** **09 36 46.8 -1.1**
ARCES pmax pmax
comp=Z,34nm,0.7s
ARE0 ARCESS Array S 73.02 19 *eP* **P** **09 36 46.7 -1.2**
V19A Window Rock 73.08 305⇑P **P** **09 36 49.0 0.0**
baz=73
319A Douglas 73.10 300⇓P **P** **09 36 49.0 -0.1**
baz=73,SNR=13
219A White Tail Can 73.10 301⇑P **P** **09 36 48.8 -0.3**
baz=73,SNR=19
T19A Beclabito 73.13 306⇑P **P** **09 36 48.7 -0.5**
baz=73
Z19A T-Link Ranch, 73.15 302⇑P **P** **09 36 48.9 -0.5**
baz=73
119A Ashpeak Ranch, 73.16 302⇓P **P** **09 36 49.7 +0.2**
baz=73,SNR=11
Y19A Nutrioso 73.17 303⇓P **P** **09 36 49.6 +0.2**
baz=73,SNR=29
X19A St. Johns 73.22 304⇓P **P** **09 36 50.1 +0.3**
baz=73,SNR=21
PV10 Paradox Valley 73.24 308 *eP* **P** **09 36 49.3 -0.6**
S19A Harvey Farm, M 73.28 307⇓P **P** **09 36 50.1 +0.1**
baz=73,SNR=7.0
P19A Cripple Cowboy 73.29 309⇓P **P** **09 36 50.2 +0.1**
baz=73,SNR=28
OBN Obninsk 73.33 35⇑*eP* **P** **09 36 49.3 -0.7**
OBN pmax pmax
comp=Z,40nm,1.2s,mb5.2
W19A Sanders 73.33 304⇑P **P** **09 36 50.6 +0.2**
baz=73,SNR=5.7
R19A Curley Farm, L 73.41 308⇑P **P** **09 36 51.0 +0.2**
baz=73,SNR=22
O19A Miners Draw (B 73.45 310⇓P **P** **09 36 51.1 +0.1**
baz=73,SNR=23
Q19A Hogan Spring (73.46 308⇑P **P** **09 36 51.1 0.0**
baz=73,SNR=121
N19A John Jarvie Ra 73.53 310⇑P **P** **09 36 51.4 -0.1**
baz=74,SNR=25
KEV Kevo 73.59 19 *ep* **P** **09 36 49.3 -2.0**
comp=Z,96nm,0.9s,mb5.7
KEV Kevo 73.59 19 *eP* **P** **09 36 49.3 -2.0**
KEV pmax pmax
comp=Z,96nm,0.9s,mb5.7
W18A Petrified Fore 73.62 304⇓P **P** **09 36 52.2 +0.1**
baz=74
SOC Sochi 73.68 47 *eP* **P** **09 36 51.8 -0.5**
SOC *e**SP sP 09 37 04.9 +8.1

SOC ePPP 09 41 19.5
SOC eS S 09 46 19.2 -4.0
SOC pmax pmax
comp=Z,32nm,0.8s,mb5.3
SOC Sochi 73.68 47 *i* P **P 09 36 52.7 +0.4**
118A Homack Ranch, 73.72 302 ⇓P **P 09 36 52.4 -0.3**
baz=74
218A Dragoon 73.77 301 ⇓P **P 09 36 53.2 +0.2**
baz=74,SNR=13
X18A Snowflake 73.77 304 ⇓P **P 09 36 53.2 +0.2**
baz=74,SNR=11
U18A Rough Rock, Ch 73.79 306 ⇑P **P 09 36 53.3 +0.2**
baz=74,SNR=11
Z18A Geronimo 73.79 302 ⇑P **P 09 36 53.3 +0.1**
baz=74,SNR=11
V18A Ganado 73.80 305 ⇑P **P 09 36 52.8 -0.4**
baz=74
Y18A Canyon Day Jun 73.81 303 ⇓P **P 09 36 53.3 +0.1**
baz=74,SNR=28
T18A Mexican Hat 73.83 306 ⇑P **P 09 36 53.3 0.0**
baz=74,SNR=14
R18A Canyonlands Na 73.91 308 ⇑P **P 09 36 53.8 0.0**
baz=74
N18A Larsen Ranch, 73.92 310 ⇑P **P 09 36 53.3 -0.4**
baz=74,SNR=36
S18A Hurst Farm, Bl 73.95 307 ⇓P **P 09 36 54.1 +0.1**
baz=74
LPIG La Paz 73.96 293 LR LR 10 06 57.7
comp=Z,379nm,21.6s,MS4.7,baz=256,slow=34
BW06 Boulder Array 73.97 312 *eP* **P 09 36 53.5 -0.5**
comp=Z,25nm,1.1s,mb5.1
PDAR Pinedale Array 73.97 312 P **P 09 36 53.4 -0.6**
comp=Z,12nm,0.7s,mb5.0,baz=100,slow=6.7,SNR=84
PDAR LR LR 10 05 37.8
comp=Z,675nm,19.5s,MS4.9,baz=121,slow=33
RLMT Red Lodge 73.98 315 *eP* **P 09 36 54.1 +0.1**
comp=Z,24nm,0.7s,mb5.2
MOS Moscow 74.04 34 *eP* **P 09 36 53.5 -0.6**
MOS *e* 09 37 09.6
MOS *e* 09 39 36.8
MOS pmax pmax
comp=Z,69nm,0.7s,mb5.7
MOS MLR MLR
comp=Z,900nm,18.0s,MS5.1
O18A Roosevelt 74.12 310 ⇓P **P 09 36 54.8 -0.2**
baz=74,SNR=17
Q18A Rafter H Ranch 74.14 308 ⇓P **P 09 36 55.0 -0.1**
baz=74,SNR=17
Z17A San Carlos Hig 74.16 302 ⇓P **P 09 36 55.3 0.0**
baz=74,SNR=12
VRSR Storozhevoye 74.23 39 *eP* **P 09 36 54.2 -1.1**
VRSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VRSR pmax pmax
comp=N,6.0nm,0.8s
VRSR pmax pmax
comp=E,20nm,0.8s
P18A Preston Nutter 74.26 309 ⇓P **P 09 36 55.6 -0.2**
baz=74,SNR=11
GCMT Greycliff 74.33 315 *eP* **P 09 36 55.6 -0.4**
117A Oracle 74.37 302 ⇓P **P 09 36 56.2 -0.4**
baz=74
W17A Winslow 74.42 304 ⇑P **P 09 36 56.6 -0.1**
baz=74
217A Green Valley 74.42 301 ⇑P **P 09 36 56.7 -0.1**
baz=74,SNR=24
U17A Shonto 74.43 306 ⇑P **P 09 36 56.5 -0.3**
baz=74,SNR=7.7
SRU San Rafael 74.45 308 ⇓P **P 09 36 57.0 +0.1**
baz=74,SNR=13
SRU San Rafael 74.45 308 *eP* **P 09 36 57.1 +0.2**
X17A Forest Lakes 74.47 304 ⇓P **P 09 36 57.4 +0.3**
baz=74,SNR=14
Y17A Roosevelt 74.48 303 ⇑P **P 09 36 57.7 +0.5**
baz=74,SNR=20
R17A Hanksville Air 74.56 308 ⇓P **P 09 36 57.4 -0.2**
baz=74,SNR=12
T17A Navajo Res., N 74.56 306 ⇓P **P 09 36 57.8 +0.2**
baz=74,SNR=50
S17A Black Ridge (B 74.59 307 ⇑P **P 09 36 58.2 +0.5**
baz=74,SNR=36
EGMT Eagleton 74.62 318 *eP* **P 09 36 56.9 -0.8**
ERZM Erzurum 74.63 51 *i* P **P 09 36 59.2 +1.2**
P17A Butcher Ranch, 74.63 309 ⇓P **P 09 36 58.3 +0.3**
baz=75,SNR=9.6
O17A Robinson Place 74.67 310 ⇓P **P 09 36 57.9 -0.3**
baz=75,SNR=22
LKWY Lake 74.73 314 *eP* **P 09 36 59.8 +1.4**
N17A Moffit Pass 74.79 310 ⇑P **P 09 36 58.7 -0.1**
baz=75,SNR=11
U16A Tuba City 74.79 305 ⇑P **P 09 36 59.3 +0.3**
baz=75,SNR=22
SNOW Snow King Moun 74.90 313 *eP* **P 09 36 59.8 +0.4**
comp=E,42nm,1.3s,mb5.2
FLWY Flagg Ranch 74.91 314 *eP* **P 09 37 00.2 +0.7**
comp=E,44nm,0.9s,mb5.4
Q16A Castle Valley 74.94 308 ⇓P **P 09 37 00.2 +0.4**
baz=75
YNR Norris Junctio 74.94 314 *eP* **P 09 37 02.1 +2.5**
Z16A Peralta Trail, 74.96 302 ⇓P **P 09 37 00.1 +0.1**
baz=75
216A Three Points, 74.97 301 ⇓P **P 09 36 60.0 -0.1**
baz=75,SNR=8.9
REDW Red Top Meadow 74.97 313 *eP* **P 09 36 59.6 -0.2**
comp=E,46nm,1.4s,mb5.2
WUAZ Wupatki 74.97 305 ⇓P **P 09 37 00.2 +0.2**
baz=75,SNR=20
WUAZ Wupatki 74.97 305 *eP* **P 09 37 00.7 +0.7**
comp=E,24nm,0.8s,mb5.2
APA Apatity 74.99 22⇓*eP* **P 09 37 03.0 +3.6**
APA *eS* S 09 46 44.0 +7.1
APA pmax pmax
comp=Z,31nm,1.0s,mb5.2
TMUT Trail Mountain 74.99 309 *eP* **P 09 37 01.0 +1.0**
X16A Lo Mia Camp, P 75.00 304 ⇑P **P 09 37 00.6 +0.5**
baz=75,SNR=20
Y16A Circle Bar Ran 75.01 303 ⇑P **P 09 37 00.7 +0.4**
baz=75,SNR=10
YFT Old Faithful 75.03 314 *eP* **P 09 37 02.0 +1.9**
TPAW Teton Pass 75.05 313 *eP* **P 09 37 00.2 0.0**
DAU Daniels Canyon 75.08 310 *eP* **P 09 37 01.1 +0.6**
W16A Flagstaff 75.09 304 ⇑P **P 09 37 01.2 +0.6**
baz=75,SNR=10
AHID Auburn Hatcher 75.11 312 *eP* **P 09 37 00.8 +0.1**
comp=Z,28nm,1.3s,mb5.0
T16A Glen Canyon Da 75.12 306 ⇓P **P 09 37 01.2 +0.4**
baz=75
ARTV Artvin 75.13 49⇑*iP* **P 09 37 01.1 +0.3**
YMR Madison River 75.14 314 *eP* **P 09 37 01.6 +0.8**
comp=Z,61nm,0.7s,mb5.6
R16A Teasdale 75.16 308 ⇓P **P 09 37 01.3 +0.3**
baz=75,SNR=33
PMSA Palmer Station 75.16 193 LR LR 10 04 33.6
comp=Z,231nm,21.3s,MS4.5,baz=271,slow=31
KBS Kingsbay 75.17 8⇑*iP* **P 09 37 01.2 +0.9**
116A Eloy 75.18 302 ⇑P **P 09 37 01.1 -0.2**
baz=75,SNR=18
DCID1 Drake Creek 75.22 313 *eP* **P 09 37 01.5 +0.3**
S16A Weppner Ranch, 75.22 307 ⇓P **P 09 37 01.5 +0.1**
baz=75,SNR=16
JLU Jordanelle 75.24 310 *eP* **P 09 37 01.2 -0.2**
N16A Rees Ranch, Co 75.24 310 ⇑P **P 09 37 01.9 +0.5**
baz=75
O16A Springville 75.26 310 ⇑P **P 09 37 02.0 +0.4**
baz=75
L16A Fish Haven 75.30 311 ⇓P **P 09 37 01.9 +0.2**
baz=75,SNR=8.9
RRI2 Red Ridge 75.31 313 *eP* **P 09 37 01.8 0.0**
comp=Z,23nm,0.8s,mb5.2
H16A Russell Place, 75.35 314 ⇑P **P 09 37 02.7 +0.7**
baz=75,SNR=14
MPU Maple Canyon 75.35 309 *eP* **P 09 37 03.5 +1.4**
P16A Fountain Green 75.35 309 ⇓P **P 09 37 02.7 +0.6**
baz=75
M16A Huntsville 75.41 311 ⇑P **P 09 37 02.2 -0.2**
baz=75,SNR=20
I16A Newdale 75.46 313 ⇑P **P 09 37 02.7 0.0**
baz=75,SNR=21
K16A Soda Springs 75.47 312 ⇑P **P 09 37 02.7 0.0**
baz=75,SNR=13
QLMT Earthquake Lak 75.49 314 *eP* **P 09 37 04.0 +1.3**
J16A Bone 75.51 313 ⇑P **P 09 37 02.9 0.0**
baz=76,SNR=14
Z15A Gila River Ind 75.57 302 ⇓P **P 09 37 03.7 +0.2**
baz=76
115A Sonoran Desert 75.62 302 ⇑P **P 09 37 03.8 -0.1**
baz=76,SNR=5.2

V15A Kaibab Nationa 75.63 305 ⇑P **P 09 37 03.9 +0.2**
baz=76,SNR=28
X15A Humboldt 75.65 304 ⇓P **P 09 37 04.1 +0.1**
baz=76,SNR=18
NLU North Lily Min 75.69 309 *eP* **P 09 37 06.2 +2.2**
BOZ Bozeman (W) 75.69 315 ⇓P **P 09 37 03.8 -0.1**
baz=76
BOZ Bozeman (W) 75.69 315 *eP* **P 09 37 03.8 -0.1**
W15A Williams 75.69 304 ⇑P **P 09 37 04.3 +0.2**
baz=76,SNR=6.3
MSU Marysvale 75.71 308 *eP* **P 09 37 05.3 +1.1**
Y15A Casa Rosa Ranc 75.73 303 ⇓P **P 09 37 04.5 +0.1**
baz=76,SNR=7.1
VRHR Novokhopersk 75.73 39 *eP* **P 09 37 03.4 -0.6**
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,30nm,0.6s
U15A North Rim 75.74 306 ⇓P **P 09 37 04.7 +0.3**
baz=76,SNR=18
NOQ North Oquirrh 75.75 310 *eP* **P 09 37 06.4 +2.0**
R15A Junction 75.78 307 ⇓P **P 09 37 05.0 +0.5**
baz=76,SNR=5.6
T15A Red Dirt Ranch 75.83 306 ⇓P **P 09 37 05.1 +0.2**
baz=76
P15A Leamington 75.83 309 ⇓P **P 09 37 05.8 +1.0**
baz=76,SNR=5.8
S15A Panguitch 75.83 307 ⇑P **P 09 37 06.0 +1.1**
baz=76,SNR=6.3
KIV Kislovodsk 75.86 47*c iP* **P 09 37 04.9 0.0**
KIV pmax pmax
comp=Z,49nm,1.2s,mb5.3
KIV Kislovodsk 75.86 47⇑*iP* **P 09 37 04.0 -0.9**
Q15A Fillmore 75.88 308 ⇓P **P 09 37 05.3 +0.1**
baz=76,SNR=8.7
O15A The Old Anders 76.00 310 ⇑P **P 09 37 06.0 +0.2**
baz=76,SNR=12
L15A Malad City 76.01 311 ⇓P **P 09 37 05.8 0.0**
baz=76,SNR=27
SPUT South Promonto 76.03 311 *eP* **P 09 37 08.4 +2.5**
M15A Larsen Ranch, 76.03 311 ⇓P **P 09 37 06.1 +0.1**
baz=76,SNR=13
N15A Stansbury Isla 76.06 310 ⇑P **P 09 37 06.0 -0.1**
baz=76,SNR=8.2
214A Organ Pipe Nat 76.12 301 ⇓P **P 09 37 06.7 +0.1**
baz=76,SNR=12
J15A Blackfoot 76.12 313 ⇑P **P 09 37 06.4 -0.1**
baz=76,SNR=13
K15A Arbon 76.15 312 ⇑P **P 09 37 06.3 -0.3**
baz=76,SNR=8.0
GOF Gofitskoye 76.17 45 *eP* **P 09 37 07.5 +0.8**
GOF pmax pmax
comp=Z,50nm,1.3s,mb5.3
I15A Monteview 76.19 313 ⇓P **P 09 37 06.8 0.0**
baz=76,SNR=11
X14A Yava 76.19 304 ⇓P **P 09 37 06.7 -0.3**
baz=76,SNR=21
Z14A Wintersburg 76.23 302 ⇑P **P 09 37 07.2 0.0**
baz=76
G15A Dillon 76.26 315 ⇓P **P 09 37 07.4 +0.2**
baz=76,SNR=32
DUG Dugway 76.26 309 *eP* **P 09 37 07.8 +0.5**
DUG pmax pmax
comp=Z,37nm,1.3s,mb5.2
DUG Dugway 76.26 309 ⇑P **P 09 37 07.5 +0.2**
baz=76
DUG Dugway 76.26 309 *eP* **P 09 37 07.8 +0.5**
comp=Z,37nm,1.3s,mb5.2
LRM Limekiln Ridge 76.27 315 *eP* **P 09 37 07.7 +0.5**
Y14A Wickenburg 76.28 303 ⇓P **P 09 37 07.7 +0.1**
baz=76,SNR=11
HVU Hansel Valley 76.29 311 *eP* **P 09 37 08.5 +1.1**
F15A Butte 76.30 315 ⇓P **P 09 37 07.6 +0.2**
baz=76,SNR=18
H15A Lima 76.34 314 ⇓P **P 09 37 07.8 +0.2**
baz=76,SNR=8.7
DLMT Dillon 76.35 315 *eP* **P 09 37 08.0 +0.3**
comp=Z,34nm,1.0s,mb5.2
W14A Seligman 76.36 304 ⇑P **P 09 37 08.2 +0.2**
baz=76,SNR=17
V14A Boquillas Ranc 76.38 305 ⇑P **P 09 37 08.6 +0.5**
baz=76,SNR=12
T14A Hurricane 76.39 306 ⇑P **P 09 37 08.4 +0.3**
baz=76,SNR=6.2
D15A Lincoln 76.40 317 ⇓P **P 09 37 07.9 0.0**
baz=76,SNR=12
P14A Drum Mountains 76.44 309 ⇑P **P 09 37 08.2 -0.1**
baz=76,SNR=41
E15A Deer Lodge 76.44 316 ⇓P **P 09 37 08.3 +0.1**
baz=76
BGU Big Grassy Mou 76.45 310 *eP* **P 09 37 08.2 -0.2**
U14A Mt Trumbull 76.45 306 ⇓P **P 09 37 08.7 +0.2**
baz=76,SNR=34
S14A Cedar City 76.47 307 ⇑P **P 09 37 08.7 +0.2**
baz=76,SNR=25
MCMT McKenzie Canyo 76.49 314 *eP* **P 09 37 08.4 -0.1**
N14A Grayback Hills 76.57 310 ⇓P **P 09 37 09.1 0.0**
baz=76,SNR=14
Q14A Sevier Lake (B 76.58 308 ⇑P **P 09 37 09.5 +0.3**
baz=76,SNR=28
CCUT Cedar City 76.62 307 *eP* **P 09 37 18.9 +10**
K14A Jones Ranch, D 76.62 312 ⇑P **P 09 37 09.4 +0.2**
baz=77,SNR=12
L14A Malta 76.65 311 ⇑P **P 09 37 09.2 -0.3**
baz=77,SNR=25
M14A Sheep Mountain 76.71 311 ⇑P **P 09 37 09.6 -0.2**
baz=77,SNR=16
H14A Leadore 76.85 314 ⇑P **P 09 37 10.5 0.0**
baz=77,SNR=6.6
I14A Mackay 76.88 313 ⇑P **P 09 37 10.8 +0.1**
baz=77,SNR=14
CHMT Chamberlain Mo 76.89 316 *eP* **P 09 37 10.4 -0.3**
J14A Carey 76.91 313 ⇓P **P 09 37 10.9 0.0**
baz=77,SNR=11
113A Mohawk Valley, 76.92 302 ⇓P **P 09 37 11.1 -0.1**
baz=77
G14A Jackson 76.95 315 ⇓P **P 09 37 11.2 +0.1**
baz=77
Y13A Salome 76.97 303 ⇑P **P 09 37 11.6 +0.2**
baz=77,SNR=12
S13A Holt Ranch, En 77.02 307 ⇓P **P 09 37 11.8 +0.2**
baz=77,SNR=26
W13A Hualapai Mount 77.02 304 ⇑P **P 09 37 12.1 +0.4**
baz=77,SNR=13
E14A Clinton 77.03 316 ⇓P **P 09 37 11.6 +0.1**
baz=77
T13A Saint George 77.05 306 ⇑P **P 09 37 12.1 +0.3**
baz=77,SNR=36
D14A Greenough 77.08 317 ⇑P **P 09 37 12.2 +0.4**
baz=77,SNR=8.9
U13A Pakoon Wash 77.09 306 ⇓P **P 09 37 12.4 +0.3**
baz=77,SNR=17
V13A Grand Canyon W 77.10 305 ⇓P **P 09 37 12.2 +0.1**
baz=77,SNR=10
R13A O'Grain Ranch, 77.11 307 ⇑P **P 09 37 12.5 +0.4**
baz=77,SNR=17
Q13A Wheeler Ranch, 77.16 308 ⇓P **P 09 37 12.7 +0.3**
baz=77,SNR=14
P13A Bates Ranch, G 77.17 309 ⇓P **P 09 37 13.0 +0.5**
baz=77,SNR=38
L13A Double Diamond 77.18 311 ⇑P **P 09 37 12.5 +0.1**
baz=77,SNR=12
PDMCI Parker Dam,Lak 77.23 303 ⇑P **P 09 37 12.9 0.0**
baz=77
GNI Garni 77.23 51 LR LR 10 14 22.5
comp=Z,305nm,20.7s,MS4.6,baz=92,slow=38
GNI Garni 77.23 51⇑*iP* **P 09 37 13.4 +0.6**
C14A Swan Lake 77.28 317 ⇓P **P 09 37 12.4 -0.4**
baz=77
K13A Stover Farm, H 77.30 312 ⇓P **P 09 37 13.6 +0.5**
baz=77,SNR=6.1
M13A Montello 77.32 311 ⇓P **P 09 37 13.1 -0.1**
baz=77,SNR=32
N13A Wendover, West 77.34 310 ⇓P **P 09 37 13.3 -0.1**
baz=77,SNR=6.9
MSO Missoula 77.36 316 *eP* **P 09 37 14.9 +1.5**
I13A Wildhorse Cree 77.36 313 ⇓P **P 09 37 13.1 -0.3**
baz=77,SNR=18
J13A Cove Ranch, Pi 77.39 313 ⇑P **P 09 37 13.6 0.0**
baz=77,SNR=21
H13A Challis 77.48 314 ⇑P **P 09 37 14.0 0.0**
baz=77,SNR=20
E13A Victor 77.51 316 ⇑P **P 09 37 14.0 -0.2**
baz=78,SNR=21
Y12C Blythe 77.55 303 ⇓P **P 09 37 14.4 -0.3**
baz=78,SNR=11
U12A Valley of Fire 77.55 306 ⇓P **P 09 37 14.3 -0.3**
baz=78,SNR=13
HLID Hailey 77.56 313 ⇑P **P 09 37 14.4 -0.2**
baz=78,SNR=29
HLID Hailey 77.56 313 *eP* **P 09 37 14.9 +0.3**
F13A Darby 77.58 315 ⇑P **P 09 37 14.4 -0.3**
baz=78,SNR=24
R12A Pony Springs, 77.61 308 ⇓P **P 09 37 14.8 -0.1**
baz=78,SNR=23
T12A Moapa 77.69 306 ⇓P **P 09 37 15.2 -0.2**
baz=78
D13A Huson 77.73 317 ⇓P **P 09 37 15.3 -0.1**
baz=78,SNR=10
O12A Currie 77.74 310 ⇑P **P 09 37 15.2 -0.4**
baz=78,SNR=19
A13A Flathead Natio 77.78 318 ⇓P **P 09 37 15.1 -0.6**
baz=78
B13A Whitefish 77.79 318 ⇓P **P 09 37 15.7 0.0**
baz=78,SNR=12
Q12A Willow Creek R 77.79 308 ⇓P **P 09 37 16.0 +0.1**
baz=78,SNR=20
S12A Delamar Landin 77.80 307 ⇓P **P 09 37 16.2 +0.2**
baz=78,SNR=32
V12A Nelson 77.81 305 ⇓P **P 09 37 16.1 0.0**
baz=78,SNR=9.3
GLA Glamis 77.81 302 ⇑P **P 09 37 16.1 -0.1**
baz=78
GLA Glamis 77.81 302 *eP* **P 09 37 18.0 +1.8**
C13A Hot Springs 77.83 317 ⇓P **P 09 37 16.2 +0.3**
baz=78,SNR=15
P12A McGill 77.86 309 ⇑P **P 09 37 16.4 +0.1**
baz=78,SNR=24
M12A Wells 77.89 311 ⇑P **P 09 37 16.5 +0.1**
baz=78,SNR=8.7
K12A Draper Farm, C 77.90 312 ⇓P **P 09 37 16.6 +0.1**
baz=78,SNR=22
H12A Diamond D Ranc 77.91 314 ⇓P **P 09 37 16.3 -0.2**
baz=78,SNR=26
N12A Clover Valley, 77.97 310 ⇓P **P 09 37 17.2 +0.2**
baz=78,SNR=34
L12A House Creek Ra 77.97 311 ⇑P **P 09 37 16.9 0.0**
baz=78,SNR=22
LDFC Landfair 78.02 304 *eP* **P 09 37 19.0 +1.7**
SHPR Sheep Range 78.05 306 *eP* **P 09 37 18.2 +0.8**
J12A Stokes Ranch, 78.06 313 ⇓P **P 09 37 17.1 -0.2**
baz=78,SNR=19
IRM Iron Mountain 78.06 303 ⇓P **P 09 37 17.3 -0.2**
baz=78,SNR=12
T11A Corn Creek, Al 78.10 306 ⇑P **P 09 37 18.5 +0.8**
baz=78,SNR=39
ELK Elko 78.12 310 *eP* **P 09 37 18.3 +0.6**
F12A Elk City 78.23 315 ⇑P **P 09 37 17.9 -0.3**
baz=78,SNR=17
U11A Corn Creek 78.23 306 ⇓P **P 09 37 18.6 +0.1**
baz=78,SNR=8.0
V11A Goodsprings 78.28 305 ⇓P **P 09 37 18.8 +0.1**
baz=78
BC3 Big Chuckw Mtn 78.33 303 ⇑P **P 09 37 18.1 -0.9**
baz=78,SNR=6.4
D12A Red Ives Fores 78.33 316 ⇑P **P 09 37 18.1 -0.6**
baz=78
R11A Troy Canyon, C 78.38 308 ⇑P **P 09 37 19.6 +0.3**
baz=78,SNR=17
Q11A Duckwater 78.44 308 ⇓P **P 09 37 19.6 +0.1**
baz=78,SNR=18
O11A Cowboy Ranch, 78.44 309 ⇓P **P 09 37 20.3 +0.8**
baz=78,SNR=31
C12B Naegeli Ranch, 78.44 317 ⇑P **P 09 37 19.1 -0.2**
baz=78
E12A Beaver Dam Sad 78.47 316 ⇓P **P 09 37 19.3 -0.2**
baz=78
GMRC Granite Mounta 78.48 304 ⇓P **P 09 37 19.9 +0.1**
baz=78,SNR=14
N11A Elko Archery C 78.50 310 ⇑P **P 09 37 20.5 +0.7**
baz=78
P11A Circle Ranch, 78.51 309 ⇓P **P 09 37 20.5 +0.6**
baz=78
S11A Rachel 78.51 307 ⇓P **P 09 37 20.9 +1.0**
baz=78,SNR=17
L11A Cat Creek Ranc 78.52 311 ⇓P **P 09 37 20.1 +0.2**
baz=78,SNR=26
B12A Libby 78.54 318 ⇑P **P 09 37 20.4 +0.5**
baz=78
M11A Holland Ranch, 78.55 311 ⇑P **P 09 37 20.5 +0.4**
baz=78,SNR=16
MFID Camas Ranch 78.59 313 ⇑P **P 09 37 20.0 -0.3**
baz=78
A12A Yaak River Ran 78.60 318 ⇑P **P 09 37 20.1 0.0**
baz=78,SNR=8.8
TUQ Turquoise Moun 78.68 305 ⇓P **P 09 37 21.4 +0.4**
baz=79,SNR=16
I11A Placerville 78.69 313 ⇓P **P 09 37 20.5 -0.3**
baz=79
K11A Parker Ranch, 78.73 312 ⇓P **P 09 37 21.2 +0.1**
baz=79,SNR=22
H11A Donnelly 78.74 314 ⇓P **P 09 37 20.7 -0.4**
baz=79,SNR=11
BELC Belle Mtn. 78.77 303 ⇓P **P 09 37 21.5 0.0**
baz=79,SNR=7.6
F11A Grangeville 78.86 315 ⇓P **P 09 37 21.9 +0.2**
baz=79
DVTC Desert V Tower 78.89 302 ⇓P **P 09 37 21.9 -0.2**
baz=79
YKA Yellowknife Ar 78.89 332 P **P 09 37 20.0 -1.5**
comp=Z,16nm,0.7s,mb5.0,baz=97,slow=5.6,SNR=29
YKA LR LR 10 08 59.8
comp=Z,445nm,18.6s,MS4.8,baz=140,slow=33
E11A Bogner Ranch, 78.91 316 ⇓P **P 09 37 21.8 -0.2**
baz=79,SNR=15
YKW3 Yellowknife Ar 78.91 332 *eP* **P 09 37 20.0 -1.6**
TPNV Topopah Spring 78.92 306 *eP* **P 09 37 23.3 +1.1**
TPNV pmax pmax
comp=Z,22nm,0.9s,mb5.1
TPNV Topopah Spring 78.92 306 *eP* **P 09 37 23.2 +1.0**
comp=Z,22nm,0.9s,mb5.1
G11A Walters Elk Ra 78.93 315 ⇓P **P 09 37 21.8 -0.3**
baz=79
R10A Warm Springs 78.95 308 ⇑P **P 09 37 22.4 0.0**
baz=79,SNR=11
SHOC Shoshone 78.96 305 ⇑P **P 09 37 22.6 +0.1**
baz=79,SNR=11
C11A Tepee Creek (N 78.97 317 ⇑P **P 09 37 21.7 -0.6**
baz=79
U10A Ash Meadows, A 79.00 306 ⇓P **P 09 37 23.3 +0.7**
baz=79,SNR=7.4
D11A Klaveano Farm, 79.01 316 ⇑P **P 09 37 21.7 -0.8**
baz=79,SNR=8.1
Q10A Clear Creek Ra 79.02 308 ⇑P **P 09 37 22.9 +0.2**
baz=79,SNR=9.0
HEC Hector,Ludlow 79.03 304 ⇑P **P 09 37 23.2 +0.4**
baz=79,SNR=18
B11A Sandpoint 79.06 318 ⇓P **P 09 37 23.2 +0.5**
baz=79
L10A Juniper Basin 79.06 311 ⇑P **P 09 37 23.2 +0.3**
baz=79,SNR=20
P10A Eureka 79.06 309 ⇓P **P 09 37 23.7 +0.8**
baz=79,SNR=19
A11A Hall Mountain, 79.07 318 ⇓P **P 09 37 22.8 0.0**
baz=79,SNR=14
O10A Cortez Mining, 79.08 310 ⇓P **P 09 37 23.0 0.0**
baz=79,SNR=6.0
N10A Dunphy 79.09 310 ⇓P **P 09 37 23.4 +0.4**
baz=79
M10A I.L. Ranch, Tu 79.11 311 ⇓P **P 09 37 23.7 +0.6**
baz=79
MONP Monument Peak 79.15 302 ⇓P **P 09 37 23.2 -0.4**
baz=79,SNR=5.4
PFO Pinyon Flat Ob 79.16 303 P **P 09 37 23.5 -0.1**
comp=Z,4.2nm,0.7s,mb4.5,baz=84,slow=4.9,SNR=7.4
PFO LR LR 10 10 12.8
comp=Z,652nm,18.3s,MS5.0,baz=103,slow=34
PFO Pinyon Flat Ob 79.16 303 ⇓P **P 09 37 24.0 +0.3**
baz=79
PFO Pinyon Flat Ob 79.16 303 *eP* **P 09 37 24.8 +1.2**
comp=Z,161nm,3.0s
S10A Tonopah Range, 79.18 307 ⇑P **P 09 37 24.2 +0.6**
baz=79,SNR=49
H10A Noah's Angus R 79.27 314 ⇓P **P 09 37 23.4 -0.6**
baz=79,SNR=6.9
I10A Payette 79.30 313 ⇑P **P 09 37 24.6 +0.5**
baz=79
BAR Barrett 79.37 302 *eP* **P 09 37 25.3 +0.5**
GSC Goldstone 79.41 304 ⇓P **P 09 37 25.0 +0.1**
baz=79,SNR=16
GSC Goldstone 79.41 304 *eP* **P 09 37 25.4 +0.5**
FURC Furnace Creek, 79.42 306 ⇑P **P 09 37 25.6 +0.6**
baz=79,SNR=14

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BBRC	Big Bear Sol-O	79.53	303	⇑P	P	09 37 26.0	+0.4
	baz=80,SNR=6.6						
E10A	Myers Farm, Un	79.53	316	⇑P	P	09 37 25.3	0.0
	baz=80,SNR=6.5						
G10A	Bishop Farm, J	79.53	315	⇑P	P	09 37 25.2	-0.2
	baz=80,SNR=8.4						
R09A	Tonopah	79.55	307	⇑P	P	09 37 26.1	+0.4
	baz=80,SNR=25						
NEW	Newport	79.56	318	eP	P	09 37 25.6	+0.1
F10A	Beach Ranch, E	79.61	315	⇓P	P	09 37 25.4	-0.4
	baz=80						
O09A	Fish Creek Ran	79.61	309	⇑P	P	09 37 26.4	+0.4
	baz=80,SNR=28						
BMN	Battle Mountai	79.63	310	eP	P	09 37 26.8	+0.7
D10A	Wagner Farm, O	79.65	316	⇓P	P	09 37 24.8	-1.2
	baz=80,SNR=14						
BMO	Blue Mountains	79.66	314	eP	P	09 37 27.1	+1.0
BMO				pmax	pmax		
	comp=Z,128nm,2.8s,mb5.4						
BMO	Blue Mountains	79.66	314	eP	P	09 37 27.1	+1.0
	comp=Z,128nm,2.8s,mb5.4						
S09A	Goldfield	79.69	307	⇑P	P	09 37 26.6	+0.2
	baz=80,SNR=9.9						
MURC	Murrieta	79.78	303	⇑P	P	09 37 27.0	0.0
	baz=80						
M09A	Marrel Ranch,	79.79	311	⇓P	P	09 37 27.4	+0.5
	baz=80						
VNA1	Neumayer--Stat	79.82	171	eP	P	09 37 27.1	+0.8
VNA1				e	pP	09 37 30.9	+1.3
VNA1				e		09 37 34.6	
VNA1				e		09 37 42.6	
VNA1				e		09 52 24.0	
GRAC	Grapevine Rang	79.82	306	⇑P	P	09 37 27.1	0.0
	baz=80						
A10A	Northport	79.86	318	⇓P	P	09 37 26.5	-0.5
	baz=80,SNR=21						
N09A	Rock Creek Ran	79.86	310	⇑P	P	09 37 27.9	+0.6
	baz=80,SNR=17						
H09A	Durkee	79.92	314	⇑P	P	09 37 26.9	-0.6
	baz=80,SNR=8.2						
MPMC	Manual Prospec	79.94	305	⇑P	P	09 37 28.5	+0.7
	baz=80,SNR=29						
I09A	Lost Marbles R	79.98	313	⇓P	P	09 37 28.0	+0.1
	baz=80,SNR=25						
K09A	Rome	79.98	312	⇓P	P	09 37 28.4	+0.5
	baz=80,SNR=44						
J09A	Fry Pan Ranch,	80.00	313	⇓P	P	09 37 28.1	+0.1
	baz=80,SNR=11						
G09A	Cove	80.00	315	⇑P	P	09 37 28.1	+0.1
	baz=80,SNR=28						
F09A	S2 Ranch, Elgi	80.09	315	⇑P	P	09 37 28.0	-0.4
	baz=80						
LRMC	Laurel Mountai	80.12	305	⇓P	P	09 37 29.3	+0.5
	baz=80						
BFSC	Mount Baldy St	80.14	303	⇓P	P	09 37 28.4	-0.6
	baz=80,SNR=7.1						
VNA3	Neumayer Olymp	80.15	172	eP	P	09 37 28.6	+0.5
VNA3				e	pP	09 37 32.4	+1.0
VNA3				e		09 37 35.4	
VNA3				e		09 37 44.0	
VNA3				e		09 52 22.9	
VNA2	Neumayer--Watz	80.19	171	eP	P	09 37 28.9	+0.6
VNA2				e	pP	09 37 32.4	+0.7
VNA2				e		09 37 36.9	
VNA2				e		09 37 44.4	
VNA2				e		09 52 22.7	
VNA2				e		09 52 26.5	
Q08A	Gabbs	80.21	308	⇑P	P	09 37 28.7	-0.5
	baz=80,SNR=11						
B09A	Rice	80.24	318	⇑P	P	09 37 28.3	-0.9
	baz=80,SNR=11						
E09A	Wood Farm, Sta	80.25	316	⇑P	P	09 37 28.5	-0.7
	baz=80,SNR=7.4						
P08A	Dixie Valley	80.31	309	⇓P	P	09 37 30.0	+0.3
	baz=80						
N08A	GE Springer Mi	80.32	310	⇓P	P	09 37 29.7	-0.1
	baz=80,SNR=21						
C09A	Chrisman Ranch	80.33	317	⇑P	P	09 37 29.4	-0.3
	baz=80						
LNOR	Lincton Mounta	80.35	315	eP	P	09 37 26.2	-3.6
O08A	Rochester Mine	80.35	310	⇓P	P	09 37 30.0	0.0
	baz=80,SNR=15						
EDW2	Edwards Air Fo	80.39	304	⇓P	P	09 37 30.2	-0.1
	baz=80,SNR=19						
S08C	White Mtn Res	80.44	307	⇓P	P	09 37 31.4	+0.9
	baz=80,SNR=34						
L08A	Fields	80.45	311	⇓P	P	09 37 30.6	+0.1
	baz=80,SNR=16						
M08A	Happy Creek Ra	80.49	311	⇓P	P	09 37 31.0	+0.3
	baz=80						
NVAR	Mina Array Bea	80.52	308	P	P	09 37 30.9	0.0
	comp=Z,5.7nm,0.8s,mb4.6,baz=96,slow=5.0,SNR=37						
J08A	Circle Bar Ran	80.52	313	⇓P	P	09 37 31.1	+0.3
	baz=80,SNR=7.0						
A09A	Danville	80.53	318	⇓P	P	09 37 30.2	-0.5
	baz=80,SNR=9.5						
K08A	Mann Creek Ran	80.54	312	⇓P	P	09 37 31.3	+0.4
	baz=80,SNR=11						
I08A	Drewsey	80.58	313	⇓P	P	09 37 31.4	+0.3
	baz=80,SNR=8.2						
OD2	Odessa Site #2	80.63	317	P	P	09 37 30.4	-0.9
H08A	Prairie City	80.64	314	⇑P	P	09 37 31.4	0.0
	baz=81,SNR=6.9						
WVOR	Wild Horse Val	80.66	312	eP	P	09 37 31.6	0.0
WVOR				e		09 40 36.0	
WVOR				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
WVOR	Wild Horse Val	80.66	312	eP	P	09 37 31.6	0.0
	comp=Z,13nm,1.2s,mb4.8						
WVOR				ePP	PP	09 40 36.0	+0.8
F08A	Pendleton	80.69	315	⇓P	P	09 37 31.0	-0.6
	baz=81						
ISA	Isabella	80.75	305	eP	P	09 37 33.0	+0.8
ISA				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.1						
ISA	Isabella	80.75	305	⇓P	P	09 37 32.8	+0.6
	baz=81,SNR=26						
ISA	Isabella	80.75	305	eP	P	09 37 33.0	+0.8
	comp=Z,31nm,1.2s,mb5.1						
D08A	Wollman Farm,	80.78	316	⇑P	P	09 37 31.9	-0.1
	baz=81						
G08A	Pilot Rock	80.83	315	⇑P	P	09 37 31.5	-0.9
	baz=81,SNR=5.5						
O07A	Toulon	80.91	309	⇓P	P	09 37 32.2	-0.7
	baz=81,SNR=11						
SCI	San Clemente I	80.94	302	⇓P	P	09 37 33.3	0.0
	baz=81						
N07B	Gerlach	80.96	310	⇑P	P	09 37 33.2	0.0
	baz=81						
A08A	Turner Farm, O	80.98	318	⇓P	P	09 37 32.6	-0.5
	baz=81,SNR=11						
ARVC	Arvin	81.07	304	⇑P	P	09 37 34.3	+0.4
	baz=81						
M07A	Soldier Meadow	81.09	311	⇓P	P	09 37 34.1	+0.3
	baz=81						
K07A	Rock Creek Ran	81.10	312	⇑P	P	09 37 34.1	+0.1
	baz=81,SNR=15						
R07C	Lee Vining	81.11	307	⇓P	P	09 37 35.0	+0.9
	baz=81,SNR=6.7						
J07A	Hines	81.13	313	⇓P	P	09 37 34.7	+0.7
	baz=81						
L07A	Adell	81.19	311	⇑P	P	09 37 34.7	+0.3
	baz=81,SNR=18						
RSW	Rattlesnake Hi	81.25	316	eP	P	09 37 34.0	-0.6
G07A	Ruggs Ranch, H	81.33	315	⇑P	P	09 37 34.7	-0.4
	baz=81,SNR=6.6						
RCTC	Rector, Farmer	81.35	306	⇑P	P	09 37 35.0	-0.4
	baz=81,SNR=7.4						
WAKR	Walker	81.40	308	eP	P	09 37 36.5	+0.9
R06C	Coleville	81.41	308	⇓P	P	09 37 36.4	+0.8
	baz=81,SNR=10						
E07A	Sunnyside	81.43	316	⇓P	P	09 37 35.1	-0.4
	baz=81						
D07A	Quincy	81.49	317	⇓P	P	09 37 35.4	-0.5
	baz=81						
F07A	Phinny Hill Vi	81.50	315	⇓P	P	09 37 35.9	0.0
	baz=81,SNR=7.0						
C07A	Waterville	81.54	317	⇓P	P	09 37 35.5	-0.6
	baz=82						
B07A	Winthrop	81.56	318	⇓P	P	09 37 35.9	-0.3
	baz=82						
SNAA	Sanae	81.57	170	eP	P	09 37 35.8	+0.1
SNAA				e	pP	09 37 38.8	-0.2
SNAA				e		09 37 42.5	
SNAA				e		09 52 17.0	
SNAA				e		09 52 20.4	
SNAA	Sanae	81.57	170	eP	P	09 37 35.3	-0.4
SNAA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SNAA	Sanae	81.57	170	eP	P	09 37 35.3	-0.4
	comp=Z,9.8nm,0.9s,mb4.7						
N06A	Buffalo Meadow	81.61	310	⇓P	P	09 37 36.8	+0.1
	baz=82,SNR=5.7						
WCN	Washoe City	81.62	309	⇓P	P	09 37 36.0	-0.7
	baz=82						
O06A	Flanigan	81.63	309	⇓P	P	09 37 36.5	-0.3
	baz=82,SNR=5.8						
T06C	Millerton Lake	81.69	306	⇑P	P	09 37 36.6	-0.5
	baz=82						
A07A	Ashnola River,	81.71	318	⇓P	P	09 37 36.6	-0.4
	baz=82,SNR=23						
ETW	Entiat	81.72	317	eP	P	09 37 36.0	-1.1
J06A	Christmas Vall	81.75	313	⇑P	P	09 37 37.1	-0.3
	baz=82,SNR=9.4						
S06C	San Francisco	81.76	307	⇑P	P	09 37 37.5	0.0
	baz=82,SNR=13						
I06A	Prineville	81.76	313	⇓P	P	09 37 37.4	0.0
	baz=82						
H06A	Lindquist Farm	81.82	314	⇑P	P	09 37 37.8	+0.2
	baz=82,SNR=14						
K06A	Valley Falls	81.84	312	⇑P	P	09 37 38.1	+0.3
	baz=82,SNR=7.1						
PKM	Peak Mountain	81.89	304	⇑P	P	09 37 39.1	+0.8
	baz=82,SNR=14						
R05C	Kirkwood Meado	81.89	308	⇓P	P	09 37 38.8	+0.6
	baz=82,SNR=7.3						
EBG	Ellensburg	81.91	316	P	P	09 37 38.3	+0.2
MOD	Modoc	81.92	311	⇓P	P	09 37 38.7	+0.4
	baz=82,SNR=16						
MOD	Modoc	81.92	311	eP	P	09 37 38.9	+0.7
TBM	Table Mountain	81.92	317	P	P	09 37 39.1	+1.0
G06A	Carlson Farm,	82.02	315	⇓P	P	09 37 39.2	+0.5
	baz=82,SNR=6.4						
SMMC	Simmler	82.02	305	⇓P	P	09 37 39.3	+0.4
	baz=82,SNR=6.7						
BEKR	Beckwourth	82.06	309	⇑P	P	09 37 39.5	+0.5
	baz=82,SNR=21						
M06C	Likely Place G	82.08	311	⇓P	P	09 37 39.8	+0.7
	baz=82,SNR=16						
F06A	Goldendale	82.10	315	⇓P	P	09 37 39.8	+0.7
	baz=82						
S05C	Merced	82.17	307	⇑P	P	09 37 40.0	+0.3
	baz=82						
CMB	Columbia Colle	82.17	307	⇓P	P	09 37 40.1	+0.4
	baz=82						
CMB	Columbia Colle	82.17	307	eP	P	09 37 40.5	+0.8
E06A	Yakima	82.20	316	⇑P	P	09 37 40.5	+0.9
	baz=82						
P05C	Yuba Gap, Truc	82.28	309	⇓P	P	09 37 40.9	+0.8
	baz=82						
ELFS	Eagle Lake Fie	82.30	310	⇑P	P	09 37 41.1	+0.9
	baz=82,SNR=11						
L05A	Lakeview	82.31	311	⇓P	P	09 37 41.2	+0.9
	baz=82						
K05A	Summer Lake	82.31	312	⇑P	P	09 37 40.9	+0.6
	baz=82						
LAVA	Lava Cap Winer	82.41	308	⇑P	P	09 37 41.7	+0.8
	baz=82						
PKD	Parkfield	82.42	305	⇓P	P	09 37 40.7	-0.3
	baz=82						
A06A	Chilliwack	82.43	319	⇓P	P	09 37 40.4	-0.4
	baz=82,SNR=8.9						
H05A	Madras	82.46	314	⇓P	P	09 37 41.7	+0.6
	baz=82,SNR=7.1						
O05C	Quincy	82.48	309	⇓P	P	09 37 41.6	+0.4
	baz=82						
RPW	Rockport	82.48	318	P	P	09 37 39.4	-1.7
I05A	Bend	82.52	314	⇓P	P	09 37 42.3	+1.0
	baz=82						
F05A	White Salmon	82.56	315	⇑P	P	09 37 41.8	+0.3
	baz=82,SNR=10						
M05C	Lookout	82.57	311	⇓P	P	09 37 41.8	+0.1
	baz=82,SNR=14						
U04C	Hernandez Rese	82.59	306	⇓P	P	09 37 42.2	+0.3
	baz=82,SNR=10						
R04C	Big Horse Ranc	82.59	308	⇑P	P	09 37 41.9	0.0
	baz=82,SNR=8.5						
LON	Longmire	82.76	316	eP	P	09 37 42.9	+0.3
LON				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
LON	Longmire	82.76	316	eP	P	09 37 42.9	+0.3
	comp=Z,3.4nm,0.7s,mb4.5						
JCW	Jim Creek	82.77	318	eP	P	09 37 41.8	-0.8
A05A	Maple Falls	82.83	318	⇑P	P	09 37 42.4	-0.5
	baz=83,SNR=6.2						
LASM	Arnica Sink	82.88	311	P	P	09 37 44.1	+0.8
CMW	Cultus Mountai	82.89	318	P	P	09 37 41.7	-1.5
Q04C	Lincoln	82.90	308	⇓P	P	09 37 43.8	+0.3
	baz=83,SNR=5.9						
ORV	Oroville	82.95	309	⇓P	P	09 37 43.4	-0.4
	baz=83,SNR=8.4						
OHCM	Honcut	82.95	309	eP	P	09 37 44.7	+1.0
V03C	Hunter Liggett	82.97	305	⇓P	P	09 37 43.7	-0.2
	baz=83						
M04C	Macdoel	83.07	311	⇓P	P	09 37 44.3	+0.1
	baz=83						
L04A	Klamath Falls	83.08	312	⇓P	P	09 37 44.1	-0.2
	baz=83						
H04A	Detroit Lake	83.14	314	⇓P	P	09 37 45.0	+0.4
	baz=83,SNR=6.8						
J04A	Umpqua Nationa	83.18	313	⇓P	P	09 37 44.8	0.0
	baz=83,SNR=8.9						
LVP	Lakeview Peak	83.22	316	P	P	09 37 45.0	+0.1
A04A	Legoe Bay, Lum	83.26	318	⇑P	P	09 37 45.5	+0.5
	baz=83						
C04A	Brinnon	83.50	317	⇓P	P	09 37 45.9	-0.4
	baz=83,SNR=8.9						
HDW	Hoodsport	83.56	317	P	P	09 37 46.2	-0.4
YBH	Yreka Blue Hor	83.72	311	P	P	09 37 46.0	-1.7
	comp=Z,2.8nm,0.7s,mb4.5,baz=169,slow=4.2,SNR=7.9						
YBH	Yreka Blue Hor	83.72	311	P	P	09 37 46.0	-1.6
YBH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PGC	Sidney	83.76	318	eP	P	09 37 48.5	+0.8
MAIT	Maitri	83.85	166	eP	P	09 37 47.5	-0.1
NLWA	Neilton Lookou	84.13	317	⇑P	P	09 37 49.7	+0.2
	baz=84						
NLWA	Neilton Lookou	84.13	317	eP	P	09 37 50.8	+1.3
KTRM	Thompson Ridge	84.20	311	P	P	09 37 50.9	+0.8
OBC	Olympics--Boni	84.22	318	P	P	09 37 51.9	+1.9
OPO	Ambohidratompo	84.65	109	P	P	09 37 54.7	+1.9
	comp=Z,3.5nm,0.8s,mb4.5,baz=208,slow=2.4,SNR=4.8						
KEBM	Edson Butte	84.83	312	eP	P	09 37 56.1	+2.9
ARU	Arti	85.75	34c	iP	P	09 37 57.8	+0.3
ARU				e		09 41 15.8	
ARU				eS	S	09 48 20.0	-10
ARU				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.4						
ARU	Arti	85.75	34	eP	P	09 37 57.9	+0.4
	comp=Z,18nm,0.8s,mb5.3						
DLBC	Dease Lake	86.62	328	eP	P	09 38 02.8	+1.0
SVE	Sverdlovsk	86.83	33	eP	P	09 38 03.7	+0.9
SVE				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.3						
DAWY	Dawson	89.84	335	eP	P	09 38 16.3	-0.7
HYT	Haines Junctio	89.86	331	eP	P	09 38 18.6	+1.5
EGAK	Eagle	90.36	336	eP	P	09 38 18.7	-0.7
SYO	Syowa Base	91.21	160	⇑eP	P	09 38 22.0	-1.2
SYO	Syowa Base	91.21	160	⇓epP	pP	09 38 25.8	-0.7
COLA	College	93.00	337	iP	P	09 38 30.6	-1.0
COLA	College	93.00	337	iP	P	09 38 30.6	-1.0
BRVK	Borovoye	93.07	36	⇑iP	P	09 38 32.3	+0.1
BMRM	Bremner River	93.12	333	eP	P	09 38 30.4	-1.8
RAGM	Ragged Mountai	93.36	332	eP	P	09 38 32.4	-1.0
EYAK	Cordova Ski Ar	93.80	332	eP	P	09 38 34.1	-1.3
	comp=Z,19nm,1.2s,mb5.4						
MCK	McKinley	93.90	336	eP	P	09 38 34.7	-1.1
MCK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb5.0						
MCK	McKinley	93.90	336	eP	P	09 38 34.7	-1.1
	comp=Z,7.8nm,1.2s,mb5.0						
BPAW	Bear Paw Mtn.	94.55	337	eP	P	09 38 36.7	-2.1
	comp=Z,4.3nm,0.8s,mb4.9						
TRF	Thorofare Moun	94.57	336	eP	P	09 38 37.7	-1.2
	comp=Z,5.6nm,0.9s,mb5.0						
IMA2	Indian Mountai	94.63	339	eP	P	09 38 40.6	+1.5
PMR	Palmer	94.89	334	eP	P	09 38 38.5	-1.9
PMR				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
PMR	Palmer	94.89	334	eP	P	09 38 38.5	-1.9
	comp=Z,4.2nm,0.9s,mb4.9						
PPLA	Purkeypile	95.59	336	eP	P	09 38 42.2	-1.4
	comp=Z,6.0nm,0.8s,mb5.1						
KDAK	Kodiak Island	98.16	331	LR	LR	10 16 48.4	
	comp=Z,116nm,21.6s,MS4.3,baz=68,slow=32						
KURK	Kurchatov	98.72	36	iP	P	09 38 56.5	-1.5
MAW	Mawson	99.60	157	LR	LR	10 15 44.8	
	comp=Z,353nm,21.5s,MS4.8,baz=259,slow=30						
TIXI	Tiksi	100.44	5	eP	Pdif	09 39 03.3	-2.2
RKT	Rikitea	102.28	248	eLQ		10 08 04.3	
	comp=Z,629nm,33.5s						
RKT				eLR	LR	10 12 36.3	
	comp=Z,621nm,27.2s						
BILL	Bilibino	103.37	352	eP	Pdif	09 39 19.0	+0.5
BILL				e		09 43 33.1	
BILL				pmax	pmax		
	comp=Z,6.0nm,0.4s						
WMQ	Urumqi	107.28	40	ePDIF	Pdif	09 39 38.0	+2.1
WMQ				ePP	PP	09 44 08.0	+5.1
WMQ				PP	PP		
	comp=Z,206nm,4.0s						
WMQ				LR	LR		
	comp=N,507nm,19.6s,MS5.2						
WMQ				LR	LR		
	comp=E,475nm,21.2s,MS5.2						
WMQ				LR	LR		
	comp=Z,655nm,22.8s,MS5.1						
PPT	Papeete	115.88	254	eSS	SS	10 00 52.0	-16
	comp=Z,200nm,32.5s						
PPT	Papeete	115.88	254	eLR	LR	10 18 54.0	
	comp=Z,300nm,23.2s						
PETK	Petropavlovsk-	118.89	352	PKP	PKPdf	09 44 07.6	+0.6
	comp=Z,4.1nm,0.9s,baz=80,slow=9.3,SNR=4.4						
PETK	Petropavlovsk-	118.89	352	PKP	PKPdf	09 44 07.6	+0.6
LZH	Lanzhou	121.85	39	ePKP	PKPdf	09 44 08.5	-4.7
LZH				PP	PP	09 45 45.0	-0.9
LZH				SS	SS	10 02 17.0	-5.9
LZH				PP	PP		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=E,540nm,19.5s						
LZH				LR	LR		
	comp=Z,847nm,20.8s,MS5.4						
HHC	Hu-ho-hao-te	122.89	30	ePKP	PKPdf	09 44 09.4	-5.7
HHC				PP	PP	09 45 51.2	-1.4
HHC				PKS		09 47 44.6	
HHC				SKS	SKSdf	09 51 19.9	-7.4
HHC				SKKS	SKKSac	09 52 44.2	-8.7
HHC				SS	SS	10 02 31.7	-3.9
HHC				PP	PP		
	comp=Z,189nm,9.9s						
HHC				LR	LR		
	comp=N,508nm,19.8s,MS5.2						
HHC				LR	LR		
	comp=E,290nm,19.8s,MS5.2						
HHC				LR	LR		
	comp=Z,622nm,21.5s,MS5.2						
CD2	Chengdu	124.97	44	ePKP	PKPdf	09 44 17.8	-1.5
CD2				PP	PP	09 46 10.1	+3.0
CD2				PKS		09 47 53.2	
CD2				SKS	SKSdf	09 51 24.7	-7.0
CD2				SKKS	SKKSac	09 52 58.0	-8.7
CD2				SS	SS	10 02 59.7	-3.2
CD2				PP	PP		
	comp=Z,260nm,10.8s						
CD2				LR	LR		
	comp=N,610nm,20.4s,MS5.3						
CD2				LR	LR		
	comp=E,430nm,22.8s,MS5.3						
CD2				LR	LR		
	comp=Z,430nm,22.8s,MS5.1						
BJI	Beijing	125.73	27	PKP	PKPdf	09 44 16.9	-3.6
BJI				PP	PP	09 46 12.8	+1.3
BJI				SS	SS	10 03 15.0	+3.8
BJI				LR	LR		
	comp=N,494nm,23.1s,MS5.2						
BJI				LR	LR		
	comp=E,410nm,23.1s,MS5.2						
BJI				LR	LR		
	comp=Z,672nm,20.1s,MS5.3						
MDJ	Mudanjiang	126.39	14	PKP	PKPdf	09 44 19.4	-2.2
KMI	Kunming	127.49	51	PKP	PKPdf	09 44 21.6	-2.7
KMI				XPKP		09 44 30.4	
KMI				PP	PP	09 46 25.3	+1.2
KMI				PPP		09 49 11.4	
KMI				SS	SS	10 03 32.3	-2.6
KMI				SSS		10 08 18.3	
KMI				PP	PP		
	comp=Z,177nm,10.2s						
KMI				LR	LR		
	comp=N,223nm,18.8s,MS5.0						
KMI				LR	LR		
	comp=E,200nm,20.3s,MS5.0						
KMI				LR	LR		
	comp=Z,234nm,21.9s,MS4.8						
CMAR	Chiang Mai Arr	127.56	60	PKP	PKPdf	09 44 24.4	-0.2
	comp=Z,1.5nm,0.3s,baz=290,slow=3.5,SNR=9.3						
CMAR	Chiang Mai Arr	127.56	60	PKIKP	PKPdf	09 44 24.4	-0.2
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GYA	Guiyang	129.66	47	PDIF	Pdif	09 41 15.2	-0.2
GYA				PKP	PKPdf	09 44 28.4	0.0
GYA				PP	PP	09 46 44.0	+5.8
GYA				PKS		09 48 04.0	
GYA				SKS	SKSdf	09 51 36.4	-4.1
GYA				SS	SS	10 04 05.2	+3.7
GYA				PP	PP		
	comp=Z,90nm,6.0s						
GYA				LR	LR		
	comp=N,280nm,22.4s,MS5.0						
GYA				LR	LR		
	comp=E,230nm,23.8s,MS5.0						
GYA				LR	LR		
	comp=Z,210nm,22.0s,MS4.8						
NJ2	Nanjing	133.41	31	ePKP	PKPdf	09 44 31.4	-3.9
MUN	Mundaring	143.43	136	ePKP	PKPdf	09 44 52.8	-0.9
KLBR	Kellerberrin	144.72	137	ePKP	PKPdf	09 44 53.3	-2.6
	comp=Z,26nm,0.9s						
TOO	Toolangi	149.89	180	ePKP	PKPbc	09 45 09.1	-0.1
FORT	Forrest	151.61	147	ePKP	PKPbc	09 45 12.9	-0.5
	comp=Z,11nm,0.7s						
FORT				e		09 45 20.5	
MBWA	Marble Bar	151.69	122	eP	PKPdf	09 45 08.6	+1.0
CNB	Canberra Magne	151.89	187	ePKP	PKPbc	09 45 13.7	-0.2
CAN	Canberra	151.93	186	ePKIKP	PKPbc	09 45 11.0	-3.0
FITZ	Fitzroy Crossi	158.03	121	ePKP	PKPab	09 45 50.2	+0.5
	comp=Z,7.6nm,0.8s						
ASAR	Alice Springs	160.39	147	PKP	PKPdf	09 45 17.9	-1.1
	comp=Z,1.1nm,0.9s,baz=124,slow=1.3,SNR=5.0						
ASAR				PKPab	PKPab	09 45 59.9	+0.3
	comp=Z,2.5nm,0.9s,baz=221,slow=3.1,SNR=6.0						
ASAR	Alice Springs	160.39	147	PKIKP	PKPdf	09 45 17.9	-1.1
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						

*NEIC **07** 09:28:01.1, 1432N×9351W, h22km, MD4.2(MEX), After MEX.*

MEX 07 09:28:00.9±1.0**, 1431N×9348W, h23**km±94km**, MD4.2, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.31	63	iP	Pn	09 28 20.4	-3.5
THIG				iS	Sn	09 28 36.6	-4.1
CCIG	Comitan	2.35	33	iP	Pn	09 28 37.1	-1.0
CCIG				iS	Sn	09 29 04.5	-1.7
CCIG	Comitan	2.35	33	iP	Pn	09 28 37.6	-0.5
CCIG				iS	Sn	09 29 04.9	-1.3
TGIG		2.48	8	iP	Pn	09 28 37.6	-2.2
TGIG				iS	Sn	09 29 06.3	-3.1
SCX	San Cristobal	2.54	19	iP	Pn	09 28 40.7	-0.1
SCX				iS	Sn	09 29 07.0	-4.1
CMIG	Matias Romero	3.08	334	iP	Pn	09 28 45.9	-2.2
CMIG				iS	Sn	09 29 19.6	-4.7
VHO	Vista Hermosa	4.17	312	iP	Pn	09 29 02.4	-0.8
TEIG	Tepich	7.70	39	iP	Pn	09 29 48.2	-3.5
TEIG	Tepich	7.70	39	ePn	Pn	09 29 48.2	-3.5
	9.8nm,0.3s						
OTAV	Otavalo	20.41	132	eP	P	09 32 31.9	-4.7
	1.0nm,0.5s						

*NIED **07** 09:30:00, 2990N×13920E, h420km, Mw4.9 Best double couple: $M_0$2.34000×10^16 NP1:ϕ_s337.00000°, δ78.00000°,*

λ-49.00000°. NP2:φs80.00000°,δ42.00000°,
λ-163.00000°.
SZGRF *07 09:30:54.1,2859N×13894E,h33km,mb5.1,Bonin Islands, Japan, region*
JMA *07 09:30:57.6±0.2,2989N×139.17E,h436km±4km,M4.9*
MOS *07 09:30:57.8±0.8,2995N×13867E,h413km,mb4.9/71,Error ellipse: s-maj=7.9km s-min=4.6km az=107.3*
ISCJB *07 09:30:59.0±0.3,2999N±003×13866E±002,h421km±2km, mb4.8/159,Error ellipse: s-maj=4.8km s-min=2.5km az=164.3*
BJI *07 09:30:59.7,2998N×13859E,h425km,mB4.9,mb5.3*
IDC *07 09:30:59.4±0.7,2996N×13876E,h419km±6km,mb4.4/19, mb1 4.5/24,mb1mx4.5/27,mbtmp4.4/24,Error ellipse: s-maj=10.7km s-min=8.4km az=94.0*
BGS *07 09:31:00.0±2.0,2995N×13865E,h426km,mb4.7, mb4.8(NEIC)*
NEIC *07 09:31:00.1±0.5,2995N×13865E,h426km±4km,mb4.8/85, MW4.8(NIED),Error ellipse: s-maj=4.0km s-min=3.0km az=153.0*
ISC 07 09:31:00.2±0.3,**2998N**±003×**13869E**±002,**h423**km±3km, **h423**km±4.0km**:pP-P,n850,σ0.71**/867,**mb4.8**/159, **193C-219D,Southeast of Honshu**

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Code  Station Name        Δ°    AZ°   Phase ID        Time       Res
                                      Op     ISC      h  m  s    ISC
JHJ   Hachijo jima 2      3.27   16   P      P        09 32 06.7 -0.5
      320nm,0.3s,baz=241,slow=20,SNR=73
JHJ                                   S      S        09 32 59.6 -1.9
      348nm,0.3s,baz=64,slow=22,SNR=10
JHJ2  Mitsune             3.27   17   P      P        09 32 06.4 -0.8
JHJ2                                  eS     S        09 32 59.0 -2.6
CBIJ  Chichi jima         4.21  132   P      P        09 32 10.8 -4.9
      433nm,0.3s,baz=324,slow=3.2,SNR=83
CBIJ                                  S      S        09 33 08.2 -8.7
      965nm,0.3s,baz=275,slow=20,SNR=34
JWZ   Kozaga              4.35  325   P      P        09 32 18.7 +1.9
JHHJ  Haha-jima-NKT       4.54  137   P      P        09 32 13.7 -5.1
JHHJ                                  eS     S        09 33 14.3 -8.4
JIE   Ise                 4.71  340   P      P        09 32 22.1 +1.8
JIE                                   eS     S        09 33 27.9 +2.4
BSO1  Boso 1              5.05   22   P      P        09 32 21.7 -1.9
BSO1                                  eS     S        09 33 27.6 -4.0
JOD2  Odawara 2           5.28    4   P      P        09 32 25.3 -0.7
JOD2                                  eS     S        09 33 33.6 -2.3
JTO   Tosashimizu         5.79  301   P      P        09 32 33.8 +2.5
JTO                                   eS     S        09 33 48.5 +2.8
JRY   Ryogami san         6.02    2   P      P        09 32 33.2 -0.5
JRY                                   eS     S        09 33 46.1 -3.9
MJAR  Matsushiro Arr      6.55  357   P      P        09 32 37.8 -1.6
      18nm,0.3s,baz=203,slow=6.3,SNR=128
MJAR                                  S      S        09 33 58.3 -2.2
      9.4nm,0.3s,baz=172,slow=17,SNR=9.2
MJAR  Matsushiro Arr      6.55  357   P      P        09 32 37.8 -1.6
MJAR                                  S      S        09 33 58.3 -2.2
MJAR                                  pmax   pmax
      comp=Z,19nm,0.3s
MJAR                                  smax
      comp=N,9.0nm,0.3s
MAJO  Matsushiro          6.56  357   eP     P        09 32 38.3 -1.1
MAT   Matsushiro          6.56  357   P      P        09 32 39.7 +0.3
MAT                                   S      S        09 33 59.7 -0.8
MAT   Matsushiro          6.56  357   P      P        09 32 38.6 -0.8
MAT                                   eS     S        09 33 58.6 -1.9
JHS   Saijyo              6.87  318   P      P        09 32 45.4 +2.6
JHS                                   eS     S        09 34 10.9 +4.2
JMZ   Minamidaito 2       7.80  240   P      P        09 32 54.6 +1.4
JSJ   Shimokoshiki        7.90  285   P      P        09 32 57.1 +2.9
JAM   Amami Oshima        8.09  261   P      P        09 32 58.4 +2.1
JTU   Tsushima            9.08  302   P      P        09 33 09.9 +2.8
JMK   Ichinoseki          9.19   12   P      P        09 33 08.0 -0.3
JMK                                   eS     S        09 34 49.0 -4.6
JOW   Kunigami            9.69  254   P      P        09 33 16.9 +2.9
      comp=N,23nm,0.3s,baz=89,slow=8.1,SNR=59
JKE   Kume jima 2        11.12  254   P      P        09 33 31.5 +1.8
JOT   Ohata              11.54    9   P      P        09 33 35.1 +1.0
KSRS  Korea Array        11.65  313   P      P        09 33 37.3 +1.9
      comp=N,8.0nm,0.3s,baz=127,slow=11,SNR=196
KSRS                                  ScP    ScP      09 41 39.0 +0.1
      comp=N,0.2nm,0.3s,baz=196,slow=1.3,SNR=15
JKB   Kayabe             12.03    8   P      P        09 33 40.3 +0.8
JOSM  Okushiri--Mats     12.09    3   P      P        09 33 41.1 +0.9
INCN  Inchon             12.51  310   eP     P        09 33 44.8  0.0
ERM   Erimo              12.54   16   eP     P        09 33 45.9 +0.8
ERM                                   pmax   pmax
      comp=Z,231nm,0.8s
ERM   Erimo              12.54   16   eP     P        09 33 45.9 +0.8
      comp=Z,231nm,0.8s
VLA   Vladivostok        14.20  339   eP     P        09 34 02.7 -0.4
VLA                                   pmax   pmax
      comp=Z,192nm,1.5s
ASAJ  Asahikawa          14.45   11   P      P        09 34 06.9 +1.1
      comp=Z,13nm,0.3s,baz=223,slow=13,SNR=36
ASAJ                                  S      S        09 36 43.6 +4.4
      comp=Z,1.6nm,0.3s,baz=168,slow=31,SNR=3.5
ASAJ  Asahikawa          14.45   11   P      P        09 34 06.9 +1.1
ASAJ                                  S      S        09 36 43.7 +4.5
ASAJ                                  pmax   pmax
      comp=Z,13nm,0.3s
ASAJ                                  smax
      comp=N,2.0nm,0.3s
SSE   Sheshan            15.13  279   P      P        09 34 12.4 -0.9
SSE                                   XP              09 35 49.3
SSE                                   S      S        09 36 49.5 -3.5
SSE                                   AMB    AMB
      comp=Z,91nm,0.6s
SSE                                   AMB    AMB
      comp=Z,23nm,3.2s
TATO  Taipei             16.05  256   eP     P        09 34 22.5 -0.8
YHNB  Yeheng             16.27  255   eP     P        09 34 24.6 -1.0
      comp=Z,115nm,0.5s
NACB  Ninganchiao        16.28  253   eP     P        09 34 23.9 -1.9
      comp=Z,201nm,0.5s
MDJ   Mudanjiang         16.29  336   P      P        09 34 26.0 +0.5
MDJ                                   S      S        09 37 18.0 +2.7
MDJ                                   PCP    PcP      09 38 54.3 +1.4
MDJ                                   SCP    ScP      09 41 48.9 +2.2
MDJ                                   PCS    PcS      09 42 29.1 +0.4
MDJ                                   AMB    AMB
      comp=Z,131nm,0.8s
MDJ                                   AMB    AMB
      comp=Z,185nm,4.2s
MDJ   Mudanjiang         16.29  336⇓iP    P        09 34 26.3 +0.8
      comp=Z,120nm,0.9s
DL2   Dalian             16.63  307 ⇓P     P        09 34 28.3 -1.0
DL2                                   AMB    AMB
      comp=Z,70nm,0.7s
NJ2   Nanjing            17.13  282   eP     P        09 34 33.9 -0.7
NJ2                                   XP     sP       09 36 18.0 -7.7
NJ2                                   S      S        09 37 30.0 -1.9
NJ2                                   AMB    AMB
      comp=Z,200nm,0.8s
NJ2                                   AMB    AMB
      comp=Z,130nm,5.2s
YSS   Yuzh-Sakhalins     17.24    9⇑iP    P        09 34 35.7 +0.1
YSS                                   eS     S        09 37 35.0 +1.4
YSS                                   pmax   pmax
      comp=N,70nm,0.7s
YSS                                   pmax   pmax
      comp=Z,110nm,0.7s
YSS                                   pmax   pmax
      comp=Z,300nm,3.0s
YSS                                   smax
      comp=N,350nm,1.9s
YSS                                   smax
      comp=E,350nm,1.9s
YSS   Yuzh-Sakhalins     17.24    9   eP     P        09 34 35.7 +0.1
GUMO  Guam               17.29  159   P      P        09 34 35.9 -0.6
      comp=E,15nm,0.3s,baz=179,slow=5.6,SNR=13
GUMO                                  S      S        09 37 39.4 +4.2
      comp=E,1.6nm,0.3s,baz=202,slow=23,SNR=2.4
GUMO  Guam               17.29  159   P      P        09 34 35.9 -0.6
GUMO                                  S      S        09 37 39.4 +4.2
GUMO                                  pmax   pmax
      comp=Z,15nm,0.3s
GUMO                                  smax
      comp=N,2.0nm,0.3s
GUMO  Guam               17.29  159   eP     P        09 34 36.5  0.0
CN2   Changchun          17.36  326   eP     P        09 34 37.6 +0.7
CN2                                   eXP    sP       09 36 22.4 -5.8
CN2                                   AMB    AMB
      comp=Z,70nm,0.8s
CN2                                   AMB    AMB
      comp=Z,200nm,4.0s
QZH   Quanzhou           18.52  259⇑iP    P        09 34 48.0 -1.3
QZH                                   S      S        09 37 54.3 -3.1
QZH                                   AMB    AMB
      comp=Z,300nm,0.6s
TIA   Tai'an             19.09  295 ⇓P     P        09 34 54.0 -0.8
TIA                                   AMB    AMB
      comp=Z,209nm,1.0s
KLR   Kul'dur            19.94  347   eP     P        09 35 00.0 -2.3
KLR                                   e               09 38 21.7
BJT   Baijiatuau         20.94  305⇓iP    P        09 35 11.1 -0.5
BJT                                   pmax   pmax
      comp=Z,197nm,1.0s
BJT   Baijiatuau         20.94  305⇓iP    P        09 35 11.1 -0.6
      comp=Z,197nm,1.0s
BJI   Beijing            20.94  305   P      P        09 35 11.0 -0.7
BJI                                   XP     sP       09 37 06.8 -1.1
BJI                                   S      S        09 38 36.4 -0.1
BJI                                   AMB    AMB
      comp=Z,139nm,0.9s
WHN   Wuhan              21.02  278 ⇓P     P        09 35 13.0 +0.5
HIA   Hailar             24.04  329⇓iP    P        09 35 40.3 +0.8
HIA                                   pmax   pmax
      comp=Z,82nm,0.6s
HIA   Hailar             24.04  329⇓iP    P        09 35 40.3 +0.8
      comp=Z,82nm,0.6s,mb5.3
SKR   Severo-Kuril's     24.46   27   eP     P        09 35 42.3 -0.9
HHC   Hu-ho-hao-te       24.53  304⇓iP    P        09 35 44.0  0.0
HHC                                   XP     sP       09 37 44.3 -2.4
HHC                                   PCP    PcP      09 39 09.0 +0.3
HHC                                   S      S        09 39 34.3 +1.0
HHC                                   SCP    ScP      09 42 07.8 +1.1
HHC                                   PCS    PcS      09 42 48.1 -0.9
HHC                                   AMB    AMB
      comp=Z,63nm,0.9s,mb5.0
HHC                                   AMB    AMB
      comp=Z,149nm,5.3s
XAN   Xi'an              25.52  287   P      P        09 35 53.0 +0.1
XAN                                   XP     sP       09 37 52.8 -4.2
XAN                                   PCP    PcP      09 39 10.0 -1.1
XAN                                   S      S        09 39 42.1 -6.9
XAN                                   AMB    AMB
      comp=Z,168nm,0.9s,mb5.5
XAN                                   AMB    AMB
      comp=Z,119nm,4.0s
BTO   Baotou             25.58  302   eP     P        09 35 53.0 -0.4
PEA0B Petropavlovsk-     26.97   26   eP     P        09 36 06.1 +0.7
PETK  Petropavlovsk-     26.97   26   P      P        09 36 05.7 +0.2
      comp=Z,23nm,0.7s,mb4.7,baz=132,slow=2.1,SNR=57
PETK                                  ScP    ScP      09 42 11.0 -2.6
      comp=Z,10nm,1.1s,baz=193,slow=2.6,SNR=5.6
PET   Petropavlovsk      27.27   27   i P    P        09 36 08.4 +0.3
PET                                   pmax   pmax
      comp=Z,78nm,0.9s,mb5.1
PET   Petropavlovsk      27.27   27   eP     P        09 36 08.5 +0.4
QIZ   Qiongzhong         28.34  254   P      P        09 36 18.5 +0.5
QIZ   Qiongzhong         28.34  254⇓iP    P        09 36 19.1 +1.1
      comp=Z,8.7nm,0.6s,mb4.3
GYA   Guiyang            28.39  271⇓iP    P        09 36 18.4 +0.1
GYA                                   AP              09 37 32.5
GYA                                   XP     sP       09 38 21.0 -2.1
GYA                                   PCP    PcP      09 39 19.6 +1.5
GYA                                   S      S        09 40 34.7 +0.5
GYA                                   AMB    AMB
      comp=Z,70nm,1.0s,mb5.0
GYA                                   AMB    AMB
      comp=Z,410nm,5.1s
LZH   Lanzhou            29.73  291 ⇑P     P        09 36 30.0  0.0
LZH                                   AP              09 37 50.2
LZH                                   PCP    PcP      09 39 22.0 +0.6
LZH                                   S      S        09 40 58.3 +3.4
LZH                                   SCP    ScP      09 42 23.0 +0.4
LZH                                   PCS    PcS      09 43 02.0 -3.2
LZH                                   AMB    AMB
      comp=Z,151nm,1.0s,mb5.3
LZH                                   AMB    AMB
      comp=Z,600nm,4.0s
CD2   Chengdu            30.06  281⇑iP    P        09 36 33.0 +0.1
CD2                                   AP     pP       09 37 48.3 -0.5
CD2                                   XP     sP       09 38 35.6 -2.5
CD2                                   S      S        09 41 00.7 +0.6
CD2                                   XS     sS       09 43 15.4 -5.0
CD2                                   SS     SS       09 43 26.7 -4.8
CD2                                   AMB    AMB
      comp=Z,470nm,0.8s,mb5.9
CD2                                   AMB    AMB
      comp=Z,220nm,4.2s
ULN   Ulaanbaatar        30.12  315   eP     P        09 36 34.1 +0.9
SONM  Songino Array      30.51  315   P      P        09 36 37.4 +0.9
      comp=Z,42nm,0.5s,mb5.0,baz=125,slow=8.5,SNR=143
SONM                                  PcP    PcP      09 39 22.8 -0.5
      comp=Z,4.2nm,0.7s,baz=146,slow=3.0,SNR=3.7
SONM                                  ScP    ScP      09 42 23.4 -1.6
      comp=Z,3.3nm,0.6s,baz=142,slow=4.2,SNR=8.1
SONM  Songino Array      30.51  315   P      P        09 36 37.4 +0.8
SONM                                                  09 39 22.8
SONM                                  pmax   pmax
      comp=Z,42nm,0.5s
SONM                                  pmax   pmax
      comp=Z,4.0nm,0.7s
SONM                                  pmax   pmax
      comp=N,3.0nm,0.6s
MYLDM Lahad Datu         31.17  222 ⇑P     P        09 36 45.0 +2.3
SDKM  Sandakan           31.57  224 ⇓P     P        09 36 46.6 +0.4
KKM   Kota Kinabalu      31.86  226 ⇓P     P        09 36 48.2 -0.5
KMI   Kunming            32.15  270   P      P        09 36 51.8 +0.7
KMI                                   AMB    AMB
      comp=Z,27nm,0.8s,mb4.6
KMI                                   AMB    AMB
      comp=Z,93nm,3.1s
BOD   Bodaibo            32.66  336   eP     P        09 36 54.9  0.0
BOD                                   pmax   pmax
      comp=Z,30nm,0.9s,mb4.6
GTA   Gaotai             33.10  297⇓iP    P        09 36 59.5 +0.5
GTA                                   AP     pP       09 38 16.7 +0.7
GTA                                   XP     sP       09 39 03.4 -1.6
GTA                                   PCP    PcP      09 39 31.1 +0.5
GTA                                   S      S        09 41 48.9 +2.1
GTA                                   SCP    ScP      09 42 33.8 -0.2
GTA                                   XS     sS       09 44 06.4 -1.8
GTA                                   SS     SS       09 44 29.2 -3.3
GTA                                   AMB    AMB
      comp=Z,112nm,1.1s,mb5.1
GTA                                   AMB    AMB
      comp=Z,230nm,5.7s
ZAK   Zakamensk          33.42  318   eP     P        09 37 01.5  0.0
ZAK                                   pmax   pmax
      comp=Z,62nm,1.2s,mb4.8
TLY   Talaya             33.76  320 ⇑P     P        09 37 05.7 +1.2
      SNR=26
TLY   Talaya             33.76  320   eP     P        09 37 05.3 +0.8
TLY                                   pmax   pmax
      comp=Z,68nm,0.7s,mb5.1
TLY   Talaya             33.76  320   eP     P        09 37 05.4 +0.9
MOY   Mondy              35.26  319   eP     P        09 37 18.0 +0.9
MOY                                   pmax   pmax
      comp=Z,50nm,1.7s,mb4.6
NANT  Nan                36.19  261 ⇓P     P        09 37 23.0 -2.4
      comp=Z,675nm,1.0s,mb5.9
CHRT  Chiangrai          36.54  263 ⇓P     P        09 37 29.0 +0.8
      comp=Z,479nm,0.8s,mb5.9
SBUM  Sibu               37.15  228 ⇑P     P        09 37 33.1 -0.3
CHG   Chiang Mai         37.69  262 ⇓P     P        09 37 38.2 +0.4
      comp=Z,107nm,0.9s,mb5.2
CHTO  Chiang Mai         37.69  262 ⇓P     P        09 37 38.2 +0.4
      SNR=23
CHTO  Chiang Mai         37.69  262   eP     P        09 37 38.1 +0.3
CMAR  Chiang Mai Arr     37.84  262   P      P        09 37 39.6 +0.5
      comp=Z,19nm,0.7s,mb4.6,baz=47,slow=8.1,SNR=104
CMAR                                  PcP    PcP      09 39 45.0 -0.1
      comp=Z,3.0nm,0.5s,baz=48,slow=1.0,SNR=6.9
CMAR                                  ScP    ScP      09 42 51.8 +0.1
      comp=Z,2.6nm,0.8s,baz=40,slow=3.0,SNR=9.3
CMAR  Chiang Mai Arr     37.84  262   P      P        09 37 39.6 +0.5
CMAR                                                  09 39 45.1
CMAR                                                  09 42 51.8
CMAR                                  pmax   pmax
      comp=Z,19nm,0.7s
CMAR                                  pmax   pmax
      comp=Z,3.0nm,0.5s
CMAR                                  pmax   pmax
      comp=N,3.0nm,0.8s
NST   Nakhon Sawan       38.09  257   P      P        09 37 41.0 -0.1
      comp=N,70nm,0.9s,mb5.0
BDT   Bhumibol Dam       38.32  260 ⇑P     P        09 37 44.0 +1.0
      comp=N,31nm,0.7s,mb4.8
KSM   Kuching            39.12  229 ⇓P     P        09 37 50.7 +1.1
KSM   Kuching            39.12  229   eP     P        09 37 50.4 +0.9
LSA   Lhasa              41.00  282   eP     P        09 38 06.3 +1.7
LSA                                   pmax   pmax
      comp=Z,20nm,0.6s,mb4.6
LSA   Lhasa              41.00  282   eP     P        09 38 06.3 +1.7
      comp=Z,20nm,0.6s,mb4.6
BILL  Bilibino           41.41   15d iP    P        09 38 08.0 +0.7
BILL                                  pmax   pmax
      comp=Z,78nm,1.2s,mb4.9
BILL  Bilibino           41.41   15   eP     P        09 38 07.4 +0.1
      comp=Z,14nm,0.4s,mb4.6
KTGM  Kuala Trenggan     41.52  241 ⇑P     P        09 38 09.9 +1.0
SNG   Songkhla           42.31  245   P      P        09 38 16.0 +0.7
      comp=Z,120nm,1.0s,mb5.2
WMQ   Urumqi             42.41  303⇓iP    P        09 38 16.4 +0.8
WMQ                                   AP     pP       09 39 35.0 -1.5
WMQ                                   AMB    AMB
      comp=Z,87nm,0.6s,mb5.3
WMQ                                   AMB    AMB
      comp=Z,214nm,3.5s
KAKA  Kakadu             42.87  189   eP     P        09 38 18.1 -1.4
      comp=Z,31nm,0.6s,mb4.8
IPM   Ipoh               43.67  242 ⇑P     P        09 38 26.0  0.0
TAPN  Taplejung          44.51  280   eP     P        09 38 33.3 +0.9
      comp=Z,91nm,0.4s,mb5.5
ODAN  Odare              44.92  279   eP     P        09 38 36.4 +0.8
ZAA0  Zalesovo Array     45.30  318   eP     P        09 38 37.8 -0.3
ZALV  Zalesovo Beam      45.30  318   P      P        09 38 37.8 -0.3
      comp=Z,32nm,0.4s,mb5.0,baz=97,slow=7.5,SNR=105
ZALV                                  PcP    PcP      09 40 08.7 -0.6
      comp=Z,12nm,0.5s,baz=110,slow=3.4,SNR=8.1
ZALV                                  ScP    ScP      09 43 19.5 -1.4
      comp=Z,2.8nm,0.4s,baz=106,slow=4.2,SNR=6.1
ZALV  Zalesovo Beam      45.30  318   P      P        09 38 37.8 -0.3
ZALV                                  PcP    PcP      09 40 08.7 -0.6
ZALV                                  ScP    ScP      09 43 19.5 -1.4
ZAL   Zalesovo           45.31  318   P      P        09 38 37.8 -0.3
ZAL                                                   09 40 08.7
ZAL                                   pmax   pmax
      comp=Z,32nm,0.4s
ZAL                                   pmax   pmax
      comp=Z,12nm,0.5s
ZAL                                   pmax   pmax
      comp=N,3.0nm,0.4s
RAMN  Ramite             45.57  280   eP     P        09 38 41.5 +0.9
      comp=N,616nm,0.7s
JIRN  Jiri               45.73  281   eP     P        09 38 43.3 +1.5
      comp=N,749nm,0.5s
UNV   Unalaska Valle     45.83   42   eP     P        09 38 40.3 -1.9
      comp=N,24nm,0.9s,mb4.5
GUN   Gumba              45.92  281   eP     P        09 38 44.7 +1.4
      comp=N,355nm,0.5s
MK31  Makanchi Array     46.28  308   i P    P        09 38 45.8 +0.1
MK31                                  pmax   pmax
      comp=Z,16nm,0.5s,mb4.6
MKAR  Makanchi Array     46.28  308   P      P        09 38 46.0 +0.3
      comp=Z,34nm,0.7s,mb4.8,baz=93,slow=9.5,SNR=208
MKAR                                  PcP    PcP      09 40 12.6 -0.4
      comp=Z,8.6nm,0.5s,baz=82,slow=12,SNR=8.1
MKAR                                  ScP    ScP      09 43 24.3 -0.9
      comp=Z,6.0nm,0.6s,baz=80,slow=5.5,SNR=12
MKAR  Makanchi Array     46.28  308   P      P        09 38 46.0 +0.3
MKAR                                         pP       09 40 12.6 +4.3
MKAR                                  pmax   pmax
      comp=Z,34nm,0.7s
MKAR                                  pmax   pmax
      comp=Z,9.0nm,0.5s
MKAR                                  pmax   pmax
      comp=N,6.0nm,0.6s
NVS   Novosibirsk        46.36  319   i P    P        09 38 45.8 -0.4
NVS                                   pmax   pmax
      comp=N,32nm,0.6s
NVS                                   pmax   pmax
      comp=E,70nm,1.1s
PKI   Pulchoki           46.41  281   eP     P        09 38 47.7 +0.6
      comp=E,96nm,0.5s,mb5.4
PKIN  Phulchoki          46.42  281   eP     P        09 38 47.6 +0.4
      comp=E,83nm,0.5s,mb5.3
KKN   Kakani             46.47  281   eP     P        09 38 48.2 +0.7
      comp=E,173nm,0.6s,mb5.6
DMN   Daman              46.66  281   eP     P        09 38 49.8 +0.8
      comp=E,147nm,0.4s,mb5.6
GKN   Gorkha             46.95  282   eP     P        09 38 51.9 +0.7
      comp=E,170nm,0.3s,mb5.8
BOK   Bokaro             47.16  276   eP     P        09 38 52.2 -0.6
BOK                                   AMb    AMB      09 38 53.4
      comp=Z,68nm,0.4s,mb5.3
DANN  Dangsing           47.60  282   eP     P        09 38 57.5 +1.4
      comp=Z,588nm,0.4s
KOLN  Koldanda           47.90  282   eP     P        09 38 59.4 +1.0
      comp=Z,194nm,0.3s,mb5.9
TNA   Tin City           48.13   27   eP     P        09 39 00.0 +0.5
FITZ  Fitzroy Crossi     49.43  196   eP     P        09 39 08.9 -0.9
      comp=Z,25nm,0.8s,mb4.6
SDPT  Sand Point         49.49   41   eP     P        09 39 08.0 -1.8
WRAB  Tennant Creek      49.80  185   eP     P        09 39 11.1 -1.4
WRAB                                  pmax   pmax
      comp=Z,30nm,0.8s,mb4.7
WRAB  Tennant Creek      49.80  185   eP     P        09 39 11.1 -1.4
      comp=Z,30nm,0.8s,mb4.7
PTH   Pithoragarh        50.26  285   eP     P        09 39 17.1 +1.1
CTA   Charters Tower     50.31  171   eP     P        09 39 15.6 -0.7
      comp=Z,2.8nm,0.9s
CTA   Charters Tower     50.31  171   eP     P        09 39 15.6 -0.7
CTA                                   pmax   pmax
      comp=Z,3.0nm,0.9s
CHGN  Chignik            50.72   40   eP     P        09 39 17.0 -1.9
ULHL  Ulahol             50.87  302   P      P        09 39 21.4 +1.1
      SNR=25
TKM2  Tokmak 2           51.26  303   eP     P        09 39 24.3 +1.2
TKM2                                  pmax   pmax
      comp=Z,54nm,0.8s,mb4.8
TKM2  Tokmak 2           51.26  303   P      P        09 39 24.4 +1.3
      SNR=29
TKM2  Tokmak 2           51.26  303   eP     P        09 39 24.2 +1.2
      comp=Z,54nm,0.8s,mb4.8
VIS   Vishakhapatnam     51.65  269   eP     P        09 39 25.6 -0.7
VIS                                   AMb    AMB      09 39 27.9
      comp=Z,66nm,0.7s,mb5.0
KBK   Karagaybulak       51.77  303   P      P        09 39 27.9 +1.1
      SNR=42
CHMS  Chumysh            51.87  303   P      P        09 39 28.0 +0.5
      SNR=8.9
FRU   Bishkek            51.98  303⇓iP    P        09 39 29.0 +0.6
FRU                                   pmax   pmax
      comp=Z,90nm,1.6s,mb4.8
USP   Ospenovka          52.01  303   P      P        09 39 29.0 +0.5
      SNR=23
AAK   Ala-Archa          52.10  303   P      P        09 39 30.0 +0.8
      SNR=19
UCH   Uchtor             52.15  302   P      P        09 39 31.1 +1.5
      SNR=43
UCH   Uchtor             52.15  302   eP     P        09 39 31.1 +1.5
SMLA  Simla              52.37  288⇓iP    P        09 39 31.5 +0.1
SDNR  Sundarnagar        52.44  288   eP     P        09 39 31.5 -0.3
SVW2  Sparrevohn         52.57   34   eP     P        09 39 32.6 +0.3
EKS2  Erkin-Say          52.62  303   P      P        09 39 33.7 +0.7
      SNR=20
EKS2  Erkin-Say          52.62  303⇓iP    P        09 39 33.4 +0.4
      comp=Z,101nm,1.1s,mb5.0
AML   Almayashu          52.76  302   P      P        09 39 35.8 +1.8
      SNR=22
AML   Almayashu          52.76  302   eP     P        09 39 35.6 +1.6
      comp=Z,156nm,0.7s,mb5.3
DLH   Dalhousie          52.98  290   eP     P        09 39 36.0 +0.2
NDI   New Delhi          53.02  285⇓iP    P        09 39 35.0 -1.1
THN   Thein Dam          53.22  290   eP     P        09 39 36.5 -0.9
ASAR  Alice Springs      53.54  185   P      P        09 39 38.5 -1.1
      comp=Z,9.9nm,0.3s,mb4.5,baz=22,slow=11,SNR=240
ASAR                                  PcP    PcP      09 40 40.2 +0.2
      comp=Z,2.2nm,0.8s,baz=4.0,slow=2.9,SNR=4.6
ASAR                                  ScP    ScP      09 43 56.2 -0.3
      comp=Z,1.4nm,0.6s,baz=6.4,slow=4.5,SNR=5.2
ASAR  Alice Springs      53.54  185   P      P        09 39 38.6 -1.1
ASAR                                                  09 40 40.2
ASAR                                  pmax   pmax
      comp=Z,10.0nm,0.3s
ASAR                                  pmax   pmax
      comp=Z,2.0nm,0.8s
ASAR                                  pmax   pmax
      comp=N,1.0nm,0.6s
BVA0  Borovoye Array     53.84  316   i P    P        09 39 41.4 -0.1
BVA0                                  pmax   pmax
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comp=Z,17nm,0.5s,mb4.5
BRVK Borovoye 53.90 316 ⇓P P 09 39 42.2 +0.3
SNR=12
BRVK Borovoye 53.90 316 *e*P P 09 39 42.3 +0.3
IMA2 Indian Mountai 53.94 28 *e*P P 09 39 42.5 +0.4
KDAK Kodiak Island 53.95 38 P P 09 39 41.6 -0.6
comp=Z,59nm,0.8s,mb4.9,baz=275,slow=3.1,SNR=35
KDAK Kodiak Island 53.95 38 *e*P P 09 39 41.8 -0.5
comp=Z,62nm,0.8s,mb4.9
NGP Nagpur 54.01 275 *e*P P 09 39 41.4 -1.8
MBWA Marble Bar 54.02 202 *e*P P 09 39 42.3 -0.8
comp=Z,23nm,0.6s,mb4.6
PPLA Purkeypile 54.30 32 *e*P P 09 39 44.6 0.0
comp=Z,36nm,0.8s,mb4.7
CHUM Lake Minchumin 54.30 31 *e*P P 09 39 45.1 +0.5
comp=Z,53nm,1.0s,mb4.7
BPAW Bear Paw Mtn. 54.90 30 *e*P P 09 39 49.2 +0.3
comp=Z,6.7nm,1.4s
KTH Kantishna Hill 54.90 31 *e*P P 09 39 48.1 -0.7
comp=Z,64nm,1.5s,mb4.6
KK31 Karatay Array 54.92 304 *i*P P 09 39 49.5 +0.1
KK31 pmax pmax
comp=Z,47nm,0.5s,mb5.0
SLKM Skilak Lake 55.17 35 *e*P P 09 39 50.0 -0.8
TRF Thorofare Moun 55.18 31 *e*P P 09 39 50.6 -0.3
comp=Z,15nm,0.7s,mb4.3
RC01 Rabbit Creek A 55.40 34 *e*P P 09 39 51.1 -1.3
comp=Z,54nm,1.0s,mb4.7
SEW Seward 55.56 35 *e*P P 09 39 52.6 -0.9
PMR Palmer 55.69 33 *e*P P 09 39 53.4 -1.1
PMR pmax pmax
comp=Z,57nm,0.9s,mb4.9
PMR Palmer 55.69 33 *e*P P 09 39 53.4 -1.1
comp=Z,57nm,0.9s,mb4.9
MCK McKinley 55.80 31 *e*P P 09 39 54.9 -0.3
HYB Hyderabad 55.92 272 *i*P P 09 39 57.0 +0.2
HYB Hyderabad 55.92 272 *e*P P 09 39 57.0 +0.2
AKL Akola 55.93 276 *e*P P 09 39 57.6 +0.8
COLA College 56.29 29 *e*P P 09 39 58.1 -0.5
COLA pmax pmax
comp=Z,25nm,0.8s,mb4.6
COLA College 56.29 29 *e*P P 09 39 58.1 -0.4
comp=Z,24nm,0.8s,mb4.6
EIDS Eidsvold 56.30 167 *e*P P 09 39 55.4 -3.8
LATR Latur 57.23 274 *e*P P 09 40 05.9 0.0
LATR AMb AMB 09 40 08.0
comp=Z,106nm,2.0s,mb4.8
DIV Divide 57.33 34 *e*P P 09 40 05.8 -0.1
comp=Z,73nm,1.6s,mb4.8
BMRM Bremner River 57.91 34 *e*P P 09 40 09.7 -0.1
KBL Kabul 58.01 294 *e*P P 09 40 10.9 -0.1
KBL pmax pmax
comp=Z,55nm,0.8s,mb4.9
KBL Kabul 58.01 294 *e*P P 09 40 10.9 -0.1
comp=Z,55nm,0.8s,mb4.9
SVE Sverdlovsk 59.06 321⇑ *e*P P 09 40 18.1 +0.4
SVE *e* 09 42 37.0
SVE pmax pmax
comp=Z,52nm,0.7s,mb5.0
EGAK Eagle 59.15 29 *e*P P 09 40 18.1 -0.1
POO Poona 59.53 275 *e*P P 09 40 20.8 -0.7
KAD Karad 59.75 273 *e*P P 09 40 22.1 -0.9
KAD AMb AMB 09 40 23.4
comp=Z,121nm,0.9s,mb5.3
KOD Kodaikanal 60.07 265 *e*P P 09 40 25.4 +0.2
KOD AMb AMB 09 40 26.8
comp=Z,84nm,0.6s,mb5.3
ARU Arti 60.26 321 *d i*P P 09 40 25.6 -0.2
ARU *e**PP pP 09 41 54.3 +0.4
ARU *e* 09 42 43.2
ARU *e*S S 09 48 06.2 +0.3
ARU *e*SS SS 09 52 09.3 -2.1
ARU pmax pmax
comp=Z,64nm,0.6s,mb5.2
ARU Arti 60.26 321 *e*P P 09 40 25.6 -0.2
PNL Peninsula 60.64 35 *e*P P 09 40 28.4 +0.1
AB31 Akbulak array 60.89 313 P P 09 40 29.5 -0.6
AB31 pmax pmax
comp=Z,43nm,0.4s,mb5.2
FORT Forrest 61.26 190 *e*P P 09 40 31.9 -0.8
comp=Z,117nm,0.4s,mb5.7
TRD Trivandrum 61.34 263 *e*P P 09 40 32.4 -1.3
TRD AMb AMB 09 40 34.4
comp=Z,58nm,1.2s,mb4.9
HYT Haines Junctio 61.36 34 *e*P P 09 40 36.1 +3.1
STKA Stephens Creek 61.58 177 ⇓ *i*P P 09 40 33.8 -1.0
comp=Z,8.8nm,0.7s,mb4.4
STKA Stephens Creek 61.58 177 P P 09 40 33.9 -0.9
comp=Z,5.8nm,0.3s,mb4.5,baz=350,slow=7.1,SNR=39
STKA Stephens Creek 61.58 177 *e*P P 09 40 33.7 -1.1
comp=Z,16nm,0.8s,mb4.6
SKAG Skagway 62.71 35 *e*P P 09 40 42.3 +0.4
comp=Z,33nm,1.2s,mb4.7
KLBR Kellerberrin 64.38 200 *e*P P 09 40 51.8 -1.2
comp=Z,28nm,0.8s,mb4.8
MUN Mundaring 65.21 201 *e*P P 09 40 58.2 0.0
DLBC Dease Lake 65.63 35 *e*P P 09 41 01.3 +0.7
NWAO Narrogin (SRO) 65.78 200 P P 09 41 01.1 -0.7
comp=Z,63nm,0.6s,mb5.4,baz=20,slow=5.8,SNR=68
NWAO Narrogin (SRO) 65.78 200 P P 09 41 01.1 -0.7
NWAO pmax pmax
comp=Z,63nm,0.6s
NWAO Narrogin (SRO) 65.78 200 *e*P P 09 41 01.0 -0.8
TOO Toolangi 67.50 174 *e*P P 09 41 12.2 -0.2
KEV Kevo 69.24 340 *ep* P 09 41 22.0 -0.7
comp=Z,12nm,0.5s,mb4.8
KEV Kevo 69.24 340 *e*P P 09 41 22.0 -0.7
KEV pmax pmax
comp=Z,12nm,0.5s,mb4.8
ARCES ARCESS Array B 69.80 340 P P 09 41 26.5 +0.4
comp=Z,16nm,0.5s,mb4.8,baz=68,slow=8.1,SNR=111
ARCES ARCESS Array B 69.80 340 P P 09 41 26.5 +0.4
ARCES pmax pmax
comp=Z,16nm,0.5s
WBK Wadi Bani Khal 70.54 285 ⇑P P 09 41 31.8 +0.4
BIDO Bidbid 70.86 287 ⇑P P 09 41 34.0 +0.7
SNR=6.1
YKA Yellowknife Ar 71.06 28 P P 09 41 33.2 -0.5
comp=Z,8.5nm,0.6s,mb4.4,baz=298,slow=5.9,SNR=17
YKA Yellowknife Ar 71.06 28 P P 09 41 33.2 -0.5
YKA pmax pmax
comp=Z,9.0nm,0.6s
YKA Yellowknife Ar 71.06 28 P P 09 41 33.2 -0.5
JOF Joensuu 71.13 333 *ep* P 09 41 33.3 -0.8
comp=Z,51nm,0.7s,mb5.2
JOF Joensuu 71.13 333 *e*P P 09 41 33.3 -0.8
JOF pmax pmax
comp=Z,51nm,0.7s,mb5.2
BANOM Banah 71.36 290 ⇑P P 09 41 36.7 +0.5
JMDO Jabal Madar 71.37 285 ⇓P P 09 41 36.5 +0.2
HOQ Hoqain 71.51 287 ⇑P P 09 41 37.5 +0.4
SNR=9.5
MOS Moscow 71.59 324 *e*P P 09 41 35.5 -1.5
MOS pmax pmax
comp=Z,76nm,1.1s,mb5.1
HATD Hatta, Dubai 71.96 289 ⇓P P 09 41 40.4 +0.7
SNR=6.2
BSY Bisya 71.96 286 ⇓P P 09 41 40.2 +0.5
SNR=7.4
ASHO Ashiyiah 72.08 289 ⇓P P 09 41 40.9 +0.5
OBN Obninsk 72.41 324 *d i*P P 09 41 41.5 -0.3
OBN *e* 09 41 56.3
OBN *e**PP pP 09 43 14.8 +0.9
OBN *e*S S 09 50 30.1 -0.1
OBN pmax pmax
comp=Z,79nm,1.2s,mb5.1
OBN Obninsk 72.41 324 *e*P P 09 41 41.5 -0.3
PGC Sidney 72.94 43 *e*P P 09 41 45.5 +0.6
B04A Port Angeles 73.17 44 ⇓P P 09 41 47.0 +0.7
baz=73
NLWA Neilton Lookou 73.24 45 ⇓P P 09 41 47.4 +0.7
baz=73
NLWA Neilton Lookou 73.24 45 *e*P P 09 41 47.4 +0.7
comp=Z,19nm,0.8s,mb4.7
A04A Legoe Bay, Lum 73.35 43 ⇑P P 09 41 47.9 +0.5
baz=73,SNR=5.5
D03A Wishkah Elem. 73.42 45 ⇑P P 09 41 48.7 +0.9
baz=73
KAF Kangasniemi 73.53 333 *ep* P 09 41 47.4 -0.7
comp=Z,22nm,0.5s,mb5.0,baz=55,slow=5.4
KAF Kangasniemi 73.53 333 *e*P P 09 41 47.4 -0.7
KAF pmax pmax
comp=Z,22nm,0.5s,mb5.0
VDB Vedder Mountai 73.57 43 P P 09 41 48.7 +0.1
A05A Maple Falls 73.59 43 ⇓P P 09 41 48.8 +0.1
baz=73
HDW Hoodsport 73.62 44 P P 09 41 50.0 +1.1
C04A Brinnon 73.64 44 ⇓P P 09 41 49.7 +0.7
baz=74
E03A Lebam 73.80 45 ⇓P P 09 41 50.5 +0.5
baz=74
KIV Kislovodsk 73.84 312 *d i*P P 09 41 50.5 +0.2
KIV pmax pmax
comp=Z,73nm,1.0s,mb5.3
KIV Kislovodsk 73.84 312 *e*P P 09 41 50.2 -0.1
A06A Chilliwack 73.90 42 ⇓P P 09 41 50.3 -0.2
baz=74,SNR=5.6
B05A Bryant 73.92 43 ⇑P P 09 41 50.9 +0.3
baz=74
JCW Jim Creek 74.05 43 *e*P P 09 41 50.8 -0.6
GNI Garni 74.12 307 *e*P P 09 41 52.6 +0.6
GNI pmax pmax
comp=Z,51nm,1.2s
GNI Garni 74.12 307 *e*P P 09 41 52.6 +0.7
comp=Z,51nm,1.2s,mb5.0
B06A Marblemount 74.16 43 ⇓P P 09 41 52.4 +0.4
baz=74
RPW Rockport 74.18 43 P P 09 41 52.3 +0.2
C05A Tolt Reservoir 74.42 44 ⇑P P 09 41 53.6 +0.2
baz=74,SNR=6.3
D05A Enumclaw 74.47 44 ⇑P P 09 41 54.2 +0.4
baz=74
A07A Ashnola River, 74.56 42 ⇑P P 09 41 54.2 -0.1
baz=74,SNR=8.5
TDL Tradedollar La 74.72 45 P P 09 41 55.8 +0.6
LON Longmire 74.78 45 *e*P P 09 41 54.6 -1.0
LON pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
LON Longmire 74.78 45 *e*P P 09 41 54.6 -0.9
comp=Z,4.5nm,0.8s,mb4.2
F04A Amboy 74.78 46 ⇑P P 09 41 55.7 +0.1
baz=75,SNR=9.8
H03A Soap Creek Ran 74.81 47 ⇑P P 09 41 56.1 +0.4
baz=75
E05A Randle 74.90 45 ⇓P P 09 41 56.4 +0.1
baz=75
B07A Winthrop 74.99 43 ⇑P P 09 41 56.9 +0.2
baz=75,SNR=11
NLW Nelson Butte 75.05 43 P P 09 41 57.4 +0.4
G04A Mulino 75.08 46 ⇓P P 09 41 57.7 +0.4
baz=75
I03A Eugene 75.14 48 ⇑P P 09 41 58.4 +0.7
baz=75
D06A Cle Elum 75.16 44 ⇓P P 09 41 57.8 +0.1
baz=75,SNR=6.3
TWW Teanaway 75.17 44 P P 09 41 58.7 +1.0
J02A Umpqua 75.23 48 ⇓P P 09 41 58.9 +0.7
baz=75
A08A Turner Farm, O 75.25 42 ⇑P P 09 41 58.1 -0.1
baz=75,SNR=7.8
ETW Entiat 75.27 43 P P 09 41 58.7 +0.4
TBM Table Mountain 75.32 44 P P 09 41 59.0 +0.4
E06A Yakima 75.38 45 ⇓P P 09 41 59.1 +0.1
baz=75
C07A Waterville 75.39 43 ⇑P P 09 41 58.8 -0.2
baz=75,SNR=12
F05A White Salmon 75.40 45 ⇓P P 09 41 59.2 +0.1
baz=75
EBG Ellensburg 75.46 44 P P 09 42 00.2 +0.8
B08A Colville Reser 75.50 42 ⇓P P 09 41 59.7 +0.2
baz=75,SNR=19
H04A Detroit Lake 75.51 47 ⇑P P 09 41 59.7 0.0
baz=75,SNR=6.7
HOOD Mount Hood Mea 75.54 46 *e*P P 09 42 00.8 +0.9
A09A Danville 75.64 42 ⇓P P 09 42 00.6 +0.3
baz=76,SNR=11
D07A Quincy 75.68 44 ⇑P P 09 42 00.3 -0.4
baz=76,SNR=5.9
GL2 New Goldendale 75.76 45 P P 09 42 01.8 +0.7
L02A Cave Junction 75.77 49 ⇑P P 09 42 01.1 0.0
baz=76
I04A Tendick Farm, 75.78 48 ⇑P P 09 42 01.2 0.0
baz=76,SNR=9.5
G05A Wamic 75.79 46 ⇑P P 09 42 01.8 +0.5
baz=76
F06A Goldendale 75.87 45 ⇑P P 09 42 01.8 +0.1
baz=76
SOC Sochi 75.92 312 *e*P P 09 42 01.9 -0.1
SOC *e**PP pP 09 43 37.6 +2.4
SOC *e* 09 45 05.0
SOC *e*S S 09 51 07.7 -1.7
SOC *e*SS SS 09 56 13.6 +1.8
SOC pmax pmax
comp=Z,51nm,0.8s,mb5.2
C08A Higginbotham F 75.95 43 ⇑P P 09 42 02.0 -0.1
baz=76,SNR=6.8
HUMO Hull Mountain 75.98 49 ⇑P P 09 42 02.7 +0.3
baz=76
E07A Sunnyside 76.06 44 ⇑P P 09 42 02.9 +0.1
baz=76
JCC Jacoby Creek 76.10 51 ⇓P P 09 42 02.5 -0.6
baz=76
H05A Madras 76.13 46 ⇑P P 09 42 03.5 +0.4
baz=76,SNR=5.7
B09A Rice 76.16 42 ⇑P P 09 42 03.3 0.0
baz=76,SNR=11
G06A Carlson Farm, 76.22 46 ⇑P P 09 42 03.6 0.0
baz=76,SNR=5.7
A10A Northport 76.22 41 ⇓P P 09 42 03.5 -0.1
baz=76,SNR=10
J04A Umpqua Nationa 76.23 48 ⇑P P 09 42 04.1 +0.3
baz=76,SNR=13
GBL Gable Mountain 76.28 44 P P 09 42 04.4 +0.5
RSW Rattlesnake Hi 76.30 44 P P 09 42 04.7 +0.6
EDM Edmonton 76.33 36 *e*P P 09 42 03.8 -0.3
I05A Bend 76.33 47 ⇑P P 09 42 04.4 +0.1
baz=76
HAWA Hanford 76.33 44 *e*P P 09 42 04.4 +0.1
comp=Z,20nm,1.3s,mb4.6
F07A Phinny Hill Vi 76.33 45 ⇓P P 09 42 04.4 +0.1
baz=76,SNR=11
OD2 Odessa Site #2 76.34 43 P P 09 42 04.3 +0.1
D08A Wollman Farm, 76.38 43 ⇑P P 09 42 04.5 0.0
baz=76,SNR=13
C09A Chrisman Ranch 76.39 43 ⇓P P 09 42 04.7 +0.1
baz=76,SNR=8.5
YBH Yreka Blue Hor 76.55 50 P P 09 42 05.8 +0.2
comp=Z,9.5nm,0.8s,mb4.5,baz=334,slow=2.3,SNR=13
YBH Yreka Blue Hor 76.55 50 P P 09 42 05.8 +0.2
YBH pmax pmax
comp=Z,10.0nm,0.8s
YBH Yreka Blue Hor 76.55 50 ⇑P P 09 42 05.4 -0.2
baz=76
E08A Dider Farm, El 76.57 44 ⇓P P 09 42 06.0 +0.4
baz=76
VIPM Ingram Point 76.58 46 P P 09 42 06.3 +0.7
BUOR Burton Butte 76.60 49 P P 09 42 06.5 +0.7
M02C Callahan 76.62 50 ⇑P P 09 42 05.9 -0.1
baz=76,SNR=5.3
H06A Lindquist Farm 76.64 46 ⇑P P 09 42 05.9 -0.1
baz=76,SNR=6.8
D09A Jones Farm, Ri 76.74 43 ⇓P P 09 42 06.2 -0.2
baz=77,SNR=5.8
J05A Fort Rock 76.77 48 ⇓P P 09 42 07.1 +0.3
baz=77,SNR=20
K04A Chiloquin 76.78 48 ⇓P P 09 42 07.0 +0.2
baz=77
ANN Anapa 76.79 314 *d i*P P 09 42 06.4 -0.4
ANN *e**PP pP 09 43 40.2 0.0
ANN *e*S S 09 51 19.6 +1.0
ANN pmax pmax
comp=Z,127nm,1.4s,mb5.4
G07A Ruggs Ranch, H 76.80 45 ⇑P P 09 42 07.1 +0.2
baz=77,SNR=10
NEW Newport 76.83 42 *e*P P 09 42 07.3 +0.3
NEW pmax pmax
comp=Z,19nm,0.9s
NEW Newport 76.83 42 *e*P P 09 42 07.3 +0.3
comp=Z,19nm,0.9s,mb4.7
L04A Klamath Falls 76.88 49 ⇑P P 09 42 07.4 +0.1
baz=77,SNR=5.9
A11A Hall Mountain, 76.92 41 ⇑P P 09 42 08.0 +0.5
baz=77,SNR=13
C10A Spilker Farm, 76.95 42 ⇑P P 09 42 07.5 -0.1
baz=77,SNR=6.9
F08A Pendleton 77.08 44 ⇑P P 09 42 08.9 +0.5
baz=77,SNR=14
M04C Macdoel 77.10 49 ⇑P P 09 42 08.8 +0.2
baz=77,SNR=8.1
I06A Prineville 77.11 47 ⇑P P 09 42 08.9 +0.3
baz=77,SNR=11
E09A Wood Farm, Sta 77.11 44 ⇓P P 09 42 08.8 +0.2
baz=77,SNR=14
M03C McCloud 77.16 50 ⇑P P 09 42 09.1 +0.2
baz=77,SNR=6.1
B11A Sandpoint 77.18 41 ⇑P P 09 42 09.0 +0.1
baz=77
H07A Lands Inn, Kim 77.19 46 ⇓P P 09 42 09.0 0.0
baz=77,SNR=5.2
WDC Whiskeytown Da 77.21 51 ⇓P P 09 42 09.1 -0.1
baz=77
WDC Whiskeytown Da 77.21 51 *e*P P 09 42 10.1 +0.8
G08A Pilot Rock 77.22 45 ⇑P P 09 42 09.4 +0.2
baz=77,SNR=9.3
O02C Red Bluff 77.23 51 ⇓P P 09 42 09.9 +0.5
baz=77,SNR=5.5
K05A Summer Lake 77.26 48 ⇓P P 09 42 10.0 +0.6
baz=77,SNR=12
A12A Yaak River Ran 77.33 41 ⇓P P 09 42 09.8 +0.1
baz=77,SNR=8.9
LNOR Lincton Mounta 77.35 44 *e*P P 09 42 09.7 -0.2
D10A Wagner Farm, O 77.35 43 ⇓P P 09 42 09.2 -0.6
baz=77
J06A Christmas Vall 77.48 47 ⇓P P 09 42 11.0 +0.3
baz=77,SNR=11
I07A Izee 77.48 46 ⇑P P 09 42 11.0 +0.3
baz=77
GASB Alder Springs 77.53 51 ⇑P P 09 42 11.9 +0.9
baz=77
C11A Tepee Creek (N 77.55 42 ⇑P P 09 42 10.9 0.0
baz=77
LTIM Timbered Crate 77.62 50 P P 09 42 11.8 +0.4
L05A Lakeview 77.63 49 ⇑P P 09 42 12.0 +0.6
baz=78,SNR=6.4
K06A Valley Falls 77.64 48 ⇓P P 09 42 11.7 +0.2
baz=78,SNR=13
E10A Myers Farm, Un 77.74 43 ⇑P P 09 42 11.9 -0.1
baz=78,SNR=6.8
M05C Lookout 77.76 49 ⇓P P 09 42 12.4 +0.2
baz=78
H08A Prairie City 77.79 46 ⇓P P 09 42 12.4 +0.1
baz=78,SNR=15
HATC Hat Creek Radi 77.81 50 ⇓P P 09 42 12.8 +0.3
baz=78
D11A Klaveano Farm, 77.91 43 ⇓P P 09 42 12.4 -0.5
baz=78,SNR=14
F10A Beach Ranch, E 77.93 44 ⇑P P 09 42 12.9 -0.1
baz=78,SNR=5.1
G09A Cove 77.95 45 ⇑P P 09 42 13.1 0.0
baz=78,SNR=15
J07A Hines 77.96 47 ⇓P P 09 42 13.5 +0.3
baz=78,SNR=32
A13A Flathead Natio 78.03 40 ⇓P P 09 42 13.5 0.0
baz=78
MOD Modoc 78.05 49 ⇓P P 09 42 14.1 +0.3
baz=78,SNR=9.1
MOD Modoc 78.05 49 *e*P P 09 42 14.3 +0.5
MNRC McLaughlin Nat 78.09 52 ⇓P P 09 42 14.7 +0.6
baz=78,SNR=5.4
I08A Drewsey 78.15 46 ⇓P P 09 42 14.4 +0.1
baz=78,SNR=13
WALA Waterton Lakes 78.24 40 *e*P P 09 42 14.9 +0.2
M06C Likely Place G 78.28 49 ⇑P P 09 42 15.4 +0.4
baz=78
B13A Whitefish 78.29 41 ⇑P P 09 42 15.5 +0.5
baz=78,SNR=13
O04C Chester 78.31 50 ⇓P P 09 42 15.2 0.0
baz=78
H09A Durkee 78.33 45 ⇑P P 09 42 15.8 +0.6
baz=78,SNR=8.0
CVS Carmenet Viney 78.34 52 ⇓P P 09 42 15.3 -0.1
baz=78
K07A Rock Creek Ran 78.34 47 ⇑P P 09 42 15.5 +0.2
baz=78,SNR=20
E11A Bogner Ranch, 78.34 43 ⇑P P 09 42 14.7 -0.5
baz=78,SNR=6.2
G10A Bishop Farm, J 78.34 44 ⇓P P 09 42 15.1 -0.2
baz=78,SNR=14
ELFS Eagle Lake Fie 78.40 50 ⇓P P 09 42 16.0 +0.3
baz=78,SNR=5.2
ORV Oroville 78.40 51 ⇑P P 09 42 15.0 -0.7
baz=78,SNR=15
BMO Blue Mountains 78.46 45 *e*P P 09 42 16.0 +0.1
AKASG Malin Array Be 78.47 322 P P 09 42 15.3 -0.6
comp=Z,16nm,0.5s,mb4.9,baz=50,slow=5.8,SNR=52
AKASG Malin Array Be 78.47 322 P P 09 42 15.3 -0.6
AKASG pmax pmax
comp=Z,16nm,0.5s
D12A Red Ives Fores 78.48 42 ⇑P P 09 42 16.0 0.0
baz=78
J08A Circle Bar Ran 78.49 47 ⇓P P 09 42 16.6 +0.4
baz=78
Q03C Winters 78.50 52 ⇑P P 09 42 16.8 +0.5
baz=78
OHCM Honcut 78.52 51 *e*P P 09 42 16.2 -0.2
O05C Quincy 78.59 50 ⇑P P 09 42 16.3 -0.5
baz=78,SNR=6.8
C13A Hot Springs 78.60 41 ⇓P P 09 42 16.7 +0.1
baz=78,SNR=13
L07A Adell 78.61 48 ⇓P P 09 42 17.1 +0.3
baz=78,SNR=23
F11A Grangeville 78.62 43 ⇑P P 09 42 16.4 -0.4
baz=78,SNR=6.8
I09A Lost Marbles R 78.64 46 ⇑P P 09 42 17.1 +0.2
baz=78,SNR=6.2
E12A Beaver Dam Sad 78.69 43 ⇓P P 09 42 17.1 0.0
baz=78
K08A Mann Creek Ran 78.80 47 ⇓P P 09 42 18.0 +0.2
baz=79,SNR=27
G11A Walters Elk Ra 78.80 44 ⇓P P 09 42 17.1 -0.7
baz=79,SNR=21
Q04C Lincoln 78.84 52 ⇑P P 09 42 18.2 +0.1
baz=79
WVOR Wild Horse Val 78.86 47 *e*P P 09 42 18.2 +0.1
WVOR pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
WVOR Wild Horse Val 78.86 47 *e*P P 09 42 18.2 +0.1
comp=Z,7.0nm,0.8s,mb4.3
N06A Buffalo Meadow 78.92 49 ⇑P P 09 42 18.5 0.0
baz=79,SNR=7.1
BDM Black Diamond 78.93 53 ⇓P P 09 42 19.0 +0.4
baz=79
H10A Noah's Angus R 78.93 45 ⇓P P 09 42 17.9 -0.5
baz=79,SNR=11
JRSC Jasper Ridge 78.94 53 ⇑P P 09 42 18.4 -0.2
baz=79
J09A Fry Pan Ranch, 78.95 46 ⇑P P 09 42 18.9 +0.3
baz=79,SNR=17
D13A Huson 78.98 42 ⇓P P 09 42 18.1 -0.5
baz=79,SNR=5.2
BEKR Beckwourth 79.02 50 ⇓P P 09 42 19.2 +0.2
baz=79,SNR=24
M07A Soldier Meadow 79.04 49 ⇓P P 09 42 19.5 +0.4
baz=79,SNR=16
P05C Yuba Gap, Truc 79.13 51 ⇑P P 09 42 19.4 -0.2
baz=79,SNR=7.7
L08A Fields 79.17 48 ⇑P P 09 42 19.8 0.0
baz=79,SNR=33
WENL Wente Vineyard 79.17 53 ⇑P P 09 42 19.9 0.0
baz=79
O06A Flanigan 79.22 50 ⇑P P 09 42 20.1 0.0
baz=79,SNR=12
F12A Elk City 79.22 43 ⇓P P 09 42 20.1 +0.1
baz=79,SNR=22
K09A Rome 79.30 47 ⇓P P 09 42 20.3 -0.2
baz=79,SNR=11
LAVA Lava Cap Winer 79.31 51 ⇑P P 09 42 20.1 -0.5
baz=79,SNR=14
MALT Malatya 79.32 308 *e*P P 09 42 21.6 +0.9
MALT pmax pmax
comp=Z,19nm,0.8s,mb4.8
MALT Malatya 79.32 308 ⇑ *i*P P 09 42 21.5 +0.8
MALT Malatya 79.32 308 *e*P P 09 42 21.6 +0.9
comp=Z,19nm,0.8s,mb4.8
H11A Donnelly 79.32 44 ⇓P P 09 42 20.0 -0.5
baz=79,SNR=7.8
R04C Big Horse Ranc 79.42 52 ⇓P P 09 42 20.9 -0.4
baz=79,SNR=8.0
N07B Gerlach 79.47 49 ⇑P P 09 42 21.9 +0.4
baz=79
E13A Victor 79.48 42 ⇓P P 09 42 21.2 -0.2
baz=79
M08A Happy Creek Ra 79.52 48 ⇑P P 09 42 22.5 +0.8
baz=79
J10A Berg Farm, Mel 79.52 46 ⇓P P 09 42 22.0 +0.3
baz=79
D14A Greenough 79.53 41 ⇑P P 09 42 20.9 -0.8
baz=79,SNR=5.7
SUW Suwalki 79.58 327 *e*P P 09 42 21.8 +0.1
SUW Suwalki 79.58 327 *e*P P 09 42 21.8 +0.1

L09A **Wilkinson Ranc** 79.69 47 ⇑P P 09 42 23.2 +0.7
baz=80
WCN **Washoe City** 79.70 51 ⇓P P 09 42 22.7 0.0
baz=80
PAHR **Pah Rah Range** 79.75 50 *eP* P 09 42 22.7 -0.2
comp=Z,15nm,0.9s,mb4.6
F13A **Darby** 79.75 43 ⇓P P 09 42 21.8 -1.0
baz=80,SNR=5.3
I11A **Placerville** 79.77 45 ⇓P P 09 42 22.4 -0.6
baz=80,SNR=5.9
NOA **NORSAR Array B** 79.78 337 P P 09 42 22.0 -0.6
comp=Z,20nm,0.7s,mb4.8,baz=46,slow=5.2,SNR=66
NOA **NORSAR Array B** 79.78 337 P P 09 42 22.0 -0.6
NOA pmax pmax
comp=Z,20nm,0.7s
NOA **NORSAR Array B** 79.78 337 P P 09 42 22.0 -0.6
R05C **Kirkwood Meado** 79.79 51 ⇓P P 09 42 23.4 +0.3
baz=80,SNR=11
K10A **MacKenzie Ranc** 79.80 46 ⇑P P 09 42 23.5 +0.4
baz=80,SNR=16
PACP **Pacheco Peak** 79.80 53 ⇓P P 09 42 23.4 +0.1
baz=80
SAO **San Andreas Ge** 79.81 53 *eP* P 09 42 23.4 +0.1
O07A **Toulon** 79.85 49 ⇑P P 09 42 23.8 +0.4
baz=80,SNR=10
E14A **Clinton** 79.90 42 ⇑P P 09 42 23.2 -0.4
baz=80
CMB **Columbia Colle** 79.91 52 *eP* P 09 42 23.6 -0.2
CMB pmax pmax
comp=Z,22nm,0.8s,mb4.8
CMB **Columbia Colle** 79.91 52 ⇓P P 09 42 23.8 0.0
baz=80,SNR=20
CMB **Columbia Colle** 79.91 52 *eP* P 09 42 23.6 -0.2
comp=Z,22nm,0.8s,mb4.8
N08A **GE Springer Mi** 80.02 49 ⇑P P 09 42 25.0 +0.6
baz=80,SNR=16
H12A **Diamond D Ranc** 80.11 44 ⇓P P 09 42 24.5 -0.2
baz=80,SNR=6.2
MFID **Camas Ranch** 80.11 45 ⇓P P 09 42 25.1 +0.3
baz=80,SNR=6.7
D15A **Lincoln** 80.12 41 ⇑P P 09 42 24.6 -0.2
baz=80
M09A **Marrel Ranch,** 80.13 48 ⇑P P 09 42 25.4 +0.5
baz=80
O08A **Rochester Mine** 80.26 49 ⇓P P 09 42 26.2 +0.6
baz=80,SNR=19
S05C **Merced** 80.29 53 ⇓P P 09 42 25.7 -0.1
baz=80,SNR=6.9
R06C **Coleville** 80.30 51 ⇑P P 09 42 26.0 +0.1
baz=80,SNR=12
K11A **Parker Ranch,** 80.33 46 ⇑P P 09 42 26.1 +0.2
baz=80,SNR=10
V03C **Hunter Liggett** 80.33 54 ⇓P P 09 42 25.8 -0.3
baz=80
S06C **San Francisco** 80.35 52 ⇓P P 09 42 25.8 -0.4
baz=80,SNR=12
N09A **Rock Creek Ran** 80.38 48 ⇑P P 09 42 26.5 +0.3
baz=80,SNR=10
E15A **Deer Lodge** 80.39 42 ⇑P P 09 42 26.0 -0.2
baz=80,SNR=9.5
L10A **Juniper Basin** 80.42 47 ⇓P P 09 42 26.4 0.0
baz=80,SNR=9.5
H13A **Challis** 80.46 44 ⇑P P 09 42 26.4 -0.2
baz=80,SNR=16
U04C **Hernandez Rese** 80.47 54 ⇓P P 09 42 27.0 +0.2
baz=80,SNR=6.9
G14A **Jackson** 80.56 43 ⇑P P 09 42 26.8 -0.3
baz=80
J12A **Stokes Ranch,** 80.65 45 ⇑P P 09 42 27.6 0.0
baz=80
M10A **I.L. Ranch, Tu** 80.66 47 ⇓P P 09 42 27.9 +0.2
baz=80,SNR=13
R07C **Lee Vining** 80.79 51 ⇓P P 09 42 28.7 +0.2
baz=81,SNR=18
BMN **Battle Mountai** 80.80 49 *eP* P 09 42 28.4 0.0
F15A **Butte** 80.80 42 ⇑P P 09 42 28.4 +0.1
baz=81,SNR=26
L11A **Cat Creek Ranc** 80.82 47 ⇓P P 09 42 29.0 +0.5
baz=81,SNR=14
LRM **Limekiln Ridge** 80.84 42 *eP* P 09 42 28.8 +0.3
PKD **Parkfield** 80.85 54 ⇑P P 09 42 28.9 +0.1
baz=81,SNR=12
FFC **Flin Flon** 80.89 31 *eP* P 09 42 27.5 -1.1
T06C **Millerton Lake** 80.89 53 ⇑P P 09 42 28.4 -0.6
baz=81,SNR=20
I13A **Wildhorse Cree** 80.89 44 ⇓P P 09 42 29.1 +0.3
baz=81,SNR=13
HLID **Hailey** 80.90 45 ⇓P P 09 42 29.1 +0.2
baz=81,SNR=10
HLID **Hailey** 80.90 45 *eP* P 09 42 29.4 +0.5
U05C **Westside ANR,** 80.95 53 ⇑P P 09 42 29.6 +0.4
baz=81
O09A **Fish Creek Ran** 80.95 49 ⇓P P 09 42 29.4 +0.1
baz=81,SNR=12
H14A **Leadore** 80.96 43 ⇑P P 09 42 28.6 -0.6
baz=81
DLMT **Dillon** 81.01 43 *eP* P 09 42 29.8 +0.4
comp=Z,21nm,1.0s,mb4.8
K12A **Draper Farm, C** 81.10 46 ⇓P P 09 42 30.1 +0.2
baz=81,SNR=5.1
N10A **Dunphy** 81.11 48 ⇑P P 09 42 30.3 +0.3
baz=81
EGMT **Eagleton** 81.11 39 *eP* P 09 42 30.1 +0.2
comp=Z,26nm,0.8s,mb5.0
NVAR **Mina Array Bea** 81.12 51 P P 09 42 30.6 +0.4
comp=Z,15nm,0.7s,mb4.8,baz=281,slow=6.3,SNR=126
J13A **Cove Ranch, Pi** 81.14 45 ⇑P P 09 42 30.8 +0.7
baz=81,SNR=6.1
Q08A **Gabbs** 81.15 50 ⇓P P 09 42 30.4 +0.1
baz=81,SNR=10.0
MCMT **McKenzie Canyo** 81.15 43 *eP* P 09 42 30.0 -0.2
MLAC **Mammoth Lakes** 81.17 52 ⇑P P 09 42 31.0 +0.6
baz=81
G15A **Dillon** 81.18 43 ⇑P P 09 42 30.4 +0.1
baz=81,SNR=16
M11A **Holland Ranch,** 81.19 47 ⇑P P 09 42 31.1 +0.6
baz=81,SNR=9.1
I14A **Mackay** 81.29 44 ⇓P P 09 42 31.6 +0.7
baz=81,SNR=32
L12A **House Creek Ra** 81.30 46 ⇓P P 09 42 31.5 +0.5
baz=81,SNR=13
P09A **Austin** 81.31 49 ⇓P P 09 42 31.5 +0.4
baz=81
O10A **Cortez Mining,** 81.34 48 ⇑P P 09 42 31.7 +0.5
baz=81
H15A **Lima** 81.39 43 ⇑P P 09 42 31.6 +0.2
baz=81
BOZ **Bozeman (W)** 81.41 42 ⇑P P 09 42 31.7 +0.2
baz=81
BOZ **Bozeman (W)** 81.41 42 *eP* P 09 42 31.7 +0.2
N11A **Elko Archery C** 81.55 48 ⇑P P 09 42 32.8 +0.5
baz=81,SNR=6.4
SMMC **Simmler** 81.55 54 ⇓P P 09 42 33.0 +0.6
baz=81
J14A **Carey** 81.58 45 ⇓P P 09 42 33.1 +0.7
baz=81,SNR=18
K13A **Stover Farm, H** 81.60 45 ⇑P P 09 42 33.0 +0.4
baz=81,SNR=12
S08C **White Mtn Res** 81.69 52 ⇓P P 09 42 33.2 +0.1
baz=82,SNR=20
LVV **L'vov** 81.70 323 ⇓*i*P P 09 42 31.5 -1.4
P10A **Eureka** 81.72 49 ⇓P P 09 42 33.5 +0.2
baz=82,SNR=6.3
M12A **Wells** 81.75 47 ⇓P P 09 42 33.7 +0.4
baz=82,SNR=25
I15A **Monteview** 81.83 44 ⇓P P 09 42 34.2 +0.5
baz=82,SNR=5.2
PKM **Peak Mountain** 81.89 54 ⇑P P 09 42 34.1 -0.1
baz=82,SNR=9.4
ELK **Elko** 81.91 48 *eP* P 09 42 35.1 +0.9
VES **Vestal, Richgr** 81.92 53 ⇓P P 09 42 33.7 -0.6
baz=82
O11A **Cowboy Ranch,** 81.97 48 ⇑P P 09 42 34.6 +0.1
baz=82,SNR=9.2
N12A **Clover Valley,** 81.98 47 ⇑P P 09 42 34.7 +0.1
baz=82,SNR=16
QLMT **Earthquake Lak** 81.99 43 *eP* P 09 42 35.0 +0.5
L13A **Double Diamond** 82.00 46 ⇓P P 09 42 35.1 +0.5
baz=82,SNR=8.1
R09A **Tonopah** 82.05 50 ⇓P P 09 42 35.0 +0.1
baz=82,SNR=32
H16A **Russell Place,** 82.17 43 ⇓P P 09 42 35.8 +0.4
baz=82,SNR=9.3
Q10A **Clear Creek Ra** 82.18 50 ⇑P P 09 42 35.7 +0.1
baz=82,SNR=9.3
J15A **Blackfoot** 82.20 44 ⇓P P 09 42 36.0 +0.4
baz=82,SNR=7.6
S09A **Goldfield** 82.21 51 ⇑P P 09 42 35.4 -0.4
baz=82,SNR=28
P11A **Circle Ranch,** 82.22 49 ⇑P P 09 42 35.9 +0.1
baz=82
K14A **Jones Ranch, D** 82.22 45 ⇓P P 09 42 36.0 +0.3
baz=82,SNR=13
M13A **Montello** 82.26 47 ⇓P P 09 42 36.1 +0.1
baz=82,SNR=15
ANTO **Ankara** 82.27 312 *eP* P 09 42 36.3 +0.3
ANTO pmax pmax
comp=Z,20nm,0.8s,mb4.9
ANTO **Ankara** 82.27 312 *eP* P 09 42 36.2 +0.2
comp=Z,20nm,0.8s,mb4.9
CWC **Cottonwood Cre** 82.31 52 ⇑P P 09 42 36.0 -0.3
baz=82,SNR=7.6
TIRR **Tirgusor** 82.43 317 ⇓*i*P P 09 42 36.5 -0.3
TIRR **Tirgusor** 82.43 317 ⇓P P 09 42 36.5 -0.2
ISA **Isabella** 82.44 53 ⇓P P 09 42 35.7 -1.3
baz=82,SNR=10.0
ISA **Isabella** 82.44 53 *eP* P 09 42 36.4 -0.6
GCMT **Greycliff** 82.46 41 *eP* P 09 42 37.1 +0.3
ODB **Odobesti** 82.46 319 ⇓*i*P P 09 42 36.9 0.0
ODB **Odobesti** 82.46 319 ⇓P P 09 42 36.9 0.0
L14A **Malta** 82.46 46 ⇑P P 09 42 37.2 +0.3
baz=82,SNR=14
ARVC **Arvin** 82.47 54 ⇑P P 09 42 37.0 -0.2
baz=82
O12A **Currie** 82.48 48 ⇑P P 09 42 37.7 +0.6
baz=82,SNR=43
BSC **Santa Cruz Isl** 82.48 55 ⇑P P 09 42 37.3 +0.1
baz=82
YNR **Norris Junctio** 82.49 42 *eP* P 09 42 38.5 +1.4
I16A **Newdale** 82.50 43 ⇓P P 09 42 37.8 +0.6
baz=82,SNR=11
GRAC **Grapevine Rang** 82.50 52 ⇓P P 09 42 37.4 +0.1
baz=82,SNR=9.2
KWP **Kalwaria** 82.50 324 *eP* P 09 42 37.2 +0.3
KWP **Kalwaria** 82.50 324 *eP* P 09 42 37.2 +0.2
N13A **Wendover, West** 82.51 47 ⇑P P 09 42 37.6 +0.4
baz=82,SNR=7.4
S10A **Tonopah Range,** 82.53 50 ⇓P P 09 42 37.3 -0.1
baz=82,SNR=33
R10A **Warm Springs** 82.53 50 ⇑P P 09 42 37.4 0.0
baz=82,SNR=13
K15A **Arbon** 82.54 45 ⇑P P 09 42 37.7 +0.4
baz=82,SNR=5.5
YFT **Old Faithful** 82.55 43 *eP* P 09 42 39.8 +2.4
VRI **Vrincioaia** 82.59 319 ⇑*i*P P 09 42 38.3 +0.8
VRI **Vrincioaia** 82.59 319 ⇑P P 09 42 38.3 +0.7
PLOR **Plostina** 82.64 319 ⇓*i*P P 09 42 38.6 +0.8
Q11A **Duckwater** 82.66 49 ⇑P P 09 42 37.7 -0.4
baz=82,SNR=7.9
M14A **Sheep Mountain** 82.69 46 ⇓P P 09 42 38.3 +0.1
baz=82,SNR=28
LKWY **Lake** 82.74 42 *eP* P 09 42 40.3 +2.0
LKWY pmax pmax
comp=Z,18nm,0.8s,mb4.8
LKWY **Lake** 82.74 42 *eP* P 09 42 40.3 +2.0
comp=Z,18nm,0.8s,mb4.8
J16A **Bone** 82.76 44 ⇓P P 09 42 38.7 +0.3
baz=83,SNR=9.6
IMW **Indian Meadow** 82.81 43 *eP* P 09 42 39.8 +1.1
P12A **McGill** 82.81 48 ⇑P P 09 42 39.0 +0.2
baz=83,SNR=27
BLG **Laguna Peak** 82.83 55 ⇓P P 09 42 38.5 -0.5
baz=83
DCID1 **Drake Creek** 82.84 43 *eP* P 09 42 40.0 +1.2
FLWY **Flagg Ranch** 82.84 43 *eP* P 09 42 39.7 +0.8
comp=Z,18nm,1.0s,mb4.8
HVU **Hansel Valley** 82.89 46 *eP* P 09 42 39.6 +0.4
HVU pmax pmax
comp=Z,17nm,0.8s,mb4.8
HVU **Hansel Valley** 82.89 46 *eP* P 09 42 39.6 +0.4
comp=Z,17nm,0.8s,mb4.8
RRI2 **Red Ridge** 82.90 44 *eP* P 09 42 39.8 +0.7
MPMC **Manual Prospec** 82.91 52 ⇑P P 09 42 39.5 +0.1
baz=83,SNR=20
R11A **Troy Canyon, C** 82.98 50 ⇑P P 09 42 39.8 +0.1
baz=83,SNR=20
L15A **Malad City** 83.01 45 ⇓P P 09 42 39.9 +0.1
baz=83,SNR=16
PSN **Preselentsi** 83.01 317 P P 09 42 39.6 -0.1
K16A **Soda Springs** 83.03 44 ⇑P P 09 42 40.3 +0.5
baz=83,SNR=14
TPAW **Teton Pass** 83.04 43 *eP* P 09 42 40.4 +0.6
RLMT **Red Lodge** 83.08 41 *eP* P 09 42 40.3 +0.3
comp=Z,20nm,1.0s,mb4.8
LRMC **Laurel Mountai** 83.08 53 ⇑P P 09 42 39.8 -0.4
baz=83,SNR=5.2
Q12A **Willow Creek R** 83.10 49 ⇑P P 09 42 40.4 +0.1
baz=83,SNR=9.3
FURC **Furnace Creek,** 83.12 52 ⇑P P 09 42 40.5 +0.1
baz=83,SNR=25
KOLS **Kolonicke sedl** 83.15 323 *eP* P 09 42 40.3 0.0
N14A **Grayback Hills** 83.15 47 ⇑P P 09 42 40.5 0.0
baz=83,SNR=20
REDW **Red Top Meadow** 83.17 43 *eP* P 09 42 41.5 +1.0
comp=Z,20nm,1.6s,mb4.6
SNOW **Snow King Moun** 83.17 43 *eP* P 09 42 40.6 +0.1
LOHW **Long Hollow** 83.17 43 *eP* P 09 42 41.0 +0.5
EDW2 **Edwards Air Fo** 83.19 54 ⇓P P 09 42 40.8 +0.1
baz=83,SNR=21
BGU **Big Grassy Mou** 83.21 46 *eP* P 09 42 40.6 -0.2
S11A **Rachel** 83.25 50 ⇓P P 09 42 40.9 -0.2
baz=83,SNR=12
MLR **Muntele Rosu** 83.26 319 ⇑*i*P P 09 42 41.2 +0.3
MLR **Muntele Rosu** 83.26 319 ⇑P P 09 42 41.2 +0.2
M15A **Larsen Ranch,** 83.27 46 ⇑P P 09 42 41.1 0.0
baz=83,SNR=8.7
TPNV **Topopah Spring** 83.28 51 *eP* P 09 42 41.1 -0.1
STHS **Stebnicka Huta** 83.38 324 *eP* P 09 42 41.5 +0.1
STHS pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
STHS **Stebnicka Huta** 83.38 324 *eP* P 09 42 41.5 +0.1
comp=Z,7.6nm,0.8s,mb4.5
P13A **Bates Ranch, G** 83.40 48 ⇑P P 09 42 41.5 -0.3
baz=83,SNR=14
MWC **Mount Wilson** 83.48 54 *eP* P 09 42 42.3 0.0
MWC pmax pmax
comp=Z,17nm,0.8s,mb4.8
MWC **Mount Wilson** 83.48 54 *eP* P 09 42 42.3 0.0
comp=Z,17nm,0.8s,mb4.8
U10A **Ash Meadows, A** 83.51 52 ⇓P P 09 42 42.5 +0.1
baz=83,SNR=21
N15A **Stansbury Isla** 83.55 46 ⇑P P 09 42 42.6 +0.1
baz=83,SNR=11
OJC **Ojcow** 83.58 326 *eP* P 09 42 41.4 -1.1
L16A **Fish Haven** 83.59 45 ⇑P P 09 42 43.0 +0.4
baz=83,SNR=5.6
CRVS **Cervenica-Dubn** 83.59 324 *eP* P 09 42 42.7 +0.2
R12A **Pony Springs,** 83.63 49 ⇑P P 09 42 42.8 -0.2
baz=84,SNR=18
CIS **Catalina Islan** 83.67 55 ⇓P P 09 42 42.6 -0.6
baz=84
Q13A **Wheeler Ranch,** 83.67 49 ⇑P P 09 42 43.1 0.0
baz=84
BFSC **Mount Baldy St** 83.75 54 ⇑P P 09 42 43.1 -0.6
baz=84,SNR=9.8
PRD **Provadia** 83.76 317 P P 09 42 43.9 +0.4
DUG **Dugway** 83.76 47 *eP* P 09 42 43.8 +0.3
DUG pmax pmax
comp=Z,30nm,1.1s,mb4.9
DUG **Dugway** 83.76 47 ⇑P P 09 42 43.6 +0.1
baz=84,SNR=26
DUG **Dugway** 83.76 47 *eP* P 09 42 43.8 +0.3
comp=Z,30nm,1.1s,mb4.9
GSC **Goldstone** 83.78 53 *eP* P 09 42 43.7 -0.1
GSC pmax pmax
comp=Z,25nm,0.9s,mb4.9
GSC **Goldstone** 83.78 53 ⇑P P 09 42 43.5 -0.3
baz=84,SNR=21
GSC **Goldstone** 83.78 53 *eP* P 09 42 43.7 -0.1
comp=Z,25nm,0.9s,mb4.9
VOIR 83.79 320 ⇓*i*P P 09 42 44.1 +0.5
VOIR 83.79 320 ⇓P P 09 42 44.1 +0.5
DGMT **Dagmar** 83.81 37 *eP* P 09 42 43.2 -0.4
comp=Z,13nm,0.9s,mb4.7
T11A **Corn Creek, Al** 83.82 50 ⇓P P 09 42 43.6 -0.3
baz=84,SNR=15
SHOC **Shoshone** 83.83 52 ⇓P P 09 42 43.3 -0.7
baz=84,SNR=13
LAO **LASA Array** 83.84 39 *eP* P 09 42 43.8 0.0
comp=Z,18nm,0.9s,mb4.8
M16A **Huntsville** 83.87 46 ⇑P P 09 42 43.6 -0.5
baz=84,SNR=11
S12A **Delamar Landin** 83.87 50 ⇓P P 09 42 43.7 -0.4
baz=84,SNR=6.4
O15A **The Old Anders** 83.93 47 ⇓P P 09 42 44.5 +0.1
baz=84
P14A **Drum Mountains** 83.93 48 ⇑P P 09 42 44.3 -0.2
baz=84,SNR=26
NOQ **North Oquirrh** 83.94 46 *eP* P 09 42 45.2 +0.8
R13A **O'Gram Ranch,** 84.13 49 ⇑P P 09 42 45.7 +0.2
baz=84,SNR=7.2
Q14A **Sevier Lake (B** 84.14 48 ⇓P P 09 42 45.3 -0.2
baz=84,SNR=20
CTU **Camp Tracy** 84.14 46 *eP* P 09 42 45.7 +0.2
U11A **Corn Creek** 84.15 51 ⇑P P 09 42 45.7 +0.1
baz=84,SNR=5.0
N16A **Rees Ranch, Co** 84.23 46 ⇓P P 09 42 45.6 -0.3
baz=84
DRGR 84.25 322 ⇓*i*P P 09 42 45.7 -0.2
BBRC **Big Bear Sol-O** 84.26 54 ⇓P P 09 42 45.9 -0.3
baz=84,SNR=6.3
SHPR **Sheep Range** 84.26 51 *eP* P 09 42 46.3 +0.2
BW06 **Boulder Array** 84.29 43 *eP* P 09 42 46.1 0.0
PDAR **Pinedale Array** 84.29 43 P P 09 42 46.0 -0.1
comp=Z,4.5nm,0.8s,mb4.2,baz=310,slow=2.2,SNR=27
PDAR PP PP 09 46 04.8 -2.6
comp=Z,1.6nm,1.1s,baz=324,slow=7.3,SNR=3.9
TUQ **Turquoise Moun** 84.32 52 ⇑P P 09 42 46.1 -0.3
baz=84,SNR=22
KECS **Kecovo** 84.36 324 *eP* P 09 42 45.2 -1.1
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
KECS **Kecovo** 84.36 324 *eP* P 09 42 45.2 -1.1
comp=Z,3.4nm,1.0s,mb4.0
KECS *e*PP PP 09 46 06.6 -1.1
NLU **North Lily Min** 84.36 47 *eP* P 09 42 46.9 +0.4
HEC **Hector,Ludlow** 84.37 53 ⇓P P 09 42 46.1 -0.6
baz=84,SNR=22
JLU **Jordanelle** 84.38 46 *eP* P 09 42 47.4 +0.7
MURC **Murrieta** 84.42 54 ⇑P P 09 42 46.2 -0.8
baz=84,SNR=7.8
V11A **Goodsprings** 84.44 52 ⇓P P 09 42 47.0 -0.1
baz=84,SNR=11
P15A **Leamington** 84.45 47 ⇓P P 09 42 46.8 -0.2
baz=84,SNR=11
S13A **Holt Ranch, En** 84.54 50 ⇑P P 09 42 47.4 0.0
baz=84,SNR=24
CSS **Prodhromos** 84.56 307 *eP* P 09 42 46.8 -0.8
comp=Z,34nm,0.6s,mb5.2
N17A **Moffit Pass** 84.57 45 ⇑P P 09 42 47.4 -0.1
baz=84,SNR=5.9
O16A **Springville** 84.58 46 ⇑P P 09 42 47.6 0.0
baz=84
SZH **Strazhica** 84.58 317 P P 09 42 47.0 -0.6
MPU **Maple Canyon** 84.60 47 *eP* P 09 42 48.4 +0.6
DAU **Daniels Canyon** 84.61 46 *eP* P 09 42 48.3 +0.5
OKC **Ostrava-Krasne** 84.64 326 *eP* P 09 42 47.2 -0.5
Q15A **Fillmore** 84.71 48 ⇓P P 09 42 48.2 0.0
baz=84,SNR=10
U12A **Valley of Fire** 84.72 51 ⇓P P 09 42 48.6 +0.2
baz=85
T13A **Saint George** 84.82 50 ⇑P P 09 42 49.1 +0.2
baz=85,SNR=12
KSP **Ksiaz** 84.85 327 *eP* P 09 42 48.4 -0.3
KSP **Ksiaz** 84.85 327 *eP* P 09 42 48.2 -0.5
GMRC **Granite Mounta** 84.86 53 ⇑P P 09 42 48.9 -0.2
baz=85,SNR=12
S14A **Cedar City** 84.89 49 ⇓P P 09 42 48.9 -0.3
baz=85,SNR=5.8
V12A **Nelson** 84.89 52 ⇑P P 09 42 49.1 -0.2
baz=85,SNR=14
PFO **Pinyon Flat Ob** 84.94 54 P P 09 42 49.2 -0.3
comp=Z,25nm,0.9s,mb5.0,baz=304,slow=4.3,SNR=35
PFO **Pinyon Flat Ob** 84.94 54 P P 09 42 49.2 -0.3
PFO pmax pmax
comp=Z,25nm,0.9s,mb4.9
PFO **Pinyon Flat Ob** 84.94 54 ⇓P P 09 42 49.3 -0.2
baz=85,SNR=21
PFO **Pinyon Flat Ob** 84.94 54 *eP* P 09 42 49.2 -0.3
comp=Z,23nm,0.8s,mb5.0
MORC **Moravsky Berou** 84.97 326 ⇓*i*P P 09 42 49.1 -0.3
MORC **Moravsky Berou** 84.97 326 ⇓P P 09 42 49.1 -0.3
PSZ **Piszkesteto** 85.02 324 *eP* P 09 42 49.2 -0.4
PSZ pmax pmax
comp=Z,16nm,1.2s,mb4.6
PSZ **Piszkesteto** 85.02 324 *eP* P 09 42 49.2 -0.4
comp=Z,16nm,1.2s,mb4.6
BELC **Belle Mtn.** 85.05 54 ⇑P P 09 42 49.6 -0.4
baz=85,SNR=22
O17A **Robinson Place** 85.06 46 ⇓P P 09 42 50.2 +0.2
baz=85,SNR=16
LDFC **Landfair** 85.07 52 *eP* P 09 42 50.4 +0.3
MSU **Marysvale** 85.11 48 *eP* P 09 42 51.3 +1.0
U13A **Pakoon Wash** 85.11 51 ⇓P P 09 42 50.4 +0.1
baz=85,SNR=13
DPC **Dobruska-Polom** 85.17 327 *eP* P 09 42 50.0 -0.3
VYHS **Vyhne** 85.19 325 *eP* P 09 42 49.9 -0.5
VYHS pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
VYHS **Vyhne** 85.19 325 *eP* P 09 42 49.9 -0.5
comp=Z,2.4nm,0.8s,mb4.0
UPC **Upice** 85.21 327 *eP* P 09 42 50.0 -0.5
R15A **Junction** 85.22 48 ⇓P P 09 42 51.0 +0.2
baz=85,SNR=9.7
N18A **Larsen Ranch,** 85.27 45 ⇑P P 09 42 50.5 -0.5
baz=85,SNR=6.4
BAR **Barrett** 85.28 55 *eP* P 09 42 50.7 -0.6
comp=Z,14nm,0.9s,mb4.7
T14A **Hurricane** 85.34 50 ⇓P P 09 42 51.7 +0.3
baz=85,SNR=9.9
MONP **Monument Peak** 85.35 55 ⇑P P 09 42 51.5 -0.1
baz=85,SNR=13
V13A **Grand Canyon W** 85.41 51 ⇓P P 09 42 51.6 -0.2
baz=85,SNR=9.9
S15A **Panguitch** 85.47 49 ⇑P P 09 42 52.5 +0.4
baz=85,SNR=5.5
O18A **Roosevelt** 85.48 46 ⇓P P 09 42 52.4 +0.3
baz=85,SNR=7.6
P17A **Butcher Ranch,** 85.48 47 ⇓P P 09 42 51.9 -0.2
baz=85,SNR=6.0
Q16A **Castle Valley** 85.53 47 ⇑P P 09 42 52.2 0.0
baz=85
IRM **Iron Mountain** 85.55 53 ⇑P P 09 42 52.3 -0.2
baz=85,SNR=7.9
BC3 **Big Chuckw Mtn** 85.61 54 ⇓P P 09 42 52.5 -0.3
baz=86,SNR=7.9
N19A **John Jarvie Ra** 85.62 45 ⇑P P 09 42 52.5 -0.2
baz=85,SNR=5.8
U14A **Mt Trumbull** 85.64 50 ⇓P P 09 42 52.6 -0.3
baz=86,SNR=8.8
R16A **Teasdale** 85.69 48 ⇑P P 09 42 53.4 +0.3
baz=86,SNR=14
P18A **Preston Nutter** 85.70 46 ⇑P P 09 42 53.3 +0.2
baz=86,SNR=6.2
SRU **San Rafael** 85.83 47 ⇓P P 09 42 53.3 -0.4
baz=86,SNR=7.3
SRU **San Rafael** 85.83 47 *eP* P 09 42 54.1 +0.3
T15A **Red Dirt Ranch** 85.83 49 ⇑P P 09 42 54.0 +0.2
baz=86,SNR=17
PVCC **Panska Ves** 85.86 328 *eP* P 09 42 52.8 -0.9
W13A **Hualapai Mount** 85.90 52 ⇓P P 09 42 53.6 -0.6
baz=86
BRG **Berggiesshubel** 85.91 329 *eP* P 09 42 53.3 -0.6
BRG pmax pmax
comp=Z,11nm,1.4s,mb4.4
BRG **Berggiesshubel** 85.91 329 *eP* P 09 42 53.1 -0.8
comp=Z,19nm,1.3s,mb4.7
BRG **Berggiesshubel** 85.91 329 *eP* P 09 42 53.3 -0.5
comp=Z,19nm,1.4s,mb4.6
S16A **Weppner Ranch,** 85.94 48 ⇑P P 09 42 54.0 -0.3
baz=86
O19A **Miners Draw (B** 86.00 45 ⇓P P 09 42 53.7 -0.9
baz=86
CLL **Collm** 86.02 329 *i* P P 09 42 53.2 -1.2
CLL pmax pmax
comp=Z,28nm,1.6s,mb4.7
CLL **Collm** 86.02 329 *eP* P 09 42 53.0 -1.4
comp=Z,28nm,1.6s,mb4.7
CLL **Collm** 86.02 329 *i* P P 09 42 53.2 -1.2
comp=Z,28nm,1.6s,mb4.7
CLL *e*PP PP 09 46 23.0 +2.1
MODS **Modra-Piesok** 86.04 325 *eP* P 09 42 54.9 +0.3
MODS pmax pmax
comp=Z,10.0nm,1.5s,mb4.3
MODS **Modra-Piesok** 86.04 325 *eP* P 09 42 54.9 +0.3
comp=Z,10nm,1.5s,mb4.3
Q18A **Rafter H Ranch** 86.08 47 ⇓P P 09 42 54.8 -0.2
baz=86
R17A **Hanksville Air** 86.11 47 ⇓P P 09 42 54.9 -0.2
baz=86,SNR=6.2
V14A **Boquillas Ranc** 86.13 51 ⇓P P 09 42 55.6 +0.3

baz=86,SNR=12
PDMCI Parker Dam,Lak 86.17 52 ⇓P P **09 42 55.5 0.0**
baz=86
Y12C Blythe 86.21 53 ⇑P P **09 42 55.7 0.0**
baz=86
U15A North Rim 86.22 50 ⇓P P **09 42 56.1 +0.4**
baz=86,SNR=11
PRU Pruhonice 86.25 328 *e*P P **09 42 54.7 -0.9**
RWWY Rawlins 86.33 43 *e*P P **09 42 56.5 +0.4**
comp=Z,18nm,0.9s,mb4.8
W14A Seligman 86.38 51 ⇓P P **09 42 56.8 +0.3**
baz=86,SNR=6.3
GLA Glamis 86.38 54 *e*P P **09 42 57.0 +0.5**
GLA pmax pmax
comp=Z,11nm,0.7s,mb4.7
GLA Glamis 86.38 54 ⇑P P **09 42 56.8 +0.3**
baz=86,SNR=5.2
GLA Glamis 86.38 54 *e*P P **09 42 57.0 +0.4**
comp=Z,12nm,0.7s,mb4.7
T16A Glen Canyon Da 86.42 49 ⇑P P **09 42 56.3 -0.3**
baz=86
P19A Cripple Cowboy 86.49 46 ⇑P P **09 42 57.1 +0.2**
baz=86,SNR=12
RSSD Black Hills 86.64 40 *e*P P **09 42 57.5 0.0**
V15A Kaibab Nationa 86.65 50 ⇑P P **09 42 58.2 +0.4**
baz=86,SNR=5.4
R18A Canyonlands Na 86.65 47 ⇓P P **09 42 57.4 -0.3**
baz=86
ULM Lac du Bonnet 86.66 32 P P **09 42 55.6 -1.9**
comp=Z,5.2nm,1.1s,mb4.2,baz=297,slow=4.5,SNR=3.1
Q19A Hogan Spring (86.71 46 ⇑P P **09 42 57.9 -0.1**
baz=86
T17A Navajo Res., N 86.87 49 ⇑P P **09 42 58.7 -0.1**
baz=87
X14A Yava 86.93 52 ⇓P P **09 42 58.9 -0.2**
baz=87
W15A Williams 86.95 51 ⇓P P **09 42 59.2 0.0**
baz=87
S18A Hurst Farm, Bl 86.99 48 ⇓P P **09 42 59.1 -0.2**
baz=87
NKC Novy Kostel 87.04 329 *e*P P **09 42 58.3 -1.0**
CONA Conrad Observa 87.04 326 ⇓*i*P P **09 42 59.1 -0.2**
comp=Z,10nm,0.9s,mb4.6
CONA Conrad Observa 87.04 326 ⇓*i*PcP PcP 09 42 59.1 -1.9
comp=Z,10nm,0.9s
CSNA Conrad Observa 87.04 326 ⇓*i*P P **09 42 59.1 -0.2**
comp=Z,9.7nm,0.8s,mb4.6
CSNA Conrad Observa 87.04 326 ⇓*i*PcP PcP 09 42 59.1 -1.9
comp=Z,9.7nm,0.8s
R19A Curley Farm, L 87.11 47 ⇑P P **09 42 59.5 -0.3**
baz=87
Y14A Wickenburg 87.15 52 ⇑P P **09 43 00.1 -0.1**
baz=87,SNR=5.7
U16A Tuba City 87.15 50 ⇓P P **09 42 59.8 -0.3**
baz=87
PV10 Paradox Valley 87.20 47 *e*P P **09 43 00.4 +0.2**
U17A Shonto 87.20 49 ⇑P P **09 43 00.6 +0.3**
baz=87
113A Mohawk Valley, 87.28 54 ⇑P P **09 43 00.8 0.0**
baz=87
KHC Kasperske Hory 87.30 327 *e*P P **09 42 59.8 -0.7**
WUAZ Wupatki 87.35 50 ⇓P P **09 43 01.0 -0.1**
baz=87
X15A Humboldt 87.36 51 ⇓P P **09 43 00.3 -0.8**
baz=87,SNR=5.9
MANZ Manzenberg 87.37 329 *e*P P **09 42 59.9 -0.9**
comp=Z,7.0nm,1.2s,mb4.3
T18A Mexican Hat 87.39 48 ⇑P P **09 43 00.5 -0.7**
baz=87
GEC2 GERESS Array S 87.44 327 *e*P P **09 42 59.6 -1.6**
GEC2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
GEC2 GERESS Array S 87.44 327 *e*P P **09 42 59.6 -1.6**
comp=Z,5.0nm,0.7s,mb4.3
GERES GERESS Array B 87.44 327 P P **09 42 59.9 -1.3**
comp=Z,4.6nm,0.6s,mb4.4,baz=46,slow=4.2,SNR=27
GERES PP PP 09 46 34.3 +2.0
comp=Z,1.0nm,0.8s,baz=40,slow=5.2,SNR=4.6
GERES GERESS Array B 87.44 327 P P **09 42 59.9 -1.3**
GERES 09 46 34.3
GERES pmax pmax
comp=Z,5.0nm,0.6s
GERES pmax pmax
comp=Z,1.0nm,0.8s
ROTZ Rotzenmuhle 87.48 329 *e*P P **09 43 00.6 -0.8**
comp=Z,9.0nm,1.2s,mb4.4
IBBN Ibbenburen 87.51 332 *e*P P **09 43 00.8 -0.7**
comp=Z,17nm,0.6s,mb5.0
Y15A Casa Rosa Ranc 87.60 52 ⇓P P **09 43 02.2 -0.1**
baz=87
PHWY Pilot Hill 87.60 43 *e*P P **09 43 02.7 +0.5**
WET Wettzell 87.62 328 *e*P P **09 43 01.0 -1.0**
WET pmax pmax
comp=Z,5.0nm,1.1s,mb4.2
WET Wettzell 87.62 328 *e*P P **09 43 01.0 -1.0**
comp=Z,5.0nm,1.1s,mb4.2
PV01 Paradox Valley 87.64 47 *e*P P **09 43 02.2 -0.2**
UBBA Unterbreizbach 87.69 330 *e*P P **09 43 01.8 -0.5**
comp=Z,13nm,1.6s,mb4.4
UBBA Unterbreizbach 87.69 330 *e*S P **09 43 04.2 +1.9**
KAC Achnashellach 87.73 341 *e*P P **09 43 02.1 -0.3**
U18A Rough Rock, Ch 87.82 49 ⇓P P **09 43 03.3 0.0**
baz=88
KPL Plockton 87.97 342 *e*P P **09 43 03.0 -0.4**
KPL AMb AMB 09 43 04.7
comp=Z,46nm,1.8s,mb4.9
GRA1 Grafenberg Arr 87.98 329 *e*P P **09 43 03.2 -0.5**
comp=Z,25nm,1.4s,mb4.8
GRA1 Grafenberg Arr 87.98 329 *e*S P **09 43 03.3 -0.4**
GRF Grafenberg Arr 87.98 329 *e*P P **09 43 03.2 -0.5**
comp=Z,25nm,1.4s,mb4.8
GRF Grafenberg Arr 87.98 329 *e*S P **09 43 03.3 -0.4**
KSB Sheil Bridge 88.02 341 *e*P P **09 43 03.3 -0.4**
T19A Beclabito 88.12 48 ⇓P P **09 43 04.6 -0.1**
baz=88
V18A Ganado 88.19 49 ⇑P P **09 43 04.8 -0.2**
baz=88
PERS Pernice 88.30 325 *i* P P **09 43 04.5 -0.8**
SOKA Soboth 88.31 325 ⇓*i*P P **09 43 04.5 -0.8**
SOKA Soboth 88.31 325 ⇓*i*PcP PcP 09 43 04.5 -2.1
X17A Forest Lakes 88.42 51 ⇓P P **09 43 06.2 +0.1**
baz=88
ISCO Idaho Springs 88.44 44 *e*P P **09 43 07.1 +1.0**
ISCO pmax pmax
comp=Z,44nm,2.3s,mb4.8
ISCO Idaho Springs 88.44 44 *e*P P **09 43 07.1 +1.0**
comp=Z,44nm,2.3s,mb4.8
EAB Aberfoyle 88.58 340 *e*P P **09 43 05.5 -0.8**
RJOB Jochberg 88.66 327 *e*P P **09 43 06.1 -0.8**
comp=Z,13nm,0.8s,mb4.7
RJOB Jochberg 88.66 327 *e*S P **09 43 06.9 0.0**
CRES Cresnjev 88.69 324 *i* P P **09 43 06.0 -1.1**
PDKS Podkum 88.76 325 *e*P P **09 43 06.2 -1.2**
Y17A Roosevelt 88.76 51 ⇓P P **09 43 07.6 -0.1**
baz=89
X18A Snowflake 88.88 50 ⇑P P **09 43 08.1 -0.1**
baz=89
ESK Eskdalemuir 88.99 339 *e*P P **09 43 07.3 -1.0**
ESK AMb AMB 09 43 19.1
comp=Z,21nm,1.8s,mb4.6
BOJS Bojanci 89.01 324 *e*P P **09 43 07.7 -1.0**
MYKA Terra Mystica 89.03 326 ⇓*i*P P **09 43 07.2 -1.5**
comp=Z,7.4nm,0.5s,mb4.7
FUR Furstenfeldbru 89.06 328 *e*P P **09 43 08.6 -0.2**
FUR pmax pmax
comp=Z,24nm,0.6s,mb5.1
FUR Furstenfeldbru 89.06 328 *e*P P **09 43 08.6 -0.2**
comp=Z,24nm,0.6s,mb5.1
Y18A Canyon Day Jun 89.26 51 ⇑P P **09 43 10.0 0.0**
baz=89,SNR=6.9
X19A St. Johns 89.38 50 ⇓P P **09 43 10.8 +0.2**
baz=89,SNR=5.7
ABTA Abfaltersbach 89.50 326 ⇑*i*P P **09 43 09.4 -1.5**
comp=Z,12nm,0.6s,mb4.8
HPK Haverah Park 89.63 338 *e*P P **09 43 10.8 -0.5**
HPK AMb AMB 09 43 11.4
comp=Z,57nm,1.3s,mb5.2
Y19A Nutrioso 89.68 50 ⇓P P **09 43 12.5 +0.5**
baz=90
SDCO Great Sand Dun 89.79 46 *e*P P **09 43 13.3 +0.8**
GAL1 Galloway 89.83 340 *e*P P **09 43 11.2 -1.0**
GAL1 AMb AMB 09 43 12.1
comp=Z,20nm,0.9s,mb5.0
217A Green Valley 89.90 53 ⇑P P **09 43 13.5 +0.5**
baz=90
118A Homack Ranch, 89.97 52 ⇓P P **09 43 13.2 -0.1**
baz=90

LHO Holmfirth 90.05 338 *e*P P **09 43 12.4 -0.8**
Z19A T-Link Ranch, 90.07 51 ⇓P P **09 43 13.3 -0.5**
baz=90
FETA Feichten 90.15 327 ⇓*i*P P **09 43 13.0 -0.9**
comp=Z,13nm,1.0s,mb4.7
FETA Feichten 90.15 327 ⇓*i*PcP PcP 09 43 13.0 -1.8
comp=Z,13nm,1.0s
WLF Walferdange 90.19 331 *e*P P **09 43 13.7 -0.3**
comp=Z,8.0nm,0.7s,mb4.7
BFO Black Forest 90.27 329 *e*P P **09 43 12.8 -1.6**
BFO pmax pmax
comp=Z,15nm,1.1s,mb4.7
BFO Black Forest 90.27 329 *e*P P **09 43 12.9 -1.5**
comp=Z,15nm,1.1s,mb4.7
BFO Black Forest 90.27 329 *e*P P **09 43 12.8 -1.6**
comp=Z,15nm,1.1s,mb4.7
218A Dragoon 90.31 52 ⇓P P **09 43 15.4 +0.5**
baz=90
DAVA Damuels 90.34 328 ⇓*i*P P **09 43 14.1 -0.7**
comp=Z,21nm,1.1s,mb4.9
DAVA Damuels 90.34 328 ⇓*i*PcP PcP 09 43 14.1 -1.5
comp=Z,21nm,1.1s
119A Ashpeak Ranch, 90.35 51 ⇑P P **09 43 15.3 +0.2**
baz=90
CDF Champ du Feu 90.67 330 *e*P P **09 43 15.3 -0.9**
comp=Z,17nm,0.8s,mb4.6
CDF Champ du Feu 90.67 330 *e*P P **09 43 15.3 -0.9**
CDF pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
CDF Champ du Feu 90.67 330 *e*P P **09 43 15.3 -0.9**
comp=Z,8.6nm,0.8s,mb4.6
BAIF Baives 90.67 333 *e*P P **09 43 15.0 -1.2**
comp=Z,6.9nm,0.8s,mb4.3
BAIF Baives 90.67 333 *e*P P **09 43 15.0 -1.2**
BAIF pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
BAIF Baives 90.67 333 *e*P P **09 43 15.0 -1.2**
comp=Z,3.5nm,0.8s,mb4.2
LAZ Ladron 90.81 49 *e*P P **09 43 17.2 0.0**
219A White Tail Can 90.84 52 ⇑P P **09 43 17.8 +0.5**
baz=91
ECSD EROS,Sioux Fal 90.89 37 *e*P P **09 43 16.9 -0.5**
ANMO Albuquerque 90.92 48 *e*P P **09 43 18.3 +0.6**
ANMO pmax pmax
comp=Z,8.0nm,0.8s
ANMO Albuquerque 90.92 48 *e*P P **09 43 18.2 +0.6**
comp=Z,8.0nm,0.8s,mb4.6
SBD1 Bryn Du 91.05 338 *e*P P **09 43 17.0 -0.9**
YLL Lianberis 91.14 339 *e*P P **09 43 17.5 -0.8**
319A Douglas 91.19 52 ⇓P P **09 43 19.0 0.0**
baz=91
HINF Hinteralfeld 91.30 330 *e*P P **09 43 17.8 -1.4**
YRE Yr Eifl 91.35 339 *e*P P **09 43 18.7 -0.6**
HAU Haudompre 91.38 330 *e*P P **09 43 18.2 -1.3**
MCH1 Michaelchurch 91.73 337 P P **09 43 20.1 -0.9**
MCH1 AMb AMB 09 43 28.7
comp=Z,28nm,1.4s,mb5.0
MCH1 Michaelchurch 91.73 337 *e*P P **09 43 20.1 -1.0**
MCH1 *e*P 09 43 20.1
MCH1 AMb AMB 09 43 28.7
comp=Z,28nm,1.4s,mb5.0
HTR Trewern Hill 91.75 338 *e*P P **09 43 19.5 -1.6**
LOR Lormes 93.01 331 *e*P P **09 43 25.7 -1.4**
LPL La Plagne 93.11 328 *e*P P **09 43 26.7 -0.9**
comp=Z,16nm,0.6s,mb4.8
LPL La Plagne 93.11 328 *e*P P **09 43 26.7 -0.9**
LPL pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
LPL La Plagne 93.11 328 *e*P P **09 43 26.7 -0.9**
comp=Z,7.8nm,0.6s,mb4.8
LPG La Plagne 93.12 328 *e*P P **09 43 26.9 -0.7**
comp=Z,17nm,0.6s,mb4.9
LPG La Plagne 93.12 328 *e*P P **09 43 26.9 -0.7**
LPG pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
LPG La Plagne 93.12 328 *e*P P **09 43 26.9 -0.7**
comp=Z,8.4nm,0.6s,mb4.8
SSF Saint Saulge 93.32 331 *e*P P **09 43 27.4 -1.1**
SMF Signal de Mont 93.51 331 *e*P P **09 43 28.3 -1.0**
comp=Z,21nm,0.9s,mb4.9
SMF Signal de Mont 93.51 331 *e*P P **09 43 28.3 -1.0**
SMF pmax pmax
comp=Z,11nm,0.9s,mb4.9
SMF Signal de Mont 93.51 331 *e*P P **09 43 28.3 -1.0**
comp=Z,11nm,0.9s,mb4.9
LDF La Druitiere 93.54 334 *e*P P **09 43 28.1 -1.3**
AVF Avril sur Loir 93.60 331 *e*P P **09 43 28.7 -1.1**
comp=Z,22nm,0.9s,mb4.9
AVF Avril sur Loir 93.60 331 *e*P P **09 43 28.7 -1.1**
AVF pmax pmax
comp=Z,11nm,0.9s,mb4.9
AVF Avril sur Loir 93.60 331 *e*P P **09 43 28.7 -1.1**
comp=Z,11nm,0.9s,mb4.9
MBDF Montbardon 93.70 328 *e*P P **09 43 28.6 -1.7**
comp=Z,8.5nm,0.6s,mb4.6
MBDF Montbardon 93.70 328 *e*P P **09 43 28.6 -1.7**
MBDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
MBDF Montbardon 93.70 328 *e*P P **09 43 28.6 -1.7**
comp=Z,4.3nm,0.6s,mb4.7
ORIF Oris-en-Rattie 93.96 329 *e*P P **09 43 30.7 -0.7**
comp=Z,6.6nm,0.5s,mb4.6
ORIF Oris-en-Rattie 93.96 329 *e*P P **09 43 30.7 -0.7**
ORIF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
ORIF Oris-en-Rattie 93.96 329 *e*P P **09 43 30.7 -0.7**
comp=Z,3.3nm,0.5s,mb4.6
GRR Gorron 93.98 334 *e*P P **09 43 30.4 -1.1**
comp=Z,18nm,1.0s,mb4.7
GRR Gorron 93.98 334 *e*P P **09 43 30.4 -1.1**
GRR pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
GRR Gorron 93.98 334 *e*P P **09 43 30.4 -1.1**
comp=Z,9.1nm,1.0s,mb4.8
KSU1 Kansas State U 94.13 40 *e*P P **09 43 31.6 -0.8**
comp=Z,5.1nm,0.7s,mb4.7
PGF Pioggiola 94.27 325 *e*P P **09 43 31.3 -1.6**
comp=Z,15nm,0.9s,mb4.7
PGF Pioggiola 94.27 325 *e*P P **09 43 31.3 -1.6**
PGF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
PGF Pioggiola 94.27 325 *e*P P **09 43 31.3 -1.6**
comp=Z,7.4nm,0.9s,mb4.7
TCF Toulx Ste Croi 94.48 331 *e*P P **09 43 32.8 -1.0**
VIVF Saint-Julien-l 94.55 329 *e*P P **09 43 32.9 -1.2**
comp=Z,13nm,0.7s,mb4.8
VIVF Saint-Julien-l 94.55 329 *e*P P **09 43 32.9 -1.2**
VIVF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
VIVF Saint-Julien-l 94.55 329 *e*P P **09 43 32.9 -1.2**
comp=Z,6.4nm,0.7s,mb4.8
TXAR Lajitas Array 96.27 51 P P **09 43 41.8 -0.5**
comp=Z,2.3nm,0.8s,mb4.3,baz=309,slow=3.7,SNR=18
TXAR PP PP 09 47 38.3 -3.3
comp=Z,1.2nm,1.0s,baz=270,slow=3.8,SNR=4.2
TXAR Lajitas Array 96.27 51 P P **09 43 41.8 -0.5**
TXAR 09 47 38.3
TXAR pmax pmax
comp=Z,2.0nm,0.8s
TXAR pmax pmax
comp=Z,1.0nm,1.0s
DRV Dumont d'Urvil 96.34 179 SS SS 10 01 14.0 +5.2
DRV R 10 24 00.0
TORD Torodi Ar. Bea 120.38 310 PKP PKPdf 09 49 01.4 -1.6
comp=Z,2.6nm,0.6s,baz=27,slow=1.2,SNR=37
TORD PP PP 09 50 30.8 -4.5
comp=Z,1.4nm,0.7s,baz=43,slow=6.9,SNR=5.4
DBIC Dimbokro 129.48 310 PKP PKPdf 09 49 19.7 -0.8
comp=Z,3.8nm,0.7s,baz=8.5,slow=4.1,SNR=7.2
DBIC SKPbc 09 52 00.9
comp=Z,11nm,0.6s,baz=18,slow=5.1,SNR=16
DBIC Dimbokro 129.48 310 PKIKP PKPdf 09 49 19.7 -0.8
DBIC pmax pmax
comp=Z,4.0nm,0.7s
DBIC pmax pmax
comp=N,11nm,0.6s
DBIC Dimbokro 129.48 310 PKP PKPdf 09 49 19.7 -0.8
DBIC SKPbc 09 52 00.9
LPAZ La Paz 151.91 67 PKPbc PKPbc 09 50 07.3 +0.6
comp=N,3.9nm,0.8s,baz=324,slow=3.3,SNR=20
LPAZ La Paz 151.91 67 PKIKP PKPbc 09 50 07.3 +0.6
LPAZ pmax pmax
comp=Z,4.0nm,0.8s
LPAZ La Paz 151.91 67 PKPbc PKPbc 09 50 07.3 +0.6
PLCA Paso Flores 153.96 122 PKPbc PKPbc 09 50 09.1 -1.4
comp=Z,1.9nm,0.8s,baz=254,slow=3.4,SNR=6.6
PLCA PKPab PKPab 09 50 25.2 -0.8
comp=Z,2.5nm,0.8s,baz=241,slow=3.8,SNR=5.1
PLCA Paso Flores 153.96 122 PKIKP PKPbc 09 50 09.1 -1.4
PLCA 09 50 25.2
PLCA pmax pmax
comp=Z,2.0nm,0.8s
PLCA pmax pmax
comp=Z,3.0nm,0.8s

GII ***07*** *09:30:37.9±0.6,2992N×36.18E, h0km,ML2.5/6, EXPLOSION*
HLW ***07*** *09:31:27.9,2956N×36.13E, h6km,Mb2.7*
ISC 07 09:31:22.9±1.1,2986N±005×3635E±005, h0km, n17,
σ0s85/29, 3C-1D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HRFI	**Mount Harif**	**1.15**	**279**	Pg	**Pg**	**09 31 44.7**	**-0.3**
HRFI				Sg	**Sg**	**09 31 59.8**	**-0.2**
ZFRI	**Zfri**	**1.23**	**304**	Pg	**Pg**	**09 31 46.4**	**0.0**
ZFRI				Sg	**Sg**	**09 32 02.2**	**-0.1**
EIL	**Elat**	**1.23**	**261**	Pg	**Pg**	**09 31 46.9**	**+0.4**
EIL				Sg	**Sg**	**09 32 03.0**	**+0.6**
MBRI	**Mt Berech**	**1.25**	**267**	Pg	**Pg**	**09 31 46.6**	**-0.2**
MBRI				Sg	**Sg**	**09 32 03.9**	**+0.9**
PRNI	**Paran**	**1.26**	**293**	Pg	**Pg**	**09 31 46.5**	**-0.6**
PRNI				Sg	**Sg**	**09 32 03.5**	**0.0**
KRMI	**Paran Flat**	**1.43**	**281**	Pg	**Pg**	**09 31 49.7**	**-0.6**
KRMI				Sg	**Sg**	**09 32 08.5**	**-0.4**
HBST	**Basata**	**1.55**	**246**	⇑P	**Pn**	**09 31 51.3**	**-0.4**
MZDA	**Masada**	**1.67**	**330**	Pn	**Pn**	**09 31 53.9**	**+0.5**
MZDA				Sn	**Sn**	**09 32 15.7**	**+0.1**
RTMI	**Retamim**	**1.86**	**310**	Pn	**Pn**	**09 31 56.1**	**+0.1**
RTMI				Sn	**Sn**	**09 32 20.1**	**-0.1**
DSI	**Dead Sea**	**1.89**	**334**	Pn	**Pn**	**09 31 57.4**	**+0.9**
KZIT	**Kziot**	**1.98**	**302**	Pn	**Pn**	**09 31 58.5**	**+0.9**
KZIT				Sn	**Sn**	**09 32 22.6**	**-0.6**
HNKL	**Nakhl**	**2.06**	**272**	⇑*e*P	**Pn**	**09 31 59.9**	**+1.1**
HNKL				S	**Sn**	**09 32 24.2**	**-0.9**
HNKL	**Nakhl**	**2.06**	**272**	P	**Pn**	**09 31 59.8**	**+1.1**
HNKL				S	**Sn**	**09 32 24.2**	**-0.9**
RSH		**2.52**	**296**	P	**Pn**	**09 32 08.7**	**+3.6**
SHRM		**2.76**	**225**	P	**Pn**	**09 32 07.2**	**-1.2**
AMAG	**Maghara**	**2.83**	**287**	⇑P	**Pn**	**09 32 12.2**	**+2.9**
AMAG				S	**Sn**	**09 32 43.9**	**-0.2**
HRSH	**Kfar Ka'horesh**	**2.97**	**342**	⇓*e*P	**Pn**	**09 32 08.7**	**-2.6**

CSEM ***07*** *09:32:58.4,3872N×3568E, h2km, MD2.9, After ISK*
ISK 07 09:32:58.4, 3872N×3568E, h2km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNN	**Bunyan**	**0.19**	**43**	*e*PG	Pg	09 33 02.5	+0.4
BNN				*e*SG	Sg	09 33 07.1	+2.6
SARI	**SarD1z-Kayseri**	**0.80**	**92**	*e*PG	Pg	09 33 11.7	-1.9
SARI				*e*SG	Sg	09 33 21.7	-2.3
YOZ	**Yozgat**	**0.96**	**343**	*e*PG	Pg	09 33 17.0	+0.1
KOZT	**Kozan**	**1.24**	**175**	*e*PN	Pn	09 33 23.1	+0.4
KARA	**Karaisali**	**1.53**	**199**	*e*PN	Pn	09 33 28.1	+1.3
KMRS	**Kahramanmaras**	**1.54**	**141**	*e*PN	Pn	09 33 27.9	+1.0
SVSK	**Karacayir**	**1.58**	**40**	*e*PN	Pn	09 33 28.2	+0.8
SVSK				*e*SN	Sn	09 33 50.0	+1.7
CORM	**Corum**	**1.67**	**331**	*e*PN	Pn	09 33 30.2	+1.5
DARE	**Darende-Malaty**	**1.68**	**81**	*e*PN	Pn	09 33 26.5	-2.2

ISCJB ***07*** *09:43:03.0±0.5,2272N±002×12155E±002, h15km±3km,*
Error ellipse: s-maj=2.9km s-min=2.3km az=152.2
TAP ***07*** *09:43:04.5,2276N×12140E, h16km, ML3.8, B*
JMA ***07*** *09:43:04.5±0.3,2273N×12165E, h17km, M3.6*
ISC 07 09:43:02.8±0.4,2274N±002×12153E±002, h7km±2km, n65,
σ0s91/119, 6C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTN	**Taitung**	**0.35**	**273**	*i* P	**Pg**	**09 43 10.6**	**+0.9**
TTN	baz=263			*i* S	**Sg**	**09 43 15.3**	**+0.9**
CHKT	**Chengkung**	**0.39**	**337**	⇓*i*P	**Pg**	**09 43 11.9**	**+1.5**
CHKT	baz=2.0			*i* S	**Sg**	**09 43 17.0**	**+1.5**
TWG	**Pinlang**	**0.43**	**281**	⇑*i*P	**Pg**	**09 43 11.4**	**+0.3**
TWG	baz=286			S	**Sg**	**09 43 16.6**	**-0.2**
ECL	**Taimali**	**0.55**	**255**	⇑*i*P	**Pg**	**09 43 13.7**	**+0.3**
ECL	baz=247			*e*S	**Sg**	**09 43 20.0**	**-0.6**
TWF1	**Yuli**	**0.65**	**341**	⇓*i*P	**Pg**	**09 43 15.8**	**+0.5**
TWF1	baz=356			*e*S	**Sg**	**09 43 23.7**	**0.0**
ELDTW	**Lidau**	**0.65**	**314**	⇓*i*P	**Pg**	**09 43 15.2**	**-0.2**
ELDTW	baz=321			S	**Sg**	**09 43 23.1**	**-0.7**
LAY	**Lan-yu**	**0.70**	**178**	P	**Pg**	**09 43 17.0**	**+0.8**
LAY	baz=158			S	**Sg**	**09 43 26.9**	**+1.6**
TAW	**Tawu**	**0.70**	**237**	*e*P	**Pg**	**09 43 16.3**	**+0.1**
TAW	baz=228			*e*S	**Sg**	**09 43 23.5**	**-1.8**
EAST	**Anshuo**	**0.72**	**241**	⇑*i*P	**Pg**	**09 43 16.6**	**-0.1**
EAST	baz=233			*e*S	**Sg**	**09 43 25.0**	**-1.1**
EHY	**Hungye**	**0.79**	**346**	*i* P	**Pg**	**09 43 18.1**	**+0.1**
EHY	baz=342			S	**Sg**	**09 43 29.0**	**+0.8**
STYT	**Tauyuan**	**0.83**	**301**	⇓*i*P	**Pg**	**09 43 18.5**	**-0.3**
STYT	baz=304			*i* S	**Sg**	**09 43 28.6**	**-0.9**
SSD	**Sandimen**	**0.83**	**271**	⇑*i*P	**Pg**	**09 43 18.1**	**-0.7**
SSD	baz=268			*e*S	**Sg**	**09 43 26.4**	**-3.2**
SCZT	**Fangliau**	**0.92**	**247**	*e*P	**Pg**	**09 43 19.9**	**-0.5**
SCZT	baz=232			*e*S	**Sg**	**09 43 30.4**	**-2.0**
YUS	**Yu-Shan**	**0.92**	**325**	⇓*i*P	**Pg**	**09 43 20.3**	**-0.1**
YUS	baz=340			S	**Sg**	**09 43 31.4**	**-1.0**
SGST	**Jiashian**	**0.94**	**292**	*e*P	**Pg**	**09 43 20.7**	**-0.1**
SGST	baz=302			S	**Sg**	**09 43 32.8**	**-0.2**
WTP	**Ta-pu**	**0.98**	**301**	*i* P	**Pg**	**09 43 21.9**	**+0.2**
WTP	baz=304			*i* S	**Sg**	**09 43 34.6**	**+0.1**
ALS	**Alishan**	**1.02**	**319**	P	**Pg**	**09 43 22.2**	**-0.1**
ALS	baz=333			*e*S	**Sg**	**09 43 35.0**	**-0.6**
CHN1	**Nanshi**	**1.02**	**296**	*e*P	**Pg**	**09 43 22.9**	**+0.4**
CHN1	baz=298			S	**Sg**	**09 43 36.3**	**+0.5**
TWM1	**Shoushan**	**1.02**	**275**	*e*P	**Pg**	**09 43 23.0**	**+0.5**
HEN	**Hengchun**	**1.03**	**225**	*e*P	**Pg**	**09 43 22.3**	**-0.3**
HEN	baz=218			*e*S	**Sg**	**09 43 35.1**	**-1.0**
TWK1	**Hengchun**	**1.04**	**220**	P	**Pg**	**09 43 22.1**	**-0.6**
TWK1	baz=213			*e*S	**Sg**	**09 43 34.7**	**-1.5**
CHN4	**Tsaushan**	**1.06**	**305**	⇑*i*P	**Pg**	**09 43 23.3**	**+0.2**
CHN4	baz=309			S	**Sg**	**09 43 36.9**	**+0.1**
ESL	**Shilin**	**1.07**	**355**	⇑P	**Pg**	**09 43 22.4**	**-1.0**
	baz=4.0						

ESL				eS	Sg	09 43 35.6	-1.8
	baz=4.0						
TWK	**Hsinying**	**1.09**	**299**	P	**Pg**	**09 43 23.8**	**0.0**
	baz=301						
TWK				eS	**Sg**	**09 43 38.0**	**0.0**
	baz=301						
KAU	**Kaohsiung**	**1.14**	**262**	eP	**Pg**	**09 43 26.0**	**+1.3**
	baz=258						
TWP	**Hsiaoliuchiu**	**1.15**	**250**	eP	**Pg**	**09 43 26.9**	**+2.1**
	baz=244						
TWP				eS	**Sg**	**09 43 44.6**	**+4.8**
	baz=244						
CHN5	**Tsauling**	**1.16**	**318**	eP	**Pg**	**09 43 24.9**	**-0.2**
	baz=322						
CHN5				eS	**Sg**	**09 43 39.8**	**-0.3**
	baz=322						
HWA	**Hwalien**	**1.23**	**3**	eP	**Pb**	**09 43 25.1**	**-1.3**
	baz=357						
HWA				eS	**Sg**	**09 43 42.1**	**-0.4**
	baz=357						
CHN2	**Minshiung**	**1.25**	**309**	eP	**Pn**	**09 43 27.3**	**+0.6**
	baz=313						
CHN2				S	**Sg**	**09 43 44.2**	**+1.1**
	baz=313						
CHY	**Chiayi**	**1.27**	**307**	i P	**Pn**	**09 43 27.4**	**+0.5**
	baz=310						
CHY				i S	**Sb**	**09 43 43.8**	**+0.3**
	baz=310						
SMLT	**Sun Moon Lake**	**1.28**	**333**	P	**Pn**	**09 43 26.8**	**-0.3**
	baz=346						
SMLT				eS	**Sb**	**09 43 43.8**	**0.0**
	baz=346						
WGK	**Gukeng**	**1.30**	**317**	eP	**Pn**	**09 43 27.9**	**+0.5**
	baz=321						
WGK				eS	**Sb**	**09 43 45.2**	**+0.8**
	baz=321						
SCLT	**Jiali**	**1.31**	**290**	eP	**Pn**	**09 43 28.0**	**+0.6**
	baz=290						
SCLT				eS	**Sb**	**09 43 45.7**	**+1.1**
	baz=290						
TYC	**Yuchr**	**1.31**	**332**	eP	**Pn**	**09 43 27.6**	**0.0**
	baz=347						
TYC				eS	**Sb**	**09 43 44.8**	**0.0**
	baz=347						
TWD	**Chiawan**	**1.34**	**3**	P	**Pn**	**09 43 26.4**	**-1.5**
	baz=353						
TWD				eS	**Sb**	**09 43 43.5**	**-2.0**
	baz=353						
CHN8	**Yiju**	**1.36**	**297**	eP	**Pn**	**09 43 28.5**	**+0.3**
	baz=298						
CHN8				eS	**Sb**	**09 43 46.7**	**+0.6**
	baz=298						
WNT	**Mingjian**	**1.38**	**326**	eP	**Pn**	**09 43 28.9**	**+0.5**
	baz=332						
WNT				eS	**Sb**	**09 43 46.9**	**+0.3**
	baz=332						
WHF	**Hehuan Shan**	**1.42**	**350**	P	**Pn**	**09 43 28.0**	**-1.0**
	baz=11						
WSF	**Szhu**	**1.50**	**307**	eP	**Pn**	**09 43 30.0**	**-0.2**
	baz=309						
WSF				eS	**Sn**	**09 43 49.3**	**-0.7**
	baz=309						
TWT	**Tachien**	**1.54**	**348**	eP	**Pn**	**09 43 30.6**	**-0.1**
	baz=354						
TCU	**Taichung**	**1.61**	**331**	eP	**Pn**	**09 43 32.8**	**+1.2**
	baz=338						
TCU				eS	**Sn**	**09 43 52.6**	**0.0**
	baz=338						
ENA	**Nanau**	**1.69**	**7**	eP	**Pn**	**09 43 31.7**	**-1.1**
ENA				eS	**Sn**	**09 43 53.1**	**-1.6**
NNS	**Nan Shan**	**1.70**	**355**	eP	**Pn**	**09 43 32.6**	**-0.2**
	baz=15						
TWQ1	**Liyutan**	**1.75**	**337**	eP	**Pn**	**09 43 35.0**	**+1.5**
	baz=344						
TWQ1				eS	**Sn**	**09 43 56.5**	**+0.5**
	baz=344						
NSY	**Sanyi**	**1.81**	**337**	eP	**Pn**	**09 43 36.2**	**+1.7**
	baz=345						
NSY				eS	**Sn**	**09 43 59.8**	**+2.2**
	baz=345						
TWC	**Suao**	**1.89**	**9**	P	**Pn**	**09 43 35.0**	**-0.4**
	baz=15						
TWC				eS	**Sn**	**09 43 58.3**	**-1.1**
	baz=15						
ENTT	**Nioudou**	**1.89**	**1**	eP	**Pn**	**09 43 35.5**	**0.0**
	baz=7.0						
NSTT	**Nanjuang**	**1.94**	**346**	eP	**Pn**	**09 43 37.0**	**+0.8**
	baz=354						
NSTT				eS	**Sn**	**09 44 02.1**	**+1.2**
	baz=354						
TWE	**Neicheng**	**1.98**	**4**	eP	**Pn**	**09 43 37.0**	**+0.3**
	baz=12						
TWE				eS	**Sn**	**09 44 00.8**	**-0.9**
	baz=12						
PNG	**Penghu**	**2.00**	**295**	eP	**Pn**	**09 43 36.5**	**-0.4**
	baz=295						
PNG				eS	**Sn**	**09 43 59.6**	**-2.5**
	baz=295						
YOJ	**Yonaguni jima**	**2.19**	**38**	P	**Pn**	**09 43 40.1**	**+0.5**
YOJ				S	**Sn**	**09 44 06.6**	**-0.3**
YOJ	**Yonaguni jima**	**2.19**	**38**	eP	**Pn**	**09 43 40.0**	**+0.4**
	baz=43						
TWA	**Mucha**	**2.23**	**1**	eP	**Pn**	**09 43 38.8**	**-1.4**
	baz=16						
TWB1	**Santiao Chiao**	**2.30**	**10**	eP	**Pn**	**09 43 41.3**	**+0.2**
	baz=15						
NWF	**Wu-fen Shan**	**2.33**	**6**	P	**Pn**	**09 43 42.8**	**+1.2**
	baz=13						
NWF				S	**Sn**	**09 44 10.2**	**-0.4**
	baz=13						
TWS1	**Kuangyinshan**	**2.35**	**358**	eP	**Pn**	**09 43 42.8**	**+0.9**
	baz=19						
TWS1				eS	**Sn**	**09 44 12.0**	**+1.0**
	baz=19						
HATJ	**Hateruma jima**	**2.47**	**57**	P	**Pn**	**09 43 43.6**	**+0.2**
HATJ				S	**Sn**	**09 44 12.5**	**-1.3**
IRIF	**Iriomote-Funau**	**2.57**	**51**	P	**Pn**	**09 43 45.9**	**+1.1**
IRIF				S	**Sn**	**09 44 16.2**	**-0.1**
JKRS	**Kuro-shima**	**2.72**	**56**	P	**Pn**	**09 43 47.8**	**+0.9**
JKRS				S	**Sn**	**09 44 18.9**	**-1.2**
JIJ	**Ishigaki jima**	**2.89**	**55**	P	**Pn**	**09 43 49.9**	**+0.6**
JIJ				S	**Sn**	**09 44 23.2**	**-1.1**
KNM	**Kinmen**	**3.29**	**301**	eP	**Pn**	**09 43 55.7**	**+0.9**
	baz=313						
KNM				eS	**Sn**	**09 44 33.9**	**-0.4**
	baz=313						
JTJ	**Tarama**	**3.47**	**56**	P	**Pn**	**09 43 58.0**	**+0.8**
JTJ				S	**Sn**	**09 44 37.2**	**-1.4**
JMJ	**Miyako jima 2**	**4.02**	**58**	P	**Pn**	**09 44 05.8**	**+1.0**
JOGS	**Gusukube**	**4.08**	**60**	P	**Pn**	**09 44 06.8**	**+1.2**
JOGS				S	**Sn**	**09 44 54.1**	**+0.4**
JKE	**Kume jima 2**	**5.97**	**52**	P	**Pn**	**09 44 31.1**	**-0.5**

CASC 07 09:53:24.9±2.2**,1156N**×**8744W,h35**km±999km**,MD4.2, ML2.6,5C-8D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	**Leon**	**1.01**	**32**	⇑eP	Pn	09 53 42.4	-0.2
COPN	**Copaltepe**	**1.04**	**53**	⇓eP	Pn	09 53 42.9	0.0
TEL3	**Telica 3**	**1.17**	**30**	eP	Pn	09 53 45.2	+0.5
CSAN		**1.18**	**58**	⇓eP	Pn	09 53 44.5	-0.3
CNGN	**Cerro Negro**	**1.19**	**38**	⇑eP	Pn	09 53 44.6	-0.4
CNGN				eP		09 53 45.2	
CNGN				AML	AML	09 54 22.9	
	comp=Z,142nm,0.6s						
CRUN	**El Crucero**	**1.19**	**69**	eP	Pn	09 53 44.4	-0.7
CRUN				AML	AML	09 54 24.4	
	comp=Z,188nm,0.6s						
TELN	**Telica**	**1.20**	**30**	⇓eP	Pn	09 53 45.9	+0.7
MOMN	**Momotombo**	**1.22**	**46**	eP	Pn	09 53 44.8	-0.7
MOMN				AML	AML	09 54 08.2	
	comp=Z,11nm,0.4s						
XAVN	**Gruta Xavier**	**1.24**	**61**	⇑eP	Pn	09 53 45.5	-0.2
TICN	**Ticuantepe**	**1.27**	**68**	eP	Pn	09 53 47.5	+1.3
TISN	**Laguna Tiscapa**	**1.28**	**63**	eP	Pn	09 53 46.2	-0.2
MGAN	**Managua**	**1.31**	**63**	eP	Pn	09 53 46.4	-0.3
MGAN				eP		09 53 46.5	
APON	**Apoyo**	**1.39**	**75**	⇓eP	Pn	09 53 48.7	+0.9
HUEN		**1.46**	**58**	⇓eP	Pn	09 53 48.8	0.0
CNCH	**Conchagua**	**1.75**	**347**	⇓eP	x	09 53 52.5	
CNCH				AML	x	09 54 24.1	
	comp=Z,64nm,0.4s						
CONN	**Concepcion**	**1.78**	**90**	eP	Pn	09 53 53.2	+0.1
CAHU	**Cacacuatique**	**2.33**	**341**	eP	x	09 54 00.4	
JCR	**Jicaral**	**2.85**	**126**	eP	Pn	09 54 07.2	-0.7
JCR				eS	Sn	09 54 39.4	-1.5
CAO	**Cobano**	**2.94**	**129**	eP	Pn	09 54 09.0	-0.2
CGA2	**Cerro Gallo 2**	**3.30**	**117**	⇑eP	Pn	09 54 15.6	+1.6
CGA2				eS	Sn	09 54 54.3	+2.2
PRS1	**Puriscal**	**3.45**	**117**	eP	Pn	09 54 17.9	+1.7
PRS1				eS	Sn	09 54 55.6	-0.1
LCR2	**La Lucha 2**	**3.83**	**118**	⇑eP	Pn	09 54 23.6	+2.3
LCR2				eS	Sn	09 55 06.0	+0.8
BUS	**Buena Vista**	**4.13**	**118**	⇓eP	Pn	09 54 27.5	+2.0
BUS				eS	Sn	09 55 14.6	+2.0
CTCR	**Cotoan**	**5.31**	**119**	⇓eP	Pn	09 54 44.0	+2.2
CTCR				eS	Sn	09 55 41.3	-0.5
CHI2		**15.20**	**116**	eP		09 53 44.7	
CHI2				AML	AML	09 54 09.8	
	comp=Z,577nm,0.2s						

BJI ***07*** *09:56:34.0,203N×6545E,h30km,mB5.0,mb4.5,Ms4.6, Msz4.5*
ISCJB ***07*** *09:56:38.4±0.4,274N±008×6628E±007,h10km,mb4.5/28, MS4.1/5,Error ellipse: s-maj=11.9km s-min=9.6km az=140.8*
IDC ***07*** *09:56:38.3±0.6,274N×6634E,h0km,mb4.2/14, mb1 4.3/14,mb1mx4.1/24,mbtmp4.2/14,MS3.7/1, Ms1 3.9/1,ms1mx3.2/19,Error ellipse: s-maj=18.4km s-min=17.5km az=152.0*
MOS ***07*** *09:56:38.3±1.5,268N×6630E,h10km,mb4.9/7,Error ellipse: s-maj=17.2km s-min=11.9km az=73.9*
NEIC ***07*** *09:56:40.0±0.5,271N×6624E,h10km,mb5.0/6,Error ellipse: s-maj=15.0km s-min=12.8km az=132.0*
ISC 07 09:56:40.2±0.4**,269N**±008×**6628E**±007**,h10**km**, (h30**km±5.3km**:pP-P),n46,**σ**1**s**23**/46**,mb4.5**/28**,MS4.1**/5**, 1C-1D,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**31.79**	**4**	eP	**P**	**10 03 06.1**	**+1.2**
KBL				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
KBL	**Kabul**	**31.79**	**4**	eP	**P**	**10 03 06.1**	**+1.1**
	comp=Z,1.8nm,0.4s,mb4.2						
CMAR	**Chiang Mai Arr**	**35.62**	**62**	P	**P**	**10 03 37.3**	**-1.2**
	comp=Z,1.5nm,0.4s,mb4.2,baz=246,slow=9.7,SNR=18						
CMAR				LR	LR	10 17 56.0	
	comp=Z,110nm,18.2s,MS3.7,baz=277,slow=36						
LSA	**Lhasa**	**35.76**	**39**	eP	**P**	**10 03 42.1**	**+2.6**
LSA				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
LSA	**Lhasa**	**35.76**	**39**	eP	**P**	**10 03 42.1**	**+2.6**
	comp=Z,34nm,1.2s,mb5.2						
CHTO	**Chiang Mai**	**35.76**	**61**	eP	**P**	**10 03 41.1**	**+1.4**
CHTO				pmax	pmax		
	comp=Z,34nm,1.4s,mb5.1						
CHTO	**Chiang Mai**	**35.76**	**61**	eP	**P**	**10 03 41.1**	**+1.4**
	comp=Z,34nm,1.4s,mb5.1						
EKS2	**Erkin-Say**	**40.36**	**9**	eP	**P**	**10 04 19.9**	**+1.8**
	comp=Z,72nm,0.7s,mb5.5						
LSZ	**Lusaka**	**41.71**	**243**	P	**P**	**10 04 30.6**	**+0.9**
	comp=Z,2.5nm,0.8s,mb3.9,baz=57,slow=9.0,SNR=3.7						
LSZ				PcP	PcP	10 06 26.8	+0.5
	comp=Z,2.3nm,0.9s,baz=202,slow=4.9,SNR=3.8						
GNI	**Garni**	**42.08**	**335**	P	**P**	**10 04 33.8**	**+1.4**
	comp=Z,3.5nm,0.4s,mb4.4,baz=125,slow=16,SNR=5.3						
GNI	**Garni**	**42.08**	**335**	eP	**P**	**10 04 33.4**	**+1.0**
GNI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GNI	**Garni**	**42.08**	**335**	eP	**P**	**10 04 33.4**	**+1.0**
	comp=Z,5.4nm,0.5s,mb4.4						
GYA	**Guiyang**	**45.35**	**55**	⇓iP	**P**	**10 04 59.8**	**+0.9**
GYA				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.8						
QIZ	**Qiongzhong**	**45.58**	**66**	P	**P**	**10 04 59.1**	**-1.8**
QIZ				S	**S**	**10 11 39.1**	**-4.5**
QIZ				AMB	AMB		
	comp=Z,12nm,1.7s,mb4.5						
QIZ				LR	LR		
	comp=Z,139nm,18.3s,MS3.9						
MKAR	**Makanchi Array**	**46.08**	**15**	P	**P**	**10 05 02.9**	**-1.4**
	comp=Z,0.8nm,0.9s,mb3.7,baz=194,slow=7.3,SNR=7.6						
MKAR	**Makanchi Array**	**46.08**	**15**	P	**P**	**10 05 02.9**	**-1.4**
KIV	**Kislovodsk**	**46.10**	**336**	eP	**P**	**10 05 06.3**	**+1.8**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
GTA	**Gaotai**	**47.58**	**35**	eP	**P**	**10 05 17.2**	**+1.0**
GTA				AP	pP	10 05 22.1	+2.7
GTA				XP	sP	10 05 25.2	+4.6
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb4.2						
LZH	**Lanzhou**	**48.03**	**42**	eP	**P**	**10 05 20.2**	**+0.4**
LZH				AP	pP	10 05 29.3	+6.3
LZH				XP	sP	10 05 32.5	+8.3
LZH				AMB	AMB		
	comp=Z,15nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,78nm,4.6s						
LBTB	**Lobatse**	**48.11**	**233**	P	**P**	**10 05 20.4**	**-0.2**
	comp=Z,2.9nm,0.8s,mb4.4,baz=84,slow=6.7,SNR=4.5						
KURK	**Kurchatov**	**48.98**	**10**	P	**P**	**10 05 25.4**	**-1.3**
	comp=Z,1.8nm,0.7s,mb4.2,baz=205,slow=7.9,SNR=6.1						
XAN	**Xi'an**	**50.49**	**47**	P	**P**	**10 05 39.1**	**+0.4**
XAN				AP	pP	10 05 49.9	+8.0
XAN				XP	sP	10 05 54.4	+11
XAN				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.8						
XAN				AMB	AMB		
	comp=Z,34nm,4.7s						
XAN				LR	LR		
	comp=N,147nm,20.7s,MS4.3						
XAN				LR	LR		
	comp=E,279nm,18.6s,MS4.3						
XAN				LR	LR		
	comp=Z,391nm,20.7s,MS4.4						
WHN	**Wuhan**	**53.17**	**53**	P	**P**	**10 06 00.4**	**+1.7**
ZAL	**Zalesovo**	**53.30**	**14**	P	**P**	**10 05 57.8**	**-1.4**
ZAA0	**Zalesovo Array**	**53.31**	**14**	eP	**P**	**10 05 57.7**	**-1.6**
ZALV	**Zalesovo Beam**	**53.31**	**14**	P	**P**	**10 05 57.8**	**-1.6**
	comp=Z,3.2nm,0.8s,mb4.3,baz=205,slow=6.6,SNR=8.5						
ARU	**Arti**	**53.94**	**355**c	iP	**P**	**10 06 04.6**	**+0.8**
ARU				e		10 08 02.8	
ARU				ePPP		10 09 13.3	
ARU				eS	**S**	**10 13 43.3**	**+4.1**
ARU				eSS	SS	10 17 25.9	+5.3
ARU				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.7						
SONM	**Songino Array**	**56.69**	**31**	P	**P**	**10 06 24.3**	**+0.4**
	comp=Z,1.0nm,0.6s,mb4.0,baz=221,slow=5.9,SNR=11						
MOS	**Moscow**	**57.71**	**341**	eP	**P**	**10 06 30.3**	**-0.6**
TLY	**Talaya**	**57.94**	**26**	eP	**P**	**10 06 34.5**	**+1.9**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
TLY				MLR	MLR		
	comp=Z,219nm,19.0s,MS4.3						
SSE	**Sheshan**	**58.90**	**55**	P	**P**	**10 06 38.7**	**-1.0**
SSE				S	**S**	**10 14 44.0**	**-1.9**
SSE				AMB	AMB		
	comp=Z,29nm,0.9s,mb5.3						
SSE				AMB	AMB		
	comp=Z,57nm,5.1s						
SSE				LR	LR		
	comp=N,194nm,15.7s,MS4.5						
SSE				LR	LR		
	comp=E,166nm,15.8s,MS4.5						
SSE				LR	LR		
	comp=Z,245nm,13.4s,MS4.5						
TORD	**Torodi Ar. Bea**	**64.65**	**283**	P	**P**	**10 07 17.6**	**-1.2**
	comp=Z,0.9nm,1.0s,mb3.8,baz=72,slow=4.8,SNR=5.0						
CLL	**Collm**	**65.72**	**326**	i P	**P**	**10 07 24.2**	**-0.8**
CLL				pmax	pmax		
	comp=Z,26nm,2.0s,mb4.9						
CLL	**Collm**	**65.72**	**326**	i P	**P**	**10 07 24.2**	**-0.8**
	comp=Z,26nm,2.0s,mb4.9						
ECH	**Echery**	**67.82**	**322**	eP	**P**	**10 07 37.0**	**-1.5**
WRA	**Warramunga Arr**	**70.41**	**112**	P	**P**	**10 07 54.4**	**-0.8**
	comp=Z,5.0nm,1.0s,mb4.4,baz=287,slow=5.5,SNR=17						
ASAR	**Alice Springs**	**70.73**	**116**	P	**P**	**10 07 56.3**	**-0.8**
	comp=Z,2.8nm,0.8s,mb4.2,baz=287,slow=5.7,SNR=24						
ESDC	**Sonseca Array**	**73.12**	**311**	P	**P**	**10 08 10.1**	**-1.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=75,slow=5.8,SNR=7.2						
STKA	**Stephens Creek**	**79.00**	**123**	P	**P**	**10 08 44.4**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.0,baz=296,slow=6.9,SNR=3.7						
STKA	**Stephens Creek**	**79.00**	**123**	P	**P**	**10 08 44.4**	**-0.3**
VNA2	**Neumayer--Watz**	**87.23**	**198**	eP	**P**	**10 09 26.7**	**+0.2**
VNA2				e		10 09 32.1	
VNA3	**Neumayer Olymp**	**88.03**	**198**	eP	**P**	**10 09 30.7**	**+0.4**
VNA3				e		10 09 36.8	
QSPA	**South Pole Qui**	**92.66**	**180**	P	**P**	**10 09 53.7**	**+1.9**
	comp=Z,2.0nm,0.9s,mb4.5,baz=292,slow=6.0,SNR=3.2						
PDAR	**Pinedale Array**	**134.60**	**356**	PKP	PKPdf	10 16 00.2	+0.9
	comp=Z,0.5nm,0.8s,baz=50,slow=2.3,SNR=4.9						
NVAR	**Mina Array Bea**	**138.87**	**5**	PKP	PKPdf	10 16 07.8	+0.4
	comp=Z,0.5nm,0.8s,baz=270,slow=3.0,SNR=4.1						
TXAR	**Lajitas Array**	**146.73**	**344**	PKPbc	PKPbc	10 16 22.1	-1.1
	comp=Z,2.3nm,0.9s,baz=60,slow=2.1,SNR=22						

ISCJB ***07*** *10:34:22.9±1.4,1427N±0.10×92.10W±007,h64km±13km, Error ellipse: s-maj=19.1km s-min=6.4km az=31.6*
CASC ***07*** *10:34:25.7±1.5,1431N×9191W,h53km±18km,MD4.0*
NEIC ***07*** *10:34:25.0,14.17N×9222W,h37km,MD4.2(MEX),After MEX.*
MEX ***07*** *10:34:25.0±0.8,14.17N×9222W,h37km±42km,MD4.2*
ISC 07 10:34:24.2±1.4**,143N**±01×**9208W**±007**,h52**km±18km**,n15,** σ**0**s**83**/17**,2C-1D,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.43**	**84**	⇑eP	**Pn**	**10 34 35.4**	**+0.6**
THIG		**0.66**	**344**	i P	**Pn**	**10 34 36.6**	**-0.9**
THIG				i S	**Sn**	**10 34 47.1**	**-0.1**
FG6		**1.19**	**76**	⇓eP	**Pn**	**10 34 44.4**	**-0.1**
FG6				eS	**Sn**	**10 34 59.6**	**-0.1**
FUG	**Fuego 3**	**1.21**	**81**	eP	**Pn**	**10 34 44.6**	**-0.1**
PCG	**Pacaya**	**1.43**	**85**	⇑eP	**Pn**	**10 34 47.6**	**-0.2**
PCG				eS	**Sn**	**10 35 04.3**	**-1.1**
NBG	**Las Nubes**	**1.71**	**79**	eP	**Pn**	**10 34 53.0**	**+1.4**
CCIG	**Comitan**	**2.00**	**358**	i P	**Pn**	**10 34 56.8**	**+1.3**
CCIG				i S	**Sn**	**10 35 20.6**	**+1.2**
RBDL	**Robledal**	**2.33**	**94**	eP	x	10 35 00.1	
SNJE	**San Jose**	**2.43**	**99**	eP	x	10 35 01.0	
SCX	**San Cristobal**	**2.51**	**348**	i P	**Pn**	**10 35 06.5**	**+4.0**
TGIG		**2.69**	**338**	i P	**Pn**	**10 35 05.6**	**+0.6**
TGIG				i S	**Sn**	**10 35 35.3**	**-1.0**
BOQS	**Boqueron**	**2.77**	**101**	eP	x	10 35 06.4	
LFRS	**El Faro**	**3.00**	**102**	eP	x	10 35 09.2	
CMIG	**Matias Romero**	**3.90**	**316**	i P	**Pn**	**10 35 21.4**	**-0.1**
CMIG				i S	**Sn**	**10 36 05.5**	**-0.5**
TEIG	**Tepich**	**6.95**	**31**	ePn	**Pn**	**10 36 02.3**	**-1.1**
	5.9nm,0.4s						

NNC 07 10:39:11.8±2.7**,5385N**×**8646E,h0**km**,mb3.6,mpv3.1, 2C-8D,Error ellipse: s-maj=20.6km s-min=16.4km az=55.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.75**	**240**	⇓Pn	Pn	10 40 37.9	-0.4
	2.2nm,0.6s						
KURK				⇑Sn	Sn	10 41 46.5	+1.6
	0.8nm,0.5s						
KURK				⇓Lg		10 42 14.1	
	6.0nm,0.8s						
KURBB	**Kurchatov Arra**	**5.85**	**240**	⇓Pn	Pn	10 40 39.8	+0.1
	0.5nm,0.5s,baz=51,slow=14						
KURBB				⇑Sn	Sn	10 41 49.8	+2.5
	0.5nm,0.5s						
KURBB				⇓Lg		10 42 18.2	
	1.6nm,0.7s,baz=50,slow=31						
MK31	**Makanchi Array**	**7.55**	**202**	⇓Pn	Pn	10 41 06.4	+3.3
	0.8nm,0.5s,baz=252,slow=54,SNR=16						
MK31				⇓Sn	Sn	10 42 35.0	+5.8
	1.1nm,0.6s						
MK31				⇓Lg		10 43 08.1	
	3.6nm,0.8s,baz=25,slow=31,SNR=5.3						
VOSK	**Vostochnaya**	**9.35**	**269**	⇓Pn	Pn	10 41 25.9	-1.7
	1.3nm,0.6s						

KRSC ***07*** *10:51:30.9±0.6,5551N×16030E,h197km±22km,ML3.6*
ISCJB ***07*** *10:51:32.7±1.0,5545N±004×1604E±01,h188km±7km, Error ellipse: s-maj=13.2km s-min=6.4km az=15.7*
ISC 07 10:51:33.0±1.0**,5546N**±004×**1604E**±01**,h189**km±6km**,n22,** σ**0**s**68**/40**,Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**0.22**	**216**	eP	**Pn**	**10 51 58.6**	**+0.6**
TUMR				eS	**Sn**	**10 52 18.5**	**+1.3**
KMNR	**Kamenistaya**	**0.30**	**345**	eP	**Pn**	**10 51 58.4**	**+0.3**
KMNR				eS	**Sn**	**10 52 18.1**	**+0.4**
BZMR	**Bezymyannaya**	**0.48**	**8**	eP	**Pn**	**10 51 58.8**	**+0.2**
BZMR				eS	**Sn**	**10 52 18.9**	**+0.3**
KIRR	**Kirishev**	**0.49**	**358**	eP	**Pn**	**10 51 58.6**	**-0.1**
KIRR				eS	**Sn**	**10 52 18.6**	**-0.1**
BZWR	**Bezymyannyi-We**	**0.51**	**8**	eP	**Pn**	**10 51 59.1**	**+0.4**
BZWR				eS	**Sn**	**10 52 19.3**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**0.51**	**21**	eP	**Pn**	**10 51 58.8**	**0.0**
BZGR				eS	**Sn**	**10 52 19.6**	**+0.8**
KPT	**Kopyto**	**0.51**	**350**	eP	**Pn**	**10 51 58.2**	**-0.6**
KPT				eS	**Sn**	**10 52 18.0**	**-0.8**
ZLN	**Zelenaya**	**0.60**	**23**	eP	**Pn**	**10 51 59.4**	**+0.2**
ZLN				eS	**Sn**	**10 52 20.0**	**+0.4**
KOZ	**Kozyrevsk**	**0.66**	**335**	eP	**Pn**	**10 51 58.9**	**-0.5**
KOZ				eS	**Sn**	**10 52 19.1**	**-0.9**
CIRR	**Tsirk**	**0.69**	**18**	eP	**Pn**	**10 51 59.9**	**+0.3**
CIRR				eS	**Sn**	**10 52 20.8**	**+0.5**
KRSR	**Krestovskiy**	**0.76**	**8**	eP	**Pn**	**10 51 59.8**	**-0.2**
KRSR				eS	**Sn**	**10 52 20.8**	**-0.2**
KLY	**Klyuchi**	**0.87**	**10**	eP	**Pn**	**10 52 00.6**	**0.0**
KLY				eS	**Sn**	**10 52 22.2**	**+0.1**
SRDR	**Sredinnyy**	**0.93**	**337**	eP	**Pn**	**10 52 00.2**	**-0.8**
SRDR				eS	**Sn**	**10 52 21.2**	**-1.7**
MKZ	**Mys Kozlova**	**1.20**	**139**	eP	**Pn**	**10 52 03.0**	**-0.1**
MKZ				eS	**Sn**	**10 52 26.2**	**0.0**
SRKR	**Sorokina**	**1.27**	**20**	P	**Pn**	**10 52 04.4**	**+0.8**
KBTR	**Krutoberegovo**	**1.57**	**61**	eP	**Pn**	**10 52 05.9**	**-0.3**
KBTR				eS	**Sn**	**10 52 31.2**	**-0.8**
GNL	**Ganaly**	**2.27**	**220**	eP	**Pn**	**10 52 14.4**	**+0.9**
NLC	**Nalytchevo**	**2.38**	**195**	eP	**Pn**	**10 52 15.2**	**+0.5**
NLC				eS	**Sn**	**10 52 47.4**	**+0.3**
SPN	**Mys Shipunski**	**2.38**	**185**	P	**Pn**	**10 52 14.4**	**-0.4**
SPN				S	**Sn**	**10 52 45.4**	**-1.8**
AVH	**Avacha**	**2.40**	**204**	P	**Pn**	**10 52 15.6**	**+0.6**
PET	**Petropavlovsk**	**2.65**	**203**	S	**Sn**	**10 52 53.4**	**+0.7**
RUS	**Russkaya**	**3.23**	**201**	P	**Pn**	**10 52 25.2**	**+0.4**
RUS				S	**Sn**	**10 53 03.7**	**-1.5**

IDC ***07*** *11:00:06.3±1.6,704S×12836E,h0km,mb3.7/2,mb1 3.8/6, mb1mx3.7/15,mbtmp3.7/6,ML3.7/4,Error ellipse: s-maj=45.2km s-min=24.0km az=70.0*
NEIC ***07*** *11:00:19.3±2.7,769S×12749E,h108km±26km,mb4.5/3, Error ellipse: s-maj=32.2km s-min=23.6km az=48.0*
ISCJB ***07*** *11:00:20.2±2.7,77S±02×1277E±01,h138km±27km,Error ellipse: s-maj=38.1km s-min=17.3km az=30.2*
ISC 07 11:00:21.5±2.5**,77S**±02×**1277E**±01**,h130**km±24km**,n10,** σ**1**s**17**/10**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.71**	**238**	Pn	**Pn**	**11 01 31.4**	**+0.7**
	5.1nm,0.3s,baz=168,slow=1.2,SNR=5.3						
BATI				Sn	Sx	11 02 23.3	
	7.1nm,0.3s,baz=51,slow=22,SNR=13						
KAKA	**Kakadu**	**6.79**	**137**	ePn	**Pn**	**11 01 59.3**	**+0.6**
	52nm,0.6s						
KAKA				eSn	Sx	11 03 10.9	
FITZ	**Fitzroy Crossi**	**10.51**	**191**	Pn	**Pn**	**11 02 48.0**	**-0.6**
	0.2nm,0.3s,baz=4.8,slow=14,SNR=15						
FITZ				Sn	Sx	11 04 40.4	
	0.2nm,0.3s,baz=32,slow=18,SNR=2.8						
FITZ	**Fitzroy Crossi**	**10.51**	**191**	ePn	**Pn**	**11 02 47.0**	**-1.7**
	6.6nm,1.1s						
FITZ				eSn	Sx	11 04 40.5	
WRAB	**Tennant Creek**	**13.73**	**153**	ePn	**Pn**	**11 03 30.2**	**-0.5**
	10nm,1.3s						
WRAB				eSn	Sx	11 05 54.1	
WRA	**Warramunga Arr**	**13.73**	**153**	Pn	**Pn**	**11 03 28.7**	**-2.1**
	0.5nm,0.3s,baz=336,slow=12,SNR=36						
WRA				Sn	Sx	11 05 52.9	
	0.3nm,0.3s,baz=329,slow=21,SNR=6.8						
ASAR	**Alice Springs**	**16.92**	**160**	P	**Pn**	**11 04 12.1**	**+1.5**
	0.2nm,0.3s,baz=337,slow=11,SNR=23						
STKA	**Stephens Creek**	**27.28**	**154**	P	**P**	**11 05 55.1**	**+1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	0.3nm,0.3s,baz=317,slow=11,SNR=4.9						
STKA	Stephens Creek	27.28	154	P	P	11 05 55.1	+1.3
MKAR	Makanchi Array	67.62	328	P	P	11 11 03.6	-0.6
	0.1nm,0.4s,baz=114,slow=6.5,SNR=2.6						

*IDC **07** 11:04:12.9±0.8,263N×96.19E,h0km,mb4.1/11, mb1 4.1/12,mb1mx4.0/21,mbtmp4.1/12,ML4.4/1,MS3.3/2, Ms1 3.4/2,ms1mx2.7/38,Error ellipse: s-maj=28.5km s-min=15.3km az=57.0*
*DJA **07** 11:04:16,256N×9590E,h30km,MLv4.4/5*
*BJI **07** 11:04:18.6,335N×9603E,h15km,mB5.2,mb4.5*
*NEIC **07** 11:04:18.0±0.5,265N×96.19E,h35km,mb4.2/3,Error ellipse: s-maj=19.4km s-min=9.9km az=62.0*
*ISCJB **07** 11:04:19.7±2.6,27N±0.1×962E±0.1,h70km±22km, mb4.1/17,Error ellipse: s-maj=27.1km s-min=12.5km az=150.0*
ISC 07 11:04:21.1±2.6,**27N**±01×**962E**±01,**h64**km±22km,**n23, σ0s73**/21,**mb4.2**/17,**1C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
PSI	Prapat	2.71	87⇑	eP	Pn	11 05 02.6	+0.3
CMAR	Chiang Mai Arr	15.92	9	Pn	Pn	11 08 01.1	-0.1
	0.5nm,0.3s,baz=196,slow=12,SNR=18						
CMAR				LR	LR	11 14 56.6	
	comp=Z,87nm,20.3s,baz=195,slow=40						
XAN	Xi'an	33.39	19	P	P	11 10 53.3	-0.2
XAN				AP	pP	11 11 00.4	-8.7
XAN				XP	sP	11 11 04.0	-13
XAN				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.5						
XAN				AMB	AMB		
	comp=Z,80nm,8.8s						
FITZ	Fitzroy Crossi	35.59	127	P	P	11 11 12.0	-0.8
	comp=Z,1.0nm,0.8s,mb3.8,baz=223,slow=14,SNR=3.2						
GTA	Gaotai	36.72	5	eP	P	11 11 21.6	-0.5
GTA				AP	pP	11 11 26.6	-11
GTA				XP	sP	11 11 29.6	-16
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.3						
BJI	Beijing	41.37	23	P	P	11 12 02.9	+2.0
BJI				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.7						
WRA	Warramunga Arr	43.65	123	P	P	11 12 20.0	+0.2
	comp=Z,0.9nm,0.6s,mb3.7,baz=300,slow=9.4,SNR=8.9						
UCH	Uchtor	43.92	337	eP	P	11 12 21.5	-0.1
	comp=Z,2.7nm,0.8s,mb4.0						
EKS2	Erkin-Say	44.58	336	eP	P	11 12 26.1	-0.7
	comp=Z,2.3nm,0.5s,mb4.3						
ASAR	Alice Springs	45.07	128	P	P	11 12 29.9	-1.1
	comp=Z,0.6nm,0.5s,mb3.7,baz=299,slow=8.2,SNR=22						
KSRS	Korea Array	45.23	36	P	P	11 12 32.4	+0.3
	comp=Z,1.4nm,0.7s,mb3.9,baz=212,slow=12,SNR=3.8						
MKAR	Makanchi Array	45.59	347	P	P	11 12 34.7	-0.1
	comp=Z,2.4nm,0.5s,mb4.4,baz=158,slow=8.3,SNR=28						
SONM	Songino Array	45.84	10	P	P	11 12 37.3	+0.5
	comp=Z,3.0nm,0.5s,mb4.5,baz=192,slow=9.1,SNR=16						
ULN	Ulaanbaatar	45.98	10	eP	P	11 12 37.0	-0.9
	comp=Z,2.0nm,0.6s,mb4.2						
ZAA0	Zalesovo Array	51.96	351	eP	P	11 13 23.2	-0.3
ZALV	Zalesovo Beam	51.96	351	P	P	11 13 22.9	-0.7
	comp=Z,3.6nm,0.4s,mb4.6,baz=179,slow=7.9,SNR=14						
STKA	Stephens Creek	55.07	132	P	P	11 13 47.5	+0.9
	comp=Z,2.3nm,1.0s,mb4.2,baz=312,slow=14,SNR=3.7						
AKTK	Aktyubinsk	57.48	332	P	P	11 14 03.4	-0.1
AKTO	Aktyubinsk	57.48	332	P	P	11 14 03.4	-0.1
	comp=Z,2.3nm,1.0s,mb4.2,baz=97,slow=3.8,SNR=6.0						
KMBO	Kilima Mbogo	59.06	267	P	P	11 14 15.7	+0.4
	comp=Z,0.4nm,0.3s,mb3.9,baz=60,slow=14,SNR=4.0						
HFS	Hagfors	83.96	330	P	P	11 16 45.7	+1.6
	comp=Z,2.5nm,1.0s,mb4.3,baz=134,slow=10,SNR=2.7						
TXAR	Lajitas Array	142.91	29	PKP	PKPdf	11 23 51.1	+2.8
	comp=Z,0.1nm,0.5s,baz=158,slow=1.1,SNR=4.7						
CPUP	Villa Florida	145.38	225	PKPbc	PKPbc	11 23 52.6	0.0
	comp=Z,0.4nm,0.3s,baz=37,slow=5.7,SNR=5.6						

*ISCJB **07** 11:06:56.8±0.7,5933N±003×272E±0.1,h0km,Error ellipse: s-maj=8.9km s-min=4.1km az=10.9*
*NAO **07** 11:06:57.2±1.2,5929N×2723E,ML2.2*
*HEL **07** 11:06:58.2±0.2,5932N×27.18E,h0km,ML1.7, ML2.2(NAO),Explosion*
*BER **07** 11:06:58.4±1.8,5931N×27.18E,h0km,ML2.2(NAO), Suspected explosion*
ISC 07 11:06:57.7±0.7,**5935N**±003×**271E**±01,**h0**km,**n17, σ1s30**/29,**Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
VSU	Vasula	0.91	193	i P	Pg	11 07 13.8	-1.3
VSU				i S	Sg	11 07 25.8	-1.1
VJF	Virojoki	1.22	10	ePB	Pb	11 07 20.6	-0.8
VJF				MSG		11 07 37.6	
	comp=Z,5.9nm,0.2s						
VJF				eSB	Sb	11 07 37.6	-0.1
PVF	Pernaja	1.36	333	eP	Pg	11 07 22.5	-1.2
PVF				eS	Sg	11 07 40.5	-0.8
PVF				MSG		11 07 40.5	
	comp=Z,4.6nm,0.2s						
MEF	Metsahovi	1.63	303	ePG	Pg	11 07 28.3	-0.6
MEF				MSG		11 07 51.6	
	comp=Z,8.9nm,0.4s						
MEF				eSN	Sn	11 07 51.6	+2.4
MTSE	Matsula	1.82	251	ePN	Pn	11 07 30.8	+0.6
MTSE				eSN	Sn	11 07 54.9	+0.9
FIA0	FINESS Array S	2.17	347	eP	Pn	11 07 35.7	+0.8
	baz=165						
FIA0				eSG	Sg	11 08 05.7	-1.5
FIA0				MSG		11 08 05.7	
	comp=Z,4.3nm,0.3s						
FIA0	FINESS Array S	2.17	347	Pn	Pn	11 07 35.8	+0.9
	baz=164,slow=18						
FIA0				Lg		11 08 07.2	
	baz=160,slow=28						
FIA0				Rg		11 08 19.6	
	baz=161,slow=56						
FIA1	FINESS Array S	2.17	347	eP	Pn	11 07 35.9	+0.9
FIA1				eSG	Sg	11 08 05.5	-1.7
KAF	Kangasniemi	2.80	352	eP	Pn	11 07 45.0	+1.3
KAF				eS	Sn	11 08 20.2	+2.1
KAF				MSG		11 08 20.2	
	comp=Z,1.9nm,0.2s						
KEF	Keuruu	3.04	340	ePB	Pb	11 07 51.9	-0.6
RAF	Rauma	3.16	304	eP	Pn	11 07 50.7	+2.1
	baz=111						
SUF	Sumiainen	3.42	352	eP	Pn	11 07 54.2	+2.1
JOF	Joensuu	4.12	28	eP	Pn	11 08 02.2	+0.5
JOF				eSG	Sg	11 09 03.6	-6.2
JOF				MSG		11 09 03.6	
	comp=Z,3.1nm,0.4s						
HFS	Hagfors	6.83	282	eS	Sn	11 09 53.8	-3.6
HFS				eSG	Sg	11 10 29.0	-7.9
HFS	Hagfors	6.83	282	Sn	Sn	11 09 53.8	-3.6
	baz=89,slow=28						
HFS				Lg		11 10 29.0	
	baz=89,slow=28						
ARA0	ARCESS Array S	10.25	357	Pn	Pn	11 09 24.6	-1.1
	baz=174,slow=14						
ARA0				Sn	Sn	11 11 14.7	-6.5
	baz=174,slow=28						
ARA0	ARCESS Array S	10.25	357	eP	Pn	11 09 24.6	-1.1
ARA0				eS	Sn	11 11 14.7	-6.5

MAN 07 11:18:49,1820N×12025E,h50km**,mb3.5,ML2.2,MS1.6, 1D,Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ABRA	Dolores	0.70	141	eP	Pn	11 19 00.0	-2.7
ABRA				eS	Sn	11 19 22.6	+10
ABRA	Dolores	0.70	141	eP	Pn	11 19 13.0	+10
APYP	Conner	1.00	109	eP	Pn	11 19 00.0	-6.7
APYP				eS	Sn	11 19 29.5	+10
APYP	Conner	1.00	109	eP	Pn	11 19 08.0	+1.3
APYP				eS	Sn	11 19 21.9	+2.1
CVP	Callao Caves	1.57	108⇓	eP	Pn	11 19 15.8	+1.3
CVP				i S	Sn	11 19 44.9	+11
CAUP	Cauayan	1.95	130	eP	Pn	11 19 23.1	+3.4
CAUP	Cauayan	1.95	130	eP	Pn	11 19 23.1	+3.5
BALP	Baler	2.75	152	eP	Pn	11 19 32.6	+1.9

*SGS **07** 11:35:30.7,3003N×3633E,h6km*
*CSEM **07** 11:35:30.7,3003N×3633E,h6km,ML3.0,After SNSN*
*ISCJB **07** 11:35:32.1±0.9,2984N±003×36.18E±005,h0km,Error ellipse: s-maj=6.4km s-min=4.5km az=11.6*
*GII **07** 11:35:32.7±0.8,2985N×36.10E,h0km,ML2.3/8, EXPLOSION*
ISC 07 11:35:32.2±0.9,**2983N**±003×**3623E**±005,**h0**km,**n15, σ0s88**/26,**Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
HRFI	Mount Harif	1.05	281	Pg	Pg	11 35 51.5	-0.8
HRFI				Sg	Sg	11 36 06.4	+0.4
EIL	Elat	1.12	262	Pg	Pg	11 35 53.1	-0.5
EIL				Sg	Sg	11 36 08.4	+0.2
MBRI	Mt Berech	1.14	268	Pg	Pg	11 35 53.4	-0.7
HQLS		1.15	243	P	Pg	11 35 54.0	-0.2
HQLS		1.15	243	P	Pg	11 35 54.0	-0.1
HQLS				S	Sg	11 36 11.0	+2.0
ZFRI	Zfri	1.16	309	Pg	Pg	11 35 53.5	-0.8
ZFRI				Sg	Sg	11 36 09.5	+0.1
PRNI	Paran	1.18	296	Pg	Pg	11 35 53.6	-1.2
PRNI				Sg	Sg	11 36 10.3	+0.2
JLOS		1.27	211	P	Pg	11 35 55.9	-0.6
JLOS				S	Sg	11 36 15.1	+2.1
KRMI	Paran Flat	1.33	283	Pg	Pg	11 35 56.6	-1.1
KRMI				Sg	Sg	11 36 14.8	-0.2
MZDA	Masada	1.65	333	Pn	Pn	11 36 01.9	-0.5
MZDA				Sn	Sn	11 36 24.7	+0.4
YTIR	Yattir	1.80	328	Pn	Pn	11 36 04.1	-0.3
DSI	Dead Sea	1.88	337	Pn	Pn	11 36 06.0	+0.5
DSI				Sn	Sn	11 36 31.2	+1.3
KZIT	Kziot	1.91	305	Pn	Pn	11 36 06.3	+0.4
KZIT				Sn	Sn	11 36 30.0	-0.7
RSHS		1.98	220	P	Pn	11 36 05.7	-1.2
HMDT	Nahal Hemdat	2.48	346	Pn	Pn	11 36 14.4	+0.6
HMDT				Sn	Sn	11 36 46.3	+1.4

IDC 07 12:17:03.0±1.9,**264N**×**12684E,h0**km**,mb3.5**/5,**mb1 3.7**/5, **mb1mx3.5**/17,**mbtmp3.5**/5,**Error ellipse: s-maj=108.6km s-min=26.2km az=68.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
FITZ	Fitzroy Crossi	20.64	183	P	P	12 21 45.1	+0.9
	1.3nm,0.9s,baz=21,slow=14,SNR=3.6						
WRA	Warramunga Arr	23.62	162	P	P	12 22 15.8	-0.3
	1.9nm,0.6s,baz=340,slow=11,SNR=23						
WB2	Warramunga Arr	23.62	162	eP	P	12 22 15.8	-0.3
ASAR	Alice Springs	27.03	166	P	P	12 22 46.8	-0.3
	0.2nm,0.5s,baz=349,slow=7.2,SNR=6.0						
STKA	Stephens Creek	37.08	159	P	P	12 24 15.2	+0.2
	1.1nm,0.7s,baz=350,slow=12,SNR=3.2						
MKAR	Makanchi Array	58.51	326	P	P	12 27 00.8	-0.2
	0.2nm,0.3s,baz=116,slow=6.6,SNR=2.0						

*NIED **07** 12:22:00,4630N×15370E,h11km,Mw4.9 Best double couple: M0 2.86000×10^16 NP1:φs114.00000°,δ86.00000°, λ68.00000°. NP2:φs15.00000°,δ22.00000°,λ171.00000°.*
*SKHL **07** 12:22:06.0±0.9,4605N×15390E,h56km±21km,mb5.9/1, Ms5.0/2,msh5.5/2*
*JMA **07** 12:22:07.6±0.8,4630N×15371E,h30km,M5.2*
*ISCJB **07** 12:22:09.2±0.1,4581N±003×15372E±002,h44km, mb5.2/235,MS4.2/49,Error ellipse: s-maj=4.4km s-min=1.5km az=168.1*
*BJI **07** 12:22:09.2,4635N×15352E,h28km,mB4.9,mb5.0,Ms4.6, Msz4.2*
*MOS **07** 12:22:09.1±1.2,4601N×15361E,h36km,mb5.4/100, MS4.2/28,Error ellipse: s-maj=6.4km s-min=4.1km az=105.5*
*GCMT **07** 12:22:11.5±0.3,46.14N×15379E,h15km±2km,MW4.8/74, Moment Tensor Solution. s19,c24; s74,c107; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr0.04±.10; Mθθ1.45±.10; Mφφ-1.49±.10; Mrθ0.43±.22; Mθφ1.70±.09; Mφr-0.45±.22; Best double couple: M0 2.32800×10^16 NP1:φs21.00000°,δ76.00000°,λ-174.00000°. NP2: φs290.00000°,δ84.00000°,λ-14.00000°. Principal axes: T 2.2480, Plg6.0000°, Azm336.0000°; N 0.1550, Plg75.0000°, Azm88.0000°; P -2.4080, Plg14.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **07** 12:22:11.5±0.2,4623N×15365E,h35km,mb5.2/121, MS4.3/4 Error ellipse: s-maj=4.9km s-min=2.7km az=174.0*
*IDC **07** 12:22:12.1±0.4,4623N×15357E,h43km±2km,mb4.7/31, mb1 4.8/32,mb1mx4.7/34,mbtmp4.7/32,MS4.1/21, Ms1 4.1/21,ms1mx4.0/29,Error ellipse: s-maj=10.4km s-min=9.2km az=154.0*
*SZGRF **07** 12:22:22.3,4784N×15163E,h33km,mb5.4,Kuril Islands, Russia*
ISC 07 12:22:12.0±0.1,**4597N**±003×**15367E**±002,**h46**km, **h46**km±1.0km**:pP-P,n1069,σ0s89**/1096,**mb5.2**/235, **MS4.2**/49,**204C-170D,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KUR	Kuril'sk	4.14	262	eP	Pn	12 23 08.2	-4.3
KUR				AMB	AMB	12 23 09.2	
	8µm,1.0s						
KUR				AMB	AMB	12 23 09.5	
	912nm,0.6s						
KUR				AMB	AMB	12 23 09.5	
	532nm,0.6s						
KUR				AMB	AMB	12 23 09.5	
	4µm,0.6s						
KUR				eS	Sn	12 23 55.5	-4.1
KUR				A		12 23 57.7	
	4µm,0.8s						
KUR				A		12 23 57.7	
	3µm,0.8s						
KUR				A		12 24 08.0	
	10µm,1.0s						
KUR				A		12 24 08.0	
	5µm,1.0s						
SKR	Severo-Kuril's	4.99	18	eP	Pn	12 23 17.5	-6.7
SKR				AMB	AMB	12 23 22.6	
	230nm,0.5s						
SKR				AMB	AMB	12 23 22.6	
	80nm,0.5s						
SKR				AMB	AMB	12 23 22.6	
	400nm,0.5s						
SKR				AMB	AMB	12 23 28.0	
	2µm,4.0s						
SKR				AMB	AMB	12 23 28.0	
	2µm,4.0s						
SKR				eS	Sn	12 24 10.5	-10
SKR				A		12 24 17.5	
	400nm,0.6s						
SKR				A		12 24 17.5	
	570nm,0.6s						
SKR				A		12 24 17.5	
	240nm,0.6s						
SKR				A		12 24 28.0	
	3µm,10.0s						
SKR				A		12 24 28.0	
	4µm,10.0s						
SKR				A		12 24 28.0	
	2µm,10.0s						
SKR				AMS	AMS	12 25 48.0	
	7µm,12.0s						
SKR				AMS	AMS	12 25 48.0	
	5µm,12.0s						
SKR				AMS	AMS	12 25 48.0	
	5µm,12.0s						
SKR				AMS	AMS	12 25 48.0	
	3µm,12.0s						
SKR				AMS	AMS	12 25 48.0	
	7µm,12.0s						
YUK	Yuzh-Kuril'sk	5.86	254	eP	Pn	12 23 35.1	-1.1
YUK				AMB	AMB	12 23 36.2	
	570nm,0.2s						
YUK				eS	Sn	12 24 37.5	-4.6
YUK				A		12 24 46.3	
	2µm,0.8s						
YUK				A		12 24 46.3	
	4µm,0.8s						
YUK				A		12 24 55.5	
	3µm,1.5s						
YUK				A		12 24 55.6	
	5µm,2.0s						
YUK				AMS	AMS	12 25 49.0	
	8µm,13.0s						
YUK				AMS	AMS	12 25 49.0	
	5µm,13.0s						
NEM2	Nemuro 2	6.22	248	P	Pn	12 23 38.3	-2.8
NEM2				eS	Sn	12 24 45.7	-5.2
JRA	Rausu	6.39	255	P	Pn	12 23 42.8	-0.7
JRA				eS	Sn	12 24 55.5	+0.4
JNK	Nakash	6.80	253	P	Pn	12 23 48.1	-1.0
JNK				eS	Sn	12 25 01.0	-4.1
JAK	Akkeshi	7.07	248	P	Pn	12 23 50.3	-2.5
JAK				eS	Sn	12 25 07.2	-4.6
JTKR	Abashiri--Toko	7.21	257	P	Pn	12 23 54.2	-0.4
JTKR				eS	Sn	12 25 16.2	+1.2
JAR	Ashorobuto	7.55	253	P	Pn	12 23 58.4	-0.9
JAR				eS	Sn	12 25 22.7	-0.8
JMP	Maruseppu	7.57	259	P	Pn	12 23 59.3	-0.3
JMP				eS	Sn	12 25 25.0	+1.1
JMP	Maruseppu	7.57	259	P	Pn	12 23 58.8	-0.8
YSS	Yuzh-Sakhalins	7.60	281⇑	iPN	Pn	12 24 01.6	+1.6
YSS				pmax	pmax		
	comp=E,90nm,1.0s						
YSS				pmax	pmax		
	comp=Z,120nm,1.0s						
YSS				MLR	MLR		
	comp=Z,700nm,14.0s						
YSS				MLR	MLR		
	comp=N,1µm,12.0s						
YSS	Yuzh-Sakhalins	7.60	281⇑	iP	Pn	12 24 01.6	+1.6
YSS				AMB	AMB	12 24 02.5	
	comp=N,90nm,1.0s						
YSS				AMB	AMB	12 24 02.5	
	comp=N,120nm,1.0s						
YSS				eS	Sn	12 25 25.0	+0.3
YSS				A		12 25 31.8	
	comp=N,110nm,0.8s						
YSS				eLQ		12 25 52.0	
YSS				AMS	AMS	12 27 38.0	
	comp=N,700nm,14.0s						
YSS				AMS	AMS	12 27 38.0	
	comp=N,1µm,12.0s						
YSS	Yuzh-Sakhalins	7.60	281	ePn	Pn	12 24 00.5	+0.5
PEA0B	Petropavlovsk-	7.61	19	ePn	Pn	12 23 55.1	-5.0
PETK	Petropavlovsk-	7.61	19	P	Pn	12 23 54.3	-5.8
	comp=N,11nm,0.3s,baz=175,slow=12,SNR=225						
PETK				LR	LR	12 27 28.5	
	comp=N,772nm,18.0s,baz=44,slow=43						
JOB	Onbets	7.67	250	P	Pn	12 23 59.7	-1.4
JOB				eS	Sn	12 25 23.0	-3.6
PET	Petropavlovsk	7.77	23	ePN	Pn	12 23 55.2	-7.1
PET				pmax	pmax		
	comp=Z,151nm,0.9s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
PET	Petropavlovsk	7.77	23	ePn	Pn	12 23 55.6	-6.7
PET				eSn	Sn	12 25 21.1	-7.8
JSE	Soyaes	7.86	267	P	Pn	12 24 04.7	+1.1
JKK2	Kamakawa 2	8.03	259	P	Pn	12 24 05.9	0.0
ASAJ	Asahikawa	8.06	261	P	Pn	12 24 05.3	-1.0
	comp=Z,8.5nm,0.3s,baz=90,slow=19,SNR=42						
ASAJ				LR	LR	12 27 21.6	
	comp=Z,880nm,19.7s,baz=323,slow=38						
ASAJ	Asahikawa	8.06	261	P	Pn	12 24 06.6	+0.3
ASAJ	Asahikawa	8.06	261	P	Pn	12 24 06.6	+0.3
ASAJ	Asahikawa	8.06	261	PN	Pn	12 24 05.3	-1.0
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,880nm,19.7s						
JCH	Churui	8.12	249	P	Pn	12 24 05.3	-1.8
JCH				eS	Sn	12 25 32.3	-5.2
JWK2	Keihoku	8.28	270	P	Pn	12 24 12.8	+3.5
JFR	Furan	8.39	254	P	Pn	12 24 11.2	+0.4
JFR				eS	Sn	12 25 43.2	-0.9
UGL	Uglegorsk	8.45	296	ePN	Pn	12 24 12.0	+0.4
UGL				pmax	pmax		
	comp=Z,92nm,0.7s						
UGL				MLR	MLR		
	comp=N,3µm,10.0s						
UGL				MLR	MLR		
	comp=E,2µm,12.0s						
UGL				MLR	MLR		
	comp=Z,1µm,12.0s						
UGL	Uglegorsk	8.45	296	eP	Pn	12 24 12.0	+0.4
UGL				AMB	AMB	12 24 16.5	
	comp=Z,92nm,0.7s						
UGL				eS	Sn	12 25 47.0	+1.6
UGL				A		12 25 48.5	
	comp=Z,157nm,0.8s						
UGL				A		12 25 48.5	
	comp=Z,80nm,0.6s						
JSS	Shosan	8.49	264	P	Pn	12 24 15.6	+3.3
JAB	Ashibetsu	8.51	257	P	Pn	12 24 12.6	+0.1
JEM	Erimo	8.54	246	P	Pn	12 24 12.8	-0.2
JEM				eS	Sn	12 25 44.4	-3.5
JEM	Erimo	8.54	246	P	Pn	12 24 11.7	-1.3
ERM	Erimo	8.54	246	ePn	Pn	12 24 12.0	-1.0
	comp=Z,166nm,0.6s						
JNBK	Urakawa-nobuka	8.67	249	P	Pn	12 24 12.2	-2.5
JNBK				eS	Sn	12 25 44.1	-7.0
JBT2	Biratori 2	8.70	253	P	Pn	12 24 13.9	-1.2
JBT2				eS	Sn	12 25 49.9	-1.9
JHR	Hokuryu	8.77	260	P	Pn	12 24 16.3	+0.2
JEW	Eniwo	9.29	255	P	Pn	12 24 22.2	-0.9
JEW				eS	Sn	12 26 05.5	-0.7
JEW	Eniwo	9.29	255	P	Pn	12 24 22.6	-0.5
JNB	Noboribetsu	9.72	253	P	Pn	12 24 27.5	-1.5
JNB				eS	Sn	12 26 13.2	-3.5
JSK	Shakotan	9.76	259	P	Pn	12 24 30.3	+0.7
JKB	Kayabe	9.98	250	P	Pn	12 24 28.9	-3.8
JKB				eS	Sn	12 26 15.5	-7.8
JSH	Shimam	10.31	256	P	Pn	12 24 36.6	-0.6
JSH	Shimam	10.31	256	P	Pn	12 24 34.6	-2.6
JYM2	Yakumo 2	10.32	253	P	Pn	12 24 35.5	-1.7
JYM2				eS	Sn	12 26 28.1	-3.3
JANG	Nango	10.49	242	P	Pn	12 24 34.9	-4.6
JANG				eS	Sn	12 26 25.6	-10
JTM	Tenmabayashi	10.53	245	P	Pn	12 24 36.6	-3.5
JTM				eS	Sn	12 26 27.6	-9.0
JTM	Tenmabayashi	10.53	245	P	Pn	12 24 35.6	-4.5
JTH	Tanohata	10.54	239	P	Pn	12 24 35.4	-4.9
JTH				eS	Sn	12 26 26.2	-11
JOSM	Okushiri--Mats	10.93	254	P	Pn	12 24 43.4	-2.2
JOM	Ohasama	11.17	239	P	Pn	12 24 44.2	-4.8
OFUJ	Ofunato	11.21	236	P	Pn	12 24 45.4	-4.0
OFUJ				eS	Sn	12 26 43.9	-9.3
JRG	Rokugo	11.62	240	P	Pn	12 24 50.3	-4.7
JRG				eS	Sn	12 26 55.3	-7.9
JIO	Ouri	11.81	235	P	Pn	12 24 53.5	-4.2
JIO				eS	Sn	12 26 56.4	-12
JYA	Atsumi	12.68	239	P	Pn	12 25 06.6	-2.9
JFK	Kawauchi	12.85	233	P	Pn	12 25 07.4	-4.4
JFY	Yanaizu	13.48	236	P	Pn	12 25 17.4	-3.0
JYT	Yasato	14.05	231	P	Pn	12 25 23.2	-5.0
JRY	Ryogami san	14.91	233	P	Pn	12 25 37.4	-2.3
MAJO	Matsushiro	14.94	236	eP	Pn	12 25 37.5	-2.5
MAT	Matsushiro	14.94	236	P	Pn	12 25 37.9	-2.1
MAT				S	Sn	12 28 24.0	-0.2
MAT	Matsushiro	14.94	236	P	Pn	12 25 36.7	-3.3
MAT				X		12 25 46.8	
MJAR	Matsushiro Arr	14.94	236	P	Pn	12 25 36.8	-3.2
	comp=Z,0.7nm,0.3s,baz=31,slow=12,SNR=17						
MJAR				LR	LR	12 32 28.9	
	comp=Z,685nm,18.3s,baz=50,slow=41						
MJAR	Matsushiro Arr	14.94	236	P	Pn	12 25 36.8	-3.2
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,685nm,18.3s						
KLR	Kul'dur	15.13	290	eP	Pn	12 25 38.0	-4.4
VLA	Vladivostok	15.78	267	eP	Pn	12 25 48.3	-2.5
VLA				pmax	pmax		
	comp=Z,81nm,0.9s						
VLA				MLR	MLR		
	comp=Z,500nm,11.7s						
VLA	Vladivostok	15.78	267	eP	Pn	12 25 49.0	-1.8
MDJ	Mudanjiang	16.98	274	P	Pn	12 26 04.8	-1.2

MDJ AP pP 12 26 14.6 -3.5
MDJ XP sP 12 26 19.2 -4.7
MDJ S **S** **12 29 13.4 -8.5**
MDJ SCP ScP 12 34 22.8 +2.2
MDJ PCS PcS 12 34 29.4 +3.7
MDJ SCS ScS 12 37 59.0 -1.1
MDJ AMB AMB
comp=Z,72nm,1.3s
MDJ AMB AMB
comp=Z,194nm,5.0s
MDJ LR LR
comp=N,624nm,25.3s
MDJ LR LR
comp=E,223nm,26.5s
MDJ Mudanjiang 16.98 274 *e*Pn **Pn** **12 26 04.0 -2.0**
comp=E,110nm,1.2s
CN2 Changchun 20.07 274 *e*P **P** **12 26 39.7 -1.6**
CN2 *e*AP 12 26 48.3
CN2 *e*XP sP 12 26 52.8 -5.1
CN2 PP 12 26 59.0
CN2 PPP 12 27 08.2
CN2 *e*S **S** **12 30 18.6 -5.6**
CN2 AMB AMB
comp=Z,20nm,0.6s
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1μm,11.0s,MS4.6
CN2 LR LR
comp=E,800nm,11.0s,MS4.6
CN2 LR LR
comp=Z,1μm,16.0s,MS4.3
CLNS Chul'man 20.82 312 *e*P **P** **12 26 47.0 -2.3**
CLNS *e* 12 26 58.8
CLNS *e*S **S** **12 30 38.3 -0.5**
CLNS *e*SS 12 31 05.7
CLNS *e* 12 38 06.1
CLNS pmax pmax
comp=Z,64nm,0.9s
CLNS pmax pmax
comp=E,45nm,1.4s
CLNS pmax pmax
comp=N,37nm,1.2s
CLNS smax
comp=N,64nm,1.3s
CLNS smax
comp=E,18nm,1.2s
CLNS MLR MLR
comp=Z,666nm,14.0s,MS4.2
CLNS MLR MLR
comp=N,657nm,17.0s,MS4.1
CLNS MLR MLR
comp=E,157nm,13.0s,MS4.1
KSRS Korea Array 20.95 255 P **P** **12 26 51.5 +0.7**
comp=E,22nm,0.7s,baz=61,slow=9.8,SNR=58
KSRS LR LR 12 34 33.2
comp=E,418nm,21.7s,MS3.8,baz=54,slow=35
KSRS Korea Array 20.95 255 P **P** **12 26 51.6 +0.8**
KSRS pmax pmax
comp=Z,22nm,0.7s
KSRS MLR MLR
comp=Z,418nm,21.7s,MS3.8
YAK Yakutsk 21.19 328 *e*P **P** **12 26 48.2 -4.9**
YAK *e* 12 27 04.2
YAK *e*S **S** **12 30 39.2 -6.7**
YAK *e**SS sS 12 30 54.1 -9.4
YAK *e*SS 12 31 02.9
YAK *e*SSS 12 31 14.0
YAK pmax pmax
comp=E,31nm,1.0s
YAK pmax pmax
comp=N,31nm,1.2s
YAK pmax pmax
comp=Z,152nm,1.1s,mb5.2
YAK smax
comp=N,344μm,2.3s
YAK smax
comp=E,337μm,2.2s
YAK MLR MLR
comp=E,277nm,12.0s,MS4.0
YAK MLR MLR
comp=N,280nm,12.0s,MS4.0
YAK MLR MLR
comp=Z,244nm,11.0s,MS3.9
YAK Yakutsk 21.19 328 *e*P **P** **12 26 48.9 -4.2**
INCN Inchon 21.81 257 *e*P **P** **12 27 00.8 +0.8**
comp=Z,78nm,0.8s,mb5.2
SNY Shenyang 22.01 270 ⇑P **P** **12 27 02.1 0.0**
SNY AMB AMB
comp=Z,57nm,0.7s,mb5.1
SNY AMB AMB
comp=Z,150nm,3.5s
SNY LR LR
comp=N,596nm,11.8s
SNY LR LR
comp=Z,661nm,18.0s
HIA Hailar 22.99 291 *e*P **P** **12 27 09.0 -3.4**
HIA pmax pmax
comp=Z,13nm,0.8s
HIA Hailar 22.99 291 *e*P **P** **12 27 09.0 -3.4**
comp=Z,13nm,0.8s,mb4.4
BILL Bilibino 23.07 12*d* *i*P **P** **12 27 09.1 -4.0**
BILL *e*S **S** **12 31 16.4 -3.9**
BILL pmax pmax
comp=Z,162nm,1.2s,mb5.3
BILL MLR MLR
comp=Z,800nm,17.0s,MS4.2
BILL Bilibino 23.07 12 *e*P **P** **12 27 09.2 -3.9**
comp=Z,127nm,0.9s,mb5.3
DL2 Dalian 24.56 265 P **P** **12 27 28.3 +1.0**
DL2 S **S** **12 31 47.1 +2.2**
DL2 AMB AMB
comp=Z,20nm,0.8s,mb4.7
DL2 LR LR
comp=N,190nm,11.7s,MS4.0
DL2 LR LR
comp=E,270nm,12.5s,MS4.0
DL2 LR LR
comp=Z,250nm,12.9s,MS3.9
BOD Bodaibo 26.79 311 *e*P **P** **12 27 43.5 -3.7**
BOD pmax pmax
comp=Z,35nm,0.7s,mb5.0
BJI Beijing 27.86 271 P **P** **12 28 00.8 +3.7**
BJI S **S** **12 32 39.0 +1.8**
BJI AMB AMB
comp=Z,23nm,0.8s,mb4.9
BJI LR LR
comp=N,637nm,14.3s,MS4.5
BJI LR LR
comp=E,650nm,17.4s,MS4.5
BJI LR LR
comp=Z,459nm,20.4s,MS4.0
BJT Baijiatuau 27.88 271 *e*P **P** **12 27 57.7 +0.5**
BJT pmax pmax
comp=Z,12nm,0.5s
BJT Baijiatuau 27.88 271 *e*P **P** **12 27 57.7 +0.5**
comp=Z,12nm,0.5s,mb4.8
TIXI Tiksi 28.32 344 *e*P **P** **12 27 56.0 -4.9**
TIXI *e*S **S** **12 32 45.4 +1.6**
TIXI pmax pmax
comp=Z,30nm,1.3s,mb4.8
TIXI MLR MLR
comp=Z,452nm,11.0s,MS4.3
TIXI Tiksi 28.32 344 *e*P **P** **12 27 56.5 -4.4**
comp=Z,14nm,0.8s,mb4.6
TNA Tin City 28.47 33 *e*P **P** **12 28 08.5 +6.3**
comp=Z,36nm,0.7s,mb5.1
SSE Sheshan 29.19 251 P **P** **12 28 11.5 +2.5**
SSE AP pP 12 28 22.3 +1.3
SSE XP sP 12 28 27.5 +1.0
SSE S **S** **12 33 00.8 +2.7**
SSE XS sS 12 33 19.8 +1.4
SSE AMB AMB
comp=Z,21nm,1.2s,mb4.7
SSE AMB AMB
comp=Z,80nm,4.9s
SSE LR LR
comp=N,127nm,15.6s,MS4.0
SSE LR LR
comp=E,237nm,15.5s,MS4.0
SSE LR LR
comp=Z,319nm,15.4s,MS4.0
NJ2 Nanjing 30.15 255 *e*P **P** **12 28 21.1 +3.7**
NJ2 AP pP 12 28 30.7 +1.2
NJ2 XP sP 12 28 34.4 -0.6
NJ2 S **S** **12 33 18.0 +4.8**
NJ2 XS sS 12 33 34.5 +1.0
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
NJ2 AMB AMB
comp=Z,100nm,5.8s
NJ2 LR LR
comp=N,120nm,24.2s,MS3.8
NJ2 LR LR
comp=E,250nm,24.8s,MS3.8
NJ2 LR LR
comp=Z,250nm,19.9s,MS3.9
HHC Hu-ho-hao-te 30.74 276 *e*P **P** **12 28 23.9 +1.3**
HHC AP pP 12 28 33.9 -0.8
HHC XP sP 12 28 38.0 -2.2
HHC PP PP 12 29 25.1 -7.3
HHC PCP PcP 12 31 20.0 +0.8
HHC S **S** **12 33 24.2 +1.9**
HHC XS sS 12 33 39.6 -3.0
HHC SCP ScP 12 34 59.3 +1.4
HHC PCS PcS 12 35 03.0 0.0
HHC SS SS 12 35 07.4 -27
HHC SCS ScS 12 38 54.8 +0.4
HHC AMB AMB
comp=Z,36nm,0.5s,mb5.5
HHC AMB AMB
comp=Z,104nm,6.5s
HHC LR LR
comp=N,811nm,15.7s,MS4.6
HHC LR LR
comp=E,550nm,14.3s,MS4.6
HHC LR LR
comp=Z,656nm,13.5s,MS4.5
ULN Ulaanbaatar 31.52 291 *i*P **P** **12 28 28.3 -1.1**
ULN Ulaanbaatar 31.52 291 *e*P **P** **12 28 27.7 -1.7**
SONM Songino Array 31.96 291 P **P** **12 28 31.9 -1.3**
comp=Z,3.8nm,0.7s,mb4.3,baz=66,slow=7.9,SNR=20
SONM pP pP 12 28 43.4 -2.0
comp=Z,4.0nm,0.8s,baz=75,slow=7.5,SNR=5.2
SONM LR LR 12 41 57.6
comp=Z,257nm,18.8s,MS3.9,baz=77,slow=37
SONM Songino Array 31.96 291 P **P** **12 28 31.9 -1.3**
SONM *PP pP 12 28 43.4 -2.0
SONM pmax pmax
comp=Z,4.0nm,0.7s
SONM MLR MLR
comp=Z,257nm,18.8s
TTA Tatalina 32.76 41 *e*P **P** **12 28 39.4 -0.6**
TTA pP 12 28 51.1 -1.1
TTA Tatalina 32.76 41 *e*P **P** **12 28 39.6 -0.4**
SVW2 Sparrevohn 32.78 44 *e*P **P** **12 28 39.9 -0.4**
TLY Talaya 32.88 299 *e*P **P** **12 28 39.6 -1.7**
TLY *e*S **S** **12 33 49.7 -5.8**
TLY *e*SSS 12 36 14.6
TLY pmax pmax
comp=Z,20nm,0.8s,mb5.1
TLY MLR MLR
comp=Z,399nm,14.0s,MS4.3
TLY Talaya 32.88 299 *i*P **P** **12 28 39.6 -1.7**
GUMO Guam 33.12 196 LR LR 12 41 19.5
comp=Z,235nm,18.3s,MS3.9,baz=269,slow=34
ZAK Zakamensk 33.36 296⇑ *i*P **P** **12 28 43.6 -1.8**
ZAK *e* 12 31 25.8
ZAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
IMA2 Indian Mountai 34.22 35 *e*P **P** **12 28 52.0 -0.7**
KDAK Kodiak Island 34.30 50 P **P** **12 28 51.1 -2.4**
comp=Z,8.6nm,0.7s,mb4.8,baz=273,slow=5.8,SNR=10.0
KDAK LR LR 12 42 26.0
comp=Z,318nm,20.9s,MS4.0,baz=249,slow=36
PPLA Purkeypile 34.50 41 *e*P **P** **12 28 54.8 -0.3**
comp=Z,105nm,1.4s,mb5.6
CHUM Lake Minchumin 34.52 39 *e*P **P** **12 28 51.7 -3.6**
comp=Z,16nm,0.9s,mb4.9
KTH Kantishna Hill 35.11 40 *e*P **P** **12 28 59.7 -0.7**
comp=Z,107nm,1.4s,mb5.6
TRF Thorofare Moun 35.39 40 *e*P **P** **12 29 01.4 -1.4**
comp=Z,17nm,0.8s,mb5.0
XAN Xi'an 35.84 267 P **P** **12 29 07.4 +0.3**
XAN AP pP 12 29 17.1 -2.2
XAN XP sP 12 29 21.2 -3.5
XAN PP PP 12 30 30.0 +1.0
XAN S **S** **12 34 40.1 -1.4**
XAN XS sS 12 34 57.1 -4.9
XAN PS 12 35 22.1
XAN SS SS 12 36 59.2 -20
XAN AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
XAN AMB AMB
comp=Z,44nm,5.8s
XAN LR LR
comp=N,116nm,15.4s,MS3.9
XAN LR LR
comp=E,153nm,18.8s,MS3.9
XAN LR LR
comp=Z,275nm,17.1s,MS4.1
PMR Palmer 35.90 43 *e*P **P** **12 29 04.7 -2.5**
PMR pmax pmax
comp=Z,35nm,1.2s,mb5.2
PMR Palmer 35.90 43 *e*P **P** **12 29 06.4 -0.8**
comp=Z,16nm,1.0s,mb4.9
MCK McKinley 36.00 40 *e*P **P** **12 29 07.2 -0.9**
COLA College 36.52 38 P **P** **12 29 11.6 -0.8**
COLA pmax pmax
comp=Z,29nm,0.9s,mb5.1
COLA College 36.52 38⇑ *i*P **P** **12 29 11.6 -0.8**
DIV Divide 37.54 44 *e*P **P** **12 29 20.7 -0.5**
comp=Z,25nm,0.8s,mb5.0
BMRM Bremner River 38.12 44 *e*P **P** **12 29 24.8 -1.3**
LZH Lanzhou 38.31 273 *e*P **P** **12 29 29.2 +1.3**
LZH AP pP 12 29 42.5 +2.2
LZH PP PP 12 31 01.0 +5.0
LZH S **S** **12 35 20.0 +1.1**
LZH XS sS 12 35 37.2 -2.3
LZH SS SS 12 38 00.0 -8.5
LZH AMB AMB
comp=Z,42nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,110nm,4.0s
LZH LR LR
comp=N,507nm,14.6s
LZH LR LR
comp=Z,557nm,15.4s,MS4.5
EGAK Eagle 39.38 38 *e*P **P** **12 29 35.2 -1.4**
comp=Z,35nm,0.8s,mb5.1
GTA Gaotai 39.48 280 P **P** **12 29 39.2 +1.5**
GTA AP pP 12 29 48.4 -1.7
GTA XP sP 12 29 52.1 -3.4
GTA PP PP 12 31 15.3 +6.5
GTA PCP PcP 12 31 51.1 +6.4
GTA PCS PcS 12 35 37.6 +3.0
GTA S **S** **12 35 39.4 +2.9**
GTA XS sS 12 35 54.3 -2.8
GTA SS SS 12 38 25.6 -6.3
GTA AMB AMB
comp=Z,17nm,0.8s,mb4.8
GTA AMB AMB
comp=Z,86nm,7.2s
GTA LR LR
comp=N,354nm,13.5s,MS4.5
GTA LR LR
comp=E,358nm,12.0s,MS4.5
GTA LR LR
comp=Z,301nm,15.0s,MS4.2
DAWY Dawson 40.20 39 *e*P **P** **12 29 42.6 -0.8**
CD2 Chengdu 41.20 267 *e*P **P** **12 29 52.9 +0.8**
CD2 AP pP 12 30 02.8 -1.7
CD2 XP sP 12 30 06.9 -3.0
CD2 PP PP 12 31 31.2 +3.5
CD2 PCP PcP 12 31 53.2 +2.8
CD2 PCS PcS 12 35 43.0 +1.4
CD2 S **S** **12 36 02.5 +0.1**
CD2 XS sS 12 36 19.0 -4.2
CD2 SS SS 12 39 01.1 -5.4
CD2 SCS ScS 12 39 52.9 +0.7
CD2 AMB AMB
comp=Z,40nm,0.5s,mb5.3
CD2 AMB AMB
comp=Z,120nm,6.2s
CD2 LR LR
comp=N,420nm,13.2s,MS4.6
CD2 LR LR
comp=E,320nm,14.4s,MS4.6
CD2 LR LR
comp=Z,220nm,13.2s,MS4.2
HYT Haines Junctio 41.57 44 *e*P **P** **12 29 57.9 +3.2**
GYA Guiyang 41.93 259⇓ *i*P **P** **12 29 59.1 +1.0**
GYA AP pP 12 30 09.1 -1.4
GYA XP sP 12 30 13.4 -2.5
GYA PP PP 12 31 40.2 +4.6
GYA PCP PcP 12 31 53.2 +0.3
GYA SCP ScP 12 35 41.1 +1.8
GYA PCS PcS 12 35 45.0 +0.4
GYA S **S** **12 36 16.3 +3.1**
GYA XS sS 12 36 33.1 -0.9
GYA SS SS 12 39 17.5 -3.5
GYA SCS ScS 12 39 57.2 +0.5
GYA AMB AMB
comp=Z,40nm,1.1s,mb5.0
GYA AMB AMB
comp=Z,160nm,5.0s
GYA LR LR
comp=N,440nm,13.0s,MS4.7
GYA LR LR
comp=E,430nm,13.2s,MS4.7
GYA LR LR
comp=Z,590nm,14.4s,MS4.6
ZAA0 Zalesovo Array 43.38 307 *e*P **P** **12 30 06.7 -2.8**
ZALV Zalesovo Beam 43.38 307 P **P** **12 30 06.5 -3.0**
comp=Z,9.1nm,0.5s,mb4.8,baz=58,slow=6.9,SNR=30
ZALV pP pP 12 30 19.3 -2.7
comp=Z,2.4nm,0.5s,baz=70,slow=14,SNR=3.5
ZALV sP sP 12 30 24.9 -2.5
comp=Z,5.5nm,0.7s,baz=66,slow=7.2,SNR=3.4
ZALV PcP PcP 12 31 57.2 0.0
comp=Z,5.9nm,0.9s,baz=90,slow=3.0,SNR=4.9
ZALV LR LR 12 47 57.5
comp=Z,81nm,19.8s,MS3.6,baz=65,slow=36
ZALV Zalesovo Beam 43.38 307 P **P** **12 30 06.5 -3.0**
ZALV pP pP 12 30 19.3 -2.7
ZALV sP sP 12 30 24.9 -2.5
ZALV PcP PcP 12 31 57.2 0.0
ZALV LR LR 12 47 57.5
ZAL Zalesovo 43.40 307 P **P** **12 30 06.5 -3.1**
ZAL *PP pP 12 30 19.3 -2.8
ZAL 12 31 57.2
ZAL pmax pmax
comp=Z,9.0nm,0.5s
ZAL MLR MLR
comp=Z,81nm,19.8s
NVS Novosibirsk 43.97 308 *e*P **P** **12 30 11.2 -3.0**
NVS *e* 12 31 54.8
NVS *e* 12 40 09.1
NVS pmax pmax
comp=N,4.0nm,1.0s
NVS pmax pmax
comp=E,8.0nm,1.0s
NVS pmax pmax
comp=Z,14nm,1.0s,mb4.7
QIZ Qiongzhong 44.90 248 P **P** **12 30 24.4 +2.3**
QIZ PP PP 12 32 11.6 +4.1
QIZ S **S** **12 37 01.7 +4.9**
QIZ XS sS 12 37 17.7 0.0
QIZ AMB AMB
comp=Z,13nm,1.4s,mb4.6
QIZ LR LR
comp=E,273nm,18.3s
QIZ LR LR
comp=Z,296nm,13.8s,MS4.4
KMI Kunming 45.49 261 P **P** **12 30 24.5 -2.2**
KMI AP pP 12 30 39.2 0.0
KMI PP PP 12 32 12.6 -1.0
KMI PPP 12 32 59.6
KMI S **S** **12 37 06.6 +1.5**
KMI SS SS 12 40 25.4 -3.9
KMI SSS 12 41 34.1
KMI AMB AMB
comp=Z,16nm,1.5s,mb4.6
KMI AMB AMB
comp=Z,65nm,3.1s
KMI LR LR
comp=N,218nm,14.2s,MS4.3
KMI LR LR
comp=E,173nm,17.7s,MS4.3
KMI LR LR
comp=Z,181nm,20.5s,MS4.0
WMQ Urumqi 45.57 292 *e*P **P** **12 30 27.6 +0.5**
WMQ AP pP 12 30 37.5 -2.2
WMQ XP sP 12 30 40.8 -4.2
WMQ PCP PcP 12 32 09.0 +4.1
WMQ *e*S **S** **12 37 06.5 +0.5**
WMQ XS sS 12 37 22.0 -4.9
WMQ SS SS 12 40 20.0 -10
WMQ AMB AMB
comp=Z,41nm,0.6s,mb5.5
WMQ AMB AMB
comp=Z,142nm,5.6s
WMQ LR LR
comp=N,797nm,12.0s,MS4.9
WMQ LR LR
comp=E,502nm,14.6s,MS4.9
WMQ LR LR
comp=Z,312nm,16.0s,MS4.3
DLBC Dease Lake 45.87 45 *e*P **P** **12 30 29.5 +0.2**
DLBC *e*pP pP 12 30 38.6 -3.2
DLBC *e*sP sP 12 30 44.4 -2.7
MK31 Makanchi Array 47.65 298 *i*P **P** **12 30 41.8 -1.5**
MK31 pmax pmax
comp=Z,48nm,0.8s,mb5.6
MK31 Makanchi Array 47.65 298 *i*P **P** **12 30 41.9 -1.4**
MKAR Makanchi Array 47.65 298 P **P** **12 30 41.8 -1.5**
comp=Z,25nm,0.7s,mb5.3,baz=67,slow=8.1,SNR=202
MKAR pP pP 12 30 54.0 -1.9
comp=Z,12nm,0.9s,baz=52,slow=8.3,SNR=5.0
MKAR PcP PcP 12 32 12.0 -0.2
comp=Z,2.9nm,0.6s,baz=48,slow=3.5,SNR=2.5
MKAR LR LR 12 51 53.8
comp=Z,426nm,18.1s,MS4.5,baz=64,slow=38
MKAR Makanchi Array 47.65 298 P **P** **12 30 41.8 -1.5**
MKAR *PP pP 12 30 54.0 -1.9
MKAR 12 32 12.0
MKAR pmax pmax
comp=Z,25nm,0.7s
MKAR MLR MLR
comp=Z,426nm,18.1s
MKAR Makanchi Array 47.65 298 P **P** **12 30 41.8 -1.5**
MKAR pP pP 12 30 54.0 -1.9
MKAR PcP PcP 12 32 12.0 -0.2
MKAR LR LR 12 51 53.8
KURK Kurchatov 48.12 304 P **P** **12 30 44.0 -2.9**
comp=Z,331nm,0.6s,mb6.5,SNR=24
KURK Kurchatov 48.12 304 P **P** **12 30 44.9 -2.0**
SNR=14
KURK Kurchatov 48.12 304 P **P** **12 30 45.0 -1.9**
comp=Z,30nm,0.7s,mb5.4,baz=68,slow=8.3,SNR=57
KURK Kurchatov 48.12 304 *e*P **P** **12 30 44.9 -2.0**
LSA Lhasa 50.71 274 *e*P **P** **12 31 09.0 +2.1**
LSA pmax pmax
comp=Z,23nm,0.7s,mb5.2
LSA Lhasa 50.71 274 *e*P **P** **12 31 09.0 +2.1**
comp=Z,23nm,0.7s,mb5.2
CHRT Chiangrai 51.02 258 P **P** **12 31 11.0 +1.6**
NANT Nan 51.14 256⇑ P **P** **12 31 10.0 -0.2**
comp=Z,121nm,0.9s,mb5.8
YKW3 Yellowknife Ar 51.29 36 *e*P **P** **12 31 10.4 -0.4**
YKA Yellowknife Ar 51.32 36 P **P** **12 31 09.8 -1.2**
comp=Z,12nm,0.8s,mb4.9,baz=295,slow=7.1,SNR=13
YKA pP pP 12 31 23.6 -0.2
comp=Z,9.6nm,0.7s,baz=295,slow=6.9,SNR=6.7
YKA LR LR 12 54 35.4
comp=Z,128nm,21.2s,MS3.9,baz=240,slow=38
YKA Yellowknife Ar 51.32 36 P **P** **12 31 09.8 -1.3**
YKA *PP pP 12 31 23.6 -0.2
YKA pmax pmax
comp=Z,12nm,0.8s
YKA MLR MLR
comp=Z,128nm,21.2s
YKA Yellowknife Ar 51.32 36 P **P** **12 31 09.8 -1.2**
YKA pP pP 12 31 23.6 -0.2
YKA LR LR 12 54 35.4
BVA0 Borovoye Array 51.65 310 *i*P **P** **12 31 11.3 -2.4**
BVA0 pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
BVAR Borovoye Array 51.65 310 P **P** **12 31 11.7 -2.0**
comp=Z,8.9nm,0.6s,mb4.9,baz=54,slow=9.0,SNR=33
BVAR pP pP 12 31 23.7 -2.7
comp=Z,4.1nm,0.6s,baz=58,slow=20,SNR=5.1
BVAR Borovoye Array 51.65 310 P **P** **12 31 11.7 -2.0**
BVAR *PP pP 12 31 23.7 -2.7
BVAR pmax pmax
comp=Z,9.0nm,0.6s

BRVK Borovoye 51.69 310 P P 12 31 10.1 -3.9
comp=Z,166nm,0.6s,mb6.1,SNR=6.9
BRVK Borovoye 51.69 310⇑ *e*P P 12 31 12.5 -1.5
CHG Chiang Mai 52.32 258 ⇓P P 12 31 24.1 +5.0
comp=Z,15nm,0.9s,mb4.9
CHTO Chiang Mai 52.32 258 *e*P P 12 31 20.2 +1.1
CHTO pmax pmax
comp=Z,20nm,1.2s,mb4.9
CHTO Chiang Mai 52.32 258 *e*P P 12 31 20.2 +1.1
comp=Z,20nm,1.2s,mb4.9
CMAR Chiang Mai Arr 52.57 257 P P 12 31 22.0 +1.1
comp=Z,2.6nm,0.6s,mb4.3,baz=35,slow=8.0,SNR=21
CMAR LR LR 12 58 10.0
comp=Z,202nm,18.4s,MS4.2,baz=57,slow=41
CMAR Chiang Mai Arr 52.57 257 P P 12 31 22.0 +1.1
CMAR pmax pmax
comp=Z,3.0nm,0.6s
CMAR MLR MLR
comp=Z,202nm,18.4s
KBS Kingsbay 53.33 351 *e*P P 12 31 24.3 -1.5
KBS Kingsbay 53.33 351⇑ *i*P P 12 31 24.3 -1.5
SPITS Spitsbergen Ar 53.45 350 P P 12 31 24.2 -2.5
comp=Z,21nm,0.8s,mb5.1,baz=36,slow=7.3,SNR=16
SPITS Spitsbergen Ar 53.45 350 P P 12 31 24.2 -2.5
SPITS pmax pmax
comp=Z,21nm,0.9s
ULHL Ulahol 53.65 296 P P 12 31 28.8 +0.2
SNR=30
TKM2 Tokmak 2 53.69 297 *e*P P 12 31 28.5 -0.4
TKM2 pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
TKM2 Tokmak 2 53.69 297 P P 12 31 28.9 0.0
SNR=21
TKM2 Tokmak 2 53.69 297 *e*P P 12 31 28.5 -0.4
comp=Z,8.9nm,0.6s,mb4.9
USP Ospenovka 54.19 298 P P 12 31 32.5 0.0
SNR=16
KBK Karagaybulak 54.23 297 P P 12 31 33.0 +0.2
SNR=6.4
FRU Bishkek 54.35 297⇑ *i*P P 12 31 33.0 -0.7
FRU *i* pP 12 31 46.0 -0.5
KZA Kyzart 54.36 296 P P 12 31 34.9 +1.2
SNR=14
A06A Chilliwack 54.47 54 ⇓P P 12 31 33.2 -1.2
baz=54
AAK Ala-Archa 54.53 297 P P 12 31 35.1 +0.1
SNR=15
TAPN Taplejung 54.53 274 *e*P P 12 31 36.9 +1.7
comp=Z,55nm,0.9s,mb5.6
SVE Sverdlovsk 54.67 318⇓ *e*P P 12 31 35.0 -0.8
SVE *e*PPP 12 34 56.4
SVE *e*S **S** **12 39 15.1 +3.0**
SVE *e*SS SS 12 42 47.0 -7.7
SVE *e*SSS 12 44 58.1
SVE pmax pmax
comp=Z,26nm,0.7s,mb5.4
SVE MLR MLR
comp=Z,404nm,15.0s,MS4.6
JCW Jim Creek 54.68 55 *e*P P 12 31 35.5 -0.5
UCH Uchtor 54.74 297 *e*P P 12 31 36.9 +0.4
comp=Z,6.4nm,1.0s,mb4.6
EKS2 Erkin-Say 54.96 298 P P 12 31 38.2 +0.1
SNR=25
EKS2 Erkin-Say 54.96 298 *e*P P 12 31 37.7 -0.4
comp=Z,24nm,0.7s,mb5.3
ODAN Odare 55.06 274 *e*P P 12 31 40.8 +1.7
comp=Z,31nm,0.6s,mb5.5
C05A Tolt Reservoir 55.09 55 ⇑P P 12 31 38.5 -0.5
baz=55
A07A Ashnola River, 55.10 53 ⇑P P 12 31 38.3 -0.8
baz=55,SNR=5.6
D05A Enumclaw 55.18 56 ⇑P P 12 31 38.9 -0.8
baz=55
AML Almayashu 55.30 297 P P 12 31 41.3 +0.7
SNR=10.0
AML Almayashu 55.30 297 *e*P P 12 31 40.9 +0.3
comp=Z,9.0nm,0.6s,mb5.0
KSH Kashi 55.31 293 *e*P P 12 31 42.0 +1.3
KSH *e*AP pP 12 31 52.1 -1.4
KSH *e*XP sP 12 31 56.0 -2.8
KSH *e*PCP PcP 12 32 43.6 +2.7
KSH *e*PP PP 12 33 48.2 +3.8
KSH *e*PPP 12 35 01.0
KSH *e*SCP ScP 12 36 38.1 +2.4
KSH *e*PCS PcS 12 36 42.2 +1.3
KSH *e*S **S** **12 39 18.9 -2.4**
KSH *e*XS sS 12 39 39.2 -3.5
KSH *e*SCS ScS 12 41 26.0 +0.2
KSH *e*SS SS 12 43 06.1 +0.5
KSH AMB AMB
comp=Z,133nm,1.8s,mb5.7
KSH LR LR
comp=N,949nm,6.2s
KSH LR LR
comp=E,1μm,13.5s
KSH LR LR
comp=Z,768nm,12.2s,MS5.0
JIRN Jiri 55.40 275 *e*P P 12 31 43.5 +2.0
comp=Z,77nm,0.8s,mb5.8
GUN Gumba 55.46 276 *e*P P 12 31 44.3 +2.4
comp=Z,22nm,0.4s,mb5.6
RAMN Ramite 55.55 275 *e*P P 12 31 44.1 +1.5
comp=Z,120nm,0.9s,mb5.9
B07A Winthrop 55.57 54 ⇑P P 12 31 42.2 -0.2
baz=55
F04A Amboy 55.61 57 ⇓P P 12 31 42.1 -0.6
baz=55
NLW Nelson Butte 55.65 54 P P 12 31 42.8 -0.2
A08A Turner Farm, O 55.77 53 ⇑P P 12 31 43.0 -0.8
baz=55,SNR=9.4
D06A Cle Elum 55.84 55 ⇑P P 12 31 43.8 -0.6
baz=56
ARU Arti 55.85 318 P P 12 31 43.4 -0.9
comp=Z,346nm,0.7s,mb6.5,SNR=9.1
ARU Arti 55.85 318*c i*P P 12 31 42.1 -2.2
ARU *e* 12 32 42.3
ARU *e*S **S** **12 39 25.5 -2.4**
ARU *e*SS SS 12 43 10.6 -2.7
ARU pmax pmax
comp=Z,32nm,0.6s,mb5.5
ARU Arti 55.85 318 *e*P P 12 31 42.5 -1.8
ETW Entiat 55.91 55 P P 12 31 44.6 -0.2
KKN Kakani 55.95 276 *e*P P 12 31 47.4 +2.0
PKI Pulchoki 55.99 276 *e*P P 12 31 48.1 +2.3
comp=Z,20nm,0.6s,mb5.4
PKIN Phulchoki 56.00 276 *e*P P 12 31 47.2 +1.4
comp=Z,24nm,0.6s,mb5.4
C07A Waterville 56.02 54 ⇓P P 12 31 44.7 -1.0
baz=56
B08A Colville Reser 56.06 53 ⇑P P 12 31 44.8 -1.1
baz=56,SNR=7.6
A09A Danville 56.14 52 ⇑P P 12 31 46.1 -0.4
baz=56,SNR=10
EBG Ellensburg 56.15 55 P P 12 31 46.8 +0.2
I03A Eugene 56.17 60 ⇓P P 12 31 47.3 +0.5
baz=56
DMN Daman 56.18 276 *e*P P 12 31 48.6 +1.5
comp=Z,65nm,0.8s,mb5.7
GKN Gorkha 56.26 277 *e*P P 12 31 49.3 +1.6
comp=Z,52nm,0.4s,mb5.9
J02A Umpqua 56.33 60 ⇓P P 12 31 48.1 +0.2
baz=56
HOOD Mount Hood Mea 56.39 58 *e*P P 12 31 48.9 +0.5
H04A Detroit Lake 56.43 58 ⇑P P 12 31 48.4 -0.2
baz=56,SNR=6.5
C08A Higginbotham F 56.54 54 ⇑P P 12 31 49.0 -0.3
baz=56
EDM Edmonton 56.58 46 *e*P P 12 31 48.8 -0.8
G05A Wamic 56.63 57 ⇑P P 12 31 50.1 0.0
baz=56
DANN Dangsing 56.65 278 *e*P P 12 31 52.6 +2.2
comp=Z,83nm,0.5s,mb6.0
F06A Goldendale 56.66 57 ⇑P P 12 31 50.2 0.0
baz=56
B09A Rice 56.69 53 ⇓P P 12 31 49.7 -0.7
baz=56
J03A Ideyld Park 56.69 60 ⇑P P 12 31 50.4 -0.1
baz=56
A10A Northport 56.71 52 ⇓P P 12 31 49.9 -0.6
baz=56,SNR=5.9
KK31 Karatay Array 56.72 300 P P 12 31 49.6 -1.1
KK31 pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
KK31 Karatay Array 56.72 300 *i*P P 12 31 49.6 -1.1
E07A Sunnyside 56.76 55 ⇓P P 12 31 50.8 -0.1
baz=56

I04A Tendick Farm, 56.79 59 ⇑P P 12 31 51.2 0.0
baz=56
OD2 Odessa Site #2 56.94 54 *e*P P 12 31 51.0 -1.3
C09A Chrisman Ranch 56.96 53 ⇓P P 12 31 51.9 -0.5
baz=57
CROR Criterion Ridg 56.97 58 P P 12 31 53.0 +0.5
RSW Rattlesnake Hi 57.00 55 *e*P P 12 31 52.4 -0.2
D08A Wollman Farm, 57.01 55 ⇓P P 12 31 52.0 -0.7
baz=57
H05A Madras 57.02 58 ⇑P P 12 31 53.2 +0.4
baz=57
HAWA Hanford 57.03 55 *e*P P 12 31 52.8 0.0
G06A Carlson Farm, 57.04 57 ⇑P P 12 31 53.2 +0.2
baz=57
VTHM Trough 57.11 57 P P 12 31 53.9 +0.4
KOLN Koldanda 57.12 277 *e*P P 12 31 55.6 +1.8
comp=Z,126nm,0.8s,mb6.0
I05A Bend 57.27 58 ⇑P P 12 31 55.3 +0.7
baz=57
J04A Umpqua Nationa 57.28 60 ⇑P P 12 31 55.2 +0.5
baz=57
NEW Newport 57.34 53 *e*P P 12 31 54.7 -0.3
NEW *e**PP pP 12 32 08.3 +0.4
NEW pmax pmax
comp=Z,23nm,1.4s
NEW Newport 57.34 53 *e*P P 12 31 54.7 -0.4
comp=Z,24nm,1.4s,mb5.0
NEW *e*pP pP 12 32 08.2 +0.3
A11A Hall Mountain, 57.37 52 ⇑P P 12 31 54.9 -0.3
baz=57,SNR=8.3
VIPM Ingram Point 57.46 58 P P 12 31 56.0 +0.1
H06A Lindquist Farm 57.50 57 ⇑P P 12 31 55.9 -0.2
baz=57,SNR=6.1
G07A Ruggs Ranch, H 57.59 57 ⇑P P 12 31 56.9 +0.1
baz=57
LVZ Lovozero 57.64 337 P P 12 31 55.1 -1.7
comp=Z,194nm,0.7s,mb6.2,SNR=6.3
B11A Sandpoint 57.66 52 ⇓P P 12 31 56.8 -0.5
baz=57,SNR=6.6
E09A Wood Farm, Sta 57.76 55 ⇓P P 12 31 57.6 -0.4
baz=57,SNR=8.8
YBH Yreka Blue Hor 57.78 62 ⇓P P 12 31 58.2 0.0
baz=58
J05A Fort Rock 57.78 59 ⇑P P 12 31 58.0 -0.3
baz=57
F08A Pendleton 57.80 56 ⇑P P 12 31 58.6 +0.3
baz=57
D10A Wagner Farm, O 57.94 54 ⇑P P 12 31 58.1 -1.2
baz=58,SNR=7.0
G08A Pilot Rock 57.98 56 ⇑P P 12 31 59.2 -0.4
baz=58,SNR=7.5
I06A Prineville 58.02 58 ⇓P P 12 31 59.9 0.0
baz=58,SNR=6.1
H07A Lands Inn, Kim 58.03 57 ⇑P P 12 32 00.1 +0.1
baz=58
LNOR Lincton Mounta 58.04 55 *e*P P 12 31 58.9 -1.1
C11A Tepee Creek (N 58.06 53 ⇑P P 12 32 00.1 0.0
baz=58
KEV Kevo 58.21 341 *e*p P 12 31 58.3 -2.5
M04C Macdoel 58.28 61 ⇓P P 12 32 01.8 +0.1
baz=58
K05A Summer Lake 58.31 60 ⇑P P 12 32 02.4 +0.5
baz=58
I07A Izee 58.36 58 ⇑P P 12 32 02.2 0.0
baz=58,SNR=6.3
E10A Myers Farm, Un 58.36 54 ⇑P P 12 32 02.0 -0.2
baz=58
A13A Flathead Natio 58.45 51 ⇑P P 12 32 03.1 +0.3
baz=58
J06A Christmas Vall 58.45 59 ⇑P P 12 32 02.9 0.0
baz=58,SNR=6.0
D11A Klaveano Farm, 58.47 53 ⇓P P 12 32 01.9 -1.1
baz=58,SNR=6.1
C12B Naegeli Ranch, 58.57 52 ⇓P P 12 32 03.7 +0.1
baz=58
F10A Beach Ranch, E 58.59 55 ⇓P P 12 32 03.7 -0.1
baz=58
H08A Prairie City 58.59 57 ⇓P P 12 32 04.0 +0.2
baz=58,SNR=8.5
WALA Waterton Lakes 58.64 50 *e*P P 12 32 03.8 -0.3
comp=Z,14nm,0.9s,mb5.0
K06A Valley Falls 58.65 59 ⇑P P 12 32 04.6 +0.3
baz=58,SNR=10
G09A Cove 58.67 56 ⇑P P 12 32 04.2 -0.2
baz=58,SNR=5.7
ARCES ARCESS Array B 58.72 341 P P 12 32 02.5 -1.9
comp=Z,24nm,0.9s,mb5.2,baz=40,slow=8.1,SNR=28
ARCES PcP PcP 12 32 54.1 +0.4
comp=Z,10nm,0.7s,baz=28,slow=5.5,SNR=4.8
ARCES LR LR 13 00 09.2
comp=Z,268nm,21.5s,MS4.3,baz=69,slow=39
ARCES ARCESS Array B 58.72 341 P P 12 32 02.5 -1.8
ARCES 12 32 54.1
ARCES pmax pmax
comp=Z,25nm,0.9s
ARCES MLR MLR
comp=Z,268nm,21.5s
B13A Whitefish 58.74 51 ⇓P P 12 32 04.9 +0.1
baz=58,SNR=15
L05A Lakeview 58.74 60 ⇑P P 12 32 05.1 +0.2
baz=58
FUNA Funafuti 58.87 150 *e*P P 12 32 08.1 +2.1
comp=Z,65nm,0.8s,mb5.7
J07A Hines 58.88 58 ⇑P P 12 32 06.0 +0.1
baz=58
E11A Bogner Ranch, 58.95 54 ⇓P P 12 32 05.6 -0.7
baz=59,SNR=6.3
M05C Lookout 58.95 61 ⇓P P 12 32 06.8 +0.4
baz=59
I08A Drewsey 59.01 57 ⇓P P 12 32 06.8 +0.1
baz=59,SNR=6.1
D12A Red Ives Fores 59.02 53 ⇑P P 12 32 06.3 -0.4
baz=59
G10A Bishop Farm, J 59.05 55 ⇓P P 12 32 06.8 -0.1
baz=59,SNR=25
HATC Hat Creek Radi 59.08 62 ⇓P P 12 32 07.2 0.0
baz=59
C13A Hot Springs 59.09 52 ⇑P P 12 32 07.3 +0.1
baz=59
H09A Durkee 59.10 56 ⇑P P 12 32 07.1 -0.2
baz=59,SNR=5.1
LBCM Butte Creek Ri 59.13 62 P P 12 32 08.1 +0.5
MOD Modoc 59.15 60 ⇓P P 12 32 07.3 -0.4
baz=59,SNR=10
MOD Modoc 59.15 60 *e*P P 12 32 08.2 +0.5
BMO Blue Mountains 59.19 56 *e*P P 12 32 08.4 +0.4
AB31 Akbulak array 59.22 310 P P 12 32 06.9 -1.2
AB31 pmax pmax
comp=Z,15nm,0.5s,mb5.3
AB31 Akbulak array 59.22 310⇑ *e*P P 12 32 06.9 -1.2
F11A Grangeville 59.25 54 ⇑P P 12 32 07.8 -0.6
baz=59,SNR=13
E12A Beaver Dam Sad 59.27 54 ⇓P P 12 32 08.4 -0.1
baz=59
K07A Rock Creek Ran 59.32 59 ⇑P P 12 32 09.0 +0.1
baz=59,SNR=5.8
J08A Circle Bar Ran 59.39 58 ⇓P P 12 32 09.6 +0.3
baz=59
DLH Dalhousie 59.39 286 *e*P P 12 32 10.0 +0.4
SMLA Simla 59.45 284 *i*P P 12 32 10.4 +0.4
SMLA *ex* x 12 32 11.9
comp=Z,19nm,0.3s
SMLA *i*S **S** **12 40 17.7 +1.8**
I09A Lost Marbles R 59.46 57 ⇑P P 12 32 09.9 +0.1
baz=59,SNR=5.0
G11A Walters Elk Ra 59.47 55 ⇓P P 12 32 09.6 -0.3
baz=59,SNR=16
C14A Swan Lake 59.48 51 ⇑P P 12 32 09.9 -0.1
baz=59,SNR=5.9
D13A Huson 59.49 52 ⇑P P 12 32 09.5 -0.6
baz=59,SNR=6.3
AKTK Aktyubinsk 59.53 312 P P 12 32 09.9 -0.4
AKTO Aktyubinsk 59.53 312 P P 12 32 09.9 -0.4
comp=Z,13nm,0.6s,mb5.1,baz=54,slow=4.5,SNR=26
AKTO Aktyubinsk 59.53 312 P P 12 32 09.4 -0.9
AKTO pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
O04C Chester 59.60 62 ⇑P P 12 32 10.9 0.0
baz=59
MNRC McLaughlin Nat 59.61 64 ⇑P P 12 32 10.9 0.0
baz=59
THN Thein Dam 59.63 287 *e*P P 12 32 11.1 -0.1
KTK1 Kautokeino 59.63 341 *e*P P 12 32 09.6 -1.0
KTK1 AMb AMb 12 32 10.6
comp=Z,89nm,0.8s,mb5.8
KTK1 Kautokeino 59.63 341 *e*P P 12 32 09.6 -1.0
comp=Z,89nm,0.8s,mb5.8

ELFS Eagle Lake Fie 59.64 62 ⇓P P 12 32 11.7 +0.5
baz=59
L07A Adell 59.66 60 ⇑P P 12 32 11.7 +0.5
baz=59,SNR=6.3
H10A Noah's Angus R 59.67 56 ⇓P P 12 32 10.8 -0.5
baz=59,SNR=12
K08A Mann Creek Ran 59.75 58 ⇑P P 12 32 12.0 +0.2
baz=59,SNR=14
ORV Oroville 59.80 63 ⇓P P 12 32 11.4 -0.8
baz=60,SNR=5.4
J09A Fry Pan Ranch, 59.82 58 ⇓P P 12 32 11.8 -0.5
baz=60,SNR=12
WVOR Wild Horse Val 59.83 59 *e*P P 12 32 12.3 -0.2
WVOR pmax pmax
comp=Z,12nm,1.1s,mb4.8
WVOR Wild Horse Val 59.83 59 *e*P P 12 32 12.3 -0.1
comp=Z,12nm,1.1s,mb4.8
F12A Elk City 59.84 54 ⇓P P 12 32 12.4 0.0
baz=60,SNR=20
MSO Missoula 59.93 52 *e*P P 12 32 13.2 +0.1
comp=Z,22nm,1.2s,mb5.1
I10A Payette 59.94 56 ⇑P P 12 32 12.4 -0.7
baz=60
OHCM Honcut 59.94 63 *e*P P 12 32 13.0 -0.2
D14A Greenough 60.02 52 ⇑P P 12 32 13.4 -0.3
baz=60,SNR=22
E13A Victor 60.03 53 ⇑P P 12 32 13.3 -0.4
baz=60,SNR=12
H11A Donnelly 60.03 55 ⇑P P 12 32 13.6 -0.2
baz=60,SNR=15
TRO Tromso 60.04 343 *e*P P 12 32 12.0 -1.4
TRO AMb AMB 12 32 13.9
comp=Z,141nm,1.2s,mb5.9
TRO *e*pP pP 12 32 23.1 -3.3
TRO Tromso 60.04 343 *e*P P 12 32 12.0 -1.4
TRO pmax pmax
comp=Z,141nm,1.2s,mb5.9
TRO Tromso 60.04 343 *e*P P 12 32 12.0 -1.4
comp=Z,141nm,1.2s,mb5.9
N06A Buffalo Meadow 60.11 61 ⇑P P 12 32 13.9 -0.5
baz=60,SNR=10
M07A Soldier Meadow 60.13 60 ⇑P P 12 32 14.6 +0.1
baz=60,SNR=16
L08A Fields 60.15 59 ⇓P P 12 32 14.7 0.0
baz=60,SNR=10
K09A Rome 60.22 58 ⇑P P 12 32 15.1 0.0
baz=60,SNR=9.3
CHMT Chamberlain Mo 60.26 52 *e*P P 12 32 15.2 -0.1
BEKR Beckwourth 60.32 62 ⇑P P 12 32 15.7 -0.1
baz=60,SNR=11
F13A Darby 60.34 54 ⇓P P 12 32 15.4 -0.4
baz=60,SNR=19
E14A Clinton 60.43 53 ⇑P P 12 32 16.2 -0.2
baz=60,SNR=5.4
O06A Flanigan 60.46 62 ⇑P P 12 32 16.8 0.0
baz=60,SNR=8.1
P05C Yuba Gap, Truc 60.50 63 ⇓P P 12 32 16.9 -0.1
baz=60
M08A Happy Creek Ra 60.58 60 ⇓P P 12 32 17.2 -0.3
baz=60,SNR=6.4
D15A Lincoln 60.59 52 ⇓P P 12 32 17.5 0.0
baz=60,SNR=5.9
N07B Gerlach 60.62 61 ⇑P P 12 32 17.8 0.0
baz=60
L09A Wilkinson Ranc 60.66 59 ⇑P P 12 32 17.6 -0.5
baz=60
K10A MacKenzie Ranc 60.68 58 ⇓P P 12 32 18.0 -0.2
baz=60
LAVA Lava Cap Winer 60.75 63 ⇑P P 12 32 18.3 -0.5
baz=60,SNR=6.3
H12A Diamond D Ranc 60.78 55 ⇑P P 12 32 18.8 -0.1
baz=60,SNR=9.9
F14A Wisdom 60.86 53 ⇓P P 12 32 19.2 -0.2
baz=60
E15A Deer Lodge 60.89 52 ⇑P P 12 32 19.2 -0.4
baz=60,SNR=15
MFID Camas Ranch 60.90 57 ⇓P P 12 32 19.7 0.0
baz=60
NDI New Delhi 60.94 282 *e*P P 12 32 20.0 -0.2
PAHR Pah Rah Range 61.01 62 *e*P P 12 32 20.9 +0.4
comp=Z,15nm,1.1s,mb5.0
WCN Washoe City 61.03 62 ⇓P P 12 32 21.1 +0.4
baz=61,SNR=8.1
O07A Toulon 61.05 61 ⇑P P 12 32 21.3 +0.5
baz=61,SNR=14
FFC Flin Flon 61.09 40 P P 12 32 20.9 +0.1
comp=Z,156nm,0.9s,mb6.1,SNR=6.7
FFC Flin Flon 61.09 40 *e*P P 12 32 20.7 -0.1
H13A Challis 61.12 55 ⇓P P 12 32 20.9 -0.3
baz=61,SNR=13
N08A GE Springer Mi 61.12 60 ⇑P P 12 32 21.1 -0.2
baz=61,SNR=5.5
M09A Marrel Ranch, 61.15 59 ⇑P P 12 32 21.8 +0.4
baz=61
HRY Holter Researc 61.16 52 *e*P P 12 32 15.0 -6.4
K11A Parker Ranch, 61.17 57 ⇑P P 12 32 21.2 -0.4
baz=61,SNR=7.9
R05C Kirkwood Meado 61.19 63 ⇑P P 12 32 22.0 +0.3
baz=61
F15A Butte 61.33 53 ⇓P P 12 32 22.7 +0.1
baz=61,SNR=21
L10A Juniper Basin 61.33 58 ⇓P P 12 32 22.6 -0.1
baz=61,SNR=8.7
LRM Limekiln Ridge 61.36 53 *e*P P 12 32 23.2 +0.3
CMB Columbia Colle 61.41 64 ⇓P P 12 32 22.9 -0.3
baz=61,SNR=7.5
CMB Columbia Colle 61.41 64 *e*P P 12 32 22.3 -0.9
O08A Rochester Mine 61.41 61 ⇓P P 12 32 23.9 +0.7
baz=61,SNR=9.3
J12A Stokes Ranch, 61.43 56 ⇑P P 12 32 23.6 +0.3
baz=61,SNR=14
N09A Rock Creek Ran 61.45 60 ⇑P P 12 32 23.5 +0.1
baz=61,SNR=5.7
SUMG Summit 61.45 4 *e*P P 12 32 22.6 -0.4
KAKA Kakadu 61.46 204 *e*P P 12 32 25.6 +1.9
comp=Z,11nm,1.0s,mb4.9
KAKA Kakadu 61.46 204 *e*P P 12 32 25.5 +1.8
EGMT Eagleton 61.48 49 ⇓P P 12 32 23.0 -0.5
baz=61
EGMT Eagleton 61.48 49 *e*P P 12 32 23.3 -0.2
DLMT Dillon 61.56 53 *e*P P 12 32 24.1 0.0
comp=Z,14nm,1.3s,mb4.9
H14A Leadore 61.59 54 ⇑P P 12 32 24.4 +0.1
baz=61,SNR=8.4
I13A Wildhorse Cree 61.59 55 ⇑P P 12 32 24.5 +0.1
baz=61,SNR=20
M10A I.L. Ranch, Tu 61.63 59 ⇓P P 12 32 25.2 +0.5
baz=61,SNR=13
HLID Hailey 61.63 56 ⇓P P 12 32 24.8 +0.1
baz=61,SNR=13
HLID Hailey 61.63 56 *e*P P 12 32 24.8 +0.1
LCCM Lewis and Clar 61.67 52 P P 12 32 24.9 0.0
R06C Coleville 61.69 63 ⇑P P 12 32 25.3 +0.2
baz=61,SNR=8.1
L11A Cat Creek Ranc 61.70 58 ⇓P P 12 32 25.3 +0.1
baz=61,SNR=17
WAKR Walker 61.71 63 *e*P P 12 32 25.9 +0.7
WAKR *e*pP pP 12 32 38.8 +0.5
G15A Dillon 61.74 53 ⇑P P 12 32 25.1 -0.3
baz=61,SNR=7.5
MCMT McKenzie Canyo 61.75 54 *e*P P 12 32 25.3 -0.2
P08A Dixie Valley 61.82 61 ⇑P P 12 32 26.6 +0.6
baz=62
S06C San Francisco 61.83 64 ⇑P P 12 32 25.8 -0.3
baz=62,SNR=7.8
S05C Merced 61.86 64 ⇓P P 12 32 26.0 -0.3
baz=62
J13A Cove Ranch, Pi 61.87 56 ⇓P P 12 32 26.6 +0.3
baz=62,SNR=14
BMN Battle Mountai 61.89 60 *e*P P 12 32 26.8 +0.4
K12A Draper Farm, C 61.91 57 ⇑P P 12 32 26.4 -0.2
baz=62,SNR=10
BOZ Bozeman (W) 61.93 52 *e*P P 12 32 26.8 +0.2
BOZ pmax pmax
comp=Z,20nm,1.1s,mb5.2
BOZ Bozeman (W) 61.93 52 ⇑P P 12 32 26.7 +0.1
baz=62
BOZ Bozeman (W) 61.93 52 *e*P P 12 32 26.8 +0.2
comp=Z,20nm,1.1s,mb5.2
I14A Mackay 61.96 55 ⇑P P 12 32 27.2 +0.3
baz=62,SNR=28
H15A Lima 61.99 54 ⇓P P 12 32 27.4 +0.3
baz=62
O09A Fish Creek Ran 62.07 60 ⇑P P 12 32 27.9 +0.3
baz=62,SNR=9.1
M11A Holland Ranch, 62.13 58 ⇓P P 12 32 28.5 +0.4
baz=62,SNR=9.4

L12A **House Creek Ra** 62.15 57 ⇓P P 12 32 28.2 +0.1
baz=62,SNR=18
U04C **Hernandez Rese** 62.18 65 ⇑P P 12 32 28.2 -0.2
baz=62
JOF **Joensuu** 62.20 334 *ep* P 12 32 25.8 -2.4
comp=Z,89nm,0.8s,mb6.0
JOF **Joensuu** 62.20 334 *eP* P 12 32 25.8 -2.4
JOF pmax pmax
comp=Z,89nm,0.8s,mb6.0
R07C **Lee Vining** 62.21 63 ⇓P P 12 32 29.1 +0.4
baz=62,SNR=11
J14A **Carey** 62.29 55 ⇑P P 12 32 28.7 -0.4
baz=62,SNR=20
LOF **Lofoten** 62.36 344 *eP* P 12 32 30.1 +0.9
LOF AMb AMB 12 32 33.0
comp=Z,154nm,1.4s,mb5.9
LOF **Lofoten** 62.36 344 *eP* P 12 32 30.1 +0.9
comp=Z,154nm,1.4s,mb5.9
K13A **Stover Farm, H** 62.38 56 ⇑P P 12 32 29.7 -0.1
baz=62
O10A **Cortez Mining,** 62.41 60 ⇑P P 12 32 30.0 0.0
baz=62,SNR=5.8
Q08A **Gabbs** 62.42 62 ⇓P P 12 32 30.0 -0.1
baz=62,SNR=20
NVAR **Mina Array Bea** 62.46 62 P P 12 32 30.6 +0.3
comp=Z,5.2nm,0.8s,mb4.7,baz=291,slow=7.5,SNR=43
NVAR pP pP 12 32 44.0 +0.7
comp=Z,3.6nm,0.7s,baz=282,slow=8.1,SNR=7.5
T06C **Millerton Lake** 62.46 64 ⇑P P 12 32 30.0 -0.3
baz=62
QLMT **Earthquake Lak** 62.54 53 *eP* P 12 32 31.4 +0.6
PKD **Parkfield** 62.59 66 ⇓P P 12 32 31.0 -0.2
baz=62
JMIC **Jan Mayen** 62.65 354 P P 12 32 29.7 -1.3
comp=Z,34nm,0.8s,mb5.5,baz=225,slow=4.2,SNR=3.0
M12A **Wells** 62.66 58 ⇓P P 12 32 31.4 -0.2
baz=62,SNR=16
KBL **Kabul** 62.72 292 *eP* P 12 32 31.7 -0.4
KBL pmax pmax
comp=Z,27nm,0.8s,mb5.4
KBL **Kabul** 62.72 292 *eP* P 12 32 31.6 -0.4
comp=Z,27nm,0.8s,mb5.4
H16A **Russell Place,** 62.72 53 ⇓P P 12 32 32.4 +0.4
baz=62,SNR=23
L13A **Double Diamond** 62.81 57 ⇓P P 12 32 33.1 +0.5
baz=62,SNR=8.2
P10A **Eureka** 62.85 60 ⇑P P 12 32 33.0 +0.1
baz=62,SNR=5.7
J15A **Blackfoot** 62.87 55 ⇑P P 12 32 33.4 +0.5
baz=62,SNR=9.8
ELK **Elko** 62.88 59 *eP* P 12 32 33.7 +0.6
Q09A **Carvers** 62.90 61 ⇓P P 12 32 33.4 +0.2
baz=63
GCMT **Greycliff** 62.91 51 *eP* P 12 32 33.4 +0.2
N12A **Clover Valley,** 62.94 58 ⇓P P 12 32 33.4 -0.1
baz=63,SNR=7.4
K14A **Jones Ranch, D** 62.97 56 ⇓P P 12 32 33.8 +0.2
baz=63,SNR=8.2
O11A **Cowboy Ranch,** 63.02 59 ⇑P P 12 32 33.8 -0.1
baz=63,SNR=5.6
HELL **Mitchell Peak** 63.09 64 ⇓P P 12 32 34.2 -0.3
baz=63
I16A **Newdale** 63.11 54 ⇓P P 12 32 34.9 +0.4
baz=63
YFT **Old Faithful** 63.11 53 *eP* P 12 32 36.1 +1.5
S08C **White Mtn Res** 63.12 63 ⇓P P 12 32 34.7 0.0
baz=63,SNR=8.6
M13A **Montello** 63.14 57 ⇓P P 12 32 34.6 -0.1
baz=63,SNR=11
L14A **Malta** 63.26 56 ⇓P P 12 32 35.9 +0.4
baz=63,SNR=12
K15A **Arbon** 63.26 55 ⇓P P 12 32 36.0 +0.5
baz=63,SNR=14
P11A **Circle Ranch,** 63.32 60 ⇑P P 12 32 36.2 +0.2
baz=63
R09A **Tonopah** 63.33 62 ⇓P P 12 32 35.8 -0.3
baz=63,SNR=26
Q10A **Clear Creek Ra** 63.38 61 ⇑P P 12 32 36.4 0.0
baz=63,SNR=13
IMW **Indian Meadow** 63.40 54 *eP* P 12 32 37.3 +0.8
comp=Z,18nm,1.1s,mb5.1
J16A **Bone** 63.41 54 ⇓P P 12 32 37.3 +0.7
baz=63,SNR=18
N13A **Wendover, West** 63.43 58 ⇓P P 12 32 36.9 +0.2
baz=63,SNR=7.1
DCID1 **Drake Creek** 63.45 54 *eP* P 12 32 37.8 +1.0
O12A **Currie** 63.48 59 ⇑P P 12 32 37.1 +0.1
baz=63,SNR=20
M14A **Sheep Mountain** 63.53 57 ⇓P P 12 32 37.5 +0.2
baz=63,SNR=8.6
RRI2 **Red Ridge** 63.53 54 *eP* P 12 32 38.6 +1.2
RLMT **Red Lodge** 63.55 52 *eP* P 12 32 37.8 +0.3
comp=Z,20nm,1.1s,mb5.1
S09A **Goldfield** 63.56 62 ⇑P P 12 32 37.3 -0.3
baz=63,SNR=12
VES **Vestal, Richgr** 63.58 65 ⇓P P 12 32 37.2 -0.6
baz=63,SNR=6.0
TPAW **Teton Pass** 63.65 54 *eP* P 12 32 39.1 +1.0
K16A **Soda Springs** 63.70 55 ⇑P P 12 32 38.8 +0.3
baz=63,SNR=12
PKM **Peak Mountain** 63.71 66 ⇑P P 12 32 38.6 -0.1
baz=63
LOHW **Long Hollow** 63.77 54 *eP* P 12 32 39.0 +0.2
comp=Z,19nm,1.2s,mb5.0
L15A **Malad City** 63.77 56 ⇑P P 12 32 38.6 -0.3
baz=63,SNR=6.0
R10A **Warm Springs** 63.77 61 ⇑P P 12 32 38.7 -0.3
baz=63,SNR=10
SNOW **Snow King Moun** 63.78 54 *eP* P 12 32 39.9 +0.9
REDW **Red Top Meadow** 63.79 54 *eP* P 12 32 39.8 +0.8
Q11A **Duckwater** 63.82 60 ⇑P P 12 32 38.6 -0.7
baz=64,SNR=6.8
S10A **Tonopah Range,** 63.83 62 ⇓P P 12 32 38.9 -0.5
baz=64,SNR=18
CWC **Cottonwood Cre** 63.84 64 ⇑P P 12 32 38.6 -0.8
baz=64,SNR=9.7
P12A **McGill** 63.88 60 ⇑P P 12 32 39.3 -0.4
baz=64,SNR=8.2
MOR8 **Moi Rana** 63.88 343 *eP* P 12 32 36.5 -2.7
MOR8 AMb AMB 12 32 38.5
comp=Z,85nm,1.0s,mb5.7
MOR8 **Moi Rana** 63.88 343 *eP* P 12 32 36.5 -2.7
comp=Z,85nm,1.0s,mb5.7
GRAC **Grapevine Rang** 63.93 63 ⇓P P 12 32 39.9 -0.1
baz=64
STOK **Stokkvaagen** 64.03 343 *eP* P 12 32 38.7 -1.5
STOK *epP* pP 12 32 48.7 -4.6
N14A **Grayback Hills** 64.03 57 ⇑P P 12 32 40.8 +0.2
baz=64,SNR=7.7
DGMT **Dagmar** 64.07 46 *eP* P 12 32 40.7 -0.1
comp=Z,24nm,0.8s,mb5.3
DGMT *epP* pP 12 32 54.3 +0.5
M15A **Larsen Ranch,** 64.08 56 ⇑P P 12 32 41.0 0.0
baz=64,SNR=16
ISA **Isabella** 64.08 65 ⇓P P 12 32 39.5 -1.5
baz=64,SNR=7.4
ISA **Isabella** 64.08 65 *eP* P 12 32 40.4 -0.6
SPUT **South Promonto** 64.17 57 *eP* P 12 32 42.9 +1.3
R11A **Troy Canyon, C** 64.17 61 ⇑P P 12 32 41.3 -0.4
baz=64,SNR=24
LAO **LASA Array** 64.18 49 *eP* P 12 32 41.8 +0.2
comp=Z,24nm,0.9s,mb5.2
LAO *epP* pP 12 32 56.3 +1.7
ARVC **Arvin** 64.19 65 ⇑P P 12 32 42.1 +0.3
baz=64
Q12A **Willow Creek R** 64.20 60 ⇓P P 12 32 41.3 -0.5
baz=64,SNR=7.1
KAF **Kangasniemi** 64.31 335 *ep* P 12 32 40.0 -2.1
comp=Z,81nm,0.8s,mb5.8,baz=37,slow=6.2
KAF **Kangasniemi** 64.31 335 *eP* P 12 32 40.0 -2.1
KAF pmax pmax
comp=Z,81nm,0.8s,mb5.8
L16A **Fish Haven** 64.31 55 ⇑P P 12 32 42.5 0.0
baz=64
P13A **Bates Ranch, G** 64.42 59 ⇓P P 12 32 43.1 -0.1
baz=64,SNR=10
MPMC **Manual Prospec** 64.44 64 ⇓P P 12 32 43.2 -0.3
baz=64,SNR=20
S11A **Rachel** 64.52 62 ⇑P P 12 32 43.7 -0.3
baz=64,SNR=14
FURC **Furnace Creek,** 64.58 63 ⇓P P 12 32 44.1 -0.3
baz=64,SNR=20
M16A **Huntsville** 64.64 56 ⇓P P 12 32 45.0 +0.3
baz=64,SNR=10.0
TPNV **Topopah Spring** 64.65 62 *eP* P 12 32 44.8 0.0
TPNV pmax pmax
comp=Z,21nm,1.1s,mb5.1
TPNV **Topopah Spring** 64.65 62 ⇑P P 12 32 44.9 +0.1
baz=64
TPNV **Topopah Spring** 64.65 62 *eP* P 12 32 44.8 0.0
comp=Z,21nm,1.1s,mb5.1
DUG **Dugway** 64.67 58 *eP* P 12 32 45.5 +0.7
DUG pmax pmax
comp=Z,27nm,1.3s,mb5.1
DUG **Dugway** 64.67 58 ⇑P P 12 32 45.0 +0.1
baz=64
LRMC **Laurel Mountai** 64.69 65 ⇑P P 12 32 45.1 +0.1
baz=64
Q13A **Wheeler Ranch,** 64.74 59 ⇓P P 12 32 45.2 -0.1
baz=64
NOQ **North Oquirrh** 64.78 57 *eP* P 12 32 45.7 +0.1
R12A **Pony Springs,** 64.78 60 ⇓P P 12 32 45.6 0.0
baz=64,SNR=13
O15A **The Old Anders** 64.81 58 ⇓P P 12 32 45.8 0.0
baz=64
EDW2 **Edwards Air Fo** 64.88 65 ⇑P P 12 32 45.9 -0.4
baz=65,SNR=17
BW06 **Boulder Array** 64.90 54 *eP* P 12 32 46.1 -0.2
comp=Z,14nm,0.9s,mb5.0
PDAR **Pinedale Array** 64.90 54 P P 12 32 46.1 -0.2
comp=Z,9.1nm,0.8s,mb4.8,baz=318,slow=2.0,SNR=58
PDAR pP pP 12 33 00.1 +0.7
comp=Z,9.1nm,0.9s,baz=277,slow=1.5,SNR=12
PDAR LR LR 13 03 17.8
comp=Z,70nm,18.0s,MS3.9,baz=332,slow=38
P14A **Drum Mountains** 64.90 58 ⇑P P 12 32 46.4 0.0
baz=64,SNR=14
PUL **Pulkovo** 64.91 332 *eP* P 12 32 45.5 -0.6
U10A **Ash Meadows, A** 64.94 63 ⇑P P 12 32 46.8 +0.2
baz=65,SNR=13
CTU **Camp Tracy** 64.97 57 *eP* P 12 32 46.9 +0.1
N16A **Rees Ranch, Co** 65.03 56 ⇓P P 12 32 47.5 +0.4
baz=65
S12A **Delamar Landin** 65.09 61 ⇓P P 12 32 48.0 +0.3
baz=65,SNR=15
T11A **Corn Creek, Al** 65.10 62 ⇓P P 12 32 47.6 -0.1
baz=65,SNR=26
Q14A **Sevier Lake (B** 65.16 59 ⇑P P 12 32 48.3 +0.3
baz=65,SNR=17
JLU **Jordanelle** 65.21 57 *eP* P 12 32 49.1 +0.7
MWC **Mount Wilson** 65.25 66 *eP* P 12 32 48.9 +0.2
MWC pmax pmax
comp=Z,27nm,1.3s,mb5.1
MWC **Mount Wilson** 65.25 66 *eP* P 12 32 48.9 +0.2
comp=Z,27nm,1.4s,mb5.1
NLU **North Lily Min** 65.26 58 *eP* P 12 32 49.1 +0.4
MOS **Moscow** 65.30 326 *eP* P 12 32 46.8 -1.9
MOS *e* 12 33 19.5
MOS pmax pmax
comp=Z,79nm,0.8s,mb5.8
SHOC **Shoshone** 65.30 63 ⇑P P 12 32 48.6 -0.4
baz=65,SNR=7.2
N17A **Moffit Pass** 65.34 56 ⇑P P 12 32 49.6 +0.3
baz=65,SNR=15
GSC **Goldstone** 65.36 64 ⇓P P 12 32 48.5 -0.9
baz=65,SNR=7.5
GSC **Goldstone** 65.36 64 *eP* P 12 32 49.4 0.0
O16A **Springville** 65.43 57 ⇓P P 12 32 49.8 0.0
baz=65
DAU **Daniels Canyon** 65.44 57 *eP* P 12 32 50.8 +0.9
MPU **Maple Canyon** 65.48 57 *eP* P 12 32 50.9 +0.8
MPU *epP* pP 12 33 04.9 +1.7
BFSC **Mount Baldy St** 65.50 66 ⇓P P 12 32 49.8 -0.5
baz=65,SNR=5.5
SHPR **Sheep Range** 65.61 62 *eP* P 12 32 51.3 +0.3
Q15A **Fillmore** 65.69 59 ⇓P P 12 32 51.5 0.0
baz=65,SNR=5.4
S13A **Holt Ranch, En** 65.71 61 ⇓P P 12 32 51.9 +0.2
baz=65,SNR=14
T12A **Moapa** 65.74 62 ⇑P P 12 32 52.2 +0.4
baz=65
TUQ **Turquoise Moun** 65.82 64 ⇓P P 12 32 51.8 -0.6
baz=66,SNR=13
NSS **Namsos** 65.83 343 *eP* P 12 32 50.0 -2.0
V11A **Goodsprings** 65.87 63 ⇓P P 12 32 52.3 -0.4
baz=66,SNR=5.8
O17A **Robinson Place** 65.88 57 ⇓P P 12 32 53.2 +0.4
baz=66,SNR=7.1
BBRC **Big Bear Sol-O** 65.95 65 ⇓P P 12 32 53.6 +0.3
baz=66
HEC **Hector,Ludlow** 65.96 64 ⇓P P 12 32 52.8 -0.4
baz=66,SNR=11
N18A **Larsen Ranch,** 65.99 55 ⇓P P 12 32 53.2 -0.2
baz=66,SNR=7.9
S14A **Cedar City** 66.02 60 ⇑P P 12 32 53.9 +0.3
baz=66
CCUT **Cedar City** 66.03 60 *eP* P 12 33 02.3 +8.6
U12A **Valley of Fire** 66.04 62 ⇑P P 12 32 53.9 +0.1
baz=66
T13A **Saint George** 66.05 61 ⇑P P 12 32 54.3 +0.4
baz=66,SNR=6.0
MSU **Marysvale** 66.13 59 *eP* P 12 32 55.2 +0.9
OBN **Obninsk** 66.17 326 *ep* P 12 32 52.8 -1.5
OBN *i* *SP sP 12 33 03.8 -8.9
OBN *e* 12 35 17.0
OBN *eS* S 12 41 39.2 -0.1
OBN pmax pmax
comp=Z,131nm,1.0s,mb5.9
OBN **Obninsk** 66.17 326 *eP* P 12 32 53.0 -1.3
TMUT **Trail Mountain** 66.19 58 *eP* P 12 32 54.4 -0.3
MURC **Murrieta** 66.20 66 ⇓P P 12 32 53.8 -1.0
baz=66
O18A **Roosevelt** 66.26 56 ⇑P P 12 32 55.2 0.0
baz=66,SNR=8.7
R15A **Junction** 66.26 59 ⇑P P 12 32 55.6 +0.4
baz=66
V12A **Nelson** 66.30 63 ⇑P P 12 32 55.5 0.0
baz=66,SNR=7.8
N19A **Jon Jarvie Ra** 66.33 55 ⇓P P 12 32 55.2 -0.3
baz=66,SNR=7.8
P17A **Butcher Ranch,** 66.35 57 ⇓P P 12 32 56.0 +0.3
baz=66,SNR=9.2
U13A **Pakoon Wash** 66.40 62 ⇑P P 12 32 56.4 +0.3
baz=66,SNR=28
GMRC **Granite Mounta** 66.41 64 ⇓P P 12 32 55.8 -0.4
baz=66,SNR=8.4
Q16A **Castle Valley** 66.46 58 ⇑P P 12 32 56.8 +0.3
baz=66,SNR=6.1
T14A **Hurricane** 66.52 61 ⇑P P 12 32 57.3 +0.5
baz=66,SNR=7.9
P18A **Preston Nutter** 66.54 57 ⇓P P 12 32 57.6 +0.6
baz=66,SNR=10
S15A **Panguitch** 66.56 60 ⇑P P 12 32 57.4 +0.3
baz=66
LDFC **Landfair** 66.56 63 *eP* P 12 32 57.3 +0.2
W12A **Cal Nev Ari** 66.57 63 ⇓P P 12 32 57.5 +0.4
baz=66
PFO **Pinyon Flat Ob** 66.67 65 ⇑P P 12 32 57.7 -0.1
baz=66
PFO **Pinyon Flat Ob** 66.67 65 *eP* P 12 32 57.8 -0.1
R16A **Teasdale** 66.69 59 ⇓P P 12 32 58.4 +0.5
baz=66,SNR=21
BELC **Belle Mtn.** 66.70 65 ⇑P P 12 32 57.3 -0.8
baz=66
SRU **San Rafael** 66.72 57 ⇓P P 12 32 57.9 -0.1
baz=66,SNR=17
SRU **San Rafael** 66.72 57 *eP* P 12 32 58.5 +0.4
O19A **Miners Draw (B** 66.75 56 ⇑P P 12 32 58.0 -0.2
baz=66,SNR=9.3
V13A **Grand Canyon W** 66.76 62 ⇓P P 12 32 58.9 +0.5
baz=66,SNR=21
ULM **Lac du Bonnet** 66.86 41 P P 12 32 57.5 -1.3
comp=Z,6.9nm,0.8s,mb4.7,baz=304,slow=10.0,SNR=7.8
ULM pP pP 12 33 09.9 -2.0
comp=Z,8.4nm,1.0s,baz=322,slow=5.4,SNR=4.7
ULM LR LR 13 04 31.7
comp=Z,88nm,18.8s,MS4.0,baz=7.9,slow=38
U14A **Mt Trumbull** 66.88 61 ⇑P P 12 32 59.7 +0.5
baz=66,SNR=12
RWWY **Rawlins** 66.92 53 *eP* P 12 32 59.2 -0.1
comp=Z,28nm,1.4s,mb5.1
RWWY *epP* pP 12 33 13.1 +0.6
Q18A **Rafter H Ranch** 66.95 57 ⇓P P 12 32 59.5 -0.1
baz=67
T15A **Red Dirt Ranch** 66.97 60 ⇓P P 12 33 00.0 +0.3
baz=67,SNR=7.7
VRHR **Novokhopersk** 66.98 321 *eP* P 12 32 58.3 -1.2
VRHR pmax pmax
comp=E,30nm,0.7s
VRHR pmax pmax
comp=Z,60nm,0.7s,mb5.7
VRHR pmax pmax
comp=N,20nm,0.4s
S16A **Weppner Ranch,** 66.99 59 ⇑P P 12 33 00.3 +0.5
baz=67,SNR=7.4
RSSD **Black Hills** 67.03 50 *eP* P 12 32 58.7 -1.3
RSSD pmax pmax
comp=Z,15nm,0.8s,mb5.1
RSSD **Black Hills** 67.03 50 *eP* P 12 32 58.7 -1.3
comp=Z,15nm,0.8s,mb5.1
R17A **Hanksville Air** 67.06 58 ⇑P P 12 33 00.3 0.0
baz=67,SNR=16
VSU **Vasula** 67.09 333 ⇑*iP* P 12 32 58.9 -1.2
IRM **Iron Mountain** 67.13 64 ⇑P P 12 33 00.4 -0.4
baz=67,SNR=14
BAR **Barrett** 67.13 66 *eP* P 12 33 00.7 -0.1
MONP **Monument Peak** 67.16 66 ⇑P P 12 33 01.0 0.0
baz=67
BC3 **Big Chuckw Mtn** 67.27 65 ⇑P P 12 33 01.7 0.0
baz=67
P19A **Cripple Cowboy** 67.27 56 ⇓P P 12 33 01.4 -0.2
baz=67,SNR=14
W13A **Hualapai Mount** 67.31 63 ⇓P P 12 33 01.5 -0.3
baz=67,SNR=10
U15A **North Rim** 67.42 61 ⇑P P 12 33 03.4 +0.8
baz=67,SNR=21
V14A **Boquillas Ranc** 67.44 62 ⇑P P 12 33 03.0 +0.3
baz=67,SNR=26
S17A **Black Ridge (B** 67.52 59 ⇑P P 12 33 03.5 +0.3
baz=67,SNR=29
T16A **Glen Canyon Da** 67.53 60 ⇑P P 12 33 02.8 -0.4
baz=67
Q19A **Hogan Spring (** 67.56 57 ⇓P P 12 33 02.8 -0.6
baz=67,SNR=25
R18A **Canyonlands Na** 67.56 58 ⇑P P 12 33 03.1 -0.3
baz=67,SNR=20
PDMCI **Parker Dam,Lak** 67.67 63 ⇑P P 12 33 04.0 -0.2
baz=67,SNR=6.4
X13A **Yucca** 67.67 63 ⇑P P 12 33 03.5 -0.7
baz=67
W14A **Seligman** 67.73 62 ⇑P P 12 33 04.8 +0.3
baz=67,SNR=22
Y12C **Blythe** 67.79 64 ⇓P P 12 33 05.0 0.0
baz=68
V15A **Kaibab Nationa** 67.89 61 ⇓P P 12 33 05.6 +0.1
baz=68,SNR=17
WRAB **Tennant Creek** 67.89 200 *eP* P 12 33 06.6 +1.1
WRAB pmax pmax
comp=Z,34nm,1.5s,mb5.2
WRAB **Tennant Creek** 67.89 200 *eP* P 12 33 06.6 +1.1
comp=Z,34nm,1.5s,mb5.2
WB2 **Warramunga Arr** 67.90 200 *eP* P 12 33 06.5 +0.9
WRA **Warramunga Arr** 67.90 200 P P 12 33 06.3 +0.8
comp=Z,3.3nm,0.6s,mb4.5,baz=19,slow=7.0,SNR=31
WRA pP pP 12 33 20.5 +1.8
comp=Z,2.5nm,0.7s,baz=17,slow=6.7,SNR=5.3
WRA **Warramunga Arr** 67.90 200 P P 12 33 06.3 +0.7
WRA *PP pP 12 33 20.5 +1.7
WRA pmax pmax
comp=Z,3.0nm,0.6s
T17A **Navajo Res., N** 67.94 59 ⇑P P 12 33 05.0 -0.8
baz=68,SNR=5.9
VRSR **Storozhevoye** 67.95 322 *eP* P 12 33 04.7 -1.0
VRSR pmax pmax
comp=Z,20nm,0.6s,mb5.3
VRSR pmax pmax
comp=N,30nm,0.9s
VRSR pmax pmax
comp=E,20nm,0.7s
S18A **Hurst Farm, Bl** 67.96 58 ⇓P P 12 33 05.9 0.0
baz=68,SNR=18
R19A **Curley Farm, L** 68.00 57 ⇑P P 12 33 05.9 -0.3
baz=68,SNR=12
GLA **Glamis** 68.06 65 *eP* P 12 33 07.0 +0.3
GLA pmax pmax
comp=Z,21nm,1.3s,mb5.0
GLA **Glamis** 68.06 65 ⇑P P 12 33 06.3 -0.3
baz=68,SNR=5.7
GLA **Glamis** 68.06 65 *eP* P 12 33 07.0 +0.3
comp=Z,21nm,1.4s,mb5.0
PV10 **Paradox Valley** 68.07 57 *eP* P 12 33 06.8 +0.2
Y13A **Salome** 68.19 64 ⇓P P 12 33 07.1 -0.3
baz=68,SNR=6.5
AGMN **Agassiz Refuge** 68.25 42 *eP* P 12 33 06.8 -0.8
comp=Z,19nm,1.0s,mb5.1
W15A **Williams** 68.25 62 ⇓P P 12 33 08.7 +0.9
baz=68
U17A **Shonto** 68.29 60 ⇑P P 12 33 08.4 +0.4
baz=68
U16A **Tuba City** 68.31 60 ⇑P P 12 33 08.4 +0.2
baz=68,SNR=21
X14A **Yava** 68.34 63 ⇓P P 12 33 08.6 +0.2
baz=68,SNR=16
T18A **Mexican Hat** 68.40 59 ⇓P P 12 33 08.1 -0.6
baz=68,SNR=12
S19A **Harvey Farm, M** 68.43 58 ⇓P P 12 33 08.8 -0.1
baz=68,SNR=30
PV01 **Paradox Valley** 68.51 57 *eP* P 12 33 09.1 -0.2
WUAZ **Wupatki** 68.58 61 ⇑P P 12 33 10.0 +0.2
baz=68,SNR=7.1
WUAZ **Wupatki** 68.58 61 *eP* P 12 33 10.6 +0.7
Y14A **Wickenburg** 68.62 63 ⇓P P 12 33 09.7 -0.4
baz=68,SNR=8.0
FITZ **Fitzroy Crossi** 68.64 209 *eP* P 12 33 11.1 +0.9
comp=Z,4.2nm,0.9s,mb4.4
FITZ **Fitzroy Crossi** 68.64 209 P P 12 33 11.6 +1.4
comp=Z,2.3nm,0.8s,mb4.1,baz=67,slow=3.3,SNR=5.2
FITZ pP pP 12 33 25.0 +1.6
comp=Z,2.6nm,0.8s,baz=59,slow=7.0,SNR=4.1
X15A **Humboldt** 68.73 62 ⇓P P 12 33 10.9 +0.1
baz=68,SNR=19
W16A **Flagstaff** 68.76 61 ⇑P P 12 33 11.5 +0.5
baz=68,SNR=6.9
U18A **Rough Rock, Ch** 68.88 59 ⇑P P 12 33 11.7 -0.1
baz=68,SNR=6.8
Y15A **Casa Rosa Ranc** 69.03 63 ⇑P P 12 33 12.6 -0.1
baz=69,SNR=14
ISCO **Idaho Springs** 69.09 54 *eP* P 12 33 13.4 +0.5
NB2 **NORSAR Subarra** 69.09 341 P P 12 33 11.5 -1.1
comp=Z,43nm,0.8s,mb5.4,baz=28,slow=6.5
NOA **NORSAR Array B** 69.09 341 P P 12 33 11.5 -1.1
comp=Z,35nm,0.8s,mb5.4,baz=27,slow=6.3,SNR=87
NOA pP pP 12 33 25.0 -0.8
baz=28,slow=6.3
NOA LR LR 13 06 24.7
comp=Z,150nm,19.1s,MS4.2,baz=35,slow=38
NOA **NORSAR Array B** 69.09 341 P P 12 33 11.5 -1.1
NOA *PP pP 12 33 25.0 -0.8
NOA pmax pmax
comp=Z,35nm,0.8s
NOA MLR MLR
comp=Z,150nm,19.1s
T19A **Beclabito** 69.11 58 ⇓P P 12 33 13.0 -0.1
baz=69,SNR=5.2
MVCO **Mesa Verde** 69.17 58 ⇓P P 12 33 13.5 0.0
baz=69
MVCO **Mesa Verde** 69.17 58 *eP* P 12 33 14.0 +0.5
X16A **Lo Mia Camp, P** 69.27 62 ⇓P P 12 33 14.3 +0.1
baz=69,SNR=18
V18A **Ganado** 69.32 60 ⇑P P 12 33 14.8 +0.4
baz=69,SNR=10
BORG **Borgarnes** 69.56 358 *eP* P 12 33 18.7 +3.3
Y16A **Circle Bar Ran** 69.60 62 ⇑P P 12 33 15.9 -0.3
baz=69
X17A **Forest Lakes** 69.71 61 ⇑P P 12 33 17.4 +0.5
baz=69,SNR=9.2
V19A **Window Rock** 69.85 59 ⇑P P 12 33 18.2 +0.4
baz=70
MNK **Minsk** 69.89 330 ⇓*eP* P 12 33 14.0 -3.6
MNK pmax pmax
comp=Z,120nm,1.0s,mb5.8
115A **Sonoran Desert** 69.93 64 ⇓P P 12 33 18.3 +0.1
baz=70
214A **Organ Pipe Nat** 70.06 64 ⇓P P 12 33 18.9 -0.1
baz=70
X18A **Snowflake** 70.10 61 ⇓P P 12 33 19.1 -0.2
baz=70,SNR=5.4
Y17A **Roosevelt** 70.12 62 ⇑P P 12 33 19.2 -0.2
baz=70,SNR=11
EYMN **Ely** 70.52 40 *eP* P 12 33 21.3 -0.3
comp=Z,46nm,1.4s,mb5.2
SDCO **Great Sand Dun** 70.55 56 *eP* P 12 33 22.2 +0.2
Y18A **Canyon Day Jun** 70.56 61 ⇓P P 12 33 23.0 +0.9
baz=70,SNR=13
X19A **St. Johns** 70.57 60 ⇑P P 12 33 22.4 +0.2
baz=70,SNR=18
Z17A **San Carlos Hig** 70.61 62 ⇓P P 12 33 22.6 +0.1
baz=70,SNR=6.5
KONO **Kongsberg** 70.70 342 *i* P P 12 33 22.1 -0.4
KONO **Kongsberg** 70.70 342 *i* P P 12 33 22.1 -0.4
216A **Three Points,** 70.88 64 ⇑P P 12 33 23.8 -0.2

baz=71,SNR=5.1
Y19A Nutrioso 70.91 61 ⇑P **P 12 33 24.9 +0.7**
baz=71,SNR=12
117A Oracle 70.94 63 ⇓P **P 12 33 24.9 +0.5**
baz=71
Z18A Geronimo 71.03 62 ⇓P **P 12 33 25.6 +0.6**
baz=71
EIDS Eidsvold 71.03 182 *e*P **P 12 33 21.7 -3.1**
EIDS *ep*P pP 12 33 32.9 -5.1
ODD1 Odda 71.09 343 *e*P **P 12 33 24.1 -0.7**
ECSD EROS,Sioux Fal 71.15 46 *e*P **P 12 33 24.4 -1.2**
comp=Z,18nm,0.9s,mb5.0
Z19A T-Link Ranch, 71.36 61 ⇓P **P 12 33 27.3 +0.3**
baz=71,SNR=6.1
118A Homack Ranch, 71.37 62 ⇑P **P 12 33 27.6 +0.6**
baz=71
217A Green Valley 71.43 63 ⇑P **P 12 33 27.9 +0.5**
baz=71
BLS5 Blasjo 71.57 343 *e*P **P 12 33 28.8 +1.1**
ASAR Alice Springs 71.59 199 P **P 12 33 30.1 +1.9**
comp=Z,7.7nm,0.8s,mb4.7,baz=13,slow=5.1,SNR=43
ASAR pP pP 12 33 42.5 +1.0
comp=Z,5.8nm,0.9s,baz=13,slow=5.3,SNR=5.8
ASAR Alice Springs 71.59 199 P **P 12 33 30.2 +2.0**
ASAR *PP pP 12 33 42.5 +1.0
ASAR pmax pmax
comp=Z,8.0nm,0.8s
KIV Kislovodsk 71.62 315 P **P 12 33 29.8 +1.5**
comp=Z,544nm,0.7s,mb6.6,SNR=6.9
KIV Kislovodsk 71.62 315 P **P 12 33 29.4 +1.1**
SNR=15
KIV Kislovodsk 71.62 315 ⇑*i*P **P 12 33 30.2 +1.9**
KIV Kislovodsk 71.62 315 *e*P **P 12 33 28.9 +0.6**
119A Ashpeak Ranch, 71.69 62 ⇑P **P 12 33 29.2 +0.2**
baz=71,SNR=5.7
218A Dragoon 71.78 63 ⇓P **P 12 33 29.7 +0.2**
baz=72,SNR=6.7
LAZ Ladron 71.89 59 *e*P **P 12 33 30.2 +0.1**
LAZ *e* pP 12 33 45.1 +1.7
ANMO Albuquerque 71.92 58 *e*P **P 12 33 30.7 +0.4**
219A White Tail Can 72.25 62 ⇓P **P 12 33 32.8 +0.5**
baz=72,SNR=11
LPM Los Pinos Moun 72.25 59 *e*P **P 12 33 31.4 -0.9**
BNM Barren Site 72.37 59 *e*P **P 12 33 33.4 +0.4**
BNM *e* pP 12 33 46.1 -0.2
AKASG Malin Array Be 72.41 327 P **P 12 33 31.8 -1.1**
comp=Z,40nm,0.5s,mb5.6,baz=36,slow=6.2,SNR=104
AKASG pP pP 12 33 44.9 -1.3
comp=Z,31nm,0.6s,baz=38,slow=6.1,SNR=7.2
AKASG LR LR 13 06 12.5
comp=Z,174nm,20.9s,MS4.3,baz=20,slow=37
AKASG Malin Array Be 72.41 327 P **P 12 33 31.8 -1.1**
AKASG *PP pP 12 33 44.9 -1.3
AKASG pmax pmax
comp=Z,40nm,0.5s
AKASG MLR MLR
comp=Z,174nm,20.9s
319A Douglas 72.66 63 ⇓P **P 12 33 35.3 +0.5**
baz=72,SNR=15
GNI Garni 73.33 311 P **P 12 33 40.7 +2.1**
SNR=10
GNI Garni 73.33 311 P **P 12 33 38.9 +0.3**
comp=Z,14nm,0.5s,mb5.1,baz=307,slow=3.6,SNR=12
GNI Garni 73.33 311 *e*P **P 12 33 40.8 +2.2**
SOC Sochi 73.35 316 *e*P **P 12 33 38.8 +0.2**
SOC *e* pP 12 33 52.6 +0.7
SOC *e* 12 36 18.6
SOC *e*PPP 12 38 03.2
SOC *e*S S 12 43 00.3 -3.6
SOC *e* 12 43 50.0
SOC *e*SSS 12 50 59.6
SOC pmax pmax
comp=Z,46nm,0.9s,mb5.4
SOC MLR MLR
comp=Z,172nm,15.0s,MS4.5
SOC Sochi 73.35 316 *i*P **P 12 33 39.5 +0.9**
ANN Anapa 73.52 318 *e*P **P 12 33 39.3 -0.3**
ANN *e*PP pP 12 33 51.3 -1.6
ANN pmax pmax
comp=Z,55nm,1.3s,mb5.3
SCHQ Schefferville 73.88 23 P **P 12 33 39.9 -1.6**
comp=Z,3.3nm,0.6s,mb4.4,baz=328,slow=3.2,SNR=5.3
SCHQ LR LR 13 07 12.0
comp=Z,168nm,21.1s,MS4.3,baz=299,slow=37
SCHQ Schefferville 73.88 23 P **P 12 33 39.9 -1.6**
SCHQ LR LR 13 07 12.0
SCIA State Center 74.19 46 *e*P **P 12 33 42.7 -0.9**
SCIA *ep*P pP 12 33 56.8 -0.1
KSU1 Kansas State U 74.52 49 *e*P **P 12 33 43.9 -1.6**
comp=Z,16nm,0.8s,mb5.0
KSU1 *ep*P pP 12 33 57.5 -1.4
AMTX Amarillo 74.75 56 *e*P **P 12 33 46.5 -0.6**
comp=Z,21nm,1.0s,mb5.0
SIM Simferopol' 74.91 320 *ce*P **P 12 33 47.5 -0.2**
SIM pmax pmax
comp=Z,23nm,1.0s,mb5.1
SIM MLR MLR
comp=Z,200nm,16.0s,MS4.5
LVV L'vov 75.06 329 ⇓*i*P **P 12 33 47.3 -1.2**
GDL2 Guadalupe Moun 75.08 59 *e*P **P 12 33 49.2 +0.3**
KIS Kishinev 75.54 325 *e*P **P 12 33 50.0 -1.3**
KIS *e* pP 12 34 05.0 +0.3
KIS Kishinev 75.54 325 *e*UNK 12 33 50.0
KWP Kalwaria 75.69 330 *e*P **P 12 33 52.1 0.0**
KWP Kalwaria 75.69 330 ⇓*i*P **P 12 33 52.7 +0.6**
KWP Kalwaria 75.69 330 *e*P **P 12 33 52.1 0.0**
BSEG Bad Segeberg 75.70 339 *e*P **P 12 33 52.0 -0.1**
BSEG pmax pmax
comp=Z,23nm,0.9s,mb5.1
BSEG Bad Segeberg 75.70 339 *e*P **P 12 33 52.0 -0.1**
comp=Z,23nm,0.9s,mb5.1
HAKT HAKKARI 75.77 310 *i*P **P 12 33 54.1 +1.3**
GRSN GIRESUNGRSN 76.06 315 *i*P **P 12 33 55.1 +0.7**
RUE Ruedersdorf 76.07 336 *e*P **P 12 33 54.1 -0.1**
comp=Z,32nm,0.7s,mb5.4
OJC Ojcow 76.19 332 *e*P **P 12 33 54.6 -0.3**
STHS Stebnicka Huta 76.38 330 *e*P **P 12 33 56.4 +0.3**
STHS pmax pmax
comp=Z,28nm,0.9s,mb5.2
STHS Stebnicka Huta 76.38 330 *e*P **P 12 33 56.4 +0.3**
comp=Z,28nm,0.9s,mb5.2
STHS *e* 12 33 59.7
KOLS Kolonicke sedl 76.43 329 *e*P **P 12 33 55.9 -0.4**
BURAR Bucovina Array 76.45 327 ⇑*i*P **P 12 33 56.6 +0.1**
BURAR Bucovina Array 76.45 327 ⇑P **P 12 33 56.6 +0.1**
WMOK Wichita Mounta 76.51 54 *e*P **P 12 33 56.7 -0.3**
UZH Uzhgorod 76.68 329 *e*P **P 12 33 56.8 -0.9**
UZH *e* pP 12 34 11.4 +0.3
NIE Niedzica 76.70 331 *e*P **P 12 33 58.7 +0.9**
CRVS Cervenica-Dubn 76.75 330 *e*P **P 12 33 58.2 +0.1**
KSP Ksiaz 76.77 334 *e*P **P 12 33 58.3 +0.1**
KSP Ksiaz 76.77 334 *e*P **P 12 33 57.5 -0.7**
NRDL Niedersach Rie 77.06 338 *e*P **P 12 33 59.4 -0.4**
comp=Z,23nm,0.9s,mb5.1
OKC Ostrava-Krasne 77.06 332 *e*P **P 12 33 59.9 0.0**
UPC Upice 77.15 334 *e*P **P 12 34 00.5 +0.1**
UPC *ep*P pP 12 34 08.8 -5.0
DPC Dobruska-Polom 77.19 334 *e*P **P 12 34 00.9 +0.3**
DPC *ep*P pP 12 34 09.1 -4.9
DPC AMS AMS 13 12 40.0
comp=Z,200nm,16.4s
ESK Eskdalemuir 77.21 347 P **P 12 34 02.6 +2.0**
comp=Z,130nm,0.8s,mb5.9,SNR=6.1
ESK Eskdalemuir 77.21 347 *e*P **P 12 34 02.7 +2.1**
ESK pmax pmax
comp=Z,15nm,0.7s,mb5.0
ESK Eskdalemuir 77.21 347 *e*P **P 12 34 02.7 +2.1**
comp=Z,15nm,0.7s,mb5.0
VRI Vrincioaia 77.31 325 ⇑*i*P **P 12 34 01.8 +0.5**
VRI Vrincioaia 77.31 325 ⇑P **P 12 34 01.8 +0.5**
MORC Moravsky Berou 77.31 333 P **P 12 34 01.5 +0.2**
MORC Moravsky Berou 77.31 333 ⇑*i*P **P 12 34 00.8 -0.5**
MORC Moravsky Berou 77.31 333 *e*P **P 12 34 01.1 -0.2**
comp=Z,24nm,0.9s,mb5.1
CLL Collm 77.34 336 *e*P **P 12 34 01.0 -0.4**
comp=Z,55nm,0.7s,mb5.6
CLL Collm 77.34 336 ⇓*i*P **P 12 34 00.9 -0.5**
comp=Z,34nm,0.9s,mb5.3
CLL LmV 12 11 00.0
comp=Z,200nm,20.2s
CLL *i* Pmax 12 34 02.5
comp=Z,55nm,0.7s
CLL Collm 77.34 336 ⇓*i*P **P 12 34 00.9 -0.5**
comp=Z,34nm,0.9s,mb5.3
CLL *i* pP pP 12 34 02.5 -12
CLL *i* 12 34 04.0
CLL LR LR
comp=Z,200nm,20.2s,MS4.4
PLOR Plostina 77.35 325 ⇑*i*P **P 12 34 03.3 +1.7**
KECS Kecovo 77.44 330 *e*P **P 12 34 02.1 +0.1**
KECS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KECS Kecovo 77.44 330 *e*P **P 12 34 02.1 +0.1**
comp=Z,8.0nm,0.9s,mb4.7
BRG Berggiesshubel 77.45 335 *e*P **P 12 34 01.6 -0.4**
BRG *e* pP 12 34 12.7 -2.7
BRG pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BRG Berggiesshubel 77.45 335 *e*P **P 12 34 01.6 -0.4**
comp=Z,15nm,0.9s,mb4.9
BRG *e* pP 12 34 12.7 -2.8
comp=Z,10nm,0.8s
MARD Mardin 77.51 311 *i*P **P 12 34 02.9 +0.3**
HATD Hatta, Dubai 77.52 293 P **P 12 34 05.8 +3.0**
SNR=7.0
TXAR Lajitas Array 77.54 61 P **P 12 34 02.8 -0.1**
comp=Z,24nm,0.7s,mb5.3,baz=302,slow=4.1,SNR=356
TXAR pP pP 12 34 16.2 -0.1
comp=Z,12nm,0.7s,baz=270,slow=1.3,SNR=11
TXAR Lajitas Array 77.54 61 P **P 12 34 02.8 -0.1**
TXAR *PP pP 12 34 16.2 -0.1
TXAR pmax pmax
comp=Z,24nm,0.7s
PVCC Panska Ves 77.57 335 *e*P **P 12 34 02.7 0.0**
CLZ Clausthal 77.58 338 *e*P **P 12 34 02.8 +0.1**
CLZ pmax pmax
comp=Z,50nm,0.9s,mb5.4
CLZ Clausthal 77.58 338 *e*P **P 12 34 02.8 +0.1**
comp=Z,50nm,0.9s,mb5.4
HOQ Hoqain 77.63 291 P **P 12 34 07.6 +4.2**
SNR=6.5
ASHO Ashiyiah 77.67 293 P **P 12 34 07.1 +3.4**
SNR=5.8
TIRR Tirgusor 77.77 323 ⇑*i*P **P 12 34 04.4 +0.5**
TIRR Tirgusor 77.77 323 P **P 12 34 04.1 +0.2**
HARR Harsova 77.78 324 P **P 12 34 04.7 +0.7**
IBBN Ibbenburen 77.82 339 *e*P **P 12 34 04.1 0.0**
comp=Z,38nm,0.9s,mb5.3
BALT Daday 77.92 318 *i*P **P 12 34 06.3 +1.5**
MLR Muntele Rosu 77.93 325 ⇓*i*P **P 12 34 05.8 +1.0**
MLR Muntele Rosu 77.93 325 P **P 12 34 05.5 +0.8**
MALT Malatya 77.97 313 P **P 12 34 06.9 +1.8**
MALT Malatya 77.97 313 ⇓*i*P **P 12 34 06.7 +1.6**
MALT Malatya 77.97 313 *e*P **P 12 34 06.3 +1.2**
CTKT Corum 77.97 317 *i*P **P 12 34 05.3 +0.2**
VYHS Vyhne 78.00 331 *e*P **P 12 34 04.9 -0.2**
VYHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
VYHS Vyhne 78.00 331 *e*P **P 12 34 04.9 -0.2**
comp=Z,3.2nm,0.7s,mb4.4
VRAC Vranov 78.02 333 ⇓*i*P **P 12 34 06.1 +0.9**
VRAC Vranov 78.02 333 P **P 12 34 05.8 +0.6**
PRU Pruhonice 78.06 334 *e*P **P 12 34 05.4 0.0**
PRU *ep*P pP 12 34 13.5 -5.3
PRU AMS AMS 13 12 30.0
comp=Z,200nm,16.9s
KOLL Kolacno 78.07 331 *e*P **P 12 34 06.2 +0.7**
DRGR 78.08 328 ⇓*i*P **P 12 34 06.0 +0.4**
DRGR 78.08 328 P **P 12 34 05.6 0.0**
PSZ Piszkesteto 78.13 330 ⇓*e*P **P 12 34 06.5 +0.6**
PSZ Piszkesteto 78.13 330 ⇓*i*P **P 12 34 06.7 +0.8**
PSZ Piszkesteto 78.13 330 *e*P **P 12 34 06.4 +0.5**
comp=Z,16nm,0.9s,mb5.0
STKA Stephens Creek 78.25 190 *e*P **P 12 34 09.5 +3.0**
comp=Z,3.8nm,1.1s,mb4.2
STKA Stephens Creek 78.25 190 P **P 12 34 08.3 +1.8**
comp=Z,2.1nm,0.7s,mb4.2,baz=8.8,slow=11,SNR=5.9
STKA pP pP 12 34 20.6 +0.7
comp=Z,2.5nm,0.7s,baz=344,slow=14,SNR=4.2
STKA LR LR 13 06 38.5
comp=Z,124nm,20.4s,MS4.2,baz=203,slow=34
TANN Tannenbergstha 78.29 336 *e*P **P 12 34 06.5 -0.2**
comp=Z,12nm,1.1s,mb4.7
BSY Bisya 78.29 290 P **P 12 34 11.4 +4.2**
SNR=5.1
MOX Moxa 78.32 336 *e*P **P 12 34 06.6 -0.3**
comp=Z,39nm,1.3s,mb5.2
MOX *e* pP 12 34 20.5 +0.2
MOX
comp=Z,100nm,21.0s
MOX Moxa 78.32 336 *e*P **P 12 34 06.6 -0.3**
MOX *e* pP 12 34 20.5 +0.2
MOX pmax pmax
comp=Z,39nm,1.3s,mb5.2
MOX MLR MLR
comp=Z,100nm,21.0s,MS4.1
VOIR 78.32 326 ⇑P **P 12 34 08.2 +1.2**
VOIR 78.32 326 ⇑*i*P **P 12 34 08.1 +1.1**
VOIR 78.32 326 P **P 12 34 07.9 +1.0**
WTSB Winterswijk 78.37 340 *e*P **P 12 34 06.1 -1.0**
GUNZ Gunzen 78.37 336 *e*P **P 12 34 07.3 +0.2**
comp=Z,18nm,0.8s,mb5.0
TREC Trest 78.38 334 *e*P **P 12 34 07.4 +0.2**
NKC Novy Kostel 78.45 336 *e*P **P 12 34 07.5 -0.1**
NKC *ep*P pP 12 34 13.6 -7.4
UBBA Unterbreizbach 78.60 337 *e*P **P 12 34 08.0 -0.4**
comp=Z,50nm,1.7s,mb5.2
MODS Modra-Piesok 78.62 332 *e*P **P 12 34 09.3 +0.8**
BUG Bochum--Univer 78.74 339 *e*P **P 12 34 09.5 +0.4**
comp=Z,36nm,0.9s,mb5.3
MANZ Manzenberg 78.77 336 *e*P **P 12 34 09.5 +0.1**
comp=Z,14nm,1.1s,mb4.8
BUD Budapest 78.80 331 ⇓*e*P **P 12 34 11.7 +2.1**
ZST Bratislava 78.83 332 *e*P **P 12 34 10.1 +0.4**
comp=Z,26nm,1.3s,mb5.0
ZST LR LR
comp=Z,100nm,21.5s,MS4.1
ROTZ Rotzenmuhle 78.94 336 *e*P **P 12 34 10.6 +0.3**
comp=Z,29nm,1.1s,mb5.1
CDAG Cicekdag 78.95 317 *i*P **P 12 34 12.1 +1.6**
JCT Junction City 79.03 57 P **P 12 34 11.0 -0.1**
JCT pmax pmax
comp=Z,23nm,1.1s,mb5.0
JCT Junction City 79.03 57 *e*P **P 12 34 10.9 -0.2**
comp=Z,24nm,1.1s,mb5.0
KHC Kasperske Hory 79.11 335 *e*P **P 12 34 11.0 -0.2**
KHC AMS AMS 13 16 50.0
comp=Z,200nm,17.0s
GZT Gaziantep 79.14 313 *i*P **P 12 34 13.1 +1.5**
GZR Gura Zlata 79.23 327 ⇓*i*P **P 12 34 12.5 +0.5**
GZR Gura Zlata 79.23 327 P **P 12 34 12.4 +0.4**
GRA1 Grafenberg Arr 79.29 336 *e*P **P 12 34 12.6 +0.4**
comp=Z,55nm,0.8s,mb5.5
GRF Grafenberg Arr 79.29 336 *e*P **P 12 34 12.6 +0.4**
GRF pmax pmax
comp=Z,55nm,0.8s,mb5.5
GRF Grafenberg Arr 79.29 336 *e*P **P 12 34 12.6 +0.4**
comp=Z,55nm,0.8s,mb5.5
SGKT Sivrigoynuk 79.29 319 *i*P **P 12 34 13.3 +0.9**
WET Wettzell 79.31 335 *e*P **P 12 34 12.6 +0.3**
WET pmax pmax
comp=Z,32nm,0.9s,mb5.2
WET Wettzell 79.31 335 *e*P **P 12 34 12.6 +0.3**
comp=Z,32nm,0.9s,mb5.2
GEC2 GERESS Array S 79.33 334 *e*P **P 12 34 12.2 -0.2**
GEC2 pmax pmax
comp=Z,15nm,1.0s,mb4.9
GEC2 GERESS Array S 79.33 334 *e*P **P 12 34 12.2 -0.2**
comp=Z,15nm,1.0s,mb4.9
GERES GERESS Array B 79.33 334 P **P 12 34 12.4 -0.1**
comp=Z,6.7nm,0.7s,mb4.7,baz=35,slow=4.9,SNR=39
GERES pP pP 12 34 25.1 -0.8
comp=Z,3.1nm,0.6s,baz=41,slow=4.3,SNR=4.5
GERES LR LR 13 13 00.7
comp=Z,159nm,18.0s,MS4.4,baz=74,slow=39
GERES GERESS Array B 79.33 334 P **P 12 34 12.4 0.0**
GERES *PP pP 12 34 25.1 -0.7
GERES pmax pmax
comp=Z,7.0nm,0.7s
GERES MLR MLR
comp=Z,159nm,18.0s
UMR Umm Al-Rimmam 79.36 302 *e*P **P 12 34 13.7 +0.8**
baz=301
UMR AMb AMB 12 34 15.6
comp=Z,61nm,0.6s,mb5.7,baz=301
SIUC Southern Illin 79.37 46 *e*P **P 12 34 12.4 -0.5**
comp=Z,28nm,0.9s,mb5.2
SIUC *ep*P pP 12 34 26.0 -0.3
MIB Mutribah 79.40 302 *e*P **P 12 34 13.3 +0.2**
baz=302
MIB AMb AMB 12 34 16.7
comp=Z,69nm,0.8s,mb5.6,baz=302
CONA Conrad Observa 79.47 333 ⇑*i*P **P 12 34 13.3 +0.1**
comp=Z,30nm,0.8s,mb5.3,SNR=20
CSNA Conrad Observa 79.47 333 ⇑*i*P **P 12 34 13.3 +0.1**
comp=Z,27nm,0.8s,mb5.2
BZS Buzias 79.48 328 ⇓*i*P **P 12 34 14.0 +0.7**
BZS Buzias 79.48 328 P **P 12 34 13.3 0.0**
ANTO Ankara 79.51 318 *e*P **P 12 34 13.6 0.0**
ANTO pmax pmax
comp=Z,13nm,0.6s,mb5.0
ANTO Ankara 79.51 318 *e*P **P 12 34 13.6 0.0**
comp=Z,13nm,0.6s,mb5.0
MIAR Mount Ida 79.53 51 *e*P **P 12 34 13.0 -0.8**
TNS Taunus Mts 79.56 338 *e*P **P 12 34 13.7 +0.1**
TNS pmax pmax
comp=Z,41nm,0.7s,mb5.5
TNS Taunus Mts 79.56 338 *e*P **P 12 34 13.7 +0.1**
comp=Z,41nm,0.7s,mb5.5
KBD Kabd 79.65 301 *e*P **P 12 34 14.9 +0.3**
baz=301
KBD AMb AMB 12 34 19.1
comp=Z,35nm,0.7s,mb5.4,baz=301
HGN Heimansgroeve 79.69 340 *e*P **P 12 34 13.4 -0.9**
comp=Z,27nm,1.4s,mb5.0
DSB Dublin 79.70 348 *e*P **P 12 34 14.4 0.0**
comp=Z,25nm,0.8s,mb5.2
BEBN Eben Emael 79.72 340 P **P 12 34 15.3 +0.8**
comp=Z,24nm,0.9s,mb5.1
SZH Strazhica 79.77 324 P **P 12 34 16.2 +1.3**
MEM Membach 79.81 340 P **P 12 34 15.1 +0.1**
comp=Z,35nm,1.0s,mb5.2
FORT Forrest 79.84 202 *e*P **P 12 34 18.4 +3.2**
comp=Z,16nm,0.9s,mb4.9
NAY Al-Naaiem 79.86 302 *e*P **P 12 34 15.8 +0.1**
baz=302
NAY AMb AMB 12 34 19.2
comp=Z,32nm,1.1s,mb5.2,baz=302
PARMO Parma 79.92 47 *e*P **P 12 34 15.3 -0.6**
RDF Al-Radifah 79.92 301 *e*P **P 12 34 16.9 +0.9**
baz=301
RDF AMb AMB 12 34 23.6
comp=Z,88nm,1.0s,mb5.6,baz=301
UCC Uccle 80.03 341 P **P 12 34 15.6 -0.6**
TOD Tromm 80.03 338 *e*P **P 12 34 16.2 0.0**
PKSM Moragy 80.04 330 ⇑*i*P **P 12 34 16.0 -0.3**
PKSM Moragy 80.04 330 P **P 12 34 15.9 -0.4**
BCLA Clavier 80.16 340 P **P 12 34 16.6 -0.3**
comp=Z,24nm,1.2s,mb5.0
ARSA Arzberg 80.17 333 ⇓*i*P **P 12 34 17.2 +0.1**
comp=Z,24nm,1.1s,mb5.0
RUP Ruppelstein 80.39 339 *e*P **P 12 34 19.1 +0.9**
WCI Wyandotte Cave 80.41 44 *e*P **P 12 34 18.2 -0.3**
WCI *e*PP pP 12 34 31.4 -0.5
WCI pmax pmax
comp=Z,18nm,0.8s,mb5.0
WCI Wyandotte Cave 80.41 44 *e*P **P 12 34 18.2 -0.3**
comp=Z,18nm,0.8s,mb5.0
GIVF Givet 80.57 340 *e*P **P 12 34 18.6 -0.5**
comp=Z,88nm,1.1s,mb5.3
GIVF Givet 80.57 340 *e*P **P 12 34 18.6 -0.5**
GIVF pmax pmax
comp=Z,44nm,1.1s,mb5.3
GIVF Givet 80.57 340 *e*P **P 12 34 18.6 -0.5**
comp=Z,44nm,1.1s,mb5.3
RJOB Jochberg 80.59 334 *e*P **P 12 34 20.0 +0.7**
comp=Z,26nm,0.9s,mb5.2
DOU Dourbes 80.63 340 P **P 12 34 19.5 +0.1**
comp=Z,13nm,1.3s,mb4.7
FUR Furstenfeldbru 80.65 336 *e*P **P 12 34 19.8 +0.2**
FUR pmax pmax
comp=Z,33nm,0.8s,mb5.3
FUR Furstenfeldbru 80.65 336 *e*P **P 12 34 19.8 +0.2**
comp=Z,33nm,0.8s,mb5.3
WLF Walferdange 80.65 339 P **P 12 34 21.3 +1.7**
comp=Z,20nm,1.3s,mb4.9
WLF Walferdange 80.65 339 *e*P **P 12 34 21.6 +2.0**
WLF pmax pmax
comp=Z,20nm,0.7s,mb5.2
WLF Walferdange 80.65 339 *e*P **P 12 34 20.8 +1.2**
comp=Z,45nm,1.3s,mb5.2
WLF Walferdange 80.65 339 *e*P **P 12 34 21.6 +2.0**
comp=Z,20nm,0.7s,mb5.2
STU Stuttgart 80.69 337 *e*P **P 12 34 19.8 0.0**
comp=Z,42nm,0.8s,mb5.4
STU Stuttgart 80.69 337 *e*P **P 12 34 21.1 +1.3**
ESKT Eskisehir 80.69 319 *i*P **P 12 34 20.2 +0.2**
MENF Mencas 80.74 342 *e*P **P 12 34 19.7 -0.3**
BAIF Baives 80.75 341 *e*P **P 12 34 19.8 -0.3**
comp=Z,60nm,1.2s,mb5.1
BAIF Baives 80.75 341 *e*P **P 12 34 19.8 -0.3**
BAIF pmax pmax
comp=Z,30nm,1.2s,mb5.1
BAIF Baives 80.75 341 *e*P **P 12 34 19.8 -0.3**
comp=Z,30nm,1.2s,mb5.1
SOKA Soboth 80.83 333 ⇑*i*P **P 12 34 20.3 -0.2**
comp=Z,54nm,1.2s,mb5.3
LANF Langenberg 80.86 338 *e*P **P 12 34 21.0 +0.3**
GROS Grobnik 80.88 332 *e*P **P 12 34 19.9 -0.9**
DIM Dimitrovgrad 80.94 324 P **P 12 34 22.4 +1.1**
ULDT Uludag 80.96 320 *i*P **P 12 34 20.3 -1.1**
NATX Nacogdoches 81.03 53 *e*P **P 12 34 21.4 -0.5**
OBKA Obir 81.14 333 ⇑*i*P **P 12 34 21.7 -0.5**
comp=Z,22nm,0.7s,mb5.2,SNR=9.4
BOLV Bolvadin 81.29 318 *e*P **P 12 34 22.7 -0.4**
WVT Waverly 81.30 46 *e*P **P 12 34 22.8 -0.5**
WVT *e*PP pP 12 34 36.0 -0.8
WVT Waverly 81.30 46 *e*P **P 12 34 22.8 -0.5**
comp=Z,10nm,0.9s,mb4.8
WATA Walderalm 81.31 335 ⇑*i*P **P 12 34 24.3 +1.1**
comp=Z,82nm,1.1s,mb5.6,SNR=7.6
BFO Black Forest 81.32 337 P **P 12 34 23.3 +0.1**
comp=Z,204nm,0.9s,mb6.1,SNR=12
BFO Black Forest 81.32 337 *e*P **P 12 34 23.2 0.0**
BFO pmax pmax
comp=Z,42nm,1.0s,mb5.3
BFO Black Forest 81.32 337 *e*P **P 12 34 23.2 0.0**
comp=Z,42nm,1.0s,mb5.3
WTTA Wattenberg 81.36 335 ⇑*i*P **P 12 34 23.6 +0.2**
comp=Z,88nm,0.6s,mb5.8,SNR=35
PPT Papeete 81.39 126 *e*LR LR 13 00 01.7
comp=Z,214nm,24.2s
PPT Papeete 81.39 126 LR LR 13 04 02.3
comp=Z,140nm,21.4s,MS4.3,baz=329,slow=31
SPAK Spaichingen-Ko 81.41 337 *e*P **P 12 34 24.0 +0.4**
RETA Reutte 81.41 336 ⇑*i*P **P 12 34 23.5 -0.2**
comp=Z,27nm,0.7s,mb5.3,SNR=14
MOTA Moosalm 81.44 335 ⇓*i*P **P 12 34 24.0 +0.1**
comp=Z,56nm,0.9s,mb5.5,SNR=22
CRES Cresnjev 81.45 332 *e*P **P 12 34 22.9 -1.0**
MEST Erdemli 81.45 315 *i*P **P 12 34 23.9 -0.1**
CDF Champ du Feu 81.53 338 *e*P **P 12 34 24.0 -0.2**
comp=Z,65nm,0.8s,mb5.3
CDF Champ du Feu 81.53 338 *e*P **P 12 34 24.0 -0.2**
CDF pmax pmax
comp=Z,33nm,0.8s,mb5.3
CDF Champ du Feu 81.53 338 *e*P **P 12 34 24.0 -0.2**
comp=Z,32nm,0.8s,mb5.3
RZN Rozhen 81.58 324 P **P 12 34 26.3 +1.6**
PTCC Patocco-Chiusa 81.61 333 P **P 12 34 24.0 -0.7**
GDZ Gediz 81.66 319 *i*P **P 12 34 25.1 0.0**
LIBD Limburg 81.68 338 *e*P **P 12 34 25.5 +0.5**
DURS Dursunbey 81.70 320 *i*P **P 12 34 24.9 -0.4**
ECH Echery 81.74 338 *e*P **P 12 34 25.0 -0.3**
OXF Oxford 81.76 48 *e*P **P 12 34 24.3 -1.4**
OXF *e* pP 12 34 38.4 -0.8
OXF pmax pmax
comp=Z,36nm,1.1s,mb5.2
OXF Oxford 81.76 48 *e*P **P 12 34 24.3 -1.4**
comp=Z,36nm,1.1s,mb5.2
OXF *e* pP 12 34 38.4 -0.8
BTOK Tokmak 81.76 321 *i*P **P 12 34 23.8 -1.9**
FELD Feldberg im Sc 81.83 337 *e*P **P 12 34 25.3 -0.5**
FETA Feichten 81.84 335 ⇓*i*P **P 12 34 26.0 +0.1**
comp=Z,29nm,0.8s,mb5.2,SNR=16
DAVA Damuels 81.85 336 ⇑*i*P **P 12 34 26.1 +0.1**
comp=Z,39nm,0.8s,mb5.4,SNR=13
BALY Balya 81.96 321 *i*P **P 12 34 26.7 0.0**
MEZF Maizieres J'vi 82.00 340 *e*P **P 12 34 26.8 +0.1**
comp=Z,78nm,0.7s,mb5.4
MEZF Maizieres J'vi 82.00 340 *e*P **P 12 34 26.8 +0.1**
comp=Z,78nm,0.7s,mb5.8
THEF They Montfort 82.03 339 *e*P **P 12 34 27.1 +0.2**
MMB Musomiste 82.07 324 P **P 12 34 29.3 +2.1**
PLAL Pickwick Lake 82.08 47 *e*P **P 12 34 25.7 -1.7**
PLAL *ep*P pP 12 34 39.4 -1.5

MOF	**Molkenrain**	**82.08**	**338**	*e*P	**P**	**12 34 26.7**	**-0.4**
KKB	**Krupnik**	**82.09**	**325**	P	**P**	**12 34 29.2**	**+1.9**
HAU	**Haudompre**	**82.14**	**339**	*e*P	**P**	**12 34 27.0**	**-0.5**
	comp=Z,48nm,0.8s,mb5.2						
HAU				*e*MLR	MLR		
	comp=Z,260nm,23.0s,MS4.2						
HAU	**Haudompre**	**82.14**	**339**	*e*P	**P**	**12 34 27.0**	**-0.5**
HAU				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
HAU				MLR	MLR		
	comp=Z,260nm,23.0s,MS4.5						
HAU	**Haudompre**	**82.14**	**339**	*e*P	**P**	**12 34 27.0**	**-0.5**
	comp=Z,24nm,0.8s,mb5.2						
HAU				LR	LR		
	comp=Z,260nm,23.0s,MS4.5						
HINF	**Hinteralfeld**	**82.18**	**338**	*e*P	**P**	**12 34 27.0**	**-0.7**
	comp=Z,37nm,0.9s,mb5.0						
HINF	**Hinteralfeld**	**82.18**	**338**	*e*P	**P**	**12 34 27.0**	**-0.7**
HINF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
HINF	**Hinteralfeld**	**82.18**	**338**	*e*P	**P**	**12 34 27.0**	**-0.7**
	comp=Z,18nm,0.9s,mb5.0						
PLE	**Pljevlja**	**82.26**	**328**	⇓*i*P	**P**	**12 34 29.7**	**+1.5**
BBS	**Basel-Blauen**	**82.34**	**338**	*e*P	**P**	**12 34 28.1**	**-0.4**
BRMO	**Bormio**	**82.44**	**335**	P	**P**	**12 34 30.3**	**+1.2**
CTI	**Castel Tesino**	**82.45**	**334**	P	**P**	**12 34 29.6**	**+0.5**
IVA	**Berane**	**82.47**	**328**	⇓*i*P	**P**	**12 34 30.6**	**+1.3**
UPM	**Unac-Piva**	**82.55**	**328**	⇓*i*P	**P**	**12 34 29.2**	**-0.5**
LOMF	**Lomont**	**82.62**	**338**	*e*P	**P**	**12 34 30.4**	**+0.4**
PVY	**Plav**	**82.68**	**327**	⇓*i*P	**P**	**12 34 31.5**	**+1.1**
TUE	**Stuetta**	**82.74**	**336**	*e*P	**P**	**12 34 31.1**	**+0.4**
	comp=Z,42nm,0.8s,mb5.5						
TUE				*e*	pP	12 34 47.5	+3.4
VAY	**Valandovo**	**82.76**	**325**	*e*P	**P**	**12 34 30.8**	**0.0**
MABI	**Malga Bissina**	**82.78**	**335**	P	**P**	**12 34 32.7**	**+1.8**
NKY	**Niksic**	**82.85**	**328**	⇓*i*P	**P**	**12 34 32.0**	**+0.7**
BRY	**Bratogost**	**82.94**	**329**	⇓*i*P	**P**	**12 34 32.7**	**+1.0**
SWET	**Sewanee**	**82.97**	**45**	*e*P	**P**	**12 34 31.2**	**-0.8**
SWET				*e*pP	pP	12 34 45.4	-0.2
FLN	**La Foliniere**	**82.99**	**343**	*e*P	**P**	**12 34 31.2**	**-0.7**
	comp=Z,39nm,0.8s,mb5.2						
FLN				*e*MLR	MLR		
	comp=Z,200nm,21.8s,MS4.2						
FLN	**La Foliniere**	**82.99**	**343**	*e*P	**P**	**12 34 31.2**	**-0.7**
FLN				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
FLN				MLR	MLR		
	comp=Z,200nm,21.8s,MS4.5						
FLN	**La Foliniere**	**82.99**	**343**	*e*P	**P**	**12 34 31.2**	**-0.7**
	comp=Z,20nm,0.8s,mb5.2						
FLN				LR	LR		
	comp=Z,200nm,21.8s,MS4.5						
TZTN	**Tazewell**	**83.07**	**43**	*e*P	**P**	**12 34 31.4**	**-1.1**
	comp=Z,43nm,1.6s,mb5.2						
LDF	**La Druitiere**	**83.08**	**343**	*e*P	**P**	**12 34 31.7**	**-0.6**
	comp=Z,21nm,0.8s,mb4.9						
LDF	**La Druitiere**	**83.08**	**343**	*e*P	**P**	**12 34 31.7**	**-0.6**
LDF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
LDF	**La Druitiere**	**83.08**	**343**	*e*P	**P**	**12 34 31.7**	**-0.6**
	comp=Z,11nm,0.8s,mb4.9						
TTG	**Podgorica**	**83.09**	**328**	⇓*i*P	**P**	**12 34 32.8**	**+0.3**
GOLH	**Golhisar**	**83.13**	**318**	*i* P	**P**	**12 34 33.1**	**+0.2**
KDAG	**Bornova**	**83.22**	**320**	*i* P	**P**	**12 34 33.9**	**+0.7**
KRUS	**Krusevo**	**83.24**	**326**	*e*P	**P**	**12 34 34.9**	**+1.6**
BUM	**Brajici-Budva**	**83.33**	**328**	*e*P	**P**	**12 34 34.9**	**+1.1**
HCY	**Herceg Novi**	**83.35**	**328**	⇓*i*P	**P**	**12 34 34.4**	**+0.5**
GRR	**Gorron**	**83.43**	**343**	⇑*i*P	**P**	**12 34 33.7**	**-0.4**
	comp=Z,63nm,0.8s,mb5.4						
GRR	**Gorron**	**83.43**	**343**	⇑*i*P	**P**	**12 34 33.7**	**-0.4**
GRR				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.4						
GRR	**Gorron**	**83.43**	**343**	⇑*i*P	**P**	**12 34 33.7**	**-0.4**
	comp=Z,32nm,0.8s,mb5.4						
LOR	**Lormes**	**83.44**	**340**	*e*P	**P**	**12 34 33.9**	**-0.3**
	comp=Z,90nm,0.8s,mb5.5						
LOR				*e*MLR	MLR		
	comp=Z,252nm,22.8s,MS4.2						
LOR	**Lormes**	**83.44**	**340**	*e*P	**P**	**12 34 33.9**	**-0.3**
LOR				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.5						
LOR				MLR	MLR		
	comp=Z,250nm,22.8s,MS4.5						
LOR	**Lormes**	**83.44**	**340**	*e*P	**P**	**12 34 33.9**	**-0.3**
	comp=Z,45nm,0.8s,mb5.5						
LOR				LR	LR		
	comp=Z,250nm,22.8s,MS4.5						
VAI	**Varese**	**83.46**	**336**	P	**P**	**12 34 34.5**	**+0.2**
CPCT	**Cooper Cave**	**83.48**	**44**	*e*P	**P**	**12 34 34.3**	**-0.4**
CPCT				*e*pP	pP	12 34 48.0	-0.2
ASF	**Jabal al Asfar**	**83.49**	**310**	P	**P**	**12 34 35.7**	**+0.9**
	comp=Z,10nm,0.9s,mb4.9,baz=201,slow=1.7,SNR=8.1						
ASF	**Jabal al Asfar**	**83.49**	**310**	P	**P**	**12 34 35.7**	**+0.9**
ASF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ULC	**Ulcinj**	**83.49**	**328**	⇓*i*P	**P**	**12 34 35.4**	**+0.8**
CABF	**La Chapelle**	**83.50**	**338**	*e*P	**P**	**12 34 34.8**	**+0.3**
	comp=Z,90nm,1.2s,mb5.4						
CABF	**La Chapelle**	**83.50**	**338**	*e*P	**P**	**12 34 34.8**	**+0.3**
CABF				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.4						
CABF	**La Chapelle**	**83.50**	**338**	*e*P	**P**	**12 34 34.8**	**+0.3**
	comp=Z,45nm,1.2s,mb5.4						
MMAI	**Mount Meron Ar**	**83.62**	**312**	P	**P**	**12 34 36.5**	**+1.1**
	comp=Z,26nm,0.8s,mb5.4,baz=32,slow=6.9,SNR=14						
SSF	**Saint Saulge**	**83.72**	**340**	*e*P	**P**	**12 34 35.2**	**-0.5**
	comp=Z,54nm,0.8s,mb5.4						
SSF	**Saint Saulge**	**83.72**	**340**	*e*P	**P**	**12 34 35.2**	**-0.5**
SSF				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.4						
SSF	**Saint Saulge**	**83.72**	**340**	*e*P	**P**	**12 34 35.2**	**-0.5**
	comp=Z,27nm,0.8s,mb5.4						
TIR	**Tirane**	**83.79**	**327**	*e*P	**P**	**12 34 37.7**	**+1.6**
TIR				pmax	pmax		
	comp=Z,59nm,0.7s,mb5.8						
TIR	**Tirane**	**83.79**	**327**	*e*P	**P**	**12 34 37.7**	**+1.6**
	comp=Z,59nm,0.7s,mb5.8						
SGMF	**Saint Gilles**	**83.89**	**344**	*e*P	**P**	**12 34 36.1**	**-0.4**
	comp=Z,56nm,0.7s,mb5.5						
SGMF	**Saint Gilles**	**83.89**	**344**	*e*P	**P**	**12 34 36.1**	**-0.4**
SGMF				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.5						
SGMF	**Saint Gilles**	**83.89**	**344**	*e*P	**P**	**12 34 36.1**	**-0.4**
	comp=Z,28nm,0.7s,mb5.5						
ROSF	**Rostrenen**	**83.94**	**345**	*e*P	**P**	**12 34 36.4**	**-0.4**
	comp=Z,87nm,0.9s,mb5.6						
ROSF	**Rostrenen**	**83.94**	**345**	*e*P	**P**	**12 34 36.4**	**-0.4**
ROSF				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.6						
ROSF	**Rostrenen**	**83.94**	**345**	*e*P	**P**	**12 34 36.4**	**-0.4**
	comp=Z,43nm,0.9s,mb5.6						
BLA	**Blacksburg**	**83.98**	**41**	*e*P	**P**	**12 34 35.6**	**-1.6**
BLA				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.1						
BLA	**Blacksburg**	**83.98**	**41**	*e*P	**P**	**12 34 35.6**	**-1.6**
	comp=Z,15nm,0.9s,mb5.1						
AVF	**Avril sur Loir**	**84.01**	**340**	⇑*i*P	**P**	**12 34 36.9**	**-0.3**
	comp=Z,52nm,0.8s,mb5.4						
AVF	**Avril sur Loir**	**84.01**	**340**	⇑*i*P	**P**	**12 34 36.9**	**-0.3**
AVF				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.4						
AVF	**Avril sur Loir**	**84.01**	**340**	⇑*i*P	**P**	**12 34 36.9**	**-0.3**
	comp=Z,26nm,0.8s,mb5.4						
SMF	**Signal de Mont**	**84.03**	**340**	⇑*i*P	**P**	**12 34 37.1**	**-0.2**
	comp=Z,89nm,0.9s,mb5.6						
SMF	**Signal de Mont**	**84.03**	**340**	⇑*i*P	**P**	**12 34 37.1**	**-0.2**
SMF				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.6						
SMF	**Signal de Mont**	**84.03**	**340**	⇑*i*P	**P**	**12 34 37.1**	**-0.2**
	comp=Z,44nm,0.9s,mb5.6						
TRAV	**Traversella**	**84.07**	**337**	P	**P**	**12 34 36.8**	**-0.7**
RSM	**Repubblica di**	**84.11**	**333**	P	**P**	**12 34 38.7**	**+1.0**
RSL	**Roselend**	**84.21**	**337**	*e*P	**P**	**12 34 38.8**	**+0.6**
FSSB	**Fossombrone**	**84.22**	**333**	P	**P**	**12 34 39.0**	**+0.7**
BDRM	**Kayabasi**	**84.24**	**320**	*i* P	**P**	**12 34 39.2**	**+0.8**
BOB	**Bobbio (Coli)**	**84.27**	**335**	P	**P**	**12 34 39.8**	**+1.3**
LSD	**Lago del Serru**	**84.28**	**337**	P	**P**	**12 34 39.7**	**+1.1**
GSCL	**Gusciola**	**84.31**	**334**	P	**P**	**12 34 41.4**	**+2.7**
FNVD	**Fontana Vidola**	**84.31**	**334**	P	**P**	**12 34 40.4**	**+1.7**
SFI	**Santa Sofia**	**84.32**	**333**	P	**P**	**12 34 41.7**	**+2.9**
QUIF	**Quistinic**	**84.33**	**345**	*e*P	**P**	**12 34 38.7**	**0.0**
	comp=Z,22nm,0.8s,mb5.0						
QUIF	**Quistinic**	**84.33**	**345**	*e*P	**P**	**12 34 38.7**	**0.0**
QUIF				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
QUIF	**Quistinic**	**84.33**	**345**	*e*P	**P**	**12 34 38.7**	**0.0**
	comp=Z,11nm,0.8s,mb5.0						
LPL	**La Plagne**	**84.34**	**337**	*e*P	**P**	**12 34 39.6**	**+0.7**
	comp=Z,80nm,1.0s,mb5.5						
LPL	**La Plagne**	**84.34**	**337**	*e*P	**P**	**12 34 39.6**	**+0.7**
LPL				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
LPL	**La Plagne**	**84.34**	**337**	*e*P	**P**	**12 34 39.6**	**+0.7**
	comp=Z,40nm,1.0s,mb5.5						
SEI	**Scarperia**	**84.34**	**334**	P	**P**	**12 34 40.8**	**+1.9**
BGF	**Bois d'Agland**	**84.35**	**340**	*e*P	**P**	**12 34 38.7**	**-0.2**
	comp=Z,23nm,0.6s,mb5.2						
BGF	**Bois d'Agland**	**84.35**	**340**	*e*P	**P**	**12 34 38.7**	**-0.2**
BGF				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.2						
BGF	**Bois d'Agland**	**84.35**	**340**	*e*P	**P**	**12 34 38.7**	**-0.2**
	comp=Z,12nm,0.6s,mb5.2						
LPG	**La Plagne**	**84.35**	**337**	*e*P	**P**	**12 34 39.8**	**+0.9**
	comp=Z,134nm,1.1s,mb5.7						
LPG	**La Plagne**	**84.35**	**337**	*e*P	**P**	**12 34 39.8**	**+0.9**
LPG				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.7						
LPG	**La Plagne**	**84.35**	**337**	*e*P	**P**	**12 34 39.8**	**+0.9**
	comp=Z,67nm,1.1s,mb5.7						
VMG	**Vicchio**	**84.37**	**334**	P	**P**	**12 34 41.1**	**+2.1**
RSP	**Reno Superiore**	**84.54**	**337**	P	**P**	**12 34 39.7**	**-0.2**
VLC	**Villacollemand**	**84.54**	**334**	*e*P	**P**	**12 34 43.3**	**+3.4**
	comp=Z,21nm,0.8s,mb5.3						
SNTG	**Esanatoglia**	**84.56**	**332**	P	**P**	**12 34 42.7**	**+2.7**
BDI	**Bagni Di Lucca**	**84.57**	**334**	P	**P**	**12 34 41.9**	**+1.9**
MURB	**Monte Urbino**	**84.69**	**333**	P	**P**	**12 34 43.4**	**+2.8**
PLDF	**La Plantade**	**84.72**	**340**	*e*P	**P**	**12 34 42.2**	**+1.5**
PCP	**Piancastagn**	**84.73**	**336**	P	**P**	**12 34 40.9**	**0.0**
TCF	**Toulx Ste Croi**	**84.75**	**341**	*e*P	**P**	**12 34 40.6**	**-0.3**
	comp=Z,47nm,0.8s,mb5.4						
TCF	**Toulx Ste Croi**	**84.75**	**341**	*e*P	**P**	**12 34 40.6**	**-0.3**
TCF				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.4						
TCF	**Toulx Ste Croi**	**84.75**	**341**	*e*P	**P**	**12 34 40.6**	**-0.3**
	comp=Z,24nm,0.8s,mb5.4						
AGO	**Saint Agoulin**	**84.76**	**340**	*e*P	**P**	**12 34 42.4**	**+1.4**
BNI	**Bardonecchia**	**84.78**	**337**	*e*P	**P**	**12 34 42.1**	**+1.0**
BNI				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.3						
BNI	**Bardonecchia**	**84.78**	**337**	*e*P	**P**	**12 34 42.1**	**+1.0**
	comp=Z,25nm,1.0s,mb5.3						
TERO	**Teramo**	**84.91**	**332**	P	**P**	**12 34 42.3**	**+0.5**
MFF	**Saint Martin d**	**84.98**	**342**	*e*P	**P**	**12 34 41.5**	**-0.6**
	comp=Z,71nm,0.9s,mb5.5						
MFF	**Saint Martin d**	**84.98**	**342**	*e*P	**P**	**12 34 41.5**	**-0.6**
MFF				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.5						
MFF	**Saint Martin d**	**84.98**	**342**	*e*P	**P**	**12 34 41.5**	**-0.6**
	comp=Z,36nm,0.9s,mb5.5						
MBDF	**Montbardon**	**85.06**	**337**	*e*P	**P**	**12 34 42.5**	**0.0**
	comp=Z,40nm,0.7s,mb5.4						
MBDF	**Montbardon**	**85.06**	**337**	*e*P	**P**	**12 34 42.5**	**0.0**
MBDF				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.4						
MBDF	**Montbardon**	**85.06**	**337**	*e*P	**P**	**12 34 42.5**	**0.0**
	comp=Z,20nm,0.7s,mb5.3						
PYM	**Petit Puy Mans**	**85.07**	**340**	*e*P	**P**	**12 34 42.6**	**+0.1**
ORIF	**Oris-en-Rattie**	**85.12**	**338**	*e*P	**P**	**12 34 43.5**	**+0.7**
	comp=Z,63nm,0.8s,mb5.5						
ORIF				*e*MLR	MLR		
	comp=Z,182nm,21.2s,MS4.1						
ORIF	**Oris-en-Rattie**	**85.12**	**338**	*e*P	**P**	**12 34 43.5**	**+0.7**
ORIF				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.5						
ORIF	**Oris-en-Rattie**	**85.12**	**338**	*e*P	**P**	**12 34 43.5**	**+0.7**
	comp=Z,31nm,0.8s,mb5.5						
SSB	**Saint Sauveur**	**85.13**	**339**	*e*P	**P**	**12 34 43.2**	**+0.3**
VIVF	**Saint-Julien-l**	**85.50**	**338**	*e*P	**P**	**12 34 45.0**	**+0.3**
	comp=Z,32nm,0.7s,mb5.2						
VIVF	**Saint-Julien-l**	**85.50**	**338**	*e*P	**P**	**12 34 45.0**	**+0.3**
VIVF				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.3						
VIVF	**Saint-Julien-l**	**85.50**	**338**	*e*P	**P**	**12 34 45.0**	**+0.3**
	comp=Z,16nm,0.7s,mb5.3						
SAOF	**Saorge**	**85.53**	**336**	*e*P	**P**	**12 34 44.8**	**0.0**
AUTN	**L'Aution**	**85.55**	**336**	*e*P	**P**	**12 34 45.9**	**+0.9**
OG25	**Le Caire**	**85.58**	**337**	*e*P	**P**	**12 34 45.7**	**+0.6**
TOUF	**Mont Tournerai**	**85.59**	**336**	*e*P	**P**	**12 34 45.2**	**+0.1**
OCF	**Saint Nazaire**	**85.59**	**338**	*e*P	**P**	**12 34 46.2**	**+1.1**
OG26	**St.-Nazaire-De**	**85.59**	**338**	*e*P	**P**	**12 34 46.2**	**+1.1**
SBF	**Sospel**	**85.67**	**336**	*e*P	**P**	**12 34 45.2**	**-0.4**
	comp=Z,112nm,0.9s,mb5.8						
SBF	**Sospel**	**85.67**	**336**	*e*P	**P**	**12 34 45.2**	**-0.4**
SBF				pmax	pmax		
	comp=Z,56nm,0.9s,mb5.8						
SBF	**Sospel**	**85.67**	**336**	*e*P	**P**	**12 34 45.2**	**-0.4**
	comp=Z,56nm,0.9s,mb5.8						
MVIF	**Mont Vial**	**85.72**	**336**	*e*P	**P**	**12 34 45.4**	**-0.4**
REVF	**Revere**	**85.81**	**336**	*e*P	**P**	**12 34 46.5**	**+0.3**
RJF	**Les Rejaudoux**	**85.84**	**341**	*e*P	**P**	**12 34 46.4**	**0.0**
	comp=Z,57nm,0.9s,mb5.5						
RJF				*e*MLR	MLR		
	comp=Z,243nm,22.2s,MS4.2						
RJF	**Les Rejaudoux**	**85.84**	**341**	*e*P	**P**	**12 34 46.4**	**0.0**
RJF				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.5						
RJF				MLR	MLR		
	comp=Z,240nm,22.3s,MS4.5						
RJF	**Les Rejaudoux**	**85.84**	**341**	*e*P	**P**	**12 34 46.4**	**0.0**
	comp=Z,28nm,0.9s,mb5.5						
RJF				LR	LR		
	comp=Z,240nm,22.3s,MS4.5						
LHS	**Liberty Hill**	**86.05**	**42**	*e*P	**P**	**12 34 46.6**	**-1.0**
CAF	**Calviac**	**86.07**	**340**	*e*P	**P**	**12 34 46.9**	**-0.6**
	comp=Z,56nm,0.7s,mb5.6						
CAF	**Calviac**	**86.07**	**340**	*e*P	**P**	**12 34 46.9**	**-0.6**
CAF				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.6						
CAF	**Calviac**	**86.07**	**340**	*e*P	**P**	**12 34 46.9**	**-0.6**
	comp=Z,28nm,0.7s,mb5.6						
SMRF	**Simiane la Rot**	**86.08**	**338**	*e*P	**P**	**12 34 47.3**	**-0.3**
	comp=Z,22nm,0.7s,mb5.2						
SMRF	**Simiane la Rot**	**86.08**	**338**	*e*P	**P**	**12 34 47.3**	**-0.3**
	comp=Z,22nm,0.7s,mb5.5						
FRF	**La Foret Royal**	**86.17**	**337**	*e*P	**P**	**12 34 47.8**	**-0.2**
LFF	**La Frestale**	**86.36**	**341**	*e*P	**P**	**12 34 48.9**	**-0.1**
	comp=Z,61nm,0.7s,mb5.6						
LFF	**La Frestale**	**86.36**	**341**	*e*P	**P**	**12 34 48.9**	**-0.1**
LFF				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.6						
LFF	**La Frestale**	**86.36**	**341**	*e*P	**P**	**12 34 48.9**	**-0.1**
	comp=Z,30nm,0.7s,mb5.6						
LMR	**La Mourre**	**86.42**	**337**	*e*P	**P**	**12 34 49.3**	**0.0**
	comp=Z,51nm,0.9s,mb5.5						
LMR	**La Mourre**	**86.42**	**337**	*e*P	**P**	**12 34 49.3**	**0.0**
LMR				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.5						
LMR	**La Mourre**	**86.42**	**337**	*e*P	**P**	**12 34 49.3**	**0.0**
	comp=Z,26nm,0.9s,mb5.5						
PGF	**Pioggiola**	**86.43**	**335**	*e*P	**P**	**12 34 49.1**	**-0.2**
	comp=Z,38nm,0.8s,mb5.4						
PGF	**Pioggiola**	**86.43**	**335**	*e*P	**P**	**12 34 49.1**	**-0.2**
PGF				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.4						
PGF	**Pioggiola**	**86.43**	**335**	*e*P	**P**	**12 34 49.1**	**-0.2**
	comp=Z,19nm,0.8s,mb5.4						
EIL	**Elat**	**86.49**	**310**	P	**P**	**12 34 51.0**	**+1.2**
	comp=Z,38nm,0.7s,mb5.7,baz=352,slow=4.3,SNR=32						
TIP	**Timpagrande**	**86.85**	**328**	*e*P	**P**	**12 34 52.3**	**+0.8**
	comp=Z,23nm,1.0s,mb5.4						
IDI	**Anoyia**	**86.86**	**320**	P	**P**	**12 34 52.8**	**+1.2**
	comp=Z,35nm,0.6s,mb5.8,baz=23,slow=8.5,SNR=30						
MTLF	**Montolieu**	**87.53**	**340**	*e*P	**P**	**12 34 53.7**	**-1.0**
	comp=Z,26nm,0.7s,mb5.3						
MTLF	**Montolieu**	**87.53**	**340**	*e*P	**P**	**12 34 53.7**	**-1.0**
MTLF				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.3						
MTLF	**Montolieu**	**87.53**	**340**	*e*P	**P**	**12 34 53.7**	**-1.0**
	comp=Z,13nm,0.7s,mb5.3						
EPF	**Esparros**	**88.27**	**341**	*e*P	**P**	**12 34 58.2**	**0.0**
	comp=Z,17nm,0.8s,mb5.0						
EPF	**Esparros**	**88.27**	**341**	*e*P	**P**	**12 34 58.2**	**0.0**
EPF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
EPF	**Esparros**	**88.27**	**341**	*e*P	**P**	**12 34 58.2**	**0.0**
	comp=Z,8.6nm,0.8s,mb5.0						
ETSF	**Etsaut**	**88.60**	**341**	*e*P	**P**	**12 35 00.1**	**+0.4**
	comp=Z,18nm,0.8s,mb5.2						
ETSF	**Etsaut**	**88.60**	**341**	*e*P	**P**	**12 35 00.1**	**+0.4**
ETSF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
ETSF	**Etsaut**	**88.60**	**341**	*e*P	**P**	**12 35 00.1**	**+0.4**
	comp=Z,9.2nm,0.8s,mb5.2						
VSL	**Villasalto**	**89.10**	**333**	*e*P	**P**	**12 35 05.3**	**+3.2**
RPZ	**Rata Peaks**	**90.62**	**167**	P	**P**	**12 35 12.3**	**+3.6**
	comp=Z,6.2nm,0.9s,mb5.0,baz=281,slow=5.2,SNR=4.5						
ESDC	**Sonseca Array**	**92.41**	**343**	P	**P**	**12 35 16.4**	**-1.2**
	comp=Z,1.8nm,0.7s,mb4.5,baz=7.8,slow=3.6,SNR=10						
KEST	**Kesra**	**92.54**	**332**	LR	LR	13 22 03.7	
	comp=Z,47nm,18.2s,MS4.0,baz=298,slow=39						
TORD	**Torodi Ar. Bea**	**115.96**	**329**	PKiKP	PKiKP	12 40 49.4	-0.6
	comp=Z,0.9nm,0.7s,baz=18,slow=1.7,SNR=4.9						
TORD				pPKiKP		12 41 02.5	
	comp=Z,0.6nm,0.6s,baz=27,slow=1.7,SNR=4.3						
TORD				PKKPab	PKKPab	12 51 27.1	-1.0
	comp=Z,0.6nm,0.7s,baz=219,slow=3.4,SNR=3.7						
DBIC	**Dimbokro**	**124.19**	**334**	PKP	PKPdf	12 41 05.2	-0.6
	comp=Z,3.5nm,0.8s,baz=217,slow=5.1,SNR=3.1						
DBIC	**Dimbokro**	**124.19**	**334**	PKIKP	PKPdf	12 41 05.2	-0.6
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LSZ	**Lusaka**	**125.33**	**286**	PKP	PKPdf	12 41 07.9	+0.1
	comp=Z,1.1nm,0.5s,baz=35,slow=3.8,SNR=4.7						
LSZ	**Lusaka**	**125.33**	**286**	PKIKP	PKPdf	12 41 07.9	+0.1
LSZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
QSPA	**South Pole Qui**	**135.70**	**180**	PKP	PKPdf	12 41 26.2	+0.6
	comp=Z,1.2nm,0.8s,baz=48,slow=6.4,SNR=11						
QSPA				pPKP	pPKPdf	12 41 39.6	-0.1
	comp=Z,2.8nm,0.9s,baz=245,slow=0.4,SNR=6.2						
QSPA	**South Pole Qui**	**135.70**	**180**	PKP	PKPdf	12 41 26.2	+0.6
QSPA				pPKP	pPKPdf	12 41 39.6	-0.1
BDFB	**Brasilia**	**144.73**	**38**	PKP	PKPdf	12 41 42.0	-1.8
	comp=Z,4.8nm,0.8s,baz=263,slow=9.1,SNR=6.4						
BDFB				pPKP	pPKPdf	12 41 55.5	-2.4
	comp=Z,5.1nm,0.8s,baz=186,slow=5.8,SNR=3.9						
BDFB	**Brasilia**	**144.73**	**38**	PKIKP	PKPdf	12 41 42.0	-1.8
BDFB						12 41 55.5	
BDFB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PLCA	**Paso Flores**	**147.74**	**97**	PKPbc	PKPbc	12 41 51.4	+0.4
	comp=Z,7.8nm,0.7s,baz=285,slow=2.1,SNR=24						
PLCA	**Paso Flores**	**147.74**	**97**	PKP2	PKPbc	12 41 51.4	+0.3
PLCA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PLCA	**Paso Flores**	**147.74**	**97**	PKPbc	PKPbc	12 41 51.4	+0.4
CPUP	**Villa Florida**	**148.50**	**62**	PKPbc	PKPbc	12 41 53.4	-0.1
	comp=Z,2.7nm,0.6s,baz=312,slow=2.0,SNR=17						
CPUP	**Villa Florida**	**148.50**	**62**	PKP2	PKPbc	12 41 53.4	-0.1
CPUP				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAIT	**Maitri**	**149.10**	**203**	*e*PKPdif	PKPbc	12 41 53.2	-0.4
SNAA	**Sanae**	**151.91**	**196**	*e*PKPdf	PKPbc	12 42 00.2	-0.1
SNAA				*e*		12 42 06.3	
SNAA				*e*		12 42 09.6	
SNAA				*e*		12 42 11.6	
SNAA				*e*		12 42 16.1	
SNAA	**Sanae**	**151.91**	**196**	*e*P	PKPbc	12 42 00.2	-0.1
PMSA	**Palmer Station**	**152.12**	**146**	*e*PKPbc	PKPbc	12 42 04.0	+3.1
TRQA	**Tornquist**	**152.54**	**86**	*e*PKPbc	PKPbc	12 42 03.8	+1.0
VNA2	**Neumayer--Watz**	**153.34**	**194**	*e*PKPdf	PKPbc	12 42 03.9	+0.4
VNA2				*e*		12 42 09.8	
VNA2				*e*		12 42 16.0	
VNA2				*e*		12 42 18.3	
VNA2				*e*		12 42 22.6	
VNA3	**Neumayer Olymp**	**153.41**	**192**	*e*PKPdf	PKPbc	12 42 04.0	+0.4
VNA3				*e*		12 42 17.0	
VNA3				*e*		12 42 18.8	
VNA3				*e*		12 42 22.5	
VNA1	**Neumayer--Stat**	**153.72**	**194**	*e*PKPdf	PKPbc	12 42 05.2	+0.9
VNA1				*e*		12 42 18.1	
VNA1				*e*		12 42 20.0	
VNA1				*e*		12 42 25.2	

*ATH **07** 12:32:30.9, 3876N×2291E, h35^{km}±5^{km}, MD3.1/4*
*ISCJB **07** 12:32:31.3±0.6, 3889N±004×2290E±007, h10^{km}±6^{km}, Error ellipse: s-maj=10.7km s-min=4.1km az=150.6*
*THE **07** 12:32:32.4, 3889N×2286E, h1^{km}, ML2.9*
*CSEM **07** 12:32:32.6±0.1, 3886N×2282E, h12^{km}, MD3.1, Error ellipse: s-maj=3.3km s-min=1.7km az=57.0*
ISC 07 12:32:32.2±0.6**, 3885N**±004×**2283E**±007**, h15**^{km}±6^{km}**, n12,** σ**0^{s}70**/21**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.24**	**146**	*e*Pg	**Pg**	**12 32 37.5**	**+0.1**
LKR				*e*Sg	**Sg**	**12 32 41.0**	**0.0**
LKR	**Lokris**	**0.24**	**146**	*e*PB	**Pg**	**12 32 37.8**	**+0.4**
LKR				*e*SB	**Sg**	**12 32 41.8**	**+0.8**
LKR	**Lokris**	**0.24**	**146**	*e*Pg	**Pg**	**12 32 37.5**	**+0.1**
LKR	**Lokris**	**0.24**	**146**	*e*Pb	**Pg**	**12 32 37.8**	**+0.4**
LKR				*e*Sg	**Sg**	**12 32 41.0**	**0.0**
LKR				*e*Sb	**Sg**	**12 32 41.8**	**+0.8**
AGG	**Agios Georgios**	**0.43**	**294**	*e*Pg	**Pg**	**12 32 40.4**	**-0.4**
AGG				*e*Sg	**Sg**	**12 32 47.2**	**+0.6**
NEO	**Neokhori**	**0.55**	**34**	*e*PN	**Pg**	**12 32 43.4**	**+0.3**
EVR	**Evrytania**	**0.80**	**275**	*e*PN	**Pn**	**12 32 47.9**	**-1.0**
LTK	**Loutraki**	**0.83**	**173**	*e*Pg	**Pg**	**12 32 48.8**	**+0.5**
THL	**Klokotos Trika**	**0.96**	**319**	*e*Pg	**Pg**	**12 32 50.0**	**-0.7**
THL				*e*Sg	**Sg**	**12 33 03.4**	**+0.2**
THL	**Klokotos Trika**	**0.96**	**319**	*e*Pn	**Pn**	**12 32 50.6**	**-0.4**
THL				*e*Sg	**Sg**	**12 33 03.4**	**+0.1**
THL				*e*Sn	**Sn**	**12 33 06.0**	**+1.7**
LIT	**Litokhoron**	**1.28**	**348**	*e*Pg	**Pg**	**12 32 55.8**	**-1.1**
LIT				*e*Sg	**Sg**	**12 33 13.7**	**+0.2**
DID	**Didima**	**1.38**	**166**	*e*Pg	**Pg**	**12 32 58.2**	**-0.5**

*ISCJB **07** 13:02:44.7±0.8, 137N±0.1×1446E±04, h112^{km}±13^{km}, mb4.1/10, Error ellipse: s-maj=62.7km s-min=17.4km az=165.7*
*IDC **07** 13:02:45.4±0.6, 1368N×14464E, h101^{km}±9^{km}, mb3.6/7, mb1 3.8/7, mb1mx3.6/19, mbtmp3.6/7, MS2.5/1, Ms1 2.5/1, ms1mx2.0/24, Error ellipse: s-maj=36.5km s-min=16.3km az=74.0*
*NEIC **07** 13:02:45.8±0.8, 1368N×14471E, h109^{km}±7^{km}, mb4.7/4, Error ellipse: s-maj=23.1km s-min=11.5km az=81.0*
ISC 07 13:02:46.0±0.8**, 137N**±01×**1446E**±04**, h105**^{km}±14^{km}**, n22,** σ**0^{s}57**/16**, mb4.1**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.27**	**103**	P	**Pn**	**13 03 00.9**	**-0.1**
	2μm,0.3s,baz=283,slow=0.8,SNR=891						
GUMO				S	**Sn**	**13 03 12.2**	**0.0**
	1μm,0.3s,baz=21,slow=23,SNR=146						
KAKA	**Kakadu**	**28.83**	**205**	*e*P	**P**	**13 08 34.3**	**-0.2**
	5.3nm,0.6s,mb4.3						
KAKA	**Kakadu**	**28.83**	**205**	*e*P	**P**	**13 08 33.9**	**-0.6**
	5.6nm,0.4s,mb4.5						
CTA	**Charters Tower**	**33.56**	**177**	P	**P**	**13 09 16.9**	**+0.9**
	2.1nm,0.3s,mb4.4,baz=270,slow=1.0,SNR=2.4						
WB2	**Warramunga Arr**	**34.87**	**197**	*e*P	**P**	**13 09 27.2**	**-0.2**
WB2	**Warramunga Arr**	**34.87**	**197**	*e*P	**P**	**13 09 27.1**	**-0.2**
WRA	**Warramunga Arr**	**34.87**	**197**	P	**P**	**13 09 27.3**	**0.0**
	4.0nm,0.6s,mb4.4,baz=15,slow=8.3,SNR=71						
WRA				PcP	PcP	13 11 57.5	-0.8
	0.4nm,0.5s,baz=16,slow=3.2,SNR=5.0						
FITZ	**Fitzroy Crossi**	**36.67**	**211**	*e*P	**P**	**13 09 43.4**	**+0.6**
	3.5nm,0.3s,mb4.8						
ASAR	**Alice Springs**	**38.53**	**196**	P	**P**	**13 09 58.5**	**+0.1**
	2.0nm,0.7s,mb4.1,baz=19,slow=12,SNR=45						
PETK	**Petropavlovsk-**	**40.72**	**12**	LR	LR	13 24 49.2	
	comp=Z,7.5nm,21.4s,baz=256,slow=32						
CMAR	**Chiang Mai Arr**	**44.05**	**282**	P	**P**	**13 10 43.6**	**-0.1**
	0.4nm,0.5s,mb3.4,baz=92,slow=5.3,SNR=4.3						
STKA	**Stephens Creek**	**45.36**	**184**	*e*P	**P**	**13 10 52.1**	**-1.7**
	1.3nm,0.5s,mb3.9						
STKA	**Stephens Creek**	**45.36**	**184**	P	**P**	**13 10 53.1**	**-0.6**
	1.5nm,0.5s,mb4.0,baz=348,slow=10,SNR=4.5						
SONM	**Songino Array**	**46.53**	**325**	P	**P**	**13 11 03.6**	**+0.8**
	0.2nm,0.4s,mb3.2,baz=128,slow=9.3,SNR=3.0						
FORT	**Forrest**	**46.95**	**200**	*e*P	**P**	**13 11 06.6**	**+0.3**
	14nm,0.9s,mb4.7						
MKAR	**Makanchi Array**	**61.26**	**316**	P	**P**	**13 12 49.3**	**-0.8**
	0.2nm,0.3s,mb3.6,baz=123,slow=5.3,SNR=3.4						
SNAA	**Sanae**	**118.79**	**191**	*e*	PKPdf	13 21 19.7	-1.6
VNA2	**Neumayer--Watz**	**120.24**	**190**	*e*	PKPdf	13 21 23.2	-0.9
VNA3	**Neumayer Olymp**	**120.34**	**189**	*e*	PKPdf	13 21 22.9	-1.4
LVC	**Limon Verde**	**147.00**	**111**	PKPbc	PKPbc	13 22 16.8	-0.5
	3.3nm,0.7s,baz=228,slow=7.1,SNR=3.0						
LVC	**Limon Verde**	**147.00**	**111**	PKPbc	PKPbc	13 22 16.8	-0.5
CPUP	**Villa Florida**	**155.89**	**125**	PKP	PKPdf	13 22 27.1	-1.3

0.5nm,0.4s,baz=125,slow=2.0,SNR=3.2

*CSEM **07** 13:11:37.0±0.2, 4057N×3501E, h2km, MD2.8, Error ellipse: s-maj=5.4km s-min=4.1km az=89.0*
*ISK **07** 13:11:37.4, 4054N×3506E, h5km, MD2.8*
*ISCJB **07** 13:11:38.7±0.6, 4056N±003×3504E±006, h10km, Error ellipse: s-maj=6.3km s-min=4.2km az=2.6*
*DDA **07** 13:11:41.7, 4054N×3469E, h8km±2km, Md2.8*
ISC 07 13:11:39.5±0.6**, 4056N**±003×**3503E**±006**, h10km, n15, σ1.21**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.20**	**290**	*i* P	**Pg**	**13 11 41.8**	**-1.8**
CTKT				*i* S	**Sg**	**13 11 46.5**	**+0.1**
CORM	**Corum**	**0.49**	**219**	*e*PG	**Pg**	**13 11 47.6**	**-1.3**
CORM				*e*SG	**Sg**	**13 11 56.3**	**+0.9**
YOZ	**Yozgat**	**0.94**	**166**	*e*PG	**Pg**	**13 11 56.1**	**-1.5**
YOZ				*e*SG	**Sg**	**13 12 10.3**	**+0.4**
CDAG	**Cicekdag**	**1.06**	**209**	*i* P	**Pg**	**13 12 00.5**	**+0.6**
CDAG				*i* S	**Sg**	**13 12 13.3**	**-0.3**
DIKM	**Dikmen**	**1.10**	**9**	*e*PN	**Pg**	**13 12 00.2**	**-0.5**
DIKM				*e*SN	**Sg**	**13 12 16.2**	**+1.1**
ILGA	**Ilgaz**	**1.11**	**297**	*e*P	**Pg**	**13 11 59.0**	**-1.9**
KAMT	**Kaman**	**1.56**	**221**	*e*PN	**Pn**	**13 12 07.5**	**+0.3**
SVSK	**Karacayir**	**1.64**	**112**	*e*PN	**Pn**	**13 12 08.3**	**0.0**
ESKT	**Eskisehir**	**3.37**	**253**	*i* P	**Sn**	**13 13 03.6**	**-8.6**
GDZ	**Gediz**	**4.52**	**253**	*i* P	**Pn**	**13 12 53.6**	**+5.7**
ULDT	**Uludag**	**4.52**	**267**	*i* P	**Pn**	**13 12 52.9**	**+4.9**
DEMI	**Demirci**	**5.09**	**255**	*i* P	**Pn**	**13 12 58.5**	**+2.7**
DURS	**Dursunbey**	**5.12**	**261**	*i* P	**Pn**	**13 12 56.2**	**0.0**
BTOK	**Tokmak**	**5.42**	**264**	*i* P	**Pn**	**13 13 02.8**	**+2.5**
BALY	**Balya**	**5.74**	**264**	*i* P	**Pn**	**13 13 09.2**	**+4.5**

IDC 07 13:20:22.3±47.0**, 1720S×17263W, h0km, mb4.1**/3**, mb1 4.2**/3**, mb1mx3.8**/18**, mbtmp4.1**/3**, Error ellipse: s-maj=905.8km s-min=171.9km az=81.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.81**	**242**	P	P	13 28 30.9	+0.7
	0.7nm,0.3s,baz=99,slow=11,SNR=6.2						
WRA	**Warramunga Arr**	**50.18**	**258**	P	P	13 29 19.7	-0.5
	0.9nm,0.3s,baz=98,slow=7.0,SNR=42						
ASAR	**Alice Springs**	**50.28**	**253**	P	P	13 29 20.7	-0.2
	1.8nm,0.6s,baz=90,slow=7.6,SNR=42						

*CSEM **07** 13:39:30.2, 3800N×3453E, h2km, MD2.9, After ISK*
*ISK **07** 13:39:30.2, 3800N×3453E, h2km, MD2.9*
*ISCJB **07** 13:39:31.4±0.7, 3796N±005×3454E±007, h10km, Error ellipse: s-maj=8.2km s-min=5.8km az=146.4*
ISC 07 13:39:30.9±1.5**, 3798N**±005×**3450E**±008**, h2km**±11km**, n12, σ0.73**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIG	**Nigde**	**0.15**	**35**	*e*PG	**Pg**	**13 39 33.4**	**-0.5**
KOZT	**Kozan**	**1.17**	**115**	*e*PN	**Pg**	**13 39 52.9**	**-0.3**
KOZT				*e*SN	**Sg**	**13 40 09.9**	**+1.5**
BNN	**Bunyan**	**1.37**	**50**	*e*PN	**Pn**	**13 39 56.5**	**-0.6**
BNN				*e*SN	**Sn**	**13 40 15.9**	**+0.1**
MEST	**Erdemli**	**1.42**	**192**	*i* P	**Pn**	**13 39 57.1**	**-0.7**
YURE	**YUREGIR**	**1.47**	**142**	*i* P	**Pn**	**13 39 50.8**	**-7.6**
KAMT	**Kaman**	**1.52**	**336**	*e*PN	**Pn**	**13 39 59.1**	**0.0**
KAMT				*e*SN	**Sn**	**13 40 20.2**	**+0.8**
ANDN	**Andirin**	**1.52**	**105**	*i* P	**Pn**	**13 39 57.8**	**-1.3**
CDAG	**Cicekdag**	**1.64**	**357**	*i* P	**Pn**	**13 39 55.0**	**-5.9**
YOZ	**Yozgat**	**1.77**	**21**	*e*PN	**Pn**	**13 40 02.6**	**0.0**
IKL	**Isikli**	**1.86**	**201**	*e*PN	**Pn**	**13 40 04.4**	**+0.7**
SARI	**SarD1z-Kayseri**	**1.86**	**67**	*e*PN	**Pn**	**13 39 59.1**	**-4.7**
CORM	**Corum**	**2.20**	**3**	*e*PN	**Pn**	**13 40 08.8**	**+0.4**

*TIF **07** 13:51:12.6, 4134N×4380E, h16km±1km*
*CSEM **07** 13:51:21.8, 4188N×4445E, h12km, mb3.8, Error ellipse: s-maj=42.4km s-min=11.0km az=106.0, After OBN*
*MOS **07** 13:51:21.8±1.7, 4188N×4445E, h12km, mb3.8/1, Error ellipse: s-maj=42.4km s-min=11.0km az=100.6*
ISC 07 13:51:11.0±2.0**, 4125N**±007×**4368E**±009**, h3km**±9km**, n11, σ0.82**/20**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOR	**Gori**	**0.80**	**23**	P	**Pg**	**13 51 26.6**	**+0.2**
GOR				S	**Sg**	**13 51 36.6**	**-0.2**
TBLG	**Delisi**	**0.93**	**58**	P	**Pg**	**13 51 28.9**	**+0.1**
TBLG				S	**Sg**	**13 51 40.4**	**-0.4**
MTA	**Mtatsminda**	**0.95**	**62**	P	**Pg**	**13 51 29.5**	**+0.3**
MTA				S	**Sg**	**13 51 40.5**	**-0.9**
DGRG	**David-gareji**	**1.29**	**80**	P	**Pg**	**13 51 35.9**	**+0.2**
DGRG				S	**Sg**	**13 51 53.4**	**+1.0**
ONI	**Oni**	**1.34**	**353**	P	**Pn**	**13 51 36.5**	**-0.2**
ONI				S	**Sg**	**13 51 54.2**	**+0.1**
ZEI	**Tsey**	**1.53**	**6**	*e*Pg	**Pn**	**13 51 38.4**	**-0.8**
ZEI				*e*Sg	**Sg**	**13 52 00.7**	**+0.6**
LACR	**Lac**	**1.64**	**16**	*e*Pg	**Pn**	**13 51 40.8**	**+0.1**
KORR	**Kora**	**1.86**	**9**	*e*Pg	**Pg**	**13 51 45.9**	**-0.7**
ARNR	**Ardon**	**1.99**	**13**	*e*Pg	**Pn**	**13 51 46.5**	**+1.0**
ARNR				*e*Sg	**Sn**	**13 52 11.5**	**+0.6**
SNJR	**Sundja**	**2.00**	**24**	*e*Pg	**Pn**	**13 51 43.1**	**-2.6**
SNJR				*e*Sg	**Sn**	**13 52 05.5**	**-5.8**
LSNR	**Lesken**	**2.03**	**3**	*e*Pg	**Pn**	**13 51 49.6**	**+3.6**
LSNR				*e*Sg	**Sn**	**13 52 16.7**	**+4.8**

*NEIC **07** 13:51:26.0, 40.16N×108.90W, h0km, ML2.7(SLC), After SLC.*
*ISCJB **07** 13:51:29.8±0.5, 40.16N±002×109.03W±004, h23km±4km, Error ellipse: s-maj=4.7km s-min=3.7km az=5.6*
ISC 07 13:51:29.7±0.6**, 4017N**±002×**10904W**±004**, h17km**±4km**, n28, σ0.84**/49**, 14C-14D, Utah**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
O19A	**Miners Draw (B**	**0.14**	**335**	⇓P	**Pg**	**13 51 35.8**	**+2.0**
	baz=0.2,SNR=749						
O19A				⇓S	**Sg**	**13 51 40.9**	**+4.4**
	baz=0.2						
P19A	**Cripple Cowboy**	**0.54**	**175**	⇑P	**Pg**	**13 51 40.4**	**+0.1**
	baz=0.5,SNR=39						
P19A				⇓S	**Sg**	**13 51 48.6**	**+1.1**
	baz=0.5						
N19A	**John Jarvie Ra**	**0.73**	**352**	⇑P	**Pg**	**13 51 43.3**	**-0.8**
	baz=0.8						
N19A				⇓S	**Sg**	**13 51 53.3**	**-0.5**
	baz=0.8						
O18A	**Roosevelt**	**0.74**	**278**	⇑P	**Pg**	**13 51 43.8**	**-0.4**
	baz=0.8,SNR=15						
O18A				⇓S	**Sg**	**13 51 54.7**	**+0.6**
	baz=0.8						
N18A	**Larsen Ranch,**	**0.94**	**330**	⇓P	**Pb**	**13 51 46.5**	**-1.1**
	baz=1.0						
N18A				⇑S	**Sb**	**13 51 59.2**	**-0.5**
	baz=1.0						
P18A	**Preston Nutter**	**1.07**	**240**	P	**Pb**	**13 51 48.6**	**-1.1**
	baz=1.2,SNR=111						
P18A				⇓S	**Sb**	**13 52 02.5**	**-0.9**
	baz=1.2						
Q19A	**Hogan Spring (**	**1.22**	**188**	⇑P	**Pn**	**13 51 51.1**	**-0.9**
	baz=1.2,SNR=39						
Q19A				⇑S	**Sb**	**13 52 06.5**	**-1.3**
	baz=1.2						
O17A	**Robinson Place**	**1.30**	**272**	⇑P	**Pn**	**13 51 52.5**	**-0.6**
	baz=1.4,SNR=112						
O17A				⇓S	**Sb**	**13 52 09.7**	**-0.3**
	baz=1.4						
Q18A	**Rafter H Ranch**	**1.35**	**219**	⇓P	**Pn**	**13 51 53.3**	**-0.5**
	baz=1.4,SNR=56						
Q18A				⇓S	**Sn**	**13 52 10.8**	**-0.6**
	baz=1.4						
P17A	**Butcher Ranch,**	**1.48**	**243**	⇓P	**Pn**	**13 51 55.3**	**-0.2**
	baz=1.6,SNR=13						
P17A				⇑S	**Sn**	**13 52 14.0**	**-0.4**
	baz=1.6						
SRU	**San Rafael**	**1.56**	**228**	⇑P	**Pn**	**13 51 56.5**	**-0.1**
	baz=1.6,SNR=57						
SRU				⇓Sb	**Sb**	**13 52 16.6**	**-0.8**
	baz=1.6						
SRU	**San Rafael**	**1.56**	**228**	*e*Pn	**Pn**	**13 51 56.3**	**-0.3**
SRU				*e*Sn	**Sn**	**13 52 16.6**	**+0.3**
N17A	**Moffit Pass**	**1.57**	**300**	⇑P	**Pn**	**13 51 57.3**	**+0.5**
	baz=1.7,SNR=51						
N17A				⇑Sb	**Sb**	**13 52 17.8**	**0.0**
	baz=1.7						
DAU	**Daniels Canyon**	**1.71**	**279**	*e*Pn	**Pn**	**13 51 58.7**	**0.0**
DAU				*e*Sn	**Sn**	**13 52 20.2**	**+0.1**
PV10	**Paradox Valley**	**1.79**	**180**	*e*P	**Pn**	**13 52 00.3**	**+0.6**
TMUT	**Trail Mountain**	**1.88**	**243**	*e*Pn	**Pn**	**13 52 01.5**	**+0.5**
TMUT				*e*Sn	**Sn**	**13 52 25.9**	**+1.6**
JLU	**Jordanelle**	**1.89**	**284**	*e*Pn	**Pn**	**13 52 01.6**	**+0.4**
R18A	**Canyonlands Na**	**1.90**	**201**	⇓P	**Pn**	**13 52 02.1**	**+0.9**
	baz=1.9,SNR=16						
MPU	**Maple Canyon**	**1.99**	**266**	*e*Pn	**Pn**	**13 52 01.5**	**-1.0**
MPU				*e*Sn	**Sn**	**13 52 28.2**	**+1.1**
RWWY	**Rawlins**	**2.06**	**42**	*e*Pn	**Pn**	**13 52 02.7**	**-0.8**
RWWY				*e*S	**Sn**	**13 52 29.3**	**+0.5**
PV01	**Paradox Valley**	**2.06**	**170**	*e*P	**Pn**	**13 52 03.2**	**-0.3**
Q16A	**Castle Valley**	**2.06**	**233**	⇑P	**Pn**	**13 52 03.7**	**+0.1**
	baz=2.1,SNR=14						
Q16A				⇓Sb	**Sb**	**13 52 31.5**	**-0.6**
	baz=2.1						
P16A	**Fountain Green**	**2.09**	**255**	⇑Sb	**Sb**	**13 52 32.5**	**-0.2**
	baz=2.2						
CTU	**Camp Tracy**	**2.13**	**285**	*e*Pn	**Pn**	**13 52 05.5**	**+1.0**
CTU				*e*Sn	**Sn**	**13 52 33.1**	**+2.6**
M16A	**Huntsville**	**2.27**	**301**	⇑P	**Pn**	**13 52 06.2**	**-0.2**
	baz=2.4,SNR=13						
ISCO	**Idaho Springs**	**2.66**	**97**	*e*Pn	**Pn**	**13 52 05.7**	**-6.0**
ISCO				*e*S	**Sn**	**13 52 48.8**	**+5.2**
MSU	**Marysvale**	**2.94**	**237**	*e*Pn	**Pn**	**13 52 15.1**	**-0.5**
MSU				*e*Sn	**Sn**	**13 52 51.0**	**+0.6**
MVCO	**Mesa Verde**	**2.98**	**172**	Pn	**Pn**	**13 52 18.2**	**+2.0**

NEIC 07 14:01:15.9±9.5**, 4352N×12831W, h10km, ML3.5, Error ellipse: s-maj=114.0km s-min=17.3km az=78.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUMO	**Hull Mountain**	**4.03**	**101**	*e*Pn	Pn	14 02 16.7	-0.9
HUMO				*e*Sn	Sn	14 03 02.1	-2.7
YBH	**Yreka Blue Hor**	**4.50**	**111**	Pn	Pn	14 02 24.8	+0.7
YBH				*e*Sn	Sn	14 03 15.3	-1.1
HOOD	**Mount Hood Mea**	**5.10**	**67**	*e*Pn	Pn	14 02 32.7	+0.4
	52nm,0.7s						
HOOD				*e*Sn	Sn	14 03 30.1	-1.1
LON	**Longmire**	**5.62**	**53**	*e*Pn	Pn	14 02 39.6	+0.1
	14nm,0.6s						
LON				*e*Sn	Sn	14 03 41.8	-2.2
RSW	**Rattlesnake Hi**	**6.82**	**62**	*e*Pn	Pn	14 02 56.4	+0.4
RPW	**Rockport**	**6.83**	**41**	*e*Pn	Pn	14 02 56.0	-0.1
RPW				*e*Sn	Sn	14 04 12.0	-1.9

*ISK **07** 14:10:27.9, 4041N×2707E, h16km, MD2.7*
*ISCJB **07** 14:10:28.5±0.5, 4042N±004×2706E±004, h11km±7km, Error ellipse: s-maj=7.1km s-min=3.7km az=151.7*
*CSEM **07** 14:10:28.0±0.1, 4043N×2706E, h15km, MD2.9, Error ellipse: s-maj=2.0km s-min=1.3km az=144.0*
*DDA **07** 14:10:29.3, 4042N×27.12E, h7km±5km, Md2.9*
ISC 07 14:10:28.8±0.4**, 4042N**±003×**2708E**±003**, h14km**±5km**, n13, σ0.59**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RKY	**Sarkoy-Tekirda**	**0.28**	**15**	PG	**Pg**	**14 10 34.6**	**-0.2**
RKY				SG	**Sg**	**14 10 39.1**	**+0.3**
SART	**Tekirdag**	**0.28**	**16**	*i* P	**Pg**	**14 10 35.0**	**+0.2**
SART				*i* S	**Sg**	**14 10 39.3**	**+0.5**
MFT	**Murefte**	**0.40**	**22**	PG	**Pg**	**14 10 36.6**	**-0.3**
MFT				SG	**Sg**	**14 10 42.8**	**+0.5**
MRMT	**Marmara Adasi**	**0.44**	**64**	PG	**Pg**	**14 10 37.4**	**-0.1**
MRMT				SG	**Sg**	**14 10 43.4**	**0.0**
ENEZ	**Enez**	**0.78**	**295**	*e*PG	**Pg**	**14 10 43.3**	**-0.6**
ENEZ				*e*SG	**Sg**	**14 10 54.0**	**-0.1**
BALY	**Balya**	**0.79**	**148**	*i* P	**Pg**	**14 10 44.8**	**+0.6**
BALY				*i* S	**Sg**	**14 10 53.2**	**-1.4**
EZN	**Ezine**	**0.83**	**225**	*e*PG	**Pg**	**14 10 44.4**	**-0.4**
EZN				*e*SG	**Sg**	**14 10 55.7**	**+0.1**
GADA	**Gvkgeada**	**0.93**	**256**	*e*PG	**Pg**	**14 10 46.2**	**-0.6**
GADA				*e*SG	**Sg**	**14 10 59.6**	**+0.6**
BOZC	**Bozcaada**	**0.97**	**234**	*i* P	**Pb**	**14 10 47.4**	**-0.1**
BOZC				*i* S	**Sb**	**14 11 00.8**	**+0.7**
BTOK	**Tokmak**	**0.98**	**132**	*i* P	**Pb**	**14 10 48.2**	**+0.6**
BTOK				*i* S	**Sb**	**14 11 01.5**	**+1.2**
SLVT	**Silivri**	**1.18**	**46**	*e*PN	**Pn**	**14 10 50.4**	**-0.5**
BGKT	**Bogazkoy**	**1.50**	**59**	*e*PN	**Pn**	**14 10 54.3**	**-0.9**
YLV	**Yalova**	**1.76**	**84**	*e*PN	**Pn**	**14 10 58.4**	**-0.3**

*NIED **07** 14:36:00, 28.10N×129.40E, h20km, Mw4.6 Best double couple: M0 8.89000×10^15 NP1:φs 93.00000°, δ75.00000°, λ108.00000°. NP2:φs 221.00000°, δ23.00000°, λ41.00000°.*
*IDC **07** 14:36:10.1±0.5, 28.07N×129.43E, h0km, mb4.5/20, mb1 4.6/24, mb1mx4.6/29, mbtmp4.6/24, ML4.1/4, MS4.0/28, Ms1 4.0/28, ms1mx3.9/43, Error ellipse: s-maj=14.7km s-min=12.2km az=106.0*
*BJI **07** 14:36:11.7, 27.70N×129.77E, h42km, mB4.8, mb4.6, Ms4.3, Msz4.2*
*MOS **07** 14:36:13.7±1.2, 28.00N×129.46E, h33km, mb5.0/45, MS4.2/11, Error ellipse: s-maj=9.6km s-min=5.8km az=105.9*
*JMA **07** 14:36:14.6±0.1, 28.07N×129.39E, h40km±2km, M4.7*
JMA Felt III J1.
*ISCJB **07** 14:36:15.7±0.1, 28.05N±002×129.34E±002, h40km, mb4.9/102, MS4.2/39, Error ellipse: s-maj=3.7km s-min=2.2km az=150.0*
*NEIC **07** 14:36:15.9±0.7, 28.00N×129.44E, h37km±6km, mb4.9/49, MS4.6/1, MW4.6(NIED), Error ellipse: s-maj=5.8km s-min=4.9km az=145.0*
NEIC Recorded [3 JMA] on Amami-oshima and [2 JMA] on Kikaiga-shima and Tokuno-shima.
*SZGRF **07** 14:36:25.9, 29.79N×128.91E, h45km, mb5.0, Northwest of Ryukyu Islands, Japan*
ISC 07 14:36:17.1±0.1**, 2802N**±003×**12936E**±002**, h42km, h42km**±2.6km**:pP-P, n513, σ0.82**/522**, mb4.9**/102**, MS4.2**/39**, 122C-130D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.43**	**237**	P	**Pn**	**14 36 24.9**	**-2.2**
JTK				S	**Sn**	**14 36 32.7**	**-1.3**
JAM	**Amami Oshima**	**0.45**	**29**	P	**Pn**	**14 36 23.6**	**-3.7**
JAM				S	**Sn**	**14 36 30.4**	**-4.1**
JZK	**Kikaishima**	**0.62**	**61**	P	**Pn**	**14 36 26.0**	**-3.5**
JZK				*e*S	**Sn**	**14 36 35.0**	**-3.3**
JOW	**Kunigami**	**1.52**	**219**	Pn	**Pn**	**14 36 41.0**	**-0.9**
	382nm,0.3s,baz=63,slow=8.0,SNR=332						
JOW				Sn	**Sn**	**14 37 02.1**	**+1.6**
	915nm,0.3s,baz=34,slow=27,SNR=16						
JOW	**Kunigami**	**1.52**	**219**	P	**Pn**	**14 36 40.8**	**-1.1**
JOW				*e*S	**Sn**	**14 37 00.7**	**+0.2**
JIH	**Iheya**	**1.58**	**232**	P	**Pn**	**14 36 42.2**	**-0.4**
JIH				*e*S	**Sn**	**14 37 03.4**	**+1.6**
JNN	**Nakanoshima**	**1.87**	**14**	P	**Pn**	**14 36 45.5**	**-1.2**
JNN				*e*S	**Sn**	**14 37 07.5**	**-1.6**
NAH1	**Naha**	**2.34**	**220**	P	**Pn**	**14 36 52.1**	**-1.0**
NAH1				*e*S	**Sn**	**14 37 20.5**	**-0.1**
JJT2	**Tamagusuku 2**	**2.36**	**218**	P	**Pn**	**14 36 52.5**	**-0.9**
JJT2				*e*S	**Sn**	**14 37 21.0**	**-0.1**
JAGN	**Aguni-jima**	**2.36**	**233**	P	**Pn**	**14 36 53.3**	**-0.1**
JKC	**Kuchinoerabu**	**2.54**	**17**	P	**Pn**	**14 36 55.0**	**-0.9**
JKE	**Kume jima 2**	**2.84**	**234**	P	**Pn**	**14 36 59.3**	**-0.7**
JKE				*e*S	**Sn**	**14 37 32.7**	**-0.4**
JTN	**Tanegashima 3**	**2.98**	**28**	P	**Pn**	**14 37 00.6**	**-1.3**
JTN				*e*S	**Sn**	**14 37 35.1**	**-1.4**
TATO	**Taipei**	**7.67**	**249**	*e*Pn	**Pn**	**14 38 08.2**	**+1.8**
SSE	**Sheshan**	**7.75**	**295**	P	**Pn**	**14 38 09.5**	**+2.1**
SSE				XP		14 38 24.0	
SSE				S	**Sn**	**14 39 38.0**	**+4.2**
SSE				AMB	AMB		
	comp=Z,35nm,0.7s						
SSE				AMB	AMB		
	comp=Z,94nm,4.5s						
SSE				LR	LR		
	comp=N,510nm,16.5s						
SSE				LR	LR		
	comp=E,371nm,16.5s						
SSE				LR	LR		
	comp=Z,530nm,13.9s						
YHNB	**Yeheng**	**7.90**	**247**	*e*Pn	**Pn**	**14 38 10.0**	**+0.6**
	comp=Z,104nm,0.8s						
NACB	**Ninganchiao**	**7.96**	**243**	*e*Pn	**Pn**	**14 38 07.7**	**-2.6**
	comp=Z,47nm,0.8s						
KSRS	**Korea Array**	**9.48**	**353**	Pn	**Pn**	**14 38 33.4**	**+2.2**
	comp=Z,1.3nm,0.3s,baz=172,slow=14,SNR=76						
KSRS				LR	LR	14 42 29.3	
	comp=Z,1μm,19.0s,baz=165,slow=40						
KSRS	**Korea Array**	**9.48**	**353**	P	**Pn**	**14 38 33.4**	**+2.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,1μm,19.0s						
INCN	**Inchon**	**9.71**	**347**	*e*Pn	**Pn**	**14 38 37.5**	**+3.3**
NJ2	**Nanjing**	**9.95**	**296**	*e*P	**Pn**	**14 38 41.0**	**+3.5**
NJ2				PP		14 38 50.1	
NJ2				XP		14 38 55.6	
NJ2				S	**Sn**	**14 40 33.7**	**+5.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,100nm,4.8s						
JHJ	**Hachijo jima 2**	**10.32**	**58**	Pn	**Pn**	**14 38 40.3**	**-2.3**
	comp=Z,17nm,0.3s,baz=69,slow=21,SNR=6.2						
JHJ				LR	LR	14 42 13.5	
	comp=Z,552nm,20.0s,baz=247,slow=35						
MAJO	**Matsushiro**	**11.32**	**39**	*e*P	**Pn**	**14 38 55.2**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s						
MAJO	**Matsushiro**	**11.32**	**39**	*e*Pn	**Pn**	**14 38 55.2**	**-1.1**
	comp=Z,14nm,0.8s						
MAT	**Matsushiro**	**11.32**	**39**	P	**Pn**	**14 38 56.0**	**-0.3**
MJAR	**Matsushiro Arr**	**11.32**	**39**	Pn	**Pn**	**14 38 53.7**	**-2.6**
	comp=Z,0.5nm,0.3s,baz=235,slow=15,SNR=8.2						
MJAR	**Matsushiro Arr**	**11.32**	**39**	P	**Pn**	**14 38 53.7**	**-2.6**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CBIJ	**Chichi jima**	**11.42**	**92**	Pn	**Pn**	**14 38 54.0**	**-3.7**
	comp=Z,5.5nm,0.3s,baz=278,slow=22,SNR=2.1						
CBIJ				LR	LR	14 42 56.0	
	comp=Z,331nm,18.3s,baz=308,slow=36						
CN2	**Changchun**	**16.06**	**350**	*e*P	**Pn**	**14 40 03.4**	**+3.5**
CN2				*e*XP	sP	14 40 18.8	+0.5
CN2				*e*S	**S**	**14 43 00.6**	**-8.3**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,1μm,13.0s						
CN2				LR	LR		
	comp=E,500nm,13.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
BJT	**Baijiatuau**	**16.19**	**321**	*e*P	**Pn**	**14 40 03.5**	**+2.0**
BJT				pmax	pmax		
	comp=Z,42nm,0.6s						
BJT	**Baijiatuau**	**16.19**	**321**	*e*P	**Pn**	**14 40 03.5**	**+1.9**
	comp=Z,42nm,0.6s						
BJI	**Beijing**	**16.20**	**321**	P	**Pn**	**14 40 03.9**	**+2.2**
BJI				S	**S**	**14 43 04.5**	**-7.3**
BJI				AMB	AMB		
	comp=Z,26nm,1.1s						
BJI				AMB	AMB		
	comp=Z,209nm,3.6s						
BJI				LR	LR		
	comp=N,585nm,17.5s						
BJI				LR	LR		
	comp=E,257nm,23.5s						
BJI				LR	LR		
	comp=Z,391nm,24.9s						
MDJ	**Mudanjiang**	**16.57**	**1**	P	**Pn**	**14 40 07.3**	**+1.1**
MDJ				AP	pP	14 40 19.3	+0.8
MDJ				S	**S**	**14 43 10.8**	**-8.3**
MDJ				PCP	PcP	14 44 55.7	+0.6
MDJ				SCP	ScP	14 48 25.8	-0.5
MDJ				PCS	PcS	14 48 31.8	+1.1
MDJ				SCS	ScS	14 52 04.6	-0.8
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,303nm,5.2s						
MDJ				LR	LR		
	comp=N,242nm,31.6s						
MDJ				LR	LR		
	comp=E,82nm,24.6s						
XAN	**Xi'an**	**18.50**	**294**	P	**Pn**	**14 40 30.7**	**+0.5**
XAN				AP	pP	14 40 40.0	0.0
XAN				XP	sP	14 40 45.8	+0.4
XAN				S	**S**	**14 43 51.1**	**-7.6**
XAN				XS	sS	14 44 08.3	-6.7
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s						
XAN				AMB	AMB		
	comp=Z,48nm,5.5s						
XAN				LR	LR		
	comp=N,189nm,14.0s						
XAN				LR	LR		
	comp=E,281nm,15.3s						
XAN				LR	LR		
	comp=Z,562nm,16.2s						
ASAJ	**Asahikawa**	**19.26**	**30**	P	**Pn**	**14 40 35.1**	**-4.1**
	comp=Z,1.3nm,0.3s,baz=235,slow=20,SNR=12						
ASAJ				LR	LR	14 47 53.2	
	comp=Z,442nm,21.2s,baz=116,slow=37						
ASAJ	**Asahikawa**	**19.26**	**30**	P	**Pn**	**14 40 35.2**	**-4.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,443nm,21.2s						
HHC	**Hu-ho-hao-te**	**19.43**	**316**	*e*P	**Pn**	**14 40 39.3**	**-2.0**
HHC				AP	pP	14 40 49.3	-0.8
HHC				XP	sP	14 40 55.2	-0.3
HHC				PP		14 40 58.0	
HHC				S	**S**	**14 44 11.2**	**-6.0**
HHC				PCP	PcP	14 44 59.1	-0.8
HHC				SCP	ScP	14 48 28.3	-4.2
HHC				PCS	PcS	14 48 34.7	-2.3
HHC				AMB	AMB		
	comp=Z,9.0nm,0.5s						
HHC				AMB	AMB		
	comp=Z,218nm,3.8s						
HHC				LR	LR		
	comp=N,420nm,12.3s						
HHC				LR	LR		
	comp=E,446nm,11.8s						
HHC				LR	LR		
	comp=Z,606nm,12.4s						
QIZ	**Qiongzhong**	**19.98**	**248**	P	**Pn**	**14 40 45.8**	**-2.3**
QIZ				XP	sP	14 41 00.9	-0.8
QIZ				S	**S**	**14 44 28.8**	**+0.2**
QIZ				XS	sS	14 44 44.0	-1.2
QIZ				AMB	AMB		
	comp=Z,14nm,1.5s						
QIZ				LR	LR		
	comp=N,343nm,18.4s						
QIZ				LR	LR		
	comp=E,465nm,20.4s						
QIZ				LR	LR		
	comp=Z,453nm,21.4s						
GYA	**Guiyang**	**20.24**	**271**	⇑*i*P	**P**	**14 40 50.3**	**+1.5**
GYA				AP		14 41 01.0	
GYA				XP	sP	14 41 07.0	+2.5
GYA				PP		14 41 10.4	
GYA				S	**S**	**14 44 31.7**	**-1.9**
GYA				XS	sS	14 44 46.8	-3.4
GYA				SS		14 45 01.2	
GYA				SCP	ScP	14 48 35.2	+0.5
GYA				AMB	AMB		
	comp=Z,20nm,0.9s						
GYA				AMB	AMB		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,490nm,10.9s,MS4.2						
GYA				LR	LR		
	comp=E,440nm,11.3s,MS4.2						
GYA				LR	LR		
	comp=Z,930nm,11.2s,MS4.4						
GUMO	**Guam**	**20.37**	**132**	LR	LR	14 47 25.9	
	comp=Z,266nm,21.4s,MS3.6,baz=78,slow=33						
DAV	**Davao City (W)**	**21.14**	**190**	LR	LR	14 48 46.1	
	comp=Z,282nm,20.1s,MS3.6,baz=13,slow=36						

KLR Kul'dur 21.26 4 eP P 14 40 52.8 -6.8
YSS Yuzh-Sakhalins 21.63 26⇓eP P 14 41 03.0 -0.6
YSS pmax pmax
comp=N,60nm,1.0s
YSS pmax pmax
comp=E,30nm,1.0s
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 21.63 26 eP P 14 41 02.7 -0.9
CD2 Chengdu 22.46 284 P P 14 41 12.8 +0.2
CD2 AP 14 41 24.0
CD2 XP sP 14 41 29.6 +1.2
CD2 PP 14 41 41.3
CD2 S S 14 45 11.4 -5.6
CD2 AMB AMB
comp=Z,50nm,0.9s,mb4.9
CD2 AMB AMB
comp=Z,80nm,4.2s
CD2 LR LR
comp=N,1µm,18.6s,MS4.4
CD2 LR LR
comp=E,820nm,16.4s,MS4.4
CD2 LR LR
comp=Z,820nm,15.6s,MS4.3
LZH Lanzhou 23.03 297 eP P 14 41 19.7 +1.2
LZH AP 14 41 29.3
LZH XP sP 14 41 35.2 +0.8
LZH PP 14 41 49.2
LZH eS S 14 45 25.1 -1.1
LZH XS sS 14 45 45.0 +0.1
LZH AMB AMB
comp=Z,41nm,1.4s,mb4.7
LZH AMB AMB
comp=Z,160nm,4.3s
LZH LR LR
comp=E,1µm,13.9s
LZH LR LR
comp=Z,2µm,14.6s,MS4.6
KMI Kunming 23.96 269 P P 14 41 27.9 +0.3
KMI AP 14 41 37.0
KMI XP sP 14 41 40.9 -3.2
KMI PP 14 41 59.8
KMI PPP 14 42 11.5
KMI S S 14 45 37.1 -4.5
KMI AMB AMB
comp=Z,43nm,0.9s,mb4.9
KMI AMB AMB
comp=Z,81nm,3.8s
KMI LR LR
comp=N,289nm,16.8s,MS4.0
KMI LR LR
comp=E,250nm,15.7s,MS4.0
KMI LR LR
comp=Z,250nm,16.1s,MS3.8
ULN Ulaanbaatar 26.33 325 eP P 14 41 48.0 -0.9
SONM Songino Array 26.65 324 P P 14 41 52.0 +0.3
comp=Z,4.2nm,0.9s,mb4.0,baz=138,slow=11,SNR=13
SONM PcP PcP 14 45 13.7 -1.0
comp=Z,0.7nm,0.7s,baz=27,slow=1.6,SNR=3.6
SONM LR LR 14 53 58.0
comp=Z,282nm,19.8s,MS3.8,baz=135,slow=40
SONM Songino Array 26.65 324 P P 14 41 52.0 +0.3
SONM 14 45 13.7
SONM pmax pmax
comp=Z,4.0nm,0.9s
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM MLR MLR
comp=Z,282nm,19.8s
GTA Gaotai 26.96 303 P P 14 41 54.7 +0.1
GTA AP pP 14 42 06.1 +0.1
GTA XP sP 14 42 12.0 +0.9
GTA PP 14 42 39.7
GTA PCP PcP 14 45 16.2 +0.6
GTA S S 14 46 22.8 -6.1
GTA AMB AMB
comp=Z,21nm,1.0s,mb4.6
GTA AMB AMB
comp=Z,81nm,7.5s
GTA LR LR
comp=N,264nm,15.9s,MS4.2
GTA LR LR
comp=E,482nm,18.6s,MS4.2
GTA LR LR
comp=Z,636nm,17.7s,MS4.2
CHG Chiang Mai 29.31 258 ⇑P P 14 42 16.1 +0.3
comp=Z,17nm,0.6s,mb5.0
CHTO Chiang Mai 29.31 258 eP P 14 42 16.1 +0.3
CHTO pmax pmax
comp=Z,12nm,0.7s,mb4.7
CHTO Chiang Mai 29.31 258 eP P 14 42 16.1 +0.3
comp=Z,12nm,0.7s,mb4.8
CMAR Chiang Mai Arr 29.45 258 P P 14 42 17.5 +0.4
comp=Z,4.3nm,0.8s,mb4.3,baz=56,slow=7.2,SNR=44
CMAR PcP PcP 14 45 22.8 +0.7
comp=Z,4.3nm,0.6s,baz=38,slow=1.2,SNR=27
CMAR LR LR 14 55 59.7
comp=Z,272nm,18.1s,MS3.9,baz=74,slow=40
CMAR Chiang Mai Arr 29.45 258 P P 14 42 17.5 +0.4
CMAR 14 45 22.8
CMAR pmax pmax
comp=Z,4.0nm,0.8s
CMAR pmax pmax
comp=Z,4.0nm,0.6s
CMAR MLR MLR
comp=Z,272nm,18.1s
BDT Bhumibol Dam 29.92 256 P P 14 42 21.5 +0.3
TLY Talaya 30.50 328 eP P 14 42 26.5 +0.5
TLY pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
TLY MLR MLR
comp=Z,557nm,16.0s,MS4.3
PETK Petropavlovsk- 32.65 32 P P 14 42 42.5 -2.4
comp=Z,4.8nm,0.9s,mb4.4,baz=236,slow=4.9,SNR=4.8
PETK LR LR 14 57 29.4
comp=Z,144nm,20.1s,MS3.7,baz=79,slow=39
LSA Lhasa 33.41 282 P P 14 42 52.8 +1.0
LSA S S 14 48 16.0 +5.8
LSA AMB AMB
comp=Z,20nm,0.8s,mb5.1
LSA AMB AMB
comp=Z,320nm,3.0s
LSA LR LR
comp=N,140nm,18.0s,MS4.0
LSA LR LR
comp=E,170nm,15.0s,MS4.0
LSA LR LR
comp=Z,220nm,18.0s,MS3.9
LSA Lhasa 33.41 282 eP P 14 42 52.5 +0.7
LSA pmax pmax
comp=Z,16nm,0.7s,mb5.1
LSA Lhasa 33.41 282 eP P 14 42 52.5 +0.7
comp=Z,16nm,0.7s,mb5.0
YAK Yakutsk 34.01 0 eP P 14 42 53.7 -2.9
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=Z,20nm,0.9s,mb5.0
YAK Yakutsk 34.01 0 eP P 14 42 54.3 -2.3
comp=Z,21nm,0.8s,mb5.1
TAPN Taplejung 36.76 279 eP P 14 43 20.8 +0.1
comp=Z,66nm,1.1s,mb5.4
WMQ Urumqi 36.82 307 eP P 14 43 21.7 +0.7
WMQ AP pP 14 43 34.0 +1.4
WMQ XP sP 14 43 39.0 +1.3
WMQ PP PP 14 44 48.0 +2.7
WMQ S S 14 49 03.0 +0.7
WMQ XS sS 14 49 23.0 +1.3
WMQ AMB AMB
comp=Z,10.0nm,0.6s,mb4.8
WMQ AMB AMB
comp=Z,134nm,4.6s
WMQ LR LR
comp=N,402nm,14.8s,MS4.5
WMQ LR LR
comp=E,456nm,15.0s,MS4.5
WMQ LR LR
comp=Z,586nm,17.7s,MS4.4
ODAN Odare 37.13 278 eP P 14 43 24.0 +0.1
comp=Z,209nm,0.7s,mb6.1
RAMN Ramite 37.81 279 eP P 14 43 29.6 0.0
comp=Z,49nm,0.7s,mb5.3
JIRN Jiri 38.02 280 eP P 14 43 31.7 +0.3
comp=Z,34nm,0.7s,mb5.2
GUN Gumba 38.25 280 eP P 14 43 34.0 +0.7
comp=Z,57nm,0.5s,mb5.6
PKI Pulchoki 38.72 280 eP P 14 43 37.4 +0.1
comp=Z,130nm,0.8s,mb5.7
PKIN Phulchoki 38.73 280 eP P 14 43 37.2 -0.2
comp=Z,38nm,0.5s,mb5.4
KKN Kakani 38.79 280 eP P 14 43 38.1 +0.2
comp=Z,142nm,0.8s,mb5.7
DMN Daman 38.98 280 eP P 14 43 39.5 +0.1
comp=Z,98nm,0.9s,mb5.6
GKN Gorkha 39.31 281 eP P 14 43 42.2 0.0
comp=Z,131nm,0.8s,mb5.7
DANN Dangsing 40.01 282 eP P 14 43 48.5 +0.5
comp=Z,93nm,0.7s,mb5.6
KOLN Koldanda 40.26 281 eP P 14 43 50.3 +0.2
comp=Z,42nm,0.9s,mb5.2
MKAR Makanchi Array 41.12 310 P P 14 43 56.6 -0.4
comp=Z,1.2nm,0.4s,mb3.9,baz=97,slow=9.7,SNR=17
MKAR PcP PcP 14 45 55.6 -0.2
comp=Z,2.4nm,0.7s,baz=73,slow=4.1,SNR=6.2
MKAR LR LR 15 02 54.6
comp=Z,234nm,18.2s,MS4.1,baz=103,slow=39
MKAR Makanchi Array 41.12 310 P P 14 43 56.6 -0.4
MKAR 14 45 55.6
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR MLR MLR
comp=Z,234nm,18.2s
ZAA0 Zalesovo Array 41.46 321 eP P 14 43 58.2 -1.4
ZALV Zalesovo Beam 41.46 321 P P 14 43 57.7 -1.9
comp=Z,5.1nm,0.6s,mb4.3,baz=107,slow=8.6,SNR=21
ZALV PcP PcP 14 45 54.8 -1.9
comp=Z,1.8nm,0.8s,baz=100,slow=6.2,SNR=3.6
ZALV Zalesovo Beam 41.46 321 P P 14 43 57.7 -1.9
ZALV PcP PcP 14 45 54.8 -1.9
ZAL Zalesovo 41.47 321 P P 14 43 57.7 -2.0
ZAL 14 45 54.8
ZAL pmax pmax
comp=Z,5.0nm,0.6s
ZAL pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 44.24 315 P P 14 44 19.6 -2.5
comp=Z,4.8nm,0.8s,mb4.2,baz=100,slow=9.0,SNR=3.9
KURK Kurchatov 44.24 315 eP P 14 44 21.1 -1.1
KURK pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
KURK Kurchatov 44.24 315 eP P 14 44 21.1 -1.1
comp=Z,6.8nm,0.7s,mb4.5
TKM2 Tokmak 2 45.49 304 eP P 14 44 32.6 +0.3
TKM2 pmax pmax
comp=Z,11nm,0.7s,mb4.8
TKM2 Tokmak 2 45.49 304 eP P 14 44 32.6 +0.3
comp=Z,11nm,0.7s,mb4.8
BILL Bilibino 45.66 18⇑iP P 14 44 32.4 -0.8
BILL e 14 44 49.0
BILL pmax pmax
comp=Z,21nm,1.2s,mb4.9
BILL MLR MLR
comp=Z,200nm,24.0s,MS4.0
FITZ Fitzroy Crossi 45.99 185 eP P 14 44 35.2 -1.1
comp=Z,7.6nm,0.8s,mb4.7
FITZ Fitzroy Crossi 45.99 185 LR LR 15 02 10.4
comp=Z,65nm,21.9s,MS3.5,baz=223,slow=34
FITZ Fitzroy Crossi 45.99 185 eP P 14 44 35.6 -0.7
UCH Uchtor 46.29 303 eP P 14 44 38.9 +0.3
comp=Z,16nm,0.8s,mb5.0
HNR Honiara 47.56 137 LR LR 15 01 13.7
comp=Z,108nm,18.7s,MS3.9,baz=199,slow=32
WRAB Tennant Creek 47.91 174 P P 14 44 50.2 -1.1
WRA Warramunga Arr 47.92 174 P P 14 44 49.8 -1.5
comp=Z,1.9nm,0.6s,mb4.3,baz=354,slow=8.5,SNR=26
WRA Warramunga Arr 47.92 174 P P 14 44 49.8 -1.6
WRA pmax pmax
comp=Z,2.0nm,0.6s
WB2 Warramunga Arr 47.92 174 eP P 14 44 49.6 -1.8
BVAR Borovoye Array 49.63 317 P P 14 45 02.4 -1.8
comp=Z,2.4nm,0.5s,mb4.5,baz=92,slow=10,SNR=3.6
BVAR PcP PcP 14 46 25.2 +0.1
comp=Z,3.7nm,0.7s,baz=93,slow=3.0,SNR=4.6
BVAR Borovoye Array 49.63 317 P P 14 45 02.4 -1.8
BVAR 14 46 25.2
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BVAR pmax pmax
comp=Z,4.0nm,0.7s
CTA Charters Tower 50.54 159 eP P 14 45 10.0 -1.4
comp=Z,8.4nm,0.8s,mb4.7
CTA Charters Tower 50.54 159 LR LR 15 08 16.0
comp=Z,111nm,18.3s,MS3.9,baz=49,slow=38
CTA Charters Tower 50.54 159 eP P 14 45 10.0 -1.4
CTA pmax pmax
comp=Z,8.0nm,0.8s
CTAO Charters Tower 50.54 159 eP P 14 45 09.1 -2.3
CTAO pmax pmax
comp=Z,13nm,0.9s,mb4.9
CTAO Charters Tower 50.54 159 eP P 14 45 09.1 -2.3
comp=Z,13nm,0.9s,mb4.8
ASAR Alice Springs 51.57 175 P P 14 45 18.8 -0.3
comp=Z,1.0nm,0.6s,mb3.9,baz=5.9,slow=14,SNR=20
ASAR Alice Springs 51.57 175 P P 14 45 18.8 -0.3
ASAR pmax pmax
comp=Z,1.0nm,0.6s
SVE Sverdlovsk 55.48 322⇓eP P 14 45 46.2 -1.2
SVE eS S 14 53 31.2 +1.9
SVE e 14 55 25.1
SVE pmax pmax
comp=Z,12nm,1.0s,mb4.9
SVE MLR MLR
comp=Z,600nm,16.0s,MS4.8
ARU Arti 56.62 321diP P 14 45 54.3 -1.3
ARU eS S 14 53 42.7 -1.8
ARU e 15 46 48.0
ARU pmax pmax
comp=Z,453nm,17.1s
ARU Arti 56.62 321 eP P 14 45 52.9 -2.8
comp=Z,7.0nm,0.8s,mb4.7
SVW2 Sparrevohn 58.72 33 eP P 14 46 10.6 +0.3
CHUM Lake Minchumin 60.12 30 eP P 14 46 19.4 -0.5
comp=Z,6.4nm,0.9s,mb4.7
OHAK Old Harbor 60.17 38 eP P 14 46 17.7 -2.7
KDAK Kodiak Island 60.49 37 P P 14 46 21.1 -1.4
comp=Z,29nm,0.7s,mb5.4,baz=268,slow=3.5,SNR=20
KDAK Kodiak Island 60.49 37 eP P 14 46 21.7 -0.8
STKA Stephens Creek 60.69 168 eP P 14 46 22.9 -1.2
comp=Z,1.6nm,0.6s,mb4.3
STKA Stephens Creek 60.69 168 P P 14 46 23.2 -0.9
comp=Z,1.3nm,0.7s,mb4.2,baz=0.6,slow=11,SNR=3.7
STKA LR LR 15 11 45.1
comp=Z,110nm,21.2s,MS4.0,baz=25,slow=35
MCK McKinley 61.63 30 eP P 14 46 29.1 -1.0
MCK pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
MCK McKinley 61.63 30 eP P 14 46 29.1 -1.0
comp=Z,5.2nm,0.7s,mb4.8
PMR Palmer 61.78 32 eP P 14 46 29.6 -1.6
PMR pmax pmax
comp=Z,17nm,1.4s,mb5.0
PMR Palmer 61.78 32 eP P 14 46 29.6 -1.6
comp=Z,17nm,1.4s,mb5.0
COLA College 61.97 29 eP P 14 46 32.1 -0.3
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
COLA College 61.97 29 eP P 14 46 32.1 -0.3
comp=Z,4.2nm,0.8s,mb4.6
EGAK Eagle 64.81 28 eP P 14 46 49.8 -1.3
comp=Z,2.9nm,0.8s,mb4.4
DAWY Dawson 65.72 29 eP P 14 46 56.1 -1.0
SPITS Spitsbergen Ar 67.29 348 LR LR 15 20 18.6
comp=Z,134nm,19.1s,MS4.2,baz=50,slow=39
HYT Haines Junctio 67.44 32 eP P 14 47 10.8 +2.7
GNI Garni 68.67 305 LR LR 15 21 20.2
comp=Z,53nm,18.0s,MS3.8,baz=137,slow=40
ARCES ARCESS Array B 68.72 339 P P 14 47 14.2 -1.7
comp=Z,4.0nm,0.9s,mb4.4,baz=66,slow=7.2,SNR=6.3
ARCES LR LR 15 22 30.4
comp=Z,180nm,18.9s,MS4.3,baz=74,slow=40
ARCES ARCESS Array B 68.72 339 P P 14 47 14.2 -1.8
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES MLR MLR
comp=Z,180nm,18.9s
KIV Kislovodsk 68.88 309ciP P 14 47 17.5 0.0
KIV e 14 47 25.1
KIV pmax pmax
comp=Z,30nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,200nm,21.0s,MS4.3
KIV Kislovodsk 68.88 309 eP P 14 47 17.4 -0.1
comp=Z,34nm,1.0s,mb5.2
JOF Joensuu 68.97 331 ep P 14 47 16.2 -1.5
comp=Z,16nm,0.7s,mb5.0
JOF Joensuu 68.97 331 eP P 14 47 16.2 -1.5
JOF pmax pmax
comp=Z,16nm,0.7s,mb5.1
OBN Obninsk 69.04 322diP P 14 47 17.3 -0.9
OBN e pP 14 47 26.9 -3.8
OBN e 14 47 40.1
OBN e 14 56 15.6
OBN eSS SS 15 00 44.3 -1.4
OBN pmax pmax
comp=Z,18nm,1.2s,mb4.9
OBN MLR MLR
comp=Z,300nm,21.0s,MS4.5
RDF Al-Radifah 70.41 293 eP P 14 47 27.1 0.0
RDF AMb AMB 14 47 32.1
comp=Z,22nm,0.9s,mb5.1
NAY Al-Naaiem 70.54 293 eP P 14 47 27.2 -0.8
NAY AMb AMB 14 47 28.1
comp=Z,14nm,0.8s,mb4.9
KAF Kangasniemi 71.42 331 ep P 14 47 30.6 -2.1
comp=Z,11nm,0.8s,mb4.8,baz=63,slow=5.7
KAF Kangasniemi 71.42 331 eP P 14 47 30.6 -2.1
KAF pmax pmax
comp=Z,11nm,0.8s,mb4.8
ANN Anapa 72.12 312 eP P 14 47 35.3 -1.9
ANN eS S 14 56 54.3 -2.0
ANN pmax pmax
comp=Z,29nm,0.8s,mb5.3
MALT Malatya 73.91 305⇓iP P 14 47 49.0 +1.1
MALT Malatya 73.91 305 ⇓P P 14 47 49.0 +1.1
AKASG Malin Array Be 74.83 320 P P 14 47 52.0 -1.0
comp=Z,3.7nm,0.6s,mb4.5,baz=50,slow=6.0,SNR=19
AKASG LR LR 15 23 41.0
comp=Z,298nm,18.7s,MS4.6,baz=65,slow=38
AKASG Malin Array Be 74.83 320 P P 14 47 52.1 -0.9
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG MLR MLR
comp=Z,298nm,18.7s
AKASG Malin Array Be 74.83 320 P P 14 47 52.0 -1.0
AKASG LR LR 15 23 41.0
YKA Yellowknife Ar 76.49 25 P P 14 48 01.1 -1.2
comp=Z,4.0nm,0.7s,mb4.4,baz=302,slow=5.5,SNR=7.7
YKA LR LR 15 22 09.1
comp=Z,24nm,18.1s,MS3.5,baz=250,slow=36
YKA Yellowknife Ar 76.49 25 P P 14 48 01.1 -1.2
YKA pmax pmax
comp=Z,4.0nm,0.7s
YKA MLR MLR
comp=Z,24nm,18.1s
SUW Suwalki 76.59 324 eP P 14 48 02.9 -0.1
SUW Suwalki 76.59 324 eP P 14 48 02.9 -0.1
JMIC Jan Mayen 76.90 347 LR LR 15 24 25.6
comp=Z,68nm,20.5s,MS4.0,baz=76,slow=38
HFS Hagfors 77.71 333 LR LR 15 27 04.9
comp=Z,152nm,18.4s,MS4.4,baz=51,slow=39
NB2 NORSAR Subarra 78.16 334 P P 14 48 09.9 -1.7
comp=Z,9.3nm,0.8s,mb4.8,baz=52,slow=5.6
NOA NORSAR Array B 78.16 334 P P 14 48 10.3 -1.3
comp=Z,7.7nm,0.7s,mb4.7,baz=52,slow=5.6,SNR=29
NOA LR LR 15 25 58.9
comp=Z,87nm,18.8s,MS4.1,baz=25,slow=38
NOA NORSAR Array B 78.16 334 P P 14 48 10.3 -1.3
NOA pmax pmax
comp=Z,8.0nm,0.7s
NOA MLR MLR
comp=Z,87nm,18.8s
VRI Vrincioaia 78.51 316⇓iP P 14 48 14.8 +0.9
VRI Vrincioaia 78.51 316 ⇓P P 14 48 14.8 +0.9
BURAR Bucovina Array 78.58 318⇓iP P 14 48 14.2 -0.1
BURAR Bucovina Array 78.58 318 ⇓P P 14 48 14.2 -0.1
KWP Kalwaria 79.03 321 eP P 14 48 17.3 +0.6
KWP Kalwaria 79.03 321⇓iP P 14 48 17.1 +0.4
KWP Kalwaria 79.03 321 eP P 14 48 17.3 +0.6
MLR Muntele Rosu 79.17 316⇓iP P 14 48 17.7 +0.2
MLR Muntele Rosu 79.17 316 ⇓P P 14 48 17.7 +0.2
SUMG Summit 79.33 356 eP P 14 48 17.8 -0.1
comp=Z,8.8nm,0.8s,mb4.7
KOLS Kolonicke sedl 79.63 320 eP P 14 48 20.3 +0.3
URZ Urewera 79.64 144 P P 14 48 17.6 -2.4
comp=Z,5.4nm,0.8s,mb4.5,baz=0.1,slow=13,SNR=3.8
STHS Stebnicka Huta 79.96 321 eP P 14 48 22.4 +0.7
STHS e 14 48 30.7
STHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
STHS Stebnicka Huta 79.96 321 eP P 14 48 22.4 +0.7
comp=Z,6.1nm,1.2s,mb4.4
STHS e 14 48 30.7
CRVS Cervenica-Dubn 80.10 320 eP P 14 48 22.9 +0.4
OJC Ojcow 80.33 322 eP P 14 48 23.6 -0.1
DRGR 80.47 318⇑iP P 14 48 25.4 +0.8
DRGR 80.47 318 ⇑P P 14 48 25.4 +0.8
A06A Chilliwack 80.71 39 ⇓P P 14 48 25.3 -0.5
baz=80
B05A Bryant 80.81 40 ⇑P P 14 48 26.1 -0.2
baz=81
JCW Jim Creek 80.94 40 eP P 14 48 26.9 -0.1
C05A Tolt Reservoir 81.34 40 ⇑P P 14 48 29.0 -0.2
baz=81
A07A Ashnola River, 81.34 39 ⇓P P 14 48 28.7 -0.4
baz=81,SNR=6.7
OKC Ostrava-Krasne 81.43 322 eP P 14 48 28.3 -1.3
OKC epP pP 14 48 42.7 +0.4
VYHS Vyhne 81.79 321 eP P 14 48 31.6 +0.1
VYHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
VYHS Vyhne 81.79 321 eP P 14 48 31.6 +0.1
comp=Z,2.7nm,0.9s,mb4.2
B07A Winthrop 81.81 39 ⇑P P 14 48 31.2 -0.4
baz=82
KSP Ksiaz 81.85 324 eP P 14 48 32.3 +0.5
KSP Ksiaz 81.85 324 eP P 14 48 31.4 -0.4
F04A Amboy 81.85 42 ⇑P P 14 48 31.6 -0.3
baz=82
E05A Randle 81.91 41 ⇓P P 14 48 31.7 -0.5
baz=82
KOLL Kolacno 81.99 321 eP P 14 48 33.5 +0.9
A08A Turner Farm, O 82.01 38 ⇑P P 14 48 32.7 0.0
baz=82
D06A Cle Elum 82.09 40 ⇓P P 14 48 32.8 -0.4
baz=82
DPC Dobruska-Polom 82.11 323 eP P 14 48 33.7 +0.5
ETW Entiat 82.16 40 P P 14 48 33.2 -0.3
C07A Waterville 82.27 40 ⇑P P 14 48 33.6 -0.5
baz=82,SNR=5.6
B08A Colville Reser 82.31 39 ⇑P P 14 48 33.4 -0.8
baz=82,SNR=10.0
WTV Waterville 82.32 40 P P 14 48 34.0 -0.4
E06A Yakima 82.37 41 ⇓P P 14 48 34.9 +0.3
baz=82
A09A Danville 82.37 38 ⇑P P 14 48 34.0 -0.6
baz=82,SNR=6.5
EBG Ellensburg 82.41 41 P P 14 48 35.1 +0.3
EDM Edmonton 82.55 33 eP P 14 48 35.2 -0.2
VRAC Vranov 82.56 323 LR LR 15 29 29.9
comp=Z,168nm,18.9s,MS4.4,baz=66,slow=39
VRAC Vranov 82.56 323⇑iP P 14 48 36.0 +0.4
VRAC Vranov 82.56 323 ⇑P P 14 48 36.0 +0.4
D07A Quincy 82.59 40 ⇓P P 14 48 35.6 -0.1
baz=82
H04A Detroit Lake 82.66 43 ⇓P P 14 48 35.9 -0.3
baz=82
MODS Modra-Piesok 82.72 321 eP P 14 48 37.7 +1.3
MODS epP pP 14 48 50.5 +1.4
C08A Higginbotham F 82.79 39 ⇑P P 14 48 36.7 0.0
baz=83
G05A Wamic 82.88 42 ⇓P P 14 48 37.6 +0.3
baz=83
F06A Goldendale 82.91 42 ⇓P P 14 48 37.6 +0.2
baz=83
ZST Bratislava 82.92 321 eP P 14 48 39.9 +2.5
comp=Z,7.8nm,1.2s,mb4.6
ZST LR LR
comp=Z,100nm,16.6s,MS4.3
B09A Rice 82.92 38 ⇑P P 14 48 37.6 +0.2
baz=83
A10A Northport 82.92 38 ⇑P P 14 48 37.6 +0.2
baz=83
BSEG Bad Segeberg 82.93 329 eP P 14 48 37.2 -0.2
BSEG pmax pmax
comp=Z,13nm,0.7s,mb5.1

BSEG **Bad Segeberg** 82.93 329 *e*P P 14 48 37.2 -0.2
comp=Z,13nm,0.7s,mb5.1
I04A **Tendick Farm,** 82.99 44 ⇓P P 14 48 37.7 -0.2
baz=83
E07A **Sunnyside** 83.01 41 ⇓P P 14 48 38.1 +0.1
baz=83
BRG **Berggiesshubel** 83.04 325 *e*P P 14 48 37.9 -0.1
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
BRG MLR MLR
comp=N,116nm,14.9s,MS4.6
BRG MLR MLR
comp=E,153nm,17.6s,MS4.6
BRG MLR MLR
comp=Z,248nm,21.2s,MS4.5
BRG Berggiesshubel 83.04 325 *e*P P 14 48 37.9 -0.1
comp=Z,4.0nm,0.9s,mb4.5
BRG *e*pP pP 14 48 50.9 +0.2
BRG Berggiesshubel 83.04 325 *e*P P 14 48 37.9 -0.1
comp=Z,4.8nm,1.0s,mb4.5
BRG
comp=N,194nm,14.9s
BRG
comp=E,256nm,17.6s
BRG
comp=Z,414nm,21.2s
GBB **Gable Butte** 83.11 40 P P 14 48 38.5 0.0
OD2 **Odessa Site #2** 83.19 39 P P 14 48 38.6 -0.3
CROR **Criterion Ridg** 83.21 42 P P 14 48 39.1 +0.1
GBL **Gable Mountain** 83.21 40 P P 14 48 39.3 +0.3
H05A **Madras** 83.25 43 ⇓P P 14 48 39.3 0.0
baz=83
CLL **Collm** 83.26 326 ⇑*i*P P 14 48 38.6 -0.5
CLL *i* *PP pP 14 48 51.8 0.0
CLL pmax pmax
comp=Z,12nm,0.8s,mb5.0
CLL MLR MLR
comp=Z,600nm,16.2s,MS5.1
CLL Collm 83.26 326 *e*P P 14 48 38.6 -0.5
comp=Z,12nm,0.8s,mb5.0
CLL *e*pP pP 14 48 52.1 +0.3
CLL Collm 83.26 326 ⇑*i*P P 14 48 38.6 -0.5
comp=Z,12nm,0.8s,mb5.0
CLL Lm 14 29 00.0
comp=N,300nm,20.0s
CLL Lm 14 29 00.0
comp=E,300nm,18.5s
CLL *i* pP pP 14 48 51.8 0.0
CLL Collm 83.26 326 ⇑*i*P P 14 48 38.6 -0.5
comp=E,12nm,0.8s,mb5.0
CLL *i* pP pP 14 48 51.8 0.0
CLL LR LR
comp=Z,600nm,16.2s,MS5.1
PRU **Pruhonice** 83.26 324 *e*P P 14 48 38.9 -0.2
PRU *e*pP pP 14 48 48.4 -3.5
D08A **Wollman Farm,** 83.26 40 ⇑P P 14 48 39.2 0.0
baz=83,SNR=8.1
G06A **Carlson Farm,** 83.28 42 ⇑P P 14 48 39.3 -0.1
baz=83,SNR=5.8
H2OWA **Water** 83.35 41 P P 14 48 39.9 +0.2
J04A **Umpqua Nationa** 83.48 44 ⇑P P 14 48 40.7 +0.3
baz=83
E08A **Dider Farm, El** 83.50 40 ⇓P P 14 48 40.5 0.0
baz=83
NEW **Newport** 83.57 38 *e*P P 14 48 40.2 -0.6
NEW pmax pmax
comp=Z,8.0nm,0.9s
NEW Newport 83.57 38 *e*P P 14 48 40.2 -0.6
comp=Z,8.4nm,0.9s,mb4.9
A11A **Hall Mountain,** 83.58 37 ⇓P P 14 48 41.7 +0.9
baz=83
D09A **Jones Farm, Ri** 83.61 40 ⇑P P 14 48 40.7 -0.3
baz=83
H06A **Lindquist Farm** 83.74 42 ⇓P P 14 48 41.4 -0.3
baz=84
CONA **Conrad Observa** 83.75 322 ⇑*i*P P 14 48 42.2 +0.4
comp=Z,15nm,1.1s,mb5.0
CSNA **Conrad Observa** 83.76 322 ⇑*i*P P 14 48 42.1 +0.4
comp=Z,13nm,0.9s,mb5.0
G07A **Ruggs Ranch, H** 83.84 42 ⇓P P 14 48 42.6 +0.4
baz=84
B11A **Sandpoint** 83.88 38 ⇑P P 14 48 43.1 +0.8
baz=84
YBH **Yreka Blue Hor** 83.91 46 ⇑P P 14 48 43.4 +0.7
baz=84
NRDL **Niedersach Rie** 83.94 328 *e*P P 14 48 42.5 -0.1
comp=Z,9.0nm,0.9s,mb4.9
J05A **Fort Rock** 83.99 44 ⇓P P 14 48 43.3 +0.2
baz=84,SNR=10
E09A **Wood Farm, Sta** 84.01 40 ⇑P P 14 48 43.2 +0.1
baz=84,SNR=8.9
F08A **Pendleton** 84.06 41 ⇑P P 14 48 43.6 +0.3
baz=84,SNR=7.4
TANN **Tannenbergstha** 84.07 325 *e*P P 14 48 43.0 -0.3
comp=Z,5.0nm,1.0s,mb4.6
L04A **Klamath Falls** 84.19 45 ⇓P P 14 48 44.0 -0.1
baz=84
CLZ **Clausthal** 84.22 327 *e*P P 14 48 44.1 +0.1
CLZ *e**PP pP 14 48 57.2 +0.4
CLZ pmax pmax
comp=Z,20nm,0.8s,mb5.3
CLZ Clausthal 84.22 327 *e*P P 14 48 44.1 +0.1
comp=Z,20nm,0.8s,mb5.3
CLZ *e*pP pP 14 48 57.2 +0.4
G08A **Pilot Rock** 84.24 41 ⇑P P 14 48 44.2 0.0
baz=84
I06A **Prineville** 84.25 43 ⇓P P 14 48 44.7 +0.3
baz=84
KHC **Kasperske Hory** 84.27 324 *e*P P 14 48 44.4 +0.1
H07A **Lands Inn, Kim** 84.27 42 ⇓P P 14 48 44.7 +0.2
baz=84
MOX **Moxa** 84.36 326 *e*P P 14 48 44.6 -0.1
comp=Z,5.0nm,0.9s,mb4.6
MOX *e*pP pP 14 48 57.5 0.0
GEC2 **GERESS Array S** 84.38 323 *e*P P 14 48 44.8 -0.1
GEC2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
GEC2 GERESS Array S 84.38 323 *e*P P 14 48 44.8 -0.1
comp=Z,5.0nm,0.8s,mb4.7
GERES **GERESS Array B** 84.38 323 P P 14 48 44.6 -0.3
comp=Z,2.8nm,0.7s,mb4.5,baz=46,slow=4.4,SNR=17
GERES LR LR 15 30 18.0
comp=Z,188nm,18.6s,MS4.5,baz=87,slow=38
GERES GERESS Array B 84.38 323 P P 14 48 44.6 -0.3
GERES pmax pmax
comp=Z,3.0nm,0.7s
GERES MLR MLR
comp=Z,188nm,18.6s
M04C **Macdoel** 84.43 45 ⇓P P 14 48 45.4 +0.1
baz=84,SNR=5.4
K05A **Summer Lake** 84.50 44 ⇓P P 14 48 46.1 +0.4
baz=84,SNR=7.1
MANZ **Manzenberg** 84.51 325 *e*P P 14 48 45.8 +0.2
comp=Z,3.0nm,0.8s,mb4.5
MANZ *e*pP pP 14 48 58.6 +0.3
I07A **Izee** 84.59 42 ⇓P P 14 48 46.3 +0.2
baz=84,SNR=6.6
ROTZ **Rotzenmuhle** 84.60 325 *e*P P 14 48 46.4 +0.4
comp=Z,6.0nm,0.9s,mb4.7
ROTZ *e*pP pP 14 48 59.2 +0.5
F09A **S2 Ranch, Elgi** 84.61 40 ⇑P P 14 48 46.2 +0.1
baz=84
E10A **Myers Farm, Un** 84.61 40 ⇑P P 14 48 46.0 -0.1
baz=84
WDC **Whiskeytown Da** 84.63 47 ⇑P P 14 48 46.0 -0.4
baz=84
WET **Wettzell** 84.63 324 *e*P P 14 48 45.7 -0.5
WET pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
WET Wettzell 84.63 324 *e*P P 14 48 45.7 -0.5
comp=Z,8.0nm,1.2s,mb4.7
J06A **Christmas Vall** 84.67 43 ⇑P P 14 48 46.5 +0.1
baz=84,SNR=7.0
D11A **Klaveano Farm,** 84.72 39 ⇓P P 14 48 46.1 -0.5
baz=84
BORG **Borgarnes** 84.75 348 LR LR 15 26 50.8
comp=Z,62nm,18.5s,MS4.0,baz=1.9,slow=36
WALA **Waterton Lakes** 84.81 36 *e*P P 14 48 47.1 0.0
comp=Z,9.5nm,1.0s,mb4.9
WALA *e*pP pP 14 48 53.2 -6.7
WALA *e* 14 51 49.6
H08A **Prairie City** 84.84 42 ⇓P P 14 48 47.5 +0.2
baz=85,SNR=7.6
K06A **Valley Falls** 84.86 44 ⇑P P 14 48 47.4 -0.1
baz=85,SNR=8.1
L05A **Lakeview** 84.91 45 ⇓P P 14 48 48.1 +0.4
baz=85
G09A **Cove** 84.93 41 ⇑P P 14 48 47.4 -0.4
baz=85,SNR=7.9
B13A **Whitefish** 84.94 37 ⇑P P 14 48 48.2 +0.5
baz=85
UBBA **Unterbreizbach** 85.05 326 *e*P P 14 48 47.7 -0.5
M05C **Lookout** 85.10 45 ⇑P P 14 48 48.7 +0.1
baz=85
J07A **Hines** 85.11 43 ⇑P P 14 48 48.8 +0.1
baz=85,SNR=8.4
GRA1 **Grafenberg Arr** 85.15 325 *e*P P 14 48 49.3 +0.6
comp=Z,15nm,1.1s,mb5.0
GRF **Grafenberg Arr** 85.15 325 *e*P P 14 48 49.3 +0.6
GRF pmax pmax
comp=Z,15nm,1.1s,mb5.0
GRF Grafenberg Arr 85.15 325 *e*P P 14 48 49.3 +0.6
comp=Z,15nm,1.1s,mb5.0
IBBN **Ibbenburen** 85.16 328 *e*P P 14 48 48.4 -0.3
comp=Z,26nm,0.9s,mb5.4
HATC **Hat Creek Radi** 85.19 46 ⇑P P 14 48 49.0 -0.1
baz=85
E11A **Bogner Ranch,** 85.19 39 ⇓P P 14 48 48.4 -0.7
baz=85
I08A **Drewsey** 85.25 42 ⇓P P 14 48 49.3 -0.1
baz=85,SNR=5.1
LBCM **Butte Creek Ri** 85.25 46 P P 14 48 49.5 0.0
G10A **Bishop Farm, J** 85.30 40 ⇓P P 14 48 49.6 0.0
baz=85,SNR=9.7
C13A **Hot Springs** 85.30 38 ⇓P P 14 48 49.6 +0.1
baz=85
MOD **Modoc** 85.32 45 ⇓P P 14 48 49.8 0.0
baz=85,SNR=8.3
H09A **Durkee** 85.35 41 ⇑P P 14 48 49.8 0.0
baz=85,SNR=6.0
BMO **Blue Mountains** 85.45 41 *e*P P 14 48 50.0 -0.4
BMO pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
BMO Blue Mountains 85.45 41 *e*P P 14 48 50.0 -0.4
comp=Z,8.8nm,1.1s,mb4.8
E12A **Beaver Dam Sad** 85.52 39 ⇑P P 14 48 50.7 +0.1
baz=85
RJOB **Jochberg** 85.53 323 *e*P P 14 48 51.1 +0.4
comp=Z,18nm,0.8s,mb5.3
K07A **Rock Creek Ran** 85.53 44 ⇑P P 14 48 50.8 0.0
baz=85,SNR=10
M06C **Likely Place G** 85.60 45 ⇑P P 14 48 51.7 +0.5
baz=85
MNRC **McLaughlin Nat** 85.61 48 ⇑P P 14 48 51.4 +0.2
baz=85
J08A **Circle Bar Ran** 85.62 43 ⇑P P 14 48 51.5 +0.3
baz=85,SNR=5.6
I09A **Lost Marbles R** 85.70 42 ⇑P P 14 48 52.1 +0.5
baz=86,SNR=10.0
O04C **Chester** 85.70 46 ⇑P P 14 48 51.9 +0.2
baz=86
G11A **Walters Elk Ra** 85.72 40 ⇑P P 14 48 51.2 -0.5
baz=86,SNR=8.2
ELFS **Eagle Lake Fie** 85.77 46 ⇓P P 14 48 52.1 0.0
baz=86
L07A **Adell** 85.85 44 ⇓P P 14 48 52.8 +0.3
baz=86,SNR=28
ORV **Oroville** 85.86 47 ⇓P P 14 48 51.5 -1.0
baz=86,SNR=7.2
H10A **Noah's Angus R** 85.93 41 ⇑P P 14 48 52.5 -0.2
baz=86,SNR=16
K08A **Mann Creek Ran** 85.97 43 ⇓P P 14 48 53.1 +0.1
baz=86,SNR=10
OHCM **Honcut** 85.99 47 *e*P P 14 48 51.9 -1.2
O05C **Quincy** 86.01 46 ⇓P P 14 48 53.0 -0.3
baz=86
WVOR **Wild Horse Val** 86.05 43 *e*P P 14 48 53.1 -0.3
WVOR pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
WVOR Wild Horse Val 86.05 43 *e*P P 14 48 53.1 -0.3
comp=Z,7.4nm,0.9s,mb4.9
J09A **Fry Pan Ranch,** 86.06 42 ⇑P P 14 48 53.7 +0.3
baz=86,SNR=14
F12A **Elk City** 86.08 39 ⇑P P 14 48 53.2 -0.3
baz=86,SNR=17
D14A **Greenough** 86.24 38 ⇓P P 14 48 54.4 +0.1
baz=86
N06A **Buffalo Meadow** 86.26 45 ⇑P P 14 48 54.1 -0.4
baz=86,SNR=9.5
M07A **Soldier Meadow** 86.31 45 ⇑P P 14 48 54.9 +0.2
baz=86,SNR=8.2
L08A **Fields** 86.37 44 ⇑P P 14 48 55.6 +0.7
baz=86,SNR=26
BEKR **Beckwourth** 86.42 46 ⇑P P 14 48 55.2 0.0
baz=86,SNR=19
K09A **Rome** 86.45 43 ⇑P P 14 48 55.5 +0.2
baz=86,SNR=10
CHMT **Chamberlain Mo** 86.48 38 *e*P P 14 48 54.0 -1.4
FFC **Flin Flon** 86.55 27 *e*P P 14 48 54.8 -0.8
FFC pmax pmax
comp=Z,25nm,0.9s,mb5.4
FFC Flin Flon 86.55 27 *e*P P 14 48 54.8 -0.8
comp=Z,25nm,0.9s,mb5.4
P05C **Yuba Gap, Truc** 86.57 47 ⇓P P 14 48 55.7 -0.3
baz=86
F13A **Darby** 86.58 39 ⇑P P 14 48 55.0 -0.9
baz=86
O06A **Flanigan** 86.59 46 ⇑P P 14 48 56.1 0.0
baz=86,SNR=17
M08A **Happy Creek Ra** 86.77 44 ⇑P P 14 48 57.3 +0.4
baz=87,SNR=6.5
I11A **Placerville** 86.78 41 ⇑P P 14 48 56.9 -0.1
baz=87
LAVA **Lava Cap Winer** 86.79 47 ⇓P P 14 48 56.5 -0.6
baz=87
D15A **Lincoln** 86.79 37 ⇑P P 14 48 57.3 +0.3
baz=87
K10A **MacKenzie Ranc** 86.91 42 ⇓P P 14 48 58.0 +0.3
baz=87
H12A **Diamond D Ranc** 87.04 40 ⇑P P 14 48 58.3 +0.2
baz=87,SNR=14
F14A **Wisdom** 87.10 38 ⇓P P 14 48 59.1 +0.6
baz=87
E15A **Deer Lodge** 87.11 38 ⇓P P 14 48 58.4 -0.1
baz=87
WCN **Washoe City** 87.12 47 ⇓P P 14 48 59.2 +0.5
baz=87
MFID **Camas Ranch** 87.16 41 ⇓P P 14 48 59.1 +0.3
baz=87,SNR=6.0
O07A **Toulon** 87.19 45 ⇑P P 14 48 58.8 -0.2
baz=87,SNR=11
R05C **Kirkwood Meado** 87.25 47 ⇑P P 14 48 58.8 -0.6
baz=87
N08A **GE Springer Mi** 87.30 45 ⇑P P 14 48 59.8 +0.2
baz=87,SNR=20
H13A **Challis** 87.37 40 ⇑P P 14 49 00.1 +0.3
baz=87,SNR=7.8
PACP **Pacheco Peak** 87.39 49 ⇑P P 14 48 59.6 -0.5
baz=87
K11A **Parker Ranch,** 87.42 42 ⇓P P 14 49 00.2 +0.1
baz=87
CMB **Columbia Colle** 87.42 48 *e*P P 14 48 58.7 -1.5
CMB *e**PP pP 14 49 07.2 -5.8
CMB pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
CMB Columbia Colle 87.42 48 ⇓P P 14 48 59.5 -0.6
baz=87,SNR=5.0
CMB Columbia Colle 87.42 48 *e*P P 14 48 58.7 -1.5
comp=Z,8.1nm,0.9s,mb5.0
CMB *e*pP pP 14 49 07.2 -5.8
F15A **Butte** 87.56 38 ⇑P P 14 49 00.7 0.0
baz=87
L10A **Juniper Basin** 87.56 43 ⇓P P 14 49 01.3 +0.5
baz=87,SNR=7.9
O08A **Rochester Mine** 87.57 45 ⇓P P 14 49 01.2 +0.3
baz=87,SNR=14
EGMT **Eagleton** 87.61 35 *e*P P 14 49 00.2 -0.7
comp=Z,25nm,0.9s,mb5.5
N09A **Rock Creek Ran** 87.64 44 ⇓P P 14 49 01.9 +0.7
baz=88,SNR=8.2
DAVOX **Davos/Dischmat** 87.68 323 LR LR 15 33 54.4
comp=Z,118nm,18.7s,MS4.3,baz=76,slow=40
J12A **Stokes Ranch,** 87.68 41 ⇓P P 14 49 02.0 +0.7
baz=88
R06C **Coleville** 87.76 47 ⇑P P 14 49 02.1 +0.3
baz=88
DLMT **Dillon** 87.80 39 *e*P P 14 49 01.9 +0.1
comp=Z,20nm,1.0s,mb5.3
DLMT *e*pP pP 14 49 08.4 -6.3
I13A **Wildhorse Cree** 87.84 40 ⇑P P 14 49 02.8 +0.7
baz=88,SNR=19
M10A **I.L. Ranch, Tu** 87.85 43 ⇓P P 14 49 02.7 +0.5
baz=88,SNR=7.6
S06C **San Francisco** 87.86 48 ⇓P P 14 49 01.6 -0.6
baz=88,SNR=5.8
HLID **Hailey** 87.89 41 ⇑P P 14 49 02.8 +0.5
baz=88,SNR=12
HLID **Hailey** 87.89 41 *e*P P 14 49 02.6 +0.3
comp=Z,8.5nm,0.9s,mb5.0
L11A **Cat Creek Ranc** 87.94 42 ⇑P P 14 49 03.3 +0.7
baz=88,SNR=13
G15A **Dillon** 87.98 39 ⇑P P 14 49 03.0 +0.3
baz=88
BMN **Battle Mountai** 88.07 44 *e*P P 14 49 02.1 -1.1
BMN pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
BMN Battle Mountai 88.07 44 *e*P P 14 49 02.1 -1.2
comp=Z,9.1nm,1.0s,mb5.0
J13A **Cove Ranch, Pi** 88.13 41 ⇓P P 14 49 04.6 +1.2
baz=88
BOZ **Bozeman (W)** 88.15 38 *e*P P 14 49 03.0 -0.5
BOZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
BOZ Bozeman (W) 88.15 38 ⇓P P 14 49 03.8 +0.3
baz=88
BOZ Bozeman (W) 88.15 38 *e*P P 14 49 03.0 -0.5
comp=Z,4.5nm,0.8s,mb4.8
K12A **Draper Farm, C** 88.16 42 ⇓P P 14 49 04.1 +0.5
baz=88
I14A **Mackay** 88.21 40 ⇑P P 14 49 04.5 +0.7
baz=88,SNR=11
H15A **Lima** 88.24 39 ⇓P P 14 49 04.1 +0.1
baz=88
O09A **Fish Creek Ran** 88.25 45 ⇓P P 14 49 04.6 +0.5
baz=88,SNR=7.5
R07C **Lee Vining** 88.26 47 ⇓P P 14 49 04.3 +0.2
baz=88
M11A **Holland Ranch,** 88.36 43 ⇓P P 14 49 05.8 +1.2
baz=88
L12A **House Creek Ra** 88.39 42 ⇑P P 14 49 06.0 +1.2
baz=88
T06C **Millerton Lake** 88.44 48 ⇑P P 14 49 04.6 -0.5
baz=88
NVAR **Mina Array Bea** 88.55 47 P P 14 49 06.0 +0.5
comp=Z,3.0nm,0.8s,mb4.7,baz=279,slow=5.5,SNR=20
J14A **Carey** 88.55 41 ⇑P P 14 49 06.1 +0.7
baz=88,SNR=7.1
O10A **Cortez Mining,** 88.60 44 ⇓P P 14 49 06.9 +1.2
baz=88
K13A **Stover Farm, H** 88.64 41 ⇑P P 14 49 07.0 +1.2
baz=88
QLMT **Earthquake Lak** 88.78 38 *e*P P 14 49 07.2 +0.7
M12A **Wells** 88.89 43 ⇑P P 14 49 08.2 +1.2
baz=89,SNR=8.0
H16A **Russell Place,** 88.96 38 ⇓P P 14 49 08.0 +0.7
baz=89
P10A **Eureka** 89.02 45 ⇑P P 14 49 08.4 +0.7
baz=89
L13A **Double Diamond** 89.06 42 ⇑P P 14 49 09.2 +1.4
baz=89
J15A **Blackfoot** 89.12 40 ⇑P P 14 49 08.7 +0.5
baz=89
N12A **Clover Valley,** 89.16 43 ⇓P P 14 49 09.2 +0.9
baz=89,SNR=5.4
S08C **White Mtn Res** 89.17 47 ⇑P P 14 49 08.7 +0.2
baz=89
O11A **Cowboy Ranch,** 89.22 44 ⇑P P 14 49 09.1 +0.5
baz=89
K14A **Jones Ranch, D** 89.23 41 ⇓P P 14 49 09.3 +0.6
baz=89
M13A **Montello** 89.38 42 ⇑P P 14 49 10.3 +0.9
baz=89,SNR=6.6
R09A **Tonopah** 89.45 46 ⇑P P 14 49 10.0 +0.2
baz=89,SNR=9.6
P11A **Circle Ranch,** 89.50 45 ⇓P P 14 49 10.3 +0.4
baz=89
L14A **Malta** 89.51 41 ⇑P P 14 49 11.1 +1.1
baz=89,SNR=6.2
IMW **Indian Meadow** 89.65 39 *e*P P 14 49 09.3 -1.2
comp=Z,3.8nm,0.8s,mb4.8
S09A **Goldfield** 89.65 47 ⇓P P 14 49 10.9 +0.2
baz=90
FLWY **Flagg Ranch** 89.66 39 *e*P P 14 49 11.1 +0.5
comp=Z,7.1nm,0.8s,mb5.0
N13A **Wendover, West** 89.66 43 ⇑P P 14 49 11.1 +0.4
baz=90
J16A **Bone** 89.67 40 ⇑P P 14 49 11.5 +0.8
baz=90
O12A **Currie** 89.69 43 ⇓P P 14 49 11.0 +0.2
baz=90,SNR=12
RLMT **Red Lodge** 89.76 37 *e*P P 14 49 11.6 +0.5
comp=Z,6.7nm,1.0s,mb4.9
M14A **Sheep Mountain** 89.77 42 ⇓P P 14 49 11.6 +0.4
baz=90,SNR=16
CWC **Cottonwood Cre** 89.84 48 ⇓P P 14 49 11.4 -0.2
baz=90
TPAW **Teton Pass** 89.90 39 *e*P P 14 49 12.2 +0.4
comp=Z,6.2nm,1.0s,mb4.9
S10A **Tonopah Range,** 89.94 46 ⇓P P 14 49 12.1 +0.1
baz=90
K16A **Soda Springs** 89.96 40 ⇓P P 14 49 13.3 +1.2
baz=90
GRAC **Grapevine Rang** 89.98 47 ⇓P P 14 49 12.8 +0.6
baz=90
LOHW **Long Hollow** 90.02 39 *e*P P 14 49 12.8 +0.5
comp=Z,1.9nm,0.8s,mb4.5
P12A **McGill** 90.07 44 ⇓P P 14 49 13.1 +0.4
baz=90,SNR=8.2
N14A **Grayback Hills** 90.27 42 ⇓P P 14 49 13.9 +0.4
baz=90
R11A **Troy Canyon, C** 90.33 45 ⇑P P 14 49 13.9 0.0
baz=90,SNR=9.0
M15A **Larsen Ranch,** 90.33 41 ⇑P P 14 49 14.1 +0.3
baz=90,SNR=5.4
MPMC **Manual Prospec** 90.45 48 ⇓P P 14 49 14.1 -0.3
baz=90
PPT **Papeete** 90.53 110 LR LR 15 26 34.7
comp=Z,1.4nm,18.8s,baz=293,slow=33
P13A **Bates Ranch, G** 90.63 44 ⇑P P 14 49 15.2 -0.1
baz=90,SNR=7.5
TPNV **Topopah Spring** 90.73 47 *e*P P 14 49 15.6 -0.2
TPNV pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
TPNV Topopah Spring 90.73 47 *e*P P 14 49 15.6 -0.2
comp=Z,4.1nm,1.0s,mb4.7
M16A **Huntsville** 90.90 41 ⇓P P 14 49 16.6 +0.1
baz=91
DUG **Dugway** 90.90 43 ⇓P P 14 49 16.4 -0.1
baz=91,SNR=6.3
Q13A **Wheeler Ranch,** 90.93 44 ⇓P P 14 49 16.8 +0.2
baz=91
R12A **Pony Springs,** 90.95 45 ⇑P P 14 49 17.1 +0.3
baz=91,SNR=6.4
P14A **Drum Mountains** 91.12 43 ⇓P P 14 49 17.7 +0.2
baz=91,SNR=18
PDAR **Pinedale Array** 91.14 39 P P 14 49 17.6 0.0
comp=Z,3.6nm,0.8s,mb4.8,baz=18,slow=0.7,SNR=18
T11A **Corn Creek, Al** 91.22 46 ⇓P P 14 49 17.8 -0.2
baz=91,SNR=6.4
N16A **Rees Ranch, Co** 91.28 41 ⇓P P 14 49 19.0 +0.7
baz=91
LDF **La Druitiere** 91.36 329 *e*P P 14 49 16.8 -1.6
comp=Z,12nm,0.8s,mb5.0
LDF **La Druitiere** 91.36 329 *e*P P 14 49 16.8 -1.6
LDF pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
LDF La Druitiere 91.36 329 *e*P P 14 49 16.8 -1.6
comp=Z,5.8nm,0.8s,mb5.0
Q14A **Sevier Lake (B** 91.37 44 ⇓P P 14 49 19.2 +0.5
baz=91,SNR=18
R13A **O'Grain Ranch,** 91.44 45 ⇓P P 14 49 19.4 +0.4
baz=91
SSB **Saint Sauveur** 91.46 325 *e*P P 14 49 25.3 +6.3
N17A **Moffit Pass** 91.60 41 ⇑P P 14 49 20.5 +0.8
baz=91
P15A **Leamington** 91.61 43 ⇑P P 14 49 20.2 +0.4
baz=91,SNR=8.6
DAU **Daniels Canyon** 91.69 42 *e*P P 14 49 20.8 +0.7
GRR **Gorron** 91.84 329 *e*P P 14 49 19.7 -1.0
TUQ **Turquoise Moun** 91.84 48 ⇑P P 14 49 21.4 +0.4
baz=92
S13A **Holt Ranch, En** 91.87 45 ⇑P P 14 49 21.6 +0.6
baz=92,SNR=7.8
Q15A **Fillmore** 91.91 43 ⇓P P 14 49 21.9 +0.7
baz=92
HEC **Hector,Ludlow** 91.93 49 ⇓P P 14 49 21.5 +0.1
baz=92
O17A **Robinson Place** 92.13 42 ⇑P P 14 49 23.2 +1.0
baz=92
T13A **Saint George** 92.19 46 ⇓P P 14 49 22.5 0.0
baz=92
N18A **Larsen Ranch,** 92.25 41 ⇓P P 14 49 23.5 +0.8
baz=92

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MSU	Marysvale	92.34	44	eP	P	14 49 23.9	+0.7
V12A	Nelson	92.37	47	⇓P	P	14 49 23.5	+0.1
	baz=92						
ULM	Lac du Bonnet	92.37	27	P	P	14 49 22.6	-0.5
	comp=Z,13nm,0.8s,mb5.3,baz=328,slow=5.9,SNR=14						
ULM				LR	LR	15 36 32.2	
	comp=Z,53nm,18.2s,MS4.0,baz=256,slow=39						
GMRC	Granite Mounta	92.41	48	⇓P	P	14 49 23.9	+0.3
	baz=92						
R15A	Junction	92.47	44	⇓P	P	14 49 24.7	+0.9
	baz=92						
O18A	Roosevelt	92.52	41	⇓P	P	14 49 25.0	+1.1
	baz=92						
U13A	Pakoon Wash	92.52	46	⇓P	P	14 49 24.8	+0.7
	baz=92,SNR=6.5						
P17A	Butcher Ranch,	92.59	42	⇓P	P	14 49 24.9	+0.6
	baz=92						
BELC	Belle Mtn.	92.65	49	⇑P	P	14 49 24.5	-0.2
	baz=92						
Q16A	Castle Valley	92.69	43	⇓P	P	14 49 25.5	+0.7
	baz=92						
SGMF	Saint Gilles	92.70	330	eP	P	14 49 22.5	-2.1
	comp=Z,27nm,1.1s,mb5.3						
SGMF	Saint Gilles	92.70	330	eP	P	14 49 22.5	-2.1
SGMF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.3						
SGMF	Saint Gilles	92.70	330	eP	P	14 49 22.5	-2.1
	comp=Z,13nm,1.1s,mb5.3						
S15A	Panguitch	92.75	44	⇑P	P	14 49 26.6	+1.5
	baz=93						
P18A	Preston Nutter	92.79	42	⇓P	P	14 49 26.6	+1.4
	baz=93						
V13A	Grand Canyon W	92.85	47	⇓P	P	14 49 25.8	+0.2
	baz=93,SNR=6.6						
R16A	Teasdale	92.91	43	⇑P	P	14 49 26.6	+0.8
	baz=93,SNR=9.9						
ROSF	Rostrenen	92.95	331	eP	P	14 49 24.5	-1.3
	comp=Z,24nm,0.9s,mb5.3						
ROSF	Rostrenen	92.95	331	eP	P	14 49 24.5	-1.3
ROSF				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.3						
ROSF	Rostrenen	92.95	331	eP	P	14 49 24.5	-1.3
	comp=Z,12nm,0.9s,mb5.3						
SRU	San Rafael	92.96	42	eP	P	14 49 26.2	+0.2
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.9						
SRU	San Rafael	92.96	42	⇓P	P	14 49 26.2	+0.2
	baz=93						
SRU	San Rafael	92.96	42	eP	P	14 49 26.2	+0.2
	comp=Z,4.0nm,0.8s,mb4.9						
MONP	Monument Peak	93.02	50	⇑P	P	14 49 26.8	+0.3
	baz=93						
U14A	Mt Trumbull	93.02	46	⇓P	P	14 49 26.7	+0.3
	baz=93,SNR=6.8						
IRM	Iron Mountain	93.11	49	⇓P	P	14 49 26.6	-0.3
	baz=93,SNR=5.0						
T15A	Red Dirt Ranch	93.15	45	⇑P	P	14 49 27.1	+0.2
	baz=93,SNR=6.4						
S16A	Weppner Ranch,	93.19	44	⇓P	P	14 49 27.6	+0.4
	baz=93						
Q18A	Rafter H Ranch	93.19	42	⇓P	P	14 49 27.3	+0.2
	baz=93						
BC3	Big Chuckw Mtn	93.22	49	⇑P	P	14 49 27.9	+0.6
	baz=93						
QUIF	Quistinic	93.22	330	eP	P	14 49 25.4	-1.7
	comp=Z,19nm,1.1s,mb5.2						
QUIF	Quistinic	93.22	330	eP	P	14 49 25.4	-1.7
QUIF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.2						
QUIF	Quistinic	93.22	330	eP	P	14 49 25.4	-1.7
	comp=Z,9.4nm,1.0s,mb5.2						
W13A	Hualapai Mount	93.38	47	⇑P	P	14 49 28.2	+0.1
	baz=93,SNR=6.1						
P19A	Cripple Cowboy	93.53	41	⇑P	P	14 49 29.1	+0.5
	baz=93						
V14A	Boquillas Ranc	93.55	46	⇑P	P	14 49 29.4	+0.6
	baz=93,SNR=9.4						
U15A	North Rim	93.57	45	⇓P	P	14 49 29.2	+0.3
	baz=93,SNR=9.3						
PDMCI	Parker Dam,Lak	93.70	48	⇑P	P	14 49 29.6	0.0
	baz=94						
S17A	Black Ridge (B	93.73	44	⇑P	P	14 49 29.5	-0.1
	baz=94						
Y12C	Blythe	93.78	49	⇓P	P	14 49 30.1	+0.2
	baz=94						
R18A	Canyonlands Na	93.80	43	⇓P	P	14 49 29.8	-0.1
	baz=94						
Q19A	Hogan Spring (	93.80	42	⇓P	P	14 49 30.3	+0.4
	baz=94						
W14A	Seligman	93.82	47	⇓P	P	14 49 30.3	+0.2
	baz=94,SNR=9.1						
GLA	Glamis	94.00	49	⇓P	P	14 49 31.7	+0.7
	baz=94						
V15A	Kaibab Nationa	94.03	46	⇓P	P	14 49 31.4	+0.3
	baz=94,SNR=8.0						
S18A	Hurst Farm, Bl	94.19	43	⇓P	P	14 49 31.4	-0.3
	baz=94						
Y13A	Salome	94.20	48	⇑P	P	14 49 32.0	+0.1
	baz=94,SNR=5.2						
PV10	Paradox Valley	94.31	42	eP	P	14 49 31.6	-0.7
W15A	Williams	94.37	46	⇓P	P	14 49 33.2	+0.6
	baz=94						
X14A	Yava	94.41	47	⇑P	P	14 49 33.3	+0.5
	baz=94						
U17A	Shonto	94.48	44	⇓P	P	14 49 33.6	+0.5
	baz=94						
U16A	Tuba City	94.48	45	⇓P	P	14 49 33.9	+0.8
	baz=94						
T18A	Mexican Hat	94.62	44	⇑P	P	14 49 33.6	-0.1
	baz=94						
Y14A	Wickenburg	94.66	48	⇑P	P	14 49 34.3	+0.3
	baz=94						
S19A	Harvey Farm, M	94.67	43	⇑P	P	14 49 34.8	+0.9
	baz=94						
WUAZ	Wupatki	94.72	46	⇓P	P	14 49 34.7	+0.5
	baz=94						
PV01	Paradox Valley	94.75	42	eP	P	14 49 31.8	-2.5
X15A	Humboldt	94.82	47	⇑P	P	14 49 34.9	+0.2
	baz=95,SNR=6.2						
113A	Mohawk Valley,	94.88	49	⇓P	P	14 49 34.5	-0.4
	baz=95						
U18A	Rough Rock, Ch	95.08	44	⇓P	P	14 49 36.3	+0.5
	baz=95						
Y15A	Casa Rosa Ranc	95.09	47	⇑P	P	14 49 36.0	0.0
	baz=95,SNR=6.7						
T19A	Beclabito	95.33	43	⇓P	P	14 49 37.5	+0.5
	baz=95						
X16A	Lo Mia Camp, P	95.38	46	⇓P	P	14 49 37.9	+0.7
	baz=95						
V18A	Ganado	95.50	45	⇑P	P	14 49 38.3	+0.5
	baz=95						
SCHQ	Schefferville	96.32	9	LR	LR	15 34 51.3	
	comp=Z,92nm,20.1s,MS4.2,baz=300,slow=37						
217A	Green Valley	97.45	48	⇑P	P	14 49 47.9	+1.3
	baz=97						
218A	Dragoon	97.83	48	⇓P	P	14 49 49.2	+0.9
	baz=98						
TXAR	Lajitas Array	103.68	46	Pdiff	Pdif	14 50 13.9	-0.2
	comp=Z,0.2nm,0.6s,baz=264,slow=3.8,SNR=4.2						
TORD	Torodi Ar. Bea	114.87	302	PKP	PKiKP	14 54 52.6	-1.4
	comp=Z,1.1nm,0.7s,baz=4.2,slow=1.9,SNR=6.4						
VNA2	Neumayer--Watz	130.77	197	ePKPdf	PKPdf	14 55 22.4	-0.3
VNA2				e		14 55 32.3	
VNA2				e		14 55 34.5	
VNA3	Neumayer Olymp	131.16	196	ePKPdf	PKPdf	14 55 22.9	-0.6
VNA3				e		14 55 33.0	
VNA3				e		14 55 35.6	
CPUP	Villa Florida	173.81	76	PKP	PKPdf	14 56 21.4	-1.0
	comp=Z,0.3nm,0.4s,baz=142,slow=6.7,SNR=3.1						

ISCJB 07 14:47:43.1±1.2, 20.7S±0.2×178.3W±0.1, h531km±16km, mb3.6/10, Error ellipse: s-maj=28.1km s-min=11.6km az=142.4
NEIC 07 14:47:44.0±1.3, 20.80S×178.20W, h540km±16km, mb4.6/1, Error ellipse: s-maj=27.5km s-min=12.7km az=146.0
IDC 07 14:47:43.4±1.9, 20.73S×178.26W, h526km±22km, mb3.2/10, mb1 3.5/12, mb1mx3.4/18, mbtmp3.2/12, Error ellipse: s-maj=27.8km s-min=12.5km az=146.0
ISC 07 14:47:44.0±1.2, **20.8S**±0.2×**178.2W**±0.1, **h533**km±15km, **n19**, σ0.79/18, **mb3.6**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	9.22	43	P	P	14 49 54.1	+0.3
	5.5nm,0.3s,baz=64,slow=22,SNR=11						
AFI				S	S	14 51 35.8	-4.5
	1.2nm,0.3s,baz=240,slow=22,SNR=2.5						
AFI	Afiamalu	9.22	43	eP	P	14 49 53.1	-0.7
	37nm,1.1s						
AFI				eS	S	14 51 40.6	+0.4
DZM	Mont Dzumac	14.32	262	eP	P	14 50 47.7	+1.0
URZ	Urewera	17.86	192	P	P	14 51 20.5	-0.8
	0.7nm,0.3s,baz=317,slow=3.1,SNR=5.8						
CTA	Charters Tower	33.24	265	P	P	14 53 37.3	0.0
	3.5nm,1.0s,mb3.8,baz=141,slow=6.5,SNR=2.5						
STKA	Stephens Creek	37.46	244	P	P	14 54 12.2	0.0
	1.9nm,0.7s,mb3.7,baz=72,slow=7.3,SNR=5.0						
ASAR	Alice Springs	44.23	257	P	P	14 55 06.0	-0.2
	1.1nm,0.5s,mb3.7,baz=95,slow=7.7,SNR=32						
ASAR				PcP	PcP	14 56 38.6	-0.6
	0.4nm,0.6s,baz=106,slow=3.8,SNR=6.5						
WRA	Warramunga Arr	44.34	262	P	P	14 55 06.7	-0.3
	0.5nm,0.3s,mb3.5,baz=97,slow=7.3,SNR=47						
HPO	Honuapo	45.44	31	eP	P	14 55 14.3	-1.2
MJAR	Matsushiro Arr	70.32	324	P	P	14 58 02.6	-1.4
	0.8nm,0.6s,mb3.4,baz=142,slow=6.2,SNR=3.4						
PETK	Petropavlovsk-	76.50	345	P	P	14 58 38.4	-0.4
	2.1nm,0.8s,mb3.6,baz=108,slow=8.4,SNR=5.6						
PETK	Petropavlovsk-	76.50	345	P	P	14 58 38.4	-0.4
NVAR	Mina Array Bea	81.39	43	P	P	14 59 06.5	+1.3
	0.7nm,0.7s,mb3.2,baz=226,slow=11,SNR=5.7						
TXAR	Lajitas Array	87.41	57	P	P	14 59 35.6	+0.7
	0.7nm,0.9s,mb3.3,baz=215,slow=5.7,SNR=5.9						
PDAR	Pinedale Array	89.33	43	P	P	14 59 43.8	+0.2
	0.9nm,0.7s,mb3.7,baz=188,slow=3.0,SNR=4.4						
CMAR	Chiang Mai Arr	90.00	290	P	P	14 59 48.3	+1.1
	0.9nm,0.3s,mb4.1,baz=134,slow=3.9,SNR=10						
AKASG	Malin Array Be	143.16	331	PKhKP		15 06 13.7	
	3.9nm,0.5s,baz=38,slow=4.3,SNR=15						
CLL	Collm	148.30	347	ePKPbc	PKPbc	15 06 29.0	-1.0
CLL				ePKPab	PKPab	15 06 35.0	-0.1
GERES	GERESS Array B	150.43	344	PKPbc	PKPbc	15 06 33.3	-1.9
	0.7nm,0.6s,baz=335,slow=2.2,SNR=6.3						

DJA 07 14:50:22, 4.18S×120.86E, h33km, MLv3.6/2, 1C, Sulawesi

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKS	Makassar	1.73	233	⇑eP	Pn	14 50 50.4	+0.7
MKS				eS	Sn	14 51 10.3	-0.3

ISCJB 07 14:59:15.8±1.8, 3.3N±0.3×96.9E±0.3, h33km, mb3.5/5, Error ellipse: s-maj=53.4km s-min=15.9km az=138.0
IDC 07 14:59:26.4±14.0, 3.02N×96.35E, h136km±121km, mb3.1/5, mb1 3.2/6, mb1mx3.1/19, mbtmp3.1/6, ML4.3/1, Error ellipse: s-maj=131.7km s-min=18.6km az=60.0
ISC 07 14:59:18.5±1.9, **3.4N**±0.3×**97.0E**±0.3, **h35**km, **n7**, σ1.00/7, **mb3.5**/5, **1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.00	107	⇑eP	Pn	14 59 49.2	-0.6
CMAR	Chiang Mai Arr	15.10	7	P	Pn	15 02 58.8	+9.4
	0.4nm,0.3s,baz=198,slow=11,SNR=5.1						
WRA	Warramunga Arr	43.37	124	P	P	15 07 17.3	-0.5
	0.2nm,0.6s,mb3.1,baz=304,slow=8.8,SNR=4.7						
ASAR	Alice Springs	44.88	129	P	P	15 07 30.9	+1.1
	0.4nm,0.9s,mb3.2,baz=299,slow=7.9,SNR=5.3						
SONM	Songino Array	45.02	9	P	P	15 07 32.3	+1.7
	0.2nm,0.4s,mb3.3,baz=177,slow=5.8,SNR=3.0						
MKAR	Makanchi Array	45.09	346	P	P	15 07 30.6	-0.5
	0.4nm,0.3s,mb3.7,baz=169,slow=8.0,SNR=7.0						
ZALV	Zalesovo Beam	51.39	351	P	P	15 08 18.6	-1.0
	1.4nm,0.6s,mb4.1,baz=181,slow=7.4,SNR=8.2						

ISCJB 07 15:00:20.8±1.3, 17.2S±0.3×178.3W±0.3, h588km±31km, mb4.3/9, Error ellipse: s-maj=61.6km s-min=20.6km az=139.3
IDC 07 15:00:20.5±2.2, 17.16S×178.74W, h514km±33km, mb3.7/5, mb1 3.9/6, mb1mx3.4/18, mbtmp3.7/6, Error ellipse: s-maj=94.2km s-min=19.4km az=157.0
NEIC 07 15:00:20.8±1.3, 17.02S×178.68W, h538km±23km, mb4.4/6, Error ellipse: s-maj=51.0km s-min=15.4km az=148.0
ISC 07 15:00:21.7±1.3, **17.2S**±0.3×**178.3W**±0.3, **h581**km±31km, **n21**, σ0.42/21, **mb4.3**/9, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.08	63	P	P	15 02 11.7	0.0
	7.0nm,0.3s,baz=97,slow=15,SNR=10						
AFI	Afiamalu	7.08	63	P	P	15 02 11.7	0.0
ARMA	Armidale	30.39	239	eP	P	15 05 47.7	-0.1
CTA	Charters Tower	33.69	260	eP	P	15 06 15.5	-0.4
	2.6nm,0.4s,mb4.2						
CTA	Charters Tower	33.69	260	P	P	15 06 15.5	-0.4
	3.1nm,0.4s,mb4.3,baz=106,slow=9.2,SNR=3.6						
CNB	Canberra Magne	33.94	232	eP	P	15 06 17.6	-0.2
TOO	Toolangi	37.69	230	eP	P	15 06 48.9	+0.2
STKA	Stephens Creek	39.06	240	eP	P	15 07 00.2	+0.3
	5.9nm,0.5s,mb4.4						
STKA	Stephens Creek	39.06	240	P	P	15 07 00.3	+0.4
	7.2nm,0.4s,mb4.5,baz=88,slow=9.0,SNR=44						
STKA	Stephens Creek	39.06	240	eP	P	15 06 59.8	-0.2
	9.3nm,0.5s,mb4.6						
WB2	Warramunga Arr	44.87	259	eP	P	15 07 45.0	-0.6
WB2	Warramunga Arr	44.87	259	eP	P	15 07 45.2	-0.4
WRA	Warramunga Arr	44.88	259	P	P	15 07 45.2	-0.5
	3.8nm,0.5s,mb4.2,baz=97,slow=7.0,SNR=128						
ASAR	Alice Springs	45.10	254	P	P	15 07 47.5	+0.2
	36nm,0.6s,mb5.1,baz=89,slow=7.9,SNR=1240						
KAKA	Kakadu	47.72	268	eP	P	15 08 07.9	+0.7
	11nm,0.4s,mb4.7						
FORT	Forrest	50.41	244	eP	P	15 08 26.4	-0.4
	14nm,0.6s,mb4.6						
FITZ	Fitzroy Crossi	53.26	260	eP	P	15 08 48.4	+0.9
	3.5nm,0.4s,mb4.0						
MBWA	Marble Bar	58.36	255	eP	P	15 09 22.6	0.0
	3.9nm,0.3s,mb4.0						
KLBR	Kellerberrin	59.24	243	eP	P	15 09 28.3	0.0
RAGM	Ragged Mountai	81.97	16	eP	P	15 11 40.7	-0.4
TXAR	Lajitas Array	85.53	58	P	P	15 12 06.2	+6.7
	0.4nm,0.7s,mb3.2,baz=214,slow=4.4,SNR=6.3						

IDC 07 15:09:05.3±44.0, **15.34S×171.99W, h0km, mb3.9**/3, **mb1 4.0**/3, **mb1mx3.7**/18, **mbtmp3.9**/3, **Error ellipse: s-maj=864.4km s-min=193.2km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.25	240	P	P	15 17 23.9	-0.7
	1.4nm,0.7s,baz=90,slow=12,SNR=3.1						
WRA	Warramunga Arr	51.18	257	P	P	15 18 10.6	-0.1
	0.2nm,0.4s,baz=91,slow=6.9,SNR=10						
ASAR	Alice Springs	51.42	252	P	P	15 18 12.9	+0.4
	2.4nm,0.6s,baz=89,slow=8.2,SNR=60						

CSEM 07 15:17:38.9±0.4, 37.76N×36.32E, h5km±3km, MD2.9, Error ellipse: s-maj=3.4km s-min=1.9km az=172.0
ISCJB 07 15:17:39.9±0.4, 37.72N±0.03×36.33E±0.03, h10km, Error ellipse: s-maj=5.0km s-min=3.5km az=13.0
ISK 07 15:17:39.2, 37.74N×36.35E, h10km, MD3.2
DDA 07 15:17:41.7, 37.60N×36.43E, h7km±2km, Md2.9
ISC 07 15:17:39.7±0.9, **37.77N**±0.06×**36.31E**±0.03, **h2**km±9km, **n17**, σ0.67/25, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANDN	Andirin	0.19	172	i P	Pg	15 17 42.3	-0.9
ANDN				i S	Sg	15 17 45.5	-0.1
KOZT	Kozan	0.48	234	PG	Pg	15 17 49.5	+0.6
KOZT				SG	Sg	15 17 56.3	+1.2
KMRS	Kahramanmaras	0.53	119	PG	Pg	15 17 49.3	-0.6
KMRS				SG	Sg	15 17 56.3	-0.5
GAZ	Gaziantep	0.93	129	ePG	Pg	15 17 57.0	-0.5
GZT	Gaziantep	1.07	112	i P	Pg	15 17 59.9	-0.4
GZT				i S	Sg	15 18 15.1	+0.9
BNN	Bunyan	1.15	341	ePN	Pn	15 18 02.1	-0.7
BNN				eSN	Sn	15 18 19.1	+0.1
AKCD	Akcadag	1.38	67	i P	Pn	15 18 06.2	+0.2
AKCD				i S	Sb	15 18 26.4	+2.2
NIG	Nigde	1.39	285	ePN	Pn	15 18 05.6	-0.5
NIG				eSN	Sn	15 18 25.0	-0.1
ATAB	Bozova	1.60	100	eP	Pn	15 18 09.9	+0.9
ATAB				eS	Sn	15 18 30.3	0.0
DARE	Darende-Malaty	1.67	44	ePN	Pn	15 18 02.7	-7.2
MERS	Mersin	1.69	238	ePN	Pn	15 18 10.0	-0.2
MALT	Malatya	1.76	71	ePN	Pn	15 18 10.8	-0.3
MYA	Malataya	1.76	71	ePN	Pn	15 18 10.4	-0.8
URFA	Urfa	2.02	98	ePN	Pn	15 18 14.3	-0.4
YOZ	Yozgat	2.03	338	ePN	Pn	15 18 14.9	+0.1
SVSK	Karacayir	2.21	14	ePN	Pn	15 18 17.4	-0.1
PTK	Pertek	2.67	64	ePN	Pn	15 18 23.4	-0.3

NEIC 07 15:48:50.7, 19.60N×68.12W, h37km, MD3.6(RSPR), After RSPR.
RSPR 07 15:48:50.7, 19.60N×68.12W, h37km±33km, **MD3.6**/13, **MD3.6**/13, **8C-6D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.47	140	⇑eP	Pn	15 49 13.3	-1.4
AGPR				eS	Sn	15 49 30.7	-2.1
LSP	Las Mesas	1.72	145	⇓eP	Pn	15 49 16.8	-1.4
LSP				eS	Sn	15 49 38.6	-0.3
LRS	Lares	1.77	137	⇑eP	Pn	15 49 17.1	-1.8
LRS				eS	Sn	15 49 38.7	-1.4
AOPR	Arecibo Observ	1.79	134	⇑eP	Pn	15 49 17.7	-1.4
CRPR	Cabo Rojo, PR	1.85	149	⇑eP	Pn	15 49 18.9	-1.0
CRPR				eS	Sn	15 49 41.1	-1.0
GBPR	Guanica, Bosqu	2.00	144	⇑eP	Pn	15 49 21.5	-0.4
GBPR	Guanica, Bosqu	2.00	144	eS	Sn	15 49 44.9	-0.8
STDO	Santo Domingo	2.06	237	⇓eP	Pn	15 49 22.6	-0.2
STDO				eS	Sn	15 49 45.4	-1.8
CELP	Cerrillos	2.10	136	⇓eP	Pn	15 49 22.8	-0.6
CELP				eS	Sn	15 49 47.0	-1.3
OBIP	Obispado Ponce	2.11	137	⇓eP	Pn	15 49 23.2	-0.3
OBIP				eS	Sn	15 49 46.7	-1.7
ICM	Isla Caja Muer	2.27	138	⇑eP	Pn	15 49 25.5	-0.2
ICM				eS	Sn	15 49 51.5	-1.0
SJG	San Juan	2.38	128	⇑eP	Pn	15 49 25.9	-1.3
SJG				eS	Sn	15 49 54.5	-0.6
SJG	San Juan	2.38	128	⇓eP	Pn	15 49 26.9	-0.3
SJG				eS	Sn	15 49 53.9	-1.2
HUMP	Col San Antoni	2.59	124	⇑eP	Pn	15 49 30.3	+0.2
CPD	Cerro la Pandu	2.60	126	eP	Pn	15 49 30.4	+0.2
MTP	Monte Pirata	2.85	121	⇓eP	Pn	15 49 32.2	-1.5

CSEM 07 16:00:39.1±0.2, 37.27N×30.95E, h140km±2km, Mw3.1, Error ellipse: s-maj=4.0km s-min=3.1km az=7.0
ISCJB 07 16:00:42.4±0.7, 37.04N±0.06×30.94E±0.06, h121km±8km, Error ellipse: s-maj=10.2km s-min=7.5km az=21.9
HLW 07 16:00:43.1, 37.03N×30.85E, h31km, Mb3.8
ISK 07 16:00:44.4, 37.27N×31.04E, h102km, MD3.0
NIC 07 16:00:45.5±0.3, 37.17N×31.48E, h86km, ML3.2, MW3.1
GII 07 16:00:50.7±0.0, 36.51N×31.66E, h0km, ML3.3/11
ISC 07 16:00:44.0±0.9, **37.01N**±0.06×**30.95E**±0.06, **h111**km±10km, **n46**, σ0.87/56, **6C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANTB	Antalya	0.27	245	ePg	Pn	16 01 00.6	+0.9
BCK	Bucak	0.53	327	ePG	Pn	16 01 01.3	+0.2
BCK				eSG	Sn	16 01 14.0	-0.1
BCK	Bucak	0.53	327	ePg	Pn	16 01 00.2	-1.0
ELL	Elmali	0.88	253	ePg	Pn	16 01 06.3	+2.3
ISP	Isparta	0.90	337	ePG	Pn	16 01 02.8	-1.4
ISP				eSG	Sn	16 01 15.4	-4.2
HDMB	Hadim	1.23	92	ePG	Pn	16 01 08.4	+0.7
HDMB				eSG	Sn	16 01 24.9	-0.7
HDMB	Hadim	1.23	92	ePn	Pn	16 01 08.3	+0.6
KIZT	Kizilcal	2.00	21	ePN	Pn	16 01 13.9	-3.1
AKMC	Akamas	2.27	150	⇑P	Pn	16 01 21.5	+1.0
ALFC	Alevga	2.28	144	P	Pn	16 01 20.7	+0.1
	19nm,0.1s						
ALFC				S	Sn	16 01 48.9	+0.3
IKL	Isikli	2.33	109	ePn	Pn	16 01 22.1	+0.9
PPCY	Paphos	2.40	152	P	Pn	16 01 23.0	+0.8
LEF	Lefka	2.46	140	ePn	Pn	16 01 22.5	-0.4
MAMC	Mammari	2.60	134	P	Pn	16 01 24.5	-0.2
SZAC	Souni-Zanaja	2.74	145	P	Pn	16 01 27.4	+0.8
CSS	Prodhromos	2.81	136	P	Pn	16 01 27.0	-0.5
	1.5nm,0.3s						
CSS				S	Sn	16 01 59.0	-2.0
NIG	Nigde	3.11	68	ePN	Pn	16 01 31.6	+0.2
HNTI	Hanita	5.23	137	Pn	Pn	16 01 59.8	-0.1
HNTI				Sn	Sn	16 02 53.3	-5.7
MMA2	Mount Meron ar	5.41	136	Pn	Pn	16 02 02.5	+0.2
KSDI	Kefar Szold	5.42	133	Pn	Pn	16 02 02.0	-0.5
OFRI	‘Ofer	5.49	142	Pn	Pn	16 02 03.6	+0.1
HRSH	Kfar Ka’horesh	5.58	139	⇓eP	Px	16 02 16.0	
HRSH				S	Sx	16 03 24.9	
KSHT	Keshet	5.66	134	Pn	Pn	16 02 05.9	+0.2
SLTI	Sal’it	5.83	144	Pn	Pn	16 02 07.5	-0.6
SLTI				Sn	Sn	16 03 09.3	-4.3
MMLI	Mount Malkishu	5.86	140	Pn	Pn	16 02 08.4	0.0
HMDT	Nahal Hemdat	6.06	140	Pn	Pn	16 02 11.9	+0.7
RSH		6.46	158	P	Pn	16 02 16.0	-0.6
DSI	Dead Sea	6.55	145	Pn	Pn	16 02 18.5	+0.8
DSI				Sn	Sn	16 03 26.5	-4.5
AMAG	Maghara	6.62	163	P	Pn	16 02 18.1	-0.7
RTMI	Retamim	6.70	151	Pn	Pn	16 02 20.3	+0.4
AANS		6.71	177	⇓P	Pn	16 02 19.5	-0.6
HMAT	Matruh	6.71	210	P	Pn	16 02 19.1	-0.9
MZDA	Masada	6.76	146	Pn	Pn	16 02 20.8	+0.2
MZDA				Sn	Sn	16 03 32.0	-4.1
KOT	Kottamia	7.10	174	⇓P	Pn	16 02 25.1	-0.2
HHAG	Hagoal	7.11	172	⇑P	Pn	16 02 24.9	-0.5
SLUM		7.27	222	⇑P	Pn	16 02 26.8	-0.7
SLUM				S	Sn	16 03 41.4	-7.2
HNAT	Natroun	7.37	182	⇑P	Pn	16 02 28.4	-0.4
HSAF	As Saff	7.39	176	P	Pn	16 02 28.9	-0.3
GLL	Jalalah	7.44	175	⇓eP	Pn	16 02 29.9	-0.1
PRNI	Paran	7.45	152	Pn	Pn	16 02 30.9	+0.9
HNKL	Nakhl	7.50	159	⇑eP	Pn	16 02 30.8	0.0
HRFI	Mount Harif	7.75	153	Pn	Pn	16 02 35.3	+1.2
HRFI				Sn	Sn	16 03 57.1	-3.0
ZAF		7.82	170	⇑eP	Pn	16 02 35.1	0.0
MBRI	Mt Berech	7.92	154	Pn	Pn	16 02 37.9	+1.5
EIL	Elat	8.05	154	Pn	Pn	16 02 39.4	+1.2
AWBH		8.84	192	⇓P	Pn	16 02 48.5	-0.3

CSEM 07 16:01:04.9±0.1, 38.11N×38.64E, h2km, MD3.4, Error ellipse: s-maj=1.4km s-min=1.3km az=5.0
ISK 07 16:01:05.4, 38.13N×38.63E, h3km, MD3.4
ISCJB 07 16:01:06.8±0.3, 38.14N±0.02×38.64E±0.02, h10km, Error ellipse: s-maj=3.3km s-min=2.8km az=176.4
DDA 07 16:01:06.2, 38.12N×38.63E, h3km, Md3.3
ISC 07 16:01:07.5±0.3, **38.15N**±0.02×**38.64E**±0.03, **h10**km, **n37**, σ1.25/50, **1C-1D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MALT	Malatya	0.23	314	PG	Pg	16 01 10.9	-1.4
MALT				SG	Sg	16 01 14.9	-0.6
MALT	Malatya	0.23	314	i Pg	Pg	16 01 11.4	-0.9
MALT				i Sg	Sg	16 01 14.9	-0.6
MYA	Malataya	0.24	316	PG	Pg	16 01 11.7	-0.8
SVRC	Sivrice-ELAZID	0.57	67	PG	Pg	16 01 17.4	-1.2
SVRC				SG	Sg	16 01 26.2	+0.1
AKCD	Akcadag	0.58	284	i P	Pg	16 01 17.5	-1.3
AKCD				i S	Sg	16 01 26.3	-0.2
URFA	Urfa	0.73	169	PG	Pg	16 01 19.4	-2.2
URFA				SG	Sg	16 01 31.2	+0.2
URFA	Urfa	0.73	169	i Pg	Pg	16 01 19.4	-2.1
URFA				i Sg	Sg	16 01 30.6	-0.4
ATAB	Bozova	0.73	202	i P	Pg	16 01 19.5	-2.2
ATAB				i S	Sg	16 01 33.0	+1.7
PTK	Pertek	0.94	38	PG	Pg	16 01 24.5	-1.2
PTK				SG	Sg	16 01 39.1	+1.1
DARE	Darende-Malaty	1.03	321	PG	Pg	16 01 24.5	-2.8
DIYA	Diyarbakir	1.19	101	i P	Pg	16 01 28.9	-1.6
DIYA				i S	Sg	16 01 47.7	+1.8
GAZ	Gaziantep	1.50	230	ePN	Pn	16 01 34.0	-0.5
GAZ				eSN	Sn	16 01 55.3	+1.3
KMRS	Kahramanmaras	1.52	245	PN	Pn	16 01 33.5	-1.3
KMRS				SN	Sn	16 01 55.7	+1.1
SARI	SarD1z-Kayseri	1.61	290	ePN	Pn	16 01 38.5	+2.4
SARI	SarD1z-Kayseri	1.61	290	ePn	Pn	16 01 37.9	+1.9
MARD	Mardin	1.89	116	eP	Pg	16 01 39.1	-4.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MARD				*i* S	Sg	16 02 10.9	+2.6
ANDN	Andirin	1.90	253	*e*P	Pn	16 01 38.6	-1.5
BNGL	BINGOL	2.12	67	*i* P	Pg	16 01 46.1	-2.1
BNGL				*i* S	Sg	16 02 20.8	+5.0
SVSK	Karacayir	2.18	325	*e*PN	Pn	16 01 44.8	+1.0
SVSK				*e*SN	Sn	16 02 12.8	+2.0
SVSK	Karacayir	2.18	325	*e*Pn	Pn	16 01 44.5	+0.7
BNN	Bunyan	2.30	289	*e*PN	Pn	16 01 46.3	+0.8
BNN	Bunyan	2.30	289	*e*PN	Pn	16 01 46.9	+1.4
BNN	Bunyan	2.30	289	*e*Pn	Pn	16 01 45.2	-0.3
KOZT	Kozan	2.33	254	*e*PN	Pn	16 01 46.4	+0.6
GUMT	Gumushane	2.39	16	*e*PN	Pn	16 01 47.8	+1.1
GUMT	Gumushane	2.39	16	*e*Pn	Pn	16 01 47.4	+0.6
TOKT	Tokat	2.71	324	*e*PN	Pn	16 01 51.7	+0.6
ESPY	Espiye-Giresun	2.76	1	*e*PN	Pn	16 01 52.5	+0.7
HTY	Hatay	2.85	225	*e*PN	Pn	16 01 52.3	-0.7
YOZ	Yozgat	2.99	301	*e*PN	Pn	16 01 56.2	+1.3
YOZ	Yozgat	2.99	301	*e*Pn	Pn	16 01 55.5	+0.6
SIRT	Sirnak	3.08	101	*e*PN	Pn	16 01 56.0	-0.1
NIG	Nigde	3.18	270	*e*PN	Pn	16 01 57.7	+0.2
CORM	Corum	3.71	304	*e*PN	Pn	16 02 06.1	+1.2
MSL	Mosul	4.01	116	*e*x	x	16 02 06.0	
MSL				*e*x	x	16 02 24.0	
MSL				*e*x	x	16 02 54.0	
MSL				*e*x	x	16 03 07.0	
MSL				*e*x	x	16 03 14.0	
HWQ	Hawqa	4.44	210	⇓*e*Pn	Pn	16 02 14.9	0.0
BHL	Bhannes	4.88	211	⇑*e*Pn	Pn	16 02 21.4	+0.4

IDC 07 16:45:36.5±3.6**,226S×10162E,h0km,mb3.5**/4**,mb1 3.7**/4**, mb1mx3.4**/17**,mbtmp3.5**/4**,Error ellipse: s-maj=149.7km s-min=22.7km az=57.0,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.47	121	P	P	16 52 43.4	-0.2
	0.2nm,0.4s,baz=296,slow=12,SNR=7.9						
ASAR	Alice Springs	37.79	127	P	P	16 52 54.9	+0.1
	0.2nm,0.4s,baz=302,slow=8.2,SNR=16						
SONM	Songino Array	50.06	4	P	P	16 54 33.6	+0.6
	0.8nm,0.5s,baz=190,slow=9.9,SNR=7.9						
MKAR	Makanchi Array	51.73	343	P	P	16 54 45.2	-0.4
	0.4nm,0.4s,baz=162,slow=10,SNR=3.6						

ISCJB ***07*** *17:05:25.2±0.3,6329N±003×14969W±007,h108km±3km, mb4.0/5,Error ellipse: s-maj=5.1km s-min=4.4km az=147.4*
NEIC ***07*** *17:05:26.7,6329N×14967W,h99km,MG3.5(AEIC),After AEIC.*
IDC ***07*** *17:05:29.6±8.7,6281N×149.19W,h165km±144km,mb3.5/5, mb1 3.4/7,mb1mx3.2/22,mbtmp3.4/7,ML3.6/2,MS3.9/1, Ms1 3.8/1,ms1mx2.4/32,Error ellipse: s-maj=135.6km s-min=27.9km az=152.0*
ISC 07 17:05:26.5±0.3**,6329N**±003×**14969W**±006**,h101**km±4km**, n44,**σ0^s**72**/55**,mb4.0**/5**,Central Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.32	302	P	Pn	17 05 41.6	+0.3
TRF				S	Sn	17 05 52.9	+0.6
MCK	McKinley	0.56	37	P	Pn	17 05 42.9	+0.1
MCK				S	Sn	17 05 54.4	-0.6
KTH	Kantishna Hill	0.62	296	P	Pn	17 05 43.4	+0.1
KTH				S	Sn	17 05 55.5	-0.3
BPAW	Bear Paw Mtn.	1.00	325	P	Pn	17 05 46.9	0.0
BPAW				S	Sn	17 06 01.5	-0.8
PPLA	Purkeypile	1.20	252	P	Pn	17 05 49.6	+0.4
PPLA				S	Sn	17 06 06.7	+0.3
CHUM	Lake Minchumin	1.32	298	P	Pn	17 05 50.8	+0.3
CHUM				S	Sn	17 06 08.6	-0.1
GHO	Glory Hole Cre	1.56	167	P	Pn	17 05 53.8	+0.3
PMR	Palmer	1.72	171	P	Pn	17 05 55.8	+0.3
PMR				S	Sn	17 06 17.7	+0.2
COLA	College	1.79	26	P	Pn	17 05 56.3	0.0
ILB	Eielson Array	1.94	38	P	Pn	17 05 57.9	-0.3
IL1	Eielson Array	1.94	38	P	Pn	17 05 57.9	-0.3
KNK	Knik Glacier	1.97	162	P	Pn	17 05 59.0	+0.4
FIB	Fire Island	2.14	186	P	Pn	17 06 03.4	+2.5
RC01	Rabbit Creek A	2.21	181	P	Pn	17 06 02.1	+0.4
RC01				S	Sn	17 06 28.3	-0.4
HARP	HAARP	2.26	111	P	Pn	17 06 03.0	+0.6
MENT	Mentasta	2.74	95	P	Pn	17 06 09.1	+0.5
SLKM	Skilak Lake	2.80	185	P	Pn	17 06 10.4	+0.9
DIV	Divide	2.84	138	P	Pn	17 06 09.1	-0.9
DIV				S	Sn	17 06 42.1	-1.4
TTA	Tatalina	2.90	266	P	Pn	17 06 10.7	-0.1
TT01	Tatalina	2.90	265	P	Pn	17 06 10.8	-0.1
SEW	Seward	3.20	178	P	Pn	17 06 15.3	+0.5
IM3	Indian Mountai	3.22	329	P	Pn	17 06 15.2	0.0
IMA2	Indian Mountai	3.28	330	*e*P	Pn	17 06 15.6	-0.3
EYAK	Cordova Ski Ar	3.32	144	P	Pn	17 06 16.2	-0.2
BMRM	Bremner River	3.33	132	P	Pn	17 06 15.8	-0.8
SVW2	Sparrevohn	3.53	234	P	Pn	17 06 18.9	-0.4
BCA3	Beaver Creek A	3.59	90	P	Pn	17 06 19.8	-0.3
RAGM	Ragged Mountai	3.76	139	*e*Pn	Pn	17 06 21.9	-0.4
EGAK	Eagle	4.04	64	P	Pn	17 06 26.2	+0.1
EGAK				S	Sn	17 07 12.7	+0.4
DAWY	Dawson	4.65	76	P	Pn	17 06 34.4	0.0
BM3	Burnt Mountain	4.66	25	P	Pn	17 06 34.6	+0.2
KDAK	Kodiak Island	5.70	196	P	Pn	17 06 47.4	-1.2
	1.8nm,0.3s,baz=41,slow=8.3,SNR=13						
KDAK				S	Sn	17 07 48.2	-4.4
	8.2nm,0.3s,baz=112,slow=23,SNR=15						
KDAK	Kodiak Island	5.70	196	P	Pn	17 06 47.3	-1.3
PNL	Peninsula	6.12	122	P	Pn	17 06 53.9	-0.3
HYT	Haines Junctio	6.24	108	*e*Pn	Pn	17 06 58.5	+2.7
OHAK	Old Harbor	6.34	198	P	Pn	17 06 55.4	-1.9
DHAK	Deception Hill	6.96	122	*e*Pn	Pn	17 07 06.5	+0.9
DHAK				*e*Sn	Sn	17 08 19.1	-4.0
YKA	Yellowknife Ar	15.89	77	P	Pn	17 09 03.5	-0.4
	0.3nm,0.3s,baz=289,slow=10,SNR=7.5						
SCHQ	Schefferville	40.53	62	LR	LR	17 29 53.4	
	comp=Z,168nm,19.9s,baz=118,slow=36						
ARCES	ARCESS Array B	47.42	2	P	P	17 13 49.7	-0.2
	1.5nm,0.5s,mb4.0,baz=9.6,slow=8.0,SNR=9.1						
SONM	Songino Array	54.13	306	P	P	17 14 41.8	+1.3
	0.7nm,0.8s,mb3.8,baz=46,slow=6.4,SNR=4.7						
ZALV	Zalesovo Beam	55.64	324	P	P	17 14 51.3	+0.1
	0.5nm,0.3s,mb4.0,baz=28,slow=6.5,SNR=3.2						
BVAR	Borovoye Array	59.87	333	P	P	17 15 20.7	-0.1
	0.7nm,0.4s,mb4.1,baz=40,slow=5.6,SNR=6.6						
MKAR	Makanchi Array	62.81	323	P	P	17 15 39.9	-0.9
	0.6nm,0.3s,mb4.0,baz=33,slow=7.2,SNR=6.7						

IDC ***07*** *17:09:10.3±2.4,033N×9778E,h0km,mb3.8/6,mb1 3.9/7, mb1mx3.7/20,mbtmp3.8/7,ML3.8/1,Error ellipse: s-maj=100.7km s-min=18.8km az=58.0*
ISCJB ***07*** *17:09:12.9±1.2,03N±01×977E±02,h33km,mb3.8/7,Error ellipse: s-maj=33.6km s-min=13.7km az=157.6*
DJA ***07*** *17:09:12,004N×9779E,h0km,MLv3.9/3*
NEIC ***07*** *17:09:15.4±1.4,046N×9798E,h30km,mb3.8/1,Error ellipse: s-maj=52.3km s-min=11.3km az=61.0*
ISC 07 17:09:15.6±1.3**,04N**±01×**978E**±02**,h35**km**,n9,**σ0^s**67**/9**, mb3.8**/7**,1D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.65	24	⇓*e*P	Pn	17 09 56.4	+0.5
CMAR	Chiang Mai Arr	18.01	3	P	Pn	17 13 21.8	-1.5
	0.1nm,0.3s,baz=192,slow=11,SNR=11						
WRA	Warramunga Arr	41.06	122	P	P	17 16 55.7	-0.4
	0.8nm,0.5s,mb3.6,baz=302,slow=9.0,SNR=16						
WRAB	Tennant Creek	41.07	122	P	P	17 16 55.9	-0.2
	1.1nm,0.6s,mb3.7						
ASAR	Alice Springs	42.39	127	P	P	17 17 07.2	+0.3
	0.8nm,0.7s,mb3.5,baz=297,slow=7.9,SNR=25						
SONM	Songino Array	47.86	8	P	P	17 17 51.0	+1.0
	1.0nm,0.7s,mb3.9,baz=185,slow=10,SNR=7.5						
MKAR	Makanchi Array	48.20	346	P	P	17 17 53.0	+0.4
	0.7nm,0.6s,mb3.9,baz=150,slow=8.4,SNR=9.1						
ZALV	Zalesovo Beam	54.48	351	P	P	17 18 39.6	+0.1
	1.8nm,0.5s,mb4.3,baz=182,slow=6.2,SNR=9.5						
BVAR	Borovoye Array	57.24	341	P	P	17 18 59.0	-0.3
	0.6nm,0.7s,mb3.8,baz=120,slow=8.7,SNR=4.5						

IDC ***07*** *17:33:17.4±2.0,3743N×13866E,h0km,mb3.3/2, mb1 3.6/3,mb1mx3.2/22,mbtmp3.4/3,ML3.3/1,MS3.4/1, Ms1 3.6/1,ms1mx2.6/14,Error ellipse: s-maj=19.3km s-min=17.6km az=107.0*
ISCJB ***07*** *17:33:20.0±0.4,3738N±003×13853E±004,h28km±4km, mb3.3/2,Error ellipse: s-maj=5.6km s-min=4.8km az=167.2*
JMA ***07*** *17:33:20.4,3739N×13851E,h19km±1km,M3.2*
JMA Felt I J1.
ISC 07 17:33:20.4±0.5**,3737N**±003×**13853E**±003**,h20**km±4km**, n14,**σ0^s**66**/24**,mb3.3**/2**,4D,Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIZZ	Izumozaki	0.22	42	P	Pg	17 33 25.9	+0.2
JIZZ				*e*S	Sg	17 33 30.5	+1.1
JJN	Nakama	0.40	227	⇓P	Pg	17 33 28.5	-0.2
JJN				*e*S	Sg	17 33 34.6	+0.4
JHK	Hiroka	0.41	107	⇓P	Pg	17 33 28.5	-0.5
JHK				*e*S	Sg	17 33 34.4	-0.3
JSD	Sado	0.70	342	⇓P	Pb	17 33 33.1	-0.8
JSD				*e*S	Sb	17 33 42.5	-0.6
JNS	Sasagawa	0.77	54	P	Pb	17 33 34.8	-0.4
JNS				*e*S	Sb	17 33 45.7	+0.5
JKT	Katashina	0.84	136	⇓P	Pb	17 33 36.0	-0.3
JKT				*e*S	Sb	17 33 47.1	0.0
MAT	Matsushiro	0.87	197	P	Pb	17 33 37.2	+0.4
MAT				S	Sb	17 33 48.8	+0.9
MAT	Matsushiro	0.87	197	P	Pb	17 33 36.3	-0.5
MAT				*e*S	Sb	17 33 48.0	+0.1
MJAR	Matsushiro Arr	0.87	197	Pg	Pg	17 33 36.5	-0.9
	28nm,0.3s,baz=23,slow=16,SNR=475						
MJAR				Lg		17 33 49.0	
	67nm,0.3s,baz=17,slow=28,SNR=54						
JSZ	Suzu	0.93	275	P	Pb	17 33 37.2	-0.6
JSZ				*e*S	Sb	17 33 49.7	-0.1
JFY	Yanaizu	0.94	88	P	Pb	17 33 37.8	-0.2
JFY				*e*S	Sb	17 33 50.1	0.0
KSRS	Korea Array	8.44	274	Pn	Pn	17 35 24.2	+2.7
	0.3nm,0.3s,baz=88,slow=15,SNR=4.4						
WRA	Warramunga Arr	57.14	185	P	P	17 43 05.9	+0.2
	0.4nm,0.6s,mb3.6,baz=0.5,slow=7.5,SNR=10						
ASAR	Alice Springs	60.87	185	P	P	17 43 31.9	+0.4
	0.1nm,0.8s,mb3.0,baz=2.9,slow=6.9,SNR=4.3						

ISCJB ***07*** *18:18:05.4±0.5,3559N±009×3465W±006,h10km, mb4.3/48,MS3.7/26,Error ellipse: s-maj=13.8km s-min=6.8km az=168.5*
CSEM ***07*** *18:18:05.8±0.1,3567N×3467W,h15km,mb4.6/25,Ms3.1, Error ellipse: s-maj=3.7km s-min=1.8km az=164.0*
IDC ***07*** *18:18:06.2±0.8,3571N×3465W,h0km,mb4.1/15, mb1 4.3/15,mb1mx4.1/26,mbtmp4.1/15,MS3.8/23, Ms1 3.8/23,ms1mx3.5/44,Error ellipse: s-maj=24.1km s-min=14.8km az=167.0*
NEIC ***07*** *18:18:07.8±0.3,3554N×3463W,mb4.6/29,Error ellipse: s-maj=9.0km s-min=5.0km az=164.0*
SZGRF ***07*** *18:18:31.6,3671N×3168W,h18km,mb4.6,Azores Islands region*
ISC 07 18:18:07.4±0.4**,3557N**±009×**3463W**±006**,h10**km**, (h16**km±.7km**:pP-P),n110,**σ0^s**81**/91**,mb4.3**/48**,MS3.7**/26**, Azores Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	24.57	71	P	P	18 23 28.6	+1.3
	1.1nm,0.6s,mb3.6,baz=273,slow=8.6,SNR=7.7						
MDT	Midelt	24.93	88	LR	LR	18 31 11.7	
	comp=Z,140nm,19.3s,MS3.5,baz=0.4,slow=32						
QUIF	Quistinic	26.33	52	*e*P	P	18 23 42.4	-0.8
	69nm,1.6s,mb4.6						
QUIF	Quistinic	26.33	52	*e*P	P	18 23 42.4	-0.8
	34nm,1.6s,mb4.6						
ROSF	Rostrenen	26.38	51	*e*P	P	18 23 44.0	+0.3
BBTS	Babate	26.40	137	LR	LR	18 31 19.7	
	comp=Z,283nm,18.7s,MS3.8,baz=147,slow=30						
SGMF	Saint Gilles	26.81	52	*e*P	P	18 23 47.3	-0.3
	32nm,1.1s,mb4.5						
SGMF	Saint Gilles	26.81	52	*e*P	P	18 23 47.3	-0.3
	16nm,1.1s,mb4.5						
ETSF	Etsaut	27.25	64	*e*P	P	18 23 52.0	+0.4
GRR	Gorron	27.94	52	*e*P	P	18 23 57.5	-0.2
	20nm,0.9s,mb4.4						
GRR	Gorron	27.94	52	*e*P	P	18 23 57.5	-0.2
	10nm,0.9s,mb4.4						
MFF	Saint Martin d	28.02	56	*e*P	P	18 23 58.1	-0.3
FLN	La Foliniere	28.28	52	*e*P	P	18 24 00.5	-0.2
	24nm,1.1s,mb4.4						
FLN				*e*MLR	MLR		
	comp=Z,51nm,17.0s,MS2.9						
FLN	La Foliniere	28.28	52	*e*P	P	18 24 00.5	-0.2
	comp=Z,12nm,1.1s,mb4.4						
FLN				LR	LR		
	comp=Z,50nm,17.0s,MS3.2						
LDF	La Druitiere	28.47	52	*e*P	P	18 24 02.1	-0.3
	comp=Z,27nm,1.1s,mb4.5						
LDF	La Druitiere	28.47	52	*e*P	P	18 24 02.1	-0.3
	comp=Z,13nm,1.1s,mb4.5						
ESK	Eskdalemuir	29.21	38	P	P	18 24 11.7	+2.8
	comp=Z,9.0nm,1.1s,mb4.4						
EKA	Eskdalemuir Ar	29.24	38	P	P	18 24 09.0	-0.2
	comp=Z,1.5nm,0.9s,mb3.7,baz=243,slow=8.3,SNR=4.2						
MTLF	Montolieu	29.30	63	*e*P	P	18 24 10.6	+0.7
	comp=Z,26nm,1.4s,mb4.5						
MTLF	Montolieu	29.30	63	*e*P	P	18 24 10.6	+0.7
	comp=Z,13nm,1.4s,mb4.5						
SCHQ	Schefferville	29.37	321	LR	LR	18 34 40.2	
	comp=Z,287nm,20.0s,MS3.9,baz=307,slow=34						
TCF	Toulx Ste Croi	29.57	57	*e*P	P	18 24 12.4	+0.1
	comp=Z,17nm,1.0s,mb4.4						
TCF	Toulx Ste Croi	29.57	57	*e*P	P	18 24 12.4	+0.1
	comp=Z,8.6nm,1.0s,mb4.4						
BGF	Bois d'Agland	30.05	57	*e*P	P	18 24 16.4	0.0
	comp=Z,13nm,0.9s,mb4.4						
BGF	Bois d'Agland	30.05	57	*e*P	P	18 24 16.4	0.0
	comp=Z,6.7nm,0.9s,mb4.4						
SSF	Saint Saulge	30.57	56	*e*P	P	18 24 20.8	-0.2
SMF	Signal de Mont	30.74	57	*e*P	P	18 24 22.8	+0.2
LOR	Lormes	30.83	56	*e*P	P	18 24 23.2	-0.2
LOR				*e*MLR	MLR		
	comp=Z,41nm,19.0s,MS2.8						
LOR	Lormes	30.83	56	*e*P	P	18 24 23.2	-0.2
LOR				LR	LR		
	comp=Z,40nm,19.0s,MS3.1						
BAIF	Baives	31.56	51	*e*P	P	18 24 29.3	-0.5
	comp=Z,25nm,1.1s,mb4.7						
BAIF	Baives	31.56	51	*e*P	P	18 24 29.3	-0.5
	comp=Z,12nm,1.1s,mb4.7						
MEZF	Maizieres J'vi	31.81	54	*e*P	P	18 24 31.9	-0.1
	comp=Z,25nm,0.9s,mb4.7						
MEZF	Maizieres J'vi	31.81	54	*e*P	P	18 24 31.9	-0.1
	comp=Z,13nm,0.9s,mb4.7						
HAU	Haudompre	32.60	55	*e*P	P	18 24 38.6	-0.3
	comp=Z,31nm,1.2s,mb4.8						
HAU				*e*MLR	MLR		
	comp=Z,33nm,18.0s,MS2.8						
HAU	Haudompre	32.60	55	*e*P	P	18 24 38.6	-0.3
	comp=Z,16nm,1.2s,mb4.8						
HAU				LR	LR		
	comp=Z,30nm,18.0s,MS3.0						
WLF	Walferdange	32.72	52	*e*P	P	18 24 39.9	0.0
	comp=Z,10.0nm,1.0s,mb4.7						
SFJD	Kangerlussuaq	32.81	348	LR	LR	18 34 54.8	
	comp=Z,463nm,19.4s,MS4.2,baz=128,slow=31						
SJG	San Juan	32.87	246	LR	LR	18 34 41.7	
	comp=Z,29nm,20.0s,MS3.0,baz=264,slow=30						
HINF	Hinteralfeld	32.92	55	*e*P	P	18 24 41.5	-0.2
CDF	Champ du Feu	33.27	54	*e*P	P	18 24 44.7	0.0
	comp=Z,22nm,1.0s,mb4.7						
CDF	Champ du Feu	33.27	54	*e*P	P	18 24 44.7	0.0
	comp=Z,11nm,1.0s,mb4.7						
BFO	Black Forest	33.96	55	*e*P	P	18 24 50.8	+0.1
	comp=Z,11nm,1.3s,mb4.6						
BFO				*e*pP	pP	18 24 55.7	+1.9
UBBA	Unterbreizbach	35.34	50	*e*P	P	18 25 03.4	+0.7
	comp=Z,22nm,1.9s,mb4.8						
UBBA				*e*pP	pP	18 25 08.4	+2.6
GRA1	Grafenberg Arr	35.99	52	*e*P	P	18 25 08.9	+0.7
	comp=Z,13nm,1.5s,mb4.6						
GRA1				*e*pP	pP	18 25 12.9	+1.6
GRF	Grafenberg Arr	35.99	52	*e*P	P	18 25 08.9	+0.7
	comp=Z,13nm,1.5s,mb4.6						
GRF				*e*pP	pP	18 25 12.9	+1.6
ROTZ	Rotzenmuhle	36.63	52	*e*P	P	18 25 14.2	+0.5
	comp=Z,13nm,1.9s,mb4.4						
RJOB	Jochberg	36.91	56	*e*P	P	18 25 16.5	+0.4
	comp=Z,8.0nm,1.2s,mb4.4						
RJOB				*e*pP	pP	18 25 21.1	+1.9
SUMG	Summit	37.13	358	P	P	18 25 17.5	-0.2
	comp=Z,3.4nm,0.9s,mb4.2						
SUMG	Summit	37.13	358	P	P	18 25 17.5	-0.2
	comp=Z,3.4nm,0.9s,mb4.2						
GERES	GERESS Array B	37.55	54	P	P	18 25 22.3	+0.8
	comp=Z,0.6nm,0.7s,mb3.4,baz=251,slow=8.1,SNR=7.9						
NB2	NORSAR Subarra	38.53	34	P	P	18 25 29.4	-0.2
	comp=Z,3.3nm,0.8s,mb4.1,baz=251,slow=9.3						
NOA	NORSAR Array B	38.53	34	P	P	18 25 29.7	0.0
	comp=Z,2.5nm,0.8s,mb4.0,baz=251,slow=8.6,SNR=6.6						
NOA				LR	LR	18 40 22.5	
	comp=Z,25nm,18.5s,MS3.1,baz=280,slow=35						
NOA	NORSAR Array B	38.53	34	P	P	18 25 29.7	0.0
NOA				LR	LR	18 40 22.5	
TORD	Torodi Ar. Bea	39.58	115	P	P	18 25 39.2	+0.3
	comp=Z,0.5nm,0.9s,mb3.3,baz=309,slow=6.6,SNR=2.9						
TORD				LR	LR	18 41 01.4	
	comp=Z,293nm,18.8s,MS4.1,baz=300,slow=35						
DBIC	Dimbokro	39.67	129	LR	LR	18 40 14.9	
	comp=Z,145nm,18.7s,MS3.8,baz=282,slow=33						
DBIC	Dimbokro	39.67	129	P	P	18 25 38.6	-1.1
DBIC	Dimbokro	39.67	129	P	P	18 25 38.6	-1.1
SDV	Santo Domingo	42.22	240	LR	LR	18 38 57.7	
	comp=Z,47nm,19.8s,MS3.4,baz=327,slow=30						
SDV	Santo Domingo	42.22	240	P	P	18 26 05.8	+5.1
	comp=Z,12nm,1.2s,mb4.4						
ULM	Lac du Bonnet	45.91	308	P	P	18 26 28.9	-1.1
	comp=Z,2.4nm,0.8s,mb4.2,baz=66,slow=12,SNR=3.4						
ULM				LR	LR	18 44 51.1	
	comp=Z,328nm,20.1s,MS4.3,baz=220,slow=35						
ARCES	ARCESS Array B	46.77	25	P	P	18 26 35.0	-1.5
	comp=Z,2.4nm,0.8s,mb4.2,baz=268,slow=4.5,SNR=6.3						
ARCES				LR	LR	18 44 05.2	
	comp=Z,23nm,20.9s,MS3.1,baz=264,slow=33						
ECSD	EROS,Sioux Fal	47.43	300	*e*P	P	18 26 41.0	-1.0
	comp=Z,9.1nm,1.1s,mb4.6						
AKASG	Malin Array Be	47.51	51	P	P	18 26 41.7	-0.8
	comp=Z,5.2nm,0.7s,mb4.7,baz=273,slow=7.2,SNR=14						
AKASG	Malin Array Be	47.51	51	P	P	18 26 41.7	-0.8
BDFB	Brasilia	52.49	196	P	P	18 27 17.8	-2.8
	comp=Z,1.9nm,0.5s,mb4.3						
OTAV	Otavalo	53.80	239	P	P	18 27 31.2	+0.8
	comp=Z,4.1nm,1.0s,mb4.3						
OTAV	Otavalo	53.80	239	P	P	18 27 31.2	+0.8
	comp=Z,4.1nm,1.0s,mb4.3						
YKA	Yellowknife Ar	54.64	326	P	P	18 27 35.7	-0.2
	comp=Z,1.6nm,0.8s,mb4.1,baz=67,slow=7.5,SNR=2.8						
YKA				LR	LR	18 50 17.5	
	comp=Z,66nm,19.0s,MS3.7,baz=60,slow=35						
YKA	Yellowknife Ar	54.64	326	P	P	18 27 35.6	-0.2
YKA				LR	LR	18 50 17.5	
SDCO	Great Sand Dun	55.62	295	P	P	18 27 43.1	-0.2
SDCO	Great Sand Dun	55.62	295	P	P	18 27 43.1	-0.3
CMIG	Matias Romero	56.22	267	LR	LR	18 51 10.2	
	comp=Z,359nm,18.7s,MS4.5,baz=289,slow=35						
PDAR	Pinedale Array	56.78	302	P	P	18 27 51.8	+0.2
	comp=Z,0.5nm,0.5s,mb3.9,baz=87,slow=8.2,SNR=3.8						
PDAR				LR	LR	18 52 06.3	
	comp=Z,187nm,18.8s,MS4.2,baz=66,slow=36						
MALT	Malatya	57.01	64	P	P	18 27 51.7	-1.6
	comp=Z,1.7nm,0.7s,mb4.2						
MALT	Malatya	57.01	64	P	P	18 27 51.7	-1.6
	comp=Z,1.7nm,0.7s,mb4.2						
ANMO	Albuquerque	57.38	292	LR	LR	18 50 33.1	
	comp=Z,159nm,18.7s,MS4.2,baz=341,slow=34						
TXAR	Lajitas Array	57.53	285	P	P	18 27 57.5	+0.4
	comp=Z,1.8nm,0.8s,mb4.2,baz=89,slow=7.9,SNR=18						
TXAR				LR	LR	18 49 58.0	
	comp=Z,90nm,19.3s,MS3.9,baz=350,slow=33						
HWUT	Hardware Ranch	58.58	301	P	P	18 28 05.5	+1.2
	comp=Z,7.1nm,1.3s,mb4.5						
DUG	Dugway	59.99	300	*e*P	P	18 28 13.2	-0.9
	comp=Z,17nm,1.6s,mb4.8						
DUG	Dugway	59.99	300	*e*P	P	18 28 13.2	-0.9
	comp=Z,17nm,1.6s,mb4.8						
MSU	Marysvale	60.20	298	P	P	18 28 16.6	+1.1
MSU	Marysvale	60.20	298	P	P	18 28 16.6	+1.1
LPAZ	La Paz	60.56	217	P	P	18 28 20.1	+2.0
	comp=Z,2.9nm,0.9s,mb4.4,baz=38,slow=5.6,SNR=10.0						
LPAZ	La Paz	60.56	217	*e*P	P	18 28 18.9	+0.8
	comp=Z,4.8nm,1.0s,mb4.6						
LPAZ	La Paz	60.56	217	*e*P	P	18 28 18.9	+0.8
	comp=Z,4.8nm,1.0s,mb4.6						
GNI	Garni	60.84	60	P	P	18 28 19.0	-0.9
	comp=Z,18nm,1.4s,mb5.0						
GNI	Garni	60.84	60	P	P	18 28 19.0	-0.9
	comp=Z,18nm,1.4s,mb5.0						
NVAR	Mina Array Bea	64.60	300	P	P	18 28 45.3	+0.3
	comp=Z,0.7nm,0.7s,mb3.8,baz=107,slow=4.4,SNR=6.6						
AKTK	Aktyubinsk	65.09	45	P	P	18 28 48.0	+0.1
AKTK	Aktyubinsk	65.09	45	P	P	18 28 48.0	0.0
AKTO	Aktyubinsk	65.09	45	P	P	18 28 48.0	0.0
	comp=Z,7.7nm,0.8s,mb4.8,baz=307,slow=6.3,SNR=23						
LPIG	La Paz	65.20	283	LR	LR	18 56 51.1	
	comp=Z,72nm,18.6s,MS3.9,baz=103,slow=36						
YBH	Yreka Blue Hor	66.14	305	LR	LR	18 56 17.2	
	comp=Z,103nm,18.4s,MS4.1,baz=65,slow=35						
BVAR	Borovoye Array	70.49	38	LR	LR	18 58 38.8	
	comp=Z,38nm,18.6s,MS3.7,baz=13,slow=35						
KURK	Kurchatov	75.97	37	*e*P	P	18 29 53.7	-0.6
	comp=Z,8.6nm,1.2s,mb4.6						
KURK	Kurchatov	75.97	37	*e*P	P	18 29 53.7	-0.6
	comp=Z,8.6nm,1.2s,mb4.6						
KMBO	Kilima Mbogo	75.98	102	LR	LR	19 04 34.2	
	comp=Z,80nm,18.7s,MS4.0,baz=98,slow=37						
ZALV	Zalesovo Beam	76.69	32	P	P	18 29 58.6	+0.2
	comp=Z,0.7nm,0.5s,mb3.9,baz=314,slow=9.6,SNR=5.1						
ZALV				LR	LR	19 02 16.9	
	comp=Z,22nm,19.8s,MS3.5,baz=29,slow=35						
EKS2	Erkin-Say	78.40	46	*e*P	P	18 30 07.5	-0.6
	comp=Z,2.6nm,1.1s,mb4.1						
EKS2	Erkin-Say	78.40	46	*e*P	P	18 30 07.5	-0.6
	comp=Z,2.6nm,1.1s,mb4.1						
UCH	Uchtor	79.09	46	*e*P	P	18 30 13.6	+1.6
	comp=Z,5.7nm,1.0s,mb4.5						
UCH	Uchtor	79.09	46	*e*P	P	18 30 13.6	+1.7
	comp=Z,5.7nm,1.0s,mb4.5						
TKM2	Tokmak 2	79.28	45	P	P	18 30 15.0	+2.0
	comp=Z,2.9nm,0.9s,mb4.2						
MKAR	Makanchi Array	80.38	38	P	P	18 30 18.1	-0.7
	comp=Z,2.6nm,1.0s,mb4.1,baz=329,slow=4.5,SNR=10						
BOSA	Boshof	85.19	130	LR	LR	19 07 22.2	
	comp=Z,54nm,18.2s,MS4.0,baz=95,slow=35						
PETK	Petropavlovsk-	91.04	353	LR	LR	19 14 42.4	
	comp=Z,33nm,18.3s,MS3.8,baz=250,slow=37						
SBA	Scott Base	136.62	186	*e*PKIKP	PKPdf	18 37 29.3	+0.8
SBA	Scott Base	136.62	186	*e*PKPdf	PKPdf	18 37 29.3	+0.8
CASY	Casey	143.16	157	PKIKP	PKPdf	18 37 39.7	-0.9
CASY	Casey	143.16	157	PKPdf	PKPdf	18 37 39.7	-0.9

NEIC ***07*** *18:34:38.7±1.0,851S×7378W,h159km±11km,mb4.2/6, Error ellipse: s-maj=14.3km s-min=7.4km az=65.0*
ISCJB ***07*** *18:34:39.5±0.8,855S±005×7392W±006,h181km±8km, mb3.9/21,Error ellipse: s-maj=11.2km s-min=6.4km az=147.0*
IDC ***07*** *18:34:40.7±0.6,862S×7388W,h180km±6km,mb3.7/9, mb1 3.9/14,mb1mx3.8/21,mbtmp3.7/14,Error ellipse: s-maj=11.7km s-min=9.4km az=41.0*
ISC 07 18:34:39.3±0.7**,853S**±005×**7380W**±006**,h162**km±8km**, h181**km±.9km**:pP-P,n52,**σ0^s**89**/52**,mb3.9**/21**,3C, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	Nana	4.56	221	P	Pn	18 35 48.1	+0.8
	31nm,0.3s,baz=40,slow=9.8,SNR=58						
NNA				S	Sn	18 36 39.2	-1.1
	45nm,0.3s,baz=289,slow=18,SNR=9.0						
NNA	Nana	4.56	221	*e*Pn	Pn	18 35 47.5	+0.2
NNA				*e*Sn	Sn	18 36 25.9	-14
ATAH	Atahualpa	4.80	288	P	Pn	18 35 50.9	+0.5
	21nm,0.3s,baz=91,slow=6.0,SNR=113						
ATAH				S	Sn	18 36 45.1	-0.7
	87nm,0.3s,baz=18,slow=11,SNR=14						
LPAZ	La Paz	9.49	145	P	Pn	18 36 53.1	+0.6
	0.8nm,0.3s,baz=336,slow=14,SNR=11						
LPAZ	La Paz	9.49	145	*e*Pn	Pn	18 36 52.2	-0.2
OTAV	Otavalo	9.86	332	Pn	Pn	18 36 57.4	-0.1
ROSC	El Rosal	13.30	358	P	Pn	18 37 44.7	+2.6
SIV	San Ignacio	14.47	122	P	Pn	18 37 58.2	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.2nm,0.3s,baz=301,slow=12,SNR=38						
SIV				S	Sn	18 40 36.6	-1.1
	0.3nm,0.3s,baz=221,slow=24,SNR=3.4						
LVC	**Limon Verde**	**14.77**	**162**	P	**Pn**	**18 38 03.5**	**+3.1**
	1.0nm,0.3s,baz=331,slow=7.5,SNR=9.5						
LVC	**Limon Verde**	**14.77**	**162**	*e*Pn	**Pn**	**18 37 58.1**	**-2.3**
SDV	**Santo Domingo**	**17.58**	**10**	P	**Pn**	**18 38 35.1**	**+0.5**
	1.1nm,0.3s,baz=253,slow=7.9,SNR=8.3						
SDV	**Santo Domingo**	**17.58**	**10**	*e*Pn	**Pn**	**18 38 34.1**	**-0.5**
LCO	**Las Campanas**	**20.59**	**172**	P	**P**	**18 39 06.0**	**+0.3**
	5.2nm,0.6s						
CFAA	**Coronel Fontan**	**23.54**	**168**	P	**P**	**18 39 34.4**	**-0.5**
	0.2nm,0.4s,mb3.0,baz=334,slow=11,SNR=4.9						
CFAA	**Coronel Fontan**	**23.54**	**168**	P	**P**	**18 39 34.4**	**-0.5**
CPUP	**Villa Florida**	**23.62**	**141**	P	**P**	**18 39 34.9**	**-0.8**
	5.7nm,0.7s,mb4.2,baz=302,slow=9.6,SNR=25						
CPUP	**Villa Florida**	**23.62**	**141**	*e*P	**P**	**18 39 34.4**	**-1.4**
	29nm,0.8s,mb4.9						
BDFB	**Brasilia**	**26.17**	**108**	P	**P**	**18 39 59.2**	**+0.3**
	2.5nm,0.7s,mb4.0,baz=263,slow=15,SNR=4.0						
BDFB				pP	pP	18 40 35.6	+3.1
	4.4nm,0.7s,baz=254,slow=12,SNR=3.9						
TRQA	**Tornquist**	**31.28**	**162**	P	**P**	**18 40 42.4**	**-1.5**
	2.3nm,0.8s,mb4.0						
PLCA	**Paso Flores**	**32.20**	**175**	P	**P**	**18 40 52.6**	**+0.6**
	2.8nm,0.7s,mb4.1,baz=339,slow=8.7,SNR=8.4						
PLCA	**Paso Flores**	**32.20**	**175**	*e*P	**P**	**18 40 51.8**	**-0.1**
	6.0nm,0.9s,mb4.3						
SWET	**Sewanee**	**44.99**	**346**	P	**P**	**18 42 36.4**	**-2.0**
TXAR	**Lajitas Array**	**47.38**	**324**	P	**P**	**18 42 58.1**	**+0.9**
	2.3nm,0.8s,mb3.9,baz=151,slow=8.8,SNR=21						
TXAR				pP	pP	18 43 37.5	+3.8
	0.3nm,0.5s,baz=152,slow=9.5,SNR=2.4						
ANMO	**Albuquerque**	**53.13**	**326**	P	**P**	**18 43 38.8**	**-1.6**
	0.8nm,0.5s,mb3.7						
PMSA	**Palmer Station**	**56.58**	**175**	P	**P**	**18 44 05.8**	**+1.1**
MSU	**Marysvale**	**58.87**	**325**	P	**P**	**18 44 22.1**	**+0.9**
PDAR	**Pinedale Array**	**60.57**	**330**	P	**P**	**18 44 32.5**	**-0.1**
	0.6nm,0.5s,mb3.7,baz=145,slow=8.3,SNR=4.9						
HWUT	**Hardware Ranch**	**60.73**	**328**	*e*P	**P**	**18 44 33.2**	**-0.6**
	4.4nm,1.1s,mb4.2						
DBIC	**Dimbokro**	**70.36**	**80**	P	**P**	**18 45 35.8**	**-0.4**
	2.8nm,0.5s,mb4.2,baz=214,slow=11,SNR=7.5						
DBIC				pP	pP	18 46 19.1	+3.8
	3.6nm,0.8s,baz=244,slow=8.2,SNR=2.7						
VNA3	**Neumayer Olymp**	**73.80**	**162**	*e*	**P**	**18 45 56.3**	**+0.8**
VNA3				*e*		18 46 07.7	
VNA1	**Neumayer--Stat**	**74.02**	**162**	*e*	**P**	**18 45 57.8**	**+1.0**
VNA2	**Neumayer--Watz**	**74.38**	**162**	*e*	**P**	**18 45 59.9**	**+1.0**
VNA2				*e*		18 46 11.0	
SNAA	**Sanae**	**76.01**	**162**	*e*	**P**	**18 46 08.6**	**+0.4**
SNAA				*e*		18 46 19.4	
EVO	**Evora**	**76.89**	**47**	*e*P	**P**	**18 46 13.2**	**-0.5**
	4.4nm,0.7s,mb3.9						
YKA	**Yellowknife Ar**	**77.46**	**342**	P	**P**	**18 46 16.2**	**-0.1**
	0.6nm,0.6s,mb3.4,baz=141,slow=5.8,SNR=4.6						
YKA				pP	pP	18 47 00.2	+4.0
	0.9nm,0.7s,baz=143,slow=6.2,SNR=2.7						
YKA	**Yellowknife Ar**	**77.46**	**342**	P	**P**	**18 46 16.2**	**-0.1**
YKA				pP	pP	18 47 00.2	+4.0
TORD	**Torodi Ar. Bea**	**77.99**	**75**	P	**P**	**18 46 19.4**	**-0.9**
	2.1nm,0.8s,mb3.8,baz=280,slow=5.9,SNR=10.0						
ESDC	**Sonseca Array**	**80.24**	**47**	P	**P**	**18 46 32.4**	**+0.3**
	0.1nm,0.3s,mb2.9,baz=252,slow=5.6,SNR=4.6						
SJPF	**Ste Jean**	**83.30**	**45**	*e*P	**P**	**18 46 47.7**	**-0.3**
MFF	**Saint Martin d**	**85.11**	**42**	*e*P	**P**	**18 46 57.0**	**0.0**
	7.8nm,0.8s,mb4.2						
GRR	**Gorron**	**85.20**	**40**	*e*P	**P**	**18 46 57.0**	**-0.4**
	8.7nm,0.9s,mb4.2						
LFF	**La Frestale**	**85.20**	**43**	⇑*i*P	**P**	**18 46 57.6**	**+0.1**
	9.1nm,0.6s,mb4.4						
TCF	**Toulx Ste Croi**	**86.58**	**42**	*e*P	**P**	**18 47 04.1**	**-0.1**
AVF	**Avril sur Loir**	**87.47**	**42**	⇑*i*P	**P**	**18 47 07.6**	**-0.9**
	3.8nm,0.7s,mb4.0						
SSF	**Saint Saulge**	**87.64**	**42**	*e*P	**P**	**18 47 09.3**	**0.0**
	5.0nm,0.9s,mb4.1						
ORIF	**Oris-en-Rattie**	**88.72**	**44**	⇑*i*P	**P**	**18 47 14.8**	**+0.3**
	4.2nm,0.6s,mb4.3						
LPL	**La Plagne**	**89.44**	**44**	*e*P	**P**	**18 47 18.3**	**+0.4**
	2.9nm,0.5s,mb4.2						
LPG	**La Plagne**	**89.45**	**44**	*e*P	**P**	**18 47 18.6**	**+0.7**
ASAR	**Alice Springs**	**138.09**	**220**	PKhKP		18 53 34.9	
	0.1nm,0.6s,baz=132,slow=2.7,SNR=3.3						
ASAR				PKP	PKPdf	18 53 45.1	-0.6
	0.4nm,0.6s,baz=117,slow=2.4,SNR=9.2						
ASAR				pPKP	pPKPdf	18 54 33.0	+4.4
	0.2nm,0.5s,baz=121,slow=1.9,SNR=1.6						
WB2	**Warramunga Arr**	**140.40**	**224**	*e*P	PKPdf	18 53 52.0	+2.0
WRA	**Warramunga Arr**	**140.41**	**224**	PKhKP		18 53 42.2	
	0.1nm,0.3s,baz=134,slow=2.7,SNR=13						
WRA				PKP	PKPdf	18 53 49.7	-0.4
	0.5nm,0.3s,baz=126,slow=2.0,SNR=17						
WRA				pPKP	pPKPdf	18 54 36.7	+3.8
	0.3nm,0.5s,baz=128,slow=2.1,SNR=2.5						
FITZ	**Fitzroy Crossi**	**147.31**	**216**	*e*P	PKPdf	18 54 04.7	+2.6
	6.7nm,1.4s						

*IDC **07** 18:38:24.7±2.7, 6077S×2828W, h0km, mb4.1/3, mb1 4.1/3, mb1mx3.8/14, mbtmp4.0/3, Error ellipse: s-maj=124.1km s-min=37.7km az=82.0*

*ISCJB **07** 18:38:35.9±1.6, 610S±02×18W±, h10km, mb3.9/2, Error ellipse: s-maj=87.4km s-min=10.4km az=165.3*

ISC 07 18:38:37.4±1.7**, 610S**±02×**19W**±**, h10km, n8,** σ**1s.54**/10**, mb3.9**/2**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**10.61**	**161**	*e*	**Pn**	**18 41 11.4**	**+2.1**
VNA1				*e*		18 41 12.7	
VNA1				*e*		18 41 20.1	
VNA1				*e*S	**Sn**	**18 43 07.4**	**-0.6**
VNA3	**Neumayer Olymp**	**10.94**	**165**	*e*	**Pn**	**18 41 13.4**	**-0.4**
VNA3				*e*		18 41 14.5	
VNA3				*e*		18 41 21.6	
VNA3				*e*S	**Sn**	**18 43 10.3**	**-5.8**
VNA2	**Neumayer--Watz**	**10.99**	**160**	*e*	**Pn**	**18 41 16.4**	**+1.9**
VNA2				*e*		18 41 18.1	
VNA2				*e*		18 41 24.6	
VNA2				*e*S	**Sn**	**18 43 15.4**	**-1.9**
SNAA	**Sanae**	**12.44**	**156**	*e*	**Pn**	**18 41 37.3**	**+3.1**
SNAA				*e*		18 41 39.1	
SNAA				*e*		18 41 45.0	
SNAA				*e*S	**Sn**	**18 43 52.9**	**+0.3**
MAW	**Mawson**	**33.52**	**137**	P	Px	18 45 33.3	
	2.0nm,0.7s,baz=265,slow=14,SNR=7.0						
TORD	**Torodi Ar. Bea**	**75.61**	**20**	P	**P**	**18 50 21.9**	**-0.3**
	0.9nm,0.7s,mb3.8,baz=195,slow=5.5,SNR=5.4						
ASAR	**Alice Springs**	**92.80**	**155**	P	**P**	**18 51 47.6**	**-2.4**
	0.5nm,0.8s,mb4.0,baz=192,slow=3.3,SNR=7.6						
SONM	**Songino Array**	**146.50**	**88**	PKPbc	PKPbc	18 58 18.0	+0.3
	0.9nm,0.6s,baz=228,slow=3.0,SNR=8.0						

*GII **07** 18:48:59.9±0.2, 3752N×3007E, h9km, mb4.3/13, ML4.1/13, Mw3.4/6*

*CSEM **07** 18:50:56.2±0.1, 3761N×2991E, h2km, MD3.5, Error ellipse: s-maj=1.7km s-min=1.1km az=8.0*

*IDC **07** 18:50:56.9±1.2, 3753N×2997E, h0km, mb3.7/3, mb1 3.8/7, mb1mx3.6/24, mbtmp3.7/7, ML3.8/4, MS2.8/7, Ms1 2.8/7, ms1mx2.6/40, Error ellipse: s-maj=22.5km s-min=19.5km az=165.0*

*ISK **07** 18:50:56.4, 3758N×2991E, h3km, MD3.5*

*NEIC **07** 18:50:57.9±1.3, 3758N×3000E, h7km±10km, MD3.6(ISK), ML3.4(ATH), Error ellipse: s-maj=7.1km s-min=5.8km az=130.0*

*ISCJB **07** 18:50:57.7±0.5, 3753N±002×2998E±002, h18km±4km, mb3.5/3, MS3.0/3, Error ellipse: s-maj=3.3km s-min=2.3km az=39.8*

*DDA **07** 18:50:57.4, 3757N×2988E, h16km, Md3.5*

ISC 07 18:50:58.0±0.4**, 3757N**±002×**2993E**±002**, h7km**±3km**, n105,** σ**0s.82**/138**, mb3.5**/3**, MS3.0**/3**, 2C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.44**	**222**	*i* P	**Pg**	**18 51 05.4**	**-1.2**
GOLH				*i* S	**Sg**	**18 51 14.0**	**+1.6**
BCK	**Bucak**	**0.53**	**101**	*e*PG	**Pg**	**18 51 07.7**	**-0.5**
BCK				*e*SG	**Sg**	**18 51 17.0**	**+1.9**
BCK	**Bucak**	**0.53**	**101**	*e*Pg	**Pg**	**18 51 07.3**	**-0.9**
BCK				*e*Sg	**Sg**	**18 51 16.1**	**+0.9**
ISP	**Isparta**	**0.53**	**59**	*e*PG	**Pg**	**18 51 07.2**	**-1.1**
ISP				*e*SG	**Sg**	**18 51 17.0**	**+1.8**
ISP	**Isparta**	**0.53**	**59**	P	**Pg**	**18 51 07.4**	**-0.8**
ISP				*e*Sg	**Sg**	**18 51 16.0**	**+0.8**
ISP	**Isparta**	**0.53**	**59**	*e*Pg	**Pg**	**18 51 07.0**	**-1.2**
ISP				P		18 51 07.4	
ISP				*e*Sg	**Sg**	**18 51 17.2**	**+2.0**
ISP	**Isparta**	**0.53**	**59**	Pg	**Pg**	**18 51 07.0**	**-1.2**
ISP				Sg	**Sg**	**18 51 16.1**	**+0.9**
TKTP	**Tekketepe**	**0.56**	**33**	*i* P	**Pg**	**18 51 08.3**	**-0.5**
TKTP				*i* S	**Sg**	**18 51 23.8**	**+7.7**
DNZL	**Cakiroluk**	**0.71**	**280**	*i* P	**Pg**	**18 51 10.2**	**-1.5**
DNZL				*i* S	**Sg**	**18 51 24.6**	**+3.6**
DENT	**Denizli**	**0.74**	**285**	*e*Pg	**Pg**	**18 51 10.8**	**-1.4**
DENT				*e*Sg	**Sg**	**18 51 21.6**	**-0.2**
KHAL	**Karahalli**	**0.87**	**337**	*i* P	**Pg**	**18 51 13.3**	**-1.5**
ANTB	**Antalya**	**0.88**	**139**	*e*PG	**Pg**	**18 51 14.9**	**+0.1**
SHUT	**Suhut-Afyon**	**1.10**	**26**	*e*PN	**Pn**	**18 51 18.3**	**-1.5**
SHUT				*e*SN	**Sn**	**18 51 34.7**	**-0.4**
DALT	**Dalyan (Mudla)**	**1.31**	**233**	*e*PN	**Pn**	**18 51 21.3**	**-1.3**
DALT				*e*SN	**Sn**	**18 51 40.4**	**+0.1**
DALT	**Dalyan (Mudla)**	**1.31**	**233**	*e*Pn	**Pn**	**18 51 21.9**	**-0.7**
DALT				*e*Sn	**Sn**	**18 51 40.4**	**+0.1**
KULA	**Kula-Manisa**	**1.38**	**314**	*e*PN	**Pn**	**18 51 22.8**	**-0.8**
KULA				*e*SN	**Sn**	**18 51 42.3**	**+0.2**
YER	**Yerkesik**	**1.39**	**252**	*e*PN	**Pn**	**18 51 23.4**	**-0.3**
YER				*e*SN	**Sn**	**18 51 42.4**	**+0.2**
BOLV	**Bolvadin**	**1.40**	**35**	*i* P	**Pn**	**18 51 23.8**	**-0.1**
BOLV				*i* S	**Sb**	**18 51 47.5**	**+5.0**
KSL	**Kastellorizon**	**1.44**	**191**	*e*P	**Pn**	**18 51 24.5**	**0.0**
ALT	**Altintas**	**1.49**	**5**	*e*PN	**Pn**	**18 51 24.2**	**-1.0**
MLSB	**Milas**	**1.74**	**262**	*e*PN	**Pn**	**18 51 28.2**	**-0.3**
MLSB				*e*SN	**Sn**	**18 51 51.0**	**+0.1**
DEMI	**Demirci**	**1.76**	**327**	*i* P	**Pn**	**18 51 27.7**	**-1.1**
DEMI				*i* S	**Sn**	**18 52 00.3**	**+8.9**
KONT	**Konya--Tatoy**	**1.96**	**78**	*e*PN	**Pn**	**18 51 32.2**	**+0.7**
ARG	**Arkhangelos**	**1.98**	**228**	*e*P	**Pn**	**18 51 33.4**	**+1.5**
ARG	**Arkhangelos**	**1.98**	**228**	P	**Pn**	**18 51 33.3**	**+1.4**
KIZT	**Kizilcal**	**2.02**	**49**	*e*PN	**Pn**	**18 51 32.8**	**+0.4**
LADK	**Ladik-KONYA**	**2.02**	**71**	*e*PN	**Pn**	**18 51 32.8**	**+0.3**
AKS	**Akhisar**	**2.12**	**309**	*e*PN	**Pn**	**18 51 33.0**	**-0.8**
HDMB	**Hadim**	**2.12**	**106**	*e*PN	**Pn**	**18 51 34.7**	**+0.9**
BODT	**Bodrum**	**2.15**	**257**	*e*PN	**Pn**	**18 51 34.1**	**-0.1**
IZM	**Izmir**	**2.27**	**292**	*e*PN	**Pn**	**18 51 35.7**	**-0.1**
DST	**Dursunbey**	**2.28**	**334**	*e*PN	**Pn**	**18 51 35.5**	**-0.5**
BLCB	**Balcova**	**2.43**	**291**	*e*PN	**Pn**	**18 51 37.7**	**-0.3**
SMG	**Samos**	**2.46**	**274**	*e*P	**Pn**	**18 51 38.0**	**-0.5**
SMG	**Samos**	**2.46**	**274**	P	**Pn**	**18 51 38.4**	**-0.1**
BALB	**Balikesir**	**2.62**	**323**	*e*PN	**Pn**	**18 51 40.9**	**+0.2**
BALY	**Balya**	**2.83**	**321**	*i* P	**Pn**	**18 51 43.7**	**+0.2**
BALY				*i* S	**Sg**	**18 52 33.9**	**+5.2**
GEMT	**Gemlik**	**2.92**	**349**	*e*PN	**Pn**	**18 51 45.5**	**+0.7**
KARP	**Karpathos**	**3.01**	**229**	*e*P	**Pn**	**18 51 46.7**	**+0.7**
KARP	**Karpathos**	**3.01**	**229**	P	**Pn**	**18 51 46.9**	**+0.9**
YLV	**Yalova**	**3.03**	**352**	*e*PN	**Pn**	**18 51 46.9**	**+0.7**
BNT	**Bandirma**	**3.20**	**331**	*e*PN	**Pn**	**18 51 48.3**	**-0.3**
ANTO	**Ankara**	**3.21**	**43**	*e*Pn	**Pn**	**18 51 47.3**	**-1.4**
ANTO	**Ankara**	**3.21**	**43**	*e*Pn	**Pn**	**18 51 47.4**	**-1.4**
IKL	**Isikli**	**3.29**	**113**	*e*PN	**Pn**	**18 51 51.8**	**+2.0**
IKL	**Isikli**	**3.29**	**113**	*e*Pn	**Pn**	**18 51 50.9**	**+1.1**
PRK	**Paraskevi**	**3.33**	**301**	*e*P	**Pn**	**18 51 49.7**	**-0.7**
KAMT	**Kaman**	**3.47**	**58**	*e*PN	**Pn**	**18 51 53.0**	**+0.7**
ISK	**Istanbul-Kandi**	**3.56**	**349**	*e*PN	**Pn**	**18 51 54.1**	**+0.6**
CSS	**Prodhromos**	**3.78**	**132**	*e*Pn	**Pn**	**18 51 56.7**	**+0.1**
NPS	**Neapolis**	**4.18**	**238**	*e*P	**Pn**	**18 51 58.2**	**-3.9**
NPS	**Neapolis**	**4.18**	**238**	P	**Pn**	**18 52 02.8**	**+0.7**
IDI	**Anoyia**	**4.66**	**242**	Pn	**Pn**	**18 52 09.3**	**+0.6**
	2.8nm,0.3s,baz=63,slow=13,SNR=16						
IDI				Sn	**Sn**	**18 53 05.2**	**+2.2**
	1.3nm,0.3s,baz=90,slow=20,SNR=2.4						
KDZ	**Kurdzhali**	**5.36**	**321**	P	**Pn**	**18 52 18.6**	**+0.2**
JMB	**Yambol**	**5.53**	**333**	P	**Pn**	**18 52 23.0**	**+2.4**
RZN	**Rozhen**	**5.76**	**317**	P	**Pn**	**18 52 24.2**	**+0.4**
PLD	**Plovdiv**	**6.06**	**320**	P	**Pn**	**18 52 18.8**	**-9.1**
HNTI	**Hanita**	**6.19**	**135**	Pn	**Pn**	**18 52 29.5**	**-0.3**
HNTI				Sn	**Sn**	**18 53 41.4**	**+0.6**
MMC6	**Mount Meron ar**	**6.37**	**134**	Pn	**Pn**	**18 52 32.9**	**+0.7**
MMAI	**Mount Meron Ar**	**6.37**	**134**	Pn	**Pn**	**18 52 32.9**	**+0.7**
	5.5nm,0.3s,baz=313,slow=12,SNR=42						
MMAI				Sn	**Sn**	**18 53 46.9**	**+1.6**
	5.7nm,0.3s,baz=309,slow=26,SNR=6.4						
MMA2	**Mount Meron ar**	**6.38**	**134**	Pn	**Pn**	**18 52 32.7**	**+0.4**
MMA2				Sn	**Sn**	**18 53 45.1**	**-0.2**
HRI	**Mount Hermon**	**6.39**	**130**	Pn	**Pn**	**18 52 32.3**	**-0.2**
KSDI	**Kefar Szold**	**6.40**	**131**	Pn	**Pn**	**18 52 33.4**	**+0.8**
KSDI				Sn	**Sn**	**18 53 45.5**	**-0.3**
KSHT	**Keshet**	**6.63**	**132**	Pn	**Pn**	**18 52 36.6**	**+0.8**
MALT	**Malatya**	**6.75**	**81**	⇓*i*P	**Pn**	**18 52 41.7**	**+4.2**
MALT	**Malatya**	**6.75**	**81**	⇓P	**Pn**	**18 52 41.7**	**+4.2**
SLTI	**Sal'it**	**6.77**	**140**	Pn	**Pn**	**18 52 38.1**	**+0.4**
SLTI				Sn	**Sn**	**18 53 54.1**	**-0.9**
MMLI	**Mount Malkishu**	**6.82**	**137**	Pn	**Pn**	**18 52 39.0**	**+0.6**
MMLI				Sn	**Sn**	**18 53 55.6**	**-0.6**
TIRR	**Tirgusor**	**6.98**	**351**	⇓*i*P	**Pn**	**18 52 40.3**	**-0.2**
TIRR	**Tirgusor**	**6.98**	**351**	*e*Pn	**Pn**	**18 52 39.4**	**-1.1**
TIRR	**Tirgusor**	**6.98**	**351**	⇓*i*P	**Pn**	**18 52 40.3**	**-0.2**
TIRR	**Tirgusor**	**6.98**	**351**	*e*Pn	**Pn**	**18 52 39.4**	**-1.1**
HMDT	**Nahal Hemdat**	**7.01**	**137**	Pn	**Pn**	**18 52 41.7**	**+0.6**
HMDT				Sn	**Sn**	**18 54 01.1**	**+0.1**
DSI	**Dead Sea**	**7.48**	**142**	Pn	**Pn**	**18 52 47.6**	**+0.1**
DSI				Sn	**Sn**	**18 54 12.2**	**-0.3**
YTIR	**Yattir**	**7.52**	**144**	Pn	**Pn**	**18 52 47.4**	**-0.7**
YTIR				Sn	**Sn**	**18 54 13.3**	**-0.3**
RTMI	**Retamim**	**7.59**	**147**	Pn	**Pn**	**18 52 48.8**	**-0.2**
RTMI				Sn	**Sn**	**18 54 14.8**	**-0.6**
KZIT	**Kziot**	**7.60**	**150**	Pn	**Pn**	**18 52 49.3**	**+0.1**
KZIT				Sn	**Sn**	**18 54 14.8**	**-0.7**
TLCR		**7.66**	**354**	⇓*i*P	**Pn**	**18 52 49.7**	**-0.1**
TLCR		**7.66**	**354**	⇓P	**Pn**	**18 52 49.7**	**-0.1**
MZDA	**Masada**	**7.69**	**143**	Pn	**Pn**	**18 52 50.4**	**+0.2**
MZDA				Sn	**Sn**	**18 54 17.1**	**-0.5**
ASF	**Jabal al Asfar**	**7.85**	**131**	LR	LR	18 56 09.5	
	comp=Z,35nm,19.9s,baz=166,slow=40						
RMNI	**Mount Ramon**	**8.02**	**149**	Pn	**Pn**	**18 52 54.8**	**-0.1**
RMNI				Sn	**Sn**	**18 54 25.2**	**-0.6**
ZFRI	**Zfri**	**8.24**	**147**	Pn	**Pn**	**18 52 58.0**	**+0.2**
ZFRI				Sn	**Sn**	**18 54 31.1**	**0.0**
PRNI	**Paran**	**8.34**	**148**	Pn	**Pn**	**18 52 59.4**	**+0.1**
PRNI				Sn	**Sn**	**18 54 33.1**	**-0.5**
KRMI	**Paran Flat**	**8.43**	**150**	Pn	**Pn**	**18 53 00.7**	**+0.2**
KRMI				Sn	**Sn**	**18 54 35.7**	**-0.2**
HRFI	**Mount Harif**	**8.63**	**149**	Pn	**Pn**	**18 53 03.6**	**+0.4**
HRFI				Sn	**Sn**	**18 54 40.2**	**-0.6**
VRI	**Vrincioaia**	**8.63**	**345**	⇓*i*P	**Pn**	**18 53 05.2**	**+2.0**
VRI	**Vrincioaia**	**8.63**	**345**	⇓P	**Pn**	**18 53 05.2**	**+2.1**
VOIR		**8.67**	**337**	⇑*i*P	**Pn**	**18 53 04.2**	**+0.5**
VOIR		**8.67**	**337**	⇑P	**Pn**	**18 53 04.2**	**+0.5**
MBRI	**Mt Berech**	**8.79**	**150**	Pn	**Pn**	**18 53 05.4**	**0.0**
MBRI				Sn	**Sn**	**18 54 44.1**	**-0.7**
EIL	**Elat**	**8.92**	**151**	Pn	**Pn**	**18 53 06.8**	**-0.4**
	1.8nm,0.3s,baz=335,slow=13,SNR=18						
EIL				Sn	**Sn**	**18 54 45.6**	**-2.3**
	1.5nm,0.3s,baz=86,slow=21,SNR=8.0						
EIL	**Elat**	**8.92**	**151**	Pn	**Pn**	**18 53 06.7**	**-0.5**
TIP	**Timpagrande**	**10.47**	**283**	Pn	**Pn**	**18 53 28.6**	**+0.2**
TIP	**Timpagrande**	**10.47**	**283**	Pn	**Pn**	**18 53 28.6**	**+0.1**
VRAC	**Vranov**	**15.19**	**325**	LR	LR	19 00 35.9	
	comp=Z,24nm,19.1s,baz=82,slow=38						
GERES	**GERESS Array B**	**16.30**	**319**	Pn	**Pn**	**18 54 50.3**	**+3.1**
	0.1nm,0.3s,baz=129,slow=13,SNR=3.6						
GERES				LR	LR	19 01 39.5	
	comp=Z,28nm,19.8s,baz=271,slow=39						
DAVOX	**Davos/Dischmat**	**17.44**	**308**	LR	LR	19 02 42.1	
	comp=Z,24nm,19.3s,baz=265,slow=40						
NOA	**NORSAR Array B**	**26.28**	**339**	LR	LR	19 08 02.3	
	comp=Z,19nm,20.5s,MS2.6,baz=170,slow=39						
ARCES	**ARCESS Array B**	**32.12**	**357**	LR	LR	19 11 02.4	
	comp=Z,28nm,20.5s,MS2.9,baz=250,slow=38						
TORD	**Torodi Ar. Bea**	**35.00**	**233**	P	**P**	**18 57 50.5**	**-0.6**
	0.5nm,0.5s,mb3.7,baz=31,slow=9.0,SNR=6.6						
TORD	**Torodi Ar. Bea**	**35.00**	**233**	P	**P**	**18 57 50.5**	**-0.6**
MKAR	**Makanchi Array**	**39.23**	**59**	P	**P**	**18 58 26.8**	**0.0**
	0.5nm,0.5s,mb3.5,baz=282,slow=7.4,SNR=7.3						
ZALV	**Zalesovo Beam**	**40.55**	**48**	P	**P**	**18 58 37.0**	**-0.6**
	0.6nm,0.6s,mb3.4,baz=268,slow=10,SNR=3.7						
SJG	**San Juan**	**83.83**	**288**	LR	LR	19 33 37.3	
	comp=Z,20nm,20.4s,MS3.5,baz=187,slow=30						

*IDC **07** 19:02:45.6±1.7, 026N×9767E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, ML4.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/26, Error ellipse: s-maj=60.8km s-min=17.9km az=57.0*

*ISCJB **07** 19:02:49.1±0.9, 04N±01×978E±01, h33km, mb4.0/12, Error ellipse: s-maj=21.5km s-min=11.2km az=147.5*

*NEIC **07** 19:02:50.5±0.8, 035N×9775E, h30km, mb4.0/5, Error ellipse: s-maj=24.2km s-min=9.4km az=53.0*

ISC 07 19:02:51.6±0.9**, 04N**±01×**978E**±01**, h35km, n18,** σ**0s.76**/18**, mb4.0**/12**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.62**	**24**	⇑*e*P	**Pn**	**19 03 31.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**17.98**	**3**	P	**Pn**	**19 06 57.5**	**-1.4**
	0.3nm,0.3s,baz=193,slow=11,SNR=14						
CHTO	**Chiang Mai**	**18.33**	**3**	*e*P	**Pn**	**19 07 02.1**	**-1.1**
	2.4nm,0.8s						
KKM	**Kota Kinabalu**	**19.17**	**73**	P	**Pn**	**19 07 14.4**	**+0.9**
LSA	**Lhasa**	**29.83**	**348**	P	**P**	**19 08 55.7**	**+0.2**
	1.7nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**41.07**	**122**	P	**P**	**19 10 31.5**	**-0.6**
	1.3nm,0.6s,mb3.7,baz=303,slow=8.9,SNR=21						
WRAB	**Tennant Creek**	**41.07**	**122**	*e*P	**P**	**19 10 31.7**	**-0.5**
	2.2nm,0.6s,mb4.0						
ASAR	**Alice Springs**	**42.40**	**127**	P	**P**	**19 10 42.9**	**-0.1**
	1.4nm,0.8s,mb3.6,baz=298,slow=8.0,SNR=32						
KSRS	**Korea Array**	**46.14**	**34**	P	**P**	**19 11 13.2**	**+0.5**
	1.9nm,0.8s,mb4.1,baz=223,slow=9.0,SNR=18						
UCH	**Uchtor**	**46.63**	**336**	P	**P**	**19 11 17.9**	**+1.3**
	0.8nm,0.7s,mb3.8						
TKM2	**Tokmak 2**	**46.80**	**338**	P	**P**	**19 11 18.0**	**+0.3**
SONM	**Songino Array**	**47.83**	**8**	P	**P**	**19 11 27.0**	**+1.3**
	1.5nm,0.5s,mb4.2,baz=189,slow=9.6,SNR=12						
ULN	**Ulaanbaatar**	**47.95**	**8**	*e*P	**P**	**19 11 27.4**	**+0.7**
	2.0nm,0.9s,mb4.2						
MKAR	**Makanchi Array**	**48.17**	**346**	P	**P**	**19 11 28.8**	**+0.5**
	1.4nm,0.6s,mb4.2,baz=155,slow=8.0,SNR=21						
KURK	**Kurchatov**	**52.73**	**345**	P	**P**	**19 12 02.0**	**-0.8**
	0.8nm,0.8s,mb3.7,baz=167,slow=7.3,SNR=8.5						
ZAA0	**Zalesovo Array**	**54.44**	**351**	*e*P	**P**	**19 12 15.0**	**-0.3**
ZALV	**Zalesovo Beam**	**54.44**	**351**	P	**P**	**19 12 15.4**	**+0.2**
	3.2nm,0.5s,mb4.5,baz=180,slow=6.4,SNR=19						
BVAR	**Borovoye Array**	**57.21**	**341**	P	**P**	**19 12 34.4**	**-0.8**
	1.1nm,0.7s,mb4.0,baz=139,slow=12,SNR=9.1						

*ISCJB **07** 19:10:15.4±0.7, 3276N±002×11736W±003, h5km±4km, Error ellipse: s-maj=4.8km s-min=2.9km az=148.2*

*NEIC **07** 19:10:17.0, 3278N×11730W, h8km, ML3.1(PAS), After PAS.*

NEIC Felt at San Diego.

*ECX **07** 19:10:17.7±0.5, 3279N×11731W, h10km±3km, MD3.2, ML3.1*

ISC 07 19:10:15.8±0.5**, 3276N**±002×**11736W**±003**, h9km**±4km**, n33,** σ**0s.85**/56**, 19C-19D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
109C	**Camp Elliot, M**	**0.25**	**59**	⇓P	**Pg**	**19 10 21.5**	**+0.7**
	baz=0.2,SNR=119						
109C				⇓S	**Sg**	**19 10 25.3**	**+1.0**
	baz=0.2						
DPP	**Dos Picos Cty**	**0.43**	**56**	⇓*i*P	**Pg**	**19 10 24.5**	**+0.4**
EML	**El Monte Cty P**	**0.45**	**73**	⇓*i*P	**Pg**	**19 10 24.9**	**+0.3**
BAR	**Barrett**	**0.59**	**97**	⇓*i*P	**Pg**	**19 10 27.3**	**+0.2**
BAR	**Barrett**	**0.59**	**97**	*e*Pg	**Pg**	**19 10 27.0**	**-0.1**
BAR				*e*Sg	**Sg**	**19 10 34.0**	**-0.7**
CBX	**Cerro Bola**	**0.74**	**127**	⇑*e*P	**Pg**	**19 10 30.4**	**+0.5**
CBX				*e*S	**Sg**	**19 10 40.4**	**+0.8**
MONP	**Monument Peak**	**0.80**	**80**	⇓P	**Pg**	**19 10 31.0**	**-0.3**
	baz=0.8,SNR=438						
MONP				⇑S	**Sg**	**19 10 41.5**	**-0.2**
	baz=0.8						
MURC	**Murrieta**	**0.85**	**9**	⇑P	**Pg**	**19 10 32.2**	**0.0**
	baz=0.8						
MURC				⇑S	**Sg**	**19 10 43.6**	**+0.3**
	baz=0.8						
ENX	**Ensenada**	**1.05**	**146**	⇑*e*P	**Pg**	**19 10 36.1**	**+0.1**
ENX				*e*S	**Sg**	**19 10 50.3**	**+0.6**
ENX				⇓*e*		19 10 51.6	
	comp=N,544nm,0.4s						
DVTC	**Desert V Tower**	**1.07**	**95**	⇑P	**Pg**	**19 10 34.6**	**-1.7**
	baz=1.0,SNR=17						
DVTC				⇓S	**Sg**	**19 10 49.8**	**-0.3**
	baz=1.0						
CIS	**Catalina Islan**	**1.09**	**307**	⇓P	**Pg**	**19 10 36.1**	**-0.6**
	baz=1.1,SNR=27						
CIS				⇑S	**Sg**	**19 10 51.0**	**+0.2**
	baz=1.1						
RMX	**La Rumorosa**	**1.09**	**98**	⇑*e*P	**Pg**	**19 10 36.5**	**-0.3**
RMX				*e*S	**Sg**	**19 10 50.7**	**-0.2**
PFO	**Pinyon Flat Ob**	**1.14**	**42**	⇑P	**Pg**	**19 10 37.3**	**-0.3**
	baz=1.1						
PFO				⇑S	**Sg**	**19 10 52.2**	**-0.3**
	baz=1.1						
PFO	**Pinyon Flat Ob**	**1.14**	**42**	*e*Pg	**Pg**	**19 10 37.1**	**-0.6**
PFO				*e*Sg	**Sg**	**19 10 51.4**	**-1.1**
PBX	**Punta Banda**	**1.15**	**152**	*e*P	**Pb**	**19 10 37.7**	**0.0**
PBX				⇓*e*S	**Sg**	**19 10 53.4**	**+0.7**
PBX				⇑*e*		19 10 55.2	
	comp=N,513nm,0.6s						
FMP	**Fort Macarthur**	**1.23**	**321**	⇓S	**Sb**	**19 10 54.6**	**-0.7**
	baz=1.2						
ECNX	**Esteban Cantu**	**1.27**	**149**	⇓*e*P	**Pn**	**19 10 39.9**	**+0.2**
ECNX				⇓*e*P		19 10 36.6	
ECNX				*e*S	**Sb**	**19 10 50.5**	**-5.9**
ECNX				*e*S	**Sb**	**19 10 57.3**	**+0.8**
SWSC	**Sam W. Stewart**	**1.33**	**82**	Pb	**Pb**	**19 10 40.5**	**-0.4**
	baz=1.3,SNR=183						
SWSC				⇑Sb	**Sb**	**19 10 58.0**	**-0.1**
	baz=1.3						
BFSC	**Mount Baldy St**	**1.50**	**351**	⇑Pb	**Pb**	**19 10 43.5**	**-0.3**
	baz=1.5,SNR=7.8						
BFSC				⇑Sb	**Sb**	**19 11 03.3**	**+0.3**
	baz=1.5						
BBRC	**Big Bear Sol-O**	**1.54**	**14**	⇑Pb	**Pb**	**19 10 44.6**	**0.0**
	baz=1.5,SNR=11						
BBRC				⇓Sb	**Sb**	**19 11 04.8**	**+0.5**
	baz=1.5						
MWC	**Mount Wilson**	**1.57**	**338**	*e*Pn	**Pn**	**19 10 43.0**	**-0.9**
BELC	**Belle Mtn.**	**1.69**	**42**	⇑Pb	**Pb**	**19 10 46.4**	**-0.6**
	baz=1.6,SNR=111						
BELC				⇓Sb	**Sb**	**19 11 09.0**	**+0.7**
	baz=1.6						
BC3	**Big Chuckw Mtn**	**1.83**	**60**	⇑Pb	**Pb**	**19 10 47.9**	**-1.6**
	baz=1.8,SNR=111						
BLG	**Laguna Peak**	**1.96**	**314**	⇑P	**Pn**	**19 10 48.0**	**-1.3**
	baz=2.0,SNR=7.7						
RRX	**Edison Barstow**	**2.14**	**8**	⇑Sb	**Sb**	**19 11 22.9**	**+1.6**
	baz=2.1						
GLA	**Glamis**	**2.15**	**81**	⇓P	**Pn**	**19 10 50.2**	**-1.6**
	baz=2.1,SNR=16						
GLA	**Glamis**	**2.15**	**81**	*e*Pn	**Pn**	**19 10 52.0**	**+0.1**
GLA				*e*Sn	**Sn**	**19 11 17.1**	**-1.6**
OSI	**Osito Adit**	**2.17**	**329**	⇓S	**Sn**	**19 11 18.9**	**-0.3**
	baz=2.2						
EDW2	**Edwards Air Fo**	**2.18**	**346**	⇓S	**Sn**	**19 11 19.3**	**-0.1**
	baz=2.2						
HEC	**Hector,Ludlow**	**2.24**	**22**	⇓Sb	**Sb**	**19 11 25.7**	**+1.5**
	baz=2.2						
GSC	**Goldstone**	**2.58**	**10**	*e*Pn	**Pn**	**19 10 59.4**	**+1.6**
GSC				*e*Pb	**Pb**	**19 11 03.7**	**+1.5**
GSC				*e*Sg	**Sg**	**19 11 37.0**	**-1.7**
ISA	**Isabella**	**3.04**	**343**	*e*Pn	**Pn**	**19 11 08.7**	**+4.6**
ISA				*e*Sg	**Sg**	**19 11 48.9**	**-4.5**
TPNV	**Topopah Spring**	**4.28**	**12**	*e*Pn	**Pn**	**19 11 22.9**	**+1.7**
TPNV				*e*Sg	**Sg**	**19 12 26.6**	**-6.6**

*NEIC **07** 19:25:41.9±2.2, 736S×12957E, h156km±25km, mb4.2/5, Error ellipse: s-maj=23.9km s-min=16.2km az=52.0*

*ISCJB **07** 19:25:44.6±1.5, 770S±009×12935E±008, h200km±16km, mb3.4/4, Error ellipse: s-maj=17.0km s-min=8.3km az=36.8*

*IDC **07** 19:25:53.8±6.7, 791S×12873E, h260km±68km, mb3.2/3, mb1 3.3/6, mb1mx3.1/15, mbtmp3.2/6, Error ellipse: s-maj=74.9km s-min=17.4km az=53.0*

ISC 07 19:25:40.8±2.3**, 73S**±01×**12950E**±009**, h135km**±24km**, n15,** σ**1s.07**/22**, mb3.5**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.08**	**152**	*e*P	**Pn**	**19 27 09.5**	**+0.9**
	29nm,0.5s						
KAKA				*e*S	**Sn**	**19 28 15.9**	**-1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	6.43	243	P	Pn	19 27 14.9	+1.7
	12nm,0.3s,baz=132,slow=3.8,SNR=34						
BATI				S	Sn	19 28 24.6	-1.0
	7.0nm,0.3s,baz=312,slow=13,SNR=5.3						
FITZ	Fitzroy Crossi	11.35	199	eP	Pn	19 28 18.6	-0.4
	1.7nm,0.2s						
FITZ				eS	Sn	19 30 14.6	-10
FITZ	Fitzroy Crossi	11.35	199	P	Pn	19 28 17.8	-1.2
	0.3nm,0.3s,baz=27,slow=15,SNR=21						
FITZ				S	Sn	19 30 14.4	-10
	0.9nm,0.3s,baz=218,slow=21,SNR=8.0						
WRAB	Tennant Creek	13.38	160	ePn	Pn	19 28 45.6	+0.1
	5.2nm,0.4s						
WRAB				eS	Sn	19 31 00.9	-13
WRA	Warramunga Arr	13.39	160	P	Pn	19 28 44.1	-1.5
	1.6nm,0.3s,baz=347,slow=13,SNR=88						
WRA				S	Sn	19 31 05.3	-8.3
	2.8nm,0.3s,baz=322,slow=26,SNR=13						
WB2	Warramunga Arr	13.39	160	eP	Pn	19 28 45.8	+0.1
WB2				eS	Sn	19 31 06.3	-7.3
MBWA	Marble Bar	16.68	213	eP	Pn	19 29 27.6	+1.0
	5.9nm,0.8s						
ASAR	Alice Springs	16.79	166	P	Pn	19 29 29.9	+2.0
	0.7nm,0.3s,baz=336,slow=8.8,SNR=36						
STKA	Stephens Creek	26.90	157	eP	P	19 31 11.0	+1.7
	2.3nm,1.1s,mb3.7						
STKA	Stephens Creek	26.90	157	P	P	19 31 10.2	+0.8
	0.8nm,0.4s,mb3.7,baz=312,slow=14,SNR=4.0						
STKA	Stephens Creek	26.90	157	P	P	19 31 07.6	-1.7
CMAR	Chiang Mai Arr	39.56	311	P	P	19 32 58.6	-0.4
	0.3nm,0.4s,mb3.3,baz=144,slow=7.8,SNR=5.5						
CHTO	Chiang Mai	39.78	311	P	P	19 33 00.1	-0.7
	1.3nm,0.9s,mb3.6						
MKAR	Makanchi Array	68.23	327	P	P	19 36 26.7	-0.1
	0.4nm,0.3s,mb3.6,baz=123,slow=8.6,SNR=7.2						

IDC 07 19:29:34.3±2.4, 2292S×6844W, h74km±27km, mb3.6/1, mb1 3.5/3, mb1mx3.3/17, mbtmp3.5/3, Error ellipse: s-maj=68.3km s-min=33.2km az=143.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.53	305	P	Pn	19 29 50.2	+2.4
	826nm,0.3s,baz=63,slow=2.4,SNR=9549						
LVC				S	Sn	19 30 00.3	+2.6
	436nm,0.3s,baz=238,slow=21,SNR=75						
LPAZ	La Paz	6.61	3	P	Pn	19 31 10.8	+2.0
	0.3nm,0.3s,baz=229,slow=11,SNR=6.9						
SIV	San Ignacio	9.79	47	P	Pn	19 31 51.7	-0.6
	0.9nm,0.3s,baz=270,slow=9.3,SNR=18						
TORD	Torodi Ar. Bea	77.43	70	P	P	19 41 21.4	-0.5
	0.4nm,0.3s,baz=255,slow=5.4,SNR=16						
WRA	Warramunga Arr	131.94	209	PKP	PKPdf	19 48 39.8	-0.1
	0.4nm,0.7s,baz=153,slow=1.5,SNR=5.5						

NNC 07 19:32:04.1±2.8, 3839N×7137E, h0km, mb3.6, mpv3.4, 3C-4D, Error ellipse: s-maj=22.2km s-min=16.9km az=0.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	4.75	352	⇑Pn	Pn	19 33 20.0	+3.0
	4.8nm,0.3s,baz=168,slow=12,SNR=158						
KK31				⇑Sn	Sn	19 34 19.5	+6.8
	1.1nm,0.3s,baz=172,slow=22,SNR=5.9						
TKM2	Tokmak 2	5.55	34	⇓Pn	Pn	19 33 27.3	-0.6
	1.9nm,0.8s						
TKM2				⇓Sn	Sn	19 34 33.9	+1.6
	2.8nm,0.9s						
AB31	Akbulak array	13.62	327	⇑Pn	Pn	19 35 16.5	-1.9
	0.7nm,0.8s						
AB31				⇓Sn	Sn	19 37 48.3	-2.0
	0.3nm,0.3s						
BVA0	Borovoye Array	14.65	358	Pn	Pn	19 35 35.1	+2.6
	1.4nm,2.5s,baz=165,slow=11,SNR=8.3						
AKTO	Aktyubinsk	15.33	326	⇓Pn	Pn	19 35 42.5	+0.8
	0.6nm,1.0s						

*NIED **07** 19:51:00, 2440N×12230E, h50km, Mw4.1 Best double couple: Mo1.40000×10^15 NP1:φs67.00000°, δ56.00000°, λ122.00000°. NP2:φs199.00000°, δ46.00000°, λ52.00000°.*
*BJI **07** 19:51:13.1, 2423N×12227E, h59km, mB4.6, mb4.3, ML3.5*
*ISCJB **07** 19:51:13.3±0.2, 2429N±002×12234E±001, h67km±2km, mb4.1/19, Error ellipse: s-maj=3.0km s-min=2.0km az=151.9*
*NEIC **07** 19:51:13.6±0.7, 2438N×12238E, h57km±6km, mb4.2/11, Error ellipse: s-maj=9.9km s-min=8.0km az=201.0*
*TAP **07** 19:51:14.0, 2429N×12230E, h54km, ML4.7, B*
*JMA **07** 19:51:14.0±0.2, 2443N×12233E, h67km±2km, M4.0*
*IDC **07** 19:51:14.1±4.1, 2439N×12234E, h58km±38km, mb4.0/8, mb1 4.1/9, mb1mx3.8/20, mbtmp4.0/9, ML4.3/1, MS3.2/6, Ms1 3.2/6, ms1mx2.8/42, Error ellipse: s-maj=26.8km s-min=15.7km az=64.0*
ISC 07 19:51:14.2±0.2, 2428N±002×12233E±001, h60km±2km, n120, σ1.08/195, mb4.1/19, MS3.4/3, 29C-11D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.54	273	eP	Pn	19 51 26.1	-0.4
	baz=275						
EHP				eS	Sn	19 51 35.6	0.0
	baz=275						
TWC	Suao	0.55	306	⇑iP	Pn	19 51 26.1	-0.6
	baz=311						
TWC				i S	Sn	19 51 34.3	-1.4
	baz=311						
ENA	Nanau	0.56	285	⇑iP	Pn	19 51 26.2	-0.6
	baz=291						
ENA				eS	Sn	19 51 34.4	-1.5
	baz=291						
YOJ	Yonaguni jima	0.64	74	P	Pn	19 51 27.8	+0.1
YOJ				S	Sn	19 51 38.0	+0.4
YOJ	Yonaguni jima	0.64	74	⇓iP	Pn	19 51 27.9	+0.2
	baz=65						
YOJ				i S	Sn	19 51 38.1	+0.4
	baz=65						
NACB	Ninganchiao	0.68	261	ePn	Pn	19 51 26.9	-1.3
NACB				eSn	Sn	19 51 36.9	-1.5
TWD	Chiawan	0.70	253	⇑P	Pn	19 51 27.6	-0.9
	baz=243						
TWD				S	Sn	19 51 37.4	-1.5
	baz=243						
ILA	Ilan	0.72	312	⇑iP	Pn	19 51 28.8	+0.2
	baz=323						
ILA				i S	Sn	19 51 39.9	+0.7
	baz=323						
HWA	Hwalien	0.73	245	⇓P	Pn	19 51 28.1	-0.7
	baz=244						
HWA				S	Sn	19 51 38.9	-0.6
	baz=244						
TWE	Neicheng	0.75	306	⇑iP	Pn	19 51 29.1	+0.1
	baz=305						
TWE				i S	Sn	19 51 39.9	+0.1
	baz=305						
ENTT	Nioudou	0.78	297	⇑iP	Pn	19 51 29.7	+0.2
	baz=291						
ENTT				S	Sn	19 51 40.6	-0.1
	baz=291						
TWB1	Santiao Chiao	0.79	337	⇑iP	Pn	19 51 29.1	-0.4
	baz=329						
TWB1				S	Sn	19 51 39.7	-1.1
	baz=329						
ESF	Shoufeng Towns	0.86	242	eP	Pn	19 51 29.3	-1.1
	baz=240						
ESF				eS	Sn	19 51 41.3	-1.1
	baz=240						
NNS	Nan Shan	0.89	280	⇑iP	Pn	19 51 30.6	-0.2
	baz=271						
NNS				eS	Sn	19 51 42.1	-0.9
	baz=271						
TEGC	Jichi Village	0.92	232	eP	Pn	19 51 30.7	-0.6
	baz=223						
TEGC				S	Sn	19 51 42.9	-0.9
	baz=223						
NWF	Wu-fen Shan	0.93	327	⇑iP	Pn	19 51 31.2	-0.1
	baz=329						
NWF				i S	Sn	19 51 43.1	-0.8
	baz=329						
ESL	Shilin	0.95	241	⇓iP	Pn	19 51 30.5	-1.0
	baz=250						
ESL				eS	Sn	19 51 42.8	-1.5
	baz=250						
YHNB	Yeheng	0.95	294	ePn	Pn	19 51 31.4	-0.2
TWA	Mucha	0.97	316	⇑iP	Pn	19 51 32.0	+0.1
	baz=328						
TWA				eS	Sn	19 51 46.2	+1.3
	baz=328						
WHF	Hehuan Shan	0.98	262	⇑iP	Pn	19 51 31.8	-0.2
	baz=253						
WHF				eS	Sn	19 51 44.6	-0.5
	baz=253						
TATO	Taipei	1.03	312	ePn	Pn	19 51 32.2	-0.4
TATO				eSn	Sn	19 51 47.2	+0.9
TAP1	Taipei	1.05	316	⇑iP	Pn	19 51 32.8	-0.1
	baz=328						
TAP1				S	Sn	19 51 46.3	-0.5
	baz=328						
TWT	Tachien	1.06	269	⇑iP	Pn	19 51 33.4	+0.5
	baz=268						
TWT				S	Sn	19 51 46.9	0.0
	baz=268						
TWS1	Kuangyinshan	1.16	315	⇑iP	Pn	19 51 34.5	+0.1
	baz=327						
TWS1				eS	Sn	19 51 49.5	+0.1
	baz=327						
TWY	Chenhua	1.19	326	P	Pn	19 51 34.4	-0.4
	baz=328						
TWY				eS	Sn	19 51 49.4	-0.7
	baz=328						
EHY	Hungye	1.21	230	⇓P	Pn	19 51 33.8	-1.1
	baz=228						
EHY				S	Sn	19 51 48.2	-2.2
	baz=228						
NCU	National Centr	1.25	303	i P	Pn	19 51 35.8	+0.3
	baz=305						
NCU				eS	Sn	19 51 51.6	+0.2
	baz=305						
NSTT	Nanjuang	1.26	286	⇑iP	Pn	19 51 36.3	+0.6
	baz=278						
NSTT				eS	Sn	19 51 52.1	+0.4
	baz=278						
IRIF	Iriomote-Funau	1.28	87	P	Pn	19 51 36.0	+0.2
IRIF				S	Sn	19 51 52.1	+0.1
TWF1	Yuli	1.33	226	⇓iP	Pn	19 51 35.7	-0.8
	baz=235						
TWF1				S	Sn	19 51 51.2	-2.1
	baz=235						
HSN	Hsinchu	1.34	293	eP	Pn	19 51 36.7	-0.1
	baz=306						
PCYT	Pengchaiyu	1.36	350	⇑iP	Pn	19 51 37.0	0.0
	baz=344						
HATJ	Hateruma jima	1.36	99	P	Pn	19 51 38.0	+1.0
HATJ				S	Sn	19 51 55.8	+1.7
SMLT	Sun Moon Lake	1.37	253	⇑iP	Pn	19 51 37.4	+0.2
	baz=247						
SMLT				S	Sn	19 51 54.1	-0.2
	baz=247						
TYC	Yuchr	1.40	255	⇑iP	Pn	19 51 37.7	+0.2
	baz=247						
TYC				eS	Sn	19 51 54.3	-0.7
	baz=247						
TWQ1	Liyutan	1.43	273	⇑iP	Pn	19 51 38.6	+0.8
	baz=273						
TWQ1				eS	Sn	19 51 57.1	+1.5
	baz=273						
NSY	Sanyi	1.44	276	P	Pn	19 51 38.9	+0.9
	baz=275						
NSY				eS	Sn	19 51 57.5	+1.5
	baz=275						
CHKT	Chengkung	1.48	217	⇓iP	Pn	19 51 37.2	-1.3
	baz=207						
CHKT				S	Sn	19 51 54.1	-2.8
	baz=207						
YUS	Yu-Shan	1.49	238	⇑P	Pn	19 51 39.4	+0.6
	baz=237						
YUS				i S	Sn	19 51 56.3	-0.9
	baz=237						
TCU	Taichung	1.52	265	⇑iP	Pn	19 51 40.1	+1.0
	baz=265						
TCU				S	Sn	19 51 59.8	+1.9
	baz=265						
JKRS	Kuro-shima	1.53	91	P	Pn	19 51 39.9	+0.6
JKRS				S	Sn	19 51 59.2	+1.0
WNT	Mingjian	1.56	255	⇑iP	Pn	19 51 41.0	+1.3
	baz=255						
WNT				eS	Sn	19 52 00.6	+1.7
	baz=255						
ALS	Alishan	1.60	241	P	Pn	19 51 40.9	+0.7
	baz=233						
ALS				S	Sn	19 52 00.1	+0.4
	baz=233						
ELDTW	Lidau	1.62	228	⇓iP	Pn	19 51 39.8	-0.8
	baz=227						
ELDTW				S	Sn	19 51 58.6	-1.9
	baz=227						
JIJ	Ishigaki jima	1.65	87	P	Pn	19 51 40.9	0.0
JIJ				S	Sn	19 52 01.3	+0.2
CHN5	Tsauling	1.66	246	⇑iP	Pn	19 51 42.0	+0.9
	baz=236						
CHN5				eS	Sn	19 52 02.9	+1.5
	baz=236						
WGK	Gukeng	1.73	250	⇑iP	Pn	19 51 43.2	+1.3
	baz=239						
WGK				eS	Sn	19 52 04.6	+1.7
	baz=239						
STYT	Tauyuan	1.82	233	P	Pn	19 51 43.7	+0.5
	baz=226						
STYT				eS	Sn	19 52 05.5	+0.2
	baz=226						
CHN4	Tsaushan	1.84	240	eP	Pn	19 51 44.8	+1.3
	baz=239						
CHN4				i S	Sn	19 52 07.3	+1.5
	baz=239						
CHN2	Minshiung	1.86	247	P	Pn	19 51 45.0	+1.3
	baz=246						
CHN2				eS	Sn	19 52 08.3	+2.2
	baz=246						
TWG	Pinlang	1.86	219	⇓P	Pn	19 51 42.5	-1.3
	baz=217						
TWG				eS	Sn	19 52 04.0	-2.1
	baz=217						
TTN	Taitung	1.87	216	eP	Pn	19 51 43.1	-0.8
	baz=207						
TTN				eS	Sn	19 52 05.8	-0.7
	baz=207						
WTP	Ta-pu	1.88	237	⇑P	Pn	19 51 45.0	+0.9
	baz=236						
WTP				eS	Sn	19 52 07.9	+1.1
	baz=236						
CHY	Chiayi	1.92	246	P	Pn	19 51 45.8	+1.3
	baz=234						
CHY				eS	Sn	19 52 08.8	+1.3
	baz=234						
WTCT	Ta-ch'eng	1.92	258	⇑iP	Pn	19 51 45.0	+0.4
	baz=257						
WTCT				eS	Sn	19 52 08.0	+0.3
	baz=257						
TWK	Hsinying	1.97	239	P	Pn	19 51 46.5	+1.3
	baz=239						
TWK				eS	Sn	19 52 10.5	+1.6
	baz=239						
CHN1	Nanshi	1.98	237	eP	Pn	19 51 46.7	+1.2
	baz=236						
CHN1				i S	Sn	19 52 10.7	+1.5
	baz=236						
SGST	Jiashian	2.00	234	eP	Pn	19 51 46.8	+1.1
	baz=225						
SGST				S	Sn	19 52 10.6	+1.0
	baz=225						
WSF	Szhu	2.04	252	⇑P	Pn	19 51 46.8	+0.7
	baz=252						
WSF				S	Sn	19 52 12.0	+1.6
	baz=252						
ECL	Taimali	2.10	217	⇓P	Pn	19 51 45.6	-1.5
	baz=222						
ECL				eS	Sn	19 52 08.9	-3.2
	baz=222						
CHN8	Yiju	2.16	245	P	Pn	19 51 48.6	+0.8
	baz=233						
CHN8				S	Sn	19 52 14.3	+0.9
	baz=233						
SSD	Sandimen	2.19	226	P	Pn	19 51 48.5	+0.3
	baz=216						
SSD				eS	Sn	19 52 14.9	+0.8
	baz=216						
JTJ	Tarama	2.19	80	P	Pn	19 51 48.8	+0.6
JTJ				S	Sn	19 52 15.2	+1.0
SCLT	Jiali	2.25	241	eP	Pn	19 51 49.9	+0.9
	baz=241						
SCLT				eS	Sn	19 52 17.1	+1.4
	baz=241						
TWM1	Shoushan	2.28	231	eP	Pn	19 51 51.8	+2.4
	baz=230						
TAW	Tawu	2.33	215	eP	Pn	19 51 50.3	+0.2
	baz=213						
TAW				eS	Sn	19 52 14.8	-2.8
	baz=213						
EAST	Anshuo	2.33	216	⇓P	Pn	19 51 49.1	-1.1
	baz=208						
EAST				eS	Sn	19 52 17.8	+0.1
	baz=208						
LAY	Lan-yu	2.35	198	P	Pn	19 51 48.7	-1.7
	baz=187						
LAY				eS	Sn	19 52 14.4	-3.7
	baz=187						
SCZT	Fangliau	2.47	220	eP	Pn	19 51 52.4	+0.4
	baz=215						
SCZT				eS	Sn	19 52 21.5	+0.5
	baz=215						
KAU	Kaohsiung	2.52	228	eP	Pn	19 51 53.5	+0.7
	baz=241						
PNG	Penghu	2.64	255	eP	Pn	19 51 53.5	-0.9
	baz=255						
PNG				eS	Sn	19 52 23.9	-1.3
	baz=255						
TWP	Hsiaoliuchiu	2.65	224	eP	Pn	19 51 58.5	+4.0
	baz=223						
HEN	Hengchun	2.70	213	⇑P	Pn	19 51 55.5	+0.3
	baz=201						
HEN				eS	Sn	19 52 25.6	-1.1
	baz=201						
TWK1	Hengchun	2.72	211	P	Pn	19 51 54.9	-0.6
	baz=209						
TWK1				eS	Sn	19 52 25.7	-1.5
	baz=209						
JMJ	Miyako jima 2	2.75	78	P	Pn	19 51 57.3	+1.5
JMJ				S	Sn	19 52 29.3	+1.4
JMJ	Miyako jima 2	2.75	78	eP	Pn	19 51 56.2	+0.4
	baz=79						
JMJ				eS	Sn	19 52 29.3	+1.5
	baz=79						
JOGS	Gusukube	2.84	80	P	Pn	19 51 58.7	+1.6
JOGS				S	Sn	19 52 32.0	+1.9
QZH	Quanzhou	3.47	282	⇓iP	Pn	19 52 04.7	-1.0
QZH				S	Sn	19 52 41.1	-4.4
QZH				Smax			
	comp=N,290nm,0.3s						
QZH				Smax			
	comp=E,150nm,0.3s						
KNM	Kinmen	3.56	273	eP	Pn	19 52 07.1	+0.1
	baz=271						
KNM				eS	Sn	19 52 47.2	-0.6
	baz=271						
JKE	Kume jima 2	4.51	62	P	Pn	19 52 20.9	+0.9
JKE				S	Sn	19 53 11.4	+0.2
JAGN	Aguni-jima	5.00	62	P	Pn	19 52 27.4	+0.8
JAGN				S	Sn	19 53 22.5	-0.6
JIH	Iheya	5.78	60	P	Pn	19 52 37.3	0.0
JOW	Kunigami	5.94	63	P	Pn	19 52 39.0	-0.5
	comp=E,17nm,0.3s,baz=228,slow=14,SNR=98						
JOW				S	Sn	19 53 45.6	-0.5
	comp=E,3.1nm,0.3s,baz=141,slow=24,SNR=3.3						
JOW	Kunigami	5.94	63	P	Pn	19 52 38.9	-0.6
JOW				S	Sn	19 53 43.6	-2.5
JOW	Kunigami	5.94	63	eP	Pn	19 52 38.6	-0.9
	baz=65						
JTK	Tokunoshima	6.90	58	P	Pn	19 52 51.8	-0.9
JTK				S	Sn	19 54 06.8	-3.0
JAM	Amami Oshima	7.71	56	P	Pn	19 53 02.4	-1.4
JAM				S	Sn	19 54 26.4	-3.3
JMZ	Minamidaito 2	8.20	77	P	Pn	19 53 07.2	-3.4
WHN	Wuhan	9.44	313	eP	Pn	19 53 33.0	+5.5
KSRS	Korea Array	13.97	19	P	Pn	19 54 32.0	+2.9
	comp=E,1.1nm,0.3s,baz=197,slow=12,SNR=24						
KSRS				LR	LR	20 00 04.2	
	comp=E,33nm,20.6s,baz=159,slow=38						
GYA	Guiyang	14.33	282	⇑iP	Pn	19 54 34.8	+0.9
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
JHJ	Hachijo jima 2	17.64	56	LR	LR	20 01 14.3	
	comp=Z,124nm,19.6s,baz=339,slow=34						
MAJO	Matsushiro	18.32	44	P	Pn	19 55 21.2	-2.9
	comp=Z,20nm,1.3s						
MJAR	Matsushiro Arr	18.32	44	LR	LR	20 03 19.1	
	comp=Z,46nm,19.8s,baz=30,slow=40						
GTA	Gaotai	24.27	314	eP	P	19 56 21.7	-4.0
GTA				AMB	AMB		
	comp=Z,2.0nm,1.0s,mb3.5						
ULN	Ulaanbaatar	26.48	337	eP	P	19 56 45.2	-0.4
	comp=Z,2.4nm,0.4s,mb4.1						
SONM	Songino Array	26.70	336	P	P	19 56 47.5	-0.1
	comp=Z,6.7nm,0.7s,mb4.3,baz=150,slow=9.9,SNR=54						
SONM				PcP	PcP	20 00 09.8	0.0
	comp=Z,0.2nm,0.5s,baz=137,slow=4.6,SNR=3.6						
SONM				LR	LR	20 07 10.9	
	comp=Z,32nm,18.1s,MS2.9,baz=340,slow=36						
MKAR	Makanchi Array	39.00	315	P	P	19 58 34.7	0.0
	comp=Z,2.7nm,0.6s,mb4.2,baz=101,slow=11,SNR=28						
MKAR				PcP	PcP	20 00 43.4	-0.6
	comp=Z,0.2nm,0.3s,baz=78,slow=4.9,SNR=4.1						
ZAA0	Zalesovo Array	40.74	327	eP	P	19 58 47.5	-1.5
ZALV	Zalesovo Beam	40.74	327	P	P	19 58 47.9	-1.1
	comp=Z,5.8nm,0.6s,mb4.4,baz=111,slow=7.9,SNR=27						
ZALV	Zalesovo Beam	40.74	327	P	P	19 58 47.9	-1.1
TKM2	Tokmak 2	42.53	308	eP	P	19 59 04.6	+0.8
	comp=Z,1.9nm,0.7s,mb3.9						
KURK	Kurchatov	42.69	320	eP	P	19 59 04.0	-1.1
	comp=Z,2.8nm,0.6s,mb4.2						
UCH	Uchtor	43.20	306	eP	P	19 59 08.4	-0.9
	comp=Z,7.0nm,1.5s,mb4.2						
AML	Almayashu	43.79	306	P	P	19 59 15.6	+1.6
	comp=Z,1.4nm,0.6s,mb3.9						
WRAB	Tennant Creek	45.48	164	eP	P	19 59 28.0	+0.4
	comp=Z,1.9nm,0.7s,mb4.0						
WRA	Warramunga Arr	45.49	164	P	P	19 59 28.0	+0.3
	comp=Z,1.8nm,0.6s,mb4.1,baz=346,slow=8.7,SNR=28						
KBL	Kabul	47.07	295	eP	P	19 59 41.2	+1.1
	comp=Z,3.5nm,1.0s,mb4.2						
BRVK	Borovoye	48.33	320	eP	P	19 59 49.0	-0.5
	comp=Z,5.5nm,0.8s,mb4.6						
ASAR	Alice Springs	48.97	166	P	P	19 59 55.6	+0.9
	comp=Z,0.4nm,0.3s,mb4.0,baz=347,slow=6.6,SNR=25						
ARU	Arti	55.66	323	eP	P	20 00 42.7	-1.3
	comp=Z,3.9nm,0.4s,mb4.8						
NIKO	Nikolski	58.32	41	P	P	20 01 00.6	-2.3
	comp=Z,233nm,1.3s						
JOF	Joensuu	69.14	331	ep	P	20 02 12.3	-1.6
	comp=Z,0.6nm,0.3s						
KEV	Kevo	69.28	338	ep	P	20 02 13.2	-1.4
SPITS	Spitsbergen Ar	69.61	348	LR	LR	20 36 01.7	
	comp=Z,27nm,19.3s,MS3.5,baz=125,slow=39						
ARCES	ARCESS Array B	69.84	338	P	P	20 02 16.6	-1.5
	comp=Z,1.2nm,0.6s,mb4.0,baz=71,slow=5.4,SNR=8.8						
MALT	Malatya	70.81	304	eP	P	20 02 25.4	+0.8
	comp=Z,1.6nm,0.8s,mb4.0						
HFS	Hagfors	77.99	331	LR	LR	20 38 58.4	
	comp=Z,28nm,18.6s,MS3.6,baz=44,slow=37						
YKA	Yellowknife Ar	82.47	23	P	P	20 03 29.4	-0.5
	comp=Z,2.4nm,0.9s,mb4.1,baz=309,slow=4.8,SNR=5.4						
NVAR	Mina Array Bea	95.64	43	P	P	20 04 34.1	+0.7
	comp=Z,0.7nm,0.6s,mb4.2,baz=288,slow=6.8,SNR=7.3						

*ISCJB **07** 20:06:39.3±0.6, 4376N±004×10530W±007, h0km, mb4.5/1, Error ellipse: s-maj=7.1km s-min=5.8km az=8.9*
*NEIC **07** 20:06:40.5±0.5, 4376N×10528W, h0km, ML3.1, Error ellipse: s-maj=6.6km s-min=5.2km az=119.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.
*IDC **07** 20:06:40.0±1.8, 4385N×10559W, h0km, mb4.1/1, mb1 3.8/4, mb1mx3.5/23, mbtmp3.6/4, ML2.4/2, Error ellipse: s-maj=58.7km s-min=9.5km az=149.0*
ISC 07 20:06:40.6±0.5, 4377N±004×10526W±006, h0km, n36, σ1.11/36, mb4.5/1, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.95	68	ePg	Pg	20 06 59.0	+0.1
PHWY	Pilot Hill	2.47	184	ePn	Pn	20 07 21.7	-0.4
RWWY	Rawlins	2.53	215	ePn	Pn	20 07 23.3	+0.4
LAO	LASA Array	3.00	347	Pn	Pn	20 07 31.0	+1.6
RLMT	Red Lodge	3.18	297	ePn	Pn	20 07 31.4	-0.4
BW06	Boulder Array	3.30	254	ePn	Pn	20 07 33.5	0.0
PDAR	Pinedale Array	3.30	254	Pn	Pn	20 07 33.4	-0.1

	4.8nm,0.3s,baz=74,slow=17,SNR=45						
PDAR				Lg		20 08 16.6	
	3.4nm,0.3s,baz=73,slow=30,SNR=3.4						
GCMT	Greycliff	3.74	304	ePn	Pn	20 07 40.0	+0.5
LOHW	Long Hollow	3.88	270	ePn	Pn	20 07 43.8	+2.3
FLWY	Flagg Ranch	3.94	276	ePn	Pn	20 07 40.5	-1.9
ISCO	Idaho Springs	3.97	184	ePn	Pn	20 07 42.8	0.0
SNOW	Snow King Moun	4.00	268	ePn	Pn	20 07 44.5	+1.3
YNR	Norris Junctio	4.01	286	Pn	Pn	20 07 41.1	-2.1
YFT	Old Faithful	4.08	282	Pn	Pn	20 07 46.4	+2.2
REDW	Red Top Meadow	4.09	266	Pn	Pn	20 07 44.0	-0.3
IMW	Indian Meadow	4.11	274	ePn	Pn	20 07 46.8	+2.1
TPAW	Teton Pass	4.14	268	ePn	Pn	20 07 45.1	0.0
RRI2	Red Ridge	4.43	267	ePn	Pn	20 07 49.5	+0.5
DGMT	Dagmar	4.76	9	ePn	Pn	20 07 54.9	+1.3
BOZ	Bozeman (W)	4.92	295	ePn	Pn	20 07 54.4	-1.3
HWUT	Hardware Ranch	5.13	247	ePn	Pn	20 07 58.4	-0.3
	7.4nm,0.4s						
EGMT	Eagleton	5.29	325	ePn	Pn	20 08 00.3	-0.5
	14nm,0.4s						
DLMT	Dillon	5.48	289	ePn	Pn	20 08 02.1	-1.4
	2.9nm,0.4s						
SDCO	Great Sand Dun	6.02	182	ePn	Pn	20 08 14.4	+3.5
	1.5nm,0.4s						
PV10	Paradox Valley	6.10	209	ePn	Pn	20 08 13.3	+1.4
SRU	San Rafael	6.11	222	ePn	Pn	20 08 10.0	-2.0
	6.8nm,0.5s						
PV01	Paradox Valley	6.16	205	ePn	Pn	20 08 13.6	+0.8
TMUT	Trail Mountain	6.32	227	ePn	Pn	20 08 14.4	-0.6
CHMT	Chamberlain Mo	6.45	302	ePn	Pn	20 08 17.1	+0.3
DUG	Dugway	6.67	240	ePn	Pn	20 08 19.2	-0.6
	3.7nm,0.4s						
MSU	Marysvale	7.40	227	ePn	Pn	20 08 29.8	-0.1
ELK	Elko	8.00	251	Pn	Pn	20 08 37.7	-0.3
	0.2nm,0.3s,baz=70,slow=11,SNR=2.7						
ELK	Elko	8.00	251	Pn	Pn	20 08 37.7	-0.3
ULM	Lac du Bonnet	9.11	41	Pn	Pn	20 08 52.0	-1.3
	0.4nm,0.3s,baz=225,slow=9.0,SNR=3.4						
ULM				Pg	Pn	20 09 27.5	+34
	1.6nm,0.3s,baz=230,slow=15,SNR=6.7						
WUAZ	Wupatki	9.49	212	ePn	Pn	20 08 58.2	-0.3
ARCES	ARCESS Array B	61.39	18	P	P	20 16 57.0	-0.9
	5.0nm,1.2s,mb4.5,baz=330,slow=8.8,SNR=3.8						

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*ISK **07** 20:12:03.9, 38.10N×38.62E, h5km, MD3.4*
*CSEM **07** 20:12:04.1±0.1, 38.11N×38.64E, h2km, MD3.4, Error ellipse: s-maj=2.0km s-min=1.7km az=105.0*
*ISCJB **07** 20:12:05.9±0.4, 38.12N±0.03×38.64E±0.03, h10km, Error ellipse: s-maj=4.3km s-min=3.4km az=147.3*
*DDA **07** 20:12:05.1, 38.08N×38.66E, h20km±1km, Md3.2*
ISC 07 20:12:05.8±0.5, **38.11N**±0.03×**38.62E**±0.03, **h1**km±5km, **n20**, σ**0.99**/31, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	Malatya	0.25	324	ePG	Pg	20 12 10.1	-0.6
MALT				eSG	Sg	20 12 14.7	+0.6
MYA	Malataya	0.27	326	ePG	Pg	20 12 10.9	-0.1
SVRC	Sivrice-ELAZID	0.61	63	ePG	Pg	20 12 16.5	-1.0
SVRC				eSG	Sg	20 12 26.5	+1.1
URFA	Urfa	0.68	166	ePG	Pg	20 12 18.7	-0.2
URFA				eSG	Sg	20 12 28.0	+0.2
URFA	Urfa	0.68	166	ePg	Pg	20 12 18.5	-0.4
URFA				eSg	Sg	20 12 28.3	+0.5
ATAB	Bozova	0.69	202	i P	Pg	20 12 18.6	-0.3
PTK	Pertek	0.99	38	ePG	Pg	20 12 23.9	-1.0
PTK				eSG	Sg	20 12 39.4	+1.7
DARE	Darende-Malaty	1.06	323	ePG	Pg	20 12 23.9	-2.2
GZT	Gaziantep	1.12	228	i P	Pg	20 12 27.1	-0.2
GZT				i S	Sg	20 12 44.3	+2.5
GAZ	Gaziantep	1.45	231	ePN	Pn	20 12 32.8	-0.4
GAZ				eSN	Sn	20 12 53.1	+0.3
GAZ	Gaziantep	1.45	231	ePn	Pn	20 12 32.4	-0.8
KMRS	Kahramanmaras	1.48	247	ePN	Pn	20 12 32.8	-0.8
KMRS				eSN	Sn	20 12 53.1	-0.5
SARI	SarD1z-Kayseri	1.61	291	ePN	Pn	20 12 37.0	+1.7
ANDN	Andirin	1.87	254	i P	Pn	20 12 38.2	-0.7
ANDN				i S	Sn	20 13 04.3	+1.2
ANDN	Andirin	1.87	254	i P	Pn	20 12 38.2	-0.7
ANDN				i S	Sn	20 13 04.3	+1.1
MARD	Mardin	1.89	114	i P	Pn	20 12 38.3	-0.9
MARD				i S	Sn	20 13 03.1	-0.5
BEST	Besiri	2.11	95	i P	Pn	20 12 43.5	+1.3
SVSK	Karacayir	2.20	326	ePN	Pn	20 12 43.8	+0.3
SVSK	Karacayir	2.20	326	ePn	Pn	20 12 43.4	-0.1
KOZT	Kozan	2.30	255	ePN	Pn	20 12 44.4	-0.4

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*ISCJB **07** 20:14:52.8±0.9, 22.67N±0.05×92.15E±0.04, h34km±9km, mb4.2/18, MS3.4/8, Error ellipse: s-maj=9.0km s-min=4.9km az=26.2*
*IDC **07** 20:14:52.2±0.8, 22.97N×92.78E, h0km, mb4.1/9, mb1 4.2/9, mb1mx3.9/22, mbtmp4.1/9, MS3.5/7, Ms1 3.5/7, ms1mx3.2/33, Error ellipse: s-maj=35.9km s-min=16.8km az=64.0*
*BJI **07** 20:14:56.8, 23.16N×92.43E, h28km, mB4.5, mb4.3, Ms3.7, Msz3.6*
*NEIC **07** 20:14:57.0±1.3, 23.01N×92.71E, h39km±13km, mb4.2/8, Error ellipse: s-maj=20.2km s-min=7.1km az=56.0*
ISC 07 20:14:54.8±1.5, **22.70N**±0.05×**92.21E**±0.04, **h30**km±13km, **n56**, σ**1.26**/67, **mb4.2**/18, **MS3.4**/8, **1D**, **India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	2.61	37	eP	Pn	20 15 35.0	0.0
IMP				eS	Sn	20 16 05.0	-0.6
SHL	Shillong	2.87	354	ex	x	20 15 12.0	
SHL				eS	Sn	20 16 12.0	-0.2
CAL	Calcutta	3.59	268	ex	x	20 16 08.3	
ODAN	Odare	6.03	314	ePn	Pn	20 16 22.9	+0.9
ODAN				eSn	Sn	20 17 31.0	+0.9
	98nm,0.4s						
TAPN	Taplejung	6.17	320	ePn	Pn	20 16 25.2	+1.2
TAPN				eSn	Sn	20 17 35.0	+1.4
	188nm,0.6s						
RAMN	Ramite	6.63	311	ePn	Pn	20 16 30.8	+0.6
LSA	Lhasa	7.04	352	P	Pn	20 16 37.2	+1.3
LSA				S	Sn	20 17 53.2	-1.7
LSA	Lhasa	7.04	352	ePn	Pn	20 16 35.7	-0.2
	9.1nm,0.4s						
LSA				eSn	Sn	20 17 47.0	-7.9
JIRN	Jiri	7.36	313	ePn	Pn	20 16 41.4	+1.1
JIRN				eSn	Sn	20 18 03.6	+0.8
CHTO	Chiang Mai	7.39	120	ePn	Pn	20 16 37.5	-3.2
	4.9nm,0.6s						
CMAR	Chiang Mai Arr	7.58	123	Pn	Pn	20 16 43.4	0.0
	0.7nm,0.3s,baz=296,slow=13,SNR=36						
CHRT	Chiangrai	7.60	110	P	Pn	20 16 43.0	-0.6
GUN	Gumba	7.73	313	ePn	Pn	20 16 46.9	+1.5
GUN				eSn	Sn	20 18 12.0	+0.1
	91nm,0.4s						
PKI	Pulchoki	7.84	310	ePn	Pn	20 16 47.7	+0.8
PKIN	Phulchoki	7.86	310	ePn	Pn	20 16 47.9	+0.8
PKIN				eSn	Sn	20 18 15.1	+0.1
KKN	Kakani	8.07	310	ePn	Pn	20 16 50.6	+0.6
KKN				eSn	Sn	20 18 20.0	-0.2
DMN	Daman	8.08	309	ePn	Pn	20 16 50.8	+0.6
DMN				eSn	Sn	20 18 20.2	-0.4
	186nm,1.0s						
GKN	Gorkha	8.65	309	ePn	Pn	20 16 58.1	+0.1
GKN				eSn	Sn	20 18 32.8	-1.7
	37nm,0.3s						
KOLN	Koldanda	9.29	305	ePn	Pn	20 17 06.7	0.0
KOLN				eSn	Sn	20 18 47.3	-2.9
	74nm,0.5s						
DANN	Dangsing	9.48	308	ePn	Pn	20 17 09.1	-0.3
DANN				eSn	Sn	20 18 52.5	-2.5
	75nm,0.7s						
JOSI	Joshimath	13.75	307⇓	eP	Pn	20 18 06.0	-1.8
JOSI				ex	Sn	20 20 32.5	-7.0
SONA	Sohna	14.74	295	eP	Pn	20 18 19.1	-2.1
SONA				AMb	AMB	20 18 25.0	
	comp=Z,9.3nm,0.4s						
SONA				ex	Sn	20 20 51.9	-12
DDI	Dehra Dun	14.77	304	eP	Pn	20 18 19.2	-2.4
DDI				ex	Sn	20 20 56.0	-8.2
NDI	New Delhi	14.77	297	ex	Pn	20 18 22.0	+0.3
NDI				ex	x	20 20 45.0	
AYAN	Aya Nagar	14.78	296	eP	Pn	20 18 19.2	-2.5
KLP	Kalpa	15.22	308	eP	Pn	20 18 26.0	-1.6
KLP				AMb	AMB	20 18 36.3	
	comp=Z,14nm,0.5s						
KLP				eS	Sn	20 21 11.2	-4.1
LZH	Lanzhou	16.74	35	eP	Pn	20 18 48.5	+1.4
LZH				AP	pP	20 18 53.5	-3.6
LZH				XP	sP	20 18 57.0	-3.9
LZH				AMB	AMB		
	comp=Z,26nm,1.2s						
LZH				AMB	AMB		
	comp=Z,110nm,4.4s						
GTA	Gaotai	17.88	20	eP	Pn	20 18 56.9	-4.3
GTA				AP	pP	20 19 01.3	-8.3
GTA				AMB	AMB		
	comp=Z,3.0nm,1.9s						
XAN	Xi'an	18.52	49	P	Pn	20 19 06.2	-2.9
XAN				AP	pP	20 19 11.6	-5.2
XAN				AMB	AMB		
	comp=Z,6.0nm,0.6s						
XAN				AMB	AMB		
	comp=Z,31nm,4.0s						
XAN				LR	LR		
	comp=N,131nm,14.1s						
XAN				LR	LR		
	comp=E,122nm,11.6s						
XAN				LR	LR		
	comp=Z,239nm,13.5s						
WMQ	Urumqi	21.40	351	eP	P	20 19 40.2	+0.2
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.2						
WMQ				AMB	AMB		
	comp=Z,115nm,4.5s						
WMQ				LR	LR		
	comp=Z,97nm,13.5s,MS3.4						
KBL	Kabul	23.45	305	eP	P	20 20 04.2	+2.3
	comp=Z,17nm,1.4s,mb4.3						
TKM2	Tokmak 2	24.45	329	eP	P	20 20 12.5	+1.6
	comp=Z,9.3nm,1.3s,mb4.0						
UCH	Uchtor	24.45	327	eP	P	20 20 12.8	+1.9
	comp=Z,5.6nm,0.9s,mb4.0						
AML	Almayashu	24.80	326	eP	P	20 20 15.8	+1.6
	comp=Z,340nm,1.1s,mb5.8						
EKS2	Erkin-Say	25.14	327	eP	P	20 20 18.2	+1.0
	comp=Z,6.6nm,1.1s,mb4.1						
MKAR	Makanchi Array	25.34	344	P	P	20 20 19.4	+0.3
	comp=Z,1.9nm,0.4s,mb4.0,baz=164,slow=7.8,SNR=23						
SONM	Songino Array	27.54	21	P	P	20 20 36.9	-1.9
	comp=Z,2.3nm,1.1s,mb3.7,baz=197,slow=11,SNR=7.6						
SONM				LR	LR	20 33 24.8	
	comp=Z,79nm,20.5s,MS3.3,baz=102,slow=41						
ULN	Ulaanbaatar	27.78	22	P	P	20 20 37.2	-3.8
	comp=Z,5.0nm,1.5s,mb3.9						
KURK	Kurchatov	29.91	343	P	P	20 20 59.6	-0.3
	comp=Z,1.3nm,0.6s,mb3.8,baz=160,slow=8.6,SNR=12						
KURK	Kurchatov	29.91	343	P	P	20 20 54.1	-5.8
	comp=Z,2.7nm,0.7s,mb4.1						
KURK				P		20 20 59.6	
ZALV	Zalesovo Beam	31.70	352	P	P	20 21 14.9	-0.7
	comp=Z,1.3nm,0.5s,mb4.0,baz=166,slow=8.4,SNR=7.9						
JOW	Kunigami	32.94	75	LR	LR	20 36 08.4	
	comp=Z,81nm,18.1s,MS3.5,baz=227,slow=39						
KSRS	Korea Array	34.00	56	LR	LR	20 37 06.9	
	comp=Z,86nm,21.5s,MS3.4,baz=241,slow=40						
AKTO	Aktyubinsk	38.43	325	LR	LR	20 40 39.7	
	comp=Z,64nm,18.2s,MS3.5,baz=305,slow=40						
ARU	Arti	41.75	332	P	P	20 22 40.5	-0.5
	comp=Z,27nm,1.7s,mb4.6						
PETK	Petropavlovsk-	57.52	41	LR	LR	20 53 07.7	
	comp=Z,44nm,18.2s,MS3.6,baz=72,slow=40						
WRA	Warramunga Arr	59.05	133	P	P	20 24 53.1	+0.8
	comp=Z,1.8nm,0.5s,mb4.3,baz=321,slow=7.4,SNR=52						
WRAB	Tennant Creek	59.05	133	eP	P	20 24 52.0	-0.3
	comp=Z,4.5nm,0.9s,mb4.5						
WB2	Warramunga Arr	59.06	133	eP	P	20 24 53.2	+0.8
NWAO	Narrogin (SRO)	60.25	156	P	P	20 24 58.3	-2.0
ASAR	Alice Springs	61.37	136	P	P	20 25 09.3	+1.2
	comp=Z,2.6nm,0.6s,mb4.6,baz=316,slow=6.9,SNR=79						
GERES	GERESS Array B	65.83	315	P	P	20 25 42.1	+4.8
	comp=Z,0.8nm,0.7s,mb3.9,baz=72,slow=6.3,SNR=8.0						
GERES				LR	LR	20 57 32.3	
	comp=Z,22nm,18.8s,MS3.4,baz=87,slow=39						
NOA	NORSAR Array B	66.08	328	P	P	20 25 42.7	+4.0
	comp=Z,0.9nm,0.7s,mb3.9,baz=92,slow=6.2,SNR=3.5						
NOA				LR	LR	20 58 01.3	
	comp=Z,24nm,21.2s,MS3.4,baz=315,slow=39						
NOA	NORSAR Array B	66.08	328	P	P	20 25 42.7	+4.0
NOA				LR	LR	20 58 01.3	
BOSA	Boshof	82.24	235	P	P	20 27 18.6	+5.2
	comp=Z,2.4nm,0.8s,mb4.2,baz=63,slow=9.0,SNR=3.4						
CPUP	Villa Florida	152.08	256	PKPbc	PKPbc	20 34 48.9	+1.1
	comp=Z,1.1nm,0.5s,baz=253,slow=0.7,SNR=4.9						

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*ISCJB **07** 20:27:45.9±0.7, 15.43S±0.07×70.99W±0.08, h191km±6km, mb3.9/6, Error ellipse: s-maj=13.5km s-min=8.8km az=143.6*
*NEIC **07** 20:27:46.7±0.9, 15.42S×71.03W, h181km±10km, Error ellipse: s-maj=21.8km s-min=11.0km az=225.0*
*IDC **07** 20:27:48.7±1.6, 15.45S×70.73W, h197km±15km, mb3.7/6, mb1 3.9/8, mb1mx3.6/19, mbtmp3.7/8, Error ellipse: s-maj=21.8km s-min=16.7km az=99.0*
ISC 07 20:27:47.0±0.7, **15.57S**±0.06×**71.05W**±0.08, **h193**km±6km, **n17**, σ**1.20**/20, **mb3.9**/6, **1C**, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	Arequipa	0.98	205⇑	iP	Pn	20 28 16.2	+0.4
ARE				eS	Sn	20 28 39.0	+0.7
LPAZ	La Paz	2.90	105	P	Pn	20 28 35.9	+0.8
	2.4nm,0.3s,baz=304,slow=10.0,SNR=82						
LPAZ				S	Sn	20 29 10.8	-1.7
	2.7nm,0.3s,baz=183,slow=21,SNR=14						
LPAZ	La Paz	2.90	105	P	Pn	20 28 35.9	+0.8
LPAZ				eSn	Sn	20 28 57.5	-15
NNA	Nana	6.66	302	S	Sn	20 30 37.0	-1.5
	3.3nm,0.3s,baz=297,slow=22,SNR=3.9						
NNA	Nana	6.66	302	eSn	Sn	20 30 35.9	-2.6
LVC	Limon Verde	7.29	164	P	Pn	20 29 33.2	+2.3
	5.0nm,0.3s,baz=328,slow=10,SNR=74						
LVC				S	Sn	20 30 52.2	-1.2
	22nm,0.3s,baz=172,slow=19,SNR=21						
LCO	Las Campanas	13.38	179	ePn	Pn	20 30 49.2	-0.2
LCO				eSn	Sn	20 33 18.0	-0.6
PLCA	Paso Flores	25.07	179	P	P	20 32 57.7	+4.1
	0.9nm,0.4s,mb3.8,baz=259,slow=10,SNR=7.0						
PDAR	Pinedale Array	67.98	330	P	P	20 38 27.0	+1.9
	0.3nm,0.5s,mb3.1,baz=112,slow=6.9,SNR=3.0						
ULM	Lac du Bonnet	69.08	343	P	P	20 38 32.0	+0.2
	5.8nm,0.4s,mb4.5,baz=148,slow=6.8,SNR=9.5						
DBIC	Dimbokro	69.17	77	P	P	20 38 31.9	-1.3
	2.0nm,0.4s,mb4.1,baz=253,slow=7.5,SNR=8.3						
TORD	Torodi Ar. Bea	77.40	72	P	P	20 39 20.3	-1.0
	0.9nm,0.3s,mb3.8,baz=243,slow=4.9,SNR=39						
TORD	Torodi Ar. Bea	77.40	72	P	P	20 39 20.3	-1.0
YKA	Yellowknife Ar	84.95	341	P	P	20 40 00.6	+0.7
	1.6nm,0.6s,mb4.0,baz=132,slow=5.0,SNR=9.4						
YKA	Yellowknife Ar	84.95	341	P	P	20 40 00.6	+0.7
ZALV	Zalesovo Beam	137.31	21	PKP	PKPdf	20 46 49.0	+1.8
	0.5nm,0.5s,baz=303,slow=4.4,SNR=3.6						
SONM	Songino Array	147.76	3	PKPbc	PKPbc	20 47 11.4	+2.4
	1.7nm,0.5s,baz=322,slow=1.8,SNR=15						

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*IDC **07** 20:28:07.9±1.2, 3.00S×130.00E, h0km, mb3.9/7, mb1 4.0/9, mb1mx3.9/17, mbtmp3.9/9, ML3.7/2, MS3.3/1, Ms1 3.3/1, ms1mx2.3/24, Error ellipse: s-maj=74.3km s-min=17.1km az=70.0*
*NEIC **07** 20:28:12.4±0.6, 3.05S×130.03E, h35km, mb4.1/5, Error ellipse: s-maj=23.2km s-min=6.8km az=68.0*
*DJA **07** 20:28:14, 2.89S×129.96E, h75km, MLv4.1/5*
*ISCJB **07** 20:28:18.3±2.6, 3.35S±0.10×129.9E±0.2, h121km±25km, mb3.7/7, Error ellipse: s-maj=35.3km s-min=8.4km az=156.2*
ISC 07 20:28:13.0±2.3, **3.1S**±0.1×**130.0E**±0.2, **h39**km±23km, **n23**, σ**0.88**/30, **mb3.8**/7, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	9.44	221	LR	LR	20 34 16.1	
	comp=Z,198nm,20.2s,baz=104,slow=39						
KAKA	Kakadu	9.87	166	eP	Pn	20 30 32.6	+0.2
	7.7nm,0.6s						
KAKA				eS	Sn	20 32 22.9	+0.9
KAKA	Kakadu	9.87	166	ePn	Pn	20 30 31.1	-1.3
	16nm,0.6s						
KAKA				eSn	Sn	20 32 22.6	+0.6
FITZ	Fitzroy Crossi	15.51	196	eP	Pn	20 31 49.7	+0.7
	7.1nm,0.6s						
FITZ	Fitzroy Crossi	15.51	196	Pn	Pn	20 31 48.4	-0.7
	0.1nm,0.3s,baz=34,slow=13,SNR=4.8						
COEN	Coen	16.93	130	Pn	Pn	20 31 58.4	-8.8
	32nm,1.9s						
COEN				eSn	Sn	20 34 59.9	-15
WRAB	Tennant Creek	17.28	166	ePn	Pn	20 32 10.9	-0.6
WRAB				eSn	Sn	20 35 14.1	-8.7
WRA	Warramunga Arr	17.29	166	P	Pn	20 32 10.8	-0.8
	0.4nm,0.3s,baz=349,slow=11,SNR=35						
WRA				S	S	20 35 14.2	-16
	0.1nm,0.3s,baz=339,slow=22,SNR=4.4						
WB2	Warramunga Arr	17.29	166	eP	Pn	20 32 11.2	-0.4
WB2				eS	S	20 35 14.5	-16
KSM	Kuching	20.16	283	eP	P	20 32 44.8	+0.4
ASAR	Alice Springs	20.81	170	P	P	20 32 52.6	+1.5
	12nm,0.6s,baz=348,slow=10,SNR=170						
ASAR				S	S	20 36 39.3	-2.1
	1.7nm,0.9s,baz=350,slow=23,SNR=6.8						
ASAR	Alice Springs	20.81	170	P	P	20 32 52.6	+1.5
ASAR				S	S	20 36 39.3	-2.1
STKA	Stephens Creek	30.66	160	eP	P	20 34 25.4	+1.5
	4.2nm,1.5s,mb4.0						
STKA	Stephens Creek	30.66	160	P	P	20 34 25.1	+1.2
	1.0nm,0.3s,mb4.1,baz=232,slow=10,SNR=6.7						
STKA	Stephens Creek	30.66	160	eP	P	20 34 25.1	+1.2
	2.9nm,0.9s,mb4.1						
CMAR	Chiang Mai Arr	37.30	306	P	P	20 35 22.4	+0.6
	0.4nm,0.6s,mb3.5,baz=136,slow=7.8,SNR=5.0						
CHTO	Chiang Mai	37.49	307	eP	P	20 35 22.0	-1.3
	2.0nm,0.8s,mb4.0						
ULN	Ulaanbaatar	54.56	341	P	P	20 37 36.4	-0.9
SONM	Songino Array	54.75	341	P	P	20 37 38.7	0.0
	0.8nm,0.9s,mb3.7,baz=145,slow=10,SNR=4.8						
MKAR	Makanchi Array	64.97	326	P	P	20 38 49.1	+0.2
	0.3nm,0.5s,mb3.6,baz=114,slow=8.0,SNR=6.1						
ZALV	Zalesovo Beam	68.09	333	P	P	20 39 09.7	+1.0
	0.3nm,0.4s,mb3.7,baz=116,slow=6.6,SNR=3.3						
KURK	Kurchatov	69.19	328	P	P	20 39 15.6	0.0
	1.3nm,0.6s,mb4.0,baz=122,slow=5.9,SNR=16						
KURK	Kurchatov	69.19	328	eP	P	20 39 15.1	-0.6
	1.6nm,0.6s,mb4.1						

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*ISCJB **07** 20:30:31.2±0.7, 68.14N±0.04×9.4E±0.1, h10km, Error ellipse: s-maj=7.5km s-min=4.7km az=25.9*
*IDC **07** 20:30:32.7±1.8, 68.25N×8.97E, h0km, mb1 3.5/5, mb1mx3.2/27, mbtmp3.4/5, ML3.3/5, Error ellipse: s-maj=25.7km s-min=13.2km az=131.0*
*CSEM **07** 20:30:34.9±0.2, 68.13N×9.89E, h10km, ML2.5, Error ellipse: s-maj=5.2km s-min=2.1km az=120.0*
*NAO **07** 20:30:34.2±3.0, 68.07N×9.71E, h1km±21km, ML2.6*
*HEL **07** 20:30:35.5±0.4, 68.09N×9.75E, h10km, ML3.0, MD3.1(BER), ML2.5(BER)*
*BER **07** 20:30:35.3±3.4, 68.10N×9.42E, h2km±15km, MD3.1, ML2.5, ML2.6(NAO)*
*NEIC **07** 20:30:36.8, 68.08N×9.53E, h10km, ML2.5(BER), After BER.*
ISC 07 20:30:35.1±0.7, **68.08N**±0.04×**9.8E**±0.1, **h10**km, **n46**, σ**1.25**/83, **Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOF	Lofoten	1.40	86	eP	Pn	20 31 02.1	+1.4
LOF				e		20 31 06.3	
LOF				eSg	Sg	20 31 24.1	+3.9
LOF				AML	AML	20 31 31.7	
	comp=Z,213nm,0.5s						
LOF	Lofoten	1.40	86	eP	Pn	20 31 02.1	+1.4
	SNR=50						
LOF				eSg	Sg	20 31 24.1	+3.9
	SNR=91						
LOF	Lofoten	1.40	86	eP	Pn	20 31 02.1	+1.4
LOF				eS	Sn	20 31 24.2	+5.0
KONS	Konsvik	2.04	139	eP	Pn	20 31 09.9	+0.4
KONS				eS	Sn	20 31 36.2	+1.2
STEI	Steigen	2.06	92	eP	Pn	20 31 09.5	-0.1
STEI				eS	Sn	20 31 35.1	-0.1
STOK	Stokkvaagen	2.16	143	eP	Pn	20 31 11.6	+0.5
STOK				eS	Sn	20 31 38.7	+1.0
STOK				AML	AML	20 31 44.8	
	comp=Z,43nm,0.4s						
STOK	Stokkvaagen	2.16	143	eP	Pn	20 31 11.6	+0.6
	SNR=50						
STOK				eS	Sn	20 31 39.3	+1.5
STOK	Stokkvaagen	2.16	143	eP	Pn	20 31 10.8	-0.2
STOK				eS	Sn	20 31 39.3	+1.5
FLOS	Flostrand	2.23	140	eP	Pn	20 31 11.7	-0.4
MOR8	Moi Rana	2.64	134	eP	Pn	20 31 18.8	+1.2
MOR8				eS	Sn	20 31 52.3	+2.7
MOR8				AML	AML	20 31 55.6	
	comp=Z,93nm,0.6s						
MOR8	Moi Rana	2.64	134	eP	Pn	20 31 18.8	+1.1
	SNR=50						
MOR8				eS	Sn	20 31 52.3	+2.6
	comp=Z,93nm,0.6s,SNR=50						
MOR8	Moi Rana	2.64	134	eP	Pn	20 31 18.8	+1.2
MOR8				eS	Sn	20 31 51.9	+2.2
TRO	Tromso	3.66	61	eP	Pn	20 31 32.2	+0.6
TRO				AML	AML	20 32 15.4	
	comp=Z,6.0nm,0.4s						
NSS	Namsos	3.67	165	eP	Pn	20 31 31.7	-0.2
NSS				eS	Sn	20 32 14.2	-0.9
KIF	Kilpisjarvi	4.15	72	eP	Pn	20 31 39.2	+0.9
KIF				MPN		20 31 40.4	
	comp=Z,1.7nm,0.1s						
KIF				eS	Sn	20 32 25.3	-1.5
KTK1	Kautokeino	5.02	73	eP	Pn	20 31 51.9	+1.6
HEF	Hetta	5.17	80	eP	Pn	20 31 53.0	+0.6
HEF				MPN		20 31 54.8	
	comp=Z,2.7nm,0.2s						
HEF				eS	Sn	20 32 50.1	-1.8
MOL	Molde	5.61	191	eP	Pn	20 31 55.6	-2.9
MOL				eS	Sn	20 32 58.0	-4.9
ARA0	ARCESS Array S	5.88	68	Pn	Pn	20 32 02.6	+0.6
	baz=250,slow=14						
ARA0				Sn	Sn	20 33 08.1	-1.3
	baz=253,slow=16						
ARA0				Lg		20 33 41.5	
	baz=268,slow=28						
ARA0	ARCESS Array S	5.88	68	eP	Pn	20 32 02.6	+0.6
ARA0				eS	Sn	20 33 08.1	-1.3
ARA0				e		20 33 41.5	
ARA0	ARCESS Array S	5.88	68	Pn	Pn	20 32 02.7	+0.6
ARA0				Sn	Sn	20 33 08.1	-1.3
ARCES	ARCESS Array B	5.88	68	Pn	Pn	20 32 02.5	+0.4
	comp=Z,0.3nm,0.3s,baz=266,slow=12,SNR=19						
ARCES				Sn	Sn	20 33 14.8	+5.5
	comp=Z,0.8nm,0.3s,baz=248,slow=26,SNR=3.2						
ARCES				Lg		20 33 47.0	
	comp=Z,1.3nm,0.3s,baz=262,slow=27,SNR=7.2						
ARCES	ARCESS Array B	5.88	68	Pn	Pn	20 32 02.5	+0.4
ARCES				Sn	Sn	20 33 14.8	+5.5
ARCES				Lg		20 33 47.0	
DOMB	Dombas	6.07	183	eP	Pn	20 32 04.3	-0.4
SGF	Sodankyl	6.38	88	eP	Pn	20 32 08.8	-0.2
SGF				eS	Sn	20 33 18.2	-3.5
KEV	Kevo	6.42	67	eP	Pn	20 32 11.1	+1.5
KEV				MPN		20 32 15.4	
	comp=Z,0.7nm,0.1s						
JMIC	Jan Mayen	7.04	303	Pn	Pn	20 32 12.7	-5.3
	comp=Z,3.2nm,0.3s,baz=147,slow=14,SNR=11						
OUL	Oulu	7.08	108	eP	Pn	20 32 18.9	+0.3
OUL				eS	Sn	20 33 34.3	-4.6
NB2	NORSAR Subarra	7.10	174	Pn	Pn	20 32 18.9	+0.1
	baz=349,slow=14						
NB2				Sn	Sn	20 33 38.7	-0.7
	baz=357,slow=22						
NB2	NORSAR Subarra	7.10	174	eP	Pn	20 32 18.9	+0.1
NB2				eS	Sn	20 33 38.7	-0.7
NOA	NORSAR Array B	7.10	174	Pn	Pn	20 32 19.1	+0.3
	comp=Z,0.4nm,0.3s,baz=356,slow=14,SNR=7.8						
NOA				Sn	Sn	20 33 35.5	-3.8
	comp=Z,0.8nm,0.3s,baz=264,slow=13,SNR=3.8						
NOA	NORSAR Array B	7.10	174	Pn	Pn	20 32 19.1	+0.3
NOA				Sn	Sn	20 33 35.5	-3.9
VAF	Ylistaro	7.34	127	eP	Pn	20 32 23.7	+1.5
VAF				MPN		20 32 27.9	
	comp=Z,1.0nm,0.2s						
VAF				eS	Sn	20 33 43.8	-1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSF	**Maaselka**	**7.83**	**97**	*e*P	**Pn**	**20 32 28.2**	**-0.7**
MSF				*e*S	**Sn**	**20 33 52.4**	**-5.1**
KU6	**Riekki**	**8.10**	**95**	*e*P	**Pn**	**20 32 31.9**	**-0.8**
KU6				MPN		20 32 36.9	
	comp=Z,2.0nm,0.2s						
KU6				*e*S	**Sn**	**20 33 59.4**	**-4.8**
HFS	**Hagfors**	**8.16**	**166**	*e*P	**Pn**	**20 32 33.0**	**-0.4**
HFS				*e*S	**Sn**	**20 34 00.5**	**-5.0**
HFS	**Hagfors**	**8.16**	**166**	Pn	**Pn**	**20 32 33.9**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=349,slow=13,SNR=22						
HFS				Sn	**Sn**	**20 34 02.0**	**-3.5**
	comp=Z,1.2nm,0.3s,baz=354,slow=24,SNR=10.0						
HFS	**Hagfors**	**8.16**	**166**	Pn	**Pn**	**20 32 33.0**	**-0.4**
	baz=353,slow=12						
HFS				Sn	**Sn**	**20 34 00.5**	**-5.0**
	baz=347,slow=28						
KJN	**Kajaani**	**8.29**	**110**	*e*P	**Pn**	**20 32 34.3**	**-0.9**
KJN				MPN		20 32 39.3	
	comp=Z,1.1nm,0.2s						
KJN				*e*S	**Sn**	**20 34 05.0**	**-3.7**
SUF	**Sumiainen**	**8.66**	**121**	*e*P	**Pn**	**20 32 40.9**	**+0.6**
SUF				MPN		20 32 45.1	
	comp=Z,0.6nm,0.1s						
SUF				*e*S	**Sn**	**20 34 15.0**	**-2.8**
FIA0	**FINESS Array S**	**9.60**	**126**	Pn	**Pn**	**20 32 52.8**	**-0.2**
	baz=324,slow=12						
FIA0				Sn	**Sn**	**20 34 38.2**	**-2.5**
	baz=328,slow=22						
FIA0				Lg		20 35 29.6	
	baz=331,slow=28						
FIA0	**FINESS Array S**	**9.60**	**126**	*e*P	**Pn**	**20 32 52.8**	**-0.2**
FIA0				*e*S	**Sn**	**20 34 38.2**	**-2.5**
FIA0	**FINESS Array S**	**9.60**	**126**	Pn	**Pn**	**20 32 52.8**	**-0.2**
	baz=324,slow=12						
FIA0				Sn	**Sn**	**20 34 38.2**	**-2.5**
	baz=328,slow=22						
SPA0	**Spitsbergen Ar**	**10.32**	**8**	Pn	**Pn**	**20 33 00.9**	**-2.0**
	baz=182,slow=16						
SPA0	**Spitsbergen Ar**	**10.32**	**8**	*e*P	**Pn**	**20 33 00.9**	**-2.0**
GERES	**GERESS Array B**	**19.39**	**172**	P	**Pn**	**20 35 03.9**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=356,slow=11,SNR=4.4						

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*CSEM **07** 20:31:59.9±0.2, 3536N×2771E, h20^{km}, MD3.4, Error ellipse: s-maj=6.5km s-min=2.5km az=161.0*
*ATH **07** 20:31:59.0, 3532N×2765E, h31^{km}, MD3.4/7*
*ISCJB **07** 20:32:00.7±0.9, 3532N±007×2764E±005, h33^{km}, Error ellipse: s-maj=11.3km s-min=4.9km az=156.9*
*NEIC **07** 20:32:04.0, 3564N×2755E, h10^{km}, ML3.0(ATH), After ATH.*
*DDA **07** 20:32:07.2, 3609N×28.11E, h7^{km}±5^{km}, Md3.2*
ISC 07 20:32:02.1±0.9**, 3536N**±008×**2764E**±006**, h35**^{km}**, n16, σ1**^{s}**10**/23**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.43**	**295**	*e*PB	**Pn**	**20 32 08.9**	**-2.9**
KARP				*e*SB	**Sn**	**20 32 16.7**	**-1.8**
ARG	**Arkhangelos**	**0.94**	**25**	*e*PN	**Pn**	**20 32 17.8**	**-1.0**
ARG				*e*SN	**Sn**	**20 32 31.5**	**+0.5**
NPS	**Neapolis**	**1.66**	**267**	*e*PB	**Pn**	**20 32 27.9**	**-0.9**
NPS				*e*SN	**Sn**	**20 32 48.6**	**-0.3**
NPS	**Neapolis**	**1.66**	**267**	*e*Pb	**Pn**	**20 32 29.9**	**+1.1**
NPS				*e*Sn	**Sn**	**20 32 49.6**	**+0.7**
BDRM	**Kayabasi**	**1.71**	**355**	*i* P	**Pn**	**20 32 28.2**	**-1.1**
BDRM				*i* S	**Sn**	**20 32 51.2**	**+1.2**
BDRM	**Kayabasi**	**1.71**	**355**	*i* P	**Pn**	**20 32 28.2**	**-1.2**
BDRM				*i* S	**Sn**	**20 32 51.2**	**+1.3**
AKAS	**Kas**	**1.82**	**61**	*i* P	**Pn**	**20 32 29.8**	**-1.0**
AKAS				*i* S	**Sn**	**20 32 53.2**	**+0.6**
IDI	**Anoyia**	**2.25**	**269**	P	**Pn**	**20 32 38.6**	**+1.8**
APE	**Apeiranthos**	**2.41**	**316**	*e*PN	**Pn**	**20 32 38.8**	**-0.2**
GOLH	**Golhisar**	**2.43**	**39**	*i* P	**Pn**	**20 32 39.2**	**0.0**
SMG	**Samos**	**2.43**	**345**	*e*PN	**Pn**	**20 32 39.4**	**+0.1**
VAM	**Vamos**	**2.81**	**272**	*e*PN	**Pn**	**20 32 44.6**	**0.0**
VAM	**Vamos**	**2.81**	**272**	*e*Pn	**Pn**	**20 32 45.3**	**+0.7**
GVD	**Gavdhos**	**2.96**	**261**	*e*PN	**Pn**	**20 32 46.1**	**-0.5**
VLI	**Veliai**	**4.05**	**291**	*e*PN	**Pn**	**20 33 01.8**	**+0.3**
ITM	**Ithomi**	**4.96**	**293**	P	**Pn**	**20 33 16.2**	**+2.1**

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*ISCJB **07** 20:33:24.3±2.8, 65S±0.1×1492E±02, h88^{km}±22^{km}, mb4.0/10, Error ellipse: s-maj=37.9km s-min=19.1km az=18.2*
*NEIC **07** 20:33:25.4±2.5, 655S×14920E, h82^{km}±20^{km}, mb4.3/5, Error ellipse: s-maj=29.6km s-min=15.4km az=105.0*
*IDC **07** 20:33:30.1±7.3, 653S×14903E, h117^{km}±62^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.7/16, mbtmp3.8/9, MS3.3/4, Ms1 3.3/4, ms1mx2.8/24, Error ellipse: s-maj=37.7km s-min=19.6km az=92.0*
ISC 07 20:33:26.1±2.7**, 65S**±01×**1490E**±02**, h84**^{km}±22^{km}**, n22, σ1**^{s}**25**/18**, mb4.0**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.44**	**213**	*e*Pn	**Pn**	**20 34 16.8**	**-0.8**
PMG				*e*Sn	**Sn**	**20 34 59.6**	**+2.3**
CTA	**Charters Tower**	**13.78**	**191**	LR	LR	20 41 30.0	
	comp=Z,67nm,21.1s,baz=230,slow=35						
WRAB	**Tennant Creek**	**19.55**	**225**	*e*P	**Pn**	**20 37 47.4**	**-2.0**
	15nm,0.8s						
WB2	**Warramunga Arr**	**19.55**	**225**	*e*P	**Pn**	**20 37 47.9**	**-1.5**
WRA	**Warramunga Arr**	**19.56**	**225**	P	**Pn**	**20 37 47.9**	**-1.6**
	1.1nm,0.3s,baz=49,slow=10,SNR=48						
WRA				PcP	PcP	20 42 04.7	+0.1
	0.0nm,0.3s,baz=38,slow=2.1,SNR=4.7						
ASAR	**Alice Springs**	**22.44**	**219**	P	**P**	**20 38 19.0**	**+0.8**
	1.6nm,0.4s,mb3.7,baz=56,slow=9.3,SNR=28						
ASAR				PcP	PcP	20 42 10.3	+0.2
	0.2nm,0.5s,baz=46,slow=2.7,SNR=5.0						
BATI	**Baumata**	**25.37**	**260**	P	**P**	**20 38 46.6**	**+0.8**
	11nm,0.5s,mb4.6,baz=145,slow=17,SNR=7.6						
FITZ	**Fitzroy Crossi**	**25.57**	**241**	*e*P	**P**	**20 38 48.3**	**+0.7**
	18nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**25.57**	**241**	P	**P**	**20 38 48.4**	**+0.8**
	12nm,0.8s,mb4.4,baz=82,slow=8.6,SNR=33						
STKA	**Stephens Creek**	**26.20**	**194**	*e*P	**P**	**20 38 54.7**	**+1.7**
	4.2nm,1.2s,mb3.7						
STKA	**Stephens Creek**	**26.20**	**194**	P	**P**	**20 38 54.0**	**+1.0**
	2.5nm,0.7s,mb3.8,baz=7.2,slow=14,SNR=5.6						
STKA				LR	LR	20 49 55.6	
	comp=Z,86nm,19.4s,baz=24,slow=38						
STKA	**Stephens Creek**	**26.20**	**194**	*e*P	**P**	**20 38 52.3**	**-0.7**
	3.3nm,0.7s,mb3.9						
MBWA	**Marble Bar**	**31.89**	**240**	*e*P	**P**	**20 39 44.0**	**+0.3**
	4.3nm,0.6s,mb4.4						
CBIJ	**Chichi jima**	**34.04**	**349**	LR	LR	20 50 41.3	
	comp=Z,86nm,21.4s,baz=175,slow=30						
KSRS	**Korea Array**	**47.96**	**337**	LR	LR	20 59 33.4	
	comp=Z,40nm,19.6s,baz=221,slow=33						
PETK	**Petropavlovsk-**	**59.83**	**6**	P	**P**	**20 43 23.2**	**+0.6**
	2.2nm,0.5s,mb4.5,baz=149,slow=6.2,SNR=9.2						
CASY	**Casey**	**65.33**	**196**	*e*P	**P**	**20 43 58.9**	**-0.2**
	1.8nm,0.6s,mb4.1						
SONM	**Songino Array**	**65.83**	**330**	P	**P**	**20 44 05.0**	**+2.4**
	0.4nm,0.5s,mb3.5,baz=145,slow=5.2,SNR=4.0						
MKAR	**Makanchi Array**	**79.17**	**320**	P	**P**	**20 45 21.0**	**-0.8**
	0.2nm,0.4s,mb3.3,baz=95,slow=8.3,SNR=3.3						
ZALV	**Zalesovo Beam**	**80.51**	**327**	P	**P**	**20 45 27.9**	**-1.0**
	0.4nm,0.4s,mb3.6,baz=114,slow=6.8,SNR=3.6						
TORD	**Torodi Ar. Bea**	**147.18**	**284**	PKPbc	PKPbc	20 52 59.2	-1.5
	1.0nm,0.6s,baz=41,slow=3.1,SNR=14						
BDFB	**Brasilia**	**152.27**	**143**	PKPbc	PKPbc	20 53 12.6	-0.7
	3.1nm,0.5s,baz=219,slow=2.5,SNR=7.6						

IDC 07 20:56:07.4±6.8**, 1183S**×**16582E, h33**^{km}±8^{km}**, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.4**/16**, mbtmp3.6**/3**, Error ellipse: s-maj=203.8km s-min=40.3km az=125.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.29**	**251**	P	P	21 02 24.2	-0.4
	0.4nm,0.5s,baz=85,slow=9.3,SNR=6.7						
WRA				pP	pP	21 02 34.8	+0.6
	0.4nm,0.6s,baz=84,slow=9.2,SNR=3.4						
ASAR	**Alice Springs**	**32.51**	**244**	P	P	21 02 35.4	0.0
	0.7nm,0.7s,baz=67,slow=9.9,SNR=10						
ASAR				pP	pP	21 02 45.4	+0.5
	0.4nm,0.7s,baz=64,slow=11,SNR=3.1						
MKAR	**Makanchi Array**	**94.14**	**317**	P	P	21 09 23.2	+0.4
	0.2nm,0.2s,baz=97,slow=7.4,SNR=5.1						
MKAR				pP	pP	21 09 32.5	-0.8
	0.3nm,0.3s,baz=90,slow=7.6,SNR=1.9						

IDC 07 21:00:00.3±2.6**, 2410S**×**6713W, h182**^{km}±40^{km}**, mb3.0**/1**, mb1 3.2**/4**, mb1mx3.1**/17**, mbtmp3.1**/4**, Error ellipse: s-maj=51.5km s-min=36.1km az=101.0, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.21**	**312**	P	Pn	21 00 41.5	+1.7
	8.0nm,0.3s,baz=135,slow=6.0,SNR=136						
LVC				S	Sn	21 01 11.0	+0.6
	15nm,0.3s,baz=240,slow=22,SNR=18						
LPAZ	**La Paz**	**7.83**	**353**	P	Pn	21 01 53.5	+2.0
	0.4nm,0.3s,baz=171,slow=7.5,SNR=10.0						
LPAZ				S	Sn	21 03 20.6	+1.2
	0.0nm,0.3s,baz=336,slow=20,SNR=3.4						
BDFB	**Brasilia**	**19.83**	**68**	P	P	21 04 17.0	-0.3
	0.4nm,0.3s,baz=230,slow=11,SNR=6.3						
TORD	**Torodi Ar. Bea**	**76.71**	**69**	P	P	21 11 31.7	-0.1
	0.3nm,0.7s,baz=239,slow=4.7,SNR=4.7						

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*ISCJB **07** 21:00:12.2±2.5, 222N±0.1×1440E±06, h115^{km}±24^{km}, mb3.9/8, Error ellipse: s-maj=89.1km s-min=16.8km az=169.1*
*IDC **07** 21:00:14.9±3.4, 22.19N×14376E, h118^{km}±31^{km}, mb3.5/7, mb1 3.6/9, mb1mx3.4/21, mbtmp3.5/9, Error ellipse: s-maj=55.7km s-min=15.7km az=78.0*
*NEIC **07** 21:00:16.7, 2282N×14457E, h98^{km}, mb4.4/2, After JMA.*
ISC 07 21:00:13.5±2.4**, 222N**±01×**1441E**±05**, h112**^{km}±21^{km}**, n16, σ0**^{s}**75**/15**, mb3.9**/8**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.16**	**340**	P	**Pn**	**21 01 28.4**	**0.0**
	21nm,0.3s,baz=286,slow=20,SNR=14						
CBIJ				S	**Sn**	**21 02 22.1**	**-4.7**
	27nm,0.3s,baz=304,slow=23,SNR=14						
MJAR	**Matsushiro Arr**	**15.16**	**341**	P	**Pn**	**21 03 42.2**	**+0.6**
	0.5nm,0.3s,baz=170,slow=12,SNR=6.9						
MJAR	**Matsushiro Arr**	**15.16**	**341**	P	**Pn**	**21 03 42.2**	**+0.6**
MAJO	**Matsushiro**	**15.17**	**341**	*e*Pn	**Pn**	**21 03 40.5**	**-1.2**
KSRS	**Korea Array**	**20.64**	**321**	P	**P**	**21 04 45.1**	**+1.1**
	2.4nm,0.4s,baz=144,slow=8.8,SNR=9.9						
MDJ	**Mudanjiang**	**25.34**	**335**	*e*P	**P**	**21 05 30.9**	**+1.1**
	2.9nm,0.4s,mb4.1						
QIZ	**Qiongzhong**	**32.21**	**271**	*e*P	**P**	**21 06 38.2**	**+7.2**
	21nm,1.5s,mb4.7						
SONM	**Songino Array**	**39.50**	**320**	P	**P**	**21 07 32.4**	**-0.6**
	0.5nm,0.4s,mb3.7,baz=130,slow=7.1,SNR=9.2						
WRA	**Warramunga Arr**	**42.99**	**194**	P	**P**	**21 08 01.6**	**-0.1**
	0.5nm,0.3s,mb3.8,baz=13,slow=8.6,SNR=19						
ASAR	**Alice Springs**	**46.69**	**193**	P	**P**	**21 08 30.9**	**-0.1**
	0.4nm,0.6s,mb3.3,baz=16,slow=8.6,SNR=5.9						
STKA	**Stephens Creek**	**53.85**	**183**	P	**P**	**21 09 25.2**	**+0.3**
	1.3nm,0.8s,mb4.0,baz=348,slow=9.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**54.35**	**321**	P	**P**	**21 09 27.0**	**-1.3**
	0.6nm,0.5s,mb3.9,baz=107,slow=9.5,SNR=2.9						
ZALV	**Zalesovo Beam**	**54.35**	**321**	P	**P**	**21 09 27.0**	**-1.3**
ARCES	**ARCESS Array B**	**78.70**	**342**	P	**P**	**21 12 03.1**	**+0.2**
	3.7nm,1.1s,mb4.2,baz=69,slow=10.0,SNR=4.4						
PLCA	**Paso Flores**	**145.44**	**130**	PKPbc	PKPbc	21 19 40.2	+1.6
	1.1nm,0.4s,baz=237,slow=2.5,SNR=6.1						
PLCA	**Paso Flores**	**145.44**	**130**	PKPbc	PKPbc	21 19 40.2	+1.6

IDC 07 21:14:56.4±2.0**, 373S**×**13072E, h0**^{km}**, mb3.8**/3**, mb1 3.9**/4**, mb1mx3.6**/14**, mbtmp3.8**/4**, ML3.4**/1**, Error ellipse: s-maj=113.9km s-min=27.3km az=72.0, Seram**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.12**	**199**	Pn	Pn	21 18 30.7	-0.9
	0.1nm,0.3s,baz=32,slow=14,SNR=5.2						
WRA	**Warramunga Arr**	**16.50**	**168**	Pn	Pn	21 18 44.5	-4.9
	0.2nm,0.3s,baz=350,slow=11,SNR=18						
WRA				Sn	Sn	21 21 42.0	-11
	0.1nm,0.3s,baz=345,slow=22,SNR=4.5						
ASAR	**Alice Springs**	**20.06**	**171**	P	P	21 19 32.2	+0.9
	6.5nm,0.6s,baz=353,slow=11,SNR=92						
STKA	**Stephens Creek**	**29.81**	**161**	P	P	21 21 04.8	-0.4
	0.6nm,0.7s,baz=344,slow=7.4,SNR=4.1						
MKAR	**Makanchi Array**	**65.92**	**326**	P	P	21 25 44.4	+0.1
	0.2nm,0.3s,baz=114,slow=8.4,SNR=4.7						

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*TAP **07** 21:44:18.9, 22.14N×12033E, h43^{km}, ML2.8, D*
ISC 07 21:44:19.0±1.0**, 2211N**±004×**12031E**±006**, h46**^{km}±7^{km}**, n24, σ0**^{s}**60**/46**, 2D, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWP	**Hsiaoliuchiu**	**0.25**	**12**	P	**Pn**	**21 44 26.7**	**-0.6**
	baz=7.0						
TWP				S	**Sn**	**21 44 32.8**	**-0.4**
	baz=7.0						
SCZT	**Fangliau**	**0.39**	**47**	⇓*i*P	**Pn**	**21 44 28.1**	**-0.7**
	baz=49						
SCZT				*i* S	**Sn**	**21 44 35.3**	**-0.4**
	baz=49						
HEN	**Hengchun**	**0.41**	**104**	⇓*i*P	**Pn**	**21 44 28.9**	**-0.1**
	baz=109						
HEN				*e*S	**Sn**	**21 44 37.0**	**+1.0**
	baz=109						
KAU	**Kaohsiung**	**0.46**	**0**	*e*P	**Pn**	**21 44 30.0**	**+0.4**
	baz=357						
KAU				*e*S	**Sn**	**21 44 37.8**	**+0.8**
	baz=357						
TWK1	**Hengchun**	**0.49**	**109**	P	**Pn**	**21 44 29.9**	**0.0**
	baz=113						
TWK1				S	**Sn**	**21 44 38.4**	**+0.8**
	baz=113						
EAST	**Anshuo**	**0.57**	**61**	P	**Pn**	**21 44 30.8**	**-0.1**
	baz=63						
EAST				S	**Sn**	**21 44 39.8**	**+0.3**
	baz=63						
TAW	**Tawu**	**0.60**	**65**	*e*P	**Pn**	**21 44 30.2**	**-1.1**
	baz=67						
TAW				*e*S	**Sn**	**21 44 39.3**	**-0.8**
	baz=67						
SSD	**Sandimen**	**0.71**	**25**	P	**Pn**	**21 44 32.3**	**-0.4**
	baz=24						
SSD				*e*S	**Sn**	**21 44 42.1**	**-0.5**
	baz=24						
TWM1	**Shoushan**	**0.72**	**9**	*e*P	**Pn**	**21 44 33.5**	**+0.6**
	baz=7.0						
TWM1				*e*S	**Sn**	**21 44 44.7**	**+1.7**
	baz=7.0						
ECL	**Taimali**	**0.77**	**51**	P	**Pn**	**21 44 33.5**	**-0.1**
	baz=51						
ECL				S	**Sn**	**21 44 43.5**	**-0.7**
	baz=51						
TWG	**Pinlang**	**1.00**	**45**	P	**Pn**	**21 44 37.3**	**+0.6**
	baz=45						
TWG				*e*S	**Sn**	**21 44 49.6**	**-0.1**
	baz=45						
SGST	**Jiashian**	**1.01**	**15**	*e*P	**Pn**	**21 44 36.3**	**-0.4**
	baz=13						
SGST				*e*S	**Sn**	**21 44 49.9**	**+0.1**
	baz=13						
TTN	**Taitung**	**1.01**	**50**	*e*P	**Pn**	**21 44 36.4**	**-0.4**
	baz=50						
TTN				*e*S	**Sn**	**21 44 49.8**	**-0.1**
	baz=50						
CHN1	**Nanshi**	**1.09**	**11**	*e*P	**Pn**	**21 44 37.4**	**-0.6**
	baz=9.0						
CHN1				*e*S	**Sn**	**21 44 51.4**	**-0.6**
	baz=9.0						
STYT	**Tauyuan**	**1.13**	**21**	*e*P	**Pn**	**21 44 38.5**	**+0.1**
	baz=21						
STYT				*e*S	**Sn**	**21 44 52.7**	**-0.1**
	baz=21						
TWK	**Hsinying**	**1.17**	**8**	*e*P	**Pn**	**21 44 38.7**	**-0.3**
	baz=7.0						
TWK				*e*S	**Sn**	**21 44 53.2**	**-0.5**
	baz=7.0						
WTP	**Ta-pu**	**1.17**	**14**	*e*P	**Pn**	**21 44 39.7**	**+0.7**
	baz=13						
WTP				*e*S	**Sn**	**21 44 54.1**	**+0.4**
	baz=13						
ELDTW	**Lidau**	**1.26**	**31**	*e*P	**Pn**	**21 44 39.9**	**-0.3**
	baz=31						
ELDTW				*e*S	**Sn**	**21 44 56.3**	**+0.3**
	baz=31						
ALS	**Alishan**	**1.47**	**18**	*e*P	**Pn**	**21 44 43.6**	**+0.5**
	baz=17						
ALS				*e*S	**Sn**	**21 45 00.7**	**-0.5**
	baz=17						
YUS	**Yu-Shan**	**1.50**	**23**	*e*P	**Pn**	**21 44 43.3**	**-0.2**
	baz=23						
CHN5	**Tsauling**	**1.52**	**13**	*e*P	**Pn**	**21 44 43.4**	**-0.4**
	baz=12						
CHN5				*e*S	**Sn**	**21 45 02.0**	**-0.5**
	baz=12						
TWF1	**Yuli**	**1.54**	**36**	*e*P	**Pn**	**21 44 45.0**	**+0.9**
	baz=36						
TWF1				*e*S	**Sn**	**21 45 03.3**	**+0.4**
	baz=36						
EHY	**Hungye**	**1.68**	**34**	*e*S	**Sn**	**21 45 07.9**	**+1.6**
	baz=33						
TYC	**Yuchr**	**1.86**	**16**	*e*P	**Pn**	**21 44 48.7**	**+0.3**
	baz=15						
TYC				*e*S	**Sn**	**21 45 10.8**	**0.0**
	baz=15						

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*ISCJB **07** 21:47:30.9±0.7, 3277N±002×11735W±003, h3^{km}±4^{km}, Error ellipse: s-maj=4.8km s-min=3.4km az=145.1*
*ECX **07** 21:47:33.2±0.5, 3278N×11730W, h4^{km}±2^{km}, MD2.7, ML2.8*
ISC 07 21:47:31.5±0.6**, 3277N**±002×**11735W**±003**, h12**^{km}±4^{km}**, n22, σ0**^{s}**62**/38**, 14C-15D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
109C	**Camp Elliot, M**	**0.23**	**59**	P	**Pg**	**21 47 36.9**	**+0.5**
	baz=0.2,SNR=76						
109C				⇓S	**Sg**	**21 47 40.6**	**+0.8**
	baz=0.2						
DPP	**Dos Picos Cty**	**0.41**	**56**	⇓*e*P	**Pg**	**21 47 40.0**	**+0.4**
EML	**El Monte Cty P**	**0.44**	**74**	⇓*e*P	**Pg**	**21 47 40.4**	**+0.3**
CBX	**Cerro Bola**	**0.73**	**128**	⇑*e*P	**Pg**	**21 47 45.8**	**+0.2**
CBX				*e*S	**Sg**	**21 47 55.8**	**+0.5**
MONP	**Monument Peak**	**0.79**	**81**	P	**Pg**	**21 47 46.5**	**-0.2**
	baz=0.8,SNR=186						
MONP				⇑S	**Sg**	**21 47 57.0**	**0.0**
	baz=0.8						
MURC	**Murrieta**	**0.84**	**8**	⇑P	**Pg**	**21 47 47.5**	**-0.2**
	baz=0.8,SNR=28						
MURC				⇑S	**Sg**	**21 47 59.2**	**+0.6**
	baz=0.8						
SCI	**San Clemente I**	**1.03**	**282**	⇓S	**Sb**	**21 48 05.0**	**+0.2**
	baz=1.0						
DVTC	**Desert V Tower**	**1.05**	**96**	⇑P	**Pb**	**21 47 51.1**	**-0.5**
	baz=1.0						
DVTC				⇑Sb	**Sb**	**21 48 05.2**	**-0.2**
	baz=1.0						
ENX	**Ensenada**	**1.05**	**147**	*e*P	**Pb**	**21 47 51.5**	**-0.2**
ENX				*e*S	**Sb**	**21 48 05.7**	**+0.3**
ENX				⇓*e*		21 48 07.7	
	comp=E,349nm,0.3s						
RMX	**La Rumorosa**	**1.08**	**99**	⇓*e*P	**Pb**	**21 47 52.0**	**-0.1**
RMX				*e*S	**Sb**	**21 48 06.0**	**-0.2**
CIS	**Catalina Islan**	**1.09**	**306**	⇑P	**Pb**	**21 47 51.9**	**-0.4**
	baz=1.1						
CIS				⇑S	**Sb**	**21 48 06.6**	**+0.1**
	baz=1.1						
PFO	**Pinyon Flat Ob**	**1.12**	**41**	⇑Pg	**Pg**	**21 47 52.8**	**-0.3**
	baz=1.1,SNR=160						
PFO				⇓S	**Sb**	**21 48 06.9**	**-0.5**
	baz=1.1						
PBX	**Punta Banda**	**1.15**	**153**	*e*P	**Pb**	**21 47 53.4**	**+0.1**
PBX				*e*S	**Sb**	**21 48 08.8**	**+0.6**
PBX				⇑*e*		21 48 10.6	
	comp=N,234nm,0.4s						
ECNX	**Esteban Cantu**	**1.28**	**150**	*e*P	**Pn**	**21 47 55.2**	**+0.1**
ECNX				*e*S	**Sb**	**21 48 06.2**	**-5.7**
ECNX				*e*S	**Sb**	**21 48 12.7**	**+0.9**
SWSC	**Sam W. Stewart**	**1.31**	**82**	⇓Pg	**Pg**	**21 47 56.4**	**-0.4**
	baz=1.3,SNR=72						
SWSC				⇑Sb	**Sb**	**21 48 13.0**	**+0.1**
	baz=1.3						
BFSC	**Mount Baldy St**	**1.49**	**350**	⇓Pb	**Pb**	**21 47 58.9**	**-0.2**
	baz=1.5,SNR=5.8						
BFSC				⇑Sb	**Sb**	**21 48 18.5**	**+0.5**
	baz=1.5						
BBRC	**Big Bear Sol-O**	**1.53**	**13**	⇑Sb	**Sb**	**21 48 20.4**	**+1.3**
	baz=1.5						
BELC	**Belle Mtn.**	**1.67**	**42**	⇓Pb	**Pb**	**21 48 01.7**	**-0.4**
	baz=1.7,SNR=49						
BELC				⇓Sb	**Sb**	**21 48 24.1**	**+1.0**
	baz=1.7						
BC3	**Big Chuckw Mtn**	**1.81**	**60**	⇓Pb	**Pb**	**21 48 03.7**	**-0.9**
	baz=1.8,SNR=33						
GLA	**Glamis**	**2.14**	**82**	⇓Pb	**Pb**	**21 48 07.8**	**-2.3**
	baz=2.1,SNR=6.4						
GLA				⇓Sb	**Sb**	**21 48 37.0**	**+0.5**
	baz=2.1						
HEC	**Hector,Ludlow**	**2.22**	**22**	⇓Pg	**Pg**	**21 48 12.8**	**-1.3**
	baz=2.2,SNR=8.8						
IRM	**Iron Mountain**	**2.30**	**52**	⇑Pg	**Pg**	**21 48 14.8**	**-0.7**
	baz=2.3,SNR=7.1						

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*JMA **07** 21:47:33.1±0.3, 2238N×12261E, h86^{km}, M3.0*
TAP 07 21:47:32.0, 2236N×**12231E, h20**^{km}**, ML3.4, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.77**	**246**	*i* P	Pb	21 47 46.3	-0.4
	baz=245						
LAY				*i* S	Sb	21 47 56.6	-0.1
	baz=245						
CHKT	**Chengkung**	**1.14**	**311**	*e*P	Pn	21 47 52.0	-0.9
	baz=310						
CHKT				*e*S	Sb	21 48 06.3	-1.3
	baz=310						
TWG	**Pinlang**	**1.23**	**292**	P	Pn	21 47 54.4	+0.3
	baz=292						
TWG				S	Sb	21 48 10.2	+0.1
	baz=292						
ECL	**Taimali**	**1.28**	**281**	P	Pn	21 47 54.8	+0.1
	baz=280						
ECL				S	Sn	21 48 11.1	-0.1
	baz=280						
EAST	**Anshuo**	**1.35**	**271**	*i* P	Pn	21 47 55.8	+0.1
	baz=271						
EAST				S	Sn	21 48 12.9	-0.3
	baz=271						
TWF1	**Yuli**	**1.36**	**317**	P	Pn	21 47 55.4	-0.6
	baz=316						
TWF1				S	Sn	21 48 13.3	-0.1
	baz=316						
ELDTW	**Lidau**	**1.45**	**305**	*e*P	Pn	21 47 56.9	-0.3
	baz=304						
ELDTW				*e*S	Sn	21 48 14.7	-1.0
	baz=304						
TWK1	**Hengchun**	**1.45**	**254**	*e*P	Pn	21 47 57.8	+0.7
	baz=253						
TWK1				*e*S	Sn	21 48 15.0	-0.6
	baz=253						
EHY	**Hungye**	**1.46**	**322**	*e*P	Pn	21 47 57.2	-0.1
	baz=321						
EHY				*e*S	Sn	21 48 15.6	-0.3
	baz=321						
HEN	**Hengchun**	**1.50**	**257**	*e*P	Pn	21 47 58.7	+1.0
	baz=256						
HEN				*e*S	Sn	21 48 16.6	-0.1
	baz=256						
SCZT	**Fangliau**	**1.56**	**271**	*e*P	Pn	21 47 59.4	+0.7
	baz=270						
SCZT				*e*S	Sn	21 48 20.4	+2.1
	baz=270						
SSD	**Sandimen**	**1.60**	**284**	*e*P	Pn	21 47 59.7	+0.6
	baz=284						
STYT	**Tauyuan**	**1.64**	**300**	*e*P	Pn	21 48 00.7	+1.0
	baz=299						
STYT				S	Sn	21 48 21.2	+0.9
	baz=299						
ESL	**Shilin**	**1.66**	**331**	*e*P	Pn	21 47 59.7	-0.3
	baz=330						
ESL				*e*S	Sn	21 48 19.9	-0.9
	baz=330						
YUS	**Yu-Shan**	**1.69**	**312**	*e*P	Pn	21 48 01.2	+0.8
	baz=311						
YUS				*e*S	Sn	21 48 21.1	-0.2
	baz=311						
SGST	**Jiashian**	**1.75**	**295**	*e*P	Pn	21 48 02.7	+1.4
	baz=294						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SGST				eS	Sn	21 48 24.4	+1.4
	baz=294						
WTP	**Ta-pu**	**1.80**	**300**	eP	Pn	21 48 03.6	+1.7
	baz=299						
WTP				eS	Sn	21 48 26.5	+2.4
	baz=299						
ALS	**Alishan**	**1.80**	**310**	eP	Pn	21 48 03.4	+1.5
	baz=309						
ALS				eS	Sn	21 48 26.0	+1.8
	baz=309						
TWM1	**Shoushan**	**1.81**	**285**	eP	Pn	21 48 02.2	+0.3
	baz=284						
CHN1	**Nanshi**	**1.84**	**297**	eP	Pn	21 48 04.6	+2.1
	baz=296						
CHN1				eS	Sn	21 48 27.5	+2.4
	baz=296						
CHN4	**Tsaushan**	**1.87**	**302**	eP	Pn	21 48 03.7	+0.9
	baz=302						
TWK	**Hsinying**	**1.91**	**299**	eP	Pn	21 48 05.5	+2.1
	baz=298						
CHN5	**Tsauling**	**1.95**	**310**	eP	Pn	21 48 05.8	+1.8
	baz=309						
SMLT	**Sun Moon Lake**	**2.00**	**320**	eP	Pn	21 48 06.0	+1.4
	baz=319						
SMLT				eS	Sn	21 48 30.1	+1.0
	baz=319						
WHF	**Hehuan Shan**	**2.02**	**332**	eP	Pn	21 48 05.1	+0.1
	baz=331						
WHF				eS	Sn	21 48 29.2	-0.5
	baz=331						
TYC	**Yuchr**	**2.04**	**319**	eP	Pn	21 48 06.8	+1.6
	baz=319						
TYC				eS	Sn	21 48 31.1	+1.0
	baz=319						
ENA	**Nanau**	**2.13**	**346**	P	Pn	21 48 06.4	0.0
	baz=345						
ENA				eS	Sn	21 48 32.3	0.0
	baz=345						
HATJ	**Hateruma jima**	**2.18**	**39**	P	Pn	21 48 05.6	-1.6
HATJ				S	Sn	21 48 30.2	-3.4
NNS	**Nan Shan**	**2.25**	**338**	eP	Pn	21 48 08.9	+0.8
	baz=337						
NNS				eS	Sn	21 48 34.7	-0.5
	baz=337						
TWC	**Suao**	**2.28**	**349**	eP	Pn	21 48 09.1	+0.6
	baz=349						
TWC				eS	Sn	21 48 36.5	+0.3
	baz=349						
IRIF	**Iriomote-Funau**	**2.36**	**33**	P	Pn	21 48 08.4	-1.3
IRIF				S	Sn	21 48 35.3	-2.8
ENTT	**Nioudou**	**2.38**	**343**	eP	Pn	21 48 10.6	+0.8
	baz=343						
ENTT				eS	Sn	21 48 38.7	+0.3
	baz=343						
TWQ1	**Liyutan**	**2.44**	**325**	eP	Pn	21 48 12.0	+1.3
	baz=324						
JKRS	**Kuro-shima**	**2.44**	**40**	P	Pn	21 48 09.4	-1.3
JKRS				S	Sn	21 48 36.6	-3.4
JIJ	**Ishigaki jima**	**2.62**	**40**	P	Pn	21 48 11.1	-2.0
JIJ				S	Sn	21 48 39.8	-4.5
JTJ	**Tarama**	**3.16**	**44**	P	Pn	21 48 18.9	-1.8
JTJ				S	Sn	21 48 53.7	-4.1

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*DDA **07** 21:54:28.0, 37.62N×29.85E, h6^{km}±3^{km}, Md3.2*
*ISCJB **07** 21:54:28.9±0.5, 37.60N±0.03×29.89E±0.04, h8^{km}±6^{km}, Error ellipse: s-maj=5.3km s-min=4.5km az=151.2*
*CSEM **07** 21:54:28.0±0.1, 37.66N×29.91E, h5^{km}, MD3.2, Error ellipse: s-maj=2.7km s-min=1.8km az=21.0*
*ISK **07** 21:54:28.1, 37.67N×29.93E, h8^{km}, MD3.3*
*NEIC **07** 21:54:28.0, 37.64N×29.91E, h11^{km}, MD3.3(ISK), ML3.2(ATH), After ISK.*
ISC 07 21:54:29.3±0.5, **37.62N**±0.04×**29.89E**±0.04, **h8**^{km}±5^{km}, **n24**, σ1^{s}**09**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.46**	**215**	eP	**Pg**	**21 54 36.4**	**-1.9**
GOLH				i S	**Sg**	**21 54 44.4**	**0.0**
ISP	**Isparta**	**0.54**	**65**	ePG	**Pg**	**21 54 38.1**	**-1.6**
ISP				eSG	**Sg**	**21 54 47.3**	**+0.5**
ISP	**Isparta**	**0.54**	**65**	P	**Pg**	**21 54 39.8**	**0.0**
ISP	**Isparta**	**0.54**	**65**	P	**Pg**	**21 54 39.8**	**0.0**
TKTP	**Tekketepe**	**0.54**	**39**	i P	**Pg**	**21 54 39.1**	**-0.7**
TKTP				i S	**Sg**	**21 54 51.7**	**+4.8**
DENT	**Denizli**	**0.69**	**281**	ePG	**Pg**	**21 54 42.2**	**-0.5**
DENT				eSG	**Sg**	**21 54 52.9**	**+1.1**
ANTB	**Antalya**	**0.94**	**139**	ePG	**Pg**	**21 54 47.4**	**-0.1**
ANTB				eSG	**Sg**	**21 55 00.7**	**+1.1**
ANTB	**Antalya**	**0.94**	**139**	ePg	**Pg**	**21 54 47.0**	**-0.4**
ANTB				eSg	**Sg**	**21 55 00.7**	**+1.1**
BOLV	**Bolvadin**	**1.38**	**37**	i P	**Pn**	**21 54 54.5**	**-0.4**
AKAS	**Kas**	**1.40**	**189**	i P	**Pn**	**21 54 54.3**	**-0.9**
GDZ	**Gediz**	**1.50**	**348**	i P	**Pn**	**21 54 56.2**	**-0.4**
GDZ				i S	**Sg**	**21 55 21.9**	**+4.2**
AYDN	**Tasoluk**	**1.60**	**272**	i P	**Pn**	**21 54 57.6**	**-0.3**
AYDN				i S	**Sn**	**21 55 18.7**	**0.0**
ARG	**Arkhangelos**	**1.99**	**226**	P	**Pn**	**21 55 05.7**	**+2.4**
KIZT	**Kizilcal**	**2.01**	**51**	ePN	**Pn**	**21 55 03.4**	**-0.2**
KIZT	**Kizilcal**	**2.01**	**51**	ePn	**Pn**	**21 55 02.5**	**-1.1**
BDRM	**Kayabasi**	**2.03**	**255**	i P	**Pn**	**21 55 00.2**	**-3.6**
ESKT	**Eskisehir**	**2.04**	**21**	eP	**Pn**	**21 55 07.0**	**+3.0**
ESKT				i S	**Sg**	**21 55 41.5**	**+6.5**
AKHS	**Akhisar**	**2.06**	**308**	i P	**Pn**	**21 55 03.3**	**-1.0**
AKS	**Akhisar**	**2.06**	**308**	ePN	**Pn**	**21 55 04.0**	**-0.3**
IZM	**Izmir**	**2.22**	**291**	ePN	**Pn**	**21 55 06.1**	**-0.3**
BLCB	**Balcova**	**2.38**	**290**	ePN	**Pn**	**21 55 08.0**	**-0.6**
SMG	**Samos**	**2.42**	**273**	P	**Pn**	**21 55 10.0**	**+0.7**
ZKR	**Zakros**	**3.88**	**231**	P	**Pn**	**21 55 32.6**	**+3.3**
NPS	**Neapolis**	**4.17**	**237**	P	**Pn**	**21 55 34.8**	**+1.5**

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*KNET **07** 22:09:12.4±0.5, 41.96N×73.35E, h18^{km}±1^{km}, ml3.1, Error ellipse: s-maj=2.6km s-min=2.5km az=38.0*
*ISCJB **07** 22:09:13.7±0.9, 41.99N±0.06×73.42E±0.05, h10^{km}, Error ellipse: s-maj=8.2km s-min=4.9km az=171.1*
ISC 07 22:09:13.7±1.0, **41.95N**±0.06×**73.40E**±0.05, **h10**^{km}, **n11**, σ**0**^{s}**95**/20, **6C-11D**, **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.28**	**50**	⇓P	**Pg**	**22 09 18.9**	**-0.5**
	138nm,0.1s,SNR=281						
AML				⇑S	**Sg**	**22 09 25.1**	**+1.9**
	2µm,0.3s						
EKS2	**Erkin-Say**	**0.76**	**21**	P	**Pg**	**22 09 27.0**	**-1.4**
	51nm,0.2s,SNR=233						
EKS2				⇑S	**Sg**	**22 09 38.5**	**+0.1**
	81nm,0.1s						
UCH	**Uchtor**	**0.87**	**71**	⇓P	**Pg**	**22 09 29.7**	**-0.8**
	45nm,0.2s,SNR=38						
AAK	**Ala-Archa**	**1.06**	**49**	⇓P	**Pg**	**22 09 32.9**	**-1.1**
	58nm,0.4s,SNR=19						
AAK				⇑S	**Sg**	**22 09 48.2**	**+0.4**
	84nm,0.2s						
KBK	**Karagaybulak**	**1.34**	**58**	⇓P	**Pn**	**22 09 38.2**	**-0.3**
	41nm,0.1s,SNR=72						
KBK				⇓S	**Sg**	**22 09 57.8**	**+0.8**
	547nm,0.4s						
KZA	**Kyzart**	**1.38**	**84**	⇑P	**Pn**	**22 09 39.2**	**+0.2**
	57nm,0.1s,SNR=15						
KZA				⇓S	**Sg**	**22 09 59.1**	**+1.0**
	248nm,0.2s						
CHMS	**Chumysh**	**1.45**	**43**	⇓P	**Pn**	**22 09 39.8**	**-0.1**
	49nm,0.3s,SNR=46						
CHMS				⇑S	**Sg**	**22 10 00.3**	**0.0**
	104nm,0.2s						
USP	**Ospenovka**	**1.54**	**31**	P	**Pn**	**22 09 41.2**	**0.0**
	150nm,0.2s,SNR=218						
USP				⇓S	**Sg**	**22 10 03.1**	**-0.3**
	294nm,0.2s						
TKM2	**Tokmak 2**	**1.89**	**58**	⇓Pn	**Pg**	**22 09 47.7**	**-2.2**
	32nm,0.3s						
TKM2				⇓Sn	**Sg**	**22 10 14.0**	**-0.5**
	639nm,0.8s						
TKM2	**Tokmak 2**	**1.89**	**58**	⇓P	**Pn**	**22 09 47.7**	**+1.6**
	83nm,0.3s,SNR=164						
KK31	**Karatay Array**	**2.43**	**299**	⇑Pn	**Pn**	**22 09 53.3**	**-0.1**
	8.7nm,0.3s,baz=120,slow=12,SNR=367						
KK31				Sn	**Sn**	**22 10 24.4**	**+1.3**
	53nm,0.4s,baz=122,slow=27,SNR=20						

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*ISCJB **07** 22:17:01.4±0.5, 72.31N±0.05×17E±0.2, h10^{km}, mb3.8/7, MS3.2/8, Error ellipse: s-maj=8.2km s-min=6.3km az=142.8*
*IDC **07** 22:17:02.2±0.9, 72.24N×13.5E, h0^{km}, mb3.8/6, mb1 3.9/11, mb1mx3.7/28, mbtmp3.8/11, ML3.6/6, MS3.1/10, Ms1 3.1/10, ms1mx2.8/44, Error ellipse: s-maj=21.7km s-min=15.3km az=49.0*
*MOS **07** 22:17:02.4±1.8, 72.34N×20.2E, h10^{km}, mb4.0/5, Error ellipse: s-maj=41.1km s-min=7.4km az=95.9*
*NAO **07** 22:17:02.9±3.8, 72.14N×20.5E, ML2.6*
*CSEM **07** 22:17:03.6±0.2, 72.18N×08.7E, h10^{km}, mb3.8/4, Error ellipse: s-maj=12.8km s-min=2.0km az=90.0*
*NEIC **07** 22:17:03.7±0.4, 72.29N×13.4E, h10^{km}, mb4.2/2, Error ellipse: s-maj=8.4km s-min=6.1km az=72.0*
*BER **07** 22:17:05.4±3.6, 72.33N×1.10E, h15^{km}±42^{km}, MD2.5, ML2.6, ML2.6(NAO)*
ISC 07 22:17:02.7±3.2, **72.30N**±0.05×**16E**±0.2, **h0**^{km}±23^{km}, **n59**, σ**1**^{s}**23**/60, **mb3.8**/7, **MS3.2**/8, **Norwegian Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**3.47**	**253**	Pn	**Pn**	**22 17 54.9**	**-2.9**
	13nm,0.3s,baz=143,slow=6.6,SNR=11						
JMIC	**Jan Mayen**	**3.47**	**253**	eP	**Pn**	**22 17 55.2**	**-2.5**
	SNR=50						
LOF	**Lofoten**	**5.81**	**130**	eP	**Pn**	**22 18 31.5**	**+1.6**
LOF				eS	**Sn**	**22 19 34.0**	**-3.0**
LOF				AML	AML	22 19 39.4	
	comp=Z,6.2nm,0.5s						
LOF	**Lofoten**	**5.81**	**130**	eP	**Pn**	**22 18 31.5**	**+1.6**
LOF				eS	**Sn**	**22 19 34.0**	**-3.0**
TRO	**Tromso**	**6.25**	**107**	eP	**Pn**	**22 18 35.1**	**-0.7**
SPB4	**Spitsbergen Ar**	**6.97**	**26**	ePn	**Pn**	**22 18 47.4**	**+1.7**
SPB4	**Spitsbergen Ar**	**6.97**	**26**	ePn	**Pn**	**22 18 47.4**	**+1.6**
SPA0	**Spitsbergen Ar**	**6.97**	**26**	Pn	**Pn**	**22 18 46.4**	**+0.6**
	baz=220,slow=16						
SPITS	**Spitsbergen Ar**	**6.97**	**26**	Pn	**Pn**	**22 18 46.5**	**+0.7**
	baz=230,slow=15,SNR=32						
KBS	**Kingsbay**	**7.12**	**16**	Pn	**Pn**	**22 18 47.9**	**+0.1**
MOR8	**Moi Rana**	**7.64**	**137**	eP	**Pn**	**22 18 54.8**	**-0.1**
MOR8				eS	**Sn**	**22 20 16.2**	**-5.7**
MOR8				AML	AML	22 20 21.4	
	comp=Z,9.8nm,0.5s						
MOR8	**Moi Rana**	**7.64**	**137**	eP	**Pn**	**22 18 54.8**	**-0.1**
MOR8				eS	**Sn**	**22 20 16.2**	**-5.7**
KTK1	**Kautokeino**	**7.87**	**104**	eP	**Pn**	**22 18 58.8**	**+0.8**
ARCES	**ARCESS Array B**	**8.26**	**98**	Pn	**Pn**	**22 19 01.8**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=309,slow=13,SNR=14						
ARCES	**ARCESS Array B**	**8.26**	**98**	P	**Pn**	**22 19 01.8**	**-1.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**8.26**	**98**	Pn	**Pn**	**22 19 01.8**	**-1.7**
ARA0	**ARCESS Array S**	**8.27**	**98**	Pn	**Pn**	**22 19 01.1**	**-2.3**
	baz=301,slow=12						
NSS	**Namsos**	**8.67**	**149**	eS	**Sn**	**22 20 38.7**	**-8.6**
NSS				AML	AML	22 20 44.2	
	comp=Z,7.4nm,0.4s						
NB2	**NORSAR Subarra**	**11.90**	**157**	Pn	**Pn**	**22 19 52.5**	**-0.8**
	baz=352,slow=16						
NOA	**NORSAR Array B**	**11.90**	**157**	Pn	**Pn**	**22 19 53.5**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=341,slow=9.9,SNR=3.4						
NOA				Sn	**Sn**	**22 21 58.2**	**-8.3**
	baz=324,slow=20						
NOA				LR	LR	22 24 00.9	
	comp=Z,42nm,18.6s,baz=345,slow=35						
NOA	**NORSAR Array B**	**11.90**	**157**	Pn	**Pn**	**22 19 53.5**	**+0.2**
NOA				Sn	**Sn**	**22 21 58.2**	**-8.3**
NOA	**NORSAR Array B**	**11.90**	**157**	Pn	**Pn**	**22 19 53.5**	**+0.3**
NOA				Sn	**Sn**	**22 21 58.2**	**-8.3**
NOA				LR	LR	22 24 00.9	
SUMG	**Summit**	**11.95**	**290**	ePn	**Pn**	**22 19 53.0**	**-0.8**
	comp=Z,1.6nm,0.6s						
SUMG	**Summit**	**11.95**	**290**	ePn	**Pn**	**22 19 53.0**	**-0.8**
	comp=Z,1.6nm,0.6s						
HFS	**Hagfors**	**13.11**	**153**	Pn	**Pn**	**22 20 08.4**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=356,slow=14,SNR=10						
HFS				Sn	**Sn**	**22 22 23.2**	**-13**
	comp=Z,0.1nm,0.3s,baz=360,slow=26,SNR=3.2						
HFS				LR	LR	22 25 08.8	
	comp=Z,32nm,20.2s,baz=349,slow=37						
HFS	**Hagfors**	**13.11**	**153**	P	**Pn**	**22 20 08.7**	**-1.0**
	baz=341,slow=16						
HFS				Sn	**Sn**	**22 22 25.0**	**-11**
	baz=359,slow=22						
FIA0	**FINESS Array S**	**14.36**	**127**	P	**Pn**	**22 20 25.4**	**-1.3**
	baz=315,slow=14						
EKA	**Eskdalemuir Ar**	**17.15**	**189**	P	**Pn**	**22 21 02.2**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=5.8,slow=11,SNR=4.7						
SUW	**Suwalki**	**20.53**	**142**	eP	**P**	**22 21 44.2**	**+2.1**
SUW				pmax	pmax		
	comp=Z,21nm,0.7s						
SUW	**Suwalki**	**20.53**	**142**	eP	**P**	**22 21 44.2**	**+2.1**
	comp=Z,21nm,0.7s						
BRG	**Berggiesshubel**	**22.19**	**159**	eP	**P**	**22 22 06.0**	**+6.1**
BRG				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb3.8						
BRG	**Berggiesshubel**	**22.19**	**159**	eP	**P**	**22 22 06.0**	**+6.1**
	comp=Z,12nm,1.6s,mb4.1						
NKC	**Novy Kostel**	**22.67**	**162**	eP	**P**	**22 22 05.8**	**+0.8**
UPC	**Upice**	**22.79**	**156**	eP	**P**	**22 22 06.9**	**+0.6**
DPC	**Dobruska-Polom**	**22.99**	**155**	eP	**P**	**22 22 09.4**	**+1.0**
GRA1	**Grafenberg Arr**	**23.09**	**164**	eP	**P**	**22 22 11.3**	**+1.8**
GRF	**Grafenberg Arr**	**23.09**	**164**	eP	**P**	**22 22 11.3**	**+1.8**
PRU	**Pruhonice**	**23.13**	**158**	eP	**P**	**22 22 10.9**	**+1.0**
OKC	**Ostrava-Krasne**	**23.73**	**153**	eP	**P**	**22 22 17.4**	**+1.4**
KHC	**Kasperske Hory**	**23.87**	**160**	eP	**P**	**22 22 17.9**	**+0.6**
VRAC	**Vranov**	**24.04**	**155**	P	**P**	**22 22 19.1**	**+0.3**
	comp=Z,4.7nm,0.7s,mb4.1,baz=350,slow=9.5,SNR=10						
VRAC	**Vranov**	**24.04**	**155**	P	**P**	**22 22 19.1**	**+0.2**
VRAC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GERES	**GERESS Array B**	**24.17**	**160**	P	**P**	**22 22 21.3**	**+1.3**
	comp=Z,1.4nm,0.7s,mb3.6,baz=346,slow=9.6,SNR=12						
GERES				LR	LR	22 31 07.9	
	comp=Z,25nm,18.4s,MS2.7,baz=308,slow=35						
GERES	**GERESS Array B**	**24.17**	**160**	P	**P**	**22 22 21.3**	**+1.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES				MLR	MLR		
	comp=Z,25nm,18.4s						
AKASG	**Malin Array Be**	**24.88**	**136**	P	**P**	**22 22 26.1**	**-0.5**
	comp=Z,3.7nm,0.6s,mb4.3,baz=340,slow=9.1,SNR=5.9						
AKASG	**Malin Array Be**	**24.88**	**136**	P	**P**	**22 22 26.1**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZALV	**Zalesovo Beam**	**37.87**	**73**	LR	LR	22 42 00.3	
	comp=Z,25nm,19.8s,MS3.0,baz=310,slow=40						
YKA	**Yellowknife Ar**	**38.70**	**318**	P	**P**	**22 24 26.6**	**-0.9**
	comp=Z,1.3nm,0.8s,mb3.6,baz=22,slow=8.3,SNR=2.7						
YKA				LR	LR	22 40 31.2	
	comp=Z,18nm,21.3s,MS2.9,baz=195,slow=36						
YKA	**Yellowknife Ar**	**38.70**	**318**	P	**P**	**22 24 26.6**	**-0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA				MLR	MLR		
	comp=Z,18nm,21.3s						
MKAR	**Makanchi Array**	**43.46**	**80**	LR	LR	22 44 31.3	
	comp=Z,22nm,18.8s,MS3.1,baz=182,slow=38						
ULM	**Lac du Bonnet**	**45.23**	**296**	LR	LR	22 43 42.8	
	comp=Z,65nm,21.7s,MS3.5,baz=199,slow=35						
TORD	**Torodi Ar. Bea**	**59.12**	**180**	P	**P**	**22 27 03.5**	**-1.1**
	comp=Z,0.5nm,0.6s,mb3.8,baz=355,slow=6.9,SNR=14						
TORD	**Torodi Ar. Bea**	**59.12**	**180**	P	**P**	**22 27 03.5**	**-1.1**
ANMO	**Albuquerque**	**62.30**	**298**	LR	LR	22 55 19.6	
	comp=Z,38nm,18.8s,MS3.6,baz=157,slow=37						
TXAR	**Lajitas Array**	**66.82**	**294**	P	**P**	**22 27 54.8**	**-0.9**
	comp=Z,0.2nm,0.5s,mb3.6,baz=48,slow=4.0,SNR=3.2						
PCRV	**Puerto La Cruz**	**73.24**	**250**	LR	LR	22 56 48.1	
	comp=Z,37nm,18.5s,MS3.7,baz=196,slow=33						
SDV	**Santo Domingo**	**76.22**	**256**	LR	LR	22 55 49.3	
	comp=Z,21nm,21.2s,MS3.4,baz=342,slow=31						
MAW	**Mawson**	**145.38**	**144**	PKPbc	PKPbc	22 36 39.3	-0.9
	comp=Z,1.3nm,0.6s,baz=315,slow=3.3,SNR=3.7						
MAW	**Mawson**	**145.38**	**144**	PKIKP	PKPdf	22 36 39.3	-0.9
MAW				pmax	pmax		
	comp=Z,1.0nm,0.6s						

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*ISCJB **07** 22:40:36.2±0.6, 25.25S±0.08×176.7W±0.1, h32^{km}, mb4.1/10, MS3.8/4, Error ellipse: s-maj=18.9km s-min=10.7km az=15.7*
*IDC **07** 22:40:37.2±0.7, 25.22S×176.71W, h29^{km}±4^{km}, mb3.9/8, mb1 4.1/8, mb1mx4.0/14, mbtmp3.8/8, MS3.8/5, Ms1 3.7/5, ms1mx3.3/27, Error ellipse: s-maj=30.4km s-min=21.2km az=161.0*
*NEIC **07** 22:40:37.3±0.6, 24.85S×176.65W, mb4.6/2, Error ellipse: s-maj=26.2km s-min=14.0km az=121.0*
ISC 07 22:40:38.0±0.6, **25.23S**±0.08×**176.7W**±0.1, **h35**^{km}, **h31**^{km}±2.8^{km}**:pP-P**, **n42**, σ**0**^{s}**85**/20, **mb4.1**/10, **MS3.8**/4, **1C**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.16**	**195**	Sn	**Sn**	**22 42 26.3**	**+0.1**
	80nm,0.3s,baz=77,slow=18,SNR=3.9						
AFI	**Afiamalu**	**12.17**	**23**	Pn	**Pn**	**22 43 22.5**	**-6.3**
	8.0nm,0.3s,baz=286,slow=20,SNR=7.2						
AFI	**Afiamalu**	**12.17**	**23**	Pn	**Pn**	**22 43 22.5**	**-6.3**
URZ	**Urewera**	**14.02**	**201**	Pn	**Pn**	**22 44 00.3**	**+6.3**
	0.7nm,0.3s,baz=94,slow=14,SNR=3.6						
URZ				Sn	**Sn**	**22 46 15.9**	**-13**
	0.2nm,0.3s,baz=210,slow=20,SNR=2.5						
RAR	**Rarotonga**	**16.04**	**79**	LR	LR	22 48 38.6	
	comp=Z,236nm,20.6s,baz=226,slow=30						
RPZ	**Rata Peaks**	**20.99**	**205**	LR	LR	22 53 01.4	
	comp=Z,436nm,21.1s,MS3.8,baz=338,slow=36						
PAE	**Paea**	**26.29**	**79**	eT		23 12 57.6	
	459nm,0.3s						
PPT	**Papeete**	**26.32**	**79**	eLQ		22 51 16.2	
	288nm,23.8s						
PPT				eLQ		22 51 16.2	
	288nm,23.8s						
PPT				eLR	LR	22 52 31.1	
	191nm,23.2s,baz=246						
PPT				eLR	LR	22 52 31.1	
	191nm,23.2s,baz=246						
PPT	**Papeete**	**26.32**	**79**	LR	LR	22 54 02.4	
	comp=Z,166nm,19.0s,MS3.6,baz=276,slow=31						
TVO	**Taravao**	**26.53**	**79**	eT		23 13 16.0	
	76nm,0.3s						
MEH	**Mehetia**	**27.56**	**80**	eT		23 14 32.6	
	5µm,0.3s						
VAH	**Vaihoa**	**28.95**	**76**	eT		23 16 18.1	
	12nm,0.2s						
STKA	**Stephens Creek**	**37.08**	**250**	P	**P**	**22 47 45.5**	**+0.6**
	0.7nm,0.4s,mb3.9,baz=86,slow=15,SNR=3.8						
STKA				LR	LR	23 00 24.3	
	comp=Z,80nm,19.4s,MS3.5,baz=30,slow=32						
RKT	**Rikitea**	**38.00**	**96**	eT		23 27 31.3	
	4.9nm,0.4s						
ASAR	**Alice Springs**	**44.81**	**261**	P	**P**	**22 48 48.6**	**-0.1**
	1.1nm,0.5s,mb4.0,baz=94,slow=7.8,SNR=14						
WRA	**Warramunga Arr**	**45.34**	**266**	P	**P**	**22 48 51.4**	**-1.5**
	0.5nm,0.5s,mb3.6,baz=103,slow=7.9,SNR=7.1						
WRA				PcP	PcP	22 50 32.3	+0.1
	0.4nm,0.7s,baz=109,slow=3.1,SNR=4.2						
MAW	**Mawson**	**77.55**	**200**	P	**P**	**22 52 30.6**	**+0.8**
	2.2nm,0.6s,mb4.3,baz=120,slow=7.3,SNR=5.1						
MAW				LR	LR	23 25 45.8	
	comp=Z,84nm,18.3s,MS4.1,baz=254,slow=35						
SNAA	**Sanae**	**83.27**	**178**	e	**P**	**22 52 59.9**	**-0.6**
SNAA				e		22 53 25.3	
SNAA	**Sanae**	**83.27**	**178**	eP	**P**	**22 53 00.5**	**0.0**
	4.5nm,1.0s,mb4.5						
VNA3	**Neumayer Olymp**	**83.36**	**176**	e	**P**	**22 53 00.3**	**-0.7**
VNA3				e		22 53 06.4	
VNA3				e		22 53 25.9	
NVAR	**Mina Array Bea**	**83.65**	**42**	P	**P**	**22 53 03.8**	**+0.9**
	0.3nm,0.5s,mb3.7,baz=219,slow=8.0,SNR=4.5						
NVAR				pP	pP	22 53 13.4	-0.4
	1.3nm,0.9s,baz=218,slow=8.0,SNR=6.8						
VNA2	**Neumayer--Watz**	**83.82**	**176**	e	**P**	**22 53 03.2**	**-0.1**
VNA2				e	pP	22 53 10.7	-3.7
VNA2				e		22 53 28.5	
VNA1	**Neumayer--Stat**	**84.04**	**176**	e	**P**	**22 53 04.8**	**+0.4**
VNA1				e		22 53 10.3	
PLCA	**Paso Flores**	**85.16**	**133**	P	**P**	**22 53 10.2**	**-0.5**
	1.6nm,0.7s,mb4.2,baz=252,slow=4.4,SNR=4.2						
PLCA				pP	pP	22 53 21.2	-0.5
	2.9nm,1.0s,baz=232,slow=12,SNR=3.7						
NLU	**North Lily Min**	**88.42**	**44**	eP	**P**	**22 53 20.0**	**-6.4**
ANMO	**Albuquerque**	**89.42**	**51**	pP	pP	22 53 41.4	-0.9
	2.2nm,0.9s,baz=218,slow=8.0,SNR=4.6						
CHUM	**Lake Minchumin**	**90.85**	**11**	eP	**P**	**22 53 33.8**	**-3.4**
	3.0nm,0.7s,mb4.7						
PDAR	**Pinedale Array**	**91.57**	**43**	P	**P**	**22 53 41.1**	**+0.1**
	0.3nm,0.3s,mb4.0,baz=263,slow=11,SNR=2.2						
PDAR				pP	pP	22 53 51.0	-1.2
	1.2nm,0.9s,baz=204,slow=3.3,SNR=2.8						
CMAR	**Chiang Mai Arr**	**92.82**	**289**	P	**P**	**22 53 48.7**	**+1.3**
	0.5nm,0.3s,mb4.4,baz=144,slow=3.0,SNR=7.0						
MKAR	**Makanchi Array**	**115.28**	**312**	PKP	PKPdf	22 59 15.0	-0.5
	0.3nm,0.2s,baz=162,slow=0.9,SNR=3.4						
MKAR				pPKP		22 59 23.6	
	0.2nm,0.3s,baz=180,slow=2.4,SNR=2.2						
KURK	**Kurchatov**	**118.25**	**316**	PKP	PKPdf	22 59 20.6	-0.6
	0.1nm,0.2s,baz=125,slow=2.3,SNR=4.2						
KURK				pPKP	pPKPdf	22 59 29.8	-2.8
	0.5nm,0.6s,baz=108,slow=2.0,SNR=3.2						
KURK	**Kurchatov**	**118.25**	**316**	PKP	PKPdf	22 59 20.6	-0.6
KURK				pPKP	pPKPdf	22 59 29.8	-2.8
BVAR	**Borovoye Array**	**123.44**	**318**	PKP	PKPdf	22 59 31.0	0.0
	0.7nm,0.6s,baz=90,slow=2.9,SNR=3.9						
BVAR				pPKP	pPKPdf	22 59 40.4	-2.0
	0.7nm,0.6s,baz=166,slow=0.6,SNR=3.6						
ARCES	**ARCESS Array B**	**133.77**	**349**	PKP	PKPdf	22 59 51.0	+0.7
	2.8nm,0.9s,baz=5.7,slow=3.6,SNR=4.5						
ARCES	**ARCESS Array B**	**133.77**	**349**	PKP	PKPdf	22 59 51.0	+0.7
NOA	**NORSAR Array B**	**143.80**	**354**	PKP	PKPdf	23 00 06.5	-2.3
	1.5nm,0.7s,baz=1.8,slow=2.2,SNR=5.5						
NOA	**NORSAR Array B**	**143.80**	**354**	PKP	PKPdf	23 00 06.5	-2.3
AKASG	**Malin Array Be**	**147.70**	**329**	PKPbc	PKPbc	23 00 18.8	+0.2
	1.1nm,0.6s,baz=48,slow=1.4,SNR=5.4						
KWP	**Kalwaria**	**151.35**	**333**	ePKPbc	PKPbc	23 00 27.6	-0.1
CLL	**Collm**	**152.92**	**347**	⇑ i PKPbc	PKPbc	23 00 31.4	+0.3
	comp=Z,4.0nm,0.8s						
CLL				i PKPab	PKPab	23 00 40.7	-1.6
	comp=Z,4.0nm,0.8s						
CLL				i sPKPbc		23 00 44.0	
BRG	**Berggiesshubel**	**153.12**	**345**	eP	PKPdf	23 00 27.4	+3.2
	comp=Z,4.7nm,1.3s						
BRG				e		23 00 41.2	
	comp=Z,3.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**167.88**	**172**	PKPab	PKPab	23 01 47.7	-0.5
	comp=Z,1.7nm,0.9s,baz=177,slow=4.0,SNR=6.5						

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*ISCJB **07** 22:41:19.5±1.3, 39.1N±0.1×97.63E±0.09, h33^{km}, Error ellipse: s-maj=21.7km s-min=8.5km az=16.1*
*BJI **07** 22:41:19.0, 39.23N×97.84E, h17^{km}, ML3.2*
*IDC **07** 22:41:21.5±8.4, 39.40N×97.82E, h0^{km}, mb1 3.5/4, mb1mx3.3/26, mbtmp3.5/4, ML3.3/3, Error ellipse: s-maj=98.5km s-min=34.2km az=163.0*
ISC 07 22:41:21.4±1.3, **39.1N**±0.1×**97.69E**±0.09, **h35**^{km}, **n7**, σ**0**^{s}**78**/10, **Gansu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**1.69**	**78**	PG	**Pn**	**22 41 48.4**	**+0.1**
GTA				SG	**Sn**	**22 42 09.2**	**+0.5**
GTA				Smax			
	comp=N,212nm,0.5s						
GTA				Smax			
	comp=E,278nm,0.6s						
LZH	**Lanzhou**	**5.72**	**119**	eP	**Pn**	**22 42 44.4**	**+0.6**
LZH				S	**Sn**	**22 43 59.0**	**+11**
LZH				Smax			
	comp=N,28nm,0.5s						
LZH				Smax			
	comp=E,25nm,0.8s						
HHC	**Hu-ho-hao-te**	**10.80**	**76**	eP	**Pn**	**22 43 51.4**	**-2.0**
SONM	**Songino Array**	**10.80**	**33**	Pn	**Pn**	**22 43 53.7**	**+0.3**
	comp=E,0.3nm,0.3s,baz=222,slow=14,SNR=6.0						
SONM				Lg		22 46 54.0	
	comp=E,0.2nm,0.3s,baz=213,slow=31,SNR=4.1						
MKAR	**Makanchi Array**	**13.66**	**309**	Pn	**Pn**	**22 44 31.9**	**-0.5**
	comp=E,0.1nm,0.3s,baz=117,slow=13,SNR=2.8						
MKAR				Sn	**Sn**	**22 46 55.6**	**-7.1**
	comp=E,0.1nm,0.3s,baz=116,slow=26,SNR=2.4						
ZALV	**Zalesovo Beam**	**17.28**	**334**	Pn	**Pn**	**22 45 19.9**	**+0.3**
	comp=E,0.1nm,0.3s,baz=139,slow=11,SNR=3.7						
KURK	**Kurchatov**	**17.78**	**317**	P	**Pn**	**22 45 26.3**	**+0.4**
	baz=115,slow=12,SNR=6.1						

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*KNET **07** 22:47:26.5±0.4, 42.00N×73.34E, h17^{km}±1^{km}, ml2.7, Error ellipse: s-maj=2.4km s-min=1.7km az=88.0*
*ISCJB **07** 22:47:27.3±1.0, 41.95N±0.06×73.39E±0.05, h10^{km}, Error ellipse: s-maj=9.1km s-min=5.1km az=169.3*

ISC 07 22:47:27.8±1.0**, 4195N**±007×**7339E**±005**, h10**km**, n12,** σ**1.03**/21**, 11C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.29**	**52**	P	**Pg**	**22 47 32.9**	**-0.7**
	36nm,0.2s,SNR=174						
AML				⇑S	**Sg**	**22 47 38.6**	**+1.1**
	913nm,0.4s						
EKS2	**Erkin-Say**	**0.77**	**22**	⇓P	**Pg**	**22 47 40.7**	**-1.9**
	14nm,0.2s,SNR=58						
EKS2				⇑S	**Sg**	**22 47 52.1**	**-0.5**
	60nm,0.4s						
UCH	**Uchtor**	**0.88**	**71**	⇓P	**Pg**	**22 47 43.3**	**-1.4**
	12nm,0.1s,SNR=60						
UCH				⇑S	**Sg**	**22 47 57.1**	**+0.9**
	51nm,0.1s						
AAK	**Ala-Archa**	**1.07**	**50**	⇓P	**Pg**	**22 47 46.5**	**-1.8**
	12nm,0.2s,SNR=13						
AAK				⇑S	**Sg**	**22 48 02.1**	**-0.1**
	28nm,0.2s						
KBK	**Karagaybulak**	**1.35**	**58**	⇓P	**Pn**	**22 47 51.9**	**-0.9**
	24nm,0.2s,SNR=26						
KBK				⇑S	**Sb**	**22 48 11.6**	**+1.0**
	104nm,0.2s						
KZA	**Kyzart**	**1.39**	**84**	⇑P	**Pn**	**22 47 53.2**	**-0.1**
	34nm,0.2s,SNR=14						
CHMS	**Chumysh**	**1.45**	**43**	⇓P	**Pn**	**22 47 53.5**	**-0.6**
	12nm,0.2s,SNR=17						
CHMS				⇑S	**Sn**	**22 48 13.9**	**+0.7**
	50nm,0.3s						
USP	**Ospenovka**	**1.55**	**32**	⇓P	**Pn**	**22 47 54.9**	**-0.5**
	85nm,0.3s,SNR=83						
USP				⇓S	**Sn**	**22 48 16.8**	**+1.3**
	70nm,0.2s						
TKM2	**Tokmak 2**	**1.90**	**59**	⇓Pn	**Pn**	**22 48 01.5**	**+1.3**
	19nm,0.6s						
TKM2				⇓Sn	**Sg**	**22 48 28.4**	**-0.4**
	277nm,0.8s						
TKM2	**Tokmak 2**	**1.90**	**59**	⇑P	**Pn**	**22 48 01.4**	**+1.1**
	25nm,0.3s,SNR=55						
ULHL	**Ulahol**	**2.14**	**81**	⇑P	**Pn**	**22 48 05.1**	**+1.5**
	10nm,0.2s,SNR=53						
KK31	**Karatay Array**	**2.42**	**299**	⇑Pn	**Pn**	**22 48 07.1**	**-0.3**
	4.2nm,0.3s,baz=119,slow=16,SNR=131						
KK31				⇑Sn	**Sn**	**22 48 38.5**	**+1.4**
	26nm,0.4s,baz=124,slow=27,SNR=21						

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*IDC **07** 22:50:37.6±0.7, 5239N×17069W, h0km, mb3.8/15, mb1 4.1/16, mb1mx4.0/24, mbtmp3.9/16, ML4.1/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/32, Error ellipse: s-maj=25.0km s-min=13.7km az=174.0*

*NEIC **07** 22:50:42.9±0.6, 5227N×17073W, h35km, mb3.8/1, Error ellipse: s-maj=18.5km s-min=7.2km az=162.0*

*ISCJB **07** 22:50:43.5±1.4, 524N±0.1×1706W±0.1, h57km±12km, mb3.9/18, MS3.2/4, Error ellipse: s-maj=23.2km s-min=12.4km az=171.7*

*BJI **07** 22:50:44.9, 5230N×17070W, h35km, mB4.5, mb4.8, Ms4.2, Msz4.2*

ISC 07 22:50:44.0±1.4**, 523N**±01×**1707W**±01**, h44**km±12km**, n36,** σ**0.99**/33**, mb3.9**/18**, MS3.2**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**1.29**	**59**	*e*Pn	**Pn**	**22 51 03.1**	**-2.4**
OKCE	**Okmok Cone E**	**1.89**	**53**	P	**Pn**	**22 51 13.4**	**-0.3**
OKCD	**Okmok Cone D**	**1.91**	**54**	P	**Pn**	**22 51 14.0**	**0.0**
UNV	**Unalaska Valle**	**2.95**	**57**	*e*Pn	**Pn**	**22 51 27.9**	**-0.3**
AKGG	**Akutan Green G**	**3.39**	**55**	P	**Pn**	**22 51 35.3**	**+1.0**
AKUT	**Akutan**	**3.47**	**57**	*e*Pn	**Pn**	**22 51 35.6**	**+0.3**
KDAK	**Kodiak Island**	**11.72**	**55**	Pn	**Pn**	**22 53 27.9**	**-0.4**
	1.4nm,0.3s,baz=233,slow=7.4,SNR=6.9						
PPLA	**Purkeypile**	**14.44**	**36**	*e*Pn	**Pn**	**22 54 05.3**	**-0.1**
	36nm,1.2s						
PETK	**Petropavlovsk-**	**19.09**	**285**	P	**Pn**	**22 55 04.4**	**+0.7**
	0.5nm,0.3s,baz=87,slow=13,SNR=7.0						
EGAK	**Eagle**	**19.58**	**39**	*e*P	**Pn**	**22 55 09.5**	**0.0**
	3.9nm,0.7s						
HYT	**Haines Junctio**	**19.96**	**52**	*e*P	**Pn**	**22 55 16.6**	**+2.5**
DLBC	**Dease Lake**	**23.60**	**59**	P	**P**	**22 55 53.2**	**+2.7**
	baz=270,slow=12						
YKA	**Yellowknife Ar**	**30.88**	**49**	P	**P**	**22 56 55.1**	**-0.6**
	0.6nm,0.6s,mb3.6,baz=275,slow=9.4,SNR=3.3						
YKA				LR	LR	23 08 30.0	
	comp=Z,37nm,21.6s,MS3.0,baz=220,slow=35						
NVAR	**Mina Array Bea**	**38.48**	**90**	P	**P**	**22 58 03.0**	**+1.5**
	0.6nm,0.7s,mb3.5,baz=299,slow=8.1,SNR=7.4						
MJAR	**Matsushiro Arr**	**38.88**	**267**	P	**P**	**22 58 05.9**	**+0.9**
	0.8nm,0.7s,mb3.5,baz=19,slow=19,SNR=3.6						
PDAR	**Pinedale Array**	**41.21**	**78**	P	**P**	**22 58 23.4**	**-0.7**
	0.6nm,0.3s,mb3.6,baz=302,slow=6.7,SNR=4.2						
CN2	**Changchun**	**42.24**	**285**	*e*P	**P**	**22 58 39.2**	**+6.7**
KSRS	**Korea Array**	**44.60**	**276**	P	**P**	**22 58 52.6**	**+0.9**
	1.7nm,0.9s,mb3.9,baz=55,slow=7.6,SNR=4.1						
SONM	**Songino Array**	**50.62**	**300**	P	**P**	**22 59 39.1**	**+0.9**
	0.6nm,0.6s,mb3.7,baz=55,slow=7.1,SNR=3.9						
SONM				PcP	PcP	23 00 54.9	-0.2
	1.0nm,0.9s,baz=38,slow=2.6,SNR=3.8						
TXAR	**Lajitas Array**	**53.56**	**88**	P	**P**	**23 00 00.5**	**+0.2**
	1.4nm,0.7s,mb4.0,baz=296,slow=5.1,SNR=22						
TXAR				PcP	PcP	23 01 06.2	-0.3
	0.3nm,0.5s,baz=199,slow=1.3,SNR=4.0						
ZALV	**Zalesovo Beam**	**56.90**	**317**	PcP	PcP	23 01 19.0	0.0
	0.7nm,0.6s,baz=46,slow=4.3,SNR=4.0						
ZALV				LR	LR	23 23 24.1	
	comp=Z,16nm,20.3s,MS3.1,baz=72,slow=35						
ARCES	**ARCESS Array B**	**57.87**	**353**	P	**P**	**23 00 29.6**	**-1.0**
	1.8nm,0.7s,mb4.2,baz=18,slow=8.9,SNR=4.6						
ARCES				LR	LR	23 25 50.6	
	comp=Z,39nm,19.6s,MS3.5,baz=203,slow=36						
KURK	**Kurchatov**	**61.86**	**318**	P	**P**	**23 00 57.9**	**-0.3**
	0.3nm,0.6s,mb3.6,baz=42,slow=6.8,SNR=3.5						
KURK	**Kurchatov**	**61.86**	**318**	P	**P**	**23 00 57.9**	**-0.3**
MKAR	**Makanchi Array**	**63.24**	**313**	P	**P**	**23 01 07.2**	**-0.3**
	0.2nm,0.2s,mb3.8,baz=55,slow=7.2,SNR=2.9						
BVAR	**Borovoye Array**	**63.26**	**324**	P	**P**	**23 01 06.8**	**-0.7**
	1.1nm,0.6s,mb4.2,baz=64,slow=6.8,SNR=6.0						
GYA	**Guiyang**	**65.14**	**282**	P	**P**	**23 01 26.2**	**+5.9**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
NB2	**NORSAR Subarra**	**66.97**	**359**	P	**P**	**23 01 30.7**	**-0.8**
	comp=Z,1.3nm,0.6s,mb4.1,baz=1.2,slow=6.5						
NOA	**NORSAR Array B**	**66.97**	**359**	P	**P**	**23 01 30.4**	**-1.1**
	comp=Z,1.1nm,0.5s,mb4.1,baz=1.9,slow=6.4,SNR=6.7						
NOA				LR	LR	23 30 14.4	
	comp=Z,14nm,21.2s,MS3.2,baz=5.0,slow=36						
KMI	**Kunming**	**68.49**	**283**	P	**P**	**23 01 48.1**	**+6.5**
KMI				PP	PP	23 04 22.2	+9.4
KMI				PPP		23 06 00.5	
KMI				S	S	23 10 52.3	+12
KMI				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb5.1						
KMI				AMB	AMB		
	comp=Z,41nm,5.5s						
CMAR	**Chiang Mai Arr**	**75.83**	**282**	P	**P**	**23 02 25.6**	**+0.1**
	comp=Z,1.8nm,0.8s,mb4.1,baz=28,slow=6.2,SNR=13						
GERES	**GERESS Array B**	**79.13**	**357**	P	**P**	**23 02 43.7**	**+0.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=27,slow=6.3,SNR=4.0						
WRA	**Warramunga Arr**	**86.35**	**231**	P	**P**	**23 03 19.8**	**-1.4**
	comp=Z,0.2nm,0.7s,mb3.4,baz=28,slow=5.8,SNR=3.1						
ASAR	**Alice Springs**	**89.75**	**229**	P	**P**	**23 03 36.1**	**-1.2**
	comp=Z,0.7nm,0.8s,mb4.1,baz=24,slow=5.0,SNR=6.1						
TSUM	**Tsumeb**	**146.31**	**346**	PKPbc	PKPbc	23 10 20.2	+0.5
	comp=Z,2.4nm,0.8s,baz=339,slow=9.7,SNR=3.6						
LBTB	**Lobatse**	**150.05**	**329**	PKPbc	PKPbc	23 10 30.3	+0.8
	comp=Z,3.1nm,0.6s,baz=331,slow=4.5,SNR=5.1						

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*CSEM **07** 22:54:33.2±0.1, 4007N×2066E, h8km, MD3.0, Error ellipse: s-maj=2.9km s-min=1.9km az=113.0*

*ATH **07** 22:54:33.5, 4005N×2064E, h15km±2km, MD3.0/4*

*NEIC **07** 22:54:33.5, 4005N×2064E, h15km, MD3.0(ATH), After ATH.*

*ISCJB **07** 22:54:34.4±0.8, 3996N±004×2062E±007, h24km±7km, Error ellipse: s-maj=8.6km s-min=5.8km az=17.8*

*SKO **07** 22:54:34.1, 3999N×2060E, h0km*

ISC 07 22:54:35.1±0.9**, 4002N**±003×**208E**±01**, h12**km±6km**, n13,** σ**0.98**/22**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	**Janina**	**0.37**	**173**	*e*PB	**Pg**	**22 54 41.4**	**-1.0**
JAN				*e*SB	**Sg**	**22 54 48.1**	**+0.8**
KZN	**Kozani**	**0.81**	**69**	*e*PN	**Pn**	**22 54 50.8**	**-1.5**
KZN				*e*SN	**Sn**	**22 55 04.1**	**0.0**
KEK	**Kerkira**	**0.82**	**248**	*e*PN	**Pn**	**22 54 47.1**	**-5.4**
KEK				*e*SN	**Sn**	**22 54 58.0**	**-6.5**
THL	**Klokotos Trika**	**1.05**	**115**	*e*PN	**Pn**	**22 54 55.3**	**-0.3**
BIA	**Bitola**	**1.08**	**22**	*e*Pg	**Pg**	**22 54 53.8**	**-2.0**
BIA				*e*Sg	**Sg**	**22 55 10.5**	**+0.6**
BIA	**Bitola**	**1.08**	**22**	*e*Pg	**Pg**	**22 54 53.8**	**-2.1**
BIA				*e*Sg	**Sg**	**22 55 10.4**	**+0.5**
OHR	**Ohrid**	**1.09**	**0**	*e*Pg	**Pg**	**22 54 55.5**	**-0.6**
OHR				*e*Sg	**Sg**	**22 55 10.8**	**+0.5**
OHR	**Ohrid**	**1.09**	**0**	*e*Pg	**Pg**	**22 54 55.5**	**-0.6**
OHR				*e*Sg	**Sg**	**22 55 10.7**	**+0.4**
EVR	**Evrytania**	**1.36**	**144**	*e*PN	**Pn**	**22 55 00.9**	**+1.1**
EVR	**Evrytania**	**1.36**	**144**	*e*Pn	**Pn**	**22 54 59.9**	**+0.1**
KRUS	**Krusevo**	**1.39**	**14**	*e*Pn	**Pn**	**22 55 01.9**	**+1.5**
KRUS				*e*Sg	**Sg**	**22 55 20.6**	**+0.7**
KRUS	**Krusevo**	**1.39**	**14**	*e*Pn	**Pn**	**22 55 01.8**	**+1.5**
KRUS				*e*Sg	**Sg**	**22 55 20.6**	**+0.7**
VLS	**Valsamata**	**1.85**	**185**	*e*PN	**Pn**	**22 55 07.6**	**+1.0**

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*ISCJB **07** 23:01:49.1±1.6, 146S±03×138W±03, h10km, mb4.1/17, MS3.7/13, Error ellipse: s-maj=62.1km s-min=11.2km az=41.2*

*IDC **07** 23:01:49.7±2.7, 1448S×1387W, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/20, mbtmp3.8/8, MS3.7/13, Ms1 3.7/13, ms1mx3.6/27, Error ellipse: s-maj=120.4km s-min=17.7km az=138.0*

*NEIC **07** 23:01:50.9±1.1, 1463S×1377W, h10km, mb4.5/10, Error ellipse: s-maj=45.1km s-min=8.1km az=131.0*

ISC 07 23:01:51.1±1.6**, 146S**±03×**138W**±03**, h10**km**, n28,** σ**0.77**/19**, mb4.1**/17**, MS3.7**/13**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**22.93**	**23**	LR	LR	23 13 38.0	
	comp=Z,129nm,20.4s,MS3.4,baz=172,slow=31						
BBTS	**Babate**	**29.22**	**355**	LR	LR	23 17 14.9	
	comp=Z,124nm,20.9s,MS3.5,baz=165,slow=32						
TSUM	**Tsumeb**	**30.32**	**103**	LR	LR	23 17 41.3	
	comp=Z,196nm,19.3s,MS3.8,baz=142,slow=31						
TORD	**Torodi Ar. Bea**	**31.56**	**30**	P	**P**	**23 08 14.7**	**+0.9**
	2.1nm,0.8s,mb4.0,baz=213,slow=8.2,SNR=18						
TORD				LR	LR	23 18 31.0	
	comp=Z,168nm,21.6s,MS3.7,baz=210,slow=32						
BDFB	**Brasilia**	**33.05**	**264**	LR	LR	23 18 46.6	
	comp=Z,195nm,21.7s,MS3.8,baz=36,slow=31						
SUR	**Sutherland**	**36.09**	**125**	LR	LR	23 21 11.5	
	comp=Z,59nm,19.3s,MS3.4,baz=98,slow=32						
LBTB	**Lobatse**	**38.33**	**112**	LR	LR	23 22 05.9	
	comp=Z,138nm,19.2s,MS3.8,baz=200,slow=32						
BOSA	**Boshof**	**38.68**	**118**	LR	LR	23 22 55.7	
	comp=Z,124nm,19.2s,MS3.7,baz=330,slow=33						
CPUP	**Villa Florida**	**42.25**	**247**	P	**P**	**23 09 44.6**	**-0.2**
	1.8nm,0.8s,mb3.8,baz=77,slow=9.3,SNR=7.3						
CPUP				LR	LR	23 24 49.6	
	comp=Z,198nm,18.7s,MS4.0,baz=91,slow=33						
SIV	**San Ignacio**	**45.57**	**262**	P	**P**	**23 10 10.5**	**-1.1**
	1.3nm,0.9s,mb3.9,baz=102,slow=9.2,SNR=6.4						
TRQA	**Tornquist**	**48.45**	**232**	*e*P	**P**	**23 10 34.1**	**+0.3**
	3.0nm,0.9s,mb4.3						
ERON	**Agron**	**52.21**	**10**	P	**P**	**23 11 02.3**	**+0.1**
	2.2nm,0.6s,mb4.3						
ELOJ	**Sierra Loja**	**52.28**	**10**	P	**P**	**23 11 03.0**	**+0.3**
	2.6nm,0.6s,mb4.3						
LPAZ	**La Paz**	**52.29**	**261**	P	**P**	**23 11 05.2**	**+2.0**
	1.5nm,0.9s,mb3.9,baz=232,slow=16,SNR=5.5						
CFAA	**Coronel Fontan**	**52.35**	**241**	P	**P**	**23 11 03.0**	**-0.4**
	0.1nm,0.4s,mb3.1,baz=79,slow=10,SNR=3.0						
CFAA				LR	LR	23 30 37.9	
	comp=Z,18nm,19.9s,MS3.1,baz=123,slow=33						
CFAA	**Coronel Fontan**	**52.35**	**241**	P	**P**	**23 11 03.0**	**-0.4**
CFAA				LR	LR	23 30 37.9	
ECOG	**Cogollos-Vega**	**52.51**	**10**	P	**P**	**23 11 04.4**	**0.0**
	8.6nm,0.7s,mb4.8						
LVC	**Limon Verde**	**52.61**	**253**	LR	LR	23 29 59.3	
	comp=Z,144nm,21.6s,MS4.0,baz=127,slow=32						
ELUQ	**Luque**	**52.67**	**10**	P	**P**	**23 11 05.6**	**+0.1**
	6.7nm,0.7s,mb4.7						
EQES	**Quesada**	**53.11**	**11**	P	**P**	**23 11 08.8**	**0.0**
	14nm,1.3s,mb4.7						
EBAN	**Banos Encina**	**53.34**	**10**	P	**P**	**23 11 10.4**	**-0.1**
	2.3nm,1.1s,mb4.0						
EBAD	**Badajoz**	**53.47**	**7**	P	**P**	**23 11 11.9**	**+0.4**
	3.2nm,0.8s,mb4.3						
ESDC	**Sonseca Array**	**54.78**	**9**	P	**P**	**23 11 18.9**	**-2.1**
	0.6nm,0.6s,mb3.8,baz=187,slow=8.4,SNR=5.1						
ESDC	**Sonseca Array**	**54.78**	**9**	P	**P**	**23 11 21.3**	**+0.3**
	0.4nm,0.5s,mb3.7						
ELOB	**Lobios**	**56.45**	**5**	P	**P**	**23 11 32.4**	**-0.6**
	8.6nm,0.6s,mb5.0						
ROSC	**El Rosal**	**63.06**	**283**	LR	LR	23 37 49.4	
	comp=Z,126nm,21.7s,MS4.0,baz=352,slow=34						
GERES	**GERESS Array B**	**67.73**	**19**	P	**P**	**23 12 49.2**	**+0.6**
	0.5nm,0.7s,mb3.6,baz=208,slow=6.1,SNR=4.0						
GERES				LR	LR	23 41 03.8	
	comp=Z,71nm,21.8s,MS3.9,baz=265,slow=35						
AKASG	**Malin Array Be**	**75.13**	**27**	P	**P**	**23 13 32.1**	**-1.2**
	0.3nm,0.3s,mb3.7,baz=220,slow=6.5,SNR=5.2						

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*IDC **07** 23:11:38.3±0.8, 2.13N×10158W, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.4/19, mbtmp4.2/13, ML3.1/1, MS3.9/12, Ms1 3.9/12, ms1mx3.7/23, Error ellipse: s-maj=31.5km s-min=13.4km az=61.0*

*ISCJB **07** 23:11:40.3±0.5, 235N±007×101.18W±008, h10km, mb4.4/40, MS4.1/13, Error ellipse: s-maj=13.4km s-min=6.4km az=140.0*

*BJI **07** 23:11:40.7, 230N×10130W, h10km, mB5.4, Ms5.2, Msz4.8*

*NEIC **07** 23:11:41.8±0.4, 234N×10125W, h10km, mb4.5/30, Error ellipse: s-maj=12.1km s-min=5.8km az=58.0*

ISC 07 23:11:42.2±0.5**, 234N**±007×**10119W**±007**, h10**km**, n221,** σ**0.64**/200**, mb4.4**/40**, MS4.1**/13**, 59C-73D, Galapagos Triple Junction region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**15.91**	**23**	Pn	**Pn**	**23 15 28.2**	**+1.9**
	0.1nm,0.3s,baz=186,slow=19,SNR=3.0						
CMIG				LR	LR	23 20 01.4	
	comp=Z,871nm,21.2s,baz=166,slow=31						
JTS	**JuntasAbangare**	**17.96**	**63**	LR	LR	23 20 59.9	
	comp=Z,128nm,20.2s,baz=244,slow=30						
TEIG	**Tepich**	**21.80**	**34**	P	**P**	**23 16 37.9**	**+3.4**
	1.1nm,0.3s,mb3.7,baz=205,slow=11,SNR=3.6						
TEIG				LR	LR	23 23 49.9	
	comp=Z,436nm,21.4s,MS3.8,baz=234,slow=33						
TEIG	**Tepich**	**21.80**	**34**	*e*P	**P**	**23 16 33.8**	**-0.7**
	50nm,1.6s,mb4.7						
TEIG				LR	LR	23 23 49.9	
OTAV	**Otavalo**	**22.83**	**95**	P	**P**	**23 16 47.7**	**+2.0**
	16nm,1.6s,mb4.2						
LPIG	**La Paz**	**23.36**	**339**	LR	LR	23 23 56.4	
	comp=Z,467nm,19.8s,MS3.9,baz=190,slow=32						
TXAR	**Lajitas Array**	**26.95**	**355**	P	**P**	**23 17 23.9**	**0.0**
	3.0nm,0.8s,mb3.9,baz=178,slow=9.9,SNR=28						
TXAR				PcP	PcP	23 20 43.7	-2.2
	0.9nm,1.0s,baz=191,slow=3.2,SNR=5.4						
TXAR				LR	LR	23 27 09.0	
	comp=Z,721nm,19.2s,MS4.2,baz=270,slow=34						
TXAR	**Lajitas Array**	**26.95**	**355**	P	**P**	**23 17 23.9**	**0.0**
TXAR				PcP	PcP	23 20 43.7	-2.2
TXAR				LR	LR	23 27 09.0	
JCT	**Junction City**	**28.02**	**3**	*e*P	**P**	**23 17 33.5**	**0.0**
	8.6nm,0.8s,mb4.4						
218A	**Dragoon**	**30.63**	**345**	⇑P	**P**	**23 17 55.4**	**-1.3**
	baz=31						
217A	**Green Valley**	**30.65**	**344**	⇓P	**P**	**23 17 55.9**	**-1.0**
	baz=31						
SDV	**Santo Domingo**	**31.08**	**77**	*e*P	**P**	**23 18 02.9**	**+1.9**
	2.6nm,0.6s,mb4.2						
119A	**Ashpeak Ranch,**	**31.21**	**347**	⇓P	**P**	**23 18 01.9**	**+0.2**
	baz=31						
118A	**Homack Ranch,**	**31.25**	**346**	⇑P	**P**	**23 18 01.7**	**-0.4**
	baz=31						
117A	**Oracle**	**31.38**	**344**	⇑P	**P**	**23 18 02.2**	**-1.1**
	baz=31						
214A	**Organ Pipe Nat**	**31.42**	**341**	⇓P	**P**	**23 18 03.1**	**-0.6**
	baz=31						
WMOK	**Wichita Mounta**	**32.31**	**4**	*e*P	**P**	**23 18 10.7**	**-0.7**
	5.1nm,1.5s,mb4.1						
Y18A	**Canyon Day Jun**	**32.35**	**346**	⇓P	**P**	**23 18 11.5**	**-0.2**
	baz=32						
X19A	**St. Johns**	**32.80**	**348**	⇓P	**P**	**23 18 15.9**	**+0.1**
	baz=33						
ANMO	**Albuquerque**	**32.81**	**352**	*e*P	**P**	**23 18 15.6**	**-0.2**
MIAR	**Mount Ida**	**32.82**	**12**	*e*P	**P**	**23 18 15.5**	**-0.4**
	14nm,1.0s,mb4.8						
GLA	**Glamis**	**33.12**	**339**	⇑P	**P**	**23 18 18.6**	**0.0**
	baz=33						
GLA	**Glamis**	**33.12**	**339**	*e*P	**P**	**23 18 19.1**	**+0.5**
	5.5nm,0.8s,mb4.5						
Y15A	**Casa Rosa Ranc**	**33.13**	**343**	⇓P	**P**	**23 18 18.5**	**-0.2**
	baz=33						
OXF	**Oxford**	**33.84**	**18**	*e*P	**P**	**23 18 24.2**	**-0.6**
	23nm,1.0s,mb5.1						
BC3	**Big Chuckw Mtn**	**33.89**	**338**	⇑P	**P**	**23 18 25.1**	**-0.1**
	baz=34						
PDMCI	**Parker Dam,Lak**	**34.01**	**341**	⇑P	**P**	**23 18 26.3**	**0.0**
	baz=34						
X13A	**Yucca**	**34.18**	**341**	⇓P	**P**	**23 18 27.7**	**0.0**
	baz=34						
IRM	**Iron Mountain**	**34.23**	**339**	⇑P	**P**	**23 18 27.9**	**-0.3**
	baz=34						
WUAZ	**Wupatki**	**34.33**	**345**	⇓P	**P**	**23 18 29.2**	**+0.1**
	baz=34						
WUAZ	**Wupatki**	**34.33**	**345**	*e*P	**P**	**23 18 29.3**	**+0.2**
	4.7nm,0.9s,mb4.4						
BELC	**Belle Mtn.**	**34.40**	**338**	⇑P	**P**	**23 18 29.6**	**-0.1**
	baz=34						
W14A	**Seligman**	**34.52**	**343**	⇑P	**P**	**23 18 30.9**	**+0.2**
	baz=34						
W13A	**Hualapai Mount**	**34.66**	**342**	⇓P	**P**	**23 18 31.1**	**-0.9**
	baz=35						
V15A	**Kaibab Nationa**	**34.83**	**344**	⇑P	**P**	**23 18 33.3**	**-0.1**
	baz=35						
CIS	**Catalina Islan**	**34.85**	**334**	⇓P	**P**	**23 18 33.5**	**-0.2**
	baz=35						
U16A	**Tuba City**	**34.87**	**346**	⇑P	**P**	**23 18 33.7**	**0.0**
	baz=35						
V14A	**Boquillas Ranc**	**34.92**	**343**	⇑P	**P**	**23 18 34.0**	**-0.2**
	baz=35						
GMRC	**Granite Mounta**	**34.97**	**339**	⇓P	**P**	**23 18 34.7**	**+0.1**
	baz=35						
T19A	**Beclabito**	**35.07**	**349**	⇓P	**P**	**23 18 36.1**	**+0.6**
	baz=35						
HEC	**Hector,Ludlow**	**35.26**	**338**	⇓P	**P**	**23 18 37.7**	**+0.5**
	baz=35						
MVCO	**Mesa Verde**	**35.34**	**350**	*e*P	**P**	**23 18 37.1**	**-0.7**
	7.7nm,0.9s,mb4.6						
V13A	**Grand Canyon W**	**35.39**	**342**	⇑P	**P**	**23 18 38.0**	**-0.2**
	baz=35						
U15A	**North Rim**	**35.44**	**344**	⇑P	**P**	**23 18 38.1**	**-0.5**
	baz=35						
SDCO	**Great Sand Dun**	**35.45**	**354**	*e*P	**P**	**23 18 38.2**	**-0.5**
	2.1nm,0.9s,mb4.1						
T18A	**Mexican Hat**	**35.54**	**348**	⇑P	**P**	**23 18 39.4**	**-0.1**
	baz=36,SNR=5.5						
V12A	**Nelson**	**35.55**	**341**	⇓P	**P**	**23 18 39.5**	**-0.1**
	baz=36						
T17A	**Navajo Res., N**	**35.60**	**347**	⇑P	**P**	**23 18 40.2**	**+0.2**
	baz=36						
SWET	**Sewanee**	**35.65**	**22**	*e*P	**P**	**23 18 39.3**	**-1.2**
U14A	**Mt Trumbull**	**35.67**	**343**	⇑P	**P**	**23 18 41.0**	**+0.4**
	baz=36						
WVT	**Waverly**	**35.82**	**19**	*e*P	**P**	**23 18 41.8**	**-0.2**
	0.5nm,1.0s,mb3.4						
GSC	**Goldstone**	**35.86**	**338**	⇓P	**P**	**23 18 42.4**	**+0.2**
	baz=36						
GSC	**Goldstone**	**35.86**	**338**	*e*P	**P**	**23 18 43.0**	**+0.8**
	8.1nm,1.1s,mb4.6						
U13A	**Pakoon Wash**	**35.90**	**342**	⇑P	**P**	**23 18 42.4**	**-0.2**
	baz=36						
EDW2	**Edwards Air Fo**	**35.95**	**336**	⇓P	**P**	**23 18 42.6**	**-0.5**
	baz=36						
S19A	**Harvey Farm, M**	**35.98**	**349**	⇓P	**P**	**23 18 42.8**	**-0.5**
	baz=36						
S18A	**Hurst Farm, Bl**	**36.09**	**348**	⇓P	**P**	**23 18 44.2**	**-0.1**
	baz=36,SNR=7.6						
T14A	**Hurricane**	**36.25**	**344**	⇑P	**P**	**23 18 45.2**	**-0.4**
	baz=36						
PV01	**Paradox Valley**	**36.26**	**350**	*e*P	**P**	**23 18 43.8**	**-1.8**
CPCT	**Cooper Cave**	**36.40**	**23**	*e*P	**P**	**23 18 47.5**	**+0.6**
T13A	**Saint George**	**36.44**	**343**	⇓P	**P**	**23 18 47.3**	**+0.1**
	baz=36						
S16A	**Weppner Ranch,**	**36.48**	**346**	⇓P	**P**	**23 18 47.6**	**0.0**
	baz=36						
R19A	**Curley Farm, L**	**36.53**	**349**	⇓P	**P**	**23 18 47.9**	**0.0**
	baz=36						
PV10	**Paradox Valley**	**36.58**	**350**	*e*P	**P**	**23 18 48.0**	**-0.3**
PKM	**Peak Mountain**	**36.73**	**334**	⇑P	**P**	**23 18 49.5**	**-0.2**
	baz=37						
R18A	**Canyonlands Na**	**36.75**	**349**	⇑P	**P**	**23 18 50.0**	**+0.2**
	baz=37,SNR=9.5						
MPMC	**Manual Prospec**	**36.79**	**338**	⇓P	**P**	**23 18 49.7**	**-0.5**
	baz=37,SNR=7.8						
ISA	**Isabella**	**36.82**	**336**	⇓P	**P**	**23 18 50.4**	**-0.1**
	baz=37						
ISA	**Isabella**	**36.82**	**336**	*e*P	**P**	**23 18 50.7**	**+0.2**
	13nm,1.5s,mb4.5						
KSU1	**Kansas State U**	**36.82**	**6**	*e*P	**P**	**23 18 50.2**	**-0.3**
	13nm,0.5s,mb5.0						
SIUC	**Southern Illin**	**36.88**	**16**	*e*P	**P**	**23 18 50.6**	**-0.4**
FURC	**Furnace Creek,**	**36.92**	**339**	⇓P	**P**	**23 18 51.2**	**-0.1**
	baz=37						
R17A	**Hanksville Air**	**36.95**	**348**	⇑P	**P**	**23 18 51.3**	**-0.2**
	baz=37						
R16A	**Teasdale**	**36.99**	**346**	⇓P	**P**	**23 18 51.9**	**+0.1**
	baz=37						
T11A	**Corn Creek, Al**	**37.05**	**341**	⇑P	**P**	**23 18 52.5**	**+0.1**
	baz=37						
TPNV	**Topopah Spring**	**37.13**	**340**	⇓P	**P**	**23 18 53.3**	**+0.2**
	baz=37						
TPNV	**Topopah Spring**	**37.13**	**340**	*e*P	**P**	**23 18 53.8**	**+0.7**
	30nm,2.2s,mb4.7						
Q19A	**Hogan Spring (**	**37.18**	**350**	⇑P	**P**	**23 18 53.4**	**-0.1**
	baz=37,SNR=10.0						
Q18A	**Rafter H Ranch**	**37.49**	**349**	⇑P	**P**	**23 18 56.5**	**+0.5**
	baz=38						
ISCO	**Idaho Springs**	**37.50**	**354**	*e*P	**P**	**23 18 55.7**	**-0.5**
	16nm,1.7s,mb4.6						
R13A	**O'Grain Ranch,**	**37.54**	**343**	⇑P	**P**	**23 18 57.2**	**+0.6**
	baz=38						
LPAZ	**La Paz**	**37.54**	**121**	P	**P**	**23 18 57.9**	**+1.0**
	4.1nm,1.2s,mb4.0,baz=296,slow=10.0,SNR=6.3						
LPAZ	**La Paz**	**37.54**	**121**	*e*P	**P**	**23 18 57.8**	**+0.9**
	3.1nm,1.0s,mb4.0						
SRU	**San Rafael**	**37.57**	**348**	⇓P	**P**	**23 18 57.6**	**+0.8**
	baz=38						
TZTN	**Tazewell**	**37.73**	**24**	*e*P	**P**	**23 18 58.8**	**+0.5**
P19A	**Cripple Cowboy**	**37.79**	**350**	⇓P	**P**	**23 18 59.1**	**+0.5**
	baz=38						
R12A	**Pony Springs,**	**37.86**	**343**	⇑P	**P**	**23 18 59.5**	**+0.2**
	baz=38						
TMUT	**Trail Mountain**	**37.90**	**347**	*e*P	**P**	**23 18 58.1**	**-1.4**
HELL	**Mitchell Peak**	**37.93**	**336**	⇓P	**P**	**23 18 59.7**	**-0.2**
	baz=38,SNR=8.5						
PKD	**Parkfield**	**37.93**	**334**	⇓P	**P**	**23 19 00.2**	**+0.3**
	baz=38						
P17A	**Butcher Ranch,**	**37.97**	**348**	⇓P	**P**	**23 19 00.6**	**+0.5**
	baz=38						
P18A	**Preston Nutter**	**38.02**	**349**	⇑P	**P**	**23 19 00.6**	**+0.1**
	baz=38						
Q14A	**Sevier Lake (B**	**38.10**	**345**	⇓P	**P**	**23 19 01.3**	**0.0**
	baz=38						
S10A	**Tonopah Range,**	**38.13**	**340**	⇓P	**P**	**23 19 01.6**	**+0.1**
	baz=38,SNR=9.2						
S09A	**Goldfield**	**38.17**	**339**	⇓P	**P**	**23 19 01.6**	**-0.3**
	baz=38						
R11A	**Troy Canyon, C**	**38.18**	**342**	⇓P	**P**	**23 19 02.0**	**0.0**
	baz=38						
Q13A	**Wheeler Ranch,**	**38.28**	**344**	⇑P	**P**	**23 19 02.5**	**-0.2**
	baz=38						
S08C	**White Mtn Res**	**38.31**	**338**	⇑P	**P**	**23 19 03.4**	**+0.4**
	baz=38,SNR=6.2						
O19A	**Miners Draw (B**	**38.46**	**350**	⇓P	**P**	**23 19 04.0**	**-0.3**
	baz=38						
O18A	**Roosevelt**	**38.59**	**349**	⇓P	**P**	**23 19 06.0**	**+0.6**
	baz=39						
P14A	**Drum Mountains**	**38.62**	**345**	⇑P	**P**	**23 19 05.7**	**0.0**
	baz=39						
Q11A	**Duckwater**	**38.66**	**342**	⇑P	**P**	**23 19 06.1**	**+0.1**
	baz=39,SNR=7.1						
DAU	**Daniels Canyon**	**38.98**	**348**	*e*P	**P**	**23 19 09.1**	**+0.5**
DUG	**Dugway**	**39.12**	**346**	⇓P	**P**	**23 19 09.8**	**-0.1**
	baz=39						
DUG	**Dugway**	**39.12**	**346**	*e*P	**P**	**23 19 10.0**	**+0.1**
R07C	**Lee Vining**	**39.16**	**337**	⇓P	**P**	**23 19 10.4**	**+0.2**
	baz=39						
NVAR	**Mina Array Bea**	**39.18**	**339**	P	**P**	**23 19 10.5**	**+0.1**
	1.9nm,0.8s,mb3.9,baz=164,slow=8.8,SNR=12						
N18A	**Larsen Ranch,**	**39.21**	**350**	⇓P	**P**	**23 19 10.8**	**+0.2**

baz=39,SNR=6.3
S06C San Francisco 39.29 336 ⇓P P 23 19 11.1 -0.2
baz=39
Q08A Gabbs 39.43 339 ⇑P P 23 19 12.7 +0.3
baz=39,SNR=6.0
CMB Columbia Colle 39.64 336 *e*P P 23 19 13.9 -0.3
2.5nm,1.0s,mb3.9
R06C Coleville 39.69 337 ⇓P P 23 19 14.8 +0.2
baz=40
O12A Currie 39.70 344 ⇓P P 23 19 15.4 +0.7
baz=40
N15A Stansbury Isla 39.72 347 ⇓P P 23 19 15.2 +0.4
baz=40
SPUT South Promonto 40.10 347 *e*P P 23 19 17.6 -0.3
HWUT Hardware Ranch 40.19 348 *e*P P 23 19 19.0 +0.3
M15A Larsen Ranch, 40.24 347 ⇑P P 23 19 18.4 -0.7
baz=40,SNR=6.6
O09A Fish Creek Ran 40.35 341 ⇓P P 23 19 19.7 -0.4
baz=40
M14A Sheep Mountain 40.49 346 ⇓P P 23 19 21.2 0.0
baz=40,SNR=12
M13A Montello 40.56 345 ⇓P P 23 19 21.1 -0.7
baz=41
L15A Malad City 40.74 347 ⇑P P 23 19 23.4 +0.1
baz=41,SNR=6.0
O08A Rochester Mine 40.78 340 ⇑P P 23 19 23.4 -0.2
baz=41
M12A Wells 40.81 344 ⇑P P 23 19 24.2 +0.3
baz=41
P05C Yuba Gap, Truc 40.82 337 ⇑P P 23 19 25.7 +1.7
baz=41
BW06 Boulder Array 40.94 351 *e*P P 23 19 24.3 -0.6
8.1nm,1.0s,mb4.3
PDAR Pinedale Array 40.94 351 P P 23 19 24.2 -0.7
4.4nm,0.8s,mb4.2,baz=155,slow=8.2,SNR=28
PDAR LR LR 23 36 42.1
comp=Z,110nm,18.2s,MS3.8,baz=174,slow=37
L14A Malta 40.97 346 ⇓P P 23 19 25.8 +0.7
baz=41,SNR=8.2
M11A Holland Ranch, 41.08 343 ⇑P P 23 19 26.1 +0.1
baz=41
ACSO Alum Creek Sta 41.17 21 *e*P P 23 19 26.4 -0.5
11nm,1.0s,mb4.4
L13A Double Diamond 41.19 346 ⇑P P 23 19 27.3 +0.3
baz=41
O06A Flanigan 41.27 338 ⇓P P 23 19 28.4 +0.8
baz=41
K16A Soda Springs 41.37 348 ⇓P P 23 19 29.8 +1.4
baz=41
ORV Oroville 41.39 336 ⇑P P 23 19 29.4 +0.7
baz=41
ECSD EROS,Sioux Fal 41.41 5 *e*P P 23 19 28.5 -0.3
RKT Rikitea 41.52 231 *e*LQ 23 29 09.1
183nm,26.0s
RKT Rikitea 41.52 231 *e*T 00 03 16.7
2.3nm,0.2s
L12A House Creek Ra 41.52 344 ⇑P P 23 19 30.1 +0.4
baz=42
RSSD Black Hills 41.68 357 *e*P P 23 19 30.7 -0.2
L11A Cat Creek Ranc 41.74 344 ⇓P P 23 19 32.1 +0.6
baz=42,SNR=6.8
K13A Stover Farm, H 41.76 346 ⇑P P 23 19 31.7 +0.1
baz=42
RRI2 Red Ridge 41.81 349 *e*P P 23 19 32.0 -0.1
7.9nm,0.8s,mb4.4
LOHW Long Hollow 41.94 350 *e*P P 23 19 33.0 0.0
2.8nm,0.4s,mb4.2
M07A Soldier Meadow 42.11 340 ⇑P P 23 19 35.0 +0.4
baz=42
IMW Indian Meadow 42.27 350 *e*P P 23 19 35.7 -0.1
FLWY Flagg Ranch 42.41 350 *e*P P 23 19 36.5 -0.4
18nm,1.1s,mb4.6
M06C Likely Place G 42.42 338 ⇓P P 23 19 37.6 +0.6
baz=42
L08A Fields 42.55 341 ⇓P P 23 19 38.1 0.0
baz=43
J12A Stokes Ranch, 42.58 345 ⇑P P 23 19 37.8 -0.4
baz=43
HLID Hailey 42.70 346 ⇑P P 23 19 39.1 -0.1
baz=43
HLID Hailey 42.70 346 *e*P P 23 19 39.4 +0.1
L07A Adell 42.73 340 ⇓P P 23 19 40.2 +0.7
baz=43
M05C Lookout 42.80 338 ⇑P P 23 19 40.9 +0.8
baz=43
K09A Rome 42.81 342 ⇑P P 23 19 40.4 +0.1
baz=43
I14A Mackay 42.82 347 ⇓P P 23 19 40.9 +0.7
baz=43
WVOR Wild Horse Val 42.86 341 *e*P P 23 19 40.8 +0.2
8.1nm,1.2s,mb4.3
MFID Camas Ranch 42.92 344 ⇓P P 23 19 41.0 -0.1
baz=43
I13A Wildhorse Cree 42.96 346 ⇓P P 23 19 41.9 +0.5
baz=43,SNR=7.7
K08A Mann Creek Ran 43.08 341 ⇑P P 23 19 42.7 +0.3
baz=43
H16A Russell Place, 43.11 350 ⇑P P 23 19 44.7 +2.1
baz=43
L05A Lakeview 43.28 339 ⇓P P 23 19 45.0 +1.0
baz=43
K07A Rock Creek Ran 43.30 341 ⇓P P 23 19 44.3 +0.2
baz=43
H15A Lima 43.30 348 ⇓P P 23 19 44.9 +0.8
baz=43,SNR=6.9
I11A Placerville 43.42 344 ⇓P P 23 19 45.2 +0.1
baz=43
M04C Macdoel 43.43 337 ⇓P P 23 19 45.7 +0.4
baz=43
H14A Leadore 43.45 347 ⇓P P 23 19 45.9 +0.5
baz=44,SNR=8.7
MCMT McKenzie Canyo 43.54 348 P P 23 19 45.5 -0.6
H13A Challis 43.60 346 ⇑P P 23 19 46.3 -0.3
baz=44,SNR=8.3
SIV San Ignacio 43.63 116 P P 23 19 45.8 -1.5
0.7nm,0.8s,mb3.5,baz=279,slow=11,SNR=5.1
YBH Yreka Blue Hor 43.73 337 P P 23 19 46.4 -1.2
2.4nm,0.7s,mb4.1,baz=90,slow=17,SNR=4.1
H12A Diamond D Ranc 43.73 346 ⇑P P 23 19 47.8 +0.2
baz=44
G15A Dillon 43.79 348 ⇓P P 23 19 48.1 0.0
baz=44
K05A Summer Lake 43.89 339 ⇑P P 23 19 49.3 +0.3
baz=44
GCMT Greycliff 43.91 351 *e*P P 23 19 48.6 -0.4
GCMT *e*pP pP 23 20 23.9 +32
BOZ Bozeman (W) 44.09 349 ⇓P P 23 19 51.1 +0.7
baz=44
J06A Christmas Vall 44.10 340 P P 23 19 51.1 +0.5
baz=44,SNR=5.6
H11A Donnelly 44.17 345 ⇓P P 23 19 50.7 -0.4
baz=44
F15A Butte 44.44 349 ⇑P P 23 19 53.5 +0.2
baz=44
J05A Fort Rock 44.50 339 ⇓P P 23 19 53.7 -0.1
baz=44
I06A Prineville 44.73 340 ⇑P P 23 19 55.3 -0.3
baz=45
H08A Prairie City 44.75 342 ⇓P P 23 19 56.5 +0.7
baz=45
F13A Darby 44.78 347 ⇓P P 23 19 56.3 +0.4
baz=45
G11A Walters Elk Ra 44.88 345 ⇓P P 23 19 56.4 -0.5
baz=45
H07A Lands Inn, Kim 45.10 341 ⇑P P 23 19 58.6 0.0
baz=45
BRNJ Basking Ridge 45.12 29 *e*P P 23 19 59.3 +0.5
11nm,0.4s,mb5.0
E13A Victor 45.37 347 ⇑P P 23 20 00.5 -0.1
baz=45
H06A Lindquist Farm 45.47 341 ⇓P P 23 20 01.9 +0.4
baz=46
G08A Pilot Rock 45.54 342 ⇓P P 23 20 02.0 0.0
baz=46
E12A Beaver Dam Sad 45.66 346 ⇑P P 23 20 02.6 -0.4
baz=46
D14A Greenough 45.83 348 ⇓P P 23 20 03.9 -0.4
baz=46
CFAA Coronel Fontan 46.04 140 P P 23 20 05.2 -1.0
0.1nm,0.3s,baz=315,slow=8.2,SNR=5.1
CFAA Coronel Fontan 46.04 140 P P 23 20 05.2 -1.0
EYMN Ely 46.20 9 *e*P P 23 20 05.4 -1.8
29nm,1.3s,mb5.0
B13A Whitefish 47.26 348 ⇑P P 23 20 15.2 -0.3
baz=47
WALA Waterton Lakes 47.80 349 *e*P P 23 20 19.6 -0.1
4.6nm,0.9s,mb4.5
ULM Lac du Bonnet 47.95 5 P P 23 20 18.4 -2.4
9.2nm,1.1s,mb4.7,baz=193,slow=5.1,SNR=3.9
ULM LR LR 23 41 53.8
comp=Z,170nm,18.1s,MS4.1,baz=98,slow=38
PMOR Pomariorio Ree 49.33 248 *e*T 00 13 00.4
1.0nm,0.2s
CPUP Villa Florida 51.05 127 P P 23 20 44.5 -0.5
3.6nm,0.8s,mb4.4,baz=284,slow=8.4,SNR=14
CPUP LR LR 23 37 57.3
comp=Z,72nm,20.6s,MS3.7,baz=177,slow=31
PLCA Paso Flores 51.18 150 P P 23 20 45.0 -0.7
3.5nm,1.0s,mb4.2,baz=291,slow=7.7,SNR=3.3
PLCA LR LR 23 37 35.7
comp=Z,198nm,18.8s,MS4.2,baz=2.3,slow=30
PPT Papeete 51.62 245 *e*LR LR 23 35 24.2
92nm,26.0s
PPT Papeete 51.62 245 LR LR 23 37 08.9
comp=Z,105nm,18.9s,MS3.9,baz=29,slow=30
BDFB Brasilia 55.52 111 P P 23 21 16.6 -1.5
7.7nm,1.0s,mb4.7,baz=129,slow=3.6,SNR=6.9
DLBC Dease Lake 60.34 343 *e*P P 23 21 51.4 +0.3
YKA Yellowknife Ar 60.84 353 P P 23 21 51.5 -2.9
2.8nm,0.9s,mb4.4,baz=160,slow=6.8,SNR=6.6
YKA LR LR 23 48 39.4
comp=Z,72nm,18.7s,MS3.9,baz=170,slow=36
YKA Yellowknife Ar 60.84 353 P P 23 21 51.5 -2.9
YKA LR LR 23 48 39.4
EGAK Eagle 68.60 343 *e*P P 23 22 44.7 -0.3
7.2nm,1.1s,mb4.5
PMSA Palmer Station 72.26 164 P P 23 23 09.2 +1.8
8.7nm,1.3s,mb4.5
KBS Kingsbay 92.07 10 *e*P P 23 24 51.6 +0.5
40nm,0.6s
NOA NORSAR Array B 98.62 27 LR LR 00 06 36.6
comp=Z,36nm,21.2s,MS3.8,baz=300,slow=33
TSUM Tsumeb 117.89 110 *e*PKPdf PKPdf 23 30 32.0 +2.0
ASAR Alice Springs 122.71 243 PKP PKPdf 23 30 35.5 -3.7
0.8nm,0.8s,baz=119,slow=1.7,SNR=6.4
WRA Warrmunga Arr 123.08 248 PKP PKPdf 23 30 35.6 -4.4
0.9nm,0.9s,baz=94,slow=2.7,SNR=7.4
HHC Hu-ho-hao-te 127.66 329 *e*PKP PKPdf 23 30 40.7 -7.5
HHC PP PP
comp=Z,118nm,9.1s
HHC LR LR
comp=N,221nm,19.4s,MS4.9
HHC LR LR
comp=E,181nm,21.2s,MS4.9
HHC LR LR
comp=Z,169nm,19.8s,MS4.7
NJ2 Nanjing 128.91 315 *e*PKP PKPdf 23 30 47.4 -3.4
MKAR Makanchi Array 130.98 357 PKP PKPdf 23 30 51.9 -2.4
comp=Z,1.0nm,1.1s,baz=336,slow=3.2,SNR=5.4
LZH Lanzhou 135.19 331 *e*PKP PKPdf 23 30 57.5 -5.1
LZH XPKP 23 31 09.0
CD2 Chengdu 139.28 326 *e*PKP PKPdf 23 31 08.8 -1.5
CD2 LR LR
comp=N,160nm,14.2s
CD2 LR LR
comp=Z,130nm,16.2s,MS4.8
GYA Guiyang 140.71 319 PKP PKPdf 23 31 12.8 -0.2
GYA PP PP
comp=Z,80nm,7.8s
KMI Kunming 144.17 321 PKP PKPdf 23 31 19.1 -0.1
KMI LR LR
comp=N,131nm,8.7s
KMI LR LR
comp=E,74nm,8.7s
KMI LR LR
comp=Z,107nm,11.4s,MS4.9
NDI New Delhi 149.12 3 *e*P PKPdf 23 31 29.0 +1.6
NDI *e*P 23 31 37.0
CHTO Chiang Mai 151.11 318 *e*PKPbc PKPbc 23 31 36.0 -0.6
CMAR Chiang Mai Arr 151.36 317 PKPbc PKPbc 23 31 35.0 -2.3
comp=Z,1.1nm,0.3s,baz=288,slow=1.3,SNR=11

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*SZGRF **07** 23:19:51.2, 385S×2867E, h33km, mb4.6, Lake Tanganyika region*
*BJI **07** 23:19:58.9, 192S×2858E, h9km, mB5.0, mb4.8, Ms4.9, Msz4.5*
*IDC **07** 23:19:59.5±0.6, 2.18S×2877E, h0km, mb4.3/16, mb1 4.4/18, mb1mx4.3/23, mbtmp4.3/18, ML4.0/2, MS3.4/6, Ms1 3.4/6, ms1mx3.2/29, Error ellipse: s-maj=18.6km s-min=13.4km az=97.0*
*ISCJB **07** 23:19:59.0±0.3, 222S±005×2869E±006, h11km, mb4.5/71, MS3.8/14, Error ellipse: s-maj=8.8km s-min=6.7km az=170.7*
*NEIC **07** 23:20:00.5±0.2, 224S×2873E, h10km, mb4.6/37, Error ellipse: s-maj=7.3km s-min=4.9km az=88.0*
*MOS **07** 23:20:00.3±0.8, 228S×2858E, h23km, mb4.8/36, Error ellipse: s-maj=16.0km s-min=4.8km az=99.0*
ISC 07 23:20:02.0±3.2, 224S±005×2872E±006, h17km±20km, h12km±.7km: pP-P, n177, σ0.985/177, mb4.5/71, MS3.8/14, 4C-11D, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KMBO	**Kilima Mbogo**	**8.60**	**83**	Pn		**Pn**	**23 22 04.9**	**-0.9**
	3.0nm,0.3s,baz=242,slow=17,SNR=32							
KMBO				Sn		**Sn**	**23 23 37.8**	**-4.7**
	5.4nm,0.3s,baz=189,slow=20,SNR=4.2							
KMBO				Lg			23 24 22.6	
	12nm,0.3s,baz=152,slow=24,SNR=12							
KMBO	**Kilima Mbogo**	**8.60**	**83**	*e*Pn		**Pn**	**23 22 04.2**	**-1.6**
LSZ	**Lusaka**	**12.97**	**182**	Pn		**Pn**	**23 23 05.6**	**0.0**
	0.4nm,0.3s,baz=13,slow=11,SNR=7.3							
LSZ				Lg			23 26 40.7	
	0.6nm,0.3s,baz=303,slow=21,SNR=3.6							
LSZ	**Lusaka**	**12.97**	**182**	*e*Pn		**Pn**	**23 23 04.0**	**-1.7**
TSUM	**Tsumeb**	**20.08**	**212**	P		**P**	**23 24 36.3**	**+1.6**
	4.3nm,0.9s,baz=89,slow=22,SNR=9.4							
TSUM				Lg			23 30 27.4	
	9.7nm,1.0s,baz=72,slow=15,SNR=3.4							
TSUM				LR		LR	23 33 13.0	
	comp=Z,72nm,19.6s,MS3.0,baz=321,slow=39							
LBTB	**Lobatse**	**22.85**	**187**	P		**P**	**23 25 04.8**	**+0.3**
	18nm,0.8s,mb4.5,baz=13,slow=10,SNR=18							
LBTB				LR		LR	23 33 13.0	
	comp=Z,123nm,19.1s,MS3.4,baz=196,slow=35							
LBTB	**Lobatse**	**22.85**	**187**	*e*P		**P**	**23 25 04.2**	**-0.3**
LBTB				pmax		pmax		
	comp=Z,32nm,1.1s,mb4.7							
LBTB	**Lobatse**	**22.85**	**187**	*e*P		**P**	**23 25 04.2**	**-0.3**
	comp=Z,32nm,1.1s,mb4.7							
BOSA	**Boshof**	**26.44**	**187**	P		**P**	**23 25 37.9**	**-0.2**
	comp=Z,7.8nm,0.7s,mb4.3,baz=9.8,slow=6.6,SNR=16							
BOSA				LR		LR	23 36 03.8	
	comp=Z,136nm,19.5s,MS3.5,baz=197,slow=36							
TOA0	**Torodi Ar. Sit**	**30.87**	**300**	*e*P		**P**	**23 26 17.0**	**-0.7**
TORD	**Torodi Ar. Bea**	**30.87**	**300**	P		**P**	**23 26 17.1**	**-0.6**
	comp=Z,4.9nm,0.7s,mb4.5,baz=106,slow=7.4,SNR=40							
TORD				LR		LR	23 38 11.8	
	comp=Z,142nm,20.1s,MS3.6,baz=105,slow=35							
DBIC	**Dimbokro**	**34.66**	**285**	P		**P**	**23 26 49.6**	**-1.4**
	comp=Z,2.2nm,0.5s,mb4.3,baz=70,slow=17,SNR=4.8							
DBIC				LR		LR	23 41 19.1	
	comp=Z,48nm,20.8s,MS3.2,baz=110,slow=37							
MALT	**Malatya**	**41.33**	**12**	*i*P		**P**	**23 27 48.4**	**+1.5**
MALT	**Malatya**	**41.33**	**12**	*e*P		**P**	**23 27 47.6**	**+0.7**
	comp=Z,10nm,1.1s,mb4.4							
KEST	**Kesra**	**41.89**	**336**	P		**P**	**23 27 52.8**	**+1.3**
	comp=Z,2.6nm,0.8s,mb3.9,baz=115,slow=2.8,SNR=7.5							
KEST				LR		LR	23 45 41.7	
	comp=Z,35nm,19.5s,MS3.2,baz=198,slow=37							
ANN	**Anapa**	**47.47**	**8**	*e*P		**P**	**23 28 30.0**	**-5.9**
ANN				pmax		pmax		
	comp=Z,22nm,1.0s,mb5.0							
MLR	**Muntele Rosu**	**47.58**	**357**	*i*P		**P**	**23 28 37.9**	**+1.1**
KIV	**Kislovodsk**	**47.66**	**14**	*i*P		**P**	**23 28 38.4**	**+1.0**
KIV				*e*			23 30 27.6	
KIV				*e*S		**S**	**23 35 38.4**	**+5.9**
KIV				pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.6							
PLOR	**Plostina**	**47.91**	**358**	*i*P		**P**	**23 28 39.7**	**+0.4**
BZS	**Buzias**	**48.06**	**353**	*i*P		**P**	**23 28 41.6**	**+1.1**
PKSM	**Moragy**	**49.06**	**351**	*i*P		**P**	**23 28 48.9**	**+0.8**
DRGR		**49.11**	**355**	*i*P		**P**	**23 28 49.7**	**+1.2**
ERON	**Agron**	**49.37**	**325**	P		**P**	**23 28 55.5**	**+4.7**
LMR	**La Mourre**	**49.57**	**339**	*e*P		**P**	**23 28 51.6**	**-0.5**
	comp=Z,12nm,1.0s,mb4.5							
LMR	**La Mourre**	**49.57**	**339**	*e*P		**P**	**23 28 51.6**	**-0.5**
LMR				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.6							
LMR	**La Mourre**	**49.57**	**339**	*e*P		**P**	**23 28 51.6**	**-0.5**
	comp=Z,5.8nm,1.0s,mb4.6							

SBF Sospel 49.70 340 *e*P P 23 28 53.5 +0.4
comp=Z,26nm,0.9s,mb4.9
SBF Sospel 49.70 340 *e*P P 23 28 53.5 +0.4
SBF pmax pmax
comp=Z,13nm,0.9s,mb5.0
SBF Sospel 49.70 340 *e*P P 23 28 53.5 +0.4
comp=Z,13nm,0.9s,mb5.0
FRF La Foret Royal 49.72 339 *e*P P 23 28 52.7 -0.5
BURAR Bucovina Array 49.74 357 *i*P P 23 28 55.5 +2.2
BUR08 Bucovina Ar. S 49.77 357 *e*P P 23 28 55.1 +1.5
EBAN Banos Encina 50.18 327 P P 23 29 00.1 +3.3
ESPR Espera 50.46 324 P P 23 29 03.8 +4.8
comp=Z,3.9nm,0.5s,mb4.7
PSZ Piszkesteto 50.54 352 *i*P P 23 28 59.9 +0.5
PSZ Piszkesteto 50.54 352 *e*P P 23 28 59.6 +0.2
comp=Z,9.1nm,0.9s,mb4.7
MBDF Montbardon 50.69 340 *e*P P 23 29 00.8 +0.2
comp=Z,16nm,0.9s,mb4.7
MBDF Montbardon 50.69 340 *e*P P 23 29 00.8 +0.2
MBDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
MBDF Montbardon 50.69 340 *e*P P 23 29 00.8 +0.2
comp=Z,7.8nm,0.9s,mb4.6
BNI Bardonecchia 51.01 340 *e*P P 23 29 03.0 0.0
BNI pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BNI Bardonecchia 51.01 340 *e*P P 23 29 03.0 +0.1
comp=Z,6.0nm,0.9s,mb4.5
KECS Kecovo 51.02 353 *e*P P 23 29 03.4 +0.4
KECS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
KECS Kecovo 51.02 353 *e*P P 23 29 03.4 +0.4
comp=Z,4.1nm,1.2s,mb4.2
LASF Ste Croix 51.20 337 *e*P P 23 29 04.4 0.0
comp=Z,30nm,1.4s,mb4.7
ZST Bratislava 51.24 350 *e*P P 23 29 04.8 +0.2
VYHS Vyhne 51.25 352 *e*P P 23 29 04.9 +0.2
VYHS pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
VYHS Vyhne 51.25 352 *e*P P 23 29 04.9 +0.2
comp=Z,5.1nm,1.7s,mb4.2
KOLS Kolonicke sedl 51.27 355 *e*P P 23 29 05.9 +1.0
CRVS Cervenica-Dubn 51.32 354 *e*P P 23 29 06.2 +1.0
ESDC Sonseca Array 51.36 328 P P 23 29 06.4 +0.7
comp=Z,1.5nm,0.8s,mb4.0,baz=136,slow=6.3,SNR=4.9
LPG La Plagne 51.37 340 *e*P P 23 29 05.1 -0.6
comp=Z,19nm,1.2s,mb4.6
LPG La Plagne 51.37 340 *e*P P 23 29 05.1 -0.6
LPG pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
LPG La Plagne 51.37 340 *e*P P 23 29 05.1 -0.6
comp=Z,9.4nm,1.2s,mb4.6
MODS Modra-Piesok 51.38 350 *e*P P 23 29 04.2 -1.5
LPL La Plagne 51.40 340 *e*P P 23 29 05.2 -0.7
comp=Z,16nm,1.1s,mb4.5
LPL La Plagne 51.40 340 *e*P P 23 29 05.2 -0.7
LPL pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
LPL La Plagne 51.40 340 *e*P P 23 29 05.2 -0.7
comp=Z,8.1nm,1.1s,mb4.6
KOLL Kolacno 51.40 351 *e*P P 23 29 06.1 +0.3
TUE Stuetta 51.43 343 *e*P P 23 29 06.3 +0.2
comp=Z,19nm,1.3s,mb4.9
LIKS Likavka 51.76 352 *e*P P 23 29 12.2 +3.7
LIKS Likavka 51.76 352 *e*pP pP 23 29 12.2 -1.7
EPF Esparros 51.81 334 *e*P P 23 29 09.3 +0.3
comp=Z,26nm,1.2s,mb4.7
EPF Esparros 51.81 334 *e*P P 23 29 09.3 +0.3
EPF pmax pmax
comp=Z,13nm,1.2s,mb4.7
EPF Esparros 51.81 334 *e*P P 23 29 09.3 +0.3
comp=Z,13nm,1.2s,mb4.7
STHS Stebnicka Huta 51.85 354 *e*P P 23 29 07.6 -1.6
STHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
STHS Stebnicka Huta 51.85 354 *e*P P 23 29 07.6 -1.6
comp=Z,2.4nm,0.8s,mb4.2
KWP Kalwaria 51.92 355 *e*P P 23 29 10.9 +1.2
KWP Kalwaria 51.92 355 *i*P P 23 29 10.6 +0.9
KWP Kalwaria 51.92 355 *e*P P 23 29 10.9 +1.2
ETSF Etsaut 52.11 333 *e*P P 23 29 11.5 +0.3
comp=Z,36nm,1.2s,mb4.9
ETSF Etsaut 52.11 333 *e*P P 23 29 11.5 +0.3
ETSF pmax pmax
comp=Z,18nm,1.2s,mb4.9
ETSF Etsaut 52.11 333 *e*P P 23 29 11.5 +0.3
comp=Z,18nm,1.2s,mb4.9
VRAC Vranov 52.40 350 *i*P P 23 29 13.3 0.0
GEC2 GERESS Array S 52.52 348 *e*P P 23 29 14.0 -0.2
GEC2 pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
GEC2 GERESS Array S 52.52 348 *e*P P 23 29 14.0 -0.2
comp=Z,6.0nm,1.1s,mb4.4
GERES GERESS Array B 52.52 348 P P 23 29 14.4 +0.2
comp=Z,2.3nm,0.9s,mb4.1,baz=174,slow=6.3,SNR=13
SJPF Ste Jean 52.58 333 *e*P P 23 29 14.9 +0.2
comp=Z,10nm,0.9s,mb4.5
SJPF Ste Jean 52.58 333 *e*P P 23 29 14.9 +0.2
SJPF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
SJPF Ste Jean 52.58 333 *e*P P 23 29 14.9 +0.2
comp=Z,5.2nm,0.9s,mb4.5
TREC Trest 52.59 349 *e*P P 23 29 13.9 -0.8
CAF Calviac 52.62 336 *e*P P 23 29 15.0 0.0
comp=Z,5.7nm,0.7s,mb4.3
CAF Calviac 52.62 336 *e*P P 23 29 15.0 0.0
CAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CAF Calviac 52.62 336 *e*P P 23 29 15.0 0.0
comp=Z,2.8nm,0.7s,mb4.3
OKC Ostrava-Krasne 52.66 351 *e*P P 23 29 14.7 -0.5
MORC Moravsky Berou 52.70 351 *i*P P 23 29 15.7 +0.2
MORC Moravsky Berou 52.70 351 *e*P P 23 29 15.2 -0.3
comp=Z,8.2nm,1.1s,mb4.6
AKASG Malin Array Be 52.73 0 P P 23 29 15.2 -0.6
comp=Z,0.9nm,0.4s,mb4.1,baz=192,slow=7.4,SNR=7.7
KHC Kasperske Hory 52.82 348 *e*P P 23 29 16.1 -0.3
EVO Evora 52.84 324 *e*P P 23 29 18.3 +1.5
comp=Z,14nm,1.1s,mb4.5
EVO *e*MLR MLR
comp=Z,96nm,18.2s,MS3.6
WET Wettzell 52.98 347 *e*P P 23 29 15.8 -1.8
WET pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
WET Wettzell 52.98 347 *e*P P 23 29 15.8 -1.8
comp=Z,5.0nm,1.4s,mb4.2
LFF La Frestale 53.17 335 *e*P P 23 29 19.2 +0.1
comp=Z,8.4nm,0.6s,mb4.5
LFF La Frestale 53.17 335 *e*P P 23 29 19.2 +0.1
LFF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
LFF La Frestale 53.17 335 *e*P P 23 29 19.2 +0.1
comp=Z,4.2nm,0.6s,mb4.5
SMF Signal de Mont 53.38 339 *e*P P 23 29 20.0 -0.6
comp=Z,27nm,1.3s,mb4.7
SMF Signal de Mont 53.38 339 *e*P P 23 29 20.0 -0.6
SMF pmax pmax
comp=Z,14nm,1.3s,mb4.7
SMF Signal de Mont 53.38 339 *e*P P 23 29 20.0 -0.6
comp=Z,14nm,1.3s,mb4.7
HINF Hinteralfeld 53.39 342 *e*P P 23 29 19.9 -0.7
comp=Z,6.5nm,0.8s,mb4.3
HINF Hinteralfeld 53.39 342 *e*P P 23 29 19.9 -0.7
HINF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
HINF Hinteralfeld 53.39 342 *e*P P 23 29 19.9 -0.7
comp=Z,3.3nm,0.8s,mb4.3
PRU Pruhonice 53.43 349 *e*P P 23 29 19.9 -1.0
DPC Dobruska-Polom 53.45 350 *e*P P 23 29 20.9 -0.1
UPC Upice 53.66 350 *e*P P 23 29 22.4 -0.1
AVF Avril sur Loir 53.68 339 *e*P P 23 29 22.3 -0.5
TCF Toulx Ste Croi 53.69 337 *e*P P 23 29 23.0 +0.1
comp=Z,39nm,1.6s,mb4.8
TCF Toulx Ste Croi 53.69 337 *e*P P 23 29 23.0 +0.1
TCF pmax pmax
comp=Z,19nm,1.6s,mb4.8
TCF Toulx Ste Croi 53.69 337 *e*P P 23 29 23.0 +0.1
comp=Z,19nm,1.6s,mb4.8
HAU Haudompre 53.71 342 *e*P P 23 29 21.5 -1.5
comp=Z,5.5nm,0.8s,mb4.2
HAU *e*MLR MLR
comp=Z,41nm,20.8s,MS3.2
HAU Haudompre 53.71 342 *e*P P 23 29 21.5 -1.5
HAU pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
HAU MLR MLR

comp=Z,40nm,20.8s,MS3.5
HAU Haudompre 53.71 342 *e*P **P 23 29 21.5 -1.5**
comp=Z,2.8nm,0.8s,mb4.2
HAU LR LR
comp=Z,40nm,20.8s,MS3.5
ROTZ Rotzenmuhle 53.72 347 *e*P **P 23 29 23.0 0.0**
comp=Z,6.0nm,1.1s,mb4.4
CDF Champ du Feu 53.79 342 *e*P **P 23 29 22.8 -0.7**
comp=Z,11nm,1.0s,mb4.5
CDF Champ du Feu 53.79 342 *e*P **P 23 29 22.8 -0.7**
CDF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CDF Champ du Feu 53.79 342 *e*P **P 23 29 22.8 -0.7**
comp=Z,5.5nm,1.0s,mb4.4
SSF Saint Saulge 53.86 339 *e*P **P 23 29 23.3 -0.8**
comp=Z,6.2nm,0.9s,mb4.2
SSF Saint Saulge 53.86 339 *e*P **P 23 29 23.3 -0.8**
SSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
SSF Saint Saulge 53.86 339 *e*P **P 23 29 23.3 -0.8**
comp=Z,3.1nm,0.9s,mb4.2
GRA1 Grafenberg Arr 53.88 346 *e*P **P 23 29 24.2 0.0**
comp=Z,11nm,1.0s,mb4.7
GRF Grafenberg Arr 53.88 346 *e*P **P 23 29 24.2 0.0**
GRF pmax pmax
comp=Z,11nm,1.0s,mb4.7
GRF Grafenberg Arr 53.88 346 *e*P **P 23 29 24.2 0.0**
comp=Z,11nm,1.0s,mb4.7
LOR Lormes 53.91 339 *e*P **P 23 29 23.7 -0.7**
comp=Z,7.6nm,0.9s,mb4.3
LOR *e*MLR MLR
comp=Z,94nm,17.2s,MS3.6
LOR Lormes 53.91 339 *e*P **P 23 29 23.7 -0.7**
LOR pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
LOR MLR MLR
comp=Z,90nm,17.3s,MS3.9
LOR Lormes 53.91 339 *e*P **P 23 29 23.7 -0.7**
comp=Z,3.8nm,0.9s,mb4.3
LOR LR LR
comp=Z,90nm,17.3s,MS3.9
MANZ Manzenberg 53.95 347 *e*P **P 23 29 24.8 +0.1**
comp=Z,7.0nm,1.0s,mb4.5
TANN Tannenbergstha 54.27 347 *e*P **P 23 29 27.3 +0.3**
comp=Z,13nm,1.7s,mb4.6
MEZF Maizieres J'vi 54.57 341 *e*P **P 23 29 28.4 -0.8**
comp=Z,14nm,0.9s,mb4.7
MEZF Maizieres J'vi 54.57 341 *e*P **P 23 29 28.4 -0.8**
comp=Z,14nm,0.9s,mb5.0
MOX Moxa 54.68 347 *e*P **P 23 29 30.2 +0.2**
comp=Z,13nm,1.7s,mb4.7
MFF Saint Martin d 54.88 336 *e*P **P 23 29 31.4 -0.1**
CLL Collm 55.00 348 *e*P **P 23 29 32.1 -0.2**
comp=Z,5.0nm,1.1s,mb4.5
TNS Taunus Mts 55.08 344 *e*P **P 23 29 33.1 +0.2**
TNS pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
TNS Taunus Mts 55.08 344 *e*P **P 23 29 33.1 +0.2**
comp=Z,8.0nm,1.2s,mb4.6
BAIF Baives 56.19 341 *e*P **P 23 29 40.0 -0.9**
SUW Suwalki 56.24 356 *e*P **P 23 29 41.4 +0.3**
SUW Suwalki 56.24 356 *e*P **P 23 29 41.4 +0.2**
LDF La Druitiere 56.49 337 *e*P **P 23 29 42.4 -0.6**
NRDL Niedersach Rie 56.75 347 *e*P **P 23 29 45.9 +1.1**
comp=Z,22nm,1.2s,mb5.1
SGMF Saint Gilles 57.18 336 *e*P **P 23 29 47.4 -0.6**
OBN Obninsk 57.52 5*d i*P **P 23 29 49.9 -0.3**
OBN *e* 23 30 39.9
OBN *e*S **S 23 37 53.2 +6.3**
OBN pmax pmax
comp=Z,19nm,1.2s,mb5.0
ROSF Rostrenen 57.55 335 *e*P **P 23 29 49.8 -0.7**
comp=Z,17nm,1.2s,mb4.7
ROSF Rostrenen 57.55 335 *e*P **P 23 29 49.8 -0.7**
ROSF pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
ROSF Rostrenen 57.55 335 *e*P **P 23 29 49.8 -0.7**
comp=Z,8.7nm,1.2s,mb4.7
UCH Uchtor 60.56 38 *e*P **P 23 30 12.7 +1.1**
comp=Z,3.5nm,1.1s,mb4.4
TKM2 Tokmak 2 61.61 38 *e*P **P 23 30 19.0 +0.3**
TKM2 pmax pmax
comp=Z,1.0nm,0.8s,mb4.0
TKM2 Tokmak 2 61.61 38 *e*P **P 23 30 19.0 +0.3**
comp=Z,1.4nm,0.8s,mb4.1
ARU Arti 63.30 18*d i*P **P 23 30 29.2 -0.5**
ARU *e* 23 32 45.3
ARU *e*S **S 23 39 00.0 -1.0**
ARU pmax pmax
comp=Z,13nm,1.2s,mb4.9
ARU Arti 63.30 18 *e*P **P 23 30 29.4 -0.4**
comp=Z,7.0nm,0.8s,mb4.8
SVE Sverdlovsk 64.28 19 *e*P **P 23 30 36.0 -0.2**
SVE pmax pmax
comp=Z,14nm,1.4s,mb4.8
NB2 NORSAR Subarra 64.53 351 P **P 23 30 37.3 -0.5**
comp=Z,15nm,1.2s,mb4.9,baz=162,slow=6.5
NOA NORSAR Array B 64.53 351 P **P 23 30 37.8 0.0**
comp=Z,4.2nm,1.0s,mb4.4,baz=162,slow=6.5,SNR=4.9
SYO Syowa Base 67.06 176↓*e*pP pP 23 30 55.0 -4.4
MKAR Makanchi Array 67.69 37 P **P 23 30 58.0 -0.4**
comp=Z,4.1nm,0.7s,mb4.6,baz=245,slow=5.7,SNR=19
MKAR Makanchi Array 67.69 37 P **P 23 30 58.0 -0.4**
MAW Mawson 69.35 167 P **P 23 31 09.9 +1.6**
comp=Z,6.3nm,0.9s,mb4.5,baz=286,slow=7.2,SNR=6.2
MAW Mawson 69.35 167 P **P 23 31 07.4 -0.9**
MAW pmax pmax
comp=Z,5.0nm,1.1s
MAW Mawson 69.35 167 P **P 23 31 07.4 -1.0**
comp=Z,4.7nm,1.1s,mb4.3
ARCES ARCESS Array B 71.66 359 P **P 23 31 22.2 -0.2**
comp=Z,2.8nm,0.8s,mb4.3,baz=157,slow=6.6,SNR=7.5
ARCES ARCESS Array B 71.66 359 P **P 23 31 22.2 -0.2**
CMAR Chiang Mai Arr 72.02 70 P **P 23 31 25.5 0.0**
comp=Z,1.0nm,0.3s,mb4.2,baz=258,slow=7.0,SNR=6.1
CMAR Chiang Mai Arr 72.02 70 P **P 23 31 25.5 0.0**
NVS Novosibirsk 72.31 30 *e*P **P 23 31 26.1 -0.4**
NVS pmax pmax
comp=N,7.0nm,1.5s
NVS pmax pmax
comp=E,5.0nm,1.5s
NVS pmax pmax
comp=Z,13nm,1.5s,mb4.6
ZAL Zalesovo 72.63 31 P **P 23 31 27.8 -0.7**
ZAA0 Zalesovo Array 72.65 31 *e*P **P 23 31 28.1 -0.5**
ZALV Zalesovo Beam 72.65 31 P **P 23 31 27.8 -0.8**
comp=Z,2.5nm,0.8s,mb4.2,baz=251,slow=4.5,SNR=9.7
HOPE Hope Point 73.91 214 *e*P **P 23 31 36.0 -0.1**
comp=Z,0.2nm,0.9s
KMI Kunming 76.53 64 P **P 23 31 52.1 +0.4**
KMI AP pP 23 31 55.4 -1.9
KMI XP sP 23 31 56.6 -2.7
KMI PPP 23 36 33.7
KMI S S 23 41 37.5 +0.1
KMI AMB AMB
comp=Z,7.0nm,0.8s,mb4.6
KMI AMB AMB
comp=Z,53nm,5.6s
KMI LR LR
comp=N,131nm,8.7s
KMI LR LR
comp=E,74nm,8.7s
KMI LR LR
comp=Z,107nm,11.4s,MS4.4
BDFB Brasilia 76.63 255 P **P 23 31 54.4 +1.9**
comp=Z,4.1nm,0.7s,mb4.5,baz=107,slow=6.8,SNR=7.7
GTA Gaotai 76.92 49 *e*P **P 23 31 54.8 +1.1**
GTA AP pP 23 31 59.0 -0.2
GTA XP sP 23 32 02.5 +1.2
GTA AMB AMB
comp=Z,5.0nm,1.2s,mb4.3
CD2 Chengdu 78.35 58 *e*P **P 23 32 02.1 +0.3**
CD2 XP sP 23 32 09.1 -0.3
CD2 S S 23 41 56.1 -0.9
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CD2 AMB AMB
comp=Z,20nm,5.2s
CD2 LR LR
comp=N,160nm,14.2s
CD2 LR LR
comp=Z,130nm,16.2s,MS4.3
LZH Lanzhou 79.33 53 *e*P **P 23 32 08.5 +1.4**
LZH AP pP 23 32 11.7 -1.0
LZH XP sP 23 32 14.5 -0.2
LZH AMB AMB
comp=Z,13nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,86nm,4.6s
GYA Guiyang 80.22 63 P **P 23 32 12.5 +0.4**
GYA PP PP 23 35 16.7 +1.9
GYA S S 23 42 17.3 +0.3
GYA SKS 23 42 25.2
GYA PS 23 43 03.4
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,70nm,5.3s
GYA LR LR
comp=N,390nm,20.9s,MS4.8
GYA LR LR
comp=E,240nm,21.3s,MS4.8
GYA LR LR
comp=Z,330nm,20.2s,MS4.7
ZAK Zakamensk 81.92 39 *e*P **P 23 32 18.5 -2.2**
ZAK pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
TLY Talaya 82.44 37 *e*P **P 23 32 24.8 +1.4**
TLY pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
TLY MLR MLR
comp=Z,60nm,17.0s,MS4.0
SONM Songino Array 83.39 42 P **P 23 32 29.0 +0.6**
comp=Z,1.6nm,1.1s,mb4.0,baz=225,slow=4.0,SNR=4.4
HHC Hu-ho-hao-te 86.03 49 *e*P **P 23 32 40.5 -1.4**
HHC AP pP 23 32 44.2 -3.3
HHC XP sP 23 32 46.5 -3.0
HHC PP PP 23 36 03.1 +1.0
HHC SKS 23 43 03.4
HHC S S 23 43 13.2 -2.3
HHC AMB AMB
comp=Z,11nm,0.6s,mb5.3
HHC AMB AMB
comp=Z,144nm,7.5s
HHC LR LR
comp=N,119nm,17.8s,MS4.6
HHC LR LR
comp=E,164nm,16.4s,MS4.6
HHC LR LR
comp=Z,150nm,17.0s,MS4.5
MIV Mineville/With 100.35 314 *e*Pdif Pdif 23 33 46.1 -1.6
TXAR Lajitas Array 127.38 306 PKP PKPdf 23 39 08.2 +1.6
comp=Z,0.7nm,0.9s,baz=119,slow=4.4,SNR=5.8

IDC 07 23:45:31.0±2.3, 603S×13022E, h0km, mb3.7/1, mb1 3.5/3, mb1mx3.4/13, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=92.0km s-min=29.2km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.80**	**200**	Pn	Pn	23 48 34.2	-0.3
	baz=29,slow=13						
WRA	**Warramunga Arr**	**14.40**	**164**	Pn	Pn	23 48 56.7	+0.4
	0.4nm,0.3s,baz=348,slow=14,SNR=8.5						
WRA				Sn	Sn	23 51 23.0	-14
	0.4nm,0.3s,baz=339,slow=22,SNR=6.0						
ASAR	**Alice Springs**	**17.89**	**169**	P	Pn	23 49 41.5	0.0
	0.2nm,0.3s,baz=347,slow=9.1,SNR=7.0						
MKAR	**Makanchi Array**	**67.54**	**327**	P	P	23 56 29.3	+0.1
	0.4nm,0.5s,baz=114,slow=5.4,SNR=4.5						

*BJI **07** 23:56:13.6, 7.97S×103.23E, h20km, mB5.3, mb5.3, Ms5.1, Msz4.9*
*ISCJB **07** 23:56:21.4±0.2, 7.19S±003×103.19E±003, h30km, mb5.1/88, MS4.7/27, Error ellipse: s-maj=4.9km s-min=3.7km az=28.7*
*MOS **07** 23:56:22.5±0.9, 6.95S×103.40E, h33km, mb5.4/26, Error ellipse: s-maj=12.8km s-min=7.0km az=116.0*
*DJA **07** 23:56:23, 7.18S×103.26E, h0km, Mw5.4/15*
*IDC **07** 23:56:23.5±0.5, 7.13S×103.31E, h30km±3km, mb4.4/24, mb1 4.5/25, mb1mx4.4/28, mbtmp4.4/25, ML4.0/1, MS4.2/8, Ms1 4.3/8, ms1mx3.9/28, Error ellipse: s-maj=14.8km s-min=8.7km az=39.0*
*NEIC **07** 23:56:23.4±0.2, 7.14S×103.28E, mb5.1/23, Error ellipse: s-maj=7.0km s-min=5.1km az=218.0*
ISC 07 23:56:23.7±0.2, 7.19S±003×10321E±003, h32km, h32km±.4km: pP-P, n221, σ1°03/217, mb5.1/88, MS4.7/27, 28C-16D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLSI	**Bandar Lampung**	**2.71**	**48**	P	**Pn**	**23 57 04.7**	**-0.4**
	0.0nm,0.0s						
KLI	**Kotabumi**	**2.83**	**35**	P	**Pn**	**23 57 06.6**	**-0.1**
	0.0nm,0.0s						
SBJI	**Serang**	**3.09**	**70**	P	**Pn**	**23 57 09.9**	**-0.3**
	0.0nm,0.0s						
SKJI	**Sukabumi**	**3.33**	**87**	P	**Pn**	**23 57 12.7**	**-0.8**
	0.0nm,0.0s						
DBJI	**Dramaga**	**3.57**	**80**	P	**Pn**	**23 57 16.4**	**-0.4**
	0.0nm,0.0s						
CBJI	**Citeko**	**3.69**	**78**	P	**Pn**	**23 57 19.0**	**+0.4**
	0.0nm,0.0s						
XMIS	**Christmas Isla**	**4.06**	**144**	*e*Pn	**Pn**	**23 57 17.3**	**-6.3**
LEM	**Lembang**	**4.39**	**86**	P	**Pn**	**23 57 29.4**	**+1.3**
	0.0nm,0.0s						
JCJI	**Jatiwangi**	**5.07**	**82**	P	**Pn**	**23 57 43.4**	**+5.9**
	396nm,1.0s						
JMBI	**JAMBI**	**5.54**	**4**	P	**Pn**	**23 57 45.0**	**+1.1**
	1μm,1.4s						
CLJI	**Cilicap**	**5.78**	**96**	P	**Pn**	**23 57 57.2**	**+10**
	2μm,1.2s						
PPBI	**Pangkal Pinang**	**5.78**	**30**	P	**Pn**	**23 57 47.1**	**-0.2**
	169nm,1.1s						
TPI	**Tanjungpandan**	**6.24**	**45**	P	**Pn**	**23 57 58.1**	**+4.5**
	70nm,1.0s						
BJII	**Banjamegara**	**6.45**	**92**	P	**Pn**	**23 57 57.4**	**+1.0**
	313nm,1.0s						
BJII	**Banjamegara**	**6.45**	**92**↓*e*P		**Pn**	**23 57 57.5**	**+1.1**
BJII				*e*S	**Sn**	**23 59 14.3**	**+5.3**
RGRI	**Rengat**	**6.85**	**353**	P	**Pn**	**23 58 02.4**	**+0.4**
	607nm,0.5s						
PPI	**Padang Panjang**	**7.25**	**337**	P	Pn	**23 58 04.1**	**-3.4**
	143nm,0.9s						
COCO	**West Island**	**8.01**	**231**	Pn	Pn	**23 58 15.9**	**-2.0**
	6μm,0.7s,SNR=6.2						
COCO	**West Island**	**8.01**	**231**	*e*Pn	**Pn**	**23 58 15.6**	**-2.3**
SJI	**Sawahan**	**8.50**	**94**	P	**Pn**	**23 58 24.1**	**-0.5**
	303nm,1.4s						
MYKOM	**Kota Tinggi**	**8.94**	**4**	⇑P	**Pn**	**23 58 29.9**	**-0.8**
KGM	**Kluang**	**9.15**	**1**	⇑P	**Pn**	**23 58 33.4**	**-0.1**
KRKI	**Karangkates**	**9.21**	**97**	P	**Pn**	**23 58 35.2**	**+0.8**
	531nm,1.1s						
FRIM	**Kepong**	**10.48**	**351**	⇑P	**Pn**	**23 58 50.0**	**-1.7**
STKI	**Sintang**	**10.95**	**49**	P	**Pn**	**23 59 00.0**	**+1.8**
	122nm,1.0s						
KSM	**Kuching**	**11.15**	**40**	*e*Pn	**Pn**	**23 58 59.2**	**-1.7**
IPM	**Ipoh**	**11.80**	**349**	⇑P	**Pn**	**23 59 08.0**	**-1.8**
IGBI	**Denpasar**	**11.93**	**99**	P	**Pn**	**23 59 20.4**	**+8.8**
	265nm,1.1s						
BBKI	**Banjar Baru**	**12.16**	**73**	P	**Pn**	**23 59 17.3**	**+2.6**
	129nm,1.1s						
KHKI	**Kahang-Kahang**	**12.34**	**96**	P	**Pn**	**23 59 20.9**	**+3.7**
	103nm,1.2s						
MTNI	**Mataram**	**12.92**	**97**	P	**Pn**	**23 59 26.4**	**+1.3**
	145nm,1.0s						
SBUM	**Sibu**	**13.14**	**44**	⇓P	**Pn**	**23 59 31.0**	**+2.9**
BTM	**Bintulu**	**14.27**	**44**	⇓P	**Pn**	**23 59 51.6**	**+8.0**
BSI	**Banda Aceh**	**14.87**	**328**	P	**Pn**	**23 59 59.6**	**+7.8**
	118nm,1.1s						
SMKI	**Samarinda**	**15.48**	**65**	P	**Pn**	**00 00 06.4**	**+6.6**
	209nm,1.1s						
KAPI	**Kappang**	**16.59**	**83**	Pn	**Pn**	**00 00 11.4**	**-2.6**
	0.6nm,0.3s,baz=270,slow=12,SNR=5.1						
KAPI				LR	LR	00 08 00.7	
	comp=Z,754nm,18.6s,baz=274,slow=42						
KAPI	**Kappang**	**16.59**	**83**	*e*Pn	**Pn**	**00 00 11.6**	**-2.5**
PCI	**Palu**	**17.71**	**70**	P	**Pn**	**00 00 29.2**	**+1.1**
	332nm,1.4s						
KKM	**Kota Kinabalu**	**18.47**	**45**	⇓P	**Pn**	**00 00 37.7**	**+0.4**
KKM	**Kota Kinabalu**	**18.47**	**45**	*e*P	**Pn**	**00 00 36.6**	**-0.7**
TSM	**Tawau**	**18.55**	**52**	⇑P	**Pn**	**00 00 38.7**	**+0.4**
SDKM	**Sandakan**	**18.90**	**48**	⇓P	**Pn**	**00 00 41.5**	**-1.1**
KDM	**Kudat**	**19.52**	**44**	⇑P	**Pn**	**00 00 49.0**	**-0.9**
MYLDM	**Lahad Datu**	**19.59**	**52**	⇓P	**Pn**	**00 00 51.9**	**+1.1**
BATI	**Baumata**	**20.44**	**100**	P	**P**	**00 00 59.2**	**+0.7**
	222nm,1.3s						
BATI	**Baumata**	**20.44**	**100**	P	**P**	**00 00 58.6**	**+0.1**
	117nm,0.8s,baz=236,slow=2.7,SNR=18						
BATI				S	**S**	**00 04 43.5**	**-2.4**
	26nm,0.7s,baz=270,slow=20,SNR=6.1						
MBWA	**Marble Bar**	**21.17**	**133**	*e*P	**P**	**00 01 06.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**24.39**	**119**	*e*P	**P**	**00 01 38.9**	**-0.3**
	11nm,0.8s,mb4.3						
FITZ				*e*S	**S**	**00 06 02.9**	**+5.8**
FITZ	**Fitzroy Crossi**	**24.39**	**119**	P	**P**	**00 01 39.1**	**-0.2**
	5.7nm,1.0s,mb4.0,baz=299,slow=7.7,SNR=6.7						
FITZ				S	**S**	**00 06 07.0**	**+10**
	2.8nm,0.7s,baz=184,slow=19,SNR=5.4						
CMAR	**Chiang Mai Arr**	**25.83**	**351**	P	**P**	**00 01 52.2**	**0.0**
	70nm,1.0s,mb5.2,baz=184,slow=8.6,SNR=252						
CMAR				pP	pP	00 02 01.3	-0.2
	72nm,0.9s,baz=184,slow=8.5,SNR=18						
CMAR				LR	LR	00 14 02.4	
	comp=Z,686nm,18.0s,MS4.2,baz=180,slow=41						
CMAR	**Chiang Mai Arr**	**25.83**	**351**	P	**P**	**00 01 52.3**	**0.0**
CMAR				*PP	pP	00 02 01.3	-0.2
CMAR	**Chiang Mai Arr**	**25.83**	**351**	P	**P**	**00 01 52.2**	**0.0**
CMAR				pP	pP	00 02 01.3	-0.2
CMAR				LR	LR	00 14 02.4	
CHG	**Chiang Mai**	**26.18**	**351**	⇑P	**P**	**00 01 55.2**	**-0.2**
	90nm,1.1s,mb5.2						
CHTO	**Chiang Mai**	**26.18**	**351**	*e*P	**P**	**00 01 55.0**	**-0.4**
CHTO				*e*PP	pP	00 02 04.0	-0.7
CHTO				pmax	pmax		
	comp=Z,82nm,1.0s,mb5.2						
CHTO	**Chiang Mai**	**26.18**	**351**	*e*P	**P**	**00 01 55.0**	**-0.4**
	comp=Z,82nm,1.0s,mb5.2						
CHTO				*e*pP	pP	00 02 04.0	-0.7
DAV	**Davao City (W)**	**26.43**	**58**	P	**P**	**00 01 57.9**	**+0.1**
	comp=Z,193nm,0.4s,mb5.9,baz=59,slow=11,SNR=5.7						
DAV				LR	LR	00 12 32.3	
	comp=Z,662nm,18.4s,MS4.2,baz=210,slow=37						
QIZ	**Qiongzhong**	**26.86**	**14**	P	**P**	**00 02 02.0**	**+0.4**
QIZ				AP	pP	00 02 11.4	+0.5
QIZ				S	**S**	**00 06 39.9**	**+3.7**
QIZ				AMB	AMB		
	comp=Z,28nm,1.8s,mb4.5						
QIZ				AMB	AMB		
	comp=Z,199nm,8.8s						
QIZ				LR	LR		
	comp=N,2μm,14.6s						
QIZ				LR	LR		
	comp=Z,1μm,16.0s,MS4.6						
CHRT	**Chiangrai**	**27.10**	**353**	⇑P	**P**	**00 02 03.0**	**-0.7**
	comp=Z,105nm,0.7s,mb5.5						
NWAO	**Narrogin (SRO)**	**28.73**	**155**	LR	LR	00 12 07.9	
	comp=Z,441nm,18.5s,MS4.1,baz=5.6,slow=33						
KAKA	**Kakadu**	**29.29**	**103**	*e*P	**P**	**00 02 21.7**	**-1.7**
	comp=Z,14nm,0.7s,mb4.8						
KMI	**Kunming**	**32.12**	**359**	P	**P**	**00 02 50.0**	**+1.8**
KMI				AP	pP	00 02 58.9	+1.4
KMI				XP	sP	00 03 02.7	+1.3
KMI				PP	PP	00 04 01.5	+0.3
KMI				PPP		00 04 16.5	
KMI				S	**S**	**00 08 02.5**	**+3.8**
KMI				XS	sS	00 08 17.3	+3.2
KMI				AMB	AMB		
	comp=Z,90nm,1.2s,mb5.5						
KMI				AMB	AMB		
	comp=Z,328nm,3.5s						
KMI				LR	LR		
	comp=N,2μm,14.0s,MS5.0						
KMI				LR	LR		
	comp=E,1μm,12.4s,MS5.0						
KMI				LR	LR		
	comp=Z,2μm,12.9s,MS5.0						
WRA	**Warramunga Arr**	**32.73**	**116**	P	**P**	**00 02 53.3**	**-0.4**
	comp=Z,5.2nm,0.9s,mb4.5,baz=286,slow=11,SNR=20						
WRA				pP	pP	00 03 01.8	-1.3
	comp=Z,10nm,0.9s,baz=285,slow=12,SNR=15						
WRA				PcP	PcP	00 05 38.7	-0.2
	comp=Z,2.3nm,1.0s,baz=310,slow=1.8,SNR=3.7						
WRA				pPcP		00 05 48.2	
	comp=Z,1.2nm,0.8s,baz=306,slow=2.1,SNR=3.5						
WRA	**Warramunga Arr**	**32.73**	**116**	P	**P**	**00 02 53.3**	**-0.4**
WRA				*PP	pP	00 03 01.8	-1.2
WRA						00 05 38.7	
WRAB	**Tennant Creek**	**32.74**	**116**	*e*P	**P**	**00 02 53.5**	**-0.3**
WRAB				*e*PP	pP	00 03 02.7	-0.4
WRAB				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
WRAB	**Tennant Creek**	**32.74**	**116**	*e*P	**P**	**00 02 53.5**	**-0.2**
	comp=Z,13nm,0.9s,mb4.8						
WRAB				*e*pP	pP	00 03 02.7	-0.4
WB2	**Warramunga Arr**	**32.74**	**116**	*e*P	**P**	**00 02 53.2**	**-0.6**
GYA	**Guiyang**	**33.62**	**6**↑*i*P		**P**	**00 03 01.5**	**+0.2**
GYA				AP	pP	00 03 10.5	-0.1
GYA				XP	sP	00 03 14.5	0.0
GYA				PP	PP	00 04 13.6	-4.2
GYA				XS	sS	00 08 37.0	-0.4
GYA				SCP	ScP	00 09 24.8	+1.2
GYA				SCS	ScS	00 13 24.6	-0.4
GYA				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
GYA				AMB	AMB		
	comp=Z,270nm,6.0s						
GYA				LR	LR		
	comp=N,1μm,14.1s,MS5.1						
GYA				LR	LR		
	comp=E,2μm,13.7s,MS5.1						
GYA				LR	LR		
	comp=Z,2μm,13.2s,MS5.1						
ASAR	**Alice Springs**	**33.70**	**122**	P	**P**	**00 03 01.4**	**-0.7**
	comp=Z,5.4nm,0.9s,mb4.5,baz=294,slow=7.5,SNR=14						
ASAR				PcP	PcP	00 05 41.1	-0.4
	comp=Z,1.9nm,0.8s,baz=298,slow=2.0,SNR=5.1						
ASAR				pPcP		00 05 51.3	
	comp=Z,3.3nm,1.0s,baz=296,slow=2.3,SNR=5.5						
ASAR				ScP	ScP	00 09 24.8	+0.7
	comp=Z,0.7nm,0.8s,baz=270,slow=1.3,SNR=4.3						
ASAR	**Alice Springs**	**33.70**	**122**	P	**P**	**00 03 01.5**	**-0.6**
ASAR						00 05 41.2	
QZH	**Quanzhou**	**35.28**	**25**	P	**P**	**00 03 14.9**	**-0.8**
QZH				S	**S**	**00 08 48.8**	**+1.2**
QZH				LR	LR		
	comp=N,2μm,13.6s,MS5.1						
QZH				LR	LR		
	comp=E,1μm,14.4s,MS5.1						
QZH				LR	LR		
	comp=Z,1μm,14.4s,MS4.9						
ODAN	**Odare**	**37.16**	**336**	*e*P	**P**	**00 03 32.5**	**+0.8**
	comp=Z,134nm,0.9s,mb5.8						
TAPN	**Taplejung**	**37.47**	**337**	*e*P	**P**	**00 03 35.7**	**+1.3**
	comp=Z,206nm,1.0s,mb5.9						
RAMN	**Ramite**	**37.56**	**335**	*e*P	**P**	**00 03 36.3**	**+1.1**
	comp=Z,229nm,1.3s,mb5.7						
CD2	**Chengdu**	**37.89**	**1**⇑*i*P		**P**	**00 03 37.5**	**-0.3**
CD2				AP	pP	00 03 47.5	+0.2
CD2				XP	sP	00 03 50.6	-0.6
CD2				PP	PP	00 05 07.2	+2.3
CD2				PCP	PcP	00 05 52.5	-1.2
CD2				XS	sS	00 09 45.1	+2.2
CD2				SCS	ScS	00 13 45.0	-3.2
CD2				AMB	AMB		
	comp=Z,90nm,0.8s,mb5.5						
CD2				AMB	AMB		
	comp=Z,190nm,8.4s						
CD2				LR	LR		
	comp=N,2μm,16.8s,MS5.1						
CD2				LR	LR		
	comp=E,2μm,15.6s,MS5.1						
CD2				LR	LR		
	comp=Z,2μm,13.2s,MS5.1						
JIRN	**Jiri**	**38.36**	**335**	*e*P	**P**	**00 03 43.2**	**+1.3**
	comp=Z,219nm,1.0s,mb5.9						
LSA	**Lhasa**	**38.47**	**343**	P	**P**	**00 03 42.3**	**-0.5**
LSA				XP	sP	00 03 55.0	-1.1
LSA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LSA				AMB	AMB		
	comp=Z,400nm,4.0s						
LSA				LR	LR		
	comp=N,140nm,13.0s,MS4.3						
LSA				LR	LR		
	comp=E,300nm,13.0s,MS4.3						
LSA				LR	LR		
	comp=Z,420nm,16.0s,MS4.3						
PKI	**Pulchoki**	**38.61**	**334**	*e*P	**P**	**00 03 44.7**	**+0.7**
	comp=Z,172nm,1.3s,mb5.6						
PKIN	**Phulchoki**	**38.62**	**334**	*e*P	**P**	**00 03 44.5**	**+0.4**
	comp=Z,104nm,1.3s,mb5.4						
GUN	**Gumba**	**38.71**	**335**	*e*P	**P**	**00 03 46.2**	**+1.4**
	comp=Z,141nm,0.9s,mb5.7						

DMN **Daman** 38.77 334 *e*P P **00 03 46.2 +0.8**
comp=Z,177nm,1.1s,mb5.7
KKN **Kakani** 38.86 334 *e*P P **00 03 46.8 +0.7**
comp=Z,272nm,1.2s,mb5.9
WHN **Wuhan** 39.01 15 ⇓P P **00 03 47.5 +0.2**
WHN AP pP 00 03 57.5 +0.7
WHN S S **00 09 44.0 -0.3**
WHN LR LR
comp=N,1μm,12.0s,MS5.1
WHN LR LR
comp=E,645nm,10.0s,MS5.1
GKN **Gorkha** 39.32 334 *e*P P **00 03 50.6 +0.7**
comp=E,263nm,1.1s,mb5.9
KOLN **Koldanda** 39.59 332 *e*P P **00 03 53.1 +0.9**
comp=E,238nm,1.2s,mb5.8
DANN **Dangsing** 40.01 333 *e*P P **00 03 56.4 +0.7**
comp=E,299nm,1.1s,mb5.9
XAN **Xi'an** 41.36 7 P P **00 04 06.0 -0.7**
XAN AP pP 00 04 15.8 -0.4
XAN XP sP 00 04 20.7 +0.6
XAN PP PP 00 05 41.8 -0.9
XAN S S **00 10 17.1 -2.2**
XAN XS sS 00 10 33.1 -1.9
XAN AMB AMB
comp=Z,73nm,1.0s,mb5.3
XAN AMB AMB
comp=Z,134nm,6.0s
XAN LR LR
comp=N,628nm,13.0s,MS4.9
XAN LR LR
comp=E,980nm,13.0s,MS4.9
XAN LR LR
comp=Z,2μm,14.1s,MS5.0
LZH **Lanzhou** 43.05 1 ⇓P P **00 04 21.2 +0.7**
LZH AP pP 00 04 30.0 0.0
LZH XP sP 00 04 33.0 -0.9
LZH PP PP 00 06 05.0 +4.1
LZH S S **00 10 46.0 +1.8**
LZH XS sS 00 11 02.1 +2.2
LZH SS SS 00 13 53.0 -4.4
LZH AMB AMB
comp=Z,169nm,1.5s,mb5.5
LZH AMB AMB
comp=Z,286nm,4.0s
LZH LR LR
comp=N,2μm,14.7s
LZH LR LR
comp=Z,2μm,15.3s,MS5.2
STKA **Stephens Creek** 43.36 130 *e*P P **00 04 23.0 -0.1**
comp=Z,12nm,0.7s,mb4.7
STKA **Stephens Creek** 43.36 130 P P **00 04 23.1 -0.1**
comp=Z,9.0nm,0.7s,mb4.6,baz=297,slow=8.1,SNR=32
PMG **Port Moresby** 43.52 96 *e*P P **00 04 24.6 -0.1**
PMG pmax pmax
comp=Z,61nm,1.0s
PMG **Port Moresby** 43.52 96 *e*P P **00 04 24.6 -0.1**
comp=Z,61nm,1.0s,mb5.3
CTA **Charters Tower** 43.61 112 *e*P P **00 04 26.0 +0.7**
comp=Z,9.7nm,1.2s,mb4.4
CTA **Charters Tower** 43.61 112 P P **00 04 24.9 -0.4**
comp=Z,6.5nm,0.9s,mb4.3,baz=310,slow=6.5,SNR=4.3
CTA **Charters Tower** 43.61 112 *e*P P **00 04 26.0 +0.7**
CTA pmax pmax
comp=Z,10.0nm,1.2s
CTAO **Charters Tower** 43.61 112 *e*P P **00 04 25.1 -0.2**
CTAO pmax pmax
comp=Z,35nm,1.4s,mb4.9
CTAO **Charters Tower** 43.61 112 *e*P P **00 04 25.1 -0.3**
comp=Z,35nm,1.4s,mb4.9
TIY **Taiyuan** 45.49 10 *e*P P **00 04 40.7 +0.7**
TIY AP pP 00 04 50.7 +1.1
TIY PCP PcP 00 06 20.2 +1.6
TIY PP PP 00 06 27.8 +0.8
TIY S S **00 11 20.8 +1.1**
TIY XS sS 00 11 37.3 +1.8
TIY LR LR
comp=N,1μm,12.4s,MS5.2
TIY LR LR
comp=E,1μm,11.8s,MS5.2
TIY LR LR
comp=Z,1μm,12.1s,MS5.0
GUMO **Guam** 46.23 64 *e*P P **00 04 45.1 -1.1**
GUMO pmax pmax
comp=Z,13nm,0.3s,mb5.3
GUMO **Guam** 46.23 64 *e*P P **00 04 45.1 -1.1**
comp=Z,13nm,0.3s,mb5.3
GTA **Gaotai** 46.47 356 P P **00 04 48.5 +0.8**
GTA AP pP 00 04 57.5 +0.2
GTA XP sP 00 05 02.1 +1.0
GTA PCP PcP 00 06 23.0 +1.1
GTA PP PP 00 06 38.1 +0.8
GTA S S **00 11 38.1 +4.4**
GTA XS sS 00 11 53.7 +4.1
GTA AMB AMB
comp=Z,44nm,1.1s,mb5.3
GTA AMB AMB
comp=Z,296nm,8.4s
GTA LR LR
comp=N,1μm,16.5s,MS5.0
GTA LR LR
comp=E,770nm,18.3s,MS5.0
GTA LR LR
comp=Z,1μm,17.1s,MS5.0
BTO **Baotou** 47.97 7 *e*P P **00 04 59.0 -0.3**
HHC **Hu-ho-hao-te** 48.42 8 ⇑P P **00 05 03.5 +0.7**
HHC AP pP 00 05 12.6 +0.2
HHC XP sP 00 05 16.6 +0.3
HHC PCP PcP 00 06 28.5 -0.3
HHC PP PP 00 06 56.4 +0.6
HHC SCP ScP 00 10 19.8 -1.6
HHC PCS PcS 00 10 23.2 -1.5
HHC S S **00 12 02.9 +1.6**
HHC XS sS 00 12 18.8 +1.6
HHC SCS ScS 00 14 50.8 -2.4
HHC SS SS 00 15 28.4 -3.2
HHC AMB AMB
comp=Z,58nm,1.1s,mb5.5
HHC AMB AMB
comp=Z,307nm,6.9s
HHC LR LR
comp=N,852nm,12.9s,MS5.0
HHC LR LR
comp=E,833nm,14.2s,MS5.0
HHC LR LR
comp=Z,788nm,13.0s,MS4.9
BJI **Beijing** 48.50 13 P P **00 05 03.1 -0.3**
BJI PP PP 00 06 57.5 +1.0
BJI S S **00 12 09.7 +7.2**
BJI AMB AMB
comp=Z,48nm,1.1s,mb5.4
BJI LR LR
comp=N,765nm,14.5s,MS5.0
BJI LR LR
comp=E,895nm,16.0s,MS5.0
BJI LR LR
comp=Z,496nm,15.2s,MS4.6
TOO **Toolangi** 48.79 135 *e*P P **00 05 10.8 +5.0**
EIDS **Eidsvold** 49.07 117 *e*P P **00 05 12.1 +3.9**
KSRS **Korea Array** 50.06 26 P P **00 05 15.2 -0.2**
comp=Z,12nm,1.0s,mb4.9,baz=217,slow=7.7,SNR=24
KSRS pP pP 00 05 23.8 -1.3
comp=Z,8.0nm,0.8s,baz=218,slow=7.9,SNR=8.2
KBL **Kabul** 52.59 324 *e*P P **00 05 34.3 -0.1**
KBL *e**PP pP 00 05 43.4 -0.8
KBL pmax pmax
comp=Z,12nm,1.0s,mb4.8
KBL **Kabul** 52.59 324 *e*P P **00 05 34.3 -0.1**
comp=Z,12nm,1.0s,mb4.8
KBL *e*pP pP 00 05 43.4 -0.8
WMQ **Urumqi** 52.68 346 ⇑*i*P P **00 05 36.0 +1.1**
WMQ AP pP 00 05 45.5 +0.8
WMQ XP sP 00 05 50.0 +1.5
WMQ PCP PcP 00 06 46.0 +1.5
WMQ S S **00 13 00.0 -0.5**
WMQ XS sS 00 13 18.0 +1.5
WMQ AMB AMB
comp=Z,72nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,301nm,3.6s
WMQ LR LR
comp=N,506nm,14.2s,MS4.8
WMQ LR LR
comp=E,470nm,14.2s,MS4.8
WMQ LR LR
comp=Z,393nm,17.8s,MS4.5

KSH **Kashi** 52.87 334 P P **00 05 36.6 +0.2**
KSH *e*AP pP 00 05 46.5 +0.3
KSH *e*XP sP 00 05 50.3 +0.3
KSH *e*PCP PcP 00 06 46.1 +0.8
KSH *e*PP PP 00 07 36.6 +0.3
KSH *e*PPP 00 08 42.2
KSH *e*SCP ScP 00 10 39.5 -1.1
KSH *e*PCS PcS 00 10 43.0 -0.9
KSH *e*S S **00 13 00.1 -3.1**
KSH *e*PS 00 13 13.1
KSH *e*XS sS 00 13 16.1 -3.2
KSH *e*SCS ScS 00 15 20.1 -3.7
KSH AMB AMB
comp=Z,513nm,2.3s,mb6.0
KSH LR LR
comp=N,658nm,9.6s
KSH LR LR
comp=E,1μm,11.2s
KSH LR LR
comp=Z,1μm,13.0s,MS5.2
MJAR **Matsushiro Arr** 54.49 35 P P **00 05 46.3 -2.1**
comp=Z,0.8nm,0.4s,mb4.0,baz=206,slow=8.3,SNR=6.3
CN2 **Changchun** 54.60 20 ⇑P P **00 05 47.9 -1.1**
CN2 *e*AP pP 00 05 57.9 -0.9
CN2 *e*XP sP 00 06 01.9 -0.7
CN2 *e*S S **00 13 24.2 -2.3**
CN2 AMB AMB
comp=Z,30nm,1.4s,mb5.1
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,600nm,12.0s,MS5.0
CN2 LR LR
comp=E,600nm,12.0s,MS5.0
CN2 LR LR
comp=Z,700nm,14.0s,MS4.9
SONM **Songino Array** 54.86 3 P P **00 05 51.6 +0.9**
comp=Z,29nm,0.9s,mb5.3,baz=180,slow=8.9,SNR=157
SONM pP pP 00 06 00.8 +0.2
comp=Z,27nm,0.9s,baz=182,slow=7.2,SNR=16
ULN **Ulaanbaatar** 54.92 3 *e*P P **00 05 51.7 +0.5**
ULN *e**PP pP 00 06 01.2 +0.2
UCH **Uchtor** 55.72 334 *e*P P **00 05 57.5 +0.3**
comp=Z,15nm,1.1s,mb4.9
TKM2 **Tokmak 2** 55.84 336 *e*P P **00 05 57.8 -0.2**
TKM2 pmax pmax
comp=Z,25nm,1.1s,mb5.2
TKM2 **Tokmak 2** 55.84 336 *e*P P **00 05 57.8 -0.2**
comp=Z,25nm,1.1s,mb5.2
HNR **Honiara** 56.14 97 *e*P P **00 05 59.8 -0.9**
HNR pmax pmax
comp=Z,120nm,0.8s,mb6.0
HNR **Honiara** 56.14 97 *e*P P **00 05 59.8 -0.8**
comp=Z,120nm,0.8s,mb6.0
FRU **Bishkek** 56.17 335 *e*P P **00 06 00.0 -0.4**
FRU *i* P **00 06 59.0**
EKS2 **Erkin-Say** 56.39 334 *e*P P **00 06 02.0 +0.1**
comp=Z,27nm,0.9s,mb5.3
EKS2 *e*pP pP 00 06 09.9 -1.9
EKS2 *e*sP sP 00 06 15.4 -0.1
MDJ **Mudanjiang** 56.78 22 P P **00 06 05.8 +1.1**
MDJ AP pP 00 06 14.9 +0.4
MDJ XP sP 00 06 18.3 0.0
MDJ PCP PcP 00 07 01.8 +1.5
MDJ PP PP 00 08 13.8 +2.5
MDJ SCP ScP 00 10 57.4 -0.2
MDJ PCS PcS 00 11 02.1 +1.2
MDJ S S **00 13 57.2 +1.6**
MDJ SCS ScS 00 15 52.2 +0.6
MDJ AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
MDJ AMB AMB
comp=Z,256nm,4.8s
MDJ LR LR
comp=N,58nm,18.4s,MS4.1
MDJ LR LR
comp=E,134nm,17.0s,MS4.1
MDJ LR LR
comp=Z,180nm,17.0s,MS4.2
MKAR **Makanchi Array** 56.88 343 P P **00 06 04.6 -0.6**
comp=Z,9.7nm,0.9s,mb4.8,baz=153,slow=9.1,SNR=57
MKAR LR LR 00 35 19.9
comp=Z,127nm,18.8s,MS4.0,baz=146,slow=41
ZAK **Zakamensk** 57.34 0 *e*P P **00 06 08.6 +0.2**
ZAK *e* 00 08 19.1
ZAK pmax pmax
comp=Z,11nm,1.1s,mb4.8
ZAK pmax pmax
comp=Z,6.0nm,1.4s,mb4.4
KK31 **Karatay Array** 58.20 332 *i* P P **00 06 13.4 -1.3**
KK31 pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
TLY **Talaya** 58.64 0 *e*P P **00 06 18.7 +1.2**
TLY *e* pP 00 06 26.9 -0.5
TLY *e*S S **00 14 20.9 +1.3**
TLY *e* 00 15 54.5
TLY pmax pmax
comp=Z,24nm,1.3s,mb5.1
TLY MLR MLR
comp=Z,628nm,14.0s,MS4.9
IRK **Irkutsk** 59.21 1 ⇑*i*P P **00 06 21.6 +0.1**
IRK *e* 00 06 27.6
IRK *e* 00 07 02.2
IRK pmax pmax
comp=Z,65nm,2.1s,mb5.3
KURK **Kurchatov** 61.47 342 P P **00 06 36.0 -1.0**
comp=Z,185nm,0.9s,mb6.2,SNR=8.9
KURK **Kurchatov** 61.47 342 P P **00 06 36.3 -0.7**
comp=Z,9.6nm,1.0s,mb4.9,baz=161,slow=6.2,SNR=26
KLR **Kul'dur** 61.48 21 *e*P P **00 06 32.8 -4.3**
KLR *e*S S **00 15 06.0 +10**
KLR *e* 00 18 54.0
KLR pmax pmax
comp=Z,78nm,1.8s,mb5.5
ZAL **Zalesovo** 62.85 348 P P **00 06 45.7 -0.5**
ZAL *PP pP 00 06 54.8 -1.3
ZAA0 **Zalesovo Array** 62.85 348 *e*P P **00 06 45.6 -0.6**
ZAA0 *e*pP pP 00 06 55.2 -0.9
ZAA0 *e*sP sP 00 06 59.4 -0.5
ZALV **Zalesovo Beam** 62.85 348 P P **00 06 45.7 -0.5**
comp=Z,25nm,0.9s,mb5.4,baz=151,slow=3.4,SNR=95
ZALV pP pP 00 06 54.8 -1.4
comp=Z,40nm,1.0s,baz=160,slow=4.6,SNR=14
ZALV LR LR 00 37 34.8
comp=Z,290nm,18.8s,MS4.5,baz=316,slow=39
NVS **Novosibirsk** 64.02 347 ⇑*i*P P **00 06 52.4 -1.5**
NVS *e*S S **00 15 26.3 -1.7**
NVS pmax pmax
comp=Z,29nm,1.3s,mb5.2
NVS pmax pmax
comp=N,31nm,1.5s
NVS pmax pmax
comp=E,15nm,1.3s
NVS smax
comp=E,14nm,1.8s
NVS smax
comp=N,16nm,2.2s
BOD **Bodaibo** 65.38 6 ⇓*i*P P **00 07 02.0 -0.7**
BOD pmax pmax
comp=Z,39nm,1.4s,mb5.2
VOSK **Vostochnaya** 65.68 339 P P **00 07 03.7 -1.1**
VOSK pmax pmax
comp=Z,16nm,1.2s,mb4.9
MAW **Mawson** 66.13 196 P P **00 07 07.2 -0.2**
comp=Z,3.6nm,0.8s,mb4.4,baz=36,slow=9.8,SNR=4.3
MAW LR LR 00 29 07.5
comp=Z,212nm,20.0s,MS4.3,baz=177,slow=30
BVA0 **Borovoye Array** 66.13 339 P P **00 07 05.9 -1.8**
BVA0 pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
BVAR **Borovoye Array** 66.13 339 P P **00 07 06.5 -1.1**
comp=Z,3.3nm,0.6s,mb4.5,baz=141,slow=9.6,SNR=19
CLNS **Chul'man** 66.24 13 *e*P P **00 07 04.4 -3.9**
CLNS *e**PP pP 00 07 17.1 -1.2
CLNS *e* 00 07 35.6
CLNS *e*S S 00 15 47.1 -8.0
CLNS *e* 00 16 56.9
CLNS pmax pmax
comp=Z,22nm,1.2s,mb5.1
CLNS pmax pmax
comp=E,12nm,1.1s
CLNS pmax pmax
comp=N,13nm,0.9s
CLNS smax
comp=N,66μm,10.8s

CLNS smax
comp=E,140μm,12.7s
CLNS MLR MLR
comp=Z,247nm,11.0s,MS4.7
CLNS MLR MLR
comp=E,266nm,11.0s,MS4.9
CLNS MLR MLR
comp=N,314nm,12.0s,MS4.9
AB31 **Akbulak array** 67.70 331 P P **00 07 16.6 -1.1**
AB31 pmax pmax
comp=Z,80nm,1.3s,mb5.6
AKTK **Aktyubinsk** 69.42 331 P P **00 07 27.4 -1.0**
AKTK pP pP 00 07 37.3 -1.2
AKTO **Aktyubinsk** 69.42 331 P P **00 07 27.4 -1.1**
comp=Z,5.9nm,0.9s,mb4.5,baz=137,slow=5.3,SNR=12
AKTO pP pP 00 07 37.3 -1.2
comp=Z,13nm,1.0s,baz=144,slow=7.9,SNR=13
GNI **Garni** 71.47 316 pP pP 00 07 50.9 -0.4
comp=Z,0.8nm,0.3s,baz=342,slow=22,SNR=1.9
YAK **Yakutsk** 72.00 13*c* *i*P P **00 07 42.9 -1.0**
YAK *e**PP pP 00 07 51.6 -2.3
YAK *e* 00 08 01.0
YAK *e*S S 00 16 57.9 -5.0
YAK *e* 00 17 53.0
YAK *e*SS SS 00 21 35.3 -5.1
YAK pmax pmax
comp=Z,115nm,1.0s,mb5.8
YAK pmax pmax
comp=N,42nm,1.2s
YAK pmax pmax
comp=E,26nm,1.2s
YAK smax
comp=N,88μm,12.6s
YAK smax
comp=E,27μm,10.5s
YAK **Yakutsk** 72.00 13 *e*P P **00 07 43.2 -0.6**
comp=E,49nm,0.8s,mb5.5
YAK *e*pP pP 00 07 52.5 -1.4
SVE **Sverdlovsk** 72.67 337⇓*e*P P **00 07 48.2 +0.2**
SVE *e* 00 17 59.7
SVE pmax pmax
comp=Z,34nm,1.2s,mb5.2
ARU **Arti** 73.22 336 P P **00 07 51.5 +0.2**
comp=Z,101nm,1.1s,mb5.7,SNR=5.6
ARU **Arti** 73.22 336*c* *i*P P **00 07 51.0 -0.3**
ARU *e* 00 08 08.0
ARU *e* 00 10 30.4
ARU *e*PPP 00 12 19.6
ARU *e*S S 00 17 20.3 +3.2
ARU *e*SS SS 00 21 58.0 -1.3
ARU pmax pmax
comp=Z,21nm,1.2s,mb4.9
ARU **Arti** 73.22 336 *e*P P **00 07 50.9 -0.4**
comp=Z,40nm,1.4s,mb5.2
ARU *e*pP pP 00 08 00.6 -0.7
ARU *e*PcP PcP 00 08 06.4 -1.2
LSZ **Lusaka** 73.74 256 P P **00 07 57.7 +2.5**
comp=Z,5.8nm,1.2s,mb4.4,baz=91,slow=7.3,SNR=3.9
SYO **Syowa Base** 74.05 200⇑*e*P P **00 07 54.4 -1.6**
SYO **Syowa Base** 74.05 200⇑*e*sP sP 00 08 08.8 -1.0
ASF **Jabal al Asfar** 74.21 306 P P **00 07 58.7 +1.0**
comp=Z,2.6nm,0.8s,mb4.2,baz=172,slow=7.9,SNR=3.1
KIV **Kislovodsk** 74.54 319*c* *i*P P **00 07 59.1 -0.2**
KIV *i* *PP pP 00 08 08.8 -0.6
KIV *i* S S 00 17 35.7 +3.2
KIV pmax pmax
comp=Z,13nm,1.2s,mb4.7
EIL **Elat** 75.01 303 P P **00 08 03.0 +0.7**
comp=Z,5.9nm,0.9s,mb4.5,baz=76,slow=7.7,SNR=4.9
PETK **Petropavlovsk-** 75.62 30 P P **00 08 04.7 -0.6**
comp=Z,4.1nm,0.8s,mb4.4,baz=218,slow=2.8,SNR=6.1
MMAI **Mount Meron Ar** 75.67 307 P P **00 08 06.5 +0.4**
comp=Z,14nm,1.1s,mb4.8,baz=124,slow=2.6,SNR=4.0
PET **Petropavlovsk** 76.06 31 *e*P P **00 08 06.8 -1.0**
PET *e**PP pP 00 08 16.6 -1.4
PET pmax pmax
comp=Z,48nm,1.3s,mb5.3
PET **Petropavlovsk** 76.06 31 *e*P P **00 08 06.8 -1.0**
comp=Z,48nm,1.3s,mb5.3
PET *e*pP pP 00 08 16.6 -1.4
SBA **Scott Base** 77.58 169 *e*P P **00 08 17.2 +1.1**
SBA pmax pmax
comp=Z,11nm,1.2s,mb4.7
SBA **Scott Base** 77.58 169 *e*P P **00 08 17.1 +1.1**
comp=Z,11nm,1.2s,mb4.7
TIXI **Tiksi** 80.48 8 *i*P P **00 08 30.6 -1.3**
TIXI pmax pmax
comp=Z,38nm,1.4s,mb5.1
MOS **Moscow** 82.56 329 *e*P P **00 08 42.9 -0.4**
MOS *i* pP 00 08 51.8 -1.7
MOS pmax pmax
comp=Z,41nm,1.0s,mb5.4
QSPA **South Pole Qui** 82.80 180 P P **00 08 44.6 +0.4**
comp=Z,8.0nm,1.0s,mb4.7,baz=294,slow=3.1,SNR=11
OBN **Obninsk** 82.86 328*c* *i*P P **00 08 44.9 +0.1**
OBN *i* *PP pP 00 08 54.1 -0.9
OBN *i* 00 11 55.0
OBN *i* S S 00 18 59.8 -1.2
OBN pmax pmax
comp=Z,75nm,1.6s,mb5.5
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.2
OBN **Obninsk** 82.86 328 *e*P P **00 08 45.0 +0.1**
comp=Z,54nm,1.1s,mb5.5
MAIT **Maitri** 83.75 199 *e*P P **00 08 45.8 -3.4**
AKASG **Malin Array Be** 85.52 322 P P **00 08 57.4 -1.0**
comp=Z,1.2nm,0.4s,mb4.5,baz=80,slow=4.4,SNR=8.5
AKASG pP pP 00 09 07.1 -1.6
comp=Z,0.9nm,0.4s,baz=81,slow=4.0,SNR=2.0
AKASG **Malin Array Be** 85.52 322 P P **00 08 57.4 -1.0**
AKASG pP pP 00 09 07.1 -1.6
VRI **Vrincioaia** 85.81 317⇓*i*P P **00 09 01.1 +1.1**
VRI **Vrincioaia** 85.81 317 ⇓P P **00 09 01.1 +1.2**
MLR **Muntele Rosu** 86.25 317⇓*i*P P **00 09 03.3 +1.1**
MLR **Muntele Rosu** 86.25 317 ⇓P P **00 09 03.3 +1.1**
BILL **Bilibino** 86.91 20⇓*i*P P **00 09 04.3 -0.6**
BILL *i* *PP pP 00 09 13.2 -2.0
BILL pmax pmax
comp=Z,25nm,1.5s,mb5.2
BURAR **Bucovina Array** 87.24 319⇑*i*P P **00 09 08.8 +1.8**
BURAR **Bucovina Array** 87.24 319 ⇑P P **00 09 08.8 +1.8**
BUR08 **Bucovina Ar. S** 87.26 319 *e*P P **00 09 08.2 +1.1**
BUR08 *e*pP pP 00 09 17.5 +0.2
SNAA **Sanae** 88.21 198 *e* P **00 09 12.3 +1.1**
SNAA *e* pP 00 09 21.6 +0.1
SNAA *e* 00 09 28.1
JOF **Joensuu** 88.25 334 *e*p P **00 09 10.9 -0.5**
comp=Z,12nm,0.9s,mb5.1
DRGR 88.73 317⇑*i*P P **00 09 15.2 +1.1**
DRGR 88.73 317 ⇑P P **00 09 15.2 +1.1**
BZS **Buzias** 89.24 316⇑*i*P P **00 09 17.0 +0.5**
BZS **Buzias** 89.24 316 ⇑P P **00 09 17.0 +0.4**
KWP **Kalwaria** 89.31 320 *e*P P **00 09 15.9 -0.9**
KWP pmax pmax
comp=Z,17nm,1.1s,mb5.3
KWP **Kalwaria** 89.31 320⇓*i*P P **00 09 15.8 -1.0**
KWP **Kalwaria** 89.31 320 *e*P P **00 09 15.9 -0.9**
comp=Z,17nm,1.1s,mb5.3
UZH **Uzhgorod** 89.38 319 *e*P P **00 09 16.0 -1.1**
UZH *e* pP 00 09 25.3 -2.1
VNA2 **Neumayer--Watz** 89.85 198 *e* P **00 09 20.4 +1.5**
VNA2 *e* pP 00 09 29.7 +0.5
VNA2 *e* 00 09 35.9
SUW **Suwalki** 89.94 324 *e*P P **00 09 18.5 -1.1**
SUW *e**PP pP 00 09 29.0 -0.9
SUW pmax pmax
comp=Z,19nm,1.0s,mb5.4
SUW **Suwalki** 89.94 324 *e*P P **00 09 18.5 -1.1**
comp=Z,19nm,1.0s,mb5.4
SUW *e*pP pP 00 09 29.0 -0.9
VNA1 **Neumayer--Stat** 90.22 198 *e* P **00 09 22.8 +2.2**
VNA1 *e* pP 00 09 31.9 +1.0
VNA1 *e* 00 09 38.4
KAF **Kangasniemi** 90.23 333 *e*p P **00 09 20.5 -0.3**
comp=Z,100nm,0.9s,mb5.2,baz=100,slow=4.2
KAF **Kangasniemi** 90.23 333 *e*P P **00 09 20.5 -0.3**
KAF pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
VNA3 **Neumayer Olymp** 90.41 197 *e* P **00 09 22.8 +1.3**
VNA3 *e* pP 00 09 32.2 +0.4
VNA3 *e* 00 09 38.4
PKSM **Moragy** 91.39 316⇑*i*P P **00 09 36.3 -0.5**
ARCES **ARCESS Array B** 92.41 340 P P **00 09 30.8 +0.1**
comp=Z,5.1nm,1.0s,mb4.8,baz=71,slow=7.8,SNR=5.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GERES	GERESS Array B	95.03	318	P	P	00 09 43.2	-0.1
	comp=Z,0.3nm,0.6s,mb3.9,baz=145,slow=19,SNR=3.5						
BRG	Berggiesshubel	95.06	321	eP	P	00 09 47.7	+4.4
BRG				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.3						
BRG	Berggiesshubel	95.06	321	eP	P	00 09 47.6	+4.3
	comp=Z,1.5nm,0.7s,mb4.5						
CLL	Collm	95.68	321	e(pP)	pP	00 09 53.0	-3.5
NOA	NORSAR Array B	97.21	331	LR	LR	00 59 39.2	
	comp=Z,92nm,18.5s,MS4.3,baz=270,slow=39						
NVAR	Mina Array Bea	131.34	44	PKP	PKPdf	00 15 34.5	+1.4
	comp=Z,0.5nm,0.7s,baz=249,slow=2.6,SNR=4.2						
PDAR	Pinedale Array	134.31	34	PKP	PKPdf	00 15 40.5	+2.0
	comp=Z,0.4nm,0.6s,baz=17,slow=1.5,SNR=3.7						
CPUP	Villa Florida	141.70	209	PKP	PKPdf	00 15 53.8	+1.1
	comp=Z,0.2nm,0.3s,baz=101,slow=5.2,SNR=2.4						
QUA2	Belchertown	144.84	354	ePKPdf	PKPdf	00 15 57.0	-0.7
QUA2				epPKPdf	pPKPdf	00 16 06.1	-2.2
BINY	Binghamton	145.13	359	ePKPbc	PKPbc	00 15 57.5	-0.1
BINY				ePKPdf	pPKPdf	00 16 06.9	-1.9
ALLY	Alegheny Colle	145.56	4	ePKPdf	PKPdf	00 15 58.8	-0.1
ALLY				epPKPdf	pPKPdf	00 16 07.9	-1.7
TXAR	Lajitas Array	146.45	46	PKPbc	PKPbc	00 16 02.8	+0.6
	comp=Z,4.8nm,0.8s,baz=272,slow=1.0,SNR=49						
TXAR				pPKPbc	pPKPbc	00 16 12.1	-0.6
	comp=Z,9.4nm,0.9s,baz=270,slow=0.6,SNR=22						
FVM	French Village	146.95	20	ePKPbc	PKPbc	00 16 02.8	-0.5
FVM				epPKPdf	pPKPdf	00 16 11.7	-0.4
BLO	Bloomington	146.97	14	ePKP	PKPdf	00 16 03.2	+1.8
BLO				e		00 16 12.5	
SIUC	Southern Illin	147.59	19	ePKPbc	PKPbc	00 16 05.1	-0.1
SIUC				e		00 16 14.5	
JCT	Junction City	148.34	40	ePKPbc	PKPbc	00 16 07.4	0.0
JCT				e		00 16 17.5	
HBAR	Harrisburg	149.03	22	ePKPbc	PKPbc	00 16 08.9	-0.1
HBAR				e		00 16 18.4	
UALR	University of	149.04	25	ePKPbc	PKPbc	00 16 08.9	-0.2
UALR				e		00 16 18.2	
LVC	Limon Verde	149.39	194	ePKPbc	PKPab	00 16 12.6	-2.3
WVT	Waverly	149.48	18	ePKPbc	PKPbc	00 16 09.6	-0.5
WVT				e		00 16 19.4	
URVA	University of	149.75	1	ePKPbc	PKPbc	00 16 10.6	-0.2
URVA				e		00 16 19.9	
PLAL	Pickwick Lake	150.46	19	ePKPbc	PKPbc	00 16 11.6	-0.9
PLAL				e		00 16 21.2	
GOGA	Godfrey	153.19	12	ePKIKP	PKPab	00 16 28.3	-2.0
GOGA				e		00 16 38.8	
LPAZ	La Paz	155.15	200	PKPab	PKPab	00 16 39.9	+0.8
	comp=Z,1.7nm,0.9s,baz=199,slow=3.4,SNR=4.8						

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*IDC **08** 00:14:15.2±1.9, 4391N×8703E, h0^{km}, mb3.8/2, mb1 3.5/6, mb1mx3.4/26, mbtmp3.4/6, ML3.2/4, Error ellipse: s-maj=36.8km s-min=20.7km az=47.0*
*ISCJB **08** 00:14:17.8±1.1, 4423N±009×8744E±01, h27^{km}±17^{km}, mb3.7/2, Error ellipse: s-maj=15.8km s-min=13.3km az=138.7*
*BJI **08** 00:14:18.5, 4404N×87.11E, h17^{km}, ML3.2*
*NEIC **08** 00:14:20.5±1.4, 4433N×87.15E, h10^{km}, Error ellipse: s-maj=22.7km s-min=12.6km az=173.0*
ISC 08 00:14:19.5±1.6**, 4414N**±009×**873E**±01**, h24**^{km}±22^{km}**, n14, σ1^{s}33**/22**, mb3.7**/2**, 1C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	0.42	140	PG	Pb	00 14 26.4	-1.9
WMQ				SG	Sb	00 14 34.7	+0.4
MK31	Makanchi Array	4.42	309	⇓Pn	Pn	00 15 25.4	+0.3
	1.2nm,0.3s,baz=125,slow=14,SNR=29						
MK31				⇓Sn	Sn	00 16 16.8	+1.0
	6.8nm,0.5s,baz=127,slow=27						
MKAR	Makanchi Array	4.42	309	Pn	Pn	00 15 25.3	+0.2
	0.8nm,0.3s,baz=129,slow=14,SNR=28						
MKAR				Sn	Sn	00 16 16.4	+0.6
	1.8nm,0.3s,baz=134,slow=23,SNR=5.3						
MKAR				Lg		00 16 36.2	
	4.0nm,0.3s,baz=127,slow=31,SNR=5.6						
MKAR	Makanchi Array	4.42	309	Pn	Pn	00 15 25.3	+0.2
MKAR				Sn	Sn	00 16 16.4	+0.6
KURBB	Kurchatov Arra	8.80	320	⇓Sn	Sn	00 18 01.1	-2.5
	1.3nm,0.6s						
KURBB				⇑Lg		00 18 48.3	
	3.1nm,0.8s						
KURK	Kurchatov	8.83	321	Pn	Pn	00 16 24.1	-1.4
	0.1nm,0.3s,baz=133,slow=13,SNR=7.0						
KURK				Sn	Sn	00 18 02.8	-1.4
	0.2nm,0.3s,baz=157,slow=22,SNR=4.2						
KURK				Lg		00 18 56.3	
	0.1nm,0.3s,baz=148,slow=32,SNR=4.7						
KURK	Kurchatov	8.83	321	Pn	Pn	00 16 24.1	-1.4
KURK				Sn	Sn	00 18 02.8	-1.3
UCH	Uchtor	9.55	263	ePn	Pn	00 16 37.4	+1.9
ZALV	Zalesovo Beam	9.95	351	Pn	Pn	00 16 41.5	+0.6
	0.3nm,0.3s,baz=174,slow=14,SNR=7.4						
ZALV				Sn	Sn	00 18 32.2	+0.5
	0.4nm,0.3s,baz=169,slow=24,SNR=5.5						
ZALV	Zalesovo Beam	9.95	351	Pn	Pn	00 16 41.5	+0.6
ZALV				Sn	Sn	00 18 32.2	+0.6
SONM	Songino Array	13.76	68	Pn	Pn	00 17 36.4	+3.4
	0.0nm,0.3s,baz=264,slow=13,SNR=2.2						
BVAR	Borovoye Array	14.27	314	Pn	Pn	00 17 43.1	+3.2
	0.2nm,0.3s,baz=121,slow=12,SNR=5.4						
ARCES	ARCESS Array B	39.71	331	P	P	00 21 49.6	+0.1
	3.9nm,1.0s,mb4.1,baz=84,slow=8.3,SNR=3.7						
TORD	Torodi Ar. Bea	77.86	277	P	P	00 26 13.8	-1.6
	0.3nm,0.8s,mb3.3,baz=56,slow=5.0,SNR=7.4						

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*ISCJB **08** 00:18:48.1±1.6, 137S±02×1120W±03, h10^{km}, mb4.0/12, MS4.4/17, Error ellipse: s-maj=45.3km s-min=12.9km az=150.3*
*GCMT **08** 00:18:49.4±0.2, 1347S×11165W, h16^{km}±1^{km}, MW5.1/89, Moment Tensor Solution. s57,c75; s89,c144; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.19±.15; $M_{\theta\theta}$1.52±.13; $M_{\phi\phi}$-1.34±.15; $M_{r\theta}$-0.22±.36; $M_{\theta\phi}$6.05±.13; $M_{\phi r}$0.10±.39; Best double couple: $M_0$6.22100×10^{16} NP1:ϕ_s187.00000°, δ88.00000°, λ-179.00000°. NP2: ϕ_s97.00000°, δ89.00000°, λ-2.00000°. Principal axes: T 6.3080, Plg1.0000°, Azm142.0000°; N -0.1810, Plg88.0000°, Azm256.0000°; P -6.1340, Plg2.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **08** 00:18:49.4±1.2, 1371S×11200W, h10^{km}, mb4.9/2 Error ellipse: s-maj=35.5km s-min=12.3km az=61.0*
*IDC **08** 00:18:49.2±1.2, 1347S×11171W, h0^{km}, mb4.0/9, mb1 4.3/9, mb1mx4.2/15, mbtmp4.0/9, MS4.4/17, Ms1 4.4/17, ms1mx4.2/24, Error ellipse: s-maj=42.2km s-min=19.3km az=59.0*
ISC 08 00:18:50.3±1.5**, 136S**±02×**1119W**±03**, h10**^{km}**, n35, σ0^{s}95**/20**, mb4.0**/12**, MS4.4**/17**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RKT	Rikitea	23.83	243	eLR	LR	00 30 05.5	
	2μm,27.5s,baz=65						
TAOE	Nuku Hiva Isla	28.12	277	eLR	LR	00 31 45.0	
	3μm,24.8s						
PPT	Papeete	36.48	259	eS	S	00 31 51.6	+13
	327nm,25.8s						
PPT				eLQ		00 34 33.3	
	1μm,31.5s						
PPT				eLR	LR	00 35 46.7	
	834nm,27.8s						
PPT	Papeete	36.48	259	LR	LR	00 36 28.1	
	comp=Z,352nm,21.7s,MS4.1,baz=315,slow=29						
LPIG	La Paz	37.55	2	LR	LR	00 35 55.8	
	comp=Z,187nm,18.6s,MS3.9,baz=359,slow=28						
TEIG	Tepich	40.89	35	P	P	00 26 31.5	-1.4
	4.5nm,0.6s,mb4.3,baz=249,slow=8.6,SNR=3.4						
ROSC	El Rosal	41.56	66	LR	LR	00 40 05.3	
	comp=Z,124nm,21.1s,MS3.8,baz=238,slow=31						
LPAZ	La Paz	42.29	99	P	P	00 26 45.7	+1.2
	1.6nm,0.8s,mb3.7,baz=279,slow=9.0,SNR=6.9						
LPAZ				LR	LR	00 40 13.3	
	comp=Z,429nm,19.1s,MS4.3,baz=71,slow=30						
TXAR	Lajitas Array	43.45	10	P	P	00 26 53.0	-0.6
	1.7nm,1.0s,mb3.7,baz=193,slow=10,SNR=10						
TXAR				LR	LR	00 41 44.1	
	comp=Z,338nm,18.5s,MS4.3,baz=110,slow=32						
CFAA	Coronel Fontan	43.74	122	P	P	00 26 55.2	-0.9
	0.2nm,0.7s,mb3.0,baz=315,slow=7.0,SNR=3.7						
PLCA	Paso Flores	45.00	135	P	P	00 27 06.8	+0.8
	1.3nm,0.7s,mb3.8,baz=313,slow=8.6,SNR=3.7						
PLCA				LR	LR	00 41 07.5	
	comp=Z,1μm,18.9s,MS4.9,baz=252,slow=30						
PLCA	Paso Flores	45.00	135	P	P	00 27 06.8	+0.8
PLCA				LR	LR	00 41 07.5	
JCT	Junction City	45.38	15	eP	P	00 27 09.8	+0.7
	32nm,1.5s,mb4.9						
SDV	Santo Domingo	46.66	64	eP	P	00 27 20.2	+0.8
	8.4nm,1.0s,mb4.6						
LENM	Lemitar	47.77	5	eP	P	00 27 28.7	+0.9
BNM	Barren Site	47.79	6	eP	P	00 27 28.8	+0.8
LAZ	Ladron	47.99	5	eP	P	00 27 30.4	+1.0
PV01	Paradox Valley	51.60	3	eP	P	00 27 57.0	+0.1
NVAR	Mina Array Bea	52.15	354	P	P	00 28 00.9	0.0
	2.2nm,0.8s,mb4.2,baz=183,slow=10.0,SNR=13						
CPUP	Villa Florida	52.45	113	P	P	00 28 02.7	-0.9
	0.9nm,0.6s,mb3.9,baz=244,slow=12,SNR=3.2						
CPUP				LR	LR	00 46 40.8	
	comp=Z,385nm,18.3s,MS4.5,baz=259,slow=32						
CPUP	Villa Florida	52.45	113	P	P	00 28 02.7	-0.9
CPUP				LR	LR	00 46 40.8	
PDAR	Pinedale Array	56.17	2	P	P	00 28 28.4	-1.8
	1.0nm,0.7s,mb4.0,baz=174,slow=8.7,SNR=7.0						
PDAR				LR	LR	00 48 51.1	
	comp=Z,362nm,18.2s,MS4.5,baz=196,slow=32						
BDFB	Brasilia	61.62	101	LR	LR	00 53 03.7	
	comp=Z,168nm,18.4s,MS4.2,baz=14,slow=33						
ULM	Lac du Bonnet	65.15	11	LR	LR	00 54 57.4	
	comp=Z,196nm,18.9s,MS4.3,baz=248,slow=33						
URZ	Urewera	66.82	234	LR	LR	00 50 39.3	
	comp=Z,511nm,21.0s,MS4.7,baz=290,slow=28						
YKA	Yellowknife Ar	75.92	359	P	P	00 30 37.2	+0.4
	0.7nm,0.8s,mb3.7,baz=178,slow=7.3,SNR=4.3						
YKA				LR	LR	01 01 00.6	
	comp=Z,308nm,18.4s,MS4.7,baz=185,slow=33						
SCHQ	Schefferville	78.10	25	P	P	00 30 47.9	-1.3
	5.3nm,0.8s,mb4.5,baz=252,slow=6.4,SNR=3.9						
SCHQ				LR	LR	01 03 40.4	
	comp=Z,232nm,18.4s,MS4.5,baz=208,slow=35						
SCHQ	Schefferville	78.10	25	P	P	00 30 47.9	-1.3
SCHQ				LR	LR	01 03 40.4	
KDAK	Kodiak Island	78.64	339	LR	LR	00 56 55.2	
	comp=Z,461nm,21.8s,MS4.8,baz=107,slow=29						
CTA	Charters Tower	96.19	248	LR	LR	01 07 31.3	
	comp=Z,148nm,20.6s,MS4.5,baz=49,slow=30						
STKA	Stephens Creek	96.44	235	LR	LR	01 08 20.1	
	comp=Z,261nm,18.0s,MS4.8,baz=293,slow=31						
MAW	Mawson	98.89	178	LR	LR	01 13 14.1	
	comp=Z,168nm,19.6s,MS4.5,baz=57,slow=33						
MKAR	Makanchi Array	144.88	343	PKP	PKPdf	00 38 25.7	-2.1
	1.0nm,0.8s,baz=29,slow=2.8,SNR=7.3						
KMBO	Kilima Mbogo	146.07	113	PKPbc	PKPbc	00 38 34.5	+2.8
	2.6nm,0.9s,baz=214,slow=3.6,SNR=2.6						
CMAR	Chiang Mai Arr	150.02	283	PKPbc	PKPbc	00 38 43.5	+1.4
	2.1nm,0.7s,baz=35,slow=0.6,SNR=9.9						

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*IDC **08** 00:35:18.9±5.3, 236S×10192E, h128^{km}±45^{km}, mb4.0/18, mb1 4.1/19, mb1mx4.0/24, mbtmp4.0/19, Error ellipse: s-maj=29.4km s-min=9.7km az=58.0*
*ISCJB **08** 00:35:23.1±0.7, 232S±009×10194E±009, h186^{km}±5^{km}, mb4.2/19, Error ellipse: s-maj=19.7km s-min=6.5km az=135.2*
*NEIC **08** 00:35:23.2±2.7, 230S×10200E, h168^{km}±23^{km}, mb4.3/3, Error ellipse: s-maj=18.7km s-min=6.7km az=56.0*
*DJA **08** 00:35:25, 237S×10196E, h119^{km}, MLv4.5/10*
ISC 08 00:35:23.9±0.7**, 233S**±009×**10194E**±009**, h177**^{km}±5^{km}**, n52, σ0^{s}78**/42**, mb4.2**/19**, 1C-1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RGRI	Rengat	2.01	11	P	Pn	00 36 00.6	-0.4
	0.0nm,0.0s						
PPI	Padang Panjang	2.42	320	P	Pn	00 36 05.4	-0.1
	0.0nm,0.0s						
KLI	Kotabumi	3.85	131	P	Pn	00 36 23.2	+0.1
	0.0nm,0.0s						
PPBI	Pangkal Pinang	4.20	88	P	Pn	00 36 27.6	+0.1
	0.0nm,0.0s						
GSI	Gunungsitoli	5.66	310	⇑eP	Pn	00 36 47.0	+0.5
TPI	Tanjungpandan	5.73	94	P	Pn	00 36 47.7	+0.3
	0.0nm,0.0s						
TPI	Tanjungpandan	5.73	94	⇓eP	Pn	00 36 48.0	+0.6
CBJI	Citeko	6.36	130	P	Pn	00 36 58.1	+2.4
	557nm,1.0s						
DBJI	Dramaga	6.37	131	P	Pn	00 36 54.9	-0.9
	0.0nm,0.0s						
LEM	Lembang	7.21	128	P	Pn	00 37 07.6	+0.7
	0.0nm,0.0s						
BJII	Banjamegara	9.20	123	P	Pn	00 37 33.5	+0.4
	85nm,0.8s						
BSI	Banda Aceh	10.22	320	P	Pn	00 37 44.5	-1.9
	0.0nm,0.0s						
SJI	Sawahan	11.16	119	P	Pn	00 37 58.4	-0.3
	0.0nm,0.0s						
KAPI	Kappang	17.98	99	P	Pn	00 39 21.6	-1.5
KAPI	Kappang	17.98	99	P	Pn	00 39 21.6	-1.5
CMAR	Chiang Mai Arr	20.87	352	P	P	00 39 52.1	-0.1
	4.5nm,0.8s,baz=183,slow=8.6,SNR=14						
FITZ	Fitzroy Crossi	28.04	126	P	P	00 40 58.2	-0.6
	1.1nm,0.7s,mb3.7,baz=302,slow=9.4,SNR=3.5						
FITZ				PcP	PcP	00 44 10.0	+0.9
	1.9nm,0.9s,baz=320,slow=7.6,SNR=4.5						
WRA	Warramunga Arr	36.16	121	P	P	00 42 08.3	-1.3
	3.6nm,0.7s,mb4.1,baz=301,slow=9.2,SNR=20						
WRA				PcP	PcP	00 44 31.6	+0.2
	1.4nm,0.6s,baz=310,slow=2.3,SNR=7.8						
WRA				S	S	00 47 28.0	-8.3
	1.1nm,0.9s,baz=295,slow=16,SNR=6.4						
ASAR	Alice Springs	37.50	127	P	P	00 42 19.8	-1.1
	4.1nm,0.6s,mb4.2,baz=302,slow=8.1,SNR=42						
ASAR				PcP	PcP	00 44 36.1	+0.7
	2.0nm,0.6s,baz=312,slow=2.5,SNR=16						
ASAR				S	S	00 47 51.4	-5.2
	0.7nm,0.7s,baz=298,slow=14,SNR=7.3						
KSRS	Korea Array	46.35	29	P	P	00 43 32.8	+0.5
	0.9nm,0.4s,mb3.7,baz=210,slow=7.2,SNR=5.5						
STKA	Stephens Creek	47.49	133	eP	P	00 43 41.7	+0.4
	6.0nm,0.7s,mb4.3						
STKA	Stephens Creek	47.49	133	P	P	00 43 41.4	+0.1
	6.4nm,0.5s,mb4.5,baz=300,slow=6.8,SNR=15						
SONM	Songino Array	50.11	4	P	P	00 44 02.5	+1.6
	3.4nm,0.4s,mb4.3,baz=186,slow=10,SNR=36						
SONM				PcP	PcP	00 45 18.3	+0.5
	1.1nm,0.5s,baz=186,slow=3.5,SNR=5.5						
TKM2	Tokmak 2	50.92	335	eP	P	00 44 08.2	+1.1
	4.4nm,0.3s,mb4.6						
MJAR	Matsushiro Arr	51.33	38	P	P	00 44 10.0	-0.2
	2.8nm,0.6s,mb4.1,baz=217,slow=7.4,SNR=10						
EKS2	Erkin-Say	51.50	334	eP	P	00 44 12.5	+1.1
	5.5nm,0.8s,mb4.2						
MKAR	Makanchi Array	51.89	343	P	P	00 44 14.4	+0.2
	3.2nm,0.5s,mb4.2,baz=146,slow=8.5,SNR=22						
KURK	Kurchatov	56.49	342	P	P	00 44 47.0	-0.3
	1.8nm,0.6s,mb4.1,baz=161,slow=7.1,SNR=14						
KURK				PcP	PcP	00 45 42.5	+0.6
	0.3nm,0.6s,baz=162,slow=4.7,SNR=3.9						
ZAA0	Zalesovo Array	57.87	348	eP	P	00 44 56.9	-0.1
ZALV	Zalesovo Beam	57.87	348	P	P	00 44 56.8	-0.1
	3.2nm,0.4s,mb4.5,baz=189,slow=7.2,SNR=18						
BVAR	Borovoye Array	61.17	339	P	P	00 45 19.1	-0.4
	1.2nm,0.5s,mb4.0,baz=148,slow=8.7,SNR=8.7						
AKTK	Aktyubinsk	64.58	331	P	P	00 45 41.6	-0.5
AKTK				PcP	PcP	00 46 15.2	+0.6
AKTO	Aktyubinsk	64.58	331	P	P	00 45 41.6	-0.6
	0.9nm,0.3s,mb4.0,baz=134,slow=5.0,SNR=7.3						
AKTO				PcP	PcP	00 46 15.2	+0.6
	1.2nm,0.5s,baz=166,slow=4.2,SNR=4.5						
PETK	Petropavlovsk-	72.14	32	P	P	00 46 29.0	0.0
	2.1nm,0.6s,mb4.1,baz=251,slow=4.4,SNR=3.4						
RPZ	Rata Peaks	73.38	135	P	P	00 46 37.0	+0.5
	4.3nm,0.5s,mb4.4,baz=278,slow=4.6,SNR=8.1						
AKASG	Malin Array Be	80.93	322	P	P	00 47 18.4	-0.1
	1.3nm,0.3s,mb4.0,baz=80,slow=4.3,SNR=6.5						
JOF	Joensuu	83.35	334	ep	P	00 47 31.2	+0.5
KAF	Kangasniemi	85.36	333	ep	P	00 47 41.3	+0.4
ARCES	ARCESS Array B	87.44	340	P	P	00 47 50.6	-0.3
	2.4nm,0.8s,mb4.1,baz=90,slow=7.3,SNR=8.5						
NOA	NORSAR Array B	92.37	331	P	P	00 48 14.2	+0.2
	0.8nm,0.7s,mb3.9,baz=92,slow=4.6,SNR=3.3						
NVAR	Mina Array Bea	128.61	40	PKP	PKPdf	00 54 12.0	+1.7
	0.6nm,0.8s,baz=264,slow=3.1,SNR=4.7						
NVAR	Mina Array Bea	128.61	40	PKP	PKPdf	00 54 12.0	+1.7
YMR	Madison River	128.82	30	ePKPdf	PKPdf	00 54 12.5	+1.9
PDAR	Pinedale Array	130.90	31	PKP	PKPdf	00 54 15.4	+0.8
	0.2nm,0.4s,baz=344,slow=3.0,SNR=2.5						
TXAR	Lajitas Array	143.76	40	PKP	PKPdf	00 54 37.5	-1.0
	1.0nm,0.6s,baz=317,slow=1.1,SNR=18						
MIAR	Mount Ida	144.84	23	ePKPbc	PKPdf	00 54 39.7	-0.6
CFAA	Coronel Fontan	144.98	195	PKP	PKPdf	00 54 42.1	+1.4
	0.3nm,0.4s,baz=172,slow=2.7,SNR=11						
CPUP	Villa Florida	145.16	214	PKPbc	PKPbc	00 54 42.1	+1.1
	3.2nm,0.9s,baz=148,slow=1.7,SNR=8.4						
WVT	Waverly	145.18	14	ePKPbc	PKPbc	00 54 40.6	-0.1
JCT	Junction City	145.25	34	ePKPbc	PKPbc	00 54 41.7	+0.5
BDFB	Brasilia	145.33	238	PKPbc	PKPbc	00 54 42.9	+1.1
	3.8nm,0.7s,baz=111,slow=4.2,SNR=6.6						
PLAL	Pickwick Lake	146.21	15	ePKPdf	PKPdf	00 54 43.2	+0.6

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*IDC **08** 00:48:44.0±1.4, 1743S×7346W, h0^{km}, mb3.8/3, mb1 4.1/5, mb1mx3.8/17, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=41.9km s-min=27.8km az=72.0*
*ISCJB **08** 00:48:48.6±2.6, 1762S±007×734W±02, h43^{km}±26^{km}, mb3.8/4, Error ellipse: s-maj=25.9km s-min=11.5km az=7.3*
*NEIC **08** 00:48:49.6±2.1, 1753S×7332W, h36^{km}±21^{km}, mb3.8/1, Error ellipse: s-maj=24.1km s-min=10.6km az=96.0*
ISC 08 00:48:50.1±2.4**, 1759S**±007×**733W**±02**, h40**^{km}±26^{km}**, n13, σ0^{s}91**/14**, mb3.8**/4**, 1C, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARE	Arequipa	2.09	58	⇑iP	Pn	00 49 22.3	-0.3
ARE				iS	Sn	00 49 48.0	+0.7
LPAZ	La Paz	5.14	76	Pn	Pn	00 50 08.3	+3.7
	1.1nm,0.3s,baz=252,slow=9.0,SNR=44						
LVC	Limon Verde	6.49	141	Pn	Pn	00 50 24.6	+1.5
	1.9nm,0.3s,baz=315,slow=11,SNR=30						
LVC				Sn	Sn	00 51 35.1	-0.9
	2.9nm,0.3s,baz=78,slow=20,SNR=10						
SIV	San Ignacio	11.84	84	Pn	Pn	00 51 34.9	-1.6
	0.5nm,0.3s,baz=253,slow=15,SNR=12						
CFAA	Coronel Fontan	14.69	163	Pn	Pn	00 52 14.9	-0.4
	0.0nm,0.3s,baz=358,slow=12,SNR=3.9						
PLCA	Paso Flores	23.18	175	P	P	00 53 54.1	+0.8
	2.7nm,1.0s,mb3.6,baz=341,slow=9.3,SNR=3.9						
KVTX	Kingsville	50.80	332	P	P	00 57 46.4	-0.2
	116nm,0.4s						
ANMO	Albuquerque	61.00	329	eP	P	00 58 59.8	+0.2
	0.8nm,1.0s,mb3.8						
PV01	Paradox Valley	64.56	330	eP	P	00 59 23.0	-0.1
TORD	Torodi Ar. Bea	80.08	73	P	P	01 00 57.2	+0.9
	0.3nm,0.7s,mb3.3,baz=264,slow=5.1,SNR=4.0						
YKA	Yellowknife Ar	86.17	342	P	P	01 01 25.7	-1.0
	1.5nm,0.7s,mb4.3,baz=134,slow=5.1,SNR=8.5						
YKA	Yellowknife Ar	86.17	342	P	P	01 01 25.7	-1.0
WRA	Warramunga Arr	133.86	217	PKP	PKPdf	01 08 03.9	+0.2
	0.3nm,0.3s,baz=153,slow=1.9,SNR=3.8						

IDC 08 01:10:53.6±1.2**, 025N**×**12343E, h0**^{km}**, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.6**/17**, mbtmp3.6**/5**, ML4.0**/1**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.4**/21**, Error ellipse: s-maj=109.9km s-min=19.6km az=68.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	6.39	215	LR	LR	01 15 09.9	
	comp=Z,45nm,18.2s,baz=129,slow=40						
FITZ	Fitzroy Crossi	18.36	173	P	Pn	01 15 10.4	+0.6
	0.4nm,0.3s,baz=353,slow=11,SNR=15						
WRA	Warramunga Arr	22.74	153	P	P	01 15 56.8	-0.6
	1.6nm,0.5s,baz=331,slow=10,SNR=22						
ASAR	Alice Springs	25.86	158	P	P	01 16 27.2	+0.2
	0.4nm,0.6s,baz=335,slow=8.5,SNR=6.2						
SONM	Songino Array	49.66	345	P	P	01 19 48.0	+1.0
	0.5nm,0.5s,baz=152,slow=9.4,SNR=3.3						
MKAR	Makanchi Array	58.63	328	P	P	01 20 51.9	-0.7
	0.3nm,0.5s,baz=122,slow=8.0,SNR=7.3						

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*CSEM **08** 01:31:34.9±0.1, 7256N×235E, h10^{km}, ML2.4, Error ellipse: s-maj=3.7km s-min=2.2km az=48.0*
*MOS **08** 01:31:34.8±1.5, 7233N×2.16E, h10^{km}, mb3.9/7, Error ellipse: s-maj=38.6km s-min=8.6km az=96.8*
*IDC **08** 01:31:35.7±0.8, 72.18N×156E, h0^{km}, mb3.7/7, mb1 3.9/12, mb1mx3.7/28, mbtmp3.7/12, ML3.6/6, MS3.0/6, Ms1 3.0/6, ms1mx2.7/31, Error ellipse: s-maj=17.8km s-min=12.7km az=48.0*
*ISCJB **08** 01:31:35.0±0.6, 7229N±004×2.1E±02, h10^{km}, mb3.6/10, MS3.2/2, Error ellipse: s-maj=8.1km s-min=5.8km az=162.4*
*NEIC **08** 01:31:36.6±0.5, 7227N×169E, h10^{km}, mb3.8/3, Error ellipse: s-maj=8.0km s-min=6.6km az=58.0*
*NAO **08** 01:31:36.6±3.0, 72.17N×2.10E, ML2.6*
*BER **08** 01:31:38.3±2.9, 7223N×138E, h10^{km}, MD2.7, ML2.4, ML2.6(NAO)*
*SZGRF **08** 01:31:39.9, 7298N×496E, h33^{km}, mb3.9, Norwegian Sea*
ISC 08 01:31:37.4±0.5**, 7226N**±004×**20E**±02**, h10**^{km}**, n51, σ1^{s}21**/62**, mb3.6**/10**, MS3.2**/2**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMIC	Jan Mayen	3.55	254	Pn	Pn	01 32 28.3	-4.2
	8.3nm,0.3s,baz=70,slow=3.6,SNR=6.5						
JMIC				LR	LR	01 33 10.7	
	comp=Z,136nm,19.2s,baz=74,slow=28						
JMIC	Jan Mayen	3.55	254	eP	Pn	01 32 28.4	-4.0
JMIC	Jan Mayen	3.55	254	Pn	Pn	01 32 28.3	-4.2
JMIC				LR	LR	01 33 10.7	
LOF	Lofoten	5.71	131	eP	Pn	01 33 04.8	+2.8
LOF				eSn	Sn	01 34 07.5	0.0
LOF				AML	AML	01 34 10.0	
	comp=Z,6.3nm,0.2s						
LOF	Lofoten	5.71	131	eP	Pn	01 33 04.9	+2.8
TRO	Tromso	6.14	107	eP	Pn	01 33 07.3	-0.7
TRO				eS	Sn	01 34 12.2	-5.8
TRO				AML	AML	01 34 18.9	
	comp=Z,7.4nm,0.6s						
TRO	Tromso	6.14	107	eP	Pn	01 33 07.3	-0.6
	SNR=47						
TRO				eS	Sn	01 34 12.5	-5.6
TRO	Tromso	6.14	107	eP	Pn	01 33 07.2	-0.8
TRO				eS	Sn	01 34 12.5	-5.6
SPA0	Spitsbergen Ar	6.97	25	Pn	Pn	01 33 19.7	+0.4
	baz=214,slow=14						
SPITS	Spitsbergen Ar	6.97	25	Pn	Pn	01 33 19.6	+0.4
	baz=237,slow=16,SNR=39						
SPITS				Sn	Sn	01 34 39.8	+1.4
	baz=241,slow=24,SNR=1.7						
KBS	Kingsbay	7.13	16	eP	Pn	01 33 20.3	-1.3
KBS	Kingsbay	7.13	16	eP	Pn	01 33 19.3	-2.3
KBS				pmax	pmax		
	comp=Z,12nm,0.7s						
KBS	Kingsbay	7.13	16	Pn	Pn	01 33 20.0	-1.6
KBS	Kingsbay	7.13	16	ePn	Pn	01 33 19.3	-2.3
	comp=Z,12nm,0.7s						
MOR8	Moi Rana	7.54	138	ePn	Pn	01 33 28.0	+0.9
MOR8				eS	Sn	01 34 44.6	-7.9
MOR8				AML	AML	01 34 54.5	
	comp=Z,9.0nm,0.5s						
MOR8	Moi Rana	7.54	138	eP	Pn	01 33 28.0	+0.9
MOR8				eS	Sn	01 34 44.6	-7.9
KTK1	Kautokeino	7.76	104	ePn	Pn	01 33 31.7	+1.5
KTK1				AML	AML	01 35 03.1	
	comp=Z,2.1nm,0.5s						
ARA0	ARCESS Array S	8.16	98	Pn	Pn	01 33 35.6	-0.1
	baz=303,slow=12						
ARA0				Sn	Sn	01 35 03.0	-4.7
	baz=294,slow=22						
ARCES	ARCESS Array B	8.16	98	Pn	Pn	01 33 35.3	-0.3
	comp=Z,0.6nm,0.3s,baz=300,slow=12,SNR=37						
ARCES				Sn	Sn	01 35 05.4	-2.3
	comp=Z,0.6nm,0.3s,baz=291,slow=20,SNR=3.1						
ARCES				LR	LR	01 37 32.7	
	comp=Z,35nm,18.3s,baz=347,slow=43						
ARCES	ARCESS Array B	8.16	98	P	Pn	01 33 35.3	-0.3
ARCES						01 35 05.4	
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES				smax			
	comp=N,1.0nm,0.3s						
ARCES				MLR	MLR		
	comp=Z,35nm,18.3s						
ARE0	ARCESS Array S	8.16	98	ePn	Pn	01 33 36.9	+1.3
NSS	Namsos	8.58	150	ePn	Pn	01 33 42.2	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NB2	NORSAR Subarra	11.83	158	Pn	Pn	01 34 25.8	0.0
NOA	NORSAR Array B	11.83	158	Pn	Pn	01 34 26.1	+0.2
	comp=Z,0.2nm,0.3s,baz=342,slow=13,SNR=3.4						
NOA				Sn	Sn	01 36 34.1	-3.5
	baz=324,slow=24						
NOA				LR	LR	01 38 55.9	
	comp=Z,58nm,18.1s,baz=340,slow=37						
NOA	NORSAR Array B	11.83	158	Pn	Pn	01 34 26.0	+0.2
HFS	Hagfors	13.02	153	Pn	Pn	01 34 42.0	-0.1
	comp=Z,0.2nm,0.3s,baz=348,slow=13,SNR=8.2						
HFS				Sn	Sn	01 37 02.3	-4.5
	comp=Z,0.2nm,0.3s,baz=359,slow=22,SNR=5.6						
HFS				LR	LR	01 39 23.1	
	comp=Z,70nm,18.0s,baz=305,slow=36						
HFS	Hagfors	13.02	153	Pn	Pn	01 34 42.2	+0.1
	baz=358,slow=12						
HFS				Sn	Sn	01 36 59.9	-6.9
	baz=343,slow=28						
KAF	Kangasniemi	13.74	125	ep	Pn	01 34 51.2	-0.7
FIA0	FINESS Array S	14.25	127	Pn	Pn	01 34 58.5	-0.4
	baz=331,slow=14						
JOF	Joensuu	14.40	116	ep	Pn	01 34 59.1	-1.7
EKA	Eskdalemuir Ar	17.13	190	P	Pn	01 35 36.1	-0.3
	comp=Z,0.2nm,0.3s,baz=5.7,slow=11,SNR=4.6						
BRG	Berggiesshubel	22.11	160	eP	P	01 36 35.2	+2.7
BRG				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb3.6						
BRG	Berggiesshubel	22.11	160	eP	P	01 36 35.2	+2.8
	comp=Z,6.5nm,1.5s,mb3.8						
GRA1	Grafenberg Arr	23.03	164	eP	P	01 36 46.9	+4.7
	comp=Z,5.0nm,1.3s,mb3.8						
GRF	Grafenberg Arr	23.03	164	eP	P	01 36 46.9	+4.7
GRF				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.8						
GRF	Grafenberg Arr	23.03	164	eP	P	01 36 46.9	+4.7
GRF				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.8						
GRF	Grafenberg Arr	23.03	164	eP	P	01 36 46.9	+4.7
	comp=Z,5.0nm,1.3s,mb3.8						
VRAC	Vranov	23.96	156	P	P	01 36 52.4	+1.0
	comp=Z,3.5nm,0.7s,mb3.9,baz=346,slow=11,SNR=4.2						
VRAC	Vranov	23.96	156	P	P	01 36 52.4	+1.0
VRAC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GERES	GERESS Array B	24.09	161	P	P	01 36 53.8	+1.2
	comp=Z,1.0nm,0.7s,mb3.3,baz=7.0,slow=5.5,SNR=11						
GERES	GERESS Array B	24.09	161	P	P	01 36 53.8	+1.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	24.78	136	P	P	01 36 58.3	-0.6
	comp=Z,0.9nm,0.4s,mb3.7,baz=341,slow=9.4,SNR=4.9						
AKASG	Malin Array Be	24.78	136	P	P	01 36 58.3	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DAVOX	Davos/Dischmat	25.82	167	LR	LR	01 47 08.0	
	comp=Z,53nm,18.5s,MS3.1,baz=327,slow=36						
ZALV	Zalesovo Beam	37.79	73	P	P	01 38 57.0	+3.9
	comp=Z,0.3nm,0.3s,mb3.5,baz=337,slow=6.3,SNR=2.3						
ZAL	Zalesovo	37.79	73	P	P	01 38 57.0	+3.8
YKA	Yellowknife Ar	38.80	318	P	P	01 39 00.2	-1.3
	comp=Z,0.9nm,0.7s,mb3.6,baz=22,slow=8.7,SNR=4.8						
YKA				LR	LR	01 54 33.0	
	comp=Z,40nm,18.6s,MS3.3,baz=130,slow=36						
YKA	Yellowknife Ar	38.80	318	P	P	01 39 00.2	-1.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA				MLR	MLR		
	comp=Z,40nm,18.6s						
TORD	Torodi Ar. Bea	59.08	180	P	P	01 41 37.4	-0.1
	comp=Z,0.6nm,0.7s,mb3.8,baz=345,slow=6.2,SNR=8.7						
NVAR	Mina Array Bea	62.11	310	P	P	01 41 58.2	+0.3
	comp=Z,0.5nm,0.9s,mb3.7,baz=3.4,slow=4.5,SNR=3.3						
TXAR	Lajitas Array	66.93	294	P	P	01 42 28.3	-1.2
	comp=Z,0.3nm,0.7s,mb3.4,baz=36,slow=7.9,SNR=3.6						

ISCJB ***08*** *01:46:41.8±0.6, 4473S±008×367E±02, h10^{km}, mb4.1/12, MS3.9/14, Error ellipse: s-maj=18.9km s-min=9.6km az=157.0*
IDC ***08*** *01:46:41.7±0.7, 4483S×3667E, h0^{km}, mb4.2/10, mb1 4.3/12, mb1mx4.1/21, mbtmp4.3/12, ML3.6/2, MS3.9/16, Ms1 3.9/16, ms1mx3.8/27, Error ellipse: s-maj=29.6km s-min=16.3km az=55.0*
NEIC ***08*** *01:46:43.4±0.4, 4477S×3668E, h10^{km}, mb4.4/3, Error ellipse: s-maj=16.1km s-min=7.8km az=61.0*
ISC 08 01:46:43.6±0.6**, 4473S**±008×**368E**±02**, h10**^{km}**, n37, σ0^{s}78**/22**, mb4.1**/12**, MS3.9**/14**, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SUR	Sutherland	17.49	309	P	Pn	01 50 48.0	+0.5
	0.3nm,0.3s,baz=129,slow=9.8,SNR=4.0						
SUR				LR	LR	01 56 17.7	
	comp=Z,368nm,18.3s,baz=137,slow=33						
BOSA	Boshof	18.50	326	P	Pn	01 51 01.0	+1.0
	0.1nm,0.3s,baz=156,slow=12,SNR=12						
BOSA				LR	LR	01 57 00.2	
	comp=Z,558nm,18.5s,baz=148,slow=33						
LBTB	Lobatse	21.65	332	P	P	01 51 34.6	+0.6
	8.4nm,1.0s,mb4.1,baz=202,slow=10,SNR=6.5						
LBTB				LR	LR	01 58 55.7	
	comp=Z,441nm,18.6s,MS3.9,baz=165,slow=34						
LBTB	Lobatse	21.65	332	eP	P	01 51 34.3	+0.2
	12nm,0.9s,mb4.3						
LBTB				LR	LR	01 58 55.7	
MAW	Mawson	26.74	158	P	P	01 52 24.2	+1.4
	4.1nm,1.0s,mb3.9,baz=339,slow=14,SNR=1.7						
MAW				LR	LR	02 00 26.3	
	comp=Z,279nm,21.9s,MS3.8,baz=155,slow=31						
LSZ	Lusaka	30.24	343	P	P	01 52 54.6	+0.2
	11nm,0.8s,mb4.7,baz=165,slow=10.0,SNR=24						
LSZ	Lusaka	30.24	343	eP	P	01 52 54.3	-0.2
	13nm,0.8s,mb4.7						
SNAA	Sanae	32.95	202	e	P	01 53 18.4	+0.5
SNAA				e	pP	01 53 22.9	+2.0
SNAA				e		01 53 27.6	
SNAA	Sanae	32.95	202	eP	P	01 53 17.9	+0.1
	4.3nm,0.9s,mb4.4						
VNA2	Neumayer--Watz	33.85	204	e	P	01 53 26.1	+0.4
VNA2				e		01 53 31.1	
VNA2				e		01 53 35.3	
VNA2				e		01 56 04.1	
VNA1	Neumayer--Stat	33.98	205	e	P	01 53 27.8	+1.0
VNA1				e		01 53 32.7	
VNA1				e		01 53 36.9	
VNA3	Neumayer Olymp	34.66	204	e	P	01 53 27.2	-5.5
VNA3				e		01 53 32.5	
VNA3				e		01 53 36.4	
VNA3				e		01 56 06.3	
KMBO	Kilima Mbogo	43.42	1	LR	LR	02 11 04.6	
	comp=Z,222nm,18.2s,MS4.1,baz=161,slow=34						
QSPA	South Pole Qui	45.49	180	P	P	01 55 01.7	-0.7
	2.0nm,0.9s,mb3.9,baz=257,slow=4.6,SNR=9.9						
QSPA	South Pole Qui	45.49	180	P	P	01 55 01.7	-0.7
DBIC	Dimbokro	63.35	312	P	P	01 57 11.6	-1.4
	3.8nm,0.9s,mb4.5,baz=119,slow=5.5,SNR=3.4						
DBIC				LR	LR	02 20 13.8	
	comp=Z,67nm,18.9s,MS3.8,baz=132,slow=32						
TORD	Torodi Ar. Bea	65.80	322	P	P	01 57 28.9	0.0
	3.7nm,1.2s,mb4.3,baz=161,slow=5.7,SNR=7.5						
TORD				LR	LR	02 27 42.3	
	comp=Z,76nm,19.1s,MS3.9,baz=290,slow=37						
PLCA	Paso Flores	72.86	229	P	P	01 58 11.7	-0.7
	2.3nm,1.1s,mb4.0,baz=228,slow=4.8,SNR=3.2						
PLCA				LR	LR	02 26 53.0	
	comp=Z,40nm,19.2s,MS3.7,baz=295,slow=33						
CPUP	Villa Florida	74.70	248	P	P	01 58 21.9	-1.6
	0.2nm,0.3s,mb3.5,baz=102,slow=7.3,SNR=3.4						
CPUP				LR	LR	02 23 39.6	
	comp=Z,40nm,19.7s,MS3.7,baz=292,slow=30						
STKA	Stephens Creek	77.69	123	P	P	01 58 40.2	-0.2
	1.6nm,0.6s,mb4.1,baz=266,slow=8.2,SNR=4.2						
STKA	Stephens Creek	77.69	123	P	P	01 58 40.2	-0.2
ASAR	Alice Springs	78.55	112	P	P	01 58 45.1	-0.2
	1.5nm,0.9s,mb3.9,baz=224,slow=5.6,SNR=8.5						
IDI	Anoyia	80.36	350	LR	LR	02 35 50.8	
	comp=Z,68nm,21.1s,MS4.0,baz=75,slow=37						
WRA	Warramunga Arr	81.42	109	P	P	01 59 00.7	-0.2
	1.8nm,0.9s,mb4.0,baz=223,slow=4.3,SNR=10						
WRA				LR	LR	02 29 14.3	
	comp=Z,112nm,21.8s,MS4.2,baz=240,slow=31						
KEST	Kesra	83.85	338	LR	LR	02 38 49.9	
	comp=Z,79nm,19.5s,MS4.1,baz=221,slow=37						
LPAZ	La Paz	88.87	248	LR	LR	02 31 54.7	
	comp=Z,48nm,20.1s,MS3.9,baz=91,slow=31						
ESDC	Sonseca Array	91.66	330	LR	LR	02 42 35.3	
	comp=Z,82nm,18.5s,MS4.2,baz=140,slow=37						
GERES	GERESS Array B	95.35	345	LR	LR	02 45 22.6	
	comp=Z,31nm,19.5s,MS3.8,baz=262,slow=37						
MKAR	Makanchi Array	99.58	30	LR	LR	02 41 47.0	
	comp=Z,38nm,21.0s,MS3.9,baz=350,slow=33						
WMOK	Wichita Mounta	144.76	269	ePKPdf	PKPdf	02 06 19.1	-1.2
TXAR	Lajitas Array	145.24	257	PKPbc	PKPbc	02 06 20.9	-0.1
	6.1nm,1.0s,baz=137,slow=5.2,SNR=35						
AMTX	Amarillo	146.90	267	ePKPbc	PKPbc	02 06 25.3	-0.6
ECSD	EROS,Sioux Fal	146.92	285	ePKPbc	PKPbc	02 06 25.4	-0.3
ULM	Lac du Bonnet	147.95	297	PKPbc	PKPbc	02 06 27.5	-0.8
	4.1nm,0.8s,baz=116,slow=7.9,SNR=4.2						
SDCO	Great Sand Dun	150.97	269	ePKPbc	PKPbc	02 06 36.3	+0.2
PV01	Paradox Valley	153.32	268	ePKPbc	PKPbc	02 06 42.4	+0.9
YKA	Yellowknife Ar	155.73	327	PKPab	PKPab	02 07 03.8	+0.7
	0.4nm,0.7s,baz=61,slow=4.3,SNR=3.1						

IDC ***08*** *02:01:41.5±0.7, 1040S×11739E, h0^{km}, mb4.4/10, mb1 4.6/13, mb1mx4.4/18, mbtmp4.4/13, ML4.3/3, MS3.6/4, Ms1 3.6/4, ms1mx3.3/18, Error ellipse: s-maj=22.8km s-min=15.0km az=49.0*
ISCJB ***08*** *02:01:45.0±0.8, 1057S±005×11739E±004, h45^{km}±8^{km}, mb4.6/20, MS3.6/2, Error ellipse: s-maj=9.4km s-min=5.9km az=34.7*
DJA ***08*** *02:01:46, 1071S×11726E, h60^{km}, MLv4.8/7*
NEIC ***08*** *02:01:52.1±2.2, 1033S×11765E, h87^{km}±21^{km}, mb4.5/8, Error ellipse: s-maj=20.8km s-min=8.8km az=62.0*
ISC 08 02:01:45.8±0.7**, 1065S**±005×**11733E**±005**, h36**^{km}±7^{km}**, n47, σ1^{s}22**/56**, mb4.6**/20**, MS3.6**/2**, 3D, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MTNI	Mataram	2.31	330	P	Pn	02 02 21.5	+0.2
	0.0nm,0.0s						
KHKI	Kahang-Kahang	2.84	323	P	Pn	02 02 29.7	+1.0
	0.0nm,0.0s						
DNP	Denpasar	2.87	313	P	Pn	02 02 29.2	+0.1
	0.0nm,0.0s						
WSI	Waingapu	3.08	72	⇓eP	Pn	02 02 32.3	+0.3
WSI				eS	Sn	02 03 11.5	+3.9
KRKI	Karangkates	5.41	297	P	Pn	02 03 03.4	-0.7
	0.0nm,0.0s						
TRT	Tretes	5.48	302	⇓eP	Pn	02 03 00.0	-5.1
MKS	Makassar	5.80	22	⇓eP	Sn	02 04 14.8	+0.1
KAPI	Kappang	6.09	23	Pn	Pn	02 03 15.4	+1.9
	3.3nm,0.3s,baz=209,slow=9.8,SNR=7.9						
KAPI				Sn	Sn	02 04 20.4	-1.6
	11nm,0.3s,baz=104,slow=23,SNR=12						
KAPI				LR	LR	02 05 58.8	
	comp=Z,403nm,19.7s,baz=60,slow=44						
BATI	Baumata	6.25	87	P	Pn	02 03 16.1	+0.6
	0.0nm,0.0s						
BATI	Baumata	6.25	87	Pn	Pn	02 03 16.3	+0.7
	21nm,0.3s,baz=271,slow=4.1,SNR=10						
BATI				Sn	Sn	02 04 26.1	+0.4
	22nm,0.3s,baz=2.8,slow=22,SNR=18						
MBWA	Marble Bar	10.70	168	ePn	Pn	02 04 13.9	-2.7
MBWA				eSn	Sn	02 06 00.5	-15
FITZ	Fitzroy Crossi	10.94	134	eP	Pn	02 04 18.9	-1.0
	38nm,0.6s						
FITZ				eS	Sn	02 06 12.5	-8.5
FITZ	Fitzroy Crossi	10.94	134	Pn	Pn	02 04 19.3	-0.6
	2.0nm,0.3s,baz=327,slow=9.8,SNR=63						
FITZ				Sn	Sn	02 06 09.7	-11
	0.4nm,0.3s,baz=329,slow=19,SNR=3.3						
KAKA	Kakadu	14.94	99	eP	Pn	02 05 15.9	+1.4
	6.6nm,0.5s						
KAKA				eS	Sn	02 07 51.2	-7.7
WRA	Warramunga Arr	18.81	121	P	Pn	02 06 02.5	-0.7
	0.4nm,0.3s,baz=299,slow=13,SNR=19						
WRA				S	S	02 09 20.5	-14
	0.2nm,0.3s,baz=76,slow=20,SNR=4.9						
WRA				LR	LR	02 13 43.6	
	comp=Z,248nm,18.7s,baz=315,slow=38						
WRAB	Tennant Creek	18.82	121	eP	Pn	02 06 02.4	-0.9
	13nm,1.1s						
WB2	Warramunga Arr	18.82	121	eP	Pn	02 06 02.5	-0.9
WB2				eS	S	02 09 20.0	-14
WB2	Warramunga Arr	18.82	121	eP	Pn	02 06 02.3	-1.1
WB2				eS	S	02 09 20.0	-14
PPI	Padang Panjang	19.64	300	P	Pn	02 06 11.8	-1.5
	0.0nm,0.0s						
ASAR	Alice Springs	20.42	131	P	P	02 06 22.4	+2.4
	16nm,0.8s,baz=303,slow=10,SNR=126						
ASAR				S	S	02 10 03.3	-3.7
	1.9nm,0.6s,baz=303,slow=23,SNR=6.4						
NWAO	Narrogin (SRO)	22.17	180	P	P	02 06 45.2	+6.4
	11nm,0.6s,mb4.4,baz=17,slow=9.5,SNR=8.0						
NWAO	Narrogin (SRO)	22.17	180	P	P	02 06 45.2	+6.4
STKA	Stephens Creek	30.80	137	eP	P	02 08 00.2	+1.9
	4.8nm,0.9s,mb4.3						
STKA	Stephens Creek	30.80	137	P	P	02 08 00.3	+2.0
	5.7nm,0.8s,mb4.5,baz=323,slow=7.5,SNR=9.3						
STKA				LR	LR	02 20 56.2	
	comp=Z,143nm,20.9s,MS3.6,baz=210,slow=37						
CMAR	Chiang Mai Arr	34.14	328	P	P	02 08 27.9	+0.2
	0.9nm,0.3s,mb4.2,baz=167,slow=7.1,SNR=5.3						
CMAR				S	S	02 13 49.8	-1.9
	0.8nm,0.4s,baz=202,slow=36,SNR=4.2						
TOO	Toolangi	36.86	141	eP	P	02 08 55.0	+4.2
KSRS	Korea Array	48.87	11	P	P	02 10 28.4	+0.3
	4.0nm,0.9s,mb4.5,baz=191,slow=7.6,SNR=10						
KSRS				LR	LR	02 32 44.1	
	comp=Z,58nm,18.1s,MS3.6,baz=351,slow=38						
MJAR	Matsushiro Arr	50.89	22	P	P	02 10 40.8	-2.6
	1.8nm,0.7s,mb4.1,baz=219,slow=5.5,SNR=5.3						
ULN	Ulaanbaatar	58.97	352	eP	P	02 11 41.0	-0.6
	2.3nm,0.7s,mb4.3						
SONM	Songino Array	59.03	351	P	P	02 11 41.8	-0.2
	4.2nm,0.9s,mb4.5,baz=166,slow=7.0,SNR=18						
KBL	Kabul	64.13	317	eP	P	02 12 16.2	-0.5
	21nm,0.7s,mb5.3						
MKAR	Makanchi Array	65.19	334	P	P	02 12 22.9	-0.4
	3.0nm,0.8s,mb4.4,baz=142,slow=8.6,SNR=16						
TKM2	Tokmak 2	65.53	328	eP	P	02 12 25.2	-0.5
	11nm,1.5s,mb4.7						
AML	Almayashu	66.02	326	eP	P	02 12 29.2	+0.4
	9.8nm,1.0s,mb4.8						
EKS2	Erkin-Say	66.33	326	eP	P	02 12 31.5	+0.7
	10.0nm,0.9s,mb4.8						
OPO	Ambohidratompo	67.98	254	P	P	02 12 43.9	+2.0
	1.7nm,0.8s,mb4.2,baz=105,slow=12,SNR=2.8						
ZAA0	Zalesovo Array	70.01	340	eP	P	02 12 52.1	-1.5
ZALV	Zalesovo Beam	70.01	340	P	P	02 12 52.1	-1.6
	2.6nm,0.7s,mb4.3,baz=146,slow=4.5,SNR=12						
RDF	Al-Radifah	77.91	303	eP	P	02 13 41.7	+1.3
	baz=298						
RDF				AMb	AMB	02 13 42.9	
	comp=Z,57nm,1.2s,mb5.4,baz=298						
UMR	Umm Al-Rimmam	77.98	303	eP	P	02 13 41.4	+0.6
	baz=298						
UMR				AMb	AMB	02 13 42.5	
	comp=Z,30nm,0.8s,mb5.3,baz=298						
NAY	Al-Naaiem	78.27	303	eP	P	02 13 42.7	+0.3
	baz=298						
NAY				AMb	AMB	02 13 44.3	
	comp=Z,11nm,0.7s,mb4.9,baz=298						
MIB	Mutribah	78.37	304	eP	P	02 13 43.3	+0.3
	baz=299						
MIB				AMb	AMB	02 13 44.7	
	comp=Z,23nm,0.9s,mb5.1,baz=299						
BOSA	Boshof	86.78	242	P	P	02 14 29.5	+2.6
	comp=Z,2.5nm,0.9s,mb4.4,baz=160,slow=12,SNR=3.6						
MALT	Malatya	87.97	309	eP	P	02 14 34.4	+2.0
	comp=Z,3.9nm,1.0s,mb4.6						
TORD	Torodi Ar. Bea	117.12	279	PKP	PKPdf	02 20 29.1	+1.0
	comp=Z,0.5nm,0.9s,baz=61,slow=1.1,SNR=5.2						
NVAR	Mina Array Bea	123.33	51	PKP	PKPdf	02 20 41.4	+1.9
	comp=Z,0.4nm,0.6s,baz=270,slow=3.0,SNR=5.9						
BDFB	Brasilia	150.12	209	PKPbc	PKPbc	02 21 36.8	+3.0
	comp=Z,2.4nm,0.7s,baz=171,slow=2.8,SNR=3.8						

ISCJB ***08*** *02:24:33.4±0.9, 3724N±004×2700E±006, h7^{km}±8^{km}, Error ellipse: s-maj=7.4km s-min=6.2km az=4.9*
ISK ***08*** *02:24:33.9, 3726N×2706E, h6^{km}, MD3.0*
CSEM ***08*** *02:24:33.5±0.1, 3723N×2706E, h12^{km}, MD3.0, Error ellipse: s-maj=3.7km s-min=2.4km az=43.0*
DDA ***08*** *02:24:34.5, 3726N×2709E, h7^{km}±2^{km}, Md2.8*
ATH ***08*** *02:24:34.2, 3733N×2700E, h31^{km}±1^{km}, MD2.9/3*
ISC 08 02:24:33.8±0.8**, 3723N**±003×**2700E**±006**, h9**^{km}±8^{km}**, n13, σ0^{s}53**/22**, 1D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.30	125	PG	Pg	02 24 39.7	-0.1
BODT				eSG	Sg	02 24 44.5	+0.8
BDRM	Kayabasi	0.39	115	i P	Pg	02 24 41.2	-0.2
BDRM				i S	Sg	02 24 47.1	+0.5
BDRM	Kayabasi	0.39	115	i P	Pg	02 24 41.2	-0.3
BDRM				i S	Sg	02 24 47.2	+0.6
SMG	Samos	0.49	345	⇓iPB	Pg	02 24 43.6	+0.1
SMG				eSB	Sg	02 24 50.1	+0.1
GCAM	G?zelcaml?	0.50	21	i P	Pg	02 24 43.8	+0.1
GCAM				i S	Sg	02 24 50.6	+0.3
MLSB	Milas	0.62	84	ePG	Pg	02 24 44.8	-1.1
MLSB				eSG	Sg	02 24 53.9	0.0
AYDN	Tasoluk	0.82	58	i P	Pg	02 24 48.5	-1.1
AYDN				i S	Sg	02 25 00.4	+0.2
YER	Yerkesik	1.03	95	ePG	Pg	02 24 53.7	+0.1
BLCB	Balcova	1.15	2	ePN	Pn	02 24 55.9	-0.2
IZM	Izmir	1.18	10	ePN	Pn	02 24 56.8	+0.3
KDAG	Bornova	1.19	10	i P	Pb	02 24 56.5	0.0
KDAG				i S	Sb	02 25 12.8	+0.9
APE	Apeiranthos	1.19	263	ePN	Pn	02 24 56.6	0.0
APE				eSN	Sn	02 25 13.2	+0.4
PRK	Paraskevi	2.09	344	ePN	Pn	02 25 07.9	-1.1

IDC ***08*** *03:00:56.9±1.2, 1086N×13844E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.9/17, mbtmp3.9/7, Error ellipse: s-maj=44.2km s-min=19.3km az=76.0*
ISCJB ***08*** *03:01:00.4±1.0, 108N±0.1×1379E±04, h33^{km}, mb3.9/8, Error ellipse: s-maj=50.9km s-min=14.8km az=167.6*
NEIC ***08*** *03:01:01.9±0.9, 1086N×13838E, h35^{km}, mb4.5/1, Error ellipse: s-maj=36.4km s-min=14.0km az=75.0*
ISC 08 03:01:02.0±1.0**, 109N**±01×**1384E**±03**, h35**^{km}**, n10, σ0^{s}89**/10**, mb3.9**/8**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.86	187	P	P	03 07 14.1	-1.0
	0.4nm,0.7s,mb3.4,baz=1.7,slow=9.9,SNR=4.9						
ASAR	Alice Springs	34.59	187	P	P	03 07 48.0	+0.4
	0.7nm,0.6s,mb3.8,baz=14,slow=13,SNR=10						
CMAR	Chiang Mai Arr	38.82	286	P	P	03 08 25.6	+1.7
	1.5nm,0.4s,mb4.1,baz=90,slow=6.5,SNR=8.0						
STKA	Stephens Creek	42.60	176	P	P	03 08 55.0	+0.2
	2.4nm,0.7s,mb4.0,baz=349,slow=14,SNR=6.0						
SONM	Songino Array	45.59	330	P	P	03 09 18.3	-0.4
	1.4nm,1.1s,mb3.8,baz=141,slow=5.7,SNR=4.8						
MK31	Makanchi Array	59.16	318	eP	P	03 10 58.7	-0.6
MK31				e	pP	03 11 07.4	-2.6
MKAR	Makanchi Array	59.16	318	P	P	03 10 59.2	-0.1
	1.5nm,0.8s,mb4.1,baz=105,slow=9.2,SNR=11						
MKAR	Makanchi Array	59.16	318	P	P	03 10 59.2	-0.1
KURK	Kurchatov	62.67	322	eP	P	03 11 21.9	-1.2
	2.5nm,0.7s,mb4.5						
YKA	Yellowknife Ar	88.16	26	P	P	03 13 50.1	+1.1
	0.6nm,0.7s,mb4.0,baz=294,slow=4.7,SNR=3.4						

NEIC ***08*** *03:09:52.0±1.6, 1588S×16822E, h270^{km}±15^{km}, mb4.5/12, Error ellipse: s-maj=12.3km s-min=9.3km az=202.0*
ISCJB ***08*** *03:09:52.7±1.6, 160S±0.1×168.13E±0.09, h285^{km}±15^{km}, mb4.3/21, Error ellipse: s-maj=16.6km s-min=13.3km az=4.2*
IDC ***08*** *03:09:52.6±1.9, 1593S×168.19E, h273^{km}±17^{km}, mb4.1/12, mb1 4.2/12, mb1mx4.0/20, mbtmp4.1/12, Error ellipse: s-maj=15.9km s-min=12.3km az=159.0*
LDG ***08*** *03:09:54.7±0.3, 1642S×16866E, h300^{km}, Ms3.9/1, Error ellipse: s-maj=62.0km s-min=2.7km az=103.0*
ISC 08 03:09:53.2±1.7**, 159S**±01×**16813E**±009**, h276**^{km}±16^{km}**, n69, σ0^{s}78**/33**, mb4.3**/21**, 12C-3D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.31	194	ePn	Pn	03 11 24.8	-0.9
ARMA	Armidale	20.89	223	eP	P	03 14 16.4	+1.5
CTA	Charters Tower	21.21	256	eP	P	03 14 18.8	+0.8
	8.3nm,0.5s,mb4.3						
CTA	Charters Tower	21.21	256	P	P	03 14 19.0	+1.0
	10nm,0.4s,mb4.5,baz=82,slow=12,SNR=18						
CTAO	Charters Tower	21.21	256	eP	P	03 14 18.9	+0.9
	12nm,0.6s,mb4.4						
PMG	Port Moresby	21.45	285	eP	P	03 14 20.8	+0.5
	30nm,0.9s,mb4.6						
URZ	Urewera	23.61	162	P	P	03 14 39.3	-0.3
	10nm,0.3s,mb4.6,baz=325,slow=1.4,SNR=14						
COEN	Coen	24.19	271	eP	P	03 14 45.5	+0.3
	5.5nm,0.8s,mb3.9						
RPZ	Rata Peaks	27.80	175	P	P	03 15 16.5	-0.6
	8.7nm,0.8s,mb4.2,baz=252,slow=6.4,SNR=3.0						
STKA	Stephens Creek	28.88	232	⇓iP	P	03 15 27.8	+1.0
	5.1nm,0.4s,mb4.3						
STKA	Stephens Creek	28.88	232	P	P	03 15 28.1	+1.3
	6.0nm,0.3s,mb4.5,baz=65,slow=9.9,SNR=38						
WB2	Warramunga Arr	32.35	258	⇓iP	P	03 15 56.3	-1.1
WRAB	Tennant Creek	32.35	258	eP	P	03 15 56.2	-1.2
	6.3nm,0.6s,mb4.3						
WRA	Warramunga Arr	32.37	258	P	P	03 15 56.6	-0.9
	6.2nm,0.3s,mb4.6,baz=85,slow=7.7,SNR=197						
WRA				S	S	03 20 48.3	-2.7
	1.0nm,0.9s,baz=90,slow=15,SNR=7.0						
WRA				ScP	ScP	03 21 57.5	+2.1
	0.7nm,0.8s,baz=89,slow=3.5,SNR=5.0						
ASAR	Alice Springs	33.05	251	P	P	03 16 03.4	0.0
	44nm,0.5s,mb5.2,baz=76,slow=9.3,SNR=952						
ASAR				S	S	03 21 00.7	-0.7
	1.5nm,1.0s,baz=72,slow=17,SNR=7.0						
ASAR				ScP	ScP	03 22 00.2	+2.5
	0.6nm,0.6s,baz=92,slow=4.3,SNR=10						
KAKA	Kakadu	34.70	271	eP	P	03 16 17.1	-0.6
	7.2nm,0.4s,mb4.6						
FORT	Forrest	39.42	241	eP	P	03 16 57.3	+0.3
	21nm,0.6s,mb4.7						
FORT	Forrest	39.42	241	eP	P	03 16 57.0	0.0
	3.6nm,0.7s,mb3.9						
FITZ	Fitzroy Crossi	40.63	261	⇓iP	P	03 17 07.0	0.0
	43nm,0.7s,mb4.8						
FITZ	Fitzroy Crossi	40.63	261	P	P	03 17 07.4	+0.4
	15nm,0.4s,mb4.6,baz=89,slow=9.4,SNR=193						
MBWA	Marble Bar	46.05	256	eP	P	03 17 50.4	+0.3
	12nm,0.4s,mb4.6						
NWAO	Narrogin (SRO)	48.86	240	P	P	03 18 12.0	+0.5
	21nm,0.9s,mb4.5,baz=53,slow=6.0,SNR=6.8						
NWAO	Narrogin (SRO)	48.86	240	P	P	03 18 12.0	+0.5
SBA	Scott Base	61.94	180	eP	P	03 19 44.5	+0.9
	11nm,0.8s,mb4.5						
CASY	Casey	62.74	203	eP	P	03 19 49.4	+0.4
	3.3nm,0.6s,mb4.1						
PETK	Petropavlovsk-	69.34	353	P	P	03 20 30.6	-0.3
	1.7nm,0.8s,mb3.9,baz=107,slow=5.0,SNR=3.2						
BDT	Bhumibol Dam	75.69	293	P	P	03 21 18.0	+9.1
MAW	Mawson	81.09	202	P	P	03 21 37.4	-0.1
	2.5nm,0.6s,mb4.2,baz=111,slow=5.4,SNR=6.7						
SONM	Songino Array	83.95	323	P	P	03 21 53.4	+1.0
	0.4nm,0.7s,mb3.4,baz=133,slow=8.1,SNR=3.3						
NVAR	Mina Array Bea	87.42	49	P	P	03 22 09.7	+0.1
	0.6nm,0.8s,mb3.5,baz=225,slow=9.1,SNR=4.5						
TXAR	Lajitas Array	96.12	61	P	P	03 22 49.1	-0.9
	0.1nm,0.5s,mb3.2,baz=230,slow=7.0,SNR=3.2						
CPUP	Villa Florida	119.03	133	PKP	PKPdf	03 28 07.8	-2.1
	0.2nm,0.3s,baz=143,slow=5.1,SNR=3.5						
ARCES	ARCESS Array B	121.62	345	PKP	PKPdf	03 28 12.5	-1.0
	2.3nm,0.5s,baz=62,slow=2.1,SNR=31						
NOA	NORSAR Array B	132.00	345	PKP	PKPdf	03 28 32.6	-0.9
	0.4nm,0.6s,baz=38,slow=2.2,SNR=2.8						
BDFB	Brasilia	132.48	130	PKP	PKPdf	03 28 35.4	-0.4
	0.8nm,0.5s,baz=284,slow=4.2,SNR=4.4						
CDF	Champ du Feu	144.00	338	ePKP1	PKPdf	03 28 54.0	-1.8
	12nm,1.1s						
HINF	Hinteralfeld	144.65	338	⇑iPKP1	PKPdf	03 28 56.0	-1.0
	6.9nm,0.6s						
HAU	Haudompre	144.67	339	⇑iPKP1	PKPdf	03 28 56.3	-0.7
	14nm,0.7s						
MEZF	Maizieres J'vi	144.68	340	⇑iPKP1	PKPdf	03 28 56.7	-0.3
	6.9nm,0.6s						
CABF	La Chapelle	145.95	338	ePKP1	PKPbc	03 29 00.8	+0.3
	22nm,1.0s						
FLN	La Foliniere	145.96	347	⇑iPKP1	PKPbc	03 28 59.8	-0.6
	10nm,0.7s						
LDF	La Druitiere	146.03	346	ePKP1	PKPbc	03 29 00.0	-0.7
	6.9nm,0.6s						
LOR	Lormes	146.14	341	ePKP1	PKPbc	03 29 00.8	-0.2
	7.6nm,0.8s						

GRR	Gorron	146.39	347	ePKP1	PKPbc	03 29 01.3	-0.4
	17nm,1.0s						
SSF	Saint Saulge	146.44	341	⇑iPKP1	PKPbc	03 29 01.8	-0.1
	8.4nm,0.6s						
LPL	La Plagne	146.62	336	⇑iPKP1	PKPbc	03 29 02.8	+0.3
	5.5nm,0.7s						
LPG	La Plagne	146.63	336	ePKP1	PKPbc	03 29 02.9	+0.4
	5.2nm,0.6s						
AVF	Avril sur Loir	146.73	341	ePKP1	PKPbc	03 29 02.9	+0.2
SGMF	Saint Gilles	146.87	349	⇑iPKP1	PKPbc	03 29 02.5	-0.5
	17nm,0.9s						
BGF	Bois d'Agland	147.09	341	ePKP1	PKPbc	03 29 03.4	-0.3
	7.6nm,0.7s						
MBDF	Montbardon	147.26	335	ePKP1	PKPbc	03 29 03.9	-0.3
	4.1nm,0.6s						
QUIF	Quistinic	147.31	349	ePKP1	PKPbc	03 29 03.6	-0.7
ORIF	Oris-en-Rattie	147.46	336	ePKP1	PKPbc	03 29 04.6	-0.2
	7.2nm,0.8s						
TCF	Toulx Ste Croi	147.53	342	ePKP1	PKPbc	03 29 04.5	-0.4
	9.3nm,1.0s						
SBF	Sospel	147.69	333	ePKP1	PKPbc	03 29 05.4	0.0
	20nm,0.9s						
MFF	Saint Martin d	147.90	345	ePKP1	PKPbc	03 29 05.5	-0.4
VIVF	Saint-Julien-l	147.96	338	⇑iPKP1	PKPbc	03 29 05.9	-0.2
	4.4nm,0.7s						
PGF	Pioggiola	148.01	330	ePKP1	PKPbc	03 29 05.9	-0.4
	18nm,0.8s						
FRF	La Foret Royal	148.27	334	ePKP1	PKPbc	03 29 06.3	-0.6
	22nm,1.0s						
SMRF	Simiane la Rot	148.36	336	⇑iPKP1	PKPbc	03 29 07.2	0.0
	10nm,0.8s						
LMR	La Mourre	148.51	334	⇑iPKP1	PKPbc	03 29 07.0	-0.5
RJF	Les Rejaudoux	148.63	342	ePKP1	PKPbc	03 29 07.5	-0.3
LASF	Ste Croix	148.93	338	ePKP1	PKPbc	03 29 08.5	-0.1
	5.8nm,0.6s						
MTLF	Montolieu	150.16	339	⇑iPKP1	PKPbc	03 29 11.3	-0.3
	7.7nm,0.8s						
EPF	Esparros	151.04	341	ePKP1	PKPbc	03 29 13.2	-0.5
SJPF	Ste Jean	151.42	344	ePKP1	PKPbc	03 29 14.7	+0.2
ETSF	Etsaut	151.43	342	⇑iPKP1	PKPbc	03 29 14.7	+0.1
	7.8nm,0.6s						
KEST	Kesra	152.66	320	PKPbc	PKPbc	03 29 17.8	+0.2
	1.1nm,0.6s,baz=70,slow=5.0,SNR=8.2						
TORD	Torodi Ar. Bea	166.58	260	PKP	PKPdf	03 29 25.1	-1.5
	0.4nm,0.8s,baz=26,slow=0.9,SNR=5.5						
TORD				PKPab	PKPab	03 30 30.4	-0.2
	0.8nm,0.7s,baz=76,slow=4.7,SNR=5.5						

*ISCJB **08** 03:14:45.8±2.1, 20.17S±0.06×173.81W±0.04, h11km±13km, mb5.0/82, MS4.6/35, Error ellipse: s-maj=11.0km s-min=4.8km az=151.0*

*IDC **08** 03:14:45.7±0.5, 20.19S×173.74W, h0km, mb4.7/22, mb1 4.8/23, mb1mx4.8/26, mbtmp4.7/23, ML4.6/1, MS4.5/18, Ms1 4.5/18, ms1mx4.3/30, Error ellipse: s-maj=20.9km s-min=12.7km az=145.0*

*BJI **08** 03:14:45.6, 20.40S×173.96W, h9km, mB5.4, mb5.2, Ms5.0, Msz4.5*

*MOS **08** 03:14:49.9±1.2, 20.11S×173.89W, h33km, mb5.3/22, MS4.8/6, Error ellipse: s-maj=13.3km s-min=8.9km az=140.0*

*DJA **08** 03:14:51, 20.37S×174.22W, h10km, mb5.2/11*

*GCMT **08** 03:14:51.0±0.2, 20.26S×173.08W, h17km, MW5.1/69, Moment Tensor Solution. s43,c56; s69,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.22±.19; $M_{\theta\theta}$-0.21±.13; $M_{\phi\phi}$-4.01±.14; $M_{r\theta}$1.69±.38; $M_{\theta\phi}$-0.68±.10; $M_{\phi r}$2.86±.33; Best double couple: $M_0$5.32900×10^{16} NP1:ϕ_s179.00000°, δ28.00000°, λ69.00000°. NP2: ϕ_s22.00000°, δ64.00000°, λ100.00000°. Principal axes: T 5.4740, Plg69.0000°, Azm313.0000°; N -0.2920, Plg9.0000°, Azm198.0000°; P -5.1830, Plg19.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*SZGRF **08** 03:14:51.2, 19.20S×175.75W, h33km, Tonga Islands*

*NEIC **08** 03:14:51.0±0.1, 20.16S×173.83W, h35km, mb5.1/50, Error ellipse: s-maj=9.1km s-min=4.0km az=146.0*

*BGS **08** 03:14:53.0±4.4, 20.16S×173.83W, h33km, mb5.1(NEIC)*

ISC 08 03:14:49.2±2.3, **20.18S**±0.06×**173.79W**±0.04, **h22**km±16km, **h13**km±1.0km**:pP-P, n492, σ0s78**/295, **mb5.0**/82, **MS4.6**/35, **82C-71D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	6.53	17	Pn	Pn	03 16 17.9	-6.0
	34nm,0.3s,baz=20,slow=1.3,SNR=25						
AFI				Sn	Sn	03 17 25.3	-12
	16nm,0.3s,baz=168,slow=20,SNR=2.9						
AFI	Afiamalu	6.53	17	eP	Pn	03 16 17.7	-6.2
AFI				pmax	pmax		
	comp=Z,227nm,0.6s						
AFI	Afiamalu	6.53	17	ePn	Pn	03 16 17.7	-6.2
	comp=Z,227nm,0.6s						
RAO	Raoul Island	9.78	202	Sn	Sn	03 18 51.1	-6.5
	comp=Z,48nm,0.3s,baz=73,slow=19,SNR=3.2						
RAR	Rarotonga	13.16	97	Pn	Pn	03 17 43.5	-11
	comp=Z,9.3nm,0.3s,baz=258,slow=8.7,SNR=29						
RAR				Sn	Sn	03 19 54.9	-26
	comp=Z,1.0nm,0.3s,baz=131,slow=20,SNR=3.0						
RAR				LR	LR	03 22 18.3	
	comp=Z,3µm,18.1s,baz=220,slow=34						
DZM	Mont Dzumac	18.54	261	eP	Pn	03 19 06.7	+2.0
URZ	Urewera	19.67	202	P	Pn	03 19 17.2	-1.0
	comp=Z,1.8nm,0.3s,baz=319,slow=4.3,SNR=9.0						
URZ				S	Sn	03 22 42.7	-16
	comp=Z,0.5nm,0.3s,baz=321,slow=21,SNR=5.9						
PPT	Papeete	23.05	88	eLQ		03 24 04.6	
	comp=Z,2µm,25.0s						
PPT				eLR	LR	03 24 51.4	
	comp=Z,1µm,21.5s,baz=257						
PPT	Papeete	23.05	88	LR	LR	03 26 41.0	
	comp=Z,2µm,18.2s,MS4.5,baz=252,slow=31						
PMOR	Pomariorio Ree	25.20	82	eP	P	03 20 12.1	-1.3
	comp=Z,106nm,1.4s,mb5.2						
RPZ	Rata Peaks	26.67	205	P	P	03 20 26.3	-0.2
	comp=Z,10nm,0.8s,mb4.4,baz=312,slow=4.9,SNR=6.2						
HNR	Honiara	27.50	289	LR	LR	03 29 45.4	
	comp=Z,381nm,20.8s,MS4.0,baz=331,slow=33						
TAOE	Nuku Hiva Isla	34.38	76	eS	S	03 27 01.3	-0.5
	comp=Z,674nm,24.3s						
TAOE				eLR	LR	03 30 07.7	
	comp=Z,3µm,20.7s						
CNB	Canberra Magne	35.70	237	eP	P	03 21 46.2	+0.1
CAN	Canberra	35.99	237	eP	P	03 21 48.2	-0.4
RKT	Rikitea	36.13	102	eLR	LR	03 30 57.3	
	comp=Z,1µm,30.2s,baz=272						
CTA	Charters Tower	37.45	263	eP	P	03 22 00.6	-0.6
	comp=Z,19nm,0.5s,mb5.2						
CTA				eS	S	03 27 52.2	+3.4
CTA	Charters Tower	37.45	263	P	P	03 22 01.2	0.0
	comp=Z,21nm,0.5s,mb5.2,baz=87,slow=9.9,SNR=32						
CTA				LR	LR	03 35 11.5	
	comp=Z,476nm,19.1s,MS4.3,baz=89,slow=33						
CTA	Charters Tower	37.45	263	eP	P	03 22 00.6	-0.6
CTA				eS	S	03 27 52.2	+3.4
CTA				pmax	pmax		
	comp=Z,19nm,0.5s						
CTAO	Charters Tower	37.45	263	eP	P	03 22 00.8	-0.4
CTAO				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.2						
CTAO	Charters Tower	37.45	263	eP	P	03 22 00.8	-0.5
	comp=Z,22nm,0.6s,mb5.2						
PMG	Port Moresby	39.15	280	c iP	P	03 22 15.2	-0.4
PMG	Port Moresby	39.15	280	eP	P	03 22 14.8	-0.7
	comp=Z,38nm,0.9s,mb5.1						
TOO	Toolangi	39.29	235	eP	P	03 22 16.3	-0.2
TAU	Tasmania Unive	39.66	226	P	P	03 22 20.9	+1.4
	comp=Z,145nm,0.6s,mb5.9,SNR=5.5						
TAU	Tasmania Unive	39.66	226	eP	P	03 22 20.1	+0.6
TAU				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.9						
TAU	Tasmania Unive	39.66	226	eP	P	03 22 20.1	+0.6
	comp=Z,15nm,0.6s,mb4.9						
STKA	Stephens Creek	41.49	244	eP	P	03 22 34.2	-0.6
	comp=Z,12nm,0.6s,mb4.7						
STKA	Stephens Creek	41.49	244	P	P	03 22 34.5	-0.2
	comp=Z,15nm,0.7s,mb4.7,baz=91,slow=9.9,SNR=42						
STKA				LR	LR	03 38 07.1	
	comp=Z,805nm,18.9s,MS4.6,baz=50,slow=34						
COEN	Coen	41.52	272	eP	P	03 22 34.4	-0.7
	comp=Z,8.3nm,0.8s,mb4.4						
ASAR	Alice Springs	48.43	256	P	P	03 23 29.1	-1.1
	comp=Z,11nm,0.8s,mb5.0,baz=89,slow=8.3,SNR=82						
ASAR				PcP	PcP	03 24 57.1	+0.8
	comp=Z,3.4nm,0.7s,baz=94,slow=4.1,SNR=6.6						
ASAR				S	S	03 30 28.5	-1.5
	comp=Z,0.6nm,0.7s,baz=92,slow=15,SNR=4.5						
WB2	Warramunga Arr	48.55	261	eP	P	03 23 29.5	-1.5
WRAB	Tennant Creek	48.55	261	P	P	03 23 29.3	-1.8
	comp=Z,105nm,1.0s,mb5.8,SNR=6.5						
WRAB	Tennant Creek	48.55	261	c iP	P	03 23 29.2	-1.9
WRAB	Tennant Creek	48.55	261	eP	P	03 23 29.5	-1.5
	comp=Z,17nm,0.9s,mb5.1						
WRA	Warramunga Arr	48.56	261	P	P	03 23 29.4	-1.8
	comp=Z,6.8nm,0.6s,mb4.9,baz=94,slow=5.4,SNR=74						
WRA				PcP	PcP	03 24 57.4	+0.6
	comp=Z,3.2nm,0.7s,baz=94,slow=3.8,SNR=3.9						
WRA				S	S	03 30 31.2	-0.6
	comp=Z,0.8nm,0.9s,baz=99,slow=14,SNR=2.7						
KAKA	Kakadu	51.92	269	eP	P	03 23 55.6	-1.1
	comp=Z,13nm,0.5s,mb5.1						
FORT	Forrest	53.04	246	eP	P	03 24 04.0	-0.8
	comp=Z,28nm,0.6s,mb5.4						
FORT	Forrest	53.04	246	eP	P	03 24 03.8	-1.0
	comp=Z,5.4nm,0.7s,mb4.6						
FITZ	Fitzroy Crossi	56.98	261	eP	P	03 24 32.8	-0.7
FITZ	Fitzroy Crossi	56.98	261	P	P	03 24 33.3	-0.2
	comp=Z,3.4nm,0.5s,mb4.6,baz=144,slow=8.6,SNR=20						
SBA	Scott Base	58.48	185	eP	P	03 24 45.3	+2.2
SBA				pmax	pmax		
	comp=Z,161nm,2.1s,mb5.7						
SBA	Scott Base	58.48	185	eP	P	03 24 45.3	+2.2
	comp=Z,161nm,2.1s,mb5.7						
BATI	Baumata	60.88	269	P	P	03 25 01.8	+1.2
	comp=Z,52nm,0.7s,mb5.8,baz=232,slow=2.9,SNR=6.8						
KLBR	Kellerberrin	61.76	244	eP	P	03 25 06.5	+0.1
	comp=Z,26nm,0.7s,mb5.5						
MBWA	Marble Bar	61.77	256	eP	P	03 25 05.9	-0.7
	comp=Z,12nm,0.8s,mb5.1						
NWAO	Narrogin (SRO)	62.03	243	P	P	03 25 08.6	+0.5
	comp=Z,24nm,1.1s,mb5.2,baz=183,slow=5.4,SNR=7.4						
NWAO				LR	LR	03 53 19.2	
	comp=Z,691nm,18.3s,MS4.8,baz=255,slow=37						
MUN	Mundaring	63.02	244	eP	P	03 25 15.5	+0.8
CASY	Casey	65.94	205	eP	P	03 25 34.1	+0.9
KAPI	Kappang	66.20	273	P	P	03 25 34.9	-0.9
	comp=Z,11nm,1.0s,mb4.8,baz=68,slow=2.5,SNR=5.3						
MJAR	Matsushiro Arr	72.37	321	P	P	03 26 14.3	+0.8
	comp=Z,6.3nm,0.8s,mb4.6,baz=159,slow=5.6,SNR=16						
MJAR				LR	LR	03 53 00.3	
	comp=Z,232nm,20.7s,MS4.4,baz=165,slow=32						
MAJO	Matsushiro	72.37	321	eP	P	03 26 12.7	-0.8
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
MAJO	Matsushiro	72.37	321	eP	P	03 26 12.7	-0.8
	comp=Z,9.5nm,0.8s,mb4.8						
MAT	Matsushiro	72.37	321	P	P	03 26 14.7	+1.2
MAT				eS	S	03 35 30.0	-5.9
JOW	Kunigami	73.05	308	LR	LR	03 56 40.1	
	comp=Z,215nm,18.8s,MS4.5,baz=73,slow=34						
MURC	Murrieta	75.95	46	⇑P	P	03 26 34.7	+0.3
	baz=76						
VES	Vestal, Richgr	76.05	43	⇑P	P	03 26 35.1	+0.1
	baz=76						
EDW2	Edwards Air Fo	76.18	44	⇓P	P	03 26 35.9	+0.1
	baz=76						
ISA	Isabella	76.33	44	⇓P	P	03 26 35.4	-1.2
	baz=76						
T06C	Millerton Lake	76.37	42	⇑P	P	03 26 35.9	-0.9
	baz=76						
PFO	Pinyon Flat Ob	76.46	46	P	P	03 26 37.3	0.0
	comp=Z,4.3nm,0.9s,mb4.4,baz=237,slow=8.1,SNR=6.0						
CMB	Columbia Colle	76.59	41	⇑P	P	03 26 37.4	-0.6
	baz=77						
HELL	Mitchell Peak	76.60	42	⇑P	P	03 26 36.9	-1.2
	baz=77						
PET	Petropavlovsk	76.72	343	eP	P	03 26 44.5	+6.2
PET				eS	S	03 36 28.5	+4.7
PET				pmax	pmax		
	comp=Z,100nm,10.5s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.7						
LRMC	Laurel Mountai	76.73	44	⇑P	P	03 26 38.7	-0.2
	baz=77						
OHCM	Honcut	76.76	39	eP	P	03 26 39.4	+0.5
PETK	Petropavlovsk-	77.05	343	P	P	03 26 41.1	+0.9
	comp=Z,9.5nm,0.7s,mb4.8,baz=127,slow=7.6,SNR=20						
BC3	Big Chuckw Mtn	77.17	47	⇑P	P	03 26 41.7	+0.4
	baz=77,SNR=6.2						
MPMC	Manual Prospec	77.21	44	⇑P	P	03 26 40.6	-0.9
	baz=77,SNR=8.3						
HEC	Hector,Ludlow	77.25	45	⇑P	P	03 26 41.2	-0.6
	baz=77						
GLA	Glamis	77.25	48	eP	P	03 26 42.6	+0.7
GLA				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
GLA	Glamis	77.25	48	eP	P	03 26 42.6	+0.7
	comp=Z,30nm,1.5s,mb5.0						
KSM	Kuching	77.29	276	eP	P	03 26 43.6	+1.1
YBH	Yreka Blue Hor	77.62	37	P	P	03 26 43.6	-0.2
	comp=Z,2.7nm,0.7s,mb4.3,baz=71,slow=7.5,SNR=3.4						
S08C	White Mtn Res	77.64	42	⇓P	P	03 26 43.5	-0.5
	baz=78,SNR=12						
IRM	Iron Mountain	77.66	46	⇑P	P	03 26 44.7	+0.6
	baz=78,SNR=8.7						
GRAC	Grapevine Rang	77.85	43	⇑P	P	03 26 45.2	+0.1
	baz=78						
214A	Organ Pipe Nat	78.07	49	P	P	03 26 47.0	+0.5
	baz=78,SNR=6.9						
NVAR	Mina Array Bea	78.12	41	P	P	03 26 46.6	+0.1
	comp=Z,1.9nm,0.9s,mb4.0,baz=64,slow=4.4,SNR=4.1						
U10A	Ash Meadows, A	78.18	44	⇑P	P	03 26 47.2	+0.2
	baz=78						
LDFC	Landfair	78.21	46	eP	P	03 26 47.5	+0.4
	comp=Z,17nm,1.0s,mb4.9						
TPNV	Topopah Spring	78.54	44	eP	P	03 26 48.1	-0.8
TPNV				pmax	pmax		
	comp=Z,112nm,2.3s,mb5.4						
TPNV	Topopah Spring	78.54	44	eP	P	03 26 48.0	-0.9
	comp=Z,112nm,2.3s,mb5.4						
TPH	Tonopah	78.59	42	eP	P	03 26 49.2	0.0
TPH				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
TPH	Tonopah	78.59	42	eP	P	03 26 49.2	0.0
	comp=Z,11nm,0.9s,mb4.8						
Q08A	Gabbs	78.62	41	⇑P	P	03 26 49.0	-0.3
	baz=79						
Z14A	Wintersburg	78.74	48	⇑P	P	03 26 50.8	+0.7
	baz=79						
R09A	Tonopah	78.78	42	⇓P	P	03 26 49.6	-0.6
	baz=79,SNR=8.6						
X13A	Yucca	78.80	47	⇑P	P	03 26 50.7	+0.3
	baz=79						
O07A	Toulon	78.84	40	⇑P	P	03 26 50.2	-0.3
	baz=79,SNR=8.2						
S10A	Tonopah Range,	78.89	43	⇑P	P	03 26 50.3	-0.5
	baz=79,SNR=10						
Y14A	Wickenburg	79.01	48	⇑P	P	03 26 51.8	+0.2
	baz=79,SNR=6.5						
216A	Three Points,	79.06	50	⇑P	P	03 26 52.6	+0.7
	baz=79,SNR=5.4						
116A	Eloy	79.18	49	⇓P	P	03 26 53.0	+0.5
	baz=79						
R10A	Warm Springs	79.30	42	⇑P	P	03 26 52.9	-0.1
	baz=80,SNR=10						
KSRS	Korea Array	79.32	316	P	P	03 26 55.0	+1.8
	comp=Z,3.6nm,0.8s,mb4.3,baz=132,slow=6.0,SNR=14						
KSRS				LR	LR	04 00 22.4	
	comp=Z,180nm,18.2s,MS4.5,baz=143,slow=34						
O08A	Rochester Mine	79.36	40	⇑P	P	03 26 53.1	-0.2
	baz=80,SNR=6.1						
U12A	Valley of Fire	79.36	45	P	P	03 26 54.0	+0.5
	baz=80,SNR=6.6						
T11A	Corn Creek, Al	79.38	44	⇑P	P	03 26 53.1	-0.4
	baz=80,SNR=11						
X14A	Yava	79.38	47	⇑P	P	03 26 53.6	0.0
	baz=80,SNR=11						
217A	Green Valley	79.41	51	⇑P	P	03 26 54.2	+0.4
	baz=80,SNR=9.6						
V13A	Grand Canyon W	79.41	46	⇓P	P	03 26 53.6	-0.1
	baz=80						
J05A	Fort Rock	79.47	36	⇑P	P	03 26 53.5	-0.3
	baz=80						
Y15A	Casa Rosa Ranc	79.49	48	⇓P	P	03 26 54.4	+0.2
	baz=80,SNR=18						
QZH	Quanzhou	79.58	301	⇑iP	P	03 26 56.5	+1.6
QZH				AMB	AMB		
	comp=Z,740nm,2.8s,mb6.1						
W14A	Seligman	79.66	47	⇓P	P	03 26 55.5	+0.4
	baz=80,SNR=15						
L07A	Adell	79.73	38	⇑P	P	03 26 54.8	-0.5
	baz=80						
U13A	Pakoon Wash	79.73	45	⇓P	P	03 26 55.7	+0.2
	baz=80,SNR=5.5						
R11A	Troy Canyon, C	79.79	43	⇓P	P	03 26 55.5	-0.2
	baz=80,SNR=7.0						
X15A	Humboldt	79.84	48	⇑P	P	03 26 56.3	+0.2
	baz=80,SNR=15						
O09A	Fish Creek Ran	79.87	41	⇓P	P	03 26 55.7	-0.4
	baz=80						
V14A	Boquillas Ranc	79.88	46	P	P	03 26 56.7	+0.5
	baz=80,SNR=8.2						
117A	Oracle	79.88	50	⇓P	P	03 26 57.4	+1.0
	baz=80,SNR=8.3						
P10A	Eureka	79.98	41	⇓P	P	03 26 56.1	-0.7
	baz=80						
BMN	Battle Mountai	80.01	40	eP	P	03 26 57.6	+0.8
BMN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BMN	Battle Mountai	80.01	40	eP	P	03 26 57.6	+0.7
	comp=Z,3.8nm,0.8s,mb4.4						
Q11A	Duckwater	80.03	42	⇑P	P	03 26 57.4	+0.3
	baz=80,SNR=9.6						
Y16A	Circle Bar Ran	80.05	48	⇑P	P	03 26 57.5	+0.3
	baz=80,SNR=9.5						
U14A	Mt Trumbull	80.26	45	⇑P	P	03 26 58.6	+0.3
	baz=80						
319A	Douglas	80.32	52	⇓P	P	03 27 00.1	+1.3
	baz=80,SNR=6.8						
X16A	Lo Mia Camp, P	80.36	48	P	P	03 26 59.6	+0.8
	baz=80,SNR=9.7						
P11A	Circle Ranch,	80.39	42	⇓P	P	03 26 58.5	-0.4
	baz=80						
Y17A	Roosevelt	80.39	49	⇓P	P	03 26 59.8	+0.7
	baz=81,SNR=7.8						
WVOR	Wild Horse Val	80.40	38	eP	P	03 26 58.5	-0.4
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
WVOR	Wild Horse Val	80.40	38	eP	P	03 26 58.5	-0.4
	comp=Z,9.6nm,1.1s,mb4.6						
R12A	Pony Springs,	80.40	43	P	P	03 26 59.2	+0.2
	baz=81,SNR=7.3						
L08A	Fields	80.41	38	⇑P	P	03 26 58.1	-0.9
	baz=81,SNR=8.4						
S13A	Holt Ranch, En	80.46	44	⇓P	P	03 26 59.7	+0.3
	baz=81,SNR=5.1						
118A	Homack Ranch,	80.47	50	⇑P	P	03 27 00.4	+0.9
	baz=81,SNR=9.3						
SSE	Sheshan	80.56	308	P	P	03 26 59.1	-1.0
SSE				S	S	03 37 06.5	+0.6
SSE				XS	sS	03 37 12.0	-6.0
SSE				SS	SS	03 42 19.2	+0.1
SSE				AMB	AMB		
	comp=Z,19nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,204nm,6.1s						
SSE				LR	LR		
	comp=N,41nm,25.0s,MS4.0						
SSE				LR	LR		
	comp=E,79nm,25.0s,MS4.0						
SSE				LR	LR		
	comp=Z,117nm,25.0s,MS4.1						
219A	White Tail Can	80.65	51	⇑P	P	03 27 01.6	+1.1
	baz=81,SNR=6.7						
K08A	Mann Creek Ran	80.67	38	⇑P	P	03 26 59.8	-0.5
	baz=81,SNR=6.6						
Q12A	Willow Creek R	80.67	43	⇑P	P	03 27 00.5	+0.1
	baz=81						
T14A	Hurricane	80.68	45	⇓P	P	03 27 00.6	0.0
	baz=81						
U15A	North Rim	80.86	46	⇓P	P	03 27 02.6	+1.0
	baz=81						
P12A	McGill	80.87	42	⇓P	P	03 27 01.4	-0.1
	baz=81						
H06A	Lindquist Farm	80.90	35	⇓P	P	03 27 00.3	-1.2
	baz=81						
WUAZ	Wupatki	80.99	47	eP	P	03 27 04.0	+1.7
	comp=Z,57nm,1.9s,mb5.2						
Y18A	Canyon Day Jun	81.01	49	⇓P	P	03 27 03.1	+0.7
	baz=81,SNR=10.0						
K09A	Rome	81.09	38	⇑P	P	03 27 02.1	-0.5
	baz=81,SNR=9.2						
T15A	Red Dirt Ranch	81.13	45	⇑P	P	03 27 02.9	0.0
	baz=81,SNR=9.2						
Q13A	Wheeler Ranch,	81.14	43	⇑P	P	03 26 57.2	-5.8
	baz=81,SNR=7.1						
ELK	Elko	81.41	41	eP	P	03 27 04.8	+0.5
ELK				pmax	pmax		
	comp=Z,28nm,1.8s						
ELK	Elko	81.41	41	eP	P	03 27 04.8	+0.5
	comp=Z,28nm,1.8s,mb4.9						
P13A	Bates Ranch, G	81.43	43	⇓P	P	03 27 04.7	+0.2
	baz=82						
O12A	Currie	81.43	42	⇑P	P	03 27 04.4	-0.1
	baz=82						
L10A	Juniper Basin	81.45	39	P	P	03 27 04.2	-0.3
	baz=82,SNR=6.8						
U16A	Tuba City	81.50	47	⇑P	P	03 27 04.8	-0.1
	baz=82,SNR=7.4						
Q14A	Sevier Lake (B	81.63	43	⇑P	P	03 27 05.2	-0.4
	baz=82,SNR=6.9						
K10A	MacKenzie Ranc	81.64	39	⇑P	P	03 27 04.9	-0.6
	baz=82						
Y19A	Nutrioso	81.66	49	⇑P	P	03 27 06.9	+1.1
	baz=82,SNR=12						
X19A	St. Johns	81.88	49	⇓P	P	03 27 08.1	+1.1
	baz=82,SNR=10.0						
L11A	Cat Creek Ranc	81.93	40	⇑P	P	03 27 06.8	-0.2
	baz=82						
G08A	Pilot Rock	82.01	36	⇓P	P	03 27 06.9	-0.4
	baz=82						
MSU	Marysvale	82.08	44	eP	P	03 27 09.0	+1.0
V18A	Ganado	82.09	48	⇓P	P	03 27 08.6	+0.5
	baz=82,SNR=7.6						
P14A	Drum Mountains	82.11	43	⇓P	P	03 27 07.9	-0.1
	baz=82,SNR=9.4						
R16A	Teasdale	82.42	45	⇑P	P	03 27 09.6	-0.1
	baz=83						
U18A	Rough Rock, Ch	82.51	47	⇑P	P	03 27 10.4	+0.2
	baz=83,SNR=9.5						
MDJ	Mudanjiang	82.58	323	P	P	03 27 11.9	+1.5
MDJ				AP	pP	03 27 14.7	-3.0
MDJ				XP	sP	03 27 15.9	-4.5
MDJ				PP	PP	03 30 22.7	+2.3
MDJ				S	S	03 37 36.2	+10
MDJ				XS	sS	03 37 42.6	+4.3
MDJ				AMB	AMB		
	comp=Z,14nm,1.7s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,163nm,4.7s						
MDJ				LR	LR		
	comp=N,112nm,20.9s,MS4.4						
MDJ				LR	LR		
	comp=E,138nm,20.0s,MS4.4						
MDJ				LR	LR		
	comp=Z,231nm,21.1s,MS4.5						
DUG	Dugway	82.61	42	eP	P	03 27 11.0	+0.3
DUG				pmax	pmax		
	comp=Z,30nm,2.0s,mb5.0						
DUG	Dugway	82.61	42	eP	P	03 27 11.0	+0.3
	comp=Z,30nm,2.0s,mb5.0						
BMO	Blue Mountains	82.65	37	eP	P	03 27 10.1	-0.7
BMO				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.9						
BMO	Blue Mountains	82.65	37	eP	P	03 27 10.1	-0.6
	comp=Z,22nm,1.7s,mb4.9						
ETW	Entiat	82.76	33	eP	P	03 27 10.9	-0.4
NJ2	Nanjing	82.76	308	eP	P	03 27 10.6	-1.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
T18A	Mexican Hat	82.88	46	P	P	03 27 12.7	+0.5
	baz=83,SNR=42						
C07A	Waterville	82.95	33	⇑P	P	03 27 11.6	-0.7
	baz=83						
J12A	Stokes Ranch,	82.96	39	⇓P	P	03 27 12.3	-0.1
	baz=83,SNR=7.1						
L13A	Double Diamond	82.98	40	⇓P	P	03 27 12.7	+0.1
	baz=83						
R17A	Hanksville Air	83.00	45	⇓P	P	03 27 12.6	-0.1
	baz=83,SNR=18						
M14A	Sheep Mountain	83.01	41	⇓P	P	03 27 12.6	-0.1
	baz=83,SNR=12						
G10A	Bishop Farm, J	83.02	36	⇑P	P	03 27 12.3	-0.4
	baz=83						
S18A	Hurst Farm, Bl	83.09	46	⇑P	P	03 27 13.4	+0.2
	baz=83						
D08A	Wollman Farm,	83.14	34	⇓P	P	03 27 12.0	-1.3

baz=83
TMUT Trail Mountain 83.14 44 *e*P **P 03 27 14.6 +1.1**
MAW Mawson 83.17 199 *e*P **P 03 27 14.1 +0.9**
comp=Z,3.2nm,0.8s,mb4.4
MAW Mawson 83.17 199 P **P 03 27 14.1 +0.9**
comp=Z,3.3nm,0.8s,mb4.4,baz=109,slow=5.4,SNR=5.1
MAW LR LR 04 04 02.3
comp=Z,758nm,18.4s,MS5.1,baz=317,slow=36
MAW Mawson 83.17 199 *e*P **P 03 27 14.1 +0.9**
MAW pmax pmax
comp=Z,3.0nm,0.8s
H11A Donnelly 83.29 37 ⇑P **P 03 27 13.3 -0.8**
baz=83
T19A Beclabito 83.30 47 ⇑P **P 03 27 15.2 +0.8**
baz=84,SNR=12
F10A Beach Ranch, E 83.38 36 ⇓P **P 03 27 13.7 -0.9**
baz=84,SNR=9.7
LAZ Ladron 83.40 50 *e*P **P 03 27 16.0 +1.1**
LENM Lemitar 83.40 50 *e*P **P 03 27 15.7 +0.7**
SRU San Rafael 83.49 44 *e*P **P 03 27 15.4 +0.1**
SRU pmax pmax
comp=Z,24nm,1.2s,mb5.1
SRU San Rafael 83.49 44 ⇑P **P 03 27 15.1 -0.2**
baz=84,SNR=19
SRU San Rafael 83.49 44 *e*P **P 03 27 15.4 +0.1**
comp=Z,24nm,1.2s,mb5.1
R18A Canyonlands Na 83.53 45 ⇑P **P 03 27 15.2 -0.2**
baz=84,SNR=20
P17A Butcher Ranch, 83.55 44 ⇑P **P 03 27 15.5 0.0**
baz=84,SNR=8.3
M15A Larsen Ranch, 83.55 42 ⇓P **P 03 27 15.3 -0.2**
baz=84,SNR=9.9
HLID Hailey 83.55 39 ⇑P **P 03 27 15.3 -0.2**
baz=84,SNR=15
HLID Hailey 83.55 39 *e*P **P 03 27 15.7 +0.2**
comp=Z,9.6nm,0.9s,mb4.9
G11A Walters Elk Ra 83.57 37 ⇑P **P 03 27 14.5 -1.0**
baz=84,SNR=13
TXAR Lajitas Array 83.58 56 P **P 03 27 16.6 +0.6**
comp=Z,3.1nm,1.1s,mb4.4,baz=207,slow=7.9,SNR=17
TXAR LR LR 03 57 50.2
comp=Z,323nm,18.3s,MS4.7,baz=130,slow=31
J13A Cove Ranch, Pi 83.59 39 ⇑P **P 03 27 15.5 -0.2**
baz=84,SNR=7.7
BNM Barren Site 83.64 50 *e*P **P 03 27 17.3 +1.2**
S19A Harvey Farm, M 83.70 46 ⇑P **P 03 27 16.4 0.0**
baz=84,SNR=18
JLU Jordanelle 83.70 43 *e*P **P 03 27 16.3 0.0**
LPM Los Pinos Moun 83.72 50 *e*P **P 03 27 17.4 +0.9**
DAU Daniels Canyon 83.72 43 *e*P **P 03 27 16.9 +0.5**
Q18A Rafter H Ranch 83.75 45 ⇑P **P 03 27 16.1 -0.4**
baz=84,SNR=22
MVCO Mesa Verde 83.86 47 *e*P **P 03 27 16.9 -0.2**
comp=Z,34nm,1.6s,mb5.2
H12A Diamond D Ranc 83.87 38 ⇓P **P 03 27 16.4 -0.7**
baz=84,SNR=9.2
L15A Malad City 83.89 41 ⇓P **P 03 27 16.6 -0.6**
baz=84
R19A Curley Farm, L 83.90 46 ⇓P **P 03 27 17.6 +0.2**
baz=84,SNR=8.9
F11A Grangeville 83.92 36 ⇓P **P 03 27 15.9 -1.4**
baz=84
O17A Robinson Place 83.94 43 ⇓P **P 03 27 17.4 -0.1**
baz=84,SNR=29
J14A Carey 83.94 40 ⇓P **P 03 27 17.6 +0.1**
baz=84,SNR=23
P18A Preston Nutter 83.95 44 ⇓P **P 03 27 17.7 +0.1**
baz=84,SNR=9.6
M16A Huntsville 83.98 42 ⇓P **P 03 27 17.4 -0.3**
baz=84
D10A Wagner Farm, O 84.02 35 ⇓P **P 03 27 16.1 -1.7**
baz=84
PV10 Paradox Valley 84.09 46 *e*P **P 03 27 18.2 -0.2**
ANMO Albuquerque 84.15 50 *d i*P **P 03 27 20.1 +1.3**
ANMO Albuquerque 84.15 50 *e*P **P 03 27 19.8 +1.0**
comp=Z,40nm,1.6s,mb5.3
A08A Turner Farm, O 84.17 33 ⇓P **P 03 27 17.5 -1.0**
baz=84
HWUT Hardware Ranch 84.18 42 *e*P **P 03 27 17.6 -1.1**
comp=Z,9.8nm,1.0s,mb4.9
H13A Challis 84.22 38 ⇓P **P 03 27 18.2 -0.6**
baz=84,SNR=8.4
Q19A Hogan Spring (84.24 45 ⇓P **P 03 27 19.2 +0.1**
baz=84,SNR=17
PV01 Paradox Valley 84.28 46 *e*P **P 03 27 19.4 +0.1**
F12A Elk City 84.35 37 P **P 03 27 18.8 -0.7**
baz=84,SNR=17
QIZ Qiongzhong 84.36 293 P **P 03 27 19.1 -1.0**
QIZ AP pP 03 27 22.4 -5.1
QIZ XP sP 03 27 23.4 -6.7
QIZ S S 03 37 44.4 -0.8
QIZ SS SS 03 43 16.3 +0.4
QIZ AMB AMB
comp=Z,183nm,6.9s
QIZ LR LR
comp=Z,153nm,18.5s,MS4.4
L16A Fish Haven 84.48 42 ⇑P **P 03 27 19.7 -0.6**
baz=85,SNR=13
CN2 Changchun 84.51 321 *e*P **P 03 27 21.7 +1.4**
CN2 AMB AMB
comp=Z,20nm,1.0s,mb5.2
J15A Blackfoot 84.64 40 ⇓P **P 03 27 20.9 -0.1**
baz=85,SNR=14
H14A Leadore 84.77 39 ⇓P **P 03 27 21.2 -0.4**
baz=85,SNR=9.0
P19A Cripple Cowboy 84.78 45 ⇓P **P 03 27 21.6 -0.2**
baz=85,SNR=11
K16A Soda Springs 84.84 41 ⇓P **P 03 27 21.9 -0.2**
baz=85,SNR=11
NEW Newport 84.85 34 *e*P **P 03 27 21.2 -0.7**
NEW pmax pmax
comp=Z,2.0nm,0.7s
NEW Newport 84.85 34 *e*P **P 03 27 21.2 -0.7**
comp=Z,2.3nm,0.7s,mb4.4
F13A Darby 84.89 37 ⇓P **P 03 27 21.2 -1.0**
baz=85
O19A Miners Draw (B 85.04 44 ⇓P **P 03 27 23.0 -0.1**
baz=85,SNR=8.3
N18A Larsen Ranch, 85.04 43 ⇓P **P 03 27 22.2 -0.8**
baz=85,SNR=9.6
C11A Tepee Creek (N 85.05 35 ⇑P **P 03 27 22.2 -0.8**
baz=85
J16A Bone 85.07 40 ⇓P **P 03 27 22.8 -0.3**
baz=85,SNR=6.5
D12A Red Ives Fores 85.07 36 ⇑P **P 03 27 21.8 -1.3**
baz=85
RRI2 Red Ridge 85.28 40 *e*P **P 03 27 25.5 +1.2**
comp=Z,29nm,1.5s,mb5.2
N19A John Jarvie Ra 85.31 43 ⇑P **P 03 27 24.1 -0.3**
baz=86
I16A Newdale 85.47 40 ⇓P **P 03 27 25.3 +0.1**
baz=86,SNR=8.3
REDW Red Top Meadow 85.58 41 *e*P **P 03 27 26.4 +0.6**
comp=Z,88nm,2.1s,mb5.6
TPAW Teton Pass 85.59 41 *e*P **P 03 27 25.9 +0.2**
comp=Z,6.9nm,1.0s,mb4.8
G15A Dillon 85.60 38 ⇓P **P 03 27 25.2 -0.5**
baz=86,SNR=15
SNOW Snow King Moun 85.69 41 *e*P **P 03 27 26.1 -0.2**
comp=Z,13nm,1.0s,mb5.1
IMW Indian Meadow 85.82 40 *e*P **P 03 27 27.1 +0.3**
comp=Z,13nm,1.3s,mb5.0
MCK McKinley 85.86 11 *e*P **P 03 27 25.8 -0.8**
MCK pmax pmax
comp=Z,19nm,1.0s,mb5.3
MCK McKinley 85.86 11 *e*P **P 03 27 25.8 -0.9**
comp=Z,19nm,1.0s,mb5.3
LOHW Long Hollow 85.87 41 *e*P **P 03 27 27.3 +0.1**
comp=Z,34nm,1.9s,mb5.3
QLMT Earthquake Lak 86.03 39 *e*P **P 03 27 28.4 +0.4**
BW06 Boulder Array 86.06 42 *e*P **P 03 27 27.3 -0.8**
comp=Z,43nm,2.0s,mb5.3
PDAR Pinedale Array 86.06 42 P **P 03 27 27.4 -0.8**
comp=Z,3.4nm,0.9s,mb4.6,baz=204,slow=3.3,SNR=14
PDAR LR LR 04 02 54.1
comp=Z,297nm,18.3s,MS4.7,baz=257,slow=34
PDAR Pinedale Array 86.06 42 P **P 03 27 27.4 -0.8**
PDAR LR LR 04 02 54.1
H16A Russell Place, 86.07 39 ⇓P **P 03 27 28.2 0.0**
baz=86,SNR=9.5
SDCO Great Sand Dun 86.19 48 *e*P **P 03 27 29.9 +1.0**
comp=Z,28nm,1.9s,mb5.2
BOZ Bozeman (W) 86.37 38 *e*P **P 03 27 29.9 +0.3**
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
BOZ Bozeman (W) 86.37 38 *e*P **P 03 27 29.9 +0.3**
comp=Z,4.8nm,0.8s,mb4.8

PLCA Paso Flores 86.59 132 LR LR 04 00 41.1
comp=Z,498nm,18.1s,MS5.0,baz=208,slow=32
SEY Seymchan 87.02 345 *c i*P **P 03 27 32.9 +0.6**
COLA College 87.10 11 ⇑*i*P **P 03 27 32.0 -0.7**
COLA College 87.10 11 *e*P **P 03 27 31.7 -1.0**
comp=Z,11nm,0.8s,mb5.1
AMTX Amarillo 87.59 52 *e*P **P 03 27 36.0 +0.2**
comp=Z,9.2nm,0.9s,mb5.0
SYO Syowa Base 87.87 191 ⇑*e*P **P 03 27 35.7 -0.9**
SYO Syowa Base 87.87 191 ⇑*e*PcP PcP 03 27 38.1 -0.3
DAWY Dawson 88.12 14 *e*P **P 03 27 37.9 +0.3**
VNA3 Neumayer Olymp 88.16 175 *e*P **P 03 27 37.3 -0.6**
VNA3 *e* 03 27 40.0
VNA3 *e* 03 27 53.5
SNAA Sanae 88.18 177 *e*P **P 03 27 38.1 +0.1**
SNAA *e* 03 27 39.9
SNAA *e* 03 27 52.3
SNAA Sanae 88.18 177 *e*P **P 03 27 37.7 -0.3**
SNAA pmax pmax
comp=Z,6.0nm,1.1s
SNAA Sanae 88.18 177 *e*P **P 03 27 37.7 -0.3**
comp=Z,5.5nm,1.1s,mb4.7
EGAK Eagle 88.33 13 *e*P **P 03 27 39.0 +0.4**
comp=Z,8.9nm,1.0s,mb5.0
BJI Beijing 88.48 314 P **P 03 27 41.2 +1.3**
BJI PP PP 03 31 05.9 -2.5
BJI S S 03 38 25.6 +1.1
BJI SS SS 03 44 15.6 -0.1
BJI AMB AMB
comp=Z,18nm,1.8s,mb5.0
BJI LR LR
comp=N,156nm,21.8s,MS4.6
BJI LR LR
comp=E,165nm,20.6s,MS4.6
BJI LR LR
comp=Z,79nm,19.1s,MS4.2
VNA2 Neumayer--Watz 88.64 176 *e*P **P 03 27 39.7 -0.5**
VNA2 *e* 03 27 42.2
VNA2 *e* 03 27 56.0
VNA1 Neumayer--Stat 88.85 175 *e*P **P 03 27 42.2 +1.0**
VNA1 *e* 03 27 44.4
BILL Bilibino 89.17 353 *i*P **P 03 27 43.1 +0.6**
BILL pmax pmax
comp=Z,23nm,1.3s,mb5.3
EDM Edmonton 89.73 32 *e*P **P 03 27 45.7 +0.3**
GYA Guiyang 89.95 298 P **P 03 27 50.9 +3.8**
GYA AP pP 03 27 55.0 +0.5
GYA XP sP 03 27 57.7 +0.6
GYA PP PP 03 31 22.4 +1.9
GYA SKS 03 38 20.0
GYA S S 03 38 45.7 +6.8
GYA PS PS 03 39 47.2 -0.5
GYA SS SS 03 44 38.6 +1.0
GYA AMB AMB
comp=Z,30nm,0.8s,mb5.7
GYA AMB AMB
comp=Z,100nm,6.0s
GYA LR LR
comp=N,510nm,20.1s,MS5.1
GYA LR LR
comp=E,460nm,21.7s,MS5.1
GYA LR LR
comp=Z,490nm,20.2s,MS4.9
HKT Hockley 90.01 58 *e*P **P 03 27 48.2 +0.9**
HKT pmax pmax
comp=Z,8.0nm,1.4s,mb4.9
HKT Hockley 90.01 58 *e*P **P 03 27 48.2 +0.8**
comp=Z,8.1nm,1.4s,mb4.9
RSSD Black Hills 90.22 43 *e*P **P 03 27 47.3 -0.6**
RSSD pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
RSSD Black Hills 90.22 43 *e*P **P 03 27 47.3 -0.7**
comp=Z,7.1nm,1.1s,mb4.9
HIA Hailar 90.77 323 *e*P **P 03 27 48.9 -1.5**
XAN Xi'an 91.11 306 P **P 03 27 51.2 -1.2**
XAN AP pP 03 27 56.3 -3.5
XAN PP PP 03 31 25.9 -3.6
XAN SKS 03 38 21.0
XAN S S 03 38 45.0 -4.3
XAN SS SS 03 44 52.8 -1.3
XAN AMB AMB
comp=Z,3.0nm,1.2s,mb4.5
XAN AMB AMB
comp=Z,98nm,6.4s
XAN LR LR
comp=N,38nm,15.6s
XAN LR LR
comp=E,91nm,22.0s
XAN LR LR
comp=Z,109nm,19.1s,MS4.3
HHC Hu-ho-hao-te 91.99 313 *e*P **P 03 27 52.2 -4.1**
HHC PP PP 03 31 34.8 -1.5
HHC SKS 03 38 23.1
HHC S S 03 38 50.8 -6.1
HHC AMB AMB
comp=Z,12nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,111nm,6.8s
HHC LR LR
comp=N,134nm,17.0s,MS4.8
HHC LR LR
comp=E,251nm,17.6s,MS4.8
HHC LR LR
comp=Z,165nm,17.4s,MS4.5
JTS JuntasAbangare 92.41 80 *e*P **P 03 27 59.8 +1.0**
JTS pmax pmax
comp=Z,8.0nm,0.8s
JTS JuntasAbangare 92.41 80 *e*P **P 03 27 59.8 +1.0**
comp=Z,8.2nm,0.8s,mb5.1
KMI Kunming 92.75 296 P **P 03 27 59.8 -0.4**
KMI AP pP 03 28 03.6 -3.9
KMI XP sP 03 28 05.3 -4.9
KMI PP PP 03 31 44.4 +1.8
KMI PPP 03 33 46.5
KMI S S 03 39 03.6 -0.8
KMI XS sS 03 39 11.4 -5.2
KMI PS PS 03 40 16.9 -1.9
KMI SS SS 03 45 18.4 +0.4
KMI SSS 03 48 57.1
KMI AMB AMB
comp=Z,7.0nm,0.8s,mb5.1
KMI AMB AMB
comp=Z,109nm,3.1s
KMI LR LR
comp=N,111nm,17.1s,MS4.7
KMI LR LR
comp=E,194nm,20.1s,MS4.7
KMI LR LR
comp=Z,176nm,20.1s,MS4.5
YAK Yakutsk 93.34 337 *e*P **P 03 28 02.3 +0.4**
CMAR Chiang Mai Arr 93.75 288 P **P 03 28 06.5 +1.6**
comp=Z,4.2nm,0.9s,mb4.9,baz=113,slow=3.1,SNR=13
CMAR LR LR 04 09 34.7
comp=Z,81nm,19.1s,MS4.2,baz=275,slow=35
CHTO Chiang Mai 93.87 289 *e*P **P 03 28 07.9 +2.5**
CHTO pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
CHTO Chiang Mai 93.87 289 *e*P **P 03 28 07.9 +2.5**
comp=Z,6.8nm,1.0s,mb5.0
CD2 Chengdu 93.97 301 P **P 03 28 06.2 +0.5**
CD2 AP pP 03 28 10.9 -2.1
CD2 XP sP 03 28 13.9 -1.8
CD2 PP PP 03 31 55.1 +3.0
CD2 S S 03 39 13.2 -1.7
CD2 XS sS 03 39 22.2 -5.0
CD2 PS PS 03 40 34.2 +2.1
CD2 SS SS 03 45 36.8 +1.5
CD2 AMB AMB
comp=Z,30nm,0.8s,mb5.8
CD2 AMB AMB
comp=Z,120nm,7.2s
CD2 LR LR
comp=N,360nm,14.4s,MS5.0
CD2 LR LR
comp=E,330nm,18.0s,MS5.0
CD2 LR LR
comp=Z,200nm,24.0s
YKA Yellowknife Ar 94.61 24 P **P 03 28 05.9 -1.9**
comp=Z,0.6nm,0.8s,mb4.1,baz=201,slow=4.6,SNR=4.6
YKA LR LR 04 05 21.4
comp=Z,96nm,18.9s,MS4.3,baz=205,slow=32
YKA Yellowknife Ar 94.61 24 P **P 03 28 05.9 -1.9**
YKA LR LR 04 05 21.4
ECSD EROS,Sioux Fal 94.88 45 *e*P **P 03 28 08.7 -0.8**
comp=Z,41nm,1.6s,mb5.6

LZH Lanzhou 95.74 306 *e*P **P 03 28 15.9 +2.3**
LZH AP pP 03 28 19.0 -2.0
LZH XP sP 03 28 21.0 -2.6
LZH PP PP 03 32 10.0 +4.3
LZH *e*S S 03 39 28.5 -1.6
LZH XS sS 03 39 38.0 -4.4
LZH SS SS 03 46 03.0 +2.7
LZH AMB AMB
comp=Z,29nm,1.6s,mb5.5
LZH AMB AMB
comp=Z,150nm,7.2s
LZH LR LR
comp=N,543nm,17.5s
LZH LR LR
comp=Z,831nm,18.6s,MS5.2
ULN Ulaanbaatar 97.73 318 *e*P **P 03 28 23.2 +0.8**
ULM Lac du Bonnet 97.85 39 LR LR 04 07 58.2
comp=Z,472nm,18.9s,MS5.0,baz=235,slow=33
SONM Songino Array 98.14 318 P **P 03 28 25.2 +1.1**
comp=Z,0.8nm,0.7s,mb4.3,baz=90,slow=4.3,SNR=2.8
SONM LR LR 04 10 30.4
comp=Z,150nm,19.9s,MS4.5,baz=121,slow=34
LPAZ La Paz 98.50 111 P **P 03 28 26.2 -0.4**
comp=Z,0.7nm,0.8s,mb4.2,baz=284,slow=8.3,SNR=2.6
LPAZ LR LR 04 05 36.4
comp=Z,240nm,18.0s,MS4.7,baz=287,slow=31
TIXI Tiksi 99.48 344 *e*P **P 03 28 30.4 +0.8**
TIXI pmax pmax
comp=Z,12nm,1.3s,mb5.3
WMQ Urumqi 109.71 310 *e*PKP PKiKP 03 33 19.0 +0.6
WMQ *e*PP PP 03 33 57.0 +6.7
WMQ PKS 03 36 54.0
WMQ PP PP
comp=Z,95nm,6.2s
WMQ LR LR
comp=N,172nm,22.8s,MS4.7
WMQ LR LR
comp=E,114nm,20.4s,MS4.7
WMQ LR LR
comp=Z,156nm,23.6s,MS4.5
ZALV Zalesovo Beam 112.72 321 PKiKP PKiKP 03 33 23.2 -0.6
comp=Z,0.6nm,0.3s,baz=207,slow=1.7,SNR=4.7
ZALV Zalesovo Beam 112.72 321 PKPdf PKiKP 03 33 23.2 -0.6
ZAL Zalesovo 112.73 321 PKiKP PKiKP 03 33 23.2 -0.6
MK31 Makanchi Array 113.86 313 *e*PKiKP PKiKP 03 33 25.6 -0.6
MKAR Makanchi Array 113.86 313 PKiKP PKiKP 03 33 25.6 -0.5
comp=Z,2.0nm,0.7s,baz=59,slow=3.1,SNR=7.7
TKM2 Tokmak 2 118.40 309 *e*PKiKP PKPdf 03 33 34.5 -0.5
UCH Uchtor 119.18 308 *e*PKPdf PKPdf 03 33 37.4 +0.8
EKS2 Erkin-Say 119.73 308 *e*PKPdf PKPdf 03 33 37.9 +0.3
BRVK Borovoye 121.42 320 *e*PKiKP PKPdf 03 33 39.9 -0.6
ARU Arti 127.15 327 PKiKP PKPdf 03 33 51.5 +0.1
ARU Arti 127.15 327 *e*PKPdf PKPdf 03 33 51.6 +0.2
BOSA Boshof 128.12 201 PKP PKPdf 03 33 55.2 +1.0
comp=Z,2.0nm,0.9s,baz=180,slow=3.0,SNR=2.9
BOSA Boshof 128.12 201 PKP PKPdf 03 33 55.2 +1.0
ARCES ARCESS Array B 129.26 351 PKP PKPdf 03 33 54.7 -0.4
comp=Z,1.8nm,0.7s,baz=5.7,slow=1.2,SNR=12
LSZ Lusaka 138.67 213 PKP PKPdf 03 34 14.5 +0.2
comp=Z,2.1nm,0.8s,baz=135,slow=7.1,SNR=5.0
KIV Kislovodsk 141.51 316 *i*PKiKP PKPdf 03 34 20.4 +1.8
KMBO Kilima Mbogo 142.94 239 PKP PKPdf 03 34 21.2 -0.9
comp=Z,3.1nm,0.8s,baz=210,slow=8.1,SNR=3.7
EAB Aberfoyle 143.19 10 *e*P PKPdf 03 34 19.1 -2.1
EDI Edinburgh 143.62 9 *e*P PKPdf 03 34 20.3 -1.6
EBL Broad Law 143.79 9 *e*P PKPdf 03 34 19.9 -2.4
SUW Suwalki 143.81 343 *e*PKP PKPdf 03 34 22.4 +0.1
SUW Suwalki 143.81 343 *e*PKP PKPdf 03 34 22.4 0.0
ESK Eskdalemuir 144.21 9 *e*P PKPdf 03 34 20.6 -2.4
ESK Eskdalemuir 144.21 9 *e*PKPdf PKPdf 03 34 22.8 -0.2
ANN Anapa 144.36 321 *i*PKiKP PKPdf 03 34 21.3 -2.3
ANN pmax pmax
comp=Z,62nm,1.0s
GAL1 Galloway 144.39 11 *e*P PKPdf 03 34 21.3 -2.0
AKASG Malin Array Be 144.54 335 PKP PKPdf 03 34 22.1 -1.6
comp=Z,12nm,0.7s,baz=39,slow=4.4,SNR=30
AKBB Malin Array Si 144.54 335 *e*PKiKP PKPdf 03 34 21.6 -2.1
XAL Allendale 144.79 8 *e*P PKPdf 03 34 22.3 -1.8
DMUB Kingscourt 144.87 13 *e*P PKPdf 03 34 23.0 -1.2
DCN Croghan 145.30 14 *e*P PKPdf 03 34 24.5 -0.2
DLF Lyons Farm 145.51 14 *e*P PKPdf 03 34 25.2 -0.1
DSB Dublin 145.59 13 *e*PKPbc PKPbc 03 34 25.3 -0.4
HPK Haverah Park 145.75 8 *e*P PKPdf 03 34 25.9 +0.2
GKP Gorka Klasztor 145.89 348 *e*PKP PKPdf 03 34 26.9 +1.0
GKP Gorka Klasztor 145.89 348 *e*PKP PKPdf 03 34 26.9 +0.9
WAR Warsaw 145.98 344 *e*PKP PKPab 03 34 29.5 +2.1
WAR Warsaw 145.98 344 *e*PKP PKPab 03 34 29.5 +2.1
LHO Holmfirth 146.12 9 *e*P PKPdf 03 34 26.8 +0.4
BSEG Bad Segeberg 146.16 356 *e*PKPbc PKPbc 03 34 27.5 +0.1
KBI1 Birley Grange 146.45 8 *e*P PKPdf 03 34 28.6 +1.7
KWE Weaver Farm 146.64 9 *e*P PKPdf 03 34 28.6 +1.4
MALT Malatya 146.82 310 ⇓*i*P PKPbc 03 34 31.4 +1.6
MALT Malatya 146.82 310 *e*PKPbc PKPbc 03 34 30.7 +0.9
CWF Charnwood Fore 146.98 8 *e*P PKPdf 03 34 28.8 +1.0
LVV L'vov 147.20 339 *i*PKP2 PKPbc 03 34 29.9 -0.6
HTR Trewern Hill 147.31 11 *e*P PKPdf 03 34 28.0 -0.4
MCH1 Michaelchurch 147.44 11 *e*P PKPdf 03 34 28.1 -0.5
KIS Kishinev 147.52 331 *e*PKP2 PKPbc 03 34 31.0 -0.5
KIS MLR MLR
comp=Z,400nm,22.0s,MS5.2
KIS MLR MLR
comp=Z,400nm,22.0s
NRDL Niedersach Rie 147.61 356 *e*PKPbc PKPbc 03 34 31.3 -0.3
KWP Kalwaria 147.80 340 *e*PKP PKPbc 03 34 33.9 +1.8
KWP Kalwaria 147.80 340 ⇓*i*P PKPbc 03 34 33.8 +1.6
KWP Kalwaria 147.80 340 *e*PKP PKPbc 03 34 33.9 +1.7
HGH Gray Hill 147.82 11 *e*P PKPbc 03 34 32.0 -0.2
IBBN Ibbenburen 147.91 358 *e*PKPbc PKPbc 03 34 33.7 +1.3
OJC Ojcow 148.14 343 *e*PKP2 PKPbc 03 34 33.5 +0.4
CLZ Clausthal 148.23 355 *e*PKPbc PKPbc 03 34 33.7 +0.4
WTSB Winterswijk 148.27 359 *e*PKiKP PKiKP 03 34 35.3 +0.2
KSP Ksiaz 148.38 348 *e*PKP PKPbc 03 34 32.5 -1.2
KSP Ksiaz 148.38 348 *e*PKP PKPbc 03 34 34.3 +0.6
WOL Wolverton 148.39 9 *e*P PKPbc 03 34 33.4 -0.3
STHS Stebnicka Huta 148.45 341 *e*PKP2 PKPbc 03 34 34.5 +0.6
STHS Stebnicka Huta 148.45 341 *e*PKP PKPbc 03 34 34.5 +0.6
STHS Stebnicka Huta 148.45 341 *e*PKP PKPbc 03 34 34.5 +0.6
CLL Collm 148.48 352 *i*PKP2 PKPbc 03 34 34.1 +0.2
CLL pmax pmax
comp=Z,9.0nm,1.0s
CLL pmax pmax
comp=Z,147nm,2.1s
CLL MLR MLR
comp=Z,200nm,18.8s,MS4.9
CLL Collm 148.48 352 *e*PKPbc PKPbc 03 34 34.1 +0.2
CLL Collm 148.48 352 *i*PKPbc PKPbc 03 34 34.1 +0.2
comp=Z,9.0nm,1.0s
CLL *i*PKiKP PKiKP 03 34 35.3 -0.2
comp=Z,147nm,2.1s
CLL *e*SSS 04 03 00.0
CLL Lm 04 46 00.0
comp=Z,200nm,18.8s
CLL Collm 148.48 352 *i*PKP PKPbc 03 34 34.1 +0.2
CLL *i*PKP PKPab 03 34 35.3 -1.9
CLL LR LR
comp=Z,200nm,18.8s,MS4.9
KOLS Kolonicke sedl 148.55 340 *e*PKP PKPbc 03 34 34.2 0.0
BUR08 Bucovina Ar. S 148.57 335 *e*PKPbc PKPbc 03 34 35.6 +1.3
BURAR Bucovina Array 148.59 335 ⇑*i*P PKPab 03 34 36.8 -1.0
BURAR Bucovina Array 148.59 335 ⇑P PKPab 03 34 36.8 -1.0
UPC Upice 148.76 348 *e*PKPbc PKPbc 03 34 34.3 -0.4
BRG Berggiesshubel 148.77 351 *e*PKPbc PKPbc 03 34 35.1 +0.4
BRG Berggiesshubel 148.77 351 *e*PKP PKPbc 03 34 35.2 +0.5
comp=Z,4.5nm,1.0s
BRG *i* 03 34 38.4
comp=Z,22nm,1.0s
UZH Uzhgorod 148.80 339 ⇓*i*PKP2 PKPbc 03 34 35.5 +0.7
CRVS Cervenica-Dubn 148.84 340 *e*PKP PKPbc 03 34 36.2 +1.3
TLCR 148.84 328 ⇓*i*P PKPbc 03 34 35.8 +0.7
TLCR 148.84 328 ⇓P PKPbc 03 34 35.8 +0.7
DPC Dobruska-Polom 148.84 347 *e*PKPbc PKPbc 03 34 34.0 -0.9
OKC Ostrava-Krasne 148.92 345 *e*PKPbc PKPbc 03 34 35.4 +0.3
PVCC Panska Ves 149.00 350 *e*PKPbc PKPbc 03 34 34.1 -1.2
MORC Moravsky Berou 149.12 346 ⇑*i*P PKPbc 03 34 36.2 +0.6
MORC Moravsky Berou 149.12 346 *e*PKPdf PKPdf 03 34 31.4 0.0
MORC *e*PKPbc PKPbc 03 34 36.1 +0.5
UBBA Unterbreizbach 149.28 355 *e*PKPbc PKPbc 03 34 36.7 +0.7
MOX Moxa 149.30 353 *e*PKP PKPbc 03 34 34.5 -1.5
MOX *e* 03 34 38.4
MOX
comp=Z,200nm,20.0s
MOX Moxa 149.30 353 *e*PKPbc PKPbc 03 34 36.1 +0.1
VRI Vrincioaia 149.32 331 ⇑*i*P PKPbc 03 34 37.2 +0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	**Plostina**	**149.37**	**331**	PKP2	PKPbc	03 34 38.6	+2.2
UCC	**Uccle**	**149.41**	**2**	PKPbc	PKPbc	03 34 37.6	+1.3
TANN	**Tannenbergstha**	**149.43**	**352**	*e*PKPbc	PKPbc	03 34 36.6	+0.2
BEBN	**Eben Emael**	**149.44**	**1**	PKPbc	PKPbc	03 34 37.1	+0.7
HGN	**Heimansgroeve**	**149.48**	**0**	*e*PKiKP	PKiKP	03 34 36.4	-1.2
	comp=Z,36nm,2.2s						
KECS	**Kecovo**	**149.51**	**341**	*e*PKP	PKPbc	03 34 38.3	+1.7
KECS				*e*		03 34 51.3	
KECS	**Kecovo**	**149.51**	**341**	*e*PKP	PKPbc	03 34 38.3	+1.7
KECS				*e*		03 34 51.3	
MENF	**Mencas**	**149.52**	**5**	PKP	PKPbc	03 34 38.1	+1.5
PRU	**Pruhonice**	**149.53**	**349**	*e*PKPdf	PKPdf	03 34 32.8	+0.7
PRU				*e*PKPbc	PKPbc	03 34 37.3	+0.7
PRU				AMS	AMS	04 48 10.0	
	comp=Z,200nm,19.1s						
NKC	**Novy Kostel**	**149.61**	**352**	*e*PKPbc	PKPbc	03 34 36.8	0.0
HARR	**Harsova**	**149.63**	**329**	⇑*i*P	PKPbc	03 34 38.4	+1.3
HARR	**Harsova**	**149.63**	**329**	P	PKPbc	03 34 38.2	+1.2
MEM	**Membach**	**149.64**	**0**	PKPbc	PKPbc	03 34 39.1	+2.2
VRAC	**Vranov**	**149.77**	**346**	⇓*i*P	PKPab	03 34 41.9	-0.7
VRAC	**Vranov**	**149.77**	**346**	⇓P	PKPab	03 34 41.9	-0.7
BCLA	**Clavier**	**149.82**	**1**	PKPbc	PKPbc	03 34 39.0	+1.7
MANZ	**Manzenberg**	**149.89**	**352**	*e*PKPbc	PKPbc	03 34 38.3	+0.8
ANTO	**Ankara**	**149.94**	**317**	⇓*i*P	PKPbc	03 34 39.0	+1.0
ANTO	**Ankara**	**149.94**	**317**	*e*PKPbc	PKPbc	03 34 38.5	+0.6
MLR	**Muntele Rosu**	**149.96**	**332**	⇑*i*P	PKPbc	03 34 37.8	0.0
MLR	**Muntele Rosu**	**149.96**	**332**	P	PKPbc	03 34 37.7	-0.2
TNS	**Taunus Mts**	**149.97**	**357**	*e*PKPbc	PKPbc	03 34 38.5	+0.8
VYHS	**Vyhne**	**149.97**	**343**	*e*PKP	PKPbc	03 34 37.2	-0.6
KOLL	**Kolacno**	**150.01**	**344**	*e*PKP	PKPbc	03 34 38.5	+0.6
KOLL	**Kolacno**	**150.01**	**344**	*e*PKP	PKPbc	03 34 38.5	+0.6
TREC	**Trest**	**150.02**	**348**	*e*PKPbc	PKPbc	03 34 39.2	+1.4
ROTZ	**Rotzenmuhle**	**150.09**	**352**	*e*PKPbc	PKPbc	03 34 38.5	+0.5
DOU	**Dourbes**	**150.12**	**2**	PKPbc	PKPbc	03 34 38.3	+0.2
GIVF	**Givet**	**150.12**	**2**	*e*PKP1	PKPbc	03 34 38.2	+0.1
	comp=Z,58nm,1.0s						
BAIF	**Baives**	**150.14**	**3**	*e*PKP1	PKPbc	03 34 38.4	+0.3
	comp=Z,51nm,1.1s						
PSZ	**Piszkesteto**	**150.19**	**341**	*e*pPKP	pPKPdf	03 34 39.7	-1.1
PSZ	**Piszkesteto**	**150.19**	**341**	⇓*i*P	PKPab	03 34 43.0	-1.3
PSZ	**Piszkesteto**	**150.19**	**341**	*e*PKPbc	PKPbc	03 34 39.0	+0.7
DRGR		**150.23**	**337**	⇓*i*P	PKPbc	03 34 38.8	+0.4
GRA1	**Grafenberg Arr**	**150.28**	**353**	*e*PKPbc	PKPbc	03 34 39.9	+1.4
GRF	**Grafenberg Arr**	**150.28**	**353**	*e*PKPbc	PKPbc	03 34 39.9	+1.4
VOIR		**150.40**	**333**	⇓*i*P	PKPbc	03 34 40.6	+1.7
VOIR		**150.40**	**333**	P	PKPbc	03 34 40.3	+1.4
MODS	**Modra-Piesok**	**150.49**	**345**	*e*PKP	PKPbc	03 34 38.2	-0.8
MODS	**Modra-Piesok**	**150.49**	**345**	*e*PKP	PKPbc	03 34 38.2	-0.8
KHC	**Kasperske Hory**	**150.52**	**350**	*e*PKPdf	PKPdf	03 34 34.6	+0.9
KHC				*e*PKPbc	PKPbc	03 34 39.3	+0.3
KHC				AMS	AMS	04 48 30.0	
	comp=Z,200nm,22.1s						
RUP	**Ruppelstein**	**150.54**	**359**	PKP	PKPbc	03 34 40.8	+1.7
TOD	**Tromm**	**150.57**	**357**	PKP	PKPbc	03 34 40.8	+1.7
WLF	**Walferdange**	**150.58**	**0**	PKPbc	PKPbc	03 34 39.6	+0.5
WLF	**Walferdange**	**150.58**	**0**	*e*PKPbc	PKPbc	03 34 40.7	+1.5
WLF	**Walferdange**	**150.58**	**0**	*e*PKPbc	PKPbc	03 34 40.2	+1.0
WET	**Wettzell**	**150.61**	**351**	*e*PKPbc	PKPbc	03 34 40.0	+0.7
ZST	**Bratislava**	**150.70**	**345**	*e*PKP	PKPbc	03 34 41.0	+1.5
ZST	**Bratislava**	**150.70**	**345**	*e*PKP	PKPbc	03 34 41.0	+1.5
GEC2	**GERESS Array S**	**150.77**	**350**	*e*PKPbc	PKPbc	03 34 40.5	+0.8
GERES	**GERESS Array B**	**150.77**	**350**	PKP	PKPdf	03 34 34.2	+0.1
	comp=Z,0.7nm,0.8s,baz=336,slow=2.2,SNR=2.9						
GERES				PKPbc	PKPbc	03 34 41.4	+1.7
	comp=Z,4.4nm,0.9s,baz=5.2,slow=1.5,SNR=15						
ROSF	**Rostrenen**	**150.88**	**13**	*e*PKP1	PKPbc	03 34 39.2	-0.7
FLN	**La Foliniere**	**150.98**	**9**	*e*PKP1	PKPbc	03 34 39.8	-0.3
	comp=Z,44nm,0.9s						
FLN				*e*MLR	MLR		
	comp=Z,196nm,20.2s,MS4.6						
FLN	**La Foliniere**	**150.98**	**9**	*e*PKP	PKPbc	03 34 39.8	-0.3
FLN				LR	LR		
	comp=Z,200nm,20.3s,MS4.9						
SGMF	**Saint Gilles**	**151.11**	**12**	*e*PKP1	PKPbc	03 34 40.0	-0.5
	comp=Z,44nm,1.2s						
LDF	**La Druitiere**	**151.20**	**9**	*e*PKP1	PKPbc	03 34 40.2	-0.5
	comp=Z,39nm,0.9s						
CONA	**Conrad Observa**	**151.24**	**346**	⇑*i*P	PKPbc	03 34 38.4	-2.4
	comp=Z,21nm,1.7s						
CSNA	**Conrad Observa**	**151.24**	**346**	⇑*i*P	PKPbc	03 34 38.2	-2.6
	comp=Z,19nm,1.7s						
LANF	**Langenberg**	**151.24**	**358**	PKP	PKPbc	03 34 43.1	+2.4
GRR	**Gorron**	**151.29**	**10**	*e*PKP1	PKPbc	03 34 40.5	-0.4
	comp=Z,36nm,0.8s						
QUIF	**Quistinic**	**151.31**	**13**	*e*PKP1	PKPbc	03 34 40.8	-0.1
GZR	**Gura Zlata**	**151.37**	**335**	⇑*i*P	PKPbc	03 34 41.4	+0.2
GZR	**Gura Zlata**	**151.37**	**335**	⇑P	PKPbc	03 34 41.4	+0.2
STU	**Stuttgart**	**151.37**	**356**	*e*PKPbc	PKPbc	03 34 42.1	+1.0
BZS	**Buzias**	**151.63**	**337**	⇑*i*P	PKPbc	03 34 42.4	+0.6
BZS	**Buzias**	**151.63**	**337**	P	PKPbc	03 34 42.3	+0.5
MEZF	**Maizieres J'vi**	**151.73**	**2**	*e*PKP1	PKPbc	03 34 42.2	+0.3
	comp=Z,35nm,0.9s						
CDF	**Champ du Feu**	**151.82**	**358**	*e*PKP1	PKPbc	03 34 42.3	+0.2
	comp=Z,20nm,0.8s						
BFO	**Black Forest**	**151.87**	**357**	*e*PKPbc	PKPbc	03 34 42.1	-0.1
RJOB	**Jochberg**	**152.00**	**351**	*e*PKPbc	PKPbc	03 34 43.7	+1.2
THEF	**They Montfort**	**152.02**	**0**	PKP	PKPbc	03 34 44.7	+2.1
ECH	**Echery**	**152.02**	**359**	PKP	PKPbc	03 34 44.7	+2.1
SPAK	**Spaichingen-Ko**	**152.07**	**356**	PKP	PKPbc	03 34 44.3	+1.6
PKSM	**Moragy**	**152.10**	**341**	⇑*i*P	PKPdf	03 34 37.1	+0.9
PKSM	**Moragy**	**152.10**	**341**	⇑P	PKPdf	03 34 37.1	+0.9
HAU	**Haudompre**	**152.24**	**360**	*e*PKP1	PKPbc	03 34 43.0	-0.1
	comp=Z,19nm,0.8s						
HAU				*e*MLR	MLR		
	comp=Z,208nm,19.8s,MS4.6						
HAU	**Haudompre**	**152.24**	**360**	*e*PKP	PKPbc	03 34 43.0	-0.1
HAU				LR	LR		
	comp=Z,210nm,19.8s,MS5.0						
FELD	**Feldberg im Sc**	**152.33**	**357**	PKP	PKPbc	03 34 45.0	+1.7
EIL	**Elat**	**152.34**	**296**	PKPbc	PKPbc	03 34 44.4	+0.5
	comp=Z,7.9nm,0.9s,baz=118,slow=1.9,SNR=5.2						
MOF	**Molkenrain**	**152.39**	**359**	PKP	PKPbc	03 34 45.4	+2.0
HINF	**Hinteralfeld**	**152.43**	**359**	*e*PKP1	PKPbc	03 34 43.3	-0.2
	comp=Z,9.6nm,0.8s						
PERS	**Pernice**	**152.62**	**347**	*i* PKPdf	PKPbc	03 34 44.7	+0.8
BBS	**Basel-Blauen**	**152.76**	**358**	PKP	PKPbc	03 34 46.0	+1.8
HYF	**Humbligny**	**152.82**	**5**	*e*PKP1	PKPbc	03 34 44.5	+0.1
LOR	**Lormes**	**152.91**	**4**	*e*PKP1	PKPbc	03 34 44.6	0.0
	comp=Z,18nm,1.1s						
LOR				*e*MLR	MLR		
	comp=Z,344nm,19.0s,MS4.9						
LOR	**Lormes**	**152.91**	**4**	*e*PKP	PKPbc	03 34 44.6	0.0
LOR				LR	LR		
	comp=Z,340nm,19.0s,MS5.2						
SSF	**Saint Saulge**	**153.10**	**4**	*e*PKP1	PKPbc	03 34 45.1	+0.1
	comp=Z,19nm,0.8s						
MFF	**Saint Martin d**	**153.14**	**10**	*e*PKP1	PKPbc	03 34 44.6	-0.5
	comp=Z,16nm,1.1s						
DAVOX	**Davos/Dischmat**	**153.30**	**354**	PKPbc	PKPbc	03 34 45.5	0.0
	comp=Z,3.7nm,0.9s,baz=13,slow=5.4,SNR=4.0						
AVF	**Avril sur Loir**	**153.35**	**4**	*e*PKP1	PKPbc	03 34 45.1	-0.5
	comp=Z,9.1nm,0.8s						
VTS	**Vitosha**	**153.46**	**331**	⇓*i*P	PKPbc	03 34 45.9	0.0
VTS	**Vitosha**	**153.46**	**331**	⇓P	PKPbc	03 34 45.9	0.0
VISS	**Visnje**	**153.47**	**346**	*i* PKPdf	PKPbc	03 34 46.0	+0.1
SMF	**Signal de Mont**	**153.53**	**4**	*e*PKP1	PKPbc	03 34 45.8	-0.2
	comp=Z,8.3nm,0.8s						
BGF	**Bois d'Agland**	**153.55**	**5**	*e*PKP1	PKPbc	03 34 45.8	-0.2
	comp=Z,19nm,0.8s						
JAVS	**Javornik**	**153.55**	**348**	*i* PKPdf	PKPbc	03 34 49.9	+3.9
CABF	**La Chapelle**	**153.64**	**0**	*e*PKP1	PKPbc	03 34 46.7	+0.5
BOJS	**Bojanci**	**153.66**	**346**	*i* PKPdf	PKPbc	03 34 47.0	+0.7
TCF	**Toulx Ste Croi**	**153.75**	**6**	*e*PKP1	PKPbc	03 34 46.0	-0.5
	comp=Z,6.5nm,0.8s						
LFF	**La Frestale**	**154.90**	**9**	*e*PKP1	PKPbc	03 34 49.2	+0.3
CAF	**Calviac**	**155.08**	**7**	*e*PKP1	PKPdf	03 34 49.2	+8.7
BNI	**Bardonecchia**	**155.19**	**359**	*e*PKP2	PKPab	03 35 06.1	+0.7
ORIF	**Oris-en-Rattie**	**155.33**	**1**	*e*PKP1	PKPdf	03 34 49.0	+8.2
ORIF				*e*MLR	MLR		
	comp=Z,201nm,20.0s,MS4.6						
MBDF	**Montbardon**	**155.52**	**359**	*e*PKP1	PKPdf	03 34 49.1	+8.0
	comp=Z,13nm,1.0s						
MDT	**Midelt**	**164.13**	**35**	PKP	PKPdf	03 34 52.0	+0.8
	comp=Z,1.7nm,0.8s,baz=305,slow=4.7,SNR=5.0						
MDT				PKPab	PKPab	03 35 43.4	-1.3
	comp=Z,2.2nm,0.9s,baz=339,slow=5.2,SNR=4.7						
TORD	**Torodi Ar. Bea**	**171.78**	**148**	PKP	PKPdf	03 34 55.5	-1.4
	comp=Z,0.9nm,0.8s,baz=297,slow=1.7,SNR=5.2						
TORD				PKPab	PKPab	03 36 19.8	+1.0
	comp=Z,0.8nm,0.9s,baz=230,slow=2.4,SNR=2.8						

IDC 08 03:35:56.3±10.0**, 2421S**×**6672W, h174**km±83km**, mb2.9**/1**, mb1 3.0**/3**, mb1mx2.9**/16**, mbtmp2.9**/3**, Error ellipse: s-maj=112.8km s-min=40.2km az=3.0, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.99**	**350**	P	Pn	03 37 50.0	+0.5
	0.2nm,0.3s,baz=172,slow=12,SNR=6.7						
BDFB	**Brasilia**	**19.52**	**68**	P	P	03 40 11.2	+0.7
	0.3nm,0.3s,baz=204,slow=7.0,SNR=4.2						
TORD	**Torodi Ar. Bea**	**76.40**	**69**	P	P	03 47 26.4	-0.4
	0.7nm,1.1s,baz=256,slow=6.2,SNR=7.1						
WRA	**Warramunga Arr**	**131.56**	**207**	PKP	PKPdf	03 54 48.6	-0.3
	0.5nm,0.9s,baz=169,slow=1.8,SNR=5.3						
MKAR	**Makanchi Array**	**146.52**	**40**	PKPbc	PKPbc	03 55 16.6	-0.2
	0.5nm,0.5s,baz=20,slow=2.1,SNR=3.2						

IDC 08 03:41:58.6±2.4**, 673S**×**12982E, h0**km**, mb3.6**/1**, mb1 3.7**/4**, mb1mx3.5**/15**, mbtmp3.5**/4**, ML3.6**/3**, Error ellipse: s-maj=90.5km s-min=30.0km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.02**	**199**	Pn	Pn	03 44 50.7	-0.6
	0.3nm,0.3s,baz=24,slow=14,SNR=12						
FITZ				Sn	Sn	03 46 50.4	-16
	0.2nm,0.3s,baz=145,slow=16,SNR=4.3						
WRA	**Warramunga Arr**	**13.85**	**162**	Pn	Pn	03 45 15.9	-0.4
	0.4nm,0.3s,baz=346,slow=13,SNR=12						
WRA				Sn	Sn	03 47 38.2	-13
	0.5nm,0.3s,baz=333,slow=22,SNR=8.6						
ASAR	**Alice Springs**	**17.29**	**167**	P	Pn	03 46 02.5	+1.0
	0.1nm,0.3s,baz=345,slow=9.5,SNR=7.6						
ASAR				S	Sn	03 49 02.8	-12
	0.1nm,0.3s,baz=319,slow=14,SNR=4.0						
MKAR	**Makanchi Array**	**67.90**	**327**	P	P	03 52 59.1	+0.1
	0.3nm,0.4s,baz=133,slow=6.3,SNR=3.2						

*ISCJB **08** 03:46:18.3±0.6, 1066N±005×6282W±003, h107km±6km, Error ellipse: s-maj=8.5km s-min=4.2km az=169.8*
*FUNV **08** 03:46:18.8, 1072N×6271W, h108km, MW3.4*
*NEIC **08** 03:46:20.4, 1069N×6280W, h93km, MD3.9(TRN), After TRN.*
*TRN **08** 03:46:20.4, 1069N×6280W, h93km, MD3.9*
ISC 08 03:46:19.0±0.6**, 1067N**±005×**6281W**±003**, h104**km±6km**, n22,** σ**0**^{s}**80**/38**, 4C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.42**	**271**	*e*P	**Pn**	**03 46 34.8**	**+0.1**
CRUV				*e*S	**Sn**	**03 46 46.6**	**+0.2**
GUNV	**Guanoco**	**0.52**	**194**	⇑*i*P	**Pn**	**03 46 36.1**	**+0.8**
GUNV				*e*S	**Sn**	**03 46 48.9**	**+1.3**
GUIV	**Guiria**	**0.58**	**92**	⇑*e*P	**Pn**	**03 46 35.4**	**-0.4**
GUIV				*e*S	**Sn**	**03 46 47.2**	**-1.2**
ITEV	**Isla Los Testi**	**0.75**	**335**	⇓*i*P	**Pn**	**03 46 37.1**	**-0.2**
ITEV				*e*S	**Sn**	**03 46 50.4**	**-0.6**
TCE	**Chacachacare**	**1.04**	**88**	*e*P	**Pn**	**03 46 41.1**	**+1.0**
TCE				*e*S	**Sn**	**03 46 55.5**	**-0.7**
TPP	**Pointe-a-Pierr**	**1.38**	**104**	*e*P	**Pn**	**03 46 44.6**	**+0.5**
TPP				*e*S	**Sn**	**03 47 03.4**	**+0.4**
TPP	**Pointe-a-Pierr**	**1.38**	**104**	*e*P	**Pn**	**03 46 44.6**	**+0.5**
TPP				*e*S	**Sn**	**03 47 03.4**	**+0.4**
TRN	**Trinidad (W)**	**1.39**	**91**	*e*P	**Pn**	**03 46 44.4**	**+0.3**
TRN				*e*S	**Sn**	**03 47 02.3**	**-0.9**
ORIV	**Oritupano**	**1.69**	**200**	⇑*i*P	**Pn**	**03 46 48.6**	**+0.8**
TBH	**Brigand Hill**	**1.73**	**96**	*e*P	**Pn**	**03 46 49.0**	**+0.7**
TBH				*e*S	**Sn**	**03 47 10.5**	**-0.1**
PCRV	**Puerto La Cruz**	**1.86**	**255**	⇑*e*P	**Pn**	**03 46 50.5**	**+0.5**
PCRV				*e*S	**Sn**	**03 47 13.5**	**0.0**
GRW	**Mount Saint Ca**	**1.87**	**37**	*e*P	**Pn**	**03 46 50.5**	**+0.5**
GRW				*e*S	**Sn**	**03 47 13.4**	**-0.3**
TPR	**Prospect**	**2.06**	**75**	*e*P	**Pn**	**03 46 53.5**	**+1.0**
TPR				*e*S	**Sn**	**03 47 17.3**	**-0.9**
IBAV	**Isla La Blanqu**	**2.08**	**304**	⇓*e*P	**Pn**	**03 46 52.7**	**-0.1**
BOT	**Bacolet**	**2.12**	**76**	*e*P	**Pn**	**03 46 54.8**	**+1.5**
BOT				*e*S	**Sn**	**03 47 18.9**	**-0.5**
PRGV	**PARIAGUAN**	**2.62**	**224**	*e*P	**Pn**	**03 46 59.9**	**+0.1**
CUPV	**Cœpira**	**2.99**	**259**	*e*P	**Pn**	**03 47 05.2**	**+0.5**
CUPV				*e*S	**Sn**	**03 47 39.6**	**-0.4**
BIRV	**Birongo**	**3.40**	**267**	*e*P	**Pn**	**03 47 10.9**	**+0.7**
MERV	**Las Mercedes**	**3.71**	**248**	*e*P	**Pn**	**03 47 14.3**	**0.0**
CAOV	**Caicara del Or**	**4.80**	**227**	*e*P	**Pn**	**03 47 28.3**	**-0.8**
CAOV				*e*S	**Sn**	**03 48 20.2**	**-3.3**
LUEV	**Luepa**	**4.97**	**164**	*e*P	**Pn**	**03 47 29.8**	**-1.7**
BAUV	**El Baul**	**5.43**	**252**	*e*P	**Pn**	**03 47 36.9**	**-0.7**
BAUV				*e*S	**Sn**	**03 48 35.4**	**-3.5**

*NIED **08** 04:05:00, 2490N×12490E, h5km, Mw3.8 Best double couple: Mo5.64000×10^14 NP1:φs103.00000°, δ56.00000°, λ-112.00000°. NP2:φs319.00000°, δ40.00000°, λ-60.00000°.*
*IDC **08** 04:05:17.3±1.0, 2498N×12486E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/22, mbtmp3.8/7, ML3.5/1, Error ellipse: s-maj=28.1km s-min=20.0km az=65.0*
*JMA **08** 04:05:18.9±0.1, 2495N×12487E, h14km±2km, M4.1*
JMA Felt I J1.
*ISCJB **08** 04:05:19.1±0.7, 2493N±007×12490E±004, h20km±7km, mb3.7/6, Error ellipse: s-maj=12.3km s-min=3.5km az=157.3*
*NEIC **08** 04:05:22.8±1.0, 2498N×12490E, h38km±10km, MG4.1(JMA), Error ellipse: s-maj=13.8km s-min=9.9km az=166.0*
NEIC Recorded [1 JMA] on Miyako-jima.
ISC 08 04:05:18.8±0.9**, 2495N**±007×**12487E**±004**, h10**km±7km**, n22,** σ**0**^{s}**66**/33**, mb3.7**/6**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.35**	**206**	P	**Pg**	**04 05 25.7**	**+0.1**
JTJ				S	**Sg**	**04 05 31.0**	**+0.7**
JMJ	**Miyako jima 2**	**0.41**	**110**	P	**Pg**	**04 05 26.8**	**-0.1**
JMJ				S	**Sg**	**04 05 32.6**	**+0.2**
JOGS	**Gusukube**	**0.53**	**111**	P	**Pg**	**04 05 29.1**	**0.0**
JOGS				S	**Sg**	**04 05 36.2**	**+0.2**
JIJ	**Ishigaki jima**	**0.88**	**228**	P	**Pg**	**04 05 35.2**	**-0.6**
JIJ				S	**Sg**	**04 05 46.4**	**-0.9**
JKRS	**Kuro-shima**	**1.06**	**228**	P	**Pg**	**04 05 38.6**	**-0.5**
JKRS				*e*S	**Sg**	**04 05 52.7**	**-0.2**
IRIF	**Iriomote-Funau**	**1.20**	**239**	P	**Pn**	**04 05 41.1**	**-0.6**
IRIF				*e*S	**Sb**	**04 05 56.9**	**-0.4**
HATJ	**Hateruma jima**	**1.32**	**227**	P	**Pn**	**04 05 43.0**	**-0.3**
HATJ				*e*S	**Sb**	**04 06 00.5**	**-0.1**
YOJ	**Yonaguni jima**	**1.76**	**254**	P	**Pn**	**04 05 49.0**	**-0.3**
YOJ				*e*S	**Sn**	**04 06 11.5**	**-0.3**
JKE	**Kume jima 2**	**2.21**	**51**	P	**Pn**	**04 05 55.2**	**-0.3**
JKE				*e*S	**Sn**	**04 06 22.2**	**-0.7**
JAGN	**Aguni-jima**	**2.69**	**52**	P	**Pn**	**04 06 02.1**	**-0.1**
JAGN				*e*S	**Sn**	**04 06 34.6**	**-0.2**
TATO	**Taipei**	**3.07**	**271**	*e*Pn	**Pn**	**04 06 10.2**	**+2.8**
NACB	**Ninganchiao**	**3.08**	**256**	*e*Pn	**Pn**	**04 06 08.4**	**+0.9**
YHNB	**Yeheng**	**3.18**	**266**	*e*Pn	**Pn**	**04 06 11.0**	**+2.1**
JOW	**Kunigami**	**3.59**	**58**	Pn	**Pn**	**04 06 15.3**	**+0.7**
	7.0nm,0.3s,baz=122,slow=20,SNR=23						
JOW				Sn	**Sn**	**04 06 56.8**	**-0.4**
	14nm,0.3s,baz=126,slow=23,SNR=4.1						
JOW	**Kunigami**	**3.59**	**58**	P	**Pn**	**04 06 15.2**	**+0.6**
MKAR	**Makanchi Array**	**40.17**	**314**	P	**P**	**04 12 55.4**	**+0.3**
	0.4nm,0.4s,mb3.5,baz=93,slow=10,SNR=3.1						
ZALV	**Zalesovo Beam**	**41.48**	**325**	P	**P**	**04 13 05.4**	**-0.5**
	0.5nm,0.3s,mb3.6,baz=125,slow=9.0,SNR=2.8						
KURK	**Kurchatov**	**43.70**	**318**	P	**P**	**04 13 23.4**	**-0.5**
	0.4nm,0.2s,mb3.7,baz=113,slow=7.0,SNR=2.5						
WRA	**Warramunga Arr**	**45.57**	**167**	P	**P**	**04 13 39.1**	**0.0**
	1.5nm,0.8s,mb4.0,baz=349,slow=8.2,SNR=6.8						
ASAR	**Alice Springs**	**49.12**	**169**	P	**P**	**04 14 07.0**	**+0.4**
	0.3nm,0.7s,mb3.4,baz=356,slow=14,SNR=3.7						
YKA	**Yellowknife Ar**	**80.94**	**24**	P	**P**	**04 17 33.5**	**+0.3**
	1.4nm,0.9s,mb3.9,baz=301,slow=5.9,SNR=4.7						
YKA	**Yellowknife Ar**	**80.94**	**24**	P	**P**	**04 17 33.5**	**+0.3**

JMA 08 04:26:46.0±0.2**, 4392N**×**14803E, h0**km**, M4.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.75**	**252**	P	Pn	04 27 18.2	+0.6
NEM2				*e*S	Sn	04 27 40.9	+0.3
JRA	**Rausu**	**2.10**	**271**	P	Pn	04 27 23.2	+0.8
JRA				*e*S	Sn	04 27 50.9	+1.7
JNK	**Nakash**	**2.42**	**263**	P	Pn	04 27 27.4	+0.6
JNK				*e*S	Sn	04 27 57.7	+0.6
JAK	**Akkeshi**	**2.60**	**250**	P	Pn	04 27 30.3	+1.1
JAK				*e*S	Sn	04 28 02.2	+0.8
JTKR	**Abashiri--Toko**	**2.98**	**272**	P	Pn	04 27 36.4	+2.0
JAR	**Ashorobuto**	**3.16**	**260**	P	Pn	04 27 38.6	+1.7
JAR				*e*S	Sn	04 28 17.3	+2.1
JCH	**Churui**	**3.65**	**251**	P	Pn	04 27 45.4	+1.7
JCH				*e*S	Sn	04 28 28.1	+0.7
JNBK	**Urakawa-nobuka**	**4.20**	**249**	P	Pn	04 27 53.1	+1.9
JKB	**Kayabe**	**5.53**	**251**	P	Pn	04 28 11.6	+2.1
JKB				*e*S	Sn	04 29 14.1	+0.4

*TIR **08** 04:50:25.5±2.9, 4130N×1950E, h28km±22km, ML2.8*
*ISCJB **08** 04:50:27.1±0.4, 4138N±002×1953E±002, h10km, Error ellipse: s-maj=3.3km s-min=2.3km az=33.1*
*SKO **08** 04:50:27.9, 4140N×1948E, h7km*
*THE **08** 04:50:27.6, 4158N×1962E, h0km, ML3.7*
*CSEM **08** 04:50:28.5±0.1, 4148N×1966E, h16km, ML3.7, Error ellipse: s-maj=2.1km s-min=1.3km az=38.0*
*ROM **08** 04:50:28.5±0.8, 4148N×1946E, h10km, Md2.9/9, Ml3.0/6, Error ellipse: s-maj=16.1km s-min=3.1km az=52.0*
*PDG **08** 04:50:29.0±0.3, 4146N×1956E, h7km, ML2.9/9, Error ellipse: s-maj=1.1km s-min=1.5km az=0.0*
ISC 08 04:50:27.5±0.5**, 4137N**±002×**1950E**±003**, h0**km±4km**, n51,** σ**1**^{s}**19**/84**, 6C-4D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.28**	**94**	*e*Pg	**Pg**	**04 50 33.2**	**+0.5**
TIR				*e*Sg	**Sg**	**04 50 38.2**	**+1.9**
TIR	**Tirane**	**0.28**	**94**	*e*PG	**Pg**	**04 50 33.6**	**+0.8**
TIR				*i* SG	**Sg**	**04 50 38.4**	**+2.0**
QSH	**Qafa e Shtames**	**0.34**	**63**	*e*PG	**Pg**	**04 50 34.5**	**+0.5**
ULC	**Ulcinj**	**0.62**	**343**	⇑*i*Pg	**Pg**	**04 50 39.8**	**+0.4**
ULC				*e*Sg	**Sg**	**04 50 48.2**	**+0.7**
ULC	**Ulcinj**	**0.62**	**343**	*i* PG	**Pg**	**04 50 39.8**	**+0.4**
ULC				*i* SG	**Sg**	**04 50 48.1**	**+0.6**
PUK	**Puka**	**0.74**	**24**	*e*PG	**Pg**	**04 50 40.3**	**-1.3**
PUK				*i* SG	**Sg**	**04 50 51.5**	**+0.3**
PHP	**Peshkopia**	**0.78**	**66**	*e*PG	**Pg**	**04 50 41.2**	**-1.1**
PHP				*i* SG	**Sg**	**04 50 52.5**	**+0.1**
OHR	**Ohrid**	**1.01**	**104**	*e*Pg	**Pg**	**04 50 46.3**	**-0.6**
OHR				*e*Sg	**Sg**	**04 51 01.0**	**+0.9**
OHR	**Ohrid**	**1.01**	**104**	*e*Pg	**Pg**	**04 50 46.3**	**-0.6**
OHR				*i* Sg	**Sg**	**04 51 01.4**	**+1.4**
BUM	**Brajici-Budva**	**1.03**	**335**	⇓*i*Pg	**Pg**	**04 50 47.5**	**+0.2**
BUM				*e*Sg	**Sg**	**04 51 02.7**	**+2.0**
BUM	**Brajici-Budva**	**1.03**	**335**	*i* PG	**Pg**	**04 50 47.5**	**+0.2**
BUM				*i* SG	**Sg**	**04 51 02.7**	**+2.0**
PDG	**Podgorica**	**1.08**	**351**	*e*Pg	**Pg**	**04 50 47.0**	**-1.1**
PDG				*e*Sg	**Sg**	**04 51 03.2**	**+1.1**
TTG	**Podgorica**	**1.08**	**351**	*e*Pg	**Pg**	**04 50 47.0**	**-1.1**
TTG				*e*Sg	**Sg**	**04 51 03.2**	**+1.1**
BCI	**Bajram Curri**	**1.09**	**23**	*e*PG	**Pg**	**04 50 46.2**	**-2.1**
PVY	**Plav**	**1.28**	**16**	⇓*i*Pg	**Pg**	**04 50 49.8**	**-2.2**
PVY				*e*Sg	**Sg**	**04 51 09.4**	**+0.9**
PVY	**Plav**	**1.28**	**16**	*i* PG	**Pg**	**04 50 52.1**	**+0.1**
PVY				*i* SG	**Sg**	**04 51 11.9**	**+3.4**
HCY	**Herceg Novi**	**1.31**	**326**	⇑*i*Pg	**Pg**	**04 50 52.1**	**-0.5**
HCY				*e*Sg	**Sg**	**04 51 11.9**	**+2.3**
HCY	**Herceg Novi**	**1.31**	**326**	*i* PG	**Pg**	**04 50 49.8**	**-2.8**
HCY				*i* SG	**Sg**	**04 51 09.4**	**-0.2**
BIA	**Bitola**	**1.42**	**104**	*e*Pg	**Pg**	**04 50 52.9**	**-1.8**
BIA				*e*Sg	**Sg**	**04 51 13.7**	**+0.6**
BIA	**Bitola**	**1.42**	**104**	*e*Pg	**Pg**	**04 50 53.8**	**-0.9**
BIA				*e*Sg	**Sg**	**04 51 13.6**	**+0.5**
BIA	**Bitola**	**1.42**	**104**	*e*Pg	**Pg**	**04 50 53.7**	**-1.0**
BIA				*e*Sg	**Sg**	**04 51 13.7**	**+0.6**
NKY	**Niksic**	**1.49**	**346**	⇑*i*Pg	**Pg**	**04 50 55.3**	**-0.8**
NKY				*e*Sg	**Sg**	**04 51 17.0**	**+1.6**
NKY	**Niksic**	**1.49**	**346**	*i* PG	**Pg**	**04 50 55.3**	**-0.8**
NKY				*i* SG	**Sg**	**04 51 17.0**	**+1.6**
BEY	**Berane**	**1.53**	**11**	⇑*i*Pg	**Pg**	**04 50 55.3**	**-1.6**
IVA	**Berane**	**1.53**	**11**	⇑*i*Pg	**Pg**	**04 50 55.3**	**-1.6**
IVA				*e*Sg	**Sg**	**04 51 18.1**	**+1.4**
FNA	**Florina**	**1.54**	**112**	*e*Pg	**Pg**	**04 50 56.3**	**-0.5**
FNA				*e*Sg	**Sg**	**04 51 17.2**	**+0.4**
SKO	**Skopje**	**1.58**	**67**	*e*Pg	**Pg**	**04 50 54.9**	**-2.8**
SKO	**Skopje**	**1.58**	**67**	*e*Pg	**Pg**	**04 50 56.7**	**-1.0**
SKO				*e*Sg	**Sg**	**04 51 17.8**	**-0.3**
SKO	**Skopje**	**1.58**	**67**	*e*Pg	**Pg**	**04 50 54.9**	**-2.8**
SKO				*e*Sg	**Sg**	**04 51 17.7**	**-0.4**
TREB	**Trebinje**	**1.60**	**328**	*e*Pn	**Pn**	**04 50 54.7**	**-2.2**
TREB				*e*Sn	**Sn**	**04 51 17.4**	**-0.8**
PE1	**Pezze di Greco**	**1.67**	**251**	*e*Pn	**Pn**	**04 50 57.1**	**-0.7**
KEK	**Kerkira**	**1.67**	**172**	Pn	**Pn**	**04 50 59.6**	**+1.7**
KEK				Sn	**Sn**	**04 51 23.3**	**+3.4**
	86nm,0.4s						
BRY	**Bratogost**	**1.69**	**335**	⇑*i*Pn	**Pn**	**04 50 58.1**	**-0.1**
BRY				*e*Sn	**Sn**	**04 51 23.0**	**+2.5**
UPM	**Unac-Piva**	**1.89**	**347**	⇓*i*Pn	**Pn**	**04 51 01.8**	**+0.9**
UPM				*e*Sn	**Sn**	**04 51 27.2**	**+1.9**
SJES	**Sjenica**	**1.93**	**10**	*e*Pn	**Pn**	**04 51 00.8**	**-0.6**
SJES				*e*Sn	**Sn**	**04 51 26.6**	**+0.3**
IGT	**Igoumenitsa**	**1.94**	**161**	*e*Pn	**Pn**	**04 51 03.3**	**+1.6**
PLE	**Pljevlja**	**1.96**	**358**	⇓*i*Pn	**Pn**	**04 51 02.6**	**+0.6**
PLE				*e*Sn	**Sn**	**04 51 28.6**	**+1.3**
STON	**Ston**	**2.01**	**319**	*e*Pn	**Pn**	**04 51 01.2**	**-1.4**
STON				Sn	**Sn**	**04 51 26.2**	**-2.3**
STIP	**Stip**	**2.04**	**80**	*e*Pn	**Pn**	**04 51 01.9**	**-1.2**
STIP	**Stip**	**2.04**	**80**	*e*Pn	**Pn**	**04 51 01.8**	**-1.3**
VAY	**Valandovo**	**2.31**	**90**	*e*Pn	**Pn**	**04 51 06.6**	**-0.2**
VAY	**Valandovo**	**2.31**	**90**	*e*Pn	**Pn**	**04 51 06.5**	**-0.3**
DIVS	**Divibare**	**2.75**	**7**	*e*Pn	**Pn**	**04 51 11.4**	**-1.4**
DIVS				*e*Sn	**Sn**	**04 51 44.6**	**-2.2**
SGO	**Sicignano**	**3.27**	**257**	Pn	**Pn**	**04 51 20.2**	**+0.2**
	11nm,0.4s						
CDRU	**Civita di Ruta**	**3.29**	**256**	Pn	**Pn**	**04 51 20.1**	**-0.2**
	22nm,1.0s						
MCRV	**Calabrutti - M**	**3.32**	**261**	Pn	**Pn**	**04 51 20.2**	**-0.5**
	258nm,1.1s						
SGG	**Gregorio Mates**	**3.85**	**272**	Pn	**Pn**	**04 51 28.4**	**+0.5**
	14nm,0.5s						
VAGA	**Valle Agricola**	**3.96**	**272**	Pn	**Pn**	**04 51 30.1**	**+0.7**
	62nm,1.5s						
FIAM	**Fiamignano**	**4.85**	**283**	Pn	**Pn**	**04 51 42.1**	**+0.5**
	58nm,1.8s						
NRCA	**Norcia**	**4.97**	**289**	Pn	**Pn**	**04 51 43.0**	**-0.3**
	3.0nm,0.3s						
MURB	**Monte Urbino**	**5.51**	**292**	Pn	**Pn**	**04 51 50.7**	**+0.1**

IDC 08 05:00:09.1±2.5**, 4613N**×**15295E, h0**km**, mb3.7**/4**, mb1 3.8**/5**, mb1mx3.5**/22**, mbtmp3.7**/5**, ML3.2**/1**, Error ellipse: s-maj=72.8km s-min=31.2km az=179.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**7.63**	**22**	Pn	Pn	05 02 01.6	+0.1
	0.3nm,0.3s,baz=237,slow=5.1,SNR=3.7						
MKAR	**Makanchi Array**	**47.13**	**298**	P	P	05 08 42.6	-0.2
	0.3nm,0.6s,baz=69,slow=7.9,SNR=4.2						
KURK	**Kurchatov**	**47.61**	**304**	P	P	05 08 47.2	+0.7
	0.5nm,0.6s,baz=68,slow=7.8,SNR=3.3						
AKASG	**Malin Array Be**	**72.00**	**326**	P	P	05 11 34.4	0.0
	1.2nm,0.5s,baz=35,slow=6.4,SNR=4.4						
TXAR	**Lajitas Array**	**77.90**	**60**	P	P	05 12 09.0	+0.2
	0.3nm,0.5s,baz=306,slow=4.9,SNR=8.6						

TAP 08 05:14:41.9, 2447N×**12167E, h60**km±1km**, ML3.7, 3C-4D, A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.08**	**127**	⇓*i*P	Pn	05 14 50.9	0.0
	baz=127						
ENTT	**Nioudou**	**0.19**	**329**	P	Pn	05 14 51.8	+0.5
	baz=328						
ENTT				S	Sn	05 14 58.9	+0.7
	baz=328						
TWC	**Suao**	**0.21**	**50**	⇓*i*P	Pn	05 14 51.9	+0.5
	baz=49						
TWC				*e*S	Sn	05 14 58.8	+0.5
	baz=49						
TWE	**Neicheng**	**0.25**	**359**	⇓*i*P	Pn	05 14 52.1	+0.5
	baz=358						

TWE				S	Sn	05 14 59.4	+0.7
	baz=358						
NNS	Nan Shan	0.28	263	⇓iP	Pn	05 14 52.5	+0.7
	baz=262						
NNS				S	Sn	05 14 59.8	+0.7
	baz=262						
ILA	Ilan	0.30	13	eP	Pn	05 14 52.7	+0.7
	baz=12						
ILA				eS	Sn	05 15 00.8	+1.5
	baz=12						
NSK	Sanguang	0.35	305	eP	Pn	05 14 52.7	+0.2
	baz=304						
NSK				eS	Sn	05 15 00.0	0.0
	baz=304						
TWD	Chiawan	0.40	190	⇑P	Pn	05 14 52.1	-0.8
	baz=190						
TWD				eS	Sn	05 14 59.7	-1.1
	baz=190						
WHF	Hehuan Shan	0.50	229	P	Pn	05 14 54.5	+0.6
	baz=228						
WHF				S	Sn	05 15 03.4	+0.9
	baz=228						
HWA	Hwalien	0.50	187	eP	Pn	05 14 53.3	-0.5
	baz=187						
TWT	Tachien	0.51	244	eP	Pn	05 14 55.1	+1.2
	baz=244						
TWT				eS	Sn	05 15 03.8	+1.1
	baz=244						
TWA	Mucha	0.51	351	eP	Pn	05 14 54.4	+0.4
	baz=350						
TWA				eS	Sn	05 15 03.1	+0.3
	baz=350						
NWF	Wu-fen Shan	0.60	9	⇑iP	Pn	05 14 55.5	+0.5
	baz=9.0						
NWF				eS	Sn	05 15 04.9	+0.4
	baz=9.0						
TWB1	Santiao Chiao	0.60	28	P	Pn	05 14 55.9	+0.9
	baz=28						
NSTT	Nanjuang	0.63	284	eP	Pn	05 14 55.9	+0.6
	baz=284						
NSTT				eS	Sn	05 15 06.1	+1.0
	baz=284						
NCU	National Centr	0.66	318	eP	Pn	05 14 56.1	+0.4
	baz=318						
NCU				eS	Sn	05 15 06.6	+0.8
	baz=318						
TWS1	Kuangyinshan	0.67	340	⇑P	Pn	05 14 56.1	+0.4
	baz=339						
TWS1				eS	Sn	05 15 06.6	+0.8
	baz=339						
ESL	Shilin	0.69	199	eP	Pn	05 14 54.7	-1.3
	baz=198						
TWY	Chenhua	0.80	355	eP	Pn	05 14 57.7	+0.3
	baz=355						
TWQ1	Liyutan	0.83	262	eP	Pn	05 14 58.2	+0.4
	baz=261						
NSY	Sanyi	0.83	266	eP	Pn	05 14 58.5	+0.7
	baz=266						
SMLT	Sun Moon Lake	0.92	230	eP	Pn	05 15 00.3	+1.4
	baz=230						
TYC	Yuchr	0.94	233	eP	Pn	05 15 00.3	+1.2
	baz=232						
EHY	Hungye	1.02	199	eP	Pn	05 14 58.5	-1.6
	baz=198						
TWF1	Yuli	1.17	197	eP	Pn	05 15 00.6	-1.6
	baz=197						
YUS	Yu-Shan	1.18	214	eP	Pn	05 15 03.4	+1.1
	baz=213						
PCYT	Pengchaiyu	1.21	17	eP	Pn	05 15 03.0	+0.3
	baz=17						
ALS	Alishan	1.25	220	eP	Pn	05 15 04.7	+1.6
	baz=219						
CHN5	Tsauling	1.26	226	eP	Pn	05 15 04.7	+1.3
	baz=226						
CHKT	Chengkung	1.40	192	eP	Pn	05 15 04.6	-0.6
	baz=191						
ELDTW	Lidau	1.41	205	eP	Pn	05 15 05.0	-0.4
	baz=205						
CHN4	Tsaushan	1.49	222	eP	Pn	05 15 08.2	+1.7
	baz=221						
STYT	Tauyuan	1.55	213	eP	Pn	05 15 08.8	+1.5
	baz=212						
WTP	Ta-pu	1.56	219	eP	Pn	05 15 08.3	+0.9
	baz=218						
TWK	Hsinying	1.62	222	eP	Pn	05 15 10.1	+1.9
	baz=222						
CHN1	Nanshi	1.66	220	eP	Pn	05 15 10.4	+1.8
	baz=219						
SGST	Jiashian	1.71	216	eP	Pn	05 15 11.3	+1.9
	baz=215						
TWG	Pinlang	1.74	199	eP	Pn	05 15 08.4	-1.3
	baz=198						
SSD	Sandimen	1.97	209	eP	Pn	05 15 14.6	+1.7
	baz=209						
ECL	Taimali	1.98	200	eP	Pn	05 15 13.4	+0.3
	baz=199						
EAST	Anshuo	2.21	200	eP	Pn	05 15 16.5	+0.2
	baz=200						
SCZT	Fangliau	2.31	205	eP	Pn	05 15 19.9	+2.4
	baz=204						

IDC 08 05:22:27.5±26.0**, 2224S**×**17347W, h0^{km}, mb4.3**/4**, mb1 4.4**/4**, mb1mx3.9**/18**, mbtmp4.3**/4**, Error ellipse: s-maj=482.0km s-min=154.3km az=76.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	37.54	266	P	P	05 29 44.0	+0.4
	5.2nm,0.3s,baz=97,slow=11,SNR=13						
STKA	Stephens Creek	40.90	247	P	P	05 30 11.8	+0.1
	0.6nm,0.4s,baz=90,slow=13,SNR=3.0						
ASAR	Alice Springs	48.25	258	P	P	05 31 10.3	-0.2
	1.4nm,0.5s,baz=95,slow=7.4,SNR=28						
WRA	Warramunga Arr	48.55	263	P	P	05 31 12.5	-0.4
	1.2nm,0.3s,baz=102,slow=8.3,SNR=21						

JMA 08 05:24:50.1±0.4, 2325N×12157E, h93^{km}, M2.6
TAP 08 05:24:48.6, 2320N×12143E, h26^{km}, ML3.5, 9C-1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.12	212	⇓iP	Pb	05 24 53.8	+0.3
	baz=212						
CHKT				eS	Sb	05 24 57.4	+0.6
	baz=212						
TWF1	Yuli	0.20	320	⇑iP	Pb	05 24 54.6	+0.4
	baz=306						
TWF1				i S	Sb	05 24 59.4	+1.3
	baz=306						
EHY	Hungye	0.32	341	⇑iP	Pb	05 24 55.9	0.0
	baz=330						
EHY				eS	Sb	05 25 00.9	-0.1
	baz=330						
ELDTW	Lidau	0.38	268	⇑iP	Pb	05 24 56.7	-0.2
	baz=268						
ELDTW				S	Sb	05 25 02.1	-0.5
	baz=268						
TWG	Pinlang	0.51	221	P	Pb	05 24 58.5	-0.4
	baz=232						
TWG				eS	Sb	05 25 05.5	-0.4
	baz=232						
TTN	Taitung	0.52	211	eP	Pb	05 24 59.8	+0.7
	baz=223						
YUS	Yu-Shan	0.53	303	⇑iP	Pb	05 24 59.8	+0.5
	baz=301						
YUS				i S	Sb	05 25 07.0	+0.5
	baz=301						
ESL	Shilin	0.61	360	eP	Pb	05 25 01.4	+0.7
	baz=359						
STYT	Tauyuan	0.62	267	i P	Pb	05 25 00.9	0.0
	baz=266						
STYT				eS	Sb	05 25 09.5	+0.2
	baz=266						
ALS	Alishan	0.66	298	⇑iP	Pb	05 25 02.0	+0.6
	baz=297						
ALS				S	Sb	05 25 11.0	+0.9
	baz=297						
ECL	Taimali	0.75	216	eP	Pb	05 25 01.6	-1.4
	baz=223						
ECL				eS	Sb	05 25 11.3	-1.5
	baz=223						
WTP	Ta-pu	0.76	273	⇑iP	Pb	05 25 03.7	+0.6
	baz=273						
WTP				eS	Sb	05 25 13.8	+0.8
	baz=273						
CHN4	Tsaushan	0.79	281	⇑iP	Pb	05 25 04.4	+0.7
	baz=280						
CHN4				S	Sb	05 25 16.2	+2.2
	baz=280						
HWA	Hwalien	0.79	11	eP	Pb	05 25 04.4	+0.7
	baz=356						
SGST	Jiashian	0.79	261	eP	Pb	05 25 04.3	+0.6
	baz=261						
SGST				eS	Sb	05 25 15.2	+1.2
	baz=261						
CHN5	Tsauling	0.80	300	P	Pb	05 25 04.7	+0.9
	baz=299						
CHN5				eS	Sb	05 25 16.0	+1.8
	baz=299						
CHN1	Nanshi	0.83	269	i P	Pb	05 25 05.2	+0.8
	baz=269						
CHN1				S	Sb	05 25 17.3	+2.1
	baz=269						
SMLT	Sun Moon Lake	0.84	324	⇑iP	Pb	05 25 04.5	0.0
	baz=332						
SMLT				eS	Sb	05 25 15.5	+0.2
	baz=332						
SSD	Sandimen	0.87	239	eP	Pb	05 25 04.3	-0.7
	baz=238						
TWK	Hsinying	0.87	274	⇑iP	Pb	05 25 05.7	+0.7
	baz=274						
TWK				S	Sb	05 25 18.1	+1.8
	baz=274						
TYC	Yuchr	0.88	323	eP	Pb	05 25 05.2	0.0
	baz=330						
TYC				eS	Sb	05 25 17.3	+0.9
	baz=330						
TWD	Chiawan	0.89	10	eP	Pb	05 25 04.2	-1.1
	baz=355						
WGK	Gukeng	0.94	301	eP	Pn	05 25 07.4	+1.3
	baz=314						
WGK				eS	Sb	05 25 20.7	+2.6
	baz=314						
CHN2	Minshiung	0.94	291	eP	Pn	05 25 07.3	+1.1
	baz=290						
CHN2				eS	Sb	05 25 21.3	+3.0
	baz=290						
WHF	Hehuan Shan	0.95	351	eP	Pn	05 25 05.7	-0.6
	baz=358						
WHF				eS	Sb	05 25 17.9	-0.7
	baz=358						
WNT	Mingjian	0.96	314	P	Pn	05 25 07.5	+1.1
	baz=313						
WNT				S	Sb	05 25 21.1	+2.2
	baz=313						
CHY	Chiayi	0.97	288	eP	Pn	05 25 07.5	+0.9
	baz=287						
CHY				eS	Sb	05 25 21.6	+2.3
	baz=287						
EAST	Anshuo	0.98	214	P	Pn	05 25 05.4	-1.3
	baz=216						
TWM1	Shoushan	1.00	248	eP	Pn	05 25 08.8	+1.8
	baz=249						
SCZT	Fangliau	1.12	222	eP	Pn	05 25 08.5	0.0
	baz=221						
TCU	Taichung	1.17	324	eP	Pn	05 25 12.7	+3.4
	baz=322						
TCU				eS	Sn	05 25 27.0	+2.6
	baz=322						
NNS	Nan Shan	1.23	357	eP	Pn	05 25 10.0	-0.2
	baz=7.0						
WTCT	Ta-ch'eng	1.25	302	eP	Pn	05 25 12.5	+2.2
	baz=301						
WTCT				eS	Sn	05 25 28.1	+1.8
	baz=301						
TWQ1	Liyutan	1.29	332	eP	Pn	05 25 12.2	+1.2
	baz=330						
TWQ1				eS	Sn	05 25 31.1	+3.7
	baz=330						
HEN	Hengchun	1.35	209	eP	Pn	05 25 12.4	+0.6
	baz=199						
NSY	Sanyi	1.36	333	eP	Pn	05 25 14.0	+2.1
	baz=331						
NSY				eS	Sn	05 25 32.7	+3.6
	baz=331						
TWK1	Hengchun	1.38	205	eP	Pn	05 25 12.6	+0.4
	baz=196						
TWC	Suao	1.45	15	eP	Pn	05 25 13.3	+0.1
NSTT	Nanjuang	1.48	345	eP	Pn	05 25 16.1	+2.6
	baz=343						
TWE	Neicheng	1.53	8	eP	Pn	05 25 15.4	+1.2
	baz=5.0						
PNG	Penghu	1.76	282	eP	Pn	05 25 18.4	+0.9
	baz=282						
NWF	Wu-fen Shan	1.89	10	eP	Pn	05 25 20.1	+0.9
	baz=6.0						
YOJ	Yonaguni jima	1.91	49	P	Pn	05 25 20.0	+0.5
YOJ				eS	Sn	05 25 42.9	+0.1
YOJ	Yonaguni jima	1.91	49	eP	Pn	05 25 19.2	-0.3
	baz=49						
YOJ				eS	Sn	05 25 41.8	-1.0
	baz=49						
HATJ	Hateruma jima	2.33	68	eS	Sn	05 25 51.6	-1.6
IRIF	Iriomote-Funau	2.39	61	P	Pn	05 25 26.6	+0.6
IRIF				eS	Sn	05 25 54.0	-0.5
JKRS	Kuro-shima	2.58	66	P	Pn	05 25 29.0	+0.4
JKRS				eS	Sn	05 25 58.7	-0.4
JIJ	Ishigaki jima	2.74	64	P	Pn	05 25 30.7	-0.2
JIJ				eS	Sn	05 26 01.3	-1.8
KNM	Kinmen	3.00	294	eP	Pn	05 25 36.5	+2.0
	baz=291						
JTJ	Tarama	3.32	64	P	Pn	05 25 38.9	+0.1
JTJ				eS	Sn	05 26 16.3	-1.1

ISCJB 08 05:36:31.7±0.3, 3292S±002×70.18W±005, h111^{km}±3^{km}, mb3.9/8, Error ellipse: s-maj=7.4km s-min=4.1km az=177.7
GUC 08 05:36:32.4±0.7, 3290S×70.11W, h100^{km}±4^{km}, ML4.0
NEIC 08 05:36:32.4, 3290S×70.11W, h100^{km}, MG4.0(GUC), After GUC.
IDC 08 05:36:33.4±1.8, 3296S×6999W, h108^{km}±14^{km}, mb3.7/8, mb1 3.7/12, mb1mx3.6/20, mbtmp3.6/12, MS2.9/2, Ms1 2.9/2, ms1mx2.6/25, Error ellipse: s-maj=23.2km s-min=13.7km az=106.0
ISC 08 05:36:32.8±0.3**, 3292S**±003×**7017W**±005**, h104^{km}**±3^{km}**, n51, $\sigma 0^{s}68$**/73**, mb3.9**/8**, 9C-14D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	0.42	194	⇓iP	Pn	05 36 48.9	+0.4
FCH				i S	Sn	05 37 01.1	+0.7
FCH				AML	AML	05 37 01.9	
	comp=E,5μm,0.2s						
JACH	Jahuel	0.42	303	⇑iP	Pn	05 36 48.4	-0.1
PEL	Peldehue	0.49	242	⇑iP	Pn	05 36 48.9	-0.1
PEL				eS	Sn	05 37 00.8	-0.2
PEL				AML	AML	05 37 01.8	
	comp=E,30μm,0.3s						
CLCH	Cerro Calan	0.57	213	⇓iP	Pn	05 36 49.5	-0.1
CLCH				i S	Sn	05 37 02.7	+0.6
CLCH				AML	AML	05 37 03.7	
	comp=E,6μm,0.3s						
FSR	Penalolen	0.64	208	⇓eP	Pn	05 36 50.0	0.0
FSR				eS	Sn	05 37 03.4	+0.4
FSR				AML	AML	05 37 04.7	
	comp=E,8μm,0.4s						
FSR	Penalolen	0.64	208	⇓eP	Pn	05 36 50.0	0.0
FSR				eS	Sn	05 37 03.4	+0.4
SAN	Santiago	0.67	217	⇑iP	Pn	05 36 50.3	-0.1
SAN				i S	Sn	05 37 03.9	+0.3
ROCH	El Roble	0.71	265	⇑iP	Pn	05 36 50.7	0.0
ROCH				i S	Sn	05 37 03.9	-0.2
SJCH	San Jose de Ma	0.74	192	⇓iP	Pn	05 36 50.3	-0.6
SJCH				i S	Sn	05 37 04.3	-0.3
SJCH				AML	AML	05 37 06.4	
	comp=E,3μm,0.6s						
SJCH	San Jose de Ma	0.74	192	⇓iP	Pn	05 36 50.3	-0.6
SJCH				i S	Sn	05 37 04.3	-0.3
YECH	El Yeso	0.75	174	⇓iP	Pn	05 36 51.6	+0.5
YECH				i S	Sn	05 37 05.0	+0.2
YECH				AML	AML	05 37 05.8	
	comp=E,2μm,0.4s						
ANTU	Antumapu	0.76	211	⇓iP	Pn	05 36 51.0	-0.1
ANTU				i S	Sn	05 37 05.1	+0.2
ANTU				AML	AML	05 37 06.1	
	comp=E,12μm,0.4s						
ANTU	Antumapu	0.76	211	⇓iP	Pn	05 36 51.0	-0.1
ANTU				i S	Sn	05 37 05.1	+0.2
PCH	Pirque	0.76	202	⇑iP	Pn	05 36 51.2	+0.1
PCH				i S	Sn	05 37 05.5	+0.5
RCDM	Rinconada Maip	0.78	223	⇓eP	Pn	05 36 51.0	-0.3
RCDM				eS	Sn	05 37 05.5	+0.3
RCDM				AML	AML	05 37 08.1	
	comp=E,6μm,0.4s						
RCDM	Rinconada Maip	0.78	223	⇓eP	Pn	05 36 51.0	-0.3
RCDM				eS	Sn	05 37 05.5	+0.3
PTCH	Petorca	0.91	315	eP	Pn	05 36 52.8	+0.1
PTCH				i S	Sn	05 37 08.1	+0.5
PTCH				AML	AML	05 37 09.8	
	comp=E,7μm,0.3s						
PTCH	Petorca	0.91	315	eP	Pn	05 36 52.8	+0.1
PTCH				i S	Sn	05 37 08.1	+0.5
TACH	Talagante	0.97	221	⇑iP	Pn	05 36 53.1	-0.2
TACH				i S	Sn	05 37 08.6	-0.1
IHA	Instituto Hidr	1.24	265	⇓eP	Pn	05 36 55.5	-0.7
IHA				i S	Sn	05 37 12.6	-1.3
CACH	El Canelo	1.25	197	⇓iP	Pn	05 36 56.8	+0.5
CACH				i S	Sn	05 37 15.6	+1.5
LNV	Longovilo	1.47	225	⇓iP	Pn	05 36 57.8	-1.1
LNV				i S	Sn	05 37 17.3	-1.3
CHNG	Los Chungos	1.52	312	⇑iP	Pn	05 36 59.5	0.0
CHNG				i S	Sn	05 37 20.1	+0.2
SFDO	San Fernando	1.83	202	⇑iP	Pn	05 37 03.0	-0.4
CFAA	Coronel Fontan	2.10	52	P	Pn	05 37 07.0	+0.3
	comp=E,3.2nm,0.3s,baz=218,slow=12,SNR=818						
CFAA				S	Sn	05 37 32.3	-0.4
	comp=E,12nm,0.3s,baz=340,slow=20,SNR=53						
OVCH	Ovalle	2.46	339	eP	Pn	05 37 11.7	+0.1
OVCH				eS	Sn	05 37 41.1	-0.2
TLL	Tololo Astrono	2.79	349	eP	Pn	05 37 16.4	+0.4
TLL				i S	Sn	05 37 49.5	+0.4
TLL				AML	AML	05 37 53.5	
	comp=N,652nm,0.6s						
TLL	Tololo Astrono	2.79	349	eP	Pn	05 37 16.4	+0.4
TLL				i S	Sn	05 37 49.5	+0.4
LSCH	La Serena	3.14	343	⇑eP	Pn	05 37 20.1	-0.4
LCO	Las Campanas	3.92	353	ePn	Pn	05 37 30.3	-0.7
LCO				eSn	Sn	05 38 15.4	-0.6
PLCA	Paso Flores	7.81	182	P	Pn	05 38 22.8	-0.8
	comp=N,0.1nm,0.3s,baz=351,slow=13,SNR=4.4						
PLCA				LR	LR	05 41 22.4	
	comp=N,50nm,19.0s,baz=187,slow=37						
TRQA	Tornquist	8.42	130	ePn	Pn	05 38 30.9	-1.0
	comp=N,12nm,0.6s						
LVC	Limon Verde	10.32	7	P	Pn	05 38 53.4	-4.5
	comp=N,0.1nm,0.3s,baz=105,slow=12,SNR=2.5						
CPUP	Villa Florida	12.95	63	P	Pn	05 39 27.9	-4.9
	comp=N,0.2nm,0.3s,baz=224,slow=14,SNR=2.6						
LPAZ	La Paz	16.66	7	P	Pn	05 40 21.2	+1.2
	comp=N,0.4nm,0.3s,baz=178,slow=8.0,SNR=14						
LPAZ	La Paz	16.66	7	P	Pn	05 40 21.2	+1.2
SIV	San Ignacio	18.76	28	P	P	05 40 43.2	-0.4
	comp=N,0.6nm,0.3s,baz=205,slow=9.4,SNR=26						
USHA	Ushuaia	21.94	177	P	P	05 41 16.6	-1.0
	comp=N,3.0nm,0.9s,mb3.6,baz=349,slow=12,SNR=4.1						
BDFB	Brasilia	26.44	55	P	P	05 41 59.2	-0.7
	comp=N,2.9nm,0.5s,mb3.9,baz=200,slow=9.0,SNR=6.1						
SJG	San Juan	50.88	5	LR	LR	06 06 54.5	
	comp=N,19nm,18.8s,baz=149,slow=36						
TEIG	Tepich	55.60	339	P	P	05 45 58.4	+0.7
	comp=N,4.9nm,0.5s,mb4.8,baz=45,slow=4.6,SNR=10.0						
TEIG	Tepich	55.60	339	P	P	05 45 58.4	+0.7
QSPA	South Pole Qui	57.32	180	P	P	05 46 10.6	+1.5
	comp=N,1.4nm,0.9s,mb4.0,baz=172,slow=3.7,SNR=5.5						
TXAR	Lajitas Array	69.58	329	P	P	05 47 31.6	+1.1
	comp=N,0.4nm,0.5s,mb3.5,baz=161,slow=8.9,SNR=8.7						
DBIC	Dimbokro	73.35	70	P	P	05 47 52.3	-1.2
	comp=N,1.8nm,0.5s,mb4.2,baz=238,slow=9.5,SNR=4.1						
TORD	Torodi Ar. Bea	82.37	69	P	P	05 48 43.6	+0.1
	comp=N,1.4nm,0.7s,mb3.9,baz=268,slow=5.1,SNR=12						
NVAR	Mina Array Bea	83.91	324	P	P	05 48 53.0	+2.2
	comp=N,0.3nm,0.7s,mb3.2,baz=160,slow=4.7,SNR=3.5						
ARCES	ARCESS Array B	122.38	24	PKP	PKPdf	05 55 13.9	-0.7
	comp=N,2.2nm,0.9s,baz=258,slow=2.7,SNR=3.0						
WRA	Warramunga Arr	122.45	208	PKP	PKPdf	05 55 16.0	-0.3
	comp=N,0.1nm,0.4s,baz=158,slow=1.7,SNR=4.3						
ZALV	Zalesovo Beam	152.48	33	PKPbc	PKPbc	05 56 16.6	+0.4
	comp=N,3.6nm,0.5s,baz=309,slow=3.7,SNR=15						
MKAR	Makanchi Array	154.88	48	PKPbc	PKPbc	05 56 21.3	-0.3
	comp=N,0.2nm,0.4s,baz=220,slow=6.6,SNR=2.7						
MKAR				PKPab	PKPab	05 56 37.4	0.0
	comp=N,0.2nm,0.4s,baz=287,slow=5.9,SNR=2.5						

NEIC 08 06:36:20.6, 2820S×6900W, h101^{km}, mb4.4/2, After GUC.
GUC 08 06:36:20.6±1.2**, 2820S**×**6900W, h101^{km}**±46^{km}**, ML4.1, 4D, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPCH	Copiapo	1.46	305	eP	Pn	06 36 46.9	+0.5
CPCH				i S	Sn	06 37 06.5	+0.4
CPCH				AML	AML	06 37 07.2	
	comp=E,7μm,0.1s						
CPCH	Copiapo	1.46	305	eP	Pn	06 36 46.9	+0.5
CPCH				i S	Sn	06 37 06.5	+0.4
VACH	Vallenar	1.60	256	eP	Pn	06 36 49.4	+1.3
VACH				i S	Sn	06 37 10.1	+1.1
VACH				AML	AML	06 37 11.3	
	comp=N,3μm,0.1s						
VACH	Vallenar	1.60	256	eP	Pn	06 36 49.4	+1.3
VACH				i S	Sn	06 37 10.1	+1.1
LCO	Las Campanas	1.70	241	⇓eP	Pn	06 36 51.0	+1.6
LCO				i S	Sn	06 37 13.0	+1.7
CDCH	Caldera	1.97	304	eP	Pn	06 36 53.5	+0.7
CDCH				i S	Sn	06 37 17.5	0.0
TLL	Tololo Astrono	2.52	218	⇓iP	Pn	06 37 01.3	+1.4
TLL				i S	Sn	06 37 31.9	+1.7
TLL				AML	AML	06 37 35.8	
	comp=E,203nm,0.9s						
TLL	Tololo Astrono	2.52	218	⇓iP	Pn	06 37 01.3	+1.4
TLL				i S	Sn	06 37 31.9	+1.7
CPN1	Cerro Paranal	3.77	340	eP	Pn	06 37 17.9	+1.2
CPN1				i S	Sn	06 38 00.0	-0.2
CPN1				AML	AML	06 38 07.8	
	comp=E,341nm,0.5s						
CEN1	Los Morros	4.91	347	⇓eP	Pn	06 37 29.8	-2.3
FCH	Farellones	5.23	192	eP	Pn	06 37 37.5	+1.0
FCH				i S	Sn	06 38 35.7	+0.2
LVC	Limon Verde	5.56	1	ePn	Pn	06 37 41.7	+0.7
	comp=E,24nm,0.6s						
TRQA	Tornquist	11.45	151	ePn	Pn	06 38 59.5	-1.4
	comp=E,3.0nm,0.6s						

ISCJB 08 07:12:51.1±0.5, 2054N±005×10085E±007, h10^{km}, mb3.5/4, Error ellipse: s-maj=10.9km s-min=4.4km az=29.3
IDC 08 07:12:52.3±1.2, 2046N×10094E, h0^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.5/21, mbtmp3.5/5, ML3.8/1, Error ellipse: s-maj=19.2km s-min=17.0km az=106.0
NEIC 08 07:12:53.9±0.6, 2046N×10081E, h10^{km}, Error ellipse: s-maj=15.1km s-min=11.0km az=98.0
BJI 08 07:12:53.9, 2050N×10080E, h10^{km}, mB4.5, mb4.1, ML4.2, Ms4.1, Msz4.0
ISC 08 07:12:53.0±0.5**, 2046N**±003×**10086E**±005**, h10^{km}, n16, $\sigma 1^{s}38$**/26**, mb3.5**/4**, 1C-1D, Laos**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHRT	Chiangrai	1.17	240	⇑P	Pb	07 13 14.0	-1.3
NANT	Nan	1.66	185	⇓P	Pn	07 13 21.0	-1.2
CHG	Chiang Mai	2.44	228	PN	Pn	07 13 33.2	+0.3
CHG				PG	Pg	07 13 38.5	-1.3
CHG				SG	Sg	07 14 10.9	-0.5
CHTO	Chiang Mai	2.44	228	ePn	Pn	07 13 33.4	+0.5
CHTO				eSg	Sg	07 14 13.6	+2.1
CMAR	Chiang Mai Arr	2.69	222	Pn	Pn	07 13 36.9	+0.5
	4.4nm,0.3s,baz=36,slow=12,SNR=26						
CMAR				Pg	Pg	07 13 42.2	-2.4
	35nm,0.3s,baz=38,slow=17,SNR=242						
CMAR				Sn	Sn	07 14 09.7	+0.7
	14nm,0.3s,baz=38,slow=18,SNR=4.1						
CMAR				Lg		07 14 19.9	
	46nm,0.3s,baz=46,slow=31,SNR=17						
KKTK	Khon Kaen	4.51	155	PN	Pn	07 14 04.0	+2.6
KKTK				PG	Pg	07 14 24.0	+4.6
KKTK				SG	Sg	07 15 16.0	-1.9
NST	Nakhon Sawan	4.81	188	PN	Pn	07 14 08.0	+2.4
NST				PG	Pg	07 14 25.0	-0.3

NST				SG	Sn	07 14 40.0	-21
KMI	**Kunming**	**4.95**	**20**	PG	**Pg**	**07 14 25.3**	**-2.6**
KMI				SG	**Sg**	**07 15 32.3**	**+0.2**
KMI				Smax			
	comp=N,57nm,1.2s						
KMI				Smax			
	comp=E,59nm,1.0s						
KMI				LR	LR		
	comp=N,499nm,6.4s						
KMI				LR	LR		
	comp=E,465nm,6.2s						
KMI				LR	LR		
	comp=Z,499nm,10.2s						
UBT	**Ubonrachathani**	**6.53**	**142**	P	**Sn**	**07 15 30.0**	**-14**
GYA	**Guiyang**	**8.00**	**41**	P	**Pn**	**07 14 50.1**	**+0.8**
GYA				Smax			
	comp=N,80nm,1.0s						
GYA				Smax			
	comp=E,70nm,1.1s						
GYA				LR	LR		
	comp=N,320nm,10.2s						
GYA				LR	LR		
	comp=E,480nm,10.1s						
GYA				LR	LR		
	comp=Z,580nm,10.7s						
CD2	**Chengdu**	**10.72**	**14**	*e*P	**Pn**	**07 15 26.2**	**-0.5**
CD2				PP		07 15 35.0	
CD2				S	**Sn**	**07 17 24.2**	**-2.6**
CD2				SS		07 17 39.5	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CD2				AMB	AMB		
	comp=Z,20nm,3.8s						
CD2				LR	LR		
	comp=N,610nm,10.4s						
CD2				LR	LR		
	comp=E,420nm,7.2s						
CD2				LR	LR		
	comp=Z,790nm,10.8s						
MK31	**Makanchi Array**	**30.32**	**334**	*e*P	**P**	**07 19 05.3**	**+0.8**
MKAR	**Makanchi Array**	**30.32**	**334**	P	**P**	**07 19 05.7**	**+1.1**
	comp=Z,0.8nm,0.6s,mb3.6,baz=147,slow=9.4,SNR=7.3						
WRA	**Warramunga Arr**	**51.84**	**139**	P	**P**	**07 22 02.6**	**+1.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=322,slow=8.2,SNR=5.7						
ASAR	**Alice Springs**	**54.41**	**142**	P	**P**	**07 22 21.8**	**+1.3**
	comp=Z,0.3nm,0.8s,mb3.3,baz=320,slow=7.5,SNR=3.6						
GERES	**GERESS Array B**	**73.04**	**316**	P	**P**	**07 24 23.9**	**+0.7**
	comp=Z,0.2nm,0.4s,mb3.4,baz=113,slow=7.6,SNR=4.2						

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*IDC **08** 07:15:38.4±0.8, 33.63N×108.95W, h0^{km}, mb1 3.7/5, mb1mx3.5/27, mbtmp3.3/5, ML3.7/4, Error ellipse: s-maj=12.7km s-min=7.7km az=25.0*
*NEIC **08** 07:15:40.6±0.7, 33.70N×108.81W, h5^{km}, ML3.5, MW3.6(SLM), Error ellipse: s-maj=11.1km s-min=5.8km az=206.0*
NEIC Felt in the Apache Creek-Luna-Reserve area.
ISC 08 07:15:40.4±0.4**, 33.81N**±0.03×**108.97W**±0.02**, h10^{km}, n37, σ1^{s}58**/71**, New Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAZ	**Ladron**	**1.63**	**68**	*e*Pn	**Pn**	**07 16 09.6**	**+0.4**
LAZ				*e*Pg	**Pg**	**07 16 11.8**	**0.0**
LENM	**Lemitar**	**1.70**	**77**	*e*Pn	**Pn**	**07 16 09.9**	**-0.3**
LENM				*e*S	**Sn**	**07 16 32.8**	**+0.8**
BNM	**Barren Site**	**1.98**	**79**	*e*Pn	**Pn**	**07 16 13.6**	**-0.4**
BNM				*e*Sg	**Sg**	**07 16 41.3**	**-2.8**
LPM	**Los Pinos Moun**	**2.01**	**75**	*e*Pn	**Pn**	**07 16 14.1**	**-0.2**
LPM				S	**Sn**	**07 16 41.2**	**+1.7**
ANMO	**Albuquerque**	**2.37**	**61**	Pn	**Pn**	**07 16 20.1**	**+0.7**
	5.6nm,0.3s,baz=246,slow=12,SNR=58						
ANMO				Lg		07 16 55.0	
	21nm,0.3s,baz=342,slow=23,SNR=13						
ANMO	**Albuquerque**	**2.37**	**61**	*e*Pn	**Pn**	**07 16 19.9**	**+0.5**
WUAZ	**Wupatki**	**2.61**	**311**	*e*Pn	**Pn**	**07 16 25.9**	**+3.2**
WUAZ				*e*Pg	**Pg**	**07 16 32.4**	**+1.9**
WUAZ				*e*Sg	**Sg**	**07 17 04.7**	**+0.3**
MVCO	**Mesa Verde**	**3.42**	**6**	*e*Pn	**Pn**	**07 16 36.3**	**+2.5**
MVCO				*e*Sg	**Sg**	**07 17 31.1**	**+0.9**
PV01	**Paradox Valley**	**4.33**	**4**	*e*Pn	**Pn**	**07 16 48.4**	**+2.1**
PV01				*e*Pg	**Pg**	**07 17 00.4**	**-3.0**
PV01				*e*Sg	**Sg**	**07 17 56.0**	**-3.5**
PV10	**Paradox Valley**	**4.56**	**359**	*e*Pn	**Pn**	**07 16 50.6**	**+1.2**
PV10				*e*Pg	**Pg**	**07 17 05.3**	**-2.5**
PV10				*e*Sg	**Sg**	**07 18 04.9**	**-1.9**
SDCO	**Great Sand Dun**	**4.84**	**35**	*e*Pn	**Pn**	**07 16 55.3**	**+2.0**
SDCO				*e*Pg	**Pg**	**07 17 10.1**	**-3.0**
SDCO				Sg	**Sg**	**07 18 11.3**	**-4.5**
GLA	**Glamis**	**4.95**	**263**	*e*Pn	**Pn**	**07 16 54.4**	**-0.5**
GLA				*e*Sn	**Sn**	**07 17 49.5**	**-2.6**
GLA				*e*Sg	**Sg**	**07 18 12.1**	**-7.3**
LDFC	**Landfair**	**5.23**	**286**	*e*Pn	**Pn**	**07 17 01.3**	**+2.7**
LDFC				*e*Pg	**Pg**	**07 17 19.7**	**-0.8**
LDFC				*e*Sg	**Sg**	**07 18 29.3**	**+1.1**
MSU	**Marysvale**	**5.36**	**332**	*e*Pn	**Pn**	**07 17 03.8**	**+3.3**
MSU				*e*Pg	**Pg**	**07 17 21.8**	**-1.4**
SRU	**San Rafael**	**5.44**	**347**	*e*Pn	**Pn**	**07 17 03.8**	**+2.3**
SRU				*e*Pg	**Pg**	**07 17 24.1**	**-0.5**
SRU				*e*Sg	**Sg**	**07 18 32.9**	**-2.1**
TMUT	**Trail Mountain**	**5.77**	**342**	*e*Pn	**Pn**	**07 17 07.4**	**+1.4**
TMUT				*e*Pg	**Pg**	**07 17 31.9**	**+1.0**
TMUT				*e*Sg	**Sg**	**07 18 44.9**	**-0.6**
AMTX	**Amarillo**	**6.13**	**78**	*e*Pn	**Pn**	**07 17 09.0**	**-2.0**
AMTX				Pg	**Pg**	**07 17 32.6**	**-5.2**
AMTX				*e*Sg	**Sg**	**07 18 50.9**	**-6.3**
PFO	**Pinyon Flat Ob**	**6.24**	**270**	Pn	**Pn**	**07 17 12.5**	**0.0**
	2.1nm,0.3s,baz=87,slow=11,SNR=27						
PFO				Sn	**Sn**	**07 18 22.6**	**-1.2**
	0.4nm,0.3s,baz=136,slow=20,SNR=2.4						
PFO				Lg		07 18 58.0	
	0.7nm,0.3s,baz=168,slow=19,SNR=3.3						
PFO	**Pinyon Flat Ob**	**6.24**	**270**	*e*Pn	**Pn**	**07 17 12.4**	**-0.1**
TXAR	**Lajitas Array**	**6.35**	**133**	Pn	**Pn**	**07 17 12.7**	**-1.4**
	2.4nm,0.3s,baz=311,slow=12,SNR=220						
TXAR				Sn	**Sn**	**07 18 21.8**	**-4.9**
	1.9nm,0.3s,baz=336,slow=28,SNR=3.0						
TXAR				Lg		07 18 54.7	
	8.3nm,0.3s,baz=328,slow=29,SNR=16						
BAR	**Barrett**	**6.55**	**262**	*e*Pn	**Pn**	**07 17 16.3**	**-0.4**
ISCO	**Idaho Springs**	**6.56**	**23**	Pn	**Pn**	**07 17 19.9**	**+3.0**
	5.2nm,0.6s						
ISCO				Pg	**Pg**	**07 17 42.4**	**-3.6**
NLU	**North Lily Min**	**6.62**	**339**	*e*Pg	**Pg**	**07 17 47.8**	**+0.6**
NLU				*e*Sg	**Sg**	**07 19 15.5**	**+2.6**
GSC	**Goldstone**	**6.63**	**285**	*e*Pn	**Pn**	**07 17 19.2**	**+1.3**
	9.2nm,0.7s						
GSC				*e*Sg	**Sg**	**07 19 11.4**	**-1.9**
TPNV	**Topopah Spring**	**6.72**	**300**	*e*Pn	**Pn**	**07 17 21.4**	**+2.3**
	15nm,0.8s						
TPNV				*e*		07 17 31.9	
TPNV				*e*Pg	**Pg**	**07 17 44.8**	**-4.3**
TPNV				*e*Sg	**Sg**	**07 19 12.9**	**-3.2**
DAU	**Daniels Canyon**	**6.84**	**345**	Pn	**Pn**	**07 17 24.9**	**+4.1**
DAU				*e*Sg	**Sg**	**07 19 19.7**	**-0.3**
JLU	**Jordanelle**	**7.06**	**344**	Pn	**Pn**	**07 17 31.3**	**+7.4**
JLU				*e*Pg	**Pg**	**07 17 55.2**	**-0.4**
DUG	**Dugway**	**7.08**	**335**	*e*Pn	**Pn**	**07 17 26.1**	**+2.1**
DUG				*e*Pg	**Pg**	**07 17 55.3**	**-0.6**
CTU	**Camp Tracy**	**7.22**	**343**	Pn	**Pn**	**07 17 28.1**	**+2.1**
	23nm,0.7s						
CTU				*e*Pg	**Pg**	**07 17 52.9**	**-5.7**
CTU				Sg	**Sg**	**07 19 31.3**	**-0.9**
TPH	**Tonopah**	**7.93**	**305**	*e*Pg	Px	07 18 12.3	
RWWY	**Rawlins**	**7.99**	**10**	Sg	Sx	07 19 52.5	
HWUT	**Hardware Ranch**	**8.05**	**346**	Pn	**Pn**	**07 17 36.2**	**-1.2**
HWUT				*e*Pb	**Pb**	**07 17 55.1**	**-4.9**
HWUT				*e*Pg	Pn	07 18 12.9	+36
HWUT				*e*Sg	Sn	07 19 55.2	+47
JCT	**Junction City**	**8.45**	**111**	*e*Pn	**Pn**	**07 17 41.5**	**-1.5**
JCT				*e*Sg	Sn	07 20 00.0	+42
WMOK	**Wichita Mounta**	**8.49**	**81**	Pn	**Pn**	**07 17 39.3**	**-4.1**
WMOK				*e*Pg	Pn	07 18 12.3	+29
WMOK				*e*Sg	Sn	07 20 04.8	+46
ELK	**Elko**	**8.54**	**326**	Lg		07 20 07.9	
	0.2nm,0.3s,baz=241,slow=20,SNR=7.5						
NVAR	**Mina Array Bea**	**8.84**	**304**	Pn	**Pn**	**07 17 53.2**	**+4.9**
	0.1nm,0.3s,baz=122,slow=15,SNR=4.9						
NVAR				Lg		07 20 19.2	
	0.2nm,0.3s,baz=126,slow=28,SNR=2.9						
PDAR	**Pinedale Array**	**8.96**	**357**	Pn	**Pn**	**07 17 54.6**	**+4.8**
	0.1nm,0.3s,baz=168,slow=14,SNR=3.0						
PDAR				Lg		07 20 24.6	
	0.6nm,0.3s,baz=178,slow=22,SNR=4.4						

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*NIED **08** 07:17:00, 39.20N×142.40E, h29^{km}, Mw3.4 Best double couple: Mo1.33000×10^{14} NP1:φs256.00000°, δ81.00000°, λ-162.00000°. NP2:φs163.00000°, δ72.00000°, λ-10.00000°.*
*ISCJB **08** 07:17:34.4±1.7, 39.14N±0.05×142.6E±0.1, h15^{km}±12^{km}, mb3.5/4, Error ellipse: s-maj=13.7km s-min=7.1km az=15.3*
*IDC **08** 07:17:35.7±2.4, 38.81N×143.07E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.5/21, mbtmp3.4/5, ML2.9/1, Error ellipse: s-maj=65.8km s-min=28.0km az=65.0*
*JMA **08** 07:17:36.7±0.1, 39.16N×142.43E, h28^{km}±1^{km}, M3.5*
JMA Felt I J1.
ISC 08 07:17:36.4±1.5**, 39.16N**±0.04×**142.43E**±0.08**, h18^{km}**±7^{km}**, n14, σ0^{s}82**/22**, mb3.5**/4**, 4C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.59**	**262**	⇓P	**Pg**	**07 17 48.4**	**+0.2**
OFUJ				*e*S	**Sg**	**07 17 56.5**	**+0.3**
MIYJ	**Miyakonagasawa**	**0.62**	**312**	⇑P	**Pg**	**07 17 48.8**	**0.0**
MIYJ				S	**Sg**	**07 17 57.3**	**+0.1**
JTH	**Tanohata**	**0.89**	**331**	P	**Pb**	**07 17 52.9**	**-0.4**
JOM	**Ohasama**	**0.93**	**290**	⇓P	**Pb**	**07 17 54.1**	**0.0**
JOM				S	**Sb**	**07 18 06.5**	**+0.4**
JMK	**Ichinoseki**	**0.96**	**258**	⇑P	**Pb**	**07 17 54.3**	**-0.3**
JMK				S	**Sb**	**07 18 07.2**	**+0.2**
JIO	**Ouri**	**1.10**	**230**	⇑P	**Pb**	**07 17 55.4**	**-1.5**
JIO				*e*S	**Sb**	**07 18 08.6**	**-2.3**
JKZ	**Kuzumaki**	**1.18**	**314**	⇑P	**Pn**	**07 17 57.9**	**-0.2**
JKZ				S	**Sb**	**07 18 13.2**	**0.0**
JANG	**Nango**	**1.40**	**330**	P	**Pn**	**07 18 00.7**	**-0.4**
JANG				S	**Sn**	**07 18 18.8**	**-0.3**
MAT	**Matsushiro**	**4.24**	**233**	P	**Pn**	**07 18 43.4**	**+3.2**
MAT				*e*S	**Sn**	**07 19 33.6**	**+4.4**
MJAR	**Matsushiro Arr**	**4.24**	**233**	Pn	**Pn**	**07 18 44.6**	**+4.5**
	0.6nm,0.3s,baz=39,slow=12,SNR=7.8						
ZALV	**Zalesovo Beam**	**41.10**	**311**	P	**P**	**07 25 25.9**	**+6.9**
	0.4nm,0.5s,mb3.4,baz=79,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	**43.70**	**300**	P	**P**	**07 25 47.2**	**+7.0**
	0.2nm,0.5s,mb3.1,baz=79,slow=9.5,SNR=4.6						
WRA	**Warramunga Arr**	**59.28**	**189**	P	**P**	**07 27 36.8**	**-0.2**
	0.5nm,0.4s,mb3.9,baz=5.9,slow=6.9,SNR=11						
ASAR	**Alice Springs**	**63.01**	**189**	P	**P**	**07 28 03.2**	**+1.0**
	0.3nm,0.8s,mb3.5,baz=24,slow=8.1,SNR=3.2						

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*NEIC **08** 08:02:02.3±1.2, 11.72S×117.08E, h35^{km}, Error ellipse: s-maj=26.5km s-min=14.3km az=77.0*
IDC 08 08:01:57.7±1.4**, 11.76S**×**117.03E, h0^{km}, mb4.0**/3**, mb1 4.0**/7**, mb1mx3.8**/18**, mbtmp3.9**/7**, ML4.0**/2**, MS2.8**/3**, Ms1 2.8**/3**, ms1mx2.6**/32**, Error ellipse: s-maj=36.0km s-min=21.8km az=64.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.69**	**77**	Pn	Pn	08 03 37.0	-0.4
	7.9nm,0.3s,baz=333,slow=9.0,SNR=2.8						
BATI				Sn	Sn	08 04 51.0	-3.4
	2.4nm,0.3s,baz=26,slow=18,SNR=1.8						
BATI				LR	LR	08 05 52.8	
	comp=Z,78nm,20.6s,baz=137,slow=35						
KAPI	**Kappang**	**7.22**	**22**	Pn	Pn	08 03 43.7	-1.0
	2.8nm,0.3s,baz=179,slow=3.7,SNR=6.6						
KAPI				Sn	Sn	08 04 58.5	-8.9
	5.0nm,0.3s,baz=108,slow=22,SNR=10.0						
KAPI				LR	LR	08 06 10.7	
	comp=Z,59nm,19.0s,baz=200,slow=35						
KAPI	**Kappang**	**7.22**	**22**	Pn	Pn	08 03 43.6	-1.0
KAPI				Sn	Sn	08 04 58.5	-8.9
KAPI				LR	LR	08 06 10.7	
MBWA	**Marble Bar**	**9.70**	**165**	*e*Pn	Pn	08 04 13.3	-5.3
	20nm,0.3s						
FITZ	**Fitzroy Crossi**	**10.44**	**128**	*e*P	Pn	08 04 25.5	-3.2
	3.1nm,0.2s						
FITZ				*e*S	Sn	08 06 17.2	-9.3
FITZ	**Fitzroy Crossi**	**10.44**	**128**	Pn	Pn	08 04 25.5	-3.2
	1.3nm,0.3s,baz=306,slow=10.0,SNR=42						
FITZ				Sn	Sn	08 06 16.4	-10
	1.7nm,0.3s,baz=162,slow=23,SNR=10						
FITZ				LR	LR	08 07 50.4	
	comp=Z,62nm,19.5s,baz=134,slow=34						
WRA	**Warramunga Arr**	**18.52**	**118**	P	Pn	08 06 15.2	-0.7
	0.4nm,0.3s,baz=296,slow=13,SNR=25						
WRA				S	Sn	08 09 27.6	-16
	0.2nm,0.3s,baz=286,slow=24,SNR=5.8						
WB2	**Warramunga Arr**	**18.53**	**118**	*e*P	Pn	08 06 15.5	-0.5
WB2				*e*S	Sn	08 09 28.2	-16
ASAR	**Alice Springs**	**19.94**	**129**	P	Pn	08 06 32.5	-0.4
	0.2nm,0.3s,baz=302,slow=12,SNR=13						
ASAR				S	Sn	08 10 03.4	-14
	0.2nm,0.3s,baz=301,slow=22,SNR=9.6						
NWAO	**Narrogin (SRO)**	**21.07**	**180**	P	P	08 06 42.5	-1.1
	8.7nm,0.8s,baz=357,slow=13,SNR=6.0						
NWAO				S	S	08 10 22.2	-17
	2.0nm,0.3s,baz=330,slow=16,SNR=4.3						
NWAO	**Narrogin (SRO)**	**21.07**	**180**	P	P	08 06 42.5	-1.1
NWAO				S	S	08 10 22.2	-17
STKA	**Stephens Creek**	**30.21**	**135**	P	P	08 08 10.6	+0.5
	1.5nm,0.5s,baz=307,slow=12,SNR=4.5						
STKA	**Stephens Creek**	**30.21**	**135**	P	P	08 08 10.6	+0.5
MKAR	**Makanchi Array**	**66.06**	**335**	P	P	08 12 46.7	+0.3
	0.4nm,0.5s,baz=146,slow=6.0,SNR=3.3						

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*BJI **08** 08:16:24.0, 40.30N×124.70W, h15^{km}, mB5.1, mb4.7, Ms4.8, Msz4.6*
*IDC **08** 08:16:27.0±2.0, 40.39N×124.45W, h0^{km}, mb3.7/2, mb1 4.0/7, mb1mx3.7/25, mbtmp3.7/7, ML3.8/4, MS3.3/10, Ms1 3.3/10, ms1mx3.1/41, Error ellipse: s-maj=23.3km s-min=10.1km az=103.0*
*ISCJB **08** 08:16:28.6±0.5, 40.31N±0.02×124.58W±0.05, h33^{km}±5^{km}, mb4.1/5, MS3.3/6, Error ellipse: s-maj=6.1km s-min=2.7km az=171.0*
*NEIC **08** 08:16:28.0, 40.32N×124.65W, h15^{km}, mb4.2/8, MW4.3(BRK), After NCEDC.*
NEIC Felt [IV] at Ferndale, Loleta, Petrolia, Redway and Whitethorn; [III] at Eureka, Fort Bragg, Fortuna, Garberville and Rio Dell; [II] at Arcata. Also felt at Bayside, Carlotta, Hydesville, Leggett, Myers Flat, Piercy, Redcrest, Samoa, Scotia and Westport.
ISC 08 08:16:29.4±0.8**, 40.30N**±0.02×**124.62W**±0.05**, h27^{km}**±5^{km}**, h14^{km}**±.3^{km}**:pP-P, n200, σ1^{s}26**/211**, mb4.1**/5**, MS3.3**/6**, 65C-42D, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
O01C	**Eel River Cons**	**0.63**	**105**	⇑P	**Pb**	**08 16 41.6**	**-0.3**
	baz=0.7,SNR=1000						
O01C				⇑S	**Sb**	**08 16 51.3**	**+1.0**
	baz=0.7						
JCC	**Jacoby Creek**	**0.68**	**41**	⇑P	**Pb**	**08 16 41.1**	**-1.6**
	baz=0.7,SNR=1000						
JCC				⇑S	**Sb**	**08 16 50.5**	**-1.3**
	baz=0.7						
KHMM	**Horse Mountain**	**0.88**	**49**	*e*Pb	**Pb**	**08 16 45.0**	**-1.1**
KIPM	**Iron Peak**	**1.00**	**119**	*e*Pn	**Pn**	**08 16 46.9**	**-0.8**
KIPM				*e*Sn	**Sn**	**08 17 06.1**	**+5.2**
KCPM	**Cahto Peak**	**1.00**	**127**	*e*Pn	**Pn**	**08 16 46.9**	**-0.8**
KCPM				*e*Sn	**Sn**	**08 17 03.0**	**+2.0**
N02C	**Big Bar**	**1.12**	**62**	⇓P	**Pn**	**08 16 48.0**	**-1.5**
	baz=1.1,SNR=1000						
KRMB	**Red Mountain**	**1.33**	**24**	⇑*i*Pn	**Pn**	**08 16 50.6**	**-1.7**
O02C	**Red Bluff**	**1.41**	**95**	⇑P	**Pn**	**08 16 52.8**	**-0.5**
	baz=1.4,SNR=1000						
M01C	**Crescent City**	**1.59**	**13**	⇓P	**Pn**	**08 16 53.5**	**-2.3**
	baz=1.6,SNR=126						
GASB	**Alder Springs**	**1.60**	**113**	⇑P	**Pn**	**08 16 55.1**	**-0.8**
	baz=1.6,SNR=1000						
WDC	**Whiskeytown Da**	**1.61**	**79**	⇓P	**Pn**	**08 16 55.1**	**-1.0**
	baz=1.6,SNR=382						
WDC	**Whiskeytown Da**	**1.61**	**79**	⇑*i*Pn	**Pn**	**08 16 55.0**	**-1.0**
M02C	**Callahan**	**1.72**	**50**	⇓P	**Pn**	**08 16 56.0**	**-1.7**
	baz=1.7,SNR=1000						
HOPS	**Hopland**	**1.77**	**137**	⇑P	**Pn**	**08 16 56.9**	**-1.4**
	baz=1.8,SNR=101						
HOPS	**Hopland**	**1.77**	**137**	*e*Pn	**Pn**	**08 16 57.2**	**-1.0**
KBO	**Bosley Butte**	**1.93**	**9**	*e*Pn	**Pn**	**08 16 58.6**	**-1.9**
L02A	**Cave Junction**	**2.00**	**22**	⇑P	**Pn**	**08 17 00.0**	**-1.5**
	baz=2.0,SNR=418						
L02A				⇑S	**Sn**	**08 17 23.6**	**-2.1**
	baz=2.0						
YBH	**Yreka Blue Hor**	**2.03**	**45**	Pg	**Pn**	**08 17 01.1**	**-0.8**
	122nm,0.3s,baz=261,slow=10,SNR=1990						
YBH				Lg		08 17 26.8	
	139nm,0.3s,baz=182,slow=11,SNR=20						
YBH	**Yreka Blue Hor**	**2.03**	**45**	⇑P	**Pn**	**08 17 01.1**	**-0.7**
	baz=2.0,SNR=1000						
YBH	**Yreka Blue Hor**	**2.03**	**45**	⇑*i*Pn	**Pn**	**08 17 01.2**	**-0.7**
M03C	**McCloud**	**2.13**	**62**	⇑P	**Pn**	**08 17 03.2**	**0.0**
	baz=2.1,SNR=242						
MNRC	**McLaughlin Nat**	**2.20**	**130**	⇑P	**Pn**	**08 17 03.7**	**-0.5**
	baz=2.2,SNR=53						
NSHM	**Saint Helena R**	**2.36**	**138**	*e*Pn	**Pn**	**08 17 05.7**	**-0.8**
ORV	**Oroville**	**2.51**	**106**	⇑P	**Pn**	**08 17 07.1**	**-1.3**
	baz=2.5,SNR=118						
ORV				⇑S	**Sn**	**08 17 36.6**	**-1.6**
	baz=2.5						
MCCM	**Marconi Confer**	**2.54**	**147**	⇑P	**Pn**	**08 17 07.4**	**-1.5**
	baz=2.6						
MCCM	**Marconi Confer**	**2.54**	**147**	*e*Pn	**Pn**	**08 17 07.4**	**-1.5**
M04C	**Macdoel**	**2.57**	**54**	⇑P	**Pn**	**08 17 09.3**	**+0.1**
	baz=2.6,SNR=500						
CVS	**Carmenet Viney**	**2.57**	**139**	⇓P	**Pn**	**08 17 08.0**	**-1.3**
	baz=2.6,SNR=36						
KEBM	**Edson Butte**	**2.58**	**5**	*e*Pn	**Pn**	**08 17 09.1**	**-0.3**
OHCM	**Honcut**	**2.60**	**111**	*e*Pn	**Pn**	**08 17 09.1**	**-0.5**
K02A	**Glendale**	**2.60**	**19**	⇓P	**Pn**	**08 17 08.6**	**-1.1**
	baz=2.6						
K02A				⇓S	**Sn**	**08 17 37.7**	**-2.8**
	baz=2.6						
Q03C	**Winters**	**2.61**	**129**	⇓P	**Pn**	**08 17 09.8**	**0.0**
	baz=2.6						
HUMO	**Hull Mountain**	**2.62**	**28**	⇓P	**Pn**	**08 17 08.6**	**-1.3**
	baz=2.6,SNR=154						
HUMO				⇑S	**Sn**	**08 17 39.1**	**-1.7**
	baz=2.6						
HUMO	**Hull Mountain**	**2.62**	**28**	*e*Pn	**Pn**	**08 17 09.0**	**-0.9**
O04C	**Chester**	**2.70**	**88**	⇓P	**Pn**	**08 17 11.1**	**0.0**
	baz=2.7,SNR=139						
L04A	**Klamath Falls**	**2.78**	**47**	⇓P	**Pn**	**08 17 12.1**	**-0.1**
	baz=2.8,SNR=51						
M05C	**Lookout**	**2.84**	**67**	P	**Pn**	**08 17 12.3**	**-0.6**
	baz=2.9,SNR=116						
O05C	**Quincy**	**2.86**	**96**	⇑P	**Pn**	**08 17 10.7**	**-2.5**
	baz=2.9						
O05C				⇑S	**Sn**	**08 17 48.6**	**+1.9**
	baz=2.9						
FARB	**Farallon Islan**	**2.89**	**154**	⇑P	**Pn**	**08 17 12.1**	**-1.6**
	baz=2.9,SNR=24						
FARB				⇓S	**Sn**	**08 17 43.1**	**-4.4**
	baz=2.9						
Q04C	**Lincoln**	**2.90**	**119**	⇑P	**Pn**	**08 17 13.0**	**-0.8**
	baz=2.9						
ELFS	**Eagle Lake Fie**	**2.98**	**83**	⇑P	**Pn**	**08 17 14.9**	**0.0**
	baz=3.0,SNR=26						
J02A	**Umpqua**	**3.16**	**14**	⇑S	**Sn**	**08 17 50.8**	**-3.4**
	baz=3.2						
K04A	**Chilquin**	**3.17**	**42**	⇑P	**Pn**	**08 17 17.6**	**+0.1**
	baz=3.2						
BDM	**Black Diamond**	**3.17**	**137**	⇑P	**Pn**	**08 17 17.9**	**+0.3**
	baz=3.2,SNR=5.9						
SAC	**San Andreas**	**3.21**	**147**	*e*Pn	**Pn**	**08 17 16.7**	**-1.4**
P05C	**Yuba Gap, Truc**	**3.25**	**107**	⇑P	**Pn**	**08 17 19.2**	**+0.6**
	baz=3.3						
M06C	**Likely Place G**	**3.27**	**73**	⇓P	**Pn**	**08 17 18.4**	**-0.5**
	baz=3.3,SNR=261						
BEKR	**Beckwourth**	**3.29**	**96**	⇑P	**Pn**	**08 17 19.6**	**+0.3**
	baz=3.3,SNR=231						
L05A	**Lakeview**	**3.34**	**57**	P	**Pn**	**08 17 19.8**	**-0.2**
	baz=3.4,SNR=303						
LAVA	**Lava Cap Winer**	**3.37**	**116**	⇑P	**Pn**	**08 17 20.6**	**+0.3**
	baz=3.4						
JRSC	**Jasper Ridge**	**3.44**	**147**	⇑P	**Pn**	**08 17 19.4**	**-1.8**
	baz=3.5						
WENL	**Wente Vineyard**	**3.48**	**139**	⇓P	**Pn**	**08 17 21.0**	**-0.8**
	baz=3.5						
J04A	**Umpqua Nationa**	**3.48**	**32**	⇑P	**Pn**	**08 17 21.9**	**0.0**
	baz=3.5						
MOD	**Modoc**	**3.63**	**62**	⇓P	**Pn**	**08 17 23.0**	**-0.8**
	baz=3.6,SNR=99						
MOD	**Modoc**	**3.63**	**62**	*e*Pn	**Pn**	**08 17 23.1**	**-0.8**
O06A	**Flanigan**	**3.67**	**91**	⇓P	**Pn**	**08 17 24.3**	**-0.1**
	baz=3.7						
N06A	**Buffalo Meadow**	**3.67**	**81**	⇓P	**Pn**	**08 17 23.8**	**-0.6**
	baz=3.7,SNR=26						
N06A				⇑Sn	**Sn**	**08 18 06.6**	**-0.2**
	baz=3.7						
K05A	**Summer Lake**	**3.70**	**48**	⇑P	**Pn**	**08 17 25.0**	**+0.2**
	baz=3.7						
K05A				⇓Sn	**Sn**	**08 18 06.6**	**-0.9**
	baz=3.7						
I02A	**Mapleton**	**3.75**	**9**	⇑P	**Pn**	**08 17 25.8**	**+0.4**
	baz=3.7						
I03A	**Eugene**	**3.80**	**15**	⇓P	**Pn**	**08 17 26.0**	**-0.2**
	baz=3.8						
I04A	**Tendick Farm,**	**3.86**	**24**	⇑P	**Pn**	**08 17 27.6**	**+0.7**
	baz=3.9						
R05C	**Kirkwood Meado**	**3.86**	**113**	⇑P	**Pn**	**08 17 28.1**	**+1.1**
	baz=3.9,SNR=15						
WCN	**Washoe City**	**3.87**	**103**	⇓P	**Pn**	**08 17 27.9**	**+0.7**
	baz=3.9						
J05A	**Fort Rock**	**3.91**	**39**	⇑P	**Pn**	**08 17 28.2**	**+0.5**
	baz=3.9						
CMB	**Columbia Colle**	**3.99**	**123**	⇓P	**Pn**	**08 17 29.2**	**+0.4**
	baz=4.0						
CMB	**Columbia Colle**	**3.99**	**123**	*e*Pn	**Pn**	**08 17 29.2**	**+0.4**
PAHR	**Pah Rah Range**	**4.06**	**97**	*e*Pn	**Pn**	**08 17 30.0**	**+0.2**
K06A	**Valley Falls**	**4.12**	**51**	P	**Pn**	**08 17 30.5**	**-0.1**
	baz=4.1,SNR=182						
PACP	**Pacheco Peak**	**4.20**	**141**	P	**Pn**	**08 17 30.9**	**-0.7**
	baz=4.2,SNR=33						
M07A	**Soldier Meadow**	**4.27**	**74**	P	**Pn**	**08 17 31.9**	**-0.7**
	baz=4.3,SNR=211						
SAO	**San Andreas Ge**	**4.32**	**144**	*e*Pn	**Pn**	**08 17 31.7**	**-1.6**
SAO				*e*Sn	**Sn**	**08 18 21.4**	**-1.4**
N07B	**Gerlach**	**4.33**	**82**	⇑P	**Pn**	**08 17 32.7**	**-0.7**
	baz=4.3,SNR=32						
L07A	**Adell**	**4.34**	**65**	⇑P	**Pn**	**08 17 32.6**	**-0.9**
	baz=4.3,SNR=40						
COR	**Corvallis**	**4.39**	**12**	*e*Pn	**Pn**	**08 17 36.1**	**+1.9**
O07A	**Toulon**	**4.39**	**90**	⇓P	**Pn**	**08 17 34.1**	**-0.2**
	baz=4.4,SNR=35						
WAKR	**Walker**	**4.39**	**112**	*e*Pn	**Pn**	**08 17 36.1**	**+1.7**
J06A	**Christmas Vall**	**4.45**	**47**	⇑P	**Pn**	**08 17 35.1**	**0.0**
	baz=4.5,SNR=123						
S05C	**Merced**	**4.46**	**130**	⇑P	**Pn**	**08 17 35.9**	**+0.6**
	baz=4.5						
H03A	**Soap Creek Ran**	**4.48**	**12**	⇓P	**Pn**	**08 17 36.9**	**+1.3**
	baz=4.5						
I05A	**Bend**	**4.59**	**32**	⇑P	**Pn**	**08 17 37.1**	**+0.1**
	baz=4.6						
K07A	**Rock Creek Ran**	**4.69**	**58**	⇓P	**Pn**	**08 17 38.0**	**-0.4**
	baz=4.7,SNR=132						
H04A	**Detroit Lake**	**4.73**	**22**	⇓P	**Pn**	**08 17 39.8**	**+0.9**
	baz=4.7						
M08A	**Happy Creek Ra**	**4.87**	**74**	⇓P	**Pn**	**08 17 39.6**	**-1.2**
	baz=4.9,SNR=31						
I06A	**Prineville**	**4.90**	**41**	⇓P	**Pn**	**08 17 41.4**	**+0.2**
	baz=4.9						
O08A	**Rochester Mine**	**4.94**	**88**	⇑P	**Pn**	**08 17 42.0**	**+0.1**
	baz=5.0						
HEBO	**Mount Hebo**	**4.95**	**7**	*e*Pn	**Pn**	**08 17 42.4**	**+0.4**
U04C	**Hernandez Rese**	**4.95**	**141**	⇓P	**Pn**	**08 17 41.4**	**-0.6**
	baz=5.0,SNR=25						
N08A	**GE Springer Mi**	**4.96**	**82**	⇑P	**Pn**	**08 17 41.2**	**-1.0**
	baz=5.0,SNR=19						
WVOR	**Wild Horse Val**	**4.98**	**63**	*e*Pn	**Pn**	**08 17 41.2**	**-1.1**
V03C	**Hunter Liggett**	**5.04**	**147**	⇓P	**Pn**	**08 17 41.6**	**-1.5**
	baz=5.1						
T06C	**Millerton Lake**	**5.06**	**129**	⇓P	**Pn**	**08 17 44.9**	**+1.4**
	baz=5.1						
L08A	**Fields**	**5.09**	**66**	⇑P	**Pn**	**08 17 42.7**	**-1.2**
	baz=5.1,SNR=15						
K08A	**Mann Creek Ran**	**5.20**	**60**	⇑P	**Pn**	**08 17 44.6**	**-0.8**
	baz=5.2,SNR=46						
NVAR	**Mina Array Bea**	**5.24**	**109**	Pn	**Pn**	**08 17 47.4**	**+1.5**
	2.2nm,0.3s,baz=289,slow=15,SNR=28						
NVAR				Lg		08 19 19.9	
	baz=309,slow=31,SNR=2.7						
NVAR	**Mina Array Bea**	**5.24**	**109**	Pn	**Pn**	**08 17 47.4**	**+1.5**
NVAR				Lg		08 19 19.9	
I07A	**Izee**	**5.36**	**43**	⇑P	**Pn**	**08 17 47.6**	**+0.1**
	baz=5.4						
PKD	**Parkfield**	**5.41**	**142**	⇑P	**Pn**	**08 17 47.0**	**-1.3**

baz=5.4,SNR=15
N09A Rock Creek Ran 5.43 82 ⇑P Pn 08 17 48.1 -0.5
baz=5.4,SNR=13
H06A Lindquist Farm 5.44 34 ⇓P Pn 08 17 50.5 +1.8
baz=5.4
HOOD Mount Hood Mea 5.47 23 ePn Pn 08 17 57.0 +7.9
J08A Circle Bar Ran 5.51 54 ⇑P Pn 08 17 49.3 -0.4
baz=5.5
M09A Marrel Ranch, 5.55 76 ⇑P Pn 08 17 49.3 -0.9
baz=5.6
BMN Battle Mountai 5.65 86 ePn Pn 08 17 51.9 +0.3
23nm,0.9s
HELL Mitchell Peak 5.69 128 ⇑P Pn 08 17 53.4 +1.3
baz=5.7
O09A Fish Creek Ran 5.69 89 ⇑P Pn 08 17 51.5 -0.6
baz=5.7
H07A Lands Inn, Kim 5.69 39 ⇓P Pn 08 17 53.4 +1.4
baz=5.7
K09A Rome 5.70 63 ⇓P Pn 08 17 51.4 -0.9
baz=5.7,SNR=5.8
G06A Carlson Farm, 5.74 29 ⇓P Pn 08 17 54.1 +1.4
baz=5.7
I08A Drewsey 5.76 49 ⇓P Pn 08 17 52.5 -0.7
baz=5.8
PTRM Twissleman Ran 5.80 142 ePn Pn 08 17 52.3 -1.4
J09A Fry Pan Ranch, 5.96 57 ⇑P Pn 08 17 55.4 -0.4
baz=6.0
F05A White Salmon 6.04 21 ⇓P Pn 08 17 57.9 +1.0
baz=6.0
H08A Prairie City 6.09 44 ⇓P Pn 08 17 59.4 +1.7
baz=6.1
G07A Ruggs Ranch, H 6.15 35 ⇑P Pn 08 18 00.3 +1.8
baz=6.2
VES Vestal, Richgr 6.24 134 ⇑P Pn 08 18 00.7 +1.1
baz=6.3
M10A I.L. Ranch, Tu 6.24 76 ⇓P Pn 08 17 58.8 -0.9
baz=6.2,SNR=5.5
K10A MacKenzie Ranc 6.32 64 ⇑P Pn 08 18 00.0 -0.7
baz=6.3,SNR=18
L10A Juniper Basin 6.39 71 ⇑P Pn 08 18 00.8 -1.1
baz=6.4
ISA Isabella 6.71 132 ⇑P Pn 08 18 07.9 +1.8
baz=6.7
ISA Isabella 6.71 132 ePn Pn 08 18 08.1 +2.0
H09A Durkee 6.74 47 ⇓P Pn 08 18 06.5 0.0
baz=6.7
LON Longmire 6.76 17 Pn Pn 08 18 09.6 +2.8
10nm,1.0s
K11A Parker Ranch, 6.90 66 ⇑P Pn 08 18 08.0 -0.7
baz=6.9
ARVC Arvin 6.91 137 ⇓P Pn 08 18 09.1 +0.2
baz=6.9
L11A Cat Creek Ranc 6.94 72 ⇑P Pn 08 18 08.4 -0.8
baz=6.9
BMO Blue Mountains 7.05 47 ePn Pn 08 18 13.0 +2.1
RSW Rattlesnake Hi 7.11 29 ePn Pn 08 18 13.6 +2.1
RSW eSn Sn 08 19 31.1 -0.3
HAWA Hanford 7.12 30 ePn Pn 08 18 13.8 +2.0
ELK Elko 7.16 83 Pn Pn 08 18 12.7 +0.3
0.1nm,0.3s,baz=271,slow=13,SNR=15
ELK Lg 08 20 06.6
0.2nm,0.3s,baz=180,slow=20,SNR=2.3
ELK LR LR 08 21 03.1
comp=Z,166nm,21.7s,baz=260,slow=39
ELK Elko 7.16 83 ePn Pn 08 18 12.4 +0.1
LNOR Lincton Mounta 7.24 38 ePn Pn 08 18 15.4 +2.0
MFID Camas Ranch 7.26 62 ⇑P Pn 08 18 13.3 -0.3
baz=7.3
N12A Clover Valley, 7.31 83 ⇓P Pn 08 18 14.7 +0.2
baz=7.3
TPNV Topopah Spring 7.36 114 ePn Pn 08 18 15.5 +0.4
OSI Osito Adit 7.36 139 Pn Pn 08 18 15.6 +0.5
23nm,0.6s
O12A Currie 7.55 87 ⇓P Pn 08 18 18.5 +0.9
baz=7.6
ETW Entiat 7.93 22 ePn Pn 08 18 24.1 +1.3
GSC Goldstone 7.94 126 ePn Pn 08 18 25.3 +2.2
MWC Mount Wilson 8.01 137 ePn Pn 08 18 25.0 +1.1
JCW Jim Creek 8.12 13 ePn Pn 08 18 24.2 -1.3
BFSC Mount Baldy St 8.21 135 ⇑Pn Pn 08 18 28.3 +1.6
baz=8.2
OD2 Odessa Site #2 8.27 29 Pn Pn 08 18 28.2 +0.7
HLID Hailey 8.27 63 ePn Pn 08 18 30.3 +2.7
PGC Sidney 8.39 5 Pn Pn 08 18 32.0 +2.8
PGC eSn Sn 08 19 57.9 -5.0
BGU Big Grassy Mou 8.84 82 ePn Pn 08 18 37.6 +2.3
DUG Dugway 9.03 87 ePn Pn 08 18 39.8 +1.8
PFO Pinyon Flat Ob 9.34 133 Pn Pn 08 18 43.9 +1.6
1.9nm,0.3s,baz=324,slow=9.3,SNR=27
PFO LR LR 08 22 23.6
comp=Z,133nm,19.7s,baz=297,slow=38
PFO Pinyon Flat Ob 9.34 133 ePn Pn 08 18 42.6 +0.4
NEW Newport 9.60 32 ePn Pn 08 18 48.4 +2.7
MSU Marysvale 9.79 97 ePn Pn 08 18 49.2 +0.8
BAR Barrett 9.93 137 ePn Pn 08 18 52.5 +2.1
HWUT Hardware Ranch 9.96 78 ePn Pn 08 18 54.0 +3.3
MSO Missoula 10.12 46 ePn Pn 08 18 54.6 +1.7
DLMT Dillon 10.17 56 ePn Pn 08 18 53.7 +0.1
TMUT Trail Mountain 10.37 91 ePn Pn 08 18 57.7 +1.4
RRI2 Red Ridge 10.38 69 Pn Pn 08 18 56.6 +0.2
LRM Limekiln Ridge 10.47 54 ePn Pn 08 18 60.0 +2.3
DCID1 Drake Creek 10.53 67 ePn Pn 08 19 01.8 +3.3
CHMT Chamberlain Mo 10.56 48 ePn Pn 08 19 01.7 +2.9
TPAW Teton Pass 10.67 68 ePn Pn 08 19 05.7 +5.2
GLA Glamis 10.68 130 ePn Pn 08 19 01.1 +0.5
REDW Red Top Meadow 10.72 69 ePn Pn 08 19 06.2 +5.1
QLMT Earthquake Lak 10.72 61 Pn Pn 08 19 03.9 +2.8
IMW Indian Meadow 10.78 66 ePn Pn 08 19 05.5 +3.6
SNOW Snow King Moun 10.81 68 ePn Pn 08 19 11.5 +9.2
BOZ Bozeman (W) 10.91 56 ePn Pn 08 19 05.4 +1.8
SRU San Rafael 10.93 92 ePn Pn 08 19 08.2 +4.2
LOHW Long Hollow 10.95 68 ePn Pn 08 19 11.3 +7.1
FLWY Flagg Ranch 10.99 65 ePn Pn 08 19 06.8 +2.0
HRY Holter Researc 11.27 51 ePn Pn 08 19 08.8 +0.2
BW06 Boulder Array 11.55 73 ePn Pn 08 19 19.1 +6.6
PDAR Pinedale Array 11.55 73 Pn Pn 08 19 15.5 +3.0
0.2nm,0.3s,baz=270,slow=7.1,SNR=18
PDAR LR LR 08 23 59.4
comp=Z,131nm,19.6s,baz=249,slow=40
WALA Waterton Lakes 11.60 37 ePn Pn 08 19 16.2 +3.1
PV10 Paradox Valley 12.22 94 ePn Pn 08 19 22.7 +1.1
RLMT Red Lodge 12.27 62 Pn Pn 08 19 23.4 +1.1
PV01 Paradox Valley 12.63 95 ePn Pn 08 19 30.8 +3.5
EGMT Eagleton 13.15 49 ePn Pn 08 19 34.1 -0.3
PHWY Pilot Hill 14.55 80 ePn Pn 08 19 50.6 -2.8
EDM Edmonton 15.03 27 ePn Pn 08 19 57.9 -1.8
SDCO Great Sand Dun 15.08 94 ePn Pn 08 20 04.0 +3.5
13nm,1.3s
ANMO Albuquerque 15.34 105 Pn Pn 08 20 03.2 -0.8
0.1nm,0.3s,baz=353,slow=8.1,SNR=2.1
ANMO LR LR 08 25 43.9
comp=Z,107nm,18.9s,baz=312,slow=36
RSSD Black Hills 15.71 69 Pn Pn 08 20 05.5 -3.3
4.0nm,0.8s
DGMT Dagmar 16.69 54 ePn Pn 08 20 20.2 -1.1
73nm,1.9s
CBKS Cedar Bluff 19.23 86 eP Pn 08 20 51.3 -1.2
17nm,1.0s
LPIG La Paz 20.14 139 LR LR 08 28 41.9
comp=Z,93nm,19.6s,MS3.1,baz=277,slow=36
TXAR Lajitas Array 20.34 116 P P 08 21 06.8 +3.2
1.3nm,0.8s,baz=298,slow=9.4,SNR=19
TXAR LR LR 08 29 57.3
comp=Z,50nm,18.6s,MS2.9,baz=190,slow=40
FFC Flin Flon 20.89 39 eP P 08 21 09.1 -0.3
5.9nm,0.9s
ECSD EROS,Sioux Fal 21.04 71 eP P 08 21 08.4 -2.7
3.9nm,0.6s,mb3.9
KSU1 Kansas State U 21.55 84 eP P 08 21 20.4 +3.8
20nm,0.6s,mb4.7
AGMN Agassiz Refuge 21.98 59 eP P 08 21 21.1 0.0
14nm,0.6s,mb4.6
ULM Lac du Bonnet 22.41 54 P P 08 21 24.1 -1.6
5.3nm,0.7s,mb4.1,baz=266,slow=9.0,SNR=10
ULM LR LR 08 30 46.7
comp=Z,180nm,18.4s,MS3.5,baz=336,slow=39
YKA Yellowknife Ar 23.03 12 P P 08 21 33.9 +1.8
0.9nm,0.7s,mb3.3,baz=198,slow=11,SNR=2.6
YKA LR LR 08 31 17.9
comp=Z,70nm,19.8s,MS3.1,baz=240,slow=39
SCHQ Schefferville 40.41 49 LR LR 08 42 03.8
comp=Z,39nm,18.4s,MS3.3,baz=114,slow=38
BORG Borgarnes 59.56 29 LR LR 08 53 00.4
comp=Z,49nm,18.8s,MS3.7,baz=273,slow=37
CN2 Changchun 75.19 315 eP P 08 28 10.7 +1.3

HHC Hu-ho-hao-te 84.44 321 eP P 08 28 58.4 -1.1
HHC AP pP 08 29 03.0 -5.1
HHC XP sP 08 29 05.8 -5.4
HHC PP PP 08 32 14.0 -0.1
HHC SKS 08 39 18.0
HHC S S 08 39 21.0 -3.1
HHC AMB AMB
comp=Z,65nm,6.2s
LZH Lanzhou 91.89 323 eP P 08 29 33.7 -1.6
LZH AP pP 08 29 38.0 -5.9
LZH XP sP 08 29 41.5 -5.5
LZH AMB AMB
comp=Z,56nm,4.0s
CD2 Chengdu 96.16 320 eP P 08 29 54.7 -0.3
CD2 AP pP 08 29 59.0 -4.7
CD2 XP sP 08 30 03.0 -3.7
CD2 AMB AMB
comp=Z,20nm,5.2s
GYA Guiyang 98.24 315 P P 08 30 05.2 +0.7
KMI Kunming 101.40 317 P Pdif 08 30 21.0 +2.7
KMI AP 08 30 25.8

IDC 08 08:21:42.0±1.9,273S×3640E,h0km,mb3.7/3,mb1 3.7/3, mb1mx3.4/21,mbtmp3.7/3,MS3.2/8,Ms1 3.2/8, ms1mx3.0/42,Error ellipse: s-maj=45.2km s-min=17.3km az=132.0,Tanzania

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
KMBO Kilima Mbogo 1.80 28 Pg Pg 08 22 15.2 -1.4
75nm,0.3s,baz=208,slow=15,SNR=490
KMBO Lg 08 22 39.1
322nm,0.3s,baz=85,slow=23,SNR=31
LSZ Lusaka 14.87 212 LR LR 08 30 48.2
comp=Z,64nm,18.1s,baz=236,slow=37
LBTB Lobatse 24.48 204 LR LR 08 37 30.2
comp=Z,38nm,20.1s,baz=136,slow=39
TSUM Tsumeb 24.63 227 LR LR 08 37 57.3
comp=Z,30nm,18.8s,baz=330,slow=40
EIL Elat 32.24 358 LR LR 08 40 10.1
comp=Z,25nm,19.0s,baz=106,slow=34
TORD Torodi Ar. Bea 37.88 295 P P 08 29 01.0 -0.1
0.5nm,1.0s,baz=119,slow=8.7,SNR=2.5
TORD LR LR 08 44 34.6
comp=Z,42nm,20.3s,baz=125,slow=36
DBIC Dimbokro 42.23 283 LR LR 08 47 42.0
comp=Z,42nm,19.0s,baz=151,slow=37
KEST Kesra 45.87 329 LR LR 08 49 40.4
comp=Z,38nm,18.3s,baz=59,slow=37
MDT Midelt 52.47 316 LR LR 08 54 11.6
comp=Z,45nm,19.0s,baz=12,slow=37
MKAR Makanchi Array 63.68 33 P P 08 32 14.9 -0.3
1.7nm,0.9s,baz=227,slow=6.2,SNR=9.2
KURK Kurchatov 64.29 28 P P 08 32 18.9 -0.2
0.8nm,0.8s,baz=228,slow=7.6,SNR=5.7

LDG 08 08:34:09.9±0.3, 1369S×16749E, h10km, Mb4.6/1, Error ellipse: s-maj=56.4km s-min=10.8km az=89.0
NEIC 08 08:34:13.4±0.5, 1391S×16747E, h35km, mb4.8/5, Error ellipse: s-maj=26.7km s-min=10.0km az=136.0
ISCJB 08 08:34:21.0±3.6, 143S±01×1675E±02, h118km±29km, mb4.6/12, Error ellipse: s-maj=27.3km s-min=19.7km az=145.2
IDC 08 08:34:45.8±14.0, 1429S×16672E, h308km±117km, mb4.0/9, mb1 4.1/9, mb1mx3.8/18, mbtmp4.0/9, MS2.6/1, Ms1 2.6/1, ms1mx2.2/31, Error ellipse: s-maj=82.6km s-min=35.0km az=92.0

ISC 08 08:34:21.7±3.0,143S±01×1676E±02,h117km±24km,n58, σ1°93/26,mb4.7/12,17C,Vanuatu Islands

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
DZM Mont Dzumac 7.80 188 eP Pn 08 36 13.4 +0.9
DZM eS Sn 08 37 37.7 -1.5
HNR Honiara 8.91 302 LR LR 08 39 34.1
comp=Z,42nm,21.6s,baz=171,slow=35
CTA Charters Tower 21.16 251 eP P 08 38 57.0 -0.8
6.9nm,0.8s,mb4.0
CTA Charters Tower 21.16 251 P P 08 39 00.6 +2.8
10nm,0.9s,mb4.2,baz=77,slow=12,SNR=9.7
CNB Canberra Magne 26.58 215 eP P 08 39 51.7 +2.8
STKA Stephens Creek 29.50 229 ⇑iP P 08 40 17.1 +2.1
12nm,0.6s,mb4.7
STKA Stephens Creek 29.50 229 P P 08 40 17.2 +2.2
16nm,0.6s,mb4.8,baz=46,slow=7.8,SNR=45
TOO Toolangi 30.37 216 eP P 08 40 24.8 +2.2
WB2 Warramunga Arr 32.21 255 ⇑iP P 08 40 38.4 -0.7
WRAB Tennant Creek 32.22 255 eP P 08 40 38.2 -0.8
3.9nm,0.4s,mb4.5
WRA Warramunga Arr 32.23 255 P P 08 40 38.6 -0.6
7.8nm,0.6s,mb4.7,baz=86,slow=9.5,SNR=140
WRA PcP PcP 08 43 24.3 -0.9
0.7nm,1.0s,baz=80,slow=4.0,SNR=5.0
ASAR Alice Springs 33.11 249 P P 08 40 46.5 -0.4
7.0nm,0.5s,mb4.8,baz=76,slow=9.3,SNR=139
ASAR PcP PcP 08 43 25.9 -1.6
0.6nm,0.6s,baz=73,slow=2.5,SNR=4.2
FORT Forrest 39.77 239 eP P 08 41 43.4 0.0
18nm,0.5s,mb5.2
FITZ Fitzroy Crossi 40.40 259 eP P 08 41 48.0 -0.6
8.5nm,0.6s,mb4.8
FITZ Fitzroy Crossi 40.40 259 P P 08 41 48.4 -0.3
4.7nm,0.7s,mb4.4,baz=102,slow=8.0,SNR=15
KLBR Kellerberrin 48.58 240 eP P 08 42 53.1 -0.4
1.2nm,1.8s,mb5.5
NWAO Narrogin (SRO) 49.23 239 P P 08 42 58.2 -0.3
10nm,0.7s,mb4.8,baz=82,slow=5.6,SNR=7.8
NWAO Narrogin (SRO) 49.23 239 P P 08 42 58.2 -0.3
SONM Songino Array 82.34 323 P P 08 46 30.9 +0.5
0.6nm,0.4s,mb3.8,baz=144,slow=5.0,SNR=4.7
SNAA Sanae 93.98 183 e P 08 47 25.5 -0.6
VNA3 Neumayer Olymp 94.64 181 e P 08 47 28.7 -0.4
VNA3 e 08 47 31.8
VNA2 Neumayer--Watz 94.91 182 e P 08 47 30.3 -0.1
VNA2 e 08 47 33.0
MK31 Makanchi Array 97.11 316 eP P 08 47 40.6 -0.1
MKAR Makanchi Array 97.11 316 P P 08 47 41.1 +0.4
1.5nm,1.7s,mb4.5,baz=98,slow=6.6,SNR=13
ZALV Zalesovo Beam 97.23 324 P P 08 47 40.2 -0.9
1.6nm,0.8s,mb4.5,baz=122,slow=5.6,SNR=4.4
ZALV Zalesovo Beam 97.23 324 P P 08 47 40.2 -0.9
ARCES ARCESS Array B 119.92 346 PKP PKPdf 08 52 57.5 -0.3
1.6nm,0.6s,baz=76,slow=2.4,SNR=7.0
MIV Mineville/With 120.51 47 ePKPdf PKPdf 08 52 53.1 -6.5
GERES GERESS Array B 139.41 333 PKP PKPdf 08 53 36.4 +1.2
1.3nm,0.8s,baz=96,slow=3.9,SNR=2.5
CABF La Chapelle 144.25 338 ePKP1 PKPdf 08 53 43.3 -0.7
22nm,1.1s
LOR Lormes 144.44 341 ePKP1 PKPdf 08 53 43.5 -0.8
12nm,0.9s
GRR Gorron 144.70 347 ⇑iPKP1 PKPdf 08 53 44.2 -0.5
22nm,0.9s
SSF Saint Saulge 144.74 341 ⇑iPKP1 PKPdf 08 53 44.7 -0.1
17nm,0.8s
LPL La Plagne 144.93 336 ePKP1 PKPdf 08 53 45.8 +0.6
14nm,0.8s
LPG La Plagne 144.94 336 ⇑iPKP1 PKPdf 08 53 45.8 +0.6
20nm,0.8s
SMF Signal de Mont 145.00 340 ⇑iPKP1 PKPdf 08 53 45.3 0.0
32nm,1.0s
AVF Avril sur Loir 145.03 341 ⇑iPKP1 PKPbc 08 53 45.2 +0.3
24nm,1.1s
SGMF Saint Gilles 145.18 348 ⇑iPKP1 PKPbc 08 53 45.7 +0.3
8.8nm,0.4s
BGF Bois d'Agland 145.39 341 ⇑iPKP1 PKPbc 08 53 46.5 +0.4
18nm,0.8s
MBDF Montbardon 145.57 336 ePKP1 PKPbc 08 53 47.1 +0.4
20nm,0.9s
ORIF Oris-en-Rattie 145.76 337 ⇑iPKP1 PKPbc 08 53 48.1 +0.8
26nm,0.7s
TCF Toulx Ste Croi 145.83 342 ⇑iPKP1 PKPbc 08 53 47.9 +0.5
SBF Sospel 146.00 334 ePKP1 PKPbc 08 53 48.1 0.0
31nm,0.8s
MFF Saint Martin d 146.20 345 ⇑iPKP1 PKPbc 08 53 49.0 +0.5
13nm,0.7s
VIVF Saint-Julien-l 146.27 338 ePKP1 PKPbc 08 53 49.4 +0.6
14nm,1.1s
PGF Pioggiola 146.34 331 ⇑iPKP1 PKPbc 08 53 49.4 +0.3
28nm,0.9s
FRF La Foret Royal 146.58 334 ⇑iPKP1 PKPbc 08 53 49.9 +0.1
32nm,1.0s
SMRF Simiane la Rot 146.67 336 ePKP1 PKPbc 08 53 49.6 -0.4
12nm,0.8s
LMR La Mourre 146.82 334 ePKP1 PKPbc 08 53 50.7 +0.2
27nm,1.1s
RJF Les Rejaudoux 146.93 342 ⇑iPKP1 PKPbc 08 53 51.3 +0.6
CAF Calviac 147.10 341 ePKP1 PKPbc 08 53 51.9 +0.7
LASF Ste Croix 147.24 338 ⇑iPKP1 PKPbc 08 53 52.3 +0.7
13nm,0.8s
LFF La Frestale 147.49 342 ePKP1 PKPbc 08 53 52.8 +0.6
MTLF Montolieu 148.46 339 ⇑iPKP1 PKPbc 08 53 55.5 +0.6
17nm,0.9s
EPF Esparros 149.34 341 ePKP1 PKPbc 08 53 58.1 +1.0
14nm,0.9s
ETSF Etsaut 149.73 343 ePKP1 PKPbc 08 53 59.3 +1.2
2.8nm,0.4s
KEST Kesra 151.08 321 PKPbc PKPbc 08 54 02.4 +0.8
3.3nm,0.8s,baz=10.0,slow=2.3,SNR=5.2
TORD Torodi Ar. Bea 166.24 267 PKPab PKPab 08 55 14.8 -0.9
0.9nm,0.8s,baz=116,slow=4.1,SNR=3.6

ATH 08 08:38:20.6, 4008N×2267E, h27km±1km, MD3.3/6
CSEM 08 08:38:21.3±0.1, 4007N×2270E, h15km, ML3.5, Error ellipse: s-maj=1.3km s-min=1.1km az=149.0
NEIC 08 08:38:21.5, 4007N×2271E, h6km, ML3.5(THE), After THE.
THE 08 08:38:21.5, 4007N×2271E, h5km, ML3.5
ISCJB 08 08:38:21.2±0.4, 4006N±002×2270E±003, h20km±4km, Error ellipse: s-maj=4.4km s-min=3.8km az=44.3
SKO 08 08:38:22.5, 4012N×2272E, h0km

ISC 08 08:38:20.7±0.4,4007N±002×2267E±003,h19km±3km,n35, σ0°82/56,Greece

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
LIT Litokhoron 0.14 282 ePg Pg 08 38 25.1 +0.1
LIT eSg Sg 08 38 27.8 0.0
THE Thessaloniki 0.60 22 ePg Pg 08 38 32.7 0.0
THE eSg Sg 08 38 41.3 +0.4
HORT Hortiatis 0.62 32 ePg Pg 08 38 32.9 -0.1
HORT eSg Sg 08 38 41.8 +0.5
PLG Polygyros 0.67 63 ePg Pg 08 38 33.6 -0.3
PLG eSg Sg 08 38 42.6 -0.1
PLG Polygyros 0.67 63 ePn Pn 08 38 33.8 -1.4
PLG eSg Sg 08 38 42.7 -0.1
PLG eSn Sb 08 38 43.0 +0.4
THL Klokotos Trika 0.71 225 ePg Pg 08 38 34.9 +0.1
THL Klokotos Trika 0.71 225 ePN Pn 08 38 35.1 -0.7
THL eSN Sn 08 38 45.7 -0.6
KZN Kozani 0.73 289 ePN Pn 08 38 35.1 -0.9
KZN eSN Sn 08 38 45.5 -1.1
KZN Kozani 0.73 289 ePn Pn 08 38 35.7 -0.3
KZN eSn Sn 08 38 45.0 -1.6
PAIG Paliouri 0.79 100 ePg Pg 08 38 35.7 -0.4
PAIG eSg Sg 08 38 46.9 +0.3
XOR Xorichti 0.81 150 ePg Pg 08 38 36.7 +0.1
NEO Neokhori 0.87 151 ePN Pn 08 38 37.7 -0.3
NEO eSN Sn 08 38 50.2 0.0
NEO Neokhori 0.87 151 ePn Pn 08 38 38.0 0.0
NEO eSn Sn 08 38 49.5 -0.7
GRG Griva 0.91 347 ePg Pg 08 38 38.4 -0.1
SOH Sokhos 0.91 35 ePg Pg 08 38 37.9 -0.6
OUR Ouranopolis 1.04 75 ePg Pg 08 38 40.0 -0.8
AGG Agios Georgios 1.08 194 ePg Pg 08 38 41.9 +0.3
FNA Florina 1.22 306 ePg Pg 08 38 44.6 +0.3
VAY Valandovo 1.25 357 ePg Pg 08 38 43.0 -2.0
VAY eSg Sg 08 39 00.5 -0.8
VAY Valandovo 1.25 357 ePg Pg 08 38 42.9 -2.0
VAY eSg Sg 08 39 00.5 -0.8
EVR Evrytania 1.33 210 ePN Pn 08 38 45.8 +1.5
BIA Bitola 1.40 313 ePg Pg 08 38 48.1 +0.4
BIA eSg Sg 08 39 07.1 +1.2
BIA Bitola 1.40 313 ePg Pg 08 38 48.0 +0.3
BIA eSg Sg 08 39 07.1 +1.2
LKR Lokris 1.44 170 ePN Pn 08 38 46.8 +1.0
NVR Nevrokopi 1.57 35 ePn Pn 08 38 48.6 +1.1
NVR eSn Sn 08 39 07.9 +0.6
KRUS Krusevo 1.69 321 ePn Pn 08 38 52.6 +3.4
KRUS eSg Sg 08 39 16.2 +1.0
KRUS Krusevo 1.69 321 ePn Pn 08 38 52.6 +3.4
KRUS eSg Sg 08 39 16.1 +0.9
MMB Musomiste 1.72 28 iP Pn 08 38 49.8 +0.2
OHR Ohrid 1.76 307 ePn Pn 08 38 55.4 +5.2
OHR eSg Sg 08 39 17.4 -0.2
OHR Ohrid 1.76 307 ePn Pn 08 38 55.4 +5.1
OHR eSg Sg 08 39 17.3 -0.3
KKB Krupnik 1.82 10 iP Pn 08 38 51.5 +0.5
RZN Rozhen 2.24 43 iP Pn 08 38 57.7 +0.9
RDO Rodhopi 2.43 63 ePN Pn 08 39 00.4 +1.0
VTS Vitosha 2.55 9 iP Pn 08 38 59.0 -2.1
KDZ Kurdzhali 2.61 52 iP Pn 08 39 07.1 +5.2

IDC 08 08:39:34.4±0.4, 032N×9777E, h0km, mb4.7/30, mb1 4.8/31, mb1mx4.7/33, mbtmp4.8/31, ML5.1/1, MS4.7/19, Ms1 4.8/19, ms1mx4.6/34, Error ellipse: s-maj=15.8km s-min=10.6km az=45.0
ISCJB 08 08:39:36.8±0.2, 033N±003×9772E±003, h26km, mb5.1/142, MS5.0/51, Error ellipse: s-maj=4.2km s-min=3.4km az=30.6
DJA 08 08:39:36, 0.17N×97.35E, h30km, Mw5.6/7
BJI 08 08:39:36.3, 024N×9775E, h28km, mB5.4, mb5.2, Ms5.3, Msz5.1
MOS 08 08:39:37.9±1.0, 041N×9781E, h33km, mb5.3/64, MS4.8/22, Error ellipse: s-maj=9.8km s-min=4.9km az=114.2
GCMT 08 08:39:38.2±0.3, 002N×9739E, h35km±1km, MW5.2/68, Moment Tensor Solution. s56,c89; s68,c105; Duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr5.17±.22; Mθθ-3.05±.14; Mφφ-2.12±.18; Mrθ3.84±.18; Mrφ3.61±.12; Mθφ-3.22±.23; Best double couple: M0 7.58800×10^16 NP1:φs313.00000°, δ24.00000°, λ92.00000°. NP2: φs130.00000°, δ66.00000°, λ89.00000°. Principal axes: T 7.0610, Plg69.0000°, Azm38.0000°; N 1.0530, Plg1.0000°, Azm131.0000°; P -8.1140, Plg21.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 08 08:39:38.2±0.1, 029N×9775E, mb5.1/63 Error ellipse: s-maj=5.5km s-min=3.7km az=221.0

ISC 08 08:39:38.8±0.2,030N±003×9770E±003,h28km, h28km±1.0km:pP-P,n375,σ0°95/360,mb5.1/142,MS5.0/51, 30C-9D,Northern Sumatera

Code Station Name Δ° AZ° Phase ID Time Res
Op ISC h m s ISC
GSI Gunungsitoli 1.00 353 ⇑eP Pn 08 39 57.0 0.0
TRSI Tarutung 2.12 36 P Pn 08 40 12.6 +0.1
0.0nm,0.0s
PPI Padang Panjang 2.80 106 P Pn 08 40 21.7 -0.1
0.0nm,0.0s
RGRI Rengat 4.68 98 P Pn 08 40 53.9 +6.2
0.0nm,0.0s
FRIM Kepong 4.89 53 ⇑P Pn 08 40 51.3 +0.7
IPM Ipoh 5.32 39 ⇑P Pn 08 40 51.3 -5.1
IPM Ipoh 5.32 39 ⇑P Pn 08 40 58.2 +1.8
BSI Banda Aceh 5.69 335 P Pn 08 41 00.5 -1.0
218nm,0.8s
KGM Kluang 5.87 73 ⇓P Pn 08 41 05.5 +1.5
MYKOM Kota Tinggi 6.33 76 ⇓P Pn 08 41 11.4 +1.1
DSRI Dabo 6.92 96 P Pb 08 41 30.0 -8.4
171nm,0.7s
KTGM Kuala Trenggan 7.37 47 ⇑P Pn 08 41 25.8 +1.1
SNG Songkhla 7.42 23 P Pn 08 41 24.0 -1.4
1µm,0.9s
PKT Phuket 7.74 4 P Pn 08 41 29.0 -0.7
PPBI Pangkal Pinang 8.79 106 P Pn 08 41 47.8 +3.7
70nm,1.3s
KLI Kotabumi 8.80 126 P Pn 08 41 47.5 +3.2
444nm,1.0s
LEM Lembang 12.17 126 P Pn 08 42 30.3 -0.2
89nm,0.8s
COCO West Island 12.44 184 ePn Pn 08 42 34.9 +0.7
KSM Kuching 12.66 85 ⇑P Pn 08 42 39.2 +1.9
KSM Kuching 12.66 85 ePn Pn 08 42 38.3 +1.1
STKI Sintang 13.78 91 P Pn 08 42 57.8 +5.3
96nm,0.8s
BTM Bintulu 15.64 79 ⇑P Pn 08 43 19.5 +2.0
SJI Sawahan 16.14 120 P Pn 08 43 30.8 +6.9
52nm,1.3s
KKTK Khon Kaen 16.71 17 P Pn 08 43 30.0 -1.2

BDT Bhumibol Dam 16.88 4 P **Pn** **08 43 32.5 -0.8**
60nm,0.9s
CMAR Chiang Mai Arr 18.08 4 P **Pn** **08 43 46.8 -1.4**
2.3nm,0.3s,baz=193,slow=12,SNR=77
CMAR LR LR 08 51 32.2
comp=Z,3µm,18.6s,baz=189,slow=40
CMAR Chiang Mai Arr 18.08 4 P **Pn** **08 43 46.8 -1.3**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR MLR MLR
comp=Z,3µm,18.6s
PALK Pallekele 18.31 293 *e*Pn **Pn** **08 43 51.6 +0.6**
comp=Z,20nm,0.9s
CHG Chiang Mai 18.43 4 ⇑P **Pn** **08 43 50.7 -1.8**
comp=Z,44nm,0.8s
CHG SG **Sn** **08 47 29.4 +12**
CHTO Chiang Mai 18.43 4 *e*P **Pn** **08 43 50.7 -1.8**
CHTO *e* 08 47 19.6
CHTO pmax pmax
comp=Z,29nm,0.7s
CHTO Chiang Mai 18.43 4 *e*Pn **Pn** **08 43 50.7 -1.8**
comp=Z,29nm,0.7s
CHTO *e*Sn **Sn** **08 47 19.6 +1.9**
NANT Nan 18.62 9 ⇑P **Pn** **08 43 52.0 -2.6**
comp=Z,338nm,1.0s
KKM Kota Kinabalu 19.34 72 *e*P **Pn** **08 44 02.4 -1.1**
SDKM Sandakan 20.17 74 ⇑P **P** **08 44 11.9 +0.5**
KDM Kudat 20.19 71 ⇑P **P** **08 44 12.6 +1.2**
TSM Tawau 20.54 79 ⇓P **P** **08 44 15.5 +0.2**
MYLDM Lahad Datu 21.33 77 ⇓P **P** **08 44 25.0 +1.1**
QIZ Qiongzhong 22.10 32 ⇑P **P** **08 44 30.8 -1.2**
QIZ XP sP 08 44 41.8 -1.3
QIZ S **S** **08 48 36.9 +2.5**
QIZ XS sS 08 48 47.3 +0.8
QIZ AMB AMB
comp=Z,433nm,9.6s
QIZ LR LR
comp=E,4µm,13.8s
QIZ LR LR
comp=Z,2µm,12.4s,MS4.8
QIZ Qiongzhong 22.10 32 *e*P **P** **08 44 30.5 -1.5**
comp=Z,123nm,1.7s,mb5.1
TRD Trivandrum 22.21 292 *e*P **P** **08 44 33.2 -0.1**
TRD AMb AMB 08 44 56.9
comp=Z,62nm,1.0s,mb5.0
VIS Vishakhapatnam 22.35 322 *e*P **P** **08 44 35.7 +1.0**
VIS AMb AMB 08 44 45.4
comp=Z,97nm,1.4s,mb5.0
VIS *ex* x 08 48 39.4
KOD Kodaikanal 22.41 297 *e*P **P** **08 44 36.4 +1.0**
KOD AMb AMB 08 44 59.4
comp=Z,42nm,1.3s,mb4.7
KAPI Kappang 22.65 104 P **P** **08 44 37.3 -0.7**
comp=Z,31nm,1.1s,mb4.6,baz=286,slow=8.3,SNR=4.7
KAPI Kappang 22.65 104 *e*P **P** **08 44 38.0 0.0**
comp=Z,38nm,1.0s,mb4.8
CAL Calcutta 23.91 338 *e*P **P** **08 44 50.5 0.0**
CAL *ex* x 08 49 12.4
IMP Imphal 24.61 352 *ex* x 08 44 37.0
KMI Kunming 25.15 11 P **P** **08 45 02.9 +1.1**
KMI AP pP 08 45 13.0 +3.1
KMI XP sP 08 45 16.7 +3.4
KMI PP 08 45 43.4
KMI PPP 08 45 54.9
KMI S **S** **08 49 25.9 +0.7**
KMI XS sS 08 49 41.7 +3.2
KMI SS 08 50 25.3
KMI SSS 08 50 44.1
KMI AMB AMB
comp=Z,101nm,1.2s,mb5.2
KMI AMB AMB
comp=Z,865nm,5.1s
KMI LR LR
comp=N,7µm,15.9s,MS5.3
KMI LR LR
comp=E,2µm,13.4s,MS5.3
KMI LR LR
comp=Z,7µm,16.7s,MS5.3
HYB Hyderabad 25.38 313 *i* P **P** **08 45 05.5 +1.5**
HYB *e*pP pP 08 45 15.0 +3.0
HYB Hyderabad 25.38 313 *e*P **P** **08 45 05.5 +1.5**
HYB *e* pP 08 45 15.0 +3.0
SHL Shillong 25.73 348 ⇑*i*P **P** **08 45 08.0 +0.9**
SHL *e*S **S** **08 49 36.0 +1.5**
BOK Bokaro 26.01 335 *e*P **P** **08 45 10.4 +0.8**
BOK AMb AMB 08 45 12.2
comp=Z,71nm,0.7s,mb5.3
GYA Guiyang 27.40 18 ⇑*i*P **P** **08 45 21.7 -0.4**
GYA AP pP 08 45 30.7 +0.5
GYA XP sP 08 45 34.7 +1.1
GYA PP 08 46 10.0
GYA PCP PcP 08 48 43.0 +2.2
GYA S **S** **08 49 58.0 -2.7**
GYA XS sS 08 50 15.2 +1.0
GYA SS 08 51 21.4
GYA SCP ScP 08 52 20.3 +0.7
GYA SCS ScS 08 56 10.4 -0.9
GYA AMB AMB
comp=Z,40nm,0.9s,mb5.0
GYA AMB AMB
comp=Z,320nm,11.0s
GYA LR LR
comp=N,5µm,15.0s,MS5.3
GYA LR LR
comp=E,3µm,14.6s,MS5.3
GYA LR LR
comp=Z,5µm,15.8s,MS5.2
GOA Goa 27.99 304 *ex* x 08 46 44.7
GOA AMb AMB 08 47 00.6
comp=Z,49nm,1.4s,mb4.9
ODAN Odare 28.20 340 *e*P **P** **08 45 30.0 +0.7**
comp=Z,53nm,0.9s,mb5.1
TAPN Taplejung 28.55 341 *e*P **P** **08 45 33.8 +1.4**
comp=Z,97nm,0.9s,mb5.5
RAMN Ramite 28.56 339 *e*P **P** **08 45 33.7 +1.2**
comp=Z,34nm,0.7s,mb5.2
KAD Karad 28.66 307 *e*P **P** **08 45 31.9 -1.5**
JIRN Jiri 29.36 339 *e*P **P** **08 45 40.4 +0.9**
comp=Z,109nm,1.0s,mb5.5
PKI Pulchoki 29.57 337 *e*P **P** **08 45 41.9 +0.5**
POO Poona 29.61 309 *e*P **P** **08 45 41.2 -0.7**
POO AMb AMB 08 45 48.8
comp=Z,26nm,0.9s,mb5.0
GUN Gumba 29.70 339 *e*P **P** **08 45 43.6 +1.0**
comp=Z,105nm,0.7s,mb5.7
DMN Daman 29.72 337 *e*P **P** **08 45 43.4 +0.7**
comp=Z,89nm,0.8s,mb5.5
KKN Kakani 29.81 337 *e*P **P** **08 45 44.1 +0.5**
comp=Z,51nm,0.8s,mb5.3
LSA Lhasa 29.89 349 P **P** **08 45 45.2 +0.9**
LSA S **S** **08 50 36.7 -3.2**
LSA AMB AMB
comp=Z,30nm,1.0s,mb5.0
LSA AMB AMB
comp=Z,290nm,15.0s
LSA LR LR
comp=N,1µm,25.0s,MS4.6
LSA LR LR
comp=E,1µm,28.0s,MS4.6
LSA LR LR
comp=Z,2µm,28.0s,MS4.6
LSA Lhasa 29.89 349 *e*P **P** **08 45 45.6 +1.4**
LSA pmax pmax
comp=Z,41nm,0.8s,mb5.2
LSA Lhasa 29.89 349 *e*P **P** **08 45 45.6 +1.3**
comp=Z,41nm,0.8s,mb5.2
GKN Gorkha 30.25 337 *e*P **P** **08 45 48.1 +0.6**
comp=Z,85nm,0.9s,mb5.5
MBWA Marble Bar 30.31 136 *e*P **P** **08 45 49.2 +1.1**
comp=Z,22nm,1.4s,mb4.7
KOLN Koldanda 30.48 335 *e*P **P** **08 45 50.3 +0.9**
comp=Z,56nm,0.7s,mb5.4
DANN Dangsing 30.92 336 *e*P **P** **08 45 54.1 +0.8**
comp=Z,38nm,0.7s,mb5.3
CD2 Chengdu 30.98 10 P **P** **08 45 53.2 -0.6**
CD2 AP pP 08 46 01.5 -0.5
CD2 XP sP 08 46 04.5 -0.9
CD2 PP PP 08 46 55.4 -8.7
CD2 PCP PcP 08 48 49.1 -0.6
CD2 S **S** **08 50 54.7 -2.2**
CD2 XS sS 08 51 07.4 -2.9
CD2 PCS PcS 08 52 31.7 -2.1
CD2 SS SS 08 52 40.2 -30
CD2 SCS ScS 08 56 24.3 -3.5
CD2 AMB AMB
comp=Z,40nm,0.5s,mb5.5
CD2 AMB AMB
comp=Z,270nm,7.2s
CD2 LR LR
comp=N,5µm,14.4s,MS5.5
CD2 LR LR
comp=E,6µm,15.6s,MS5.5
CD2 LR LR
comp=Z,6µm,14.4s,MS5.4
QZH Quanzhou 31.75 38 ⇑*i*P **P** **08 46 00.0 -0.8**
QZH S **S** **08 51 09.3 +0.1**
QZH AMB AMB
comp=Z,80nm,0.8s,mb5.6
QZH LR LR
comp=N,5µm,15.9s
QZH LR LR
comp=E,2µm,10.1s
QZH LR LR
comp=Z,4µm,17.2s,MS5.1
FITZ Fitzroy Crossi 33.01 125 ⇑*i*P **P** **08 46 10.3 -1.5**
comp=Z,23nm,0.9s,mb5.1
FITZ Fitzroy Crossi 33.01 125 P **P** **08 46 10.5 -1.3**
comp=Z,11nm,0.8s,mb4.9,baz=304,slow=6.4,SNR=28
NACB Ninganchiao 33.16 43 *e*P **P** **08 46 13.9 +0.9**
comp=Z,15nm,0.8s,mb5.0
WHN Wuhan 33.98 26 ⇑P **P** **08 46 20.6 +0.4**
WHN S **S** **08 51 44.0 +0.3**
WHN AMB AMB
comp=Z,49nm,0.9s,mb5.4
WHN LR LR
comp=N,1µm,12.0s,MS5.2
WHN LR LR
comp=E,2µm,12.0s,MS5.2
AJM Ajmer 34.20 321 *e*P **P** **08 46 21.5 -0.6**
KUDL Kundal 34.34 326 *e*P Px 08 47 15.1
KUDL *e*S x 08 48 09.6
NDI New Delhi 34.35 327 *ex* **P** **08 46 22.0 -1.4**
JOSI Joshimath 34.67 332 *e*P **P** **08 46 26.6 +0.4**
JOSI *e*S x 08 46 42.5
JOSI AML AML 08 46 45.4
comp=N,492nm,0.2s
JOSI AML AML 08 46 45.5
comp=E,630nm,0.3s
XAN Xi'an 35.17 16 P **P** **08 46 29.7 -0.7**
XAN AP pP 08 46 36.8 -1.8
XAN XP sP 08 46 40.4 -1.6
XAN S **S** **08 52 00.6 -1.4**
XAN XS sS 08 52 12.2 -3.3
XAN SS SS 08 54 16.9 -19
XAN AMB AMB
comp=Z,136nm,0.9s,mb5.9
XAN LR LR
comp=N,1µm,14.5s,MS5.0
XAN LR LR
comp=E,2µm,13.5s,MS5.0
XAN LR LR
comp=Z,5µm,14.0s,MS5.4
DDI Dehra Dun 35.22 330 *ex* **P** **08 46 31.6 +0.7**
LZH Lanzhou 36.06 8 ⇓P **P** **08 46 38.0 0.0**
LZH AP pP 08 46 49.3 +3.1
LZH XP sP 08 46 53.1 +3.5
LZH PP PP 08 48 01.6 +1.3
LZH S **S** **08 52 15.0 -0.5**
LZH XS sS 08 52 29.1 +0.1
LZH SS SS 08 54 43.4 -10
LZH AMB AMB
comp=Z,29nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,129nm,4.2s
LZH LR LR
comp=E,3µm,14.6s
LZH LR LR
comp=Z,3µm,16.4s,MS5.1
KLP Kalpa 36.11 331 *e*P **P** **08 46 38.8 +0.3**
KLP *e*S x 08 47 07.2
KLP AML AML 08 47 28.0
comp=N,223nm,0.3s
KLP AML AML 08 47 28.2
comp=E,342nm,0.3s
SMLA Simla 36.31 329 *i* P **P** **08 46 39.9 -0.4**
SDNR Sundarnagar 36.71 330 *ex* **P** **08 46 42.6 -1.1**
SDNR *ex* x 08 47 47.0
KAKA Kakadu 36.80 112 *e*P **P** **08 46 41.6 -3.1**
comp=E,4.6nm,0.4s,mb4.7
NJ2 Nanjing 37.37 30 *e*P **P** **08 46 49.3 0.0**
NJ2 AP pP 08 46 56.6 -0.9
NJ2 XP sP 08 46 59.6 -1.3
NJ2 PP PP 08 48 17.6 +2.7
NJ2 S **S** **08 52 36.0 +0.3**
NJ2 XS sS 08 52 48.0 -1.3
NJ2 AMB AMB
comp=Z,30nm,0.8s,mb5.2
NJ2 AMB AMB
comp=Z,160nm,4.7s
NJ2 LR LR
comp=N,1µm,15.1s,MS5.1
NJ2 LR LR
comp=E,2µm,13.9s,MS5.1
NJ2 LR LR
comp=Z,2µm,13.9s,MS5.0
NWAO Narrogin (SRO) 37.84 153 *e*P **P** **08 46 53.3 +0.1**
NWAO pmax pmax
comp=Z,71nm,1.5s
NWAO Narrogin (SRO) 37.84 153 *e*P **P** **08 46 53.3 +0.1**
comp=Z,71nm,1.5s,mb5.2
SSE Sheshan 37.87 34 P **P** **08 46 53.5 0.0**
SSE XP sP 08 47 06.2 +1.1
SSE PP PP 08 48 20.8 +0.5
SSE S **S** **08 52 44.5 +1.3**
SSE XS sS 08 52 59.7 +2.9
SSE AMB AMB
comp=Z,51nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,249nm,5.8s
SSE LR LR
comp=N,2µm,14.4s,MS5.2
SSE LR LR
comp=E,2µm,14.4s,MS5.2
SSE LR LR
comp=Z,4µm,15.4s,MS5.4
THN Thein Dam 38.10 329 *e*P **P** **08 46 54.5 -0.9**
GTA Gaotai 38.97 3 P **P** **08 47 02.3 -0.3**
GTA AP pP 08 47 11.9 +1.1
GTA XP sP 08 47 16.1 +1.9
GTA PP PP 08 48 36.3 +4.0
GTA S **S** **08 53 00.7 +1.1**
GTA XS sS 08 53 16.0 +2.8
GTA SS SS 08 55 48.2 -4.0
GTA SCS ScS 08 57 05.7 -4.8
GTA AMB AMB
comp=Z,17nm,1.2s,mb4.7
GTA AMB AMB
comp=Z,301nm,6.3s
GTA LR LR
comp=N,921nm,21.9s,MS5.0
GTA LR LR
comp=E,2µm,19.8s,MS5.0
GTA LR LR
comp=Z,2µm,20.7s,MS4.8
JOW Kunigami 39.50 46 P **P** **08 47 06.2 -1.0**
comp=Z,6.3nm,0.5s,mb4.6,baz=232,slow=12,SNR=3.8
TIY Taiyuan 39.63 18 *e*P **P** **08 47 06.6 -1.6**
TIY XP sP 08 47 20.4 +0.6
TIY PP PP 08 48 43.0 +3.5
TIY S **S** **08 53 07.4 -2.2**
TIY XS sS 08 53 23.5 +0.2
TIY AMB AMB
comp=Z,301nm,3.1s
TIY LR LR
comp=N,3µm,14.3s,MS5.3
TIY LR LR
comp=E,1µm,12.6s,MS5.3
TIY LR LR
comp=Z,2µm,13.7s,MS5.1
WRA Warramunga Arr 41.14 121 P **P** **08 47 19.7 -1.3**
comp=Z,15nm,0.6s,mb4.8,baz=303,slow=9.0,SNR=174
WRA S **S** **08 53 28.5 -4.3**
comp=Z,2.5nm,1.1s,baz=291,slow=19,SNR=4.2
WRA LR LR 09 07 07.5
comp=Z,926nm,20.7s,MS4.6,baz=285,slow=40
WRA Warramunga Arr 41.14 121 P **P** **08 47 19.7 -1.3**
WRA S **S** **08 53 28.5 -4.2**
WRA pmax pmax
comp=Z,15nm,0.6s
WRA smax
comp=N,3.0nm,1.1s
WRA MLR MLR
comp=Z,926nm,20.7s
WRAB Tennant Creek 41.15 121 P **P** **08 47 19.0 -2.0**
comp=Z,226nm,0.7s,mb5.9,SNR=11
WRAB Tennant Creek 41.15 121 *c i*P **P** **08 47 19.7 -1.3**
WRAB Tennant Creek 41.15 121 *e*P **P** **08 47 19.8 -1.2**
comp=Z,26nm,0.8s,mb4.9
WB2 Warramunga Arr 41.15 121 ⇑*i*P **P** **08 47 19.6 -1.5**
BTO Baotou 41.65 14 *e*P **P** **08 47 24.6 -0.2**
HHC Hu-ho-hao-te 42.27 16 ⇑*i*P **P** **08 47 31.3 +1.4**
HHC AP pP 08 47 40.6 +2.4
HHC XP sP 08 47 45.0 +3.4
HHC PP PP 08 49 12.6 +4.4
HHC PCP PcP 08 49 25.2 +1.8
HHC SCP ScP 08 53 11.5 -0.9
HHC S **S** **08 53 50.4 +1.5**
HHC XS sS 08 54 06.2 +3.6
HHC SS SS 08 56 54.1 -3.9
HHC SCS ScS 08 57 28.1 -2.1
HHC AMB AMB
comp=Z,57nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,533nm,7.6s
HHC LR LR
comp=N,3µm,15.2s,MS5.4
HHC LR LR
comp=E,2µm,16.0s,MS5.4
HHC LR LR
comp=Z,3µm,15.5s,MS5.3
ASAR Alice Springs 42.46 127 P **P** **08 47 31.4 -0.4**
comp=Z,16nm,0.6s,mb4.8,baz=296,slow=7.9,SNR=149
ASAR S **S** **08 53 49.3 -2.9**
comp=Z,3.3nm,1.2s,baz=295,slow=15,SNR=9.2
ASAR Alice Springs 42.46 127 P **P** **08 47 31.4 -0.3**
ASAR S **S** **08 53 49.3 -2.9**
ASAR pmax pmax
comp=Z,16nm,0.6s
ASAR smax
comp=N,3.0nm,1.2s
BJT Baijiatuau 42.97 21 *e*P **P** **08 47 36.5 +1.0**
BJT pmax pmax
comp=Z,73nm,0.8s
BJT Baijiatuau 42.97 21 *e*P **P** **08 47 36.5 +1.0**
comp=Z,74nm,0.8s,mb5.5
BJI Beijing 42.99 21 P **P** **08 47 36.6 +0.9**
BJI PP PP 08 49 16.9 +1.0
BJI S **S** **08 54 02.2 +2.8**
BJI XS sS 08 54 15.9 +2.8
BJI AMB AMB
comp=Z,91nm,0.8s,mb5.6
BJI AMB AMB
comp=Z,823nm,3.7s
BJI LR LR
comp=N,2µm,16.9s,MS5.1
BJI LR LR
comp=E,1µm,16.9s,MS5.1
BJI LR LR
comp=Z,985nm,17.4s,MS4.8
KBL Kabul 43.33 325 *e*P **P** **08 47 38.4 -0.2**
KBL pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
KBL Kabul 43.33 325 *e*P **P** **08 47 38.4 -0.2**
comp=Z,6.5nm,0.8s,mb4.4
DL2 Dalian 44.24 27 ⇑*i*P **P** **08 47 46.1 +0.3**
DL2 S **S** **08 54 21.6 +3.9**
DL2 AMB AMB
comp=Z,60nm,0.7s,mb5.4
DL2 AMB AMB
comp=Z,290nm,3.9s
DL2 LR LR
comp=N,1µm,13.6s,MS4.9
DL2 LR LR
comp=E,300nm,14.6s,MS4.9
DL2 LR LR
comp=Z,1µm,15.0s,MS4.9
WMQ Urumqi 44.24 350 P **P** **08 47 46.2 +0.5**
WMQ AP pP 08 47 54.0 0.0
WMQ XP sP 08 47 57.0 -0.4
WMQ PCP PcP 08 49 29.0 -1.0
WMQ PCS PcS 08 53 19.0 -4.0
WMQ S **S** **08 54 18.0 +0.4**
WMQ XS sS 08 54 31.5 +0.2
WMQ SCS ScS 08 57 42.0 -0.3
WMQ AMB AMB
comp=Z,31nm,1.1s,mb5.0
WMQ AMB AMB
comp=Z,400nm,4.6s
WMQ LR LR
comp=N,1µm,22.4s,MS5.1
WMQ LR LR
comp=E,2µm,18.8s,MS5.1
WMQ LR LR
comp=Z,2µm,25.2s
KSRS Korea Array 46.31 34 P **P** **08 48 01.9 -0.3**
comp=Z,30nm,0.7s,mb5.3,baz=220,slow=8.7,SNR=99
KSRS LR LR 09 09 57.1
comp=Z,1µm,18.6s,MS4.9,baz=223,slow=39
KSRS Korea Array 46.31 34 P **P** **08 48 02.0 -0.2**
KSRS pmax pmax
comp=Z,30nm,0.7s,mb5.3
KSRS MLR MLR
comp=Z,1µm,18.6s,MS4.9
UCH Uchtor 46.66 336 *e*P **P** **08 48 06.7 +1.7**
comp=Z,33nm,0.3s,mb5.7
TKM2 Tokmak 2 46.83 338 *e*P **P** **08 48 07.1 +0.9**
TKM2 pmax pmax
comp=Z,18nm,1.0s,mb5.0
TKM2 Tokmak 2 46.83 338 *e*P **P** **08 48 07.1 +0.9**
comp=Z,18nm,1.0s,mb5.0
AML Almayashu 46.92 336 *e*P **P** **08 48 08.1 +1.2**
comp=Z,12nm,0.8s,mb4.9
FRU Bishkek 47.13 337 *e*P **P** **08 48 08.0 -0.6**
FRU *e* 08 48 26.0
FRU pmax pmax
comp=Z,110nm,2.5s,mb5.3
FRU MLR MLR
comp=E,1µm,18.0s
EKS2 Erkin-Say 47.33 336 *e*P **P** **08 48 11.3 +1.2**
comp=E,17nm,0.9s,mb5.0
SNY Shenyang 47.48 26 ⇑P **P** **08 48 10.8 -0.5**
SNY AMB AMB
comp=Z,34nm,0.9s,mb5.3
SNY AMB AMB
comp=Z,587nm,3.6s
SNY LR LR
comp=N,2µm,18.3s,MS5.3
SNY LR LR
comp=E,2µm,15.7s,MS5.3
SNY LR LR
comp=Z,3µm,13.8s,MS5.4
SONM Songino Array 47.94 8 P **P** **08 48 15.6 +0.8**
comp=Z,33nm,0.7s,mb5.5,baz=190,slow=9.1,SNR=185
SONM PcP PcP 08 49 43.1 +0.3
comp=Z,6.0nm,0.6s,baz=179,slow=3.7,SNR=4.9
SONM LR LR 09 11 26.2
comp=Z,2µm,18.1s,MS5.2,baz=190,slow=40
SONM Songino Array 47.94 8 P **P** **08 48 15.6 +0.8**
SONM 08 49 43.1
SONM pmax pmax
comp=Z,33nm,0.7s
SONM pmax pmax
comp=Z,6.0nm,0.6s
SONM MLR MLR
comp=Z,2µm,18.1s
ULN Ulaanbaatar 48.06 8 ⇑*e*P **P** **08 48 16.3 +0.5**
ULN Ulaanbaatar 48.06 8 *e*P **P** **08 48 16.5 +0.7**
comp=Z,27nm,0.9s,mb5.3
MK31 Makanchi Array 48.23 346 *i* P **P** **08 48 17.1 +0.1**
MK31 pmax pmax
comp=Z,32nm,0.7s,mb5.5
MK31 Makanchi Array 48.23 346 *e*P **P** **08 48 17.3 +0.3**
MKAR Makanchi Array 48.23 346 P **P** **08 48 17.6 +0.5**
comp=Z,35nm,0.7s,mb5.5,baz=156,slow=7.7,SNR=244
MKAR LR LR 09 10 59.1
comp=Z,488nm,21.8s,MS4.4,baz=158,slow=39
MKAR Makanchi Array 48.23 346 P **P** **08 48 17.6 +0.6**
MKAR pmax pmax
comp=Z,35nm,0.7s
MKAR MLR MLR
comp=Z,488nm,21.8s
KK31 Karatay Array 49.07 334 P **P** **08 48 23.2 -0.4**
KK31 pmax pmax
comp=Z,17nm,1.2s,mb5.0
CN2 Changchun 49.88 26 ⇑P **P** **08 48 29.1 -0.6**
CN2 *e*AP pP 08 48 38.9 +0.7

CN2 eXP sP 08 48 43.0 +1.5
CN2 eS **S** **08 55 35.9 -2.2**
CN2 AMB AMB
comp=Z,30nm,0.7s,mb5.4
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2µm,16.0s,MS5.3
CN2 LR LR
comp=E,2µm,16.0s,MS5.3
CN2 LR LR
comp=Z,2µm,15.0s,MS5.2
ZAK Zakamensk 50.12 5 *i* P **P** **08 48 31.5 +0.1**
ZAK *e* 08 50 31.7
ZAK pmax pmax
comp=Z,11nm,0.9s,mb4.9
PMG Port Moresby 50.17 102 *e*P **P** **08 48 32.0 -0.5**
PMG *e**PP pP 08 48 39.7 -1.3
PMG pmax pmax
comp=Z,67nm,0.7s
PMG Port Moresby 50.17 102 *e*P **P** **08 48 32.0 -0.5**
comp=Z,67nm,0.7s,mb5.8
PMG *e*pP pP 08 48 39.7 -1.3
JHJ Hachijo jima 2 51.27 46 LR LR 09 10 05.3
comp=Z,456nm,18.9s,MS4.5,baz=50,slow=36
TLY Talaya 51.44 5 P **P** **08 48 42.9 +1.5**
comp=Z,212nm,0.7s,mb6.2,SNR=14
TLY Talaya 51.44 5 *c i* P **P** **08 48 42.3 +0.9**
TLY *e* 08 48 56.7
TLY *e* 08 50 38.7
TLY eS **S** **08 56 01.3 +1.9**
TLY pmax pmax
comp=Z,23nm,0.7s,mb5.2
TLY MLR MLR
comp=Z,2µm,15.0s,MS5.2
TLY Talaya 51.44 5 *e*P **P** **08 48 42.4 +1.1**
comp=Z,25nm,0.7s,mb5.2
CTA Charters Tower 51.66 116 *e*P **P** **08 48 42.2 -1.4**
comp=Z,4.3nm,0.8s,mb4.4
CTA Charters Tower 51.66 116 P **P** **08 48 42.5 -1.1**
comp=Z,7.3nm,0.9s,mb4.6,baz=291,slow=7.6,SNR=6.5
CTA LR LR 09 13 57.3
comp=Z,1µm,20.1s,MS5.0,baz=286,slow=40
CTA Charters Tower 51.66 116 *e*P **P** **08 48 42.2 -1.4**
CTA pmax pmax
comp=Z,4.0nm,0.8s
CTAO Charters Tower 51.66 116 *e*P **P** **08 48 41.8 -1.8**
CTAO pmax pmax
comp=Z,78nm,2.0s,mb5.3
CTAO Charters Tower 51.66 116 *e*P **P** **08 48 41.8 -1.8**
comp=Z,78nm,2.0s,mb5.3
MJAR Matsushiro Arr 52.02 42 P **P** **08 48 44.6 -1.4**
comp=Z,6.9nm,1.0s,mb4.6,baz=220,slow=6.8,SNR=16
MJAR LR LR 09 14 07.6
comp=Z,833nm,19.1s,MS4.8,baz=255,slow=40
MJAR Matsushiro Arr 52.02 42 P **P** **08 48 44.6 -1.4**
MJAR pmax pmax
comp=Z,7.0nm,1.0s
MJAR MLR MLR
comp=Z,833nm,19.1s
IRK Irkutsk 52.05 5 *i* P **P** **08 48 46.1 +0.2**
IRK *e* 08 50 47.3
IRK eS **S** **08 56 14.7 +6.9**
IRK pmax pmax
comp=Z,74nm,2.6s,mb5.2
HIA Hailar 52.33 18 *e*P **P** **08 48 48.4 +0.4**
HIA pmax pmax
comp=Z,22nm,0.8s
HIA Hailar 52.33 18 *e*P **P** **08 48 48.4 +0.3**
comp=Z,22nm,0.8s,mb5.1
STKA Stephens Creek 52.39 132 *e*P **P** **08 48 48.7 -0.2**
comp=Z,10nm,0.9s,mb4.8
STKA Stephens Creek 52.39 132 P **P** **08 48 48.7 -0.1**
comp=Z,11nm,1.0s,mb4.8,baz=314,slow=7.1,SNR=10
STKA LR LR 09 12 34.3
comp=Z,2µm,21.8s,MS5.1,baz=284,slow=38
MDJ Mudanjiang 52.41 28 P **P** **08 48 49.9 +1.2**
MDJ AP pP 08 48 56.3 -0.9
MDJ XP sP 08 48 58.9 -1.6
MDJ PCP PcP 08 49 59.8 +0.4
MDJ SCP ScP 08 53 54.7 -0.2
MDJ PCS PcS 08 53 56.6 -1.0
MDJ S **S** **08 56 20.1 +7.1**
MDJ XS sS 08 56 26.7 -0.3
MDJ AMB AMB
comp=Z,12nm,1.4s,mb4.6
MDJ AMB AMB
comp=Z,228nm,7.1s
MDJ LR LR
comp=N,3µm,17.0s
MDJ LR LR
comp=Z,5µm,16.3s,MS5.6
VLA Vladivostok 52.47 31 P **P** **08 48 56.0 +6.8**
VLA pmax pmax
comp=Z,79nm,2.8s,mb5.2
VLA MLR MLR
comp=Z,1µm,13.3s,MS5.1
KURK Kurchatov 52.78 345 P **P** **08 48 51.3 -0.1**
comp=Z,211nm,0.7s,mb6.2,SNR=22
KURK Kurchatov 52.78 345 P **P** **08 48 51.1 -0.3**
comp=Z,19nm,0.6s,mb5.2,baz=164,slow=6.7,SNR=82
KURK LR LR 09 13 56.9
comp=Z,573nm,21.9s,MS4.6,baz=165,slow=39
KURK Kurchatov 52.78 345 *e*P **P** **08 48 51.5 +0.1**
KURK pmax pmax
comp=Z,33nm,0.9s,mb5.3
KURK Kurchatov 52.78 345 *e*P **P** **08 48 51.5 +0.1**
comp=Z,33nm,0.9s,mb5.3
OPO Ambohidratompo 53.02 246 P **P** **08 48 54.5 +0.8**
comp=Z,5.9nm,0.8s,mb4.5,baz=51,slow=5.7,SNR=8.9
CIT Chita 53.23 12 *e*P **P** **08 48 55.8 +1.1**
ZAL Zalesovo 54.51 351 P **P** **08 49 04.3 +0.3**
ZAL pmax pmax
comp=Z,65nm,0.6s
ZAL MLR MLR
comp=Z,388nm,19.4s
ZAA0 Zalesovo Array 54.52 351 *e*P **P** **08 49 04.2 +0.2**
ZAA0 *e*pP pP 08 49 11.9 -0.6
ZALV Zalesovo Beam 54.52 351 P **P** **08 49 04.2 +0.2**
comp=Z,65nm,0.6s,mb5.8,baz=180,slow=6.5,SNR=213
ZALV LR LR 09 15 53.6
comp=Z,388nm,19.4s,MS4.5,baz=8.6,slow=40
NVS Novosibirsk 55.64 350 *i* P **P** **08 49 11.4 -0.7**
NVS eS **S** **08 56 53.3 -3.0**
NVS pmax pmax
comp=N,23nm,0.8s
NVS pmax pmax
comp=E,15nm,0.8s
NVS pmax pmax
comp=Z,34nm,0.8s,mb5.4
NVS smax
comp=N,6.0nm,1.3s
NVS smax
comp=E,65nm,2.7s
RDF Al-Radifah 55.65 305 *e*P **P** **08 49 13.2 +0.5**
baz=305
RDF AMb AMB 08 49 21.5
comp=Z,51nm,1.0s,mb5.5,baz=305
NAY Al-Naaiem 56.02 306 *e*P **P** **08 49 15.2 -0.1**
baz=306
NAY AMb AMB 08 49 16.7
comp=Z,26nm,0.9s,mb5.3,baz=306
MIB Mutribah 56.14 306 *e*P **P** **08 49 16.4 +0.2**
baz=306
MIB AMb AMB 08 49 25.2
comp=Z,60nm,0.7s,mb5.7,baz=306
VOSK Vostochnaya 56.81 341 P **P** **08 49 18.9 -1.6**
VOSK pmax pmax
comp=Z,20nm,0.8s,mb5.2
KLR Kul'dur 56.83 26 *e*P **P** **08 49 16.6 -4.2**
KLR eS S 08 57 34.0 +22
KLR pmax pmax
comp=E,63nm,2.0s
KLR pmax pmax
comp=Z,110nm,2.0s,mb5.5
KLR MLR MLR
comp=E,2µm,14.0s
KLR MLR MLR
comp=Z,4µm,14.0s,MS5.7
BVA0 Borovoye Array 57.25 341 *i* P **P** **08 49 22.4 -1.3**
BVA0 pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
BVAR Borovoye Array 57.25 341 P **P** **08 49 23.0 -0.7**
comp=Z,16nm,0.7s,mb5.2,baz=143,slow=8.7,SNR=76
BVAR Borovoye Array 57.25 341 P **P** **08 49 23.0 -0.7**
BVAR pmax pmax
comp=Z,16nm,0.7s
BRVK Borovoye 57.32 341 P **P** **08 49 23.2 -0.9**
comp=Z,127nm,0.8s,mb6.0,SNR=6.0
BRVK Borovoye 57.32 341 *e*P **P** **08 49 23.6 -0.5**
BRVK pmax pmax
comp=Z,15nm,0.7s,mb5.1
BRVK Borovoye 57.32 341 *e*P **P** **08 49 23.6 -0.6**
comp=Z,15nm,0.7s,mb5.1
AB31 Akbulak array 58.53 332 P **P** **08 49 31.5 -1.2**
AB31 pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
BOD Bodaibo 58.80 10 *e*P **P** **08 49 34.4 0.0**
BOD pmax pmax
comp=Z,29nm,0.9s,mb5.3
ASAJ Asahikawa 59.08 36 LR LR 09 15 39.7
comp=Z,780nm,20.5s,MS4.8,baz=181,slow=37
CAN Canberra 59.45 132 P **P** **08 49 42.0 +2.6**
AKTK Aktyubinsk 60.25 332 P **P** **08 49 43.4 -1.1**
AKTO Aktyubinsk 60.25 332 P **P** **08 49 43.4 -1.1**
comp=Z,4.2nm,0.8s,mb4.5,baz=139,slow=7.9,SNR=14
AKTO Aktyubinsk 60.25 332 P **P** **08 49 43.4 -1.2**
AKTO pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
CLNS Chul'man 60.45 17 *e*P **P** **08 49 44.0 -1.8**
CLNS pmax pmax
comp=Z,17nm,0.8s,mb5.1
CLNS pmax pmax
comp=E,6.0nm,0.7s
CLNS pmax pmax
comp=N,10.0nm,0.8s
CLNS MLR MLR
comp=N,1.0nm,16.0s,MS4.9
CLNS MLR MLR
comp=Z,1µm,16.0s,MS5.2
CLNS MLR MLR
comp=E,752nm,16.0s,MS4.9
KMBO Kilima Mbogo 60.46 269 P **P** **08 49 47.8 +1.1**
comp=E,1.2nm,0.7s,mb4.0,baz=20,slow=22,SNR=3.5
KMBO LR LR 09 12 46.1
comp=E,876nm,19.0s,MS4.9,baz=275,slow=33
KMBO Kilima Mbogo 60.46 269 *e*P **P** **08 49 48.3 +1.6**
KMBO *e**PP pP 08 49 56.1 +0.8
KMBO pmax pmax
comp=Z,4.0nm,1.0s
KMBO Kilima Mbogo 60.46 269 *e*P **P** **08 49 48.3 +1.5**
comp=Z,4.4nm,1.0s,mb4.4
KMBO *e*pP pP 08 49 56.1 +0.7
YSS Yuzh-Sakhalins 60.81 34 *e*P **P** **08 49 48.5 +0.1**
YSS *e* pP 08 49 55.8 -1.3
YSS Yuzh-Sakhalins 60.81 34 *e*P **P** **08 49 48.0 -0.5**
comp=Z,53nm,0.8s,mb5.7
YSS *e*pP pP 08 49 56.2 -0.8
GNI Garni 62.28 316 *e*P **P** **08 49 59.2 +0.7**
GNI pmax pmax
comp=Z,18nm,1.0s
GNI Garni 62.28 316 *e*P **P** **08 49 59.1 +0.6**
comp=Z,18nm,1.0s,mb5.2
DGRG David-gareji 62.42 318 P **P** **08 49 59.2 -0.3**
HNR Honiara 62.71 101 P **P** **08 50 01.1 -0.8**
comp=Z,79nm,0.9s,mb5.8,baz=144,slow=2.7,SNR=4.6
HNR Honiara 62.71 101 *e*P **P** **08 50 01.4 -0.5**
HNR pmax pmax
comp=Z,222nm,0.8s,mb6.3
HNR Honiara 62.71 101 *e*P **P** **08 50 01.4 -0.5**
comp=Z,222nm,0.8s,mb6.3
MTA Mtatsminda 62.92 318 P **P** **08 50 01.5 -1.3**
TBLG Delisi 62.98 318 P **P** **08 50 02.1 -1.0**
SVE Sverdlovsk 63.70 338 *e*P **P** **08 50 07.2 -0.4**
SVE *e*PPP 08 53 57.1
SVE eS **S** **08 58 42.2 +2.0**
SVE pmax pmax
comp=Z,20nm,0.9s,mb5.2
SVE MLR MLR
comp=Z,886nm,22.0s,MS4.9
ARU Arti 64.20 337 *d i* P **P** **08 50 09.5 -1.4**
ARU *e* 08 50 43.3
ARU eS **S** **08 58 44.5 -1.9**
ARU *e*SS SS 09 02 59.6 +3.5
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.8
ARU MLR MLR
comp=Z,992nm,20.0s,MS5.0
ARU Arti 64.20 337 *e*P **P** **08 50 09.8 -1.1**
comp=Z,13nm,1.0s,mb4.9
ONI Oni 64.21 318 P **P** **08 50 12.3 +1.0**
KIV Kislovodsk 65.31 319 *e*P **P** **08 50 18.3 -0.1**
KIV *i* pP 08 50 25.8 -1.3
KIV *e* 08 50 50.3
KIV *i* 08 52 38.5
KIV *i* S S 08 59 02.6 +2.1
KIV *i* SS SS 09 03 11.4 -2.5
KIV pmax pmax
comp=Z,11nm,0.9s,mb4.9
KIV Kislovodsk 65.31 319 *e*P **P** **08 50 18.6 +0.2**
comp=Z,28nm,1.0s,mb5.2
MALT Malatya 66.09 312 *e*P **P** **08 50 23.6 0.0**
MALT *e**PP pP 08 50 31.5 -0.8
MALT pmax pmax
comp=Z,12nm,0.9s,mb4.9
MALT Malatya 66.09 312 *e*P **P** **08 50 23.6 0.0**
comp=Z,12nm,0.9s,mb4.9
MALT *e*pP pP 08 50 31.5 -0.8
YAK Yakutsk 66.14 16 *c i* P **P** **08 50 22.6 -0.8**
YAK *e**PP pP 08 50 28.8 -3.3
YAK *e* 08 50 52.1
YAK eS S 08 59 08.0 -2.0
YAK *e*SS SS 09 03 16.9 -9.2
YAK pmax pmax
comp=Z,76nm,1.0s,mb5.7
YAK pmax pmax
comp=E,10.0nm,0.9s
YAK pmax pmax
comp=N,17nm,1.1s
YAK smax
comp=N,159µm,5.2s
YAK smax
comp=E,35µm,1.8s
YAK MLR MLR
comp=Z,2µm,17.0s,MS5.3
YAK MLR MLR
comp=E,1µm,18.0s,MS5.3
YAK MLR MLR
comp=N,1µm,19.0s,MS5.3
YAK Yakutsk 66.14 16 *e*P **P** **08 50 22.7 -0.7**
comp=N,84nm,0.9s,mb5.8
EIL Elat 66.35 302 P **P** **08 50 25.9 +0.4**
comp=N,2.9nm,0.8s,mb4.3,baz=61,slow=9.4,SNR=2.3
MMAI Mount Meron Ar 66.83 306 P **P** **08 50 29.9 +1.5**
comp=N,2.5nm,0.6s,mb4.4,baz=109,slow=11,SNR=2.7
CASY Casey 67.07 174 *e*P **P** **08 50 27.0 -2.3**
comp=N,6.8nm,1.1s,mb4.6
SOC Sochi 67.11 318 *e*P **P** **08 50 28.0 -2.0**
SOC *e**PP pP 08 50 34.7 -4.0
SOC *e**SP sP 08 50 40.7 -1.3
SOC eS S 08 59 19.3 -3.2
SOC *e*SS SS 09 03 35.6 -6.4
SOC pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
VRSR Storozhevoye 70.57 325 *e*P pP 08 51 01.7 +1.6
VRSR pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
VRSR pmax pmax
comp=N,6.0nm,0.7s
VRSR pmax pmax
comp=E,10.0nm,1.2s
SIM Simferopol' 71.36 318 P **P** **08 50 58.6 +2.3**
SIM eS S 09 00 11.0 -1.6
MAW Mawson 71.96 193 LR LR 09 16 00.0
comp=E,562nm,18.4s,MS4.9,baz=44,slow=30
PETK Petropavlovsk- 72.20 33 P **P** **08 51 00.8 -0.4**
comp=E,5.5nm,0.7s,mb4.6,baz=202,slow=2.3,SNR=10
PETK LR LR 09 27 22.7
comp=E,450nm,18.1s,MS4.8,baz=243,slow=40
PET Petropavlovsk 72.69 34 *e*P **P** **08 51 04.2 +0.1**
PET eS S 09 00 24.9 -2.7
PET *e*SP 09 00 50.5
PET pmax pmax
comp=Z,65nm,0.6s,mb5.7
PET pmax pmax
comp=Z,100nm,12.8s
PET pmax pmax
comp=Z,100nm,17.1s
PET MLR MLR
comp=Z,600nm,16.0s,MS5.0
DRV Dumont d'Urvil 73.16 164 S S 09 00 54.0 +22
DRV R 09 15 00.0
MOS Moscow 73.35 329 *e*P **P** **08 51 05.2 -2.7**
OBN Obninsk 73.64 328 *e*P **P** **08 51 09.3 -0.3**
OBN *e* 08 51 21.9
OBN *e* 08 54 00.9
OBN *i* S S 09 00 36.5 -1.8
OBN *i* SS SS 09 05 28.2 +6.4
OBN pmax pmax
comp=Z,13nm,1.6s,mb4.6
OBN Obninsk 73.64 328 *e*P **P** **08 51 09.3 -0.3**
comp=Z,10nm,0.4s,mb5.1
TIXI Tiksi 73.98 10 *c i* P **P** **08 51 10.2 -1.1**
TIXI eS S 09 00 42.4 +0.9
TIXI pmax pmax
comp=Z,35nm,1.0s,mb5.2
TIXI MLR MLR
comp=Z,1µm,16.0s,MS5.3
TIXI Tiksi 73.98 10 *e*P **P** **08 51 10.1 -1.2**
comp=Z,21nm,0.6s,mb5.2
BOSA Boshof 74.77 240 P **P** **08 51 17.0 +0.2**
comp=Z,3.8nm,1.0s,mb4.3,baz=121,slow=10,SNR=3.9
BOSA Boshof 74.77 240 P **P** **08 51 17.0 +0.2**
BOSA pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BOSA Boshof 74.77 240 P **P** **08 51 17.0 +0.2**
AKASG Malin Array Be 76.27 322 P **P** **08 51 23.8 -1.1**
comp=Z,4.4nm,0.7s,mb4.5,baz=85,slow=4.8,SNR=15
AKASG LR LR 09 31 43.1
comp=Z,227nm,19.1s,MS4.5,baz=75,slow=41
AKBB Malin Array Si 76.27 322 *e*P **P** **08 51 24.0 -0.9**
BUR08 Bucovina Ar. S 78.04 319 *e*P **P** **08 51 35.8 +0.9**
MNK Minsk 78.17 326 *e*P pP 08 51 46.0 +1.7
RPZ Rata Peaks 78.23 135 P **P** **08 51 36.1 0.0**
comp=Z,6.9nm,0.6s,mb4.8,baz=72,slow=7.3,SNR=6.7
JOF Joensuu 79.16 335 *e*p **P** **08 51 40.1 -0.7**
comp=Z,6.8nm,0.7s,mb4.7
JOF Joensuu 79.16 335 *e*P **P** **08 51 40.1 -0.7**
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
SYO Syowa Base 79.31 198 *i e*PcP PcP 08 51 50.1 +0.5
SYO Syowa Base 79.31 198 *i e*X 08 51 57.5
KOLS Kolonicke sedl 80.22 320 *e*P **P** **08 51 47.3 +0.5**
KOLS *e*pP pP 08 51 56.5 +0.8
SUW Suwalki 80.69 325 *e*P **P** **08 51 48.9 -0.4**
SUW pmax pmax
comp=Z,49nm,0.9s,mb5.4
SUW Suwalki 80.69 325 *e*P **P** **08 51 48.9 -0.4**
comp=Z,49nm,0.9s,mb5.4
CRVS Cervenica-Dubn 80.74 320 *e*P **P** **08 51 49.7 +0.1**
STHS Stebnicka Huta 80.97 320 *e*P **P** **08 51 51.2 +0.3**
STHS *e* 08 52 02.3
STHS pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
STHS Stebnicka Huta 80.97 320 *e*P **P** **08 51 51.2 +0.3**
comp=Z,10nm,1.1s,mb4.7
STHS *e* 08 52 02.3
KAF Kangasniemi 81.10 333 *e*p **P** **08 51 50.2 -1.1**
comp=Z,9.4nm,0.7s,mb4.8,baz=102,slow=5.0
KAF Kangasniemi 81.10 333 *e*P **P** **08 51 50.2 -1.1**
KAF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KECS Kecovo 81.30 319 *e*P **P** **08 51 52.8 +0.1**
KECS *e* 08 52 04.1
KECS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KECS Kecovo 81.30 319 *e*P **P** **08 51 52.8 +0.1**
comp=Z,4.5nm,0.9s,mb4.4
KECS *e* 08 52 04.1
PSZ Piszkesteto 81.60 318 *e*P **P** **08 51 54.5 +0.2**
PSZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
PSZ Piszkesteto 81.60 318 *e*P **P** **08 51 54.5 +0.2**
comp=Z,7.9nm,0.9s,mb4.6
BILL Bilibino 81.82 21 *e*P **P** **08 51 55.3 +0.3**
BILL *i* 08 55 05.2
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
URZ Urewera 81.87 129 P **P** **08 51 55.5 -0.4**
comp=Z,6.4nm,0.7s,mb4.6,baz=243,slow=14,SNR=2.6
URZ LR LR 09 29 25.2
comp=Z,878nm,18.7s,MS5.2,baz=95,slow=37
OJC Ojcow 82.03 321 *e*P **P** **08 52 04.4 +8.0**
VYHS Vyhne 82.39 319 *e*S S 09 02 10.7 -2.1
OKC Ostrava-Krasne 83.03 320 *e*P **P** **08 52 01.9 +0.2**
OKC *e*pP pP 08 52 09.3 -1.2
OKC *e*S S 09 02 15.8 -3.5
OKC AMS AMS 09 39 40.0
comp=Z,300nm,16.0s
OKC Ostrava-Krasne 83.03 320 *e*P **P** **08 52 01.9 +0.2**
OKC *e* pP 08 52 09.3 -1.2
OKC *e*SKS 09 02 15.8
KEV Kevo 83.11 341 *e*p **P** **08 52 01.3 -0.4**
MODS Modra-Piesok 83.40 319 *e*P **P** **08 52 04.8 +1.2**
MODS *e*S S 09 02 20.3 -2.9
MORC Moravsky Berou 83.41 320 P **P** **08 52 02.2 -1.4**
MORC pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
MORC Moravsky Berou 83.41 320 P **P** **08 52 02.2 -1.4**
comp=Z,5.4nm,0.9s,mb4.6
ZST Bratislava 83.50 318 *e*P pP 08 52 14.8 +1.8
ZST pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
ZST Bratislava 83.50 318 *e*P pP 08 52 14.8 +1.8
ZST *e*S S 09 02 23.8 -0.3
ARCES ARCESS Array B 83.54 340 P **P** **08 52 03.9 0.0**
comp=Z,3.7nm,0.7s,mb4.6,baz=102,slow=4.5,SNR=24
ARCES LR LR 09 36 06.3
comp=Z,395nm,19.8s,MS4.8,baz=108,slow=41
DPC Dobruska-Polom 84.25 320 *e*P **P** **08 52 08.0 0.0**
DPC *e*pP pP 08 52 15.1 -1.8
DPC *e*S S 09 02 32.4 +0.8
DPC AMS AMS 09 36 00.0
comp=Z,300nm,17.9s
BOJS Bojanci 84.48 316 *i* P **P** **08 52 09.5 +0.3**
BOJS *i* 08 52 23.4
PERS Pernice 84.68 317 *i* P **P** **08 52 10.4 +0.3**
PERS *i* 08 52 23.0
TREC Trest 84.68 319 AMS AMS 09 35 10.0
comp=Z,300nm,20.9s
VISS Visnje 84.80 316 *i* P **P** **08 52 11.2 +0.4**
VISS *e* 08 52 23.2
JAVS Javornik 85.34 316 *i* P **P** **08 52 13.5 -0.1**
JAVS *i* 08 52 26.2
PRU Pruhonice 85.36 320 *e*P **P** **08 52 13.6 +0.1**
PRU *e*pP pP 08 52 21.6 -0.8
PRU *e*S S 09 02 40.3 -2.3
PRU AMS AMS 09 36 50.0
comp=Z,300nm,20.7s
PVCC Panska Ves 85.39 321 AMS AMS 09 36 40.0
comp=Z,300nm,16.4s
GEC2 GERESS Array S 85.81 319 *e*P **P** **08 52 15.8 0.0**
GEC2 pmax pmax
comp=Z,14nm,1.5s,mb5.0
GEC2 GERESS Array S 85.81 319 *e*P **P** **08 52 15.8 0.0**
comp=Z,14nm,1.5s,mb5.0
GERES GERESS Array B 85.81 319 P **P** **08 52 16.0 +0.2**
comp=Z,1.3nm,0.7s,mb4.3,baz=90,slow=4.0,SNR=14
GERES GERESS Array B 85.81 319 P **P** **08 52 16.0 +0.2**
GERES pmax pmax
comp=Z,1.0nm,0.7s
BRG Berggiesshubel 85.81 321 *e*P pP 08 52 24.0 -0.7
BRG *e* 09 02 48.0
BRG pmax pmax
comp=Z,2.0nm,1.1s,mb4.3
BRG Berggiesshubel 85.81 321 *e*P pP 08 52 24.0 -0.7
comp=Z,4.0nm,1.1s
BRG *e* 09 02 48.0
KHC Kasperske Hory 85.91 319 *e*P **P** **08 52 16.8 +0.5**
KHC *e*pP pP 08 52 23.2 -2.0
KHC *e*S S 09 02 45.3 -2.8
KHC AMS AMS 09 37 20.0
comp=Z,200nm,15.7s
RUE Ruedersdorf 86.05 322 *e*P **P** **08 52 17.4 +0.5**
WET Wettzell 86.37 319 *e*P **P** **08 52 18.4 -0.2**
WET pmax pmax
comp=Z,10.0nm,1.2s,mb4.9
WET Wettzell 86.37 319 *e*P **P** **08 52 18.4 -0.2**
comp=Z,10.0nm,1.2s,mb4.9
CLL Collm 86.44 321 *e*P **P** **08 52 26.0 +7.2**
CLL *e*S S 09 02 58.0 +4.9
CLL MLR MLR
comp=Z,300nm,18.5s,MS4.7
CLL Collm 86.44 321 *e*pP pP 08 52 26.0 -1.8
comp=Z,7.0nm,1.3s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CLL				eS	S	09 02 58.0	+4.9
CLL				LmV		09 39 00.0	
	comp=Z,300nm,18.5s						
TANN	Tannenbergstha	86.72	320	eP	P	08 52 19.7	-0.6
	comp=Z,9.0nm,1.5s,mb4.8						
GUNZ	Gunzen	86.80	320	eP	P	08 52 20.6	0.0
	comp=Z,5.0nm,1.0s,mb4.7						
ROTZ	Rotzenmuhle	86.85	320	eP	P	08 52 20.1	-0.8
	comp=Z,7.0nm,1.1s,mb4.8						
MANZ	Manzenberg	86.92	320	eP	P	08 52 21.4	+0.1
MOX	Moxa	87.27	321	eP	P	08 52 23.1	+0.2
GRA1	Grafenberg Arr	87.48	320	eP	P	08 52 24.4	+0.4
	comp=Z,12nm,1.0s,mb5.1						
GRF	Grafenberg Arr	87.48	320	eP	P	08 52 24.4	+0.4
GRF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.1						
GRF	Grafenberg Arr	87.48	320	eP	P	08 52 24.4	+0.4
GRF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.1						
GRF	Grafenberg Arr	87.48	320	eP	P	08 52 24.4	+0.4
	comp=Z,12nm,1.0s,mb5.1						
GRFO	Grafenberg	87.48	320	eP	P	08 52 24.2	+0.2
NB2	NORSAR Subarra	88.03	331	P	P	08 52 25.2	-1.1
	comp=Z,5.1nm,0.9s,mb4.8,baz=94,slow=5.1						
NOA	NORSAR Array B	88.03	331	P	P	08 52 25.8	-0.5
	comp=Z,2.4nm,0.7s,mb4.5,baz=95,slow=4.9,SNR=6.8						
NOA				LR	LR	09 36 50.6	
	comp=Z,236nm,20.0s,MS4.6,baz=90,slow=39						
KEST	Kesra	88.48	306	P	P	08 52 30.4	+1.3
	comp=Z,1.4nm,0.7s,mb4.3,baz=82,slow=7.1,SNR=3.0						
PGF	Pioggiola	88.83	312	eP	P	08 52 30.1	-0.5
	comp=Z,31nm,1.2s,mb5.2						
PGF	Pioggiola	88.83	312	eP	P	08 52 30.1	-0.5
PGF				pmax	pmax		
	comp=Z,15nm,1.3s,mb5.2						
PGF	Pioggiola	88.83	312	eP	P	08 52 30.1	-0.5
	comp=Z,15nm,1.3s,mb5.2						
NVL	N'lazarevskaya	88.92	199	P	P	08 52 32.5	+2.2
NVL				*PP	pP	08 52 39.4	+0.1
NVL				pmax	pmax		
	comp=Z,28nm,3.0s						
MAIT	Maitri	88.95	199	eP	P	08 52 31.7	+1.2
SBF	Sospel	89.98	314	eP	P	08 52 35.6	-0.3
	comp=Z,40nm,0.9s,mb5.4						
SBF	Sospel	89.98	314	eP	P	08 52 35.6	-0.3
SBF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.5						
SBF	Sospel	89.98	314	eP	P	08 52 35.6	-0.3
	comp=Z,20nm,0.9s,mb5.5						
CDF	Champ du Feu	90.06	318	eP	P	08 52 35.5	-0.6
	comp=Z,9.3nm,1.0s,mb4.8						
CDF	Champ du Feu	90.06	318	eP	P	08 52 35.5	-0.6
CDF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.8						
CDF	Champ du Feu	90.06	318	eP	P	08 52 35.5	-0.6
	comp=Z,4.7nm,1.0s,mb4.8						
ECH	Echery	90.14	318	eP	P	08 52 37.3	+0.8
MBDF	Montbardon	90.45	315	eP	P	08 52 37.3	-0.8
LPG	La Plagne	90.45	315	eP	P	08 52 38.1	0.0
	comp=Z,17nm,0.9s,mb5.1						
LPG	La Plagne	90.45	315	eP	P	08 52 38.1	0.0
LPG				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
LPG	La Plagne	90.45	315	eP	P	08 52 38.1	0.0
	comp=Z,8.4nm,0.9s,mb5.1						
LPL	La Plagne	90.46	315	eP	P	08 52 38.1	0.0
	comp=Z,22nm,0.9s,mb5.2						
LPL	La Plagne	90.46	315	eP	P	08 52 38.1	0.0
LPL				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.2						
LPL	La Plagne	90.46	315	eP	P	08 52 38.1	0.0
	comp=Z,11nm,0.9s,mb5.2						
BNI	Bardonecchia	90.51	315	P	P	08 52 38.3	0.0
BNI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
BNI	Bardonecchia	90.51	315	P	P	08 52 38.2	-0.1
	comp=Z,5.5nm,0.9s,mb4.9						
FRF	La Foret Royal	90.56	313	eP	P	08 52 38.4	-0.2
	comp=Z,38nm,1.2s,mb5.3						
FRF	La Foret Royal	90.56	313	eP	P	08 52 38.4	-0.2
FRF				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.3						
FRF	La Foret Royal	90.56	313	eP	P	08 52 38.4	-0.2
	comp=Z,19nm,1.2s,mb5.3						
LMR	La Mourre	90.66	313	eP	P	08 52 38.8	-0.3
	comp=Z,24nm,1.1s,mb5.2						
LMR	La Mourre	90.66	313	eP	P	08 52 38.8	-0.3
LMR				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.1						
LMR	La Mourre	90.66	313	eP	P	08 52 38.8	-0.3
	comp=Z,12nm,1.1s,mb5.1						
HAU	Haudompre	90.68	318	eP	P	08 52 38.5	-0.6
	comp=Z,32nm,1.0s,mb5.3						
HAU				eMLR	MLR		
	comp=Z,353nm,20.0s,MS4.5						
HAU	Haudompre	90.68	318	eP	P	08 52 38.5	-0.6
HAU				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.3						
HAU				MLR	MLR		
	comp=Z,350nm,20.0s,MS4.8						
HAU	Haudompre	90.68	318	eP	P	08 52 38.5	-0.6
	comp=Z,16nm,1.0s,mb5.3						
HAU				LR	LR		
	comp=Z,350nm,20.0s,MS4.8						
CABF	La Chapelle	90.89	316	eP	P	08 52 40.1	0.0
	comp=Z,17nm,0.9s,mb5.1						
CABF	La Chapelle	90.89	316	eP	P	08 52 40.1	0.0
CABF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
CABF	La Chapelle	90.89	316	eP	P	08 52 40.1	0.0
	comp=Z,8.4nm,0.9s,mb5.1						
ORIF	Oris-en-Rattie	91.08	315	eP	P	08 52 41.1	+0.1
	comp=Z,13nm,0.9s,mb5.0						
ORIF				eMLR	MLR		
	comp=Z,256nm,21.0s,MS4.3						
ORIF	Oris-en-Rattie	91.08	315	eP	P	08 52 41.1	+0.1
ORIF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.0						
ORIF	Oris-en-Rattie	91.08	315	eP	P	08 52 41.1	+0.1
	comp=Z,6.7nm,0.9s,mb5.0						
SMRF	Simiane la Rot	91.32	314	eP	P	08 52 41.7	-0.4
	comp=Z,14nm,0.9s,mb5.0						
SMRF	Simiane la Rot	91.32	314	eP	P	08 52 41.7	-0.4
	comp=Z,14nm,0.9s,mb5.3						
MEZF	Maizieres J'vi	91.53	318	eP	P	08 52 42.8	-0.2
VIVF	Saint-Julien-l	91.94	315	eP	P	08 52 44.8	-0.2
	comp=Z,14nm,1.1s,mb4.9						
VIVF	Saint-Julien-l	91.94	315	eP	P	08 52 44.8	-0.2
VIVF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.9						
VIVF	Saint-Julien-l	91.94	315	eP	P	08 52 44.8	-0.2
	comp=Z,6.8nm,1.1s,mb4.9						
SSB	Saint Sauveur	92.01	315	eP	P	08 52 45.3	0.0
BAIF	Baives	92.02	320	eP	P	08 52 45.3	+0.1
	comp=Z,28nm,1.1s,mb5.2						
BAIF	Baives	92.02	320	eP	P	08 52 45.3	+0.1
BAIF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.2						
BAIF	Baives	92.02	320	eP	P	08 52 45.3	+0.1
	comp=Z,14nm,1.1s,mb5.2						
LOR	Lormes	92.39	317	eP	P	08 52 46.7	-0.3
	comp=Z,24nm,1.0s,mb5.2						
LOR				eMLR	MLR		
	comp=Z,243nm,21.0s,MS4.3						
LOR	Lormes	92.39	317	eP	P	08 52 46.7	-0.3
LOR				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.2						
LOR				MLR	MLR		
	comp=Z,240nm,21.0s,MS4.6						
LOR	Lormes	92.39	317	eP	P	08 52 46.7	-0.3
	comp=Z,12nm,1.0s,mb5.2						
LOR				LR	LR		
	comp=Z,240nm,21.0s,MS4.6						
SMF	Signal de Mont	92.44	317	eP	P	08 52 46.8	-0.4
	comp=Z,22nm,0.9s,mb5.2						
SMF	Signal de Mont	92.44	317	eP	P	08 52 46.8	-0.4
SMF				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.2						
SMF	Signal de Mont	92.44	317	eP	P	08 52 46.8	-0.4
	comp=Z,11nm,0.9s,mb5.2						
LASF	Ste Croix	92.56	314	eP	P	08 52 47.9	0.0
	comp=Z,13nm,1.0s,mb5.0						
SSF	Saint Saulge	92.64	317	eP	P	08 52 48.1	-0.1
AVF	Avril sur Loir	92.77	317	eP	P	08 52 48.3	-0.4
	comp=Z,20nm,1.1s,mb5.2						
AVF	Avril sur Loir	92.77	317	eP	P	08 52 48.3	-0.4
AVF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.2						
AVF	Avril sur Loir	92.77	317	eP	P	08 52 48.3	-0.4
	comp=Z,9.9nm,1.1s,mb5.2						
BGF	Bois d'Agland	93.13	316	eP	P	08 52 50.6	+0.2
TORD	Torodi Ar. Bea	95.78	283	P	P	08 53 04.4	+1.1
	comp=Z,0.3nm,0.7s,baz=84,slow=5.8,SNR=2.7						
PPT	Papeete	111.72	109	ePP	PP	08 58 47.6	-6.7
	comp=Z,69nm,26.8s						
PPT	Papeete	111.72	109	eLR	LR	09 31 24.0	
	comp=Z,400nm,23.0s						
YKA	Yellowknife Ar	112.82	16	PP	PP	08 59 06.0	+5.8
	comp=Z,1.9nm,0.9s,baz=327,slow=6.8,SNR=3.8						
TAOE	Nuku Hiva Isla	121.78	100	eLR	LR	09 36 09.4	
	comp=Z,1μm,23.4s						
RKT	Rikitea	124.08	118	eLR	LR	09 37 04.9	
	comp=Z,461nm,28.2s						
DLMT	Dillon	127.23	27	ePKPdf	PKPdf	08 58 41.3	+0.3
NVAR	Mina Array Bea	129.21	37	PKP	PKPdf	08 58 45.4	+0.5
	comp=Z,1.2nm,0.8s,baz=284,slow=3.6,SNR=10						
HWUT	Hardware Ranch	130.60	29	ePKPdf	PKPdf	08 58 48.3	+0.8
PDAR	Pinedale Array	130.62	26	PKP	PKPdf	08 58 46.8	-0.8
	comp=Z,0.7nm,0.7s,baz=0.0,slow=0.9,SNR=5.9						
ANMO	Albuquerque	138.29	30⇑	iPKIKP	PKPdf	08 59 01.2	-0.9
WMOK	Wichita Mounta	141.88	22	ePKHKP		08 59 02.0	
MIAR	Mount Ida	143.76	16	ePKIKP	PKPdf	08 59 09.4	-2.6
UALR	University of	143.86	14	ePKPdf	PKPdf	08 59 09.3	-2.8
TXAR	Lajitas Array	144.16	33	PKP	PKPdf	08 59 11.4	-1.3
	comp=Z,2.3nm,0.7s,baz=278,slow=1.1,SNR=35						
TXAR	Lajitas Array	144.16	33	PKIKP	PKPdf	08 59 11.5	-1.3
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CPCT	Cooper Cave	144.37	3	ePKPdf	PKPdf	08 59 09.7	-3.3
PLAL	Pickwick Lake	144.49	8	ePKPdf	PKPdf	08 59 10.1	-3.1
SWET	Sewanee	144.50	5	ePKPdf	PKPdf	08 59 10.1	-3.1
CPUP	Villa Florida	144.67	221	PKP	PKPdf	08 59 12.9	-0.8
	comp=Z,3.6nm,0.6s,baz=79,slow=2.9,SNR=12						
JCT	Junction City	145.15	27	ePKIKP	PKPdf	08 59 13.6	-0.9
JSC	Jenkinsville	145.58	358	ePKIKP	PKPdf	08 59 14.4	-0.7
NATX	Nacogdoches	146.03	19	ePKPbc	PKPbc	08 59 16.8	+0.1
CFAA	Coronel Fontan	146.14	202	PKPbc	PKPbc	08 59 17.6	+0.5
	comp=Z,0.2nm,0.5s,baz=204,slow=6.0,SNR=2.9						
GOGA	Godfrey	146.45	2	ePKP2	PKPab	08 59 17.2	-1.6
LRAL	Lakeview Retre	146.55	7	ePKPbc	PKPbc	08 59 17.4	-0.8
HKT	Hockley	147.27	22	ePKP2	PKPab	08 59 20.7	-1.4
CMIG	Matias Romero	158.73	35	PKPab	PKPab	09 00 11.3	+0.9
	comp=Z,1.9nm,0.6s,baz=4.6,slow=2.4,SNR=4.6						

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*IDC **08** 08:51:55.0±0.8, 3639S×9845W, h0km, mb4.4/12, mb1 4.5/12, mb1mx4.4/20, mbtmp4.4/12, MS4.4/16, Ms1 4.4/16, ms1mx4.3/27, Error ellipse: s-maj=20.2km s-min=16.3km az=72.0*

*ISCJB **08** 08:51:55.6±0.3, 3650S±006×9829W±009, h10km, mb4.6/32, MS4.5/17, Error ellipse: s-maj=10.7km s-min=7.3km az=151.8*

*MOS **08** 08:51:56.2±1.2, 3653S×9831W, h16km, mb4.9/9, Error ellipse: s-maj=22.7km s-min=17.2km az=90.1*

*BJI **08** 08:51:56.0, 3650S×9830W, h10km, mB5.3, Ms4.9, Msz4.8*

*GCMT **08** 08:51:57.4±0.2, 3640S×9850W, h21km, MW5.3/87, Moment Tensor Solution. s65,c109; s87,c147; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.10±.02; $M_{\theta\theta}$-0.04±.02; $M_{\phi\phi}$0.14±.02; $M_{r\theta}$0.06±.03; $M_{\theta\phi}$-0.99±.02; $M_{\phi r}$0.07±.03; Best double couple: $M_0$1.00300×10^{17} NP1:ϕ_s273.00000°,δ86.00000°, λ-176.00000°. NP2:ϕ_s183.00000°,δ86.00000°, λ-4.00000°. Principal axes: T 1.0500, Plg1.0000°, Azm228.0000°; N -0.0940, Plg84.0000°, Azm323.0000°; P -0.9550, Plg6.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **08** 08:51:57.4±0.3, 3647S×9829W, h10km, mb4.7/25 Error ellipse: s-maj=10.9km s-min=7.4km az=54.0*

ISC 08 08:51:57.6±0.3**, 3647S**±006×**9830W**±009**, h10km, (h39km**±4.4km**:pP-P), n91,** σ0s**99**/71**, mb4.6**/32**, MS4.5**/17**,**
1C, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	22.06	110	P	P	08 56 53.9	+1.5
	21nm,1.1s,mb4.5,baz=271,slow=10,SNR=17						
PLCA				LR	LR	09 03 24.4	
	comp=Z,1μm,21.0s,MS4.2,baz=274,slow=31						
PLCA	Paso Flores	22.06	110	eP	P	08 56 53.5	+1.1
PLCA				pmax	pmax		
	comp=Z,50nm,1.3s						
PLCA	Paso Flores	22.06	110	eP	P	08 56 53.5	+1.1
	comp=Z,50nm,1.3s,mb4.8						
LCO	Las Campanas	24.32	80	eP	P	08 57 17.1	+1.7
	comp=Z,29nm,0.9s,mb4.7						
CFAA	Coronel Fontan	25.33	88	P	P	08 57 23.7	-0.8
	comp=Z,0.7nm,0.8s,baz=248,slow=10,SNR=13						
CFAA				LR	LR	09 04 59.0	
	comp=Z,123nm,19.9s,baz=255,slow=31						
CFAA	Coronel Fontan	25.33	88	P	P	08 57 23.7	-0.8
CFAA				LR	LR	09 04 59.0	
USHA	Ushuaia	27.48	141	P	P	08 57 43.9	+0.2
	comp=Z,9.4nm,1.1s,mb4.2,baz=288,slow=8.8,SNR=5.0						
USHA				LR	LR	09 06 23.8	
	comp=Z,2μm,18.3s,MS4.7,baz=271,slow=32						
TRQA	Tornquist	28.84	104	eP	P	08 57 56.4	+0.4
	comp=Z,7.5nm,1.0s,mb4.4						
LVC	Limon Verde	28.93	70	P	P	08 57 57.2	+0.3
	comp=Z,3.6nm,0.8s,mb4.2,baz=253,slow=8.2,SNR=4.9						
LVC				LR	LR	09 06 52.0	
	comp=Z,988nm,18.2s,MS4.5,baz=226,slow=31						
LVC	Limon Verde	28.93	70	eP	P	08 57 56.9	0.0
	comp=Z,5.1nm,0.9s,mb4.2						
ARE	Arequipa	31.02	57	eP	P	08 58 15.0	-0.5
LPAZ	La Paz	33.47	61	P	P	08 58 37.6	+0.7
	comp=Z,13nm,0.9s,mb4.8,baz=212,slow=6.8,SNR=27						
LPAZ				LR	LR	09 09 19.2	
	comp=Z,316nm,21.9s,MS4.0,baz=245,slow=31						
LPAZ	La Paz	33.47	61	eP	P	08 58 37.5	+0.5
LPAZ				pmax	pmax		
	comp=Z,22nm,1.0s						
LPAZ	La Paz	33.47	61	eP	P	08 58 37.5	+0.6
	comp=Z,22nm,1.0s,mb5.0						
RKT	Rikitea	34.28	283	eS	S	09 04 04.7	-6.5
	comp=Z,331nm,28.5s						
RKT				eLQ		09 06 27.9	
	comp=Z,3μm,28.2s						
RKT				eLR	LR	09 07 47.8	
	comp=Z,849nm,29.2s						
ATAH	Atahualpa	34.52	37	P	P	08 58 43.6	-2.4
	comp=Z,8.7nm,1.0s,mb4.7,baz=223,slow=7.2,SNR=11						
PMSA	Palmer Station	34.89	155	P	P	08 58 49.0	+0.2
	comp=Z,5.7nm,1.0s,mb4.5,baz=338,slow=8.7,SNR=6.2						
PMSA				LR	LR	09 09 05.9	
	comp=Z,623nm,21.4s,MS4.3,baz=125,slow=29						
PMSA	Palmer Station	34.89	155	eP	P	08 58 49.2	+0.4
	comp=Z,13nm,1.2s,mb4.7						
CPUP	Villa Florida	36.17	86	P	P	08 59 00.5	+0.2
	comp=Z,2.2nm,0.9s,mb4.1,baz=234,slow=6.8,SNR=7.2						
CPUP				LR	LR	09 12 47.4	
	comp=Z,453nm,18.5s,MS4.3,baz=234,slow=34						
CPUP	Villa Florida	36.17	86	eP	P	08 59 00.1	-0.2
	comp=Z,41nm,0.7s,mb5.5						
OTAV	Otavalo	40.91	31	eP	P	08 59 39.1	-1.0
	comp=Z,22nm,1.4s,mb4.6						
SPB	Sao Paulo	45.40	88	eP	P	09 00 16.0	-0.4
ROSC	El Rosal	46.83	34	P	P	09 00 27.7	-0.1
	comp=Z,3.8nm,0.7s,mb4.5,baz=96,slow=21,SNR=6.7						
ROSC				LR	LR	09 17 13.7	
	comp=Z,468nm,18.6s,MS4.5,baz=204,slow=32						
ROSC	El Rosal	46.83	34	eP	P	09 00 27.8	+0.1
TAOE	Nuku Hiva Isla	46.85	295	eS	S	09 07 17.0	-1.6
	comp=Z,1μm,25.2s						
TAOE				eLR	LR	09 13 38.2	
	comp=Z,2μm,27.3s						
PPT	Papeete	48.81	279	eS	S	09 07 40.3	-6.1
	comp=Z,128nm,23.8s						
PPT				eLR	LR	09 14 22.1	
	comp=Z,347nm,23.2s,baz=120						
BDFB	Brasilia	49.10	79	P	P	09 00 44.7	-0.6
	comp=Z,6.1nm,0.9s,mb4.6,baz=256,slow=8.4,SNR=5.2						
BDFB				LR	LR	09 19 59.5	
	comp=Z,592nm,20.4s,MS4.6,baz=59,slow=34						
QSPA	South Pole Qui	53.74	180	P	P	09 01 19.1	-0.2
	comp=Z,9.6nm,1.1s,mb4.7,baz=123,slow=4.8,SNR=15						
VNA3	Neumayer Olymp	55.51	157	eP	P	09 01 31.9	-0.3
VNA3				e		09 01 37.5	
VNA3				e		09 01 40.6	
SBA	Scott Base	55.69	195	eP	P	09 01 33.3	-0.1
SBA				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
SBA	Scott Base	55.69	195	eP	P	09 01 33.3	-0.2
	comp=Z,14nm,1.1s,mb4.9						
VNA1	Neumayer--Stat	56.09	156	eP	P	09 01 35.4	-1.0
VNA1				e		09 01 41.9	
VNA1				e		09 01 45.2	
VNA2	Neumayer--Watz	56.31	157	eP	P	09 01 37.4	-0.5
VNA2				e		09 01 43.3	
VNA2				e		09 01 46.5	
VNA2				e		09 02 08.9	
SNAA	Sanae	57.51	158	eP	P	09 01 45.8	-0.6
SNAA				e		09 01 54.3	
SNAA				e		09 02 16.9	
SNAA	Sanae	57.51	158	P	P	09 01 45.0	-1.4
SNAA				e*PP	pP	09 01 53.9	+4.2
SNAA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SNAA	Sanae	57.51	158	P	P	09 01 45.0	-1.5
	comp=Z,5.1nm,1.2s,mb4.4						
SNAA				epP	pP	09 01 53.9	+4.3
TXAR	Lajitas Array	65.65	355	P	P	09 02 41.5	-0.3
	comp=Z,1.6nm,1.0s,mb4.0,baz=151,slow=2.9,SNR=4.5						
TXAR				LR	LR	09 25 48.7	
	comp=Z,177nm,19.7s,MS4.3,baz=5.0,slow=31						
JCT	Junction City	66.61	359	eP	P	09 02 47.6	-0.4
JCT				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.9						
JCT	Junction City	66.61	359	eP	P	09 02 47.6	-0.4
	comp=Z,18nm,1.4s,mb4.9						
AFI	Afiamalu	68.65	268	LR	LR	09 25 08.1	
	comp=Z,245nm,18.4s,MS4.5,baz=125,slow=29						
SYO	Syowa Base	70.33	165⇑	epP	P	09 03 12.5	+1.7
AMTX	Amarillo	71.06	357	eP	P	09 03 14.7	-0.8
	comp=Z,12nm,0.9s,mb4.8						
GNAR	Gosnell	72.48	7	eP	P	09 03 24.0	-0.1
	comp=Z,120nm,0.6s						
MVCO	Mesa Verde	73.92	352	eP	P	09 03 33.3	+0.8
	comp=Z,19nm,1.4s,mb4.8						
MVCO				epP	pP	09 03 46.1	+10
ISA	Isabella	74.18	343	eP	P	09 03 35.6	+1.5
TPNV	Topopah Spring	74.92	345	eP	P	09 03 38.9	+0.5
ELN	Prospectdale	75.11	14	eP	P	09 03 37.6	-1.9
CASY	Casey	75.19	192	eP	P	09 03 39.4	-0.3
	comp=Z,7.2nm,1.2s,mb4.5						
URVA	University of	76.14	17	P	P	09 03 45.2	-0.2
NVAR	Mina Array Bea	76.79	344	P	P	09 03 47.3	-1.7
	baz=182,slow=7.2						
CMB	Columbia Colle	76.90	342	eP	P	09 03 50.3	+0.6
CMB				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
CMB	Columbia Colle	76.90	342	eP	P	09 03 50.3	+0.6
	comp=Z,6.5nm,1.1s,mb4.5						
BW06	Boulder Array	79.53	352	eP	P	09 04 04.0	-0.1
	comp=Z,11nm,1.4s,mb4.6						
PDAR	Pinedale Array	79.53	352	P	P	09 04 04.1	0.0
	comp=Z,2.2nm,0.8s,mb4.1,baz=157,slow=5.2,SNR=15						
ECSD	EROS,Sioux Fal	79.84	1	eP	P	09 04 03.9	-1.9
	comp=Z,12nm,1.0s,mb4.8						
WDC	Whiskeytown Da	79.84	341	eP	P	09 04 03.5	-2.4
WDC				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
WDC	Whiskeytown Da	79.84	341	eP	P	09 04 03.5	-2.4
	comp=Z,15nm,1.4s,mb4.7						
REDW	Red Top Meadow	80.28	351	eP	P	09 04 07.6	-0.5
	comp=Z,11nm,1.4s,mb4.6						
TPAW	Teton Pass	80.41	351	eP	P	09 04 09.6	+0.7
	comp=Z,13nm,1.3s,mb4.7						
LOHW	Long Hollow	80.49	351	eP	P	09 04 10.5	+1.2
MOD	Modoc	80.55	344	eP	P	09 04 11.0	+1.3
IMW	Indian Meadow	80.81	351	eP	P	09 04 12.1	+1.1
	comp=Z,12nm,1.4s,mb4.6						
HLID	Hailey	81.00	348	eP	P	09 04 11.6	-0.4
	comp=Z,4.1nm,0.9s,mb4.4						
RLMT	Red Lodge	81.82	352	eP	P	09 04 15.8	-0.5
	comp=Z,6.0nm,1.2s,mb4.4						
BOZ	Bozeman (W)	82.62	351	eP	P	09 04 21.8	+1.3
BOZ				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.5						
BOZ	Bozeman (W)	82.62	351	eP	P	09 04 21.8	+1.3
	comp=Z,8.4nm,1.5s,mb4.5						
BOZ				epP	pP	09 04 34.8	+11
HAWA	Hanford	84.67	345	eP	P	09 04 32.2	+1.2
RSW	Rattlesnake Hi	84.69	345	eP	P	09 04 31.5	+0.4
DGMT	Dagmar	84.73	356	eP	P	09 04 32.9	+1.7
EGMT	Eagleton	84.74	352	eP	P	09 04 32.8	+1.5
NEW	Newport	86.02	348	eP	P	09 04 38.2	+0.5
NEW				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NEW	Newport	86.02	348	eP	P	09 04 38.2	+0.5
	comp=Z,8.7nm,1.1s,mb4.9						
SUR	Sutherland	90.94	132	LR	LR	09 40 46.3	
	comp=Z,231nm,18.2s,MS4.7,baz=198,slow=32						
STKA	Stephens Creek	91.89	227	LR	LR	09 40 53.8	
	comp=Z,227nm,18.6s,MS4.6,baz=299,slow=32						
BOSA	Boshof	96.30	133	LR	LR	09 42 51.6	
	comp=Z,209nm,19.2s,MS4.6,baz=173,slow=32						
TSUM	Tsumeb	98.00	121	LR	LR	09 41 55.9	
	comp=Z,217nm,18.0s,MS4.7,baz=317,slow=31						
LBTB	Lobatse	99.15	130	LR	LR	09 43 40.2	
	comp=Z,162nm,20.7s,MS4.5,baz=227,slow=31						
MDJ	Mudanjiang	143.15	298	PKP	PKPdf	09 11 28.3	-3.1
KSRS	Korea Array	143.34	286	PKP	PKPdf	09 11 32.9	+0.9
	comp=Z,4.4nm,1.0s,baz=167,slow=2.5,SNR=4.1						
CN2	Changchun	146.08	296	ePKP	PKPdf	09 11 29.4	-7.1
CN2				PP	PP	09 14 56.7	-3.2
NJ2	Nanjing	149.10	273	ePKP	PKPdf	09 11 38.6	-3.3
BJI	Beijing	152.79	288	PKP	PKPdf	09 11 41.4	-5.9
HHC	Hu-ho-hao-te	156.33	290	ePKP	PKPdf	09 11 47.0	-5.2
HHC				PKS		09 15 19.8	
HHC				PP	PP	09 15 56.5	-2.3
HHC				SKS	SKSdf	09 18 51.8	-6.6
HHC				SKKS	SKKSac	09 22 44.1	-3.8
HHC				SS	SS	09 35 45.4	-4.0
HHC				PP	PP		
	comp=Z,234nm,9.5s						
HHC				LR	LR		
	comp=N,141nm,21.6s,MS4.9						
HHC				LR	LR		
	comp=E,130nm,21.0s,MS4.9						
HHC				LR	LR		
	comp=Z,150nm,21.0s,MS4.8						
CMAR	Chiang Mai Arr	156.48	225	PKPab	PKPab	09 12 20.1	-1.6
	comp=Z,1.3nm,0.8s,baz=158,slow=2.9,SNR=5.5						
GYA	Guiyang	156.54	252	ePKP	PKPdf	09 11 53.2	+0.2
GYA				PKP2	PKPab	09 12 24.6	+2.8
GYA				PKS		09 15 25.8	
GYA				PP	PP	09 16 03.4	+3.4
GYA				SKKS	SKKSac	09 22 49.2	-0.3
GYA				SS	SS	09 35 52.0	+0.3
GYA				PP	PP		
	comp=Z,90nm,7.6s						
GYA				LR	LR		
	comp=N,190nm,24.0s,MS4.9						
GYA				LR	LR		
	comp=E,120nm,25.6s,MS4.9						
GYA				LR	LR		
	comp=Z,170nm,23.8s,MS4.8						
AKTO	Aktyubinsk	157.98	43	PKPab	PKPab	09 12 25.9	-1.4
	comp=Z,0.6nm,0.4s,baz=268,slow=1.4,SNR=3.8						
KMI	Kunming	158.72	244	PKP	PKPdf	09 11 56.5	+0.8
KMI				APKP		09 12 00.0	
KMI				XPKP		09 12 01.4	
KMI				PKP2	PKPab	09 12 35.8	+4.5
KMI				PP	PP	09 16 16.7	+4.9
KMI				PP	PP		
	comp=Z,206nm,12.6s						
KMI				LR	LR		
	comp=N,102nm,23.6s						
KMI				LR	LR		
	comp=E,90nm,28.9s						
KMI				LR	LR		
	comp=Z,114nm,30.0s						
CD2	Chengdu	160.84	260	ePKP	PKPdf	09 11 56.6	-1.4
CD2				PKP2	PKPab	09 12 41.7	+1.3
CD2				PP	PP	09 16 26.3	+2.7
CD2				SKS	SKSdf	09 18 57.0	-6.2
CD2				SKKS	SKKSac	09 23 09.1	-2.8
CD2				SS	SS	09 36 34.2	-3.4
CD2				PP	PP		
	comp=Z,90nm,10.2s						
CD2				LR	LR		
	comp=N,130nm,21.2s						
CD2				LR	LR		
	comp=Z,150nm,22.2s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LZH	Lanzhou	162.14	275	ePKP	PKPdf	09 11 55.6	-3.5
LZH				APKP		09 12 05.0	
LZH				PKP2	PKPab	09 12 46.0	0.0
KURK	Kurchatov	165.59	8	PKPab	PKPab	09 12 57.4	-3.0
	comp=Z,0.2nm,0.3s,baz=344,slow=5.4,SNR=3.8						
MKAR	Makanchi Array	169.68	358	PKPab	PKPab	09 13 16.6	-2.0
	comp=Z,1.1nm,0.8s,baz=354,slow=3.7,SNR=5.6						

IDC 08 09:08:45.2±2.6,1961S×17206E,h0km,mb4.0/6, mb1 4.3/6,mb1mx4.0/16,mbtmp4.0/6,Error ellipse: s-maj=196.0km s-min=22.7km az=159.0,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	35.45	263	P	P	09 15 43.6	+0.1
	1.1nm,0.7s,baz=92,slow=8.2,SNR=11						
ASAR	Alice Springs	35.62	257	P	P	09 15 44.1	-0.9
	3.2nm,0.8s,baz=87,slow=8.5,SNR=18						
FITZ	Fitzroy Crossi	43.85	264	P	P	09 16 55.0	+1.4
	6.1nm,0.9s,baz=109,slow=8.2,SNR=5.2						
NVAR	Mina Array Bea	87.07	48	P	P	09 21 33.3	+0.4
	2.0nm,1.0s,baz=229,slow=8.0,SNR=11						
TXAR	Lajitas Array	94.61	61	P	P	09 22 08.0	-0.4
	0.2nm,0.7s,baz=254,slow=3.4,SNR=2.7						
PDAR	Pinedale Array	94.93	46	P	P	09 22 10.9	+1.5
	0.1nm,0.4s,baz=221,slow=3.6,SNR=2.5						
GERES	GERESS Array B	146.02	334	PKPbc	PKPbc	09 28 25.1	-1.8
	0.7nm,0.8s,baz=15,slow=4.1,SNR=4.3						

*NEIC **08** 09:48:33.0,33.12S×72.19W,h12km,ML2.9(GUC),After GUC.*

GUC 08 09:48:33.0±0.4,3312S×7219W,h12km±4km,MD3.9, ML2.9,2C-5D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.47	79⇓	iP	Pg	09 48 42.4	+0.2
IHA				iS	Sg	09 48 49.9	+1.3
LCCH	Las Cruces	0.63	125	eP	Pg	09 48 45.2	-0.2
LCCH				iS	Sg	09 48 54.4	+0.7
ROCH	El Roble	1.00	82⇑	iP	Pb	09 48 51.3	-1.1
LNV	Longovilo	1.06	142⇓	iP	Pb	09 48 51.9	-1.4
LNV				iS	Sb	09 49 06.4	-0.8
TACH	Talagante	1.18	117⇓	iP	Pb	09 48 54.0	-1.3
TACH				iS	Sb	09 49 09.8	-0.8
RCDM	Rinconada Maip	1.22	108	eP	Pn	09 48 54.4	-1.5
RCDM				iS	Sb	09 49 10.8	-1.0
PEL	Peldehue	1.27	92⇓	eP	Pn	09 48 55.3	-1.2
PEL				eS	Sb	09 49 12.6	-0.5
PEL				AML	AML	09 49 14.3	
	comp=E,657nm,0.4s						
CHNG	Los Chungos	1.36	26	eP	Pn	09 48 56.8	-1.1
CHNG				iS	Sb	09 49 14.6	-1.2
ANTU	Antumapu	1.38	110	eP	Pn	09 48 57.4	-0.8
ANTU				iS	Sn	09 49 15.5	-0.8
ANTU				AML	AML	09 49 22.8	
	comp=N,197nm,0.4s						
ANTU	Antumapu	1.38	110	eP	Pn	09 48 57.4	-0.8
ANTU				iS	Sn	09 49 15.5	-0.8
JACH	Jahuel	1.42	73	eP	Pn	09 48 57.3	-1.3
CLCH	Cerro Calan	1.42	102	eP	Pn	09 48 57.8	-0.8
CLCH				eS	Sn	09 49 16.9	-0.3
CLCH				AML	AML	09 49 21.3	
	comp=E,450nm,0.5s						
PCH	Pirque	1.49	110	iP	Pn	09 48 59.2	-0.5
CHCH	Chadas Angostu	1.52	123⇓	iP	Pn	09 48 59.5	-0.6
FCH	Farellones	1.61	98⇑	eP	Pn	09 49 01.2	-0.1
FCH				iS	Sn	09 49 22.7	+0.8
FCH				AML	AML	09 49 26.2	
	comp=N,209nm,0.5s						
CACH	El Canelo	1.66	127	eP	Pn	09 49 02.4	+0.4
SFDO	San Fernando	1.79	147	eP	Pn	09 49 03.5	-0.2
CICH	Cipreses	1.91	130	eP	Pn	09 49 04.7	-0.6

*ISK **08** 10:08:47.9,3882N×4002E,h10km,MD3.1*
*CSEM **08** 10:08:47.9±0.2,3881N×3998E,h10km,MD3.1,Error ellipse: s-maj=6.3km s-min=4.4km az=131.0*
*ISCJB **08** 10:08:49.7±0.7,3879N±005×3997E±005,h19km±9km, Error ellipse: s-maj=8.0km s-min=5.8km az=163.2*
*DDA **08** 10:08:49.4,3871N×4006E,h7km±5km,Md2.8*

ISC 08 10:08:50.0±0.7,3879N±005×3994E±005,h19km±7km,n12, σ0.s92/18,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	Pertek	0.44	284	ePG	Pg	10 08 57.0	-2.0
PTK				eSG	Sg	10 09 05.7	+0.4
SVRC	Sivrice-ELAZID	0.65	231	ePG	Pg	10 09 02.1	-0.6
SVRC				eSG	Sg	10 09 12.9	+1.5
BNGL	BINGOL	0.96	80	iP	Pb	10 09 04.9	-3.0
BNGL				iS	Sb	10 09 19.8	-0.3
EZC	Erzincan	0.96	354	ePG	Pg	10 09 08.8	+0.1
MYA	Malataya	1.28	249	ePN	Pn	10 09 12.5	-0.3
MALT	Malatya	1.28	249	ePN	Pn	10 09 12.4	-0.4
BEST	Besiri	1.38	130	iP	Pn	10 09 13.4	-0.7
BEST				iS	Sn	10 09 31.9	+0.2
ERZM	Erzurum	1.57	44	iP	Pn	10 09 17.8	+1.0
ERZM				iS	Sg	10 09 41.9	+1.2
URFA	Urfa	1.61	214	ePN	Pn	10 09 17.9	+0.5
MARD	Mardin	1.61	156	iP	Pn	10 09 16.8	-0.5
MARD				iS	Sn	10 09 38.4	+0.8
GUMT	Gumushane	1.71	348	ePN	Pn	10 09 19.0	+0.3
AGRB	Hanur-Agry	2.50	71	ePN	Pn	10 09 29.5	0.0

*NEIC **08** 10:23:58.2,1453N×9346W,h72km,MD4.2(MEX),After MEX.*

MEX 08 10:23:58.6±0.6,1452N×9344W,h70km±26km,MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.20	71	iP	Pn	10 24 18.0	-1.6
THIG				iS	Sn	10 24 33.8	-1.6
TGIG		2.27	8	iP	Pn	10 24 33.1	-0.8
TGIG				iS	Sn	10 24 58.7	-2.1
SCX	San Cristobal	2.33	19	iP	Pn	10 24 33.8	-1.0
SCX				iS	Sn	10 25 01.2	-1.3
SCX	San Cristobal	2.33	19	iP	Pn	10 24 35.0	+0.2
SCX				iS	Sn	10 24 59.5	-3.0
CMIG	Matias Romero	2.91	332	iP	Pn	10 24 41.2	-1.4
CMIG				iS	Sn	10 25 15.2	-1.3
CMIG	Matias Romero	2.91	332	iP	Pn	10 24 41.4	-1.3
CMIG				iS	Sn	10 25 13.8	-2.7
VHO	Vista Hermosa	4.06	309	iP	Pn	10 24 57.8	-0.6
VHO				iS	Sn	10 25 43.1	-1.6
UTMO	Huajuapan	5.33	309	iP	Pn	10 25 16.0	+0.3
UTMO				iS	Sn	10 26 14.9	-0.8
TEIG	Tepich	7.51	40	ePn	Pn	10 25 44.9	-0.6
TEIG				eSn	Sn	10 27 10.3	+1.0

IDC 08 10:26:01.9±22.0,1859S×17750W,h506km±197km, mb3.2/6,mb1 3.3/6,mb1mx3.0/19,mbtmp3.2/6,Error ellipse: s-maj=234.0km s-min=50.9km az=48.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	20.15	192	P	P	10 30 01.4	-0.1
	4.4nm,0.8s,baz=37,slow=5.1,SNR=3.0						
CTA	Charters Tower	34.19	261	P	P	10 32 04.8	-0.1
	1.4nm,0.4s,baz=78,slow=14,SNR=4.6						
STKA	Stephens Creek	39.07	242	P	P	10 32 45.3	+0.4
	0.7nm,0.5s,baz=84,slow=12,SNR=3.4						
WRA	Warramunga Arr	45.36	260	P	P	10 33 34.2	-0.5
	1.5nm,0.4s,baz=98,slow=6.7,SNR=67						
ASAR	Alice Springs	45.44	255	P	P	10 33 35.2	0.0
	3.5nm,0.6s,baz=89,slow=8.8,SNR=58						
FITZ	Fitzroy Crossi	53.77	261	P	P	10 34 37.1	+0.3
	0.6nm,0.4s,baz=80,slow=6.1,SNR=3.3						

*ISCJB **08** 10:29:11.6±0.5,3980N±003×2676E±003,h3km±7km, Error ellipse: s-maj=4.8km s-min=4.3km az=15.4*
*ISK **08** 10:29:11.4,3979N×2675E,h5km,MD3.1*
*DDA **08** 10:29:11.5,3979N×2676E,h7km±4km,Md3.1*
*CSEM **08** 10:29:11.1±0.1,3979N×2675E,h8km,MD3.1,Error ellipse: s-maj=1.3km s-min=1.2km az=78.0*

ISC 08 10:29:12.2±0.5,3979N±003×2675E±003,h7km±7km,n16, σ0.s43/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	Ezine	0.33	276	ePG	Pg	10 29 18.2	-0.4
EZN				eSG	Sg	10 29 23.2	+0.2
AYVA	Ayvalik	0.49	185	iP	Pg	10 29 21.3	-0.3
AYVA				iS	Sg	10 29 27.9	0.0
BOZC	Bozcaada	0.54	275	iP	Pg	10 29 22.5	-0.1
BOZC				iS	Sg	10 29 30.2	+0.6
LPK	Lapseki	0.58	1	ePG	Pg	10 29 22.9	-0.5
LPK				eSG	Sg	10 29 31.3	+0.3
BALY	Balya	0.67	94	iP	Pg	10 29 25.1	-0.1
BALY				iS	Sg	10 29 34.3	+0.4
BALB	Balikesir	0.89	100	ePG	Pg	10 29 28.8	-0.3
BALB				eSG	Sg	10 29 41.3	+0.6
RKY	Sarkoy-Tekirda	0.95	20	ePG	Pg	10 29 30.0	-0.5
SART	Tekirdag	0.95	20	iP	Pg	10 29 30.1	-0.4
SART				iS	Sg	10 29 43.2	+0.3
MRMT	Marmara Adasi	1.04	38	ePG	Pg	10 29 31.8	-0.3
ENEZ	Enez	1.05	334	ePG	Pg	10 29 32.8	+0.5
MFT	Murefte	1.07	22	ePG	Pg	10 29 32.2	-0.6
AKS	Akhisar	1.23	138	ePN	Pn	10 29 35.3	-0.5
KCT	Karacabey	1.32	69	ePN	Pn	10 29 36.6	-0.4
IZM	Izmir	1.45	164	ePN	Pn	10 29 38.6	-0.2
DST	Dursunbey	1.46	97	ePN	Pn	10 29 39.5	+0.6
YLV	Yalova	2.15	68	ePN	Pn	10 29 49.3	+0.8

*AUST **08** 10:29:00,4050S×14509E,h10km,ML3.8*
*ISCJB **08** 10:29:12.7±1.1,4052S±005×1450E±0.1,h10km,Error ellipse: s-maj=13.5km s-min=6.2km az=169.6*
*NEIC **08** 10:29:13.2±1.0,4053S×14489E,h10km,ML3.8(AUST), Error ellipse: s-maj=18.6km s-min=9.9km az=67.0*
NEIC Felt in the Smithton, Tasmania area.

ISC 08 10:29:13.1±2.0,4054S±005×1450E±01,h2km±15km,n8, σ0.s88/14,Bass Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOO	Moorlands	2.51	140	eP	Pn	10 29 54.5	-0.4
MOO				eS	Sn	10 30 25.9	-0.1
TAU	Tasmania Unive	2.93	145	ePn	Pn	10 30 01.3	+0.6
TAU				eSn	Sg	10 30 47.5	+0.2
TOO	Toolangi	2.98	7	ePG	Pn	10 30 06.4	+5.0
TOO	Toolangi	2.98	7	eP	Pn	10 30 00.4	-1.0
TOO				eS	Sn	10 30 42.1	+4.3
ARPS	Mount Arapiles	4.51	326	eP	Pn	10 30 22.3	-0.1
ARPS				eS	Sn	10 31 08.5	-6.9
	7.9nm,0.2s						
MILA	Mila	4.75	44	eP	Pn	10 30 25.2	-0.5
MILA				eS	Sn	10 31 19.9	-1.4
CAN	Canberra	6.09	32	ePn	Pn	10 30 44.5	+0.5
CAN				eSn	Sn	10 31 57.1	+2.8
YNG	Young	6.78	24	eP	Pn	10 30 53.6	0.0

*NIED **08** 11:21:00,2440N×12230E,h44km,Mw3.7 Best double couple: $M_0$4.65000×10[14] NP1:ϕ_s50.00000°,δ52.00000°, λ90.00000°. NP2:ϕ_s230.00000°,δ38.00000°,λ90.00000°.*
*TAP **08** 11:21:59.0,2426N×12225E,h53km,ML4.2,B*
*ISCJB **08** 11:21:58.3±0.2,2426N±002×12231E±002,h61km±4km, mb3.8/6,Error ellipse: s-maj=3.4km s-min=2.1km az=156.3*
*NEIC **08** 11:21:58.8±0.8,2430N×12229E,h58km±8km, MG3.6(JMA),Error ellipse: s-maj=13.7km s-min=11.1km az=211.0*
*JMA **08** 11:21:59.3±0.1,2442N×12234E,h68km±1km,M3.6*
*IDC **08** 11:22:01.4±8.6,2442N×12248E,h86km±92km,mb3.5/6, mb1 3.6/7,mb1mx3.5/22,mbtmp3.6/7,ML4.1/1,Error ellipse: s-maj=64.3km s-min=15.8km az=62.0*

ISC 08 11:21:59.1±0.2,2426N±002×12231E±002,h54km±4km, n88,σ0.s95/151,mb3.8/6,26C-3D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.54	288⇑	iP	Pn	11 22 10.9	-0.3
	baz=293						
ENA				eS	Sn	11 22 19.0	-0.8
	baz=293						
TWC	Suao	0.54	310⇑	iP	Pn	11 22 10.8	-0.3
	baz=316						
TWC				iS	Sn	11 22 18.5	-1.3
	baz=316						
NACB	Ninganchiao	0.66	263⇓	iPg	Pn	11 22 11.5	-1.1
NACB				eSg	Sn	11 22 18.2	-4.0
YOJ	Yonaguni jima	0.67	73	P	Pn	11 22 13.2	+0.5
YOJ				S	Sn	11 22 23.3	+0.7
YOJ	Yonaguni jima	0.67	73⇓	iP	Pn	11 22 13.2	+0.5
	baz=73						
YOJ				iS	Sn	11 22 23.4	+0.9
	baz=73						
TWD	Chiawan	0.67	255⇑	iP	Pn	11 22 11.8	-0.9
	baz=253						
TWD				iS	Sn	11 22 21.2	-1.4
	baz=253						
HWA	Hwalien	0.70	246	iP	Pn	11 22 12.4	-0.6
	baz=245						
HWA				iS	Sn	11 22 22.5	-0.7
	baz=245						
ILA	Ilan	0.72	315	eP	Pn	11 22 12.8	-0.4
	baz=327						
ILA				eS	Sn	11 22 24.9	+1.3
	baz=327						
TWE	Neicheng	0.74	308⇑	iP	Pn	11 22 13.9	+0.3
	baz=306						
TWE				S	Sn	11 22 24.4	+0.3
	baz=306						
ENTT	Nioudou	0.77	299⇑	iP	Pn	11 22 14.2	+0.1
	baz=294						
ENTT				S	Sn	11 22 25.0	+0.1
	baz=294						
TWB1	Santiao Chiao	0.80	339⇑	iP	Pn	11 22 14.1	-0.2
	baz=342						
TWB1				iS	Sn	11 22 24.8	-0.7
	baz=342						
ESF	Shoufeng Towns	0.83	242	eP	Pn	11 22 13.9	-0.8
	baz=241						
ESF				eS	Sn	11 22 24.8	-1.3
	baz=241						
NNS	Nan Shan	0.87	282⇑	iP	Pn	11 22 14.9	-0.3
	baz=283						
NNS				eS	Sn	11 22 26.0	-1.1
	baz=283						
TEGC	Jichi Village	0.89	232	eP	Pn	11 22 15.0	-0.6
	baz=230						
TEGC				eS	Sn	11 22 26.5	-1.1
	baz=230						
ESL	Shilin	0.92	241	⇑P	Pn	11 22 14.7	-1.2
	baz=250						
ESL				eS	Sn	11 22 26.2	-1.9
	baz=250						
NWF	Wu-fen Shan	0.94	329⇑	iP	Pn	11 22 16.3	+0.1
	baz=332						
NWF				eS	Sn	11 22 28.7	0.0
	baz=332						
YHNB	Yeheng	0.94	296	eP	Pn	11 22 16.0	-0.2
YHNB				eSn	Sn	11 22 29.8	+1.0
NSK	Sanguang	0.96	296⇑	iP	Pn	11 22 16.4	0.0
	baz=287						
WHF	Hehuan Shan	0.96	263⇑	iP	Pn	11 22 16.1	-0.3
	baz=256						
WHF				S	Sn	11 22 28.7	-0.5
	baz=256						
TWA	Mucha	0.97	318⇑	iP	Pn	11 22 17.0	+0.3
	baz=330						
TWA				S	Sn	11 22 29.6	+0.1
	baz=330						
TATO	Taipei	1.03	314	ePg	Pn	11 22 17.4	0.0
TWT	Tachien	1.03	270⇑	iP	Pn	11 22 17.8	+0.4
	baz=270						
TWT				iS	Sn	11 22 30.7	-0.2
	baz=270						
TAP1	Taipei	1.05	318	P	Pn	11 22 17.8	+0.1
	baz=330						
TAP1				S	Sn	11 22 31.2	-0.2
	baz=330						
TWS1	Kuangyinshan	1.16	316⇑	iP	Pn	11 22 19.4	+0.2
	baz=329						
TWS1				eS	Sn	11 22 34.0	0.0
	baz=329						
EHY	Hungye	1.17	230	eP	Pn	11 22 18.0	-1.3
	baz=229						
EHY				eS	Sn	11 22 31.7	-2.6
	baz=229						
TWY	Chenhua	1.20	328	eP	Pn	11 22 19.7	0.0
	baz=329						
TWY				eS	Sn	11 22 35.2	+0.3
	baz=329						
NCU	National Centr	1.24	305	eP	Pn	11 22 20.5	+0.3
	baz=306						
NCU				eS	Sn	11 22 36.0	+0.1
	baz=306						
NSTT	Nanjuang	1.25	287⇑	iP	Pn	11 22 20.8	+0.6
	baz=282						
NSTT				S	Sn	11 22 36.9	+0.9
	baz=282						
TWF1	Yuli	1.29	226	⇑P	Pn	11 22 19.9	-1.0
	baz=235						
TWF1				eS	Sn	11 22 35.1	-2.1
	baz=235						
IRIF	Iriomote-Funau	1.30	86	P	Pn	11 22 21.3	+0.3
IRIF				S	Sn	11 22 38.0	+0.7
HSN	Hsinchu	1.33	294	eP	Pn	11 22 21.0	-0.5
	baz=307						
SMLT	Sun Moon Lake	1.34	254⇑	iP	Pn	11 22 21.5	0.0
	baz=248						
SMLT				S	Sn	11 22 37.7	-0.6
	baz=248						
TYC	Yuchr	1.37	255⇑	iP	Pn	11 22 21.9	-0.1
	baz=247						
TYC				eS	Sn	11 22 38.6	-0.5
	baz=247						
PCYT	Pengchaiyu	1.38	351	eP	Pn	11 22 22.0	-0.1
	baz=345						
HATJ	Hateruma jima	1.38	98	P	Pn	11 22 23.1	+1.0
HATJ				S	Sn	11 22 40.8	+1.5
TWQ1	Liyutan	1.40	274⇑	iP	Pn	11 22 23.1	+0.7
	baz=274						
TWQ1				eS	Sn	11 22 40.5	+0.6
	baz=274						
NSY	Sanyi	1.42	277	eP	Pn	11 22 23.3	+0.7
	baz=277						
NSY				eS	Sn	11 22 41.0	+0.8
	baz=277						
CHKT	Chengkung	1.44	217	eP	Pn	11 22 21.4	-1.6
	baz=208						
CHKT				eS	Sn	11 22 37.0	-3.7
	baz=208						
YUS	Yu-Shan	1.46	239⇑	iP	Pn	11 22 23.5	+0.3
	baz=238						
YUS				S	Sn	11 22 40.4	-0.8
	baz=238						
TCU	Taichung	1.49	266	eP	Pn	11 22 24.1	+0.5
	baz=266						
TCU				eS	Sn	11 22 43.7	+1.7
	baz=266						
WNT	Mingjian	1.53	256⇑	iP	Pn	11 22 25.2	+1.1
	baz=256						
WNT				eS	Sn	11 22 44.1	+1.1
	baz=256						
JKRS	Kuro-shima	1.55	90	P	Pn	11 22 25.4	+1.0
JKRS				eS	Sn	11 22 43.9	+0.4
ALS	Alishan	1.56	242	⇑P	Pn	11 22 25.1	+0.5
	baz=234						
ALS				eS	Sn	11 22 43.1	-0.7
	baz=234						
ELDTW	Lidau	1.59	228	eP	Pn	11 22 23.9	-1.1
	baz=227						
CHN5	Tsauling	1.63	246⇑	iP	Pn	11 22 26.1	+0.6
	baz=237						
CHN5				eS	Sn	11 22 46.5	+1.1
	baz=237						
JIJ	Ishigaki jima	1.68	86	P	Pn	11 22 26.2	+0.1
JIJ				eS	Sn	11 22 46.5	0.0
WGK	Gukeng	1.70	251	eP	Pn	11 22 27.3	+0.9
	baz=241						
WGK				eS	Sn	11 22 48.6	+1.6
	baz=241						
STYT	Tauyuan	1.79	233	⇑P	Pn	11 22 27.8	+0.1
	baz=227						
STYT				eS	Sn	11 22 48.6	-0.8
	baz=227						
CHN4	Tsaushan	1.81	240	P	Pn	11 22 29.0	+1.0
	baz=240						
CHN4				eS	Sn	11 22 51.1	+1.3
	baz=240						
CHN2	Minshiung	1.83	247	eP	Pn	11 22 29.4	+1.2
	baz=247						
CHN2				eS	Sn	11 22 52.7	+2.5
	baz=247						
TWG	Pinlang	1.83	219	eP	Pn	11 22 26.7	-1.5
	baz=218						
TTN	Taitung	1.84	216	eP	Pn	11 22 28.4	+0.1
	baz=209						
TTN				eS	Sn	11 22 49.9	-0.6
	baz=209						
WTP	Ta-pu	1.85	237	P	Pn	11 22 29.2	+0.7
	baz=237						
WTP				eS	Sn	11 22 51.9	+1.1
	baz=237						
CHY	Chiayi	1.88	247	eP	Pn	11 22 29.2	+0.3
	baz=236						
CHY				eS	Sn	11 22 52.9	+1.3
	baz=236						
WTCT	Ta-ch'eng	1.89	258	eP	Pn	11 22 29.1	0.0
	baz=258						
WTCT				eS	Sn	11 22 51.8	0.0
	baz=258						
TWK	Hsinying	1.94	240⇓	iP	Pn	11 22 30.7	+1.0
	baz=240						
TWK				eS	Sn	11 22 53.5	+0.6
	baz=240						
CHN1	Nanshi	1.95	237	eP	Pn	11 22 30.4	+0.6
	baz=237						
CHN1				eS	Sn	11 22 54.1	+0.9
	baz=237						
SGST	Jiashian	1.97	234⇑	iP	Pn	11 22 31.2	+1.1
	baz=226						
SGST				eS	Sn	11 22 55.0	+1.4
	baz=226						
WSF	Szhu	2.01	252	eP	Pn	11 22 31.1	+0.5
	baz=252						
WSF				eS	Sn	11 22 55.7	+1.1
	baz=252						
ECL	Taimali	2.07	217	eP	Pn	11 22 29.9	-1.6
	baz=222						
CHN8	Yiju	2.12	245	eP	Pn	11 22 30.9	-1.4
	baz=234						
CHN8				eS	Sn	11 22 58.6	+1.2
	baz=234						
SSD	Sandimen	2.15	226	eP	Pn	11 22 33.1	+0.5
	baz=218						
SSD				eS	Sn	11 22 58.5	+0.3
	baz=218						
JTJ	Tarama	2.21	80	P	Pn	11 22 34.2	+0.8
JTJ				eS	Sn	11 22 59.8	+0.1
SCLT	Jiali	2.22	241	eP	Pn	11 22 34.0	+0.5
	baz=242						
SCLT				eS	Sn	11 23 01.1	+1.3
	baz=242						
TWM1	Shoushan	2.25	231	eP	Pn	11 22 36.4	+2.5
	baz=242						
TWM1				eS	Sn	11 23 04.4	+4.0
	baz=242						
EAST	Anshuo	2.30	216	eP	Pn	11 22 33.7	-1.0
	baz=209						
SCZT	Fangliau	2.44	220	eP	Pn	11 22 36.8	+0.2
	baz=216						
PNG	Penghu	2.61	255	eP	Pn	11 22 37.6	-1.3
	baz=255						
PNG				eS	Sn	11 23 07.1	-2.3
	baz=255						
HEN	Hengchun	2.67	213	eP	Pn	11 22 41.7	+2.0
	baz=204						
TWK1	Hengchun	2.69	211	eP	Pn	11 22 41.3	+1.3
	baz=212						
TWK1				eS	Sn	11 23 09.8	-1.5
	baz=212						
JMJ	Miyako jima 2	2.77	78	eS	Sn	11 23 13.0	-0.4
JOGS	Gusukube	2.87	79	P	Pn	11 22 43.2	+0.8
JOGS				eS	Sn	11 23 15.8	+0.1
KNM	Kinmen	3.54	273	eP	Pn	11 22 50.4	-1.1
	baz=271						
JKE	Kume jima 2	4.54	62	P	Pn	11 23 06.0	+0.6
JAGN	Aguni-jima	5.03	62	P	Pn	11 23 12.7	+0.7
JIH	Iheya	5.81	60	P	Pn	11 23 22.6	-0.1
JOW	Kunigami	5.97	63	P	Pn	11 23 24.3	-0.6
	12nm,0.3s,baz=179,slow=10,SNR=108						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JOW				S	Sn	11 24 30.1	-1.8
	baz=136,slow=26,SNR=1.9						
JOW	**Kunigami**	**5.97**	**63**	P	**Pn**	**11 23 24.2**	**-0.7**
JOW				*e*S	**Sn**	**11 24 30.2**	**-1.7**
JOW	**Kunigami**	**5.97**	**63**⇑	*e*P	**Pn**	**11 23 24.3**	**-0.6**
	baz=64						
JTK	**Tokunoshima**	**6.93**	**58**	P	**Pn**	**11 23 36.8**	**-1.3**
JAM	**Amami Oshima**	**7.74**	**56**	P	**Pn**	**11 23 47.8**	**-1.4**
JMZ	**Minamidaito 2**	**8.23**	**77**	P	**Pn**	**11 23 52.4**	**-3.5**
SONM	**Songino Array**	**26.71**	**336**	P	**P**	**11 27 32.4**	**-0.8**
	2.1nm,0.7s,mb3.8,baz=148,slow=11,SNR=14						
MKAR	**Makanchi Array**	**39.00**	**315**	P	**P**	**11 29 20.1**	**-0.2**
	0.6nm,0.7s,mb3.4,baz=117,slow=10,SNR=6.7						
ZALV	**Zalesovo Beam**	**40.74**	**327**	P	**P**	**11 29 32.5**	**-2.1**
	1.1nm,0.4s,mb3.8,baz=140,slow=7.5,SNR=5.3						
WRA	**Warramunga Arr**	**45.47**	**164**	P	**P**	**11 30 12.7**	**-0.4**
	1.5nm,0.7s,mb3.9,baz=346,slow=8.5,SNR=14						
BVAR	**Borovoye Array**	**48.27**	**320**	P	**P**	**11 30 32.9**	**-1.8**
	0.5nm,0.5s,mb3.8,baz=89,slow=9.3,SNR=3.7						
ASAR	**Alice Springs**	**48.95**	**166**	P	**P**	**11 30 40.3**	**+0.1**
	0.5nm,0.6s,mb3.7,baz=345,slow=7.0,SNR=9.4						

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*IDC **08** 11:31:40.1±0.6, 0.38N×97.87E, h0km, mb4.5/17, mb1 4.6/18, mb1mx4.4/25, mbtmp4.5/18, ML4.5/1, MS4.6/30, Ms1 4.6/30, ms1mx4.5/43, Error ellipse: s-maj=21.4km s-min=13.1km az=55.0*

*DJA **08** 11:31:41, 0.43N×97.05E, h102km, Mw5.2/6*

*ISCJB **08** 11:31:42.8±0.3, 0.31N±0.04×97.66E±0.03, h32km, mb4.8/69, MS4.8/58, Error ellipse: s-maj=5.9km s-min=4.4km az=17.6*

*MOS **08** 11:31:43.3±0.9, 0.43N×97.77E, h33km, mb5.2/26, MS4.8/8, Error ellipse: s-maj=13.5km s-min=6.3km az=105.5*

*BJI **08** 11:31:43.0, 0.24N×97.65E, h40km, mB5.3, mb4.8, Ms5.1, Msz4.9*

*GCMT **08** 11:31:44.3±0.3, 0.10N×97.62E, h36km±1km, MW5.1/70, Moment Tensor Solution. s46,c67; s70,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.44±.18; $M_{\theta\theta}$-2.84±.13; $M_{\phi\phi}$-0.59±.18; $M_{r\theta}$2.66±.14; $M_{\theta\phi}$2.88±.10; $M_{\phi r}$-1.59±.18; Best double couple: $M_0$5.16100×10^{16} NP1:ϕ_s309.00000°,δ27.00000°,λ97.00000°. NP2: ϕ_s121.00000°,δ64.00000°,λ87.00000°. Principal axes: T 4.4810, Plg71.0000°, Azm24.0000°; N 1.3640, Plg3.0000°, Azm123.0000°; P -5.8400, Plg18.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **08** 11:31:44.3±0.3, 0.34N×97.80E, h30km, mb5.0/16 Error ellipse: s-maj=10.3km s-min=5.6km az=45.0*

*SZGRF **08** 11:31:44.6, 0.72N×98.29E, h33km, mb5.1, Northern Sumatera, Indonesia*

ISC 08 11:31:44.9±0.3, **0.30N**±0.04×**97.65E**±0.03, **h33**km, **h33**km±1.4km**:pP-P, n202,** σ1**s**.**00**/192, **mb4.8**/69, **MS4.8**/58, **14C-11D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSI	**Tarutung**	**2.16**	**37**	P	**Pn**	**11 32 18.8**	**+0.2**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**2.84**	**105**	P	**Pn**	**11 32 27.7**	**-0.3**
	0.0nm,0.0s						
RGRI	**Rengat**	**4.72**	**98**	P	**Pn**	**11 32 58.1**	**+4.2**
	0.0nm,0.0s						
FRIM	**Kepong**	**4.93**	**54**	⇓P	**Pn**	**11 32 57.5**	**+0.8**
IPM	**Ipoh**	**5.35**	**39**	⇑P	**Pn**	**11 33 04.0**	**+1.5**
BSI	**Banda Aceh**	**5.67**	**336**	P	**Pn**	**11 33 06.1**	**-0.9**
	132nm,0.7s						
KGM	**Kluang**	**5.92**	**73**	⇓P	**Pn**	**11 33 11.4**	**+1.1**
KTGM	**Kuala Trenggan**	**7.41**	**48**	⇓P	**Pn**	**11 33 31.4**	**+0.6**
SNG	**Songkhla**	**7.45**	**23**	P	**Pn**	**11 33 31.0**	**-0.3**
	160nm,1.0s						
KLI	**Kotabumi**	**8.83**	**126**	P	**Pn**	**11 33 56.2**	**+5.8**
	260nm,1.3s						
CBJI	**Citeko**	**11.35**	**126**	P	**Pn**	**11 34 34.4**	**+10**
	309nm,1.2s						
PBA	**Port Blair**	**12.29**	**337**	*e*P	x	11 36 55.0	
PBA				*e*S	x	11 40 13.5	
KSM	**Kuching**	**12.71**	**85**	⇑P	**Pn**	**11 34 44.3**	**+0.9**
STKI	**Sintang**	**13.83**	**91**	P	**Pn**	**11 35 07.5**	**+8.8**
	50nm,1.0s						
SBUM	**Sibu**	**14.72**	**82**	⇑P	**Pn**	**11 35 12.5**	**+1.6**
BDT	**Bhumibol Dam**	**16.89**	**4**	P	**Pn**	**11 35 40.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**18.09**	**4**	P	**Pn**	**11 35 52.3**	**-1.5**
	0.6nm,0.3s,baz=312,slow=11,SNR=5.7						
CMAR				LR	LR	11 43 36.5	
	comp=Z,2μm,18.7s,baz=189,slow=40						
CHTO	**Chiang Mai**	**18.44**	**4**	*e*P	**Pn**	**11 35 56.8**	**-1.3**
NANT	**Nan**	**18.63**	**9**	P	**Pn**	**11 35 57.2**	**-3.1**
	102nm,1.0s						
KKM	**Kota Kinabalu**	**19.39**	**73**	⇓P	**Pn**	**11 36 09.2**	**-0.4**
KKM	**Kota Kinabalu**	**19.39**	**73**	*e*P	**Pn**	**11 36 08.1**	**-1.4**
SDKM	**Sandakan**	**20.22**	**74**	⇓P	**P**	**11 36 18.1**	**+0.7**
KDM	**Kudat**	**20.23**	**71**	⇓P	**P**	**11 36 18.1**	**+0.7**
TSM	**Tawau**	**20.59**	**79**	⇓P	**P**	**11 36 22.7**	**+1.4**
MYLDM	**Lahad Datu**	**21.37**	**77**	⇑P	**P**	**11 36 31.1**	**+1.2**
MDRS	**Chennai**	**21.42**	**307**	*e*P	**P**	**11 36 28.3**	**-2.0**
QIZ	**Qiongzhong**	**22.13**	**32**	P	**P**	**11 36 37.1**	**-0.7**
QIZ				S	**S**	**11 40 39.9**	**-0.1**
QIZ				XS	sS	11 40 52.6	-1.7
QIZ				AMB	AMB		
	comp=Z,282nm,12.7s						
QIZ				LR	LR		
	comp=E,3μm,13.6s						
QIZ				LR	LR		
	comp=Z,1μm,12.8s,MS4.6						
VIS	**Vishakhapatnam**	**22.32**	**322**	*e*P	**P**	**11 36 40.6**	**+0.7**
VIS				*e*x	x	11 40 42.3	
KOD	**Kodaikanal**	**22.37**	**297**	*e*P	**P**	**11 36 40.3**	**-0.2**
KOD				AMb	AMB	11 36 59.1	
	comp=Z,42nm,2.0s,mb4.5						
KAPI	**Kappang**	**22.69**	**104**	P	**P**	**11 36 40.4**	**-3.6**
	comp=Z,2.7nm,0.3s,mb4.2,baz=154,slow=19,SNR=4.1						
CAL	**Calcutta**	**23.90**	**338**	*e*P	**P**	**11 36 54.7**	**-1.1**
CAL				AMb	AMB	11 37 03.9	
	comp=Z,1μm,0.3s						
CAL				*e*S	**S**	**11 41 11.9**	**+1.8**
KMI	**Kunming**	**25.16**	**11**	P	**P**	**11 37 08.6**	**+1.3**
KMI				AP	pP	11 37 19.8	+2.9
KMI				XP	sP	11 37 23.9	+3.0
KMI				PP		11 37 48.9	
KMI				PPP		11 38 00.1	
KMI				S	**S**	**11 41 30.9**	**+0.5**
KMI				XS	sS	11 41 45.3	-0.8
KMI				SSS		11 42 48.6	
KMI				AMB	AMB		
	comp=Z,38nm,2.0s,mb4.6						
KMI				AMB	AMB		
	comp=Z,512nm,3.4s						
KMI				LR	LR		
	comp=N,5μm,16.7s,MS5.1						
KMI				LR	LR		
	comp=E,1μm,13.5s,MS5.1						
KMI				LR	LR		
	comp=Z,5μm,15.4s,MS5.1						
SHL	**Shillong**	**25.73**	**348**	*e*P	**P**	**11 37 14.0**	**+1.5**
SHL				*e*x	x	11 41 10.0	
BOK	**Bokaro**	**26.00**	**335**	*e*P	**P**	**11 37 15.3**	**+0.4**
BOK				AMb	AMB	11 37 20.6	
	comp=Z,42nm,1.6s,mb4.7						
BOK				*e*S	**S**	**11 41 45.4**	**+1.8**
GYA	**Guiyang**	**27.42**	**18**⇓	*i*P	**P**	**11 37 27.6**	**-0.1**
GYA				AP	pP	11 37 36.6	-0.7
GYA				XP	sP	11 37 40.6	-0.7
GYA				PP		11 38 14.0	
GYA				PCP	PcP	11 40 48.6	+2.5
GYA				S	**S**	**11 42 03.3**	**-2.7**
GYA				XS	sS	11 42 21.3	-0.5
GYA				SCP	ScP	11 44 25.7	+1.3
GYA				SCS	ScS	11 48 16.5	+0.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
GYA				AMB	AMB		
	comp=Z,230nm,6.3s						
GYA				LR	LR		
	comp=N,2μm,17.6s,MS4.9						
GYA				LR	LR		
	comp=E,2μm,14.7s,MS4.9						
GYA				LR	LR		
	comp=Z,3μm,15.3s,MS5.0						
NGP	**Nagpur**	**27.56**	**320**	*e*x	x	11 36 11.9	
NGP				AMb	AMB	11 36 15.4	
	comp=Z,11nm,3.3s						
ODAN	**Odare**	**28.20**	**340**	*e*P	**P**	**11 37 35.6**	**+1.0**
TAPN	**Taplejung**	**28.54**	**341**	*e*P	**P**	**11 37 39.4**	**+1.7**
RAMN	**Ramite**	**28.55**	**339**	*e*P	**P**	**11 37 37.7**	**-0.1**
KAD	**Karad**	**28.63**	**307**	*e*P	**P**	**11 37 37.0**	**-1.6**
KAD				AMb	AMB	11 37 45.6	
	comp=Z,26nm,1.6s,mb4.7						
DAV	**Davao City (W)**	**28.65**	**76**	LR	LR	11 50 12.4	
	comp=Z,1μm,20.3s,MS4.5,baz=235,slow=39						
JIRN	**Jiri**	**29.35**	**339**	*e*P	**P**	**11 37 45.7**	**+0.8**
PKI	**Pulchoki**	**29.55**	**338**	*e*P	**P**	**11 37 48.0**	**+1.3**
GUN	**Gumba**	**29.69**	**339**	*e*P	**P**	**11 37 48.6**	**+0.7**
DMN	**Daman**	**29.71**	**337**	*e*P	**P**	**11 37 48.8**	**+0.7**
KKN	**Kakani**	**29.80**	**338**	*e*P	**P**	**11 37 50.5**	**+1.6**
GKN	**Gorkha**	**30.24**	**337**	*e*P	**P**	**11 37 53.9**	**+1.1**
KOLN	**Koldanda**	**30.46**	**335**	*e*P	**P**	**11 37 54.4**	**-0.3**
DANN	**Dangsing**	**30.90**	**336**	*e*P	**P**	**11 37 58.6**	**0.0**
CD2	**Chengdu**	**30.99**	**10**⇓	*i*P	**P**	**11 37 59.2**	**-0.2**
CD2				AP	pP	11 38 08.8	-0.2
CD2				XP	sP	11 38 13.0	0.0
CD2				PP	PP	11 39 01.8	-8.0
CD2				PCP	PcP	11 40 54.2	-0.9
CD2				S	**S**	**11 43 00.6**	**-1.4**
CD2				XS	sS	11 43 16.2	-1.7
CD2				PCS	PcS	11 44 37.5	-1.7
CD2				SS	SS	11 44 45.2	-30
CD2				SCS	ScS	11 48 29.5	-3.1
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
CD2				AMB	AMB		
	comp=Z,240nm,10.6s						
CD2				LR	LR		
	comp=N,3μm,12.0s,MS5.3						
CD2				LR	LR		
	comp=E,4μm,14.4s,MS5.3						
CD2				LR	LR		
	comp=Z,4μm,13.2s,MS5.3						
QZH	**Quanzhou**	**31.79**	**38**	P	**P**	**11 38 05.4**	**-1.1**
QZH				*e*S	**S**	**11 43 11.0**	**-3.7**
QZH				LR	LR		
	comp=N,5μm,15.1s,MS5.4						
QZH				LR	LR		
	comp=E,3μm,15.2s,MS5.4						
QZH				LR	LR		
	comp=Z,5μm,15.6s,MS5.3						
FITZ	**Fitzroy Crossi**	**33.04**	**125**	P	**P**	**11 38 15.4**	**-2.2**
	comp=Z,5.0nm,0.8s,mb4.5,baz=306,slow=11,SNR=11						
WHN	**Wuhan**	**34.01**	**26**	*e*P	**P**	**11 38 26.0**	**+0.2**
WHN				LR	LR		
	comp=N,705nm,12.0s,MS4.9						
WHN				LR	LR		
	comp=E,1μm,11.0s,MS4.9						
XAN	**Xi'an**	**35.19**	**16**	P	**P**	**11 38 34.5**	**-1.5**
XAN				AP	pP	11 38 43.2	-2.4
XAN				XP	sP	11 38 48.1	-1.6
XAN				PP	PP	11 39 53.0	-3.3
XAN				S	**S**	**11 44 05.7**	**-1.5**
XAN				SS	SS	11 46 25.7	-15
XAN				AMB	AMB		
	comp=Z,45nm,1.3s,mb5.2						
XAN				AMB	AMB		
	comp=Z,138nm,7.2s						
XAN				LR	LR		
	comp=N,991nm,14.3s,MS4.9						
XAN				LR	LR		
	comp=E,992nm,13.4s,MS4.9						
XAN				LR	LR		
	comp=Z,3μm,14.6s,MS5.2						
DDI	**Dehra Dun**	**35.20**	**330**	*e*P	**P**	**11 38 34.0**	**-2.1**
LZH	**Lanzhou**	**36.07**	**9**	*e*P	**P**	**11 38 42.5**	**-1.0**
LZH				AP	pP	11 38 51.0	-2.2
LZH				XP	sP	11 38 55.5	-1.7
LZH				PP	PP	11 40 07.0	+1.0
LZH				*e*S	**S**	**11 44 20.0**	**-0.6**
LZH				XS	sS	11 44 36.1	-0.5
LZH				SS	SS	11 46 45.0	-14
LZH				AMB	AMB		
	comp=Z,83nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,320nm,4.0s						
LZH				LR	LR		
	comp=E,2μm,14.8s						
LZH				LR	LR		
	comp=Z,2μm,16.7s,MS5.0						
SMLA	**Simla**	**36.30**	**330**	*e*x	x	11 38 36.8	
NJ2	**Nanjing**	**37.40**	**30**	*e*P	**P**	**11 38 54.8**	**-0.1**
NJ2				AP	pP	11 39 05.2	+0.6
NJ2				XP	sP	11 39 08.3	-0.3
NJ2				PP	PP	11 40 24.6	+3.9
NJ2				S	**S**	**11 44 37.0**	**-4.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,80nm,6.0s						
NJ2				LR	LR		
	comp=N,770nm,16.4s,MS4.9						
NJ2				LR	LR		
	comp=E,1μm,13.4s,MS4.9						
NJ2				LR	LR		
	comp=Z,1μm,14.7s,MS4.8						
SSE	**Sheshan**	**37.90**	**34**	P	**P**	**11 38 59.2**	**+0.1**
SSE				S	**S**	**11 44 49.6**	**+1.0**
SSE				XS	sS	11 45 04.4	-0.2
SSE				AMB	AMB		
	comp=Z,41nm,0.9s,mb5.2						
SSE				AMB	AMB		
	comp=Z,195nm,8.9s						
SSE				LR	LR		
	comp=N,2μm,14.7s,MS5.1						
SSE				LR	LR		
	comp=E,1μm,14.7s,MS5.1						
SSE				LR	LR		
	comp=Z,3μm,15.6s,MS5.2						
GTA	**Gaotai**	**38.98**	**3**	*e*P	**P**	**11 39 07.5**	**-0.6**
GTA				AP	pP	11 39 16.7	-1.1
GTA				XP	sP	11 39 21.0	-0.8
GTA				PP	PP	11 40 38.7	+0.9
GTA				PCP	PcP	11 41 19.4	+1.3
GTA				S	**S**	**11 45 03.7**	**-1.0**
GTA				XS	sS	11 45 18.7	-2.0
GTA				SS	SS	11 47 48.5	-9.0
GTA				AMB	AMB		
	comp=Z,14nm,1.6s,mb4.4						
GTA				AMB	AMB		
	comp=Z,232nm,7.5s						
GTA				LR	LR		
	comp=N,590nm,21.3s,MS4.8						
GTA				LR	LR		
	comp=E,1μm,18.6s,MS4.8						
GTA				LR	LR		
	comp=Z,982nm,20.1s,MS4.6						
TIY	**Taiyuan**	**39.65**	**18**	*e*P	**P**	**11 39 15.0**	**+1.3**
TIY				XP	sP	11 39 28.9	+1.4
TIY				PP	PP	11 40 51.1	+5.9
TIY				PPP		11 41 15.5	
TIY				S	**S**	**11 45 16.5**	**+1.7**
TIY				XS	sS	11 45 33.3	+2.4
TIY				AMB	AMB		
	comp=Z,205nm,6.2s						
TIY				LR	LR		
	comp=N,2μm,15.2s,MS5.2						
TIY				LR	LR		
	comp=E,710nm,12.8s,MS5.2						
TIY				LR	LR		
	comp=Z,1μm,15.7s,MS4.9						
WRA	**Warramunga Arr**	**41.18**	**121**	P	**P**	**11 39 24.9**	**-1.7**
	comp=Z,5.1nm,0.6s,mb4.3,baz=304,slow=9.0,SNR=58						
WRA				LR	LR	11 59 13.5	
	comp=Z,600nm,20.0s,MS4.5,baz=285,slow=40						
WRAB	**Tennant Creek**	**41.18**	**121**	*d i*P	**P**	**11 39 25.8**	**-0.9**
WRAB	**Tennant Creek**	**41.18**	**121**	*e*P	**P**	**11 39 25.9**	**-0.8**
WB2	**Warramunga Arr**	**41.19**	**121**	*e*P	**P**	**11 39 25.1**	**-1.6**
BTO	**Baotou**	**41.66**	**14**	*e*P	**P**	**11 39 29.1**	**-1.2**
HHC	**Hu-ho-hao-te**	**42.29**	**16**	⇑P	**P**	**11 39 36.3**	**+0.9**
HHC				AP	pP	11 39 45.6	+0.3
HHC				XP	sP	11 39 49.5	+0.3
HHC				PP	PP	11 41 18.1	+4.2
HHC				PCP	PcP	11 41 30.0	+1.2
HHC				SCP	ScP	11 45 17.1	-0.1
HHC				PCS	PcS	11 45 21.1	+0.5
HHC				S	**S**	**11 45 55.5**	**+1.4**
HHC				XS	sS	11 46 11.2	+1.0
HHC				SS	SS	11 48 59.1	-4.4
HHC				SCS	ScS	11 49 32.7	-2.4
HHC				AMB	AMB		
	comp=Z,38nm,1.2s,mb4.9						
HHC				AMB	AMB		
	comp=Z,351nm,5.5s						
HHC				LR	LR		
	comp=N,2μm,15.0s,MS5.2						
HHC				LR	LR		
	comp=E,2μm,15.6s,MS5.2						
HHC				LR	LR		
	comp=Z,2μm,14.8s,MS5.1						
ASAR	**Alice Springs**	**42.49**	**127**	P	**P**	**11 39 36.6**	**-0.8**
	comp=Z,14nm,0.9s,mb4.6,baz=302,slow=7.6,SNR=68						
BJI	**Beijing**	**43.01**	**21**	P	**P**	**11 39 41.8**	**+0.5**
BJI				PP	PP	11 41 23.3	+1.7
BJI				AMB	AMB		
	comp=Z,38nm,1.6s,mb4.9						
BJI				LR	LR		
	comp=N,803nm,18.8s,MS4.9						
BJI				LR	LR		
	comp=E,1μm,18.8s,MS4.9						
BJI				LR	LR		
	comp=Z,564nm,18.8s,MS4.5						
KSH	**Kashi**	**43.77**	**336**	*e*P	**P**	**11 39 46.1**	**-1.4**
KSH				*e*AP	pP	11 39 57.1	-0.2
KSH				*e*XP	sP	11 40 02.1	+0.8
KSH				*e*PP	PP	11 41 29.2	-0.6
KSH				*e*SCP	ScP	11 45 25.1	+1.9
KSH				*e*PCS	PcS	11 45 29.2	+2.6
KSH				*e*S	**S**	**11 46 09.1**	**-6.8**
KSH				*e*SCS	ScS	11 49 42.3	-2.0
KSH				AMB	AMB		
	comp=Z,475nm,3.1s						
KSH				LR	LR		
	comp=N,833nm,9.8s						
KSH				LR	LR		
	comp=E,1μm,10.2s						
KSH				LR	LR		
	comp=Z,1μm,13.6s,MS5.0						
WMQ	**Urumqi**	**44.23**	**350**	P	**P**	**11 39 51.9**	**+0.8**
WMQ				AP	pP	11 40 02.0	+1.1
WMQ				XP	sP	11 40 06.0	+1.1
WMQ				PCP	PcP	11 41 36.5	+1.2
WMQ				SCP	ScP	11 45 25.0	0.0
WMQ				S	**S**	**11 46 23.0**	**+0.6**
WMQ				XS	sS	11 46 39.0	+0.3
WMQ				SCS	ScS	11 49 45.0	-2.0
WMQ				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.4						
WMQ				AMB	AMB		
	comp=Z,220nm,4.2s						
WMQ				LR	LR		
	comp=N,878nm,15.2s,MS5.0						
WMQ				LR	LR		
	comp=E,1μm,20.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,1μm,24.2s,MS4.7						
DL2	**Dalian**	**44.26**	**27**	⇑P	**P**	**11 39 50.1**	**-1.3**
DL2				S	**S**	**11 46 23.3**	**+0.3**
DL2				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
DL2				AMB	AMB		
	comp=Z,160nm,3.9s						
DL2				LR	LR		
	comp=N,630nm,12.4s,MS4.8						
DL2				LR	LR		
	comp=E,290nm,12.1s,MS4.8						
DL2				LR	LR		
	comp=Z,700nm,13.3s,MS4.8						
KSRS	**Korea Array**	**46.34**	**34**	P	**P**	**11 40 06.6**	**-1.3**
	comp=Z,8.9nm,1.0s,mb4.7,baz=222,slow=8.6,SNR=20						
KSRS				LR	LR	12 02 01.5	
	comp=Z,850nm,19.1s,MS4.7,baz=223,slow=40						
TKM2	**Tokmak 2**	**46.82**	**338**	*e*P	**P**	**11 40 12.9**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.4						
TKM2	**Tokmak 2**	**46.82**	**338**	*e*P	**P**	**11 40 12.9**	**+1.3**
	comp=Z,41nm,0.8s,mb5.4						
AML	**Almayashu**	**46.91**	**336**	*e*P	**P**	**11 40 13.3**	**+1.1**
	comp=Z,26nm,1.5s,mb4.9						
FRU	**Bishkek**	**47.12**	**337**	*e*P	**P**	**11 40 14.0**	**+0.1**
FRU				*e*		11 40 32.5	
FRU				pmax	pmax		
	comp=Z,90nm,2.3s,mb5.3						
EKS2	**Erkin-Say**	**47.31**	**336**	*e*P	**P**	**11 40 16.8**	**+1.4**
	comp=Z,6.5nm,0.8s,mb4.6						
SONM	**Songino Array**	**47.95**	**8**	P	**P**	**11 40 20.6**	**+0.3**
	comp=Z,4.7nm,0.5s,mb4.8,baz=190,slow=9.6,SNR=45						
SONM				LR	LR	12 03 30.8	
	comp=Z,1μm,18.2s,MS5.0,baz=190,slow=40						
ULN	**Ulaanbaatar**	**48.08**	**8**⇑	*e*P	**P**	**11 40 21.3**	**+0.1**
ULN	**Ulaanbaatar**	**48.08**	**8**	*e*P	**P**	**11 40 21.5**	**+0.2**
MK31	**Makanchi Array**	**48.22**	**346**	*e*P	**P**	**11 40 22.9**	**+0.5**
MKAR	**Makanchi Array**	**48.22**	**346**	P	**P**	**11 40 22.6**	**+0.2**
	comp=Z,6.7nm,0.7s,mb4.8,baz=155,slow=7.6,SNR=40						
MKAR				LR	LR	12 03 54.3	
	comp=Z,282nm,20.2s,MS4.2,baz=158,slow=40						
KK31	**Karatay Array**	**49.06**	**334**	*i* P	**P**	**11 40 28.3**	**-0.6**
KK31				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
CN2	**Changchun**	**49.90**	**26**	*e*P	**P**	**11 40 34.3**	**-1.0**
CN2				*e*XP	sP	11 40 48.2	-1.0
CN2				*e*S	**S**	**11 47 41.1**	**-2.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,1μm,14.0s,MS5.2						
CN2				LR	LR		
	comp=E,1μm,14.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1μm,15.0s,MS5.1						
ZAK	**Zakamensk**	**50.13**	**5**	*e*P	**P**	**11 40 34.7**	**-2.2**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb4.5						
PMG	**Port Moresby**	**50.22**	**102**	*e*P	**P**	**11 40 38.3**	**+0.1**
TLY	**Talaya**	**51.45**	**5**	*e*P	**P**	**11 40 47.3**	**+0.5**
TLY				*e*S	**S**	**11 48 08.5**	**+4.1**
TLY				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
TLY				MLR	MLR		
	comp=Z,1μm,15.0s,MS5.0						
MJAR	**Matsushiro Arr**	**52.05**	**42**	P	**P**	**11 40 50.2**	**-1.5**
	comp=Z,3.2nm,1.1s,mb4.2,baz=206,slow=8.2,SNR=5.6						
MJAR				LR	LR	12 06 02.5	
	comp=Z,562nm,18.9s,MS4.6,baz=245,slow=40						
HIA	**Hailar**	**52.35**	**18**	*e*P	**P**	**11 40 53.1**	**-0.5**
STKA	**Stephens Creek**	**52.42**	**132**	*e*P	**P**	**11 40 55.1**	**+0.7**
	comp=Z,5.6nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**52.42**	**132**	P	**P**	**11 40 54.7**	**+0.3**
	comp=Z,7.9nm,1.2s,mb4.5,baz=296,slow=7.0,SNR=4.1						
STKA				LR	LR	12 04 40.2	
	comp=Z,1μm,21.6s,MS4.8,baz=284,slow=38						
MDJ	**Mudanjiang**	**52.43**	**28**	P	**P**	**11 40 54.4**	**+0.1**
MDJ				AP	pP	11 41 03.4	-0.9
MDJ				XP	sP	11 41 07.1	-1.2
MDJ				S	**S**	**11 48 24.4**	**+6.1**
MDJ				XS	sS	11 48 34.2	-0.6
MDJ				AMB	AMB		
	comp=Z,334nm,5.9s						
MDJ				LR	LR		
	comp=N,2μm,16.6s,MS5.3						
MDJ				LR	LR		
	comp=E,1μm,17.2s,MS5.3						
MDJ				LR	LR		
	comp=Z,3μm,16.6s,MS5.4						
VLA	**Vladivostok**	**52.49**	**31**	*e*P	**P**	**11 40 54.8**	**0.0**
VLA				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.1						
VLA				MLR	MLR		
	comp=Z,1μm,15.0s,MS5.0						
KURK	**Kurchatov**	**52.77**	**345**	P	**P**	**11 40 57.9**	**+1.2**
	comp=Z,110nm,1.4s,mb5.6,SNR=5.5						
KURK	**Kurchatov**	**52.77**	**345**	P	**P**	**11 40 56.4**	**-0.3**
	comp=Z,5.8nm,0.7s,mb4.6,baz=165,slow=6.8,SNR=18						
KURK				LR	LR	12 09 08.0	
	comp=Z,409nm,18.0s,MS4.5,baz=140,slow=43						
KURK	**Kurchatov**	**52.77**	**345**⇑	*e*P	**P**	**11 40 56.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
OPO	**Ambohidratompo**	**52.98**	**246**	P	**P**	**11 41 01.5**	**+2.7**
	comp=Z,4.4nm,1.0s,mb4.3,baz=72,slow=8.4,SNR=3.8						
CIT	**Chita**	**53.25**	**12**	*e*P	**P**	**11 41 01.4**	**+1.2**
ZAL	**Zalesovo**	**54.51**	**351**	P	**P**	**11 41 09.4**	**+0.1**
ZAA0	**Zalesovo Array**	**54.51**	**351**	*e*P	**P**	**11 41 09.4**	**0.0**
ZALV	**Zalesovo Beam**	**54.51**	**351**	P	**P**	**11 41 09.4**	**0.0**
	comp=Z,15nm,0.4s,mb5.4,baz=179,slow=6.4,SNR=68						

ZALV LR LR 12 07 57.8
comp=Z,285nm,18.6s,MS4.4,baz=8.9,slow=40
KBD Kabd 55.59 306 *e*P **P 11 41 17.9 +0.3**
baz=306
KBD AMb AMB 11 41 27.8
comp=Z,39nm,1.6s,mb5.2,baz=306
RDF Al-Radifah 55.62 305 *e*P **P 11 41 18.6 +0.7**
baz=305
RDF AMb AMB 11 41 34.2
comp=Z,57nm,1.6s,mb5.3,baz=305
NVS Novosibirsk 55.64 350⇑ *i*P **P 11 41 16.4 -1.1**
NVS *e* 11 42 24.2
NVS pmax pmax
comp=Z,56nm,22.0s
NVS pmax pmax
comp=N,58nm,2.0s
NVS pmax pmax
comp=E,34nm,2.0s
KRAR Krasnoyarsk 55.67 357 *e*P **P 11 41 17.9 +0.2**
NAY Al-Naaiem 55.98 306 *e*P **P 11 41 20.5 0.0**
baz=306
NAY AMb AMB 11 41 22.0
comp=Z,20nm,1.1s,mb5.1,baz=306
MIB Mutribah 56.11 306 *e*P **P 11 41 21.6 +0.3**
baz=306
MIB AMb AMB 11 41 23.2
comp=Z,37nm,0.9s,mb5.4,baz=306
VOSK Vostochnaya 56.80 341 P **P 11 41 25.0 -0.8**
VOSK pmax pmax
comp=Z,33nm,1.1s,mb5.3
KLR Kul'dur 56.86 26 *e*P **P 11 41 22.0 -4.3**
KLR *e* 11 41 37.2
KLR *e*S **S 11 49 22.0 +4.4**
KLR pmax pmax
comp=Z,50nm,1.6s,mb5.3
KLR MLR MLR
comp=E,2μm,14.0s
KLR MLR MLR
comp=Z,2μm,14.0s,MS5.5
BVA0 Borovoye Array 57.24 341 *i*P **P 11 41 27.0 -2.0**
BVA0 pmax pmax
comp=Z,7.0nm,2.2s,mb4.3
BVAR Borovoye Array 57.24 341 P **P 11 41 28.4 -0.6**
comp=Z,5.0nm,0.6s,mb4.7,baz=147,slow=8.8,SNR=22
BVAR LR LR 12 09 59.2
comp=Z,743nm,20.0s,MS4.8,baz=146,slow=40
BRVK Borovoye 57.31 341 *e*P **P 11 41 29.5 +0.1**
EIDS Eidsvold 57.53 121 *e*P **P 11 41 32.1 +0.6**
AB31 Akbulak array 58.52 332 *i*P **P 11 41 37.1 -0.9**
BOD Bodaibo 58.81 10 *e*P **P 11 41 39.9 +0.1**
BOD pmax pmax
comp=Z,17nm,1.6s,mb4.8
ASAJ Asahikawa 59.11 36 P **P 11 41 42.5 +0.3**
comp=Z,11nm,1.0s,mb4.8,baz=137,slow=31,SNR=6.4
AKTO Aktyubinsk 60.23 332 P **P 11 41 48.9 -0.9**
AKTO pmax pmax
comp=Z,3.0nm,2.2s,mb3.9
YSS Yuzh-Sakhalins 60.84 34 *e*P **P 11 41 54.0 0.0**
YSS pmax pmax
comp=Z,27nm,1.0s,mb5.3
GNI Garni 62.26 316 LR LR 12 10 17.1
comp=Z,66nm,18.3s,MS3.8,baz=320,slow=37
GNI Garni 62.26 316*c* *i*P **P 11 42 03.7 0.0**
GNI pmax pmax
comp=Z,5.0nm,1.0s
DGRG David-gareji 62.40 318 P **P 11 42 04.9 +0.2**
SVE Sverdlovsk 63.69 338⇑ *e*P **P 11 42 13.0 +0.1**
SVE *e*S **S 11 50 50.1 +5.2**
SVE pmax pmax
comp=Z,26nm,1.1s,mb5.2
SVE MLR MLR
comp=Z,529nm,21.0s,MS4.7
ONI Oni 64.18 318 P **P 11 42 16.1 -0.4**
ARU Arti 64.19 337*c* *i*P **P 11 42 15.4 -0.8**
ARU *e* 11 42 46.4
ARU *e* 11 44 35.1
ARU *e*S **S 11 50 52.0 +0.9**
ARU *e*SS SS 11 54 57.1 -3.8
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.7
ARU MLR MLR
comp=Z,677nm,20.0s,MS4.8
ARU Arti 64.19 337 *e*P **P 11 42 15.8 -0.4**
comp=Z,25nm,1.5s,mb5.0
KIV Kislovodsk 65.28 319*c* *i*P **P 11 42 23.7 +0.1**
KIV *i* 11 42 50.1
KIV *i*S S 11 50 57.6 -7.5
KIV *i*SS SS 11 55 23.0 +4.5
KIV pmax pmax
comp=Z,33nm,2.5s,mb4.9
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.1
MALT Malatya 66.07 312 *e*P **P 11 42 29.6 +0.8**
MALT pmax pmax
comp=Z,15nm,1.4s,mb4.8
MALT Malatya 66.07 312 *e*P **P 11 42 29.6 +0.8**
comp=Z,15nm,1.4s,mb4.8
YAK Yakutsk 66.16 16*ce*P **P 11 42 27.5 -1.4**
YAK *e**PP pP 11 42 39.2 +0.1
YAK *e* 11 42 52.8
YAK *e*S S 11 51 13.1 -2.0
YAK *e* 11 52 25.6
YAK pmax pmax
comp=N,9.0nm,1.5s
YAK pmax pmax
comp=E,15nm,1.5s
YAK pmax pmax
comp=Z,26nm,1.1s,mb5.2
YAK smax
comp=N,129μm,13.7s
YAK smax
comp=E,36μm,13.7s
YAK MLR MLR
comp=Z,2μm,20.0s,MS5.2
YAK MLR MLR
comp=E,698nm,15.0s,MS5.1
YAK MLR MLR
comp=N,731nm,17.0s,MS5.1
EIL Elat 66.32 302 LR LR 12 11 48.2
comp=N,1μm,18.5s,MS5.1,baz=115,slow=36
MMAI Mount Meron Ar 66.80 306 LR LR 12 15 01.5
comp=N,298nm,18.0s,MS4.5,baz=105,slow=39
ANN Anapa 69.07 319 *e*P **P 11 42 56.5 +8.9**
ANN pmax pmax
comp=Z,130nm,1.3s,mb5.7
LSZ Lusaka 70.30 254 LR LR 12 08 47.3
comp=Z,425nm,20.9s,MS4.7,baz=276,slow=32
MAW Mawson 71.94 193 LR LR 12 07 45.9
comp=Z,444nm,20.6s,MS4.7,baz=168,slow=30
PETK Petropavlovsk- 72.23 33 LR LR 12 19 36.6
comp=Z,280nm,18.0s,MS4.6,baz=242,slow=40
PET Petropavlovsk 72.72 34 *e*P **P 11 43 11.0 +1.4**
PET *e* 11 45 45.7
PET *e*S S 11 52 32.3 -0.5
PET *e*SS SS 11 57 12.1 -0.8
PET pmax pmax
comp=Z,100nm,13.5s
PET pmax pmax
comp=Z,100nm,16.4s
PET MLR MLR
comp=Z,300nm,17.0s,MS4.6
OBN Obninsk 73.62 328 *e*P **P 11 43 14.3 -0.6**
OBN *i* 11 43 30.9
OBN *i*S S 11 52 46.4 +3.5
OBN *i*SS SS 11 57 31.5 +5.0
OBN pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
LBTB Lobatse 73.90 244 LR LR 12 13 20.2
comp=Z,709nm,18.3s,MS5.0,baz=99,slow=34
TIXI Tiksi 73.99 10 *e*P **P 11 43 15.3 -1.4**
TIXI *e* pP 11 43 23.3 -3.8
TIXI *e*S S 11 52 44.0 -2.5
TIXI pmax pmax
comp=Z,30nm,1.4s,mb5.0
TIXI MLR MLR
comp=Z,831nm,16.0s,MS5.1
TIXI Tiksi 73.99 10 *e*P **P 11 43 16.0 -0.7**
comp=Z,23nm,1.1s,mb5.0
BOSA Boshof 74.73 240 LR LR 12 11 41.8
comp=Z,371nm,18.2s,MS4.7,baz=78,slow=32
IDI Anoyia 75.80 306 LR LR 12 15 46.1
comp=Z,104nm,22.0s,MS4.1,baz=81,slow=35
AKASG Malin Array Be 76.25 322 P **P 11 43 29.9 -0.3**
comp=Z,1.6nm,0.7s,mb4.1,baz=94,slow=3.3,SNR=6.6
AKASG LR LR 12 24 44.3
comp=Z,133nm,18.8s,MS4.3,baz=75,slow=42

BUR08 Bucovina Ar. S 78.01 319 *e*P **P 11 43 41.2 +1.0**
RPZ Rata Peaks 78.25 135 LR LR 12 17 52.4
comp=Z,917nm,21.5s,MS5.1,baz=281,slow=36
JOF Joensuu 79.15 335 *ep* pP 11 43 58.9 +2.4
comp=Z,4.1nm,0.7s
JOF Joensuu 79.15 335 *e*P pP 11 43 58.9 +2.4
JOF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SYO Syowa Base 79.29 198⇓ *e*PcP PcP 11 43 55.0 +0.1
TSUM Tsumeb 80.72 251 LR LR 12 17 11.5
comp=Z,401nm,18.7s,MS4.8,baz=142,slow=34
KAF Kangasniemi 81.09 333 *ep* **P 11 43 54.2 -2.3**
comp=Z,6.3nm,0.8s,mb4.6,baz=104,slow=5.0
KAF Kangasniemi 81.09 333 *e*P **P 11 43 54.2 -2.3**
KAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
BILL Bilibino 81.84 21 *e*P **P 11 44 07.8 +7.4**
URZ Urewera 81.90 129 LR LR 12 21 32.1
comp=Z,616nm,18.7s,MS5.0,baz=94,slow=37
OKC Ostrava-Krasne 83.00 320 *e*P **P 11 44 07.2 +0.3**
OKC *ep*P pP 11 44 15.0 -2.4
ARCES ARCESS Array B 83.53 340 P **P 11 44 08.9 -0.3**
comp=Z,2.2nm,0.8s,mb4.3,baz=112,slow=5.4,SNR=7.1
ARCES LR LR 12 28 12.0
comp=Z,285nm,20.3s,MS4.6,baz=104,slow=41
DPC Dobruska-Polom 84.23 320 *e*P **P 11 44 13.3 +0.1**
DPC *ep*P pP 11 44 21.9 -1.8
GEC2 GERESS Array S 85.79 319 *e*P **P 11 44 20.6 -0.4**
GEC2 pmax pmax
comp=Z,10.0nm,1.3s,mb4.9
GEC2 GERESS Array S 85.79 319 *e*P **P 11 44 20.6 -0.4**
comp=Z,10.0nm,1.3s,mb4.9
GERES GERESS Array B 85.79 319 P **P 11 44 21.7 +0.7**
comp=Z,0.7nm,0.6s,mb4.1,baz=90,slow=6.7,SNR=11
BRG Berggiesshubel 85.79 321 *e*P **P 11 44 28.6 +7.6**
BRG pmax pmax
comp=Z,5.0nm,1.7s,mb4.5
BRG Berggiesshubel 85.79 321 *e*(P) **P 11 44 28.6 +7.6**
comp=Z,8.7nm,1.7s,mb4.7
KHC Kasperske Hory 85.89 319 *e*P **P 11 44 15.5 -6.0**
KHC *ep*P pP 11 44 28.7 -3.4
CLL Collm 86.42 321 *e*P **P 11 44 33.0 +8.9**
CLL *e*S S 11 55 01.0 +3.3
CLL MLR MLR
comp=Z,200nm,18.8s,MS4.5
CLL Collm 86.42 321 *ep*P pP 11 44 33.0 -1.6
CLL *e*S S 11 55 01.0 +3.3
CLL *e*PS 11 56 08.0
CLL *e*SSS 12 04 12.0
CLL *e*SSSS 12 07 36.0
CLL LmV 12 31 00.0
comp=Z,200nm,18.8s
MANZ Manzenberg 86.90 320 *e*P **P 11 44 27.2 +0.7**
comp=Z,27nm,2.0s,mb5.1
GRA1 Grafenberg Arr 87.46 320 *e*P **P 11 44 29.6 +0.4**
comp=Z,44nm,2.2s,mb5.3
GRF Grafenberg Arr 87.46 320 *e*P **P 11 44 29.6 +0.4**
GRF pmax pmax
comp=Z,44nm,2.2s,mb5.3
GRF Grafenberg Arr 87.46 320 *e*P **P 11 44 29.6 +0.4**
GRF pmax pmax
comp=Z,44nm,2.2s,mb5.3
GRF Grafenberg Arr 87.46 320 *e*P **P 11 44 29.6 +0.4**
comp=Z,44nm,2.2s,mb5.3
NOA NORSAR Array B 88.01 331 P **P 11 44 31.7 +0.1**
NOA LR LR 12 27 35.2
comp=Z,237nm,21.8s,MS4.6,baz=80,slow=38
KEST Kesra 88.45 306 LR LR 12 24 09.3
comp=Z,101nm,20.7s,MS4.2,baz=249,slow=36
MAIT Maitri 88.93 199 *e*P **P 11 44 38.1 +2.4**
MAIT *e*E pP 11 44 45.5 -0.8
LPG La Plagne 90.42 315 *e*P **P 11 44 43.5 +0.2**
comp=Z,16nm,1.1s,mb5.0
LPG La Plagne 90.42 315 *e*P **P 11 44 43.5 +0.2**
LPG pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
LPG La Plagne 90.42 315 *e*P **P 11 44 43.5 +0.2**
comp=Z,8.2nm,1.1s,mb5.0
LPL La Plagne 90.44 315 *e*P **P 11 44 43.5 +0.2**
comp=Z,20nm,1.1s,mb5.0
LPL La Plagne 90.44 315 *e*P **P 11 44 43.5 +0.2**
LPL pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
LPL La Plagne 90.44 315 *e*P **P 11 44 43.5 +0.2**
comp=Z,9.9nm,1.1s,mb5.0
FRF La Foret Royal 90.53 313 *e*P **P 11 44 43.8 0.0**
comp=Z,30nm,1.3s,mb5.2
FRF La Foret Royal 90.53 313 *e*P **P 11 44 43.8 0.0**
FRF pmax pmax
comp=Z,15nm,1.3s,mb5.2
FRF La Foret Royal 90.53 313 *e*P **P 11 44 43.8 0.0**
comp=Z,15nm,1.3s,mb5.2
LMR La Mourre 90.63 313 *e*P **P 11 44 44.2 -0.1**
comp=Z,31nm,1.2s,mb5.2
LMR La Mourre 90.63 313 *e*P **P 11 44 44.2 -0.1**
LMR pmax pmax
comp=Z,15nm,1.2s,mb5.2
LMR La Mourre 90.63 313 *e*P **P 11 44 44.2 -0.1**
comp=Z,15nm,1.2s,mb5.2
ORIF Oris-en-Rattie 91.05 315 *e*P **P 11 44 46.4 +0.2**
comp=Z,15nm,1.1s,mb4.9
ORIF Oris-en-Rattie 91.05 315 *e*P **P 11 44 46.4 +0.2**
ORIF pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
ORIF Oris-en-Rattie 91.05 315 *e*P **P 11 44 46.4 +0.2**
comp=Z,7.3nm,1.1s,mb4.9
LOR Lormes 92.37 317 *e*P **P 11 44 52.1 -0.1**
SMF Signal de Mont 92.41 317 *e*P **P 11 44 52.3 -0.1**
TORD Torodi Ar. Bea 95.74 283 LR LR 12 28 47.4
comp=Z,312nm,18.7s,MS4.8,baz=135,slow=36
ESDC Sonseca Array 98.75 310 LR LR 12 37 13.5
comp=Z,95nm,19.0s,MS4.3,baz=80,slow=40
KDAK Kodiak Island 100.18 31 LR LR 12 36 40.5
comp=Z,435nm,19.2s,MS5.0,baz=316,slow=39
PPT Papeete 111.76 109 *e*LR LR 12 23 27.2
comp=Z,280nm,22.8s
TAOE Nuku Hiva Isla 121.83 100 *e*PS PS 12 01 59.1 -5.7
comp=Z,508nm,28.3s
TAOE Nuku Hiva Isla 121.83 100 *e*LR LR 12 28 05.9
comp=Z,881nm,25.1s
RKT Rikitea 124.11 118 *e*LR LR 12 29 11.8
comp=Z,299nm,27.8s
ANMO Albuquerque 138.32 30⇑ *i*PKIKP PKPdf 11 51 07.6 +0.2
TXAR Lajitas Array 144.18 33 PKP PKPdf 11 51 17.1 -1.0
comp=Z,0.9nm,0.7s,baz=294,slow=1.2,SNR=8.7
CPUP Villa Florida 144.64 221 PKP PKPdf 11 51 18.9 -0.1
comp=Z,2.0nm,0.7s,baz=54,slow=5.1,SNR=9.8
CFAA Coronel Fontan 146.12 202 PKPbc PKPbc 11 51 24.2 +2.0
comp=Z,0.1nm,0.4s,baz=228,slow=21,SNR=2.8
SIV San Ignacio 153.85 232 PKPbc PKPbc 11 51 44.1 +2.2
comp=Z,0.2nm,0.3s,baz=74,slow=7.2,SNR=3.9

*ISCJB **08** 11:45:00.2±0.3, 1675N±003×9960W±002, h10km, mb4.0/8, MS3.4/2, Error ellipse: s-maj=4.4km s-min=2.4km az=8.9*
*IDC **08** 11:45:00.2±4.6, 1685N×9956W, h0km, mb3.9/4, mb1 4.1/8, mb1mx3.9/24, mbtmp3.8/8, ML3.1/4, MS3.4/3, Ms1 3.4/3, ms1mx2.9/36, Error ellipse: s-maj=83.5km s-min=17.4km az=13.0*
*MEX **08** 11:45:01.9±0.8, 1670N×9971W, h2km±10km, MD4.5*
*NEIC **08** 11:45:02.6, 1673N×9974W, h7km, mb4.1/8, MD4.6(MEX), After MEX.*
ISC 08 11:45:02.3±0.3**, 1682N**±003×**9959W**±002**, h10**km**, n117,** σ1**8**15/158**, mb3.9/8, MS3.4/2, 29C-19D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.32**	**278**	*i* P		**Pg**	**11 45 06.3**	**-2.3**
ACX				*i* P			11 45 07.2	
ACX				*i* S		**Sg**	**11 45 09.4**	**-3.5**
ACX	**Acapulco**	**0.32**	**278**	*i* P		**Pg**	**11 45 06.2**	**-2.4**
ACX				*i* S		**Sg**	**11 45 09.4**	**-3.5**
CAIG	**El Cayaco**	**0.69**	**289**	*i* P		**Pg**	**11 45 13.9**	**-1.7**
CAIG				*i* S		**Sg**	**11 45 22.8**	**-1.8**
MEIG	**Mezcala**	**1.10**	**359**	*i* P		**Pb**	**11 45 22.4**	**-1.0**
MEIG				*e*S		**Sg**	**11 45 38.1**	**+0.4**
PNIG	**Pinotepa**	**1.47**	**107**	*i* P		**Pn**	**11 45 26.6**	**-2.2**
PNIG				*i* S		**Sn**	**11 45 46.2**	**-1.9**
PNIG	**Pinotepa**	**1.47**	**107**	*i* P		**Pn**	**11 45 26.6**	**-2.2**
PNIG				*e*S		**Sn**	**11 45 48.8**	**+0.7**
PLIG	**Platanillo**	**1.56**	**3**	*i* P		**Pn**	**11 45 29.9**	**-0.3**
PLIG				*i* S		**Sn**	**11 45 50.5**	**0.0**
PLIG	**Platanillo**	**1.56**	**3**	*i* P		**Pn**	**11 45 29.9**	**-0.3**
PLIG				*e*S		**Sn**	**11 45 52.4**	**+1.9**
ZIIG	**Zihuatanejo**	**1.96**	**294**	*e*P		**Pn**	**11 45 32.8**	**-2.8**
ZIIG				*i* S		**Sn**	**11 45 55.7**	**-4.4**
ZIIG	**Zihuatanejo**	**1.96**	**294**	*i* P		**Pn**	**11 45 34.6**	**-1.0**
ZIIG				*i* S		**Sn**	**11 45 55.7**	**-4.4**
ZIIG				*e*S		**Sn**	**11 46 00.3**	**+0.1**
UTMO	**Huajuapan**	**1.98**	**59**	*i* P		**Pn**	**11 45 34.9**	**-1.0**
UTMO				*i* S		**Sn**	**11 46 01.8**	**+1.0**
YAIG	**Yautepec**	**2.09**	**14**	*i* P		**Pn**	**11 45 36.6**	**-0.8**
YAIG				*i* S		**Sn**	**11 46 04.5**	**+1.0**
YAIG	**Yautepec**	**2.09**	**14**	*i* P		**Pn**	**11 45 34.9**	**-2.5**
YAIG				*i* S		**Sn**	**11 45 60.0**	**-3.5**
PPM	**Popocatepetl**	**2.41**	**22**	*e*P		**Pn**	**11 45 41.2**	**-0.7**
PPM				*i* P			11 45 41.5	
PPM				*i* S		**Sn**	**11 46 12.5**	**+1.0**
PPM				*e*S		**Sn**	**11 46 13.7**	**+2.2**
PPM	**Popocatepetl**	**2.41**	**22**	*i* P		**Pg**	**11 45 47.3**	**-1.3**
PPM				*e*S		**Sg**	**11 46 18.3**	**-1.6**
PPM				*i* S		**Sn**	**11 46 19.5**	**+8.0**
SZVM	**Salazar**	**2.50**	**5**	*i* P		**Pg**	**11 45 47.1**	**-3.1**
SZVM				*i* S		**Sg**	**11 46 19.1**	**-3.5**
UNM	**Universidad Na**	**2.52**	**9**	*i* P		**Pn**	**11 45 43.3**	**-0.1**
UNM				*e*P			11 45 45.0	
UNM				*i* S		**Sn**	**11 46 15.0**	**+0.8**
UNM	**Universidad Na**	**2.52**	**9**	*i* P		**Pg**	**11 45 49.8**	**-1.0**
UNM				*e*S		**Sg**	**11 46 28.1**	**+4.6**
TPIG	**Tehuac#an**	**2.65**	**53**	*i* P		**Pn**	**11 45 44.5**	**-0.7**
TPIG				*i* S		**Sn**	**11 46 19.6**	**+2.2**
VHO	**Vista Hermosa**	**2.75**	**84**	*e*P		**Pn**	**11 45 46.2**	**-0.3**
VHO				*i* S		**Sn**	**11 46 20.8**	**+1.1**
VHO	**Vista Hermosa**	**2.75**	**84**	*e*P		**Pn**	**11 45 46.2**	**-0.3**
VHO				*e*S		**Sg**	**11 46 30.3**	**-0.3**
OXX	**Oaxaca**	**2.76**	**84**	*i* P		**Pn**	**11 45 46.2**	**-0.4**
OXX	**Oaxaca**	**2.76**	**84**	*i* P		**Pg**	**11 45 58.1**	**+2.9**
OXX				*e*S		**Sg**	**11 46 29.8**	**-1.2**
PTVM	**Pico Tres Padr**	**2.79**	**9**	*i* P		**Pn**	**11 45 51.2**	**+4.1**
PTVM				*i* S		**Sg**	**11 46 30.7**	**-1.4**
IIO	**Organos**	**2.88**	**17**	*e*P		**Pn**	**11 45 48.4**	**+0.1**
IIO				*i* S		**Sn**	**11 46 21.9**	**-1.1**
MOIG	**Morelia**	**3.22**	**332**	*i* P		**Pn**	**11 45 53.8**	**+0.8**
MOIG				*i* S		**Sn**	**11 46 30.1**	**-1.3**
MOIG	**Morelia**	**3.22**	**332**	*i* P		**Pn**	**11 45 56.1**	**+3.1**
MOIG				*i* S		**Sn**	**11 46 31.2**	**-0.3**
DEIG	**Demacu**	**3.50**	**9**	*e*P		**Pn**	**11 45 57.8**	**+0.9**
DEIG				*i* S		**Sn**	**11 46 39.3**	**+0.9**
HUIG	**Huatulco**	**3.50**	**107**	*i* P		**Pn**	**11 45 56.1**	**-0.8**
HUIG				*i* S		**Sn**	**11 46 37.8**	**-0.6**
HUIG	**Huatulco**	**3.50**	**107**	*e*P		**Pn**	**11 45 47.9**	**-9.0**
HUIG				*i* S		**Sn**	**11 46 31.8**	**-6.6**
LVIG	**Laguna Verde**	**4.17**	**46**	*e*P		**Pn**	**11 46 04.0**	**-2.1**
LVIG				*i* S		**Sn**	**11 46 57.8**	**+2.9**
CMIG	**Matias Romero**	**4.51**	**86**	Pn		**Pn**	**11 46 09.5**	**-1.3**
	1.0nm,0.3s,baz=266,slow=12,SNR=13							
CMIG				Sn		**Sn**	**11 47 03.7**	**+0.4**
	8.6nm,0.3s,baz=308,slow=11,SNR=5.6							
CMIG				Lg			11 47 22.6	
	20nm,0.3s,baz=27,slow=18,SNR=8.0							
CMIG				LR		LR	11 48 11.9	
	comp=Z,379nm,18.9s,baz=261,slow=43							
CMIG	**Matias Romero**	**4.51**	**86**	*i* P		**Pn**	**11 46 09.9**	**-0.8**
CMIG				*i* S		**Sn**	**11 47 03.3**	**0.0**
CMIG	**Matias Romero**	**4.51**	**86**	*e*P		**Pn**	**11 46 16.5**	**+5.8**
CMIG				Sn		**Sn**	**11 47 03.7**	**+0.4**
CMIG				Lg			11 47 22.6	
CMIG				LR		LR	11 48 11.9	
COLM	**Colima**	**4.55**	**302**	*i* P		**Pn**	**11 46 13.4**	**+2.1**
COLM				*i* S		**Sn**	**11 47 01.2**	**-3.2**
EZ5V		**4.64**	**305**	*i* P		**Pn**	**11 46 13.9**	**+1.4**
R15V		**4.79**	**300**	*e*P		**Pn**	**11 46 14.3**	**-0.3**
R15V				*i* S		**Sn**	**11 47 05.6**	**-4.5**
TUIG	**Tuzandepetl**	**5.08**	**76**	*i* P		**Pn**	**11 46 16.3**	**-2.2**
TUIG	**Tuzandepetl**	**5.08**	**76**	*i* P		**Pn**	**11 46 08.9**	**-10**
TUIG				*i* S		**Sn**	**11 46 57.6**	**-20**
TGIG		**6.20**	**89**	*i* P		**Pn**	**11 46 34.1**	**+0.2**
TGIG				*i* S		**Sn**	**11 47 43.5**	**-1.4**
ANIG	**Ahuacatlan**	**6.28**	**313**	*i* P		**Pn**	**11 46 30.5**	**-4.6**
ANIG				*i* S		**Sn**	**11 47 42.8**	**-4.2**
CCIG	**Comitan**	**7.17**	**93**	*i* S		**Sn**	**11 48 11.5**	**+2.6**
CCIG	**Comitan**	**7.17**	**93**	*i* P		**Pg**	**11 47 19.1**	**-0.6**
LNIG	**Linares**	**8.04**	**1**	*e*P		**Pn**	**11 47 03.6**	**+4.4**
TEIG	**Tepich**	**11.25**	**71**	Pn		**Pn**	**11 47 41.8**	**-1.5**
	0.4nm,0.3s,baz=0.8,slow=18,SNR=3.4							
TEIG				Sn		**Sn**	**11 49 50.1**	**+0.9**
	1.6nm,0.3s,baz=311,slow=22,SNR=3.8							
HPIG		**11.53**	**332**	*i* P		**Pn**	**11 47 42.8**	**-4.3**
TXAR	**Lajitas Array**	**13.00**	**344**	Pn		**Pn**	**11 48 08.2**	**+1.0**
	0.0nm,0.3s,baz=160,slow=15,SNR=7.4							
CGIG		**15.51**	**332**	*i* P		**Pn**	**11 48 44.5**	**+3.3**
GDL2	**Guadalupe Moun**	**15.91**	**345**	*e*Pn		**Pn**	**11 48 47.3**	**+1.0**
WMOK	**Wichita Mounta**	**17.86**	**2**	*e*Pn		**Pn**	**11 49 09.2**	**-1.7**
	35nm,2.3s							
MIAR	**Mount Ida**	**18.46**	**16**	*e*Pn		**Pn**	**11 49 16.5**	**-1.7**
	13nm,1.3s							
ANMO	**Albuquerque**	**19.07**	**342**	Pn		**Pn**	**11 49 25.0**	**-0.7**
	0.1nm,0.3s,baz=152,slow=12,SNR=10							
Y17A	**Roosevelt**	**19.62**	**331**	⇑P		**Pn**	**11 49 31.7**	**-0.6**
	baz=19							
Y16A	**Circle Bar Ran**	**20.07**	**330**	⇑P		**P**	**11 49 36.5**	**+0.6**
	baz=19							
X16A	**Lo Mia Camp, P**	**20.49**	**331**	⇑P		**P**	**11 49 41.3**	**+0.8**
	baz=20,SNR=6.9							
Y15A	**Casa Rosa Ranc**	**20.55**	**329**	⇑P		**P**	**11 49 42.2**	**+1.1**
	baz=20,SNR=5.7							
PLAL	**Pickwick Lake**	**20.81**	**27**	*e*Pn		**P**	**11 49 45.5**	**+1.6**
	7.2nm,0.8s							
X15A	**Humboldt**	**20.93**	**330**	⇑P		**P**	**11 49 46.3**	**+1.1**
	baz=20							
W16A	**Flagstaff**	**21.09**	**332**	⇓P		**P**	**11 49 46.5**	**-0.5**
	baz=20							
GLA	**Glamis**	**21.22**	**322**	⇓P		**P**	**11 49 49.4**	**+1.1**
	baz=21							
GLA	**Glamis**	**21.22**	**322**	*e*P		**P**	**11 49 49.7**	**+1.3**
	7.2nm,0.8s,mb4.0							
Y13A	**Salome**	**21.22**	**326**	⇑P		**P**	**11 49 49.3**	**+1.0**
	baz=20							
WUAZ	**Wupatki**	**21.38**	**333**	⇑P		**P**	**11 49 50.0**	**0.0**
	baz=21,SNR=5.7							
WUAZ	**Wupatki**	**21.38**	**333**	*e*P		**P**	**11 49 51.7**	**+1.6**
	7.9nm,0.9s,mb4.0							
SDCO	**Great Sand Dun**	**21.48**	**347**	*e*P		**P**	**11 49 51.1**	**0.0**
	48nm,2.6s,mb4.4							
PDMCI	**Parker Dam,Lak**	**21.75**	**326**	⇓P		**P**	**11 49 55.8**	**+1.7**
	baz=21							
MVCO	**Mesa Verde**	**21.78**	**341**	*e*P		**P**	**11 49 54.6**	**+0.3**
X13A	**Yucca**	**21.81**	**327**	⇑P		**P**	**11 49 55.8**	**+1.1**
	baz=21,SNR=7.6							
WVT	**Waverly**	**21.89**	**26**	*e*P		**P**	**11 49 55.7**	**+0.2**
	9.3nm,1.1s,mb4.1							
W14A	**Seligman**	**21.92**	**329**	⇑P		**P**	**11 49 56.4**	**+0.6**
	baz=21							
T18A	**Mexican Hat**	**22.18**	**338**	⇑P		**P**	**11 49 57.9**	**-0.8**
	baz=21							
IRM	**Iron Mountain**	**22.21**	**324**	⇓P		**P**	**11 49 59.2**	**+0.3**
	baz=22							
U15A	**North Rim**	**22.55**	**332**	⇑P		**P**	**11 50 02.2**	**-0.3**
	baz=22,SNR=5.3							
PV01	**Paradox Valley**	**22.65**	**341**	*e*P		**P**	**11 50 05.1**	**+1.5**
V13A	**Grand Canyon W**	**22.88**	**329**	⇑P		**P**	**11 50 06.3**	**+0.3**
	baz=22							
GMRC	**Granite Mounta**	**22.95**	**324**	⇓P		**P**	**11 50 08.2**	**+1.4**
	baz=22							
T15A	**Red Dirt Ranch**	**23.08**	**333**	⇑P		**P**	**11 50 08.6**	**+0.4**
	baz=22,SNR=8.3							
V12A	**Nelson**	**23.22**	**327**	⇓P		**P**	**11 50 09.8**	**+0.1**
	baz=22,SNR=5.9							
R18A	**Canyonlands Na**	**23.31**	**339**	⇑P		**P**	**11 50 09.3**	**-1.2**
	baz=22							
TKL	**Tuckaleechee C**	**23.46**	**34**	P		**P**	**11 50 11.4**	**-0.8**
	3.3nm,0.8s,mb3.8,baz=111,slow=8.8,SNR=3.9							
ISCO	**Idaho Springs**	**23.49**	**348**	*e*P		**P**	**11 50 11.5**	**-0.9**
S14A	**Cedar City**	**24.04**	**333**	⇓P		**P**	**11 50 18.0**	**+0.4**
	baz=23							
SRU	**San Rafael**	**24.18**	**339**	⇓P		**P**	**11 50 18.7**	**-0.1**
	baz=23,SNR=5.3							
SRU	**San Rafael**	**24.18**	**339**	*e*P		**P**	**11 50 19.1**	**+0.3**
	0.1nm,0.7s							
S13A	**Holt Ranch, En**	**24.20**	**331**	⇑P		**P**	**11 50 19.5**	**+0.5**
	baz=24,SNR=7.6							
U10A	**Ash Meadows, A**	**24.52**	**326**	⇓P		**P**	**11 50 23.1**	**+1.1**
	baz=24							
R13A	**O'Grain Ranch,**	**24.74**	**332**	⇓P		**P**	**11 50 24.6**	**+0.6**
	baz=24							
TPNV	**Topopah Spring**	**24.88**	**327**	⇓P		**P**	**11 50 26.0**	**+0.7**
	baz=24							

TPNV	**Topopah Spring**	**24.88**	**327**	*e*P	**P**	**11 50 26.6**	**+1.3**
Q14A	**Sevier Lake (B**	**25.12**	**334**	⇓P	**P**	**11 50 27.6**	**+0.3**
	baz=24,SNR=6.7						
O17A	**Robinson Place**	**25.22**	**340**	⇑P	**P**	**11 50 28.3**	**0.0**
	baz=24,SNR=5.3						
Q13A	**Wheeler Ranch,**	**25.41**	**333**	⇓P	**P**	**11 50 30.5**	**+0.5**
	baz=25,SNR=9.5						
P14A	**Drum Mountains**	**25.55**	**335**	⇑P	**P**	**11 50 30.8**	**-0.4**
	baz=25						
S10A	**Tonopah Range,**	**25.80**	**328**	⇑P	**P**	**11 50 34.5**	**+1.0**
	baz=25						
S09A	**Goldfield**	**25.97**	**327**	⇑P	**P**	**11 50 35.9**	**+0.7**
	baz=25						
HELL	**Mitchell Peak**	**26.22**	**323**	⇓P	**P**	**11 50 38.5**	**+1.1**
	baz=26						
S08C	**White Mtn Res**	**26.32**	**325**	⇑P	**P**	**11 50 39.7**	**+1.4**
	baz=26						
NVAR	**Mina Array Bea**	**27.07**	**326**	P	**P**	**11 50 45.5**	**+0.4**
	1.7nm,0.8s,mb3.6,baz=154,slow=9.2,SNR=19						
Q08A	**Gabbs**	**27.19**	**327**	⇓P	**P**	**11 50 47.1**	**+0.9**
	baz=26						
PDAR	**Pinedale Array**	**27.22**	**344**	P	**P**	**11 50 46.2**	**-0.1**
	1.7nm,0.8s,mb3.6,baz=147,slow=10.0,SNR=16						
L15A	**Malad City**	**27.39**	**339**	⇓P	**P**	**11 50 47.5**	**-0.4**
	baz=27						
L14A	**Malta**	**27.72**	**338**	⇑P	**P**	**11 50 51.0**	**+0.2**
	baz=27,SNR=5.5						
K15A	**Arbon**	**28.05**	**339**	⇑P	**P**	**11 50 52.8**	**-1.0**
	baz=27						
O07A	**Toulon**	**28.65**	**328**	⇑P	**P**	**11 50 59.7**	**+0.6**
	baz=28						
J15A	**Blackfoot**	**28.65**	**340**	⇑P	**P**	**11 50 58.9**	**-0.2**
	baz=28						
L11A	**Cat Creek Ranc**	**28.81**	**335**	⇑P	**P**	**11 51 00.5**	**0.0**
	baz=28						
L10A	**Juniper Basin**	**29.04**	**334**	⇑P	**P**	**11 51 02.3**	**-0.2**
	baz=28						
K08A	**Mann Creek Ran**	**30.45**	**332**	⇓P	**P**	**11 51 15.6**	**+0.5**
	baz=30						
F15A	**Butte**	**30.88**	**342**	⇑P	**P**	**11 51 18.1**	**-0.8**
	baz=30						
F12A	**Elk City**	**31.68**	**339**	⇑P	**P**	**11 51 25.5**	**-0.4**
	baz=31						
H08A	**Prairie City**	**31.95**	**334**	⇓P	**P**	**11 51 28.0**	**-0.3**
	baz=31						
D13A	**Huson**	**32.60**	**341**	⇓P	**P**	**11 51 33.2**	**-0.7**
	baz=32						
G08A	**Pilot Rock**	**32.70**	**334**	⇑P	**P**	**11 51 34.2**	**-0.6**
	baz=32						
ULM	**Lac du Bonnet**	**33.48**	**4**	LR	LR	12 06 19.4	
	comp=Z,82nm,20.8s,MS3.4,baz=264,slow=38						
MIV	**Mineville/With**	**34.96**	**34**	*e*P	**P**	**11 51 56.5**	**+1.9**
YKA	**Yellowknife Ar**	**46.83**	**351**	P	**P**	**11 53 29.9**	**-2.2**
	1.2nm,0.8s,mb3.9,baz=156,slow=6.9,SNR=3.2						
YKA				LR	LR	12 14 50.0	
	comp=Z,43nm,19.6s,MS3.4,baz=280,slow=38						
YKA	**Yellowknife Ar**	**46.83**	**351**	P	**P**	**11 53 29.9**	**-2.2**
YKA				LR	LR	12 14 50.0	

*BJI **08** 12:01:27.2, 031S×9760E, h30km, mB5.4, mb4.6*
*IDC **08** 12:01:29.9±1.3, 026N×9777E, h0km, mb4.5/9, mb1 4.5/10, mb1mx4.1/22, mbtmp4.4/10, ML4.7/1, Error ellipse: s-maj=48.9km s-min=17.5km az=57.0*
*DJA **08** 12:01:33, 206N×10124E, h0km, MLv4.6/2*
*ISCJB **08** 12:01:34.4±2.3, 03N±01×978E±01, h46km±17km, mb4.5/13, Error ellipse: s-maj=28.6km s-min=13.6km az=140.4*
*NEIC **08** 12:01:34.2±1.0, 027N×9770E, h30km, mb3.9/2, Error ellipse: s-maj=28.0km s-min=10.6km az=56.0*
ISC 08 12:01:32.6±5.3**, 02N**±01×**977E**±01**, h18**km±30km**, n26, σ0.77**/24**, mb4.5**/13**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.07**	**352**	⇑*e*P	**Pb**	**12 01 53.0**	**+0.4**
SNG	**Songkhla**	**7.47**	**23**	P	**Pn**	**12 03 31.0**	**+10**
	100nm,1.0s						
BDT	**Bhumibol Dam**	**16.94**	**4**	P	**Pn**	**12 05 30.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**18.14**	**4**	P	**Pn**	**12 05 41.8**	**-2.0**
	0.9nm,0.3s,baz=194,slow=11,SNR=13						
CHTO	**Chiang Mai**	**18.50**	**4**	*e*P	**Pn**	**12 05 46.5**	**-1.6**
	5.1nm,0.8s						
KKM	**Kota Kinabalu**	**19.33**	**72**	*e*P	**Pn**	**12 05 59.0**	**+0.7**
KMI	**Kunming**	**25.21**	**11**	P	**P**	**12 06 59.0**	**+1.5**
KMI				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.3						
XAN	**Xi'an**	**35.22**	**16**	P	**P**	**12 08 25.3**	**-0.8**
XAN				AP	pP	12 08 32.3	+0.8
XAN				XP	sP	12 08 35.7	+2.0
XAN				AMB	AMB		
	comp=Z,17nm,0.9s,mb5.0						
XAN				AMB	AMB		
	comp=Z,118nm,11.6s						
WRA	**Warramunga Arr**	**41.08**	**121**	P	**P**	**12 09 15.2**	**-0.5**
	comp=Z,3.6nm,0.5s,mb4.3,baz=302,slow=9.0,SNR=36						
WB2	**Warramunga Arr**	**41.09**	**121**	*e*P	**P**	**12 09 15.7**	**-0.1**
ASAR	**Alice Springs**	**42.40**	**127**	P	**P**	**12 09 26.3**	**-0.1**
	comp=Z,3.8nm,0.7s,mb4.1,baz=298,slow=8.0,SNR=33						
KSRS	**Korea Array**	**46.34**	**34**	P	**P**	**12 09 57.4**	**-0.3**
	comp=Z,4.2nm,0.7s,mb4.5,baz=221,slow=8.7,SNR=17						
SONM	**Songino Array**	**48.00**	**8**	P	**P**	**12 10 11.2**	**+0.7**
	comp=Z,3.7nm,0.6s,mb4.6,baz=190,slow=9.3,SNR=33						
SONM				PcP	PcP	12 11 39.0	+0.6
	comp=Z,0.7nm,0.4s,baz=195,slow=4.9,SNR=3.4						
SONM	**Songino Array**	**48.00**	**8**	P	**P**	**12 10 11.2**	**+0.7**
SONM				PcP	PcP	12 11 39.0	+0.6
ULN	**Ulaanbaatar**	**48.12**	**8**	*e*P	**P**	**12 10 12.0**	**+0.6**
	comp=Z,1.5nm,0.6s,mb4.2						
MK31	**Makanchi Array**	**48.29**	**346**	*e*P	**P**	**12 10 13.0**	**+0.2**
MKAR	**Makanchi Array**	**48.29**	**346**	P	**P**	**12 10 12.8**	**0.0**
	comp=Z,5.0nm,0.7s,mb4.6,baz=158,slow=8.2,SNR=32						
KURK	**Kurchatov**	**52.85**	**345**	P	**P**	**12 10 47.0**	**-0.2**
	comp=Z,3.5nm,0.7s,mb4.4,baz=167,slow=7.0,SNR=13						
ZAA0	**Zalesovo Array**	**54.58**	**351**	*e*P	**P**	**12 10 59.6**	**-0.1**
ZALV	**Zalesovo Beam**	**54.58**	**351**	P	**P**	**12 10 60.0**	**+0.2**
	comp=Z,11nm,0.6s,mb5.1,baz=180,slow=6.3,SNR=22						
ZALV	**Zalesovo Beam**	**54.58**	**351**	P	**P**	**12 10 60.0**	**+0.2**
MIB	**Mutribah**	**56.21**	**306**	*e*P	**P**	**12 11 12.4**	**+0.4**
MIB				AMb	AMB	12 11 14.3	
	comp=Z,21nm,1.0s,mb5.1						
BVAR	**Borovoye Array**	**57.32**	**341**	P	**P**	**12 11 18.9**	**-0.5**
	comp=Z,2.4nm,0.7s,mb4.3,baz=138,slow=9.6,SNR=12						
ARCES	**ARCESS Array B**	**83.61**	**340**	P	**P**	**12 13 59.7**	**+0.1**
	comp=Z,2.3nm,0.8s,mb4.4,baz=108,slow=4.0,SNR=6.0						
TXAR	**Lajitas Array**	**144.19**	**33**	PKP	PKPdf	12 21 07.0	-1.2
	comp=Z,0.3nm,0.6s,baz=318,slow=1.1,SNR=6.1						
CPUP	**Villa Florida**	**144.65**	**221**	PKP	PKPdf	12 21 10.0	+0.9
	comp=Z,0.4nm,0.5s,baz=69,slow=5.2,SNR=3.1						

*ISCJB **08** 12:04:19.6±1.1, 74S±02×1238E±02, h571km±12km, mb3.4/2, Error ellipse: s-maj=43.8km s-min=16.3km az=145.0*
*NEIC **08** 12:04:20.2±1.0, 739S×12383E, h565km±18km, mb4.2/1, Error ellipse: s-maj=37.0km s-min=12.6km az=59.0*
*IDC **08** 12:04:21.2±1.6, 782S×12315E, h579km±28km, mb3.0/2, mb1 3.1/6, mb1mx2.9/18, mbtmp3.0/6, Error ellipse: s-maj=212.9km s-min=17.5km az=55.0*
ISC 08 12:04:20.3±1.1**, 74S**±02×**1238E**±03**, h566**km±12km**, n10, σ0.49**/11**, mb3.5**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.79**	**183**	P	**P**	**12 05 35.9**	**+0.5**
	33nm,0.3s,baz=19,slow=1.2,SNR=22						
BATI				S	**S**	**12 06 36.4**	**-0.2**
	3.5nm,0.3s,baz=303,slow=3.8,SNR=3.8						
KAPI	**Kappang**	**4.68**	**300**	P	**P**	**12 05 48.5**	**-0.1**
	1.1nm,0.3s,baz=241,slow=23,SNR=5.3						
FITZ	**Fitzroy Crossi**	**10.78**	**171**	*e*P	**P**	**12 06 46.5**	**+0.1**
	2.8nm,0.2s						
MBWA	**Marble Bar**	**14.23**	**196**	*e*P	**P**	**12 07 21.4**	**-0.3**
WRA	**Warramunga Arr**	**16.11**	**142**	P	**P**	**12 07 39.4**	**-0.7**
	0.7nm,0.3s,baz=318,slow=9.9,SNR=53						
WRAB	**Tennant Creek**	**16.11**	**142**	*e*P	**P**	**12 07 40.4**	**+0.2**
WB2	**Warramunga Arr**	**16.12**	**142**	*e*P	**P**	**12 07 39.4**	**-0.8**
ASAR	**Alice Springs**	**18.85**	**150**	P	**P**	**12 08 05.6**	**+0.4**
	0.4nm,0.3s,baz=322,slow=7.9,SNR=34						
STKA	**Stephens Creek**	**29.45**	**148**	P	**P**	**12 09 40.1**	**+0.9**
	1.0nm,0.5s,mb3.7,baz=318,slow=12,SNR=3.9						
MKAR	**Makanchi Array**	**65.35**	**330**	P	**P**	**12 14 07.1**	**0.0**
	0.4nm,0.4s,mb3.2,baz=131,slow=6.5,SNR=3.4						

DJA 08 12:05:33, 770S×10724E, h73km, MLv4.0/10, 1C, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**0.94**	**23**	⇑*i*P	Pn	12 05 53.3	+2.3
LEM				*i* S	Sn	12 06 08.2	+3.8

*IDC **08** 12:11:09.8±1.3, 1183S×16533E, h0km, mb4.0/5, mb1 4.2/6, mb1mx4.0/17, mbtmp4.0/6, ML4.2/1, Error ellipse: s-maj=43.5km s-min=23.9km az=160.0*
*ISCJB **08** 12:11:10.7±6.2, 119S±02×1652E±01, h15km±39km, mb3.9/5, Error ellipse: s-maj=36.7km s-min=16.1km az=14.1*
ISC 08 12:11:11.7±7.5**, 119S**±02×**1653E**±01**, h11**km±47km**, n6, σ0.73**/7**, mb3.9**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.79**	**294**	Pn	**Pn**	**12 12 37.5**	**-0.1**
	6.7nm,0.3s,baz=152,slow=7.8,SNR=3.8						
HNR				Sn	**Sn**	**12 13 43.9**	**-0.2**
	4.9nm,0.3s,baz=292,slow=23,SNR=4.3						
WRA	**Warramunga Arr**	**30.79**	**251**	P	**P**	**12 17 28.0**	**+0.4**
	3.8nm,1.0s,mb4.2,baz=80,slow=8.9,SNR=17						
ASAR	**Alice Springs**	**32.03**	**244**	P	**P**	**12 17 38.1**	**-0.4**
	1.3nm,0.8s,mb3.8,baz=72,slow=9.5,SNR=15						
SONM	**Songino Array**	**79.08**	**324**	P	**P**	**12 23 16.9**	**+0.9**
	0.3nm,0.5s,mb3.5,baz=150,slow=6.7,SNR=2.1						
NVAR	**Mina Array Bea**	**86.89**	**50**	P	**P**	**12 23 55.9**	**-0.8**
	0.8nm,0.8s,mb4.0,baz=237,slow=7.2,SNR=5.8						
PDAR	**Pinedale Array**	**94.44**	**47**	P	**P**	**12 24 32.1**	**+0.2**
	0.2nm,0.3s,mb4.0,baz=283,slow=8.2,SNR=3.0						

*IDC **08** 12:12:41.6±1.5, 3600N×14137E, h0km, mb3.4/4, mb1 3.5/7, mb1mx3.4/24, mbtmp3.5/7, ML2.9/3, MS2.9/1, Ms1 2.9/1, ms1mx2.5/23, Error ellipse: s-maj=33.9km s-min=19.5km az=73.0*
*ISCJB **08** 12:12:44.0±0.9, 3603N±005×14138E±008, h33km, mb3.5/4, Error ellipse: s-maj=9.1km s-min=7.2km az=173.9*
*JMA **08** 12:12:46.6±0.1, 3603N×14109E, h40km±1km, M2.8*
ISC 08 12:12:46.2±0.9**, 3602N**±005×**14128E**±009**, h35**km**, n12, σ1.25**/17**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.47**	**227**	P	**Pn**	**12 12 55.6**	**-0.8**
CHOJ				S	**Sn**	**12 13 02.0**	**-1.4**
JHO	**Hitachi**	**0.82**	**316**	P	**Pn**	**12 12 59.9**	**-1.3**
JYT	**Yasato**	**0.90**	**283**	P	**Pn**	**12 13 00.8**	**-1.5**
JYT				*e*S	**Sn**	**12 13 10.7**	**-3.4**
JAG	**Ashikaga**	**1.53**	**286**	P	**Pn**	**12 13 09.8**	**-1.2**
MJAR	**Matsushiro Arr**	**2.53**	**283**	Pn	**Pn**	**12 13 24.9**	**+0.1**
	2.7nm,0.3s,baz=117,slow=7.2,SNR=35						
MJAR				Sn	**Sn**	**12 13 56.9**	**+2.5**
	2.1nm,0.3s,baz=238,slow=47,SNR=5.5						
MAT	**Matsushiro**	**2.53**	**283**	P	**Pn**	**12 13 26.1**	**+1.3**
MAT				*e*S	**Sn**	**12 13 55.1**	**+0.7**
JHJ	**Hachijo jima 2**	**3.15**	**203**	Pn	**Pn**	**12 13 32.4**	**-0.9**
	1.7nm,0.3s,baz=59,slow=23,SNR=2.0						
JHJ				Sn	**Sn**	**12 14 10.6**	**+1.0**
	4.9nm,0.3s,baz=78,slow=23,SNR=4.5						
JHJ				LR	LR	12 14 31.8	
	comp=Z,172nm,19.6s,baz=148,slow=35						
ASAJ	**Asahikawa**	**8.15**	**7**	Pn	**Pn**	**12 14 40.9**	**-1.0**
	0.2nm,0.3s,baz=184,slow=19,SNR=2.6						
MKAR	**Makanchi Array**	**44.57**	**303**	P	**P**	**12 20 56.3**	**+1.8**
	0.2nm,0.3s,mb3.5,baz=76,slow=6.1,SNR=2.1						
KURK	**Kurchatov**	**46.47**	**309**	P	**P**	**12 21 10.7**	**+1.1**
	0.6nm,0.5s,mb3.8,baz=84,slow=7.7,SNR=4.3						
WRA	**Warramunga Arr**	**56.05**	**188**	P	**P**	**12 22 22.6**	**+1.0**
	0.1nm,0.3s,mb3.3,baz=6.7,slow=7.4,SNR=6.3						
ASAR	**Alice Springs**	**59.77**	**188**	P	**P**	**12 22 48.0**	**+0.3**
	0.5nm,1.0s,mb3.5,baz=24,slow=9.2,SNR=2.8						

*ISCJB **08** 12:23:19.6±0.7, 3836N±003×2051E±005, h1km±6km, Error ellipse: s-maj=6.7km s-min=4.2km az=175.7*
*THE **08** 12:23:19.3, 3834N×2041E, h7km, ML3.9*
*ATH **08** 12:23:19.8, 3832N×2048E, h10km±1km, MD3.6/8*
*NEIC **08** 12:23:20.0, 3834N×2049E, h7km, ML3.6(ATH), After ATH.*
*CSEM **08** 12:23:20.3±0.1, 3835N×2050E, h1km±2km, MD3.6, Error ellipse: s-maj=4.1km s-min=1.8km az=81.0*
ISC 08 12:23:20.7±0.7**, 3836N**±003×**2053E**±005**, h4**km±5km**, n20, σ0.89**/30**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.19**	**166**	*e*Pg	**Pg**	**12 23 23.6**	**-0.7**
VLS				*e*Sg	**Sg**	**12 23 26.8**	**+0.1**
VLS	**Valsamata**	**0.19**	**166**	*e*PG	**Pg**	**12 23 23.9**	**-0.4**
VLS				*e*SG	**Sg**	**12 23 26.9**	**+0.1**
VLS	**Valsamata**	**0.19**	**166**	*e*Pg	**Pg**	**12 23 23.9**	**-0.4**
VLS				*e*Sg	**Sg**	**12 23 26.8**	**0.0**
KFL	**Anninata**	**0.32**	**141**	*e*Pg	**Pg**	**12 23 26.4**	**-0.4**
LKD	**Levkas**	**0.36**	**15**	*e*Pg	**Pg**	**12 23 27.3**	**-0.4**
LKD				*e*Sg	**Sg**	**12 23 33.4**	**+1.0**
RLS	**Riolos of Patr**	**0.80**	**112**	*e*PB	**Pg**	**12 23 35.3**	**-0.6**
EVR	**Evrytania**	**1.15**	**60**	*e*PN	**Pg**	**12 23 41.8**	**-0.8**
JAN	**Janina**	**1.32**	**11**	*e*PB	**Pg**	**12 23 45.7**	**-0.3**
JAN				*e*SB	**Sg**	**12 24 04.0**	**+0.9**
KEK	**Kerkira**	**1.47**	**337**	*e*PG	**Pn**	**12 23 47.3**	**-0.6**
AGG	**Agios Georgios**	**1.56**	**64**	*e*Pb	**Pn**	**12 23 48.2**	**-0.9**
AGG				*e*Sb	**Sb**	**12 24 09.8**	**-0.2**
ITM	**Ithomi**	**1.61**	**136**	*e*PB	**Pn**	**12 23 50.4**	**+0.5**
ITM	**Ithomi**	**1.61**	**136**	*e*Pb	**Pg**	**12 23 51.9**	**+0.3**
ITM				*e*Sb	**Sg**	**12 24 13.3**	**+0.8**
THL	**Klokotos Trika**	**1.67**	**43**	*e*Pb	**Pn**	**12 23 48.8**	**-1.8**
THL				*e*Sb	**Sn**	**12 24 12.6**	**+0.1**
THL	**Klokotos Trika**	**1.67**	**43**	*e*Pg	**Pg**	**12 23 51.8**	**-0.9**
THL				*e*Sb	**Sn**	**12 24 12.6**	**+0.1**
THL				*e*Sn	**Sg**	**12 24 15.3**	**+1.0**
LKR	**Lokris**	**1.96**	**81**	*e*Pn	**Pn**	**12 23 54.0**	**-0.6**
LKR	**Lokris**	**1.96**	**81**	*e*Pn	**Pn**	**12 23 55.7**	**+1.1**
VLI	**Veliai**	**2.52**	**130**	*e*Pn	**Pn**	**12 24 04.2**	**+1.9**
TIP	**Timpagrande**	**3.06**	**287**	P	**Pn**	**12 24 09.1**	**-0.7**
SGO	**Sicignano**	**4.60**	**300**	Pn	**Pn**	**12 24 30.7**	**-0.3**
CSSN	**Cassano Irpino**	**4.93**	**302**	Pn	**Pn**	**12 24 37.6**	**+2.1**

*ISCJB **08** 12:37:52.9±0.4, 3401N±006×13670E±006, h370km±3km, mb3.1/6, Error ellipse: s-maj=9.6km s-min=6.9km az=156.1*
*JMA **08** 12:37:53.4±0.1, 3404N×13661E, h370km±2km, M3.1*
*NEIC **08** 12:37:53.8±0.8, 3405N×13665E, h366km±13km, MG3.1(JMA), Error ellipse: s-maj=23.7km s-min=15.6km az=93.0*
*IDC **08** 12:37:54.1±0.7, 3411N×13656E, h369km±9km, mb2.9/6, mb1 3.1/10, mb1mx3.0/27, mbtmp3.0/10, Error ellipse: s-maj=17.3km s-min=11.9km az=53.0*
ISC 08 12:37:53.9±0.4**, 3404N**±006×**13667E**±006**, h363**km±3km**, n32, σ0.71**/49**, mb3.1**/6**, 1D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**0.35**	**5**	P	**Pn**	**12 38 40.1**	**+0.8**
JIE				*e*S	**S**	**12 39 16.2**	**+0.4**
JKN2	**Miekihoku**	**0.38**	**301**	P	**Pn**	**12 38 39.8**	**+0.4**
JKN2				S	**S**	**12 39 15.6**	**-0.3**
TK01	**Tokai 1**	**0.82**	**109**	*e*S	**S**	**12 39 19.0**	**+1.2**
JWY	**Kouya**	**0.91**	**282**	P	**Pn**	**12 38 41.3**	**+0.6**
JWY				*e*S	**S**	**12 39 18.0**	**-0.3**
JWZ	**Kozaga**	**0.94**	**238**	P	**Pn**	**12 38 40.7**	**-0.2**
JWZ				*e*S	**S**	**12 39 18.0**	**-0.6**
JWT	**Wachi**	**1.62**	**320**	P	**Pn**	**12 38 44.3**	**+0.4**
JWT				S	**S**	**12 39 23.4**	**-0.8**
JGM	**Miyama**	**1.66**	**1**	P	**Pn**	**12 38 44.9**	**+0.8**
JGM				*e*S	**S**	**12 39 25.1**	**+0.5**
JAI	**Aioi**	**1.86**	**263**	P	**Pn**	**12 38 45.5**	**0.0**
JAI				S	**S**	**12 39 26.1**	**-0.8**
JYN	**Shimob**	**2.12**	**46**	P	**Pn**	**12 38 47.5**	**+0.3**
JOD2	**Odawara 2**	**2.34**	**58**	P	**Pn**	**12 38 49.7**	**+0.9**
JMN	**Monobe**	**2.34**	**263**	P	**Pn**	**12 38 49.1**	**+0.3**
JRY	**Ryogami san**	**2.69**	**42**	P	**Pn**	**12 38 52.2**	**+0.7**
JRY				*e*S	**S**	**12 39 37.7**	**-0.3**
JHJ	**Hachijo jima 2**	**2.76**	**109**	P	**Pn**	**12 38 52.5**	**+0.3**
	6.1nm,0.3s,baz=15,slow=22,SNR=4.4						
JHJ				S	**S**	**12 39 44.2**	**+5.1**
	7.6nm,0.3s,baz=76,slow=22,SNR=9.7						
JHJ2	**Mitsune**	**2.79**	**109**	P	**Pn**	**12 38 52.6**	**+0.2**
MAJO	**Matsushiro**	**2.80**	**26**	⇓*i*Pn	**Pn**	**12 38 52.5**	**+0.1**
MAT	**Matsushiro**	**2.80**	**26**	P	**Pn**	**12 38 53.4**	**+1.0**
MAT				*e*S	**S**	**12 39 39.8**	**+0.2**
MAT	**Matsushiro**	**2.80**	**26**	P	**Pn**	**12 38 52.4**	**0.0**
MAT				S	**S**	**12 39 39.1**	**-0.5**
MJAR	**Matsushiro Arr**	**2.80**	**26**	P	**Pn**	**12 38 52.5**	**+0.1**
	3.8nm,0.3s,baz=183,slow=9.7,SNR=55						
MJAR				S	**S**	**12 39 39.1**	**-0.4**
	0.2nm,0.3s,baz=144,slow=28,SNR=4.7						
MJAR	**Matsushiro Arr**	**2.80**	**26**	P	**Pn**	**12 38 52.5**	**+0.1**
MJAR				S	**S**	**12 39 39.1**	**-0.4**
JTO	**Tosashimizu**	**3.44**	**251**	P	**Pn**	**12 38 58.1**	**-0.1**
BSO1	**Boso 1**	**3.62**	**79**	P	**Pn**	**12 38 57.8**	**-2.1**
BSO1				*e*S	**S**	**12 39 50.7**	**-2.5**
KSRS	**Korea Array**	**7.88**	**298**	P	**Pn**	**12 39 47.2**	**+0.5**
	0.9nm,0.3s,baz=114,slow=12,SNR=30						
KSRS				S	**S**	**12 41 18.5**	**-0.3**
	0.2nm,0.3s,baz=118,slow=39,SNR=6.4						
ERM	**Erimo**	**9.46**	**31**	*e*Pn	**Pn**	**12 40 05.2**	**-0.1**
ERM				*e*S	**S**	**12 41 44.5**	**-8.5**
ASAJ	**Asahikawa**	**11.06**	**23**	P	**Pn**	**12 40 23.8**	**-0.4**
	0.9nm,0.3s,baz=23,slow=32,SNR=13						
ASAJ				S	**S**	**12 42 20.6**	**-7.3**
	0.2nm,0.3s,baz=233,slow=20,SNR=2.3						
YSS	**Yuzh-Sakhalins**	**13.70**	**18**	Pn	**Pn**	**12 40 54.9**	**-0.2**
CMAR	**Chiang Mai Arr**	**36.99**	**255**	P	**P**	**12 44 29.8**	**-0.4**
	0.8nm,0.4s,mb3.3,baz=50,slow=8.3,SNR=5.8						
MKAR	**Makanchi Array**	**42.51**	**304**	P	**P**	**12 45 14.3**	**-0.5**
	0.2nm,0.4s,mb2.6,baz=100,slow=8.4,SNR=3.7						
MKAR	**Makanchi Array**	**42.51**	**304**	P	**P**	**12 45 14.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**52.91**	**193**	P	**P**	**12 46 34.4**	**+0.4**
	0.7nm,0.5s,mb3.2,baz=0.0,slow=4.0,SNR=2.7						
WRA	**Warramunga Arr**	**53.73**	**183**	P	**P**	**12 46 38.5**	**-1.4**
	0.6nm,0.3s,mb3.4,baz=360,slow=7.6,SNR=31						
ASAR	**Alice Springs**	**57.45**	**183**	P	**P**	**12 47 06.3**	**+0.4**
	0.2nm,0.5s,mb2.7,baz=7.7,slow=13,SNR=5.7						
NVAR	**Mina Array Bea**	**79.88**	**50**	P	**P**	**12 49 24.1**	**+1.0**
	0.3nm,0.6s,mb3.2,baz=274,slow=5.9,SNR=3.4						

*ISCJB **08** 12:46:20.5±1.2, 804S±006×1193E±01, h65km±12km, mb3.6/3, Error ellipse: s-maj=19.3km s-min=7.6km az=163.0*
*IDC **08** 12:46:21.6±1.1, 802S×11934E, h45km±11km, mb3.4/3, mb1 3.7/6, mb1mx3.5/18, mbtmp3.6/6, ML3.7/3, Error ellipse: s-maj=22.3km s-min=9.5km az=69.0*
*NEIC **08** 12:46:22.0±1.1, 804S×11957E, h45km±14km, mb3.7/1, Error ellipse: s-maj=20.1km s-min=8.7km az=72.0*
ISC 08 12:46:21.7±1.1**, 804S**±006×**1193E**±01**, h56**km±12km**, n13, σ1.08**/18**, mb3.6**/3**, 1C, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.87**	**150**	⇑*e*P	**Pn**	**12 46 51.3**	**-0.1**
WSI				*e*S	**Sn**	**12 47 13.3**	**-0.6**
KAPI	**Kappang**	**3.04**	**8**	P	**Pn**	**12 47 07.3**	**0.0**
	11nm,0.3s,baz=246,slow=21,SNR=39						
KAPI				S	**Sn**	**12 47 41.8**	**-0.7**
	3.1nm,0.3s,baz=244,slow=23,SNR=4.4						
KAPI	**Kappang**	**3.04**	**8**	P	**Pn**	**12 47 07.3**	**0.0**
KAPI				S	**Sn**	**12 47 41.8**	**-0.7**
BATI	**Baumata**	**4.78**	**117**	P	**Pn**	**12 47 32.1**	**+0.9**
	2.7nm,0.3s,baz=288,slow=7.1,SNR=3.7						
BATI				S	**Sn**	**12 48 27.6**	**+2.3**
	1.9nm,0.3s,baz=269,slow=17,SNR=1.7						
MBWA	**Marble Bar**	**13.04**	**178**	*e*Pn	**Pn**	**12 49 24.9**	**+0.7**
MBWA				*e*Sn	**Sn**	**12 51 34.6**	**-13**
WRA	**Warramunga Arr**	**18.73**	**131**	P	**Pn**	**12 50 35.4**	**-1.5**
	0.3nm,0.3s,baz=303,slow=12,SNR=34						
WRAB	**Tennant Creek**	**18.74**	**131**	*e*Pn	**Pn**	**12 50 35.9**	**-1.0**
WB2	**Warramunga Arr**	**18.74**	**131**	*e*Pn	**Pn**	**12 50 35.4**	**-1.6**
ASAR	**Alice Springs**	**20.89**	**140**	P	**P**	**12 50 59.3**	**-0.1**
	1.1nm,0.5s,baz=326,slow=12,SNR=23						
ASAR				pP		12 51 09.5	
	1.2nm,0.4s,baz=321,slow=11,SNR=8.3						
COEN	**Coen**	**24.11**	**106**	*e*P	**P**	**12 51 32.2**	**-0.2**
	1.3nm,0.5s,mb3.6						
STKA	**Stephens Creek**	**31.48**	**142**	P	**P**	**12 52 38.7**	**+0.5**
	1.1nm,0.4s,mb4.1,baz=324,slow=13,SNR=3.7						
STKA				pP	pP	12 52 52.0	-0.2
	4.2nm,1.0s,baz=311,slow=11,SNR=2.8						
STKA	**Stephens Creek**	**31.48**	**142**	P	**P**	**12 52 38.7**	**+0.5**
STKA				pP	pP	12 52 52.0	-0.2
MKAR	**Makanchi Array**	**63.77**	**333**	P	**P**	**12 56 49.7**	**+2.0**
	0.2nm,0.9s,mb3.1,baz=90,slow=10,SNR=2.2						
MKAR				pP	pP	12 57 01.8	-1.2
	0.3nm,0.5s,baz=151,slow=7.2,SNR=3.6						

*IDC **08** 13:38:56.5±1.1, 887S×12759E, h0km, mb4.1/4, mb1 4.2/8, mb1mx4.0/16, mbtmp4.1/8, ML3.9/4, MS2.8/3, Ms1 2.8/3, ms1mx2.5/25, Error ellipse: s-maj=33.2km s-min=18.5km az=64.0*
*ISCJB **08** 13:39:02.0±2.0, 915S±009×12756E±009, h66km±21km, mb4.0/4, Error ellipse: s-maj=19.7km s-min=7.3km az=41.8*
*NEIC **08** 13:39:05.6±2.4, 943S×12725E, h87km±30km, mb4.0/1, Error ellipse: s-maj=23.3km s-min=19.4km az=197.0*
ISC 08 13:39:03.4±1.8**, 91S**±01×**12757E**±008**, h61**km±22km**, n17, σ0.82**/26**, mb4.0**/4**, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.00**	**254**	Pn	**Pn**	**13 40 01.2**	**-1.0**
	7.0nm,0.3s,baz=29,slow=3.7,SNR=13						
BATI				Sn	**Sn**	**13 40 49.0**	**+1.0**
	10nm,0.3s,baz=124,slow=12,SNR=3.6						
KAKA	**Kakadu**	**5.96**	**127**	*e*P	**Pn**	**13 40 32.9**	**+3.8**
	25nm,0.6s						
KAKA	**Kakadu**	**5.96**	**127**	*e*Pn	**Pn**	**13 40 32.4**	**+3.3**
KAKA				*e*Sn	**Sn**	**13 41 31.2**	**-4.8**
KAPI	**Kappang**	**8.77**	**297**	LR	LR	13 44 37.3	
	comp=Z,54nm,18.8s,baz=245,slow=39						
FITZ	**Fitzroy Crossi**	**9.12**	**192**	*e*P	**Pn**	**13 41 12.1**	**-0.2**
	6.5nm,0.3s						
FITZ				*e*S	**Sn**	**13 42 48.3**	**-5.2**
FITZ	**Fitzroy Crossi**	**9.12**	**192**	Pn	**Pn**	**13 41 11.9**	**-0.4**
	0.9nm,0.3s,baz=29,slow=11,SNR=45						
FITZ				Sn	**Sn**	**13 42 52.8**	**-0.7**
	2.5nm,0.3s,baz=88,slow=21,SNR=10.0						
FITZ				LR	LR	13 45 08.2	
	comp=Z,46nm,21.3s,baz=193,slow=40						
FITZ	**Fitzroy Crossi**	**9.12**	**192**	*e*Pn	**Pn**	**13 41 09.4**	**-2.9**
	11nm,0.6s						
FITZ				*e*Sn	**Sn**	**13 42 47.7**	**-5.8**
WRAB	**Tennant Creek**	**12.58**	**149**	*e*Pn	**Pn**	**13 42 00.2**	**+0.6**
	5.8nm,0.6s						
WRAB				*e*Sn	**Sn**	**13 44 18.2**	**+0.1**
WRA	**Warramunga Arr**	**12.59**	**149**	Pn	**Pn**	**13 41 59.3**	**-0.4**
	1.0nm,0.3s,baz=318,slow=14,SNR=73						
WRA				Sn	**Sn**	**13 44 18.4**	**+0.1**
	1.5nm,0.3s,baz=316,slow=23,SNR=6.8						
WRA				LR	LR	13 47 24.2	
	comp=Z,50nm,18.6s,baz=250,slow=40						
WB2	**Warramunga Arr**	**12.59**	**149**	*e*P	**Pn**	**13 42 00.0**	**+0.2**
WB2				*e*S	**Sn**	**13 44 17.0**	**-1.4**
WB2	**Warramunga Arr**	**12.59**	**149**	*e*Pn	**Pn**	**13 42 00.2**	**+0.4**
WB2				*e*Sn	**Sn**	**13 44 14.6**	**-3.8**
ASAR	**Alice Springs**	**15.68**	**158**	Pn	**Pn**	**13 42 40.6**	**+0.1**
	0.2nm,0.3s,baz=333,slow=9.8,SNR=21						
ASAR				Sn	**Sn**	**13 45 33.8**	**+0.4**
	0.3nm,0.3s,baz=321,slow=18,SNR=6.0						
STKA	**Stephens Creek**	**26.11**	**152**	*e*P	**P**	**13 44 37.8**	**+6.2**
	3.7nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**26.11**	**152**	P	**P**	**13 44 35.0**	**+3.4**
	2.6nm,0.6s,mb3.9,baz=317,slow=8.4,SNR=5.5						
CMAR	**Chiang Mai Arr**	**39.36**	**314**	P	**P**	**13 46 26.9**	**-0.2**
	2.4nm,0.7s,mb4.0,baz=143,slow=6.9,SNR=24						
MKAR	**Makanchi Array**	**68.72**	**328**	P	**P**	**13 50 00.7**	**+0.1**
	0.8nm,0.7s,mb3.8,baz=140,slow=7.7,SNR=13						
ZALV	**Zalesovo Beam**	**72.45**	**335**	P	**P**	**13 50 22.9**	**-0.2**
	2.3nm,0.6s,mb4.3,baz=116,slow=4.1,SNR=10						

*IDC **08** 14:15:31.8±0.5, 258S×3621E, h0km, mb4.5/17, mb1 4.6/18, mb1mx4.5/22, mbtmp4.5/18, ML4.1/1, MS4.1/30, Ms1 4.1/30, ms1mx4.0/37, Error ellipse: s-maj=18.0km s-min=10.3km az=118.0*
*ISCJB **08** 14:15:31.2±0.2, 261S±003×3608E±005, h10km, mb4.8/76,*

MS4.2/45, Error ellipse: s-maj=6.6km s-min=4.8km az=2.9
BJI **08** 14:15:32.0, 2.20S×36.15E, h5km, mB5.5, mb5.0, Ms4.7, Msz4.3
MOS **08** 14:15:32.4±0.8, 2.58S×36.11E, h18km, mb5.0/36, MS4.2/4, Error ellipse: s-maj=11.5km s-min=5.1km az=101.4
GCMT **08** 14:15:33.0±0.4, 2.59S×36.11E, h12km, MW4.9/64, Moment Tensor Solution. s29,c32; s64,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.36±.09; $M_{\theta\theta}$0.69±.08; $M_{\phi\phi}$1.68±.10; $M_{r\theta}$-0.52±.30; $M_{\theta\phi}$1.28±.08; $M_{\phi r}$-0.67±.31; Best double couple: $M_0$2.60100×10^{16} NP1:ϕ_s213.00000°,δ36.00000°,λ-92.00000°. NP2: ϕ_s36.00000°,δ55.00000°,λ-88.00000°. Principal axes: T 2.6980, Plg10.0000°, Azm125.0000°; N -0.1870, Plg1.0000°, Azm215.0000°; P -2.5030, Plg80.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC **08** 14:15:33.0±0.3, 2.64S×36.11E, h10km, mb4.8/38, MS4.5/1 Error ellipse: s-maj=8.4km s-min=5.7km az=82.0
NEIC Felt at Arusha.
SZGRF **08** 14:15:37.1, 2.06S×37.40E, h33km, mb4.8, Kenya
ISC 08 14:15:33.2±0.2, 2.63S±.003×36.15E±.005, h10km, (h15km±1.5km:pP-P), n223, σ0.92/201, mb4.8/76, MS4.2/45, 6C-1D, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	1.86	36	Pn	Pn	14 16 04.2	-1.0
	548nm,0.3s,baz=212,slow=16,SNR=997						
KMBO				Lg		14 16 27.2	
	901nm,0.3s,baz=75,slow=23,SNR=26						
KMBO				Rg		14 16 39.3	
	2μm,0.3s,baz=254,slow=24,SNR=6.5						
KMBO	Kilima Mbogo	1.86	36	Pn	Pn	14 16 04.2	-0.9
KMBO				Sn	Sn	14 16 28.6	-0.1
KMBO	Kilima Mbogo	1.86	36	eP	Pn	14 16 04.3	-0.9
LSZ	Lusaka	14.82	212	Pn	Pn	14 19 00.4	-2.6
	1.0nm,0.3s,baz=43,slow=13,SNR=8.4						
LSZ				Sn	Sn	14 21 37.3	-10
	3.5nm,0.3s,baz=129,slow=13,SNR=4.7						
LSZ				Lg		14 23 13.2	
	7.0nm,0.3s,baz=127,slow=20,SNR=11						
LSZ	Lusaka	14.82	212	eP	Pn	14 18 59.8	-3.2
LSZ				pmax	pmax		
	comp=Z,21nm,0.8s						
LSZ	Lusaka	14.82	212	ePn	Pn	14 18 59.8	-3.1
	comp=Z,21nm,0.8s						
LSZ				eSn	Sn	14 21 36.8	-11
LSZ	Lusaka	14.82	212	eP	Pn	14 19 00.2	-2.8
LSZ				AMb	AMB	14 19 14.7	
	comp=Z,381nm,1.2s						
SLAT	Slait	18.68	350	i P	Pn	14 19 56.2	+4.2
SLAT				AMb	AMB	14 19 58.9	
	comp=Z,61nm,1.9s						
SLAT				i S	Sn	14 23 28.2	+7.1
OPO	Ambohidratompo	19.18	146	P	Pn	14 19 59.4	+1.2
	comp=Z,0.6nm,0.3s,baz=320,slow=16,SNR=4.5						
OPO				S	Sn	14 23 19.0	-14
	comp=Z,0.2nm,0.3s,baz=306,slow=14,SNR=2.0						
ABPO	Ambohimpanom	19.57	147	eP	Pn	14 20 02.3	-0.4
ABPO				pmax	pmax		
	comp=Z,29nm,1.1s						
ABPO	Ambohimpanom	19.57	147	eP	Pn	14 20 02.2	-0.5
	comp=Z,29nm,1.1s						
MSNA	Messina	20.48	196	eP	P	14 20 11.1	-0.3
MSNA				AMb	AMB	14 20 17.5	
	comp=Z,24nm,1.6s						
SLR	Silverton	24.19	198	eP	P	14 20 49.2	-0.8
SLR				AML	AML	14 20 53.5	
	comp=Z,56nm,2.1s						
LBTB	Lobatse	24.47	204	P	P	14 20 52.5	0.0
	comp=Z,12nm,0.8s,mb4.4,baz=31,slow=9.4,SNR=15						
LBTB				Lg		14 28 07.9	
	comp=Z,26nm,0.9s,baz=292,slow=21,SNR=4.0						
LBTB				LR	LR	14 30 18.8	
	comp=Z,423nm,19.6s,MS3.9,baz=43,slow=36						
LBTB	Lobatse	24.47	204	eP	P	14 20 51.8	-0.8
LBTB				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.4						
LBTB	Lobatse	24.47	204	eP	P	14 20 51.8	-0.8
	comp=Z,13nm,0.8s,mb4.4						
LBTB	Lobatse	24.47	204	eP	P	14 20 51.3	-1.3
LBTB				AMb	AMB	14 21 00.5	
	comp=Z,36nm,1.6s,mb4.5						
TSUM	Tsumeb	24.52	226	P	P	14 20 53.7	+0.6
	comp=Z,3.9nm,0.8s,mb4.0,baz=24,slow=9.0,SNR=4.9						
TSUM				S	S	14 25 24.6	+11
	comp=Z,5.8nm,0.7s,baz=308,slow=19,SNR=3.1						
TSUM				Lg		14 28 16.6	
	comp=Z,15nm,0.9s,baz=94,slow=10,SNR=3.4						
TSUM				LR	LR	14 31 05.2	
	comp=Z,893nm,18.6s,MS4.3,baz=347,slow=38						
TSUM	Tsumeb	24.52	226	eP	P	14 20 50.6	-2.5
	comp=Z,14nm,0.9s,mb4.5						
TSUM	Tsumeb	24.52	226	eP	P	14 20 51.9	-1.2
TSUM				AMb	AMB	14 21 29.1	
	comp=Z,262nm,1.7s,mb5.5						
POGA	Pongola	24.98	190	eP	P	14 20 55.7	-1.5
POGA				AMb	AMB	14 21 18.8	
	comp=Z,68nm,1.1s,mb5.1						
BOSA	Boshof	27.85	201	P	P	14 21 22.9	-0.1
	comp=Z,11nm,0.8s,mb4.5,baz=27,slow=9.9,SNR=16						
BOSA				Lg		14 29 59.5	
	comp=Z,30nm,0.9s,baz=266,slow=1.7,SNR=5.6						
BOSA				LR	LR	14 32 44.5	
	comp=Z,273nm,19.6s,MS3.8,baz=202,slow=37						
BOSA	Boshof	27.85	201	P	P	14 21 22.9	-0.1
BOSA				Lg		14 29 59.5	
BOSA				LR	LR	14 32 44.5	
BOSA	Boshof	27.85	201	eP	P	14 21 21.6	-1.5
BOSA				AMb	AMB	14 21 28.1	
	comp=Z,28nm,1.6s,mb4.6						
SUR	Sutherland	32.92	204	P	P	14 22 07.9	0.0
	comp=Z,6.7nm,0.9s,mb4.6,baz=349,slow=13,SNR=2.8						
SUR	Sutherland	32.92	204	eP	P	14 22 07.6	-0.2
	comp=Z,8.4nm,0.7s,mb4.8						
SUR	Sutherland	32.92	204	eP	P	14 22 06.7	-1.2
SUR				AMb	AMB	14 22 28.6	
	comp=Z,46nm,2.4s,mb5.0						
CER	Ceres	34.41	205	eP	P	14 22 16.9	-3.9
CER				AMb	AMB	14 22 18.1	
	comp=Z,20nm,1.3s,mb4.9						
TOA0	Torodi Ar. Sit	37.62	295	eP	P	14 22 48.4	-0.2
TORD	Torodi Ar. Bea	37.62	295	P	P	14 22 48.6	+0.1
	comp=Z,8.6nm,1.2s,mb4.4,baz=116,slow=6.6,SNR=18						
TORD				PP	PP	14 24 18.6	+4.0
	comp=Z,6.5nm,1.1s,baz=111,slow=9.1,SNR=5.9						
TORD				PcP	PcP	14 25 07.7	+1.3
	comp=Z,1.6nm,0.8s,baz=118,slow=4.5,SNR=4.2						
TORD				LR	LR	14 38 23.7	
	comp=Z,818nm,19.3s,MS4.5,baz=105,slow=36						
IDI	Anoyia	39.17	345	LR	LR	14 41 56.3	
	comp=Z,306nm,20.7s,MS4.1,baz=86,slow=40						
APE	Apeiranthos	40.71	347	eP	P	14 23 17.5	+3.4
MALT	Malatya	40.79	3	eP	P	14 23 16.5	+1.7
MALT				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.5						
MALT	Malatya	40.79	3	eP	P	14 23 16.5	+1.7
	comp=Z,15nm,1.3s,mb4.5						
DBIC	Dimbokro	41.96	283	LR	LR	14 41 21.1	
	comp=Z,829nm,18.6s,MS4.6,baz=95,slow=37						
GNI	Garni	43.29	10	eP	P	14 23 34.6	-0.6
GNI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
VAE	Valguarnera	44.72	335	LR	LR	14 42 12.8	
	comp=Z,512nm,19.2s,MS4.5,baz=306,slow=36						
KEST	Kesra	45.66	329	LR	LR	14 43 52.9	
	comp=Z,201nm,19.7s,MS4.1,baz=89,slow=37						
KIV	Kislovodsk	46.74	6	eP	P	14 24 03.5	+0.9
KIV				e		14 25 31.1	
KIV				eS	S	14 31 02.9	+10
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
KIV				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.1						
BUR08	Bucovina Ar. S	50.98	350	eP	P	14 24 35.9	+0.9
PGF	Pioggiola	51.23	334	eP	P	14 24 36.3	-0.8
	comp=Z,54nm,1.4s,mb5.0						
PGF	Pioggiola	51.23	334	eP	P	14 24 36.3	-0.8
PGF				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.0						
PGF	Pioggiola	51.23	334	eP	P	14 24 36.3	-0.8
	comp=Z,27nm,1.4s,mb5.0						
MDT	Midelt	52.23	316	LR	LR	14 48 47.6	
	comp=Z,718nm,19.2s,MS4.7,baz=136,slow=38						
PSZ	Piszkesteto	52.31	346	eP	P	14 24 45.4	+0.4
PSZ				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
PSZ	Piszkesteto	52.31	346	eP	P	14 24 45.4	+0.4
	comp=Z,13nm,1.1s,mb4.8						
KECS	Kecovo	52.70	347	eP	P	14 24 47.3	-0.6
KECS				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.1						
KECS	Kecovo	52.70	347	eP	P	14 24 47.3	-0.6
	comp=Z,3.5nm,1.5s,mb4.1						
KOLS	Kolonicke sedl	52.75	349	eP	P	14 24 49.2	+0.9
CRVS	Cervenica-Dubn	52.89	348	eP	P	14 24 50.5	+1.2
LMR	La Mourre	52.96	333	eP	P	14 24 49.5	-0.4
	comp=Z,31nm,1.1s,mb4.8						
LMR	La Mourre	52.96	333	eP	P	14 24 49.5	-0.4
LMR				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
LMR	La Mourre	52.96	333	eP	P	14 24 49.5	-0.4
	comp=Z,15nm,1.1s,mb4.8						
SBF	Sospel	52.97	334	eP	P	14 24 49.3	-0.7
VYHS	Vyhne	53.10	346	eP	P	14 24 51.3	+0.4
MODS	Modra-Piesok	53.39	344	eP	P	14 24 53.7	+0.7
STHS	Stebnicka Huta	53.42	348	eP	P	14 24 55.7	+2.5
STHS				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
STHS	Stebnicka Huta	53.42	348	eP	P	14 24 55.7	+2.5
	comp=Z,2.4nm,1.2s,mb4.0						
AKASG	Malin Array Be	53.45	355	P	P	14 24 52.1	-1.3
	comp=Z,6.4nm,0.9s,mb4.5,baz=180,slow=6.1,SNR=21						
AKASG				LR	LR	14 51 30.4	
	comp=Z,67nm,18.1s,MS3.7,baz=210,slow=40						
SMRF	Simiane la Rot	53.88	333	eP	P	14 24 56.0	-0.7
	comp=Z,26nm,1.2s,mb4.7						
SMRF	Simiane la Rot	53.88	333	eP	P	14 24 56.0	-0.7
	comp=Z,26nm,1.2s,mb5.0						
MBDF	Montbardon	53.94	334	eP	P	14 24 57.3	+0.2
	comp=Z,21nm,1.1s,mb4.7						
MBDF	Montbardon	53.94	334	eP	P	14 24 57.3	+0.2
MBDF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
MBDF	Montbardon	53.94	334	eP	P	14 24 57.3	+0.2
	comp=Z,10nm,1.1s,mb4.7						
RJOB	Jochberg	54.16	341	eP	P	14 24 58.7	0.0
	comp=Z,8.0nm,1.2s,mb4.5						
BNI	Bardonecchia	54.24	335	eP	P	14 25 00.8	+1.5
BNI				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
BNI	Bardonecchia	54.24	335	eP	P	14 25 00.8	+1.5
	comp=Z,30nm,1.5s,mb5.0						
DAVOX	Davos/Dischmat	54.37	338	LR	LR	14 51 48.6	
	comp=Z,168nm,18.7s,MS4.1,baz=266,slow=40						
ORIF	Oris-en-Rattie	54.48	334	eP	P	14 25 00.9	-0.2
	comp=Z,13nm,1.1s,mb4.5						
ORIF				eMLR	MLR		
	comp=Z,322nm,21.5s,MS4.1						
ORIF	Oris-en-Rattie	54.48	334	eP	P	14 25 00.9	-0.2
ORIF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
ORIF	Oris-en-Rattie	54.48	334	eP	P	14 25 00.9	-0.2
	comp=Z,6.4nm,1.1s,mb4.5						
LPG	La Plagne	54.57	335	eP	P	14 25 01.0	-0.7
	comp=Z,24nm,1.1s,mb4.8						
LPG	La Plagne	54.57	335	eP	P	14 25 01.0	-0.7
LPG				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
LPG	La Plagne	54.57	335	eP	P	14 25 01.0	-0.7
	comp=Z,12nm,1.1s,mb4.8						
LPL	La Plagne	54.59	335	eP	P	14 25 01.0	-0.8
	comp=Z,19nm,1.1s,mb4.7						
LPL	La Plagne	54.59	335	eP	P	14 25 01.0	-0.8
LPL				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
LPL	La Plagne	54.59	335	eP	P	14 25 01.0	-0.8
	comp=Z,9.6nm,1.1s,mb4.7						
MORC	Moravsky Berou	54.61	345	eP	P	14 25 02.1	+0.2
TREC	Trest	54.73	344	AMS	AMS	14 53 20.0	
	comp=Z,200nm,16.7s						
LASF	Ste Croix	54.76	332	eP	P	14 25 03.1	+0.1
GEC2	GERESS Array S	54.85	342	eP	P	14 25 03.6	0.0
GEC2				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
GEC2	GERESS Array S	54.85	342	eP	P	14 25 03.6	0.0
	comp=Z,11nm,1.1s,mb4.8						
GERES	GERESS Array B	54.85	342	P	P	14 25 04.3	+0.6
	comp=Z,6.6nm,1.0s,mb4.6,baz=150,slow=6.2,SNR=23						
GERES				LR	LR	14 53 15.2	
	comp=Z,164nm,18.2s,MS4.1,baz=283,slow=41						
VIVF	Saint-Julien-l	54.97	333	eP	P	14 25 04.8	+0.2
	comp=Z,39nm,1.3s,mb5.0						
VIVF	Saint-Julien-l	54.97	333	eP	P	14 25 04.8	+0.2
VIVF				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
VIVF	Saint-Julien-l	54.97	333	eP	P	14 25 04.8	+0.2
	comp=Z,19nm,1.3s,mb5.0						
MTLF	Montolieu	55.00	330	eP	P	14 25 04.8	0.0
KHC	Kasperske Hory	55.14	342⇑	eP	P	14 25 05.4	-0.3
KHC	Kasperske Hory	55.14	342	eP	P	14 25 05.2	-0.5
KHC				AMS	AMS	14 52 40.0	
	comp=Z,200nm,16.3s						
WET	Wettzell	55.37	342	eP	P	14 25 07.1	-0.3
WET				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.6						
WET	Wettzell	55.37	342	eP	P	14 25 07.1	-0.3
	comp=Z,9.0nm,1.5s,mb4.6						
DPC	Dobruska-Polom	55.45	345	eP	P	14 25 05.8	-2.2
EPF	Esparros	55.73	329	eP	P	14 25 10.4	+0.3
CABF	La Chapelle	55.73	335	eP	P	14 25 09.3	-0.8
ESDC	Sonseca Array	55.90	323	P	P	14 25 12.0	+0.6
	comp=Z,1.7nm,0.8s,mb4.2,baz=116,slow=7.8,SNR=5.9						
ESDC				LR	LR	14 50 44.0	
	comp=Z,264nm,19.2s,MS4.3,baz=140,slow=38						
AKTO	Aktyubinsk	56.09	17	LR	LR	14 52 43.3	
	comp=Z,100nm,19.3s,MS3.9,baz=299,slow=40						
ETSF	Etsaut	56.11	328	eP	P	14 25 13.1	+0.3
	comp=Z,22nm,1.1s,mb4.8						
ETSF	Etsaut	56.11	328	eP	P	14 25 13.1	+0.3
ETSF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
ETSF	Etsaut	56.11	328	eP	P	14 25 13.1	+0.3
	comp=Z,11nm,1.1s,mb4.8						
ROTZ	Rotzenmuhle	56.13	342	eP	P	14 25 12.6	-0.2
	comp=Z,15nm,1.5s,mb4.8						
CAF	Calviac	56.24	331	eP	P	14 25 14.1	+0.4
BFO	Black Forest	56.24	338	eP	P	14 25 14.3	+0.6
BFO				pmax	pmax		
	comp=Z,16nm,1.6s,mb4.8						
BFO	Black Forest	56.24	338	eP	P	14 25 14.3	+0.6
	comp=Z,16nm,1.6s,mb4.8						
MANZ	Manzenberg	56.35	342	eP	P	14 25 14.2	-0.2
	comp=Z,10.0nm,1.4s,mb4.7						
GRA1	Grafenberg Arr	56.38	341	eP	P	14 25 14.5	-0.1
	comp=Z,11nm,1.1s,mb4.8						
GRF	Grafenberg Arr	56.38	341	eP	P	14 25 14.5	-0.1
GRF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
GRF	Grafenberg Arr	56.38	341	eP	P	14 25 14.5	-0.1
GRF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
GRF	Grafenberg Arr	56.38	341	eP	P	14 25 14.5	-0.1
	comp=Z,11nm,1.1s,mb4.8						
HINF	Hinteralfeld	56.39	337	eP	P	14 25 14.1	-0.6
GUNZ	Gunzen	56.61	342	eP	P	14 25 15.8	-0.5
	comp=Z,22nm,2.0s,mb4.8						
SJPF	Ste Jean	56.61	328	eP	P	14 25 16.8	+0.4
TANN	Tannenbergstha	56.62	342	eP	P	14 25 16.8	+0.5
	comp=Z,14nm,1.8s,mb4.7						
WERD	Werda	56.69	342	eP	P	14 25 17.3	+0.5
	comp=Z,20nm,1.6s,mb4.9						
CDF	Champ du Feu	56.71	337	eP	P	14 25 16.3	-0.7
	comp=Z,22nm,1.2s,mb4.8						
CDF	Champ du Feu	56.71	337	eP	P	14 25 16.3	-0.7
CDF				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
CDF	Champ du Feu	56.71	337	eP	P	14 25 16.3	-0.7
	comp=Z,11nm,1.2s,mb4.8						
SMF	Signal de Mont	56.72	334	eP	P	14 25 16.7	-0.4
	comp=Z,27nm,1.1s,mb4.9						
SMF	Signal de Mont	56.72	334	eP	P	14 25 16.7	-0.4
SMF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
SMF	Signal de Mont	56.72	334	eP	P	14 25 16.7	-0.4
	comp=Z,14nm,1.1s,mb4.9						
RJF	Les Rejaudoux	56.78	331	eP	P	14 25 17.9	+0.3
	comp=Z,36nm,1.2s,mb5.0						
RJF				eMLR	MLR		
	comp=Z,420nm,19.5s,MS4.2						
RJF	Les Rejaudoux	56.78	331	eP	P	14 25 17.9	+0.3
RJF				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.0						
RJF				MLR	MLR		
	comp=Z,420nm,19.5s,MS4.5						
RJF	Les Rejaudoux	56.78	331	eP	P	14 25 17.9	+0.3
	comp=Z,18nm,1.2s,mb5.0						
RJF				LR	LR		
	comp=Z,420nm,19.5s,MS4.5						
LFF	La Frestale	56.89	331	eP	P	14 25 18.6	+0.2
AVF	Avril sur Loir	57.05	334	eP	P	14 25 19.1	-0.4
	comp=Z,28nm,1.3s,mb4.8						
AVF	Avril sur Loir	57.05	334	eP	P	14 25 19.1	-0.4
AVF				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
AVF	Avril sur Loir	57.05	334	eP	P	14 25 19.1	-0.4
	comp=Z,14nm,1.3s,mb4.8						
BGF	Bois d'Agland	57.10	333	eP	P	14 25 19.8	0.0
TCF	Toulx Ste Croi	57.19	333	eP	P	14 25 21.0	+0.6
	comp=Z,53nm,1.1s,mb5.2						
TCF	Toulx Ste Croi	57.19	333	eP	P	14 25 21.0	+0.6
TCF				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
TCF	Toulx Ste Croi	57.19	333	eP	P	14 25 21.0	+0.6
	comp=Z,27nm,1.1s,mb5.2						
SSF	Saint Saulge	57.19	334	eP	P	14 25 19.8	-0.6
LOR	Lormes	57.20	334	eP	P	14 25 20.1	-0.4
	comp=Z,18nm,1.1s,mb4.7						
LOR				eMLR	MLR		
	comp=Z,206nm,17.5s,MS4.0						
LOR	Lormes	57.20	334	eP	P	14 25 20.1	-0.4
LOR				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
LOR				MLR	MLR		
	comp=Z,210nm,17.5s,MS4.3						
LOR	Lormes	57.20	334	eP	P	14 25 20.1	-0.4
	comp=Z,9.2nm,1.1s,mb4.7						
LOR				LR	LR		
	comp=Z,210nm,17.5s,MS4.3						
SUW	Suwalki	57.47	351	eP	P	14 25 23.0	+0.8
OBN	Obninsk	57.55	0	eP	P	14 25 22.2	-0.6
OBN				e		14 26 17.2	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
TKM2	Tokmak 2	57.61	34	eP	P	14 25 22.6	-0.9
TKM2				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
TKM2	Tokmak 2	57.61	34	eP	P	14 25 22.6	-0.8
	comp=Z,21nm,1.1s,mb5.1						
MEZF	Maizieres J'vi	57.66	336	eP	P	14 25 23.8	+0.1
EVO	Evora	57.74	320	eP	P	14 25 26.1	+1.6
	comp=Z,19nm,1.1s,mb4.8						
EVO				eMLR	MLR		
	comp=Z,296nm,21.0s,MS4.1						
UBBA	Unterbreizbach	57.75	341	eP	P	14 25 24.4	+0.1
	comp=Z,18nm,1.6s,mb4.8						
MFF	Saint Martin d	58.52	331	eP	P	14 25 29.9	+0.1
	comp=Z,37nm,1.3s,mb5.0						
MFF	Saint Martin d	58.52	331	eP	P	14 25 29.9	+0.1
MFF				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
MFF	Saint Martin d	58.52	331	eP	P	14 25 29.9	+0.1
	comp=Z,19nm,1.3s,mb5.0						
BCLA	Clavier	59.09	338	P	P	14 25 35.0	+1.3
DOU	Dourbes	59.11	337	P	P	14 25 34.6	+0.8
LDF	La Druitiere	59.96	333	eP	P	14 25 38.9	-0.8
	comp=Z,57nm,1.5s,mb5.1						
LDF	La Druitiere	59.96	333	eP	P	14 25 38.9	-0.8
LDF				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.1						
LDF	La Druitiere	59.96	333	eP	P	14 25 38.9	-0.8
	comp=Z,28nm,1.5s,mb5.1						
GRR	Gorron	60.15	332	eP	P	14 25 40.4	-0.6
QUIF	Quistinic	60.91	331	eP	P	14 25 45.9	-0.3
	comp=Z,94nm,1.8s,mb5.3						
QUIF	Quistinic	60.91	331	eP	P	14 25 45.9	-0.3
QUIF				pmax	pmax		
	comp=Z,47nm,1.8s,mb5.3						
QUIF	Quistinic	60.91	331	eP	P	14 25 45.9	-0.3
	comp=Z,47nm,1.8s,mb5.3						
ROSF	Rostrenen	61.25	331	eP	P	14 25 48.7	+0.2
ARU	Arti	61.63	14⇑	eP	P	14 25 50.6	-0.3
ARU				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.3						
ARU	Arti	61.63	14	eP	P	14 25 50.8	-0.2
BRVK	Borovoye	62.44	22	eP	P	14 25 55.6	-0.8
SVE	Sverdlovsk	62.50	15	eP	P	14 25 56.8	0.0
SVE				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
MK31	Makanchi Array	63.74	34	eP	P	14 26 04.3	-0.9
MKAR	Makanchi Array	63.74	34	P	P	14 26 04.4	-0.8
	comp=Z,15nm,1.0s,mb5.0,baz=232,slow=6.0,SNR=87						
MKAR				LR	LR	14 56 55.8	
	comp=Z,101nm,18.6s,MS4.0,baz=71,slow=39						
KURK	Kurchatov	64.33	28	LR	LR	14 54 45.0	
	comp=Z,50nm,19.5s,MS3.7,baz=195,slow=37						
KURK	Kurchatov	64.33	28⇑	eP	P	14 26 08.3	-0.7
KURK				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.1						
KURK	Kurchatov	64.33	28	eP	P	14 26 08.5	-0.5
	comp=Z,21nm,1.1s,mb5.1						
KAF	Kangasniemi	65.00	355	ep	P	14 26 10.2	-3.0
	comp=Z,15nm,1.0s,mb5.0,baz=167,slow=6.3						
KAF	Kangasniemi	65.00	355	eP	P	14 26 10.2	-3.0
KAF				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
CMAR	Chiang Mai Arr	65.22	68	P	P	14 26 15.7	+0.2
	comp=Z,12nm,1.1s,mb4.8,baz=257,slow=7.7,SNR=51						
CMAR				LR	LR	14 51 56.4	
	comp=Z,82nm,18.7s,MS4.0,baz=84,slow=34						
WMQ	Urumqi	65.28	39	P	P	14 26 15.5	+0.2
WMQ				AP	pP	14 26 20.0	+1.4
WMQ				XP	sP	14 26 22.5	+2.7
WMQ				PCP	PcP	14 26 48.0	+0.4
WMQ				PP	PP	14 28 40.0	+0.9
WMQ				eS	S	14 34 57.0	-2.1
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,182nm,3.9s						
WMQ				LR	LR		
	comp=N,178nm,26.4s						
WMQ				LR	LR		
	comp=E,108nm,20.2s						
WMQ				LR	LR		
	comp=Z,114nm,22.0s,MS4.0						
CHTO	Chiang Mai	65.29	68	eP	P	14 26 15.4	-0.5
CHTO				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
CHTO	Chiang Mai	65.29	68	eP	P	14 26 15.4	-0.5
	comp=Z,16nm,1.3s,mb4.9						
JOF	Joensuu	65.47	358	ep	P	14 26 14.7	-1.5
	comp=Z,4.5nm,0.7s,mb4.6						
SYO	Syowa Base	66.31	179⇑	eP	P	14 26 21.6	+0.1
SYO	Syowa Base	66.31	179⇓	epP	pP	14 26 23.8	-1.0
NOA	NORSAR Array B	66.35	347	LR	LR	15 00 09.0	
	comp=Z,52nm,20.6s,MS3.7,baz=170,slow=40						
MAW	Mawson	67.42	169	eP	P	14 26 29.7	+1.1
	comp=Z,3.7nm,0.8s,mb4.5						
MAW	Mawson	67.42	169	P	P	14 26 29.6	+1.0
	comp=Z,2.7nm,0.8s,mb4.3,baz=331,slow=8.5,SNR=6.0						
MAW				LR	LR	14 51 50.0	
	comp=Z,168nm,19.9s,MS4.3,baz=15,slow=32						
MAW	Mawson	67.42	169	eP	P	14 26 29.7	+1.1
MAW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NVS	Novosibirsk	69.13	27	eP	P	14 26 36.6	-2.9
ZAL	Zalesovo	69.30	28	P	P	14 26 39.8	-0.8
ZALV	Zalesovo Beam	69.32	28	P	P	14 26 39.8	-0.9
	comp=Z,11nm,1.0s,mb4.8,baz=245,slow=5.7,SNR=33						
KMI	Kunming	70.09	62	P	P	14 26 46.6	+0.5
KMI				AP	pP	14 26 50.4	+1.0
KMI				XP	sP	14 26 52.1	+1.5
KMI				PP	PP	14 29 26.7	+5.3
KMI				S	S	14 35 58.7	+1.2
KMI				XS	sS	14 36 06.9	+4.0
KMI				AMB	AMB		
	comp=Z,11nm,1.5s,mb4.6						
KMI				AMB	AMB		
	comp=Z,78nm,3.4s						
KMI				LR	LR		
	comp=N,64nm,27.2s						
KMI				LR	LR		
	comp=E,110nm,20.4s						
KMI				LR	LR		
	comp=Z,110nm,23.3s,MS4.0						

GTA	Gaotai	71.67	47	eP	P	14 26 54.7	-0.8
GTA				AP	pP	14 26 59.0	+0.3
GTA				XP	sP	14 27 02.2	+2.3
GTA				PP	PP	14 29 36.3	+1.6
GTA				S	S	14 36 14.5	-0.9
GTA				XS	sS	14 36 22.6	+1.8
GTA				SS	SS	14 40 52.1	+1.0
GTA				AMB	AMB		
	comp=Z,9.0nm,2.0s,mb4.3						
GTA				AMB	AMB		
	comp=Z,98nm,8.1s						
GTA				LR	LR		
	comp=N,63nm,16.2s,MS4.2						
GTA				LR	LR		
	comp=E,73nm,16.5s,MS4.2						
GTA				LR	LR		
	comp=Z,71nm,16.5s,MS4.0						
CD2	Chengdu	72.32	57	eP	P	14 27 00.6	+1.1
CD2				AP	pP	14 27 05.2	+2.4
CD2				XP	sP	14 27 07.8	+3.8
CD2				PP	PP	14 29 44.0	+3.6
CD2				S	S	14 36 22.5	-0.6
CD2				XS	sS	14 36 30.2	+1.7
CD2				SS	SS	14 41 03.2	+1.8
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				LR	LR		
	comp=N,160nm,12.4s,MS4.6						
CD2				LR	LR		
	comp=E,180nm,14.2s,MS4.6						
CD2				LR	LR		
	comp=Z,140nm,15.2s,MS4.3						
ARCES	ARCESS Array B	72.38	356	P	P	14 26 58.9	-0.2
	comp=Z,6.8nm,0.9s,mb4.6,baz=176,slow=8.0,SNR=14						
ARCES				LR	LR	15 05 17.5	
	comp=Z,68nm,19.2s,MS3.9,baz=26,slow=41						
SNAA	Sanae	73.21	192	eP	P	14 27 06.6	+2.6
SNAA				e		14 27 16.3	
SNAA	Sanae	73.21	192⇑	eP	P	14 27 06.5	+2.5
VNA2	Neumayer--Watz	73.67	194	eP	P	14 27 09.6	+2.8
VNA2				e		14 27 14.9	
VNA1	Neumayer--Stat	73.69	194	eP	P	14 27 10.0	+3.1
VNA1				e		14 27 15.7	
LZH	Lanzhou	73.72	51	eP	P	14 27 08.2	+0.5
LZH				AP	pP	14 27 14.7	+3.7
LZH				XP	sP	14 27 18.5	+6.3
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,140nm,4.1s						
GYA	Guiyang	73.83	62⇑	iP	P	14 27 08.3	-0.3
GYA				PCP	PcP	14 27 26.0	+1.9
GYA				PP	PP	14 29 57.0	+3.6
GYA				S	S	14 36 44.2	+3.7
GYA				SKS		14 37 12.6	
GYA				PS		14 37 16.8	
GYA				SS	SS	14 41 27.4	+2.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,4.6s						
GYA				LR	LR		
	comp=N,200nm,18.2s,MS4.5						
GYA				LR	LR		
	comp=E,150nm,19.0s,MS4.5						
GYA				LR	LR		
	comp=Z,280nm,18.8s,MS4.6						
VNA3	Neumayer Olymp	74.43	194	eP	P	14 27 13.4	+2.2
VNA3				e		14 27 19.3	
QIZ	Qiongzhong	75.49	70	P	P	14 27 18.7	+0.4
QIZ				S	S	14 37 05.4	+6.1
QIZ				LR	LR		
	comp=E,50nm,25.1s						
QIZ				LR	LR		
	comp=Z,58nm,26.1s,MS3.8						
ZAK	Zakamensk	77.67	37	eP	P	14 27 30.2	+0.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
TLY	Talaya	78.32	36	eP	P	14 27 34.9	+1.3
TLY				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.3						
TLY				MLR	MLR		
	comp=Z,84nm,18.0s,MS4.1						
SONM	Songino Array	78.83	40	P	P	14 27 37.8	+1.3
	comp=Z,4.1nm,1.0s,mb4.3,baz=244,slow=4.7,SNR=22						
BORG	Borgarnes	79.09	338	LR	LR	15 02 34.6	
	comp=Z,88nm,21.5s,MS4.1,baz=167,slow=36						
ULN	Ulaanbaatar	79.26	40	eP	P	14 27 39.4	+0.5
HHC	Hu-ho-hao-te	80.73	48	eP	P	14 27 46.3	-0.7
HHC				AP	pP	14 27 49.4	-0.9
HHC				XP	sP	14 27 52.0	+0.5
HHC				PP	PP	14 30 52.4	+1.4
HHC				S	S	14 37 53.0	-2.0
HHC				SKS		14 38 00.2	
HHC				SS	SS	14 43 10.0	+1.7
HHC				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,219nm,6.4s						
HHC				LR	LR		
	comp=N,146nm,18.1s,MS4.5						
HHC				LR	LR		
	comp=E,144nm,18.0s,MS4.5						
HHC				LR	LR		
	comp=Z,100nm,17.9s,MS4.2						
KAPI	Kappang	83.41	95	LR	LR	15 00 38.4	
	comp=Z,208nm,20.1s,MS4.5,baz=186,slow=32						
BDFB	Brasilia	83.68	255	LR	LR	15 02 44.0	
	comp=Z,111nm,18.2s,MS4.3,baz=278,slow=34						
BJI	Beijing	84.05	49	P	P	14 28 04.8	+0.4
BJI				PP	PP	14 31 16.6	-1.8
BJI				S	S	14 38 30.4	+1.3
BJI				SS	SS	14 43 59.5	+1.8
BJI				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.9						
BJI				LR	LR		
	comp=Z,63nm,31.5s,MS3.8						
NJ2	Nanjing	85.20	58	eP	P	14 28 11.2	+0.8
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.5						
FITZ	Fitzroy Crossi	88.71	108	LR	LR	15 01 03.9	
	comp=Z,180nm,21.7s,MS4.5,baz=301,slow=31						
FITZ	Fitzroy Crossi	88.71	108	eP	P	14 28 28.6	+0.9
DAV	Davao City (W)	89.75	83	LR	LR	15 07 29.0	
	comp=Z,89nm,21.2s,MS4.2,baz=228,slow=35						
CN2	Changchun	91.29	46	eP	P	14 28 39.2	0.0
CN2				eS	S	14 39 35.3	-3.0
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
CN2				AMB	AMB		
	comp=Z,300nm,5.0s						
CPUP	Villa Florida	91.96	244	P	P	14 28 44.6	+1.8
	comp=Z,1.3nm,0.8s,mb4.3,baz=135,slow=5.7,SNR=3.6						
CPUP				LR	LR	15 08 38.5	
	comp=Z,106nm,19.0s,MS4.3,baz=271,slow=35						
KSRS	Korea Array	92.99	53	LR	LR	15 11 16.6	
	comp=Z,55nm,18.1s,MS4.0,baz=264,slow=36						
JOW	Kunigami	93.07	63	LR	LR	15 11 38.5	
	comp=Z,68nm,19.6s,MS4.1,baz=241,slow=36						
MDJ	Mudanjiang	94.29	46	P	P	14 28 53.0	0.0
MDJ				XP	sP	14 28 57.8	+0.2
MDJ				S	S	14 40 05.1	+0.3
MDJ				SS	SS	14 46 24.3	-1.8
MDJ				AMB	AMB		
	comp=Z,15nm,1.5s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,116nm,3.8s						
MDJ				LR	LR		
	comp=N,53nm,26.8s,MS3.9						
MDJ				LR	LR		
	comp=E,31nm,26.8s,MS3.9						
MDJ				LR	LR		
	comp=Z,51nm,22.7s,MS3.9						
TRQA	Tornquist	94.79	232	eP	P	14 28 59.1	+3.5
	comp=Z,6.5nm,1.1s,mb5.0						
ASAR	Alice Springs	96.05	114	P	P	14 29 00.3	-1.3
	comp=Z,0.6nm,1.0s,mb4.0,baz=278,slow=4.5,SNR=4.4						
WRA	Warramunga Arr	96.80	110	P	P	14 29 04.6	-0.5
	comp=Z,1.7nm,0.9s,mb4.5,baz=268,slow=2.7,SNR=14						
WRA				LR	LR	15 08 10.2	
	comp=Z,205nm,19.0s,MS4.6,baz=285,slow=33						
SCHQ	Schefferville	99.61	325	LR	LR	15 16 08.0	
	comp=Z,109nm,19.9s,MS4.4,baz=94,slow=36						
LVC	Limon Verde	102.85	246	ePdif	Pdif	14 29 31.4	+0.1
MDV	Middlebury	105.67	315	ePKPdf	PKiKP	14 33 55.6	-1.6
EIDS	Eidsvold	111.20	118	ePdif	Pdif	14 30 14.3	+5.9
EGMT	Eagleton	126.09	332	ePKPdf	PKPdf	14 34 37.5	+1.5
WMOK	Wichita Mounta	127.36	313	ePKIKP	PKPdf	14 34 40.0	+1.1
BOZ	Bozeman (W)	128.71	331	ePKIKP	PKPdf	14 34 42.0	+0.9
PDAR	Pinedale Array	129.69	327	PKP	PKPdf	14 34 43.9	+0.8
	comp=Z,1.1nm,0.9s,baz=105,slow=3.5,SNR=6.6						
TXAR	Lajitas Array	133.52	309	PKhKP		14 34 48.0	
	comp=Z,0.3nm,0.7s,baz=27,slow=4.2,SNR=2.6						
TXAR				PKP	PKPdf	14 34 52.1	+1.4
	comp=Z,0.2nm,0.7s,baz=96,slow=2.5,SNR=4.2						
TXAR	Lajitas Array	133.52	309	PKP	PKPdf	14 34 48.0	-2.7
TXAR				PKP	PKPdf	14 34 52.1	+1.4
NVAR	Mina Array Bea	137.40	330	PKhKP		14 34 51.4	
	comp=Z,0.3nm,0.6s,baz=188,slow=1.0,SNR=3.8						
NVAR				PKP	PKPdf	14 34 58.5	+0.8
	comp=Z,2.3nm,1.0s,baz=93,slow=1.2,SNR=11						

ISCJB ***08*** *14:38:27.5±1.9, 58S±0.1×1482E±02, h86km±20km, mb4.0/5, Error ellipse: s-maj=37.9km s-min=12.4km az=28.8*
IDC ***08*** *14:38:29.4±4.4, 588S×14828E, h90km±34km, mb3.7/5, mb1 3.9/6, mb1mx3.6/15, mbtmp3.8/6, MS3.7/2, Ms1 3.7/2, ms1mx2.9/22, Error ellipse: s-maj=68.7km s-min=14.5km az=115.0*
NEIC ***08*** *14:38:29.2±2.3, 585S×14820E, h89km±24km, mb4.2/3, Error ellipse: s-maj=35.3km s-min=15.8km az=132.0*
ISC 08 14:38:31.4±1.6**, 60S**±01×**1482E**±02**, h109**km±19km**, n15, σ0s84**/15**, mb4.0**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.56	197	ePn	Pn	14 39 23.6	-1.3
PMG				eSn	Sn	14 40 06.4	+0.2
CTA	Charters Tower	14.15	187	LR	LR	14 47 15.4	
	comp=Z,63nm,19.4s,baz=235,slow=37						
KAKA	Kakadu	16.92	246	eP	Pn	14 42 21.7	+0.1
	5.5nm,0.4s						
WRAB	Tennant Creek	19.32	223	eP	P	14 42 48.6	+0.4
	12nm,0.8s						
WB2	Warramunga Arr	19.33	223	eP	P	14 42 49.0	+0.7
WRA	Warramunga Arr	19.34	223	P	P	14 42 49.1	+0.7
	1.4nm,0.3s,baz=48,slow=11,SNR=110						
WRA				S	S	14 46 20.1	-1.4
	0.1nm,0.3s,baz=40,slow=20,SNR=3.8						
ASAR	Alice Springs	22.32	217	P	P	14 43 20.9	+0.5
	4.0nm,0.4s,mb4.1,baz=52,slow=8.8,SNR=170						
ASAR				pP		14 43 37.9	
	5.9nm,0.8s,baz=47,slow=11,SNR=11						
ASAR				PcP	PcP	14 47 11.8	-0.2
	0.8nm,0.8s,baz=140,slow=2.9,SNR=5.1						
ASAR				S	S	14 47 23.0	+4.8
	2.6nm,1.0s,baz=26,slow=22,SNR=11						
FITZ	Fitzroy Crossi	25.09	239	eP	P	14 43 47.4	+1.2
	17nm,1.0s,mb4.4						
FITZ				e	pP	14 44 09.0	-0.9
FITZ	Fitzroy Crossi	25.09	239	P	P	14 43 47.6	+1.5
	4.4nm,0.4s,mb4.3,baz=60,slow=11,SNR=34						
FITZ				pP	pP	14 44 09.5	-0.4
	5.5nm,0.6s,baz=78,slow=11,SNR=4.8						
CBIJ	Chichi jima	33.39	350	LR	LR	14 55 38.7	
	comp=Z,620nm,21.8s,baz=141,slow=31						
KSRS	Korea Array	47.17	338	P	P	14 46 52.8	-0.2
	1.1nm,0.7s,mb3.7,baz=155,slow=9.4,SNR=5.1						
PETK	Petropavlovsk-	59.41	7	P	P	14 48 22.4	+0.1
	1.5nm,0.6s,mb4.2,baz=136,slow=6.8,SNR=8.5						
MKAR	Makanchi Array	78.24	320	P	P	14 50 17.6	-1.5
	0.2nm,0.2s,mb3.4,baz=97,slow=8.8,SNR=2.1						
DAWY	Dawson	87.75	25	eP	P	14 51 07.9	+0.1
TORD	Torodi Ar. Bea	146.23	285	PKPbc	PKPbc	14 57 59.6	-0.7
	0.5nm,0.5s,baz=64,slow=3.5,SNR=9.0						

ISK ***08*** *14:42:49.7, 3909N×2907E, h9km, MD2.9*
CSEM ***08*** *14:42:49.7±0.1, 3909N×2904E, h8km, MD2.8, Error ellipse: s-maj=2.7km s-min=2.1km az=162.0*
ISCJB ***08*** *14:42:50.2±0.4, 3910N±004×2905E±003, h10km, Error ellipse: s-maj=5.5km s-min=3.2km az=174.2*
DDA ***08*** *14:42:50.1, 3909N×2904E, h7km±2km, Md2.8*
ISC 08 14:42:50.3±0.5**, 3914N**±004×**2905E**±003**, h2**km±8km**, n16, σ0s58**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	Demirci	0.28	250	iP	Pg	14 42 56.0	+0.3
DEMI				iS	Sg	14 42 59.8	+0.6
GDZ	Gediz	0.34	98	iP	Pg	14 42 57.3	+0.5
GDZ				iS	Sg	14 43 01.1	-0.2
KULA	Kula-Manisa	0.69	206	ePG	Pg	14 43 03.1	-0.4
KULA				eSG	Sg	14 43 11.8	-0.8
ALT	Altintas	0.83	95	ePG	Pg	14 43 06.4	+0.2
ALT				eSG	Sg	14 43 16.1	-0.9
AKHS	Akhisar	1.00	255	iP	Pg	14 43 09.3	-0.1
AKHS				iS	Sg	14 43 23.1	+0.8
AKS	Akhisar	1.00	255	ePG	Pg	14 43 09.8	+0.3
BTOK	Tokmak	1.00	309	iP	Pg	14 43 09.6	0.0
BTOK				iS	Sg	14 43 21.8	-0.8
BALB	Balikesir	1.04	299	ePG	Pg	14 43 10.5	+0.3
KCT	Karacabey	1.25	335	ePN	Pn	14 43 13.7	-1.0
BALY	Balya	1.26	299	iP	Pg	14 43 14.3	-0.2
BALY				iP		14 43 30.7	
GEMT	Gemlik	1.30	5	ePN	Pn	14 43 15.4	-0.1
SHUT	Suhut-Afyon	1.31	116	ePN	Pn	14 43 15.2	-0.5
ADVT	Abdulvahap	1.40	22	ePN	Pn	14 43 16.6	-0.3
ESKT	Eskisehir	1.45	74	iP	Pn	14 43 18.0	+0.4
ESKT				iS	Sb	14 43 38.3	+1.4
SEYT	Eskypehyr	1.45	74	iP	Pn	14 43 18.0	+0.5
SEYT				iS	Sb	14 43 38.3	+1.4
YLV	Yalova	1.45	10	ePN	Pn	14 43 17.8	+0.3

IDC ***08*** *14:59:14.7±1.0, 1791N×12256E, h0km, mb3.4/7, mb1 3.7/8, mb1mx3.6/19, mbtmp3.6/8, ML3.5/1, Error ellipse: s-maj=27.5km s-min=18.6km az=83.0*
BJI ***08*** *14:59:16.4, 1800N×12260E, h20km, mb4.0*
ISCJB ***08*** *14:59:18.8±1.2, 1801N±006×12265E±009, h47km±14km, mb3.5/6, Error ellipse: s-maj=14.7km s-min=10.0km az=12.2*
NEIC ***08*** *14:59:19.5±0.6, 1795N×12260E, h35km, Error ellipse: s-maj=14.2km s-min=11.4km az=97.0*
ISC 08 14:59:19.7±0.9**, 1804N**±005×**12265E**±008**, h35**km±13km**, n15, σ0s97**/18**, mb3.5**/6**, 2C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	1.00	192⇓	eP	Pn	14 59 36.7	-0.5
PALP				eS	Sn	14 59 52.4	+2.3
BCPH	Baguio City Da	2.57	230⇑	iP	Pn	14 59 59.1	+0.2
BCPH				iS	Sn	15 00 28.1	-0.9
PCPH	Palayan	2.88	211⇑	eP	Pn	15 00 02.9	-0.2
GQP	Guinayangan	4.12	183⇓	eP	Sn	15 01 06.9	-0.3
JOW	Kunigami	10.18	30	Pn	Pn	15 01 43.9	+0.5
	1.0nm,0.3s,baz=246,slow=10.0,SNR=8.3						
JOW				Sn	Sn	15 03 33.8	-2.5
	0.3nm,0.3s,baz=308,slow=19,SNR=3.1						
KSRS	Korea Array	19.89	12	P	Pn	15 03 49.8	0.0
	2.0nm,1.0s,baz=194,slow=11,SNR=4.7						
XAN	Xi'an	20.11	325	P	P	15 03 51.0	+0.5
XAN				AP		15 03 59.1	
XAN				AMB	AMB		
	comp=Z,5.0nm,1.2s						
CMAR	Chiang Mai Arr	22.51	275	P	P	15 04 16.1	-0.4
	comp=Z,2.2nm,1.1s,mb3.5,baz=75,slow=9.2,SNR=15						
MJAR	Matsushiro Arr	22.98	34	P	P	15 04 23.2	+1.9
	comp=Z,0.6nm,0.7s,mb3.1,baz=206,slow=7.2,SNR=3.5						
SONM	Songino Array	32.55	339	P	P	15 05 47.9	+0.4
	comp=Z,0.3nm,0.5s,mb3.4,baz=156,slow=11,SNR=3.4						
SONM	Songino Array	32.55	339	P	P	15 05 47.9	+0.4
WRA	Warramunga Arr	39.45	163	P	P	15 06 45.5	-1.2
	comp=Z,1.9nm,1.1s,mb3.8,baz=344,slow=9.3,SNR=5.8						
ASAR	Alice Springs	42.89	165	P	P	15 07 14.4	-0.4
	comp=Z,0.9nm,0.8s,mb3.5,baz=334,slow=5.8,SNR=9.5						
MK31	Makanchi Array	43.80	320	eP	P	15 07 22.2	+0.1
MKAR	Makanchi Array	43.80	320	P	P	15 07 22.1	0.0
	comp=Z,0.2nm,0.2s,mb3.4,baz=97,slow=9.9,SNR=4.6						

IDC ***08*** *15:13:02.2±3.4, 022S×15013E, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.8/16, mbtmp3.9/5, Error ellipse: s-maj=97.5km s-min=28.0km az=96.0*
NEIC ***08*** *15:13:04.9±3.0, 024S×15066E, h35km, mb4.3/2, Error ellipse: s-maj=92.1km s-min=21.4km az=96.0*
ISC 08 15:13:11.8±4.3**, 03S**±02×**1494E**±08**, h35**km**, n9, σ0s62**/8**, mb3.9**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	24.48	216	eP	P	15 18 27.8	-0.1
	13nm,0.8s,mb4.4						
WB2	Warramunga Arr	24.49	216	eP	P	15 18 28.2	+0.3
WRA	Warramunga Arr	24.49	216	P	P	15 18 28.5	+0.6
	7.6nm,0.7s,mb4.3,baz=38,slow=11,SNR=91						
ASAR	Alice Springs	27.70	212	P	P	15 18 56.9	0.0
	1.2nm,0.4s,mb3.9,baz=40,slow=7.5,SNR=20						
FITZ	Fitzroy Crossi	29.32	232	eP	P	15 19 10.2	-1.2
	1.8nm,0.6s,mb4.0						
FITZ	Fitzroy Crossi	29.32	232	P	P	15 19 10.2	-1.2
	0.9nm,0.6s,mb3.7,baz=71,slow=12,SNR=5.8						
CMAR	Chiang Mai Arr	52.94	293	P	P	15 22 25.9	+0.8
	0.5nm,0.6s,mb3.6,baz=110,slow=5.5,SNR=6.5						
MKAR	Makanchi Array	74.71	319	P	P	15 24 47.6	-0.5
	0.2nm,0.2s,mb3.6,baz=95,slow=7.2,SNR=4.9						
TORD	Torodi Ar. Bea	145.55	293	PKPbc	PKPbc	15 32 43.1	-4.6
	0.3nm,0.6s,baz=48,slow=1.8,SNR=3.4						

IDC 08 15:20:05.7±5.5**, 2969S**×**17653W, h65**km±33km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/15**, mbtmp3.4**/3**, Error ellipse: s-maj=48.1km s-min=41.8km az=116.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.29	289	P	Pn	15 20 27.6	-0.1
	279nm,0.3s,baz=102,slow=18,SNR=7.8						
RAO				S	Sn	15 20 44.1	0.0
	373nm,0.3s,baz=112,slow=24,SNR=10.0						
STKA	Stephens Creek	35.88	256	P	P	15 26 59.1	-0.3
	1.8nm,0.7s,baz=80,slow=11,SNR=2.1						
ASAR	Alice Springs	44.43	266	P	P	15 28 10.4	+0.2
	0.2nm,0.5s,baz=103,slow=6.7,SNR=4.2						
WRA	Warramunga Arr	45.36	271	P	P	15 28 17.7	0.0
	0.4nm,0.4s,baz=110,slow=8.1,SNR=10.0						

ISCJB ***08*** *15:41:12.3±2.0, 1034N±007×8636W±008, h1km±14km, mb3.9/4, Error ellipse: s-maj=16.0km s-min=7.8km az=138.2*
IDC ***08*** *15:41:14.8±1.5, 1070N×8606W, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.7/22, mbtmp3.8/4, ML3.0/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/33, Error ellipse: s-maj=57.8km s-min=16.0km az=30.0*
CASC ***08*** *15:41:14.3±2.0, 1029N×8634W, h10km, MD4.0, ML3.1, mb4.3(NEIC)*
NEIC ***08*** *15:41:15.8±1.2, 1065N×8601W, h10km, mb4.3/2, Error ellipse: s-maj=31.9km s-min=10.5km az=211.0*
ISC 08 15:41:15.6±1.7**, 1044N**±007×**8619W**±008**, h13**km±11km**, n33, σ1s04**/27**, mb3.8**/4**, 6C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	Vista de Mar	0.63	120	eP	Pg	15 41 28.2	+0.3
SSN	San Juan del S	0.92	21⇑	eP	Pb	15 41 33.9	+0.5
CUI		1.02	77⇑	iP	Pb	15 41 35.6	+0.5
MADN	Villa Maderas	1.16	34⇑	iP	Pb	15 41 38.2	+0.7
JCR	Jicaral	1.21	119	eP	Pn	15 41 36.7	-1.6
JTS	JuntasAbangare	1.23	97	Pg	Pg	15 41 37.7	-1.5
	27nm,0.3s,baz=292,slow=13,SNR=44						
JTS				Lg		15 41 58.1	
	66nm,0.3s,baz=0.0,slow=20,SNR=12						
JTS	JuntasAbangare	1.23	97	Pg	Pg	15 41 37.7	-1.5
JTS				Lg		15 41 58.1	
CONN	Concepcion	1.25	26⇑	eP	Pn	15 41 39.5	+0.7
MGAN	Managua	1.69	358	eS	Sn	15 42 12.2	+5.6
MGAN				AML	AML	15 42 20.5	
	comp=E,190nm,0.4s						
CGA2	Cerro Gallo 2	1.75	104	eP	Pn	15 41 45.9	+0.3
COPN	Copaltepe	1.77	347⇓	eP	Pn	15 41 45.5	-0.5
APYN	Apoyeque	1.79	355⇑	eP	Pn	15 41 46.3	+0.1
PRS1	Puriscal	1.90	104	eP	Pn	15 41 47.8	0.0
MOMN	Momotombo	1.98	350	eP	Pn	15 41 48.9	-0.1
QCR	Quepos	2.24	117	eP	Pn	15 41 54.2	+1.8
LCR2	La Lucha 2	2.26	108	eP	Pn	15 41 54.0	+1.3
BUS	Buena Vista	2.55	110	eP	Pn	15 41 57.3	+0.6
TGUH	Tegucigalpa,Un	3.75	344	ePn	Pn	15 42 12.9	-0.3
TEIG	Tepich	9.93	349	LR	LR	15 47 37.9	
	comp=E,95nm,19.0s,baz=348,slow=40						
CMIG	Matias Romero	10.72	309	Pn	Pn	15 43 49.7	+0.8
	comp=E,0.1nm,0.3s,baz=122,slow=9.5,SNR=3.4						
CMIG	Matias Romero	10.72	309	Pn	Pn	15 43 49.7	+0.7
CHI2		13.62	114	eP	Px	15 41 56.0	
LAPE	La Pedrera	14.71	100⇑	iP	Px	15 41 32.3	
SDV	Santo Domingo	15.41	94	Pn	Pn	15 44 50.6	-2.4
	comp=E,9.8nm,0.4s						
ATAH	Atahualpa	18.99	156	LR	LR	15 51 36.6	
	comp=E,73nm,21.8s,baz=37,slow=32						
JSC	Jenkinsville	24.15	10	eP	P	15 46 30.7	-0.8
TXAR	Lajitas Array	24.90	321	P	P	15 46 38.5	+0.1
	comp=E,1.1nm,0.8s,mb3.5,baz=136,slow=10,SNR=15						
TXAR				PcP	PcP	15 50 14.6	+0.5
	comp=E,0.2nm,0.8s,baz=122,slow=3.3,SNR=3.2						
TKL	Tuckaleechee C	25.20	5	P	P	15 46 39.8	-1.2
	comp=E,2.1nm,0.5s,mb3.9,baz=188,slow=13,SNR=3.4						
WMOK	Wichita Mounta	26.78	337	eP	P	15 46 55.5	+0.2
	comp=E,4.9nm,1.0s,mb4.0						
TMUT	Trail Mountain	36.37	326	eP	P	15 48 17.1	-2.4
NVAR	Mina Array Bea	40.02	320	P	P	15 48 52.1	+1.7
	comp=E,1.1nm,0.8s,mb3.6,baz=144,slow=7.8,SNR=9.5						
NVAR				PcP	PcP	15 50 57.0	+1.7
	comp=E,0.3nm,0.7s,baz=114,slow=4.0,SNR=3.5						
WRA	Warramunga Arr	139.86	251	PKP	PKPdf	16 00 47.6	+3.1
	comp=E,0.4nm,0.8s,baz=94,slow=3.0,SNR=4.0						
CMAR	Chiang Mai Arr	150.84	350	PKPbc	PKPbc	16 01 07.5	-1.4
	comp=E,0.5nm,0.8s,baz=335,slow=3.3,SNR=5.3						

BJI ***08*** *15:55:31.5, 1170S×16580E, h10km, mb4.5*
ISCJB ***08*** *15:55:33.7±4.8, 1180S±0.10×16559E±008, h15km±30km, mb4.3/16, MS3.4/3, Error ellipse: s-maj=17.9km s-min=12.1km az=30.3*
IDC ***08*** *15:55:33.1±0.8, 1167S×16566E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.2/19, mbtmp4.2/13, ML4.4/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/29, Error ellipse: s-maj=22.7km s-min=20.8km az=120.0*
NEIC ***08*** *15:55:33.6±0.6, 1167S×16581E, h10km, mb4.4/6, Error ellipse: s-maj=13.7km s-min=10.9km az=88.0*
ISC 08 15:55:36.6±4.9**, 118S**±01×**16564E**±010**, h23**km±34km**, n37, σ0s94**/27**, mb4.3**/16**, MS3.4**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.06	292	Pn	Pn	15 57 05.5	+0.7
	9.7nm,0.3s,baz=2.6,slow=5.3,SNR=12						
HNR				Sn	Sn	15 58 13.4	-0.1
	8.5nm,0.3s,baz=270,slow=20,SNR=4.0						
DZM	Mont Dzumac	10.28	176	eP	Pn	15 58 02.0	-0.7
DZM	Mont Dzumac	10.28	176	ePn	Pn	15 58 01.8	-1.0
CTA	Charters Tower	20.38	244	P	P	16 00 13.9	+2.0
	3.9nm,0.6s,baz=71,slow=11,SNR=4.8						
CTAO	Charters Tower	20.38	244	eP	P	16 00 12.3	+0.4
	3.2nm,0.4s						
AFI	Afiamalu	22.12	98	LR	LR	16 07 34.8	
	comp=Z,117nm,18.6s,MS3.3,baz=243,slow=33						
STKA	Stephens Creek	29.86	224	P	P	16 01 45.8	+3.4
	1.5nm,0.6s,mb3.9,baz=42,slow=9.9,SNR=3.8						
STKA	Stephens Creek	29.86	224	P	P	16 01 45.5	+3.2
	3.6nm,0.8s,mb4.2						
WB2	Warramunga Arr	31.14	251	eP	P	16 01 53.1	-0.7
WRA	Warramunga Arr	31.15	251	P	P	16 01 53.9	0.0
	2.1nm,0.6s,mb4.1,baz=82,slow=9.0,SNR=26						
RPZ	Rata Peaks	32.18	173	P	P	16 02 02.9	+0.3
	20nm,0.8s,mb5.0,baz=184,slow=2.8,SNR=11						
ASAR	Alice Springs	32.39	244	P	P	16 02 04.2	-0.6
	2.6nm,0.7s,mb4.2,baz=69,slow=9.3,SNR=38						
ASAR				PcP	PcP	16 04 52.0	-0.1
	0.6nm,0.8s,baz=38,slow=3.5,SNR=4.2						
KAKA	Kakadu	32.45	265	eP	P	16 02 04.7	-0.7
	5.8nm,0.5s,mb4.7						
FITZ	Fitzroy Crossi	39.10	256	eP	P	16 03 02.5	+0.1
	6.6nm,1.0s,mb4.3						
FITZ	Fitzroy Crossi	39.10	256	P	P	16 03 02.6	+0.1
	3.5nm,1.0s,mb4.0,baz=118,slow=9.6,SNR=6.0						
FITZ				LR	LR	16 17 46.0	
	comp=Z,37nm,20.4s,MS3.2,baz=67,slow=34						
PPT	Papeete	43.63	103	eLR	LR	16 16 21.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	43nm,22.8s						
PPT	Papeete	43.63	103	LR	LR	16 15 55.6	
	comp=Z,66nm,21.4s,MS3.5,baz=245,slow=28						
MJAR	Matsushiro Arr	54.56	333	P	P	16 05 01.6	-1.4
	1.0nm,0.7s,mb4.0,baz=168,slow=10.0,SNR=6.1						
KSRS	Korea Array	60.41	326	P	P	16 05 43.4	-0.8
	0.8nm,0.7s,mb3.8,baz=141,slow=5.0,SNR=4.3						
CMAR	Chiang Mai Arr	72.31	294	P	P	16 07 02.0	+1.2
	1.7nm,0.9s,mb4.0,baz=123,slow=4.2,SNR=12						
ULN	Ulaanbaatar	78.82	324	eP	P	16 07 38.1	+0.5
	3.5nm,0.8s,mb4.3						
ULN				ePcP	PcP	16 07 47.7	+1.4
SONM	Songino Array	79.18	324	P	P	16 07 39.7	+0.1
	1.7nm,0.8s,mb4.0,baz=138,slow=5.5,SNR=8.3						
GTA	Gaotai	79.48	314	eP	P	16 07 42.7	+1.3
GTA				AP	pP	16 07 48.2	-0.8
GTA				XP	sP	16 07 51.1	-0.7
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.4						
MK31	Makanchi Array	93.97	317	eP	P	16 08 52.1	-0.5
MKAR	Makanchi Array	93.97	317	P	P	16 08 52.3	-0.3
	comp=Z,2.1nm,0.9s,mb4.5,baz=99,slow=5.7,SNR=11						
ZALV	Zalesovo Beam	94.07	324	P	P	16 08 51.4	-1.5
	comp=Z,0.6nm,0.3s,mb4.5,baz=126,slow=2.6,SNR=5.1						
ZALV	Zalesovo Beam	94.07	324	P	P	16 08 51.4	-1.5
TXAR	Lajitas Array	96.26	61	P	P	16 09 05.3	+1.8
	comp=Z,0.2nm,0.8s,mb3.6,baz=283,slow=8.0,SNR=2.1						
SNAA	Sanae	96.40	184	eP	P	16 09 03.0	-0.3
	comp=Z,5.5nm,1.5s,mb4.8						
ARCES	ARCESS Array B	117.00	345	PKP	PKPdf	16 14 17.5	-1.4
	comp=Z,0.5nm,0.5s,baz=117,slow=1.4,SNR=6.1						
LPG	La Plagne	141.86	336	ePKP1	PKPdf	16 15 02.5	-4.1
ORIF	Oris-en-Rattie	142.69	336	ePKP1	PKPdf	16 15 03.5	-4.6
	comp=Z,6.4nm,0.7s						
LASF	Ste Croix	144.18	337	ePKP1	PKPdf	16 15 08.7	-2.0
	comp=Z,17nm,1.0s						
MTLF	Montolieu	145.41	338	ePKP1	PKPbc	16 15 11.6	-1.2
	comp=Z,8.4nm,0.7s						
KEST	Kesra	147.92	322	PKPbc	PKPbc	16 15 20.9	+0.5
	comp=Z,2.0nm,0.9s,baz=56,slow=3.7,SNR=5.7						
ESDC	Sonseca Array	150.71	343	PKPbc	PKPbc	16 15 26.5	-0.7
	comp=Z,0.4nm,0.5s,baz=6.9,slow=4.3,SNR=3.1						
TORD	Torodi Ar. Bea	164.26	277	PKP	PKPdf	16 15 40.0	+0.8
	comp=Z,0.4nm,0.7s,baz=19,slow=3.5,SNR=3.2						
TORD				PKPab	PKPab	16 16 35.7	+2.4
	comp=Z,0.5nm,1.0s,baz=103,slow=4.6,SNR=2.5						

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*ISCJB **08** 16:18:20.3±1.6, 9.21S±0.08×127.53E±0.08, h81km±18km, mb3.3/3, Error ellipse: s-maj=15.8km s-min=8.3km az=43.2*
*IDC **08** 16:18:22.1±4.9, 9.25S×127.53E, h83km±52km, mb3.1/3, mb1 3.3/7, mb1mx3.2/16, mbtmp3.2/7, ML3.4/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/11, Error ellipse: s-maj=46.7km s-min=15.5km az=34.0*
*NEIC **08** 16:18:22.9±2.5, 9.30S×127.47E, h91km±31km, Error ellipse: s-maj=24.7km s-min=21.1km az=186.0*
ISC 08 16:18:21.6±1.6, **9.2S**±0.1×**127.55E**±0.07, **h77**km±20km, **n9**, σ**0.64**/14, **mb3.3**/3, **Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.96	255	P	Pn	16 19 18.7	-1.4
	2.3nm,0.3s,baz=90,slow=7.1,SNR=7.2						
BATI				S	Sn	16 20 06.2	+0.8
	2.6nm,0.3s,baz=114,slow=19,SNR=4.1						
BATI				LR	LR	16 21 14.2	
	comp=Z,147nm,19.8s,baz=73,slow=44						
KAKA	Kakadu	5.94	127	ePn	Pn	16 19 48.0	+1.0
KAKA				eSn	Sn	16 20 59.7	+6.1
FITZ	Fitzroy Crossi	9.05	192	P	Pn	16 20 29.1	-0.4
	0.3nm,0.3s,baz=13,slow=12,SNR=17						
FITZ				S	Sn	16 22 10.1	+0.3
	0.7nm,0.3s,baz=147,slow=10,SNR=5.4						
WRA	Warramunga Arr	12.54	149	P	Pn	16 21 16.9	-0.2
	0.3nm,0.3s,baz=319,slow=14,SNR=22						
WRA				S	Sn	16 23 34.4	-0.6
	0.3nm,0.3s,baz=330,slow=17,SNR=7.0						
ASAR	Alice Springs	15.62	158	P	Pn	16 21 57.6	+0.3
	0.1nm,0.3s,baz=331,slow=9.8,SNR=12						
ASAR				S	S	16 24 48.7	-12
	0.1nm,0.3s,baz=321,slow=22,SNR=3.8						
CMAR	Chiang Mai Arr	39.40	314	P	P	16 25 44.1	0.0
	0.5nm,0.6s,mb3.5,baz=144,slow=6.7,SNR=5.0						
MKAR	Makanchi Array	68.77	328	P	P	16 29 17.8	+0.4
	0.1nm,0.6s,mb2.8,baz=131,slow=6.5,SNR=2.3						
ZALV	Zalesovo Beam	72.50	335	P	P	16 29 39.7	-0.3
	0.5nm,0.5s,mb3.6,baz=136,slow=9.3,SNR=3.2						
ZALV	Zalesovo Beam	72.50	335	P	P	16 29 39.6	-0.3

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*SZGRF **08** 16:41:19.7, 34.27N×3.20W, h10km, mb4.2, Morocco*
*ISCJB **08** 16:41:28.8±0.4, 35.82N±0.01×3.46W±0.01, h3km±2km, mb4.7/76, MS4.1/19, Error ellipse: s-maj=2.1km s-min=2.0km az=168.9*
*MOS **08** 16:41:29.7±0.9, 35.78N×3.42W, h12km, mb4.8/34, Error ellipse: s-maj=6.7km s-min=3.2km az=70.1*
*CSEM **08** 16:41:29.5±0.0, 35.80N×3.47W, h12km, mb4.8/50, ML4.6/4, Ms3.7, Error ellipse: s-maj=1.2km s-min=1.1km az=149.0*
*IDC **08** 16:41:29.5±0.4, 35.80N×3.40W, h0km, mb4.5/22, mb1 4.6/29, mb1mx4.6/35, mbtmp4.5/29, ML4.3/6, MS3.7/11, Ms1 3.7/11, ms1mx3.2/41, Error ellipse: s-maj=15.0km s-min=9.7km az=110.0*
*LDG **08** 16:41:29.6±0.1, 35.75N×3.43W, h12km, Md4.3/1, Ml4.5/11, ms3.7, Error ellipse: s-maj=3.3km s-min=2.8km az=175.0*
*BJI **08** 16:41:30.2, 36.73N×3.70W, h5km, mB5.1, mb4.9, Ms4.9, Msz4.7*
*NEIC **08** 16:41:30.4, 35.68N×3.49W, h11km, mb4.8/41, ML4.3(LIS), MN4.2(MDD), After MDD.*
NEIC Felt [III] at Torrox and [II] at Malaga, Spain. Also felt at Nerja.
*SFS **08** 16:41:30.0, 35.69N×3.49W, h0km, ML3.9*
*CRAAG **08** 16:41:30.0, 35.84N×3.51W, Mb4.9*
*CNRM **08** 16:41:31.1, 35.83N×3.48W, h18km, MD4.6*
*MDD **08** 16:41:31.4±0.2, 35.84N×3.52W, h0km, mbLg4.2/43, Error ellipse: s-maj=2.6km s-min=2.4km az=33.0, PRIMO*
MDD EMS: III INTENSIDAD MIMA.
*IGIL **08** 16:41:31.9, 35.69N×3.49W, h11km, ML4.5*
*INMG **08** 16:41:32.6±1.1, 35.67N×3.50W, h44km±7km, ML4.1, Error ellipse: s-maj=4.3km s-min=2.7km az=166.0*
*STR **08** 16:41:47.3±0.7, 36.83N×2.82W, h5km, Ml4.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 08 16:41:30.6±0.3, **35.82N**±0.01×**3.52W**±0.01, **h5**km±2km, **h14**km±.6km**:pP-P**, **n720**, σ**1.18**/848, **mb4.7**/76, **MS4.1**/19, **92C-60D**, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	Alboran	0.41	73	⇑Pg	Pg	16 41 39.0	+0.5
	3μm,0.3s,SNR=18						
EALB				Lg		16 41 44.6	
	28μm,0.3s,SNR=7.9						
EALB	Alboran	0.41	73	P	Pg	16 41 39.0	+0.5
	3μm,0.3s,SNR=18						
EALB				S	Sg	16 41 46.6	+2.8
EALB	Alboran	0.41	73	P	Pg	16 41 39.0	+0.5
EALB				S	Sg	16 41 46.6	+2.7
MPAL	Palemas	0.69	211	iP	Pg	16 41 45.5	+1.7
MPAL				iS	Sg	16 41 54.5	+1.8
MELI	Melilla	0.71	138	⇑P	Pg	16 41 44.9	+0.8
MELI				S	Sg	16 41 54.1	+0.8
MELI	Melilla	0.71	138	iP	Pg	16 41 44.9	+0.8
MELI				iS	Sg	16 41 54.1	+0.8
TOU	Touzarine	0.88	193	iP	Pg	16 41 48.5	+1.1
TOU				iS	Sg	16 42 00.0	+1.2
ZAI	Zaio	1.05	143	iP	Pg	16 41 49.5	-1.3
ZAI				iS	Sg	16 42 03.0	-1.5
EBER	Berja	1.19	25	⇑Pg	Pg	16 41 52.0	-1.5
	786nm,0.4s,SNR=18						
EBER				Lg		16 42 08.7	
	7μm,0.4s,SNR=7.9						
EBER	Berja	1.19	25	P	Pg	16 41 52.0	-1.4
	786nm,0.4s,SNR=18						
EBER				S	Sg	16 42 09.1	+0.2
	7μm,0.4s,SNR=7.9						
EBER	Berja	1.19	25	P	Pg	16 41 52.0	-1.5
EBER				S	Sg	16 42 09.1	+0.2
EMAL	Malaga-Limoner	1.20	322	Pg	Pg	16 41 56.1	+2.6
	623nm,0.3s,SNR=7.9						
EMAL				Lg		16 42 09.9	
	3μm,0.2s,SNR=7.9						
EMAL	Malaga-Limoner	1.20	322	eP	Pg	16 41 52.3	-1.3
EMAL				eS	Sg	16 42 09.4	+0.3
EMAL	Malaga-Limoner	1.20	322	P	Pg	16 41 52.0	-1.6
ERON	Agron	1.22	349	⇓Pg	Pg	16 41 52.3	-1.7
	139nm,0.3s,SNR=18						
EMIJ	Mijas	1.26	307	⇓Pg	Pg	16 41 53.0	-1.8
	662nm,0.3s,SNR=18						
EMIJ				Lg		16 42 09.6	
	5μm,0.4s,SNR=7.9						
EMIJ	Mijas	1.26	307	P	Pg	16 41 53.0	-1.8
	662nm,0.3s,SNR=18						
EMIJ				S	Sg	16 42 09.8	-1.3
EMIJ	Mijas	1.26	307	P	Pg	16 41 52.9	-1.9
EMIJ				S	Sg	16 42 09.8	-1.3
EQUE	Quentar	1.39	3	⇓Pg	Pg	16 41 55.7	-1.5
	485nm,0.4s,SNR=18						
EQUE				Lg		16 42 13.3	
	3μm,0.5s,SNR=20						
EQUE	Quentar	1.39	3	P	Pn	16 41 55.7	-0.9
	485nm,0.4s,SNR=18						
EQUE				S	Sb	16 42 15.2	+0.2
	3μm,0.5s,SNR=20						
ELOJ	Sierra Loja	1.42	339	⇑Pg	Pg	16 41 56.0	-1.9
	190nm,0.3s,SNR=18						
ELOJ				Lg		16 42 16.7	
	849nm,0.5s,SNR=15						
ELOJ	Sierra Loja	1.42	339	P	Pn	16 41 56.0	-1.1
	190nm,0.3s,SNR=18						
ELOJ				S	Sb	16 42 16.7	+0.6
	849nm,0.5s,SNR=15						
ELOJ	Sierra Loja	1.42	339	P	Pn	16 41 56.4	-0.7
ELOJ				Lg		16 42 16.7	
ECOG	Cogollos-Vega	1.46	358	⇑Pg	Pg	16 41 56.9	-1.6
	455nm,0.4s,SNR=18						
ECEU	Ceuta	1.51	274	⇑Pn	Pn	16 41 56.6	-1.8
	62nm,0.3s,SNR=18						
ECEU				Sn	Sn	16 42 15.4	-3.1
	368nm,0.3s,SNR=12						
ECEU	Ceuta	1.51	274	P	Pn	16 41 56.4	-2.0
	170nm,0.4s,SNR=18						
REAL	Reales	1.52	296	⇑P	Pn	16 41 56.9	-1.6
REAL	Reales	1.52	296	iP	Pn	16 41 56.9	-1.6
EJIF	Jimena Fronter	1.70	292	⇑Pg	Pg	16 41 59.8	-3.4
	14nm,0.1s,SNR=18						
EJIF	Jimena Fronter	1.70	292	P	Pn	16 42 00.4	-0.6
EJIF	Jimena Fronter	1.70	292	P	Pn	16 42 00.4	-0.6
TZK	Tazeka	1.81	198	iP	Pn	16 42 00.0	-2.5
TZK				eS	Sn	16 42 23.0	-2.8
MOMI	Momias	1.86	287	⇑P	Pn	16 42 05.9	+2.8
MOMI				S	Sn	16 42 32.8	+5.9
MOMI	Momias	1.86	287	iP	Pn	16 42 05.9	+2.8
LIJA	Lijar	1.87	306	⇑P	Pn	16 42 05.7	+2.4
LIJA	Lijar	1.87	306	iP	Pn	16 42 05.7	+2.4
ODZI	Dziouia	1.94	105	P	Pn	16 42 02.0	-2.2
EQES	Quesada	2.01	10	⇓Pn	Pn	16 42 06.3	+1.0
	940nm,0.4s,SNR=18						
EQES				Sn	Sn	16 42 31.6	+0.8
	6μm,0.4s,SNR=11						
EQES	Quesada	2.01	10	P	Pn	16 42 06.2	+1.0
EQES				S	Sn	16 42 33.4	+2.6
EQES	Quesada	2.01	10	P	Pn	16 42 06.2	+1.0
EQES				S	Sn	16 42 33.4	+2.6
EHUE	Huescar	2.13	20	⇑Pn	Pn	16 42 07.2	+0.4
	48nm,0.2s,SNR=18						
EHUE	Huescar	2.13	20	P	Pn	16 42 07.3	+0.5
	SNR=18						
EHUE	Huescar	2.13	20	P	Pn	16 42 07.6	+0.8
CNIL	Conil	2.13	286	⇑P	Pn	16 42 08.5	+1.6
CNIL				S	Sn	16 42 35.0	+1.3
CNIL	Conil	2.13	286	iP	Pn	16 42 08.5	+1.7
CNIL				eS	Sn	16 42 35.0	+1.3
TGT	Taghat	2.15	216	iP	Pn	16 42 04.0	-3.2
TGT				iS	Sn	16 42 29.0	-5.3
ESPR	Espera	2.16	300	⇑Pn	Pn	16 42 08.4	+1.1
	179nm,0.7s,SNR=18						
ESPR				Sn	Sn	16 42 32.5	-2.0
	829nm,0.3s,SNR=8.4						
ESPR	Espera	2.16	300	P	Pn	16 42 08.6	+1.3
	179nm,0.7s,SNR=18						
ESPR				S	Sn	16 42 35.2	+0.8
	829nm,0.3s,SNR=8.4						
ESPR	Espera	2.16	300	P	Pn	16 42 08.6	+1.4
GIBL	Gibalbin	2.22	298	P	Pn	16 42 09.1	+1.0
GIBL				S	Sn	16 42 33.9	-2.1
GIBL	Gibalbin	2.22	298	eP	Pn	16 42 09.1	+1.0
GIBL				eS	Sn	16 42 33.9	-2.1
SFS	San Fernando	2.27	287	P	Pn	16 42 11.0	+2.2
SFS				S	Sn	16 42 30.5	-6.6
SFS	San Fernando	2.27	287	eP	Pn	16 42 09.6	+0.8
SFS	San Fernando	2.27	287	ePn	Pn	16 42 09.6	+0.8
SCRT	Cerro San Cris	2.30	292	P	Pn	16 42 10.7	+1.5
SCRT	Cerro San Cris	2.30	292	eP	Pn	16 42 10.7	+1.5
EBAN	Banos Encina	2.35	355	Pn	Pn	16 42 09.9	0.0
	145nm,0.5s,SNR=36						
EBAN				Sn	Sn	16 42 41.5	+2.3
	156nm,0.3s,SNR=4.0						
EBAN	Banos Encina	2.35	355	P	Pn	16 42 09.8	-0.1
	145nm,0.5s,SNR=36						
EBAN	Banos Encina	2.35	355	P	Pn	16 42 10.1	+0.2
EBAN				S	Sn	16 42 43.7	+4.5
USTO	Oran	2.41	91	P	Pn	16 42 08.0	-2.7
EADA	Adamuz	2.49	340	Pn	Pn	16 42 11.9	0.0
	528nm,0.5s,SNR=18						
EADA				Sn	Sn	16 42 46.5	+3.8
	1μm,0.6s,SNR=10						
EADA	Adamuz	2.49	340	P	Pn	16 42 12.2	+0.3
EADA				S	Sn	16 42 47.7	+5.1
IFR	Ifrane	2.65	211	P	Pn	16 42 13.4	-0.6
IFR				S	Sn	16 42 45.0	-1.6
CART	Cartagena	2.68	48	P	Pn	16 42 13.1	-1.4
CART				S	Sn	16 42 40.9	-6.4
CART	Cartagena	2.68	48	eP	Pn	16 42 13.1	-1.4
CART				eS	Sn	16 42 40.9	-6.4
CART	Cartagena	2.68	48	ePn	Pn	16 42 12.3	-2.2
ECAB	El Cabril	2.72	326	Pn	Pn	16 42 15.3	+0.3
	4.1nm,0.1s,SNR=35						
ECAB				Pg	Pg	16 42 21.8	-0.9
	559nm,0.6s,SNR=7.9						
ECAB				Lg		16 42 56.7	
	937nm,0.4s,SNR=7.9						
ECAB	El Cabril	2.72	326	P	Pn	16 42 15.1	+0.1
	33nm,0.4s,SNR=35						
ECAB	El Cabril	2.72	326	P	Pn	16 42 15.2	+0.2
ECAB				S	Sn	16 42 57.0	+8.8
EMUR	La Murta	2.72	41	Pn	Pn	16 42 12.5	-2.5
	44nm,0.4s,SNR=4.0						
EMUR				Pg	Pg	16 42 20.5	-2.3
	SNR=7.9						
EMUR				Sn	Sn	16 42 44.5	-3.9
	619nm,0.5s,SNR=7.9						
EMUR	La Murta	2.72	41	P	Pn	16 42 13.2	-1.8
EMUR				S	Sn	16 42 44.5	-3.8
	716nm,0.6s,SNR=7.9						
EMUR	La Murta	2.72	41	P	Pn	16 42 13.2	-1.8
MIF	Mishlifen	2.79	211	eP	Pn	16 42 13.0	-2.9
MIF				iS	Sn	16 42 45.0	-4.9
EVIA	Vianos	2.93	16	Pn	Pn	16 42 18.6	+0.8
	119nm,0.4s,SNR=41						
EVIA	Vianos	2.93	16	P	Pn	16 42 20.5	+2.6
CZD	Col de Zad	3.05	205	iP	Pn	16 42 17.5	-2.0
CZD				iS	Sn	16 42 52.0	-4.4
MDT	Midelt	3.13	197	Pn	Pn	16 42 20.4	-0.2
	11nm,0.3s,baz=28,slow=11,SNR=115						
MDT				Sn	Sn	16 42 58.9	+0.6
	32nm,0.3s,baz=311,slow=20,SNR=4.3						
MDT				Lg		16 43 09.5	
	62nm,0.3s,baz=322,slow=23,SNR=5.8						
MDT	Midelt	3.13	197	Pn	Pn	16 42 20.4	-0.2
MDT				Sn	Sn	16 42 58.9	+0.6
EMIN	Mina Concepcio	3.19	308	⇑Pn	Pn	16 42 21.0	-0.5
	38nm,0.3s,SNR=18						
EMIN				Sn	Sn	16 42 58.5	-1.5
	144nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.19	308	P	Pn	16 42 21.1	-0.4
EMIN				S	Sn	16 42 58.8	-1.1
	144nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.19	308	P	Pn	16 42 21.1	-0.4
EMIN				S	Sn	16 42 58.8	-1.2
ETOB	Tobarra	3.23	29	⇑Pn	Pn	16 42 22.4	+0.5
	212nm,0.4s,SNR=18						
ETOB				Lg		16 43 07.1	
	3μm,1.5s,SNR=7.9						
ETOB	Tobarra	3.23	29	P	Pn	16 42 22.4	+0.4
	212nm,0.4s,SNR=18						
RTC	Rabat Centre	3.30	237	iP	Pn	16 42 22.0	-0.9
RTC				iS	Sn	16 42 59.0	-3.5
EGRO	El Granado	3.62	299	⇑Pn	Pn	16 42 27.1	-0.2
	185nm,0.3s,SNR=18						
EGRO				Sn	Sn	16 43 08.2	-2.2
	424nm,0.3s,SNR=7.7						
EGRO	El Granado	3.62	299	P	Pn	16 42 27.1	-0.2
	185nm,0.3s,SNR=18						
EGRO				S	Sn	16 43 08.6	-1.8
EGRO	El Granado	3.62	299	P	Pn	16 42 27.1	-0.2
EGRO				S	Sn	16 43 08.6	-1.9
PBAR	Barrancos	3.67	311	eP	Pn	16 42 27.9	-0.2
PBAR				eS	Sn	16 43 10.1	-1.6
PBAR				A		16 43 32.2	
	213nm,0.5s						
PBAR	Barrancos	3.67	311	eP	Pn	16 42 27.9	-0.2
PBAR				eS	Sn	16 43 10.1	-1.6
	213nm,0.5s						
PVAQ	Vaqueiros	3.73	296	eP	Pn	16 42 28.5	-0.4
PVAQ				eS	Sn	16 43 10.8	-2.4
PVAQ				A		16 43 21.6	
	440nm,0.6s						
PVAQ	Vaqueiros	3.73	296	eP	Pn	16 42 28.5	-0.4
PVAQ				eS	Sn	16 43 10.8	-2.4
	440nm,0.6s						
EANR	'Ain N'Sour	3.75	87	P	Pn	16 42 26.4	-2.7
PAB	San Pablo	3.78	350	eP	Pn	16 42 29.1	-0.4
PAB	San Pablo	3.78	350	ePn	Pn	16 42 29.1	-0.4
PBDV	Barranco-do-Ve	3.83	293	eP	Pn	16 42 30.0	-0.2
PBDV				eS	Sn	16 43 12.9	-2.7
PBDV				A		16 43 15.4	
	307nm,0.5s						
PBDV	Barranco-do-Ve	3.83	293	eP	Pn	16 42 30.0	-0.2
PBDV				eS	Sn	16 43 12.9	-2.7
	307nm,0.5s						
ZFT	Errachidia	3.84	191	iP	Pn	16 42 29.5	-0.8
ZFT				eS	Sn	16 43 12.0	-3.9
KIB	El Ksiba	3.85	214	eP	Pn	16 42 29.0	-1.5
KIB				eS	Sn	16 43 12.0	-4.2
ESDC	Sonseca Array	3.87	355	Pn	Pn	16 42 31.6	+0.9
	45nm,0.3s,baz=174,slow=12,SNR=383						
ESDC				Sn	Sn	16 43 14.9	-1.6
	40nm,0.3s,baz=170,slow=19,SNR=5.5						
ESDC				Lg		16 43 30.1	
	96nm,0.3s,baz=169,slow=27,SNR=8.3						
ESDC	Sonseca Array	3.87	355	Pn	Pn	16 42 31.4	+0.7
	49nm,0.4s,baz=175,slow=12,SNR=323						
ESDC	Sonseca Array	3.87	355	P	Pn	16 42 31.4	+0.7
	49nm,0.4s,SNR=323						
EBEN	Beniarda	3.90	41	Pn	Pn	16 42 29.3	-1.8
	33nm,0.4s,SNR=32						
EBEN				Sn	Sn	16 43 12.7	-4.6
	652nm,1.2s,SNR=7.9						
EBEN	Beniarda	3.90	41	P	Pn	16 42 30.6	-0.5
EBEN	Beniarda	3.90	41	P	Pn	16 42 30.6	-0.5
ETRT	Tiaret	3.95	95	P	Pn	16 42 29.3	-2.5
ECHF	Ech Chlef	3.95	84	P	Pn	16 42 30.0	-1.9
ECHA	Ech Chlef	3.97	84	P	Pn	16 42 30.0	-2.2
EBAD	Badajoz	4.05	317	Pn	Pn	16 42 33.4	+0.2
	51nm,0.3s,SNR=85						
EBAD				Sn	Sn	16 43 18.7	-2.3
	215nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.05	317	P	Pn	16 42 33.3	+0.1
	51nm,0.3s,SNR=85						
EBAD	Badajoz	4.05	317	P	Pn	16 42 33.5	+0.3
EBAD				S	Sn	16 43 18.7	-2.3
AVE	Averroes	4.08	233	P	Pn	16 42 31.3	-2.4
AVE	Averroes	4.08	233	P	Pn	16 42 37.1	+3.4
EBNR	Beni Rached	4.12	82	P	Pn	16 42 32.0	-2.2
PBEJ	Beja	4.12	304	eP	Pn	16 42 34.3	0.0
PBEJ				eS	Sn	16 43 20.3	-2.6
PBEJ				A		16 43 23.6	
	154nm,0.4s						
PBEJ	Beja	4.12	304	eP	Pn	16 42 34.3	0.0
PBEJ				eS	Sn	16 43 20.3	-2.6
	154nm,0.4s						
ECHE	Chera	4.27	27	Pn	Pn	16 42 37.4	+1.1
	3.2nm,0.4s,SNR=7.9						
ECHE	Chera	4.27	27	P	Pn	16 42 37.4	+1.1
	SNR=7.9						
ECHE				S	Sn	16 43 24.5	-2.1
	77nm,0.6s,SNR=7.9						
ECHE	Chera	4.27	27	P	Pn	16 42 37.6	+1.3
ECHE				S	Sn	16 43 24.5	-2.0
MORF	Marmelete	4.39	291	eP	Pn	16 42 37.2	-0.8
MORF				eS	Sn	16 43 26.6	-2.9
MORF				A		16 43 35.3	
	178nm,0.3s						
MORF	Marmelete	4.39	291	eP	Pn	16 42 37.2	-0.8
MORF				eS	Sn	16 43 26.6	-2.9
	178nm,0.3s						
TZC	Tazercounte	4.42	215	P	Pn	16 42 37.0	-1.3
TZC				S	Sn	16 43 26.0	-4.1
TZC	Tazercounte	4.42	215	eP	Pn	16 42 37.0	-1.3
PESTR	Estremoz	4.45	314	eP	Pn	16 42 39.3	+0.6
PESTR				eS	Sn	16 43 28.7	-2.2
PESTR				A		16 44 01.4	
	251nm,0.6s						
PESTR	Estremoz	4.45	314	eP	Pn	16 42 39.3	+0.6
PESTR				eS	Sn	16 43 28.7	-2.2
	251nm,0.6s						
PFVI	Vila Bisbo	4.48	289	eP	Pn	16 42 38.6	-0.5
PFVI				eS	Sn	16 43 27.7	-3.9
PFVI				A		16 43 36.0	
	307nm,0.5s						
EVO	Evora	4.50	308	ePn	Pn	16 42 40.4	+1.0
EVO				eSn	Sn	16 43 31.4	-0.7
EVO				eSg	Sg	16 43 59.8	+4.7
	487nm,0.7s						
EVO				eMLR	MLR		
	comp=Z,668nm,17.2s						
EVO	Evora	4.50	308	eP	Pn	16 42 39.5	+0.1
EVO				eS	Sn	16 43 29.7	-2.4
EVO				A		16 44 10.5	
	comp=Z,194nm,0.5s						
EVO	Evora	4.50	308	eP	Pn	16 42 39.5	+0.1
EVO				eS	Sn	16 43 29.7	-2.4
	comp=Z,194nm,0.5s						
PTEO	Sao Teotonio	4.53	294	eP	Pn	16 42 39.7	-0.1
PTEO				eS	Sn	16 43 29.7	-3.1
PTEO				A		16 43 35.8	
	comp=Z,348nm,0.6s						
PTEO	Sao Teotonio	4.53	294	P	Pn	16 42 39.7	-0.1
PTEO				S	Sn	16 43 29.7	-3.1
	comp=Z,174nm,0.6s						
PTEO	Sao Teotonio	4.53	294	eP	Pn	16 42 39.9	+0.1
PTEO				eS	Sn	16 43 29.7	-3.1
	comp=Z,348nm,0.6s						
EVOP	Sao Brissos	4.57	308	ePn	Pn	16 42 40.4	+0.1
EVOP				eSn	Sn	16 43 31.4	-2.4
EVOP				eSg	Sg	16 43 59.8	+2.5
	comp=Z,244nm,0.7s						
MOE	Montemor	4.71	306	eP	Pn	16 42 42.8	+0.5
MOE				eS	Sn	16 43 34.6	-2.7
MOE	Montemor	4.71	306	eP	Pn	16 42 43.6	+1.3
PMRV	Marv??o	4.74	321	eP	Pn	16 42 43.1	+0.4
PMRV				eS	Sn	16 43 36.2	-1.8
PMRV				A		16 44 02.9	
	comp=Z,160nm,0.5s						
PMRV	Marv??o	4.74	321	eP	Pn	16 42 43.1	+0.4
PMRV				eS	Sn	16 43 36.2	-1.8
	comp=Z,160nm,0.5s						
GUD	Guadarrama	4.84	354	⇓Pn	Pn	16 42 44.4	+0.3
	comp=Z,44nm,0.5s,SNR=18						
GUD				Lg		16 44 01.5	
	comp=Z,152nm,0.4s,SNR=5.0						
GUD	Guadarrama	4.84	354	P	Pn	16 42 44.5	+0.4
	comp=Z,44nm,0.5s,SNR=18						
GUD	Guadarrama	4.84	354	P	Pn	16 42 44.6	+0.4
EIBI	Ibiza	5.02	49	Pn	Pn	16 42 46.0	-0.6
	comp=Z,18nm,0.2s,SNR=18						
EIBI				Sn	Sn	16 43 38.4	-6.6
	comp=Z,157nm,0.5s,SNR=7.9						
EIBI	Ibiza	5.02	49	P	Pn	16 42 46.0	-0.6
	comp=Z,48nm,0.6s,SNR=18						
EIBI				S	Sn	16 43 40.0	-5.0
EIBI	Ibiza	5.02	49	P	Pn	16 42 46.1	-0.5
EIBI				S	Sn	16 43 40.0	-5.0
PCBR	Castelo Branco	5.09	323	eP	Pn	16 42 48.2	+0.6
PCBR				eS	Sn	16 43 42.6	-4.2
PCBR				A		16 44 23.2	
	comp=Z,203nm,0.7s						
PCBR	Castelo Branco	5.09	323	P	Pn	16 42 48.2	+0.6
PCBR				S	Sn	16 43 42.6	-4.2

comp=Z,102nm,0.7s
ETOR Torete 5.12 13 Pn **Pn 16 42 48.1 +0.1**
comp=Z,68nm,0.4s,SNR=19
ETOR Pg **Pg 16 43 04.7 -4.1**
comp=Z,326nm,0.7s,SNR=7.9
ETOR Lg 16 44 12.7
comp=Z,654nm,1.4s,SNR=7.9
ETOR Torete 5.12 13 P **Pn 16 42 48.5 +0.5**
ETOR Torete 5.12 13 P **Pn 16 42 48.5 +0.5**
EMOS Mosqueruela 5.13 27 Pn **Pn 16 42 48.2 +0.1**
comp=Z,8.8nm,0.4s,SNR=12
EMOS Lg 16 44 15.1
comp=Z,1µm,1.6s,SNR=7.9
EMOS Mosqueruela 5.13 27 P **Pn 16 42 48.2 +0.1**
comp=Z,8.8nm,0.4s,SNR=12
EMOS Mosqueruela 5.13 27 P **Pn 16 42 49.8 +1.6**
ALMR Almeirim 5.22 311 *e*P **Pn 16 42 49.4 0.0**
ALMR *e*S **Sn 16 43 45.5 -4.5**
ALMR *e*S **Sn 16 43 45.5 -4.5**
ALMR AML AML 16 44 08.5
comp=E,1µm,0.6s
ALMR Almeirim 5.22 311 P **Pn 16 42 49.4 0.0**
ALMR S **Sn 16 43 45.5 -4.5**
EMHD Djebel Mahouad 5.26 84 P **Pn 16 42 54.0 +4.1**
LIS Lisbon 5.34 304 *e*P **Pn 16 42 50.6 -0.4**
LIS *e*S **Sn 16 43 48.5 -4.5**
LIS *e*S **Sn 16 43 48.5 -4.4**
LIS AML AML 16 43 54.2
comp=N,572nm,0.4s
LIS Lisbon 5.34 304 P **Pn 16 42 50.6 -0.4**
LIS S **Sn 16 43 48.5 -4.5**
ABA Alger-Bouzarea 5.38 78 P **Pn 16 42 51.4 -0.1**
PTOM Tomar 5.42 316 *e*P **Pn 16 42 52.9 +0.8**
PTOM *e*S **Sn 16 43 52.9 -2.1**
PTOM A 16 44 03.7
comp=N,215nm,0.8s
PTOM Tomar 5.42 316 P **Pn 16 42 52.9 +0.8**
PTOM S **Sn 16 43 52.9 -2.1**
comp=N,108nm,0.8s
PTOM Tomar 5.42 316 *e*P **Pn 16 42 52.7 +0.6**
PMAFR Mafra 5.56 306 *e*P **Pn 16 42 54.6 +0.6**
PMAFR *e*S **Sn 16 43 55.9 -2.3**
PMAFR A 16 44 07.4
comp=N,196nm,0.4s
MTE Manteigas 5.57 326 *e*P **Pn 16 42 55.0 +0.9**
MTE *e*S **Sn 16 43 56.6 -1.9**
MTE A 16 44 41.7
comp=N,334nm,0.6s
MTE Manteigas 5.57 326 P **Pn 16 42 55.0 +0.9**
MTE S **Sn 16 43 56.6 -1.9**
comp=N,167nm,0.6s
MTE Manteigas 5.57 326 *e*Pn **Pn 16 42 53.9 -0.2**
ADJB Djebel Djouab 5.65 85 P **Pn 16 42 53.6 -1.6**
OUK Oukaimeden 5.86 220 P **Pn 16 42 57.0 -1.1**
OUK S **Sn 16 44 01.0 -4.7**
OUK Oukaimeden 5.86 220 *e*P **Pn 16 42 57.0 -1.1**
ERTA Horta de San J 5.95 29 Pn **Pn 16 42 59.5 +0.1**
comp=N,71nm,0.6s,SNR=7.9
ERTA Lg 16 44 41.3
comp=N,490nm,2.0s,SNR=7.9
ERTA Horta de San J 5.95 29 P **Pn 16 42 59.5 +0.1**
comp=N,71nm,0.6s,SNR=7.9
ERTA Horta de San J 5.95 29 P **Pn 16 43 00.1 +0.7**
PVIS Viseu 5.98 326 *e*P **Pn 16 43 00.4 +0.6**
PVIS *e*S **Sn 16 44 05.8 -2.8**
PVIS A 16 44 56.1
comp=N,115nm,0.8s
PVIS Viseu 5.98 326 P **Pn 16 43 00.4 +0.6**
PVIS S **Sn 16 44 05.8 -2.8**
comp=N,58nm,0.8s
MVO Moncorvo 6.01 334 *e*P **Pn 16 43 00.6 +0.5**
MVO *e*S **Sn 16 44 05.3 -4.0**
MVO A 16 44 53.1
comp=N,256nm,0.6s
AKET Djebel Ketaf 6.01 86 P **Pn 16 43 00.0 -0.1**
CIA Chichaoua 6.09 227 P **Pn 16 43 01.0 -0.3**
CIA S **Sn 16 44 05.0 -6.4**
CIA Chichaoua 6.09 227 *e*P **Pn 16 43 01.0 -0.3**
ESAC San Caprasio 6.36 21 Pn **Pn 16 43 04.7 -0.2**
comp=N,18nm,0.3s,SNR=7.9
ESAC Lg 16 44 53.3
comp=N,1µm,1.6s,SNR=7.9
ESAC San Caprasio 6.36 21 P **Pn 16 43 04.8 -0.1**
ESAC San Caprasio 6.36 21 P **Pn 16 43 04.8 -0.2**
ETOS Mallorca 6.38 50 Pn **Pn 16 43 03.9 -1.3**
comp=N,12nm,0.3s,SNR=7.9
ETOS Sn **Sn 16 44 13.8 -4.6**
comp=N,71nm,0.7s,SNR=7.9
ETOS Mallorca 6.38 50 P **Pn 16 43 04.9 -0.3**
ETOS Mallorca 6.38 50 P **Pn 16 43 05.0 -0.3**
ETOS S **Sn 16 44 14.3 -4.0**
JHA Jbel Lahdid 6.40 232 P **Pn 16 43 05.0 -0.6**
JHA S **Sn 16 44 12.0 -7.1**
JHA Jbel Lahdid 6.40 232 *e*P **Pn 16 43 05.0 -0.6**
PBRG Braganca 6.49 338 *e*P **Pn 16 43 06.9 +0.2**
PBRG *e*S **Sn 16 44 18.1 -3.0**
PBRG A 16 45 08.3
comp=N,124nm,0.8s
PBRG Braganca 6.49 338 P **Pn 16 43 06.9 +0.2**
PBRG S **Sn 16 44 18.1 -3.0**
comp=N,62nm,0.8s
EPOB Poblet 6.59 32 Pn **Pn 16 43 07.9 -0.3**
comp=N,22nm,0.7s,SNR=7.9
EPOB Lg 16 45 04.8
comp=N,369nm,2.2s,SNR=7.9
EPOB Poblet 6.59 32 P **Pn 16 43 07.9 -0.3**
SNR=7.9
EPOB Poblet 6.59 32 P **Pn 16 43 07.8 -0.4**
ECAL Calabor 6.61 339 ⇑Pn **Pn 16 43 08.7 +0.3**
comp=N,77nm,0.4s,SNR=18
ECAL Sn **Sn 16 44 22.7 -1.4**
comp=N,205nm,0.7s,SNR=7.9
ECAL Lg 16 44 56.8
comp=N,976nm,1.5s,SNR=7.9
ECAL Calabor 6.61 339 P **Pn 16 43 08.7 +0.3**
comp=N,40nm,0.4s,SNR=18
ECAL Calabor 6.61 339 P **Pn 16 43 08.7 +0.3**
ECAL S **Sn 16 44 22.7 -1.4**
PTO Porto 6.64 325 *e*P **Pn 16 43 09.3 +0.5**
PTO *e*S **Sn 16 44 20.6 -4.3**
PCAB Cabril 6.86 330 *e*P **Pn 16 43 12.2 +0.4**
PCAB *e*S **Sn 16 44 26.3 -3.9**
PCAB A 16 45 20.9
comp=N,210nm,0.7s
PCAB Cabril 6.86 330 P **Pn 16 43 12.2 +0.4**
PCAB S **Sn 16 44 26.3 -3.9**
comp=N,105nm,0.7s
ELOB Lobios 7.00 331 ⇓Pn **Pn 16 43 14.1 +0.3**
comp=N,85nm,0.8s,SNR=18
ELOB Sn **Sn 16 44 28.0 -5.8**
comp=N,205nm,0.9s,SNR=7.9
ELOB Lg 16 45 12.7
comp=N,605nm,1.2s,SNR=7.9
ELOB Lobios 7.00 331 P **Pn 16 43 14.6 +0.8**
ELOB Lobios 7.00 331 P **Pn 16 43 14.6 +0.8**
ELOB S **Sn 16 44 31.4 -2.4**
IUNC Unciti 7.10 12 Pn **Pn 16 43 15.9 +0.8**
comp=N,1.4nm,0.1s,SNR=4.0
IUNC Lg 16 45 19.9
comp=N,114nm,0.9s,SNR=7.9
EARA Aranguren 7.11 12 Pn **Pn 16 43 17.7 +2.5**
comp=N,25nm,0.7s,SNR=7.4
IPRE Itoiz 7.17 13 Pn **Pn 16 43 18.1 +2.0**
comp=N,8.6nm,0.3s,SNR=4.0
IPRE Lg 16 45 19.2
comp=N,31nm,0.6s,SNR=7.9
SET Setif 7.24 84 P **Pn 16 43 18.0 +1.0**
EORO Oroz-Betelu 7.27 13 Pn **Pn 16 43 17.8 +0.4**
comp=N,14nm,0.3s,SNR=7.9
EORO Lg 16 45 24.2
comp=N,171nm,1.6s,SNR=7.9
IUSE Utxeti 7.28 11 Pn **Pn 16 43 19.8 +2.2**
comp=N,27nm,0.7s,SNR=7.9
IUSE Lg 16 45 21.1
comp=N,112nm,1.0s,SNR=7.9
CKHR Kef el Ahmar 7.33 86 P **Pn 16 43 17.0 -1.3**
MAHO Mahon 7.38 54 P **Pn 16 43 19.8 +0.8**
MAHO S **Sn 16 44 37.0 -6.1**
MAHO Mahon 7.38 54 *e*P **Pn 16 43 19.8 +0.8**
ELAN Lanestosa 7.40 0 Pn **Pn 16 43 20.0 +0.7**
comp=N,30nm,0.7s,SNR=19
ELAN Lg 16 45 28.2
comp=N,148nm,0.8s,SNR=7.9
ELAN Lanestosa 7.40 0 P **Pn 16 43 20.4 +1.1**
ELAN Lanestosa 7.40 0 P **Pn 16 43 20.4 +1.1**

EBIE Bielsa 7.42 21 Pn **Pn 16 43 20.7 +1.1**
comp=N,57nm,1.0s,SNR=7.9
EBIE Lg 16 45 26.9
comp=N,1µm,3.1s,SNR=7.9
EBIE Bielsa 7.42 21 P **Pn 16 43 22.6 +3.1**
ETSF Etsaut 7.43 17 *e*P **Pn 16 43 20.7 +1.0**
ETSF *e*Sg **Sg 16 45 25.5 -3.6**
comp=N,320nm,1.3s
ETSF Etsaut 7.43 17 *e*P **Pn 16 43 20.7 +1.0**
ETSF *e*Sg **Sg 16 45 25.5 -3.6**
comp=N,160nm,1.3s
LARF Larrau 7.47 14 P **Pn 16 43 22.1 +1.9**
LARF S **Sn 16 44 40.3 -5.0**
ELIZ Elizondo 7.50 11 Pn **Pn 16 43 21.6 +1.0**
comp=N,15nm,0.4s,SNR=14
ELIZ Lg 16 45 30.3
comp=N,215nm,1.4s,SNR=7.9
ELIZ Elizondo 7.50 11 P **Pn 16 43 23.3 +2.8**
ELIZ Elizondo 7.50 11 P **Pn 16 43 23.3 +2.8**
SJPF Ste Jean 7.50 13 *e*P **Pn 16 43 22.1 +1.5**
SJPF *e*Sg **Sg 16 45 26.9 -4.3**
comp=N,219nm,1.0s
SJPF Ste Jean 7.50 13 *e*P **Pn 16 43 22.1 +1.5**
SJPF *e*Sg **Sg 16 45 26.9 -4.3**
comp=N,109nm,1.0s
EALK Alkurruntz 7.55 11 Pn **Pn 16 43 23.3 +2.0**
comp=N,39nm,0.4s,SNR=29
EALK Lg 16 45 32.2
comp=N,1µm,1.8s,SNR=7.9
VIEF Viey 7.57 20 P **Pn 16 43 22.4 +0.8**
ATE Arette 7.58 16 P **Pn 16 43 23.0 +1.3**
EARI Arriondas 7.59 351 Pn **Pn 16 43 22.8 +1.0**
comp=N,16nm,0.4s,SNR=20
EARI Lg 16 45 29.9
comp=N,2µm,2.7s,SNR=7.9
EARI Arriondas 7.59 351 P **Pn 16 43 22.9 +1.1**
OSSF Osses 7.63 13 P **Pn 16 43 23.8 +1.4**
OSSF S **Sn 16 44 43.0 -6.2**
DFRA Djebel Bou Aff 7.63 82 P **Pn 16 43 21.5 -0.9**
REYF Montagne du Re 7.63 17 P **Pn 16 43 23.6 +1.2**
ORDF Ordiarp 7.65 14 P **Pn 16 43 23.6 +0.9**
LABF Labassere 7.73 20 P **Pn 16 43 23.8 0.0**
MELF Melles 7.78 24 P **Pn 16 43 24.8 +0.3**
EPF Esparros 7.79 21 *e*Pn **Pn 16 43 21.2 -3.5**
EPF Esparros 7.79 21 *e*P **Pn 16 43 26.5 +1.8**
EPF *e*Sg **Sg 16 45 35.4 -5.4**
comp=N,196nm,1.1s
EPF Esparros 7.79 21 Pn **Pn 16 43 21.2 -3.5**
EPF Lg 16 45 35.4
comp=N,98nm,1.1s
EPF Esparros 7.79 21 *e*P **Pn 16 43 26.5 +1.8**
EPF *e*Sg **Sg 16 45 35.4 -5.4**
comp=N,98nm,1.1s
SALF Salau 7.83 26 P **Pn 16 43 25.7 +0.5**
VALF Valcebollere 7.85 32 P **Pn 16 43 26.7 +1.2**
YBT Youssef Ben Ta 7.89 223 P **Pn 16 43 22.0 -4.0**
YBT S **Sn 16 44 46.0 -10**
MLS Moulis 7.97 25 P **Pn 16 43 27.6 +0.5**
EPON Pontenova 8.01 341 Pn **Pn 16 43 27.9 +0.4**
comp=N,11nm,0.5s,SNR=7.9
EPON Lg 16 45 44.9
comp=N,246nm,1.3s,SNR=7.9
EPON Pontenova 8.01 341 P **Pn 16 43 29.6 +2.1**
EPON Pontenova 8.01 341 P **Pn 16 43 29.6 +2.0**
STS Santiago 8.06 333 Lg 16 45 48.0
comp=N,179nm,1.0s,SNR=7.9
CASM Ain Smara 8.12 84 P **Pn 16 43 30.5 +1.4**
EMAZ Mazaricos 8.28 331 Pn **Pn 16 43 32.6 +1.2**
comp=N,5.2nm,0.3s,SNR=7.9
EMAZ Sn **Sn 16 44 60.0 -5.2**
comp=N,37nm,0.8s,SNR=7.9
EMAZ Lg 16 45 56.4
comp=N,744nm,1.6s,SNR=7.9
EMAZ Mazaricos 8.28 331 P **Pn 16 43 32.7 +1.4**
EMAZ Mazaricos 8.28 331 P **Pn 16 43 32.7 +1.4**
CKFL Kef-Lekhel 8.30 83 P **Pn 16 43 32.0 +0.3**
CAEH 'Ain El Ouahch 8.42 80 P **Pn 16 43 31.5 -1.8**
MTLF Montolieu 8.72 29 *e*P **Pn 16 43 39.2 +1.9**
MTLF *e*Sg Sn 16 46 05.1 +49
comp=N,46nm,1.0s
MTLF Montolieu 8.72 29 Pn **Pn 16 43 33.3 -4.0**
MTLF Lg 16 46 05.1
comp=N,23nm,1.0s
MTLF Montolieu 8.72 29 *e*P **Pn 16 43 39.2 +1.9**
MTLF Montolieu 8.72 29 *e*Pn **Pn 16 43 33.3 -4.0**
MTLF *e*Sg Sn 16 46 05.1 +49
CMAH Djebel Manchou 8.87 82 P **Pn 16 43 37.0 -2.5**
ABSA Djebel Ababsia 8.92 84 P **Pn 16 43 41.0 +0.9**
CABS Djebel Ababsia 8.92 84 P **Pn 16 43 41.0 +0.9**
LFF La Frestale 9.67 18 *e*Pn **Pn 16 43 47.1 -3.3**
LASF Ste Croix 10.00 32 *e*Pn **Pn 16 43 51.1 -3.8**
LASF Ste Croix 10.00 32 *e*P **Pn 16 43 56.8 +1.9**
LASF *e*Sg Sn 16 46 45.7 +58
comp=N,31nm,0.8s
LASF Ste Croix 10.00 32 Pn **Pn 16 43 51.1 -3.8**
LASF Lg 16 46 45.7
comp=N,16nm,0.8s
LASF Ste Croix 10.00 32 *e*P **Pn 16 43 56.8 +1.9**
CAF Calviac 10.04 23 *e*P **Pn 16 43 57.3 +1.9**
CAF *e*Sg Sn 16 46 46.4 +58
comp=N,35nm,1.0s
CAF Calviac 10.04 23 P **Pn 16 43 57.3 +1.9**
CAF Lg 16 46 46.4
comp=N,17nm,1.0s
KEST Kesra 10.45 87 Pn **Pn 16 43 59.0 -2.1**
comp=N,0.3nm,0.3s,baz=156,slow=1.7,SNR=14
LBL Lubilhac 10.71 27 P **Pn 16 44 05.0 +0.3**
VSL Villasalto 10.86 66 *e*Pn **Pn 16 44 06.7 0.0**
VIVF Saint-Julien-l 10.97 32 *e*Sg Sx 16 47 14.4
comp=N,47nm,1.3s
VIVF Saint-Julien-l 10.97 32 Lg 16 47 14.4
comp=N,24nm,1.3s
MFF Saint Martin d 11.07 12 *e*Pn **Pn 16 44 06.5 -3.0**
PYM Petit Puy Mans 11.08 24 P **Pn 16 44 09.8 +0.1**
TCF Toulx Ste Croi 11.31 21 *e*P **Pn 16 44 14.8 +2.0**
AGO Saint Agoulin 11.39 24 P **Pn 16 44 13.5 -0.4**
PLD La Plantade 11.48 26 P **Pn 16 44 15.6 +0.4**
SBF Sospel 11.63 43 *e*P **Pn 16 44 18.7 +1.5**
PGF Pioggiola 11.80 52 *e*P **Pn 16 44 19.9 +0.3**
QUIF Quistinic 12.09 1 *e*Pn **Pn 16 44 21.6 -1.9**
QUIF *e*Sn **Sn 16 46 27.4 -11**
comp=N,24nm,0.8s
SGMF Saint Gilles 12.45 3 *e*Pn **Pn 16 44 26.8 -1.5**
SGMF *e*Sn **Sn 16 46 34.8 -13**
comp=N,29nm,0.9s
ROSF Rostrenen 12.51 1 *e*Pn **Pn 16 44 25.9 -3.3**
ROSF *e*Sn **Sn 16 46 38.2 -11**
comp=N,14nm,0.6s
ROSF Rostrenen 12.51 1 *e*Pn **Pn 16 44 25.9 -3.3**
ROSF *e*Sn **Sn 16 46 38.2 -11**
comp=N,6.9nm,0.6s
GRR Gorron 12.71 8 *e*Pn **Pn 16 44 29.3 -2.7**
LDF La Druitiere 13.01 10 *e*Pn **Pn 16 44 33.1 -2.9**
FLN La Foliniere 13.13 9 *e*Pn **Pn 16 44 34.3 -3.3**
FLN *e*MLR MLR
comp=Z,369nm,20.5s
FLN La Foliniere 13.13 9 *e*P **Pn 16 44 40.7 +3.1**
baz=185
FLN La Foliniere 13.13 9 *e*P **Pn 16 44 40.7 +3.1**
TUE Stuetta 14.37 38 *e*Pn **Pn 16 44 55.8 +1.1**
comp=Z,16nm,1.4s
TUE Stuetta 14.37 38 *e*Pn **Pn 16 44 55.8 +1.1**
comp=Z,16nm,1.4s
VAE Valguarnera 14.49 78 Pn **Pn 16 44 55.1 -1.3**
baz=229,slow=11,SNR=2.8
DAVOX Davos/Dischmat 14.85 38 Pn **Pn 16 45 08.1 +6.9**
comp=Z,0.4nm,0.3s,baz=240,slow=18,SNR=7.2
DAVOX LR LR 16 50 47.8
comp=Z,106nm,20.0s,baz=88,slow=38
CDF Champ du Feu 14.89 29 *e*P **Pn 16 45 02.6 +0.8**
TAM Tamanrasset 15.18 146 P **Pn 16 45 03.9 -1.8**
DOU Dourbes 15.44 20 P **Pn 16 45 10.2 +1.2**
comp=Z,7.4nm,1.3s
DOU Dourbes 15.44 20 P **Pn 16 45 10.1 +1.1**
comp=Z,7.4nm,1.3s
FETA Feichten 15.45 39 ⇓*i* P **Pn 16 45 14.4 +5.4**
comp=Z,17nm,0.6s,SNR=17
WLF Walferdange 15.53 24 P **Pn 16 45 13.3 +3.1**
RETA Reutte 15.77 38 *i* P **Pn 16 45 17.2 +3.9**
comp=Z,9.1nm,0.6s,SNR=7.7
MOTA Moosalm 15.85 39 ⇑*i*P **Pn 16 45 17.8 +3.4**
comp=Z,12nm,1.3s
WTTA Wattenberg 16.07 40 ⇑*i*P **Pn 16 45 20.6 +3.4**
comp=Z,23nm,0.9s,SNR=12

WTTA Wattenberg 16.07 40 P **Pn 16 45 20.7 +3.4**
WATA Walderalm 16.09 40 ⇑*i*P **Pn 16 45 20.7 +3.3**
comp=Z,18nm,1.2s,SNR=8.4
MEM Membach 16.31 22 P **Pn 16 45 21.6 +1.4**
GRFO Grafenberg 17.54 33 P **Pn 16 45 39.7 +3.9**
GRA1 Grafenberg Arr 17.54 33 *e*P **Pn 16 45 38.3 +2.5**
GRF Grafenberg Arr 17.54 33 *e*P **Pn 16 45 38.3 +2.5**
SOKA Soboth 17.63 46 ⇑*i*P **Pn 16 45 37.9 +1.0**
comp=Z,7.0nm,0.9s
WET Wettzell 17.93 37 *e*P **Pn 16 45 38.7 -1.9**
ROTZ Rotzenmuhle 18.04 35 *e*P **Pn 16 45 42.4 +0.4**
comp=Z,6.0nm,1.1s
GEC2 GERESS Array S 18.15 39 *e*P **Pn 16 45 42.6 -0.7**
GERES GERESS Array B 18.15 39 P **Pn 16 45 42.0 -1.3**
comp=Z,0.2nm,0.3s,baz=226,slow=11,SNR=13
GERES PcP PcP 16 50 16.2 -0.5
comp=Z,0.1nm,0.3s,baz=191,slow=1.4,SNR=7.5
GERES GERESS Array B 18.15 39 PcP PcP 16 50 16.2 -0.5
KHC Kasperske Hory 18.27 38 *e*P **Pn 16 45 43.5 -1.3**
comp=Z,300nm,9.8s
KHC Kasperske Hory 18.27 38 *e*P **Pn 16 45 43.5 -1.3**
KHC *e*pP pP 16 45 49.8 +3.5
KHC AMS AMS 16 53 30.0
comp=Z,300nm,9.8s
MOX Moxa 18.41 32 *e*(P) **Pn 16 45 47.2 +0.7**
comp=Z,16nm,1.4s
MOX
comp=Z,300nm,12.0s
MOX Moxa 18.41 32 *e*P **Pn 16 45 47.2 +0.7**
MOX pmax pmax
comp=Z,16nm,1.4s
MOX MLR MLR
comp=Z,300nm,12.0s
NKC Novy Kostel 18.48 34 *e*P **Pn 16 45 47.9 +0.5**
comp=Z,500nm,8.4s
NKC Novy Kostel 18.48 34 *e*P **Pn 16 45 47.9 +0.5**
NKC AMS AMS 16 53 30.0
comp=Z,500nm,8.4s
WERD Werda 18.57 33 *e*P **Pn 16 45 48.4 0.0**
PRU Pruhonice 19.31 37 *e*P **Pn 16 45 56.0 -1.3**
comp=Z,300nm,10.2s
PRU Pruhonice 19.31 37 P **Pn 16 45 56.0 -1.3**
PRU AMS AMS 16 54 30.0
comp=Z,300nm,10.2s
TREC Trest 19.35 40 *e*P **Pn 16 45 57.1 -0.8**
comp=Z,300nm,6.4s
TREC Trest 19.35 40 *e*P **Pn 16 45 57.1 -0.8**
TREC AMS AMS 16 55 30.0
comp=Z,300nm,6.4s
FBE Freiberg 19.38 34 *e*P **Pn 16 45 57.9 -0.3**
CLL Collm 19.50 32 ⇓*i*P **Pn 16 45 59.7 +0.1**
CLL *e*S **Sn 16 49 35.0 -3.6**
CLL pmax pmax
comp=Z,12nm,0.9s
CLL Collm 19.50 32 *e*P **Pn 16 45 59.8 +0.2**
comp=Z,11nm,0.9s
CLL Collm 19.50 32 ⇓*i*P **Pn 16 45 59.7 +0.1**
comp=Z,12nm,0.9s
CLL *i* pP pP 16 46 02.7 +2.9
CLL *e*PPP 16 46 20.0
CLL *e*S **Sn 16 49 35.0 -3.6**
CLL Collm 19.50 32 ⇓*i*P **Pn 16 45 59.7 +0.1**
comp=Z,12nm,0.9s
CLL *i* 16 46 02.7
CLL *e*S **Sn 16 49 35.0 -3.6**
ESK Eskdalemuir 19.50 1 *e*P **Pn 16 45 58.7 -0.9**
ESK pmax pmax
comp=Z,16nm,1.1s
ESK Eskdalemuir 19.50 1 *e*P **Pn 16 45 58.7 -0.9**
comp=Z,16nm,1.1s
ESK Eskdalemuir 19.50 1 *e*P **Pn 16 45 58.7 -0.9**
comp=Z,16nm,1.1s
EKA Eskdalemuir Ar 19.52 1 P **Pn 16 46 00.0 +0.2**
comp=Z,0.5nm,0.3s,baz=177,slow=11,SNR=16
EKA Eskdalemuir Ar 19.52 1 P **Pn 16 46 00.0 +0.2**
EKA pmax pmax
comp=Z,1.0nm,0.3s
BRG Berggiesshubel 19.61 34 *e*P **Pn 16 46 00.4 -0.6**
BRG pmax pmax
comp=Z,3.0nm,0.9s
BRG MLR MLR
comp=N,222nm,10.2s
BRG MLR MLR
comp=E,80nm,5.3s
BRG MLR MLR
comp=Z,202nm,9.8s
BRG Berggiesshubel 19.61 34 *e*P **Pn 16 46 00.9 -0.1**
comp=Z,9.0nm,1.2s
BRG Berggiesshubel 19.61 34 *e*P **Pn 16 46 00.4 -0.6**
comp=Z,5.2nm,0.9s
BRG S **Sn 16 49 46.0 +4.6**
BRG
comp=N,371nm,10.2s
BRG
comp=E,134nm,5.3s
BRG
comp=Z,337nm,9.8s
ZST Bratislava 19.62 45 *e*P **Pn 16 46 03.7 +2.6**
ZST pmax pmax
comp=Z,7.0nm,0.6s
ZST Bratislava 19.62 45 *e*P **Pn 16 46 03.7 +2.6**
comp=Z,7.3nm,0.6s
PKSM Moragy 19.62 51 ⇓*i*P **Pn 16 45 59.7 -1.4**
PKSM Moragy 19.62 51 ⇓P **Pn 16 45 59.7 -1.4**
PVCC Panska Ves 19.67 36 *e*P **Pn 16 46 01.3 -0.4**
comp=Z,300nm,11.3s
PVCC Panska Ves 19.67 36 *e*P **Pn 16 46 01.3 -0.4**
PVCC AMS AMS 16 54 30.0
comp=Z,300nm,11.3s
OHR Ohrid 19.73 67 *e*P **Pn 16 46 00.7 -1.8**
OHR Ohrid 19.73 67 *e*P **Pn 16 46 00.6 -1.9**
MODS Modra-Piesok 19.81 44 *e*P **Pn 16 46 01.9 -1.5**
MODS *e*pP pP 16 46 04.8 +1.6
VRAC Vranov 19.95 41 P **Pn 16 46 03.1 -1.9**
comp=Z,0.8nm,0.3s,baz=242,slow=9.8,SNR=13
VRAC LR LR 16 53 53.8
comp=Z,58nm,18.2s,baz=101,slow=37
VRAC Vranov 19.95 41 ⇑*i*P **Pn 16 46 02.7 -2.3**
VRAC Vranov 19.95 41 ⇑P **Pn 16 46 02.6 -2.3**
BIA Bitola 20.11 68 *e*P **P 16 46 04.0 -1.2**
UPC Upice 20.36 38 *e*P **P 16 46 07.8 -0.1**
UPC *e*pP 16 46 11.3
DPC Dobruska-Polom 20.42 39 *e*P **P 16 46 08.8 +0.3**
comp=Z,300nm,10.7s
DPC Dobruska-Polom 20.42 39 *e*P **P 16 46 08.8 +0.3**
DPC *e*pP 16 46 12.2
DPC AMS AMS 16 54 50.0
comp=Z,300nm,10.7s
BSEG Bad Segeberg 20.53 24 *e*P **P 16 46 10.7 +1.1**
RUE Ruedersdorf 20.68 31 *e*P **P 16 46 12.4 +1.1**
comp=Z,72nm,1.0s
RUE Ruedersdorf 20.68 31 *e*P **P 16 46 10.8 -0.5**
comp=Z,47nm,0.9s
RUE Ruedersdorf 20.68 31 *e*P **P 16 46 10.8 -0.5**
comp=Z,47nm,0.9s
KSP Ksiaz 20.71 37 *e*P **P 16 46 12.4 +0.7**
KSP Ksiaz 20.71 37 ⇑*e*P **P 16 46 11.8 +0.1**
KSP *e*pP 16 46 14.8
MORC Moravsky Berou 20.72 41 ⇓*i*P **P 16 46 11.7 0.0**
MORC Moravsky Berou 20.72 41 *e*P **P 16 46 11.7 0.0**
VYHS Vyhne 20.77 46 *e*P **P 16 46 11.4 -0.8**
VYHS pmax pmax
comp=Z,2.0nm,0.9s
VYHS Vyhne 20.77 46 *e*P **P 16 46 11.4 -0.8**
comp=Z,2.3nm,0.9s
STIP Stip 20.85 66 *e*P **P 16 46 11.6 -1.6**
STIP Stip 20.85 66 *e*P **P 16 46 11.5 -1.7**
OKC Ostrava-Krasne 21.08 42 *e*P **P 16 46 13.6 -2.0**
PSZ Piszkesteto 21.12 48 *e*P **P 16 46 19.9 +3.8**
PSZ Piszkesteto 21.12 48 ⇓*i*P **P 16 46 16.5 +0.4**
PSZ Piszkesteto 21.12 48 *e*Pn **P 16 46 17.1 +1.0**
LIKS Likavka 21.20 44 *e*P **P 16 46 18.1 +1.2**
BZS Buzias 21.34 55 ⇑*i*P **P 16 46 17.7 -0.8**
KECS Kecovo 21.73 47 *e*P **P 16 46 22.7 +0.1**
KECS pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
KECS Kecovo 21.73 47 *e*P **P 16 46 22.7 +0.1**
comp=Z,8.9nm,1.0s,mb4.2
OJC Ojcow 22.18 42 *e*P **P 16 46 27.3 -0.2**
DRGR 22.44 53 ⇑*i*P **P 16 46 30.2 -0.1**
DRGR 22.44 53 ⇑P **P 16 46 30.2 -0.1**
CRVS Cervenica-Dubn 22.49 47 *e*P **P 16 46 31.1 +0.3**
STHS Stebnicka Huta 22.60 45 *e*P **P 16 46 33.6 +1.7**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb3.8

STHS **Stebnicka Huta** 22.60 45 *e*P P 16 46 33.6 +1.7
comp=Z,4.1nm,1.0s,mb3.8
UZH **Uzhgorod** 22.88 48 *e*P P 16 46 33.0 -1.8
KOLS **Kolonicke sedl** 22.99 47 *e*P P 16 46 36.1 +0.1
TORD **Torodi Ar. Bea** 23.06 167 P P 16 46 36.1 -0.8
comp=Z,16nm,0.8s,mb4.5,baz=348,slow=10.0,SNR=62
TORD LR LR 16 56 18.3
comp=Z,195nm,19.8s,MS3.6,baz=340,slow=39
IDI **Anoyia** 23.09 83 P P 16 46 37.1 -0.1
comp=Z,14nm,1.1s,mb4.3,baz=287,slow=19,SNR=2.5
APE **Apeiranthos** 23.36 78*d* *i*P P 16 46 38.3 -1.8
APE **Apeiranthos** 23.36 78 *i* P P 16 46 38.3 -1.8
VOIR 23.61 57 ⇓*i*P P 16 46 42.7 +0.2
VOIR 23.61 57 ⇓P P 16 46 42.7 +0.2
BBTS **Babate** 24.09 212 P P 16 46 47.3 +0.2
comp=Z,14nm,0.4s,mb4.8,baz=105,slow=1.2,SNR=4.7
BBTS LR LR 16 57 02.6
comp=Z,350nm,18.5s,MS3.9,baz=350,slow=39
MLR **Muntele Rosu** 24.23 57⇑*i*P P 16 46 48.6 +0.4
MLR **Muntele Rosu** 24.23 57 ⇑P P 16 46 48.6 +0.3
BUR08 **Bucovina Ar. S** 24.33 52 *e*P P 16 46 48.2 -0.9
BUR08 **Bucovina Ar. S** 24.33 52 *e*P P 16 46 48.2 -0.9
BURAR **Bucovina Array** 24.33 52⇑*i*P P 16 46 47.9 -1.2
BURAR **Bucovina Array** 24.33 52 ⇑P P 16 46 47.9 -1.2
VRI **Vrincioaia** 24.85 57⇓*i*P P 16 46 53.5 -0.4
VRI **Vrincioaia** 24.85 57 ⇓P P 16 46 53.5 -0.4
HFS **Hagfors** 26.75 19 P P 16 47 10.5 -0.4
comp=Z,20nm,0.9s,mb4.6,baz=195,slow=8.9,SNR=10
HFS LR LR 16 57 58.5
comp=Z,176nm,18.6s,MS3.6,baz=240,slow=37
HFS **Hagfors** 26.75 19 P P 16 47 10.5 -0.4
HFS pmax pmax
comp=Z,20nm,0.9s
HFS MLR MLR
comp=Z,176nm,18.6s
HFS **Hagfors** 26.75 19 P P 16 47 10.6 -0.4
HFS LR LR 16 57 58.5
NB2 **NORSAR Subarra** 26.93 16 P P 16 47 12.3 -0.3
comp=Z,9.2nm,0.8s,mb4.4,baz=206,slow=9.3
NOA **NORSAR Array B** 26.93 16 P P 16 47 12.4 -0.1
comp=Z,9.5nm,0.8s,mb4.4,baz=207,slow=9.0,SNR=9.5
NOA LR LR 16 59 41.3
comp=Z,225nm,18.3s,MS3.8,baz=225,slow=40
NOA **NORSAR Array B** 26.93 16 P P 16 47 12.4 -0.2
NOA pmax pmax
comp=Z,10.0nm,0.8s
NOA MLR MLR
comp=Z,225nm,18.3s
AKASG **Malin Array Be** 27.82 47 P P 16 47 16.2 -4.5
comp=Z,0.7nm,0.5s,baz=254,slow=11,SNR=2.5
AKASG **Malin Array Be** 27.82 47 P P 16 47 16.2 -4.5
AKASG pmax pmax
comp=Z,1.0nm,0.5s
DBIC **Dimbokro** 29.04 183 P P 16 47 31.7 0.0
comp=Z,12nm,0.8s,mb4.7,baz=352,slow=10,SNR=15
DBIC LR LR 16 59 46.4
comp=Z,212nm,18.5s,MS3.8,baz=337,slow=38
DBIC **Dimbokro** 29.04 183 P P 16 47 31.7 0.0
DBIC pmax pmax
comp=Z,12nm,0.8s
DBIC MLR MLR
comp=Z,212nm,18.5s
TIC **Toumodi** 29.07 183 *e*P P 16 47 31.6 -0.4
comp=Z,93nm,0.9s,mb5.5
TIC **Toumodi** 29.07 183 *e*P P 16 47 31.6 -0.4
TIC pmax pmax
comp=Z,93nm,0.9s,mb5.5
KIC **Kosan Boka** 29.34 182 *e*P P 16 47 33.8 -0.6
comp=Z,87nm,0.8s,mb5.5
LIC **Lamto** 29.48 183 *e*P P 16 47 35.3 -0.4
comp=Z,34nm,0.8s,mb4.8
LIC *e*pP pP 16 47 39.0 +1.8
LIC *e*MLR MLR
comp=Z,509nm,15.2s,MS4.0
LIC **Lamto** 29.48 183 *e*P P 16 47 35.4 -0.3
comp=Z,63nm,0.9s,mb5.3
LIC **Lamto** 29.48 183 *e*P P 16 47 35.3 -0.4
comp=Z,17nm,0.8s,mb4.8
LIC *e*pP pP 16 47 39.0 +1.8
LIC **Lamto** 29.48 183 *e*P P 16 47 35.3 -0.4
comp=Z,17nm,0.8s,mb4.8
LIC *e*pP pP 16 47 39.0 +1.8
LIC LR LR
comp=Z,250nm,15.3s,MS4.0
BORG **Borgarnes** 30.88 345 LR LR 16 58 32.4
comp=Z,123nm,21.2s,MS3.5,baz=108,slow=33
KAF **Kangasniemi** 32.25 26 *e*p P 16 47 59.1 -0.6
baz=238,slow=10
OBN **Obninsk** 33.48 42 *e*P P 16 48 11.1 +0.6
OBN *i* 16 50 50.4
OBN pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
OBN MLR MLR
comp=Z,100nm,17.0s,MS3.6
OBN **Obninsk** 33.48 42 *e*P P 16 48 11.1 +0.6
comp=Z,5.0nm,1.2s,mb4.3
OBN **Obninsk** 33.48 42 *i* PcP PcP 16 50 50.4 -1.0
comp=Z,100nm,17.0s
JOF **Joensuu** 34.58 27 *e*p P 16 48 17.5 -2.5
KIV **Kislovodsk** 35.98 63 *e*P P 16 48 31.9 -0.4
KIV pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
KIV **Kislovodsk** 35.98 63 *e*P P 16 48 31.9 -0.4
comp=Z,5.0nm,1.2s,mb4.3
ARCES **ARCESS Array B** 37.31 16 P P 16 48 43.0 -0.3
comp=Z,7.5nm,0.6s,mb4.7,baz=205,slow=5.4,SNR=42
ARCES PcP PcP 16 51 00.7 -1.7
comp=Z,2.0nm,0.8s,baz=228,slow=2.3,SNR=5.8
ARCES LR LR 17 04 28.2
comp=Z,124nm,20.6s,MS3.7,baz=107,slow=37
ARCES **ARCESS Array B** 37.31 16 P P 16 48 43.0 -0.3
ARCES 16 51 00.7
ARCES pmax pmax
comp=Z,8.0nm,0.6s
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES MLR MLR
comp=Z,124nm,20.6s
ARCES **ARCESS Array B** 37.31 16 PcP PcP 16 51 00.7 -1.7
comp=Z,124nm,20.6s
ARE0 **ARCESS Array S** 37.31 16 *e*P P 16 48 42.6 -0.7
ARE0 **ARCESS Array S** 37.31 16 *e*P P 16 48 42.6 -0.7
KEV **Kevo** 37.83 17 *e*p P 16 48 46.6 -1.1
comp=Z,6.0nm,0.5s,mb4.6
KEV **Kevo** 37.83 17 *e*P P 16 48 46.6 -1.1
KEV pmax pmax
comp=Z,6.0nm,0.5s,mb4.6
GNI **Garni** 37.91 69 *e*P P 16 48 47.0 -1.8
GNI pmax pmax
comp=Z,3.0nm,0.8s
GNI **Garni** 37.91 69 *e*P P 16 48 47.0 -1.8
comp=Z,3.0nm,0.8s,mb4.1
KBS **Kingsbay** 43.69 4 *e*P P 16 49 37.0 +1.0
ARU **Arti** 45.90 43*c* *i*P P 16 49 52.1 -1.8
ARU *e* 16 51 29.4
ARU *e* 16 51 38.9
ARU *e*S S 16 56 36.6 -2.0
ARU *e*SS SS 16 59 55.1 -7.7
ARU pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ARU **Arti** 45.90 43 *e*P P 16 49 52.1 -1.8
comp=Z,7.6nm,0.8s,mb4.7
ARU **Arti** 45.90 43 *e*PcP PcP 16 51 29.4 -1.4
ARU *e*S S 16 56 36.6 -2.0
SVE **Sverdlovsk** 47.04 43 *e*P P 16 50 01.9 -0.9
SVE pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SVE **Sverdlovsk** 47.04 43 *e*P P 16 50 01.9 -0.9
comp=Z,10.0nm,0.9s,mb4.8
KMBO **Kilima Mbogo** 52.84 125 P P 16 50 49.9 +2.5
comp=Z,2.8nm,0.8s,mb4.2,baz=53,slow=23,SNR=6.4
KMBO **Kilima Mbogo** 52.84 125 *e*P P 16 50 47.4 0.0
KMBO **Kilima Mbogo** 52.84 125 *e*P P 16 50 47.5 +0.1
BVAR **Borovoye Array** 53.10 47 LR LR 17 14 35.7
comp=Z,38nm,18.3s,MS3.5,baz=118,slow=37
EKS2 **Erkin-Say** 58.31 58 *e*P P 16 51 24.0 -2.5
comp=Z,17nm,1.3s,mb4.9
AML **Almayashu** 58.45 58 *e*P P 16 51 27.3 -0.1
comp=Z,6.0nm,1.2s,mb4.5
AML **Almayashu** 58.45 58 *e*P P 16 51 27.3 -0.1
comp=Z,6.0nm,1.2s,mb4.5
KURK **Kurchatov** 58.64 48⇑*e*P P 16 51 27.5 -1.1
KURK pmax pmax
comp=Z,12nm,1.0s,mb4.9
KURK **Kurchatov** 58.64 48 *e*P P 16 51 27.5 -1.1
comp=Z,12nm,1.0s,mb4.9
KURK **Kurchatov** 58.64 48 *e*P P 16 51 27.4 -1.1
comp=Z,13nm,1.1s,mb4.9
LSZ **Lusaka** 59.02 144 *e*P P 16 51 32.4 +0.9
LSZ pmax pmax
comp=Z,11nm,1.2s,mb4.8
LSZ **Lusaka** 59.02 144 *e*P P 16 51 32.4 +0.9
comp=Z,11nm,1.2s,mb4.8
NVS **Novosibirsk** 59.87 42 *e*P P 16 51 36.1 -1.0
ACSO **Alum Creek Sta** 60.75 300 *e*P P 16 51 44.0 +0.7
comp=Z,14nm,0.6s,mb5.3
ACSO **Alum Creek Sta** 60.75 300 *e*P P 16 51 44.0 +0.7
comp=Z,14nm,0.6s,mb5.3
ZAL **Zalesovo** 61.05 42 P P 16 51 43.9 -1.2
ZAL pmax pmax
comp=Z,2.0nm,0.7s
ZAL **Zalesovo** 61.05 42 P P 16 51 43.9 -1.2
comp=Z,2.0nm,0.7s,mb4.4
ZALV **Zalesovo Beam** 61.06 42 P P 16 51 43.9 -1.3
comp=Z,2.2nm,0.7s,mb4.4,baz=292,slow=7.6,SNR=6.9
MKAR **Makanchi Array** 62.34 51 P P 16 51 53.1 -0.9
comp=Z,13nm,0.7s,mb5.2,baz=286,slow=5.9,SNR=164
MKAR **Makanchi Array** 62.34 51 P P 16 51 53.1 -0.9
MKAR pmax pmax
comp=Z,13nm,0.7s
TZTN **Tazewell** 62.70 297 *e*P P 16 51 58.5 +2.0
TZTN **Tazewell** 62.70 297 *e*P P 16 51 58.5 +2.0
ULM **Lac du Bonnet** 64.83 315 P P 16 52 10.7 +0.3
comp=Z,3.6nm,0.4s,mb4.7,baz=63,slow=5.3,SNR=6.3
FFC **Flin Flon** 66.10 321 *e*P P 16 52 17.7 -0.7
FFC **Flin Flon** 66.10 321 *e*P P 16 52 17.7 -0.7
BDFB **Brasilia** 66.27 228 P P 16 52 20.6 +0.5
comp=Z,4.1nm,0.8s,mb4.5,baz=3.8,slow=15,SNR=3.1
BDFB **Brasilia** 66.27 228 P P 16 52 20.6 +0.6
BDFB pmax pmax
comp=Z,4.0nm,0.8s
BDFB **Brasilia** 66.27 228 P P 16 52 20.5 +0.5
PLAL **Pickwick Lake** 66.69 297 *e*P P 16 52 22.6 0.0
PLAL **Pickwick Lake** 66.69 297 *e*P P 16 52 22.6 0.0
FVM **French Village** 66.94 301 *e*P P 16 52 23.7 -0.5
FVM pmax pmax
comp=Z,26nm,1.5s,mb5.0
FVM **French Village** 66.94 301 *e*P P 16 52 23.7 -0.5
comp=Z,26nm,1.5s,mb5.0
FVM **French Village** 66.94 301 *e*P P 16 52 23.7 -0.4
comp=Z,26nm,1.5s,mb5.0
WMQ **Urumqi** 67.07 52 P P 16 52 25.2 +0.3
WMQ AP pP 16 52 30.0 +3.6
WMQ XP sP 16 52 32.5 +5.5
WMQ PCP PcP 16 52 54.0 +0.9
WMQ PP PP 16 54 55.0 +2.8
WMQ S S 17 01 17.0 -2.3
WMQ AMB AMB
comp=Z,16nm,0.9s,mb5.0
WMQ AMB AMB
comp=Z,75nm,5.8s
WMQ LR LR
comp=N,513nm,16.5s,MS4.9
WMQ LR LR
comp=E,459nm,19.2s,MS4.9
WMQ LR LR
comp=Z,621nm,24.0s,MS4.7
YKW3 **Yellowknife Ar** 67.62 332 *e*P P 16 52 27.9 -0.1
YKW3 **Yellowknife Ar** 67.62 332 *e*P P 16 52 27.9 -0.1
YKA **Yellowknife Ar** 67.65 332 P P 16 52 28.4 +0.2
comp=Z,18nm,0.8s,mb5.2,baz=59,slow=6.3,SNR=27
YKA **Yellowknife Ar** 67.65 332 P P 16 52 28.4 +0.2
YKA pmax pmax
comp=Z,19nm,0.8s
YKA **Yellowknife Ar** 67.65 332 P P 16 52 28.4 +0.2
comp=Z,19nm,0.8s,mb5.2
YKA **Yellowknife Ar** 67.65 332 P P 16 52 28.4 +0.2
ECSD **EROS,Sioux Fal** 68.31 309 *e*P P 16 52 32.4 -0.3
comp=Z,23nm,1.6s,mb5.0
ECSD **EROS,Sioux Fal** 68.31 309 *e*P P 16 52 32.4 -0.4
comp=Z,23nm,1.6s,mb5.0
BOSA **Boshof** 69.59 153 P P 16 52 40.5 -0.2
comp=Z,4.5nm,0.9s,mb4.4,baz=336,slow=6.2,SNR=12
BOSA **Boshof** 69.59 153 P P 16 52 40.5 -0.1
BOSA pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
BOSA **Boshof** 69.59 153 P P 16 52 40.5 -0.2
DGMT **Dagmar** 70.45 316 *e*P P 16 52 47.0 +1.1
DGMT **Dagmar** 70.45 316 *e*P P 16 52 47.0 +1.1
MIAR **Mount Ida** 70.84 299 *e*P P 16 52 48.4 -0.1
MIAR pmax pmax
comp=Z,11nm,0.8s,mb4.8
MIAR **Mount Ida** 70.84 299 *e*P P 16 52 48.4 -0.1
comp=Z,12nm,0.8s,mb4.9
MIAR **Mount Ida** 70.84 299 *e*P P 16 52 48.4 -0.1
comp=Z,12nm,0.8s,mb4.9
EDM **Edmonton** 72.56 324 *e*P P 16 52 59.0 +0.5
EDM **Edmonton** 72.56 324 *e*P P 16 52 59.0 +0.5
LAO **LASA Array** 72.57 315 *e*P P 16 52 59.9 +1.2
comp=Z,23nm,0.9s,mb5.1
RSSD **Black Hills** 72.70 312 *e*P P 16 52 59.8 +0.3
RSSD pmax pmax
comp=Z,12nm,1.0s,mb4.8
RSSD **Black Hills** 72.70 312 *e*P P 16 52 59.8 +0.3
comp=Z,12nm,1.0s,mb4.8
RSSD **Black Hills** 72.70 312 *e*P P 16 52 59.8 +0.2
comp=Z,12nm,1.0s,mb4.8
ZAK **Zakamensk** 72.71 40 *e*P P 16 52 53.0 -6.4
ZAK pmax pmax
comp=Z,2.0nm,1.6s,mb3.8
CBKS **Cedar Bluff** 72.85 306 *e*P P 16 53 00.4 -0.1
CBKS pmax pmax
comp=Z,26nm,0.7s,mb5.3
CBKS **Cedar Bluff** 72.85 306 *e*P P 16 53 00.4 -0.1
comp=Z,26nm,0.7s,mb5.3
CBKS **Cedar Bluff** 72.85 306 *e*P P 16 53 00.4 -0.1
comp=Z,26nm,0.7s,mb5.3
BOD **Bodaibo** 73.07 30 *e*P P 16 52 59.0 -2.4
BOD pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BOD **Bodaibo** 73.07 30 *e*P P 16 52 59.0 -2.4
comp=Z,4.0nm,1.0s,mb4.3
EGMT **Eagleton** 73.78 318 ⇑P P 16 53 05.6 -0.2
baz=74
EGMT **Eagleton** 73.78 318 *e*P P 16 53 06.3 +0.5
EGMT **Eagleton** 73.78 318 *e*P P 16 53 06.3 +0.5
WMOK **Wichita Mounta** 74.39 302 *e*P P 16 53 09.8 +0.2
WMOK pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
WMOK **Wichita Mounta** 74.39 302 *e*P P 16 53 09.8 +0.2
comp=Z,6.3nm,0.8s,mb4.6
WMOK **Wichita Mounta** 74.39 302 *e*P P 16 53 09.8 +0.1
comp=Z,6.3nm,0.8s,mb4.6
DAWY **Dawson** 74.53 341 *e*P P 16 53 10.9 +1.0
DAWY **Dawson** 74.53 341 *e*P P 16 53 10.9 +1.0
GCMT **Greycliff** 75.05 316 *e*P P 16 53 13.7 +0.5
GCMT **Greycliff** 75.05 316 *e*P P 16 53 13.7 +0.4
PHWY **Pilot Hill** 75.14 310 *e*P P 16 53 14.5 +0.6
PHWY **Pilot Hill** 75.14 310 *e*P P 16 53 14.5 +0.6
RLMT **Red Lodge** 75.21 315 *e*P P 16 53 13.9 -0.3
comp=Z,12nm,1.2s,mb4.7
RLMT **Red Lodge** 75.21 315 *e*P P 16 53 13.9 -0.3
comp=Z,12nm,1.2s,mb4.7
WALA **Waterton Lakes** 75.37 320 *e*P P 16 53 15.3 +0.3
comp=Z,16nm,0.8s,mb5.0
WALA **Waterton Lakes** 75.37 320 *e*P P 16 53 15.3 +0.2
comp=Z,16nm,0.8s,mb5.0
YAK **Yakutsk** 75.43 21⇑*e*P P 16 53 13.3 -1.8
YAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
YAK **Yakutsk** 75.43 21 *e*P P 16 53 13.3 -1.8
comp=Z,4.0nm,0.8s,mb4.4
HRY **Holter Researc** 75.70 318 *e*P P 16 53 18.0 +1.0
HRY **Holter Researc** 75.70 318 *e*P P 16 53 18.0 +1.1
A13A **Flathead Natio** 75.71 321 ⇑P P 16 53 16.8 -0.2
baz=76
D15A **Lincoln** 75.88 318 ⇓P P 16 53 18.3 +0.3
baz=76,SNR=7.3
SONM **Songino Array** 75.88 41 P P 16 53 17.2 -0.7
comp=Z,1.3nm,0.8s,mb3.9,baz=294,slow=5.2,SNR=9.0
SONM LR LR 17 33 06.9
comp=Z,123nm,19.7s,MS4.2,baz=323,slow=41
SONM **Songino Array** 75.88 41 P P 16 53 17.2 -0.7
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM MLR MLR
comp=Z,123nm,19.7s
RWWY **Rawlins** 76.00 311 *e*P P 16 53 19.5 +0.7
comp=Z,22nm,0.7s,mb5.2
RWWY **Rawlins** 76.00 311 *e*P P 16 53 19.5 +0.8
comp=Z,22nm,0.7s,mb5.2
C14A **Swan Lake** 76.08 319 ⇑P P 16 53 18.0 -1.2
baz=76
B13A **Whitefish** 76.09 320 ⇑P P 16 53 18.9 -0.2
baz=76,SNR=5.7
ISCO **Idaho Springs** 76.10 309 *e*P P 16 53 19.9 +0.5
ISCO pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ISCO **Idaho Springs** 76.10 309 *e*P P 16 53 19.9 +0.5
comp=Z,4.7nm,0.8s,mb4.5
ISCO **Idaho Sprimgs** 76.10 309 *e*P P 16 53 19.9 +0.5
comp=Z,4.7nm,0.8s,mb4.5
ULN **Ulaanbaatar** 76.20 40 *e*P P 16 53 18.7 -1.1
BOZ **Bozeman (W)** 76.23 317 ⇓P P 16 53 20.4 +0.4
baz=76
BOZ **Bozeman (W)** 76.23 317 *e*P P 16 53 21.2 +1.2
BOZ **Bozeman (W)** 76.23 317 *e*P P 16 53 21.2 +1.1
E15A **Deer Lodge** 76.32 318 ⇑P P 16 53 21.3 +0.8
baz=76,SNR=5.8
CHMT **Chamberlain Mo** 76.35 318 *e*P P 16 53 21.2 +0.5
CHMT **Chamberlain Mo** 76.35 318 *e*P P 16 53 21.2 +0.5
D14A **Greenough** 76.38 319 ⇑P P 16 53 19.8 -1.1
baz=76
C13A **Hot Springs** 76.58 320 ⇑P P 16 53 22.4 +0.5
baz=76
H16A **Russell Place,** 76.59 316 ⇑P P 16 53 23.1 +1.1
baz=76,SNR=6.2
F15A **Butte** 76.59 317 ⇑P P 16 53 22.6 +0.5
baz=76,SNR=6.4
FLWY **Flagg Ranch** 76.65 315 *e*P P 16 53 23.7 +1.3
comp=Z,12nm,0.9s,mb4.8
FLWY **Flagg Ranch** 76.65 315 *e*P P 16 53 23.7 +1.3
comp=Z,12nm,0.9s,mb4.8
A11A **Hall Mountain,** 76.69 321 ⇑P P 16 53 22.9 +0.4
baz=76,SNR=6.8
MSO **Missoula** 76.77 319 *e*P P 16 53 23.9 +0.8
MSO **Missoula** 76.77 319 *e*P P 16 53 23.9 +0.9
BW06 **Boulder Array** 76.78 313 *e*P P 16 53 23.2 0.0
BW06 **Boulder Array** 76.78 313 *e*P P 16 53 23.2 +0.1
PDAR **Pinedale Array** 76.78 313 P P 16 53 23.1 0.0
comp=Z,10.0nm,0.8s,mb4.8,baz=69,slow=8.1,SNR=61
PDAR **Pinedale Array** 76.78 313 P P 16 53 23.1 -0.1
LOHW **Long Hollow** 76.88 315 *e*P P 16 53 24.5 +0.8
D13A **Huson** 76.88 319 ⇓P P 16 53 23.2 -0.4
baz=77,SNR=8.6
IMW **Indian Meadow** 76.90 315 *e*P P 16 53 25.1 +1.3
comp=Z,5.3nm,0.9s,mb4.5
IMW **Indian Meadow** 76.90 315 *e*P P 16 53 25.1 +1.2
comp=Z,5.3nm,0.9s,mb4.5
DLMT **Dillon** 76.94 317 *e*P P 16 53 25.7 +1.6
comp=Z,12nm,0.9s,mb4.8
DLMT **Dillon** 76.94 317 *e*P P 16 53 25.7 +1.7
comp=Z,12nm,0.9s,mb4.8
G15A **Dillon** 77.01 317 ⇓P P 16 53 24.7 +0.3
baz=77
C12B **Naegeli Ranch,** 77.03 320 ⇑P P 16 53 24.9 +0.4
baz=77
GTA **Gaotai** 77.10 51 *e*P P 16 53 24.8 -0.3
GTA AP pP 16 53 28.9 +2.3
GTA XP sP 16 53 32.2 +5.0
GTA PP PP 16 56 19.1 +1.0
GTA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GTA AMB AMB
comp=Z,86nm,6.9s
GTA LR LR
comp=N,212nm,19.5s,MS4.6
GTA LR LR
comp=E,200nm,17.7s,MS4.6
GTA LR LR
comp=Z,419nm,23.4s
E13A **Victor** 77.15 318 ⇓P P 16 53 25.1 0.0
baz=77,SNR=12
TPAW **Teton Pass** 77.16 315 *e*P P 16 53 26.4 +1.1
TPAW **Teton Pass** 77.16 315 *e*P P 16 53 26.4 +1.2
REDW **Red Top Meadow** 77.17 314 *e*P P 16 53 26.4 +1.0
comp=Z,7.3nm,0.8s,mb4.7
REDW **Red Top Meadow** 77.17 314 *e*P P 16 53 26.4 +1.0
comp=Z,7.3nm,0.8s,mb4.7
SDCO **Great Sand Dun** 77.21 307 *e*P P 16 53 26.3 +0.6
SDCO **Great Sand Dun** 77.21 307 *e*P P 16 53 26.3 +0.6
A10A **Northport** 77.28 322 ⇓P P 16 53 25.6 -0.3
baz=77
C11A **Tepee Creek (N** 77.36 320 ⇑P P 16 53 26.5 +0.2
baz=77
D12A **Red Ives Fores** 77.38 319 ⇑P P 16 53 26.3 -0.2
baz=77,SNR=7.4
JCT **Junction City** 77.45 298 *e*P P 16 53 27.6 +0.4
JCT pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
JCT **Junction City** 77.45 298 *e*P P 16 53 27.6 +0.4
comp=Z,9.8nm,0.7s,mb4.8
JCT **Junction City** 77.45 298 *e*P P 16 53 27.6 +0.4
comp=Z,9.8nm,0.7s,mb4.8
RRI2 **Red Ridge** 77.45 315 *e*P P 16 53 28.1 +1.2
NEW **Newport** 77.53 321 *e*P P 16 53 27.1 -0.2
NEW pmax pmax
comp=Z,5.0nm,0.9s
NEW **Newport** 77.53 321 *e*P P 16 53 27.1 -0.2
comp=Z,4.7nm,0.9s,mb4.4
NEW **Newport** 77.53 321 *e*P P 16 53 27.1 -0.2
comp=Z,4.7nm,0.9s,mb4.4
F13A **Darby** 77.63 318 ⇑P P 16 53 28.3 +0.3
baz=77
OTAV **Otavalo** 77.66 261 *e*P P 16 53 30.1 +1.5
comp=Z,7.0nm,0.6s,mb4.8
OTAV **Otavalo** 77.66 261 *e*P P 16 53 30.1 +1.6
comp=Z,7.0nm,0.6s,mb4.8
J16A **Bone** 77.67 315 ⇑P P 16 53 29.1 +0.9
baz=78,SNR=12
H14A **Leadore** 77.84 317 ⇓P P 16 53 30.1 +1.0
baz=78
D11A **Klaveano Farm,** 77.90 320 ⇓P P 16 53 28.7 -0.7
baz=78
E12A **Beaver Dam Sad** 77.91 319 ⇓P P 16 53 29.6 +0.2
baz=78
N18A **Larsen Ranch,** 77.92 312 ⇓P P 16 53 29.8 +0.2
baz=78,SNR=7.1
O19A **Miners Draw (B** 77.99 311 ⇑P P 16 53 30.1 +0.1
baz=78,SNR=19
J15A **Blackfoot** 78.06 315 ⇑P P 16 53 31.6 +1.2
baz=78,SNR=14
F12A **Elk City** 78.16 318 ⇓P P 16 53 30.6 -0.3
baz=78
E11A **Bogner Ranch,** 78.28 319 ⇑P P 16 53 30.9 -0.6
baz=78,SNR=10
I14A **Mackay** 78.31 316 ⇑P P 16 53 32.5 +0.8
baz=78,SNR=10.0
H13A **Challis** 78.36 317 ⇓P P 16 53 33.1 +1.1
baz=78,SNR=34
F11A **Grangeville** 78.56 319 ⇑P P 16 53 31.9 -1.1
baz=78,SNR=5.6
B08A **Colville Reser** 78.58 322 ⇑P P 16 53 33.4 +0.3
baz=78,SNR=6.4
HWUT **Hardware Ranch** 78.66 313 *e*P P 16 53 34.0 +0.3
comp=Z,9.0nm,0.8s,mb4.8
HWUT **Hardware Ranch** 78.66 313 *e*P P 16 53 34.0 +0.3
comp=Z,9.0nm,0.8s,mb4.8
I13A **Wildhorse Cree** 78.70 316 ⇓P P 16 53 36.0 +2.2
baz=78,SNR=7.1
H12A **Diamond D Ranc** 78.70 317 ⇑P P 16 53 34.6 +0.7
baz=78,SNR=16
C08A **Higginbotham F** 78.82 322 ⇑P P 16 53 34.4 0.0
baz=79
L15A **Malad City** 78.90 314 ⇑P P 16 53 35.3 +0.3
baz=79,SNR=7.6
G11A **Walters Elk Ra** 78.93 319 ⇓P P 16 53 35.3 +0.2
baz=79
O17A **Robinson Place** 79.03 312 ⇑P P 16 53 35.8 0.0
baz=79,SNR=8.4
J13A **Cove Ranch, Pi** 79.06 316 ⇑P P 16 53 37.2 +1.4
baz=79
P18A **Preston Nutter** 79.08 311 P P 16 53 36.8 +0.8
baz=79,SNR=9.3
HLID **Hailey** 79.09 316 ⇑P P 16 53 37.1 +1.1
baz=79,SNR=11
HLID **Hailey** 79.09 316 *e*P P 16 53 37.0 +1.0
comp=Z,6.9nm,0.9s,mb4.6
HLID **Hailey** 79.09 316 *e*P P 16 53 37.0 +1.0
comp=Z,6.9nm,0.9s,mb4.6
PV10 **Paradox Valley** 79.09 310 *e*P P 16 53 36.6 +0.5
PV10 **Paradox Valley** 79.09 310 *e*P P 16 53 36.6 +0.5
DAU **Daniels Canyon** 79.21 312 *e*P P 16 53 37.1 +0.3
DAU **Daniels Canyon** 79.21 312 *e*P P 16 53 37.1 +0.3
Q18A **Rafter H Ranch** 79.33 311 ⇑P P 16 53 37.0 -0.4
baz=79,SNR=5.5
L14A **Malta** 79.38 314 ⇑P P 16 53 38.1 +0.5
baz=79
C07A **Waterville** 79.39 322 ⇑P P 16 53 37.7 +0.1

baz=79
G10A Bishop Farm, J 79.46 319 ⇓P **P 16 53 37.6 -0.4**
baz=79
ANMO Albuquerque 79.47 305 P **P**
comp=Z,0.5nm,0.4s,mb3.8,baz=100,slow=6.6,SNR=3.7
ANMO Albuquerque 79.47 305 *e*P **P 16 53 38.3 0.0**
ANMO Albuquerque 79.47 305 P **P 16 53 38.7 +0.4**
P17A Butcher Ranch, 79.48 311 ⇓P **P 16 53 38.3 +0.1**
baz=79
S19A Harvey Farm, M 79.53 309 ⇑P **P 16 53 39.0 +0.5**
baz=79,SNR=8.1
SRU San Rafael 79.57 311 *e*P **P 16 53 39.1 +0.4**
SRU San Rafael 79.57 311 *e*P **P 16 53 39.1 +0.4**
ETW Entiat 79.58 322 *e*P **P 16 53 38.5 -0.1**
ETW Entiat 79.58 322 *e*P **P 16 53 38.5 -0.2**
LNOR Lincton Mounta 79.69 320 *e*P **P 16 53 38.9 -0.4**
LNOR Lincton Mounta 79.69 320 *e*P **P 16 53 38.9 -0.4**
I11A Placerville 79.72 317 ⇓P **P 16 53 39.5 0.0**
baz=80
M14A Sheep Mountain 79.78 314 ⇓P **P 16 53 39.8 0.0**
baz=80,SNR=5.9
G09A Cove 79.82 319 ⇑P **P 16 53 39.7 -0.2**
baz=80
BMO Blue Mountains 79.84 319 *e*P **P 16 53 40.1 0.0**
BMO pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BMO Blue Mountains 79.84 319 *e*P **P 16 53 40.1 0.0**
comp=Z,4.8nm,0.7s,mb4.5
TMUT Trail Mountain 79.87 311 *e*P **P 16 53 41.0 +0.6**
TMUT Trail Mountain 79.87 311 *e*P **P 16 53 41.0 +0.6**
BGU Big Grassy Mou 79.95 314 *e*P **P 16 53 40.3 -0.5**
BGU Big Grassy Mou 79.95 314 *e*P **P 16 53 40.3 -0.4**
CPUP Villa Florida 80.00 227 P **P 16 53 41.3 +0.2**
comp=Z,1.7nm,0.5s,mb4.2,baz=40,slow=5.7,SNR=9.6
CPUP Villa Florida 80.00 227 P **P 16 53 41.3 +0.2**
CPUP pmax pmax
comp=Z,2.0nm,0.5s
T19A Beclabito 80.02 308 ⇓P **P 16 53 41.0 -0.2**
baz=80
LPAZ La Paz 80.08 242 P **P 16 53 42.2 +0.5**
comp=Z,1.8nm,0.8s,mb4.1,baz=55,slow=4.8,SNR=11
LPAZ La Paz 80.08 242 P **P 16 53 42.2 +0.5**
LPAZ pmax pmax
comp=Z,2.0nm,0.8s
N14A Grayback Hills 80.09 314 ⇑P **P 16 53 41.2 -0.3**
baz=80,SNR=7.2
R17A Hanksville Air 80.11 310 ⇑P **P 16 53 41.5 -0.1**
baz=80,SNR=13
S18A Hurst Farm, Bl 80.11 309 ⇑P **P 16 53 41.9 +0.3**
baz=80
C05A Tolt Reservoir 80.19 323 ⇑P **P 16 53 41.8 -0.2**
baz=80
M13A Montello 80.34 314 ⇓P **P 16 53 43.2 +0.4**
baz=80
R16A Teasdale 80.67 311 ⇓P **P 16 53 45.0 +0.3**
baz=80,SNR=16
L11A Cat Creek Ranc 80.74 316 ⇑P **P 16 53 46.0 +1.0**
baz=80,SNR=7.7
U18A Rough Rock, Ch 80.80 308 ⇑P **P 16 53 46.1 +0.6**
baz=81
G07A Ruggs Ranch, H 80.82 320 ⇑P **P 16 53 45.5 +0.1**
baz=81
TXAR Lajitas Array 80.86 299 P **P 16 53 46.5 +0.7**
comp=Z,1.0nm,0.6s,mb3.9,baz=75,slow=5.6,SNR=10
TXAR Lajitas Array 80.86 299 P **P 16 53 46.5 +0.7**
TXAR pmax pmax
comp=Z,1.0nm,0.6s
LON Longmire 80.90 322 *e*P **P 16 53 45.5 -0.3**
LON pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LON Longmire 80.90 322 *e*P **P 16 53 45.5 -0.3**
comp=Z,4.8nm,0.7s,mb4.5
LON Longmire 80.90 322 *e*P **P 16 53 45.5 -0.2**
comp=Z,4.8nm,0.7s,mb4.5
MSU Marysvale 80.95 311 *e*P **P 16 53 47.1 +0.9**
MSU Marysvale 80.95 311 *e*P **P 16 53 47.1 +0.9**
S16A Weppner Ranch, 81.09 310 ⇓P **P 16 53 47.1 +0.2**
baz=81
U17A Shonto 81.20 309 ⇑P **P 16 53 48.0 +0.4**
baz=81
L10A Juniper Basin 81.20 316 ⇑P **P 16 53 48.3 +0.9**
baz=81
M11A Holland Ranch, 81.23 315 ⇓P **P 16 53 48.2 +0.6**
baz=81
Q14A Sevier Lake (B 81.32 312 P **P 16 53 48.6 +0.5**
baz=81,SNR=7.6
ELK Elko 81.36 314 P **P 16 53 49.4 +1.1**
comp=Z,4.2nm,0.8s,mb4.4,baz=47,slow=5.5,SNR=17
ELK Elko 81.36 314 *e*P **P 16 53 49.2 +0.9**
ELK pmax pmax
comp=Z,8.0nm,1.1s
ELK Elko 81.36 314 *e*P **P 16 53 49.2 +0.9**
comp=Z,8.1nm,1.1s,mb4.6
ELK Elko 81.36 314 *e*P **P 16 53 49.2 +0.9**
comp=Z,8.1nm,1.1s,mb4.6
O12A Currie 81.38 314 ⇓P **P 16 53 49.0 +0.6**
baz=81,SNR=6.8
P13A Bates Ranch, G 81.47 313 ⇑P **P 16 53 49.5 +0.5**
baz=81,SNR=7.5
K09A Rome 81.49 317 ⇑P **P 16 53 49.9 +1.0**
baz=81
M10A I.L. Ranch, Tu 81.60 316 ⇓P **P 16 53 51.4 +1.8**
baz=81,SNR=5.2
LZH Lanzhou 81.65 51 *e*P **P 16 53 50.5 +0.6**
LZH AP pP 16 53 54.0 +2.5
LZH XP sP 16 53 56.5 +4.4
LZH AMB AMB
comp=Z,30nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,90nm,4.7s
LZH LR LR
comp=N,145nm,16.3s
LZH LR LR
comp=Z,322nm,19.2s,MS4.7
U16A Tuba City 81.78 309 ⇓P **P 16 53 51.8 +1.2**
baz=82,SNR=12
Q13A Wheeler Ranch, 81.79 312 ⇑P **P 16 53 51.1 +0.5**
baz=82
P12A McGill 81.98 313 ⇑P **P 16 53 52.5 +0.9**
baz=82
O11A Cowboy Ranch, 82.00 314 ⇓P **P 16 53 52.0 +0.3**
baz=82,SNR=5.2
T15A Red Dirt Ranch 82.02 310 ⇑P **P 16 53 51.5 -0.3**
baz=82,SNR=5.1
L08A Fields 82.17 317 ⇓P **P 16 53 53.9 +1.4**
baz=82
R13A O'Grain Ranch, 82.25 312 ⇓P **P 16 53 53.9 +0.8**
baz=82
U15A North Rim 82.33 310 ⇓P **P 16 53 53.5 0.0**
baz=82,SNR=8.7
BMN Battle Mountai 82.71 315 *e*P **P 16 53 56.0 +0.6**
BMN pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
BMN Battle Mountai 82.71 315 *e*P **P 16 53 56.0 +0.6**
comp=Z,4.8nm,0.9s,mb4.5
BMN Battle Mountai 82.71 315 *e*P **P 16 53 56.0 +0.6**
comp=Z,4.8nm,0.9s,mb4.5
O09A Fish Creek Ran 82.86 315 ⇓P **P 16 53 56.7 +0.5**
baz=83,SNR=8.1
U14A Mt Trumbull 82.89 310 P **P 16 53 57.0 +0.5**
baz=83,SNR=7.9
T13A Saint George 82.96 311 ⇓P **P 16 53 57.6 +0.9**
baz=83
N08A GE Springer Mi 82.99 316 ⇓P **P 16 53 57.9 +1.0**
baz=83
X16A Lo Mia Camp, P 83.05 308 ⇑P **P 16 53 58.8 +1.5**
baz=83
R11A Troy Canyon, C 83.11 313 P **P 16 53 58.2 +0.7**
baz=83,SNR=12
HHC Hu-ho-hao-te 83.21 44 *e*P **P 16 53 54.7 -3.3**
HHC AP pP 16 53 58.6 -1.0
HHC XP sP 16 54 00.7 +0.6
HHC PP PP 16 57 06.8 -1.9
HHC AMB AMB
comp=Z,15nm,0.6s,mb5.2
HHC AMB AMB
comp=Z,109nm,7.4s
HHC LR LR
comp=N,280nm,18.0s,MS4.8
HHC LR LR
comp=E,202nm,17.2s,MS4.8
HHC LR LR
comp=Z,382nm,18.4s,MS4.8
Y16A Circle Bar Ran 83.41 307 ⇓P **P 16 54 00.6 +1.4**
baz=83,SNR=5.5
319A Douglas 83.51 304 ⇑P **P 16 54 01.5 +1.7**
baz=83,SNR=5.6
X15A Humboldt 83.52 308 ⇓P **P 16 54 01.3 +1.6**
baz=83
R10A Warm Springs 83.58 313 ⇓P **P 16 54 01.4 +1.5**
baz=83
W14A Seligman 83.60 309 ⇓P **P 16 54 01.7 +1.6**
baz=83,SNR=7.0
T11A Corn Creek, Al 83.61 312 ⇑P **P 16 54 01.4 +1.2**
baz=83,SNR=6.7
L05A Lakeview 83.63 318 ⇑P **P 16 54 01.5 +1.4**
baz=83
218A Dragoon 83.66 305 ⇓P **P 16 54 01.6 +1.1**
baz=84,SNR=7.6
117A Oracle 83.75 306 ⇑P **P 16 54 01.9 +1.0**
baz=84,SNR=12
S10A Tonopah Range, 84.00 313 ⇑P **P 16 54 02.0 -0.1**
baz=84,SNR=5.9
R09A Tonopah 84.07 313 ⇑P **P 16 54 03.0 +0.6**
baz=84
217A Green Valley 84.29 305 ⇓P **P 16 54 04.8 +1.1**
baz=84
M04C Macdoel 84.36 319 ⇑P **P 16 54 04.9 +1.0**
baz=84
Y14A Wickenburg 84.36 308 ⇓P **P 16 54 05.2 +1.2**
baz=84
TPNV Topopah Spring 84.43 312 ⇑P **P 16 54 05.0 +0.7**
baz=84
S09A Goldfield 84.50 313 ⇑P **P 16 54 05.3 +0.6**
baz=84
NVAR Mina Array Bea 84.66 314 P **P 16 54 05.6 +0.1**
comp=Z,0.8nm,0.8s,mb3.9,baz=34,slow=0.5,SNR=4.7
CD2 Chengdu 84.81 55 *e*P **P 16 54 05.5 -0.9**
CD2 AP pP 16 54 09.9 +2.0
CD2 XP sP 16 54 12.8 +4.3
CD2 PP PP 16 57 22.3 +0.2
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.3
CD2 AMB AMB
comp=Z,30nm,6.8s
CD2 LR LR
comp=N,210nm,14.8s
CD2 LR LR
comp=Z,180nm,16.2s,MS4.5
BEKR Beckwourth 84.86 316 ⇑P **P 16 54 07.4 +0.9**
baz=85
R06C Coleville 85.27 315 ⇓P **P 16 54 10.1 +1.6**
baz=85
WAKR Walker 85.27 315 *e*P **P 16 54 10.1 +1.6**
WAKR Walker 85.27 315 *e*P **P 16 54 10.1 +1.6**
P05C Yuba Gap, Truc 85.39 316 ⇑P **P 16 54 09.9 +0.8**
baz=85
MTUM Tungsten Hills 85.54 314 *e*P **P 16 54 10.6 +0.7**
MTUM Tungsten Hills 85.54 314 *e*P **P 16 54 10.6 +0.7**
XAN Xi'an 86.16 50 P **P 16 54 12.7 -0.3**
XAN AMB AMB
comp=Z,10.0nm,1.1s,mb5.0
XAN AMB AMB
comp=Z,29nm,4.0s
BJI Beijing 86.31 42 P **P 16 54 12.9 -0.8**
BJI AMB AMB
comp=Z,8.0nm,0.9s,mb5.0
ISA Isabella 86.62 312 *e*P **P 16 54 16.2 +0.9**
ISA Isabella 86.62 312 *e*P **P 16 54 16.2 +0.9**
KMI Kunming 87.72 61 P **P 16 54 19.5 -1.3**
KMI AP pP 16 54 24.2 +1.8
KMI XP sP 16 54 26.6 +3.7
KMI PP PP 16 57 47.6 +1.8
KMI PPP 16 59 46.0
KMI AMB AMB
comp=Z,4.0nm,1.0s,mb4.6
KMI AMB AMB
comp=Z,66nm,3.3s
KMI LR LR
comp=N,99nm,12.7s,MS4.5
KMI LR LR
comp=E,107nm,15.9s,MS4.5
KMI LR LR
comp=Z,110nm,20.4s,MS4.3
CN2 Changchun 88.18 34 *e*P **P 16 54 19.7 -2.9**
CMAR Chiang Mai Arr 89.03 68 P **P 16 54 26.1 -1.0**
comp=Z,2.3nm,1.0s,mb4.5,baz=305,slow=6.8,SNR=7.0
CMAR Chiang Mai Arr 89.03 68 P **P 16 54 26.1 -1.0**
CMAR pmax pmax
comp=Z,2.0nm,1.0s
CMAR Chiang Mai Arr 89.03 68 P **P 16 54 26.0 -1.1**
GYA Guiyang 89.61 57 *e*P **P 16 54 30.0 +0.3**
GYA PP PP 16 58 02.4 +1.6
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,110nm,6.4s
GYA LR LR
comp=N,440nm,20.2s,MS5.0
GYA LR LR
comp=E,420nm,21.0s,MS5.0
GYA LR LR
comp=Z,450nm,20.8s,MS4.9
NJ2 Nanjing 93.54 46 *e*P **P 16 54 48.2 +0.4**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.8
SSE Sheshan 95.60 45 P **P 16 54 54.7 -2.6**
SSE S S 17 06 09.8 -5.2
SSE AMB AMB
comp=Z,82nm,5.6s
SSE LR LR
comp=N,255nm,25.0s,MS4.7
SSE LR LR
comp=E,228nm,25.0s,MS4.7
SSE LR LR
comp=Z,305nm,25.0s,MS4.7
ASAR Alice Springs 141.38 84 PKhKP 17 00 58.3
comp=Z,1.1nm,0.6s,baz=274,slow=2.7,SNR=2.9
ASAR Alice Springs 141.38 84 PKIKP PKPdf 17 00 58.3 -4.6
ASAR pmax pmax
comp=Z,1.0nm,0.6s
STKA Stephens Creek 150.85 92 PKPbc PKPbc 17 01 23.3 -1.0
comp=Z,16nm,0.9s,baz=343,slow=3.8,SNR=6.5

*ISCJB **08** 16:43:55.5±0.5, 3582N±002×354W±003, h8km±4km, Error ellipse: s-maj=4.3km s-min=3.3km az=26.1*
*NEIC **08** 16:43:56.6, 3582N×355W, h0km, MN2.8(MDD), After MDD.*
*CSEM **08** 16:43:56.4±0.1, 3573N×352W, h25km, ML2.8, Error ellipse: s-maj=2.8km s-min=2.1km az=104.0*
*MDD **08** 16:43:56.7±0.4, 3584N×352W, h0km, mbLg3.2/6, Error ellipse: s-maj=3.8km s-min=3.1km az=100.0, PRIMO*
*CNRM **08** 16:43:58.8, 3576N×340W, h30km, MD3.6*
ISC 08 16:43:56.0±0.5, 3585N±002×356W±003, h5km±4km, n56, σ0s98/92, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
EALB	**Alboran**	**0.43**	**78**	Pg	**Pg**	**16 44 04.0**	**-0.4**
	76nm,0.1s,SNR=7.8						
EALB				Lg		16 44 09.6	
	1μm,0.2s,SNR=9.4						
EALB	**Alboran**	**0.43**	**78**	P	**Pg**	**16 44 04.0**	**-0.4**
	76nm,0.1s,SNR=7.8						
EALB				S	**Sg**	**16 44 10.4**	**+0.3**
	989nm,0.2s,SNR=9.4						
EALB	**Alboran**	**0.43**	**78**	P	**Pg**	**16 44 04.0**	**-0.4**
EALB				S	**Sg**	**16 44 10.4**	**+0.3**
MPAL	**Palemas**	**0.70**	**207**	*i* P	**Pg**	**16 44 11.0**	**+1.6**
MPAL				*i* S	**Sg**	**16 44 20.0**	**+1.6**
TOU	**Touzarine**	**0.90**	**190**	*i* P	**Pg**	**16 44 14.0**	**+0.8**
TOU				*i* S	**Sg**	**16 44 24.5**	**-0.4**
ZAI	**Zaio**	**1.10**	**143**	*e*P	**Pg**	**16 44 14.5**	**-2.6**
ZAI				*i* S	**Sg**	**16 44 27.0**	**-4.3**
EMAL	**Malaga-Limoner**	**1.15**	**323**	Pg	**Pg**	**16 44 22.7**	**+4.6**
	22nm,0.2s,SNR=7.9						
EMAL				Lg		16 44 35.1	
	295nm,0.1s,SNR=7.9						
EBER	**Berja**	**1.18**	**27**	Pg	**Pg**	**16 44 18.9**	**+0.3**
	6.4nm,0.1s,SNR=7.9						
EBER				Lg		16 44 33.8	
	685nm,0.6s,SNR=7.6						
EBER	**Berja**	**1.18**	**27**	P	**Pg**	**16 44 19.4**	**+0.8**
	6.4nm,0.1s,SNR=7.9						
EBER				S	**Sg**	**16 44 33.8**	**-0.1**
	264nm,0.3s,SNR=7.6						
EBER	**Berja**	**1.18**	**27**	P	**Pg**	**16 44 19.4**	**+0.7**
EBER				S	**Sg**	**16 44 33.8**	**-0.1**
ERON	**Agron**	**1.19**	**350**	Pg	**Pg**	**16 44 17.6**	**-1.2**
	41nm,0.4s,SNR=7.9						
ERON				Lg		16 44 34.6	
	48nm,0.2s,SNR=7.9						
ERON	**Agron**	**1.19**	**350**	P	**Pg**	**16 44 18.6**	**-0.2**
ERON				S	**Sg**	**16 44 34.6**	**+0.5**
	48nm,0.2s,SNR=7.9						
ERON	**Agron**	**1.19**	**350**	P	**Pg**	**16 44 18.6**	**-0.2**
ERON				S	**Sg**	**16 44 34.6**	**+0.4**
EMIJ	**Mijas**	**1.22**	**306**	Pg	**Pg**	**16 44 18.8**	**-0.5**
	118nm,0.5s,SNR=7.9						
EMIJ				Lg		16 44 34.4	
	101nm,0.2s,SNR=5.9						
EMIJ	**Mijas**	**1.22**	**306**	P	**Pg**	**16 44 18.8**	**-0.5**
	7.3nm,0.1s,SNR=7.9						
EMIJ				S	**Sg**	**16 44 34.4**	**-0.7**
	101nm,0.2s,SNR=5.9						
EMIJ	**Mijas**	**1.22**	**306**	P	**Pg**	**16 44 18.8**	**-0.5**
EMIJ				S	**Sg**	**16 44 34.4**	**-0.6**
EQUE	**Quentar**	**1.36**	**4**	Pn	**Pn**	**16 44 22.0**	**+0.3**
	0.9nm,0.1s,SNR=7.9						
EQUE				Sn	**Sn**	**16 44 38.4**	**-1.7**
	77nm,0.4s,SNR=7.9						
EQUE	**Quentar**	**1.36**	**4**	P	**Pn**	**16 44 22.0**	**+0.3**
	0.9nm,0.1s,SNR=7.9						
EQUE				S	**Sb**	**16 44 39.3**	**-0.3**
	77nm,0.4s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.38**	**340**	Pg	**Pg**	**16 44 22.4**	**-0.1**
	58nm,0.7s,SNR=7.9						
ELOJ				Lg		16 44 41.9	
	60nm,0.3s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.38**	**340**	P	**Pn**	**16 44 22.4**	**+0.4**
	1.8nm,0.2s,SNR=7.9						
ELOJ				S	**Sb**	**16 44 42.6**	**+2.2**
	60nm,0.3s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.38**	**340**	P	**Pn**	**16 44 22.4**	**+0.4**
ELOJ				S	**Sb**	**16 44 42.6**	**+2.2**
ECOG	**Cogollos-Vega**	**1.43**	**360**	Pg	**Pg**	**16 44 22.8**	**-0.5**
	2.2nm,0.2s,SNR=7.9						
ECOG				Lg		16 44 44.2	
	68nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.43**	**360**	P	**Pn**	**16 44 22.8**	**+0.2**
	2.2nm,0.2s,SNR=7.9						
ECOG				S	**Sb**	**16 44 42.4**	**+0.8**
	68nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.43**	**360**	P	**Pn**	**16 44 22.8**	**+0.2**
ECOG				S	**Sb**	**16 44 42.4**	**+0.8**
ECEU	**Ceuta**	**1.48**	**272**	Sn	**Sn**	**16 44 41.8**	**-1.3**
	26nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**1.48**	**272**	P	**Pn**	**16 44 23.7**	**+0.4**
	18nm,0.2s,SNR=7.9						
ECEU				S	**Sn**	**16 44 42.0**	**-1.0**
	26nm,0.1s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.66**	**292**	Lg		16 44 50.3	
	122nm,0.6s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.66**	**292**	P	**Pn**	**16 44 25.4**	**-0.4**
	1.9nm,0.1s,SNR=7.9						
EJIF				S	**Sn**	**16 44 47.6**	**+0.1**
	20nm,0.2s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.66**	**292**	P	**Pn**	**16 44 25.4**	**-0.4**
EJIF				S	**Sn**	**16 44 47.6**	**+0.1**
TZK	**Tazeka**	**1.83**	**196**	*i* P	**Pn**	**16 44 27.0**	**-1.1**
TZK				*i* S	**Sn**	**16 44 47.0**	**-4.7**
EQES	**Quesada**	**1.99**	**11**	Pn	**Pn**	**16 44 31.0**	**+0.7**
	19nm,0.3s,SNR=7.9						
EQES				Sn	**Sn**	**16 44 56.1**	**+0.4**
	81nm,0.3s,SNR=7.9						
EQES	**Quesada**	**1.99**	**11**	P	**Pn**	**16 44 31.0**	**+0.6**
	5.9nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**16 44 56.1**	**+0.4**
	81nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**2.11**	**21**	Pn	**Pn**	**16 44 32.8**	**+0.8**
	50nm,0.7s,SNR=7.9						
EHUE				Sn	**Sn**	**16 44 59.9**	**+1.2**
	15nm,0.3s,SNR=7.9						
ESPR	**Espera**	**2.12**	**299**	Sn	**Sn**	**16 45 00.5**	**+1.8**
	40nm,0.3s,SNR=7.9						
ESPR	**Espera**	**2.12**	**299**	P	**Pn**	**16 44 32.4**	**+0.3**
	2.3nm,0.3s,SNR=7.9						
ESPR				S	**Sn**	**16 45 00.6**	**+1.8**
	40nm,0.3s,SNR=7.9						
ESPR	**Espera**	**2.12**	**299**	P	**Pn**	**16 44 32.4**	**+0.3**
ESPR				S	**Sn**	**16 45 00.6**	**+1.9**
EBAN	**Banos Encina**	**2.32**	**356**	P	**Pn**	**16 44 35.7**	**+0.8**
	0.8nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**2.32**	**356**	P	**Pn**	**16 44 35.7**	**+0.8**
EADA	**Adamuz**	**2.45**	**341**	Pg	**Pg**	**16 44 40.7**	**-2.3**
	18nm,0.3s,SNR=7.9						
EADA				Lg		16 45 13.0	
	94nm,0.5s,SNR=7.9						
EADA	**Adamuz**	**2.45**	**341**	P	**Pn**	**16 44 37.1**	**+0.4**
	0.5nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**16 45 08.0**	**+0.9**
	11nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.45**	**341**	P	**Pn**	**16 44 37.1**	**+0.3**
EADA				S	**Sn**	**16 45 08.0**	**+0.8**
ECAB	**El Cabril**	**2.68**	**327**	Lg		16 45 22.1	
	38nm,0.5s,SNR=7.9						
ECAB	**El Cabril**	**2.68**	**327**	S	**Sn**	**16 45 12.9**	**+0.3**
	10.0nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.15**	**308**	Pn	**Pn**	**16 44 46.2**	**-0.1**
	0.6nm,0.1s,SNR=4.0						
EMIN				Sn	**Sn**	**16 45 22.7**	**-1.5**
	4.1nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.15**	**308**	P	**Pn**	**16 44 46.2**	**-0.1**
	0.6nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**16 45 23.1**	**-1.2**
	3.8nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.15**	**308**	P	**Pn**	**16 44 46.2**	**0.0**
EMIN				S	**Sn**	**16 45 23.1**	**-1.2**
ETOB	**Tobarra**	**3.22**	**29**	Pn	**Pn**	**16 44 47.6**	**+0.3**
	100nm,0.9s,SNR=7.9						
ETOB	**Tobarra**	**3.22**	**29**	P	**Pn**	**16 44 47.6**	**+0.3**
	2.8nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**16 45 24.4**	**-1.6**
	1.5nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.22**	**29**	P	**Pn**	**16 44 47.6**	**+0.3**
ETOB				S	**Sn**	**16 45 24.4**	**-1.6**
EGRO	**El Granado**	**3.58**	**299**	Pn	**Pn**	**16 44 52.2**	**+0.1**
	22nm,0.3s,SNR=7.9						
EGRO				Sn	**Sn**	**16 45 33.5**	**-1.2**
	21nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**3.58**	**299**	P	**Pn**	**16 44 52.2**	**+0.1**
	1.4nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**16 45 33.5**	**-1.3**
	21nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.00**	**318**	Pn	**Pn**	**16 44 58.8**	**+0.8**
	2.1nm,0.1s,SNR=4.0						
EBAD				Sn	**Sn**	**16 45 43.7**	**-1.6**
	11nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.00**	**318**	P	**Pn**	**16 44 58.8**	**+0.8**
	2.1nm,0.1s,SNR=7.9						
EIBI	**Ibiza**	**5.03**	**49**	Pn	**Pn**	**16 45 11.5**	**-0.6**
	1.1nm,0.1s,SNR=4.0						
EIBI				Sn	**Sn**	**16 46 03.8**	**-6.8**
	0.4nm,0.1s,SNR=4.0						
EIBI	**Ibiza**	**5.03**	**49**	P	**Pn**	**16 45 11.6**	**-0.5**
	SNR=7.9						
EIBI	**Ibiza**	**5.03**	**49**	P	**Pn**	**16 45 11.6**	**-0.5**
EIBI				S	**Sn**	**16 46 03.8**	**-6.8**

*BJI **08** 16:53:52.1, 105S×126.00E, h40km, mB5.0, mb4.9, Ms4.5, Ms2.4*
*MOS **08** 16:53:56.8±1.0, 028S×125.99E, h33km, mb5.3/17, Error ellipse: s-maj=15.8km s-min=6.6km az=116.6*
*IDC **08** 16:53:57.6±2.6, 028S×125.99E, h22km±15km, mb4.7/21, mb1 4.7/23, mb1mx4.7/26, mbtmp4.7/23, ML4.3/2, MS4.0/4, Ms1 4.0/4, ms1mx3.7/14, Error ellipse: s-maj=19.3km s-min=8.9km az=72.0*
*NEIC **08** 16:53:58.9±0.2, 030S×126.01E, h35km, mb5.0/15, Error ellipse: s-maj=8.5km s-min=4.7km az=69.0*
*GCMT **08** 16:53:58.9±0.3, 0.90S×125.82E, h32km, MW5.1/54, Moment Tensor Solution. s54,c77; s52,c81; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.55±.22; Mθθ-4.65±.14; Mϕϕ1.11±.18; Mrθ2.63±.22; Mθϕ-1.01±.11; Mϕr-1.80±.30; Best double couple: Mo5.37400×10^16 NP1:ϕs234.00000°, δ37.00000°, λ44.00000°. NP2: ϕs106.00000°, δ65.00000°, λ119.00000°. Principal axes: T 5.2930, Plg59.0000°, Azm58.0000°; N 0.1730, Plg26.0000°, Azm273.0000°; P -5.4560, Plg15.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **08** 16:53:59.2±0.6, 036S×003×12598E±004, h55km±5km, mb5.0/78, MS4.3/20 Error ellipse: s-maj=6.7km*

s-min=5.1km az=144.4
DJA 08 16:54:03,051S×12600E,h58km,Mw5.0/7
ISC 08 16:54:00.9±0.5**,037S**±003×**12599E**±004**,h55**km±5km**,**
h40km±2.9km**:pP-P,n170,**σ1s**01**/183**,mb5.0**/78**,MS4.3**/20**,**
15C-16D,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	1.54	100	P	Pn	16 54 26.4	+0.4
	0.0nm,0.0s						
TNE	Ternate	1.80	50⇑	eP	Pn	16 54 29.0	-0.6
MNI	Manado	2.14	328	P	Pn	16 54 33.5	-0.7
	0.0nm,0.0s						
MNI	Manado	2.14	328⇓	eP	Pn	16 54 33.0	-1.2
MNI				eS	Sn	16 55 03.5	+3.9
AAI	Ambon	3.96	146	P	Pn	16 55 01.5	+2.3
	0.0nm,0.0s						
AAI	Ambon	3.96	146	P	Pn	16 55 01.5	+2.3
	0.0nm,0.0s						
AAI	Ambon	3.96	146⇓	eP	Pn	16 54 58.0	-1.2
KDI	Kendari	4.90	223	P	Pn	16 55 11.8	-0.2
	0.0nm,0.0s						
KDI	Kendari	4.90	223⇓	eP	Pn	16 55 10.6	-1.4
KDI				eS	Sn	16 56 02.5	-5.0
SWI	Sorong	5.29	95	P	Pn	16 55 24.7	+7.2
	56nm,0.7s						
PCI	Palu	6.17	265	P	Pn	16 55 31.5	+2.0
	266nm,1.0s						
PCI	Palu	6.17	265⇓	eP	Pn	16 55 28.0	-1.5
PCI				eS	Sn	16 56 11.6	-27
KAPI	Kappang	7.75	233	Pn	Pn	16 55 50.9	-0.3
	2.5nm,0.3s,baz=65,slow=7.8,SNR=13						
KAPI				Sn	Sn	16 57 13.3	-4.2
	14nm,0.3s,baz=164,slow=21,SNR=22						
KAPI	Kappang	7.75	233	ePn	Pn	16 55 50.9	-0.2
MYLDM	Lahad Datu	9.29	307	⇑P	Pn	16 56 14.4	+2.1
TSM	Tawau	9.34	300	⇑P	Pn	16 56 13.3	+0.3
BATI	Baumata	10.04	193	P	Pn	16 56 29.9	+7.4
	40nm,1.4s						
BATI	Baumata	10.04	193	Pn	Pn	16 56 25.2	+2.7
	3.0nm,0.3s,baz=173,slow=1.1,SNR=8.1						
SDKM	Sandakan	10.62	304	⇑P	Pn	16 56 31.9	+1.5
KKM	Kota Kinabalu	11.65	303	⇓P	Pn	16 56 44.9	+0.3
KDM	Kudat	11.66	309	⇓P	Pn	16 56 49.6	+5.0
BTM	Bintulu	13.38	285	⇑P	Pn	16 57 07.6	-0.5
KAKA	Kakadu	13.83	153	eP	Pn	16 57 12.6	-1.6
	16nm,0.6s						
SBUM	Sibu	14.05	282	⇓P	Pn	16 57 22.7	+5.5
KSM	Kuching	15.79	277	⇑P	Pn	16 57 41.3	+1.5
KSM	Kuching	15.79	277	ePn	Pn	16 57 39.8	-0.1
SJI	Sawahan	15.95	242	P	Pn	16 57 47.8	+5.9
	65nm,2.1s						
FITZ	Fitzroy Crossi	17.62	181	eP	Pn	16 58 02.3	-0.4
	48nm,0.8s						
FITZ	Fitzroy Crossi	17.62	181	P	Pn	16 58 02.5	-0.2
	1.2nm,0.3s,baz=19,slow=14,SNR=73						
LEM	Lembang	19.41	250	P	Pn	16 58 28.5	+4.1
	64nm,1.2s						
CBJI	Citeko	20.02	252	P	P	16 58 32.1	+2.7
	246nm,1.0s						
DBJI	Dramaga	20.15	252	P	P	16 58 34.4	+3.6
	63nm,0.8s						
WRAB	Tennant Creek	21.09	158	P	P	16 58 40.0	-0.9
	387nm,0.9s,mb5.7,SNR=25						
WRAB	Tennant Creek	21.09	158⇓	iP	P	16 58 40.4	-0.5
WRAB	Tennant Creek	21.09	158	eP	P	16 58 40.4	-0.5
	61nm,0.9s,mb4.9						
WRA	Warramunga Arr	21.10	158	P	P	16 58 40.5	-0.5
	44nm,0.8s,mb4.8,baz=337,slow=11,SNR=182						
WRA				S	S	17 02 37.1	+4.2
	3.4nm,1.1s,baz=335,slow=20,SNR=4.7						
WRA				PcP	PcP	17 02 47.0	+1.2
	0.7nm,0.8s,baz=338,slow=1.8,SNR=4.1						
WB2	Warramunga Arr	21.10	158	eP	P	16 58 40.4	-0.6
WB2				eS	S	17 02 36.4	+3.5
MBWA	Marble Bar	21.54	196	eP	P	16 58 45.1	-0.7
	31nm,0.8s,mb4.8						
COEN	Coen	21.72	129	eP	P	16 58 47.6	0.0
	28nm,1.1s,mb4.6						
MYKOM	Kota Tinggi	22.24	276	⇓P	P	16 58 53.7	+0.4
PMG	Port Moresby	22.90	114	eP	P	16 58 59.7	-0.6
GUMO	Guam	23.29	53	P	P	16 59 01.5	-2.7
	91nm,1.1s,mb5.1,baz=182,slow=11,SNR=5.4						
GUMO				LR	LR	17 05 37.0	
	comp=Z,124nm,20.8s,MS3.3,baz=230,slow=30						
KTGM	Kuala Trenggan	23.52	284	⇑P	P	16 59 05.4	-0.9
ASAR	Alice Springs	24.39	162	P	P	16 59 15.3	+1.1
	66nm,1.0s,mb5.0,baz=346,slow=11,SNR=260						
ASAR				PcP	PcP	17 02 54.0	+1.5
	0.6nm,0.3s,baz=352,slow=1.8,SNR=4.3						
ASAR				S	S	17 03 35.5	+5.2
	10nm,1.3s,baz=342,slow=19,SNR=8.1						
ASAR				ScP	ScP	17 06 30.2	+3.5
	1.1nm,0.8s,baz=298,slow=0.3,SNR=5.5						
ASAR	Alice Springs	24.39	162	P	P	16 59 15.4	+1.2
ASAR						17 02 54.0	
ASAR				S	S	17 03 35.5	+5.2
FRIM	Kepong	24.61	279	⇓P	P	16 59 16.1	-0.3
QIZ	Qiongzhong	24.96	321	P	P	16 59 15.7	-3.7
QIZ				S	S	17 03 37.6	-1.8
QIZ				XS	sS	17 04 01.7	-1.0
QIZ				LR	LR		
	comp=N,403nm,19.0s						
QIZ				LR	LR		
	comp=Z,399nm,26.9s						
IPM	Ipoh	25.40	281	⇑P	P	16 59 23.3	-0.2
PPI	Padang Panjang	25.59	270	P	P	16 59 25.7	+0.4
	comp=Z,25nm,1.2s,mb4.6						
QZH	Quanzhou	26.17	345⇓	iP	P	16 59 31.7	+1.4
QZH				S	S	17 04 00.0	+1.6
QZH				AMB	AMB		
	comp=Z,160nm,1.2s,mb5.4						
QZH				LR	LR		
	comp=Z,2μm,32.6s,MS4.3						
JOW	Kunigami	27.14	4	P	P	16 59 39.5	+0.5
	comp=Z,57nm,1.0s,mb5.1,baz=203,slow=7.6,SNR=14						
CTA	Charters Tower	27.88	136	P	P	16 59 47.4	+1.6
	comp=Z,6.3nm,0.9s,mb4.3,baz=325,slow=12,SNR=3.8						
CTAO	Charters Tower	27.88	136	eP	P	16 59 44.8	-1.0
NANT	Nan	31.30	309	⇑P	P	17 00 15.0	-1.1
	comp=Z,69nm,1.0s,mb5.4						
CMAR	Chiang Mai Arr	32.51	307	P	P	17 00 25.9	-0.8
	comp=Z,1.8nm,0.8s,mb4.1,baz=130,slow=6.5,SNR=26						
CMAR				PcP	PcP	17 03 14.8	+2.1
	comp=Z,1.9nm,0.8s,baz=168,slow=2.5,SNR=11						
CMAR				ScP	ScP	17 06 56.2	+4.1
	comp=Z,2.0nm,1.0s,baz=149,slow=2.4,SNR=12						
CMAR	Chiang Mai Arr	32.51	307	P	P	17 00 25.9	-0.8
CMAR						17 03 14.8	
GYA	Guiyang	32.53	327	eP	P	17 00 30.2	+3.4
GYA				AP	pP	17 00 40.8	+0.1
GYA				XP	sP	17 00 46.2	-1.0
GYA				PP	PP	17 01 40.0	-1.3
GYA				S	S	17 05 43.2	+4.8
GYA				XS	sS	17 06 01.4	-0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,200nm,5.2s						
GYA				LR	LR		
	comp=N,1μm,14.6s,MS5.0						
GYA				LR	LR		
	comp=E,2μm,14.5s,MS5.0						
GYA				LR	LR		
	comp=Z,2μm,15.3s,MS5.0						
WHN	Wuhan	32.68	341	eP	P	17 00 28.2	+0.2
CHG	Chiang Mai	32.69	307	⇑P	P	17 00 27.1	-1.2
	comp=Z,12nm,1.0s,mb4.8						
CHTO	Chiang Mai	32.69	307	eP	P	17 00 27.2	-1.1
NJ2	Nanjing	32.95	349	eP	P	17 00 32.2	+1.8
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
NWAO	Narrogin (SRO)	33.41	193	P	P	17 00 35.0	+0.6
	comp=Z,7.4nm,0.8s,mb4.7,baz=9.5,slow=12,SNR=3.6						
NWAO	Narrogin (SRO)	33.41	193	P	P	17 00 35.0	+0.6
KMI	Kunming	33.89	320	P	P	17 00 39.9	+1.3
KMI				AP	pP	17 00 52.0	-0.6
KMI				XP	sP	17 00 56.3	-2.7
KMI				PP	PP	17 01 57.3	+1.0
KMI				PPP		17 02 14.1	
KMI				S	S	17 06 04.6	+5.2
KMI				XS	sS	17 06 21.7	-1.3
KMI				SS	SS	17 08 13.4	-14
KMI				SSS		17 08 42.3	
KMI				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.5						
KMI				AMB	AMB		
	comp=Z,79nm,5.0s						
KMI				LR	LR		
	comp=N,155nm,24.4s,MS3.9						
KMI				LR	LR		
	comp=E,190nm,20.4s,MS3.9						
KMI				LR	LR		
	comp=Z,357nm,22.1s,MS4.0						
STKA	Stephens Creek	34.63	156	eP	P	17 00 46.4	+1.4
	comp=Z,12nm,1.0s,mb4.8						
STKA	Stephens Creek	34.63	156	P	P	17 00 46.5	+1.4
	comp=Z,9.8nm,0.7s,mb4.9,baz=334,slow=8.5,SNR=14						
CD2	Chengdu	37.60	328⇓	iP	P	17 01 09.6	-0.8
CD2				AP	pP	17 01 19.4	-5.1
CD2				XP	sP	17 01 23.3	-7.6
CD2				PP	PP	17 02 39.3	+2.2
CD2				PCP	PcP	17 03 26.4	-0.9
CD2				S	S	17 06 57.8	+1.6
CD2				XS	sS	17 07 14.0	-6.0
CD2				SS	SS	17 09 34.1	-7.7
CD2				SCS	ScS	17 11 17.5	-1.4
CD2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
CD2				AMB	AMB		
	comp=Z,30nm,4.2s						
CD2				LR	LR		
	comp=N,540nm,19.2s,MS4.5						
CD2				LR	LR		
	comp=E,390nm,19.2s,MS4.5						
CD2				LR	LR		
	comp=Z,470nm,18.0s,MS4.3						
KSRS	Korea Array	37.68	3	P	P	17 01 11.8	+0.9
	comp=Z,12nm,0.7s,mb4.8,baz=180,slow=9.9,SNR=62						
XAN	Xi'an	37.80	337	P	P	17 01 10.5	-1.5
XAN				AP	pP	17 01 20.0	-6.1
XAN				XP	sP	17 01 24.1	-8.4
XAN				PP	PP	17 02 38.6	-0.6
XAN				S	S	17 06 56.2	-2.9
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
XAN				AMB	AMB		
	comp=Z,38nm,4.3s						
XAN				LR	LR		
	comp=N,93nm,25.0s,MS3.8						
XAN				LR	LR		
	comp=E,137nm,24.1s,MS3.8						
XAN				LR	LR		
	comp=Z,317nm,27.7s,MS4.0						
MAT	Matsushiro	38.44	16	P	P	17 01 17.0	-0.4
MJAR	Matsushiro Arr	38.44	16	P	P	17 01 16.4	-1.0
	comp=Z,1.6nm,0.5s,mb4.0,baz=185,slow=9.2,SNR=11						
MJAR				PcP	PcP	17 03 30.3	+0.5
	comp=Z,1.9nm,0.9s,baz=176,slow=3.9,SNR=4.5						
DL2	Dalian	39.29	355	P	P	17 01 25.5	+1.0
DL2				S	S	17 07 26.8	+5.3
DL2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
DL2				AMB	AMB		
	comp=Z,120nm,4.4s						
DL2				LR	LR		
	comp=N,180nm,17.7s,MS4.1						
DL2				LR	LR		
	comp=E,170nm,14.0s,MS4.1						
DL2				LR	LR		
	comp=Z,160nm,18.6s,MS3.9						
TOO	Toolangi	41.16	156	eP	P	17 01 42.8	+2.9
BJT	Baijiatuau	41.19	349	eP	P	17 01 39.8	-0.3
BJT				pmax	pmax		
	comp=Z,66nm,1.1s						
BJT	Baijiatuau	41.19	349	eP	P	17 01 39.8	-0.4
	comp=Z,66nm,1.1s,mb5.2						
BJI	Beijing	41.21	349	P	P	17 01 40.0	-0.3
BJI				PP	PP	17 03 19.3	+2.9
BJI				S	S	17 07 56.1	+6.0
BJI				AMB	AMB		
	comp=Z,28nm,1.0s,mb4.8						
BJI				LR	LR		
	comp=N,230nm,28.9s,MS4.0						
BJI				LR	LR		
	comp=E,199nm,28.5s,MS4.0						
BJI				LR	LR		
	comp=Z,381nm,35.2s						
LZH	Lanzhou	41.72	333	eP	P	17 01 44.2	-0.3
LZH				AP	pP	17 01 55.0	-3.8
LZH				XP	sP	17 02 01.5	-3.7
LZH				PP	PP	17 03 27.1	+5.2
LZH				eS	S	17 08 00.3	+2.6
LZH				AMB	AMB		
	comp=Z,44nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,130nm,4.2s						
LZH				LR	LR		
	comp=N,1μm,14.7s						
LZH				LR	LR		
	comp=Z,2μm,15.5s,MS5.0						
HHC	Hu-ho-hao-te	43.08	344	eP	P	17 01 56.7	+1.2
HHC				AP	pP	17 02 07.2	-2.6
HHC				XP	sP	17 02 11.1	-5.1
HHC				PP	PP	17 03 39.8	+3.3
HHC				PCP	PcP	17 03 45.0	+0.3
HHC				SCP	ScP	17 07 32.8	+1.3
HHC				PCS	PcS	17 07 37.1	0.0
HHC				S	S	17 08 20.7	+3.1
HHC				SS	SS	17 11 28.5	-3.3
HHC				SCS	ScS	17 11 51.4	+0.3
HHC				AMB	AMB		
	comp=Z,17nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,140nm,6.5s						
HHC				LR	LR		
	comp=N,280nm,15.9s,MS4.4						
HHC				LR	LR		
	comp=E,208nm,15.4s,MS4.4						
HHC				LR	LR		
	comp=Z,382nm,16.2s,MS4.4						
CN2	Changchun	43.98	359	eP	P	17 02 03.2	+0.5
CN2				eXP	sP	17 02 18.0	-5.4
CN2				eS	S	17 08 34.6	+3.9
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,18.0s,MS4.3						
CN2				LR	LR		
	comp=E,200nm,18.0s,MS4.3						
CN2				LR	LR		
	comp=Z,300nm,19.0s,MS4.2						
LSA	Lhasa	44.69	315	eP	P	17 02 09.0	+0.3
LSA				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.8						
LSA	Lhasa	44.69	315	eP	P	17 02 09.0	+0.3
	comp=Z,12nm,0.7s,mb4.8						
MDJ	Mudanjiang	44.91	4	P	P	17 02 11.0	+0.9
MDJ				AP	pP	17 02 19.9	-4.6
MDJ				S	S	17 08 53.1	+8.9
MDJ				AMB	AMB		
	comp=Z,21nm,1.1s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,83nm,5.1s						
MDJ				LR	LR		
	comp=N,231nm,30.3s						
MDJ				LR	LR		
	comp=Z,286nm,30.3s,MS4.0						
ODAN	Odare	45.95	309	eP	P	17 02 17.8	-0.9
GTA	Gaotai	46.28	332	P	P	17 02 20.8	-0.3
GTA				AP	pP	17 02 29.8	-5.7
GTA				XP	sP	17 02 34.0	-7.8
GTA				PCP	PcP	17 03 57.4	+1.6
GTA				PP	PP	17 04 05.6	-5.0
GTA				S	S	17 09 04.4	+0.3
GTA				SS	SS	17 12 23.5	-6.8
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.5						
GTA				AMB	AMB		
	comp=Z,71nm,7.2s						
GTA				LR	LR		
	comp=N,212nm,18.9s,MS4.3						
GTA				LR	LR		
	comp=E,199nm,16.5s,MS4.3						
GTA				LR	LR		
	comp=Z,419nm,18.9s,MS4.4						
RAMN	Ramite	46.61	309	eP	P	17 02 23.0	-0.9
	comp=Z,25nm,0.9s,mb5.2						
JIRN	Jiri	47.27	309	eP	P	17 02 27.9	-1.2
GUN	Gumba	47.64	310	eP	P	17 02 30.9	-1.0
	comp=Z,40nm,0.8s,mb5.5						
PKI	Pulchoki	47.84	309	eP	P	17 02 32.4	-1.0
KKN	Kakani	48.04	309	eP	P	17 02 33.6	-1.4
DMN	Daman	48.09	309	eP	P	17 02 34.4	-1.0
	comp=Z,22nm,1.0s,mb5.2						
GKN	Gorkha	48.64	309	eP	P	17 02 38.0	-1.6
	comp=Z,22nm,0.9s,mb5.2						
KOLN	Koldanda	49.35	308	eP	P	17 02 44.3	-0.7
	comp=Z,40nm,0.8s,mb5.5						
KLR	Kul'dur	49.66	5	eP	P	17 02 42.7	-4.3
KLR				pmax	pmax		
	comp=Z,50nm,1.6s,mb5.3						
HIA	Hailar	49.74	355	eP	P	17 02 48.5	+0.9
HIA				pmax	pmax		
	comp=Z,21nm,0.9s						
HIA	Hailar	49.74	355	eP	P	17 02 48.5	+0.9
	comp=Z,21nm,0.9s,mb5.2						
ULN	Ulaanbaatar	50.79	344⇑	eP	P	17 02 55.7	+0.1
ULN	Ulaanbaatar	50.79	344	eP	P	17 02 56.2	+0.6
	comp=Z,11nm,0.8s,mb4.8						
SONM	Songino Array	50.95	343	P	P	17 02 57.1	+0.3
	comp=Z,7.1nm,0.7s,mb4.7,baz=157,slow=8.0,SNR=63						
CIT	Chita	53.25	350	eP	P	17 03 15.0	+1.2
CIT				e	pP	17 03 32.4	+3.9
CIT				pmax	pmax		
	comp=Z,121nm,1.6s,mb5.6						
TLY	Talaya	55.20	343	eP	P	17 03 28.6	+0.6
TLY				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
TLY				MLR	MLR		
	comp=Z,254nm,24.0s,MS4.2						
TLY	Talaya	55.20	343	eP	P	17 03 28.6	+0.7
	comp=Z,9.2nm,0.7s,mb4.9						
IRK	Irkutsk	55.52	344	eP	P	17 03 31.0	+0.7
IRK				pmax	pmax		
	comp=Z,36nm,2.5s,mb5.0						
WMQ	Urumqi	55.69	327	eP	P	17 03 30.9	-0.8
WMQ				AP	pP	17 03 41.0	-5.5
WMQ				XP	sP	17 03 45.0	-7.7
WMQ				PCP	PcP	17 04 30.0	-0.6
WMQ				PP	PP	17 05 37.0	+0.4
WMQ				eS	S	17 11 14.0	-0.1
WMQ				SCS	ScS	17 13 14.0	-2.2
WMQ				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,167nm,5.4s						
WMQ				LR	LR		
	comp=N,782nm,26.0s,MS4.8						
WMQ				LR	LR		
	comp=E,597nm,23.5s,MS4.8						
WMQ				LR	LR		
	comp=Z,768nm,24.6s,MS4.7						
MOY	Mondy	55.99	341	eP	P	17 03 34.2	+0.6
MOY				pmax	pmax		
	comp=Z,30nm,2.3s,mb4.9						
BOD	Bodaibo	58.80	353⇓	iP	P	17 03 53.6	+0.3
BOD				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
PETK	Petropavlovsk-	59.49	22	P	P	17 03 58.3	+0.1
	comp=Z,6.3nm,0.8s,mb4.7,baz=191,slow=3.0,SNR=5.2						
MK31	Makanchi Array	60.52	327⇑	iP	P	17 04 04.9	-0.5
MKAR	Makanchi Array	60.52	327	P	P	17 04 04.9	-0.6
	comp=Z,6.5nm,0.4s,mb5.1,baz=120,slow=8.1,SNR=130						
MKAR				PcP	PcP	17 04 50.1	+0.5
	comp=Z,4.1nm,0.7s,baz=124,slow=5.7,SNR=4.9						
MKAR				LR	LR	17 31 36.4	
	comp=Z,218nm,21.7s,MS4.3,baz=119,slow=37						
MKAR	Makanchi Array	60.52	327	P	P	17 04 04.9	-0.5
MKAR						17 04 50.1	
YAK	Yakutsk	62.31	2	eP	P	17 04 17.2	+0.1
YAK				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.5						
YAK				pmax	pmax		
	comp=N,22nm,1.2s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.4s						
YAK	Yakutsk	62.31	2	eP	P	17 04 17.0	-0.1
TKM2	Tokmak 2	62.36	320	eP	P	17 04 17.2	-0.7
TKM2				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.6						
TKM2	Tokmak 2	62.36	320	P	P	17 04 18.4	+0.5
	SNR=11						
TKM2	Tokmak 2	62.36	320	eP	P	17 04 17.2	-0.7
	comp=Z,28nm,0.6s,mb5.6						
AAK	Ala-Archa	62.93	320	P	P	17 04 22.4	+0.7
	SNR=5.2						
AML	Almayashu	63.22	319	P	P	17 04 24.6	+0.9
	SNR=15						
AML	Almayashu	63.22	319	eP	P	17 04 23.4	-0.2
	comp=Z,16nm,1.0s,mb5.1						
USP	Ospenovka	63.23	320	P	P	17 04 23.8	+0.1
	SNR=7.1						
EKS2	Erkin-Say	63.41	319	P	P	17 04 25.2	+0.3
	SNR=14						
EKS2	Erkin-Say	63.41	319	eP	P	17 04 24.8	-0.1
	comp=Z,13nm,0.9s,mb5.1						
ZALV	Zalesovo Beam	63.91	334	P	P	17 04 27.1	-0.8
	comp=Z,6.1nm,0.8s,mb4.7,baz=121,slow=5.4,SNR=19						
ZAL	Zalesovo	63.91	334	P	P	17 04 27.2	-0.8
KURK	Kurchatov	64.81	329	P	P	17 04 33.6	-0.3
	comp=Z,236nm,0.4s,mb6.6,SNR=23						
KURK	Kurchatov	64.81	329	P	P	17 04 33.5	-0.5
	comp=Z,2.7nm,0.4s,mb4.7,baz=169,slow=4.7,SNR=13						
KURK	Kurchatov	64.81	329	eP	P	17 04 33.5	-0.4
NVS	Novosibirsk	65.20	334	eP	P	17 04 34.8	-1.5
NVS				pmax	pmax		
	comp=Z,35nm,1.9s,mb5.1						
NVS				pmax	pmax		
	comp=N,20nm,1.7s						
NVS				pmax	pmax		
	comp=E,15nm,1.8s						
KK31	Karatay Array	65.75	319	i P	P	17 04 39.3	-0.9
KK31				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
VOSK	Vostochnaya	69.90	328	P	P	17 05 05.2	-0.9
VOSK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
BVA0	Borovoye Array	70.36	328	i P	P	17 05 08.5	-0.4
BVA0				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
BVAR	Borovoye Array	70.36	328	P	P	17 05 08.8	-0.1
	comp=Z,5.4nm,0.7s,mb4.6,baz=138,slow=7.2,SNR=31						
BRVK	Borovoye	70.43	328	P	P	17 05 09.8	+0.5
	comp=Z,109nm,0.9s,mb5.8,SNR=5.6						
BRVK	Borovoye	70.43	328	eP	P	17 05 09.2	-0.1
TIXI	Tiksi	71.93	1	eP	P	17 05 18.0	0.0
TIXI				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,237nm,22.0s,MS4.4						
TIXI	Tiksi	71.93	1	eP	P	17 05 17.7	-0.3
	comp=Z,31nm,1.4s,mb5.0						
BILL	Bilibino	73.68	15	eP	P	17 05 28.1	-0.4
BILL				e	pP	17 05 43.7	-0.1
BILL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
AB31	Akbulak array	74.86	322	i P	P	17 05 35.4	-0.3
AB31				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
AKTK	Aktyubinsk	76.42	322	P	P	17 05 45.0	+0.4
AKTO	Aktyubinsk	76.42	322	P	P	17 05 45.0	+0.4
	comp=Z,38nm,0.8s,mb5.4,baz=106,slow=7.2,SNR=115						
SVE	Sverdlovsk	77.06	329⇓	eP	P	17 05 48.5	+0.4
SVE				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.3						
ARU	Arti	78.00	328	P	P	17 05 52.9	-0.4
	comp=Z,92nm,0.9s,mb5.7,SNR=7.4						
ARU	Arti	78.00	328c	iP	P	17 05 52.8	-0.5
ARU				e*PP	pP	17 06 07.6	-1.2
ARU				e		17 08 46.0	
ARU				eS	S	17 15 41.9	-0.8
ARU				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1						
ARU	Arti	78.00	328	eP	P	17 05 52.8	-0.5
MAW	Mawson	79.67	200	LR	LR	17 37 38.7	
	comp=Z,66nm,18.9s,MS4.0,baz=224,slow=33						
RDF	Al-Radifah	80.06	299	eP	P	17 06 05.5	+0.2
	baz=299						
RDF				AMb	AMB	17 06 06.5	
	comp=Z,50nm,0.7s,mb5.5,baz=299						
MIB	Mutribah	80.34	300	eP	P	17 06 06.5	-0.2
	baz=300						
MIB				AMb	AMB	17 06 07.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,105nm,0.7s,mb5.9,baz=300						
NAY	**Al-Naaiem**	**80.36**	**300**	*e*P	**P**	**17 06 06.2**	**-0.6**
	baz=300						
NAY				AMb	AMB	17 06 07.8	
	comp=Z,43nm,0.9s,mb5.4,baz=300						
RST	**Umm Al-Ruwaisa**	**80.60**	**300**	*e*P	**P**	**17 06 07.6**	**-0.5**
	baz=300						
RST				AMb	AMB	17 06 08.4	
	comp=Z,5.0nm,0.7s,mb4.5,baz=300						
DGRG	**David-gareji**	**83.20**	**312**	P	**P**	**17 06 23.1**	**+1.6**
GNI	**Garni**	**83.54**	**310**⇑	*e*P	**P**	**17 06 24.4**	**+1.1**
GNI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MTA	**Mtatsminda**	**83.67**	**312**	P	**P**	**17 06 24.1**	**+0.2**
ONI	**Oni**	**84.75**	**313**	P	**P**	**17 06 30.3**	**+0.9**
KIV	**Kislovodsk**	**85.42**	**314**	*e*P	**P**	**17 06 32.8**	**+0.1**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.5						
COLD	**Coldfoot**	**87.94**	**23**	*e*P	**P**	**17 06 45.1**	**+0.6**
	comp=Z,11nm,1.0s,mb5.0						
MALT	**Malatya**	**88.31**	**308**	*e*P	**P**	**17 06 46.8**	**-0.1**
SYO	**Syowa Base**	**88.36**	**201**⇓	*e*P	**P**	**17 06 46.8**	**+0.4**
SYO	**Syowa Base**	**88.36**	**201**⇓	*e*PcP	PcP	17 06 51.0	+2.9
KMBO	**Kilima Mbogo**	**88.73**	**269**	P	**P**	**17 06 51.5**	**+2.1**
	comp=Z,2.8nm,0.9s,mb4.6,baz=62,slow=21,SNR=5.0						
KMBO	**Kilima Mbogo**	**88.73**	**269**	P	**P**	**17 06 51.5**	**+2.1**
ASF	**Jabal al Asfar**	**89.42**	**302**	P	**P**	**17 06 52.7**	**+0.4**
	comp=Z,8.2nm,1.0s,mb5.0,baz=216,slow=3.8,SNR=6.4						
OBN	**Obninsk**	**89.97**	**325**	*e*P	**P**	**17 06 53.9**	**-0.4**
OBN				pmax	pmax		
	comp=Z,33nm,1.6s,mb5.4						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.3						
MMAI	**Mount Meron Ar**	**90.69**	**303**	P	**P**	**17 07 00.0**	**+1.8**
	comp=Z,1.6nm,0.5s,mb4.6,baz=76,slow=7.6,SNR=2.5						
ARCES	**ARCESS Array B**	**94.02**	**340**	P	**P**	**17 07 12.2**	**-0.6**
	comp=Z,4.3nm,0.7s,mb5.0,baz=62,slow=5.6,SNR=11						
AKASG	**Malin Array Be**	**94.58**	**321**	P	**P**	**17 07 13.6**	**-2.1**
	comp=Z,0.3nm,0.4s,mb4.1,baz=62,slow=4.9,SNR=4.1						
BUR08	**Bucovina Ar. S**	**97.55**	**318**	*e*P	**P**	**17 07 28.0**	**-1.2**
BOSA	**Boshof**	**99.24**	**241**	LR	LR	17 47 28.8	
	comp=Z,228nm,21.2s,MS4.7,baz=106,slow=32						
ANMO	**Albuquerque**	**120.29**	**49**	PKP	PKPdf	17 12 49.1	+2.6
	comp=Z,1.0nm,0.6s,baz=250,slow=11,SNR=3.4						
ANMO	**Albuquerque**	**120.29**	**49**⇑	*i*PKIKP	PKPdf	17 12 45.2	-1.3
TORD	**Torodi Ar. Bea**	**123.39**	**285**	PKP	PKPdf	17 12 53.8	+0.8
	comp=Z,2.5nm,0.8s,baz=73,slow=1.8,SNR=14						
PLCA	**Paso Flores**	**136.41**	**162**	PKP	PKPdf	17 13 21.1	+4.2
	comp=Z,0.9nm,0.7s,baz=170,slow=5.5,SNR=3.1						
CPUP	**Villa Florida**	**153.26**	**173**	PKPbc	PKPbc	17 13 55.1	+1.5
	comp=Z,2.8nm,0.6s,baz=159,slow=1.3,SNR=13						

*IDC **08** 16:59:53.4±0.8, 027S×12592E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.9/20, mbtmp3.9/10, ML3.6/1, MS3.7/2, Ms1 3.7/2, ms1mx3.3/30, Error ellipse: s-maj=47.7km s-min=16.3km az=74.0*
*ISCJB **08** 16:59:56.3±0.6, 026S±0.10×126.1E±03, h33km, mb3.8/10, Error ellipse: s-maj=37.3km s-min=10.3km az=165.4*
*NEIC **08** 16:59:58.2±0.5, 023S×126.17E, h35km, mb4.0/1, Error ellipse: s-maj=32.3km s-min=8.4km az=74.0*
ISC 08 16:59:58.5±0.6**, 027S**±009×**1261E**±02**, h35**km**, n16, σ0.80**/14**, mb3.8**/10**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**7.89**	**233**	LR	LR	17 04 47.5	
	comp=Z,421nm,19.0s,baz=265,slow=38						
FITZ	**Fitzroy Crossi**	**17.72**	**181**	P	**Pn**	**17 04 03.0**	**+0.4**
	0.2nm,0.3s,baz=14,slow=12,SNR=6.9						
FITZ	**Fitzroy Crossi**	**17.72**	**181**	*e*S	**Pn**	**17 04 03.2**	**+0.6**
WRAB	**Tennant Creek**	**21.15**	**158**	*e*P	**P**	**17 04 40.0**	**-0.7**
	4.5nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**21.15**	**158**	P	**P**	**17 04 40.3**	**-0.4**
	1.7nm,0.7s,mb3.5,baz=338,slow=10,SNR=9.8						
ASAR	**Alice Springs**	**24.46**	**162**	P	**P**	**17 05 15.1**	**+0.8**
	3.1nm,0.8s,mb3.8,baz=345,slow=11,SNR=15						
ASAR				PcP	PcP	17 08 53.3	+0.6
	0.4nm,0.9s,baz=351,slow=1.8,SNR=4.2						
KSRS	**Korea Array**	**37.58**	**2**	P	**P**	**17 07 11.4**	**+1.8**
	1.0nm,0.6s,mb3.8,baz=187,slow=10,SNR=7.6						
MJAR	**Matsushiro Arr**	**38.32**	**16**	P	**P**	**17 07 15.0**	**-1.0**
	0.3nm,0.3s,mb3.5,baz=178,slow=9.5,SNR=2.8						
SONM	**Songino Array**	**50.89**	**343**	P	**P**	**17 08 56.8**	**+0.8**
	0.4nm,0.6s,mb3.5,baz=146,slow=7.3,SNR=4.5						
MKAR	**Makanchi Array**	**60.50**	**327**	P	**P**	**17 10 04.3**	**-0.7**
	1.0nm,0.3s,mb4.3,baz=120,slow=8.1,SNR=29						
MKAR	**Makanchi Array**	**60.50**	**327**	P	**P**	**17 10 04.3**	**-0.7**
KURK	**Kurchatov**	**64.78**	**329**	P	**P**	**17 10 32.4**	**-1.1**
	0.6nm,0.3s,mb4.1,baz=135,slow=7.0,SNR=7.5						
BVAR	**Borovoye Array**	**70.33**	**328**	P	**P**	**17 11 08.1**	**-0.3**
	0.4nm,0.4s,mb3.7,baz=82,slow=10,SNR=2.6						
AKTK	**Aktyubinsk**	**76.40**	**322**	P	**P**	**17 11 44.5**	**+0.2**
AKTO	**Aktyubinsk**	**76.40**	**322**	P	**P**	**17 11 44.5**	**+0.2**
	2.5nm,0.7s,mb4.3,baz=105,slow=8.2,SNR=8.6						
IDI	**Anoyia**	**99.30**	**306**	LR	LR	18 01 49.1	
	comp=Z,40nm,20.2s,baz=77,slow=38						

JMA 08 17:29:56.5±0.3**, 4020N**×**14526E, h46**km**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**2.41**	**319**	P	Pn	17 30 34.9	+1.5
JEM				*e*S	Sn	17 31 03.8	+2.1
JTH	**Tanohata**	**2.62**	**265**	P	Pn	17 30 37.3	+1.0
JTH				S	Sn	17 31 07.4	+0.6
JCH	**Churui**	**2.80**	**330**	P	Pn	17 30 39.4	+0.6
JCH				S	Sn	17 31 12.1	+0.8
JNBK	**Urakawa-nobuka**	**2.81**	**319**	P	Pn	17 30 40.9	+2.0
JNBK				S	Sn	17 31 15.0	+3.5
JAK	**Akkeshi**	**2.83**	**352**	P	Pn	17 30 38.3	-0.8
JAK				*e*S	Sn	17 31 10.7	-1.2
JANG	**Nango**	**2.87**	**275**	P	Pn	17 30 41.0	+1.3
JOM	**Ohasama**	**3.14**	**258**	P	Pn	17 30 45.7	+2.3
JOM				*e*S	Sn	17 31 21.8	+2.2
NEM2	**Nemuro 2**	**3.18**	**6**	*e*S	Sn	17 31 16.6	-4.1
JMK	**Ichinoseki**	**3.36**	**250**	P	Pn	17 30 48.2	+1.7
JMK				*e*S	Sn	17 31 26.8	+1.7
JOT	**Ohata**	**3.41**	**292**	P	Pn	17 30 49.2	+2.1
JOT				*e*S	Sn	17 31 28.0	+1.8
JKB	**Kayabe**	**3.61**	**299**	P	Pn	17 30 51.9	+2.0
JKB				*e*S	Sn	17 31 32.9	+1.6
JTKR	**Abashiri--Toko**	**3.90**	**345**	P	Pn	17 30 54.8	+1.0
JTKR				S	Sn	17 31 38.3	0.0
JOSM	**Okushiri--Mats**	**4.76**	**295**	P	Pn	17 31 07.2	+1.6
MAT	**Matsushiro**	**6.63**	**239**	P	Pn	17 31 34.0	+2.6
MAT				S	Sn	17 32 47.6	+1.9

*ISCJB **08** 17:56:11.2±0.4, 4408N±003×1238E±003, h50km±7km, Error ellipse: s-maj=5.0km s-min=4.2km az=7.2*
*LDG **08** 17:56:11.1±0.1, 4406N×1250E, h20km, Ml2.7/7, Error ellipse: s-maj=3.7km s-min=2.2km az=49.0*
*CSEM **08** 17:56:11.8±0.1, 4401N×1245E, h40km, ML2.8/13, Error ellipse: s-maj=2.8km s-min=2.0km az=49.0*
*ROM **08** 17:56:12.4±0.2, 4399N×1244E, h36km±1km, Md2.6/22, Ml2.2/13, Error ellipse: s-maj=3.5km s-min=2.7km az=35.0*
*NEIC **08** 17:56:12.4, 4399N×1244E, h36km, MD2.6(ROM), ML2.7(LDG), After ROM.*
ISC 08 17:56:12.2±0.3**, 4407N**±003×**1240E**±003**, h39**km±8km**, n48, σ1.12**/75**, 1C-1D, Northern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSM	**Repubblica di**	**0.15**	**165**	Pg	**Pn**	**17 56 18.5**	**-0.4**
RSM				Sg	**Sn**	**17 56 23.7**	**+0.1**
	60nm,0.7s						
SFI	**Santa Sofia**	**0.43**	**247**	Pg	**Pn**	**17 56 22.2**	**+0.3**
	55nm,0.3s						
FSSB	**Fossombrone**	**0.47**	**144**	Pg	**Pn**	**17 56 21.0**	**-1.4**
FSSB				Sg	**Sn**	**17 56 28.4**	**-1.2**
	546nm,0.2s						
BADI	**Badiali**	**0.57**	**191**	Pg	**Pn**	**17 56 22.7**	**-1.1**
BADI				Sg	**Sn**	**17 56 31.6**	**-0.5**
	169nm,0.2s						
CDCA	**Citt' di Caste**	**0.62**	**191**	Pg	**Pn**	**17 56 23.5**	**-1.0**
CDCA				Sg	**Sn**	**17 56 32.9**	**-0.4**
	17nm,0.3s						
VMG	**Vicchio**	**0.63**	**260**	Pg	**Pn**	**17 56 26.1**	**+1.5**
VMG				Sg	**Sn**	**17 56 36.9**	**+3.5**
	111nm,0.4s						
SEI	**Scarperia**	**0.75**	**269**	Pg	**Pn**	**17 56 28.0**	**+1.7**
	185nm,0.3s						
MURB	**Monte Urbino**	**0.81**	**173**	Pg	**Pn**	**17 56 26.3**	**-0.8**
MURB				Sg	**Sn**	**17 56 38.3**	**+0.4**
	379nm,0.5s						
FIU	**Minerbio Fiu**	**0.86**	**311**	Pg	**Pn**	**17 56 31.8**	**+4.0**
CING	**Cingoli**	**0.91**	**140**	Pg	**Pn**	**17 56 27.9**	**-0.5**
CING				Sg	**Sn**	**17 56 40.9**	**+0.7**
	55nm,0.7s						
SNTG	**Esanatoglia**	**0.91**	**154**⇓	*i*Pg	**Pn**	**17 56 27.5**	**-0.9**
	33nm,0.2s						
FNVD	**Fontana Vidola**	**0.92**	**276**	Pg	**Pn**	**17 56 30.9**	**+2.3**
	82nm,0.5s						
CSNT	**Castellina Chi**	**1.00**	**234**	Pg	**Pn**	**17 56 30.6**	**+0.9**
CSNT				Sg	**Sn**	**17 56 43.5**	**+0.9**
	32nm,0.7s						
AOI	**Ancona**	**1.02**	**120**	Pg	**Pn**	**17 56 29.9**	**0.0**
AOI				Sg	**Sn**	**17 56 44.5**	**+1.6**
	89nm,0.9s						
CRMI	**Carmignano**	**1.07**	**255**	Pg	**Pn**	**17 56 31.1**	**+0.5**
CRMI				Sg	**Sn**	**17 56 45.0**	**+0.7**
	27nm,0.4s						
PZZT	**Monte Pizzetto**	**1.11**	**274**	Pg	**Pn**	**17 56 33.2**	**+2.0**
SACS	**San Casciano d**	**1.27**	**196**	Pg	**Pn**	**17 56 32.3**	**-1.1**
SACS				Sg	**Sn**	**17 56 49.0**	**-0.3**
	33nm,0.5s						
NRCA	**Norcia**	**1.34**	**157**⇑	*i*Pg	**Pn**	**17 56 34.8**	**+0.4**
	9.0nm,0.3s						
MAIM	**Mastiano**	**1.39**	**264**	Pg	**Pn**	**17 56 36.9**	**+1.9**
PII	**Pisa**	**1.40**	**256**	Pg	**Pn**	**17 56 35.6**	**+0.5**
	18nm,0.2s						
TERO	**Teramo**	**1.69**	**148**	Pn	**Pn**	**17 56 41.1**	**+1.9**
CAMP	**Campotosto**	**1.70**	**154**	Pg	**Pn**	**17 56 39.3**	**0.0**
	3.0nm,0.4s						
NVLJ	**Novalja**	**1.84**	**74**	*e*Pn	**Pn**	**17 56 41.9**	**+0.6**
NVLJ				Sn	**Sn**	**17 57 02.5**	**-0.8**
NVLJ	**Novalja**	**1.84**	**74**	*e*Pn	**Pn**	**17 56 41.8**	**+0.6**
NVLJ				Sn	**Sn**	**17 57 02.4**	**-0.9**
SKDS	**Skadanscina**	**1.87**	**37**	*i* Pn	**Pn**	**17 56 41.0**	**-0.6**
KNDS	**Knezji Dol**	**2.03**	**43**	*i* Pn	**Pn**	**17 56 43.7**	**-0.1**
CTI	**Castel Tesino**	**2.05**	**345**	Pn	**Pn**	**17 56 44.7**	**+0.6**
MAGA	**Magasa**	**2.12**	**324**	Pn	**Pn**	**17 56 45.6**	**+0.6**
	55nm,0.5s						
MABI	**Malga Bissina**	**2.39**	**327**	Pn	**Pn**	**17 56 49.9**	**+1.1**
	7.0nm,0.1s						
GORS	**Gorjuse**	**2.51**	**26**	*i* Pn	**Pn**	**17 56 50.8**	**+0.3**
APPI	**Appiano**	**2.54**	**341**	Pn	**Pn**	**17 56 52.5**	**+1.6**
PGF	**Pioggiola**	**2.91**	**240**	*e*Pn	**Pn**	**17 56 54.8**	**-1.1**
PGF				*e*Sn	**Sn**	**17 57 28.5**	**-1.1**
	1.6nm,0.3s						
PGF	**Pioggiola**	**2.91**	**240**	*e*Pn	**Pn**	**17 56 54.8**	**-1.1**
PGF				*e*Sn	**Sn**	**17 57 28.5**	**-1.1**
	0.8nm,0.3s						
MBDF	**Montbardon**	**4.09**	**281**	*e*P	**Pn**	**17 57 15.5**	**+3.4**
FRF	**La Foret Royal**	**4.19**	**265**	*e*Pn	**Pn**	**17 57 12.6**	**-0.9**
LPG	**La Plagne**	**4.26**	**291**	*e*Pn	**Pn**	**17 57 13.7**	**-0.8**
LPG				*e*Sn	**Sn**	**17 58 01.9**	**-1.1**
	2.2nm,0.4s						
LPG	**La Plagne**	**4.26**	**291**	*e*Pn	**Pn**	**17 57 13.7**	**-0.8**
LPG				*e*Sn	**Sn**	**17 58 01.9**	**-1.1**
	1.1nm,0.4s						
LPL	**La Plagne**	**4.28**	**292**	*e*Pn	**Pn**	**17 57 14.4**	**-0.4**
LPL				*e*Sn	**Sn**	**17 58 01.3**	**-2.2**
	1.9nm,0.3s						
LPL	**La Plagne**	**4.28**	**292**	*e*Pn	**Pn**	**17 57 14.4**	**-0.4**
LPL				*e*Sn	**Sn**	**17 58 01.3**	**-2.2**
	0.9nm,0.3s						
CABF	**La Chapelle**	**5.12**	**302**	*e*Pn	**Pn**	**17 57 25.9**	**-0.4**
HINF	**Hinteralfeld**	**5.38**	**316**	*e*Pn	**Pn**	**17 57 29.9**	**0.0**
HINF				*e*Sn	**Sn**	**17 58 27.5**	**-3.0**
	1.6nm,0.2s						
HINF	**Hinteralfeld**	**5.38**	**316**	*e*Pn	**Pn**	**17 57 29.9**	**0.0**
HINF				*e*Sn	**Sn**	**17 58 27.5**	**-3.0**
	0.8nm,0.2s						
CDF	**Champ du Feu**	**5.61**	**323**	*e*Pn	**Pn**	**17 57 33.2**	**+0.2**
CDF				*e*Sn	**Sn**	**17 58 33.2**	**-2.9**
	1.3nm,0.3s						
CDF	**Champ du Feu**	**5.61**	**323**	*e*Pn	**Pn**	**17 57 33.2**	**+0.2**
CDF				*e*Sn	**Sn**	**17 58 33.2**	**-2.9**
	0.6nm,0.3s						
HAU	**Haudompre**	**5.76**	**315**	*e*Pn	**Pn**	**17 57 34.8**	**-0.3**
HAU				*e*Sn	**Sn**	**17 58 36.4**	**-3.5**
	1.7nm,0.2s						
HAU	**Haudompre**	**5.76**	**315**	*e*Pn	**Pn**	**17 57 34.8**	**-0.3**
HAU				*e*Sn	**Sn**	**17 58 36.4**	**-3.5**
	0.9nm,0.2s						
LOR	**Lormes**	**6.78**	**301**	*e*Pn	**Pn**	**17 57 48.3**	**-0.8**
LOR				*e*Sn	**Sn**	**17 59 01.1**	**-3.9**
	3.5nm,0.4s						
LOR	**Lormes**	**6.78**	**301**	*e*Pn	**Pn**	**17 57 48.3**	**-0.8**
LOR				*e*Sn	**Sn**	**17 59 01.1**	**-3.9**
	1.8nm,0.4s						

*CNRM **08** 17:57:55.3, 36.13N×359W, h30km, MD3.7*
*CSEM **08** 17:57:57.6±0.2, 3564N×3.15W, h35km, ML3.1/7, Error ellipse: s-maj=6.2km s-min=4.0km az=101.0*
*ISCJB **08** 17:57:58.8±0.7, 3582N±002×357W±003, h11km±5km, mb3.1/2, Error ellipse: s-maj=3.8km s-min=3.2km az=21.2*
*IDC **08** 17:57:58.3±1.5, 3587N×3.10W, h0km, mb3.0/2, mb1 3.0/4, mb1mx2.9/27, mbtmp2.9/4, ML3.1/2, Error ellipse: s-maj=33.8km s-min=14.5km az=98.0*
*INMG **08** 17:57:59.3±1.6, 3577N×356W, h0km, ML2.4, Error ellipse: s-maj=8.2km s-min=4.8km az=168.0*
*MDD **08** 17:57:59.4±0.3, 3582N×353W, h0km, mbLg2.5/20, Error ellipse: s-maj=3.4km s-min=3.0km az=5.0, PRIMO*
*SFS **08** 17:57:59.0, 3587N×353W, h0km, ML2.4*
ISC 08 17:57:58.9±0.6**, 3583N**±002×**355W**±003**, h6**km±5km**, n58, σ1.18**/101**, mb3.1**/2**, 1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EALB	**Alboran**	**0.43**	**75**	P	**Pg**	**17 58 07.2**	**-0.1**
	4.6nm,0.1s,SNR=82						
EALB				S	**Sg**	**17 58 12.8**	**-0.2**
	709nm,0.3s,SNR=7.9						
EALB	**Alboran**	**0.43**	**75**	P	**Pg**	**17 58 07.2**	**-0.1**
	4.6nm,0.1s,SNR=82						
EALB				S	**Sg**	**17 58 12.8**	**-0.2**
	235nm,0.2s,SNR=7.9						
MPAL	**Palemas**	**0.68**	**208**	*i* P	**Pg**	**17 58 12.0**	**0.0**
MPAL				*i* S	**Sg**	**17 58 24.0**	**+3.1**
TOU	**Touzarine**	**0.88**	**191**	*i* P	**Pg**	**17 58 14.0**	**-1.8**
TOU				*i* S	**Sg**	**17 58 29.0**	**+1.7**
ZAI	**Zaio**	**1.08**	**142**	P	**Pg**	**17 58 17.5**	**-2.1**
ZAI				S	**Sg**	**17 58 33.0**	**-0.6**
ZAI	**Zaio**	**1.08**	**142**	*e*P	**Pg**	**17 58 17.5**	**-2.1**
EMAL	**Malaga-Limoner**	**1.17**	**323**	P	**Pb**	**17 58 24.6**	**+3.0**
	1.3nm,0.0s,SNR=7.9						
EMAL				S	**Sg**	**17 58 40.3**	**+3.6**
	135nm,0.2s,SNR=7.9						
EMAL	**Malaga-Limoner**	**1.17**	**323**	*e*P	**Pb**	**17 58 20.7**	**-0.9**
EBER	**Berja**	**1.19**	**26**	P	**Pb**	**17 58 20.0**	**-2.0**
	12nm,0.3s,SNR=19						
EBER				S	**Sb**	**17 58 36.2**	**-1.4**
	182nm,0.4s,SNR=13						
EBER	**Berja**	**1.19**	**26**	P	**Pb**	**17 58 20.0**	**-1.9**
	14nm,0.4s,SNR=19						
EBER				S	**Sb**	**17 58 36.2**	**-1.4**
	68nm,0.3s,SNR=13						
ERON	**Agron**	**1.21**	**350**	P	**Pb**	**17 58 20.7**	**-1.5**
	3.6nm,0.1s,SNR=7.9						
ERON				S	**Sb**	**17 58 36.6**	**-1.4**
	47nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**1.23**	**307**	P	**Pn**	**17 58 21.1**	**-1.5**
	3.6nm,0.1s,SNR=22						
EMIJ				S	**Sb**	**17 58 37.3**	**-1.4**
	38nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**1.38**	**4**	P	**Pn**	**17 58 23.8**	**-0.9**
	9.1nm,0.3s,SNR=34						
EQUE				S	**Sb**	**17 58 42.1**	**-0.8**
	18nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**1.38**	**4**	P	**Pn**	**17 58 23.8**	**-0.8**
	12nm,0.4s,SNR=34						
EQUE				S	**Sb**	**17 58 41.7**	**-1.2**
	17nm,0.4s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.40**	**340**	P	**Pn**	**17 58 24.3**	**-0.7**
	7.5nm,0.3s,SNR=14						
ELOJ				S	**Sn**	**17 58 45.1**	**+1.3**
	37nm,0.4s,SNR=16						
ELOJ	**Sierra Loja**	**1.40**	**340**	P	**Pn**	**17 58 24.9**	**-0.1**
	8.2nm,0.4s,SNR=14						
ELOJ				S	**Sn**	**17 58 45.1**	**+1.3**
	37nm,0.4s,SNR=16						
ECOG	**Cogollos-Vega**	**1.45**	**359**	P	**Pn**	**17 58 24.9**	**-0.7**
	1.6nm,0.2s,SNR=22						
ECOG				S	**Sn**	**17 58 44.2**	**-0.7**
	27nm,0.4s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.45**	**359**	P	**Pn**	**17 58 25.4**	**-0.2**
	18nm,0.4s,SNR=22						
ECEU	**Ceuta**	**1.49**	**273**	P	**Pn**	**17 58 26.4**	**+0.2**
	2.4nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**17 58 44.4**	**-1.4**
	13nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.67**	**292**	P	**Pn**	**17 58 28.6**	**-0.1**
	2.9nm,0.3s,SNR=7.9						
EJIF				S	**Sn**	**17 58 51.7**	**+1.2**
	25nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.01**	**11**	⇓P	**Pn**	**17 58 34.3**	**+1.0**
	3.8nm,0.1s,SNR=18						
EQES				S	**Sn**	**17 58 59.8**	**+1.1**
	37nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.01**	**11**	P	**Pn**	**17 58 34.4**	**+1.1**
	14nm,0.4s,SNR=36						
EHUE	**Huescar**	**2.13**	**21**	P	**Pn**	**17 58 35.4**	**+0.5**
	2.8nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**17 59 02.7**	**+1.0**
	11nm,0.4s,SNR=7.9						
ESPR	**Espera**	**2.13**	**300**	P	**Pn**	**17 58 36.5**	**+1.5**
	0.6nm,0.1s,SNR=4.8						
ESPR				S	**Sn**	**17 59 03.5**	**+1.7**
	18nm,0.3s,SNR=7.9						
ESPR	**Espera**	**2.13**	**300**	P	**Pn**	**17 58 36.5**	**+1.5**
	6.5nm,0.7s,SNR=4.8						
EBAN	**Banos Encina**	**2.34**	**355**	P	**Pn**	**17 58 38.8**	**+0.9**
	4.3nm,0.2s,SNR=7.9						
EBAN				S	**Sn**	**17 59 10.0**	**+3.1**
	13nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**2.48**	**341**	P	**Pn**	**17 58 40.4**	**+0.7**
	0.5nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**17 59 15.3**	**+5.1**
	12nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**2.48**	**341**	P	**Pn**	**17 58 40.4**	**+0.7**
	SNR=7.9						
EADA				S	**Sn**	**17 59 15.3**	**+5.0**
	12nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**2.70**	**327**	P	**Pn**	**17 58 44.8**	**+2.0**
	0.4nm,0.0s,SNR=7.9						
ECAB				S	**Sn**	**17 59 15.7**	**0.0**
	4.3nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**2.70**	**327**	S	**Sn**	**17 59 18.4**	**+2.7**
	SNR=7.9						
EMUR	**La Murta**	**2.73**	**42**	P	**Pn**	**17 58 44.8**	**+1.5**
	1.9nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**17 59 16.4**	**-0.2**
	18nm,0.8s,SNR=7.9						
CZD	**Col de Zad**	**3.05**	**204**	*e*P	**Pn**	**17 58 45.0**	**-2.6**
MDT	**Midelt**	**3.13**	**197**	Pn	**Pn**	**17 58 49.6**	**+0.8**
	0.5nm,0.3s,baz=344,slow=4.4,SNR=10						
MDT				Sn	**Sn**	**17 59 26.9**	**+0.5**
	0.7nm,0.3s,baz=100,slow=24,SNR=4.6						
MDT				Lg		17 59 42.5	
	1.0nm,0.3s,baz=236,slow=18,SNR=4.3						
EMIN	**Mina Concepcio**	**3.17**	**309**	P	**Pn**	**17 58 49.1**	**-0.2**
	0.4nm,0.1s,SNR=9.3						
EMIN				S	**Sn**	**17 59 26.5**	**-0.9**
	4.0nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.23**	**29**	P	**Pn**	**17 58 50.8**	**+0.7**
	0.9nm,0.2s,SNR=20						
ETOB				S	**Sn**	**17 59 29.2**	**+0.2**
	8.2nm,0.4s,SNR=7.9						
EGRO	**El Granado**	**3.59**	**299**	P	**Pn**	**17 58 55.3**	**+0.2**
	1.6nm,0.1s,SNR=13						
EGRO				S	**Sn**	**17 59 36.3**	**-1.4**
	5.8nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**3.59**	**299**	P	**Pn**	**17 58 55.3**	**+0.2**
	4.2nm,0.3s,SNR=13						
PBAR	**Barrancos**	**3.65**	**311**	*e*Pn	**Pn**	**17 58 55.9**	**+0.1**
PBAR				*e*Sn	**Sn**	**17 59 38.5**	**-0.6**
PBAR				A		17 59 50.9	
	4.0nm,0.7s						
PBAR	**Barrancos**	**3.65**	**311**	*e*Pn	**Pn**	**17 58 55.9**	**+0.1**
PBAR				*e*Sn	**Sn**	**17 59 38.5**	**-0.6**
	4.0nm,0.7s						
PVAQ	**Vaqueiros**	**3.70**	**296**	*e*Pn	**Pn**	**17 58 56.7**	**+0.1**
PVAQ				*e*Sn	**Sn**	**17 59 38.8**	**-1.7**
PVAQ				A		17 59 40.5	
	8.1nm,0.3s						
PVAQ	**Vaqueiros**	**3.70**	**296**	*e*Pn	**Pn**	**17 58 56.7**	**+0.1**
PVAQ				*e*Sn	**Sn**	**17 59 38.8**	**-1.7**
	8.1nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.80**	**293**	*e*Sn	**Sn**	**17 59 41.6**	**-1.4**
PBDV				A		17 59 43.1	
	5.9nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.80**	**293**	*e*Sn	**Sn**	**17 59 41.6**	**-1.4**
	5.9nm,0.4s						
ZFT	**Errachidia**	**3.84**	**190**	*e*P	**Pn**	**17 58 54.0**	**-4.5**
ESDC	**Sonseca Array**	**3.85**	**355**	Pn	**Pn**	**17 58 59.5**	**+0.8**
	1.3nm,0.3s,baz=173,slow=12,SNR=13						
ESDC				Sn	**Sn**	**17 59 44.4**	**+0.2**
	1.0nm,0.3s,baz=168,slow=18,SNR=4.3						
ESDC				Lg		17 59 59.9	
	2.4nm,0.3s,baz=165,slow=27,SNR=5.3						
ESDC	**Sonseca Array**	**3.85**	**355**	P	**Pn**	**17 58 59.5**	**+0.8**
	0.7nm,0.2s,baz=174,slow=14,SNR=9.5						
MORF	**Marmelete**	**4.36**	**291**	*e*Pn	**Pn**	**17 59 07.0**	**+1.3**
MORF				*e*Sn	**Sn**	**17 59 56.0**	**-0.8**
PESTR	**Estremoz**	**4.42**	**314**	*e*Pn	**Pn**	**17 59 10.0**	**+3.5**
PESTR				*e*Sn	**Sn**	**17 59 58.2**	**-0.1**
PESTR				A		18 00 04.1	
	2.3nm,0.5s						
PESTR	**Estremoz**	**4.42**	**314**	*e*Pn	**Pn**	**17 59 10.0**	**+3.5**
PESTR				*e*Sn	**Sn**	**17 59 58.2**	**-0.1**
	2.3nm,0.5s						
PFVI	**Vila Bisbo**	**4.45**	**289**	*e*Pn	**Pn**	**17 59 07.5**	**+0.6**
PFVI				*e*Sn	**Sn**	**17 59 55.1**	**-3.8**
PFVI				A		18 00 07.6	
	6.3nm,0.6s						
PFVI	**Vila Bisbo**	**4.45**	**289**	*e*Pn	**Pn**	**17 59 07.5**	**+0.6**
PFVI				*e*Sn	**Sn**	**17 59 55.1**	**-3.8**
	6.3nm,0.6s						
EVO	**Evora**	**4.47**	**308**	*e*Pn	**Pn**	**17 59 08.2**	**+1.0**
EVO				*e*Sn	**Sn**	**17 59 55.7**	**-3.8**
EVO				A		17 59 59.9	
	2.6nm,0.4s						
EVO	**Evora**	**4.47**	**308**	*e*Pn	**Pn**	**17 59 08.2**	**+1.0**
EVO				*e*Sn	**Sn**	**17 59 55.7**	**-3.8**
	2.6nm,0.4s						
PTEO	**Sao Teotonio**	**4.50**	**294**	*e*Pn	**Pn**	**17 59 08.8**	**+1.2**
PTEO				*e*Sn	**Sn**	**18 00 00.0**	**-0.2**
PTEO				A		18 00 03.6	
	8.7nm,0.5s						
PTEO	**Sao Teotonio**	**4.50**	**294**	*e*Pn	**Pn**	**17 59 08.8**	**+1.2**
PTEO				*e*Sn	**Sn**	**18 00 00.0**	**-0.2**
	8.7nm,0.5s						
MOE	**Montemor**	**4.68**	**306**	*e*Sn	**Sn**	**18 00 04.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**23.07**	**167**	P	**P**	**18 03 05.9**	**+0.6**
	0.3nm,0.7s,mb2.8,baz=343,slow=9.5,SNR=3.0						
MKAR	**Makanchi Array**	**62.36**	**51**	P	**P**	**18 08 21.0**	**-1.2**
	0.2nm,0.6s,mb3.4,baz=282,slow=7.1,SNR=2.7						

*ISCJB **08** 18:19:27.7±0.8, 3606N±009×13734E±009, h279km±6km, mb2.9/2, Error ellipse: s-maj=14.2km s-min=11.4km az=177.3*
*JMA **08** 18:19:27.2±0.3, 3605N×13721E, h280km±3km, M2.4*
*IDC **08** 18:19:28.4±3.0, 3585N×13687E, h252km±49km, mb2.8/2, mb1 3.1/2, mb1mx2.7/22, mbtmp2.8/2, Error ellipse: s-maj=115.2km s-min=101.8km az=33.0*
ISC 08 18:19:28.8±0.8**, 3606N**±009×**13737E**±009**, h273**km±6km**, n19, σ0.64**/27**, mb2.9**/2**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.17**	**345**	P	**Pn**	**18 20 03.0**	**-0.7**
JGM	**Miyama**	**0.64**	**236**	P	**Pn**	**18 20 04.0**	**-0.8**
JNG	**Nsakai**	**0.69**	**59**	P	**Pn**	**18 20 05.0**	**+0.1**
JNG				S	**S**	**18 20 34.1**	**+0.7**
JAO	**Obara**	**0.79**	**187**	P	**Pn**	**18 20 04.5**	**-0.9**
MAT	**Matsushiro**	**0.83**	**54**	P	**Pn**	**18 20 06.2**	**+0.7**
MAT				*e*S	**S**	**18 20 35.3**	**+0.8**
MAT	**Matsushiro**	**0.83**	**54**	P	**Pn**	**18 20 05.3**	**-0.2**
MAT				*e*S	**S**	**18 20 35.0**	**+0.5**
MJAR	**Matsushiro Arr**	**0.83**	**54**	P	**Pn**	**18 20 05.4**	**-0.1**
	4.6nm,0.3s,baz=244,slow=6.5,SNR=97						
MJAR				S	**S**	**18 20 34.8**	**+0.3**
	baz=82,slow=22,SNR=3.4						
HMMJ	**Hamamatsu 2**	**1.23**	**166**	P	**Pn**	**18 20 07.4**	**-0.3**
JHU	**Hanno**	**1.56**	**97**	P	**Pn**	**18 20 11.2**	**+1.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHU				*e*S	**S**	**18 20 42.4**	**+0.2**
JSD	**Sado**	**2.10**	**20**	P	**Pn**	**18 20 13.8**	**-0.2**
JYT	**Yasato**	**2.29**	**85**	P	**Pn**	**18 20 15.9**	**+0.1**
JHO	**Hitachi**	**2.64**	**77**	P	**Pn**	**18 20 18.9**	**-0.2**
JHO				*e*S	**S**	**18 20 57.4**	**-1.6**
JFT	**Otama**	**2.79**	**58**	P	**Pn**	**18 20 21.5**	**+0.9**
BSO3	**Boso 3**	**2.85**	**115**	*e*S	**S**	**18 21 02.8**	**-0.1**
JFK	**Kawauchi**	**3.10**	**64**	P	**Pn**	**18 20 23.8**	**0.0**
JFK				*e*S	**S**	**18 21 06.6**	**-0.9**
BSO1	**Boso 1**	**3.26**	**114**	P	**Pn**	**18 20 25.1**	**-0.4**
BSO1				*e*S	**S**	**18 21 11.2**	**+0.6**
JMM	**Marumori**	**3.28**	**56**	P	**Pn**	**18 20 26.0**	**+0.4**
WRA	**Warramunga Arr**	**55.76**	**183**	P	**P**	**18 28 37.6**	**0.0**
	0.3nm,0.3s,mb3.1,baz=360,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**59.49**	**184**	P	**P**	**18 29 03.8**	**+0.4**
	0.1nm,0.3s,mb2.7,baz=356,slow=5.6,SNR=7.7						

IDC 08 18:46:40.3±3.2**,2121S×6666W,h244**km±25km**,mb2.9**/1**, mb1 3.0**/3**,mb1mx2.9**/17**,mbtmp2.9**/3**,Error ellipse: s-maj=65.6km s-min=24.5km az=53.0,Southern Bolivia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.09**	**344**	P	Pn	18 47 57.7	+0.7
	3.2nm,0.3s,baz=155,slow=12,SNR=54						
LPAZ				S	S	18 48 59.6	+1.4
	baz=350,slow=19,SNR=1.7						
CPUP	**Villa Florida**	**9.95**	**123**	P	Pn	18 48 58.4	+0.1
	0.2nm,0.3s,baz=285,slow=12,SNR=3.2						
TORD	**Torodi Ar. Bea**	**75.28**	**69**	P	P	18 57 57.0	-0.1
	0.1nm,0.4s,baz=252,slow=5.7,SNR=3.6						
ASAR	**Alice Springs**	**131.11**	**205**	PKP	PKPdf	19 05 22.3	-1.5
	0.5nm,0.9s,baz=122,slow=1.4,SNR=4.0						
WRA	**Warramunga Arr**	**134.24**	**208**	PKP	PKPdf	19 05 29.9	+0.1
	0.1nm,0.5s,baz=148,slow=1.7,SNR=3.4						
MKAR	**Makanchi Array**	**144.15**	**37**	PKP	PKPdf	19 05 47.1	+0.2
	0.2nm,0.3s,baz=325,slow=4.7,SNR=5.0						

IDC 08 19:34:22.5±1.1**,1085S×6672E,h0**km**,mb3.8**/5**,mb1 3.9**/5**, mb1mx3.6**/20**,mbtmp3.8**/5**,MS3.4**/5**,Ms1 3.4**/5**, ms1mx3.1**/26**,Error ellipse: s-maj=32.8km s-min=31.5km az=17.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**42.58**	**239**	P	P	19 42 20.4	-0.1
	2.5nm,0.9s,baz=85,slow=11,SNR=3.6						
BOSA				LR	LR	19 56 56.5	
	comp=Z,38nm,20.2s,baz=325,slow=32						
CMAR	**Chiang Mai Arr**	**43.11**	**48**	LR	LR	19 58 17.3	
	comp=Z,25nm,18.4s,baz=170,slow=33						
KAPI	**Kappang**	**52.78**	**88**	LR	LR	20 01 15.1	
	comp=Z,55nm,21.1s,baz=138,slow=31						
MAW	**Mawson**	**56.75**	**182**	LR	LR	20 02 53.4	
	comp=Z,55nm,21.2s,baz=174,slow=30						
FITZ	**Fitzroy Crossi**	**57.31**	**105**	LR	LR	20 03 08.4	
	comp=Z,33nm,20.6s,baz=24,slow=30						
MKAR	**Makanchi Array**	**59.05**	**12**	P	P	19 44 24.0	-0.2
	0.3nm,0.7s,baz=190,slow=6.9,SNR=3.5						
ASAR	**Alice Springs**	**64.92**	**111**	P	P	19 45 04.2	-0.2
	0.7nm,0.8s,baz=278,slow=5.6,SNR=10						
WRA	**Warramunga Arr**	**65.46**	**107**	P	P	19 45 08.2	+0.3
	0.9nm,0.6s,baz=275,slow=5.5,SNR=13						
SONM	**Songino Array**	**68.20**	**28**	P	P	19 45 24.9	+0.1
	1.1nm,0.8s,baz=234,slow=4.3,SNR=7.4						
NVAR	**Mina Array Bea**	**152.17**	**8**	PKPbc	PKPbc	19 54 21.2	+0.7
	0.4nm,0.6s,baz=335,slow=4.0,SNR=3.2						

*ISCJB **08** 19:46:18.8±0.4,5523N±003×16173E±008,h109km±3km, mb3.7/9,Error ellipse: s-maj=7.7km s-min=3.8km az=14.5*
*KRSC **08** 19:46:18.8±0.3,5522N×16176E,h98km±88km,ML4.3*
*MOS **08** 19:46:18.9±0.9,5523N×16168E,h108km,mb4.1/5,Error ellipse: s-maj=26.4km s-min=9.1km az=71.1*
*NEIC **08** 19:46:20.7±1.0,5535N×16141E,h110km±10km,mb4.5/2, Error ellipse: s-maj=17.9km s-min=10.2km az=150.0*
*IDC **08** 19:46:21.9±2.8,5538N×16135E,h121km±24km,mb3.3/7, mb1 3.5/9,mb1mx3.3/25,mbtmp3.3/9,Error ellipse: s-maj=28.5km s-min=22.7km az=148.0*
ISC 08 19:46:19.8±0.4**,5523N**±003×**16174E**±008**,h105**km±3km**, n46,**σ**0^{s}78**/72**,mb3.7**/9**,1D,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.67**	**181**	*e*P	**Pn**	**19 46 37.1**	**-0.2**
MKZ				*i* S	**Sn**	**19 46 50.0**	**-0.5**
TUMR	**Tumrok**	**0.92**	**274**	*e*P	**Pn**	**19 46 40.1**	**+0.5**
TUMR				*i* S	**Sn**	**19 46 55.4**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**0.93**	**321**	*e*P	**Pn**	**19 46 39.7**	**0.0**
BZGR				*i* S	**Sn**	**19 46 54.4**	**-0.4**
ZLN	**Zelenaya**	**0.95**	**326**	*e*P	**Pn**	**19 46 40.3**	**+0.3**
ZLN				*i* S	**Sn**	**19 46 56.6**	**+1.4**
BZMR	**Bezymyannaya**	**1.00**	**315**	*e*P	**Pn**	**19 46 40.3**	**-0.2**
BZMR				*i* S	**Sn**	**19 46 56.6**	**+0.4**
KMNR	**Kamenistaya**	**1.01**	**302**	*e*P	**Pn**	**19 46 40.6**	**+0.1**
KMNR				*i* S	**Sn**	**19 46 55.7**	**-0.5**
BZWR	**Bezymyannyi-We**	**1.02**	**317**	*e*P	**Pn**	**19 46 40.8**	**+0.1**
BZWR				*i* S	**Sn**	**19 46 57.6**	**+1.1**
KIRR	**Kirishev**	**1.08**	**313**	*e*P	**Pn**	**19 46 41.0**	**-0.3**
KIRR				*i* S	**Sn**	**19 46 57.6**	**0.0**
KPT	**Kopyto**	**1.14**	**311**	*e*P	**Pn**	**19 46 41.7**	**-0.3**
KPT				*i* S	**Sn**	**19 46 58.6**	**-0.1**
KBTR	**Krutoberegovo**	**1.16**	**31**	*e*P	**Pn**	**19 46 42.1**	**-0.1**
KBTR				*i* S	**Sn**	**19 46 59.3**	**+0.2**
KRSR	**Krestovskiy**	**1.19**	**327**	*e*P	**Pn**	**19 46 42.4**	**-0.2**
KRSR				*i* S	**Sn**	**19 47 00.1**	**+0.2**
KLY	**Klyuchi**	**1.25**	**331**	*e*P	**Pn**	**19 46 42.6**	**-0.6**
KLY				*i* S	**Sn**	**19 46 59.9**	**-1.1**
KOZR	**Kozyr**	**1.34**	**309**	PN	**Pn**	**19 46 44.4**	**+0.1**
KOZR				S	**Sn**	**19 47 02.6**	**-0.3**
KOZ	**Kozyrevsk**	**1.35**	**309**	*e*P	**Pn**	**19 46 44.4**	**0.0**
KOZ				*i* S	**Sn**	**19 47 02.6**	**-0.4**
BDR	**Baidarnaya**	**1.38**	**348**	*e*P	**Pn**	**19 46 44.2**	**-0.5**
BDR				*i* S	**Sn**	**19 47 02.7**	**-0.9**
SRKR	**Sorokina**	**1.47**	**347**	*e*P	**Pn**	**19 46 45.9**	**+0.1**
SRKR				*i* S	**Sn**	**19 47 05.9**	**+0.4**
SRDR	**Sredinnyy**	**1.58**	**314**	*e*P	**Pn**	**19 46 46.9**	**-0.3**
SRDR				*i* S	**Sn**	**19 47 08.0**	**0.0**
KII	**Karymskiy**	**1.79**	**229**	*e*P	**Pn**	**19 46 50.3**	**+0.5**
KII				*i* S	**Sn**	**19 47 13.1**	**+0.4**
SPN	**Mys Shipunski**	**2.36**	**206**	*e*P	**Pn**	**19 46 56.5**	**-0.6**
SPN				*i* S	**Sn**	**19 47 23.1**	**-2.7**
NLC	**Nalytchevo**	**2.50**	**215**	*e*P	**Pn**	**19 46 59.0**	**+0.1**
NLC				*i* S	**Sn**	**19 47 28.0**	**-0.9**
GNL	**Ganaly**	**2.70**	**237**	*e*P	**Pn**	**19 47 02.7**	**+1.2**
GNL				*i* S	**Sn**	**19 47 34.6**	**+0.9**
PET	**Petropavlovsk**	**2.86**	**221**	⇓*i*PN	**Pn**	**19 47 04.7**	**+1.0**
PET				*e*S	**Sn**	**19 47 37.6**	**+0.1**
PET				pmax	pmax		
	comp=Z,188nm,0.6s						
PET				smax			
	comp=E,300nm,0.9s						
PET				smax			
	comp=E,387nm,0.5s						
PET	**Petropavlovsk**	**2.86**	**221**	*e*P	**Pn**	**19 47 04.5**	**+0.8**
PET				*i* S	**Sn**	**19 47 37.9**	**+0.4**
PET	**Petropavlovsk**	**2.86**	**221**	*e*Pn	**Pn**	**19 47 04.2**	**+0.5**
PET				*e*Sn	**Sn**	**19 47 37.5**	**0.0**
PEA0B	**Petropavlovsk-**	**3.19**	**230**	*e*Pn	**Pn**	**19 47 08.5**	**+0.4**
PETK	**Petropavlovsk-**	**3.19**	**230**	P	**Pn**	**19 47 08.7**	**+0.7**
	comp=E,11nm,0.3s,baz=64,slow=16,SNR=187						
PETK				S	**Sn**	**19 47 47.8**	**+2.5**
	comp=E,2.3nm,0.3s,baz=70,slow=18,SNR=3.2						
RUS	**Russkaya**	**3.39**	**216**	*e*P	**Pn**	**19 47 10.7**	**-0.1**
RUS				*i* S	**Sn**	**19 47 47.8**	**-2.4**
SKR	**Severo-Kuril's**	**5.68**	**219**	*e*PN	**Pn**	**19 47 41.0**	**-0.6**
SKR				*e*		19 48 43.5	
ASAJ	**Asahikawa**	**16.59**	**236**	P	**Pn**	**19 50 06.1**	**+0.3**
	comp=E,1.0nm,0.3s,baz=77,slow=12,SNR=11						
ASAJ	**Asahikawa**	**16.59**	**236**	P	**Pn**	**19 50 06.1**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	**Matsushiro**	**24.65**	**230**	*e*P	**P**	**19 51 30.2**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
MAJO	**Matsushiro**	**24.65**	**230**	*e*P	**P**	**19 51 30.2**	**-0.2**
	comp=Z,7.8nm,0.8s,mb4.2						
MAT	**Matsushiro**	**24.65**	**230**	P	**P**	**19 51 30.9**	**+0.5**
MJAR	**Matsushiro Arr**	**24.65**	**230**	P	**P**	**19 51 30.4**	**+0.1**
	comp=Z,3.7nm,0.7s,mb3.9,baz=22,slow=6.9,SNR=5.0						
MJAR	**Matsushiro Arr**	**24.65**	**230**	P	**P**	**19 51 30.4**	**0.0**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MJAR	**Matsushiro Arr**	**24.65**	**230**	P	**P**	**19 51 30.4**	**+0.1**
PMR	**Palmer**	**25.96**	**56**	P	**P**	**19 51 42.9**	**+0.9**
PMR				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.6						
PMR	**Palmer**	**25.96**	**56**	P	**P**	**19 51 42.9**	**+0.9**
	comp=Z,25nm,1.1s,mb4.5						
KURK	**Kurchatov**	**47.45**	**301**	P	**P**	**19 54 41.9**	**-1.4**
	comp=Z,0.6nm,0.3s,mb3.9,baz=54,slow=6.3,SNR=2.4						
KURK	**Kurchatov**	**47.45**	**301**	P	**P**	**19 54 41.9**	**-1.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
MKAR	**Makanchi Array**	**48.12**	**295**	P	**P**	**19 54 47.0**	**-1.6**
	comp=Z,0.3nm,0.6s,mb3.3,baz=64,slow=9.8,SNR=3.0						
NVAR	**Mina Array Bea**	**54.14**	**73**	P	**P**	**19 55 35.6**	**+1.9**
	comp=Z,0.5nm,0.7s,mb3.7,baz=297,slow=8.0,SNR=4.7						
CMAR	**Chiang Mai Arr**	**59.57**	**258**	P	**P**	**19 56 11.4**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.6,baz=16,slow=7.1,SNR=5.1						
CMAR	**Chiang Mai Arr**	**59.57**	**258**	*e*P	**P**	**19 56 11.4**	**-0.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**78.43**	**206**	P	**P**	**19 58 09.0**	**+0.4**
	comp=Z,0.2nm,0.8s,mb2.9,baz=16,slow=5.7,SNR=3.6						
ESDC	**Sonseca Array**	**84.68**	**349**	P	**P**	**19 58 41.5**	**0.0**
	comp=Z,0.3nm,0.6s,mb3.4,baz=354,slow=3.7,SNR=3.4						

IDC 08 19:47:57.8±4.8**,1707S×17383W,h0**km**,mb4.1**/3**, mb1 4.3**/4**,mb1mx3.8**/18**,mbtmp4.2**/4**,ML3.0**/1**,Error ellipse: s-maj=196.5km s-min=31.0km az=135.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.72**	**32**	Pn	Pn	19 48 56.6	+0.1
	62nm,0.3s,baz=178,slow=2.3,SNR=62						
AFI				Sn	Sn	19 49 31.9	-9.2
	74nm,0.3s,baz=67,slow=22,SNR=10						
STKA	**Stephens Creek**	**42.86**	**241**	P	P	19 55 58.6	+0.6
	1.4nm,0.6s,baz=80,slow=6.1,SNR=3.2						
WRA	**Warramunga Arr**	**49.08**	**258**	P	P	19 56 46.9	-0.4
	0.3nm,0.4s,baz=98,slow=7.0,SNR=22						
ASAR	**Alice Springs**	**49.22**	**253**	P	P	19 56 48.0	-0.3
	5.5nm,0.5s,baz=88,slow=8.5,SNR=125						

*ISCJB **08** 20:16:19.6±0.2,4628N±001×642E±002,h5km±2km,Error ellipse: s-maj=2.4km s-min=2.0km az=157.2*
*ZUR **08** 20:16:20.8,4628N×651E,h-2km±5km,ML1.6/8*
*LDG **08** 20:16:21.5±0.0,4626N×653E,h2km,Md2.6/1,Ml2.3/19, Error ellipse: s-maj=0.7km s-min=0.6km az=69.0*
*STR **08** 20:16:21.7±0.2,4624N×664E,h5km,Ml2.4,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ROM **08** 20:16:21.6±0.8,4621N×651E,h10km,Md2.1/3,Ml1.2/1, Error ellipse: s-maj=9.9km s-min=6.0km az=177.0*
ISC 08 20:16:20.9±0.2**,4627N**±001×**648E**±002**,h11**km±2km**,n52,** σ**0^{s}79**/89**,3C-1D,Switzerland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OG01	**Vacheresse**	**0.16**	**66**	Pg	**Pg**	**20 16 24.1**	**-0.3**
OG01				Sg	**Sg**	**20 16 26.3**	**-0.6**
GIMEL	**St. Georges /**	**0.30**	**331**	*e*P	**Pg**	**20 16 27.7**	**+0.7**
	317nm,0.2s						
AIGLE	**Aigle**	**0.34**	**77**	*e*S	**Pg**	**20 16 27.9**	**+0.3**
	236nm,0.6s						
AIGLE	**Aigle**	**0.34**	**77**	*e*P	**Sg**	**20 16 32.9**	**+0.7**
	236nm,0.6s						
EMV	**Vieux Emosson**	**0.36**	**125**	*e*S	**Pg**	**20 16 28.0**	**+0.1**
	103nm,0.3s						
EMV	**Vieux Emosson**	**0.36**	**125**	*e*P	**Sg**	**20 16 33.4**	**+0.7**
	103nm,0.3s						
EMV	**Vieux Emosson**	**0.36**	**125**	Pg	**Pg**	**20 16 27.9**	**-0.1**
EMV				Sg	**Sg**	**20 16 33.3**	**+0.6**
SALAN	**Lac Salanfe**	**0.37**	**110**	⇑*i*P	**Pg**	**20 16 28.1**	**0.0**
	36nm,0.2s						
SALAN				*e*S	**Sg**	**20 16 33.4**	**+0.4**
	36nm,0.2s						
CABF	**La Chapelle**	**0.44**	**322**	*e*Pg	**Pg**	**20 16 30.4**	**+0.9**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**20 16 36.7**	**+1.4**
CABF				*e*Sn	**Sg**	**20 16 38.2**	**+2.9**
	76nm,0.7s						
SENIN	**Lac Senin/Sane**	**0.58**	**80**	*e*S	**Pg**	**20 16 32.3**	**+0.2**
	45nm,0.2s						
SENIN	**Lac Senin/Sane**	**0.58**	**80**	⇓*i*P	**Sg**	**20 16 40.3**	**+0.6**
	45nm,0.2s						
RSL	**Roselend**	**0.59**	**170**	Pg	**Pg**	**20 16 32.4**	**+0.1**
RSL				Sg	**Sg**	**20 16 40.1**	**+0.1**
MRGE	**Morge**	**0.64**	**141**	Pg	**Pg**	**20 16 33.5**	**+0.2**
	11nm,0.3s						
BRANT	**Les Verrieres**	**0.67**	**360**	⇑*i*Pn	**Pn**	**20 16 34.6**	**-1.6**
	103nm,0.2s						
DIX	**Grande Dixence**	**0.67**	**106**	⇑*i*Pn	**Pg**	**20 16 34.2**	**+0.3**
	2.2nm,0.1s						
DIX	**Grande Dixence**	**0.67**	**106**	Pg	**Pg**	**20 16 34.2**	**+0.3**
DIX				Sg	**Sg**	**20 16 43.1**	**+0.4**
OG05	**Jujurieux**	**0.74**	**253**	Pg	**Pg**	**20 16 36.8**	**+1.6**
OG05				Sg	**Sg**	**20 16 50.0**	**+5.0**
LPL	**La Plagne**	**0.77**	**167**	*e*Pg	**Pg**	**20 16 36.1**	**+0.3**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**20 16 46.2**	**+0.4**
	6.2nm,0.2s						
LPL				*e*Sn	**Sn**	**20 16 49.4**	**+0.2**
LPG	**La Plagne**	**0.79**	**166**	*e*Pg	**Pg**	**20 16 35.8**	**-0.4**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**20 16 46.7**	**+0.2**
	14nm,0.2s,SNR=1.0						
LPG				*e*Sn	**Sn**	**20 16 50.2**	**+0.5**
	SNR=1.0						
LKBD	**Leukerbad**	**0.81**	**81**	*e*Pn	**Pn**	**20 16 36.5**	**-1.6**
	40nm,0.5s						
ORIF	**Oris-en-Rattie**	**1.41**	**197**	*e*Pn	**Pn**	**20 16 46.9**	**+0.5**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.41**	**197**	*e*Pg	**Pg**	**20 16 47.9**	**-0.1**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**20 17 04.7**	**-0.3**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**20 17 06.3**	**0.0**
	9.1nm,0.3s,SNR=1.0						
MBDF	**Montbardon**	**1.55**	**172**	*e*Pg	**Pg**	**20 16 50.5**	**-0.2**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**20 17 10.8**	**0.0**
	6.1nm,0.5s,SNR=1.0						
HINF	**Hinteralfeld**	**1.57**	**9**	*e*Pn	**Pn**	**20 16 48.6**	**0.0**
	SNR=1.0						
HINF	**Hinteralfeld**	**1.57**	**9**	*e*Pg	**Pg**	**20 16 50.5**	**-0.5**
HINF				*e*Sn	**Sn**	**20 17 08.3**	**-0.6**
HINF				*e*Sg	**Sg**	**20 17 11.2**	**-0.2**
	11nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**1.74**	**357**	*e*Pn	**Pn**	**20 16 51.4**	**+0.5**
	SNR=1.0						
HAU	**Haudompre**	**1.74**	**357**	*e*Pg	**Pg**	**20 16 53.9**	**-0.4**
HAU				*e*Sn	**Sn**	**20 17 12.7**	**-0.4**
HAU				*e*Sg	**Sg**	**20 17 16.7**	**-0.1**
	8.8nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**1.86**	**283**	*e*Pn	**Pn**	**20 16 53.4**	**+0.8**
	SNR=1.0						
SMF	**Signal de Mont**	**1.86**	**283**	*e*Pg	**Pg**	**20 16 56.9**	**+0.4**
SMF				*e*Sn	**Sn**	**20 17 16.0**	**0.0**
SMF				*e*Sg	**Sg**	**20 17 20.8**	**+0.1**
	8.1nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.90**	**223**	*e*Pn	**Pn**	**20 16 53.7**	**+0.6**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**1.90**	**223**	*e*Pg	**Pg**	**20 16 57.4**	**+0.2**
VIVF				*e*Sn	**Sn**	**20 17 16.0**	**-0.9**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**20 17 21.8**	**0.0**
	12nm,0.4s,SNR=1.0						
LOR	**Lormes**	**2.06**	**300**	*e*Pn	**Pn**	**20 16 56.2**	**+0.9**
	SNR=1.0						
LOR	**Lormes**	**2.06**	**300**	*e*PKP2	**Pn**	**20 16 58.3**	**+3.0**
LOR	**Lormes**	**2.06**	**300**	*e*Pg	**Pg**	**20 17 00.4**	**+0.1**
LOR				*e*Sg	**Sg**	**20 17 26.3**	**-0.7**
	3.8nm,0.3s						
SFTF	**Sexfontaines**	**2.17**	**334**	*e*Pg	**Pg**	**20 17 02.2**	**-0.3**
SFTF				*e*Sn	**Sn**	**20 17 23.2**	**-0.5**
SFTF				*e*Sg	**Sg**	**20 17 30.3**	**-0.3**
	4.9nm,0.4s						
SSF	**Saint Saulge**	**2.19**	**292**	*e*Pn	**Pn**	**20 16 57.9**	**+0.7**
	SNR=1.0						
SSF	**Saint Saulge**	**2.19**	**292**	*e*PKP2	**Pn**	**20 16 59.6**	**+2.4**
SSF	**Saint Saulge**	**2.19**	**292**	*e*Pg	**Pg**	**20 17 02.9**	**0.0**
SSF				*e*Sg	**Sg**	**20 17 32.1**	**+0.7**
	2.0nm,0.3s,SNR=1.0						
CDF	**Champ du Feu**	**2.21**	**14**	*e*Pn	**Pn**	**20 16 57.1**	**-0.3**
	SNR=1.0						
CDF	**Champ du Feu**	**2.21**	**14**	*e*Pg	**Pg**	**20 17 02.7**	**-0.6**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**20 17 31.1**	**-0.9**
	3.2nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**2.22**	**285**	*e*Pn	**Pn**	**20 16 58.4**	**+0.9**
	SNR=1.0						
AVF	**Avril sur Loir**	**2.22**	**285**	*e*Pg	**Pg**	**20 17 03.4**	**0.0**
AVF				*e*Sn	**Sn**	**20 17 24.6**	**-0.3**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**20 17 31.5**	**-0.7**
	2.1nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**2.38**	**196**	*e*PKP2	**Pn**	**20 17 02.2**	**+2.5**
SMRF				*e*Sg	**Sg**	**20 17 36.6**	**-0.7**
	0.3nm,0.2s						
MEZF	**Maizieres J'vi**	**2.44**	**337**	*e*Pg	**Pg**	**20 17 06.5**	**-1.0**
	SNR=1.0						
MEZF				*e*Sn	**Sn**	**20 17 29.6**	**-0.6**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**20 17 38.8**	**-0.3**
	5.8nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**2.53**	**278**	*e*Pn	**Pn**	**20 17 02.9**	**+1.1**
	SNR=1.0						
FRF	**La Foret Royal**	**2.71**	**177**	*e*PKP2	**Pn**	**20 17 06.5**	**+2.3**
	SNR=1.0						
FRF	**La Foret Royal**	**2.71**	**177**	*e*Pg	**Pg**	**20 17 11.5**	**-1.3**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**20 17 46.4**	**-1.4**
	0.7nm,0.2s						
LASF	**Ste Croix**	**2.87**	**221**	*e*Pn	**Pn**	**20 17 07.4**	**+0.9**
	SNR=1.0						
LASF	**Ste Croix**	**2.87**	**221**	*e*Pg	**Pg**	**20 17 15.2**	**-0.6**
LASF				*e*Sg	**Sg**	**20 17 51.7**	**-1.3**
	5.8nm,0.6s,SNR=1.0						
LMR	**La Mourre**	**2.93**	**180**	*e*Sn	**Sn**	**20 17 41.0**	**-1.5**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**20 17 53.2**	**-1.8**
	1.0nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**2.96**	**272**	*e*Pn	**Pn**	**20 17 08.5**	**+0.8**
TCF				*e*Sg	**Sg**	**20 17 55.7**	**-0.2**
	2.1nm,0.4s,SNR=1.0						
CAF	**Calviac**	**3.38**	**248**	*e*Sg	**Sg**	**20 18 08.8**	**-0.4**
	0.8nm,0.2s						

GUC 08 20:17:08.6±0.7**,3269S×7107W,h4**km±2km**,MD3.6,ML2.4, 2C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.40**	**88**	*e*P	Pg	20 17 16.6	+0.3
JACH				*i* S	Sg	20 17 23.2	+1.7
PEL	**Peldehue**	**0.55**	**144**	*e*P	Pg	20 17 20.1	+0.8
PEL				*i* S	Sg	20 17 28.9	+2.5
PEL				AML	AML	20 17 37.3	
	comp=N,190nm,0.5s						
FCH	**Farellones**	**0.91**	**134**	*e*P	Pg	20 17 26.1	0.0
FCH				*i* S	Sg	20 17 39.8	+2.0
TACH	**Talagante**	**0.96**	**174**	⇑*i*P	Pg	20 17 26.9	-0.2
TACH				*i* S	Sg	20 17 40.4	+0.8
PCH	**Pirque**	**1.03**	**153**	⇑*i*P	Pg	20 17 28.0	-0.5
PCH				*i* S	Sg	20 17 43.0	+1.1
SFDO	**San Fernando**	**1.92**	**179**	*e*P	Pn	20 17 43.5	+1.6
SFDO				*i* S	Sn	20 18 09.3	+2.8
TLL	**Tololo Astrono**	**2.53**	**5**	*e*P	Pn	20 17 51.9	+1.5
TLL				*e*S	Sn	20 18 25.3	+3.7
TLL				AML	AML	20 18 31.4	
	comp=N,53nm,0.8s						

*ISCJB **08** 20:18:47.9±2.0,5016N±005×13007W±007,h9km±14km, mb3.8/5,MS3.2/6,Error ellipse: s-maj=9.4km s-min=6.0km az=135.8*
*PGC **08** 20:18:48.3,4980N×13009W,h10km,ML3.1,215km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **08** 20:18:50.9±2.3,5013N×12987W,h0km,mb3.6/3, mb1 3.8/6,mb1mx3.5/25,mbtmp3.6/6,ML4.0/2,MS3.2/10, Ms1 3.2/10,ms1mx2.9/41,Error ellipse: s-maj=38.4km s-min=13.5km az=78.0*
*NEIC **08** 20:18:53.4±1.2,5021N×12949W,h10km,mb4.1/4, ML3.1(PGC),Error ellipse: s-maj=15.7km s-min=8.1km az=77.0*
ISC 08 20:18:48.8±1.7**,5023N**±004×**13002W**±008**,h1**km±10km**, n38,**σ**1^{s}33**/40**,mb3.9**/5**,MS3.2**/6**,7D,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.27**	**70**	⇓P	**Pg**	**20 19 13.0**	**-0.2**
HOLB				⇑S	**Sg**	**20 19 29.8**	**+0.1**
BPBC	**Brooks Peninsu**	**1.45**	**92**	⇑P	**Pn**	**20 19 13.5**	**-2.5**
PHC	**Port Hardy**	**1.72**	**73**	⇑Pn	**Pn**	**20 19 19.4**	**-0.5**
PHC				⇓Sn	**Sn**	**20 19 41.3**	**-1.2**
MAYB	**Maynard**	**1.83**	**83**	⇓Pn	**Pn**	**20 19 19.8**	**-1.6**
EDB	**Eliza Dome**	**1.90**	**100**	⇓Pn	**Pn**	**20 19 19.2**	**-3.1**
EDB				⇓Sn	**Sn**	**20 19 41.2**	**-5.7**
WOSB	**Woss**	**2.22**	**90**	⇓Pn	**Pn**	**20 19 25.4**	**-1.3**
BBB	**Bella Bella**	**2.30**	**31**	Pn	**Pn**	**20 19 29.5**	**+1.8**
	35nm,0.3s,baz=225,slow=14,SNR=281						
BBB				Sn	**Sn**	**20 19 57.5**	**+0.9**
	19nm,0.3s,baz=132,slow=23,SNR=8.3						
BBB				LR	LR	20 20 40.1	
	comp=Z,265nm,18.7s,baz=26,slow=47						
BBB	**Bella Bella**	**2.30**	**31**	⇓Pn	**Pn**	**20 19 29.5**	**+1.8**
BBB	**Bella Bella**	**2.30**	**31**	Pn	**Pn**	**20 19 29.5**	**+1.8**
BBB				Sn	**Sn**	**20 19 57.5**	**+0.9**
BBB				LR	LR	20 20 40.1	
DIB	**Dawson Inlet,**	**3.35**	**334**	Pn	**Pn**	**20 19 41.7**	**-0.5**
	SNR=45						
DIB				Sn	**Sn**	**20 20 22.2**	**-0.3**
VIB	**Van Inlet**	**3.41**	**334**	Pn	**Pn**	**20 19 42.1**	**-1.0**
	SNR=47						
VIB				Sn	**Sn**	**20 20 23.2**	**-0.9**
RPW	**Rockport**	**5.84**	**105**	*e*Pn	**Pn**	**20 20 16.9**	**+0.5**
	5.0nm,0.8s						
LON	**Longmire**	**6.47**	**119**	*e*Pn	**Pn**	**20 20 24.3**	**-0.9**
	5.7nm,0.9s						
ETW	**Entiat**	**6.90**	**109**	*e*Pn	**Pn**	**20 20 31.8**	**+0.7**
	7.2nm,0.6s						
RSW	**Rattlesnake Hi**	**7.94**	**115**	*e*Pn	**Pn**	**20 20 45.4**	**+0.1**
	8.8nm,0.5s						
OD2	**Odessa Site #2**	**7.99**	**106**	*e*Pn	**Pn**	**20 20 45.4**	**-0.5**
	12nm,0.7s						
DLBC	**Dease Lake**	**8.22**	**360**	Pn	**Pn**	**20 20 53.1**	**+3.9**
	baz=179,slow=14						
LNOR	**Lincton Mounta**	**8.99**	**115**	*e*Pn	**Pn**	**20 20 58.6**	**-1.0**
	2.9nm,0.7s						
YBH	**Yreka Blue Hor**	**9.90**	**146**	LR	LR	20 24 28.2	
	comp=Z,161nm,20.1s,baz=332,slow=34						
ELK	**Elko**	**14.03**	**127**	LR	LR	20 27 22.0	
	comp=Z,65nm,19.1s,baz=291,slow=37						
IMW	**Indian Meadow**	**14.45**	**109**	*e*P	**Pn**	**20 22 22.5**	**+8.3**
	10nm,1.0s						
NVAR	**Mina Array Bea**	**14.45**	**140**	Pn	**Pn**	**20 22 16.1**	**+1.8**
	0.0nm,0.3s,baz=339,slow=12,SNR=3.8						
TPAW	**Teton Pass**	**14.66**	**110**	*e*Pn	**Pn**	**20 22 21.5**	**+4.3**
	17nm,1.1s						
LOHW	**Long Hollow**	**14.80**	**109**	*e*P	**Pn**	**20 22 25.6**	**+6.5**
	8.0nm,1.2s						
YKA	**Yellowknife Ar**	**14.91**	**29**	Pn	**Pn**	**20 22 22.1**	**+1.6**
	0.0nm,0.3s,baz=222,slow=12,SNR=2.7						
YKA				LR	LR	20 28 40.0	
	comp=Z,54nm,18.4s,baz=55,slow=39						
PDAR	**Pinedale Array**	**15.91**	**110**	Pn	**Pn**	**20 22 36.5**	**+2.8**
	0.1nm,0.3s,baz=316,slow=12,SNR=9.6						
MSU	**Marysvale**	**17.27**	**126**	*e*P	**Pn**	**20 22 51.8**	**+0.8**
	6.9nm,1.4s						
FFC	**Flin Flon**	**17.60**	**64**	*e*P	**Pn**	**20 22 57.5**	**+2.4**
	6.5nm,0.8s						
PV01	**Paradox Valley**	**19.48**	**120**	*e*P	**Pn**	**20 23 17.0**	**-1.2**
	278nm,0.8s						
ULM	**Lac du Bonnet**	**21.73**	**77**	P	**P**	**20 23 43.8**	**+2.5**
	5.4nm,0.9s,mb4.0,baz=288,slow=11,SNR=7.4						
ULM				LR	LR	20 32 12.3	
	comp=Z,106nm,18.8s,MS3.3,baz=289,slow=37						
ANMO	**Albuquerque**	**22.97**	**123**	P	**P**	**20 23 56.2**	**+1.6**
	1.8nm,0.9s,mb3.6,baz=320,slow=11,SNR=4.3						
ANMO				LR	LR	20 33 57.5	
	comp=Z,38nm,18.5s,MS2.9,baz=338,slow=40						
LAZ	**Ladron**	**23.02**	**125**	*e*P	**P**	**20 23 52.8**	**-2.3**
ECSD	**EROS,Sioux Fal**	**23.56**	**93**	*e*P	**P**	**20 24 00.4**	**-0.3**
	17nm,1.4s,mb4.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMTX	**Amarillo**	**25.70**	**116**	*e*P	**P**	**20 24 19.8**	**-0.5**
	6.3nm,0.8s,mb4.3						
TXAR	**Lajitas Array**	**28.82**	**126**	P	**P**	**20 24 49.9**	**+1.5**
	0.4nm,0.9s,mb3.2,baz=339,slow=6.7,SNR=3.8						
TXAR				LR	LR	20 36 51.4	
	comp=Z,79nm,19.4s,MS3.3,baz=0.0,slow=38						
TKL	**Tuckaleechee C**	**36.24**	**96**	LR	LR	20 39 59.6	
	comp=Z,44nm,20.0s,MS3.2,baz=254,slow=35						
PETK	**Petropavlovsk-**	**43.17**	**303**	LR	LR	20 42 18.1	
	comp=Z,24nm,20.4s,MS3.1,baz=266,slow=32						
ARCES	**ARCESS Array B**	**59.21**	**10**	LR	LR	20 57 49.2	
	comp=Z,22nm,18.3s,MS3.3,baz=25,slow=39						

*IDC **08** 20:26:37.8±0.7, 15.10N×120.26E, h0km, mb4.1/10, mb1 4.3/10, mb1mx4.1/20, mbtmp4.2/10, MS3.1/4, Ms1 3.1/4, ms1mx2.8/27, Error ellipse: s-maj=46.9km s-min=14.2km az=65.0*
*MAN **08** 20:26:43, 15.04N×119.62E, h33km, mb5.1, ML4.1, MS4.2*
MAN INTENSITY III - SAN FELIPE, ZAMBALES.
*ISCJB **08** 20:26:45.6±0.6, 15.03N±0.05×119.98E±0.10, h75km±7km, mb4.2/19, Error ellipse: s-maj=15.7km s-min=7.1km az=166.2*
*NEIC **08** 20:26:45.5±4.1, 15.02N×120.13E, h63km±36km, mb4.6/9, Error ellipse: s-maj=28.1km s-min=7.9km az=61.0*
NEIC Felt [III PIVS] at San Felipe.
ISC 08 20:26:46.8±0.6**, 15.04N**±0.05×**120.04E**±0.09**, h72**km±7km**, n52,** $\sigma 1^{s}12$/50**, mb4.2**/19**, 4C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NBP	**Mount Natib**	**0.47**	**129**	⇑*e*P	**Pn**	**20 26 57.9**	**-1.6**
NBP				*e*S	**Sn**	**20 27 07.2**	**-1.6**
NZB	**Bigte**	**1.04**	**100**	⇑*e*P	**Pn**	**20 27 07.4**	**+1.5**
PCPH	**Palayan**	**1.14**	**63**	*e*P	**Pn**	**20 27 00.4**	**-6.8**
TGY	**Tagaytay City**	**1.28**	**137**	⇑*e*P	**Pn**	**20 27 11.1**	**+2.2**
TGY				*e*S	**Sn**	**20 27 26.8**	**+1.3**
LBPH	**Los Banos**	**1.42**	**129**	⇑*e*P	**Pn**	**20 27 12.3**	**+1.6**
BCPH	**Baguio City Da**	**1.43**	**21**	⇓*i*P	**Pn**	**20 27 09.4**	**-1.5**
BCPH				*e*S	**Sn**	**20 27 28.5**	**-0.5**
GQP	**Guinayangan**	**2.59**	**116**	⇓*e*P	**Pn**	**20 27 29.6**	**+3.1**
DAV	**Davao City (W)**	**9.61**	**145**	LR	LR	20 33 28.6	
	comp=Z,123nm,20.6s,baz=204,slow=43						
QIZ	**Qiongzhong**	**10.53**	**294**	*e*Pn	**Pn**	**20 29 08.4**	**-6.5**
	16nm,1.0s						
QIZ				*e*Sn	**Sn**	**20 30 56.0**	**-15**
KSM	**Kuching**	**16.56**	**216**	*e*Pn	**Pn**	**20 30 35.3**	**+0.7**
CMAR	**Chiang Mai Arr**	**20.48**	**282**	P	**P**	**20 31 19.9**	**+0.9**
	4.5nm,0.9s,baz=93,slow=8.5,SNR=25						
CMAR				PcP	PcP	20 35 30.6	+2.2
	0.3nm,0.4s,baz=11,slow=0.9,SNR=4.6						
CHTO	**Chiang Mai**	**20.52**	**283**	P	**P**	**20 31 19.5**	**0.0**
	6.1nm,1.3s						
KSRS	**Korea Array**	**23.39**	**16**	LR	LR	20 41 03.8	
	comp=Z,45nm,18.2s,baz=195,slow=37						
BATI	**Baumata**	**25.34**	**172**	P	**P**	**20 32 07.7**	**+0.5**
	8.5nm,0.4s,mb4.5,baz=68,slow=4.4,SNR=8.4						
SONM	**Songino Array**	**34.59**	**344**	P	**P**	**20 33 29.2**	**+0.5**
	0.4nm,0.8s,mb3.3,baz=164,slow=5.7,SNR=2.8						
SONM				LR	LR	20 48 08.7	
	comp=Z,48nm,19.1s,baz=43,slow=37						
MBWA	**Marble Bar**	**35.98**	**180**	*e*P	**P**	**20 33 39.8**	**-1.1**
	8.0nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**37.50**	**158**	*e*P	**P**	**20 33 52.0**	**-1.8**
	9.6nm,1.3s,mb4.6						
WRA	**Warramunga Arr**	**37.50**	**158**	P	**P**	**20 33 52.7**	**-1.1**
	1.9nm,0.8s,mb4.0,baz=342,slow=8.8,SNR=23						
WRA				PcP	PcP	20 36 11.7	+0.8
	0.4nm,0.6s,baz=336,slow=3.4,SNR=4.4						
WB2	**Warramunga Arr**	**37.51**	**158**	*e*P	**P**	**20 33 52.1**	**-1.8**
ASAR	**Alice Springs**	**40.79**	**160**	P	**P**	**20 34 20.6**	**-0.6**
	1.1nm,0.4s,mb4.0,baz=336,slow=7.1,SNR=39						
MKAR	**Makanchi Array**	**44.58**	**323**	P	**P**	**20 34 52.5**	**+0.8**
	0.9nm,0.7s,mb3.6,baz=121,slow=10.0,SNR=8.5						
MKAR				PcP	PcP	20 36 34.6	+1.0
	0.3nm,0.3s,baz=111,slow=2.9,SNR=4.9						
MKAR	**Makanchi Array**	**44.58**	**323**	P	**P**	**20 34 52.5**	**+0.8**
MKAR				PcP	PcP	20 36 34.6	+1.0
ZALV	**Zalesovo Beam**	**47.58**	**332**	P	**P**	**20 35 15.1**	**0.0**
	0.6nm,0.4s,mb3.8,baz=134,slow=6.4,SNR=3.7						
NWAO	**Narrogin (SRO)**	**47.77**	**183**	P	**P**	**20 35 16.0**	**-0.9**
	14nm,1.0s,mb4.7						
EKS2	**Erkin-Say**	**48.17**	**314**	*e*P	**P**	**20 35 20.4**	**+0.5**
KURK	**Kurchatov**	**48.72**	**326**	P	**P**	**20 35 24.4**	**+0.4**
	1.9nm,0.7s,mb4.2,baz=121,slow=8.7,SNR=26						
KBL	**Kabul**	**49.64**	**303**	*e*P	**P**	**20 35 30.9**	**-0.4**
BRVK	**Borovoye**	**54.38**	**325**	*e*P	**P**	**20 36 05.7**	**-0.5**
	4.3nm,1.0s,mb4.4						
ARU	**Arti**	**61.92**	**326**	*e*P	**P**	**20 36 58.3**	**-0.5**
	2.8nm,0.5s,mb4.5						
JOF	**Joensuu**	**76.16**	**332**	*e*p	**P**	**20 38 26.5**	**-0.4**
	1.8nm,0.5s,mb4.1						
PMR	**Palmer**	**77.30**	**29**	*e*P	**P**	**20 38 23.8**	**-9.5**
	13nm,1.0s,mb4.6						
ARCES	**ARCESS Array B**	**77.61**	**339**	P	**P**	**20 38 36.0**	**+1.1**
	0.9nm,0.4s,mb3.8,baz=76,slow=7.1,SNR=16						
KAF	**Kangasniemi**	**78.58**	**331**	*e*p	**P**	**20 38 39.7**	**-0.7**
	3.7nm,0.5s,mb4.5,baz=77,slow=5.2						
BUR08	**Bucovina Ar. S**	**82.25**	**317**	*e*P	**P**	**20 39 01.1**	**+0.7**
STHS	**Stebnicka Huta**	**84.33**	**320**	*e*P	**P**	**20 39 05.2**	**-5.8**
STHS	**Stebnicka Huta**	**84.33**	**320**	*e*P	**P**	**20 39 05.2**	**-5.8**
CRVS	**Cervenica-Dubn**	**84.33**	**319**	*e*P	**P**	**20 39 10.1**	**-1.0**
CRVS	**Cervenica-Dubn**	**84.33**	**319**	*e*P	**P**	**20 39 10.1**	**-1.0**
OJC	**Ojcow**	**84.99**	**321**	*e*P	**P**	**20 39 15.1**	**+0.8**
KECS	**Kecovo**	**85.08**	**319**	*e*P	**P**	**20 39 12.0**	**-2.8**
KECS	**Kecovo**	**85.08**	**319**	*e*P	**P**	**20 39 12.0**	**-2.8**
NB2	**NORSAR Subarra**	**85.78**	**332**	P	**P**	**20 39 18.1**	**+0.1**
	comp=Z,6.1nm,0.7s,mb4.6,baz=67,slow=4.8						
NOA	**NORSAR Array B**	**85.78**	**332**	P	**P**	**20 39 18.2**	**+0.2**
	comp=Z,5.3nm,0.7s,mb4.6,baz=67,slow=4.9,SNR=17						
NOA				LR	LR	21 17 57.7	
	comp=Z,5.2nm,19.4s,baz=0.0,slow=36						
VYHS	**Vyhne**	**86.12**	**319**	*e*P	**P**	**20 39 13.5**	**-6.5**
VYHS	**Vyhne**	**86.12**	**319**	*e*P	**P**	**20 39 13.5**	**-6.5**
KSP	**Ksiaz**	**86.91**	**322**	*e*P	**P**	**20 39 24.8**	**+1.0**
BRG	**Berggiesshubel**	**88.29**	**322**	*e*P	**P**	**20 39 31.9**	**+1.5**
	comp=Z,4.8nm,1.1s,mb4.4						
GERES	**GERESS Array B**	**89.19**	**321**	P	**P**	**20 39 35.7**	**+1.0**
	comp=Z,1.6nm,0.8s,mb4.1,baz=72,slow=5.7,SNR=9.8						
TORD	**Torodi Ar. Bea**	**112.86**	**291**	PKiKP	PKiKP	20 45 16.3	-0.1
	comp=Z,0.3nm,0.8s,baz=68,slow=2.2,SNR=3.2						
TXAR	**Lajitas Array**	**118.96**	**44**	PKP	PKPdf	20 45 29.8	+1.9
	comp=Z,1.3nm,0.9s,baz=291,slow=1.1,SNR=15						
TXAR	**Lajitas Array**	**118.96**	**44**	PKP	PKPdf	20 45 29.8	+1.9
PLCA	**Paso Flores**	**152.79**	**162**	PKPbc	PKPbc	20 46 37.1	+1.3
	comp=Z,0.4nm,0.4s,baz=135,slow=2.2,SNR=3.7						

*NEIC **08** 20:41:57.3, 16.76N×95.08W, h20km, MD4.5(MEX), After MEX.*
MEX 08 20:41:56.3±1.3**, 16.71N**×**95.04W, h5**km**, MD4.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.41**	**21**	*i* P	Pg	20 42 03.1	-1.1
CMIG				*i* S	Sg	20 42 09.4	-0.2
HUIG	**Huatulco**	**1.39**	**228**	*i* P	Pn	20 42 17.8	-4.6
HUIG				*i* S	Sb	20 42 35.4	-5.4
HUIG	**Huatulco**	**1.39**	**228**	*i* P	Pn	20 42 17.8	-4.6
HUIG				*i* S	Sb	20 42 35.7	-5.1
TUIG	**Tuzandepetl**	**1.45**	**24**	*i* P	Pn	20 42 19.7	-3.4
TUIG				*i* S	Sb	20 42 38.3	-4.1
TUIG	**Tuzandepetl**	**1.45**	**24**	*i* P	Pn	20 42 19.7	-3.4
TUIG				*i* S	Sb	20 42 41.0	-1.4
OXX	**Oaxaca**	**1.66**	**283**	*i* P	Pn	20 42 24.4	-1.6
OXX				*e*S	Sn	20 42 45.9	-1.8
VHO	**Vista Hermosa**	**1.67**	**283**	*i* P	Pn	20 42 24.3	-1.8
VHO				*i* S	Sn	20 42 43.4	-4.5
VHO	**Vista Hermosa**	**1.67**	**283**	*i* P	Pn	20 42 24.3	-1.8
VHO				*e*S	Sn	20 42 46.0	-1.9
VHO				*i* S	Sn	20 42 47.9	0.0
TGIG		**1.83**	**87**	*i* P	Pn	20 42 26.2	-2.3
TGIG				*i* S	Sn	20 42 48.0	-4.1
SCX	**San Cristobal**	**2.30**	**89**	*i* P	Pn	20 42 34.0	-0.9
SCX				*e*S	Sn	20 42 58.5	-5.1
TPIG	**Tehuac#an**	**2.80**	**308**	*i* P	Pn	20 42 38.8	-3.0
TPIG				*i* S	Sn	20 43 11.5	-4.4
CCIG	**Comitan**	**2.81**	**98**	*i* P	Pn	20 42 39.8	-2.1
CCIG				*i* S	Sn	20 43 13.4	-2.9
CCIG	**Comitan**	**2.81**	**98**	*i* P	Pn	20 42 39.8	-2.1
CCIG				*e*S	Sn	20 43 15.2	-1.0
PNIG	**Pinotepa**	**2.98**	**264**	*i* P	Pn	20 42 41.1	-3.1
PNIG				*i* S	Sn	20 43 16.7	-3.7
PNIG	**Pinotepa**	**2.98**	**264**	*i* P	Pn	20 42 41.1	-3.1
PNIG				*i* S	Sn	20 43 15.8	-4.6
THIG		**3.21**	**123**	*i* P	Pn	20 42 43.9	-3.5
THIG				*i* S	Sn	20 43 23.0	-3.1
PPM	**Popocatepetl**	**4.15**	**305**	*i* S	Sn	20 43 48.0	-1.3
PPM	**Popocatepetl**	**4.15**	**305**	*i* P	Pb	20 43 11.1	+1.3
PPM				*e*S	Sg	20 44 13.3	+3.7
YAIG	**Yautepec**	**4.40**	**300**	*i* S	Sn	20 43 53.8	-1.6
IIO	**Organos**	**4.53**	**310**	*e*P	Pn	20 43 13.2	+7.6
IIO				*i* P		20 43 18.1	
MEIG	**Mezcala**	**4.54**	**286**	*i* P	Pn	20 43 04.3	-1.4
MEIG				*i* S	Sn	20 43 55.2	-3.8
PLIG	**Platanillo**	**4.58**	**292**	*i* P	Pn	20 43 02.5	-3.7
PLIG				*i* S	Sn	20 43 56.6	-3.3
PLIG	**Platanillo**	**4.58**	**292**	*i* P	Pb	20 43 16.5	-0.7
PLIG				*e*S	Sb	20 44 19.0	+6.3
ACX	**Acapulco**	**4.68**	**273**	*i* P	Pn	20 43 02.0	-5.6
ACX				*e*S	Sn	20 44 01.5	-0.8
PTVM	**Pico Tres Padr**	**4.82**	**307**	*e*P	Pb	20 43 22.0	+0.6
PTVM				*i* P		20 43 26.2	
CAIG	**El Cayaco**	**5.02**	**275**	*i* P	Pn	20 43 09.9	-2.4
CAIG				*i* S	Sn	20 44 07.6	-3.2
CAIG	**El Cayaco**	**5.02**	**275**	*i* P	Pb	20 43 24.3	-0.4
CAIG				*e*S	Sb	20 44 30.7	+5.3
ZIIG	**Zihuatanejo**	**6.21**	**279**	*i* P	Pn	20 43 26.8	-1.9
ZIIG				*i* S	Sn	20 44 39.0	-1.1
ZIIG	**Zihuatanejo**	**6.21**	**279**	*e*S	Sg	20 45 08.0	-7.9
TEIG	**Tepich**	**7.31**	**60**	*e*Pn	Pn	20 43 39.8	-4.0
	31nm,0.3s						
TEIG				*e*Sn	Sn	20 45 00.5	-6.7
EZ5V		**8.60**	**290**	*i* P	Pn	20 44 04.3	+2.8
EZ5V				*i* S	Sn	20 45 36.0	-2.9
R15V		**8.86**	**287**	*i* P	Pn	20 44 06.0	+0.9

*IDC **08** 20:54:32.4±2.1, 35.56N×140.17E, h76km±15km, mb3.5/4, mb1 3.6/7, mb1mx3.3/24, mbtmp3.6/7, Error ellipse: s-maj=30.1km s-min=6.4km az=66.0*
*ISCJB **08** 20:54:33.1±0.5, 35.50N±0.03×139.96E±0.05, h89km±4km, mb3.8/4, Error ellipse: s-maj=7.9km s-min=4.7km az=148.4*
*JMA **08** 20:54:33.9±0.2, 35.56N×139.97E, h81km±2km, M3.4 Broadband fault plane solution: P waves. NP1: ϕs117.00000°, δ21.00000°, λ-153.00000°. NP2:ϕs2.00000°, δ81.00000°, λ-71.00000°. Principal axes: T Plg33.0000°, Azm76.0000°; N Plg19.0000°, Azm179.0000°; P Plg51.0000°, Azm294.0000°;*
JMA Felt I J1.
ISC 08 20:54:34.1±0.5**, 35.50N**±0.03×**139.96E**±0.05**, h83**km±4km**, n21,** $\sigma 0^{s}62$/36**, mb3.8**/4**, 8C-2D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.21**	**113**	⇓P	**Pn**	**20 54 46.6**	**+0.3**
JCN				S	**Sn**	**20 54 55.9**	**+0.6**
TOK	**Tokyo**	**0.25**	**318**	⇑P	**Pn**	**20 54 46.4**	**0.0**
TOK				S	**Sn**	**20 54 55.8**	**+0.2**
JYO	**Yokosk**	**0.37**	**221**	⇑P	**Pn**	**20 54 47.5**	**+0.4**
JYO				*e*S	**Sn**	**20 54 55.7**	**-1.1**
JOD2	**Odawara 2**	**0.75**	**252**	⇑P	**Pn**	**20 54 50.1**	**-0.4**
JOD2				*e*S	**Sn**	**20 55 02.1**	**-0.7**
BSO3	**Boso 3**	**0.83**	**147**	⇓P	**Pn**	**20 54 51.1**	**-0.3**
BSO3				*e*S	**Sn**	**20 55 04.7**	**+0.4**
JIM2	**Oshima 3**	**0.90**	**209**	⇑P	**Pn**	**20 54 51.8**	**-0.3**
JIM2				*e*S	**Sn**	**20 55 04.9**	**-0.7**
JRY	**Ryogami san**	**1.00**	**301**	⇑P	**Pn**	**20 54 53.4**	**+0.1**
JRY				*e*S	**Sn**	**20 55 07.4**	**-0.4**
JAG	**Ashikaga**	**1.01**	**336**	⇑P	**Pn**	**20 54 52.8**	**-0.6**
JAG				*e*S	**Sn**	**20 55 07.2**	**-0.7**
JYN	**Shimob**	**1.16**	**270**	⇑P	**Pn**	**20 54 55.1**	**-0.1**
JYN				S	**Sn**	**20 55 11.4**	**+0.4**
JIZS	**Izushimoda**	**1.19**	**229**	⇑P	**Pn**	**20 54 55.5**	**0.0**
JIZS				S	**Sn**	**20 55 11.9**	**+0.3**
BSO1	**Boso 1**	**1.19**	**135**	P	**Pn**	**20 54 54.8**	**-0.8**
BSO1				*e*S	**Sn**	**20 55 12.5**	**+0.8**
JKT	**Katashina**	**1.39**	**336**	P	**Pn**	**20 54 57.7**	**-0.4**
JKT				*e*S	**Sn**	**20 55 15.6**	**-0.5**
MJAR	**Matsushiro Arr**	**1.76**	**307**	P	**Pn**	**20 55 02.9**	**+0.1**
	11nm,0.3s,baz=132,slow=9.4,SNR=139						
MJAR				S	**Sn**	**20 55 24.7**	**0.0**
	16nm,0.3s,baz=146,slow=22,SNR=18						
MAT	**Matsushiro**	**1.76**	**307**	P	**Pn**	**20 55 04.0**	**+1.1**
MAT				S	**Sn**	**20 55 26.9**	**+2.1**
JHJ	**Hachijo jima 2**	**2.38**	**184**	P	**Pn**	**20 55 11.9**	**+0.7**
	18nm,0.3s,baz=84,slow=23,SNR=31						
JHJ				S	**Sn**	**20 55 39.8**	**+0.3**
	82nm,0.3s,baz=215,slow=23,SNR=14						
ASAJ	**Asahikawa**	**8.84**	**12**	P	**Pn**	**20 56 34.8**	**-4.1**
	0.7nm,0.3s,baz=204,slow=8.7,SNR=7.5						
KSRS	**Korea Array**	**9.89**	**285**	P	**Pn**	**20 56 53.8**	**+0.5**
	0.1nm,0.3s,baz=100,slow=14,SNR=5.7						
ZALV	**Zalesovo Beam**	**42.10**	**314**	P	**P**	**21 02 17.9**	**+0.3**
	1.5nm,0.6s,mb3.9,baz=84,slow=6.1,SNR=7.6						
MKAR	**Makanchi Array**	**43.96**	**303**	P	**P**	**21 02 32.7**	**-0.1**
	2.2nm,0.6s,mb4.1,baz=88,slow=9.7,SNR=23						
WRA	**Warramunga Arr**	**55.40**	**186**	P	**P**	**21 03 59.0**	**-0.7**
	0.6nm,0.4s,mb4.0,baz=1.6,slow=7.6,SNR=19						
ASAR	**Alice Springs**	**59.12**	**186**	P	**P**	**21 04 25.4**	**-0.5**
	0.2nm,0.6s,mb3.3,baz=5.1,slow=12,SNR=4.0						

IDC 08 21:02:21.3±3.9**, 11.84N**×**145.16E, h0**km**, mb3.5**/3**, mb1 3.6**/3**, mb1mx3.4**/19**, mbtmp3.5**/3**, Error ellipse: s-maj=165.2km s-min=21.7km az=88.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.77**	**351**	Pn	Pn	21 02 53.2	+0.1
	48nm,0.3s,baz=159,slow=9.8,SNR=56						
GUMO				Sn	Sn	21 03 13.3	-3.1
	94nm,0.3s,baz=171,slow=24,SNR=12						
WRA	**Warramunga Arr**	**33.33**	**199**	P	P	21 09 01.5	+0.3
	0.6nm,0.8s,baz=22,slow=9.5,SNR=5.4						
ASAR	**Alice Springs**	**36.96**	**197**	P	P	21 09 32.2	-0.2
	0.2nm,0.5s,baz=13,slow=8.7,SNR=3.5						
MKAR	**Makanchi Array**	**62.95**	**317**	P	P	21 12 49.8	0.0
	0.4nm,0.4s,baz=84,slow=7.8,SNR=5.5						

*ISCJB **08** 21:06:23.3±2.0, 32.70N±0.08×49.3E±0.1, h6km±16km, Error ellipse: s-maj=18.9km s-min=9.2km az=34.6*
*CSEM **08** 21:06:23.2, 32.77N×49.33E, h14km, ML3.1, After THR*
*THR **08** 21:06:23.2±0.5, 32.77N×49.33E, h14km±4km, ML3.1*
ISC 08 21:06:23.7±2.3**, 32.72N**±0.08×**49.3E**±0.1**, h1**km±18km**, n10,** $\sigma 0^{s}67$/12**, Western Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.73**	**214**	*e*Pg	**Pg**	**21 06 38.4**	**+0.7**
SHGR				AML	AML	21 06 57.6	
	comp=N,669nm,0.3s						
SHGR				AML	AML	21 06 59.5	
	comp=E,770nm,0.6s						
GHVR	**GHOM**	**2.43**	**43**	*e*Pn	**Pn**	**21 07 03.4**	**-1.2**
GHVR				*e*Sg	**Sn**	**21 07 36.4**	**+1.5**
GHVR				AML	AML	21 07 39.5	
	comp=E,100nm,0.7s						
GHVR	**GHOM**	**2.43**	**43**	*e*Pn	**Pn**	**21 07 03.4**	**-1.2**
	SNR=52						
GHVR				*e*Sg	**Sn**	**21 07 36.4**	**+1.4**
	comp=E,100nm,0.7s,SNR=90						
SNGE	**Sanandaj**	**2.86**	**326**	*e*Pn	**Pn**	**21 07 10.2**	**-0.3**
NASN	**Na'in**	**2.98**	**88**	*e*Pn	**Pn**	**21 07 11.5**	**-0.5**
MIB	**Mutribah**	**3.35**	**210**	*e*P	**Pn**	**21 07 17.1**	**-0.1**
	baz=210						
MIB				AML	AML	21 08 06.4	
	comp=Z,24nm,0.6s,baz=210						
UMR	**Umm Al-Rimmam**	**3.43**	**203**	*e*P	**Pn**	**21 07 18.5**	**+0.2**
	baz=203						
UMR				AML	AML	21 08 03.4	
	comp=Z,22nm,0.4s,baz=203						
RST	**Umm Al-Ruwaisa**	**3.76**	**212**	*e*P	**Pn**	**21 07 22.8**	**0.0**
	baz=212						
RST				AML	AML	21 08 08.2	
	comp=Z,0.4nm,0.4s,baz=212						
NAY	**Al-Naaiem**	**3.88**	**207**	*e*P	**Pn**	**21 07 24.5**	**+0.1**
	baz=207						
NAY				AML	AML	21 08 16.8	
	comp=Z,8.0nm,0.5s,baz=207						
RDF	**Al-Radifah**	**4.06**	**202**	*e*P	**Pn**	**21 07 26.6**	**-0.3**
	baz=202						
RDF				AML	AML	21 08 11.7	
	comp=Z,11nm,0.5s,baz=202						

*ISCJB **08** 21:14:09.7±0.3, 47.37N±0.02×9.10E±0.02, h13km±2km, Error ellipse: s-maj=2.6km s-min=2.1km az=11.4*
*ZUR **08** 21:14:10.3, 47.39N×9.15E, h7km±2km, ML1.9/9*
*LDG **08** 21:14:10.6±0.1, 47.38N×9.13E, h6km, Md2.6/1, Ml2.2/11, Error ellipse: s-maj=1.0km s-min=0.8km az=151.0*
*VIE **08** 21:14:10.6±0.3, 47.37N×9.14E, h12km±1km, mb1.3/2, ML2.3/4, Error ellipse: s-maj=2.1km s-min=1.4km az=140.0 19 km WSW of St.Gallen*
*LEDBW **08** 21:14:10.7±0.1, 47.39N±0.01×9.141E±0.008, h6km±2km, ML2.0, Error ellipse: s-maj=4.2km s-min=2.0km az=31.0*
*CSEM **08** 21:14:10.3±0.1, 47.38N×9.13E, h19km, ML1.9/9, Error ellipse: s-maj=1.4km s-min=0.9km az=32.0*
*STR **08** 21:14:11.8±0.8, 47.39N×9.05E, h10km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BGR **08** 21:14:11.4±0.9, 47.42N×9.23E, h10km, ML2.0/5, Error ellipse: s-maj=11.1km s-min=5.6km az=16.0*
*PRU **08** 21:14:12.6, 47.48N×9.22E, h0km*
ISC 08 21:14:10.0±0.2**, 47.38N**±0.01×**9.12E**±0.02**, h18**km±2km**, n99,** $\sigma 1^{s}02$/167**, 13C-10D, Germany**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WILA	**Wila**	**0.15**	**284**	⇑*i*Pg	**Pg**	**21 14 14.2**	**0.0**
	2μm,0.2s						
WILA				*e*Sg	**Sg**	**21 14 17.1**	**0.0**
	2μm,0.2s						
WILA	**Wila**	**0.15**	**284**	⇑*i*Pg	**Pg**	**21 14 14.2**	**0.0**
WILA				Sg	**Sg**	**21 14 17.1**	**0.0**
WEIN	**Weingarten**	**0.18**	**329**	*i* Sg	**Pg**	**21 14 14.4**	**-0.2**
	317nm,0.3s						
WEIN	**Weingarten**	**0.18**	**329**	⇓*i*Pg	**Sg**	**21 14 17.5**	**-0.2**
	317nm,0.3s						
WEIN	**Weingarten**	**0.18**	**329**	⇓*i*Pg	**Pg**	**21 14 14.4**	**-0.2**
WEIN				Sg	**Sg**	**21 14 17.5**	**-0.3**
WEIN	**Weingarten**	**0.18**	**329**	⇓*i*Pg	**Sg**	**21 14 17.5**	**-0.2**
	317nm,0.3s						
LIENZ	**Kamor/St.Gall**	**0.27**	**108**	*i* Sg	**Pg**	**21 14 15.9**	**0.0**
	215nm,0.1s						
LIENZ	**Kamor/St.Gall**	**0.27**	**108**	⇑*i*Pg	**Sg**	**21 14 20.2**	**+0.2**
	215nm,0.1s						
LIENZ	**Kamor/St.Gall**	**0.27**	**108**	⇑*i*Pg	**Pg**	**21 14 15.9**	**0.0**
LIENZ				Sg	**Sg**	**21 14 20.2**	**+0.3**
SISB	**Singen-Schiene**	**0.33**	**341**	⇓P*	**Pg**	**21 14 17.2**	**+0.2**
SISB				S*	**Sg**	**21 14 22.4**	**+0.6**
SISB	**Singen-Schiene**	**0.33**	**341**	⇓Pg	**Pg**	**21 14 17.2**	**+0.2**
SISB				Sg	**Sg**	**21 14 22.4**	**+0.6**
STEIN	**Stein am Rhein**	**0.34**	**330**	⇑*i*P	**Pg**	**21 14 17.6**	**+0.4**
STEIN	**Stein am Rhein**	**0.34**	**330**	⇑*i*Pg	**Pg**	**21 14 17.6**	**+0.4**
ZUR	**Degenried**	**0.37**	**269**	*i* Sg	**Pg**	**21 14 18.4**	**+0.7**
	331nm,0.4s						
ZUR	**Degenried**	**0.37**	**269**	⇑*i*Pg	**Sg**	**21 14 24.1**	**+1.2**
	331nm,0.4s						
PLONS	**Plons/SG**	**0.37**	**152**	⇓*i*Pg	**Pg**	**21 14 18.1**	**+0.3**
	49nm,0.2s						
PLONS				*i* Sg	**Sg**	**21 14 23.9**	**+0.9**
	49nm,0.2s						
TRULL	**Truellikon**	**0.40**	**312**	⇓*i*Pg	**Pg**	**21 14 18.9**	**+0.6**
	196nm,0.3s						
TRULL				*e*Sg	**Sg**	**21 14 24.7**	**+0.8**
	196nm,0.3s						
FLACH	**Flaach**	**0.42**	**298**	*e*Sg	**Pg**	**21 14 19.5**	**+0.8**
	163nm,0.2s						
FLACH	**Flaach**	**0.42**	**298**	⇑*i*Pg	**Sg**	**21 14 25.6**	**+1.1**
	163nm,0.2s						
DAVA	**Damuels**	**0.52**	**100**	⇑*i*Pg	**Pg**	**21 14 20.6**	**+0.2**
DAVA				⇑*i*Sg	**Sg**	**21 14 28.3**	**+0.8**
	20nm,0.2s						
DAVA	**Damuels**	**0.52**	**100**	*e*Pg	**Pg**	**21 14 20.9**	**+0.4**
DAVA				*e*Sg	**Sg**	**21 14 28.3**	**+0.8**
LLS	**Linth-Limmern**	**0.54**	**188**	*e*S	**Pg**	**21 14 21.2**	**+0.5**
	67nm,0.1s						
LLS	**Linth-Limmern**	**0.54**	**188**	*e*P	**Sg**	**21 14 28.9**	**+1.0**
	67nm,0.1s						
SLE	**Schleitheim**	**0.58**	**312**	⇓*i*P	**Pg**	**21 14 21.8**	**+0.3**
	143nm,0.3s						
SLE				*e*S	**Sg**	**21 14 29.8**	**+0.6**
	143nm,0.3s						
GUT	**Gutenstein**	**0.69**	**360**	⇓P*	**Pb**	**21 14 23.6**	**0.0**
GUT				PmP		21 14 25.5	
GUT				S*	**Sb**	**21 14 33.0**	**+0.2**
GUT				SmS		21 14 36.6	
GUT	**Gutenstein**	**0.69**	**360**	⇓Pg	**Pg**	**21 14 23.6**	**-0.1**
GUT				Sg	**Sg**	**21 14 33.0**	**+0.1**
GUT	**Gutenstein**	**0.69**	**360**	PmP		21 14 25.6	
GUT				SmS		21 14 36.6	
UBR	**Ueberruh**	**0.73**	**65**	⇑P*	**Pb**	**21 14 24.6**	**+0.4**
UBR				PmP		21 14 26.9	
UBR				S*	**Sb**	**21 14 34.8**	**+0.9**
UBR				SmS		21 14 38.8	
UBR	**Ueberruh**	**0.73**	**65**	⇑Pg	**Pg**	**21 14 24.6**	**+0.2**
UBR				Sg	**Sg**	**21 14 34.8**	**+0.7**
UBR	**Ueberruh**	**0.73**	**65**	PmP		21 14 26.9	
UBR				SmS		21 14 38.9	
SPAK	**Spaichingen-Ko**	**0.76**	**343**	P*	**Pb**	**21 14 25.0**	**+0.3**
SPAK	**Spaichingen-Ko**	**0.76**	**343**	Pg	**Pg**	**21 14 25.3**	**+0.4**
SPAK				Sg	**Sg**	**21 14 37.0**	**+2.0**
FELD	**Feldberg im Sc**	**0.91**	**304**	P*	**Pb**	**21 14 28.1**	**+0.9**
FELD				Pg	**Pg**	**21 14 28.7**	**+1.0**
FELD	**Feldberg im Sc**	**0.91**	**304**	Pg	**Pg**	**21 14 28.1**	**+0.5**
FELD	**Feldberg im Sc**	**0.91**	**304**	P	**Pb**	**21 14 28.7**	**+1.5**
FELD	**Feldberg im Sc**	**0.91**	**304**	Pg	**Pg**	**21 14 28.0**	**+0.4**
FELD				Sg	**Sg**	**21 14 40.3**	**+0.7**
KIZ	**Kirchzarten**	**1.00**	**306**	P*	**Pb**	**21 14 29.6**	**+0.9**
KIZ				Pg	**Pg**	**21 14 30.2**	**+0.8**
KIZ				PmP		21 14 30.6	
KIZ				S*	**Sb**	**21 14 43.0**	**+1.4**
KIZ				SmS		21 14 44.6	
KIZ	**Kirchzarten**	**1.00**	**306**	Pg	**Pg**	**21 14 29.6**	**+0.2**
KIZ				Sg	**Sg**	**21 14 43.0**	**+0.4**
KIZ	**Kirchzarten**	**1.00**	**306**	P	**Pb**	**21 14 30.2**	**+1.4**
KIZ	**Kirchzarten**	**1.00**	**306**	PmP		21 14 30.6	
KIZ				SmS		21 14 44.6	
KIZ	**Kirchzarten**	**1.00**	**306**	Pg	**Pg**	**21 14 30.2**	**+0.8**
BUCH	**Bad Urach**	**1.08**	**8**	⇑P	**Pb**	**21 14 30.8**	**+0.6**
BUCH				Pg	**Pg**	**21 14 31.3**	**+0.3**
BUCH				S	**Sb**	**21 14 45.4**	**+1.4**
BUCH				SmS		21 14 47.0	
BUCH	**Bad Urach**	**1.08**	**8**	⇑Pg	**Pg**	**21 14 30.9**	**-0.2**
BUCH				Sg	**Sg**	**21 14 45.4**	**+0.2**
BUCH	**Bad Urach**	**1.08**	**8**	P	**Pb**	**21 14 31.3**	**+1.1**
BUCH				SmS		21 14 47.0	
BUCH	**Bad Urach**	**1.08**	**8**	Pg	**Pg**	**21 14 31.3**	**+0.3**
BUCH				S	**Sb**	**21 14 45.4**	**+1.4**
BFO	**Black Forest**	**1.09**	**331**	*e*Pg	**Pg**	**21 14 31.1**	**-0.1**
	SNR=17						
BFO				*e*Sg	**Sg**	**21 14 46.2**	**+0.7**
	SNR=4.0						
BFO	**Black Forest**	**1.09**	**331**	Pg	**Pg**	**21 14 31.1**	**-0.1**
	SNR=17						
BFO				Sg	**Sg**	**21 14 46.2**	**+0.7**
	SNR=4.0						
BBS	**Basel-Blauen**	**1.10**	**275**	Sg	**Sg**	**21 14 47.2**	**+1.5**
BBS	**Basel-Blauen**	**1.10**	**275**	S	**Sb**	**21 14 47.2**	**+2.8**
BBS	**Basel-Blauen**	**1.10**	**275**	Pg	**Pg**	**21 14 32.2**	**+0.9**
BBS				Sg	**Sg**	**21 14 46.9**	**+1.2**
LBG	**Lerchenberg**	**1.31**	**350**	P	**Pn**	**21 14 33.9**	**+0.6**
LBG				Pg	**Pg**	**21 14 35.0**	**-0.2**
LBG				S	**Sn**	**21 14 50.4**	**+0.1**
LBG				Sg	**Sg**	**21 14 52.5**	**+0.3**
LBG	**Lerchenberg**	**1.31**	**350**	Pn	**Pn**	**21 14 33.9**	**+0.6**
LBG				Sn	**Sn**	**21 14 50.4**	**+0.1**
LBG	**Lerchenberg**	**1.31**	**350**	P	**Pn**	**21 14 35.0**	**+1.7**
LBG				S	**Sn**	**21 14 52.5**	**+2.2**
MOTA	**Moosalm**	**1.35**	**91**	⇑*i*Pn	**Pn**	**21 14 35.2**	**+1.4**
MOTA				⇑*i*Sn	**Sn**	**21 14 53.9**	**+2.6**
MOTA				⇑*i*Sg	**Sg**	**21 14 55.1**	**+1.5**
	5.5nm,0.1s						
STU	**Stuttgart**	**1.40**	**2**	*e*Sg	**Sg**	**21 14 54.8**	**-0.4**
	SNR=2.5						
HDH	**Heidenheim-Cha**	**1.41**	**31**	Pg	**Pg**	**21 14 36.9**	**-0.3**
HDH				Sg	**Sg**	**21 14 55.4**	**-0.2**
MOF	**Molkenrain**	**1.43**	**290**	Pg	**Pg**	**21 14 38.3**	**+0.8**
MOF				Sg	**Sg**	**21 14 56.2**	**+0.1**
ECH	**Echery**	**1.57**	**303**	Pg	**Pg**	**21 14 39.9**	**-0.3**
HINF	**Hinteralfeld**	**1.60**	**287**	*e*Pn	**Pn**	**21 14 37.7**	**+0.4**
HINF	**Hinteralfeld**	**1.60**	**287**	*e*Pg	**Pg**	**21 14 40.2**	**-0.5**

HINF				eSn	Sn	21 14 57.4	-0.1
HINF				eSg	Sg	21 15 01.0	-0.5
	7.9nm,0.2s						
HINF	Hinteralfeld	1.60	287	ePg	Pg	21 14 40.2	-0.5
HINF				eSn	Sn	21 14 57.4	-0.1
HINF				eSg	Sg	21 15 01.0	-0.5
	4.0nm,0.2s						
CDF	Champ du Feu	1.62	310	ePn	Pn	21 14 37.7	+0.1
CDF	Champ du Feu	1.62	310	ePg	Pg	21 14 40.7	-0.4
CDF				eSg	Sg	21 15 01.8	-0.4
	8.5nm,0.3s						
CDF	Champ du Feu	1.62	310	ePg	Pg	21 14 40.7	-0.4
CDF				eSg	Sg	21 15 01.8	-0.4
FUR	Furstenfeldbru	1.65	61	ePg	Pg	21 14 41.7	-0.1
FUR				eSg	Sg	21 15 03.5	+0.2
	SNR=2.1						
FUR	Furstenfeldbru	1.65	61	Pg	Pg	21 14 41.7	-0.1
FUR				Sg	Sg	21 15 03.5	+0.2
	SNR=2.1						
HAU	Haudompre	1.98	290	ePn	Pn	21 14 42.9	+0.4
HAU	Haudompre	1.98	290	ePg	Pg	21 14 47.4	-0.6
HAU				eSg	Sg	21 15 13.2	-0.4
	12nm,0.4s						
HAU	Haudompre	1.98	290	ePg	Pg	21 14 47.4	-0.6
HAU				eSg	Sg	21 15 13.2	-0.4
	6.1nm,0.4s						
SIND	Sindeldorf	2.00	9	⇑P	Pn	21 14 42.5	-0.3
SIND				Pg	Pg	21 14 47.9	-0.5
SIND				S	Sn	21 15 06.4	-1.0
SIND				Sg	Sg	21 15 13.6	-0.8
SIND	Sindeldorf	2.00	9	⇑Pn	Pn	21 14 42.5	-0.3
SIND				Sn	Sn	21 15 06.4	-1.0
SIND	Sindeldorf	2.00	9	P	Pn	21 14 47.9	+5.0
SIND				S	Sn	21 15 13.6	+6.2
CABF	La Chapelle	2.21	251	ePg	Pg	21 14 52.4	-0.1
CABF				eSg	Sg	21 15 21.0	-0.2
	3.4nm,0.3s						
CABF	La Chapelle	2.21	251	ePg	Pg	21 14 52.4	-0.1
CABF				eSg	Sg	21 15 21.0	-0.2
	1.7nm,0.3s						
LPL	La Plagne	2.49	222	ePg	Pg	21 14 56.9	-0.8
LPG	La Plagne	2.50	222	ePg	Pg	21 14 56.8	-1.0
LPG				eSg	Sg	21 15 29.8	-0.4
	0.7nm,0.2s						
LPG	La Plagne	2.50	222	ePg	Pg	21 14 56.8	-1.0
LPG				eSg	Sg	21 15 29.8	-0.4
	0.3nm,0.2s						
GRA1	Grafenberg Arr	2.70	30	Sg	Sg	21 15 34.2	-2.7
	SNR=2.3						
GRF	Grafenberg Arr	2.70	30	eSg	Sg	21 15 34.2	-2.6
	SNR=2.3						
SFTF	Sexfontaines	2.88	288	ePg	Pg	21 15 03.7	-1.4
SFTF				eSn	Sn	21 15 28.1	-0.9
SFTF				eSg	Sg	21 15 40.7	-1.7
	2.5nm,0.3s						
SFTF	Sexfontaines	2.88	288	ePg	Pg	21 15 03.7	-1.4
SFTF				eSn	Sn	21 15 28.1	-0.9
SFTF				eSg	Sg	21 15 40.7	-1.7
	1.2nm,0.3s						
MEZF	Maizieres J'vi	2.96	294	eSg	Sg	21 15 43.9	-1.1
	2.3nm,0.3s						
MEZF	Maizieres J'vi	2.96	294	eSg	Sg	21 15 43.9	-1.1
	1.1nm,0.3s						
WET	Wettzell	3.07	53	eSn	Sn	21 15 32.5	-1.2
WET				eSg	Sg	21 15 44.3	-4.3
	SNR=3.7						
ORIF	Oris-en-Rattie	3.34	224	ePg	Pg	21 15 12.2	-1.7
ORIF				eSg	Sg	21 15 55.6	-1.5
	0.9nm,0.3s						
ORIF	Oris-en-Rattie	3.34	224	ePg	Pg	21 15 12.2	-1.7
ORIF				eSg	Sg	21 15 55.6	-1.5
	0.4nm,0.3s						
GEC2	GERESS Array S	3.40	63	ePn	Pn	21 15 03.5	+1.4
	SNR=1.0						
GEC2				ePg	Pg	21 15 13.3	-1.8
	SNR=1.8						
GEC2				eSn	Sn	21 15 40.0	-2.0
GEC2				eSg	Sg	21 15 54.9	-4.3
	SNR=0.8						
GEC2	GERESS Array S	3.40	63	Pg	Pg	21 15 13.3	-1.8
	SNR=1.8						
GEC2				Sn	Sn	21 15 40.0	-1.9
GEC2				Sg	Sg	21 15 54.9	-4.3
	SNR=0.8						
KHC	Kasperske Hory	3.46	58	ePG	Pg	21 15 13.4	-2.8
KHC				eSG	Sg	21 15 59.4	-1.5
LOR	Lormes	3.58	270	ePg	Pg	21 15 17.2	-1.4
LOR				eSg	Sg	21 16 02.7	-2.3
	1.3nm,0.2s						
LOR	Lormes	3.58	270	ePg	Pg	21 15 17.2	-1.4
LOR				eSg	Sg	21 16 02.7	-2.3
	0.6nm,0.2s						
NKC	Novy Kostel	3.60	36	eSG	Sg	21 16 02.5	-3.2
MOX	Moxa	3.66	26	eSg	Sg	21 16 05.5	-2.0
	SNR=2.0						
SMF	Signal de Mont	3.69	260	eSg	Sg	21 16 06.5	-1.8
	1.0nm,0.3s						
SMF	Signal de Mont	3.69	260	eSg	Sg	21 16 06.5	-1.8
	0.5nm,0.3s						
TANN	Tannenbergstha	3.75	35	eSg	Sg	21 16 08.8	-1.7
	SNR=1.9						
AVF	Avril sur Loir	3.99	264	eSg	Sg	21 16 15.8	-2.1
	0.3nm,0.2s						
AVF	Avril sur Loir	3.99	264	eSg	Sg	21 16 15.8	-2.1
	0.2nm,0.2s						
PRU	Pruhonice	4.44	52	eSG	Sg	21 16 29.2	-3.2

GUC 08 21:27:44.7±0.7, 2470S×6936W, h80^{km}, MD3.7, ML2.8, 1C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPN1	Cerro Paranal	0.96	274	eP	Pn	21 28 04.2	+0.9
CPN1				i S	Sn	21 28 19.3	+2.2
CPN1				AML	AML	21 28 24.6	
	comp=E,427nm,0.3s						
ANCH	Antofagasta	1.40	316	eP	Pn	21 28 09.2	+0.5
ANCH				i S	Sn	21 28 27.8	+1.0
ANCH				AML	AML	21 28 31.4	
	comp=N,407nm,0.1s						
CEN1	Los Morros	1.52	329	⇑iP	Pn	21 28 09.7	-0.6
CEN1				i S	Sn	21 28 28.3	-1.2
CEN1				AML	AML	21 28 32.5	
	comp=N,117nm,0.5s						
CDCH	Caldera	2.71	209	eP	Pn	21 28 29.2	+3.1
CDCH				i S	Sn	21 29 01.1	+3.2

*IDC **08** 21:43:56.2±0.9, 043S×13571E, h0^{km}, mb3.9/6, mb1 4.2/8, mb1mx3.9/18, mbtmp4.0/8, ML4.2/2, MS3.3/8, Ms1 3.3/8, ms1mx3.0/27, Error ellipse: s-maj=34.3km s-min=19.2km az=68.0*

*NEIC **08** 21:43:57.0±0.7, 040S×13573E, h10^{km}, mb4.1/4, Error ellipse: s-maj=20.1km s-min=11.3km az=80.0*

*ISCJB **08** 21:43:58.2±0.8, 045S±009×1359E±01, h33^{km}, mb3.8/5, MS3.3/7, Error ellipse: s-maj=19.0km s-min=12.8km az=1.0*

ISC 08 21:44:00.4±0.8, 047S±009×1358E±01, h35^{km}, n25, σ0^{s}84/15, mb3.8/5, MS3.3/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	12.62	195	eP	Pn	21 46 57.1	-0.4
	18nm,0.8s						
BATI	Baumata	15.49	231	Pn	Pn	21 47 36.9	+0.5
	2.2nm,0.3s,baz=129,slow=9.3,SNR=2.6						
GUMO	Guam	16.59	32	LR	LR	21 52 46.1	
	comp=Z,95nm,21.1s,baz=158,slow=32						
WB2	Warramunga Arr	19.41	184	eP	Pn	21 48 24.1	-0.9
WRA	Warramunga Arr	19.41	184	P	Pn	21 48 24.1	-0.8
	0.6nm,0.3s,baz=360,slow=12,SNR=72						
FITZ	Fitzroy Crossi	20.18	209	eP	P	21 48 36.7	+4.6
	10.0nm,1.0s						
FITZ	Fitzroy Crossi	20.18	209	P	P	21 48 34.3	+2.2
	2.6nm,0.5s,baz=49,slow=13,SNR=16						
FITZ				LR	LR	21 55 20.8	
	comp=Z,52nm,20.7s,MS2.9,baz=14,slow=34						
CTA	Charters Tower	22.00	153	eP	P	21 48 54.6	+2.9
	4.4nm,0.7s,mb4.0						
CTA	Charters Tower	22.00	153	P	P	21 48 53.5	+1.7
	3.7nm,0.6s,mb4.0,baz=355,slow=13,SNR=5.6						
CTAO	Charters Tower	22.00	153	eP	P	21 48 53.1	+1.3
	4.0nm,0.8s,mb3.9						
ASAR	Alice Springs	23.13	185	P	P	21 49 03.4	-0.3
	6.0nm,0.9s,mb4.0,baz=16,slow=12,SNR=35						
CBIJ	Chichi jima	28.08	12	LR	LR	21 58 39.5	
	comp=Z,98nm,20.4s,MS3.4,baz=112,slow=32						
JOW	Kunigami	28.10	346	LR	LR	21 58 37.1	
	comp=Z,57nm,19.9s,MS3.2,baz=223,slow=31						
STKA	Stephens Creek	31.71	171	eP	P	21 50 21.1	+0.2
	2.6nm,0.9s,mb4.1						
STKA	Stephens Creek	31.71	171	P	P	21 50 21.0	+0.1
	1.9nm,0.5s,mb4.2,baz=317,slow=13,SNR=6.0						
KSRS	Korea Array	38.44	350	LR	LR	22 06 08.5	
	comp=Z,36nm,18.6s,MS3.2,baz=196,slow=35						
CMAR	Chiang Mai Arr	40.84	299	P	P	21 51 38.7	-0.4
	0.4nm,0.7s,mb3.1,baz=133,slow=7.2,SNR=5.1						
MIDW	Midway	53.11	54	eP	P	21 53 14.4	-0.4
	81nm,0.3s						
SONM	Songino Array	54.50	336	LR	LR	22 15 38.3	
	comp=Z,40nm,20.3s,MS3.5,baz=221,slow=35						
PETK	Petropavlovsk-	56.43	16	LR	LR	22 15 11.3	
	comp=Z,27nm,20.6s,MS3.3,baz=85,slow=33						
MKAR	Makanchi Array	66.28	323	P	P	21 54 45.4	+0.3
	0.3nm,0.3s,mb3.8,baz=98,slow=9.5,SNR=5.0						
YKA	Yellowknife Ar	99.36	26	LR	LR	22 41 20.4	
	comp=Z,14nm,19.6s,MS3.5,baz=165,slow=35						
BRG	Berggiesshubel	109.94	325	e(P)	PKiKP	22 02 32.7	+4.6
	6.8nm,1.5s						
CPUP	Villa Florida	150.49	155	PKPbc	PKPbc	22 03 50.1	+0.9
	1.0nm,0.7s,baz=219,slow=1.1,SNR=5.5						
CPUP				PKPab	PKPab	22 03 58.3	+2.6
	0.3nm,0.4s,baz=85,slow=3.4,SNR=3.1						
LPAZ	La Paz	151.08	126	PKPbc	PKPbc	22 03 53.7	+2.9
	2.1nm,0.8s,baz=130,slow=0.3,SNR=8.9						
LPAZ				PKPab	PKPab	22 04 01.4	+3.0
	1.8nm,0.8s,baz=189,slow=1.8,SNR=8.3						

*IDC **08** 21:44:46.8±2.2, 563S×15393E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/17, mbtmp4.0/7, ML3.6/1, MS3.2/2, Ms1 3.2/2, ms1mx2.1/25, Error ellipse: s-maj=69.4km s-min=27.2km az=110.0*

*NEIC **08** 21:44:49.4±1.4, 556S×15371E, h10^{km}, mb4.3/2, Error ellipse: s-maj=39.6km s-min=16.8km az=108.0*

ISC 08 21:44:52.9±2.3, 56S±02×1538E±04, h35^{km}, n12, σ0^{s}83/9, mb3.9/8, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	16.11	206	Pn	Pn	21 48 37.3	+0.4
	0.1nm,0.3s,baz=38,slow=17,SNR=2.2						
CTA				LR	LR	21 53 09.3	
	comp=Z,80nm,21.8s,baz=23,slow=31						
KAKA	Kakadu	22.17	250	eP	P	21 49 45.7	-0.4
	24nm,1.0s,mb4.6						
WRAB	Tennant Creek	23.62	231	eP	P	21 50 01.1	0.0
	2.8nm,0.6s,mb3.9						
WRA	Warramunga Arr	23.64	231	P	P	21 50 00.2	-1.0
	1.7nm,0.5s,mb3.8,baz=54,slow=9.7,SNR=7.4						
ASAR	Alice Springs	26.20	225	P	P	21 50 25.3	+0.8
	3.4nm,0.8s,mb3.9,baz=57,slow=9.1,SNR=7.7						
ASAR				PcP	PcP	21 53 51.5	+0.5
	0.8nm,0.9s,baz=54,slow=2.4,SNR=4.5						
FITZ	Fitzroy Crossi	30.11	243	P	P	21 50 59.0	-0.5
	4.0nm,0.8s,mb4.2,baz=62,slow=10,SNR=5.9						
AFI	Afiamalu	34.92	106	LR	LR	22 04 38.9	
	comp=Z,48nm,19.2s,baz=30,slow=34						
CMAR	Chiang Mai Arr	59.08	295	P	P	21 54 52.1	+1.9
	0.5nm,0.4s,mb3.9,baz=126,slow=6.1,SNR=4.3						
CMAR				pP	pP	21 55 04.3	+3.5
	1.2nm,0.8s,baz=116,slow=5.3,SNR=7.1						
MKAR	Makanchi Array	81.57	319	P	P	21 57 06.9	-0.2
	0.3nm,0.2s,mb3.8,baz=102,slow=5.4,SNR=5.0						
ZALV	Zalesovo Beam	82.36	326	P	P	21 57 10.3	-0.8
	0.2nm,0.3s,mb3.5,baz=46,slow=4.2,SNR=2.9						
SHEL	Horse Pasture	150.47	223	ePKPbc	PKPbc	22 04 43.7	+1.8
TORD	Torodi Ar. Bea	151.46	287	PKPbc	PKPbc	22 04 43.6	-0.6
	0.9nm,0.7s,baz=80,slow=2.0,SNR=12						
TORD				PKPab	PKPab	22 04 52.5	-0.1
	1.6nm,1.0s,baz=85,slow=3.6,SNR=5.9						

*CSEM **08** 21:45:04.4, 38.11N×2289E, h1^{km}, ML3.8, After THE*

THE 08 21:45:04.4, 3811N×2289E, h1^{km}, ML3.8, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTK	Loutraki	0.11	146	ePg	Pg	21 45 06.8	+0.4
LTK				eSg	Sg	21 45 08.3	+0.5
LKR	Lokris	0.55	9	ePg	Pg	21 45 14.5	-0.4
DID	Didima	0.66	155	ePg	Pg	21 45 16.5	-0.5
VLX	Vlachokerasia	0.84	209	ePg	Pg	21 45 20.1	-0.4
AGG	Agios Georgios	1.01	334	ePg	Pg	21 45 23.6	-0.2
AGG	Agios Georgios	1.01	334	ePg	Pg	21 45 23.5	-0.3

*IDC **08** 22:14:47.1±0.9, 320N×12678E, h0^{km}, mb4.0/8, mb1 4.2/8, mb1mx4.0/18, mbtmp4.1/8, Error ellipse: s-maj=66.1km s-min=15.1km az=66.0*

*NEIC **08** 22:14:48.2±0.4, 325N×12693E, h10^{km}, mb4.5/5, Error ellipse: s-maj=20.9km s-min=5.5km az=70.0*

*ISCJB **08** 22:14:49.6±0.7, 33N±0.1×1269E±02, h33^{km}, mb4.2/11, Error ellipse: s-maj=38.2km s-min=9.0km az=158.5*

ISC 08 22:14:51.8±0.7, 32N±01×1270E±02, h35^{km}, n20, σ0^{s}46/18, mb4.2/11, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	16.75	161	eP	Pn	22 18 43.2	-0.7
	12nm,0.6s						
FITZ	Fitzroy Crossi	21.24	183	eP	P	22 19 34.5	-0.4
	5.6nm,0.4s,mb4.2						
FITZ	Fitzroy Crossi	21.24	183	P	P	22 19 34.3	-0.6
	3.4nm,0.5s,mb4.0,baz=15,slow=8.3,SNR=30						
WRAB	Tennant Creek	24.14	163	eP	P	22 20 04.7	0.0
	8.1nm,0.4s,mb4.5						
WRA	Warramunga Arr	24.15	163	P	P	22 20 04.6	-0.1
	5.3nm,0.5s,mb4.2,baz=341,slow=10,SNR=81						
WRA				PcP	PcP	22 23 46.6	+1.2
	0.3nm,0.4s,baz=335,slow=2.2,SNR=5.1						
WB2	Warramunga Arr	24.15	163	eP	P	22 20 04.6	-0.2
WB2	Warramunga Arr	24.15	163	eP	P	22 20 04.8	0.0
ASAR	Alice Springs	27.58	166	P	P	22 20 35.8	0.0
	0.7nm,0.5s,mb3.6,baz=347,slow=7.2,SNR=19						
ASAR				PcP	PcP	22 23 54.6	+1.5
	0.6nm,0.6s,baz=347,slow=1.9,SNR=5.8						
CMAR	Chiang Mai Arr	31.31	301	P	P	22 21 08.7	-0.3
	0.4nm,0.3s,mb3.7,baz=110,slow=6.2,SNR=5.2						
KLBR	Kellerberrin	35.72	194	eP	P	22 21 47.5	+0.3
	21nm,1.1s,mb5.0						
MUN	Mundaring	36.47	195	eP	P	22 21 54.1	+0.5
STKA	Stephens Creek	37.59	159	eP	P	22 22 03.9	+0.8
	6.3nm,0.8s,mb4.4						
STKA	Stephens Creek	37.59	159	P	P	22 22 04.0	+0.8
	7.2nm,0.6s,mb4.6,baz=325,slow=7.8,SNR=22						
STKA				PcP	PcP	22 24 22.3	+1.8
	1.4nm,0.5s,baz=340,slow=6.3,SNR=6.2						
SONM	Songino Array	47.84	341	P	P	22 23 26.2	+0.2
	0.4nm,0.5s,mb3.7,baz=153,slow=10.0,SNR=4.0						
MK31	Makanchi Array	58.09	325	eP	P	22 24 42.4	+0.8
MKAR	Makanchi Array	58.09	325	P	P	22 24 41.8	+0.1
	1.8nm,0.5s,mb4.4,baz=122,slow=8.3,SNR=29						
ZALV	Zalesovo Beam	61.13	333	P	P	22 25 02.1	-0.4
	0.6nm,0.5s,mb4.0,baz=98,slow=3.1,SNR=4.2						
KURK	Kurchatov	62.27	328	eP	P	22 25 09.6	-0.7
	2.0nm,0.6s,mb4.4						
TORD	Torodi Ar. Bea	123.28	288	PKP	PKPdf	22 33 46.9	+0.8
	0.6nm,0.6s,baz=136,slow=1.2,SNR=6.8						
SIUC	Southern Illin	127.24	36	ePKPdf	PKPdf	22 33 54.0	+0.8

*NIED **08** 22:38:00, 3740N×13590E, h340^{km}, Mw4.1 Best double couple: $M_0$1.64000×10^{15} NP1:ϕ_s240.00000°, δ85.00000°, λ152.00000°. NP2:ϕ_s333.00000°, δ62.00000°, λ6.00000°.*

*BJI **08** 22:38:41.7, 3747N×13599E, h364^{km}, mB4.6, mb4.5*

*MOS **08** 22:38:44.1±0.8, 3758N×13573E, h353^{km}, mb3.9/15, Error ellipse: s-maj=13.1km s-min=10.3km az=123.1*

*IDC **08** 22:38:44.5±0.6, 3753N×13571E, h339^{km}±8^{km}, mb3.4/12, mb1 3.6/17, mb1mx3.5/26, mbtmp3.5/17, Error ellipse: s-maj=13.9km s-min=9.9km az=66.0*

*ISCJB **08** 22:38:44.2±0.2, 3751N±004×13576E±005, h354^{km}±3^{km}, mb4.0/33, Error ellipse: s-maj=6.5km s-min=5.7km az=40.1*

*JMA **08** 22:38:45.1±0.1, 3744N×13586E, h356^{km}±2^{km}, M3.7*

*NEIC **08** 22:38:45.2, 3744N×13586E, h356^{km}, mb4.2/9, After JMA.*

ISC 08 22:38:45.0±0.2, 3749N±004×13577E±005, h348^{km}±3^{km}, n95, σ0^{s}86/117, mb4.0/33, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHG	Hegura jima	0.98	68	P	Pn	22 39 31.2	+0.8
JHG				S	S	22 40 06.8	+0.1
JSZ	Suzu	1.27	91	P	Pn	22 39 32.6	+0.9
JSZ				S	S	22 40 10.0	+0.9
JKG	Kaga	1.29	160	P	Pn	22 39 32.4	+0.5
JKG				S	S	22 40 08.7	-0.7
JGM	Miyama	1.94	157	P	Pn	22 39 36.0	+0.2
JGM				S	S	22 40 16.0	-0.4
JSD	Sado	2.05	74	P	Pn	22 39 36.9	+0.5
JSD				S	S	22 40 16.4	-1.2
MAJO	Matsushiro	2.16	115	eP	Pn	22 39 38.0	+0.7
MAT	Matsushiro	2.16	115	P	Pn	22 39 38.9	+1.6
MAT				S	S	22 40 20.8	+1.6
MAT	Matsushiro	2.16	115	P	Pn	22 39 38.0	+0.7
MAT				S	S	22 40 19.1	-0.1
MJAR	Matsushiro Arr	2.17	115	P	Pn	22 39 38.0	+0.7
	25nm,0.3s,baz=299,slow=9.4,SNR=589						
MJAR				S	S	22 40 19.0	-0.2
	1.0nm,0.3s,baz=253,slow=19,SNR=5.3						
MJAR	Matsushiro Arr	2.17	115	P	Pn	22 39 38.0	+0.7
MJAR				S	S	22 40 19.0	-0.3
MJAR				pmax	pmax		
	comp=Z,25nm,0.3s						
MJAR				smax			
	comp=N,1.0nm,0.3s						
JWT	Wachi	2.22	188	P	Pn	22 39 38.5	+0.7
JWT				S	S	22 40 19.3	-0.8
JNS	Sasagawa	2.83	82	P	Pn	22 39 43.1	+0.4
JNS				S	S	22 40 28.4	-0.6
JRY	Ryogami san	2.91	119	P	Pn	22 39 43.1	-0.3
JRY				S	S	22 40 31.4	+1.1
JAW	Awa shima	2.91	70	P	Pn	22 39 45.0	+1.7
JAW				eS	S	22 40 32.9	+2.6
JYN	Shimob	2.99	131	P	Pn	22 39 44.4	+0.3
JAG	Ashikaga	3.13	109	P	Pn	22 39 44.8	-0.6
JIE	Ise	3.18	166	P	Pn	22 39 45.6	-0.4
JIE				S	S	22 40 34.2	-0.7
JWY	Kouya	3.27	183	P	Pn	22 39 47.3	+0.6
JWY				S	S	22 40 35.0	-1.4
JHS	Saijyo	3.28	222	P	Pn	22 39 47.6	+0.7
JOD2	Odawara 2	3.48	129	P	Pn	22 39 49.2	+0.5
JMK	Ichinoseki	4.53	70	P	Pn	22 39 59.2	-0.2
JMK				S	S	22 40 56.5	-2.9
BSO1	Boso 1	5.08	122	P	Pn	22 40 03.9	-1.5
BSO1				S	S	22 41 08.0	-2.4
JHJ	Hachijo jima 2	5.45	142	P	Pn	22 40 10.1	+0.4
	comp=N,18nm,0.3s,baz=230,slow=22,SNR=3.2						
JHJ				S	S	22 41 17.6	-0.5
	comp=N,24nm,0.3s,baz=267,slow=23,SNR=4.4						
KSRS	Korea Array	6.25	272	P	Pn	22 40 19.6	+1.1
	comp=N,1.6nm,0.3s,baz=84,slow=12,SNR=46						
KSRS				S	S	22 41 26.3	-8.1
	baz=232,slow=47,SNR=1.4						
KSRS	Korea Array	6.25	272	P	Pn	22 40 19.6	+1.1
KSRS				S	S	22 41 26.3	-8.1
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ERM	Erimo	7.26	49	eP	Pn	22 40 29.9	-0.4
ERM				pmax	pmax		
	comp=Z,57nm,0.6s						
ERM	Erimo	7.26	49	ePn	Pn	22 40 29.9	-0.5
	comp=Z,57nm,0.6s						
ASAJ	Asahikawa	8.40	36	P	Pn	22 40 42.4	-1.3
	comp=Z,41nm,0.3s,baz=234,slow=14,SNR=301						
ASAJ				S	S	22 42 13.7	-6.9
	comp=Z,2.8nm,0.3s,baz=4.5,slow=25,SNR=12						
ASAJ	Asahikawa	8.40	36	P	Pn	22 40 42.4	-1.3
ASAJ				S	S	22 42 13.7	-6.9
ASAJ				pmax	pmax		
	comp=Z,41nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
CN2	Changchun	10.06	312	eP	Pn	22 41 02.7	-0.9
CN2				AMB	AMB		
	comp=Z,20nm,1.0s						
YSS	Yuzh-Sakhalins	10.78	26	eP	Pn	22 41 11.5	-0.5
YSS				pmax	pmax		
	comp=Z,49nm,0.3s						
YSS	Yuzh-Sakhalins	10.78	26	ePn	Pn	22 41 11.5	-0.5
	comp=Z,49nm,0.3s						
DL2	Dalian	11.22	282	P	Pn	22 41 18.3	+0.8
DL2				AMB	AMB		
	comp=Z,60nm,0.7s						
CBIJ	Chichi jima	11.69	151	S	S	22 43 25.6	-7.9
	comp=Z,34nm,0.3s,baz=275,slow=22,SNR=10						
KLR	Kul'dur	12.10	347	eP	Pn	22 41 22.7	-5.0
JOW	Kunigami	12.37	213	P	Pn	22 41 30.1	-1.2
	comp=Z,1.9nm,0.3s,baz=85,slow=14,SNR=9.1						
BJI	Beijing	15.50	286	P	P	22 42 04.7	-0.4
BJI				AMB	AMB		
	comp=Z,13nm,0.6s						
BJT	Baijiatuau	15.50	285	eP	P	22 42 04.9	-0.2
BJT				pmax	pmax		
	comp=Z,15nm,0.4s						
BJT	Baijiatuau	15.50	285	eP	P	22 42 04.9	-0.2
	comp=Z,15nm,0.4s						
PETK	Petropavlovsk-	21.82	37	P	P	22 43 10.0	+0.6
	comp=Z,2.4nm,0.7s,mb3.5,baz=270,slow=3.0,SNR=3.7						
XAN	Xi'an	22.03	269	P	P	22 43 10.1	-1.6
XAN				AMB	AMB		
	comp=Z,21nm,0.5s,mb4.6						
XAN				AMB	AMB		
	comp=Z,44nm,4.0s						
ULN	Ulaanbaatar	23.40	305	eP	P	22 43 23.3	-0.6
ULN				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.1						
ULN	Ulaanbaatar	23.40	305	eP	P	22 43 23.3	-0.6
	comp=Z,11nm,0.8s,mb4.1						
SONM	Songino Array	23.82	305	P	P	22 43 27.0	-0.6
	comp=Z,4.3nm,0.5s,mb4.0,baz=108,slow=9.0,SNR=25						
SONM	Songino Array	23.82	305	P	P	22 43 27.0	-0.6
SONM				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BOD	Bodaibo	24.87	332	eP	P	22 43 36.6	-0.3
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.7						
LZH	Lanzhou	25.55	277	eP	P	22 43 43.3	0.0
LZH				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.3						
LZH				AMB	AMB		
	comp=Z,97nm,5.0s						
GTA	Gaotai	28.11	285	eP	P	22 44 04.9	-1.1
GTA				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb3.6						
CHTO	Chiang Mai	37.12	250	eP	P	22 45 23.5	-0.2
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.6						
CHTO	Chiang Mai	37.12	250	eP	P	22 45 23.5	-0.2
	comp=Z,3.5nm,0.9s,mb3.6						
CMAR	Chiang Mai Arr	37.34	250	P	P	22 45 26.1	+0.6
	comp=Z,1.0nm,0.7s,mb3.2,baz=46,slow=7.6,SNR=8.0						
CMAR	Chiang Mai Arr	37.34	250	P	P	22 45 26.2	+0.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	Zalesovo Beam	38.28	312	P	P	22 45 31.4	-1.4
	comp=Z,1.5nm,0.3s,mb3.7,baz=102,slow=7.2,SNR=12						
ZAL	Zalesovo	38.29	312	P	P	22 45 31.5	-1.4
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MK31	Makanchi Array	40.05	301	eP	P	22 45 46.8	-0.6
MKAR	Makanchi Array	40.05	301	P	P	22 45 46.7	-0.7
	comp=Z,1.8nm,0.4s,mb3.6,baz=87,slow=9.9,SNR=27						
MKAR	Makanchi Array	40.05	301	P	P	22 45 46.7	-0.7
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	Makanchi Array	40.05	301	P	P	22 45 46.7	-0.7
TAPN	Taplejung	41.43	270	eP	P	22 45 59.3	+0.4
	comp=Z,12nm,0.4s,mb4.5						
ODAN	Odare	41.90	270	eP	P	22 46 02.9	+0.2
KURK	Kurchatov	42.09	307	eP	P	22 46 03.2	-0.6
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.0						
KURK	Kurchatov	42.09	307	eP	P	22 46 03.2	-0.6
	comp=Z,9.2nm,0.8s,mb4.0						
RAMN	Ramite	42.49	270	eP	P	22 46 07.3	-0.1
	comp=Z,8.4nm,0.3s,mb4.3						
JIRN	Jiri	42.50	272	eP	P	22 46 08.6	+1.2
	comp=Z,18nm,0.4s,mb4.5						
GUN	Gumba	42.64	272	eP	P	22 46 09.5	+1.0

KKN	Kakani	43.17	272	eP	P	22 46 13.1	+0.4
	comp=Z,28nm,0.7s,mb4.5						
DMN	Daman	43.38	272	eP	P	22 46 15.0	+0.5
GKN	Gorkha	43.58	273	eP	P	22 46 15.9	-0.1
	comp=Z,25nm,0.5s,mb4.6						
DANN	Dangsing	44.13	274	eP	P	22 46 20.9	+0.6
	comp=Z,32nm,0.4s,mb4.8						
KOLN	Koldanda	44.51	273	eP	P	22 46 23.6	+0.3
	comp=Z,8.1nm,0.2s,mb4.4						
TKM2	Tokmak 2	45.43	297	eP	P	22 46 31.1	+0.8
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb3.8						
TKM2	Tokmak 2	45.43	297	eP	P	22 46 31.1	+0.8
	comp=Z,4.5nm,0.5s,mb3.9						
AML	Almayashu	46.99	296	eP	P	22 46 43.5	+1.2
	comp=Z,22nm,0.7s,mb4.5						
ARU	Arti	53.01	317	eP	P	22 47 26.5	-0.3
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
ARU	Arti	53.01	317	eP	P	22 47 26.5	-0.3
	comp=Z,8.1nm,0.8s,mb4.1						
FITZ	Fitzroy Crossi	56.11	192	eP	P	22 47 49.0	-0.3
	comp=Z,4.5nm,1.5s,mb3.6						
WB2	Warramunga Arr	57.14	182	eP	P	22 47 56.6	+0.2
WRA	Warramunga Arr	57.14	182	P	P	22 47 56.7	+0.2
	comp=Z,9.7nm,0.4s,mb4.5,baz=358,slow=7.5,SNR=302						
WRA	Warramunga Arr	57.14	182	P	P	22 47 56.7	+0.3
WRA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ASAR	Alice Springs	60.85	182	P	P	22 48 22.1	+0.5
	comp=Z,1.6nm,0.5s,mb3.7,baz=0.7,slow=7.2,SNR=42						
ASAR	Alice Springs	60.85	182	P	P	22 48 22.2	+0.5
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	ARCESS Array B	61.94	338	P	P	22 48 28.5	+0.2
	comp=Z,2.4nm,0.8s,mb3.8,baz=64,slow=8.2,SNR=4.7						
ARCES	ARCESS Array B	61.94	338	P	P	22 48 28.5	+0.2
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
JOF	Joensuu	63.39	330	ep	P	22 48 36.9	-1.0
	comp=Z,0.5nm,0.3s,mb3.5						
JOF	Joensuu	63.39	330	eP	P	22 48 36.9	-1.0
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
KAF	Kangasniemi	65.78	331	ep	P	22 48 52.7	-0.6
	comp=Z,0.5nm,0.3s,mb3.7,baz=52,slow=6.0						
KAF	Kangasniemi	65.78	331	eP	P	22 48 52.7	-0.6
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
STKA	Stephens Creek	69.22	175	eP	P	22 49 15.6	+0.7
	comp=Z,3.0nm,1.1s,mb3.9						
STKA	Stephens Creek	69.22	175	P	P	22 49 16.3	+1.4
	comp=Z,4.3nm,1.1s,mb4.1,baz=13,slow=3.6,SNR=4.1						
AKASG	Malin Array Be	71.12	320	P	P	22 49 25.8	-0.4
	comp=Z,1.3nm,0.5s,mb3.9,baz=51,slow=6.2,SNR=5.3						
AKASG	Malin Array Be	71.12	320	P	P	22 49 25.8	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	71.95	335	P	P	22 49 31.2	+0.2
	comp=Z,0.7nm,0.8s,mb3.5,baz=74,slow=18,SNR=3.6						
NOA	NORSAR Array B	71.95	335	P	P	22 49 31.2	+0.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PDAR	Pinedale Array	80.47	43	P	P	22 50 19.9	+1.1
	comp=Z,0.8nm,0.8s,mb3.5,baz=207,slow=1.7,SNR=4.1						
TXAR	Lajitas Array	93.31	49	P	P	22 51 22.6	+1.5
	comp=Z,0.3nm,0.6s,mb3.5,baz=309,slow=3.1,SNR=6.4						

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*SKO **08** 22:52:19.1, 3971N×2184E, h2km*
*ATH **08** 22:52:21.5, 3991N×2193E, h2km, MD3.1/6*
*ISCJB **08** 22:52:21.2±0.5, 3989N±002×2193E±004, h5km±7km, Error ellipse: s-maj=5.8km s-min=3.7km az=169.4*
*THE **08** 22:52:21.7, 3988N×2194E, h1km, ML2.8*
*CSEM **08** 22:52:21.4±0.1, 3990N×2193E, h12km, ML2.8, Error ellipse: s-maj=2.0km s-min=1.4km az=93.0*
*NEIC **08** 22:52:21.7, 3991N×2193E, h3km, MD3.1(ATH), After ATH.*
ISC 08 22:52:21.8±0.5, **3988N**±002×**2194E**±004, **h12**km±6km, **n15**, σ0^{s}**73**/26, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THL	Klokotos Trika	0.32	170	ePg	Pg	22 52 27.8	-0.5
THL				eSg	Sg	22 52 32.4	-0.2
THL	Klokotos Trika	0.32	170	ePg	Pg	22 52 28.0	-0.3
THL				eSg	Sg	22 52 32.8	+0.1
KZN	Kozani	0.44	343	ePG	Pg	22 52 29.8	-0.7
KZN				eSG	Sg	22 52 35.9	-0.5
LIT	Litokhoron	0.47	63	ePg	Pg	22 52 30.6	-0.5
LIT				eSg	Sg	22 52 37.7	+0.3
MEV	Metsovon	0.56	260	ePg	Pg	22 52 32.0	-0.6
MEV	Metsovon	0.56	260	ePg	Pg	22 52 32.0	-0.6
JAN	Janina	0.87	255	ePB	Pb	22 52 38.3	-0.5
AGG	Agios Georgios	0.91	161	ePg	Pg	22 52 39.1	-0.3
AGG				eSg	Sg	22 52 51.8	+0.6
EVR	Evrytania	0.97	186	ePB	Pb	22 52 40.2	-0.3
EVR				eSG	Sg	22 52 54.3	+1.2
NEO	Neokhori	1.15	120	ePB	Pb	22 52 44.1	+0.6
BIA	Bitola	1.23	338	ePn	Pn	22 52 44.0	-0.8
BIA				eSg	Sg	22 53 03.1	+1.7
BIA	Bitola	1.23	338	ePn	Pn	22 52 43.9	-0.9
BIA				eSg	Sg	22 53 03.0	+1.6
PLG	Polygyros	1.25	67	ePG	Pg	22 52 44.6	-1.3
PLG				eSB	Sb	22 53 01.9	+0.5
KRUS	Krusevo	1.57	341	ePn	Pn	22 52 50.0	+0.5
KRUS				eSg	Sg	22 53 13.3	+0.9
KRUS	Krusevo	1.57	341	ePn	Pn	22 52 49.9	+0.4
KRUS				eSg	Sg	22 53 13.3	+0.9

CASC 08 23:15:55.4±1.5, **1249N**×**8773W**, **h30**km±10km, **MD4.0**, **ML4.0**, **2C-3D**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEL3	Telica 3	0.87	84	⇓eP	Pn	23 16 11.5	0.0
TELN	Telica	0.88	82	eP	Pn	23 16 11.9	+0.1
COPN	Copaltepe	1.15	105	⇑eP	Pn	23 16 15.1	-0.4
COPN				eS	Sn	23 16 30.7	+0.5
MOMJ	Momotombo	1.16	94	eP	Pn	23 16 15.4	-0.3
MOMJ				eS	Sn	23 16 32.0	+1.5
APYN	Apoyeque	1.37	100	⇓eP	Pn	23 16 18.5	0.0
XAVN	Gruta Xavier	1.41	104	eP	Pn	23 16 19.1	0.0
TISN	Laguna Tiscapa	1.47	103	eP	Pn	23 16 19.7	-0.1
MGAN	Managua	1.48	103	eP	Pn	23 16 19.9	-0.2
MGAN				eS	Sn	23 16 38.9	+0.4
MGAN				eS	Sn	23 16 39.8	+1.3
MGAN				AML	AML	23 16 40.8	
	comp=E,2μm,0.3s						
HUEN		1.53	95	⇑eP	Pn	23 16 20.7	0.0
TICN	Ticuantepe	1.53	107	eP	Pn	23 16 20.6	-0.1
APON	Apoyo	1.72	109	⇓eP	Pn	23 16 23.2	-0.1
CONN	Concepcion	2.25	114	eP	Pn	23 16 30.7	+0.1
MADN	Villa Maderas	2.40	116	eP	Pn	23 16 32.0	-0.7
VCR	Vista de Mar	3.12	139	eP	Pn	23 16 41.7	-0.8
JCR	Jicaral	3.67	135	eP	Pn	23 16 49.8	-0.3
CGA2	Cerro Gallo 2	4.03	127	eP	Pn	23 16 56.9	+1.8
PRS1	Puriscal	4.17	126	eP	Pn	23 16 59.2	+2.1
LCR2	La Lucha 2	4.56	126	eP	Pn	23 17 04.5	+2.1
BUS	Buena Vista	4.86	126	eP	Pn	23 17 08.7	+2.1

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*NEIC **08** 23:40:35.1, 1769N×6084W, h91km, MD3.9(TRN), After TRN.*
TRN 08 23:40:29.9, **1769N**×**6053W**, **h3**km, **MD4.0**, **M1.9**(FDF), **M4.0**(FDF), **4C-4D**, **Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BPA	Boggy Peak	1.42	243	eP	Pn	23 40 58.5	+1.9
BPA				eS	Sb	23 41 19.2	+3.6
BPA	Boggy Peak	1.42	243	eP	Pn	23 40 58.5	+1.9
BPA				eS	Sb	23 41 14.8	-0.8
MBLG		1.83	239	⇓eP	Pn	23 41 04.6	+2.3
MBLG				i S	Sn	23 41 30.7	+4.7
MBRY		1.84	238	⇑iP	Pn	23 41 04.9	+2.6
MBRY				i S	Sn	23 41 30.9	+4.8
MBWH		1.85	240	i P	Pn	23 41 04.5	+2.0
MBWH				i S	Sn	23 41 30.2	+3.8
MLYT	Lee's Yard	1.86	239	⇓iP	Pn	23 41 05.3	+2.7
MLYT				i S	Sn	23 41 31.6	+5.0
MBGB		1.88	240	⇑iP	Pn	23 41 05.1	+2.1
MBGB				i S	Sn	23 41 31.4	+4.2
MGG	Marie-Galante	1.92	203	⇑iP	Pn	23 41 06.0	+2.6
LZG	Guadaloupe-1	1.95	218	eP	Pn	23 41 06.9	+3.0
SCG	Saint Claude	1.99	214	⇑eP	Pn	23 41 07.4	+3.0
HMG	Houelmont	2.04	214	eP	Pn	23 41 08.1	+3.0
TBG	Guadaloupe-3	2.12	210	eP	Pn	23 41 09.2	+3.0
DWS	Wesley	2.24	200	eP	Pn	23 41 10.8	+2.9
DWS				eS	Sn	23 41 39.7	+3.6
DWS	Wesley	2.24	200	eP	Pn	23 41 10.8	+2.9
DWS				eS	Sn	23 41 36.8	+0.8
DBCT	Belle View Cho	2.53	198	eP	Pn	23 41 14.5	+2.6
DBCT				eS	Sn	23 41 47.6	+4.4
DBCT	Belle View Cho	2.53	198	eP	Pn	23 41 15.8	+3.9
DBCT				eS	Sn	23 41 47.6	+4.4
FDF	Fort de France	3.00	192	⇓eP	Pn	23 41 19.9	+1.5
FDF				⇓eS	Sn	23 41 57.0	+2.1
FDF	Fort de France	3.00	192	ePn	Pn	23 41 19.9	+1.5
FDF				eSn	Sn	23 41 56.7	+1.8
SLW	Petit Monier	3.67	186	eP	Pn	23 41 29.8	+2.2
SLB	Belfond	3.87	187	eP	Pn	23 41 33.0	+2.7
SLB				eS	Sn	23 42 18.5	+2.0
SLB	Belfond	3.87	187	eP	Pn	23 41 33.0	+2.7
SLB				eS	Sn	23 42 21.3	+4.9
SSV	Crater Summit	4.39	188	eP	Pn	23 41 40.6	+3.1
SSV				eS	Sn	23 42 32.2	+3.1
SSV	Crater Summit	4.39	188	eP	Pn	23 41 40.6	+3.1
SSV				eS	Sn	23 42 34.7	+5.6
SVV	Soufriere Volc	4.40	189	eP	Pn	23 41 40.9	+3.3
SVV				eS	Sn	23 42 35.4	+6.0
SVB	Belmont	4.45	189	eP	Pn	23 41 40.6	+2.3
SVB				eS	Sn	23 42 30.2	-0.4
MTP	Monte Pirata	4.80	276	ePn	Pn	23 41 41.3	-1.8
MTP				eSn	Sn	23 42 33.1	-6.1
HUMP	Col San Antoni	5.08	276	ePn	Pn	23 41 45.0	-2.1
HUMP				eSn	Sn	23 42 39.5	-6.8

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*IDC **08** 23:49:12.1±2.4, 1143S×16528E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.8/17, mbtmp4.0/5, ML4.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/24, Error ellipse: s-maj=60.6km s-min=37.9km az=120.0*
*NEIC **08** 23:49:12.6±1.5, 1147S×16540E, h10km, mb4.1/2, Error ellipse: s-maj=26.9km s-min=12.4km az=57.0*
*ISCJB **08** 23:49:14.6±2.1, 116S±02×1653E±02, h33km, mb3.9/5, MS3.1/2, Error ellipse: s-maj=36.4km s-min=16.8km az=147.2*
ISC 08 23:49:16.4±2.0, **115S**±02×**1654E**±02, **h35**km, **n13**, σ0^{s}**73**/10, **mb3.9**/5, **MS3.1**/2, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.71	291	Pn	Pn	23 50 37.4	-1.4
	9.5nm,0.3s,baz=194,slow=6.7,SNR=3.7						
DZM	Mont Dzumac	10.56	175	eP	Pn	23 51 44.1	-1.1
DZM	Mont Dzumac	10.56	175	ePn	Pn	23 51 44.2	-1.0
CTA	Charters Tower	20.25	243	LR	LR	23 59 49.2	
	comp=Z,65nm,18.6s,MS3.0,baz=49,slow=32						
CTAO	Charters Tower	20.25	243	eP	P	23 53 48.8	-0.1
	1.7nm,0.3s						
AFI	Afiamalu	22.43	99	LR	LR	00 01 18.3	
	comp=Z,70nm,18.9s,MS3.1,baz=99,slow=32						
STKA	Stephens Creek	29.85	224	P	P	23 55 21.6	+1.1
	1.4nm,0.6s,mb3.9,baz=27,slow=11,SNR=3.6						
WRAB	Tennant Creek	30.96	250	eP	P	23 55 30.7	+0.2
	5.5nm,1.2s,mb4.3						
WB2	Warramunga Arr	30.96	250	eP	P	23 55 31.0	+0.5
WRA	Warramunga Arr	30.98	250	P	P	23 55 31.1	+0.5
	1.8nm,0.8s,mb4.0,baz=81,slow=9.0,SNR=14						
ASAR	Alice Springs	32.25	244	P	P	23 55 41.5	-0.3
	0.4nm,0.8s,mb3.3,baz=66,slow=10,SNR=5.4						
MKAR	Makanchi Array	93.60	317	P	P	00 02 29.3	+0.4
	0.2nm,0.2s,mb4.1,baz=83,slow=8.3,SNR=3.1						
KEST	Kesra	147.55	322	PKPbc	PKPbc	00 08 58.2	+0.9
	1.0nm,0.8s,baz=205,slow=3.0,SNR=5.4						

IDC 09 00:01:07.2±2.4, **1690S**×**17515W**, **h0**km, **mb4.1**/2, **mb1 4.2**/3, **mb1mx3.8**/16, **mbtmp4.2**/3, **ML2.5**/1, **Error ellipse: s-maj=81.0km s-min=31.5km az=147.0**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.41	48	Pn	Pn	00 02 15.5	+0.1
	15nm,0.3s,baz=73,slow=1.1,SNR=7.7						
AFI				Sn	Sn	00 02 54.5	-13
	21nm,0.3s,baz=115,slow=20,SNR=8.2						
HNR	Honiara	25.34	284	P	P	00 06 36.2	+0.2
	120nm,0.3s,baz=272,slow=5.7,SNR=8.4						
STKA	Stephens Creek	41.84	241	P	P	00 08 59.4	+0.4
	1.7nm,0.8s,baz=5.7,slow=10,SNR=2.9						
WRA	Warramunga Arr	47.88	258	P	P	00 09 46.9	-0.5
	0.2nm,0.4s,baz=90,slow=6.6,SNR=11						
ASAR	Alice Springs	48.06	253	P	P	00 09 48.6	-0.1
	1.4nm,0.7s,baz=88,slow=8.1,SNR=22						

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*NEIC **09** 00:16:13.7, 3785N×2264E, h22km, ML2.9(ATH), After ATH.*
*ATH **09** 00:16:13.6, 3785N×2263E, h24km±1km, MD3.1/8, ML2.9*
*ISCJB **09** 00:16:14.3±0.5, 3784N±003×2267E±004, h23km±5km, Error ellipse: s-maj=5.5km s-min=4.9km az=29.9*
*CSEM **09** 00:16:14.2±0.1, 3787N×2261E, h5km, ML2.6, Error ellipse: s-maj=1.7km s-min=1.5km az=150.0*
*THE **09** 00:16:14.1, 3785N×2263E, h10km, ML2.6*
ISC 09 00:16:14.3±0.6, **3784N**±003×**2267E**±004, **h21**km±6km, **n21**, σ0^{s}**87**/33, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTK	Loutraki	0.30	51	ePg	Pb	00 16 20.7	-0.4
LTK				eSg	Sb	00 16 25.2	-0.5
VLX	Vlachokerasia	0.52	207	ePg	Pb	00 16 24.1	-0.7
VLX				eSg	Sb	00 16 31.7	-0.1
DID	Didima	0.56	126	ePg	Pb	00 16 25.3	-0.1
DID				eSg	Sb	00 16 34.1	+1.2
NAIG	Nisos Aigina	0.65	96	ePN	Pn	00 16 27.5	-0.8
ATH	Athens Observa	0.84	80	ePN	Pn	00 16 30.4	-0.5
ATH				eSN	Sn	00 16 42.1	-0.5
ATH	Athens Observa	0.84	80	ePn	Pn	00 16 30.4	-0.5
ATH				eSn	Sn	00 16 41.6	-1.0
LKR	Lokris	0.85	18	ePg	Pb	00 16 29.7	-0.8
LKR				eSg	Sb	00 16 42.7	+1.2
LKR	Lokris	0.85	18	ePN	Pn	00 16 30.0	-1.1
LKR				eSN	Sn	00 16 41.9	-1.1
LKR	Lokris	0.85	18	ePn	Pn	00 16 30.0	-1.1
LKR				eSn	Sn	00 16 41.9	-1.1
LKR				eSg	Sb	00 16 42.7	+1.2
KVR	Kavouri	0.87	90	ePN	Pn	00 16 31.5	+0.2
ITM	Ithomi	0.88	222	ePN	Pn	00 16 30.8	-0.7
RLS	Riolos of Patr	0.98	284	ePN	Pn	00 16 32.0	-0.8
RLS				eSN	Sn	00 16 45.0	-1.0
VLI	Veliai	1.14	169	ePN	Pn	00 16 35.5	+0.5
AGG	Agios Georgios	1.22	347	ePg	Pn	00 16 36.0	-0.1
EVR	Evrytania	1.27	328	ePN	Pn	00 16 37.3	+0.4
EVR				eSN	Sn	00 16 54.5	+1.1
EVR	Evrytania	1.27	328	ePn	Pn	00 16 38.0	+1.1
EVR				eSn	Sn	00 16 54.5	+1.1
NEO	Neokhori	1.53	16	ePN	Pn	00 16 41.1	+0.7
VLS	Valsamata	1.68	282	ePN	Pn	00 16 43.5	+1.0
VLS	Valsamata	1.68	282	ePn	Pn	00 16 44.8	+2.3
THL	Klokotos Trika	1.80	344	ePN	Pn	00 16 45.1	+0.9
APE	Apeiranthos	2.40	108	ePN	Pn	00 16 54.0	+1.6

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*IDC **09** 00:26:56.2±0.6, 1165S×16525E, h0km, mb4.3/14, mb1 4.5/15, mb1mx4.5/20, mbtmp4.4/15, ML4.7/1, MS3.7/6, Ms1 3.7/6, ms1mx3.4/22, Error ellipse: s-maj=17.9km s-min=16.9km az=24.0*
*BJI **09** 00:26:56.3, 1160S×16520E, h10km, mB5.0, mb4.8, Ms4.7, Msz4.2*
*ISCJB **09** 00:26:58.3±3.3, 1170S±007×165.14E±004, h15km±20km, mb4.5/29, MS4.0/10, Error ellipse: s-maj=11.8km s-min=6.6km az=6.2*
*NEIC **09** 00:26:58.3±0.3, 1158S×16520E, h10km, mb4.6/9, Error ellipse: s-maj=12.6km s-min=7.6km az=158.0*
ISC 09 00:27:00.2±3.5, **1167S**±007×**16520E**±005, **h22**km±24km, **h15**km±1.5km**:pP-P**, **n193**, σ0^{s}**58**/180, **mb4.5**/29, **MS4.0**/11, **58C-58D**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.63	293	Pn	Pn	00 28 23.0	+0.4
	20nm,0.3s,baz=170,slow=4.0,SNR=14						
HNR				Sn	Sn	00 29 26.4	-0.2
	22nm,0.3s,baz=73,slow=22,SNR=4.4						
HNR	Honiara	5.63	293	ePn	Pn	00 28 20.6	-2.0
	121nm,0.7s						
HNR				eSn	Sn	00 29 25.3	-1.4
DZM	Mont Dzumac	10.41	174	eP	Pn	00 29 27.9	-0.4
CTA	Charters Tower	20.04	243	eP	P	00 31 33.5	+1.6
	7.8nm,0.8s						
CTA	Charters Tower	20.04	243	P	P	00 31 33.3	+1.4
	12nm,0.8s,baz=73,slow=13,SNR=9.5						
CTA				LR	LR	00 38 11.5	
	comp=Z,274nm,19.3s,MS3.6,baz=61,slow=34						
CTAO	Charters Tower	20.04	243	eP	P	00 31 33.7	+1.7
ARMA	Armidale	22.51	212	eP	P	00 32 02.4	+4.0
AFI	Afiamalu	22.56	98	LR	LR	00 38 43.7	
	comp=Z,224nm,18.9s,MS3.6,baz=301,slow=31						
RAO	Raoul Island	23.52	141	P	P	00 32 08.8	-0.3
	422nm,0.3s,baz=113,slow=21,SNR=3.2						
URZ	Urewera	28.54	160	P	P	00 32 52.8	-1.5
	2.0nm,0.5s,mb4.1,baz=122,slow=19,SNR=2.0						
STKA	Stephens Creek	29.62	224	eP	P	00 33 06.6	+2.5
	7.6nm,1.8s,mb4.1						
STKA	Stephens Creek	29.62	224	P	P	00 33 04.0	-0.1
	2.2nm,0.7s,mb4.0,baz=24,slow=9.6,SNR=5.2						
STKA				LR	LR	00 44 04.3	
	comp=Z,268nm,18.2s,MS3.9,baz=276,slow=35						
WRAB	Tennant Creek	30.76	251	eP	P	00 33 14.2	0.0
	22nm,1.2s,mb4.8						
WB2	Warramunga Arr	30.76	251	eP	P	00 33 14.0	-0.3
WRA	Warramunga Arr	30.77	251	P	P	00 33 14.2	-0.2
	12nm,1.0s,mb4.7,baz=85,slow=8.8,SNR=38						
WRA				PcP	PcP	00 36 11.4	-0.3
	1.0nm,0.8s,baz=81,slow=2.7,SNR=7.1						
WRA				LR	LR	00 44 20.5	
	comp=Z,59nm,20.8s,MS3.2,baz=170,slow=34						
ASAR	Alice Springs	32.04	244	P	P	00 33 24.4	-1.1
	4.2nm,0.7s,mb4.3,baz=72,slow=9.3,SNR=30						
ASAR				PcP	PcP	00 36 14.3	-0.7
	1.3nm,0.8s,baz=84,slow=2.6,SNR=7.2						
GUMO	Guam	32.20	321	LR	LR	00 44 57.0	
	comp=Z,74nm,21.3s,MS3.4,baz=96,slow=34						
FITZ	Fitzroy Crossi	38.71	256	eP	P	00 34 23.4	+0.5
	7.4nm,0.9s,mb4.4						
FITZ	Fitzroy Crossi	38.71	256	P	P	00 34 22.8	-0.1
	4.4nm,0.9s,mb4.2,baz=80,slow=9.5,SNR=8.3						
PPT	Papeete	44.07	103	eS	S	00 41 36.7	-1.9
	33nm,24.2s						
PPT				eLR	LR	00 47 23.4	
	208nm,30.5s						
PPT	Papeete	44.07	103	LR	LR	00 50 19.9	
	comp=Z,137nm,19.0s,MS3.9,baz=291,slow=32						
MJAR	Matsushiro Arr	54.28	333	P	P	00 36 22.6	-2.2
	3.3nm,0.9s,mb4.2,baz=171,slow=5.5,SNR=11						
MAT	Matsushiro	54.28	333	P	P	00 36 25.1	+0.3
MAT				eS	S	00 43 50.0	-11
KSRS	Korea Array	60.09	326	P	P	00 37 06.2	+0.3
	1.9nm,0.8s,mb4.2,baz=139,slow=7.2,SNR=5.6						
NJ2	Nanjing	62.09	316	eP	P	00 37 19.5	-0.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
WHN	Wuhan	64.41	312	eP	P	00 37 39.4	+4.4
MDJ	Mudanjiang	64.66	333	P	P	00 37 35.5	-0.8
MDJ				AMB	AMB		
	comp=Z,10.0nm,2.1s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,84nm,4.4s						
CN2	Changchun	66.01	330	eP	P	00 37 45.8	+0.8
GYA	Guiyang	68.33	305	P	P	00 38 01.7	+1.5
GYA				PCP	PcP	00 38 27.8	+2.1
GYA				PP	PP	00 40 33.4	+2.1
GYA				SCP		00 42 29.6	
GYA				S	S	00 47 01.2	+0.8
GYA				SKS		00 47 56.8	
GYA				SS	SS	00 51 24.9	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,6.4s						
GYA				LR	LR		
	comp=N,450nm,20.6s,MS4.9						
GYA				LR	LR		
	comp=E,470nm,19.5s,MS4.9						
GYA				LR	LR		
	comp=Z,430nm,18.3s,MS4.7						
BJI	Beijing	68.64	322	P	P	00 38 01.0	-0.8
BJI				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.6						
KMI	Kunming	71.00	302	P	P	00 38 17.0	+0.4
KMI				AP	pP	00 38 21.3	-2.4
KMI				XP	sP	00 38 23.0	-3.3
KMI				PCP	PcP	00 38 38.3	+1.3
KMI				PP	PP	00 40 56.7	+2.4
KMI				S	S	00 47 31.7	-0.1
KMI				SS	SS	00 52 05.6	+0.2
KMI				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.6						
KMI				AMB	AMB		
	comp=Z,54nm,4.2s						
KMI				LR	LR		
	comp=N,86nm,13.3s						
KMI				LR	LR		
	comp=E,93nm,19.0s						
KMI				LR	LR		
	comp=Z,63nm,15.1s,MS4.0						
CMAR	Chiang Mai Arr	71.88	294	P	P	00 38 22.6	+0.5
	comp=Z,1.1nm,0.4s,mb4.1,baz=117,slow=4.3,SNR=7.9						
HHC	Hu-ho-hao-te	71.97	320	eP	P	00 38 20.0	-2.2
HHC				AP	pP	00 38 23.8	-5.4
HHC				PCP	PcP	00 38 39.7	-1.0
HHC				PP	PP	00 41 01.5	-0.8
HHC				S	S	00 47 38.5	-3.9
HHC				SKS		00 48 18.6	
HHC				SCS	ScS	00 48 21.6	-5.3
HHC				SS	SS	00 52 16.7	-3.0
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.0						
HHC				AMB	AMB		
	comp=Z,72nm,7.4s						
HHC				LR	LR		
	comp=N,110nm,16.7s,MS4.4						
HHC				LR	LR		
	comp=E,127nm,17.3s,MS4.4						
HHC				LR	LR		
	comp=Z,85nm,15.1s,MS4.1						
CD2	Chengdu	72.56	308	eP	P	00 38 27.0	+1.1
CD2				AP	pP	00 38 31.2	-1.8
CD2				XP	sP	00 38 35.0	-0.6
CD2				PP	PP	00 41 11.1	+3.4
CD2				S	S	00 47 51.2	+1.6
CD2				XS	sS	00 47 59.0	-2.2
CD2				SS	SS	00 52 33.3	+4.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,20nm,6.8s						
CD2				LR	LR		
	comp=N,180nm,15.6s,MS4.7						
CD2				LR	LR		
	comp=E,200nm,14.2s,MS4.7						
CD2				LR	LR		
	comp=Z,150nm,13.8s,MS4.4						
LZH	Lanzhou	74.78	313	eP	P	00 38 40.0	+1.1
LZH				AP	pP	00 38 46.5	+0.5
LZH				XP	sP	00 38 48.5	-0.1
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,110nm,4.6s						
SONM	Songino Array	78.86	324	P	P	00 39 02.1	+0.6
	comp=Z,1.1nm,0.8s,mb3.9,baz=136,slow=5.5,SNR=9.7						
GTA	Gaotai	79.11	314	P	P	00 39 04.8	+1.6
GTA				AP	pP	00 39 08.9	-1.4
GTA				XP	sP	00 39 12.0	-0.9
GTA				PP	PP	00 42 08.2	+5.4
GTA				S	S	00 49 02.6	+1.0
GTA				XS	sS	00 49 09.8	-3.5
GTA				SS	SS	00 54 11.4	+3.2
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.4						
GTA				AMB	AMB		
	comp=Z,116nm,6.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GTA				LR	LR		
	comp=N,119nm,16.5s,MS4.5						
GTA				LR	LR		
	comp=E,138nm,20.1s,MS4.5						
GTA				LR	LR		
	comp=Z,65nm,16.8s,MS4.0						
YBH	**Yreka Blue Hor**	**84.71**	**46**	*e*P	**P**	**00 39 33.4**	**+0.8**
	comp=Z,20nm,1.6s,mb5.0						
ORV	**Oroville**	**84.83**	**48**	⇓P	**P**	**00 39 32.5**	**-0.7**
	baz=85,SNR=5.7						
M03C	**McCloud**	**84.96**	**46**	⇓P	**P**	**00 39 33.4**	**-0.5**
	baz=85						
S05C	**Merced**	**84.97**	**50**	⇓P	**P**	**00 39 33.9**	**-0.1**
	baz=85						
LAVA	**Lava Cap Winer**	**85.12**	**49**	⇑P	**P**	**00 39 34.2**	**-0.5**
	baz=85						
CMB	**Columbia Colle**	**85.15**	**50**	⇑P	**P**	**00 39 34.2**	**-0.7**
	baz=85,SNR=6.9						
CMB	**Columbia Colle**	**85.15**	**50**	*e*P	**P**	**00 39 34.4**	**-0.5**
	comp=Z,4.5nm,0.9s,mb4.6						
T06C	**Millerton Lake**	**85.33**	**51**	⇓P	**P**	**00 39 34.7**	**-1.2**
	baz=85,SNR=8.0						
O05C	**Quincy**	**85.38**	**48**	⇓P	**P**	**00 39 35.4**	**-0.7**
	baz=85						
P05C	**Yuba Gap, Truc**	**85.39**	**48**	⇑P	**P**	**00 39 36.1**	**0.0**
	baz=85						
S06C	**San Francisco**	**85.50**	**50**	⇓P	**P**	**00 39 36.2**	**-0.5**
	baz=86,SNR=12						
HELL	**Mitchell Peak**	**85.76**	**51**	⇓P	**P**	**00 39 37.4**	**-0.6**
	baz=86,SNR=10						
BEKR	**Beckwourth**	**85.76**	**48**	⇓P	**P**	**00 39 37.4**	**-0.5**
	baz=86,SNR=6.6						
R06C	**Coleville**	**86.00**	**50**	⇓P	**P**	**00 39 38.4**	**-0.8**
	baz=86						
WAKR	**Walker**	**86.01**	**50**	*e*P	**P**	**00 39 39.5**	**+0.4**
EDW2	**Edwards Air Fo**	**86.02**	**53**	⇑P	**P**	**00 39 38.9**	**-0.4**
	baz=86						
O06A	**Flanigan**	**86.24**	**48**	⇑P	**P**	**00 39 40.2**	**-0.1**
	baz=86,SNR=6.2						
J05A	**Fort Rock**	**86.27**	**45**	⇓P	**P**	**00 39 40.4**	**+0.1**
	baz=86						
MTUM	**Tungsten Hills**	**86.31**	**51**	*e*P	**P**	**00 39 41.0**	**+0.3**
K05A	**Summer Lake**	**86.31**	**45**	⇑P	**P**	**00 39 40.4**	**-0.2**
	baz=86						
LRMC	**Laurel Mountai**	**86.43**	**53**	⇓P	**P**	**00 39 41.2**	**-0.1**
	baz=86						
MOD	**Modoc**	**86.46**	**46**	⇓P	**P**	**00 39 40.6**	**-0.7**
	baz=86						
MOD	**Modoc**	**86.46**	**46**	*e*P	**P**	**00 39 41.3**	**0.0**
S08C	**White Mtn Res**	**86.65**	**51**	P	**P**	**00 39 42.6**	**+0.2**
	baz=87,SNR=6.4						
MPMC	**Manual Prospec**	**86.75**	**52**	⇓P	**P**	**00 39 42.8**	**-0.1**
	baz=87						
K06A	**Valley Falls**	**86.79**	**45**	⇓P	**P**	**00 39 42.5**	**-0.4**
	baz=87						
NVAR	**Mina Array Bea**	**86.83**	**50**	P	**P**	**00 39 43.3**	**+0.1**
	comp=Z,3.2nm,0.8s,mb4.6,baz=232,slow=7.9,SNR=15						
O07A	**Toulon**	**86.93**	**48**	⇓P	**P**	**00 39 43.3**	**-0.3**
	baz=87,SNR=5.6						
Q08A	**Gabbs**	**87.24**	**50**	⇑P	**P**	**00 39 44.7**	**-0.5**
	baz=87						
BELC	**Belle Mtn.**	**87.35**	**55**	⇑P	**P**	**00 39 45.6**	**-0.3**
	baz=87,SNR=5.0						
FURC	**Furnace Creek,**	**87.36**	**52**	⇑P	**P**	**00 39 45.8**	**-0.1**
	baz=87,SNR=5.4						
S09A	**Goldfield**	**87.44**	**51**	⇓P	**P**	**00 39 45.7**	**-0.5**
	baz=87						
K07A	**Rock Creek Ran**	**87.45**	**46**	⇑P	**P**	**00 39 45.7**	**-0.5**
	baz=87						
R09A	**Tonopah**	**87.70**	**50**	⇑P	**P**	**00 39 47.1**	**-0.4**
	baz=88						
I07A	**Izee**	**87.71**	**44**	⇓P	**P**	**00 39 47.4**	**0.0**
	baz=88						
WVOR	**Wild Horse Val**	**87.80**	**46**	*e*P	**P**	**00 39 47.8**	**0.0**
	comp=Z,3.3nm,1.0s,mb4.5						
GMRC	**Granite Mounta**	**87.83**	**54**	⇑P	**P**	**00 39 47.9**	**-0.3**
	baz=88						
H07A	**Lands Inn, Kim**	**87.83**	**44**	⇑P	**P**	**00 39 47.7**	**-0.2**
	baz=88						
L08A	**Fields**	**87.93**	**46**	⇓P	**P**	**00 39 48.6**	**+0.1**
	baz=88						
TPNV	**Topopah Spring**	**87.96**	**52**	⇓P	**P**	**00 39 48.2**	**-0.5**
	baz=88						
S10A	**Tonopah Range,**	**87.97**	**51**	⇑P	**P**	**00 39 48.4**	**-0.3**
	baz=88,SNR=5.6						
G07A	**Ruggs Ranch, H**	**87.98**	**43**	⇑P	**P**	**00 39 48.4**	**-0.2**
	baz=88						
GLA	**Glamis**	**88.04**	**56**	⇓P	**P**	**00 39 49.2**	**0.0**
	baz=88						
GLA	**Glamis**	**88.04**	**56**	*e*P	**P**	**00 39 49.4**	**+0.2**
	comp=Z,6.4nm,0.8s,mb4.9						
IRM	**Iron Mountain**	**88.07**	**55**	P	**P**	**00 39 49.6**	**+0.3**
	baz=88,SNR=6.3						
O09A	**Fish Creek Ran**	**88.17**	**48**	⇑P	**P**	**00 39 49.8**	**+0.2**
	baz=88						
J08A	**Circle Bar Ran**	**88.20**	**45**	⇑P	**P**	**00 39 49.3**	**-0.3**
	baz=88						
R10A	**Warm Springs**	**88.30**	**50**	⇑P	**P**	**00 39 50.4**	**+0.2**
	baz=88						
I08A	**Drewsey**	**88.30**	**45**	⇓P	**P**	**00 39 50.2**	**+0.1**
	baz=88						
LDFC	**Landfair**	**88.35**	**54**	*e*P	**P**	**00 39 51.0**	**+0.4**
G08A	**Pilot Rock**	**88.46**	**43**	P	**P**	**00 39 50.6**	**-0.3**
	baz=88,SNR=5.5						
Y12C	**Blythe**	**88.47**	**55**	⇓P	**P**	**00 39 50.9**	**-0.3**
	baz=88						
K09A	**Rome**	**88.52**	**46**	⇑P	**P**	**00 39 51.3**	**+0.1**
	baz=88						
SHPR	**Sheep Range**	**88.69**	**52**	*e*P	**P**	**00 39 52.6**	**+0.4**
J09A	**Fry Pan Ranch,**	**88.69**	**45**	⇑P	**P**	**00 39 52.2**	**+0.2**
	baz=89,SNR=5.1						
T11A	**Corn Creek, Al**	**88.83**	**52**	⇑P	**P**	**00 39 52.8**	**0.0**
	baz=89						
R11A	**Troy Canyon, C**	**88.85**	**51**	⇓P	**P**	**00 39 52.8**	**-0.1**
	baz=89,SNR=7.3						
I09A	**Lost Marbles R**	**88.89**	**45**	⇓P	**P**	**00 39 52.7**	**-0.2**
	baz=89						
PDMCI	**Parker Dam,Lak**	**88.92**	**55**	⇑P	**P**	**00 39 53.5**	**+0.3**
	baz=89						
Q11A	**Duckwater**	**88.94**	**50**	P	**P**	**00 39 53.5**	**+0.3**
	baz=89,SNR=6.6						
D08A	**Wollman Farm,**	**89.04**	**42**	⇓P	**P**	**00 39 53.4**	**-0.1**
	baz=89						
Y13A	**Salome**	**89.04**	**55**	⇓P	**P**	**00 39 54.0**	**+0.1**
	baz=89						
WMQ	**Urumqi**	**89.16**	**315**	*e*P	**P**	**00 39 53.4**	**-0.8**
WMQ				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,129nm,5.5s						
S12A	**Delamar Landin**	**89.22**	**51**	⇑P	**P**	**00 39 54.6**	**0.0**
	baz=89						
L10A	**Juniper Basin**	**89.23**	**47**	⇑P	**P**	**00 39 54.8**	**+0.2**
	baz=89						
X13A	**Yucca**	**89.24**	**55**	⇓P	**P**	**00 39 55.1**	**+0.3**
	baz=89						
W13A	**Hualapai Mount**	**89.32**	**54**	⇓P	**P**	**00 39 55.4**	**+0.3**
	baz=89,SNR=6.1						
214A	**Organ Pipe Nat**	**89.41**	**57**	⇑P	**P**	**00 39 55.8**	**+0.1**
	baz=89						
V13A	**Grand Canyon W**	**89.43**	**53**	P	**P**	**00 39 55.8**	**+0.1**
	baz=89,SNR=5.6						
R12A	**Pony Springs,**	**89.59**	**51**	⇑P	**P**	**00 39 56.8**	**+0.5**
	baz=90						
U13A	**Pakoon Wash**	**89.59**	**53**	⇓P	**P**	**00 39 56.8**	**+0.4**
	baz=90,SNR=6.3						
Q12A	**Willow Creek R**	**89.61**	**50**	⇑P	**P**	**00 39 56.9**	**+0.5**
	baz=90						
P12A	**McGill**	**89.67**	**50**	⇑P	**P**	**00 39 56.8**	**+0.1**
	baz=90						
G10A	**Bishop Farm, J**	**89.70**	**44**	⇑P	**P**	**00 39 56.7**	**0.0**
	baz=90,SNR=5.6						
K11A	**Parker Ranch,**	**89.74**	**46**	⇓P	**P**	**00 39 56.6**	**-0.4**
	baz=90						
H10A	**Noah's Angus R**	**89.75**	**44**	⇓P	**P**	**00 39 56.7**	**-0.3**
	baz=90						
L11A	**Cat Creek Ranc**	**89.77**	**47**	⇓P	**P**	**00 39 56.8**	**-0.3**
	baz=90						
T13A	**Saint George**	**89.79**	**52**	⇓P	**P**	**00 39 57.9**	**+0.5**
	baz=90,SNR=9.1						
N12A	**Clover Valley,**	**89.93**	**48**	⇓P	**P**	**00 39 58.2**	**+0.3**
	baz=90,SNR=5.6						
X14A	**Yava**	**89.96**	**55**	⇑P	**P**	**00 39 58.6**	**+0.4**
	baz=90,SNR=8.6						
S13A	**Holt Ranch, En**	**89.97**	**52**	⇑P	**P**	**00 39 58.5**	**+0.3**
	baz=90,SNR=5.9						
W14A	**Seligman**	**89.99**	**54**	⇑P	**P**	**00 39 59.0**	**+0.7**
	baz=90,SNR=5.4						
R13A	**O'Grain Ranch,**	**90.04**	**51**	⇓P	**P**	**00 39 58.9**	**+0.5**
	baz=90,SNR=7.0						
115A	**Sonoran Desert**	**90.07**	**57**	⇓P	**P**	**00 39 59.1**	**+0.3**
	baz=90						
V14A	**Boquillas Ranc**	**90.07**	**54**	⇑P	**P**	**00 39 59.0**	**+0.3**
	baz=90,SNR=7.4						
Q13A	**Wheeler Ranch,**	**90.20**	**50**	⇓P	**P**	**00 39 59.1**	**-0.1**
	baz=90						
Y15A	**Casa Rosa Ranc**	**90.28**	**55**	⇓P	**P**	**00 39 59.9**	**+0.2**
	baz=90						
L12A	**House Creek Ra**	**90.29**	**47**	⇑P	**P**	**00 40 00.1**	**+0.5**
	baz=90						
G11A	**Walters Elk Ra**	**90.31**	**44**	P	**P**	**00 39 59.3**	**-0.3**
	baz=90,SNR=6.1						
P13A	**Bates Ranch, G**	**90.33**	**50**	⇑P	**P**	**00 40 00.0**	**+0.2**
	baz=90						
T14A	**Hurricane**	**90.44**	**52**	⇓P	**P**	**00 40 00.7**	**+0.3**
	baz=90						
116A	**Eloy**	**90.47**	**57**	⇑P	**P**	**00 40 00.9**	**+0.3**
	baz=90						
X15A	**Humboldt**	**90.49**	**55**	⇓P	**P**	**00 40 01.1**	**+0.4**
	baz=90,SNR=8.0						
A10A	**Northport**	**90.50**	**40**	⇑P	**P**	**00 40 00.2**	**-0.1**
	baz=90						
K12A	**Draper Farm, C**	**90.50**	**47**	⇑P	**P**	**00 40 00.5**	**0.0**
	baz=90						
J12A	**Stokes Ranch,**	**90.53**	**46**	⇑P	**P**	**00 40 01.1**	**+0.5**
	baz=90,SNR=7.9						
S14A	**Cedar City**	**90.55**	**52**	⇑P	**P**	**00 40 00.9**	**+0.1**
	baz=90						
E11A	**Bogner Ranch,**	**90.61**	**43**	⇓P	**P**	**00 40 00.2**	**-0.7**
	baz=91						
M13A	**Montello**	**90.70**	**48**	P	**P**	**00 40 01.9**	**+0.4**
	baz=91,SNR=6.2						
D11A	**Klaveano Farm,**	**90.72**	**42**	⇑P	**P**	**00 40 01.1**	**-0.4**
	baz=91						
Q14A	**Sevier Lake (B**	**90.77**	**50**	P	**P**	**00 40 02.3**	**+0.5**
	baz=91,SNR=17						
V15A	**Kaibab Nationa**	**90.85**	**54**	⇑P	**P**	**00 40 02.8**	**+0.5**
	baz=91,SNR=5.8						
Z16A	**Peralta Trail,**	**90.87**	**56**	⇓P	**P**	**00 40 02.9**	**+0.4**
	baz=91						
U15A	**North Rim**	**90.90**	**53**	⇓P	**P**	**00 40 03.1**	**+0.6**
	baz=91,SNR=11						
Y16A	**Circle Bar Ran**	**90.96**	**56**	⇑P	**P**	**00 40 03.2**	**+0.3**
	baz=91,SNR=7.5						
C11A	**Tepee Creek (N**	**91.00**	**41**	⇓P	**P**	**00 40 02.5**	**-0.1**
	baz=91						
H12A	**Diamond D Ranc**	**91.04**	**45**	⇑P	**P**	**00 40 02.5**	**-0.4**
	baz=91						
E12A	**Beaver Dam Sad**	**91.06**	**43**	⇑P	**P**	**00 40 02.4**	**-0.6**
	baz=91						
P14A	**Drum Mountains**	**91.07**	**50**	⇑P	**P**	**00 40 03.3**	**0.0**
	baz=91,SNR=7.5						
F12A	**Elk City**	**91.09**	**44**	⇓P	**P**	**00 40 02.8**	**-0.3**
	baz=91,SNR=9.1						
HLID	**Hailey**	**91.09**	**46**	⇑P	**P**	**00 40 03.6**	**+0.4**
	baz=91,SNR=6.0						
HLID	**Hailey**	**91.09**	**46**	*e*P	**P**	**00 40 03.5**	**+0.3**
	comp=Z,3.5nm,1.0s,mb4.6						
X16A	**Lo Mia Camp, P**	**91.11**	**55**	⇓P	**P**	**00 40 03.8**	**+0.3**
	baz=91,SNR=6.5						
J13A	**Cove Ranch, Pi**	**91.22**	**46**	⇓P	**P**	**00 40 04.1**	**+0.3**
	baz=91,SNR=5.4						
N14A	**Grayback Hills**	**91.29**	**49**	⇑P	**P**	**00 40 04.4**	**+0.2**
	baz=91,SNR=6.8						
M14A	**Sheep Mountain**	**91.33**	**48**	⇓P	**P**	**00 40 04.8**	**+0.3**
	baz=91,SNR=10						
D12A	**Red Ives Fores**	**91.37**	**42**	⇓P	**P**	**00 40 04.3**	**-0.1**
	baz=91						
I13A	**Wildhorse Cree**	**91.39**	**46**	⇓P	**P**	**00 40 04.9**	**+0.3**
	baz=91,SNR=7.0						
DUG	**Dugway**	**91.41**	**49**	⇑P	**P**	**00 40 05.0**	**+0.2**
	baz=91						
WUAZ	**Wupatki**	**91.42**	**54**	⇑P	**P**	**00 40 04.9**	**0.0**
	baz=91						
H13A	**Challis**	**91.46**	**45**	⇑P	**P**	**00 40 04.9**	**0.0**
	baz=91,SNR=6.3						
MSU	**Marysvale**	**91.48**	**51**	*e*P	**P**	**00 40 06.3**	**+1.2**
L14A	**Malta**	**91.54**	**47**	⇑P	**P**	**00 40 05.8**	**+0.5**
	baz=92						
P15A	**Leamington**	**91.66**	**50**	⇓P	**P**	**00 40 06.1**	**+0.1**
	baz=92						
J14A	**Carey**	**91.66**	**46**	⇑P	**P**	**00 40 06.5**	**+0.6**
	baz=92						
F13A	**Darby**	**91.72**	**44**	⇓P	**P**	**00 40 05.7**	**-0.4**
	baz=92,SNR=11						
S16A	**Weppner Ranch,**	**91.75**	**52**	⇓P	**P**	**00 40 06.5**	**+0.1**
	baz=92						
U16A	**Tuba City**	**91.75**	**54**	⇑P	**P**	**00 40 06.9**	**+0.4**
	baz=92						
N15A	**Stansbury Isla**	**91.79**	**49**	⇑P	**P**	**00 40 06.8**	**+0.3**
	baz=92,SNR=5.6						
HVU	**Hansel Valley**	**91.82**	**48**	*e*P	**P**	**00 40 07.3**	**+0.6**
I14A	**Mackay**	**91.86**	**46**	⇓P	**P**	**00 40 07.0**	**+0.2**
	baz=92						
NLU	**North Lily Min**	**91.90**	**50**	*e*P	**P**	**00 40 07.5**	**+0.4**
M15A	**Larsen Ranch,**	**91.98**	**48**	⇑P	**P**	**00 40 06.7**	**-0.7**
	baz=92,SNR=5.1						
E13A	**Victor**	**91.99**	**43**	⇓P	**P**	**00 40 06.5**	**-0.8**
	baz=92						
L15A	**Malad City**	**92.15**	**48**	⇑P	**P**	**00 40 07.5**	**-0.7**
	baz=92						
219A	**White Tail Can**	**92.36**	**58**	⇓P	**P**	**00 40 09.6**	**+0.2**
	baz=92						
R17A	**Hanksville Air**	**92.58**	**51**	⇓P	**P**	**00 40 10.5**	**+0.2**
	baz=93						
DLMT	**Dillon**	**92.80**	**44**	*e*P	**P**	**00 40 11.7**	**+0.6**
G15A	**Dillon**	**92.83**	**45**	⇑P	**P**	**00 40 11.4**	**+0.1**
	baz=93						
F15A	**Butte**	**92.98**	**44**	⇓P	**P**	**00 40 11.5**	**-0.4**
	baz=93						
MKAR	**Makanchi Array**	**93.61**	**317**	P	**P**	**00 40 15.2**	**+0.4**
	comp=Z,1.2nm,0.7s,mb4.5,baz=101,slow=6.3,SNR=11						
ZALV	**Zalesovo Beam**	**93.75**	**324**	P	**P**	**00 40 13.0**	**-2.3**
	comp=Z,0.8nm,0.8s,mb4.2,baz=117,slow=5.6,SNR=4.5						
PDAR	**Pinedale Array**	**94.36**	**47**	P	**P**	**00 40 18.6**	**+0.3**
	comp=Z,0.8nm,0.7s,mb4.2,baz=264,slow=1.5,SNR=6.4						
ARCES	**ARCESS Array B**	**116.80**	**345**	PKP	PKPdf	00 45 40.4	-2.0
	comp=Z,1.2nm,0.7s,baz=39,slow=4.7,SNR=6.7						
LPAZ	**La Paz**	**120.38**	**117**	PKP	PKPdf	00 45 50.6	-0.3
	comp=Z,0.8nm,0.7s,baz=306,slow=6.0,SNR=4.4						
CLL	**Collm**	**134.46**	**336**	*e*PKP	PKPdf	00 46 16.0	-0.6
CLL				*e*pPKP	pPKPdf	00 46 37.0	+13
SGMF	**Saint Gilles**	**142.12**	**347**	*e*PKP1	PKPdf	00 46 28.8	-2.0
	comp=Z,35nm,1.4s						
CAF	**Calviac**	**143.85**	**340**	*e*PKP1	PKPdf	00 46 31.3	-2.7
	comp=Z,8.4nm,1.1s						
LASF	**Ste Croix**	**143.93**	**337**	*e*PKP1	PKPdf	00 46 31.5	-2.6
LFF	**La Frestale**	**144.27**	**341**	*e*PKP1	PKPdf	00 46 32.5	-2.2
	comp=Z,29nm,1.3s						
MTLF	**Montolieu**	**145.17**	**338**	*e*PKP1	PKPbc	00 46 35.8	-0.1
	comp=Z,30nm,1.2s						
EPF	**Esparros**	**146.10**	**340**	*e*PKP1	PKPbc	00 46 38.7	-0.1
ETSF	**Etsaut**	**146.52**	**341**	*e*PKP1	PKPbc	00 46 41.3	+1.3
	comp=Z,26nm,1.2s						
KEST	**Kesra**	**147.58**	**322**	PKPbc	PKPbc	00 46 42.8	-0.5
	comp=Z,2.3nm,0.9s,baz=172,slow=1.5,SNR=8.2						
ESDC	**Sonseca Array**	**150.50**	**343**	PKPbc	PKPbc	00 46 50.6	+0.1
	comp=Z,1.0nm,0.7s,baz=33,slow=1.9,SNR=9.1						
TORD	**Torodi Ar. Bea**	**163.83**	**277**	PKP	PKPdf	00 47 02.3	-0.3
	comp=Z,0.8nm,1.0s,baz=113,slow=1.9,SNR=3.2						
TORD				PKPab	PKPab	00 47 53.8	-1.4
	comp=Z,1.6nm,1.1s,baz=80,slow=3.6,SNR=5.3						

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*IDC **09** 00:45:10.0±0.4, 669N×7292W, h159km±4km, mb3.6/18, mb1 3.8/23, mb1mx3.8/26, mbtmp3.7/23, MS2.8/1, Ms1 3.0/1, ms1mx2.2/27, Error ellipse: s-maj=9.1km s-min=6.2km az=119.0*

*FUNV **09** 00:45:09.2, 668N×7324W, h171km, MW4.3*

*ISCJB **09** 00:45:10.1±0.4, 676N±004×7295W±004, h171km±3km, mb3.9/21, Error ellipse: s-maj=7.2km s-min=4.9km az=43.7*

*NEIC **09** 00:45:10.3±0.3, 668N×7291W, mb4.2/5, Error ellipse: s-maj=7.7km s-min=6.6km az=92.0*

ISC 09 00:45:11.1±0.3**, 674N**±003×**7292W**±004**, h166**km±3km**, n69,** σ**0.88**/79**, mb3.9**/21**, 3C-12D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.27**	**28**	⇑*i*P	**Pn**	**00 45 40.3**	**+0.6**
CAPV				*e*S	**Sn**	**00 46 02.0**	**+0.2**
ROSC	**El Rosal**	**2.34**	**217**	P	**Pn**	**00 45 51.4**	**+0.3**
	250nm,0.3s,baz=75,slow=3.7,SNR=246						
ROSC				S	**Sn**	**00 46 20.9**	**-1.1**
	227nm,0.3s,baz=97,slow=18,SNR=14						
SOCV	**Socops**	**2.56**	**53**	⇑*e*P	**Pn**	**00 45 54.8**	**+1.1**
SOCV				*e*S	**Sn**	**00 46 27.2**	**+0.4**
VIGV	**El Vigia**	**2.60**	**36**	⇑*e*P	**Pn**	**00 45 54.7**	**+0.5**
VIGV				*e*S	**Sn**	**00 46 28.0**	**+0.4**
SDV	**Santo Domingo**	**3.11**	**47**	P	**Pn**	**00 46 01.6**	**+1.1**
	126nm,0.3s,baz=258,slow=7.6,SNR=85						
SDV				S	**Sn**	**00 46 38.5**	**-0.5**
	60nm,0.3s,baz=256,slow=15,SNR=22						
ELOV	**Elorza**	**3.42**	**85**	⇓*i*P	**Pn**	**00 46 06.4**	**+1.9**
ELOV				*e*S	**Sn**	**00 46 47.3**	**+1.4**
VIRV	**Villa del Rosa**	**3.77**	**8**	⇓*i*P	**Pn**	**00 46 07.0**	**-1.9**
VIRV				*e*S	**Sn**	**00 46 49.8**	**-4.2**
QARV	**Quebrada Arrib**	**4.18**	**34**	⇓*i*P	**Pn**	**00 46 14.6**	**+0.5**
QARV				*e*S	**Sn**	**00 47 02.1**	**-1.3**
SANV	**Sanarito**	**4.33**	**50**	⇓*e*P	**Pn**	**00 46 16.6**	**+0.5**
SANV				*e*S	**Sn**	**00 47 07.2**	**+0.4**
CURV	**Curarigua**	**4.38**	**42**	⇓*i*P	**Pn**	**00 46 16.9**	**+0.3**
CURV				*e*S	**Sn**	**00 47 07.2**	**-0.7**
DABV	**Dabajuro**	**4.73**	**28**	⇓*e*P	**Pn**	**00 46 20.9**	**-0.4**
TEPV	**Terepaima**	**4.89**	**49**	⇓*i*P	**Pn**	**00 46 23.7**	**+0.4**
SIQV	**Siquisique**	**4.96**	**38**	⇓*i*P	**Pn**	**00 46 23.8**	**-0.5**
BAUV	**El Baul**	**5.31**	**65**	⇓*i*P	**Pn**	**00 46 28.4**	**-0.4**
BAUV				*e*S	**Sn**	**00 47 28.3**	**-1.4**
JACV	**Jacura**	**5.92**	**43**	*e*P	**Pn**	**00 46 37.0**	**+0.2**
IMOV	**Isla Los Monje**	**5.93**	**19**	⇓*e*P	**Pn**	**00 46 35.3**	**-1.7**
TURV	**Turiamo**	**6.23**	**53**	*e*P	**Pn**	**00 46 41.2**	**+0.2**
CAOV	**Caicara del Or**	**6.58**	**85**	⇓*e*P	**Pn**	**00 46 45.3**	**-0.2**
MERV	**Las Mercedes**	**7.02**	**69**	*e*P	**Pn**	**00 46 50.9**	**-0.5**
BIRV	**Birongo**	**7.55**	**60**	*e*P	**Pn**	**00 46 58.1**	**-0.4**
CUPV	**Cœpira**	**7.79**	**64**	⇓*i*P	**Pn**	**00 47 01.2**	**-0.5**
OTAV	**Otavalo**	**8.49**	**221**	*e*Pn	**Pn**	**00 47 09.8**	**-1.1**
	15nm,0.8s						
PCRV	**Puerto La Cruz**	**8.88**	**67**	P	**Pn**	**00 47 16.0**	**-0.1**
	1.7nm,0.3s,baz=217,slow=6.0,SNR=12						
PCRV				S	**Sn**	**00 48 55.6**	**+0.5**
	0.7nm,0.3s,baz=235,slow=17,SNR=2.4						
PCRV	**Puerto La Cruz**	**8.88**	**67**	*e*P	**Pn**	**00 47 15.8**	**-0.3**
LUEV	**Luepa**	**11.43**	**94**	*e*P	**Pn**	**00 47 48.7**	**-0.8**
SJG	**San Juan**	**13.09**	**30**	P	**Pn**	**00 48 10.2**	**-0.7**
	4.1nm,0.3s,baz=204,slow=14,SNR=12						
SJG				S	**Sn**	**00 50 23.5**	**-13**
	0.3nm,0.3s,baz=309,slow=17,SNR=3.3						
ATAH	**Atahualpa**	**14.70**	**202**	P	**Pn**	**00 48 32.2**	**+1.0**
	0.2nm,0.3s,baz=29,slow=19,SNR=2.7						
ATAH				S	**Sn**	**00 51 15.8**	**+1.0**
	0.2nm,0.3s,baz=89,slow=15,SNR=1.7						
ANWB	**Willy Bob**	**15.37**	**44**	*e*Pn	**Pn**	**00 48 40.1**	**+0.7**
TEIG	**Tepich**	**20.04**	**313**	P	**P**	**00 49 31.4**	**+0.1**
	5.2nm,0.6s,baz=303,slow=14,SNR=7.0						
TEIG	**Tepich**	**20.04**	**313**	P	**P**	**00 49 31.4**	**+0.1**
LPAZ	**La Paz**	**23.36**	**168**	P	**P**	**00 50 05.3**	**+0.5**
	1.2nm,0.5s,mb3.5,baz=337,slow=16,SNR=5.2						
LPAZ				pP		00 50 36.2	
	4.2nm,0.8s,baz=347,slow=14,SNR=5.9						
LPAZ				S	**S**	**00 54 05.0**	**-0.3**
	1.7nm,1.1s,baz=99,slow=19,SNR=4.3						
LPAZ				LR	LR	01 00 23.4	
	comp=Z,24nm,18.3s,baz=315,slow=39						
LPAZ	**La Paz**	**23.36**	**168**	P	**P**	**00 50 05.3**	**+0.5**
LPAZ				pP		00 50 36.2	
LPAZ				S	**S**	**00 54 05.0**	**-0.3**
LPAZ				LR	LR	01 00 23.4	
SIV	**San Ignacio**	**25.45**	**153**	P	**P**	**00 50 23.6**	**-0.1**
	3.0nm,0.8s,mb3.9,baz=332,slow=9.8,SNR=18						
SIV				pP	pP	00 50 57.5	-0.5
	1.8nm,0.8s,baz=313,slow=9.0,SNR=3.5						
LVC	**Limon Verde**	**29.43**	**172**	P	**P**	**00 50 56.8**	**-2.4**
	1.8nm,0.5s,mb4.1,baz=324,slow=8.7,SNR=1.8						
LVC	**Limon Verde**	**29.43**	**172**	P	**P**	**00 50 56.8**	**-2.4**
BDFB	**Brasilia**	**33.21**	**132**	P	**P**	**00 51 33.2**	**+0.8**
	5.5nm,0.6s,mb4.4,baz=293,slow=12,SNR=11						
CPUP	**Villa Florida**	**36.19**	**156**	P	**P**	**00 51 55.1**	**-2.7**
	0.4nm,0.5s,mb3.3,baz=162,slow=20,SNR=4.4						
TXAR	**Lajitas Array**	**36.66**	**312**	P	**P**	**00 52 01.6**	**-0.2**
	1.0nm,0.7s,mb3.6,baz=126,slow=9.1,SNR=5.6						
TXAR				PcP	PcP	00 54 21.6	+0.4
	1.1nm,0.7s,baz=111,slow=5.5,SNR=6.1						
LAZ	**Ladron**	**41.87**	**316**	*e*P	**P**	**00 52 46.3**	**+1.3**
WUAZ	**Wupatki**	**45.42**	**315**	*e*P	**P**	**00 53 14.1**	**+0.9**
	5.1nm,0.9s,mb4.2						
PLCA	**Paso Flores**	**47.29**	**178**	P	**P**	**00 53 24.0**	**-3.6**
	22nm,0.3s,baz=270,slow=16,SNR=272						
ULM	**Lac du Bonnet**	**47.43**	**340**	P	**P**	**00 53 26.9**	**-1.7**
	3.5nm,0.5s,mb4.3,baz=155,slow=8.3,SNR=10						
ULM	**Lac du Bonnet**	**47.43**	**340**	P	**P**	**00 53 26.9**	**-1.7**
SCHQ	**Schefferville**	**48.21**	**5**	P	**P**	**00 53 34.7**	**+0.2**
	5.2nm,0.6s,mb4.4,baz=174,slow=8.2,SNR=4.8						
SCHQ	**Schefferville**	**48.21**	**5**	P	**P**	**00 53 34.7**	**+0.2**
PDAR	**Pinedale Array**	**48.26**	**324**	P	**P**	**00 53 35.5**	**+0.4**
	1.2nm,0.9s,mb3.5,baz=124,slow=9.2,SNR=6.9						
PDAR				pP	pP	00 54 12.4	-0.1
	0.6nm,0.9s,baz=128,slow=10,SNR=2.2						
PDAR				PcP	PcP	00 54 59.0	-0.6
	0.5nm,0.7s,baz=131,slow=6.3,SNR=2.6						
REDW	**Red Top Meadow**	**49.38**	**324**	*e*P	**P**	**00 53 44.2**	**+0.6**
	2.7nm,0.9s,mb3.9						
RRI2	**Red Ridge**	**49.64**	**324**	*e*P	**P**	**00 53 46.4**	**+0.7**
	2.8nm,0.7s,mb4.0						
NVAR	**Mina Array Bea**	**51.68**	**315**	P	**P**	**00 54 01.7**	**+0.7**
	0.8nm,0.7s,mb3.5,baz=113,slow=7.9,SNR=7.2						
NVAR				PcP	PcP	00 55 13.4	+1.1
	0.2nm,0.5s,baz=122,slow=5.6,SNR=4.0						
YKA	**Yellowknife Ar**	**63.41**	**340**	P	**P**	**00 55 22.4**	**-0.1**
	3.2nm,0.6s,mb4.3,baz=129,slow=6.6,SNR=18						
YKA	**Yellowknife Ar**	**63.41**	**340**	P	**P**	**00 55 22.4**	**-0.1**
DBIC	**Dimbokro**	**67.54**	**86**	P	**P**	**00 55 50.4**	**+0.3**
	6.8nm,0.7s,mb4.5,baz=264,slow=6.1,SNR=17						
SUMG	**Summit**	**69.03**	**11**	*e*P	**P**	**00 55 59.3**	**+1.1**
	5.0nm,0.8s,mb4.3						
ESDC	**Sonseca Array**	**69.55**	**50**	P	**P**	**00 56 01.9**	**-0.2**
	0.1nm,0.3s,mb3.0,baz=203,slow=36,SNR=2.8						
TORD	**Torodi Ar. Bea**	**73.56**	**78**	P	**P**	**00 56 25.4**	**-1.0**
	0.5nm,0.3s,mb3.8,baz=285,slow=6.5,SNR=23						
NB2	**NORSAR Subarra**	**81.30**	**29**	P	**P**	**00 57 10.0**	**+1.4**
	comp=Z,1.6nm,0.7s,mb3.8,baz=267,slow=5.3						
NOA	**NORSAR Array B**	**81.30**	**29**	P	**P**	**00 57 10.0**	**+1.4**
	comp=Z,1.4nm,0.8s,mb3.7,baz=267,slow=5.3,SNR=4.1						
GERES	**GERESS Array B**	**82.75**	**42**	P	**P**	**00 57 16.2**	**-0.1**
	comp=Z,0.8nm,0.7s,mb3.6,baz=279,slow=2.6,SNR=5.2						
ARCES	**ARCESS Array B**	**86.68**	**20**	P	**P**	**00 57 35.7**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.8,baz=270,slow=4.0,SNR=6.5						
ARCES	**ARCESS Array B**	**86.68**	**20**	P	**P**	**00 57 35.7**	**+0.1**
VNA3	**Neumayer Olymp**	**88.03**	**163**	*e*	**P**	**00 57 41.4**	**-0.6**
VNA3				*e*		00 57 45.6	
VNA2	**Neumayer--Watz**	**88.56**	**163**	*e*	**P**	**00 57 44.4**	**0.0**
VNA2				*e*		00 57 48.4	
SNAA	**Sanae**	**90.20**	**163**	*e*	**P**	**00 57 51.8**	**-0.3**
SNAA				*e*		00 57 55.7	
ZALV	**Zalesovo Beam**	**116.70**	**15**	PKP	PKPdf	01 03 35.1	-0.4
	comp=Z,1.4nm,0.6s,baz=325,slow=2.3,SNR=7.6						
MKAR	**Makanchi Array**	**122.33**	**20**	PKP	PKPdf	01 03 45.9	-0.6
	comp=Z,0.9nm,0.5s,baz=345,slow=2.9,SNR=5.5						
SONM	**Songino Array**	**125.66**	**1**	PKP	PKPdf	01 03 53.7	+0.9
	comp=Z,0.5nm,0.5s,baz=33,slow=0.8,SNR=5.1						
ASAR	**Alice Springs**	**149.22**	**234**	PKP	PKPdf	01 04 36.5	+0.2
	comp=Z,5.5nm,0.7s,baz=122,slow=3.1,SNR=11						
ASAR				PKPbc	PKPbc	01 04 39.9	-0.9
	comp=Z,5.5nm,0.7s,baz=117,slow=3.3,SNR=41						
ASAR				pPKPbc	pPKPbc	01 05 20.5	-3.8
	comp=Z,1.0nm,0.7s,baz=113,slow=3.1,SNR=1.6						
WRA	**Warramunga Arr**	**150.47**	**241**	PKP	PKPdf	01 04 38.5	+0.1
	comp=Z,2.9nm,0.6s,baz=112,slow=1.9,SNR=5.8						
WRA				PKPbc	PKPbc	01 04 42.9	-1.0
	comp=Z,5.2nm,0.6s,baz=109,slow=2.4,SNR=34						
WRA				pPKPbc	pPKPbc	01 05 23.6	-3.8
	comp=Z,1.6nm,0.6s,baz=107,slow=2.4,SNR=3.3						
CMAR	**Chiang Mai Arr**	**153.71**	**18**	PKP	PKPdf	01 04 42.3	-1.0
	comp=Z,0.6nm,0.3s,baz=301,slow=2.7,SNR=5.8						
CMAR				PKPbc	PKPbc	01 04 52.1	+1.0
	comp=Z,2.4nm,0.5s,baz=316,slow=3.0,SNR=13						

IDC 09 00:58:47.2±2.0**, 158N**×**12573E, h0**km**, mb3.6**/2**, mb1 3.8**/2**, mb1mx3.4**/16**, mbtmp3.6**/2**, Error ellipse: s-maj=183.1km s-min=29.4km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.00**	**159**	P	P	01 03 54.2	+0.5
	0.4nm,0.5s,baz=338,slow=11,SNR=9.9						
MKAR	**Makanchi Array**	**58.76**	**326**	P	P	01 08 47.5	+0.5
	0.8nm,0.4s,baz=119,slow=7.1,SNR=6.3						
TORD	**Torodi Ar. Bea**	**122.60**	**287**	PKP	PKPdf	01 17 44.8	-1.1
	0.6nm,0.9s,baz=74,slow=1.4,SNR=4.9						

IDC 09 01:08:12.5±16.0, 1792S×17843W, h550km±201km, mb3.1/4, mb1 3.3/4, mb1mx3.1/16, mbtmp3.1/4, Error ellipse: s-maj=143.0km s-min=61.9km az=166.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.61	241	P	P	01 14 48.6	-0.4
	4.4nm,1.1s,baz=53,slow=5.1,SNR=3.7						
WRA	Warramunga Arr	44.61	260	P	P	01 15 36.4	-0.1
	0.6nm,0.5s,baz=96,slow=7.4,SNR=22						
ASAR	Alice Springs	44.77	254	P	P	01 15 37.9	+0.2
	3.3nm,0.6s,baz=87,slow=8.9,SNR=47						
PDAR	Pinedale Array	87.37	43	P	P	01 20 02.1	+0.7
	0.5nm,0.6s,baz=251,slow=2.8,SNR=4.4						
GERES	GERESS Array B	147.62	345	PKPbc	PKPbc	01 26 54.1	-1.1
	0.5nm,0.8s,baz=39,slow=6.7,SNR=3.7						

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*ISCJB **09** 01:25:41.7±0.3, 1379N±004×9081W±003, h97km±4km, mb3.8/8, Error ellipse: s-maj=8.3km s-min=3.0km az=34.6*

*CASC **09** 01:25:42.9±2.1, 1375N×9077W, h75km±13km, MD4.1, ML3.9*

*MEX **09** 01:25:42.1±0.5, 1346N×9103W, h76km±20km, MD4.7*

*NEIC **09** 01:25:43.8±0.9, 1382N×9082W, h108km±8km, MD4.7(MEX), Error ellipse: s-maj=14.2km s-min=7.6km az=215.0*

*IDC **09** 01:25:44.8±2.1, 1387N×9087W, h117km±19km, mb3.5/8, mb1 3.6/11, mb1mx3.4/24, mbtmp3.5/11, MS2.8/1, Ms1 2.8/1, ms1mx2.2/31, Error ellipse: s-maj=19.7km s-min=13.1km az=44.0*

ISC 09 01:25:42.8±0.3, 1379N±004×9083W±003, h92km±4km, n83, σ1§16/88, mb3.8/8, 12C-9D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.64	19	⇑eP	Pn	01 25 58.7	-0.2
PCG				eS	Sn	01 26 10.6	-0.3
FUG	Fuego 3	0.66	359	⇑eP	Pn	01 25 58.8	-0.3
FG6		0.77	356	⇑eP	Pn	01 26 00.2	0.0
NBG	Las Nubes	0.92	30	⇑iP	Pn	01 26 02.6	+0.8
NBG				eS	Sn	01 26 16.7	+0.8
JAT	Jato	0.95	304	⇑eP	Pn	01 26 02.6	+0.5
JAT				eS	Sn	01 26 13.9	-2.5
RTR	El Retiro	1.15	84	⇓eP	x	01 26 03.6	
RTR				eS	x	01 26 21.1	
RBDL	Robledal	1.15	74	⇑eP	x	01 26 03.2	
RBDL				⇑eP	x	01 26 03.3	
SBLS	San Blas	1.17	87	⇓iP	x	01 26 03.7	
SBLS				eS	x	01 26 18.9	
SNJE	San Jose	1.19	86	⇓eP	x	01 26 03.9	
SNJE				eS	x	01 26 21.8	
BOQS	Boqueron	1.50	92	eP	x	01 26 07.8	
BOQS				eS	x	01 26 26.6	
MTO2	Montecristo 2	1.54	67	⇑iP	x	01 26 08.3	
MTO2				eS	x	01 26 29.2	
SNET	Serv Nac Est T	1.55	93	⇓eP	x	01 26 08.1	
SNET				eS	x	01 26 27.3	
SNET				i		01 26 31.2	
	comp=Z,5μm,0.4s						
LFU	La Fuente	1.66	91	eP	x	01 26 10.0	
LFRS	El Faro	1.72	95	⇓eP	x	01 26 10.5	
LBRS	Las Brisas	1.73	91	eP	x	01 26 10.6	
LBRS				eS	x	01 26 30.9	
THIG		1.79	309	i P	Pn	01 26 10.8	-1.5
THIG				i S	Sn	01 26 33.8	-0.9
SNVI	San Vicente	1.94	95	⇑eP	x	01 26 13.7	
SNVI				eS	x	01 26 37.5	
VSM	San Miguel	2.51	98	eP	x	01 26 21.7	
VSM				eS	x	01 26 51.2	
CAHU	Cacacuatique	2.54	90	⇓eP	x	01 26 21.3	
CNCH	Conchagua	2.95	100	⇓eP	x	01 26 27.2	
CNCH				eS	x	01 27 01.5	
SCX	San Cristobal	3.41	329	i P	Pn	01 26 35.5	+1.6
SCX				i S	Sn	01 27 16.1	+2.6
TGUH	Tegucigalpa,Un	3.46	85	eP	Pn	01 26 34.1	-0.5
TGUH				AML	AML	01 26 59.5	
	comp=Z,512nm,0.6s						
TGUH				eS	Sn	01 27 14.1	-0.5
TGUH	Tegucigalpa,Un	3.46	85	ePn	Pn	01 26 34.0	-0.6
TGIG		3.71	324	i P	Pn	01 26 38.2	+0.3
TGIG				i S	Sn	01 27 23.4	+2.8
TEL3	Telica 3	4.06	107	eP	Pn	01 26 42.1	-0.6
TELN	Telica	4.06	106	eP	Pn	01 26 42.1	-0.7
LEON	Leon	4.07	109	eP	Pn	01 26 41.5	-1.4
LEON				eS	Sn	01 27 26.2	-3.2
CNGN	Cerro Negro	4.22	107	⇓iP	Pn	01 26 43.9	-1.0
CNGN				AML	AML	01 26 51.5	
	comp=N,196nm,0.5s						
MOMN	Momotombo	4.39	108	⇑eP	Pn	01 26 47.1	-0.1
COPN	Copaltepe	4.42	111	⇑iP	Pn	01 26 46.9	-0.8
COPN				eS	Sn	01 27 36.4	-1.7
CSAN		4.58	110	eP	Pn	01 26 49.6	-0.1
APYN	Apoyeque	4.63	109	eP	Pn	01 26 50.2	-0.2
XAVN	Gruta Xavier	4.68	110	eP	Pn	01 26 50.6	-0.5
TISN	Laguna Tiscapa	4.73	110	eP	Pn	01 26 50.9	-1.0
MGAN	Managua	4.75	110	eP	Pn	01 26 52.0	-0.1
HUEN		4.76	107	eP	Pn	01 26 51.4	-0.8
CRUN	El Crucero	4.76	112	⇓eP	Pn	01 26 52.7	+0.5
CRUN				eS	Sn	01 27 45.9	-0.4
WILN	Americas 2	4.80	109	eP	Pn	01 26 52.4	-0.3
TICN	Ticuantepe	4.81	111	eP	Pn	01 26 52.6	-0.3
APON	Apoyo	5.00	111	eP	Pn	01 26 55.3	-0.2
CMIG	Matias Romero	5.11	311	P	Pn	01 26 57.6	+0.7
	comp=N,7.7nm,0.3s,baz=93,slow=9.7,SNR=119						
CMIG				S	Sn	01 27 55.8	+1.1
	comp=N,1.6nm,0.3s,baz=74,slow=22,SNR=2.4						
CMIG	Matias Romero	5.11	311	i P	Pn	01 26 57.4	+0.4
CMIG				i S	Sn	01 27 54.7	0.0
HUIG	Huatulco	5.48	292	i P	Pn	01 26 59.9	-2.0
HUIG				i S	Sn	01 28 00.6	-3.0
HUIG	Huatulco	5.48	292	i P	Pn	01 26 59.9	-2.0
HUIG				i S	Sn	01 27 55.2	-8.4
CONN	Concepcion	5.53	113	eP	Pn	01 27 02.3	-0.4
VCR	Vista de Mar	6.25	125	eP	Pn	01 27 13.6	+1.0
CUI		6.33	119	eP	Pn	01 27 14.4	+0.7
2RIO	Dos Rios de Up	6.36	120	eP	Pn	01 27 10.4	-3.6
OXX	Oaxaca	6.56	301	i P	Pn	01 27 20.7	+4.0
VHO	Vista Hermosa	6.57	301	i P	Pn	01 27 17.1	+0.3
VHO				i S	Sn	01 28 29.3	-1.0
VHO	Vista Hermosa	6.57	301	i P	Pn	01 27 20.4	+3.6
VHO				i S	Sn	01 28 40.0	+10
JCR	Jicaral	6.83	124	eP	Pn	01 27 21.5	+1.2
TEIG	Tepich	6.85	20	P	Pn	01 27 21.6	+1.0
	comp=N,13nm,0.3s,baz=186,slow=5.5,SNR=84						
TEIG				S	Sn	01 28 37.1	0.0
	comp=N,1.2nm,0.3s,baz=206,slow=23,SNR=5.9						
TEIG				LR	LR	01 30 36.1	
	comp=N,69nm,19.1s,baz=139,slow=43						
TEIG	Tepich	6.85	20	eP	Pn	01 27 21.5	+0.8
TEIG	Tepich	6.85	20	ePn	Pn	01 27 21.5	+0.9
TEIG				eSn	Sn	01 28 37.2	+0.1
CGA2	Cerro Gallo 2	7.26	120	eP	Pn	01 27 27.9	+1.6
PRS1	Puriscal	7.41	120	eP	Pn	01 27 29.9	+1.5
PNIG	Pinotepa	7.51	291	i P	Pn	01 27 28.8	-0.9
PNIG				i S	Sn	01 28 50.7	-2.7
PNIG	Pinotepa	7.51	291	i P	Pn	01 27 31.1	+1.5
PNIG				i S	Sn	01 28 48.7	-4.6
LCR2	La Lucha 2	7.80	120	eP	Pn	01 27 34.4	+0.8
QCR	Quepos	7.83	123	eP	Pn	01 27 35.6	+1.5
BUS	Buena Vista	8.10	121	eP	Pn	01 27 39.7	+2.0
ACR	Cerro Adams	9.08	123	eP	Pn	01 27 53.6	+2.5
PPM	Popocatepetl	9.14	306	i P	Pn	01 27 51.9	0.0
PPM				eP		01 27 56.0	
PPM				i S	Sn	01 29 33.0	0.0
PPM	Popocatepetl	9.14	306	i P	Pn	01 27 57.2	+5.3
PPM				i S	Sn	01 29 44.4	+11
MEIG	Mezcala	9.41	297	i P	Pn	01 27 56.7	+1.2
BCIP	Isla Barro Col	11.71	112	ePn	Pn	01 28 27.7	+0.9
CHI2		19.14	117	⇑eP	Px	01 26 39.6	
TXAR	Lajitas Array	19.52	324	P	Pn	01 30 03.4	-1.7
	comp=N,0.1nm,0.3s,baz=150,slow=12,SNR=7.7						
LAPE	La Pedrera	19.89	106	eP	Px	01 27 10.3	
LAPE				eP	Px	01 27 11.7	
SDV	Santo Domingo	20.38	102	P	P	01 30 13.8	+1.3
	comp=N,1.8nm,0.5s,baz=27,slow=11,SNR=3.6						
SWET	Sewanee	21.79	11	eP	P	01 30 27.8	+0.6
TKL	Tuckaleechee C	22.68	15	P	P	01 30 37.2	+0.5
	comp=N,4.8nm,0.8s,mb3.9,baz=187,slow=12,SNR=6.8						
SADO	Sadowa	32.44	16	P	P	01 32 03.0	-1.2
	baz=219,slow=9.8						
PDAR	Pinedale Array	33.09	334	P	P	01 32 09.6	-0.3
	comp=N,0.3nm,0.8s,mb3.2,baz=70,slow=3.9,SNR=2.5						
NVAR	Mina Array Bea	34.56	320	P	P	01 32 25.8	+3.1
	comp=N,1.5nm,0.7s,mb3.9,baz=139,slow=7.8,SNR=12						
NVAR				pP	pP	01 32 46.6	+2.9
	comp=N,0.6nm,0.6s,baz=133,slow=8.3,SNR=4.2						
ULM	Lac du Bonnet	36.59	355	P	P	01 32 38.3	-1.6
	comp=N,2.4nm,0.8s,mb4.2,baz=181,slow=8.3,SNR=3.5						
LPAZ	La Paz	37.36	142	P	P	01 32 47.7	+0.9
	comp=N,0.7nm,0.8s,mb3.6,baz=291,slow=14,SNR=2.7						
LPAZ	La Paz	37.36	142	P	P	01 32 47.7	+0.9
YBH	Yreka Blue Hor	39.24	321	P	P	01 33 00.4	-1.9
	comp=N,2.1nm,1.1s,mb3.9,baz=163,slow=11,SNR=2.0						
SIV	San Ignacio	41.72	134	P	P	01 33 23.1	+0.1
	comp=N,0.9nm,0.6s,mb3.7,baz=297,slow=7.7,SNR=5.6						
SCHQ	Schefferville	45.03	19	P	P	01 33 47.8	-1.3
	comp=N,2.3nm,0.6s,mb4.1,baz=209,slow=14,SNR=4.1						
CMAR	Chiang Mai Arr	146.54	343	PKPbc	PKPbc	01 45 11.5	-3.0
	comp=N,1.0nm,0.4s,baz=52,slow=42,SNR=3.3						

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*IDC **09** 01:33:18.6±0.9, 4058N×11736W, h27km±12km, mb4.2/1, mb1 3.7/2, mb1mx3.2/20, mbtmp3.5/2, ML2.8/1, MS5.2/1, Ms1 5.2/1, ms1mx2.8/46, Error ellipse: s-maj=11.2km s-min=5.1km az=148.0*

*ISCJB **09** 01:33:23.4±0.2, 4030N±001×11713W±001, h10km, Error ellipse: s-maj=1.6km s-min=1.5km az=29.8*

*NEIC **09** 01:33:23.8, 4036N×11711W, h8km, ML3.6(REN), After REN.*

ISC 09 01:33:23.9±0.2, 4032N±001×11712W±001, h10km, n114, σ1§13/176, 61C-53D, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BMN	Battle Mountai	0.14	326	ePg	Pg	01 33 26.4	-0.6
BMN				eSg	Sg	01 33 28.5	-0.7
O09A	Fish Creek Ran	0.16	199	⇑P	Pg	01 33 27.6	+0.3
	baz=0.2,SNR=1000						
O10A	Cortez Mining,	0.48	93	⇑P	Pg	01 33 32.9	-0.3
	baz=0.5,SNR=742						
O10A				⇓S	Sg	01 33 39.3	-0.2
	baz=0.5						
N09A	Rock Creek Ran	0.61	330	⇓P	Pg	01 33 35.1	-0.7
	baz=0.6,SNR=552						
N09A				⇓S	Sg	01 33 43.2	-0.6
	baz=0.6						
N10A	Dunphy	0.62	49	⇑P	Pg	01 33 34.5	-1.3
	baz=0.6,SNR=235						
N10A				⇓S	Sg	01 33 42.6	-1.3
	baz=0.6						
P09A	Austin	0.77	181	⇓P	Pg	01 33 38.9	+0.3
	baz=0.8,SNR=51						
P09A				⇓S	Sg	01 33 49.7	+1.1
	baz=0.8						
O08A	Rochester Mine	0.79	268	⇑P	Pg	01 33 39.0	-0.1
	baz=0.8,SNR=430						
O08A				⇑S	Sg	01 33 49.8	+0.5
	baz=0.8						
P10A	Eureka	0.86	144	⇑P	Pg	01 33 40.4	0.0
	baz=0.9,SNR=30						
P10A				⇓S	Sg	01 33 52.6	+0.9
	baz=0.9						
N08A	GE Springer Mi	0.90	301	⇓P	Pg	01 33 40.6	-0.6
	baz=0.9,SNR=1000						
N08A				⇓S	Sg	01 33 52.6	-0.2
	baz=0.9						
P08A	Dixie Valley	0.96	230	⇑P	Pg	01 33 43.2	+0.8
	baz=1.0,SNR=23						
M09A	Marrel Ranch,	1.13	347	⇑P	Pb	01 33 44.4	-1.1
	baz=1.1,SNR=179						
M09A				⇑S	Sb	01 33 59.5	-0.7
	baz=1.1						
O11A	Cowboy Ranch,	1.14	99	⇓P	Pb	01 33 45.0	-0.6
	baz=1.1,SNR=27						
O11A				⇑S	Sb	01 33 59.6	-0.8
	baz=1.1						
N11A	Elko Archery C	1.17	64	⇓P	Pn	01 33 45.1	-1.2
	baz=1.1,SNR=68						
N11A				⇑S	Sb	01 34 00.5	-0.8
	baz=1.1						
M10A	I.L. Ranch, Tu	1.28	20	⇑P	Pn	01 33 47.0	-0.8
	baz=1.2,SNR=131						
P11A	Circle Ranch,	1.30	126	⇑P	Pn	01 33 47.9	-0.2
	baz=1.3,SNR=134						
P11A				⇑S	Sb	01 34 05.7	+0.5
	baz=1.3						
O07A	Toulon	1.35	264	⇑P	Pn	01 33 47.9	-0.8
	baz=1.4,SNR=968						
O07A				⇓S	Sb	01 34 06.9	+0.3
	baz=1.4						
M08A	Happy Creek Ra	1.48	320	⇑P	Pn	01 33 50.0	-0.5
	baz=1.5,SNR=245						
N07B	Gerlach	1.48	289	⇑P	Pn	01 33 49.9	-0.6
	baz=1.5,SNR=638						
Q09A	Carvers	1.48	182	⇑P	Pn	01 33 51.1	+0.5
	baz=1.5,SNR=16						
ELK	Elko	1.50	73	Pg	Pn	01 33 49.9	-0.9
	15nm,0.3s,baz=262,slow=13,SNR=147						
ELK				Lg		01 34 09.9	
	48nm,0.3s,baz=0.7,slow=21,SNR=72						
M11A	Holland Ranch,	1.50	42	P	Pn	01 33 50.1	-0.7
	baz=1.5,SNR=63						
P07A	Fallon	1.56	241	⇓Pn	Pn	01 33 51.7	0.0
	baz=1.6						
P07A				⇓Sg	Sg	01 34 15.9	+1.8
	baz=1.6						
P07A				⇓Sg	Sg	01 34 16.2	+2.1
	baz=1.6						
N12A	Clover Valley,	1.68	71	⇑Pn	Pn	01 33 52.3	-0.9
	baz=1.6,SNR=71						
N12A				⇑Sb	Sb	01 34 15.3	-0.6
	baz=1.6						
L09A	Wilkinson Ranc	1.75	347	⇓Pn	Pn	01 33 54.1	-0.1
	baz=1.7,SNR=9.1						
O12A	Currie	1.82	91	⇑Pn	Pn	01 33 54.3	-0.9
	baz=1.8,SNR=35						
O12A				⇑Sb	Sb	01 34 20.2	+0.1
	baz=1.8						
L10A	Juniper Basin	1.82	15	⇑Pn	Pn	01 33 54.9	-0.4
	baz=1.8,SNR=169						
L10A				⇓Sb	Sb	01 34 19.4	-0.8
	baz=1.8						
PAHR	Pah Rah Range	1.84	251	ePn	Pn	01 33 54.6	-0.9
PAHR				ePg	Pg	01 33 57.6	-1.5
PAHR				eSg	Sg	01 34 22.1	-0.9
Q11A	Duckwater	1.86	142	⇓Pn	Pn	01 33 55.9	+0.1
	baz=1.9,SNR=32						
M07A	Soldier Meadow	1.89	305	⇓Pn	Pn	01 33 55.4	-0.7
	baz=1.9,SNR=106						
Q07A	Schurz	1.90	224	⇓Sg	Sg	01 34 27.5	+2.7
	baz=1.9						
P12A	McGill	1.90	116	⇑Sb	Sb	01 34 23.3	+0.9
	baz=1.9						
M12A	Wells	2.00	56	⇓Pn	Pn	01 33 56.6	-1.1
	baz=2.0,SNR=24						
M12A				⇓Sb	Sb	01 34 25.2	-0.1
	baz=2.0						
R09A	Tonopah	2.08	179	⇑Pn	Pn	01 33 59.4	+0.7
	baz=2.1,SNR=22						
R09A				⇓Sb	Sb	01 34 30.2	+2.8
	baz=2.1						
L08A	Fields	2.08	334	⇓Pb	Pb	01 34 00.1	-1.7
	baz=2.1						
NVAR	Mina Array Bea	2.10	206	Pg	Pn	01 33 59.3	+0.3
	4.4nm,0.3s,baz=21,slow=12,SNR=68						
NVAR				Lg		01 34 31.9	
	24nm,0.3s,baz=23,slow=30,SNR=12						
NVAR	Mina Array Bea	2.10	206	Pg	Pn	01 33 59.3	+0.3
NVAR				Lg		01 34 31.9	
R08A	Mina	2.11	201	⇓Pn	Pn	01 33 59.9	+0.7
	baz=2.2,SNR=8.1						
L11A	Cat Creek Ranc	2.12	29	Pn	Pn	01 33 59.2	-0.1
	baz=2.1,SNR=931						
L11A				⇑Sb	Sb	01 34 28.7	+0.1
	baz=2.1						
R10A	Warm Springs	2.13	162	⇓Sb	Sg	01 34 31.6	-0.6
	baz=2.2						
Q12A	Willow Creek R	2.18	125	⇓Sb	Sb	01 34 31.9	+1.4
	baz=2.2						
P06A	Stead Airport,	2.23	254	⇓Sb	Sg	01 34 34.0	-1.3
	baz=2.2						
WCN	Washoe City	2.27	244	⇓Pn	Pn	01 34 01.0	-0.3
	baz=2.3,SNR=24						
WCN				⇓Sb	Sb	01 34 35.1	+2.2
	baz=2.3						
N13A	Wendover, West	2.29	76	⇓Sb	Sb	01 34 34.1	+0.6
	baz=2.3						
R11A	Troy Canyon, C	2.30	148	⇑Pn	Pn	01 34 01.9	+0.1
	baz=2.3,SNR=15						
R11A				⇓Sb	Sb	01 34 36.2	+2.3
	baz=2.3						
WVOR	Wild Horse Val	2.40	332	ePg	Pn	01 34 04.8	+1.6
K09A	Rome	2.42	349	⇓Pn	Pn	01 34 03.6	+0.1
	baz=2.4,SNR=41						
L12A	House Creek Ra	2.42	40	⇑Pn	Pn	01 34 03.1	-0.4
	baz=2.4						
S10A	Tonopah Range,	2.43	170	Pn	Pn	01 34 04.4	+0.8
	baz=2.5,SNR=13						
K10A	MacKenzie Ranc	2.46	4	⇓Pn	Pn	01 34 03.9	-0.2
	baz=2.4,SNR=22						
M13A	Montello	2.47	64	⇑Pn	Pn	01 34 03.1	-1.1
	baz=2.4,SNR=7.6						
M13A				⇑Sb	Sb	01 34 39.7	+0.8
	baz=2.4						
BEKR	Beckwourth	2.52	261	⇑Pn	Pn	01 34 04.7	-0.2
	baz=2.5,SNR=29						
P13A	Bates Ranch, G	2.54	109	⇑Pn	Pn	01 34 04.8	-0.3
	baz=2.5						
P13A				⇓Sb	Sb	01 34 42.4	+1.5
	baz=2.5						
K11A	Parker Ranch,	2.58	18	⇑Pn	Pn	01 34 06.2	+0.5
	baz=2.5,SNR=99						
K11A				⇑Sb	Sb	01 34 42.2	+0.1
	baz=2.5						
S09A	Goldfield	2.59	182	⇓Pn	Pn	01 34 06.5	+0.7
	baz=2.6,SNR=16						
K08A	Mann Creek Ran	2.62	337	⇓Pn	Pn	01 34 04.9	-1.3
	baz=2.6						
K08A				⇑Sb	Sb	01 34 44.0	+1.0
	baz=2.6						
Q13A	Wheeler Ranch,	2.76	119	⇑Pn	Pn	01 34 09.4	+1.3
	baz=2.8						
Q13A				⇓Sb	Sb	01 34 49.2	+2.2
	baz=2.8						
R05C	Kirkwood Meado	2.80	236	Pn	Pn	01 34 08.8	+0.2
	baz=2.8,SNR=19						
K12A	Draper Farm, C	2.85	35	⇑Pn	Pn	01 34 09.4	0.0
	baz=2.8,SNR=22						
K12A				⇑Sb	Sb	01 34 49.9	+0.1
	baz=2.8						
K07A	Rock Creek Ran	2.86	327	⇑Pb	Pb	01 34 13.1	-1.8
	baz=2.8						
K07A				⇑Sb	Sb	01 34 51.0	+1.1
	baz=2.8						
P05C	Yuba Gap, Truc	2.87	250	⇑Pn	Pn	01 34 09.4	-0.3
	baz=2.9						
MOD	Modoc	2.88	304	ePg	Pn	01 34 13.1	+3.4
O05C	Quincy	2.93	264	⇑Pb	Pb	01 34 15.8	-0.4
	baz=2.9						
L13A	Double Diamond	2.98	53	⇓Pn	Pn	01 34 10.5	-0.7
	baz=2.9						
L13A				⇑Sb	Sb	01 34 54.0	+0.6
	baz=2.9						
N14A	Grayback Hills	3.04	79	⇑Pn	Pn	01 34 12.2	+0.2
	baz=3.0,SNR=40						
J09A	Fry Pan Ranch,	3.06	351	⇑Pb	Pb	01 34 16.4	-2.0
	baz=3.0						
J09A				⇑Sb	Sb	01 34 56.6	+0.8
	baz=3.0						
M14A	Sheep Mountain	3.10	66	⇑Pn	Pn	01 34 11.9	-0.8
	baz=3.1,SNR=5.7						
J08A	Circle Bar Ran	3.20	342	⇑Pb	Pb	01 34 18.6	-2.1
	baz=3.2						
J08A				⇓Sb	Sb	01 35 01.3	+1.5
	baz=3.2						
MFID	Camas Ranch	3.24	17	⇑Pn	Pn	01 34 14.9	+0.1
	baz=3.2,SNR=8.9						
MFID				⇓Sb	Sb	01 35 01.0	0.0
	baz=3.2						
K13A	Stover Farm, H	3.26	43	⇓Pn	Pn	01 34 14.5	-0.5
	baz=3.2,SNR=7.5						
J12A	Stokes Ranch,	3.30	27	⇓Sb	Sb	01 35 02.9	+0.3
	baz=3.3						
DUG	Dugway	3.30	91	ePn	Pn	01 34 16.0	+0.5
DUG				ePg	Pg	01 34 26.8	-0.3
DUG				eSg	Sg	01 35 07.3	-2.5
L14A	Malta	3.40	58	⇓Pn	Pn	01 34 16.2	-0.7
	baz=3.4,SNR=32						
CMB	Columbia Colle	3.41	229	ePn	Pn	01 34 17.4	+0.3
CMB				ePg	Pg	01 34 27.8	-1.4
CMB				eSn	Sn	01 34 56.2	-1.4
CMB				eSg	Sg	01 35 11.9	-1.5
T11A	Corn Creek, Al	3.42	154	⇓Pn	Pn	01 34 17.8	+0.7
	baz=3.4,SNR=18						
TPNV	Topopah Spring	3.43	168	⇓Pn	Pn	01 34 18.5	+1.1
	baz=3.5						
TPNV	Topopah Spring	3.43	168	ePn	Pn	01 34 18.4	+1.0
TPNV				ePg	Pg	01 34 28.8	-0.8
TPNV				eSg	Sg	01 35 13.6	-0.6
I09A	Lost Marbles R	3.68	353	⇑Sb	Sb	01 35 14.9	+1.3
	baz=3.6						
SPUT	South Promonto	3.68	73	ePn	Pn	01 34 20.1	-0.7
SPUT				ePg	Pg	01 34 30.2	-4.2
SPUT				eSn	Sn	01 34 60.0	-4.3
SPUT				eSg	Sg	01 35 18.0	-4.1
I11A	Placerville	3.69	13	⇑Sb	Sb	01 35 14.7	+0.8
	baz=3.7						
K14A	Jones Ranch, D	3.71	52	⇓Pn	Pn	01 34 20.4	-0.8
	baz=3.7,SNR=7.5						
K14A				⇑Sb	Sb	01 35 15.6	+1.2
	baz=3.7						
S13A	Holt Ranch, En	3.73	136	⇑Pn	Pn	01 34 22.4	+0.8
	baz=3.8						
I08A	Drewsey	3.75	344	⇑Sb	Sb	01 35 17.4	+1.9
	baz=3.7						
I10A	Payette	3.77	4	⇓Sb	Sb	01 35 18.0	+1.8
	baz=3.7						
J13A	Cove Ranch, Pi	3.78	35	⇑Sb	Sb	01 35 17.6	+1.1
	baz=3.7						
HLID	Hailey	3.82	31	⇑Sb	Sb	01 35 18.6	+1.0
	baz=3.8						
HLID	Hailey	3.82	31	ePn	Pn	01 34 23.2	+0.5
HLID				ePg	Pg	01 34 34.1	-2.9
HLID				eSg	Sg	01 35 18.6	-7.9
S05C	Merced	3.88	221	⇓Sb	Sb	01 35 23.3	+3.9
	baz=3.9						
NLU	North Lily Min	3.89	94	ePn	Pn	01 34 22.9	-0.8
NLU				ePg	Pg	01 34 36.0	-2.3
NLU				eSg	Sg	01 35 24.5	-4.2
L15A	Malad City	3.95	63	⇑Pn	Pn	01 34 23.9	-0.6
	baz=3.9						
J14A	Carey	4.03	41	⇓Sb	Sb	01 35 25.4	+1.7
	baz=4.0						
CTU	Camp Tracy	4.11	83	ePn	Pn	01 34 27.0	+0.3
WDC	Whiskeytown Da	4.14	275	ePg	Pg	01 34 39.5	-3.6
I13A	Wildhorse Cree	4.23	31	⇓Sb	Sb	01 35 30.8	+1.4
	baz=4.2						
MSU	Marysvale	4.24	114	ePn	Pn	01 34 30.1	+1.6
MSU				ePg	Pg	01 34 43.2	-1.8
MSU				eSn	Sn	01 35 17.7	-0.2
MPMC	Manual Prospec	4.26	184	⇑Pn	Pn	01 34 30.4	+1.6
	baz=4.3,SNR=15						
H10A	Noah's Angus R	4.28	4	⇓Sb	Sb	01 35 31.3	+0.6
	baz=4.2						
H08A	Prairie City	4.35	345	⇑Sb	Sb	01 35 35.2	+2.4
	baz=4.3						
YBH	Yreka Blue Hor	4.46	290	Pg	Pn	01 34 33.2	+1.8
	0.0nm,0.3s,baz=129,slow=15,SNR=2.0						
YBH				Lg		01 35 40.8	
	0.2nm,0.3s,baz=139,slow=5.6,SNR=2.6						
H11A	Donnelly	4.46	10	⇓Sb	Sb	01 35 37.1	+1.2
	baz=4.4						
DAU	Daniels Canyon	4.48	87	ePn	Pn	01 34 33.0	+1.2
DAU				ePg	Pg	01 34 43.6	-6.1
I14A	Mackay	4.52	36	⇑Sb	Sb	01 35 39.9	+2.0
	baz=4.5						
BMO	Blue Mountains	4.53	358	ePg	Pn	01 34 40.6	+8.1
BMO				eSg	Sg	01 35 41.8	-7.5
H12A	Diamond D Ranc	4.55	21	⇑Sb	Sb	01 35 40.4	+1.9
	baz=4.5						
TMUT	Trail Mountain	4.67	101	ePn	Pn	01 34 33.7	-0.6
TMUT				ePg	Pg	01 34 52.3	-1.0
HUMO	Hull Mountain	4.94	299	ePg	Pg	01 34 56.1	-2.3
SRU	San Rafael	5.23	101	ePn	Pn	01 34 44.6	+2.5
	2.3nm,0.5s						
SRU				ePg	Pg	01 35 02.4	-1.6
SRU				eSg	Sg	01 36 08.4	-3.4
TPAW	Teton Pass	5.59	53	ePn	Pn	01 34 46.9	-0.1
	5.8nm,1.0s						
TPAW				ePg	Pg	01 35 00.6	-10
TPAW				eSg	Sg	01 36 12.3	-11
IMW	Indian Meadow	5.83	50	ePn	Pn	01 34 51.2	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	3.2nm,0.6s						
IMW				ePg	Pg	01 35 05.6	-10
IMW				eSg	Sg	01 36 18.7	-12
PDAR	Pinedale Array	6.18	64	Pn	Pn	01 34 50.7	-4.4
	0.0nm,0.3s,baz=218,slow=17,SNR=2.1						
PDAR				Pg	Pb	01 35 08.2	-3.4
	0.1nm,0.3s,baz=222,slow=13,SNR=2.7						
PDAR				Lg		01 36 35.9	
	0.1nm,0.3s,baz=234,slow=27,SNR=3.5						
WUAZ	Wupatki	6.61	135	ePn	Pg	01 35 28.2	-2.1
WUAZ				eSg	Sg	01 36 53.0	-2.9
PFO	Pinyon Flat Ob	6.72	175	LR	LR	01 37 21.8	
	comp=Z,43nm,20.0s,baz=308,slow=35						
PV01	Paradox Valley	6.99	105	ePn	Pn	01 35 08.6	+2.3
SCHQ	Schefferville	36.07	49	P	P	01 40 17.6	-7.7
	3.6nm,0.6s,baz=239,slow=18,SNR=3.4						
IDI	Anoyia	97.03	30	LR	LR	02 30 33.1	
	comp=Z,1μm,21.4s,baz=113,slow=35						

*IDC **09** 01:38:50.7±1.4, 059S×12782E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.7/17, mbtmp3.7/6, ML3.3/1, Error ellipse: s-maj=103.0km s-min=19.2km az=69.0*
*ISCJB **09** 01:38:52.6±1.1, 05S±02×1285E±03, h33^{km}, mb3.7/4, Error ellipse: s-maj=42.9km s-min=7.6km az=149.8*
*NEIC **09** 01:38:55.3±1.0, 053S×12820E, h35^{km}, mb3.4/1, Error ellipse: s-maj=53.7km s-min=12.5km az=70.0*
ISC 09 01:38:55.3±1.0**, 05S**±02×**1283E**±03**, h35**^{km}**, n11,** σ1s**13**/12**, mb3.7**/4**, 1D, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNE	Ternate	1.60	325	⇓eP	Pn	01 39 19.2	-1.9
TNE				eS	Sn	01 39 42.0	+1.5
KAKA	Kakadu	12.78	161	eP	Pn	01 41 53.3	-1.4
	5.7nm,0.9s						
FITZ	Fitzroy Crossi	17.65	188	eP	Pn	01 42 58.6	0.0
	2.8nm,0.8s						
FITZ	Fitzroy Crossi	17.65	188	P	Pn	01 42 57.9	-0.7
	0.1nm,0.3s,baz=341,slow=18,SNR=5.4						
WRA	Warramunga Arr	20.18	163	P	P	01 43 27.3	+0.2
	0.9nm,0.5s,baz=340,slow=12,SNR=11						
WB2	Warramunga Arr	20.19	163	eP	P	01 43 27.7	+0.6
ASAR	Alice Springs	23.64	167	P	P	01 44 04.1	+0.5
	1.5nm,0.5s,mb3.7,baz=346,slow=11,SNR=33						
STKA	Stephens Creek	33.62	159	P	P	01 45 34.2	+1.7
	1.4nm,0.8s,mb3.9,baz=335,slow=14,SNR=3.6						
MKAR	Makanchi Array	61.92	326	P	P	01 49 11.8	+0.3
	0.2nm,0.3s,mb3.7,baz=117,slow=7.0,SNR=5.0						
MKAR	Makanchi Array	61.92	326	P	P	01 49 11.8	+0.3
KURK	Kurchatov	66.15	328	P	P	01 49 37.9	-1.3
	0.3nm,0.6s,mb3.5,baz=126,slow=6.0,SNR=3.0						

*ISCJB **09** 01:49:38.8±0.6, 1056N±003×6320W±002, h4^{km}±5^{km}, Error ellipse: s-maj=5.1km s-min=4.0km az=15.1*
*FUNV **09** 01:49:39.5, 1056N×6312W, h3^{km}, MW3.6*
*TRN **09** 01:49:47.1, 1043N×6292W, h7^{km}, MD3.9*
*NEIC **09** 01:49:48.9, 1091N×6287W, h7^{km}, MD3.9(TRN), After TRN.*
ISC 09 01:49:39.2±0.6**, 1055N**±003×**6322W**±003**, h1**^{km}±6^{km}**, n21,** σ1s**15**/33**, 2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRUV	Carupano	0.13	352	⇓iP	Pg	01 49 41.1	-0.6
CRUV				eS	Sg	01 49 43.1	-0.3
GUNV	Guanoco	0.47	145	⇓iP	Pg	01 49 47.4	-0.8
GUNV				eS	Sg	01 49 54.9	+0.6
ITEV	Isla Los Testi	0.81	6	eP	Pg	01 49 54.7	-0.1
ITEV				eS	Sg	01 50 06.1	+0.8
GUIV	Guiria	0.98	84	eP	Pg	01 49 56.7	-1.3
GUIV				eS	Sg	01 50 09.1	-1.7
PCRV	Puerto La Cruz	1.44	255	eP	Pn	01 50 06.4	0.0
TCE	Chacachacare	1.45	84	eP	Pg	01 50 09.7	+2.7
TCE				eS	Sg	01 50 27.3	+1.5
ORIV	Oritupano	1.48	187	eP	Pn	01 50 07.1	+0.1
ORIV				eS	Sb	01 50 27.9	+1.1
TPP	Pointe-a-Pierr	1.75	97	eP	Pg	01 50 17.6	+4.8
TPP				eS	Sg	01 50 37.0	+1.5
TRN	Trinidad (W)	1.79	87	eP	Pg	01 50 14.9	+1.5
TRN				eS	Sn	01 50 34.8	+0.3
IBAV	Isla La Blanqu	1.84	314	eP	Pn	01 50 12.1	+0.2
TBH	Brigand Hill	2.12	91	eP	Pg	01 50 19.4	-0.3
TBH				eS	Sn	01 50 43.1	+0.5
TBH	Brigand Hill	2.12	91	eP	Pg	01 50 21.2	+1.4
TBH				eS	Sg	01 50 45.0	-2.2
PRGV	PARIAGUAN	2.27	219	eP	Pn	01 50 18.5	+0.8
TPR	Prospect	2.48	75	eP	Pg	01 50 25.3	-1.4
CUPV	Cœpira	2.58	259	eP	Pn	01 50 22.5	+0.5
CUPV				eS	Sn	01 50 54.5	+0.5
GURV	El Guri	2.77	177	eP	Pn	01 50 24.0	-0.7
RIOV	Rio Grande	2.82	151	eP	Pn	01 50 23.8	-1.7
MERV	Las Mercedes	3.30	247	eP	Pn	01 50 33.0	+1.0
CAOV	Caicara del Or	4.43	224	eP	Pn	01 50 48.1	+0.5
LUEV	Luepa	4.99	159	eP	Pn	01 50 52.9	-2.3
BAUV	El Baul	5.01	252	eP	Pn	01 50 55.4	-0.2
BAUV				eS	Sn	01 51 51.2	-3.0

*BGS **09** 02:00:28.2±1.7, 2869N×7041E, h20^{km}, mb5.1*
*ISCJB **09** 02:00:37.7±0.5, 3058N±002×6980E±001, h9^{km}±3^{km}, mb5.2/288, MS5.1/234, Error ellipse: s-maj=3.4km s-min=2.0km az=5.4*
*IDC **09** 02:00:37.9±0.4, 3060N×6981E, h0^{km}, mb5.0/35, mb1 5.0/36, mb1mx5.0/37, mbtmp5.0/36, ML5.0/1, MS5.0/33, Ms1 5.0/33, ms1mx5.0/35, Error ellipse: s-maj=12.8km s-min=9.3km az=13.0*
*SZGRF **09** 02:00:37.6, 30.14N×7039E, h33^{km}, mb5.3, MS4.8, Pakistan*
*MOS **09** 02:00:41.6±1.1, 3061N×6977E, h35^{km}, mb5.4/116, MS5.0/73, Error ellipse: s-maj=5.8km s-min=3.0km az=129.4*
*GCMT **09** 02:00:41.5±0.2, 3043N×6997E, h12^{km}, MW5.3/92, Moment Tensor Solution. s61,c90; s92,c173; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.17±.02; $M_{\theta\theta}$0.39±.02; $M_{\phi\phi}$-0.22±.02; $M_{r\theta}$0.22±.05; $M_{\theta\phi}$-1.05±.01; $M_{\phi r}$-0.05±.05; Best double couple: $M_0$1.11400×10^{17} NP1:ϕ_s172.00000°,δ80.00000°,λ2.00000°. NP2: ϕ_s82.00000°,δ88.00000°,λ170.00000°. Principal axes: T 1.2100, Plg9.0000°, Azm37.0000°; N -0.1940, Plg79.0000°, Azm253.0000°; P -1.0180, Plg6.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **09** 02:00:41.5±1.7, 3061N×6979E, h20^{km}±11^{km}, mb5.2/173, MS5.1/170 Error ellipse: s-maj=5.4km s-min=2.9km az=194.0*
*BJI **09** 02:00:43.8, 3083N×7034E, h20^{km}, mB5.3, mb5.1, Ms5.5, Msz5.1*
*DJA **09** 02:00:46, 3063N×6980E, h57^{km}, Mw5.6/11*
*NNC **09** 02:00:46.6±9.5, 3103N×6985E, h31^{km}±84^{km}, mb5.1, Error ellipse: s-maj=48.5km s-min=37.1km az=149.0*
ISC 09 02:00:40.3±0.6**, 3059N**±002×**6981E**±001**, h13**^{km}±3^{km}**, h21**^{km}±1.8^{km}**:pP-P, n932,** σ1s**07**/874**, mb5.2**/288**, MS5.1**/234**, 115C-30D, Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THW	Thamme Wali	2.75	36	⇓P	Pn	02 01 24.8	+0.8
SARP	Sargodha	2.79	61	P	Pn	02 01 25.8	+1.2
SARP				S	Sg	02 02 10.0	+0.1
CEP	Cherat	3.68	28	⇓P	Pn	02 01 38.2	+1.3
CEP				S	Sn	02 02 24.0	+3.8
JASL	Jaisalmer	3.78	165	eP	Pn	02 01 37.8	-0.4
KBL	Kabul	3.99	351	ePn	Pn	02 01 43.8	+2.7
KBL				ePg	Pg	02 01 54.9	-1.8
CHCP	Chirah Chowk	4.24	43	⇓P	Pn	02 01 45.4	+0.9
JMU	Jammu	4.83	63	i P	Pn	02 01 53.0	+0.3
JMU				i x	Pg	02 02 09.0	-3.8
THN	Thein Dam	5.37	68	eP	Pn	02 01 59.6	-0.5
THN				ex	Sg	02 03 37.9	+5.2
SRNI	Srinagar	5.52	49	i x	Pb	02 02 14.5	-1.9
SRNI				i x	Sb	02 03 29.5	+7.0
DLH	Dalhousie	5.60	68	eP	Pn	02 02 05.0	+1.7
DLH				ex	Sg	02 03 46.0	+5.8
BHK	Bhakra	5.73	80	eP	Pn	02 02 04.4	-0.7
BHK				ex	Sn	02 03 11.0	+0.3
SDNR	Sundarnagar	6.21	80	eP	Pn	02 02 11.6	-0.1
SDNR				ex	Sn	02 03 27.0	+4.5
SMLA	Simla	6.35	83	i P	Pn	02 02 13.8	+0.2
SMLA				i x	Sn	02 03 24.9	-1.0
AYAN	Aya Nagar	6.71	106	eP	Pn	02 02 16.8	-1.8
NDI	New Delhi	6.72	105	eP	Pn	02 02 17.0	-1.7
NDI				eS	Sn	02 03 30.5	-4.6
DDI	Dehra Dun	7.12	90	eP	Pn	02 02 24.2	0.0
DDI				ex	x	02 04 23.2	
KLP	Kalpa	7.30	80	eP	Pn	02 02 27.6	+0.9
KLP				ex	Sn	02 03 52.2	+2.8
BHJ	Bhuj	7.31	181	eP	Pn	02 02 24.5	-2.2
BHJ				eS	Sn	02 03 43.3	-6.3
JOSI	Joshimath	8.41	88	eP	Pn	02 02 43.0	+1.2
JHNI	Jhansi	9.25	121	i P	Pn	02 02 52.0	-1.4
JHNI				i x	x	02 05 40.0	
KSH	Kashi	10.23	28	P	Pn	02 03 09.4	+2.6
KSH				S	Sn	02 04 56.6	-4.8
KSH				Smax			
	comp=N,3μm,0.9s						
KSH				Smax			
	comp=E,3μm,0.8s						
JBP	Jabalpur	11.71	127	eP	Pn	02 03 24.1	-2.9
JBP				eS	Sn	02 05 24.5	-13
AKL	Akola	11.79	145	eP	Pn	02 03 27.8	-0.5
AKL				AMb	AMB	02 03 30.6	
	comp=Z,132nm,0.9s						
AKL				i x	Sn	02 05 42.1	+2.4
AML	Almayashu	11.93	14	P	Pn	02 03 29.5	-0.5
	SNR=81						
AML	Almayashu	11.93	14	ePn	Pn	02 03 28.9	-1.1
	comp=Z,538nm,0.6s						
BOM	Bombay	11.96	166	ex	x	02 05 18.9	
BOM				ex	x	02 06 33.1	
VAN	Vannovskaya	12.14	310	eP	Pn	02 03 32.8	-0.1
UCH	Uchtor	12.21	17	ePn	Pn	02 03 34.3	+0.5
KZA	Kyzart	12.27	19	P	Pn	02 03 33.4	-1.2
	SNR=98						
DANN	Dangsing	12.36	97	ePn	Pn	02 03 31.6	-4.4
DANN				eSn	Sn	02 05 46.6	-7.0
	comp=Z,525nm,0.6s						
KOLN	Koldanda	12.38	100	ePn	Pn	02 03 32.9	-3.2
KOLN				eSn	Sn	02 05 48.8	-5.1
EKS2	Erkin-Say	12.46	14	P	Pn	02 03 37.1	-0.1
	SNR=23						
EKS2	Erkin-Say	12.46	14	ePn	Pn	02 03 36.6	-0.6
	comp=Z,136nm,0.6s						
KK31	Karatay Array	12.50	2	Pn	Pn	02 03 36.5	-1.3
	comp=Z,145nm,0.7s,baz=189,slow=13,SNR=1412						
KK31				⇓Sn	Sn	02 05 52.4	-4.5
	comp=Z,371nm,1.2s,baz=186,slow=22,SNR=7.0						
WBK	Wadi Bani Khal	12.53	233	P	Pn	02 03 35.7	-2.6
	SNR=12						
WBK	Wadi Bani Khal	12.53	233	P	Pn	02 03 35.7	-2.6
	SNR=12						
NGP	Nagpur	12.55	136	eP	Pn	02 03 32.9	-5.6
NGP				eS	Sn	02 05 42.3	-16
POO	Poona	12.56	162	eP	Pn	02 03 38.9	+0.3
POO				AMb	AMB	02 03 45.4	
	comp=Z,55nm,1.0s						
AAK	Ala-Archa	12.59	16	P	Pn	02 03 38.6	-0.4
	SNR=127						
KBK	Karagaybulak	12.73	17	P	Pn	02 03 43.8	+2.9
	SNR=17						
ULHL	Ulahol	12.73	22	P	Pn	02 03 39.5	-1.4
	SNR=19						
FRU	Bishkek	12.81	16	⇑iP	Pn	02 03 41.0	-1.0
FRU				eS	Sn	02 05 59.0	-5.4
FRU				pmax	pmax		
	comp=Z,400nm,1.6s						
FRU				pmax	pmax		
	comp=N,1μm,2.2s						
FRU				MLR	MLR		
	comp=Z,19μm,18.0s						
FRU				MLR	MLR		
	comp=E,25μm,9.0s						
SMDO	Samad	12.90	237	P	Pn	02 03 42.0	-1.3
	SNR=10						
SMDO	Samad	12.90	237	P	Pn	02 03 42.0	-1.3
	SNR=10						
CHMS	Chumysh	13.00	16	P	Pn	02 03 43.5	-1.1
	SNR=79						
TKM2	Tokmak 2	13.15	19	⇑Pn	Pn	02 03 45.5	-1.1
	comp=E,162nm,0.8s						
TKM2				⇑Sn	Sn	02 06 03.5	-9.1
	comp=E,190nm,1.4s						
TKM2	Tokmak 2	13.15	19	eP	Pn	02 03 45.7	-0.9
TKM2				pmax	pmax		
	comp=Z,152nm,0.7s						
TKM2	Tokmak 2	13.15	19	P	Pn	02 03 46.0	-0.7
	SNR=88						
TKM2	Tokmak 2	13.15	19	ePn	Pn	02 03 45.7	-0.9
	comp=Z,152nm,0.7s						
USP	Ospenovka	13.19	15	P	Pn	02 03 47.3	0.0
	SNR=42						
GKN	Gorkha	13.20	98	ePn	Pn	02 03 42.8	-4.6
GKN				eSn	Sn	02 06 06.2	-7.8
	comp=Z,741nm,0.6s						
JMDO	Jabal Madar	13.29	235	P	Pn	02 03 48.4	-0.3
	SNR=18						
JMDO	Jabal Madar	13.29	235	P	Pn	02 03 48.4	-0.3
	SNR=18						
LATR	Latur	13.58	152	eP	Pn	02 03 53.7	+1.0
DMN	Daman	13.70	99	ePn	Pn	02 03 49.8	-4.5
DMN				eSn	Sn	02 06 19.2	-7.2
	comp=Z,367nm,0.7s						
BSY	Bisya	13.71	238	P	Pn	02 03 54.2	-0.2
	SNR=14						
BSY	Bisya	13.71	238	P	Pn	02 03 54.2	-0.2
	SNR=14						
KKN	Kakani	13.80	98	ePn	Pn	02 03 51.1	-4.5
KKN				eSn	Sn	02 06 20.8	-8.0
	comp=Z,489nm,0.7s						
KAD	Karad	13.81	162	ex	Pn	02 03 48.5	-7.3
KAD				AMb	AMB	02 04 10.7	
	comp=Z,80nm,1.6s						
AAA	Alma-Ata	13.88	22	i P	Pn	02 03 53.9	-2.7
AAA				pmax	pmax		
	comp=Z,1μm,2.4s						
AAA				MLR	MLR		
	comp=Z,13μm,15.0s						
PKI	Pulchoki	13.97	99	ePn	Pn	02 03 52.5	-5.4
PKI				eSn	Sn	02 06 25.7	-7.2
	comp=Z,704nm,0.8s						
GUN	Gumba	14.28	97	ePn	Pn	02 03 57.1	-5.1
GUN				eSn	Sn	02 06 32.4	-8.1
	comp=Z,1μm,0.8s						
JIRN	Jiri	14.61	97	ePn	Pn	02 04 01.8	-4.9
JIRN				eSn	Sn	02 06 40.0	-8.6
	comp=Z,786nm,1.0s						
RAMN	Ramite	15.16	100	ePn	Pn	02 04 08.2	-6.0
RAMN				eSn	Sn	02 06 53.7	-8.3
	comp=Z,471nm,0.7s						
HYB	Hyderabad	15.35	147	eP	Pn	02 04 16.5	-0.1
HYB				eS	Sn	02 07 08.0	+1.5
HYB				pmax	pmax		
	comp=Z,50nm,0.8s						
HYB	Hyderabad	15.35	147	i P	Pn	02 04 21.0	+4.4
	comp=Z,50nm,0.8s						
HYB				eS	Sn	02 07 13.0	+6.5
HYB				LR	LR	02 10 14.0	
	comp=Z,17nm,16.0s						
HYB	Hyderabad	15.35	147	eP	Pn	02 04 16.5	-0.1
	comp=Z,50nm,0.8s						
HYB				e		02 04 20.5	
HYB				eS	Sn	02 07 08.0	+1.5
HYB				e		02 10 14.0	
BOK	Bokaro	15.82	111	ex	Pn	02 04 17.7	-5.0
BOK				AMb	AMB	02 04 22.8	
	comp=Z,114nm,0.7s						
ODAN	Odare	15.86	99	ePn	Pn	02 04 18.4	-4.9
ODAN				eSn	Sn	02 07 10.2	-8.9
	comp=Z,292nm,0.7s						
TAPN	Taplejung	16.00	97	ePn	Pn	02 04 20.0	-5.0
TAPN				eSn	Sn	02 07 12.1	-10
	comp=Z,864nm,1.0s						
BWNR	Bhubaneshwar	17.70	122	ex	Pn	02 04 42.5	-4.0
BWNR				ex	x	02 07 50.8	
VIS	Vishakhapatnam	17.76	133	eP	Pn	02 04 45.1	-2.3
VIS				AMb	AMB	02 05 14.7	
	comp=Z,141nm,1.0s						
CAL	Calcutta	18.39	111	eP	Pn	02 04 54.7	-0.4
CAL				ex	x	02 05 00.1	
CAL				ex	x	02 07 50.7	
LSA	Lhasa	18.48	87	P	Pn	02 04 55.7	-0.4
LSA				XP	sP	02 05 11.0	+10
LSA				AMB	AMB		
	comp=Z,40nm,0.8s						
LSA				AMB	AMB		
	comp=Z,600nm,4.0s						
LSA				LR	LR		
	comp=N,6μm,11.0s						
LSA				LR	LR		
	comp=E,9μm,12.0s						
LSA				LR	LR		
	comp=Z,8μm,11.0s						
LSA	Lhasa	18.48	87	eP	Pn	02 04 56.4	+0.3
LSA				pmax	pmax		
	comp=Z,131nm,0.9s						
LSA	Lhasa	18.48	87	ePn	Pn	02 04 56.4	+0.3
	comp=Z,131nm,0.9s						
MK31	Makanchi Array	18.85	27	⇑P	Pn	02 04 58.5	-1.9
	comp=Z,108nm,0.8s,baz=199,slow=11,SNR=216						
MK31	Makanchi Array	18.85	27	i P	Pn	02 04 58.8	-1.6
MKAR	Makanchi Array	18.85	27	P	Pn	02 04 58.9	-1.5
	comp=Z,4.4nm,0.3s,baz=200,slow=10,SNR=64						
MKAR				LR	LR	02 13 16.5	
	comp=Z,6μm,21.6s,baz=216,slow=40						
MKAR	Makanchi Array	18.85	27	P	Pn	02 04 58.9	-1.5
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,6μm,21.6s						
UMR	Umm Al-Rimmam	19.15	273	eP	Pn	02 05 03.8	-0.4
	baz=272						
UMR				AMb	AMB	02 05 11.6	
	comp=Z,296nm,1.1s,baz=272						
KBD	Kabd	19.23	271	eP	Pn	02 05 04.4	-0.7
	baz=271						
KBD				AML	AML	02 05 14.0	
	comp=Z,115nm,0.9s,baz=271						
WMQ	Urumqi	19.37	42	P	Pn	02 05 05.8	-1.0
WMQ				AP	pP	02 05 10.5	+1.2
WMQ				XP	sP	02 05 14.5	+3.5
WMQ				PP		02 05 24.0	
WMQ				PPP		02 05 32.0	
WMQ				S	Sn	02 08 37.5	-6.3
WMQ				XS	sS	02 08 46.5	-3.5
WMQ				SCP	ScP	02 13 00.0	-2.9
WMQ				AMB	AMB		
	comp=Z,641nm,1.3s						
WMQ				AMB	AMB		
	comp=Z,2μm,3.7s						
WMQ				LR	LR		
	comp=N,16μm,18.0s						
WMQ				LR	LR		
	comp=E,6μm,11.6s						
WMQ				LR	LR		
	comp=Z,10μm,18.4s						
RDF	Al-Radifah	19.39	271	eP	Pn	02 05 06.4	-0.7
	baz=270						
RDF				AMb	AMB	02 05 13.7	
	comp=Z,161nm,0.8s,baz=270						
NAY	Al-Naaiem	19.61	272	eP	Pn	02 05 08.4	-1.2
	baz=272						
NAY				AMb	AMB	02 05 25.3	
	comp=Z,140nm,1.1s,baz=272						
AB31	Akbulak array	20.09	341	P	P	02 05 13.4	+0.1
	comp=Z,48nm,0.7s,baz=147,slow=12,SNR=704						
AB31	Akbulak array	20.09	341	i P	P	02 05 13.4	0.0
AB31				pmax	pmax		
	comp=Z,73nm,0.7s						
AB31	Akbulak array	20.09	341	⇑eP	P	02 05 13.4	0.0
SHL	Shillong	20.10	99	eP	P	02 05 12.5	-1.2
SHL				eS	S	02 08 59.5	+0.2
KURBB	Kurchatov Arra	21.05	16	⇑P	P	02 05 22.9	-0.9
	comp=Z,24nm,0.8s,mb4.6						
KURK	Kurchatov	21.16	16	P	P	02 05 24.0	-0.9
	comp=Z,832nm,0.7s,mb6.2,SNR=70						
KURK	Kurchatov	21.16	16	⇓P	P	02 05 24.3	-0.6
	comp=Z,116nm,0.8s,mb5.3						
KURK	Kurchatov	21.16	16	P	P	02 05 24.7	-0.3
	SNR=74						
KURK	Kurchatov	21.16	16	P	P	02 05 21.9	-3.1
	comp=Z,37nm,0.8s,mb4.8,baz=207,slow=9.0,SNR=48						
KURK				LR	LR	02 14 31.0	
	comp=Z,9μm,18.5s,MS5.2,baz=205,slow=40						
KURK	Kurchatov	21.16	16	⇑eP	P	02 05 23.9	-1.0
KURK				pmax	pmax		
	comp=Z,142nm,1.1s,mb5.2						
KURK				MLR	MLR		
	comp=Z,10μm,19.0s,MS5.2						
KURK	Kurchatov	21.16	16	ePn	P	02 05 23.6	-1.4
	comp=Z,103nm,0.8s,mb5.2						
KURK				LR	LR		
	comp=Z,11μm,19.0s,MS5.2						
KOD	Kodaikanal	21.47	159	eP	P	02 05 28.4	-0.2
KOD				AMb	AMB	02 05 38.1	
	comp=Z,74nm,0.5s,mb5.3						
MAK	Makhachkala	21.64	311	eP	P	02 05 31.1	+0.9
MAK				eS	S	02 09 28.0	-1.5
MAK				pmax	pmax		
	comp=Z,349nm,1.2s,mb5.7						
MAK				MLR	MLR		
	comp=Z,9μm,13.0s,MS5.3						
AKTK	Aktyubinsk	21.70	339	P	P	02 05 30.3	-0.5
AKTK				LR	LR	02 15 29.1	
AKTO	Aktyubinsk	21.70	339	⇑P	P	02 05 30.8	-0.1
	comp=Z,32nm,0.9s,mb4.7						
AKTO	Aktyubinsk	21.70	339	P	P	02 05 30.3	-0.5
	comp=Z,34nm,0.8s,mb4.8,baz=163,slow=9.7,SNR=55						
AKTO				LR	LR	02 15 29.1	
	comp=Z,5μm,18.3s,MS5.0,baz=150,slow=41						
AKTO	Aktyubinsk	21.70	339	P	P	02 05 30.2	-0.6
AKTO				pmax	pmax		
	comp=Z,33nm,1.0s,mb4.7						
BHD	Baghdad	21.73	284	ex	x	02 05 26.0	
BHD				ex	x	02 09 35.0	
IMP	Imphal	22.11	99	ex	P	02 05 39.0	+3.5
IMP				ex	x	02 06 13.0	
IMP				ex	x	02 09 45.0	
VOSK	Vostochnaya	22.13	2	⇓P	P	02 05 34.6	-0.8
	comp=Z,175nm,0.8s,mb5.6						
VOSK	Vostochnaya	22.13	2	P	P	02 05 35.5	+0.1
VOSK				pmax	pmax		
	comp=Z,229nm,0.8s,mb5.7						
BVA0	Borovoye Array	22.42	1	⇑P	P	02 05 38.1	-0.4
	comp=Z,35nm,0.8s,mb4.8,baz=167,slow=11,SNR=860						
BVA0	Borovoye Array	22.42	1	i P	P	02 05 38.0	-0.5
BVA0				pmax	pmax		
	comp=Z,35nm,0.9s,mb4.8						
BVAR	Borovoye Array	22.42	1	P	P	02 05 38.1	-0.4
	comp=Z,100nm,0.8s,mb5.3,baz=170,slow=11,SNR=57						
BVAR				LR	LR	02 15 29.5	
	comp=Z,4μm,21.0s,MS4.8,baz=186,slow=40						
BVAR	Borovoye Array	22.42	1	P	P	02 05 38.1	-0.4
BVAR				pmax	pmax		
	comp=Z,100nm,0.8s						
BVAR				MLR	MLR		
	comp=Z,4μm,21.0s						
BRVK	Borovoye	22.45	1	P	P	02 05 39.1	+0.3
	comp=Z,2μm,0.8s,mb6.6,SNR=56						
BRVK	Borovoye	22.45	1	P	P	02 05 38.6	-0.2
	SNR=169						
BRVK	Borovoye	22.45	1	eP	P	02 05 37.9	-0.9
BRVK				pmax	pmax		
	comp=Z,420nm,1.0s,mb5.8						
BRVK				MLR	MLR		
	comp=Z,4μm,20.0s,MS4.8						
BRVK	Borovoye	22.45	1	eP	P	02 05 37.9	-0.9
	comp=Z,420nm,1.0s,mb5.8						
BRVK				LR	LR		
	comp=Z,4μm,20.0s,MS4.8						
DGRG	David-gareji	22.47	306	P	P	02 05 40.7	+1.6
GNI	Garni	22.49	302	P	P	02 05 42.6	+3.2
	SNR=57						
GNI	Garni	22.49	302	P	P	02 05 42.6	+3.2
	SNR=57						
GNI	Garni	22.49	302	P	P	02 05 40.5	+1.1
	comp=Z,103nm,0.8s,mb5.3,baz=359,slow=3.1,SNR=46						
GNI				LR	LR	02 15 52.9	
	comp=Z,2μm,18.4s,MS4.7,baz=106,slow=41						
GNI	Garni	22.49	302	⇑eP	P	02 05 39.8	+0.4
GNI				pmax	pmax		
	comp=Z,277nm,1.2s						
GNI				MLR	MLR		
	comp=Z,2μm,18.0s						
GNI	Garni	22.49	302	eP	P	02 05 41.7	+2.3
	comp=Z,257nm,0.9s,mb5.7						
GNI				LR	LR		
	comp=Z,2μm,20.0s,MS4.6						

HAKT HAKKARI 22.67 295 *i* P P 02 05 43.4 +2.1
MTA Mtatsminda 22.96 306 P P 02 05 46.5 +2.2
TRD Trivandrum 22.96 162 *e*P P 02 05 44.9 +0.4
TRD AMb AMB 02 05 47.6
comp=Z,108nm,1.2s,mb5.2
MSL Mosul 22.97 292 *e*x x 02 05 42.0
MSL *e*x x 02 05 48.0
MSL *e*x x 02 09 51.0
MSL *e*x x 02 13 16.0
MSL *e*x x 02 14 23.0
TBLG Delisi 23.01 306 P P 02 05 46.5 +1.6
DYDN Diyadin 23.11 300 *i* P P 02 05 49.0 +3.1
ONI Oni 24.21 307 P P 02 05 56.7 +0.2
ONI S S 02 10 34.6 +20
HOMI Horasan 24.56 300 *i* P P 02 06 02.4 +2.7
ARTV Artvin 24.84 303 *i* P P 02 06 02.0 -0.3
BNGL BINGOL 24.90 297 *i* P P 02 06 06.8 +3.9
ERZM Erzurum 24.93 300 *i* P P 02 06 07.5 +4.4
MARD Mardin 24.93 293 *i* P P 02 06 02.0 -1.2
KIV Kislovodsk 25.24 309 P P 02 06 07.5 +1.6
comp=Z,330nm,0.9s,mb5.9,SNR=11
KIV Kislovodsk 25.24 309 P P 02 06 07.6 +1.7
SNR=9.3
KIV Kislovodsk 25.24 309 P P 02 06 07.6 +1.7
SNR=9.3
KIV Kislovodsk 25.24 309α*e*P P 02 06 06.3 +0.4
KIV *e**SP sP 02 06 17.1 +5.7
KIV *e* 02 06 37.2
KIV *e* 02 11 51.4
KIV pmax pmax
comp=Z,48nm,1.0s,mb5.0
KIV Kislovodsk 25.24 309 *e*P P 02 06 06.1 +0.3
comp=Z,38nm,0.7s,mb5.0
KIV LR LR
comp=Z,4µm,20.0s,MS4.9
PALK Pallekele 25.35 154 *e*P P 02 06 08.3 +1.3
comp=Z,58nm,1.3s,mb5.0
PALK LR LR
comp=Z,3µm,20.0s,MS4.8
ZAL Zalesovo 25.73 21 P P 02 06 10.2 0.0
ZAL pmax pmax
comp=Z,49nm,0.5s
ZAL MLR MLR
comp=Z,6µm,18.1s
ZALV Zalesovo Beam 25.74 21 P P 02 06 10.2 -0.1
comp=Z,49nm,0.5s,mb5.3,baz=218,slow=7.2,SNR=89
ZALV LR LR 02 17 22.5
comp=Z,6µm,18.1s,MS5.1,baz=218,slow=39
GTA Gaotai 26.01 62 P P 02 06 13.9 +1.0
GTA AP pP 02 06 21.4 +4.5
GTA XP sP 02 06 24.8 +6.3
GTA S S 02 10 44.5 +1.1
GTA SCP ScP 02 13 26.1 +5.8
GTA AMB AMB
comp=Z,53nm,1.1s,mb5.0
GTA AMB AMB
comp=Z,206nm,7.2s
GTA LR LR
comp=N,10µm,21.0s
GTA LR LR
comp=E,3µm,14.1s
GTA LR LR
comp=Z,3µm,18.0s,MS4.9
NVS Novosibirsk 26.07 18 *e*P P 02 06 15.1 +1.8
NVS pmax pmax
comp=Z,245nm,1.8s,mb5.4
NVS pmax pmax
comp=N,288nm,1.7s
NVS pmax pmax
comp=E,69nm,1.2s
MALT Malatya 26.91 295 *e*P P 02 06 21.5 +0.5
MALT pmax pmax
comp=Z,17nm,0.9s,mb4.6
MALT MLR MLR
comp=Z,2µm,20.0s,MS4.6
MALT Malatya 26.91 295 *e*P P 02 06 21.5 +0.5
comp=Z,17nm,0.9s,mb4.6
MALT LR LR
comp=Z,2µm,20.0s,MS4.6
ATAB Bozova 26.92 293 *i* P P 02 06 24.9 +3.7
SVE Sverdlovsk 27.00 349⇓*e*P P 02 06 22.5 +0.8
SVE *e* 02 17 05.5
SVE pmax pmax
comp=Z,113nm,1.3s,mb5.2
SVE MLR MLR
comp=Z,6µm,15.0s,MS5.3
ARU Arti 27.02 346 P P 02 06 22.5 +0.7
comp=Z,673nm,0.8s,mb6.2,SNR=15
ARU Arti 27.02 346*c* *i*P P 02 06 22.8 +1.0
ARU *e* 02 07 05.1
ARU *e* 02 09 43.2
ARU *e*S S 02 10 57.2 -1.6
ARU pmax pmax
comp=Z,149nm,1.2s,mb5.4
ARU MLR MLR
comp=Z,5µm,18.0s,MS5.1
ARU Arti 27.02 346 *e*P P 02 06 22.6 +0.8
comp=Z,121nm,1.0s,mb5.4
ARU LR LR
comp=Z,4µm,20.0s,MS5.0
GZT Gaziantep 27.49 293 *i* P P 02 06 27.3 +1.1
ASF Jabal al Asfar 28.08 282 P P 02 06 32.6 +0.9
comp=Z,6.7nm,1.0s,mb4.2,baz=294,slow=2.5,SNR=6.2
ASF LR LR 02 19 36.8
comp=Z,3µm,18.3s,MS4.9,baz=315,slow=41
ASF Jabal al Asfar 28.08 282 P P 02 06 32.6 +1.0
ASF pmax pmax
comp=Z,7.0nm,1.0s
ASF MLR MLR
comp=Z,3µm,18.3s
CHG Chiang Mai 28.86 107 ⇑P P 02 06 37.9 -0.8
comp=Z,56nm,0.8s,mb5.3
CHTO Chiang Mai 28.86 107 P P 02 06 38.1 -0.5
SNR=21
CHTO Chiang Mai 28.86 107 P P 02 06 38.1 -0.5
SNR=21
CHTO Chiang Mai 28.86 107 *e*P P 02 06 37.9 -0.8
CHTO pmax pmax
comp=Z,45nm,0.8s,mb5.2
CHTO MLR MLR
comp=Z,1µm,19.0s,MS4.6
CHTO Chiang Mai 28.86 107 *e*P P 02 06 37.9 -0.8
comp=Z,45nm,0.8s,mb5.2
CHTO LR LR
comp=Z,1µm,19.0s,MS4.6
LZH Lanzhou 28.86 70 ⇑P P 02 06 40.0 +1.5
LZH AP pP 02 06 45.3 +2.8
LZH XP sP 02 06 47.3 +3.2
LZH PP PP 02 07 34.4 -9.3
LZH S S 02 11 28.0 -0.4
LZH XS sS 02 11 37.1 +2.2
LZH AMB AMB
comp=Z,42nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,250nm,4.0s
LZH LR LR
comp=N,5µm,13.8s
LZH LR LR
comp=Z,6µm,15.4s,MS5.3
CMAR Chiang Mai Arr 29.04 108 P P 02 06 40.1 -0.1
comp=Z,15nm,0.7s,mb4.8,baz=293,slow=10,SNR=32
CMAR LR LR 02 18 26.5
comp=Z,2µm,20.3s,MS4.6,baz=297,slow=37
CMAR Chiang Mai Arr 29.04 108 P P 02 06 40.2 0.0
CMAR pmax pmax
comp=Z,15nm,0.7s
CMAR MLR MLR
comp=Z,2µm,20.3s
CHRT Chiangrai 29.06 104 ⇓P P 02 06 40.5 +0.1
comp=Z,132nm,1.0s,mb5.6
ANN Anapa 29.06 308 *e*P P 02 06 38.8 -1.4
ANN MLR MLR
comp=N,3µm,15.0s,MS5.2
ANN MLR MLR
comp=E,3µm,15.0s,MS5.2
ANN MLR MLR
comp=Z,3µm,15.0s,MS5.1
CD2 Chengdu 29.12 81 P P 02 06 41.2 +0.4
CD2 AP pP 02 06 47.2 +2.4
CD2 XP sP 02 06 49.4 +3.0
CD2 PP PP 02 07 35.7 -11
CD2 PCP PcP 02 09 49.8 +1.2
CD2 S S 02 11 29.9 -2.6
CD2 XS sS 02 11 39.5 +0.5
CD2 PCS PcS 02 13 31.2 -0.2
CD2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
CD2 AMB AMB
comp=Z,130nm,4.3s
CD2 LR LR
comp=N,10µm,13.2s,MS5.6
CD2 LR LR
comp=E,4µm,18.0s,MS5.6
CD2 LR LR
comp=Z,5µm,12.0s
MMAI Mount Meron Ar 29.27 284 P P 02 06 43.2 +1.1
comp=Z,12nm,0.8s,mb4.6,baz=85,slow=12,SNR=6.6
MMAI PcP PcP 02 09 50.1 +1.2
comp=Z,4.1nm,0.6s,baz=74,slow=7.0,SNR=6.0
MMAI LR LR 02 20 13.5
comp=Z,5µm,18.5s,MS5.1,baz=75,slow=40
VRHR Novokhopersk 29.27 322 *e*P P 02 06 41.6 -0.4
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=Z,90nm,0.7s,mb5.6
VRHR pmax pmax
comp=E,30nm,0.8s
VRHR MLR MLR
comp=Z,4µm,17.0s,MS5.2
VRHR MLR MLR
comp=N,2µm,18.0s,MS5.0
VRHR MLR MLR
comp=E,3µm,18.0s,MS5.0
KMI Kunming 29.55 92 P P 02 06 45.4 +0.6
KMI AP pP 02 06 51.1 +2.4
KMI XP sP 02 06 53.5 +3.1
KMI PP PP 02 07 39.2 -12
KMI PPP 02 07 56.0
KMI S S 02 11 39.1 -0.4
KMI XS sS 02 11 48.7 +2.7
KMI AMB AMB
comp=Z,29nm,0.8s,mb5.1
KMI AMB AMB
comp=Z,147nm,3.1s
KMI LR LR
comp=N,6µm,19.6s,MS5.3
KMI LR LR
comp=E,2µm,19.1s,MS5.3
KMI LR LR
comp=Z,3µm,14.8s,MS5.0
KRAR Krasnoyarsk 30.17 26 *e*P P 02 06 48.5 -1.4
NANT Nan 30.32 106 ⇑P P 02 06 52.7 +1.1
comp=Z,238nm,0.9s,mb5.9
VRSR Storozhevoye 30.64 321 *e*P P 02 06 52.8 -1.3
VRSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=E,20nm,0.8s
VRSR MLR MLR
comp=Z,910nm,14.0s,MS4.6
VRSR MLR MLR
comp=N,1µm,16.0s,MS4.9
VRSR MLR MLR
comp=E,2µm,17.0s,MS4.9
CSS Prodhromos 30.87 288 *e*P P 02 06 57.3 +1.0
comp=E,18nm,0.8s,mb5.0
CSS LR LR
comp=Z,5µm,20.0s,MS5.2
MOY Mondy 31.17 39 *e*P P 02 07 00.8 +2.0
MOY pmax pmax
comp=Z,146nm,1.9s,mb5.5
SIM Simferopol’ 31.37 307 *e*P P 02 07 03.0 +2.4
SIM S S 02 12 05.0 -2.5
SIM pmax pmax
comp=Z,29nm,1.0s,mb5.1
ANTO Ankara 31.43 297 *e*P P 02 07 01.9 +0.7
ANTO pmax pmax
comp=Z,11nm,0.8s,mb4.7
ANTO MLR MLR
comp=Z,2µm,19.0s,MS4.8
ANTO Ankara 31.43 297 *e*P P 02 07 01.9 +0.7
comp=Z,11nm,0.8s,mb4.7
ANTO LR LR
comp=Z,2µm,19.0s,MS4.8
NST Nakhon Sawan 31.47 111 P P 02 07 04.0 +2.3
ZAK Zakamensk 31.84 42 *e*P P 02 07 06.6 +1.9
ZAK *e* 02 08 16.3
ZAK pmax pmax
comp=Z,19nm,1.5s,mb4.7
GYA Guiyang 32.55 88⇓*i*P P 02 07 11.4 +0.2
GYA AP pP 02 07 19.6 +4.4
GYA XP sP 02 07 24.0 +7.2
GYA PCP PcP 02 10 01.0 +3.3
GYA S S 02 12 24.4 -1.9
GYA XS sS 02 12 37.6 +4.7
GYA SCP ScP 02 13 41.9 +0.6
GYA SCS ScS 02 17 39.2 -1.7
GYA AMB AMB
comp=Z,20nm,0.9s,mb5.0
GYA AMB AMB
comp=Z,200nm,4.0s
GYA LR LR
comp=N,4µm,15.5s,MS5.3
GYA LR LR
comp=E,3µm,16.7s,MS5.3
GYA LR LR
comp=Z,2µm,16.1s,MS4.9
TLY Talaya 32.63 40 P P 02 07 14.2 +2.6
comp=Z,348nm,0.8s,mb6.3,SNR=16
TLY Talaya 32.63 40 P P 02 07 14.2 +2.7
SNR=26
TLY Talaya 32.63 40 *e*P P 02 07 14.0 +2.4
TLY *e*S S 02 12 29.8 +2.8
TLY pmax pmax
comp=Z,60nm,0.9s,mb5.5
TLY MLR MLR
comp=Z,8µm,19.0s,MS5.4
TLY Talaya 32.63 40 *e*P P 02 07 13.4 +1.8
comp=Z,40nm,0.8s,mb5.4
TLY LR LR
comp=Z,8µm,19.0s,MS5.4
SONM Songino Array 32.79 48 P P 02 07 13.7 +0.7
comp=Z,32nm,0.8s,mb5.3,baz=249,slow=8.7,SNR=56
SONM LR LR 02 23 03.8
comp=Z,7µm,18.9s,MS5.4,baz=251,slow=41
SONM Songino Array 32.79 48 P P 02 07 13.7 +0.7
SONM pmax pmax
comp=Z,32nm,0.8s
SONM MLR MLR
comp=Z,7µm,18.9s
XAN Xi’an 33.10 74 P P 02 07 15.6 -0.3
XAN AP pP 02 07 21.6 +1.7
XAN XP sP 02 07 24.5 +3.0
XAN PP PP 02 08 23.7 -7.0
XAN S S 02 12 28.2 -6.5
XAN SS SS 02 14 23.4 -34
XAN AMB AMB
comp=Z,25nm,0.8s,mb5.2
XAN AMB AMB
comp=Z,52nm,4.6s
XAN LR LR
comp=N,6µm,20.7s,MS5.3
XAN LR LR
comp=E,3µm,20.0s,MS5.3
XAN LR LR
comp=Z,4µm,18.6s,MS5.2
ISP Isparta 33.11 293 PFAKE 02 07 30.0 +14
ISP LR LR
comp=Z,4µm,20.0s,MS5.1
ULN Ulaanbaatar 33.22 48 P P 02 07 18.7 +1.9
SNR=18
ULN Ulaanbaatar 33.22 48 P P 02 07 18.7 +1.9
SNR=18
ULN Ulaanbaatar 33.22 48⇑*e*P P 02 07 18.6 +1.8
ULN Ulaanbaatar 33.22 48 *e*P P 02 07 18.7 +1.9
comp=Z,28nm,1.0s,mb5.2
ULN LR LR
comp=Z,3µm,22.0s,MS4.9
IRK Irkutsk 33.23 39 *e*P P 02 07 18.6 +1.8
IRK *e* 02 08 27.8
IRK pmax pmax
comp=Z,244nm,2.0s,mb5.8
KKTK Khon Kaen 33.30 108 P P 02 07 17.6 -0.2
comp=Z,617nm,0.6s
MOS Moscow 33.87 327 *e*P P 02 07 22.7 +0.4
MOS *e* 02 08 36.7
MOS *e*PPP 02 08 49.6
MOS *e* 02 09 59.3
MOS *e*S S 02 12 43.6 -2.5
MOS pmax pmax
comp=Z,100nm,1.4s,mb5.5
MOS pmax pmax
comp=Z,200µm,1.6s
MOS MLR MLR
comp=Z,4µm,14.0s,MS5.3
BTO Baotou 33.94 62 *e*P P 02 07 24.4 +1.3
OBN Obninsk 34.02 326⇑*e*P P 02 07 23.4 -0.3
OBN *e* 02 07 35.3
OBN *e* 02 08 41.9
OBN S S 02 12 51.0 +2.5
OBN pmax pmax
comp=Z,55nm,0.8s,mb5.5
OBN MLR MLR
comp=Z,5µm,18.0s,MS5.3
OBN Obninsk 34.02 326 *e*P P 02 07 23.2 -0.5
comp=Z,42nm,0.6s,mb5.5
OBN LR LR
comp=Z,6µm,19.0s,MS5.3
ENH Enshi 34.09 80 PFAKE 02 07 40.0 +15
ENH LR LR
comp=Z,3.0nm,21.0s
TLCR 35.09 306⇓*i*P P 02 07 33.4 +0.4
TLCR 35.09 306 P P 02 07 33.4 +0.4
HHC Hu-ho-hao-te 35.12 61 *e*P P 02 07 33.8 +0.4
HHC AP pP 02 07 37.1 -0.3
HHC PP PP 02 08 52.0 -1.0
HHC PCP PcP 02 10 06.4 +1.6
HHC S S 02 13 04.7 -1.2
HHC XS sS 02 13 10.3 -2.2
HHC SCP ScP 02 13 50.0 -0.1
HHC SCS ScS 02 17 52.0 -2.0
HHC AMB AMB
comp=Z,11nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,208nm,5.4s
HHC LR LR
comp=N,3µm,15.3s,MS5.2
HHC LR LR
comp=E,2µm,15.6s,MS5.2
HHC LR LR
comp=Z,3µm,15.0s,MS5.1
TIRR Tirgusor 35.25 305⇓*i*P P 02 07 34.2 -0.2
TIRR Tirgusor 35.25 305 *e*P P 02 07 34.3 -0.1
comp=Z,16nm,0.6s,mb5.1
KIS Kishinev 35.45 309 *e*P P 02 07 36.0 -0.1
KIS *e*S S 02 13 07.0 -3.7
KIS Kishinev 35.45 309 *e*PP PP 02 08 45.0 -11
KIS *e*S S 02 13 07.0 -3.7
KIS *e*SSS 02 16 19.0
KIS *e*L 02 20 48.0
KIS LRM 02 28 22.0
comp=Z,2µm,16.0s
HARR Harsova 35.62 305⇓*i*P P 02 07 38.1 +0.5
HARR Harsova 35.62 305 ⇓P P 02 07 38.1 +0.4
TIY Taiyuan 35.74 67 *e*P P 02 07 42.6 +3.8
TIY S S 02 13 20.3 +4.8
TIY PCS PcS 02 13 54.5 +0.6
TIY AMB AMB
comp=Z,159nm,3.0s
TIY LR LR
comp=N,2µm,11.4s,MS5.2
TIY LR LR
comp=E,1µm,10.1s,MS5.2
TIY LR LR
comp=Z,1µm,13.8s,MS4.9
KARP Karpathos 35.87 289 PN P 02 07 40.9 +1.0
SMG Samos 36.02 293 PN P 02 07 43.5 +2.4
AKASG Malin Array Be 36.17 315 P P 02 07 41.5 -0.7
comp=Z,46nm,0.7s,mb5.5,baz=99,slow=7.1,SNR=45
AKASG LR LR 02 25 44.1
comp=Z,3µm,20.2s,MS5.0,baz=100,slow=42
AKASG Malin Array Be 36.17 315 P P 02 07 41.6 -0.7
AKASG pmax pmax
comp=Z,46nm,0.7s
AKASG MLR MLR
comp=Z,3µm,20.2s
VRI Vrincioaia 36.65 307⇓*i*P P 02 07 46.6 +0.2
VRI Vrincioaia 36.65 307 P P 02 07 47.8 +1.4
PLOR Plostina 36.70 307⇓*i*P P 02 07 47.7 +0.9
SZH Strazhica 36.88 302 *i* P P 02 07 48.3 -0.1
RDO Rodhopi 37.04 299 PN P 02 07 51.7 +1.9
MLR Muntele Rosu 37.13 306⇑*i*P P 02 07 51.9 +1.4
MLR Muntele Rosu 37.13 306 P P 02 07 52.0 +1.5
SANT Santorini 37.19 291 *e*P P 02 07 50.6 -0.5
SANT LR LR
comp=Z,1µm,20.0s,MS4.7
MSEY Mahe Island 37.65 204 PFAKE 02 08 10.0 +15
MSEY LR LR
comp=Z,1µm,21.0s,MS4.6
RZN Rozhen 37.68 300 *i* P P 02 07 55.6 +0.4
IDI Anoyia 37.74 289 P P 02 07 56.2 +0.3
comp=Z,12nm,0.6s,mb4.8,baz=62,slow=12,SNR=5.1
VOIR 37.75 306 ⇑P P 02 07 56.4 +0.6
VOIR 37.75 306⇑*i*P P 02 07 56.3 +0.5
VOIR 37.75 306 P P 02 07 56.6 +0.8
QIZ Qiongzhong 37.94 98 P P 02 07 57.1 -0.5
QIZ AP pP 02 08 05.4 +3.8
QIZ S S 02 13 47.3 -1.9
QIZ XS sS 02 14 01.8 +6.0
QIZ AMB AMB
comp=Z,30nm,1.6s,mb4.8
QIZ LR LR
comp=N,2µm,20.4s,MS5.0
QIZ LR LR
comp=E,1µm,21.7s,MS5.0
QIZ LR LR
comp=Z,1µm,19.3s,MS4.8
QIZ Qiongzhong 37.94 98 *e*P P 02 07 59.4 +1.8
comp=Z,25nm,0.8s,mb5.0
QIZ LR LR
comp=Z,1µm,19.0s,MS4.8
BURAR Bucovina Array 37.97 309⇑*i*P P 02 07 57.8 +0.2
BURAR Bucovina Array 37.97 309 ⇑P P 02 07 57.8 +0.2
BUR08 Bucovina Ar. S 37.98 310 *e*P P 02 07 57.2 -0.5
WHN Wuhan 38.16 78 ⇓P P 02 08 00.5 +1.1
WHN S S 02 13 53.0 +0.5
WHN LR LR
comp=N,8µm,12.0s,MS5.8
WHN LR LR
comp=E,2µm,11.0s,MS5.8
MNK Minsk 38.26 321 *e*P P 02 07 57.0 -2.9
VAM Vamos 38.29 290 PN P 02 08 01.3 +0.8
NVR Nevrokopi 38.31 299 PB P 02 08 02.6 +2.1
CIT Chita 38.46 43 *e*P P 02 07 58.9 -2.7
CIT pmax pmax
comp=Z,235nm,2.2s,mb5.5
BJT Baijiatuau 38.62 63 *e*P P 02 08 04.8 +1.7
BJT pmax pmax
comp=Z,53nm,0.6s
BJT MLR MLR
comp=Z,3µm,21.0s
BJT Baijiatuau 38.62 63 *e*P P 02 08 04.8 +1.7
comp=Z,53nm,0.6s,mb5.5
BJT LR LR
comp=Z,3µm,21.0s,MS5.1
BJI Beijing 38.62 63 P P 02 08 04.8 +1.6
BJI AP pP 02 08 09.3 +2.1
BJI XP sP 02 08 11.9 +3.1
BJI S S 02 13 53.4 -5.8
BJI XS sS 02 14 08.8 +3.0
BJI AMB AMB
comp=Z,26nm,0.9s,mb5.0
BJI LR LR
comp=N,7µm,19.4s,MS5.5
BJI LR LR
comp=E,2µm,18.4s,MS5.5
BJI LR LR
comp=Z,2µm,31.7s
VTS Vitosha 38.83 301 *i* P P 02 08 06.3 +1.4
LVV L’vov 39.16 313 *e*P P 02 08 08.0 +0.4
LVV *e* 02 09 41.8
LVV *e*PPP 02 10 06.8
LVV *e*S S 02 14 07.6 +0.5
LVV *e*SS SS 02 16 50.0 -10
VLI Veliai 39.19 292 PN P 02 08 03.5 -4.5
VAY Valandovo 39.28 299 *e*P P 02 08 02.9 -5.8
PUL Pulkovo 39.33 329 *e*P P 02 08 07.7 -1.1
GZH Guangzhou 39.37 90 P P 02 08 09.9 +0.3
GZH S S 02 14 09.5 -1.3
GZH LR LR
comp=N,3µm,16.3s,MS5.3
GZH LR LR

comp=E,1µm,13.6s,MS5.3
GZH LR LR

comp=Z,2µm,18.8s
DRGR 39.53 308 ⇓*i* P **P** **02 08 11.2 +0.5**
DRGR 39.53 308 P **P** **02 08 12.1 +1.4**
TIA **Tai'an** 39.59 69 P **P** **02 08 12.7 +1.4**
TIA S **S** **02 14 16.0 +2.1**
TIA AMB AMB

comp=Z,137nm,0.9s,mb5.7
TIA LR LR

comp=N,1µm,12.0s,MS5.2
TIA LR LR

comp=E,2µm,14.0s,MS5.2
THL **Klokotos Trika** 39.73 296 PB **P** **02 08 13.5 +1.0**
ITM **Ithomi** 39.95 293 PB **P** **02 08 16.3 +2.0**
KWP **Kalwaria** 39.97 312 *eP* **P** **02 08 14.9 +0.6**
KWP **Kalwaria** 39.97 312 ⇓*iP* **P** **02 08 15.0 +0.7**
KWP **Kalwaria** 39.97 312 *eP* **P** **02 08 14.9 +0.6**
UZH **Uzhgorod** 40.07 311 ⇓*iP* **P** **02 08 15.3 +0.1**
UZH *i* 02 08 27.3
UZH *eS* **S** **02 14 20.0 -0.8**
KOLS **Kolonicke sedl** 40.13 311 *eP* **P** **02 08 14.8 -0.9**
KOLS *e* 02 08 29.6
BZS **Buzias** 40.17 306 ⇓*iP* **P** **02 08 16.4 +0.4**
BZS **Buzias** 40.17 306 P **P** **02 08 16.9 +0.9**
VSU **Vasula** 40.37 326 *eP* **P** **02 08 17.1 -0.4**
JOF **Joensuu** 40.62 334 *ep* **P** **02 08 17.9 -1.6**
comp=E,60nm,0.7s,mb5.3
JOF **Joensuu** 40.62 334 *ep* **P** **02 08 17.9 -1.6**
comp=E,60nm,0.7s,mb5.3
JAN **Janina** 40.63 297 PN **P** **02 08 19.5 -0.4**
CRVS **Cervenica-Dubn** 40.66 311 *eP* **P** **02 08 20.0 0.0**
BOD **Bodaibo** 40.66 35 *eP* **P** **02 08 20.6 +0.7**
BOD pmax pmax

comp=Z,24nm,1.8s,mb4.5
SUW **Suwalki** 40.69 319 *eP* **P** **02 08 20.1 -0.1**
SUW **Suwalki** 40.69 319 *eP* **P** **02 08 20.1 -0.1**
STHS **Stebnicka Huta** 40.87 312 *eP* **P** **02 08 22.6 +0.8**
STHS pmax pmax

comp=Z,9.0nm,0.8s,mb4.5
STHS **Stebnicka Huta** 40.87 312 *eP* **P** **02 08 22.6 +0.8**
STHS **Stebnicka Huta** 40.87 312 *eP* **P** **02 08 22.6 +0.8**
comp=Z,8.5nm,0.8s,mb4.4
KECS **Kecovo** 41.24 310 *eP* **P** **02 08 25.3 +0.5**
KECS pmax pmax

comp=Z,11nm,0.7s,mb4.6
KECS **Kecovo** 41.24 310 *eP* **P** **02 08 25.3 +0.5**
comp=Z,11nm,0.7s,mb4.6
NIE **Niedzica** 41.48 311 *eP* **P** **02 08 28.5 +1.8**
PSZ **Piszkesteto** 41.57 309 ⇓*eP* **P** **02 08 28.4 +0.9**
PSZ **Piszkesteto** 41.57 309 ⇑*iP* **P** **02 08 28.5 +1.0**
PSZ **Piszkesteto** 41.57 309 *eP* **P** **02 08 27.7 +0.2**
comp=Z,36nm,0.8s,mb5.0
PSZ LR LR

comp=Z,730nm,19.0s,MS4.6
HIA **Hailar** 41.74 49 *eP* **P** **02 08 28.9 0.0**
HIA **Hailar** 41.74 49 *eP* **P** **02 08 30.9 +2.0**
comp=Z,43nm,0.9s,mb5.1
HIA LR LR

comp=Z,5µm,19.0s,MS5.4
OJC **Ojcow** 41.92 313 *eP* **P** **02 08 30.5 +0.1**
BUD **Budapest** 42.11 308 *eP* **P** **02 08 35.8 +3.8**
KAF **Kangasniemi** 42.18 331 *ep* **P** **02 08 31.5 -0.9**
comp=Z,57nm,0.6s,mb5.4,baz=117,slow=8.1
KAF **Kangasniemi** 42.18 331 *ep* **P** **02 08 31.5 -0.9**
comp=Z,57nm,0.6s,mb5.4,baz=117,slow=8.1
PKSM **Moragy** 42.28 306 ⇓*iP* **P** **02 08 35.4 +2.0**
PKSM **Moragy** 42.28 306 ⇓P **P** **02 08 35.4 +2.1**
VYHS **Vyhne** 42.33 310 *eP* **P** **02 08 33.7 0.0**
VYHS pmax pmax

comp=Z,5.0nm,0.9s,mb4.1
VYHS **Vyhne** 42.33 310 *eP* **P** **02 08 33.7 0.0**
comp=Z,4.8nm,0.9s,mb4.1
KOLL **Kolacno** 42.62 310 *eP* **P** **02 08 36.1 0.0**
KOLL *e* pP 02 08 38.3 -1.9
KOLL *es*P sP 02 08 50.6 +8.8
LVZ **Lovozero** 42.65 341 ⇑*eP* **P** **02 08 36.4 +0.3**
LVZ pmax pmax

comp=Z,38nm,1.3s,mb5.0
LVZ MLR MLR

comp=Z,3µm,21.0s,MS5.2
LVZ **Lovozero** 42.65 341 ⇑*eP* **P** **02 08 36.5 +0.4**
LVZ LR LR

comp=Z,3µm,20.0s,MS5.2
DL2 **Dalian** 42.89 64 P **P** **02 08 39.7 +1.2**
DL2 S **S** **02 15 03.3 +0.4**
DL2 AMB AMB

comp=Z,40nm,0.8s,mb5.2
DL2 LR LR

comp=N,1µm,16.2s,MS5.0
DL2 LR LR

comp=E,990nm,16.0s,MS5.0
DL2 LR LR

comp=Z,1µm,16.3s,MS4.9
OKC **Ostrava-Krasne** 42.93 312 *eP* **P** **02 08 38.4 -0.2**
OKC AMS AMS 02 30 30.0

comp=Z,1µm,19.1s
QZH **Quanzhou** 43.27 85 P **P** **02 08 39.6 -2.1**
QZH S **S** **02 15 06.0 -2.7**
QZH LR LR

comp=N,8µm,15.4s,MS5.8
QZH LR LR

comp=E,2µm,10.4s,MS5.8
QZH LR LR

comp=Z,4µm,17.6s
MORC **Moravsky Berou** 43.31 312 ⇑*iP* **P** **02 08 42.5 +0.8**
MORC **Moravsky Berou** 43.31 312 *eP* **P** **02 08 41.7 0.0**
comp=Z,39nm,0.6s,mb5.3
MODS **Modra-Piesok** 43.35 310 *eP* **P** **02 08 42.8 +0.8**
MODS *es*P sP 02 08 56.2 +8.5
ZST **Bratislava** 43.46 309 *eP* **P** **02 08 43.1 +0.2**
ZST *es*P sP 02 08 57.4 +8.9
ZST **Bratislava** 43.46 309 *eP* **P** **02 08 43.1 +0.2**
comp=Z,29nm,0.9s,mb5.0
ZST *e* 02 08 57.4
ZST LR LR

comp=Z,800nm,13.4s,MS4.8
SSE **Sheshan** 43.78 76 P **P** **02 08 44.8 -1.0**
SSE AMB AMB

comp=Z,35nm,0.7s,mb5.2
SSE AMB AMB

comp=Z,104nm,8.3s
TIP **Timpagrande** 43.82 296 *eP* **P** **02 08 45.8 -0.2**
comp=Z,30nm,1.3s,mb4.9
TIP LR LR

comp=Z,972nm,20.0s,MS4.7
VRAC **Vranov** 43.88 311 LR LR 02 30 27.0
comp=Z,1µm,20.4s,MS4.8,baz=192,slow=41
VRAC **Vranov** 43.88 311 ⇓*iP* **P** **02 08 48.5 +2.2**
VRAC **Vranov** 43.88 311 ⇓P **P** **02 08 48.5 +2.2**
KOGS **Kog** 43.95 307 *eP* **P** **02 08 46.6 -0.3**
GKP **Gorka Klasztor** 43.98 317 *eP* **P** **02 08 47.3 +0.3**
GKP **Gorka Klasztor** 43.98 317 *eP* **P** **02 08 47.3 +0.3**
DPC **Dobruska-Polom** 44.15 312 *eP* **P** **02 08 48.7 +0.3**
DPC AMS AMS 02 30 20.0

comp=Z,1µm,17.3s
SNY **Shenyang** 44.17 60 ⇑P **P** **02 08 50.4 +1.7**
SNY AP pP 02 08 55.6 +2.9
SNY XP sP 02 09 00.2 +5.9
SNY PP PP 02 10 33.6 +2.1
SNY S **S** **02 15 21.3 -0.1**
SNY XS sS 02 15 32.7 +4.6
SNY AMB AMB

comp=Z,20nm,0.8s,mb4.9
SNY AMB AMB

comp=Z,254nm,4.2s
SNY LR LR

comp=N,3µm,15.7s
SNY LR LR

comp=E,1µm,28.4s
SNY LR LR

comp=Z,2µm,18.1s,MS5.0
KMBO **Kilima Mbogo** 44.21 230 P **P** **02 08 50.1 +0.8**
comp=Z,3.2nm,0.7s,mb4.2,baz=28,slow=7.9,SNR=6.7
KMBO LR LR 02 29 28.8
comp=Z,793nm,18.4s,MS4.7,baz=183,slow=39
KMBO **Kilima Mbogo** 44.21 230 P **P** **02 08 50.1 +0.8**
KMBO pmax pmax

comp=Z,3.0nm,0.7s
KMBO MLR MLR

comp=Z,793nm,18.4s
KMBO **Kilima Mbogo** 44.21 230 *eP* **P** **02 08 50.7 +1.4**
comp=Z,12nm,1.0s,mb4.6
KMBO LR LR

comp=Z,1µm,22.0s,MS4.8
KSP **Ksiaz** 44.22 313 *eP* **P** **02 08 49.3 +0.3**
KSP **Ksiaz** 44.22 313 *eP* **P** **02 08 49.2 +0.2**
KSP *eS* **S** **02 15 20.0 -2.0**
KSP LR LR

comp=Z,3µm,22.7s,MS5.1
CONA **Conrad Observa** 44.27 309 ⇓*iP* **P** **02 08 48.6 -0.8**
comp=Z,13nm,0.9s,mb4.7,SNR=6.3
UPC **Upice** 44.36 313 *eP* **P** **02 08 50.2 +0.1**
ARSA **Arzberg** 44.47 308 *iP* **P** **02 08 51.0 0.0**
comp=Z,37nm,0.9s,mb5.1,SNR=20
RGNG **Rignano Grg** 44.51 300 P **P** **02 08 53.1 +1.6**
TREC **Trest** 44.60 311 *eP* **P** **02 08 51.8 -0.2**
TREC AMS AMS 02 33 10.0

comp=Z,1µm,14.9s
FG4 **Candela** 44.60 299 P **P** **02 08 51.7 -0.5**
BOJS **Bojanci** 44.63 305 *eP* **P** **02 08 53.9 +1.6**
PERS **Pernice** 44.73 307 *eP* **P** **02 08 53.0 -0.1**
FG5 **Orsara di Pugl** 44.78 299 P **P** **02 08 56.0 +2.4**
FG5 pmax pmax

comp=Z,56nm,1.0s,mb5.3
FG5 **Orsara di Pugl** 44.78 299 P **P** **02 08 56.0 +2.4**
comp=Z,56nm,1.0s,mb5.3
SOKA **Sooth** 44.79 307 ⇑*iP* **P** **02 08 53.7 +0.1**
comp=Z,15nm,0.9s,mb4.8
SGO **Sicignano** 44.81 298 P **P** **02 08 54.9 +1.1**
SGO pmax pmax

comp=Z,13nm,0.6s,mb4.9
SGO **Sicignano** 44.81 298 P **P** **02 08 54.9 +1.1**
comp=Z,13nm,0.6s,mb4.9
PDKS **Podkum** 44.81 306 *eP* **P** **02 08 53.6 -0.2**
LJU **Ljubljana** 45.14 306 *eP* **P** **02 08 58.2 +1.8**
LJU *e* 02 15 34.5
CEY **Cerknica** 45.21 306 *eP* **P** **02 08 56.7 -0.3**
PRU **Pruhonice** 45.26 312 *eP* **P** **02 08 57.8 +0.5**
PRU AMS AMS 02 31 50.0

comp=Z,1µm,15.8s
PVCC **Panska Ves** 45.28 312 *eP* **P** **02 08 58.6 +1.1**
PVCC AMS AMS 02 32 50.0

comp=Z,2µm,13.5s
MOA **Molln** 45.34 309 ⇓*iP* **P** **02 08 57.3 -0.6**
comp=Z,39nm,0.8s,mb5.3,SNR=12
CN2 **Changchun** 45.44 57 ⇑P **P** **02 09 00.1 +1.3**
CN2 *eAP* pP 02 09 06.5 +3.6
CN2 *eS* **S** **02 15 39.6 -0.3**
CN2 AMB AMB

comp=Z,10.0nm,0.8s,mb4.7
CN2 AMB AMB

comp=Z,30nm,4.0s
CN2 LR LR

comp=N,2µm,16.0s,MS5.3
CN2 LR LR

comp=E,2µm,16.0s,MS5.3
CN2 LR LR

comp=Z,2µm,17.0s,MS5.1
MIDA **Miranda** 45.51 300 P **P** **02 09 00.2 +0.8**
comp=Z,70nm,1.5s,mb5.4
VOY **Vojsko** 45.58 306 *e*(P) **P** **02 09 00.8 +0.9**
VOY *e* 02 09 17.4
BRG **Berggiesshubel** 45.71 313 *eP* **P** **02 09 01.3 +0.5**
BRG 02 10 50.0
BRG S **S** **02 15 48.0 +4.5**
BRG pmax pmax

comp=Z,8.0nm,0.8s,mb4.7
BRG pmax pmax

comp=Z,57nm,2.5s,mb5.1
BRG MLR MLR

comp=N,720nm,14.2s,MS4.9
BRG MLR MLR

comp=E,598nm,13.0s,MS4.9
BRG MLR MLR

comp=Z,951nm,17.3s,MS4.8
BRG **Berggiesshubel** 45.71 313 *eP* **P** **02 09 01.1 +0.3**
comp=Z,26nm,0.8s,mb5.2
BRG *eS* **S** **02 15 47.3 +3.8**
BRG **Berggiesshubel** 45.71 313 *eP* **P** **02 09 01.3 +0.5**
comp=Z,13nm,0.8s,mb4.9
BRG *i* pP 02 09 03.2 -1.6

comp=Z,26nm,0.8s
BRG PP PP 02 10 50.0 +2.2

comp=Z,95nm,2.5s
BRG S **S** **02 15 48.0 +4.5**
BRG

comp=N,1µm,14.2s
BRG

comp=E,999nm,13.0s
BRG

comp=Z,2µm,17.3s
BRG **Berggiesshubel** 45.71 313 *eP* **P** **02 09 01.3 +0.5**
comp=Z,8.0nm,0.8s,mb4.7
BRG *i* pP 02 09 03.2 -1.6
BRG PP PP 02 10 50.0 +2.2
BRG S **S** **02 15 48.0 +4.5**
BRG LR LR

comp=Z,950nm,17.3s,MS4.8
TATO **Taipei** 45.74 84 PFAKE 02 09 10.0 +8.5
TATO LR LR

comp=Z,2µm,19.0s,MS5.1
YHNB **Yeheng** 45.75 84 *eP* **P** **02 09 03.2 +1.7**
comp=Z,41nm,0.8s,mb5.4
YHNB LR LR

comp=Z,2µm,19.0s,MS5.0
GEC2 **GERESS Array S** 45.75 310 *eP* **P** **02 09 00.8 -0.4**
GEC2 pmax pmax

comp=Z,20nm,0.9s,mb5.0
GEC2 **GERESS Array S** 45.75 310 *eP* **P** **02 09 00.8 -0.4**
comp=Z,20nm,0.9s,mb5.0
GERES **GERESS Array B** 45.75 310 P **P** **02 09 00.8 -0.4**
comp=Z,12nm,0.8s,mb4.9,baz=97,slow=6.9,SNR=36
GERES LR LR 02 30 27.2

comp=Z,929nm,21.0s,MS4.7,baz=96,slow=39
GERES **GERESS Array B** 45.75 310 P **P** **02 09 00.8 -0.4**
GERES pmax pmax

comp=Z,12nm,0.8s
GERES MLR MLR

comp=Z,929nm,21.0s
MYKA **Terra Mystica** 45.75 307 ⇑*iP* **P** **02 09 01.7 +0.5**
comp=Z,23nm,0.9s,mb5.1
KHC **Kasperske Hory** 45.84 310 ⇑*eP* **P** **02 09 01.4 -0.5**
KHC **Kasperske Hory** 45.84 310 *eP* **P** **02 09 01.1 -0.8**
KHC AMS AMS 02 29 50.0

comp=Z,2µm,22.6s
VAE **Valguarnera** 45.86 294 P **P** **02 09 01.5 -0.7**
comp=Z,4.3nm,0.8s,mb4.5,baz=357,slow=16,SNR=1.8
TERO **Teramo** 45.92 301 P **P** **02 09 02.5 -0.1**
comp=Z,44nm,1.2s,mb5.3
RUE **Ruedersdorf** 45.95 315 *eP* **P** **02 09 02.1 -0.6**
comp=Z,63nm,0.8s,mb5.6
RUE **Ruedersdorf** 45.95 315 *eP* **P** **02 09 01.6 -1.1**
comp=Z,59nm,0.7s,mb5.6
PTCC **Patocco-Chiusa** 45.95 307 P **P** **02 09 02.6 -0.2**
comp=Z,44nm,1.2s,mb5.3
VVLD **Villa Vallelon** 45.96 300 P **P** **02 09 03.3 +0.3**
comp=Z,87nm,1.7s,mb5.4
KEV **Kevo** 45.98 341 *ep* **P** **02 09 03.3 +0.6**
comp=Z,20nm,0.7s,mb5.2
KEV **Kevo** 45.98 341 *ep* **P** **02 09 03.3 +0.6**
comp=Z,20nm,0.7s,mb5.2
KEV **Kevo** 45.98 341 PFAKE 02 09 10.0 +7.3
KEV LR LR

comp=Z,3µm,19.0s,MS5.3
CLNS **Chul'man** 46.03 39 *eP* **P** **02 09 05.0 +1.7**
CLNS pmax pmax

comp=Z,38nm,0.8s,mb5.4
CLNS pmax pmax

comp=N,11nm,0.9s
CLNS pmax pmax

comp=E,28nm,0.9s
CLNS MLR MLR

comp=Z,3µm,16.0s,MS5.3
CLNS MLR MLR

comp=E,2µm,14.0s,MS5.2
CLNS MLR MLR

comp=N,1µm,18.0s,MS5.2
GMNA **Gemona** 46.03 306 P **P** **02 09 05.9 +2.4**
FBE **Freiberg** 46.08 313 *eP* **P** **02 09 04.6 +0.8**
comp=Z,24nm,0.9s,mb5.1
AQU **L'Aquila** 46.09 301 P **P** **02 09 06.5 +2.5**
AQU pmax pmax

comp=Z,45nm,1.0s,mb5.3
AQU **L'Aquila** 46.09 301 P **P** **02 09 06.5 +2.5**
comp=Z,44nm,1.0s,mb5.3
NACB **Ninganchiao** 46.10 85 *eP* **P** **02 09 05.8 +1.6**
comp=Z,36nm,0.9s,mb5.3
PTQR **Pietraquaria** 46.12 301 P **P** **02 09 04.5 +0.3**
comp=Z,65nm,0.7s,mb5.7
CING **Cingoli** 46.17 302 P **P** **02 09 03.6 -1.0**

NRCA **Norcia** 46.27 302 P **P** **02 09 05.1 -0.2**
comp=Z,14nm,0.8s,mb5.0
ARCES **ARCESS Array B** 46.29 340 P **P** **02 09 05.1 0.0**
comp=Z,17nm,0.6s,mb5.2,baz=126,slow=8.6,SNR=35
ARCES LR LR 02 30 15.4
comp=Z,2µm,18.2s,MS5.2,baz=124,slow=38
ARCES **ARCESS Array B** 46.29 340 P **P** **02 09 05.1 0.0**
ARCES pmax pmax

comp=Z,17nm,0.6s
ARCES MLR MLR

comp=Z,2µm,18.2s
ARE0 **ARCESS Array S** 46.29 340 *eP* **P** **02 09 04.8 -0.3**
WET **Wettzell** 46.30 310 *eP* **P** **02 09 05.8 +0.3**
WET pmax pmax

comp=Z,6.0nm,1.2s,mb4.4
WET **Wettzell** 46.30 310 *eP* **P** **02 09 05.8 +0.3**
comp=Z,6.0nm,1.2s,mb4.4
FIAM **Fiamignano** 46.31 301 P **P** **02 09 06.4 +0.7**
comp=Z,41nm,1.0s,mb5.3
CLL **Collm** 46.33 313 *eP* **P** **02 09 06.0 +0.3**
CLL *i* *PP pP 02 09 11.5 +1.7
CLL *eS* **S** **02 15 59.0 +6.6**
CLL pmax pmax

comp=Z,12nm,0.8s,mb4.9
CLL MLR MLR

comp=Z,1µm,18.5s,MS4.9
CLL **Collm** 46.33 313 *eP* **P** **02 09 05.4 -0.3**
comp=Z,12nm,0.8s,mb4.9
CLL **Collm** 46.33 313 *eP* **P** **02 09 06.0 +0.3**
comp=Z,12nm,0.8s,mb4.9
CLL *i* pP pP 02 09 11.5 +1.7
CLL *i* sP sP 02 09 14.4 +3.0
CLL *e*PPP 02 11 32.0
CLL *e*PPPP 02 11 44.0
CLL *e*S **S** **02 15 59.0 +6.6**
CLL *e*SS SS 02 19 30.0 +12
CLL *ex* x 02 21 24.0
CLL LmV 02 31 00.0

comp=Z,1µm,18.5s
CLL **Collm** 46.33 313 *eP* **P** **02 09 06.0 +0.3**
comp=Z,12nm,0.8s,mb4.9
CLL *i* pP pP 02 09 11.5 +1.7
CLL *e*S **S** **02 15 59.0 +6.6**
CLL LR LR

comp=Z,1µm,18.5s,MS4.9
RJOB **Jochberg** 46.33 308 *eP* **P** **02 09 05.6 -0.2**
comp=Z,16nm,1.0s,mb4.9
FVI **Forni Avoltri** 46.34 307 P **P** **02 09 05.9 0.0**
FVI pmax pmax

comp=Z,25nm,0.7s,mb5.2
FVI **Forni Avoltri** 46.34 307 P **P** **02 09 05.9 0.0**
comp=Z,25nm,0.7s,mb5.2
SNTG **Esanatoglia** 46.36 302 P **P** **02 09 06.6 +0.5**
comp=Z,17nm,0.7s,mb5.1
CERT **Cerreto** 46.43 300 P **P** **02 09 07.5 +0.8**
comp=Z,44nm,1.4s,mb5.2
FSSB **Fossombrone** 46.45 303 P **P** **02 09 07.3 +0.5**
comp=Z,39nm,1.2s,mb5.2
ABTA **Abfaltersbach** 46.53 307 ⇓*iP* **P** **02 09 06.8 -0.5**
comp=Z,14nm,1.0s,mb4.8,SNR=17
MTCE **Montecelio** 46.60 301 P **P** **02 09 08.3 +0.3**
comp=Z,49nm,1.5s,mb5.2
TANN **Tannenbergstha** 46.62 312 *eP* **P** **02 09 08.4 +0.4**
comp=Z,16nm,1.0s,mb4.9
NKC **Novy Kostel** 46.62 312 *eP* **P** **02 09 08.5 +0.5**
NKC AMS AMS 02 32 50.0

comp=Z,2µm,15.2s
MURB **Monte Urbino** 46.66 302 P **P** **02 09 09.9 +1.4**
comp=Z,61nm,0.9s,mb5.5
WERN **Wernitzgruen** 46.67 312 *eP* **P** **02 09 09.5 +1.1**
comp=Z,60nm,1.9s,mb5.2
KTK1 **Kautokeino** 46.69 339 *eP* **P** **02 09 09.0 +0.7**
GUNZ **Gunzen** 46.70 312 *eP* **P** **02 09 08.9 +0.3**
comp=Z,22nm,0.9s,mb5.1
WERD **Werda** 46.72 312 *eP* **P** **02 09 09.5 +0.7**
comp=Z,14nm,0.8s,mb4.9
ROTZ **Rotzenmuhle** 46.76 311 *eP* **P** **02 09 09.4 +0.3**
comp=Z,25nm,0.9s,mb5.1
ROTZ *eS* **S** **02 16 01.8 +3.2**
MANZ **Manzenberg** 46.83 312 *eP* **P** **02 09 10.3 +0.6**
comp=Z,44nm,1.0s,mb5.3
MANZ *eS* **S** **02 16 02.1 +2.5**
BADI **Badiali** 46.85 303 P **P** **02 09 10.9 +1.0**
CDCA **Citt' di Caste** 46.86 303 P **P** **02 09 10.5 +0.5**
INCN **Inchon** 46.98 66 *eP* **P** **02 09 13.4 +2.3**
comp=Z,23nm,0.6s,mb5.3
INCN LR LR

comp=Z,1µm,19.0s,MS4.8
SFI **Santa Sofia** 47.11 303 P **P** **02 09 12.9 +0.9**
SFI pmax pmax

comp=Z,40nm,0.8s,mb5.4
SFI **Santa Sofia** 47.11 303 P **P** **02 09 12.9 +0.9**
comp=Z,40nm,0.8s,mb5.4
WTTA **Wattenberg** 47.12 308 ⇓*iP* **P** **02 09 10.3 -1.7**
comp=Z,35nm,0.9s,mb5.3,SNR=17
CTI **Castel Tesino** 47.14 306 P **P** **02 09 11.6 -0.6**
CTI pmax pmax

comp=Z,19nm,0.6s,mb5.2
CTI **Castel Tesino** 47.14 306 P **P** **02 09 11.6 -0.6**
comp=Z,19nm,0.6s,mb5.2
WATA **Walderalm** 47.16 308 ⇓*iP* **P** **02 09 11.3 -1.0**
comp=Z,17nm,1.1s,mb4.9,SNR=8.2
MOX **Moxa** 47.17 312 *eP* **P** **02 09 12.5 +0.2**
comp=Z,76nm,1.8s,mb5.3
MOX

comp=Z,1µm,17.0s
MOX **Moxa** 47.17 312 *eP* **P** **02 09 12.5 +0.2**
MOX pmax pmax

comp=Z,76nm,1.8s,mb5.3
MOX MLR MLR

comp=Z,1µm,17.0s,MS4.8
MOX **Moxa** 47.17 312 *eP* **P** **02 09 12.4 +0.1**
comp=Z,28nm,1.0s,mb5.2
MOX *eS* **S** **02 16 05.2 +0.7**
HFS **Hagfors** 47.23 326 LR LR 02 32 27.6
comp=Z,5µm,19.0s,MS5.5,baz=100,slow=40
VMG **Vicchio** 47.33 303 P **P** **02 09 14.9 +1.3**
comp=Z,50nm,0.7s,mb5.5
FUR **Furstenfeldbru** 47.35 309 *eP* **P** **02 09 13.2 -0.6**
FUR pmax pmax

comp=Z,32nm,1.0s,mb5.2
FUR **Furstenfeldbru** 47.35 309 *eP* **P** **02 09 13.2 -0.6**
comp=Z,32nm,1.0s,mb5.2
GRA1 **Grafenberg Arr** 47.40 311 *eP* **P** **02 09 14.6 +0.5**
comp=Z,52nm,0.8s,mb5.5
GRA1 *eS* **S** **02 16 13.1 +5.4**
GRA1 LR LR

comp=Z,1µm,20.2s,MS4.8
GRF **Grafenberg Arr** 47.40 311 *eP* **P** **02 09 14.6 +0.5**
GRF *eS* **S** **02 16 13.1 +5.4**
GRF pmax pmax

comp=Z,52nm,0.8s,mb5.5
GRF MLR MLR

comp=Z,1µm,20.2s,MS4.8
GRF **Grafenberg Arr** 47.40 311 *eP* **P** **02 09 14.6 +0.5**
comp=Z,52nm,0.8s,mb5.5
GRF *eS* **S** **02 16 13.1 +5.4**
GRF *eL* 02 32 50.7

comp=Z,1µm,20.2s
APPI **Appiano** 47.42 307 P **P** **02 09 13.4 -0.9**
comp=Z,20nm,0.8s,mb5.1
SEI **Scarperia** 47.45 303 P **P** **02 09 16.3 +1.7**
comp=Z,73nm,0.6s,mb5.8
MOTA **Moosalm** 47.48 308 ⇑*iP* **P** **02 09 13.1 -1.6**
comp=Z,15nm,1.0s,mb4.9,SNR=42
CSNT **Castellina Chi** 47.55 303 P **P** **02 09 14.6 -0.8**
comp=Z,18nm,1.0s,mb5.1
FNVD **Fontana Vidola** 47.62 304 P **P** **02 09 17.0 +1.1**
comp=Z,214nm,2.6s,mb5.7
FETA **Feichten** 47.74 308 ⇑*iP* **P** **02 09 15.4 -1.4**
comp=Z,28nm,0.7s,mb5.4,SNR=18
MABI **Malga Bissina** 47.93 306 P **P** **02 09 18.4 +0.1**
comp=Z,14nm,0.8s,mb5.0
GSCL **Gusciola** 47.98 304 P **P** **02 09 21.0 +2.3**
CLZ **Clausthal** 48.00 314 *eP* **P** **02 09 18.6 -0.1**
CLZ pmax pmax

comp=Z,44nm,0.9s,mb5.5
CLZ **Clausthal** 48.00 314 *eP* **P** **02 09 18.6 -0.1**
comp=Z,44nm,0.9s,mb5.5
BDI **Bagni Di Lucca** 48.00 304 P **P** **02 09 19.6 +0.7**

BDI pmax pmax
comp=Z,68nm,1.8s,mb5.4
BDI Bagni Di Lucca 48.00 304 P **P 02 09 19.6 +0.7**
comp=Z,68nm,1.8s,mb5.4
KSRS Korea Array 48.00 65 P **P 02 09 19.2 +0.2**
comp=Z,41nm,0.8s,mb5.5,baz=270,slow=7.6,SNR=50
KSRS LR LR 02 31 28.1
comp=Z,2µm,18.3s,MS5.1,baz=106,slow=39
KSRS Korea Array 48.00 65 P **P 02 09 19.2 +0.2**
KSRS pmax pmax
comp=Z,41nm,0.8s,mb5.5
KSRS MLR MLR
comp=Z,2µm,18.3s,MS5.1
BRMO Bormio 48.01 307 P **P 02 09 16.0 -2.9**
comp=Z,17nm,0.8s,mb5.1
KSM Kuching 48.05 119 *e*P **P 02 09 20.3 +0.7**
PII Pisa 48.08 303 P **P 02 09 18.4 -1.1**
MAIM Mastiano 48.09 303 P **P 02 09 18.8 -0.7**
comp=Z,31nm,0.8s,mb5.4
ERBM Eremo 48.10 304 P **P 02 09 20.6 +0.9**
comp=Z,59nm,1.1s,mb5.5
VLC Villacollemand 48.14 304 *e*P **P 02 09 20.3 +0.3**
comp=Z,28nm,1.0s,mb5.2
VLC LR LR
comp=Z,2µm,21.0s,MS5.0
BSEG Bad Segeberg 48.15 317 *e*P **P 02 09 19.9 +0.1**
BSEG pmax pmax
comp=Z,32nm,0.8s,mb5.4
BSEG Bad Segeberg 48.15 317 *e*P **P 02 09 19.9 +0.1**
comp=Z,32nm,0.8s,mb5.4
NRDL Niedersach Rie 48.19 315 *e*S **S 02 16 23.1 +4.2**
UBBA Unterbreizbach 48.20 313 *e*P **P 02 09 22.1 +1.8**
comp=Z,20nm,1.2s,mb5.0
DAVA Damuels 48.31 308⇑*i*P **P 02 09 20.0 -1.2**
comp=Z,42nm,0.8s,mb5.5,SNR=18
TRO Tromso 48.33 339 *e*P **P 02 09 21.0 0.0**
TRO *e*SS SS 02 19 53.0 +3.4
TRO AMS AMS 02 32 36.9
comp=Z,1µm,15.8s,MS4.9
MDJ Mudanjiang 48.37 56 P **P 02 09 21.3 -0.4**
MDJ AP pP 02 09 27.6 +1.8
MDJ XP sP 02 09 30.1 +2.7
MDJ PP PP 02 11 14.0 -0.1
MDJ SCP ScP 02 14 41.2 -1.4
MDJ PCS PcS 02 14 44.0 +0.1
MDJ S **S 02 16 20.7 -0.9**
MDJ AMB AMB
comp=Z,30nm,2.0s,mb5.0
MDJ LR LR
comp=N,2µm,15.1s,MS5.4
MDJ LR LR
comp=E,3µm,17.2s,MS5.4
MDJ LR LR
comp=Z,3µm,17.9s,MS5.4
MDJ Mudanjiang 48.37 56 *e*P **P 02 09 23.8 +2.1**
comp=Z,38nm,1.1s,mb5.3
MDJ LR LR
comp=Z,1µm,20.0s,MS5.0
MOR8 Moi Rana 48.56 334 *e*P **P 02 09 21.9 -1.0**
MOR8 AMb AMB 02 09 27.2
comp=Z,38nm,1.2s,mb5.3
MOR8 Moi Rana 48.56 334 *e*P **P 02 09 21.9 -1.0**
comp=Z,38nm,1.2s,mb5.3
NB2 NORSAR Subarra 48.62 326 P **P 02 09 22.0 -1.4**
comp=Z,13nm,0.7s,mb5.1,baz=104,slow=7.9
NOA NORSAR Array B 48.62 326 P **P 02 09 22.2 -1.2**
comp=Z,12nm,0.7s,mb5.0,baz=104,slow=7.8,SNR=30
NOA LR LR 02 33 11.5
comp=Z,3µm,18.8s,MS5.4,baz=125,slow=40
NOA NORSAR Array B 48.62 326 P **P 02 09 22.2 -1.2**
NOA pmax pmax
comp=Z,12nm,0.7s
NOA MLR MLR
comp=Z,3µm,18.8s
TUE Stuetta 48.72 307 *e*P **P 02 09 23.1 -1.2**
comp=Z,18nm,0.8s,mb5.2
TUE LR LR
comp=Z,958nm,21.0s,MS4.8
STU Stuttgart 48.73 310 *e*P **P 02 09 23.8 -0.6**
STU pmax pmax
comp=Z,73nm,1.3s,mb5.5
STU Stuttgart 48.73 310 *e*P **P 02 09 23.8 -0.6**
comp=Z,40nm,1.0s,mb5.4
STU Stuttgart 48.73 310 *e*P **P 02 09 23.8 -0.6**
comp=Z,73nm,1.3s,mb5.5
BOB Bobbio (Coli) 48.76 305 P **P 02 09 26.4 +1.7**
TOD Tromm 48.97 311 *e*P **P 02 09 27.0 +0.8**
MUD Monsted U'grnd 49.01 320 *e*P **P 02 09 27.5 +1.0**
MUD pmax pmax
comp=Z,34nm,1.1s,mb5.3
MUD MLR MLR
comp=Z,3µm,18.0s,MS5.3
MUD Monsted U'grnd 49.01 320 *i* P **P 02 09 27.5 +1.0**
comp=Z,34nm,1.1s,mb5.3
MUD *e*S SS 02 20 27.3 +26
MUD
comp=Z,3µm,18.0s
MUD Monsted U'grnd 49.01 320 *e*P **P 02 09 27.5 +1.0**
comp=Z,34nm,1.1s,mb5.3
MUD *e*S SS 02 20 27.3 +26
SPAK Spaichingen-Ko 49.02 309 *e*P **P 02 09 26.3 -0.4**
NSS Namsos 49.08 331 *e*P **P 02 09 25.5 -1.3**
NSS AMb AMB 02 09 28.4
comp=Z,72nm,2.0s,mb5.4
NSS AMS AMS 02 32 52.6
comp=Z,3µm,20.1s,MS5.2
NSS Namsos 49.08 331 *e*P **P 02 09 25.5 -1.3**
comp=Z,72nm,2.0s,mb5.4
NSS LR LR
comp=Z,3µm,20.1s,MS5.2
VAI Varese 49.16 306 P **P 02 09 26.9 -0.8**
KONO Kongsberg 49.17 324 *e*P **P 02 09 29.3 +1.7**
KONO AMS AMS 02 33 31.5
comp=Z,3µm,20.6s,MS5.3
PGF Pioggiola 49.31 302 *e*P **P 02 09 27.5 -1.5**
comp=Z,31nm,1.0s,mb5.0
PGF Pioggiola 49.31 302 *e*P **P 02 09 27.5 -1.5**
PGF pmax pmax
comp=Z,16nm,1.0s,mb5.0
PGF Pioggiola 49.31 302 *e*P **P 02 09 27.5 -1.5**
comp=Z,16nm,1.0s,mb5.0
BFO Black Forest 49.32 309 P **P 02 09 28.3 -0.6**
comp=Z,105nm,0.8s,mb5.9,SNR=14
BFO Black Forest 49.32 309 *e*P **P 02 09 27.6 -1.3**
BFO pmax pmax
comp=Z,20nm,0.9s,mb5.2
BFO Black Forest 49.32 309 *e*P **P 02 09 27.6 -1.3**
comp=Z,20nm,0.9s,mb5.2
YAK Yakutsk 49.41 32 *e*P **P 02 09 29.0 -0.4**
YAK *e**PP pP 02 09 36.9 +3.4
YAK *e*SS SS 02 20 04.6 -2.6
YAK pmax pmax
comp=Z,80nm,0.9s,mb5.8
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,16nm,1.1s
YAK pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
YAK MLR MLR
comp=Z,2µm,16.0s,MS5.1
YAK MLR MLR
comp=E,1µm,17.0s,MS5.1
YAK MLR MLR
comp=N,959nm,16.0s,MS5.1
YAK Yakutsk 49.41 32 *e*P **P 02 09 28.7 -0.8**
comp=N,112nm,0.7s,mb6.0
YAK LR LR
comp=Z,2µm,20.0s,MS5.1
VSL Villasalto 49.46 298 *e*P **P 02 09 30.1 -0.1**
comp=Z,21nm,0.6s,mb5.3
VSL LR LR
comp=Z,647nm,20.0s,MS4.6
FELD Feldberg im Sc 49.55 309 *e*P **P 02 09 30.7 -0.1**
KLR Kul'dur 49.59 49 *e*P **P 02 09 27.2 -3.8**
KLR *e*S **S 02 16 32.0 -6.7**
KLR pmax pmax
comp=E,100nm,2.0s
KLR pmax pmax
comp=Z,180nm,2.0s,mb5.8
KLR MLR MLR
comp=E,2µm,14.0s
KLR MLR MLR
comp=Z,2µm,14.0s,MS5.3
IBBN Ibbenburen 49.62 315 *e*P **P 02 09 31.0 -0.2**
comp=Z,69nm,0.8s,mb5.7

STR Strasbourg 49.68 310 *e*P **P 02 09 31.2 -0.5**
ORO Oropa 49.73 306 P **P 02 09 30.2 -1.9**
COCO West Island 49.85 144 PFAKE 02 09 50.0 +17
COCO LR LR
comp=Z,1µm,19.0s,MS5.0
KKM Kota Kinabalu 49.89 110 *e*P **P 02 09 33.3 -0.4**
KKM LR LR
comp=Z,264nm,19.0s,MS4.3
BBS Basel-Blauen 49.91 308 *e*P **P 02 09 32.5 -1.0**
BUG Bochum-Univer 49.92 313 *e*P **P 02 09 33.4 -0.1**
comp=Z,43nm,0.9s,mb5.5
CDF Champ du Feu 50.01 310 *e*P **P 02 09 33.1 -1.1**
comp=Z,30nm,1.0s,mb5.0
CDF Champ du Feu 50.01 310 *e*P **P 02 09 33.1 -1.1**
CDF pmax pmax
comp=Z,15nm,1.0s,mb5.0
CDF Champ du Feu 50.01 310 *e*P **P 02 09 33.1 -1.1**
comp=Z,15nm,1.0s,mb5.0
RUP Ruppelstein 50.10 311 *e*P **P 02 09 35.3 +0.4**
ECH Echery 50.10 309 *e*P **P 02 09 33.5 -1.4**
ECH Echery 50.10 309 *e*P **P 02 09 33.4 -1.5**
MOF Molkenrain 50.14 309 *e*P **P 02 09 33.5 -1.7**
VLA Vladivostok 50.17 57 *e*P **P 02 09 35.0 -0.5**
VLA pmax pmax
comp=Z,60nm,0.8s,mb5.7
VLA Vladivostok 50.17 57 *e*P **P 02 09 36.4 +0.9**
KEST Kesra 50.19 293 P **P 02 09 35.9 +0.1**
comp=Z,4.4nm,0.7s,mb4.6,baz=336,slow=3.7,SNR=26
KEST LR LR 02 35 45.2
comp=Z,363nm,18.1s,MS4.4,baz=13,slow=42
WTSB Winterswijk 50.21 314 *e*P **P 02 09 36.2 +0.5**
comp=Z,102nm,1.4s,mb5.7
AUTN L'Aution 50.28 304 *e*P **P 02 09 36.5 +0.2**
SBF Sospel 50.29 304 *e*P **P 02 09 35.2 -1.2**
comp=Z,53nm,0.8s,mb5.3
SBF Sospel 50.29 304 *e*P **P 02 09 35.2 -1.2**
SBF pmax pmax
comp=Z,27nm,0.8s,mb5.3
SBF Sospel 50.29 304 *e*P **P 02 09 35.2 -1.2**
comp=Z,26nm,0.8s,mb5.3
STV Sant Anna di V 50.33 304 P **P 02 09 37.2 +0.5**
STV pmax pmax
comp=Z,28nm,1.5s,mb5.1
STV Sant Anna di V 50.33 304 P **P 02 09 37.2 +0.5**
comp=Z,28nm,1.5s,mb5.1
HINF Hinteralfeld 50.33 309 *e*P **P 02 09 35.4 -1.3**
comp=Z,29nm,0.7s,mb5.1
HINF Hinteralfeld 50.33 309 *e*P **P 02 09 35.4 -1.3**
HINF pmax pmax
comp=Z,15nm,0.7s,mb5.1
HINF Hinteralfeld 50.33 309 *e*P **P 02 09 35.4 -1.3**
comp=Z,15nm,0.7s,mb5.1
LSD Lago del Serru 50.33 306 P **P 02 09 36.2 -0.5**
LSD pmax pmax
comp=Z,16nm,0.7s,mb5.2
LSD Lago del Serru 50.33 306 P **P 02 09 36.2 -0.5**
comp=Z,16nm,0.7s,mb5.2
LUCF Luceram 50.35 304 *e*P **P 02 09 36.2 -0.7**
DOI San Damiano 50.35 304 P **P 02 09 36.9 0.0**
TOUF Mont Tournerai 50.41 304 *e*P **P 02 09 37.6 +0.3**
MVIF Mont Vial 50.49 304 *e*P **P 02 09 36.5 -1.4**
OG01 Vacheresse 50.57 307 *e*P **P 02 09 38.3 -0.1**
BJO Bjornoya 50.60 344 *e*P **P 02 09 41.7 +3.4**
BJO AMS AMS 02 33 47.0
comp=Z,1µm,19.1s,MS4.9
LPG La Plagne 50.60 306 *e*P **P 02 09 38.0 -0.7**
comp=Z,74nm,0.8s,mb5.4
LPG La Plagne 50.60 306 *e*P **P 02 09 38.0 -0.7**
LPG pmax pmax
comp=Z,37nm,0.8s,mb5.4
LPG La Plagne 50.60 306 *e*P **P 02 09 38.0 -0.7**
comp=Z,37nm,0.8s,mb5.4
MOL Molde 50.60 328 AMS AMS 02 33 31.3
comp=Z,4µm,17.4s,MS5.5
LPL La Plagne 50.61 306⇑*i*P **P 02 09 38.0 -0.8**
comp=Z,63nm,0.8s,mb5.3
LPL La Plagne 50.61 306⇑*i*P **P 02 09 38.0 -0.8**
LPL pmax pmax
comp=Z,31nm,0.8s,mb5.3
LPL La Plagne 50.61 306⇑*i*P **P 02 09 38.0 -0.8**
comp=Z,31nm,0.8s,mb5.3
BJO1 Bjornoya 50.64 344 *e*P **P 02 09 41.7 +3.1**
BJO1 LR LR
comp=Z,1µm,19.1s,MS4.9
HAU Haudompre 50.66 309⇑*i*P **P 02 09 38.3 -0.8**
comp=Z,64nm,1.0s,mb5.2
HAU *e*MLR MLR
comp=Z,815nm,18.0s,MS4.5
HAU Haudompre 50.66 309⇑*i*P **P 02 09 38.3 -0.8**
HAU pmax pmax
comp=Z,32nm,1.0s,mb5.2
HAU MLR MLR
comp=Z,820nm,18.0s,MS4.8
HAU Haudompre 50.66 309⇑*i*P **P 02 09 38.3 -0.8**
comp=Z,32nm,1.0s,mb5.2
HAU LR LR
comp=Z,820nm,18.0s,MS4.8
MBDF Montbardon 50.67 305 *e*P **P 02 09 37.7 -1.5**
comp=Z,52nm,0.8s,mb5.2
MBDF Montbardon 50.67 305 *e*P **P 02 09 37.7 -1.5**
MBDF pmax pmax
comp=Z,26nm,0.8s,mb5.2
MBDF Montbardon 50.67 305 *e*P **P 02 09 37.7 -1.5**
comp=Z,26nm,0.8s,mb5.2
RSL Roselend 50.67 306 *e*P **P 02 09 38.9 -0.3**
WLF Walferdange 50.69 311 P **P 02 09 38.6 -0.7**
comp=Z,24nm,1.5s,mb4.9
WLF Walferdange 50.69 311 *e*P **P 02 09 40.0 +0.7**
WLF pmax pmax
comp=Z,24nm,0.9s,mb5.1
WLF MLR MLR
comp=Z,1µm,20.0s,MS4.9
WLF Walferdange 50.69 311 *e*P **P 02 09 39.6 +0.3**
comp=Z,17nm,0.9s,mb5.1
WLF Walferdange 50.69 311 *e*P **P 02 09 40.0 +0.7**
comp=Z,24nm,0.9s,mb5.1
WLF LR LR
comp=Z,1µm,20.0s,MS4.9
BNI Bardonecchia 50.70 305 *e*P **P 02 09 38.0 -1.5**
BNI pmax pmax
comp=Z,12nm,0.8s,mb4.9
BNI MLR MLR
comp=Z,853nm,19.0s,MS4.8
BNI Bardonecchia 50.70 305 *e*P **P 02 09 38.0 -1.5**
comp=Z,12nm,0.8s,mb4.9
BNI LR LR
comp=Z,853nm,19.0s,MS4.8
MEM Membach 50.74 312 P **P 02 09 39.5 -0.2**
comp=Z,9.0nm,1.1s,mb4.6
HGN Heimansgroeve 50.78 313 *e*P **P 02 09 41.9 +1.9**
comp=Z,22nm,2.0s,mb4.7
HGN Heimansgroeve 50.78 313 *e*S **S 02 16 54.7 -0.6**
FRF La Foret Royal 50.90 303 *e*P **P 02 09 39.5 -1.5**
comp=Z,19nm,1.0s,mb4.7
FRF La Foret Royal 50.90 303 *e*P **P 02 09 39.5 -1.5**
FRF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
FRF La Foret Royal 50.90 303 *e*P **P 02 09 39.5 -1.5**
comp=Z,9.4nm,1.0s,mb4.7
JOW Kunigami 50.93 79 P **P 02 09 41.1 -0.4**
comp=Z,50nm,0.7s,mb5.6,baz=274,slow=7.2,SNR=19
CABF La Chapelle 50.95 307⇑*i*P **P 02 09 41.0 -0.3**
comp=Z,104nm,1.0s,mb5.4
CABF La Chapelle 50.95 307⇑*i*P **P 02 09 41.0 -0.3**
CABF pmax pmax
comp=Z,52nm,1.0s,mb5.4
CABF La Chapelle 50.95 307⇑*i*P **P 02 09 41.0 -0.3**
comp=Z,52nm,1.0s,mb5.4
BCLA Clavier 51.20 312 P **P 02 09 42.6 -0.5**
ORIF Oris-en-Rattie 51.27 305⇑*i*P **P 02 09 43.7 -0.1**
comp=Z,18nm,0.7s,mb4.8
ORIF *e*MLR MLR
comp=Z,1µm,20.5s,MS4.7
ORIF Oris-en-Rattie 51.27 305⇑*i*P **P 02 09 43.7 -0.1**
ORIF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
ORIF Oris-en-Rattie 51.27 305⇑*i*P **P 02 09 43.7 -0.1**
comp=Z,9.1nm,0.7s,mb4.8
BER Bergen 51.39 325 *e*P **P 02 09 46.8 +2.4**
BER *e* 02 21 42.5
BER LR LR
comp=Z,3µm,17.9s,MS5.4
MEZF Maizieres J'vi 51.48 310⇑*i*P **P 02 09 44.9 -0.4**
comp=Z,54nm,0.8s,mb5.2
MEZF Maizieres J'vi 51.48 310⇑*i*P **P 02 09 44.9 -0.4**
comp=Z,54nm,0.8s,mb5.5

CMAH Djebel Manchou 51.52 294 P **P 02 09 48.0 +2.2**
GIVF Givet 51.52 312⇑*i*P **P 02 09 45.8 +0.2**
comp=Z,154nm,1.3s,mb5.5
GIVF pmax pmax
comp=Z,77nm,1.3s,mb5.5
GIVF Givet 51.52 312⇑*i*P **P 02 09 45.8 +0.2**
comp=Z,77nm,1.3s,mb5.5
ABSA Djebel Ababsia 51.55 294 P **P 02 09 48.0 +2.0**
TIXI Tiksi 51.63 20 *e*P **P 02 09 46.0 -0.1**
TIXI *e*S **S 02 17 04.3 -2.2**
TIXI *e* 02 19 28.9
TIXI pmax pmax
comp=Z,44nm,0.9s,mb5.4
TIXI MLR MLR
comp=Z,1µm,12.0s,MS5.2
TIXI Tiksi 51.63 20 *e*P **P 02 09 45.8 -0.3**
comp=Z,38nm,0.8s,mb5.4
TIXI LR LR
comp=Z,1µm,20.0s,MS5.0
DOU Dourbes 51.67 312 P **P 02 09 46.8 +0.1**
comp=Z,18nm,1.3s,mb4.8
OCF Saint Nazaire 51.73 305 *e*P **P 02 09 45.9 -1.3**
OG26 St.-Nazaire-De 51.73 305 *e*P **P 02 09 45.9 -1.3**
UCC Uccle 51.78 313 P **P 02 09 47.6 +0.2**
UCC AP pP 02 09 54.1 +2.5
BAIF Baives 51.92 312⇑*i*P **P 02 09 48.7 +0.1**
comp=Z,74nm,1.0s,mb5.3
BAIF Baives 51.92 312⇑*i*P **P 02 09 48.7 +0.1**
BAIF pmax pmax
comp=Z,37nm,1.0s,mb5.3
BAIF Baives 51.92 312⇑*i*P **P 02 09 48.7 +0.1**
comp=Z,37nm,1.0s,mb5.3
CAEH `Ain El Ouahch 51.93 295 P **P 02 09 50.0 +1.2**
CKFL Kef-Lekhel 52.12 294 P **P 02 09 50.0 -0.2**
VIVF Saint-Julien-l 52.13 305⇑*i*P **P 02 09 49.2 -1.0**
comp=Z,77nm,1.1s,mb5.2
VIVF Saint-Julien-l 52.13 305⇑*i*P **P 02 09 49.2 -1.0**
VIVF pmax pmax
comp=Z,39nm,1.1s,mb5.2
VIVF Saint-Julien-l 52.13 305⇑*i*P **P 02 09 49.2 -1.0**
comp=Z,39nm,1.1s,mb5.2
SSB Saint Sauveur 52.17 306 *e*P **P 02 09 49.6 -0.9**
SSB Saint Sauveur 52.17 306 *e*P **P 02 09 49.6 -0.9**
CASM Ain Smara 52.33 294 P **P 02 09 52.0 +0.2**
LOR Lormes 52.40 308⇑*i*P **P 02 09 51.1 -1.1**
comp=Z,41nm,0.9s,mb5.1
LOR *e*MLR MLR
comp=Z,1µm,22.0s,MS4.6
LOR Lormes 52.40 308⇑*i*P **P 02 09 51.1 -1.1**
LOR pmax pmax
comp=Z,20nm,0.9s,mb5.0
LOR MLR MLR
comp=Z,1µm,22.0s,MS4.9
LOR Lormes 52.40 308⇑*i*P **P 02 09 51.1 -1.1**
comp=Z,20nm,0.9s,mb5.1
LOR LR LR
comp=Z,1µm,22.0s,MS4.9
SMF Signal de Mont 52.49 308⇑*i*P **P 02 09 52.0 -0.8**
comp=Z,104nm,1.0s,mb5.4
SMF Signal de Mont 52.49 308⇑*i*P **P 02 09 52.0 -0.8**
SMF pmax pmax
comp=Z,52nm,1.0s,mb5.4
SMF Signal de Mont 52.49 308⇑*i*P **P 02 09 52.0 -0.8**
comp=Z,52nm,1.0s,mb5.4
SSF Saint Saulge 52.66 308⇑*i*P **P 02 09 53.3 -0.8**
comp=Z,61nm,0.7s,mb5.3
SSF Saint Saulge 52.66 308⇑*i*P **P 02 09 53.3 -0.8**
SSF pmax pmax
comp=Z,31nm,0.7s,mb5.3
SSF Saint Saulge 52.66 308⇑*i*P **P 02 09 53.3 -0.8**
comp=Z,31nm,0.7s,mb5.3
PLDF La Plantade 52.72 307 *e*P **P 02 09 54.3 -0.3**
DFRA Djebel Bou Aff 52.74 295 P **P 02 09 56.0 +1.1**
AVF Avril sur Loir 52.80 308⇑*i*P **P 02 09 54.2 -0.9**
comp=Z,39nm,0.9s,mb5.1
AVF Avril sur Loir 52.80 308⇑*i*P **P 02 09 54.2 -0.9**
AVF pmax pmax
comp=Z,20nm,0.9s,mb5.0
AVF Avril sur Loir 52.80 308⇑*i*P **P 02 09 54.2 -0.9**
comp=Z,20nm,0.9s,mb5.0
LASF Ste Croix 52.82 304 *e*P **P 02 09 54.5 -0.9**
comp=Z,41nm,1.0s,mb5.0
AGO Saint Agoulin 53.05 307 *e*P **P 02 09 56.4 -0.6**
LBL Lubilhac 53.08 306 *e*P **P 02 09 57.1 -0.1**
CKHR Kef el Ahmar 53.16 294 P **P 02 09 58.0 +0.1**
PYM Petit Puy Mans 53.17 306 *e*P **P 02 09 56.4 -1.5**
BGF Bois d'Agland 53.18 308 *e*P **P 02 09 57.0 -0.9**
comp=Z,24nm,0.8s,mb4.9
BGF Bois d'Agland 53.18 308 *e*P **P 02 09 57.0 -0.9**
BGF pmax pmax
comp=Z,12nm,0.8s,mb4.9
BGF Bois d'Agland 53.18 308 *e*P **P 02 09 57.0 -0.9**
comp=Z,12nm,0.8s,mb4.9
SET Setif 53.20 294 P **P 02 10 00.0 +1.7**
HYF Humbligny 53.23 308⇑*i*P **P 02 09 58.0 -0.3**
FRNF Fournols 53.54 306 *e*P **P 02 10 01.2 +0.6**
TCF Toulx Ste Croi 53.65 307 *e*P **P 02 10 00.9 -0.5**
comp=Z,67nm,1.2s,mb5.1
TCF Toulx Ste Croi 53.65 307 *e*P **P 02 10 00.9 -0.5**
TCF pmax pmax
comp=Z,34nm,1.2s,mb5.2
TCF Toulx Ste Croi 53.65 307 *e*P **P 02 10 00.9 -0.5**
comp=Z,34nm,1.2s,mb5.2
AKF Akfadou 53.75 295 P **P 02 10 05.0 +2.7**
ABPO Ambohimpanom 53.89 207 PFAKE 02 10 20.0 +17
ABPO LR LR
comp=Z,1µm,19.0s,MS4.9
CAF Calviac 53.96 306⇑*i*P **P 02 10 03.2 -0.5**
comp=Z,45nm,0.8s,mb5.1
CAF Calviac 53.96 306⇑*i*P **P 02 10 03.2 -0.5**
CAF pmax pmax
comp=Z,22nm,0.8s,mb5.1
CAF Calviac 53.96 306⇑*i*P **P 02 10 03.2 -0.5**
comp=Z,22nm,0.8s,mb5.2
MTLF Montolieu 54.12 304⇑*i*P **P 02 10 03.9 -1.0**
comp=Z,17nm,0.8s,mb4.7
MTLF Montolieu 54.12 304⇑*i*P **P 02 10 03.9 -1.0**
MTLF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MTLF Montolieu 54.12 304⇑*i*P **P 02 10 03.9 -1.0**
comp=Z,8.7nm,0.8s,mb4.7
KBS Kingsbay 54.16 348 *e*P **P 02 10 06.0 +1.3**
KBS *e*S **S 02 17 44.8 +3.9**
KBS AMS AMS 02 35 00.1
comp=Z,1µm,19.7s,MS5.0
KBS Kingsbay 54.16 348⇑*e*P **P 02 10 04.8 +0.1**
KBS Kingsbay 54.16 348 *e*P **P 02 10 05.9 +1.2**
comp=Z,30nm,0.7s,mb5.3
KBS LR LR
comp=Z,1µm,19.0s,MS5.1
RJF Les Rejaudoux 54.28 306⇑*i*P **P 02 10 05.5 -0.5**
RJF *e*MLR MLR
comp=Z,1µm,17.5s,MS4.7
RJF Les Rejaudoux 54.28 306⇑*i*P **P 02 10 05.5 -0.5**
RJF LR LR
comp=Z,1µm,17.5s,MS5.0
AKET Djebel Ketaf 54.43 295 P **P 02 10 18.6 +11**
ADJB Djebel Djouab 54.75 295 P **P 02 10 14.1 +4.5**
LFF La Frestale 54.88 306⇑*i*P **P 02 10 09.8 -0.6**
comp=Z,28nm,0.7s,mb5.1
LFF La Frestale 54.88 306⇑*i*P **P 02 10 09.8 -0.6**
LFF pmax pmax
comp=Z,14nm,0.7s,mb5.1
LFF La Frestale 54.88 306⇑*i*P **P 02 10 09.8 -0.6**
comp=Z,14nm,0.7s,mb5.1
EMIR Miracle 54.89 302 P **P 02 10 12.4 +1.9**
comp=Z,18nm,0.8s,mb5.2
LDF La Druitiere 54.89 310⇑*i*P **P 02 10 09.3 -1.1**
comp=Z,56nm,0.7s,mb5.4
LDF La Druitiere 54.89 310⇑*i*P **P 02 10 09.3 -1.1**
LDF pmax pmax
comp=Z,28nm,0.7s,mb5.4
LDF La Druitiere 54.89 310⇑*i*P **P 02 10 09.3 -1.1**
comp=Z,28nm,0.7s,mb5.4
ABA Alger-Bouzarea 54.90 296 P **P 02 09 59.5 -11**
FLN La Foliniere 55.10 311⇑*i*P **P 02 10 10.9 -1.0**
comp=Z,41nm,0.8s,mb5.2
FLN *e*MLR MLR
comp=Z,1µm,17.8s,MS4.8
FLN La Foliniere 55.10 311⇑*i*P **P 02 10 10.9 -1.0**
FLN pmax pmax
comp=Z,21nm,0.8s,mb5.2
FLN MLR MLR
comp=Z,1µm,17.8s,MS5.1
FLN La Foliniere 55.10 311⇑*i*P **P 02 10 10.9 -1.0**

comp=Z,21nm,0.8s,mb5.2
FLN LR LR

comp=Z,1µm,17.8s,MS5.1
CWF Charnwood Fore 55.13 315 *e*P **P 02 10 11.2 -0.9**
CWF AMb AMB 02 10 16.6

comp=Z,21nm,1.0s,mb5.1
KBI1 Birley Grange 55.21 316⇑ *e*P **P 02 10 11.8 -0.8**
MFF Saint Martin d 55.21 308⇑ *i*P **P 02 10 11.6 -1.2**
comp=Z,35nm,0.7s,mb5.2
MFF Saint Martin d 55.21 308⇑ *i*P **P 02 10 11.6 -1.2**
MFF pmax pmax

comp=Z,17nm,0.7s,mb5.2
MFF Saint Martin d 55.21 308⇑ *i*P **P 02 10 11.6 -1.2**
comp=Z,17nm,0.7s,mb5.2
WOL Wolverton 55.24 314 *e*P **P 02 10 12.2 -0.7**
WOL AMb AMB 02 10 14.3

comp=Z,105nm,1.6s,mb5.6
EPOB Poblet 55.33 301 P **P 02 10 13.8 +0.1**
comp=Z,5.2nm,0.6s,mb4.7
LHO Holmfirth 55.38 316 *e*P **P 02 10 12.9 -0.9**
GRR Gorron 55.41 310 *e*P **P 02 10 13.6 -0.5**
comp=Z,12nm,0.4s,mb5.0
GRR Gorron 55.41 310 *e*P **P 02 10 13.6 -0.5**
GRR pmax pmax

comp=Z,6.0nm,0.4s,mb5.0
GRR Gorron 55.41 310 *e*P **P 02 10 13.6 -0.5**
comp=Z,5.9nm,0.4s,mb5.0
XSO Sourhope Farm 55.42 319 *e*P **P 02 10 13.8 -0.3**
XAL Allendale 55.46 318⇑ *e*P **P 02 10 14.2 -0.2**
EPF Esparros 55.52 304⇑ *i*P **P 02 10 15.7 +0.6**
comp=Z,11nm,0.8s,mb4.6
EPF Esparros 55.52 304⇑ *i*P **P 02 10 15.7 +0.6**
EPF pmax pmax

comp=Z,6.0nm,0.8s,mb4.7
EPF Esparros 55.52 304⇑ *i*P **P 02 10 15.7 +0.6**
comp=Z,5.7nm,0.8s,mb4.7
SWN1 Swindon 55.58 314 *e*P **P 02 10 13.7 -1.6**
SWN1 AMb AMB 02 10 20.4

comp=Z,168nm,2.0s,mb5.7
EBIE Bielsa 55.74 303 P **P 02 10 17.0 +0.4**
comp=Z,7.1nm,0.6s,mb4.9
MCD Coleburn Disti 55.81 321 *e*P **P 02 10 17.1 +0.3**
EDI Edinburgh 55.91 319 *e*P **P 02 10 17.4 -0.3**
EDI AMb AMB 02 10 22.1

comp=Z,35nm,1.6s,mb5.1
ERTA Horta de San J 55.97 301 P **P 02 10 17.9 -0.4**
comp=Z,8.1nm,0.7s,mb4.9
ESK Eskdalemuir 55.98 319 *e*P **P 02 10 17.3 -0.8**
ESK AMb AMB 02 10 22.1

comp=Z,38nm,1.4s,mb5.2
ESK Eskdalemuir 55.98 319 *e*P **P 02 10 17.0 -1.1**
ESK pmax pmax

comp=Z,8.0nm,0.6s,mb4.9
ESK MLR MLR

comp=Z,2µm,20.0s,MS5.2
ESK Eskdalemuir 55.98 319 *e*P **P 02 10 17.0 -1.1**
comp=Z,7.7nm,0.6s,mb4.9
ESK LR LR

comp=Z,2µm,20.0s,MS5.2
HLM1 Long Mynd 56.11 315 *e*P **P 02 10 18.6 -0.5**
JSA Saint Aubin 56.14 311 *e*P **P 02 10 17.4 -2.0**
JSA AMb AMB 02 10 19.1

comp=Z,39nm,2.0s,mb5.1
HGH Gray Hill 56.18 314 *e*P **P 02 10 18.3 -1.3**
ETSF Etsaut 56.20 304 *e*P **P 02 10 19.1 -0.8**
comp=Z,31nm,0.8s,mb5.1
ETSF Etsaut 56.20 304 *e*P **P 02 10 19.1 -0.8**
ETSF pmax pmax

comp=Z,16nm,0.8s,mb5.1
ETSF Etsaut 56.20 304 *e*P **P 02 10 19.1 -0.8**
comp=Z,16nm,0.8s,mb5.1
MAJO Matsushiro 56.23 64 *e*P **P 02 10 19.4 -0.8**
MAJO pmax pmax

comp=Z,20nm,0.8s,mb5.2
MAJO MLR MLR

comp=Z,1µm,19.0s,MS5.1
MAJO Matsushiro 56.23 64 *e*P **P 02 10 19.4 -0.9**
comp=Z,20nm,0.8s,mb5.2
MAJO LR LR

comp=Z,1µm,19.0s,MS5.1
MAT Matsushiro 56.23 64 P **P 02 10 20.6 +0.3**
MAT S **S 02 18 08.0 -1.7**
MJAR Matsushiro Arr 56.23 64 P **P 02 10 20.8 +0.5**
comp=Z,7.0nm,0.8s,mb4.8,baz=294,slow=11,SNR=24
MJAR LR LR 02 37 06.9

comp=Z,1µm,18.3s,MS5.0,baz=265,slow=39
MJAR Matsushiro Arr 56.23 64 P **P 02 10 20.8 +0.5**
MJAR pmax pmax

comp=Z,7.0nm,0.8s
MJAR MLR MLR

comp=Z,1µm,18.3s
MCH1 Michaelchurch 56.25 315⇑ *e*P **P 02 10 18.9 -1.2**
MCH1 AMb AMB 02 10 24.0

comp=Z,82nm,1.3s,mb5.6
SBD1 Bryn Du 56.29 316 *e*P **P 02 10 19.5 -0.9**
ESAC San Caprasio 56.39 302 P **P 02 10 23.1 +1.8**
comp=Z,26nm,0.7s,mb5.4
HTR Trewern Hill 56.41 315⇑ *e*P **P 02 10 19.8 -1.4**
LARF Larrau 56.48 304 *e*P **P 02 10 21.4 -0.5**
SGMF Saint Gilles 56.55 310⇑ *i*P **P 02 10 21.8 -0.5**
comp=Z,50nm,0.7s,mb5.3
SGMF Saint Gilles 56.55 310⇑ *i*P **P 02 10 21.8 -0.5**
SGMF pmax pmax

comp=Z,25nm,0.7s,mb5.3
SGMF Saint Gilles 56.55 310⇑ *i*P **P 02 10 21.8 -0.5**
comp=Z,25nm,0.7s,mb5.4
WPM1 Penmaenmawr 56.63 316 *e*P **P 02 10 21.6 -1.2**
SJPF Ste Jean 56.63 304⇑ *i*P **P 02 10 22.3 -0.7**
comp=Z,25nm,1.0s,mb4.9
SJPF Ste Jean 56.63 304⇑ *i*P **P 02 10 22.3 -0.7**
SJPF pmax pmax

comp=Z,12nm,1.0s,mb4.9
SJPF Ste Jean 56.63 304⇑ *i*P **P 02 10 22.3 -0.7**
comp=Z,12nm,1.0s,mb4.9
EMOS Mosqueruela 56.70 301 P **P 02 10 23.4 -0.2**
comp=Z,15nm,0.8s,mb5.1
YLL Llanberis 56.80 316 *e*P **P 02 10 22.4 -1.6**
EALK Alkurruntz 56.81 304 P **P 02 10 24.7 +0.5**
comp=Z,6.9nm,0.6s,mb4.9
GAL1 Galloway 56.89 318 *e*P **P 02 10 23.4 -1.2**
GAL1 AMb AMB 02 10 29.3

comp=Z,40nm,1.7s,mb5.2
KAC Achnashellach 56.91 321 *e*P **P 02 10 23.8 -0.9**
ROSF Rostrenen 57.00 310⇑ *i*P **P 02 10 24.7 -0.8**
comp=Z,43nm,0.6s,mb5.4
ROSF Rostrenen 57.00 310⇑ *i*P **P 02 10 24.7 -0.8**
ROSF pmax pmax

comp=Z,21nm,0.6s,mb5.3
ROSF Rostrenen 57.00 310⇑ *i*P **P 02 10 24.7 -0.8**
comp=Z,22nm,0.6s,mb5.3
QUIF Quistinic 57.01 310 *e*P **P 02 10 24.6 -1.0**
comp=Z,58nm,0.8s,mb5.4
QUIF Quistinic 57.01 310 *e*P **P 02 10 24.6 -1.0**
QUIF pmax pmax

comp=Z,29nm,0.8s,mb5.4
QUIF Quistinic 57.01 310 *e*P **P 02 10 24.6 -1.0**
comp=Z,29nm,0.8s,mb5.4
YRC Rhoscolyn 57.03 316 *e*P **P 02 10 24.7 -0.9**
DYA Yadsworthy 57.06 313 *e*P **P 02 10 24.8 -1.2**
DYA AMb AMB 02 10 26.6

comp=Z,54nm,1.2s,mb5.5
DAV Davao City (W) 57.09 102 P **P 02 10 28.1 +1.4**
comp=Z,81nm,0.3s,mb6.2,baz=4.5,slow=9.8,SNR=4.1
DAV Davao City (W) 57.09 102 P **P 02 10 28.1 +1.4**
DAV LR LR

comp=Z,920nm,19.0s,MS4.9
KPL Plockton 57.12 321 *e*P **P 02 10 25.6 -0.6**
KPL AMb AMB 02 10 26.6

comp=Z,34nm,1.5s,mb5.2
YSS Yuzh-Sakhalins 57.17 51 *e*P **P 02 10 26.0 -0.8**
YSS *e* 02 10 35.0
YSS *e*S **S 02 18 10.0 -12**
YSS *e* 02 18 34.0
YSS MLR MLR

comp=N,2µm,16.0s
YSS MLR MLR

comp=Z,2µm,16.0s,MS5.3
YSS Yuzh-Sakhalins 57.17 51 *e*P **P 02 10 26.8 0.0**
comp=Z,52nm,0.7s,mb5.7
YSS LR LR

comp=Z,777nm,19.0s,MS4.8
TAM Tamanrasset 57.29 279 *e*P **P 02 10 27.8 -0.2**
ETOR Torete 57.76 301 P **P 02 10 30.8 -0.2**
ETOR pmax pmax

comp=Z,5.0nm,0.6s,mb4.7
ETOR Torete 57.76 301 P **P 02 10 30.8 -0.2**

comp=Z,4.5nm,0.6s,mb4.7
CMA1 Manaccan 57.88 313 *e*P **P 02 10 30.3 -1.4**
EMUR La Murta 57.92 298 P **P 02 10 33.4 +1.2**
comp=Z,8.6nm,0.9s,mb4.8
CCA1 Carnmenellis 57.93 313 *e*P **P 02 10 31.4 -0.6**
ETOB Tobarra 57.94 299 P **P 02 10 34.3 +2.0**
comp=Z,5.9nm,0.8s,mb4.7
ELAN Lanestosa 58.18 305 P **P 02 10 35.4 +1.5**
comp=Z,18nm,0.9s,mb5.1
DMUB Kingscourt 58.30 317 *e*P **P 02 10 34.7 +0.1**
ERM Erimo 58.55 57 P **P 02 10 39.6 +3.1**
comp=Z,258nm,0.6s,mb6.4,SNR=5.2
ERM Erimo 58.55 57 *e*P **P 02 10 38.4 +1.9**
ERM pmax pmax

comp=Z,26nm,0.6s,mb5.4
ERM MLR MLR

comp=Z,2µm,19.0s,MS5.2
ERM Erimo 58.55 57 *e*P **P 02 10 38.4 +1.8**
comp=Z,26nm,0.6s,mb5.4
ERM LR LR

comp=Z,2µm,19.0s,MS5.2
DCN Croghan 58.61 317 *e*P **P 02 10 36.8 0.0**
EQES Quesada 59.33 298 P **P 02 10 41.7 -0.3**
comp=Z,18nm,0.9s,mb5.1
GUD Guadarrama 59.35 302 P **P 02 10 41.8 -0.3**
GUD pmax pmax

comp=Z,7.0nm,0.8s,mb4.7
GUD Guadarrama 59.35 302 P **P 02 10 41.8 -0.3**
comp=Z,6.6nm,0.8s,mb4.7
KAPI Kapang 59.41 118 P **P 02 10 40.8 -2.0**
comp=Z,9.3nm,0.8s,mb4.8,baz=59,slow=18,SNR=2.4
KAPI Kappang 59.41 118 P **P 02 10 40.8 -2.0**
KAPI LR LR

comp=Z,469nm,19.0s,MS4.6
EARI Arriondas 59.42 305 P **P 02 10 44.6 +2.1**
comp=Z,20nm,0.8s,mb5.2
EBER Berja 59.45 297 P **P 02 10 43.2 +0.4**
comp=Z,26nm,0.8s,mb5.3
ESDC Sonseca Array 59.47 301 P **P 02 10 42.4 -0.6**
comp=Z,6.9nm,0.7s,mb4.8,baz=67,slow=7.4,SNR=41
ESDC LR LR 02 40 52.2

comp=Z,557nm,18.4s,MS4.7,baz=45,slow=41
ESDC Sonseca Array 59.47 301 P **P 02 10 42.2 -0.7**
EBAN Banos Encina 59.76 299 P **P 02 10 44.6 -0.4**
EBAN pmax pmax

comp=Z,9.0nm,0.7s,mb4.9
EBAN Banos Encina 59.76 299 P **P 02 10 44.6 -0.4**
comp=Z,9.0nm,0.7s,mb4.9
PAB San Pablo 59.79 301 *e*P **P 02 10 44.5 -0.7**
PAB pmax pmax

comp=Z,8.0nm,0.8s,mb4.8
PAB MLR MLR

comp=Z,624nm,19.0s,MS4.8
PAB San Pablo 59.79 301 *e*P **P 02 10 44.5 -0.7**
comp=Z,8.3nm,0.8s,mb4.8
PAB LR LR

comp=Z,624nm,19.0s,MS4.8
SEY Seymchan 59.92 32⇑ *e*P **P 02 10 46.3 +0.7**
ELOJ Sierra Loja 60.34 298 P **P 02 10 49.5 +0.5**
ELOJ pmax pmax

comp=Z,3.0nm,0.8s,mb4.4
ELOJ Sierra Loja 60.34 298 P **P 02 10 49.5 +0.5**
comp=Z,2.5nm,0.8s,mb4.3
EADA Adamuz 60.36 299 P **P 02 10 50.3 +1.2**
comp=Z,11nm,0.7s,mb5.0
LSZ Lusaka 60.69 227 *e*P **P 02 10 52.6 +1.1**
LSZ pmax pmax

comp=Z,18nm,1.3s,mb5.0
LSZ MLR MLR

comp=Z,2µm,21.0s,MS5.2
LSZ Lusaka 60.69 227 *e*P **P 02 10 52.6 +1.1**
comp=Z,18nm,1.3s,mb5.0
LSZ LR LR

comp=Z,2µm,21.0s,MS5.2
EPON Pontenova 60.78 305 P **P 02 10 52.5 +0.6**
comp=Z,18nm,0.8s,mb5.3
PBRG Braganca 60.91 304 *e*P **P 02 11 00.1 +7.3**
comp=Z,23nm,1.8s,mb5.0
EMIJ Mijas 60.99 297 P **P 02 10 51.6 -1.8**
comp=Z,12nm,0.8s,mb5.1
ECAB El Cabril 61.02 299 P **P 02 10 53.5 -0.1**
comp=Z,16nm,0.8s,mb5.2
MVO Moncorvo 61.30 303 *e*P **P 02 10 57.6 +2.2**
comp=Z,18nm,1.1s,mb5.1
ESPR Espera 61.72 298 P **P 02 10 57.1 -1.3**
comp=Z,7.6nm,0.8s,mb4.9
PVRL Vila Real 61.76 303 *e*P **P 02 10 58.4 -0.1**
ELOB Lobios 61.83 304 P **P 02 11 01.3 +2.2**
comp=Z,13nm,0.7s,mb5.2
PCAB Cabril 61.86 304 *e*P **P 02 10 59.8 +0.6**
comp=Z,40nm,1.3s,mb5.4
MTE Manteigas 61.90 302 *e*P **P 02 10 59.7 +0.2**
comp=Z,37nm,1.3s,mb5.3
MTE Manteigas 61.90 302 *e*P **P 02 10 59.0 -0.5**
comp=Z,13nm,0.7s,mb5.2
MTE LR LR

comp=Z,469nm,19.0s,MS4.7
EBAD Badajoz 62.01 300 P **P 02 10 59.7 -0.5**
comp=Z,12nm,0.7s,mb5.1
PCBR Castelo Branco 62.02 302 *e*P **P 02 11 00.3 0.0**
comp=Z,37nm,1.7s,mb5.2
PVIS Viseu 62.05 303 *e*P **P 02 11 00.8 +0.3**
comp=Z,35nm,1.8s,mb5.2
EMIN Mina Concepcio 62.06 299 P **P 02 10 59.7 -0.9**
comp=Z,8.5nm,0.7s,mb5.0
PMRV Marv??o 62.08 301 *e*P **P 02 10 59.8 -0.9**
comp=Z,33nm,1.6s,mb5.2
MDT Midelt 62.09 293 P **P 02 10 60.0 -0.9**
comp=Z,7.8nm,0.8s,mb4.9,baz=81,slow=8.9,SNR=17
SFS San Fernando 62.12 298 PFAKE 02 11 10.0 +9.0
SFS LR LR

comp=Z,980nm,20.0s,MS5.0
PBAR Barrancos 62.20 300 *e*P **P 02 11 01.2 -0.4**
comp=Z,52nm,1.8s,mb5.4
PESTR Estremoz 62.40 301 *e*P **P 02 11 02.4 -0.5**
comp=Z,38nm,1.7s,mb5.2
EGRO El Granado 62.74 299 P **P 02 11 06.0 +0.8**
comp=Z,12nm,0.7s,mb5.1
PTOM Tomar 62.77 302 *e*P **P 02 11 05.5 +0.2**
comp=Z,57nm,1.8s,mb5.4
EVO Evora 62.82 300 *e*P **P 02 11 04.6 -1.1**
comp=Z,22nm,0.7s,mb5.1
EVO *e*MLR MLR

comp=Z,671nm,19.2s,MS4.5
EVO Evora 62.82 300 *e*P **P 02 11 05.6 -0.1**
comp=Z,44nm,1.6s,mb5.3
PBEJ Beja 62.87 300 *e*P **P 02 11 05.6 -0.4**
comp=Z,35nm,1.6s,mb5.2
PVAQ Vaqueiros 62.96 299 *e*P **P 02 11 06.8 +0.1**
BORG Borgarnes 63.25 331 LR LR 02 42 11.6
comp=Z,878nm,18.7s,MS5.0,baz=306,slow=39
BORG Borgarnes 63.25 331 PFAKE 02 11 20.0 +12
BORG LR LR

comp=Z,1µm,20.0s,MS5.0
PMAFR Mafra 63.62 301 *e*P **P 02 11 09.4 -1.6**
PTEO Sao Teotonio 63.67 300 *e*P **P 02 11 10.1 -1.3**
comp=Z,34nm,1.0s,mb5.3
BILL Bilibino 64.36 24⇑ *e*P **P 02 11 16.5 +1.1**
BILL *e* 02 11 22.8
BILL pmax pmax

comp=Z,11nm,1.0s,mb4.8
BILL Bilibino 64.36 24 *e*P **P 02 11 15.2 -0.2**
BILL LR LR

comp=Z,3µm,19.0s,MS5.6
TOA0 Torodi Ar. Sit 64.69 271 *e*P **P 02 11 17.6 -0.7**
TORD Torodi Ar. Bea 64.69 271 P **P 02 11 16.8 -1.5**
comp=Z,15nm,0.7s,mb5.1,baz=53,slow=5.9,SNR=61
TORD LR LR 02 43 24.4

comp=Z,2µm,18.1s,MS5.2,baz=60,slow=40
PETK Petropavlovsk- 64.97 42 P **P 02 11 17.9 -1.6**
comp=Z,4.3nm,0.6s,mb4.6,baz=298,slow=3.1,SNR=8.2
PETK LR LR 02 42 41.8

comp=Z,2µm,19.1s,MS5.4,baz=290,slow=39
PETK Petropavlovsk- 64.97 42 P **P 02 11 17.9 -1.6**
PETK LR LR 02 42 41.8
PET Petropavlovsk 65.54 42 *e*P **P 02 11 21.5 -1.8**
PET *e*S S 02 20 02.7 -5.3
PET *e*SS SS 02 24 15.9 -5.2
PET pmax pmax

comp=Z,100nm,16.6s
PET pmax pmax

comp=Z,100nm,8.3s
PET MLR MLR

comp=Z,3µm,18.0s,MS5.5
PET MLR MLR

comp=Z,3µm,18.0s
PET Petropavlovsk 65.54 42 PFAKE 02 11 40.0 +17
PET LR LR

comp=Z,3µm,21.0s,MS5.4
BATI Baumata 65.70 119 P **P 02 11 24.3 -0.5**
comp=Z,28nm,0.7s,mb5.4,baz=313,slow=5.9,SNR=4.4
SUMG Summit 66.33 342 *e*P **P 02 11 28.8 +0.7**
comp=Z,32nm,0.8s,mb5.4
MBWA Marble Bar 70.34 131 PFAKE 02 12 10.0 +16
MBWA LR LR

comp=Z,893nm,20.0s,MS5.0
GUMO Guam 70.47 85 PFAKE 02 12 10.0 +15
GUMO LR LR

comp=Z,462nm,19.0s,MS4.8
TSUM Tsumeb 70.51 232 *e*P **P 02 11 56.6 +1.7**
comp=Z,10nm,0.8s,mb4.8
TSUM LR LR

comp=Z,2µm,22.0s,MS5.2
FITZ Fitzroy Crossi 72.29 124 *e*P **P 02 12 06.2 +0.5**
comp=Z,12nm,1.1s,mb4.7
BOSA Boshof 72.60 220 P **P 02 12 06.4 -0.9**
comp=Z,12nm,0.7s,mb5.0,baz=40,slow=6.4,SNR=20
BOSA LR LR 02 43 24.4

comp=Z,692nm,18.8s,MS5.0,baz=41,slow=35
SFJD Kangerlussuaq 72.91 339 P **P 02 12 07.5 -1.2**
comp=Z,25nm,0.8s,mb5.2,baz=26,slow=6.9,SNR=8.6
SFJD Kangerlussuaq 72.91 339 *e*P **P 02 12 09.8 +1.1**
SFJD pmax pmax

comp=Z,36nm,1.0s,mb5.3
SFJD MLR MLR

comp=Z,950nm,20.0s,MS5.1
SFJD Kangerlussuaq 72.91 339 *i* P **P 02 12 09.8 +1.1**
comp=Z,36nm,1.0s,mb5.2
SFJD *e* 02 21 45.0
SFJD

comp=Z,940nm,20.0s
SFJD Kangerlussuaq 72.91 339 *e*P **P 02 12 09.0 +0.3**
comp=Z,40nm,1.0s,mb5.3
SFJD LR LR

comp=Z,2µm,21.0s,MS5.3
DBIC Dimbokro 73.44 268 P **P 02 12 12.1 -0.7**
comp=Z,9.9nm,1.0s,mb4.7,baz=46,slow=3.9,SNR=8.5
DBIC LR LR 02 48 27.5

comp=Z,1µm,18.9s,MS5.2,baz=39,slow=39
DBIC Dimbokro 73.44 268 P **P 02 12 12.1 -0.7**
DBIC pmax pmax

comp=Z,10.0nm,1.0s
DBIC MLR MLR

comp=Z,1µm,18.9s
KIC Kosan Boka 73.50 268 *e*P **P 02 12 13.0 -0.1**
comp=Z,78nm,0.8s,mb5.7
TIC Toumodi 73.60 268 *e*P **P 02 12 12.9 -0.8**
comp=Z,90nm,0.8s,mb5.7
TIC Toumodi 73.60 268 *e*P **P 02 12 12.9 -0.8**
TIC pmax pmax

comp=Z,90nm,0.8s,mb5.8
LIC Lamto 73.81 268⇑ *i*P **P 02 12 14.8 -0.1**
comp=Z,33nm,0.8s,mb5.0
LIC *e*MLR MLR

comp=Z,968nm,19.5s,MS4.8
LIC Lamto 73.81 268 *e*P **P 02 12 14.7 -0.2**
comp=Z,50nm,0.8s,mb5.5
LIC Lamto 73.81 268⇑ *i*P **P 02 12 14.8 -0.1**
comp=Z,16nm,0.8s,mb5.0
LIC LR LR

comp=Z,480nm,19.5s,MS4.8
KAKA Kakadu 73.97 116 *e*P **P 02 12 15.2 -0.5**
comp=Z,19nm,0.7s,mb5.1
SMY Shemya 74.19 38 PFAKE 02 12 30.0 +14
SMY LR LR

comp=Z,1µm,21.0s,MS5.2
NWAO Narrogin (SRO) 77.48 141 PFAKE 02 12 50.0 +15
NWAO LR LR

comp=Z,1µm,19.0s,MS5.2
COLD Coldfoot 77.92 15 *e*P **P 02 12 37.5 0.0**
comp=Z,22nm,0.8s,mb5.2
SUR Sutherland 77.94 221 PFAKE 02 12 50.0 +12
SUR LR LR

comp=Z,861nm,20.0s,MS5.1
IMA2 Indian Mountai 78.05 17 *e*P **P 02 12 38.4 +0.2**
ADK Adak 79.39 35 PFAKE 02 13 00.0 +14
ADK LR LR

comp=Z,1µm,21.0s,MS5.2
BBTS Babate 79.59 281 LR LR 02 53 41.3
comp=Z,1µm,18.9s,MS5.2,baz=249,slow=40
WRA Warramunga Arr 79.79 120 P **P 02 12 47.9 -0.6**
comp=Z,12nm,0.9s,mb4.8,baz=320,slow=5.2,SNR=48
WRA LR LR 02 49 31.3

comp=Z,455nm,21.4s,MS4.8,baz=295,slow=37
WRA Warramunga Arr 79.79 120 P **P 02 12 47.9 -0.6**
WRA pmax pmax

comp=Z,12nm,0.9s
WRA MLR MLR

comp=Z,455nm,21.4s
WRAB Tennant Creek 79.80 120 P **P 02 12 48.0 -0.5**
comp=Z,156nm,0.7s,mb6.0,SNR=9.4
WRAB Tennant Creek 79.80 120*c i*P **P 02 12 48.3 -0.2**
WRAB Tennant Creek 79.80 120 *e*P **P 02 12 48.2 -0.3**
comp=Z,16nm,0.7s,mb5.0
WRAB LR LR

comp=Z,697nm,20.0s,MS5.0
WB2 Warramunga Arr 79.80 120 *e*P **P 02 12 47.7 -0.8**
COLA College 80.42 15*c i*P **P 02 12 50.5 -0.7**
COLA College 80.42 15 *e*P **P 02 12 51.1 0.0**
comp=Z,35nm,0.9s,mb5.3
COLA LR LR

comp=Z,710nm,21.0s,MS5.0
MCK McKinley 81.13 16 *e*P **P 02 12 54.7 -0.3**
MCK pmax pmax

comp=Z,32nm,0.9s,mb5.2
MCK McKinley 81.13 16 *e*P **P 02 12 54.7 -0.3**
comp=Z,32nm,0.9s,mb5.2
ASAR Alice Springs 81.76 124 P **P 02 12 58.3 -0.6**
comp=Z,6.8nm,0.8s,mb4.6,baz=312,slow=5.1,SNR=40
ASAR Alice Springs 81.76 124 P **P 02 12 58.3 -0.6**
ASAR pmax pmax

comp=Z,7.0nm,0.8s
PMR Palmer 82.88 18 *e*P **P 02 13 03.8 -0.4**
PMR pmax pmax

comp=Z,15nm,0.7s,mb5.1
PMR MLR MLR

comp=Z,968nm,19.0s,MS5.2
PMR Palmer 82.88 18 *e*P **P 02 13 03.8 -0.5**
comp=Z,15nm,0.7s,mb5.1
PMR LR LR

comp=Z,968nm,19.0s,MS5.2
DAWY Dawson 82.89 12 *e*P **P 02 13 04.2 0.0**
COEN Coen 83.21 110 *e*P **P 02 13 07.5 +0.8**
comp=Z,9.5nm,1.0s,mb4.8
SLKM Skilak Lake 83.50 19 *e*P **P 02 13 06.8 -0.6**
PMG Port Moresby 84.02 105 *e*P **P 02 13 11.2 +0.3**
PMG pmax pmax

comp=Z,15nm,0.8s
PMG MLR MLR

comp=Z,401nm,19.0s
PMG Port Moresby 84.02 105 *e*P **P 02 13 11.2 +0.3**
comp=Z,15nm,0.8s,mb5.2
PMG LR LR

comp=Z,401nm,19.0s,MS4.8
SEW Seward 84.05 19 *e*P **P 02 13 10.1 -0.2**
KDAK Kodiak Island 85.04 21 P **P 02 13 15.7 +0.3**
comp=Z,303nm,0.8s,mb6.5,SNR=6.7
KDAK Kodiak Island 85.04 21 *e*P **P 02 13 14.9 -0.5**
comp=Z,49nm,0.9s,mb5.6
KDAK LR LR

comp=Z,380nm,20.0s,MS4.8
OHAK Old Harbor 85.28 22 *e*P **P 02 13 16.4 -0.2**
comp=Z,24nm,0.8s,mb5.4
SCHQ Schefferville 87.12 337 P **P 02 13 24.6 -1.1**
comp=Z,7.0nm,0.7s,mb5.0,baz=40,slow=11,SNR=5.1
SCHQ LR LR 02 56 51.3

comp=Z,820nm,18.2s,MS5.2,baz=83,slow=39
YKA Yellowknife Ar 87.18 2 P **P 02 13 26.0 +0.2**
comp=Z,12nm,0.6s,mb5.3,baz=350,slow=5.1,SNR=40
YKA LR LR 02 58 33.7

comp=Z,500nm,19.4s,MS4.9,baz=200,slow=40
CTA Charters Tower 89.02 114 *e*P **P 02 13 33.5 -1.7**
comp=Z,6.6nm,0.6s,mb5.1
CTA Charters Tower 89.02 114 *e*P **P 02 13 33.5 -1.7**
CTA pmax pmax

comp=Z,7.0nm,0.6s
CTAO Charters Tower 89.02 114 *e*P **P 02 13 36.2 +1.0**
CTAO pmax pmax

comp=Z,9.0nm,0.8s,mb5.2
CTAO MLR MLR

comp=Z,589nm,19.0s,MS5.0
CTAO Charters Tower 89.02 114 *e*P **P 02 13 36.2 +1.0**
comp=Z,9.3nm,0.8s,mb5.2
CTAO LR LR

comp=Z,589nm,19.0s,MS5.0
DLBC Dease Lake 89.77 10 *e*P **P 02 13 38.1 -0.1**
FCC Fort Churchill 89.98 352 *e*P **P 02 13 38.8 -0.3**
FCC pmax pmax
comp=Z,20nm,0.8s,mb5.5
FCC Fort Churchill 89.98 352 *e*P **P 02 13 38.8 -0.3**
comp=Z,20nm,0.8s,mb5.5
SIT Sitka 90.14 13 PFAKE 02 13 50.0 +10
SIT LR LR
comp=Z,1µm,21.0s,MS5.3
WRAK Wrangell Islan 91.31 12 PFAKE 02 14 00.0 +15
WRAK LR LR
comp=Z,568nm,21.0s,MS5.0
STKA Stephens Creek 92.11 126 LR LR 02 54 38.8
comp=Z,911nm,21.4s,MS5.2,baz=265,slow=35
FFC Flin Flon 94.74 355 P **P 02 14 01.7 +0.5**
comp=Z,74nm,0.9s,mb6.1,SNR=5.1
FFC Flin Flon 94.74 355 *e*P **P 02 14 00.9 -0.3**
FFC pmax pmax
comp=Z,11nm,0.8s,mb5.3
FFC MLR MLR
comp=Z,808nm,19.0s,MS5.2
FFC Flin Flon 94.74 355 *e*P **P 02 14 00.9 -0.3**
comp=Z,11nm,0.8s,mb5.3
FFC LR LR
comp=Z,808nm,19.0s,MS5.2
HNR Honiara 94.85 98 PFAKE 02 14 10.0 +7.6
HNR LR LR
comp=Z,413nm,22.0s,MS4.9
PKME Peaks-Kenny Pk 95.84 332 PFAKE 02 14 20.0 +14
PKME LR LR
comp=Z,1µm,21.0s,MS5.3
EDM Edmonton 96.50 2 *e*P **P 02 14 09.1 -0.1**
LBNH Lisbon 97.74 333 PFAKE 02 14 30.0 +15
LBNH LR LR
comp=Z,1µm,20.0s,MS5.3
MAW Mawson 98.03 183 P **P 02 14 15.3 -0.3**
comp=Z,2.9nm,0.8s,mb4.8,baz=320,slow=5.2,SNR=6.3
MAW LR LR 02 51 55.9
comp=Z,704nm,20.3s,MS5.2,baz=35,slow=31
LONY Lake Ozonia 98.41 335 PFAKE 02 14 30.0 +12
LONY LR LR
comp=Z,653nm,20.0s,MS5.1
ULM Lac du Bonnet 98.52 351 P **P 02 14 17.8 -0.7**
comp=Z,5.4nm,0.9s,mb5.0,baz=2.1,slow=5.2,SNR=7.3
ULM LR LR 03 03 40.0
comp=Z,676nm,20.2s,MS5.1,baz=210,slow=38
NCB Newcomb 98.83 335 PFAKE 02 14 30.0 +10
NCB LR LR
comp=Z,616nm,20.0s,MS5.1
HRV Adam Dziewonsk 99.05 332 PFAKE 02 14 30.0 +9.0
HRV LR LR
comp=Z,695nm,21.0s,MS5.1
WES Weston 99.05 332 PFAKE 02 14 30.0 +9.0
WES LR LR
comp=Z,537nm,21.0s,MS5.0
EYMN Ely 100.04 347 PFAKE 02 14 40.0 +15
EYMN LR LR
comp=Z,1µm,20.0s,MS5.5
AGMN Agassiz Refuge 100.43 350 *e*Pdif Pdif 02 14 28.6 +1.6
AGMN LR LR
comp=Z,845nm,20.0s,MS5.2
BINY Binghamton 101.02 335 PFAKE 02 14 40.0 +10
BINY LR LR
comp=Z,923nm,20.0s,MS5.3
DGMT Dagmar 101.12 356 PFAKE 02 14 40.0 +10
DGMT LR LR
comp=Z,818nm,21.0s,MS5.2
NEW Newport 101.26 5 PFAKE 02 14 40.0 +9.3
NEW LR LR
comp=Z,794nm,20.0s,MS5.2
COWI Conover 101.32 345 PFAKE 02 14 40.0 +9.0
COWI LR LR
comp=Z,840nm,20.0s,MS5.2
NLWA Neilton Lookou 101.41 9 PFAKE 02 14 40.0 +8.6
NLWA LR LR
comp=Z,637nm,20.0s,MS5.1
CASY Casey 101.46 164 PFAKE 02 14 40.0 +8.4
CASY LR LR
comp=Z,420nm,19.0s,MS5.0
EGMT Eagleton 101.75 360 PFAKE 02 14 40.0 +7.1
EGMT LR LR
comp=Z,825nm,20.0s,MS5.2
TAU Tasmania Unive 101.92 133 PFAKE 02 14 50.0 +16
TAU LR LR
comp=Z,1µm,22.0s,MS5.3
MSO Missoula 102.87 3 PFAKE 02 14 50.0 +12
MSO LR LR
comp=Z,612nm,19.0s,MS5.2
HAWA Hanford 102.91 7 PFAKE 02 14 50.0 +12
HAWA LR LR
comp=Z,721nm,19.0s,MS5.2
LAO LASA Array 103.00 357 PFAKE 02 14 50.0 +12
LAO LR LR
comp=Z,1µm,22.0s,MS5.4
BBSR BB Station 103.99 322 PFAKE 02 14 50.0 +7.1
BBSR LR LR
comp=Z,524nm,22.0s,MS5.0
BOZ Bozeman (W) 104.11 1 PFAKE 02 14 50.0 +6.6
BOZ LR LR
comp=Z,611nm,21.0s,MS5.1
COR Corvallis 104.23 10 PFAKE 02 15 00.0 +16
COR LR LR
comp=Z,149nm,21.0s,MS4.5
JFWS Jewell Farm 104.60 345 PFAKE 02 15 00.0 +14
JFWS LR LR
comp=Z,1µm,22.0s,MS5.3
MCWV Mont Chateau 104.63 336 PFAKE 02 15 00.0 +14
MCWV LR LR
comp=Z,578nm,20.0s,MS5.1
BMO Blue Mountains 104.64 5 PFAKE 02 15 00.0 +14
BMO LR LR
comp=Z,927nm,21.0s,MS5.3
RLMT Red Lodge 104.64 359 PFAKE 02 15 00.0 +14
RLMT LR LR
comp=Z,1µm,20.0s,MS5.4
ECSD EROS,Sioux Fal 105.00 350 PFAKE 02 15 00.0 +13
ECSD LR LR
comp=Z,1µm,22.0s,MS5.4
YMR Madison River 105.10 1 PFAKE 02 19 10.0 +7.7
YMR LR LR
comp=Z,2µm,22.0s,MS5.6
ACSO Alum Creek Sta 105.15 339 PFAKE 02 19 10.0 +7.5
ACSO LR LR
comp=Z,1µm,20.0s,MS5.4
LKWY Lake 105.21 0 PFAKE 02 19 10.0 +7.5
LKWY LR LR
comp=Z,1µm,20.0s,MS5.5
RSSD Black Hills 105.44 355 PFAKE 02 19 10.0 +7.1
RSSD LR LR
comp=Z,313nm,20.0s,MS4.8
HLID Hailey 106.11 3 PFAKE 02 19 20.0 +16
HLID LR LR
comp=Z,648nm,20.0s,MS5.2
SCIA State Center 106.18 347 PFAKE 02 19 20.0 +16
SCIA LR LR
comp=Z,2µm,19.0s,MS5.6
HUMO Hull Mountain 106.22 10 PFAKE 02 19 20.0 +16
HUMO LR LR
comp=Z,550nm,20.0s,MS5.1
WVOR Wild Horse Val 106.92 7 PFAKE 02 19 20.0 +14
WVOR LR LR
comp=Z,802nm,22.0s,MS5.2
AHID Auburn Hatcher 107.00 1 PFAKE 02 19 20.0 +14
AHID LR LR
comp=Z,683nm,22.0s,MS5.2
BW06 Boulder Array 107.00 360 PFAKE 02 19 20.0 +14
BW06 LR LR
comp=Z,938nm,20.0s,MS5.3
PDAR Pinedale Array 107.00 360 PKiKP PKiKP 02 19 05.5 -0.4
comp=Z,0.5nm,0.4s,baz=64,slow=4.1,SNR=3.0
BLA Blacksburg 107.02 336 PFAKE 02 19 20.0 +14
BLA LR LR
comp=Z,1µm,21.0s,MS5.4
YBH Yreka Blue Hor 107.12 10 PFAKE 02 19 20.0 +14
YBH LR LR
comp=Z,577nm,19.0s,MS5.2
MOD Modoc 107.27 8 PFAKE 02 19 20.0 +14
MOD LR LR
comp=Z,580nm,20.0s,MS5.1
CNNC Cliffs of the 107.81 333 PFAKE 02 19 20.0 +12
CNNC LR LR
comp=Z,815nm,20.0s,MS5.3
WCI Wyandotte Cave 107.99 340 PFAKE 02 19 20.0 +12
WCI LR LR
comp=Z,193nm,21.0s,MS4.6

WDC Whiskeytown Da 108.27 10 PFAKE 02 19 20.0 +12
WDC LR LR
comp=Z,613nm,20.0s,MS5.2
TZTN Tazewell 108.69 338 PFAKE 02 19 20.0 +11
TZTN LR LR
comp=Z,1µm,22.0s,MS5.5
ELK Elko 108.87 4 PFAKE 02 19 20.0 +11
ELK LR LR
comp=Z,799nm,19.0s,MS5.3
BMN Battle Mountai 109.04 6 PFAKE 02 19 20.0 +10
BMN LR LR
comp=Z,729nm,20.0s,MS5.2
KSU1 Kansas State U 109.52 349 PFAKE 02 19 20.0 +9.3
KSU1 LR LR
comp=Z,1µm,22.0s,MS5.4
DUG Dugway 109.53 2 PFAKE 02 19 20.0 +9.3
DUG LR LR
comp=Z,639nm,19.0s,MS5.2
MPU Maple Canyon 109.74 1 PFAKE 02 19 20.0 +8.9
MPU LR LR
comp=Z,626nm,19.0s,MS5.2
HOPS Hopland 109.74 11 PFAKE 02 19 20.0 +8.9
HOPS LR LR
comp=Z,850nm,20.0s,MS5.3
ISCO Idaho Springs 109.84 356 PFAKE 02 19 20.0 +8.7
ISCO LR LR
comp=Z,789nm,20.0s,MS5.3
CBKS Cedar Bluff 110.27 351 PFAKE 02 19 20.0 +7.9
CBKS LR LR
comp=Z,843nm,19.0s,MS5.3
WVT Waverly 110.39 341 PFAKE 02 19 20.0 +7.6
WVT LR LR
comp=Z,856nm,21.0s,MS5.3
NHSC New Hope 110.58 333 PFAKE 02 19 20.0 +7.1
NHSC LR LR
comp=Z,1µm,22.0s,MS5.4
MCCM Marconi Confer 110.60 11 PFAKE 02 19 20.0 +7.2
MCCM LR LR
comp=Z,507nm,20.0s,MS5.1
NVAR Mina Array Bea 110.92 7 PKiKP PKiKP 02 19 15.3 +1.9
comp=Z,1.7nm,0.7s,baz=281,slow=2.3,SNR=9.4
NVAR Mina Array Bea 110.92 7 PKPdf PKiKP 02 19 15.3 +1.9
FUNA Funafuti 110.96 88 PFAKE 02 19 30.0 +16
FUNA LR LR
comp=Z,5µm,22.0s,MS6.1
CMB Columbia Colle 111.07 9 PFAKE 02 19 30.0 +16
CMB LR LR
comp=Z,600nm,20.0s,MS5.2
MVU Marysvale 111.24 2 PFAKE 02 19 30.0 +16
MVU LR LR
comp=Z,669nm,19.0s,MS5.2
TPH Tonopah 111.38 6 PFAKE 02 19 30.0 +16
TPH LR LR
comp=Z,582nm,20.0s,MS5.2
GOGA Godfrey 111.51 336 PFAKE 02 19 30.0 +15
GOGA LR LR
comp=Z,860nm,19.0s,MS5.3
PLAL Pickwick Lake 111.53 341 PFAKE 02 19 30.0 +15
PLAL LR LR
comp=Z,1µm,21.0s,MS5.5
SDCO Great Sand Dun 111.88 356 PFAKE 02 19 30.0 +15
SDCO LR LR
comp=Z,994nm,21.0s,MS5.4
SAO San Andreas Ge 112.17 10 PFAKE 02 19 30.0 +14
SAO LR LR
comp=Z,538nm,20.0s,MS5.1
OXF Oxford 112.35 342 PFAKE 02 19 30.0 +14
OXF LR LR
comp=Z,1µm,20.0s,MS5.5
MVCO Mesa Verde 112.54 359 PFAKE 02 19 30.0 +14
MVCO LR LR
comp=Z,673nm,19.0s,MS5.2
TPNV Topopah Spring 112.58 5 PFAKE 02 19 30.0 +13
TPNV LR LR
comp=Z,1µm,22.0s,MS5.4
LRAL Lakeview Retre 113.02 339 PFAKE 02 19 30.0 +12
LRAL LR LR
comp=Z,1µm,19.0s,MS5.5
DAC Darwin (Calif) 113.12 6 PFAKE 02 19 30.0 +12
DAC LR LR
comp=Z,711nm,21.0s,MS5.2
MIAR Mount Ida 113.34 345 PFAKE 02 19 30.0 +12
MIAR LR LR
comp=Z,865nm,19.0s,MS5.4
SNAA Sanae 113.51 199 *e*PKPdf PKiKP 02 19 17.3 +0.2
SNAA *e* 02 19 21.6
SNAA *e* 02 19 25.8
SNAA Sanae 113.51 199⇑PKIKP PKiKP 02 19 17.4 +0.3
ISA Isabella 113.64 7 PFAKE 02 19 30.0 +11
ISA LR LR
comp=Z,525nm,20.0s,MS5.1
WMOK Wichita Mounta 114.14 350 PFAKE 02 19 30.0 +10
WMOK LR LR
comp=Z,764nm,19.0s,MS5.3
WUAZ Wupatki 114.23 1 PFAKE 02 19 30.0 +10
WUAZ LR LR
comp=Z,712nm,21.0s,MS5.2
AMTX Amarillo 114.38 352 PFAKE 02 19 30.0 +10
AMTX LR LR
comp=Z,1µm,20.0s,MS5.4
VNA2 Neumayer--Watz 114.54 201 *e*PKPdf PKiKP 02 19 19.4 +0.3
VNA2 *e* 02 19 23.8
VNA2 *e* 02 19 27.5
VNA1 Neumayer--Stat 114.71 201 *e*PKPdf PKiKP 02 19 20.8 +1.4
VNA1 *e* 02 19 25.1
VNA1 *e* 02 19 28.5
ANMO Albuquerque 114.72 357 PFAKE 02 19 30.0 +9.3
ANMO LR LR
comp=Z,826nm,21.0s,MS5.3
BBGH Gun Hill 114.73 304 PFAKE 02 19 30.0 +8.8
BBGH LR LR
comp=Z,328nm,19.0s,MS5.0
VBMS Vicksburg 114.81 342 PFAKE 02 19 30.0 +9.1
VBMS LR LR
comp=Z,841nm,20.0s,MS5.3
BRAL Brewton 114.91 338 PFAKE 02 19 30.0 +8.8
BRAL LR LR
comp=Z,1µm,20.0s,MS5.4
VNA3 Neumayer Olymp 115.35 201 *e*PKPdf PKPdf 02 19 20.9 +0.3
VNA3 *e* 02 19 25.4
DWPF Disney 115.50 332 PFAKE 02 19 30.0 +7.6
DWPF LR LR
comp=Z,192nm,21.0s,MS4.7
SJG San Juan 115.66 313 PFAKE 02 19 30.0 +7.1
SJG LR LR
comp=Z,280nm,19.0s,MS4.9
PFO Pinyon Flat Ob 115.87 6 PFAKE 02 19 30.0 +7.0
PFO LR LR
comp=Z,641nm,22.0s,MS5.2
NATX Nacogdoches 116.27 345 PFAKE 02 19 40.0 +16
NATX LR LR
comp=Z,761nm,20.0s,MS5.3
BAR Barrett 116.78 6 PFAKE 02 19 40.0 +15
BAR LR LR
comp=Z,782nm,21.0s,MS5.3
GRGR Grenville 116.91 305 PFAKE 02 19 40.0 +15
GRGR LR LR
comp=Z,320nm,21.0s,MS4.9
RPZ Rata Peaks 118.08 126 PKP PKPdf 02 19 28.2 +1.5
comp=Z,9.7nm,1.0s,baz=83,slow=19,SNR=1.9
HKT Hockley 118.26 346 PFAKE 02 19 40.0 +12
HKT LR LR
comp=Z,219nm,19.0s,MS4.8
JCT Junction City 118.47 350 *e*PKIKP PKPdf 02 19 28.0 0.0
JCT MLR MLR
comp=Z,774nm,19.0s,MS5.3
TXAR Lajitas Array 120.09 353 PKP PKPdf 02 19 31.5 +0.3
comp=Z,1.2nm,0.8s,baz=180,slow=2.5,SNR=10
TXAR PKKPab PKKPab 02 29 45.2 +1.6
comp=Z,0.4nm,0.8s,baz=182,slow=7.5,SNR=3.7
KVTX Kingsville 121.01 347 PFAKE 02 19 40.0 +7.0
KVTX LR LR
comp=Z,932nm,19.0s,MS5.5
SBA Scott Base 121.13 166 PFAKE 02 19 40.0 +8.4
SBA LR LR
comp=Z,511nm,19.0s,MS5.2
SDV Santo Domingo 125.40 309 PFAKE 02 19 50.0 +8.3
SDV LR LR
comp=Z,109nm,21.0s,MS4.5
TGUH Tegucigalpa,Un 130.43 330 *e*PKPdf PKPdf 02 19 52.2 +1.0
TGUH LR LR
comp=Z,544nm,19.0s,MS5.3
ROSC El Rosal 130.83 310 PKP PKPdf 02 19 53.7 +1.6
comp=Z,9.1nm,0.8s,baz=87,slow=18,SNR=8.2
ROSC El Rosal 130.83 310 *e*PKPdf PKPdf 02 19 54.0 +1.9

BCIP Isla Barro Col 130.89 319 PFAKE 02 20 00.0 +7.8
BCIP LR LR
comp=Z,312nm,19.0s,MS5.0
CPUP Villa Florida 133.68 262 PKP PKPdf 02 19 57.0 -0.1
comp=Z,2.4nm,0.7s,baz=53,slow=2.6,SNR=13
CPUP Villa Florida 133.68 262 PKIKP PKPdf 02 19 57.0 0.0
CPUP pmax pmax
comp=Z,2.0nm,0.7s
CPUP Villa Florida 133.68 262 *e*PKPdf PKPdf 02 19 57.0 0.0
EFI East Falkland 136.54 226 PFAKE 02 20 10.0 +8.4
EFI LR LR
comp=Z,584nm,21.0s,MS5.3
OTAV Otavalo 136.99 310 *e*PKPdf PKPdf 02 20 04.9 +1.2
LPAZ La Paz 139.11 281 PKP PKPdf 02 20 08.3 +1.0
comp=Z,2.0nm,0.7s,baz=153,slow=2.7,SNR=8.7
LPAZ La Paz 139.11 281 PKIKP PKPdf 02 20 08.3 +0.9
LPAZ pmax pmax
comp=Z,2.0nm,0.7s
LPAZ La Paz 139.11 281 PKP PKPdf 02 20 08.3 +1.0
PPT Papeete 141.97 79 *e*LR LR 03 06 37.2
comp=Z,435nm,23.0s
PLCA Paso Flores 146.49 241 PKPbc PKPbc 02 20 21.9 +0.7
comp=Z,6.2nm,0.8s,baz=96,slow=6.8,SNR=6.3
PLCA Paso Flores 146.49 241 PKP2 PKPab 02 20 21.9 -0.2
PLCA pmax pmax
comp=Z,6.0nm,0.8s

IDC 09 02:03:30.6±4.5, 1879S×17455W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.8/17, mbtmp3.8/3, Error ellipse: s-maj=311.2km s-min=32.7km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**48.08**	**260**	P	P	02 12 12.4	0.0
	0.8nm,0.8s,baz=95,slow=6.7,SNR=23						
ASAR	**Alice Springs**	**48.09**	**255**	P	P	02 12 12.2	-0.2
	1.1nm,0.8s,baz=101,slow=8.1,SNR=12						
NVAR	**Mina Array Bea**	**77.57**	**42**	P	P	02 15 29.0	+0.5
	0.8nm,0.7s,baz=226,slow=4.7,SNR=3.6						

*ISCJB **09** 02:34:40.6±0.4, 3300N×003×11778W×002, h10km, Error ellipse: s-maj=4.3km s-min=2.1km az=21.8*
*NEIC **09** 02:34:42.3, 3300N×11776W, h6km, ML3.9(PAS), After PAS.*
NEIC Felt [III] at Bonsall, Carlsbad, Escondido, Laguna Beach, Oceanside, San Diego and Vista; [II] at Aliso Viejo, Cypress, Dana Point, El Cajon, Fallbrook, Huntington Beach, Irvine, Jamul, Lake Forest, La Mesa, Long Beach, Mission Viejo, Poway, San Clemente, San Marcos, Santee, Spring Valley and Valley Center. Also felt at Anaheim, Bonita, Chula Vista, Corona del Mar, Costa Mesa, Encinitas, Fullerton, Ladera Ranch, Laguna Hills, Laguna Niguel, Lake Elsinore, Lakeside, Lakewood, La Palma, Los Alamitos, Murrieta, Newport Beach, Palos Verdes Estates, Pauma Valley, Placentia, Ramona, San Juan Capistrano, San Ysidro, Seal Beach, Signal Hill, Tecate, Temecula, Tustin and Westminster.

ISC 09 02:34:41.7±0.3, 3305N×002×11776W×002, h10km, n68, σ1§24/100, 32C-31D, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
109C	**Camp Elliot, M**	**0.57**	**106**	⇑P	**Pg**	**02 34 52.8**	**-0.1**
	baz=0.6						
CIS	**Catalina Islan**	**0.65**	**304**	⇑P	**Pg**	**02 34 53.9**	**-0.3**
	baz=0.7,SNR=681						
CIS				⇓S	**Sg**	**02 35 03.8**	**+1.2**
	baz=0.7						
SCI	**San Clemente I**	**0.67**	**264**	⇓P	**Pg**	**02 34 54.2**	**-0.3**
	baz=0.7						
SCI				⇓S	**Sg**	**02 35 03.2**	**0.0**
	baz=0.7						
MURC	**Murrieta**	**0.72**	**40**	P	**Pg**	**02 34 55.8**	**+0.2**
	baz=0.8,SNR=1000						
FMP	**Fort Macarthur**	**0.80**	**326**	⇑P	**Pg**	**02 34 56.8**	**-0.3**
	baz=0.8,SNR=66						
FMP				⇓S	**Sg**	**02 35 08.2**	**+0.7**
	baz=0.8						
BAR	**Barrett**	**0.99**	**112**	*e*Pg	**Pg**	**02 34 59.7**	**-1.0**
BAR				*e*Sg	**Sg**	**02 35 12.5**	**-1.1**
MONP	**Monument Peak**	**1.14**	**98**	⇓P	**Pb**	**02 35 02.4**	**-1.0**
	baz=1.1,SNR=1000						
MONP				⇑S	**Sb**	**02 35 17.7**	**-0.6**
	baz=1.1						
BFSC	**Mount Baldy St**	**1.19**	**4**	⇑P	**Pb**	**02 35 04.1**	**-0.2**
	baz=1.2,SNR=608						
MWC	**Mount Wilson**	**1.20**	**348**	*e*Pg	**Pg**	**02 35 04.1**	**-0.6**
MWC				*e*Sg	**Sg**	**02 35 20.7**	**+0.4**
PFO	**Pinyon Flat Ob**	**1.23**	**63**	⇑P	**Pn**	**02 35 04.7**	**-0.2**
	baz=1.2,SNR=803						
PFO				⇑S	**Sb**	**02 35 20.7**	**-0.1**
	baz=1.2						
PFO	**Pinyon Flat Ob**	**1.23**	**63**	*e*Pg	**Pg**	**02 35 04.7**	**-0.5**
PFO				*e*Sg	**Sg**	**02 35 21.3**	**+0.1**
DECC	**Green Verdugo**	**1.29**	**338**	⇓Pb	**Pb**	**02 35 05.4**	**-0.6**
	baz=1.3,SNR=30						
DECC				⇓Sn	**Sn**	**02 35 22.6**	**-0.4**
	baz=1.3						
BBRC	**Big Bear Sol-O**	**1.40**	**30**	⇓Pb	**Pb**	**02 35 07.4**	**-0.5**
	baz=1.4,SNR=62						
DVTC	**Desert V Tower**	**1.45**	**105**	⇑Pb	**Pb**	**02 35 08.0**	**-0.8**
	baz=1.4,SNR=167						
DVTC				⇑Sb	**Sb**	**02 35 27.0**	**-0.3**
	baz=1.4						
SNCC	**San Nicolas Is**	**1.49**	**278**	⇓Pn	**Pn**	**02 35 06.5**	**-2.0**
	baz=1.5,SNR=39						
SNCC				⇓Sn	**Sn**	**02 35 26.2**	**-1.9**
	baz=1.5						
SNCC	**San Nicolas Is**	**1.49**	**278**	*e*Pn	**Pn**	**02 35 08.1**	**-0.5**
SNCC				*e*Sn	**Sn**	**02 35 28.8**	**+0.7**
BLG	**Laguna Peak**	**1.52**	**314**	⇑Pn	**Pn**	**02 35 07.4**	**-1.5**
	baz=1.5						
BLG				⇑Sn	**Sn**	**02 35 26.9**	**-1.8**
	baz=1.5						
SWSC	**Sam W. Stewart**	**1.66**	**93**	⇓Pb	**Pb**	**02 35 11.2**	**-1.0**
	baz=1.7,SNR=228						
SWSC				⇓Sn	**Sn**	**02 35 31.4**	**-0.7**
	baz=1.7						
BELC	**Belle Mtn.**	**1.75**	**57**	⇓Pb	**Pb**	**02 35 13.2**	**-0.7**
	baz=1.8,SNR=162						
BELC				⇑Sb	**Sb**	**02 35 37.1**	**+1.1**
	baz=1.8						
OSI	**Osito Adit**	**1.75**	**333**	⇓Pb	**Pb**	**02 35 13.0**	**-1.0**
	baz=1.8						
OSI	**Osito Adit**	**1.75**	**333**	*e*Pn	**Pn**	**02 35 14.1**	**+2.0**
OSI				*e*Sg	**Sg**	**02 35 37.6**	**-0.5**
BSC	**Santa Cruz Isl**	**1.82**	**302**	⇑Pn	**Pn**	**02 35 11.8**	**-1.4**
	baz=1.8,SNR=15						
EDW2	**Edwards Air Fo**	**1.83**	**354**	⇓Pb	**Pb**	**02 35 14.3**	**-1.0**
	baz=1.9,SNR=490						
EDW2				⇓Sb	**Sb**	**02 35 39.5**	**+1.1**
	baz=1.9						
BC3	**Big Chuckw Mtn**	**2.02**	**72**	⇓Pb	**Pb**	**02 35 17.2**	**-1.4**
	baz=2.0,SNR=64						
BC3				⇓Sb	**Sb**	**02 35 45.4**	**+1.6**
	baz=2.0						
HEC	**Hector,Ludlow**	**2.14**	**33**	⇓Pb	**Pb**	**02 35 19.1**	**-1.3**
	baz=2.2,SNR=80						
ARVC	**Arvin**	**2.25**	**337**	⇓Pb	**Pb**	**02 35 20.4**	**-2.0**
	baz=2.3,SNR=19						
GSC	**Goldstone**	**2.38**	**19**	⇑Pb	**Pb**	**02 35 22.6**	**-2.1**
	baz=2.4,SNR=39						
GSC	**Goldstone**	**2.38**	**19**	*e*Pn	**Pn**	**02 35 22.0**	**+1.2**
GSC				*e*Pg	**Pg**	**02 35 26.4**	**-0.9**
GSC				*e*Sg	**Sg**	**02 35 55.4**	**-2.8**
IRM	**Iron Mountain**	**2.44**	**62**	⇑Pn	**Pn**	**02 35 21.5**	**-0.1**
	baz=2.5,SNR=123						
GLA	**Glamis**	**2.46**	**89**	⇑Pn	**Pn**	**02 35 21.7**	**-0.2**
	baz=2.5,SNR=20						
GLA	**Glamis**	**2.46**	**89**	*e*Pn	**Pn**	**02 35 21.3**	**-0.6**
GLA				*e*Pg	**Pg**	**02 35 29.0**	**+0.1**
GLA				*e*Sg	**Sg**	**02 35 58.5**	**-2.3**
PKM	**Peak Mountain**	**2.51**	**318**	⇑Pn	**Pn**	**02 35 22.5**	**-0.1**
	baz=2.5,SNR=64						
ISA	**Isabella**	**2.67**	**347**	⇓Pn	**Pn**	**02 35 24.2**	**-0.6**
	baz=2.7						
ISA	**Isabella**	**2.67**	**347**	*e*Pn	**Pn**	**02 35 25.8**	**+1.0**
ISA				*e*Pg	**Pg**	**02 35 31.1**	**-1.8**
ISA				*e*Sn	**Sn**	**02 35 59.4**	**+2.2**
112A	**Yuma**	**2.73**	**100**	⇓Pn	**Pn**	**02 35 24.7**	**-0.8**
	baz=2.7,SNR=35						
Y12C	**Blythe**	**2.80**	**75**	⇑Pn	**Pn**	**02 35 26.6**	**+0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=2.8,SNR=23						
TUQ	Turquoise Moun	2.82	32	⇓Pn	Pn	02 35 28.1	+1.2
	baz=2.9,SNR=15						
SMMC	Simmler	2.92	321	⇑Pn	Pn	02 35 29.1	+0.9
	baz=3.0,SNR=6.9						
LDFC	Landfair	2.99	47	ePg	Pg	02 35 36.3	-2.6
LDFC				eSg	Sg	02 36 16.3	-1.4
MPMC	Manual Prospec	3.01	4	⇑Pn	Pn	02 35 30.4	+1.0
	baz=3.1,SNR=230						
Y13A	Salome	3.37	76	⇓Pn	Pn	02 35 34.8	+0.3
	baz=3.4,SNR=9.5						
U10A	Ash Meadows, A	3.56	19	⇓Pn	Pn	02 35 38.7	+1.7
	baz=3.6,SNR=13						
V12A	Nelson	3.59	41	⇑Pn	Pn	02 35 38.5	+1.1
	baz=3.6,SNR=12						
X13A	Yucca	3.62	64	⇑Pn	Pn	02 35 39.2	+1.5
	baz=3.6,SNR=18						
PKD	Parkfield	3.69	322	⇓Pn	Pn	02 35 38.4	-0.3
	baz=3.7,SNR=5.9						
W13A	Hualapai Mount	3.81	57	⇓Pn	Pn	02 35 41.8	+1.4
	baz=3.8,SNR=30						
GRAC	Grapevine Rang	3.95	5	⇓Pn	Pn	02 35 44.9	+2.5
	baz=4.0,SNR=25						
TPNV	Topopah Spring	4.08	17	ePn	Pn	02 35 45.8	+1.6
TPNV				eSg	Sg	02 36 51.8	-1.0
V03C	Hunter Liggett	4.12	317	⇑Pn	Pn	02 35 43.9	-0.9
	baz=4.2,SNR=181						
U04C	Hernandez Rese	4.14	324	⇓Pn	Pn	02 35 45.5	+0.6
	baz=4.2,SNR=9.5						
X14A	Yava	4.30	69	⇑Pn	Pn	02 35 48.3	+1.2
	baz=4.3,SNR=45						
214A	Organ Pipe Nat	4.32	103	⇑Pn	Pn	02 35 47.1	-0.4
	baz=4.3,SNR=7.8						
MTUM	Tungsten Hills	4.34	352	ePn	Pn	02 35 50.3	+2.6
MTUM				ePg	Pg	02 36 01.6	-3.3
MTUM				eSg	Sg	02 36 59.2	-2.0
U13A	Pakoon Wash	4.58	42	⇑Pn	Pn	02 35 52.6	+1.5
	baz=4.6,SNR=9.8						
Y15A	Casa Rosa Ranc	4.62	77	⇑Pn	Pn	02 35 52.6	+1.0
	baz=4.6,SNR=20						
V14A	Boquillas Ranc	4.63	55	⇑Pn	Pn	02 35 52.4	+0.7
	baz=4.7						
115A	Sonoran Desert	4.67	93	⇑Pn	Pn	02 35 53.0	+0.8
	baz=4.7						
S09A	Goldfield	4.68	5	⇑Pn	Pn	02 35 54.9	+2.5
	baz=4.7,SNR=28						
SAO	San Andreas Ge	4.79	322	ePn	Pn	02 35 53.4	-0.4
X15A	Humboldt	4.82	71	⇓Pn	Pn	02 35 55.6	+1.3
	baz=4.8,SNR=23						
S10A	Tonopah Range,	4.95	11	⇑Pn	Pn	02 35 58.2	+2.1
	baz=5.0,SNR=8.9						
TPH	Tonopah	5.03	5	Pn	Pn	02 36 00.6	+3.4
	27nm,0.7s						
TPH				ePg	Pg	02 36 16.2	-1.9
CMB	Columbia Colle	5.41	337	ePn	Pn	02 36 04.4	+2.0
	5.9nm,0.6s						
CMB				ePg	Pg	02 36 19.9	-5.5
X16A	Lo Mia Camp, P	5.44	74	⇑Pn	Pn	02 36 04.5	+1.6
	baz=5.4,SNR=34						
Y17A	Roosevelt	5.82	82	⇓Pn	Pn	02 36 08.6	+0.5
	baz=5.8						
WUAZ	Wupatki	5.83	63	ePn	Pn	02 36 10.3	+2.1
	6.8nm,0.6s						
WUAZ				ePg	Pg	02 36 29.0	-4.4
WUAZ				eSg	Sg	02 37 43.7	-5.2
MSU	Marysvale	7.09	38	ePn	Pn	02 36 29.2	+3.7
MVCO	Mesa Verde	8.65	59	ePn	Pn	02 36 48.4	+1.5

*ISCJB **09** 02:42:31.2±0.3, 3659N±002×2113E±002, h10km, mb4.1/24, Error ellipse: s-maj=3.2km s-min=2.3km az=6.3*
*NEIC **09** 02:42:32.8, 3661N×2116E, h19km, mb3.9/19, ML3.9(ATH), After ATH.*
*ATH **09** 02:42:32.7, 3660N×2114E, h18km±1km, MD4.1/14, ML3.9*
*MOS **09** 02:42:33.9±1.8, 3661N×2108E, h33km, mb4.3/14, Error ellipse: s-maj=6.8km s-min=3.7km az=111.1*
*THE **09** 02:42:34.0, 3657N×2125E, h0km, ML4.3*
*CSEM **09** 02:42:34.1±0.1, 3658N×2119E, h10km, Ms3.7, Error ellipse: s-maj=1.8km s-min=1.1km az=13.0*
*IDC **09** 02:42:35.5±4.1, 3669N×2130E, h30km±31km, mb3.8/15, mb1 3.9/21, mb1mx3.8/33, mbtmp3.8/21, ML3.7/5, Error ellipse: s-maj=14.6km s-min=12.6km az=159.0*
*PRU **09** 02:42:37.9, 3724N×2207E, h0km, M3.9*
*VIE **09** 02:42:42.8±1.0, 3777N×2191E, h10km, mb3.6/3, Ms3.7/2, Error ellipse: s-maj=41.6km s-min=7.7km az=63.0*
*PDG **09** 02:42:42.6±0.2, 3717N×1950E, h14km±11km, ML4.0/10, Error ellipse: s-maj=177.6km s-min=11.4km az=90.0*
*HLW **09** 02:42:46.4, 3609N×2238E, h30km, Mb3.6*
ISC 09 02:42:32.9±0.6**, 3658N**±002×**2119E**±002**, h11**km±4km**,**
n251, σ1s43/290**, mb4.1**/24**, 11C-9D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	Ithomi	0.84	45	ePN	Pn	02 42 48.9	-1.8
VLX	Vlachokerasia	1.23	50	ePg	Pg	02 42 56.5	-0.1
VLI	Veliai	1.41	84	ePN	Pg	02 43 00.5	+0.5
RLS	Riolos of Patr	1.49	8	ePN	Pg	02 43 01.0	-0.5
KYTH	Kithira	1.52	101	ePN	Pg	02 43 01.5	-0.6
KFL	Anninata	1.56	348	ePg	Pg	02 43 01.5	-1.3
VLS	Valsamata	1.66	343	ePb	Pg	02 43 03.4	-1.4
VLS				eSb	Sg	02 43 27.8	+1.4
VLS	Valsamata	1.66	343	ePN	Pg	02 43 02.9	-1.9
VLS				eSN	Sg	02 43 25.0	-1.4
VLS	Valsamata	1.66	343	ePb	Pg	02 43 03.4	-1.4
VLS				eSn	Sg	02 43 25.0	-1.4
VLS				eSb	Sb	02 43 27.8	+3.3
DID	Didima	1.88	60	ePb	Pb	02 43 06.3	-0.9
LTK	Loutraki	2.02	44	ePn	Pg	02 43 08.3	-3.3
LKD	Levkas	2.16	349	ePn	Pg	02 43 11.5	-2.9
LKD				eSn	Sg	02 43 40.0	-2.5
NAIG	Nisos Aigina	2.18	57	ePN	Pn	02 43 10.5	+1.4
EVR	Evrytania	2.38	12	ePb	Pb	02 43 14.9	-0.9
EVR				eSn	Sn	02 43 42.1	+1.1
KVR	Kavouri	2.41	58	ePN	Pn	02 43 13.5	+1.3
KVR	Kavouri	2.41	58	ePn	Pn	02 43 13.0	+0.8
ATH	Athens Observa	2.45	55	ePB	Pb	02 43 14.6	-2.3
KARN	Karanos	2.51	117	ePn	Pn	02 43 15.3	+1.7
LKR	Lokris	2.52	34	ePn	Pn	02 43 14.9	+1.2
LKR	Lokris	2.52	34	ePb	Pb	02 43 15.4	-2.7
VAM	Vamos	2.71	115	ePn	Pn	02 43 18.0	+1.6
VAM				P		02 43 28.0	
THL	Klokotos Trika	3.05	12	ePn	Pn	02 43 22.9	+1.8
THL	Klokotos Trika	3.05	12	ePN	Pn	02 43 22.8	+1.8
THL				eSN	Sn	02 43 58.5	+1.0
JAN	Janina	3.08	355	P	Pg	02 43 25.5	-6.4
JAN				eSn	Sn	02 43 58.2	-0.1
JAN	Janina	3.08	355	ePn	Pn	02 43 22.4	+0.9
JAN				P		02 43 25.5	
JAN				eSn	Sn	02 43 58.2	-0.1
NEO	Neokhori	3.16	30	ePN	Pn	02 43 24.0	+1.4
NEO				eSN	Sn	02 44 01.8	+1.6
IDI	Anoyia	3.27	112	Pn	Pn	02 43 25.6	+1.5
	1.6nm,0.3s,baz=235,slow=22,SNR=15						
IDI				Sn	Sn	02 44 02.8	-0.2
	11nm,0.3s,baz=282,slow=23,SNR=6.3						
KEK	Kerkira	3.31	341	ePN	Pn	02 43 25.5	+0.8
SANT	Santorini	3.45	92	ePn	Pn	02 43 26.4	-0.1
SANT	Santorini	3.45	92	ePg	Pg	02 43 36.7	-2.3
SANT	Santorini	3.45	92	ePn	Pn	02 43 26.4	-0.1
SANT				ePg	Pg	02 43 36.6	-2.3
APE	Apeiranthos	3.52	81	ePN	Pn	02 43 29.8	+2.3
APE	Apeiranthos	3.52	81	eP	Pn	02 43 27.7	+0.2
APE	Apeiranthos	3.52	81	ePn	Pn	02 43 29.0	+1.5
LIT	Litokhoron	3.66	16	ePn	Pn	02 43 32.6	+3.2
KZN	Kozani	3.75	7	ePN	Pn	02 43 32.7	+2.1
NPS	Neapolis	3.82	109	ePN	Pn	02 43 34.0	+2.3
PLG	Polygyros	4.18	24	ePN	Pn	02 43 37.4	+0.8
SOI	Samo	4.35	292	Pn	Pn	02 43 40.1	+1.1
TIP	Timpagrande	4.36	308	P	Pn	02 43 40.2	+1.1
BIA	Bitola	4.43	1	ePn	Pn	02 43 41.0	+1.0
OHR	Ohrid	4.53	356	ePn	Pn	02 43 43.0	+1.6
OHR	Ohrid	4.53	356	ePn	Pn	02 43 42.9	+1.5
SOH	Sokhos	4.56	21	ePn	Pn	02 43 43.7	+1.9
LIA	Limnos Island	4.56	42	ePn	Pn	02 43 42.4	+0.5
MTTG	Motta San Giov	4.61	290	Pn	Pn	02 43 43.5	+1.1
SCLL	Scilla	4.67	293	Pn	Pn	02 43 44.3	+1.0
MSI	Messina ING	4.77	292	Pn	Pn	02 43 46.0	+1.3
KRUS	Krusevo	4.78	1	ePn	Pn	02 43 45.9	+1.0
KRUS	Krusevo	4.78	1	ePn	Pn	02 43 45.8	+1.0
PRK	Paraskevi	4.82	55	ePN	Pn	02 43 47.9	+2.5
AGST	Augusta-Monte	4.83	280	Pn	Pn	02 43 46.2	+0.7
AGST				Sn	Sn	02 44 39.2	-2.1
TIR	Tirane	4.87	348	P	Pn	02 43 47.5	+1.5
HAVL	Avola	4.88	276	Pn	Pn	02 43 46.5	+0.2
HAVL				Sn	Sn	02 44 41.2	-1.6
SSY	Sortino	4.94	278	Pn	Pn	02 43 48.1	+1.1
SSY				Sn	Sn	02 44 41.0	-3.1
KARP	Karpathos	4.95	100	ePN	Pn	02 43 50.1	+3.0
PE1	Pezze di Greco	5.14	326	ePn	Pn	02 43 50.6	+0.8
STIP	Stip	5.16	8	ePn	Pn	02 43 50.9	+0.8
STIP	Stip	5.16	8	ePn	Pn	02 43 50.8	+0.7
NVR	Nevrokopi	5.20	23	ePn	Pn	02 43 51.8	+1.3
HVZN	Vizzini	5.22	278	Pn	Pn	02 43 51.7	+0.8
HVZN				Sn	Sn	02 44 47.2	-4.0
MMB	Musomiste	5.38	21	iP	Pn	02 43 54.5	+1.5
KKB	Krupnik	5.48	15	iP	Pn	02 43 55.3	+0.9
VAE	Valguarnera	5.50	281	Pn	Pn	02 43 57.2	+2.5
	1.5nm,0.3s,baz=304,slow=4.0,SNR=8.9						
VAE				Sn	Sn	02 44 59.9	+2.0
	4.0nm,0.3s,baz=19,slow=10,SNR=3.0						
VAE	Valguarnera	5.50	281	Pn	Pn	02 43 57.1	+2.5
VAE				Sn	Sn	02 44 59.9	+2.0
RAFF	Raffo Rosso	5.51	279	Pn	Pn	02 43 55.8	+0.9
RAFF				Sn	Sn	02 44 56.7	-1.5
SG1	Sgolgore (BA)	5.52	322	ePn	Pn	02 43 55.7	+0.7
ULC	Ulcinj	5.58	345	ePn	Pn	02 43 56.2	+0.4
ULC				eSn	Sn	02 44 51.2	-8.7
PTRP	Pietrapertosa	5.62	316	Pn	Pn	02 43 57.8	+1.4
	92nm,1.0s						
BAI	Bari	5.63	325	ePn	Pn	02 43 56.9	+0.4
RDO	Rodhopi	5.68	35	ePn	Pn	02 43 58.1	+0.9
RZN	Rozhen	5.79	27	iP	Pn	02 44 00.0	+1.3
BUM	Brajici-Budva	5.98	343	ePn	Pn	02 44 00.8	-0.5
BUM				eSn	Sn	02 44 59.4	-10
PDG	Podgorica	6.03	346	⇓iPn	Pn	02 44 01.7	-0.2
TTG	Podgorica	6.03	346	⇓iPn	Pn	02 44 01.7	-0.2
TTG				eSn	Sn	02 45 02.4	-8.5
KDZ	Kurdzhali	6.03	32	iP	Pn	02 44 01.0	-1.0
PVY	Plav	6.08	351	⇑iPn	Pn	02 44 04.8	+2.2
PVY				eSn	Sn	02 45 06.9	-5.3
SGO	Sicignano	6.08	313	Pn	Pn	02 44 04.9	+2.2
SGO				S	Sn	02 45 13.4	+1.1
VTS	Vitosha	6.20	14	eP	Pn	02 44 04.5	+0.2
HCY	Herceg Novi	6.21	341	⇑iPn	Pn	02 44 03.4	-1.1
HCY				eSn	Sn	02 45 03.8	-12
FG4	Candela	6.34	317	P	Pn	02 44 07.9	+1.6
FG4				pmax	pmax		
	comp=Z,49nm,0.5s						
FG4	Candela	6.34	317	Pn	Pn	02 44 07.9	+1.6
	comp=Z,49nm,0.5s						
BEY	Berane	6.36	351	⇓iPn	Pn	02 44 08.2	+1.7
IVA	Berane	6.36	351	⇓iPn	Pn	02 44 08.2	+1.7
IVA				eSn	Sn	02 45 13.0	-6.1
CSSN	Cassano Irpino	6.44	313	Pn	Pn	02 44 10.2	+2.6
	comp=Z,14nm,0.4s						
NKY	Niksic	6.45	345	⇓iPn	Pn	02 44 07.3	-0.4
NKY				eSn	Sn	02 45 11.6	-10
TREB	Trebinje	6.51	341	ePn	Pn	02 44 07.6	-0.9
FGMS	Monte Sant'Ang	6.54	323	Pn	Pn	02 44 09.1	+0.1
	comp=Z,79nm,0.9s						
FG5	Orsara di Pugl	6.58	317	P	Pn	02 44 10.7	+1.1
FG5				pmax	pmax		
	comp=Z,63nm,1.0s						
FG5	Orsara di Pugl	6.58	317	Pn	Pn	02 44 10.7	+1.1
	comp=Z,63nm,1.0s						
BRY	Bratogost	6.63	343	⇑iPn	Pn	02 44 09.0	-1.2
BRY				eSn	Sn	02 45 14.7	-11
RGNG	Rignano Grg	6.69	321	Pn	Pn	02 44 11.2	+0.1
RGNG				Sn	Sn	02 45 23.8	-3.5
UPM	Unac-Piva	6.84	346	⇑iPn	Pn	02 44 13.6	+0.5
UPM				eSn	Sn	02 45 20.9	-10
PLE	Pljevlja	6.88	349	⇑iPn	Pn	02 44 14.4	+0.8
PLE				eSn	Sn	02 45 23.6	-8.3
FG2	Serracapriola	7.01	320	Pn	Pn	02 44 16.1	+0.7
	comp=Z,203nm,1.2s						
CIGN	Sant'Elia a Pi	7.04	318	Pn	Pn	02 44 17.4	+1.6
	comp=Z,83nm,0.9s						
SGG	Gregorio Mates	7.15	314	Pn	Pn	02 44 18.8	+1.4
	comp=Z,63nm,0.8s						
HMAT	Matruh	7.36	136	P	Pn	02 44 18.0	-2.3
MIDA	Miranda	7.39	315	Pn	Pn	02 44 22.4	+1.8
	comp=Z,66nm,0.9s						
RNI2	Rionero Sannit	7.48	315	Pn	Pn	02 44 24.2	+2.2
	comp=Z,110nm,1.1s						
SDI	San Donato	7.68	314	P	Pn	02 44 25.6	+0.9
SDI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SDI	San Donato	7.68	314	Pn	Pn	02 44 25.6	+0.9
	comp=Z,4.6nm,0.6s						
INTR	Introdacqua	7.83	316	Pn	Pn	02 44 28.7	+2.0
	comp=Z,85nm,0.8s						
VVLD	Villa Vallelon	7.90	314	Pn	Pn	02 44 28.8	+1.2
	comp=Z,82nm,0.8s						
SWA2		8.15	153	P	Pn	02 44 31.6	+0.5
BLY	Banja Luka	8.71	341	ePn	Pn	02 44 38.2	-0.5
KEST	Kesra	9.62	268	Pn	Pn	02 44 53.0	+1.7
	comp=Z,0.1nm,0.3s,baz=21,slow=11,SNR=4.8						
KEST				Sn	Sn	02 46 38.0	-1.2
	comp=Z,0.0nm,0.3s,baz=294,slow=22,SNR=2.5						
CEY	Cerknica	10.47	333	ePn	Pn	02 45 02.9	+0.1
AWBH		10.50	139	⇑eP	Pn	02 45 01.4	-1.9
VOY	Vojsko	10.91	332	ePn	Pn	02 45 09.2	+0.3
VOY				eSn	Sn	02 47 03.5	-7.5
SOKA	Soboth	11.08	337	⇑iPn	Pn	02 45 10.3	-0.9
SOKA				⇑iSn	Sn	02 47 05.0	-10
OBKA	Obir	11.09	335	⇑iPn	Pn	02 45 10.1	-1.3
OBKA				⇓iSn	Sn	02 47 07.8	-7.5
OBKA	Obir	11.09	335	Pn	Pn	02 45 10.1	-1.3
OBKA				Sn	Sn	02 47 07.8	-7.5
HFRF	Wahat Farafira	11.18	145	P	Pn	02 45 11.2	-1.5
HFRF	Wahat Farafira	11.18	145	P	Pn	02 45 11.1	-1.6
PSZ	Piszkesteto	11.37	356	⇓eP	Pn	02 45 14.8	-0.4
PSZ	Piszkesteto	11.37	356	ePn	Pn	02 45 14.2	-1.0
PSZ	Piszkesteto	11.37	356	ePn	Pn	02 45 14.2	-1.0
AMAG	Maghara	11.63	117	⇑P	Pn	02 45 15.9	-3.0
KECS	Kecovo	11.90	358	ePN	Pn	02 45 21.6	-0.9
VYHS	Vyhne	12.03	352	ePN	Pn	02 45 27.9	+3.7
MODS	Modra-Piesok	12.13	347	ePN	Pn	02 45 29.0	+3.4
KOLL	Kolacno	12.16	351	ePN	Pn	02 45 25.0	-1.0
FRF	La Foret Royal	13.13	307	eP	Pn	02 45 35.8	-3.4
	comp=Z,57nm,1.7s						
FRF	La Foret Royal	13.13	307	eP	Pn	02 45 35.8	-3.4
FRF				pmax	pmax		
	comp=Z,28nm,1.7s						
FRF	La Foret Royal	13.13	307	eP	Pn	02 45 35.8	-3.4
	comp=Z,28nm,1.7s						
VRAC	Vranov	13.15	347	Pn	Pn	02 45 40.7	+1.2
	comp=Z,0.1nm,0.3s,baz=127,slow=10,SNR=2.6						
DAVOX	Davos/Dischmat	13.22	324	Pn	Pn	02 45 41.8	+1.3
	comp=Z,0.4nm,0.3s,baz=152,slow=19,SNR=8.6						
DAVOX				Sn	Sn	02 48 03.7	-3.8
	comp=Z,0.2nm,0.3s,baz=114,slow=22,SNR=4.4						
DAVOX	Davos/Dischmat	13.22	324	Pn	Pn	02 45 41.8	+1.3
DAVOX				Sn	Sn	02 48 03.7	-3.8
TUE	Stuetta	13.26	322	ePn	Pn	02 45 40.0	-1.0
	comp=Z,9.5nm,0.8s						
GERES	GERESS Array B	13.43	338	Pn	Pn	02 45 43.1	-0.2
	comp=Z,0.3nm,0.3s,baz=154,slow=13,SNR=9.0						
GERES				Sn	Sn	02 48 06.1	-6.2
	comp=Z,0.2nm,0.3s,baz=150,slow=22,SNR=3.5						
EIL	Elat	13.43	117	Sn	Sn	02 48 04.0	-8.6
	comp=Z,0.7nm,0.3s,baz=299,slow=23,SNR=3.4						
MORC	Moravsky Berou	13.45	350	ePn	Pn	02 45 41.2	-2.4
MORC	Moravsky Berou	13.45	350	ePn	Pn	02 45 41.2	-2.4
DAVA	Damuels	13.59	325	⇓iPn	Pn	02 45 47.7	+2.1
MBDF	Montbardon	13.62	311	eP	Pn	02 45 42.8	-3.2
	comp=Z,18nm,1.1s						
MBDF	Montbardon	13.62	311	eP	Pn	02 45 42.8	-3.2
MBDF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MBDF	Montbardon	13.62	311	eP	Pn	02 45 42.8	-3.2
	comp=Z,9.1nm,1.1s						
ASF	Jabal al Asfar	13.70	104	Pn	Pn	02 45 52.0	+4.9
	comp=Z,0.1nm,0.3s,baz=356,slow=3.6,SNR=2.6						
KHC	Kasperske Hory	13.72	338	eP	Pn	02 45 47.1	-0.1
KHC				ex	x	02 45 57.0	
KHC				eS	Sn	02 48 09.7	-10
BFO	Black Forest	15.07	325	eP	Pn	02 46 06.8	+1.1
BFO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BFO	Black Forest	15.07	325	eP	Pn	02 46 06.8	+1.1
	comp=Z,6.0nm,1.0s						
BFO	Black Forest	15.07	325	ePn	Pn	02 46 06.8	+1.2
	comp=Z,5.5nm,1.0s						
CABF	La Chapelle	15.08	316	eP	Pn	02 46 01.6	-4.1
BRG	Berggiesshubel	15.20	342	eP	Pn	02 46 13.4	+6.0
BRG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRG	Berggiesshubel	15.20	342	eP	Pn	02 46 13.4	+6.0
	comp=Z,3.3nm,0.8s						
AKASG	Malin Array Be	15.25	20	Pn	Pn	02 46 11.7	+3.7
	comp=Z,1.4nm,0.3s,baz=211,slow=9.0,SNR=10						
AKASG	Malin Array Be	15.25	20	P	Pn	02 46 11.7	+3.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HINF	Hinteralfeld	15.43	321	eP	Pn	02 46 06.6	-3.7
	comp=Z,16nm,1.0s						
HINF	Hinteralfeld	15.43	321	eP	Pn	02 46 06.6	-3.7
HINF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HINF	Hinteralfeld	15.43	321	eP	Pn	02 46 06.6	-3.7
	comp=Z,8.1nm,1.0s						
ECH	Echery	15.54	323	eP	Pn	02 46 10.5	-1.4
ECH	Echery	15.54	323	ePn	Pn	02 46 10.5	-1.3
CDF	Champ du Feu	15.62	323	eP	Pn	02 46 09.3	-3.6
	comp=Z,18nm,1.1s						
CDF	Champ du Feu	15.62	323	eP	Pn	02 46 09.3	-3.6
CDF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CDF	Champ du Feu	15.62	323	eP	Pn	02 46 09.3	-3.6
	comp=Z,9.3nm,1.1s						
HAU	Haudompre	15.81	321	eP	Pn	02 46 13.0	-2.3
	comp=Z,24nm,1.0s						
HAU	Haudompre	15.81	321	eP	Pn	02 46 13.0	-2.3
HAU				pmax	pmax		
	comp=Z,12nm,1.0s						
HAU	Haudompre	15.81	321	eP	Pn	02 46 13.0	-2.3
	comp=Z,12nm,1.0s						
CLL	Collm	15.84	341	eP	Pn	02 46 21.0	+5.3
CLL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CLL	Collm	15.84	341	esP	sP	02 46 21.0	-3.0
	comp=Z,9.0nm,1.3s						
CLL				ex	x	02 46 38.0	
LOR	Lormes	16.70	315	eP	Pn	02 46 24.3	-2.5
	comp=Z,10nm,1.2s						
LOR	Lormes	16.70	315	eP	Pn	02 46 24.3	-2.5
LOR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LOR	Lormes	16.70	315	eP	Pn	02 46 24.3	-2.5
	comp=Z,5.2nm,1.2s						
AVF	Avril sur Loir	16.74	313	eP	Pn	02 46 24.7	-2.6
	comp=Z,12nm,1.1s						
AVF	Avril sur Loir	16.74	313	eP	Pn	02 46 24.7	-2.6
AVF				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AVF	Avril sur Loir	16.74	313	eP	Pn	02 46 24.7	-2.6
	comp=Z,6.2nm,1.1s						
SSF	Saint Saulge	16.80	314	eP	Pn	02 46 25.4	-2.5
	comp=Z,12nm,1.1s						
SSF	Saint Saulge	16.80	314	eP	Pn	02 46 25.4	-2.5
SSF				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SSF	Saint Saulge	16.80	314	eP	Pn	02 46 25.4	-2.5
	comp=Z,6.1nm,1.1s						
WLF	Walferdange	17.03	325	eP	Pn	02 46 29.1	-1.8
WLF				pmax	pmax		
	comp=Z,15nm,1.0s						
WLF	Walferdange	17.03	325	eP	Pn	02 46 29.1	-1.8
	comp=Z,15nm,1.0s						
WLF	Walferdange	17.03	325	eP	Pn	02 46 29.1	-1.7
	comp=Z,15nm,1.0s						
TCF	Toulx Ste Croi	17.18	310	eP	Pn	02 46 31.6	-1.2
EPF	Esparros	17.25	298	eP	Pn	02 46 32.7	-0.9
	comp=Z,8.1nm,1.1s						
EPF	Esparros	17.25	298	eP	Pn	02 46 32.7	-0.9
EPF				pmax	pmax		
	comp=Z,4.0nm,1.1s						
EPF	Esparros	17.25	298	eP	Pn	02 46 32.7	-0.9
	comp=Z,4.1nm,1.1s						
SUW	Suwalki	17.48	4	eP	Pn	02 46 36.9	+0.4
SUW				pmax	pmax		
	comp=Z,45nm,0.8s						
SUW	Suwalki	17.48	4	eP	Pn	02 46 36.9	+0.4
	comp=Z,45nm,0.8s						
SUW	Suwalki	17.48	4	eP	Pn	02 46 36.9	+0.4
	comp=Z,45nm,0.8s						
ETSF	Etsaut	17.85	297	eP	Pn	02 46 42.8	+1.6
	comp=Z,17nm,1.2s						
ETSF	Etsaut	17.85	297	eP	Pn	02 46 42.8	+1.6
ETSF				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ETSF	Etsaut	17.85	297	eP	Pn	02 46 42.8	+1.6
	comp=Z,8.3nm,1.2s						
BAIF	Baives	18.22	323	eP	Pn	02 46 45.5	-0.1
	comp=Z,35nm,1.5s						
BAIF	Baives	18.22	323	eP	Pn	02 46 45.5	-0.1
BAIF				pmax	pmax		
	comp=Z,17nm,1.5s						
BAIF	Baives	18.22	323	eP	Pn	02 46 45.5	-0.1
	comp=Z,17nm,1.5s						
GNI	Garni	18.80	72	eP	Pn	02 46 51.9	-0.8
GNI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GNI	Garni	18.80	72	eP	Pn	02 46 51.9	-0.8
	comp=Z,5.0nm,1.3s						
LDF	La Druitiere	19.68	314	eP	Pn	02 47 02.8	-0.5
	comp=Z,17nm,1.0s						
LDF	La Druitiere	19.68	314	eP	Pn	02 47 02.8	-0.5
LDF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LDF	La Druitiere	19.68	314	eP	Pn	02 47 02.8	-0.5
	comp=Z,8.6nm,1.0s						
FLN	La Foliniere	19.97	314	eP	Pn	02 47 05.9	-0.8
	comp=Z,15nm,0.8s						
FLN	La Foliniere	19.97	314	eP	Pn	02 47 05.9	-0.8
FLN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FLN	La Foliniere	19.97	314	eP	Pn	02 47 05.9	-0.8
	comp=Z,7.3nm,0.8s						
ESDC	Sonseca Array	20.01	287	P	Pn	02 47 05.7	-1.5
	comp=Z,0.4nm,0.6s,baz=86,slow=9.8,SNR=5.0						
OBN	Obninsk	21.32	25	ceP	P	02 47 17.8	-1.8
OBN				e		02 47 41.5	
OBN				eS	S	02 51 15.3	-0.7
OBN				e		02 51 31.2	
OBN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.1						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s						
OBN	Obninsk	21.32	25	eP	P	02 47 18.1	-1.5
	comp=Z,9.0nm,0.4s,mb4.5						
MDT	Midelt	21.52	268	P	P	02 47 22.1	+0.1
	comp=Z,1.5nm,1.1s,mb3.3,baz=194,slow=8.3,SNR=2.7						
VSU	Vasula	22.19	8	d iP	P	02 47 27.4	-1.5
VSU	Vasula	22.19	8	iP	P	02 47 27.4	-1.5
HFS	Hagfors	24.06	351	P	P	02 47 47.0	-0.8
	comp=Z,5.6nm,0.7s,mb4.1,baz=163,slow=11,SNR=20						
HFS	Hagfors	24.06	351	P	P	02 47 47.0	-0.8
HFS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KONO	Kongsberg	24.27	346	eP	P	02 47 49.5	-0.3
EKA	Eskdalemuir Ar	25.04	326	P	P	02 47 56.6	-0.3
	comp=Z,1.1nm,0.7s,mb3.5,baz=124,slow=10,SNR=7.6						
EKA	Eskdalemuir Ar	25.04	326	P	P	02 47 56.6	-0.3
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NB2	NORSAR Subarra	25.28	349	P	P	02 47 58.0	-1.0
	comp=Z,2.6nm,0.8s,mb3.8,baz=158,slow=9.3						
NOA	NORSAR Array B	25.28	349	P	P	02 47 58.2	-0.8
	comp=Z,2.3nm,0.8s,mb3.8,baz=158,slow=9.1,SNR=7.3						
NOA	NORSAR Array B	25.28	349	P	P	02 47 58.2	-0.8
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	25.28	349	P	P	02 47 58.2	-0.8
KAF	Kangasniemi	25.75	6	ep	P	02 48 01.9	-1.3
	comp=Z,12nm,0.8s,mb4.5						
KAF	Kangasniemi	25.75	6	ep	P	02 48 01.9	-1.3
	comp=Z,12nm,0.8s,mb4.5						
JOF	Joensuu	27.09	10	ep	P	02 48 12.7	-2.6
	comp=Z,4.4nm,0.5s,mb4.2						
JOF	Joensuu	27.09	10	ep	P	02 48 12.7	-2.6
	comp=Z,4.4nm,0.5s,mb4.2						
TORD	Torodi Ar. Bea	29.16	222	P	P	02 48 35.1	+0.9
	comp=Z,0.6nm,0.8s,mb3.4,baz=33,slow=10.0,SNR=10						
AKTK	Aktyubinsk	29.75	51	P	P	02 48 37.3	-1.8
	comp=Z,1.0nm,0.4s,mb3.9						
AKTK	Aktyubinsk	29.75	51	P	P	02 48 37.3	-1.8
AKTO	Aktyubinsk	29.75	51	P	P	02 48 37.3	-1.8
	comp=Z,0.7nm,0.4s,mb3.7,baz=225,slow=2.9,SNR=3.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKTO	**Aktyubinsk**	**29.75**	**51**	P	**P**	**02 48 37.3**	**-1.8**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
ARCES	**ARCESS Array B**	**33.09**	**3**	P	**P**	**02 49 07.3**	**-1.0**
	comp=Z,0.9nm,0.5s,mb4.0,baz=180,slow=9.2,SNR=9.9						
ARCES	**ARCESS Array B**	**33.09**	**3**	P	**P**	**02 49 07.3**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**33.09**	**3**	P	**P**	**02 49 07.3**	**-1.0**
BRVK	**Borovoye**	**37.70**	**48**	*e*P	**P**	**02 49 47.3**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**37.70**	**48**	*e*P	**P**	**02 49 47.3**	**-0.8**
	comp=Z,2.6nm,0.6s,mb4.1						
BRVK	**Borovoye**	**37.70**	**48**	*e*P	**P**	**02 49 47.3**	**-0.8**
	comp=Z,2.6nm,0.6s,mb4.1						
DBIC	**Dimbokro**	**38.11**	**225**	P	**P**	**02 49 51.4**	**-0.6**
	comp=Z,3.0nm,0.8s,mb4.1,baz=122,slow=6.0,SNR=2.8						
DBIC	**Dimbokro**	**38.11**	**225**	P	**P**	**02 49 51.4**	**-0.6**
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DBIC	**Dimbokro**	**38.11**	**225**	P	**P**	**02 49 51.4**	**-0.6**
KMBO	**Kilima Mbogo**	**40.38**	**155**	P	**P**	**02 50 07.7**	**-3.3**
	comp=Z,1.0nm,0.3s,mb4.0,baz=216,slow=19,SNR=3.4						
KMBO	**Kilima Mbogo**	**40.38**	**155**	P	**P**	**02 50 07.7**	**-3.3**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	**Kurchatov**	**42.82**	**52**	*e*P	**P**	**02 50 28.7**	**-1.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
KURK	**Kurchatov**	**42.82**	**52**	*e*P	**P**	**02 50 28.7**	**-1.9**
	comp=Z,1.6nm,0.8s,mb3.8						
KURK	**Kurchatov**	**42.82**	**52**	*e*P	**P**	**02 50 28.7**	**-1.9**
	comp=Z,1.6nm,0.8s,mb3.8						
MK31	**Makanchi Array**	**45.70**	**57**	*e*P	**P**	**02 50 52.4**	**-1.3**
MK31	**Makanchi Array**	**45.70**	**57**	*e*P	**P**	**02 50 52.4**	**-1.3**
MKAR	**Makanchi Array**	**45.70**	**57**	P	**P**	**02 50 52.1**	**-1.6**
	comp=Z,1.1nm,0.6s,mb4.0,baz=284,slow=6.3,SNR=14						
MKAR	**Makanchi Array**	**45.70**	**57**	P	**P**	**02 50 52.1**	**-1.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZAL	**Zalesovo**	**46.36**	**47**	P	**P**	**02 50 57.5**	**-1.3**
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZAL	**Zalesovo**	**46.36**	**47**	P	**P**	**02 50 57.5**	**-1.3**
	comp=Z,3.0nm,0.4s,mb4.6						
ZALV	**Zalesovo Beam**	**46.37**	**47**	P	**P**	**02 50 57.5**	**-1.4**
	comp=Z,2.6nm,0.4s,mb4.5,baz=275,slow=8.0,SNR=9.2						
BOD	**Bodaibo**	**61.31**	**38**	*e*P	**P**	**02 52 46.2**	**-1.9**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb4.2						
BOD	**Bodaibo**	**61.31**	**38**	*e*P	**P**	**02 52 46.2**	**-1.9**
	comp=Z,3.0nm,1.7s,mb4.2						
CMAR	**Chiang Mai Arr**	**69.59**	**82**	P	**P**	**02 53 40.6**	**-1.7**
	comp=Z,3.0nm,0.2s,mb4.8,baz=306,slow=7.7,SNR=6.0						
CMAR	**Chiang Mai Arr**	**69.59**	**82**	P	**P**	**02 53 40.6**	**-1.7**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.2s						
YKA	**Yellowknife Ar**	**75.07**	**340**	P	**P**	**02 54 12.4**	**-1.9**
	comp=Z,1.0nm,0.7s,mb3.9,baz=34,slow=4.9,SNR=2.8						
YKA	**Yellowknife Ar**	**75.07**	**340**	P	**P**	**02 54 12.4**	**-1.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ULM	**Lac du Bonnet**	**77.30**	**324**	P	**P**	**02 54 27.1**	**-0.2**
	comp=Z,2.2nm,0.8s,mb4.1,baz=350,slow=8.3,SNR=4.6						
ULM	**Lac du Bonnet**	**77.30**	**324**	P	**P**	**02 54 27.0**	**-0.2**
BDFB	**Brasilia**	**83.32**	**245**	P	**P**	**02 55 02.3**	**+2.2**
	comp=Z,1.8nm,0.7s,mb4.2,baz=109,slow=6.4,SNR=3.7						
BDFB	**Brasilia**	**83.32**	**245**	P	**P**	**02 55 02.3**	**+2.2**
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SDV	**Santo Domingo**	**86.23**	**278**	P	**P**	**02 55 16.8**	**+1.9**
	comp=Z,2.1nm,0.5s,mb4.6,baz=53,slow=18,SNR=3.1						
ASAR	**Alice Springs**	**121.45**	**97**	PKP	PKPdf	03 01 26.9	+0.3
	comp=Z,0.4nm,0.7s,baz=312,slow=1.1,SNR=4.6						

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*TRN **09** 02:51:12.2, 1906N×6475W, h67km*
*RSPR **09** 02:51:13.6, 1903N×6469W, h79km±4km, MD3.5/6, MD3.5/6*
*NEIC **09** 02:51:13.6, 1903N×6469W, h79km, MD3.5(RSPR), After RSPR.*
ISC 09 02:51:12.9±2.0**, 190N**±03×**647W**±02**, h80**km±39km**, n8,** σ**0.25**/13**, 8C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.46**	**133**	⇑*e*P	**Pn**	**02 51 26.2**	**-0.1**
ABV				*e*S	**Sn**	**02 51 36.3**	**+0.1**
TBVI	**Tortola**	**0.62**	**174**	⇑*e*P	**Pn**	**02 51 28.1**	**+0.3**
TBVI				*e*S	**Sn**	**02 51 38.7**	**-0.2**
MTP	**Monte Pirata**	**1.25**	**221**	⇑*e*P	**Pn**	**02 51 35.1**	**+0.1**
MTP				*e*S	**Sn**	**02 51 51.4**	**-0.3**
HUMP	**Col San Antoni**	**1.42**	**231**	⇑*e*P	**Pn**	**02 51 37.0**	**-0.3**
HUMP				*e*S	**Sn**	**02 51 55.5**	**-0.1**
CPD	**Cerro la Pandu**	**1.54**	**230**	⇑*e*P	**Pn**	**02 51 38.4**	**-0.3**
CPD				*e*S	**Sn**	**02 51 58.6**	**+0.5**
CELP	**Cerrillos**	**2.04**	**242**	⇑*e*P	**Pn**	**02 51 45.7**	**+0.4**
AOPR	**Arecibo Observ**	**2.08**	**251**	⇑*e*P	**Pn**	**02 51 45.6**	**-0.2**
CRPR	**Cabo Rojo, PR**	**2.52**	**246**	⇑*e*P	**Pn**	**02 51 51.7**	**0.0**

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*IDC **09** 03:00:34.5±3.6, 227N×10049E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/19, mbtmp3.6/4, ML4.5/1, Error ellipse: s-maj=173.6km s-min=25.0km az=58.0*
*ISCJB **09** 03:00:36.1±1.0, 23N±0.1×10021E±0.09, h33km, mb3.4/3, Error ellipse: s-maj=18.0km s-min=11.9km az=163.2*
ISC 09 03:00:38.1±1.0**, 23N**±01×**10022E**±009**, h35**km**, n6,** σ**1.67**/6**, mb3.4**/3**, 2C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.41**	**293**	⇑*e*P	**Sn**	**03 01 12.1**	**-6.5**
GSI	**Gunungsitoli**	**2.81**	**251**	⇑*e*P	**Sn**	**03 01 53.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**16.16**	**356**	Pn	**Pn**	**03 04 21.6**	**-1.0**
	0.6nm,0.3s,baz=181,slow=13,SNR=5.8						
WRA	**Warramunga Arr**	**40.09**	**125**	P	**P**	**03 08 11.2**	**+0.7**
	0.5nm,0.7s,mb3.4,baz=303,slow=8.9,SNR=9.3						
ASAR	**Alice Springs**	**41.68**	**130**	P	**P**	**03 08 22.6**	**-0.9**
	0.3nm,0.4s,mb3.2,baz=292,slow=8.2,SNR=5.7						
MKAR	**Makanchi Array**	**47.04**	**343**	P	**P**	**03 09 08.5**	**+2.4**
	0.5nm,0.5s,mb3.7,baz=156,slow=8.1,SNR=6.3						

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*IDC **09** 03:11:34.0±4.3, 282N×9593E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.4/19, mbtmp3.7/4, Error ellipse: s-maj=168.8km s-min=27.9km az=57.0*
*ISCJB **09** 03:11:35.8±2.2, 27N±03×956E±02, h33km, mb3.6/4, Error ellipse: s-maj=51.5km s-min=20.0km az=37.5*
ISC 09 03:11:38.3±2.2**, 27N**±03×**957E**±03**, h35**km**, n5,** σ**0.73**/5**, mb3.6**/4**, 1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.20**	**88**	⇓*e*P	**Pn**	**03 12 26.1**	**0.0**
WRA	**Warramunga Arr**	**44.07**	**122**	P	**P**	**03 19 43.2**	**0.0**
	0.3nm,0.8s,mb3.1,baz=302,slow=9.2,SNR=4.2						
MKAR	**Makanchi Array**	**45.47**	**347**	P	**P**	**03 19 54.7**	**+0.7**
	0.5nm,0.4s,mb3.7,baz=152,slow=9.3,SNR=11						
SONM	**Songino Array**	**45.91**	**10**	P	**P**	**03 19 57.6**	**+0.1**
	0.5nm,0.7s,mb3.6,baz=205,slow=9.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**51.88**	**352**	P	**P**	**03 20 42.2**	**-0.9**
	1.3nm,0.5s,mb4.1,baz=177,slow=8.1,SNR=3.9						

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*ISCJB **09** 03:16:38.1±0.5, 3672N±002×960W±004, h10km, Error ellipse: s-maj=4.7km s-min=3.1km az=150.6*
*CSEM **09** 03:16:40.9±0.3, 3665N×945W, h10km, ML3.6/4, Error ellipse: s-maj=6.4km s-min=4.1km az=63.0*
*MDD **09** 03:16:41.5±1.3, 3665N×983W, h47km±37km, mb4.8/15, Error ellipse: s-maj=12.5km s-min=5.3km az=62.0, PRIMO*
*NEIC **09** 03:16:41.8, 3672N×975W, h22km, MG4.2(MDD), After MDD.*
*CNRM **09** 03:16:41.4, 3647N×989W, h34km, MD3.8*
*INMG **09** 03:16:42.8±0.8, 3672N×969W, h19km±2km, MD3.3, ML3.2, Error ellipse: s-maj=2.9km s-min=1.5km az=56.0*
*IGIL **09** 03:16:42.9, 3670N×969W, h20km, ML3.3*
*LDG **09** 03:16:43.1±0.2, 3681N×964W, h10km, Ml3.6/9, Error ellipse: s-maj=3.7km s-min=2.4km az=41.0*
ISC 09 03:16:41.9±0.5**, 3684N**±002×**949W**±003**, h10**km**, n196,** σ**1.21**/358**, 7C-2D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.61**	**61**	*i* P	**Pg**	**03 16 57.6**	**+3.9**
PFVI				*e*S	**Sg**	**03 17 08.6**	**+6.9**
MORF	**Marmelete**	**0.82**	**55**	*e*P	**Pg**	**03 17 00.6**	**+2.9**
MORF				*e*S	**Sg**	**03 17 13.9**	**+5.4**
MORF				A		03 17 16.8	
	410nm,0.1s						
MORF	**Marmelete**	**0.82**	**55**	⇑P	**Pg**	**03 17 00.6**	**+2.9**
MORF				S	**Sg**	**03 17 13.9**	**+5.4**
	410nm,0.1s						
PTEO	**Sao Teotonio**	**0.94**	**41**	*e*P	**Pg**	**03 17 02.2**	**+2.2**
PTEO				*e*S	**Sg**	**03 17 16.8**	**+4.6**
PTEO				A		03 17 17.7	
	260nm,0.1s						
PTEO	**Sao Teotonio**	**0.94**	**41**	⇑P	**Pg**	**03 17 02.2**	**+2.2**
PTEO				S	**Sg**	**03 17 16.8**	**+4.6**
	130nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.31**	**72**	*i* P	**Pn**	**03 17 07.3**	**+1.0**
PBDV				*e*S	**Sb**	**03 17 25.3**	**+1.7**
PBDV				A		03 17 28.1	
	94nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.31**	**72**	⇑P	**Pn**	**03 17 07.3**	**+1.0**
PBDV				S	**Sb**	**03 17 25.3**	**+1.7**
	47nm,0.1s						
PVAQ	**Vaqueiros**	**1.53**	**68**	*i* P	**Pn**	**03 17 10.2**	**+1.0**
PVAQ				*e*S	**Sn**	**03 17 30.7**	**+1.5**
PVAQ				A		03 17 33.9	
	164nm,0.1s						
PVAQ	**Vaqueiros**	**1.53**	**68**	⇑P	**Pn**	**03 17 10.2**	**+1.0**
PVAQ				S	**Sn**	**03 17 30.7**	**+1.5**
	82nm,0.1s						
EGRO	**El Granado**	**1.75**	**66**	⇑P	**Pn**	**03 17 13.1**	**+0.8**
	7.8nm,0.1s,SNR=18						
EGRO				S	**Sn**	**03 17 36.6**	**+2.0**
	98nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.75**	**66**	P	**Pn**	**03 17 13.2**	**+0.9**
	5.1nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**03 17 36.8**	**+2.2**
	62nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.75**	**66**	P	**Pn**	**03 17 13.2**	**+0.9**
EGRO				S	**Sn**	**03 17 36.8**	**+2.1**
PBEJ	**Beja**	**1.76**	**47**	*e*P	**Pn**	**03 17 13.2**	**+0.8**
PBEJ				*e*S	**Sn**	**03 17 36.2**	**+1.4**
PBEJ				A		03 17 38.2	
	77nm,0.1s						
PBEJ	**Beja**	**1.76**	**47**	*e*P	**Pn**	**03 17 13.2**	**+0.8**
PBEJ				*e*S	**Sn**	**03 17 36.2**	**+1.4**
	77nm,0.1s						
LIS	**Lisbon**	**1.90**	**8**	*e*P	**Pn**	**03 17 14.5**	**+0.2**
LIS				*e*S	**Sn**	**03 17 38.3**	**0.0**
LIS				*e*S	**Sn**	**03 17 38.3**	**0.0**
LIS				AML	AML	03 17 39.5	
	comp=E,372nm,0.2s						
LIS	**Lisbon**	**1.90**	**8**	P	**Pn**	**03 17 14.5**	**+0.2**
LIS				S	**Sn**	**03 17 38.3**	**0.0**
MOE	**Montemor**	**1.91**	**28**	*e*P	**Pn**	**03 17 15.6**	**+1.1**
MOE				*e*S	**Sn**	**03 17 40.0**	**+1.3**
EVOP	**Sao Brissos**	**2.01**	**32**	*e*Pn	**Pn**	**03 17 16.7**	**+0.8**
EVOP				*e*Sn	**Sn**	**03 17 41.8**	**+0.8**
	comp=E,62nm,0.2s						
EVO	**Evora**	**2.06**	**34**	*e*Pn	**Pn**	**03 17 16.7**	**+0.1**
EVO				*e*Sn	**Sn**	**03 17 41.8**	**-0.5**
	comp=E,123nm,0.2s						
EVO	**Evora**	**2.06**	**34**	*e*P	**Pn**	**03 17 17.3**	**+0.7**
EVO				*e*S	**Sn**	**03 17 43.1**	**+0.8**
EVO				A		03 17 45.3	
	comp=E,316nm,0.1s						
EVO	**Evora**	**2.06**	**34**	*e*P	**Pn**	**03 17 17.3**	**+0.7**
EVO				*e*S	**Sn**	**03 17 43.1**	**+0.8**
	comp=E,316nm,0.1s						
PMAFR	**Mafra**	**2.12**	**4**	*e*P	**Pn**	**03 17 17.2**	**-0.2**
PMAFR				*e*S	**Sn**	**03 17 43.4**	**-0.4**
PMAFR				A		03 17 47.4	
	comp=E,632nm,0.2s						
PMAFR	**Mafra**	**2.12**	**4**	*e*P	**Pn**	**03 17 17.2**	**-0.2**
PMAFR				*e*S	**Sn**	**03 17 43.4**	**-0.4**
	comp=E,632nm,0.2s						
PBAR	**Barrancos**	**2.37**	**55**	*e*P	**Pn**	**03 17 21.7**	**+0.9**
PBAR				*e*S	**Sn**	**03 17 50.9**	**+1.1**
PBAR				A		03 17 53.4	
	comp=E,65nm,0.1s						
PBAR	**Barrancos**	**2.37**	**55**	*e*P	**Pn**	**03 17 21.7**	**+0.9**
PBAR				*e*S	**Sn**	**03 17 50.9**	**+1.1**
	comp=E,65nm,0.1s						
ALMR	**Almeirim**	**2.43**	**17**	*e*P	**Pn**	**03 17 21.9**	**+0.3**
ALMR				*e*S	**Sn**	**03 17 51.3**	**0.0**
ALMR				*e*S	**Sn**	**03 17 51.3**	**0.0**
ALMR				AML	AML	03 17 52.7	
	comp=N,77nm,0.2s						
ALMR	**Almeirim**	**2.43**	**17**	P	**Pn**	**03 17 21.9**	**+0.3**
ALMR				S	**Sn**	**03 17 51.3**	**0.0**
EMIN	**Mina Concepcio**	**2.43**	**67**	P	**Pn**	**03 17 22.0**	**+0.3**
	comp=N,4.9nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**03 17 52.3**	**+0.8**
	comp=N,29nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.43**	**67**	P	**Pn**	**03 17 22.0**	**+0.3**
	comp=N,4.9nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**03 17 52.3**	**+0.8**
	comp=N,23nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.43**	**67**	P	**Pn**	**03 17 22.0**	**+0.3**
EMIN				S	**Sn**	**03 17 52.3**	**+0.8**
PESTR	**Estremoz**	**2.53**	**36**	*e*P	**Pn**	**03 17 23.4**	**+0.4**
PESTR				*e*S	**Sn**	**03 17 54.5**	**+0.7**
PESTR				A		03 17 56.5	
	comp=N,40nm,0.3s						
PESTR	**Estremoz**	**2.53**	**36**	*e*P	**Pn**	**03 17 23.4**	**+0.4**
PESTR				*e*S	**Sn**	**03 17 54.5**	**+0.7**
	comp=N,40nm,0.3s						
EBAD	**Badajoz**	**2.74**	**45**	⇑P	**Pn**	**03 17 26.4**	**+0.4**
	comp=N,11nm,0.1s,SNR=18						
EBAD				S	**Sn**	**03 17 59.6**	**+0.5**
	comp=N,66nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**2.74**	**45**	P	**Pn**	**03 17 26.5**	**+0.5**
	comp=N,11nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**03 17 59.4**	**+0.2**
	comp=N,56nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**2.74**	**45**	P	**Pn**	**03 17 26.5**	**+0.5**
EBAD				S	**Sn**	**03 17 59.4**	**+0.2**
PTOM	**Tomar**	**2.91**	**17**	*e*P	**Pn**	**03 17 28.5**	**+0.3**
PTOM				*e*S	**Sn**	**03 18 02.7**	**-0.4**
PTOM				A		03 18 05.9	
	comp=N,148nm,0.1s						
PTOM	**Tomar**	**2.91**	**17**	*e*P	**Pn**	**03 17 28.5**	**+0.3**
PTOM				*e*S	**Sn**	**03 18 02.7**	**-0.4**
	comp=N,148nm,0.1s						
ESPR	**Espera**	**2.92**	**88**	⇑P	**Pn**	**03 17 28.3**	**0.0**
	comp=N,18nm,0.1s,SNR=18						
ESPR				S	**Sn**	**03 18 03.1**	**-0.4**
	comp=N,144nm,0.2s,SNR=7.9						
ESPR	**Espera**	**2.92**	**88**	P	**Pn**	**03 17 28.5**	**+0.2**
	comp=N,18nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**03 18 04.0**	**+0.6**
	comp=N,25nm,0.1s,SNR=7.9						
ESPR	**Espera**	**2.92**	**88**	P	**Pn**	**03 17 28.5**	**+0.2**
ESPR				S	**Sn**	**03 18 04.0**	**+0.6**
PMRV	**Marv??o**	**3.07**	**32**	*e*P	**Pn**	**03 17 31.2**	**+0.7**
PMRV				*e*S	**Sn**	**03 18 07.3**	**0.0**
PMRV				A		03 18 10.0	
	comp=N,91nm,0.3s						
PMRV	**Marv??o**	**3.07**	**32**	*e*P	**Pn**	**03 17 31.2**	**+0.7**
PMRV				*e*S	**Sn**	**03 18 07.3**	**0.0**
	comp=N,91nm,0.3s						
EJIF	**Jimena Fronter**	**3.26**	**96**	P	**Pn**	**03 17 33.3**	**+0.3**
	comp=N,0.9nm,0.1s,SNR=7.9						
EJIF				S	**Sn**	**03 18 11.3**	**-0.6**
	comp=N,2.6nm,0.2s,SNR=7.9						
EJIF	**Jimena Fronter**	**3.26**	**96**	P	**Pn**	**03 17 33.0**	**0.0**
	comp=N,0.9nm,0.1s,SNR=7.9						
EJIF				S	**Sn**	**03 18 10.9**	**-1.0**
	comp=N,1.2nm,0.1s,SNR=7.9						
EJIF	**Jimena Fronter**	**3.26**	**96**	P	**Pn**	**03 17 33.0**	**-0.1**
EJIF				S	**Sn**	**03 18 10.9**	**-1.0**
PCBR	**Castelo Branco**	**3.39**	**27**	*e*P	**Pn**	**03 17 35.7**	**+0.8**
PCBR				A		03 18 18.3	
	comp=N,33nm,0.2s						
PCBR	**Castelo Branco**	**3.39**	**27**	*e*P	**Pn**	**03 17 35.7**	**+0.8**
	comp=N,33nm,0.2s						
ECEU	**Ceuta**	**3.45**	**105**	P	**Pn**	**03 17 35.7**	**+0.1**
	comp=N,2.7nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**03 18 16.3**	**-0.4**
	comp=N,1.9nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**3.45**	**105**	P	**Pn**	**03 17 35.5**	**-0.2**
	comp=N,2.2nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**03 18 15.1**	**-1.5**
	comp=N,1.9nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**3.47**	**68**	P	**Pn**	**03 17 36.7**	**+0.8**
	comp=N,10nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**03 18 17.1**	**0.0**
	comp=N,27nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**3.47**	**68**	P	**Pn**	**03 17 36.7**	**+0.8**
	comp=N,6.6nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**03 18 17.2**	**+0.1**
	comp=N,23nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**3.47**	**68**	P	**Pn**	**03 17 36.7**	**+0.8**
ECAB				S	**Sn**	**03 18 17.2**	**+0.2**
EMIJ	**Mijas**	**3.80**	**93**	P	**Pn**	**03 17 41.1**	**+0.5**
	comp=N,0.9nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**03 18 24.7**	**-0.6**
	comp=N,8.0nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**3.80**	**93**	P	**Pn**	**03 17 41.0**	**+0.5**
EMIJ				S	**Sn**	**03 18 25.6**	**+0.3**
	comp=N,1.7nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**3.80**	**93**	P	**Pn**	**03 17 41.0**	**+0.5**
EMIJ				S	**Sn**	**03 18 25.6**	**+0.3**
MTE	**Manteigas**	**3.87**	**23**	*e*P	**Pn**	**03 17 42.0**	**+0.5**
MTE				*e*S	**Sn**	**03 18 26.1**	**-0.9**
MTE				A		03 18 29.7	
	comp=N,38nm,0.2s						
MTE	**Manteigas**	**3.87**	**23**	P	**Pn**	**03 17 42.0**	**+0.5**
MTE				S	**Sn**	**03 18 26.1**	**-0.9**
	comp=N,19nm,0.2s						
MTE	**Manteigas**	**3.87**	**23**	*e*Pn	**Pn**	**03 17 41.3**	**-0.2**
MTE	**Manteigas**	**3.87**	**23**	*e*P	**Pn**	**03 17 42.0**	**+0.5**
MTE				*e*S	**Sn**	**03 18 26.1**	**-0.9**
	comp=N,38nm,0.2s						
MTE				*e*Sn	**Sn**	**03 18 26.6**	**-0.4**
MTE	**Manteigas**	**3.87**	**23**	*e*Pn	**Pn**	**03 17 41.3**	**-0.1**
MTE				*e*Sn	**Sn**	**03 18 26.6**	**-0.4**
PVIS	**Viseu**	**4.07**	**17**	*e*P	**Pn**	**03 17 44.3**	**+0.1**
PVIS				*e*S	**Sn**	**03 18 30.6**	**-1.3**
PVIS				A		03 18 35.4	
	comp=N,55nm,0.1s						
PVIS	**Viseu**	**4.07**	**17**	*e*P	**Pn**	**03 17 44.3**	**+0.1**
PVIS				*e*S	**Sn**	**03 18 30.6**	**-1.3**
	comp=N,55nm,0.1s						
EADA	**Adamuz**	**4.13**	**70**	P	**Pn**	**03 17 45.5**	**+0.5**
	comp=N,3.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**03 18 32.4**	**-0.9**
	comp=N,11nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**4.13**	**70**	P	**Pn**	**03 17 45.9**	**+0.9**
	comp=N,3.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**03 18 33.3**	**0.0**
	comp=N,9.5nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**4.13**	**70**	P	**Pn**	**03 17 45.9**	**+0.9**
EADA				S	**Sn**	**03 18 33.3**	**-0.1**
ELOJ	**Sierra Loja**	**4.29**	**84**	P	**Pn**	**03 17 49.0**	**+1.8**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOJ				S	**Sn**	**03 18 37.0**	**-0.2**
	comp=N,3.0nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**4.29**	**84**	P	**Pn**	**03 17 48.7**	**+1.5**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOJ				S	**Sn**	**03 18 36.1**	**-1.1**
	comp=N,1.2nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**4.29**	**84**	P	**Pn**	**03 17 48.7**	**+1.5**
ELOJ				S	**Sn**	**03 18 36.1**	**-1.1**
PTO	**Porto**	**4.35**	**9**	*e*P	**Pn**	**03 17 47.6**	**-0.5**
PTO				*e*S	**Sn**	**03 18 36.9**	**-1.9**
PTO				A		03 18 41.5	
	comp=N,103nm,0.1s						
PTO	**Porto**	**4.35**	**9**	*e*P	**Pn**	**03 17 47.6**	**-0.5**
PTO				*e*S	**Sn**	**03 18 36.9**	**-1.9**
	comp=N,103nm,0.1s						
PVRL	**Vila Real**	**4.64**	**17**	*e*P	**Pn**	**03 17 52.1**	**0.0**
PVRL				*e*S	**Sn**	**03 18 43.9**	**-2.1**
PVRL				A		03 18 47.7	
	comp=N,107nm,0.1s						
PVRL	**Vila Real**	**4.64**	**17**	*e*P	**Pn**	**03 17 52.1**	**0.0**
PVRL				*e*S	**Sn**	**03 18 43.9**	**-2.1**
	comp=N,107nm,0.1s						
EBAN	**Banos Encina**	**4.73**	**72**	P	**Pn**	**03 17 53.7**	**+0.4**
	comp=N,2.8nm,0.1s,SNR=7.9						
EBAN				S	**Sn**	**03 18 45.6**	**-2.5**
	comp=N,4.7nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**4.73**	**72**	P	**Pn**	**03 17 53.9**	**+0.7**
	comp=N,3.3nm,0.1s,SNR=7.9						
EBAN				S	**Sn**	**03 18 45.8**	**-2.3**
	comp=N,4.7nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**4.73**	**72**	P	**Pn**	**03 17 53.9**	**+0.7**
EBAN				S	**Sn**	**03 18 45.8**	**-2.3**
MVO	**Moncorvo**	**4.73**	**23**	*e*P	**Pn**	**03 17 53.3**	**+0.1**
MVO				*e*S	**Sn**	**03 18 46.5**	**-1.6**
MVO				A		03 18 49.4	
	comp=N,48nm,0.3s						
MVO	**Moncorvo**	**4.73**	**23**	*e*P	**Pn**	**03 17 53.3**	**+0.1**
MVO				*e*S	**Sn**	**03 18 46.5**	**-1.6**
	comp=N,48nm,0.3s						
ECOG	**Cogollos-Vega**	**4.76**	**83**	P	**Pn**	**03 17 55.2**	**+1.6**
	comp=N,0.4nm,0.1s,SNR=7.9						
ECOG				S	**Sn**	**03 18 48.3**	**-0.6**
	comp=N,1.9nm,0.1s,SNR=7.9						
ECOG	**Cogollos-Vega**	**4.76**	**83**	P	**Pn**	**03 17 55.2**	**+1.5**
	comp=N,0.3nm,0.1s,SNR=7.9						
ECOG				S	**Sn**	**03 18 48.4**	**-0.5**
	comp=N,0.9nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**4.76**	**83**	P	**Pn**	**03 17 55.2**	**+1.6**
ECOG				S	**Sn**	**03 18 48.4**	**-0.5**
EQUE	**Quentar**	**4.86**	**84**	P	**Pn**	**03 17 56.7**	**+1.6**
	comp=N,0.2nm,0.1s,SNR=7.9						
EQUE				S	**Sn**	**03 18 51.9**	**+0.6**
	comp=N,4.1nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**4.86**	**84**	P	**Pn**	**03 17 55.5**	**+0.5**
	comp=N,0.2nm,0.1s,SNR=7.9						
EQUE				S	**Sn**	**03 18 51.4**	**+0.1**
	comp=N,1.0nm,0.2s,SNR=7.9						
MIF	**Mishlifen**	**4.89**	**133**	P	**Pn**	**03 17 53.0**	**-2.4**
MIF				S	**Sn**	**03 18 46.0**	**-6.1**
MIF	**Mishlifen**	**4.89**	**133**	*i* P	**Pn**	**03 17 53.0**	**-2.4**
PCAB	**Cabril**	**5.00**	**13**	*e*P	**Pn**	**03 17 56.5**	**-0.4**
PCAB				*e*S	**Sn**	**03 18 52.3**	**-2.5**
PCAB				A		03 18 56.7	
	comp=N,37nm,0.2s						
PCAB	**Cabril**	**5.00**	**13**	*e*P	**Pn**	**03 17 56.5**	**-0.4**
PCAB				*e*S	**Sn**	**03 18 52.3**	**-2.5**
	comp=N,37nm,0.2s						
JHA	**Jbel Lahdid**	**5.09**	**180**	P	**Pn**	**03 17 50.0**	**-8.2**
JHA				S	**Sn**	**03 18 42.0**	**-15**
KIB	**El Ksiba**	**5.11**	**145**	P	**Pn**	**03 17 54.0**	**-4.5**
KIB				S	**Sn**	**03 18 48.0**	**-10**
KIB	**El Ksiba**	**5.11**	**145**	*e*P	**Pn**	**03 17 54.0**	**-4.5**
TZK	**Tazeka**	**5.13**	**121**	P	**Pn**	**03 17 57.0**	**-1.7**
TZK				S	**Sn**	**03 18 52.0**	**-5.9**
TZK	**Tazeka**	**5.13**	**121**	*i* P	**Pn**	**03 17 57.0**	**-1.7**
ELOB	**Lobios**	**5.15**	**12**	P	**Pn**	**03 17 57.9**	**-1.1**
	comp=N,7.4nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**03 18 54.9**	**-3.5**
	comp=N,16nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.15**	**12**	P	**Pn**	**03 17 58.7**	**-0.3**
	comp=N,5.4nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**03 18 55.9**	**-2.5**
	comp=N,16nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.15**	**12**	P	**Pn**	**03 17 58.6**	**-0.3**
ELOB				S	**Sn**	**03 18 55.9**	**-2.5**
ESDC	**Sonseca Array**	**5.19**	**55**	P	**Pn**	**03 18 00.4**	**+0.8**
	comp=N,14nm,0.1s,SNR=7.9						
ESDC				S	**Sn**	**03 18 58.8**	**-0.7**
	SNR=7.9						
ESDC	**Sonseca Array**	**5.19**	**55**	P	**Pn**	**03 18 00.4**	**+0.8**
	comp=N,14nm,0.1s,SNR=7.9						
ESDC				S	**Sn**	**03 18 58.8**	**-0.8**
	SNR=7.9						
EQES	**Quesada**	**5.21**	**77**	P	**Pn**	**03 17 60.0**	**+0.1**
	comp=N,0.8nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**03 18 59.3**	**-0.7**
	comp=N,16nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.21**	**77**	P	**Pn**	**03 18 00.2**	**+0.4**
	comp=N,0.8nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**03 18 57.8**	**-2.2**
	comp=N,4.6nm,0.1s,SNR=7.9						
EQES	**Quesada**	**5.21**	**77**	P	**Pn**	**03 18 00.2**	**+0.4**
EQES				S	**Sn**	**03 18 57.8**	**-2.1**
CZD	**Col de Zad**	**5.27**	**135**	*i* P	**Pn**	**03 17 58.0**	**-2.7**
CIA	**Chichaoua**	**5.29**	**173**	P	**Pn**	**03 17 53.0**	**-8.0**
CIA				S	**Sn**	**03 18 46.0**	**-16**
TZC	**Tazercounte**	**5.29**	**151**	P	**Pn**	**03 17 55.0**	**-6.0**
TZC				S	**Sn**	**03 18 50.0**	**-12**
TZC	**Tazercounte**	**5.29**	**151**	*e*P	**Pn**	**03 17 55.0**	**-6.0**
EBER	**Berja**	**5.29**	**87**	P	**Pn**	**03 18 02.5**	**+1.5**
	comp=N,0.2nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**03 19 01.0**	**-1.1**

comp=N,8.8nm,0.4s,SNR=7.9
EBER Berja 5.29 87 P **Pn 03 18 03.0 +2.0**
comp=N,0.3nm,0.1s,SNR=7.9
EBER S **Sn 03 19 00.4 -1.7**
SNR=7.9
EBER Berja 5.29 87 P **Pn 03 18 03.0 +2.0**
EBER S **Sn 03 19 00.4 -1.6**
PBRG Braganca 5.40 22 *e*P **Pn 03 18 02.5 0.0**
PBRG *e*S **Sn 03 19 02.5 -2.2**
PBRG A 03 19 04.6
comp=N,28nm,0.2s
PBRG Braganca 5.40 22 *e*P **Pn 03 18 02.5 0.0**
PBRG *e*S **Sn 03 19 02.5 -2.2**
comp=N,28nm,0.2s
ECAL Calabor 5.53 22 ⇓P **Pn 03 18 04.1 -0.1**
comp=N,6.2nm,0.1s,SNR=18
ECAL S **Sn 03 19 06.0 -1.8**
comp=N,23nm,0.2s,SNR=7.9
ECAL Calabor 5.53 22 P **Pn 03 18 04.5 +0.3**
comp=N,5.9nm,0.1s,SNR=7.9
ECAL S **Sn 03 19 05.9 -1.9**
comp=N,6.1nm,0.2s,SNR=7.9
ECAL Calabor 5.53 22 P **Pn 03 18 04.5 +0.3**
ECAL S **Sn 03 19 05.9 -1.8**
EHUE Huescar 5.59 78 P **Pn 03 18 04.8 -0.2**
comp=N,0.6nm,0.2s,SNR=7.9
EHUE S **Sn 03 19 07.5 -1.7**
comp=N,4.2nm,0.2s,SNR=7.9
EHUE Huescar 5.59 78 P **Pn 03 18 05.9 +0.9**
comp=N,0.6nm,0.2s,SNR=7.9
EHUE Huescar 5.59 78 P **Pn 03 18 05.9 +0.9**
EHUE S **Sn 03 19 07.5 -1.7**
GUD Guadarrama 5.64 46 P **Pn 03 18 06.3 +0.5**
comp=N,2.8nm,0.2s,SNR=7.9
GUD S **Sn 03 19 10.2 -0.4**
comp=N,8.3nm,0.2s,SNR=7.9
GUD Guadarrama 5.64 46 P **Pn 03 18 07.6 +1.8**
comp=N,2.8nm,0.2s,SNR=7.9
GUD S **Sn 03 19 09.5 -1.2**
comp=N,3.2nm,0.1s,SNR=7.9
GUD Guadarrama 5.64 46 P **Pn 03 18 07.5 +1.7**
GUD S **Sn 03 19 09.4 -1.2**
OUK Oukaimeden 5.77 166 P **Pn 03 18 01.0 -6.6**
OUK S **Sn 03 19 00.0 -14**
EVIA Vianos 5.83 70 P **Pn 03 18 08.6 +0.3**
comp=N,1.2nm,0.1s,SNR=7.9
EVIA S **Sn 03 19 11.3 -3.9**
comp=N,4.9nm,0.1s,SNR=7.9
EVIA Vianos 5.83 70 P **Pn 03 18 08.8 +0.5**
comp=N,1.2nm,0.1s,SNR=7.9
EVIA Vianos 5.83 70 P **Pn 03 18 08.8 +0.5**
EVIA S **Sn 03 19 13.1 -2.0**
ERUA La Rua 5.84 17 P **Pn 03 18 08.2 -0.2**
comp=N,13nm,0.1s,SNR=7.9
ERUA S **Sn 03 19 13.7 -1.7**
comp=N,18nm,0.2s,SNR=7.9
ERUA La Rua 5.84 17 P **Pn 03 18 08.6 +0.1**
comp=N,13nm,0.1s,SNR=7.9
ERUA La Rua 5.84 17 P **Pn 03 18 08.6 +0.2**
ERUA S **Sn 03 19 12.4 -3.1**
STS Santiago 6.09 7 P **Pn 03 18 10.9 -1.0**
comp=N,12nm,0.1s,SNR=7.9
STS S **Sn 03 19 18.3 -3.2**
comp=N,7.7nm,0.2s,SNR=7.9
STS Santiago 6.09 7 P **Pn 03 18 11.1 -0.8**
comp=N,12nm,0.1s,SNR=7.9
STS Santiago 6.09 7 P **Pn 03 18 11.1 -0.8**
STS S **Sn 03 19 17.2 -4.3**
EMAZ Mazaricos 6.12 4 P **Pn 03 18 10.7 -1.6**
comp=N,8.4nm,0.1s,SNR=7.9
EMAZ S **Sn 03 19 16.2 -6.2**
comp=N,25nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.12 4 P **Pn 03 18 11.4 -0.9**
comp=N,8.4nm,0.1s,SNR=7.9
EMAZ Mazaricos 6.12 4 P **Pn 03 18 11.4 -0.9**
EMAZ S **Sn 03 19 17.8 -4.5**
ZFT Errachidia 6.40 137 P **Pn 03 18 13.0 -3.2**
ZFT S **Sn 03 19 20.0 -9.4**
ETOB Tobarra 6.55 72 P **Pn 03 18 18.2 -0.1**
comp=N,0.8nm,0.1s,SNR=7.9
ETOB S **Sn 03 19 29.3 -3.7**
comp=N,8.4nm,0.3s,SNR=7.9
ETOB Tobarra 6.55 72 P **Pn 03 18 18.7 +0.4**
comp=N,0.5nm,0.1s,SNR=7.9
ETOB Tobarra 6.55 72 P **Pn 03 18 18.7 +0.5**
ETOB S **Sn 03 19 30.9 -2.1**
EMUR La Murta 6.65 79 P **Pn 03 18 19.2 -0.5**
comp=N,0.1nm,0.1s,SNR=7.9
EMUR S **Sn 03 19 33.0 -2.5**
comp=N,7.7nm,0.4s,SNR=7.9
EMUR La Murta 6.65 79 P **Pn 03 18 20.0 +0.3**
comp=N,0.2nm,0.2s,SNR=7.9
EMUR La Murta 6.65 79 P **Pn 03 18 20.0 +0.4**
EMUR S **Sn 03 19 32.5 -3.0**
EPON Pontenova 6.73 15 P **Pn 03 18 20.2 -0.5**
comp=N,0.2nm,0.2s,SNR=7.9
EPON S **Sn 03 19 33.3 -4.0**
comp=N,2.4nm,0.1s,SNR=7.9
EPON Pontenova 6.73 15 P **Pn 03 18 20.5 -0.2**
comp=N,1.7nm,0.1s,SNR=7.9
EPON Pontenova 6.73 15 P **Pn 03 18 20.4 -0.2**
EPON S **Sn 03 19 32.9 -4.4**
ETOR Torete 7.04 53 ⇓P **Pn 03 18 25.9 +1.0**
comp=N,12nm,0.2s,SNR=18
ETOR S **Sn 03 19 41.9 -3.0**
comp=N,62nm,0.4s,SNR=7.9
ETOR Torete 7.04 53 P **Pn 03 18 26.2 +1.3**
comp=N,3.7nm,0.1s,SNR=7.9
ETOR Torete 7.04 53 P **Pn 03 18 26.2 +1.2**
ETOR S **Sn 03 19 41.5 -3.5**
EARI Arriondas 7.24 26 P **Pn 03 18 28.3 +0.5**
comp=N,0.8nm,0.2s,SNR=7.9
EARI S **Sn 03 19 47.3 -2.7**
comp=N,0.6nm,0.2s,SNR=7.9
EARI Arriondas 7.24 26 P **Pn 03 18 28.4 +0.6**
comp=N,0.2nm,0.1s,SNR=7.9
EARI Arriondas 7.24 26 P **Pn 03 18 28.4 +0.7**
EARI S **Sn 03 19 46.7 -3.4**
EBEN Beniarda 7.57 73 P **Pn 03 18 32.4 +0.1**
comp=N,0.3nm,0.2s,SNR=7.9
EBEN S **Sn 03 19 54.9 -3.3**
comp=N,5.1nm,0.5s,SNR=7.9
EBEN Beniarda 7.57 73 P **Pn 03 18 33.3 +1.0**
comp=N,0.3nm,0.1s,SNR=7.9
EBEN Beniarda 7.57 73 P **Pn 03 18 33.3 +1.0**
EBEN S **Sn 03 19 54.9 -3.3**
EMOS Mosqueruela 7.89 61 P **Pn 03 18 38.4 +1.8**
comp=N,1.0nm,0.3s,SNR=7.9
EMOS S **Sn 03 20 02.6 -3.4**
comp=N,6.9nm,0.2s,SNR=7.9
EMOS Mosqueruela 7.89 61 P **Pn 03 18 37.8 +1.1**
comp=N,0.4nm,0.1s,SNR=7.9
EMOS Mosqueruela 7.89 61 P **Pn 03 18 37.8 +1.1**
EMOS S **Sn 03 20 02.6 -3.4**
ELAN Lanestosa 7.90 34 P **Pn 03 18 37.9 +1.1**
comp=N,1.6nm,0.2s,SNR=7.9
ELAN S **Sn 03 20 00.9 -5.2**
comp=N,3.4nm,0.3s,SNR=7.9
ELAN Lanestosa 7.90 34 P **Pn 03 18 37.4 +0.7**
comp=N,0.1nm,0.1s,SNR=7.9
ELAN Lanestosa 7.90 34 P **Pn 03 18 37.4 +0.6**
ELAN S **Sn 03 20 02.2 -4.0**
ESAC San Caprasio 8.53 52 P **Pn 03 18 47.3 +1.9**
comp=N,1.3nm,0.2s,SNR=7.9
ESAC S **Sn 03 20 20.1 -1.5**
comp=N,15nm,0.3s,SNR=7.9
ESAC San Caprasio 8.53 52 P **Pn 03 18 46.3 +0.9**
comp=N,0.1nm,0.2s,SNR=7.9
ESAC San Caprasio 8.53 52 P **Pn 03 18 46.3 +0.9**
ESAC S **Sn 03 20 17.4 -4.2**
IUNC Unciti 8.53 44 P **Pn 03 18 47.2 +1.8**
comp=N,0.5nm,0.1s,SNR=7.9
IUNC S **Sn 03 20 19.9 -1.8**
comp=N,2.0nm,0.1s,SNR=7.9
IUNC Unciti 8.53 44 P **Pn 03 18 46.2 +0.8**
comp=N,0.4nm,0.1s,SNR=7.9
IZUN Zunzarren 8.62 43 P **Pn 03 18 48.6 +1.9**
comp=N,0.3nm,0.1s,SNR=7.9
IZUN S **Sn 03 20 22.7 -1.3**
comp=N,1.5nm,0.2s,SNR=7.9
IZUN Zunzarren 8.62 43 P **Pn 03 18 47.5 +0.8**
comp=N,0.3nm,0.1s,SNR=7.9
ERTA Horta de San J 8.70 59 P **Pn 03 18 49.9 +2.2**
comp=N,0.3nm,0.1s,SNR=7.9
ERTA S **Sn 03 20 23.4 -2.4**
comp=N,1.4nm,0.2s,SNR=4.0
ERTA Horta de San J 8.70 59 P **Pn 03 18 48.6 +0.9**
comp=N,0.2nm,0.1s,SNR=7.9
ERTA Horta de San J 8.70 59 P **Pn 03 18 48.6 +0.9**
ERTA S **Sn 03 20 21.6 -4.2**
EORO Oroz-Betelu 8.72 44 P **Pn 03 18 49.2 +1.2**
comp=N,0.4nm,0.1s,SNR=7.9
EORO S **Sn 03 20 23.9 -2.5**
comp=N,0.3nm,0.1s,SNR=7.9
EORO Oroz-Betelu 8.72 44 P **Pn 03 18 49.4 +1.3**
comp=N,0.8nm,0.1s,SNR=7.9
ELIZ Elizondo 8.79 42 P **Pn 03 18 50.5 +1.5**
comp=N,0.9nm,0.2s,SNR=7.9
ELIZ S **Sn 03 20 22.1 -5.9**
comp=N,1.5nm,0.2s,SNR=7.9
ELIZ Elizondo 8.79 42 P **Pn 03 18 50.2 +1.2**
comp=N,0.4nm,0.1s,SNR=7.9
ELIZ Elizondo 8.79 42 P **Pn 03 18 50.2 +1.3**
ELIZ S **Sn 03 20 23.5 -4.6**
EALK Alkurruntz 8.84 41 P **Pn 03 18 50.6 +1.0**
comp=N,1.2nm,0.2s,SNR=7.9
EALK S **Sn 03 20 24.9 -4.4**
comp=N,12nm,0.4s,SNR=7.9
EALK Alkurruntz 8.84 41 P **Pn 03 18 51.0 +1.4**
comp=N,0.3nm,0.1s,SNR=7.9
EALK Alkurruntz 8.84 41 P **Pn 03 18 51.0 +1.3**
EALK S **Sn 03 20 24.2 -5.1**
SJPF Ste Jean 8.92 43 *e*Pn **Pn 03 18 51.6 +0.9**
SJPF *e*Sn **Sn 03 20 25.7 -5.5**
comp=N,3.2nm,0.3s
SJPF Ste Jean 8.92 43 *e*Pn **Pn 03 18 51.6 +0.9**
SJPF *e*Sn **Sn 03 20 25.7 -5.5**
comp=N,1.6nm,0.3s
ETSF Etsaut 9.15 46 *e*Pn **Pn 03 18 54.7 +0.8**
ETSF *e*Sn **Sn 03 20 31.3 -5.7**
comp=N,6.8nm,0.4s
ETSF Etsaut 9.15 46 *e*Pn **Pn 03 18 54.7 +0.8**
ETSF *e*Sn **Sn 03 20 31.3 -5.7**
comp=N,3.4nm,0.4s
EBIE Bielsa 9.44 49 P **Pn 03 18 58.8 +0.9**
comp=N,0.3nm,0.1s,SNR=7.9
EBIE S **Sn 03 20 40.7 -3.3**
comp=N,1.9nm,0.2s,SNR=7.9
EBIE Bielsa 9.44 49 P **Pn 03 18 58.9 +1.0**
comp=N,0.3nm,0.1s,SNR=7.9
EBIE Bielsa 9.44 49 P **Pn 03 18 58.9 +1.0**
EBIE S **Sn 03 20 39.3 -4.8**
EPF Esparros 9.76 48 *e*Pn **Pn 03 19 03.2 +1.0**
EPF *e*Sn **Sn 03 20 45.8 -6.0**
comp=N,6.6nm,0.3s
EPF Esparros 9.76 48 *e*Pn **Pn 03 19 03.2 +1.0**
EPF *e*Sn **Sn 03 20 45.8 -6.0**
comp=N,3.3nm,0.3s
MTLF Montolieu 11.07 50 *e*Sn **Sn 03 21 16.9 -7.1**
comp=N,0.7nm,0.3s
MTLF Montolieu 11.07 50 *e*Sn **Sn 03 21 16.9 -7.1**
comp=N,0.3nm,0.3s
LFF La Frestale 11.20 41 *e*Pn **Pn 03 19 21.6 -0.3**
RJF Les Rejaudoux 11.85 41 *e*Pn **Pn 03 19 30.1 -0.7**
RJF *e*Sn **Sn 03 21 35.7 -7.3**
comp=N,1.4nm,0.3s
RJF Les Rejaudoux 11.85 41 Pn **Pn 03 19 30.1 -0.7**
RJF Sn **Sn 03 21 35.7 -7.3**
comp=N,0.7nm,0.3s
CAF Calviac 11.90 44 *e*Pn **Pn 03 19 30.9 -0.6**
CAF *e*Sn **Sn 03 21 36.9 -7.4**
comp=N,1.5nm,0.3s
CAF Calviac 11.90 44 *e*Pn **Pn 03 19 30.9 -0.6**
CAF *e*Sn **Sn 03 21 36.9 -7.4**
comp=N,0.8nm,0.3s
MFF Saint Martin d 11.99 33 *e*Pn **Pn 03 19 32.0 -0.8**
QUIF Quistinic 12.02 21 *e*Pn **Pn 03 19 31.7 -1.4**
QUIF *e*Sn **Sn 03 21 39.1 -8.0**
comp=N,0.9nm,0.2s
QUIF Quistinic 12.02 21 *e*Pn **Pn 03 19 31.7 -1.4**
QUIF *e*Sn **Sn 03 21 39.1 -8.0**
comp=N,0.4nm,0.2s
SGMF Saint Gilles 12.50 22 *e*Pn **Pn 03 19 38.4 -1.3**
TCF Toulx Ste Croi 12.87 39 *e*Pn **Pn 03 19 43.9 -0.9**
FLN La Foliniere 13.62 26 *e*Pn **Pn 03 19 54.3 -0.7**
SSF Saint Saulge 14.05 39 *e*Pn **Pn 03 19 59.8 -1.1**

*NEIC **09** 03:29:00.4, 3048S×7136W, h9km, ML3.2(GUC), After GUC.*

GUC 09 03:29:00.4±0.5, 3048S×7136W, h9km±1km, MD3.5, ML3.2, 5C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OVCH	**Ovalle**	**0.18**	**132**	⇑*i*P	Pg	03 29 04.4	+0.1
OVCH				*i* S	Sg	03 29 07.6	+0.7
OVCH				AML	AML	03 29 08.0	
	comp=N,6μm,0.2s						
OVCH	**Ovalle**	**0.18**	**132**	⇑*i*P	Pg	03 29 04.4	+0.1
OVCH				*i* S	Sg	03 29 07.6	+0.7
TLL	**Tololo Astrono**	**0.57**	**57**	⇑*i*P	Pg	03 29 12.5	+1.0
TLL				*i* S	Sg	03 29 21.9	+2.8
TLL				AML	AML	03 29 24.0	
	comp=N,905nm,0.2s						
TLL	**Tololo Astrono**	**0.57**	**57**	⇑*i*P	Pg	03 29 12.5	+1.0
TLL				*i* S	Sg	03 29 21.9	+2.8
LSCH	**La Serena**	**0.58**	**10**	⇓*i*P	Pg	03 29 12.1	+0.5
LSCH				*i* S	Sg	03 29 21.2	+1.9
LSCH				AML	AML	03 29 21.7	
	comp=E,590nm,0.2s						
LCO	**Las Campanas**	**1.58**	**21**	⇑*i*P	Pn	03 29 28.5	0.0
LCO				*i* S	Sn	03 29 49.7	+0.7
PTCH	**Petorca**	**1.81**	**168**	AML	AML	03 29 56.1	
	comp=E,367nm,0.2s						
VACH	**Vallenar**	**1.97**	**16**	*i* P	Pn	03 29 34.3	+0.3
VACH				*i* S	Sn	03 29 59.8	+0.9
VACH				AML	AML	03 30 05.9	
	comp=E,766nm,0.2s						
VACH	**Vallenar**	**1.97**	**16**	*i* P	Pn	03 29 34.3	+0.3
VACH				*i* S	Sn	03 29 59.8	+0.9
JACH	**Jahuel**	**2.29**	**164**	*i* P	Pn	03 29 39.6	+1.3
JACH				*i* S	Sn	03 30 09.1	+2.5
FCH	**Farellones**	**2.98**	**162**	*i* P	Pn	03 29 49.6	+1.8
FCH				*i* S	Sn	03 30 27.1	+3.5
FCH				AML	AML	03 30 33.9	
	comp=E,74nm,0.2s						
CLCH	**Cerro Calan**	**2.99**	**167**	*i* P	Pn	03 29 49.2	+1.3
CLCH				*i* S	Sn	03 30 26.2	+2.4
CLCH				AML	AML	03 30 32.8	
	comp=N,141nm,0.5s						
RCDM	**Rinconada Maip**	**3.03**	**171**	*i* P	Pn	03 29 48.1	-0.5
RCDM				*i* S	Sn	03 30 25.4	+0.4
RCDM				AML	AML	03 30 33.8	
	comp=E,110nm,0.1s						
RCDM	**Rinconada Maip**	**3.03**	**171**	*i* P	Pn	03 29 48.1	-0.5
RCDM				*i* S	Sn	03 30 25.4	+0.4
PCH	**Pirque**	**3.21**	**167**	*i* P	Pn	03 29 52.1	+1.1
PCH				*i* S	Sn	03 30 31.3	+2.0

*IDC **09** 03:31:20.2±1.0, 3576N×7045E, h0km, mb4.0/7, mb1 4.1/11, mb1mx3.8/27, mbtmp4.0/11, ML4.0/4, Error ellipse: s-maj=23.7km s-min=20.9km az=73.0*
*ISCJB **09** 03:31:37.0±0.4, 3641N±003×7060E±006, h149km±6km, mb3.7/7, Error ellipse: s-maj=8.2km s-min=5.2km az=6.5*
*BJI **09** 03:31:37.2, 3614N×7081E, h172km*
*NEIC **09** 03:31:37.4±1.0, 3635N×7079E, h141km±10km, mb4.4/4, Error ellipse: s-maj=16.4km s-min=10.5km az=114.0*
*NNC **09** 03:31:39.6±2.8, 3656N×7069E, h130km±30km, mb3.5, mpv4.4, Error ellipse: s-maj=21.8km s-min=16.2km az=8.0*

ISC 09 03:31:38.1±0.4, 3639N±003×7063E±007, h145km±6km, n38, σ1§09/46, mb3.7/7, 5C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.26**	**216**	*e*Pn	**Pn**	**03 32 16.2**	**+0.2**
KBL				*e*Sn	**Sn**	**03 32 44.8**	**-0.3**
CEP	**Cherat**	**2.77**	**157**	⇑P	**Pn**	**03 32 22.6**	**+0.3**
CEP				S	**Sn**	**03 32 56.0**	**-0.4**
CHCP	**Chirah Chowk**	**3.48**	**141**	⇓P	**Pn**	**03 32 31.9**	**+0.5**
THW	**Thamme Wali**	**3.70**	**165**	P	**Pn**	**03 32 34.2**	**-0.2**
SARP	**Sargodha**	**4.77**	**159**	P	**Pn**	**03 32 48.4**	**0.0**
KSH	**Kashi**	**5.25**	**52**	P	**Pn**	**03 32 56.5**	**+1.8**
KSH				S	**Sn**	**03 33 57.0**	**+2.6**
KSH				Smax			
	comp=N,297nm,0.4s						
KSH				Smax			
	comp=E,289nm,0.3s						

AML Almayashu 6.21 22 P **Pn 03 33 07.6 +0.2**
SNR=201
AML Almayashu 6.21 22 *e*Pn **Pn 03 33 07.2 -0.2**
comp=E,102nm,0.3s
AML *e*Sn **Sn 03 34 11.6 -5.7**
KK31 Karatay Array 6.70 359 ⇑P **Pn 03 33 13.6 -0.5**
comp=E,10nm,0.3s,baz=178,slow=12,SNR=362
KK31 ⇓S **Sn 03 34 26.7 -2.5**
comp=E,6.2nm,0.3s,baz=184,slow=23,SNR=7.8
EKS2 Erkin-Say 6.72 20 P **Pn 03 33 14.7 +0.5**
SNR=40
EKS2 Erkin-Say 6.72 20 *e*Pn **Pn 03 33 14.1 -0.1**
comp=E,18nm,0.6s
AAK Ala-Archa 6.91 24 P **Pn 03 33 17.2 +0.3**
SNR=41
KBK Karagaybulak 7.09 27 P **Pn 03 33 20.4 +1.2**
SNR=5.1
CHMS Chumysh 7.32 24 P **Pn 03 33 22.2 -0.1**
SNR=13
TKM2 Tokmak 2 7.56 29 P **Pn 03 33 25.0 -0.5**
comp=E,16nm,0.6s
TKM2 ⇓S **Sn 03 34 48.6 -1.3**
comp=E,14nm,1.1s
TKM2 Tokmak 2 7.56 29 P **Pn 03 33 25.3 -0.2**
SNR=26
TKM2 Tokmak 2 7.56 29 *e*Pn **Pn 03 33 25.1 -0.4**
comp=E,20nm,0.6s
MK31 Makanchi Array 13.55 36 P **Pn 03 34 43.0 -1.4**
comp=E,2.4nm,0.6s,baz=221,slow=14,SNR=17
MKAR Makanchi Array 13.55 36 P **Pn 03 34 42.3 -2.1**
comp=E,0.2nm,0.3s,baz=224,slow=14,SNR=19
AB31 Akbulak array 15.04 332 ⇑P **Pn 03 35 02.9 -0.1**
comp=E,5.6nm,0.6s,baz=145,slow=12,SNR=108
KURK Kurchatov 15.43 19 Pn **Pn 03 35 04.6 -3.3**
comp=E,0.2nm,0.3s,baz=212,slow=11,SNR=14
KURK Kurchatov 15.43 19 Pn **Pn 03 35 04.6 -3.3**
VOSK Vostochnaya 16.33 1 ⇓P **Pn 03 35 18.4 -0.5**
comp=E,4.4nm,0.8s
BVA0 Borovoye Array 16.63 359 ⇑P **Pn 03 35 24.4 +1.9**
comp=E,0.8nm,0.7s,baz=173,slow=10,SNR=30
BVAR Borovoye Array 16.63 359 P **Pn 03 35 22.0 -0.5**
comp=E,0.8nm,0.3s,baz=179,slow=11,SNR=25
BRVK Borovoye 16.67 359 *e*P **Pn 03 35 23.2 +0.2**
comp=E,5.6nm,0.8s
AKTK Aktyubinsk 16.73 331 P **Pn 03 35 23.7 -0.1**
AKTK S **S 03 38 21.9 -7.9**
AKTO Aktyubinsk 16.73 331 ⇑P **Pn 03 35 25.0 +1.2**
comp=E,1.4nm,0.8s
AKTO Aktyubinsk 16.73 331 P **Pn 03 35 23.7 -0.1**
comp=E,1.1nm,0.3s,baz=137,slow=11,SNR=31
AKTO S **S 03 38 21.9 -7.9**
comp=E,0.2nm,0.3s,baz=338,slow=24,SNR=4.1
ZALV Zalesovo Beam 20.14 25 P **P 03 36 02.0 +1.4**
comp=E,23nm,0.5s,baz=219,slow=11,SNR=78
ARCES ARCESS Array B 41.13 338 P **P 03 39 09.5 +2.1**
comp=E,3.8nm,0.9s,mb4.0,baz=102,slow=8.7,SNR=4.3
ARCES ARCESS Array B 41.13 338 P **P 03 39 09.5 +2.1**
HFS Hagfors 42.97 322 P **P 03 39 23.6 +1.1**
comp=E,4.4nm,1.0s,mb4.0,baz=98,slow=12,SNR=10
NOA NORSAR Array B 44.29 323 P **P 03 39 34.3 +1.3**
comp=E,1.7nm,0.9s,mb3.7,baz=96,slow=8.0,SNR=4.0
TORD Torodi Ar. Bea 65.42 268 P **P 03 42 04.4 -1.2**
comp=E,1.0nm,0.8s,mb3.7,baz=51,slow=6.1,SNR=12
WRA Warramunga Arr 82.19 122 P **P 03 43 42.2 -0.8**
comp=E,0.2nm,0.5s,mb3.0,baz=327,slow=4.9,SNR=3.5
ASAR Alice Springs 84.44 125 P **P 03 43 53.8 -0.7**
comp=E,0.2nm,0.7s,mb3.0,baz=319,slow=4.1,SNR=3.9
COEN Coen 84.64 112 *e*P **P 03 43 54.8 -0.9**
comp=E,3.6nm,0.9s,mb4.1

DJA 09 04:11:50, 782S×11424E, h7km, MLv3.6/5, 1C, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRT	**Tretes**	**1.59**	**274**	⇑*e*P	Pn	04 12 14.5	-4.1
TRT				*e*S	Sn	04 12 37.0	-2.5

*IDC **09** 04:40:33.3±0.5, 1561S×16721E, h0km, mb4.6/18, mb1 4.6/18, mb1mx4.6/20, mbtmp4.5/18, MS3.9/9, Ms1 3.9/9, ms1mx3.5/24, Error ellipse: s-maj=19.6km s-min=15.8km az=100.0*
*LDG **09** 04:40:35.9±0.2, 1559S×16658E, h10km, Mb5.2/4, Ms4.0/5, Error ellipse: s-maj=34.5km s-min=7.7km az=84.0*
*ISCJB **09** 04:40:35.9±3.2, 1573S±005×16726E±007, h28km±22km, mb4.8/48, MS4.2/21, Error ellipse: s-maj=12.6km s-min=7.4km az=154.0*
*MOS **09** 04:40:38.3±1.6, 1560S×16710E, h33km, mb5.2/11, MS4.2/4, Error ellipse: s-maj=11.8km s-min=9.8km az=39.8*
*BJI **09** 04:40:38.1, 1584S×16767E, h60km, mB5.0, mb4.9, Ms4.9, Msz4.4*
*NEIC **09** 04:40:39.3±1.6, 1569S×16730E, h43km±13km, mb4.8/20, Error ellipse: s-maj=11.0km s-min=8.7km az=76.0*

ISC 09 04:40:38.6±1.3, 1578S±004×16732E±007, h37km±10km, h40km±5.3km: pP-P, n212, σ1§11/95, mb4.8/48, MS4.2/21, 28C-2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.31**	**187**	*e*P	**Pn**	**04 42 09.5**	**+0.3**
DZM				*e*S	**Sn**	**04 43 17.6**	**-2.5**
DZM	**Mont Dzumac**	**6.31**	**187**	*e*Pn	**Pn**	**04 42 09.2**	**0.0**
DZM				*e*Sn	**Sn**	**04 43 19.2**	**-0.9**
NOUC	**Port Laguerre**	**6.36**	**189**	*e*P	**Pn**	**04 42 10.6**	**+0.8**
NOUC				*e*S	**Sn**	**04 43 18.5**	**-2.7**
HNR	**Honiara**	**9.57**	**310**	Pn	**Pn**	**04 42 54.3**	**+0.4**
	30nm,0.3s,baz=151,slow=6.7,SNR=6.6						
HNR				Sn	**Sn**	**04 44 39.9**	**-0.3**
	6.7nm,0.3s,baz=106,slow=21,SNR=2.8						
HNR	**Honiara**	**9.57**	**310**	*e*P	**Pn**	**04 42 54.3**	**+0.4**
HNR				*e*		04 44 40.6	
HNR				pmax	pmax		
	comp=Z,122nm,0.8s						
HNR	**Honiara**	**9.57**	**310**	*e*Pn	**Pn**	**04 42 54.3**	**+0.4**
	comp=Z,122nm,0.8s						
HNR				*e*Sn	**Sn**	**04 44 40.6**	**+0.4**
AFI	**Afiamalu**	**20.29**	**87**	LR	LR	04 51 14.9	
	comp=Z,235nm,18.9s,MS3.6,baz=274,slow=32						
CTA	**Charters Tower**	**20.49**	**255**	*e*P	**P**	**04 45 15.8**	**+2.3**
	comp=Z,14nm,0.8s						
CTA				*e*pP		04 45 22.9	
CTA	**Charters Tower**	**20.49**	**255**	P	**P**	**04 45 15.1**	**+1.6**
	comp=Z,18nm,0.7s,baz=84,slow=12,SNR=25						
CTA				LR	LR	04 51 53.0	
	comp=Z,321nm,21.3s,MS3.7,baz=52,slow=33						
CTA	**Charters Tower**	**20.49**	**255**	*e*P	**P**	**04 45 15.8**	**+2.3**
CTA				pmax	pmax		
	comp=Z,14nm,0.8s						
CTAO	**Charters Tower**	**20.49**	**255**	*e*P	**P**	**04 45 15.5**	**+2.0**
CTAO				pmax	pmax		
	comp=Z,17nm,0.8s						
CTAO	**Charters Tower**	**20.49**	**255**	*e*P	**P**	**04 45 15.5**	**+2.0**
	comp=Z,17nm,0.8s						
PMG	**Port Moresby**	**20.66**	**285**	*e*P	**P**	**04 45 17.3**	**+1.9**
PMG				pmax	pmax		
	comp=Z,28nm,1.0s						
PMG	**Port Moresby**	**20.66**	**285**	*e*P	**P**	**04 45 17.3**	**+1.9**
	comp=Z,28nm,1.0s						
COEN	**Coen**	**23.41**	**271**	*e*P	**P**	**04 45 44.6**	**0.0**
	comp=Z,6.0nm,1.0s,mb4.0						
URZ	**Urewera**	**24.00**	**161**	P	**P**	**04 45 52.6**	**+2.8**
	comp=Z,36nm,1.0s,mb4.8,baz=64,slow=2.7,SNR=12						
URZ				LR	LR	04 54 25.7	
	comp=Z,367nm,18.6s,MS3.9,baz=174,slow=34						
CNB	**Canberra Magne**	**25.24**	**216**	*e*P	**P**	**04 46 02.6**	**+1.5**
RPZ	**Rata Peaks**	**28.03**	**174**	P	**P**	**04 46 27.9**	**+1.8**
	comp=Z,15nm,0.6s,mb4.8,baz=326,slow=4.2,SNR=12						
STKA	**Stephens Creek**	**28.36**	**231**	*e*P	**P**	**04 46 31.5**	**+2.2**
	comp=Z,3.9nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**28.36**	**231**	P	**P**	**04 46 29.4**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.0,baz=10.0,slow=9.4,SNR=3.7						
STKA				PcP	PcP	04 49 41.8	+0.4
	comp=Z,2.1nm,0.7s,baz=314,slow=18,SNR=5.5						
WB2	**Warramunga Arr**	**31.62**	**258**	*e*P	**P**	**04 46 56.6**	**-1.7**
WB2				*e*pP	pP	04 47 04.9	-3.8
WRAB	**Tennant Creek**	**31.62**	**258**	*e*P	**P**	**04 46 57.5**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
WRAB	**Tennant Creek**	**31.62**	**258**	*e*P	**P**	**04 46 57.5**	**-0.8**
	comp=Z,3.4nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**31.63**	**258**	P	**P**	**04 46 56.6**	**-1.8**
	comp=Z,2.3nm,0.9s,mb4.0,baz=86,slow=9.0,SNR=40						
WRA				PcP	PcP	04 49 52.8	+2.7

comp=Z,1.0nm,0.9s,baz=81,slow=3.4,SNR=4.2
WRA ScP ScP 04 53 38.9 +8.3
comp=Z,1.2nm,1.0s,baz=86,slow=3.2,SNR=6.9
WRA PKiKP PKiKP 04 57 17.6 -1.7
comp=Z,0.4nm,0.6s,baz=319,slow=0.2,SNR=6.7
WRA LR LR 04 58 47.6
comp=Z,336nm,19.6s,MS4.0,baz=75,slow=35
WRA Warramunga Arr 31.63 258 P **P** **04 46 56.6 -1.8**
WRA 04 49 52.8
WRA Warramunga Arr 31.63 258 P **P** **04 46 56.6 -1.8**
WRA PcP PcP 04 49 52.8 +2.7
WRA ScP ScP 04 53 38.9 +8.3
ASAR Alice Springs 32.36 251 P **P** **04 47 04.0 -0.8**
comp=Z,9.5nm,0.7s,mb4.7,baz=76,slow=9.0,SNR=111
ASAR PcP PcP 04 49 53.4 +1.4
comp=Z,1.1nm,0.8s,baz=80,slow=4.5,SNR=4.6
ASAR ScP ScP 04 53 41.2 +8.2
comp=Z,0.9nm,0.8s,baz=80,slow=3.9,SNR=6.3
ASAR PKiKP PKiKP 04 57 18.1 -1.7
comp=Z,0.3nm,0.5s,baz=90,slow=1.6,SNR=4.1
ASAR Alice Springs 32.36 251 P **P** **04 47 04.0 -0.7**
ASAR 04 49 53.4
ASAR Alice Springs 32.36 251 P **P** **04 47 04.0 -0.8**
ASAR PcP PcP 04 49 53.4 +1.4
ASAR ScP ScP 04 53 41.2 +8.2
KAKA Kakadu 33.92 271 ⇓*i*P **P** **04 47 17.2 -1.3**
comp=Z,5.3nm,0.4s,mb4.8
GUMO Guam 36.67 322 LR LR 05 01 04.4
comp=Z,222nm,19.4s,MS4.0,baz=269,slow=34
FORT Forrest 38.81 240 *e*P **P** **04 48 00.0 -0.1**
comp=Z,22nm,0.7s,mb5.0
FITZ Fitzroy Crossi 39.88 261 *e*P **P** **04 48 08.3 -0.8**
comp=Z,9.3nm,0.7s,mb4.6
PPT Papeete 41.27 99 *e*LR LR 05 00 21.6
comp=Z,242nm,24.2s
PPT Papeete 41.27 99 LR LR 05 00 59.4
comp=Z,169nm,19.7s,MS3.9,baz=153,slow=30
MBWA Marble Bar 45.33 256 *e*P **P** **04 48 53.5 +0.2**
comp=Z,13nm,0.8s,mb4.8
KAPI Kappang 47.89 278 P **P** **04 49 12.0 -1.5**
comp=Z,14nm,1.0s,mb5.0,baz=157,slow=1.5,SNR=5.0
NWAO Narrogin (SRO) 48.26 240 P **P** **04 49 16.5 +0.4**
comp=Z,8.2nm,0.8s,mb4.8,baz=113,slow=7.7,SNR=4.0
MJAR Matsushiro Arr 58.85 333 P **P** **04 50 32.1 -1.5**
comp=Z,3.3nm,0.8s,mb4.4,baz=174,slow=5.7,SNR=11
SBA Scott Base 62.09 180 *e*P **P** **04 50 57.3 +2.1**
SBA pmax pmax
comp=Z,25nm,1.3s,mb5.2
SBA Scott Base 62.09 180 *e*P **P** **04 50 57.2 +2.1**
comp=Z,25nm,1.3s,mb5.2
CASY Casey 62.58 202 *e*P **P** **04 50 59.5 +0.9**
comp=Z,3.8nm,0.7s,mb4.6
KSRS Korea Array 64.63 326 P **P** **04 51 11.3 -1.2**
comp=Z,2.0nm,0.7s,mb4.2,baz=139,slow=6.3,SNR=5.7
KSRS LR LR 05 14 27.7
comp=Z,61nm,20.2s,MS3.8,baz=352,slow=32
YSS Yuzh-Sakhalins 66.23 342 *e*P **P** **04 51 23.4 +0.8**
YSS pmax pmax
comp=Z,13nm,1.0s,mb4.9
WHN Wuhan 68.68 312 P **P** **04 51 38.7 +0.2**
PET Petropavlovsk 68.92 354 *e*P **P** **04 51 37.5 -2.0**
PET pmax pmax
comp=Z,18nm,0.6s,mb5.2
PET Petropavlovsk 68.92 354 *e*P **P** **04 51 37.5 -2.0**
comp=Z,18nm,0.6s,mb5.2
PETK Petropavlovsk- 69.10 354 P **P** **04 51 40.1 -0.4**
comp=Z,8.6nm,0.8s,mb4.7,baz=145,slow=8.0,SNR=9.1
PETK LR LR 05 21 27.8
comp=Z,29nm,18.6s,MS3.5,baz=324,slow=36
MDJ Mudanjiang 69.23 332 P **P** **04 51 41.6 0.0**
MDJ AMB AMB
comp=Z,16nm,2.1s,mb4.6
MDJ AMB AMB
comp=Z,73nm,4.7s
MDJ Mudanjiang 69.23 332 *e*P **P** **04 51 41.7 +0.2**
comp=Z,14nm,0.9s,mb4.9
CN2 Changchun 70.57 329 *e*P **P** **04 51 51.9 +2.1**
CN2 *e*XP sP 04 52 13.8 +8.4
CN2 *e*S S 05 01 00.2 -0.6
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1μm,18.0s,MS5.3
CN2 LR LR
comp=E,1μm,18.0s,MS5.3
CN2 LR LR
comp=Z,2μm,19.0s,MS5.4
KLR Kul'dur 71.98 336 *e*P **P** **04 51 54.7 -3.5**
GYA Guiyang 72.35 305 ⇑*i*P **P** **04 52 01.7 +0.7**
GYA AP pP 04 52 17.7 +5.4
GYA XP sP 04 52 24.8 +8.3
GYA PP PP 04 54 44.9 +2.5
GYA S S 05 01 19.7 -2.4
GYA XS sS 05 01 47.5 +6.7
GYA SKS 05 01 57.2
GYA SCS ScS 05 02 01.0 -4.2
GYA AMB AMB
comp=Z,20nm,1.2s,mb4.9
GYA AMB AMB
comp=Z,80nm,6.3s
GYA LR LR
comp=N,220nm,20.3s,MS4.5
GYA LR LR
comp=E,140nm,19.5s,MS4.5
GYA LR LR
comp=Z,210nm,18.7s,MS4.4
BJI Beijing 73.11 321 P **P** **04 52 05.3 +0.1**
BJI PP PP 04 54 49.0 +0.4
BJI S S 05 01 29.7 -0.5
BJI AMB AMB
comp=Z,11nm,0.7s,mb4.9
BJI AMB AMB
comp=Z,108nm,3.9s
BJI LR LR
comp=N,135nm,9.3s
BJI LR LR
comp=E,106nm,10.7s
BJI LR LR
comp=Z,186nm,40.2s
XAN Xi'an 74.43 313 P **P** **04 52 13.2 +0.1**
XAN AMB AMB
comp=Z,22nm,0.7s,mb5.2
XAN AMB AMB
comp=Z,57nm,6.4s
KMI Kunming 74.90 302 P **P** **04 52 17.4 +1.4**
KMI PP PP 04 55 07.2 +3.1
KMI S S 05 01 51.0 0.0
KMI XS sS 05 02 18.0 +8.2
KMI AMB AMB
comp=Z,29nm,1.0s,mb5.2
KMI AMB AMB
comp=Z,51nm,3.1s
KMI LR LR
comp=N,161nm,10.8s,MS4.7
KMI LR LR
comp=E,127nm,12.6s,MS4.7
KMI LR LR
comp=Z,91nm,16.8s,MS4.2
CMAR Chiang Mai Arr 75.42 294 P **P** **04 52 20.0 +0.9**
comp=Z,2.1nm,0.7s,mb4.2,baz=120,slow=3.9,SNR=10
CHTO Chiang Mai 75.56 295 *e*P **P** **04 52 20.6 +0.7**
CHTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CHTO Chiang Mai 75.56 295 *e*P **P** **04 52 20.6 +0.7**
comp=Z,4.5nm,0.8s,mb4.5
HHC Hu-ho-hao-te 76.41 320 *e*P **P** **04 52 27.9 +3.6**
HHC AMB AMB
comp=Z,12nm,0.7s,mb4.9
HHC AMB AMB
comp=Z,124nm,6.9s
CD2 Chengdu 76.69 308 P **P** **04 52 27.0 +0.9**
CD2 AP pP 04 52 43.3 +5.8
CD2 XP sP 04 52 50.2 +8.5
CD2 PP PP 04 55 21.5 +2.4
CD2 S S 05 02 07.8 -2.7
CD2 XS sS 05 02 36.4 +7.1
CD2 SS SS 05 07 07.7 +0.6
CD2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
CD2 AMB AMB
comp=Z,30nm,4.8s
CD2 LR LR
comp=N,180nm,14.6s,MS4.7
CD2 LR LR
comp=E,210nm,16.2s,MS4.7
CD2 LR LR
comp=Z,150nm,14.8s,MS4.4
LZH Lanzhou 79.06 312 *e*P **P** **04 52 40.8 +1.6**
LZH PCP PcP 04 52 49.5 +1.9
LZH AP pP 04 52 56.1 +5.5
LZH XP sP 04 53 02.8 +8.0
LZH PP PP 04 55 45.2 +6.3
LZH *e*S S 05 02 35.2 -0.7
LZH XS sS 05 03 03.1 +8.3
LZH SS SS 05 07 44.0 +1.4
LZH AMB AMB
comp=Z,38nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,200nm,5.5s
LZH LR LR
comp=N,1μm,16.4s
LZH LR LR
comp=Z,1μm,17.5s,MS5.3
MAW Mawson 80.94 202 P **P** **04 52 49.5 +0.7**
comp=Z,2.9nm,1.0s,mb4.2,baz=103,slow=7.0,SNR=4.3
ULN Ulaanbaatar 83.01 324 *e*P **P** **04 53 00.3 +0.4**
ULN pmax pmax
comp=Z,19nm,0.9s,mb5.1
ULN Ulaanbaatar 83.01 324 *e*P **P** **04 53 00.3 +0.4**
comp=Z,19nm,0.9s,mb5.1
YAK Yakutsk 83.04 343 *e*P **P** **04 52 59.1 -0.6**
YAK pmax pmax
comp=Z,29nm,1.0s,mb5.3
YAK Yakutsk 83.04 343 *e*P **P** **04 52 59.5 -0.3**
comp=Z,32nm,0.8s,mb5.4
SLKM Skilak Lake 83.30 20 *e*P **P** **04 53 01.4 +0.3**
SONM Songino Array 83.37 324 P **P** **04 53 01.8 0.0**
comp=Z,8.6nm,0.7s,mb4.9,baz=142,slow=6.0,SNR=34
GTA Gaotai 83.43 314 P **P** **04 53 03.4 +1.1**
GTA AP pP 04 53 19.4 +5.6
GTA XP sP 04 53 27.2 +9.2
GTA SKS 05 03 18.5
GTA S S 05 03 27.2 +6.1
GTA AMB AMB
comp=Z,17nm,1.1s,mb5.0
GTA AMB AMB
comp=Z,90nm,6.0s
GTA LR LR
comp=N,110nm,17.1s,MS4.5
GTA LR LR
comp=E,118nm,17.1s,MS4.5
GTA LR LR
comp=Z,52nm,13.8s,MS4.1
BILL Bilibino 83.59 360 ⇑*e*P **P** **04 53 01.9 -0.5**
BILL *e*pP 04 53 11.2 -2.7
BILL pmax pmax
comp=Z,27nm,1.2s,mb5.2
BOD Bodaibo 85.44 334 *e*P **P** **04 53 10.2 -1.8**
BOD pmax pmax
comp=Z,8.0nm,1.3s,mb4.7
LSA Lhasa 86.16 302 *e*P **P** **04 53 17.8 +1.5**
ZAK Zakamensk 86.43 325 ⇑*i*P **P** **04 53 16.7 -0.4**
ZAK pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
TLY Talaya 86.89 326 *e*P **P** **04 53 19.4 +0.1**
TLY pmax pmax
comp=Z,12nm,1.0s,mb5.1
TLY Talaya 86.89 326 *e*P **P** **04 53 19.2 0.0**
comp=Z,10nm,0.8s,mb5.1
COLA College 87.30 18 *e*P **P** **04 53 20.3 -0.7**
SYO Syowa Base 87.72 197 ⇑*e*P **P** **04 53 22.0 -1.2**
NVAR Mina Array Bea 87.91 49 P **P** **04 53 25.1 +0.5**
comp=Z,0.9nm,0.7s,mb4.1,baz=231,slow=7.1,SNR=6.5
PMSA Palmer Station 90.77 160 *e*P **P** **04 53 37.7 +0.1**
comp=Z,11nm,1.0s,mb5.2
SNAA Sanae 92.51 183 *e*P **P** **04 53 45.0 -0.5**
SNAA *e* 04 53 47.9
SNAA *e* pP 04 53 54.5 -2.6
SNAA Sanae 92.51 183 *e*P **P** **04 53 45.2 -0.3**
SNAA pmax pmax
comp=Z,3.0nm,0.6s
SNAA Sanae 92.51 183 *e*P **P** **04 53 45.2 -0.3**
comp=Z,2.9nm,0.6s,mb4.9
VNA3 Neumayer Olymp 93.17 181 *e*P **P** **04 53 47.6 -1.0**
VNA3 *e* 04 53 50.9
VNA2 Neumayer--Watz 93.44 182 *e*P **P** **04 53 49.6 -0.2**
VNA2 *e* 04 53 52.9
VNA2 *e* pP 04 53 59.4 -2.0
WMQ Urumqi 93.50 314 P **P** **04 53 50.7 +0.2**
WMQ AMB AMB
comp=Z,9.0nm,0.8s,mb5.2
WMQ AMB AMB
comp=Z,139nm,5.1s
WMQ LR LR
comp=Z,107nm,25.7s,MS4.2
VNA1 Neumayer--Stat 93.74 181 *e*P **P** **04 53 51.0 -0.2**
VNA1 *e* 04 53 54.3
VNA1 *e* pP 04 54 00.3 -2.5
PDAR Pinedale Array 95.62 47 LR LR 05 33 09.2
comp=Z,37nm,18.1s,MS3.9,baz=71,slow=33
TXAR Lajitas Array 96.73 62 P **P** **04 54 06.1 +0.5**
comp=Z,0.2nm,0.6s,mb3.7,baz=226,slow=4.8,SNR=3.6
MK31 Makanchi Array 97.99 316 *e*P **P** **04 54 10.8 -0.1**
MKAR Makanchi Array 97.99 316 P **P** **04 54 10.5 -0.3**
comp=Z,1.4nm,0.5s,mb4.7,baz=98,slow=5.9,SNR=19
ZAA0 Zalesovo Array 98.26 324 *e*P **P** **04 54 10.3 -1.6**
ZALV Zalesovo Beam 98.26 324 P **P** **04 54 10.8 -1.1**
comp=Z,4.7nm,0.8s,mb5.1,baz=108,slow=4.8,SNR=15
ZAL Zalesovo 98.27 324 P **P** **04 54 10.9 -1.0**
YKA Yellowknife Ar 98.45 27 P **P** **04 54 11.0 -1.5**
comp=Z,0.5nm,0.5s,mb4.3,baz=255,slow=4.1,SNR=4.2
ARU Arti 113.37 325 *e*PKiKP PKiKP 04 59 11.2 -1.0
ARU Arti 113.37 325 *e*PKP PKiKP 04 59 11.2 -1.0
ARCES ARCESS Array B 121.28 345 PKP PKPdf 04 59 26.9 -0.1
comp=Z,6.4nm,0.5s,baz=85,slow=2.1,SNR=50
ARCES ARCESS Array B 121.28 345 PKP PKPdf 04 59 26.9 -0.1
BOSA Boshof 122.61 220 PKP PKPdf 04 59 30.5 -0.4
comp=Z,3.3nm,1.0s,baz=40,slow=3.4,SNR=3.1
JOF Joensuu 123.87 337 *e*p PKPdf 04 59 31.2 -1.0
comp=Z,9.4nm,0.7s
JOF Joensuu 123.87 337 *e*p PKPdf 04 59 31.2 -1.0
comp=Z,9.4nm,0.7s
GNI Garni 124.82 308 PKP PKPdf 04 59 35.3 +0.6
comp=Z,9.5nm,0.8s,baz=348,slow=7.8,SNR=4.7
GNI Garni 124.82 308 *e*PKPdf PKPdf 04 59 35.2 +0.5
KAF Kangasniemi 126.19 338 *e*p PKPdf 04 59 35.0 -1.6
comp=Z,6.0nm,0.8s
KAF Kangasniemi 126.19 338 *e*p PKPdf 04 59 35.0 -1.6
comp=Z,6.0nm,0.8s
ANN Anapa 129.00 315 *i* PKIKP PKPdf 04 59 33.8 -8.8
ANN pmax pmax
comp=Z,246nm,1.2s
MALT Malatya 129.97 307 *e*PKIKP PKPdf 04 59 45.3 +0.7
AKASG Malin Array Be 131.62 325 PKP PKPdf 04 59 48.4 +1.1
comp=Z,2.0nm,0.5s,baz=45,slow=3.0,SNR=7.1
NB2 NORSAR Subarra131.65 345 PKPdf PKPdf 04 59 47.5 +0.4
comp=Z,1.4nm,0.7s,baz=32,slow=1.7
NOA NORSAR Array B131.65 345 PKP PKPdf 04 59 47.4 +0.3
comp=Z,2.5nm,0.8s,baz=33,slow=2.0,SNR=7.6
BDFB Brasilia 133.18 130 PKP PKPdf 04 59 51.2 -0.2
comp=Z,1.5nm,0.6s,baz=200,slow=2.6,SNR=4.5
EIL Elat 134.25 296 PKP PKPdf 04 59 54.8 +1.8
comp=Z,4.5nm,0.7s,baz=354,slow=7.2,SNR=3.8
PSZ Piszkesteto 138.22 327 *e*PKP PKPdf 05 00 04.9 +5.1
DPC Dobruska-Polom 138.33 332 *e*PKPdf PKPdf 05 00 02.1 +2.2
KHC Kasperske Hory 140.44 333 *e*PKPdf PKPdf 05 00 05.4 +1.6
GERES GERESS Array B 140.59 332 PKhKP 04 59 57.1
comp=Z,0.5nm,0.6s,baz=15,slow=5.5,SNR=5.5
GRA1 Grafenberg Arr 141.00 335 *e*PKPdf PKPdf 05 00 04.1 -0.7
GRF Grafenberg Arr 141.00 335 *e*PKPdf PKPdf 05 00 04.1 -0.7
MEM Membach 142.13 341 PKP PKPdf 05 00 07.0 +0.2
BCLA Clavier 142.52 341 PKP PKPdf 05 00 07.2 -0.3
STU Stuttgart 142.54 336 *e*PKIKP PKPdf 05 00 05.3 -2.2
WLF Walferdange 142.90 340 PKP PKPdf 05 00 07.0 -1.1
WLF Walferdange 142.90 340 *e*PKPdf PKPdf 05 00 06.9 -1.2
DOU Dourbes 143.02 341 PKP PKPdf 05 00 06.6 -1.7
BAIF Baives 143.17 342 *e*PKP1 PKPdf 05 00 05.0 -3.6
BFO Black Forest 143.23 336 *e*PKIKP PKPdf 05 00 06.1 -2.7
FETA Feichten 143.28 333 ⇓*i*P PKPdf 05 00 06.2 -2.7
comp=Z,8.7nm,1.0s
CDF Champ du Feu 143.56 337 *e*PKP1 PKPdf 05 00 06.0 -3.4
comp=Z,17nm,0.8s
ECH Echery 143.77 337 *e*PKIKP PKPdf 05 00 07.2 -2.5
HINF Hinteralfeld 144.21 337 ⇑*i*PKP1 PKPdf 05 00 08.6 -1.9
comp=Z,14nm,0.9s
HAU Haudompre 144.24 338 *e*PKP1 PKPdf 05 00 08.3 -2.3
comp=Z,24nm,0.8s
HAU *e*MLR MLR
comp=Z,46nm,22.0s,MS3.9
HAU Haudompre 144.24 338 *e*PKP PKPdf 05 00 08.3 -2.3
HAU LR LR
comp=Z,50nm,22.0s,MS4.2
MEZF Maizieres J'vi 144.27 340 *e*PKP1 PKPdf 05 00 08.9 -1.7
comp=Z,31nm,0.7s
TUE Stuetta 144.31 334 *e*PKPdf PKPdf 05 00 08.6 -2.2
TIP Timpagrande 145.26 318 *e*PKPdf PKPdf 05 00 12.2 -0.4
CABF La Chapelle 145.51 337 *e*PKP1 PKPbc 05 00 13.3 +0.4
comp=Z,128nm,1.0s
OG01 Vacheresse 145.51 336 PKP PKPdf 05 00 13.5 +0.7
FLN La Foliniere 145.62 346 *e*PKP1 PKPbc 05 00 12.6 -0.6
comp=Z,95nm,0.7s
FLN *e*MLR MLR
comp=Z,47nm,21.8s,MS3.9
FLN La Foliniere 145.62 346 *e*PKP PKPdf 05 00 12.6 -0.3
FLN LR LR
comp=Z,50nm,21.8s,MS4.2
LDF La Druitiere 145.69 345 ⇑*i*PKP1 PKPbc 05 00 12.8 -0.6
comp=Z,66nm,0.8s
LOR Lormes 145.74 340 ⇑*i*PKP1 PKPbc 05 00 13.6 0.0
comp=Z,82nm,0.9s
LOR *e*MLR MLR
comp=Z,55nm,20.0s,MS4.0
LOR Lormes 145.74 340 ⇑*i*PKP PKPdf 05 00 13.6 +0.4
LOR LR LR
comp=Z,60nm,20.0s,MS4.4
SSF Saint Saulge 146.03 340 ⇑*i*PKP1 PKPbc 05 00 14.6 +0.1
comp=Z,80nm,0.9s
GRR Gorron 146.06 346 ⇑*i*PKP1 PKPbc 05 00 14.4 -0.1
comp=Z,111nm,0.8s
RSL Roselend 146.07 335 PKP PKPdf 05 00 14.8 +1.0
LPL La Plagne 146.16 335 ⇑*i*PKP1 PKPbc 05 00 15.3 +0.3
comp=Z,40nm,0.8s
LPG La Plagne 146.17 335 ⇑*i*PKP1 PKPbc 05 00 15.5 +0.5
comp=Z,45nm,0.8s
OG05 Jujurieux 146.22 337 PKP PKPbc 05 00 16.1 +1.0
SMF Signal de Mont 146.28 339 *e*PKP1 PKPbc 05 00 15.1 -0.2
comp=Z,80nm,0.9s
AVF Avril sur Loir 146.32 340 *e*PKP1 PKPbc 05 00 14.9 -0.5
comp=Z,62nm,0.9s
SGMF Saint Gilles 146.56 348 ⇑*i*PKP1 PKPbc 05 00 15.6 -0.4
comp=Z,39nm,0.6s
BNI Bardonecchia 146.56 335 *e*PKP2 PKPab 05 00 15.7 -1.5
ROSF Rostrenen 146.62 349 ⇑*i*PKP1 PKPbc 05 00 15.8 -0.4
comp=Z,37nm,0.8s
OG22 Abries 146.64 334 PKP PKPbc 05 00 17.1 +0.7
BGF Bois d'Agland 146.69 340 ⇑*i*PKP1 PKPbc 05 00 16.4 -0.1
comp=Z,40nm,0.6s
MBDF Montbardon 146.79 334 ⇑*i*PKP1 PKPbc 05 00 16.5 -0.3
comp=Z,18nm,0.6s
PLDF La Plantade 146.95 339 PKP PKPbc 05 00 17.3 +0.1
ORIF Oris-en-Rattie 147.00 335 ⇑*i*PKP1 PKPbc 05 00 17.4 0.0
comp=Z,25nm,0.8s
ORIF *e*MLR MLR
comp=Z,43nm,20.0s,MS3.9
QUIF Quistinic 147.00 348 ⇑*i*PKP1 PKPbc 05 00 16.8 -0.5
comp=Z,46nm,1.1s
AGO Saint Agoulin 147.04 340 PKP PKPbc 05 00 17.7 +0.2
SAOF Saorge 147.05 333 PKP PKPdf 05 00 16.3 +0.8
AUTN L'Aution 147.10 333 PKP PKPdf 05 00 17.5 +1.9
TCF Toulx Ste Croi 147.13 341 ⇑*i*PKP1 PKPbc 05 00 17.6 -0.1
comp=Z,32nm,0.8s
TOUF Mont Tournerai 147.16 333 PKP PKPbc 05 00 17.8 -0.1
SBF Sospel 147.20 333 *e*PKP1 PKPbc 05 00 18.1 +0.1
comp=Z,74nm,0.8s
SSB Saint Sauveur 147.21 337 PKP PKPbc 05 00 18.1 +0.1
SSB Saint Sauveur 147.21 337 *e*PKPbc PKPbc 05 00 18.6 +0.6
LUCF Luceram 147.21 333 PKP PKPbc 05 00 18.0 -0.1
MVIF Mont Vial 147.30 333 PKP PKPdf 05 00 17.5 +1.6
COLF Collangettes 147.31 338 PKP PKPdf 05 00 17.7 +1.8
REVF Revere 147.32 333 PKP PKPdf 05 00 16.4 +0.4
PYM Petit Puy Mans 147.35 339 PKP PKPbc 05 00 18.5 +0.1
PGF Pioggiola 147.48 329 ⇑*i*PKP1 PKPbc 05 00 18.5 -0.3
comp=Z,52nm,0.9s
VIVF Saint-Julien-l 147.52 337 ⇑*i*PKP1 PKPbc 05 00 17.9 -1.0
comp=Z,31nm,1.0s
MFF Saint Martin d 147.54 344 ⇑*i*PKP1 PKPbc 05 00 18.5 -0.4
comp=Z,49nm,0.7s
LBL Lubilhac 147.72 339 PKP PKPbc 05 00 19.1 -0.3
FRF La Foret Royal 147.78 333 ⇑*i*PKP1 PKPbc 05 00 19.1 -0.5
comp=Z,29nm,1.0s
LMR La Mourre 148.03 333 *e*PKP1 PKPbc 05 00 19.7 -0.6
RJF Les Rejaudoux 148.23 341 *e*PKP1 PKPbc 05 00 21.5 +0.7
comp=Z,43nm,0.9s
RJF *e*MLR MLR
comp=Z,55nm,21.8s,MS4.0
RJF Les Rejaudoux 148.23 341 *e*PKP PKPbc 05 00 21.5 +0.7
RJF LR LR
comp=Z,60nm,21.8s,MS4.3
LASF Ste Croix 148.49 337 *i*PKP1 PKPbc 05 00 21.5 0.0
comp=Z,28nm,0.9s
LFF La Frestale 148.80 341 ⇑*i*PKP1 PKPbc 05 00 22.0 -0.2
VSL Villasalto 149.50 325 *e*PKPbc PKPbc 05 00 23.7 -0.5
MTLF Montolieu 149.73 338 ⇑*i*PKP1 PKPbc 05 00 24.6 0.0
comp=Z,16nm,0.8s
EJON La Jonquera 150.25 336 PKP PKPdf 05 00 25.2 +4.5
EPF Esparros 150.64 340 ⇑*i*PKP1 PKPbc 05 00 27.1 +0.3
comp=Z,10.0nm,0.8s
EBIE Bielsa 151.02 340 PKP PKPbc 05 00 28.5 +0.8
EALK Alkurruntz 151.03 343 PKP PKPdf 05 00 26.3 +4.4
ETSF Etsaut 151.05 341 *e*PKP1 PKPbc 05 00 28.1 +0.3
comp=Z,20nm,0.8s
SJPF Ste Jean 151.05 343 ⇑*i*PKP1 PKPbc 05 00 28.0 +0.2
ELIZ Elizondo 151.09 343 PKIKP PKPbc 05 00 29.1 +1.2
EMIR Miracle 151.22 338 PKP PKPbc 05 00 30.5 +2.3
ELAN Lanestosa 151.52 346 PKP PKPbc 05 00 29.2 +0.3
EPOB Poblet 151.88 338 PKP PKPbc 05 00 32.0 +2.3
KEST Kesra 152.04 319 PKPbc PKPbc 05 00 29.9 -0.4
comp=Z,3.3nm,0.7s,baz=358,slow=4.8,SNR=13
ESAC San Caprasio 152.08 340 PKP PKPbc 05 00 30.9 +0.7
EPON Pontenova 152.14 351 PKP PKPbc 05 00 32.0 +1.8
STS Santiago 152.75 353 PKIKP PKPbc 05 00 31.5 -0.2
ETOR Torete 153.40 342 PKIKP PKPbc 05 00 33.9 +0.8
PBRG Braganca 153.56 350 *e*PKPdf PKPdf 05 00 24.9 -0.9
PBRG *i* P PKPab 05 00 47.2 +1.3
GUD Guadarrama 154.14 345 PKIKP PKPbc 05 00 35.7 +0.9
PVRL Vila Real 154.23 351 *e*PKPdf PKPbc 05 00 35.7 +0.8
PVRL *i* P PKPab 05 00 49.3 +0.6
MVO Moncorvo 154.24 350 *e*PKPdf PKPdf 05 00 27.4 +0.7
PVIS Viseu 154.81 351 *i* P PKPab 05 00 51.7 +0.5
ESDC Sonseca Array 155.00 344 PKP PKPdf 05 00 28.4 +0.5
comp=Z,0.1nm,0.2s,baz=0.0,slow=2.1,SNR=4.5
ESDC PKPbc PKPdf 05 00 37.4 +10
comp=Z,0.5nm,0.6s,baz=12,slow=3.4,SNR=6.3
ESDC PKPab PKPab 05 00 52.1 +0.1
comp=Z,1.4nm,0.7s,baz=12,slow=3.9,SNR=7.3
MTE Manteigas 155.06 351 *e*PKPdf PKPdf 05 00 28.6 +0.7
PCBR Castelo Branco 155.60 350 *e*PKPdf PKPdf 05 00 29.2 +0.6
PMRV Marv??o 155.99 350 *e*PKPdf PKPdf 05 00 29.4 +0.2
PBAR Barrancos 157.14 348 *i* P PKPab 05 01 03.5 +2.2
PBEJ Beja 157.44 350 *e*PKPdf PKPab 05 00 59.1 -3.4
TORD Torodi Ar. Bea 165.84 261 PKP PKPdf 05 00 40.0 -0.5
comp=Z,1.0nm,0.5s,baz=35,slow=0.8,SNR=17
TORD PKPab PKPab 05 01 39.5 -0.6
comp=Z,4.2nm,0.8s,baz=101,slow=3.8,SNR=16

ISCJB **09** *04:49:43.4*±*3.9, 150S*±*02*×*1664E*±*0.5, h70km*±*24km, mb3.8/3, Error ellipse: s-maj=80.3km s-min=10.0km az=155.4*
IDC **09** *04:49:50.0*±*9.4, 14.11S*×*16683E, h193km*±*75km, mb3.5/4, mb1 3.7/5, mb1mx3.3/18, mbtmp3.7/5, Error ellipse: s-maj=118.4km s-min=63.1km az=58.0*
ISC 09 04:49:44.4±3.9,**150S**±02×**1666E**±04,**h75**km±18km,**n6,** σ1§**52/8, mb3.8**/3,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.07**	**181**	*e*P		**Pn**		**04 51 24.6**	**-0.7**
DZM				*e*S		**Sn**		**04 52 44.3**	**+0.1**
HNR	**Honiara**	**8.49**	**310**	P		**Pn**		**04 51 45.8**	**+1.1**
	10nm,0.3s,baz=198,slow=6.4,SNR=5.9								
HNR				S		**Sn**		**04 53 18.1**	**-0.8**
	16nm,0.3s,baz=203,slow=12,SNR=2.9								
CTA	**Charters Tower**	**20.03**	**252**	P		**P**		**04 54 14.3**	**+3.0**
	3.2nm,0.6s,baz=92,slow=15,SNR=5.2								
STKA	**Stephens Creek**	**28.33**	**229**	P		**P**		**04 55 32.0**	**+0.8**
	2.1nm,0.5s,mb3.9,baz=39,slow=8.6,SNR=8.1								
WRA	**Warramunga Arr**	**31.12**	**256**	P		**P**		**04 55 54.9**	**-1.0**
	1.1nm,0.6s,mb3.8,baz=87,slow=9.5,SNR=18								
ASAR	**Alice Springs**	**31.96**	**249**	P		**P**		**04 56 02.6**	**-0.8**
	1.4nm,0.7s,mb3.8,baz=70,slow=9.5,SNR=16								

NIED ***09*** *05:01:00, 3950N×14230E, h89km, Mw3.9 Best double couple: M0 7.71000×10^14 NP1:φs290.00000°, δ62.00000°, λ-65.00000°. NP2:φs65.00000°, δ37.00000°, λ-128.00000°.*
ISCJB ***09*** *05:01:53.3±0.8, 3947N±004×14241E±0.10, h85km±4km, mb3.9/8, Error ellipse: s-maj=12.9km s-min=5.9km az=8.8*
NEIC ***09*** *05:01:53.6±0.7, 3956N×14261E, MG3.8(JMA), Error ellipse: s-maj=16.5km s-min=9.0km az=110.0*
NEIC Recorded [1 JMA] in Aomori and Iwate Prefectures.
IDC ***09*** *05:01:53.8±1.3, 3955N×14255E, h80km±5km, mb3.6/8, mb1 3.6/11, mb1mx3.5/24, mbtmp3.5/11, Error ellipse: s-maj=34.6km s-min=15.5km az=74.0*
JMA ***09*** *05:01:55.2±0.1, 3947N×14228E, h81km±1km, M3.8*
JMA Felt I J1.
ISC 09 05:01:54.5±0.8**, 3948N**±004×**1424E**±01**, h80**km±5km**, h83**km±4.4km**:pP-P, n27, σ0§71**/40**, mb3.9**/8**, 2C-10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.45**	**283**	⇓P	**Pn**	**05 02 08.1**	**+0.3**
MIYJ				S	**Sn**	**05 02 17.6**	**0.0**
JTH	**Tanohata**	**0.61**	**319**	⇓P	**Pn**	**05 02 09.7**	**+0.4**
JTH				S	**Sn**	**05 02 20.2**	**0.0**
OFUJ	**Ofunato**	**0.68**	**235**	⇓P	**Pn**	**05 02 10.3**	**+0.3**
OFUJ				*e*S	**Sn**	**05 02 21.1**	**-0.4**
JOM	**Ohasama**	**0.84**	**270**	⇓P	**Pn**	**05 02 12.0**	**+0.3**
JOM				S	**Sn**	**05 02 24.5**	**-0.1**
JKZ	**Kuzumaki**	**0.96**	**302**	⇓P	**Pn**	**05 02 13.5**	**+0.5**
JKZ				S	**Sn**	**05 02 26.8**	**-0.1**
JMK	**Ichinoseki**	**1.04**	**240**	⇓P	**Pn**	**05 02 14.2**	**+0.1**
JMK				S	**Sn**	**05 02 28.1**	**-0.6**
JANG	**Nango**	**1.12**	**324**	⇓P	**Pn**	**05 02 15.0**	**0.0**
JANG				S	**Sn**	**05 02 29.7**	**-0.6**
JIO	**Ouri**	**1.30**	**219**	⇑P	**Pn**	**05 02 17.1**	**-0.2**
JIO				S	**Sn**	**05 02 32.9**	**-1.5**
JAH	**Hinai**	**1.52**	**298**	⇓P	**Pn**	**05 02 20.2**	**+0.1**
JAH				S	**Sn**	**05 02 39.5**	**+0.1**
JTM	**Tenmabayashi**	**1.65**	**323**	⇓P	**Pn**	**05 02 21.9**	**+0.1**
JTM				S	**Sn**	**05 02 42.2**	**-0.2**
JYK	**Kaneyama**	**1.67**	**251**	⇓P	**Pn**	**05 02 22.2**	**+0.2**
JYK				*e*S	**Sn**	**05 02 41.9**	**-1.0**
JOU	**Okura**	**1.74**	**231**	⇑P	**Pn**	**05 02 23.0**	**0.0**
JOU				*e*S	**Sn**	**05 02 44.1**	**-0.5**
ERM	**Erimo**	**2.60**	**13**	*e*Pn	**Pn**	**05 02 30.8**	**-3.6**
MAJO	**Matsushiro**	**4.41**	**230**	*e*Pn	**Pn**	**05 02 59.9**	**+0.9**
MAT	**Matsushiro**	**4.41**	**230**	P	**Pn**	**05 03 00.7**	**+1.7**
MAT				*e*S	**Sn**	**05 03 54.9**	**+5.8**
MJAR	**Matsushiro Arr**	**4.41**	**230**	P	**Pn**	**05 03 00.8**	**+1.8**
	0.7nm,0.3s,baz=50,slow=11,SNR=8.6						
ASAJ	**Asahikawa**	**4.64**	**2**	P	**Pn**	**05 03 02.2**	**+0.2**
	4.8nm,0.3s,baz=220,slow=11,SNR=39						
KSRS	**Korea Array**	**11.52**	**264**	P	**Pn**	**05 04 39.0**	**+3.1**
	0.2nm,0.3s,baz=74,slow=14,SNR=2.8						
SONM	**Songino Array**	**27.14**	**300**	P	**P**	**05 07 30.5**	**+0.5**
	0.9nm,0.6s,mb3.5,baz=86,slow=7.6,SNR=4.5						
ZALV	**Zalesovo Beam**	**40.88**	**310**	P	**P**	**05 09 27.8**	**-0.5**
	1.7nm,0.5s,mb4.1,baz=79,slow=7.9,SNR=6.4						
MKAR	**Makanchi Array**	**43.51**	**300**	P	**P**	**05 09 49.8**	**-0.1**
	1.2nm,0.7s,mb3.8,baz=84,slow=11,SNR=9.6						
MKAR				pP	pP	05 10 08.3	-1.0
	0.7nm,0.7s,baz=76,slow=10,SNR=3.5						
MKAR				sP	sP	05 10 17.9	-0.5
	1.1nm,0.8s,baz=82,slow=8.7,SNR=5.0						
KURK	**Kurchatov**	**45.06**	**306**	P	**P**	**05 10 02.6**	**+0.4**
	3.6nm,0.5s,mb4.3,baz=80,slow=8.3,SNR=12						
KURK				pP	pP	05 10 21.6	-0.1
	1.8nm,0.6s,baz=78,slow=8.6,SNR=3.7						
KURK				sP	sP	05 10 30.0	-0.8
	2.2nm,0.8s,baz=85,slow=8.2,SNR=3.9						
BVAR	**Borovoye Array**	**49.52**	**311**	P	**P**	**05 10 36.8**	**0.0**
	0.8nm,0.4s,mb4.0,baz=64,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	**59.58**	**189**	P	**P**	**05 11 49.1**	**-0.8**
	0.9nm,0.7s,mb3.9,baz=7.2,slow=6.9,SNR=13						
WRA				pP	pP	05 12 12.0	+1.8
	0.6nm,0.9s,baz=6.0,slow=7.1,SNR=2.9						
ASAR	**Alice Springs**	**63.31**	**189**	P	**P**	**05 12 14.8**	**-0.1**
	0.5nm,0.7s,mb3.5,baz=13,slow=5.1,SNR=4.3						
AKASG	**Malin Array Be**	**72.83**	**322**	P	**P**	**05 13 13.4**	**-0.9**
	0.6nm,0.4s,mb3.8,baz=49,slow=5.8,SNR=4.3						
PARMO	**Parma**	**90.32**	**39**	*e*P	**P**	**05 14 45.9**	**-0.7**

IDC ***09*** *05:03:01.3±1.1, 28.11N×5664E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/25, mbtmp3.8/7, Error ellipse: s-maj=28.4km s-min=26.4km az=135.0*
ISCJB ***09*** *05:03:02.7±0.5, 2828N±006×5667E±008, h10km, mb3.7/7, Error ellipse: s-maj=11.4km s-min=7.2km az=31.3*
CSEM ***09*** *05:03:03.9±0.1, 2828N×5683E, h20km, mb3.5/1, Error ellipse: s-maj=5.8km s-min=3.0km az=111.0*
NEIC ***09*** *05:03:04.9, 2827N×5666E, h14km, mb3.5/1, ML3.4(THR), After THR.*
THR ***09*** *05:03:04.9±0.4, 2827N×5666E, h14km±12km, ML3.5*
ISC 09 05:03:04.2±0.5**, 2824N**±006×**5673E**±008**, h10**km**, n25, σ1§14**/26**, mb3.7**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.98**	**211**	*e*Pg	**Pg**	**05 03 23.3**	**+0.3**
BNDS				AML	AML	05 03 47.2	
	comp=N,2μm,0.4s						
BNDS	**Bandar-Abbas**	**0.98**	**211**	*e*Pg	**Pg**	**05 03 23.0**	**0.0**
GHIR	**Ghir-Karzin**	**3.30**	**272**	*e*Pn	**Pn**	**05 03 57.5**	**+1.6**
GHIR				AML	AML	05 05 17.0	
	comp=N,98nm,0.5s						
GHIR	**Ghir-Karzin**	**3.30**	**272**	*e*Pn	**Pn**	**05 03 57.0**	**+1.1**
FAQ	**Al Faqa, Dubai**	**3.63**	**197**	P	**Pn**	**05 04 01.4**	**+0.9**
	SNR=21						
ZHSF	**Zahedan**	**3.80**	**68**	*e*Pn	**Pn**	**05 04 05.9**	**+3.1**
ZHSF	**Zahedan**	**3.80**	**68**	*e*Pn	**Pn**	**05 04 05.0**	**+2.2**
ASUD	**Al Ashush, Dub**	**3.82**	**200**	P	**Pn**	**05 04 04.5**	**+1.5**
	SNR=30						
NASN	**Na'in**	**5.66**	**324**	*e*P	**Pn**	**05 04 30.2**	**+1.8**
NASN	**Na'in**	**5.66**	**324**	*e*P	**Pn**	**05 04 30.0**	**+1.6**
BTHS		**6.74**	**233**	P	**Pn**	**05 04 42.0**	**-1.2**
BTHS		**6.74**	**233**	P	**Pn**	**05 04 42.0**	**-1.2**
BTHS				S	**Sn**	**05 05 53.2**	**-6.9**
KFJS		**7.75**	**272**	P	**Pn**	**05 04 56.5**	**-0.6**
AML	**Almayashu**	**19.55**	**40**	*e*P	**Pn**	**05 07 32.2**	**-1.1**
AML	**Almayashu**	**19.55**	**40**	*e*P	**Pn**	**05 07 32.1**	**-1.1**
	comp=N,1.9nm,0.7s						
AKTK	**Aktyubinsk**	**22.18**	**2**	P	**P**	**05 08 00.8**	**+0.5**
AKTK	**Aktyubinsk**	**22.18**	**2**	P	**P**	**05 08 00.8**	**+0.4**
AKTO	**Aktyubinsk**	**22.18**	**2**	P	**P**	**05 08 00.8**	**+0.4**
	comp=N,0.8nm,0.5s,mb3.5,baz=175,slow=12,SNR=3.3						
BVAR	**Borovoye Array**	**26.74**	**18**	P	**P**	**05 08 43.9**	**+0.2**
	comp=N,0.7nm,0.7s,mb3.3,baz=165,slow=7.4,SNR=3.3						
MKAR	**Makanchi Array**	**27.27**	**40**	P	**P**	**05 08 48.0**	**-0.5**
	comp=N,0.5nm,0.6s,mb3.2,baz=226,slow=9.3,SNR=5.7						
MKAR	**Makanchi Array**	**27.27**	**40**	P	**P**	**05 08 48.0**	**-0.6**
HFS	**Hagfors**	**43.09**	**330**	P	**P**	**05 11 03.4**	**-0.8**
	comp=N,5.2nm,1.1s,mb4.2,baz=123,slow=11,SNR=4.3						
TORD	**Torodi Ar. Bea**	**53.21**	**265**	P	**P**	**05 12 20.7**	**-2.3**
	comp=N,1.3nm,0.5s,mb4.1,baz=61,slow=7.3,SNR=47						
WRA	**Warramunga Arr**	**88.94**	**113**	P	**P**	**05 15 58.3**	**-1.0**
	comp=N,0.7nm,1.1s,mb3.9,baz=310,slow=4.0,SNR=4.5						
ASAR	**Alice Springs**	**90.48**	**117**	P	**P**	**05 16 05.6**	**-0.9**
	comp=N,0.2nm,0.5s,mb3.7,baz=310,slow=5.4,SNR=4.4						

IDC ***09*** *05:14:56.2±0.6, 3885N×2646E, h0km, mb4.1/16, mb1 4.1/24, mb1mx4.0/34, mbtmp4.0/24, ML3.4/7, MS3.4/16, Ms1 3.4/16, ms1mx3.2/39, Error ellipse: s-maj=14.0km s-min=12.2km az=169.0*
ISK ***09*** *05:14:56.8, 3883N×2640E, h10km, ML4.4*
ATH ***09*** *05:14:56.8, 3881N×2640E, h24km, MD4.2/15, ML4.1*
DDA ***09*** *05:14:57.7, 3882N×2639E, h25km, Md3.6*
NEIC ***09*** *05:14:58.2, 3881N×2641E, h7km, mb4.2/30, ML4.0(ATH), ML4.3(ISK), ML4.6(THE), After THE.*
ISCJB ***09*** *05:14:58.1±0.3, 3881N±001×2640E±002, h22km±3km, mb4.2/46, MS3.5/10, Error ellipse: s-maj=2.5km s-min=2.2km az=150.0*
CSEM ***09*** *05:14:58.1±0.0, 3882N×2644E, h20km, mb4.4/38, Ms2.9, Error ellipse: s-maj=0.8km s-min=0.8km az=177.0*
THE ***09*** *05:14:58.2, 3881N×2641E, h6km, ML4.6*
MOS ***09*** *05:14:59.3±1.0, 3886N×2645E, h33km, mb4.2/19, Error ellipse: s-maj=5.8km s-min=3.6km az=113.6*
ISC 09 05:14:58.1±0.4**, 3880N**±001×**2641E**±002**, h10**km±2km**, n319, σ0§98**/333**, mb4.2**/46**, MS3.5**/10**, 8C-10D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.45**	**346**	*e*Pg	**Pg**	**05 15 06.3**	**-0.7**
PRK				*e*Sg	**Sg**	**05 15 14.0**	**+1.0**
CHOS	**Chios island**	**0.50**	**214**	*e*Pg	**Pg**	**05 15 08.3**	**+0.4**
CHOS				*e*Sg	**Sg**	**05 15 15.4**	**+0.9**
AYVA	**Ayvalik**	**0.55**	**23**	*i* P	**Pg**	**05 15 07.7**	**-1.1**
AYVA				*i* S	**Sg**	**05 15 17.7**	**+1.7**
BLCB	**Balcova**	**0.65**	**130**	PG	**Pg**	**05 15 10.4**	**-0.2**
BLCB				*e*SG	**Sg**	**05 15 20.6**	**+1.6**
IZM	**Izmir**	**0.78**	**121**	*e*PG	**Pg**	**05 15 12.6**	**-0.5**
KDAG	**Bornova**	**0.78**	**121**	*i* P	**Pg**	**05 15 12.7**	**-0.5**
KDAG				*i* S	**Sg**	**05 15 25.3**	**+2.0**
EZN	**Ezine**	**1.02**	**356**	*e*PG	**Pg**	**05 15 16.1**	**-1.6**
EZN				*e*SG	**Sg**	**05 15 30.7**	**-0.4**
BOZC	**Bozcaada**	**1.07**	**345**	*i* P	**Pb**	**05 15 17.4**	**-1.3**
BOZC				*i* S	**Sg**	**05 15 31.7**	**-1.0**
AKS	**Akhisar**	**1.10**	**86**	*e*PN	**Pn**	**05 15 18.6**	**-0.9**
SMG	**Samos**	**1.14**	**163**	*e*PN	**Pn**	**05 15 18.8**	**-1.3**
SMG				*e*SN	**Sn**	**05 15 34.9**	**-0.9**
GCAM	**G?zelcaml?**	**1.28**	**149**	*i* S	**Sb**	**05 15 38.7**	**0.0**
GCAM	**G?zelcaml?**	**1.28**	**149**	*i* S	**Sb**	**05 15 38.7**	**0.0**
BALY	**Balya**	**1.32**	**45**	*i* P	**Pn**	**05 15 21.4**	**-1.2**
BALY				*i* S	**Sb**	**05 15 41.7**	**+1.7**
BALB	**Balikesir**	**1.41**	**53**	*e*PN	**Pn**	**05 15 23.1**	**-0.7**
LIA	**Limnos Island**	**1.45**	**319**	*e*Pg	**Pg**	**05 15 23.6**	**-2.3**
LIA	**Limnos Island**	**1.45**	**319**	*e*PN	**Pn**	**05 15 23.6**	**-0.7**
LIA				*e*SN	**Sn**	**05 15 42.8**	**-0.6**
LOS	**Limnos**	**1.53**	**318**	*e*Pg	**Pg**	**05 15 25.1**	**-2.3**
LOS	**Limnos**	**1.53**	**318**	*e*Pg	**Pg**	**05 15 25.1**	**-2.3**
LPK	**Lapseki**	**1.59**	**10**	*e*PN	**Pn**	**05 15 25.5**	**-0.8**
AYDN	**Tasoluk**	**1.62**	**134**	*i* P	**Pn**	**05 15 26.4**	**-0.4**
AYDN				*i* S	**Sn**	**05 15 51.7**	**+4.0**
KULA	**Kula-Manisa**	**1.78**	**99**	*e*PN	**Pn**	**05 15 28.6**	**-0.3**
MLSB	**Milas**	**1.85**	**144**	*e*PN	**Pn**	**05 15 30.7**	**+0.9**
APE	**Apeiranthos**	**1.87**	**202**	*e*Pb	**Pb**	**05 15 29.2**	**-3.1**
APE				*e*Sb	**Sb**	**05 15 54.1**	**-1.6**
APE	**Apeiranthos**	**1.87**	**202**	*e*PB	**Pb**	**05 15 29.0**	**-3.3**
BODT	**Bodrum**	**1.88**	**158**	*e*PN	**Pn**	**05 15 29.9**	**-0.3**
DST	**Dursunbey**	**1.90**	**64**	*e*PN	**Pn**	**05 15 29.9**	**-0.6**
EDC	**Edincik**	**1.91**	**36**	*e*PN	**Pn**	**05 15 29.8**	**-0.8**
BNT	**Bandirma**	**1.94**	**36**	*e*PN	**Pn**	**05 15 30.1**	**-1.0**
ENEZ	**Enez**	**1.94**	**354**	*e*PN	**Pn**	**05 15 30.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.97**	**17**	*e*PN	**Pn**	**05 15 30.9**	**-0.6**
AOS	**Alonnisos**	**2.01**	**281**	*e*Pn	**Pn**	**05 15 31.3**	**-0.7**
MRMT	**Marmara Adasi**	**2.02**	**27**	*e*PN	**Pn**	**05 15 31.4**	**-0.7**
MFT	**Murefte**	**2.09**	**18**	*e*PN	**Pn**	**05 15 33.0**	**-0.2**
KCT	**Karacabey**	**2.10**	**45**	*e*PN	**Pn**	**05 15 32.7**	**-0.5**
ALN	**Alexandroupoli**	**2.11**	**352**	*e*Pn	**Pn**	**05 15 32.6**	**-0.8**
ALN				*e*Sn	**Sn**	**05 15 59.4**	**-0.3**
YER	**Yerkesik**	**2.23**	**138**	*e*PN	**Pn**	**05 15 34.8**	**-0.3**
ATH	**Athens Observa**	**2.27**	**249**	*e*PN	**Pn**	**05 15 35.0**	**-0.7**
KVR	**Kavouri**	**2.30**	**246**	*e*PN	**Pn**	**05 15 35.1**	**-0.9**
DENT	**Denizli**	**2.31**	**116**	*e*PN	**Pn**	**05 15 35.9**	**-0.3**
TKR	**Tekirdag**	**2.35**	**21**	*e*PN	**Pn**	**05 15 36.8**	**+0.1**
GDZ	**Gediz**	**2.41**	**82**	*i* P	**Pn**	**05 15 39.9**	**+2.4**
OUR	**Ouranopolis**	**2.42**	**310**	*e*Pn	**Pn**	**05 15 36.9**	**-0.7**
RDO	**Rodhopi**	**2.43**	**344**	*e*PN	**Pn**	**05 15 37.3**	**-0.6**
NAIG	**Nisos Aigina**	**2.53**	**246**	*e*PN	**Pn**	**05 15 38.3**	**-0.8**
NAIG	**Nisos Aigina**	**2.53**	**246**	*e*Pn	**Pn**	**05 15 35.3**	**-3.8**
NEO	**Neokhori**	**2.53**	**282**	P	**Pn**	**05 15 40.1**	**+0.9**
CRLT	**Corlu**	**2.54**	**23**	*e*PN	**Pn**	**05 15 39.3**	**0.0**
SANT	**Santorini**	**2.54**	**198**	P	**Pn**	**05 15 38.8**	**-0.6**
XOR	**Xorichti**	**2.57**	**284**	*e*Pn	**Pn**	**05 15 38.8**	**-1.0**
LKR	**Lokris**	**2.67**	**268**	*e*Pn	**Pn**	**05 15 40.5**	**-0.6**
GEMT	**Gemlik**	**2.69**	**52**	*e*PN	**Pn**	**05 15 41.9**	**+0.5**
SLVT	**Silivri**	**2.79**	**29**	*e*PN	**Pn**	**05 15 41.7**	**-1.0**
LTK	**Loutraki**	**2.82**	**255**	*e*Pn	**Pn**	**05 15 42.6**	**-0.5**
DID	**Didima**	**2.82**	**244**	*e*Pn	**Pn**	**05 15 42.6**	**-0.5**
YLV	**Yalova**	**2.88**	**51**	*e*PN	**Pn**	**05 15 44.8**	**+0.8**
ALT	**Altintas**	**2.90**	**84**	*e*PN	**Pn**	**05 15 44.5**	**+0.3**
ARG	**Arkhangelos**	**2.92**	**152**	*e*PN	**Pn**	**05 15 44.4**	**-0.2**
BGKT	**Bogazkoy**	**2.99**	**37**	*e*PN	**Pn**	**05 15 45.3**	**-0.2**
ADVT	**Abdulvahap**	**3.04**	**57**	*e*PN	**Pn**	**05 15 45.9**	**-0.3**
SOH	**Sokhos**	**3.10**	**312**	*e*Pn	**Pn**	**05 15 46.8**	**-0.2**
HORT	**Hortiatis**	**3.12**	**306**	*e*Pn	**Pn**	**05 15 47.3**	**0.0**
KLYT	**Kilyos**	**3.17**	**39**	*e*PN	**Pn**	**05 15 48.3**	**+0.3**
AGG	**Agios Georgios**	**3.19**	**275**	*e*Pn	**Pn**	**05 15 48.3**	**0.0**
NVR	**Nevrokopi**	**3.21**	**323**	*e*PN	**Pn**	**05 15 48.2**	**-0.3**
HRT	**Hereke**	**3.22**	**50**	*e*PN	**Pn**	**05 15 48.7**	**+0.1**
SHUT	**Suhut-Afyon**	**3.25**	**93**	*e*PN	**Pn**	**05 15 49.5**	**+0.4**
KARP	**Karpathos**	**3.31**	**169**	*e*PN	**Pn**	**05 15 49.4**	**-0.5**
GPA	**Golpazari**	**3.36**	**63**	*e*PN	**Pn**	**05 15 50.8**	**+0.2**
ISP	**Isparta**	**3.36**	**105**	*e*PN	**Pn**	**05 15 51.0**	**+0.4**
ISP	**Isparta**	**3.36**	**105**	*e*Pn	**Pn**	**05 15 50.8**	**+0.2**
ISP	**Isparta**	**3.36**	**105**	*d i*P	**Pn**	**05 15 50.7**	**+0.1**
SILT	**Sile**	**3.42**	**46**	*e*PN	**Pn**	**05 15 51.6**	**+0.2**
VLX	**Vlachokerasia**	**3.49**	**247**	*e*Pn	**Pn**	**05 15 52.2**	**-0.1**
THL	**Klokotos Trika**	**3.50**	**284**	*e*Pn	**Pn**	**05 15 52.5**	**0.0**
THL	**Klokotos Trika**	**3.50**	**284**	*e*Pn	**Pn**	**05 15 52.4**	**-0.1**
PLD	**Plovdiv**	**3.54**	**339**	*e*Pn	**Pn**	**05 15 53.4**	**+0.3**
BCK	**Bucak**	**3.56**	**111**	*e*PN	**Pn**	**05 15 53.9**	**+0.6**
KNT	**Kendrikon**	**3.58**	**312**	*e*Pn	**Pn**	**05 15 53.9**	**+0.2**
NPS	**Neapolis**	**3.59**	**190**	*e*PN	**Pn**	**05 15 53.2**	**-0.6**
EVR	**Evrytania**	**3.59**	**273**	P	**Pn**	**05 15 55.2**	**+1.4**
JMB	**Yambol**	**3.66**	**2**	*e*Pn	**Pn**	**05 15 54.3**	**-0.4**
ZKR	**Zakros**	**3.69**	**182**	*e*Pn	**Pn**	**05 15 54.8**	**-0.3**
LAST	**Lasithi**	**3.71**	**192**	*e*Pn	**Pn**	**05 15 55.4**	**0.0**
IDI	**Anoyia**	**3.71**	**200**	Pn	**Pn**	**05 15 54.7**	**-0.8**
	6.2nm,0.3s,baz=19,slow=12,SNR=53						
IDI				Sn	**Sn**	**05 16 37.1**	**-2.2**
	20nm,0.3s,baz=105,slow=23,SNR=7.1						
IDI				LR	LR	05 17 37.2	
	comp=Z,656nm,20.3s,baz=49,slow=43						
IDI	**Anoyia**	**3.71**	**200**	Pn	**Pn**	**05 15 54.7**	**-0.8**
IDI				Sn	**Sn**	**05 16 37.1**	**-2.2**
GRG	**Griva**	**3.76**	**306**	*e*Pn	**Pn**	**05 15 56.4**	**+0.3**
ANTB	**Antalya**	**3.86**	**118**	*e*PN	**Pn**	**05 15 58.8**	**+1.3**
VAY	**Valandovo**	**3.87**	**312**	*e*Pn	**Pn**	**05 15 57.7**	**0.0**
VAY	**Valandovo**	**3.87**	**312**	*e*Pn	**Pn**	**05 15 57.2**	**-0.5**
KZN	**Kozani**	**3.89**	**294**	P	**Pn**	**05 15 59.0**	**+1.1**
ITM	**Ithomi**	**3.90**	**247**	*e*PN	**Pn**	**05 15 58.0**	**0.0**
KARN	**Karanos**	**3.94**	**211**	*e*Pn	**Pn**	**05 15 58.8**	**+0.3**
KIZT	**Kizilcal**	**4.27**	**87**	*e*PN	**Pn**	**05 16 04.0**	**+0.9**
STIP	**Stip**	**4.33**	**313**	*e*Pn	**Pn**	**05 16 04.6**	**+0.6**
STIP	**Stip**	**4.33**	**313**	*e*Pn	**Pn**	**05 16 04.5**	**+0.5**
FNA	**Florina**	**4.35**	**299**	*e*Pn	**Pn**	**05 16 03.9**	**-0.4**
FNA	**Florina**	**4.35**	**299**	*e*Pn	**Pn**	**05 16 03.8**	**-0.4**
BIA	**Bitola**	**4.49**	**301**	*e*Pn	**Pn**	**05 16 04.5**	**-1.6**
VTS	**Vitosha**	**4.50**	**328**	P	**Pn**	**05 16 07.2**	**+1.0**
VTS	**Vitosha**	**4.50**	**328**	P	**Pn**	**05 16 07.2**	**+1.0**
LADK	**Ladik-KONYA**	**4.71**	**96**	*e*PN	**Pn**	**05 16 10.4**	**+1.2**
KRUS	**Krusevo**	**4.72**	**305**	*e*Pn	**Pn**	**05 16 10.4**	**+1.2**
KRUS	**Krusevo**	**4.72**	**305**	*e*Pn	**Pn**	**05 16 10.4**	**+1.2**
KONT	**Konya--Tatoy**	**4.75**	**99**	*e*PN	**Pn**	**05 16 11.2**	**+1.5**
ZIMR		**4.91**	**351**	P	**Pn**	**05 16 14.0**	**+2.1**
SKO	**Skopje**	**4.94**	**311**	*e*Pn	**Pn**	**05 16 11.1**	**-1.3**
SKO	**Skopje**	**4.94**	**311**	*e*Pn	**Pn**	**05 16 11.0**	**-1.3**
ANTO	**Ankara**	**5.06**	**76**	⇓*i*P	**Pg**	**05 16 39.5**	**+4.5**
HDMB	**Hadim**	**5.14**	**109**	*e*PN	**Pn**	**05 16 16.8**	**+1.6**
TIRR	**Tirgusor**	**5.84**	**14**	⇓*i*P	**Pn**	**05 16 24.5**	**-0.2**
TIRR	**Tirgusor**	**5.84**	**14**	P	**Pn**	**05 16 24.6**	**-0.1**
TIRR	**Tirgusor**	**5.84**	**14**	P	**Pn**	**05 16 24.6**	**-0.1**
HARR	**Harsova**	**5.99**	**10**	⇓*i*P	**Pn**	**05 16 26.4**	**-0.3**
HARR	**Harsova**	**5.99**	**10**	P	**Pn**	**05 16 26.4**	**-0.3**
MLR	**Muntele Rosu**	**6.69**	**357**	⇓*i*P	**Pn**	**05 16 37.1**	**+0.8**
MLR	**Muntele Rosu**	**6.69**	**357**	P	**Pn**	**05 16 37.8**	**+1.5**
MLR	**Muntele Rosu**	**6.69**	**357**	P	**Pn**	**05 16 37.8**	**+1.5**
VOIR		**6.71**	**352**	⇓*i*P	**Pn**	**05 16 36.6**	**+0.1**
VOIR		**6.71**	**352**	P	**Pn**	**05 16 38.4**	**+1.9**
VOIR		**6.71**	**352**	P	**Pn**	**05 16 38.4**	**+1.9**
ODB	**Odobesti**	**6.98**	**4**	⇓*i*P	**Pn**	**05 16 41.9**	**+1.6**
ODB	**Odobesti**	**6.98**	**4**	⇓P	**Pn**	**05 16 41.9**	**+1.6**
PLOR	**Plostina**	**7.04**	**1**	⇑*i*P	**Pn**	**05 16 42.4**	**+1.2**
VRI	**Vrincioaia**	**7.06**	**2**	⇓*i*P	**Pn**	**05 16 41.9**	**+0.5**
VRI	**Vrincioaia**	**7.06**	**2**	P	**Pn**	**05 16 44.5**	**+3.1**
GZR	**Gura Zlata**	**7.12**	**339**	⇑*i*P	**Pn**	**05 16 41.4**	**-0.8**
GZR	**Gura Zlata**	**7.12**	**339**	P	**Pn**	**05 16 41.6**	**-0.6**
GZR	**Gura Zlata**	**7.12**	**339**	P	**Pn**	**05 16 41.6**	**-0.6**
TIP	**Timpagrande**	**7.53**	**276**	*e*Pn	**Pn**	**05 16 48.5**	**+0.6**
	9.9nm,0.6s						
TIP	**Timpagrande**	**7.53**	**276**	*e*Pn	**Pn**	**05 16 48.5**	**+0.7**
	9.9nm,0.6s						
BZS	**Buzias**	**7.68**	**334**	⇑*i*P	**Pn**	**05 16 49.8**	**-0.1**
BZS	**Buzias**	**7.68**	**334**	P	**Pn**	**05 16 51.4**	**+1.5**
BZS	**Buzias**	**7.68**	**334**	P	**Pn**	**05 16 51.4**	**+1.5**
SEV	**Sevastopol'**	**7.90**	**41**	*e*P	**Pn**	**05 16 51.6**	**-1.3**
SEV				*e*S	**Sn**	**05 18 18.8**	**-3.4**
KIS	**Kishinev**	**8.38**	**11**	*e*P	**Pn**	**05 17 04.0**	**+4.5**
KIS				*e*		05 18 30.0	
SIM	**Simferopol'**	**8.41**	**41**	*e*P	**Pn**	**05 17 02.7**	**+2.8**
DRGR		**8.43**	**342**	⇑*i*P	**Pn**	**05 16 59.9**	**-0.3**
DRGR		**8.43**	**342**	⇑P	**Pn**	**05 16 59.9**	**-0.3**
SGO	**Sicignano**	**8.74**	**285**	P	**Pn**	**05 17 05.4**	**+0.9**
SGO				pmax	pmax		
	comp=Z,18nm,0.4s						
SGO	**Sicignano**	**8.74**	**285**	Pn	**Pn**	**05 17 05.4**	**+0.9**
	comp=Z,18nm,0.4s						
RGNG	**Rignano Grg**	**8.76**	**293**	Pn	**Pn**	**05 17 04.2**	**-0.6**
BURAR	**Bucovina Array**	**8.85**	**355**	⇑*i*P	**Pn**	**05 17 07.6**	**+1.7**
BURAR	**Bucovina Array**	**8.85**	**355**	P	**Pn**	**05 17 08.1**	**+2.2**
BURAR	**Bucovina Array**	**8.85**	**355**	P	**Pn**	**05 17 08.1**	**+2.2**
BUR08	**Bucovina Ar. S**	**8.88**	**355**	*e*Pn	**Pn**	**05 17 07.3**	**+1.0**
BUR08	**Bucovina Ar. S**	**8.88**	**355**	*e*Pn	**Pn**	**05 17 07.3**	**+0.9**
CSSN	**Cassano Irpino**	**9.00**	**287**	Pn	**Pn**	**05 17 09.7**	**+1.7**
	comp=Z,16nm,0.7s						
MMAI	**Mount Meron Ar**	**9.30**	**126**	Pn	**Pn**	**05 17 10.2**	**-2.0**
	comp=Z,5.5nm,0.3s,baz=305,slow=12,SNR=10						
MMAI				Sn	**Sn**	**05 18 54.3**	**-2.6**
	comp=Z,2.8nm,0.3s,baz=311,slow=26,SNR=4.2						
MMAI				LR	LR	05 21 36.9	
	comp=Z,92nm,21.7s,baz=285,slow=43						
PKSM	**Moragy**	**9.36**	**325**	⇓*i*P	**Pn**	**05 17 12.7**	**-0.3**
PKSM	**Moragy**	**9.36**	**325**	P	**Pn**	**05 17 12.8**	**-0.2**
SGG	**Gregorio Mates**	**9.57**	**289**	Pn	**Pn**	**05 17 16.3**	**+0.4**
	comp=Z,16nm,0.6s						
PSZ	**Piszkesteto**	**10.27**	**335**	P	**Pn**	**05 17 26.9**	**+1.6**
PSZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PSZ	**Piszkesteto**	**10.27**	**335**	⇑*e*P	**Pn**	**05 17 26.7**	**+1.4**
PSZ	**Piszkesteto**	**10.27**	**335**	Pn	**Pn**	**05 17 26.9**	**+1.6**
	comp=Z,6.1nm,0.8s						
PSZ	**Piszkesteto**	**10.27**	**335**	Pn	**Pn**	**05 17 26.9**	**+1.5**
	comp=Z,6.1nm,0.8s						
ASF	**Jabal al Asfar**	**10.80**	**125**	Pn	**Pn**	**05 17 33.5**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=102,slow=9.3,SNR=3.0						
ASF				Sn	**Sn**	**05 19 34.0**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=198,slow=20,SNR=2.3						
ASF				LR	LR	05 22 45.3	
	comp=Z,86nm,20.3s,baz=335,slow=43						
EIL	**Elat**	**11.52**	**140**	Pn	**Pn**	**05 17 42.0**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=17,slow=14,SNR=4.2						
EIL				Sn	**Sn**	**05 19 44.2**	**-7.2**
	comp=Z,0.7nm,0.3s,baz=302,slow=19,SNR=2.9						
EIL	**Elat**	**11.52**	**140**	Pn	**Pn**	**05 17 42.0**	**-0.6**
EIL				Sn	**Sn**	**05 19 44.2**	**-7.2**
AKASG	**Malin Array Be**	**12.06**	**9**	Pn	**Pn**	**05 17 48.5**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=198,slow=11,SNR=4.4						
AKASG	**Malin Array Be**	**12.06**	**9**	P	**Pn**	**05 17 48.5**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
OKC	**Ostrava-Krasne**	**12.51**	**335**	AMS	AMS	05 23 10.0	
	comp=Z,300nm,11.7s						
VRAC	**Vranov**	**12.64**	**329**	LR	LR	05 22 38.3	
	comp=Z,145nm,21.3s,baz=338,slow=37						
KIV	**Kislovodsk**	**13.26**	**62**	⇑*e*P	**Pn**	**05 18 05.8**	**-0.4**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,100nm,14.0s						
KIV	**Kislovodsk**	**13.26**	**62**	*e*P	**Pn**	**05 18 05.8**	**-0.4**
	comp=Z,100nm,14.0s						
GERES	**GERESS Array B**	**13.58**	**322**	Pn	**Pn**	**05 18 11.7**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=138,slow=11,SNR=3.7						
GERES				LR	LR	05 23 33.4	
	comp=Z,154nm,18.1s,baz=298,slow=38						
KHC	**Kasperske Hory**	**13.84**	**322**	*e*P	**Pn**	**05 18 22.8**	**+8.7**
KHC	**Kasperske Hory**	**13.84**	**322**	*e*P	**Pn**	**05 18 23.3**	**+9.2**
KHC				AMS	AMS	05 23 30.0	
	comp=Z,300nm,12.4s						
KEST	**Kesra**	**13.93**	**263**	Pn	**Pn**	**05 18 15.7**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=84,slow=9.2,SNR=2.8						
KEST				LR	LR	05 24 52.3	
	comp=Z,34nm,18.8s,baz=309,slow=43						
PRU	**Pruhonice**	**14.02**	**327**	AMS	AMS	05 23 40.0	
	comp=Z,200nm,11.7s						
WET	**Wettzell**	**14.18**	**321**	*e*P	**Pn**	**05 18 27.8**	**+9.0**
DAVOX	**Davos/Dischmat**	**14.50**	**309**	Pn	**Pn**	**05 18 23.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=151,slow=19,SNR=3.1						
DAVOX				LR	LR	05 23 49.6	
	comp=Z,68nm,18.2s,baz=114,slow=37						
CMAH	**Djebel Manchou**	**15.19**	**268**	P	**Pn**	**05 18 40.0**	**+7.4**
MBDF	**Montbardon**	**15.79**	**298**	*e*P	**Pn**	**05 18 38.9**	**-1.5**
	comp=Z,9.0nm,0.6s						
MBDF	**Montbardon**	**15.79**	**298**	*e*P	**Pn**	**05 18 38.9**	**-1.5**
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MBDF	**Montbardon**	**15.79**	**298**	*e*P	**Pn**	**05 18 38.9**	**-1.5**
	comp=Z,4.5nm,0.6s						
CKFL	**Kef-Lekhel**	**15.79**	**267**	P	**Pn**	**05 18 46.0**	**+5.5**
MOX	**Moxa**	**15.80**	**323**	*e*P	**Pn**	**05 18 46.2**	**+5.8**
	comp=Z,12nm,1.4s						
MOX							
	comp=Z,100nm,18.0s						
MOX	**Moxa**	**15.80**	**323**	*e*P	**Pn**	**05 18 46.2**	**+5.8**
MOX				pmax	pmax		
	comp=Z,12nm,1.4s						
MOX				MLR	MLR		
	comp=Z,100nm,18.0s						
BNI	**Bardonecchia**	**15.94**	**299**	*e*P	**Pn**	**05 18 48.9**	**+6.6**
BNI				pmax	pmax		
	comp=Z,24nm,1.4s						
BNI	**Bardonecchia**	**15.94**	**299**	*e*P	**Pn**	**05 18 48.9**	**+6.5**
	comp=Z,24nm,1.4s						
CASM	**Ain Smara**	**16.01**	**267**	P	**Pn**	**05 18 49.0**	**+5.8**
LPG	**La Plagne**	**16.02**	**301**	*e*P	**Pn**	**05 18 47.2**	**+3.8**
	comp=Z,16nm,0.9s						
LPG	**La Plagne**	**16.02**	**301**	*e*P	**Pn**	**05 18 47.2**	**+3.8**
LPG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LPG	**La Plagne**	**16.02**	**301**	*e*P	**Pn**	**05 18 47.2**	**+3.8**
	comp=Z,8.1nm,0.9s						
DFRA	**Djebel Bou Aff**	**16.41**	**268**	P	**Pn**	**05 18 55.0**	**+6.5**
CABF	**La Chapelle**	**16.82**	**304**	*e*P	**Pn**	**05 18 53.5**	**-0.1**
	comp=Z,28nm,1.1s						
CABF	**La Chapelle**	**16.82**	**304**	*e*P	**Pn**	**05 18 53.5**	**-0.1**
CABF				pmax	pmax		
	comp=Z,14nm,1.1s						
CABF	**La Chapelle**	**16.82**	**304**	*e*P	**Pn**	**05 18 53.5**	**-0.1**
	comp=Z,14nm,1.1s						
OBN	**Obninsk**	**17.70**	**19**	P	**Pn**	**05 19 06.0**	**+1.6**
OBN				MLR	MLR		
	comp=Z,200nm,18.0s						
OBN	**Obninsk**	**17.70**	**19**	P	**Pn**	**05 19 06.0**	**+1.6**
	comp=Z,200nm,18.0s						
SMF	**Signal de Mont**	**18.30**	**303**	*e*P	**Pn**	**05 19 12.2**	**+0.3**
LOR	**Lormes**	**18.48**	**305**	*e*P	**Pn**	**05 19 13.9**	**-0.2**
LOR				*e*MLR	MLR		
	comp=Z,123nm,19.8s						
SSF	**Saint Saulge**	**18.64**	**304**	*e*P	**Pn**	**05 19 15.0**	**-1.1**
	comp=Z,7.7nm,0.7s						
SSF	**Saint Saulge**	**18.64**	**304**	*e*P	**Pn**	**05 19 15.0**	**-1.1**
SSF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SSF	**Saint Saulge**	**18.64**	**304**	*e*P	**Pn**	**05 19 15.0**	**-1.1**
	comp=Z,3.8nm,0.7s						
AVF	**Avril sur Loir**	**18.66**	**303**	*e*P	**Pn**	**05 19 16.3**	**0.0**
	comp=Z,30nm,1.1s						
AVF	**Avril sur Loir**	**18.66**	**303**	*e*P	**Pn**	**05 19 16.3**	**0.0**
AVF				pmax	pmax		
	comp=Z,15nm,1.1s						
AVF	**Avril sur Loir**	**18.66**	**303**	*e*P	**Pn**	**05 19 16.3**	**0.0**
	comp=Z,15nm,1.1s						
MTLF	**Montolieu**	**18.77**	**292**	*e*P	**Pn**	**05 19 18.0**	**+0.3**
	comp=Z,7.9nm,1.0s						
MTLF	**Montolieu**	**18.77**	**292**	*e*P	**Pn**	**05 19 18.0**	**+0.3**
MTLF				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MTLF	**Montolieu**	**18.77**	**292**	*e*P	**Pn**	**05 19 18.0**	**+0.3**
	comp=Z,4.0nm,1.0s						
BGF	**Bois d'Agland**	**18.93**	**302**	*e*P	**Pn**	**05 19 19.4**	**-0.2**
	comp=Z,14nm,0.8s						
BGF	**Bois d'Agland**	**18.93**	**302**	*e*P	**Pn**	**05 19 19.4**	**-0.2**
BGF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BGF	**Bois d'Agland**	**18.93**	**302**	*e*P	**Pn**	**05 19 19.4**	**-0.2**
	comp=Z,6.8nm,0.8s						
TCF	**Toulx Ste Croi**	**19.29**	**301**	*e*P	**Pn**	**05 19 24.2**	**+0.3**
	comp=Z,31nm,1.3s						
TCF	**Toulx Ste Croi**	**19.29**	**301**	*e*P	**Pn**	**05 19 24.2**	**+0.3**
TCF				pmax	pmax		
	comp=Z,15nm,1.3s						
TCF	**Toulx Ste Croi**	**19.29**	**301**	*e*P	**Pn**	**05 19 24.2**	**+0.3**

comp=Z,15nm,1.3s
BAIF Baives 19.36 313 eP Pn 05 19 24.2 -0.6
RJF Les Rejaudoux 19.55 297 eP Pn 05 19 26.4 -0.7
RJF eMLR MLR
comp=Z,108nm,19.0s
EPF Esparros 20.12 290 eP P 05 19 32.2 +0.2
ESAC San Caprasio 20.69 287 P P 05 19 43.0 +4.8
comp=Z,9.3nm,0.5s
ETSF Etsaut 20.77 290 eP P 05 19 39.4 +0.3
comp=Z,5.0nm,0.6s
ETSF Etsaut 20.77 290 eP P 05 19 39.4 +0.3
ETSF pmax pmax
comp=Z,3.0nm,0.6s
ETSF Etsaut 20.77 290 eP P 05 19 39.4 +0.3
comp=Z,2.5nm,0.6s
MFF Saint Martin d 20.95 300 eP P 05 19 41.0 +0.1
comp=Z,28nm,1.1s
MFF Saint Martin d 20.95 300 eP P 05 19 41.0 +0.1
MFF pmax pmax
comp=Z,14nm,1.1s
MFF Saint Martin d 20.95 300 eP P 05 19 41.0 +0.1
comp=Z,14nm,1.1s
SJPF Ste Jean 21.27 291 eP P 05 19 46.4 +2.0
comp=Z,21nm,0.7s,mb4.3
SJPF Ste Jean 21.27 291 eP P 05 19 46.4 +2.0
SJPF pmax pmax
comp=Z,11nm,0.7s,mb4.3
SJPF Ste Jean 21.27 291 eP P 05 19 46.4 +2.0
comp=Z,11nm,0.7s,mb4.3
LDF La Druitiere 21.44 306 eP P 05 19 45.9 -0.3
comp=Z,8.9nm,0.8s,mb3.8
LDF La Druitiere 21.44 306 eP P 05 19 45.9 -0.3
LDF pmax pmax
comp=Z,4.0nm,0.8s,mb3.8
LDF La Druitiere 21.44 306 eP P 05 19 45.9 -0.3
comp=Z,4.4nm,0.8s,mb3.8
FLN La Foliniere 21.72 306 eP P 05 19 49.8 +0.6
FLN eMLR MLR
comp=Z,78nm,19.5s,MS2.8
FLN La Foliniere 21.72 306 eP P 05 19 49.8 +0.6
FLN LR LR
comp=Z,80nm,19.5s,MS3.1
GRR Gorron 21.85 305 eP P 05 19 50.8 +0.2
comp=Z,23nm,0.9s,mb4.3
GRR Gorron 21.85 305 eP P 05 19 50.8 +0.2
GRR pmax pmax
comp=Z,12nm,0.9s,mb4.3
GRR Gorron 21.85 305 eP P 05 19 50.8 +0.2
comp=Z,12nm,0.9s,mb4.3
HFS Hagfors 22.81 343 P P 05 19 58.5 -2.2
comp=Z,1.9nm,0.6s,mb3.7,baz=139,slow=9.8,SNR=9.2
HFS LR LR 05 29 57.7
comp=Z,160nm,21.0s,MS3.4,baz=274,slow=40
HFS Hagfors 22.81 343 P P 05 19 58.5 -2.2
HFS pmax pmax
comp=Z,2.0nm,0.6s
HFS MLR MLR
comp=Z,160nm,21.0s
SGMF Saint Gilles 22.91 304 eP P 05 20 01.2 -0.7
EQES Quesada 23.12 277 P P 05 20 05.7 +1.5
comp=Z,8.5nm,0.9s,mb4.2
EQES Quesada 23.12 277 P P 05 20 05.7 +1.5
comp=Z,8.5nm,0.9s,mb4.2
EBER Berja 23.18 274 P P 05 20 06.5 +1.7
comp=Z,16nm,1.0s,mb4.4
EBER Berja 23.18 274 P P 05 20 06.5 +1.7
comp=Z,16nm,1.0s,mb4.4
ROSF Rostrenen 23.40 304 eP P 05 20 05.6 -1.4
comp=Z,16nm,0.8s,mb4.2
ROSF Rostrenen 23.40 304 eP P 05 20 05.6 -1.4
ROSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.2
ROSF Rostrenen 23.40 304 eP P 05 20 05.6 -1.4
comp=Z,8.2nm,0.8s,mb4.2
ESDC Sonseca Array 23.49 282 P P 05 20 08.9 +0.7
comp=Z,7.6nm,0.8s,mb4.2,baz=71,slow=11,SNR=48
GUD Guadarrama 23.53 284 P P 05 20 09.3 +0.8
GUD pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
GUD Guadarrama 23.53 284 P P 05 20 09.3 +0.8
comp=Z,2.9nm,0.6s,mb3.9
GUD Guadarrama 23.53 284 P P 05 20 09.3 +0.8
comp=Z,2.9nm,0.6s,mb3.9
EBAN Banos Encina 23.60 278 P P 05 20 10.3 +1.1
EBAN pmax pmax
comp=Z,10.0nm,0.8s,mb4.3
EBAN Banos Encina 23.60 278 P P 05 20 10.3 +1.1
comp=Z,9.8nm,0.8s,mb4.3
EBAN Banos Encina 23.60 278 P P 05 20 10.3 +1.1
comp=Z,9.8nm,0.8s,mb4.3
PAB San Pablo 23.81 282 eP P 05 20 11.2 +0.2
PAB pmax pmax
comp=Z,23nm,1.1s,mb4.5
PAB San Pablo 23.81 282 eP P 05 20 11.1 +0.1
comp=Z,23nm,1.1s,mb4.5
PAB San Pablo 23.81 282 eP P 05 20 11.2 +0.1
comp=Z,23nm,1.1s,mb4.5
TAM Tamanrasset 23.93 234 eP P 05 20 13.7 +1.4
ELOJ Sierra Loja 24.10 276 P P 05 20 14.8 +1.0
ELOJ pmax pmax
comp=Z,2.0nm,0.7s,mb3.7
ELOJ Sierra Loja 24.10 276 P P 05 20 14.8 +1.0
comp=Z,1.5nm,0.7s,mb3.5
NB2 NORSAR Subarra 24.19 342 P P 05 20 12.7 -1.6
comp=Z,3.2nm,0.8s,mb3.8,baz=144,slow=10
NOA NORSAR Array B 24.19 342 P P 05 20 13.2 -1.2
comp=Z,2.7nm,0.8s,mb3.8,baz=146,slow=9.7,SNR=8.5
NOA LR LR 05 30 58.5
comp=Z,175nm,18.4s,MS3.6,baz=150,slow=40
NOA NORSAR Array B 24.19 342 P P 05 20 13.2 -1.1
NOA pmax pmax
comp=Z,3.0nm,0.8s
NOA MLR MLR
comp=Z,175nm,18.4s
EADA Adamuz 24.21 278 P P 05 20 15.1 +0.3
comp=Z,11nm,0.8s,mb4.3
EADA Adamuz 24.21 278 P P 05 20 15.1 +0.4
comp=Z,11nm,0.8s,mb4.3
EMIJ Mijas 24.72 275 P P 05 20 19.8 +0.4
comp=Z,8.7nm,0.9s,mb4.3
EMIJ Mijas 24.72 275 P P 05 20 19.8 +0.4
comp=Z,8.7nm,0.9s,mb4.3
ECAB El Cabril 24.88 278 P P 05 20 21.9 +1.0
comp=Z,27nm,0.7s,mb4.9
ECAB El Cabril 24.88 278 P P 05 20 21.9 +1.0
comp=Z,27nm,0.7s,mb4.9
TZK Tazeka 24.99 269 i P P 05 20 24.0 +2.1
AKTK Aktyubinsk 25.13 52 P P 05 20 22.2 -0.8
comp=Z,73nm,18.4s
AKTK Aktyubinsk 25.13 52 P P 05 20 22.2 -0.8
AKTK LR LR 05 32 21.1
AKTO Aktyubinsk 25.13 52 P P 05 20 22.2 -0.8
comp=Z,1.3nm,0.8s,mb3.5,baz=245,slow=12,SNR=4.8
AKTO LR LR 05 32 21.1
comp=Z,73nm,18.4s,MS3.2,baz=129,slow=42
AKTO Aktyubinsk 25.13 52 P P 05 20 22.2 -0.8
AKTO pmax pmax
comp=Z,1.0nm,0.8s,mb3.4
AKTO MLR MLR
comp=Z,73nm,18.4s,MS3.2
ESPR Espera 25.49 276 P P 05 20 27.8 +1.4
comp=Z,3.1nm,0.9s,mb3.8
ESPR Espera 25.49 276 P P 05 20 27.8 +1.4
comp=Z,3.1nm,0.9s,mb3.8
EPON Pontenova 25.60 291 P P 05 20 27.8 +0.5
comp=Z,9.2nm,0.9s,mb4.3
EPON Pontenova 25.60 291 P P 05 20 27.8 +0.4
comp=Z,9.2nm,0.9s,mb4.3
MVO Moncorvo 25.64 286 eP P 05 20 26.8 -1.0
comp=Z,21nm,1.2s,mb4.5
EKA Eskdalemuir Ar 25.78 320 P P 05 20 28.5 -0.3
comp=Z,4.6nm,1.1s,mb3.9,baz=97,slow=14,SNR=5.1
EKA Eskdalemuir Ar 25.78 320 P P 05 20 28.5 -0.3
EKA pmax pmax
comp=Z,5.0nm,1.1s
MDT Midelt 25.78 266 P P 05 20 29.7 +0.6
comp=Z,4.7nm,0.9s,mb4.0,baz=81,slow=14,SNR=13
ZFT Errachidia 25.89 264 i P P 05 20 31.0 +1.0
EMIN Mina Concepcio 25.91 278 P P 05 20 30.0 -0.3
comp=Z,7.6nm,0.8s,mb4.3
EMIN Mina Concepcio 25.91 278 P P 05 20 30.0 -0.3
comp=Z,7.6nm,0.8s,mb4.3
CZD Col de Zad 26.04 267 i P P 05 20 34.5 +3.1
MIF Mishlifen 26.05 268 i P P 05 20 34.5 +3.0
PBAR Barrancos 26.11 279 eP P 05 20 32.4 +0.4
comp=Z,13nm,1.6s,mb4.2
MTE Manteigas 26.12 284 eP P 05 20 33.0 +0.9
comp=Z,25nm,1.6s,mb4.5
PVRL Vila Real 26.15 286 eP P 05 20 32.7 +0.4
PCBR Castelo Branco 26.15 283 eP P 05 20 32.4 0.0
comp=Z,19nm,1.3s,mb4.5
PMRV Marv??o 26.15 282 eP P 05 20 32.4 0.0
comp=Z,14nm,1.5s,mb4.3
PESTR Estremoz 26.40 281 eP P 05 20 34.4 -0.2
comp=Z,12nm,1.3s,mb4.3
PBEJ Beja 26.78 279 eP P 05 20 38.8 +0.7
comp=Z,15nm,1.5s,mb4.3
PVAQ Vaqueiros 26.81 278 eP P 05 20 39.1 +0.8
comp=Z,31nm,1.2s,mb4.7
PBDV Barranco-do-Ve 27.01 278 eP P 05 20 40.4 +0.2
comp=Z,49nm,1.5s,mb4.8
ARU Arti 27.57 40 eP P 05 20 46.5 +1.5
ARU pmax pmax
comp=Z,6.0nm,1.5s,mb4.0
ARU Arti 27.57 40 eP P 05 20 46.5 +1.5
comp=Z,6.0nm,1.5s,mb4.0
ARCES ARCESS Array B 30.80 359 LR LR 05 34 08.4
comp=Z,101nm,19.4s,MS3.5,baz=305,slow=38
BVAR Borovoye Array 33.17 50 P P 05 21 33.8 -0.7
comp=Z,0.4nm,0.4s,mb3.7,baz=299,slow=1.5,SNR=2.9
TORD Torodi Ar. Bea 33.65 227 P P 05 21 38.9 -0.2
comp=Z,2.6nm,0.8s,mb4.2,baz=36,slow=9.6,SNR=25
TORD PcP PcP 05 24 18.3 -0.8
comp=Z,1.2nm,0.8s,baz=48,slow=2.4,SNR=5.2
TORD LR LR 05 38 16.5
comp=Z,67nm,18.2s,MS3.4,baz=185,slow=42
TORD Torodi Ar. Bea 33.65 227 P P 05 21 38.9 -0.2
TORD PcP PcP 05 24 18.3 -0.8
TORD LR LR 05 38 16.5
KURK Kurchatov 38.17 54 P P 05 22 16.7 -0.8
comp=Z,2.1nm,0.4s,mb4.2,baz=280,slow=8.9,SNR=7.3
KURK Kurchatov 38.17 54 P P 05 22 16.7 -0.8
KURK pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
MK31 Makanchi Array 41.01 60 eP P 05 22 40.6 -0.5
MK31 Makanchi Array 41.01 60 eP P 05 22 40.6 -0.6
MKAR Makanchi Array 41.01 60 P P 05 22 40.8 -0.3
comp=Z,1.7nm,0.7s,mb3.8,baz=276,slow=7.4,SNR=15
MKAR Makanchi Array 41.01 60 P P 05 22 40.8 -0.3
MKAR pmax pmax
comp=Z,2.0nm,0.7s
ZAL Zalesovo 41.80 49 P P 05 22 46.2 -1.3
ZAL pmax pmax
comp=Z,1.0nm,0.4s
ZAL Zalesovo 41.80 49 P P 05 22 46.2 -1.3
comp=Z,1.0nm,0.4s,mb3.8
ZALV Zalesovo Beam 41.81 49 P P 05 22 46.2 -1.5
comp=Z,1.4nm,0.4s,mb4.0,baz=271,slow=8.3,SNR=6.7
ZAK Zakamensk 53.62 51 eP P 05 24 18.6 -0.7
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
ZAK Zakamensk 53.62 51 eP P 05 24 18.6 -0.7
comp=Z,2.0nm,1.2s,mb3.9
SONM Songino Array 56.44 53 P P 05 24 39.6 -0.1
comp=Z,1.0nm,0.8s,mb3.9,baz=283,slow=6.2,SNR=5.5
SONM LR LR 05 54 36.7
comp=Z,40nm,18.2s,MS3.5,baz=99,slow=42
SCHQ Schefferville 61.09 319 P P 05 25 10.6 -1.3
comp=Z,3.2nm,0.8s,mb4.5,baz=338,slow=14,SNR=4.2
YKA Yellowknife Ar 74.29 342 P P 05 26 34.4 -0.6
comp=Z,1.8nm,0.7s,mb4.1,baz=29,slow=5.5,SNR=11
YKA LR LR 05 58 29.1
comp=Z,21nm,19.4s,MS3.5,baz=100,slow=35
YKA Yellowknife Ar 74.29 342 P P 05 26 34.4 -0.7
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 74.29 342 P P 05 26 34.4 -0.7
comp=Z,2.0nm,0.7s,mb4.2
YKA Yellowknife Ar 74.29 342 P P 05 26 34.4 -0.6
YKA LR LR 05 58 29.1
KSRS Korea Array 75.30 54 LR LR 06 03 31.2
comp=Z,38nm,18.1s,MS3.7,baz=50,slow=39
ULM Lac du Bonnet 77.84 326 P P 05 26 54.5 -1.0
comp=Z,2.7nm,0.8s,mb4.2,baz=133,slow=3.0,SNR=3.6
ULM Lac du Bonnet 77.84 326 P P 05 26 54.5 -1.0
LRAL Lakeview Retre 85.53 309 eP P 05 27 36.1 -0.4
comp=Z,22nm,1.6s,mb5.1
LRAL Lakeview Retre 85.53 309 eP P 05 27 36.1 -0.4
comp=Z,22nm,1.6s,mb5.1
BDFB Brasilia 88.00 248 P P 05 27 50.2 +1.6
comp=Z,5.4nm,0.7s,mb4.9,baz=66,slow=4.2,SNR=11
BDFB Brasilia 88.00 248 P P 05 27 50.2 +1.6
BDFB pmax pmax
comp=Z,5.0nm,0.7s
PDAR Pinedale Array 89.51 329 LR LR 06 09 57.7
comp=Z,26nm,19.2s,MS3.7,baz=259,slow=37
TXAR Lajitas Array 97.76 318 P P 05 28 32.6 -1.0
comp=Z,0.3nm,0.7s,mb3.9,baz=77,slow=5.4,SNR=4.7

IDC 09 05:28:22.4±4.7**, 241S×14654E, h0km, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/15**, mbtmp3.7**/3**, MS3.5**/4**, Ms1 3.5**/4**, ms1mx2.9**/25**, Error ellipse: s-maj=104.3km s-min=70.4km az=107.0, Admiralty Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CTA Charters Tower 17.57 181 LR LR 05 37 56.1
comp=Z,94nm,18.3s,baz=231,slow=33
WRA Warramunga Arr 21.11 213 P P 05 33 09.1 +0.4
1.5nm,0.7s,baz=34,slow=12,SNR=20
WRA LR LR 05 40 44.1
comp=Z,39nm,19.5s,baz=170,slow=35
ASAR Alice Springs 24.42 209 P P 05 33 42.4 -0.3
1.6nm,0.8s,baz=40,slow=7.5,SNR=11
FITZ Fitzroy Crossi 25.75 231 P P 05 33 55.7 +0.7
1.0nm,0.9s,baz=48,slow=12,SNR=2.2
MJAR Matsushiro Arr 39.52 349 LR LR 05 49 27.1
comp=Z,139nm,21.5s,baz=195,slow=32
RAO Raoul Island 43.05 132 LR LR 05 51 15.2
comp=Z,167nm,20.0s,baz=346,slow=32
TORD Torodi Ar. Bea 143.62 289 PKP PKPdf 05 47 58.2 -2.2
0.4nm,0.8s,baz=90,slow=2.9,SNR=3.7

ISK 09 05:43:02.7, 3876N×2625E, h15km, MD3.5, ML3.5
ATH 09 05:43:03.7, 3878N×2637E, h23km±1km, MD3.6/6
NEIC 09 05:43:03.7, 3877N×2636E, h22km, ML3.0(ATH), ML3.6(ISK), ML4.1(THE), After ATH.
CSEM 09 05:43:04.2±0.1, 3881N×2643E, h15km, MD3.6, Error ellipse: s-maj=2.0km s-min=1.3km az=69.0
ISCJB 09 05:43:04.0±0.5, 3878N±002×2633E±003, h12km±4km, Error ellipse: s-maj=4.4km s-min=2.8km az=162.8
THE 09 05:43:04.0, 3878N×2656E, h6km, ML4.1
DDA 09 05:43:04.5, 3881N×2637E, h10km, Md3.4
SOF 09 05:43:12.0, 3952N×2620E, h2km, MD3.0
ISC 09 05:43:04.5±0.5**, 3877N**±002×**2634E**±003**, h12**km±3km**, n55, σ0^{s}85**/76**, Aegean Sea**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CHOS Chios island 0.44 210 ePg Pg 05 43 15.2 +1.9
CHOS eSg Sg 05 43 23.3 +4.2
PRK Paraskevi 0.48 354 ePg Pg 05 43 13.4 -0.4
PRK eSg Sg 05 43 21.7 +1.5
PRK Paraskevi 0.48 354 ePB Pg 05 43 13.5 -0.4
PRK Paraskevi 0.48 354 ePg Pg 05 43 13.4 -0.5
PRK eSg Sg 05 43 21.7 +1.5
AYVA Ayvalik 0.60 27 i P Pg 05 43 15.0 -1.2
AYVA i S Sg 05 43 24.3 +0.2
BLCB Balcova 0.67 125 PG Pg 05 43 17.4 -0.1
IZM Izmir 0.81 117 ePG Pg 05 43 19.9 -0.3
IZM eSG Sg 05 43 33.2 +2.3
KDAG Bornova 0.81 117 i P Pg 05 43 19.9 -0.3
KDAG i S Sg 05 43 35.2 +4.3
EZN Ezine 1.05 359 ePG Pg 05 43 23.2 -1.5
EZN eSG Sg 05 43 38.6 +0.1
BOZC Bozcaada 1.09 348 i P Pb 05 43 24.7 -0.6
BOZC i S Sb 05 43 39.1 -0.3
SMG Samos 1.13 160 ePN Pn 05 43 25.5 -0.5
SMG eSN Sn 05 43 40.8 -0.6
AKHS Akhisar 1.16 84 i P Pb 05 43 25.7 -0.6
AKHS i S Sb 05 43 41.7 +0.5
AKS Akhisar 1.16 84 ePN Pn 05 43 25.9 -0.5
GCAM G?zelcaml? 1.28 146 i P Pn 05 43 28.3 +0.2
GCAM i S Sb 05 43 46.9 +2.0
GCAM G?zelcaml? 1.28 146 i P Pn 05 43 28.3 +0.2
GCAM i S Sb 05 43 46.8 +2.0
BALY Balya 1.39 45 i P Pn 05 43 28.7 -0.8
BALY i S Sn 05 43 48.4 +0.6
LIA Limnos Island 1.44 322 ePg Pg 05 43 30.4 -1.7
LIA eSg Sg 05 43 51.7 +0.9
LIA Limnos Island 1.44 322 ePn Pn 05 43 30.7 +0.4
LIA eSg Sg 05 43 51.7 +0.9
BALB Balikesir 1.48 54 ePN Pn 05 43 30.6 -0.3
LOS Limnos 1.52 320 ePb Pb 05 43 32.1 -0.4
LPK Lapseki 1.63 11 ePN Pn 05 43 32.6 -0.3
AYDN Tasoluk 1.64 132 i P Pn 05 43 33.5 +0.4
AYDN i S Sn 05 43 58.5 +4.4
BTOK Tokmak 1.64 52 i P Pn 05 43 32.7 -0.4
BTOK i S Sn 05 43 56.4 +2.3
APE Apeiranthos 1.82 201 ePb Pb 05 43 35.4 -2.2
APE eSb Sb 05 44 00.1 -0.2
APE Apeiranthos 1.82 201 ePn Pn 05 43 35.9 +0.4
APE eSb Sb 05 44 00.1 -0.1
KULA Kula-Manisa 1.83 97 ePN Pn 05 43 35.0 -0.7
MLSB Milas 1.86 142 ePN Pn 05 43 35.3 -0.8
BODT Bodrum 1.87 155 ePN Pn 05 43 35.8 -0.4
BDRM Kayabasi 1.91 153 i P Pn 05 43 37.3 +0.5
BDRM i S Sn 05 44 09.4 +8.7
DST Dursunbey 1.96 64 ePN Pn 05 43 37.1 -0.4
EDC Edincik 1.96 36 ePN Pn 05 43 36.8 -0.7
ENEZ Enez 1.97 356 ePN Pn 05 43 36.7 -0.8
BNT Bandirma 2.00 37 ePN Pn 05 43 37.4 -0.6
RKY Sarkoy-Tekirda 2.02 18 ePN Pn 05 43 38.2 -0.1
MRMT Marmara Adasi 2.07 28 ePN Pn 05 43 38.5 -0.5
ALN Alexandroupoli 2.13 354 ePn Pn 05 43 39.9 0.0
ALN eSn Sn 05 44 06.7 +0.4
MFT Murefte 2.14 20 ePN Pn 05 43 40.1 +0.2
KCT Karacabey 2.16 46 ePN Pn 05 43 39.7 -0.5
YER Yerkesik 2.24 136 ePN Pn 05 43 40.6 -0.7
DENT Denizli 2.35 115 ePN Pn 05 43 42.1 -0.7
TKR Tekirdag 2.40 22 ePN Pn 05 43 43.0 -0.5
RDO Rodhopi 2.45 346 ePN Pn 05 43 44.7 +0.5
GEMT Gemlik 2.76 52 ePN Pn 05 43 48.0 -0.4
SLVT Silivri 2.84 30 ePN Pn 05 43 49.3 -0.3
YLV Yalova 2.95 52 ePN Pn 05 43 51.6 +0.6
ALT Altintas 2.96 83 ePN Pn 05 43 50.9 -0.3
KDZ Kurdzhali 2.96 346 P Pn 05 43 51.3 +0.1
BGKT Bogazkoy 3.05 37 ePN Pn 05 43 52.2 -0.2
ADVT Abdulvahap 3.11 57 ePN Pn 05 43 53.8 +0.6
RZN Rozhen 3.17 337 P Pn 05 43 55.1 +1.1
NVR Nevrokopi 3.20 324 ePN Pn 05 43 55.5 +1.0
KLYT Kilyos 3.23 39 ePN Pn 05 43 55.8 +0.8
HRT Hereke 3.28 50 ePN Pn 05 43 56.1 +0.5
MMB Musomiste 3.45 325 P Pn 05 43 58.8 +0.8
VTS Vitosha 4.50 329 P Pn 05 44 14.0 +1.7

ISCJB 09 05:45:18.2±0.8, 167N±009×12732E±008, h120km, mb4.1/9, Error ellipse: s-maj=14.5km s-min=9.0km az=37.9
IDC 09 05:45:19.1±8.5, 158N×12735E, h112km±84km, mb3.8/8, mb1 3.9/9, mb1mx3.7/18, mbtmp3.8/9, Error ellipse: s-maj=60.9km s-min=17.4km az=77.0
NEIC 09 05:45:26.2±3.5, 152N×12739E, h184km±36km, mb4.4/3, Error ellipse: s-maj=40.9km s-min=13.0km az=74.0
ISC 09 05:45:21.1±1.0**, 15N**±01×**1272E**±01**, h130**km±6km**, n15, σ0^{s}77**/17**, mb4.0**/9**, 2D, Halmahera**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TNE Ternate 0.76 167⇓eP Pn 05 45 41.0 -0.9
TNE eS Sn 05 45 58.5 +0.8
MNI Manado 2.36 268⇓eP Pn 05 45 59.0 -0.5
MNI eS Sn 05 46 29.0 0.0
KAKA Kakadu 15.08 160 eP Pn 05 48 50.0 +2.5
9.3nm,0.7s
FITZ Fitzroy Crossi 19.57 184 eP P 05 49 39.3 +0.4
4.5nm,0.4s
FITZ Fitzroy Crossi 19.57 184 P P 05 49 39.3 +0.3
0.6nm,0.3s,baz=16,slow=11,SNR=30
WRAB Tennant Creek 22.45 162 eP P 05 50 08.8 -0.8
12nm,0.6s,mb4.5
WRA Warramunga Arr 22.46 162 P P 05 50 08.8 -0.9
7.4nm,0.4s,mb4.5,baz=339,slow=10,SNR=171
WB2 Warramunga Arr 22.46 162 eP P 05 50 08.9 -0.9
WB2 e 05 50 15.8
ASAR Alice Springs 25.88 166 P P 05 50 40.6 -0.2
2.5nm,0.5s,mb4.1,baz=350,slow=7.4,SNR=46
NWAO Narrogin (SRO) 35.54 194 P P 05 52 06.0 +0.3
4.3nm,0.8s,mb4.1,baz=16,slow=8.5,SNR=4.6
STKA Stephens Creek 35.92 159 P P 05 52 08.8 -0.1
2.8nm,0.5s,mb4.2,baz=339,slow=11,SNR=4.8
SONM Songino Array 49.52 342 P P 05 53 58.5 +0.1
0.4nm,0.5s,mb3.3,baz=171,slow=9.8,SNR=3.0
MKAR Makanchi Array 59.62 326 P P 05 55 11.8 +0.4
0.8nm,0.3s,mb4.0,baz=116,slow=7.9,SNR=7.2
KURK Kurchatov 63.84 328 P P 05 55 39.5 0.0
0.6nm,0.3s,mb3.9,baz=127,slow=4.9,SNR=2.5
MAW Mawson 81.87 200 P P 05 57 26.2 +0.7
1.0nm,0.4s,mb3.8,baz=45,slow=7.1,SNR=3.7

NIED 09 05:45:00, 4240N×14240E, h74km, Mw4.1 Best double couple: $M_0$1.43000×10^{15} NP1:ϕ_s326.00000°, δ75.00000°, λ-72.00000°. NP2:ϕ_s94.00000°, δ24.00000°, λ-139.00000°.
ISCJB 09 05:45:23.9±0.2, 4234N±003×14242E±004, h88km±2km, mb4.5/30, Error ellipse: s-maj=5.6km s-min=3.5km az=142.9
MOS 09 05:45:23.5±0.8, 4232N×14254E, h93km, mb4.1/9, Error ellipse: s-maj=14.3km s-min=9.0km az=72.5
BJI 09 05:45:23.1, 4199N×14232E, h84km, mB5.6, mb4.4
JMA 09 05:45:24.5±0.2, 4236N×14244E, h85km±2km, M4.2 Broadband fault plane solution: P waves. NP1: ϕ_s92.00000°, δ35.00000°, λ-151.00000°. NP2: ϕ_s337.00000°, δ74.00000°, λ-59.00000°. Principal axes: T Plg23.0000°, Azm44.0000°; N Plg30.0000°, Azm148.0000°; P Plg51.0000°, Azm283.0000°;
JMA Felt II J1.
NEIC 09 05:45:25.2±0.3, 4235N×14248E, mb4.6/5, MW4.0(NIED) Error ellipse: s-maj=8.6km s-min=6.8km az=120.0
NEIC Recorded [2 JMA] in south-central Hokkaido and [1 JMA] in southwestern Hokkaido. Also recorded [1 JMA] in Aomori Prefecture, Honshu.
IDC 09 05:45:25.6±0.7, 4237N×14238E, h88km±5km, mb3.9/15, mb1 4.0/17, mb1mx3.9/25, mbtmp3.8/17, MS2.9/1, Ms1 2.9/1, ms1mx1.9/38, Error ellipse: s-maj=13.9km s-min=7.5km az=103.0
ISC 09 05:45:25.1±0.2**, 4236N**±003×**14241E**±004**, h82**km±2km**, h90**km±1.7km**:pP-P, n84, σ0^{s}68**/101**, mb4.5**/30**, 9C-6D, Hokkaido region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JNBK Urakawa-nobuka 0.27 107 ⇓P Pn 05 45 37.1 -0.2
JNBK eS Sn 05 45 46.5 +0.1
JBT2 Biratori 2 0.42 355 ⇓P Pn 05 45 37.8 -0.5
JBT2 eS Sn 05 45 47.8 -0.3
JEM Erimo 0.65 121 ⇓P Pn 05 45 40.3 -0.1
ERM Erimo 0.65 122 ePg Pn 05 45 40.4 0.0
ERM eSg Sn 05 45 53.2 +1.5
JCH Churui 0.75 70 ⇓P Pn 05 45 41.0 -0.4
JCH eS Sn 05 45 53.2 -0.3
JFR Furan 0.81 10 ⇓P Pn 05 45 41.8 -0.3
JFR eS Sn 05 45 54.8 0.0
JEW Eniwo 0.86 304 ⇑P Pn 05 45 42.5 0.0
JEW eS Sn 05 45 56.0 +0.4
JNB Noboribetsu 1.02 277 ⇑P Pn 05 45 43.4 -1.0
JNB eS Sn 05 45 58.1 -0.8
JKB Kayabe 1.13 246 ⇑P Pn 05 45 45.2 -0.5
JKB eS Sn 05 46 00.4 -0.8
JAB Ashibetsu 1.15 353 ⇑P Pn 05 45 46.5 +0.5
JOB Onbets 1.18 62 P Pn 05 45 46.7 +0.3
JOB eS Sn 05 46 02.9 +0.4
JAR Ashorobuto 1.37 46 ⇓P Pn 05 45 48.6 -0.2
JAR eS Sn 05 46 06.2 -0.4
JOT Ohata 1.41 227 ⇑P Pn 05 45 48.7 -0.6
JOT eS Sn 05 46 06.7 -0.8
JHR Hokuryu 1.47 340 ⇑P Pn 05 45 50.9 +0.8
JKK2 Kamakawa 2 1.53 9 ⇑P Pn 05 45 51.1 +0.2
JKK2 eS Sn 05 46 11.3 +1.0
JYM2 Yakumo 2 1.53 262 ⇑P Pn 05 45 50.5 -0.3
JYM2 eS Sn 05 46 10.2 -0.1
ASAJ Asahikawa 1.76 4 P Pn 05 45 54.4 +0.5
134nm,0.3s,baz=217,slow=11,SNR=726
ASAJ S Sn 05 46 16.8 +1.1
61nm,0.3s,baz=319,slow=27,SNR=11

ASAJ	Asahikawa	1.76	4	PN	Pn	05 45 54.4	+0.6
ASAJ				S	Sn	05 46 16.8	+1.1
ASAJ				pmax	pmax		
	comp=Z,134nm,0.3s						
ASAJ				smax			
	comp=N,61nm,0.3s						
YUK	Yuzh-Kuril'sk	3.03	55	ePN	Pn	05 46 11.0	+0.2
YUK				eS	Sn	05 46 46.0	0.0
YUK				smax			
	comp=N,4µm,2.0s						
YUK				smax			
	comp=E,4µm,2.5s						
YUK				smax			
	comp=N,2µm,0.5s						
YUK				smax			
	comp=E,1µm,0.5s						
YSS	Yuzh-Sakhalins	4.60	3⇑	ePN	Pn	05 46 33.0	+0.9
YSS	Yuzh-Sakhalins	4.60	3	ePn	Pn	05 46 33.3	+1.2
KUR	Kuril'sk	4.88	52	ePN	Pn	05 46 33.0	-3.0
KUR				eS	Sn	05 47 31.0	-0.2
KUR				pmax	pmax		
	comp=N,50nm,0.5s						
KUR				pmax	pmax		
	comp=E,50nm,0.5s						
KUR				pmax	pmax		
	comp=Z,140nm,0.5s						
KUR				smax			
	comp=N,200nm,0.8s						
KUR				smax			
	comp=E,130nm,0.8s						
MAJO	Matsushiro	6.66	211	ePN	Pn	05 46 59.9	-0.3
MAJO				pmax	pmax		
	comp=Z,26nm,0.8s						
MAJO	Matsushiro	6.66	211	ePn	Pn	05 46 59.9	-0.3
	comp=Z,26nm,0.8s						
MAT	Matsushiro	6.66	211	P	Pn	05 47 01.0	+0.8
MAT				eS	Sn	05 48 16.0	+1.5
MJAR	Matsushiro Arr	6.66	211	P	Pn	05 47 00.4	+0.2
	comp=Z,1.4nm,0.3s,baz=19,slow=15,SNR=13						
MJAR	Matsushiro Arr	6.66	211	PN	Pn	05 47 00.4	+0.2
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	Korea Array	12.15	251	P	Pn	05 48 16.0	+0.9
	comp=Z,0.2nm,0.3s,baz=64,slow=12,SNR=6.6						
SKR	Severo-Kuril's	12.57	44	ePN	Pn	05 48 19.5	-1.1
PETK	Petropavlovsk-	14.85	38	P	Pn	05 48 47.0	-3.4
	comp=Z,2.5nm,0.3s,baz=214,slow=7.0,SNR=42						
JOW	Kunigami	19.33	221	LR	LR	05 58 13.8	
	comp=Z,36nm,19.2s,baz=330,slow=40						
SONM	Songino Array	25.84	295	P	P	05 50 48.4	-0.2
	comp=Z,2.3nm,0.6s,mb3.8,baz=78,slow=8.5,SNR=21						
SONM	Songino Array	25.84	295	P	P	05 50 48.4	-0.2
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAK	Zakamensk	27.90	300	eP	P	05 50 59.2	-7.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.5						
GTA	Gaotai	32.09	279	eP	P	05 51 44.5	+0.3
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.3						
ZAA0	Zalesovo Array	39.08	308	eP	P	05 52 43.6	-0.2
ZALV	Zalesovo Beam	39.08	308	P	P	05 52 43.6	-0.2
	comp=Z,5.6nm,0.5s,mb4.6,baz=88,slow=7.5,SNR=26						
ZALV				PcP	PcP	05 54 51.3	-0.7
	comp=Z,0.7nm,0.4s,baz=50,slow=1.7,SNR=4.5						
ZAL	Zalesovo	39.09	308	P	P	05 52 43.6	-0.3
ZAL						05 54 51.3	
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	42.14	297	P	P	05 53 08.8	-0.3
	comp=Z,4.6nm,0.7s,mb4.3,baz=84,slow=9.5,SNR=34						
MKAR				pP	pP	05 53 29.4	+0.7
	comp=Z,0.5nm,0.5s,baz=65,slow=9.5,SNR=1.6						
MKAR				PcP	PcP	05 55 02.2	+0.1
	comp=Z,0.7nm,0.4s,baz=71,slow=4.0,SNR=4.5						
MKAR	Makanchi Array	42.14	297	P	P	05 53 08.9	-0.2
MKAR				*PP	pP	05 53 29.4	+0.7
MKAR						05 55 02.2	
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	42.14	297	P	P	05 53 08.8	-0.3
MKAR				pP	pP	05 53 29.4	+0.7
MKAR				PcP	PcP	05 55 02.2	+0.1
KDAK	Kodiak Island	42.73	46	P	P	05 53 13.1	-0.6
	comp=Z,3.1nm,0.5s,mb4.3,baz=155,slow=24,SNR=7.2						
KDAK	Kodiak Island	42.73	46	P	P	05 53 13.1	-0.6
BPAW	Bear Paw Mtn.	42.92	36	eP	P	05 53 14.4	-0.8
	comp=Z,13nm,1.5s,mb4.5						
KURK	Kurchatov	43.42	304	P	P	05 53 19.6	+0.2
	comp=Z,24nm,0.6s,mb5.1,baz=76,slow=9.3,SNR=42						
KURK	Kurchatov	43.42	304	P	P	05 53 19.6	+0.2
KURK				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.1						
CMAR	Chiang Mai Arr	43.79	251	P	P	05 53 23.4	+0.6
	comp=Z,1.4nm,0.5s,mb3.9,baz=42,slow=7.8,SNR=9.7						
CMAR	Chiang Mai Arr	43.79	251	P	P	05 53 23.4	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TAPN	Taplejung	46.55	270	eP	P	05 53 45.1	+0.6
	comp=Z,12nm,0.4s,mb5.0						
ODAN	Odare	47.06	269	eP	P	05 53 48.9	+0.4
JIRN	Jiri	47.51	271	eP	P	05 53 52.7	+0.7
	comp=Z,14nm,0.3s,mb5.2						
RAMN	Ramite	47.59	270	eP	P	05 53 52.7	+0.1
	comp=Z,42nm,0.7s,mb5.4						
GUN	Gumba	47.60	271	eP	P	05 53 53.2	+0.5
	comp=Z,87nm,0.4s						
BVAR	Borovoye Array	47.69	309	P	P	05 53 53.1	+0.1
	comp=Z,10.0nm,0.4s,mb5.0,baz=75,slow=8.6,SNR=46						
BVAR				PcP	PcP	05 55 20.8	-0.3
	comp=Z,1.6nm,0.5s,baz=117,slow=1.7,SNR=5.0						
BVAR	Borovoye Array	47.69	309	P	P	05 53 53.1	+0.1
BVAR						05 55 20.8	
BVAR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	Borovoye	47.74	309	eP	P	05 53 53.4	0.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5						
BRVK	Borovoye	47.74	309	eP	P	05 53 53.4	0.0
	comp=Z,4.3nm,0.5s,mb4.5						
TKM2	Tokmak 2	47.94	295	eP	P	05 53 55.6	+0.4
TKM2				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
TKM2	Tokmak 2	47.94	295	eP	P	05 53 55.6	+0.5
	comp=Z,14nm,0.6s,mb5.0						
KKN	Kakani	48.11	272	eP	P	05 53 57.2	+0.6
	comp=Z,17nm,0.5s,mb5.1						
PKI	Pulchoki	48.13	271	eP	P	05 53 57.1	+0.3
	comp=Z,15nm,0.4s,mb5.1						
DMN	Daman	48.34	272	eP	P	05 53 58.8	+0.4
	comp=Z,15nm,0.5s,mb5.1						
GKN	Gorkha	48.47	272	eP	P	05 53 59.2	-0.2
	comp=Z,16nm,0.4s,mb5.2						
DANN	Dangsing	48.93	273	eP	P	05 54 03.5	+0.6
EKS2	Erkin-Say	49.27	295	eP	P	05 54 05.1	-0.3
	comp=Z,4.4nm,0.6s,mb4.6						
KOLN	Koldanda	49.36	273	eP	P	05 54 06.6	+0.4
	comp=Z,22nm,0.3s,mb5.6						
AML	Almayashu	49.55	294	eP	P	05 54 07.8	+0.3
	comp=Z,2.7nm,0.5s,mb4.4						
YKA	Yellowknife Ar	58.85	32	P	P	05 55 14.8	+0.1
	comp=Z,1.0nm,0.5s,mb4.1,baz=306,slow=7.1,SNR=11						
YKA	Yellowknife Ar	58.85	32	P	P	05 55 14.8	+0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	Joensuu	61.66	331	ep	P	05 55 32.2	-1.6
	comp=Z,1.6nm,0.5s,mb4.3						
JOF	Joensuu	61.66	331	ep	P	05 55 32.2	-1.6
	comp=Z,1.6nm,0.5s,mb4.3						
WB2	Warramunga Arr	62.43	189	eP	P	05 55 38.6	-0.8
WRA	Warramunga Arr	62.43	189	P	P	05 55 38.7	-0.7
	comp=Z,1.9nm,0.5s,mb4.4,baz=6.5,slow=6.9,SNR=28						
WRA				pP	pP	05 56 01.3	+1.0
	comp=Z,1.4nm,0.6s,baz=7.8,slow=7.7,SNR=6.8						
WRA	Warramunga Arr	62.43	189	P	P	05 55 38.7	-0.7
WRA				*PP	pP	05 56 01.3	+1.0
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	66.16	189	P	P	05 56 04.0	+0.2
	comp=Z,1.2nm,0.8s,mb3.8,baz=5.5,slow=6.2,SNR=8.0						
ASAR				pP	pP	05 56 26.9	+2.1
	comp=Z,0.6nm,0.6s,baz=13,slow=11,SNR=2.8						
ASAR	Alice Springs	66.16	189	P	P	05 56 04.0	+0.3
ASAR				*PP	pP	05 56 26.9	+2.1
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	NORSAR Subarra	69.58	337	P	P	05 56 24.0	-0.8
	comp=Z,1.0nm,0.6s,mb3.8,baz=35,slow=6.5						
NOA	NORSAR Array B	69.58	337	P	P	05 56 24.1	-0.7
	comp=Z,1.5nm,0.7s,mb3.9,baz=36,slow=6.2,SNR=6.5						
NOA	NORSAR Array B	69.58	337	P	P	05 56 24.1	-0.7
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	70.58	322	P	P	05 56 29.7	-1.4
	comp=Z,0.5nm,0.3s,mb3.8,baz=43,slow=6.4,SNR=3.8						
AKASG	Malin Array Be	70.58	322	P	P	05 56 29.7	-1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVAR	Mina Array Bea	71.24	55	P	P	05 56 36.5	+1.2
	comp=Z,0.4nm,0.5s,mb3.5,baz=286,slow=7.0,SNR=4.8						
PDAR	Pinedale Array	73.43	47	P	P	05 56 48.0	-0.2
	comp=Z,0.5nm,0.5s,mb3.6,baz=147,slow=0.1,SNR=5.5						
TXAR	Lajitas Array	86.29	53	P	P	05 57 58.4	+0.5
	comp=Z,0.2nm,0.5s,baz=291,slow=4.2,SNR=6.3						

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*NEIC **09** 06:05:17.9, 27.32S×70.84W, h54km, MD3.9(GUC), After GUC.*
NEIC Felt [III] at Caldera.
GUC 09 06:05:17.9±0.7**, 27.32S×70.84W, h54**km±6km**, MD3.9, ML4.0, 2C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDCH	Caldera	0.24	3⇓	iP	Pn	06 05 27.1	+0.1
CDCH				i S	Sn	06 05 33.8	+0.5
CDCH				AML	AML	06 05 34.6	
	comp=E,5µm,0.4s						
CDCH	Caldera	0.24	3⇓	iP	Pn	06 05 27.1	+0.1
CDCH				i S	Sn	06 05 33.8	+0.5
CPCH	Copiapo	0.44	95⇓	iP	Pn	06 05 28.8	+0.2
CPCH				i S	Sn	06 05 37.2	+0.8
CPCH				AML	AML	06 05 37.8	
	comp=E,87µm,0.1s						
CPCH	Copiapo	0.44	95⇓	iP	Pn	06 05 28.8	+0.2
CPCH				i S	Sn	06 05 37.2	+0.8
VACH	Vallenar	1.25	177⇑	iP	Pn	06 05 40.4	+1.3
VACH				i S	Sn	06 05 56.9	+2.0
VACH				AML	AML	06 05 58.3	
	comp=E,3µm,0.4s						
VACH	Vallenar	1.25	177⇑	iP	Pn	06 05 40.4	+1.3
VACH				i S	Sn	06 05 56.9	+2.0
LCO	Las Campanas	1.69	176	eP	Pn	06 05 46.0	+1.0
LCO				eSn	Sn	06 06 01.7	-3.9
LCO				i S	Sn	06 06 07.5	+1.9
CPN1	Cerro Paranal	2.71	8	eP	Pn	06 05 55.4	-3.6
CPN1				i S	Sn	06 06 27.1	-3.4
TLL	Tololo Astrono	2.84	179	eP	Pn	06 06 02.2	+1.5
LVC	Limon Verde	5.00	21	ePn	Pn	06 06 38.7	+8.2

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*NEIC **09** 06:06:34.5, 18.14N×68.36W, h137km, MD3.7(RSPR), After RSPR.*
RSPR 09 06:06:34.5, 18.14N×68.36W, h137km±2km**, MD3.7**/7**, MD3.7**/7**, 5C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	1.20	96⇑	eP	Pn	06 06 59.2	-0.7
CRPR				eS	Sn	06 07 19.6	+0.4
AGPR	Aguadilla, PR	1.23	75⇑	eP	Pn	06 07 00.4	+0.1
LRS	Lares	1.45	84⇓	eP	Pn	06 07 02.3	-0.3
AOPR	Arecibo Observ	1.54	82⇓	eP	Pn	06 07 03.3	-0.3
AOPR				eS	Sn	06 07 25.7	0.0
CBYP	Canovanas	2.38	87⇑	eP	Pn	06 07 13.5	-0.1
CBYP				eS	Sn	06 07 44.0	+0.5
HUMP	Col San Antoni	2.39	90⇑	eP	Pn	06 07 13.4	-0.2
HUMP				eS	Sn	06 07 44.1	+0.4
MTP	Monte Pirata	2.67	91⇑	eP	Pn	06 07 17.7	+0.5

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*ISCJB **09** 06:11:51.6±0.8, 10.32N±0.03×62.28W±0.02, h13km±5km, Error ellipse: s-maj=5.3km s-min=3.0km az=157.9*
*NEIC **09** 06:11:51.3, 10.36N×62.26W, h3km, MD3.8(TRN), After TRN.*
*TRN **09** 06:11:51.1, 10.35N×62.26W, h3km, MD3.8*
*FUNV **09** 06:11:52.9, 10.35N×62.19W, h12km, MW3.1*
ISC 09 06:11:52.2±0.5**, 10.33N**±0.03×**62.25W**±0.02**, h10**km±3km**, n35,** σ**0.91**/53**, 1C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.32	5⇑	iP	Pg	06 11 59.1	+0.6
GUIV				eS	Sg	06 12 03.3	+0.5
TCE	Chacachacare	0.61	53	eP	Pg	06 12 03.0	-1.1
TCE				eS	Sg	06 12 11.6	-0.6
GUNV	Guanoco	0.70	256	eP	Pg	06 12 06.3	+0.6
GUNV				eS	Sg	06 12 17.1	+2.2
TPP	Pointe-a-Pierr	0.79	91	eP	Pg	06 12 06.2	-1.3
TPP				eS	Sg	06 12 17.9	+0.1
TRN	Trinidad (W)	0.90	69	eP	Pg	06 12 07.6	-1.8
TRN				eS	Sg	06 12 21.6	+0.5
CRUV	Carupano	1.02	290⇓	eP	Pg	06 12 11.2	-0.7
CRUV				eS	Sg	06 12 26.0	+0.7
TBH	Brigand Hill	1.18	82	eP	Pb	06 12 14.4	-0.2
TBH				eS	Sb	06 12 31.2	+1.3
ITEV	Isla Los Testi	1.33	320	eP	Pn	06 12 16.8	-0.1
ITEV				eS	Sb	06 12 35.2	+0.7
TPR	Prospect	1.68	59	eP	Pn	06 12 21.5	-0.1
TPR				eS	Sn	06 12 44.0	+0.7
ORIV	Oritupano	1.69	222	eP	Pn	06 12 23.3	+1.5
ORIV				eS	Sn	06 12 45.4	+1.9
BOT	Bacolet	1.72	61	eP	Pn	06 12 22.7	+0.5
BOT				eS	Sn	06 12 45.2	+1.0
GRW	Mount Saint Ca	1.91	18	eP	Pn	06 12 24.8	0.0
GRW				eS	Sn	06 12 48.6	-0.3
TOSP	Speyside	1.94	60	eP	Pn	06 12 25.7	+0.5
TOSP				eS	Sn	06 12 50.2	+0.5
RIOV	Rio Grande	2.29	169	eP	Pn	06 12 29.8	-0.2
PCRV	Puerto La Cruz	2.35	266	eP	Pn	06 12 31.1	+0.3
PCRV				eS	Sn	06 12 58.5	-1.2
GURV	El Guri	2.68	198	eP	Pn	06 12 36.2	+0.8
IBAV	Isla La Blanqu	2.72	303	eP	Pn	06 12 35.5	-0.5
PRGV	PARIAGUAN	2.83	237	eP	Pn	06 12 38.0	+0.6
SVB	Belmont	3.08	18	eP	Pn	06 12 41.6	+0.6
SVB				eS	Sn	06 13 17.8	-0.1
CUPV	Cœpira	3.49	266	eP	Pn	06 12 47.8	+1.2
BIRV	Birongo	3.95	272	eP	Pn	06 12 53.7	+0.8
MERV	Las Mercedes	4.13	255	eP	Pn	06 12 55.2	-0.1
MERV				eS	Sn	06 13 41.3	-2.3
ORCV	Isla La Orchil	4.14	291⇓	eP	Pn	06 12 55.4	-0.1
BIM	Bigot	4.32	15	eP	Pn	06 12 58.2	+0.3
FDF	Fort de France	4.51	14	eP	Pn	06 13 00.8	+0.3
FDF				eS	Sn	06 13 50.3	-2.7
FDF	Fort de France	4.51	14	ePn	Pn	06 13 00.4	-0.1
FDF				eSn	Sn	06 13 52.6	-0.4
LUEV	Luepa	4.53	170	eP	Pn	06 12 59.3	-1.5
CAOV	Caicara del Or	5.01	234	eP	Pn	06 13 06.5	-0.9
TURV	Turiamo	5.50	272	eP	Pn	06 13 14.4	+0.2
BAUV	El Baul	5.87	257	eP	Pn	06 13 19.2	-0.1
TEPV	Terepaima	6.84	268	eP	Pn	06 13 32.1	-0.5
SANV	Sanarito	7.22	264	eP	Pn	06 13 37.0	-0.8
SIQV	Siquisique	7.44	273	eP	Pn	06 13 40.2	-0.6
CURV	Curarigua	7.59	268	eP	Pn	06 13 42.0	-1.0
SOCV	Socops	8.73	257	eP	Pn	06 13 56.9	-1.7

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*NEIC **09** 06:13:24.4, 10.48N×62.32W, h3km, MD3.8(TRN), After TRN.*
*TRN **09** 06:13:24.4, 10.48N×62.32W, h3km, MD3.8*
*ISCJB **09** 06:13:25.9±0.8, 10.38N±0.04×62.26W±0.02, h13km±5km, Error ellipse: s-maj=6.4km s-min=3.7km az=161.3*
*FUNV **09** 06:13:26.3, 10.37N×62.22W, h16km, MW2.6*
ISC 09 06:13:26.0±0.6**, 10.38N**±0.04×**62.27W**±0.02**, h12**km±4km**, n17,** σ**1.07**/31**, 2C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.27	10⇑	eP	Pg	06 13 31.8	+0.2
GUIV				eS	Sg	06 13 36.5	+1.2
TCE	Chacachacare	0.60	58	eP	Pg	06 13 35.6	-2.1
TCE				eS	Sg	06 13 44.2	-1.3
GUNV	Guanoco	0.70	252	eP	Pg	06 13 39.3	-0.3
GUNV				eS	Sg	06 13 51.1	+2.3
TPP	Pointe-a-Pierr	0.81	95	eP	Pg	06 13 41.0	-0.6
TPP				eS	Sg	06 13 54.0	+1.7
TRN	Trinidad (W)	0.89	73	eP	Pg	06 13 41.7	-1.6
TRN				eS	Sg	06 13 55.1	+0.2
CRUV	Carupano	0.99	287⇑	eP	Pb	06 13 44.4	-0.8
CRUV				eS	Sb	06 13 57.8	-0.4
TBH	Brigand Hill	1.19	85	eP	Pn	06 13 48.2	-0.2
TBH				eS	Sb	06 14 06.5	+2.7
ITEV	Isla Los Testi	1.28	319	eP	Pn	06 13 49.5	-0.3
ITEV				eS	Sb	06 14 07.3	+0.7
TPR	Prospect	1.67	61	eP	Pn	06 13 54.7	-0.4
TPR				eS	Sn	06 14 17.8	+1.3
BOT	Bacolet	1.71	63	eP	Pn	06 13 56.6	+0.9
ORIV	Oritupano	1.72	221	eP	Pn	06 13 55.8	0.0
ORIV				eS	Sn	06 14 17.7	0.0
GRW	Mount Saint Ca	1.86	19	eP	Pn	06 13 57.0	-0.8
GRW				eS	Sn	06 14 20.2	-1.0
GRW	Mount Saint Ca	1.86	19	eP	Pn	06 13 57.0	-0.8
GRW				eS	Sn	06 14 20.2	-1.0
TOSP	Speyside	1.93	62	eP	Pn	06 13 58.3	-0.4
TOSP				eS	Sn	06 14 22.4	-0.6
PCRV	Puerto La Cruz	2.34	265	eP	Pn	06 14 03.3	-1.0
PRGV	PARIAGUAN	2.84	236	eP	Pn	06 14 10.8	-0.5
SVB	Belmont	3.04	19	eP	Pn	06 14 15.6	+1.6
SVB				eS	Sn	06 14 51.2	+0.9

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*IDC **09** 06:18:02.6±1.4, 2.32N×95.85E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/21, mbtmp3.9/10, Error ellipse: s-maj=62.3km s-min=17.4km az=57.0*
*NEIC **09** 06:18:10.3±5.6, 2.41N×96.01E, h55km±45km, mb4.1/1, Error ellipse: s-maj=52.0km s-min=9.5km az=56.0*
*ISCJB **09** 06:18:11.6±6.1, 2.5N±0.3×96.2E±0.4, h80km±46km, mb3.9/10, Error ellipse: s-maj=79.8km s-min=15.0km az=148.2*
ISC 09 06:18:11.7±6.3**, 2.4N**±0.3×**96.1E**±0.4**, h66**km±49km**, n14,** σ**0.53**/13**, mb3.9**/10**, 1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.87	83⇓	eP	Pn	06 18 55.1	0.0
CMAR	Chiang Mai Arr	16.16	10	Pn	Pn	06 21 54.9	+0.1
	baz=197,slow=11,SNR=6.3						
FITZ	Fitzroy Crossi	35.56	126	P	P	06 25 02.4	-0.6
	1.7nm,0.9s,mb4.0,baz=280,slow=15,SNR=3.7						
WRA	Warramunga Arr	43.64	122	P	P	06 26 10.7	+0.6
	0.7nm,0.8s,mb3.5,baz=300,slow=9.2,SNR=6.8						
AML	Almayashu	44.32	336	eP	P	06 26 15.8	+0.6
	2.7nm,0.8s,mb4.0						
ASAR	Alice Springs	45.04	127	P	P	06 26 21.0	-0.1
	0.4nm,0.8s,mb3.2,baz=298,slow=7.1,SNR=3.3						
MKAR	Makanchi Array	45.78	347	P	P	06 26 26.5	-0.2
	4.2nm,0.8s,mb4.2,baz=165,slow=7.9,SNR=38						
SONM	Songino Array	46.09	10	P	P	06 26 29.5	+0.4
	2.4nm,0.7s,mb4.0,baz=186,slow=8.1,SNR=19						
KURK	Kurchatov	50.31	346	P	P	06 27 00.2	-1.4
	0.9nm,0.6s,mb3.9,baz=167,slow=6.8,SNR=5.2						
ZAA0	Zalesovo Array	52.17	352	eP	P	06 27 15.5	0.0
ZALV	Zalesovo Beam	52.17	352	P	P	06 27 15.1	-0.3
	3.0nm,0.6s,mb4.5,baz=168,slow=6.6,SNR=14						
ARCES	ARCESS Array B	81.00	340	P	P	06 30 19.5	+0.6
	3.4nm,1.0s,mb4.1,baz=86,slow=3.8,SNR=4.6						
GERES	GERESS Array B	83.14	319	P	P	06 30 30.8	+0.2
	0.7nm,0.8s,mb3.5,baz=89,slow=5.7,SNR=4.8						
MSU	Marysvale	131.62	30	ePKPdf	PKPdf	06 37 18.2	+0.7

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*IDC **09** 06:38:50.4±0.7, 2.37N×126.85E, h0km, mb4.2/12, mb1 4.3/12, mb1mx4.2/19, mbtmp4.2/12, MS3.3/1, Ms1 3.3/1, ms1mx2.7/25, Error ellipse: s-maj=45.7km s-min=12.9km az=74.0*
*NEIC **09** 06:38:51.7±0.4, 2.40N×126.95E, h10km, mb4.2/3, Error ellipse: s-maj=28.2km s-min=6.9km az=72.0*
*ISCJB **09** 06:38:56.0±1.7, 2.37N±0.09×126.9E±0.1, h58km±17km, mb4.2/12, Error ellipse: s-maj=26.1km s-min=10.8km az=154.1*
ISC 09 06:38:57.0±1.8**, 2.34N**±0.09×**126.9E**±0.1**, h50**km±18km**, n23,** σ**0.67**/22**, mb4.2**/12**, 1C-3D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	Ternate	1.60	164⇓	eP	Pn	06 39 23.0	0.0
MNI	Manado	2.27	247⇓	eP	Pn	06 39 32.0	0.0
KAKA	Kakadu	15.92	160	eP	Pn	06 42 42.4	+4.5
	7.4nm,0.4s						
FITZ	Fitzroy Crossi	20.35	184⇓	iP	P	06 43 29.8	+0.4
	5.8nm,0.6s						
FITZ	Fitzroy Crossi	20.35	184	P	P	06 43 29.6	+0.2
	1.1nm,0.3s,baz=26,slow=15,SNR=19						
GUMO	Guam	20.97	57	LR	LR	06 50 22.9	
	comp=Z,87nm,19.6s,baz=144,slow=33						
WRAB	Tennant Creek	23.30	162	eP	P	06 44 00.1	-0.7
	6.0nm,0.6s,mb4.2						
WRA	Warramunga Arr	23.31	162	P	P	06 44 00.1	-0.8
	5.4nm,0.6s,mb4.2,baz=337,slow=11,SNR=68						
WB2	Warramunga Arr	23.31	162⇑	iP	P	06 44 00.1	-0.8
ASAR	Alice Springs	26.73	166	P	P	06 44 31.9	0.0
	1.0nm,0.5s,mb3.6,baz=342,slow=6.8,SNR=15						
KSRS	Korea Array	34.96	1	P	P	06 45 45.1	+0.8
	2.2nm,0.5s,mb4.4,baz=177,slow=10.0,SNR=14						
MJAR	Matsushiro Arr	35.59	16	P	P	06 45 48.9	-0.9
	1.0nm,0.5s,mb4.0,baz=187,slow=9.0,SNR=6.8						
STKA	Stephens Creek	36.77	159	eP	P	06 45 59.9	0.0
	4.2nm,0.4s,mb4.6						
STKA	Stephens Creek	36.77	159	P	P	06 46 00.4	+0.5
	7.9nm,0.6s,mb4.7,baz=321,slow=8.8,SNR=25						
STKA				PcP	PcP	06 48 22.8	+1.3
	2.9nm,0.9s,baz=15,slow=3.5,SNR=3.4						
ARMA	Armidale	40.21	146	eP	P	06 46 30.6	+1.8
SONM	Songino Array	48.67	342	P	P	06 47 36.3	+0.2
	0.9nm,0.4s,mb4.2,baz=159,slow=9.0,SNR=6.3						
MKAR	Makanchi Array	58.80	326	P	P	06 48 50.0	-0.2
	1.1nm,0.4s,mb4.3,baz=119,slow=7.7,SNR=43						
ZALV	Zalesovo Beam	61.91	333	P	P	06 49 10.3	-0.9
	1.1nm,0.4s,mb4.3,baz=122,slow=6.8,SNR=6.2						
ZALV	Zalesovo Beam	61.91	333	P	P	06 49 10.3	-1.0
KURK	Kurchatov	63.01	328	P	P	06 49 18.7	0.0
	3.4nm,0.5s,mb4.8,baz=128,slow=6.1,SNR=25						
BVAR	Borovoye Array	68.58	327	P	P	06 49 55.1	+0.6
	0.8nm,0.4s,mb4.0,baz=134,slow=8.4,SNR=6.9						
AKTK	Aktyubinsk	74.86	322	P	P	06 50 32.5	+0.2
AKTO	Aktyubinsk	74.86	322	P	P	06 50 32.5	+0.2
	1.9nm,0.7s,mb4.2,baz=93,slow=5.0,SNR=5.6						

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*IDC **09** 07:08:11.8±2.9, 5.64S×132.07E, h0km, mb4.0/2, mb1 4.2/4, mb1mx3.8/13, mbtmp4.1/4, ML4.2/2, Error ellipse: s-maj=236.0km s-min=26.5km az=70.0*
*ISCJB **09** 07:08:32.5±2.0, 7.27S±0.09×129.3E±0.1, h176km±21km, mb3.7/2, Error ellipse: s-maj=18.1km s-min=14.8km az=172.5*
*NEIC **09** 07:08:33.4±3.0, 7.26S×129.39E, h170km±31km, mb4.2/3, Error ellipse: s-maj=28.2km s-min=23.1km az=187.0*
ISC 09 07:08:34.9±1.7**, 7.44S**±0.09×**129.3E**±0.1**, h174**km±15km**, n11,** σ**1.12**/18**, mb3.7**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.06	150	eP	Pn	07 10 03.0	+0.3
	35nm,0.6s						
KAKA				eS	Sn	07 11 12.5	+0.8
FITZ	Fitzroy Crossi	11.20	198	eP	Pn	07 11 12.6	+2.5
	4.3nm,0.2s						
FITZ				eS	Sn	07 13 14.6	+0.1
FITZ	Fitzroy Crossi	11.20	198	ePn	Pn	07 11 12.3	+2.2
FITZ				eSn	Sn	07 13 13.2	-1.3
WRAB	Tennant Creek	13.34	159	ePn	Pn	07 11 38.0	+0.4
	3.8nm,0.5s						
WRA	Warramunga Arr	13.34	159	Pn	Pn	07 11 37.1	-0.5
	1.1nm,0.3s,baz=344,slow=13,SNR=54						
WRA				Sn	Sn	07 14 04.3	-1.6
	1.5nm,0.3s,baz=332,slow=22,SNR=6.6						
WB2	Warramunga Arr	13.35	159	eP	Pn	07 11 37.3	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WB2				eS	Sn	07 14 04.9	-1.1
COEN	Coen	15.05	117	ePn	Pn	07 11 59.2	+0.3
	3.0nm,0.5s						
COEN				eSn	Sn	07 14 35.9	-11
ASAR	Alice Springs	16.72	165	P	Pn	07 12 23.7	+4.5
	1.1nm,0.3s,baz=349,slow=11,SNR=110						
ASAR				S	S	07 15 25.0	+0.7
	0.4nm,0.3s,baz=346,slow=25,SNR=5.7						
STKA	Stephens Creek	26.86	156	P	P	07 14 00.6	+1.2
	2.6nm,0.9s,mb3.9,baz=321,slow=11,SNR=2.8						
MKAR	Makanchi Array	68.24	327	P	P	07 19 14.5	-2.2
	0.3nm,0.3s,mb3.5,baz=121,slow=7.7,SNR=6.5						
MKAR	Makanchi Array	68.24	327	P	P	07 19 14.5	-2.2

*THE **09** 07:39:31.5, 3880N×2670E, h5km, ML3.3*
*ISCJB **09** 07:39:33.6±0.9, 3882N±004×2650E±007, h9km±5km, Error ellipse: s-maj=9.8km s-min=5.9km az=26.5*
*DDA **09** 07:39:33.0, 3883N×2644E, h7km±3km, Md2.7*
*CSEM **09** 07:39:33.4±0.4, 3886N×2649E, h5km, MD2.7, Error ellipse: s-maj=8.9km s-min=6.3km az=120.0*
ISC 09 07:39:33.9±0.9**, 3883N**±004×**2650E**±007**, h7**km±6km**, n9, σ1s.04**/17**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	0.45	337	ePg	Pg	07 39 42.2	-0.5
PRK				eSg	Sg	07 39 50.8	+2.2
AYVA	Ayvalik	0.50	17	i P	Pg	07 39 43.4	-0.2
AYVA				i S	Sg	07 39 50.7	+0.6
CHOS	Chios island	0.56	218	ePg	Pg	07 39 44.0	-0.7
CHOS				eSg	Sg	07 39 53.9	+1.8
CHOS	Chios island	0.56	218	ePg	Pg	07 39 44.0	-0.8
CHOS				eSg	Sg	07 39 53.9	+1.8
BOZC	Bozcaada	1.07	341	i P	Pg	07 39 53.5	-0.9
BOZC				i S	Sg	07 40 07.0	-1.2
BALY	Balya	1.26	43	i P	Pn	07 39 57.0	-0.9
BALY				i S	Sn	07 40 15.5	+0.5
LIA	Limnos Island	1.47	317	ePg	Pn	07 39 59.4	-1.5
LIA				eSg	Sn	07 40 21.1	+0.7
LOS	Limnos	1.55	316	ePb	Pn	07 40 01.1	-0.8
SART	Tekirdag	1.93	16	i P	Pn	07 40 07.5	+0.4
SART				i S	Sn	07 40 32.5	+1.0

*IDC **09** 07:48:42.6±1.7, 1151S×165.13E, h0km, mb3.9/5, mb1 4.3/5, mb1mx3.9/17, mbtmp4.0/5, MS2.7/1, Ms1 2.7/1, ms1mx2.5/18, Error ellipse: s-maj=181.0km s-min=24.2km az=150.0*
*NEIC **09** 07:48:44.0±0.8, 1163S×16520E, h10km, Error ellipse: s-maj=19.2km s-min=14.8km az=138.0*
*ISCJB **09** 07:48:46.0±1.0, 118S±02×1652E±02, h33km, mb4.0/4, Error ellipse: s-maj=24.6km s-min=19.3km az=138.4*
ISC 09 07:48:48.0±1.0**, 117S**±02×**1652E**±02**, h35km, n7, σ0s.43**/6**, mb4.0**/4**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.63	293	LR	LR	07 52 07.2	
	comp=Z,70nm,18.4s,baz=107,slow=37						
DZM	Mont Dzumac	10.36	173	ePn	Pn	07 51 14.1	0.0
CTA	Charters Tower	20.00	243	P	P	07 53 17.7	0.0
	4.5nm,0.9s,baz=84,slow=14,SNR=4.0						
WRA	Warramunga Arr	30.74	251	P	P	07 54 59.8	-0.2
	3.8nm,1.0s,mb4.2,baz=80,slow=9.4,SNR=20						
ASAR	Alice Springs	32.00	244	P	P	07 55 11.4	+0.2
	1.1nm,0.8s,mb3.8,baz=76,slow=9.4,SNR=8.1						
NVAR	Mina Array Bea	86.88	50	P	P	08 01 28.8	-0.5
	0.6nm,0.7s,mb3.9,baz=244,slow=7.9,SNR=5.4						
PDAR	Pinedale Array	94.41	47	P	P	08 02 04.9	+0.5
	0.6nm,1.0s,mb4.0,baz=236,slow=9.7,SNR=3.9						

*NEIC **09** 08:23:52.3±0.7, 795N×12691E, h35km, Error ellipse: s-maj=19.2km s-min=11.9km az=69.0*
*IDC **09** 08:23:54.6±5.6, 786N×12675E, h52km±49km, mb3.5/6, mb1 3.6/6, mb1mx3.4/20, mbtmp3.5/6, Error ellipse: s-maj=40.6km s-min=18.1km az=62.0*
*ISCJB **09** 08:23:55.0±0.9, 784N±006×12662E±009, h76km±7km, mb3.6/6, Error ellipse: s-maj=14.4km s-min=10.3km az=178.9*
*MAN **09** 08:23:57, 756N×126.18E, h140km*
ISC 09 08:23:56.3±0.9**, 781N**±006×**12661E**±009**, h67**km±8km**, n15, σ0s.75**/18**, mb3.6**/6**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	Bislig	0.45	327	⇑iP	Pn	08 24 08.5	+0.2
BIPH				i S	Sn	08 24 16.7	-0.4
DAV	Davao City (W)	1.26	234	P	Pn	08 24 18.5	+0.5
	57nm,0.3s,baz=254,slow=3.7,SNR=9.7						
DAV				S	Sn	08 24 35.3	+1.1
	97nm,0.3s,baz=32,slow=24,SNR=20						
DAV	Davao City (W)	1.26	234	ePn	Pn	08 24 17.8	-0.2
DAV				eSn	Sn	08 24 37.8	+3.6
KCP	Kidapawan	1.70	242	⇑eP	Pn	08 24 23.2	-0.7
KCP				i S	Sn	08 24 44.1	-0.6
SCPH	Surigao	2.25	331	⇓eP	Pn	08 24 36.1	+4.7
TBP	Tagbilaran	3.30	305	eP	Pn	08 24 47.1	+1.6
TBP				eS	Sn	08 25 23.0	-0.6
FITZ	Fitzroy Crossi	25.76	182	P	P	08 29 21.7	+0.8
	1.4nm,0.9s,mb3.4,baz=0.0,slow=11,SNR=3.6						
WRA	Warramunga Arr	28.60	165	P	P	08 29 46.1	-0.2
	0.4nm,0.8s,mb3.1,baz=351,slow=9.7,SNR=3.3						
ASAR	Alice Springs	32.08	167	P	P	08 30 17.3	+0.2
	0.2nm,0.4s,mb3.2,baz=343,slow=7.7,SNR=3.7						
ASAR				PcP	PcP	08 33 05.8	+0.5
	0.3nm,0.8s,baz=323,slow=1.4,SNR=5.0						
STKA	Stephens Creek	41.98	161	P	P	08 31 39.7	-1.1
	3.2nm,0.9s,mb4.0,baz=340,slow=12,SNR=2.5						
STKA	Stephens Creek	41.98	161	P	P	08 31 39.7	-1.1
MKAR	Makanchi Array	54.19	324	P	P	08 33 15.1	+0.2
	1.1nm,0.5s,mb4.1,baz=119,slow=8.2,SNR=15						
KURK	Kurchatov	58.28	326	P	P	08 33 43.8	-0.2
	0.3nm,0.3s,mb3.8,baz=122,slow=6.9,SNR=6.8						
TORD	Torodi Ar. Bea	121.46	291	PKP	PKPdf	08 42 43.5	+0.4
	0.7nm,1.0s,baz=141,slow=1.9,SNR=3.4						
TORD	Torodi Ar. Bea	121.46	291	PKP	PKPdf	08 42 43.5	+0.4

*NIED **09** 08:52:00, 2650N×12580E, h5km, Mw4.3 Best double couple: M0 2.91000×10^15 NP1: φs 15.00000°, δ67.00000°, λ-121.00000°. NP2: φs 252.00000°, δ38.00000°, λ-39.00000°.*
*BJI **09** 08:52:38.7, 2566N×12670E, h35km, mB4.5, mb4.1, Ms4.2, Msz3.9*
*MOS **09** 08:52:41.9±1.5, 2586N×12605E, h33km, mb4.4/3, Error ellipse: s-maj=28.4km s-min=15.3km az=99.5*
*IDC **09** 08:52:43.6±0.8, 2630N×12587E, h0km, mb4.1/8, mb1 4.1/10, mb1mx4.0/23, mbtmp4.0/10, ML3.3/2, MS3.5/17, Ms1 3.6/17, ms1mx3.4/34, Error ellipse: s-maj=22.5km s-min=16.6km az=65.0*
*JMA **09** 08:52:43.5±0.3, 2651N×12584E, h4km±3km, M4.4*
*ISCJB **09** 08:52:44.3±1.6, 2649N±004×12585E±003, h9km±11km, mb4.1/12, MS3.7/18, Error ellipse: s-maj=6.7km s-min=4.4km az=173.1*
*NEIC **09** 08:52:48.0±0.5, 2637N×12590E, h35km, mb4.5/3, Error ellipse: s-maj=12.5km s-min=9.7km az=60.0*
ISC 09 08:52:44.7±1.0**, 2644N**±004×**12588E**±003**, h4**km±7km**, n49, σ1s.03**/45**, mb4.1**/12**, MS3.7**/18**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.82	97	P	Pg	08 53 00.2	-0.2
JKE				S	Sg	08 53 11.7	+0.6
JAGN	Aguni-jima	1.23	83	P	Pg	08 53 06.8	-1.5
JAGN				eS	Sg	08 53 24.7	+0.4
NAH1	Naha	1.64	98	P	Pn	08 53 13.9	-0.4
NAH1				S	Sn	08 53 35.8	-0.1
JMJ	Miyako jima 2	1.70	198	P	Pn	08 53 14.7	-0.4
JMJ				eS	Sn	08 53 38.7	+1.4
JJT2	Tamagusuku 2	1.71	100	P	Pn	08 53 15.6	+0.4
JJT2				eS	Sn	08 53 37.8	+0.4
JOGS	Gusukube	1.72	194	P	Pn	08 53 15.3	-0.1
JIH	Iheya	1.96	72	P	Pn	08 53 18.5	-0.2
JTJ	Tarama	2.08	211	P	Pn	08 53 20.4	+0.1
JOW	Kunigami	2.18	79	Pn	Pn	08 53 21.4	-0.3
	8.9nm,0.3s,baz=256,slow=10.0,SNR=37						
JOW				Sn	Sn	08 53 49.5	+0.4
	35nm,0.3s,baz=291,slow=29,SNR=6.2						
JIJ	Ishigaki jima	2.59	218	P	Pn	08 53 27.6	+0.2
JKRS	Kuro-shima	2.77	218	P	Pn	08 53 32.3	+2.5
IRIF	Iriomote-Funau	2.85	223	P	Pn	08 53 31.5	+0.5
JTK	Tokunoshima	3.05	63	P	Pn	08 53 34.3	+0.6
JAM	Amami Oshima	3.85	58	P	Pn	08 53 45.8	+1.1
KSRS	Korea Array	11.12	8	Pn	Pn	08 55 29.9	+5.4
	baz=190,slow=14,SNR=8.5						
KSRS				LR	LR	08 59 59.4	
	comp=Z,259nm,19.1s,baz=185,slow=39						
MJAR	Matsushiro Arr	14.55	43	Pn	Pn	08 56 12.3	+1.0
	0.3nm,0.3s,baz=235,slow=9.2,SNR=4.7						
MJAR				LR	LR	09 02 11.3	
	comp=Z,112nm,20.4s,baz=40,slow=39						
CBIJ	Chichi jima	14.58	84	LR	LR	09 01 04.5	
	comp=Z,72nm,20.3s,baz=257,slow=34						
CD2	Chengdu	19.91	288	P	Pn	08 57 19.7	+0.8
LZH	Lanzhou	21.11	302	eP	P	08 57 32.0	+1.7
LZH				AP		08 57 39.4	
LZH				XP	sP	08 57 44.0	+12
LZH				PP		08 58 04.2	
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.4						
LZH				AMB	AMB		
	comp=Z,150nm,6.4s						
LZH				LR	LR		
	comp=E,515nm,13.2s						
LZH				LR	LR		
	comp=Z,704nm,14.3s,MS4.2						
GUMO	Guam	21.91	122	LR	LR	09 05 28.9	
	comp=Z,58nm,18.1s,MS3.0,baz=339,slow=35						
ASAJ	Asahikawa	22.23	33	LR	LR	09 05 53.9	
	comp=Z,40nm,18.6s,MS2.9,baz=180,slow=35						
KLR	Kul'dur	23.21	10	eP	P	08 57 49.2	-3.4
KLR				MLR	MLR		
	comp=N,700nm,13.0s,MS4.4						
KLR				MLR	MLR		
	comp=E,500nm,13.0s,MS4.4						
GTA	Gaotai	25.32	307	eP	P	08 58 12.3	-0.1
GTA				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb3.9						
GTA				AMB	AMB		
	comp=Z,39nm,4.5s						
GTA				LR	LR		
	comp=N,273nm,17.1s,MS4.0						
GTA				LR	LR		
	comp=E,207nm,15.3s,MS4.0						
GTA				LR	LR		
	comp=Z,241nm,14.7s,MS3.8						
ULN	Ulaanbaatar	26.00	330	eP	P	08 58 17.1	-1.4
ULN				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.5						
ULN	Ulaanbaatar	26.00	330	eP	P	08 58 17.1	-1.4
	comp=Z,20nm,1.3s,mb4.5						
SONM	Songino Array	26.27	329	P	P	08 58 21.9	+0.9
	comp=Z,3.5nm,0.8s,mb3.9,baz=147,slow=9.1,SNR=18						
SONM				LR	LR	09 10 22.5	
	comp=Z,371nm,18.0s,MS4.0,baz=50,slow=40						
TLY	Talaya	30.32	332	eP	P	08 59 03.4	+6.3
TLY				MLR	MLR		
	comp=Z,119nm,15.0s,MS3.7						
KAPI	Kappang	31.82	192	LR	LR	09 12 15.8	
	comp=Z,92nm,19.4s,MS3.5,baz=289,slow=37						
PETK	Petropavlovsk-	35.65	33	LR	LR	09 13 34.2	
	comp=Z,35nm,19.3s,MS3.1,baz=70,slow=35						
MK31	Makanchi Array	39.83	312	eP	P	09 00 19.0	-0.1
MKAR	Makanchi Array	39.83	312	P	P	09 00 19.0	-0.1
	comp=Z,2.4nm,0.6s,mb4.1,baz=99,slow=10,SNR=31						
MKAR				LR	LR	09 19 00.7	
	comp=Z,64nm,18.5s,MS3.5,baz=266,slow=40						
ZAA0	Zalesovo Array	40.82	324	ePn	P	09 00 24.4	-2.7
ZALV	Zalesovo Beam	40.82	324	P	P	09 00 27.2	0.0
	comp=Z,2.4nm,0.7s,mb4.0,baz=111,slow=8.3,SNR=11						
ZALV				LR	LR	09 18 40.4	
	comp=Z,65nm,20.4s,MS3.5,baz=254,slow=38						
ZAL	Zalesovo	40.83	324	P	P	09 00 27.2	0.0
KURK	Kurchatov	43.23	317	eP	P	09 00 46.0	-0.9
KURK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
KURK	Kurchatov	43.23	317	ePn	P	09 00 46.0	-0.8
	comp=Z,2.5nm,0.4s,mb4.3						
FITZ	Fitzroy Crossi	44.27	180	eP	P	09 00 53.8	-1.7
	comp=Z,6.0nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	44.27	180	P	P	09 00 53.6	-2.0
	comp=Z,6.4nm,0.9s,mb4.3,baz=8.9,slow=8.7,SNR=8.2						
FITZ				LR	LR	09 19 50.7	
	comp=Z,57nm,21.5s,MS3.5,baz=263,slow=37						
FITZ	Fitzroy Crossi	44.27	180	ePn	P	09 00 53.2	-2.3
	comp=Z,10nm,0.8s,mb4.6						
FITZ				eP	pP	09 00 53.8	-3.0
WRA	Warramunga Arr	46.83	169	P	P	09 01 14.0	-1.7
	comp=Z,2.1nm,0.8s,mb4.1,baz=352,slow=8.5,SNR=21						
WRA				LR	LR	09 19 59.1	
	comp=Z,40nm,19.3s,MS3.4,baz=260,slow=35						
WB2	Warramunga Arr	46.83	169	eP	P	09 01 14.2	-1.6
CTA	Charters Tower	50.29	155	LR	LR	09 21 45.3	
	comp=Z,89nm,20.9s,MS3.8,baz=50,slow=35						
ASAR	Alice Springs	50.41	170	P	P	09 01 42.3	-1.0
	comp=Z,1.0nm,0.9s,mb3.9,baz=354,slow=7.7,SNR=9.8						
ARCES	ARCESS Array B	69.04	338	LR	LR	09 41 27.3	
	comp=Z,56nm,18.0s,MS3.9,baz=90,slow=42						
NOA	NORSAR Array B	78.19	333	LR	LR	09 40 41.9	
	comp=Z,67nm,21.1s,MS3.9,baz=30,slow=37						
GERES	GERESS Array B	83.75	322	LR	LR	09 45 23.6	
	comp=Z,73nm,18.4s,MS4.1,baz=269,slow=38						
NVAR	Mina Array Bea	91.87	45	P	P	09 05 56.5	+2.1
	comp=Z,0.5nm,0.7s,mb4.0,baz=282,slow=6.2,SNR=4.5						
PDAR	Pinedale Array	94.30	37	P	P	09 06 05.5	0.0
	comp=Z,0.5nm,0.9s,mb3.9,baz=340,slow=3.9,SNR=3.5						
SCHQ	Schefferville	98.33	7	LR	LR	09 51 39.9	
	comp=Z,55nm,20.4s,MS4.0,baz=54,slow=36						

*IDC **09** 09:35:43.4±1.7, 2744N×14004E, h452km±12km, mb3.3/6, mb1 3.4/6, mb1mx3.1/21, mbtmp3.3/6, Error ellipse: s-maj=80.7km s-min=26.2km az=20.0*
*ISCJB **09** 09:35:44.1±0.8, 277N±0.1×1408E±03, h480km±10km, mb3.5/6, Error ellipse: s-maj=37.9km s-min=13.7km az=166.3*
*JMA **09** 09:35:45.0±0.1, 2777N×14078E, h471km, M3.6*
ISC 09 09:35:44.2±0.9**, 276N**±01×**1408E**±03**, h481**km±10km**, n19, σ0s.98**/22**, mb3.5**/6**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.34	110	P	P	09 36 44.8	+0.2
	18nm,0.3s,baz=108,slow=22,SNR=9.0						
CBIJ				S	S	09 37 32.6	-0.9
	27nm,0.3s,baz=103,slow=22,SNR=9.4						
CBIJ	Chichi jima	1.34	110	P	P	09 36 45.1	+0.5
CBIJ				eS	S	09 37 32.3	-1.3
JHHJ	Haha-jima-NKT	1.56	126	P	P	09 36 46.3	+0.8
JHHJ				eS	S	09 37 35.3	+0.2
JHJ2	Mitsune	5.60	352	P	P	09 37 15.3	-0.3
BSO1	Boso 1	7.08	1	P	P	09 37 30.7	+0.3
JIE	Ise	7.65	334	P	P	09 37 36.5	+0.2
JHU	Hanno	8.37	352	P	P	09 37 42.7	-1.1
JAG	Ashikaga	8.91	353	P	P	09 37 48.4	-1.2
JAG				eS	S	09 39 27.0	-5.7
JFM	Mihama	8.93	334	P	P	09 37 50.7	+0.9
JWT	Wachi	8.96	331	P	P	09 37 50.7	+0.6
JHO	Hitachi	9.03	359	P	P	09 37 51.4	+0.6
KSRS	Korea Array	14.64	316	P	P	09 38 52.1	+1.4
	0.1nm,0.3s,baz=136,slow=8.4,SNR=3.6						
ZALV	Zalesovo Beam	48.31	319	P	P	09 43 39.1	-1.5
	1.0nm,0.4s,mb3.5,baz=118,slow=6.5,SNR=4.3						
MKAR	Makanchi Array	49.21	309	P	P	09 43 45.5	-1.9
	0.2nm,0.3s,mb2.9,baz=88,slow=10,SNR=2.6						
KURK	Kurchatov	51.76	314	P	P	09 44 05.2	-0.9
	3.4nm,0.6s,mb3.8,baz=92,slow=8.0,SNR=14						
ARCES	ARCESS Array B	72.69	341	P	P	09 46 23.7	+1.8
	2.5nm,0.8s,mb3.8,baz=67,slow=9.3,SNR=5.2						
NOA	NORSAR Array B	82.71	338	P	P	09 47 16.9	+0.5
	0.7nm,0.6s,mb3.3,baz=46,slow=4.5,SNR=3.3						
PFO	Pinyon Flat Ob	84.86	55	P	P	09 47 32.7	+5.1
	0.8nm,0.4s,mb3.7,baz=297,slow=10,SNR=3.0						
TORD	Torodi Ar. Bea	123.33	310	PKP	PKPdf	09 53 47.7	+1.1
	0.2nm,0.7s,baz=8.9,slow=3.1,SNR=2.1						

*ATH **09** 09:39:10.1, 3725N×2663E, h39km, MD3.5/4*
*CSEM **09** 09:39:58.9±0.2, 3930N×2350E, h1km, ML2.9, Error ellipse: s-maj=5.1km s-min=3.2km az=19.0, After THE*
*THE **09** 09:39:58.9, 3930N×2350E, h1km, ML2.9*
ISC 09 09:39:26.7±4.5**, 377N**±01×**250E**±05**, h10km, n9, σ1s.13**/10**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	Alonnisos	1.70	330	ePg	Pg	09 40 05.1	+5.8
LKR	Lokris	1.82	302	ePN	Pn	09 39 59.8	+1.8
VLI	Veliai	1.89	240	ePN	Pn	09 39 57.1	-1.9
NEO	Neokhori	2.11	320	ePN	Pn	09 40 02.6	+0.5
XOR	Xorichti	2.17	321	ePg	Pn	09 40 03.6	+0.7
XOR				eSg	Pg	09 40 07.5	-0.9
ITM	Ithomi	2.47	259	ePN	Pn	09 40 08.1	+1.1
OUR	Ouranopolis	2.75	344	ePg	Pg	09 40 19.0	-0.3
PLG	Polygyros	2.92	337	ePg	Pb	09 40 19.2	+0.3
LIT	Litokhoron	3.08	322	ePg	Pb	09 40 20.0	-1.6

*IDC **09** 09:50:35.9±2.2, 15.11S×17360W, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/17, mbtmp4.1/4, Error ellipse: s-maj=183.5km s-min=25.6km az=151.0*
*NEIC **09** 09:50:37.3±0.7, 1503S×17362W, h10km, mb4.4/1, Error ellipse: s-maj=52.0km s-min=11.8km az=151.0*
*ISCJB **09** 09:50:40.1±3.7, 148S±05×1736W±02, h57km±51km, mb4.1/4, Error ellipse: s-maj=94.5km s-min=31.5km az=164.5*
ISC 09 09:50:40.9±3.4**, 148S**±05×**1735W**±02**, h46**km±48km**, n7, σ0s.89**/9**, mb4.1**/4**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.93	63	Pn	Pn	09 51 12.9	+1.6
	68nm,0.3s,baz=195,slow=2.9,SNR=113						
AFI				Sn	Sn	09 51 33.7	-0.8
	375nm,0.3s,baz=33,slow=20,SNR=32						
AFI	Afiamalu	1.93	63	ePn	Pn	09 51 12.6	+1.3
AFI				eSn	Sn	09 51 33.0	-1.4
DZM	Mont Dzumac	20.30	246	eP	P	09 55 12.1	-0.9
STKA	Stephens Creek	44.21	239	P	P	09 58 44.9	-0.8
	2.3nm,0.8s,mb4.0,baz=68,slow=9.4,SNR=4.3						
WRA	Warramunga Arr	49.84	256	P	P	09 59 30.5	+0.7
	0.6nm,0.6s,mb3.8,baz=91,slow=6.7,SNR=11						
ASAR	Alice Springs	50.16	251	P	P	09 59 32.5	+0.4
	2.0nm,0.6s,mb4.4,baz=86,slow=8.1,SNR=32						
CASY	Casey	70.88	205	eP	P	10 01 53.2	+0.4
	2.2nm,0.7s,mb4.2						

*IDC **09** 10:09:33.9±0.9, 2565S×17626W, h0km, mb3.9/8, mb1 4.2/8, mb1mx4.1/14, mbtmp3.9/8, MS4.0/9, Ms1 3.9/9, ms1mx3.6/30, Error ellipse: s-maj=38.2km s-min=22.7km az=155.0*
*NEIC **09** 10:09:35.4±0.6, 2551S×17635W, h10km, mb4.6/1, Error ellipse: s-maj=23.8km s-min=16.9km az=150.0*
*ISCJB **09** 10:09:37.8±0.7, 256S±02×1764W±0.1, h33km, mb3.9/9, MS4.0/9, Error ellipse: s-maj=23.8km s-min=17.5km az=155.0*
ISC 09 10:09:39.6±0.7**, 256S**±02×**1764W**±01**, h35km, n26, σ0s.79**/19**, mb3.9**/9**, MS4.0**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	12.42	21	Pn	Pn	10 12 24.6	-9.4
	3.0nm,0.3s,baz=247,slow=22,SNR=5.8						
AFI				Sn	Sn	10 14 32.8	-18
	1.2nm,0.3s,baz=18,slow=21,SNR=3.0						
AFI	Afiamalu	12.42	21	ePn	Pn	10 12 25.7	-8.3
AFI				Sn	Sn	10 14 32.2	-19
URZ	Urewera	13.76	202	Pn	Pn	10 12 41.4	-11
	0.3nm,0.3s,baz=59,slow=16,SNR=2.5						
URZ				Sn	Sn	10 15 12.1	-12
	0.3nm,0.3s,baz=324,slow=13,SNR=2.7						
RAR	Rarotonga	15.87	77	Pn	Pn	10 13 07.9	-13
	1.1nm,0.3s,baz=144,slow=11,SNR=2.2						
RAR				Sn	Sx	10 15 44.9	
	1.7nm,0.3s,baz=94,slow=22,SNR=3.0						
HNR	Honiara	27.63	301	LR	LR	10 24 43.6	
	comp=Z,179nm,19.8s,MS3.6,baz=141,slow=33						
STKA	Stephens Creek	37.19	250	P	P	10 16 47.7	+0.2
	2.8nm,0.9s,mb4.1,baz=96,slow=10,SNR=4.2						
STKA				LR	LR	10 30 13.6	
	comp=Z,303nm,20.4s,MS4.1,baz=39,slow=33						
STKA	Stephens Creek	37.19	250	P	P	10 16 47.7	+0.2
STKA				LR	LR	10 30 13.6	
ASAR	Alice Springs	45.01	261	P	P	10 17 51.7	-0.2
	0.6nm,0.3s,mb3.9,baz=93,slow=7.6,SNR=22						
ASAR				PcP	PcP	10 19 34.3	+1.7
	0.3nm,0.5s,baz=102,slow=4.6,SNR=2.9						
WRAB	Tennant Creek	45.56	267	eP	P	10 17 55.4	-1.0
WRA	Warramunga Arr	45.57	267	P	P	10 17 56.8	+0.3
	0.5nm,0.4s,mb3.8,baz=103,slow=8.2,SNR=23						
SBA	Scott Base	52.90	184	eP	P	10 18 53.5	+1.9
GUMO	Guam	54.24	311	LR	LR	10 39 27.6	
	comp=Z,103nm,18.6s,MS3.9,baz=359,slow=33						
NWAO	Narrogin (SRO)	57.53	246	LR	LR	10 41 40.4	
	comp=Z,132nm,18.4s,MS4.1,baz=299,slow=33						
QSPA	South Pole Qui	64.48	180	LR	LR	10 45 09.3	
	comp=Z,150nm,19.0s,MS4.2,baz=42,slow=33						
MJAR	Matsushiro Arr	75.18	324	P	P	10 21 19.1	+0.7
	1.1nm,0.8s,mb3.8,baz=156,slow=6.2,SNR=5.8						
MAW	Mawson	77.28	200	P	P	10 21 30.4	+0.4
	1.3nm,0.7s,mb4.0,baz=140,slow=7.9,SNR=4.1						
MAW				LR	LR	10 56 07.4	
	comp=Z,181nm,18.4s,MS4.4,baz=240,slow=36						
PETK	Petropavlovsk-	81.56	345	LR	LR	10 56 04.2	
	comp=Z,38nm,18.3s,MS3.8,baz=310,slow=34						
KSRS	Korea Array	81.67	318	LR	LR	10 51 39.0	
	comp=Z,50nm,19.0s,MS3.9,baz=145,slow=31						
SNAA	Sanae	82.88	178	eP	P	10 21 58.8	-1.3
	4.6nm,1.1s,mb4.4						
NVAR	Mina Array Bea	83.76	42	P	P	10 22 05.1	0.0
	0.5nm,0.6s,mb3.8,baz=223,slow=10.0,SNR=3.8						
TXAR	Lajitas Array	88.59	57	P	P	10 22 28.7	-0.4
	0.3nm,0.8s,mb3.7,baz=235,slow=4.4,SNR=4.5						
PDAR	Pinedale Array	91.68	43	P	P	10 22 43.3	+0.2
	0.4nm,0.8s,mb3.8,baz=197,slow=2.8,SNR=3.4						
PDAR				LR	LR	10 57 14.0	
	comp=Z,44nm,19.3s,MS3.9,baz=85,slow=31						
NB2	NORSAR Subarra	144.20	354	PKP	PKPdf	10 29 09.0	-2.1
	comp=Z,0.8nm,0.7s,baz=16,slow=3.3						
NOA	NORSAR Array B	144.20	354	PKP	PKPdf	10 29 08.9	-2.2
	comp=Z,1.1nm,0.8s,baz=14,slow=2.4,SNR=4.1						
HFS	Hagfors	144.79	351	PKP	PKPdf	10 29 10.7	-1.5
	comp=Z,2.7nm,0.6s,baz=66,slow=3.7,SNR=10						
TORD	Torodi Ar. Bea	167.47	171	PKPab	PKPab	10 30 46.8	-1.2
	comp=Z,0.9nm,0.9s,baz=176,slow=2.7,SNR=4.6						

*IDC **09** 10:22:36.1±1.9, 26.14N×6626E, h0km, mb3.9/9, mb1 3.9/9, mb1mx3.7/25, mbtmp3.9/9, MS3.2/1, Ms1 3.2/1, ms1mx2.5/26, Error ellipse: s-maj=43.8km s-min=24.7km az=157.0*
*ISCJB **09** 10:22:38.9±0.8, 2628N±0.10×6635E±006, h33km, mb3.8/9, Error ellipse: s-maj=14.6km s-min=7.1km az=166.6*
*NEIC **09** 10:22:38.9±1.9, 2639N×6620E, h10km, mb3.7/3, Error ellipse: s-maj=43.1km s-min=19.1km az=143.0*
ISC 09 10:22:41.7±0.8**, 2636N**±009×**6628E**±006**, h35km, n25, σ1s.09**/31**, mb3.8**/9**, 1C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THW	Thamme Wali	7.98	35	P	Pn	10 24 35.5	+0.3
THW				S	Sn	10 26 03.0	-1.2
CEP	Cherat	8.89	32	⇑P	Pn	10 24 48.4	+0.8
CEP				S	Sn	10 26 25.0	-1.5
KUDL	Kundal	9.25	77	eP	Pn	10 24 51.9	-0.8
KUDL				eS	Sn	10 26 30.4	-5.2
KUDL				AML	AML	10 26 34.8	
	comp=N,8.3nm,0.1s						
CHCP	Chirah Chowk	9.46	38	P	Pn	10 24 56.0	+0.6
SONA	Sohna	9.79	76	eP	Pn	10 24 58.2	-1.8
SONA				eS	Sn	10 26 42.3	-6.4
SONA				AML	AML	10 26 47.2	
	comp=E,20nm,0.1s						
SONA				AML	AML	10 26 48.5	
	comp=N,25nm,0.5s						
NDI	New Delhi	9.98	74	eP	Pn	10 25 03.0	+0.4
NDI				eS	Sn	10 26 47.0	-6.3
SMLA	Simla	10.66	61	i P	Pn	10 25 11.7	-0.2
SMLA				i S	Sn	10 27 03.2	-6.9
KLP	Kalpa	11.68	61	eP	Pn	10 25 26.0	+0.1
KLP				ex	x	10 27 10.6	
KLP				AML	AML	10 28 14.7	
	comp=E,45nm,1.0s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLP				AML	AML	10 28 14.9	
	comp=N,28nm,0.8s						
UMR	**Umm Al-Rimmam**	**16.71**	**285**	*e*P	**Pn**	**10 26 30.8**	**-2.4**
	baz=277						
UMR				AMb	AMB	10 26 32.3	
	comp=Z,30nm,0.4s,baz=277						
RDF	**Al-Radifah**	**16.80**	**283**	*e*P	**Pn**	**10 26 33.0**	**-1.3**
	baz=274						
AML	**Almayashu**	**16.87**	**19**	*e*P	**Pn**	**10 26 33.9**	**-1.1**
	comp=Z,20nm,0.8s						
NAY	**Al-Naaiem**	**17.09**	**284**	*e*P	**Pn**	**10 26 36.6**	**-1.3**
	baz=275						
EKS2	**Erkin-Say**	**17.38**	**19**	P	**Pn**	**10 26 41.8**	**+0.4**
	comp=Z,3.0nm,0.6s						
TKM2	**Tokmak 2**	**18.19**	**22**	*e*P	**Pn**	**10 26 50.7**	**-0.6**
	comp=Z,3.2nm,0.8s						
MK31	**Makanchi Array**	**24.02**	**28**	*e*P	**P**	**10 27 53.6**	**+0.5**
MKAR	**Makanchi Array**	**24.02**	**28**	P	**P**	**10 27 54.4**	**+1.2**
	comp=Z,2.8nm,0.7s,mb3.8,baz=212,slow=9.1,SNR=14						
AKTK	**Aktyubinsk**	**24.86**	**347**	P	**P**	**10 28 02.2**	**+1.4**
AKTO	**Aktyubinsk**	**24.86**	**347**	P	**P**	**10 28 02.2**	**+1.4**
	comp=Z,0.5nm,0.3s,mb3.5,baz=146,slow=3.6,SNR=3.0						
KURK	**Kurchatov**	**26.09**	**18**	P	**P**	**10 28 12.4**	**+0.5**
	comp=Z,2.5nm,0.7s,mb3.9,baz=210,slow=8.9,SNR=6.6						
KURK				LR	LR	10 40 16.7	
	comp=Z,50nm,18.2s,baz=150,slow=40						
BVAR	**Borovoye Array**	**26.81**	**6**	P	**P**	**10 28 21.5**	**+3.1**
	comp=Z,1.0nm,0.4s,mb3.7,baz=167,slow=7.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**30.79**	**22**	P	**P**	**10 28 54.7**	**+0.9**
	comp=Z,1.3nm,0.5s,mb4.0,baz=236,slow=11,SNR=5.5						
SONM	**Songino Array**	**37.94**	**45**	P	**P**	**10 29 57.6**	**+1.9**
	comp=Z,1.1nm,0.8s,mb3.6,baz=246,slow=8.7,SNR=6.7						
ARCES	**ARCESS Array B**	**49.28**	**342**	P	**P**	**10 31 26.5**	**-0.2**
	comp=Z,1.2nm,0.5s,mb4.2,baz=142,slow=7.4,SNR=7.2						
KSRS	**Korea Array**	**52.66**	**62**	P	**P**	**10 31 52.2**	**-0.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=279,slow=8.1,SNR=3.9						
TORD	**Torodi Ar. Bea**	**61.65**	**271**	P	**P**	**10 32 56.4**	**-0.1**
	comp=Z,1.1nm,0.7s,mb4.1,baz=60,slow=6.2,SNR=8.5						

*IDC **09** 10:23:32.6±2.2, 14.38N×93.56W, h0km, mb3.8/2, mb1 4.1/5, mb1mx3.7/22, mbtmp3.7/5, ML3.7/3, MS3.2/1, Ms1 3.2/1, ms1mx2.3/31, Error ellipse: s-maj=47.3km s-min=40.1km az=80.0*
*ISCJB **09** 10:23:35.1±1.1, 14.39N±0.07×94.01W±0.04, h33km, mb3.8/2, Error ellipse: s-maj=10.2km s-min=5.1km az=5.1*
*MEX **09** 10:23:35.9±1.0, 14.28N×94.00W, h20km±62km, MD4.5*
*NEIC **09** 10:23:36.6, 14.35N×93.97W, h20km, mb3.7/2, After MEX.*
ISC 09 10:23:36.3±1.1**, 14.36N**±0.08×**93.96W**±0.04**, h35**km**, n28,**
σ**1^{s}34**/42**, mb3.8**/2**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.73**	**71**	*i* P	**Pn**	**10 24 02.2**	**-1.6**
THIG				*i* S	**Sn**	**10 24 24.0**	**-0.7**
TGIG		**2.54**	**18**	*i* P	**Pn**	**10 24 15.1**	**+0.1**
TGIG				*i* S	**Sn**	**10 24 45.1**	**+0.3**
CCIG	**Comitan**	**2.60**	**42**	*i* P	**Pn**	**10 24 16.7**	**+0.8**
CCIG				*i* S	**Sn**	**10 24 46.2**	**0.0**
SCX	**San Cristobal**	**2.69**	**28**	*e*P	**Pn**	**10 24 18.5**	**+1.4**
SCX				*i* S	**Sn**	**10 24 49.5**	**+1.1**
CMIG	**Matias Romero**	**2.86**	**342**	Pn	**Pn**	**10 24 19.1**	**-0.4**
	7.5nm,0.3s,baz=160,slow=12,SNR=103						
CMIG				Sn	**Sn**	**10 24 50.9**	**-1.8**
	25nm,0.3s,baz=252,slow=22,SNR=9.9						
CMIG	**Matias Romero**	**2.86**	**342**	*i* P	**Pn**	**10 24 18.7**	**-0.7**
CMIG				*i* S	**Sn**	**10 24 52.6**	**-0.1**
CMIG	**Matias Romero**	**2.86**	**342**	*i* P	**Pn**	**10 24 18.7**	**-0.8**
CMIG				Pn	**Pn**	**10 24 19.1**	**-0.4**
CMIG				*i* S	**Sn**	**10 24 50.7**	**-2.0**
CMIG				Sn	**Sn**	**10 24 50.9**	**-1.8**
TUIG	**Tuzandepetl**	**3.69**	**353**	*i* P	**Pn**	**10 24 27.9**	**-2.9**
TUIG	**Tuzandepetl**	**3.69**	**353**	*i* P	**Pn**	**10 24 25.5**	**-5.3**
OXX	**Oaxaca**	**3.80**	**316**	*e*P	**Pn**	**10 24 34.5**	**+2.1**
VHO	**Vista Hermosa**	**3.80**	**316**	*i* P	**Pn**	**10 24 31.6**	**-0.8**
VHO				*i* S	**Sn**	**10 25 14.7**	**-1.1**
VHO	**Vista Hermosa**	**3.80**	**316**	*i* P	**Pn**	**10 24 33.9**	**+1.5**
VHO				*i* S	**Sn**	**10 25 14.3**	**-1.6**
PNIG	**Pinotepa**	**4.50**	**297**	*i* P	**Pn**	**10 24 41.9**	**-0.1**
PNIG				*i* S	**Sn**	**10 25 30.7**	**-2.5**
PNIG	**Pinotepa**	**4.50**	**297**	*i* P	**Pn**	**10 24 38.6**	**-3.4**
PNIG				*i* S	**Sn**	**10 25 24.9**	**-8.3**
TPIG	**Tehuac#an**	**5.20**	**321**	*i* P	**Pn**	**10 24 54.1**	**+2.5**
TPIG				*i* S	**Sn**	**10 25 50.3**	**-0.1**
PPM	**Popocatepetl**	**6.48**	**317**	*i* P	**Pn**	**10 25 07.8**	**-1.3**
PPM				*e*P		10 25 10.0	
PPM				*i* S	**Sn**	**10 26 22.8**	**+0.9**
PPM	**Popocatepetl**	**6.48**	**317**	*e*P	**Pn**	**10 25 10.0**	**+0.8**
PPM				*i* S	**Sn**	**10 26 09.9**	**-12**
IIO	**Organos**	**6.92**	**319**	*i* P	**Pn**	**10 25 19.0**	**+3.8**
PTVM	**Pico Tres Padr**	**7.17**	**317**	*i* P	**Pn**	**10 25 12.6**	**-6.2**
TEIG	**Tepich**	**7.97**	**42**	Pn	**Pn**	**10 25 27.1**	**-2.5**
	2.9nm,0.3s,baz=269,slow=3.6,SNR=25						
TEIG				Sn	**Sn**	**10 26 51.4**	**-7.3**
	2.2nm,0.3s,baz=37,slow=7.8,SNR=2.7						
TEIG				LR	LR	10 28 59.8	
	comp=Z,178nm,18.8s,baz=159,slow=42						
JCT	**Junction City**	**16.93**	**342**	P	**Pn**	**10 27 34.3**	**+3.9**
	4.9nm,0.8s						
TXAR	**Lajitas Array**	**17.40**	**331**	P	**Pn**	**10 27 41.2**	**+4.8**
	0.0nm,0.3s,baz=155,slow=13,SNR=7.7						
MIAR	**Mount Ida**	**20.11**	**1**	Pn	**P**	**10 28 07.3**	**+0.3**
	3.1nm,0.6s						
NVAR	**Mina Array Bea**	**32.22**	**323**	P	**P**	**10 30 06.0**	**+4.7**
	0.8nm,0.8s,mb3.6,baz=148,slow=8.6,SNR=5.3						
YKA	**Yellowknife Ar**	**50.26**	**348**	P	**P**	**10 32 30.0**	**+1.1**
	1.1nm,0.6s,mb4.1,baz=154,slow=7.2,SNR=4.6						
WRA	**Warramunga Arr**	**133.64**	**256**	PKP	PKPdf	10 42 51.7	+1.7
	0.4nm,0.8s,baz=93,slow=1.4,SNR=3.1						
WRA	**Warramunga Arr**	**133.64**	**256**	PKP	PKPdf	10 42 51.7	+1.6
ASAR	**Alice Springs**	**133.99**	**251**	PKP	PKPdf	10 42 53.5	+2.9
	0.2nm,0.8s,baz=108,slow=3.0,SNR=3.0						

*IDC **09** 10:25:28.5±1.9, 31.13N×137.60E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.4/21, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=254.9km s-min=31.6km az=95.0*
*JMA **09** 10:25:44.5±0.4, 32.97N×137.92E, h370km, M3.1*
*ISCJB **09** 10:25:47.8±0.7, 33.1N±0.1×137.9E±0.1, h339km±13km, mb3.0/2, Error ellipse: s-maj=22.9km s-min=12.1km az=158.0*
ISC 09 10:25:48.9±0.7**, 33.1N**±0.1×**137.9E**±0.1**, h330**km±13km**, n17,**
σ**0^{s}83**/21**, mb3.0**/2**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	**Ise**	**1.61**	**322**	P	**Pn**	**10 26 36.4**	**+0.8**
JWZ	**Kozaga**	**1.87**	**283**	P	**Pn**	**10 26 37.3**	**-0.1**
JWY	**Kouya**	**2.21**	**300**	P	**Pn**	**10 26 40.1**	**+0.2**
JOD2	**Odawara 2**	**2.36**	**24**	P	**Pn**	**10 26 42.3**	**+1.2**
JYN	**Shimob**	**2.44**	**13**	P	**Pn**	**10 26 43.1**	**+1.4**
JGM	**Miyama**	**2.75**	**340**	P	**Pn**	**10 26 44.9**	**+0.5**
JAI	**Aioi**	**2.96**	**284**	P	**Pn**	**10 26 45.7**	**-0.6**
BSO1	**Boso 1**	**2.99**	**58**	P	**Pn**	**10 26 46.0**	**-0.6**
BSO1				*e*S	**S**	**10 27 32.7**	**-0.2**
JWT	**Wachi**	**2.99**	**317**	P	**Pn**	**10 26 46.0**	**-0.6**
JRY	**Ryogami san**	**3.01**	**16**	P	**Pn**	**10 26 47.7**	**+0.9**
JRY				*e*S	**S**	**10 27 32.6**	**-0.6**
JMN	**Monobe**	**3.41**	**281**	P	**Pn**	**10 26 50.0**	**-0.7**
MJAR	**Matsushiro Arr**	**3.43**	**4**	Pn	**Pn**	**10 26 50.6**	**-0.2**
	0.7nm,0.3s,baz=188,slow=10,SNR=18						
MAT	**Matsushiro**	**3.43**	**4**	P	**Pn**	**10 26 51.4**	**+0.6**
MAT				*e*S	**S**	**10 27 41.3**	**+0.8**
MAT	**Matsushiro**	**3.43**	**4**	P	**Pn**	**10 26 50.8**	**0.0**
JAG	**Ashikaga**	**3.54**	**21**	P	**Pn**	**10 26 51.0**	**-0.9**
JAG				*e*S	**S**	**10 27 39.6**	**-3.0**
WRA	**Warramunga Arr**	**52.87**	**184**	P	**P**	**10 34 31.2**	**-0.6**
	0.3nm,0.3s,mb3.1,baz=360,slow=7.6,SNR=15						
ASAR	**Alice Springs**	**56.59**	**184**	P	**P**	**10 34 58.8**	**+0.5**
	0.5nm,0.8s,mb2.9,baz=20,slow=12,SNR=5.8						

*ISCJB **09** 10:36:30.9±2.1, 7.0S±0.3×125.5E±0.3, h490km±21km, mb3.6/2, Error ellipse: s-maj=56.4km s-min=23.4km az=141.6*
*IDC **09** 10:36:30.9±3.6, 6.93S×125.64E, h472km±49km, mb2.8/1, mb1 2.9/5, mb1mx2.7/18, mbtmp2.8/5, Error ellipse: s-maj=93.8km s-min=23.3km az=52.0*
*NEIC **09** 10:36:30.5±2.5, 6.92S×125.65E, h468km±31km, mb4.0/1, Error ellipse: s-maj=43.9km s-min=25.1km az=62.0*
ISC 09 10:36:31.1±2.1**, 7.0S**±0.2×**125.7E**±0.3**, h475**km±21km**, n8,**
σ**0^{s}29**/9**, mb3.6**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.79**	**211**	P	**P**	**10 37 46.6**	**+0.5**
	18nm,0.3s,baz=38,slow=1.5,SNR=17						
BATI				S	**S**	**10 38 46.9**	**-0.2**
	21nm,0.3s,baz=254,slow=21,SNR=21						
FITZ	**Fitzroy Crossi**	**11.08**	**180**	P	**P**	**10 38 59.8**	**-0.2**
	0.4nm,0.3s,baz=5.9,slow=10,SNR=21						
FITZ	**Fitzroy Crossi**	**11.08**	**180**	*e*P	**P**	**10 38 59.8**	**-0.2**
WRA	**Warramunga Arr**	**15.42**	**148**	P	**P**	**10 39 46.0**	**-0.2**
	0.3nm,0.3s,baz=325,slow=11,SNR=34						
WB2	**Warramunga Arr**	**15.42**	**148**	*e*P	**P**	**10 39 46.1**	**-0.2**
ASAR	**Alice Springs**	**18.41**	**155**	P	**P**	**10 40 17.1**	**+0.5**
	0.3nm,0.3s,baz=330,slow=8.4,SNR=31						
CASY	**Casey**	**60.15**	**187**	*e*P	**P**	**10 45 51.5**	**0.0**
	5.5nm,0.9s,mb4.0						
MKAR	**Makanchi Array**	**65.89**	**329**	P	**P**	**10 46 28.8**	**-0.2**
	0.4nm,0.6s,mb3.2,baz=128,slow=6.5,SNR=5.1						

*GII **09** 11:15:11.2±0.0, 29.74N×36.33E, h0km, ML1.6/3, EXPLOSION*
*CSEM **09** 11:15:12.8, 30.11N×36.35E, h48km, ML3.0, After SNSN*
*SGS **09** 11:15:12.8, 30.11N×36.35E, h48km*
ISC 09 11:15:11.4±1.3**, 29.82N**±0.04×**36.38E**±0.08**, h0**km**, n13,**
σ**1^{s}06**/17**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.18**	**281**	Pg	**Pg**	**11 15 32.7**	**-1.4**
EIL	**Elat**	**1.25**	**263**	Pg	**Pg**	**11 15 34.7**	**-0.6**
EIL				Sg	**Sg**	**11 15 51.4**	**-0.2**
HQLS		**1.26**	**246**	P	**Pg**	**11 15 35.0**	**-0.5**
ZFRI	**Zfri**	**1.27**	**305**	Pg	**Pg**	**11 15 34.8**	**-0.9**
ZFRI				Sg	**Sg**	**11 15 53.5**	**+1.3**
MBRI	**Mt Berech**	**1.27**	**269**	Pg	**Pg**	**11 15 34.5**	**-1.3**
PRNI	**Paran**	**1.30**	**294**	Pg	**Pg**	**11 15 35.1**	**-1.2**
PRNI				Sg	**Sg**	**11 15 54.6**	**+1.4**
JLOS		**1.33**	**216**	P	**Pg**	**11 15 37.4**	**+0.5**
JLOS		**1.33**	**216**	P	**Pg**	**11 15 37.4**	**+0.5**
JLOS				S	**Sg**	**11 15 55.9**	**+1.7**
KRMI	**Paran Flat**	**1.46**	**282**	Pn	**Pn**	**11 15 37.6**	**-1.4**
MZDA	**Masada**	**1.72**	**330**	Pn	**Pn**	**11 15 43.1**	**+0.5**
BDAS	**Al Bad'**	**1.78**	**219**	P	**Pn**	**11 15 43.4**	**0.0**
DSI	**Dead Sea**	**1.94**	**334**	Pn	**Pn**	**11 15 47.1**	**+1.4**
KZIT	**Kziot**	**2.02**	**303**	Pn	**Pn**	**11 15 47.5**	**+0.8**

*DJA **09** 11:29:51, 2.71S×126.84E, h169km, MLv3.8/5*
*IDC **09** 11:29:56.9±3.7, 2.92S×126.62E, h55km±36km, mb3.6/4, mb1 3.9/6, mb1mx3.7/17, mbtmp3.8/6, ML4.2/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/20, Error ellipse: s-maj=28.5km s-min=9.7km az=66.0*
*ISCJB **09** 11:29:58.6±2.9, 3.1S±0.1×126.49E±0.10, h97km±31km, mb3.9/5, Error ellipse: s-maj=23.2km s-min=10.6km az=38.1*
*NEIC **09** 11:30:00.7±1.8, 3.06S×126.50E, h96km±18km, mb4.1/2, Error ellipse: s-maj=21.5km s-min=9.0km az=51.0*
ISC 09 11:29:57.7±2.0**, 2.96S**±0.08×**126.58E**±0.09**, h65**km±21km**,**
n18, σ**1^{s}03**/23**, mb3.9**/5**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**7.11**	**253**	P	**Pn**	**11 31 40.2**	**+1.0**
	4.4nm,0.3s,baz=120,slow=6.1,SNR=29						
KAPI				S	**Sn**	**11 32 58.5**	**-0.2**
	0.7nm,0.3s,baz=133,slow=16,SNR=2.2						
KAPI				LR	LR	11 34 23.0	
	comp=Z,100nm,21.3s,baz=110,slow=37						
KAPI	**Kappang**	**7.11**	**253**	*e*Pn	**Pn**	**11 31 40.1**	**+0.9**
KAPI				S	**Sn**	**11 32 58.5**	**-0.2**
KAPI				LR	LR	11 34 23.0	
KAKA	**Kakadu**	**11.29**	**149**	*e*Pn	**Pn**	**11 32 38.9**	**+2.6**
FITZ	**Fitzroy Crossi**	**15.07**	**183**	*e*P	**Pn**	**11 33 33.1**	**+6.1**
	3.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**15.07**	**183**	P	**Pn**	**11 33 31.8**	**+4.8**
	0.2nm,0.3s,baz=11,slow=12,SNR=6.7						
FITZ	**Fitzroy Crossi**	**15.07**	**183**	*e*P	**Pn**	**11 33 31.8**	**+4.8**
WRAB	**Tennant Creek**	**18.49**	**156**	*e*P	**Pn**	**11 34 08.2**	**-1.3**
	4.0nm,0.8s						
WRA	**Warramunga Arr**	**18.50**	**156**	P	**Pn**	**11 34 08.5**	**-1.1**
	0.6nm,0.3s,baz=339,slow=12,SNR=59						
WRA				S	**S**	**11 37 37.5**	**+1.1**
	0.0nm,0.3s,baz=331,slow=21,SNR=3.3						
WB2	**Warramunga Arr**	**18.50**	**156**	*e*P	**Pn**	**11 34 08.4**	**-1.2**
WB2	**Warramunga Arr**	**18.50**	**156**	*e*P	**Pn**	**11 34 08.4**	**-1.2**
MBWA	**Marble Bar**	**19.28**	**200**	P	**Pn**	**11 34 17.6**	**-1.2**
ASAR	**Alice Springs**	**21.77**	**162**	P	**P**	**11 34 43.8**	**-0.4**
	3.5nm,0.7s,mb3.8,baz=343,slow=10,SNR=56						
ASAR				S	**S**	**11 38 43.1**	**+1.9**
	0.7nm,0.9s,baz=335,slow=21,SNR=2.9						
ASAR	**Alice Springs**	**21.77**	**162**	P	**P**	**11 34 43.8**	**-0.4**
ASAR				S	**S**	**11 38 43.1**	**+1.9**
KSRS	**Korea Array**	**40.23**	**2**	P	**P**	**11 37 27.6**	**-0.4**
	1.1nm,0.9s,mb3.7,baz=270,slow=36,SNR=3.4						
ULN	**Ulaanbaatar**	**53.43**	**344**	*e*P	**P**	**11 39 10.9**	**0.0**
	3.1nm,0.8s,mb4.4						
SONM	**Songino Array**	**53.59**	**343**	P	**P**	**11 39 12.1**	**+0.1**
	0.5nm,0.7s,mb3.7,baz=148,slow=8.0,SNR=4.7						
MK31	**Makanchi Array**	**63.01**	**327**	*e*P	**P**	**11 40 18.2**	**+0.4**
MK31				*e*		11 40 27.3	
MKAR	**Makanchi Array**	**63.01**	**327**	P	**P**	**11 40 18.5**	**+0.7**
	1.3nm,0.7s,mb4.0,baz=126,slow=8.2,SNR=16						

*CSEM **09** 12:17:59.9±0.6, 37.46N×13.96W, h10km, ML1.8, Error ellipse: s-maj=14.4km s-min=8.2km az=41.0*
*NEIC **09** 12:18:00.5, 37.20N×13.81W, h0km, MG3.5(MDD), After MDD.*
*MDD **09** 12:18:00.1±3.0, 37.09N×13.79W, h0km, mb3.7/5, Error ellipse: s-maj=29.4km s-min=24.4km az=168.0, PRIMO*
*INMG **09** 12:18:01.0±1.2, 36.76N×14.14W, h10km, ML1.8, Error ellipse: s-maj=13.6km s-min=9.8km az=137.0*
ISC 09 12:18:03.2±1.4**, 37.04N**±0.10×**13.47W**±0.09**, h10**km**, n33,**
σ**0^{s}81**/56**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.72**	**87**	*e*Pn	**Pn**	**12 19 00.1**	**-0.5**
PFVI				*e*Sn	**Sn**	**12 19 43.8**	**-0.6**
PTEO	**Sao Teotonio**	**3.82**	**81**	*e*Sn	**Sn**	**12 19 47.4**	**+0.4**
PMAFR	**Mafra**	**3.83**	**59**	*e*Pn	**Pn**	**12 19 01.8**	**-0.3**
PMAFR				*e*Sn	**Sn**	**12 19 48.5**	**+1.4**
MORF	**Marmelete**	**3.86**	**85**	*e*Pn	**Pn**	**12 19 02.7**	**+0.1**
MORF				*e*Sn	**Sn**	**12 19 48.8**	**+0.8**
MORF				A		12 19 49.9	
	1.7nm,0.1s						
MORF	**Marmelete**	**3.86**	**85**	Pn	**Pn**	**12 19 02.7**	**+0.1**
MORF				Sn	**Sn**	**12 19 48.8**	**+0.8**
	1.7nm,0.1s						
MORF	**Marmelete**	**3.86**	**85**	*e*Pn	**Pn**	**12 19 02.7**	**+0.1**
MORF				*e*Sn	**Sn**	**12 19 48.8**	**+0.8**
EVO	**Evora**	**4.58**	**69**	*e*Sn	**Sn**	**12 20 05.4**	**-0.2**
EVO				A		12 20 09.3	
	1.9nm,0.1s						
EVO	**Evora**	**4.58**	**69**	*e*Sn	**Sn**	**12 20 05.4**	**-0.2**
	1.9nm,0.1s						
PVAQ	**Vaqueiros**	**4.61**	**84**	*e*Pn	**Pn**	**12 19 12.2**	**-0.6**
PVAQ				*e*Sn	**Sn**	**12 20 06.2**	**-0.2**
PTOM	**Tomar**	**4.74**	**56**	*e*Sn	**Sn**	**12 20 10.2**	**+0.5**
EGRO	**El Granado**	**4.80**	**82**	P	**Pn**	**12 19 15.1**	**-0.4**
	0.2nm,0.1s,SNR=4.0						
EGRO				S	**Sn**	**12 20 10.6**	**-0.6**
	0.5nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.80**	**82**	P	**Pn**	**12 19 15.3**	**-0.2**
	0.2nm,0.1s,SNR=4.0						
EGRO				S	**Sn**	**12 20 12.2**	**+1.0**
	0.5nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.80**	**82**	P	**Pn**	**12 19 15.3**	**-0.2**
EGRO				S	**Sn**	**12 20 12.2**	**+1.0**
PESTR	**Estremoz**	**5.00**	**67**	*e*Sn	**Sn**	**12 20 16.7**	**+0.7**
PESTR				A		12 20 21.6	
	0.5nm,0.2s						
PESTR	**Estremoz**	**5.00**	**67**	*e*Sn	**Sn**	**12 20 16.7**	**+0.7**
	0.5nm,0.2s						
PBAR	**Barrancos**	**5.23**	**76**	*e*Pn	**Pn**	**12 19 22.5**	**+1.1**
PBAR				*e*Sn	**Sn**	**12 20 21.3**	**-0.5**
PMRV	**Marv??o**	**5.35**	**62**	*e*Pn	**Pn**	**12 19 23.0**	**0.0**
PMRV				*e*Sn	**Sn**	**12 20 24.3**	**-0.4**
EBAD	**Badajoz**	**5.39**	**69**	P	**Pn**	**12 19 23.4**	**-0.1**
	0.1nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**12 20 24.8**	**-0.9**
	0.2nm,0.0s,SNR=7.9						
EBAD	**Badajoz**	**5.39**	**69**	P	**Pn**	**12 19 23.3**	**-0.3**
	0.1nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**12 20 24.5**	**-1.2**
	0.6nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**5.39**	**69**	P	**Pn**	**12 19 23.3**	**-0.3**
EBAD				S	**Sn**	**12 20 24.5**	**-1.1**
EMIN	**Mina Concepcio**	**5.46**	**80**	S	**Sn**	**12 20 25.8**	**-1.7**
	0.2nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.46**	**80**	S	**Sn**	**12 20 25.8**	**-1.7**
	0.2nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.39**	**39**	P	**Pn**	**12 19 35.7**	**-1.6**
	0.3nm,0.1s,SNR=4.0						
ELOB				S	**Sn**	**12 20 44.6**	**-5.6**
	0.3nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.39**	**39**	P	**Pn**	**12 19 35.8**	**-1.5**
	0.3nm,0.1s,SNR=4.0						
ELOB				S	**Sn**	**12 20 44.3**	**-5.9**
	0.3nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.39**	**39**	P	**Pn**	**12 19 35.8**	**-1.5**
ELOB				S	**Sn**	**12 20 44.3**	**-5.9**
ECAB	**El Cabril**	**6.48**	**78**	P	**Pn**	**12 19 39.5**	**+0.9**
	0.4nm,0.0s,SNR=7.9						
ECAB				S	**Sn**	**12 20 53.1**	**+0.5**
	0.1nm,0.0s,SNR=4.0						
ECAB	**El Cabril**	**6.48**	**78**	P	**Pn**	**12 19 39.5**	**+0.9**
	SNR=7.9						
ECAB				S	**Sn**	**12 20 53.1**	**+0.5**
	SNR=4.0						
ECAB	**El Cabril**	**6.48**	**78**	P	**Pn**	**12 19 39.5**	**+0.9**
ECAB				S	**Sn**	**12 20 53.1**	**+0.5**
ECAL	**Calabor**	**7.15**	**45**	S	**Sn**	**12 21 03.6**	**-5.4**
	0.2nm,0.1s,SNR=4.0						
ECAL	**Calabor**	**7.15**	**45**	S	**Sn**	**12 21 04.2**	**-4.8**
	0.2nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**7.15**	**78**	P	**Pn**	**12 19 49.6**	**+1.8**
	0.1nm,0.1s,SNR=4.0						
EADA				S	**Sn**	**12 21 08.7**	**-0.4**
	0.1nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**7.15**	**78**	P	**Pn**	**12 19 49.4**	**+1.6**
	0.1nm,0.1s,SNR=4.0						
EADA				S	**Sn**	**12 21 08.6**	**-0.5**
	0.4nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**7.15**	**78**	P	**Pn**	**12 19 49.4**	**+1.6**
EADA				S	**Sn**	**12 21 08.6**	**-0.5**

*ISCJB **09** 12:19:45.7±0.5, 38.85N±0.02×122.81W±0.04, h9km±4km, Error ellipse: s-maj=4.8km s-min=3.0km az=166.0*
*IDC **09** 12:19:45.3±1.8, 38.76N×122.99W, h0km, mb3.8/1, mb1 3.6/7, mb1mx3.5/26, mbtmp3.3/7, ML3.1/6, MS3.1/4, Ms1 3.1/4, ms1mx2.7/35, Error ellipse: s-maj=19.8km s-min=10.4km az=61.0*
*NEIC **09** 12:19:46.0, 38.80N×122.88W, h0km, ML3.5(NCEDC), After NCEDC.*
NEIC Felt [IV] at Middletown, [III] at Cloverdale and [II] at Lakeport. Also felt at Geyserville, Hopland and Kelseyville.
ISC 09 12:19:45.7±0.4**, 38.85N**±0.02×**122.79W**±0.03**, h2**km±4km**, n70,**
σ**1^{s}25**/79**, 31C-17D, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPS	**Hopland**	**0.26**	**302**	⇓S	**Sg**	**12 19 55.2**	**+1.0**
	baz=0.2						
HOPS	**Hopland**	**0.26**	**302**	⇑*i*Pg	**Pg**	**12 19 51.2**	**+0.4**
HOPS				*e*Sg	**Sg**	**12 19 55.2**	**+1.0**
MNRC	**McLaughlin Nat**	**0.27**	**85**	⇑P	**Pg**	**12 19 52.8**	**+1.9**
	baz=0.3,SNR=1000						
CVS	**Carmenet Viney**	**0.57**	**153**	⇑P	**Pg**	**12 19 57.4**	**+0.8**
	baz=0.6,SNR=1000						
Q03C	**Winters**	**0.64**	**110**	⇓P	**Pg**	**12 20 01.1**	**+3.0**
	baz=0.7						
MCCM	**Marconi Confer**	**0.71**	**186**	P	**Pg**	**12 20 00.1**	**+0.7**
	baz=0.7,SNR=1000						
MCCM				⇑S	**Sg**	**12 20 10.3**	**+1.7**
	baz=0.7						
MCCM	**Marconi Confer**	**0.71**	**186**	⇓*i*Pg	**Pg**	**12 19 60.0**	**+0.6**
GASB	**Alder Springs**	**0.80**	**4**	⇑P	**Pg**	**12 20 02.8**	**+1.6**
	baz=0.8,SNR=1000						
KCPM	**Cahto Peak**	**1.04**	**324**	*e*Pg	**Pg**	**12 20 05.2**	**-0.4**
KCPM				*e*Sn	**Sn**	**12 20 22.4**	**+0.1**
KIPM	**Iron Peak**	**1.09**	**331**	*e*Pg	**Pg**	**12 20 06.3**	**-0.5**
Q04C	**Lincoln**	**1.10**	**90**	⇑P	**Pg**	**12 20 07.0**	**+0.2**
	baz=1.2						
OHCM	**Honcut**	**1.12**	**64**	*e*Pg	**Pg**	**12 20 07.4**	**+0.1**
BDM	**Black Diamond**	**1.15**	**141**	⇑P	**Pg**	**12 20 07.5**	**-0.3**
	baz=1.2,SNR=71						
FARB	**Farallon Islan**	**1.17**	**188**	⇓P	**Pg**	**12 20 06.6**	**-1.5**
	baz=1.1,SNR=54						
FARB				⇑S	**Sg**	**12 20 23.3**	**+0.1**
	baz=1.1						
ORV	**Oroville**	**1.22**	**55**	⇑P	**Pg**	**12 20 08.8**	**-0.4**
	baz=1.3						
O02C	**Red Bluff**	**1.32**	**360**	⇑P	**Pg**	**12 20 08.7**	**-2.4**
	baz=1.3,SNR=311						
WENL	**Wente Vineyard**	**1.47**	**146**	⇑P	**Pn**	**12 20 12.2**	**-1.1**
	baz=1.5,SNR=12						
JRSC	**Jasper Ridge**	**1.51**	**163**	⇑P	**Pn**	**12 20 11.4**	**-2.4**
	baz=1.5						
JRSC				⇑Sb	**Sb**	**12 20 35.1**	**+1.1**
	baz=1.5						
O01C	**Eel River Cons**	**1.51**	**328**	⇑P	**Pn**	**12 20 11.8**	**-2.0**
	baz=1.5						
R04C	**Big Horse Ranc**	**1.57**	**112**	⇑P	**Pn**	**12 20 13.3**	**-1.3**
	baz=1.6						
LAVA	**Lava Cap Winer**	**1.60**	**93**	⇓P	**Pn**	**12 20 15.0**	**-0.1**
	baz=1.7						
WDC	**Whiskeytown Da**	**1.73**	**6**	⇓Pb	**Pb**	**12 20 16.8**	**-1.5**
	baz=1.8						
WDC	**Whiskeytown Da**	**1.73**	**6**	*e*Pn	**Pn**	**12 20 17.0**	**+0.1**
WDC				*e*Pg	**Pg**	**12 20 20.0**	**+1.0**
P05C	**Yuba Gap, Truc**	**1.75**	**75**	⇓Pb	**Pb**	**12 20 18.7**	**+0.1**
	baz=1.8,SNR=22						
O05C	**Quincy**	**1.82**	**52**	⇓Pb	**Pb**	**12 20 19.5**	**-0.3**
	baz=1.9,SNR=11						
O04C	**Chester**	**1.97**	**41**	⇓Pb	**Pb**	**12 20 21.4**	**-0.9**
	baz=2.0,SNR=78						
N02C	**Big Bar**	**2.01**	**349**	⇑Pb	**Pb**	**12 20 21.4**	**-1.5**
	baz=2.0						
CMB	**Columbia Colle**	**2.06**	**113**	⇓Pn	**Pn**	**12 20 21.7**	**+0.5**
	baz=2.1,SNR=95						
CMB	**Columbia Colle**	**2.06**	**113**	⇑*e*Pn	**Pn**	**12 20 21.6**	**+0.4**
CMB				*e*Sn	**Sn**	**12 20 46.3**	**-1.2**
R05C	**Kirkwood Meado**	**2.12**	**93**	⇑Pb	**Pb**	**12 20 24.0**	**-0.9**
	baz=2.2,SNR=179						
BEKR	**Beckwourth**	**2.14**	**61**	⇓Pb	**Pb**	**12 20 24.3**	**-0.8**
	baz=2.2,SNR=55						
PACP	**Pacheco Peak**	**2.19**	**147**	⇑Pn	**Pn**	**12 20 22.4**	**-0.7**
	baz=2.2						
SAO	**San Andreas Ge**	**2.34**	**153**	*e*Pn	**Pn**	**12 20 23.3**	**-1.9**
ELFS	**Eagle Lake Fie**	**2.37**	**41**	⇑Pb	**Pb**	**12 20 27.7**	**-1.5**
	baz=2.4						
P06A	**Stead Airport,**	**2.39**	**69**	⇑Pb	**Pb**	**12 20 28.8**	**-0.6**
	baz=2.5						
WCN	**Washoe City**	**2.40**	**78**	⇓Pb	**Pb**	**12 20 28.7**	**-0.9**
	baz=2.5,SNR=51						
S05C	**Merced**	**2.46**	**127**	⇓Pn	**Pn**	**12 20 26.3**	**-0.4**
	baz=2.5,SNR=10.0						
S06C	**San Francisco**	**2.51**	**112**	⇓Pn	**Pn**	**12 20 28.5**	**+1.0**
	baz=2.5,SNR=119						
M02C	**Callahan**	**2.54**	**359**	⇑Pb	**Pb**	**12 20 31.2**	**-0.7**
	baz=2.6						
R06C	**Coleville**	**2.63**	**96**	⇑Pb	**Pb**	**12 20 32.4**	**-1.2**
	baz=2.7						
PAHR	**Pah Rah Range**	**2.77**	**71**	*e*Pn	**Pn**	**12 20 33.0**	**+1.8**
KRMB	**Red Mountain**	**2.80**	**343**	*e*Pn	**Pn**	**12 20 31.7**	**+0.2**
YBH	**Yreka Blue Hor**	**2.88**	**1**	Pn	**Pn**	**12 20 35.2**	**+2.6**
	0.5nm,0.3s,baz=198,slow=8.6,SNR=14						
YBH				Lg		12 21 19.4	
	baz=120,slow=20,SNR=2.3						
YBH				LR	LR	12 21 53.2	
	comp=Z,240nm,20.5s,baz=88,slow=43						
YBH	**Yreka Blue Hor**	**2.88**	**1**	*e*Pn	**Pn**	**12 20 34.8**	**+2.2**
M06C	**Likely Place G**	**2.94**	**36**	⇑Pn	**Pn**	**12 20 33.3**	**-0.1**
	baz=3.0,SNR=9.8						
U04C	**Hernandez Rese**	**2.95**	**147**	⇑Pn	**Pn**	**12 20 33.4**	**-0.2**
	baz=3.0						
R07C	**Lee Vining**	**3.03**	**103**	⇑Pn	**Pn**	**12 20 33.9**	**-0.8**
	baz=3.1						
V03C	**Hunter Liggett**	**3.08**	**156**	⇑Pn	**Pn**	**12 20 33.5**	**-1.9**
	baz=3.1						
Q07A	**Schurz**	**3.11**	**87**	⇓Pb	**Pb**	**12 20 41.0**	**-0.7**
	baz=3.2						
O07A	**Toulon**	**3.29**	**65**	⇑Pn	**Pn**	**12 20 39.5**	**+1.2**
	baz=3.4,SNR=12						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLAC	**Mammoth Lakes**	**3.34**	**110**	⇑Pn	**Pn**	**12 20 38.7**	**-0.2**
	baz=3.4						
PKD	**Parkfield**	**3.41**	**148**	⇓Pn	**Pn**	**12 20 39.0**	**-0.8**
	baz=3.4						
N07B	**Gerlach**	**3.51**	**56**	⇑Pn	**Pn**	**12 20 41.4**	**+0.1**
	baz=3.6						
NVAR	**Mina Array Bea**	**3.54**	**95**	Pn	**Pn**	**12 20 44.1**	**+2.5**
	1.1nm,0.3s,baz=270,slow=15,SNR=21						
NVAR				Pg	**Pg**	**12 20 52.4**	**-1.1**
	5.3nm,0.3s,baz=266,slow=18,SNR=43						
NVAR				Lg		12 21 41.8	
	2.4nm,0.3s,baz=259,slow=31,SNR=3.6						
MOD	**Modoc**	**3.59**	**31**	*e*Pn	**Pn**	**12 20 45.3**	**+3.0**
HUMO	**Hull Mountain**	**3.75**	**358**	*e*Pn	**Pn**	**12 20 45.9**	**+1.3**
HUMO				*e*Pg	**Pg**	**12 20 56.0**	**-1.6**
HUMO				*e*Sg	**Sg**	**12 21 49.9**	**+3.7**
L07A	**Adell**	**4.11**	**39**	⇑Pn	**Pn**	**12 20 51.4**	**+1.9**
	baz=4.2,SNR=5.5						
TPH	**Tonopah**	**4.44**	**98**	*e*Pg	**Pg**	**12 21 07.2**	**-3.5**
ISA	**Isabella**	**4.69**	**131**	*e*Pn	**Pn**	**12 20 57.8**	**+0.3**
WVOR	**Wild Horse Val**	**4.77**	**40**	*e*Pn	**Pn**	**12 21 00.9**	**+2.4**
ARVC	**Arvin**	**4.89**	**138**	⇓Pn	**Pn**	**12 21 00.4**	**+0.2**
	baz=4.9						
TPNV	**Topopah Spring**	**5.51**	**108**	Pn	**Pn**	**12 21 11.3**	**+2.5**
	14nm,0.7s						
GSC	**Goldstone**	**5.95**	**125**	Pn	**Pn**	**12 21 16.7**	**+1.8**
	5.9nm,0.9s						
ELK	**Elko**	**6.11**	**70**	Pn	**Pn**	**12 21 19.4**	**+2.4**
	0.1nm,0.3s,baz=248,slow=11,SNR=8.5						
ELK				Lg		12 23 01.8	
	0.2nm,0.3s,baz=35,slow=11,SNR=3.7						
ELK				LR	LR	12 23 43.6	
	comp=Z,86nm,20.9s,baz=102,slow=38						
PFO	**Pinyon Flat Ob**	**7.32**	**134**	Pn	**Pn**	**12 21 34.6**	**+1.0**
	0.3nm,0.3s,baz=318,slow=12,SNR=4.4						
PFO				LR	LR	12 24 41.9	
	comp=Z,109nm,19.4s,baz=307,slow=40						
PDAR	**Pinedale Array**	**10.76**	**64**	Pn	**Pn**	**12 22 28.4**	**+7.6**
	0.0nm,0.3s,baz=249,slow=12,SNR=7.9						
LPIG	**La Paz**	**18.12**	**141**	LR	LR	12 31 35.4	
	comp=Z,146nm,18.9s,baz=2.1,slow=39						
TXAR	**Lajitas Array**	**18.43**	**115**	Pn	**Pn**	**12 24 06.5**	**+4.1**
	0.0nm,0.3s,baz=297,slow=8.2,SNR=7.8						
ULM	**Lac du Bonnet**	**22.18**	**50**	P	**P**	**12 24 43.0**	**+0.1**
	3.3nm,0.8s,baz=249,slow=9.5,SNR=5.3						
ULM	**Lac du Bonnet**	**22.18**	**50**	P	**P**	**12 24 43.0**	**0.0**

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*DDA **09** 12:39:46.1, 3882N×2720E, h30km±4km, Md2.8*
*ISCJB **09** 12:39:47.3±0.9, 3880N±006×2720E±007, h27km±8km, Error ellipse: s-maj=10.8km s-min=8.8km az=153.9*
*CSEM **09** 12:39:47.1±0.3, 3886N×2729E, h12km±3km, MD2.8, Error ellipse: s-maj=6.8km s-min=4.7km az=147.0*
*ATH **09** 12:39:48.5, 3850N×2598E, h10km, MD2.9/3*
ISC 09 12:39:47.0±1.1**, 3880N**±007×**2719E**±007**, h18**km±8km**, n8, σ0s71**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.49**	**81**	*i* P	**Pg**	**12 39 56.5**	**-0.5**
AKHS				*i* S	**Sg**	**12 40 04.0**	**+0.3**
PRK	**Paraskevi**	**0.84**	**302**	*e*PB	**Pb**	**12 40 03.3**	**+0.3**
BALY	**Balya**	**0.99**	**20**	*i* P	**Pb**	**12 40 05.0**	**-0.7**
BALY				*i* S	**Sb**	**12 40 19.8**	**+1.4**
SMG	**Samos**	**1.13**	**194**	*e*PB	**Pb**	**12 40 08.2**	**+0.3**
DEMI	**Demirci**	**1.22**	**78**	*i* P	**Pn**	**12 40 09.8**	**+0.8**
DEMI				*i* S	**Sb**	**12 40 25.0**	**+0.2**
DURS	**Dursunbey**	**1.28**	**51**	*i* P	**Pn**	**12 40 09.8**	**-0.1**
DURS				*i* S	**Sn**	**12 40 26.7**	**+0.1**
LIA	**Limnos Island**	**1.90**	**306**	*e*PB	**Pb**	**12 40 17.2**	**-3.9**
ULDT	**Uludag**	**2.02**	**48**	*i* P	**Pn**	**12 40 19.6**	**-0.4**
ULDT				*i* S	**Sn**	**12 40 43.5**	**-1.2**

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*ISCJB **09** 13:11:48.2±0.3, 3277N±002×11738W±002, h10km, Error ellipse: s-maj=3.3km s-min=1.9km az=43.4*
*NEIC **09** 13:11:49.0, 3278N×11731W, h8km, ML3.7(PAS), After PAS.*
NEIC Felt [III] at Del Mar, La Jolla, La Mesa, Poway, San Diego and Spring Valley; [II] at Coronado, El Cajon, Jamul, San Marcos, Santee, Valley Center and Vista. Felt at Bonita, Cardiff-by-the-Sea, Carlsbad, Chula Vista, Escondido, Imperial Beach, Lakeside, Rancho Santa Fe and Solana Beach.
*ECX **09** 13:11:50.0±0.6, 3280N×11731W, h7km, MD3.7, ML3.9*
ISC 09 13:11:49.0±0.3**, 3275N**±002×**11738W**±002**, h10**km**, n102, σ1s30**/136**, 54C-42D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
109C	**Camp Elliot, M**	**0.27**	**60**	⇑P	**Pg**	**13 11 53.2**	**-1.2**
	baz=0.2,SNR=1000						
109C				⇑S	**Sg**	**13 11 57.2**	**-0.9**
	baz=0.2						
DPP	**Dos Picos Cty**	**0.44**	**56**	⇓*e*P	**Pg**	**13 11 56.6**	**-1.1**
EML	**El Monte Cty P**	**0.47**	**73**	⇓*e*P	**Pg**	**13 11 57.1**	**-1.1**
BAR	**Barrett**	**0.60**	**97**	⇑*e*P	**Pg**	**13 11 59.5**	**-1.2**
BAR	**Barrett**	**0.60**	**97**	⇑*e*Pg	**Pg**	**13 11 59.4**	**-1.2**
BAR				*e*Sg	**Sg**	**13 12 06.9**	**-1.7**
CBX	**Cerro Bola**	**0.75**	**126**	⇑*e*P	**Pg**	**13 12 02.6**	**-0.8**
CBX				*e*S	**Sg**	**13 12 12.6**	**-0.6**
MONP	**Monument Peak**	**0.82**	**80**	⇓P	**Pg**	**13 12 03.2**	**-1.6**
	baz=0.8,SNR=1000						
MONP				⇓S	**Sg**	**13 12 13.7**	**-1.8**
	baz=0.8						
MURC	**Murrieta**	**0.86**	**10**	P	**Pg**	**13 12 04.3**	**-1.3**
	baz=0.8,SNR=671						
MURC				⇑S	**Sg**	**13 12 15.7**	**-1.1**
	baz=0.8						
ENX	**Ensenada**	**1.06**	**145**	⇑*e*P	**Pg**	**13 12 08.3**	**-1.0**
ENX				*e*S	**Sg**	**13 12 22.8**	**-0.3**
ENX				⇓*e*		13 12 29.8	
	comp=E,3μm,0.6s						
CIS	**Catalina Islan**	**1.08**	**307**	⇑P	**Pg**	**13 12 07.4**	**-2.4**
	baz=1.1,SNR=305						
CIS				⇑S	**Sg**	**13 12 22.7**	**-1.2**
	baz=1.1						
DVTC	**Desert V Tower**	**1.08**	**95**	⇑P	**Pb**	**13 12 08.1**	**-1.7**
	baz=1.0,SNR=211						
DVTC				⇑S	**Sg**	**13 12 21.9**	**-2.0**
	baz=1.0						
RMX	**La Rumorosa**	**1.11**	**97**	⇓*e*P	**Pb**	**13 12 08.7**	**-1.6**
RMX				*e*S	**Sg**	**13 12 22.8**	**-2.0**
PBX	**Punta Banda**	**1.15**	**151**	⇑*e*P	**Pb**	**13 12 09.9**	**-1.1**
PBX				*e*S	**Sb**	**13 12 26.0**	**0.0**
PBX				⇑*e*		13 12 28.4	
	comp=N,3μm,0.7s						
PFO	**Pinyon Flat Ob**	**1.15**	**42**	⇓P	**Pb**	**13 12 09.4**	**-1.6**
	baz=1.1,SNR=1000						
PFO				⇑S	**Sb**	**13 12 24.0**	**-2.1**
	baz=1.1						
PFO	**Pinyon Flat Ob**	**1.15**	**42**	*e*Pg	**Pg**	**13 12 09.2**	**-1.9**
PFO				*e*Sg	**Sg**	**13 12 23.5**	**-2.6**
FMP	**Fort Macarthur**	**1.23**	**322**	⇓P	**Pn**	**13 12 10.3**	**-1.9**
	baz=1.2,SNR=78						
ECNX	**Esteban Cantu**	**1.28**	**149**	⇑*e*P	**Pn**	**13 12 12.2**	**-0.8**
ECNX				⇑*e*P		13 12 08.6	
ECNX				*e*S	**Sb**	**13 12 23.7**	**-6.0**
ECNX				*e*S	**Sb**	**13 12 29.8**	**+0.1**
SWSC	**Sam W. Stewart**	**1.35**	**82**	⇓P	**Pn**	**13 12 12.4**	**-1.4**
	baz=1.3,SNR=106						
SWSC				⇓S	**Sb**	**13 12 30.2**	**-1.4**
	baz=1.3						
BFSC	**Mount Baldy St**	**1.50**	**351**	⇓Pg	**Pg**	**13 12 16.0**	**-1.8**
	baz=1.5,SNR=300						
BFSC				⇑S	**Sn**	**13 12 35.2**	**-0.4**
	baz=1.5						
BBRC	**Big Bear Sol-O**	**1.55**	**14**	⇑Pb	**Pb**	**13 12 16.8**	**-1.1**
	baz=1.5,SNR=46						
BBRC				⇑S	**Sn**	**13 12 36.5**	**-0.5**
	baz=1.5						
MWC	**Mount Wilson**	**1.57**	**339**	*e*Pn	**Pn**	**13 12 15.9**	**-1.1**
MWC				*e*Sn	**Sn**	**13 12 37.5**	**+0.1**
DECC	**Green Verdugo**	**1.69**	**332**	⇓Pn	**Pn**	**13 12 17.2**	**-1.4**
	baz=1.7						
DECC				⇓S	**Sn**	**13 12 39.5**	**-0.8**
	baz=1.7						
BELC	**Belle Mtn.**	**1.70**	**43**	⇓Pb	**Pb**	**13 12 18.3**	**-2.0**
	baz=1.6,SNR=506						
CPBX	**Cerro Prieto**	**1.78**	**100**	*e*P	**Pn**	**13 12 21.5**	**+1.6**
CPBX				*e*S	**Sn**	**13 12 45.1**	**+2.5**
BC3	**Big Chuckw Mtn**	**1.85**	**60**	⇑Pn	**Pn**	**13 12 19.9**	**-0.9**
	baz=1.8,SNR=388						
SNCC	**San Nicolas Is**	**1.87**	**286**	*e*Pn	**Pn**	**13 12 19.3**	**-1.7**
BLG	**Laguna Peak**	**1.95**	**314**	⇑Pn	**Pn**	**13 12 20.6**	**-1.6**
	baz=2.0,SNR=37						
BLG				⇑Sn	**Sn**	**13 12 44.7**	**-2.1**
	baz=2.0						
EMX	**El Mayor**	**1.96**	**112**	*e*PN	**Pn**	**13 12 22.6**	**+0.2**
EMX				*e*S	**Sn**	**13 12 48.3**	**+1.3**
GLA	**Glamis**	**2.17**	**81**	⇑Pn	**Pn**	**13 12 24.4**	**-0.7**
	baz=2.1,SNR=57						
GLA				⇓Sn	**Sn**	**13 12 52.0**	**-0.1**
	baz=2.1						
GLA	**Glamis**	**2.17**	**81**	*e*Pn	**Pn**	**13 12 24.1**	**-1.0**
OSI	**Osito Adit**	**2.17**	**329**	*e*Pn	**Pn**	**13 12 26.8**	**+1.6**
EDW2	**Edwards Air Fo**	**2.18**	**347**	⇑Pn	**Pn**	**13 12 25.6**	**+0.2**
	baz=2.2,SNR=67						
HEC	**Hector,Ludlow**	**2.25**	**23**	⇓Pn	**Pn**	**13 12 26.2**	**0.0**
	baz=2.2,SNR=31						
HEC				⇑Sb	**Sb**	**13 12 58.5**	**+0.9**
	baz=2.2						
BSC	**Santa Cruz Isl**	**2.26**	**304**	⇓Pn	**Pn**	**13 12 24.7**	**-1.7**
	baz=2.3,SNR=28						
IRM	**Iron Mountain**	**2.33**	**52**	⇓Pn	**Pn**	**13 12 27.1**	**-0.3**
	baz=2.3,SNR=124						
ECBX	**El Chinero**	**2.35**	**122**	*e*PN	**Pn**	**13 12 28.5**	**+0.8**
ECBX				*e*S	**Sn**	**13 12 58.0**	**+1.4**
SPX	**San Pedro Mart**	**2.36**	**136**	*e*PN	**Pn**	**13 12 29.3**	**+1.5**
SPX				*e*S	**Sn**	**13 12 59.5**	**+2.8**
112A	**Yuma**	**2.37**	**95**	⇑Pn	**Pn**	**13 12 27.2**	**-0.7**
	baz=2.3,SNR=57						
112A				⇓Sn	**Sn**	**13 12 56.2**	**-0.9**
	baz=2.3						
GMRC	**Granite Mounta**	**2.48**	**35**	⇑Pn	**Pn**	**13 12 29.6**	**+0.1**
	baz=2.4,SNR=106						
GSC	**Goldstone**	**2.59**	**10**	⇑Pn	**Pn**	**13 12 31.5**	**+0.6**
	baz=2.6,SNR=5.9						
GSC				⇑Sb	**Sb**	**13 13 08.7**	**+1.4**
	baz=2.6						
GSC	**Goldstone**	**2.59**	**10**	*e*Pn	**Pn**	**13 12 31.3**	**+0.4**
GSC				*e*Sg	**Sg**	**13 13 07.8**	**-4.3**
Y12C	**Blythe**	**2.59**	**67**	⇑Pn	**Pn**	**13 12 30.5**	**-0.5**
	baz=2.5,SNR=11						
ARVC	**Arvin**	**2.66**	**333**	⇑Pn	**Pn**	**13 12 32.0**	**+0.1**
	baz=2.7,SNR=7.9						
ARVC				⇓Sb	**Sb**	**13 13 10.3**	**+0.9**
	baz=2.7						
TUQ	**Turquoise Moun**	**2.94**	**24**	⇓Pn	**Pn**	**13 12 36.1**	**+0.4**
	baz=2.9,SNR=14						
PKM	**Peak Mountain**	**2.95**	**317**	⇓Pn	**Pn**	**13 12 35.0**	**-0.9**
	baz=3.0						
LDFC	**Landfair**	**2.99**	**39**	*e*Pn	**Pn**	**13 12 36.0**	**-0.4**
LDFC				*e*Sg	**Sg**	**13 13 22.8**	**-2.3**
ISA	**Isabella**	**3.04**	**343**	⇓Pn	**Pn**	**13 12 37.3**	**+0.1**
	baz=3.0,SNR=7.9						
ISA	**Isabella**	**3.04**	**343**	*e*Pn	**Pn**	**13 12 37.3**	**+0.1**
ISA				*e*Pg	**Pg**	**13 12 45.1**	**-2.2**
ISA				*e*Sg	**Sg**	**13 13 21.6**	**-5.1**
113A	**Mohawk Valley,**	**3.04**	**89**	⇓Pn	**Pn**	**13 12 37.0**	**-0.2**
	baz=3.0,SNR=18						
NEE2	**Needles Airpor**	**3.05**	**48**	⇑Pn	**Pn**	**13 12 37.8**	**+0.4**
	baz=3.0,SNR=14						
Y13A	**Salome**	**3.16**	**69**	⇓Pn	**Pn**	**13 12 38.5**	**-0.2**
	baz=3.1,SNR=14						
W12A	**Cal Nev Ari**	**3.29**	**39**	⇓Pn	**Pn**	**13 12 41.2**	**+0.6**
	baz=3.2						
MPMC	**Manual Prospec**	**3.30**	**358**	⇑Pn	**Pn**	**13 12 41.0**	**+0.2**
	baz=3.3,SNR=59						
V11A	**Goodsprings**	**3.47**	**27**	⇓Pn	**Pn**	**13 12 43.9**	**+0.8**
	baz=3.4,SNR=55						
X13A	**Yucca**	**3.48**	**57**	⇑Pn	**Pn**	**13 12 43.2**	**-0.1**
	baz=3.4,SNR=26						
V12A	**Nelson**	**3.63**	**35**	⇑Pn	**Pn**	**13 12 45.9**	**+0.7**
	baz=3.6,SNR=50						
W13A	**Hualapai Mount**	**3.73**	**50**	⇓Pn	**Pn**	**13 12 47.0**	**+0.4**
	baz=3.7,SNR=22						
U10A	**Ash Meadows, A**	**3.76**	**13**	⇓Pn	**Pn**	**13 12 48.0**	**+0.9**
	baz=3.7,SNR=21						
Y14A	**Wickenburg**	**3.85**	**71**	⇑Pn	**Pn**	**13 12 48.1**	**-0.2**
	baz=3.8						
214A	**Organ Pipe Nat**	**3.95**	**100**	⇓Pn	**Pn**	**13 12 49.4**	**-0.2**
	baz=3.9,SNR=17						
X14A	**Yava**	**4.12**	**64**	⇑Pn	**Pn**	**13 12 52.6**	**+0.6**
	baz=4.0,SNR=56						
PKD	**Parkfield**	**4.12**	**321**	⇑Pn	**Pn**	**13 12 50.9**	**-1.1**
	baz=4.1						
V13A	**Grand Canyon W**	**4.18**	**41**	⇓Pn	**Pn**	**13 12 53.9**	**+1.1**
	baz=4.1,SNR=172						
TPNV	**Topopah Spring**	**4.29**	**12**	*e*Pn	**Pn**	**13 12 56.1**	**+1.8**
TPNV				*e*Sg	**Sg**	**13 13 57.0**	**-10**
W14A	**Seligman**	**4.33**	**54**	⇓Pn	**Pn**	**13 12 55.5**	**+0.6**
	baz=4.3,SNR=30						
U12A	**Valley of Fire**	**4.35**	**32**	⇑Pn	**Pn**	**13 12 56.0**	**+0.8**
	baz=4.3,SNR=33						
Y15A	**Casa Rosa Ranc**	**4.39**	**73**	⇓Pn	**Pn**	**13 12 56.5**	**+0.8**
	baz=4.3,SNR=16						
V03C	**Hunter Liggett**	**4.56**	**317**	Pn	**Pn**	**13 12 57.1**	**-0.9**
	baz=4.6,SNR=61						
V14A	**Boquillas Ranc**	**4.56**	**50**	⇓Pn	**Pn**	**13 12 59.1**	**+1.1**
	baz=4.5,SNR=40						
U13A	**Pakoon Wash**	**4.61**	**37**	⇓Pn	**Pn**	**13 12 59.9**	**+1.1**
	baz=4.6,SNR=76						
X15A	**Humboldt**	**4.62**	**67**	⇑Pn	**Pn**	**13 12 59.7**	**+0.8**
	baz=4.6,SNR=30						
T11A	**Corn Creek, Al**	**4.81**	**21**	⇑Pn	**Pn**	**13 13 03.6**	**+2.0**
	baz=4.8						
W15A	**Williams**	**4.89**	**59**	⇓Pn	**Pn**	**13 13 04.2**	**+1.6**
	baz=4.8						
S09A	**Goldfield**	**4.96**	**1**	⇓Pn	**Pn**	**13 13 05.7**	**+2.1**
	baz=4.9						
U14A	**Mt Trumbull**	**5.04**	**42**	⇑Pn	**Pn**	**13 13 05.8**	**+1.2**
	baz=5.0						
Y16A	**Circle Bar Ran**	**5.07**	**76**	⇑Pn	**Pn**	**13 13 05.7**	**+0.7**
	baz=5.0						
T13A	**Saint George**	**5.12**	**33**	⇑Pn	**Pn**	**13 13 07.2**	**+1.4**
	baz=5.1,SNR=105						
S10A	**Tonopah Range,**	**5.20**	**7**	⇑Pn	**Pn**	**13 13 08.5**	**+1.7**
	baz=5.2						
SAO	**San Andreas Ge**	**5.22**	**321**	*e*Pn	**Pn**	**13 13 05.2**	**-1.9**
	comp=N,6.6nm,0.8s						
X16A	**Lo Mia Camp, P**	**5.23**	**70**	⇑Pn	**Pn**	**13 13 08.4**	**+1.1**
	baz=5.2						
S12A	**Delamar Landin**	**5.27**	**22**	⇑Pn	**Pn**	**13 13 09.7**	**+1.9**
	baz=5.2						
V15A	**Kaibab Nationa**	**5.28**	**53**	⇑Pn	**Pn**	**13 13 09.6**	**+1.6**
	baz=5.2						
TPH	**Tonopah**	**5.31**	**1**	*e*Pn	**Pn**	**13 13 11.1**	**+2.7**
	comp=N,24nm,1.1s						
R07C	**Lee Vining**	**5.50**	**346**	⇓Pn	**Pn**	**13 13 11.7**	**+0.8**
	baz=5.5						
Y17A	**Roosevelt**	**5.56**	**78**	⇑Pn	**Pn**	**13 13 12.1**	**+0.3**
	baz=5.5						
T14A	**Hurricane**	**5.56**	**38**	⇑Pn	**Pn**	**13 13 13.4**	**+1.6**
	baz=5.5						
U15A	**North Rim**	**5.57**	**47**	⇑Pn	**Pn**	**13 13 13.5**	**+1.6**
	baz=5.5						
S13A	**Holt Ranch, En**	**5.61**	**30**	⇓Pn	**Pn**	**13 13 14.1**	**+1.5**
	baz=5.6						
WUAZ	**Wupatki**	**5.69**	**59**	*e*Pn	**Pn**	**13 13 13.7**	**+0.1**
	comp=N,13nm,0.9s						
CMB	**Columbia Colle**	**5.81**	**336**	*e*Pn	**Pn**	**13 13 17.0**	**+1.8**
	comp=N,3.2nm,0.8s						
T15A	**Red Dirt Ranch**	**5.91**	**43**	⇑Pn	**Pn**	**13 13 18.4**	**+1.8**
	baz=5.9						
R12A	**Pony Springs,**	**6.00**	**21**	⇑Pn	**Pn**	**13 13 20.5**	**+2.6**
	baz=6.0						
R13A	**O'Grain Ranch,**	**6.09**	**26**	⇓Pn	**Pn**	**13 13 21.7**	**+2.7**
	baz=6.0						
U16A	**Tuba City**	**6.17**	**55**	⇑Pn	**Pn**	**13 13 22.7**	**+2.5**
	baz=6.1						
X18A	**Snowflake**	**6.44**	**72**	⇓Pn	**Pn**	**13 13 25.7**	**+1.8**
	baz=6.4						
U17A	**Shonto**	**6.73**	**53**	⇓Pn	**Pn**	**13 13 30.9**	**+3.0**
	baz=6.7						
MSU	**Marysvale**	**7.14**	**35**	*e*Pn	**Pn**	**13 13 34.7**	**+1.2**
ELK	**Elko**	**8.16**	**12**	*e*Pn	**Pn**	**13 13 48.1**	**+0.7**
	comp=N,3.6nm,1.0s						
SRU	**San Rafael**	**8.43**	**39**	Pn	**Pn**	**13 13 53.7**	**+2.5**
	comp=N,3.0nm,0.7s						
MVCO	**Mesa Verde**	**8.54**	**56**	*e*Pn	**Pn**	**13 13 53.0**	**+0.3**
	comp=N,7.1nm,0.6s						
PV10	**Paradox Valley**	**8.81**	**48**	Pn	**Pn**	**13 13 57.2**	**+0.8**
PV01	**Paradox Valley**	**8.97**	**51**	*e*Pn	**Pn**	**13 13 59.1**	**+0.5**

IDC 09 13:16:13.0±52.0**, 1874S**×**17465W, h0**km**, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.8**/17**, mbtmp4.0**/3**, Error ellipse: s-maj=979.4km s-min=160.9km az=82.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.40**	**243**	P	P	13 24 01.1	-0.2
	3.9nm,1.1s,baz=89,slow=11,SNR=3.3						
WRA	**Warramunga Arr**	**48.00**	**260**	P	P	13 24 54.4	+0.2
	0.5nm,0.3s,baz=97,slow=7.4,SNR=48						
ASAR	**Alice Springs**	**48.01**	**255**	P	P	13 24 54.0	-0.2
	1.1nm,0.5s,baz=89,slow=7.3,SNR=37						

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*IDC **09** 13:20:27.8±1.1, 2629N×12577E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, ML3.2/1, MS3.0/3, Ms1 3.0/3, ms1mx2.4/44, Error ellipse: s-maj=27.8km s-min=20.9km az=49.0*
*JMA **09** 13:20:27.1±0.5, 2638N×12581E, h2km±5km, M3.4*
*ISCJB **09** 13:20:28.2±0.5, 2634N±004×12579E±004, h10km, mb3.7/6, Error ellipse: s-maj=6.8km s-min=3.8km az=150.5*
*NEIC **09** 13:20:29.4±0.5, 2627N×12574E, h10km, mb3.7/2, Error ellipse: s-maj=11.7km s-min=10.2km az=196.0*
ISC 09 13:20:29.4±0.5**, 2630N**±005×**12584E**±004**, h10**km**, n21, σ0s95**/25**, mb3.7**/6**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.85**	**88**	P	**Pg**	**13 20 44.1**	**-1.7**
JKE				S	**Sg**	**13 20 56.3**	**-0.7**
JAGN	**Aguni-jima**	**1.29**	**77**	P	**Pn**	**13 20 51.3**	**-2.2**
JAGN				*e*S	**Sb**	**13 21 09.1**	**-1.4**
JMJ	**Miyako jima 2**	**1.56**	**198**	P	**Pn**	**13 20 57.0**	**-0.1**
JMJ				*e*S	**Sn**	**13 21 16.7**	**-0.6**
JOGS	**Gusukube**	**1.58**	**194**	P	**Pn**	**13 20 57.9**	**+0.5**
JOGS				S	**Sn**	**13 21 18.1**	**+0.2**
NAH1	**Naha**	**1.67**	**93**	S	**Sn**	**13 21 20.5**	**+0.4**
JJT2	**Tamagusuku 2**	**1.73**	**95**	P	**Pn**	**13 20 59.7**	**+0.2**
JJT2				*e*S	**Sn**	**13 21 21.7**	**+0.1**
JTJ	**Tarama**	**1.94**	**212**	*e*S	**Sn**	**13 21 27.5**	**+0.6**
JIH	**Iheya**	**2.04**	**68**	P	**Pn**	**13 21 05.2**	**+1.4**
JOW	**Kunigami**	**2.25**	**76**	Pn	**Pn**	**13 21 07.8**	**+1.1**
	9.2nm,0.3s,baz=256,slow=16,SNR=26						
JOW				Sn	**Sn**	**13 21 36.6**	**+2.2**
	9.3nm,0.3s,baz=202,slow=18,SNR=3.1						
JOW	**Kunigami**	**2.25**	**76**	P	**Pn**	**13 21 07.5**	**+0.8**
JIJ	**Ishigaki jima**	**2.46**	**219**	P	**Pn**	**13 21 10.1**	**+0.5**
JTK	**Tokunoshima**	**3.15**	**61**	P	**Pn**	**13 21 20.4**	**+1.4**
YHNB	**Yeheng**	**4.34**	**249**	Pn	**Pn**	**13 21 34.2**	**-1.3**
KSRS	**Korea Array**	**11.26**	**9**	LR	LR	13 27 43.3	
	comp=Z,54nm,18.0s,baz=200,slow=39						
ASAJ	**Asahikawa**	**22.37**	**33**	LR	LR	13 33 33.1	
	comp=Z,22nm,18.6s,baz=204,slow=35						
ULN	**Ulaanbaatar**	**26.10**	**330**	*e*P	**P**	**13 26 03.6**	**+0.4**
	0.7nm,0.6s,mb3.4						
SONM	**Songino Array**	**26.37**	**330**	P	**P**	**13 26 05.5**	**-0.2**
	1.0nm,0.7s,mb3.4,baz=136,slow=11,SNR=6.0						
SONM				LR	LR	13 37 26.5	
	comp=Z,45nm,18.4s,baz=43,slow=39						
MKAR	**Makanchi Array**	**39.90**	**312**	P	**P**	**13 28 03.0**	**-0.3**
	1.2nm,0.5s,mb3.9,baz=88,slow=7.4,SNR=11						
KURK	**Kurchatov**	**43.30**	**317**	*e*P	**P**	**13 28 30.6**	**-0.6**
	1.6nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**46.70**	**169**	P	**P**	**13 28 58.4**	**-0.1**
	0.9nm,0.8s,mb3.8,baz=351,slow=8.6,SNR=11						
ASAR	**Alice Springs**	**50.28**	**170**	P	**P**	**13 29 26.3**	**+0.3**
	0.6nm,0.8s,mb3.7,baz=357,slow=8.6,SNR=6.4						

KRSC 09 13:22:34.9±0.4**, 5595N**×**16452E, h10**km±10km**, ML3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.99**	**286**	*e*P	Pg	13 22 53.1	-0.8
KBTR				*i* S	Sg	13 23 06.7	0.0
BDR	**Baidarnaya**	**1.95**	**290**	*e*P	Pn	13 23 09.5	+1.5
BDR				*i* S	Sn	13 23 34.4	+1.9
SRKR	**Sorokina**	**2.00**	**292**	*e*P	Pn	13 23 09.1	+0.5
SRKR				*i* S	Sn	13 23 33.7	+0.1
ZLN	**Zelenaya**	**2.09**	**273**	*e*P	Pn	13 23 11.6	+1.7
ZLN				*i* S	Sn	13 23 37.9	+2.0
MKZ	**Mys Kozlova**	**2.12**	**230**	*e*P	Pn	13 23 11.1	+0.8
MKZ				*i* S	Sn	13 23 36.8	+0.1
KLY	**Klyuchi**	**2.20**	**281**	*e*P	Pn	13 23 10.8	-0.6
KLY				*i* S	Sn	13 23 37.8	-0.7
KRSR	**Krestovskiy**	**2.23**	**279**	*e*P	Pn	13 23 12.3	+0.4
KRSR				*i* S	Sn	13 23 40.1	+0.6
BZMR	**Bezymyannaya**	**2.27**	**271**	*e*P	Pn	13 23 13.8	+1.5
BZMR				*i* S	Sn	13 23 41.9	+1.6
KIRR	**Kirishev**	**2.35**	**272**	*e*P	Pn	13 23 14.9	+1.4
KIRR				*i* S	Sn	13 23 44.1	+1.8
KPT	**Kopyto**	**2.42**	**272**	*e*P	Pn	13 23 16.3	+1.9
KPT				*i* S	Sn	13 23 46.1	+2.1
KMNR	**Kamenistaya**	**2.42**	**267**	*e*P	Pn	13 23 15.5	+1.0
KMNR				*i* S	Sn	13 23 45.2	+1.1
TUMR	**Tumrok**	**2.57**	**257**	*e*P	Pn	13 23 18.3	+1.8
KOZ	**Kozyrevsk**	**2.61**	**274**	*e*P	Pn	13 23 19.2	+2.1
KOZ				*i* S	Sn	13 23 50.9	+2.1
SRDR	**Sredinnyy**	**2.71**	**280**	*e*P	Pn	13 23 20.3	+1.8
SRDR				*i* S	Sn	13 23 53.0	+1.7
KII	**Karymskiy**	**3.49**	**239**	P	Pn	13 23 31.5	+2.3
KII				*i* S	Sn	13 24 11.7	+1.1
NLC	**Nalytchevo**	**4.10**	**229**	*e*P	Pn	13 23 39.4	+1.8
NLC				*i* S	Sn	13 24 25.3	-0.2
AVH	**Avacha**	**4.30**	**234**	*e*P	Pn	13 23 42.9	+2.6
AVH				*i* S	Sn	13 24 32.0	+1.5
GNL	**Ganaly**	**4.42**	**242**	*e*P	Pn	13 23 43.4	+1.4
GNL				*i* S	Sn	13 24 33.2	-0.3
PET	**Petropavlovsk**	**4.50**	**232**	*e*P	Pn	13 23 44.8	+1.7
PET				*i* S	Sn	13 24 35.0	-0.5
RUS	**Russkaya**	**4.99**	**228**	*e*P	Pn	13 23 51.7	+2.0
RUS				*i* S	Sn	13 24 47.4	+0.1

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*NEIC **09** 13:39:36.0±0.4, 6047S×2704W, h10km, mb4.7/4, Error ellipse: s-maj=14.6km s-min=10.0km az=208.0*
*ISCJB **09** 13:39:37.5±3.9, 610S±02×272W±02, h53km±42km, mb4.4/15, MS3.9/12, Error ellipse: s-maj=29.9km s-min=13.4km az=23.3*
*IDC **09** 13:39:43.2±5.0, 6046S×2704W, h64km±45km, mb4.1/11, mb1 4.2/12, mb1mx4.1/18, mbtmp4.2/12, ML5.7/1, MS3.9/13, Ms1 3.9/13, ms1mx3.8/19, Error ellipse: s-maj=19.9km s-min=14.8km az=44.0*
ISC 09 13:39:36.8±4.7**, 609S**±01×**271W**±02**, h24**km±36km**, n45, σ1s01**/31**, mb4.4**/15**, MS3.9**/12**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.43**	**150**	*e*	**Pn**	**13 42 32.2**	**+0.4**
VNA1				*e*		13 42 33.9	
VNA1				*e*S	**Sn**	**13 44 43.8**	**-5.4**
VNA3	**Neumayer Olymp**	**12.52**	**153**	*e*	**Pn**	**13 42 33.1**	**0.0**
VNA3				*e*		13 42 35.1	
VNA3				*e*		13 42 36.5	
VNA3				*e*S	**Sn**	**13 44 45.0**	**-6.5**
VNA2	**Neumayer--Watz**	**12.82**	**150**	*e*	**Pn**	**13 42 37.0**	**-0.3**
VNA2				*e*		13 42 39.1	
VNA2				*e*		13 42 40.5	
VNA2				*e*S	**Sn**	**13 44 52.7**	**-6.3**
SNAA	**Sanae**	**14.44**	**149**	*e*	**Pn**	**13 42 58.8**	**-0.4**
SNAA				*e*		13 43 01.4	
SNAA				*e*S	**Sn**	**13 45 36.6**	**-1.6**
SNAA	**Sanae**	**14.44**	**149**	*e*Pn	**Pn**	**13 42 59.1**	**-0.1**
	37nm,0.4s						
SNAA				*e*Sn	**Sn**	**13 45 24.5**	**-14**
PMSA	**Palmer Station**	**17.13**	**241**	P	**Pn**	**13 43 42.8**	**+8.6**
	2.6nm,0.3s,baz=84,slow=10,SNR=22						
PMSA				LR	LR	13 49 08.3	
	comp=Z,307nm,19.6s,baz=52,slow=32						
PMSA	**Palmer Station**	**17.13**	**241**	*e*Pn	**Pn**	**13 43 43.4**	**+9.2**
PMSA				LR	LR	13 49 08.3	
USHA	**Ushuaia**	**22.48**	**267**	LR	LR	13 51 20.9	
	comp=Z,322nm,19.8s,MS3.8,baz=64,slow=31						
QSPA	**South Pole Qui**	**29.37**	**180**	P	**P**	**13 45 43.8**	**+6.5**
	11nm,0.9s,mb4.6,baz=213,slow=2.0,SNR=78						
QSPA				LR	LR	13 57 19.6	
	comp=Z,331nm,20.8s,MS3.9,baz=12,slow=36						
TRQA	**Tornquist**	**31.53**	**300**	*e*P	**P**	**13 45 56.3**	**-0.4**
PLCA	**Paso Flores**	**33.18**	**287**	LR	LR	13 59 01.3	
	comp=Z,70nm,20.6s,MS3.4,baz=311,slow=35						
MAW	**Mawson**	**36.34**	**140**	P	**P**	**13 46 41.7**	**+3.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	3.4nm,0.8s,mb4.3,baz=262,slow=10,SNR=7.1						
MAW				LR	LR	13 59 20.0	
	comp=Z,143nm,18.7s,MS3.8,baz=79,slow=32						
CFAA	**Coronel Fontan**	**39.70**	**299**	P	**P**	**13 47 07.0**	**+0.1**
	1.0nm,0.6s,mb3.7,baz=154,slow=8.4,SNR=20						
CFAA	**Coronel Fontan**	**39.70**	**299**	P	**P**	**13 47 07.0**	**+0.1**
CPUP	**Villa Florida**	**40.16**	**316**	P	**P**	**13 47 09.9**	**-0.8**
	1.1nm,0.3s,mb4.1,baz=140,slow=7.2,SNR=17						
CPUP				LR	LR	14 01 38.0	
	comp=Z,99nm,21.3s,MS3.6,baz=148,slow=33						
SUR	**Sutherland**	**42.09**	**70**	P	**P**	**13 47 27.1**	**+0.6**
	4.4nm,0.9s,mb4.1,baz=175,slow=12,SNR=3.9						
SUR	**Sutherland**	**42.09**	**70**	eP	**P**	**13 47 27.4**	**+0.9**
BOSA	**Boshof**	**47.31**	**71**	P	**P**	**13 48 09.8**	**+1.7**
	2.9nm,0.5s,mb4.4,baz=186,slow=6.5,SNR=15						
BOSA				LR	LR	14 04 14.0	
	comp=Z,100nm,19.0s,MS3.8,baz=182,slow=31						
BDFB	**Brasilia**	**47.62**	**332**	P	**P**	**13 48 10.4**	**-0.2**
	1.3nm,0.5s,mb4.2,baz=170,slow=6.1,SNR=3.8						
BDFB				LR	LR	14 05 53.9	
	comp=Z,93nm,18.5s,MS3.8,baz=50,slow=33						
LVC	**Limon Verde**	**47.89**	**304**	eP	**P**	**13 48 13.3**	**+0.6**
	4.9nm,0.6s,mb4.7						
TSUM	**Tsumeb**	**52.14**	**57**	eP	**P**	**13 48 45.7**	**+0.8**
	6.0nm,0.9s,mb4.5						
LPAZ	**La Paz**	**53.29**	**308**	P	**P**	**13 48 54.6**	**+1.1**
	5.6nm,0.5s,mb4.7,baz=148,slow=6.2,SNR=40						
LSZ	**Lusaka**	**60.20**	**66**	eP	**P**	**13 49 40.8**	**-1.7**
	5.1nm,0.9s,mb4.5						
DBIC	**Dimbokro**	**69.57**	**24**	P	**P**	**13 50 42.0**	**-1.5**
	2.9nm,0.6s,mb4.4,baz=144,slow=9.2,SNR=3.9						
DBIC	**Dimbokro**	**69.57**	**24**	P	**P**	**13 50 42.0**	**-1.5**
ROSC	**El Rosal**	**75.05**	**311**	LR	LR	14 23 44.7	
	comp=Z,52nm,18.9s,MS3.9,baz=20,slow=35						
TORD	**Torodi Ar. Bea**	**77.26**	**29**	P	**P**	**13 51 28.1**	**-0.6**
	18nm,0.5s,mb5.2,baz=198,slow=6.3,SNR=169						
SDV	**Santo Domingo**	**77.47**	**316**	eP	**P**	**13 51 29.1**	**-0.9**
	9.1nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**87.13**	**170**	LR	LR	14 32 32.1	
	comp=Z,137nm,18.8s,MS4.4,baz=25,slow=36						
ASAR	**Alice Springs**	**94.37**	**163**	P	**P**	**13 52 56.2**	**+2.0**
	0.5nm,0.6s,mb4.1,baz=185,slow=4.4,SNR=11						
MDT	**Midelt**	**95.15**	**19**	LR	LR	14 31 48.8	
	comp=Z,56nm,18.2s,MS4.1,baz=282,slow=33						
WRA	**Warramunga Arr**	**98.09**	**162**	LR	LR	14 34 33.0	
	comp=Z,132nm,20.5s,MS4.4,baz=150,slow=33						
CTA	**Charters Tower**	**99.15**	**174**	LR	LR	14 36 44.5	
	comp=Z,121nm,19.2s,MS4.4,baz=228,slow=34						
CMAR	**Chiang Mai Arr**	**123.22**	**113**	PKP	PKPdf	13 58 32.6	+1.6
	1.2nm,1.0s,baz=231,slow=3.9,SNR=6.8						
NOA	**NORSAR Array B**	**125.11**	**22**	PKP	PKPdf	13 58 34.0	+0.7
	1.0nm,0.9s,baz=205,slow=1.8,SNR=2.9						
KAF	**Kangasniemi**	**129.25**	**29**	ep	PKPdf	13 58 40.9	-0.3
	4.2nm,0.7s						
KAF	**Kangasniemi**	**129.25**	**29**	ep	PKPdf	13 58 40.9	-0.3
	4.2nm,0.7s						
ARCES	**ARCESS Array B**	**135.39**	**23**	PKP	PKPdf	13 58 52.0	-0.6
	1.7nm,0.7s,baz=196,slow=2.3,SNR=5.0						
YKA	**Yellowknife Ar**	**139.68**	**314**	PKP	PKPdf	13 59 01.5	+0.9
	1.7nm,0.7s,baz=132,slow=2.1,SNR=5.3						
YKA	**Yellowknife Ar**	**139.68**	**314**	PKP	PKPdf	13 59 01.5	+0.9
ZALV	**Zalesovo Beam**	**144.25**	**70**	PKP	PKPdf	13 59 06.7	-2.4
	1.0nm,0.4s,baz=246,slow=3.1,SNR=5.6						
SONM	**Songino Array**	**150.63**	**95**	PKPbc	PKPbc	13 59 26.4	+1.0
	3.7nm,0.8s,baz=229,slow=2.1,SNR=21						
KSRS	**Korea Array**	**151.78**	**135**	PKPbc	PKPbc	13 59 30.1	+1.7
	1.3nm,0.9s,baz=186,slow=2.2,SNR=4.9						
KDAK	**Kodiak Island**	**152.68**	**288**	PKPbc	PKPbc	13 59 31.8	+2.1
	5.9nm,0.8s,baz=196,slow=5.1,SNR=6.4						
COLA	**College**	**153.55**	**304**	ePKPbc	PKPbc	13 59 33.4	+1.9
COLA				ePKPab	PKPab	13 59 44.1	-0.1

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*NEIC **09** 13:40:12.0,32.76N×117.34W,h12km,ML2.8(PAS),After PAS.*
NEIC Felt at San Diego.
ECX 09 13:40:13.0±0.4**,32.78N×117.32W,h7km,MD2.8,ML2.8, 2C-5D,California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DPP	**Dos Picos Cty**	**0.38**	**56**	eP	Pg	13 40 20.1	-0.3
EML	**El Monte Cty P**	**0.41**	**75**	⇓eP	Pg	13 40 20.4	-0.5
BAR	**Barrett**	**0.55**	**101**	ePg	Pg	13 40 22.4	-1.2
BAR				eSg	Sg	13 40 30.2	-0.7
CBX	**Cerro Bola**	**0.72**	**130**	eS	Sg	13 40 35.8	-0.5
ENX	**Ensenada**	**1.05**	**148**	⇑eP	Pg	13 40 31.3	-1.9
ENX				eS	Sg	13 40 45.8	-1.1
ENX				⇓e		13 40 46.7	
	comp=N,316nm,0.4s						
RMX	**La Rumorosa**	**1.06**	**99**	⇓eP	Pg	13 40 31.9	-1.5
RMX				eS	Sg	13 40 46.0	-1.2
PFO	**Pinyon Flat Ob**	**1.10**	**41**	eP	Pg	13 40 32.4	-1.6
PFO				eS	Sg	13 40 46.9	-1.4
PBX	**Punta Banda**	**1.15**	**154**	⇓eP	Pg	13 40 32.9	-2.2
PBX				eS	Sg	13 40 48.5	-1.6
PBX				e		13 40 49.6	
	comp=E,176nm,0.4s						
PBX				e		13 40 50.2	
	comp=N,246nm,0.2s						
ECNX	**Esteban Cantu**	**1.28**	**151**	⇓eP	Pn	13 40 35.2	-2.1
ECNX				⇑eP		13 40 31.5	
ECNX				eS	Sb	13 40 45.9	-8.1
ECNX				eS	Sb	13 40 52.2	-1.8
MWC	**Mount Wilson**	**1.56**	**337**	ePn	Pn	13 40 39.1	-2.2
MWC				eS	Sn	13 41 00.8	-1.0
GLA	**Glamis**	**2.11**	**82**	ePn	Pn	13 40 47.9	-0.8
GLA				eSn	Sn	13 41 14.4	-0.8
SPX	**San Pedro Mart**	**2.34**	**137**	ePN	Pn	13 40 51.4	-0.5
SPX				eS	Sn	13 41 24.4	+3.5
GSC	**Goldstone**	**2.55**	**9**	ePn	Pn	13 40 54.8	+0.1
GSC				ePg	Pg	13 40 58.5	-3.4
GSC				eSg	Sg	13 41 33.4	-1.4
LDFC	**Landfair**	**2.93**	**38**	ePg	Pg	13 41 06.5	-2.8
ISA	**Isabella**	**3.03**	**342**	ePg	Pg	13 41 08.3	-2.7
TPNV	**Topopah Spring**	**4.25**	**12**	ePn	Pn	13 41 19.1	+1.0
TPNV				eSg	Sg	13 42 28.1	-1.3

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*NEIC **09** 13:47:06.9±2.8,23.28S×179.44E,h550km,mb4.1/3,Error ellipse: s-maj=89.9km s-min=18.6km az=145.0*
*IDC **09** 13:47:08.7±3.3,23.45S×179.49E,h578km±66km,mb3.1/6, mb1 3.2/6,mb1mx3.0/15,mbtmp3.1/6,Error ellipse: s-maj=127.4km s-min=20.6km az=145.0*
ISC 09 13:47:07.9±3.8**,23.4S**±07×**179.4E**±04**,h565**km±56km**,n13, σ0.66**/14**,mb3.7**/8**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**30.96**	**270**	eP	**P**	**13 52 41.3**	**+1.4**
	1.9nm,0.5s,mb3.9						
CTA	**Charters Tower**	**30.96**	**270**	P	**P**	**13 52 41.1**	**+1.2**
	2.5nm,0.4s,mb4.1,baz=96,slow=10,SNR=9.0						
CTAO	**Charters Tower**	**30.96**	**270**	eP	**P**	**13 52 40.6**	**+0.8**
	2.6nm,0.5s,mb4.0						
ASAR	**Alice Springs**	**41.60**	**260**	P	**P**	**13 54 07.2**	**-0.2**
	0.6nm,0.5s,mb3.4,baz=98,slow=7.3,SNR=24						
WB2	**Warramunga Arr**	**41.91**	**266**	eP	**P**	**13 54 09.7**	**-0.2**
WRAB	**Tennant Creek**	**41.92**	**266**	eP	**P**	**13 54 09.4**	**-0.5**
	2.2nm,0.3s,mb4.2						
WRA	**Warramunga Arr**	**41.92**	**266**	P	**P**	**13 54 09.6**	**-0.3**
	1.5nm,0.3s,mb4.0,baz=96,slow=8.4,SNR=165						
WRA				S	**S**	**13 59 48.3**	**+0.1**
	0.3nm,0.8s,baz=111,slow=14,SNR=3.1						
KAKA	**Kakadu**	**45.75**	**275**	eP	**P**	**13 54 39.6**	**0.0**
	1.5nm,0.3s,mb4.0						
KAKA	**Kakadu**	**45.75**	**275**	eP	**P**	**13 54 39.5**	**-0.1**
MJAR	**Matsushiro Arr**	**71.21**	**326**	P	**P**	**13 57 29.6**	**-0.8**
	0.8nm,0.9s,mb3.3,baz=142,slow=6.3,SNR=4.8						
KSRS	**Korea Array**	**77.55**	**320**	P	**P**	**13 58 07.2**	**+1.2**
	0.6nm,0.7s,mb3.0,baz=129,slow=6.3,SNR=3.6						
PETK	**Petropavlovsk-**	**78.51**	**347**	P	**P**	**13 58 10.1**	**-0.7**
	2.5nm,0.8s,mb3.6,baz=118,slow=6.2,SNR=4.3						
DAWY	**Dawson**	**92.92**	**17**	eP	**P**	**13 59 21.0**	**+0.5**

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*NEIC **09** 13:57:46.5,35.15N×24.14E,h43km,MD3.6(ATH),After ATH.*
*CSEM **09** 13:57:46.5,35.15N×24.14E,h43km,MD3.6/4,After ATH*
ATH 09 13:57:46.6,35.16N×24.14E,h43km±1km**,MD3.6**/4**,Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAM	**Vamos**	**0.25**	**11**	eP	Pn	13 57 55.1	+0.5
VAM				eS	Sn	13 58 01.7	+1.4
NPS	**Neapolis**	**1.21**	**85**	eP	Pn	13 58 08.0	+1.0
VLI	**Veliai**	**1.84**	**328**	eP	Pn	13 58 17.2	+1.6
APE	**Apeiranthos**	**2.21**	**30**	eP	Pn	13 58 22.5	+1.7

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*JMA **09** 14:02:01.2±0.1,24.64N×122.43E,h70km±1km,M1.9*
TAP 09 14:02:01.4,24.31N×122.26E,h60km,ML3.0,C,Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.48**	**308**	i P	Pn	14 02 13.6	+0.4
	baz=308						
TWC				S	Sn	14 02 22.1	+0.4
	baz=308						
ENA	**Nanau**	**0.49**	**284**	eP	Pn	14 02 13.6	+0.4
	baz=287						
ENA				eS	Sn	14 02 22.2	+0.4
	baz=287						
TWD	**Chiawan**	**0.65**	**249**	i P	Pn	14 02 15.0	-0.1
	baz=242						
TWD				S	Sn	14 02 25.1	0.0
	baz=242						
TWE	**Neicheng**	**0.68**	**307**	i P	Pn	14 02 16.4	+1.0
	baz=315						
TWE				S	Sn	14 02 27.2	+1.6
	baz=315						
YOJ	**Yonaguni jima**	**0.70**	**78**	P	Pn	14 02 14.6	-1.1
YOJ				S	Sn	14 02 24.4	-1.7
ENTT	**Nioudou**	**0.71**	**297**	i P	Pn	14 02 16.8	+1.0
	baz=292						
ENTT				eS	Sn	14 02 28.0	+1.6
	baz=292						
NNS	**Nan Shan**	**0.82**	**279**	eP	Pn	14 02 17.9	+0.7
	baz=271						
NNS				eS	Sn	14 02 30.0	+1.3
	baz=271						
NSK	**Sanguang**	**0.90**	**294**	eP	Pn	14 02 19.1	+0.9
	baz=286						
ESL	**Shilin**	**0.91**	**237**	eP	Pn	14 02 17.7	-0.5
	baz=247						
ESL				eS	Sn	14 02 30.4	-0.3
	baz=247						
WHF	**Hehuan Shan**	**0.92**	**260**	eP	Pn	14 02 19.1	+0.6
	baz=253						
WHF				eS	Sn	14 02 32.1	+1.0
	baz=253						
TWT	**Tachien**	**0.99**	**267**	eP	Pn	14 02 20.8	+1.5
	baz=260						
TWT				eS	Sn	14 02 34.2	+1.6
	baz=260						
EHY	**Hungye**	**1.18**	**227**	eP	Pn	14 02 21.0	-0.7
	baz=227						
EHY				eS	Sn	14 02 36.2	-0.7
	baz=227						
NSTT	**Nanjuang**	**1.19**	**286**	P	Pn	14 02 23.4	+1.4
	baz=276						
NSTT				eS	Sn	14 02 39.3	+2.0
	baz=276						
TWF1	**Yuli**	**1.30**	**223**	eP	Pn	14 02 22.9	-0.5
	baz=232						
TWF1				eS	Sn	14 02 38.6	-1.3
	baz=232						
SMLT	**Sun Moon Lake**	**1.31**	**251**	eP	Pn	14 02 24.3	+0.7
	baz=243						
IRIF	**Iriomote-Funau**	**1.34**	**89**	P	Pn	14 02 22.6	-1.4
IRIF				S	Sn	14 02 38.5	-2.4
TYC	**Yuchr**	**1.34**	**253**	eP	Pn	14 02 24.8	+0.8
	baz=246						
TYC				eS	Sn	14 02 41.3	+0.3
	baz=246						
HATJ	**Hateruma jima**	**1.43**	**100**	P	Pn	14 02 24.8	-0.4
HATJ				eS	Sn	14 02 42.3	-0.8
YUS	**Yu-Shan**	**1.45**	**236**	P	Pn	14 02 26.6	+1.1
	baz=236						
YUS				eS	Sn	14 02 44.0	+0.4
	baz=236						
CHKT	**Chengkung**	**1.46**	**214**	eP	Pn	14 02 24.4	-1.2
	baz=207						
CHKT				eS	Sn	14 02 41.4	-2.3
	baz=207						
ALS	**Alishan**	**1.55**	**239**	eP	Pn	14 02 28.0	+1.2
	baz=232						
ALS				eS	Sn	14 02 47.3	+1.4
	baz=232						
ELDTW	**Lidau**	**1.60**	**226**	eP	Pn	14 02 27.2	-0.2
	baz=221						
ELDTW				eS	Sn	14 02 46.4	-0.6
	baz=221						
JKRS	**Kuro-shima**	**1.60**	**92**	P	Pn	14 02 26.6	-0.8
JKRS				S	Sn	14 02 45.6	-1.5
CHN5	**Tsauling**	**1.61**	**244**	eP	Pn	14 02 28.9	+1.3
	baz=235						
CHN5				eS	Sn	14 02 48.6	+1.2
	baz=235						
JIJ	**Ishigaki jima**	**1.72**	**88**	P	Pn	14 02 27.6	-1.4
JIJ				S	Sn	14 02 47.0	-3.0
STYT	**Tauyuan**	**1.79**	**231**	eP	Pn	14 02 31.0	+0.9
	baz=225						
STYT				eS	Sn	14 02 52.2	+0.5
	baz=225						
CHN4	**Tsaushan**	**1.80**	**238**	eP	Pn	14 02 31.8	+1.6
	baz=232						
CHN4				eS	Sn	14 02 53.6	+1.6
	baz=232						
TWG	**Pinlang**	**1.84**	**217**	eP	Pn	14 02 29.8	-1.0
	baz=217						
TWG				eS	Sn	14 02 51.7	-1.3
	baz=217						
WTP	**Ta-pu**	**1.84**	**235**	eP	Pn	14 02 31.7	+1.0
	baz=235						
WTP				eS	Sn	14 02 54.5	+1.5
	baz=235						
CHN1	**Nanshi**	**1.94**	**235**	eP	Pn	14 02 33.1	+1.0
	baz=235						
CHN1				eS	Sn	14 02 56.3	+0.8
	baz=235						
ECL	**Taimali**	**2.09**	**215**	eP	Pn	14 02 35.9	+1.8
	baz=220						
SSD	**Sandimen**	**2.16**	**224**	eP	Pn	14 02 35.9	+0.8
	baz=216						
SSD				eS	Sn	14 03 00.8	0.0
	baz=216						
EAST	**Anshuo**	**2.32**	**214**	eP	Pn	14 02 36.5	-0.7
	baz=208						

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*IDC **09** 14:09:45.8±1.5,4.88N×92.90E,h0km,mb3.6/7,mb1 3.8/8, mb1mx3.6/20,mbtmp3.7/8,ML3.6/1,MS3.2/1,Ms1 3.2/1, ms1mx2.6/30,Error ellipse: s-maj=56.6km s-min=22.4km az=58.0*
*ISCJB **09** 14:09:48.8±0.9,4.9N±0.1×92.9E±0.1,h33km,mb3.6/7,Error ellipse: s-maj=16.8km s-min=15.6km az=34.8*
*NEIC **09** 14:09:50.3±0.7,4.96N×92.95E,h30km,Error ellipse: s-maj=12.6km s-min=12.1km az=203.0*
ISC 09 14:09:51.1±0.9**,5.0N**±01×**93.0E**±01**,h35**km**,n12,σ0.67**/12**, mb3.6**/7**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**12.39**	**281**	ePn	**Pn**	**14 12 44.1**	**-1.0**
PALK				Sn	**Sn**	**14 14 51.9**	**-10**
CMAR	**Chiang Mai Arr**	**14.63**	**23**	Pn	**Pn**	**14 13 15.4**	**-0.2**
	0.1nm,0.3s,baz=220,slow=14,SNR=19						
CHTO	**Chiang Mai**	**14.96**	**23**	Pn	**Pn**	**14 13 18.9**	**-1.2**
	2.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**39.56**	**126**	LR	LR	14 32 48.2	
	comp=Z,38nm,21.5s,baz=17,slow=35						
MKAR	**Makanchi Array**	**42.68**	**349**	P	**P**	**14 17 44.3**	**0.0**
	0.6nm,0.5s,mb3.5,baz=161,slow=7.9,SNR=7.3						
SONM	**Songino Array**	**44.24**	**13**	P	**P**	**14 17 57.9**	**+0.9**
	0.2nm,0.5s,mb3.1,baz=216,slow=7.1,SNR=2.4						
WRA	**Warramunga Arr**	**47.62**	**123**	P	**P**	**14 18 23.8**	**-0.2**
	0.5nm,0.7s,mb3.6,baz=301,slow=9.0,SNR=4.9						
ASAR	**Alice Springs**	**49.04**	**127**	P	**P**	**14 18 34.7**	**-0.2**
	0.2nm,0.6s,mb3.3,baz=298,slow=7.8,SNR=4.2						
ZALV	**Zalesovo Beam**	**49.28**	**354**	P	**P**	**14 18 36.8**	**+0.5**
	1.4nm,0.5s,mb4.2,baz=173,slow=6.2,SNR=7.5						
ARCES	**ARCESS Array B**	**77.59**	**341**	P	**P**	**14 21 43.9**	**+0.7**
	1.6nm,0.7s,mb4.0,baz=79,slow=6.3,SNR=3.8						
ARCES	**ARCESS Array B**	**77.59**	**341**	P	**P**	**14 21 43.9**	**+0.7**
GERES	**GERESS Array B**	**79.20**	**319**	P	**P**	**14 21 53.3**	**+0.7**
	0.3nm,0.4s,mb3.6,baz=147,slow=8.0,SNR=4.0						

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*CSEM **09** 14:13:12.2,37.44N×42.40E,h7km,MD3.0,After ERD*
DDA 09 14:13:12.2,37.44N×42.40E,h7km±4km**,Md3.0,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BEST	**Besiri**	**1.00**	**297**	i P	Pg	14 13 31.0	-0.5
BEST				i S	Sg	14 13 46.2	+1.6
HAKT	**HAKKARI**	**1.05**	**83**	i P	Pg	14 13 29.9	-2.5
HAKT				i S	Sg	14 13 47.6	+1.6
MSL	**Mosul**	**1.27**	**154**	ex	x	14 13 38.0	
MSL				ex	x	14 13 55.0	
MARD	**Mardin**	**1.30**	**265**	i P	Pn	14 13 36.2	-0.6
MARD				i S	Sb	14 13 56.0	+2.3

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*ISCJB **09** 14:53:43.4±0.2,51.11N±0.05×178.49W±0.03,h18km, mb4.6/69,MS4.0/26,Error ellipse: s-maj=7.6km s-min=2.5km az=179.4*
*NEIC **09** 14:53:43.9±0.3,51.04N×178.44W,h10km,mb4.6/32, ML4.7(AEIC),Error ellipse: s-maj=10.2km s-min=4.4km az=173.0*
*BJI **09** 14:53:44.0,51.34N×179.13W,h10km,mB4.9,mb4.8,Ms4.4, Msz4.2*
*MOS **09** 14:53:45.8±1.1,51.33N×178.46W,h33km,mb4.7/19,Error ellipse: s-maj=11.0km s-min=9.3km az=175.1*
*IDC **09** 14:53:53.2±4.8,51.44N×178.56W,h87km±44km,mb3.8/19, mb1 4.0/20,mb1mx4.0/25,mbtmp3.8/20,MS3.8/18, Ms1 3.8/18,ms1mx3.6/36,Error ellipse: s-maj=19.4km s-min=10.6km az=169.0*
ISC 09 14:53:45.4±0.2**,51.14N**±0.05×**178.51W**±0.03**,h19**km**, h19**km±2.2km**:pP-P,n246,σ0.92**/247**,mb4.6**/69**,MS4.0**/26**, 41C-47D,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.36**	**56**	P	**Pn**	**14 54 08.8**	**-0.5**
ADK				S	**Sn**	**14 54 26.6**	**-0.3**
AMKA	**Amchitka**	**1.40**	**281**	P	**Pn**	**14 54 10.1**	**+0.2**
AMKA				S	**Sn**	**14 54 27.4**	**-0.4**
SMY	**Shemya**	**4.84**	**292**	P	**Pn**	**14 54 59.3**	**+2.1**
SMY				S	**Sn**	**14 55 54.9**	**+2.2**
FX1	**Attu Island--F**	**5.43**	**292**	P	**Pn**	**14 55 06.5**	**+1.2**
NIKO	**Nikolski**	**6.23**	**69**	P	**Pn**	**14 55 17.4**	**+1.1**
OKCD	**Okmok Cone D**	**6.78**	**66**	P	**Pn**	**14 55 24.9**	**+1.2**
SPIA	**Saint Paul Isl**	**7.75**	**35**	P	**Pn**	**14 55 38.9**	**+1.9**
UNV	**Unalaska Valle**	**7.81**	**65**	P	**Pn**	**14 55 39.3**	**+1.4**
AKUT	**Akutan**	**8.31**	**64**	ePn	**Pn**	**14 55 47.4**	**+2.7**
SDPT	**Sand Point**	**11.59**	**62**	eP	**Pn**	**14 56 29.0**	**-0.6**
	14nm,0.3s						
CHGN	**Chignik**	**12.95**	**59**	eP	**Pn**	**14 56 47.6**	**-0.6**
PETK	**Petropavlovsk-**	**14.73**	**287**	P	**Pn**	**14 57 15.6**	**+3.1**
	0.2nm,0.3s,baz=83,slow=16,SNR=6.8						
PETK				LR	LR	15 02 42.5	
	comp=Z,378nm,21.6s,baz=97,slow=36						
OHAK	**Old Harbor**	**15.91**	**58**	ePn	**Pn**	**14 57 23.6**	**-4.4**
KDAK	**Kodiak Island**	**16.40**	**56**	P	**Pn**	**14 57 32.6**	**-1.6**
	3.1nm,0.3s,baz=283,slow=7.6,SNR=18						
KDAK	**Kodiak Island**	**16.40**	**56**	eP	**Pn**	**14 57 31.4**	**-2.9**
KDAK				pmax	pmax		
	comp=Z,19nm,0.4s						
KDAK	**Kodiak Island**	**16.40**	**56**	ePn	**Pn**	**14 57 31.4**	**-2.9**
	comp=Z,19nm,0.4s						
KDAK				ePn	**Pn**	**14 57 31.5**	**-2.8**
BILL	**Bilibino**	**18.52**	**342**	⇑eP	**Pn**	**14 58 03.3**	**+2.8**
BILL				pmax	pmax		
	comp=Z,13nm,0.9s						
BILL				MLR	MLR		
	comp=Z,200nm,15.0s						
BILL	**Bilibino**	**18.52**	**342**	eP	**Pn**	**14 58 02.6**	**+2.2**
	comp=Z,17nm,0.9s						
SEW	**Seward**	**18.56**	**50**	eP	**Pn**	**14 57 59.7**	**-1.3**
KTH	**Kantishna Hill**	**19.19**	**39**	eP	**Pn**	**14 58 10.1**	**+1.5**
	comp=Z,38nm,0.6s						
TRF	**Thorofare Moun**	**19.40**	**40**	eP	**Pn**	**14 58 12.0**	**+0.8**
	comp=Z,31nm,0.7s						
BPAW	**Bear Paw Mtn.**	**19.43**	**38**	eP	**Pn**	**14 58 11.7**	**+0.3**
SEY	**Seymchan**	**19.55**	**318**	eP	**Pn**	**14 58 13.7**	**+0.8**
PNL	**Peninsula**	**23.47**	**53**	P	**P**	**14 58 55.7**	**+2.0**
DAWY	**Dawson**	**24.16**	**43**	eP	**P**	**14 59 00.8**	**+1.0**
HYT	**Haines Junctio**	**24.50**	**51**	eP	**P**	**14 59 07.0**	**+3.9**
YSS	**Yuzh-Sakhalins**	**25.53**	**276**	⇓iP	**P**	**14 59 13.0**	**+0.5**
YSS				pmax	pmax		
	comp=Z,50nm,1.2s,mb4.9						
YSS	**Yuzh-Sakhalins**	**25.53**	**276**	eP	**P**	**14 59 13.2**	**+0.7**
	comp=Z,49nm,1.1s,mb5.0						
ASAJ	**Asahikawa**	**26.89**	**270**	P	**P**	**14 59 24.2**	**-0.7**
	comp=Z,24nm,1.0s,mb4.7,baz=14,slow=5.6,SNR=7.8						
ASAJ				LR	LR	15 09 05.5	
	comp=Z,84nm,19.5s,MS3.3,baz=248,slow=34						
ASAJ	**Asahikawa**	**26.89**	**270**	P	**P**	**14 59 24.2**	**-0.7**
ASAJ				pmax	pmax		
	comp=Z,24nm,1.0s						
ASAJ				MLR	MLR		
	comp=Z,84nm,19.5s						
KLR	**Kul'dur**	**31.42**	**286**	eP	**P**	**15 00 00.0**	**-5.1**
MAJO	**Matsushiro**	**33.93**	**262**	eP	**P**	**15 00 27.3**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
MAJO	**Matsushiro**	**33.93**	**262**	eP	**P**	**15 00 27.3**	**+0.1**
	comp=Z,16nm,1.1s,mb4.8						
MJAR	**Matsushiro Arr**	**33.93**	**262**	P	**P**	**15 00 28.3**	**+1.1**
	comp=Z,3.5nm,0.8s,mb4.3,baz=55,slow=8.1,SNR=16						
MJAR				LR	LR	15 12 03.3	
	comp=Z,154nm,20.1s,MS3.7,baz=105,slow=32						
MDJ	**Mudanjiang**	**34.80**	**280**	P	**P**	**15 00 33.0**	**-1.5**
MDJ				AP	pP	15 00 35.9	-4.4
MDJ				XP	sP	15 00 37.5	-5.1
MDJ				PP	PP	15 01 51.8	-1.5
MDJ				S	**S**	**15 06 04.0**	**0.0**
MDJ				AMB	AMB		
	comp=Z,19nm,2.2s,mb4.6						
MDJ				LR	LR		
	comp=N,56nm,35.5s,MS3.3						
MDJ				LR	LR		
	comp=E,89nm,33.6s,MS3.3						
MDJ				LR	LR		
	comp=Z,120nm,34.1s,MS3.4						
YKA	**Yellowknife Ar**	**35.26**	**46**	P	**P**	**15 00 37.5**	**-0.9**
	comp=Z,0.8nm,0.4s,mb4.0,baz=70,slow=6.0,SNR=6.4						
YKA				LR	LR	15 16 49.4	
	comp=Z,84nm,18.4s,MS3.5,baz=215,slow=39						
LON	**Longmire**	**36.70**	**74**	eP	**P**	**15 00 51.6**	**+0.7**
LON				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
LON	**Longmire**	**36.70**	**74**	eP	**P**	**15 00 51.6**	**+0.8**
	comp=Z,4.7nm,0.6s,mb4.5						
B07A	**Winthrop**	**36.93**	**71**	⇑P	**P**	**15 00 53.3**	**+0.5**
	baz=37						
ETW	**Entiat**	**37.20**	**72**	eP	**P**	**15 00 55.3**	**+0.3**
A08A	**Turner Farm, O**	**37.21**	**69**	⇓P	**P**	**15 00 54.6**	**-0.6**
	baz=37						
B08A	**Colville Reser**	**37.44**	**70**	⇑P	**P**	**15 00 57.4**	**+0.3**
	baz=37						
H04A	**Detroit Lake**	**37.49**	**77**	⇓P	**P**	**15 00 57.6**	**0.0**
	baz=37						
A09A	**Danville**	**37.61**	**69**	⇓P	**P**	**15 00 58.2**	**-0.3**
	baz=38						
G05A	**Wamic**	**37.74**	**76**	⇓P	**P**	**15 01 00.8**	**+1.1**
	baz=38						
CN2	**Changchun**	**37.77**	**281**	eP	**P**	**15 00 59.7**	**-0.3**
I04A	**Tendick Farm,**	**37.81**	**79**	⇓P	**P**	**15 01 01.2**	**+0.9**
	baz=38						
CBIJ	**Chichi jima**	**38.15**	**246**	LR	LR	15 13 49.8	
	comp=Z,72nm,20.2s,MS3.5,baz=44,slow=31						
RSW	**Rattlesnake Hi**	**38.22**	**73**	eP	**P**	**15 01 04.0**	**+0.3**
HAWA	**Hanford**	**38.25**	**73**	eP	**P**	**15 01 04.0**	**0.0**
	comp=Z,5.6nm,0.6s,mb4.5						
D08A	**Wollman Farm,**	**38.30**	**72**	⇑P	**P**	**15 01 04.1**	**-0.3**
	baz=38						
HIA	**Hailar**	**38.55**	**292**	eP	**P**	**15 01 05.1**	**-1.3**
H06A	**Lindquist Farm**	**38.60**	**76**	⇓P	**P**	**15 01 07.4**	**+0.5**
	baz=38						
YBH	**Yreka Blue Hor**	**38.73**	**82**	P	**P**	**15 01 09.3**	**+1.2**
	comp=Z,3.5nm,0.8s,mb4.2,baz=274,slow=3.9,SNR=5.8						
EDM	**Edmonton**	**38.77**	**61**	eP	**P**	**15 01 07.2**	**-1.0**
NEW	**Newport**	**38.80**	**69**	eP	**P**	**15 01 08.4**	**-0.1**
NEW				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NEW	**Newport**	**38.80**	**69**	eP	**P**	**15 01 08.4**	**-0.1**
	comp=Z,6.5nm,0.8s,mb4.4						
J05A	**Fort Rock**	**38.80**	**79**	⇑P	**P**	**15 01 09.8**	**+1.1**
	baz=39,SNR=5.2						
D10A	**Wagner Farm, O**	**39.28**	**71**	⇓P	**P**	**15 01 12.2**	**-0.4**
	baz=39						
I07A	**Izee**	**39.45**	**76**	⇑P	**P**	**15 01 14.4**	**+0.3**

baz=39,SNR=6.2
WDC Whiskeytown Da 39.49 83 ⇓P **P 15 01 15.1 +0.7**
baz=39
F09A S2 Ranch, Elgi 39.58 73 ⇑P **P 15 01 15.6 +0.5**
baz=40
E10A Myers Farm, Un 39.66 72 ⇓P **P 15 01 15.5 -0.4**
baz=40
KSRS Korea Array 39.83 271 P **P 15 01 18.1 +0.9**
comp=Z,4.7nm,0.9s,mb4.2,baz=64,slow=7.9,SNR=13
KSRS LR LR 15 15 13.7
comp=Z,61nm,19.8s,MS3.5,baz=60,slow=32
D11A Klaveano Farm, 39.85 71 ⇑P **P 15 01 16.7 -0.7**
baz=40
I08A Drewsey 40.11 76 ⇓P **P 15 01 20.1 +0.6**
baz=40,SNR=5.1
WALA Waterton Lakes 40.30 67 *e*P **P 15 01 20.3 -0.7**
K07A Rock Creek Ran 40.35 78 ⇑P **P 15 01 21.8 +0.3**
baz=40,SNR=6.7
BMO Blue Mountains 40.38 74 *e*P **P 15 01 21.5 -0.3**
BMO pmax pmax
comp=Z,5.0nm,1.1s,mb4.2
BMO Blue Mountains 40.38 74 *e*P **P 15 01 21.5 -0.3**
comp=Z,5.0nm,1.1s,mb4.2
O04C Chester 40.54 82 ⇑P **P 15 01 23.8 +0.6**
baz=40,SNR=5.2
L07A Adell 40.67 79 ⇑P **P 15 01 24.5 +0.4**
baz=41,SNR=6.8
K08A Mann Creek Ran 40.80 78 ⇓P **P 15 01 25.6 +0.4**
baz=41,SNR=6.0
WVOR Wild Horse Val 40.87 78 *e*P **P 15 01 26.3 +0.5**
WVOR *e* pP 15 01 33.0 +1.3
WVOR pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
WVOR Wild Horse Val 40.87 78 *e*P **P 15 01 26.3 +0.5**
comp=Z,8.0nm,0.8s,mb4.4
WVOR *e* pP 15 01 33.0 +1.3
M07A Soldier Meadow 41.12 80 ⇓P **P 15 01 29.1 +1.1**
baz=41,SNR=10
F12A Elk City 41.15 72 ⇑P **P 15 01 27.6 -0.5**
baz=41
L08A Fields 41.19 78 ⇑P **P 15 01 28.4 -0.1**
baz=41,SNR=6.2
D14A Greenough 41.51 69 ⇓P **P 15 01 30.3 -0.7**
baz=41
K10A MacKenzie Ranc 41.77 77 ⇑P **P 15 01 33.3 +0.1**
baz=42,SNR=6.1
G13A Cobalt 42.11 72 ⇓P **P 15 01 35.3 -0.6**
baz=42
J12A Stokes Ranch, 42.59 75 ⇑P **P 15 01 39.6 -0.2**
baz=42
L11A Cat Creek Ranc 42.79 77 ⇑P **P 15 01 41.9 +0.4**
baz=43,SNR=12
I13A Wildhorse Cree 42.81 74 ⇓P **P 15 01 41.6 -0.1**
baz=43,SNR=8.9
HLID Hailey 42.83 74 ⇑P **P 15 01 41.8 0.0**
baz=43,SNR=7.2
HLID Hailey 42.83 74 *e*P **P 15 01 41.6 -0.2**
comp=Z,3.2nm,0.8s,mb4.1
HLID *e* pP 15 01 48.1 +0.4
J13A Cove Ranch, Pi 43.06 74 ⇓P **P 15 01 43.7 0.0**
baz=43,SNR=9.5
MCMT McKenzie Canyo 43.08 72 *e*P **P 15 01 43.5 -0.4**
M11A Holland Ranch, 43.19 78 ⇑P **P 15 01 44.7 -0.1**
baz=43
I14A Mackay 43.21 73 ⇓P **P 15 01 45.3 +0.4**
baz=43,SNR=5.7
L12A House Creek Ra 43.26 76 ⇓P **P 15 01 46.0 +0.7**
baz=43,SNR=5.2
BOZ Bozeman (W) 43.36 70 *e*P **P 15 01 45.6 -0.5**
BOZ pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
BOZ Bozeman (W) 43.36 70 *e*P **P 15 01 45.6 -0.5**
comp=Z,4.6nm,0.7s,mb4.3
Q08A Gabbs 43.37 82 ⇑P **P 15 01 46.9 +0.6**
baz=43
NVAR Mina Array Bea 43.40 83 P **P 15 01 47.1 +0.6**
comp=Z,1.8nm,0.8s,mb3.8,baz=291,slow=9.3,SNR=13
J14A Carey 43.50 74 ⇑P **P 15 01 48.1 +0.8**
baz=43
M12A Wells 43.74 77 ⇑P **P 15 01 50.1 +0.9**
baz=44
MTUM Tungsten Hills 43.89 84 *e*P **P 15 01 51.3 +0.8**
ELK Elko 43.93 78 *e*P **P 15 01 51.2 +0.5**
ELK *e**PP pP 15 01 57.7 +1.1
ELK pmax pmax
comp=Z,5.0nm,0.8s
ELK Elko 43.93 78 *e*P **P 15 01 51.2 +0.4**
comp=Z,4.6nm,0.8s,mb4.3
ELK *e*pP pP 15 01 57.7 +1.1
HELL Mitchell Peak 44.02 85 ⇓P **P 15 01 51.0 -0.6**
baz=44,SNR=5.9
R09A Tonopah 44.28 82 ⇓P **P 15 01 53.4 -0.2**
baz=44,SNR=10
GCMT Greycliff 44.44 69 *e*P **P 15 01 55.3 +0.5**
S09A Goldfield 44.50 83 ⇓P **P 15 01 55.7 +0.3**
baz=44
IMW Indian Meadow 44.73 72 *e*P **P 15 01 56.3 -0.9**
comp=Z,3.5nm,0.9s,mb4.2
S10A Tonopah Range, 44.77 82 ⇑P **P 15 01 57.5 -0.1**
baz=45,SNR=7.3
RRI2 Red Ridge 44.82 73 *e*P **P 15 01 58.4 +0.5**
comp=Z,12nm,1.3s,mb4.6
P12A McGill 44.88 79 ⇑P **P 15 01 58.5 +0.1**
baz=45
K16A Soda Springs 44.95 73 ⇑P **P 15 01 59.1 +0.3**
baz=45,SNR=6.0
ISA Isabella 45.01 86 ⇑P **P 15 01 58.7 -0.7**
baz=45
RLMT Red Lodge 45.04 69 *e*P **P 15 01 59.6 0.0**
comp=Z,10nm,0.9s,mb4.7
R11A Troy Canyon, C 45.14 81 ⇓P **P 15 02 00.4 -0.1**
baz=45,SNR=8.4
P13A Bates Ranch, G 45.45 79 ⇓P **P 15 02 02.9 0.0**
baz=45,SNR=7.4
FURC Furnace Creek, 45.51 84 ⇓P **P 15 02 03.5 +0.1**
baz=45
TPNV Topopah Spring 45.59 83 *e*P **P 15 02 04.2 +0.1**
TPNV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TPNV Topopah Spring 45.59 83 *e*P **P 15 02 04.2 +0.1**
comp=Z,6.5nm,0.8s,mb4.6
BJI Beijing 45.61 283 P **P 15 02 02.5 -1.6**
BJI S **S 15 08 45.1 -0.4**
BJI AMB AMB
comp=Z,6.0nm,0.4s,mb4.9
BJI AMB AMB
comp=Z,122nm,4.5s
BJI LR LR
comp=N,91nm,7.7s
BJI LR LR
comp=E,125nm,11.2s
BJI LR LR
comp=Z,138nm,30.4s
DUG Dugway 45.74 77 *e*P **P 15 02 05.6 +0.4**
DUG pmax pmax
comp=Z,11nm,1.0s,mb4.7
DUG Dugway 45.74 77 ⇓P **P 15 02 04.5 -0.7**
baz=46
DUG Dugway 45.74 77 *e*P **P 15 02 05.6 +0.4**
comp=Z,11nm,1.0s,mb4.8
R12A Pony Springs, 45.76 80 ⇓P **P 15 02 05.6 +0.2**
baz=46,SNR=6.1
P14A Drum Mountains 45.95 78 ⇑P **P 15 02 06.7 -0.1**
baz=46,SNR=5.8
T11A Corn Creek, Al 46.05 82 ⇑P **P 15 02 07.6 -0.1**
baz=46,SNR=9.1
Q14A Sevier Lake (B 46.19 79 ⇑P **P 15 02 08.2 -0.5**
baz=46,SNR=11
PDAR Pinedale Array 46.21 72 P **P 15 02 08.8 -0.1**
comp=Z,5.1nm,0.7s,mb4.6,baz=305,slow=5.2,SNR=24
PDAR LR LR 15 18 55.2
comp=Z,75nm,20.4s,MS3.6,baz=320,slow=32
GSC Goldstone 46.28 85 *e*P **P 15 02 09.8 +0.3**
GSC pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
GSC Goldstone 46.28 85 *e*P **P 15 02 09.8 +0.3**
comp=Z,8.0nm,1.0s,mb4.6
ULN Ulaanbaatar 46.53 297 *e*P **P 15 02 11.4 +0.1**
ULN pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
ULN Ulaanbaatar 46.53 297 *e*P **P 15 02 11.4 +0.1**
comp=Z,1.9nm,0.5s,mb4.3
O16A Springville 46.54 76 ⇓P **P 15 02 11.7 +0.3**
baz=46
DAU Daniels Canyon 46.57 76 *e*P **P 15 02 11.1 -0.6**
S13A Holt Ranch, En 46.69 81 ⇓P **P 15 02 13.1 +0.4**
baz=47,SNR=6.4

SONM Songino Array 46.92 297 P **P 15 02 14.7 +0.3**
comp=Z,1.6nm,0.6s,mb4.1,baz=62,slow=8.2,SNR=16
SONM LR LR 15 23 01.4
comp=Z,200nm,19.0s,MS4.1,baz=60,slow=37
T13A Saint George 47.01 81 ⇑P **P 15 02 15.7 +0.5**
baz=47,SNR=7.1
MSU Marysvale 47.16 79 *e*P **P 15 02 17.1 +0.8**
ZAK Zakamensk 47.24 301 *e*P **P 15 02 16.7 -0.1**
ZAK *e* 15 03 47.7
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
P17A Butcher Ranch, 47.45 77 ⇑P **P 15 02 19.0 +0.4**
baz=47,SNR=6.2
T14A Hurricane 47.50 81 ⇑P **P 15 02 19.5 +0.5**
baz=47,SNR=5.8
Q16A Castle Valley 47.53 77 ⇑P **P 15 02 20.0 +0.8**
baz=47
P18A Preston Nutter 47.66 76 ⇓P **P 15 02 20.4 +0.1**
baz=48,SNR=5.2
V13A Grand Canyon W 47.70 83 ⇑P **P 15 02 19.8 -0.8**
baz=48
R16A Teasdale 47.73 78 ⇑P **P 15 02 21.7 +1.0**
baz=48,SNR=6.5
SRU San Rafael 47.80 77 *e*P **P 15 02 22.2 +0.8**
SRU pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
SRU San Rafael 47.80 77 ⇑P **P 15 02 21.6 +0.2**
baz=48,SNR=8.1
SRU San Rafael 47.80 77 *e*P **P 15 02 22.2 +0.8**
comp=Z,3.2nm,0.6s,mb4.5
HHC Hu-ho-hao-te 47.93 286 *e*P **P 15 02 20.0 -2.3**
HHC AP pP 15 02 23.7 -4.5
HHC XP sP 15 02 25.9 -4.6
HHC PCP PcP 15 03 48.4 -2.0
HHC PP PP 15 04 11.6 -2.5
HHC SCP ScP 15 07 41.2 -2.4
HHC PCS PcS 15 07 43.3 -2.7
HHC S **S 15 09 15.7 -3.0**
HHC XS sS 15 09 22.6 -5.8
HHC SCS ScS 15 12 10.4 -4.0
HHC SS SS 15 12 39.2 -7.9
HHC AMB AMB
comp=Z,14nm,0.7s,mb5.1
HHC AMB AMB
comp=Z,103nm,6.8s
HHC LR LR
comp=N,127nm,15.9s,MS4.2
HHC LR LR
comp=E,149nm,15.5s,MS4.2
HHC LR LR
comp=Z,199nm,15.6s,MS4.2
O19A Miners Draw (B 47.94 75 ⇓P **P 15 02 22.5 +0.2**
baz=48,SNR=11
T15A Red Dirt Ranch 47.96 80 ⇓P **P 15 02 22.3 -0.3**
baz=48,SNR=6.2
S16A Weppner Ranch, 48.01 79 ⇑P **P 15 02 22.9 0.0**
baz=48,SNR=7.0
Q18A Rafter H Ranch 48.05 77 ⇓P **P 15 02 23.0 -0.2**
baz=48,SNR=6.9
R17A Hanksville Air 48.12 78 ⇑P **P 15 02 23.8 0.0**
baz=48,SNR=7.4
U15A North Rim 48.39 81 ⇓P **P 15 02 26.3 +0.4**
baz=48,SNR=11
P19A Cripple Cowboy 48.43 75 ⇓P **P 15 02 26.0 -0.2**
baz=48,SNR=6.9
S17A Black Ridge (B 48.55 79 ⇓P **P 15 02 27.1 0.0**
baz=48,SNR=7.3
R18A Canyonlands Na 48.64 77 ⇓P **P 15 02 27.1 -0.7**
baz=48
Q19A Hogan Spring (48.67 76 ⇓P **P 15 02 27.5 -0.5**
baz=49,SNR=6.6
V15A Kaibab Nationa 48.85 81 ⇓P **P 15 02 30.0 +0.5**
baz=49,SNR=7.2
S18A Hurst Farm, Bl 49.01 78 ⇑P **P 15 02 30.6 -0.1**
baz=49,SNR=9.3
R19A Curley Farm, L 49.09 77 ⇑P **P 15 02 30.7 -0.6**
baz=49,SNR=5.1
PV10 Paradox Valley 49.17 77 *e*P **P 15 02 32.0 +0.2**
T18A Mexican Hat 49.44 78 ⇑P **P 15 02 32.9 -1.0**
baz=49,SNR=9.1
S19A Harvey Farm, M 49.51 77 ⇓P **P 15 02 34.1 -0.3**
baz=49,SNR=8.3
WUAZ Wupatki 49.54 81 ⇓P **P 15 02 35.2 +0.4**
baz=49
WUAZ Wupatki 49.54 81 *e*P **P 15 02 34.9 +0.1**
comp=Z,5.7nm,0.8s,mb4.7
Y14A Wickenburg 49.55 84 ⇓P **P 15 02 33.5 -1.3**
baz=49
PV01 Paradox Valley 49.61 77 *e*P **P 15 02 34.9 -0.4**
ULM Lac du Bonnet 49.66 57 P **P 15 02 35.5 0.0**
comp=Z,2.7nm,0.7s,mb4.4,baz=194,slow=2.3,SNR=3.3
ULM LR LR 15 24 03.9
comp=Z,67nm,20.2s,MS3.6,baz=354,slow=37
X15A Humboldt 49.67 83 ⇓P **P 15 02 34.6 -1.2**
baz=50
T19A Beclabito 50.16 78 ⇓P **P 15 02 39.2 -0.2**
baz=50,SNR=11
SDCO Great Sand Dun 51.73 75 *e*P **P 15 02 51.4 +0.2**
comp=Z,2.5nm,0.8s,mb4.2
118A Homack Ranch, 52.31 83 ⇓P **P 15 02 55.0 -0.6**
baz=52
WHN Wuhan 52.86 274 P **P 15 02 59.5 -0.2**
LAZ Ladron 52.90 79 *e*P **P 15 03 00.3 +0.3**
ANMO Albuquerque 52.96 78 *e*P **P 15 02 59.2 -1.2**
XAN Xi'an 53.89 281 P **P 15 03 06.2 -1.0**
XAN AP pP 15 03 15.0 +1.8
XAN XP sP 15 03 19.5 +4.0
XAN AMB AMB
comp=Z,8.0nm,1.1s,mb4.6
XAN AMB AMB
comp=Z,21nm,5.6s
LZH Lanzhou 55.63 287 P **P 15 03 20.0 +0.2**
LZH AP pP 15 03 26.5 +0.7
LZH XP sP 15 03 28.5 +0.4
LZH PP PP 15 05 24.0 +0.2
LZH *e*S **S 15 11 03.1 -1.6**
LZH XS sS 15 11 10.0 -4.5
LZH *e*SS SS 15 14 50.0 +0.6
LZH AMB AMB
comp=Z,42nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,90nm,4.0s
LZH LR LR
comp=N,533nm,14.2s
LZH LR LR
comp=Z,750nm,15.7s,MS4.9
GTA Gaotai 55.83 292 P **P 15 03 21.1 -0.1**
GTA AP pP 15 03 25.4 -1.8
GTA XP sP 15 03 28.7 -0.8
GTA PP PP 15 05 27.1 +1.6
GTA S **S 15 11 01.1 -6.2**
GTA XS sS 15 11 11.3 -5.8
GTA SS SS 15 14 47.9 -4.5
GTA AMB AMB
comp=Z,20nm,0.8s,mb5.2
GTA AMB AMB
comp=Z,45nm,4.8s
GTA LR LR
comp=N,116nm,18.0s,MS4.1
GTA LR LR
comp=E,93nm,16.8s,MS4.1
GTA LR LR
comp=Z,165nm,18.6s,MS4.2
ARCES ARCESS Array B 58.36 350 P **P 15 03 35.9 -2.8**
comp=Z,2.9nm,0.7s,mb4.4,baz=17,slow=6.7,SNR=10
ARCES LR LR 15 29 43.4
comp=Z,43nm,18.6s,MS3.6,baz=151,slow=37
TXAR Lajitas Array 58.51 81 P **P 15 03 39.5 -0.8**
comp=Z,0.8nm,0.7s,mb3.9,baz=302,slow=5.0,SNR=13
TXAR LR LR 15 25 28.3
comp=Z,43nm,20.1s,MS3.6,baz=5.0,slow=32
CD2 Chengdu 59.20 282 *e*P **P 15 03 47.9 +2.8**
CD2 XP sP 15 03 54.8 +1.4
CD2 PP PP 15 06 00.5 +4.8
CD2 S **S 15 11 53.5 +1.7**
CD2 XS sS 15 12 01.1 -0.6
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
CD2 AMB AMB
comp=Z,20nm,8.2s
CD2 LR LR
comp=N,120nm,12.8s
CD2 LR LR
comp=Z,140nm,13.2s,MS4.3

KURK Kurchatov 59.32 314 *e*P **P 15 03 46.3 +0.7**
KURK pmax pmax
comp=Z,12nm,1.4s,mb4.7
KURK Kurchatov 59.32 314 *e*P **P 15 03 46.3 +0.7**
comp=Z,12nm,1.4s,mb4.7
WMQ Urumqi 59.63 303 *e*P **P 15 03 50.0 +2.2**
WMQ AP pP 15 03 55.0 +1.1
WMQ *e*S **S 15 11 59.0 +2.1**
WMQ AMB AMB
comp=Z,5.0nm,0.6s,mb4.7
WMQ AMB AMB
comp=Z,92nm,5.1s
WMQ LR LR
comp=N,147nm,26.0s,MS4.2
WMQ LR LR
comp=E,159nm,22.3s,MS4.2
WMQ LR LR
comp=Z,238nm,23.4s,MS4.2
MK31 Makanchi Array 60.33 309 *e*P **P 15 03 51.2 -1.4**
MKAR Makanchi Array 60.33 309 P **P 15 03 50.1 -2.4**
comp=Z,0.9nm,0.6s,mb4.0,baz=52,slow=7.9,SNR=9.4
MKAR LR LR 15 30 31.5
comp=Z,107nm,21.9s,MS3.9,baz=35,slow=37
GYA Guiyang 60.53 276 *e*P **P 15 03 55.4 +1.1**
GYA PCP PcP 15 04 40.0 +1.3
GYA PP PP 15 06 10.8 +3.3
GYA SCP ScP 15 08 39.4 +0.6
GYA S **S 15 12 08.9 -0.1**
GYA PS 15 12 24.7
GYA SCS ScS 15 13 42.6 -1.5
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb5.0
GYA AMB AMB
comp=Z,80nm,5.9s
GYA LR LR
comp=N,420nm,18.3s,MS4.8
GYA LR LR
comp=E,440nm,19.5s,MS4.8
GYA LR LR
comp=Z,410nm,19.7s,MS4.6
MIAR Mount Ida 61.03 70 *e*P **P 15 03 56.4 -1.2**
MIAR pmax pmax
comp=Z,6.0nm,0.5s,mb5.0
MIAR Mount Ida 61.03 70 *e*P **P 15 03 56.4 -1.2**
comp=Z,6.3nm,0.5s,mb5.0
OXF Oxford 63.50 67 *e*P **P 15 04 13.4 -0.7**
OXF pmax pmax
comp=Z,29nm,1.0s,mb5.3
OXF Oxford 63.50 67 *e*P **P 15 04 13.4 -0.7**
comp=Z,29nm,1.0s,mb5.3
JOF Joensuu 63.88 345 *e*p **P 15 04 12.0 -4.1**
JOF Joensuu 63.88 345 *e*p **P 15 04 12.0 -4.1**
KMI Kunming 63.94 278 P **P 15 04 17.1 -0.1**
KMI AP pP 15 04 20.5 -2.7
KMI XP sP 15 04 21.8 -3.7
KMI PCP PcP 15 04 54.7 +2.1
KMI PP PP 15 06 41.6 +4.0
KMI PPP 15 08 13.1
KMI S **S 15 12 51.5 -0.5**
KMI SS SS 15 17 01.3 +1.1
KMI AMB AMB
comp=Z,7.0nm,1.2s,mb4.6
KMI AMB AMB
comp=Z,110nm,5.5s
KMI LR LR
comp=N,105nm,12.8s,MS4.3
KMI LR LR
comp=E,75nm,14.7s,MS4.3
KMI LR LR
comp=Z,77nm,24.3s
AFI Afiamalu 65.04 173 LR LR 15 32 54.7
comp=Z,105nm,18.2s,MS4.1,baz=94,slow=36
KAF Kangasniemi 65.39 347 *e*p **P 15 04 22.2 -3.8**
comp=Z,4.6nm,0.9s,mb4.5,baz=24,slow=6.6
KAF Kangasniemi 65.39 347 *e*p **P 15 04 22.2 -3.8**
comp=Z,4.6nm,0.9s,mb4.5,baz=24,slow=6.6
TKL Tuckaleechee C 65.90 63 *e*P **P 15 04 28.4 -1.3**
LRAL Lakeview Retre 65.96 67 *e*P **P 15 04 28.5 -1.7**
comp=Z,3.5nm,0.6s,mb4.6
TKM2 Tokmak 2 66.41 310 *e*P **P 15 04 33.3 +0.4**
TKM2 pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
TKM2 Tokmak 2 66.41 310 *e*P **P 15 04 33.3 +0.4**
comp=Z,2.3nm,1.0s,mb4.2
LSA Lhasa 67.70 290 P **P 15 04 42.4 +1.1**
LSA AMB AMB
comp=Z,30nm,1.0s,mb5.3
NOA NORSAR Array B 67.90 355 P **P 15 04 38.8 -3.3**
baz=13,slow=5.2
NOA LR LR 15 32 50.0
comp=Z,32nm,19.0s,MS3.6,baz=240,slow=35
NOA NORSAR Array B 67.90 355 P **P 15 04 38.8 -3.3**
NOA LR LR 15 32 50.0
AML Almayashu 67.93 310 *e*P **P 15 04 44.0 +1.4**
comp=Z,4.7nm,1.1s,mb4.4
TAOE Iku Hiva Isla 68.32 139 *e*T 16 19 24.2
comp=Z,120nm,0.3s
OBN Obninsk 70.16 339⇓*e*P **P 15 04 56.0 -0.2**
OBN *e* 15 05 11.0
OBN pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
PMOR Pomariorio Ree 71.08 149 *e*T 16 22 50.3
comp=Z,25nm,0.3s
CMAR Chiang Mai Arr 71.22 276 P **P 15 05 02.8 -0.4**
comp=Z,1.4nm,0.7s,mb4.0,baz=30,slow=6.5,SNR=8.9
CMAR LR LR 15 38 22.2
comp=Z,73nm,18.3s,MS4.0,baz=263,slow=38
TAPN Taplejung 71.46 291 *e*P **P 15 05 05.1 +0.5**
comp=Z,150nm,1.2s
ODAN Odare 72.02 290 *e*P **P 15 05 08.0 +0.1**
comp=Z,35nm,0.9s,mb5.3
GUN Gumba 72.12 292 *e*P **P 15 05 09.0 +0.5**
JIRN Jiri 72.12 292 *e*P **P 15 05 09.3 +0.8**
comp=Z,159nm,0.8s
RAMN Ramite 72.42 291 *e*P **P 15 05 10.3 0.0**
comp=Z,143nm,0.8s
KKN Kakani 72.56 293 *e*P **P 15 05 11.4 +0.3**
comp=Z,88nm,0.8s
PKI Pulchoki 72.65 292 *e*P **P 15 05 11.8 +0.1**
comp=Z,65nm,0.7s,mb5.7
PKIN Phulchoki 72.65 292 *e*P **P 15 05 11.8 +0.1**
comp=Z,55nm,0.7s,mb5.6
GKN Gorkha 72.77 293 *e*P **P 15 05 12.0 -0.4**
comp=Z,51nm,0.5s,mb5.7
DMN Daman 72.80 293 *e*P **P 15 05 12.7 +0.2**
comp=Z,73nm,0.9s,mb5.6
PPT Papeete 72.96 151 *e*LR LR 15 27 42.6
comp=Z,150nm,28.8s
PPT Papeete 72.96 151 *e*T 16 25 10.8
comp=Z,6.1nm,0.2s
PPT Papeete 72.96 151 LR LR 15 31 18.9
comp=Z,172nm,20.3s,MS4.3,baz=357,slow=31
DANN Dangsing 73.02 294 *e*P **P 15 05 14.4 +0.6**
comp=Z,87nm,0.8s,mb5.7
KOLN Koldanda 73.55 294 *e*P **P 15 05 16.4 -0.6**
comp=Z,45nm,1.0s,mb5.4
AKASG Malin Array Be 75.83 342 P **P 15 05 27.7 -2.2**
comp=Z,0.6nm,0.3s,mb4.0,baz=21,slow=7.0,SNR=5.0
AKASG LR LR 15 44 18.4
comp=Z,77nm,18.3s,MS4.0,baz=255,slow=40
AKASG Malin Array Be 75.83 342 P **P 15 05 27.7 -2.2**
AKASG LR LR 15 44 18.4
KIV Kislovodsk 78.77 331 P **P 15 05 45.0 -1.4**
KIV *e* 15 05 55.7
KIV MLR MLR
comp=Z,100nm,17.0s,MS4.2
BUR08 Bucovina Ar. S 79.51 344 *e*P **P 15 05 48.2 -2.2**
BURAR Bucovina Array 79.53 344⇑*i*P **P 15 05 50.4 -0.1**
GERES GERESS Array B 79.85 352 P **P 15 05 50.6 -1.6**
comp=Z,0.6nm,0.6s,mb3.7,baz=28,slow=6.0,SNR=6.0
LDF La Druitiere 80.64 1 *e*P **P 15 05 53.9 -2.6**
comp=Z,5.0nm,0.6s,mb4.3
MLR Muntele Rosu 81.46 343⇓*i*P **P 15 06 00.9 0.0**
WB2 Warramunga Arr 81.96 224 *e*P **P 15 06 03.4 -0.3**
WRA Warramunga Arr 81.97 224 P **P 15 06 03.2 -0.5**
comp=Z,0.2nm,0.4s,baz=31,slow=5.7,SNR=11
SMF Signal de Mont 82.58 358 *e*P **P 15 06 04.5 -2.2**
comp=Z,5.2nm,0.6s,mb4.4
RKT Rikitea 83.26 140 *e*T 16 38 03.8
comp=Z,3.4nm,0.3s
LFF La Frestale 84.30 1 *e*P **P 15 06 15.0 -0.7**
CAF Calviac 84.32 360 *e*P **P 15 06 13.1 -2.6**
comp=Z,4.1nm,0.8s,mb4.3
FITZ Fitzroy Crossi 84.46 232 *e*P **P 15 06 18.0 +1.3**
comp=Z,5.9nm,1.1s,mb4.6
ASAR Alice Springs 85.44 223 P **P 15 06 21.7 +0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.7nm,0.4s,mb4.1,baz=24,slow=5.6,SNR=43						
POO	Poona	86.32	295	ex	x	15 06 22.0	
ESDC	Sonseca Array	89.44	4	P	P	15 06 38.6	-2.1
	comp=Z,0.5nm,0.7s,mb4.0,baz=349,slow=3.8,SNR=5.7						
STKA	Stephens Creek	89.82	213	eP	P	15 06 43.6	+1.3
	comp=Z,6.5nm,1.3s,mb4.8						
STKA	Stephens Creek	89.82	213	P	P	15 06 42.0	-0.4
	comp=Z,1.4nm,0.5s,mb4.5,baz=145,slow=20,SNR=4.7						
RPZ	Rata Peaks	94.91	188	LR	LR	15 44 57.2	
	comp=Z,186nm,18.4s,MS4.6,baz=347,slow=32						
MAW	Mawson	146.41	217	PKPbc	PKPbc	15 13 23.1	-0.4
	comp=Z,1.6nm,0.8s,baz=318,slow=3.7,SNR=4.5						
BOSA	Boshof	151.27	313	PKPbc	PKPbc	15 13 36.5	-0.8
	comp=Z,2.2nm,0.5s,baz=24,slow=3.0,SNR=11						

*IDC **09** 15:06:51.3±1.6, 828S×15693E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/16, mbtmp3.8/5, ML4.0/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/30, Error ellipse: s-maj=38.0km s-min=25.5km az=3.0*
*NEIC **09** 15:06:52.1±1.2, 833S×15708E, h10km, Error ellipse: s-maj=33.3km s-min=16.5km az=180.0*
*ISCJB **09** 15:06:55.6±1.3, 84S±02×15682E±006, h33km, mb3.6/4, Error ellipse: s-maj=32.0km s-min=7.9km az=7.8*
ISC 09 15:06:57.3±1.3**, 83S**±02×**15682E**±008**, h35**km**, n8, σ0^{s}65**/9**, mb3.6**/4**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.29	110	Pn	Pn	15 07 41.6	-4.7
	16nm,0.3s,baz=188,slow=1.2,SNR=13						
HNR				Sn	Sn	15 08 23.7	-0.5
	40nm,0.3s,baz=94,slow=21,SNR=8.9						
HNR	Honiara	3.29	110	ePn	Pn	15 07 39.9	-6.5
HNR				eS	Sn	15 08 24.5	+0.3
CTA	Charters Tower	15.54	220	LR	LR	15 15 08.0	
	comp=Z,61nm,20.1s,baz=232,slow=32						
WB2	Warramunga Arr	24.63	240	eP	P	15 12 14.7	+0.1
WRA	Warramunga Arr	24.64	240	P	P	15 12 14.4	-0.3
	1.0nm,0.8s,mb3.4,baz=66,slow=10,SNR=6.7						
ASAR	Alice Springs	26.73	233	P	P	15 12 32.7	-1.0
	0.4nm,0.9s,mb2.9,baz=60,slow=9.9,SNR=3.3						
STKA	Stephens Creek	27.39	209	P	P	15 12 40.6	+1.1
	5.3nm,1.1s,mb4.0,baz=35,slow=16,SNR=5.3						
MKAR	Makanchi Array	85.58	318	P	P	15 19 32.3	+0.3
	0.4nm,0.4s,mb4.0,baz=94,slow=5.7,SNR=5.8						

IDC 09 15:10:41.8±31.0**, 377S**×**15361E, h491**km±177km**, mb3.0**/4**, mb1 3.2**/5**, mb1mx2.8**/17**, mbtmp3.1**/5**, Error ellipse: s-maj=383.4km s-min=55.2km az=39.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	17.73	203	P	P	15 14 20.2	0.0
	0.4nm,0.3s,baz=50,slow=8.9,SNR=5.7						
KAKA	Kakadu	22.73	246	eP	P	15 15 05.4	-0.4
	3.4nm,0.6s						
WB2	Warramunga Arr	24.71	228	eP	P	15 15 23.6	+0.2
WRA	Warramunga Arr	24.72	228	P	P	15 15 23.6	+0.1
	0.9nm,0.5s,baz=53,slow=9.5,SNR=30						
ASAR	Alice Springs	27.45	222	P	P	15 15 47.5	+0.1
	1.2nm,0.4s,baz=53,slow=8.6,SNR=79						
STKA	Stephens Creek	30.15	201	P	P	15 16 10.8	-0.2
	4.1nm,1.1s,baz=32,slow=13,SNR=3.3						
FITZ	Fitzroy Crossi	30.86	240	eP	P	15 16 17.4	+0.1
	6.4nm,1.8s						
FITZ	Fitzroy Crossi	30.86	240	P	P	15 16 17.2	-0.1
	0.6nm,0.5s,baz=77,slow=12,SNR=5.0						

NEIC 09 15:13:11.4, 3836S×**17599E, h174**km**, MG4.2**(WEL)**, After WEL., North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WATZ	Wairara	0.40	210	P	Pn	15 13 35.3	+0.2
WATZ				S	Sn	15 13 53.8	+0.4
RATZ	Rangitukua	0.54	199	P	Pn	15 13 35.6	0.0
HATZ	Hinemaiaia	0.54	171	P	Pn	15 13 35.6	0.0
HATZ				S	Sn	15 13 53.0	-1.4
RITZ	Rihia Road	0.63	189	P	Pn	15 13 36.5	+0.5
KATZ	Kakaramea	0.66	201	P	Pn	15 13 36.4	+0.2
TWVZ	Taurewa	0.83	211	P	Pn	15 13 37.4	+0.1
URZ	Urewera	0.89	84	P	Pn	15 13 36.9	-0.7
BKZ	Black Stump Fm	0.90	154	P	Pn	15 13 37.8	+0.1
HIZ	Hauiti	0.90	260	P	Pn	15 13 37.5	-0.3
WPVZ	Whakapapa	0.91	202	P	Pn	15 13 38.0	+0.2
TUVZ	Tukino	0.94	196	P	Pn	15 13 38.3	+0.3
TUVZ				S	Sn	15 13 58.6	-0.1
FWVZ	Far West T-bar	0.96	201	P	Pn	15 13 38.1	0.0
DRZ	Dome Shelter	0.97	200	P	Pn	15 13 38.8	+0.6
WNVZ	Wahianoa	1.01	197	P	Pn	15 13 38.7	+0.1
MOVZ	Moawhango	1.06	190	P	Pn	15 13 38.8	-0.1
MWZ	Matawai	1.21	89	P	Pn	15 13 40.0	-0.1
VRZ	Vera Road	1.23	231	P	Pn	15 13 40.0	-0.3
KNZ	Kokohu	1.47	117	P	Pn	15 13 42.8	+0.3
RAEZ	Rainy Point	1.55	233	P	Pn	15 13 43.4	+0.1
WAZ	Wanganui	1.60	209	P	Pn	15 13 43.5	-0.3
TSZ	Takapari Road	1.70	181	P	Pn	15 13 44.5	-0.3
NEZ	North Egmont	1.74	238	P	Pn	15 13 45.6	+0.4
PUZ	Puketiti	1.81	82	P	Pn	15 13 45.5	-0.4
MXZ	Matakaoa Point	2.00	67	P	Pn	15 13 47.9	-0.1
MRZ	Mangatainoka R	2.32	188	P	Pn	15 13 50.1	-1.5
KIW	Kapiti Island	2.63	198	P	Pn	15 13 53.5	-1.8
MTW	Mount Morrison	2.82	188	P	Pn	15 13 55.6	-1.9
CAW	Cannon Point	2.84	194	P	Pn	15 13 55.8	-1.9
PAWZ	Paruwai Farm	3.05	188	P	Pn	15 13 58.1	-2.2
WEL	Wellington	3.07	197	P	Pn	15 13 58.4	-2.1
MSWZ	Moikau Station	3.10	190	P	Pn	15 13 58.7	-2.3
SNZO	South Karori	3.11	198	P	Pn	15 13 58.6	-2.4
TCW	Tory Channel	3.14	204	P	Pn	15 13 59.1	-2.3
BHW	Baring Head	3.17	195	P	Pn	15 13 59.3	-2.4
NNZ	Nelson	3.49	214	P	Pn	15 14 02.8	-3.0
QRZ	Quartz Range	3.64	226	P	Pn	15 14 04.2	-3.4
BSWZ	Blackbirch Sta	3.72	205	P	Pn	15 14 06.1	-2.6
THZ	Tophouse	4.14	214	P	Pn	15 14 10.6	-3.4
KHZ	Kahutara	4.46	204	P	Pn	15 14 15.3	-2.9
DSZ	Denniston Nort	4.67	222	P	Pn	15 14 16.7	-4.1
LTZ	Lake Taylor	5.25	211	P	Pn	15 14 23.8	-4.5
CRLZ	Canterbury Las	5.80	205	P	Pn	15 14 31.0	-4.6
MQZ	McQueen's Vall	5.91	204	P	Pn	15 14 32.2	-4.8
WVZ	Waitaha Valley	6.17	219	P	Pn	15 14 36.3	-4.2
RPZ	Rata Peaks	6.52	213	P	Pn	15 14 40.9	-4.2
FOZ	Fox Glacier	7.05	221	P	Pn	15 14 46.4	-5.7
LBZ	Lake Benmore	7.44	214	P	Pn	15 14 52.5	-4.6
ODZ	Otahua Downs	7.78	209	P	Pn	15 14 57.4	-4.3
JCZ	Jackson Bay	7.89	221	P	Pn	15 14 57.6	-5.5
WKZ	Wanaka	8.31	217	P	Pn	15 15 03.4	-5.2
EAZ	Earnscleugh	8.49	214	P	Pn	15 15 05.8	-5.1
TUZ	Tuapeka	8.94	210	P	Pn	15 15 13.5	-3.3
WHZ	Wether Hill Ro	9.61	216	P	Pn	15 15 20.7	-5.0

MAN 09 16:05:21, 1205N×**12547E, h30**km**, mb4.1, ML2.9, MS2.6, 1C-1D, Samar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BESP	Borongan	0.45	184	eP	Pb	16 05 31.1	+0.5
OCLP	Ormoc	1.30	220	eP	Pn	16 05 44.8	+1.7
MSLP	Maasin	2.00	198	eP	Pn	16 05 54.1	+1.4
MSLP				eS	Sn	16 06 17.7	+1.0
RCP	Roxas	2.71	260⇓	iP	Pn	16 06 02.7	+0.1
KALP	Kalibo	3.09	263⇑	eP	Pn	16 06 16.1	+8.4
GUIM	Jordan	3.16	244	eP	Pn	16 06 05.8	-2.9
GUIM				eS	Sn	16 06 32.0	-13

*BJI **09** 16:25:57.3, 2444N×10397E, h15km, ML3.0*
*PLV **09** 16:26:10.3±0.6, 2400N×104.18E, h18km±999km, ML2.5*
ISC 09 16:25:56.0±0.8**, 2429N**±004×**10395E**±005**, h5**km±9km**, n6, σ1^{s}09**/13**, Yunnan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI	Kunming	1.38	307	PG	Pg	16 26 22.9	+0.4
KMI				SG	Sg	16 26 40.1	-0.3
KMI				Smax			
	comp=N,47nm,0.9s						
KMI				Smax			
	comp=E,69nm,0.7s						
GYA	Guiyang	3.27	48	P	Pn	16 26 49.4	+1.5
GYA				PG	Pg	16 26 58.3	-0.3
GYA				S	Sn	16 27 30.0	+2.8
GYA				SG	Sg	16 27 40.1	-0.9
GYA				Smax			
	comp=N,50nm,0.8s						
GYA				Smax			
	comp=E,30nm,0.7s						
MTZV	Met	3.51	141	ePg	Pg	16 27 04.5	+1.2
MTZV				eSg	Sb	16 27 40.7	-0.9
HNV	Hanoi	3.65	152	ePg	Pg	16 27 07.3	+1.3
HNV				eSg	Sb	16 27 46.1	+0.4
HNV				AMP		16 28 08.8	
	comp=Z,35nm,0.4s						
DSV	Doi Son	4.13	153	ePg	Pg	16 27 14.4	-0.9
DSV				eSg	Sb	16 27 58.5	-1.1
CD2	Chengdu	6.59	359	eP	Pn	16 27 32.5	-1.2

IDC 09 16:30:03.5±2.6**, 097N**×**9724E, h0**km**, mb3.5**/6**, mb1 3.6**/6**, mb1mx3.5**/18**, mbtmp3.5**/6**, Error ellipse: s-maj=90.5km s-min=22.1km az=60.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.88	122	P	P	16 37 55.6	-0.2
	0.1nm,0.5s,baz=274,slow=8.3,SNR=4.3						
ASAR	Alice Springs	43.23	127	P	P	16 38 07.0	+0.2
	0.7nm,1.0s,baz=302,slow=7.8,SNR=4.0						
KSRS	Korea Array	46.02	34	P	P	16 38 28.2	-0.6
	0.4nm,0.7s,baz=224,slow=6.0,SNR=4.4						
SONM	Songino Array	47.35	8	P	P	16 38 39.8	+0.7
	0.5nm,0.5s,baz=194,slow=8.1,SNR=4.0						
MKAR	Makanchi Array	47.47	346	P	P	16 38 40.0	0.0
	0.4nm,0.6s,baz=144,slow=8.4,SNR=6.2						
ZALV	Zalesovo Beam	53.79	351	P	P	16 39 27.3	-0.4
	0.5nm,0.4s,baz=179,slow=5.9,SNR=4.0						

*ISCJB **09** 16:31:07.3±0.6, 2436N±003×10409E±005, h10km, Error ellipse: s-maj=7.2km s-min=3.8km az=159.6*
*BJI **09** 16:31:09.8, 2445N×10388E, h16km, ML3.2*
*PLV **09** 16:31:18.3±0.4, 2370N×10433E, h4km±2km, MD3.5*
ISC 09 16:31:07.8±0.6**, 2427N**±003×**10401E**±005**, h10**km**, n8, σ1^{s}49**/23**, Yunnan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI	Kunming	1.44	307	PG	Pn	16 31 33.8	-0.1
KMI				SG	Sn	16 31 51.7	-1.2
KMI				Smax			
	comp=N,209nm,0.7s						
KMI				Smax			
	comp=E,266nm,0.9s						
GYA	Guiyang	3.24	47	P	Pn	16 32 00.9	+2.1
GYA				PG	Pg	16 32 09.3	-0.7
GYA				S	Sn	16 32 41.5	+4.1
GYA				SG	Sg	16 32 51.6	-0.4
GYA				Smax			
	comp=N,110nm,0.7s						
GYA				Smax			
	comp=E,130nm,0.7s						
MTZV	Met	3.45	141	ePn	Pn	16 32 04.2	+2.6
MTZV				ePg	Pg	16 32 12.8	-1.3
MTZV				eSg	Sb	16 32 50.1	-1.0
BGV	Bac-Giang	3.60	145	ePn	Pn	16 32 06.2	+2.6
BGV				ePg	Pg	16 32 15.3	-1.5
BGV				eSg	Sb	16 32 53.8	-1.4
HNV	Hanoi	3.60	152	ePn	Pn	16 32 06.9	+3.2
HNV				ePg	Pg	16 32 16.3	-0.5
HNV				eSg	Sb	16 32 55.8	+0.4
DSV	Doi Son	4.09	153	ePn	Pn	16 32 12.8	+2.4
DSV				ePg	Pg	16 32 24.4	-1.8
DSV				eSg	Sb	16 33 09.4	0.0
PLV	Phu-Lien	4.21	144	ePn	Pn	16 32 14.7	+2.7
PLV				ePg	Pg	16 32 27.0	-1.5
PLV				eSg	Sb	16 33 13.6	+0.8
CD2	Chengdu	6.62	358	eP	Pn	16 32 46.5	+1.3
CD2				S	Sn	16 33 59.2	-1.6
CD2				Smax			
	comp=N,10.0nm,1.7s						
CD2				Smax			
	comp=E,10.0nm,1.4s						

*ISCJB **09** 16:33:08.4±0.9, 2067S±008×667W±02, h215km±18km, Error ellipse: s-maj=28.1km s-min=10.4km az=14.9*
*IDC **09** 16:33:09.4±1.3, 2051S×6675W, h229km±22km, mb3.2/2, mb1 3.1/5, mb1mx3.0/19, mbtmp3.0/5, Error ellipse: s-maj=36.2km s-min=14.5km az=104.0*
*NEIC **09** 16:33:09.2±0.9, 2063S×6670W, h226km±18km, mb3.6/1, Error ellipse: s-maj=33.3km s-min=14.0km az=118.0*
ISC 09 16:33:09.0±0.9**, 2066S**±008×**667W**±02**, h213**km±17km**, n9, σ1^{s}26**/13**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.81	226	P	Pn	16 33 58.5	+1.3
	1.5nm,0.3s,baz=51,slow=8.1,SNR=8.8						
LVC				S	S	16 34 33.5	-1.5
	7.8nm,0.3s,baz=150,slow=19,SNR=16						
LVC	Limon Verde	2.81	226	ePn	Pn	16 33 58.1	+0.9
LVC				S	S	16 34 33.5	-1.5
LPAZ	La Paz	4.54	343	P	Pn	16 34 19.2	+1.1
	0.4nm,0.3s,baz=150,slow=8.1,SNR=10						
LPAZ				S	S	16 35 12.2	-0.4
	0.4nm,0.3s,baz=298,slow=20,SNR=14						
LPAZ	La Paz	4.54	343	ePn	Pn	16 34 19.4	+1.3
LPAZ				S	S	16 35 12.2	-0.4
SIV	San Ignacio	7.10	50	P	Pn	16 34 50.7	0.0
	1.0nm,0.3s,baz=241,slow=9.5,SNR=34						
PLCA	Paso Flores	20.28	188	P	P	16 37 30.4	+2.1
	2.0nm,0.9s,baz=13,slow=13,SNR=5.2						
PLCA	Paso Flores	20.28	188	P	P	16 37 29.1	+0.8
	1.1nm,0.6s						
TORD	Torodi Ar. Bea	75.15	70	P	P	16 44 26.4	-1.9
	0.5nm,0.4s,baz=254,slow=5.6,SNR=7.1						
TORD	Torodi Ar. Bea	75.15	70	P	P	16 44 26.4	-1.9

*ISCJB **09** 16:35:53.8±0.4, 24.14N±002×104.10E±004, h10km, mb3.7/2, Error ellipse: s-maj=5.3km s-min=3.3km az=175.2*
*BJI **09** 16:35:54.5, 2427N×10405E, h14km, ML3.6, Msz3.5*
*IDC **09** 16:35:55.8±1.5, 2437N×10399E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.4/20, mbtmp3.7/4, ML4.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/39, Error ellipse: s-maj=36.8km s-min=23.3km az=92.0*
*NEIC **09** 16:35:56.6±0.9, 2430N×104.11E, h10km, Error ellipse: s-maj=16.5km s-min=13.8km az=72.0*
*PLV **09** 16:36:04.5±1.3, 2370N×10423E, h6km±7km, MD3.8*
ISC 09 16:35:56.3±0.4**, 2419N**±002×**10405E**±004**, h10**km**, n22, σ1^{s}72**/46**, mb3.7**/2**, Yunnan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI	Kunming	1.52	308	PG	Pn	16 36 21.1	-2.4
KMI				SG	Sn	16 36 40.4	-2.9
KMI				Smax			
	comp=N,390nm,1.0s						
KMI				Smax			
	comp=E,425nm,0.9s						
LCVN	Lai Chau	2.29	201	ePG	Pg	16 36 40.6	+0.3
LCVN				eSG	Sg	16 37 08.9	-1.1
SLVN	Son La	2.84	183	ePG	Pg	16 36 53.8	+3.0
SLVN				eSG	Sg	16 37 25.4	-2.3
DBV	Dienbien	2.94	199	ePN	Pn	16 36 45.4	+2.3
DBV				ePG	Pg	16 36 53.6	+0.9
DBV				eSG	Sg	16 37 27.6	-3.2
GYA	Guiyang	3.27	46	P	Pn	16 36 49.0	+1.3
GYA				S	Sn	16 37 26.9	+0.2
GYA				SG	Sg	16 37 39.0	-2.5
GYA				Smax			
	comp=N,330nm,0.7s						
GYA				Smax			
	comp=E,260nm,0.8s						
GYA				LR	LR		
	comp=N,510nm,3.1s						
GYA				LR	LR		
	comp=E,540nm,3.4s						
GYA				LR	LR		
	comp=Z,640nm,5.2s						
MTZV	Met	3.37	141	ePn	Pn	16 36 52.0	+3.0
MTZV				ePg	Pg	16 37 00.7	-0.2
MTZV				eSg	Sg	16 37 38.9	-5.8
BGV	Bac-Giang	3.51	145	ePn	Pn	16 36 52.9	+1.9
BGV				ePg	Pg	16 37 02.7	-1.0
BGV				eSg	Sg	16 37 41.9	-7.2
HNV	Hanoi	3.52	152	ePn	Pn	16 36 53.4	+2.4
HNV				ePG	Pg	16 37 03.0	-0.8
HNV				eSG	Sg	16 37 43.1	-6.2
DSV	Doi Son	4.00	153	ePn	Pn	16 36 59.3	+1.6
DSV				ePg	Pg	16 37 11.1	-1.9
DSV				eSG	Sg	16 37 56.9	-8.0
PLV	Phu-Lien	4.12	144	ePn	Pn	16 37 01.5	+2.1
PLV				ePg	Pg	16 37 14.2	-1.2
PLV				eSG	Sg	16 38 01.6	-7.2
LAVN	Lang Chanh	4.16	164	ePG	Pg	16 37 20.2	+4.1
LAVN				eSG	Sg	16 38 08.7	-1.4
CHRT	Chiangrai	5.84	224	P	Pg	16 37 46.0	-2.3
	comp=Z,203nm,1.1s						
NANT	Nan	6.20	211	P	Pn	16 37 29.0	+1.0
	comp=Z,212nm,1.0s						
CD2	Chengdu	6.70	358	eP	Pn	16 37 36.7	+1.9
CD2				S	Sn	16 38 52.5	+1.2
CD2				SG	Sg	16 39 30.6	-0.9
CD2				Smax			
	comp=N,20nm,1.6s						
CD2				Smax			
	comp=E,30nm,1.7s						
CD2				LR	LR		
	comp=Z,340nm,7.2s						
CHTO	Chiang Mai	7.15	223	ePn	Pn	16 37 42.6	+1.5
CHTO				eSg	Sg	16 39 47.8	+1.8
CMAR	Chiang Mai Arr	7.43	221	Pn	Pn	16 37 47.0	+2.1
	comp=Z,1.9nm,0.3s,baz=31,slow=13,SNR=36						
CMAR				Pg	Pg	16 38 16.4	-2.3
	baz=36,slow=18,SNR=11						
CMAR				Lg		16 39 54.3	
	comp=Z,0.1nm,0.3s,baz=57,slow=33,SNR=6.5						
QIZ	Qiongzhong	7.44	133	ePn	Pn	16 37 44.9	-0.1
QIZ				eSg	Sg	16 39 58.2	+3.0
KKTK	Khon Kaen	7.89	189	PN	Sb	16 39 39.0	-8.4
KKTK				SG	Sn	16 40 21.5	+61
HHC	Hu-ho-hao-te	17.77	19	eP	Pn	16 40 01.1	-2.7
HHC				AP	pP	16 40 04.4	-3.0
HHC				XP	sP	16 40 08.5	-0.2
HHC				PP		16 40 15.5	
HHC				S	Sn	16 43 15.3	-6.5
HHC				SS		16 43 36.9	
HHC				PCP	PcP	16 44 41.6	+0.4
HHC				SCS	ScS	16 51 53.6	-3.2
HHC				LR	LR		
	comp=Z,77nm,8.7s						
MKAR	Makanchi Array	28.51	328	P	P	16 41 51.7	-0.1
	comp=Z,0.2nm,0.6s,baz=134,slow=8.3,SNR=2.3						
MKAR				LR	LR	16 55 00.3	
	comp=Z,28nm,20.6s,baz=136,slow=40						
ZALV	Zalesovo Beam	33.04	339	P	P	16 42 30.6	-1.0
	comp=Z,1.4nm,0.7s,mb4.0,baz=148,slow=7.9,SNR=8.1						
WRA	Warramunga Arr	52.86	143	P	P	16 45 14.8	+2.4
	comp=Z,0.5nm,0.9s,mb3.4,baz=331,slow=8.3,SNR=4.0						

*ISCJB **09** 18:36:32.4±0.7, 786S±003×11424E±003, h7km±4km, mb4.7/57, MS4.4/31, Error ellipse: s-maj=5.3km s-min=3.9km az=39.0*
*IDC **09** 18:36:32.6±0.5, 772S×11435E, h0km, mb4.3/14, mb1 4.5/17, mb1mx4.4/21, mbtmp4.4/17, ML4.4/3, MS4.3/19, Ms1 4.3/19, ms1mx4.1/32, Error ellipse: s-maj=18.2km s-min=10.4km az=48.0*
*MOS **09** 18:36:35.5±1.3, 773S×11434E, h30km, mb4.9/16, Error ellipse: s-maj=15.5km s-min=7.8km az=119.1*
*DJA **09** 18:36:36, 775S×11438E, h10km, Mw5.3/8*
*BJI **09** 18:36:37.6, 780S×11430E, h35km, mB4.9, mb4.7, Ms4.8, Msz4.6*
*NEIC **09** 18:36:37.6±0.3, 778S×11434E, h35km, mb4.8/18, Error ellipse: s-maj=10.7km s-min=6.5km az=55.0*
NEIC At least 13 people injured and buildings damaged [VI] at Situbondo.
*GCMT **09** 18:36:37.6±0.3, 792S×11424E, h15km±2km, MW4.9/57, Moment Tensor Solution. s21,c24; s57,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.01±.11; $M_{\theta\theta}$-1.87±.09; $M_{\phi\phi}$1.88±.11; $M_{r\theta}$-0.37±.17; $M_{\theta\phi}$1.22±.08; $M_{\phi r}$1.24±.30; Best double couple: $M_0$2.57600×10^{16} NP1:ϕ_s63.00000°, δ61.00000°, λ4.00000°. NP2: ϕ_s331.00000°, δ87.00000°, λ151.00000°. Principal axes: T 2.6930, Plg23.0000°, Azm283.0000°; N -0.2340, Plg61.0000°, Azm146.0000°; P -2.4600, Plg18.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 09 18:36:33.6±0.7**, 788S**±003×**11425E**±003**, h3**km±4km**, h35**km±1.4km**:pP-P, n157, σ1^{s}30**/174**, mb4.7**/57**, MS4.4**/31**, 5C-10D, Bali Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NBBI	Negara	0.61	143	P	Pg	18 36 46.6	+1.4
	0.0nm,0.0s						
KMMI	Kalianget	0.87	341	P	Pg	18 36 49.8	-0.5
	0.0nm,0.0s						
DNP	Denpasar	1.23	130	P	Pg	18 36 57.9	+0.6
	0.0nm,0.0s						
IGBI	Denpasar	1.28	137	P	Pg	18 36 57.8	-0.4
	0.0nm,0.0s						
KHKI	Kahang-Kahang	1.42	110	P	Pn	18 36 59.5	-0.9
	0.0nm,0.0s						
TRT	Tretes	1.61	276⇑	eP	Pn	18 36 59.5	-3.5
TRT				eS	Sn	18 37 17.0	-7.3
KRKI	Karangkates	1.81	261	P	Pn	18 37 05.4	-0.2
	0.0nm,0.0s						
KRKI	Karangkates	1.81	261⇓	iP	Pn	18 37 01.1	-4.5
KRKI				i S	Sn	18 37 25.5	-3.6
MTNI	Mataram	2.04	112	P	Pn	18 37 08.7	-0.1
	0.0nm,0.0s						
SJI	Sawahan	2.47	273	P	Pn	18 37 14.0	-0.7
	0.0nm,0.0s						
BBKI	Banjar Baru	4.43	8	P	Pn	18 37 42.0	+0.3
	0.0nm,0.0s						
BJII	Banjamegara	4.54	277	P	Pn	18 37 46.2	+3.0
	0.0nm,0.0s						
BJII	Banjamegara	4.54	277⇓	eP	Pn	18 37 45.3	+2.1
BJII				eS	Sg	18 39 15.1	+16
CLJI	Cilicap	5.19	271	P	Pn	18 38 01.2	+9.0
	2μm,0.5s						
PBKI	Pangkalan Bun	5.75	333	P	Pn	18 38 01.1	+1.2
	462nm,1.0s						
MKS	Makassar	5.82	63⇑	eP	Pn	18 37 59.6	-1.2
MKS				eS	Sg	18 39 46.3	+5.7
KAPI	Kappang	6.16	63	Pn	Pn	18 38 03.3	-2.2
	15nm,0.3s,baz=246,slow=6.0,SNR=58						
KAPI				Sn	Sn	18 39 12.0	-4.5
	3.7nm,0.3s,baz=339,slow=4.2,SNR=6.0						
KAPI	Kappang	6.16	63⇓	ePn	Pn	18 38 03.3	-2.3
WSI	Waingapu	6.23	107⇓	eP	Pn	18 38 07.0	+0.5
LEM	Lembang	6.67	279	P	Pn	18 38 20.8	+8.3
	327nm,1.3s						
CBJI	Citeko	7.49	281	P	Pn	18 38 30.4	+6.6
	516nm,1.1s						
DBJI	Dramaga	7.56	280	P	Pn	18 38 30.6	+5.8
	226nm,1.2s						
SBJI	Serang	8.25	282	P	Pn	18 38 43.9	+10
	304nm,1.7s						
TPI	Tanjungpandan	8.31	307⇓	eP	Pn	18 38 36.5	+1.4
TPI				eS	Sn	18 40 45.0	+35
STKI	Sintang	8.36	341	P	Pn	18 38 35.5	-0.3
	221nm,1.0s						
XMIS	Christmas Isla	8.88	252	ePn	Pn	18 38 41.4	-1.5
BATI	Baumata	9.58	105	P	Pn	18 39 06.0	+14
	58nm,1.1s						
BATI	Baumata	9.58	105	Pn	Pn	18 38 52.3	-0.2
	6.3nm,0.3s,baz=285,slow=18,SNR=15						
BATI				Sn	Sn	18 40 42.4	+1.7
	baz=41,slow=20,SNR=2.2						
BATI				LR	LR	18 44 13.7	
	comp=Z,6μm,18.4s,baz=321,slow=48						
PPBI	Pangkal Pinang	9.88	305	P	Pn	18 38 58.7	+2.1
	77nm,0.8s						
KSM	Kuching	10.09	337	⇓P	Pn	18 38 58.5	-1.0
KSM	Kuching	10.09	337	ePn	Pn	18 38 58.4	-1.2
KSM				eSn	Sn	18 40 53.7	+0.3
SBUM	Sibu	10.46	349	⇑P	Pn	18 39 10.1	+5.6
KKM	Kota Kinabalu	13.97	8	ePn	Pn	18 39 51.0	-1.6

MBWA	Marble Bar	14.22	159	ePn	Pn	18 39 52.0	-4.0
FITZ	Fitzroy Crossi	15.03	134	eP	Pn	18 40 04.9	-2.2
	26nm,0.8s						
FITZ				eS	Sn	18 42 46.3	-8.0
FITZ	Fitzroy Crossi	15.03	134	Pn	Pn	18 40 05.0	-2.1
	0.5nm,0.3s,baz=328,slow=10.0,SNR=18						
FITZ				Sn	Sn	18 42 46.5	-7.7
	0.4nm,0.3s,baz=173,slow=15,SNR=4.0						
FITZ				LR	LR	18 46 41.7	
	comp=Z,652nm,18.2s,baz=315,slow=40						
PPI	Padang Panjang	15.66	297	P	Pn	18 40 25.2	+10
	60nm,2.1s						
KTGM	Kuala Trenggan	17.18	319	⇓P	Pn	18 40 42.6	+7.8
IPM	Ipoh	18.02	312	⇓P	Pn	18 40 49.6	+4.2
SWI	Sorong	18.32	68	P	Pn	18 40 51.1	+2.1
	120nm,1.4s						
KAKA	Kakadu	18.52	107	eP	Pn	18 40 49.4	-2.1
KAKA				eS	Sn	18 44 20.7	+1.7
DAV	Davao City (W)	18.66	38	LR	LR	18 48 31.4	
	comp=Z,586nm,21.7s,baz=199,slow=39						
WRA	Warramunga Arr	22.85	124	P	P	18 41 36.4	-1.8
	7.8nm,0.6s,mb4.3,baz=294,slow=12,SNR=34						
WRA				S	S	18 45 50.8	+2.0
	4.1nm,0.9s,baz=298,slow=22,SNR=6.9						
WRA				LR	LR	18 51 50.4	
	comp=Z,650nm,18.3s,MS4.1,baz=305,slow=40						
WRA	Warramunga Arr	22.85	124	P	P	18 41 36.4	-1.8
WRA				S	S	18 45 50.8	+1.9
WRAB	Tennant Creek	22.86	124	d iP	P	18 41 38.3	0.0
WRAB	Tennant Creek	22.86	124	eP	P	18 41 38.4	+0.2
	22nm,0.6s,mb4.8						
WB2	Warramunga Arr	22.86	124	eP	P	18 41 38.2	-0.1
WB2				eS	S	18 45 47.2	-1.8
BSI	Banda Aceh	23.11	305	P	P	18 41 45.5	+4.5
	50nm,1.5s,mb4.7						
KLBR	Kellerberrin	23.82	173	eP	P	18 41 49.4	+1.5
	45nm,1.2s,mb4.8						
ASAR	Alice Springs	24.52	132	P	P	18 41 53.6	-0.8
	11nm,0.7s,mb4.5,baz=304,slow=9.2,SNR=36						
ASAR				PcP	PcP	18 45 31.4	-1.7
	1.6nm,0.6s,baz=320,slow=1.5,SNR=2.9						
ASAR				S	S	18 46 25.9	+10
	8.7nm,1.1s,baz=333,slow=27,SNR=7.0						
ASAR	Alice Springs	24.52	132	P	P	18 41 53.7	-0.8
ASAR						18 45 31.5	
NWAO	Narrogin (SRO)	25.08	174	P	P	18 42 00.0	+0.6
	8.4nm,0.7s,mb4.4,baz=0.2,slow=9.2,SNR=3.9						
FORT	Forrest	26.19	152	eP	P	18 42 09.3	-0.2
	64nm,0.8s,mb5.2						
KKTK	Khon Kaen	26.59	335	P	P	18 42 14.0	+0.8
QIZ	Qiongzhong	27.09	351	P	P	18 42 20.1	+2.4
QIZ				S	S	18 46 57.5	+0.8
QIZ				XS	sS	18 47 12.0	+14
QIZ				AMB	AMB		
	comp=Z,22nm,1.7s,mb4.4						
QIZ				AMB	AMB		
	comp=Z,96nm,7.5s						
QIZ				LR	LR		
	comp=N,585nm,15.5s,MS4.5						
QIZ				LR	LR		
	comp=E,770nm,15.8s,MS4.5						
QIZ				LR	LR		
	comp=Z,955nm,16.9s,MS4.4						
COEN	Coen	29.01	105	eP	P	18 42 31.8	-3.3
	comp=Z,14nm,1.0s,mb4.6						
NANT	Nan	29.69	333	P	P	18 42 42.1	+1.2
CMAR	Chiang Mai Arr	30.22	330	P	P	18 42 45.7	+0.1
	comp=Z,8.6nm,1.0s,mb4.5,baz=160,slow=7.8,SNR=14						
CHTO	Chiang Mai	30.52	330	eP	P	18 42 47.2	-1.1
PMG	Port Moresby	32.56	95	eP	P	18 43 06.8	+0.4
CTA	Charters Tower	33.26	115	eP	P	18 43 12.4	-0.1
	comp=Z,7.3nm,0.7s,mb4.7						
CTA				eS	S	18 48 36.0	+2.4
CTA	Charters Tower	33.26	115	P	P	18 43 12.0	-0.5
	comp=Z,4.5nm,0.5s,mb4.7,baz=279,slow=10,SNR=5.4						
CTA				LR	LR	18 57 25.7	
	comp=Z,591nm,19.2s,MS4.3,baz=288,slow=38						
CTA	Charters Tower	33.26	115	eP	P	18 43 12.4	-0.1
CTA				eS	S	18 48 36.0	+2.4
CTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CTAO	Charters Tower	33.26	115	eP	P	18 43 13.5	+1.0
KMI	Kunming	34.67	341	P	P	18 43 29.4	+4.8
KMI				AP	pP	18 43 37.3	+12
KMI				XP	sP	18 43 40.9	+15
KMI				PP	PP	18 44 45.7	+2.5
KMI				PPP		18 45 04.9	
KMI				S	S	18 48 54.8	-0.3
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
KMI				AMB	AMB		
	comp=Z,59nm,3.8s						
KMI				LR	LR		
	comp=N,844nm,15.2s,MS4.9						
KMI				LR	LR		
	comp=E,1μm,14.3s,MS4.9						
KMI				LR	LR		
	comp=Z,958nm,14.3s,MS4.7						
STKA	Stephens Creek	34.89	137	eP	P	18 43 26.1	-0.4
	comp=Z,10.0nm,0.6s,mb4.9						
STKA	Stephens Creek	34.89	137	P	P	18 43 25.5	-0.9
	comp=Z,11nm,0.6s,mb5.0,baz=313,slow=9.1,SNR=22						
STKA				LR	LR	18 58 18.3	
	comp=Z,699nm,18.5s,MS4.4,baz=110,slow=37						
GYA	Guiyang	34.92	348	P	P	18 43 30.2	+3.5
GYA				AP	pP	18 43 40.6	+13
GYA				XP	sP	18 43 44.9	+17
GYA				PP	PP	18 44 49.5	+3.6
GYA				PCP	PcP	18 46 02.0	+2.4
GYA				S	S	18 48 58.3	-0.7
GYA				XS	sS	18 49 16.2	+16
GYA				SCP	ScP	18 49 43.7	-2.5
GYA				PCS	PcS	18 49 47.6	+1.2
GYA				SCS	ScS	18 53 45.2	-4.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,180nm,5.0s						
GYA				LR	LR		
	comp=N,550nm,16.6s,MS4.5						
GYA				LR	LR		
	comp=E,470nm,15.5s,MS4.5						
GYA				LR	LR		
	comp=Z,530nm,17.3s,MS4.3						
JOW	Kunigami	37.09	21	LR	LR	19 01 10.3	
	comp=Z,230nm,18.7s,MS4.0,baz=292,slow=40						
WHN	Wuhan	38.20	0	eP	P	18 43 58.0	+3.3
WHN				eS	S	18 49 51.0	+2.0
WHN				LR	LR		
	comp=N,705nm,12.0s,MS4.7						
WHN				LR	LR		
	comp=E,269nm,12.0s,MS4.7						
SSE	Sheshan	39.32	9	P	P	18 44 04.6	+0.6
SSE				S	S	18 50 05.6	-0.3
SSE				XS	sS	18 50 24.2	+17
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,89nm,8.9s						
SSE				LR	LR		
	comp=N,270nm,18.3s,MS4.2						
SSE				LR	LR		
	comp=E,107nm,18.3s,MS4.2						
SSE				LR	LR		
	comp=Z,274nm,22.2s,MS4.0						
SHL	Shillong	39.74	327	eP	P	18 44 06.0	-1.6
CD2	Chengdu	39.86	346	P	P	18 44 09.7	+1.1
CD2				AP	pP	18 44 20.9	+11
CD2				XP	sP	18 44 24.5	+15
CD2				PP	PP	18 45 46.6	+6.4
CD2				S	S	18 50 14.3	+0.3
CD2				XS	sS	18 50 28.9	+13
CD2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.2						
CD2				AMB	AMB		
	comp=Z,120nm,5.8s						
CD2				LR	LR		
	comp=N,550nm,16.8s,MS4.6						
CD2				LR	LR		
	comp=E,430nm,14.8s,MS4.6						
CD2				LR	LR		
	comp=Z,290nm,12.0s,MS4.3						
TOO	Toolangi	40.91	141	eP	P	18 44 18.8	+1.5
XAN	Xi’an	41.99	353	P	P	18 44 25.8	-0.3
XAN				AP	pP	18 44 35.7	+8.7
XAN				XP	sP	18 44 39.6	+12
XAN				PP	PP	18 46 06.7	+3.3
XAN				S	S	18 50 42.5	-3.2
XAN				AMB	AMB		
	comp=Z,6.0nm,1.5s,mb4.0						
XAN				AMB	AMB		
	comp=Z,52nm,4.4s						
XAN				LR	LR		
	comp=N,212nm,17.2s,MS4.4						
XAN				LR	LR		
	comp=E,349nm,13.2s,MS4.4						
XAN				LR	LR		
	comp=Z,842nm,16.3s,MS4.7						
CNB	Canberra Magne	42.17	136	eP	P	18 44 27.9	+0.3
ODAN	Odare	43.26	324	eP	P	18 44 36.4	-0.1
	comp=Z,46nm,0.9s,mb5.2						
TAPN	Taplejung	43.44	325	eP	P	18 44 39.8	+1.8
	comp=Z,93nm,1.2s,mb5.4						
LSA	Lhasa	43.47	330	P	P	18 44 40.3	+2.1
LSA				XP	sP	18 44 57.3	+18
LSA				S	S	18 51 06.8	-0.9
LSA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
LSA				AMB	AMB		
	comp=Z,70nm,4.0s						
LSA				LR	LR		
	comp=N,310nm,20.0s,MS4.4						
LSA				LR	LR		
	comp=E,380nm,18.0s,MS4.4						
LSA				LR	LR		
	comp=Z,360nm,18.0s,MS4.3						
LSA	Lhasa	43.47	330	eP	P	18 44 39.4	+1.2
LSA				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.8						
LSA	Lhasa	43.47	330	eP	P	18 44 39.4	+1.1
	comp=Z,21nm,1.1s,mb4.8						
RAMN	Ramite	43.79	323	eP	P	18 44 41.7	+0.9
JIRN	Jiri	44.56	324	eP	P	18 44 46.9	-0.1
	comp=Z,26nm,0.7s,mb5.2						
LZH	Lanzhou	44.81	348	eP	P	18 44 51.0	+2.1
LZH				AP	pP	18 45 03.5	+14
LZH				XP	sP	18 45 07.7	+18
LZH				PP	PP	18 46 36.0	+2.4
LZH				eS	S	18 51 25.4	-1.6
LZH				XS	sS	18 51 42.2	+14
LZH				SS	SS	18 54 39.3	-8.7
LZH				AMB	AMB		
	comp=Z,29nm,1.6s,mb4.9						
LZH				AMB	AMB		
	comp=Z,70nm,4.0s						
LZH				LR	LR		
	comp=E,1μm,14.1s						
LZH				LR	LR		
	comp=Z,1μm,16.4s,MS4.9						
GUN	Gumba	44.93	323	eP	P	18 44 50.3	+0.4
	comp=Z,47nm,0.8s,mb5.4						
PKI	Pulchoki	44.96	323	eP	P	18 44 50.0	-0.2
DMN	Daman	45.17	322	eP	P	18 44 51.5	-0.4
	comp=Z,31nm,1.0s,mb5.1						
HNR	Honiara	45.18	95	LR	LR	19 03 49.4	
	comp=Z,182nm,18.8s,MS4.0,baz=302,slow=36						
KKN	Kakani	45.20	323	eP	P	18 44 51.9	-0.2
	comp=Z,24nm,0.8s,mb5.0						
GKN	Gorkha	45.74	322	eP	P	18 44 56.0	-0.4
	comp=Z,25nm,0.9s,mb5.2						
KOLN	Koldanda	46.21	321	eP	P	18 44 59.8	-0.3
	comp=Z,26nm,0.7s,mb5.3						
DANN	Dangsing	46.52	322	eP	P	18 45 01.2	-1.4
	comp=Z,44nm,0.8s,mb5.5						
KSRS	Korea Array	46.87	15	P	P	18 45 07.0	+1.9
	comp=Z,0.9nm,0.8s,mb3.8,baz=182,slow=6.1,SNR=4.1						
KSRS				LR	LR	19 03 58.0	
	comp=Z,207nm,21.4s,MS4.1,baz=206,slow=35						
BJI	Beijing	47.71	2	P	P	18 45 13.3	+1.7
BJI				AP	pP	18 45 22.5	+10
BJI				XP	sP	18 45 26.1	+13
BJI				S	S	18 52 09.0	+0.5
BJI				XS	sS	18 52 25.0	+15
BJI				AMB	AMB		
	comp=Z,7.0nm,0.4s,mb5.0						
BJI				AMB	AMB		
	comp=Z,102nm,3.7s						
BJI				LR	LR		
	comp=N,435nm,19.4s,MS4.6						
BJI				LR	LR		
	comp=E,452nm,18.4s,MS4.6						
BJI				LR	LR		
	comp=Z,301nm,22.5s,MS4.2						
HHC	Hu-ho-hao-te	48.55	357	eP	P	18 45 19.7	+1.6
HHC				AP	pP	18 45 30.2	+11
HHC				XP	sP	18 45 34.0	+15
HHC				PCP	PcP	18 46 44.0	+0.1
HHC				PP	PP	18 47 12.8	+1.7
HHC				SCP	ScP	18 50 35.5	-4.4
HHC				PCS	PcS	18 50 39.3	-0.5
HHC				S	S	18 52 19.6	-0.7
HHC				XS	sS	18 52 35.4	+14
HHC				SCS	ScS	18 55 06.2	-5.7
HHC				SS	SS	18 55 44.9	-5.7
HHC				AMB	AMB		
	comp=Z,96nm,6.2s						
HHC				LR	LR		
	comp=N,393nm,14.8s,MS4.7						
HHC				LR	LR		
	comp=E,406nm,14.9s,MS4.7						
HHC				LR	LR		
	comp=Z,416nm,14.8s,MS4.5						
GTA	Gaotai	48.92	345	eP	P	18 45 23.2	+2.2
GTA				AP	pP	18 45 32.2	+10
GTA				XP	sP	18 45 36.6	+14
GTA				PP	PP	18 47 16.4	+1.9
GTA				S	S	18 52 28.2	+2.6
GTA				XS	sS	18 52 42.0	+15
GTA				SS	SS	18 55 52.0	-4.6
GTA				AMB	AMB		
	comp=Z,2.0nm,1.1s,mb4.1						
GTA				AMB	AMB		
	comp=Z,63nm,5.4s						
GTA				LR	LR		
	comp=N,426nm,17.4s,MS4.8						
GTA				LR	LR		
	comp=E,649nm,15.6s,MS4.8						
GTA				LR	LR		
	comp=Z,464nm,15.6s,MS4.6						
MAJO	Matsushiro	49.58	25	eP	P	18 45 24.1	-2.0
MAJO				pmax	pmax		
	comp=Z,21nm,1.5s,mb5.0						
MAJO	Matsushiro	49.58	25	eP	P	18 45 24.1	-2.0
	comp=Z,22nm,1.5s,mb5.0						
MAT	Matsushiro	49.58	25	P	P	18 45 26.3	+0.2
MAT				S	S	18 52 35.0	0.0
MJAR	Matsushiro Arr	49.58	25	P	P	18 45 24.0	-2.1
	comp=Z,3.0nm,1.0s,mb4.3,baz=202,slow=8.4,SNR=10						
MJAR				LR	LR	19 05 39.5	
	comp=Z,133nm,18.2s,MS4.0,baz=165,slow=35						
NDI	New Delhi	50.96	317	eP	P	18 45 33.0	-3.7
CN2	Changchun	52.43	10	eP	P	18 45 49.2	+1.8
MDJ	Mudanjiang	54.05	13	P	P	18 46 00.4	+1.1
MDJ				AP	pP	18 46 09.4	+9.1
MDJ				XP	sP	18 46 13.3	+13
MDJ				PP	PP	18 48 02.2	+1.2
MDJ				SCP	ScP	18 50 59.4	-4.2
MDJ				PCS	PcS	18 51 03.8	+0.3
MDJ				S	S	18 53 35.5	-0.8
MDJ				AMB	AMB		
	comp=Z,11nm,2.0s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,76nm,3.8s						
MDJ				LR	LR		
	comp=N,131nm,32.3s,MS3.8						
MDJ				LR	LR		
	comp=E,43nm,28.5s,MS3.8						
MDJ				LR	LR		
	comp=Z,172nm,31.9s,MS3.9						
ULN	Ulaanbaatar	55.87	354	eP	P	18 46 12.3	-0.1
ULN				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.9						
ULN	Ulaanbaatar	55.87	354	eP	P	18 46 12.3	-0.1
	comp=Z,21nm,1.7s,mb4.9						
SONM	Songino Array	55.91	354	P	P	18 46 12.4	-0.3
	comp=Z,1.9nm,0.8s,mb4.2,baz=170,slow=7.6,SNR=12						
SONM				LR	LR	19 13 42.4	
	comp=Z,427nm,18.2s,MS4.6,baz=175,slow=40						
WMQ	Urumqi	56.81	337	eP	P	18 46 19.8	+0.6
WMQ				AP	pP	18 46 30.0	+10
WMQ				eS	S	18 54 09.0	-4.2
WMQ				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,115nm,4.0s						
WMQ				LR	LR		
	comp=N,765nm,16.0s,MS5.0						
WMQ				LR	LR		
	comp=E,759nm,16.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,884nm,24.6s						
CASY	Casey	58.37	182	eP	P	18 46 29.4	-0.5
ZAK	Zakamensk	58.80	352	eP	P	18 46 32.0	-1.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb4.0						
KBL	Kabul	60.05	317	eP	P	18 46 41.0	-1.1
KBL				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
KBL	Kabul	60.05	317	eP	P	18 46 41.0	-1.1
	comp=Z,8.2nm,1.0s,mb4.7						
MK31	Makanchi Array	61.41	336	eP	P	18 46 51.1	0.0
MKAR	Makanchi Array	61.41	336	P	P	18 46 49.2	-1.9
	comp=Z,1.7nm,0.6s,mb4.3,baz=153,slow=6.8,SNR=14						
MKAR				LR	LR	19 16 16.9	
	comp=Z,164nm,18.9s,MS4.2,baz=306,slow=39						
MKAR	Makanchi Array	61.41	336	P	P	18 46 49.2	-1.9
MKAR				LR	LR	19 16 16.9	
AML	Almayashu	62.04	327	eP	P	18 46 52.9	-2.6
	comp=Z,10nm,1.1s,mb4.9						
EKS2	Erkin-Say	62.36	327	eP	P	18 46 57.0	-0.5
	comp=Z,10nm,1.1s,mb4.9						
BOD	Bodaibo	65.47	360	eP	P	18 47 16.1	-1.6
BOD				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.5						
KURK	Kurchatov	66.00	336	eP	P	18 47 21.6	+0.3
KURK				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.5						
KURK	Kurchatov	66.00	336	eP	P	18 47 21.6	+0.4
	comp=Z,6.8nm,1.0s,mb4.6						
KRAR	Krasnoyarsk	66.08	347	i P	P	18 47 22.0	+0.3
KRAR				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.8						
ZAL	Zalesovo	66.41	342	P	P	18 47 21.3	-2.5
ZALV	Zalesovo Beam	66.41	342	P	P	18 47 21.3	-2.5
	comp=Z,4.0nm,0.6s,mb4.6,baz=154,slow=4.7,SNR=14						
NVS	Novosibirsk	67.67	341	eP	P	18 47 28.6	-3.2
NVS				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.6						
NVS				pmax	pmax		
	comp=N,10.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,20nm,2.4s						
MAW	Mawson	68.73	199	eP	P	18 47 38.2	-0.2
	comp=E,4.5nm,0.8s,mb4.5						
MAW	Mawson	68.73	199	P	P	18 47 38.6	+0.2
	comp=E,5.5nm,0.7s,mb4.6,baz=54,slow=4.9,SNR=15						
MAW				LR	LR	19 12 15.4	
	comp=E,167nm,18.7s,MS4.3,baz=179,slow=31						
MAW	Mawson	68.73	199	eP	P	18 47 38.2	-0.2
MAW				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YAK	Yakutsk	70.72	8	eP	P	18 47 50.2	-0.4
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
PETK	Petropavlovsk-	71.03	26	LR	LR	19 19 57.1	
	comp=Z,64nm,20.3s,MS3.9,baz=99,slow=37						
BRVK	Borovoye	71.23	334	eP	P	18 47 54.1	+0.2
SBA	Scott Base	74.88	170	eP	P	18 48 14.0	-1.2
SBA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
SBA	Scott Base	74.88	170	eP	P	18 48 14.0	-1.2
	comp=Z,4.4nm,0.9s,mb4.4						
AKTK	Aktyubinsk	75.68	327	P	P	18 48 18.4	-1.8
AKTO	Aktyubinsk	75.68	327	P	P	18 48 18.4	-1.8
	comp=Z,4.2nm,0.8s,mb4.4,baz=112,slow=4.8,SNR=8.6						
KMBO	Kilima Mbogo	76.97	271	P	P	18 48 30.3	+1.9
	comp=Z,1.4nm,0.5s,mb4.2,baz=53,slow=20,SNR=4.2						
KMBO				LR	LR	19 21 44.7	
	comp=Z,156nm,18.7s,MS4.3,baz=86,slow=35						
KMBO	Kilima Mbogo	76.97	271	eP	P	18 48 29.8	+1.4
SVE	Sverdlovsk	77.92	333	⇑eP	P	18 48 33.7	+1.0
SVE				eS	S	18 58 26.2	-0.4
SVE				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
SVE				MLR	MLR		
	comp=Z,205nm,18.0s,MS4.5						
ARU	Arti	78.64	332	d iP	P	18 48 37.5	+0.8
ARU				e		18 51 30.4	
ARU				eS	S	18 58 31.6	-2.8
ARU				eSS	SS	19 03 37.4	-1.1
ARU				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.8						
ARU	Arti	78.64	332	eP	P	18 48 36.0	-0.7
	comp=Z,26nm,1.5s,mb5.0						
QSPA	South Pole Qui	82.11	180	LR	LR	19 23 57.6	
	comp=Z,123nm,18.1s,MS4.3,baz=145,slow=35						
LSZ	Lusaka	84.19	255	eP	P	18 49 05.8	-1.3
LSZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
LSZ	Lusaka	84.19	255	eP	P	18 49 05.8	-1.3
	comp=Z,4.6nm,0.8s,mb4.7						
BOSA	Boshof	85.41	242	LR	LR	19 22 00.1	
	comp=Z,511nm,19.1s,MS4.9,baz=124,slow=32						
OBN	Obninsk	89.43	326	⇑eP	P	18 49 33.0	+1.3
OBN						18 53 01.0	
OBN				e		19 00 22.6	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.9						
SNAA	Sanae	90.78	196	eP	P	18 49 38.5	+0.7
SNAA				e		18 49 42.4	
SNAA				e		18 49 47.7	
SNAA	Sanae	90.78	196	eP	P	18 49 38.3	+0.5
VNA2	Neumayer--Watz	92.42	196	eP	P	18 49 46.2	+0.8
VNA2				e		18 49 49.5	
VNA2				e		18 49 55.6	
VNA1	Neumayer--Stat	92.81	196	eP	P	18 49 50.8	+3.5
VNA1				e		18 49 57.2	
VNA3	Neumayer Olymp	92.87	196	eP	P	18 49 48.4	+0.9
VNA3				e		18 49 51.9	
VNA3				e		18 49 57.3	
AKASG	Malin Array Be	92.90	321	P	P	18 49 45.2	-2.7
	comp=Z,0.2nm,0.3s,mb4.0,baz=78,slow=7.3,SNR=4.3						
PPT	Papeete	93.48	108	LR	LR	19 28 43.6	
	comp=Z,144nm,18.2s,MS4.5,baz=293,slow=34						
ARCES	ARCESS Array B	96.89	339	LR	LR	19 42 08.4	
	comp=Z,230nm,18.5s,MS4.7,baz=106,slow=41						
NVAR	Mina Array Bea	123.87	49	PKhKP		18 55 24.3	
	comp=Z,0.4nm,0.7s,baz=282,slow=4.3,SNR=3.8						
NVAR				PKP	PKPdf	18 55 35.2	+1.7
	comp=Z,0.5nm,0.7s,baz=266,slow=5.2,SNR=3.4						
NVAR	Mina Array Bea	123.87	49	PKP	PKPdf	18 55 35.2	+1.7
CPUP	Villa Florida	145.03	193	PKPbc	PKPbc	18 56 12.1	-0.4
	comp=Z,4.6nm,0.6s,baz=104,slow=2.7,SNR=9.4						
BDFB	Brasilia	150.77	217	PKPbc	PKPbc	18 56 28.3	-0.2
	comp=Z,5.1nm,0.6s,baz=92,slow=1.1,SNR=11						
LPAZ	La Paz	155.87	174	PKPab	PKPab	18 56 58.5	+1.8
	comp=Z,3.3nm,0.7s,baz=195,slow=6.2,SNR=18						
LPAZ	La Paz	155.87	174	PKPab	PKPab	18 56 58.5	+1.8

DDA **09** *18:54:33.7, 36.10N×27.02E, h11km, Md3.2*
ATH **09** *18:54:34.6, 36.35N×26.83E, h34km±5km, MD3.4/5*
NEIC **09** *18:54:34.6, 36.35N×26.84E, h35km, MD3.4(ATH), After ATH.*
ISCJB **09** *18:54:34.1±0.7, 36.38N±0.04×26.85E±0.04, h6km±5km, Error ellipse: s-maj=7.5km s-min=4.0km az=140.0*
CSEM **09** *18:54:35.1±0.1, 36.39N×26.96E, h15km, MD3.3, Error ellipse: s-maj=2.1km s-min=1.5km az=154.0*
ISK **09** *18:54:39.8, 36.70N×26.91E, h5km, MD3.3*
THE **09** *18:54:42.6, 36.56N×26.40E, h3km*
ISC 09 18:54:34.7±0.7, **36.35N**±0.04×**26.87E**±0.04, **h15**km±4km, **n21**, σ**1.08**/33, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	Bodrum	0.79	26	ePG	Pg	18 54 50.1	0.0
BODT				eSG	Sg	18 54 58.5	-2.1
KARP	Karpathos	0.83	164	ePN	Pn	18 54 51.3	-0.7
BDRM	Kayabasi	0.85	32	i P	Pg	18 54 49.8	-1.4
BDRM				i S	Sg	18 55 03.5	+1.1
ARG	Arkhangelos	1.02	97	ePN	Pn	18 54 54.4	-0.1
SANT	Santorini	1.14	272	ePg	Pg	18 54 57.6	+0.9
SANT				eSg	Sg	18 55 09.4	-2.2
THR1	Thera Island	1.14	271	ePg	Pg	18 54 57.7	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MLSB	Milas	1.19	37	ePG	Pg	18 54 59.1	+1.4
MLSB				eSG	Sg	18 55 12.4	-0.8
THR3	Thira Island,	1.19	273	ePg	Pg	18 54 58.4	+0.8
THR6	Thira Island,	1.19	271	ePg	Pg	18 54 58.6	+0.9
THR5	Thira Island,	1.23	274	ePg	Pg	18 54 59.2	+0.7
APE	Apeiranthos	1.30	304	ePg	Pg	18 54 59.1	-0.5
APE				eSg	Sg	18 55 12.2	-4.4
APE	Apeiranthos	1.30	304	ePN	Pn	18 54 58.0	-0.3
APE				eSN	Sn	18 55 14.7	-0.7
APE	Apeiranthos	1.30	304	ePg	Pg	18 54 59.2	-0.5
APE				eSn	Sn	18 55 14.7	-0.7
SMG	Samos	1.36	359	ePN	Pn	18 54 58.9	-0.3
SMG				eSN	Sn	18 55 16.8	-0.1
GCAM	G?zelcaml?	1.38	12	i P	Pn	18 54 58.6	-0.8
GCAM				i S	Sn	18 55 18.2	+0.8
NPS	Neapolis	1.49	224	ePN	Pn	18 55 00.1	-0.9
AYDN	Tasoluk	1.54	31	i P	Pn	18 55 01.5	-0.1
AYDN				i S	Sn	18 55 25.7	+4.3
BLCB	Balcova	2.04	4	ePN	Pn	18 55 12.4	+3.8
IZM	Izmir	2.07	8	ePN	Pn	18 55 11.8	+2.9
KDAG	Bornova	2.07	9	i P	Pn	18 55 12.2	+3.2
KDAG				i S	Sg	18 55 41.4	-0.1
BALY	Balya	3.44	10	i P	Pn	18 55 36.8	+9.0
BALY				i S	Sg	18 56 25.2	+0.1

*CSEM **09** 18:58:43.4, 3469N×4828E, h16km, ML3.2, After THR*
*THR **09** 18:58:43.4±0.7, 3469N×4828E, h16km±4km, ML3.2*
*ISCJB **09** 18:58:44.9±0.6, 3490N±006×4830E±005, h10km, Error ellipse: s-maj=8.1km s-min=5.4km az=9.9*
ISC 09 18:58:46.1±0.6**, 3491N**±005×**4832E**±005**, h10**km**, n13,** σ1§**20**/16**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNGE	Sanandaj	0.82	283	ePg	Pg	18 58 59.8	-2.1
SNGE				eSg	Sg	18 59 12.1	-0.6
SNGE				AML	AML	18 59 13.8	
	comp=E,1μm,0.2s						
SNGE	Sanandaj	0.82	283	ePg	Pg	18 58 59.8	-2.1
	SNR=92						
SNGE				eSg	Sg	18 59 12.1	-0.5
	comp=E,1μm,0.2s,SNR=92						
ASAO	Ashtian	1.45	104	ePg	Pn	18 59 10.7	-1.7
ASAO				eSg	Sn	18 59 29.4	-2.0
ASAO				AML	AML	18 59 35.6	
	comp=N,307nm,0.4s						
ASAO	Ashtian	1.45	104	ePg	Pn	18 59 10.6	-1.8
	SNR=91						
ASAO				eSg	Sn	18 59 29.4	-2.0
	comp=N,91nm,0.6s,SNR=91						
THKV	Tehran--Karaj	2.32	64	ePn	Pn	18 59 24.9	+0.6
GHVR	GHOM	2.49	99	AML	AML	19 00 07.2	
	comp=N,85nm,0.4s						
GHVR				AML	AML	19 00 12.3	
	comp=E,91nm,0.6s						
CHTH	Charan	2.50	66	ePn	Pn	18 59 27.5	+0.7
DAMV	Damavand	3.07	75	ePn	Pn	18 59 34.9	+0.2
GRMI	Germi	3.91	355	ePn	Pn	18 59 48.0	+1.9
GRMI				eSg	Sg	19 00 51.5	0.0
MIB	Mutribah	5.16	190	eP	Pn	19 00 04.5	+1.1
	baz=187						
MIB				AML	AML	19 01 03.0	
	comp=Z,4.0nm,0.4s,baz=187						
RST	Umm Al-Ruwaisa	5.51	192	AML	AML	19 01 10.7	
	comp=Z,0.1nm,0.4s,baz=190						
NAY	Al-Naaiem	5.72	190	eP	Pn	19 00 11.6	+0.5
	baz=188						
NAY				AML	AML	19 01 19.9	
	comp=Z,3.0nm,0.5s,baz=188						
RDF	Al-Radifah	6.00	186	eP	Pn	19 00 15.9	+1.0
	baz=185						
RDF				AML	AML	19 01 21.6	
	comp=Z,5.0nm,0.5s,baz=185						

NEIC 09 19:18:10.5, 3863S×17866E, h24km, ML3.9(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	0.64	330	P	Pb	19 18 22.9	-0.1
PUZ				S	Sb	19 18 30.1	-1.4
KNZ	Kokohu	0.86	243	P	Pb	19 18 26.4	-0.4
MWZ	Matawai	0.94	288	P	Pb	19 18 27.6	-0.4
MXZ	Matakaoa Point	1.10	345	P	Pn	19 18 29.8	-0.6
URZ	Urewera	1.27	286	P	Pn	19 18 32.3	-0.4
EDRZ	Edgecumbe	1.60	288	P	Pn	19 18 37.3	+0.1
BKZ	Black Stump Fm	1.77	252	P	Pn	19 18 39.2	-0.5
MOVZ	Moawhango	2.39	250	P	Pn	19 18 47.8	-0.4
TUVZ	Tukino	2.43	254	P	Pn	19 18 48.6	-0.1
WNVZ	Wahianoa	2.49	253	P	Pn	19 18 49.2	-0.2
WPVZ	Whakapapa	2.50	256	P	Pn	19 18 49.3	-0.3
FWVZ	Far West T-bar	2.50	255	P	Pn	19 18 49.3	-0.4
TSZ	Takapari Road	2.53	235	P	Pn	19 18 48.1	-2.0
WAZ	Wanganui	3.07	247	P	Pn	19 18 57.6	+0.2
VRZ	Vera Road	3.08	260	P	Pn	19 18 57.5	-0.2
MRZ	Mangatainoka R	3.13	229	P	Pn	19 18 55.5	-2.7
MTW	Mount Morrison	3.50	223	P	Pn	19 18 59.4	-4.0
KIW	Kapiti Island	3.65	231	P	Pn	19 19 02.8	-2.6
PKE	Pukeiti	3.69	260	P	Pn	19 19 07.5	+1.5
PAWZ	Paruwai Farm	3.71	221	P	Pn	19 19 01.8	-4.4
CAW	Cannon Point	3.71	227	P	Pn	19 19 03.0	-3.3
MSWZ	Moikau Station	3.82	222	P	Pn	19 19 03.3	-4.5
TCW	Tory Channel	4.25	231	P	Pn	19 19 09.5	-4.1
NNZ	Nelson	4.81	236	P	Pn	19 19 18.6	-2.8
QRZ	Quartz Range	5.21	243	P	Pn	19 19 23.3	-3.6
THZ	Tophouse	5.41	233	P	Pn	19 19 25.3	-4.2
KHZ	Kahutara	5.43	224	P	Pn	19 19 25.1	-4.8
DSZ	Denniston Nort	6.10	237	P	Pn	19 19 35.0	-4.1
LTZ	Lake Taylor	6.38	227	P	Pn	19 19 39.6	-3.4
MQZ	McQueen's Vall	6.80	220	P	Pn	19 19 42.9	-5.8
LBZ	Lake Benmore	8.57	225	P	Pn	19 20 08.3	-4.7
ODZ	Otahua Downs	8.77	220	P	Pn	19 20 10.9	-4.7

KRSC 09 20:05:17.3±1.1**, 5061N×15738E, h53**km±53km**, ML3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.19	283	eP	Pn	20 05 37.6	0.0
ALID				i S	Sn	20 05 51.9	-0.8
RUS	Russkaya	1.96	21	eP	Pn	20 05 49.8	+1.8
RUS				i S	Sn	20 06 13.7	+2.3
PET	Petropavlovsk	2.54	18	eP	Pn	20 05 58.9	+2.9
PET				i S	Sn	20 06 29.7	+4.0
NLC	Nalytchevo	2.84	25	eP	Pn	20 06 01.8	+1.7
NLC				i S	Sn	20 06 33.8	+0.8
GNL	Ganaly	3.11	6	eP	Pn	20 06 07.0	+3.2
GNL				i S	Sn	20 06 43.2	+3.6
MKZ	Mys Kozlova	4.76	32	P	Pn	20 06 28.6	+2.2
KBTR	Krutoberegovo	6.48	28	eP	Pn	20 06 52.2	+2.3

*THE **09** 20:29:03.7, 3875N×2285E, h4km*
*ISCJB **09** 20:29:05.0±0.7, 3889N±004×2284E±005, h13km±7km, Error ellipse: s-maj=7.2km s-min=6.2km az=139.5*
*CSEM **09** 20:29:05.4±0.1, 3887N×2287E, h2km, ML3.2*
*ATH **09** 20:29:05.1, 3892N×2284E, h18km±6km, MD3.2/7, ML3.2*
*NEIC **09** 20:29:05.2, 3892N×2283E, h16km, ML3.2(ATH), After ATH.*
ISC 09 20:29:05.4±0.6**, 3890N**±004×**2283E**±005**, h17**km±6km**, n15,** σ1§**11**/19**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKR	Lokris	0.28	152	ePB	Pg	20 29 11.3	-0.3
AGG	Agios Georgios	0.41	287	ePg	Pg	20 29 13.1	-0.7
AGG				eSg	Sg	20 29 20.3	+0.9
NEO	Neokhori	0.51	37	ePB	Pb	20 29 15.0	-0.8
NEO				eSB	Sb	20 29 22.1	-0.8
XOR	Xorichti	0.54	31	ePg	Pg	20 29 16.3	+0.1
EVR	Evrytania	0.80	271	ePN	Pn	20 29 20.7	-1.1
AOS	Alonnisos	0.86	72	ePg	Pg	20 29 20.8	-1.4
THL	Klokotos Trika	0.92	316	ePg	Pg	20 29 23.3	+0.1
THL	Klokotos Trika	0.92	316	ePn	Pn	20 29 22.3	-1.2
THL	Klokotos Trika	0.92	316	ePg	Pg	20 29 23.3	+0.1
ATH	Athens Observa	1.16	143	ePN	Pn	20 29 27.0	+0.2
PAIG	Paliouri	1.22	32	ePg	Pg	20 29 28.1	-0.8
PAIG				eSg	Sg	20 29 47.4	+2.6
LIT	Litokhoron	1.23	348	ePg	Pg	20 29 28.6	-0.5
LIT				eSg	Sg	20 29 48.5	+3.4
NAIG	Nisos Aigina	1.25	155	ePN	Pn	20 29 29.3	+1.2
KVR	Kavouri	1.30	145	ePN	Pn	20 29 30.0	+1.2
KNT	Kendrikon	2.26	1	ePn	Pn	20 29 43.7	+1.8

*IDC **09** 20:36:36.6±1.6, 1405S×7630W, h0km, mb3.9/3, mb1 4.1/6, mb1mx3.8/19, mbtmp3.9/6, ML4.0/3, MS2.9/2, Ms1 3.0/2, ms1mx2.5/30, Error ellipse: s-maj=56.5km s-min=21.8km az=54.0*
*ISCJB **09** 20:36:38.0±1.2, 1423S±009×769W±0.1, h33km, mb3.9/4, Error ellipse: s-maj=19.1km s-min=6.7km az=141.6*
*NEIC **09** 20:36:41.6±1.1, 1400S×7643W, h35km, mb4.0/1, ML4.1(LIM), Error ellipse: s-maj=34.2km s-min=11.5km az=53.0*
NEIC Felt [II] at Pisco.
ISC 09 20:36:40.4±1.2**, 1419S**±009×**769W**±01**, h35**km**, n14,** σ1§**72**/18**, mb3.9**/4**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.19	1	Pn	Pn	20 37 12.8	-1.5
	28nm,0.3s,baz=166,slow=14,SNR=43						
NNA				Sn	Sn	20 37 42.4	+2.2
	46nm,0.3s,baz=170,slow=18,SNR=9.2						
NNA	Nana	2.19	1	ePn	Pn	20 37 12.4	-1.9
NNA				eSn	Sn	20 37 39.1	-1.1
ARE	Arequipa	5.68	114	eP	Pn	20 38 03.0	+0.7
ARE				eS	Sn	20 39 08.0	+1.7
ATAH	Atahualpa	7.29	348	Pn	Pn	20 38 24.9	+0.4
	1.4nm,0.3s,baz=161,slow=14,SNR=9.0						
ATAH				Sn	Sn	20 39 56.3	+10
	1.2nm,0.3s,baz=26,slow=3.3,SNR=3.7						
LPAZ	La Paz	8.71	105	Pn	Pn	20 38 43.6	-0.3
	0.4nm,0.3s,baz=296,slow=9.5,SNR=13						
LPAZ				Sn	Sn	20 40 22.9	+2.0
	0.1nm,0.3s,baz=0.0,slow=17,SNR=1.9						
LPAZ				LR	LR	20 42 07.6	
	comp=Z,60nm,19.0s,baz=135,slow=40						
LPAZ	La Paz	8.71	105	ePn	Pn	20 38 41.8	-2.1
	1.9nm,0.5s						
LPAZ				eSn	Sn	20 40 16.9	-4.0
LVC	Limon Verde	11.29	139	Pn	Pn	20 39 16.9	-2.4
	0.5nm,0.3s,baz=319,slow=14,SNR=4.1						
LVC	Limon Verde	11.29	139	ePn	Pn	20 39 17.5	-1.8
	4.9nm,0.8s						
CPUP	Villa Florida	21.93	126	LR	LR	20 51 32.5	
	comp=Z,42nm,19.4s,baz=180,slow=42						
SDV	Santo Domingo	23.75	16	eP	P	20 41 48.0	-1.7
	1.9nm,0.4s,mb3.9						
TXAR	Lajitas Array	50.41	329	P	P	20 45 37.2	+2.8
	0.7nm,0.6s,mb3.9,baz=147,slow=8.8,SNR=11						
PDAR	Pinedale Array	64.12	334	P	P	20 47 13.9	+2.8
	0.2nm,0.3s,mb3.6,baz=144,slow=7.3,SNR=3.7						
TORD	Torodi Ar. Bea	82.42	74	P	P	20 48 58.1	-1.5
	1.4nm,0.7s,mb4.0,baz=257,slow=4.4,SNR=16						
SONM	Songino Array	146.34	356	PKPbc	PKPbc	20 56 18.6	+1.1
	0.8nm,0.7s,baz=16,slow=2.4,SNR=3.9						

*ISCJB **09** 20:43:02.9±0.7, 4729N±009×1527E±0.1, h106km±6km, mb4.0/14, Error ellipse: s-maj=20.2km s-min=5.1km az=44.0*
*MOS **09** 20:43:03.2±1.1, 4733N×15266E, h108km, mb3.9/9, Error ellipse: s-maj=21.5km s-min=11.4km az=52.8*
*NEIC **09** 20:43:04.3±0.9, 4740N×15241E, h102km±8km, mb4.0/4, Error ellipse: s-maj=16.9km s-min=7.1km az=130.0*
*IDC **09** 20:43:07.1±2.7, 4756N×15251E, h124km±25km, mb3.5/8, mb1 3.9/10, mb1mx3.6/23, mbtmp3.6/10, Error ellipse: s-maj=30.7km s-min=13.4km az=142.0*
ISC 09 20:43:04.8±0.6**, 4739N**±009×**1525E**±01**, h105**km±5km**, n73,** σ1§**25**/80**, mb4.0**/14**, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.84	237	ePN	Pn	20 44 02.0	+0.2
KUR				eS	Sn	20 44 48.5	+2.5
KUR				pmax	pmax		
	comp=N,80nm,0.7s						
KUR				pmax	pmax		
	comp=E,70nm,0.7s						
KUR				pmax	pmax		
	comp=Z,280nm,0.7s						
KUR				smax			
	comp=N,170nm,0.5s						
KUR				smax			
	comp=E,150nm,0.5s						
SKR	Severo-Kuril's	4.08	35	ePN	Pn	20 44 04.0	-1.0
SKR				eS	Sn	20 44 51.5	-0.3
SKR				pmax	pmax		
	comp=N,120nm,0.5s						
SKR				pmax	pmax		
	comp=E,120nm,0.5s						
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				pmax	pmax		
	comp=N,1μm,4.0s						
SKR				pmax	pmax		
	comp=E,2μm,4.0s						
SKR				pmax	pmax		
	comp=Z,1μm,4.0s						
SKR				smax			
	comp=E,2μm,4.0s						
SKR				smax			
	comp=N,120nm,0.5s						
SKR				smax			
	comp=E,120nm,0.7s						
JRA	Rausu	6.19	239	P	Pn	20 44 36.0	+2.4
NEM2	Nemuro 2	6.21	232	P	Pn	20 44 33.2	-0.6
NEM2				eS	Sn	20 45 39.9	-3.4
YSS	Yuzh-Sakhalins	6.63	270c	i PN	Pn	20 44 43.4	+3.9
JNK	Nakash	6.63	238	P	Pn	20 44 41.3	+1.7
PEA0B	Petropavlovsk-	6.64	28	ePn	Pn	20 44 39.6	0.0
PETK	Petropavlovsk-	6.64	28	P	Pn	20 44 39.6	0.0
	comp=E,3.2nm,0.3s,baz=180,slow=10,SNR=36						
JTKR	Abashiri--Toko	6.89	243	P	Pn	20 44 46.0	+2.9
JAK	Akkeshi	7.02	234	P	Pn	20 44 44.5	-0.4
JAK				eS	Sn	20 46 00.0	-3.1
JMP	Maruseppu	7.21	245	P	Pn	20 44 50.6	+3.2
JAR	Ashorobuto	7.36	239	P	Pn	20 44 51.7	+2.2
JOB	Onbets	7.56	237	P	Pn	20 44 52.9	+0.6
JOB				eS	Sn	20 46 14.6	-1.7
ASAJ	Asahikawa	7.63	248	P	Pn	20 44 56.6	+3.5
	comp=E,8.3nm,0.3s,baz=67,slow=12,SNR=55						
ASAJ	Asahikawa	7.63	248	P	Pn	20 44 57.6	+4.5
ASAJ	Asahikawa	7.63	248	PN	Pn	20 44 56.7	+3.6
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
JKK2	Kamakawa 2	7.66	246	P	Pn	20 44 56.9	+3.4
JCH	Churui	8.02	237	P	Pn	20 44 58.6	+0.2
JCH				eS	Sn	20 46 23.7	-3.6
JFR	Furan	8.13	242	P	Pn	20 45 02.5	+2.5
JBT2	Biratori 2	8.50	241	P	Pn	20 45 06.0	+1.1
JEM	Erimo	8.52	234	P	Pn	20 45 05.3	0.0
ERM	Erimo	8.52	234	ePN	Pn	20 45 04.6	-0.7
ERM				pmax	pmax		
	comp=Z,31nm,0.4s						
ERM	Erimo	8.52	234	ePn	Pn	20 45 04.6	-0.7
	comp=Z,31nm,0.4s						
ERM				eSn	Sn	20 46 32.5	-7.2
JNBK	Urakawa-nobuka	8.58	237	P	Pn	20 45 04.8	-1.2
JNBK				eS	Sn	20 46 36.7	-4.2
JNB	Noboribetsu	9.47	243	P	Pn	20 45 18.4	+0.2
JKB	Kayabe	9.82	240	P	Pn	20 45 21.9	-1.0
JKB				eS	Sn	20 47 04.6	-6.6
JSH	Shimam	9.98	246	P	Pn	20 45 27.0	+1.9
JTM	Tenmabayashi	10.51	235	P	Pn	20 45 29.4	-2.9
JTM				eS	Sn	20 47 19.6	-8.4
JANG	Nango	10.55	232	P	Pn	20 45 29.0	-3.9
JANG				eS	Sn	20 47 18.9	-10
JOSM	Okushiri--Mats	10.64	245	P	Pn	20 45 33.8	-0.3
JTH	Tanohata	10.68	230	P	Pn	20 45 30.5	-4.1
JTH				eS	Sn	20 47 21.8	-10
MAJO	Matsushiro	15.13	229	eP	Pn	20 46 31.1	-1.7
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MAJO	Matsushiro	15.13	229	ePn	Pn	20 46 31.1	-1.7
	comp=Z,5.6nm,0.4s						
MAT	Matsushiro	15.13	229	P	Pn	20 46 32.7	-0.1
MJAR	Matsushiro Arr	15.13	229	P	Pn	20 46 31.5	-1.3
	comp=Z,0.3nm,0.3s,baz=26,slow=14,SNR=5.9						
MJAR	Matsushiro Arr	15.13	229	eP	Pn	20 46 33.1	+0.3
KSRS	Korea Array	20.57	250	P	P	20 47 37.7	+2.6
	comp=Z,2.6nm,0.5s,baz=49,slow=11,SNR=15						
KSRS	Korea Array	20.57	250	eP	P	20 47 40.2	+5.1
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KURK	Kurchatov	46.63	303	P	P	20 51 21.7	-0.5
	comp=Z,0.6nm,0.7s,mb3.5,baz=68,slow=8.5,SNR=4.2						
KURK	Kurchatov	46.63	303	P	P	20 51 21.7	-0.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
CMAR	Chiang Mai Arr	52.09	255	P	P	20 52 05.8	+1.8
	comp=Z,1.0nm,0.7s,mb3.9,baz=25,slow=6.8,SNR=8.4						
CMAR	Chiang Mai Arr	52.09	255	P	P	20 52 05.8	+1.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	Mina Array Bea	62.54	62	P	P	20 53 17.9	+0.6
	comp=Z,0.6nm,0.5s,mb3.8,baz=289,slow=6.7,SNR=5.1						
PDAR	Pinedale Array	64.73	54	P	P	20 53 31.4	-0.2
	comp=Z,0.5nm,0.6s,mb3.6,baz=326,slow=1.8,SNR=5.8						
WRA	Warramunga Arr	68.97	198	P	P	20 53 59.0	+0.5
	comp=Z,1.1nm,0.6s,mb3.9,baz=15,slow=6.8,SNR=22						
WRA	Warramunga Arr	68.97	198	eP	P	20 53 59.0	+0.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	72.68	198	P	P	20 54 22.6	+1.7
	comp=Z,3.4nm,0.8s,mb4.2,baz=10,slow=5.1,SNR=32						
ASAR	Alice Springs	72.68	198	P	P	20 54 22.6	+1.7
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TXAR	Lajitas Array	77.57	60	P	P	20 54 48.4	-0.8
	comp=Z,1.0nm,0.5s,mb3.8,baz=296,slow=4.9,SNR=20						
TXAR	Lajitas Array	77.57	60	eP	P	20 54 49.0	-0.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CDF	Champ du Feu	79.89	337	eP	P	20 55 01.1	-0.5
MEZF	Maizieres J'vi	80.38	339	eP	P	20 55 04.0	-0.2
LOR	Lormes	81.82	339	eP	P	20 55 11.3	-0.5
	comp=Z,3.4nm,0.6s,mb4.1						
LOR	Lormes	81.82	339	eP	P	20 55 11.3	-0.5
LOR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
LOR	Lormes	81.82	339	eP	P	20 55 11.3	-0.5
	comp=Z,1.7nm,0.6s,mb4.0						
SSF	Saint Saulge	82.10	339	eP	P	20 55 12.8	-0.5
	comp=Z,2.3nm,0.7s,mb3.8						
SSF	Saint Saulge	82.10	339	eP	P	20 55 12.8	-0.5
SSF				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
SSF	Saint Saulge	82.10	339	eP	P	20 55 12.8	-0.5
	comp=Z,1.1nm,0.7s,mb3.8						
SGMF	Saint Gilles	82.29	343	eP	P	20 55 13.3	-1.0
AVF	Avril sur Loir	82.39	339	eP	P	20 55 14.4	-0.4
	comp=Z,5.2nm,0.6s,mb4.2						
SMF	Signal de Mont	82.40	339	eP	P	20 55 14.5	-0.4
	comp=Z,3.6nm,0.5s,mb4.1						
LPL	La Plagne	82.70	336	eP	P	20 55 16.8	+0.3
BGF	Bois d'Agland	82.73	339	eP	P	20 55 17.6	+1.0
	comp=Z,4.0nm,0.5s,mb4.2						
TCF	Toulx Ste Croi	83.13	340	eP	P	20 55 18.4	-0.3
	comp=Z,7.4nm,0.9s,mb4.2						
ORIF	Oris-en-Rattie	83.49	337	eP	P	20 55 20.7	+0.2
	comp=Z,2.1nm,0.6s,mb3.9						
ORIF	Oris-en-Rattie	83.49	337	eP	P	20 55 20.7	+0.2
ORIF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
ORIF	Oris-en-Rattie	83.49	337	eP	P	20 55 20.7	+0.2
	comp=Z,1.0nm,0.6s,mb3.8						
CAF	Calviac	84.45	339	eP	P	20 55 25.6	+0.2
CPUP	Villa Florida	148.53	59	PKPbc	PKPbc	21 02 37.9	-1.3
	comp=Z,0.6nm,0.5s,baz=343,slow=0.7,SNR=3.1						
CPUP	Villa Florida	148.53	59	PKP2	PKPbc	21 02 37.9	-1.3
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PLCA	Paso Flores	148.71	94	PKPbc	PKPbc	21 02 39.0	-0.2
	comp=Z,2.1nm,0.7s,baz=352,slow=22,SNR=5.2						
PLCA	Paso Flores	148.71	94	PKP2	PKPbc	21 02 39.0	-0.2
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PLCA	Paso Flores	148.71	94	PKPbc	PKPbc	21 02 39.0	-0.2

IDC 09 20:55:17.4±2.1**, 633N×12596E, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/18**, mbtmp3.6**/4**, Error ellipse: s-maj=116.0km s-min=26.3km az=68.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	24.27	181	P	P	21 00 36.9	+0.5
	1.8nm,0.8s,baz=12,slow=9.1,SNR=9.8						
WRA	Warramunga Arr	27.37	163	P	P	21 01 04.6	0.0
	0.9nm,0.5s,baz=343,slow=10,SNR=12						
ASAR	Alice Springs	30.80	166	P	P	21 01 34.8	-0.3
	0.2nm,0.4s,baz=342,slow=7.7,SNR=7.6						
MKAR	Makanchi Array	55.00	325	P	P	21 04 50.6	0.0
	0.2nm,0.5s,baz=123,slow=7.8,SNR=4.2						

*OTT **09** 21:08:04.8±1.2, 8063N×11679W, h18km, ML4.9/6, Artic Ocean. 335km northwest from Isachsen, Nu*
*ISCJB **09** 21:08:05.3±0.2, 8047N±003×1159W±02, h10km, mb4.2/34, MS3.3/5, Error ellipse: s-maj=5.4km s-min=4.3km az=18.3*
*IDC **09** 21:08:05.8±0.5, 8058N×117.19W, h0km, mb4.0/20, mb1 4.2/21, mb1mx4.1/28, mbtmp4.0/21, MS3.3/6, Ms1 3.3/6, ms1mx3.0/32, Error ellipse: s-maj=17.8km s-min=11.8km az=95.0*
*NEIC **09** 21:08:07.2±0.2, 8060N×11663W, h10km, mb4.4/18, Error ellipse: s-maj=6.8km s-min=4.6km az=113.0*
ISC 09 21:08:07.2±0.2**, 8046N**±003×**1159W**±02**, h10**km**, n91,** σ1§**44**/97**, mb4.2**/34**, MS3.3**/5**, Arctic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	Resolute Bay	7.29	131	PN	Pn	21 09 53.9	+0.5
RES				SN	Sn	21 11 13.4	-2.7
RES				Trac		21 11 17.2	
	comp=Z,97nm,0.6s						
GIFN	Gifford Fjord,	13.29	123	PN	Pn	21 11 13.8	-1.7
GIFN				SN	Sn	21 13 34.1	-8.9
GIFN				Trac		21 13 35.6	
	comp=Z,32nm,1.0s						
ILON	Igloolik, Nuna	13.84	124	PN	Pn	21 11 21.3	-1.7
LAIN	Lailor River,	13.85	127	PN	Pn	21 11 21.7	-1.4
LAIN				SN	Sn	21 13 48.9	-7.8
KUGN	Kugaaruk Camp,	14.01	137	PN	Pn	21 11 22.5	-2.8
JERN	Jeri Cho Mine,	14.57	173	PN	Pn	21 11 30.2	-2.7
JERN				SN	Sn	21 13 59.2	-15
QILN	Qililugaq Expl	15.81	134	PN	Pn	21 11 47.4	-2.1
QILN				SN	Sn	21 14 44.7	+0.2
COLD	Coldfoot	15.88	233	ePn	Pn	21 11 44.2	-6.0
	14nm,0.8s						
CTLN	Castor Lake	16.12	180	PN	Pn	21 11 49.5	-3.9
CTLN				SN	Sn	21 14 33.1	-19
CTLN				Trac		21 15 08.3	
	comp=Z,68nm,1.4s						
ROMN	Roman Lake	16.24	183	PN	Pn	21 11 51.3	-3.7
ROMN				SN	Sn	21 14 41.3	-14
ROMN				Trac		21 14 57.5	
	comp=Z,16nm,0.2s						
DAWY	Dawson	17.67	215	PN	Pn	21 12 08.2	-4.7
DAWY				SN	Sn	21 15 08.7	-21
DAWY				Trac		21 15 15.7	
	comp=Z,34nm,1.4s						
DAWY	Dawson	17.67	215	ePn	Pn	21 12 08.4	-4.5
COLA	College	17.82	228	ePn	Pn	21 12 15.9	+1.2
	6.5nm,0.8s						
SUMG	Summit	17.99	72	ePn	Pn	21 12 15.5	-1.3
	9.8nm,0.8s						
SUMG				eSn	Sn	21 15 21.7	-15
YKW3	Yellowknife Ar	18.00	178	PN	Pn	21 12 15.3	-1.7
YKW3				SN	Sn	21 15 22.8	-15
YKW3				Trac		21 15 27.2	
	comp=Z,13nm,0.5s						
YKA	Yellowknife Ar	18.07	178	P	Pn	21 12 17.9	+0.1
	0.8nm,0.3s,baz=359,slow=12,SNR=25						
YKA				LR	LR	21 19 19.0	
	comp=Z,39nm,18.9s,baz=150,slow=37						
SEDN	First Sedna Si	18.59	144	PN	Pn	21 12 21.4	-2.8
SEDN				SN	Sn	21 15 38.2	-13
KBS	Kingsbay	18.63	29	P	Pn	21 12 22.7	-1.9
BPAW	Bear Paw Mtn.	18.96	231	eP	Pn	21 12 26.7	-1.9
	15nm,1.2s						
MCK	McKinley	19.05	228	eP	Pn	21 12 28.8	-1.0
	12μm,0.8s						
CHUM	Lake Minchumin	19.34	233	eP	Pn	21 12 32.1	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	40µm,1.1s						
CHUM				S	Sn	21 15 33.2	-37
KTH	Kantishna Hill	19.48	230	eP	Pn	21 12 33.1	-1.8
	8.2nm,0.9s						
TRF	Thorofare Moun	19.49	230	eP	Pn	21 12 33.7	-1.3
	53nm,1.7s						
PPLA	Purkeypile	20.27	231	eP	P	21 12 43.2	+1.0
	28nm,1.2s						
HYT	Haines Junctio	20.69	211	eP	P	21 12 54.5	+7.7
SFJD	Kangerlussuaq	20.92	91	P	P	21 12 50.4	+1.1
	7.5nm,0.7s,baz=340,slow=16,SNR=2.7						
SFJD	Kangerlussuaq	20.92	91	eP	P	21 12 51.8	+2.5
	11nm,0.7s						
BMRM	Bremner River	21.24	220	eP	P	21 12 53.2	+0.4
RC01	Rabbit Creek A	21.71	227	eP	P	21 12 58.4	+0.6
	12nm,0.6s,mb4.5						
SLKM	Skilak Lake	22.33	227	eP	P	21 13 05.1	+0.7
DLBC	Dease Lake	22.53	200	P	P	21 13 07.2	+0.6
	baz=355,slow=11						
DLBC	Dease Lake	22.53	200	eP	P	21 13 08.4	+1.8
FCC	Fort Churchill	22.75	150	eP	P	21 13 09.6	+0.7
JMIC	Jan Mayen	23.77	51	LR	LR	21 21 26.5	
	comp=Z,52nm,21.0s,MS3.0,baz=72,slow=34						
TIXI	Tiksi	24.12	315	eP	P	21 13 19.7	-2.8
	8.7nm,0.8s,mb4.2						
KDAK	Kodiak Island	25.28	229	P	P	21 13 34.4	+1.3
	4.0nm,0.6s,mb4.1,baz=288,slow=8.4,SNR=4.2						
OHAK	Old Harbor	25.91	229	eP	P	21 13 41.0	+2.1
FFC	Flin Flon	26.23	162	eP	P	21 13 42.9	+1.2
	9.1nm,0.7s,mb4.4						
EDM	Edmonton	27.37	177	eP	P	21 13 53.4	+1.4
BORG	Borgarnes	27.75	67	LR	LR	21 24 29.0	
	comp=Z,113nm,19.2s,MS3.5,baz=12,slow=35						
ARCES	ARCESS Array B	28.70	27	P	P	21 14 03.7	0.0
	2.1nm,0.7s,mb4.0,baz=354,slow=8.5,SNR=5.4						
ARCES				LR	LR	21 24 47.5	
	comp=Z,81nm,18.7s,MS3.4,baz=35,slow=35						
ARCES	ARCESS Array B	28.70	27	P	P	21 14 03.7	0.0
ARCES				LR	LR	21 24 47.5	
SCHQ	Schefferville	29.84	119	LR	LR	21 25 32.8	
	comp=Z,80nm,18.4s,MS3.4,baz=353,slow=35						
UNV	Unalaska Valle	31.02	243	eP	P	21 14 22.5	-1.8
ULM	Lac du Bonnet	31.06	155	P	P	21 14 25.7	+0.9
	3.7nm,0.7s,mb4.3,baz=357,slow=9.4,SNR=5.8						
WALA	Waterton Lakes	31.54	178	eP	P	21 14 31.3	+2.3
GCMT	Greycliff	34.87	172	eP	P	21 15 00.6	+2.5
JOF	Joensuu	35.66	25	ep	P	21 15 03.8	-0.9
	6.7nm,0.5s,mb4.8						
JOF	Joensuu	35.66	25	ep	P	21 15 03.8	-0.9
	6.7nm,0.5s,mb4.8						
NB2	NORSAR Subarra	35.67	42	P	P	21 15 05.3	+0.5
	comp=Z,7.0nm,1.1s,mb4.5,baz=344,slow=8.6						
NOA	NORSAR Array B	35.67	42	P	P	21 15 05.5	+0.7
	comp=Z,1.8nm,0.7s,mb4.1,baz=345,slow=8.4,SNR=5.2						
RSSD	Black Hills	36.72	166	eP	P	21 15 16.1	+2.3
PETK	Petropavlovsk-	37.54	279	LR	LR	21 33 47.6	
	comp=Z,35nm,18.1s,MS3.2,baz=206,slow=41						
AHID	Auburn Hatcher	37.86	174	P	P	21 15 24.1	+0.5
	comp=Z,4.0nm,0.8s,mb4.2						
PDAR	Pinedale Array	37.89	172	P	P	21 15 26.1	+2.2
	comp=Z,1.3nm,0.6s,mb3.9,baz=19,slow=7.3,SNR=9.7						
WVOR	Wild Horse Val	38.17	183	eP	P	21 15 27.8	+1.6
	comp=Z,16nm,1.7s,mb4.5						
NCB	Newcomb	39.45	131	eP	P	21 15 39.0	+2.1
	comp=Z,3.5nm,0.4s,mb4.4						
NVAR	Mina Array Bea	42.16	183	P	P	21 16 01.0	+1.6
	comp=Z,1.8nm,0.9s,mb3.7,baz=358,slow=5.1,SNR=8.0						
NVAR				PcP	PcP	21 17 54.6	+1.3
	comp=Z,0.5nm,0.5s,baz=18,slow=3.2,SNR=3.4						
PV01	Paradox Valley	42.54	171	eP	P	21 16 04.5	+2.1
MTUM	Tungsten Hills	43.24	183	eP	P	21 16 10.7	+2.6
ARU	Arti	43.31	4	P	P	21 16 06.5	-1.9
TPNV	Topopah Spring	43.63	180	eP	P	21 16 12.1	+0.8
	comp=Z,5.1nm,0.9s,mb4.2						
ZALV	Zalesovo Beam	45.33	343	P	P	21 16 23.2	-1.4
	comp=Z,0.6nm,0.5s,mb3.7,baz=12,slow=7.5,SNR=3.1						
BLA	Blacksburg	45.40	139	eP	P	21 16 27.3	+1.9
	comp=Z,11nm,0.6s,mb4.9						
CLL	Collm	45.43	43	eP	P	21 16 26.0	+0.6
CLL				i pP	pP	21 16 29.8	+1.2
	comp=Z,8.0nm,1.4s						
WMOK	Wichita Mounta	46.32	160	eP	P	21 16 33.5	+0.8
	comp=Z,8.0nm,1.0s,mb4.6						
BVAR	Borovoye Array	46.72	355	P	P	21 16 35.3	-0.3
	comp=Z,1.6nm,0.8s,mb4.0,baz=335,slow=6.6,SNR=5.2						
BVAR				PcP	PcP	21 18 08.4	-0.3
	comp=Z,1.3nm,0.6s,baz=0.0,slow=3.4,SNR=4.6						
MORC	Moravsky Berou	47.44	40	eP	P	21 16 43.1	+1.8
	comp=Z,1.7nm,0.6s,mb4.2						
CDF	Champ du Feu	47.59	49	ePKP1	P	21 16 43.8	+1.4
AKASG	Malin Array Be	47.63	29	P	P	21 16 42.6	-0.1
	comp=Z,1.1nm,0.5s,mb4.2,baz=351,slow=8.7,SNR=4.1						
HAU	Haudompre	47.87	50	ePKP1	P	21 16 46.0	+1.4
GERES	GERESS Array B	47.94	43	P	P	21 16 46.2	+1.2
	comp=Z,0.8nm,0.9s,mb3.7,baz=358,slow=8.4,SNR=3.7						
KWP	Kalwaria	48.11	35	P	P	21 16 46.0	-0.4
LOR	Lormes	48.27	52	ePKP1	P	21 16 48.0	+0.3
SSF	Saint Saulge	48.43	53	ePKP1	P	21 16 49.3	+0.4
	comp=Z,9.1nm,1.1s,mb4.4						
AVF	Avril sur Loir	48.67	53	ePKP1	P	21 16 51.1	+0.3
	comp=Z,19nm,1.3s,mb4.7						
KURK	Kurchatov	48.82	348	P	P	21 16 51.6	-0.3
	comp=Z,1.6nm,0.7s,mb4.1,baz=0.4,slow=7.7,SNR=4.7						
BGF	Bois d'Agland	48.83	53	ePKP1	P	21 16 52.4	+0.4
	comp=Z,12nm,0.8s,mb4.7						
SMF	Signal de Mont	48.88	53	ePKP1	P	21 16 51.4	-1.0
TCF	Toulx Ste Croi	49.01	54	ePKP1	P	21 16 53.6	+0.2
	comp=Z,16nm,1.3s,mb4.6						
SONM	Songino Array	49.80	324	P	P	21 16 59.1	-0.3
	comp=Z,1.4nm,0.9s,mb4.0,baz=336,slow=3.3,SNR=4.4						
TXAR	Lajitas Array	51.47	166	P	P	21 17 14.1	+1.9
	comp=Z,0.9nm,0.7s,mb3.8,baz=2.8,slow=7.3,SNR=5.5						
MKAR	Makanchi Array	52.59	344	P	P	21 17 18.8	-1.5
	comp=Z,2.2nm,0.8s,mb4.2,baz=349,slow=3.8,SNR=4.7						
MKAR				PcP	PcP	21 18 29.1	-1.2
	comp=Z,1.5nm,0.6s,baz=17,slow=3.6,SNR=3.4						
ESDC	Sonseca Array	54.63	61	P	P	21 17 36.8	+1.5
	comp=Z,0.6nm,0.6s,mb3.8,baz=354,slow=7.6,SNR=8.7						
MJAR	Matsushiro Arr	56.79	292	P	P	21 17 48.2	-2.7
	comp=Z,1.2nm,0.8s,mb4.0,baz=358,slow=11,SNR=4.0						
UCH	Uchtor	57.43	351	P	P	21 17 56.1	+0.7
KEST	Kesra	60.34	50	P	P	21 18 17.9	+2.3
	comp=Z,2.6nm,0.7s,mb4.4,baz=360,slow=2.2,SNR=13						
MALT	Malatya	60.63	23	eP	P	21 18 17.3	-0.3
CMAR	Chiang Mai Arr	79.61	327	P	P	21 20 13.1	-1.1
	comp=Z,2.0nm,0.9s,mb4.1,baz=349,slow=6.3,SNR=14						
TORD	Torodi Ar. Bea	81.51	61	P	P	21 20 24.6	+0.2
	comp=Z,1.2nm,0.7s,mb3.9,baz=323,slow=6.8,SNR=8.9						
ASAR	Alice Springs	116.51	286	PKP	PKPdf	21 26 48.1	-2.2
	comp=Z,0.6nm,0.8s,baz=350,slow=2.9,SNR=4.8						

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*BJI **09** 21:10:11.4, 3758N×7468E, h25km, mb4.1, ML4.0, Ms3.5*
*IDC **09** 21:10:12.1±1.2, 3803N×7409E, h0km, mb3.8/4, mb1 3.9/7, mb1mx3.6/24, mbtmp3.8/7, ML3.5/3, MS2.9/3, Ms1 2.9/3, ms1mx2.6/27, Error ellipse: s-maj=24.0km s-min=22.9km az=154.0*
*NNC **09** 21:10:12.6±5.2, 3735N×7451E, h96km±78km, mb3.7, mpv4.5, Error ellipse: s-maj=42.5km s-min=33.3km az=9.0*
*ISCJB **09** 21:10:12.6±0.5, 3745N±003×7486E±008, h67km±9km, mb3.7/5, Error ellipse: s-maj=10.2km s-min=4.3km az=171.3*
*MOS **09** 21:10:15.6±1.1, 3806N×7423E, h33km, mb4.1/4, Error ellipse: s-maj=13.6km s-min=8.1km az=94.8*
*NEIC **09** 21:10:22.6±1.7, 38.11N×7438E, h100km±15km, mb3.8/3, Error ellipse: s-maj=17.8km s-min=11.2km az=198.0*
ISC 09 21:10:14.5±0.4**, 3744N**±003×**7478E**±007**, h67**km±8km**, n59, σ1§33**/69**, mb3.7**/5**, 5C-1D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.27	24	⇑iPG	Pn	21 10 51.5	+1.8
KSH				SG	Sn	21 11 20.5	+3.8
KSH				Smax			
	comp=N,6µm,0.8s						
KSH				Smax			
	comp=E,5µm,0.7s						
CHCP	Chirah Chowk	3.97	199	P	Pn	21 11 14.4	+1.5
CEP	Cherat	4.30	214	P	Pn	21 11 18.0	+0.6
CEP				S	Sn	21 12 21.0	+15
AML	Almayashu	4.76	350	P	Pn	21 11 23.4	-0.2
	SNR=97						
AML	Almayashu	4.76	350	ePn	Pn	21 11 23.4	-0.2
THN	Thein Dam	5.05	171	ex	x	21 11 43.4	
AAK	Ala-Archa	5.19	358	P	Pn	21 11 30.4	+0.9
	SNR=13						
KBK	Karagaybulak	5.21	1	P	Pn	21 11 30.6	+0.8
	SNR=26						
THW	Thamme Wali	5.26	209	P	Pn	21 11 31.2	+0.7
EKS2	Erkin-Say	5.27	352	P	Pn	21 11 30.7	+0.1
	SNR=37						
EKS2	Erkin-Say	5.27	352	ePn	Pn	21 11 30.4	-0.2
EKS2				eSn	Sn	21 12 14.2	-16
FRU	Bishkek	5.39	359	ePN	Pn	21 11 33.0	+0.8
FRU				i		21 11 47.0	
FRU				eS	Sn	21 13 01.0	+28
FRU				pmax	pmax		
	comp=Z,50nm,1.6s						
FRU				smax			
	comp=E,260nm,2.0s						
TKM2	Tokmak 2	5.51	6	⇑Pn	Pn	21 11 34.4	+0.5
	comp=E,43nm,0.6s						
TKM2				⇓Sn	Sn	21 12 38.0	+2.2
	comp=E,49nm,0.8s						
TKM2	Tokmak 2	5.51	6	PN	Pn	21 11 34.3	+0.5
TKM2						21 12 39.2	
TKM2				pmax	pmax		
	comp=Z,43nm,0.6s						
TKM2				smax			
	comp=Z,49nm,0.8s						
TKM2	Tokmak 2	5.51	6	P	Pn	21 11 34.7	+0.9
	SNR=37						
TKM2	Tokmak 2	5.51	6	ePn	Pn	21 11 34.5	+0.7
TKM2				eSn	Sn	21 12 21.7	-14
CHMS	Chumysh	5.55	360	P	Pn	21 11 34.9	+0.5
	SNR=23						
USP	Ospenovka	5.82	358	P	Pn	21 11 36.9	-1.3
	SNR=7.9						
KK31	Karatay Array	6.53	331	Pn	Pn	21 11 45.9	-1.9
	comp=Z,14nm,0.6s,baz=140,slow=13,SNR=135						
KK31				⇑Sn	Sn	21 12 59.1	-1.7
	comp=Z,16nm,0.5s,baz=141,slow=24,SNR=14						
KK31	Karatay Array	6.53	331	ePN	Pn	21 11 45.9	-1.9
KK31				pmax	pmax		
	comp=Z,6.0nm,0.3s						
KLP	Kalpa	6.55	153	eP	Pn	21 11 48.8	+0.6
KLP				eS	Sn	21 13 02.6	+1.2
KLP				AML	AML	21 13 50.1	
	comp=N,52nm,0.7s						
KLP				AML	AML	21 13 54.4	
	comp=E,57nm,0.8s						
SMLA	Simla	6.60	162	i P	Pn	21 11 50.4	+1.6
SMLA				i S	Sn	21 13 02.0	-0.5
SMLA				ex	x	21 13 05.2	
	comp=E,92nm,0.4s						
SMLA				ex	x	21 13 08.9	
	comp=N,92nm,0.4s						
DDI	Dehra Dun	7.60	158	eP	Pn	21 12 02.0	-0.5
DDI				eS	Sn	21 13 24.2	-3.0
JOSI	Joshimath	7.93	149	eP	Pn	21 12 07.2	+0.2
JOSI				eS	Sn	21 13 33.4	-1.8
JOSI				AML	AML	21 13 46.5	
	comp=N,82nm,0.6s						
JOSI				AML	AML	21 13 46.8	
	comp=E,95nm,0.7s						
SONA	Sohna	9.37	167	eP	Pn	21 12 24.7	-2.0
SONA				eS	Sn	21 14 07.2	-3.2
MK31	Makanchi Array	10.88	28	P	Pn	21 12 47.0	-0.2
	comp=E,3.1nm,0.8s,baz=207,slow=14,SNR=10						
MK31	Makanchi Array	10.88	28	i P	Pn	21 12 46.9	-0.2
MK31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	10.88	28	Pn	Pn	21 12 47.1	-0.1
	comp=Z,0.2nm,0.3s,baz=222,slow=12,SNR=9.3						
KURK	Kurchatov	13.55	10	Pn	Pn	21 13 17.2	-6.3
	comp=Z,0.1nm,0.3s,baz=199,slow=12,SNR=12						
KURK				LR	LR	21 18 27.8	
	comp=Z,31nm,18.0s,baz=140,slow=38						
KURK	Kurchatov	13.55	10	P	Pn	21 13 20.3	-3.1
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURK	Kurchatov	13.55	10	Pn	Pn	21 13 17.2	-6.3
KURK				LR	LR	21 18 27.8	
BVA0	Borovoye Array	15.88	350	⇑P	Pn	21 13 55.7	+2.1
	comp=Z,1.4nm,0.9s,baz=175,slow=7.1,SNR=29						
BVA0	Borovoye Array	15.88	350	i P	Pn	21 13 54.8	+1.2
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BVAR	Borovoye Array	15.88	350	Pn	Pn	21 13 49.7	-3.9
	comp=Z,0.1nm,0.3s,baz=169,slow=13,SNR=7.1						
BVAR				LR	LR	21 20 09.0	
	comp=Z,41nm,20.8s,baz=336,slow=39						
BRVK	Borovoye	15.93	350	P	Pn	21 13 50.7	-3.5
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s						
BRVK	Borovoye	15.93	350	Pn	Pn	21 13 50.7	-3.6
	comp=Z,11nm,1.1s						
AB31	Akbulak array	15.96	322	⇑P	Pn	21 13 49.4	-5.3
	comp=Z,2.2nm,0.7s						
AB31	Akbulak array	15.96	322	P	Pn	21 13 48.8	-5.9
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKTK	Aktyubinsk	17.68	323	Pn	Pn	21 14 12.7	-3.2
AKTK				LR	LR	21 21 30.9	
AKTO	Aktyubinsk	17.68	323	Pn	Pn	21 14 12.7	-3.2
	comp=Z,0.5nm,0.3s,baz=121,slow=13,SNR=11						
AKTO				LR	LR	21 21 30.9	
	comp=Z,53nm,19.6s,baz=305,slow=40						
AKTO	Aktyubinsk	17.68	323	P	Pn	21 14 12.7	-3.2
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,53nm,19.6s						
ZAL	Zalesovo	17.89	20	P	Pn	21 14 16.9	-1.5
ZALV	Zalesovo Beam	17.90	20	P	Pn	21 14 16.9	-1.8
	comp=Z,0.3nm,0.3s,baz=203,slow=11,SNR=24						
NVS	Novosibirsk	18.34	16	eP	Pn	21 14 24.3	+0.5
NVS				pmax	pmax		
	comp=Z,12nm,1.4s						
NVS				pmax	pmax		
	comp=N,7.0nm,1.3s						
GTA	Gaotai	19.70	77	eP	Pn	21 14 41.2	+1.0
GTA				AP	pP	21 14 46.1	-6.1
GTA				XP	sP	21 14 48.9	-12
GTA				AMB	AMB		
	comp=Z,2.0nm,0.7s						
ARU	Arti	21.89	335	P	P	21 15 00.8	-0.7
GNI	Garni	23.52	286	eP	P	21 15 18.0	-0.4
GNI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GNI	Garni	23.52	286	eP	P	21 15 18.0	-0.3
	comp=Z,3.3nm,0.6s,mb3.8						
SONM	Songino Array	25.31	56	P	P	21 15 40.2	+5.7
	comp=Z,1.4nm,0.7s,mb3.5,baz=257,slow=11,SNR=9.3						
SONM	Songino Array	25.31	56	P	P	21 15 40.2	+5.7
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ULN	Ulaanbaatar	25.75	56	eP	P	21 15 43.0	+4.5
MALT	Malatya	28.60	283	eP	P	21 16 06.7	+2.5
MALT				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
MALT	Malatya	28.60	283	eP	P	21 16 06.7	+2.5
	comp=Z,1.3nm,0.7s,mb3.7						
ISP	Isparta	34.81	285	P	P	21 16 59.5	+0.8
ARCES	ARCESS Array B	41.47	336	P	P	21 17 54.9	+0.7
	comp=Z,2.1nm,0.7s,mb4.1,baz=101,slow=8.0,SNR=9.8						
ARCES	ARCESS Array B	41.47	336	P	P	21 17 54.9	+0.7
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	45.47	322	P	P	21 18 26.2	-0.3
	baz=91,slow=7.8						
WLF	Walferdange	49.56	307	P	P	21 18 58.2	-0.2
TORD	Torodi Ar. Bea	68.75	271	P	P	21 21 13.8	+2.3
	comp=Z,0.2nm,0.4s,mb3.3,baz=47,slow=5.2,SNR=5.4						

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*IDC **09** 21:26:47.0±1.1, 765S×10695E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/19, mbtmp3.9/8, MS3.0/1, Ms1 3.0/1, ms1mx2.6/28, Error ellipse: s-maj=57.5km s-min=17.0km az=53.0*
*NEIC **09** 21:26:51.6±0.3, 768S×10688E, h35km, mb4.2/6, Error ellipse: s-maj=11.6km s-min=6.4km az=55.0*
*ISCJB **09** 21:26:53.0±0.7, 786S±006×10684E±007, h71km±7km, mb3.8/10, Error ellipse: s-maj=12.0km s-min=8.8km az=150.0*
*DJA **09** 21:26:54, 780S×10698E, h60km, MLv4.2/9*
ISC 09 21:26:54.2±0.7**, 785S**±006×**10684E**±007**, h61**km±7km**, n35, σ1§19**/34**, mb3.9**/10**, 1D, Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.88	342	P	Pn	21 27 12.5	+1.7
	0.0nm,0.0s						
LEM	Lembang	1.28	37	P	Pn	21 27 15.7	-0.2
	0.0nm,0.0s						
DBJI	Dramaga	1.29	356	P	Pn	21 27 18.1	+2.0
	0.0nm,0.0s						
CBJI	Citeko	1.42	1	P	Pn	21 27 16.0	-1.8
	0.0nm,0.0s						
SBJI	Serang	1.86	338	P	Pn	21 27 27.0	+3.3
	0.0nm,0.0s						
JCJI	Jatiwangi	1.96	47	P	Pn	21 27 23.0	-2.1
	0.0nm,0.0s						
XMIS	Christmas Isla	2.86	204	ePn	Pn	21 27 36.5	-0.9
XMIS				eSn	Sn	21 28 06.8	-4.0
BJII	Banjamegara	2.90	80	P	Pn	21 27 38.0	+0.2
	0.0nm,0.0s						
SJI	Sawahan	4.89	89	P	Pn	21 28 04.7	-0.4
	0.0nm,0.0s						
TPI	Tanjungpandan	5.13	9	⇓eP	Pn	21 28 10.1	+1.7
KAPI	Kappang	13.14	78	LR	LR	21 35 03.1	
	comp=Z,71nm,21.0s,baz=299,slow=38						
FITZ	Fitzroy Crossi	20.94	121	eP	P	21 31 33.0	+0.9
	6.6nm,0.8s						
FITZ	Fitzroy Crossi	20.94	121	P	P	21 31 33.0	+0.9
	3.4nm,0.7s,baz=294,slow=10.0,SNR=10						
FITZ	Fitzroy Crossi	20.94	121	eP	P	21 31 32.9	+0.8
	5.8nm,0.6s						
CMAR	Chiang Mai Arr	27.28	343	P	P	21 32 31.6	-1.4
	0.5nm,0.4s,mb3.4,baz=177,slow=9.1,SNR=5.4						
WRA	Warramunga Arr	29.22	117	P	P	21 32 50.1	-0.3
	1.0nm,0.7s,mb3.6,baz=292,slow=11,SNR=11						
WRA				PcP	PcP	21 35 57.2	+0.7
	0.2nm,0.4s,baz=304,slow=2.2,SNR=5.1						
WRAB	Tennant Creek	29.23	117	eP	P	21 32 50.7	+0.3
	3.0nm,0.9s,mb4.0						
WB2	Warramunga Arr	29.23	117	eP	P	21 32 50.4	-0.1
ASAR	Alice Springs	30.34	124	P	P	21 33 00.5	+0.3
	0.2nm,0.4s,mb3.2,baz=305,slow=9.0,SNR=5.4						
ENH	Enshi	37.99	4	eP	P	21 34 04.8	-1.5
STKA	Stephens Creek	40.20	131	eP	P	21 34 26.0	+1.2
	3.5nm,0.6s,mb4.3						
STKA	Stephens Creek	40.20	131	P	P	21 34 26.4	+1.6
	4.9nm,0.6s,mb4.4,baz=303,slow=8.0,SNR=16						
UCH	Uchtor	57.93	332	eP	P	21 36 39.9	-0.2
	1.5nm,0.8s,mb4.1						
TKM2	Tokmak 2	57.98	333	eP	P	21 36 40.1	-0.4
	1.4nm,0.4s,mb4.3						
EKS2	Erkin-Say	58.61	332	P	P	21 36 43.7	-1.1
MKAR	Makanchi Array	58.63	340	P	P	21 36 44.9	0.0
	0.2nm,0.3s,mb3.6,baz=153,slow=7.1,SNR=3.9						
KURK	Kurchatov	63.24	340	P	P	21 37 16.4	+0.4
	0.5nm,0.4s,mb4.0,baz=154,slow=5.5,SNR=3.7						
KURK	Kurchatov	63.24	340	eP	P	21 37 15.4	-0.7
	1.6nm,0.8s,mb4.2						
BRVK	Borovoye	68.15	337	eP	P	21 37 48.5	+0.9
KMBO	Kilima Mbogo	69.62	272	P	P	21 37 59.0	+1.3
ARU	Arti	75.31	335	P	P	21 38 29.3	-1.3
KIV	Kislovodsk	77.40	318	P	P	21 38 43.0	+0.3
QSPA	South Pole Qui	82.14	180	P	P	21 39 10.7	+2.9
	0.8nm,0.8s,mb3.7,baz=323,slow=2.3,SNR=5.8						
QSPA	South Pole Qui	82.14	180	P	P	21 39 10.7	+2.9
TXAR	Lajitas Array	144.24	49	PKP	PKPdf	21 46 24.0	+0.1
	0.2nm,0.5s,baz=297,slow=1.6,SNR=4.4						

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*ISCJB **09** 22:02:03.6±0.3, 6485S±005×1777E±02, h10km, mb4.9/25, MS4.9/13, Error ellipse: s-maj=10.9km s-min=6.8km az=159.4*
*IDC **09** 22:02:04.0±0.5, 6492S×17773E, h0km, mb4.8/14, mb1 4.9/14, mb1mx4.9/15, mbtmp4.8/14, MS4.9/11, Ms1 4.9/11, ms1mx4.7/20, Error ellipse: s-maj=25.9km s-min=13.9km az=46.0*
*NEIC **09** 22:02:06.1±0.3, 6489S×17762E, h10km, mb4.9/13, Error ellipse: s-maj=13.6km s-min=7.9km az=63.0*
*GCMT **09** 22:02:06.1±0.1, 6479S×17779E, h12km, MW5.4/89, Moment Tensor Solution. s71,c117; s89,c165; Duration: 1§3 Moment tensor: Scale 10^17Nm; Mrr-0.20±.02; Mθθ1.60±.02; Mφφ-1.40±.02; Mrθ-0.70±.05; Mθφ-0.35±.02; Mφr0.54±.06; Best double couple: M0 1.76500×10^17 NP1:φs231.00000°,δ61.00000°, λ-180.00000°. NP2:φs140.00000°,δ90.00000°, λ-29.00000°. Principal axes: T 1.9190, Plg20.0000°, Azm189.0000°; N -0.3090, Plg61.0000°, Azm320.0000°; P -1.6110, Plg20.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **09** 22:02:08.6±2.2, 6495S×17723E, h33km, mb4.8/6 Error ellipse: s-maj=34.5km s-min=11.2km az=95.9*
ISC 09 22:02:05.3±0.3**, 6490S**±004×**1778E**±02**, h10**km**, (h12**km±3.0km**:pP-P), n138, σ0§92**/60**, mb4.9**/25**, MS4.9**/13**, 15C-8D, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBA	Scott Base	13.44	190	eP	Pn	22 05 13.5	-2.1
SBA						22 07 43.8	
SBA				pmax	pmax		
	comp=Z,193nm,0.7s						
SBA	Scott Base	13.44	190	ePn	Pn	22 05 13.5	-2.1
	comp=Z,193nm,0.7s						
SBA				Sn	Sn	22 07 43.8	-1.0
RPZ	Rata Peaks	21.56	347	P	P	22 06 54.5	0.0
	comp=Z,12nm,0.8s,mb4.4,baz=254,slow=7.4,SNR=4.2						
RPZ				LR	LR	22 13 34.1	
	comp=Z,4µm,19.0s,MS4.8,baz=163,slow=32						
SNZO	South Karori	23.70	354	eP	P	22 07 16.5	-0.6
	comp=Z,101nm,1.2s,mb5.1						
QSPA	South Pole Qui	25.19	180	P	P	22 07 31.3	+1.0
	comp=Z,183nm,1.0s,mb5.6,baz=34,slow=4.0,SNR=91						
QSPA				LR	LR	22 15 52.9	
	comp=Z,2µm,20.3s,MS4.7,baz=244,slow=33						
CASY	Casey	26.63	236	eP	P	22 07 44.2	+0.8
URZ	Urewera	26.68	359	LR	LR	22 16 27.2	
	comp=Z,3µm,20.0s,MS4.8,baz=183,slow=32						
TAU	Tasmania Unive	27.90	307	P	P	22 07 54.6	-0.4
MIR	Mirnyy	32.38	228	⇑iP	P	22 08 36.0	+1.6
MIR				i		22 08 44.0	
MIR				pmax	pmax		
	comp=Z,100nm,1.5s,mb5.4						
MIR				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.2						
STKA	Stephens Creek	39.80	308	eP	P	22 09 42.0	+3.8
	comp=Z,9.1nm,0.9s,mb4.5						
STKA	Stephens Creek	39.80	308	P	P	22 09 39.1	+1.0
	comp=Z,8.8nm,0.8s,mb4.5,baz=149,slow=14,SNR=8.8						
STKA	Stephens Creek	39.80	308	P	P	22 09 39.1	+0.9
	comp=Z,12nm,0.9s,mb4.6						
MAW	Mawson	39.95	213	eP	P	22 09 40.4	+1.4
	comp=Z,9.3nm,1.4s,mb4.3						
MAW	Mawson	39.95	213	P	P	22 09 39.6	+0.6
	comp=Z,14nm,1.2s,mb4.6,baz=142,slow=9.5,SNR=15						
MAW				LR	LR	22 26 05.3	
	comp=Z,6µm,18.2s,MS5.5,baz=139,slow=36						
MAW	Mawson	39.95	213	eP	P	22 09 40.4	+1.4
MAW				pmax	pmax		
	comp=Z,9.0nm,1.4s						
PMSA	Palmer Station	43.04	146	P	P	22 10 05.6	+1.2
	comp=Z,11nm,0.9s,mb4.6,baz=128,slow=4.4,SNR=9.4						
PMSA	Palmer Station	43.04	146	eP	P	22 10 05.6	+1.2
	comp=Z,27nm,1.0s,mb4.9						
SYO	Syowa Base	43.18	201	⇓iP	P	22 10 04.7	-0.8
SNAA	Sanae	43.69	180	e	P	22 10 09.7	+0.1
SNAA				e		22 10 15.3	
SNAA				e		22 10 19.8	
SNAA				e		22 11 55.6	
SNAA	Sanae	43.69	180	eP	P	22 10 09.9	+0.3
SNAA				e		22 11 56.0	
SNAA				pmax	pmax		
	comp=Z,60nm,1.0s						
SNAA	Sanae	43.69	180	eP	P	22 10 09.9	+0.3
	comp=Z,60nm,1.0s,mb5.3						
SNAA				ePP	PP	22 11 49.4	-1.5
SNAA				ePcP	PcP	22 11 56.0	-0.3
VNA3	Neumayer Olymp	44.03	177	e	P	22 10 12.3	0.0
VNA3				e	pP	22 10 15.2	-0.2
VNA3				e		22 10 19.4	
VNA3				e		22 11 57.7	
MAIT	Maitri	44.25	187	eP	P	22 10 14.1	0.0
NVL	N'lazarevskaya	44.26	187	c iP	P	22 10 15.1	+1.0

NVL e*PP pP 22 10 21.2 +4.0
NVL e 22 11 57.9
NVL eS **S** **22 16 56.4 +9.3**
NVL pmax pmax
comp=Z,119nm,1.2s,mb5.5
NVL MLR MLR
comp=N,974nm,15.0s,MS4.9
NVL MLR MLR
comp=E,319nm,15.0s,MS4.9
NVL MLR MLR
comp=Z,2µm,15.0s,MS5.1
VNA2 Neumayer--Watz 44.40 178 e **P** **22 10 15.6 +0.4**
VNA2 e pP 22 10 17.8 -0.6
VNA2 e 22 10 21.9
VNA2 e 22 11 58.9
VNA1 Neumayer--Stat 44.66 177 e **P** **22 10 16.0 -1.3**
VNA1 e pP 22 10 18.2 -2.2
VNA1 e 22 10 23.6
VNA1 e 22 12 00.1
RAR Rarotonga 46.12 30 LR LR 22 25 02.5
comp=Z,1µm,18.5s,MS4.9,baz=226,slow=30
NWAO Narrogin (SRO) 48.26 281 eP **P** **22 10 43.6 -2.4**
NWAO pmax pmax
comp=Z,6.0nm,0.7s
NWAO Narrogin (SRO) 48.26 281 eP **P** **22 10 43.6 -2.4**
comp=Z,5.5nm,0.7s,mb4.7
CTA Charters Tower 49.41 320 eP **P** **22 10 58.3 +3.3**
comp=Z,7.5nm,0.9s,mb4.7
CTA Charters Tower 49.41 320 eP **P** **22 10 58.3 +3.3**
CTA pmax pmax
comp=Z,8.0nm,0.9s
CTAO Charters Tower 49.41 320 eP **P** **22 10 56.4 +1.4**
CTAO pmax pmax
comp=Z,11nm,0.9s,mb4.9
CTAO Charters Tower 49.41 320 eP **P** **22 10 56.4 +1.4**
comp=Z,11nm,0.9s,mb4.9
ASAR Alice Springs 49.98 304 P **P** **22 10 59.3 0.0**
comp=Z,6.2nm,0.9s,mb4.6,baz=154,slow=7.2,SNR=30
AFI Afiamalu 51.44 13 P **P** **22 11 10.4 +0.1**
RKT Rikitea 51.71 59 eLQ 22 23 15.9
comp=Z,1µm,26.0s
RKT eLR LR 22 25 54.5
comp=Z,855nm,27.8s,baz=199
RKT Rikitea 51.71 59 eT 23 06 26.3
comp=Z,41nm,0.3s
TVO Taravao 52.02 41 eT 23 06 52.5
comp=Z,476nm,0.3s
PAE Paea 52.04 41 eT 23 06 53.9
comp=Z,196nm,0.3s
PPT Papeete 52.13 41 eS **S** **22 18 37.0 -2.4**
comp=Z,439nm,26.5s
PPT eLQ 22 23 33.4
comp=Z,2µm,24.2s
PPT eLR LR 22 25 52.0
comp=Z,3µm,28.5s,baz=201
PPT Papeete 52.13 41 eT 23 07 00.9
comp=Z,14nm,0.2s
PPT Papeete 52.13 41 LR LR 22 26 58.6
comp=Z,616nm,19.1s,MS4.7,baz=199,slow=29
TIAR Tiarei 52.20 41 eT 23 07 06.4
comp=Z,304nm,0.3s
MEH Mehetia 52.27 43 eT 23 07 10.3
comp=Z,2µm,0.3s
WB2 Warramunga Arr 53.26 306 eP **P** **22 11 23.0 -0.8**
WB2 Warramunga Arr 53.26 306 eP **P** **22 11 22.8 -1.0**
WRA Warramunga Arr 53.27 306 P **P** **22 11 23.1 -0.7**
comp=Z,9.6nm,1.0s,mb4.7,baz=161,slow=6.4,SNR=31
WRA PcP PcP 22 12 33.1 +1.6
comp=Z,3.6nm,1.1s,baz=161,slow=4.6,SNR=5.0
WRA LR LR 22 31 04.9
comp=Z,1µm,20.6s,MS4.9,baz=160,slow=33
WRA Warramunga Arr 53.27 306 eP **P** **22 11 23.1 -0.8**
WRA 22 12 33.1
WRAB Tennant Creek 53.27 306 eP **P** **22 11 23.3 -0.6**
WRAB e 22 12 31.6
WRAB pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
WRAB Tennant Creek 53.27 306 eP **P** **22 11 23.3 -0.6**
comp=Z,10nm,0.9s,mb4.8
WRAB ePcP PcP 22 12 31.6 +0.1
VAH Vaihoa 54.89 42 eT 23 10 27.6
comp=Z,369nm,0.3s
PMOR Pomariorio Ree 55.04 42 eT 23 10 39.1
comp=Z,24nm,0.4s
FUNA Funafuti 56.29 2 P **P** **22 11 46.0 +0.1**
HNR Honiara 56.78 339 eP **P** **22 11 49.3 0.0**
FITZ Fitzroy Crossi 58.10 298 eP **P** **22 11 58.6 0.0**
comp=Z,13nm,1.1s,mb4.9
FITZ Fitzroy Crossi 58.10 298 LR LR 22 35 35.3
comp=Z,565nm,18.5s,MS4.7,baz=83,slow=35
PMG Port Moresby 59.40 324 P **P** **22 12 07.8 +0.2**
KAKA Kakadu 60.63 307 eP **P** **22 12 15.7 -0.4**
comp=Z,13nm,0.9s,mb5.0
PLCA Paso Flores 62.09 127 P **P** **22 12 26.2 +0.5**
comp=Z,15nm,0.9s,mb5.1,baz=217,slow=5.7,SNR=20
BATI Baumata 66.08 299 LR LR 22 39 37.7
comp=Z,753nm,18.3s,MS4.9,baz=6.7,slow=34
TRQA Tornquist 67.32 132 eP **P** **22 12 59.4 -0.5**
comp=Z,24nm,0.8s,mb5.3
KAPI Kappang 72.32 298 LR LR 22 42 17.9
comp=Z,411nm,20.3s,MS4.7,baz=169,slow=33
LCO Las Campanas 72.59 121 eP **P** **22 13 31.9 -0.5**
comp=Z,14nm,0.9s,mb4.9
COCO West Island 75.20 273 eP **P** **22 13 49.7 +1.9**
LVC Limon Verde 79.06 120 P **P** **22 14 09.9 +0.5**
comp=Z,15nm,0.8s,mb5.0,baz=249,slow=3.7,SNR=12
CPUP Villa Florida 79.63 132 P **P** **22 14 12.2 -0.3**
comp=Z,11nm,0.8s,mb4.8,baz=191,slow=5.1,SNR=24
KSM Kuching 81.93 291 eP **P** **22 14 25.4 +0.5**
KKM Kota Kinabalu 83.83 298 P **P** **22 14 35.0 +0.3**
BOSA Boshof 84.36 204 P **P** **22 14 36.4 -1.0**
comp=Z,8.1nm,1.1s,mb4.8,baz=172,slow=6.9,SNR=7.6
BOSA LR LR 22 49 02.2
comp=Z,1µm,20.1s,MS5.3,baz=161,slow=33
LPAZ La Paz 85.14 118 P **P** **22 14 42.9 +1.5**
comp=Z,3.4nm,0.9s,mb4.5,baz=170,slow=5.5,SNR=13
LPAZ La Paz 85.14 118 P **P** **22 14 42.9 +1.5**
SIV San Ignacio 87.98 125 P **P** **22 14 55.0 -0.3**
comp=Z,5.2nm,1.0s,mb4.7,baz=221,slow=4.7,SNR=15
BDFB Brasilia 92.54 136 P **P** **22 15 16.2 -0.4**
comp=Z,2.9nm,0.7s,mb4.8,baz=168,slow=4.8,SNR=3.4
PDAR Pinedale Array 121.22 55 PKP PKPdf 22 20 59.7 +2.5
comp=Z,0.3nm,0.4s,baz=128,slow=2.4,SNR=2.6
SONM Songino Array 125.21 309 PKP PKPdf 22 21 05.9 +1.3
comp=Z,0.3nm,0.4s,baz=155,slow=4.9,SNR=2.1
TORD Torodi Ar. Bea 128.24 185 PKP PKPdf 22 21 10.4 -1.1
comp=Z,1.4nm,0.9s,baz=200,slow=1.0,SNR=49
ZAK Zakamensk 128.44 308 ePKIKP PKPdf 22 21 12.6 +1.8
ZAK pmax pmax
comp=Z,3.0nm,1.6s
MKAR Makanchi Array 133.25 290 PKhKP 22 21 11.3
comp=Z,0.2nm,0.2s,baz=356,slow=8.5,SNR=2.7
MKAR PKP PKPdf 22 21 21.3 +1.3
comp=Z,0.2nm,0.2s,baz=339,slow=3.0,SNR=4.4
KURK Kurchatov 137.84 291 PKhKP 22 21 21.9
comp=Z,1.3nm,1.1s,baz=147,slow=1.3,SNR=4.4
KURK PKP PKPdf 22 21 26.6 -1.8
comp=Z,0.4nm,0.4s,baz=146,slow=1.4,SNR=4.7
BVAR Borovoye Array 142.91 287 PKhKP 22 21 33.5
comp=Z,1.3nm,0.8s,baz=145,slow=5.4,SNR=8.5
MALT Malatya 144.38 242 i*P* PKPdf 22 21 38.2 -2.4
AKTK Aktyubinsk 146.17 274 PKPbc PKPbc 22 21 44.4 0.0
AKTO Aktyubinsk 146.17 274 PKPbc PKPbc 22 21 44.4 0.0
comp=Z,8.9nm,0.9s,baz=185,slow=2.7,SNR=23
SANT Santorini 147.02 224 ePKPdf PKPdf 22 21 46.4 +1.2
SCHQ Schefferville 147.52 77 PKPbc PKPbc 22 21 50.0 +1.9
comp=Z,11nm,0.8s,baz=259,slow=2.8,SNR=5.4
SCHQ Schefferville 147.52 77 PKPbc PKPbc 22 21 50.0 +1.9
KIV Kislovodsk 147.53 252 ke PKP2 PKPab 22 21 50.6 0.0
KIV pmax pmax
comp=Z,18nm,0.8s
KIV Kislovodsk 147.53 252 ePKPdf PKPdf 22 21 47.7 +2.0
APE Apeiranthos 147.64 224 i*P* PKPbc 22 21 51.1 +2.1
APE Apeiranthos 147.64 224 ↑P PKPbc 22 21 51.1 +2.2
ANTO Ankara 147.81 236 i*P* PKPbc 22 21 52.1 +2.8
ANTO Ankara 147.81 236 ↓P PKPbc 22 21 52.1 +2.8
GOF Gofitskoye 148.30 253 ePKP2 PKPab 22 21 58.2 +4.6
SVE Sverdlovsk 149.59 285 ePKP2 PKPbc 22 21 54.8 +1.5
SVE pmax pmax
comp=Z,22nm,1.4s
KEST Kesra 149.98 199 PKPbc PKPbc 22 21 55.4 +0.4
comp=Z,3.3nm,0.9s,baz=304,slow=1.6,SNR=11
ARU Arti 150.19 283 ePKHKP 22 21 49.8
ARU e 22 21 55.6
ARU Arti 150.19 283 ePKPdf PKPdf 22 21 49.8 +0.2
ARU ePKPbc PKPbc 22 21 55.6 +0.8

EJIF Jimena Fronter 151.45 175 PKIKP PKPdf 22 21 54.1 +1.8
EMIJ Mijas 151.59 176 PKP PKPdf 22 21 55.9 +3.4
ESPR Espera 151.85 174 PKP PKPdf 22 21 55.2 +2.3
TIP Timpagrande 151.95 213 ePKPdf PKPdf 22 21 53.6 +0.6
EBER Berja 151.96 179 PKP PKPdf 22 21 55.8 +2.8
ENIJ Nijar 152.03 180 PKIKP PKPdf 22 21 55.0 +1.8
ERON Agron 152.07 177 PKP PKPdf 22 21 56.0 +2.8
MORF Marmelete 152.11 169 ePKPdf PKPbc 22 22 00.3 +0.4
ELOJ Sierra Loja 152.19 177 PKIKP PKPbc 22 21 58.1 -2.0
PVAQ Vaqueiros 152.27 171 ePKPdf PKPdf 22 21 59.0 +5.5
EGRO El Granado 152.42 171 PKP PKPdf 22 21 56.3 +2.6
EMIN Mina Concepcio 152.70 172 PKP PKPdf 22 21 57.0 +2.9
EQES Quesada 152.86 179 PKP PKPdf 22 21 58.1 +3.8
EHUE Huescar 152.88 179 PKIKP PKPdf 22 21 57.7 +3.3
PBEJ Beja 152.88 170 ePKPdf PKPbc 22 22 01.0 -0.6
ECAB El Cabril 153.07 174 PKP PKPdf 22 21 57.5 +2.9
PBAR Barrancos 153.09 172 ePKPdf PKPbc 22 22 02.4 +0.4
EADA Adamuz 153.19 176 PKP PKPdf 22 21 58.2 +3.4
TIR Tirane 153.23 219 ePKIKP PKPdf 22 21 54.8 0.0
EBAD Badajoz 153.67 172 PKP PKPdf 22 22 00.3 +4.8
EVIA Vianos 153.70 180 PKIKP PKPdf 22 21 58.1 +2.6
ETOB Tobarra 153.70 181 PKP PKPdf 22 21 58.0 +2.5
PESTR Estremoz 153.74 171 ePKPdf PKPbc 22 22 03.0 -0.4
ESDC Sonseca Array 154.71 177 PKP PKPdf 22 21 56.3 -0.6
comp=Z,0.8nm,0.8s,baz=178,slow=0.6,SNR=5.8
ESDC PKPbc PKPbc 22 22 04.7 -0.7
comp=Z,1.3nm,0.7s,baz=152,slow=1.2,SNR=10
ESDC Sonseca Array 154.71 177 PKP PKPdf 22 21 56.3 -0.6
ESDC PKP PKPdf 22 22 00.0 +3.1
ESDC PKPbc PKPbc 22 22 04.7 -0.7
MLR Muntele Rosu 155.14 232 ⇑*P* PKPab 22 22 22.0 -0.1
MLR Muntele Rosu 155.14 232 ↑P PKPab 22 22 22.0 -0.1
VRI Vrincioaia 155.20 234 ⇑*P* PKPab 22 22 22.4 0.0
VRI Vrincioaia 155.20 234 ↑P PKPab 22 22 22.4 0.0
ETOR Torete 155.88 180 PKIKP PKPdf 22 22 01.4 +2.9
BZS Buzias 156.65 226 ⇑*P* PKPdf 22 22 04.4 +5.1
BZS Buzias 156.65 226 ↑P PKPdf 22 22 04.4 +5.1
BURAR Bucovina Array 157.24 234 ⇑*P* PKPab 22 22 29.9 -1.2
BURAR Bucovina Array 157.24 234 ↑P PKPab 22 22 29.9 -1.2
DRGR 157.35 229 ⇑*P* PKPdf 22 22 02.0 +1.8
DRGR 157.35 229 ↑P PKPdf 22 22 02.0 +1.8
PKSM Moragy 158.06 221 ⇑*P* PKPab 22 22 34.6 -0.1
BRG Berggiesshubel 163.60 219 ePKP2 PKPab 22 22 56.0 -2.7
BRG pmax pmax
comp=Z,3.0nm,1.3s
BRG Berggiesshubel 163.60 219 ePKP PKPab 22 22 56.0 -2.7
comp=Z,5.0nm,1.3s
CLL Collm 164.24 217 ↓*P* PKP2 PKPab 22 23 01.5 0.0
CLL pmax pmax
comp=Z,7.0nm,1.1s
CLL MLR MLR
comp=Z,300nm,19.4s
CLL Collm 164.24 217 ↓*P* PKPab PKPab 22 23 01.5 0.0
comp=Z,7.0nm,1.1s
CLL ePP PP 22 26 51.0 +3.1
CLL ePPS 22 40 30.0
CLL ePSS 22 48 23.0
CLL ePSSrev 22 53 58.0
CLL *ex* x 23 01 17.0
CLL *ex* x 23 06 24.0
CLL LmV 23 49 00.0
comp=Z,300nm,19.4s

*IDC **09** 22:30:41.9±0.6, 1365S×7662W, h0km, mb4.6/15, mb1 4.6/19, mb1mx4.6/23, mbtmp4.5/19, ML3.9/3, MS4.1/8, Ms1 4.0/8, ms1mx3.8/23, Error ellipse: s-maj=25.0km s-min=11.6km az=65.0*
*ISCJB **09** 22:30:47.1±0.2, 1361S±004×7605W±006, h33km, mb4.8/49, MS4.5/8, Error ellipse: s-maj=9.4km s-min=3.8km az=150.3*
*BJI **09** 22:30:47.0, 1455S×76.19W, h33km, mB4.9, Ms5.2, Msz4.9*
*NEIC **09** 22:30:48.5±0.3, 1367S×76.10W, h35km, mb4.9/38, ML4.6(LIM), Error ellipse: s-maj=13.2km s-min=6.4km az=64.0*
NEIC Felt [III] at Chincha and Pisco.
ISC 09 22:30:49.8±1.0, 1361S±004×7595W±007, h39km±9km, n250, σ1$16/230, mb4.8/49, MS4.5/8, 44C-40D, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.83**	**332**	Pn	**Pn**	**22 31 10.9**	**-7.9**
	303nm,0.3s,baz=123,slow=14,SNR=205						
NNA				Sn	**Sn**	**22 31 31.4**	**-9.4**
	958nm,0.3s,baz=218,slow=15,SNR=13						
NNA	**Nana**	**1.83**	**332**	i*P*n	**Pn**	**22 31 10.3**	**-8.5**
NNA				e*S*n	**Sn**	**22 31 32.1**	**-8.8**
ATAH	**Atahualpa**	**7.00**	**340**	Pn	**Pn**	**22 32 23.7**	**-6.1**
	5.6nm,0.3s,baz=190,slow=7.5,SNR=15						
ATAH				Sn	**Sn**	**22 33 46.8**	**-1.4**
	3.2nm,0.3s,baz=16,slow=15,SNR=1.4						
ATAH				LR	LR	22 35 25.2	
	comp=Z,762nm,19.6s,baz=16,slow=42						
LPAZ	**La Paz**	**8.01**	**110**	Pn	**Pn**	**22 32 43.6**	**-0.1**
LPAZ				Sn	**Sn**	**22 34 30.8**	**+18**
LVC	**Limon Verde**	**11.17**	**144**	Pn	**Pn**	**22 33 30.1**	**+3.1**
	2.6nm,0.3s,baz=305,slow=9.1,SNR=17						
LVC				Sn	**Sn**	**22 35 35.2**	**+4.5**
	2.1nm,0.3s,baz=85,slow=18,SNR=11						
LVC				LR	LR	22 38 08.3	
	comp=Z,264nm,18.8s,baz=272,slow=39						
LVC	**Limon Verde**	**11.17**	**144**	e*P*n	**Pn**	**22 33 28.0**	**+1.0**
OTAV	**Otavalo**	**13.98**	**350**	e*P*n	**Pn**	**22 34 05.2**	**-0.3**
OTAV				e*S*n	**Sn**	**22 36 42.6**	**+3.2**
SIV	**San Ignacio**	**14.58**	**101**	Pn	**Pn**	**22 34 19.4**	**+5.8**
	0.4nm,0.3s,baz=285,slow=13,SNR=4.6						
SIV				Sn	**Sn**	**22 37 05.4**	**+11**
	0.2nm,0.3s,baz=229,slow=17,SNR=3.1						
LCO	**Las Campanas**	**16.08**	**163**	e*P*n	**Pn**	**22 34 34.7**	**+1.6**
	34nm,0.8s						
ROSC	**El Rosal**	**18.42**	**5**	P	**Pn**	**22 35 06.7**	**+4.5**
	0.3nm,0.3s,baz=108,slow=21,SNR=4.7						
ROSC				LR	LR	22 42 42.5	
	comp=Z,391nm,18.2s,baz=288,slow=39						
ROSC	**El Rosal**	**18.42**	**5**	e*P*	**Pn**	**22 35 01.0**	**-1.2**
ROSC				LR	LR	22 42 42.5	
CFAA	**Coronel Fontan**	**19.26**	**160**	P	**Pn**	**22 35 11.9**	**-0.3**
	0.1nm,0.3s,baz=331,slow=12,SNR=31						
CPUP	**Villa Florida**	**21.56**	**129**	P	**P**	**22 35 38.5**	**+2.5**
	3.9nm,0.8s,mb3.9,baz=293,slow=9.9,SNR=9.7						
CPUP	**Villa Florida**	**21.56**	**129**	e*P*	**P**	**22 35 32.7**	**-3.3**
BCIP	**Isla Barro Col**	**22.96**	**350**	e*P*	**P**	**22 35 49.1**	**-1.8**
	51nm,1.0s,mb4.9						
BCIP				ePcP	PcP	22 39 40.1	-0.2
SDV	**Santo Domingo**	**22.97**	**14**	P	**P**	**22 35 51.0**	**+0.1**
	18nm,0.3s,mb4.9,baz=0.3,slow=2.1,SNR=5.0						
SDV	**Santo Domingo**	**22.97**	**14**	e*P*	**P**	**22 35 50.5**	**-0.5**
	24nm,0.8s,mb4.7						
BDFB	**Brasilia**	**27.10**	**98**	P	**P**	**22 36 31.1**	**+2.0**
	2.8nm,0.8s,mb3.8,baz=305,slow=3.7,SNR=3.2						
TRQA	**Tornquist**	**27.33**	**155**	e*P*	**P**	**22 36 30.6**	**-0.4**
	5.1nm,0.7s,mb4.2						
PLCA	**Paso Flores**	**27.43**	**171**	P	**P**	**22 36 28.6**	**-3.3**
	9.3nm,0.8s,mb4.4,baz=345,slow=9.8,SNR=18						
PLCA				LR	LR	22 45 10.9	
	comp=Z,169nm,18.8s,MS3.6,baz=340,slow=32						
PLCA	**Paso Flores**	**27.43**	**171**	e*P*	**P**	**22 36 30.4**	**-1.4**
	17nm,1.0s,mb4.5						
PLCA				LR	LR	22 45 10.9	
TGUH	**Tegucigalpa,Un**	**29.69**	**337**	e*P*	**P**	**22 36 49.9**	**-2.3**
	51nm,1.7s,mb5.0						
AOPR	**Arecibo Observ**	**33.02**	**16**	P	**P**	**22 37 21.3**	**-0.2**
HUMP	**Col San Antoni**	**33.09**	**18**	P	**P**	**22 37 20.5**	**-1.5**
TEIG	**Tepich**	**35.74**	**340**	P	**P**	**22 37 42.4**	**-2.6**
	13nm,0.9s,mb4.8,baz=171,slow=6.3,SNR=4.1						
TEIG	**Tepich**	**35.74**	**340**	e*P*	**P**	**22 37 43.5**	**-1.5**
	29nm,1.3s,mb5.0						
CMIG	**Matias Romero**	**35.78**	**328**	P	**P**	**22 37 40.7**	**-4.7**
	5.9nm,0.9s,mb4.5,baz=131,slow=5.6,SNR=6.8						
CMIG	**Matias Romero**	**35.78**	**328**	P	**P**	**22 37 40.7**	**-4.7**
USHA	**Ushuaia**	**41.55**	**173**	P	**P**	**22 38 32.2**	**-1.1**
	16nm,0.9s,mb4.6,baz=318,slow=5.3,SNR=5.1						
SWET	**Sewanee**	**49.47**	**349**	e*P*	**P**	**22 39 35.3**	**-0.9**
OXF	**Oxford**	**49.54**	**345**	e*P*	**P**	**22 39 35.7**	**-1.0**
TXAR	**Lajitas Array**	**50.39**	**328**	P	**P**	**22 39 39.1**	**-4.2**
	3.3nm,0.9s,mb4.4,baz=150,slow=9.3,SNR=9.3						
WVT	**Waverly**	**50.73**	**348**	e*P*	**P**	**22 39 44.4**	**-1.3**
MIAR	**Mount Ida**	**50.74**	**341**	e*P*	**P**	**22 39 45.7**	**-0.1**
ELN	**Prospectdale**	**50.77**	**355**	e*P*	**P**	**22 39 45.8**	**-0.2**
PMSA	**Palmer Station**	**51.76**	**174**	e*P*	**P**	**22 39 52.4**	**-0.7**
	25nm,1.4s,mb5.0						

WCI Wyandotte Cave 52.47 350 e*P* **P** **22 39 58.6 -0.1**
20nm,1.1s,mb5.0
SIUC Southern Illin 52.55 347 e*P* **P** **22 39 58.7 -0.7**
20nm,0.9s,mb5.1
WMOK Wichita Mounta 52.75 336 e*P* **P** **22 40 00.8 0.0**
28nm,2.0s,mb4.8
SDMD Soldier's Deli 52.75 359 e*P* **P** **22 40 02.2 +1.5**
27nm,1.0s,mb5.1
OLIL Olney 53.30 348 e*P* **P** **22 40 04.0 -0.8**
44nm,1.3s,mb5.2
MVL Millersville 53.33 360 e*P* **P** **22 39 58.3 -6.7**
22nm,1.1s,mb5.0
BLO Bloomington 53.43 350 e*P* **P** **22 40 05.8 +0.1**
22nm,1.0s,mb5.0
ACSO Alum Creek Sta 53.96 353 e*P* **P** **22 40 10.1 +0.5**
319A Douglas 54.99 325 ⇑*P* **P** **22 40 17.8 +0.5**
baz=55
318A Bisbee 55.44 324 ⇑*P* **P** **22 40 20.7 +0.2**
baz=56,SNR=7.1
219A White Tail Can 55.45 325 ⇓*P* **P** **22 40 21.0 +0.4**
baz=56,SNR=6.5
BINY Binghamton 55.53 360 e*P* **P** **22 40 23.4 +2.4**
119A Ashpeak Ranch, 56.06 326 ⇑*P* **P** **22 40 25.5 +0.5**
baz=56
217A Green Valley 56.16 324 P **P** **22 40 26.0 +0.3**
baz=56,SNR=7.5
LAZ Ladron 56.20 329 e*P* **P** **22 40 22.5 -3.4**
ANMO Albuquerque 56.31 330 e*P* **P** **22 40 22.7 -4.0**
6.3nm,1.0s,mb4.6
ANMO e*P*cP PcP 22 41 23.2 -0.5
118A Homack Ranch, 56.33 325 ⇓*P* **P** **22 40 27.2 +0.3**
baz=56
117A Oracle 56.71 325 P **P** **22 40 29.9 +0.4**
baz=57,SNR=6.2
ACCN Adirondack Com 56.75 2 e*P* **P** **22 40 34.3 +4.7**
20nm,0.9s,mb5.2
Y19A Nutrioso 56.95 327 ⇑*P* **P** **22 40 31.7 +0.4**
baz=57,SNR=5.8
116A Eloy 57.25 324 ⇑*P* **P** **22 40 33.7 +0.3**
baz=57
MDV Middlebury 57.39 2 e*P* **P** **22 40 36.5 +2.4**
214A Organ Pipe Nat 57.45 323 ⇓*P* **P** **22 40 35.1 +0.3**
baz=58
115A Sonoran Desert 57.65 324 ⇓*P* **P** **22 40 36.5 +0.2**
baz=58
Z16A Peralta Trail, 57.66 325 ⇓*P* **P** **22 40 36.2 -0.2**
baz=58
LBNH Lisbon 57.69 3 e*P* **P** **22 40 36.6 +0.3**
SDCO Great Sand Dun 58.13 333 e*P* **P** **22 40 36.2 -3.4**
7.1nm,1.1s,mb4.6
SADO Sadowa 58.17 357 P **P** **22 40 38.5 -1.1**
baz=215,slow=7.4
FRNY Flat Rock 58.20 2 e*P* **P** **22 40 42.0 +2.1**
X15A Humboldt 58.97 325 ⇓*P* **P** **22 40 46.0 +0.6**
baz=59,SNR=6.3
T19A Beclabito 59.06 329 P **P** **22 40 46.3 +0.3**
baz=59,SNR=5.9
MVCO Mesa Verde 59.10 330 e*P* **P** **22 40 46.8 +0.5**
12nm,1.3s,mb4.8
WUAZ Wupatki 59.26 327 ⇓*P* **P** **22 40 47.9 +0.4**
baz=59
WUAZ Wupatki 59.26 327 e*P* **P** **22 40 45.8 -1.6**
X14A Yava 59.32 325 ⇓*P* **P** **22 40 47.8 0.0**
baz=59
T18A Mexican Hat 59.73 329 ⇓*P* **P** **22 40 50.6 0.0**
baz=60,SNR=6.4
S19A Harvey Farm, M 59.84 330 ⇑*P* **P** **22 40 46.9 -4.4**
baz=60,SNR=5.3
PV01 Paradox Valley 59.87 331 e*P* **P** **22 40 50.0 -1.6**
ISCO Idaho Springs 59.88 334 e*P* **P** **22 40 52.3 +0.7**
ECSD EROS,Sioux Fal 60.11 343 e*P* **P** **22 40 52.5 -0.6**
PV10 Paradox Valley 60.29 330 e*P* **P** **22 40 52.9 -1.5**
V14A Boquillas Ranc 60.29 325 ⇑*P* **P** **22 40 55.1 +0.6**
baz=60,SNR=5.4
W13A Hualapai Mount 60.34 325 ⇓*P* **P** **22 40 55.6 +0.8**
baz=60,SNR=6.3
IRM Iron Mountain 60.39 323 P **P** **22 40 56.0 +0.8**
baz=60,SNR=6.1
Q19A Hogan Spring (60.85 331 ⇑*P* **P** **22 40 59.1 +0.9**
baz=61
SRU San Rafael 61.58 330 e*P* **P** **22 41 03.7 +0.5**
P18A Preston Nutter 61.85 330 ⇑*P* **P** **22 41 05.7 +0.7**
baz=62
BFSC Mount Baldy St 61.94 321 ⇓*P* **P** **22 41 06.2 +0.5**
baz=62
MSU Marysvale 61.95 328 e*P* **P** **22 41 06.7 +1.0**
ARUT Antelope Range 62.06 327 e*P* **P** **22 41 03.3 -3.2**
SHPR Sheep Range 62.06 325 e*P* **P** **22 41 07.4 +0.9**
S13A Holt Ranch, En 62.13 326 ⇑*P* **P** **22 41 04.6 -2.4**
baz=62,SNR=7.5
GSC Goldstone 62.16 323 e*P* **P** **22 41 08.5 +1.3**
18nm,1.8s,mb4.9
O17A Robinson Place 62.53 330 ⇓*P* **P** **22 41 06.7 -2.8**
baz=63,SNR=5.1
T11A Corn Creek, Al 62.63 325 ⇑*P* **P** **22 41 07.4 -2.8**
baz=63,SNR=5.5
EYMN Ely 62.83 348 e*P* **P** **22 41 11.6 +0.3**
14nm,1.1s,mb5.0
Q14A Sevier Lake (B 62.87 328 ⇓*P* **P** **22 41 08.9 -2.9**
baz=63,SNR=7.2
RSSD Black Hills 62.90 338 e*P* **P** **22 41 13.5 +1.6**
18nm,1.7s,mb4.9
TPNV Topopah Spring 62.99 324 e*P* **P** **22 41 11.1 -1.6**
JLU Jordanelle 63.19 330 e*P* **P** **22 41 15.0 +1.1**
DUG Dugway 63.54 329 e*P* **P** **22 41 13.1 -3.2**
12nm,0.9s,mb4.9
R11A Troy Canyon, C 63.62 326 ⇑*P* **P** **22 41 13.7 -3.2**
baz=64,SNR=7.5
S10A Tonopah Range, 63.88 325 ⇑*P* **P** **22 41 14.9 -3.6**
baz=64,SNR=7.5
R10A Warm Springs 63.98 325 ⇑*P* **P** **22 41 15.7 -3.5**
baz=64,SNR=5.5
BW06 Boulder Array 64.02 333 e*P* **P** **22 41 19.5 +0.2**
PDAR Pinedale Array 64.02 333 P **P** **22 41 15.8 -3.5**
2.4nm,0.9s,mb4.2,baz=142,slow=7.5,SNR=15
P12A McGill 64.08 327 ⇓*P* **P** **22 41 16.1 -3.7**
baz=64,SNR=6.4
S09A Goldfield 64.09 324 ⇓*P* **P** **22 41 16.1 -3.9**
baz=64,SNR=5.7
AGMN Agassiz Refuge 64.13 345 e*P* **P** **22 41 16.8 -3.1**
N14A Grayback Hills 64.23 329 ⇓*P* **P** **22 41 16.8 -3.9**
baz=64,SNR=5.3
TPH Tonopah 64.34 325 e*P* **P** **22 41 19.9 -1.6**
R09A Tonopah 64.37 325 ⇑*P* **P** **22 41 18.4 -3.3**
baz=64,SNR=6.0
S08C White Mtn Res 64.47 324 ⇓*P* **P** **22 41 19.4 -3.1**
baz=64,SNR=7.8
O12A Currie 64.58 328 ⇓*P* **P** **22 41 20.4 -2.7**
baz=65,SNR=8.1
MTUM Tungsten Hills 64.60 323 e*P* **P** **22 41 24.3 +1.0**
HVU Hansel Valley 64.73 330 e*P* **P** **22 41 24.9 +0.8**
M14A Sheep Mountain 64.80 330 ⇑*P* **P** **22 41 20.3 -4.1**
baz=65,SNR=6.1
L14A Malta 65.15 330 ⇓*P* **P** **22 41 26.8 0.0**
baz=65,SNR=5.6
RRI2 Red Ridge 65.27 332 e*P* **P** **22 41 27.9 +0.5**
V03C Hunter Liggett 65.31 321 ⇑*P* **P** **22 41 28.4 +0.5**
baz=65,SNR=6.6
K14A Jones Ranch, D 65.51 331 ⇓*P* **P** **22 41 29.2 +0.2**
baz=66,SNR=5.9
O10A Cortez Mining, 65.52 327 ⇑*P* **P** **22 41 29.9 +0.8**
baz=66,SNR=6.4
FLWY Flagg Ranch 65.57 333 e*P* **P** **22 41 30.7 +1.3**
S06C San Francisco 65.71 323 ⇑*P* **P** **22 41 30.4 0.0**
baz=66,SNR=6.9
RLMT Red Lodge 65.79 335 e*P* **P** **22 41 31.3 +0.5**
14nm,1.3s,mb4.8
J15A Blackfoot 65.81 332 ⇑*P* **P** **22 41 31.3 +0.3**
baz=66,SNR=5.1
WAKR Walker 65.89 324 e*P* **P** **22 41 33.0 +1.4**
ULM Lac du Bonnet 65.95 346 P **P** **22 41 27.6 -4.1**
27nm,0.9s,mb5.3,baz=159,slow=5.8,SNR=25
ULM LR LR 23 07 26.3
comp=Z,225nm,20.9s,MS4.3,baz=249,slow=34
CMB Columbia Colle 66.13 323 ⇓*P* **P** **22 41 33.3 +0.1**
baz=66,SNR=6.5
CMB Columbia Colle 66.13 323 e*P* **P** **22 41 33.5 +0.4**
9.8nm,1.3s,mb4.7
J14A Carey 66.26 331 ⇑*P* **P** **22 41 35.0 +1.1**
baz=66,SNR=7.6
H16A Russell Place, 66.30 333 P **P** **22 41 35.4 +1.3**
baz=66,SNR=5.1
O08A Rochester Mine 66.41 326 P **P** **22 41 35.6 +0.8**
baz=66,SNR=7.5
K12A Draper Farm, C 66.41 330 ⇑*P* **P** **22 41 35.9 +1.1**
baz=66,SNR=7.0
L11A Cat Creek Ranc 66.49 329 ⇓*P* **P** **22 41 36.1 +0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=67,SNR=5.9						
GCMT	**Greycliff**	**66.50**	**335**	*e*P	**P**	**22 41 35.1**	**-0.2**
PAHR	**Pah Rah Range**	**66.68**	**325**	*e*P	**P**	**22 41 35.3**	**-1.4**
I14A	**Mackay**	**66.69**	**331**	P	**P**	**22 41 38.2**	**+1.6**
	baz=67,SNR=6.4						
DGMT	**Dagmar**	**66.70**	**340**	*e*P	**P**	**22 41 38.0**	**+1.4**
O07A	**Toulon**	**66.71**	**325**	P	**P**	**22 41 37.5**	**+0.7**
	baz=67,SNR=8.0						
L10A	**Juniper Basin**	**66.79**	**328**	⇓P	**P**	**22 41 33.9**	**-3.4**
	baz=67,SNR=6.4						
HLID	**Hailey**	**66.87**	**331**	*e*P	**P**	**22 41 35.7**	**-2.1**
I13A	**Wildhorse Cree**	**67.00**	**331**	⇑P	**P**	**22 41 39.5**	**+1.0**
	baz=67,SNR=8.0						
P05C	**Yuba Gap, Truc**	**67.10**	**324**	⇑P	**P**	**22 41 40.1**	**+0.7**
	baz=67,SNR=5.8						
H14A	**Leadore**	**67.18**	**332**	⇑P	**P**	**22 41 40.4**	**+0.7**
	baz=67,SNR=6.1						
BOZ	**Bozeman (W)**	**67.21**	**334**	*e*P	**P**	**22 41 37.4**	**-2.4**
BEKR	**Beckwourth**	**67.34**	**324**	⇑P	**P**	**22 41 41.2**	**+0.4**
	baz=67,SNR=7.0						
MFID	**Camas Ranch**	**67.45**	**330**	⇓P	**P**	**22 41 42.4**	**+1.0**
	baz=68,SNR=6.8						
K10A	**MacKenzie Ranc**	**67.50**	**329**	⇑P	**P**	**22 41 42.5**	**+0.7**
	baz=68,SNR=5.9						
H13A	**Challis**	**67.55**	**331**	⇓P	**P**	**22 41 42.4**	**+0.3**
	baz=68,SNR=5.8						
N06A	**Buffalo Meadow**	**67.64**	**325**	⇑P	**P**	**22 41 43.2**	**+0.4**
	baz=68,SNR=7.3						
F15A	**Butte**	**67.74**	**333**	⇓P	**P**	**22 41 44.5**	**+1.2**
	baz=68						
NSHM	**Saint Helena R**	**67.76**	**322**	*e*P	**P**	**22 41 39.6**	**-4.0**
ORV	**Oroville**	**67.79**	**323**	⇑P	**P**	**22 41 44.1**	**+0.5**
	baz=68,SNR=11						
L08A	**Fields**	**67.84**	**327**	⇑P	**P**	**22 41 44.7**	**+0.7**
	baz=68,SNR=5.6						
K09A	**Rome**	**67.88**	**328**	⇓P	**P**	**22 41 40.8**	**-3.4**
	baz=68,SNR=7.7						
EGMT	**Eagleton**	**68.34**	**336**	*e*P	**P**	**22 41 47.7**	**+0.7**
	17nm,1.2s,mb4.9						
J09A	**Fry Pan Ranch,**	**68.36**	**328**	⇑P	**P**	**22 41 47.5**	**+0.3**
	baz=68,SNR=5.6						
F13A	**Darby**	**68.52**	**332**	⇑P	**P**	**22 41 48.7**	**+0.6**
	baz=69,SNR=6.3						
SCHQ	**Schefferville**	**68.61**	**6**	P	**P**	**22 41 46.3**	**-2.2**
	8.8nm,0.8s,mb4.7,baz=184,slow=7.0,SNR=5.1						
SCHQ	**Schefferville**	**68.61**	**6**	*e*P	**P**	**22 41 47.4**	**-1.1**
E14A	**Clinton**	**68.62**	**333**	⇓P	**P**	**22 41 49.6**	**+0.8**
	baz=69,SNR=6.3						
MOD	**Modoc**	**68.69**	**326**	⇓P	**P**	**22 41 48.8**	**-0.5**
	baz=69,SNR=7.4						
MOD	**Modoc**	**68.69**	**326**	*e*P	**P**	**22 41 49.0**	**-0.2**
E13A	**Victor**	**68.95**	**333**	⇑P	**P**	**22 41 51.8**	**+1.0**
	baz=69,SNR=6.1						
G11A	**Walters Elk Ra**	**69.12**	**331**	⇓P	**P**	**22 41 52.4**	**+0.5**
	baz=69,SNR=6.6						
MSO	**Missoula**	**69.14**	**333**	*e*P	**P**	**22 41 52.8**	**+0.8**
BMO	**Blue Mountains**	**69.22**	**330**	*e*P	**P**	**22 41 53.3**	**+0.8**
	23nm,2.0s,mb4.8						
K06A	**Valley Falls**	**69.28**	**327**	⇑P	**P**	**22 41 53.0**	**+0.1**
	baz=69,SNR=8.4						
F11A	**Grangeville**	**69.43**	**331**	⇓P	**P**	**22 41 53.8**	**0.0**
	baz=70,SNR=5.3						
G10A	**Bishop Farm, J**	**69.45**	**330**	⇑P	**P**	**22 41 54.2**	**+0.3**
	baz=70,SNR=7.6						
J06A	**Christmas Vall**	**69.54**	**327**	⇑P	**P**	**22 41 54.7**	**+0.2**
	baz=70,SNR=8.7						
VNA3	**Neumayer Olymp**	**69.65**	**162**	*e*P	**P**	**22 41 54.4**	**-0.4**
VNA3				*e*		22 42 00.7	
H08A	**Prairie City**	**69.66**	**329**	⇓P	**P**	**22 41 55.7**	**+0.5**
	baz=70						
I07A	**Izee**	**69.78**	**328**	⇓P	**P**	**22 41 56.5**	**+0.6**
	baz=70,SNR=8.0						
VNA1	**Neumayer--Stat**	**69.91**	**161**	*e*P	**P**	**22 41 56.8**	**+0.4**
VNA1				*e*		22 42 02.6	
C13A	**Hot Springs**	**70.07**	**333**	⇑P	**P**	**22 41 58.3**	**+0.6**
	baz=70,SNR=6.3						
VNA2	**Neumayer--Watz**	**70.26**	**161**	*e*P	**P**	**22 41 58.3**	**-0.3**
VNA2				*e*		22 42 03.4	
G08A	**Pilot Rock**	**70.35**	**329**	⇑P	**P**	**22 42 00.1**	**+0.7**
	baz=70						
LNOR	**Lincton Mounta**	**70.44**	**330**	*e*P	**P**	**22 41 59.7**	**-0.3**
H06A	**Lindquist Farm**	**70.66**	**328**	⇑P	**P**	**22 42 01.9**	**+0.6**
	baz=71,SNR=7.1						
D10A	**Wagner Farm, O**	**70.82**	**331**	⇓P	**P**	**22 42 02.8**	**+0.5**
	baz=71						
E09A	**Wood Farm, Sta**	**70.83**	**331**	⇑P	**P**	**22 42 03.1**	**+0.7**
	baz=71,SNR=5.4						
WALA	**Waterton Lakes**	**70.85**	**335**	*e*P	**P**	**22 42 00.1**	**-2.3**
	6.2nm,0.9s,mb4.5						
C11A	**Tepee Creek (N**	**70.93**	**333**	⇓P	**P**	**22 42 04.1**	**+1.2**
	baz=71						
HAWA	**Hanford**	**71.42**	**330**	*e*P	**P**	**22 42 07.1**	**+1.2**
RSW	**Rattlesnake Hi**	**71.45**	**330**	*e*P	**P**	**22 42 07.1**	**+1.1**
A12A	**Yaak River Ran**	**71.49**	**334**	⇑P	**P**	**22 42 07.4**	**+1.2**
	baz=72,SNR=7.6						
NEW	**Newport**	**71.64**	**332**	*e*P	**P**	**22 42 08.0**	**+0.9**
	9.4nm,1.0s,mb4.7						
OD2	**Odessa Site #2**	**71.73**	**331**	*e*P	**P**	**22 42 04.9**	**-2.8**
A11A	**Hall Mountain,**	**71.82**	**333**	⇑P	**P**	**22 42 08.9**	**+0.6**
	baz=72,SNR=5.1						
SNAA	**Sanae**	**71.87**	**161**	*e*P	**P**	**22 42 07.6**	**-0.7**
SNAA				*e*		22 42 13.4	
SNAA	**Sanae**	**71.87**	**161**	*e*P	**P**	**22 42 07.7**	**-0.6**
	26nm,1.0s,mb5.1						
B09A	**Rice**	**72.22**	**332**	⇑P	**P**	**22 42 11.3**	**+0.6**
	baz=72,SNR=5.7						
ETW	**Entiat**	**72.66**	**330**	*e*P	**P**	**22 42 12.9**	**-0.4**
A09A	**Danville**	**72.82**	**332**	⇓P	**P**	**22 42 14.9**	**+0.7**
	baz=73,SNR=6.0						
A08A	**Turner Farm, O**	**73.12**	**332**	⇓P	**P**	**22 42 16.8**	**+0.8**
	baz=73,SNR=5.8						
B07A	**Winthrop**	**73.16**	**331**	⇓P	**P**	**22 42 16.9**	**+0.6**
	baz=73						
DBIC	**Dimbokro**	**73.38**	**79**	P	**P**	**22 42 20.2**	**+1.8**
	8.0nm,1.0s,mb4.6,baz=213,slow=7.3,SNR=5.1						
DBIC	**Dimbokro**	**73.38**	**79**	*e*P	**P**	**22 42 18.4**	**0.0**
	10nm,1.0s,mb4.7						
RPW	**Rockport**	**73.82**	**330**	*e*P	**P**	**22 42 16.5**	**-3.6**
EDM	**Edmonton**	**73.88**	**338**	*e*P	**P**	**22 42 18.7**	**-1.7**
B05A	**Bryant**	**73.97**	**330**	⇑P	**P**	**22 42 21.4**	**+0.3**
	baz=74						
TOA0	**Torodi Ar. Sit**	**81.38**	**74**	*e*P	**P**	**22 43 03.1**	**0.0**
TORD	**Torodi Ar. Bea**	**81.38**	**74**	P	**P**	**22 43 04.7**	**+1.5**
	10nm,1.1s,mb4.7,baz=260,slow=5.2,SNR=30						
YKA	**Yellowknife Ar**	**81.64**	**343**	P	**P**	**22 43 01.2**	**-2.2**
	6.0nm,1.0s,mb4.5,baz=135,slow=5.1,SNR=9.4						
EVO	**Evora**	**81.87**	**47**	*e*P	**P**	**22 43 04.7**	**-0.5**
	25nm,1.1s,mb4.8						
SBA	**Scott Base**	**82.29**	**191**	*e*P	**P**	**22 43 05.4**	**-1.4**
	8.3nm,1.3s,mb4.5						
DLBC	**Dease Lake**	**84.19**	**335**	*e*P	**P**	**22 43 14.9**	**-1.8**
ESDC	**Sonseca Array**	**85.22**	**47**	P	**P**	**22 43 23.4**	**+1.0**
	1.4nm,0.8s,mb4.1,baz=264,slow=5.2,SNR=5.7						
SYO	**Syowa Base**	**86.15**	**161**	⇓*e*P	**P**	**22 43 23.8**	**-2.7**
TAM	**Tamanrasset**	**87.54**	**66**	*e*P	**P**	**22 43 33.2**	**-0.9**
SUMG	**Summit**	**89.46**	**11**	*e*P	**P**	**22 43 41.9**	**-0.2**
	13nm,1.1s,mb5.2						
DAWY	**Dawson**	**91.08**	**337**	*e*P	**P**	**22 43 50.3**	**+0.5**
TCF	**Toulx Ste Croi**	**91.73**	**43**	*e*P	**P**	**22 43 52.8**	**-0.4**
SMF	**Signal de Mont**	**92.91**	**43**	*e*P	**P**	**22 43 57.4**	**-1.3**
LOR	**Lormes**	**93.10**	**42**	*e*P	**P**	**22 43 59.0**	**-0.5**
	13nm,1.2s,mb4.9						
LOR	**Lormes**	**93.10**	**42**	*e*P	**P**	**22 43 59.0**	**-0.5**
	6.3nm,1.2s,mb4.9						
BOSA	**Boshof**	**93.14**	**120**	LR	LR	23 20 17.6	
	comp=Z,120nm,19.8s,MS4.3,baz=37,slow=32						
RAO	**Raoul Island**	**93.58**	**239**	LR	LR	23 17 51.7	
	comp=Z,880nm,21.8s,MS5.2,baz=246,slow=30						
MAW	**Mawson**	**93.69**	**165**	LR	LR	23 21 27.4	
	comp=Z,89nm,21.5s,MS4.2,baz=69,slow=32						
MAW	**Mawson**	**93.69**	**165**	*e*P	**P**	**22 44 00.5**	**-1.5**
ORIF	**Oris-en-Rattie**	**93.81**	**45**	*e*P	**P**	**22 44 02.6**	**-0.2**
	25nm,1.2s,mb5.2						
ORIF	**Oris-en-Rattie**	**93.81**	**45**	*e*P	**P**	**22 44 02.6**	**-0.2**
	12nm,1.2s,mb5.2						
FRF	**La Foret Royal**	**93.98**	**46**	*e*P	**P**	**22 44 02.0**	**-1.7**
	29nm,1.2s,mb5.3						
FRF	**La Foret Royal**	**93.98**	**46**	*e*P	**P**	**22 44 02.0**	**-1.7**
	15nm,1.2s,mb5.3						
KEST	**Kesra**	**94.08**	**54**	LR	LR	23 30 28.2	
	comp=Z,389nm,18.7s,MS4.9,baz=132,slow=38						
LPL	**La Plagne**	**94.54**	**44**	*e*P	**P**	**22 44 06.1**	**-0.1**
	12nm,1.2s,mb4.9						
LPL	**La Plagne**	**94.54**	**44**	*e*P	**P**	**22 44 06.1**	**-0.1**
	5.8nm,1.2s,mb4.9						
LPG	**La Plagne**	**94.55**	**44**	*e*P	**P**	**22 44 06.4**	**+0.2**
COLA	**College**	**94.73**	**336**	*e*P	**P**	**22 44 05.6**	**-1.0**
	7.5nm,0.9s,mb5.1						
LSZ	**Lusaka**	**99.67**	**108**	*e*Pdif	Pdif	22 44 29.5	+0.2
CTAO	**Charters Tower**	**126.66**	**232**	*e*PKPdf	PKPdf	22 49 46.4	-3.5
ASAR	**Alice Springs**	**132.83**	**218**	PKP	PKPdf	22 49 58.5	-3.0
	2.2nm,1.0s,baz=143,slow=2.2,SNR=9.9						
WB2	**Warramunga Arr**	**135.27**	**222**	*e*PKP	PKPdf	22 50 03.3	-2.8
WRAB	**Tennant Creek**	**135.28**	**222**	*e*PKPdf	PKPdf	22 50 03.2	-2.9
WRA	**Warramunga Arr**	**135.28**	**222**	PKP	PKPdf	22 50 03.4	-2.8
	2.9nm,0.8s,baz=135,slow=1.7,SNR=21						
ZALV	**Zalesovo Beam**	**136.99**	**17**	PKP	PKPdf	22 50 06.5	-1.7
	1.5nm,0.8s,baz=302,slow=2.8,SNR=6.9						
KURK	**Kurchatov**	**137.62**	**24**	PKP	PKPdf	22 50 08.5	-1.0
	1.2nm,0.9s,baz=307,slow=2.2,SNR=6.1						
MDJ	**Mudanjiang**	**142.21**	**330**	PKP	PKPdf	22 50 17.5	-0.6
MKAR	**Makanchi Array**	**142.22**	**25**	PKhKP		22 50 13.8	
	0.3nm,0.2s,baz=340,slow=1.4,SNR=4.4						
CN2	**Changchun**	**144.76**	**333**	*e*PKP	PKPdf	22 50 19.1	-3.5
ULN	**Ulaanbaatar**	**145.76**	**356**	*e*PKPdf	PKPdf	22 50 23.2	-0.9
SONM	**Songino Array**	**145.83**	**357**	PKPbc	PKPbc	22 50 23.4	-1.4
	4.9nm,0.8s,baz=351,slow=2.4,SNR=12						
WMQ	**Urumqi**	**146.79**	**22**	*e*PKP	PKPdf	22 50 26.4	+0.4
WMQ				LR	LR		
	comp=Z,128nm,22.0s,MS4.7						
KSRS	**Korea Array**	**148.12**	**322**	PKPbc	PKPbc	22 50 27.1	-4.6
	comp=Z,2.6nm,0.9s,baz=25,slow=1.9,SNR=10						
BJI	**Beijing**	**151.60**	**340**	PKP	PKPdf	22 50 33.3	-0.6
HHC	**Hu-ho-hao-te**	**152.08**	**348**	*e*PKP	PKPdf	22 50 33.8	-0.8
HHC				PKS		22 54 06.8	
HHC				PP	PP	22 54 24.0	+2.6
HHC				SKKS	SKKSac	23 01 12.8	+2.9
HHC				SS	SS	23 13 50.6	+4.9
HHC				PP	PP		
	comp=Z,56nm,7.5s						
HHC				LR	LR		
	comp=N,142nm,20.5s,MS4.9						
HHC				LR	LR		
	comp=E,126nm,20.5s,MS4.9						
HHC				LR	LR		
	comp=Z,111nm,20.1s,MS4.7						
GTA	**Gaotai**	**154.03**	**8**	PKP	PKPdf	22 50 41.1	+3.6
GTA				PP	PP		
	comp=Z,66nm,8.1s						
GTA				LR	LR		
	comp=N,82nm,9.9s						
GTA				LR	LR		
	comp=E,63nm,9.3s						
GTA				LR	LR		
	comp=Z,77nm,8.4s						
LZH	**Lanzhou**	**157.62**	**0**	*e*PKP	PKPdf	22 50 40.5	-1.8
LZH				PP	PP	22 54 55.0	+2.7
LZH				PP	PP		
	comp=Z,80nm,5.2s						
CD2	**Chengdu**	**162.78**	**1**	*e*PKP	PKPdf	22 50 47.5	-0.7
CD2				APKP		22 50 55.2	
CD2				XPKP		22 51 00.8	
CD2				PKP2	PKPab	22 51 38.9	+2.0
CD2				PP	PP	22 55 24.3	+4.1
CD2				SKS	SKSdf	22 57 47.1	-3.0
CD2				SKKS	SKKSac	23 02 07.2	+0.5
CD2				PP	PP		
	comp=Z,120nm,10.8s						
CD2				LR	LR		
	comp=N,210nm,21.4s						
CD2				LR	LR		
	comp=Z,180nm,22.4s						
GYA	**Guiyang**	**166.99**	**350**	PKP	PKPdf	22 50 52.7	+0.7
GYA				PKP2	PKPab	22 51 57.4	+1.9
GYA				PKS		22 54 23.2	
GYA				PP	PP	22 55 46.6	+4.4
GYA				SKKS	SKKSac	23 02 31.2	+3.2
GYA				SS	SS	23 16 27.8	+4.8
GYA				PP	PP		
	comp=Z,120nm,8.4s						
GYA				LR	LR		
	comp=N,250nm,25.6s						
GYA				LR	LR		
	comp=E,170nm,24.5s						
GYA				LR	LR		
	comp=Z,230nm,25.3s						
KMI	**Kunming**	**168.48**	**6**	PKP	PKPdf	22 50 51.5	-1.6
KMI				PKP2	PKPab	22 52 04.2	+2.1
KMI				PP	PP	22 55 54.0	+4.2
KMI				SS	SS	23 16 43.1	+5.1
KMI				PP	PP		
	comp=Z,56nm,5.4s						
KMI				LR	LR		
	comp=N,113nm,18.4s						
KMI				LR	LR		
	comp=E,155nm,14.1s						
CMAR	**Chiang Mai Arr**	**173.12**	**45**	PKP	PKPdf	22 50 54.4	-1.3
	comp=E,1.2nm,0.3s,baz=314,slow=1.9,SNR=7.9						

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*ISCJB **09** 23:01:30.4±0.9, 726S±008×1545E±02, h39km, mb4.1/13, Error ellipse: s-maj=22.2km s-min=10.3km az=18.3*
*NEIC **09** 23:01:31.7±2.3, 726S×15450E, h38km±18km, mb4.2/6, Error ellipse: s-maj=18.7km s-min=9.4km az=85.0*
*IDC **09** 23:01:32.3±1.6, 723S×15443E, h38km±6km, mb3.9/10, mb1 4.0/10, mb1mx3.9/18, mbtmp3.9/10, MS3.3/2, Ms1 3.3/2, ms1mx2.9/22, Error ellipse: s-maj=50.4km s-min=19.7km az=108.0*
ISC 09 23:01:31.5±3.7**, 73S**±01×**1545E**±02**, h36**km±28km**, h41**km±1.1km**:pP-P, n31,** σ**0.58**/28**, mb4.1**/13**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.58**	**253**	*e*Pn	**Pn**	**23 03 19.9**	**+0.3**
	31nm,0.8s						
CTA	**Charters Tower**	**15.05**	**211**	LR	LR	23 09 34.5	
	comp=Z,121nm,20.8s,baz=230,slow=32						
CTAO	**Charters Tower**	**15.05**	**211**	*e*Pn	**Pn**	**23 05 01.2**	**-0.5**
	6.8nm,1.0s						
KAKA	**Kakadu**	**22.39**	**254**	*e*P	**P**	**23 06 28.1**	**+1.1**
	6.9nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	**23.26**	**235**	*e*P	**P**	**23 06 35.2**	**-0.9**
	5.1nm,0.7s,mb4.1						
WRAB				*e*PcP	PcP	23 10 14.1	-9.0
WB2	**Warramunga Arr**	**23.26**	**235**	*e*P	**P**	**23 06 35.9**	**-0.2**
WB2	**Warramunga Arr**	**23.26**	**235**	*e*P	**P**	**23 06 36.2**	**+0.1**
WRA	**Warramunga Arr**	**23.27**	**235**	P	**P**	**23 06 36.1**	**-0.1**
	5.0nm,0.7s,mb4.0,baz=58,slow=9.7,SNR=27						
WRA				PcP	PcP	23 10 24.0	+0.9
	0.3nm,0.8s,baz=60,slow=2.2,SNR=7.6						
ASAR	**Alice Springs**	**25.64**	**228**	P	**P**	**23 06 58.4**	**+0.4**
	2.3nm,0.8s,mb3.8,baz=62,slow=10.0,SNR=14						
STKA	**Stephens Creek**	**27.29**	**205**	P	**P**	**23 07 12.9**	**+0.1**
	2.6nm,0.9s,mb3.8,baz=110,slow=16,SNR=3.8						
STKA				LR	LR	23 18 25.1	
	comp=Z,66nm,18.8s,baz=26,slow=37						
STKA	**Stephens Creek**	**27.29**	**205**	*e*P	**P**	**23 07 12.4**	**-0.4**
	27nm,1.6s,mb4.5						
STKA				LR	LR	23 18 25.1	
FITZ	**Fitzroy Crossi**	**30.11**	**246**	P	**P**	**23 07 38.5**	**+0.4**
	1.1nm,0.6s,mb3.7,baz=110,slow=15,SNR=6.0						
FITZ	**Fitzroy Crossi**	**30.11**	**246**	*e*P	**P**	**23 07 38.1**	**+0.1**
	1.8nm,0.6s,mb4.0						
DAV	**Davao City (W)**	**32.18**	**296**	P	**P**	**23 07 55.9**	**-0.5**
TAU	**Tasmania Unive**	**36.06**	**189**	P	**P**	**23 08 30.2**	**+0.6**
KSM	**Kuching**	**44.95**	**279**	P	**P**	**23 09 42.7**	**-0.8**
CMAR	**Chiang Mai Arr**	**60.47**	**296**	P	**P**	**23 11 38.0**	**-0.2**
	0.9nm,0.6s,mb4.0,baz=129,slow=5.5,SNR=6.3						
ULN	**Ulaanbaatar**	**68.97**	**328**	*e*P	**P**	**23 12 33.0**	**-0.1**
	2.9nm,1.1s,mb4.1						
SONM	**Songino Array**	**69.30**	**328**	P	**P**	**23 12 36.3**	**+1.1**
	1.2nm,0.5s,mb4.1,baz=129,slow=4.9,SNR=7.0						
SONM				pP	pP	23 12 48.1	+1.9
	0.8nm,0.5s,baz=122,slow=5.2,SNR=3.9						
LSA	**Lhasa**	**71.03**	**305**	*e*P	**P**	**23 12 47.0**	**+0.8**
YAK	**Yakutsk**	**71.72**	**348**	*e*P	**P**	**23 12 49.5**	**-0.1**
MKAR	**Makanchi Array**	**83.29**	**319**	P	**P**	**23 13 55.1**	**+0.5**
	1.5nm,0.6s,mb4.2,baz=115,slow=5.5,SNR=15						
MKAR				pP	pP	23 14 07.5	+1.7
	1.0nm,0.6s,baz=126,slow=6.2,SNR=5.5						
ZALV	**Zalesovo Beam**	**84.13**	**326**	P	**P**	**23 13 58.2**	**-0.5**
	2.8nm,0.5s,mb4.7,baz=114,slow=5.4,SNR=15						
ZALV				pP	pP	23 14 09.5	-0.5
	1.3nm,0.5s,baz=96,slow=5.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**84.13**	**326**	P	**P**	**23 13 58.2**	**-0.5**
ZALV				pP	pP	23 14 09.5	-0.5
KURK	**Kurchatov**	**86.75**	**322**	P	**P**	**23 14 11.5**	**-0.4**
	0.5nm,0.6s,mb4.0,baz=103,slow=4.2,SNR=3.6						
UCH	**Uchtor**	**87.49**	**313**	*e*P	**P**	**23 14 16.3**	**+0.6**
EKS2	**Erkin-Say**	**88.11**	**313**	*e*P	**P**	**23 14 18.7**	**+0.1**
BVAR	**Borovoye Array**	**92.22**	**323**	P	**P**	**23 14 36.6**	**-1.0**
	1.2nm,0.7s,mb4.4,baz=104,slow=6.3,SNR=8.9						
BVAR				pP	pP	23 14 48.4	-0.5
	0.5nm,0.7s,baz=84,slow=14,SNR=3.2						
BRVK	**Borovoye**	**92.29**	**323**	P	**P**	**23 14 37.4**	**-0.5**
GERES	**GERESS Array B**	**127.03**	**328**	PKP	PKPdf	23 20 33.1	+1.2
	0.5nm,0.7s,baz=63,slow=1.7,SNR=6.0						
TORD	**Torodi Ar. Bea**	**152.63**	**285**	PKPbc	PKPbc	23 21 25.4	0.0
	2.0nm,0.7s,baz=82,slow=2.0,SNR=18						

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*ISCJB **09** 23:22:29.9±0.3, 1728N±005×9402W±003, h186km±3km, mb4.0/5, Error ellipse: s-maj=8.7km s-min=4.2km az=6.7*
*IDC **09** 23:22:30.9±0.9, 1738N×9392W, h175km±10km, mb3.6/6, mb1 3.8/8, mb1mx3.4/22, mbtmp3.5/8, Error ellipse: s-maj=24.2km s-min=14.6km az=76.0*
*MEX **09** 23:22:32.4±1.0, 17.16N×94.07W, h185km±7km, MD4.5*
*NEIC **09** 23:22:32.4, 17.17N×94.05W, h185km, mb4.5/4, MD4.6(MEX), After MEX.*
ISC 09 23:22:30.9±0.3**, 1728N**±005×**9403W**±003**, h181**km±3km**, n47,** σ**1.13**/72**, mb4.0**/5**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.84**	**333**	*i* P	**Pn**	**23 22 58.4**	**+0.8**
TUIG				*i* S	**Sn**	**23 23 19.3**	**+1.1**
CMIG	**Matias Romero**	**0.84**	**257**	P	**Pn**	**23 22 57.8**	**+0.2**
	218nm,0.3s,baz=78,slow=5.5,SNR=2492						
CMIG	**Matias Romero**	**0.84**	**257**	*i* P	**Pn**	**23 22 58.0**	**+0.4**
CMIG				*i* S	**Sn**	**23 23 17.6**	**-0.5**
CMIG	**Matias Romero**	**0.84**	**257**	P	**Pn**	**23 22 57.8**	**+0.2**
CMIG				*i* P		23 22 58.0	
CMIG				*i* S	**Sn**	**23 23 17.6**	**-0.5**
TGIG		**1.00**	**120**	*i* P	**Pn**	**23 22 59.3**	**+0.5**
TGIG				*i* S	**Sn**	**23 23 19.7**	**-0.4**
SCX	**San Cristobal**	**1.44**	**112**	*i* P	**Pn**	**23 23 02.7**	**+0.3**
SCX				*i* S	**Sn**	**23 23 26.3**	**-0.3**
SCX	**San Cristobal**	**1.44**	**112**	*i* P	**Pn**	**23 23 02.7**	**+0.3**
SCX				*i* S	**Sn**	**23 23 24.4**	**-2.3**
CCIG	**Comitan**	**2.07**	**118**	*i* P	**Pn**	**23 23 10.0**	**+1.2**
CCIG				*i* S	**Sn**	**23 23 38.2**	**+0.1**
HUIG	**Huatulco**	**2.50**	**233**	*i* P	**Pn**	**23 23 11.9**	**-1.8**
HUIG				*i* S	**Sn**	**23 23 45.6**	**-1.2**
HUIG	**Huatulco**	**2.50**	**233**	*i* P	**Pn**	**23 23 11.8**	**-1.8**
HUIG				*i* S	**Sn**	**23 23 45.9**	**-0.9**
OXX	**Oaxaca**	**2.58**	**266**	*i* P	**Pn**	**23 23 14.9**	**+0.3**
OXX				*i* S	**Sn**	**23 23 47.6**	**-0.9**
OXX	**Oaxaca**	**2.58**	**266**	*i* P	**Pn**	**23 23 15.8**	**+1.1**
OXX				*i* S	**Sn**	**23 23 49.6**	**+1.1**
VHO	**Vista Hermosa**	**2.59**	**266**	*i* P	**Pn**	**23 23 15.3**	**+0.6**
VHO				*i* S	**Sn**	**23 23 49.4**	**+0.6**
VHO	**Vista Hermosa**	**2.59**	**266**	*i* P	**Pn**	**23 23 15.0**	**+0.3**
VHO				*i* S	**Sn**	**23 23 50.0**	**+1.2**
TPIG	**Tehuac#an**	**3.37**	**290**	*i* P	**Pn**	**23 23 25.7**	**+1.6**
TPIG				*i* S	**Sn**	**23 24 05.0**	**-0.6**
PNIG	**Pinotepa**	**4.02**	**258**	*i* P	**Pn**	**23 23 30.9**	**-1.4**
PNIG				*i* S	**Sn**	**23 24 18.3**	**-2.1**
PNIG	**Pinotepa**	**4.02**	**258**	*i* P	**Pn**	**23 23 30.9**	**-1.5**
PNIG				*i* S	**Sn**	**23 24 06.7**	**-14**
PPM	**Popocatepetl**	**4.72**	**293**	*i* P	**Pn**	**23 23 43.8**	**+2.6**
PPM				*i* S	**Sn**	**23 24 37.5**	**+1.1**
PPM	**Popocatepetl**	**4.72**	**293**	*i* P	**Pn**	**23 23 37.8**	**-3.4**
PPM				*i* S	**Sn**	**23 24 31.1**	**-5.2**
PPM				*i* S	**Sn**	**23 24 33.1**	**-3.3**
IIO	**Organos**	**5.01**	**298**	*i* P	**Pn**	**23 23 47.0**	**+2.0**
YAIG	**Yautepec**	**5.04**	**289**	*i* P	**Pn**	**23 23 47.2**	**+1.7**
YAIG				*i* S	**Sn**	**23 24 43.8**	**-0.2**
YAIG	**Yautepec**	**5.04**	**289**	*i* P	**Pn**	**23 23 47.2**	**+1.7**
YAIG				*i* S	**Sn**	**23 24 41.7**	**-2.2**
PLIG	**Platanillo**	**5.33**	**283**	*i* P	**Pn**	**23 23 50.8**	**+1.7**
PLIG				*i* S	**Sn**	**23 24 50.8**	**+0.2**
PLIG	**Platanillo**	**5.33**	**283**	*i* P	**Pn**	**23 23 50.7**	**+1.6**
PLIG				*i* S	**Sn**	**23 24 52.6**	**+2.0**
MEIG	**Mezcala**	**5.37**	**278**	*i* P	**Pn**	**23 23 51.2**	**+1.5**
MEIG				*i* S	**Sn**	**23 24 50.7**	**-0.9**
ACX	**Acapulco**	**5.65**	**267**	*i* P	**Pn**	**23 23 51.5**	**-1.8**
CAIG	**El Cayaco**	**5.97**	**269**	*e*P	**Pn**	**23 23 57.3**	**-0.2**
CAIG				*i* S	**Sn**	**23 25 05.1**	**-0.5**
CAIG	**El Cayaco**	**5.97**	**269**	*e*P	**Pn**	**23 23 56.1**	**-1.4**
CAIG				*i* S	**Sn**	**23 24 59.1**	**-6.6**
TEIG	**Tepich**	**6.19**	**61**	P	**Pn**	**23 23 58.5**	**-1.8**
	11nm,0.3s,baz=283,slow=2.0,SNR=58						
ZIIG	**Zihuatanejo**	**7.11**	**274**	*i* P	**Pn**	**23 24 12.1**	**-0.4**
ZIIG				*i* S	**Sn**	**23 25 31.7**	**-0.9**
TXAR	**Lajitas Array**	**14.90**	**325**	P	**Pn**	**23 25 53.4**	**+0.7**
	0.1nm,0.3s,baz=144,slow=11,SNR=8.2						
LRAL	**Lakeview Retre**	**16.92**	**21**	*e*P	**Pn**	**23 26 17.2**	**+0.1**
MIAR	**Mount Ida**	**17.20**	**1**	*e*P	**Pn**	**23 26 19.8**	**-0.7**
	29nm,1.0s						
GOGA	**Godfrey**	**18.66**	**29**	*e*P	**P**	**23 26 34.5**	**-0.7**
	11nm,0.8s						
AMTX	**Amarillo**	**18.82**	**340**	P	**P**	**23 26 36.8**	**0.0**
	12nm,0.5s						
WVT	**Waverly**	**19.56**	**15**	*e*P	**P**	**23 26 43.9**	**-0.9**
	3.0nm,0.4s						
TKL	**Tuckaleechee C**	**20.45**	**25**	P	**P**	**23 26 53.0**	**-1.3**
	1.4nm,0.5s,baz=175,slow=12,SNR=4.8						
TZTN	**Tazewell**	**21.31**	**24**	*e*P	**P**	**23 27 02.1**	**-1.4**
LPAZ	**La Paz**	**42.00**	**141**	P	**P**	**23 30 06.2**	**+1.7**
	2.2nm,0.6s,mb4.0,baz=317,slow=6.5,SNR=13						
SIV	**San Ignacio**	**46.35**	**134**	P	**P**	**23 30 39.0**	**-0.2**
	2.0nm,0.7s,mb3.8,baz=310,slow=6.7,SNR=12						
YKA	**Yellowknife Ar**	**47.41**	**347**	P	**P**	**23 30 46.5**	**-0.2**
	1.8nm,0.6s,mb3.9,baz=154,slow=7.2,SNR=6.3						
YKA	**Yellowknife Ar**	**47.41**	**347**	P	**P**	**23 30 46.5**	**-0.2**
PLCA	**Paso Flores**	**61.70**	**160**	P	**P**	**23 32 31.2**	**+1.4**
	3.9nm,1.0s,mb4.2,baz=345,slow=8.0,SNR=5.2						
NOA	**NORSAR Array B**	**82.20**	**28**	P	**P**	**23 34 32.1**	**+0.7**
	baz=291,slow=5.6						
ARCES	**ARCESS Array B**	**83.64**	**18**	P	**P**	**23 34 38.8**	**+0.1**
	1.4nm,0.7s,mb3.8,baz=297,slow=5.3,SNR=8.4						
WRA	**Warramunga Arr**	**134.21**	**259**	PKP	PKPdf	23 41 28.1	+0.4
	0.4nm,0.7s,baz=93,slow=4.2,SNR=5.1						
ASAR	**Alice Springs**	**134.81**	**254**	PKP	PKPdf	23 41 28.6	-0.2
	0.3nm,0.5s,baz=41,slow=2.0,SNR=3.4						

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*CSEM **09** 23:26:37.4±0.1, 3962N×2859E, h12km, MD2.7, Error ellipse: s-maj=3.9km s-min=2.5km az=95.0*
*ISK **09** 23:26:37.8, 3963N×2855E, h10km, MD2.7*
*ISCJB **09** 23:26:38.1±0.6, 3963N±003×2861E±006, h11km±3km, Error ellipse: s-maj=7.7km s-min=5.6km az=179.9*
*DDA **09** 23:26:39.2, 3956N×2856E, h4km±3km, Md2.9*
ISC 09 23:26:38.3±0.6**, 3962N**±003×**2860E**±006**, h12**km±5km**, n10,** σ**0.35**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DST	**Dursunbey**	**0.03**	**130**	*e*PG	**Pg**	**23 26 40.3**	**-0.2**
DST				*e*SG	**Sg**	**23 26 41.9**	**-0.2**
DURS	**Dursunbey**	**0.10**	**256**	*i* P	**Pg**	**23 26 41.0**	**-0.1**
DURS				*i* S	**Sg**	**23 26 43.0**	**-0.2**
DEMI	**Demirci**	**0.59**	**171**	*i* P	**Pg**	**23 26 49.9**	**+0.1**
DEMI				*i* S	**Sg**	**23 26 57.6**	**+0.1**
KCT	**Karacabey**	**0.67**	**344**	*e*PG	**Pg**	**23 26 51.2**	**-0.1**
KCT				*e*SG	**Sg**	**23 27 00.0**	**-0.1**
BALY	**Balya**	**0.76**	**279**	*i* P	**Pg**	**23 26 53.0**	**-0.1**
BALY				*i* S	**Sg**	**23 27 03.2**	**0.0**
GEMT	**Gemlik**	**0.93**	**29**	*e*PG	**Pg**	**23 26 57.1**	**+0.9**
AKHS	**Akhisar**	**0.96**	**220**	*i* P	**Pg**	**23 26 57.5**	**+0.6**
AKHS				*i* S	**Sg**	**23 27 09.8**	**+0.4**
AKS	**Akhisar**	**0.96**	**220**	*e*PG	**Pg**	**23 26 56.6**	**-0.2**
KULA	**Kula-Manisa**	**1.11**	**177**	*e*PN	**Pn**	**23 26 59.0**	**-0.6**
YLV	**Yalova**	**1.11**	**32**	*e*PN	**Pn**	**23 26 59.4**	**-0.3**

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*BJI **09** 23:31:52.9, 806S×11453E, h5km, mB4.7, mb4.6, Ms4.4, Msz4.1*
*ISCJB **09** 23:31:53.4±0.4, 8.12S±006×114.12E±004, h10km, mb4.3/16, MS3.7/4, Error ellipse: s-maj=8.4km s-min=5.3km az=25.4*
*IDC **09** 23:31:54.6±1.0, 787S×11444E, h0km, mb4.0/8, mb1 4.2/10, mb1mx4.0/19, mbtmp4.0/10, ML3.7/2, MS3.5/5, Ms1 3.5/5, ms1mx3.3/24, Error ellipse: s-maj=44.3km s-min=15.6km az=53.0*
*NEIC **09** 23:31:54.9±0.5, 800S×11430E, h10km, mb4.4/5, Error ellipse: s-maj=15.2km s-min=9.1km az=48.0*
NEIC Felt [IV] at Situbondo.
*DJA **09** 23:31:55, 784S×114.17E, h10km, MLv4.6/9*

ISC 09 23:31:54.1±3.0**, 815S**±007×**11416E**±005**, h3**km±18km**, n34, σ1s15**/36**, mb4.3**/16**, MS3.7**/4**, 1C, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRT	**Tretes**	**1.57**	**286**	⇑*e*P	**Pn**	**23 32 18.5**	**-4.4**
TRT				*e*S	**Sn**	**23 32 40.0**	**-3.7**
MKS	**Makassar**	**6.03**	**61**	*e*S	**Sn**	**23 34 34.2**	**+0.5**
KAPI	**Kappang**	**6.37**	**61**	Pn	**Pn**	**23 33 23.9**	**-5.0**
	2.0nm,0.3s,baz=174,slow=4.6,SNR=3.7						
KAPI				LR	LR	23 36 27.2	
	comp=Z,266nm,20.0s,baz=74,slow=46						
BATI	**Baumata**	**9.61**	**103**	LR	LR	23 39 34.2	
	comp=Z,770nm,19.1s,baz=122,slow=49						
MBWA	**Marble Bar**	**14.01**	**158**	*e*Pn	**Pn**	**23 35 12.7**	**-1.0**
MBWA				*e*Sn	**Sn**	**23 37 37.0**	**-13**
FITZ	**Fitzroy Crossi**	**14.92**	**133**	*e*P	**Pn**	**23 35 25.7**	**-0.4**
	10.0nm,0.9s						
FITZ				*e*S	**Sn**	**23 38 06.6**	**-5.4**
FITZ	**Fitzroy Crossi**	**14.92**	**133**	Pn	**Pn**	**23 35 25.5**	**-0.6**
	0.3nm,0.3s,baz=309,slow=5.3,SNR=10.0						
FITZ				LR	LR	23 42 00.7	
	comp=Z,104nm,19.8s,baz=318,slow=41						
KAKA	**Kakadu**	**18.54**	**106**	*e*Pn	**Pn**	**23 36 10.9**	**-1.3**
KAKA				Sn	**Sn**	**23 39 39.4**	**-0.6**
WRA	**Warramunga Arr**	**22.79**	**123**	P	**P**	**23 36 57.5**	**-0.5**
	2.9nm,0.7s,mb3.8,baz=295,slow=12,SNR=21						
WRA				LR	LR	23 46 22.1	
	comp=Z,104nm,18.6s,MS3.3,baz=305,slow=38						
WRAB	**Tennant Creek**	**22.80**	**123**	*e*P	**P**	**23 36 58.4**	**+0.3**
	7.0nm,0.8s,mb4.1						
WB2	**Warramunga Arr**	**22.80**	**123**	*e*P	**P**	**23 36 57.8**	**-0.3**
ASAR	**Alice Springs**	**24.42**	**131**	P	**P**	**23 37 15.3**	**+1.3**
	9.2nm,0.9s,mb4.2,baz=305,slow=8.9,SNR=33						
CMAR	**Chiang Mai Arr**	**30.40**	**331**	P	**P**	**23 38 08.9**	**+1.2**
	1.1nm,0.7s,mb3.7,baz=159,slow=8.0,SNR=6.1						
STKA	**Stephens Creek**	**34.76**	**137**	*e*P	**P**	**23 38 47.5**	**+1.6**
	4.5nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**34.76**	**137**	P	**P**	**23 38 47.5**	**+1.7**
	3.6nm,0.5s,mb4.6,baz=313,slow=13,SNR=7.1						
STKA				LR	LR	23 52 53.8	
	comp=Z,128nm,20.7s,MS3.6,baz=23,slow=36						
KMI	**Kunming**	**34.89**	**342**	P	**P**	**23 38 49.0**	**+2.1**
KMI				AP	pP	23 38 52.0	+4.0
KMI				XP	sP	23 38 53.2	+4.8
KMI				PP	PP	23 40 07.2	+1.1
KMI				PPP		23 40 25.0	
KMI				S	**S**	**23 44 20.0**	**+1.1**
KMI				XS	sS	23 44 25.1	+4.4
KMI				SS	SS	23 46 34.1	-16
KMI				SSS		23 47 01.2	
KMI				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.5						
KMI				AMB	AMB		
	comp=Z,55nm,3.5s						
KMI				LR	LR		
	comp=N,119nm,13.9s,MS4.0						
KMI				LR	LR		
	comp=E,150nm,13.9s,MS4.0						
KMI				LR	LR		
	comp=Z,126nm,13.4s,MS3.8						
CD2	**Chengdu**	**40.09**	**346**	*e*P	**P**	**23 39 32.2**	**+1.2**
CD2				XP	sP	23 39 40.0	+7.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,4.8s						
BJI	**Beijing**	**47.98**	**2**	P	**P**	**23 40 34.0**	**-0.2**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.7						
HHC	**Hu-ho-hao-te**	**48.81**	**357**	*e*P	**P**	**23 40 39.9**	**-0.7**
HHC				AP	pP	23 40 43.7	+2.0
HHC				XP	sP	23 40 46.0	+3.9
HHC				PCP	PcP	23 42 04.9	-0.5
HHC				PP	PP	23 42 33.5	-0.4
HHC				SCP	ScP	23 45 57.7	-3.7
HHC				PCS	PcS	23 45 59.2	-2.2
HHC				S	**S**	**23 47 42.9**	**-1.5**
HHC				SCS	ScS	23 50 29.3	-4.8
HHC				SS	SS	23 51 08.6	-6.6
HHC				AMB	AMB		
	comp=Z,15nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,80nm,6.9s						
HHC				LR	LR		
	comp=N,142nm,16.6s,MS4.2						
HHC				LR	LR		
	comp=E,132nm,15.6s,MS4.2						
HHC				LR	LR		
	comp=Z,111nm,16.6s,MS3.9						
ULN	**Ulaanbaatar**	**56.12**	**354**	P	**P**	**23 41 32.7**	**-1.9**
SONM	**Songino Array**	**56.16**	**354**	P	**P**	**23 41 36.3**	**+1.4**
	comp=Z,0.7nm,0.7s,mb3.8,baz=163,slow=5.4,SNR=2.5						
CASY	**Casey**	**58.10**	**182**	*e*P	**P**	**23 41 50.7**	**+2.3**
	comp=Z,8.0nm,1.5s,mb4.5						
MKAR	**Makanchi Array**	**61.61**	**336**	P	**P**	**23 42 13.4**	**+0.5**
	comp=Z,0.5nm,0.4s,mb4.0,baz=158,slow=9.0,SNR=4.9						
ZALV	**Zalesovo Beam**	**66.63**	**342**	P	**P**	**23 42 43.9**	**-1.8**
	comp=Z,1.8nm,0.8s,mb4.2,baz=131,slow=3.5,SNR=6.6						
BVAR	**Borovoye Array**	**71.36**	**334**	P	**P**	**23 43 13.9**	**-1.2**
	comp=Z,0.4nm,0.7s,mb3.5,baz=103,slow=6.4,SNR=3.9						
SBA	**Scott Base**	**74.64**	**170**	P	**P**	**23 43 35.6**	**+1.3**
MALT	**Malatya**	**83.97**	**310**	P	**P**	**23 44 24.7**	**-1.2**
LSZ	**Lusaka**	**84.03**	**255**	*e*P	**P**	**23 44 26.6**	**-0.1**
	comp=Z,1.1nm,0.6s,mb4.2						
LBTB	**Lobatse**	**85.31**	**246**	P	**P**	**23 44 33.4**	**+0.3**
SNAA	**Sanae**	**90.50**	**196**	*e*P	**P**	**23 44 56.4**	**-0.6**
	comp=Z,6.5nm,1.4s,mb4.8						
TSUM	**Tsumeb**	**93.50**	**250**	P	**P**	**23 45 11.5**	**-0.5**
TOA0	**Torodi Ar. Sit**	**113.59**	**281**	PKiKP	PKiKP	23 50 34.5	-0.4
CPUP	**Villa Florida**	**144.75**	**193**	PKPbc	PKPdf	23 51 33.3	+0.1
	comp=Z,1.6nm,0.6s,baz=190,slow=1.7,SNR=6.8						
CPUP	**Villa Florida**	**144.75**	**193**	*e*PKP	PKPdf	23 51 33.8	+0.5

JMA 09 23:52:57.4±0.5**, 4398N**×**14794E, h0**km**, M3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.71**	**250**	P	Pn	23 53 28.8	+0.4
NEM2				*e*S	Sn	23 53 51.9	+1.0
JRA	**Rausu**	**2.04**	**270**	P	Pn	23 53 33.6	+0.7
JRA				*e*S	Sn	23 54 00.1	+1.1
JNK	**Nakash**	**2.37**	**262**	P	Pn	23 53 38.5	+1.1
JAK	**Akkeshi**	**2.56**	**249**	P	Pn	23 53 40.9	+0.8
JAK				*e*S	Sn	23 54 12.6	+0.7
JAR	**Ashorobuto**	**3.10**	**259**	P	Pn	23 53 49.2	+1.6
JAR				*e*S	Sn	23 54 27.3	+2.0

SGS ***09*** *23:54:45.6, 3154N×3496E, h8km*
CSEM ***09*** *23:54:57.3±0.2, 3053N×3540E, h10km, ML3.3, Error ellipse: s-maj=4.5km s-min=1.8km az=46.0*
HLW ***09*** *23:54:58.2, 3055N×3541E, h6km, Mb3.3*
ISCJB ***09*** *23:55:00.1±0.5, 3048N±002×3537E±005, h24km±4km, Error ellipse: s-maj=6.9km s-min=3.0km az=9.4*
GII ***09*** *23:55:00.1±0.6, 3051N×3537E, h8km±1km, ML3.1/8, Mw2.3/4*
ISC 09 23:54:59.9±0.5**, 3049N**±002×**3536E**±005**, h16**km±3km**, n39, σ0s65**/54**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFRI	**Zfri**	**0.17**	**291**	Pg	**Pg**	**23 55 04.8**	**+0.7**
PRNI	**Paran**	**0.34**	**245**	Pg	**Pg**	**23 55 07.7**	**+0.8**
PRNI				Sg	**Sg**	**23 55 12.9**	**+1.2**
RMNI	**Mount Ramon**	**0.53**	**281**	Pg	**Pg**	**23 55 10.3**	**0.0**
HRFI	**Mount Harif**	**0.54**	**212**	Pg	**Pg**	**23 55 10.9**	**+0.5**
HRFI				Sg	**Sg**	**23 55 18.5**	**+0.8**
KRMI	**Paran Flat**	**0.67**	**236**	Pg	**Pg**	**23 55 12.8**	**-0.1**
KRMI				Sg	**Sg**	**23 55 22.3**	**+0.5**
MBRI	**Mt Berech**	**0.80**	**209**	Pg	**Pg**	**23 55 15.4**	**0.0**
MBRI				Sg	**Sg**	**23 55 26.6**	**+0.6**
RTMI	**Retamim**	**0.80**	**314**	Pg	**Pg**	**23 55 14.8**	**-0.7**
MZDA	**Masada**	**0.81**	**0**	Pg	**Pg**	**23 55 15.3**	**-0.4**
MZDA				Sg	**Sg**	**23 55 26.0**	**-0.4**
YTIR	**Yattir**	**0.89**	**346**	Pg	**Pg**	**23 55 16.4**	**-0.8**
EIL	**Elat**	**0.90**	**204**	Pg	**Pg**	**23 55 17.1**	**-0.2**
EIL				Sg	**Sg**	**23 55 29.6**	**+0.6**
KZIT	**Kziot**	**0.93**	**297**	Pg	**Pg**	**23 55 16.9**	**-0.9**
KZIT				Sg	**Sg**	**23 55 29.2**	**-0.8**
DSI	**Dead Sea**	**1.07**	**1**	Pg	**Pg**	**23 55 19.8**	**-0.8**
DSI				Sg	**Sg**	**23 55 34.6**	**0.0**
HQLS		**1.22**	**192**	P	**Pn**	**23 55 21.2**	**-1.0**
HQLS		**1.22**	**192**	P	**Pn**	**23 55 21.2**	**-1.0**
HNKL	**Nakhl**	**1.32**	**245**	P	**Pn**	**23 55 23.3**	**-0.4**
HNKL				S	**Sn**	**23 55 41.0**	**0.0**
HBST	**Basata**	**1.39**	**203**	P	**Pn**	**23 55 24.2**	**-0.3**
HBST				S	**Sn**	**23 55 43.2**	**+0.7**
HBST	**Basata**	**1.39**	**203**	P	**Pn**	**23 55 24.2**	**-0.3**
HBST				S	**Sn**	**23 55 43.2**	**+0.7**
RSH		**1.49**	**289**	P	**Pn**	**23 55 24.9**	**-1.0**
JLOS		**1.76**	**176**	P	**Pn**	**23 55 29.1**	**-0.6**
HMDT	**Nahal Hemdat**	**1.76**	**5**	Pn	**Pn**	**23 55 29.8**	**+0.1**
HMDT				Sn	**Sn**	**23 55 52.4**	**+0.6**
SLTI	**Sal'it**	**1.76**	**351**	Pn	**Pn**	**23 55 29.7**	**-0.1**
SLTI				Sn	**Sn**	**23 55 52.8**	**+0.9**
AMAG	**Maghara**	**1.86**	**275**	P	**Pn**	**23 55 30.0**	**-1.1**
MMLI	**Mount Malkishu**	**1.94**	**1**	Pn	**Pn**	**23 55 32.6**	**+0.4**
MMLI				Sn	**Sn**	**23 55 57.4**	**+1.2**
OFRI	**'Ofer**	**2.15**	**351**	Pn	**Pn**	**23 55 35.4**	**+0.4**
OFRI				Sn	**Sn**	**23 56 03.0**	**+1.8**
SUZ		**2.29**	**254**	P	**Pn**	**23 55 36.5**	**-0.4**
HKAT	**Jabal Katrina**	**2.30**	**212**	P	**Pn**	**23 55 36.4**	**-0.7**
TBKS	**Tabuk**	**2.49**	**155**	P	**Pn**	**23 55 39.9**	**+0.2**
MMA1	**Mount Meron ar**	**2.52**	**1**	Pn	**Pn**	**23 55 41.4**	**+1.2**
HRDS	**Abu Rudays**	**2.53**	**226**	P	**Pn**	**23 55 40.0**	**-0.2**
HRDS	**Abu Rudays**	**2.53**	**226**	P	**Pn**	**23 55 40.0**	**-0.3**
ZAF		**2.73**	**244**	P	**Pn**	**23 55 42.8**	**-0.2**
TR1		**2.77**	**207**	P	**Pn**	**23 55 43.1**	**-0.5**
SHRM		**2.81**	**203**	P	**Pn**	**23 55 43.8**	**-0.3**
HHAG	**Hagoal**	**2.88**	**260**	P	**Pn**	**23 55 44.9**	**-0.2**
KOT	**Kottamia**	**3.11**	**260**	P	**Pn**	**23 55 48.1**	**-0.2**
DBAS	**Duba**	**3.31**	**171**	S	**Sg**	**23 56 40.0**	**-6.4**
DBAS	**Duba**	**3.31**	**171**	P	**Pn**	**23 55 50.8**	**-0.3**
WJHS		**3.86**	**166**	P	**Pn**	**23 55 58.4**	**-0.2**
BIDS	**Bi'r al Bayda'**	**3.88**	**158**	P	**Pn**	**23 55 58.8**	**0.0**

LDG ***10*** *00:13:03.6±0.3, 1670S×6973W, h10km, Mb5.2/34, Ms4.6/8, Error ellipse: s-maj=17.3km s-min=8.5km az=52.0*
MOS ***10*** *00:13:06.6±1.2, 17.12S×6959W, h33km, mb5.3/48, MS4.9/5, Error ellipse: s-maj=10.9km s-min=7.7km az=77.4*
ISCJB ***10*** *00:13:06.0±0.2, 1724S±004×6957W±004, h30km, mb5.0/97, MS4.7/20, Error ellipse: s-maj=6.9km s-min=4.4km az=143.7*
BJI ***10*** *00:13:07.0, 1735S×6990W, h33km, mB5.1, Ms5.3, Msz5.0*
IDC ***10*** *00:13:09.2±1.7, 1730S×6979W, h44km±15km, mb4.5/15, mb1 4.5/20, mb1mx4.4/26, mbtmp4.4/20, ML4.2/5, MS4.4/13, Ms1 4.4/13, ms1mx4.2/29, Error ellipse: s-maj=17.2km s-min=13.9km az=50.0*
NEIC ***10*** *00:13:09.2±0.2, 1728S×6966W, mb5.1/84, Error ellipse: s-maj=7.2km s-min=5.0km az=49.0*
NEIC Felt [IV] at Tarata and [III] at Candarave.
GCMT ***10*** *00:13:09.2±0.3, 1755S×6998W, h14km±1km, MW5.2/60, Moment Tensor Solution. s34,c39; s60,c86; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.50±.03; $M_{\theta\theta}$-0.10±.02; $M_{\phi\phi}$0.60±.02; $M_{r\theta}$-0.44±.06; $M_{\theta\phi}$-0.17±.01; $M_{\phi r}$-0.48±.06; Best double couple: $M_0$0.86500×10^{17} NP1:ϕ_s142.00000°, δ35.00000°, λ-144.00000°. NP2: ϕ_s21.00000°, δ70.00000°, λ-61.00000°. Principal axes: T 0.7830, Plg20.0000°, Azm89.0000°; N 0.1640, Plg28.0000°, Azm190.0000°; P -0.9470, Plg55.0000°, Azm328.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 10 00:13:06.6±1.9**, 1721S**±004×**6947W**±005**, h20**km±13km**, n341, σ0s96**/296**, mb5.0**/97**, MS4.7**/20**, 26C-21D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.57**	**55**	P	**Pn**	**00 13 41.1**	**+7.7**
	64nm,0.3s,baz=234,slow=14,SNR=1138						
LPAZ				S	**Sn**	**00 14 08.7**	**+16**
	124nm,0.3s,baz=2.0,slow=21,SNR=7.7						
LPAZ				LR	LR	00 14 38.0	
	comp=Z,8μm,21.4s,baz=121,slow=47						
ARE	**Arequipa**	**2.08**	**291**	⇑*i*P	**Pn**	**00 13 33.5**	**-6.8**
ARE				*i* S	**Sn**	**00 13 56.5**	**-9.1**
LVC	**Limon Verde**	**5.41**	**175**	P	**Pn**	**00 14 26.5**	**+0.4**
	5.7nm,0.3s,baz=334,slow=9.9,SNR=42						
LVC				S	**Sn**	**00 15 39.6**	**+12**
	27nm,0.3s,baz=255,slow=17,SNR=4.8						
LVC				LR	LR	00 16 48.4	
	comp=Z,3μm,18.7s,baz=340,slow=41						
LVC	**Limon Verde**	**5.41**	**175**	*e*Pn	**Pn**	**00 14 25.9**	**-0.2**
SIV	**San Ignacio**	**8.14**	**83**	P	**Pn**	**00 15 09.6**	**+5.9**
	6.8nm,0.3s,baz=264,slow=13,SNR=250						
NNA	**Nana**	**8.82**	**305**	P	**Pn**	**00 15 11.9**	**-1.2**
	1.4nm,0.3s,baz=143,slow=9.6,SNR=4.9						
LCO	**Las Campanas**	**11.81**	**185**	*e*Pn	**Pn**	**00 15 53.5**	**-0.4**
CFAA	**Coronel Fontan**	**14.38**	**176**	P	**Pn**	**00 16 28.9**	**-0.1**
	0.0nm,0.3s,baz=348,slow=14,SNR=21						
CFAA				LR	LR	00 21 28.6	
	comp=Z,124nm,18.6s,baz=326,slow=35						
CPUP	**Villa Florida**	**14.47**	**131**	P	**Pn**	**00 16 31.8**	**+1.5**
	0.3nm,0.3s,baz=287,slow=15,SNR=7.4						
CPUP				LR	LR	00 23 11.5	
	comp=Z,742nm,21.3s,baz=293,slow=41						
CPUP	**Villa Florida**	**14.47**	**131**	*e*Pn	**Pn**	**00 16 32.5**	**+2.2**
CPUP				LR	LR	00 23 11.5	
OTAV	**Otavalo**	**19.46**	**332**	*e*Pn	**Pn**	**00 17 34.5**	**+1.0**
BDFB	**Brasilia**	**20.64**	**89**	P	**P**	**00 17 47.9**	**+2.8**
	13nm,1.0s,baz=246,slow=11,SNR=9.8						
SPB	**Sao Paulo**	**21.60**	**111**	*e*P	**P**	**00 17 57.6**	**+2.2**
TRQA	**Tornquist**	**21.79**	**164**	*e*P	**P**	**00 17 56.4**	**-0.9**
	65nm,1.0s,mb5.0						
PLCA	**Paso Flores**	**23.46**	**182**	P	**P**	**00 18 12.8**	**-2.2**
	69nm,1.1s,mb5.0,baz=0.4,slow=11,SNR=45						
PLCA				LR	LR	00 27 21.3	
	comp=Z,566nm,20.4s,MS4.0,baz=3.2,slow=36						
PLCA	**Paso Flores**	**23.46**	**182**	P	**P**	**00 18 12.8**	**-2.2**
	42nm,1.2s,mb4.8						
PLCA				LR	LR	00 27 21.3	
SDV	**Santo Domingo**	**25.95**	**357**	LR	LR	00 29 54.3	
	comp=Z,1μm,19.3s,MS4.5,baz=300,slow=39						
PCRV	**Puerto La Cruz**	**27.62**	**10**	P	**P**	**00 18 53.6**	**+0.7**
	12nm,1.0s,mb4.5,baz=52,slow=5.8,SNR=3.0						
PCRV				LR	LR	00 31 33.3	
	comp=Z,1μm,18.2s,MS4.5,baz=183,slow=40						
SJG	**San Juan**	**35.25**	**5**	*e*P	**P**	**00 19 59.0**	**-0.9**
MTP	**Monte Pirata**	**35.29**	**6**	*e*P	**P**	**00 19 59.8**	**-0.6**
HUMP	**Col San Antoni**	**35.30**	**6**	*e*P	**P**	**00 20 00.2**	**-0.3**
CBYP	**Canovanas**	**35.43**	**6**	*e*P	**P**	**00 20 01.4**	**-0.1**
	62nm,1.0s,mb5.5						
EFI	**East Falkland**	**35.56**	**168**	*e*P	**P**	**00 20 02.3**	**-0.1**
EFI				pmax	pmax		
	comp=Z,81nm,1.0s,mb5.6						
EFI	**East Falkland**	**35.56**	**168**	*e*P	**P**	**00 20 02.3**	**-0.1**
	comp=Z,81nm,1.0s,mb5.6						
TEIG	**Tepich**	**41.53**	**333**	P	**P**	**00 20 51.3**	**-1.5**
	comp=Z,9.7nm,0.7s,mb4.5,baz=145,slow=6.0,SNR=6.0						
TEIG	**Tepich**	**41.53**	**333**	*e*P	**P**	**00 20 51.6**	**-1.2**
CMIG	**Matias Romero**	**42.29**	**322**	P	**P**	**00 20 58.5**	**-0.6**
	comp=Z,2.9nm,0.8s,mb4.0,baz=204,slow=0.9,SNR=5.8						
CMIG	**Matias Romero**	**42.29**	**322**	P	**P**	**00 20 58.5**	**-0.6**
DWPF	**Disney**	**46.51**	**345**	*e*P	**P**	**00 21 31.9**	**-0.8**
	comp=Z,116nm,1.4s,mb5.6						
PMSA	**Palmer Station**	**47.67**	**177**	LR	LR	00 42 42.2	
	comp=Z,344nm,18.2s,MS4.4,baz=39,slow=37						
PMSA	**Palmer Station**	**47.67**	**177**	*e*P	**P**	**00 21 36.7**	**-4.6**
	comp=Z,16nm,0.6s,mb5.2						
BBSR	**BB Station**	**49.50**	**5**	*e*P	**P**	**00 21 56.3**	**+0.6**
	comp=Z,18nm,1.0s,mb5.0						
HKT	**Hockley**	**53.33**	**331**	*e*P	**P**	**00 22 24.1**	**-0.4**
HKT				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
HKT	**Hockley**	**53.33**	**331**	*e*P	**P**	**00 22 24.1**	**-0.4**
	comp=Z,8.4nm,1.3s,mb4.5						
NATX	**Nacogdoches**	**54.35**	**333**	*e*P	**P**	**00 22 33.3**	**+1.3**
	comp=Z,48nm,1.1s,mb5.3						
OXF	**Oxford**	**54.82**	**340**	*e*P	**P**	**00 22 34.4**	**-0.9**
OXF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
OXF	**Oxford**	**54.82**	**340**	*e*P	**P**	**00 22 34.4**	**-0.9**
	comp=Z,9.4nm,0.8s,mb4.9						
PLAL	**Pickwick Lake**	**54.83**	**341**	*e*P	**P**	**00 22 34.4**	**-1.0**
JCT	**Junction City**	**55.68**	**328**	*e*P	**P**	**00 22 40.9**	**-0.7**
JCT				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
JCT	**Junction City**	**55.68**	**328**	*e*P	**P**	**00 22 40.9**	**-0.7**
	comp=Z,24nm,0.9s,mb5.2						
WVT	**Waverly**	**55.82**	**342**	*e*P	**P**	**00 22 40.3**	**-2.2**
UALR	**University of**	**56.08**	**337**	*e*P	**P**	**00 22 43.1**	**-1.2**
	comp=Z,43nm,1.4s,mb5.3						
MIAR	**Mount Ida**	**56.34**	**336**	*e*P	**P**	**00 22 45.2**	**-1.0**
MIAR				pmax	pmax		
	comp=Z,34nm,1.4s,mb5.2						
MIAR	**Mount Ida**	**56.34**	**336**	*e*P	**P**	**00 22 45.2**	**-1.0**
	comp=Z,34nm,1.4s,mb5.2						
SIUC	**Southern Illin**	**57.70**	**342**	*e*P	**P**	**00 22 54.8**	**-1.0**
FVM	**French Village**	**58.32**	**341**	*e*P	**P**	**00 22 58.8**	**-1.4**
FVM				pmax	pmax		
	comp=Z,58nm,1.3s,mb5.5						
FVM	**French Village**	**58.32**	**341**	*e*P	**P**	**00 22 58.8**	**-1.3**
	comp=Z,58nm,1.3s,mb5.5						
WMOK	**Wichita Mounta**	**58.69**	**332**	*e*P	**P**	**00 23 01.7**	**-1.1**
RKT	**Rikitea**	**61.34**	**253**	*e*S	**S**	**00 31 42.2**	**+1.0**
	comp=Z,930nm,27.2s						
RKT				*e*LR	LR	00 41 26.0	
	comp=Z,678nm,29.5s						
KSU1	**Kansas State U**	**61.50**	**336**	*e*P	**P**	**00 23 21.6**	**-0.3**
VNA3	**Neumayer Olymp**	**64.30**	**162**	*e*P	**P**	**00 23 40.0**	**-0.2**
VNA3				*e*		00 23 49.1	
SDCO	**Great Sand Dun**	**64.31**	**329**	*e*P	**P**	**00 23 35.7**	**-5.1**
VNA1	**Neumayer--Stat**	**64.49**	**161**	*e*P	**P**	**00 23 42.0**	**+0.5**
VNA1				*e*		00 23 50.6	
VNA2	**Neumayer--Watz**	**64.86**	**161**	*e*P	**P**	**00 23 43.6**	**-0.3**
VNA2				*e*		00 23 52.8	
ECSD	**EROS,Sioux Fal**	**65.54**	**339**	*e*P	**P**	**00 23 47.4**	**-1.2**
SNAA	**Sanae**	**66.50**	**162**	*e*P	**P**	**00 23 53.4**	**-1.0**
SNAA				*e*		00 24 03.6	
SNAA				*e*		00 24 09.0	
SNAA	**Sanae**	**66.50**	**162**	*e*P	**P**	**00 23 54.2**	**-0.2**
PV10	**Paradox Valley**	**66.59**	**327**	*e*P	**P**	**00 23 54.4**	**-1.1**
PHWY	**Pilot Hill**	**67.08**	**331**	*e*P	**P**	**00 23 58.9**	**+0.4**
	comp=Z,4.3nm,0.9s,mb4.5						
LIC	**Lamto**	**67.77**	**76**	*e*P	**P**	**00 24 04.2**	**+0.7**
	comp=Z,34nm,1.0s,mb5.0						
LIC	**Lamto**	**67.77**	**76**	*e*P	**P**	**00 24 04.2**	**+0.7**
	comp=Z,17nm,1.0s,mb5.0						
DBIC	**Dimbokro**	**68.09**	**75**	P	**P**	**00 24 05.6**	**+0.1**
	comp=Z,18nm,0.9s,mb5.1,baz=242,slow=5.4,SNR=13						
DBIC	**Dimbokro**	**68.09**	**75**	*e*P	**P**	**00 24 06.8**	**+1.3**
DBIC				pmax	pmax		
	comp=Z,20nm,0.8s						
DBIC	**Dimbokro**	**68.09**	**75**	*e*P	**P**	**00 24 06.8**	**+1.3**
	comp=Z,20nm,0.8s,mb5.2						
RWWY	**Rawlins**	**68.20**	**330**	*e*P	**P**	**00 24 04.8**	**-0.8**
	comp=Z,32nm,1.5s,mb5.1						
RSSD	**Black Hills**	**68.72**	**334**	*e*P	**P**	**00 24 09.3**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
RSSD	**Black Hills**	**68.72**	**334**	*e*P	**P**	**00 24 09.3**	**+0.5**
	comp=Z,9.3nm,1.3s,mb4.5						
TAOE	**Nuku Hiva Isla**	**69.06**	**267**	*e*LR	LR	00 45 09.6	
	comp=Z,2μm,30.9s						
AGMN	**Agassiz Refuge**	**69.34**	**342**	*e*P	**P**	**00 24 11.3**	**-1.3**
PDAR	**Pinedale Array**	**70.15**	**330**	P	**P**	**00 24 15.8**	**-1.9**
	comp=Z,1.4nm,0.4s,mb4.3,baz=113,slow=3.4,SNR=9.5						
PDAR				LR	LR	00 56 03.6	
	comp=Z,202nm,18.0s,MS4.4,baz=140,slow=37						
BW06	**Boulder Array**	**70.15**	**330**	*e*P	**P**	**00 24 16.6**	**-1.0**
MAIT	**Maitri**	**70.99**	**160**	*e*P	**P**	**00 24 22.1**	**-0.3**
ULM	**Lac du Bonnet**	**71.08**	**342**	P	**P**	**00 24 21.1**	**-2.0**
	comp=Z,13nm,0.9s,mb4.8,baz=158,slow=6.4,SNR=9.6						
ULM				LR	LR	00 56 21.6	
	comp=Z,204nm,18.1s,MS4.4,baz=55,slow=36						
REDW	**Red Top Meadow**	**71.22**	**329**	*e*P	**P**	**00 24 24.6**	**+0.5**
SNOW	**Snow King Moun**	**71.25**	**330**	*e*P	**P**	**00 24 23.9**	**-0.5**
	comp=Z,149nm,1.7s,mb5.6						
LOHW	**Long Hollow**	**71.29**	**330**	*e*P	**P**	**00 24 24.9**	**+0.4**
TPAW	**Teton Pass**	**71.36**	**329**	*e*P	**P**	**00 24 25.0**	**0.0**
	comp=Z,46nm,1.6s,mb5.2						
RRI2	**Red Ridge**	**71.44**	**329**	*e*P	**P**	**00 24 25.4**	**-0.1**
	comp=Z,54nm,1.1s,mb5.4						
MOOW	**Moose Ponds**	**71.46**	**330**	*e*P	**P**	**00 24 25.6**	**0.0**
	comp=Z,34nm,1.3s,mb5.1						
J16A	**Bone**	**71.53**	**329**	⇑P	**P**	**00 24 26.9**	**+0.8**
	baz=72,SNR=15						
IMW	**Indian Meadow**	**71.66**	**330**	*e*P	**P**	**00 24 26.8**	**0.0**
	comp=Z,58nm,1.3s,mb5.3						
FLWY	**Flagg Ranch**	**71.69**	**330**	*e*P	**P**	**00 24 27.8**	**+0.9**
LAO	**LASA Array**	**71.70**	**334**	*e*P	**P**	**00 24 26.8**	**-0.3**
RLMT	**Red Lodge**	**71.80**	**332**	*e*P	**P**	**00 24 27.4**	**-0.3**
	comp=Z,12nm,1.4s,mb4.6						
I16A	**Newdale**	**71.91**	**329**	⇓P	**P**	**00 24 29.2**	**+0.9**
	baz=72,SNR=19						
J15A	**Blackfoot**	**72.03**	**329**	⇑P	**P**	**00 24 29.6**	**+0.6**
	baz=72,SNR=17						
H16A	**Russell Place,**	**72.41**	**330**	⇑P	**P**	**00 24 32.4**	**+1.1**
	baz=73						
Q07A	**Schurz**	**72.44**	**322**	⇑P	**P**	**00 24 32.0**	**+0.4**
	baz=73						
I15A	**Monteview**	**72.49**	**329**	⇑P	**P**	**00 24 32.9**	**+1.1**
	baz=73						
GCMT	**Greycliff**	**72.50**	**332**	*e*P	**P**	**00 24 31.6**	**-0.2**
QLMT	**Earthquake Lak**	**72.59**	**330**	*e*P	**P**	**00 24 33.5**	**+1.1**
I14A	**Mackay**	**72.92**	**328**	⇓P	**P**	**00 24 35.7**	**+1.3**
	baz=73,SNR=7.1						
H15A	**Lima**	**73.02**	**329**	⇑P	**P**	**00 24 35.5**	**+0.6**
	baz=73						
HLID	**Hailey**	**73.15**	**328**	⇓P	**P**	**00 24 35.6**	**-0.1**
	baz=73,SNR=16						
HLID	**Hailey**	**73.15**	**328**	*e*P	**P**	**00 24 36.5**	**+0.8**
	comp=Z,29nm,1.3s,mb5.0						
MCMT	**McKenzie Canyo**	**73.27**	**329**	*e*P	**P**	**00 24 37.2**	**+0.8**
BOZ	**Bozeman (W)**	**73.29**	**331**	*e*P	**P**	**00 24 36.2**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
BOZ	**Bozeman (W)**	**73.29**	**331**	*e*P	**P**	**00 24 36.2**	**-0.3**
	comp=Z,10nm,1.4s,mb4.6						
G15A	**Dillon**	**73.35**	**330**	⇓P	**P**	**00 24 38.0**	**+1.1**
	baz=74,SNR=14						
H14A	**Leadore**	**73.38**	**329**	⇑P	**P**	**00 24 37.7**	**+0.7**
	baz=74,SNR=6.3						
MFID	**Camas Ranch**	**73.78**	**327**	⇓P	**P**	**00 24 39.5**	**+0.1**
	baz=74,SNR=15						
H13A	**Challis**	**73.78**	**328**	⇑P	**P**	**00 24 40.3**	**+0.9**
	baz=74,SNR=9.0						
F15A	**Butte**	**73.84**	**330**	⇓P	**P**	**00 24 40.4**	**+0.6**
	baz=74						
G13A	**Cobalt**	**74.15**	**329**	⇓P	**P**	**00 24 42.4**	**+0.8**
	baz=74						
EGMT	**Eagleton**	**74.24**	**333**	*e*P	**P**	**00 24 42.2**	**+0.2**
E15A	**Deer Lodge**	**74.34**	**331**	⇑P	**P**	**00 24 42.5**	**-0.1**
	baz=74						
F13A	**Darby**	**74.69**	**329**	⇑P	**P**	**00 24 45.6**	**+1.0**
	baz=75,SNR=13						
E14A	**Clinton**	**74.74**	**330**	⇓P	**P**	**00 24 45.3**	**+0.4**
	baz=75,SNR=8.3						
D15A	**Lincoln**	**74.74**	**331**	⇓P	**P**	**00 24 45.2**	**+0.3**
	baz=75,SNR=5.7						
CHMT	**Chamberlain Mo**	**74.99**	**331**	*e*P	**P**	**00 24 47.4**	**+1.0**
E13A	**Victor**	**75.09**	**330**	⇓P	**P**	**00 24 48.1**	**+1.1**
	baz=75,SNR=8.8						
F12A	**Elk City**	**75.12**	**329**	⇓P	**P**	**00 24 47.3**	**+0.1**
	baz=75,SNR=5.8						
D14A	**Greenough**	**75.23**	**331**	⇑P	**P**	**00 24 48.1**	**+0.4**
	baz=75						
MSO	**Missoula**	**75.25**	**330**	*e*P	**P**	**00 24 48.4**	**+0.5**
	comp=Z,15nm,1.5s,mb4.7						
C15A	**Salmond Ranch,**	**75.32**	**332**	⇓P	**P**	**00 24 48.9**	**+0.7**
	baz=76						
G11A	**Walters Elk Ra**	**75.38**	**328**	⇓P	**P**	**00 24 49.1**	**+0.4**
	baz=76,SNR=12						
BMO	**Blue Mountains**	**75.54**	**327**	*e*P	**P**	**00 24 49.5**	**-0.1**
BMO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
BMO	**Blue Mountains**	**75.54**	**327**	*e*P	**P**	**00 24 49.5**	**-0.1**
	comp=Z,3.2nm,0.7s,mb4.4						
I08A	**Drewsey**	**75.57**	**326**	⇓P	**P**	**00 24 49.9**	**0.0**
	baz=76						
H09A	**Durkee**	**75.60**	**327**	⇑P	**P**	**00 24 50.8**	**+0.8**
	baz=76						
F11A	**Grangeville**	**75.67**	**328**	⇓P	**P**	**00 24 50.2**	**-0.1**
	baz=76,SNR=9.6						
D13A	**Huson**	**75.69**	**330**	⇓P	**P**	**00 24 50.8**	**+0.4**
	baz=76						
E12A	**Beaver Dam Sad**	**75.74**	**329**	⇑P	**P**	**00 24 51.2**	**+0.4**
	baz=76						
G10A	**Bishop Farm, J**	**75.74**	**327**	⇑P	**P**	**00 24 51.8**	**+1.0**
	baz=76,SNR=15						
KCPM	**Cahto Peak**	**75.80**	**320**	*e*P	**P**	**00 24 46.0**	**-5.2**
PPT	**Papeete**	**75.83**	**256**	*e*S	S	00 34 34.7	+1.1
	comp=Z,194nm,25.2s						
C14A	**Swan Lake**	**75.84**	**331**	⇑P	**P**	**00 24 51.8**	**+0.6**
	baz=76,SNR=5.5						
E11A	**Bogner Ranch,**	**76.02**	**329**	⇑P	**P**	**00 24 53.1**	**+0.8**

baz=76
H08A Prairie City 76.03 326 ⇑P P 00 24 53.4 +1.0
baz=76
G09A Cove 76.08 327 ⇑P P 00 24 53.2 +0.6
baz=76,SNR=12
D12A Red Ives Fores 76.09 330 ⇑P P 00 24 52.8 +0.1
baz=76
C13A Hot Springs 76.16 330 ⇓P P 00 24 53.3 +0.2
baz=76,SNR=6.2
HOG Hogback Mounta 76.25 323 P P 00 24 53.6 -0.1
F09A S2 Ranch, Elgi 76.43 327 ⇓P P 00 24 55.7 +1.0
baz=77
TORD Torodi Ar. Bea 76.45 71 P P 00 24 56.2 +0.7
comp=Z,37nm,1.1s,mb5.2,baz=255,slow=3.7,SNR=90
TORD LR LR 00 57 17.3
comp=Z,602nm,18.2s,MS5.0,baz=250,slow=34
TORD Torodi Ar. Bea 76.45 71 P P 00 24 56.2 +0.7
TORD LR LR 00 57 17.3
I06A Prineville 76.49 325 ⇓P P 00 24 55.9 +0.8
baz=77
YBH Yreka Blue Hor 76.52 322 P P 00 24 53.9 -1.3
comp=Z,5.0nm,0.7s,mb4.6,baz=185,slow=5.5,SNR=11
YBH Yreka Blue Hor 76.52 322 *e*P P 00 24 54.6 -0.6
E10A Myers Farm, Un 76.56 328 ⇓P P 00 24 55.0 -0.4
baz=77
D11A Klaveano Farm, 76.56 329 ⇓P P 00 24 55.6 +0.2
baz=77,SNR=6.0
KHMM Horse Mountain 76.60 321 *e*P P 00 24 57.3 +1.5
B13A Whitefish 76.61 331 ⇑P P 00 24 56.0 +0.3
baz=77
KTRM Thompson Ridge 77.02 322 P P 00 24 58.8 +0.7
VIPM Ingram Point 77.08 325 P P 00 24 59.5 +1.1
HUMO Hull Mountain 77.20 323 *e*P P 00 24 58.9 -0.1
comp=Z,3.4nm,1.0s,mb4.2
CROR Criterion Ridg 77.59 325 P P 00 25 02.6 +1.4
HAWA Hanford 77.73 327 *e*P P 00 25 02.6 +0.6
comp=Z,7.6nm,1.0s,mb4.6
RSW Rattlesnake Hi 77.76 327 *e*P P 00 25 02.4 +0.2
OD2 Odessa Site #2 77.98 328 P P 00 25 04.0 +0.7
FCC Fort Churchill 78.35 347 *e*P P 00 25 04.9 -0.2
FCC pmax pmax
comp=Z,62nm,1.3s,mb5.4
FCC Fort Churchill 78.35 347 *e*P P 00 25 04.9 -0.2
comp=Z,62nm,1.3s,mb5.4
WTV Waterville 78.81 328 P P 00 25 08.6 +0.7
ETW Entiat 78.94 328 *e*P P 00 25 09.0 +0.4
LON Longmire 79.16 326 *e*P P 00 25 09.8 0.0
LON pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
LON Longmire 79.16 326 *e*P P 00 25 09.8 0.0
comp=Z,8.0nm,1.3s,mb4.5
EDM Edmonton 79.67 335 *e*P P 00 25 11.2 -1.3
EGRO El Granado 79.71 46 P P 00 25 15.1 +2.0
comp=Z,39nm,2.1s,mb5.0
EVO Evora 79.87 44 *e*P P 00 25 12.5 -1.4
comp=Z,35nm,1.5s,mb4.8
EVO *e*MLR MLR
comp=Z,606nm,22.0s,MS4.6
SBA Scott Base 79.94 190 *e*P P 00 25 14.2 +0.5
SBA pmax pmax
comp=Z,30nm,1.8s,mb4.9
SBA Scott Base 79.94 190 *e*P P 00 25 14.2 +0.5
comp=Z,30nm,1.8s,mb4.9
RPW Rockport 80.09 328 *e*P P 00 25 14.0 -0.9
JCW Jim Creek 80.14 327 *e*P P 00 25 15.0 -0.2
EMIN Mina Concepcio 80.39 46 P P 00 25 17.2 +0.5
comp=Z,24nm,1.3s,mb5.0
ESPR Espera 80.50 47 P P 00 25 18.0 +0.6
comp=Z,43nm,1.9s,mb5.0
EBAD Badajoz 80.66 45 P P 00 25 19.5 +1.4
comp=Z,24nm,1.4s,mb4.9
NLWA Neilton Lookou 80.66 326 *e*P P 00 25 19.0 +1.1
comp=Z,19nm,1.4s,mb4.8
SYO Syowa Base 80.69 160⇑ *e*P P 00 25 16.4 -1.5
SYO Syowa Base 80.69 160⇑ *e*pP pP 00 25 29.4 +4.8
EMIJ Mijas 81.11 47 P P 00 25 21.5 +0.9
comp=Z,23nm,1.3s,mb5.0
TSUM Tsumeb 81.80 108 *e*P P 00 25 26.2 +1.4
comp=Z,8.9nm,1.1s,mb4.6
ELOJ Sierra Loja 81.83 47 P P 00 25 26.3 +1.9
ELOJ pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
ELOJ Sierra Loja 81.83 47 P P 00 25 26.2 +1.8
comp=Z,9.5nm,1.1s,mb4.6
EBER Berja 82.60 48 P P 00 25 29.0 +0.6
comp=Z,79nm,1.8s,mb5.4
PAB San Pablo 82.85 45 *e*P P 00 25 31.0 +1.3
PAB pmax pmax
comp=Z,11nm,1.1s,mb4.8
PAB San Pablo 82.85 45 *e*P P 00 25 31.0 +1.3
comp=Z,11nm,1.1s,mb4.8
EQES Quesada 82.89 47 P P 00 25 30.6 +0.6
comp=Z,80nm,2.9s,mb5.2
ESDC Sonseca Array 83.17 45 P P 00 25 32.7 +1.4
comp=Z,5.4nm,0.9s,mb4.6,baz=243,slow=5.6,SNR=27
ESDC Sonseca Array 83.17 45 P P 00 25 32.6 +1.2
comp=Z,12nm,1.0s,mb4.9
EHUE Huescar 83.23 47 P P 00 25 32.2 +0.5
EHUE pmax pmax
comp=Z,18nm,1.3s,mb4.9
EHUE Huescar 83.23 47 P P 00 25 32.2 +0.4
comp=Z,18nm,1.3s,mb5.0
TAM Tamanrasset 83.38 64 *e*P P 00 25 34.9 +2.0
GUD Guadarrama 83.51 44 P P 00 25 34.1 +1.0
GUD pmax pmax
comp=Z,14nm,1.2s,mb5.0
GUD Guadarrama 83.51 44 P P 00 25 34.1 +1.0
comp=Z,14nm,1.2s,mb5.0
EVIA Vianos 83.68 46 P P 00 25 35.4 +1.4
EVIA pmax pmax
comp=Z,18nm,1.1s,mb5.1
EVIA Vianos 83.68 46 P P 00 25 35.4 +1.3
comp=Z,18nm,1.1s,mb5.1
ETOB Tobarra 84.34 47 P P 00 25 38.2 +0.8
comp=Z,47nm,1.5s,mb5.4
ETOR Torete 85.00 45 P P 00 25 41.9 +1.3
ETOR pmax pmax
comp=Z,21nm,1.1s,mb5.2
ETOR Torete 85.00 45 P P 00 25 41.9 +1.2
comp=Z,21nm,1.1s,mb5.2
ECHE Chera 85.18 46 P P 00 25 43.4 +1.8
ECHE pmax pmax
comp=Z,18nm,1.3s,mb5.0
ECHE Chera 85.18 46 P P 00 25 43.4 +1.8
comp=Z,18nm,1.3s,mb5.0
BOSA Boshof 85.94 119 LR LR 00 59 24.6
comp=Z,329nm,20.2s,MS4.7,baz=267,slow=32
SJPF Ste Jean 86.60 43 *e*P P 00 25 48.6 0.0
comp=Z,51nm,1.5s,mb5.2
SJPF Ste Jean 86.60 43 *e*P P 00 25 48.6 0.0
SJPF pmax pmax
comp=Z,26nm,1.5s,mb5.2
SJPF Ste Jean 86.60 43 *e*P P 00 25 48.6 0.0
comp=Z,26nm,1.5s,mb5.2
ETSF Etsaut 86.94 43 *e*P P 00 25 50.3 +0.1
comp=Z,37nm,1.4s,mb5.1
ETSF Etsaut 86.94 43 *e*P P 00 25 50.3 +0.1
ETSF pmax pmax
comp=Z,18nm,1.4s,mb5.1
ETSF Etsaut 86.94 43 *e*P P 00 25 50.3 +0.1
comp=Z,18nm,1.4s,mb5.1
YKA Yellowknife Ar 86.98 341 P P 00 25 49.3 -0.6
comp=Z,7.7nm,0.9s,mb4.9,baz=134,slow=5.2,SNR=16
YKA Yellowknife Ar 86.98 341 P P 00 25 49.3 -0.6
EBIE Bielsa 87.31 44 P P 00 25 52.8 +0.8
comp=Z,27nm,1.9s,mb5.2
EPF Esparros 87.59 44 *e*P P 00 25 53.2 -0.2
comp=Z,24nm,1.3s,mb5.0
EPF Esparros 87.59 44 *e*P P 00 25 53.2 -0.2
EPF pmax pmax
comp=Z,12nm,1.3s,mb5.0
EPF Esparros 87.59 44 *e*P P 00 25 53.2 -0.2
comp=Z,12nm,1.3s,mb5.0
QUIF Quistinic 87.66 38 *e*P P 00 25 52.2 -1.3
ROSF Rostrenen 87.80 38 *e*P P 00 25 52.9 -1.3
comp=Z,18nm,1.0s,mb5.0
ROSF Rostrenen 87.80 38 *e*P P 00 25 52.9 -1.3
ROSF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
ROSF Rostrenen 87.80 38 *e*P P 00 25 52.9 -1.3
comp=Z,9.1nm,1.0s,mb5.0
SGMF Saint Gilles 88.18 38 *e*P P 00 25 55.6 -0.4
comp=Z,34nm,1.3s,mb5.1
SGMF Saint Gilles 88.18 38 *e*P P 00 25 55.6 -0.4
SGMF pmax pmax
comp=Z,17nm,1.3s,mb5.1
SGMF Saint Gilles 88.18 38 *e*P P 00 25 55.6 -0.4
comp=Z,17nm,1.3s,mb5.1
MAW Mawson 88.58 164 P P 00 25 57.7 0.0
comp=Z,4.2nm,0.9s,mb4.8,baz=227,slow=4.5,SNR=10
LFF La Frestale 88.69 42 *e*P P 00 25 57.7 -0.8
comp=Z,28nm,1.1s,mb5.2
LFF La Frestale 88.69 42 *e*P P 00 25 57.7 -0.8
LFF pmax pmax
comp=Z,14nm,1.1s,mb5.2
LFF La Frestale 88.69 42 *e*P P 00 25 57.7 -0.8
comp=Z,14nm,1.1s,mb5.2
MFF Saint Martin d 88.86 40 *e*P P 00 25 58.3 -1.0
comp=Z,21nm,1.1s,mb5.1
MFF Saint Martin d 88.86 40 *e*P P 00 25 58.3 -1.0
MFF pmax pmax
comp=Z,11nm,1.1s,mb5.1
MFF Saint Martin d 88.86 40 *e*P P 00 25 58.3 -1.0
comp=Z,11nm,1.1s,mb5.1
MTLF Montolieu 88.96 44⇑ *i*P P 00 25 59.0 -0.9
comp=Z,28nm,1.1s,mb5.2
MTLF Montolieu 88.96 44⇑ *i*P P 00 25 59.0 -0.9
MTLF pmax pmax
comp=Z,14nm,1.1s,mb5.2
MTLF Montolieu 88.96 44⇑ *i*P P 00 25 59.0 -0.9
comp=Z,14nm,1.1s,mb5.2
GRR Gorron 89.24 38 *e*P P 00 25 59.3 -1.7
comp=Z,67nm,1.4s,mb5.5
GRR Gorron 89.24 38 *e*P P 00 25 59.3 -1.7
GRR pmax pmax
comp=Z,34nm,1.4s,mb5.5
GRR Gorron 89.24 38 *e*P P 00 25 59.3 -1.7
comp=Z,34nm,1.4s,mb5.5
RJF Les Rejaudoux 89.34 42 *e*P P 00 26 00.5 -1.1
comp=Z,32nm,1.2s,mb5.2
RJF *e*MLR MLR
comp=Z,358nm,17.8s,MS4.5
RJF Les Rejaudoux 89.34 42 *e*P P 00 26 00.5 -1.1
RJF pmax pmax
comp=Z,16nm,1.2s,mb5.2
RJF MLR MLR
comp=Z,360nm,17.8s,MS4.8
RJF Les Rejaudoux 89.34 42 *e*P P 00 26 00.5 -1.1
comp=Z,16nm,1.2s,mb5.2
RJF LR LR
comp=Z,360nm,17.8s,MS4.8
CAF Calvac 89.53 42 *e*P P 00 26 01.7 -0.8
comp=Z,18nm,1.1s,mb5.0
CAF Calvac 89.53 42 *e*P P 00 26 01.7 -0.8
CAF pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
CAF Calvac 89.53 42 *e*P P 00 26 01.7 -0.8
comp=Z,9.3nm,1.1s,mb5.0
FLN La Foliniere 89.63 38 *e*P P 00 26 02.7 -0.2
comp=Z,45nm,1.3s,mb5.3
FLN *e*MLR MLR
comp=Z,575nm,21.2s,MS4.7
FLN La Foliniere 89.63 38 *e*P P 00 26 02.7 -0.2
FLN pmax pmax
comp=Z,22nm,1.3s,mb5.3
FLN MLR MLR
comp=Z,570nm,21.3s,MS5.0
FLN La Foliniere 89.63 38 *e*P P 00 26 02.7 -0.2
comp=Z,22nm,1.3s,mb5.3
FLN LR LR
comp=Z,570nm,21.3s,MS5.0
LDF La Druitiere 89.77 38 *e*P P 00 26 02.1 -1.4
comp=Z,28nm,1.2s,mb5.2
LDF La Druitiere 89.77 38 *e*P P 00 26 02.1 -1.4
LDF pmax pmax
comp=Z,14nm,1.2s,mb5.2
LDF La Druitiere 89.77 38 *e*P P 00 26 02.1 -1.4
comp=Z,14nm,1.2s,mb5.2
DLBC Dease Lake 90.17 333 P P 00 26 05.0 -0.1
baz=110,slow=3.3
DLBC Dease Lake 90.17 333 *e*P P 00 26 05.1 -0.1
TCF Toulx Ste Croi 90.20 41 *e*P P 00 26 04.2 -1.4
comp=Z,21nm,1.3s,mb5.0
TCF Toulx Ste Croi 90.20 41 *e*P P 00 26 04.2 -1.4
TCF pmax pmax
comp=Z,10.0nm,1.3s,mb5.0
TCF Toulx Ste Croi 90.20 41 *e*P P 00 26 04.2 -1.4
comp=Z,10nm,1.3s,mb5.0
LASF Ste Croix 90.35 44 *e*P P 00 26 05.8 -0.5
comp=Z,19nm,1.1s,mb5.0
BGF Bois d'Agland 90.71 41 *e*P P 00 26 06.8 -1.1
comp=Z,11nm,1.0s,mb4.8
BGF Bois d'Agland 90.71 41 *e*P P 00 26 06.8 -1.1
BGF pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
BGF Bois d'Agland 90.71 41 *e*P P 00 26 06.8 -1.1
comp=Z,5.4nm,1.0s,mb4.8
AVF Avril sur Loir 91.12 41 *e*P P 00 26 08.6 -1.3
comp=Z,14nm,1.3s,mb4.8
AVF Avril sur Loir 91.12 41 *e*P P 00 26 08.6 -1.3
AVF pmax pmax
comp=Z,7.0nm,1.3s,mb4.8
AVF Avril sur Loir 91.12 41 *e*P P 00 26 08.6 -1.3
comp=Z,7.2nm,1.3s,mb4.8
KEST Kesra 91.15 53 P P 00 26 11.8 +1.5
comp=Z,2.6nm,0.9s,mb4.6,baz=277,slow=8.8,SNR=8.7
VIVF Saint-Julien-l 91.19 43 *e*P P 00 26 09.9 -0.3
comp=Z,34nm,1.2s,mb5.2
VIVF Saint-Julien-l 91.19 43 *e*P P 00 26 09.9 -0.3
VIVF pmax pmax
comp=Z,17nm,1.2s,mb5.2
VIVF Saint-Julien-l 91.19 43 *e*P P 00 26 09.9 -0.3
comp=Z,17nm,1.2s,mb5.2
SSF Saint Saulge 91.33 41 *e*P P 00 26 09.2 -1.6
comp=Z,9.3nm,1.2s,mb4.7
SSF Saint Saulge 91.33 41 *e*P P 00 26 09.2 -1.6
SSF pmax pmax
comp=Z,5.0nm,1.2s,mb4.7
SSF Saint Saulge 91.33 41 *e*P P 00 26 09.2 -1.6
comp=Z,4.7nm,1.2s,mb4.7
SMF Signal de Mont 91.37 41 *e*P P 00 26 09.9 -1.1
comp=Z,14nm,1.0s,mb5.0
SMF Signal de Mont 91.37 41 *e*P P 00 26 09.9 -1.1
SMF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
SMF Signal de Mont 91.37 41 *e*P P 00 26 09.9 -1.1
comp=Z,7.3nm,1.0s,mb5.0
SMRF Simiane la Rot 91.45 44 *e*P P 00 26 10.7 -0.7
comp=Z,40nm,1.3s,mb5.3
SMRF Simiane la Rot 91.45 44 *e*P P 00 26 10.7 -0.7
comp=Z,40nm,1.3s,mb5.6
LOR Lormes 91.63 41 *e*P P 00 26 10.1 -2.1
LOR *e*MLR MLR
comp=Z,506nm,20.2s,MS4.7
LOR Lormes 91.63 41 *e*P P 00 26 10.1 -2.1
LOR LR LR
comp=Z,510nm,20.3s,MS5.0
LMR La Mourre 91.83 45 *e*P P 00 26 12.6 -0.7
comp=Z,80nm,1.7s,mb5.5
LMR La Mourre 91.83 45 *e*P P 00 26 12.6 -0.7
LMR pmax pmax
comp=Z,40nm,1.7s,mb5.5
LMR La Mourre 91.83 45 *e*P P 00 26 12.6 -0.7
comp=Z,40nm,1.7s,mb5.5
SUMG Summit 91.92 9 *e*P P 00 26 14.0 +1.0
comp=Z,2.2nm,0.9s,mb4.5
ORIF Oris-en-Rattie 92.01 43 *e*P P 00 26 14.0 0.0
comp=Z,32nm,1.1s,mb5.3
ORIF *e*MLR MLR
comp=Z,371nm,21.8s,MS4.5
ORIF Oris-en-Rattie 92.01 43 *e*P P 00 26 14.0 0.0
ORIF pmax pmax
comp=Z,16nm,1.1s,mb5.3
ORIF Oris-en-Rattie 92.01 43 *e*P P 00 26 14.0 0.0
comp=Z,16nm,1.1s,mb5.3
FRF La Foret Royal 92.01 45 *e*P P 00 26 13.6 -0.5
comp=Z,30nm,1.2s,mb5.2
FRF La Foret Royal 92.01 45 *e*P P 00 26 13.6 -0.5
FRF pmax pmax
comp=Z,15nm,1.2s,mb5.2
FRF La Foret Royal 92.01 45 *e*P P 00 26 13.6 -0.5
comp=Z,15nm,1.2s,mb5.2
MBDF Montbardon 92.53 44 *e*P P 00 26 14.9 -1.5
comp=Z,28nm,1.5s,mb5.2
MBDF Montbardon 92.53 44 *e*P P 00 26 14.9 -1.5
MBDF pmax pmax
comp=Z,14nm,1.5s,mb5.2
MBDF Montbardon 92.53 44 *e*P P 00 26 14.9 -1.5
comp=Z,14nm,1.5s,mb5.2
LSZ Lusaka 92.63 107 LR LR 01 09 19.4
comp=Z,394nm,18.0s,MS4.9,baz=81,slow=36
LSZ Lusaka 92.63 107 *e*P P 00 26 17.8 +0.2
LSZ pmax pmax
comp=Z,4.0nm,1.3s,mb4.7
LSZ Lusaka 92.63 107 *e*P P 00 26 17.8 +0.2
comp=Z,4.0nm,1.3s,mb4.7
SBF Sospel 92.66 45 *e*P P 00 26 16.5 -0.5
CABF La Chapelle 92.78 42 *e*P P 00 26 15.3 -2.3
LPL La Plagne 92.79 43 *e*P P 00 26 17.7 +0.1
comp=Z,25nm,1.2s,mb5.2
LPL La Plagne 92.79 43 *e*P P 00 26 17.7 +0.1
LPL pmax pmax
comp=Z,12nm,1.2s,mb5.2
LPL La Plagne 92.79 43 *e*P P 00 26 17.7 +0.1
comp=Z,12nm,1.2s,mb5.2
LPG La Plagne 92.80 43 *e*P P 00 26 17.9 +0.2
comp=Z,27nm,1.2s,mb5.2
LPG La Plagne 92.80 43 *e*P P 00 26 17.9 +0.2
LPG pmax pmax
comp=Z,13nm,1.2s,mb5.2
LPG La Plagne 92.80 43 *e*P P 00 26 17.9 +0.2
comp=Z,13nm,1.2s,mb5.2
MEZF Maizieres J'vi 92.86 40 *e*P P 00 26 16.5 -1.3
BAIF Baives 92.96 38 *e*P P 00 26 17.0 -1.3
GIVF Givet 93.34 38 *e*P P 00 26 18.8 -1.2
comp=Z,33nm,1.1s,mb5.4
GIVF Givet 93.34 38 *e*P P 00 26 18.8 -1.2
GIVF pmax pmax
comp=Z,16nm,1.1s,mb5.4
GIVF Givet 93.34 38 *e*P P 00 26 18.8 -1.2
comp=Z,16nm,1.1s,mb5.4
HAU Haudompre 93.47 41 *e*P P 00 26 18.3 -2.4
HAU *e*MLR MLR
comp=Z,694nm,17.2s,MS4.9
HAU Haudompre 93.47 41 *e*P P 00 26 18.3 -2.4
HAU LR LR
comp=Z,690nm,17.3s,MS5.2
HINF Hinteralfeld 93.72 41 *e*P P 00 26 20.4 -1.4
CDF Champ du Feu 94.20 41 *e*P P 00 26 22.8 -1.2
comp=Z,23nm,1.5s,mb5.1
CDF Champ du Feu 94.20 41 *e*P P 00 26 22.8 -1.2
CDF pmax pmax
comp=Z,12nm,1.5s,mb5.1
CDF Champ du Feu 94.20 41 *e*P P 00 26 22.8 -1.2
comp=Z,12nm,1.5s,mb5.1
CASY Casey 96.77 180 *e*P P 00 26 34.6 -0.9
comp=Z,3.9nm,1.2s,mb4.7
URZ Urewera 96.77 227 LR LR 01 01 47.4
comp=Z,126nm,18.8s,MS4.4,baz=240,slow=30
GERES GERESS Array B 98.37 42 P P 00 26 43.1 +0.2
comp=Z,0.6nm,0.7s,mb4.2,baz=246,slow=1.3,SNR=7.0
CLL Collm 98.64 39 *e*P P 00 26 41.0 -3.1
CLL MLR MLR
comp=Z,400nm,17.7s,MS5.0
ASAR Alice Springs 133.40 210 PKP PKPdf 00 32 21.0 -1.2
comp=Z,0.8nm,0.8s,baz=138,slow=1.7,SNR=7.8
WRA Warramunga Arr 136.30 213 PKP PKPdf 00 32 27.1 -0.6
comp=Z,1.9nm,0.9s,baz=156,slow=1.5,SNR=9.1
ZALV Zalesovo Beam 138.26 23 PKP PKPdf 00 32 30.4 +0.2
comp=Z,4.9nm,1.0s,baz=270,slow=3.0,SNR=13
ZAL Zalesovo 138.26 23 PKIKP PKPdf 00 32 30.4 +0.2
MKAR Makanchi Array 142.39 32 PKP PKPdf 00 32 34.9 -3.0
comp=Z,0.7nm,0.7s,baz=321,slow=1.7,SNR=5.4
IRK Irkutsk 144.69 7 *e*PKIKP PKPdf 00 32 40.0 -1.7
IRK pmax pmax
comp=Z,66nm,1.9s
MOY Mondy 144.79 10 *e*PKIKP PKPdf 00 32 42.3 +0.4
MOY pmax pmax
comp=Z,50nm,1.6s
TLY Talaya 145.17 8 *i* PKIKP PKPdf 00 32 43.4 +0.8
TLY pmax pmax
comp=Z,63nm,1.6s
TLY Talaya 145.17 8 *e*PKPbc PKPbc 00 32 43.3 +1.2
ZAK Zakamensk 146.39 8 *e*PKP2 PKPab 00 32 45.5 -1.3
ZAK pmax pmax
comp=Z,18nm,1.3s
WMQ Urumqi 147.19 31 PKP PKPdf 00 32 44.6 -1.7
WMQ PKP2 PKPab 00 32 50.0 -0.2
WMQ APKP 00 32 55.0
WMQ XPKP 00 32 59.0
WMQ PP PP 00 36 16.0 +2.9
WMQ PKS 00 36 18.0
WMQ PP PP
comp=Z,136nm,5.2s
WMQ LR LR
comp=N,250nm,26.0s,MS5.0
WMQ LR LR
comp=E,248nm,26.2s,MS5.0
WMQ LR LR
comp=Z,290nm,23.8s,MS5.0
MJAR Matsushiro Arr 148.87 314 PKPbc PKPbc 00 32 52.3 -0.9
comp=Z,3.3nm,0.8s,baz=131,slow=1.4,SNR=9.1
MAJO Matsushiro 148.87 314 *e*PKP2 PKPbc 00 32 53.2 0.0
MAT Matsushiro 148.87 314 *e*PKP PKPdf 00 32 46.8 -2.5
SONM Songino Array 149.26 5 PKPbc PKPbc 00 32 54.0 +0.2
comp=Z,8.2nm,1.0s,baz=334,slow=2.0,SNR=18
ULN Ulaanbaatar 149.29 5 *e*PKP2 PKPbc 00 32 54.3 +0.4
HYB Hyderabad 149.49 85 *i* PKP PKPbc 00 32 56.0 +0.7
HYB Hyderabad 149.49 85 *e*P PKPbc 00 32 56.0 +0.7
CN2 Changchun 150.64 338 *e*PKP PKPdf 00 32 50.9 -0.9
DANN Dangsing 153.00 61 *e*P PKPab 00 33 15.5 +1.0
comp=Z,79nm,1.1s
KOLN Koldanda 153.04 62 *e*P PKPab 00 33 15.1 +0.4
GKN Gorkha 153.84 61 *e*P PKPab 00 33 18.6 +0.5
comp=Z,92nm,1.2s
DMN Daman 154.36 62 *e*P PKPab 00 33 20.9 +0.6
comp=Z,29nm,0.9s
KKN Kakani 154.45 61 *e*P PKPab 00 33 21.3 +0.6
comp=Z,24nm,0.8s
PKIN Phulchoki 154.62 62 *e*P PKPab 00 33 21.8 +0.4
PKI Pulchoki 154.63 62 *e*P PKPab 00 33 21.9 +0.4
KSRS Korea Array 154.68 326 PKPbc PKPbc 00 33 05.8 -0.8
comp=Z,0.6nm,0.5s,baz=90,slow=1.2,SNR=5.1
GUN Gumba 154.91 61 *e*P PKPab 00 33 23.8 +1.1
JIRN Jiri 155.25 61 *e*P PKPab 00 33 24.8 +0.7
RAMN Ramite 155.83 62 *e*P PKPab 00 33 26.7 +0.1
GTA Gaotai 155.99 21 *e*PKP PKPdf 00 33 01.0 +1.3
GTA PKS 00 36 33.8
GTA PP PP 00 37 09.1 +6.0
GTA PP PP
comp=Z,47nm,9.9s
GTA LR LR
comp=N,131nm,17.4s,MS5.0
GTA LR LR
comp=E,131nm,16.2s,MS5.0
GTA LR LR
comp=Z,138nm,14.4s,MS4.9
HHC Hu-ho-hao-te 156.42 358 *e*PKP PKPdf 00 32 52.6 -7.6
HHC APKP 00 33 03.9
HHC XPKP 00 33 07.5
HHC PKS 00 36 25.4
HHC PP PP
comp=Z,58nm,7.8s
HHC LR LR
comp=N,136nm,20.0s,MS4.9
HHC LR LR
comp=E,123nm,20.1s,MS4.9
HHC LR LR
comp=Z,172nm,20.0s,MS4.9
ODAN Odare 156.53 62 *e*P PKPab 00 33 29.9 +0.3
LZH Lanzhou 160.28 16 *e*PKP PKPdf 00 33 04.8 -0.2
LZH APKP 00 33 15.5
LZH XPKP 00 33 21.0
LZH PKP2 PKPab 00 33 46.0 +0.6
LZH PP PP 00 37 32.0 +5.5
LZH PP PP
comp=Z,120nm,5.6s
LZH LR LR
comp=E,180nm,19.5s
LZH LR LR
comp=Z,213nm,20.4s
NJ2 Nanjing 163.41 335 *e*PKP PKPdf 00 33 07.6 -0.8
CD2 Chengdu 165.03 23 *e*PKP PKPdf 00 33 08.5 -1.4
CD2 APKP 00 33 16.5
CD2 XPKP 00 33 22.8
CD2 PKP2 PKPab 00 34 07.9 +1.6
CD2 PP PP 00 37 54.7 +2.9
CD2 SKS SKSdf 00 40 07.0 -6.3
CD2 SKKS SKKSac 00 44 36.6 -3.1
CD2 SS SS 00 58 23.7 -1.3
CD2 PP PP
comp=Z,210nm,10.2s
CD2 LR LR
comp=N,320nm,24.0s
CD2 LR LR
comp=E,410nm,21.6s
CD2 LR LR
comp=Z,160nm,18.8s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CMAR	**Chiang Mai Arr**	**168.89**	**82**	PKP	PKPdf	00 33 14.0	+0.9
	comp=Z,0.7nm,0.4s,baz=343,slow=1.5,SNR=4.8						
CMAR				PKPab	PKPab	00 34 25.1	+1.0
	comp=Z,0.5nm,0.3s,baz=270,slow=4.7,SNR=6.5						
KMI	**Kunming**	**169.28**	**41**	PKP	PKPdf	00 33 11.3	-1.9
KMI				APKP		00 33 21.3	
KMI				XPKP		00 33 25.4	
KMI				PP	PP	00 38 15.0	+0.6
KMI				PP	PP		
	comp=Z,87nm,10.8s						
KMI				LR	LR		
	comp=N,109nm,18.7s						
KMI				LR	LR		
	comp=E,86nm,20.6s						
KMI				LR	LR		
	comp=Z,210nm,33.4s						
KMI	**Kunming**	**169.28**	**41**	PKP	PKPdf	00 33 11.3	-1.9
KMI				pPKP	pPKPdf	00 33 21.3	+1.2
KMI				sPKP		00 33 25.4	
KMI				PP	PP	00 38 15.0	+0.6
KMI				PPP		00 42 18.4	
KMI				SS	SS	00 59 08.2	-1.0
KMI				SSS		01 05 45.2	
GYA	**Guiyang**	**170.12**	**21**	*i* PKP	PKPdf	00 33 11.8	-1.8
GYA				APKP		00 33 23.4	
GYA				XPKP		00 33 27.8	
GYA				PKP2	PKPab	00 34 28.2	-0.7
GYA				PKS		00 36 43.4	
GYA				PP	PP	00 38 19.2	+1.4
GYA				SKS	SKSdf	00 40 09.6	-6.7
GYA				SKKS	SKKSac	00 45 01.3	-3.7
GYA				SS	SS	00 59 13.4	-2.7
GYA				PP	PP		
	comp=Z,180nm,9.4s						
GYA				LR	LR		
	comp=N,1μm,25.8s						
GYA				LR	LR		
	comp=E,1μm,24.6s						
GYA				LR	LR		
	comp=Z,1μm,25.0s						

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*IDC **10** 00:20:15.4±0.5, 2469N×11001W, h0^{km}, mb4.3/9, mb1 4.5/15, mb1mx4.3/25, mbtmp4.4/15, ML3.8/6, MS4.3/22, Ms1 4.3/22, ms1mx4.1/36, Error ellipse: s-maj=16.7km s-min=10.3km az=92.0*

*ISCJB **10** 00:20:16.8±1.5, 2486N±003×10970W±003, h8^{km}±10^{km}, mb4.6/26, MS4.4/18, Error ellipse: s-maj=5.6km s-min=3.5km az=25.4*

*BJI **10** 00:20:18.1, 2522N×10886W, h13^{km}, mB5.5, mb4.9, Ms5.2, Msz4.8*

*GCMT **10** 00:20:18.4±0.4, 2482N×10983W, h21^{km}±1^{km}, MW5.1/73, Moment Tensor Solution. s33,c39; s73,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.15±.21; $M_{\theta\theta}$-4.35±.17; $M_{\phi\phi}$4.51±.21; $M_{r\theta}$-1.19±.31; $M_{\theta\phi}$-3.72±.17; $M_{\phi r}$2.14±.36; Best double couple: $M_0$6.22600×10^{16} NP1:ϕ_s27.00000°, δ73.00000°, λ11.00000°. NP2: ϕ_s294.00000°, δ80.00000°, λ163.00000°. Principal axes: T 6.7170, Plg19.0000°, Azm249.0000°; N -0.9740, Plg70.0000°, Azm83.0000°; P -5.7340, Plg4.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 00:20:18.4±0.3, 2477N×10973W, h10^{km}, mb4.8/33, MD4.8(MEX) Error ellipse: s-maj=5.6km s-min=3.6km az=217.0*

NEIC Felt [IV] at La Paz, Mexico.

*MEX **10** 00:20:26.9±0.8, 2447N×10999W, h10^{km}, MD4.8*

ISC 10 00:20:20.7±0.9**, 2482N**±004**×10970W**±003**, h26**^{km}±6^{km}**, n447, σ0.88**/434**, mb4.6**/26**, MS4.4**/19**, 132C-147D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.91**	**218**	Pn	**Pn**	**00 20 31.7**	**-6.1**
	2μm,0.3s,baz=20,slow=4.3,SNR=804						
LPIG				Sn	**Sn**	**00 20 43.1**	**-6.9**
	15μm,0.3s,baz=128,slow=20,SNR=82						
LPIG	**La Paz**	**0.91**	**218**	*i* P	**Pn**	**00 20 34.9**	**-2.9**
LPIG				*e*S	**Sb**	**00 20 42.9**	**-6.6**
MAIG	**Mazatlaan**	**3.41**	**118**	*i* P	**Pb**	**00 21 18.9**	**-1.5**
MAIG				*e*S	**Sb**	**00 21 59.4**	**-2.0**
HPIG		**4.20**	**59**	*i* P	**Pb**	**00 21 34.7**	**+0.9**
HPIG				*e*S	**Sb**	**00 22 27.5**	**+3.4**
HSIG		**4.33**	**345**	*i* P	**Pb**	**00 21 34.3**	**-1.8**
HSIG				*e*S	**Sb**	**00 22 28.5**	**+0.6**
CGIG		**5.73**	**15**	*i* P	**Pn**	**00 21 48.5**	**+4.4**
CGIG				*e*S	**Sb**	**00 23 18.3**	**+10**
ANIG	**Ahuacatlan**	**6.07**	**127**	*i* P	**Pn**	**00 21 55.8**	**+7.0**
ANIG				*e*S	**Sn**	**00 23 04.9**	**+7.5**
H06E		**6.12**	**191**	*i* P	**Pn**	**00 21 54.0**	**+4.5**
H06E				*e*S	**Sn**	**00 23 14.4**	**+16**
319A	**Douglas**	**6.54**	**3**	⇓P	**Pn**	**00 21 52.3**	**-2.9**
	baz=6.5,SNR=30						
318A	**Bisbee**	**6.60**	**358**	⇑P	**Pn**	**00 21 52.7**	**-3.3**
	baz=6.5,SNR=29						
217A	**Green Valley**	**7.00**	**352**	⇑P	**Pn**	**00 21 58.5**	**-3.0**
	baz=7.0,SNR=29						
TXAR	**Lajitas Array**	**7.00**	**49**	Pn	**Pn**	**00 21 58.2**	**-3.4**
	1.4nm,0.3s,baz=229,slow=13,SNR=59						
TXAR	**Lajitas Array**	**7.00**	**49**	Pn	**Pn**	**00 21 58.2**	**-3.4**
218A	**Dragoon**	**7.13**	**358**	⇑P	**Pn**	**00 22 01.2**	**-2.2**
	baz=7.1,SNR=26						
219A	**White Tail Can**	**7.16**	**3**	⇑P	**Pn**	**00 22 01.4**	**-2.4**
	baz=7.1,SNR=32						
216A	**Three Points,**	**7.32**	**348**	⇓P	**Pn**	**00 22 03.4**	**-2.6**
	baz=7.3,SNR=25						
214A	**Organ Pipe Nat**	**7.62**	**340**	⇑P	**Pn**	**00 22 07.2**	**-2.8**
	baz=7.6,SNR=9.1						
117A	**Oracle**	**7.78**	**353**	⇓P	**Pn**	**00 22 09.8**	**-2.4**
	baz=7.7,SNR=43						
118A	**Homack Ranch,**	**7.79**	**358**	⇑P	**Pn**	**00 22 09.2**	**-3.2**
	baz=7.7,SNR=18						
116A	**Eloy**	**7.91**	**348**	⇑P	**Pn**	**00 22 11.7**	**-2.3**
	baz=7.9,SNR=50						
119A	**Ashpeak Ranch,**	**7.92**	**2**	⇑P	**Pn**	**00 22 11.8**	**-2.4**
	baz=7.9,SNR=22						
115A	**Sonoran Desert**	**8.16**	**345**	⇓P	**Pn**	**00 22 15.0**	**-2.5**
	baz=8.1,SNR=19						
Z19A	**T-Link Ranch,**	**8.45**	**2**	⇓P	**Pn**	**00 22 19.0**	**-2.4**
	baz=8.4						
Z17A	**San Carlos Hig**	**8.47**	**356**	⇑P	**Pn**	**00 22 19.4**	**-2.4**
	baz=8.4						
Z16A	**Peralta Trail,**	**8.62**	**350**	⇓P	**Pn**	**00 22 22.4**	**-1.4**
	baz=8.6,SNR=11						
113A	**Mohawk Valley,**	**8.68**	**337**	⇓P	**Pn**	**00 22 23.7**	**-1.0**
	baz=8.7						
GDL2	**Guadalupe Moun**	**8.72**	**31**	*e*Pn	**Pn**	**00 22 24.3**	**-0.8**
112A	**Yuma**	**8.80**	**332**	⇑P	**Pn**	**00 22 25.2**	**-1.0**
	baz=8.8						
Y17A	**Roosevelt**	**8.90**	**354**	⇑P	**Pn**	**00 22 25.8**	**-1.7**
	baz=8.9,SNR=22						
Y18A	**Canyon Day Jun**	**8.93**	**358**	⇓P	**Pn**	**00 22 26.9**	**-1.1**
	baz=8.9,SNR=46						
Z14A	**Wintersburg**	**8.97**	**342**	⇓P	**Pn**	**00 22 27.8**	**-0.8**
	baz=8.9						
Y19A	**Nutrioso**	**9.11**	**2**	⇑P	**Pn**	**00 22 29.6**	**-0.9**
	baz=9.1,SNR=37						
Y16A	**Circle Bar Ran**	**9.16**	**351**	⇑P	**Pn**	**00 22 30.3**	**-0.9**
	baz=9.1,SNR=29						
GLA	**Glamis**	**9.35**	**332**	⇑P	**Pn**	**00 22 33.3**	**-0.5**
	baz=9.3,SNR=9.7						
GLA	**Glamis**	**9.35**	**332**	*e*Pn	**Pn**	**00 22 33.4**	**-0.3**
Y15A	**Casa Rosa Ranc**	**9.38**	**346**	⇑P	**Pn**	**00 22 33.1**	**-1.2**
	baz=9.4,SNR=12						
Y14A	**Wickenburg**	**9.53**	**343**	⇓P	**Pn**	**00 22 36.2**	**0.0**
	baz=9.5,SNR=12						
X17A	**Forest Lakes**	**9.53**	**354**	⇑P	**Pn**	**00 22 35.9**	**-0.4**
	baz=9.5,SNR=13						
X19A	**St. Johns**	**9.58**	**2**	⇑P	**Pn**	**00 22 36.7**	**-0.2**
	baz=9.5,SNR=20						
LENM	**Lemitar**	**9.61**	**14**	*e*Pn	**Pn**	**00 22 38.1**	**+0.8**
DVTC	**Desert V Tower**	**9.62**	**326**	⇓P	**Pn**	**00 22 37.0**	**-0.4**
	baz=9.6						
Y13A	**Salome**	**9.66**	**339**	⇓P	**Pn**	**00 22 37.8**	**-0.2**
	baz=9.6,SNR=9.2						
BNM	**Barren Site**	**9.67**	**15**	*e*Pn	**Pn**	**00 22 39.3**	**+1.1**
X18A	**Snowflake**	**9.68**	**359**	⇑P	**Pn**	**00 22 37.4**	**-0.9**
	baz=9.6,SNR=17						
X16A	**Lo Mia Camp, P**	**9.68**	**351**	⇑P	**Pn**	**00 22 37.1**	**-1.2**
	baz=9.6,SNR=42						
SWSC	**Sam W. Stewart**	**9.69**	**328**	⇑P	**Pn**	**00 22 37.9**	**-0.6**
	baz=9.7						
LAZ	**Ladron**	**9.80**	**13**	*e*Pn	**Pn**	**00 22 40.8**	**+0.8**
LPM	**Los Pinos Moun**	**9.82**	**15**	*e*Pn	**Pn**	**00 22 41.4**	**+1.1**
Y12C	**Blythe**	**9.84**	**336**	⇓P	**Pn**	**00 22 39.6**	**-0.9**
	baz=9.8						
X15A	**Humboldt**	**9.88**	**348**	⇑P	**Pn**	**00 22 40.4**	**-0.7**
	baz=9.9,SNR=20						
BAR	**Barrett**	**9.93**	**324**	*e*Pn	**Pn**	**00 22 41.6**	**-0.2**
MONP	**Monument Peak**	**9.96**	**325**	⇓P	**Pn**	**00 22 41.9**	**-0.3**
	baz=10.0,SNR=13						
X14A	**Yava**	**10.01**	**345**	⇓P	**Pn**	**00 22 41.5**	**-1.3**
	baz=10.0,SNR=22						
BC3	**Big Chuckw Mtn**	**10.13**	**332**	⇑P	**Pn**	**00 22 44.1**	**-0.4**
	baz=10,SNR=15						
PDMCI	**Parker Dam,Lak**	**10.20**	**339**	⇑P	**Pn**	**00 22 45.7**	**+0.2**
	baz=10,SNR=33						
W19A	**Sanders**	**10.26**	**1**	⇓P	**Pn**	**00 22 45.7**	**-0.5**
	baz=10						
W17A	**Winslow**	**10.26**	**355**	⇑P	**Pn**	**00 22 45.8**	**-0.5**
	baz=10						
W18A	**Petrified Fore**	**10.26**	**360**	⇑P	**Pn**	**00 22 46.0**	**-0.2**
	baz=10						
109C	**Camp Elliot, M**	**10.33**	**323**	⇑P	**Pn**	**00 22 48.2**	**+1.0**
	baz=10						
W16A	**Flagstaff**	**10.36**	**352**	⇑P	**Pn**	**00 22 47.8**	**+0.1**
	baz=10,SNR=11						
X13A	**Yucca**	**10.38**	**341**	⇓P	**Pn**	**00 22 48.2**	**+0.4**
	baz=10,SNR=34						
IRM	**Iron Mountain**	**10.45**	**334**	⇓P	**Pn**	**00 22 49.0**	**+0.2**
	baz=10						
ANMO	**Albuquerque**	**10.48**	**15**	Pn	**Pn**	**00 22 50.3**	**+1.1**
	0.2nm,0.3s,baz=204,slow=13,SNR=16						
ANMO				LR	LR	00 27 37.5	
	comp=Z,568nm,19.3s,baz=185,slow=41						
ANMO	**Albuquerque**	**10.48**	**15**	*e*Pn	**Pn**	**00 22 49.9**	**+0.7**
PFO	**Pinyon Flat Ob**	**10.56**	**328**	Pn	**Pn**	**00 22 49.7**	**-0.6**
	0.2nm,0.3s,baz=154,slow=12,SNR=15						
PFO				LR	LR	00 27 16.6	
	comp=Z,725nm,19.4s,baz=23,slow=40						
PFO	**Pinyon Flat Ob**	**10.56**	**328**	⇑P	**Pn**	**00 22 50.2**	**-0.1**
	baz=10,SNR=15						
PFO	**Pinyon Flat Ob**	**10.56**	**328**	*e*Pn	**Pn**	**00 22 50.2**	**-0.1**
W15A	**Williams**	**10.56**	**348**	⇓P	**Pn**	**00 22 50.3**	**0.0**
	baz=10,SNR=23						
BELC	**Belle Mtn.**	**10.67**	**330**	⇑P	**Pn**	**00 22 51.6**	**-0.2**
	baz=11,SNR=17						
WUAZ	**Wupatki**	**10.76**	**353**	⇓P	**Pn**	**00 22 53.1**	**+0.1**
	baz=11						
WUAZ	**Wupatki**	**10.76**	**353**	*e*Pn	**Pn**	**00 22 52.9**	**-0.1**
W14A	**Seligman**	**10.76**	**345**	⇓P	**Pn**	**00 22 52.9**	**-0.2**
	baz=11,SNR=30						
NEE2	**Needles Airpor**	**10.79**	**338**	⇓P	**Pn**	**00 22 53.8**	**+0.2**
	baz=11						
V18A	**Ganado**	**10.86**	**359**	⇓P	**Pn**	**00 22 54.3**	**-0.1**
	baz=11,SNR=17						
W13A	**Hualapai Mount**	**10.87**	**341**	⇓P	**Pn**	**00 22 55.2**	**+0.7**
	baz=11,SNR=38						
V19A	**Window Rock**	**10.87**	**3**	⇓P	**Pn**	**00 22 54.5**	**-0.1**
	baz=11,SNR=8.0						
MURC	**Murrieta**	**10.93**	**325**	⇓P	**Pn**	**00 22 55.0**	**-0.4**
	baz=11						
V15A	**Kaibab Nationa**	**11.17**	**350**	⇑P	**Pn**	**00 22 58.2**	**-0.4**
	baz=11,SNR=27						
V14A	**Boquillas Ranc**	**11.17**	**346**	⇓P	**Pn**	**00 22 58.4**	**-0.3**
	baz=11,SNR=21						
GMRC	**Granite Mounta**	**11.19**	**334**	⇓P	**Pn**	**00 22 58.8**	**-0.1**
	baz=11						
SCI	**San Clemente I**	**11.23**	**318**	⇓P	**Pn**	**00 22 59.9**	**+0.4**
	baz=11						
LDFC	**Landfair**	**11.24**	**337**	*e*Pn	**Pn**	**00 23 01.9**	**+2.2**
BBRC	**Big Bear Sol-O**	**11.31**	**328**	⇓P	**Pn**	**00 23 01.0**	**+0.4**
	baz=11						
U16A	**Tuba City**	**11.35**	**354**	⇓P	**Pn**	**00 23 00.7**	**-0.5**
	baz=11,SNR=52						
W12A	**Cal Nev Ari**	**11.36**	**338**	⇑P	**Pn**	**00 23 01.0**	**-0.3**
	baz=11						
HEC	**Hector,Ludlow**	**11.51**	**332**	⇑P	**Pn**	**00 23 03.3**	**-0.1**
	baz=12,SNR=9.7						
U18A	**Rough Rock, Ch**	**11.56**	**359**	⇑P	**Pn**	**00 23 03.6**	**-0.5**
	baz=12,SNR=18						
V13A	**Grand Canyon W**	**11.60**	**342**	⇓P	**Pn**	**00 23 04.3**	**-0.2**
	baz=12,SNR=14						
BFSC	**Mount Baldy St**	**11.66**	**325**	⇓P	**Pn**	**00 23 05.3**	**-0.2**
	baz=12						
V12A	**Nelson**	**11.74**	**339**	⇑P	**Pn**	**00 23 07.2**	**+0.7**
	baz=12,SNR=20						
PPM	**Popocatepetl**	**11.76**	**117**	*i* P	**Pn**	**00 23 10.7**	**+3.8**
U17A	**Shonto**	**11.77**	**356**	⇓P	**Pn**	**00 23 06.5**	**-0.4**
	baz=12,SNR=6.3						
U15A	**North Rim**	**11.78**	**350**	⇓P	**Pn**	**00 23 07.5**	**+0.4**
	baz=12,SNR=32						
MWC	**Mount Wilson**	**11.86**	**324**	*e*Pn	**Pn**	**00 23 08.4**	**+0.3**
TUQ	**Turquoise Moun**	**11.87**	**334**	⇓P	**Pn**	**00 23 08.5**	**+0.3**
	baz=12,SNR=12						
U14A	**Mt Trumbull**	**11.94**	**346**	⇓P	**Pn**	**00 23 09.3**	**+0.1**
	baz=12,SNR=16						
T19A	**Beclabito**	**11.98**	**3**	⇑P	**Pn**	**00 23 09.7**	**-0.1**
	baz=12,SNR=21						
SNCC	**San Nicolas Is**	**12.01**	**317**	⇓P	**Pn**	**00 23 10.5**	**+0.3**
	baz=12						
V11A	**Goodsprings**	**12.04**	**337**	⇓P	**Pn**	**00 23 10.8**	**+0.2**
	baz=12,SNR=14						
GSC	**Goldstone**	**12.12**	**331**	⇑P	**Pn**	**00 23 11.8**	**+0.2**
	baz=12,SNR=21						
GSC	**Goldstone**	**12.12**	**331**	*e*Pn	**Pn**	**00 23 11.5**	**-0.2**
U13A	**Pakoon Wash**	**12.12**	**343**	⇓P	**Pn**	**00 23 12.5**	**+0.8**
	baz=12,SNR=14						
T17A	**Navajo Res., N**	**12.17**	**356**	⇑P	**Pn**	**00 23 12.7**	**+0.3**
	baz=12,SNR=16						
T16A	**Glen Canyon Da**	**12.22**	**353**	⇓P	**Pn**	**00 23 13.4**	**+0.3**
	baz=12						
T18A	**Mexican Hat**	**12.28**	**359**	⇑P	**Pn**	**00 23 13.7**	**-0.2**
	baz=12,SNR=23						
U12A	**Valley of Fire**	**12.30**	**341**	⇑P	**Pn**	**00 23 14.4**	**+0.3**
	baz=12						
BLG	**Laguna Peak**	**12.33**	**321**	⇑P	**Pn**	**00 23 15.2**	**+0.6**
	baz=12						
EDW2	**Edwards Air Fo**	**12.33**	**326**	⇑P	**Pn**	**00 23 14.5**	**-0.1**
	baz=12,SNR=12						
T15A	**Red Dirt Ranch**	**12.37**	**350**	⇑P	**Pn**	**00 23 14.7**	**-0.4**
	baz=12,SNR=27						
MVCO	**Mesa Verde**	**12.39**	**4**	⇑P	**Pn**	**00 23 15.1**	**-0.3**
	baz=12						
MVCO	**Mesa Verde**	**12.39**	**4**	*e*Pn	**Pn**	**00 23 15.6**	**+0.2**
SHOC	**Shoshone**	**12.41**	**334**	⇓P	**Pn**	**00 23 15.7**	**0.0**
	baz=12						
OSI	**Osito Adit**	**12.51**	**323**	⇑P	**Pn**	**00 23 17.1**	**0.0**
	baz=12						
T14A	**Hurricane**	**12.54**	**347**	⇓P	**Pn**	**00 23 17.4**	**0.0**
	baz=12,SNR=21						
U11A	**Corn Creek**	**12.55**	**338**	⇓P	**Pn**	**00 23 18.2**	**+0.6**
	baz=12						
SHPR	**Sheep Range**	**12.55**	**339**	*e*Pn	**Pn**	**00 23 18.4**	**+0.8**
BSC	**Santa Cruz Isl**	**12.58**	**319**	⇓P	**Pn**	**00 23 18.2**	**+0.2**
	baz=13						
LRMC	**Laurel Mountai**	**12.66**	**329**	⇑P	**Pn**	**00 23 19.4**	**+0.3**
	baz=13,SNR=30						
T13A	**Saint George**	**12.68**	**344**	⇑P	**Pn**	**00 23 19.9**	**+0.5**
	baz=13,SNR=14						
S17A	**Black Ridge (B**	**12.81**	**356**	⇑P	**Pn**	**00 23 21.1**	**0.0**
	baz=13						
S18A	**Hurst Farm, Bl**	**12.83**	**359**	⇓P	**Pn**	**00 23 21.7**	**+0.3**
	baz=13,SNR=29						
U10A	**Ash Meadows, A**	**12.89**	**335**	⇓P	**Pn**	**00 23 22.8**	**+0.6**
	baz=13,SNR=29						
S19A	**Harvey Farm, M**	**12.89**	**2**	⇑P	**Pn**	**00 23 21.9**	**-0.3**
	baz=13,SNR=14						
ARVC	**Arvin**	**12.96**	**325**	⇓P	**Pn**	**00 23 22.7**	**-0.4**
	baz=13,SNR=22						
S16A	**Weppner Ranch,**	**12.96**	**353**	⇑P	**Pn**	**00 23 23.5**	**+0.3**
	baz=13,SNR=11						
S15A	**Panguitch**	**13.01**	**351**	⇑P	**Pn**	**00 23 23.9**	**0.0**
	baz=13						
MPMC	**Manual Prospec**	**13.06**	**331**	⇓P	**Pn**	**00 23 24.7**	**+0.2**
	baz=13,SNR=33						
FURC	**Furnace Creek,**	**13.14**	**334**	⇑P	**Pn**	**00 23 25.8**	**+0.2**
	baz=13,SNR=34						
ISA	**Isabella**	**13.19**	**327**	⇑P	**Pn**	**00 23 26.1**	**-0.2**
	baz=13,SNR=13						
ISA	**Isabella**	**13.19**	**327**	*e*Pn	**Pn**	**00 23 24.8**	**-1.6**
S13A	**Holt Ranch, En**	**13.21**	**345**	⇓P	**Pn**	**00 23 27.2**	**+0.7**
	baz=13,SNR=8.3						
S14A	**Cedar City**	**13.23**	**348**	⇑P	**Pn**	**00 23 27.5**	**+0.7**
	baz=13,SNR=7.1						
T11A	**Corn Creek, Al**	**13.25**	**340**	⇓P	**Pn**	**00 23 27.7**	**+0.6**
	baz=13,SNR=24						
ARUT	**Antelope Range**	**13.31**	**347**	*e*Pn	**Pn**	**00 23 28.5**	**+0.5**
TPNV	**Topopah Spring**	**13.33**	**337**	⇓P	**Pn**	**00 23 29.1**	**+0.9**
	baz=13						
TPNV	**Topopah Spring**	**13.33**	**337**	*e*Pn	**Pn**	**00 23 29.4**	**+1.3**
PKM	**Peak Mountain**	**13.33**	**321**	⇓P	**Pn**	**00 23 28.4**	**+0.1**
	baz=13						
HKT	**Hockley**	**13.33**	**64**	*e*Pn	**Pn**	**00 23 27.9**	**-0.4**
	79nm,1.5s						
SDCO	**Great Sand Dun**	**13.37**	**15**	*e*Pn	**Pn**	**00 23 30.1**	**+1.3**
	21nm,1.2s						
S12A	**Delamar Landin**	**13.48**	**342**	⇓P	**Pn**	**00 23 30.4**	**+0.1**
	baz=14,SNR=19						
R16A	**Teasdale**	**13.51**	**354**	⇓P	**Pn**	**00 23 30.8**	**+0.1**
	baz=14						
R18A	**Canyonlands Na**	**13.52**	**359**	⇑P	**Pn**	**00 23 30.6**	**-0.3**
	baz=14,SNR=22						
R15A	**Junction**	**13.53**	**351**	⇑P	**Pn**	**00 23 31.3**	**+0.4**
	baz=14,SNR=8.1						
R17A	**Hanksville Air**	**13.58**	**357**	⇓P	**Pn**	**00 23 32.1**	**+0.4**
	baz=14,SNR=22						
CWC	**Cottonwood Cre**	**13.64**	**330**	⇓P	**Pn**	**00 23 32.6**	**+0.2**
	baz=14,SNR=46						
VES	**Vestal, Richgr**	**13.64**	**326**	⇑P	**Pn**	**00 23 33.3**	**+0.9**
	baz=14,SNR=5.1						
WMOK	**Wichita Mounta**	**13.68**	**41**	*e*Pn	**Pn**	**00 23 34.8**	**+1.8**
PNIG	**Pinotepa**	**13.69**	**126**	*i* P	**Pn**	**00 23 38.5**	**+5.2**
R14A	**James Farms, M**	**13.73**	**349**	⇓P	**Pn**	**00 23 34.1**	**+0.4**
	baz=14						
SMMC	**Simmler**	**13.73**	**322**	⇓P	**Pn**	**00 23 34.6**	**+0.9**
	baz=14						
S11A	**Rachel**	**13.79**	**339**	⇑P	**Pn**	**00 23 36.0**	**+1.6**
	baz=14						
GRAC	**Grapevine Rang**	**13.80**	**333**	⇓P	**Pn**	**00 23 35.6**	**+0.9**
	baz=14,SNR=25						
R13A	**O'Grain Ranch,**	**13.80**	**346**	⇓P	**Pn**	**00 23 35.8**	**+1.1**
	baz=14,SNR=16						
MSU	**Marysvale**	**13.81**	**352**	*e*Pn	**Pn**	**00 23 37.0**	**+2.2**
RCTC	**Rector, Farmer**	**14.08**	**327**	⇓P	**Pn**	**00 23 39.7**	**+1.2**
	baz=14						
V05C	**Boulder Hill,**	**14.09**	**324**	⇓P	**Pn**	**00 23 39.5**	**+0.9**
	baz=14						
R12A	**Pony Springs,**	**14.10**	**344**	⇓P	**Pn**	**00 23 40.3**	**+1.6**
	baz=14,SNR=22						
Q16A	**Castle Valley**	**14.11**	**355**	⇑P	**Pn**	**00 23 38.9**	**0.0**
	baz=14,SNR=24						
TIN	**Tinemaha**	**14.21**	**331**	⇑P	**Pn**	**00 23 40.9**	**+0.6**
	baz=14						
Q18A	**Rafter H Ranch**	**14.24**	**359**	⇓P	**Pn**	**00 23 40.5**	**-0.2**
	baz=14						
SRU	**San Rafael**	**14.26**	**357**	⇓P	**Pn**	**00 23 40.5**	**-0.4**
	baz=14						
SRU	**San Rafael**	**14.26**	**357**	*e*Pn	**Pn**	**00 23 41.2**	**+0.2**
HELL	**Mitchell Peak**	**14.27**	**328**	⇓P	**Pn**	**00 23 41.1**	**+0.1**
	baz=14,SNR=22						
Q15A	**Fillmore**	**14.32**	**352**	⇑P	**Pn**	**00 23 41.9**	**+0.3**
	baz=14						
S10A	**Tonopah Range,**	**14.32**	**337**	⇓P	**Pn**	**00 23 42.4**	**+0.7**
	baz=14,SNR=47						
S09A	**Goldfield**	**14.37**	**335**	⇓P	**Pn**	**00 23 43.2**	**+0.8**
	baz=14,SNR=51						
R11A	**Troy Canyon, C**	**14.38**	**341**	⇓P	**Pn**	**00 23 43.1**	**+0.5**
	baz=14,SNR=50						
Q14A	**Sevier Lake (B**	**14.45**	**349**	⇓P	**Pn**	**00 23 44.1**	**+0.7**
	baz=14,SNR=14						
TMUT	**Trail Mountain**	**14.49**	**355**	*e*Pn	**Pn**	**00 23 47.0**	**+3.0**
PKD	**Parkfield**	**14.49**	**322**	⇓P	**Pn**	**00 23 44.3**	**+0.1**
	baz=14						
R10A	**Warm Springs**	**14.55**	**339**	⇓P	**Pn**	**00 23 45.5**	**+0.6**
	baz=14,SNR=37						
Q13A	**Wheeler Ranch,**	**14.56**	**346**	⇓P	**Pn**	**00 23 45.5**	**+0.6**
	baz=14						
S08C	**White Mtn Res**	**14.56**	**332**	⇓P	**Pn**	**00 23 45.4**	**+0.4**
	baz=15,SNR=40						
MTUM	**Tungsten Hills**	**14.61**	**331**	*e*Pn	**Pn**	**00 23 46.5**	**+0.9**
P17A	**Butcher Ranch,**	**14.63**	**357**	⇓P	**Pn**	**00 23 45.9**	**-0.1**
	baz=15						
TPH	**Tonopah**	**14.68**	**336**	*e*Pn	**Pn**	**00 23 47.5**	**+0.8**
P18A	**Preston Nutter**	**14.77**	**358**	⇓P	**Pn**	**00 23 48.0**	**+0.2**
	baz=15,SNR=12						
R09A	**Tonopah**	**14.77**	**337**	⇓P	**Pn**	**00 23 48.0**	**+0.1**
	baz=15,SNR=52						
P19A	**Cripple Cowboy**	**14.78**	**2**	⇓P	**Pn**	**00 23 48.6**	**+0.6**
	baz=15						
Q12A	**Willow Creek R**	**14.82**	**344**	⇓P	**Pn**	**00 23 48.9**	**+0.3**
	baz=15,SNR=28						
P16A	**Fountain Green**	**14.84**	**354**	⇓P	**Pn**	**00 23 49.6**	**+0.9**
	baz=15						
Q11A	**Duckwater**	**14.86**	**342**	⇓P	**Pn**	**00 23 49.4**	**+0.3**
	baz=15,SNR=33						
T06C	**Millerton Lake**	**14.86**	**327**	⇑P	**Pn**	**00 23 48.3**	**-0.8**
	baz=15,SNR=17						
P15A	**Leamington**	**14.87**	**352**	⇑P	**Pn**	**00 23 49.3**	**+0.1**
	baz=15						
NATX	**Nacogdoches**	**14.93**	**59**	*e*Pn	**Pn**	**00 23 50.7**	**+0.6**
U04C	**Hernandez Rese**	**14.93**	**323**	⇓P	**Pn**	**00 23 51.3**	**+1.3**
	baz=15						
V03C	**Hunter Liggett**	**14.94**	**321**	⇓P	**Pn**	**00 23 52.0**	**+1.8**
	baz=15						
MLAC	**Mammoth Lakes**	**14.96**	**331**	⇓P	**Pn**	**00 23 51.9**	**+1.5**
	baz=15						
P14A	**Drum Mountains**	**15.00**	**350**	⇓P	**Pn**	**00 23 51.1**	**+0.2**
	baz=15,SNR=14						
P13A	**Bates Ranch, G**	**15.04**	**347**	⇑P	**Pn**	**00 23 51.7**	**+0.3**
	baz=15						
Q10A	**Clear Creek Ra**	**15.07**	**339**	⇑P	**Pn**	**00 23 52.6**	**+0.7**
	baz=15,SNR=15						
NLU	**North Lily Min**	**15.22**	**353**	*e*Pn	**Pn**	**00 23 55.8**	**+1.9**
MPU	**Maple Canyon**	**15.24**	**354**	*e*Pn	**Pn**	**00 23 58.5**	**+4.5**
P12A	**McGill**	**15.26**	**345**	⇑P	**Pn**	**00 23 54.4**	**+0.1**
	baz=15,SNR=29						
R08A	**Mina**	**15.26**	**334**	⇑P	**Pn**	**00 23 54.8**	**+0.4**
	baz=15						
ISCO	**Idaho Springs**	**15.32**	**12**	*e*Pn	**Pn**	**00 23 51.8**	**-3.4**
Q09A	**Carvers**	**15.34**	**337**	⇓P	**Pn**	**00 23 55.9**	**+0.5**
	baz=15,SNR=8.8						
O17A	**Robinson Place**	**15.35**	**357**	⇑P	**Pn**	**00 23 55.8**	**+0.3**
	baz=15,SNR=7.4						
O18A	**Roosevelt**	**15.40**	**359**	⇓P	**Pn**	**00 23 55.5**	**-0.6**
	baz=15,SNR=9.5						
NVAR	**Mina Array Bea**	**15.41**	**334**	Pn	**Pn**	**00 23 56.0**	**-0.3**
	0.1nm,0.3s,baz=160,slow=11,SNR=21						
O16A	**Springville**	**15.42**	**355**	⇓P	**Pn**	**00 23 57.1**	**+0.8**
	baz=15,SNR=16						
R07C	**Lee Vining**	**15.43**	**331**	⇑P	**Pn**	**00 23 57.1**	**+0.5**
	baz=15						
S05C	**Merced**	**15.44**	**326**	⇑P	**Pn**	**00 23 57.8**	**+1.1**
	baz=15						
P11A	**Circle Ranch,**	**15.55**	**342**	⇑P	**Pn**	**00 23 58.4**	**+0.3**
	baz=16,SNR=15						
DUG	**Dugway**	**15.55**	**351**	⇑P	**Pn**	**00 23 58.7**	**+0.6**
	baz=16						
DUG	**Dugway**	**15.55**	**351**	*e*Pn	**Pn**	**00 23 59.1**	**+1.0**
	114nm,1.3s						
O15A	**The Old Anders**	**15.59**	**352**	⇓P	**Pn**	**00 23 58.8**	**+0.2**
	baz=16,SNR=5.1						
SAO	**San Andreas Ge**	**15.59**	**323**	*e*Pn	**Pn**	**00 23 57.8**	**-0.9**
DAU	**Daniels Canyon**	**15.60**	**356**	*e*Pn	**Pn**	**00 23 59.5**	**+0.7**
S06C	**San Francisco**	**15.63**	**329**	⇓P	**Pn**	**00 23 59.0**	**-0.1**
	baz=16,SNR=26						
Q08A	**Gabbs**	**15.64**	**335**	⇓P	**Pn**	**00 23 59.1**	**-0.2**
	baz=16,SNR=18						
PACP	**Pacheco Peak**	**15.68**	**323**	⇑P	**Pn**	**00 24 00.2**	**+0.4**
	baz=16						
JLU	**Jordanelle**	**15.80**	**355**	*e*Pn	**Pn**	**00 24 03.7**	**+2.3**
P10A	**Eureka**	**15.82**	**340**	⇑P	**Pn**	**00 24 02.4**	**+0.8**
	baz=16						
CMIG	**Matias Romero**	**15.82**	**116**	Pn	**Pn**	**00 24 02.6**	**+0.8**
	0.2nm,0.3s,baz=292,slow=10.0,SNR=9.6						
CMIG	**Matias Romero**	**15.82**	**116**	*e*P	**Pn**	**00 24 03.4**	**+1.6**
NOQ	**North Oquirrh**	**15.92**	**353**	*e*Pn	**Pn**	**00 24 04.3**	**+1.4**
	168nm,1.6s						
CTU	**Camp Tracy**	**15.92**	**354**	*e*Pn	**Pn**	**00 24 03.4**	**+0.5**
	94nm,1.4s						
WAKR	**Walker**	**15.95**	**331**	*e*Pn	**Pn**	**00 24 04.0**	**+0.7**
R06C	**Coleville**	**15.97**	**331**	⇓P	**Pn**	**00 24 03.5**	**-0.1**
	baz=16,SNR=11						
P09A	**Austin**	**15.97**	**339**	⇓P	**Pn**	**00 24 03.7**	**+0.2**
	baz=16						
O12A	**Currie**	**15.97**	**346**	⇓P	**Pn**	**00 24 03.6**	**0.0**
	baz=16,SNR=13						
CMB	**Columbia Colle**	**16.00**	**328**	⇑P	**Pn**	**00 24 03.7**	**-0.3**
	baz=16,SNR=17						
CMB	**Columbia Colle**	**16.00**	**328**	*e*Pn	**Pn**	**00 24 02.8**	**-1.2**
N19A	**John Jarvie Ra**	**16.03**	**1**	⇓P	**Pn**	**00 24 03.8**	**-0.6**
	baz=16,SNR=9.1						
Q07A	**Schurz**	**16.05**	**333**	⇓P	**Pn**	**00 24 05.1**	**+0.6**
	baz=16						
O11A	**Cowboy Ranch,**	**16.07**	**343**	⇑P	**Pn**	**00 24 04.4**	**-0.3**
	baz=16,SNR=15						
N16A	**Rees Ranch, Co**	**16.09**	**355**	⇑P	**Pn**	**00 24 04.8**	**-0.2**

baz=16
N17A **Moffit Pass** 16.10 357 ⇑P Pn 00 24 05.4 +0.2
baz=16,SNR=11
N18A **Larsen Ranch,** 16.11 0 ⇑P Pn 00 24 04.5 -0.8
baz=16
N15A **Stansbury Isla** 16.20 352 ⇑P Pn 00 24 06.5 +0.1
baz=16
N14A **Grayback Hills** 16.25 351 ⇓P Pn 00 24 07.4 +0.2
baz=16,SNR=28
BGU **Big Grassy Mou** 16.30 351 *e*Pn Pn 00 24 08.2 +0.5
CBKS **Cedar Bluff** 16.30 29 *e*Pn Pn 00 24 08.2 +0.5
74nm,0.9s
WENL **Wente Vineyard** 16.39 324 ⇓P Pn 00 24 09.9 +1.0
baz=16
R05C **Kirkwood Meado** 16.39 330 ⇑P Pn 00 24 08.9 -0.1
baz=16
P08A **Dixie Valley** 16.42 337 ⇓P Pn 00 24 09.8 +0.4
baz=16
N13A **Wendover, West** 16.43 348 ⇓P Pn 00 24 09.8 +0.4
baz=16
O10A **Cortez Mining,** 16.45 341 ⇓P Pn 00 24 09.8 +0.1
baz=16,SNR=24
R04C **Big Horse Ranc** 16.45 327 ⇑P Pn 00 24 10.3 +0.7
baz=16
JRSC **Jasper Ridge** 16.49 322 ⇑P Pn 00 24 10.9 +0.6
baz=16
M16A **Huntsville** 16.53 355 ⇓P Pn 00 24 10.2 -0.4
baz=16,SNR=15
ELK **Elko** 16.54 345 Pn Pn 00 24 10.6 -0.2
0.1nm,0.3s,baz=170,slow=10,SNR=14
ELK LR LR 00 29 49.4
comp=Z,1µm,21.8s,baz=181,slow=35
ELK **Elko** 16.54 345 *e*Pn Pn 00 24 10.8 -0.1
O09A **Fish Creek Ran** 16.55 339 ⇓P Pn 00 24 10.8 -0.1
baz=16,SNR=29
P07A **Fallon** 16.59 334 ⇓P Pn 00 24 12.4 +0.9
baz=17
N12A **Clover Valley,** 16.60 346 ⇓P Pn 00 24 11.8 +0.3
baz=17,SNR=6.2
SPUT **South Promonto** 16.60 353 *e*Pn Pn 00 24 12.7 +1.1
N11A **Elko Archery C** 16.73 344 ⇑P Pn 00 24 13.0 -0.2
baz=17
LAVA **Lava Cap Winer** 16.75 329 ⇓P Pn 00 24 14.4 +1.0
baz=17,SNR=14
WCN **Washoe City** 16.75 332 ⇓P Pn 00 24 13.3 -0.1
baz=17,SNR=39
M15A **Larsen Ranch,** 16.75 353 ⇑P Pn 00 24 13.8 +0.3
baz=17
BMN **Battle Mountai** 16.79 340 *e*Pn Pn 00 24 16.0 +2.0
PHWY **Pilot Hill** 16.81 11 *e*Pn Pn 00 24 16.7 +2.5
N10A **Dunphy** 16.84 342 ⇓P Pn 00 24 14.8 +0.1
baz=17
M13A **Montello** 16.91 348 ⇑P Pn 00 24 15.4 -0.1
baz=17
M14A **Sheep Mountain** 16.91 351 ⇑P Pn 00 24 15.2 -0.3
baz=17,SNR=18
PAHR **Pah Rah Range** 16.93 334 *e*Pn Pn 00 24 16.5 +0.7
150nm,1.8s
RWWY **Rawlins** 16.95 6 *e*Pn Pn 00 24 15.5 -0.4
104nm,1.8s
O08A **Rochester Mine** 16.98 337 ⇑P Pn 00 24 16.0 -0.3
baz=17,SNR=28
MIAR **Mount Ida** 17.02 52 *e*Pn Pn 00 24 17.7 +0.8
HVU **Hansel Valley** 17.11 352 *e*Pn Pn 00 24 18.8 +0.9
M12A **Wells** 17.11 347 ⇑P Pn 00 24 18.1 +0.1
baz=17,SNR=26
Q04C **Lincoln** 17.12 328 ⇓P Pn 00 24 18.7 +0.6
baz=17
P06A **Stead Airport,** 17.12 332 ⇓P Pn 00 24 18.8 +0.7
baz=17
P05C **Yuba Gap, Truc** 17.12 330 ⇑P Pn 00 24 18.5 +0.3
baz=17,SNR=5.1
O07A **Toulon** 17.13 335 ⇑P Pn 00 24 17.8 -0.4
baz=17,SNR=28
L16A **Fish Haven** 17.21 356 ⇓P Pn 00 24 18.9 -0.3
baz=17,SNR=8.9
N09A **Rock Creek Ran** 17.27 340 ⇑P Pn 00 24 19.8 -0.2
baz=17,SNR=22
L15A **Malad City** 17.28 353 ⇓P Pn 00 24 19.5 -0.7
baz=17,SNR=24
CVS **Carmenet Viney** 17.29 324 ⇑P Pn 00 24 20.5 +0.2
baz=17
M11A **Holland Ranch,** 17.32 344 ⇓P Pn 00 24 20.5 -0.1
baz=17
MCCM **Marconi Confer** 17.38 323 ⇓P Pn 00 24 20.9 -0.4
baz=17
N08A **GE Springer Mi** 17.41 338 ⇑P Pn 00 24 21.3 -0.4
baz=17,SNR=18
L14A **Malta** 17.42 351 ⇑P Pn 00 24 21.6 -0.2
baz=17
BEKR **Beckwourth** 17.48 332 ⇓P Pn 00 24 22.4 -0.1
baz=18,SNR=37
NSHM **Saint Helena R** 17.50 324 *e*Pn Pn 00 24 21.8 -1.1
O06A **Flanigan** 17.50 333 ⇑P Pn 00 24 22.5 -0.3
baz=18
OHCM **Honcut** 17.56 328 *e*Pn Pn 00 24 24.4 +0.9
L13A **Double Diamond** 17.58 349 ⇓P Pn 00 24 23.8 0.0
baz=18
M10A **I.L. Ranch, Tu** 17.60 343 ⇑P Pn 00 24 24.1 0.0
baz=18,SNR=27
MNRC **McLaughlin Nat** 17.68 325 ⇓P Pn 00 24 24.9 -0.2
baz=18
N07B **Gerlach** 17.70 336 ⇓P Pn 00 24 25.5 +0.2
baz=18,SNR=34
ORV **Oroville** 17.74 329 ⇓P Pn 00 24 25.7 -0.1
baz=18
M09A **Marrel Ranch,** 17.77 341 ⇑P Pn 00 24 26.0 -0.2
baz=18
O05C **Quincy** 17.80 331 ⇓P Pn 00 24 26.4 -0.2
baz=18,SNR=8.8
L12A **House Creek Ra** 17.83 347 ⇑P Pn 00 24 27.0 +0.1
baz=18,SNR=16
PDAR **Pinedale Array** 17.90 0 P Pn 00 24 26.8 -1.0
0.7nm,0.3s,baz=184,slow=10,SNR=14
PDAR LR LR 00 31 13.6
comp=Z,903nm,19.8s,baz=190,slow=36
K14A **Jones Ranch, D** 17.91 352 ⇓P Pn 00 24 28.3 +0.4
baz=18,SNR=27
AHID **Auburn Hatcher** 17.93 357 *e*Pn Pn 00 24 28.3 +0.1
K15A **Arbon** 17.97 353 ⇑P Pn 00 24 28.3 -0.3
baz=18
N06A **Buffalo Meadow** 18.00 334 ⇓P Pn 00 24 28.8 -0.2
baz=18
UALR **University of** 18.01 53 *e*Pn Pn 00 24 30.1 +1.0
364nm,2.5s
L11A **Cat Creek Ranc** 18.01 345 ⇑P Pn 00 24 29.1 0.0
baz=18,SNR=20
KSU1 **Kansas State U** 18.02 35 *e*Pn Pn 00 24 29.4 +0.1
85nm,1.3s
K16A **Soda Springs** 18.03 356 ⇑P Pn 00 24 29.8 +0.4
baz=18,SNR=7.2
M08A **Happy Creek Ra** 18.09 339 ⇓P Pn 00 24 29.8 -0.3
baz=18,SNR=25
HOPS **Hopland** 18.10 325 ⇓P Pn 00 24 30.5 +0.3
baz=18
L10A **Juniper Basin** 18.10 344 ⇑P Pn 00 24 30.1 -0.2
baz=18,SNR=31
K13A **Stover Farm, H** 18.15 350 ⇓P Pn 00 24 31.1 +0.3
baz=18,SNR=22
O04C **Chester** 18.16 331 ⇑P Pn 00 24 31.4 +0.3
baz=18,SNR=12
ELFS **Eagle Lake Fie** 18.26 332 ⇑P Pn 00 24 32.4 +0.2
baz=18,SNR=10.0
K12A **Draper Farm, C** 18.28 348 ⇓P Pn 00 24 33.7 +1.3
baz=18
M07A **Soldier Meadow** 18.31 337 ⇑P Pn 00 24 32.6 -0.2
baz=18,SNR=8.3
L09A **Wilkinson Ranc** 18.38 341 ⇓P Pn 00 24 33.4 -0.2
baz=18
VBMS **Vicksburg** 18.38 62 *e*P Pn 00 24 33.8 +0.1
181nm,1.3s
SNOW **Snow King Moun** 18.61 358 *e*Pn Pn 00 24 36.9 +0.4
250nm,2.1s
M06C **Likely Place G** 18.64 334 ⇓P Pn 00 24 36.5 -0.3
baz=19,SNR=6.5
K11A **Parker Ranch,** 18.65 345 ⇓P Pn 00 24 36.8 -0.1
baz=19,SNR=18
J14A **Carey** 18.72 351 ⇑P Pn 00 24 37.4 -0.4
baz=19,SNR=19
L08A **Fields** 18.74 340 ⇓P Pn 00 24 37.6 -0.5
baz=19,SNR=17
LOHW **Long Hollow** 18.76 358 *e*P Pn 00 24 37.0 -1.2
12nm,0.6s
DCID1 **Drake Creek** 18.77 357 *e*P Pn 00 24 39.0 +0.7
90nm,1.0s
K10A **MacKenzie Ranc** 18.86 343 ⇑P Pn 00 24 38.5 -1.0
baz=19,SNR=18
J13A **Cove Ranch, Pi** 18.89 350 ⇑P Pn 00 24 38.9 -0.9
baz=19,SNR=7.5
MOOW **Moose Ponds** 18.90 358 *e*Pn Pn 00 24 40.9 +1.0
76nm,1.6s
J12A **Stokes Ranch,** 18.91 348 ⇑P Pn 00 24 38.4 -1.7
baz=19,SNR=6.8
L07A **Adell** 18.92 337 ⇑P Pn 00 24 39.7 -0.5
baz=19,SNR=6.1
K09A **Rome** 19.02 342 ⇑P Pn 00 24 40.7 -0.8
baz=19,SNR=38
WDC **Whiskeytown Da** 19.04 329 ⇓P Pn 00 24 41.1 -0.5
baz=19
WDC **Whiskeytown Da** 19.04 329 *e*P Pn 00 24 40.5 -1.1
111nm,1.9s
M05C **Lookout** 19.05 333 ⇓P Pn 00 24 41.1 -0.6
baz=19,SNR=8.2
WVOR **Wild Horse Val** 19.06 339 *e*P Pn 00 24 40.7 -1.2
93nm,1.5s
MOD **Modoc** 19.17 335 ⇓P Pn 00 24 42.8 -0.4
baz=19,SNR=5.8
MOD **Modoc** 19.17 335 *e*Pn Pn 00 24 43.8 +0.5
K08A **Mann Creek Ran** 19.28 340 ⇑P Pn 00 24 44.2 -0.3
baz=19
I13A **Wildhorse Cree** 19.39 350 ⇑P Pn 00 24 44.9 -0.8
baz=19,SNR=9.6
M03C **McCloud** 19.40 331 ⇑P Pn 00 24 45.2 -0.8
baz=19,SNR=6.6
J10A **Berg Farm, Mel** 19.45 344 ⇓P Pn 00 24 45.0 -1.5
baz=19
K07A **Rock Creek Ran** 19.49 338 ⇑P Pn 00 24 45.8 -1.2
baz=20,SNR=18
L05A **Lakeview** 19.50 334 ⇑P Pn 00 24 45.9 -1.3
baz=20,SNR=5.8
N02C **Big Bar** 19.59 328 ⇑P Pn 00 24 47.5 -0.8
baz=20,SNR=5.6
HBAR **Harrisburg** 19.59 52 *e*P Pn 00 24 47.1 -1.2
J09A **Fry Pan Ranch,** 19.63 342 ⇓P Pn 00 24 47.4 -1.3
baz=20,SNR=17
M04C **Macdoel** 19.69 332 ⇑P Pn 00 24 48.5 -0.9
baz=20,SNR=14
LKWY **Lake** 19.70 359 *e*P Pn 00 24 52.3 +2.7
I11A **Placerville** 19.72 346 ⇓P Pn 00 24 48.4 -1.4
baz=20
M02C **Callahan** 19.82 330 ⇑P Pn 00 24 50.5 -0.5
baz=20
J08A **Circle Bar Ran** 19.84 341 ⇓P Pn 00 24 48.7 -2.5
baz=20
YNR **Norris Junctio** 19.86 358 *e*Pn Pn 00 24 58.6 +7.2
H16A **Russell Place,** 19.88 357 ⇑P Pn 00 24 49.9 -1.7
baz=20
H15A **Lima** 19.89 354 ⇑P Pn 00 24 50.3 -1.5
baz=20
K06A **Valley Falls** 19.93 337 ⇑P Pn 00 24 50.5 -1.8
baz=20,SNR=21
QLMT **Earthquake Lak** 20.01 356 *e*Pn P 00 24 54.6 +3.2
YBH **Yreka Blue Hor** 20.03 331 LR LR 00 32 25.2
comp=Z,389nm,19.9s,MS3.8,baz=149,slow=36
YBH **Yreka Blue Hor** 20.03 331 ⇑P P 00 24 52.0 +0.4
baz=20
L04A **Klamath Falls** 20.04 333 ⇑P P 00 24 51.5 -0.1
baz=20,SNR=6.2
OXF **Oxford** 20.07 57 *e*P P 00 24 52.4 +0.3
51nm,1.1s
I10A **Payette** 20.07 345 ⇑P P 00 24 51.6 -0.4
baz=20
K05A **Summer Lake** 20.10 335 ⇑P P 00 24 52.9 +0.5
baz=20
J07A **Hines** 20.12 339 ⇑P P 00 24 51.9 -0.6
baz=20,SNR=14
MCMT **McKenzie Canyo** 20.12 353 *e*PcP P 00 24 53.9 +1.4
H12A **Diamond D Ranc** 20.12 349 ⇓P P 00 24 52.5 -0.1
baz=20,SNR=7.9
I09A **Lost Marbles R** 20.20 343 ⇓P P 00 24 53.3 -0.1
baz=20
GNAR **Gosnell** 20.25 52 *e*P P 00 24 55.0 +1.0
800nm,1.1s
RLMT **Red Lodge** 20.26 1 *e*P P 00 24 54.7 +0.7
J06A **Christmas Vall** 20.29 338 ⇓P P 00 24 53.5 -0.9
baz=20,SNR=16
TEIG **Tepich** 20.30 99 P P 00 24 54.7 -0.1
18nm,0.9s,baz=312,slow=8.3,SNR=6.2
TEIG LR LR 00 36 06.7
comp=Z,896nm,18.6s,MS4.2,baz=150,slow=46
TEIG **Tepich** 20.30 99 *e*Pn P 00 24 55.9 +1.1
40nm,0.9s
K04A **Chilquin** 20.34 334 ⇓P P 00 24 54.8 -0.1
baz=20
H11A **Donnelly** 20.49 347 ⇓P P 00 24 56.6 +0.1
baz=20,SNR=8.7
H10A **Noah's Angus R** 20.54 346 ⇑P P 00 24 56.9 -0.2
baz=20,SNR=17
DLMT **Dillon** 20.63 354 *e*Pn P 00 25 00.5 +2.5
65nm,1.4s
HALT **Halls** 20.71 53 *e*P P 00 24 58.9 -0.1
BOZ **Bozeman (W)** 20.84 356 *e*P P 00 25 00.2 -0.1
55nm,1.5s
BRAL **Brewton** 20.92 68 *e*Pn P 00 25 06.6 +5.3
GCMT **Greycliff** 20.92 0 *e*P P 00 25 01.2 0.0
FVM **French Village** 20.99 47 *e*P P 00 25 01.7 -0.3
LRM **Limekiln Ridge** 21.07 355 *e*P P 00 25 03.1 +0.3
F15A **Butte** 21.09 355 ⇑P P 00 25 02.8 -0.2
baz=21,SNR=16
F14A **Wisdom** 21.15 353 ⇓P P 00 25 03.4 -0.3
baz=21
G11A **Walters Elk Ra** 21.21 347 ⇓P P 00 25 03.6 -0.6
baz=21
PLAL **Pickwick Lake** 21.26 57 *e*P P 00 25 03.4 -1.6
54nm,1.3s,mb4.7
H07A **Lands Inn, Kim** 21.29 340 ⇑P P 00 25 04.4 -0.9
baz=21
LRAL **Lakeview Retre** 21.46 62 *e*P P 00 25 07.2 +0.1
SIUC **Southern Illin** 21.66 49 *e*P P 00 25 09.1 -0.1
43nm,0.9s,mb4.9
ECSD **EROS,Sioux Fal** 21.69 26 *e*P P 00 25 11.0 +1.5
107nm,1.6s,mb5.0
WVT **Waverly** 21.91 54 *e*P P 00 25 11.3 -0.6
LAO **LASA Array** 22.00 6 *e*P P 00 25 12.0 -0.7
MSO **Missoula** 22.22 352 *e*P P 00 25 14.6 -0.6
68nm,1.4s,mb4.9
CHMT **Chamberlain Mo** 22.23 354 *e*P P 00 25 14.3 -0.9
HOOD **Mount Hood Mea** 22.62 338 *e*P P 00 25 21.1 +1.7
46nm,1.2s,mb4.8
USIN **University of** 22.85 50 *e*P P 00 25 22.1 +0.2
HAWA **Hanford** 22.93 342 *e*P P 00 25 22.9 +0.3
OLIL **Olney** 22.94 48 *e*P P 00 25 22.7 -0.1
78nm,1.3s,mb5.0
SWET **Sewanee** 22.98 58 *e*P P 00 25 23.4 0.0
EGMT **Eaglon** 23.16 360 *e*P P 00 25 24.3 -0.8
63nm,1.4s,mb4.8
WCI **Wyandotte Cave** 23.93 50 *e*P P 00 25 33.0 +0.4
DGMT **Dagmar** 24.00 9 *e*P P 00 25 32.6 -0.5
JFWS **Jewell Farm** 24.12 37 *e*P P 00 25 35.5 +1.3
38nm,1.3s,mb4.7
NEW **Newport** 24.12 348 *e*P P 00 25 33.0 -1.2
CPCT **Cooper Cave** 24.15 58 *e*P P 00 25 34.3 -0.4
BLO **Bloomington** 24.22 48 *e*P P 00 25 35.1 -0.1
20nm,0.9s,mb4.5
C07A **Waterville** 24.26 343 ⇑P P 00 25 34.3 -1.2
baz=24
A14A **Double T Ranch** 24.28 354 ⇓P P 00 25 34.6 -1.1
baz=24
A13A **Flathead Natio** 24.35 352 ⇑P P 00 25 35.3 -1.0
baz=24
E03A **Lebam** 24.36 336 ⇓P P 00 25 35.6 -0.8
baz=24
GOGA **Godfrey** 24.41 63 *e*P P 00 25 36.3 -0.8
37nm,1.1s,mb4.7
WALA **Waterloo Lakes** 24.42 353 *e*P P 00 25 36.2 -0.7
TKL **Tuckaleechee C** 24.79 58 P P 00 25 40.1 -0.4
17nm,0.9s,mb4.5,baz=225,slow=9.0,SNR=8.7
TKL LR LR 00 35 55.4
comp=Z,1µm,22.0s,MS4.4,baz=244,slow=38
TZTN **Tazewell** 25.26 56 *e*P P 00 25 45.4 +0.6
AGMN **Agassiz Refuge** 25.85 21 *e*P P 00 25 50.6 +0.7
23nm,1.3s,mb4.5
COWI **Conover** 26.89 33 *e*P P 00 25 59.9 +0.4
23nm,1.1s,mb4.6
EYMN **Ely** 27.20 27 *e*P P 00 26 03.0 +0.8
40nm,1.5s,mb4.7
ULM **Lac du Bonnet** 27.56 19 P P 00 26 04.0 -1.3
5.3nm,0.9s,mb4.2,baz=200,slow=9.9,SNR=3.0
ULM LR LR 00 36 50.6
comp=Z,568nm,18.6s,MS4.2,baz=29,slow=36
ELN **Prospectdale** 27.60 56 *e*P P 00 26 05.1 -0.8
EDM **Edmonton** 28.50 355 *e*P P 00 26 22.3 +8.7
FFC **Flin Flon** 30.41 9 *e*P P 00 26 34.7 +4.1
BBB **Bella Bella** 30.71 338 LR LR 00 38 33.4
comp=Z,550nm,21.8s,MS4.2,baz=57,slow=36
DLBC **Dease Lake** 36.56 342 P P 00 27 22.8 -1.3
baz=180,slow=18
YKA **Yellowknife Ar** 37.80 356 P P 00 27 35.8 +1.2
1.4nm,0.8s,mb3.8,baz=176,slow=8.7,SNR=4.4
YKA LR LR 00 43 38.7
comp=Z,737nm,18.6s,MS4.5,baz=175,slow=37
YKA **Yellowknife Ar** 37.80 356 P P 00 27 35.8 +1.2
YKA LR LR 00 43 38.7
OTAV **Otavalo** 38.87 124 *e*P P 00 27 46.2 +2.1
ROSC **El Rosal** 39.33 114 LR LR 00 45 32.1
comp=Z,318nm,18.0s,MS4.2,baz=15,slow=38
SDV **Santo Domingo** 40.42 106 LR LR 00 46 25.0
comp=Z,464nm,18.3s,MS4.4,baz=106,slow=39
DAWY **Dawson** 43.78 342 *e*P P 00 28 23.6 -0.2
ATAH **Atahualpa** 43.93 132 P P 00 28 30.4 +4.8
7.4nm,1.0s,mb4.4,baz=325,slow=5.4,SNR=3.6
TAOE **Nuku Hiva Isla** 44.74 225 *e*LR LR 00 40 54.1
3µm,26.2s,baz=39
PPLA **Purkeypile** 47.31 335 *e*P P 00 28 51.1 -0.7
52nm,1.3s,mb5.3
PPT **Papeete** 57.32 227 *e*LR LR 00 46 43.9
1µm,27.0s,baz=33
LPAZ **La Paz** 57.55 131 LR LR 00 52 16.5
comp=Z,140nm,21.9s,MS4.0,baz=159,slow=33
SIV **San Ignacio** 62.39 125 P P 00 30 41.7 +0.1
5.4nm,0.9s,mb4.7,baz=305,slow=7.3,SNR=13
CFAA **Coronel Fontan** 68.69 143 P P 00 31 21.7 -0.3
0.7nm,0.8s,mb3.7,baz=309,slow=10,SNR=3.6
CFAA **Coronel Fontan** 68.69 143 P P 00 31 21.7 -0.3
CPUP **Villa Florida** 71.71 132 P P 00 31 40.6 0.0
4.8nm,0.7s,mb4.5,baz=292,slow=8.0,SNR=6.6
CPUP LR LR 01 02 24.7
comp=Z,90nm,18.9s,MS4.1,baz=144,slow=35
PETK **Petropavlovsk-** 72.05 321 P P 00 31 41.1 -1.2
1.9nm,0.3s,mb4.5,baz=82,slow=10,SNR=12
BDFB **Brasilia** 72.34 117 P P 00 31 49.4 +4.8
4.0nm,0.9s,mb4.3,baz=332,slow=6.4,SNR=5.3
PLCA **Paso Flores** 74.68 150 P P 00 31 58.0 +0.2
5.8nm,0.9s,mb4.5,baz=6.6,slow=4.4,SNR=3.1
PLCA LR LR 00 59 14.6
comp=Z,199nm,18.5s,MS4.4,baz=345,slow=31
ARCES **ARCESS Array B** 80.56 15 P P 00 32 32.1 +1.8
1.3nm,0.6s,mb4.0,baz=328,slow=4.3,SNR=8.9
ARCES LR LR 01 10 13.2
comp=Z,193nm,20.8s,MS4.4,baz=106,slow=37
NB2 **NORSAR Subarra** 82.10 25 P P 00 32 40.0 +1.4
comp=Z,5.6nm,1.0s,mb4.5,baz=311,slow=5.1
NOA **NORSAR Array B** 82.10 25 P P 00 32 39.5 +0.8
baz=310,slow=4.9
NOA **NORSAR Array B** 82.10 25 P P 00 32 39.5 +0.8
ESDC **Sonseca Array** 85.68 48 LR LR 01 08 12.8
comp=Z,251nm,20.9s,MS4.6,baz=260,slow=34
GERES **GERESS Array B** 90.98 33 LR LR 01 12 50.8
comp=Z,350nm,19.4s,MS4.8,baz=60,slow=35
CBIJ **Chichi jima** 93.60 302 LR LR 01 07 54.5
comp=Z,209nm,20.6s,MS4.6,baz=149,slow=31
HNR **Honiara** 94.22 262 LR LR 01 06 15.6
comp=Z,313nm,21.2s,MS4.8,baz=126,slow=29
CN2 **Changchun** 95.05 323 *e*P P 00 33 43.4 +2.1
AKASG **Malin Array Be** 96.51 25 LR LR 01 18 00.9
comp=Z,227nm,18.0s,MS4.7,baz=310,slow=36
GUMO **Guam** 97.91 289 LR LR 01 10 48.8
comp=Z,51nm,21.2s,MS4.0,baz=97,slow=31
WMQ **Urumqi** 109.85 347 *e*PKP PKiKP 00 38 52.0 +2.4
WMQ *e*PP PP 00 39 30.0 +9.3
WMQ PKS 00 42 27.0
WMQ PP PP
comp=Z,74nm,4.8s
WMQ LR LR
comp=N,271nm,26.6s
WMQ LR LR
comp=E,276nm,21.3s
WMQ LR LR
comp=Z,301nm,27.8s,MS4.7
WHN **Wuhan** 110.63 320 PKP PKiKP 00 38 52.0 +0.5
LZH **Lanzhou** 111.63 331 *e*P PKiKP 00 38 50.1 -3.1
LZH pP 00 38 53.9
LZH sP 00 38 55.7
WRA **Warramunga Arr** 121.05 261 PKP PKPdf 00 39 09.2 -2.4
comp=Z,1.3nm,0.9s,baz=76,slow=2.4,SNR=8.6
KMI **Kunming** 121.26 325 PKP PKPdf 00 39 13.8 +1.8
ASAR **Alice Springs** 122.48 257 PKP PKPdf 00 39 12.2 -2.1
comp=Z,0.6nm,0.7s,baz=67,slow=3.0,SNR=4.6
CMAR **Chiang Mai Arr** 128.73 324 PKP PKPdf 00 39 24.1 -2.3
comp=Z,0.8nm,0.3s,baz=245,slow=1.9,SNR=4.2
MAW **Mawson** 136.96 176 PKP PKPdf 00 39 45.1 +4.8
comp=Z,4.1nm,0.9s,baz=264,slow=3.6,SNR=8.9

CSEM ***10*** *00:25:22.7±0.1, 3784N×29.15E, h10km, MD3.1, Error ellipse: s-maj=2.6km s-min=1.9km az=110.0*
ISCJB ***10*** *00:25:23.4±0.5, 3786N±003×29.15E±004, h5km±5km, Error ellipse: s-maj=5.3km s-min=4.5km az=10.3*
ISK ***10*** *00:25:23.2, 3784N×29.13E, h8km, MD3.1*
DDA ***10*** *00:25:23.2, 3786N×29.15E, h7km±3km, Md3.0*
ISC 10 00:25:23.7±0.5, 3784N±003×2915E±004, h11km±5km, n16, σ0°68/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.13**	**225**	PG	**Pg**	**00 25 26.2**	**-0.5**
DNZL	**Cakiroluk**	**0.17**	**207**	*i* P	**Pg**	**00 25 27.2**	**-0.3**
DNZL				*i* S	**Sg**	**00 25 30.7**	**+0.6**
KHAL	**Karahalli**	**0.59**	**27**	*i* P	**Pg**	**00 25 33.9**	**-1.4**
KHAL				*i* S	**Sg**	**00 25 43.5**	**+0.4**
GOLH	**Golhisar**	**0.69**	**151**	*i* P	**Pg**	**00 25 36.7**	**-0.4**
GOLH				*i* S	**Sg**	**00 25 49.7**	**+3.6**
KULA	**Kula-Manisa**	**0.77**	**330**	*e*PG	**Pg**	**00 25 38.5**	**-0.2**
KULA				*e*SG	**Sg**	**00 25 49.5**	**+0.8**
TKTP	**Tekketepe**	**0.95**	**78**	*i* P	**Pg**	**00 25 42.0**	**0.0**
TKTP				*i* S	**Sg**	**00 25 59.9**	**+5.5**
YER	**Yerkesik**	**0.99**	**224**	*e*PG	**Pg**	**00 25 42.4**	**-0.3**
AYDN	**Tasoluk**	**1.02**	**260**	*i* P	**Pg**	**00 25 43.0**	**-0.3**
AYDN				*i* S	**Sg**	**00 25 57.4**	**+0.7**
ISP	**Isparta**	**1.08**	**90**	*e*PN	**Pn**	**00 25 43.8**	**-1.1**
ISP				*e*SN	**Sn**	**00 26 00.4**	**+0.6**
BCK	**Bucak**	**1.21**	**108**	*e*PN	**Pn**	**00 25 47.2**	**+0.7**
DEMI	**Demirci**	**1.24**	**344**	*i* P	**Pn**	**00 25 46.5**	**-0.6**
DEMI				*i* S	**Sb**	**00 26 03.5**	**+0.2**
GDZ	**Gediz**	**1.27**	**12**	*i* P	**Pn**	**00 25 46.5**	**-1.0**
GDZ				*i* S	**Sb**	**00 26 04.5**	**+0.4**
GDZ	**Gediz**	**1.27**	**12**	*i* P	**Pn**	**00 25 46.5**	**-0.9**
GDZ				*i* S	**Sb**	**00 26 04.4**	**+0.3**
SHUT	**Suhut-Afyon**	**1.31**	**57**	*e*PN	**Pn**	**00 25 48.3**	**+0.3**
ALT	**Altintas**	**1.43**	**32**	*e*PN	**Pn**	**00 25 50.5**	**+0.9**
IZM	**Izmir**	**1.59**	**291**	*e*PN	**Pn**	**00 25 51.5**	**-0.3**

SZGRF ***10*** *00:26:33.6, 4.42S×3588E, h33km, mb4.5, Tanzania*
BJI ***10*** *00:26:41.6, 2.70S×36.10E, h10km, mB5.2, mb4.8*
ISCJB ***10*** *00:26:41.5±0.3, 2.66S±004×3620E±006, h10km, mb4.7/47, MS4.0/5, Error ellipse: s-maj=8.2km s-min=6.1km az=10.4*
IDC ***10*** *00:26:42.1±0.6, 2.63S×3620E, h0km, mb4.4/14, mb1 4.5/16, mb1mx4.3/23, mbtmp4.4/16, ML4.0/2, MS3.8/6, Ms1 3.8/6, ms1mx3.5/29, Error ellipse: s-maj=18.7km s-min=10.7km az=116.0*
MOS ***10*** *00:26:43.3±0.8, 2.66S×3608E, h22km, mb4.9/21, Error ellipse: s-maj=15.7km s-min=7.1km az=96.3*
NEIC ***10*** *00:26:43.6±0.3, 2.68S×3612E, h10km, mb4.7/20, Error ellipse: s-maj=10.5km s-min=6.2km az=86.0*
ISC 10 00:26:43.5±0.3, 2.70S±004×3622E±006, h10km, n116, σ0°81/112, mb4.7/47, MS4.0/5, 1D, Tanzania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**1.87**	**34**	Pn	**Pn**	**00 27 15.1**	**-0.6**
KMBO	461nm,0.3s,baz=216,slow=16,SNR=7450			Lg		00 27 39.4	
KMBO	870nm,0.3s,baz=101,slow=24,SNR=13			LR	LR	00 28 08.3	
	comp=Z,1µm,18.6s,baz=287,slow=47						
KMBO	**Kilima Mbogo**	**1.87**	**34**	Pn	**Pn**	**00 27 15.1**	**-0.6**
KMBO	**Kilima Mbogo**	**1.87**	**34**	*e*P	**Pn**	**00 27 15.3**	**-0.3**
LSZ	**Lusaka**	**14.79**	**212**	Pn	**Pn**	**00 30 11.3**	**-1.6**
LSZ	0.6nm,0.3s,baz=36,slow=14,SNR=16			Sn	**Sn**	**00 32 49.1**	**-7.9**
LSZ	0.9nm,0.3s,baz=313,slow=19,SNR=3.3			Lg		00 34 25.1	
LSZ	1.8nm,0.3s,baz=302,slow=22,SNR=7.3			LR	LR	00 34 58.6	
	comp=Z,76nm,22.0s,baz=214,slow=34						
LSZ	**Lusaka**	**14.79**	**212**	Pn	**Pn**	**00 30 11.3**	**-1.6**
LSZ				Sn	**Sn**	**00 32 49.1**	**-7.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LSZ	Lusaka	14.79	212	eP	Pn	00 30 11.5	-1.4
LSZ				AMb	AMB	00 30 40.1	
	comp=Z,172nm,1.9s						
OPO	Ambohidratompo	19.09	146	P	Pn	00 31 09.1	+1.8
	comp=Z,0.5nm,0.3s,baz=306,slow=8.3,SNR=10.0						
MSNA	Messina	20.43	197	eP	P	00 31 20.9	-0.3
MSNA				AMb	AMB	00 31 33.6	
	comp=Z,19nm,1.4s						
SLR	Silverton	24.14	198	eP	P	00 31 59.0	-0.8
SLR				AMb	AMB	00 32 10.5	
	comp=Z,29nm,2.6s,mb4.2						
LBTB	Lobatse	24.43	204	P	P	00 32 02.4	-0.1
	comp=Z,7.2nm,0.6s,mb4.2,baz=30,slow=9.4,SNR=15						
LBTB	Lobatse	24.43	204	eP	P	00 32 02.0	-0.5
LBTB				AMb	AMB	00 32 05.3	
	comp=Z,24nm,2.0s,mb4.3						
TSUM	Tsumeb	24.52	227	P	P	00 32 04.4	+1.1
	comp=Z,2.6nm,1.0s,mb3.7,baz=344,slow=8.8,SNR=3.2						
TSUM	Tsumeb	24.52	227	eP	P	00 32 03.1	-0.3
	comp=Z,10nm,1.3s,mb4.2						
TSUM	Tsumeb	24.52	227	eP	P	00 32 04.0	+0.6
TSUM				AMb	AMB	00 32 39.5	
	comp=Z,131nm,1.7s,mb5.2						
POGA	Pongola	24.93	190	eP	P	00 32 05.9	-1.0
POGA				AMb	AMB	00 32 20.4	
	comp=Z,40nm,1.2s,mb4.8						
BOSA	Boshof	27.81	201	P	P	00 32 32.9	-0.1
	comp=Z,5.3nm,0.7s,mb4.3,baz=13,slow=11,SNR=16						
BOSA	Boshof	27.81	201	P	P	00 32 32.9	-0.1
BOSA	Boshof	27.81	201	eP	P	00 32 32.6	-0.4
BOSA				AMb	AMB	00 33 06.6	
	comp=Z,21nm,1.9s,mb4.4						
TORD	Torodi Ar. Bea	37.71	295	P	P	00 33 59.2	-0.4
	comp=Z,4.7nm,1.0s,mb4.2,baz=112,slow=7.6,SNR=18						
TORD				PcP	PcP	00 36 16.9	0.0
	comp=Z,2.1nm,0.9s,baz=93,slow=3.6,SNR=4.2						
TORD	Torodi Ar. Bea	37.71	295	P	P	00 33 59.2	-0.5
TORD				PcP	PcP	00 36 16.9	0.0
KIV	Kislovodsk	46.80	6	eP	P	00 35 12.8	-0.5
KIV				e		00 36 58.8	
KIV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
BUR08	Bucovina Ar. S	51.05	350	eP	P	00 35 47.2	+1.3
VYHS	Vyhne	53.19	346	eP	P	00 36 01.8	+0.1
AKASG	Malin Array Be	53.53	354	P	P	00 36 03.5	-0.7
	comp=Z,3.2nm,0.8s,mb4.3,baz=182,slow=6.3,SNR=10						
MBDF	Montbardon	54.03	334	eP	P	00 36 07.2	-0.9
	comp=Z,25nm,1.2s,mb4.7						
MBDF	Montbardon	54.03	334	eP	P	00 36 07.2	-0.9
MBDF				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
MBDF	Montbardon	54.03	334	eP	P	00 36 07.2	-0.9
	comp=Z,12nm,1.2s,mb4.7						
VRAC	Vranov	54.52	344	LR	LR	01 00 00.2	
	comp=Z,17nm,21.8s,MS3.1,baz=0.0,slow=37						
OKC	Ostrava-Krasne	54.60	346	eP	P	00 36 12.4	+0.3
LPG	La Plagne	54.66	335	eP	P	00 36 12.3	-0.3
	comp=Z,20nm,1.3s,mb4.7						
LPG	La Plagne	54.66	335	eP	P	00 36 12.3	-0.3
LPG				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
LPG	La Plagne	54.66	335	eP	P	00 36 12.3	-0.3
	comp=Z,9.9nm,1.3s,mb4.7						
LASF	Ste Croix	54.85	332	eP	P	00 36 13.7	-0.3
	comp=Z,53nm,1.6s,mb5.0						
GEC2	GERESS Array S	54.94	342	eP	P	00 36 14.3	-0.2
GERES	GERESS Array B	54.94	342	P	P	00 36 14.2	-0.3
	comp=Z,2.9nm,0.9s,mb4.3,baz=142,slow=6.8,SNR=18						
BBTS	Babate	55.01	290	LR	LR	01 00 26.9	
	comp=Z,526nm,18.9s,MS4.6,baz=122,slow=37						
VIVF	Saint-Julien-l	55.07	333	eP	P	00 36 16.0	+0.5
	comp=Z,23nm,1.3s,mb4.7						
VIVF	Saint-Julien-l	55.07	333	eP	P	00 36 16.0	+0.5
VIVF				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
VIVF	Saint-Julien-l	55.07	333	eP	P	00 36 16.0	+0.5
	comp=Z,11nm,1.3s,mb4.7						
DANN	Dangsing	55.09	52	eP	P	00 36 16.3	+0.2
	comp=Z,34nm,0.7s,mb5.5						
KHC	Kasperske Hory	55.23	342	eP	P	00 36 16.5	-0.1
DPC	Dobruska-Polom	55.54	345	eP	P	00 36 20.6	+1.8
GKN	Gorkha	55.64	53	eP	P	00 36 19.7	-0.3
	comp=Z,61nm,0.9s,mb5.6						
DMN	Daman	55.85	54	eP	P	00 36 21.5	-0.1
	comp=Z,23nm,0.8s,mb5.2						
ESDC	Sonseca Array	55.99	323	P	P	00 36 24.0	+1.7
	comp=Z,2.1nm,0.8s,mb4.2,baz=129,slow=6.8,SNR=14						
AML	Almayashu	56.05	33	eP	P	00 36 23.6	+0.8
	comp=Z,7.6nm,0.9s,mb4.7						
KKN	Kakani	56.07	54	eP	P	00 36 23.0	-0.1
PKIN	Phulchoki	56.08	54	eP	P	00 36 22.5	-0.7
PKI	Pulchoki	56.08	54	eP	P	00 36 22.9	-0.3
ETSF	Etsaut	56.20	328	eP	P	00 36 24.4	+0.6
	comp=Z,10nm,0.8s,mb4.6						
ETSF	Etsaut	56.20	328	eP	P	00 36 24.4	+0.6
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ETSF	Etsaut	56.20	328	eP	P	00 36 24.4	+0.6
	comp=Z,5.3nm,0.8s,mb4.6						
CAF	Calviac	56.34	331	eP	P	00 36 25.3	+0.6
	comp=Z,22nm,1.3s,mb4.7						
CAF	Calviac	56.34	331	eP	P	00 36 25.3	+0.6
CAF				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
CAF	Calviac	56.34	331	eP	P	00 36 25.3	+0.6
	comp=Z,11nm,1.3s,mb4.7						
GRA1	Grafenberg Arr	56.47	341	eP	P	00 36 24.6	-0.9
	comp=Z,5.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	56.47	341	eP	P	00 36 24.6	-0.9
GRF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	56.47	341	eP	P	00 36 24.6	-0.9
GRF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	56.47	341	eP	P	00 36 24.6	-0.9
	comp=Z,5.0nm,1.1s,mb4.5						
HINF	Hinteralfeld	56.48	337	eP	P	00 36 24.3	-1.3
GUN	Gumba	56.60	54	eP	P	00 36 26.8	-0.1
SJPF	Ste Jean	56.70	328	eP	P	00 36 27.1	-0.2
	comp=Z,50nm,1.4s,mb5.1						
SJPF	Ste Jean	56.70	328	eP	P	00 36 27.1	-0.2
SJPF				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
SJPF	Ste Jean	56.70	328	eP	P	00 36 27.1	-0.2
	comp=Z,25nm,1.4s,mb5.0						
JIRN	Jiri	56.75	54	eP	P	00 36 27.8	-0.2
CDF	Champ du Feu	56.80	337	eP	P	00 36 27.6	-0.3
RAMN	Ramite	56.81	55	eP	P	00 36 27.9	-0.5
SMF	Signal de Mont	56.81	334	eP	P	00 36 28.0	0.0
	comp=Z,12nm,1.1s,mb4.5						
SMF	Signal de Mont	56.81	334	eP	P	00 36 28.0	0.0
SMF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
SMF	Signal de Mont	56.81	334	eP	P	00 36 28.0	0.0
	comp=Z,6.1nm,1.1s,mb4.5						
RJF	Les Rejaudoux	56.88	331	eP	P	00 36 29.1	+0.6
LFF	La Frestale	56.99	331	eP	P	00 36 29.8	+0.5
AVF	Avril sur Loir	57.14	334	eP	P	00 36 30.3	-0.1
	comp=Z,14nm,1.1s,mb4.6						
AVF	Avril sur Loir	57.14	334	eP	P	00 36 30.3	-0.1
AVF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
AVF	Avril sur Loir	57.14	334	eP	P	00 36 30.3	-0.1
	comp=Z,6.8nm,1.1s,mb4.6						
BGF	Bois d'Agland	57.19	333	eP	P	00 36 31.9	+1.2
	comp=Z,20nm,1.2s,mb4.7						
BGF	Bois d'Agland	57.19	333	eP	P	00 36 31.9	+1.2
BGF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
BGF	Bois d'Agland	57.19	333	eP	P	00 36 31.9	+1.2
	comp=Z,10nm,1.2s,mb4.7						
TCF	Toulx Ste Croi	57.28	333	eP	P	00 36 32.2	+0.9
	comp=Z,31nm,1.1s,mb4.9						
TCF	Toulx Ste Croi	57.28	333	eP	P	00 36 32.2	+0.9
TCF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
TCF	Toulx Ste Croi	57.28	333	eP	P	00 36 32.2	+0.9
	comp=Z,15nm,1.1s,mb5.0						
SSF	Saint Saulge	57.28	334	eP	P	00 36 31.0	-0.3
	comp=Z,8.9nm,1.1s,mb4.4						
SSF	Saint Saulge	57.28	334	eP	P	00 36 31.0	-0.3
SSF				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
SSF	Saint Saulge	57.28	334	eP	P	00 36 31.0	-0.3
	comp=Z,4.4nm,1.1s,mb4.4						
LOR	Lormes	57.29	334	eP	P	00 36 31.3	-0.1
	comp=Z,29nm,1.4s,mb4.8						
LOR	Lormes	57.29	334	eP	P	00 36 31.3	-0.1
LOR				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.8						
LOR	Lormes	57.29	334	eP	P	00 36 31.3	-0.1
	comp=Z,14nm,1.4s,mb4.8						
ODAN	Odare	57.42	56	eP	P	00 36 31.6	-1.1
SUW	Suwalki	57.55	351	eP	P	00 36 33.5	+0.4
SUW				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.4						
SUW	Suwalki	57.55	351	eP	P	00 36 33.5	+0.5
	comp=Z,44nm,1.0s,mb5.5						
OBN	Obninsk	57.61	0	eP	P	00 36 32.5	-1.0
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
EVO	Evora	57.83	320	eP	P	00 36 36.6	+1.2
	comp=Z,17nm,1.1s,mb4.7						
TAPN	Taplejung	57.87	55	eP	P	00 36 35.2	-0.7
	comp=Z,28nm,0.9s,mb5.3						
ARU	Arti	61.68	14	d iP	P	00 37 01.4	-0.1
ARU				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.1						
MKAR	Makanchi Array	63.76	33	P	P	00 37 15.2	-0.5
	comp=Z,8.3nm,0.8s,mb4.8,baz=225,slow=6.7,SNR=47						
KURK	Kurchatov	64.35	28	eP	P	00 37 19.2	-0.2
KURK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
KURK	Kurchatov	64.35	28	eP	P	00 37 19.2	-0.2
	comp=Z,14nm,1.1s,mb4.9						
KAF	Kangasniemi	65.08	355	ep	P	00 37 22.8	-1.1
	comp=Z,5.3nm,1.0s,mb4.5						
KAF	Kangasniemi	65.08	355	eP	P	00 37 22.8	-1.1
KAF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
CMAR	Chiang Mai Arr	65.18	68	P	P	00 37 26.2	+0.7
	comp=Z,6.5nm,1.0s,mb4.6,baz=259,slow=8.0,SNR=30						
CMAR				LR	LR	01 03 17.3	
	comp=Z,43nm,18.9s,MS3.7,baz=225,slow=34						
WMQ	Urumqi	65.29	39	eP	P	00 37 26.2	+0.5
WMQ				AMB	AMB		
	comp=Z,14nm,0.9s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,128nm,4.0s						
MAW	Mawson	67.34	169	P	P	00 37 39.4	+1.1
	comp=Z,2.7nm,0.7s,mb4.4,baz=323,slow=6.6,SNR=8.6						
NVS	Novosibirsk	69.16	27	eP	P	00 37 49.6	-0.4
NVS				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
NVS				pmax	pmax		
	comp=N,11nm,1.4s						
ZAL	Zalesovo	69.33	28	P	P	00 37 49.8	-1.3
ZALV	Zalesovo Beam	69.34	28	P	P	00 37 49.8	-1.4
	comp=N,6.9nm,0.9s,mb4.6,baz=246,slow=5.8,SNR=20						
GTA	Gaotai	71.67	47	eP	P	00 38 06.4	+0.7
GTA				AP	pP	00 38 10.9	+1.9
GTA				XP	sP	00 38 14.1	+3.9
GTA				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.4						
ARCES	ARCESS Array B	72.46	356	P	P	00 38 09.2	-0.6
	comp=Z,2.3nm,0.7s,mb4.2,baz=145,slow=4.4,SNR=9.3						
SONM	Songino Array	78.83	40	P	P	00 38 48.5	+1.7
	comp=Z,2.9nm,0.9s,mb4.2,baz=246,slow=7.3,SNR=11						
ULN	Ulaanbaatar	79.27	40	eP	P	00 38 50.5	+1.3
CASY	Casey	81.26	157	eP	P	00 39 01.1	+1.6
	comp=Z,7.2nm,1.3s,mb4.4						
KAPI	Kappang	83.33	95	LR	LR	01 10 33.8	
	comp=Z,124nm,19.7s,MS4.3,baz=78,slow=32						
BOD	Bodaibo	85.78	32	eP	P	00 39 23.3	+0.4
BOD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
FITZ	Fitzroy Crossi	88.62	108	LR	LR	01 13 09.6	
	comp=Z,108nm,18.2s,MS4.3,baz=90,slow=31						
WRA	Warramunga Arr	96.71	110	P	P	00 40 14.9	-0.1
	comp=Z,1.0nm,0.9s,mb4.2,baz=270,slow=1.7,SNR=5.5						
PV10	Paradox Valley	132.38	323	ePKPdf	PKPdf	00 45 58.5	0.0
NVAR	Mina Array Bea	137.49	330	PKP	PKPdf	00 46 07.1	-1.0
	comp=Z,0.4nm,0.6s,baz=250,slow=1.8,SNR=2.3						

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*IDC **10** 00:37:10.9±2.7, 17.14S×70.31W, h0km, mb4.2/2, mb1 4.3/5, mb1mx3.8/20, mbtmp4.2/5, ML4.6/2, Error ellipse: s-maj=59.2km s-min=24.2km az=127.0*
*NEIC **10** 00:37:17.7±0.9, 17.28S×70.05W, h46km±12km, MG4.4(LIM), Error ellipse: s-maj=13.0km s-min=11.7km az=197.0*
NEIC Felt [III] at Tarata.
*ISCJB **10** 00:37:18.0±1.0, 17.40S±0.09×70.07W±0.07, h62km±14km, mb4.1/2, Error ellipse: s-maj=15.4km s-min=10.6km az=3.0*
ISC 10 00:37:18.8±0.9**, 17.38S**±0.09×**70.05W**±0.07**, h54**km±13km**, n8, σ1s29**/10**, mb4.1**/2**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	Arequipa	1.65	303	eP	Pn	00 37 44.0	-1.5
ARE				eS	Sn	00 38 07.0	+1.4
LPAZ	La Paz	2.14	60	Pn	Pn	00 37 51.5	-0.6
	30nm,0.3s,baz=245,slow=10.0,SNR=153						
LPAZ				Sn	Sn	00 38 19.6	+2.2
	21nm,0.3s,baz=154,slow=25,SNR=6.4						
LVC	Limon Verde	5.31	169	Pn	Pn	00 38 35.9	+0.2
	2.3nm,0.3s,baz=347,slow=10,SNR=18						
SIV	San Ignacio	8.71	82	Pn	Pn	00 39 20.3	-1.9
	2.5nm,0.3s,baz=265,slow=13,SNR=29						
PLCA	Paso Flores	23.27	181	P	P	00 42 23.0	+1.2
	5.1nm,1.1s,mb3.9,baz=15,slow=10,SNR=3.8						
JLU	Jordanelle	69.33	327	eP	P	00 48 19.6	-1.0
TORD	Torodi Ar. Bea	77.04	72	P	P	00 49 07.1	+0.4
	3.9nm,0.9s,mb4.3,baz=258,slow=5.2,SNR=17						
TORD	Torodi Ar. Bea	77.04	72	P	P	00 49 07.1	+0.4

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*NEIC **10** 00:39:15.4±0.9, 17.29S×70.02W, h35km, Error ellipse: s-maj=20.2km s-min=15.8km az=155.0*
*IDC **10** 00:39:17.0±3.9, 17.36S×69.99W, h54km±36km, mb3.7/4, mb1 4.0/6, mb1mx3.7/19, mbtmp3.8/6, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/25, Error ellipse: s-maj=36.1km s-min=23.5km az=118.0*
*ISCJB **10** 00:39:18.2±3.2, 17.2S±0.2×69.8W±0.2, h79km±29km, mb3.8/4, Error ellipse: s-maj=39.2km s-min=26.7km az=175.7*
ISC 10 00:39:16.6±3.5**, 17.3S**±0.2×**70.0W**±0.2**, h50**km±33km**, n9, σ1s25**/9**, mb3.9**/4**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	2.10	61	P	Pn	00 39 48.6	-0.8
	14nm,0.3s,baz=252,slow=15,SNR=9.3						
LPAZ				S	Sn	00 40 15.9	+1.6
	13nm,0.3s,baz=345,slow=20,SNR=3.7						
SIV	San Ignacio	8.70	82	P	Pn	00 41 18.8	-1.1
	2.0nm,0.3s,baz=263,slow=13,SNR=8.9						
ATAH	Atahualpa	13.12	321	LR	LR	00 47 42.9	
	comp=Z,114nm,19.9s,baz=95,slow=39						
PLCA	Paso Flores	23.32	181	P	P	00 44 21.4	+1.1
	5.7nm,1.2s,mb3.9,baz=2.1,slow=12,SNR=4.1						
PLCA	Paso Flores	23.32	181	P	P	00 44 21.4	+1.1
ULM	Lac du Bonnet	71.04	343	P	P	00 50 29.5	+0.4
	1.5nm,0.6s,mb4.1,baz=153,slow=4.5,SNR=3.1						
NVAR	Mina Array Bea	71.57	322	P	P	00 50 33.6	+1.1
	0.4nm,0.7s,mb3.5,baz=152,slow=5.2,SNR=4.0						
MCMT	McKenzie Canyo	73.11	330	eP	P	00 50 38.7	-2.9
TORD	Torodi Ar. Bea	77.02	72	P	P	00 51 03.8	-1.0
	3.2nm,1.0s,mb4.2,baz=255,slow=5.8,SNR=8.2						

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*ISK **10** 00:42:13.8, 39.48N×43.72E, h11km, ML2.3*
*CSEM **10** 00:42:13.4±0.1, 39.48N×43.73E, h12km, MD2.9, Error ellipse: s-maj=2.0km s-min=1.5km az=46.0*
*ISCJB **10** 00:42:14.3±0.8, 39.47N±0.04×43.73E±0.05, h10km±6km, Error ellipse: s-maj=8.2km s-min=6.0km az=38.4*
*DDA **10** 00:42:15.3, 39.53N×43.65E, h8km±1km, Md2.9*
ISC 10 00:42:14.7±0.8**, 39.50N**±0.04×**43.76E**±0.05**, h9**km±6km**, n8, σ1s01**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYDN	Diyadin	0.07	307	iP	Pg	00 42 16.8	0.0
DYDN				iS	Sg	00 42 18.7	+0.4
CLDR	Caldiran	0.38	161	PG	Pg	00 42 21.4	-0.6
CLDR				eSG	Sg	00 42 27.8	+0.7
AGRB	Hanur-Agry	0.60	277	ePG	Pg	00 42 25.5	-0.8
AGRB				eSG	Sg	00 42 33.8	-0.4
GNI	Garni	0.99	49	ePG	Pg	00 42 34.0	+0.1
KARS	Kars	1.22	335	ePN	Pn	00 42 37.5	-0.5
HOMI	Horasan	1.53	291	iP	Pn	00 42 42.1	-0.1
HOMI				iS	Sg	00 43 08.3	+4.4
ERZM	Erzurum	1.89	283	iP	Pg	00 42 49.6	-1.4
ERZM				iS	Sg	00 43 17.7	+2.2
BEST	Besiri	2.53	231	iP	Pn	00 42 58.8	+2.9
BEST				iS	Sg	00 43 35.2	-0.7

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*NEIC **10** 00:52:41.0, 15.63N×94.30W, h5km, MD4.1(MEX), After MEX.*
MEX 10 00:52:41.5±0.8**, 15.65N×94.28W, h9**km±8km**, MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	1.55	338	iP	Pn	00 53 06.1	-3.2
CMIG				iS	Sn	00 53 25.0	-4.5
TGIG		1.58	44	iP	Pn	00 53 05.9	-3.8
TGIG				iS	Sn	00 53 24.8	-5.5
HUIG	Huatulco	1.77	274	iP	Pn	00 53 09.1	-3.2
HUIG				iS	Sn	00 53 29.6	-5.3
SCX	San Cristobal	1.91	55	iP	Pn	00 53 12.2	-2.1
SCX				iS	Sn	00 53 35.4	-3.1
SCX	San Cristobal	1.91	55	iP	Pn	00 53 14.3	0.0
SCX				iS	Sn	00 53 36.4	-2.1
THIG		2.08	110	iP	Pn	00 53 11.6	-4.9
THIG				iS	Sn	00 53 38.6	-3.9
CCIG	Comitan	2.15	73	iP	Pn	00 53 14.5	-3.1
CCIG				iS	Sn	00 53 40.7	-3.7
CCIG	Comitan	2.15	73	iP	Pn	00 53 14.5	-3.1
CCIG				iS	Sn	00 53 41.8	-2.7
VHO	Vista Hermosa	2.75	301	iP	Pn	00 53 23.6	-2.2
VHO				iS	Sn	00 53 56.5	-2.7
PNIG	Pinotepa	3.78	282	iP	Pn	00 53 36.9	-3.0
PNIG				iS	Sn	00 54 21.2	-3.3
PNIG	Pinotepa	3.78	282	iP	Pn	00 53 36.5	-3.5
PNIG				iS	Sn	00 54 21.2	-3.3

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*CSEM **10** 01:10:44.0±0.9, 39.12N×28.33W, h4km±4km, ML3.5, Error ellipse: s-maj=4.2km s-min=2.6km az=160.0, After PDA*
PDA 10 01:10:44.0±0.9**, 39.12N×28.33W, h4**km±4km**, MD3.7, ML3.5, Error ellipse: s-maj=4.2km s-min=2.6km az=160.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBC	Serra Branca	0.24	110	iP	Pg	01 10 48.6	-0.1
SRBC				iS	Sg	01 10 51.8	0.0
SRBC	Serra Branca	0.24	110	iS	Sg	01 10 51.8	0.0
ROSA	Rosais	0.40	170	iP	Pg	01 10 51.2	-0.6
ROSA				eS	Sg	01 10 56.6	-0.4
ROSA	Rosais	0.40	170	eS	Sg	01 10 56.6	-0.4
PMAN	Manadas	0.52	159	iP	Pg	01 10 52.6	-1.4
PMAN				eS	Sg	01 10 59.7	-1.0
PMAN				A		01 11 00.5	
	3μm,0.1s						
PMAN	Manadas	0.52	159	eS	Sg	01 10 59.7	-1.0
PCED	Cedros	0.57	211	iP	Pg	01 10 53.7	-1.2
PCED				eS	Sg	01 11 01.2	-1.1
PCED				A		01 11 03.0	
	5μm,0.1s						
PCED	Cedros	0.57	211	eS	Sg	01 11 01.2	-1.1
CALA	Caldeira	0.61	208	iP	Pg	01 10 54.6	-1.1
CALA				eS	Sg	01 11 01.6	-2.0
CALA	Caldeira	0.61	208	eS	Sg	01 11 01.6	-2.0
PICO	Pico	0.62	187	eP	Pg	01 10 54.7	-1.2
PICO				eS	Sg	01 11 02.6	-1.3
HOR	Horta	0.64	202	eP	Pg	01 10 54.5	-1.7
HOR				iS	Sg	01 11 02.9	-1.5
PSCM	Serra do Cume	1.03	113	iP	Pg	01 10 59.9	-3.9
PSCM				eS	Sg	01 11 12.7	-4.6
PSCM				A		01 11 16.1	
	66nm,0.3s						
PDA	Ponta Delgada	2.50	122	eP	Sn	01 11 51.6	-4.8
CMLA	Cha da Macela	2.59	121	eP	Pn	01 11 22.5	-4.1
CMLA				eS	Sn	01 11 50.2	-8.2
CMLA				A		01 11 55.6	
	36nm,0.3s						
CMLA	Cha da Macela	2.59	121	eP	Pn	01 11 22.5	-4.1
CMLA				eS	Sn	01 11 50.2	-8.2
PSMN	Pico do Norte,	3.33	128	eP	Pn	01 11 32.2	-4.6
PSMN				eS	Sn	01 12 08.6	-8.2

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*ISCJB **10** 01:37:45.0±1.2, 38.87N±0.05×26.34E±0.09, h10km, Error ellipse: s-maj=11.7km s-min=4.2km az=150.8*
*DDA **10** 01:37:45.4, 38.89N×26.41E, h8km±4km, Md3.0*
*CSEM **10** 01:37:45.9±0.4, 38.95N×26.49E, h5km, MD2.8, Error ellipse: s-maj=10.3km s-min=3.3km az=67.0*
*ISK **10** 01:37:45.8, 38.95N×26.47E, h9km, MD2.8*
ISC 10 01:37:45.3±1.4**, 38.88N**±0.06×**26.3E**±0.1**, h12**km±8km**, n9, σ0s79**/16**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	Balcova	0.75	131	ePG	Pg	01 38 00.2	+0.4
BLCB				eSG	Sg	01 38 10.0	+0.4
IZM	Izmir	0.88	123	ePG	Pg	01 38 02.7	+0.4
IZM				eSG	Sg	01 38 13.7	-0.1
EZN	Ezine	0.95	0	ePG	Pg	01 38 03.8	+0.1
EZN				eSG	Sg	01 38 15.2	-0.9
BOZC	Bozcaada	0.99	348	iP	Pb	01 38 04.3	0.0
BOZC				iS	Sg	01 38 18.6	+1.4
AKS	Akhisar	1.17	89	ePG	Pg	01 38 06.5	-1.2
BALY	Balya	1.33	49	iP	Pn	01 38 09.2	-0.5
BALY				iS	Sb	01 38 27.2	+0.1
BALY	Balya	1.33	49	iP	Pn	01 38 09.1	-0.5
BALY				iS	Sb	01 38 27.2	+0.1
BALB	Balikesir	1.43	57	ePN	Pn	01 38 10.6	-0.4
DURS	Dursunbey	1.82	66	iP	Pn	01 38 15.2	-1.2
DURS				iS	Sn	01 38 40.9	+1.5

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*SZGRF **10** 01:49:07.8, 1.96N×78.91W, h33km, mb6.2, MS6.8, Colombia-Ecuador border region*
*IGIL **10** 01:49:10.2, 2.95N×78.07W, h10km, MS6.9*
*MOS **10** 01:49:10.9±0.9, 3.09N×78.02W, h17km, mb6.2/147, MS6.6/90, Error ellipse: s-maj=5.0km s-min=3.6km az=68.7*
*IDC **10** 01:49:11.1±1.4, 3.07N×77.83W, h12km±7km, mb5.5/22, mb1 5.7/25, mb1mx5.7/25, mbtmp5.5/25, ML5.3/3, MS6.6/22, Ms1 6.6/22, ms1mx6.4/34, Error ellipse: s-maj=12.7km s-min=7.1km az=50.0*
*CASC **10** 01:49:11.6±2.4, 3.04N×77.95W, h6km±26km, mb7.0, MD4.9, mb6.1(NEIC)*
*NEIC **10** 01:49:11.8±0.1, 2.97N×77.96W, h15km, mb6.1/292, ME6.5, MS6.7/197, Error ellipse: s-maj=2.8km s-min=2.0km az=22.0 Broadband fault plane solution: P waves. NP1: φs70.00000°, δ15.00000°, λ-90.00000°. NP2: φs250.00000°, δ75.00000°, λ-90.00000°. Principal axes: T Plg30.0000°, Azm340.0000°; N Plg0.0000°, Azm0.0000°; P Plg60.0000°, Azm160.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Five people injured in Narino. Thirty-four houses damaged at El Charco, Iscuande, La Tola and Mosquera. Power outages occurred at Iscuande. Liquefaction observed at El Charco. Felt [V] at Tumaco, [IV] at Cali and [III] at Bogota and Pasto. Felt at Buenaventura, Dos Quebradas, Ibarra, Ipiales, Jamundi, Mulatos, Olaya Herrera, Palmira, Pereira, Popayan and Yumbo. Felt [III] at Quito, Ecuador. Also felt at Cotacachi, Ibarra, Otavalo and Santo Domingo.
*ISCJB **10** 01:49:12.5±0.1, 3.05N±0.02×77.95W±0.01, h28km, mb6.0/422, MS6.7/249 Error ellipse: s-maj=2.9km s-min=1.6km az=21.6*
*BJI **10** 01:49:12.2, 3.00N×78.00W, h31km, mB6.9, Ms7.1, Msz6.9*
*GCMT **10** 01:49:14.2±0.1, 3.08N×78.12W, h19km, MW6.8/109, Moment Tensor Solution. s105,c266; s109,c511; Duration: 5s8 Moment tensor: Scale 10^{19}Nm; M_{rr}-1.13±.01; $M_{\theta\theta}$0.84±.01; $M_{\phi\phi}$0.29±.01; $M_{r\theta}$1.01±.02; $M_{\theta\phi}$0.62±.01; $M_{\phi r}$0.58±.02; Best double couple: $M_0$1.66200×10^{19} NP1: φs54.00000°, δ23.00000°,*

λ-95.00000°. NP2:φs239.00000°,δ67.00000°, λ-88.00000°. Principal axes: T 1.7170, Plg22.0000°, Azm328.0000°; N -0.1070, Plg2.0000°, Azm58.0000°; P -1.6070, Plg68.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.

*BGS **10** 01:49:20.0±1.5,398N×7736W,h31km,mb5.8*

*DJA **10** 01:49:51,241N×7826W,h328km,Mw7.0/1*

ISC 10 01:49:14.3±0.1**,300N**±002×**7790W**±001**,h29km, h29km**±1.4km**:pP-P,n1878,σ0s.80**/1596**,mb6.0**/422**, MS6.7**/249**,254C-344D,Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**2.80**	**191**	*e*P	**Pn**	**01 49 54.8**	**-2.4**
	comp=Z,37µm,1.1s						
OTAV				*e*S	**Sn**	**01 50 33.4**	**+3.4**
	comp=Z,1530µm,18.7s						
OTAV	**Otavalo**	**2.80**	**191**	*e*Pn	**Pn**	**01 49 55.3**	**-1.9**
ROSC	**El Rosal**	**4.01**	**63**	Pn	**Pn**	**01 50 16.9**	**+3.0**
	comp=Z,560nm,0.3s,baz=221,slow=2.1,SNR=372						
ROSC				Sn	**Sn**	**01 51 09.1**	**+9.1**
	comp=Z,434nm,0.3s,baz=75,slow=20,SNR=4.5						
CHI2		**4.46**	**68**	*e*P	Px	01 52 18.5	
BCIP	**Isla Barro Col**	**6.42**	**343**	*e*P	**Pn**	**01 50 47.9**	**+0.9**
BCIP	**Isla Barro Col**	**6.42**	**343**	*e*Pn	**Pn**	**01 50 45.8**	**-1.2**
BRU2	**Volcan**	**7.47**	**321**	*e*P	**Pn**	**01 51 02.6**	**+1.2**
ACR	**Cerro Adams**	**7.68**	**317**	*e*P	**Pn**	**01 51 05.1**	**+0.8**
LAPE	**La Pedrera**	**7.75**	**54**⇑	*e*P	Px	01 51 46.4	
BAR1		**8.21**	**319**	*e*P	**Pn**	**01 51 12.3**	**+0.7**
LIO	**Limon**	**8.63**	**324**	*e*P	**Pn**	**01 51 16.9**	**-0.4**
BUS	**Buena Vista**	**8.73**	**318**	*e*P	**Pn**	**01 51 19.2**	**+0.4**
QCR	**Quepos**	**8.91**	**316**	*e*P	**Pn**	**01 51 19.7**	**-1.5**
LCR2	**La Lucha 2**	**9.03**	**318**	*e*P	**Pn**	**01 51 22.6**	**-0.3**
SJS	**Escuela Geolog**	**9.21**	**319**	*e*P	**Pn**	**01 51 26.4**	**+1.1**
SDV	**Santo Domingo**	**9.29**	**51**	Pn	**Pn**	**01 51 27.3**	**+0.8**
	comp=Z,21nm,0.3s,baz=242,slow=13,SNR=12						
SDV				Sn	**Sn**	**01 53 17.3**	**+7.2**
	comp=Z,30nm,0.3s,baz=73,slow=19,SNR=3.4						
SDV	**Santo Domingo**	**9.29**	**51**	*e*P	**Pn**	**01 51 27.3**	**+0.8**
SDV	**Santo Domingo**	**9.29**	**51**	*e*Pn	**Pn**	**01 51 28.3**	**+1.8**
PRS1	**Puriscal**	**9.42**	**318**	*e*P	**Pn**	**01 51 26.6**	**-1.6**
CGA2	**Cerro Gallo 2**	**9.54**	**317**	*e*P	**Pn**	**01 51 30.3**	**+0.4**
JCR	**Jicaral**	**9.88**	**314**	*e*P	**Pn**	**01 51 33.8**	**-0.8**
ATAH	**Atahualpa**	**9.95**	**183**	Pn	**Pn**	**01 51 37.1**	**+1.7**
	comp=Z,20nm,0.3s,baz=3.5,slow=8.1,SNR=72						
ATAH				LR	LR	01 56 00.1	
	comp=Z,1797µm,19.2s,baz=93,slow=40						
2RIO	**Dos Rios de Up**	**10.44**	**316**⇑	*e*P	**Pn**	**01 51 47.2**	**+5.1**
VCR	**Vista de Mar**	**10.44**	**313**	*e*P	**Pn**	**01 51 41.7**	**-0.5**
MADN	**Villa Maderas**	**11.27**	**318**⇓	*e*P	**Pn**	**01 51 54.5**	**+0.9**
SSN	**San Juan del S**	**11.41**	**317**	*e*P	**Pn**	**01 51 55.2**	**-0.2**
CONN	**Concepcion**	**11.45**	**318**	*e*P	**Pn**	**01 51 55.2**	**-0.8**
APON	**Apoyo**	**12.00**	**318**⇑	*i*P	**Pn**	**01 52 03.8**	**+0.3**
MASN	**Masaya**	**12.10**	**318**⇑	*e*P	**Pn**	**01 52 04.1**	**-0.9**
MGAN	**Managua**	**12.28**	**318**	*e*P	**Pn**	**01 52 07.6**	**+0.2**
MGAN	**Managua**	**12.28**	**318**	P	**Pn**	**01 52 08.0**	**+0.6**
TISN	**Laguna Tiscapa**	**12.30**	**318**⇓	*e*P	**Pn**	**01 52 07.3**	**-0.3**
XAVN	**Gruta Xavier**	**12.34**	**318**⇑	*e*P	**Pn**	**01 52 08.2**	**0.0**
HUEN		**12.37**	**319**	*e*P	**Pn**	**01 52 07.9**	**-0.7**
CSAN		**12.43**	**318**⇓	*i*P	**Pn**	**01 52 09.4**	**0.0**
COPN	**Copaltepe**	**12.54**	**317**⇓	*e*P	**Pn**	**01 52 11.1**	**+0.2**
MOMN	**Momotombo**	**12.67**	**318**⇑	*i*P	**Pn**	**01 52 11.9**	**-0.8**
CNGN	**Cerro Negro**	**12.84**	**318**	*e*P	**Pn**	**01 52 14.6**	**-0.4**
CNGN	**Cerro Negro**	**12.84**	**318**	P	**Pn**	**01 52 16.6**	**+1.5**
LEON	**Leon**	**12.91**	**317**⇑	*e*P	**Pn**	**01 52 15.4**	**-0.6**
TEL3	**Telica 3**	**12.99**	**318**⇑	*e*P	**Pn**	**01 52 17.0**	**-0.2**
TELN	**Telica**	**13.01**	**318**⇑	*e*P	**Pn**	**01 52 18.0**	**+0.7**
CNCH	**Conchagua**	**14.17**	**317**⇑	*e*P	x	01 52 32.1	
TGUH	**Tegucigalpa,Un**	**14.37**	**320**	*e*P	**Pn**	**01 52 35.4**	**-0.5**
TGUH	**Tegucigalpa,Un**	**14.37**	**320**	*e*Pn	**Pn**	**01 52 35.7**	**-0.2**
VSM	**San Miguel**	**14.58**	**316**⇑	*e*P	x	01 52 38.7	
CAHU	**Cacacuatique**	**14.77**	**317**⇑	*i*P	x	01 52 40.2	
MCJ	**Malvern**	**14.83**	**1**⇑	*e*P	**Pn**	**01 52 38.8**	**-3.4**
NNA	**Nana**	**14.93**	**176**	Pn	**Pn**	**01 52 42.0**	**-1.5**
	comp=Z,4µm,0.9s,SNR=29						
NNA	**Nana**	**14.93**	**176**	Pn	**Pn**	**01 52 41.4**	**-2.1**
	comp=Z,8.8nm,0.3s,baz=350,slow=10,SNR=33						
NNA	**Nana**	**14.93**	**176**	*e*Pn	**Pn**	**01 52 42.4**	**-1.1**
HOJ	**Hope**	**14.95**	**4**⇑	*e*P	**Pn**	**01 52 47.5**	**+3.6**
PCRV	**Puerto La Cruz**	**14.97**	**61**	Pn	**Pn**	**01 52 44.9**	**+0.7**
	comp=Z,4.6nm,0.3s,baz=263,slow=2.1,SNR=19						
STH	**Stony Hill**	**15.02**	**4**⇑	*e*P	**Pn**	**01 52 45.0**	**+0.3**
GWJ	**Greenwich**	**15.02**	**4**⇑	*e*P	**Pn**	**01 52 46.4**	**+1.6**
SNVI	**San Vicente**	**15.10**	**315**⇑	*e*P	x	01 52 44.3	
CVJ	**Coleyville**	**15.14**	**1**⇑	*e*P	**Pn**	**01 52 47.6**	**+1.4**
NEJ	**Negril**	**15.16**	**358**⇑	*e*P	**Pn**	**01 52 42.8**	**-3.8**
MBJ	**Montego Bay**	**15.31**	**0**⇑	*e*P	**Pn**	**01 52 41.0**	**-7.5**
BOQS	**Boqueron**	**15.50**	**314**	*e*P	x	01 52 50.8	
SBLS	**San Blas**	**15.81**	**314**⇑	*e*P	x	01 52 54.8	
LMGC	**Las Mercedes**	**16.98**	**3**	*e*P	**Pn**	**01 53 11.6**	**+1.7**
LMGC				*e*S	**Sn**	**01 56 14.1**	**-3.8**
	comp=N,26nm,24.9s						
LMGC				*e*			
	comp=E,12nm,21.3s						
RCC	**Rio Carpintero**	**17.03**	**7**	*e*P	**Pn**	**01 53 11.2**	**+0.7**
RCC				*e*S	**Sn**	**01 56 20.3**	**+1.3**
	comp=N,30nm,22.9s						
RCC				*e*			
	comp=E,19nm,22.9s						
MASC	**Masc**	**17.44**	**12**	*e*P	**Pn**	**01 53 17.1**	**+1.5**
TCE	**Chacachacare**	**17.75**	**64**	*e*P	**Pn**	**01 53 21.1**	**+1.6**
MOAC	**Moa**	**17.79**	**9**	*e*P	**Pn**	**01 53 24.1**	**+4.2**
MOAC				*e*S	**Sn**	**01 56 45.7**	**+8.3**
	comp=N,2µm,13.0s						
MOAC				*e*			
	comp=E,2µm,11.1s						
TPP	**Pointe-a-Pierr**	**17.87**	**65**	*e*P	**Pn**	**01 53 24.7**	**+3.7**
TRN	**Trinidad (W)**	**18.05**	**64**	*e*P	**Pn**	**01 53 24.8**	**+1.7**
CCCC	**Cccc**	**18.09**	**0**	*e*P	**Pn**	**01 53 24.2**	**+0.6**
TBH	**Brigand Hill**	**18.29**	**65**	*e*P	**Pn**	**01 53 28.4**	**+2.3**
MPR	**Mayaguez**	**18.43**	**34**	*e*Pn	**Pn**	**01 53 29.3**	**+1.5**
GRGR	**Grenville**	**18.47**	**60**	*e*P	**Pn**	**01 53 27.2**	**-1.1**
	comp=E,1µm,0.8s						
GRW	**Mount Saint Ca**	**18.48**	**60**	*e*P	**Pn**	**01 53 28.1**	**-0.3**
GRHS	**Sauteurs**	**18.52**	**59**	*e*	**Pn**	**01 53 27.8**	**-1.2**
AGPR	**Aguadilla, PR**	**18.65**	**34**	*e*P	**Pn**	**01 53 31.7**	**+1.2**
	comp=E,2µm,1.2s						
AOPR	**Arecibo Observ**	**18.76**	**35**	*e*Pn	**Pn**	**01 53 33.4**	**+1.6**
	comp=E,577nm,0.8s						
TPR	**Prospect**	**18.82**	**64**	*e*P	**Pn**	**01 53 32.9**	**+0.3**
BOT	**Bacolet**	**18.87**	**64**	*e*P	**Pn**	**01 53 33.0**	**-0.2**
SJG	**San Juan**	**18.93**	**37**	P	**Pn**	**01 53 34.0**	**+0.2**
	comp=E,24nm,0.3s,baz=222,slow=8.2,SNR=54						
SJG				S	**Sn**	**01 57 11.6**	**+6.6**
	comp=E,0.6nm,0.3s,baz=42,slow=12,SNR=1.4						
SJG	**San Juan**	**18.93**	**37**	*e*P	**Pn**	**01 53 32.9**	**-0.9**
SJG	**San Juan**	**18.93**	**37**	*e*Pn	**Pn**	**01 53 34.3**	**+0.5**
CPD	**Cerro la Pandu**	**19.01**	**37**	*e*P	**Pn**	**01 53 35.0**	**+0.2**
MGV	**Manicaragua**	**19.10**	**354**	*e*P	**Pn**	**01 53 34.7**	**-1.2**
MGV				*e*S	**Sn**	**01 57 10.2**	**+1.0**
	comp=N,8µm,9.8s						
MGV				*e*			
	comp=E,7µm,10.9s						
HUMP	**Col San Antoni**	**19.13**	**37**	*e*P	**Pn**	**01 53 36.0**	**-0.2**
	comp=E,510nm,0.7s						
CBYP	**Canovanas**	**19.22**	**37**	*e*Pn	**Pn**	**01 53 37.9**	**+0.4**
	comp=E,874nm,0.8s						
CCIG	**Comitan**	**19.24**	**314**	*i* P	**Pn**	**01 53 35.1**	**-2.5**
CCIG				*i* S	**Sn**	**01 57 09.3**	**-3.3**
MTP	**Monte Pirata**	**19.28**	**38**	*e*P	**Pn**	**01 53 38.0**	**-0.1**
TEIG	**Tepich**	**19.89**	**330**	P	**Pn**	**01 53 42.8**	**-2.5**
	comp=E,18nm,0.3s,baz=134,slow=6.6,SNR=45						
TEIG				S	**Sn**	**01 57 30.1**	**+1.8**
	comp=E,0.4nm,0.3s,baz=12,slow=19,SNR=1.7						
TEIG				LR	LR	02 01 15.9	
	comp=E,306µm,19.4s,baz=140,slow=36						
TEIG	**Tepich**	**19.89**	**330**	*e*Pn	**Pn**	**01 53 42.8**	**-2.6**
	comp=E,3µm,1.8s						
SCX	**San Cristobal**	**19.90**	**314**	*i* P	**Pn**	**01 53 42.6**	**-2.9**
FDF	**Fort de France**	**20.22**	**54**	*e*P	**P**	**01 53 46.9**	**-0.4**
FDF	**Fort de France**	**20.22**	**54**	P	**P**	**01 53 47.8**	**+0.6**
SOR	**Soroa**	**20.29**	**346**	*e*P	**P**	**01 53 47.7**	**-0.2**
SOR				*e*S	**S**	**01 57 29.4**	**-4.6**
	comp=N,6µm,2.4s						
SOR				*e*			
	comp=E,64µm,9.6s						
DPMT	**Pointe Michel**	**20.34**	**52**	*e*	**P**	**01 53 50.8**	**+2.3**
ARE	**Arequipa**	**20.35**	**162**	*e*P	**P**	**01 53 50.0**	**+1.4**
MDN	**Morne-Daniel**	**20.36**	**52**	*e*	**P**	**01 53 47.8**	**-0.9**
DBCT	**Belle View Cho**	**20.37**	**52**	*e*	**P**	**01 53 50.6**	**+1.8**
DSTT	**Stowe**	**20.39**	**52**	*e*	**P**	**01 53 54.9**	**+5.9**
TBG	**Guadaloupe-3**	**20.47**	**50**	*e*P	**P**	**01 53 50.2**	**+0.2**
HMG	**Houelmont**	**20.51**	**50**	*e*P	**P**	**01 53 50.0**	**-0.4**
LZG	**Guadaloupe-1**	**20.55**	**50**	*e*P	**P**	**01 53 50.4**	**-0.3**
SCG	**Saint Claude**	**20.55**	**50**	*e*P	**P**	**01 53 51.0**	**+0.2**
DWS	**Wesley**	**20.56**	**52**	*e*	**P**	**01 53 52.0**	**+1.1**
BCG	**Bois Riant Cap**	**20.63**	**50**	*e*P	**P**	**01 53 52.5**	**+0.8**
BBGH	**Gun Hill**	**20.75**	**60**	*e*P	**P**	**01 53 51.7**	**-1.2**
BBGH	**Gun Hill**	**20.75**	**60**	*e*P	**P**	**01 53 52.9**	**0.0**
	comp=E,725nm,0.9s						
BBGH				LR	LR		
	comp=Z,211µm,21.0s,MS6.5						
MGG	**Marie-Galante**	**20.77**	**51**	*e*P	**P**	**01 53 54.9**	**+1.8**
BBSP	**Saint Philip**	**20.82**	**60**	*e*	**P**	**01 53 53.0**	**-0.7**
STMA	**St. Maarten, A**	**20.82**	**43**	*e*	**P**	**01 53 53.9**	**+0.1**
BPA	**Boggy Peak**	**21.05**	**47**	*e*	**P**	**01 53 56.2**	**0.0**
LPAZ	**La Paz**	**21.46**	**154**	P	**P**	**01 54 00.5**	**-0.1**
	comp=Z,325nm,1.0s,mb5.6,baz=338,slow=13,SNR=122						
LPAZ	**La Paz**	**21.46**	**154**	P	**P**	**01 54 00.5**	**-0.1**
LPAZ				LR	LR		
	comp=Z,651µm,19.0s,MS7.0						
CMIG	**Matias Romero**	**21.78**	**311**	P	**P**	**01 54 01.6**	**-2.5**
	comp=Z,111nm,1.0s,mb5.2,baz=98,slow=8.1,SNR=60						
CMIG				S	**S**	**01 58 06.9**	**+3.4**
	comp=Z,19nm,1.0s,baz=22,slow=6.6,SNR=2.3						
CMIG				LR	LR	02 01 20.6	
	comp=Z,155µm,19.4s,MS6.4,baz=126,slow=34						
HUIG	**Huatulco**	**21.96**	**306**	*i* P	**P**	**01 54 04.9**	**-1.1**
HUIG				*i* S	**S**	**01 58 08.3**	**+1.2**
TUIG	**Tuzandepetl**	**22.03**	**314**	*i* P	**P**	**01 54 04.0**	**-2.8**
OXX	**Oaxaca**	**23.18**	**308**	*e*P	**P**	**01 54 16.2**	**-2.7**
VHO	**Vista Hermosa**	**23.19**	**308**	*i* P	**P**	**01 54 18.2**	**-0.8**
VHO				*i* S	**S**	**01 58 34.8**	**+5.9**
PNIG	**Pinotepa**	**23.93**	**305**	*i* P	**P**	**01 54 25.0**	**-1.1**
PNIG				*i* S	**S**	**01 58 44.3**	**+3.3**
SIV	**San Ignacio**	**25.16**	**139**	P	**P**	**01 54 36.2**	**-1.1**
	comp=Z,184nm,0.8s,mb5.7,baz=322,slow=10.0,SNR=555						
DWPF	**Disney**	**25.20**	**353**	*e*P	**P**	**01 54 38.3**	**+0.8**
	comp=Z,434nm,0.9s,mb6.0						
DWPF				LR	LR		
	comp=Z,152µm,20.0s,MS6.5						
PPM	**Popocatepetl**	**25.80**	**310**	*i* P	**P**	**01 54 45.4**	**+2.2**
CAIG	**El Cayaco**	**26.03**	**304**	*i* P	**P**	**01 54 44.7**	**-0.5**
CAIG				*i* S	**S**	**01 59 01.7**	**-13**
YAIG	**Yautepec**	**26.03**	**309**	*i* P	**P**	**01 54 46.8**	**+1.6**
PLIG	**Platanillo**	**26.11**	**307**	*i* P	**P**	**01 54 46.8**	**+0.9**
PLIG				*i* S	**S**	**01 59 22.0**	**+6.2**
IIO	**Organos**	**26.18**	**311**	*i* P	**P**	**01 54 47.1**	**+0.5**
UNM	**Universidad Na**	**26.38**	**310**	*i* P	**P**	**01 54 48.9**	**+0.5**
UNM				*i* S	**S**	**01 59 20.2**	**+0.1**
PTVM	**Pico Tres Padr**	**26.48**	**310**	*e*P	**P**	**01 54 49.9**	**+0.6**
LVC	**Limon Verde**	**26.93**	**161**	P	**P**	**01 54 54.0**	**+0.8**
	comp=Z,108nm,1.0s,mb5.3,baz=331,slow=6.9,SNR=50						
LVC				S	**S**	**01 59 39.6**	**+11**
	comp=Z,9.9nm,0.9s,baz=354,slow=9.6,SNR=1.4						
LVC				LR	LR	02 07 00.7	
	comp=Z,311µm,20.5s,MS6.8,baz=321,slow=40						
LVC	**Limon Verde**	**26.93**	**161**	*e*P	**P**	**01 54 55.4**	**+2.2**
LVC				LR	LR		
	comp=Z,296µm,20.0s,MS6.8						
CEN1	**Los Morros**	**27.28**	**164**⇓	*i*P	**P**	**01 54 59.3**	**+2.8**
ZIIG	**Zihuatanejo**	**27.30**	**304**	*i* P	**P**	**01 54 56.8**	**+0.2**
MOIG	**Morelia**	**28.14**	**308**	*i* P	**P**	**01 55 04.9**	**+0.7**
BRAL	**Brewton**	**29.17**	**344**	PFAKE		01 55 20.0	+6.8
BRAL				LR	LR		
	comp=Z,126µm,21.0s,MS6.5						
COLM	**Colima**	**29.91**	**304**	*i* P	**P**	**01 55 20.1**	**+0.2**
NHSC	**New Hope**	**30.03**	**356**	*e*P	**P**	**01 55 22.7**	**+2.0**
NHSC				LR	LR		
	comp=Z,271µm,19.0s,MS6.9						
COW	**Cow Castle Cre**	**30.34**	**355**	*e*P	**P**	**01 55 23.8**	**+0.2**
GOGA	**Godfrey**	**30.70**	**351**	*e*P	**P**	**01 55 26.3**	**-0.4**
GOGA				MLR	MLR		
	comp=Z,130µm,19.0s,MS6.6						
KVTX	**Kingsville**	**31.00**	**324**	*e*P	**P**	**01 55 30.4**	**+1.0**
KVTX				LR	LR		
	comp=Z,179µm,20.0s,MS6.7						
LRAL	**Lakeview Retre**	**31.07**	**345**	*e*P	**P**	**01 55 28.9**	**-1.1**
LRAL				LR	LR		
	comp=Z,111µm,19.0s,MS6.5						
JSC	**Jenkinsville**	**31.28**	**355**	*e*P	**P**	**01 55 31.7**	**-0.1**
VBMS	**Vicksburg**	**31.39**	**339**	*e*P	**P**	**01 55 33.0**	**+0.2**
VBMS				LR	LR		
	comp=Z,121µm,20.0s,MS6.6						
HKT	**Hockley**	**31.74**	**329**	*e*P	**P**	**01 55 34.1**	**-1.8**
HKT				pmax	pmax		
	comp=Z,240nm,1.4s,mb5.8						
HKT				MLR	MLR		
	comp=Z,79µm,21.0s,MS6.4						
HKT	**Hockley**	**31.74**	**329**	*e*P	**P**	**01 55 34.1**	**-1.8**
	comp=Z,240nm,1.4s,mb5.8						
HKT				LR	LR		
	comp=Z,79µm,21.0s,MS6.4						
BBSR	**BB Station**	**31.74**	**22**	*e*P	**P**	**01 55 36.7**	**+0.8**
	comp=Z,146nm,0.8s,mb5.9						
BBSR				LR	LR		
	comp=Z,170µm,22.0s,MS6.7						
CNNC	**Cliffs of the**	**32.08**	**0**	*e*P	**P**	**01 55 39.8**	**+1.0**
	comp=Z,73nm,0.8s,mb5.6						
CNNC				LR	LR		
	comp=Z,112µm,20.0s,MS6.5						
LCO	**Las Campanas**	**32.57**	**168**⇓	*i*P	**P**	**01 55 44.3**	**+1.1**
LCO				LR	LR		
	comp=Z,124µm,19.0s,MS6.6						
NATX	**Nacogdoches**	**32.67**	**333**	*e*P	**P**	**01 55 43.0**	**-1.1**
NATX				LR	LR		
	comp=Z,97µm,20.0s,MS6.5						
CPCT	**Cooper Cave**	**32.87**	**350**	*e*P	**P**	**01 55 45.6**	**-0.2**
SWET	**Sewanee**	**32.91**	**348**	*e*P	**P**	**01 55 45.1**	**-1.0**
TKL	**Tuckaleechee C**	**32.95**	**351**	*e*P	**P**	**01 55 45.8**	**-0.7**
OXF	**Oxford**	**33.13**	**342**	*e*P	**P**	**01 55 47.3**	**-0.8**
OXF				pmax	pmax		
	comp=Z,325nm,1.1s,mb6.2						
OXF				MLR	MLR		
	comp=Z,98µm,21.0s,MS6.5						
OXF	**Oxford**	**33.13**	**342**	*e*P	**P**	**01 55 47.3**	**-0.8**
	comp=Z,326nm,1.1s,mb6.2						
OXF				LR	LR		
	comp=Z,98µm,21.0s,MS6.5						
PLAL	**Pickwick Lake**	**33.20**	**345**	*e*P	**P**	**01 55 47.8**	**-0.9**
	comp=Z,247nm,1.4s,mb6.0						
PLAL				LR	LR		
	comp=Z,70µm,22.0s,MS6.3						
TLL	**Tololo Astrono**	**33.67**	**169**⇓	*i*P	**P**	**01 55 54.1**	**+1.3**
TZTN	**Tazewell**	**33.78**	**352**	*e*P	**P**	**01 55 53.2**	**-0.5**
TZTN				LR	LR		
	comp=Z,217µm,19.0s,MS6.9						
MET	**Memphis--Engin**	**33.86**	**342**	*e*P	**P**	**01 55 54.0**	**-0.4**
BLA	**Blacksburg**	**34.12**	**356**	*e*P	**P**	**01 55 57.1**	**+0.4**
BLA				pmax	pmax		
	comp=Z,346nm,1.0s,mb6.2						
BLA				MLR	MLR		
	comp=Z,221µm,22.0s,MS6.8						
BLA	**Blacksburg**	**34.12**	**356**	*e*P	**P**	**01 55 57.1**	**+0.5**
	comp=Z,346nm,1.0s,mb6.2						
BLA				LR	LR		
	comp=Z,221µm,22.0s,MS6.8						
MAIG	**Mazatlaan**	**34.13**	**308**	*i* P	**P**	**01 55 57.5**	**+0.6**
ELN	**Prospectdale**	**34.16**	**356**	*e*P	**P**	**01 55 57.6**	**+0.6**
WVT	**Waverly**	**34.22**	**346**	P	**P**	**01 55 55.6**	**-1.9**
WVT				MLR	MLR		
	comp=Z,122µm,22.0s,MS6.6						
JCT	**Junction City**	**34.30**	**325**	*e*P	**P**	**01 55 56.9**	**-1.4**
JCT	**Junction City**	**34.30**	**325**	PFAKE		01 56 10.0	+12
JCT				LR	LR		
	comp=Z,67µm,19.0s,MS6.4						
UALR	**University of**	**34.35**	**339**	*e*P	**P**	**01 55 56.6**	**-2.0**
URVA	**University of**	**34.41**	**1**	*e*P	**P**	**01 55 59.6**	**+0.4**
HALT	**Halls**	**34.41**	**343**	*e*P	**P**	**01 55 58.7**	**-0.5**
HBAR	**Harrisburg**	**34.48**	**341**	*e*P	**P**	**01 55 58.7**	**-1.1**
MIAR	**Mount Ida**	**34.61**	**337**	*e*P	**P**	**01 55 58.5**	**-2.4**
MIAR				pmax	pmax		
	comp=Z,167nm,1.1s,mb5.9						
MIAR				MLR	MLR		
	comp=Z,81µm,19.0s,MS6.5						
MIAR	**Mount Ida**	**34.61**	**337**	*e*P	**P**	**01 55 58.5**	**-2.4**
	comp=Z,167nm,1.1s,mb5.9						
MIAR				LR	LR		
	comp=Z,81µm,19.0s,MS6.5						
GNAR	**Gosnell**	**34.66**	**343**	*e*P	**P**	**01 56 01.1**	**-0.3**
UTMT	**University of**	**34.69**	**344**	*e*P	**P**	**01 56 01.2**	**-0.4**
GLAT	**Glass**	**34.74**	**344**	*e*P	**P**	**01 56 01.7**	**-0.3**
BDFB	**Brasilia**	**34.89**	**123**	P	**P**	**01 56 02.9**	**-0.7**
	comp=Z,46nm,0.8s,mb5.5,baz=278,slow=12,SNR=49						
BDFB	**Brasilia**	**34.89**	**123**	P	**P**	**01 56 02.9**	**-0.7**
BDFB				LR	LR		
	comp=Z,265µm,19.0s,MS7.0						
PARMO	**Parma**	**35.24**	**343**	*e*P	**P**	**01 56 05.2**	**-1.1**
CPUP	**Villa Florida**	**35.30**	**147**	P	**P**	**01 56 04.7**	**-2.3**
	comp=Z,60nm,0.7s,mb5.7,baz=314,slow=8.6,SNR=66						
CPUP				S	**S**	**02 01 37.5**	**-1.9**
	comp=Z,9.9nm,1.0s,baz=233,slow=15,SNR=2.0						
CPUP	**Villa Florida**	**35.30**	**147**	P	**P**	**01 56 04.7**	**-2.3**
CPUP				S	**S**	**02 01 37.5**	**-1.9**
CPUP				LR	LR		
	comp=Z,26µm,22.0s,MS5.9						
TXAR	**Lajitas Array**	**35.84**	**320**	P	**P**	**01 56 10.8**	**-0.8**
	comp=Z,31nm,0.8s,mb5.3,baz=141,slow=8.1,SNR=103						
TXAR				PcP	PcP	01 58 39.3	+0.5
	comp=Z,44nm,0.8s,baz=146,slow=6.0,SNR=8.6						
TXAR				S	**S**	**02 01 49.9**	**+2.2**
	comp=Z,1.3nm,0.8s,baz=34,slow=31,SNR=1.7						
TXAR				LR	LR	02 12 31.4	
	comp=Z,68µm,18.6s,MS6.4,baz=350,slow=39						
TXAR				P3KPbc		02 26 53.5	
	comp=Z,0.6nm,0.6s,baz=288,slow=3.2,SNR=6.4						
TXAR	**Lajitas Array**	**35.84**	**320**	P	**P**	**01 56 10.8**	**-0.8**
TXAR				PcP	PcP	01 58 39.3	+0.5
TXAR				S	**S**	**02 01 49.9**	**+2.2**
WCI	**Wyandotte Cave**	**35.89**	**349**	*e*P	**P**	**01 56 10.0**	**-1.9**
WCI				pmax	pmax		
	comp=Z,204nm,1.0s,mb6.0						
WCI				MLR	MLR		
	comp=Z,117µm,20.0s,MS6.7						
WCI	**Wyandotte Cave**	**35.89**	**349**	*e*P	**P**	**01 56 10.0**	**-2.0**
	comp=Z,204nm,1.0s,mb6.0						
WCI				LR	LR		
	comp=Z,117µm,20.0s,MS6.7						
USIN	**University of**	**35.93**	**347**	*e*P	**P**	**01 56 10.7**	**-1.5**
SIUC	**Southern Illin**	**36.07**	**345**	*e*P	**P**	**01 56 11.7**	**-1.8**
SDMD	**Soldier's Deli**	**36.25**	**1**	*e*P	**P**	**01 56 16.2**	**+1.2**
	comp=Z,616nm,1.7s,mb6.3						
MCWV	**Mont Chateau**	**36.53**	**357**	*e*P	**P**	**01 56 17.9**	**+0.5**
	comp=Z,736nm,1.7s,mb6.2						
MCWV				LR	LR		
	comp=Z,288µm,22.0s,MS7.0						
PEL	**Peldehue**	**36.59**	**170**⇑	*i*P	**P**	**01 56 18.6**	**+0.6**
FVM	**French Village**	**36.66**	**343**	*e*P	**P**	**01 56 16.1**	**-2.4**
OLIL	**Olney**	**36.76**	**347**	*e*P	**P**	**01 56 17.2**	**-2.1**
	comp=Z,380nm,1.1s,mb6.1						
FCH	**Farellones**	**36.84**	**169**⇓	*i*P	**P**	**01 56 21.9**	**+1.8**
BLO	**Bloomington**	**36.85**	**349**	*e*P	**P**	**01 56 18.4**	**-1.7**
BLO				pmax	pmax		
	comp=Z,771nm,1.4s,mb6.3						
BLO	**Bloomington**	**36.85**	**349**	*e*P	**P**	**01 56 18.4**	**-1.7**
	comp=Z,771nm,1.4s,mb6.3						
CLCH	**Cerro Calan**	**36.86**	**170**⇓	*i*P	**P**	**01 56 21.0**	**+0.7**
WMOK	**Wichita Mounta**	**37.07**	**331**	*e*P	**P**	**01 56 19.5**	**-2.5**
WMOK				pmax	pmax		
	comp=Z,196nm,1.2s,mb5.8						
WMOK				MLR	MLR		
	comp=Z,124µm,22.0s,MS6.7						
WMOK	**Wichita Mounta**	**37.07**	**331**	*e*P	**P**	**01 56 19.5**	**-2.5**
	comp=Z,196nm,1.2s,mb5.8						
WMOK				LR	LR		
	comp=Z,124µm,22.0s,MS6.7						
SLM	**Saint Louis**	**37.21**	**344**	*e*P	**P**	**01 56 23.3**	**+0.1**
SLM				pmax	pmax		
	comp=Z,364nm,1.3s,mb6.0						
SLM	**Saint Louis**	**37.21**	**344**	*e*P	**P**	**01 56 23.3**	**+0.1**
	comp=Z,364nm,1.3s,mb6.0						
ACSO	**Alum Creek Sta**	**37.35**	**354**	*e*P	**P**	**01 56 23.8**	**-0.5**
	comp=Z,181nm,0.9s,mb5.9						
ACSO				LR	LR		
	comp=Z,164µm,22.0s,MS6.8						
BRNJ	**Basking Ridge**	**37.63**	**4**	*e*P	**P**	**01 56 29.5**	**+2.8**
	comp=Z,326nm,1.4s,mb5.9						
LPIG	**La Paz**	**37.67**	**307**	*i* P	**P**	**01 56 24.2**	**-3.1**
CPNY	**Central Park**	**37.79**	**5**	*e*P	**P**	**01 56 29.9**	**+1.9**
	comp=Z,596nm,2.0s,mb6.0						
PAL	**Palisades**	**38.01**	**5**	*e*P	**P**	**01 56 30.8**	**+1.0**
PAL				pmax	pmax		
	comp=Z,166nm,1.0s,mb5.7						
PAL	**Palisades**	**38.01**	**5**	*e*P	**P**	**01 56 30.8**	**+0.9**
	comp=Z,166nm,1.0s,mb5.7						
ALLY	**Alegheny Colle**	**38.53**	**357**	*e*P	**P**	**01 56 34.4**	**+0.1**
	comp=Z,303nm,0.9s,mb6.0						
AMTX	**Amarillo**	**38.66**	**328**	*e*P	**P**	**01 56 34.0**	**-1.4**
	comp=Z,280nm,1.5s,mb5.8						
AMTX				LR	LR		
	comp=Z,123µm,19.0s,MS6.7						
BINY	**Binghamton**	**39.06**	**2**	*e*P	**P**	**01 56 39.3**	**+0.6**
	comp=Z,390nm,1.2s,mb6.0						
BINY				LR	LR		
	comp=Z,108µm,22.0s,MS6.6						
BRYW	**Bryant College**	**39.16**	**8**	*e*P	**P**	**01 56 40.8**	**+1.3**
	comp=Z,1µm,1.6s,mb6.4						
QUA2	**Belchertown**	**39.42**	**6**	*e*P	**P**	**01 56 42.8**	**+1.1**
	comp=Z,582nm,1.4s,mb6.1						
WES	**Weston**	**39.65**	**8**	*e*P	**P**	**01 56 45.2**	**+1.6**
WES				pmax	pmax		
	comp=Z,2µm,1.7s,mb6.5						
WES				MLR	MLR		
	comp=Z,61µm,21.0s,MS6.4						
WES	**Weston**	**39.65**	**8**	*e*P	**P**	**01 56 45.2**	**+1.6**
	comp=Z,2µm,1.7s,mb6.5						
WES				LR	LR		
	comp=Z,61µm,21.0s,MS6.4						
VAO	**Valinhos**	**39.73**	**132**	*e*P	**P**	**01 56 41.4**	**-3.2**
VAO				*i*		01 56 46.0	
SPB	**Sao Paulo**	**39.74**	**133**	P	**P**	**01 56 42.7**	**-1.9**
HRV	**Adam Dziewonsk**	**39.74**	**7**	*e*P	**P**	**01 56 45.5**	**+1.1**
HRV				pmax	pmax		
	comp=Z,223nm,1.0s,mb5.8						
HRV				MLR	MLR		
	comp=Z,122µm,22.0s,MS6.7						
HRV	**Adam Dziewonsk**	**39.74**	**7**	*e*P	**P**	**01 56 45.5**	**+1.1**
	comp=Z,223nm,1.0s,mb5.8						
HRV				LR	LR		
	comp=Z,122µm,22.0s,MS6.7						
KSU1	**Kansas State U**	**39.77**	**337**	*e*P	**P**	**01 56 42.7**	**-2.0**
	comp=Z,362nm,0.8s,mb6.2						
KSU1				LR	LR		
	comp=Z,61µm,21.0s,MS6.4						
CCHI	**Chillan**	**39.77**	**173**⇓	*i*P	**P**	**01 56 45.0**	**+0.3**
ACCN	**Adirondack Com**	**40.39**	**5**	*e*P	**P**	**01 56 52.9**	**+3.2**
	comp=Z,215nm,1.2s,mb5.8						
FFD	**Franklin Falls**	**40.68**	**7**	*e*P	**P**	**01 56 53.8**	**+1.7**
	comp=Z,301nm,1.2s,mb5.8						
CBKS	**Cedar Bluff**	**40.83**	**334**	*e*P	**P**	**01 56 52.4**	**-1.1**
CBKS				pmax	pmax		
	comp=Z,584nm,1.3s,mb6.0						
CBKS				MLR	MLR		
	comp=Z,67µm,21.0s,MS6.5						
CBKS	**Cedar Bluff**	**40.83**	**334**	*e*P	**P**	**01 56 52.4**	**-1.0**
	comp=Z,584nm,1.3s,mb6.0						
CBKS				LR	LR		
	comp=Z,67µm,21.0s,MS6.5						
HNH	**Hanover**	**40.84**	**6**	*e*P	**P**	**01 56 55.1**	**+1.7**
	comp=Z,2µm,1.9s,mb6.4						
319A	**Douglas**	**40.87**	**317**	⇑P	**P**	**01 56 54.1**	**+0.1**
	baz=41,SNR=45						
NCB	**Newcomb**	**40.93**	**4**	*e*P	**P**	**01 56 55.3**	**+1.2**
	comp=Z,466nm,1.3s,mb6.0						
NCB				LR	LR		
	comp=Z,52µm,19.0s,MS6.4						
BNM	**Barren Site**	**40.95**	**323**	*e*P	**P**	**01 56 54.6**	**+0.1**
	comp=Z,670nm,0.9s,mb6.3						
MDV	**Middlebury**	**41.04**	**5**	*e*P	**P**	**01 56 56.8**	**+1.7**
	comp=Z,89µm,1.5s						
LPM	**Los Pinos Moun**	**41.06**	**323**	*e*P	**P**	**01 56 55.2**	**-0.3**
	comp=Z,147nm,1.4s,mb5.4						
Y22C	**IRIS PASSCAL I**	**41.08**	**322**	⇓P	**P**	**01 56 56.0**	**+0.5**
	baz=41						
LENM	**Lemitar**	**41.17**	**322**	*e*P	**P**	**01 56 56.4**	**+0.1**
	comp=Z,94nm,1.1s,mb5.3						
219A	**White Tail Can**	**41.24**	**318**	⇑P	**P**	**01 56 56.6**	**-0.3**
	baz=41,SNR=29						
JFWS	**Jewell Farm**	**41.24**	**346**	*e*P	**P**	**01 56 55.4**	**-1.4**
JFWS				pmax	pmax		
	comp=Z,121nm,0.9s,mb5.5						
JFWS				MLR	MLR		
	comp=Z,112µm,19.0s,MS6.8						
JFWS	**Jewell Farm**	**41.24**	**346**	*e*P	**P**	**01 56 55.4**	**-1.3**
	comp=Z,121nm,0.9s,mb5.5						
JFWS				LR	LR		
	comp=Z,112µm,19.0s,MS6.8						
ANMO	**Albuquerque**	**41.39**	**324***c*	*i*P	**P**	**01 56 57.5**	**-0.7**
ANMO	**Albuquerque**	**41.39**	**324**	*e*P	**P**	**01 56 57.9**	**-0.3**
	comp=Z,231nm,1.0s,mb5.8						
ANMO				LR	LR		
	comp=Z,64µm,20.0s,MS6.5						

318A	**Bisbee**	**41.40**	**317**	⇑P	**P**	**01 56 58.5**	**+0.2**
	baz=41,SNR=59						
LBNH	**Lisbon**	**41.41**	**6**	*e*P	**P**	**01 56 59.5**	**+1.4**
LBNH				pmax	pmax		
	comp=Z,166nm,0.9s,mb5.7						
LBNH				MLR	MLR		
	comp=Z,105µm,22.0s,MS6.7						
LBNH	**Lisbon**	**41.41**	**6**	*e*P	**P**	**01 56 59.5**	**+1.4**
	comp=Z,166nm,0.9s,mb5.7						
LBNH				LR	LR		
	comp=Z,105µm,22.0s,MS6.7						
LAZ	**Ladron**	**41.43**	**322**	*e*P	**P**	**01 56 58.5**	**0.0**
	comp=Z,670nm,0.9s,mb6.3						
LONY	**Lake Ozonia**	**41.55**	**4**	*e*P	**P**	**01 56 59.9**	**+0.6**
	comp=Z,269nm,1.2s,mb5.8						
LONY				LR	LR		
	comp=Z,50µm,19.0s,MS6.4						
119A	**Ashpeak Ranch,**	**41.74**	**319**	⇑P	**P**	**01 57 01.6**	**+0.5**
	baz=42,SNR=43						
218A	**Dragoon**	**41.75**	**317**	⇑P	**P**	**01 57 01.3**	**+0.1**
	baz=42,SNR=24						
FRNY	**Flat Rock**	**41.83**	**5**	*e*P	**P**	**01 57 00.2**	**-1.4**
	comp=Z,408nm,1.3s,mb5.9						
Z19A	**T-Link Ranch,**	**42.05**	**319**	⇓P	**P**	**01 57 03.6**	**0.0**
	baz=42,SNR=7.9						
GLMI	**Grayling**	**42.07**	**353**	*e*P	**P**	**01 57 03.7**	**+0.2**
	comp=Z,237nm,0.9s,mb5.8						
GLMI				LR	LR		
	comp=Z,133µm,20.0s,MS6.8						
118A	**Homack Ranch,**	**42.10**	**318**	⇓P	**P**	**01 57 04.7**	**+0.6**
	baz=42,SNR=73						
LPA	**La Plata**	**42.12**	**155**	*d**e*P	**P**	**01 57 03.0**	**-1.0**
LPA				*e*pP	pP	01 57 06.0	-6.7
LPA				*e*sP	sP	01 57 08.3	-7.9
LPA				*e*PP	PP	01 58 43.0	+1.1
LPA				*e*PP	PP	01 58 46.0	+4.1
LPA				*e*pS		02 03 26.0	
217A	**Green Valley**	**42.16**	**316**	⇑P	**P**	**01 57 04.9**	**+0.4**
	baz=42,SNR=22						
Z18A	**Geronimo**	**42.42**	**319**	⇓P	**P**	**01 57 07.4**	**+0.8**
	baz=42						
Y19A	**Nutrioso**	**42.46**	**320**	⇑P	**P**	**01 57 06.8**	**-0.1**
	baz=42,SNR=53						
117A	**Oracle**	**42.58**	**317**	⇑P	**P**	**01 57 08.1**	**+0.2**
	baz=43,SNR=93						
RPN	**Rapa Nui**	**42.62**	**223**	P	**P**	**01 57 09.2**	**+0.9**
	comp=Z,1µm,1.7s,mb6.4,SNR=5.3						
216A	**Three Points,**	**42.74**	**316**	⇑P	**P**	**01 57 10.1**	**+0.9**
	baz=43,SNR=15						
PKME	**Peaks-Kenny Pk**	**42.77**	**9**	*e*P	**P**	**01 57 10.6**	**+1.4**
	comp=Z,130nm,1.0s,mb5.6						
PKME				LR	LR		
	comp=Z,116µm,22.0s,MS6.7						
X19A	**St. Johns**	**42.78**	**321**	⇑P	**P**	**01 57 09.8**	**+0.3**
	baz=43,SNR=57						
SDCO	**Great Sand Dun**	**42.84**	**327**	*e*P	**P**	**01 57 09.8**	**-0.1**
	comp=Z,95nm,0.7s,mb5.6						
SDCO				LR	LR		
	comp=Z,90µm,19.0s,MS6.7						
Z17A	**San Carlos Hig**	**42.84**	**318**	⇑P	**P**	**01 57 10.2**	**+0.2**
	baz=43,SNR=19						
Y18A	**Canyon Day Jun**	**42.85**	**319**	⇓P	**P**	**01 57 09.8**	**-0.2**
	baz=43,SNR=34						
116A	**Eloy**	**43.23**	**317**	⇑P	**P**	**01 57 13.8**	**+0.6**
	baz=43,SNR=51						
X18A	**Snowflake**	**43.27**	**320**	⇑P	**P**	**01 57 14.1**	**+0.7**
	baz=43,SNR=33						
W19A	**Sanders**	**43.28**	**321**	⇑P	**P**	**01 57 13.9**	**+0.4**
	baz=43,SNR=22						
Y17A	**Roosevelt**	**43.33**	**319**	⇑P	**P**	**01 57 15.2**	**+1.2**
	baz=43,SNR=22						
TRQA	**Tornquist**	**43.43**	**162**	*e*P	**P**	**01 57 14.3**	**-0.3**
	comp=Z,402nm,1.1s,mb6.1						
TRQA				LR	LR		
	comp=Z,94µm,21.0s,MS6.7						
V19A	**Window Rock**	**43.47**	**322**	⇑P	**P**	**01 57 14.2**	**-0.9**
	baz=44,SNR=7.0						
Z16A	**Peralta Trail,**	**43.50**	**318**	⇑P	**P**	**01 57 15.5**	**+0.1**
	baz=44,SNR=13						
W18A	**Petrified Fore**	**43.51**	**321**	⇑P	**P**	**01 57 15.8**	**+0.4**
	baz=44,SNR=18						
OGNE	**Ogallala**	**43.59**	**333**	*e*P	**P**	**01 57 15.3**	**-0.6**
	comp=Z,371nm,1.0s,mb6.1						
214A	**Organ Pipe Nat**	**43.65**	**315**	⇓P	**P**	**01 57 17.1**	**+0.5**
	baz=44,SNR=84						
115A	**Sonoran Desert**	**43.67**	**316**	⇓P	**P**	**01 57 17.7**	**+1.0**
	baz=44,SNR=32						
X17A	**Forest Lakes**	**43.70**	**319**	⇓P	**P**	**01 57 17.5**	**+0.6**
	baz=44,SNR=15						
ECSD	**EROS,Sioux Fal**	**43.83**	**340**	*e*P	**P**	**01 57 14.9**	**-2.9**
	comp=Z,232nm,1.1s,mb5.8						
ECSD				LR	LR		
	comp=Z,80µm,19.0s,MS6.7						
Y16A	**Circle Bar Ran**	**43.86**	**318**	⇑P	**P**	**01 57 18.8**	**+0.6**
	baz=44,SNR=62						
Z15A	**Gila River Ind**	**43.97**	**317**	⇑P	**P**	**01 57 19.2**	**+0.1**
	baz=44,SNR=10						
V18A	**Ganado**	**44.01**	**322**	⇑P	**P**	**01 57 18.1**	**-1.3**
	baz=44,SNR=13						
COWI	**Conover**	**44.04**	**349**	*e*P	**P**	**01 57 17.5**	**-1.9**
	comp=Z,258nm,1.3s,mb5.8						
COWI				LR	LR		
	comp=Z,168µm,19.0s,MS7.0						
PLCA	**Paso Flores**	**44.04**	**172**	P	**P**	**01 57 19.6**	**+0.1**
	comp=Z,320nm,0.8s,mb6.1,baz=344,slow=8.8,SNR=149						
PLCA				S	**S**	**02 03 53.5**	**+3.5**
	comp=Z,8.6nm,1.3s,baz=166,slow=12,SNR=3.5						
PLCA				LR	LR	02 13 41.1	
	comp=Z,72µm,21.4s,MS6.5,baz=354,slow=33						
PLCA	**Paso Flores**	**44.04**	**172**	P	**P**	**01 57 19.6**	**+0.1**
PLCA				S	**S**	**02 03 53.5**	**+3.5**
W17A	**Winslow**	**44.10**	**320**	⇑P	**P**	**01 57 20.3**	**+0.2**
	baz=44						
MVCO	**Mesa Verde**	**44.14**	**324**	⇓P	**P**	**01 57 20.5**	**+0.1**
	baz=44						
MVCO	**Mesa Verde**	**44.14**	**324**	*e*P	**P**	**01 57 19.8**	**-0.6**
	comp=Z,346nm,1.4s,mb5.9						
MVCO				LR	LR		
	comp=Z,51µm,19.0s,MS6.5						
X16A	**Lo Mia Camp, P**	**44.16**	**319**	⇓P	**P**	**01 57 21.4**	**+0.7**
	baz=44,SNR=40						
T19A	**Beclabito**	**44.20**	**323**	⇑P	**P**	**01 57 20.5**	**-0.4**
	baz=44,SNR=33						
ISCO	**Idaho Springs**	**44.42**	**329**	*e*P	**P**	**01 57 22.4**	**-0.2**
ISCO				pmax	pmax		
	comp=Z,562nm,1.8s,mb6.0						
ISCO				MLR	MLR		
	comp=Z,81µm,22.0s,MS6.6						
ISCO	**Idaho Springs**	**44.42**	**329**	*e*P	**P**	**01 57 22.4**	**-0.2**
	comp=Z,562nm,1.8s,mb6.0						
ISCO				LR	LR		
	comp=Z,81µm,22.0s,MS6.6						
U18A	**Rough Rock, Ch**	**44.43**	**322**	⇑P	**P**	**01 57 22.8**	**0.0**
	baz=44,SNR=21						
Y15A	**Casa Rosa Ranc**	**44.47**	**318**	⇓P	**P**	**01 57 24.3**	**+1.1**
	baz=44,SNR=32						
Z14A	**Wintersburg**	**44.55**	**317**	⇑P	**P**	**01 57 24.4**	**+0.7**
	baz=45,SNR=25						
W16A	**Flagstaff**	**44.63**	**320**	⇓P	**P**	**01 57 25.1**	**+0.7**
	baz=45,SNR=30						
X15A	**Humboldt**	**44.73**	**319**	⇓P	**P**	**01 57 25.9**	**+0.7**
	baz=45,SNR=67						
113A	**Mohawk Valley,**	**44.78**	**316**	⇓P	**P**	**01 57 25.5**	**-0.1**
	baz=45,SNR=29						
WUAZ	**Wupatki**	**44.80**	**320**	⇓P	**P**	**01 57 25.8**	**+0.1**
	baz=45						
WUAZ	**Wupatki**	**44.80**	**320**	*e*P	**P**	**01 57 25.8**	**+0.1**
	comp=Z,300nm,1.1s,mb6.0						
WUAZ				LR	LR		
	comp=Z,102µm,19.0s,MS6.8						
PV01	**Paradox Valley**	**44.82**	**325**	*e*P	**P**	**01 57 25.8**	**-0.1**
	comp=Z,469nm,0.5s,mb6.6						
S19A	**Harvey Farm, M**	**44.88**	**324**	⇓P	**P**	**01 57 26.0**	**-0.3**
	baz=45,SNR=36						
T18A	**Mexican Hat**	**44.91**	**323**	⇓P	**P**	**01 57 26.2**	**-0.4**
	baz=45,SNR=47						
Y14A	**Wickenburg**	**44.92**	**317**	⇑P	**P**	**01 57 26.7**	**0.0**
	baz=45,SNR=42						
U16A	**Tuba City**	**45.03**	**321**	⇓P	**P**	**01 57 27.8**	**+0.2**
	baz=45,SNR=41						
U17A	**Shonto**	**45.03**	**322**	⇓P	**P**	**01 57 28.0**	**+0.4**
	baz=45						
X14A	**Yava**	**45.15**	**318**	⇓P	**P**	**01 57 28.3**	**-0.2**
	baz=45,SNR=23						
W15A	**Williams**	**45.16**	**319**	⇓P	**P**	**01 57 29.3**	**+0.7**
	baz=45,SNR=26						
112A	**Yuma**	**45.22**	**315**	⇓P	**P**	**01 57 28.8**	**-0.4**
	baz=45,SNR=14						

PV10	**Paradox Valley**	**45.25**	**325**	*e*P	**P**	**01 57 28.6**	**-0.7**
	comp=Z,2µm,0.9s,mb6.8						
R19A	**Curley Farm, L**	**45.32**	**325**	⇓P	**P**	**01 57 29.7**	**-0.1**
	baz=45,SNR=14						
S18A	**Hurst Farm, Bl**	**45.35**	**324**	⇓P	**P**	**01 57 29.6**	**-0.5**
	baz=45,SNR=27						
T17A	**Navajo Res., N**	**45.38**	**322**	⇓P	**P**	**01 57 30.9**	**+0.6**
	baz=45,SNR=25						
Y13A	**Salome**	**45.41**	**317**	⇓P	**P**	**01 57 30.4**	**-0.1**
	baz=45,SNR=31						
PHWY	**Pilot Hill**	**45.47**	**331**	*e*P	**P**	**01 57 30.7**	**-0.3**
	comp=Z,274nm,1.5s,mb5.9						
V15A	**Kaibab Nationa**	**45.49**	**320**	⇓P	**P**	**01 57 31.8**	**+0.6**
	baz=46,SNR=130						
GLA	**Glamis**	**45.68**	**315**	*e*P	**P**	**01 57 32.4**	**-0.3**
GLA				*e**PP	pP	01 57 40.8	-0.7
GLA				pmax	pmax		
	comp=Z,376nm,1.4s,mb6.1						
GLA				MLR	MLR		
	comp=Z,77µm,19.0s,MS6.7						
GLA	**Glamis**	**45.68**	**315**	⇓P	**P**	**01 57 32.8**	**+0.1**
	baz=46,SNR=28						
GLA	**Glamis**	**45.68**	**315**	*e*P	**P**	**01 57 32.4**	**-0.4**
	comp=Z,376nm,1.4s,mb6.1						
GLA				*e*pP	pP	01 57 40.8	-0.7
GLA				LR	LR		
	comp=Z,77µm,19.0s,MS6.7						
W14A	**Seligman**	**45.72**	**319**	⇑P	**P**	**01 57 33.4**	**+0.3**
	baz=46,SNR=32						
R18A	**Canyonlands Na**	**45.75**	**324**	⇓P	**P**	**01 57 32.5**	**-0.8**
	baz=46,SNR=48						
Q19A	**Hogan Spring (**	**45.78**	**326**	⇑P	**P**	**01 57 31.8**	**-1.7**
	baz=46,SNR=52						
S17A	**Black Ridge (B**	**45.79**	**323**	⇓P	**P**	**01 57 33.2**	**-0.4**
	baz=46,SNR=14						
T16A	**Glen Canyon Da**	**45.80**	**322**	⇓P	**P**	**01 57 33.5**	**-0.1**
	baz=46,SNR=8.6						
Y12C	**Blythe**	**45.85**	**316**	⇑P	**P**	**01 57 34.3**	**+0.2**
	baz=46,SNR=43						
X13A	**Yucca**	**45.85**	**318**	⇓P	**P**	**01 57 34.2**	**+0.1**
	baz=46,SNR=37						
PDMCI	**Parker Dam,Lak**	**45.90**	**317**	⇓P	**P**	**01 57 34.4**	**0.0**
	baz=46,SNR=24						
U15A	**North Rim**	**45.94**	**321**	⇑P	**P**	**01 57 35.1**	**+0.3**
	baz=46,SNR=66						
V14A	**Boquillas Ranc**	**45.98**	**319**	⇓P	**P**	**01 57 35.9**	**+0.7**
	baz=46,SNR=59						
P19A	**Cripple Cowboy**	**46.09**	**326**	⇓P	**P**	**01 57 34.2**	**-1.6**
	baz=46,SNR=17						
W13A	**Hualapai Mount**	**46.18**	**318**	⇑P	**P**	**01 57 37.1**	**+0.4**
	baz=46,SNR=65						
R17A	**Hanksville Air**	**46.25**	**324**	⇓P	**P**	**01 57 36.2**	**-0.9**
	baz=46,SNR=74						
EYMN	**Ely**	**46.28**	**347**	*e*P	**P**	**01 57 36.4**	**-0.8**
	comp=Z,195nm,1.2s,mb5.9						
EYMN				*e*pP	pP	01 57 46.2	+0.2
EYMN				LR	LR		
	comp=Z,150µm,19.0s,MS7.0						
SWSC	**Sam W. Stewart**	**46.30**	**314**	⇑P	**P**	**01 57 36.7**	**-1.0**
	baz=46,SNR=12						
S16A	**Weppner Ranch,**	**46.33**	**323**	⇓P	**P**	**01 57 36.0**	**-1.8**
	baz=46,SNR=39						
T15A	**Red Dirt Ranch**	**46.37**	**321**	⇑P	**P**	**01 57 39.5**	**+1.4**
	baz=46,SNR=21						
Q18A	**Rafter H Ranch**	**46.37**	**325**	⇑P	**P**	**01 57 36.9**	**-1.2**
	baz=46,SNR=85						
DVTC	**Desert V Tower**	**46.38**	**314**	⇑P	**P**	**01 57 38.9**	**+0.7**
	baz=46,SNR=24						
BC3	**Big Chuckw Mtn**	**46.44**	**315**	⇑P	**P**	**01 57 38.5**	**-0.3**
	baz=46,SNR=42						
NEE2	**Needles Airpor**	**46.49**	**317**	⇓P	**P**	**01 57 39.4**	**+0.3**
	baz=46						
U14A	**Mt Trumbull**	**46.50**	**320**	⇑P	**P**	**01 57 39.9**	**+0.7**
	baz=46,SNR=29						
IRM	**Iron Mountain**	**46.51**	**316**	⇓P	**P**	**01 57 39.2**	**-0.1**
	baz=46,SNR=69						
SRU	**San Rafael**	**46.60**	**325**	*e*P	**P**	**01 57 48.1**	**+8.2**
SRU	**San Rafael**	**46.60**	**325**	⇑P	**P**	**01 57 38.9**	**-1.0**
	baz=47,SNR=82						
SRU	**San Rafael**	**46.60**	**325**	*e*pP	pP	01 57 48.1	-0.6
R16A	**Teasdale**	**46.62**	**323**	⇑P	**P**	**01 57 40.1**	**0.0**
	baz=47,SNR=36						
RWWY	**Rawlins**	**46.63**	**330**	*e*P	**P**	**01 57 39.9**	**-0.2**
	comp=Z,429nm,1.3s,mb6.2						
O19A	**Miners Draw (B**	**46.63**	**327**	⇓P	**P**	**01 57 38.8**	**-1.3**
	baz=47,SNR=29						
V13A	**Grand Canyon W**	**46.69**	**319**	⇑P	**P**	**01 57 41.5**	**+0.9**
	baz=47,SNR=24						
MONP	**Monument Peak**	**46.73**	**314**	⇓P	**P**	**01 57 41.1**	**+0.1**
	baz=47,SNR=33						
S15A	**Panguitch**	**46.77**	**322**	⇓P	**P**	**01 57 41.2**	**-0.1**
	baz=47,SNR=8.4						
P18A	**Preston Nutter**	**46.79**	**325**	⇓P	**P**	**01 57 40.6**	**-0.8**
	baz=47,SNR=44						
BAR	**Barrett**	**46.80**	**314**	*e*P	**P**	**01 57 40.9**	**-0.6**
	comp=Z,99nm,1.1s,mb5.7						
BAR				LR	LR		
	comp=Z,70µm,22.0s,MS6.6						
T14A	**Hurricane**	**46.83**	**321**	⇓P	**P**	**01 57 42.1**	**+0.3**
	baz=47,SNR=16						
Q16A	**Castle Valley**	**46.85**	**324**	⇓P	**P**	**01 57 41.5**	**-0.4**
	baz=47,SNR=36						
W12A	**Cal Nev Ari**	**46.96**	**318**	⇓P	**P**	**01 57 43.3**	**+0.6**
	baz=47						
P17A	**Butcher Ranch,**	**46.97**	**325**	⇑P	**P**	**01 57 42.9**	**+0.1**
	baz=47,SNR=22						
LDFC	**Landfair**	**46.99**	**317**	*e*P	**P**	**01 57 43.5**	**+0.4**
	comp=Z,322nm,1.3s,mb6.1						
LDFC				*e*pP	pP	01 57 52.2	+0.3
U13A	**Pakoon Wash**	**47.01**	**320**	⇑P	**P**	**01 57 43.9**	**+0.7**
	baz=47,SNR=46						
BELC	**Belle Mtn.**	**47.01**	**316**	⇓P	**P**	**01 57 44.5**	**+1.3**
	baz=47,SNR=68						
RSSD	**Black Hills**	**47.02**	**334**	*e*P	**P**	**01 57 42.7**	**-0.4**
RSSD				*e**PP	pP	01 57 52.5	+0.7
RSSD				pmax	pmax		
	comp=Z,657nm,1.3s,mb6.4						
RSSD				MLR	MLR		
	comp=Z,52µm,22.0s,MS6.5						
RSSD	**Black Hills**	**47.02**	**334**	*e*P	**P**	**01 57 42.7**	**-0.3**
	comp=Z,657nm,1.3s,mb6.4						
RSSD				*e*pP	pP	01 57 52.5	+0.7
RSSD				LR	LR		
	comp=Z,52µm,22.0s,MS6.5						
R15A	**Junction**	**47.05**	**323**	⇓P	**P**	**01 57 44.0**	**+0.6**
	baz=47						
N19A	**John Jarvie Ra**	**47.08**	**327**	⇑P	**P**	**01 57 42.8**	**-0.8**
	baz=47,SNR=34						
O18A	**Roosevelt**	**47.10**	**326**	⇑P	**P**	**01 57 43.9**	**+0.1**
	baz=47,SNR=35						
TMUT	**Trail Mountain**	**47.12**	**324**	*e*P	**P**	**01 57 43.8**	**-0.2**
	comp=Z,140nm,1.2s,mb5.8						
PFO	**Pinyon Flat Ob**	**47.13**	**315**	*e*P	**P**	**01 57 43.8**	**-0.3**
PFO				*e**PP	pP	01 57 52.4	-0.5
PFO				pmax	pmax		
	comp=Z,208nm,1.5s,mb5.8						
PFO				MLR	MLR		
	comp=Z,80µm,19.0s,MS6.7						
PFO	**Pinyon Flat Ob**	**47.13**	**315**	⇓P	**P**	**01 57 45.4**	**+1.3**
	baz=47,SNR=17						
PFO	**Pinyon Flat Ob**	**47.13**	**315**	*e*P	**P**	**01 57 43.8**	**-0.3**
	comp=Z,208nm,1.5s,mb5.8						
PFO				*e*pP	pP	01 57 52.4	-0.5
PFO				*e*sP	sP	01 57 57.0	+0.7
PFO				LR	LR		
	comp=Z,80µm,19.0s,MS6.7						
MSU	**Marysvale**	**47.19**	**323**	*e*P	**P**	**01 57 44.4**	**-0.1**
MSU				*e**PP	pP	01 57 54.2	+0.9
MSU	**Marysvale**	**47.19**	**323**	*e*P	**P**	**01 57 44.4**	**0.0**
	comp=Z,12nm,1.0s,mb4.8						
MSU				*e*pP	pP	01 57 54.2	+0.9
MSU				*e*sP	sP	01 57 57.7	+1.0
V12A	**Nelson**	**47.19**	**318**	⇑P	**P**	**01 57 45.5**	**+0.9**
	baz=47,SNR=36						
MVU	**Marysvale**	**47.20**	**323**	PFAKE		01 57 50.0	+5.4
MVU				LR	LR		
	comp=Z,55µm,20.0s,MS6.5						
GMRC	**Granite Mounta**	**47.20**	**317**	⇓P	**P**	**01 57 45.0**	**+0.3**
	baz=47,SNR=70						
109C	**Camp Elliot, M**	**47.22**	**314**	⇑P	**P**	**01 57 46.1**	**+1.3**
	baz=47,SNR=18						
S14A	**Cedar City**	**47.32**	**321**	⇑P	**P**	**01 57 45.7**	**+0.1**
	baz=47,SNR=12						
T13A	**Saint George**	**47.33**	**320**	⇓P	**P**	**01 57 46.1**	**+0.5**
	baz=47,SNR=39						
U12A	**Valley of Fire**	**47.39**	**319**	⇓P	**P**	**01 57 46.5**	**+0.3**
	baz=47,SNR=8.7						

N18A	**Larsen Ranch,**	**47.41**	**327**	⇑P	**P**	**01 57 46.0**	**-0.1**
	baz=48,SNR=23						
O17A	**Robinson Place**	**47.46**	**326**	⇓P	**P**	**01 57 47.5**	**+0.9**
	baz=48,SNR=54						
ARUT	**Antelope Range**	**47.50**	**321**	*e*P	**P**	**01 57 46.1**	**-0.8**
	comp=Z,475nm,1.0s,mb6.5						
ARUT				*e*pP	pP	01 57 55.8	+0.1
R14A	**James Farms, M**	**47.56**	**322**	⇓P	**P**	**01 57 47.3**	**-0.1**
	baz=48,SNR=7.4						
P16A	**Fountain Green**	**47.59**	**324**	⇓P	**P**	**01 57 47.1**	**-0.5**
	baz=48,SNR=13						
Q15A	**Fillmore**	**47.62**	**323**	⇓P	**P**	**01 57 48.0**	**+0.1**
	baz=48,SNR=18						
V11A	**Goodsprings**	**47.64**	**318**	⇑P	**P**	**01 57 48.2**	**+0.1**
	baz=48,SNR=21						
S13A	**Holt Ranch, En**	**47.64**	**321**	⇓P	**P**	**01 57 48.9**	**+0.8**
	baz=48,SNR=75						
MURC	**Murrieta**	**47.65**	**314**	⇑P	**P**	**01 57 48.2**	**0.0**
	baz=48,SNR=15						
T12A	**Moapa**	**47.68**	**319**	⇓P	**P**	**01 57 47.8**	**-0.6**
	baz=48,SNR=12						
HEC	**Hector,Ludlow**	**47.69**	**316**	⇓P	**P**	**01 57 49.1**	**+0.6**
	baz=48,SNR=38						
AGMN	**Agassiz Refuge**	**47.70**	**344**	*e*P	**P**	**01 57 45.9**	**-2.4**
	comp=Z,86nm,1.1s,mb5.7						
AGMN				LR	LR		
	comp=Z,100µm,20.0s,MS6.8						
TUQ	**Turquoise Moun**	**47.74**	**317**	⇓P	**P**	**01 57 49.4**	**+0.5**
	baz=48,SNR=48						
BBRC	**Big Bear Sol-O**	**47.80**	**315**	⇓P	**P**	**01 57 50.3**	**+0.9**
	baz=48						
MPU	**Maple Canyon**	**47.85**	**325**	*e*P	**P**	**01 57 49.1**	**-0.5**
	comp=Z,154nm,1.1s,mb6.0						
MPU				LR	LR		
	comp=Z,66µm,22.0s,MS6.6						
DAU	**Daniels Canyon**	**47.90**	**326**	*e*P	**P**	**01 57 49.8**	**-0.2**
	comp=Z,348nm,1.1s,mb6.3						
O16A	**Springville**	**47.90**	**325**	⇑P	**P**	**01 57 49.4**	**-0.6**
	baz=48,SNR=55						
P15A	**Leamington**	**47.93**	**324**	⇓P	**P**	**01 57 49.3**	**-0.9**
	baz=48,SNR=19						
U11A	**Corn Creek**	**47.94**	**319**	⇑P	**P**	**01 57 51.2**	**+0.8**
	baz=48,SNR=8.5						
N17A	**Moffit Pass**	**48.02**	**326**	⇑P	**P**	**01 57 50.9**	**0.0**
	baz=48,SNR=14						
NLU	**North Lily Min**	**48.06**	**325**	*e*P	**P**	**01 57 50.9**	**-0.3**
	comp=Z,149nm,1.4s,mb5.8						
NLU				*e*pP	pP	01 57 59.4	-0.7
NLU				*e*sP	sP	01 58 05.2	+1.7
R13A	**O'Grain Ranch,**	**48.07**	**321**	⇓P	**P**	**01 57 51.9**	**+0.5**
	baz=48,SNR=30						
JLU	**Jordanelle**	**48.13**	**326**	*e*P	**P**	**01 57 51.5**	**-0.3**
	comp=Z,198nm,1.1s,mb6.0						
Q14A	**Sevier Lake (B**	**48.15**	**323**	⇑P	**P**	**01 57 52.4**	**+0.4**
	baz=48,SNR=86						
RRX	**Edison Barstow**	**48.18**	**316**	⇓P	**P**	**01 57 53.1**	**+0.8**
	baz=48						
SHOC	**Shoshone**	**48.24**	**317**	⇓P	**P**	**01 57 53.0**	**+0.2**
	baz=48,SNR=15						
GSC	**Goldstone**	**48.27**	**317**	*e*P	**P**	**01 57 52.7**	**-0.3**
GSC				*e**PP	pP	01 58 01.7	-0.1
GSC				pmax	pmax		
	comp=Z,279nm,1.4s,mb6.1						
GSC				MLR	MLR		
	comp=Z,93µm,20.0s,MS6.8						
GSC	**Goldstone**	**48.27**	**317**	⇑P	**P**	**01 57 53.8**	**+0.8**
	baz=48,SNR=50						
GSC	**Goldstone**	**48.27**	**317**	*e*P	**P**	**01 57 52.7**	**-0.3**
	comp=Z,279nm,1.4s,mb6.1						
GSC				*e*pP	pP	01 58 01.7	-0.1
GSC				*e*sP	sP	01 58 06.6	+1.3
GSC				LR	LR		
	comp=Z,93µm,20.0s,MS6.8						
S12A	**Delamar Landin**	**48.28**	**320**	⇓P	**P**	**01 57 54.1**	**+1.1**
	baz=48,SNR=11						
BFSC	**Mount Baldy St**	**48.31**	**315**	⇑P	**P**	**01 57 53.6**	**+0.3**
	baz=48,SNR=16						
T11A	**Corn Creek, Al**	**48.31**	**320**	⇑P	**P**	**01 57 53.8**	**+0.6**
	baz=48,SNR=40						
SCI	**San Clemente I**	**48.31**	**313**	⇑P	**P**	**01 57 53.7**	**+0.3**
	baz=48						
N16A	**Rees Ranch, Co**	**48.32**	**326**	⇑P	**P**	**01 57 52.5**	**-0.8**
	baz=48,SNR=15						
CTU	**Camp Tracy**	**48.36**	**325**	*e*P	**P**	**01 57 53.5**	**-0.1**
	comp=Z,219nm,1.1s,mb6.1						
P14A	**Drum Mountains**	**48.41**	**323**	⇑P	**P**	**01 57 54.1**	**+0.1**
	baz=48,SNR=36						
CIS	**Catalina Islan**	**48.42**	**313**	⇓P	**P**	**01 57 54.8**	**+0.7**
	baz=48,SNR=10						
FMP	**Fort Macarthur**	**48.49**	**314**	⇑P	**P**	**01 57 54.8**	**+0.1**
	baz=48						
O15A	**The Old Anders**	**48.50**	**325**	⇓P	**P**	**01 57 54.0**	**-0.6**
	baz=49,SNR=22						
NOQ	**North Oquirrh**	**48.55**	**325**	*e*P	**P**	**01 57 54.8**	**-0.2**
	comp=Z,205nm,1.2s,mb6.0						
R12A	**Pony Springs,**	**48.56**	**321**	⇑P	**P**	**01 57 55.0**	**-0.2**
	baz=49,SNR=50						
U10A	**Ash Meadows, A**	**48.57**	**318**	⇑P	**P**	**01 57 55.8**	**+0.5**
	baz=49,SNR=35						
MWC	**Mount Wilson**	**48.58**	**315**	*e*P	**P**	**01 57 55.6**	**+0.2**
MWC				pmax	pmax		
	comp=Z,386nm,1.6s,mb6.2						
MWC				MLR	MLR		
	comp=Z,55µm,20.0s,MS6.5						
MWC	**Mount Wilson**	**48.58**	**315**	*e*P	**P**	**01 57 55.6**	**+0.2**
	comp=Z,386nm,1.6s,mb6.2						
MWC				LR	LR		
	comp=Z,55µm,20.0s,MS6.5						
Q13A	**Wheeler Ranch,**	**48.58**	**322**	⇓P	**P**	**01 57 55.7**	**+0.4**
	baz=49						
BW06	**Boulder Array**	**48.61**	**329**	*e*P	**P**	**01 57 54.7**	**-0.7**
	comp=Z,886nm,1.4s,mb6.6						
BW06				LR	LR		
	comp=Z,98µm,19.0s,MS6.8						
PDAR	**Pinedale Array**	**48.61**	**329**	P	**P**	**01 57 54.0**	**-1.4**
	comp=Z,26nm,0.9s,mb5.3,baz=140,slow=7.4,SNR=83						
PDAR				S	**S**	**02 04 56.4**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=297,slow=25,SNR=2.5						
PDAR				LR	LR	02 20 53.7	
	comp=Z,93µm,18.7s,MS6.8,baz=132,slow=39						
DUG	**Dugway**	**48.65**	**324**	*e*P	**P**	**01 57 55.3**	**-0.5**
DUG				*e**PP	pP	01 58 04.2	-0.4
DUG				pmax	pmax		
	comp=Z,165nm,1.0s,mb6.0						
DUG				MLR	MLR		
	comp=Z,59µm,19.0s,MS6.6						
DUG	**Dugway**	**48.65**	**324**	*e*P	**P**	**01 57 55.3**	**-0.4**
	comp=Z,165nm,1.0s,mb6.0						
DUG				*e*pP	pP	01 58 04.2	-0.4
DUG				LR	LR		
	comp=Z,59µm,19.0s,MS6.6						
M16A	**Huntsville**	**48.71**	**326**	⇓P	**P**	**01 57 55.7**	**-0.6**
	baz=49,SNR=24						
DECC	**Green Verdugo**	**48.79**	**314**	⇑P	**P**	**01 57 56.9**	**-0.1**
	baz=49,SNR=11						
TPNV	**Topopah Spring**	**48.81**	**319**	*e*P	**P**	**01 57 57.2**	**+0.1**
TPNV				*e**PP	pP	01 58 06.8	+0.9
TPNV				pmax	pmax		
	comp=Z,108nm,0.6s,mb6.1						
TPNV				MLR	MLR		
	comp=Z,126µm,19.0s,MS6.9						
TPNV	**Topopah Spring**	**48.81**	**319**	⇑P	**P**	**01 57 57.5**	**+0.4**
	baz=49						
TPNV	**Topopah Spring**	**48.81**	**319**	*e*P	**P**	**01 57 57.1**	**0.0**
	comp=Z,108nm,0.6s,mb6.0						
TPNV				*e*pP	pP	01 58 06.8	+0.9
TPNV				LR	LR		
	comp=Z,126µm,19.0s,MS6.9						
EDW2	**Edwards Air Fo**	**48.87**	**315**	⇑P	**P**	**01 57 57.5**	**-0.2**
	baz=49,SNR=55						
S11A	**Rachel**	**48.88**	**320**	⇑P	**P**	**01 57 57.7**	**0.0**
	baz=49,SNR=18						
P13A	**Bates Ranch, G**	**48.89**	**323**	⇑P	**P**	**01 57 57.2**	**-0.5**
	baz=49						
N15A	**Stansbury Isla**	**48.93**	**325**	⇓P	**P**	**01 57 57.3**	**-0.7**
	baz=49,SNR=7.6						
FURC	**Furnace Creek,**	**48.95**	**318**	⇑P	**P**	**01 57 59.0**	**+0.8**
	baz=49,SNR=51						
LRMC	**Laurel Mountai**	**48.98**	**316**	⇑P	**P**	**01 57 59.6**	**+1.2**
	baz=49						
L16A	**Fish Haven**	**49.08**	**327**	⇑P	**P**	**01 57 58.6**	**-0.5**
	baz=49,SNR=16						
Q12A	**Willow Creek R**	**49.13**	**322**	⇑P	**P**	**01 57 59.7**	**+0.1**
	baz=49,SNR=19						
MPMC	**Manual Prospec**	**49.15**	**317**	⇑P	**P**	**01 58 00.8**	**+1.1**
	baz=49,SNR=54						
SNCC	**San Nicolas Is**	**49.16**	**313**	⇓P	**P**	**01 57 59.4**	**-0.4**
	baz=49						

SNCC San Nicolas Is 49.16 313 *e*P P 01 58 00.5 +0.6
comp=Z,360nm,1.5s,mb6.2
SNCC LR LR
comp=Z,59µm,20.0s,MS6.6
SPUT South Promonto 49.17 326 *e*P P 01 57 59.6 -0.2
comp=Z,260nm,1.1s,mb6.2
R11A Troy Canyon, C 49.19 321 ⇑P P 01 58 00.1 +0.2
baz=49,SNR=32
BGU Big Grassy Mou 49.25 325 *e*P P 01 57 59.4 -0.9
comp=Z,199nm,1.3s,mb6.0
BLG Laguna Peak 49.25 314 ⇑P P 01 57 59.9 -0.6
baz=49
OSI Osito Adit 49.26 315 ⇑P P 01 58 00.5 -0.1
baz=49
M15A Larsen Ranch, 49.27 326 ⇓P P 01 57 59.4 -1.2
baz=49,SNR=13
N14A Grayback Hills 49.29 325 ⇓P P 01 58 00.4 -0.2
baz=49,SNR=39
DAC Darwin (Calif) 49.34 317 PFAKE
DAC LR LR
comp=Z,71µm,20.0s,MS6.7
AHID Auburn Hatcher 49.42 328 *e*P P 01 58 00.8 -0.8
comp=Z,174nm,1.0s,mb6.0
AHID LR LR
comp=Z,102µm,22.0s,MS6.8
P12A McGill 49.44 322 ⇓P P 01 58 01.9 0.0
baz=50,SNR=16
ULM Lac du Bonnet 49.48 345 P P 01 57 59.2 -2.7
comp=Z,50nm,0.6s,mb5.8,baz=157,slow=7.9,SNR=37
ULM S S 02 05 02.9 -4.7
comp=Z,4.6nm,1.0s,baz=72,slow=20,SNR=1.8
Q11A Duckwater 49.53 321 ⇓P P 01 58 03.2 +0.7
baz=50,SNR=17
GRAC Grapevine Rang 49.58 318 ⇑P P 01 58 03.3 +0.3
baz=50,SNR=46
ARVC Arvin 49.59 315 ⇑P P 01 58 03.6 +0.5
baz=50,SNR=24
S10A Tonopah Range, 49.59 320 ⇓P P 01 58 03.8 +0.7
baz=50,SNR=102
L15A Malad City 49.59 326 ⇓P P 01 58 02.5 -0.5
baz=50,SNR=68
BSC Santa Cruz Isl 49.60 313 ⇓P P 01 58 03.3 +0.1
baz=50,SNR=9.4
R10A Warm Springs 49.61 320 ⇑P P 01 58 04.0 +0.8
baz=50,SNR=28
ISA Isabella 49.62 316 *e*P P 01 58 03.2 -0.1
ISA pmax pmax
comp=Z,83nm,0.9s,mb5.8
ISA MLR MLR
comp=Z,70µm,21.0s,MS6.6
ISA Isabella 49.62 316 ⇑P P 01 58 03.9 +0.6
baz=50,SNR=38
ISA Isabella 49.62 316 *e*P P 01 58 03.2 -0.1
comp=Z,83nm,0.9s,mb5.8
ISA LR LR
comp=Z,70µm,21.0s,MS6.6
HVU Hansel Valley 49.66 326 *e*P P 01 58 03.6 +0.1
HVU *e**PP pP 01 58 13.5 +1.2
HVU pmax pmax
comp=Z,103nm,1.0s,mb5.8
HVU Hansel Valley 49.66 326 *e*P P 01 58 03.5 0.0
comp=Z,103nm,1.0s,mb5.8
HVU *ep*P pP 01 58 13.5 +1.2
HVU *es*P sP 01 58 16.1 +0.3
REDW Red Top Meadow 49.70 329 *e*P P 01 58 02.9 -0.9
comp=Z,560nm,1.0s,mb6.5
K16A Soda Springs 49.72 328 ⇑P P 01 58 03.8 -0.2
baz=50,SNR=32
SNOW Snow King Moun 49.72 329 *e*P P 01 58 03.7 -0.2
comp=Z,286nm,1.0s,mb6.3
SNOW *ep*P pP 01 58 13.7 +1.0
LOHW Long Hollow 49.75 329 *e*P P 01 58 03.4 -0.7
comp=Z,189nm,1.0s,mb6.1
CWC Cottonwood Cre 49.76 317 ⇓P P 01 58 05.1 +0.8
baz=50,SNR=22
M14A Sheep Mountain 49.80 325 ⇑P P 01 58 04.3 -0.3
baz=50,SNR=54
O12A Currie 49.84 323 ⇑P P 01 58 04.8 -0.1
baz=50,SNR=49
TPAW Teton Pass 49.84 329 *e*P P 01 58 04.2 -0.7
comp=Z,143nm,1.1s,mb5.9
TPAW *ep*P pP 01 58 14.0 +0.3
N13A Wendover, West 49.88 324 ⇓P P 01 58 05.2 -0.1
baz=50,SNR=13
S09A Goldfield 49.89 319 ⇑P P 01 58 05.6 +0.3
baz=50,SNR=37
MOOW Moose Ponds 49.92 329 *e*P P 01 58 04.1 -1.3
comp=Z,158nm,1.0s,mb6.0
RRI2 Red Ridge 49.94 328 *e*P P 01 58 04.8 -0.8
comp=Z,141nm,0.9s,mb6.0
RRI2 *ep*P pP 01 58 13.6 -0.8
Q10A Clear Creek Ra 49.99 321 ⇓P P 01 58 06.6 +0.6
baz=50,SNR=21
LAO LASA Array 49.99 335 *e*P P 01 58 05.6 -0.3
comp=Z,151nm,0.9s,mb6.0
LAO LR LR
comp=Z,58µm,19.0s,MS6.6
P11A Circle Ranch, 50.01 322 ⇑P P 01 58 06.5 +0.3
baz=50,SNR=10
DCID1 Drake Creek 50.04 329 *e*P P 01 58 07.3 +1.0
comp=Z,216nm,1.1s,mb6.1
J16A Bone 50.04 328 ⇑P P 01 58 06.2 -0.2
baz=50,SNR=29
R09A Tonopah 50.08 320 ⇓P P 01 58 06.8 +0.1
baz=50,SNR=66
TPH Tonopah 50.09 319 *e*P P 01 58 06.9 +0.1
TPH pmax pmax
comp=Z,175nm,1.3s,mb5.9
TPH MLR MLR
comp=Z,65µm,19.0s,MS6.7
TPH Tonopah 50.09 319 *e*P P 01 58 06.9 +0.1
comp=Z,174nm,1.3s,mb5.9
TPH LR LR
comp=Z,65µm,19.0s,MS6.7
L14A Malta 50.09 326 ⇓P P 01 58 06.3 -0.5
baz=50,SNR=58
IMW Indian Meadow 50.12 329 *e*P P 01 58 06.2 -0.8
comp=Z,202nm,0.9s,mb6.2
K15A Arbon 50.13 327 ⇑P P 01 58 05.5 -1.5
baz=50,SNR=22
VES Vestal, Richgr 50.13 316 ⇓P P 01 58 07.6 +0.4
baz=50,SNR=43
FLWY Flagg Ranch 50.13 329 *e*P P 01 58 06.7 -0.4
comp=Z,430nm,1.3s,mb6.3
PKM Peak Mountain 50.18 314 ⇓P P 01 58 07.7 +0.1
baz=50,SNR=39
RLMT Red Lodge 50.18 331 *e*P P 01 58 06.3 -1.0
comp=Z,152nm,1.0s,mb6.0
RLMT LR LR
comp=Z,45µm,21.0s,MS6.5
M13A Montello 50.18 325 ⇑P P 01 58 07.2 -0.3
baz=50,SNR=20
TIN Tinemaha 50.19 318 ⇑P P 01 58 07.6 0.0
baz=50,SNR=8.6
O11A Cowboy Ranch, 50.30 322 ⇑P P 01 58 08.7 +0.3
baz=50,SNR=22
LKWY Lake 50.33 330 *e*P P 01 58 09.2 +0.7
LKWY pmax pmax
comp=Z,54nm,0.8s,mb5.6
LKWY MLR MLR
comp=Z,83µm,20.0s,MS6.7
LKWY Lake 50.33 330 *e*P P 01 58 09.2 +0.7
comp=Z,69nm,0.8s,mb5.7
LKWY LR LR
comp=Z,96µm,20.0s,MS6.8
N12A Clover Valley, 50.37 324 ⇓P P 01 58 09.4 +0.5
baz=50,SNR=16
I16A Newdale 50.39 329 ⇑P P 01 58 09.2 +0.1
baz=50,SNR=39
K14A Jones Ranch, D 50.39 326 ⇑P P 01 58 08.6 -0.4
baz=50,SNR=42
S08C White Mtn Res 50.39 318 ⇑P P 01 58 09.5 +0.4
baz=50,SNR=114
ELK Elko 50.43 323 *e*P P 01 58 08.5 -0.8
ELK pmax pmax
comp=Z,38nm,1.0s
ELK MLR MLR
comp=Z,82µm,19.0s
ELK Elko 50.43 323 *e*P P 01 58 08.5 -0.8
comp=Z,38nm,1.0s,mb5.4
ELK LR LR
comp=Z,82µm,19.0s,MS6.8
YFT Old Faithful 50.46 330 *e*P P 01 58 11.2 +1.6
comp=Z,277nm,1.0s,mb6.2
RCTC Rector, Farmer 50.48 316 ⇑P P 01 58 10.2 +0.3
baz=50,SNR=13
Q09A Carvers 50.49 320 ⇑P P 01 58 10.5 +0.7
baz=50

P10A Eureka 50.49 321 ⇑P P 01 58 10.3 +0.4
baz=50,SNR=16
SMMC Simmler 50.51 315 ⇑P P 01 58 10.8 +0.7
baz=50,SNR=9.6
L13A Double Diamond 50.52 325 ⇓P P 01 58 09.9 -0.1
baz=51,SNR=8.4
HELL Mitchell Peak 50.53 317 ⇑P P 01 58 11.4 +1.2
baz=50,SNR=75
J15A Blackfoot 50.56 328 ⇓P P 01 58 10.9 +0.6
baz=51,SNR=56
YNR Norris Junctio 50.57 330 *e*P P 01 58 11.2 +0.8
comp=Z,130nm,1.3s,mb5.7
MTUM Tungsten Hills 50.58 318 *e*P P 01 58 10.3 -0.2
MTUM *ep*P pP 01 58 19.0 -0.3
DGMT Dagmar 50.61 338 *e*P P 01 58 10.8 +0.3
DGMT LR LR
comp=Z,52µm,19.0s,MS6.6
M12A Wells 50.65 324 ⇑P P 01 58 10.6 -0.4
baz=51
YMR Madison River 50.68 330 *e*P P 01 58 11.7 +0.5
comp=Z,244nm,1.0s,mb6.1
YMR *ep*P pP 01 58 21.1 +1.1
YMR LR LR
comp=Z,76µm,22.0s,MS6.7
V05C Boulder Hill, 50.72 315 ⇓P P 01 58 12.0 +0.3
baz=51
N11A Elko Archery C 50.77 323 ⇓P P 01 58 12.4 +0.5
baz=51,SNR=12
R08A Mina 50.82 319 ⇓P P 01 58 12.4 +0.1
baz=51,SNR=12
H16A Russell Place, 50.85 330 ⇓P P 01 58 13.0 +0.5
baz=51,SNR=30
GCMT Greycliff 50.86 332 *e*P P 01 58 11.8 -0.7
comp=Z,181nm,0.9s,mb6.0
GCMT *ep*P pP 01 58 22.0 +0.6
P09A Austin 50.88 321 ⇑P P 01 58 12.6 -0.2
baz=51,SNR=8.0
MLAC Mammoth Lakes 50.91 318 ⇑P P 01 58 13.7 +0.7
baz=51
O10A Cortez Mining, 50.91 322 ⇓P P 01 58 12.8 -0.2
baz=51,SNR=27
K13A Stover Farm, H 50.97 326 ⇑P P 01 58 12.9 -0.5
baz=51,SNR=13
Q08A Gabbs 50.99 320 ⇓P P 01 58 14.0 +0.3
baz=51,SNR=48
NVAR Mina Array Bea 50.99 319 P P 01 58 13.2 -0.5
comp=Z,33nm,0.7s,mb5.3,baz=132,slow=6.8,SNR=57
NVAR S S 02 05 31.1 +2.1
comp=Z,0.8nm,0.7s,baz=81,slow=5.6,SNR=1.7
I15A Monteview 51.00 328 ⇑P P 01 58 13.6 0.0
baz=51,SNR=16
QLMT Earthquake Lak 51.03 330 *e*P P 01 58 14.1 +0.3
comp=Z,182nm,1.3s,mb5.8
KCC Kaiser Creek 51.07 317 ⇓P P 01 58 15.2 +1.0
baz=51
J14A Carey 51.10 327 ⇑P P 01 58 14.5 +0.2
baz=51,SNR=100
U05C Westside ANR, 51.11 316 ⇑P P 01 58 15.4 +0.8
baz=51
T06C Millerton Lake 51.17 317 ⇑P P 01 58 14.5 -0.5
baz=51,SNR=19
L12A House Creek Ra 51.17 325 ⇓P P 01 58 15.5 +0.6
baz=51,SNR=24
N10A Dunphy 51.17 322 ⇑P P 01 58 14.7 -0.2
baz=51
M11A Holland Ranch, 51.18 324 ⇓P P 01 58 15.6 +0.6
baz=51,SNR=12
PKD Parkfield 51.21 315 ⇓P P 01 58 15.7 +0.3
baz=51,SNR=22
O09A Fish Creek Ran 51.27 322 ⇓P P 01 58 16.5 +0.8
baz=51,SNR=120
R07C Lee Vining 51.29 318 ⇑P P 01 58 16.5 +0.6
baz=51,SNR=16
K12A Draper Farm, C 51.42 325 ⇓P P 01 58 16.4 -0.3
baz=52,SNR=25
BMN Battle Mountai 51.44 322 *e*P P 01 58 16.3 -0.7
BMN pmax pmax
comp=Z,391nm,1.1s,mb6.2
BMN MLR MLR
comp=Z,107µm,19.0s,MS6.9
BMN Battle Mountai 51.44 322 *e*P P 01 58 16.3 -0.7
comp=Z,391nm,1.1s,mb6.2
BMN LR LR
comp=Z,107µm,19.0s,MS6.9
I14A Mackay 51.46 328 ⇑P P 01 58 18.0 +0.9
baz=52
H15A Lima 51.51 329 ⇑P P 01 58 18.2 +0.8
baz=52,SNR=45
J13A Cove Ranch, Pi 51.51 327 ⇓P P 01 58 17.9 +0.5
baz=52,SNR=28
P08A Dixie Valley 51.55 321 ⇓P P 01 58 18.0 +0.2
baz=52,SNR=14
U04C Hernandez Rese 51.59 315 ⇓P P 01 58 19.0 +0.9
baz=52,SNR=25
Q07A Schurz 51.60 319 ⇓P P 01 58 19.2 +1.0
baz=52
L11A Cat Creek Ranc 51.61 324 ⇓P P 01 58 18.5 +0.3
baz=52,SNR=43
M10A I.L. Ranch, Tu 51.68 323 ⇓P P 01 58 18.9 +0.2
baz=52,SNR=16
BOZ Bozeman (W) 51.71 330 *e*P P 01 58 17.9 -1.0
BOZ pmax pmax
comp=Z,219nm,1.1s,mb6.0
BOZ MLR MLR
comp=Z,45µm,20.0s,MS6.5
BOZ Bozeman (W) 51.71 330 *e*P P 01 58 17.9 -1.0
comp=Z,219nm,1.1s,mb6.0
BOZ LR LR
comp=Z,45µm,20.0s,MS6.5
S06C San Francisco 51.72 318 ⇓P P 01 58 19.6 +0.5
baz=52,SNR=42
V03C Hunter Liggett 51.74 315 ⇑P P 01 58 19.1 -0.2
baz=52,SNR=37
HLID Hailey 51.74 327 ⇑P P 01 58 19.3 +0.1
baz=52,SNR=54
HLID Hailey 51.74 327 *e*P P 01 58 18.4 -0.8
comp=Z,38nm,0.8s,mb5.4
HLID *ep*P pP 01 58 28.2 +0.1
HLID LR LR
comp=Z,86µm,20.0s,MS6.8
MCMT McKenzie Canyo 51.76 329 *e*P P 01 58 19.3 +0.1
comp=Z,200nm,1.1s,mb6.0
S05C Merced 51.77 317 ⇓P P 01 58 19.9 +0.4
baz=52,SNR=18
R06C Coleville 51.80 319 ⇓P P 01 58 20.3 +0.7
baz=52,SNR=33
G15A Dillon 51.80 329 ⇓P P 01 58 20.1 +0.5
baz=52,SNR=68
I13A Wildhorse Cree 51.81 327 ⇓P P 01 58 20.1 +0.4
baz=52,SNR=36
N09A Rock Creek Ran 51.88 322 ⇑P P 01 58 20.6 +0.3
baz=52,SNR=54
H14A Leadore 51.88 328 ⇑P P 01 58 21.2 +1.0
baz=52,SNR=40
J12A Stokes Ranch, 51.92 326 ⇓P P 01 58 20.0 -0.5
baz=52,SNR=29
O08A Rochester Mine 51.94 321 ⇑P P 01 58 20.4 -0.3
baz=52,SNR=24
L10A Juniper Basin 51.98 324 ⇓P P 01 58 21.0 0.0
baz=52,SNR=44
P07A Fallon 51.98 320 ⇑P P 01 58 21.4 +0.3
baz=52,SNR=8.8
DLMT Dillon 51.99 329 *e*P P 01 58 20.7 -0.3
comp=Z,56nm,0.6s,mb5.7
K11A Parker Ranch, 52.15 325 ⇑P P 01 58 22.6 +0.4
baz=52,SNR=87
CMB Columbia Colle 52.16 318 *e*P P 01 58 22.5 +0.1
CMB pmax pmax
comp=Z,121nm,1.4s,mb5.6
CMB MLR MLR
comp=Z,37µm,20.0s,MS6.4
CMB Columbia Colle 52.16 318 ⇓P P 01 58 22.7 +0.3
baz=52,SNR=33
CMB Columbia Colle 52.16 318 *e*P P 01 58 22.5 +0.1
comp=Z,121nm,1.4s,mb5.6
CMB LR LR
comp=Z,37µm,20.0s,MS6.4
M09A Marrel Ranch, 52.17 323 ⇓P P 01 58 22.6 +0.3
baz=52,SNR=9.0
N08A GE Springer Mi 52.21 322 ⇑P P 01 58 22.5 -0.2
baz=52,SNR=48
SAO San Andreas Ge 52.25 316 *e*P P 01 58 22.6 -0.5
SAO pmax pmax
comp=Z,343nm,1.6s,mb6.0
SAO MLR MLR
comp=Z,58µm,21.0s,MS6.6
SAO San Andreas Ge 52.25 316 *e*P P 01 58 22.6 -0.5
comp=Z,343nm,1.6s,mb6.0

SAO LR LR
comp=Z,58µm,21.0s,MS6.6
PACP Pacheco Peak 52.26 316 ⇑P P 01 58 24.4 +1.3
baz=52,SNR=13
F15A Butte 52.27 330 ⇓P P 01 58 22.9 -0.2
baz=52,SNR=52
R05C Kirkwood Meado 52.30 318 ⇓P P 01 58 25.1 +1.6
baz=52,SNR=28
H13A Challis 52.32 328 ⇑P P 01 58 23.9 +0.5
baz=52,SNR=36
O07A Toulon 52.32 321 ⇓P P 01 58 23.5 0.0
baz=52,SNR=38
G14A Jackson 52.36 329 ⇓P P 01 58 23.3 -0.4
baz=52,SNR=16
PAHR Pah Rah Range 52.40 320 *e*P P 01 58 24.0 -0.1
comp=Z,501nm,1.4s,mb6.2
WCN Washoe City 52.41 319 ⇓P P 01 58 25.8 +1.5
baz=52,SNR=14
MFID Camas Ranch 52.44 326 ⇓P P 01 58 25.1 +0.7
baz=52,SNR=43
SCHQ Schefferville 52.45 8 P P 01 58 24.5 +0.3
comp=Z,77nm,0.8s,mb5.7,baz=200,slow=6.1,SNR=44
SCHQ S S 02 05 50.2 +1.8
comp=Z,3.6nm,0.8s,baz=218,slow=19,SNR=2.2
SCHQ LR LR 02 20 32.4
comp=Z,55µm,21.3s,MS6.6,baz=195,slow=36
EGMT Eagleton 52.56 333 ⇑P P 01 58 25.2 +0.1
baz=53
EGMT Eagleton 52.56 333 *e*P P 01 58 24.9 -0.3
comp=Z,197nm,1.1s,mb6.0
EGMT *ep*P pP 01 58 34.7 +0.7
EGMT *es*P sP 01 58 38.9 +1.4
EGMT LR LR
comp=Z,50µm,22.0s,MS6.5
HRY Holter Researc 52.56 331 *e*P P 01 58 22.3 -2.9
comp=Z,1µm,0.9s,mb6.8
H12A Diamond D Ranc 52.63 327 ⇑P P 01 58 26.1 +0.3
baz=53,SNR=36
K10A MacKenzie Ranc 52.64 324 ⇓P P 01 58 26.4 +0.6
baz=53,SNR=32
R04C Big Horse Ranc 52.65 317 ⇑P P 01 58 27.1 +1.1
baz=53,SNR=13
L09A Wilkinson Ranc 52.65 323 ⇑P P 01 58 26.3 +0.3
baz=53,SNR=14
G13A Cobalt 52.66 328 ⇑P P 01 58 26.0 +0.1
baz=53
F14A Wisdom 52.70 329 ⇓P P 01 58 26.4 +0.1
baz=53,SNR=15
P06A Stead Airport, 52.71 320 ⇑P P 01 58 26.7 +0.2
baz=53
N07B Gerlach 52.73 321 ⇓P P 01 58 26.4 -0.1
baz=53,SNR=53
M08A Happy Creek Ra 52.75 322 ⇓P P 01 58 27.0 +0.3
baz=53,SNR=35
E15A Deer Lodge 52.76 330 ⇑P P 01 58 26.9 +0.2
baz=53,SNR=35
LAVA Lava Cap Winer 52.77 318 ⇓P P 01 58 27.5 +0.6
baz=53,SNR=18
I11A Placerville 52.83 326 ⇓P P 01 58 27.7 +0.5
baz=53,SNR=38
WENL Wente Vineyard 52.89 316 ⇑P P 01 58 29.1 +1.3
baz=53,SNR=9.8
O06A Flanigan 52.93 320 ⇓P P 01 58 28.2 +0.2
baz=53,SNR=75
P05C Yuba Gap, Truc 52.97 319 ⇑P P 01 58 29.5 +1.1
baz=53,SNR=56
J10A Berg Farm, Mel 52.98 325 ⇑P P 01 58 28.4 +0.1
baz=53
K09A Rome 53.09 324 ⇑P P 01 58 29.2 0.0
baz=53,SNR=169
BEKR Beckwourth 53.11 319 ⇓P P 01 58 30.2 +0.8
baz=53,SNR=20
JRSC Jasper Ridge 53.11 316 ⇓P P 01 58 30.3 +0.9
baz=53,SNR=11
BDM Black Diamond 53.13 317 ⇓P P 01 58 30.1 +0.5
baz=53,SNR=28
D15A Lincoln 53.13 331 ⇑P P 01 58 29.4 0.0
baz=53,SNR=20
L08A Fields 53.16 323 ⇑P P 01 58 28.6 -1.1
baz=53,SNR=117
E14A Clinton 53.17 330 ⇑P P 01 58 30.1 +0.4
baz=53,SNR=65
F13A Darby 53.18 329 ⇑P P 01 58 30.1 +0.4
baz=53,SNR=71
M07A Soldier Meadow 53.20 322 ⇑P P 01 58 29.9 -0.2
baz=53,SNR=34
Q04C Lincoln 53.24 318 ⇓P P 01 58 30.5 +0.1
baz=53,SNR=19
N06A Buffalo Meadow 53.26 321 ⇑P P 01 58 30.3 -0.2
baz=53,SNR=38
H11A Donnelly 53.36 327 ⇓P P 01 58 30.4 -0.7
baz=53,SNR=26
CHMT Chamberlain Mo 53.40 330 *e*P P 01 58 31.5 +0.1
comp=Z,18nm,1.0s,mb5.0
CHMT *ep*P pP 01 58 40.7 +0.4
I10A Payette 53.41 326 ⇑P P 01 58 31.4 -0.1
baz=54
WVOR Wild Horse Val 53.48 323 *e*P P 01 58 31.2 -0.8
WVOR pmax pmax
comp=Z,731nm,1.2s,mb6.5
WVOR MLR MLR
comp=Z,45µm,20.0s,MS6.5
WVOR Wild Horse Val 53.48 323 *e*P P 01 58 31.2 -0.8
comp=Z,731nm,1.2s,mb6.5
WVOR LR LR
comp=Z,45µm,20.0s,MS6.5
J09A Fry Pan Ranch, 53.50 324 ⇓P P 01 58 31.7 -0.4
baz=54,SNR=39
O05C Quincy 53.53 319 ⇑P P 01 58 33.7 +1.2
baz=54,SNR=18
E13A Victor 53.54 329 ⇑P P 01 58 32.2 -0.2
baz=54,SNR=37
K08A Mann Creek Ran 53.56 323 ⇓P P 01 58 32.2 -0.4
baz=54,SNR=100
Q03C Winters 53.57 317 ⇑P P 01 58 34.5 +1.7
baz=54,SNR=9.8
OHCM Honcut 53.57 318 *e*P P 01 58 32.5 -0.3
F12A Elk City 53.64 328 ⇓P P 01 58 31.8 -1.4
baz=54,SNR=133
D14A Greenough 53.64 330 ⇓P P 01 58 33.0 -0.1
baz=54,SNR=16
L07A Adell 53.66 322 ⇑P P 01 58 33.3 -0.1
baz=54,SNR=60
MSO Missoula 53.68 330 *e*P P 01 58 32.4 -1.1
comp=Z,190nm,1.4s,mb5.8
MSO LR LR
comp=Z,31µm,20.0s,MS6.4
H10A Noah's Angus R 53.69 326 ⇓P P 01 58 32.8 -0.8
baz=54,SNR=20
ORV Oroville 53.69 319 ⇑P P 01 58 34.9 +1.2
baz=54,SNR=75
CVS Carmenet Viney 53.73 317 ⇓P P 01 58 33.8 -0.2
baz=54,SNR=8.9
ELFS Eagle Lake Fie 53.75 320 ⇑P P 01 58 34.9 +0.7
baz=54,SNR=35
FARB Farallon Islan 53.78 316 ⇓P P 01 58 34.4 0.0
baz=54
O04C Chester 53.83 320 ⇓P P 01 58 35.4 +0.8
baz=54,SNR=14
I09A Lost Marbles R 53.87 325 ⇑P P 01 58 34.5 -0.4
baz=54,SNR=32
M06C Likely Place G 53.91 321 ⇑P P 01 58 35.5 +0.2
baz=54,SNR=11
NSHM Saint Helena R 53.91 317 *e*P P 01 58 35.5 +0.2
MCCM Marconi Confer 53.92 316 ⇓P P 01 58 36.7 +1.4
baz=54,SNR=9.1
MCCM Marconi Confer 53.92 316 *e*P P 01 58 34.9 -0.5
comp=Z,126nm,0.9s,mb5.8
MCCM *ep*P pP 01 58 43.4 -0.8
MCCM *es*P sP 01 58 47.7 0.0
MCCM LR LR
comp=Z,62µm,21.0s,MS6.7
J08A Circle Bar Ran 53.93 324 ⇓P P 01 58 35.3 0.0
baz=54,SNR=23
G11A Walters Elk Ra 53.95 327 ⇑P P 01 58 35.0 -0.4
baz=54,SNR=35
MNRC McLaughlin Nat 53.98 317 ⇑P P 01 58 35.9 +0.1
baz=54,SNR=10
K07A Rock Creek Ran 53.99 323 ⇑P P 01 58 35.9 +0.1
baz=54,SNR=33
D13A Huson 54.12 330 ⇓P P 01 58 36.9 +0.2
baz=54,SNR=46
BMO Blue Mountains 54.17 326 *e*P P 01 58 35.4 -1.6
comp=Z,16nm,1.2s,mb4.8
BMO LR LR
comp=Z,64µm,22.0s,MS6.6
MOD Modoc 54.19 322 ⇓P P 01 58 36.7 -0.5
baz=54,SNR=20

MOD Modoc 54.19 322 eP P 01 58 36.9 -0.3
comp=Z,112nm,1.1s,mb5.7
MOD LR LR
comp=Z,12µm,21.0s,MS5.9
F11A Grangeville 54.20 328 ⇓P P 01 58 36.8 -0.5
baz=54,SNR=46
C14A Swan Lake 54.23 331 ⇓P P 01 58 38.2 +0.7
baz=54
E12A Beaver Dam Sad 54.24 329 ⇓P P 01 58 37.6 +0.1
baz=54
H09A Durkee 54.25 326 ⇑P P 01 58 37.4 -0.2
baz=54,SNR=14
LBCM Butte Creek Ri 54.27 320 P P 01 58 38.1 +0.3
I08A Drewsey 54.31 325 ⇑P P 01 58 38.5 +0.4
baz=54
G10A Bishop Farm, J 54.34 327 ⇑P P 01 58 38.0 -0.3
baz=54,SNR=26
M05C Lookout 54.42 321 ⇑P P 01 58 39.2 +0.2
baz=54,SNR=26
J07A Hines 54.43 324 ⇑P P 01 58 38.9 -0.1
baz=54,SNR=22
HOPS Hopland 54.46 317 ⇑P P 01 58 39.8 +0.5
baz=54
HOPS Hopland 54.46 317 eP P 01 58 39.7 +0.4
comp=Z,286nm,1.5s,mb6.0
HOPS LR LR
comp=Z,51µm,20.0s,MS6.6
E11A Bogner Ranch, 54.53 328 ⇑P P 01 58 39.2 -0.5
baz=55,SNR=41
D12A Red Ives Fores 54.55 329 ⇑P P 01 58 39.6 -0.2
baz=55
GASB Alder Springs 54.55 318 ⇓P P 01 58 39.8 -0.1
baz=55,SNR=12
C13A Hot Springs 54.58 330 ⇑P P 01 58 40.5 +0.5
baz=55,SNR=28
L05A Lakeview 54.60 322 ⇑P P 01 58 40.3 +0.1
baz=55
K06A Valley Falls 54.66 323 ⇑P P 01 58 41.2 +0.5
baz=55,SNR=19
G09A Cove 54.70 326 ⇓P P 01 58 40.8 -0.1
baz=55,SNR=29
H08A Prairie City 54.73 325 ⇓P P 01 58 40.8 -0.4
baz=55
F10A Beach Ranch, E 54.83 327 ⇑P P 01 58 41.8 0.0
baz=55,SNR=44
J06A Christmas Vall 54.86 323 ⇑P P 01 58 41.7 -0.4
baz=55,SNR=27
O02C Red Bluff 54.86 319 ⇑P P 01 58 41.6 -0.6
baz=55,SNR=8.3
WDC Whiskeytown Da 54.91 319 eP P 01 58 40.8 -1.7
WDC pmax pmax
comp=Z,26nm,0.8s,mb5.3
WDC MLR MLR
comp=Z,36µm,19.0s,MS6.5
WDC Whiskeytown Da 54.91 319 ⇓P P 01 58 41.4 -1.1
baz=55,SNR=12
WDC Whiskeytown Da 54.91 319 eP P 01 58 40.8 -1.7
comp=Z,26nm,0.8s,mb5.3
WDC LR LR
comp=Z,36µm,19.0s,MS6.5
I07A Izee 54.96 324 ⇓P P 01 58 43.1 +0.3
baz=55,SNR=35
M03C McCloud 55.00 320 ⇑P P 01 58 43.0 -0.1
baz=55,SNR=12
B13A Whitefish 55.00 331 ⇓P P 01 58 43.4 +0.3
baz=55,SNR=37
K05A Summer Lake 55.01 322 ⇑P P 01 58 43.4 +0.2
baz=55,SNR=8.0
F09A S2 Ranch, Elgi 55.03 327 ⇓P P 01 58 43.5 +0.2
baz=55,SNR=29
C12B Naegeli Ranch, 55.05 330 ⇓P P 01 58 43.3 -0.1
baz=55
D11A Klaveano Farm, 55.05 329 ⇑P P 01 58 43.2 -0.2
baz=55,SNR=43
M04C Macdoel 55.09 321 ⇓P P 01 58 44.3 +0.5
baz=55,SNR=22
E10A Myers Farm, Un 55.09 328 ⇓P P 01 58 43.4 -0.3
baz=55,SNR=23
KIPM Iron Peak 55.14 318 eP P 01 58 44.4 +0.2
comp=Z,544nm,1.6s,mb6.3
KCPM Cahto Peak 55.15 318 eP P 01 58 44.5 +0.2
comp=Z,156nm,1.3s,mb5.9
FFC Flin Flon 55.16 343 eP P 01 58 42.6 -1.5
FFC pmax pmax
comp=Z,163nm,1.2s,mb5.9
FFC MLR MLR
comp=Z,102µm,19.0s,MS6.9
FFC Flin Flon 55.16 343 eP P 01 58 42.6 -1.4
comp=Z,163nm,1.2s,mb5.9
FFC LR LR
comp=Z,102µm,19.0s,MS6.9
WALA Waterton Lakes 55.21 332 eP P 01 58 43.7 -0.9
comp=Z,86nm,1.0s,mb5.7
H07A Lands Inn, Kim 55.29 325 ⇓P P 01 58 45.2 0.0
baz=55,SNR=28
I06A Prineville 55.29 324 ⇑P P 01 58 45.8 +0.6
baz=55,SNR=33
L04A Klamath Falls 55.33 321 ⇓P P 01 58 45.9 +0.4
baz=55,SNR=20
LNOR Lincton Mounta 55.34 327 eP P 01 58 44.6 -0.9
comp=Z,137nm,0.9s,mb6.0
A13A Flathead Natio 55.36 332 ⇑P P 01 58 46.0 +0.4
baz=55
G08A Pilot Rock 55.36 326 ⇓P P 01 58 46.0 +0.3
baz=55,SNR=88
K04A Chilquin 55.47 322 ⇑P P 01 58 46.8 +0.2
baz=56,SNR=9.2
C11A Tepee Creek (N 55.53 330 ⇓P P 01 58 47.2 +0.4
baz=56
M02C Callahan 55.53 320 ⇑P P 01 58 46.5 -0.5
baz=56,SNR=12
O01C Eel River Cons 55.53 318 ⇓P P 01 58 47.7 +0.6
baz=56,SNR=6.1
J05A Fort Rock 55.53 323 ⇓P P 01 58 47.2 +0.3
baz=56,SNR=34
N02C Big Bar 55.53 319 ⇑P P 01 58 47.0 0.0
baz=56,SNR=30
D10A Wagner Farm, O 55.54 328 ⇑P P 01 58 46.0 -0.9
baz=56,SNR=44
F08A Pendleton 55.57 326 ⇓P P 01 58 46.9 -0.3
baz=56,SNR=45
YBH Yreka Blue Hor 55.61 320 LR LR 02 24 05.4
comp=Z,46µm,18.6s,MS6.6,baz=140,slow=38
YBH Yreka Blue Hor 55.61 320 eP P 01 58 46.1 -1.5
YBH pmax pmax
comp=Z,52nm,1.0s
YBH MLR MLR
comp=Z,30µm,22.0s
YBH Yreka Blue Hor 55.61 320 ⇓P P 01 58 46.7 -0.9
baz=56,SNR=14
YBH Yreka Blue Hor 55.61 320 eP P 01 58 46.1 -1.5
comp=Z,52nm,1.0s,mb5.5
YBH LR LR
comp=Z,30µm,22.0s,MS6.3
B12A Libby 55.62 330 ⇓P P 01 58 47.3 -0.1
baz=56,SNR=16
E09A Wood Farm, Sta 55.66 327 ⇓P P 01 58 47.6 -0.2
baz=56,SNR=72
G07A Ruggs Ranch, H 55.75 325 ⇓P P 01 58 48.8 +0.3
baz=56,SNR=32
H06A Lindquist Farm 55.82 324 ⇓P P 01 58 48.6 -0.4
baz=56,SNR=23
A12A Yaak River Ran 55.96 331 ⇑P P 01 58 50.1 +0.2
baz=56,SNR=12
B11A Sandpoint 55.98 330 ⇓P P 01 58 50.2 +0.1
baz=56,SNR=13
JCC Jacoby Creek 56.00 319 ⇓P P 01 58 50.7 +0.3
baz=56
J04A Umpqua Nationa 56.04 322 ⇓P P 01 58 51.2 +0.6
baz=56,SNR=18
I05A Bend 56.04 323 ⇓P P 01 58 50.8 +0.2
baz=56,SNR=18
C10A Spilker Farm, 56.05 329 ⇑P P 01 58 50.9 +0.3
baz=56
D09A Jones Farm, Ri 56.09 328 ⇑P P 01 58 50.8 -0.1
baz=56,SNR=23
E08A Dider Farm, El 56.15 327 ⇓P P 01 58 51.2 -0.1
baz=56
VTHM Trough 56.21 325 P P 01 58 52.9 +1.1
HUMO Hull Mountain 56.23 321 ⇑P P 01 58 51.7 -0.3
baz=56
HUMO Hull Mountain 56.23 321 eP P 01 58 51.1 -0.8
comp=Z,27nm,0.9s,mb5.3
HUMO LR LR
comp=Z,63µm,20.0s,MS6.7
NEW Newport 56.25 329 eP P 01 58 51.5 -0.5
NEW pmax pmax
comp=Z,198nm,1.4s
NEW MLR MLR
comp=Z,58µm,22.0s
NEW Newport 56.25 329 eP P 01 58 51.5 -0.4
comp=Z,198nm,1.4s,mb6.0
NEW LR LR
comp=Z,58µm,22.0s,MS6.6
F07A Phinny Hill Vi 56.27 326 ⇓P P 01 58 52.6 +0.4
baz=56,SNR=16
KRMB Red Mountain 56.28 319 eP P 01 58 52.4 +0.1
comp=Z,341nm,1.1s,mb6.3
G06A Carlson Farm, 56.28 325 ⇑P P 01 58 53.1 +0.7
baz=56,SNR=46
H05A Madras 56.29 324 ⇑P P 01 58 53.1 +0.7
baz=56,SNR=11
B10A Chitwood Farm, 56.32 329 ⇓P P 01 58 52.6 +0.1
baz=56
A11A Hall Mountain, 56.32 330 ⇓P P 01 58 52.6 +0.1
baz=56,SNR=34
HAWA Hanford 56.35 326 eP P 01 58 51.7 -1.1
comp=Z,55nm,0.9s,mb5.6
HAWA LR LR
comp=Z,56µm,20.0s,MS6.7
RSW Rattlesnake Hi 56.38 326 eP P 01 58 52.8 -0.2
comp=Z,159nm,1.3s,mb5.9
L02A Cave Junction 56.40 320 ⇓P P 01 58 53.4 +0.2
baz=56,SNR=6.2
D08A Wollman Farm, 56.42 327 ⇑P P 01 58 53.3 +0.1
baz=56,SNR=23
OD2 Odessa Site #2 56.52 328 eP P 01 58 53.7 -0.2
comp=Z,321nm,1.4s,mb6.2
I04A Tendick Farm, 56.53 323 ⇓P P 01 58 53.5 -0.6
baz=57,SNR=18
C09A Chrisman Ranch 56.54 328 ⇓P P 01 58 54.2 +0.1
baz=57,SNR=14
M01C Crescent City 56.58 320 ⇑P P 01 58 55.0 +0.5
baz=57,SNR=10
E07A Sunnyside 56.62 326 ⇓P P 01 58 54.8 +0.1
baz=57,SNR=16
J03A Ideyld Park 56.64 322 ⇑P P 01 58 54.6 -0.3
baz=57
K02A Glendale 56.65 321 ⇑P P 01 58 54.7 -0.2
baz=57
F06A Goldendale 56.68 325 ⇑P P 01 58 55.0 -0.1
baz=57,SNR=29
G05A Wamic 56.68 324 ⇓P P 01 58 55.3 +0.1
baz=57,SNR=28
KBO Bosley Butte 56.83 320 eP P 01 58 56.7 +0.4
comp=Z,920nm,1.4s,mb6.6
B09A Rice 56.87 329 ⇑P P 01 58 55.9 -0.5
baz=57,SNR=59
H04A Detroit Lake 56.88 324 ⇓P P 01 58 55.8 -0.7
baz=57,SNR=17
HOOD Mount Hood Mea 56.92 324 eP P 01 58 57.3 +0.4
comp=Z,758nm,1.3s,mb6.6
A10A Northport 56.93 330 ⇓P P 01 58 56.4 -0.5
baz=57,SNR=15
C08A Higginbotham F 56.94 328 ⇑P P 01 58 56.7 -0.2
baz=57,SNR=15
J02A Umpqua 57.01 322 ⇓P P 01 58 58.1 +0.5
baz=57,SNR=10
EFI East Falkland 57.02 165 eP P 01 58 59.2 +1.8
EFI pmax pmax
comp=Z,248nm,0.9s,mb6.2
EFI MLR MLR
comp=Z,184µm,20.0s,MS7.2
EFI East Falkland 57.02 165 eP P 01 58 59.2 +1.8
comp=Z,248nm,0.9s,mb6.2
EFI LR LR
comp=Z,184µm,20.0s,MS7.2
FCC Fort Churchill 57.03 350 eP P 01 58 56.2 -1.1
FCC pmax pmax
comp=Z,130nm,1.1s,mb5.9
FCC Fort Churchill 57.03 350 eP P 01 58 56.2 -1.1
comp=Z,130nm,1.1s,mb5.9
CALA Caldeira 57.06 45 eP P 01 58 57.8 -0.2
D07A Quincy 57.07 327 ⇑P P 01 58 58.3 +0.4
baz=57,SNR=12
F05A White Salmon 57.13 325 ⇑P P 01 58 59.1 +0.8
baz=57,SNR=18
I03A Eugene 57.15 322 ⇓P P 01 58 58.7 +0.2
baz=57
PICO Pico 57.22 45 eP P 01 58 57.9 -1.2
KEBM Edson Butte 57.23 321 eP P 01 59 00.0 +0.9
comp=Z,490nm,1.2s,mb6.4
E06A Yakima 57.24 326 ⇓P P 01 58 59.6 +0.5
baz=57,SNR=40
K01A Sixes 57.29 321 ⇑P P 01 58 59.6 +0.2
baz=57
G04A Mulino 57.34 324 ⇓P P 01 59 00.0 +0.2
baz=57,SNR=14
C07A Waterville 57.42 327 ⇑P P 01 59 00.6 +0.3
baz=58,SNR=31
B08A Colville Reser 57.45 328 ⇑P P 01 59 00.1 -0.4
baz=58,SNR=28
ROSA Rosais 57.45 45 eP P 01 59 00.1 -0.6
A09A Danville 57.45 329 ⇑P P 01 59 00.7 +0.3
baz=58,SNR=30
COR Corvallis 57.49 323 eP P 01 59 00.3 -0.6
COR pmax pmax
comp=Z,795nm,1.7s,mb6.5
COR MLR MLR
comp=Z,65µm,20.0s,MS6.7
COR Corvallis 57.49 323 eP P 01 59 00.3 -0.6
comp=Z,795nm,1.7s,mb6.5
COR LR LR
comp=Z,65µm,20.0s,MS6.7
I02A Mapleton 57.50 322 ⇑P P 01 59 00.7 -0.3
baz=58,SNR=8.1
ETW Entiat 57.51 327 eP P 01 59 01.9 +0.9
comp=Z,181nm,1.1s,mb6.0
H03A Soap Creek Ran 57.53 323 ⇑P P 01 59 01.5 +0.3
baz=58,SNR=17
D06A Cle Elum 57.55 327 ⇓P P 01 59 01.5 +0.3
baz=58,SNR=10
E05A Randle 57.69 326 ⇓P P 01 59 02.7 +0.4
baz=58,SNR=22
F04A Amboy 57.71 325 ⇓P P 01 59 02.5 +0.1
baz=58,SNR=7.8
PTCN Pitcairn Islan 57.78 238 PFAKE 01 59 10.0 +6.8
PTCN LR LR
comp=Z,124µm,19.0s,MS7.0
A08A Turner Farm, O 57.78 329 ⇑P P 01 59 03.1 +0.2
baz=58,SNR=44
LON Longmire 57.83 326 eP P 01 59 02.4 -0.8
LON pmax pmax
comp=Z,116nm,1.0s,mb5.9
LON Longmire 57.83 326 eP P 01 59 02.4 -0.8
comp=Z,116nm,1.0s,mb5.9
G03A Yamhill 57.87 324 ⇑P P 01 59 04.4 +0.8
baz=58,SNR=9.6
B07A Winthrop 57.92 328 ⇓P P 01 59 03.8 0.0
baz=58,SNR=14
EDM Edmonton 57.95 336 eP P 01 59 01.9 -2.0
H02A Toledo 57.96 323 ⇑P P 01 59 04.8 +0.6
baz=58
C06A Tall Timber Ra 58.01 327 ⇓P P 01 59 05.0 +0.6
baz=58,SNR=9.0
HEBO Mount Hebo 58.10 323 eP P 01 59 07.4 +2.3
comp=Z,402nm,1.1s,mb6.4
USHA Ushuaia 58.16 174 LR LR 02 20 54.9
comp=Z,75µm,21.6s,MS6.8,baz=307,slow=33
D05A Enumclaw 58.18 326 ⇓P P 01 59 05.4 -0.2
baz=58,SNR=15
E04A Onalaska 58.25 325 ⇑P P 01 59 06.7 +0.5
baz=58
C05A Tolt Reservoir 58.31 327 ⇓P P 01 59 06.4 -0.2
baz=58
F03A Seaside 58.37 324 ⇓P P 01 59 07.8 +0.8
baz=58
A07A Ashnola River, 58.42 329 ⇑P P 01 59 06.7 -0.6
baz=58,SNR=51
BMW Boistfort Moun 58.48 325 eP P 01 59 07.4 -0.4
D04A Dobbs Creek Ra 58.59 326 ⇑P P 01 59 09.2 +0.6
baz=59
RPW Rockport 58.66 327 eP P 01 59 08.3 -0.6
comp=Z,207nm,1.4s,mb6.0
B06A Marblemount 58.68 328 ⇑P P 01 59 08.9 -0.2
baz=59,SNR=11
E03A Lebam 58.71 325 ⇑P P 01 59 09.5 +0.1
baz=59,SNR=10
JCW Jim Creek 58.73 327 eP P 01 59 09.1 -0.4
B05A Bryant 58.86 327 ⇓P P 01 59 09.9 -0.5
baz=59,SNR=12
PDA Ponta Delgada 58.90 47 eP P 01 59 18.0 +7.1
PDA eS S 02 07 22.0 +6.8
PDA eSS SS 02 11 12.0 +2.8
PDA eLQ 02 14 00.0
PDA eLR LR 02 18 00.0
CMLA Cha da Macela 59.01 47 eP P 01 59 14.5 +2.8
comp=Z,246nm,1.3s,mb6.1
CMLA eS S 02 07 20.3 +3.7
CMLA eSS SS 02 11 12.6 +1.8
CMLA eLQ 02 13 39.9
CMLA eLR LR 02 18 02.6
CMLA Cha da Macela 59.01 47 PFAKE 01 59 20.0 +8.3
CMLA LR LR
comp=Z,22µm,20.0s,MS6.3
C04A Brinnon 59.03 326 ⇑P P 01 59 11.2 -0.3
baz=59,SNR=11
D03A Wishkah Elem. 59.15 325 ⇑P P 01 59 12.9 +0.5
baz=59,SNR=8.8
A05A Maple Falls 59.28 328 ⇓P P 01 59 13.0 -0.3
baz=59,SNR=13
NLWA Neilton Lookou 59.35 325 ⇑P P 01 59 13.9 0.0
baz=59,SNR=19
NLWA Neilton Lookou 59.35 325 eP P 01 59 14.5 +0.7
comp=Z,292nm,1.1s,mb6.2
NLWA LR LR
comp=Z,71µm,22.0s,MS6.8
A04A Legoe Bay, Lum 59.46 327 ⇓P P 01 59 14.7 +0.2
baz=60,SNR=6.3
B04A Port Angeles 59.52 326 ⇓P P 01 59 15.4 +0.5
baz=60,SNR=16
PGC Sidney 59.82 327 eP P 01 59 17.2 +0.2
C03A Quillayute Air 60.05 326 ⇓P P 01 59 19.3 +0.7
baz=60
RKT Rikitea 61.35 242 ePP PP 02 01 39.8 -3.5
comp=Z,4µm,25.2s
RKT eS S 02 07 44.9 -2.2
comp=Z,31µm,31.0s
RKT eSS SS 02 11 46.6 -1.5
comp=Z,10µm,26.2s
RKT eLQ 02 14 58.5
comp=Z,77µm,30.2s
RKT eLR LR 02 17 30.1
comp=Z,89µm,29.5s,baz=74
RKT Rikitea 61.35 242 eP P 01 59 29.2 +1.3
RKT e 02 01 39.8
RKT pmax pmax
comp=Z,306nm,1.2s,mb6.3
RKT Rikitea 61.35 242 eP P 01 59 29.2 +1.3
comp=Z,306nm,1.2s,mb6.3
RKT ePP PP 02 01 39.8 -3.5
BBTS Babate 61.56 75 LR LR 02 25 24.4
comp=Z,24µm,19.7s,MS6.4,baz=142,slow=35
CHIE El Hierro 62.13 60 P P 01 59 32.6 -0.5
comp=Z,170nm,0.8s,mb6.2
EHIG Higuera 62.44 59 P P 01 59 34.9 -0.3
comp=Z,8µm,4.7s
EGOM La Gomera 62.87 60 P P 01 59 37.9 -0.2
comp=Z,7µm,5.1s
TAOE Nuku Hiva Isla 63.15 259 eP P 01 59 40.7 +0.5
comp=Z,2µm,1.2s,mb7.0
TAOE eS S 02 08 05.3 -4.8
comp=Z,114µm,26.2s
TAOE eLQ 02 15 46.9
comp=Z,486µm,29.2s
TAOE eLR LR 02 18 28.2
comp=Z,167µm,20.5s,baz=85
TAOE Nuku Hiva Isla 63.15 259 eP P 01 59 40.7 +0.5
comp=Z,2µm,1.2s,mb7.0
TAOE eS S 02 08 05.3 -4.8
CCAN Las Canadas 63.40 60 P P 01 59 42.1 +0.5
comp=Z,159nm,1.6s,mb5.9
EBAJ Bajamar 63.69 60 ⇓P P 01 59 44.1 +0.6
comp=Z,12µm,6.9s
PMAR Madeira 64.14 55 eP P 01 59 53.7 +7.3
comp=Z,333nm,1.4s,mb6.2
EOSO Osorio 64.28 60 P P 01 59 46.6 -0.8
comp=Z,6µm,5.8s
ASCN Ascension 64.30 100 eP P 01 59 48.0 +0.3
comp=Z,120nm,0.8s,mb6.0
ASCN LR LR
comp=Z,44µm,19.0s,MS6.7
YKA Yellowknife Ar 65.31 342 P P 01 59 51.1 -2.2
comp=Z,35nm,0.6s,mb5.6,baz=138,slow=6.0,SNR=74
YKA S S 02 08 33.5 -1.6
comp=Z,1.2nm,0.8s,baz=94,slow=24,SNR=2.7
YKA PKPPKP 02 28 31.7
comp=Z,1.9nm,0.9s,baz=316,slow=2.2,SNR=3.8
YKA LR LR 02 31 32.4
comp=Z,78µm,20.3s,MS6.9,baz=155,slow=39
YKA Yellowknife Ar 65.31 342 P P 01 59 51.1 -2.3
YKA S S 02 08 33.5 -1.6
YKA pmax pmax
comp=Z,35nm,0.6s
YKA smax
comp=N,1.0nm,0.8s
YKA MLR MLR
comp=Z,78µm,20.3s
YKA Yellowknife Ar 65.31 342 P P 01 59 51.1 -2.2
YKA S S 02 08 33.5 -1.6
YKA P'P' 02 28 31.7
YKA LR LR 02 31 32.4
CFTV Fuerteventura 65.62 60 P P 01 59 56.3 +0.2
comp=Z,57nm,1.5s,mb5.4
EFAM Famara 66.23 60 P P 02 00 00.7 +0.7
comp=Z,13µm,6.1s
SFJD Kangerlussuaq 66.63 11 eP P 02 00 01.7 -0.1
SFJD pmax pmax
comp=Z,220nm,1.5s,mb6.0
SFJD MLR MLR
comp=Z,76µm,22.0s,MS6.9
SFJD Kangerlussuaq 66.63 11 iP P 02 00 01.7 -0.1
SFJD iS S 02 08 50.1 -1.0
SFJD
comp=Z,65µm,22.0s
SFJD Kangerlussuaq 66.63 11 eP P 02 00 01.7 -0.1
comp=Z,220nm,1.5s,mb6.0
SFJD LR LR
comp=Z,76µm,22.0s,MS6.9
PMSA Palmer Station 68.37 174 LR LR 02 26 22.4
comp=Z,16µm,21.4s,MS6.2,baz=334,slow=33
PMSA Palmer Station 68.37 174 eP P 02 00 12.6 -0.2
comp=Z,158nm,1.1s,mb6.0
PMSA LR LR
comp=Z,31µm,21.0s,MS6.5
CRAG Craig 68.46 330 eP P 02 00 13.8 +0.2
comp=Z,283nm,1.3s,mb6.1
DLBC Dease Lake 68.49 333 eP P 02 00 14.0 +0.3
WRAK Wrangell Islan 68.54 331 eP P 02 00 14.4 +0.4
comp=Z,131nm,1.5s,mb5.6
WRAK LR LR
comp=Z,81µm,21.0s,MS6.9
SIT Sitka 70.29 331 eP P 02 00 24.4 -0.5
SIT pmax pmax
comp=Z,63nm,1.0s,mb5.5
SIT MLR MLR
comp=Z,145µm,19.0s,MS7.2
SIT Sitka 70.29 331 eP P 02 00 24.4 -0.5
comp=Z,49nm,1.0s,mb5.4
SIT LR LR
comp=Z,145µm,19.0s,MS7.2
VAH Vaihoa 71.31 253 eP P 02 00 32.2 +0.3
comp=Z,507nm,1.5s,mb6.2
SKAG Skagway 71.38 333 eP P 02 00 31.2 -0.2
comp=Z,103nm,0.7s,mb5.9
PMOR Pomariorio Ree 71.53 253 eP P 02 00 33.7 +0.5
comp=Z,428nm,1.3s,mb6.2
PMAFR Mafra 71.55 50 eP P 02 00 32.7 -0.2
comp=Z,229nm,1.9s,mb5.8
PMAFR eS S 02 09 48.1 -2.2
PMAFR Mafra 71.55 50 eLQ 02 21 44.3
PMAFR eLR LR 02 24 22.4
comp=Z,57µm,20.0s
PFVI Vila Bisbo 71.56 52 eP P 02 00 33.0 0.0
comp=Z,353nm,1.7s,mb6.0
PFVI eS S 02 09 51.4 +0.9
PFVI Vila Bisbo 71.56 52 eLQ 02 20 46.7
PFVI eLR LR 02 25 06.2
comp=Z,39µm,20.0s
LIS Lisbon 71.61 50 eP P 02 00 33.1 -0.2
LIS eS S 02 09 53.7 +2.8
LIS eS S 02 09 54.8 +3.8
LIS AMS AMS 02 28 25.6
comp=Z,59µm,26.5s,MS6.7
PTEO Sao Teotonio 71.72 51 eP P 02 00 34.4 +0.4
comp=Z,245nm,1.7s,mb5.9
MORF Marmelete 71.73 52 eP P 02 00 33.9 -0.2
comp=Z,385nm,1.9s,mb6.0
MORF eS S 02 09 54.2 +1.8
MORF Marmelete 71.73 52 eLR LR 02 23 58.7
comp=Z,43µm,20.0s
ALMR Almeirim 72.13 50 eP P 02 00 36.6 +0.2
MEH Mehetia 72.13 250 eP P 02 00 37.0 +0.2

comp=Z,18µm,1.6s
PBDV Barranco-do-Ve 72.28 52 *e*P **P 02 00 37.8 +0.4**
comp=Z,192nm,2.6s,mb5.6
PBDV *e*S S 02 10 01.0 +2.2
PBDV Barranco-do-Ve 72.28 52 *e*LQ 02 20 16.5
PBDV *e*LR LR 02 24 22.0
comp=Z,42µm,18.0s
PTOM Tomar 72.34 49 *e*P **P 02 00 37.6 -0.1**
comp=Z,274nm,1.5s,mb6.0
EVO Evora 72.45 51⇓*i*P **P 02 00 37.3 -1.0**
comp=Z,154nm,1.0s,mb5.6
EVO *e*MLR MLR
comp=Z,82µm,22.2s,MS6.7
EVO Evora 72.45 51 *e*P **P 02 00 38.2 -0.1**
comp=Z,175nm,2.0s,mb5.6
PBEJ Beja 72.47 51 *e*P **P 02 00 38.7 +0.2**
comp=Z,154nm,1.7s,mb5.7
PVAQ Vaqueiros 72.48 52 *e*P **P 02 00 39.1 +0.6**
comp=Z,154nm,1.7s,mb5.7
PVAQ *e*S S 02 10 11.2 +10
PVAQ Vaqueiros 72.48 52 *e*LQ 02 21 13.4
PVAQ *e*LR LR 02 25 21.0
comp=Z,44µm,20.0s
PTO Porto 72.50 48 *e*P **P 02 00 38.5 -0.1**
comp=Z,324nm,1.8s,mb6.0
DHAK Deception Hill 72.55 332 *e*P **P 02 00 38.3 -0.2**
comp=Z,371nm,1.3s,mb6.2
EMAZ Mazaricos 72.60 46⇓P **P 02 00 38.9 -0.3**
comp=Z,7µm,6.4s
TRIS Tristan da Cun 72.60 130 *e*P **P 02 00 39.6 +0.3**
comp=Z,690nm,1.2s,mb6.5
TRIS LR LR
comp=Z,67µm,19.0s,MS6.9
RTC Rabat Centre 72.63 55 *e*P **P 02 00 40.2 +0.7**
comp=Z,154nm,0.9s,mb5.9
RTC LR LR
comp=Z,44µm,20.0s,MS6.7
TIC Toumodi 72.66 84 *e*P **P 02 00 39.0 -1.1**
comp=Z,559nm,0.9s,mb6.5
TIC Toumodi 72.66 84 *e*P **P 02 00 39.0 -1.1**
TIC pmax pmax
comp=Z,559nm,0.9s,mb6.5
LIC Lamto 72.66 84⇓*i*P **P 02 00 38.8 -1.3**
comp=Z,423nm,0.9s,mb6.1,baz=270
LIC *e*MLR MLR
comp=Z,46µm,18.8s,MS6.5
LIC Lamto 72.66 84 *e*P **P 02 00 39.1 -1.0**
comp=Z,615nm,0.9s,mb6.5
LIC Lamto 72.66 84⇓*i*P **P 02 00 38.8 -1.3**
comp=Z,211nm,0.9s,mb6.1
LIC LR LR
comp=Z,23µm,18.8s,MS6.5
EGRO El Granado 72.69 52⇓P **P 02 00 40.4 +0.6**
comp=Z,9µm,8.5s
DBIC Dimbokro 72.83 84 P **P 02 00 39.8 -1.3**
comp=Z,70nm,0.6s,mb5.7,baz=255,slow=6.4,SNR=43
DBIC S S 02 10 05.9 +0.1
comp=Z,3.7nm,0.9s,baz=137,slow=19,SNR=5.6
DBIC LR LR 02 30 43.9
comp=Z,40µm,21.5s,MS6.7,baz=244,slow=34
DBIC Dimbokro 72.83 84 P **P 02 00 39.8 -1.3**
DBIC S S 02 10 05.9 +0.1
PESTR Estremoz 72.83 50 *e*P **P 02 00 41.0 +0.4**
comp=Z,377nm,1.4s,mb6.1
PESTR *e*S S 02 10 06.9 +1.9
PESTR Estremoz 72.83 50 *e*LQ 02 21 29.8
PESTR *e*LR LR 02 25 46.6
comp=Z,46µm,22.0s
STS Santiago 72.90 46 P **P 02 00 40.6 -0.3**
STS pmax pmax
comp=Z,61nm,1.2s,mb5.4
STS Santiago 72.90 46 P **P 02 00 40.6 -0.3**
comp=Z,61nm,1.2s,mb5.4
PVIS Viseu 72.94 48 *e*P pP 02 00 49.1 -1.3
comp=Z,200nm,1.1s
KIC Kosan Boka 72.94 84 *e*P **P 02 00 41.0 -0.8**
comp=Z,1µm,0.9s,mb6.8
HYT Haines Junctio 72.97 334 *e*P **P 02 00 44.5 +3.6**
PCAB Cabril 73.04 47 *e*P **P 02 00 41.8 0.0**
comp=Z,169nm,0.9s,mb6.0
ELOB Lobios 73.04 47⇓P **P 02 00 41.8 0.0**
comp=Z,7µm,6.8s
PMRV Marv??o 73.08 50 *e*P **P 02 00 41.5 -0.6**
comp=Z,185nm,1.5s,mb5.8
PMRV *e*S S 02 10 09.4 +1.5
PMRV Marv??o 73.08 50 *e*LQ 02 20 44.7
PMRV *e*LR LR 02 25 54.7
comp=Z,48µm,22.0s
PCBR Castelo Branco 73.09 49 *e*P pP 02 00 49.9 -1.4
comp=Z,188nm,1.1s
PBAR Barrancos 73.14 51 *e*P **P 02 00 42.4 0.0**
comp=Z,163nm,1.4s,mb5.8
PBAR Barrancos 73.14 51 *e*LQ 02 22 27.3
PBAR *e*LR LR 02 25 35.6
comp=Z,38µm,20.0s
MTE Manteigas 73.14 49 *e*P **P 02 00 41.3 -1.1**
comp=Z,158nm,1.0s,mb5.9
MTE *e*S S 02 10 08.3 -0.2
MTE Manteigas 73.14 49 *e*LQ 02 20 42.2
MTE *e*LR LR 02 25 08.4
comp=Z,58µm,22.0s
MTE Manteigas 73.14 49 *e*P **P 02 00 42.0 -0.4**
comp=Z,78nm,1.0s,mb5.6
MTE LR LR
comp=Z,73µm,22.0s,MS6.9
PVRL Vila Real 73.18 48 *e*P pP 02 00 50.6 -1.2
comp=Z,221nm,1.5s
TVO Taravao 73.23 251 *e*P **P 02 00 43.7 +0.3**
comp=Z,2µm,1.5s,mb6.8
TVO Taravao 73.23 251 *e*P **P 02 00 43.7 +0.3**
TVO pmax pmax
comp=Z,2µm,1.5s,mb6.8
EBAD Badajoz 73.26 50⇓P **P 02 00 42.0 -1.2**
comp=Z,9µm,8.1s
TIAR Tiarei 73.29 251 *e*P **P 02 00 43.8 +0.1**
comp=Z,1µm,1.1s,mb6.7
EMIN Mina Concepcio 73.36 52⇓P **P 02 00 43.5 -0.3**
comp=Z,7µm,7.4s
PPT Papeete 73.51 251 *e*P **P 02 00 45.4 +0.4**
comp=Z,212nm,1.5s,mb5.8
PPT *e*S S 02 10 08.9 -4.5
comp=Z,51µm,27.8s
PPT *e*SS SS 02 14 54.6 -2.0
comp=Z,20µm,26.0s
PPT *e*LQ 02 20 11.2
comp=Z,116µm,29.0s
PPT *e*LR LR 02 23 22.9
comp=Z,50µm,23.5s,baz=75
PPT Papeete 73.51 251 P **P 02 00 44.2 -0.8**
comp=Z,48nm,0.9s,mb5.5,baz=69,slow=3.4,SNR=5.5
PPT LR LR 02 25 58.7
comp=Z,37µm,18.9s,MS6.7,baz=82,slow=30
PAE Paea 73.52 251 *e*P **P 02 00 45.2 +0.1**
comp=Z,2µm,1.2s,mb7.0
PAE Paea 73.52 251 *e*P **P 02 00 45.2 +0.1**
PAE pmax pmax
comp=Z,2µm,1.2s,mb7.0
SFS San Fernando 73.52 53 *e*P **P 02 00 45.0 +0.2**
SFS pmax pmax
comp=Z,338nm,1.2s,mb6.2
SFS MLR MLR
comp=Z,26µm,20.0s,MS6.5
SFS San Fernando 73.52 53 *e*P **P 02 00 45.0 +0.3**
comp=Z,338nm,1.2s,mb6.2
SFS LR LR
comp=Z,26µm,20.0s,MS6.5
BORG Borgarnes 73.56 22 *e*P **P 02 00 44.5 +0.2**
comp=Z,328nm,1.5s,mb6.0
BORG LR LR
comp=Z,72µm,22.0s,MS6.9
SUMG Summit 73.62 12 *e*P **P 02 00 44.6 0.0**
comp=Z,248nm,1.3s,mb6.0
MVO Moncorvo 73.67 48 *e*P **P 02 00 45.8 +0.3**
comp=Z,191nm,1.3s,mb5.9
MVO *e*S S 02 10 11.1 -3.3
MVO Moncorvo 73.67 48 *e*LQ 02 21 03.1
MVO *e*LR LR 02 24 52.8
comp=Z,45µm,20.0s
SHEL Horse Pasture 73.73 107 *e*P **P 02 00 47.5 +1.2**
comp=Z,170nm,0.8s,mb6.0
SHEL LR LR
comp=Z,61µm,20.0s,MS6.9
ERUA La Rua 73.81 47 P **P 02 00 46.2 -0.1**
ERUA pmax pmax
comp=Z,291nm,1.9s,mb5.9
ERUA La Rua 73.81 47 P **P 02 00 46.1 -0.2**
comp=Z,291nm,1.9s,mb5.9

ESPR Espera 73.86 53⇓P **P 02 00 47.3 +0.6**
comp=Z,8µm,6.7s
EPON Pontenova 73.99 46⇓P **P 02 00 47.4 0.0**
comp=Z,6µm,5.8s
PBRG Braganca 74.00 47 *e*P **P 02 00 47.5 +0.1**
comp=Z,152nm,2.0s,mb5.6
ECAL Calabor 74.03 47⇓P **P 02 00 47.5 -0.1**
comp=Z,1µm,3.7s
EJIF Jimena Fronter 74.11 53 P **P 02 00 49.1 +0.9**
EJIF pmax pmax
comp=Z,213nm,1.2s,mb6.0
EJIF Jimena Fronter 74.11 53 P **P 02 00 49.1 +0.9**
comp=Z,213nm,1.2s,mb6.0
ECAB El Cabril 74.39 51⇓P **P 02 00 49.5 -0.2**
comp=Z,5µm,4.6s
EMIJ Mijas 74.68 53⇓P **P 02 00 51.4 -0.1**
comp=Z,3µm,5.0s
EADA Adamuz 75.06 51⇓P **P 02 00 53.5 -0.1**
comp=Z,6µm,6.8s
DAWY Dawson 75.15 336 *e*P **P 02 00 53.1 -0.5**
ELOJ Sierra Loja 75.25 52 P **P 02 00 55.1 +0.3**
ELOJ pmax pmax
comp=Z,151nm,1.2s,mb5.8
ELOJ Sierra Loja 75.25 52 P **P 02 00 55.1 +0.3**
comp=Z,151nm,1.2s,mb5.8
EARI Arriondas 75.38 46⇓P **P 02 00 55.5 +0.1**
comp=Z,9µm,7.1s
PAB San Pablo 75.43 50 *e*P **P 02 00 55.8 +0.1**
PAB pmax pmax
comp=Z,102nm,1.1s,mb5.7
PAB MLR MLR
comp=Z,49µm,22.0s,MS6.8
PAB San Pablo 75.43 50 *e*P **P 02 00 55.8 0.0**
comp=Z,102nm,1.1s,mb5.7
PAB LR LR
comp=Z,49µm,22.0s,MS6.8
ERON Agron 75.51 53 P **P 02 00 56.9 +0.6**
comp=Z,3.4nm,1.8s
EBAN Banos Encina 75.67 51 P **P 02 00 57.0 -0.2**
EBAN pmax pmax
comp=Z,181nm,2.1s,mb5.6
EBAN Banos Encina 75.67 51 P **P 02 00 57.0 -0.2**
comp=Z,181nm,2.1s,mb5.6
ECOG Cogollos-Vega 75.73 52 P **P 02 00 57.1 -0.4**
ECOG pmax pmax
comp=Z,53nm,1.0s,mb5.4
ECOG Cogollos-Vega 75.73 52 P **P 02 00 57.1 -0.4**
comp=Z,53nm,1.0s,mb5.4
GUD Guadarrama 75.73 49 P **P 02 00 56.6 -0.9**
GUD pmax pmax
comp=Z,161nm,1.6s,mb5.7
GUD Guadarrama 75.73 49 P **P 02 00 56.6 -0.9**
comp=Z,161nm,1.6s,mb5.7
ESDC Sonseca Array 75.74 50 P **P 02 00 57.3 -0.2**
comp=Z,34nm,0.9s,mb5.3,baz=267,slow=5.0,SNR=115
ESDC S S 02 10 38.1 +0.5
comp=Z,0.1nm,0.4s,baz=187,slow=30,SNR=2.4
ESDC PKPPKP 02 28 19.6
comp=Z,0.7nm,0.7s,baz=76,slow=2.1,SNR=5.9
ESDC LR LR 02 30 38.8
comp=Z,37µm,21.6s,MS6.7,baz=240,slow=33
ESDC Sonseca Array 75.74 50 P **P 02 00 56.9 -0.6**
comp=Z,158nm,1.4s,mb5.8
EALB Alboran 76.00 54⇓P **P 02 00 58.5 -0.6**
comp=Z,5µm,4.8s
RAGM Ragged Mountai 76.07 332 *e*P **P 02 00 57.9 -1.1**
DCN Croghan 76.10 36 *e*P **P 02 00 59.1 -0.2**
EQES Quesada 76.19 52⇓P **P 02 01 00.8 +0.7**
comp=Z,7µm,4.9s
EBER Berja 76.22 53⇓P **P 02 01 00.9 +0.5**
comp=Z,4µm,4.2s
DMUB Kingscourt 76.44 35 *e*P **P 02 01 01.0 -0.2**
DLF Lyons Farm 76.52 36 *e*P **P 02 01 01.1 -0.6**
EHUE Huescar 76.56 52⇓P **P 02 01 01.8 -0.5**
EHUE pmax pmax
comp=Z,265nm,1.4s,mb6.0
EHUE Huescar 76.56 52⇓P **P 02 01 01.8 -0.5**
comp=Z,265nm,1.4s,mb6.0
DSB Dublin 76.60 36 *e*P **P 02 01 01.6 -0.5**
comp=Z,40nm,0.8s,mb5.4
EYAK Cordova Ski Ar 76.63 332 P **P 02 01 02.0 -0.1**
comp=Z,185nm,0.8s,mb6.1
CCA1 Carnmenellis 76.64 39⇓*i*P **P 02 01 02.5 +0.1**
ELAN Lanestosa 76.65 46 P **P 02 01 01.8 -0.8**
comp=Z,8µm,7.1s
CMA1 Manaccan 76.69 39⇓*e*P **P 02 01 01.9 -0.8**
EVIA Vianos 76.73 51 P **P 02 01 02.7 -0.5**
EVIA pmax pmax
comp=Z,113nm,1.6s,mb5.5
EVIA Vianos 76.73 51 P **P 02 01 02.7 -0.5**
comp=Z,113nm,1.6s,mb5.5
ENIJ Nijar 76.78 53 P **P 02 01 02.9 -0.6**
ENIJ pmax pmax
comp=Z,11nm,0.5s,mb5.0
ENIJ Nijar 76.78 53 P **P 02 01 02.9 -0.6**
comp=Z,11nm,0.5s,mb5.0
CSA1 St Austell 76.89 39⇓*i*P **P 02 01 02.8 -1.1**
STCH Steam Cracks 76.96 289 *e*P **P 02 01 05.2 +0.4**
GMM Mts of Mourne 77.07 35⇓*e*P **P 02 01 04.7 -0.1**
HTL Hartland 77.27 38⇓*e*P **P 02 01 05.9 0.0**
HTL AMb AMB 02 01 22.1
comp=Z,258nm,1.6s,mb5.9
ETOR Torete 77.34 49 P **P 02 01 05.9 -0.7**
ETOR pmax pmax
comp=Z,100nm,1.5s,mb5.5
ETOR Torete 77.34 49 P **P 02 01 05.9 -0.7**
comp=Z,100nm,1.5s,mb5.5
POHA Pohakuloa 77.35 289 *e*P **P 02 01 06.8 -0.3**
comp=Z,349nm,1.4s,mb6.1
POHA LR LR
comp=Z,39µm,19.0s,MS6.7
ODZI Dzioua 77.39 55 P **P 02 01 08.0 +1.0**
ETOB Tobarra 77.48 51⇓P **P 02 01 07.9 +0.5**
comp=Z,9µm,6.0s
DYA Yadsworthy 77.51 39⇓*e*P **P 02 01 06.8 -0.5**
DYA AMb AMB 02 01 09.9
comp=Z,156nm,1.7s,mb5.7
ROSF Rostrenen 77.56 41 *e*P **P 02 01 07.1 -0.5**
comp=Z,406nm,1.4s,mb5.9
ROSF Rostrenen 77.56 41 *e*P **P 02 01 07.1 -0.5**
ROSF pmax pmax
comp=Z,203nm,1.4s,mb5.9
ROSF Rostrenen 77.56 41 *e*P **P 02 01 07.1 -0.5**
comp=Z,203nm,1.4s,mb5.9
QUIF Quistinic 77.56 42 *e*P **P 02 01 07.1 -0.6**
comp=Z,285nm,1.3s,mb5.7
QUIF Quistinic 77.56 42 *e*P **P 02 01 07.1 -0.6**
QUIF pmax pmax
comp=Z,142nm,1.3s,mb5.7
QUIF Quistinic 77.56 42 *e*P **P 02 01 07.1 -0.6**
comp=Z,142nm,1.3s,mb5.7
EMUR La Murta 77.63 52 P **P 02 01 07.6 -0.6**
comp=Z,7µm,8.1s
YRC Rhoscolyn 77.66 36⇓*e*P **P 02 01 07.8 -0.3**
YRE Yr Eifl 77.69 36⇓*i*P **P 02 01 08.4 +0.1**
WLF1 Llynfaes 77.77 36⇓*e*P **P 02 01 07.7 -1.0**
WLF1 AMb AMB 02 01 11.2
comp=Z,182nm,1.7s,mb5.7
WIM Isle of Man 77.78 35⇓*e*P **P 02 01 08.4 -0.3**
WME Myndd Eilian 77.85 36 *e*P **P 02 01 08.5 -0.6**
YLL Llanberis 77.87 36⇓*e*P **P 02 01 08.0 -1.3**
GAL1 Galloway 77.91 34⇓*e*P **P 02 01 09.2 -0.3**
comp=Z,5µm,17.8s
GAL1 AMb AMB 02 01 11.8
comp=Z,239nm,1.6s,mb5.9
GIM North Isle of 77.93 35 *e*P **P 02 01 09.0 -0.6**
KPL Plockton 77.95 32⇓*e*P **P 02 01 09.1 -0.5**
KPL AMb AMB 02 01 15.1
comp=Z,204nm,2.5s,mb5.6
KPL *e*S S 02 10 55.8 -5.2
USTO Oran 77.98 54 P **P 02 01 15.0 +4.7**
ELIZ Elizondo 78.02 47 P **P 02 01 09.4 -0.9**
ELIZ pmax pmax
comp=Z,105nm,1.4s,mb5.6
ELIZ Elizondo 78.02 47 P **P 02 01 09.4 -0.9**
comp=Z,105nm,1.4s,mb5.6
SGMF Saint Gilles 78.02 41 *e*P **P 02 01 09.6 -0.6**
comp=Z,558nm,1.5s,mb6.0
SGMF Saint Gilles 78.02 41 *e*P **P 02 01 09.6 -0.6**
SGMF pmax pmax
comp=Z,279nm,1.5s,mb6.0
SGMF Saint Gilles 78.02 41 *e*P **P 02 01 09.6 -0.6**
comp=Z,279nm,1.5s,mb6.0
ECHE Chera 78.03 50 P **P 02 01 09.7 -0.7**
ECHE pmax pmax
comp=Z,248nm,2.1s,mb5.8

ECHE Chera 78.03 50 P **P 02 01 09.7 -0.7**
comp=Z,248nm,2.1s,mb5.8
EALK Alkurruntz 78.04 47 P **P 02 01 09.6 -0.8**
comp=Z,10µm,7.5s
KSB Sheil Bridge 78.04 32 *e*P **P 02 01 09.6 -0.5**
WPM1 Penmaenmawr 78.05 36⇓*i*P **P 02 01 09.9 -0.3**
KAC Achnashellach 78.17 32⇓*e*P **P 02 01 10.4 -0.4**
HTR Trewern Hill 78.21 37⇓*e*P **P 02 01 09.9 -1.2**
OSSF Osses 78.22 47 *e*P **P 02 01 11.3 -0.1**
SJPF Ste Jean 78.23 47 *e*P **P 02 01 11.4 -0.1**
comp=Z,650nm,1.6s,mb6.0
SJPF Ste Jean 78.23 47 *e*P **P 02 01 11.4 -0.1**
SJPF pmax pmax
comp=Z,325nm,1.6s,mb6.0
SJPF Ste Jean 78.23 47 *e*P **P 02 01 11.4 -0.1**
comp=Z,325nm,1.6s,mb6.0
PGBU Glenifferbraes 78.24 34⇓*e*P **P 02 01 10.5 -0.7**
PGBU AMb AMB 02 01 21.4
comp=Z,262nm,1.8s,mb5.9
GCD Castle Douglas 78.35 35⇓*e*P **P 02 01 11.7 -0.2**
MCH1 Michaelchurch 78.36 38⇓*e*P **P 02 01 10.9 -1.1**
MCH1 AMb AMB 02 01 14.2
comp=Z,206nm,1.5s,mb5.8
SBD1 Bryn Du 78.37 37⇓*e*P **P 02 01 10.9 -1.1**
LARF Larrau 78.40 47 *e*P **P 02 01 13.1 +0.7**
EAB Aberfoyle 78.40 33⇓*e*P **P 02 01 11.4 -0.7**
HGH Gray Hill 78.42 38⇓*e*P **P 02 01 11.4 -0.9**
JSA Saint Aubin 78.42 40⇓*e*P **P 02 01 12.1 -0.3**
JSA AMb AMB 02 01 14.2
comp=Z,151nm,1.5s,mb5.7
ORDF Ordiarp 78.45 47 *e*P **P 02 01 11.4 -1.3**
EMOS Mosqueruela 78.48 50 P **P 02 01 12.4 -0.6**
comp=Z,11µm,8.3s
PMR Palmer 78.50 332 *e*P **P 02 01 11.8 -0.8**
PMR pmax pmax
comp=Z,133nm,1.3s,mb5.7
PMR MLR MLR
comp=Z,86µm,21.0s,MS7.1
PMR Palmer 78.50 332 *e*P **P 02 01 11.8 -0.8**
comp=Z,136nm,1.3s,mb5.7
PMR LR LR
comp=Z,86µm,21.0s,MS7.1
EBEN Beniarda 78.51 51 P **P 02 01 12.5 -0.7**
comp=Z,11µm,8.3s
HLM1 Long Mynd 78.53 37⇓*e*P **P 02 01 12.0 -0.9**
ATE Arette 78.61 47 *e*P **P 02 01 13.7 +0.1**
ESAC San Caprasio 78.63 48 P **P 02 01 12.9 -0.8**
comp=Z,5µm,4.2s
MDO Dochfour 78.65 32⇓*i*P **P 02 01 13.1 -0.4**
ETSF Etsaut 78.69 47 *e*P **P 02 01 14.0 0.0**
comp=Z,289nm,1.6s,mb5.6
ETSF Etsaut 78.69 47 *e*P **P 02 01 14.0 0.0**
ETSF pmax pmax
comp=Z,144nm,1.6s,mb5.7
ETSF Etsaut 78.69 47 *e*P **P 02 01 14.0 0.0**
comp=Z,144nm,1.6s,mb5.7
OJBR Djebel Berber 78.70 54 P **P 02 01 16.0 +1.8**
SLKM Skilak Lake 78.74 331 *e*P **P 02 01 13.3 -0.6**
REYF Montagne du Re 78.83 47 *e*P **P 02 01 15.3 +0.5**
MVH1 Achvaich 78.85 31⇓*i*P **P 02 01 14.3 -0.3**
ESK Eskdalemuir 78.85 34⇓*e*P **P 02 01 14.1 -0.6**
ESK AMb AMB 02 01 17.0
comp=Z,237nm,1.4s,mb5.9
ESK Eskdalemuir 78.85 34 *e*P **P 02 01 14.3 -0.3**
ESK pmax pmax
comp=Z,272nm,1.5s,mb6.0
ESK MLR MLR
comp=Z,23µm,20.0s,MS6.5
ESK Eskdalemuir 78.85 34 *e*P **P 02 01 14.3 -0.3**
comp=Z,272nm,1.5s,mb6.0
ESK LR LR
comp=Z,23µm,20.0s,MS6.5
COLA College 78.86 336 *i* P **P 02 01 13.9 -0.6**
COLA MLR MLR
comp=Z,38µm,19.0s,MS6.8
COLA College 78.86 336 *i* P **P 02 01 13.9 -0.6**
COLA LR LR
comp=Z,38µm,19.0s,MS6.8
EBH Black Hill 78.86 33⇓*e*P **P 02 01 14.4 -0.3**
ECK Cauldkaine Hil 78.87 34⇓*e*P **P 02 01 14.1 -0.6**
OKGL Djebel Kef Gue 78.98 54 P **P 02 01 17.0 +1.2**
EDI Edinburgh 78.98 34 *e*P **P 02 01 14.6 -0.7**
EDI AMb AMB 02 01 18.3
comp=Z,136nm,1.9s,mb5.6
SWN1 Swindon 79.02 38⇓*e*P **P 02 01 15.4 -0.2**
SWN1 AMb AMB 02 01 18.0
comp=Z,385nm,1.6s,mb6.1
OJGS Djebel Guires 79.02 55 P **P 02 01 19.0 +3.0**
EBL Broad Law 79.03 34⇓*e*P **P 02 01 14.2 -1.4**
STNC Stoke 79.03 37⇓*e*P **P 02 01 15.9 +0.2**
STNC AMb AMB 02 01 18.5
comp=Z,346nm,1.4s,mb6.1
SSW Stow on the Wo 79.06 38⇓*e*P **P 02 01 16.0 +0.1**
ERTA Horta de San J 79.15 49 P **P 02 01 15.8 -0.8**
comp=Z,11µm,8.3s
GRR Gorron 79.16 41 *e*P **P 02 01 15.9 -0.6**
comp=Z,662nm,1.3s,mb6.1
GRR Gorron 79.16 41 *e*P **P 02 01 15.9 -0.6**
GRR pmax pmax
comp=Z,331nm,1.3s,mb6.1
GRR Gorron 79.16 41 *e*P **P 02 01 15.9 -0.6**
comp=Z,331nm,1.3s,mb6.1
LABF Labassere 79.17 47 *e*P **P 02 01 17.2 +0.5**
EBIE Bielsa 79.18 47 P **P 02 01 16.1 -0.7**
comp=Z,7µm,6.4s
TORD Torodi Ar. Bea 79.20 77 P **P 02 01 15.8 -1.5**
comp=Z,40nm,0.7s,mb5.5,baz=282,slow=5.4,SNR=182
TORD S S 02 11 14.2 -1.7
comp=Z,0.4nm,0.8s,baz=301,slow=34,SNR=2.7
TORD PKKPbc PKKPbc 02 20 07.0 -1.2
comp=Z,2.0nm,1.0s,baz=94,slow=1.8,SNR=5.9
TORD PKP2bc 02 27 56.9
comp=Z,1.5nm,1.0s,baz=79,slow=2.3,SNR=5.4
TORD LR LR 02 38 14.4
comp=Z,34µm,18.9s,MS6.7,baz=235,slow=37
TORD Torodi Ar. Bea 79.20 77 P **P 02 01 15.8 -1.5**
TORD S S 02 11 14.2 -1.7
TORD PKKPbc PKKPbc 02 20 07.0 -1.2
TORD ⇑*e* 02 27 56.9
TORD LR LR 02 38 14.4
MATF Mathat 79.22 44 *e*P **P 02 01 16.6 -0.3**
KWE Weaver Farm 79.23 37⇓*e*P **P 02 01 16.8 +0.1**
MCD Coleburn Disti 79.27 32⇓*i*P **P 02 01 16.8 -0.1**
ESY Stoneypath 79.29 34⇓*e*P **P 02 01 16.7 -0.3**
LHO Holmfirth 79.31 36⇓*i*P **P 02 01 16.3 -0.9**
KDAK Kodiak Island 79.33 328 LR LR 02 33 52.6
comp=Z,27µm,21.9s,MS6.5,baz=124,slow=34
KDAK Kodiak Island 79.33 328 *e*P **P 02 01 16.6 -0.6**
comp=Z,81nm,1.2s,mb5.5
KDAK LR LR
comp=Z,10µm,20.0s,MS6.2
XAL Allendale 79.33 35⇓*e*P **P 02 01 16.8 -0.5**
RESF Ens 79.34 47 *e*P **P 02 01 18.3 +0.7**
EANR Ain N'Sour 79.34 54 P **P 02 01 18.5 +0.8**
WOL Wolverton 79.34 38⇓*e*P **P 02 01 16.0 -1.4**
WOL AMb AMB 02 01 20.6
comp=Z,325nm,1.8s,mb6.0
WOL *e*S S 02 11 09.8 -6.4
MLA1 Latheron 79.36 31⇓*i*P **P 02 01 17.1 -0.2**
EPF Esparros 79.36 47 *e*P **P 02 01 17.6 -0.1**
comp=Z,690nm,1.6s,mb6.0
EPF Esparros 79.36 47 *e*P **P 02 01 17.6 -0.1**
EPF pmax pmax
comp=Z,345nm,1.6s,mb6.0
EPF Esparros 79.36 47 *e*P **P 02 01 17.6 -0.1**
comp=Z,345nm,1.6s,mb6.0
MME1 Meikle Cairn 79.37 32⇓*e*P **P 02 01 16.7 -0.7**
MFF Saint Martin d 79.41 43 *e*P **P 02 01 17.4 -0.5**
comp=Z,721nm,1.6s,mb6.0
MFF Saint Martin d 79.41 43 *e*P **P 02 01 17.4 -0.5**
MFF pmax pmax
comp=Z,361nm,1.6s,mb6.0
MFF Saint Martin d 79.41 43 *e*P **P 02 01 17.4 -0.5**
comp=Z,361nm,1.6s,mb6.0
XSO Sourhope Farm 79.42 34⇓*e*P **P 02 01 17.0 -0.7**
KBI1 Birley Grange 79.46 36 *e*P **P 02 01 17.8 -0.2**
XMAS Kiritimati 79.46 272 *e*P **P 02 01 18.5 -0.4**
comp=Z,361nm,1.4s,mb6.1
XMAS LR LR
comp=Z,63µm,19.0s,MS7.0
FLN La Foliniere 79.46 41 *e*P **P 02 01 17.7 -0.4**
comp=Z,713nm,1.4s,mb6.1
FLN *e*MLR MLR
comp=Z,39µm,23.0s,MS6.4
FLN La Foliniere 79.46 41 *e*P **P 02 01 17.7 -0.4**

FLN pmax pmax
comp=Z,357nm,1.4s,mb6.1
FLN MLR MLR
comp=Z,39µm,23.0s,MS6.7
FLN La Foliniere 79.46 41 *eP* **P 02 01 17.7 -0.4**
FLN LR LR
comp=Z,39µm,23.0s,MS6.7
ETRT Tiaret 79.46 55 P **P 02 01 19.0 +0.6**
TRF Thorofare Moun 79.50 334 *eP* **P 02 01 17.4 -0.6**
comp=Z,311nm,1.6s,mb6.0
CWF Charnwood Fore 79.51 37⇓*eP* **P 02 01 18.0 -0.3**
CWF AMb AMB 02 01 20.9
comp=Z,205nm,1.6s,mb5.8
HPK Haverah Park 79.52 36⇓*eP* **P 02 01 18.3 0.0**
HPK AMb AMB 02 01 20.2
comp=Z,231nm,1.5s,mb5.9
ECHA Ech Chlef 79.57 54 P **P 02 01 20.0 +1.0**
OHAK Old Harbor 79.59 328 *eP* **P 02 01 18.1 -0.6**
comp=Z,142nm,0.7s,mb6.0
MELF Melles 79.65 47 *eP* **P 02 01 20.1 +0.8**
SKP1 Kophill 79.66 38⇓*eP* **P 02 01 18.9 -0.2**
LDF La Druitiere 79.67 41 *eP* **P 02 01 18.7 -0.6**
comp=Z,618nm,1.4s,mb6.0
LDF La Druitiere 79.67 41 *eP* **P 02 01 18.7 -0.6**
LDF pmax pmax
comp=Z,309nm,1.4s,mb6.0
LDF La Druitiere 79.67 41 *eP* **P 02 01 18.7 -0.6**
comp=Z,309nm,1.4s,mb6.0
EBNR Beni Rached 79.71 54 P **P 02 01 21.0 +1.2**
KIP Kipapa 79.71 291 *eP* **P 02 01 20.4 +0.4**
KIP pmax pmax
comp=Z,53nm,1.2s,mb5.3
KIP MLR MLR
comp=Z,42µm,19.0s,MS6.8
KIP Kipapa 79.71 291 *eP* **P 02 01 20.4 +0.4**
comp=Z,53nm,1.2s,mb5.3
KIP LR LR
comp=Z,42µm,19.0s,MS6.8
EPOB Poblet 79.75 49 P **P 02 01 19.0 -0.8**
comp=Z,8µm,7.6s
ALE Alert 79.75 2 P **P 02 01 17.0 -2.1**
comp=Z,431nm,1.0s,mb6.3,SNR=12
EIBI Ibiza 79.76 51 P **P 02 01 19.1 -0.8**
comp=Z,8µm,7.0s
LFF La Frestale 79.84 45 *eP* **P 02 01 19.7 -0.6**
comp=Z,636nm,1.6s,mb6.0
LFF La Frestale 79.84 45 *eP* **P 02 01 19.7 -0.6**
LFF pmax pmax
comp=Z,318nm,1.6s,mb6.0
LFF La Frestale 79.84 45 *eP* **P 02 01 19.7 -0.6**
comp=Z,318nm,1.6s,mb6.0
MLS Moulis 79.91 47 *eP* **P 02 01 20.7 0.0**
BPAW Bear Paw Mtn. 79.96 335 *eP* **P 02 01 19.6 -0.9**
comp=Z,132nm,0.9s,mb5.9
EMIR Miracle 80.13 48 P **P 02 01 21.0 -0.9**
comp=Z,30nm,0.7s,mb5.3
PPLA Purkeypile 80.21 333 *eP* **P 02 01 21.0 -0.8**
comp=Z,384nm,1.3s,mb6.2
DAG Danmarks Havn 80.32 12⇑*i*P **P 02 01 21.8 -0.4**
DAG pmax pmax
comp=Z,110nm,1.3s,mb5.6
DAG MLR MLR
comp=Z,156µm,23.0s,MS7.3
DAG Danmarks Havn 80.32 12α*i*P **P 02 01 21.8 -0.4**
comp=Z,109nm,1.3s,mb5.6
DAG
comp=Z,156µm,23.0s
DAG Danmarks Havn 80.32 12 *i* P **P 02 01 21.8 -0.4**
comp=Z,110nm,1.3s,mb5.6
DAG LR LR
comp=Z,156µm,23.0s,MS7.3
RJF Les Rejaudoux 80.43 45 *eP* **P 02 01 22.7 -0.7**
comp=Z,680nm,1.6s,mb6.0
RJF *e*MLR MLR
comp=Z,46µm,20.2s,MS6.5
RJF Les Rejaudoux 80.43 45 *eP* **P 02 01 22.7 -0.7**
RJF pmax pmax
comp=Z,340nm,1.6s,mb6.0
RJF MLR MLR
comp=Z,46µm,20.3s,MS6.8
RJF Les Rejaudoux 80.43 45 *eP* **P 02 01 22.7 -0.7**
comp=Z,340nm,1.6s,mb6.0
RJF LR LR
comp=Z,46µm,20.3s,MS6.8
CHUM Lake Minchumin 80.48 334 *eP* **P 02 01 22.4 -0.8**
comp=Z,204nm,1.4s,mb5.9
VALF Valcebollere 80.54 48 *eP* **P 02 01 24.6 +0.5**
JMIC Jan Mayen 80.54 18 *eP* **P 02 01 22.2 -1.3**
JMIC AMb AMB 02 01 28.1
comp=Z,531nm,2.0s,mb6.1
JMIC *e*S S 02 11 24.5 -3.6
JMIC AMS AMS 02 31 48.9
comp=Z,17µm,21.1s,MS6.4
JMIC Jan Mayen 80.54 18 *eP* **P 02 01 22.2 -1.3**
comp=Z,531nm,2.0s,mb6.1
JMIC LR LR
comp=Z,17µm,21.1s,MS6.4
JNW Jan Mayen West 80.58 18 *eP* **P 02 01 25.5 +1.8**
WAL1 Walls 80.61 29 *eP* **P 02 01 23.2 -0.8**
CARF Carcanieres 80.63 47 *eP* **P 02 01 24.6 +0.1**
MTLF Montolieu 80.76 47 *eP* **P 02 01 24.6 -0.6**
comp=Z,464nm,1.4s,mb5.9
MTLF Montolieu 80.76 47 *eP* **P 02 01 24.6 -0.6**
MTLF pmax pmax
comp=Z,232nm,1.4s,mb5.9
MTLF Montolieu 80.76 47 *eP* **P 02 01 24.6 -0.6**
comp=Z,232nm,1.4s,mb5.9
CAF Calviac 80.78 45 *eP* **P 02 01 24.8 -0.5**
comp=Z,525nm,1.5s,mb5.9
CAF Calviac 80.78 45 *eP* **P 02 01 24.8 -0.5**
CAF pmax pmax
comp=Z,262nm,1.5s,mb5.9
CAF Calviac 80.78 45 *eP* **P 02 01 24.8 -0.5**
comp=Z,262nm,1.5s,mb5.9
TFO1 Folkestone 80.79 39⇓*eP* **P 02 01 25.5 +0.3**
TFO1 AMb AMB 02 01 31.4
comp=Z,480nm,1.2s,mb6.3
LRW Lerwick 80.81 30 *eP* **P 02 01 24.8 -0.3**
LRW AMb AMB 02 01 30.6
comp=Z,153nm,1.3s,mb5.8
EMHD Djebel Mahouad 80.85 54 P **P 02 01 27.0 +1.1**
ETOS Mallorca 80.95 50 ⇓P **P 02 01 26.6 +0.3**
comp=Z,7µm,8.1s
FILF Fillols 80.95 48 *eP* **P 02 01 26.1 -0.2**
ABA Alger-Bouzarea 80.95 53 P **P 02 01 28.7 +2.3**
LRDF Laroque-de-Fa 80.96 47 *eP* **P 02 01 26.3 0.0**
TCF Toulx Ste Croi 81.00 44 *eP* **P 02 01 25.6 -0.9**
comp=Z,253nm,1.4s,mb5.7
TCF Toulx Ste Croi 81.00 44 *eP* **P 02 01 25.6 -0.9**
TCF pmax pmax
comp=Z,126nm,1.4s,mb5.7
TCF Toulx Ste Croi 81.00 44 *eP* **P 02 01 25.6 -0.9**
comp=Z,126nm,1.4s,mb5.7
AEU East Anglia Un 81.03 37 *eP* **P 02 01 26.2 -0.3**
VERF Verneugheol 81.14 44 *eP* **P 02 01 27.2 -0.1**
SJAF Saint Jean de 81.18 48 *eP* **P 02 01 27.3 -0.2**
EJON La Jonquera 81.18 48 ⇓P **P 02 01 27.8 +0.2**
comp=Z,7µm,7.0s
ADJB Djebel Djouab 81.24 54 P **P 02 01 28.7 +0.7**
MENF Mencas 81.37 39 *eP* **P 02 01 27.6 -0.7**
HYF Humbligny 81.38 43 *eP* **P 02 01 28.0 -0.5**
SVW2 Sparrevohn 81.43 331 *eP* **P 02 01 26.8 -1.7**
BGF Bois d'Agland 81.46 44 *eP* **P 02 01 28.2 -0.7**
comp=Z,664nm,1.6s,mb6.0
BGF Bois d'Agland 81.46 44 *eP* **P 02 01 28.2 -0.7**
BGF pmax pmax
comp=Z,332nm,1.6s,mb6.0
BGF Bois d'Agland 81.46 44 *eP* **P 02 01 28.2 -0.7**
comp=Z,332nm,1.6s,mb6.0
PYM Petit Puy Mans 81.51 44 *eP* **P 02 01 28.8 -0.4**
IMA2 Indian Mountai 81.52 336 *eP* **P 02 01 28.3 -0.5**
AKET Djebel Ketaf 81.60 54 P **P 02 01 31.3 +1.4**
AGO Saint Agoulin 81.62 44 *eP* **P 02 01 29.7 -0.1**
LBL Lubilhac 81.64 45 *eP* **P 02 01 30.0 +0.1**
AVF Avril sur Loir 81.83 43 *eP* **P 02 01 29.7 -1.1**
comp=Z,270nm,1.3s,mb5.7
AVF Avril sur Loir 81.83 43 *eP* **P 02 01 29.7 -1.1**
AVF pmax pmax
comp=Z,135nm,1.3s,mb5.7
AVF Avril sur Loir 81.83 43 *eP* **P 02 01 29.7 -1.1**
comp=Z,135nm,1.3s,mb5.7
TTA Tatalina 81.93 333 *eP* **P 02 01 29.9 -1.1**
TTA pmax pmax
comp=Z,365nm,1.8s,mb6.0
TTA Tatalina 81.93 333 *eP* **P 02 01 29.9 -1.1**
comp=Z,365nm,1.8s,mb6.0
SSF Saint Saulge 81.95 43 *eP* **P 02 01 30.4 -1.1**
comp=Z,372nm,1.5s,mb5.8
SSF Saint Saulge 81.95 43 *eP* **P 02 01 30.4 -1.1**
SSF pmax pmax
comp=Z,186nm,1.5s,mb5.8
SSF Saint Saulge 81.95 43 *eP* **P 02 01 30.4 -1.1**
comp=Z,186nm,1.5s,mb5.8
PLDF La Plantade 81.95 44 *eP* **P 02 01 30.2 -1.3**
COLF Collangettes 81.97 45 *eP* **P 02 01 31.7 +0.1**
LASF Ste Croix 82.00 46 *eP* **P 02 01 31.7 -0.1**
comp=Z,320nm,1.4s,mb5.8
SMF Signal de Mont 82.15 43 *eP* **P 02 01 31.6 -1.0**
comp=Z,677nm,1.6s,mb6.0
SMF Signal de Mont 82.15 43 *eP* **P 02 01 31.6 -1.0**
SMF pmax pmax
comp=Z,338nm,1.6s,mb6.0
SMF Signal de Mont 82.15 43 *eP* **P 02 01 31.6 -1.0**
comp=Z,338nm,1.6s,mb6.0
AKF Akfadou 82.17 54 P **P 02 01 33.8 +0.9**
LOR Lormes 82.21 43 *eP* **P 02 01 31.7 -1.1**
comp=Z,449nm,1.6s,mb5.8
LOR *e*MLR MLR
comp=Z,32µm,20.0s,MS6.4
LOR Lormes 82.21 43 *eP* **P 02 01 31.7 -1.1**
LOR pmax pmax
comp=Z,224nm,1.6s,mb5.8
LOR MLR MLR
comp=Z,32µm,20.0s,MS6.7
LOR Lormes 82.21 43 *eP* **P 02 01 31.7 -1.1**
comp=Z,224nm,1.6s,mb5.8
LOR LR LR
comp=Z,32µm,20.0s,MS6.7
SSB Saint Sauveur 82.56 45 *eP* **P 02 01 34.7 0.0**
comp=Z,184nm,1.5s,mb5.9
VIVF Saint-Julien-l 82.62 45 *eP* **P 02 01 35.0 -0.1**
comp=Z,635nm,1.6s,mb6.1
VIVF Saint-Julien-l 82.62 45 *eP* **P 02 01 35.0 -0.1**
VIVF pmax pmax
comp=Z,318nm,1.6s,mb6.1
VIVF Saint-Julien-l 82.62 45 *eP* **P 02 01 35.0 -0.1**
comp=Z,318nm,1.6s,mb6.1
BAIF Baives 82.64 40 *eP* **P 02 01 34.2 -0.8**
comp=Z,210nm,1.2s,mb5.8
BAIF Baives 82.64 40 *eP* **P 02 01 34.2 -0.8**
BAIF pmax pmax
comp=Z,105nm,1.2s,mb5.7
BAIF Baives 82.64 40 *eP* **P 02 01 34.2 -0.8**
comp=Z,105nm,1.2s,mb5.7
TAM Tamanrasset 82.79 68 *eP* **P 02 01 37.5 +1.2**
comp=Z,272nm,1.5s,mb6.1
UCC Uccle 82.79 39 P **P 02 01 35.0 -0.8**
comp=Z,150nm,1.8s,mb5.7
DOU Dourbes 82.89 40 P **P 02 01 35.5 -0.8**
comp=Z,86nm,1.7s,mb5.5
CKHR Kef el Ahmar 82.92 54 P **P 02 01 36.0 -0.8**
PRAF Pradon 82.93 46 *eP* **P 02 01 37.0 +0.3**
GIVF Givet 83.04 40 *eP* **P 02 01 36.6 -0.5**
comp=Z,242nm,0.8s,mb6.0
GIVF Givet 83.04 40 *eP* **P 02 01 36.6 -0.5**
GIVF pmax pmax
comp=Z,121nm,0.8s,mb6.0
GIVF Givet 83.04 40 *eP* **P 02 01 36.6 -0.5**
comp=Z,121nm,0.8s,mb6.0
TREF Trevaresse 83.08 47 *eP* **P 02 01 37.0 -0.4**
GELF Grande-Etoile 83.10 47 *eP* **P 02 01 37.7 +0.2**
DFRA Djebel Bou Aff 83.22 54 P **P 02 01 39.5 +1.1**
SMRF Simiane la Rot 83.23 46 *eP* **P 02 01 38.4 +0.2**
comp=Z,416nm,1.5s,mb5.9
SMRF Simiane la Rot 83.23 46 *eP* **P 02 01 38.4 +0.2**
comp=Z,416nm,1.5s,mb6.2
PUYF Puyloubier 83.30 47 *eP* **P 02 01 38.0 -0.6**
SDPT Sand Point 83.32 325 *eP* **P 02 01 38.1 -0.3**
comp=Z,328nm,1.0s,mb6.3
VILF Villemus 83.33 46 *eP* **P 02 01 38.7 0.0**
BCLA Clavier 83.36 40 P **P 02 01 38.6 -0.2**
comp=Z,82nm,1.9s,mb5.4
GRN Grenoble 83.40 45 *eP* **P 02 01 39.9 +0.8**
STOF St-Etienne Org 83.47 46 *eP* **P 02 01 39.4 -0.1**
ORIF Oris-en-Rattie 83.48 45 *eP* **P 02 01 39.8 +0.3**
comp=Z,551nm,1.6s,mb6.0
ORIF *e*MLR MLR
comp=Z,35µm,22.0s,MS6.4
ORIF Oris-en-Rattie 83.48 45 *eP* **P 02 01 39.8 +0.3**
ORIF pmax pmax
comp=Z,275nm,1.6s,mb6.0
ORIF Oris-en-Rattie 83.48 45 *eP* **P 02 01 39.8 +0.3**
comp=Z,275nm,1.6s,mb6.0
BEBN Eben Emael 83.62 39 P **P 02 01 40.3 +0.2**
CTEI Djebel Teioual 83.64 54 P **P 02 01 41.0 +0.5**
GDM Grand'Maison 83.66 45 *eP* **P 02 01 41.0 +0.6**
CABF La Chapelle 83.70 44 *eP* **P 02 01 40.0 -0.6**
comp=Z,297nm,1.3s,mb6.0
CABF La Chapelle 83.70 44 *eP* **P 02 01 40.0 -0.6**
CABF pmax pmax
comp=Z,148nm,1.3s,mb6.0
CABF La Chapelle 83.70 44 *eP* **P 02 01 40.0 -0.6**
comp=Z,148nm,1.3s,mb6.0
THEF They Montfort 83.70 42 *eP* **P 02 01 40.3 -0.2**
CASM Ain Smara 83.71 54 P **P 02 01 41.0 +0.1**
HGN Heimansgroeve 83.78 39⇓*eP* **P 02 01 41.1 +0.2**
comp=Z,624nm,1.5s,mb6.5
HGN Heimansgroeve 83.78 39 *eS* S 02 12 04.1 +2.0
MEM Membach 83.82 40 P **P 02 01 41.3 +0.2**
comp=Z,84nm,1.5s,mb5.7
WLF Walferdange 83.87 41 P **P 02 01 40.8 -0.6**
comp=Z,139nm,1.5s,mb5.9
WLF Walferdange 83.87 41 *eP* **P 02 01 41.2 -0.2**
WLF pmax pmax
comp=Z,180nm,1.0s,mb6.2
WLF MLR MLR
comp=Z,32µm,21.0s,MS6.7
WLF Walferdange 83.87 41 *eP* **P 02 01 41.3 -0.1**
comp=Z,195nm,1.1s,mb6.2
WLF *e*SKSac SKSac 02 11 59.3 -3.2
WLF Walferdange 83.87 41 *eP* **P 02 01 41.2 -0.1**
comp=Z,180nm,1.0s,mb6.2
WLF LR LR
comp=Z,32µm,21.0s,MS6.7
LMR La Mourre 83.88 47 *eP* **P 02 01 41.1 -0.5**
comp=Z,771nm,1.6s,mb6.3
LMR La Mourre 83.88 47 *eP* **P 02 01 41.1 -0.5**
LMR pmax pmax
comp=Z,385nm,1.6s,mb6.3
LMR La Mourre 83.88 47 *eP* **P 02 01 41.1 -0.5**
comp=Z,385nm,1.6s,mb6.3
CKFL Kef-Lekhel 83.90 54 P **P 02 01 42.0 +0.2**
HAU Haudompre 83.93 42 *eP* **P 02 01 40.8 -0.9**
comp=Z,72nm,0.8s,mb5.5
HAU *e*MLR MLR
comp=Z,22µm,22.0s,MS6.2
HAU Haudompre 83.93 42 *eP* **P 02 01 40.8 -0.9**
HAU pmax pmax
comp=Z,36nm,0.8s,mb5.5
HAU MLR MLR
comp=Z,22µm,22.0s,MS6.5
HAU Haudompre 83.93 42 *eP* **P 02 01 40.8 -0.9**
comp=Z,679nm,1.4s,mb6.3
FRF La Foret Royal 83.99 47 *eP* **P 02 01 41.5 -0.6**
comp=Z,36nm,0.8s,mb5.6
FRF La Foret Royal 83.99 47 *eP* **P 02 01 41.5 -0.6**
FRF pmax pmax
comp=Z,339nm,1.4s,mb6.3
FRF La Foret Royal 83.99 47 *eP* **P 02 01 41.5 -0.6**
comp=Z,339nm,1.4s,mb6.3
CAEH 'Ain El Ouahch 84.01 54 P **P 02 01 43.0 +0.6**
RSL Roselend 84.04 45 *eP* **P 02 01 42.7 +0.4**
BER Bergen 84.06 30 *eP* **P 02 01 42.3 +0.2**
BER AMb AMB 02 01 45.9
comp=Z,237nm,2.1s,mb6.0
BER *e*SKS 02 12 01.8
BER AMS AMS 02 34 18.5
comp=Z,22µm,24.8s,MS6.4
BER Bergen 84.06 30 *eP* **P 02 01 42.3 +0.2**
BER pmax pmax
comp=Z,237nm,2.1s,mb6.0
BER MLR MLR
comp=Z,22µm,24.8s,MS6.4
BER Bergen 84.06 30 *eP* **P 02 01 42.3 +0.2**
comp=Z,237nm,2.1s,mb6.0
BER LR LR
comp=Z,22µm,24.8s,MS6.4
BNI Bardonecchia 84.06 45 *eP* **P 02 01 43.3 +0.9**
BNI pmax pmax
comp=Z,402nm,1.7s,mb6.3
BNI MLR MLR
comp=Z,33µm,20.0s,MS6.7
BNI Bardonecchia 84.06 45 *eP* **P 02 01 43.3 +0.8**
comp=Z,402nm,1.7s,mb6.3
BNI LR LR
comp=Z,33µm,20.0s,MS6.7
LPL La Plagne 84.11 45 *eP* **P 02 01 43.0 +0.3**
comp=Z,200nm,1.3s,mb5.8
LPL La Plagne 84.11 45 *eP* **P 02 01 43.0 +0.3**
LPL pmax pmax
comp=Z,100nm,1.3s,mb5.8
LPL La Plagne 84.11 45 *eP* **P 02 01 43.0 +0.3**
comp=Z,100nm,1.3s,mb5.8
MBDF Montbardon 84.11 46 *eP* **P 02 01 42.8 +0.1**
comp=Z,444nm,1.7s,mb6.0
MBDF Montbardon 84.11 46 *eP* **P 02 01 42.8 +0.1**
MBDF pmax pmax
comp=Z,222nm,1.7s,mb6.0
MBDF Montbardon 84.11 46 *eP* **P 02 01 42.8 +0.1**
comp=Z,222nm,1.7s,mb6.0
LPG La Plagne 84.12 45 *eP* **P 02 01 43.2 +0.5**
comp=Z,493nm,1.5s,mb6.1
LPG La Plagne 84.12 45 *eP* **P 02 01 43.2 +0.5**
LPG pmax pmax
comp=Z,247nm,1.5s,mb6.1
LPG La Plagne 84.12 45 *eP* **P 02 01 43.2 +0.5**
comp=Z,246nm,1.5s,mb6.1
SURF Saint Ours 84.14 46 *eP* **P 02 01 44.0 +1.2**
CALN Calern 84.17 47 *eP* **P 02 01 43.7 +0.7**
HINF Hinteralfeld 84.26 42 *eP* **P 02 01 42.3 -1.1**
comp=Z,282nm,1.5s,mb5.9
HINF Hinteralfeld 84.26 42 *eP* **P 02 01 42.3 -1.1**
HINF pmax pmax
comp=Z,141nm,1.5s,mb5.9
HINF Hinteralfeld 84.26 42 *eP* **P 02 01 42.3 -1.1**
comp=Z,141nm,1.5s,mb5.9
MVIF Mont Vial 84.36 46 *eP* **P 02 01 44.7 +0.7**
WTSB Winterswijk 84.38 38⇓*eP* **P 02 01 44.4 +0.5**
comp=Z,276nm,1.7s,mb6.1
LSD Lago del Serru 84.39 45 P **P 02 01 45.3 +1.2**
LSD pmax pmax
comp=Z,2µm,4.7s
LSD Lago del Serru 84.39 45 P **P 02 01 45.3 +1.2**
comp=Z,2µm,4.7s
TOUF Mont Tournerai 84.44 46 *eP* **P 02 01 44.8 +0.4**
DOI San Damiano 84.45 46 P **P 02 01 44.6 +0.2**
DOI pmax pmax
comp=Z,126nm,1.2s,mb5.9
DOI San Damiano 84.45 46 P **P 02 01 44.6 +0.2**
comp=Z,126nm,1.2s,mb5.9
MOF Molkenrain 84.45 42 *eP* **P 02 01 43.6 -0.8**
RUP Ruppelstein 84.46 41 *eP* **P 02 01 44.8 +0.4**
CMAH Djebel Manchou 84.47 54 P **P 02 01 44.0 -0.7**
RSP Reno Superiore 84.47 45 P **P 02 01 45.3 +0.7**
RSP pmax pmax
comp=Z,515nm,1.7s,mb6.4
RSP Reno Superiore 84.47 45 P **P 02 01 45.3 +0.7**
comp=Z,515nm,1.7s,mb6.4
ECH Echery 84.48 42 *eP* **P 02 01 44.4 -0.1**
ECH pmax pmax
comp=Z,27nm,1.0s,mb5.3
ECH Echery 84.48 42 *eP* **P 02 01 44.4 -0.1**
comp=Z,27nm,1.0s,mb5.3
STV Sant Anna di V 84.50 46 P **P 02 01 44.7 0.0**
STV pmax pmax
comp=Z,330nm,2.6s,mb6.0
STV Sant Anna di V 84.50 46 P **P 02 01 44.7 0.0**
comp=Z,330nm,2.6s,mb6.0
LUCF Luceram 84.50 46 *eP* **P 02 01 45.0 +0.3**
ABSA Djebel Ababsia 84.51 54 P **P 02 01 44.0 -0.9**
REVF Revere 84.52 47 *eP* **P 02 01 45.1 +0.3**
CDF Champ du Feu 84.56 42 *eP* **P 02 01 44.2 -0.7**
comp=Z,444nm,1.6s,mb6.0
CDF Champ du Feu 84.56 42 *eP* **P 02 01 44.2 -0.7**
CDF pmax pmax
comp=Z,222nm,1.6s,mb6.0
CDF Champ du Feu 84.56 42 *eP* **P 02 01 44.2 -0.7**
comp=Z,222nm,1.6s,mb6.0
AUTN L'Aution 84.57 46 *eP* **P 02 01 45.7 +0.7**
SBF Sospel 84.57 46 *eP* **P 02 01 44.5 -0.6**
comp=Z,618nm,1.3s,mb6.3
SBF Sospel 84.57 46 *eP* **P 02 01 44.5 -0.6**
SBF pmax pmax
comp=Z,309nm,1.3s,mb6.3
SBF Sospel 84.57 46 *eP* **P 02 01 44.5 -0.6**
comp=Z,309nm,1.3s,mb6.3
BUG Bochum--Univer 84.65 39 *eP* **P 02 01 45.0 -0.3**
comp=Z,336nm,1.8s,mb6.2
BUG *e*SKSac SKSac 02 12 05.6 -1.8
SAOF Saorge 84.66 46 *eP* **P 02 01 45.3 -0.2**
BBS Basel-Blauen 84.70 43 *eP* **P 02 01 45.4 -0.2**
LIBD Limburg 84.78 42 *eP* **P 02 01 46.0 0.0**
TRAV Traversella 84.82 45 P **P 02 01 46.2 -0.1**
comp=Z,5µm,7.5s
STR Strasbourg 84.89 42 *eP* **P 02 01 47.0 +0.4**
LANF Langenberg 84.93 41 *eP* **P 02 01 46.9 +0.1**
IBBN Ibbenburen 84.98 38 *eP* **P 02 01 46.8 -0.1**
comp=Z,517nm,1.6s,mb6.4
IBBN *e*SKSac SKSac 02 12 08.8 -0.7
ORO Oropa 84.99 45 P **P 02 01 47.1 0.0**
ORO pmax pmax
comp=Z,7µm,5.2s
ORO Oropa 84.99 45 P **P 02 01 47.1 0.0**
comp=Z,7µm,5.2s
FELD Feldberg im Sc 85.04 42 *eP* **P 02 01 47.2 -0.1**
HLG Helgoland 85.11 36 *e*SKSac SKSac 02 12 08.8 -1.4
KTD Kalmit 85.12 41 *eP* **P 02 01 47.1 -0.6**
FIN Finale Ligure 85.13 46 P **P 02 01 47.3 -0.6**
QLNO Quiliano 85.23 46 P **P 02 01 47.8 -0.6**
comp=Z,473nm,3.9s
MOL Molde 85.25 28 *eP* **P 02 01 48.0 -0.1**
MOL AMb AMB 02 01 59.0
comp=Z,165nm,2.6s,mb5.7
MOL *e*SKS 02 12 08.4
MOL AMS AMS 02 36 56.2
comp=Z,16µm,24.3s,MS6.3
MOL Molde 85.25 28 *eP* **P 02 01 48.0 -0.1**
comp=Z,165nm,2.6s,mb5.7
MOL LR LR
comp=Z,16µm,24.3s,MS6.3
BFO Black Forest 85.27 42 *eP* **P 02 01 47.6 -0.9**
BFO *e* 02 12 11.9
BFO pmax pmax
comp=Z,107nm,1.7s,mb5.7
BFO MLR MLR
comp=Z,20µm,19.0s,MS6.5
BFO Black Forest 85.27 42 *eP* **P 02 01 47.6 -0.9**
comp=Z,107nm,1.7s,mb5.7
BFO *e*SKSac SKSac 02 12 11.9 +0.4
BFO Black Forest 85.27 42 *eP* **P 02 01 47.6 -0.9**
comp=Z,107nm,1.7s,mb5.7
BFO *e*SKSac SKSac 02 12 11.9 +0.4
BFO LR LR
comp=Z,20µm,19.0s,MS6.5
PCP Piancastagn 85.38 46 P **P 02 01 48.6 -0.5**
PCP pmax pmax
comp=Z,350nm,2.4s,mb6.1
PCP Piancastagn 85.38 46 P **P 02 01 48.6 -0.5**
comp=Z,350nm,2.4s,mb6.1
VAI Varese 85.54 44 P **P 02 01 49.7 -0.2**
VAI pmax pmax
comp=Z,274nm,1.6s,mb6.2
VAI Varese 85.54 44 P **P 02 01 49.7 -0.2**
comp=Z,274nm,1.6s,mb6.2
SPAK Spaichingen-Ko 85.57 42 *eP* **P 02 01 49.8 -0.2**
TOD Tromm 85.59 41 *eP* **P 02 01 49.6 -0.5**
PGF Pioggiola 85.70 48 *eP* **P 02 01 50.2 -0.6**
comp=Z,255nm,1.2s,mb6.0
PGF Pioggiola 85.70 48 *eP* **P 02 01 50.2 -0.6**
PGF pmax pmax
comp=Z,127nm,1.2s,mb6.0
PGF Pioggiola 85.70 48 *eP* **P 02 01 50.2 -0.6**
comp=Z,127nm,1.2s,mb6.0
CORF Corte 85.82 48 *eP* **P 02 01 50.7 -0.6**
STU Stuttgart 85.84 41 *eP* **P 02 01 51.1 -0.2**
STU pmax pmax
comp=Z,221nm,1.3s,mb6.2
STU Stuttgart 85.84 41 *eP* **P 02 01 50.9 -0.4**
comp=Z,222nm,1.3s,mb6.2
STU *e*SKSac SKSac 02 12 15.9 +0.8
STU Stuttgart 85.84 41 *eP* **P 02 01 51.1 -0.2**
comp=Z,221nm,1.3s,mb6.2
TUE Stuetta 85.94 44 *eP* **P 02 01 52.2 +0.4**
comp=Z,504nm,1.5s,mb6.5
TUE LR LR

comp=Z,22µm,19.0s,MS6.6
VNA3 Neumayer Olymp 85.95 162 *e*P **P** **02 01 51.3 -0.1**
VNA3 *e* 02 01 54.2
VNA3 *e* pP 02 01 58.1 -2.6
VNA3 *e* 02 05 13.1
VNA3 *e* 02 05 16.7
VSL Villasalto 86.01 51 *e*P **P** **02 01 52.6 +0.3**
comp=Z,394nm,1.3s,mb6.5
VSL LR LR
comp=Z,27µm,22.0s,MS6.6
BOB Bobbio (Coli) 86.02 46 P **P** **02 01 52.3 0.0**
BOB pmax pmax
comp=Z,260nm,1.0s,mb6.4
BOB Bobbio (Coli) 86.02 46 P **P** **02 01 52.3 0.0**
comp=Z,260nm,1.0s,mb6.4
KEST Kesra 86.03 55 P **P** **02 01 53.0 +0.5**
comp=Z,37nm,1.2s,mb5.5,baz=201,slow=1.4,SNR=42
KEST S S 02 12 19.1 -6.0
comp=Z,0.5nm,0.8s,baz=270,slow=20,SNR=2.0
KEST PKKPbc PKKPbc 02 19 51.4 -1.9
comp=Z,1.2nm,0.8s,baz=305,slow=4.3,SNR=5.2
KONO Kongsberg 86.16 31⇓*i*P **P** **02 01 53.1 +0.5**
KONO *e*SKS 02 12 14.7
KONO AMS AMS 02 35 20.5
comp=Z,33µm,25.0s,MS6.6
KONO Kongsberg 86.16 31*d i*P **P** **02 01 51.6 -1.1**
KONO Kongsberg 86.16 31 *i* P **P** **02 01 51.7 -1.0**
VNA1 Neumayer--Stat 86.17 162 *e*P **P** **02 01 52.7 +0.3**
VNA1 *e* 02 01 55.3
VNA1 *e* 02 01 58.9
VNA1 *e* 02 05 14.8
VNA1 *e* 02 05 18.4
DAVA Damuels 86.31 43⇓*i*P **P** **02 01 53.8 +0.2**
comp=Z,11µm,7.5s
UBBA Unterbreizbach 86.36 39 *e*P **P** **02 01 53.7 -0.2**
comp=Z,237nm,1.7s,mb6.1
UBBA *e*SKSac SKSac 02 12 19.0 +0.7
NRDL Niedersach Rie 86.42 38 *e*P **P** **02 01 54.4 +0.3**
comp=Z,335nm,1.5s,mb6.3
NRDL *e*SKSac SKSac 02 12 18.3 -0.2
VNA2 Neumayer--Watz 86.53 162 *e*P **P** **02 01 54.1 -0.1**
VNA2 *e* 02 01 56.8
VNA2 *e* 02 02 00.0
VNA2 *e* 02 05 17.2
VNA2 *e* 02 05 21.2
BSEG Bad Segeberg 86.54 36 *e*P **P** **02 01 54.7 0.0**
comp=Z,282nm,1.3s,mb6.3
BSEG *e*SKSac SKSac 02 12 20.6 +1.4
CLZ Clausthal 86.59 38 *e*P **P** **02 01 55.2 +0.3**
CLZ *e* 02 12 21.4
CLZ pmax pmax
comp=Z,346nm,1.3s,mb6.4
CLZ Clausthal 86.59 38 *e*P **P** **02 01 55.2 +0.3**
comp=Z,346nm,1.3s,mb6.4
CLZ *e*SKSac SKSac 02 12 21.4 +1.8
BRMO Bormio 86.65 44 P **P** **02 01 55.9 +0.5**
comp=Z,369nm,2.6s,mb6.2
VLC Villacollemand 86.70 46 *e*P **P** **02 01 54.6 -1.0**
comp=Z,160nm,1.2s,mb6.1
VLC LR LR
comp=Z,24µm,22.0s,MS6.5
ERBM Eremo 86.71 46 P **P** **02 01 56.0 +0.3**
MABI Malga Bissina 86.76 44 P **P** **02 01 55.8 -0.1**
UNV Unalaska Valle 86.77 324 *e*P **P** **02 01 55.8 0.0**
comp=Z,188nm,1.1s,mb6.2
MAIM Mastiano 86.78 46 P **P** **02 01 55.0 -1.0**
comp=Z,1µm,3.5s
PII Pisa 86.81 47 P **P** **02 01 55.2 -1.0**
PII pmax pmax
comp=Z,160nm,1.2s,mb6.1
PII Pisa 86.81 47 P **P** **02 01 55.2 -1.0**
comp=Z,160nm,1.2s,mb6.1
NAO01 NORSAR Array S 86.81 29 PFAKE 02 02 10.0 +14
NAO01 LR LR
comp=Z,26µm,21.0s,MS6.6
GSCL Gusciola 86.84 46 P **P** **02 01 56.4 +0.1**
comp=Z,273nm,1.4s,mb6.3
BDI Bagni Di Lucca 86.85 46 P **P** **02 01 55.3 -1.1**
BDI pmax pmax
comp=Z,224nm,2.0s,mb6.0
BDI Bagni Di Lucca 86.85 46 P **P** **02 01 55.3 -1.1**
comp=Z,224nm,2.0s,mb6.0
FETA Feichten 86.89 43⇓*i*P **P** **02 01 56.7 +0.2**
comp=Z,8µm,7.3s
RETA Reutte 86.90 43⇓*i*P **P** **02 01 56.4 -0.2**
comp=Z,10µm,7.2s
NB2 NORSAR Subarra 86.97 29 P **P** **02 01 56.9 +0.3**
comp=Z,346nm,1.4s,mb6.4,baz=268,slow=5.1
NOA NORSAR Array B 86.97 29 P **P** **02 01 56.8 +0.2**
comp=Z,51nm,0.9s,mb5.8,baz=269,slow=4.8,SNR=70
NOA PKKPbc PKKPbc 02 19 49.5 -2.6
comp=Z,1.2nm,0.8s,baz=93,slow=4.9,SNR=3.2
NOA LR LR 02 36 44.3
comp=Z,20µm,21.5s,MS6.5,baz=270,slow=33
NOA NORSAR Array B 86.97 29 P **P** **02 01 56.8 +0.2**
NOA PKKPbc PKKPbc 02 19 49.5 -2.6
NOA LR LR 02 36 44.3
KBS Kingsbay 87.05 11⇓*i*P **P** **02 01 57.7 +1.1**
KBS AMb AMB 02 02 01.3
comp=Z,280nm,1.1s,mb6.4
KBS *e*PP PP 02 05 22.1 +2.2
KBS *e*SKS 02 12 21.2
KBS AMS AMS 02 40 24.4
comp=Z,63µm,20.0s,MS7.0
KBS Kingsbay 87.05 11 *i* P **P** **02 01 56.9 +0.2**
ZCCA Zocca 87.12 46 P **P** **02 01 58.0 +0.3**
MOTA Moosalm 87.14 43⇑*i*P **P** **02 01 57.5 -0.2**
comp=Z,227nm,1.3s,mb6.2
GRA1 Grafenberg Arr 87.16 41 *e*P **P** **02 01 57.9 +0.1**
comp=Z,227nm,1.3s,mb6.2
GRA1 *e*SKSac SKSac 02 12 26.1 +2.9
GRA1 *e*PKKP PKKPbc 02 19 49.0 -2.1
GRA1 *e*P'P' 02 27 55.2
GRA1 LR LR
comp=Z,36µm,21.2s,MS6.8
GRF Grafenberg Arr 87.16 41 *e*P **P** **02 01 57.9 +0.1**
GRF *e* 02 12 26.1
GRF pmax pmax
comp=Z,227nm,1.3s,mb6.2
GRF Grafenberg Arr 87.16 41 *e*P **P** **02 01 57.9 +0.1**
GRF *e* 02 12 26.1
GRF pmax pmax
comp=Z,227nm,1.3s,mb6.2
GRF MLR MLR
comp=Z,36µm,21.2s,MS6.8
GRF Grafenberg Arr 87.16 41 *e*P **P** **02 01 57.9 +0.1**
comp=Z,227nm,1.3s,mb6.2
GRF *e*SKSac SKSac 02 12 26.1 +2.9
GRF *e*PKKPdf PKKPdf 02 19 49.0 +4.3
GRF *e*PKPPKPdf 02 27 55.2
GRF *e*L 02 37 20.9
comp=Z,36µm,21.2s
GRF Grafenberg Arr 87.16 41 *e*P **P** **02 01 57.9 +0.1**
comp=Z,227nm,1.3s,mb6.2
GRF *e*SKS 02 12 26.1
GRF PKKP PKKPbc 02 19 49.0 -2.1
RAVA Ravarino 87.21 45 P **P** **02 01 58.5 +0.4**
FNVD Fontana Vidola 87.23 46 P **P** **02 01 58.3 +0.1**
comp=Z,373nm,1.4s,mb6.4
FUR Furstenfeldbru 87.23 42 *e*P **P** **02 01 58.1 -0.1**
FUR *e* 02 12 24.6
FUR pmax pmax
comp=Z,464nm,1.6s,mb6.5
FUR Furstenfeldbru 87.23 42 *e*P **P** **02 01 58.1 -0.1**
comp=Z,464nm,1.6s,mb6.5
FUR *e*SKSac SKSac 02 12 24.6 +0.9
APPI Appiano 87.24 44 P **P** **02 01 57.6 -0.7**
comp=Z,332nm,1.7s,mb6.3
NSS Namsos 87.26 26⇓*i*P **P** **02 01 57.1 -0.8**
NSS AMb AMB 02 02 00.5
comp=Z,383nm,1.1s,mb6.5
NSS *e*SKS 02 12 22.3
NSS AMS AMS 02 37 45.9
comp=Z,28µm,20.0s,MS6.7
NSS Namsos 87.26 26⇓*i*P **P** **02 01 57.1 -0.8**
comp=Z,383nm,1.1s,mb6.5
NSS LR LR
comp=Z,28µm,20.0s,MS6.7
CSNT Castellina Chi 87.37 47 P **P** **02 01 58.0 -0.9**
comp=Z,2µm,6.3s
MOX Moxa 87.39 40 *e*P **P** **02 01 59.0 +0.1**
comp=Z,217nm,1.6s,mb6.1
MOX
comp=Z,26µm,21.0s
MOX Moxa 87.39 40 *e*P **P** **02 01 59.0 +0.1**
MOX pmax pmax
comp=Z,217nm,1.6s,mb6.1
MOX MLR MLR
comp=Z,26µm,21.0s,MS6.6
MOX Moxa 87.39 40 *e*P **P** **02 01 58.8 -0.1**
comp=Z,196nm,1.5s,mb6.1
MOX *e*SKSac SKSac 02 12 26.1 +1.5
SEI Scarperia 87.40 46 P **P** **02 01 58.0 -1.1**
comp=Z,158nm,0.7s,mb6.3
WATA Walderalm 87.46 43⇓*i*P **P** **02 01 58.9 -0.4**
comp=Z,153nm,1.4s,mb6.0
FIU Minerbio Fiu 87.48 46 P **P** **02 02 00.1 +0.7**
WTTA Wattenberg 87.50 43⇓*i*P **P** **02 01 59.6 +0.1**
comp=Z,9µm,7.4s
VMG Vicchio 87.54 46 P **P** **02 01 58.9 -0.8**
comp=Z,148nm,1.3s,mb6.1
CTI Castel Tesino 87.55 44 P **P** **02 01 59.5 -0.2**
CTI pmax pmax
comp=Z,377nm,2.0s,mb6.3
CTI Castel Tesino 87.55 44 P **P** **02 01 59.5 -0.2**
comp=Z,377nm,2.0s,mb6.3
MANZ Manzenberg 87.73 40 *e*P **P** **02 02 00.8 +0.3**
comp=Z,217nm,1.5s,mb6.2
MANZ *e*SKSac SKSac 02 12 28.5 +1.8
COP Copenhagen 87.73 35⇓*i*P **P** **02 02 01.3 +0.9**
COP *i* S S 02 12 30.9 -10
COP pmax pmax
comp=Z,98nm,0.8s,mb6.1
COP MLR MLR
comp=Z,7µm,19.0s,MS6.1
COP Copenhagen 87.73 35⇓*i*P **P** **02 02 01.3 +0.9**
comp=Z,98nm,0.8s,mb6.1
COP *i* S S 02 12 30.9 -10
COP
comp=Z,7µm,19.0s
SFI Santa Sofia 87.76 46 P **P** **02 02 00.3 -0.5**
LOF Lofoten 87.78 22⇓*i*P **P** **02 02 03.0 +2.6**
ROTZ Rotzenmuhle 87.80 40 *e*P **P** **02 02 01.4 +0.6**
comp=Z,308nm,1.7s,mb6.3
ROTZ *e*SKSac SKSac 02 12 29.3 +2.2
WERD Werda 87.84 40 *e*P **P** **02 02 01.1 +0.1**
comp=Z,188nm,1.2s,mb6.2
GUNZ Gunzen 87.86 40 *e*P **P** **02 02 01.3 +0.2**
comp=Z,222nm,1.5s,mb6.2
HSP Hornsund 87.88 13 *e*P **P** **02 02 01.6 +0.9**
WERN Wernitzgruen 87.89 40 *e*P **P** **02 02 01.6 +0.3**
comp=Z,223nm,1.3s,mb6.2
SEST Monte Rota 87.92 43 P **P** **02 02 01.3 -0.2**
TOLF Tolfa 87.94 48 P **P** **02 02 01.8 +0.1**
comp=Z,1µm,4.6s
NKC Novy Kostel 87.94 40 *e*P **P** **02 02 01.6 +0.1**
NKC *ex* x 02 02 16.9
NKC *e*SKS 02 12 24.8
NKC AMS AMS 02 37 30.0
comp=Z,35µm,21.0s
NKC Novy Kostel 87.94 40 *e*P **P** **02 02 01.6 +0.1**
NKC *e* 02 02 16.9
NKC *e*SKS 02 12 24.8
TANN Tannenbergstha 87.94 40 *e*P **P** **02 02 01.8 +0.3**
comp=Z,233nm,1.2s,mb6.3
TANN *e*SKSac SKSac 02 12 30.1 +2.2
CDCA Citt' di Caste 88.06 47 P **P** **02 02 01.6 -0.6**
comp=Z,18nm,1.0s,mb5.2
BADI Badiali 88.06 47 P **P** **02 02 01.0 -1.2**
comp=Z,335nm,2.7s,mb6.1
ABTA Abfaltersbach 88.12 43⇓*i*P **P** **02 02 01.8 -0.6**
comp=Z,6µm,7.1s
PTS Pantelleria 88.14 53 P **P** **02 02 02.0 -0.8**
PTS pmax pmax
comp=Z,397nm,1.8s,mb6.3
PTS Pantelleria 88.14 53 P **P** **02 02 02.0 -0.8**
comp=Z,397nm,1.8s,mb6.3
SNAA Sanae 88.16 162 *e*P **P** **02 02 01.8 -0.3**
SNAA *e* 02 02 04.2
SNAA *e* 02 02 07.6
SNAA *e* 02 05 29.3
SNAA *e* 02 05 33.5
SNAA Sanae 88.16 162 *e*P **P** **02 02 01.8 -0.3**
SNAA pmax pmax
comp=Z,218nm,1.2s
SNAA Sanae 88.16 162 *e*P **P** **02 02 01.8 -0.2**
comp=Z,218nm,1.2s,mb6.3
RSM Repubblica di 88.19 46 P **P** **02 02 02.5 -0.3**
RSM pmax pmax
comp=Z,117nm,2.6s,mb5.7
RSM Repubblica di 88.19 46 P **P** **02 02 02.5 -0.3**
comp=Z,117nm,2.6s,mb5.7
NIKO Nikolski 88.20 323 *e*P **P** **02 02 02.9 +0.2**
comp=Z,264nm,1.1s,mb6.4
MOR8 Moi Rana 88.23 24 *e*P **P** **02 02 03.0 +0.5**
MOR8 AMb AMB 02 02 18.6
comp=Z,240nm,1.7s,mb6.1
MOR8 Moi Rana 88.23 24 *e*P **P** **02 02 03.0 +0.5**
comp=Z,240nm,1.7s,mb6.2
CLL Collm 88.25 39 *i* P **P** **02 02 03.0 +0.1**
CLL *i* pP 02 02 10.7 -1.6
CLL *e*S S 02 12 51.0 +5.2
CLL pmax pmax
comp=Z,202nm,1.4s,mb6.2
CLL Collm 88.25 39 *e*P **P** **02 02 03.0 +0.1**
comp=Z,204nm,1.4s,mb6.2
CLL *e*SKSac SKSac 02 12 30.1 +0.4
CLL Collm 88.25 39 *i* P **P** **02 02 03.0 +0.1**
comp=Z,202nm,1.4s,mb6.2
CLL *i* pP pP 02 02 07.7 -4.6
CLL *i* sP sP 02 02 10.7 -4.9
CLL *i* x x 02 02 16.5
CLL *ex* x 02 03 02.0
CLL *e*PP PP 02 05 29.0 -1.2
CLL *ex* x 02 06 30.0
CLL *e*SKSac SKSac 02 12 36.0 +6.3
CLL *e*S S 02 12 51.0 +5.2
CLL *e*PS 02 13 58.0
CLL *e*SS SS 02 18 38.0 +3.0
CLL *e*PKPPKPdf 02 27 56.0
CLL Collm 88.25 39 *i* P **P** **02 02 03.0 +0.1**
comp=Z,202nm,1.4s,mb6.2
CLL *i* pP 02 02 10.7 -1.6
CLL *e*SKS 02 12 36.0
CLL *e*S S 02 12 51.0 +5.2
CLL *e*P'P' 02 27 56.0
WET Wettzell 88.26 41 *e*P **P** **02 02 03.4 +0.3**
WET *e* 02 12 32.4
WET pmax pmax
comp=Z,342nm,1.3s,mb6.4
WET Wettzell 88.26 41 *e*P **P** **02 02 03.4 +0.3**
comp=Z,342nm,1.3s,mb6.4
WET *e*SKSac SKSac 02 12 32.4 +2.5
RJOB Jochberg 88.27 42 *e*P **P** **02 02 03.0 -0.1**
comp=Z,111nm,1.0s,mb6.0
RJOB *e*SKSac SKSac 02 12 30.1 +0.1
MURB Monte Urbino 88.28 47 P **P** **02 02 01.7 -1.6**
comp=Z,246nm,1.9s,mb6.1
RGN Rugen 88.29 36 *e*P **P** **02 02 03.6 +0.5**
comp=Z,730nm,1.3s,mb6.8
RGN *e*SKSac SKSac 02 12 31.7 +1.9
FVI Forni Avoltri 88.31 44 P **P** **02 02 03.8 +0.5**
ROM9 Roma 88.33 48 P **P** **02 02 04.3 +0.7**
FSSB Fossombrone 88.44 47 P **P** **02 02 03.4 -0.6**
comp=Z,165nm,2.0s,mb5.9
LAV9 Lanuvio 88.47 49 P **P** **02 02 04.9 +0.7**
comp=Z,104nm,1.0s,mb6.0
RDP Rocca di Papa 88.48 48 P **P** **02 02 04.7 +0.4**
RDP pmax pmax
comp=Z,439nm,2.1s,mb6.3
RDP Rocca di Papa 88.48 48 P **P** **02 02 04.7 +0.4**
comp=Z,439nm,2.1s,mb6.3
FBE Freiberg 88.49 39 *e*P **P** **02 02 04.3 +0.2**
comp=Z,193nm,1.2s,mb6.2
MTCE Montecelio 88.49 48 P **P** **02 02 03.9 -0.4**
ERC Erice 88.56 52 P **P** **02 02 04.8 +0.1**
comp=Z,528nm,1.0s,mb6.8
SNTG Esanatoglia 88.58 47 P **P** **02 02 03.9 -0.8**
comp=Z,321nm,1.9s,mb6.3
GMNA Gemona 88.64 44 P **P** **02 02 04.7 -0.2**
comp=Z,967nm,0.9s,mb7.1
RUE Ruedersdorf 88.67 38 *e*P **P** **02 02 05.0 +0.1**
comp=Z,328nm,1.4s,mb6.5
RUE *e*SKSac SKSac 02 12 31.7 -0.5
CERT Cerreto 88.67 48 P **P** **02 02 05.0 -0.2**
comp=Z,524nm,3.2s
KBA Koelnbreinsper 88.67 43⇓*i*P **P** **02 02 05.1 0.0**
comp=Z,8µm,7.6s
PTCC Patocco-Chiusa 88.72 44 P **P** **02 02 05.1 -0.2**
comp=Z,97nm,0.8s,mb6.2
KHC Kasperske Hory 88.72 41 *e*P **P** **02 02 05.1 -0.1**
KHC *ex* x 02 02 19.5
KHC *e*SKS 02 12 36.5
KHC AMS AMS 02 36 20.0
comp=Z,35µm,23.4s
NRCA Norcia 88.73 47 P **P** **02 02 04.6 -0.8**
comp=Z,34nm,1.2s,mb5.5
FIAM Fiamignano 88.76 48 P **P** **02 02 05.2 -0.4**
comp=Z,415nm,2.3s,mb6.4
CING Cingoli 88.76 47 P **P** **02 02 04.8 -0.7**
comp=Z,194nm,2.6s,mb6.0
GEC2 GERESS Array S 88.82 41 *e*P **P** **02 02 05.7 0.0**
GEC2 *e* 02 12 33.2
GEC2 pmax pmax
comp=Z,143nm,1.4s,mb6.1
GEC2 GERESS Array S 88.82 41 *e*P **P** **02 02 05.7 0.0**
comp=Z,143nm,1.4s,mb6.1
GEC2 *e*SKSac SKSac 02 12 33.2 0.0
GERES GERESS Array B 88.82 41 P **P** **02 02 05.9 +0.2**
comp=Z,24nm,0.8s,mb5.6,baz=267,slow=2.7,SNR=153
GERES S S 02 12 35.9 -15
comp=Z,0.2nm,0.6s,baz=201,slow=36,SNR=2.3
GERES PKKPbc PKKPbc 02 19 45.3 -1.8
comp=Z,1.6nm,0.8s,baz=90,slow=2.7,SNR=6.5
GERES PKPPKP 02 27 49.4
comp=Z,2.3nm,1.0s,baz=315,slow=0.9,SNR=7.1
GERES LR LR 02 38 30.2
comp=Z,25µm,20.3s,MS6.6,baz=270,slow=33
GERES GERESS Array B 88.82 41 P **P** **02 02 05.9 +0.2**
GERES S S 02 12 35.9 -15
BRG Berggiesshubel 88.86 39 *e*P **P** **02 02 06.1 +0.3**
comp=Z,199nm,1.5s,mb6.2
BRG *e*SKSac SKSac 02 12 34.0 +0.6
BRG Berggiesshubel 88.86 39 *i* P **P** **02 02 06.6 +0.8**
comp=Z,199nm,1.5s,mb6.2
BRG *i* pP 02 02 13.8 -1.4
comp=Z,87nm,1.0s
BRG *i* 02 06 54.6
comp=Z,52nm,1.9s
BRG SKS 02 12 40.0
BRG S S 02 12 58.0 +6.4
BRG SP 02 13 56.0
BRG SS SS 02 18 45.0 +1.0
BRG *e*PKKP PKKPbc 02 19 38.5 -8.6
comp=Z,6.8nm,1.4s
BRG *e*PKPPKP 02 27 48.7
comp=Z,20nm,1.9s
BRG
comp=N,21µm,23.0s
BRG
comp=E,24µm,22.8s
BRG
comp=Z,39µm,22.2s
MYKA Terra Mystica 88.90 44⇓*i*P **P** **02 02 06.0 -0.1**
comp=Z,539µm,8.0s
AQU L'Aquila 88.96 48 P **P** **02 02 06.4 -0.1**
AQU pmax pmax
comp=Z,522nm,2.3s,mb6.5
AQU L'Aquila 88.96 48 P **P** **02 02 06.4 -0.1**
comp=Z,522nm,2.3s,mb6.5
BJO1 Bjornoya 88.98 15 *e*P **P** **02 02 09.7 +3.8**
BJO1 LR LR
comp=Z,22µm,17.1s,MS6.6
PTQR Pietraquaria 88.98 48 P **P** **02 02 06.6 0.0**
comp=Z,96nm,1.0s,mb6.1
BJO Bjornoya 89.03 15 *e*P **P** **02 02 09.7 +3.5**
BJO AMS AMS 02 39 38.9
comp=Z,22µm,17.1s,MS6.6
AOI Ancona 89.05 47 P **P** **02 02 06.7 -0.2**
comp=Z,208nm,1.2s,mb6.3
VENT Ventotene 89.06 49 P **P** **02 02 07.3 +0.3**
comp=Z,291nm,1.8s,mb6.3
TERO Teramo 89.10 48 P **P** **02 02 06.9 -0.3**
comp=Z,194nm,2.1s,mb6.1
VOY Vojsko 89.11 44 *e*P **P** **02 02 07.2 +0.1**
VOY *e* 02 02 50.4
VVLD Villa Vallelon 89.15 48 P **P** **02 02 07.3 -0.1**
comp=Z,289nm,1.9s,mb6.3
GORS Gorjuse 89.16 44 *e*P **P** **02 02 07.4 0.0**
JAVS Javornik 89.24 44 *i* P **P** **02 02 07.8 +0.1**
MOA Molln 89.25 42⇓*i*P **P** **02 02 06.9 -0.9**
comp=Z,9µm,7.3s
PVCC Panska Ves 89.28 40 *e*P **P** **02 02 08.1 +0.3**
PVCC *ex* x 02 02 23.4
PVCC *e*SKS 02 12 38.0
PVCC AMS AMS 02 38 10.0
comp=Z,35µm,22.5s
PRU Pruhonice 89.30 40 *e*P **P** **02 02 08.2 +0.3**
PRU *e*SKS 02 12 39.9
PRU AMS AMS 02 38 10.0
comp=Z,43µm,20.8s
SDI San Donato 89.30 48 P **P** **02 02 07.5 -0.6**
SDI pmax pmax
comp=Z,160nm,1.2s,mb6.2
SDI San Donato 89.30 48 P **P** **02 02 07.5 -0.6**
comp=Z,160nm,1.2s,mb6.2
INTR Introdacqua 89.36 48 P **P** **02 02 08.0 -0.4**
comp=Z,199nm,1.4s,mb6.2
MCT Mte Cammarata 89.41 53 P **P** **02 02 10.8 +2.1**
FAVR Favara 89.45 53 P **P** **02 02 10.9 +2.0**
RFI Roccamonfina 89.46 49 P **P** **02 02 09.8 +0.9**
comp=Z,31nm,1.6s,mb5.4
OBKA Obir 89.53 44⇓*i*P **P** **02 02 08.9 -0.2**
comp=Z,7µm,6.5s
LJU Ljubljana 89.55 44 *e*P **P** **02 02 10.1 +0.9**
LJU *e* 02 02 15.0
LJU *e*S S 02 12 38.1 -20
LJU Ljubljana 89.55 44 *e*P **P** **02 02 10.1 +0.9**
LJU *e* 02 02 15.0
LJU *e*SKSac SKSac 02 12 22.8 -15
LJU *e*S S 02 12 38.1 -20
RNI2 Rionero Sannit 89.56 48 P **P** **02 02 09.6 +0.3**
comp=Z,315nm,1.5s,mb6.4
TRO Tromso 89.59 20⇓*i*P **P** **02 02 08.8 -0.1**
TRO AMb AMB 02 02 12.9
comp=Z,217nm,1.1s,mb6.4
TRO *e*SKS 02 12 37.4
TRO AMS AMS 02 38 22.9
comp=Z,17µm,21.2s,MS6.5
TRO Tromso 89.59 20⇓*i*P **P** **02 02 08.8 -0.1**
TRO pmax pmax
comp=Z,217nm,1.1s,mb6.4
TRO MLR MLR
comp=Z,17µm,21.2s,MS6.5
TRO Tromso 89.59 20⇓*i*P **P** **02 02 08.8 -0.1**
comp=Z,217nm,1.1s,mb6.4
TRO LR LR
comp=Z,17µm,21.2s,MS6.5
MIDA Miranda 89.64 49 P **P** **02 02 09.4 -0.3**
comp=Z,365nm,2.0s,mb6.4
GIB Gibilmanna 89.69 52 P **P** **02 02 08.6 -1.5**
CSLB Castelbuono 89.72 52 P **P** **02 02 09.7 -0.5**
comp=Z,46nm,1.0s,mb5.8
SOKA Soboth 89.86 43⇓*i*P **P** **02 02 10.1 -0.5**
NVLJ Novalja 89.89 46 P **P** **02 02 11.0 +0.2**
PERS Pernice 89.92 43 *i* P **P** **02 02 11.0 +0.1**
TREC Trest 89.96 41 *e*P **P** **02 02 11.8 +0.8**
TREC *e*SKS 02 12 43.9
TREC AMS AMS 02 38 30.0
comp=Z,33µm,20.9s
RAFF Raffo Rosso 90.01 53 P **P** **02 02 12.0 +0.5**
comp=Z,2µm,4.1s
PSB1 Pescosannita 90.09 49 P **P** **02 02 11.7 -0.1**
comp=Z,757nm,3.2s
BOJS Bojanci 90.09 45 *i* P **P** **02 02 12.5 +0.7**
BOJS *i* 02 02 17.6
BOJS *e*S S 02 12 43.3 -20
CIGN Sant'Elia a Pi 90.13 48 P **P** **02 02 11.4 -0.6**
comp=Z,2µm,5.2s
ARSA Arzberg 90.15 43⇓*i*P **P** **02 02 11.7 -0.2**
comp=Z,5µm,6.7s
UPC Upice 90.20 40 *e*P **P** **02 02 12.9 +0.8**
MNO Monte Soro 90.22 52 P **P** **02 02 13.0 +0.5**
MNO pmax pmax
comp=Z,46nm,0.6s,mb6.0
MNO Monte Soro 90.22 52 P **P** **02 02 13.0 +0.5**
comp=Z,46nm,0.6s,mb6.0
CSSN Cassano Irpino 90.27 49 P **P** **02 02 12.2 -0.5**
comp=Z,106nm,1.4s,mb6.0
HVZN Vizzini 90.29 53 P **P** **02 02 13.1 +0.2**
comp=Z,145nm,1.2s,mb6.2
FG2 Serracapriola 90.31 48 P **P** **02 02 11.0 -1.8**
comp=Z,397nm,1.8s,mb6.4
CSNA Conrad Observa 90.32 42⇓*i*P **P** **02 02 12.8 +0.1**
comp=Z,6µm,6.9s
CSNA Conrad Observa 90.32 42⇓*i*PcP PcP 02 02 12.8 -1.1

comp=Z,6µm,6.9s
CONA Conrad Observa 90.32 42 ↓ *i*P **P 02 02 12.3 -0.4**
comp=Z,7µm,7.0s
KSP Ksiaz 90.35 39 *e*P **P 02 02 14.3 +1.5**
KSP *e*pP pP 02 02 20.1 -2.0
KSP *e*PP PP 02 05 50.4 +3.3
KSP *e*SKS 02 12 47.0
KSP *e*S S 02 13 12.0 +6.5
KSP LMZ 02 38 47.4
comp=Z,53µm,23.5s
KSP Ksiaz 90.35 39 ↓ *e*P **P 02 02 13.4 +0.6**
KSP *e*PP PP 02 05 48.5 +1.5
KSP *e*SKS 02 12 46.0
KSP LR LR
comp=Z,61µm,23.5s,MS7.0
HMDC Modica 90.36 53 P **P 02 02 13.6 +0.4**
comp=Z,102nm,1.2s,mb6.0
DPC Dobruska-Polom 90.41 40 *e*P **P 02 02 13.5 +0.4**
DPC *ex* x 02 02 28.7
DPC *e*SKS 02 12 45.9
DPC AMS AMS 02 38 40.0
comp=Z,38µm,22.0s
FG5 Orsara di Pugl 90.42 49 P **P 02 02 12.9 -0.5**
FG5 pmax pmax
comp=Z,59nm,1.0s,mb5.9
FG5 Orsara di Pugl 90.42 49 P **P 02 02 12.9 -0.5**
comp=Z,59nm,1.0s,mb5.9
SGO Sicignano 90.51 50 P **P 02 02 13.6 -0.2**
SGO pmax pmax
comp=Z,188nm,1.6s,mb6.2
SGO Sicignano 90.51 50 P **P 02 02 13.6 -0.2**
comp=Z,188nm,1.6s,mb6.2
SSY Sortino 90.58 53 P **P 02 02 14.2 0.0**
comp=Z,284nm,2.1s,mb6.2
FG4 Candela 90.62 49 P **P 02 02 13.4 -0.9**
FG4 pmax pmax
comp=Z,180nm,1.4s,mb6.2
FG4 Candela 90.62 49 P **P 02 02 13.4 -0.9**
comp=Z,180nm,1.4s,mb6.2
HAVL Avola 90.64 53 P **P 02 02 13.7 -0.8**
VRAC Vranov 90.68 41 ⇑ *i*P **P 02 02 15.9 +1.5**
VRAC Vranov 90.68 41 *e*P **P 02 02 14.9 +0.5**
VRAC *e* 02 12 46.3
GKP Gorka Klasztor 90.69 37 *e*P **P 02 02 15.7 +1.4**
GKP *e*pP pP 02 02 21.7 -2.0
GKP *e*SKS 02 12 46.0
GKP *e*S S 02 13 12.7 +4.2
GKP LMZ 02 39 26.3
comp=Z,53µm,22.4s
GKP Gorka Klasztor 90.69 37 *e*P **P 02 02 15.7 +1.3**
GKP *e*pP pP 02 02 21.7 -2.0
GKP *e*SKS 02 12 45.9
GKP *e*S S 02 13 12.7 +4.2
GKP LR LR
comp=Z,53µm,22.4s,MS6.9
SISC Sisak 90.88 45 P **P 02 02 16.3 +0.9**
MTTG Motta San Giov 91.01 52 P **P 02 02 15.3 -0.9**
ZST Bratislava 91.12 42 *i* P **P 02 02 17.3 +0.8**
ZST *e*S SKSac 02 12 49.9 +3.2
ZST pmax pmax
comp=Z,39nm,0.9s,mb5.7
ZST MLR MLR
comp=Z,3µm,21.0s,MS5.8
ZST Bratislava 91.12 42 *i* P **P 02 02 17.3 +0.8**
comp=Z,39nm,0.9s,mb5.7
ZST *e*S SKSac 02 12 49.9 +3.2
ZST LR LR
comp=Z,3µm,21.0s,MS5.8
CEL Celeste 91.14 52 PFAKE 02 02 30.0 +13
CEL LR LR
comp=Z,33µm,21.0s,MS6.8
MODS Modra-Piesok 91.22 42 *e*P **P 02 02 17.7 +0.8**
MODS *e*S SKSac 02 12 48.9 +1.6
MORC Moravsky Berou 91.25 40 *e*P **P 02 02 18.1 +1.1**
MORC pmax pmax
comp=Z,252nm,1.9s,mb6.2
MORC Moravsky Berou 91.25 40 *e*P **P 02 02 17.7 +0.7**
MORC *e* 02 12 52.1
ORI Oriolo Calabro 91.42 50 P **P 02 02 17.5 -0.5**
ORI pmax pmax
comp=Z,625nm,2.9s,mb6.4
ORI Oriolo Calabro 91.42 50 P **P 02 02 17.5 -0.5**
comp=Z,625nm,2.9s,mb6.4
GRI Girifalco 91.51 51 P **P 02 02 17.1 -1.4**
GRI pmax pmax
comp=Z,474nm,4.1s
GRI Girifalco 91.51 51 P **P 02 02 17.1 -1.4**
comp=Z,474nm,4.1s
OKC Ostrava-Krasne 91.63 40 *e*P **P 02 02 20.1 +1.3**
OKC *ex* x 02 02 34.4
OKC *e*SKS 02 12 57.9
OKC AMS AMS 02 39 40.0
comp=Z,38µm,21.7s
OKC Ostrava-Krasne 91.63 40 *e*P **P 02 02 20.1 +1.3**
OKC *e* 02 02 34.4
OKC *e*SKS 02 12 57.9
RAC Raciborz 91.64 40 *e*P **P 02 02 19.7 +0.9**
RAC *e* 02 02 20.5
RAC *e* 02 05 55.2
RAC *e* 02 12 48.8
RAC *e*S S 02 13 14.1 -3.1
RAC MLR MLR
comp=Z,50µm,21.0s,MS6.9
TIP Timpagrande 91.74 51 *e*P **P 02 02 18.1 -1.5**
comp=Z,104nm,1.4s,mb6.0
TIP LR LR
comp=Z,23µm,21.0s,MS6.6
ARCES ARCESS Array B 91.88 20 P **P 02 02 19.1 -0.4**
comp=Z,29nm,1.1s,mb5.5,baz=287,slow=4.9,SNR=25
ARCES PKKPbc PKKPbc 02 19 35.9 -4.2
comp=Z,4.2nm,1.0s,baz=104,slow=3.9,SNR=4.2
ARCES LR LR 02 39 18.0
comp=Z,26µm,21.9s,MS6.6,baz=278,slow=33
ARCES ARCESS Array B 91.88 20 P **P 02 02 19.1 -0.4**
ARCES 02 19 35.9
KOLL Kolacno 91.94 41 *e*P **P 02 02 21.1 +0.8**
STON Ston 92.09 47 P **P 02 02 20.4 -0.7**
VYHS Vyhne 92.24 41 *e*P **P 02 02 22.4 +0.8**
VYHS *e*S SKSac 02 12 56.4 +3.4
VYHS *e* 02 19 35.0
VYHS pmax pmax
comp=Z,22nm,1.4s,mb5.3
VYHS Vyhne 92.24 41 *e*P **P 02 02 22.4 +0.8**
comp=Z,22nm,1.4s,mb5.3
VYHS *e*S SKSac 02 12 56.4 +3.4
VYHS *e* 02 19 35.0
KEV Kevo 92.33 20 *e*p **P 02 02 16.9 -4.7**
KEV Kevo 92.33 20 *e*P **P 02 02 21.4 -0.2**
KEV pmax pmax
comp=Z,173nm,1.6s,mb6.1
KEV MLR MLR
comp=Z,22µm,22.0s,MS6.5
KEV Kevo 92.33 20 *e*P **P 02 02 21.4 -0.2**
comp=Z,173nm,1.6s,mb6.1
KEV LR LR
comp=Z,22µm,22.0s,MS6.5
PKSM Moragy 92.38 44 ⇑ *i*P **P 02 02 23.1 +0.7**
PKSM Moragy 92.38 44 ↓ *e*P **P 02 02 23.2 +0.8**
BUD Budapest 92.49 42 ↓ *e*PcP PcP 02 02 23.5 0.0
OJC Ojcow 92.64 40 *e*P **P 02 02 24.8 +1.4**
OJC *e**SP sP 02 02 29.8 -6.4
OJC *e* 02 12 57.4
MAIT Maitri 92.69 161 *e*P **P 02 02 22.7 -0.5**
NVL N'lazarevskaya 92.72 161 *d* *i*P **P 02 02 23.8 +0.4**
NVL *e* 02 06 11.1
NVL *e*S SKSac 02 12 56.9 +2.2
NVL *e*SS SS 02 19 47.4 +8.5
NVL pmax pmax
comp=Z,165nm,1.3s,mb6.3
NVL MLR MLR
comp=N,15µm,22.0s,MS6.6
NVL MLR MLR
comp=E,20µm,22.0s,MS6.6
NVL MLR MLR
comp=Z,32µm,22.0s,MS6.7
PSZ Piszkesteto 93.02 42 P **P 02 02 26.4 +1.2**
PSZ MLR MLR
comp=Z,16µm,20.0s,MS6.5
PSZ Piszkesteto 93.02 42 ↓ *e*PcP PcP 02 02 26.4 +0.5
PSZ Piszkesteto 93.02 42 ↓ *i*P **P 02 02 26.7 +1.5**
QSPA South Pole Qui 93.03 180 PKKPbc PKKPbc 02 19 31.3 -6.2
comp=Z,5.9nm,1.0s,baz=263,slow=2.4,SNR=5.6
ADK Adak 93.08 322 *e*P **P 02 02 25.0 -0.4**
ADK pmax pmax
comp=Z,128nm,1.1s,mb6.3
ADK MLR MLR
comp=Z,14µm,19.0s,MS6.4
ADK Adak 93.08 322 *e*P **P 02 02 24.9 -0.5**
comp=Z,128nm,1.1s,mb6.3
ADK LR LR
comp=Z,14µm,19.0s,MS6.4
NIE Niedzica 93.08 40 *e*P **P 02 02 27.7 +2.2**
NIE *e*sP sP 02 02 32.5 -5.7
WAR Warsaw 93.11 37 *e*P **P 02 02 26.7 +1.1**
WAR *e*pP pP 02 02 33.0 -1.9
WAR *e*SKS 02 13 01.3
WAR *e*S S 02 13 35.9 +5.6
WAR *e*SS SS 02 19 45.7 +0.5
WAR LMZ 02 39 10.7
comp=Z,50µm,23.0s
WAR Warsaw 93.11 37 *e*P **P 02 02 26.7 +1.1**
WAR *e*pP pP 02 02 33.0 -1.9
WAR *e*SKS 02 13 01.3
WAR *e*S S 02 13 35.9 +5.6
KECS Kecovo 93.33 41 *e*P **P 02 02 27.6 +0.9**
KECS pmax pmax
comp=Z,43nm,1.4s,mb5.7
KECS Kecovo 93.33 41 *e*P **P 02 02 27.6 +0.9**
comp=Z,43nm,1.4s,mb5.7
KECS *e* 02 19 33.0
STHS Stebnicka Huta 93.69 40 *e*P **P 02 02 29.7 +1.4**
STHS pmax pmax
comp=Z,20nm,1.1s,mb5.5
STHS Stebnicka Huta 93.69 40 *e*P **P 02 02 29.7 +1.4**
comp=Z,20nm,1.1s,mb5.5
STHS *e* 02 19 31.6
TIR Tirane 93.86 48 *e*P **P 02 02 30.3 +1.0**
TIR pmax pmax
comp=Z,49nm,0.9s,mb5.9
TIR MLR MLR
comp=Z,23µm,22.0s,MS6.6
TIR Tirane 93.86 48 *e*P **P 02 02 30.3 +1.0**
comp=Z,49nm,0.9s,mb5.9
TIR LR LR
comp=Z,23µm,22.0s,MS6.6
CRVS Cervenica-Dubn 93.91 41 *e*P **P 02 02 30.5 +1.2**
CRVS *e*pP pP 02 02 37.2 -1.5
CRVS Cervenica-Dubn 93.91 41 *e*P **P 02 02 30.5 +1.2**
CRVS *e* 02 02 37.2
CRVS *e*S SKSac 02 13 04.8 +2.6
KAF Kangasniemi 93.98 27 *e*p **P 02 02 27.9 -1.4**
comp=Z,27nm,1.2s,mb5.6,baz=283,slow=4.4
KAF Kangasniemi 93.98 27 *e*P **P 02 02 27.9 -1.4**
KAF pmax pmax
comp=Z,27nm,1.2s,mb5.5
KEK Kerkira 94.02 50 *e*P **P 02 02 30.5 +0.4**
SUW Suwalki 94.09 35 *e*P **P 02 02 30.4 +0.4**
SUW *e*pP pP 02 02 36.6 -2.8
SUW *e*PP PP 02 06 13.9 -2.4
SUW *e*S S 02 13 39.8 +1.0
SUW *e*SP SP 02 14 53.6 +0.8
SUW *e*SS SS 02 19 43.2 -16
SUW LMZ 02 39 24.4
comp=Z,29µm,24.5s
SUW Suwalki 94.09 35 *e*P **P 02 02 30.4 +0.4**
SUW *e*pP pP 02 02 36.6 -2.8
SUW *e*PP PP 02 06 13.9 -2.4
SUW *e*S S 02 13 39.8 +1.0
KOLS Kolonicke sedl 94.43 41 *e*P **P 02 02 33.0 +1.3**
KOLS *e*S SKSac 02 13 09.5 +4.5
KOLS Kolonicke sedl 94.43 41 *e*P **P 02 02 33.0 +1.3**
KOLS *e*S SKSac 02 13 09.5 +4.5
KOLS *e* 02 19 31.0
IGT Igoumenitsa 94.45 50 *e*P **P 02 02 32.5 +0.4**
UZH Uzhgorod 94.49 41 ⇑ *i*P **P 02 02 32.8 +0.8**
UZH *e* 02 06 23.0
UZH *e* 02 08 31.0
UZH *i* 02 13 03.0
UZH *i*S S 02 13 45.0 +2.4
UZH *i* 02 15 02.0
UZH *i* 02 20 12.0
BZS Buzias 94.52 44 ⇑ *i*P **P 02 02 33.1 +0.9**
BZS Buzias 94.52 44 P **P 02 02 33.0 +0.8**
KWP Kalwaria 94.59 40 *e*P **P 02 02 34.2 +1.8**
KWP *e*pP pP 02 02 40.0 -1.8
KWP *e*PP PP 02 06 23.4 +3.0
KWP *e*SKS 02 13 08.6
KWP *e*SP SP 02 15 04.9 +6.3
KWP *e*SS SS 02 20 16.8 +10
KWP LMZ 02 37 18.9
comp=Z,24µm,27.0s
KWP Kalwaria 94.59 40 ⇑ *i*P **P 02 02 34.2 +1.8**
KWP Kalwaria 94.59 40 *e*P **P 02 02 34.2 +1.8**
KWP *e*pP pP 02 02 40.0 -1.8
KWP *e*PP PP 02 06 23.4 +3.0
KWP *e*SKS 02 13 08.6
KWP LR LR
comp=Z,20µm,19.0s,MS6.6
OHR Ohrid 94.59 49 *i* P **P 02 02 31.1 -1.5**
comp=Z,230nm,1.6s,mb6.4
OHR *e*PP PP 02 06 11.4 -9.3
LKD Levkas 94.81 51 *e*P **P 02 02 34.0 +0.4**
VLS Valsamata 94.83 51 *e*P **P 02 02 33.4 -0.4**
JAN Janina 94.83 50 *e*P **P 02 02 35.7 +1.9**
KRUS Krusevo 94.89 48 *i* P **P 02 02 32.2 -1.8**
comp=Z,13nm,1.3s,mb5.2
SKO Skopje 94.95 48 *i* P **P 02 02 32.9 -1.4**
comp=Z,145nm,1.5s,mb6.2
SKO *e*PP PP 02 06 20.4 -3.0
BIA Bitola 95.00 49 *i* P **P 02 02 32.8 -1.7**
comp=Z,18nm,1.2s,mb5.4
VSU Vasula 95.07 31 *e*P **P 02 02 33.3 -1.1**
FNA Florina 95.07 49 *e*P **P 02 02 35.4 +0.5**
DRGR 95.08 43 ⇑ *i*P **P 02 02 35.6 +0.8**
DRGR 95.08 43 P **P 02 02 35.3 +0.6**
APA Apatity 95.23 21 ⇑ *i*P **P 02 02 34.0 -1.0**
APA *i* 02 06 31.0
APA *i* 02 13 08.0
APA *i*S S 02 13 44.0 -4.3
APA *i*PS PS 02 15 12.0 +3.0
APA *i*SS SS 02 20 21.0 +6.4
APA pmax pmax
comp=Z,140nm,2.0s,mb6.0
APA pmax pmax
comp=Z,4µm,9.0s
GZR Gura Zlata 95.36 44 ↓ *i*P **P 02 02 37.0 +0.9**
GZR Gura Zlata 95.36 44 P **P 02 02 37.0 +1.0**
LVV L'vov 95.40 40 *e*P **P 02 02 37.0 +0.9**
LVV *e* 02 13 08.0
LVV *e*S S 02 13 50.0 -0.4
LVV MLR MLR
comp=Z,14µm,19.0s,MS6.4
KZN Kozani 95.44 49 *e*P **P 02 02 37.2 +0.7**
RLS Riolos of Patr 95.53 51 *e*P **P 02 02 39.1 +2.1**
STIP Stip 95.54 48 *e*P **P 02 02 36.3 -0.7**
comp=Z,14nm,1.1s,mb5.3
LVZ Lovozero 95.56 21 *e*P **P 02 02 35.9 -0.6**
LVZ pmax pmax
comp=Z,90nm,2.1s,mb5.8
LVZ Lovozero 95.56 21 *e*P **P 02 02 35.0 -1.4**
LVZ LR LR
comp=Z,22µm,22.0s,MS6.6
EVR Evrytania 95.67 51 *e*P **P 02 02 38.8 +1.2**
THL Klokotos Trika 95.73 50 *e*P **P 02 02 37.9 0.0**
GRG Griva 95.81 49 *e*P **P 02 02 38.8 +0.6**
VAY Valandovo 95.88 48 *e*P **P 02 02 37.4 -1.2**
VAY *e*PP PP 02 06 25.7 -5.0
JOF Joensuu 95.98 26 *e*p **P 02 02 36.2 -2.3**
comp=Z,36nm,1.0s,mb5.8
LIT Litokhoron 96.02 49 *e*P **P 02 02 38.2 -1.0**
ITM Ithomi 96.02 52 *e*P **P 02 02 41.9 +2.6**
AGG Agios Georgios 96.06 50 *e*P **P 02 02 39.1 -0.3**
VTS Vitosha 96.14 47 ↓ *i*P **P 02 02 40.5 +0.8**
VTS Vitosha 96.14 47 P **P 02 02 40.9 +1.2**
KNT Kendrikon 96.15 48 *e*P **P 02 02 40.0 +0.3**
TSUM Tsumeb 96.15 109 *e*P **P 02 02 40.4 +0.2**
comp=Z,66nm,1.5s,mb5.8
TSUM LR LR
comp=Z,73um,19.0s,MS7.2
CRAR CRAIOVA 96.27 45 P **P 02 02 42.2 +2.0**
THE Thessaloniki 96.29 49 *e*P **P 02 02 40.4 0.0**
VLX Vlachokerasia 96.35 52 *e*P **P 02 02 41.9 +1.2**
HORT Hortiatis 96.40 49 *e*P **P 02 02 41.2 +0.3**
SOH Sokhos 96.55 49 *e*P **P 02 02 42.5 +0.9**
BURAR Bucovina Array 96.61 42 ⇑ *i*P **P 02 02 42.6 +0.9**
BURAR Bucovina Array 96.61 42 P **P 02 02 42.7 +1.0**
LKR Lokris 96.63 51 *e*P **P 02 02 41.4 -0.6**
MNK Minsk 96.64 34 *e*P **P 02 02 39.0 -2.7**
MNK *e* 02 06 34.0
MNK *e* 02 13 12.0
MNK *e*S S 02 13 52.0 -9.0
MNK *e*SS SS 02 20 30.0 -5.2
MNK pmax pmax
comp=Z,400nm,2.0s,mb6.5
MNK pmax pmax
comp=Z,8µm,10.0s
MNK smax
comp=N,20µm,14.0s
MNK MLR MLR
comp=Z,59µm,20.0s,MS7.1
MNK MLR MLR
comp=E,55µm,20.0s
PLG Polygyros 96.69 49 *e*P **P 02 02 42.6 +0.4**
NEO Neokhori 96.70 50 *e*P **P 02 02 43.1 +0.8**
LTK Loutraki 96.71 51 *e*P **P 02 02 42.0 -0.4**
NVR Nevrokopi 96.84 48 *e*P **P 02 02 43.1 +0.2**
VLI Veliai 96.89 53 *e*P **P 02 02 40.2 -3.0**
MIDW Midway 96.92 299 PFAKE 02 02 50.0 +6.4
MIDW LR LR
comp=Z,29µm,19.0s,MS6.8
VOIR 96.93 44 ⇑ *i*P **P 02 02 44.3 +1.1**
VOIR 96.93 44 P **P 02 02 44.5 +1.3**
PAIG Paliouri 96.94 49 *e*P **P 02 02 43.8 +0.4**
DID Didima 97.00 52 *e*P **P 02 02 43.2 -0.5**
ATH Athens Observa 97.30 51 *e*P **P 02 02 44.8 -0.3**
ZIMR 97.50 45 P **P 02 02 47.3 +1.5**
MLR Muntele Rosu 97.54 44 ⇑ *i*P **P 02 02 46.7 +0.8**
MLR Muntele Rosu 97.54 44 P **P 02 02 47.0 +1.1**
KARN Karanos 97.88 54 *e*P **P 02 02 47.4 -0.4**
VRI Vrincioaia 97.99 43 ↓ *i*P **P 02 02 49.8 +1.8**
VRI Vrincioaia 97.99 43 P **P 02 02 48.6 +0.6**
LIA Limnos Island 98.09 49 *e*P **P 02 02 48.8 +0.2**
VAM Vamos 98.11 54 *e*P **P 02 02 48.8 +0.1**
VAM Vamos 98.11 54 *e*P **P 02 02 48.8 +0.1**
RDO Rodhopi 98.12 48 *e*P **P 02 02 51.6 +3.0**
SBA Scott Base 98.13 191 *e*P **P 02 02 48.8 +0.9**
SBA pmax pmax
comp=Z,44nm,1.4s,mb5.8
SBA MLR MLR
comp=Z,31µm,21.0s,MS6.8
SBA Scott Base 98.13 191 *e*P **P 02 02 48.8 +0.9**
comp=Z,44nm,1.4s,mb5.8
SBA LR LR
comp=Z,31µm,21.0s,MS6.8
IAS Iasi 98.25 42 P **P 02 02 49.6 +0.5**
SMY Shemya 98.42 324 PFAKE 02 03 00.0 +10
SMY LR LR
comp=Z,17µm,20.0s,MS6.5
AKASG Malin Array Be 98.44 38 P **P 02 02 48.9 -1.0**
comp=Z,4.2nm,0.9s,mb5.0,baz=268,slow=4.6,SNR=18
AKASG PP PP 02 06 48.7 -1.3
comp=Z,1.4nm,0.8s,baz=291,slow=6.5,SNR=3.7
AKASG PKKPbc PKKPbc 02 19 15.9 -6.0
comp=Z,0.3nm,0.3s,baz=83,slow=2.0,SNR=4.8
AKASG LR LR 02 44 28.7
comp=Z,29µm,21.7s,MS6.7,baz=290,slow=34
AKASG Malin Array Be 98.44 38 P **P 02 02 48.9 -1.0**
AKASG 02 06 48.7
AKASG Malin Array Be 98.44 38 P **P 02 02 48.9 -1.0**
AKASG PP PP 02 06 48.7 -1.3
AKASG PKKPbc PKKPbc 02 19 15.9 -6.0
AKASG LR LR 02 44 28.7
ALN Alexandroupoli 98.54 48 *e*P **P 02 02 50.2 -0.3**
BOZC Bozcaada 98.76 49 *i* P **P 02 02 48.4 -3.1**
APE Apeiranthos 98.88 52 *e*P **P 02 02 52.8 +0.6**
APE Apeiranthos 98.88 52 *e*P **P 02 02 51.7 -0.5**
SANT Santorini 98.95 53 PFAKE 02 03 00.0 +7.5
SANT LR LR
comp=Z,11µm,19.0s,MS6.4
SUR Sutherland 98.96 122 PFAKE 02 03 00.0 +7.4
SUR LR LR
comp=Z,68µm,22.0s,MS7.1
CHOS Chios island 99.04 51 *e*P **P 02 02 52.0 -0.8**
PRK Paraskevi 99.04 50 *e*P **P 02 02 51.1 -1.7**
KIS Kishinev 99.13 42 α *i*P **P 02 02 52.0 -1.1**
KIS *i* 02 13 32.0
KIS *i*S S 02 14 28.0 +5.5
KIS *e*PS PS 02 15 48.0 -4.2
KIS pmax pmax
comp=Z,200nm,2.0s,mb6.3
KIS pmax pmax
comp=Z,5µm,6.0s
KIS Kishinev 99.13 42 ⇑ *i*P **P 02 02 52.0 -1.1**
comp=Z,200nm,2.0s,mb6.3
KIS Kishinev 99.13 42 *e*PP PP 02 06 50.0 -5.4
KIS Kishinev 99.13 42 *e*PS PS 02 15 48.0 -4.2
KIS LRM 02 44 16.0
comp=Z,11µm,20.0s
NPS Neapolis 99.27 54 *e*P **P 02 02 56.8 +2.9**
SART Tekirdag 99.43 48 *i* P **P 02 02 50.6 -3.9**
SMG Samos 99.78 51 *e*P Pdif 02 02 56.2 +0.5
BALY Balya 99.96 49 *i* P Pdif 02 02 50.6 -5.9
GCAM G?zelcaml? 100.09 51 *i* P Pdif 02 02 56.1 -1.0
RAO Raoul Island 100.20 241 PFAKE 02 03 10.0 +12
RAO LR LR
comp=Z,17µm,20.0s,MS6.6
AKHS Akhisar 100.29 50 *i* P Pdif 02 02 51.7 -6.3
AYDN Tasoluk 100.60 51 *i* P Pdif 02 02 52.8 -6.6
DEMI Demirci 100.94 49 *i* P Pdif 02 02 56.1 -4.8
ARG Arkhangelos 101.09 52 *e*P Pdif 02 03 03.0 +1.4
OBN Obninsk 101.25 32 *e*P Pdif 02 03 01.6 -0.7
OBN *e* 02 07 12.6
OBN *e* 02 13 33.8
OBN *e*PS PS 02 16 12.6 -1.9
OBN *e*SS SS 02 21 39.9 +0.3
OBN pmax pmax
comp=Z,84nm,2.0s
TURN Turunc 101.33 52 *i* P Pdif 02 02 58.2 -4.4
DNZL Cakiroluk 101.49 51 *i* P Pdif 02 03 00.4 -2.9
GDZ Gediz 101.51 49 *i* P Pdif 02 02 58.2 -5.2
MOS Moscow 101.57 31 *e*P Pdif 02 03 00.1 -3.6
MOS *e* 02 07 10.6
MOS *i* 02 13 43.7
MOS *e*S Sdif 02 14 41.2 -1.2
MOS *e*PS PS 02 16 11.4 -6.5
MOS *e*SS SS 02 21 39.9 -4.0
MOS pmax pmax
comp=Z,45nm,0.9s
MOS pmax pmax
comp=Z,200µm,2.0s
KHAL Karahalli 101.68 50 *i* P Pdif 02 02 57.2 -7.0
GOLH Golhisar 102.00 51 *i* P Pdif 02 03 01.5 -4.0
SYO Syowa Base 102.39 161 ⇑ *e*P Pdif 02 03 05.8 -1.5
SYO Syowa Base 102.39 161 ↓ *e*P Pdif 02 03 13.2 +5.9
TKTP Tekketepe 102.39 50 *i* P Pdif 02 03 05.9 -1.4
ISP Isparta 102.59 50 PFAKE 02 03 20.0 +12
ISP LR LR
comp=Z,15µm,22.0s,MS6.5
BOSA Boshof 102.98 119 P Pdif 02 03 11.0 +1.1
comp=Z,2.1nm,0.5s,baz=161,slow=19,SNR=5.1
BOSA PKKPbc PKKPbc 02 19 08.0 -0.2
comp=Z,3.6nm,0.8s,baz=74,slow=21,SNR=7.9
BOSA Boshof 102.98 119 P Pdif 02 03 11.0 +1.1
BOSA PKKPbc PKKPbc 02 19 08.0 -0.2
FUNA Funafuti 103.19 262 PFAKE 02 03 20.0 +9.1
FUNA LR LR
comp=Z,41um,20.0s,MS7.0
SIM Simferopol' 103.25 43 *e*P Pdif 02 03 11.1 -0.1
SIM *e* 02 07 24.0
SIM *e* 02 13 54.0
SIM *e*S Sdif 02 15 02.0 +5.5
SIM *e*PS PS 02 16 37.0 +0.8
SIM pmax pmax
comp=Z,1µm,10.0s
SIM MLR MLR
comp=Z,28µm,21.0s,MS6.8
TIXI Tiksi 103.48 352 *e*P Pdif 02 03 14.3 +2.1
TIXI *e* 02 13 47.8
TIXI pmax pmax
comp=Z,989µm,10.1s
TIXI pmax pmax
comp=E,15nm,1.2s
TIXI pmax pmax
comp=Z,24nm,1.4s
TIXI pmax pmax
comp=N,8.0nm,1.4s
TIXI Tiksi 103.48 352 *i*P Pdif 02 03 11.7 -0.5
TIXI LR LR
comp=Z,39um,19.0s,MS7.0
LBTB Lobatse 103.49 115 PFAKE 02 03 20.0 +7.8

LBTB LR LR
comp=Z,87µm,19.0s,MS7.3
ANTO Ankara 103.79 48 PFAKE 02 03 20.0 +6.4
ANTO LR LR
comp=Z,16µm,22.0s,MS6.5
ELDT Eldivan 104.09 47 *i* P Pdif 02 03 13.6 -1.3
ILGA Ilgaz 104.14 46 *i* P Pdif 02 03 12.5 -2.6
VRSR Storozhevoye 104.22 35 *e*P Pdif 02 03 14.2 -1.3
VRSR *e* 02 07 29.6
VRSR *e* 02 13 47.8
VRSR *e*PS PS 02 16 44.0 -2.0
VRSR *e*SS SS 02 22 14.9 -5.8
VRSR pmax pmax
comp=Z,300nm,8.4s
VRSR pmax pmax
comp=N,70nm,5.5s
VRSR pmax pmax
comp=E,200nm,7.6s
VRSR pmax pmax
comp=Z,780nm,9.9s
VRSR pmax pmax
comp=N,250nm,8.7s
VRSR pmax pmax
comp=E,500nm,7.9s
SNZO South Karori 105.02 228 PFAKE 02 03 30.0 +11
SNZO LR LR
comp=Z,39µm,20.0s,MS7.0
CDAG Cicekdag 105.03 48 *i* P Pdif 02 03 16.8 -2.2
CSS Prodhromos 105.51 53 PFAKE 02 07 50.0 +15
CSS LR LR
comp=Z,15µm,22.0s,MS6.5
VRHR Novokhopersk 105.66 35 *e*P Pdif 02 03 22.0 +0.1
VRHR *e* 02 13 58.0
VRHR *e*PS PS 02 16 59.6 -1.5
VRHR *e*SS SS 02 22 38.8 -1.6
VRHR pmax pmax
comp=Z,750nm,5.8s
VRHR pmax pmax
comp=N,230nm,3.6s
VRHR pmax pmax
comp=E,570nm,7.8s
LSZ Lusaka 106.30 105 PFAKE 02 07 50.0 +13
LSZ LR LR
comp=Z,135µm,19.0s,MS7.5
PET Petropavlovsk 106.92 328 *e*P Pdif 02 03 28.7 +1.2
PET *e* 02 14 00.5
PET *e*PS PS 02 17 09.1 -4.9
PET *e*SS SS 02 22 54.1 -3.2
PET pmax pmax
comp=Z,1µm,12.7s
PET pmax pmax
comp=Z,1µm,11.0s
PET Petropavlovsk 106.92 328 PFAKE 02 07 50.0 +13
PET LR LR
comp=Z,22µm,22.0s,MS6.7
ANDN Andirin 107.11 49 *i* P Pdif 02 03 23.4 -4.9
PETK Petropavlovsk- 107.38 329 PP PP 02 08 01.6 +4.9
comp=Z,7.7nm,1.0s,baz=91,slow=5.9,SNR=3.7
SOC Sochi 107.50 42 *e*P Pdif 02 03 34.3 +4.3
SOC *e* 02 07 59.9
SOC *e* 02 14 11.0
SOC *e*PS PS 02 17 19.8 -0.6
SOC *e*SS SS 02 23 11.8 +5.9
SOC MLR MLR
comp=Z,2µm,18.0s,MS5.7
BHL Bhannes 107.64 53⇓ *e*P Pdif 02 03 31.7 +1.1
MALT Malatya 108.44 48 PFAKE 02 07 50.0 +9.4
MALT LR LR
comp=Z,14µm,22.0s,MS6.5
MRKH Merkhyat 108.61 72 *i* Pp PP 02 08 06.3 -0.8
MRKH AMb AMB 02 08 28.7
comp=Z,27nm,0.4s
MRKH *i* Ss SS 02 23 25.5 +2.7
ATAB Bozova 108.62 49 *i* P Pdif 02 03 31.1 -4.0
SLAT Slait 108.89 72 *i* Ss SS 02 23 25.8 -0.7
KIV Kislovodsk 109.33 41 *e*P Pdif 02 03 40.8 +2.6
KIV *e* 02 08 14.0
KIV pmax pmax
comp=Z,300nm,12.9s
KIV MLR MLR
comp=Z,23µm,21.0s,MS6.7
KIV Kislovodsk 109.33 41 PFAKE 02 07 50.0 +7.9
KIV LR LR
comp=Z,21µm,22.0s,MS6.7
KOPT Kop Dagi 109.36 46 *i* P Pdif 02 03 43.1 +4.8
ARTV Artvin 109.93 44 *i* P Pdif 02 03 42.0 +1.2
MAW Mawson 110.15 165 *e*PDIF Pdif 02 03 44.4 +2.6
comp=Z,4.3nm,1.1s
MAW Mawson 110.15 165 *e*PP PP 02 08 17.8 +1.3
MAW *e*SKS SKSac 02 14 25.7 +6.9
MAW Mawson 110.15 165 Pdiff Pdif 02 03 43.9 +2.0
comp=Z,2.0nm,0.7s,baz=226,slow=6.0,SNR=6.1
MAW PKKPbc PKKPbc 02 18 45.7 -1.5
comp=Z,2.3nm,0.8s,baz=51,slow=9.8,SNR=4.0
MAW Mawson 110.15 165 P Pdif 02 03 43.9 +2.1
MAW 02 18 45.7
MAW pmax pmax
comp=Z,2.0nm,0.7s
ONI Oni 110.41 42 P PP 02 08 10.5 -8.6
ARU Arti 111.04 24 P Pdif 02 03 47.6 +1.8
ARU S SKSac 02 14 24.6 +1.6
ARU PS PS 02 17 48.4 -6.3
ARU Arti 111.04 24 PFAKE 02 07 50.0 +5.1
ARU LR LR
comp=Z,23µm,21.0s,MS6.7
DRV Dumont d'Urvil 111.20 195 Pdif Pdif 02 03 59.0 +13
DRV Dumont d'Urvil 111.20 195 PP PP 02 08 30.0 +6.0
DRV SKKS SKKSac 02 14 36.0 -49
DRV SP SP 02 17 57.0 +5.7
DRV SS SS 02 24 22.0 +28
DRV R 02 43 00.0
SVE Sverdlovsk 111.59 23 *i* P Pdif 02 03 52.5 +4.3
SVE *e* 02 08 31.5
SVE *e*SSS 02 28 16.3
MTA Mtatsminda 111.69 43 P PP 02 08 34.3 +5.9
YAK Yakutsk 111.81 346 *i* P Pdif 02 03 53.9 +4.7
YAK *e* 02 08 27.7
YAK *e*PS SKSac 02 14 24.3 -1.6
YAK pmax pmax
comp=Z,288nm,4.2s
YAK pmax pmax
comp=E,44nm,2.8s
YAK pmax pmax
comp=Z,4µm,9.8s
YAK pmax pmax
comp=N,999nm,8.1s
YAK pmax pmax
comp=E,789nm,9.8s
YAK MLR MLR
comp=N,32µm,25.0s,MS6.8
YAK MLR MLR
comp=E,6µm,21.0s,MS6.8
YAK Yakutsk 111.81 346 PFAKE 02 08 00.0 +14
YAK LR LR
comp=Z,40µm,20.0s,MS7.0
DGRG David-gareji 112.18 43 P PP 02 08 37.4 +5.5
GNI Garni 112.30 44 PFAKE 02 08 00.0 +12
GNI LR LR
comp=Z,11µm,22.0s,MS6.4
MSL Mosul 112.61 49 *ex* x 02 07 44.0
MSL *ex* x 02 08 44.0
MSL *ex* x 02 14 30.0
HAKT HAKKARI 112.61 47 *i* P Pdif 02 03 52.9 +0.2
MAK Makhachkala 112.92 41 *e*P Pdif 02 03 59.1 +5.0
MAK *i* 02 08 39.7
MAK *i* 02 14 34.6
MAK *i* PS PS 02 18 17.9 +5.2
MAK *i* SS SS 02 24 23.0 +4.6
BHD Baghdad 114.74 51 *ex* x 02 04 05.0
BHD *ex* x 02 08 49.0
BHD *ex* x 02 15 46.0
AKTO Aktyubinsk 114.76 29 PKIKP PKiKP 02 07 51.7 -0.5
AKTO pmax pmax
comp=Z,3.0nm,1.3s
KMBO Kilima Mbogo 115.17 90 PKP PKiKP 02 07 54.6 +0.6
comp=Z,4.6nm,1.0s,baz=26,slow=6.6,SNR=5.8
KMBO Kilima Mbogo 115.17 90 PKP PKiKP 02 07 54.6 +0.6
KMBO LR LR
comp=Z,36µm,20.0s,MS7.0
AB31 Akbulak array 116.47 29 *i* PKIKP PKPdf 02 07 55.2 -0.3
AB31 pmax pmax
comp=Z,31nm,1.1s
CASY Casey 116.56 184 *e*PDIF Pdif 02 04 12.5 +2.2
CASY *e*PP PP 02 08 41.0 -21
CASY *e*SKS SKSdf 02 14 52.2 -13
CASY Casey 116.56 184 *e*Pdif Pdif 02 04 12.5 +2.2
CASY *e*PKPdf PKPdf 02 07 55.1 -0.1
CASY *e*SKS SKSdf 02 14 52.2 -13
CASY LR LR
comp=Z,48µm,21.0s,MS7.1
CLNS Chul'man 117.55 346 *e*P Pdif 02 04 13.8 -0.9
CLNS pmax pmax
comp=Z,9.0nm,1.0s
CLNS pmax pmax
comp=E,9.0nm,0.7s
CLNS pmax pmax
comp=N,4.0nm,0.7s
CLNS MLR MLR
comp=Z,7µm,16.0s,MS6.4
CLNS MLR MLR
comp=E,3µm,21.0s,MS6.4
CLNS MLR MLR
comp=N,9µm,18.0s,MS6.4
BRVK Borovoye 118.08 21 *i* PKIKP PKPdf 02 07 57.7 -0.8
BRVK MLR MLR
comp=Z,16µm,21.0s,MS6.6
BRVK Borovoye 118.08 21 *i* PKP PKPdf 02 07 57.7 -0.8
BRVK LR LR
comp=Z,10µm,21.0s,MS6.4
BVA0 Borovoye Array 118.15 21 *i* PKIKP PKPdf 02 07 58.0 -0.6
BVA0 pmax pmax
comp=Z,3.0nm,1.3s
MIB Mutribah 118.37 54 *e*P PKPdf 02 07 58.2 -1.5
baz=54
MIB AMb AMB 02 08 00.9
comp=Z,60nm,1.1s,baz=54
NAY Al-Naaiem 118.49 54 *e*P PKPdf 02 07 58.9 -1.1
baz=54
NAY AMb AMB 02 08 14.6
comp=Z,42nm,1.4s,baz=54
BOD Bodaibo 118.62 353 *e*PKIKP PKPdf 02 07 57.8 -1.6
BOD pmax pmax
comp=Z,7.0nm,2.0s
YSS Yuzh-Sakhalins 118.76 329 *e* PP 02 09 14.0 -3.7
YSS *e* 02 14 52.0
YSS *e*PS PS 02 18 58.0 -7.5
YSS *e*SS SS 02 25 52.0 +18
YSS Yuzh-Sakhalins 118.76 329 PFAKE 02 08 10.0 +10
YSS LR LR
comp=Z,12µm,20.0s,MS6.5
UMR Umm Al-Rimmam118.77 54 *e*P PKPdf 02 07 59.5 -1.1
baz=54
UMR AMb AMB 02 08 08.6
comp=Z,66nm,1.0s,baz=54
NVS Novosibirsk 120.28 13 *e*PKIKP PKPdf 02 07 58.8 -3.9
NVS *e* 02 09 26.0
NVS pmax pmax
comp=E,14nm,1.6s
NVS pmax pmax
comp=Z,37nm,1.6s
ZALV Zalesovo Beam 121.45 12 PKP PKPdf 02 08 04.3 -0.6
comp=Z,18nm,0.6s,baz=285,slow=2.3,SNR=24
ZALV PKKPbc PKKPbc 02 18 04.2 -3.2
comp=Z,5.6nm,0.6s,baz=156,slow=3.0,SNR=10
ZAL Zalesovo 121.45 12 PKIKP PKPdf 02 08 04.4 -0.6
ERM Erimo 121.77 325 PFAKE 02 08 20.0 +14
ERM LR LR
comp=Z,13µm,20.0s,MS6.6
KLR Kul'dur 121.98 338⇓ *i*PKIKP PKPdf 02 08 01.7 -4.4
KLR *e* 02 08 02.0
KLR *e* 02 26 28.5
KLR MLR MLR
comp=E,9µm,22.0s
KLR MLR MLR
comp=Z,15µm,22.0s,MS6.6
HNR Honiara 122.20 261 PFAKE 02 08 20.0 +12
HNR LR LR
comp=Z,27µm,22.0s,MS6.9
KURK Kurchatov 122.83 18 PKIKP PKPdf 02 08 06.9 -0.8
KURK pmax pmax
comp=Z,47nm,1.1s
KURK Kurchatov 122.83 18 *e*PKP PKPdf 02 08 07.2 -0.5
KURK LR LR
comp=Z,29µm,20.0s,MS6.9
TAU Tasmania Unive 123.51 219 PFAKE 02 08 20.0 +11
TAU LR LR
comp=Z,21µm,19.0s,MS6.8
ABPO Ambohimpanom 124.09 111 *e*PKPdf PKPdf 02 08 11.3 +0.3
ABPO LR LR
comp=Z,59µm,21.0s,MS7.2
OPO Ambohidratompo124.12 110 PKP PKPdf 02 08 10.4 -0.7
comp=Z,20nm,1.1s,baz=242,slow=2.5,SNR=7.7
CIT Chita 124.33 351 *e*PKIKP PKPdf 02 08 10.7 +0.2
CIT pmax pmax
comp=Z,108nm,1.6s
IRK Irkutsk 124.93 358⇓ *i*PKIKP PKPdf 02 08 11.5 -0.2
IRK *e* 02 10 06.6
IRK *e* 02 21 34.7
IRK pmax pmax
comp=Z,121nm,2.5s
TLY Talaya 125.51 359 *i* PKIKP PKPdf 02 08 11.9 -0.9
TLY *e* 02 10 00.5
TLY *e*PPP 02 12 48.2
TLY *e* 02 15 23.1
TLY *e*PS 02 21 30.6
TLY pmax pmax
comp=Z,34nm,1.5s
TLY Talaya 125.51 359 *e*PKPdf PKPdf 02 08 13.6 +0.8
TLY LR LR
comp=Z,22µm,19.0s,MS6.8
MOY Mondy 125.53 1 *e*PKIKP PKPdf 02 08 13.1 +0.2
MOY *e* 02 10 05.5
MOY pmax pmax
comp=Z,127nm,3.3s
HIA Hailar 125.74 346 PFAKE 02 08 20.0 +6.7
HIA LR LR
comp=Z,44µm,20.0s,MS7.1
CNB Canberra Magne 125.74 228 *e*PKP PKPdf 02 08 12.9 -0.9
ARMA Armidale 125.88 234 *e*PKP PKPdf 02 08 14.4 +0.2
ARMA *e*PP PP 02 10 05.7 -1.3
KK31 Karatay Array 125.99 28 *i* PKIKP PKPdf 02 08 13.3 -0.7
KK31 pmax pmax
comp=Z,32nm,1.3s
CAN Canberra 126.01 228 *e*PKIKP PKPdf 02 08 13.6 -0.7
MDJ Mudanjiang 126.61 336 PKP PKPdf 02 08 13.8 -1.3
MDJ SS SS 02 27 15.1 +1.6
MDJ PP PP
comp=Z,577nm,9.9s
MDJ LR LR
comp=N,9µm,30.5s
MDJ LR LR
comp=E,16µm,35.6s
MDJ LR LR
comp=Z,45µm,22.9s
MDJ Mudanjiang 126.61 336 PFAKE 02 08 20.0 +4.9
MDJ LR LR
comp=Z,49µm,22.0s,MS7.1
VLA Vladivostok 126.81 333 *e*PKIKP PKPdf 02 08 08.4 -7.2
VLA *e* 02 10 11.5
VLA *e* 02 15 20.0
VLA MLR MLR
comp=Z,33µm,23.3s,MS6.9
ZAK Zakamensk 126.82 359⇓ *i*PKIKP PKPdf 02 08 15.6 +0.2
ZAK pmax pmax
comp=Z,26nm,1.4s
JSD Sado 127.21 324 P PKPdf 02 08 15.4 -1.1
MK31 Makanchi Array 127.43 17 *i* PKIKP PKPdf 02 08 15.4 -1.2
MK31 pmax pmax
comp=Z,83nm,1.3s
MKAR Makanchi Array 127.43 17 PKP PKPdf 02 08 15.6 -1.1
comp=Z,22nm,0.7s,baz=336,slow=2.7,SNR=85
MKAR Makanchi Array 127.43 17 PKP PKPdf 02 08 15.6 -1.1
TOO Toolangi 127.46 223 *e*PKP PKPdf 02 08 15.6 -1.4
TOO *e*PP PP 02 10 18.0 +1.0
USP Ospenovka 127.66 25 P PKPdf 02 08 17.7 +0.6
SNR=44
EKS2 Erkin-Say 127.83 26 P PKPdf 02 08 18.5 +0.9
SNR=65
EKS2 Erkin-Say 127.83 26 *e*PKPdf PKPdf 02 08 18.1 +0.5
EKS2 LR LR
comp=Z,24µm,20.0s,MS6.9
CHMS Chumysh 127.98 25 P PKPdf 02 08 18.2 +0.4
SNR=13
FRU Bishkek 128.06 26⇓ *i*PKIKP PKPdf 02 08 18.5 +0.5
FRU *e* 02 10 19.0
FRU pmax pmax
comp=Z,260nm,1.9s
FRU MLR MLR
comp=Z,17µm,22.0s,MS6.7
JRY Ryogami san 128.16 322 P PKPdf 02 08 17.3 -1.1
AAK Ala-Archa 128.17 26 P PKPdf 02 08 19.1 +0.9
SNR=43
AML Almayashu 128.22 27 P PKPdf 02 08 19.2 +0.9
SNR=48
AML Almayashu 128.22 27 *e*PKPdf PKPdf 02 08 19.2 +0.9
AML LR LR
comp=Z,19µm,21.0s,MS6.8
MAJO Matsushiro 128.24 323 *e*PKIKP PKPdf 02 08 18.0 -0.5
MAJO MLR MLR
comp=Z,19µm,21.0s,MS6.8
MAT Matsushiro 128.24 323 PKP PKPdf 02 08 18.8 +0.3
MAT Matsushiro 128.24 323 P PKPdf 02 08 17.4 -1.1
MJAR Matsushiro Arr 128.24 323 PKhKP 02 08 04.6
comp=Z,1.2nm,0.4s,baz=67,slow=29,SNR=4.2
MJAR PKP PKPdf 02 08 17.4 -1.2
comp=Z,8.1nm,0.8s,baz=94,slow=0.4,SNR=29
MJAR Matsushiro Arr 128.24 323 PKHKP 02 08 04.6
MJAR 02 08 17.4
MJAR pmax pmax
comp=Z,1.0nm,0.4s
MJAR pmax pmax
comp=Z,8.0nm,0.8s
MJAR Matsushiro Arr 128.24 323 PKP PKPdf 02 08 17.4 -1.2
KBK Karagaybulak 128.35 25 P PKPdf 02 08 20.1 +1.6
SNR=13
TKM2 Tokmak 2 128.41 25 P PKPdf 02 08 18.8 +0.2
SNR=26
TKM2 Tokmak 2 128.41 25 *e*PKPdf PKPdf 02 08 19.0 +0.4
TKM2 LR LR
comp=Z,24µm,22.0s,MS6.8
JOD2 Odawara 2 128.53 321 P PKPdf 02 08 18.7 -0.4
AAA Alma-Ata 128.66 23 *i* PKIKP PKPdf 02 08 18.5 -0.6
AAA pmax pmax
comp=Z,3µm,9.0s
CN2 Changchun 128.90 338 *e*PKP PKPdf 02 08 17.6 -1.9
CN2 *e*XPKP 02 08 27.0
CN2 *e*PP PP 02 10 28.0 +2.4
CN2 *e*SS SS 02 27 40.6 -1.3
CN2 LR LR
comp=N,6µm,24.0s,MS6.5
CN2 LR LR
comp=E,11µm,24.0s,MS6.5
CN2 LR LR
comp=Z,8µm,22.0s,MS6.3
ULN Ulaanbaatar 129.16 356 *i* PKIKP PKPdf 02 08 18.7 -1.2
ULN MLR MLR
comp=Z,38µm,22.0s,MS7.0
ULN Ulaanbaatar 129.16 356 *i* PKP PKPdf 02 08 18.7 -1.2
ULN LR LR
comp=Z,38µm,22.0s,MS7.0
SONM Songino Array 129.24 356 PKhKP 02 08 10.3
comp=Z,1.5nm,0.8s,baz=329,slow=2.8,SNR=6.0
SONM PKP PKPdf 02 08 20.0 -0.1
comp=Z,37nm,1.1s,baz=342,slow=0.4,SNR=98
SONM SKPbc 02 11 42.0
comp=Z,19nm,1.2s,baz=0.0,slow=2.9,SNR=4.0
SONM Songino Array 129.24 356 PKIKP PKPdf 02 08 20.0 -0.1
JGF Kuroka 129.38 323 P PKPdf 02 08 19.4 -1.3
JIE Ise 130.58 322 P PKPdf 02 08 21.5 -1.5
JWT Wachi 130.77 324 P PKPdf 02 08 22.4 -0.9
SNY Shenyang 131.30 339 PKPR 02 08 23.7
SNY PP PP
comp=Z,20µm,12.0s
SNY LR LR
comp=N,20µm,19.8s,MS6.9
SNY LR LR
comp=E,17µm,18.8s,MS6.9
SNY LR LR
comp=Z,34µm,18.6s,MS7.1
KSH Kashi 131.35 27 *i* PKP PKPdf 02 08 25.6 +1.3
KSH XPKP 02 08 39.2
KSH PP PP 02 10 47.1 +5.4
KSH PKS 02 11 59.0
KSH PPP 02 13 54.1
KSH SKS SKSdf 02 15 30.0 -4.0
KSH PP PP
comp=Z,7µm,6.7s
KSH LR LR
comp=N,31µm,17.7s,MS7.2
KSH LR LR
comp=E,27µm,16.9s,MS7.2
KSH LR LR
comp=Z,36µm,19.4s,MS7.1
WMQ Urumqi 131.62 14 PKP PKPdf 02 08 24.7 0.0
WMQ XPKP 02 08 39.0
WMQ PP PP 02 10 49.0 +5.9
WMQ PKS 02 12 00.0
WMQ PPP 02 13 40.0
WMQ SKS SKSdf 02 15 33.0 -1.3
WMQ SKKS SKKSac 02 17 37.0 -1.7
WMQ PP PP
comp=Z,10µm,8.4s
WMQ LR LR
comp=N,17µm,17.6s,MS6.9
WMQ LR LR
comp=E,15µm,20.8s,MS6.9
WMQ LR LR
comp=Z,22µm,28.2s
JAD Aida 131.73 324 P PKPdf 02 08 25.1 -0.1
JHS Saijyo 132.30 325 P PKPdf 02 08 25.0 -1.3
JMN Monobe 132.75 323 P PKPdf 02 08 26.9 -0.2
STKA Stephens Creek 133.07 228 *e*PKP PKPdf 02 08 18.7 -9.1
comp=Z,22nm,0.8s
STKA *e*PP PP 02 10 53.6 -0.1
STKA *e* 02 21 13.7
STKA Stephens Creek 133.07 228 PKhKP 02 08 16.7
comp=Z,3.4nm,0.7s,baz=296,slow=5.6,SNR=4.8
STKA PKP PKPdf 02 08 26.8 -1.0
comp=Z,18nm,0.6s,baz=258,slow=0.2,SNR=16
STKA Stephens Creek 133.07 228 PKP PKPdf 02 08 26.8 -1.0
KSRS Korea Array 133.15 332 PKhKP 02 08 16.5
comp=Z,2.9nm,0.8s,baz=47,slow=3.3,SNR=7.6
KSRS PKP PKPdf 02 08 26.8 -1.0
comp=Z,8.3nm,0.7s,baz=23,slow=1.9,SNR=12
KSRS Korea Array 133.15 332 PKHKP 02 08 16.5
KSRS 02 08 26.8
KSRS pmax pmax
comp=Z,3.0nm,0.8s
KSRS pmax pmax
comp=Z,8.0nm,0.7s
MSEY Mahe Island 133.46 94 PFAKE 02 08 40.0 +11
MSEY LR LR
comp=Z,34µm,21.0s,MS7.0
CTA Charters Tower 133.72 245 *e*PKP PKPdf 02 08 27.5 -1.8
comp=Z,50nm,1.9s
CTA *e*PP PP 02 10 58.2 -0.3
CTAO Charters Tower 133.72 245 *e*PKIKP PKPdf 02 08 27.8 -1.5
CTAO MLR MLR
comp=Z,20µm,20.0s,MS6.8
INCN Inchon 133.73 333 PFAKE 02 08 40.0 +11
INCN LR LR
comp=Z,43µm,20.0s,MS7.2
GUMO Guam 134.48 292 PFAKE 02 08 40.0 +9.1
GUMO LR LR
comp=Z,12µm,19.0s,MS6.6
DL2 Dalian 134.57 339 ⇑PKP PKPdf 02 08 25.0 -5.4
DL2 PKS 02 11 58.7
DL2 SKKS SKKSac 02 17 56.3 -0.6
DL2 SS SS 02 28 47.5 -3.5
DL2 PP PP
comp=Z,3µm,8.8s
DL2 LR LR
comp=N,12µm,20.8s,MS6.6
DL2 LR LR
comp=E,4µm,20.3s,MS6.6
DL2 LR LR
comp=Z,12µm,22.2s,MS6.6
PMG Port Moresby 134.79 260*d* *i*PKIKP PKPdf 02 08 30.5 -1.0
PMG Port Moresby 134.79 260 *e*PKPdf PKPdf 02 08 31.4 0.0
PMG LR LR
comp=Z,36µm,21.0s,MS7.1
JNU Nakatsue 134.93 325 P PKPdf 02 08 30.0 -1.3
BJI Beijing 135.26 345 PKP PKPdf 02 08 30.1 -1.6
BJI PP PP 02 11 05.3 -1.0
BJI PKS 02 12 06.6
BJI SS SS 02 29 00.5 +1.5
BJI PP PP
comp=Z,6µm,10.2s
BJI LR LR
comp=N,24µm,21.6s,MS7.0
BJI LR LR
comp=E,14µm,19.3s,MS7.0
BJI LR LR
comp=Z,35µm,24.4s

BJT	Baijiatuau	135.29	345	PFAKE		02 08 40.0	+8.3
BJT				LR	LR		
	comp=Z,33µm,20.0s,MS7.1						
HHC	Hu-ho-hao-te	135.51	350	ePKP	PKPdf	02 08 26.6	-5.5
HHC				PP	PP	02 11 06.8	-1.0
HHC				PKS		02 12 01.6	
HHC				SKS	SKSdf	02 15 36.5	-4.8
HHC				SKKS	SKKSac	02 17 57.7	-4.7
HHC				SS	SS	02 29 01.3	-0.5
HHC				PP	PP		
	comp=Z,5µm,10.3s						
HHC				LR	LR		
	comp=N,21µm,21.8s,MS6.9						
HHC				LR	LR		
	comp=E,10µm,21.3s,MS6.9						
HHC				LR	LR		
	comp=Z,34µm,22.8s,MS7.0						
BTO	Baotou	136.00	351	ePKP	PKPdf	02 08 31.3	-1.7
COEN	Coen	138.02	252	ePKPdf	PKPdf	02 08 36.9	-0.6
SDNR	Sundarnagar	138.18	33	eP	PKPdf	02 08 36.6	-0.7
SDNR				ex	x	02 12 11.0	
TIA	Tai'an	138.54	342	PKP	PKPdf	02 08 36.0	-1.9
TIA				PP	PP	02 11 31.0	+4.1
TIA				PPP		02 12 20.0	
TIA				LR	LR		
	comp=N,5µm,18.0s,MS6.6						
TIA				LR	LR		
	comp=E,9µm,18.0s,MS6.6						
SMLA	Simla	138.57	33	i P	PKPdf	02 08 38.6	+0.5
BHJ	Bhuj	139.00	49	ex	x	02 08 37.3	
BHJ				AMb	AMB	02 08 54.0	
	comp=Z,216nm,1.5s						
DDI	Dehra Dun	139.68	33	ex	x	02 08 31.4	
NDI	New Delhi	140.46	36	ex	x	02 08 32.0	
LZH	Lanzhou	141.08	358	⇑PKP	PKPdf	02 08 35.5	-7.0
LZH				PP	PP	02 11 41.0	-1.3
LZH				SKS	SKSdf	02 15 40.0	-11
LZH				SKKS	SKKSac	02 18 26.5	-8.9
LZH				PP	PP		
	comp=Z,5µm,8.4s						
LZH				LR	LR		
	comp=N,25µm,17.3s						
LZH				LR	LR		
	comp=Z,29µm,20.8s,MS7.0						
SSE	Sheshan	141.52	333	PKP	PKPdf	02 08 36.7	-6.7
SSE				PP	PP	02 11 51.5	+6.0
SSE				SKKS	SKKSac	02 18 32.9	-5.4
SSE				PP	PP		
	comp=Z,7µm,9.9s						
SSE				LR	LR		
	comp=N,18µm,21.5s,MS6.9						
SSE				LR	LR		
	comp=E,12µm,21.4s,MS6.9						
SSE				LR	LR		
	comp=Z,28µm,23.1s,MS7.0						
NJ2	Nanjing	141.68	337	ePKP	PKPdf	02 08 38.0	-5.7
NJ2				XPKP		02 08 53.2	
NJ2				PP	PP	02 11 46.5	+0.2
NJ2				PKS		02 12 13.0	
NJ2				PPP		02 14 53.5	
NJ2				PP	PP		
	comp=Z,4µm,9.5s						
NJ2				LR	LR		
	comp=N,9µm,30.8s,MS6.5						
NJ2				LR	LR		
	comp=E,10µm,31.2s,MS6.5						
NJ2				LR	LR		
	comp=Z,10µm,32.0s,MS6.4						
ASAR	Alice Springs	143.03	233	PKhKP		02 08 40.8	
	comp=Z,62nm,0.8s,baz=122,slow=3.8,SNR=134						
ASAR	Alice Springs	143.03	233	PKHKP		02 08 40.8	
ASAR				pmax	pmax		
	comp=Z,62nm,0.8s						
FORT	Forrest	143.06	219	ePKP	PKPdf	02 08 41.1	-5.1
	comp=Z,79nm,0.7s						
FORT				ePP	PP	02 11 49.7	-5.6
FORT	Forrest	143.06	219	ePKP	PKPdf	02 08 41.1	-5.1
FORT				ePKPdf	PKPdf	02 08 45.4	-0.8
FORT				ePP	PP	02 11 49.7	-5.6
DANN	Dangsing	144.19	28	eP	PKPdf	02 08 46.5	-1.7
WB2	Warramunga Arr	144.31	239	i PKP	PKPdf	02 08 45.1	-3.5
WB2				ePP	PP	02 12 03.4	-0.3
WRAB	Tennant Creek	144.31	239	ePKIKP	PKPdf	02 08 45.4	-3.2
WRAB				MLR	MLR		
	comp=Z,37µm,19.0s,MS7.2						
WRA	Warramunga Arr	144.32	239	PKP	PKPdf	02 08 45.6	-3.0
	comp=Z,262nm,1.0s,baz=112,slow=3.3,SNR=400						
KOLN	Koldanda	144.60	29	eP	PKPdf	02 08 47.3	-1.6
WHN	Wuhan	144.65	342	PKPR		02 08 45.0	
WHN				PP	PP	02 12 09.0	+4.9
WHN				LR	LR		
	comp=N,44µm,19.8s,MS7.3						
WHN				LR	LR		
	comp=E,12µm,16.3s,MS7.3						
WHN				LR	LR		
	comp=Z,65µm,21.9s						
GKN	Gorkha	144.89	27	eP	PKPdf	02 08 48.1	-1.3
POO	Poona	144.91	51	eP	PKPdf	02 08 47.0	-2.7
KKN	Kakani	145.37	27	eP	PKPbc	02 08 49.8	-0.3
DMN	Daman	145.44	27	eP	PKPbc	02 08 50.0	-0.3
GUN	Gumba	145.53	26	eP	PKPdf	02 08 50.8	+0.3
	comp=Z,3µm,1.1s						
PKIN	Phulchoki	145.60	27	eP	PKPdf	02 08 50.3	-0.4
PKI	Pulchoki	145.61	27	eP	PKPdf	02 08 50.3	-0.4
LSA	Lhasa	145.84	17	PKP	PKPdf	02 08 52.2	+1.2
LSA				PP	PP	02 12 09.7	-1.4
LSA				SKKS	SKKSac	02 18 56.8	-6.2
LSA				PP	PP		
	comp=Z,6µm,10.0s						
LSA				LR	LR		
	comp=N,10µm,22.0s,MS6.7						
LSA				LR	LR		
	comp=E,11µm,25.0s,MS6.7						
LSA				LR	LR		
	comp=Z,20µm,23.0s,MS6.8						
LSA	Lhasa	145.84	17	PFAKE		02 09 00.0	+9.0
LSA				LR	LR		
	comp=Z,15µm,19.0s,MS6.8						
KAD	Karad	145.85	53	eP	PKPdf	02 08 50.5	-0.8
JIRN	Jiri	145.88	26	eP	PKPdf	02 08 51.4	+0.2
AKL	Akola	145.94	45	eP	PKPdf	02 08 50.2	-1.2
YOJ	Yonaguni jima	145.97	324	P	PKPdf	02 08 50.2	-1.2
CD2	Chengdu	146.24	357	PKP	PKPdf	02 08 51.9	+0.2
CD2				APKP		02 08 58.0	
CD2				XPKP		02 09 05.0	
CD2				PP	PP	02 12 19.5	+6.2
CD2				PKS		02 12 26.3	
CD2				PPP		02 15 36.3	
CD2				SKS	SKSdf	02 15 55.5	-3.5
CD2				SKKS	SKKSac	02 19 05.6	+0.5
CD2				SS	SS	02 31 06.4	-0.6
CD2				PP	PP		
	comp=Z,7µm,8.7s						
CD2				LR	LR		
	comp=N,26µm,21.6s,MS7.1						
CD2				LR	LR		
	comp=E,20µm,19.2s,MS7.1						
CD2				LR	LR		
	comp=Z,11µm,27.5s						
TATO	Taipei	146.42	327	PFAKE		02 09 00.0	+7.9
TATO				LR	LR		
	comp=Z,20µm,20.0s,MS6.9						
GOA	Goa	146.53	56	eP	PKPdf	02 08 52.2	-0.3
RAMN	Ramite	146.68	26	eP	PKPdf	02 08 52.1	-0.4
YHNB	Yeheng	146.72	327	ePKPdf	PKPdf	02 08 52.6	-0.1
YHNB				LR	LR		
	comp=Z,17µm,22.0s,MS6.8						
TAPN	Taplejung	146.79	24	eP	PKPdf	02 08 53.2	+0.5
NACB	Ninganchiao	147.00	326	ePKPbc	PKPbc	02 08 54.1	-1.0
NWAO	Narrogin (SRO)	147.02	204	ePKIKP	PKPdf	02 08 52.5	-0.4
NWAO				MLR	MLR		
	comp=Z,17µm,19.0s						
NGP	Nagpur	147.05	42	eP	PKPdf	02 08 51.8	-1.5
LATR	Latur	147.05	49	eP	PKPdf	02 08 51.9	-1.4
ODAN	Odare	147.09	25	eP	PKPdf	02 08 53.1	-0.1
	comp=Z,1µm,1.3s						
GTK	Gangtok	147.16	22	ex	x	02 08 46.0	
QZH	Quanzhou	147.94	331	i PKPR		02 08 55.9	
QZH				ePP	PP	02 12 29.6	+5.7
QZH				SKKS	SKKSac	02 19 13.0	-2.0
QZH				SS	SS	02 31 30.0	+2.7
QZH				LR	LR		
	comp=N,29µm,21.2s,MS7.3						
QZH				LR	LR		
	comp=E,40µm,21.2s,MS7.3						
QZH				LR	LR		
	comp=Z,51µm,21.0s,MS7.3						
KLBR	Kellerberrin	147.96	206	ePKP	PKPdf	02 08 53.7	-0.8
	comp=Z,207nm,1.0s						
MUN	Mundaring	148.27	203	ePKP	PKPdf	02 08 53.7	-1.3
KAKA	Kakadu	148.47	250	ePKP	PKPdf	02 08 53.9	-1.9
	comp=Z,289nm,0.9s						
MNGI	Mangalore	148.62	59	i x	x	02 09 57.0	
BOK	Bokaro	149.04	30	eP	PKPdf	02 08 55.9	-0.6
HYB	Hyderabad	149.16	48	i PKP	PKPdf	02 08 57.0	+0.2
HYB	Hyderabad	149.16	48	ePKP	PKPdf	02 08 57.0	+0.2
TURI	Tura	149.41	21	ex	x	02 09 49.0	
SHL	Shillong	149.93	19	eP	PKPdf	02 08 57.0	-0.9
DGAR	Diego Garcia	150.16	100	PFAKE		02 09 10.0	+11
DGAR				LR	LR		
	comp=Z,30µm,19.0s,MS7.1						
GYA	Guiyang	150.38	352	i PKP	PKPdf	02 08 57.1	-1.5
GYA				XPKP		02 09 06.7	
GYA				PKP2	PKPab	02 09 11.4	+1.4
GYA				PKS		02 12 30.6	
GYA				PP	PP	02 12 40.8	+3.2
GYA				SKS	SKSdf	02 16 02.7	-2.1
GYA				PPP		02 16 05.4	
GYA				SKKS	SKKSac	02 19 28.0	-0.4
GYA				SS	SS	02 31 56.4	+2.8
GYA				SSS		02 37 38.2	
GYA				LR	LR		
	comp=N,11µm,25.1s,MS6.8						
GYA				LR	LR		
	comp=E,13µm,23.1s,MS6.8						
GYA				LR	LR		
	comp=Z,10µm,26.3s,MS6.5						
IMP	Imphal	151.27	16	eP	PKPdf	02 09 00.0	0.0
CAL	Calcutta	151.27	27	eP	PKPdf	02 08 59.3	-0.8
GZH	Guangzhou	151.85	338	PKP	PKPdf	02 09 00.6	-0.3
BWNR	Bhubaneshwar	151.86	34	ex	x	02 08 55.0	
KMI	Kunming	152.04	359	PKP	PKPdf	02 09 01.0	-0.1
KMI				APKP		02 09 12.0	
KMI				XPKP		02 09 16.0	
KMI				PKP2	PKPab	02 09 17.0	+0.1
KMI				PKS		02 12 34.3	
KMI				PP	PP	02 12 48.7	+1.7
KMI				SKS	SKSdf	02 16 03.3	-3.6
KMI				PPP		02 16 15.1	
KMI				SKKS	SKKSac	02 19 33.0	-4.4
KMI				SS	SS	02 32 06.6	-5.2
KMI				SSS		02 37 46.1	
KMI				PP	PP		
	comp=Z,8µm,9.3s						
KMI				LR	LR		
	comp=N,14µm,18.3s,MS6.9						
KMI				LR	LR		
	comp=E,7µm,18.3s,MS6.9						
KMI				LR	LR		
	comp=Z,23µm,19.6s,MS7.0						
KOD	Kodaikanal	152.17	61	eP	PKPdf	02 08 59.5	-2.1
HKC	Hong Kong Obse	152.22	335	PKPdf	PKPdf	02 09 02.0	+0.5
VIS	Vishakhapatnam	152.31	41	eP	PKPdf	02 08 59.0	-2.7
FITZ	Fitzroy Crossi	152.48	235	i PKP	PKPdf	02 09 01.2	-0.7
	comp=Z,245nm,0.8s						
FITZ				i SKP		02 12 51.5	
MDRS	Chennai	153.06	53	eP	PKPdf	02 08 59.9	-3.0
BIPH	Bislig	153.37	295	⇓iP	PKPdf	02 09 01.5	-1.9
DAV	Davao City (W)	154.52	293	⇑iP	PKPdf	02 09 05.2	+0.2
DAV	Davao City (W)	154.52	293	PFAKE		02 09 10.0	+5.0
DAV				LR	LR		
	comp=Z,17µm,20.0s,MS6.9						
RCP	Roxas	154.88	306	⇓eP	PKPdf	02 09 05.2	-0.3
MBWA	Marble Bar	155.09	222	ePKPdf	PKPdf	02 09 05.0	-0.6
MBWA				LR	LR		
	comp=Z,25µm,19.0s,MS7.1						
PALK	Pallekele	156.33	64	ePKPdf	PKPdf	02 09 07.6	+0.2
PALK				LR	LR		
	comp=Z,33µm,20.0s,MS7.2						
QIZ	Qiongzhong	156.82	341	PKP	PKPdf	02 09 07.7	-0.2
QIZ				APKP		02 09 17.2	
QIZ				PP	PP	02 13 18.3	+4.2
QIZ				SKKS	SKKSac	02 20 03.0	-0.4
QIZ				SS	SS	02 33 05.7	+1.4
QIZ				PP	PP		
	comp=Z,7µm,14.7s						
QIZ				LR	LR		
	comp=N,14µm,22.5s						
QIZ				LR	LR		
	comp=Z,24µm,21.5s,MS7.0						
QIZ	Qiongzhong	156.82	341	PFAKE		02 09 20.0	+12
QIZ				LR	LR		
	comp=Z,26µm,22.0s,MS7.0						
CHRT	Chiangrai	157.16	6	⇓P	PKPdf	02 09 08.5	+0.2
	comp=Z,158nm,1.0s						
CHG	Chiang Mai	158.10	8	⇓P	PKPdf	02 09 09.1	-0.4
	comp=Z,72nm,1.3s						
CHTO	Chiang Mai	158.10	8	ePKIKP	PKPdf	02 09 09.1	-0.4
CHTO				MLR	MLR		
	comp=Z,19µm,20.0s,MS6.9						
NANT	Nan	158.29	4	⇓P	PKPdf	02 09 07.0	-2.8
	comp=Z,374nm,1.0s						
CMAR	Chiang Mai Arr	158.45	8	PKP	PKPdf	02 09 10.0	0.0
	comp=Z,29nm,1.0s,baz=299,slow=2.1,SNR=97						
CMAR				PKPab	PKPab	02 09 43.5	-0.9
	comp=Z,37nm,1.0s,baz=332,slow=4.5,SNR=10.0						
KDI	Kendari	159.50	267	⇓eP	PKPdf	02 09 10.7	-0.7
KDI				eS		02 13 29.7	
BDT	Bhumibol Dam	159.65	9	⇓P	PKPdf	02 09 11.0	-0.4
	comp=Z,22nm,1.2s						
NST	Nakhon Sawan	161.34	6	P	PKPdf	02 09 11.3	-2.0
KAPI	Kappang	162.28	263	ePKPdf	PKPdf	02 09 12.9	-1.5
KAPI				LR	LR		
	comp=Z,26µm,20.0s						
KDM	Kudat	162.30	304	⇓P	PKPdf	02 09 14.6	+0.2
MKS	Makassar	162.54	262	⇑eP	PKPdf	02 09 13.6	-1.0
MKS				eS		02 13 47.5	
SDKM	Sandakan	162.65	300	⇓P	PKPdf	02 09 13.6	-1.1
TSM	Tawau	162.65	295	⇓P	PKPdf	02 09 14.1	-0.6
KKM	Kota Kinabalu	163.28	303	⇓P	PKPdf	02 09 15.7	+0.4
KKM	Kota Kinabalu	163.28	303	ePKPdf	PKPdf	02 09 15.2	-0.2
KKM				LR	LR		
	comp=Z,17µm,21.0s						
NNT	Nongplab	164.34	9	P	PKPdf	02 09 16.4	+0.1
BTM	Bintulu	167.41	299	⇑P	PKPdf	02 09 18.4	-0.4
SBUM	Sibu	168.53	298	⇓P	PKPdf	02 09 19.8	+0.2
COCO	West Island	169.49	151	PFAKE		02 09 30.0	+10
COCO				LR	LR		
	comp=Z,21µm,20.0s						
KSM	Kuching	170.67	298	⇑P	PKPdf	02 09 20.5	-0.4
KSM	Kuching	170.67	298	ePKPdf	PKPdf	02 09 20.2	-0.7
KTGM	Kuala Trenggan	171.66	353	⇓P	PKPdf	02 09 20.7	-0.6
IPM	Ipoh	172.49	8	⇑P	PKPdf	02 09 21.3	-0.4
LEM	Lembang	173.32	235	⇑iP	PKPdf	02 09 21.8	-0.3
LEM				i S		02 10 51.8	
FRIM	Kepong	173.79	4	⇓P	PKPdf	02 09 21.5	-0.8
KGM	Kluang	174.87	346	⇓P	PKPdf	02 09 21.5	-1.1
MYKOM	Kota Tinggi	174.93	340	⇓P	PKPdf	02 09 21.9	-0.7

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*IDC **10** 02:14:34.4±1.0, 278N×78.14W, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.7/21, mbtmp3.8/6, ML2.4/1, MS5.1/1, Ms1 5.1/1, ms1mx4.6/29, Error ellipse: s-maj=31.8km s-min=19.8km az=52.0*

*NEIC **10** 02:14:36.2±0.7, 280N×78.16W, h10^{km}, Error ellipse: s-maj=16.3km s-min=12.0km az=78.0*

*ISCJB **10** 02:14:39.2±1.7, 282N±009×78.1W±0.1, h47^{km}±20^{km}, mb3.7/5, Error ellipse: s-maj=20.1km s-min=11.1km az=33.2*

ISC 10 02:14:39.0±5.4**, 277N**±010×**7818W**±009**, h28**^{km}±42^{km}**, n12,** σ**0**^{s}**71**/12**, mb3.7**/5**, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	Otavalo	2.53	186	ePn	Pn	02 15 18.7	+0.4
ROSC	El Rosal	4.36	62	Pn	Pn	02 15 43.1	-0.3
	4.6nm,0.3s,baz=309,slow=1.0,SNR=12						
ROSC				Sn	Sn	02 16 33.8	+0.5
	1.2nm,0.3s,baz=258,slow=23,SNR=7.2						
ROSC				LR	LR	02 17 18.8	
	comp=Z,26µm,21.9s,baz=0.1,slow=38						
ROSC	El Rosal	4.36	62	Pn	Pn	02 15 43.1	-0.3
ROSC				Sn	Sn	02 16 33.8	+0.5
ATAH	Atahualpa	9.71	181	Pn	Pn	02 17 01.8	+4.9
	0.3nm,0.3s,baz=25,slow=5.6,SNR=5.9						
SIV	San Ignacio	25.17	138	P	P	02 20 00.6	-1.6
	3.1nm,0.8s,mb3.9,baz=320,slow=13,SNR=16						
TXAR	Lajitas Array	35.84	320	P	P	02 21 36.0	-0.4
	0.6nm,0.8s,mb3.6,baz=116,slow=9.2,SNR=3.5						
TXAR	Lajitas Array	35.84	320	P	P	02 21 36.0	-0.4
ANMO	Albuquerque	41.41	324	P	P	02 22 23.3	+0.2
	1.3nm,0.7s,mb3.7,baz=147,slow=9.5,SNR=6.3						
PLCA	Paso Flores	43.85	172	P	P	02 22 43.7	+0.9
	1.2nm,0.5s,mb3.9,baz=354,slow=12,SNR=6.7						
NVAR	Mina Array Bea	50.98	319	P	P	02 23 38.3	0.0
	0.6nm,0.7s,mb3.7,baz=126,slow=4.6,SNR=4.4						
ASAR	Alice Springs	142.67	233	PKhKP		02 34 05.5	
	0.3nm,0.5s,baz=120,slow=3.7,SNR=4.3						
WRA	Warramunga Arr	143.97	239	PKP	PKPdf	02 34 10.0	-2.8
	0.3nm,0.7s,baz=109,slow=3.0,SNR=9.3						

IDC 10 02:35:51.4±6.0**, 003S**×**2120W, h0**^{km}**, mb3.9**/1**, mb1 3.8**/2**, mb1mx3.4**/23**, mbtmp3.9**/2**, ML3.9**/1**, Error ellipse: s-maj=279.0km s-min=49.4km az=135.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	Dimbokro	17.61	67	P	Pn	02 39 57.6	-0.9
	0.4nm,0.3s,baz=244,slow=11,SNR=5.7						
TORD	Torodi Ar. Bea	26.20	59	P	P	02 41 28.5	+0.4
	1.7nm,0.9s,baz=246,slow=8.4,SNR=7.3						
ASAR	Alice Springs	146.25	136	PKPbc	PKPbc	02 55 34.0	-0.8
	0.5nm,0.6s,baz=230,slow=2.3,SNR=2.7						

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*SKO **10** 02:59:17.5, 4139N×1943E, h4^{km}*

*TIR **10** 02:59:18.5±2.5, 4131N×1960E, h22^{km}±15^{km}, ML2.8*

*ISCJB **10** 02:59:19.8±0.5, 4141N±002×1960E±003, h5^{km}±3^{km}, Error ellipse: s-maj=5.2km s-min=2.2km az=137.8*

*THE **10** 02:59:20.1, 4145N×1958E, h1^{km}, ML3.9*

*PDG **10** 02:59:20.6±0.2, 4142N×1962E, h8^{km}, ML2.9/9, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

*CSEM **10** 02:59:20.8±0.1, 4152N×1976E, h2^{km}, ML3.9, Error ellipse: s-maj=4.2km s-min=1.8km az=50.0*

*BEO **10** 02:59:22.6±0.9, 4156N×1976E, ML2.5/1*

ISC 10 02:59:20.6±0.5**, 4141N**±002×**1959E**±003**, h6**^{km}±3^{km}**, n58,** σ**1**^{s}**31**/107**, 7C-5D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.21	106	ePg	Pg	02 59 24.2	-0.6
TIR				eSg	Sg	02 59 28.3	+0.6
TIR	Tirane	0.21	106	ePG	Pg	02 59 24.4	-0.4
TIR				i SG	Sg	02 59 27.9	+0.2
LACI	Lac	0.24	21	ePG	Pg	02 59 25.2	-0.2
LACI				i SG	Sg	02 59 30.5	+1.8
QSH	Qafa e Shtames	0.26	64	ePG	Pg	02 59 29.0	+3.3
ULC	Ulcinj	0.61	335	⇑iPg	Pg	02 59 31.8	-0.6
ULC				eSg	Sg	02 59 41.9	+1.5
ULC	Ulcinj	0.61	335	i PG	Pg	02 59 31.8	-0.6
ULC				i SG	Sg	02 59 41.9	+1.5
PUK	Puka	0.67	19	ePG	Pg	02 59 33.2	-0.4
PHP	Peshkopia	0.69	66	ePG	Pg	02 59 33.1	-0.9
OHR	Ohrid	0.96	108	ePg	Pg	02 59 38.5	-0.5
OHR				eSg	Sg	02 59 52.8	+1.4
OHR	Ohrid	0.96	108	ePg	Pg	02 59 37.2	-1.8
OHR				eSg	Sg	02 59 52.2	+0.8
BCI	Bajram Curri	1.02	20	ePG	Pg	02 59 38.7	-1.5
BUM	Brajici-Budva	1.03	330	ePg	Pg	02 59 39.9	-0.5
BUM				eSg	Sg	02 59 56.3	+2.5
BUM	Brajici-Budva	1.03	330	i PG	Pg	02 59 39.9	-0.5
BUM				i SG	Sg	02 59 56.3	+2.5
PDG	Podgorica	1.05	347	i PG	Pg	02 59 40.0	-0.8
PDG				i SG	Sg	02 59 56.4	+2.0
PDG	Podgorica	1.05	347	⇑iPg	Pg	02 59 40.0	-0.8
PDG				eSg	Sg	02 59 56.4	+2.0
TTG	Podgorica	1.05	347	⇑iPg	Pg	02 59 40.0	-0.8
TTG				eSg	Sg	02 59 56.4	+2.0
PVY	Plav	1.22	13	⇓iPg	Pg	02 59 42.9	-1.1
PVY				eSg	Sg	03 00 02.0	+2.1
PVY	Plav	1.22	13	i PG	Pg	02 59 42.9	-1.1
PVY				i SG	Sg	03 00 02.0	+2.1
KRUS	Krusevo	1.25	91	ePg	Pg	02 59 42.4	-2.2
KRUS				eSg	Sg	03 00 00.3	-0.5
KRUS	Krusevo	1.25	91	ePg	Pg	02 59 42.3	-2.2
KRUS				eSg	Sg	03 00 00.2	-0.5
HCY	Herceg Novi	1.32	322	⇑iPg	Pg	02 59 44.9	-1.1
HCY				eSg	Sg	03 00 05.7	+2.6
HCY	Herceg Novi	1.32	322	i PG	Pg	02 59 44.9	-1.1
HCY				i SG	Sg	03 00 05.7	+2.6
BIA	Bitola	1.36	106	ePg	Pg	02 59 45.6	-1.1
BIA				eSg	Sg	03 00 05.1	+0.7
BIA	Bitola	1.36	106	ePn	Pn	02 59 43.5	-2.6
BIA				eSg	Sg	03 00 04.5	+0.1
BIA	Bitola	1.36	106	ePg	Pg	02 59 45.6	-1.2
BIA				eSg	Sg	03 00 05.1	+0.7
NKY	Niksic	1.47	343	⇑iPg	Pg	02 59 47.7	-1.1
NKY				eSg	Sg	03 00 10.2	+2.3
NKY	Niksic	1.47	343	i PG	Pg	02 59 47.7	-1.1
NKY				i SG	Sg	03 00 10.2	+2.3
BEY	Berane	1.48	9	i PG	Pg	02 59 47.8	-1.2
BEY				i SG	Sg	03 00 10.5	+2.3
IVA	Berane	1.48	9	⇓iPg	Pg	02 59 47.8	-1.2
IVA				eSg	Sg	03 00 10.5	+2.3
FNA	Florina	1.49	114	ePg	Pg	02 59 47.7	-1.4
FNA				eSg	Sg	03 00 09.2	+0.9
SKO	Skopje	1.50	67	ePn	Pn	02 59 46.5	-1.5
SKO				eSg	Sg	03 00 09.2	+0.6
TREB	Trebinje	1.60	325	ePg	Pg	02 59 50.2	-1.1
TREB				eSg	Sg	03 00 12.2	+0.1
TREB	Trebinje	1.60	325	ePn	Pn	02 59 48.4	-1.1
TREB	Trebinje	1.60	325	ePg	Pg	02 59 50.2	-1.1
TREB				eSn	Sn	03 00 09.6	-0.9
TREB				eSg	Sg	03 00 12.2	+0.1
BRY	Bratogost	1.68	333	⇓iPn	Pn	02 59 51.3	+0.7
BRY				eSn	Sg	03 00 15.6	+0.9
BRY	Bratogost	1.68	333	i PG	Pn	02 59 51.3	+0.7
BRY				i SG	Sg	03 00 15.6	+0.9
UPM	Unac-Piva	1.86	344	⇑iPn	Pn	02 59 54.0	+0.9
UPM				eSn	Sn	03 00 20.3	+3.4
SJES	Sjenica	1.87	9	ePn	Pn	02 59 54.0	+0.8
SJES				eSg	Sg	03 00 17.5	-3.3
SJES	Sjenica	1.87	9	ePn	Pn	02 59 53.4	+0.2
SJES				eSn	Sn	03 00 16.0	-1.2
SJES				eSg	Sg	03 00 17.5	-3.3
PLE	Pljevlja	1.93	356	⇓iPn	Pn	02 59 54.9	+1.0
PLE				eSn	Sn	03 00 21.5	+3.0
IGT	Igoumenitsa	1.96	163	ePn	Pn	02 59 53.8	-0.6
IGT				eSn	Sn	03 00 21.5	+2.3
MEV	Metsovon	2.04	142	ePn	Pn	02 59 56.1	+0.5
MEV				eSn	Sn	03 00 22.1	+0.7
GRG	Griva	2.17	101	ePn	Pn	02 59 57.1	-0.1
GRG				eSn	Sn	03 00 25.2	+0.8
BBLS	Lazići	2.46	357	ePn	Pn	03 00 02.8	+1.5
BBLS				eSg	Sg	03 00 36.3	-3.4
KNT	Kendrikon	2.50	95	ePn	Pn	03 00 01.8	-0.1
LIT	Litokhoron	2.56	120	ePn	Pn	03 00 02.5	-0.1
THL	Klokotos Trika	2.61	134	ePn	Pn	03 00 03.4	+0.1
THL				eSn	Sn	03 00 37.5	+2.2
THL	Klokotos Trika	2.61	134	ePn	Pn	03 00 03.3	0.0
DIVS	Divibare	2.71	6	ePg	Pg	03 00 07.3	-5.2
DIVS				eSg	Sg	03 00 42.7	-4.8
DIVS	Divibare	2.71	6	ePn	Pn	03 00 05.0	+0.4
DIVS	Divibare	2.71	6	ePg	Pg	03 00 07.3	-5.2
DIVS				eSn	Sn	03 00 36.5	-1.2
DIVS				eSg	Sg	03 00 42.7	-4.8
VTS	Vitosha	2.94	65	⇓iP	Pn	03 00 09.0	+1.1
VTS				S	Sn	03 00 45.5	+1.9
AGG	Agios Georgios	3.17	138	ePn	Pn	03 00 11.0	-0.1
FGSL	Fruska Gora	3.75	2	ePn	Pn	03 00 18.3	-0.7
FGSL				eSn	Sn	03 01 00.9	-2.6
BLY	Banja Luka	3.78	333	ePn	Pn	03 00 19.2	-0.1
BLY				eSn	Sn	03 01 02.5	-1.6
BZS	Buzias	4.46	19	⇑iP	Pn	03 00 28.3	-0.4
BZS	Buzias	4.46	19	ePn	Pn	03 00 28.1	-0.6
BZS				S	Sn	03 01 18.9	-2.0
GZR	Gura Zlata	4.61	29	S	Sn	03 01 24.8	+0.2

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*ISCJB **10** 03:22:33.6±0.3, 34.16N±0.02×117.43W±0.02, h10^{km}±2^{km}, Error ellipse: s-maj=2.6km s-min=2.3km az=30.9*

*NEIC **10** 03:22:34.2, 34.17N×117.43W, h8^{km}, ML2.6(PAS), After PAS.*

NEIC Felt at Devore.

ISC 10 03:22:33.7±0.2**,3416N**±002×**11743W**±002**,h11**^{km}±2^{km}**, n47,**σ**0**^{s}**50**/72**,30C-25D,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSP	**Cedar Springs**	**0.15**	**25**	⇓*i*P	**Pg**	**03 22 37.1**	**-0.1**
GAV	**Glen Avon**	**0.15**	**203**	⇑*i*P	**Pg**	**03 22 37.4**	**+0.2**
GAV				*e*S	**Sg**	**03 22 39.9**	**+0.3**
RVR	**Riverside**	**0.17**	**164**	⇓*i*P	**Pg**	**03 22 37.8**	**+0.1**
RVR				*i* S	**Sg**	**03 22 40.5**	**+0.2**
BFSC	**Mount Baldy St**	**0.20**	**293**	⇓P	**Pg**	**03 22 38.0**	**-0.1**
	baz=0.2,SNR=556						
BFSC				⇓S	**Sg**	**03 22 40.9**	**-0.1**
	baz=0.2						
BFSC	**Mount Baldy St**	**0.20**	**293**	⇓*i*P	**Pg**	**03 22 38.1**	**0.0**
BFSC				*e*S	**Sg**	**03 22 41.0**	**0.0**
SVD	**Seven Oaks Dam**	**0.28**	**101**	⇓*i*P	**Pg**	**03 22 39.9**	**+0.3**
SVD				*e*S	**Sg**	**03 22 44.4**	**+1.0**
CFT	**Crafton Hills**	**0.30**	**115**	*e*P	**Pg**	**03 22 40.1**	**+0.3**
PEM	**Pine Mountain**	**0.36**	**271**	⇑*i*P	**Pg**	**03 22 41.3**	**+0.3**
BTL	**Butler Peak**	**0.37**	**75**	⇑*i*P	**Pg**	**03 22 41.4**	**+0.3**
VTV	**Victorville**	**0.41**	**12**	⇑*i*P	**Pg**	**03 22 41.5**	**-0.3**
VTV				*e*S	**Sg**	**03 22 47.0**	**-0.3**
BBRC	**Big Bear Sol-O**	**0.44**	**77**	⇑P	**Pg**	**03 22 42.5**	**+0.2**
	baz=0.4,SNR=33						
BBRC				⇓S	**Sg**	**03 22 48.5**	**+0.3**
	baz=0.4						
JNH	**Juniper Hills**	**0.52**	**304**	⇑*i*P	**Pg**	**03 22 43.7**	**-0.1**
MWC	**Mount Wilson**	**0.52**	**277**	P	**Pg**	**03 22 44.1**	**+0.2**
MWC				*e*S	**Sg**	**03 22 51.3**	**+0.5**
GVRC	**Garvey Reservo**	**0.58**	**259**	*e*P	**Pg**	**03 22 45.5**	**+0.4**
MURC	**Murrieta**	**0.59**	**161**	P	**Pg**	**03 22 45.1**	**-0.2**
	baz=0.6,SNR=59						
MURC				⇓S	**Sg**	**03 22 53.0**	**0.0**
	baz=0.6						
DGR	**Domenigoni Val**	**0.62**	**145**	⇓*i*P	**Pg**	**03 22 45.4**	**-0.4**
DGR				*e*S	**Sg**	**03 22 53.7**	**-0.2**
PASC	**Pasadena Art C**	**0.62**	**271**	*e*P	**Pg**	**03 22 45.7**	**-0.2**
PASC				*e*S	**Sg**	**03 22 54.3**	**+0.3**
POB	**Polly Butte**	**0.64**	**138**	⇓*i*P	**Pg**	**03 22 45.8**	**-0.3**
DECC	**Green Verdugo**	**0.75**	**277**	P	**Pg**	**03 22 48.3**	**+0.1**
	baz=0.8,SNR=10.0						
DECC				⇑S	**Sg**	**03 22 58.6**	**+0.6**
	baz=0.8						
RRX	**Edison Barstow**	**0.80**	**26**	⇓P	**Pg**	**03 22 48.9**	**-0.3**
	baz=0.8,SNR=10.0						
RRX				⇑S	**Sg**	**03 22 59.6**	**-0.1**
	baz=0.8						
FMP	**Fort Macarthur**	**0.84**	**238**	⇓P	**Pg**	**03 22 50.0**	**0.0**
	baz=0.9,SNR=20						
EDW2	**Edwards Air Fo**	**0.85**	**328**	P	**Pg**	**03 22 49.7**	**-0.5**
	baz=0.8,SNR=48						
EDW2				⇓S	**Sg**	**03 23 00.9**	**-0.5**
	baz=0.8						
PLM	**Palomar**	**0.94**	**149**	⇑*i*P	**Pg**	**03 22 51.1**	**-0.7**
PLM				*e*S	**Sg**	**03 23 03.8**	**-0.2**
PFO	**Pinyon Flat Ob**	**0.98**	**124**	⇓P	**Pg**	**03 22 51.9**	**-0.8**
	baz=1.0,SNR=82						
PFO	**Pinyon Flat Ob**	**0.98**	**124**	P	**Pg**	**03 22 52.1**	**-0.6**
CIS	**Catalina Islan**	**1.10**	**227**	⇑P	**Pb**	**03 22 54.6**	**-0.1**
	baz=1.1,SNR=33						
CIS				⇑S	**Sb**	**03 23 10.2**	**+1.0**
	baz=1.1						
HEC	**Hector,Ludlow**	**1.13**	**53**	⇑P	**Pb**	**03 22 54.5**	**-0.8**
	baz=1.1,SNR=25						
HEC				⇑S	**Sb**	**03 23 09.5**	**-0.4**
	baz=1.1						
OSI	**Osito Adit**	**1.16**	**293**	⇑S	**Sb**	**03 23 10.6**	**-0.2**
	baz=1.2						
BELC	**Belle Mtn.**	**1.20**	**97**	⇑Pb	**Pb**	**03 22 56.3**	**-0.2**
	baz=1.2,SNR=118						
BELC				⇑S	**Sb**	**03 23 12.2**	**+0.2**
	baz=1.2						
GSC	**Goldstone**	**1.25**	**24**	⇑Pb	**Pb**	**03 22 56.9**	**-0.4**
	baz=1.2,SNR=28						
GSC				⇑S	**Sb**	**03 23 13.1**	**-0.3**
	baz=1.2						
109C	**Camp Elliot, M**	**1.30**	**168**	⇓P	**Pn**	**03 22 56.9**	**-0.8**
	baz=1.3,SNR=7.4						
109C				⇑S	**Sb**	**03 23 13.7**	**-1.0**
	baz=1.3						
LRMC	**Laurel Mountai**	**1.33**	**351**	⇑S	**Sb**	**03 23 15.8**	**+0.1**
	baz=1.3						
BLG	**Laguna Peak**	**1.35**	**268**	⇓S	**Sb**	**03 23 16.0**	**-0.4**
	baz=1.4						
ARVC	**Arvin**	**1.50**	**310**	⇓Pb	**Pb**	**03 23 00.9**	**-0.6**
	baz=1.5,SNR=13						
ARVC				⇑Sb	**Sb**	**03 23 20.9**	**+0.3**
	baz=1.5						
MONP	**Monument Peak**	**1.52**	**146**	⇓Pb	**Pb**	**03 23 01.2**	**-0.8**
	baz=1.5,SNR=33						
MONP				⇑S	**Sn**	**03 23 20.7**	**+0.1**
	baz=1.5						
GMRC	**Granite Mounta**	**1.59**	**67**	⇓Pb	**Pb**	**03 23 02.0**	**-1.1**
	baz=1.6,SNR=13						
GMRC				⇓Sb	**Sb**	**03 23 23.6**	**+0.4**
	baz=1.6						
ISA	**Isabella**	**1.73**	**331**	⇑Pb	**Pb**	**03 23 04.3**	**-1.1**
	baz=1.7,SNR=7.6						
ISA				⇓Sb	**Sb**	**03 23 27.4**	**+0.3**
	baz=1.7						
TUQ	**Turquoise Moun**	**1.78**	**44**	⇑Pb	**Pb**	**03 23 06.0**	**-0.3**
	baz=1.8,SNR=31						
TUQ				⇑Sb	**Sb**	**03 23 29.6**	**+1.0**
	baz=1.8						
DVTC	**Desert V Tower**	**1.87**	**143**	⇑Sb	**Sb**	**03 23 32.0**	**+0.8**
	baz=1.9						
MPMC	**Manual Prospec**	**1.90**	**359**	⇓Sb	**Sb**	**03 23 32.7**	**+0.7**
	baz=1.9						
Y13A	**Salome**	**3.02**	**96**	⇑P	**Pn**	**03 23 21.4**	**+0.1**
	baz=3.0,SNR=6.5						
W13A	**Hualapai Mount**	**3.07**	**71**	⇓P	**Pn**	**03 23 22.1**	**0.0**
	baz=3.1,SNR=29						
U13A	**Pakoon Wash**	**3.62**	**51**	⇑P	**Pn**	**03 23 30.1**	**+0.4**
	baz=3.6,SNR=5.6						
Y14A	**Wickenburg**	**3.68**	**92**	⇓P	**Pn**	**03 23 31.1**	**+0.5**
	baz=3.7,SNR=5.7						
X14A	**Yava**	**3.77**	**84**	⇑P	**Pn**	**03 23 32.3**	**+0.5**
	baz=3.8,SNR=16						
Y15A	**Casa Rosa Ranc**	**4.24**	**91**	⇑P	**Pn**	**03 23 38.8**	**+0.6**
	baz=4.2,SNR=6.9						
T14A	**Hurricane**	**4.58**	**50**	⇓P	**Pn**	**03 23 44.1**	**+1.3**
	baz=4.6,SNR=8.4						

IDC 10 03:31:01.1±1.7**,175N**×**12449E,h0**^{km}**,mb3.6**/3**,mb1 3.8**/3**, mb1mx3.6**/16**,mbtmp3.6**/3**,Error ellipse: s-maj=176.2km s-min=24.0km az=64.0,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.62**	**156**	P	P	03 36 13.5	-0.8
	1.3nm,0.3s,baz=333,slow=11,SNR=37						
ASAR	**Alice Springs**	**26.87**	**161**	P	P	03 36 44.6	+0.9
	0.9nm,0.5s,baz=345,slow=7.9,SNR=18						
MKAR	**Makanchi Array**	**57.94**	**327**	P	P	03 40 55.1	-0.2
	0.1nm,0.4s,baz=121,slow=9.4,SNR=2.7						

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*THE **10** 03:42:38.4,3933N×1984E,h1^{km},ML3.1*
*ATH **10** 03:42:41.0,3925N×20.11E,h10^{km},MD3.2/3*
*CSEM **10** 03:42:41.3±0.3,3930N×20.11E,h10^{km},ML3.1,Error ellipse: s-maj=9.0km s-min=4.7km az=87.0*
ISC 10 03:42:40.4±1.4**,3932N**±004×**200E**±01**,h16**^{km}±13^{km}**,n8,** σ**1**^{s}**17**/13**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.34**	**51**	*e*Pg	**Pg**	**03 42 46.9**	**-0.6**
IGT				*e*Sg	**Sg**	**03 42 52.6**	**+0.3**
KEK	**Kerkira**	**0.42**	**340**	*e*PB		03 42 51.0	
JAN	**Janina**	**0.75**	**63**	*e*PB	**Pb**	**03 42 54.2**	**-0.8**
LKD	**Levkas**	**0.80**	**140**	*e*Pg	**Pg**	**03 42 55.2**	**-0.7**
LKD				*e*Sg	**Sg**	**03 43 08.2**	**+1.7**
LKD	**Levkas**	**0.80**	**140**	*e*Pg	**Pg**	**03 42 55.2**	**-0.7**
LKD				*e*Sg	**Sg**	**03 43 08.1**	**+1.7**
MEV	**Metsovon**	**1.07**	**64**	*e*Pg	**Pg**	**03 42 59.6**	**-1.4**
MEV				*e*Sg	**Sg**	**03 43 17.7**	**+2.7**
VLS	**Valsamata**	**1.23**	**157**	*e*Pg	**Pg**	**03 43 02.9**	**-1.3**
VLS				*e*Sg	**Sg**	**03 43 20.6**	**+0.5**
VLS	**Valsamata**	**1.23**	**157**	*e*Pg	**Pg**	**03 43 02.8**	**-1.3**
VLS				*e*Sg	**Sg**	**03 43 20.6**	**+0.4**

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*ISCJB **10** 03:46:06.5±0.9,457S±008×1252E±0.1,h472^{km}±14^{km}, mb4.0/4,Error ellipse: s-maj=22.3km s-min=11.5km az=168.5*
*DJA **10** 03:46:07,459S×12531E,h463^{km},MLv4.7/4*
*NEIC **10** 03:46:07.4±1.1,463S×125.15E,h468^{km}±18^{km},mb4.7/4, Error ellipse: s-maj=23.5km s-min=14.3km az=49.0*
*IDC **10** 03:46:09.3±2.1,479S×12486E,h489^{km}±22^{km},mb2.9/3, mb1 3.3/6,mb1mx3.0/18,mbtmp3.2/6,Error ellipse: s-maj=52.5km s-min=12.0km az=60.0*
ISC 10 03:46:07.6±0.9**,465S**±008×**1252E**±01**,h468**^{km}±14^{km}**,n15,** σ**1**^{s}**03**/19**,mb4.0**/4**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.40**	**266**	P	**P**	**03 47 36.5**	**-0.3**
	2.4nm,0.3s,baz=77,slow=3.8,SNR=8.2						
BATI	**Baumata**	**5.72**	**195**	P	**P**	**03 47 41.0**	**+1.2**
	53nm,0.3s,baz=47,slow=1.5,SNR=35						
BATI				S	**S**	**03 48 54.9**	**-0.2**
	12nm,0.3s,baz=11,slow=19,SNR=3.8						
KAKA	**Kakadu**	**10.76**	**139**	*e*P	**P**	**03 48 32.6**	**-0.5**
	13nm,0.4s						
FITZ	**Fitzroy Crossi**	**13.38**	**178**	*e*P	**P**	**03 49 01.6**	**+0.5**
	13nm,0.3s						
FITZ				*e*S	**S**	**03 51 23.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**13.38**	**178**	P	**P**	**03 49 01.7**	**+0.6**
	2.9nm,0.3s,baz=11,slow=10,SNR=104						
FITZ				S	**S**	**03 51 23.7**	**-0.6**
	0.4nm,0.3s,baz=27,slow=23,SNR=18						
WRA	**Warramunga Arr**	**17.63**	**150**	P	**P**	**03 49 45.3**	**-0.7**
	1.7nm,0.3s,baz=333,slow=9.5,SNR=120						
WRA				S	**S**	**03 52 46.1**	**+0.9**
	baz=319,slow=23,SNR=4.5						
WB2	**Warramunga Arr**	**17.64**	**150**	*e*P	**P**	**03 49 45.2**	**-0.9**
WB2				*e*S	**S**	**03 52 40.1**	**-5.2**
ASAR	**Alice Springs**	**20.70**	**157**	P	**P**	**03 50 16.1**	**+1.7**
	1.9nm,0.5s,baz=341,slow=15,SNR=29						
ASAR				S	**S**	**03 53 33.8**	**-1.2**
	0.7nm,0.7s,baz=342,slow=18,SNR=3.5						
ASAR				PcP	PcP	03 54 03.6	-0.2
	0.8nm,0.3s,baz=358,slow=1.5,SNR=6.6						
PMG	**Port Moresby**	**22.33**	**103**	*e*P	**P**	**03 50 27.5**	**-1.8**
	22nm,1.2s,mb4.6						
GUMO	**Guam**	**26.67**	**47**	*e*P	**P**	**03 51 09.2**	**+1.4**
	20nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**31.16**	**152**	P	**P**	**03 51 47.9**	**+1.0**
	2.3nm,0.8s,mb3.6,baz=324,slow=12,SNR=3.8						
STKA				PcP	PcP	03 54 27.5	-0.7
	3.7nm,1.0s,baz=180,slow=1.0,SNR=3.0						
STKA	**Stephens Creek**	**31.16**	**152**	P	**P**	**03 51 47.9**	**+1.0**
STKA				PcP	PcP	03 54 27.5	-0.7
MKAR	**Makanchi Array**	**63.68**	**329**	P	**P**	**03 55 50.9**	**-1.1**
	0.4nm,0.3s,mb3.4,baz=122,slow=8.4,SNR=8.4						
TORD	**Torodi Ar. Bea**	**123.62**	**283**	PKP	PKPdf	04 04 11.8	-0.4
	0.6nm,0.5s,baz=89,slow=1.7,SNR=14						
TORD	**Torodi Ar. Bea**	**123.62**	**283**	PKP	PKPdf	04 04 11.8	-0.4

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*NEIC **10** 03:58:12.4,1388N×9339W,h19^{km},MD4.3(MEX),After MEX.*
MEX 10 03:58:11.1±0.5**,1390N**×**9342W,h10**^{km}±22^{km}**,MD4.3,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.50**	**48**	*i* P	Pn	03 58 34.3	-3.8
THIG				*i* S	Sn	03 58 52.9	-4.7
CCIG	**Comitan**	**2.67**	**27**	*e*P	Pn	03 58 52.0	-2.2
CCIG				*i* S	Sn	03 59 23.8	-2.8
CCIG	**Comitan**	**2.67**	**27**	*i* P	Pn	03 58 53.5	-0.7
CCIG				*i* S	Sn	03 59 23.8	-2.8
TGIG		**2.87**	**6**	*i* P	Pn	03 58 54.5	-2.5
TGIG				*i* S	Sn	03 59 27.3	-4.3
SCX	**San Cristobal**	**2.91**	**15**	*i* P	Pn	03 58 55.6	-2.0
SCX				*i* S	Sn	03 59 29.8	-2.8
SCX	**San Cristobal**	**2.91**	**15**	*i* P	Pn	03 58 55.6	-2.0
SCX				*i* S	Sn	03 59 31.0	-1.6
CMIG	**Matias Romero**	**3.47**	**336**	*i* P	Pn	03 59 03.3	-1.9
CMIG				*i* S	Sn	03 59 42.9	-3.5
CMIG	**Matias Romero**	**3.47**	**336**	*i* P	Pn	03 59 03.3	-1.9
CMIG				*i* S	Sn	03 59 41.5	-4.9
VHO	**Vista Hermosa**	**4.49**	**315**	*i* P	Pn	03 59 17.7	-1.5
VHO				*i* S	Sn	04 00 08.9	-2.7
VHO	**Vista Hermosa**	**4.49**	**315**	*i* P	Pn	03 59 18.3	-0.9
VHO				*i* S	Sn	04 00 08.9	-2.7

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*IDC **10** 04:10:39.0±0.7,2245S×17169E,h0^{km},mb4.4/15, mb1 4.5/16,mb1mx4.5/19,mbtmp4.4/16,ML3.6/1,MS4.7/1, Ms1 4.7/1,ms1mx3.8/35,Error ellipse: s-maj=21.3km s-min=18.5km az=134.0*
*ISCJB **10** 04:10:44.3±2.1,226S±0.1×17163E±009,h47^{km}±18^{km}, mb4.4/17,Error ellipse: s-maj=18.3km s-min=12.8km az=31.9*
*NEIC **10** 04:10:44.7±2.5,2248S×17167E,h39^{km}±20^{km},mb4.7/5, Error ellipse: s-maj=18.1km s-min=14.4km az=219.0*
ISC 10 04:10:45.7±1.9**,225S**±01×**17168E**±010**,h45**^{km}±16^{km}**,n37,** σ**0**^{s}**99**/31**,mb4.4**/17**,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.87**	**274**	*e*P	**Pn**	**04 11 56.3**	**-0.1**
DZM				*e*S	**Sn**	**04 12 51.6**	**+0.1**
DZM	**Mont Dzumac**	**4.87**	**274**	*e*Pn	**Pn**	**04 11 56.0**	**-0.4**
DZM				*e*Sn	**Sn**	**04 12 49.9**	**-1.5**
NOUC	**Port Laguerre**	**4.99**	**274**	*e*P	**Pn**	**04 11 58.7**	**+0.6**
NOUC				*e*S	**Sn**	**04 12 56.5**	**+1.9**
RAO	**Raoul Island**	**11.51**	**128**	LR	LR	04 16 51.0	
	comp=Z,4μm,19.8s,baz=11,slow=32						
URZ	**Urewera**	**16.36**	**165**	Pn	**Pn**	**04 14 31.3**	**-0.9**
	0.2nm,0.3s,baz=24,slow=7.2,SNR=4.0						
CTA	**Charters Tower**	**23.80**	**271**	P	**P**	**04 15 53.5**	**-1.1**
	3.4nm,0.5s,mb4.0,baz=94,slow=10,SNR=5.2						
CTAO	**Charters Tower**	**23.80**	**271**	*e*P	**P**	**04 15 53.9**	**-0.7**
	30nm,1.3s,mb4.6						
STKA	**Stephens Creek**	**28.25**	**244**	P	**P**	**04 16 34.2**	**-0.4**
	2.4nm,0.8s,mb3.9,baz=124,slow=15,SNR=2.2						
STKA	**Stephens Creek**	**28.25**	**244**	P	**P**	**04 16 34.2**	**-0.4**
ASAR	**Alice Springs**	**34.70**	**261**	P	**P**	**04 17 31.0**	**-0.4**
	7.7nm,0.9s,mb4.7,baz=86,slow=9.0,SNR=58						
WB2	**Warramunga Arr**	**34.83**	**267**	*e*P	**P**	**04 17 31.2**	**-1.4**
WRA	**Warramunga Arr**	**34.84**	**267**	P	**P**	**04 17 31.6**	**-1.1**
	2.1nm,0.4s,mb4.4,baz=96,slow=8.5,SNR=68						
WRA				PcP	PcP	04 20 04.9	-0.3
	0.7nm,0.9s,baz=107,slow=3.0,SNR=2.9						
FITZ	**Fitzroy Crossi**	**43.27**	**267**	*e*P	**P**	**04 18 43.1**	**-0.1**
	18nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**43.27**	**267**	P	**P**	**04 18 42.1**	**-1.1**
	11nm,0.9s,mb4.6,baz=115,slow=3.8,SNR=6.1						
NWAO	**Narrogin (SRO)**	**48.83**	**245**	P	**P**	**04 19 25.9**	**-0.9**
	20nm,1.1s,mb5.1,baz=74,slow=3.3,SNR=4.6						
NWAO	**Narrogin (SRO)**	**48.83**	**245**	P	**P**	**04 19 25.9**	**-0.9**
CASY	**Casey**	**58.07**	**205**	*e*P	**P**	**04 20 34.7**	**+0.8**
	11nm,1.4s,mb4.7						
MJAR	**Matsushiro Arr**	**66.71**	**331**	P	**P**	**04 21 31.2**	**-0.9**
	1.0nm,0.3s,mb4.3,baz=109,slow=19,SNR=3.7						
QSPA	**South Pole Qui**	**67.54**	**180**	P	**P**	**04 21 38.3**	**+1.5**
	2.7nm,0.7s,mb4.4,baz=324,slow=2.2,SNR=6.4						
QSPA	**South Pole Qui**	**67.54**	**180**	P	**P**	**04 21 38.3**	**+1.5**
KSRS	**Korea Array**	**72.49**	**325**	P	**P**	**04 22 08.2**	**+0.4**
	1.7nm,0.7s,mb4.1,baz=158,slow=5.4,SNR=5.1						
MAW	**Mawson**	**76.25**	**202**	*e*P	**P**	**04 22 31.6**	**+2.4**
	2.4nm,1.2s,mb4.0						
MAW	**Mawson**	**76.25**	**202**	P	**P**	**04 22 31.4**	**+2.2**
	3.9nm,1.1s,mb4.2,baz=91,slow=7.2,SNR=5.8						
PETK	**Petropavlovsk-**	**76.29**	**351**	P	**P**	**04 22 30.4**	**+1.0**
	3.3nm,0.9s,mb4.3,baz=122,slow=11,SNR=2.9						
CMAR	**Chiang Mai Arr**	**81.92**	**294**	P	**P**	**04 23 02.4**	**+1.4**
	3.1nm,0.7s,mb4.3,baz=137,slow=4.0,SNR=16						
NVAR	**Mina Array Bea**	**89.29**	**48**	P	**P**	**04 23 37.3**	**+0.2**
	0.4nm,0.3s,mb4.2,baz=238,slow=6.9,SNR=9.4						
SONM	**Songino Array**	**91.20**	**322**	P	**P**	**04 23 45.8**	**0.0**
	2.1nm,0.9s,mb4.5,baz=127,slow=4.6,SNR=9.4						
MCK	**McKinley**	**91.33**	**16**	*e*P	**P**	**04 23 45.9**	**-0.2**
	1.4nm,0.5s,mb4.5						
TXAR	**Lajitas Array**	**96.34**	**61**	P	**P**	**04 24 09.2**	**-0.7**
	0.4nm,0.9s,mb3.8,baz=224,slow=3.5,SNR=3.5						
AKTK	**Aktyubinsk**	**122.02**	**316**	PKP	PKPdf	04 29 33.9	-1.1
AKTO	**Aktyubinsk**	**122.02**	**316**	PKP	PKPdf	04 29 33.9	-1.1
	0.9nm,0.6s,baz=118,slow=3.8,SNR=3.5						
BDFB	**Brasilia**	**125.69**	**131**	PKP	PKPdf	04 29 41.4	-1.7
	1.9nm,0.6s,baz=207,slow=1.7,SNR=3.8						
LSZ	**Lusaka**	**128.13**	**227**	PKP	PKPdf	04 29 48.3	+0.5
	1.1nm,0.6s,baz=355,slow=4.9,SNR=3.1						
BRG	**Berggiesshubel**	**146.81**	**334**	*e*P	PKPdf	04 30 23.3	+2.4
	3.0nm,0.5s						
CLL	**Collm**	**146.84**	**335**	*e*PKPbc	PKPbc	04 30 22.0	-0.8
CLL				*e*pPKPbc	pPKPbc	04 30 31.0	-5.6
GERES	**GERESS Array B**	**148.45**	**332**	PKPbc	PKPbc	04 30 24.5	-2.7
	1.3nm,0.8s,baz=35,slow=3.3,SNR=8.0						
TORD	**Torodi Ar. Bea**	**166.66**	**227**	PKP	PKPdf	04 30 45.2	-1.9
	1.9nm,1.0s,baz=229,slow=1.7,SNR=6.8						
TORD				PKPab	PKPab	04 31 49.1	-0.6
	1.0nm,1.0s,baz=113,slow=4.9,SNR=5.0						

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*ISCJB **10** 04:20:30.3±1.4,141N±006×1274E±0.1,h163^{km}±14^{km}, mb4.0/12,Error ellipse: s-maj=18.0km s-min=10.4km az=175.1*
*NEIC **10** 04:20:31.6±2.7,140N×12761E,h158^{km}±27^{km},mb4.2/4, Error ellipse: s-maj=22.1km s-min=10.9km az=70.0*
*IDC **10** 04:20:33.1±4.2,137N×12738E,h170^{km}±42^{km},mb3.6/8, mb1 3.6/10,mb1mx3.6/18,mbtmp3.6/10,MS3.8/1, Ms1 3.8/1,ms1mx2.8/31,Error ellipse: s-maj=33.4km s-min=13.0km az=71.0*
ISC 10 04:20:31.1±1.6**,137N**±007×**1274E**±01**,h153**^{km}±17^{km}**,n19,** σ**0**^{s}**75**/18**,mb4.0**/12**,1D,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	**Manado**	**2.54**	**272**	⇓*e*P	**Pn**	**04 21 12.5**	**-0.4**
MNI				*e*S	**Sn**	**04 21 45.5**	**+0.4**
DAV	**Davao City (W)**	**5.95**	**342**	LR	LR	04 24 41.2	
	comp=Z,721nm,18.3s,baz=294,slow=42						
KAPI	**Kappang**	**9.91**	**230**	P	**Pn**	**04 22 53.2**	**+3.2**
	4.4nm,0.3s,baz=113,slow=7.4,SNR=11						
KAPI				S	**Sn**	**04 24 38.8**	**-1.1**
	1.9nm,0.3s,baz=164,slow=22,SNR=4.6						
FITZ	**Fitzroy Crossi**	**19.42**	**185**	P	**P**	**04 24 46.9**	**+1.3**
	0.0nm,0.3s,baz=106,slow=14,SNR=2.4						
WRAB	**Tennant Creek**	**22.24**	**162**	*e*P	**P**	**04 25 15.8**	**+0.1**
	4.5nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**22.25**	**162**	P	**P**	**04 25 15.1**	**-0.7**
	1.4nm,0.3s,mb3.9,baz=334,slow=11,SNR=33						
WB2	**Warramunga Arr**	**22.25**	**162**	*e*P	**P**	**04 25 15.5**	**-0.3**
PMG	**Port Moresby**	**22.42**	**119**	*e*P	**P**	**04 25 13.8**	**-3.7**
	20nm,1.1s,mb4.5						
ASAR	**Alice Springs**	**25.68**	**166**	P	**P**	**04 25 47.2**	**+0.3**
	0.7nm,0.3s,mb3.7,baz=347,slow=7.2,SNR=9.3						
STKA	**Stephens Creek**	**35.70**	**159**	P	**P**	**04 27 15.3**	**+0.4**
	2.9nm,0.6s,mb4.1,baz=335,slow=8.2,SNR=7.5						
KSRS	**Korea Array**	**35.92**	**1**	P	**P**	**04 27 16.6**	**0.0**
	1.2nm,0.6s,mb3.7,baz=179,slow=9.7,SNR=4.6						
MAJO	**Matsushiro**	**36.41**	**15**	*e*P	**P**	**04 27 20.2**	**-0.6**
	2.5nm,0.4s,mb4.2						
SONM	**Songino Array**	**49.73**	**342**	P	**P**	**04 29 08.0**	**+0.4**
	0.4nm,0.6s,mb3.2,baz=147,slow=8.2,SNR=2.4						
PETK	**Petropavlovsk-**	**57.37**	**21**	P	**P**	**04 30 03.7**	**+0.5**
	3.5nm,0.9s,mb4.2,baz=243,slow=6.3,SNR=4.0						
MKAR	**Makanchi Array**	**59.86**	**326**	P	**P**	**04 30 20.5**	**-0.1**
	1.3nm,0.4s,mb4.2,baz=113,slow=8.0,SNR=21						
KURK	**Kurchatov**	**64.07**	**328**	P	**P**	**04 30 48.3**	**-0.3**
	1.6nm,0.5s,mb4.1,baz=126,slow=6.1,SNR=7.5						
CASY	**Casey**	**68.56**	**187**	*e*P	**P**	**04 31 16.7**	**-0.2**
	3.0nm,1.1s,mb3.9						
TXAR	**Lajitas Array**	**122.50**	**54**	PKP	PKPdf	04 39 10.9	+1.8
	0.1nm,0.3s,baz=318,slow=1.2,SNR=6.3						
TORD	**Torodi Ar. Bea**	**124.25**	**287**	PKP	PKPdf	04 39 12.1	-0.7
	0.1nm,0.6s,baz=57,slow=2.0,SNR=5.4						

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*ISCJB **10** 04:40:51.3±0.4,4168N±003×14151E±005,h122^{km}±3^{km}, mb3.9/6,Error ellipse: s-maj=6.9km s-min=4.6km az=28.3*
*MOS **10** 04:40:51.0±1.1,4167N×14159E,h131^{km},mb4.0/1,Error ellipse: s-maj=17.7km s-min=13.4km az=65.8*
*IDC **10** 04:40:51.8±1.6,4170N×14163E,h122^{km}±21^{km},mb3.6/5, mb1 3.7/7,mb1mx3.4/23,mbtmp3.6/7,Error ellipse: s-maj=32.8km s-min=16.4km az=87.0*
*NEIC **10** 04:40:52.8,4168N×14147E,h114^{km},mb4.0/3,After JMA.*
*JMA **10** 04:40:52.7±0.1,4168N×14147E,h114^{km}±1^{km},M3.4*
JMA Felt I J1.
ISC 10 04:40:52.4±0.4**,4169N**±003×**14151E**±005**,h116**^{km}±3^{km}**, n34,**σ**0**^{s}**88**/47**,mb3.9**/6**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKB	**Kayabe**	**0.41**	**299**	P	**Pn**	**04 41 09.4**	**0.0**
JKB				*e*S	**Sn**	**04 41 22.0**	**-0.2**
JOT	**Ohata**	**0.46**	**229**	P	**Pn**	**04 41 09.7**	**0.0**
JOT				*e*S	**Sn**	**04 41 22.4**	**-0.3**
JSR	**Shiriuchi**	**0.84**	**259**	P	**Pn**	**04 41 12.5**	**0.0**
JSR				*e*S	**Sn**	**04 41 27.1**	**-0.6**
JNB	**Noboribetsu**	**0.86**	**336**	P	**Pn**	**04 41 12.6**	**-0.1**
JYM2	**Yakumo 2**	**0.95**	**297**	P	**Pn**	**04 41 13.8**	**+0.2**
JTM	**Tenmabayashi**	**0.96**	**201**	P	**Pn**	**04 41 13.7**	**0.0**
JTM				*e*S	**Sn**	**04 41 29.3**	**-0.5**
JNBK	**Urakawa-nobuka**	**1.10**	**57**	P	**Pn**	**04 41 16.0**	**+0.9**
JEW	**Eniwo**	**1.15**	**358**	P	**Pn**	**04 41 16.2**	**+0.5**
JEW				*e*S	**Sn**	**04 41 34.0**	**+0.7**
ERM	**Erimo**	**1.27**	**75**	*e*P	**Pn**	**04 41 15.6**	**-1.4**
JANG	**Nango**	**1.31**	**180**	P	**Pn**	**04 41 17.0**	**-0.5**
JANG				*e*S	**Sn**	**04 41 34.9**	**-1.5**
JOSM	**Okushiri--Mats**	**1.57**	**285**	P	**Pn**	**04 41 19.7**	**-0.7**
JOSM				*e*S	**Sn**	**04 41 40.7**	**-1.0**
JCH	**Churui**	**1.66**	**55**	P	**Pn**	**04 41 22.5**	**+1.1**
JCH				*e*S	**Sn**	**04 41 43.9**	**+0.3**
JFR	**Furan**	**1.68**	**28**	P	**Pn**	**04 41 22.1**	**+0.4**
JSK	**Shakotan**	**1.83**	**336**	P	**Pn**	**04 41 24.1**	**+0.5**
JSK				*e*S	**Sn**	**04 41 48.0**	**+0.7**
JHR	**Hokuryu**	**2.06**	**4**	P	**Pn**	**04 41 27.4**	**+1.0**
ASAJ	**Asahikawa**	**2.56**	**18**	P	**Pn**	**04 41 31.9**	**-0.8**
	22nm,0.3s,baz=226,slow=14,SNR=22						
ASAJ				S	**Sn**	**04 42 03.2**	**-0.5**
	5.9nm,0.3s,baz=28,slow=32,SNR=3.7						
ASAJ	**Asahikawa**	**2.56**	**18**	P	**Pn**	**04 41 32.0**	**-0.7**
ASAJ				S	**Sn**	**04 42 03.3**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,22nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.96**	**52**	*e*P	**Pn**	**04 41 53.0**	**+1.7**
YUK				*i* S	**Sn**	**04 42 35.3**	**-1.7**
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				smax			
	comp=E,530nm,0.4s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,2μm,0.8s						
MAJO	**Matsushiro**	**5.74**	**208**	*e*P	**Pn**	**04 42 15.7**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAJO	**Matsushiro**	**5.74**	**208**	*e*Pn	**Pn**	**04 42 15.7**	**+0.3**
	comp=Z,7.1nm,0.8s						
MAT	**Matsushiro**	**5.74**	**208**	P	**Pn**	**04 42 16.9**	**+1.6**
MAT				*e*S	**Sn**	**04 43 22.1**	**+2.1**
MJAR	**Matsushiro Arr**	**5.75**	**208**	P	**Pn**	**04 42 15.5**	**+0.1**
	comp=Z,5.2nm,0.3s,baz=25,slow=13,SNR=21						
VLA	**Vladivostok**	**7.26**	**285**	*e*P	**Pn**	**04 42 37.0**	**+1.2**
VLA				pmax	pmax		
	comp=Z,60nm,0.6s						
BJT	**Baijiatuau**	**19.23**	**273**	*e*P	**P**	**04 45 07.8**	**+0.5**
BJT				pmax	pmax		
	comp=Z,29nm,2.6s						
BJT	**Baijiatuau**	**19.23**	**273**	*e*P	**P**	**04 45 07.8**	**+0.5**
	comp=Z,29nm,2.6s						
SONM	**Songino Array**	**25.52**	**296**	P	**P**	**04 46 09.9**	**-0.1**
	comp=Z,0.3nm,0.3s,mb3.1,baz=72,slow=9.3,SNR=3.4						
SONM	**Songino Array**	**25.52**	**296**	P	**P**	**04 46 09.8**	**-0.1**
ZALV	**Zalesovo Beam**	**38.96**	**308**	P	**P**	**04 48 05.5**	**-1.3**
	comp=Z,2.2nm,0.3s,mb4.4,baz=82,slow=9.1,SNR=3.7						
ZAL	**Zalesovo**	**38.98**	**308**	P	**P**	**04 48 05.5**	**-1.4**
MKAR	**Makanchi Array**	**41.86**	**298**	P	**P**	**04 48 30.2**	**-0.6**
	comp=Z,0.4nm,0.4s,mb3.5,baz=76,slow=8.4,SNR=7.1						
KURK	**Kurchatov**	**43.25**	**304**	P	**P**	**04 48 41.8**	**-0.1**
	comp=Z,1.3nm,0.4s,mb4.0,baz=78,slow=9.0,SNR=6.3						
COEN	**Coen**	**55.38**	**178**	*e*P	**P**	**04 50 15.8**	**+1.3**
	comp=Z,1.0nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**61.67**	**188**	P	**P**	**04 50 56.9**	**-1.1**
	comp=Z,1.2nm,0.4s,mb4.3,baz=5.6,slow=7.2,SNR=57						
NSHM	**Saint Helena R**	**69.47**	**56**	*e*P	**P**	**04 51 47.8**	**-0.3**

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*TEH **10** 04:44:29.6,3668N×5436E,h4^{km},ML3.8*

THR ***10*** *04:44:54.8±0.9, 3666N×5453E, h14km±7km, ML3.6*
ISCJB ***10*** *04:44:56.0±0.6, 3663N±006×5437E±004, h10km, Error ellipse: s-maj=9.0km s-min=4.1km az=159.9*
CSEM ***10*** *04:44:55.6±0.1, 3666N×5441E, h16km, ML3.8, Error ellipse: s-maj=4.3km s-min=2.4km az=145.0*
ISC 10 04:44:57.2±0.6**, 3662N**±006×**5434E**±004**, h10km, n27, σ1ˢ15**/36**, 2C-2D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHM	**Shahmirzad**	**1.17**	**227**	⇓ePg	**Pn**	**04 45 18.2**	**-1.4**
ISHM				e		04 45 43.9	
IANJ	**Anjilo**	**1.20**	**197**	⇑ePg	**Pn**	**04 45 18.5**	**-1.5**
IANJ				eSg	**Sg**	**04 45 36.5**	**+0.8**
IANJ	**Anjilo**	**1.20**	**197**	⇑ePg	**Pn**	**04 45 18.5**	**-1.5**
IANJ				eSg	**Sg**	**04 45 36.5**	**+0.8**
IANJ				e		04 45 38.6	
IALA	**Alasht**	**1.34**	**247**	ePg	**Sg**	**04 45 40.2**	**-0.2**
IFIR	**Firoozkooh**	**1.61**	**233**	ePn	**Pn**	**04 45 25.9**	**+0.3**
IFIR				e		04 45 52.5	
IPRN	**Peran**	**1.66**	**258**	ePn	**Pn**	**04 45 25.5**	**-0.8**
ILAS	**Lasjerd**	**1.66**	**223**	ePn	**Pn**	**04 45 26.9**	**+0.5**
ILAS				e		04 45 29.5	
MRVT	**Maraveh tapeh**	**1.75**	**53**	ePg	**Pn**	**04 45 24.1**	**-3.4**
MRVT				AML	AML	04 45 49.3	
	comp=N,780nm,0.6s						
IDMV	**Damavand**	**2.13**	**242**	ePn	**Pn**	**04 45 34.2**	**+1.3**
IDMV				e		04 46 13.3	
DAMV	**Damavand**	**2.15**	**244**	ePn	**Pn**	**04 45 34.7**	**+1.6**
DAMV				eSg	**Sg**	**04 46 07.2**	**+0.8**
DAMV				AML	AML	04 46 12.2	
	comp=N,306nm,0.5s						
DAMV	**Damavand**	**2.15**	**244**	ePn	**Pn**	**04 45 34.7**	**+1.6**
	SNR=52						
DAMV				eSg	**Sg**	**04 46 07.2**	**+0.8**
	SNR=90						
IAFJ	**Afjeh**	**2.25**	**251**	ePn	**Pn**	**04 45 35.3**	**+0.8**
IAFJ				eSg	**Sg**	**04 46 08.9**	**-0.7**
IAFJ	**Afjeh**	**2.25**	**251**	ePn	**Pn**	**04 45 35.3**	**+0.8**
IAFJ				eSg	**Sg**	**04 46 08.9**	**-0.7**
IAFJ				e		04 46 13.5	
IVRN	**Varamin**	**2.67**	**233**	ePn	**Pn**	**04 45 40.8**	**+0.6**
IVRN				eSg	**Sg**	**04 46 21.2**	**-1.7**
IVRN	**Varamin**	**2.67**	**233**	ePn	**Pn**	**04 45 40.8**	**+0.6**
IVRN				ePn	**Pn**	**04 45 40.8**	**+0.6**
IVRN				eSg	**Sg**	**04 46 21.2**	**-1.7**
IVRN				e		04 46 30.7	
IVRN				e		04 46 30.7	
CHTH	**Charan**	**2.69**	**256**	ePn	**Pn**	**04 45 42.7**	**+2.1**
IR3	**Iran Long-Peri**	**2.92**	**248**	eSg	**Sg**	**04 46 28.6**	**-2.3**
GHVR	**GHOM**	**3.27**	**230**	AML	AML	04 46 49.8	
	comp=E,129nm,0.2s						
IEMG	**Emamgholi**	**3.54**	**76**	⇓ePn	**Pn**	**04 45 51.0**	**-1.3**
IEMG				e		04 47 06.3	
IPAY	**Payeh**	**3.75**	**91**	ePn	**Pn**	**04 45 55.4**	**+0.2**
IRAZ	**Razeghan**	**3.77**	**253**	ePn	**Pg**	**04 46 01.8**	**-7.7**
IRAZ				e		04 47 15.8	
NASN	**Na'in**	**4.01**	**199**	ePn	**Pn**	**04 45 59.1**	**+0.4**
NASN				eSg	**Sg**	**04 47 02.6**	**-3.4**
IMOG	**Moghan**	**4.07**	**96**	ePn	**Pn**	**04 45 59.5**	**0.0**
ASAO	**Ashtian**	**4.08**	**241**	ePn	**Pn**	**04 46 00.9**	**+1.4**
ICHK	**Chekchek**	**4.36**	**179**	ePn	**Pn**	**04 46 03.9**	**+0.4**
ICHK				e		04 47 25.4	
IMYA	**Miami**	**4.65**	**92**	ePn	**Pn**	**04 46 06.9**	**-0.6**
IKOO	**Kooshah**	**5.68**	**136**	ePn	**Pn**	**04 46 22.1**	**+0.4**
IKOO				e		04 46 23.9	

ISCJB ***10*** *04:51:52.9±2.4, 373N±009×951E±02, h59km±22km, mb4.2/12, Error ellipse: s-maj=30.7km s-min=12.1km az=164.1*
NEIC ***10*** *04:51:52.1±0.5, 369N×9493E, h35km, mb4.3/3, Error ellipse: s-maj=16.7km s-min=9.8km az=82.0*
IDC ***10*** *04:51:56.5±8.6, 385N×95.12E, h75km±77km, mb3.9/10, mb1 4.1/11, mb1mx3.8/20, mbtmp3.9/11, ML5.0/1, Error ellipse: s-maj=33.6km s-min=15.4km az=66.0*
ISC 10 04:51:54.1±2.3**, 373N**±009×**951E**±02**, h54km**±22km**, n19, σ0ˢ69**/16**, mb4.2**/12**, 1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**3.49**	**134**	⇓eP	**Pn**	**04 52 45.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**15.13**	**14**	P	**Pn**	**04 55 25.9**	**+1.3**
	2.3nm,0.3s,baz=208,slow=11,SNR=24						
CHTO	**Chiang Mai**	**15.47**	**14**	ePn	**Pn**	**04 55 29.3**	**+0.3**
	4.0nm,0.4s						
MBWA	**Marble Bar**	**34.59**	**137**	eP	**P**	**04 58 38.6**	**+0.5**
	26nm,1.0s,mb5.1						
AML	**Almayashu**	**42.74**	**336**	eP	**P**	**04 59 46.6**	**+0.5**
	4.5nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**44.31**	**347**	P	**P**	**04 59 58.1**	**-0.5**
	1.7nm,0.4s,mb4.1,baz=160,slow=8.2,SNR=22						
SONM	**Songino Array**	**45.02**	**11**	P	**P**	**05 00 03.7**	**-0.6**
	0.2nm,0.3s,mb3.5,baz=101,slow=4.6,SNR=3.0						
SONM				PcP	PcP	05 01 44.3	-0.2
	0.3nm,0.3s,baz=204,slow=5.2,SNR=3.6						
WRA	**Warramunga Arr**	**45.19**	**123**	P	**P**	**05 00 06.4**	**+0.3**
	7.3nm,0.8s,mb4.6,baz=301,slow=9.0,SNR=27						
ASAR	**Alice Springs**	**46.62**	**128**	P	**P**	**05 00 17.1**	**-0.2**
	1.7nm,0.4s,mb4.3,baz=303,slow=7.7,SNR=18						
ZALV	**Zalesovo Beam**	**50.76**	**352**	P	**P**	**05 00 47.6**	**-0.9**
	2.7nm,0.3s,mb4.6,baz=175,slow=6.7,SNR=12						
BOSA	**Boshof**	**74.20**	**239**	P	**P**	**05 03 25.8**	**+0.2**
	2.3nm,0.6s,mb4.3,baz=231,slow=18,SNR=3.2						
BOSA	**Boshof**	**74.20**	**239**	P	**P**	**05 03 25.8**	**+0.2**
MAW	**Mawson**	**74.69**	**192**	P	**P**	**05 03 29.0**	**+1.4**
	0.6nm,0.5s,mb3.8,baz=17,slow=5.0,SNR=6.7						
ARCES	**ARCESS Array B**	**79.45**	**340**	P	**P**	**05 03 54.1**	**-0.2**
	1.7nm,0.7s,mb4.1,baz=64,slow=5.5,SNR=8.7						
GERES	**GERESS Array B**	**81.51**	**319**	P	**P**	**05 04 05.0**	**-0.8**
	1.3nm,0.8s,mb3.9,baz=89,slow=5.5,SNR=7.3						
TORD	**Torodi Ar. Bea**	**92.42**	**283**	P	**P**	**05 04 59.7**	**-0.1**
	0.7nm,1.0s,mb4.0,baz=98,slow=5.2,SNR=3.3						
TXAR	**Lajitas Array**	**142.54**	**27**	PKhKP		05 11 17.7	
	0.2nm,0.7s,baz=324,slow=1.1,SNR=4.5						
CPUP	**Villa Florida**	**145.28**	**227**	PKPbc	PKPbc	05 11 26.4	-0.1
	1.4nm,0.5s,baz=46,slow=1.4,SNR=6.9						
LPAZ	**La Paz**	**159.29**	**232**	PKPab	PKPab	05 12 26.6	+1.7
	1.2nm,0.5s,baz=129,slow=6.5,SNR=6.3						

NEIC ***10*** *04:57:23.8, 3072S×7165W, h22km, ML3.8(GUC), After GUC.*
GUC 10 04:57:23.8±0.6**, 3072S**×**7165W, h22km**±2km**, MD3.9, ML3.8, 4C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.41**	**74**	⇑iP	Pb	04 57 32.3	0.0
OVCH				iS	Sb	04 57 38.5	+0.4
OVCH				AML	AML	04 57 38.9	
	comp=N,18μm,0.3s						
OVCH	**Ovalle**	**0.41**	**74**	⇑iP	Pb	04 57 32.3	0.0
OVCH				iS	Sb	04 57 38.5	+0.4
LSCH	**La Serena**	**0.88**	**24**	⇓iP	Pb	04 57 39.9	-0.5
LSCH				iS	Sb	04 57 51.7	-0.1
TLL	**Tololo Astrono**	**0.92**	**53**	⇑iP	Pb	04 57 41.0	0.0
TLL				iS	Sb	04 57 53.3	+0.6
TLL				AML	AML	04 57 56.5	
	comp=E,2μm,0.3s						
TLL	**Tololo Astrono**	**0.92**	**53**	⇑iP	Pb	04 57 41.0	0.0
TLL				iS	Sb	04 57 53.3	+0.6
CHNG	**Los Chungos**	**1.17**	**174**	eP	Pn	04 57 43.8	-1.0
CHNG				iS	Sb	04 57 59.3	-0.7
LCO	**Las Campanas**	**1.89**	**26**	ePn	Pn	04 57 55.5	+0.7
LCO				eSn	Sn	04 58 19.1	+1.1
JACH	**Jahuel**	**2.16**	**155**	iP	Pn	04 57 59.8	+1.4
JACH				iS	Sn	04 58 27.2	+2.8
VACH	**Vallenar**	**2.27**	**20**	iP	Pn	04 58 01.1	+1.1
VACH				iS	Sn	04 58 29.5	+2.2
VACH				AML	AML	04 58 40.9	
	comp=E,1μm,0.2s						
VACH	**Vallenar**	**2.27**	**20**	iP	Pn	04 58 01.1	+1.1
VACH				iS	Sn	04 58 29.5	+2.2
ROCH	**El Roble**	**2.31**	**166**	iP	Pn	04 58 02.1	+1.6
ROCH				iS	Sn	04 58 31.6	+3.3
PEL	**Peldehue**	**2.55**	**161**	AML	AML	04 58 47.5	
	comp=E,647nm,0.4s						
CLCH	**Cerro Calan**	**2.83**	**161**	AML	AML	04 59 00.5	
	comp=N,460nm,0.6s						
FCH	**Farellones**	**2.85**	**156**	AML	AML	04 58 57.9	
	comp=E,173nm,0.2s						
ANTU	**Antumapu**	**2.97**	**163**	AML	AML	04 59 05.1	
	comp=E,252nm,0.6s						
TACH	**Talagante**	**2.99**	**168**	eP	Pn	04 58 11.1	+1.3
TACH				iS	Sn	04 58 47.2	+2.2
PCH	**Pirque**	**3.05**	**162**	eP	Pn	04 58 12.2	+1.5
PCH				iS	Sn	04 58 49.0	+2.4

IDC 10 05:11:11.9±1.4**, 2102S**×**17573W, h0km, mb3.9**/5**, mb1 4.2**/5**, mb1mx3.9**/18**, mbtmp3.9**/5**, Error ellipse: s-maj=53.6km s-min=31.1km az=173.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.47**	**257**	P	P	05 19 40.0	-1.0
	2.5nm,0.9s,baz=90,slow=8.7,SNR=13						
WRA	**Warramunga Arr**	**46.64**	**262**	P	P	05 19 42.5	+0.2
	0.5nm,0.3s,baz=95,slow=8.2,SNR=18						
FITZ	**Fitzroy Crossi**	**55.07**	**262**	P	P	05 20 47.1	+1.1
	1.8nm,1.0s,baz=106,slow=20,SNR=2.6						
QSPA	**South Pole Qui**	**69.06**	**180**	P	P	05 22 19.2	+0.3
	2.0nm,0.9s,baz=41,slow=3.4,SNR=4.5						
TXAR	**Lajitas Array**	**85.55**	**56**	P	P	05 23 52.5	+0.3
	0.5nm,0.9s,baz=208,slow=10.0,SNR=4.7						
CMAR	**Chiang Mai Arr**	**92.29**	**289**	P	P	05 24 29.4	+4.8
	0.9nm,0.3s,baz=111,slow=2.0,SNR=6.9						

NEIC ***10*** *05:16:43.9, 1629N×9327W, h152km, MD4.1(MEX), After MEX.*
MEX 10 05:16:43.6±1.7**, 1628N**×**9330W, h153km**±19km**, MD4.1, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.52**	**19**	iP	Pn	05 17 04.4	-1.1
TGIG				iS	Sn	05 17 21.0	-1.2
SCX	**San Cristobal**	**0.78**	**55**	iP	Pn	05 17 06.9	-0.1
SCX				iS	Sn	05 17 21.8	-3.1
CCIG	**Comitan**	**1.12**	**90**	iP	Pn	05 17 08.2	-1.5
CCIG				iS	Sn	05 17 27.2	-2.3
THIG		**1.69**	**144**	iP	Pn	05 17 14.4	-1.0
THIG				iS	Sn	05 17 38.8	-1.1
CMIG	**Matias Romero**	**1.72**	**298**	iP	Pn	05 17 14.6	-1.2
CMIG				iS	Sn	05 17 39.1	-1.3
HUIG	**Huatulco**	**2.75**	**260**	iP	Pn	05 17 25.1	-2.8
HUIG				iS	Sn	05 17 59.6	-2.6
HUIG	**Huatulco**	**2.75**	**260**	iP	Pn	05 17 25.1	-2.8
HUIG				iS	Sn	05 17 57.8	-4.4
VHO	**Vista Hermosa**	**3.38**	**284**	iP	Pn	05 17 35.9	-0.1
VHO				iS	Sn	05 18 15.7	-0.9
PNIG	**Pinotepa**	**4.64**	**272**	iP	Pn	05 17 42.2	-10
PNIG				iS	Sn	05 18 36.1	-10

SZGRF ***10*** *05:28:54.2, 41.15N×14269E, h33km, mb4.8, Hokkaido, Japan, region*
BJI ***10*** *05:28:56.8, 4201N×14276E, h62km, mB4.9, mb4.7, Ms4.2, Msz4.0*
MOS ***10*** *05:28:56.3±0.8, 4223N×14236E, h28km, mb5.0/51, Error ellipse: s-maj=9.2km s-min=5.2km az=115.1*
ISCJB ***10*** *05:28:59.5±0.3, 4199N±003×14252E±003, h66km±2km, mb4.6/106, Error ellipse: s-maj=4.8km s-min=3.1km az=145.4*
NIED ***10*** *05:29:00, 4200N×14260E, h50km, Mw4.5 Best double couple: M₀6.66000×10¹⁵ NP1:φs27.00000°, δ67.00000°, λ82.00000°. NP2:φs226.00000°, δ24.00000°, λ107.00000°.*
JMA ***10*** *05:29:00.0±0.2, 4199N×14257E, h63km±2km, M4.5 Broadband fault plane solution: P waves. NP1: φs239.00000°, δ15.00000°, λ138.00000°. NP2: φs10.00000°, δ80.00000°, λ78.00000°. Principal axes: T Plg54.0000°, Azm266.0000°; N Plg11.0000°, Azm12.0000°; P Plg34.0000°, Azm110.0000°;*
JMA Felt II J1.
NEIC ***10*** *05:29:00.0, 4199N×14257E, h63km, mb4.7/54, MW4.5(NIED), After JMA.*
NEIC Recorded [2 JMA] in the Tomakomai area, south-central Hokkaido and southwestern Hokkaido. Recorded [1 JMA] in the Obihiro area. Also recorded [1 JMA] in Aomori Prefecture, Honshu.
IDC ***10*** *05:29:01.4±0.6, 4204N×14247E, h71km±5km, mb4.1/18, mb1 4.3/23, mb1mx4.2/26, mbtmp4.2/23, MS3.8/1, Ms1 4.0/1, ms1mx3.1/45, Error ellipse: s-maj=13.5km s-min=6.8km az=102.0*
ISC 10 05:29:00.5±0.2**, 4201N**±003×**14253E**±003**, h61km**±2km**, h68km**±2.4km**:pP-P, n291, σ0ˢ88**/303**, mb4.8**/106**, 57C-14D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.32**	**31**	⇑P	**Pn**	**05 29 10.3**	**-0.6**
JNBK				eS	**Sn**	**05 29 18.1**	**-0.3**
ERM	**Erimo**	**0.47**	**89**	ePg	**Pn**	**05 29 11.6**	**-0.6**
ERM				eSn	**Sn**	**05 29 20.7**	**0.0**
JEM	**Erimo**	**0.47**	**88**	⇑P	**Pn**	**05 29 11.7**	**-0.5**
JEM				eS	**Sn**	**05 29 20.6**	**-0.1**
JBT2	**Biratori 2**	**0.78**	**351**	⇓P	**Pn**	**05 29 15.6**	**-0.2**
JCH	**Churui**	**0.87**	**45**	⇑P	**Pn**	**05 29 16.5**	**-0.4**
JKB	**Kayabe**	**1.12**	**264**	⇓P	**Pn**	**05 29 19.8**	**-0.3**
JKB				eS	**Sn**	**05 29 34.3**	**-0.5**
JEW	**Eniwo**	**1.16**	**317**	⇓P	**Pn**	**05 29 20.7**	**+0.1**
JEW				eS	**Sn**	**05 29 35.9**	**+0.4**
JFR	**Furan**	**1.16**	**2**	P	**Pn**	**05 29 20.5**	**-0.1**
JNB	**Noboribetsu**	**1.20**	**293**	⇓P	**Pn**	**05 29 20.4**	**-0.8**
JNB				eS	**Sn**	**05 29 35.9**	**-0.7**
JOT	**Ohata**	**1.27**	**241**	⇓P	**Pn**	**05 29 21.8**	**-0.3**
JOT				eS	**Sn**	**05 29 37.8**	**-0.5**
JOB	**Onbets**	**1.32**	**47**	⇑P	**Pn**	**05 29 23.4**	**+0.6**
JAB	**Ashibetsu**	**1.52**	**352**	P	**Pn**	**05 29 25.8**	**+0.4**
JAR	**Ashorobuto**	**1.58**	**35**	⇑P	**Pn**	**05 29 26.1**	**-0.2**
JAR				eS	**Sn**	**05 29 45.3**	**-0.5**
JYM2	**Yakumo 2**	**1.61**	**275**	⇓P	**Pn**	**05 29 26.4**	**-0.3**
JTM	**Tenmabayashi**	**1.64**	**223**	⇓P	**Pn**	**05 29 27.1**	**0.0**
JTM				eS	**Sn**	**05 29 46.9**	**-0.2**
JSR	**Shiriuchi**	**1.65**	**254**	⇓P	**Pn**	**05 29 26.9**	**-0.3**
ASAJ	**Asahikawa**	**2.11**	**1**	P	**Pn**	**05 29 34.2**	**+0.8**
	180nm,0.3s,baz=210,slow=9.0,SNR=132						
ASAJ				S	**Sn**	**05 29 59.6**	**+1.0**
	102nm,0.3s,baz=73,slow=30,SNR=15						
YUK	**Yuzh-Kuril'sk**	**3.18**	**49**	ePN	**Pn**	**05 29 48.5**	**+0.5**
YUK				iS	**Sn**	**05 30 25.9**	**+1.3**
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				pmax	pmax		
	comp=N,2μm,2.0s						
YUK				pmax	pmax		
	comp=E,2μm,2.0s						
YUK				pmax	pmax		
	comp=E,380nm,0.5s						
YUK				pmax	pmax		
	comp=Z,380nm,0.5s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,1μm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.95**	**2**	ePN	**Pn**	**05 30 14.2**	**+2.0**
YSS				eS	**Sn**	**05 31 10.0**	**+1.9**
YSS				pmax	pmax		
	comp=Z,110nm,0.9s						
YSS	**Yuzh-Sakhalins**	**4.95**	**2**	ePn	**Pn**	**05 30 14.4**	**+2.2**
KUR	**Kuril'sk**	**5.04**	**48**	ePN	**Pn**	**05 30 11.0**	**-2.5**
KUR				pmax	pmax		
	comp=E,140nm,0.9s						
KUR				pmax	pmax		
	comp=Z,280nm,0.9s						
MAJO	**Matsushiro**	**6.40**	**213**	ePN	**Pn**	**05 30 32.5**	**+0.4**
MAT	**Matsushiro**	**6.40**	**213**	P	**Pn**	**05 30 30.6**	**-1.5**
MAT				eS	**Sn**	**05 31 47.7**	**+3.9**
MJAR	**Matsushiro Arr**	**6.40**	**213**	P	**Pn**	**05 30 32.8**	**+0.7**
	comp=Z,2.2nm,0.3s,baz=16,slow=14,SNR=19						
VLA	**Vladivostok**	**7.93**	**282**	ePN	**Pn**	**05 30 55.8**	**+2.8**
VLA				pmax	pmax		
	comp=Z,49nm,0.9s						
JHJ	**Hachijo jima 2**	**9.13**	**195**	S	**Sn**	**05 32 43.0**	**-7.7**
	comp=Z,11nm,0.3s,baz=266,slow=22,SNR=3.4						
MDJ	**Mudanjiang**	**9.78**	**290**	P	**Pn**	**05 31 17.0**	**-1.4**
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.7s						
MDJ				AMB	AMB		
	comp=Z,71nm,4.8s						
MDJ	**Mudanjiang**	**9.78**	**290**	ePn	**Pn**	**05 31 20.7**	**+2.3**
	comp=Z,17nm,0.8s						
KLR	**Kul'dur**	**10.44**	**317**	ePN	**Pn**	**05 31 25.5**	**-1.8**
KLR				pmax	pmax		
	comp=E,48nm,1.4s						
KLR				pmax	pmax		
	comp=Z,38nm,1.4s						
KSRS	**Korea Array**	**12.13**	**253**	P	**Pn**	**05 31 52.5**	**+2.1**
	comp=Z,1.5nm,0.3s,baz=64,slow=14,SNR=33						
KSRS				S	**Sn**	**05 34 06.3**	**+2.5**
	comp=Z,0.3nm,0.3s,baz=71,slow=24,SNR=3.5						
CN2	**Changchun**	**12.65**	**284**	eP	**Pn**	**05 31 58.8**	**+1.3**
CN2				eXP		05 32 14.0	
CN2				eS	**Sn**	**05 34 18.2**	**+1.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,1μm,13.0s						
CN2				LR	LR		
	comp=E,900nm,13.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
CBIJ	**Chichi jima**	**14.88**	**181**	P	**Pn**	**05 32 29.0**	**+1.8**
	comp=Z,4.8nm,0.3s,baz=255,slow=20,SNR=2.2						
PETK	**Petropavlovsk-**	**15.07**	**37**	P	**Pn**	**05 32 27.6**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=212,slow=11,SNR=4.4						
CLNS	**Chul'man**	**18.67**	**329**	eP	**Pn**	**05 33 11.5**	**-2.8**
CLNS				pmax	pmax		
	comp=Z,17nm,0.8s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,14nm,1.1s						
JOW	**Kunigami**	**19.12**	**222**	P	**Pn**	**05 33 17.3**	**-2.6**
	comp=E,0.8nm,0.3s,baz=326,slow=3.6,SNR=2.5						
BJI	**Beijing**	**19.96**	**273**	P	**Pn**	**05 33 25.6**	**-4.1**
BJI				XP	sP	05 33 44.7	-3.6
BJI				S	**S**	**05 37 07.4**	**-1.2**
BJI				XS	sS	05 37 27.2	-2.8
BJI				AMB	AMB		
	comp=Z,28nm,1.0s						
BJI				AMB	AMB		
	comp=Z,251nm,5.1s						
BJI				LR	LR		
	comp=N,224nm,17.4s						
BJI				LR	LR		
	comp=E,231nm,18.3s						
BJI				LR	LR		
	comp=Z,225nm,26.0s						
BJI	**Beijing**	**19.96**	**273**	P	**Pn**	**05 33 25.6**	**-4.1**
	comp=Z,28nm,1.0s						
BJI				sP	sP	05 33 44.7	-3.6
BJI				S	**S**	**05 37 07.4**	**-1.2**
BJI				sS	sS	05 37 27.2	-2.8
BJT	**Baijiatuau**	**19.97**	**273**	eP	**Pn**	**05 33 26.0**	**-3.8**
BJT				pmax	pmax		
	comp=Z,16nm,0.8s						
BJT	**Baijiatuau**	**19.97**	**273**	eP	**Pn**	**05 33 26.0**	**-3.8**
	comp=Z,16nm,0.8s						
NJ2	**Nanjing**	**21.29**	**250**	eP	**P**	**05 33 42.6**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.6						
YAK	**Yakutsk**	**21.48**	**343**	eP	pP	05 33 59.8	+2.8
YAK				e		05 34 07.2	
YAK				pmax	pmax		
	comp=Z,37nm,1.1s,mb4.6						
YAK				pmax	pmax		
	comp=N,35nm,1.4s						
YAK				pmax	pmax		
	comp=E,17nm,1.5s						
SEY	**Seymchan**	**21.75**	**12**	iP	**P**	**05 33 44.4**	**-2.2**
HHC	**Hu-ho-hao-te**	**23.19**	**278**	eP	**P**	**05 33 59.7**	**-2.2**
HHC				AP		05 34 13.4	
HHC				XP	sP	05 34 20.5	-2.6
HHC				PP		05 34 32.5	
HHC				PCP	PcP	05 37 48.3	+0.3
HHC				S	**S**	**05 38 02.2**	**-6.6**
HHC				XS	sS	05 38 24.8	-8.9
HHC				SS		05 38 51.8	
HHC				SCP	ScP	05 41 20.1	-0.5
HHC				PCS	PcS	05 41 26.1	-1.1
HHC				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.4						
HHC				AMB	AMB		
	comp=Z,175nm,6.7s						
HHC				LR	LR		
	comp=N,203nm,12.4s						
HHC				LR	LR		
	comp=E,210nm,12.6s						
HHC				LR	LR		
	comp=Z,333nm,12.8s						
BOD	**Bodaibo**	**23.98**	**321**	eP	**P**	**05 34 05.7**	**-3.3**
BOD				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
WHN	**Wuhan**	**25.32**	**252**	P	**P**	**05 34 21.7**	**+0.3**
ULN	**Ulaanbaatar**	**25.63**	**295c**	iP	**P**	**05 34 24.0**	**-0.1**
ULN	**Ulaanbaatar**	**25.63**	**295**	eP	**P**	**05 34 24.1**	**0.0**
SONM	**Songino Array**	**26.07**	**295**	P	**P**	**05 34 27.8**	**-0.3**
	comp=Z,8.6nm,0.7s,mb4.4,baz=77,slow=8.9,SNR=31						
SONM				PcP	PcP	05 37 54.8	+0.6
	comp=Z,0.6nm,0.5s,baz=132,slow=2.1,SNR=3.2						
XAN	**Xi'an**	**27.51**	**264**	P	**P**	**05 34 43.8**	**+2.7**
XAN				AP	pP	05 34 52.1	-3.9
XAN				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb3.8						
XAN				AMB	AMB		
	comp=Z,185nm,15.0s						
TLY	**Talaya**	**28.00**	**304**	eP	**P**	**05 34 45.0**	**-0.3**
TLY				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
TLY	**Talaya**	**28.00**	**304**	eP	**P**	**05 34 45.7**	**+0.3**
	comp=Z,10nm,0.9s,mb4.5						
LZH	**Lanzhou**	**30.43**	**272**	eP	**P**	**05 35 08.0**	**+0.9**
LZH				AP	pP	05 35 22.5	+0.4
LZH				XP	sP	05 35 27.9	-1.3
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,90nm,4.0s						
LZH				LR	LR		
	comp=E,360nm,15.9s						
LZH				LR	LR		
	comp=Z,429nm,16.5s						
LZH	**Lanzhou**	**30.43**	**272**	eP	**P**	**05 35 08.0**	**+0.9**
	comp=Z,20nm,1.0s,mb4.8						
LZH				pP	pP	05 35 22.5	+0.4
LZH				sP	sP	05 35 27.9	-1.3
LZH				LR	LR		
	comp=Z,430nm,16.5s						
GTA	**Gaotai**	**32.24**	**280**	eP	**P**	**05 35 23.1**	**+0.2**
GTA				AP	pP	05 35 37.1	-0.9
GTA				XP	sP	05 35 44.4	-0.7
GTA				PCP	PcP	05 38 11.3	+1.3
GTA				S	**S**	**05 40 33.4**	**+1.7**
GTA				XS	sS	05 40 58.3	+0.9
GTA				SS	SS	05 42 32.5	-19
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.3						
GTA				AMB	AMB		
	comp=Z,310nm,7.2s						
GTA				LR	LR		
	comp=N,139nm,18.3s						
GTA				LR	LR		
	comp=E,118nm,17.1s						
GTA				LR	LR		
	comp=Z,276nm,20.4s						
CD2	**Chengdu**	**32.84**	**263**	eP	**P**	**05 35 28.4**	**+0.2**
CD2				AP	pP	05 35 43.3	0.0
CD2				XP	sP	05 35 51.5	+1.1
CD2				PP	PP	05 36 39.7	-3.6
CD2				S	**S**	**05 40 40.2**	**-0.9**
CD2				XS	sS	05 41 05.8	-1.0
CD2				SS	SS	05 42 41.6	-23
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,20nm,5.8s						
CD2				LR	LR		
	comp=N,160nm,12.2s						
CD2				LR	LR		
	comp=Z,130nm,14.2s						
GYA	**Guiyang**	**33.18**	**254**	P	**P**	**05 35 32.7**	**+1.4**

GYA AP pP 05 35 46.9 +0.5
GYA XP sP 05 35 53.4 -0.1
GYA PP PP 05 36 44.2 -3.0
GYA PCP PcP 05 38 14.5 +1.6
GYA S **S** **05 40 46.2 -0.4**
GYA XS sS 05 41 11.8 -0.5
GYA SCP ScP 05 41 53.0 +1.3
GYA PCS PcS 05 41 59.5 +0.9
GYA SCS ScS 05 45 52.0 -0.5
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,90nm,4.9s
GYA LR LR
comp=N,370nm,17.8s
GYA LR LR
comp=E,360nm,17.1s
GYA LR LR
comp=Z,260nm,18.3s
KMI Kunming 36.81 256 P **P** **05 36 02.9 +0.4**
KMI AMB AMB
comp=Z,9.0nm,0.7s,mb4.7
KMI Kunming 36.81 256 P **P** **05 36 02.9 +0.4**
comp=Z,9.0nm,0.7s,mb4.7
ZALV Zalesovo Beam 39.37 308 P **P** **05 36 22.5 -1.2**
comp=Z,18nm,0.7s,mb4.9,baz=87,slow=8.3,SNR=34
ZALV PcP PcP 05 38 31.0 +0.1
comp=Z,1.7nm,0.3s,baz=90,slow=2.9,SNR=4.3
ZALV Zalesovo Beam 39.37 308 P **P** **05 36 22.5 -1.2**
ZALV PcP PcP 05 38 31.0 +0.1
ZAL Zalesovo 39.38 308 P **P** **05 36 22.5 -1.3**
ZAL 05 38 31.0
WMQ Urumqi 39.58 292 P **P** **05 36 26.1 +0.5**
WMQ AMB AMB
comp=Z,18nm,1.1s,mb4.7
WMQ AMB AMB
comp=Z,197nm,6.0s
NVS Novosibirsk 40.18 310 *eP* **P** **05 36 29.8 -0.6**
NVS pmax pmax
comp=Z,17nm,0.9s,mb4.8
NVS pmax pmax
comp=N,12nm,1.2s
NVS pmax pmax
comp=E,11nm,0.8s
NANT Nan 42.30 250 ⇑P **P** **05 36 48.0 -0.2**
comp=E,172nm,1.0s,mb5.6
MK31 Makanchi Array 42.39 298 *i* P **P** **05 36 48.3 -0.3**
MK31 pmax pmax
comp=Z,8.0nm,0.5s,mb4.6
MKAR Makanchi Array 42.39 298 P **P** **05 36 48.3 -0.3**
comp=Z,13nm,0.8s,mb4.6,baz=82,slow=9.3,SNR=98
MKAR PcP PcP 05 38 40.7 -0.1
comp=Z,1.0nm,0.5s,baz=60,slow=4.2,SNR=4.3
KDAK Kodiak Island 42.91 45 P **P** **05 36 52.7 0.0**
comp=Z,4.1nm,0.8s,mb4.2,baz=214,slow=3.9,SNR=3.8
KDAK Kodiak Island 42.91 45 P **P** **05 36 52.7 0.0**
CHG Chiang Mai 43.52 251 ⇑P **P** **05 36 58.4 +0.3**
comp=Z,16nm,0.7s,mb4.9
CHTO Chiang Mai 43.52 251 *eP* **P** **05 36 58.6 +0.5**
CHTO pmax pmax
comp=Z,13nm,0.6s,mb4.8
CHTO Chiang Mai 43.52 251 *eP* **P** **05 36 58.6 +0.5**
comp=Z,13nm,0.6s,mb4.8
KURK Kurchatov 43.69 304*c iP* **P** **05 36 58.6 -0.5**
KURK pmax pmax
comp=Z,27nm,0.9s,mb5.0
KURK Kurchatov 43.69 304 *eP* **P** **05 36 58.7 -0.4**
CMAR Chiang Mai Arr 43.76 251 P **P** **05 37 00.1 +0.1**
comp=Z,2.1nm,0.6s,mb4.1,baz=42,slow=7.3,SNR=16
CMAR pP pP 05 37 18.6 +3.1
comp=Z,1.2nm,0.4s,baz=46,slow=9.0,SNR=1.7
CMAR LR LR 05 56 44.9
comp=Z,116nm,18.8s,baz=20,slow=38
COLA College 44.46 35 *eP* **P** **05 37 05.2 +0.1**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
COLA College 44.46 35 *eP* **P** **05 37 05.2 +0.1**
comp=Z,7.3nm,0.8s,mb4.5
RAGM Ragged Mountai 46.52 41 *eP* **P** **05 37 24.1 +2.7**
TAPN Taplejung 46.63 270 *eP* **P** **05 37 23.2 +0.5**
ODAN Odare 47.14 270 *eP* **P** **05 37 27.5 +0.8**
comp=Z,30nm,0.7s,mb5.3
RAMN Ramite 47.68 270 *eP* **P** **05 37 31.1 +0.2**
comp=Z,64nm,0.7s,mb5.7
GUN Gumba 47.70 272 *eP* **P** **05 37 31.5 +0.5**
comp=Z,105nm,0.5s
BVA0 Borovoye Array 47.98 309 *i* P **P** **05 37 32.8 0.0**
BVA0 pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
BRVK Borovoye 48.03 309 *eP* **P** **05 37 33.3 +0.1**
BRVK pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
BRVK Borovoye 48.03 309 *eP* **P** **05 37 33.3 0.0**
comp=Z,5.3nm,0.5s,mb4.8
TKM2 Tokmak 2 48.17 295 *eP* **P** **05 37 34.7 +0.2**
TKM2 pmax pmax
comp=Z,32nm,0.6s,mb5.5
TKM2 Tokmak 2 48.17 295 P **P** **05 37 34.9 +0.4**
SNR=38
TKM2 Tokmak 2 48.17 295 *eP* **P** **05 37 34.7 +0.2**
comp=Z,32nm,0.6s,mb5.5
KKN Kakani 48.21 272 *eP* **P** **05 37 35.3 +0.4**
comp=Z,30nm,0.5s,mb5.6
PKI Pulchoki 48.23 272 *eP* **P** **05 37 35.4 +0.3**
DMN Daman 48.44 272 *eP* **P** **05 37 36.9 +0.2**
comp=Z,16nm,0.4s,mb5.4
GKN Gorkha 48.57 273 *eP* **P** **05 37 37.8 +0.1**
comp=Z,20nm,0.4s,mb5.5
KBK Karagaybulak 48.72 295 P **P** **05 37 39.2 +0.5**
SNR=26
KZA Kyzart 48.74 294 P **P** **05 37 39.3 +0.4**
SNR=8.8
USP Ospenovka 48.77 296 P **P** **05 37 39.1 0.0**
SNR=13
DANN Dangsing 49.04 274 *eP* **P** **05 37 42.2 +0.9**
comp=Z,77nm,0.5s,mb6.0
KOLN Koldanda 49.47 273 *eP* **P** **05 37 45.1 +0.5**
comp=Z,26nm,0.5s,mb5.5
EKS2 Erkin-Say 49.50 295 P **P** **05 37 44.8 +0.1**
SNR=18
EKS2 Erkin-Say 49.50 295 *eP* **P** **05 37 44.5 -0.1**
comp=Z,15nm,0.6s,mb5.1
AML Almayashu 49.78 295 P **P** **05 37 47.7 +0.9**
SNR=12
AML Almayashu 49.78 295 *eP* **P** **05 37 47.4 +0.6**
comp=Z,10nm,0.8s,mb4.9
HYT Haines Junctio 49.85 39 *eP* **P** **05 37 52.0 +5.0**
BOK Bokaro 49.99 267 *eP* **P** **05 37 49.3 +0.7**
BOK AMb AMB 05 37 50.1
comp=Z,12nm,0.9s,mb4.9
KK31 Karatay Array 51.50 297 *i* P **P** **05 37 59.1 -0.6**
KK31 pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
SVE Sverdlovsk 52.07 316 *eP* **P** **05 38 01.9 -1.8**
SVE pmax pmax
comp=Z,14nm,0.5s,mb5.2
SMLA Simla 52.45 281 *i* P **P** **05 38 06.8 -0.2**
ARU Arti 53.28 316*c iP* **P** **05 38 12.3 -0.4**
ARU pmax pmax
comp=Z,24nm,1.3s,mb5.0
ARU Arti 53.28 316 *eP* **P** **05 38 12.4 -0.3**
comp=Z,16nm,0.9s,mb4.9
AB31 Akbulak array 55.48 308 P **P** **05 38 28.5 -0.3**
AB31 pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
VIS Vishakhapatnam 55.57 263 *eP* **P** **05 38 29.5 -0.3**
AKL Akola 58.43 270 *eP* **P** **05 38 49.7 -0.4**
AKL AMb AMB 05 38 50.6
comp=Z,28nm,2.5s,mb4.8
YKA Yellowknife Ar 59.11 32 P **P** **05 38 53.9 -0.2**
comp=Z,1.0nm,0.6s,mb4.0,baz=306,slow=6.2,SNR=4.6
YKA Yellowknife Ar 59.11 32 P **P** **05 38 53.9 -0.2**
KEV Kevo 59.12 339 *ep* **P** **05 38 52.5 -1.6**
comp=Z,4.3nm,0.6s,mb4.7
KEV Kevo 59.12 339 *eP* **P** **05 38 52.5 -1.6**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
HYB Hyderabad 59.30 266 *i* P **P** **05 38 56.0 -0.1**
HYB Hyderabad 59.30 266 *eP* **P** **05 38 56.0 -0.1**
ARCES ARCESS Array B 59.67 339 P **P** **05 38 56.3 -1.6**
comp=Z,2.0nm,0.6s,mb4.3,baz=47,slow=7.0,SNR=16
LATR Latur 60.16 268 *eP* **P** **05 39 01.7 -0.3**
LATR AMb AMB 05 39 02.5
comp=Z,23nm,1.2s,mb5.1
JOF Joensuu 62.01 331 *ep* **P** **05 39 12.4 -1.4**
comp=Z,8.5nm,0.6s,mb5.0

WRAB Tennant Creek 62.09 189 *eP* **P** **05 39 14.3 -0.5**
WB2 Warramunga Arr 62.09 189 *eP* **P** **05 39 13.7 -1.2**
WRA Warramunga Arr 62.10 189 P **P** **05 39 14.1 -0.8**
comp=Z,3.5nm,0.8s,mb4.5,baz=5.7,slow=7.0,SNR=27
WRA pP pP 05 39 33.1 +1.9
comp=Z,4.8nm,0.9s,baz=5.3,slow=7.0,SNR=9.4
POO Poona 62.11 270 *eP* **P** **05 39 15.2 0.0**
POO AMb AMB 05 39 15.8
comp=Z,20nm,0.6s,mb5.5
KAD Karad 62.62 269 *eP* **P** **05 39 18.1 -0.5**
KAD AMb AMB 05 39 19.1
comp=Z,34nm,0.5s,mb5.7
JCW Jim Creek 63.43 48 *eP* **P** **05 39 24.9 +1.4**
KAF Kangasniemi 64.31 332 *ep* **P** **05 39 26.9 -2.2**
comp=Z,7.1nm,0.5s,mb5.0,baz=46,slow=6.2
KAF Kangasniemi 64.31 332 *eP* **P** **05 39 26.9 -2.2**
KAF pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
OBN Obninsk 64.66 322 *eP* **P** **05 39 30.8 -0.7**
OBN *e* 05 40 02.2
OBN *e* 05 41 52.5
OBN *eS* **S** **05 48 05.3 -1.3**
OBN pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
KOD Kodaikanal 64.72 261 *eP* **P** **05 39 32.6 +0.2**
KOD AMb AMB 05 39 33.5
comp=Z,24nm,1.6s,mb5.0
ASAR Alice Springs 65.82 189 P **P** **05 39 39.5 +0.2**
comp=Z,1.2nm,0.8s,mb4.0,baz=12,slow=5.8,SNR=9.2
ASAR pP pP 05 39 58.0 +2.3
comp=Z,1.2nm,0.7s,baz=355,slow=4.4,SNR=5.0
TRD Trivandrum 66.24 260 *eP* **P** **05 39 42.6 +0.3**
TRD AMb AMB 05 39 44.7
comp=Z,23nm,0.8s,mb5.3
EIDS Eidsvold 67.50 172 *eP* **P** **05 39 48.8 -1.1**
KIV Kislovodsk 68.34 310 *eP* **P** **05 39 55.2 0.0**
KIV pmax pmax
comp=Z,21nm,0.8s,mb5.2
FFC Flin Flon 69.09 34 *eP* **P** **05 40 00.1 +0.5**
FFC pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
FFC Flin Flon 69.09 34 *eP* **P** **05 40 00.1 +0.5**
comp=Z,8.8nm,0.8s,mb4.7
NB2 NORSAR Subarra 69.94 337 P **P** **05 40 04.1 -0.7**
comp=Z,8.1nm,0.7s,mb4.8,baz=36,slow=6.5
NOA NORSAR Array B 69.94 337 P **P** **05 40 04.2 -0.6**
comp=Z,8.9nm,0.7s,mb4.8,baz=37,slow=6.1,SNR=28
NOA pP pP 05 40 22.4 +1.0
comp=Z,2.8nm,0.7s,baz=36,slow=6.2,SNR=3.9
DLMT Dillon 70.25 46 *eP* **P** **05 40 08.3 +1.4**
comp=Z,8.9nm,1.4s,mb4.5
CMB Columbia Colle 70.34 56 *eP* **P** **05 40 08.0 +0.4**
CMB pmax pmax
comp=Z,10.0nm,1.6s,mb4.5
CMB Columbia Colle 70.34 56 *eP* **P** **05 40 08.0 +0.4**
comp=Z,9.9nm,1.6s,mb4.5
BOZ Bozeman (W) 70.58 46 *eP* **P** **05 40 10.2 +1.2**
BOZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BOZ Bozeman (W) 70.58 46 *eP* **P** **05 40 10.2 +1.2**
comp=Z,2.0nm,0.6s,mb4.2
ANN Anapa 70.73 313 *eP* **P** **05 40 09.4 -0.5**
ANN pmax pmax
comp=Z,58nm,1.0s,mb5.5
AKASG Malin Array Be 70.91 322 P **P** **05 40 10.2 -0.7**
comp=Z,6.5nm,0.5s,mb4.8,baz=43,slow=6.0,SNR=32
NVAR Mina Array Bea 71.37 55 P **P** **05 40 15.1 +1.2**
comp=Z,1.2nm,0.7s,mb4.0,baz=299,slow=6.7,SNR=13
RRI2 Red Ridge 72.26 47 *eP* **P** **05 40 21.1 +2.0**
comp=Z,5.2nm,1.0s,mb4.4
PDAR Pinedale Array 73.61 47 P **P** **05 40 27.1 0.0**
comp=Z,1.6nm,0.7s,mb4.1,baz=291,slow=2.3,SNR=15
MALT Malatya 74.41 308⇑*iP* **P** **05 40 32.4 +0.5**
MALT Malatya 74.41 308 *eP* **P** **05 40 32.3 +0.5**
ULM Lac du Bonnet 74.90 34 P **P** **05 40 33.8 -0.7**
comp=Z,2.3nm,0.6s,mb4.3,baz=336,slow=9.2,SNR=4.4
BURAR Bucovina Array 74.96 322⇓*iP* **P** **05 40 35.2 +0.4**
KOLS Kolonicke sedl 75.31 324 *eP* **P** **05 40 36.8 -0.1**
STHS Stebnicka Huta 75.40 325 *eP* **P** **05 40 37.7 +0.4**
STHS pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
STHS Stebnicka Huta 75.40 325 *eP* **P** **05 40 37.7 +0.4**
comp=Z,4.8nm,0.6s,mb4.6
OJC Ojcow 75.40 326 *eP* **P** **05 40 37.1 -0.2**
VRI Vrincioaia 75.51 319⇑*iP* **P** **05 40 39.3 +1.3**
VRI Vrincioaia 75.51 319⇑*P* **P** **05 40 39.3 +1.3**
SRU San Rafael 75.53 50 *eP* **P** **05 40 39.7 +1.4**
SRU pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
SRU San Rafael 75.53 50 *eP* **P** **05 40 39.6 +1.3**
comp=Z,4.0nm,0.9s,mb4.3
CRVS Cervenica-Dubn 75.69 324 *eP* **P** **05 40 39.1 +0.1**
KECS Kecovo 76.43 325 *eP* **P** **05 40 41.9 -1.3**
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
KECS Kecovo 76.43 325 *eP* **P** **05 40 41.9 -1.3**
comp=Z,1.5nm,1.0s,mb3.9
VOIR 76.63 320⇑*iP* **P** **05 40 45.3 +0.9**
VOIR 76.63 320⇑*P* **P** **05 40 45.3 +0.9**
MORC Moravsky Berou 76.67 327 *eP* **P** **05 40 45.2 +0.6**
MORC pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MORC Moravsky Berou 76.67 327⇓*iP* **P** **05 40 45.2 +0.6**
MORC Moravsky Berou 76.67 327 *eP* **P** **05 40 45.2 +0.6**
comp=Z,7.7nm,1.0s,mb4.6
UPC Upice 76.71 328 *eP* **P** **05 40 45.0 +0.2**
DPC Dobruska-Polom 76.71 328 *eP* **P** **05 40 45.2 +0.4**
DRGR 76.72 322⇓*iP* **P** **05 40 45.5 +0.6**
DRGR 76.72 322⇓*P* **P** **05 40 45.5 +0.6**
PV10 Paradox Valley 76.88 50 *eP* **P** **05 40 48.0 +2.0**
VYHS Vyhne 77.13 325 *eP* **P** **05 40 47.1 -0.1**
VYHS pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
VYHS Vyhne 77.13 325 *eP* **P** **05 40 47.1 -0.1**
comp=Z,0.7nm,0.5s,mb3.9
BRG Berggiesshubel 77.22 329 *eP* **P** **05 40 44.0 -3.7**
comp=Z,3.0nm,0.6s,mb4.4
BRG *i* 05 47 47.5
comp=Z,2.8nm,0.6s
CLL Collm 77.22 330⇑*iP* **P** **05 40 47.0 -0.6**
CLL *i* pP 05 41 06.0 +1.5
CLL pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CLL Collm 77.22 330 *eP* **P** **05 40 46.9 -0.7**
comp=Z,9.0nm,0.9s,mb4.7
CLL Collm 77.22 330⇑*iP* **P** **05 40 47.0 -0.6**
comp=Z,9.0nm,0.9s,mb4.7
CLL *i* (pP) pP 05 41 06.0 +1.5
PVCC Panska Ves 77.25 329 *eP* **P** **05 40 48.2 +0.4**
PRU Pruhonice 77.69 329 *eP* **P** **05 40 50.6 +0.3**
CLZ Clausthal 77.73 332 *eP* **P** **05 40 50.6 +0.1**
CLZ pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
CLZ Clausthal 77.73 332 *eP* **P** **05 40 50.6 +0.1**
comp=Z,9.0nm,0.6s,mb4.9
GZR Gura Zlata 77.73 321⇑*iP* **P** **05 40 51.2 +0.6**
GZR Gura Zlata 77.73 321⇑*P* **P** **05 40 51.2 +0.6**
BZS Buzias 78.10 322⇓*iP* **P** **05 40 53.1 +0.4**
BZS Buzias 78.10 322⇓*P* **P** **05 40 53.1 +0.5**
KHC Kasperske Hory 78.76 329 *eP* **P** **05 40 56.7 +0.5**
KHC *e*p*P* pP 05 41 15.1 +2.0
ROTZ Rotzenmuhle 78.77 330 *eP* **P** **05 40 56.7 +0.5**
comp=Z,7.0nm,1.0s,mb4.5
GERES GERESS Array B 78.94 328 P **P** **05 40 56.6 -0.6**
comp=Z,1.5nm,0.5s,mb4.1,baz=33,slow=5.1,SNR=13
WET Wettzell 79.02 329 *eP* **P** **05 40 58.0 +0.4**
WET pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
WET Wettzell 79.02 329 *eP* **P** **05 40 58.0 +0.4**
comp=Z,5.0nm,0.6s,mb4.6
GRA1 Grafenberg Arr 79.19 330 *eP* **P** **05 40 58.9 +0.3**
comp=Z,14nm,0.9s,mb4.9
GRF Grafenberg Arr 79.19 330 *eP* **P** **05 40 58.9 +0.3**
GRF pmax pmax
comp=Z,14nm,0.9s,mb4.9
GRF Grafenberg Arr 79.19 330 *eP* **P** **05 40 58.9 +0.3**
GRF pmax pmax
comp=Z,14nm,0.9s,mb4.9
GRF Grafenberg Arr 79.19 330 *eP* **P** **05 40 58.9 +0.3**
comp=Z,14nm,0.9s,mb4.9
ECSD EROS,Sioux Fal 79.50 39 *eP* **P** **05 41 00.6 +0.2**
VTS Vitosha 79.63 319⇑*iP* **P** **05 41 01.6 +0.5**
VTS Vitosha 79.63 319⇑*P* **P** **05 41 01.6 +0.5**
RJOB Jochberg 80.19 328 *eP* **P** **05 41 04.5 +0.5**
comp=Z,9.0nm,0.9s,mb4.7

SCHQ Schefferville 80.33 17 P **P** **05 41 04.3 -0.3**
comp=Z,4.2nm,0.7s,mb4.5,baz=355,slow=5.8,SNR=4.5
ANMO Albuquerque 80.75 51 *eP* **P** **05 41 06.1 -1.2**
GIVF Givet 81.08 334 *eP* **P** **05 41 08.8 +0.1**
BAIF Baives 81.32 334 *eP* **P** **05 41 09.2 -0.8**
BFO Black Forest 81.39 331 *eP* **P** **05 41 10.3 -0.1**
BFO pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BFO Black Forest 81.39 331 *eP* **P** **05 41 10.3 -0.1**
comp=Z,10.0nm,1.1s,mb4.7
CDF Champ du Feu 81.69 332⇑*iP* **P** **05 41 11.6 -0.4**
comp=Z,10nm,0.8s,mb4.5
CDF Champ du Feu 81.69 332⇑*iP* **P** **05 41 11.6 -0.4**
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CDF Champ du Feu 81.69 332⇑*iP* **P** **05 41 11.6 -0.4**
comp=Z,5.2nm,0.8s,mb4.5
HINF Hinteralfeld 82.35 332 *eP* **P** **05 41 15.2 -0.2**
HAU Haudompre 82.36 332 *eP* **P** **05 41 14.8 -0.7**
comp=Z,11nm,0.8s,mb4.5
HAU Haudompre 82.36 332 *eP* **P** **05 41 14.8 -0.7**
HAU pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
HAU Haudompre 82.36 332 *eP* **P** **05 41 14.8 -0.7**
comp=Z,5.3nm,0.8s,mb4.5
CABF La Chapelle 83.65 331 *eP* **P** **05 41 22.3 +0.1**
LOR Lormes 83.86 333⇑*iP* **P** **05 41 22.6 -0.6**
comp=Z,20nm,0.8s,mb5.0
LOR Lormes 83.86 333⇑*iP* **P** **05 41 22.6 -0.6**
LOR pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
LOR Lormes 83.86 333⇑*iP* **P** **05 41 22.6 -0.6**
comp=Z,9.9nm,0.8s,mb5.0
LDF La Druitiere 83.96 336 *eP* **P** **05 41 23.5 -0.2**
comp=Z,7.2nm,0.6s,mb4.7
LDF La Druitiere 83.96 336 *eP* **P** **05 41 23.5 -0.2**
LDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
LDF La Druitiere 83.96 336 *eP* **P** **05 41 23.5 -0.2**
comp=Z,3.6nm,0.6s,mb4.7
SSF Saint Saulge 84.15 333 *eP* **P** **05 41 24.2 -0.6**
comp=Z,19nm,0.9s,mb4.9
SSF Saint Saulge 84.15 333 *eP* **P** **05 41 24.2 -0.6**
SSF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
SSF Saint Saulge 84.15 333 *eP* **P** **05 41 24.2 -0.6**
comp=Z,9.6nm,0.9s,mb4.9
LPL La Plagne 84.35 330⇑*iP* **P** **05 41 25.9 +0.1**
comp=Z,8.2nm,0.8s,mb4.6
LPL La Plagne 84.35 330⇑*iP* **P** **05 41 25.9 +0.1**
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
LPL La Plagne 84.35 330⇑*iP* **P** **05 41 25.9 +0.1**
comp=Z,4.1nm,0.8s,mb4.6
LPG La Plagne 84.36 330⇑*iP* **P** **05 41 26.1 +0.3**
comp=Z,10nm,0.7s,mb4.8
LPG La Plagne 84.36 330⇑*iP* **P** **05 41 26.1 +0.3**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
LPG La Plagne 84.36 330⇑*iP* **P** **05 41 26.1 +0.3**
comp=Z,5.2nm,0.7s,mb4.8
GRR Gorron 84.36 336 *eP* **P** **05 41 25.3 -0.5**
comp=Z,16nm,0.8s,mb4.9
GRR Gorron 84.36 336 *eP* **P** **05 41 25.3 -0.5**
GRR pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
GRR Gorron 84.36 336 *eP* **P** **05 41 25.3 -0.5**
comp=Z,8.1nm,0.8s,mb4.9
SMF Signal de Mont 84.40 333⇑*iP* **P** **05 41 25.6 -0.4**
comp=Z,15nm,0.7s,mb4.9
SMF Signal de Mont 84.40 333⇑*iP* **P** **05 41 25.6 -0.4**
SMF pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
SMF Signal de Mont 84.40 333⇑*iP* **P** **05 41 25.6 -0.4**
comp=Z,7.3nm,0.7s,mb4.9
AVF Avril sur Loir 84.44 333⇑*iP* **P** **05 41 25.9 -0.3**
comp=Z,25nm,0.7s,mb5.1
AVF Avril sur Loir 84.44 333⇑*iP* **P** **05 41 25.9 -0.3**
AVF pmax pmax
comp=Z,13nm,0.7s,mb5.2
AVF Avril sur Loir 84.44 333⇑*iP* **P** **05 41 25.9 -0.3**
comp=Z,12nm,0.7s,mb5.2
BGF Bois d'Agland 84.81 333 *eP* **P** **05 41 28.3 +0.2**
SGMF Saint Gilles 84.98 337 *eP* **P** **05 41 28.6 -0.3**
comp=Z,5.1nm,0.8s,mb4.5
SGMF Saint Gilles 84.98 337 *eP* **P** **05 41 28.6 -0.3**
SGMF pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
SGMF Saint Gilles 84.98 337 *eP* **P** **05 41 28.6 -0.3**
comp=Z,2.5nm,0.7s,mb4.5
MBDF Montbardon 85.01 330⇑*iP* **P** **05 41 28.6 -0.5**
comp=Z,12nm,0.8s,mb4.8
MBDF Montbardon 85.01 330⇑*iP* **P** **05 41 28.6 -0.5**
MBDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
MBDF Montbardon 85.01 330⇑*iP* **P** **05 41 28.6 -0.5**
comp=Z,6.0nm,0.8s,mb4.8
ROSF Rostrenen 85.11 338 *eP* **P** **05 41 29.6 +0.1**
ORIF Oris-en-Rattie 85.17 331⇑*iP* **P** **05 41 29.9 0.0**
comp=Z,8.4nm,0.7s,mb4.7
ORIF Oris-en-Rattie 85.17 331⇑*iP* **P** **05 41 29.9 0.0**
ORIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
ORIF Oris-en-Rattie 85.17 331⇑*iP* **P** **05 41 29.9 0.0**
comp=Z,4.2nm,0.7s,mb4.7
TCF Toulx Ste Croi 85.26 334⇑*iP* **P** **05 41 30.2 -0.2**
comp=Z,7.6nm,0.7s,mb4.6
TCF Toulx Ste Croi 85.26 334⇑*iP* **P** **05 41 30.2 -0.2**
TCF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
TCF Toulx Ste Croi 85.26 334⇑*iP* **P** **05 41 30.2 -0.2**
comp=Z,3.8nm,0.7s,mb4.6
QUIF Quistinic 85.46 338 *eP* **P** **05 41 31.0 -0.3**
SBF Sospel 85.50 329 *eP* **P** **05 41 30.6 -1.0**
comp=Z,16nm,0.6s,mb5.0
SBF Sospel 85.50 329 *eP* **P** **05 41 30.6 -1.0**
SBF pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
SBF Sospel 85.50 329 *eP* **P** **05 41 30.6 -1.0**
comp=Z,7.8nm,0.6s,mb5.0
VIVF Saint-Julien-l 85.67 331⇑*iP* **P** **05 41 32.3 -0.1**
comp=Z,13nm,0.8s,mb4.9
VIVF Saint-Julien-l 85.67 331⇑*iP* **P** **05 41 32.3 -0.1**
VIVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
VIVF Saint-Julien-l 85.67 331⇑*iP* **P** **05 41 32.3 -0.1**
comp=Z,6.3nm,0.8s,mb4.9
MFF Saint Martin d 85.74 335 *eP* **P** **05 41 32.7 0.0**
comp=Z,15nm,0.9s,mb5.0
MFF Saint Martin d 85.74 335 *eP* **P** **05 41 32.7 0.0**
MFF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
MFF Saint Martin d 85.74 335 *eP* **P** **05 41 32.7 0.0**
comp=Z,7.7nm,0.9s,mb4.9
LMR La Mourre 86.30 329 *eP* **P** **05 41 34.9 -0.6**
comp=Z,15nm,0.7s,mb5.1
LMR La Mourre 86.30 329 *eP* **P** **05 41 34.9 -0.6**
LMR pmax pmax
comp=Z,8.0nm,0.7s,mb5.1
LMR La Mourre 86.30 329 *eP* **P** **05 41 34.9 -0.6**
comp=Z,7.6nm,0.7s,mb5.0
RJF Les Rejaudoux 86.36 334⇑*iP* **P** **05 41 35.9 +0.1**
comp=Z,14nm,0.8s,mb4.9
RJF Les Rejaudoux 86.36 334⇑*iP* **P** **05 41 35.9 +0.1**
RJF pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
RJF Les Rejaudoux 86.36 334⇑*iP* **P** **05 41 35.9 +0.1**
comp=Z,6.8nm,0.8s,mb4.9
TXAR Lajitas Array 86.43 53 P **P** **05 41 36.9 +0.4**
comp=Z,1.0nm,0.7s,mb4.2,baz=288,slow=3.2,SNR=17
CAF Calviac 86.51 333⇑*iP* **P** **05 41 37.1 +0.6**
comp=Z,25nm,0.8s,mb5.2
CAF Calviac 86.51 333⇑*iP* **P** **05 41 37.1 +0.6**
CAF pmax pmax
comp=Z,13nm,0.8s,mb5.2
CAF Calviac 86.51 333⇑*iP* **P** **05 41 37.1 +0.6**
comp=Z,13nm,0.8s,mb5.2
LFF La Frestale 86.94 334 *eP* **P** **05 41 39.1 +0.5**
comp=Z,77nm,1.4s,mb5.4
LFF La Frestale 86.94 334 *eP* **P** **05 41 39.1 +0.5**
LFF pmax pmax
comp=Z,38nm,1.4s,mb5.4
LFF La Frestale 86.94 334 *eP* **P** **05 41 39.1 +0.5**
comp=Z,38nm,1.4s,mb5.4
MTLF Montolieu 87.85 332 *eP* **P** **05 41 43.4 +0.3**
ETSF Etsaut 89.18 334 *eP* **P** **05 41 49.9 +0.6**
comp=Z,8.5nm,0.7s,mb4.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ETSF	**Etsaut**	**89.18**	**334**	*e*P	**P**	**05 41 49.9**	**+0.6**
ETSF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.9						
ETSF	**Etsaut**	**89.18**	**334**	*e*P	**P**	**05 41 49.9**	**+0.6**
	comp=Z,4.3nm,0.7s,mb4.9						
SJPF	**Ste Jean**	**89.21**	**334**	*e*P	**P**	**05 41 49.3**	**-0.2**
	comp=Z,28nm,1.3s,mb5.2						
SJPF	**Ste Jean**	**89.21**	**334**	*e*P	**P**	**05 41 49.3**	**-0.2**
SJPF				pmax	pmax		
	comp=Z,14nm,1.3s,mb5.1						
SJPF	**Ste Jean**	**89.21**	**334**	*e*P	**P**	**05 41 49.3**	**-0.2**
	comp=Z,14nm,1.3s,mb5.1						
ESDC	**Sonseca Array**	**93.19**	**335**	P	**P**	**05 42 07.9**	**-0.1**
	comp=Z,0.4nm,0.5s,mb4.1,baz=60,slow=7.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**114.34**	**318**	PKP	PKiKP	05 47 32.7	-0.9
	comp=Z,1.9nm,1.4s,baz=16,slow=1.6,SNR=6.4						
TORD	**Torodi Ar. Bea**	**114.34**	**318**	PKP	PKiKP	05 47 32.7	-0.9
SNAA	**Sanae**	**145.74**	**199**	*e*PKPdf	PKPdf	05 48 29.7	-1.0
SNAA				*e*		05 48 52.2	
SNAA	**Sanae**	**145.74**	**199**	*e*P	PKPdf	05 48 30.9	+0.3
VNA2	**Neumayer--Watz**	**147.32**	**198**	*e*PKPdf	PKPdf	05 48 35.9	+2.6
VNA2				*e*		05 48 57.6	
VNA3	**Neumayer Olymp**	**147.58**	**196**	*e*PKPdf	PKPdf	05 48 35.0	+1.2
VNA1	**Neumayer--Stat**	**147.72**	**198**	*e*PKPdf	PKPbc	05 48 37.1	+0.2
VNA1				*e*		05 48 57.6	
BDFB	**Brasilia**	**152.20**	**22**	PKPbc	PKPbc	05 48 49.6	+0.2
	comp=Z,3.5nm,1.0s,baz=280,slow=8.0,SNR=4.6						
BDFB	**Brasilia**	**152.20**	**22**	PKIKP	PKPbc	05 48 49.6	+0.2
BDFB				pmax	pmax		
	comp=Z,4.0nm,1.0s						

*ISCJB **10** 05:41:20.4±0.3, 2424N±002×12232E±002, h39km±15km, Error ellipse: s-maj=3.9km s-min=2.5km az=164.5*
*JMA **10** 05:41:20.4±0.2, 2446N×12235E, h65km±2km, M2.5*
*TAP **10** 05:41:20.5, 2429N×12226E, h51km, ML3.5, C*
ISC 10 05:41:20.8±0.5**, 2425N**±002×**12232E**±002**, h34**km±3km**, n51, σ0s74**/97**, 3C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.56**	**289**	*i* P	**Pb**	**05 41 32.1**	**-0.3**
	baz=292						
ENA				*e*S	**Sb**	**05 41 40.7**	**+0.4**
	baz=292						
TWC	**Suao**	**0.56**	**310**	*i* P	**Pb**	**05 41 32.1**	**-0.3**
	baz=313						
TWC				S	**Sb**	**05 41 40.1**	**-0.3**
	baz=313						
YOJ	**Yonaguni jima**	**0.67**	**71**	P	**Pn**	**05 41 34.0**	**+0.1**
YOJ				S	**Sb**	**05 41 43.9**	**+0.7**
TWD	**Chiawan**	**0.68**	**256**	*e*P	**Pn**	**05 41 33.7**	**-0.3**
	baz=242						
TWD				S	**Sb**	**05 41 43.2**	**-0.4**
	baz=242						
HWA	**Hwalien**	**0.71**	**248**	*e*P	**Pn**	**05 41 34.1**	**-0.3**
	baz=243						
HWA				*e*S	**Sb**	**05 41 44.1**	**-0.2**
	baz=243						
ILA	**Ilan**	**0.73**	**315**	*e*P	**Pn**	**05 41 34.7**	**-0.1**
	baz=325						
ILA				*e*S	**Sn**	**05 41 45.0**	**+0.3**
	baz=325						
TWE	**Neicheng**	**0.76**	**309**	P	**Pn**	**05 41 35.1**	**0.0**
	baz=308						
TWE				S	**Sn**	**05 41 45.5**	**+0.1**
	baz=308						
ENTT	**Nioudou**	**0.79**	**300**	⇑*i*P	**Pn**	**05 41 35.6**	**0.0**
	baz=291						
ENTT				S	**Sn**	**05 41 46.0**	**-0.1**
	baz=291						
TWB1	**Santiao Chiao**	**0.81**	**338**	*e*P	**Pn**	**05 41 35.3**	**-0.6**
	baz=331						
TWB1				S	**Sn**	**05 41 45.8**	**-1.1**
	baz=331						
NNS	**Nan Shan**	**0.88**	**283**	*e*P	**Pn**	**05 41 36.5**	**-0.3**
	baz=270						
NNS				S	**Sn**	**05 41 48.5**	**0.0**
	baz=270						
TEGC	**Jichi Village**	**0.89**	**233**	*e*P	**Pn**	**05 41 36.3**	**-0.7**
	baz=222						
ESL	**Shilin**	**0.92**	**242**	*e*P	**Pn**	**05 41 37.3**	**0.0**
	baz=249						
ESL				*e*S	**Sn**	**05 41 48.8**	**-0.5**
	baz=249						
NWF	**Wu-fen Shan**	**0.95**	**329**	*e*P	**Pn**	**05 41 37.3**	**-0.5**
	baz=331						
NWF				S	**Sn**	**05 41 49.4**	**-0.9**
	baz=331						
WHF	**Hehuan Shan**	**0.97**	**264**	⇑*i*P	**Pn**	**05 41 37.6**	**-0.4**
	baz=253						
WHF				S	**Sn**	**05 41 50.2**	**-0.4**
	baz=253						
NSK	**Sanguang**	**0.97**	**296**	⇑*i*P	**Pn**	**05 41 38.0**	**-0.1**
	baz=284						
TWA	**Mucha**	**0.99**	**318**	*e*P	**Pn**	**05 41 38.9**	**+0.6**
	baz=329						
TWA				S	**Sn**	**05 41 51.1**	**0.0**
	baz=329						
EHY	**Hungye**	**1.17**	**231**	*e*P	**Pn**	**05 41 40.0**	**-0.8**
	baz=228						
EHY				*e*S	**Sn**	**05 41 54.3**	**-1.4**
	baz=228						
TWS1	**Kuangyinshan**	**1.18**	**316**	*e*P	**Pn**	**05 41 40.5**	**-0.4**
	baz=328						
TWS1				*e*S	**Sn**	**05 41 55.9**	**+0.1**
	baz=328						
TWY	**Chenhua**	**1.21**	**328**	*e*P	**Pn**	**05 41 41.7**	**+0.3**
	baz=328						
TWY				*e*S	**Sn**	**05 41 55.9**	**-0.8**
	baz=328						
NSTT	**Nanjuang**	**1.26**	**288**	P	**Pn**	**05 41 42.4**	**+0.3**
	baz=279						
NSTT				*e*S	**Sn**	**05 41 57.9**	**+0.1**
	baz=279						
IRIF	**Iriomote-Funau**	**1.29**	**86**	P	**Pn**	**05 41 42.2**	**-0.3**
IRIF				*e*S	**Sn**	**05 41 58.6**	**0.0**
TWF1	**Yuli**	**1.29**	**227**	*e*P	**Pn**	**05 41 41.4**	**-1.1**
	baz=234						
TWF1				*e*S	**Sn**	**05 41 57.2**	**-1.4**
	baz=234						
SMLT	**Sun Moon Lake**	**1.35**	**255**	*e*P	**Pn**	**05 41 43.5**	**+0.3**
	baz=247						
SMLT				S	**Sn**	**05 41 60.0**	**0.0**
	baz=247						
HATJ	**Hateruma jima**	**1.37**	**98**	P	**Pn**	**05 41 44.1**	**+0.5**
HATJ				*e*S	**Sn**	**05 42 02.0**	**+1.5**
TYC	**Yuchr**	**1.38**	**256**	*e*P	**Pn**	**05 41 43.9**	**+0.2**
	baz=246						
TYC				*e*S	**Sn**	**05 41 59.8**	**-0.9**
	baz=246						
PCYT	**Pengchaiyu**	**1.39**	**351**	*e*P	**Pn**	**05 41 45.0**	**+1.1**
	baz=343						
PCYT				*e*S	**Sn**	**05 42 01.5**	**+0.4**
	baz=343						
TWQ1	**Liyutan**	**1.41**	**274**	*e*P	**Pn**	**05 41 44.2**	**0.0**
	baz=272						
TWQ1				*e*S	**Sn**	**05 42 01.8**	**+0.2**
	baz=272						
NSY	**Sanyi**	**1.43**	**277**	*e*P	**Pn**	**05 41 44.7**	**+0.3**
	baz=275						
NSY				*e*S	**Sn**	**05 42 02.5**	**+0.5**
	baz=275						
CHKT	**Chengkung**	**1.44**	**218**	⇓*i*P	**Pn**	**05 41 42.9**	**-1.6**
	baz=207						
CHKT				*e*S	**Sn**	**05 41 58.8**	**-3.4**
	baz=207						
YUS	**Yu-Shan**	**1.46**	**239**	⇓*i*P	**Pn**	**05 41 45.2**	**+0.4**
	baz=237						
YUS				*e*S	**Sn**	**05 42 02.4**	**-0.3**
	baz=237						
TCU	**Taichung**	**1.50**	**267**	*e*P	**Pn**	**05 41 46.4**	**+1.0**
	baz=265						
TCU				*e*S	**Sn**	**05 42 04.3**	**+0.5**
	baz=265						
JKRS	**Kuro-shima**	**1.54**	**90**	P	**Pn**	**05 41 46.2**	**+0.3**
JKRS				S	**Sn**	**05 42 05.2**	**+0.4**
ALS	**Alishan**	**1.57**	**242**	*e*P	**Pn**	**05 41 46.9**	**+0.6**
	baz=233						
ALS				*e*S	**Sn**	**05 42 05.8**	**+0.4**
	baz=233						
CHN5	**Tsauling**	**1.64**	**247**	*e*P	**Pn**	**05 41 46.3**	**-0.9**
	baz=236						
CHN5				*e*S	**Sn**	**05 42 07.2**	**+0.1**
	baz=236						
JIJ	**Ishigaki jima**	**1.67**	**86**	P	**Pn**	**05 41 47.1**	**-0.6**
JIJ				S	**Sn**	**05 42 06.8**	**-1.1**
STYT	**Tauyuan**	**1.79**	**233**	*e*P	**Pn**	**05 41 49.7**	**+0.3**
	baz=226						
STYT				*e*S	**Sn**	**05 42 11.3**	**+0.4**
	baz=226						
CHN4	**Tsaushan**	**1.81**	**241**	*e*P	**Pn**	**05 41 50.8**	**+1.1**
	baz=239						
CHN4				*e*S	**Sn**	**05 42 12.9**	**+1.4**
	baz=239						
TWG	**Pinlang**	**1.82**	**219**	*e*P	**Pn**	**05 41 48.3**	**-1.5**
	baz=218						
TWG				*e*S	**Sn**	**05 42 09.9**	**-1.8**
	baz=218						
CHN2	**Minshiung**	**1.83**	**247**	*e*P	**Pn**	**05 41 50.4**	**+0.5**
	baz=246						
CHN2				*e*S	**Sn**	**05 42 12.3**	**+0.4**
	baz=246						
WTP	**Ta-pu**	**1.85**	**238**	P	**Pn**	**05 41 50.9**	**+0.7**
	baz=236						
WTP				*e*S	**Sn**	**05 42 12.8**	**+0.4**
	baz=236						
CHY	**Chiayi**	**1.89**	**247**	*e*P	**Pn**	**05 41 51.4**	**+0.7**
	baz=236						
CHY				*e*S	**Sn**	**05 42 13.7**	**+0.3**
	baz=236						
WTCT	**Ta-ch'eng**	**1.90**	**259**	*e*P	**Pn**	**05 41 51.0**	**+0.1**
	baz=257						
WTCT				*e*S	**Sn**	**05 42 14.2**	**+0.6**
	baz=257						
TWK	**Hsinying**	**1.94**	**240**	*e*P	**Pn**	**05 41 52.5**	**+1.1**
	baz=239						
TWK				*e*S	**Sn**	**05 42 15.2**	**+0.6**
	baz=239						
CHN1	**Nanshi**	**1.95**	**238**	*e*P	**Pn**	**05 41 52.3**	**+0.7**
	baz=236						
CHN1				*e*S	**Sn**	**05 42 16.4**	**+1.5**
	baz=236						
SGST	**Jiashian**	**1.97**	**234**	*e*P	**Pn**	**05 41 52.5**	**+0.7**
	baz=233						
SGST				*e*S	**Sn**	**05 42 16.2**	**+0.9**
	baz=233						
ECL	**Taimali**	**2.07**	**218**	*e*P	**Pn**	**05 41 51.4**	**-1.7**
	baz=222						
SSD	**Sandimen**	**2.15**	**226**	*e*P	**Pn**	**05 41 55.1**	**+0.8**
	baz=217						
SSD				*e*S	**Sn**	**05 42 20.8**	**+1.0**
	baz=217						
JTJ	**Tarama**	**2.21**	**79**	P	**Pn**	**05 41 55.1**	**0.0**
JTJ				*e*S	**Sn**	**05 42 20.7**	**-0.5**
TWM1	**Shoushan**	**2.25**	**231**	*e*P	**Pn**	**05 41 56.6**	**+1.1**
	baz=230						
LAY	**Lan-yu**	**2.31**	**198**	*e*P	**Pn**	**05 41 54.8**	**-1.7**
	baz=196						
PNG	**Penghu**	**2.62**	**256**	*e*P	**Pn**	**05 42 01.5**	**+0.7**
	baz=254						
PNG				*e*S	**Sn**	**05 42 30.1**	**-1.2**
	baz=254						

FUNV 10 05:42:27.0, 683N×7308W, h170km, MW3.5, 6C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.28**	**36**	⇑*e*P	Pn	05 42 55.6	-0.6
CAPV				*e*S	Sn	05 43 16.9	-1.7
VIGV	**El Vigia**	**2.63**	**40**	*e*P	Pn	05 43 10.1	-0.6
VIGV				*e*S	Sn	05 43 40.4	-4.1
SOCV	**Socops**	**2.64**	**57**	⇑*e*P	Pn	05 43 10.2	-0.6
SOCV				*e*S	Sn	05 43 42.0	-2.8
ELOV	**Elorza**	**3.58**	**87**	⇑*i*P	Pn	05 43 21.6	-0.9
VIRV	**Villa del Rosa**	**3.71**	**10**	⇓*e*P	Pn	05 43 22.4	-1.8
VIRV				*e*S	Sn	05 44 04.0	-4.8
QARV	**Quebrada Arrib**	**4.21**	**37**	⇓*e*P	Pn	05 43 29.9	-0.6
QARV				*e*S	Sn	05 44 15.3	-4.8
CURV	**Curarigua**	**4.42**	**44**	⇓*e*P	Pn	05 43 32.2	-1.1
CURV				*e*S	Sn	05 44 20.0	-5.1
TEPV	**Terepaima**	**4.95**	**51**	⇑*e*P	Pn	05 43 38.6	-1.5
SIQV	**Siquisique**	**4.99**	**40**	⇓*e*P	Pn	05 43 39.4	-1.2
BAUV	**El Baul**	**5.42**	**67**	⇑*e*P	Pn	05 43 43.5	-2.8
TURV	**Turiamo**	**6.31**	**55**	*e*P	Pn	05 43 57.0	-1.0
CAOV	**Caicara del Or**	**6.73**	**85**	⇑*e*P	Pn	05 44 00.6	-2.9
BIRV	**Birongo**	**7.65**	**61**	*e*P	Pn	05 44 13.2	-2.5
CUPV	**Cœpira**	**7.90**	**66**	*e*P	Pn	05 44 16.4	-2.5

*DJA **10** 05:57:48, 503S×14700E, h155km, mb4.4/4*
*ISCJB **10** 05:57:49.6±1.1, 529S±007×147.11E±009, h182km±11km, mb4.0/12, Error ellipse: s-maj=16.1km s-min=8.0km az=31.1*
*NEIC **10** 05:57:53.0±1.4, 540S×14707E, h201km±14km, mb4.7/7, Error ellipse: s-maj=14.8km s-min=11.8km az=112.0*
*IDC **10** 05:57:53.7±0.9, 542S×14701E, h210km±7km, mb3.8/11, mb1 4.0/13, mb1mx3.9/18, mbtmp3.8/13, Error ellipse: s-maj=21.8km s-min=9.7km az=109.0*
ISC 10 05:57:53.9±1.1**, 545S**±007×**1471E**±01**, h210**km±11km**, n29, σ0s92**/31**, mb4.0**/12**, 2D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.93**	**179**	⇓*i*Pn	**Pn**	**05 58 53.3**	**-1.9**
PMG				*e*S	**S**	**05 59 39.3**	**-4.3**
COEN	**Coen**	**9.28**	**204**	*e*Pn	**Pn**	**06 00 03.6**	**-0.2**
	7.4nm,0.3s						
COEN				*e*S	**S**	**06 01 49.1**	**+1.1**
CTA	**Charters Tower**	**14.57**	**183**	*e*P	**Pn**	**06 01 11.3**	**+0.8**
	17nm,1.2s						
CTA				*e*		06 01 37.6	
CTA	**Charters Tower**	**14.57**	**183**	P	**Pn**	**06 01 11.6**	**+1.1**
	0.8nm,0.3s,baz=360,slow=12,SNR=14						
CTAO	**Charters Tower**	**14.57**	**183**	*e*Pn	**Pn**	**06 01 11.5**	**+1.0**
	37nm,1.2s						
KAKA	**Kakadu**	**16.14**	**242**	*e*P	**P**	**06 01 28.9**	**+0.1**
	32nm,0.6s						
KAKA				*e*S	**S**	**06 04 22.8**	**-4.6**
WRAB	**Tennant Creek**	**18.98**	**220**	*e*P	**P**	**06 01 60.0**	**+0.2**
	26nm,0.6s						
WRAB				*e*S	**S**	**06 05 25.3**	**+1.3**
WB2	**Warramunga Arr**	**18.99**	**220**	⇓*i*P	**P**	**06 02 00.1**	**+0.3**
WB2				*e*S	**S**	**06 05 22.4**	**-1.8**
WRA	**Warramunga Arr**	**19.00**	**220**	P	**P**	**06 02 00.3**	**+0.4**
	4.6nm,0.3s,baz=46,slow=12,SNR=197						
WRA				pP		06 02 35.4	
	baz=42,slow=12,SNR=1.3						
WRA				S	**S**	**06 05 23.7**	**-0.7**
	0.2nm,0.3s,baz=40,slow=21,SNR=6.4						
ASAR	**Alice Springs**	**22.11**	**214**	P	**P**	**06 02 33.0**	**+0.7**
	7.7nm,0.5s,mb4.5,baz=48,slow=8.6,SNR=89						
ASAR				S	**S**	**06 06 20.9**	**+0.3**
	2.7nm,0.9s,baz=32,slow=18,SNR=6.1						
ASAR	**Alice Springs**	**22.11**	**214**	P	**P**	**06 02 33.0**	**+0.7**
ASAR				S	**S**	**06 06 20.9**	**+0.3**
FITZ	**Fitzroy Crossi**	**24.42**	**237**	*e*P	**P**	**06 02 53.8**	**+0.4**
	23nm,0.4s,mb5.2						
FITZ				*e*		06 03 40.6	
FITZ	**Fitzroy Crossi**	**24.42**	**237**	P	**P**	**06 02 53.9**	**+0.6**
	12nm,0.5s,mb4.8,baz=47,slow=12,SNR=63						
STKA	**Stephens Creek**	**26.79**	**190**	*e*	pP	06 03 59.0	+2.4
URZ	**Urewera**	**42.55**	**144**	P	**P**	**06 05 29.0**	**-0.1**
	10nm,1.0s,mb4.2,baz=190,slow=6.1,SNR=3.9						
CMAR	**Chiang Mai Arr**	**53.05**	**298**	PcP	PcP	06 07 56.2	+0.7
	0.7nm,0.3s,baz=172,slow=2.2,SNR=4.8						
PETK	**Petropavlovsk-**	**59.03**	**7**	P	**P**	**06 07 32.7**	**+1.2**
	1.9nm,0.5s,mb4.0,baz=155,slow=7.9,SNR=2.7						
ULN	**Ulaanbaatar**	**63.66**	**331**	*e*P	**P**	**06 08 03.8**	**+1.1**
	1.3nm,0.6s,mb3.7						
SONM	**Songino Array**	**63.96**	**331**	P	**P**	**06 08 05.0**	**+0.4**
	1.8nm,0.8s,mb3.8,baz=151,slow=5.9,SNR=8.6						
SONM				pP	pP	06 08 52.3	-0.9
	0.7nm,0.9s,baz=114,slow=3.5,SNR=2.0						
MKAR	**Makanchi Array**	**77.12**	**320**	P	**P**	**06 09 23.6**	**-0.5**
	0.9nm,0.7s,mb3.5,baz=99,slow=7.5,SNR=8.4						
MKAR				pP	pP	06 10 13.3	-1.1
	1.6nm,0.9s,baz=109,slow=6.6,SNR=5.4						
ZALV	**Zalesovo Beam**	**78.59**	**328**	P	**P**	**06 09 31.2**	**-0.8**
	2.9nm,0.7s,mb4.0,baz=110,slow=5.8,SNR=7.0						
KURK	**Kurchatov**	**80.81**	**323**	P	**P**	**06 09 43.3**	**-0.8**
	0.5nm,0.8s,mb3.2,baz=95,slow=5.1,SNR=2.8						
MAW	**Mawson**	**82.78**	**203**	P	**P**	**06 09 53.0**	**-1.1**
	1.0nm,0.6s,mb3.7,baz=113,slow=4.5,SNR=6.1						
BVAR	**Borovoye Array**	**86.37**	**324**	P	**P**	**06 10 10.9**	**-1.3**
	0.6nm,0.5s,mb3.6,baz=122,slow=7.2,SNR=3.7						
NVAR	**Mina Array Bea**	**96.98**	**52**	P	**P**	**06 11 02.6**	**+0.8**
	1.0nm,0.7s,mb4.2,baz=251,slow=6.7,SNR=7.9						
GERES	**GERESS Array B**	**121.50**	**326**	PKP	PKPdf	06 16 21.4	-0.9
	0.7nm,0.5s,baz=0.0,slow=0.0,SNR=7.7						
PLCA	**Paso Flores**	**122.54**	**147**	PKP	PKPdf	06 16 24.4	-0.3
	1.1nm,0.9s,baz=259,slow=5.2,SNR=3.1						
LPAZ	**La Paz**	**139.02**	**122**	PKhKP		06 16 51.8	
	0.6nm,0.6s,baz=333,slow=2.9,SNR=3.8						
TORD	**Torodi Ar. Bea**	**145.02**	**285**	PKP	PKPdf	06 17 05.7	-1.5
	1.7nm,0.6s,baz=64,slow=3.9,SNR=31						

*ISCJB **10** 06:00:14.5±1.2, 5148N±005×16.10E±005, h0km, Error ellipse: s-maj=8.1km s-min=3.2km az=20.8*
*WAR **10** 06:00:17.0, 5151N×1609E, ML2.5, Mining Induced*
*PRU **10** 06:00:18.4, 5141N×1607E, h0km*
ISC 10 06:00:17.0±1.2**, 5148N**±006×**1606E**±005**, h0**km**, n15, σ1s14**/24**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**167**	*e*Pg	**Pg**	**06 00 29.9**	**+0.4**
KSP				*e*Sg	**Sg**	**06 00 38.6**	**+0.7**
UPC	**Upice**	**0.97**	**182**	*e*PG	**Pg**	**06 00 35.7**	**+0.1**
DPC	**Dobruska-Polom**	**1.14**	**171**	*e*PG	**Pg**	**06 00 38.1**	**-0.7**
DPC				*e*SG	**Sg**	**06 00 52.8**	**-0.8**
	comp=Z,23nm,0.3s						
PVCC	**Panska Ves**	**1.34**	**225**	*e*PG	**Pg**	**06 00 42.7**	**+0.1**
PVCC				*e*SG	**Sg**	**06 01 01.5**	**+1.6**
	comp=Z,134nm,0.2s						
BRG	**Berggiesshubel**	**1.46**	**246**	PG	**Pg**	**06 00 45.0**	**0.0**
BRG				SG	**Sg**	**06 01 04.8**	**+0.9**
	comp=Z,29nm,0.4s						
PRU	**Pruhonice**	**1.77**	**213**	*e*PG	**Pg**	**06 00 49.8**	**-1.2**
PRU				*e*SG	**Sg**	**06 01 12.6**	**-1.3**
	comp=Z,13nm,0.3s						
CLL	**Collm**	**1.92**	**266**	*e*Pg	**Pg**	**06 00 53.0**	**-0.8**
CLL				*e*x	x	06 00 56.0	
CLL				*i* Sg	**Sg**	**06 01 18.6**	**-0.1**
	comp=Z,16nm,0.7s						
OKC	**Ostrava-Krasne**	**2.11**	**140**	*e*SG	**Sg**	**06 01 22.3**	**-2.5**
NKC	**Novy Kostel**	**2.60**	**243**	*e*SG	**Sg**	**06 01 42.3**	**+1.7**
	comp=Z,29nm,0.3s						
KHC	**Kasperske Hory**	**2.83**	**215**	*e*PG	**Pg**	**06 01 08.3**	**-3.0**
KHC				*e*SN	**Sn**	**06 01 37.0**	**-1.3**
KHC				*e*SG	**Sg**	**06 01 46.9**	**-1.1**
	comp=Z,5.8nm,0.5s						
MOX	**Moxa**	**2.92**	**255**	*e*PG	**Pg**	**06 01 12.5**	**-0.5**
MOX				*e*SG	**Sg**	**06 01 52.5**	**+1.6**
MODS	**Modra-Piesok**	**3.20**	**165**	*e*SG	**Sg**	**06 02 00.3**	**+0.4**
KOLL	**Kolacno**	**3.27**	**152**	*e*SG	**Sg**	**06 02 03.2**	**+1.2**
VYHS	**Vyhne**	**3.48**	**148**	*e*SG	**Sg**	**06 02 10.3**	**+1.5**
STHS	**Stebnicka Huta**	**3.90**	**120**	*e*SG	**Sg**	**06 02 23.3**	**+0.9**

*SKO **10** 06:02:45.3, 3980N×2192E, h2km*
*ISCJB **10** 06:02:45.8±0.4, 3991N±002×2197E±003, h10km, Error ellipse: s-maj=3.4km s-min=2.9km az=139.9*
*NEIC **10** 06:02:46.1, 3991N×2193E, h5km, MD3.3(ATH), After ATH.*
*CSEM **10** 06:02:46.3±0.1, 3991N×2190E, h5km, ML3.4, Error ellipse: s-maj=2.1km s-min=1.5km az=123.0*
*ATH **10** 06:02:46.2, 3991N×2194E, h5km±3km, MD3.3/7*
*THE **10** 06:02:47.7, 3991N×2204E, h0km, ML3.4*
ISC 10 06:02:46.0±0.5**, 3987N**±002×**2194E**±003**, h2**km±8km**, n26, σ0s72**/45**, 1C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.45**	**344**	⇑*i*PB	**Pg**	**06 02 54.3**	**-0.4**
KZN				*e*SB	**Sg**	**06 03 01.0**	**+0.5**
LIT	**Litokhoron**	**0.48**	**62**	*e*Pg	**Pg**	**06 02 55.2**	**0.0**
LIT				*e*Sg	**Sg**	**06 03 01.9**	**+0.4**
JAN	**Janina**	**0.86**	**256**	*e*PB	**Pb**	**06 03 03.0**	**-0.7**
JAN				*e*SB	**Sb**	**06 03 15.2**	**-0.5**
JAN	**Janina**	**0.86**	**256**	*e*Pg	**Pg**	**06 03 02.2**	**-0.3**
JAN				*e*Sb	**Sb**	**06 03 15.2**	**-0.5**
AGG	**Agios Georgios**	**0.90**	**160**	*e*Pg	**Pg**	**06 03 04.3**	**+1.1**
EVR	**Evrytania**	**0.96**	**186**	*e*PG	**Pg**	**06 03 04.8**	**+0.5**
EVR				*e*SB	**Sb**	**06 03 19.4**	**+1.0**
EVR	**Evrytania**	**0.96**	**186**	*e*Pg	**Pg**	**06 03 04.6**	**+0.3**
EVR				*e*Sb	**Sb**	**06 03 19.4**	**+1.0**
GRG	**Griva**	**1.14**	**18**	*e*Pg	**Pg**	**06 03 07.9**	**+0.1**
GRG				*e*Sg	**Sg**	**06 03 24.1**	**+1.4**
GRG	**Griva**	**1.14**	**18**	*e*Pg	**Pg**	**06 03 07.9**	**+0.1**
GRG				*e*Sg	**Sg**	**06 03 24.0**	**+1.4**
NEO	**Neokhori**	**1.14**	**119**	*e*PB	**Pb**	**06 03 08.6**	**+0.2**
BIA	**Bitola**	**1.24**	**338**	*e*Pg	**Pg**	**06 03 09.0**	**-0.7**
BIA				*e*Sg	**Sg**	**06 03 26.5**	**+0.7**
PLG	**Polygyros**	**1.26**	**66**	*e*PB	**Pb**	**06 03 09.6**	**-0.8**
PAIG	**Paliouri**	**1.34**	**87**	*e*Pg	**Pg**	**06 03 11.0**	**-0.7**
PAIG				*e*Sg	**Sg**	**06 03 29.8**	**+0.8**
SOH	**Sokhos**	**1.44**	**48**	*e*Pg	**Pg**	**06 03 13.2**	**-0.3**
SOH				*e*Sg	**Sg**	**06 03 32.9**	**+0.7**
SOH	**Sokhos**	**1.44**	**48**	*e*Pg	**Pg**	**06 03 13.2**	**-0.4**
SOH				*e*Sg	**Sg**	**06 03 32.9**	**+0.7**
KNT	**Kendrikon**	**1.48**	**29**	*e*Pg	**Pg**	**06 03 13.9**	**-0.5**
OHR	**Ohrid**	**1.51**	**325**	*e*Pn	**Pn**	**06 03 14.1**	**0.0**
OHR				*e*Sg	**Sg**	**06 03 34.4**	**-0.1**
OHR	**Ohrid**	**1.51**	**325**	*e*Pn	**Pn**	**06 03 14.0**	**0.0**
OHR				*e*Sg	**Sg**	**06 03 34.4**	**-0.2**
VAY	**Valandovo**	**1.53**	**18**	*e*Pg	**Pg**	**06 03 14.6**	**-0.7**
VAY				*e*Sg	**Sg**	**06 03 34.8**	**-0.2**
VAY	**Valandovo**	**1.53**	**18**	*e*Pn	**Pn**	**06 03 13.9**	**-0.3**
VAY				*e*Sg	**Sg**	**06 03 36.3**	**+1.3**
VAY	**Valandovo**	**1.53**	**18**	*e*Pn	**Pn**	**06 03 13.9**	**-0.3**
VAY	**Valandovo**	**1.53**	**18**	*e*Pg	**Pg**	**06 03 14.6**	**-0.6**
VAY				*e*Sg	**Sg**	**06 03 36.2**	**+1.2**
LKD	**Levkas**	**1.53**	**221**	*e*Pg	**Pg**	**06 03 14.9**	**-0.4**
LKD				*e*Sg	**Sg**	**06 03 41.3**	**+6.1**
OUR	**Ouranopolis**	**1.64**	**73**	*e*Pg	**Pg**	**06 03 15.7**	**-1.6**
OUR				*e*Sg	**Sg**	**06 03 37.7**	**-0.8**
KEK	**Kerkira**	**1.66**	**265**	*e*PB	**Pb**	**06 03 18.0**	**+0.8**
VLS	**Valsamata**	**1.99**	**212**	*e*PN	**Pn**	**06 03 24.6**	**+4.0**

*ISCJB **10** 06:09:12.9±0.8, 4056N±004×2278E±005, h10km, Error ellipse: s-maj=6.1km s-min=5.1km az=142.2*
*THE **10** 06:09:13.0, 4054N×2278E, h1km, ML2.2*
*CSEM **10** 06:09:13.0±0.2, 4052N×2277E, h2km, ML2.2, Error ellipse: s-maj=3.6km s-min=2.3km az=38.0*
*NEIC **10** 06:09:46.4, 3733N×24.13E, h35km, MD2.8(ATH), After ATH.*
*ATH **10** 06:09:46.4, 3733N×24.13E, h35km±2km, MD2.8/6*
ISC 10 06:09:13.4±0.8**, 4056N**±004×**2279E**±005**, h10**km**, n15, σ0s78**/22**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.15**	**60**	*e*Pg	**Pg**	**06 09 16.6**	**-0.2**
THE				*e*Sg	**Sg**	**06 09 18.9**	**-0.3**
HORT	**Hortiatis**	**0.24**	**80**	*e*Pg	**Pg**	**06 09 18.2**	**-0.1**
HORT				*e*Sg	**Sg**	**06 09 21.6**	**0.0**
GRG	**Griva**	**0.50**	**324**	*e*Pg	**Pg**	**06 09 23.2**	**+0.1**
GRG				*e*Sg	**Sg**	**06 09 29.6**	**-0.1**
GRG	**Griva**	**0.50**	**324**	*e*Pg	**Pg**	**06 09 23.2**	**+0.1**
GRG				*e*Sg	**Sg**	**06 09 29.5**	**-0.2**
SOH	**Sokhos**	**0.50**	**58**	*e*Pg	**Pg**	**06 09 23.0**	**-0.2**
SOH				*e*Sg	**Sg**	**06 09 30.9**	**+1.1**
KNT	**Kendrikon**	**0.61**	**8**	*e*Pg	**Pg**	**06 09 24.8**	**-0.4**
KNT				*e*Sg	**Sg**	**06 09 33.3**	**0.0**
PAIG	**Paliouri**	**0.93**	**132**	*e*Pg	**Pg**	**06 09 29.7**	**-1.5**
ATH	**Athens Observa**	**2.68**	**164**	*e*PN	**Pn**	**06 10 00.5**	**+4.0**
ATH	**Athens Observa**	**2.68**	**164**	*e*Pn	**Pn**	**06 10 00.0**	**+3.5**
KVR	**Kavouri**	**2.83**	**164**	*e*PN	**Pn**	**06 09 58.5**	**-0.1**
NAIG	**Nisos Aigina**	**2.85**	**169**	*e*PN	**Pn**	**06 10 00.0**	**+1.2**
NAIG	**Nisos Aigina**	**2.85**	**169**	*e*Pn	**Pn**	**06 10 01.0**	**+2.2**
VLI	**Veliai**	**3.83**	**178**	*e*PN	**Pn**	**06 10 07.4**	**-5.0**
APE	**Apeiranthos**	**4.09**	**148**	*e*PN	**Pn**	**06 10 08.5**	**-7.4**
APE				*e*SN	**Pg**	**06 10 23.6**	**-8.1**
SMG	**Samos**	**4.24**	**131**	*e*PN	**Pn**	**06 10 22.2**	**+4.2**

THE 10 06:09:26.6, 4061N×2281E, h2km, ML2.4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.12**	**80**	*e*Pg	Pg	06 09 29.0	+0.2
THE				*e*Sg	Sg	06 09 30.8	+0.4
HORT	**Hortiatis**	**0.22**	**93**	*e*Pg	Pg	06 09 30.7	-0.1
HORT				*e*Sg	Sg	06 09 34.0	+0.4
GRG	**Griva**	**0.47**	**318**	*e*Pg	Pg	06 09 35.8	+0.3
GRG				*e*Sg	Sg	06 09 42.0	+0.4
KNT	**Kendrikon**	**0.55**	**7**	*e*Pg	Pg	06 09 37.1	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.95**	**136**	*e*Pg	Pg	06 09 44.3	-0.5
LKR	**Lokris**	**1.96**	**176**	*e*PB	Pg	06 10 14.2	+10
LKR				*e*SN	Sg	06 10 34.7	+5.1

NEIC 10 06:29:05.4,3727S×17669E,h269^{km},MG4.2(WEL),After WEL.,North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.04**	**162**	P	Pn	06 29 42.4	-0.2
MWZ	**Matawai**	**1.25**	**148**	P	Pn	06 29 44.0	+0.2
MWZ				S	S	06 30 13.6	-0.6
MXZ	**Matakaoa Point**	**1.32**	**103**	P	Pn	06 29 44.2	0.0
PUZ	**Puketiti**	**1.48**	**123**	P	Pn	06 29 45.3	0.0
BKZ	**Black Stump Fm**	**1.90**	**185**	P	Pn	06 29 48.6	+0.1
BKZ				S	S	06 30 22.4	-0.3
KNZ	**Kokohu**	**1.91**	**156**	P	Pn	06 29 48.8	+0.2
WTVZ	**West Tongariro**	**2.04**	**205**	P	Pn	06 29 50.2	+0.5
TWVZ	**Taurewa**	**2.05**	**208**	P	Pn	06 29 50.5	+0.7
WPVZ	**Whakapapa**	**2.13**	**205**	P	Pn	06 29 51.0	+0.5
TUVZ	**Tukino**	**2.16**	**202**	P	Pn	06 29 51.2	+0.5
FWVZ	**Far West T-bar**	**2.18**	**204**	P	Pn	06 29 51.3	+0.4
WNVZ	**Wahianoa**	**2.23**	**202**	P	Pn	06 29 51.7	+0.3
MOVZ	**Moawhango**	**2.26**	**199**	P	Pn	06 29 51.4	-0.2
WAZ	**Wanganui**	**2.82**	**208**	P	Pn	06 29 57.3	+0.2
TSZ	**Takapari Road**	**2.84**	**191**	P	Pn	06 29 56.8	-0.5
MRZ	**Mangatainoka R**	**3.50**	**194**	P	Pn	06 30 02.9	-1.4
KIW	**Kapiti Island**	**3.85**	**201**	P	Pn	06 30 06.7	-1.5
MTW	**Mount Morrison**	**3.99**	**193**	P	Pn	06 30 08.0	-1.8
CAW	**Cannon Point**	**4.04**	**198**	P	Pn	06 30 08.7	-1.6
MRW	**Makara Radio**	**4.25**	**201**	P	Pn	06 30 11.1	-1.7
MSWZ	**Moikau Station**	**4.29**	**195**	P	Pn	06 30 11.4	-1.8
SNZO	**South Karori**	**4.32**	**200**	P	Pn	06 30 11.8	-1.8
TCW	**Tory Channel**	**4.36**	**205**	P	Pn	06 30 12.5	-1.6
NNZ	**Nelson**	**4.71**	**212**	P	Pn	06 30 15.8	-2.4
QRZ	**Quartz Range**	**4.81**	**221**	P	Pn	06 30 16.3	-3.1
BSWZ	**Blackbirch Sta**	**4.94**	**205**	P	Pn	06 30 19.4	-1.6
THZ	**Tophouse**	**5.36**	**212**	P	Pn	06 30 23.9	-2.1
KHZ	**Kahutara**	**5.68**	**204**	P	Pn	06 30 28.3	-1.6
DSZ	**Denniston Nort**	**5.85**	**219**	P	Pn	06 30 28.5	-3.5
LTZ	**Lake Taylor**	**6.47**	**210**	P	Pn	06 30 36.7	-2.8
MQZ	**McQueen's Vall**	**7.13**	**204**	P	Pn	06 30 44.6	-3.1

IDC 10 06:36:17.8±7.4**,2137N×14386E,h203^{km}**±69^{km}**,mb3.5**/6**, mb1 3.7**/6**,mb1mx3.4**/19**,mbtmp3.5**/6**,Error ellipse: s-maj=41.2km s-min=18.5km az=82.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**21.16**	**323**	P	P	06 40 47.1	0.0
	7.7nm,0.7s,baz=150,slow=8.4,SNR=23						
SONM	**Songino Array**	**39.99**	**320**	P	P	06 43 32.9	+0.3
	0.9nm,0.3s,baz=127,slow=8.4,SNR=6.8						
WRA	**Warramunga Arr**	**42.09**	**193**	P	P	06 43 49.9	-0.1
	0.2nm,0.3s,baz=13,slow=8.8,SNR=8.5						
MKAR	**Makanchi Array**	**55.38**	**313**	P	P	06 45 31.1	+0.3
	1.9nm,0.6s,baz=91,slow=9.1,SNR=21						
YKA	**Yellowknife Ar**	**76.45**	**28**	P	P	06 47 45.1	+0.3
	1.7nm,0.4s,baz=291,slow=5.8,SNR=8.6						
ARCES	**ARCESS Array B**	**79.43**	**342**	P	P	06 48 00.4	-0.6
	1.8nm,0.7s,baz=72,slow=7.8,SNR=8.5						

ISCJB ***10*** *06:42:24.4±0.5,3890N±002×2636E±003,h8^{km}±4^{km}, Error ellipse: s-maj=4.4km s-min=3.0km az=160.6*
ISK ***10*** *06:42:24.9,3893N×2648E,h10^{km},MD3.1*
ATH ***10*** *06:42:24.2,3887N×2630E,h21^{km},MD3.3/3*
DDA ***10*** *06:42:24.7,3890N×2638E,h7^{km}±3^{km},Md2.9*
NEIC ***10*** *06:42:24.2,3886N×2627E,h19^{km},MD3.1(ISK), ML3.3(ATH),After ATH.*
CSEM ***10*** *06:42:25.0±0.1,3891N×2645E,h15^{km},ML3.3,Error ellipse: s-maj=2.0km s-min=1.4km az=71.0*
THE ***10*** *06:42:26.4,3889N×2635E,h11^{km},ML3.3*
ISC 10 06:42:25.1±0.4**,3890N**±002×**2638E**±003**,h13**^{km}±3^{km}**,n29,** σ**0^{s}78**/49**,1C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.36**	**347**	*e*Pg	**Pg**	**06 42 32.6**	**+0.2**
PRK				*e*Sg	**Sg**	**06 42 39.8**	**+2.5**
PRK	**Paraskevi**	**0.36**	**347**	⇑*i*PB	**Pg**	**06 42 32.5**	**+0.1**
PRK				*e*SB	**Sg**	**06 42 37.8**	**+0.5**
PRK	**Paraskevi**	**0.36**	**347**	*e*Pg	**Pg**	**06 42 32.6**	**+0.2**
PRK				*e*Sb	**Sg**	**06 42 37.8**	**+0.5**
PRK				*e*Sg	**Sg**	**06 42 39.8**	**+2.5**
AYVA	**Ayvalik**	**0.48**	**31**	*i* P	**Pg**	**06 42 33.9**	**-0.7**
AYVA				*i* S	**Sg**	**06 42 40.5**	**-0.5**
CHOS	**Chios island**	**0.57**	**206**	*e*Pg	**Pg**	**06 42 37.1**	**+0.9**
CHOS				*e*Sg	**Sg**	**06 42 45.4**	**+1.6**
BLCB	**Balcova**	**0.73**	**134**	*e*PG	**Pg**	**06 42 39.0**	**-0.3**
BLCB				*e*SG	**Sg**	**06 42 48.9**	**0.0**
IZM	**Izmir**	**0.85**	**125**	*e*PG	**Pg**	**06 42 41.2**	**-0.4**
IZM				*e*SG	**Sg**	**06 42 52.4**	**-0.4**
KDAG	**Bornova**	**0.85**	**125**	*i* P	**Pg**	**06 42 41.8**	**+0.2**
KDAG				*i* S	**Sg**	**06 42 54.2**	**+1.4**
EZN	**Ezine**	**0.93**	**358**	*e*PG	**Pg**	**06 42 42.6**	**-0.5**
BOZC	**Bozcaada**	**0.98**	**345**	*i* P	**Pb**	**06 42 43.6**	**-0.3**
BOZC				*i* S	**Sb**	**06 42 57.7**	**+1.0**
AKS	**Akhisar**	**1.12**	**90**	*e*PG	**Pg**	**06 42 46.2**	**-0.5**
AKHS	**Akhisar**	**1.12**	**90**	*i* P	**Pb**	**06 42 46.3**	**-0.1**
AKHS				*i* S	**Sb**	**06 43 01.9**	**+1.0**
SMG	**Samos**	**1.24**	**163**	*e*PN	**Pn**	**06 42 47.6**	**-0.5**
SMG				*e*SN	**Sn**	**06 43 04.6**	**0.0**
BALY	**Balya**	**1.28**	**48**	*i* P	**Pn**	**06 42 48.6**	**-0.1**
BALY				*i* S	**Sb**	**06 43 04.9**	**-0.5**
LIA	**Limnos Island**	**1.36**	**318**	*e*Pg	**Pg**	**06 42 50.9**	**-0.4**
LIA				*e*Sg	**Sg**	**06 43 07.8**	**-1.2**
LIA	**Limnos Island**	**1.36**	**318**	*e*Pg	**Pg**	**06 42 50.9**	**-0.4**
LIA				*e*Sn	**Sn**	**06 43 07.6**	**-0.1**
LIA				*e*Sg	**Sg**	**06 43 07.8**	**-1.2**
LIA	**Limnos Island**	**1.36**	**318**	*e*Pn	**Pn**	**06 42 50.3**	**+0.5**
LIA				*e*Sn	**Sn**	**06 43 07.6**	**-0.1**
BALB	**Balikesir**	**1.38**	**57**	*e*PN	**Pn**	**06 42 49.9**	**-0.2**
LPK	**Lapseki**	**1.50**	**11**	*e*PN	**Pn**	**06 42 51.6**	**-0.1**
KULA	**Kula-Manisa**	**1.83**	**101**	*e*PN	**Pn**	**06 42 56.4**	**+0.2**
ENEZ	**Enez**	**1.85**	**355**	*e*PN	**Pn**	**06 42 56.9**	**+0.5**
BNT	**Bandirma**	**1.88**	**39**	*e*PN	**Pn**	**06 42 56.4**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.89**	**19**	*e*PN	**Pn**	**06 42 57.8**	**+0.7**
APE	**Apeiranthos**	**1.94**	**200**	*e*Pb	**Pb**	**06 42 57.8**	**-2.5**
APE				*e*Sb	**Sb**	**06 43 23.1**	**-1.3**
APE	**Apeiranthos**	**1.94**	**200**	*e*Pn	**Pn**	**06 42 57.7**	**-0.1**
APE				*e*Sb	**Sb**	**06 43 23.1**	**-1.3**
BODT	**Bodrum**	**1.97**	**158**	*e*PN	**Pn**	**06 42 59.3**	**+1.1**
MFT	**Murefte**	**2.01**	**20**	*e*PN	**Pn**	**06 42 58.5**	**-0.2**
ALN	**Alexandroupoli**	**2.02**	**353**	*e*Pn	**Pn**	**06 42 59.1**	**+0.3**
ALN				*e*Sn	**Sn**	**06 43 24.8**	**+1.0**
KCT	**Karacabey**	**2.05**	**48**	*e*PN	**Pn**	**06 42 58.6**	**-0.7**

NEIC ***10*** *07:22:29.0,3836N×2236E,h32^{km},ML3.0(ATH),After ATH.*
ATH ***10*** *07:22:29.0,3836N×2236E,h32^{km}±1^{km},MD3.0/6*
ISCJB ***10*** *07:22:30.4±0.6,3841N±004×2235E±006,h31^{km}±7^{km}, Error ellipse: s-maj=7.7km s-min=5.4km az=152.5*
CSEM ***10*** *07:22:30.1±0.1,3841N×2234E,h34^{km}±1^{km},MD3.0,Error ellipse: s-maj=4.4km s-min=2.1km az=77.0*
THE ***10*** *07:22:30.2,3837N×2232E,h11^{km},ML2.7*
ISC 10 07:22:30.5±0.7**,3842N**±004×**2235E**±006**,h30**^{km}±7^{km}**,n12,** σ**0^{s}91**/20**,Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.56**	**65**	*e*Pg	**Pb**	**07 22 41.2**	**-0.7**
LKR				*e*Sg	**Sb**	**07 22 50.1**	**+0.5**
LKR	**Lokris**	**0.56**	**65**	*e*PN	**Pn**	**07 22 41.1**	**-1.3**
LKR				*e*SN	**Sn**	**07 22 50.0**	**-0.7**
LKR	**Lokris**	**0.56**	**65**	*e*Pg	**Pb**	**07 22 41.2**	**-0.7**
LKR				*e*Sg	**Sb**	**07 22 50.1**	**+0.4**
AGG	**Agios Georgios**	**0.60**	**358**	*e*Pg	**Pb**	**07 22 42.2**	**-0.5**
AGG				*e*Sg	**Sb**	**07 22 52.6**	**+1.7**
LTK	**Loutraki**	**0.62**	**129**	*e*Pg	**Pb**	**07 22 42.1**	**-0.9**
LTK				*e*Sg	**Sb**	**07 22 51.7**	**+0.3**
EVR	**Evrytania**	**0.66**	**320**	*e*PN	**Pn**	**07 22 43.2**	**-0.6**
EVR				*e*SN	**Sn**	**07 22 53.8**	**+0.7**
RLS	**Riolos of Patr**	**0.78**	**243**	*e*PN	**Pn**	**07 22 44.3**	**-1.2**
VLX	**Vlachokerasia**	**1.04**	**179**	*e*Pg	**Pn**	**07 22 48.9**	**-0.2**
VLX				*e*Sg	**Sn**	**07 23 02.8**	**+0.2**
DID	**Didima**	**1.15**	**142**	*e*Pg	**Pn**	**07 22 51.9**	**+1.4**
DID				*e*Sg	**Sn**	**07 23 07.2**	**+2.0**
ITM	**Ithomi**	**1.28**	**195**	*e*PN	**Pn**	**07 22 52.1**	**-0.2**
VLS	**Valsamata**	**1.41**	**261**	*e*PN	**Pn**	**07 22 54.6**	**+0.5**
VLI	**Veliai**	**1.76**	**164**	*e*PN	**Pn**	**07 22 58.5**	**-0.4**

THR ***10*** *07:38:14.1±0.3,3200N×4881E,h10^{km}±2^{km},ML3.2*
CSEM ***10*** *07:38:14.8±0.1,3209N×4887E,h5^{km},ML3.2,Error ellipse: s-maj=6.6km s-min=3.9km az=111.0*
ISCJB ***10*** *07:38:15.4±1.4,3206N±008×488E±0.1,h5^{km}±12^{km},Error ellipse: s-maj=22.5km s-min=10.4km az=23.3*
ISC 10 07:38:15.8±2.9**,3206N**±008×**488E**±02**,h0**^{km}±25^{km}**,n10,** σ**0^{s}44**/8**,Western Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.06**	**334**	*e*Pg	**Pg**	**07 38 16.9**	**0.0**
MIB	**Mutribah**	**2.59**	**210**	*e*P	**Pn**	**07 38 58.5**	**-0.4**
	baz=209						
MIB				AML	AML	07 39 41.8	
	comp=Z,68nm,0.5s,baz=209						
ASAO	**Ashtian**	**2.68**	**22**	*e*Pn	**Pn**	**07 39 00.3**	**+0.1**
ASAO				AML	AML	07 39 45.0	
	comp=N,81nm,0.6s						
KBD	**Kabd**	**3.04**	**199**	*e*P	**Pn**	**07 39 05.3**	**+0.2**
NAY	**Al-Naaiem**	**3.12**	**206**	*e*P	**Pn**	**07 39 05.8**	**-0.4**
GHVR	**GHOM**	**3.18**	**40**	AML	AML	07 40 04.2	
	comp=N,58nm,0.5s						
SNGE	**Sanandaj**	**3.27**	**338**	*e*Pn	**Pn**	**07 39 08.3**	**0.0**
SNGE				AML	AML	07 40 07.6	
	comp=N,52nm,0.5s						
RDF	**Al-Radifah**	**3.31**	**200**	*e*P	**Pn**	**07 39 09.5**	**+0.6**
	baz=199						
RDF				AML	AML	07 39 50.6	
	comp=Z,38nm,0.7s,baz=199						
NASN	**Na'in**	**3.44**	**77**	*e*Pn	**Pn**	**07 39 10.5**	**-0.2**
DAMV	**Damavand**	**4.42**	**35**	AML	AML	07 40 37.6	
	comp=N,20nm,0.7s						

ISCJB ***10*** *07:44:16.2±0.9,4059N±005×2403E±009,h21^{km}±11^{km}, Error ellipse: s-maj=12.2km s-min=5.9km az=149.4*
ATH ***10*** *07:44:16.1,4062N×2390E,h34^{km}±4^{km},MD2.9/4*
CSEM ***10*** *07:44:16.8±0.1,4058N×2399E,h15^{km},ML2.4,Error ellipse: s-maj=1.9km s-min=1.3km az=67.0*
NEIC ***10*** *07:44:16.1,4062N×2390E,h34^{km},MD2.9(ATH),After ATH.*
THE ***10*** *07:44:17.3,4056N×2395E,h12^{km},ML2.4*
ISC 10 07:44:16.3±1.0**,4059N**±005×**2402E**±008**,h21**^{km}±11^{km}**, n10,** σ**0^{s}84**/18**,1C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.26**	**187**	*e*Pg	**Pb**	**07 44 22.1**	**-0.3**
OUR				*e*Sg	**Sb**	**07 44 25.8**	**-0.6**
PLG	**Polygyros**	**0.49**	**244**	*e*Pg	**Pb**	**07 44 25.9**	**-0.2**
PLG				*e*Sg	**Sb**	**07 44 32.3**	**-0.6**
PLG	**Polygyros**	**0.49**	**244**	⇑*i*PB	**Pb**	**07 44 25.9**	**-0.3**
PLG				*e*SB	**Sb**	**07 44 32.1**	**-0.8**
SOH	**Sokhos**	**0.56**	**295**	*e*Pg	**Pb**	**07 44 27.1**	**-0.2**
SOH				*e*Sg	**Sb**	**07 44 34.6**	**-0.3**
HORT	**Hortiatis**	**0.70**	**271**	*e*Pg	**Pb**	**07 44 30.0**	**+0.2**
HORT				*e*Sg	**Sb**	**07 44 39.2**	**+0.2**
PAIG	**Paliouri**	**0.71**	**202**	*e*Pg	**Pb**	**07 44 29.8**	**-0.2**
PAIG				*e*Sg	**Sb**	**07 44 39.2**	**-0.1**
NVR	**Nevrokopi**	**0.77**	**351**	*e*PN	**Pn**	**07 44 30.9**	**-1.0**
NVR				*e*SN	**Sn**	**07 44 41.3**	**-1.5**
KNT	**Kendrikon**	**1.02**	**304**	*e*Pg	**Pb**	**07 44 36.4**	**+1.1**
KNT				*e*Sg	**Sb**	**07 44 50.0**	**+1.7**
LIA	**Limnos Island**	**1.13**	**127**	*e*PN	**Pn**	**07 44 38.6**	**+1.8**
NEO	**Neokhori**	**1.42**	**206**	*e*PN	**Pn**	**07 44 41.2**	**+0.4**

ISCJB ***10*** *08:00:46.8±0.8,43S±0.1×1037W±0.1,h10^{km},mb4.4/32, MS4.1/17,Error ellipse: s-maj=25.5km s-min=8.2km az=144.7*
IDC ***10*** *08:00:47.2±1.0,4.12S×10356W,h0^{km},mb4.0/13, mb1 4.3/13,mb1mx4.2/19,mbtmp4.0/13,MS4.2/17, Ms1 4.1/17,ms1mx4.1/23,Error ellipse: s-maj=39.3km s-min=14.2km az=58.0*
NEIC ***10*** *08:00:49.3±0.6,4.13S×10342W,h10^{km},mb4.7/19,Error ellipse: s-maj=23.1km s-min=8.3km az=60.0*
GCMT ***10*** *08:00:49.3±0.4,370S×10275W,h13^{km}±2^{km},MW5.0/60, Moment Tensor Solution. s17,c17; s60,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.09±.15; $M_{\theta\theta}$1.36±.13; $M_{\phi\phi}$-1.27±.14; $M_{r\theta}$1.49±.50; $M_{\theta\phi}$2.89±.15; $M_{\phi r}$-0.74±.39; Best double couple: $M_0$3.57800×10^{16} NP1:ϕ_s14.00000°,δ63.00000°,λ-175.00000°. NP2: ϕ_s281.00000°,δ85.00000°,λ-27.00000°. Principal axes: T 3.4460, Plg15.0000°, Azm331.0000°; N 0.2630, Plg63.0000°, Azm92.0000°; P -3.7100, Plg22.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 10 08:00:48.8±0.7**,43S**±01×**1036W**±01**,h10**^{km}**,n74,** σ**0^{s}99**/58**, mb4.4**/32**,MS4.1**/17**,Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**22.90**	**22**	P	**P**	**08 05 53.0**	**+0.1**
	3.4nm,0.9s,mb3.8,baz=235,slow=8.0,SNR=5.2						
CMIG				LR	LR	08 12 25.9	
	comp=Z,482nm,19.6s,MS4.0,baz=195,slow=31						
ATAH	**Atahualpa**	**25.26**	**97**	P	**P**	**08 06 16.9**	**+1.5**
	13nm,1.1s,mb4.4,baz=282,slow=9.0,SNR=7.5						
ATAH				LR	LR	08 13 02.1	
	comp=Z,222nm,19.4s,MS3.7,baz=94,slow=29						
NNA	**Nana**	**27.59**	**108**	LR	LR	08 14 21.5	
	comp=Z,351nm,19.9s,MS3.9,baz=296,slow=30						
TEIG	**Tepich**	**28.63**	**31**	LR	LR	08 16 02.9	
	comp=Z,577nm,19.4s,MS4.2,baz=230,slow=32						
LPIG	**La Paz**	**28.93**	**347**	LR	LR	08 15 17.4	
	comp=Z,673nm,21.4s,MS4.2,baz=190,slow=30						
ROSC	**El Rosal**	**30.64**	**73**	LR	LR	08 16 31.2	
	comp=Z,436nm,21.2s,MS4.1,baz=223,slow=31						
TXAR	**Lajitas Array**	**33.40**	**360**	P	**P**	**08 07 26.1**	**-1.5**
	1.2nm,1.0s,mb3.8,baz=172,slow=11,SNR=11						
TXAR				PcP	PcP	08 10 14.4	+5.1
	0.5nm,0.8s,baz=174,slow=6.0,SNR=4.3						
TXAR				LR	LR	08 19 27.8	
	comp=Z,535nm,19.3s,MS4.3,baz=65,slow=34						
RKT	**Rikitea**	**35.62**	**235**	*e*LR	LR	08 17 43.1	
	1µm,26.0s,baz=55						
TAOE	**Nuku Hiva Isla**	**36.55**	**261**	*e*LR	LR	08 18 05.1	
	3µm,25.5s						
LPAZ	**La Paz**	**36.84**	**112**	P	**P**	**08 07 56.1**	**-1.4**
	1.4nm,0.7s,mb3.9,baz=291,slow=8.5,SNR=7.5						
LPAZ				LR	LR	08 20 15.0	
	comp=Z,183nm,19.6s,MS3.9,baz=312,slow=32						
LVC	**Limon Verde**	**38.22**	**122**	P	**P**	**08 08 07.6**	**-1.5**
	3.5nm,0.8s,mb4.2,baz=283,slow=5.7,SNR=3.1						
LAZ	**Ladron**	**38.59**	**355**	*e*P	**P**	**08 08 12.5**	**+0.4**
WUAZ	**Wupatki**	**40.23**	**350**	*e*P	**P**	**08 08 26.7**	**+1.0**
GSC	**Goldstone**	**41.25**	**344**	*e*P	**P**	**08 08 35.0**	**+0.8**
MVCO	**Mesa Verde**	**41.50**	**354**	*e*P	**P**	**08 08 35.7**	**-0.5**
	11nm,1.2s,mb4.3						
PLAL	**Pickwick Lake**	**41.68**	**19**	*e*P	**P**	**08 08 37.4**	**-0.3**
	15nm,1.2s,mb4.5						
SHPR	**Sheep Range**	**41.96**	**346**	*e*P	**P**	**08 08 40.7**	**+0.7**
SHPR				*e*pP	pP	08 08 55.6	+13
ISA	**Isabella**	**42.08**	**342**	*e*P	**P**	**08 08 42.1**	**+1.2**
	4.6nm,0.9s,mb4.1						
PV01	**Paradox Valley**	**42.42**	**354**	*e*P	**P**	**08 08 43.2**	**-0.5**
TPNV	**Topopah Spring**	**42.65**	**345**	*e*P	**P**	**08 08 46.9**	**+1.3**
	4.0nm,1.0s,mb4.1						
PV10	**Paradox Valley**	**42.71**	**354**	*e*P	**P**	**08 08 45.1**	**-0.9**
ARUT	**Antelope Range**	**42.81**	**349**	*e*P	**P**	**08 08 47.6**	**+0.7**
WVT	**Waverly**	**42.81**	**19**	*e*P	**P**	**08 08 46.6**	**-0.3**
	14nm,1.2s,mb4.5						
CFAA	**Coronel Fontan**	**42.94**	**133**	P	**P**	**08 08 48.0**	**-0.1**
	0.7nm,1.0s,mb3.3,baz=305,slow=7.7,SNR=7.4						
CFAA	**Coronel Fontan**	**42.94**	**133**	P	**P**	**08 08 48.0**	**-0.1**
MSU	**Marysvale**	**43.28**	**350**	*e*P	**P**	**08 08 51.4**	**+0.7**
CPCT	**Cooper Cave**	**43.38**	**23**	*e*P	**P**	**08 08 53.9**	**+2.4**
SRU	**San Rafael**	**43.62**	**352**	*e*P	**P**	**08 08 53.1**	**-0.3**
	5.1nm,1.0s,mb4.2						
ISCO	**Idaho Springs**	**43.88**	**358**	*e*P	**P**	**08 08 59.2**	**+3.8**
NVAR	**Mina Array Bea**	**44.59**	**344**	P	**P**	**08 08 59.8**	**-1.5**
	1.1nm,0.8s,mb3.7,baz=166,slow=7.1,SNR=9.5						
TZTN	**Tazewell**	**44.72**	**23**	*e*P	**P**	**08 09 03.2**	**+1.0**
	27nm,1.4s,mb4.9						
CMB	**Columbia Colle**	**44.86**	**341**	*e*P	**P**	**08 09 04.4**	**+1.0**
	4.1nm,1.0s,mb4.2						
DAU	**Daniels Canyon**	**45.00**	**352**	*e*P	**P**	**08 09 05.2**	**+0.8**
DUG	**Dugway**	**45.03**	**350**	*e*P	**P**	**08 09 04.7**	**0.0**
JLU	**Jordanelle**	**45.21**	**352**	*e*P	**P**	**08 09 04.9**	**-1.2**
NSHM	**Saint Helena R**	**46.05**	**339**	*e*P	**P**	**08 09 12.2**	**-0.5**
PAHR	**Pah Rah Range**	**46.09**	**343**	*e*P	**P**	**08 09 15.1**	**+2.1**
HWUT	**Hardware Ranch**	**46.21**	**352**	*e*P	**P**	**08 09 13.8**	**-0.2**
	16nm,1.2s,mb4.8						
PPT	**Papeete**	**46.87**	**250**	*e*LR	LR	08 23 01.0	
	752nm,24.5s,baz=76						
PPT	**Papeete**	**46.87**	**250**	LR	LR	08 23 52.5	
	comp=Z,507nm,19.4s,MS4.5,baz=116,slow=30						
PLCA	**Paso Flores**	**46.93**	**145**	P	**P**	**08 09 20.2**	**+0.5**
	4.5nm,1.1s,mb4.3,baz=309,slow=7.7,SNR=3.7						
PLCA				LR	LR	08 24 05.7	
	comp=Z,450nm,19.9s,MS4.4,baz=2.6,slow=30						
BW06	**Boulder Array**	**47.11**	**354**	*e*P	**P**	**08 09 19.8**	**-1.3**
	22nm,1.8s,mb4.8						
PDAR	**Pinedale Array**	**47.11**	**354**	P	**P**	**08 09 19.2**	**-1.8**
	1.6nm,1.0s,mb3.9,baz=170,slow=4.2,SNR=9.1						
PDAR				LR	LR	08 26 23.5	
	comp=Z,88nm,19.3s,MS3.7,baz=336,slow=33						
REDW	**Red Top Meadow**	**47.84**	**353**	*e*P	**P**	**08 09 26.2**	**-0.5**
	15nm,1.4s,mb4.8						
RRI2	**Red Ridge**	**47.89**	**352**	*e*P	**P**	**08 09 26.7**	**-0.4**
	9.5nm,1.0s,mb4.8						
TPAW	**Teton Pass**	**47.98**	**353**	*e*P	**P**	**08 09 28.4**	**+0.6**
LOHW	**Long Hollow**	**48.06**	**353**	*e*P	**P**	**08 09 27.3**	**-1.1**
	16nm,1.3s,mb4.9						
MOOW	**Moose Ponds**	**48.21**	**353**	*e*P	**P**	**08 09 29.1**	**-0.5**
	23nm,1.8s,mb4.9						
IMW	**Indian Meadow**	**48.38**	**353**	*e*P	**P**	**08 09 30.1**	**-0.7**
	9.7nm,1.1s,mb4.8						
MOD	**Modoc**	**48.38**	**343**	*e*P	**P**	**08 09 32.1**	**+1.2**
WVOR	**Wild Horse Val**	**48.43**	**345**	*e*P	**P**	**08 09 31.4**	**+0.1**
	2.0nm,1.0s,mb4.1						
FLWY	**Flagg Ranch**	**48.54**	**353**	*e*P	**P**	**08 09 31.9**	**-0.2**
	15nm,1.1s,mb4.9						
HLID	**Hailey**	**48.58**	**350**	*e*P	**P**	**08 09 32.5**	**+0.1**
YBH	**Yreka Blue Hor**	**48.96**	**341**	P	**P**	**08 09 34.5**	**-0.9**
	2.1nm,0.8s,mb4.2,baz=87,slow=4.7,SNR=7.1						
QLMT	**Earthquake Lak**	**49.36**	**353**	*e*P	**P**	**08 09 38.6**	**+0.2**
CPUP	**Villa Florida**	**49.40**	**121**	P	**P**	**08 09 40.3**	**+1.3**
	2.5nm,0.8s,mb4.3,baz=242,slow=8.4,SNR=4.5						
CPUP				LR	LR	08 26 47.3	
	comp=Z,146nm,19.8s,MS4.0,baz=9.4,slow=32						
MCMT	**McKenzie Canyo**	**49.56**	**351**	*e*P	**P**	**08 09 39.7**	**-0.2**
RSW	**Rattlesnake Hi**	**52.38**	**346**	*e*P	**P**	**08 10 00.9**	**-0.2**
LON	**Longmire**	**53.27**	**344**	*e*P	**P**	**08 10 12.8**	**+5.1**
NEW	**Newport**	**53.62**	**349**	*e*P	**P**	**08 10 09.7**	**-0.5**
	13nm,1.3s,mb4.7						
NLWA	**Neilton Lookou**	**54.43**	**343**	*e*P	**P**	**08 10 16.6**	**+0.4**
	19nm,1.4s,mb4.8						
JCW	**Jim Creek**	**54.64**	**345**	*e*P	**P**	**08 10 16.9**	**-0.8**
ULM	**Lac du Bonnet**	**54.70**	**6**	P	**P**	**08 10 18.1**	**0.0**
	5.2nm,1.0s,mb4.5,baz=174,slow=7.5,SNR=3.7						
ULM				LR	LR	08 32 25.3	
	comp=Z,450nm,18.3s,MS4.6,baz=240,slow=35						
RPW	**Rockport**	**54.77**	**346**	*e*P	**P**	**08 10 21.6**	**+3.0**
PGC	**Sidney**	**55.46**	**344**	*e*P	**P**	**08 10 27.4**	**+3.9**
BDFB	**Brasilia**	**55.78**	**106**	LR	LR	08 33 50.6	
	comp=Z,109nm,19.3s,MS4.0,baz=86,slow=36						
SCHQ	**Schefferville**	**66.30**	**22**	LR	LR	08 38 55.8	
	comp=Z,285nm,19.4s,MS4.5,baz=41,slow=35						
YKA	**Yellowknife Ar**	**67.09**	**354**	P	**P**	**08 11 40.3**	**-1.8**
	2.2nm,0.8s,mb4.3,baz=163,slow=6.7,SNR=3.7						
YKA				LR	LR	08 39 49.8	
	comp=Z,123nm,19.1s,MS4.1,baz=165,slow=35						
HNR	**Honiara**	**95.63**	**260**	LR	LR	08 48 39.1	
	comp=Z,65nm,18.4s,MS4.1,baz=117,slow=30						
WRA	**Warramunga Arr**	**118.20**	**245**	PKP	PKPdf	08 19 39.2	+2.0
	0.4nm,0.8s,baz=93,slow=2.4,SNR=5.0						
SONM	**Songino Array**	**129.51**	**334**	PKP	PKPdf	08 20 01.7	+3.6
	0.3nm,0.3s,baz=161,slow=6.0,SNR=3.6						
BVAR	**Borovoye Array**	**131.14**	**5**	PKP	PKPdf	08 20 00.6	-0.4
	0.5nm,0.5s,baz=214,slow=5.0,SNR=4.1						
KURK	**Kurchatov**	**133.66**	**358**	PKP	PKPdf	08 20 06.6	+0.7
	0.6nm,0.2s,baz=0.3,slow=1.6,SNR=3.8						
MKAR	**Makanchi Array**	**137.32**	**354**	PKP	PKPdf	08 20 13.6	+0.8
	0.7nm,0.7s,baz=3.8,slow=3.6,SNR=5.5						

IDC 10 08:19:04.0±1.8**,5358N×8788E,h0**^{km}**,mb1 3.5**/2**, mb1mx3.2**/24**,mbtmp3.5**/2**,ML3.5**/2**,Error ellipse: s-maj=19.1km s-min=4.5km az=101.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.85**	**283**	Pg	Pg	08 19 36.9	-2.6
	9.4nm,0.3s,baz=103,slow=14,SNR=39						
ZALV				Lg		08 20 02.7	
	7.5nm,0.3s,baz=112,slow=25,SNR=12						
KURK	**Kurchatov**	**6.38**	**247**	Pn	Pn	08 20 40.9	+1.7
	0.4nm,0.3s,baz=62,slow=14,SNR=11						
KURK				Lg		08 22 30.7	
	0.2nm,0.3s,baz=63,slow=31,SNR=8.7						
MKAR	**Makanchi Array**	**7.68**	**210**	Pn	Pn	08 20 58.2	+1.2
	0.5nm,0.3s,baz=26,slow=13,SNR=12						
MKAR				Sn	Sn	08 22 25.8	+1.1
	0.3nm,0.3s,baz=27,slow=24,SNR=5.1						
MKAR				Lg		08 23 07.2	
	0.1nm,0.3s,baz=31,slow=31,SNR=4.6						

IDC 10 08:25:44.1±3.6**,1406S×7608W,h62**^{km}±30^{km}**,mb3.3**/2**, mb1 3.4**/4**,mb1mx3.2**/18**,mbtmp3.3**/4**,ML2.9**/2**,Error ellipse: s-maj=62.6km s-min=17.9km az=50.0,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.19**	**340**	P	Pn	08 26 16.4	-1.8
	7.4nm,0.3s,baz=182,slow=12,SNR=13						
NNA				S	Sn	08 26 45.5	+1.3
	37nm,0.3s,baz=176,slow=17,SNR=5.4						
ATAH	**Atahualpa**	**7.38**	**342**	P	Pn	08 27 34.0	+4.7
	0.7nm,0.3s,baz=42,slow=15,SNR=5.1						
LPAZ	**La Paz**	**7.99**	**107**	P	Pn	08 27 37.8	+0.2
	0.0nm,0.3s,baz=259,slow=3.0,SNR=3.2						
CPUP	**Villa Florida**	**21.38**	**128**	P	P	08 30 28.0	+1.4
	0.1nm,0.3s,baz=297,slow=9.0,SNR=2.9						
TORD	**Torodi Ar. Bea**	**81.63**	**74**	P	P	08 37 55.7	-0.4
	0.9nm,0.8s,baz=254,slow=5.1,SNR=5.0						
ASAR	**Alice Springs**	**132.40**	**218**	PKP	PKPdf	08 44 51.9	-0.3
	0.4nm,0.9s,baz=117,slow=3.2,SNR=4.3						
WRA	**Warramunga Arr**	**134.86**	**222**	PKP	PKPdf	08 44 56.9	0.0
	0.5nm,0.9s,baz=109,slow=3.3,SNR=3.0						

MDD ***10*** *08:29:15.7±2.2,3954N×12.17W,h0^{km},mb3.7/5,Error ellipse: s-maj=20.8km s-min=11.8km az=87.0,PRIMO*
NEIC ***10*** *08:29:15.8,3956N×12.16W,h0^{km},MG3.7(MDD),After MDD.*
CSEM ***10*** *08:29:16.2±0.4,3948N×1232W,h10^{km},ML3.3/5,Error ellipse: s-maj=7.2km s-min=4.6km az=86.0*
INMG ***10*** *08:29:16.9±1.1,3949N×1265W,h10^{km},ML2.1,Error ellipse: s-maj=8.4km s-min=4.1km az=83.0*
ISC 10 08:29:16.9±1.1**,3951N**±004×**1201W**±008**,h10**^{km}**,n39,** σ**1^{s}10**/73**,North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOE	**Montemor**	**3.01**	**108**	*e*Pn	**Pn**	**08 30 06.0**	**+1.3**
MOE				*e*Sn	**Sn**	**08 30 41.5**	**+0.7**
PTEO	**Sao Teotonio**	**3.24**	**126**	*e*Pn	**Pn**	**08 30 07.9**	**+0.1**
PTEO				*e*Sn	**Sn**	**08 30 44.7**	**-1.6**
PTEO				A		08 30 46.4	
	6.3nm,0.3s						
PTEO	**Sao Teotonio**	**3.24**	**126**	Pn	**Pn**	**08 30 07.9**	**+0.1**
PTEO				Sn	**Sn**	**08 30 44.7**	**-1.6**
	3.2nm,0.3s						
PVIS	**Viseu**	**3.37**	**68**	*e*Pn	**Pn**	**08 30 10.3**	**+0.7**
PVIS				*e*Sn	**Sn**	**08 30 50.7**	**+1.0**
MORF	**Marmelete**	**3.44**	**129**	*e*Pn	**Pn**	**08 30 10.1**	**-0.4**
MORF				*e*Sn	**Sn**	**08 30 48.7**	**-2.5**
MORF				A		08 30 52.3	
	7.2nm,0.1s						
MORF	**Marmelete**	**3.44**	**129**	Pn	**Pn**	**08 30 10.1**	**-0.4**
MORF				Sn	**Sn**	**08 30 48.7**	**-2.5**
	7.2nm,0.1s						
PFVI	**Vila Bisbo**	**3.45**	**133**	*e*Pn	**Pn**	**08 30 09.3**	**-1.4**
PFVI				*e*Sn	**Sn**	**08 30 47.8**	**-3.8**
PFVI				A		08 30 52.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	4.0nm,0.1s						
PESTR	**Estremoz**	**3.49**	**99**	ePn	**Pn**	**08 30 12.1**	**+0.8**
PESTR				eSn	**Sn**	**08 30 53.3**	**+0.7**
PBEJ	**Beja**	**3.56**	**113**	eSn	**Sn**	**08 30 54.4**	**+0.1**
PMRV	**Marv??o**	**3.57**	**90**	ePn	**Pn**	**08 30 13.4**	**+1.0**
PMRV				eSn	**Sn**	**08 30 56.3**	**+1.7**
PMRV				A		08 31 00.4	
	2.2nm,0.1s						
PMRV	**Marv??o**	**3.57**	**90**	ePn	**Pn**	**08 30 13.4**	**+1.0**
PMRV				eSn	**Sn**	**08 30 56.3**	**+1.7**
	2.2nm,0.1s						
PCAB	**Cabril**	**3.74**	**53**	ePn	**Pn**	**08 30 14.4**	**-0.3**
PCAB				eSn	**Sn**	**08 30 56.8**	**-2.0**
PCAB				A		08 31 00.4	
	5.7nm,0.1s						
PCAB	**Cabril**	**3.74**	**53**	ePn	**Pn**	**08 30 14.4**	**-0.3**
PCAB				eSn	**Sn**	**08 30 56.8**	**-2.0**
	5.7nm,0.1s						
ELOB	**Lobios**	**3.81**	**51**	P	**Pn**	**08 30 15.4**	**-0.2**
	0.2nm,0.0s,SNR=7.9						
ELOB				S	**Sn**	**08 30 58.7**	**-1.8**
	1.5nm,0.0s,SNR=7.9						
ELOB	**Lobios**	**3.81**	**51**	P	**Pn**	**08 30 15.2**	**-0.4**
	0.6nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**08 30 59.3**	**-1.2**
	2.0nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**3.81**	**51**	P	**Pn**	**08 30 15.2**	**-0.4**
ELOB				S	**Sn**	**08 30 59.3**	**-1.2**
PBDV	**Barranco-do-Ve**	**3.92**	**124**	ePn	**Pn**	**08 30 16.6**	**-0.6**
PBDV				eSn	**Sn**	**08 31 01.7**	**-1.6**
PBDV				A		08 31 05.3	
	2.4nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.92**	**124**	ePn	**Pn**	**08 30 16.6**	**-0.6**
PBDV				eSn	**Sn**	**08 31 01.7**	**-1.6**
	2.4nm,0.2s						
EBAD	**Badajoz**	**3.96**	**99**	P	**Pn**	**08 30 18.5**	**+0.9**
	0.6nm,0.1s,SNR=5.7						
EBAD				S	**Sn**	**08 31 05.2**	**+1.2**
	1.8nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.96**	**99**	P	**Pn**	**08 30 18.5**	**+0.9**
	0.6nm,0.1s,SNR=5.7						
EBAD				S	**Sn**	**08 31 05.2**	**+1.1**
	3.6nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.96**	**99**	P	**Pn**	**08 30 18.5**	**+0.9**
EBAD				S	**Sn**	**08 31 05.2**	**+1.2**
PVAQ	**Vaqueiros**	**3.97**	**121**	ePn	**Pn**	**08 30 18.7**	**+0.9**
PVAQ				eSn	**Sn**	**08 31 03.1**	**-1.3**
PVAQ				A		08 31 08.1	
	1.7nm,0.1s						
PVAQ	**Vaqueiros**	**3.97**	**121**	ePn	**Pn**	**08 30 18.7**	**+0.9**
PVAQ				eSn	**Sn**	**08 31 03.1**	**-1.3**
	1.7nm,0.1s						
EGRO	**El Granado**	**4.06**	**118**	P	**Pn**	**08 30 19.8**	**+0.8**
	0.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**08 31 06.7**	**+0.1**
	1.3nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.06**	**118**	P	**Pn**	**08 30 19.3**	**+0.2**
	0.4nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**08 31 05.9**	**-0.7**
	0.5nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.06**	**118**	P	**Pn**	**08 30 19.3**	**+0.3**
EGRO				S	**Sn**	**08 31 05.9**	**-0.7**
PBAR	**Barrancos**	**4.10**	**107**	eSn	**Sn**	**08 31 09.9**	**+2.2**
PBAR				A		08 31 11.4	
	1.3nm,0.1s						
PBAR	**Barrancos**	**4.10**	**107**	Sn	**Sn**	**08 31 09.9**	**+2.2**
	0.6nm,0.1s						
EMAZ	**Mazaricos**	**4.12**	**33**	S	**Sn**	**08 31 02.7**	**-5.5**
	6.7nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**4.12**	**33**	P	**Pn**	**08 30 19.7**	**-0.2**
	1.0nm,0.1s,SNR=4.0						
EMAZ	**Mazaricos**	**4.12**	**33**	P	**Pn**	**08 30 19.7**	**-0.3**
EMAZ				S	**Sn**	**08 31 01.0**	**-7.2**
MVO	**Moncorvo**	**4.15**	**65**	ePn	**Pn**	**08 30 20.6**	**+0.4**
MVO				eSn	**Sn**	**08 31 08.2**	**-0.6**
MVO				A		08 31 12.6	
	2.1nm,0.1s						
MVO	**Moncorvo**	**4.15**	**65**	ePn	**Pn**	**08 30 20.6**	**+0.4**
MVO				eSn	**Sn**	**08 31 08.2**	**-0.6**
	2.1nm,0.1s						
EMIN	**Mina Concepcio**	**4.53**	**111**	P	**Pn**	**08 30 26.8**	**+1.3**
	0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**08 31 18.4**	**+0.3**
	0.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.53**	**111**	P	**Pn**	**08 30 26.4**	**+0.9**
	0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**08 31 18.2**	**+0.1**
	0.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.53**	**111**	P	**Pn**	**08 30 26.4**	**+0.9**
EMIN				S	**Sn**	**08 31 18.2**	**+0.1**
ECAL	**Calabor**	**4.68**	**57**	P	**Pn**	**08 30 28.0**	**+0.4**
	0.4nm,0.1s,SNR=7.9						
ECAL				S	**Sn**	**08 31 20.8**	**-1.1**
	3.2nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**4.68**	**57**	P	**Pn**	**08 30 28.0**	**+0.4**
	0.4nm,0.1s,SNR=7.9						
ECAL				S	**Sn**	**08 31 20.1**	**-1.8**
ECAL	**Calabor**	**4.68**	**57**	P	**Pn**	**08 30 28.0**	**+0.4**
ECAL				S	**Sn**	**08 31 20.1**	**-1.8**

*IDC **10** 08:31:27.7±1.1, 4.16S×103.45W, h0km, mb4.0/15, mb1 4.2/15, mb1mx4.2/21, mbtmp4.0/15, MS4.3/19, Ms1 4.3/19, ms1mx4.3/20, Error ellipse: s-maj=37.8km s-min=13.3km az=56.0*
*ISCJB **10** 08:31:29.0±0.5, 3.94S±0.07×103.01W±0.08, h10km, mb4.5/34, MS4.3/19, Error ellipse: s-maj=12.7km s-min=8.1km az=146.7*
*GCMT **10** 08:31:30.4±0.3, 3.72S×102.84W, h13km±1km, MW5.1/76, Moment Tensor Solution. s31,c37; s76,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.05±.15; $M_{\theta\theta}$1.15±.14; $M_{\phi\phi}$-1.09±.15; $M_{r\theta}$2.05±.49; $M_{\theta\phi}$4.83±.16; $M_{\phi r}$-1.13±.40; Best double couple: $M_0$5.45800×10^{16} NP1:ϕ_s8.00000°,δ67.00000°,λ-172.00000°. NP2: ϕ_s275.00000°,δ83.00000°,λ-23.00000°. Principal axes: T 5.1590, Plg11.0000°, Azm324.0000°; N 0.6040, Plg66.0000°, Azm79.0000°; P -5.7570, Plg21.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **10** 08:31:30.4±0.6, 3.99S×103.03W, h10km, mb4.8/19 Error ellipse: s-maj=18.4km s-min=7.2km az=55.0*
ISC 10 08:31:30.7±0.5**, 3.97S**±0.07×**103.04W**±0.08**, h10**km**, n75, σ0.92**/63**, mb4.5**/34**, MS4.3**/19**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**22.42**	**21**	P	**P**	**08 36 33.2**	**+3.5**
	4.2nm,1.0s,mb3.8,baz=207,slow=6.8,SNR=5.8						
CMIG				LR	LR	08 43 05.8	
	comp=Z,1μm,19.8s,MS4.3,baz=192,slow=31						
CMIG	**Matias Romero**	**22.42**	**21**	P	**P**	**08 36 33.2**	**+3.5**
CMIG				LR	LR	08 43 05.8	
TGUH	**Tegucigalpa,Un**	**23.77**	**41**	eP	**P**	**08 36 43.8**	**0.0**
	111nm,2.0s,mb4.9						
ATAH	**Atahualpa**	**24.71**	**98**	P	**P**	**08 36 55.2**	**+2.8**
	14nm,1.2s,mb4.4,baz=110,slow=10,SNR=4.6						
ATAH				LR	LR	08 44 28.0	
	comp=Z,359nm,18.2s,MS3.9,baz=272,slow=31						
OTAV	**Otavalo**	**24.92**	**81**	eP	**P**	**08 36 54.1**	**-0.2**
	63nm,1.6s,mb4.9						
NNA	**Nana**	**27.11**	**109**	LR	LR	08 45 01.3	
	comp=Z,629nm,20.8s,MS4.2,baz=290,slow=30						
TEIG	**Tepich**	**28.07**	**31**	LR	LR	08 46 43.2	
	comp=Z,1μm,19.6s,MS4.5,baz=186,slow=32						
LPIG	**La Paz**	**28.78**	**346**	LR	LR	08 45 58.4	
	comp=Z,897nm,21.0s,MS4.3,baz=162,slow=30						
ROSC	**El Rosal**	**29.99**	**73**	P	**P**	**08 37 44.3**	**+4.5**
	1.1nm,0.4s,mb4.0,baz=93,slow=23,SNR=4.4						
ROSC				LR	LR	08 47 11.0	
	comp=Z,744nm,20.6s,MS4.3,baz=2.9,slow=31						
TXAR	**Lajitas Array**	**33.11**	**359**	P	**P**	**08 38 06.3**	**-0.8**
	1.1nm,1.0s,mb3.7,baz=181,slow=10.0,SNR=9.1						
TXAR				PcP	PcP	08 40 49.9	-0.5
	0.4nm,0.9s,baz=174,slow=2.5,SNR=3.4						
TXAR				LR	LR	08 50 08.6	
	comp=Z,634nm,19.1s,MS4.3,baz=265,slow=34						
JCT	**Junction City**	**34.39**	**5**	eP	**P**	**08 38 14.3**	**-3.9**
	3.6nm,0.3s,mb4.8						
RKT	**Rikitea**	**36.27**	**235**	eS	**S**	**08 44 15.4**	**+0.1**
	222nm,32.5s						
RKT				eLR	LR	08 48 29.6	
	2μm,25.0s,baz=49						
LPAZ	**La Paz**	**36.40**	**112**	P	**P**	**08 38 36.4**	**+0.7**
	2.7nm,1.0s,mb4.1,baz=283,slow=5.4,SNR=6.8						
LPAZ				LR	LR	08 50 54.2	
	comp=Z,365nm,19.9s,MS4.2,baz=136,slow=32						
LPAZ	**La Paz**	**36.40**	**112**	P	**P**	**08 38 36.4**	**+0.7**
LPAZ				LR	LR	08 50 54.1	
TAOE	**Nuku Hiva Isla**	**37.18**	**261**	eLR	LR	08 48 43.2	
	4μm,25.4s,baz=91						
LVC	**Limon Verde**	**37.87**	**122**	P	**P**	**08 38 48.7**	**+0.5**
	4.8nm,0.8s,mb4.3,baz=13,slow=2.3,SNR=3.9						
LAZ	**Ladron**	**38.36**	**355**	eP	**P**	**08 38 52.0**	**0.0**
ANMO	**Albuquerque**	**38.84**	**356**	eP	**P**	**08 38 56.2**	**+0.1**
MIAR	**Mount Ida**	**39.33**	**12**	eP	**P**	**08 38 59.0**	**-1.2**
	28nm,1.5s,mb4.8						
PFO	**Pinyon Flat Ob**	**39.47**	**342**	P	**P**	**08 39 01.2**	**-0.1**
	2.4nm,0.9s,mb3.9,baz=142,slow=9.9,SNR=3.6						
WUAZ	**Wupatki**	**40.05**	**349**	eP	**P**	**08 39 07.3**	**+1.2**
GSC	**Goldstone**	**41.15**	**343**	eP	**P**	**08 39 16.0**	**+0.8**
	24nm,1.5s,mb4.6						
PLAL	**Pickwick Lake**	**41.22**	**19**	eP	**P**	**08 39 13.8**	**-2.1**
MVCO	**Mesa Verde**	**41.28**	**353**	eP	**P**	**08 39 16.3**	**0.0**
	27nm,1.5s,mb4.7						
SDCO	**Great Sand Dun**	**41.56**	**357**	eP	**P**	**08 39 24.1**	**+5.4**
	26nm,2.2s,mb4.5						
SHPR	**Sheep Range**	**41.83**	**345**	eP	**P**	**08 39 21.6**	**+0.8**
ISA	**Isabella**	**41.99**	**341**	eP	**P**	**08 39 22.8**	**+0.6**
PV01	**Paradox Valley**	**42.20**	**353**	eP	**P**	**08 39 24.2**	**+0.4**
WVT	**Waverly**	**42.35**	**18**	eP	**P**	**08 39 22.9**	**-2.1**
	16nm,1.2s,mb4.5						
TPNV	**Topopah Spring**	**42.53**	**344**	eP	**P**	**08 39 27.7**	**+1.1**
ARUT	**Antelope Range**	**42.65**	**348**	eP	**P**	**08 39 27.9**	**+0.4**
CFAA	**Coronel Fontan**	**42.71**	**134**	P	**P**	**08 39 28.4**	**+0.3**
	0.8nm,1.0s,mb3.4,baz=296,slow=7.0,SNR=11						
ISCO	**Idaho Springs**	**43.61**	**357**	eP	**P**	**08 39 35.9**	**+0.6**
	27nm,1.8s,mb4.7						
NVAR	**Mina Array Bea**	**44.49**	**343**	P	**P**	**08 39 42.6**	**+0.2**
	2.0nm,1.0s,mb3.8,baz=170,slow=8.1,SNR=9.8						
CMB	**Columbia Colle**	**44.78**	**340**	eP	**P**	**08 39 45.2**	**+0.6**
	27nm,1.8s,mb4.8						
DAU	**Daniels Canyon**	**44.80**	**351**	eP	**P**	**08 39 46.0**	**+1.3**
DUG	**Dugway**	**44.85**	**349**	eP	**P**	**08 39 46.4**	**+1.2**
WAKR	**Walker**	**44.90**	**342**	eP	**P**	**08 39 46.9**	**+1.2**
JLU	**Jordanelle**	**45.02**	**351**	eP	**P**	**08 39 54.1**	**+7.6**
NSHM	**Saint Helena R**	**45.99**	**339**	eP	**P**	**08 39 55.1**	**+0.8**
HWUT	**Hardware Ranch**	**46.02**	**351**	eP	**P**	**08 39 54.6**	**+0.2**
	21nm,1.2s,mb4.9						
OHCM	**Honcut**	**46.33**	**340**	eP	**P**	**08 39 57.6**	**+0.7**
PLCA	**Paso Flores**	**46.83**	**146**	P	**P**	**08 39 59.6**	**-1.3**
	2.8nm,0.9s,mb4.2,baz=316,slow=11,SNR=4.7						
PLCA				LR	LR	08 54 54.8	
	comp=Z,717nm,18.6s,MS4.7,baz=4.0,slow=30						
PDAR	**Pinedale Array**	**46.89**	**353**	P	**P**	**08 40 00.5**	**-0.7**
	2.6nm,1.1s,mb4.1,baz=150,slow=6.8,SNR=11						
PDAR				LR	LR	08 57 13.2	
	comp=Z,144nm,18.4s,MS4.0,baz=175,slow=33						
PPT	**Papeete**	**47.53**	**250**	eS	**S**	**08 47 00.9**	**-1.1**
	172nm,25.2s						
PPT				eLQ		08 51 34.6	
	859nm,24.2s						
PPT				eLR	LR	08 53 40.3	
	1μm,25.2s,baz=70						
PPT	**Papeete**	**47.53**	**250**	LR	LR	08 55 31.7	
	comp=Z,593nm,18.4s,MS4.6,baz=331,slow=31						
REDW	**Red Top Meadow**	**47.63**	**352**	eP	**P**	**08 40 06.9**	**-0.2**
RRI2	**Red Ridge**	**47.69**	**352**	eP	**P**	**08 40 07.0**	**-0.4**
	12nm,1.1s,mb4.8						
SNOW	**Snow King Moun**	**47.72**	**352**	eP	**P**	**08 40 08.5**	**+0.8**
	15nm,1.3s,mb4.8						
TPAW	**Teton Pass**	**47.77**	**352**	eP	**P**	**08 40 08.8**	**+0.6**
	13nm,1.3s,mb4.8						
LOHW	**Long Hollow**	**47.85**	**353**	eP	**P**	**08 40 08.0**	**-0.7**
	18nm,1.5s,mb4.9						
IMW	**Indian Meadow**	**48.17**	**352**	eP	**P**	**08 40 10.7**	**-0.5**
	13nm,1.3s,mb4.8						
MOD	**Modoc**	**48.28**	**343**	eP	**P**	**08 40 12.8**	**+0.7**
	58nm,1.8s,mb5.3						
WVOR	**Wild Horse Val**	**48.30**	**345**	eP	**P**	**08 40 12.5**	**+0.3**
	9.2nm,1.1s,mb4.7						
FLWY	**Flagg Ranch**	**48.32**	**353**	eP	**P**	**08 40 12.2**	**-0.1**
HLID	**Hailey**	**48.41**	**349**	eP	**P**	**08 40 13.2**	**+0.2**
YBH	**Yreka Blue Hor**	**48.88**	**340**	P	**P**	**08 40 15.6**	**-1.1**
	1.9nm,0.9s,mb4.1,baz=140,slow=9.2,SNR=4.8						
CPUP	**Villa Florida**	**49.04**	**122**	P	**P**	**08 40 18.1**	**-0.2**
	1.5nm,0.8s,mb4.1,baz=259,slow=11,SNR=4.2						
CPUP				LR	LR	08 57 57.6	
	comp=Z,249nm,18.7s,MS4.2,baz=276,slow=32						
QLMT	**Earthquake Lak**	**49.16**	**352**	eP	**P**	**08 40 24.2**	**+5.5**
MCMT	**McKenzie Canyo**	**49.36**	**351**	eP	**P**	**08 40 19.3**	**-1.0**
CHMT	**Chamberlain Mo**	**51.46**	**351**	eP	**P**	**08 40 36.6**	**+0.4**
NEW	**Newport**	**53.45**	**348**	eP	**P**	**08 40 49.8**	**-1.1**
	11nm,1.3s,mb4.6						
ULM	**Lac du Bonnet**	**54.35**	**6**	P	**P**	**08 40 56.1**	**-1.3**
	3.3nm,0.8s,mb4.3,baz=208,slow=9.8,SNR=3.2						
ULM				LR	LR	09 02 57.1	
	comp=Z,449nm,20.5s,MS4.5,baz=220,slow=35						
JCW	**Jim Creek**	**54.51**	**345**	eP	**P**	**08 40 58.0**	**-0.7**
RPW	**Rockport**	**54.64**	**345**	eP	**P**	**08 40 58.9**	**-0.7**
BDFB	**Brasilia**	**55.29**	**106**	LR	LR	09 02 48.1	
	comp=Z,161nm,20.4s,MS4.1,baz=191,slow=34						
EDM	**Edmonton**	**57.64**	**353**	eP	**P**	**08 41 19.6**	**-1.4**
SCHQ	**Schefferville**	**65.81**	**22**	LR	LR	09 09 56.4	
	comp=Z,506nm,19.0s,MS4.7,baz=126,slow=35						
YKA	**Yellowknife Ar**	**66.86**	**354**	P	**P**	**08 42 21.1**	**-1.5**
	3.6nm,0.9s,mb4.4,baz=160,slow=6.6,SNR=6.3						
YKA				LR	LR	09 09 11.4	
	comp=Z,177nm,21.1s,MS4.2,baz=160,slow=34						
YKA	**Yellowknife Ar**	**66.86**	**354**	P	**P**	**08 42 21.1**	**-1.5**
YKA				LR	LR	09 09 11.4	
DBIC	**Dimbokro**	**98.56**	**84**	LR	LR	09 24 57.3	
	comp=Z,70nm,18.4s,MS4.2,baz=251,slow=32						
PETK	**Petropavlovsk-**	**98.72**	**323**	LR	LR	09 21 26.2	
	comp=Z,138nm,18.6s,MS4.5,baz=269,slow=30						
ESDC	**Sonseca Array**	**99.50**	**51**	LR	LR	09 22 35.0	
	comp=Z,134nm,20.2s,MS4.4,baz=290,slow=31						
SONM	**Songino Array**	**129.51**	**335**	PKP	PKPdf	08 50 40.3	+0.3
	0.5nm,0.7s,baz=29,slow=3.4,SNR=4.8						
MKAR	**Makanchi Array**	**137.09**	**355**	PKP	PKPdf	08 50 53.4	-0.9
	1.4nm,0.9s,baz=7.6,slow=3.7,SNR=7.1						
MKAR				PP	PP	08 53 36.8	-0.2
	0.3nm,0.5s,baz=20,slow=3.9,SNR=3.8						

*CSEM **10** 08:32:55.6±0.1, 40.12N×27.76E, h10km, MD2.6, Error ellipse: s-maj=2.5km s-min=1.6km az=71.0*
*ISK **10** 08:32:55.7, 40.12N×27.77E, h14km, MD2.6*
*ISCJB **10** 08:32:56.3±0.5, 40.13N±0.02×27.76E±0.04, h3km±6km, Error ellipse: s-maj=4.9km s-min=3.8km az=148.6*
*DDA **10** 08:32:56.3, 40.13N×27.76E, h7km±2km, Md3.1*
ISC 10 08:32:56.7±0.4**, 40.13N**±0.03×**27.75E**±0.04**, h8**km±7km**, n15, σ0.49**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EDC	**Edincik**	**0.23**	**22**	ePG	**Pg**	**08 33 01.2**	**-0.1**
EDC				eSG	**Sg**	**08 33 05.2**	**+0.8**
BNT	**Bandirma**	**0.26**	**30**	ePG	**Pg**	**08 33 01.8**	**-0.1**
BNT				eSG	**Sg**	**08 33 05.7**	**+0.4**
BALY	**Balya**	**0.41**	**194**	iP	**Pg**	**08 33 04.7**	**+0.1**
BALY				iS	**Sg**	**08 33 10.5**	**+0.6**
KCT	**Karacabey**	**0.48**	**74**	ePG	**Pg**	**08 33 05.3**	**-0.8**
MRMT	**Marmara Adasi**	**0.48**	**346**	ePG	**Pg**	**08 33 05.9**	**-0.2**
BALB	**Balikesir**	**0.50**	**169**	ePG	**Pg**	**08 33 05.7**	**-0.7**
RKY	**Sarkoy-Tekirda**	**0.70**	**322**	ePG	**Pg**	**08 33 10.2**	**-0.1**
SART	**Tekirdag**	**0.70**	**322**	iP	**Pg**	**08 33 10.3**	**-0.1**
SART				iS	**Sg**	**08 33 20.1**	**+0.6**
MFT	**Murefte**	**0.74**	**331**	ePG	**Pg**	**08 33 10.9**	**-0.2**
DURS	**Dursunbey**	**0.77**	**133**	iP	**Pg**	**08 33 11.8**	**+0.3**
DURS				iS	**Sg**	**08 33 22.2**	**+0.7**
DST	**Dursunbey**	**0.86**	**128**	ePG	**Pg**	**08 33 12.2**	**-1.0**
ULDT	**Uludag**	**1.06**	**89**	iP	**Pg**	**08 33 16.2**	**-0.9**
ULDT				iS	**Sg**	**08 33 30.9**	**0.0**
DEMI	**Demirci**	**1.32**	**145**	iP	**Pn**	**08 33 22.0**	**+0.5**
DEMI				iS	**Sb**	**08 33 39.4**	**+0.5**
BOZC	**Bozcaada**	**1.34**	**258**	iP	**Pn**	**08 33 21.6**	**-0.1**
BOZC				iS	**Sb**	**08 33 39.0**	**-0.4**
GDZ	**Gediz**	**1.70**	**127**	iP	**Pn**	**08 33 26.7**	**+0.1**
GDZ				iS	**Sg**	**08 33 51.3**	**+0.1**

*ISCJB **10** 09:13:54.1±4.7, 17.05S±0.10×70.3W±0.1, h4km±34km, Error ellipse: s-maj=19.3km s-min=15.5km az=154.7*
*IDC **10** 09:13:55.5±1.6, 17.07S×70.23W, h0km, mb3.9/2, mb1 3.9/6, mb1mx3.7/21, mbtmp3.9/6, ML3.7/4, Error ellipse: s-maj=29.5km s-min=16.7km az=154.0*
*NEIC **10** 09:13:58.9±6.2, 17.10S×70.27W, h28km±62km, Error ellipse: s-maj=17.4km s-min=13.6km az=202.0*
ISC 10 09:13:56.7±5.5**, 17.05S**±0.09×**70.3W**±0.1**, h7**km±40km**, n7, σ1.22**/8**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.20**	**70**	Pn	**Pn**	**09 14 35.0**	**+1.3**
	5.5nm,0.3s,baz=246,slow=11,SNR=162						
LPAZ				Lg		09 15 02.9	
	3.1nm,0.3s,baz=325,slow=25,SNR=5.0						
LVC	**Limon Verde**	**5.69**	**167**	Pn	**Pn**	**09 15 22.0**	**+0.4**
	0.6nm,0.3s,baz=345,slow=8.5,SNR=4.3						
LVC				Lg		09 16 43.5	
	2.0nm,0.3s,baz=208,slow=15,SNR=5.9						
LVC	**Limon Verde**	**5.69**	**167**	ePn	**Pn**	**09 15 21.1**	**-0.5**
LVC				eSn	**Sn**	**09 16 27.9**	**+0.8**
LVC				Lg		09 16 43.5	
NNA	**Nana**	**8.10**	**308**	Pn	**Pn**	**09 15 55.3**	**+0.5**
	1.4nm,0.3s,baz=195,slow=21,SNR=2.8						
SIV	**San Ignacio**	**8.90**	**85**	Pn	**Pn**	**09 16 04.8**	**-1.0**
	0.6nm,0.3s,baz=271,slow=13,SNR=16						
SIV				Lg		09 18 39.0	
	0.2nm,0.3s,baz=174,slow=18,SNR=3.2						
PLCA	**Paso Flores**	**23.60**	**181**	P	**P**	**09 19 07.2**	**-1.2**
	0.7nm,0.5s,baz=2.0,slow=10,SNR=3.7						
TORD	**Torodi Ar. Bea**	**77.15**	**72**	P	**P**	**09 25 51.3**	**-0.4**
	2.3nm,0.9s,baz=257,slow=6.0,SNR=8.0						

*ISCJB **10** 09:24:33.5±0.6, 36.52N±0.04×4.85W±0.03, h71km±5km, Error ellipse: s-maj=6.3km s-min=4.1km az=178.8*
*MDD **10** 09:24:35.0±0.6, 36.43N×4.76W, h56km±4km, mb3.6/8, Error ellipse: s-maj=5.6km s-min=4.0km az=180.0, PRIMO*
*CSEM **10** 09:24:34.2±0.2, 36.51N×4.89W, h51km±2km, mb3.4/9, Error ellipse: s-maj=4.1km s-min=2.8km az=149.0*
*NEIC **10** 09:24:35.1, 36.45N×4.75W, h55km, MG3.4(MDD), After MDD.*
*INMG **10** 09:24:35.9±1.1, 36.49N×4.89W, h59km±9km, ML2.4, Error ellipse: s-maj=4.4km s-min=2.7km az=97.0*
*SFS **10** 09:24:35.0, 36.40N×4.70W, h55km, ML3.4*
ISC 10 09:24:34.6±0.6**, 36.52N**±0.03×**4.83W**±0.03**, h63**km±6km**, n69, σ1.05**/125**, 5C-1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMIJ	**Mijas**	**0.07**	**46**	⇑P	**Pn**	**09 24 43.2**	**-0.7**
	8.0nm,0.0s,SNR=18						
EMIJ				S	**Sn**	**09 24 49.5**	**-1.1**
	87nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**0.07**	**46**	P	**Pn**	**09 24 43.2**	**-0.7**
EMIJ				S	**Sn**	**09 24 49.5**	**-1.1**
REAL	**Reales**	**0.30**	**264**	⇑P	**Pn**	**09 24 45.9**	**+0.9**
REAL				S	**Sn**	**09 24 52.5**	**0.0**
REAL	**Reales**	**0.30**	**264**	iP	**Pn**	**09 24 45.8**	**+0.8**
REAL				eS	**Sn**	**09 24 52.5**	**-0.1**
EMAL	**Malaga-Limoner**	**0.41**	**53**	⇓P	**Pn**	**09 24 45.8**	**-0.1**
EMAL				S	**Sn**	**09 24 53.9**	**-0.2**
EMAL	**Malaga-Limoner**	**0.41**	**53**	iP	**Pn**	**09 24 45.8**	**-0.1**
EMAL				eS	**Sn**	**09 24 53.9**	**-0.2**
LIJA	**Lijar**	**0.60**	**310**	P	**Pn**	**09 24 50.0**	**+2.1**
LIJA				S	**Sn**	**09 25 00.7**	**+3.1**
LIJA	**Lijar**	**0.60**	**310**	eP	**Pn**	**09 24 50.0**	**+2.1**
LIJA				eS	**Sn**	**09 25 00.7**	**+3.2**
ECEU	**Ceuta**	**0.76**	**216**	P	**Pn**	**09 24 49.5**	**-0.2**
	1.9nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**09 24 59.9**	**-0.9**
	6.8nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**0.76**	**216**	P	**Pn**	**09 24 49.5**	**-0.2**
	1.9nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**09 25 00.3**	**-0.5**
	6.8nm,0.1s,SNR=7.9						
ESPR	**Espera**	**0.89**	**293**	P	**Pn**	**09 24 52.7**	**+1.3**
	3.1nm,0.1s,SNR=6.5						
ESPR				S	**Sn**	**09 25 04.9**	**+1.2**
	9.0nm,0.2s,SNR=7.9						
ESPR	**Espera**	**0.89**	**293**	P	**Pn**	**09 24 52.7**	**+1.3**
	3.0nm,0.1s,SNR=6.5						
ESPR				S	**Sn**	**09 25 04.7**	**+0.9**
	9.0nm,0.2s,SNR=7.9						
ESPR	**Espera**	**0.89**	**293**	P	**Pn**	**09 24 52.7**	**+1.3**
ESPR				S	**Sn**	**09 25 04.7**	**+0.9**
EQUE	**Quentar**	**1.31**	**58**	S	**Sn**	**09 25 17.2**	**+3.8**
	1.6nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**1.31**	**58**	S	**Sn**	**09 25 17.5**	**+4.1**
	1.1nm,0.1s,SNR=7.9						
EALB	**Alboran**	**1.56**	**111**	P	**Pn**	**09 24 58.1**	**-2.1**
	1.0nm,0.1s,SNR=7.9						
EALB				S	**Sn**	**09 25 15.9**	**-3.6**
	9.5nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.56**	**111**	P	**Pn**	**09 24 58.1**	**-2.1**
EALB				S	**Sn**	**09 25 15.9**	**-3.6**
EBER	**Berja**	**1.61**	**76**	P	**Pn**	**09 25 00.9**	**+0.2**
	1.7nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**09 25 19.4**	**-1.1**
	4.2nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.61**	**76**	P	**Pn**	**09 25 00.4**	**-0.4**
	0.3nm,0.1s,SNR=7.9						
EBER	**Berja**	**1.61**	**76**	P	**Pn**	**09 25 00.4**	**-0.3**
EBER				S	**Sn**	**09 25 19.4**	**-1.1**
ECAB	**El Cabril**	**1.62**	**343**	P	**Pn**	**09 25 02.0**	**+1.0**
	3.7nm,0.1s,SNR=15						
ECAB				S	**Sn**	**09 25 21.5**	**+0.5**
	36nm,0.1s,SNR=22						
ECAB	**El Cabril**	**1.62**	**343**	P	**Pn**	**09 25 02.0**	**+1.0**
	2.8nm,0.1s,SNR=15						
ECAB				S	**Sn**	**09 25 21.5**	**+0.6**
	46nm,0.1s,SNR=22						
ECAB	**El Cabril**	**1.62**	**343**	P	**Pn**	**09 25 02.0**	**+1.0**
ECAB				S	**Sn**	**09 25 21.5**	**+0.6**
EADA	**Adamuz**	**1.66**	**7**	P	**Pn**	**09 25 02.3**	**+0.8**
	0.6nm,0.0s,SNR=7.9						
EADA				S	**Sn**	**09 25 22.7**	**+0.9**
	3.6nm,0.0s,SNR=7.9						
EADA	**Adamuz**	**1.66**	**7**	P	**Pn**	**09 25 02.6**	**+1.1**
	0.6nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**09 25 22.5**	**+0.7**
	10nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.66**	**7**	P	**Pn**	**09 25 02.6**	**+1.1**
EADA				S	**Sn**	**09 25 22.5**	**+0.7**
EMIN	**Mina Concepcio**	**1.93**	**311**	⇑P	**Pn**	**09 25 05.6**	**+0.5**
	8.0nm,0.1s,SNR=18						
EMIN				S	**Sn**	**09 25 28.1**	**-0.2**
	3.4nm,0.0s,SNR=15						
EMIN	**Mina Concepcio**	**1.93**	**311**	P	**Pn**	**09 25 05.6**	**+0.5**
	8.0nm,0.1s,SNR=53						
EMIN				S	**Sn**	**09 25 28.6**	**+0.3**
	5.3nm,0.1s,SNR=15						
EMIN	**Mina Concepcio**	**1.93**	**311**	P	**Pn**	**09 25 05.6**	**+0.5**
EMIN				S	**Sn**	**09 25 28.6**	**+0.3**
EGRO	**El Granado**	**2.35**	**296**	⇑P	**Pn**	**09 25 11.2**	**+0.4**
	3.6nm,0.1s,SNR=18						
EGRO				S	**Sn**	**09 25 38.0**	**-0.6**
	18nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**2.35**	**296**	P	**Pn**	**09 25 11.2**	**+0.4**
	3.6nm,0.1s,SNR=25						
EGRO				S	**Sn**	**09 25 37.7**	**-0.9**
	9.1nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**2.35**	**296**	P	**Pn**	**09 25 11.2**	**+0.4**
EGRO				S	**Sn**	**09 25 37.7**	**-0.9**
PBAR	**Barrancos**	**2.41**	**314**	eP	**Pn**	**09 25 12.2**	**+0.5**
PBAR				eS	**Sn**	**09 25 39.9**	**-0.2**
PBAR				A		09 25 43.0	
	12nm,0.1s						
PBAR	**Barrancos**	**2.41**	**314**	eP	**Pn**	**09 25 12.2**	**+0.5**
PBAR				eS	**Sn**	**09 25 39.9**	**-0.2**
	12nm,0.1s						
PVAQ	**Vaqueiros**	**2.47**	**292**	iP	**Pn**	**09 25 12.7**	**+0.2**
PVAQ				eS	**Sn**	**09 25 40.7**	**-0.9**
PVAQ				A		09 25 42.1	
	19nm,0.2s						
PVAQ	**Vaqueiros**	**2.47**	**292**	⇑P	**Pn**	**09 25 12.7**	**+0.2**
PVAQ				S	**Sn**	**09 25 40.7**	**-0.9**
	9.3nm,0.2s						
PBDV	**Barranco-do-Ve**	**2.59**	**287**	eP	**Pn**	**09 25 14.5**	**+0.5**
PBDV				eS	**Sn**	**09 25 43.4**	**-0.9**
PBDV				A		09 25 45.8	
	16nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.59**	**287**	eP	**Pn**	**09 25 14.5**	**+0.5**
PBDV				eS	**Sn**	**09 25 43.4**	**-0.9**
	16nm,0.1s						
EVIA	**Vianos**	**2.81**	**40**	P	**Pn**	**09 25 17.4**	**+0.3**
	0.5nm,0.1s,SNR=7.9						
EVIA				S	**Sn**	**09 25 48.8**	**-1.0**
	1.6nm,0.1s,SNR=7.9						

EBAD	**Badajoz**	**2.83**	**323**	P	**Pn**	**09 25 17.8**	**+0.5**
	2.5nm,0.1s,SNR=7.2						
EBAD				S	**Sn**	**09 25 50.3**	**+0.1**
	23nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**2.83**	**323**	P	**Pn**	**09 25 18.1**	**+0.8**
	2.5nm,0.1s,SNR=7.2						
EBAD				S	**Sn**	**09 25 50.4**	**+0.2**
	5.3nm,0.0s,SNR=7.9						
EBAD	**Badajoz**	**2.83**	**323**	P	**Pn**	**09 25 18.1**	**+0.8**
EBAD				S	**Sn**	**09 25 50.4**	**+0.2**
PBEJ	**Beja**	**2.85**	**303**	eS	**Sn**	**09 25 50.2**	**-0.6**
PBEJ				A		09 25 51.8	
	6.6nm,0.1s						
PBEJ	**Beja**	**2.85**	**303**	eS	**Sn**	**09 25 50.2**	**-0.6**
	6.6nm,0.1s						
MORF	**Marmelete**	**3.16**	**286**	eP	**Pn**	**09 25 22.2**	**+0.3**
MORF				S	**Sn**	**09 25 56.6**	**-1.7**
MORF				A		09 25 59.6	
	15nm,0.1s						
MORF	**Marmelete**	**3.16**	**286**	eP	**Pn**	**09 25 22.2**	**+0.3**
MORF				S	**Sn**	**09 25 56.6**	**-1.7**
	15nm,0.1s						
PESTR	**Estremoz**	**3.21**	**318**	eS	**Sn**	**09 25 59.2**	**-0.3**
PESTR				A		09 26 00.7	
	3.9nm,0.1s						
PESTR	**Estremoz**	**3.21**	**318**	eS	**Sn**	**09 25 59.2**	**-0.3**
	3.9nm,0.1s						
ESDC	**Sonseca Array**	**3.23**	**12**	P	**Pn**	**09 25 23.6**	**+0.8**
	2.2nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**3.23**	**12**	P	**Pn**	**09 25 23.6**	**+0.8**
	2.2nm,0.3s,SNR=7.9						
EVO	**Evora**	**3.23**	**309**	eP	**Pn**	**09 25 23.9**	**+1.1**
EVO				eS	**Sn**	**09 25 59.5**	**-0.6**
EVO				A		09 26 00.8	
	17nm,0.1s						
EVO	**Evora**	**3.23**	**309**	eP	**Pn**	**09 25 23.9**	**+1.1**
EVO				eS	**Sn**	**09 25 59.5**	**-0.6**
	17nm,0.1s						
PFVI	**Vila Bisbo**	**3.26**	**282**	eP	**Pn**	**09 25 23.5**	**+0.2**
PFVI				S	**Sn**	**09 25 59.2**	**-1.7**
PFVI				A		09 26 01.3	
	9.6nm,0.2s						
PFVI	**Vila Bisbo**	**3.26**	**282**	eP	**Pn**	**09 25 23.5**	**+0.2**
PFVI				S	**Sn**	**09 25 59.2**	**-1.7**
	9.6nm,0.2s						
PTEO	**Sao Teotonio**	**3.28**	**289**	eP	**Pn**	**09 25 24.3**	**+0.8**
PTEO				eS	**Sn**	**09 26 00.0**	**-1.3**
PTEO				A		09 26 04.2	
	8.3nm,0.2s						
PTEO	**Sao Teotonio**	**3.28**	**289**	eP	**Pn**	**09 25 24.3**	**+0.8**
PTEO				eS	**Sn**	**09 26 00.0**	**-1.3**
	8.3nm,0.2s						
MOE	**Montemor**	**3.44**	**307**	eP	**Pn**	**09 25 27.0**	**+1.3**
MOE				eS	**Sn**	**09 26 05.8**	**+0.6**
PMRV	**Marv??o**	**3.54**	**326**	eP	**Pn**	**09 25 28.3**	**+1.2**
PMRV				S	**Sn**	**09 26 06.9**	**-0.8**
PMRV				A		09 26 09.1	
	2.8nm,0.1s						
PMRV	**Marv??o**	**3.54**	**326**	eP	**Pn**	**09 25 28.3**	**+1.2**
PMRV				S	**Sn**	**09 26 06.9**	**-0.8**
	2.8nm,0.1s						
PCBR	**Castelo Branco**	**3.92**	**329**	eP	**Pn**	**09 25 33.5**	**+1.3**
PCBR				eS	**Sn**	**09 26 15.9**	**-1.0**
PCBR				A		09 26 18.3	
	3.2nm,0.2s						
PCBR	**Castelo Branco**	**3.92**	**329**	eP	**Pn**	**09 25 33.5**	**+1.3**
PCBR				eS	**Sn**	**09 26 15.9**	**-1.0**
	3.2nm,0.2s						
PVIS	**Viseu**	**4.83**	**331**	eS	**Sn**	**09 26 39.3**	**+0.1**
MVO	**Moncorvo**	**4.95**	**340**	eP	**Pn**	**09 25 47.7**	**+1.4**
MVO				eS	**Sn**	**09 26 40.7**	**-1.4**
MVO				A		09 26 43.0	
	4.5nm,0.2s						
MVO	**Moncorvo**	**4.95**	**340**	eP	**Pn**	**09 25 47.7**	**+1.4**
MVO				eS	**Sn**	**09 26 40.7**	**-1.4**
	4.5nm,0.2s						
PBRG	**Braganca**	**5.48**	**345**	eP	**Pn**	**09 25 55.0**	**+1.4**
PBRG				eS	**Sn**	**09 26 53.1**	**-2.2**
PBRG				A		09 26 57.0	
	2.1nm,0.1s						
PBRG	**Braganca**	**5.48**	**345**	P	**Pn**	**09 25 55.0**	**+1.4**
PBRG				S	**Sn**	**09 26 53.1**	**-2.2**
	1.1nm,0.1s						
PCAB	**Cabril**	**5.75**	**335**	eS	**Sn**	**09 26 58.5**	**-3.3**
PCAB				A		09 27 01.6	
	6.3nm,0.1s						
PCAB	**Cabril**	**5.75**	**335**	S	**Sn**	**09 26 58.5**	**-3.3**
	3.2nm,0.1s						
ELOB	**Lobios**	**5.90**	**336**	S	**Sn**	**09 27 03.8**	**-1.8**
	0.9nm,0.1s,SNR=7.9						

CSEM ***10*** *09:35:34.0, 3072N×3752E, h6km, ML3.3, After SNSN*
SGS ***10*** *09:35:34.0, 3072N×3752E, h6km*
ISCJB ***10*** *09:35:44.1±1.6, 3068N±004×361E±01, h0km, Error ellipse: s-maj=13.4km s-min=6.2km az=176.1*
GII ***10*** *09:35:44.6±1.6, 3070N×3605E, h0km, EXPLOSION*
ISC 10 09:35:44.1±1.6**, 3067N**±005×**362E**±01**, h0km, n11, σ0s86**/16**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFRI	**Zfri**	**0.86**	**263**	Pg	**Pg**	**09 35 59.5**	**-1.1**
PRNI	**Paran**	**1.05**	**253**	Pg	**Pg**	**09 36 03.9**	**-0.4**
DSI	**Dead Sea**	**1.12**	**323**	Pg	**Pg**	**09 36 04.9**	**-0.7**
DSI				Sg	**Sg**	**09 36 21.7**	**+1.5**
HRFI	**Mount Harif**	**1.16**	**237**	Pg	**Pg**	**09 36 06.7**	**+0.2**
KRMI	**Paran Flat**	**1.36**	**247**	Pg	**Pg**	**09 36 09.5**	**-0.7**
KRMI				Sg	**Sg**	**09 36 27.6**	**-0.3**
MBRI	**Mt Berech**	**1.39**	**232**	Pn	**Pn**	**09 36 10.4**	**-0.4**
MBRI				Sn	**Sn**	**09 36 31.2**	**+1.3**
EIL	**Elat**	**1.45**	**227**	Pn	**Pn**	**09 36 11.9**	**+0.4**
HQLS		**1.67**	**215**	P	**Pn**	**09 36 14.1**	**-0.5**
HQLS		**1.67**	**215**	P	**Pn**	**09 36 14.1**	**-0.5**
HQLS				S	**Sn**	**09 36 44.1**	**+7.4**
JLOS		**2.02**	**197**	P	**Pn**	**09 36 15.3**	**-4.0**
JLOS		**2.02**	**197**	P	**Pn**	**09 36 15.4**	**-3.9**
JLOS				S	**Sn**	**09 36 46.3**	**+1.1**

CSEM ***10*** *10:00:53.4±0.7, 5063N×1410E, h1km, ML3.2/5, Error ellipse: s-maj=9.5km s-min=6.3km az=159.0, Suspected Mining explosion.*
VIE ***10*** *10:00:54.1±0.6, 5052N×1409E, h0km, mb2.0/2, ML2.7/4, Error ellipse: s-maj=4.7km s-min=2.1km az=42.0, Suspected Mining explosion.*
ISC 10 10:00:53.9±1.6**, 5060N**±005×**1414E**±009**, h0km, n13, σ0s83**/20**, 4C-5D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**1.39**	**79**	ePn	**Pn**	**10 01 20.9**	**+0.4**
KSP				eSn	**Sn**	**10 01 40.4**	**+0.8**
VRAC	**Vranov**	**2.05**	**128**	eSg	**Sg**	**10 01 58.2**	**-1.5**
MORC	**Moravsky Berou**	**2.34**	**109**	eSg	**Sg**	**10 02 08.5**	**-0.5**
MOA	**Molln**	**2.76**	**178**	⇑iPg	**Pg**	**10 01 46.0**	**-0.6**
MOA				⇓iSn	**Sn**	**10 02 13.0**	**-0.2**
MOA				⇑iSg	**Sg**	**10 02 23.5**	**+1.1**
	21nm,0.6s						
MOA	**Molln**	**2.76**	**178**	Pg	**Pg**	**10 01 46.0**	**-0.7**
MOA				Sn	**Sn**	**10 02 13.0**	**-0.2**
MOA				Sg	**Sg**	**10 02 23.5**	**+1.1**
	21nm,0.6s						
CONA	**Conrad Observa**	**2.91**	**156**	⇓iPg	**Pg**	**10 01 48.9**	**-0.7**
CONA				⇑iSg	**Sg**	**10 02 26.8**	**-0.3**
	14nm,0.5s						
CSNA	**Conrad Observa**	**2.91**	**156**	⇓iPg	**Pg**	**10 01 48.8**	**-0.7**
CSNA				⇑iSg	**Sg**	**10 02 27.2**	**0.0**
	17nm,0.5s						
MODS	**Modra-Piesok**	**3.03**	**136**	eSG	**Sg**	**10 02 33.4**	**+2.3**
MODS	**Modra-Piesok**	**3.03**	**136**	eSg	**Sg**	**10 02 33.4**	**+2.3**
ZST	**Bratislava**	**3.09**	**140**	eSg	**Sg**	**10 02 32.9**	**-0.2**
ZST	**Bratislava**	**3.09**	**140**	eSG	**Sg**	**10 02 32.9**	**-0.2**
ARSA	**Arzberg**	**3.48**	**164**	⇓iSg	**Sg**	**10 02 46.1**	**+0.6**
	22nm,0.7s						
KBA	**Koelnbreinsper**	**3.57**	**189**	⇓iSg	**Sg**	**10 02 48.5**	**+0.1**
	7.8nm,0.5s						

IDC ***10*** *10:04:10.8±0.7, 15.10S×174.04W, h0km, mb4.4/10, mb1 4.7/11, mb1mx4.5/18, mbtmp4.4/11, ML4.7/1, MS4.4/25, Ms1 4.4/25, ms1mx4.3/28, Error ellipse: s-maj=33.0km s-min=17.6km az=145.0*
ISCJB ***10*** *10:04:11.8±0.3, 1494S±009×17429W±007, h13km, mb4.8/56, MS4.5/30, Error ellipse: s-maj=14.7km s-min=6.9km az=147.0*
GCMT ***10*** *10:04:14.2±0.2, 1479S×17397W, h12km, MW5.2/94, Moment Tensor Solution. s49,c73; s94,c159; Duration: 0 Moment tensor: Scale 10[16]Nm; Mrr-1.88±.14; Mθθ-2.77±.14; Mφφ4.65±.13; Mrθ-1.08±.36; Mθφ5.12±.12; Mφr1.99±.34; Best double couple: M0 6.82700×10[16] NP1:φs70.00000°, δ67.00000°, λ-12.00000°. NP2: φs165.00000°, δ79.00000°, λ-157.00000°. Principal axes: T 7.4440, Plg8.0000°, Azm296.0000°; N -1.2340, Plg65.0000°, Azm188.0000°; P -6.2110, Plg24.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***10*** *10:04:14.4, 1483S×17457W, h20km, mB5.1, mb4.8, Ms5.0, Msz4.8*
NEIC ***10*** *10:04:14.2±0.3, 15.11S×174.08W, h20km, mb4.9/40, MS4.7/2, Error ellipse: s-maj=14.0km s-min=7.8km az=147.0*
MOS ***10*** *10:04:15.7±1.8, 15.05S×174.15W, h33km, mb5.0/14, MS4.6/6, Error ellipse: s-maj=19.6km s-min=12.5km az=51.0*
ISC 10 10:04:13.6±0.3**, 1494S**±009×**17429W**±007**, h14km**±2.6km**: pP-P, n173, σ1s08**/111**, mb4.8**/56**, MS4.5**/30**, 7C-7D, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.64**	**67**	Pn	**Pn**	**10 04 48.0**	**-7.7**
	140nm,0.3s,baz=85,slow=0.3,SNR=130						
AFI				Sn	**Sn**	**10 05 12.0**	**-15**
	244nm,0.3s,baz=36,slow=22,SNR=15						
AFI				LR	LR	10 05 21.7	
	comp=Z,763nm,19.9s,baz=62,slow=28						
AFI	**Afiamalu**	**2.64**	**67**	ePn	**Pn**	**10 04 47.7**	**-8.0**
AFI				eSn	**Sn**	**10 05 13.4**	**-14**
AFI				LR	LR	10 05 21.8	
RAO	**Raoul Island**	**14.63**	**193**	LR	LR	10 12 31.3	
	comp=Z,2μm,19.1s,baz=274,slow=34						
RAR	**Rarotonga**	**15.14**	**116**	Pn	**Pn**	**10 07 41.1**	**-6.0**
	3.1nm,0.3s,baz=39,slow=1.8,SNR=4.7						
RAR				LR	LR	10 12 09.6	
	comp=Z,2μm,19.8s,baz=344,slow=32						
DZM	**Mont Dzumac**	**19.59**	**246**	eP	**Pn**	**10 08 43.1**	**+0.3**
PPT	**Papeete**	**23.86**	**100**	eLQ		10 14 03.2	
	4μm,26.5s						
PPT				eLR	LR	10 15 02.0	
	3μm,26.8s,baz=276						
PPT	**Papeete**	**23.86**	**100**	LR	LR	10 15 57.1	
	comp=Z,895nm,20.8s,MS4.2,baz=267,slow=30						
URZ	**Urewera**	**24.45**	**197**	P	**P**	**10 09 30.2**	**-1.7**
	16nm,0.9s,mb4.5,baz=90,slow=1.3,SNR=4.8						
URZ				LR	LR	10 17 40.6	
	comp=Z,2μm,19.5s,MS4.6,baz=30,slow=33						
URZ	**Urewera**	**24.45**	**197**	P	**P**	**10 09 30.2**	**-1.7**
URZ				LR	LR	10 17 40.6	
TAOE	**Nuku Hiva Isla**	**33.92**	**84**	eLQ		10 18 08.2	
	6μm,25.6s						
TAOE				eLR	LR	10 19 36.6	
	4μm,26.3s,baz=269						
CTA	**Charters Tower**	**37.92**	**256**	LR	LR	10 24 21.0	
	comp=Z,720nm,21.0s,MS4.5,baz=84,slow=32						
RKT	**Rikitea**	**37.95**	**108**	eLR	LR	10 21 38.3	
	2μm,26.8s,baz=279						
STKA	**Stephens Creek**	**43.53**	**239**	P	**P**	**10 12 19.2**	**+2.2**
	7.1nm,0.8s,mb4.5,baz=96,slow=6.4,SNR=7.1						
STKA				LR	LR	10 27 06.7	
	comp=Z,458nm,20.2s,MS4.4,baz=245,slow=32						
STKA	**Stephens Creek**	**43.53**	**239**	P	**P**	**10 12 19.2**	**+2.2**
STKA				LR	LR	10 27 06.7	
WB2	**Warramunga Arr**	**49.11**	**256**	eP	**P**	**10 13 00.9**	**-0.1**
WRAB	**Tennant Creek**	**49.11**	**256**	⇑eP	**P**	**10 13 01.9**	**+0.9**
WRAB	**Tennant Creek**	**49.11**	**256**	eP	**P**	**10 13 00.8**	**-0.2**
	20nm,1.3s,mb5.0						
WRA	**Warramunga Arr**	**49.12**	**256**	P	**P**	**10 13 00.5**	**-0.6**
	3.6nm,0.9s,mb4.4,baz=91,slow=7.5,SNR=24						
WRA				LR	LR	10 31 26.2	
	comp=Z,568nm,20.6s,MS4.5,baz=85,slow=33						
GUMO	**Guam**	**49.37**	**303**	LR	LR	10 30 29.1	
	comp=Z,268nm,18.6s,MS4.3,baz=88,slow=32						
ASAR	**Alice Springs**	**49.44**	**252**	P	**P**	**10 13 02.7**	**-0.8**
	28nm,0.8s,mb5.3,baz=85,slow=8.3,SNR=108						
KAKA	**Kakadu**	**51.68**	**265**	eP	**P**	**10 13 19.7**	**-0.9**
	16nm,0.7s,mb5.1						
FITZ	**Fitzroy Crossi**	**57.47**	**258**	P	**P**	**10 14 07.1**	**+4.5**
	14nm,1.5s,mb4.8,baz=110,slow=15,SNR=3.3						
SBA	**Scott Base**	**63.64**	**184**	eP	**P**	**10 14 42.8**	**-1.0**
SBA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
SBA	**Scott Base**	**63.64**	**184**	eP	**P**	**10 14 42.8**	**-1.0**
	comp=Z,6.0nm,1.0s,mb4.6						
NWAO	**Narrogin (SRO)**	**64.10**	**240**	LR	LR	10 38 51.9	
	comp=Z,474nm,21.8s,MS4.6,baz=322,slow=32						
MJAR	**Matsushiro Arr**	**68.04**	**320**	LR	LR	10 38 20.9	
	comp=Z,310nm,22.0s,MS4.5,baz=150,slow=30						
PETK	**Petropavlovsk-**	**71.93**	**343**	LR	LR	10 42 27.2	
	comp=Z,110nm,20.8s,MS4.1,baz=137,slow=32						
CMB	**Columbia Colle**	**72.99**	**42**	eP	**P**	**10 15 43.1**	**+0.2**
CMB				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
CMB	**Columbia Colle**	**72.99**	**42**	eP	**P**	**10 15 43.1**	**+0.2**
	comp=Z,8.7nm,1.3s,mb4.5						
WDC	**Whiskeytown Da**	**73.15**	**39**	eP	**P**	**10 15 37.4**	**-6.4**
WDC				pmax	pmax		
	comp=Z,33nm,1.8s,mb5.0						
WDC	**Whiskeytown Da**	**73.15**	**39**	eP	**P**	**10 15 37.4**	**-6.4**
	comp=Z,33nm,1.8s,mb5.0						
YBH	**Yreka Blue Hor**	**73.75**	**38**	eP	**P**	**10 15 47.0**	**-0.3**
YBH				pmax	pmax		
	comp=Z,11nm,1.0s						
YBH	**Yreka Blue Hor**	**73.75**	**38**	eP	**P**	**10 15 47.0**	**-0.3**
	comp=Z,11nm,1.0s,mb4.8						
HUMO	**Hull Mountain**	**74.15**	**37**	eP	**P**	**10 15 49.2**	**-0.3**
	comp=Z,6.7nm,1.0s,mb4.5						
NVAR	**Mina Array Bea**	**74.56**	**42**	P	**P**	**10 15 51.2**	**-0.9**
	comp=Z,2.0nm,0.8s,mb4.1,baz=235,slow=9.7,SNR=14						
KSRS	**Korea Array**	**75.23**	**316**	P	**P**	**10 15 56.9**	**+0.8**
	comp=Z,2.6nm,1.0s,mb4.1,baz=126,slow=6.6,SNR=7.9						
KSRS				LR	LR	10 43 56.5	
	comp=Z,151nm,20.4s,MS4.3,baz=119,slow=32						
MOD	**Modoc**	**75.29**	**39**	eP	**P**	**10 15 55.8**	**-0.5**
	comp=Z,22nm,1.4s,mb4.9						
WVOR	**Wild Horse Val**	**76.61**	**39**	eP	**P**	**10 16 02.3**	**-1.4**
WVOR				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
WVOR	**Wild Horse Val**	**76.61**	**39**	eP	**P**	**10 16 02.2**	**-1.5**
	comp=Z,8.3nm,1.1s,mb4.6						
ARUT	**Antelope Range**	**77.48**	**45**	eP	**P**	**10 16 08.2**	**-0.6**
ELK	**Elko**	**77.81**	**42**	eP	**P**	**10 16 12.0**	**+1.5**
ELK	**Elko**	**77.81**	**42**	epP	**P**	**10 16 12.0**	**+1.5**
WUAZ	**Wupatki**	**77.82**	**48**	eP	**P**	**10 16 11.2**	**+0.5**
	comp=Z,35nm,2.0s,mb4.9						
ETW	**Entiat**	**78.68**	**34**	eP	**P**	**10 16 14.6**	**-0.6**
MSU	**Marysvale**	**78.70**	**45**	eP	**P**	**10 16 15.5**	**0.0**
BMO	**Blue Mountains**	**78.78**	**37**	eP	**P**	**10 16 16.3**	**+0.5**
BMO				pmax	pmax		
	comp=Z,47nm,2.8s,mb4.9						
BMO	**Blue Mountains**	**78.78**	**37**	eP	**P**	**10 16 16.3**	**+0.5**
	comp=Z,46nm,2.8s,mb4.9						
DUG	**Dugway**	**79.11**	**43**	eP	**P**	**10 16 18.2**	**+0.5**
DUG				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
DUG	**Dugway**	**79.11**	**43**	eP	**P**	**10 16 18.2**	**+0.5**
	comp=Z,6.6nm,1.2s,mb4.4						
NJ2	**Nanjing**	**79.21**	**307**	eP	**P**	**10 16 17.6**	**-0.8**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
TMUT	**Trail Mountain**	**79.74**	**45**	eP	**P**	**10 16 21.3**	**+0.1**
HLID	**Hailey**	**79.82**	**40**	eP	**P**	**10 16 21.1**	**-0.4**
	comp=Z,3.7nm,0.8s,mb4.4						
SRU	**San Rafael**	**80.12**	**45**	eP	**P**	**10 16 23.5**	**+0.2**
CN2	**Changchun**	**80.19**	**320**	eP	**P**	**10 16 23.4**	**-0.1**
JLU	**Jordanelle**	**80.21**	**43**	epP	**P**	**10 16 25.2**	**+1.5**
KTH	**Kantishna Hill**	**80.31**	**10**	eP	**P**	**10 16 23.4**	**-0.3**
	comp=Z,12nm,1.2s,mb4.7						
TRF	**Thorofare Moun**	**80.33**	**11**	eP	**P**	**10 16 22.4**	**-1.4**
	comp=Z,32nm,1.3s,mb5.1						
CHUM	**Lake Minchumin**	**80.38**	**10**	eP	**P**	**10 16 22.2**	**-1.9**
	comp=Z,10nm,1.1s,mb4.7						
LAZ	**Ladron**	**80.42**	**51**	eP	**P**	**10 16 26.4**	**+1.4**
BNM	**Barren Site**	**80.70**	**51**	eP	**P**	**10 16 27.0**	**+0.5**
PV10	**Paradox Valley**	**80.81**	**46**	eP	**P**	**10 16 27.1**	**+0.2**
MCK	**McKinley**	**80.83**	**11**	eP	**P**	**10 16 25.4**	**-1.1**
MCK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
MCK	**McKinley**	**80.83**	**11**	eP	**P**	**10 16 25.4**	**-1.1**
	comp=Z,14nm,1.0s,mb4.8						
PV01	**Paradox Valley**	**81.03**	**47**	eP	**P**	**10 16 27.2**	**-0.9**
TXAR	**Lajitas Array**	**81.07**	**56**	P	**P**	**10 16 27.9**	**-0.7**
	comp=Z,1.6nm,1.0s,mb3.9,baz=226,slow=6.7,SNR=8.8						
TXAR				LR	LR	10 44 58.8	
	comp=Z,208nm,18.8s,MS4.5,baz=340,slow=30						
ANMO	**Albuquerque**	**81.16**	**50**	⇓eP	**P**	**10 16 29.2**	**+0.3**
ANMO	**Albuquerque**	**81.16**	**50**	eP	**P**	**10 16 29.0**	**+0.1**
	comp=Z,34nm,2.0s,mb4.9						
MCMT	**McKenzie Canyo**	**81.44**	**39**	eP	**P**	**10 16 30.1**	**0.0**
AHID	**Auburn Hatcher**	**81.50**	**42**	eP	**P**	**10 16 29.9**	**-0.6**
GDL2	**Guadalupe Moun**	**81.63**	**54**	epP	**P**	**10 16 34.3**	**+2.8**
RRI2	**Red Ridge**	**81.64**	**41**	eP	**P**	**10 16 31.5**	**+0.2**
	comp=Z,16nm,1.4s,mb4.8						
MSO	**Missoula**	**81.83**	**37**	eP	**P**	**10 16 32.6**	**+0.4**
DLMT	**Dillon**	**81.86**	**39**	eP	**P**	**10 16 33.0**	**+0.6**
	comp=Z,21nm,1.7s,mb4.8						
QIZ	**Qiongzhong**	**81.94**	**292**	P	**P**	**10 16 32.4**	**-1.0**
QIZ				S	S	10 26 45.0	-2.4
QIZ				LR	LR		
	comp=E,317nm,25.0s						
QIZ				LR	LR		
	comp=Z,395nm,27.0s,MS4.6						
TPAW	**Teton Pass**	**81.95**	**41**	eP	**P**	**10 16 32.9**	**0.0**
	comp=Z,8.7nm,1.1s,mb4.6						
REDW	**Red Top Meadow**	**81.95**	**41**	eP	**P**	**10 16 32.8**	**-0.1**
	comp=Z,17nm,1.4s,mb4.8						
SNOW	**Snow King Moun**	**82.06**	**41**	eP	**P**	**10 16 33.8**	**+0.3**
	comp=Z,16nm,1.3s,mb4.8						
COLA	**College**	**82.07**	**11**	⇓eP	**P**	**10 16 31.3**	**-1.7**
COLA	**College**	**82.07**	**11**	eP	**P**	**10 16 31.1**	**-1.9**
	comp=Z,13nm,1.0s,mb4.8						
IMW	**Indian Meadow**	**82.16**	**41**	eP	**P**	**10 16 34.1**	**+0.1**
	comp=Z,14nm,1.3s,mb4.7						
MOOW	**Moose Ponds**	**82.20**	**41**	eP	**P**	**10 16 35.9**	**+1.7**
	comp=Z,21nm,1.6s,mb4.8						
LOHW	**Long Hollow**	**82.23**	**41**	eP	**P**	**10 16 35.0**	**+0.6**
	comp=Z,31nm,1.8s,mb4.9						
CHMT	**Chamberlain Mo**	**82.27**	**37**	eP	**P**	**10 16 33.3**	**-1.2**
FLWY	**Flagg Ranch**	**82.40**	**41**	eP	**P**	**10 16 36.6**	**+1.4**
	comp=Z,8.7nm,1.0s,mb4.6						
BW06	**Boulder Array**	**82.50**	**42**	eP	**P**	**10 16 34.2**	**-1.6**
	comp=Z,26nm,2.0s,mb4.8						
PDAR	**Pinedale Array**	**82.50**	**42**	P	**P**	**10 16 34.9**	**-0.9**
	comp=Z,1.5nm,1.0s,mb3.9,baz=192,slow=2.9,SNR=5.5						
PDAR				LR	LR	10 48 39.9	
	comp=Z,249nm,18.4s,MS4.6,baz=256,slow=32						
BOZ	**Bozeman (W)**	**82.59**	**39**	eP	**P**	**10 16 36.9**	**+0.7**
HRY	**Holter Researc**	**83.01**	**38**	eP	**P**	**10 16 39.5**	**+1.2**
DAWY	**Dawson**	**83.19**	**15**	eP	**P**	**10 16 37.7**	**-1.2**
RWWY	**Rawlins**	**83.55**	**44**	eP	**P**	**10 16 42.3**	**+1.0**
	comp=Z,25nm,1.4s,mb5.2						
RLMT	**Red Lodge**	**83.79**	**40**	eP	**P**	**10 16 42.0**	**-0.5**
	comp=Z,11nm,1.5s,mb4.8						
ISCO	**Idaho Springs**	**83.83**	**46**	eP	**P**	**10 16 37.1**	**-5.6**
ISCO				pmax	pmax		
	comp=Z,33nm,2.3s,mb5.1						
ISCO	**Idaho Springs**	**83.83**	**46**	eP	**P**	**10 16 37.1**	**-5.7**
	comp=Z,33nm,2.3s,mb5.1						
BILL	**Bilibino**	**83.94**	**353**	eP	**P**	**10 16 39.1**	**-3.6**
BJI	**Beijing**	**84.53**	**314**	P	**P**	**10 16 48.4**	**+2.1**
BJI				SS	SS	10 32 43.7	-0.5
BJI				AMB	AMB		
	comp=Z,16nm,1.6s,mb4.9						
BJI				LR	LR		
	comp=N,146nm,19.1s,MS4.5						
BJI				LR	LR		
	comp=E,127nm,17.8s,MS4.5						
BJI				LR	LR		
	comp=Z,241nm,25.3s						
BJI	**Beijing**	**84.53**	**314**	P	**P**	**10 16 48.4**	**+2.1**
	comp=Z,16nm,1.6s,mb4.9						
BJI				S	S	10 27 20.2	+7.4
BJI				SS	SS	10 32 43.7	-0.5
BJI				LR	LR		
	comp=Z,240nm,25.3s,MS4.5						
PMSA	**Palmer Station**	**84.94**	**156**	LR	LR	10 45 57.7	
	comp=Z,257nm,21.1s,MS4.6,baz=74,slow=30						
LAO	**LASA Array**	**86.40**	**40**	eP	**P**	**10 16 54.4**	**-1.0**
	comp=Z,20nm,1.3s,mb5.2						
USHA	**Ushuaia**	**86.78**	**146**	LR	LR	10 45 38.1	
	comp=Z,508nm,20.8s,MS4.9,baz=242,slow=29						
GYA	**Guiyang**	**87.07**	**298**	P	**P**	**10 16 59.6**	**+0.3**
GYA				PP	PP	10 20 24.2	+1.2
GYA				SKS		10 27 23.8	
GYA				S	S	10 27 35.4	-3.0
GYA				PS		10 28 37.6	
GYA				SS	SS	10 33 20.0	-2.1
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.3						
GYA				AMB	AMB		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=N,490nm,20.8s,MS5.0						
GYA				LR	LR		
	comp=E,460nm,21.1s,MS5.0						
GYA				LR	LR		
	comp=Z,480nm,20.3s,MS4.9						
XAN	**Xi'an**	**87.67**	**306**	P	**P**	**10 17 04.4**	**+2.4**
XAN				AP	pP	10 17 12.1	+5.4
XAN				XP	sP	10 17 15.9	+7.5
XAN				AMB	AMB		
	comp=Z,6.0nm,1.5s,mb4.6						
XAN				AMB	AMB		
	comp=Z,48nm,6.0s						
MAW	**Mawson**	**87.95**	**199**	LR	LR	10 52 57.3	
	comp=Z,356nm,19.4s,MS4.8,baz=305,slow=33						
MAW	**Mawson**	**87.95**	**199**	eP	**P**	**10 17 01.1**	**-1.6**
MAW				e*PP	pP	10 17 14.7	+7.3
MAW				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MAW	**Mawson**	**87.95**	**199**	eP	**P**	**10 17 01.1**	**-1.7**
	comp=Z,10nm,1.3s,mb4.9						
MAW				epP	pP	10 17 14.7	+7.2
HHC	**Hu-ho-hao-te**	**88.09**	**313**	eP	**P**	**10 17 01.3**	**-2.5**
HHC				PP	PP	10 20 30.1	-0.7
HHC				SKS		10 27 27.2	
HHC				S	S	10 27 42.0	-5.5
HHC				SS	SS	10 33 32.8	-3.5
HHC				AMB	AMB		
	comp=Z,13nm,0.6s,mb5.3						
HHC				AMB	AMB		
	comp=Z,90nm,6.2s						
HHC				LR	LR		
	comp=N,125nm,17.7s,MS4.6						
HHC				LR	LR		
	comp=E,164nm,17.2s,MS4.6						
HHC				LR	LR		
	comp=Z,157nm,17.4s,MS4.5						
YKA	**Yellowknife Ar**	**90.02**	**24**	P	**P**	**10 17 12.1**	**-0.2**
	comp=Z,2.8nm,0.9s,mb4.6,baz=215,slow=42,SNR=2.7						
YKA				LR	LR	10 53 20.4	
	comp=Z,147nm,18.9s,MS4.4,baz=330,slow=33						
YKA	**Yellowknife Ar**	**90.02**	**24**	P	**P**	**10 17 12.1**	**-0.2**
YKA				LR	LR	10 53 20.4	
KMI	**Kunming**	**90.06**	**296**	P	**P**	**10 17 14.6**	**+1.2**
KMI				S	S	10 28 04.4	-2.2
KMI				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb5.0						
KMI				LR	LR		
	comp=N,113nm,19.2s,MS4.6						
KMI				LR	LR		
	comp=E,188nm,18.3s,MS4.6						
KMI				LR	LR		
	comp=Z,230nm,20.5s,MS4.6						
KMI	**Kunming**	**90.06**	**296**	P	**P**	**10 17 14.6**	**+1.2**
	comp=Z,8.0nm,1.1s,mb5.0						
KMI				S	S	10 28 04.4	-2.2
KMI				SS	SS	10 33 54.8	-11
KMI				SSS		10 37 38.7	
KMI				LR	LR		
	comp=Z,230nm,20.5s,MS4.6						
PLCA	**Paso Flores**	**90.45**	**132**	LR	LR	10 49 16.8	
	comp=Z,320nm,20.7s,MS4.7,baz=185,slow=30						
CD2	**Chengdu**	**90.84**	**302**	eP	**P**	**10 17 16.6**	**-0.4**
CD2				AP	pP	10 17 21.4	-0.3
CD2				XP	sP	10 17 24.2	+0.9
CD2				PP	PP	10 20 54.0	+1.0
CD2				SKS		10 27 45.7	
CD2				S	S	10 28 09.4	-4.2
CD2				SS	SS	10 34 14.3	-2.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
CD2				AMB	AMB		
	comp=Z,30nm,8.4s						
CD2				LR	LR		
	comp=N,180nm,16.8s,MS4.8						
CD2				LR	LR		
	comp=E,210nm,14.8s,MS4.8						
CD2				LR	LR		
	comp=Z,160nm,15.2s,MS4.6						
CMAR	Chiang Mai Arr	91.66	289	LR	LR	10 53 46.8	
	comp=Z,204nm,21.1s,MS4.5,baz=111,slow=32						
LZH	Lanzhou	92.26	307	eP	P	10 17 23.4	0.0
LZH				PP	PP	10 21 05.3	+1.1
LZH				eSKS		10 27 54.2	
LZH				eS	S	10 28 22.0	-4.3
LZH				SS	SS	10 34 37.0	0.0
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,44nm,4.0s						
LZH				LR	LR		
	comp=E,260nm,18.0s						
LZH				LR	LR		
	comp=Z,410nm,19.3s,MS4.9						
LZH	Lanzhou	92.26	307	eP	P	10 17 23.4	0.0
LZH						10 21 05.3	
LZH				e		10 27 54.2	
LZH				eS	S	10 28 22.0	-4.3
LZH				SS	SS	10 34 37.0	0.0
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.2						
LZH				MLR	MLR		
	comp=Z,410nm,19.3s,MS4.9						
LZH	Lanzhou	92.26	307	eP	P	10 17 23.4	0.0
	comp=Z,13nm,1.0s,mb5.2						
LZH				pP	pP	10 17 26.5	-1.6
LZH				sP	sP	10 17 28.0	-1.8
LZH				PP	PP	10 21 05.3	+1.1
LZH				eSKS		10 27 54.2	
LZH				eS	S	10 28 22.0	-4.3
LZH				sS	sS	10 28 27.0	-7.1
LZH				SS	SS	10 34 37.0	0.0
LZH				LR	LR		
	comp=Z,410nm,19.3s,MS4.9						
VNA3	Neumayer Olymp	93.39	175	eP	P	10 17 30.1	+2.1
VNA3				e	pP	10 17 33.5	+0.8
VNA3				e		10 17 39.6	
SNAA	Sanae	93.41	177	eP	P	10 17 28.7	+0.6
SNAA	Sanae	93.41	177	i P	P	10 17 28.8	+0.7
SNAA	Sanae	93.41	177	eP	P	10 17 28.5	+0.4
	comp=Z,7.7nm,1.4s,mb4.9						
ULN	Ulaanbaatar	93.52	319	⇓eP	P	10 17 32.1	+3.2
ULN	Ulaanbaatar	93.52	319	eP	P	10 17 31.3	+2.4
	comp=Z,8.6nm,1.4s,mb5.0						
VNA2	Neumayer--Watz	93.88	176	eP	P	10 17 33.4	+3.2
VNA2				e	pP	10 17 36.5	+1.5
VNA2				e		10 17 43.3	
SONM	Songino Array	93.93	318	P	P	10 17 32.4	+1.6
	comp=Z,0.3nm,0.3s,mb4.2,baz=132,slow=6.0,SNR=2.6						
SONM				LR	LR	10 53 59.9	
	comp=Z,196nm,21.3s,MS4.5,baz=74,slow=32						
NNA	Nana	93.99	103	LR	LR	10 51 24.9	
	comp=Z,108nm,18.7s,MS4.3,baz=200,slow=30						
ULM	Lac du Bonnet	94.11	39	LR	LR	10 54 31.9	
	comp=Z,400nm,18.5s,MS4.9,baz=247,slow=32						
CFAA	Coronel Fontan	95.42	125	LR	LR	10 50 41.4	
	comp=Z,53nm,20.6s,MS4.0,baz=185,slow=29						
LVC	Limon Verde	97.98	116	eP	P	10 17 42.1	-7.9
	comp=Z,9.3nm,0.9s,mb5.3						
KIV	Kislovodsk	137.30	320	ePKIKP	PKPdf	10 23 36.2	-0.6
KIV				e		10 26 26.5	
KIV				e		10 30 38.9	
KIV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KIV				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.5						
BRG	Berggiesshubel	143.55	351	ePKIKP	pPKPdf	10 23 57.7	+5.0
BRG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRG	Berggiesshubel	143.55	351	ePKP	pPKPdf	10 23 57.7	+5.1
	comp=Z,1.7nm,0.4s						
DPC	Dobruska-Polom	143.65	349	ePKP	PKPdf	10 23 48.2	+0.2
DPC				epPKP	pPKPdf	10 23 52.6	-0.3
UZH	Uzhgorod	143.74	341	ePKIKP	PKPdf	10 23 46.8	-1.4
UZH				i		10 23 53.2	
PVCC	Panska Ves	143.78	350	ePKP	PKiKP	10 23 52.7	+1.0
PRU	Pruhonice	144.31	350	ePKP	PKiKP	10 23 53.5	+0.7
PRU				AMS	AMS	11 27 00.0	
	comp=Z,200nm,26.3s						
KECS	Kecovo	144.40	343	ePKP	PKPdf	10 23 48.5	-0.9
TREC	Trest	144.81	349	ePKP	PKiKP	10 23 55.4	+1.6
VYHS	Vyhne	144.83	345	ePKP	PKPdf	10 23 47.6	-2.5
VYHS	Vyhne	144.83	345	ePKP	PKPdf	10 23 47.7	-2.4
KOLL	Kolacno	144.86	345	ePKP	PKPdf	10 23 51.0	+0.8
GIVF	Givet	144.92	1	ePKP1	PKPdf	10 23 52.1	+1.9
KMBO	Kilima Mbogo	144.96	246	PKPbc	PKPdf	10 23 51.9	+0.4
	comp=Z,0.6nm,0.3s,baz=45,slow=1.4,SNR=3.6						
GRA1	Grafenberg Arr	145.05	354	ePKP	PKPdf	10 23 51.0	+0.5
GRF	Grafenberg Arr	145.05	354	ePKP	PKPdf	10 23 51.0	+0.5
PSZ	Piszkesteto	145.08	343	⇓epPKP	PKiKP	10 23 56.1	+1.7
PSZ	Piszkesteto	145.08	343	ePKPbc	PKPbc	10 23 50.9	+0.9
KHC	Kasperske Hory	145.30	351	ePKP	PKPdf	10 23 51.9	+1.0
KHC				epPKP	pPKPdf	10 23 57.2	+1.4
KHC				AMS	AMS	11 26 50.0	
	comp=Z,100nm,18.6s						
MODS	Modra-Piesok	145.32	346	ePKP	PKPdf	10 23 51.1	+0.1
ZST	Bratislava	145.53	347	ePKP	PKPdf	10 23 54.0	+2.6
GERES	GERESS Array B	145.56	351	PKPbc	PKPbc	10 23 52.4	+0.9
	comp=Z,3.6nm,1.0s,baz=143,slow=2.7,SNR=6.7						
BUD	Budapest	145.72	344	ePKP	PKiKP	10 23 56.8	+1.0
LANF	Langenberg	146.01	358	PKP	PKiKP	10 23 58.1	+1.8
CONA	Conrad Observa	146.05	348	⇑iP	PKiKP	10 23 55.6	-0.9
	comp=Z,44nm,1.5s						
CSNA	Conrad Observa	146.05	348	⇑iP	PKiKP	10 23 55.5	-0.9
	comp=Z,44nm,1.5s						
LDF	La Druitiere	146.10	7	ePKP1	PKPbc	10 23 52.7	-0.5
	comp=Z,70nm,1.5s						
SOP	Sopron	146.13	347	epPKP	pPKPdf	10 24 00.2	+2.9
CDF	Champ du Feu	146.60	358	ePKP1	PKPbc	10 23 53.4	-1.3
	comp=Z,30nm,1.1s						
BFO	Black Forest	146.63	357	ePKP2	PKPab	10 23 54.6	-1.2
ECH	Echery	146.80	358	PKP	PKPab	10 23 58.6	+2.1
HAU	Haudompre	147.02	359	ePKP1	PKPbc	10 23 55.9	0.0
MOF	Molkenrain	147.16	358	PKP	PKPdf	10 23 55.5	+1.4
HINF	Hinteralfeld	147.20	359	ePKP1	PKPbc	10 23 56.3	-0.1
MOTA	Moosalm	147.38	353	⇓iP	PKPab	10 23 58.8	+0.1
	comp=Z,37nm,1.5s						
WTTA	Wattenberg	147.40	353	⇑iP	PKiKP	10 24 00.6	+1.3
	comp=Z,28nm,1.4s						
WTTA	Wattenberg	147.40	353	⇑ipPKPdf	PKiKP	10 24 00.6	+1.3
	comp=Z,28nm,1.4s						
DAVA	Damuels	147.56	355	⇓iP	PKiKP	10 24 00.3	+0.7
	comp=Z,24nm,1.5s						
DAVA	Damuels	147.56	355	⇓ipPKPdf	PKiKP	10 24 00.3	+0.7
	comp=Z,24nm,1.5s						
MMAI	Mount Meron Ar	147.62	309	PKPbc	PKPbc	10 23 59.6	+1.5
	comp=Z,0.8nm,0.3s,baz=266,slow=35,SNR=2.7						
FETA	Feichten	147.74	354	⇑iP	PKiKP	10 24 01.9	+2.0
	comp=Z,18nm,1.3s						
FETA	Feichten	147.74	354	⇑ipPKPdf	PKiKP	10 24 01.9	+2.0
	comp=Z,18nm,1.3s						
SSF	Saint Saulge	147.92	3	ePKP1	PKPbc	10 23 58.4	0.0
	comp=Z,66nm,1.4s						
TUE	Stuetta	148.42	355	ePKPbc	PKPbc	10 23 59.1	-0.6
CABF	La Chapelle	148.42	360	ePKP1	PKPbc	10 23 58.9	-0.8
	comp=Z,92nm,1.5s						
BNI	Bardonecchia	149.97	359	ePKIKP	PKPdf	10 23 59.3	+0.5
BNI				e		10 24 11.2	

SKO 10 10:04:27.9, 4035N×1922E, h0km
ISCJB 10 10:04:28.9±0.5, 4065N±003×1911E±003, h7km±5km, Error ellipse: s-maj=5.5km s-min=3.4km az=158.3
ROM 10 10:04:30.5±0.3, 4062N×1908E, h10km, Md2.9/8, Ml2.8/5, Error ellipse: s-maj=4.7km s-min=3.9km az=132.0
CSEM 10 10:04:30.8±0.3, 4059N×1922E, h30km, ML2.5, Error ellipse: s-maj=7.8km s-min=5.0km az=162.0
BEO 10 10:04:36.1±1.1, 4103N×1902E, ML2.5/4
ISC 10 10:04:29.7±0.5, 4065N±003×1912E±003, h9km±4km, n27, σ1^{s}19/44, 2D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCTE	Santa Cesarea	0.76	221	Pg	Pg	10 04 44.4	-0.1
SCTE				Sg	Sg	10 04 55.6	+1.2
TIR	Tirane	0.90	39	⇓iPg	Pg	10 04 48.2	+1.2
TIR				eSg	Sg	10 04 59.3	+0.7
TIR	Tirane	0.90	39	ePN	Pn	10 04 50.4	+2.0
TIR	Tirane	0.90	39	Pg	Pg	10 04 48.1	+1.1
TIR				Sg	Sn	10 05 02.7	+1.2
	286nm,0.3s						
TIR	Tirane	0.90	39	⇓iPg	Pg	10 04 48.2	+1.2
TIR				Sg	Sn	10 05 02.7	+1.2
KEK	Kerkira	1.07	151	Pg	Pg	10 04 49.6	-0.7
KEK				Sg	Sg	10 05 04.9	+0.7
	329nm,0.6s						
PE1	Pezze di Greco	1.30	277	ePg	Pg	10 04 52.8	-1.9
PE1				eSg	Sg	10 05 12.3	+0.7
OHR	Ohrid	1.35	70	ePn	Pn	10 04 55.1	+0.4
OHR				eSg	Sg	10 05 13.6	+0.4
OHR	Ohrid	1.35	70	ePn	Pn	10 04 55.0	+0.3
OHR				eSg	Sg	10 05 13.6	+0.4
PHP	Peshkopia	1.44	43	ePN	Pn	10 04 55.9	+0.1
PUK	Puka	1.51	22	ePN	Pn	10 04 55.7	-1.1
NOCI	Noci	1.57	276	Pg	Pg	10 04 59.1	-0.8
BIA	Bitola	1.71	77	ePn	Pn	10 04 59.0	-0.7
BIA				eSg	Sg	10 05 22.7	-2.0
BIA	Bitola	1.71	77	ePn	Pn	10 04 58.9	-0.7
BIA				eSg	Sg	10 05 22.7	-2.0
KRUS	Krusevo	1.76	65	ePn	Pn	10 05 00.6	+0.2
KRUS				eSg	Sg	10 05 26.5	+0.2
KRUS	Krusevo	1.76	65	ePn	Pn	10 05 00.5	+0.2
KRUS				eSg	Sg	10 05 26.5	+0.1
BCI	Bajram Curri	1.86	22	ePN	Pn	10 05 03.0	+1.4
SG1	Sgolgore (BA)	1.87	277	ePg	Pg	10 05 04.3	-1.2
SG1				eSg	Sg	10 05 32.5	+2.8
AMUR	Altamura	1.93	278	Pg	Pn	10 05 01.9	-0.7
	82nm,0.6s						
MIGL	Miglionico	2.04	270	Pg	Pn	10 05 04.9	+0.7
	351nm,0.8s						
TREB	Trebinje	2.15	345	ePn	Pn	10 05 07.0	+1.4
TREB				eSn	Sn	10 05 30.7	-1.6
TIP	Timpagrande	2.34	232	Pg	Pn	10 05 07.3	-1.0
	16nm,1.3s						
SERS	Sersale	2.47	230	Pg	Pn	10 05 08.6	-1.5
SIRI	Monte Sirino -	2.53	260	Pg	Pn	10 05 10.7	-0.2
BARS	Barje	2.96	42	ePn	Pg	10 05 22.3	-4.1
BARS				eSg	Sg	10 06 02.9	-1.8
BBLS	Lazići	3.22	4	ePn	Pn	10 05 22.4	+2.0
BBLS				eSn	Sn	10 05 58.2	-0.6
DIVS	Divibare	3.50	10	ePn	Pn	10 05 27.7	+3.4
DIVS				eSn	Sn	10 06 05.2	-0.6

IDC 10 10:12:23.6±6.8, 746S×12868E, h87km±77km, mb3.7/3, mb1 3.8/7, mb1mx3.6/17, mbtmp3.7/7, ML4.0/4, Error ellipse: s-maj=62.2km s-min=25.9km az=21.0
NEIC 10 10:12:27.6±3.6, 768S×12844E, h129km±43km, Error ellipse: s-maj=34.3km s-min=30.2km az=97.0
ISCJB 10 10:12:29.6±1.5, 797S±009×12850E±007, h181km±17km, mb3.8/3, Error ellipse: s-maj=16.8km s-min=9.5km az=30.4
ISC 10 10:12:30.7±1.4, 802S±009×12848E±007, h173km±15km, n8, σ0^{s}87/13, mb3.8/3, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.23	245	P	Pn	10 13 47.0	-0.6
	9.8nm,0.3s,baz=97,slow=5.2,SNR=5.6						
BATI				S	Sn	10 14 48.2	+0.4
	9.4nm,0.3s,baz=299,slow=17,SNR=5.0						
KAKA	Kakadu	6.08	140	ePn	Pn	10 13 59.1	+0.4
	30nm,0.3s						
KAKA				eSn	Sn	10 15 07.2	-0.6
FITZ	Fitzroy Crossi	10.40	195	P	Pn	10 14 57.4	+1.8
	0.5nm,0.3s,baz=38,slow=12,SNR=19						
FITZ				S	Sn	10 16 49.9	-1.3
	1.4nm,0.3s,baz=300,slow=23,SNR=12						
WRA	Warramunga Arr	13.14	155	P	Pn	10 15 31.9	+0.9
	0.6nm,0.3s,baz=338,slow=13,SNR=38						
WRA				S	Sn	10 17 53.1	-3.9
	1.7nm,0.3s,baz=331,slow=22,SNR=20						
ASAR	Alice Springs	16.41	162	P	Pn	10 16 15.8	+4.5
	0.5nm,0.3s,baz=338,slow=8.4,SNR=33						
ASAR				S	S	10 19 13.7	+0.2
	0.5nm,0.3s,baz=344,slow=25,SNR=5.4						
SONM	Songino Array	58.94	343	P	P	10 22 10.9	-0.8
	1.2nm,0.6s,mb3.9,baz=162,slow=7.3,SNR=5.3						
MKAR	Makanchi Array	68.26	328	P	P	10 23 12.8	0.0
	0.8nm,0.5s,mb3.7,baz=120,slow=8.0,SNR=9.1						
KURK	Kurchatov	72.61	329	P	P	10 23 39.1	0.0
	1.2nm,0.6s,mb3.8,baz=128,slow=5.3,SNR=7.0						

NEIC 10 10:31:40.1, 3270S×7179W, h15km, MD3.5(GUC), After GUC.
GUC 10 10:31:40.1±1.0, 3270S×7179W, h15km±9km, MD3.5, ML2.3, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.71	112	i P	Pg	10 31 53.5	-0.5
ROCH				i S	Sg	10 32 03.2	-0.1
PTCH	Petorca	0.85	59	⇑iP	Pb	10 31 55.7	-0.8
PTCH				i S	Sb	10 32 07.5	-0.3
PTCH				AML	AML	10 32 08.2	
	comp=N,157nm,0.2s						
PTCH	Petorca	0.85	59	⇑iP	Pb	10 31 55.7	-0.8
PTCH				i S	Sb	10 32 07.5	-0.3
CHNG	Los Chungos	0.85	17	⇓iP	Pb	10 31 55.3	-1.3
CHNG				eS	Sb	10 32 06.7	-1.2
CHNG				AML	AML	10 32 08.4	
	comp=E,68nm,0.2s						
JACH	Jahuel	1.01	89	eP	Pb	10 31 58.0	-1.3
JACH				i S	Sb	10 32 11.7	-0.7
PEL	Peldehue	1.03	116	⇑iP	Pb	10 31 58.5	-1.0
PEL				i S	Sb	10 32 12.7	-0.2
PEL				AML	AML	10 32 14.9	
	comp=N,444nm,0.2s						
TACH	Talagante	1.19	143	eP	Pn	10 32 01.0	-1.2
TACH				i S	Sb	10 32 15.2	-2.2
CLCH	Cerro Calan	1.26	124	⇓iP	Pn	10 32 02.0	-1.2
CLCH				i S	Sb	10 32 19.4	-0.2
CLCH				AML	AML	10 32 22.5	
	comp=E,128nm,0.6s						
LNV	Longovilo	1.29	166	eP	Pn	10 32 02.0	-1.6
FCH	Farellones	1.41	117	⇓iP	Pn	10 32 04.6	-0.6
FCH				i S	Sn	10 32 23.2	-0.2
FCH				AML	AML	10 32 23.5	
	comp=N,133nm,0.2s						
PCH	Pirque	1.41	131	eP	Pn	10 32 04.4	-0.8
PCH				i S	Sn	10 32 24.1	+0.6
CHCH	Chadas Angostu	1.55	142	i S	Sn	10 32 26.6	-0.4
SFDO	San Fernando	2.01	161	eP	Pn	10 32 14.1	+0.6

NEIC 10 11:16:07.0±4.3, 2423S×17988W, h472km±53km, mb4.1/5, Error ellipse: s-maj=30.8km s-min=14.2km az=188.0
ISCJB 10 11:16:08.6±0.6, 2423S±0.10×1800E±0.1, h500km, mb3.9/11, Error ellipse: s-maj=14.6km s-min=11.7km az=36.5
IDC 10 11:16:08.7±2.3, 2420S×17998W, h486km±24km, mb3.4/9, mb1 3.6/9, mb1mx3.4/17, mbtmp3.4/9, Error ellipse: s-maj=29.9km s-min=17.7km az=163.0
ISC 10 11:16:07.0±4.7, 242S±02×1799W±01, h470km±57km, n25, σ0^{s}92/25, mb3.9/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRZ	Mangatainoka R	16.82	192	eP	P	11 19 35.6	-1.1
QRZ	Quartz Range	17.73	199	eP	P	11 19 46.4	+0.3
NNZ	Nelson	17.85	197	eP	P	11 19 47.2	-0.1
THZ	Tophouse	18.48	197	P	P	11 19 53.3	+0.1
LTZ	Lake Taylor	19.61	197	P	P	11 20 02.4	-1.0
RPZ	Rata Peaks	20.81	199	P	P	11 20 15.3	+0.9
	9.0nm,0.6s,baz=43,slow=2.7,SNR=7.5						
CNB	Canberra Magne	28.76	240	eP	P	11 21 27.8	+2.5
CTA	Charters Tower	31.57	271	P	P	11 21 50.7	+0.9
	5.8nm,0.5s,mb4.3,baz=96,slow=13,SNR=7.3						
CTA	Charters Tower	31.57	271	P	P	11 21 50.7	+0.9
TOO	Toolangi	32.34	238	eP	P	11 21 57.8	+1.5
STKA	Stephens Creek	34.68	249	eP	P	11 22 16.7	+0.5
	3.0nm,0.6s,mb3.9						
STKA	Stephens Creek	34.68	249	P	P	11 22 16.4	+0.2
	5.0nm,0.8s,mb4.0,baz=93,slow=13,SNR=8.4						
ASAR	Alice Springs	42.07	261	P	P	11 23 16.5	-0.1
	2.4nm,0.8s,mb3.6,baz=93,slow=8.2,SNR=14						
ASAR				ScP	ScP	11 28 04.0	-2.1
	1.0nm,1.0s,baz=117,slow=4.1,SNR=5.5						
WB2	Warramunga Arr	42.46	266	eP	P	11 23 18.9	-0.8
WRAB	Tennant Creek	42.46	266	eP	P	11 23 18.8	-1.0
	1.2nm,0.6s,mb3.5						
WRA	Warramunga Arr	42.47	266	P	P	11 23 19.2	-0.7
	3.2nm,0.5s,mb4.0,baz=97,slow=8.4,SNR=35						
WRA				ScP	ScP	11 28 06.3	-1.5
	1.9nm,1.1s,baz=96,slow=4.0,SNR=6.7						
FORT	Forrest	46.28	250	eP	P	11 23 48.4	-0.8
	14nm,0.6s,mb4.6						
FITZ	Fitzroy Crossi	50.89	266	eP	P	11 24 24.2	+0.3
	4.7nm,0.8s,mb3.9						
FITZ	Fitzroy Crossi	50.89	266	P	P	11 24 24.2	+0.4
	2.3nm,0.7s,mb3.6,baz=161,slow=10,SNR=7.2						
KLBR	Kellerberrin	54.94	247	eP	P	11 24 51.6	-1.1
	84nm,2.0s,mb4.7						
NVAR	Mina Array Bea	84.93	44	P	P	11 27 52.2	+0.7
	0.5nm,0.8s,mb3.2,baz=226,slow=9.2,SNR=4.1						
NVAR	Mina Array Bea	84.93	44	P	P	11 27 52.2	+0.7
TXAR	Lajitas Array	90.53	58	P	P	11 28 19.2	+1.1
	0.9nm,0.7s,mb3.8,baz=210,slow=6.3,SNR=14						
JLU	Jordanelle	90.53	45	eP	P	11 28 17.2	-0.7
PDAR	Pinedale Array	92.86	44	P	P	11 28 28.1	-0.5
	0.4nm,0.8s,mb3.5,baz=247,slow=3.1,SNR=3.7						

ISCJB 10 11:16:18.2±1.0, 2985N±004×3627E±007, h0km, Error ellipse: s-maj=8.6km s-min=5.8km az=166.4
CSEM 10 11:16:18.7, 3006N×3620E, h6km, ML2.8, After SNSN
SGS 10 11:16:18.7, 3006N×3620E, h6km
GII 10 11:16:18.1±0.0, 2980N×3629E, h0km, ML1.5/3, EXPLOSION
ISC 10 11:16:18.2±1.0, 2985N±004×3631E±007, h0km, n15, σ0^{s}92/19, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	Mount Harif	1.12	280	Pg	Pg	11 16 39.1	-0.6
EIL	Elat	1.20	262	Pg	Pg	11 16 40.9	-0.3
ZFRI	Zfri	1.21	306	Pg	Pg	11 16 41.0	-0.4
ZFRI				Sg	Sg	11 16 58.5	+1.4
HQLS		1.22	244	P	Pg	11 16 40.6	-1.0
HQLS		1.22	244	P	Pg	11 16 40.6	-1.0
HQLS				S	Sg	11 16 57.2	-0.1
MBRI	Mt Berech	1.22	268	Pg	Pg	11 16 40.8	-0.8
MBRI				Sg	Sg	11 16 58.3	+1.0
PRNI	Paran	1.24	294	Pg	Pg	11 16 41.3	-0.8
JLOS		1.32	213	P	Pg	11 16 43.6	+0.1
JLOS		1.32	213	P	Pg	11 16 43.6	+0.1
JLOS				S	Sg	11 17 02.2	+1.6
KRMI	Paran Flat	1.40	282	Pn	Pn	11 16 43.6	-1.4
TBKS	Tabuk	1.63	173	P	Pn	11 16 49.1	+0.9
MZDA	Masada	1.67	331	Pn	Pn	11 16 49.2	+0.4
BDAS	Al Bad‘	1.76	217	P	Pn	11 16 49.5	-0.5
DSI	Dead Sea	1.90	335	Pn	Pn	11 16 53.4	+1.5
RSHS		2.03	221	P	Pn	11 16 52.9	-0.8

IDC 10 11:45:15.8±1.7, 2141S×17580W, h0km, mb3.7/4, mb1 4.1/5, mb1mx3.8/18, mbtmp3.8/5, ML2.2/1, Error ellipse: s-maj=77.7km s-min=22.0km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.38	28	Pn	Pn	11 47 19.6	+0.9
	1.9nm,0.3s,baz=203,slow=18,SNR=5.3						
AFI				Sn	Sn	11 48 55.0	+0.9
	2.8nm,0.3s,baz=243,slow=21,SNR=5.0						
ASAR	Alice Springs	46.32	257	P	P	11 53 43.9	+0.2
	0.9nm,0.7s,baz=98,slow=6.7,SNR=15						
WB2	Warramunga Arr	46.50	262	eP	P	11 53 46.0	+0.8
WRA	Warramunga Arr	46.51	262	P	P	11 53 45.0	-0.3
	0.8nm,0.5s,baz=95,slow=8.3,SNR=29						
NVAR	Mina Array Bea	80.29	42	P	P	11 57 29.9	+1.3
	0.4nm,0.7s,baz=226,slow=9.8,SNR=3.7						
TXAR	Lajitas Array	85.83	56	P	P	11 57 56.6	-1.0
	0.3nm,0.8s,baz=210,slow=9.9,SNR=4.6						

CSEM 10 11:48:54.5±0.1, 3757N×2993E, h1km±1km, MD2.8, Error ellipse: s-maj=3.0km s-min=2.0km az=164.0
ISK 10 11:48:54.6, 3759N×2993E, h5km, MD3.1
ISCJB 10 11:48:55.8±0.6, 3758N±004×2993E±004, h10km, Error ellipse: s-maj=5.7km s-min=4.5km az=151.4
DDA 10 11:48:55.5, 3756N×2994E, h7km±4km, Md2.8
ISC 10 11:48:56.2±0.6, 3758N±004×2991E±005, h4km±11km, n10, σ0^{s}91/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.44	219	i P	Pg	11 49 04.1	-0.6
GOLH				i S	Sg	11 49 11.8	+1.3
ISP	Isparta	0.54	61	ePG	Pg	11 49 05.3	-1.3
ISP				eSG	Sg	11 49 14.2	+0.5
BCK	Bucak	0.55	102	ePG	Pg	11 49 06.0	-0.9
BCK				eSG	Sg	11 49 15.3	+1.3
TKTP	Tekketepe	0.56	35	i P	Pg	11 49 06.8	-0.3
DNZL	Cakiroluk	0.69	279	i P	Pg	11 49 08.8	-0.8
KHAL	Karahalli	0.85	337	i P	Pg	11 49 12.1	-0.5
SHUT	Suhut-Afyon	1.09	27	ePG	Pg	11 49 16.7	-0.5
KULA	Kula-Manisa	1.36	314	ePN	Pn	11 49 21.9	0.0
YER	Yerkesik	1.37	252	ePN	Pn	11 49 21.9	-0.2
GDZ	Gediz	1.54	347	i P	Pn	11 49 24.8	+0.3
GDZ				i S	Sg	11 49 47.9	+2.1

ISCJB 10 11:51:29.9±0.6, 3654N±003×70.18E±009, h213km±6km, mb3.5/4, Error ellipse: s-maj=11.9km s-min=4.3km az=163.8
NNC 10 11:51:31.6±5.6, 3669N×7001E, h183km±52km, mb2.9, mpv4.2, Error ellipse: s-maj=49.3km s-min=26.1km az=8.0
NEIC 10 11:51:32.1±2.8, 3659N×7035E, h210km±21km, mb4.9/3, Error ellipse: s-maj=31.3km s-min=17.1km az=220.0
IDC 10 11:51:33.7±8.1, 3650N×70.16E, h252km±79km, mb3.2/5, mb1 3.3/9, mb1mx3.1/25, mbtmp3.2/9, MS2.8/1, Ms1 2.8/1, ms1mx2.2/20, Error ellipse: s-maj=52.0km s-min=32.7km az=46.0
ISC 10 11:51:30.8±0.6, 3655N±003×7021E±009, h200km±7km, n49, σ1^{s}10/56, mb3.5/4, 6C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.05	152	⇓P	Pn	11 52 22.2	+1.1
CEP				S	Sn	11 52 59.0	-1.4
CHCP	Chirah Chowk	3.82	138	P	Pn	11 52 31.4	+1.1
THW	Thamme Wali	3.95	161	⇑P	Pn	11 52 32.2	+0.2
SARP	Sargodha	5.05	155	P	Pn	11 52 46.2	+0.4
THN	Thein Dam	6.12	131	eP	Pn	11 52 59.2	-0.5
THN				eS	Sn	11 54 07.5	-2.5
AML	Almayashu	6.19	25	P	Pn	11 53 01.4	+1.0
	SNR=175						
AML	Almayashu	6.19	25	ePn	Pn	11 53 01.3	+0.9
	72nm,0.4s						
DLH	Dalhousie	6.21	128	eS	Sn	11 54 09.0	-2.9
KK31	Karatay Array	6.55	2	Pn	Pn	11 53 05.0	-0.1
	2.9nm,0.3s,baz=184,slow=13,SNR=79						
KK31				⇑Sn	Sn	11 54 17.8	-2.1
	12nm,0.7s,baz=187,slow=22,SNR=5.4						
EKS2	Erkin-Say	6.70	23	P	Pn	11 53 08.1	+1.1
	SNR=37						
EKS2	Erkin-Say	6.70	23	ePn	Pn	11 53 07.8	+0.9
	76nm,0.7s						
EKS2				eS	Sn	11 54 22.8	-0.4
AAK	Ala-Archa	6.92	27	P	Pn	11 53 10.9	+1.1
	SNR=19						
KBK	Karagaybulak	7.11	29	P	Pn	11 53 14.1	+1.8
	SNR=8.9						
CHMS	Chumysh	7.33	27	P	Pn	11 53 15.9	+0.7
	SNR=12						
USP	Ospenovka	7.47	25	P	Pn	11 53 17.4	+0.3
	SNR=12						
TKM2	Tokmak 2	7.59	31	⇑Pn	Pn	11 53 18.6	-0.1
	24nm,0.8s						
TKM2				⇓Sn	Sn	11 54 43.9	-0.5
	3.0nm,0.5s						
TKM2	Tokmak 2	7.59	31	P	Pn	11 53 19.4	+0.8
	SNR=24						
TKM2	Tokmak 2	7.59	31	ePn	Pn	11 53 19.3	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	16nm,0.6s						
SMLA	**Simla**	**7.92**	**131**	*i* x	**Pn**	**11 53 22.1**	**-0.9**
SMLA				*i* S	**Sn**	**11 54 46.0**	**-6.2**
SMLA				*e*x	x	11 54 50.2	
	comp=E,354nm,0.3s						
SMLA				*e*x	x	11 54 50.9	
	comp=N,356nm,0.3s						
KLP	**Kalpa**	**8.34**	**125**	*e*P	**Pn**	**11 53 30.6**	**+2.1**
KLP				*e*S	**Sn**	**11 54 56.9**	**-5.3**
NDI	**New Delhi**	**9.81**	**141**	*e*x	x	11 55 00.0	
JOSI	**Joshimath**	**9.82**	**125**	*e*P	**Pn**	**11 53 48.6**	**+0.8**
JOSI				*e*S	**Sn**	**11 55 30.9**	**-6.7**
SONA	**Sohna**	**10.11**	**143**	*e*S	**Sn**	**11 55 34.7**	**-10**
MK31	**Makanchi Array**	**13.63**	**38**	P	**Pn**	**11 54 35.8**	**-0.2**
	comp=N,3.1nm,0.8s,baz=228,slow=9.7,SNR=21						
MK31	**Makanchi Array**	**13.63**	**38**	*e*Pn	**Pn**	**11 54 35.9**	**-0.1**
MKAR	**Makanchi Array**	**13.63**	**38**	P	**Pn**	**11 54 36.0**	**0.0**
	comp=N,0.4nm,0.3s,baz=229,slow=12,SNR=22						
DANN	**Dangsing**	**14.05**	**122**	*e*P	**Pn**	**11 54 42.8**	**+1.4**
AB31	**Akbulak array**	**14.74**	**333**	⇓P	**Pn**	**11 54 48.3**	**-1.4**
	comp=N,0.4nm,0.4s,baz=157,slow=12,SNR=13						
GKN	**Gorkha**	**14.87**	**121**	*e*P	**Pn**	**11 54 52.4**	**+0.9**
	comp=N,24nm,0.4s						
KURK	**Kurchatov**	**15.40**	**20**	P	**Pn**	**11 54 55.4**	**-2.3**
	comp=N,0.1nm,0.3s,baz=209,slow=11,SNR=5.9						
DMN	**Daman**	**15.44**	**121**	*e*P	**Pn**	**11 54 59.7**	**+1.3**
	comp=N,6.4nm,0.3s						
KKN	**Kakani**	**15.45**	**120**	*e*P	**Pn**	**11 55 00.0**	**+1.5**
	comp=N,27nm,0.5s						
PKI	**Pulchoki**	**15.67**	**121**	*e*P	**Pn**	**11 55 01.2**	**0.0**
GUN	**Gumba**	**15.79**	**119**	*e*P	**Pn**	**11 55 03.5**	**+0.8**
	comp=N,32nm,0.5s						
JIRN	**Jiri**	**16.16**	**119**	*e*P	**Pn**	**11 55 07.3**	**+0.1**
	comp=N,33nm,0.5s						
VOSK	**Vostochnaya**	**16.18**	**2**	⇑P	**Pn**	**11 55 06.7**	**-0.4**
	comp=N,3.8nm,0.9s						
AKTK	**Aktyubinsk**	**16.43**	**331**	P	**Pn**	**11 55 10.2**	**+0.1**
AKTO	**Aktyubinsk**	**16.43**	**331**	⇑P	**Pn**	**11 55 09.8**	**-0.3**
	comp=N,0.6nm,0.9s						
AKTO	**Aktyubinsk**	**16.43**	**331**	P	**Pn**	**11 55 10.2**	**+0.1**
	comp=N,0.4nm,0.3s,baz=140,slow=9.0,SNR=5.6						
BVA0	**Borovoye Array**	**16.48**	**0**	⇑P	**Pn**	**11 55 10.8**	**+0.3**
	comp=N,0.3nm,0.6s,baz=231,slow=42,SNR=10						
BVAR	**Borovoye Array**	**16.48**	**0**	P	**Pn**	**11 55 10.4**	**-0.2**
	comp=N,1.1nm,0.3s,baz=180,slow=9.9,SNR=11						
BVAR				LR	LR	12 02 55.3	
	comp=N,30nm,18.6s,baz=266,slow=41						
RAMN	**Ramite**	**16.89**	**120**	*e*P	**Pn**	**11 55 14.7**	**-1.1**
	comp=N,22nm,0.5s						
TAPN	**Taplejung**	**17.43**	**117**	*e*P	**Pn**	**11 55 21.6**	**-0.6**
ODAN	**Odare**	**17.50**	**119**	*e*P	**Pn**	**11 55 22.1**	**-0.9**
	comp=N,29nm,0.6s						
ZALV	**Zalesovo Beam**	**20.14**	**26**	P	**P**	**11 55 49.4**	**0.0**
	comp=N,2.2nm,0.5s,baz=219,slow=13,SNR=4.6						
SONM	**Songino Array**	**28.83**	**56**	P	**P**	**11 57 10.5**	**+0.3**
	comp=N,0.8nm,0.6s,mb3.5,baz=257,slow=13,SNR=3.7						
CMAR	**Chiang Mai Arr**	**31.04**	**118**	P	**P**	**11 57 29.3**	**-0.7**
	comp=N,0.5nm,0.3s,mb3.6,baz=286,slow=6.5,SNR=4.2						
WRA	**Warramunga Arr**	**82.56**	**121**	P	**P**	**12 03 28.3**	**-3.2**
	comp=N,0.4nm,0.5s,mb3.4,baz=324,slow=4.8,SNR=12						
ASAR	**Alice Springs**	**84.80**	**124**	P	**P**	**12 03 39.8**	**-3.1**
	comp=N,0.5nm,0.6s,mb3.4,baz=309,slow=4.9,SNR=12						

*ISCJB **10** 12:02:13.1±1.5, 2152N±0.10×1429E±03, h311^{km}±16^{km}, mb3.5/8, Error ellipse: s-maj=45.6km s-min=16.0km az=178.9*
*IDC **10** 12:02:13.7±1.8, 2157N×14296E, h303^{km}±18^{km}, mb3.3/7, mb1 3.5/8, mb1mx3.2/22, mbtmp3.4/8, Error ellipse: s-maj=31.7km s-min=13.4km az=84.0*
ISC 10 12:02:13.7±1.5**, 2155N**±010×**1430E**±03**, h303**^{km}±16^{km}**, n12, σ0^{s}16**/11**, mb3.5**/8**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.57**	**353**	P	**Pn**	**12 03 38.0**	**+0.1**
	6.4nm,0.3s,baz=101,slow=22,SNR=8.2						
CBIJ				S	**S**	**12 04 45.6**	**-0.1**
	23nm,0.3s,baz=119,slow=23,SNR=8.9						
WB2	**Warramunga Arr**	**42.09**	**192**	*e*P	**P**	**12 09 36.6**	**-0.2**
WRA	**Warramunga Arr**	**42.10**	**192**	P	**P**	**12 09 36.7**	**0.0**
	1.4nm,0.7s,mb3.3,baz=12,slow=8.3,SNR=24						
FITZ	**Fitzroy Crossi**	**42.92**	**205**	*e*P	**P**	**12 09 43.5**	**+0.1**
	1.6nm,0.6s,mb3.4						
ASAR	**Alice Springs**	**45.81**	**192**	P	**P**	**12 10 06.2**	**+0.1**
	0.2nm,0.5s,mb2.7,baz=19,slow=12,SNR=5.5						
STKA	**Stephens Creek**	**53.14**	**181**	P	**P**	**12 11 00.7**	**-0.2**
	3.7nm,0.9s,mb3.7,baz=0.0,slow=5.1,SNR=3.7						
KURK	**Kurchatov**	**57.46**	**317**	P	**P**	**12 11 31.5**	**+0.2**
	1.2nm,0.4s,mb3.6,baz=93,slow=7.5,SNR=2.9						
BVAR	**Borovoye Array**	**62.66**	**320**	P	**P**	**12 12 06.4**	**0.0**
	2.4nm,0.4s,mb4.2,baz=101,slow=7.8,SNR=9.9						
ARCES	**ARCESS Array B**	**79.00**	**341**	P	**P**	**12 13 43.6**	**-0.3**
	1.7nm,0.7s,mb3.9,baz=74,slow=9.1,SNR=5.7						
NVAR	**Mina Array Bea**	**83.38**	**51**	P	**P**	**12 14 07.5**	**+0.2**
	0.3nm,0.5s,mb3.3,baz=283,slow=7.0,SNR=4.5						
PLCA	**Paso Flores**	**145.79**	**132**	PKPbc	PKPbc	12 21 17.4	0.0
	1.4nm,0.8s,baz=294,slow=3.1,SNR=4.0						
LPAZ	**La Paz**	**150.13**	**85**	PKPbc	PKPbc	12 21 30.2	+0.7
	0.4nm,0.5s,baz=307,slow=5.1,SNR=5.2						

MAN 10 12:31:08, 1416N×12017E, h41^{km}, mb3.7, ML2.5, MS2.0, 2C, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.43**	**170**	*e*P	Pn	12 31 19.6	+1.7
LUBP				*e*S	Sn	12 31 28.8	+4.0
NBP	**Mount Natib**	**0.63**	**22**	⇑*e*P	Pn	12 31 22.3	+1.8
NBP				*e*S	Sn	12 31 32.4	+3.0
LBPH	**Los Banos**	**0.98**	**90**	⇑*e*P	Pn	12 31 26.2	+0.9
LBPH				*e*S	Sn	12 31 39.5	+1.5
BALP	**Baler**	**2.08**	**41**	*e*P	Pn	12 31 42.1	+1.7
BALP				*e*S	Sn	12 31 47.2	-18

*JSN **10** 12:51:04.9±1.0, 2140N×7552W, h33^{km}, MD4.6*
ISC 10 12:51:00.5±1.9**, 1981N**±008×**740W**±01**, h16**^{km}±11^{km}**, n12, σ1^{s}04**/20**, 3C-1D, Haiti region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**0.45**	**325**	⇑*i*PG	**Pg**	**12 51 08.9**	**-0.6**
MASC				*i* SG	**Sg**	**12 51 15.9**	**+0.3**
	comp=N,390nm,0.1s						
MASC				*e*			
	comp=E,448nm,0.1s						
MOAC	**Moa**	**1.27**	**312**	*i* P	**Pn**	**12 51 22.7**	**-0.8**
MOAC				*i* S	**Sb**	**12 51 40.8**	**+0.8**
	comp=N,1µm,0.3s						
MOAC				*e*			
	comp=E,3µm,0.3s						
RCC	**Rio Carpintero**	**1.65**	**277**	*e*P	**Pn**	**12 51 26.5**	**-2.3**
RCC				*e*S	**Sn**	**12 51 48.2**	**-1.4**
	comp=N,414nm,0.3s						
RCC				*e*			
	comp=E,1µm,0.6s						
HLGC	**Holguin**	**2.25**	**299**	*e*P	**Pn**	**12 51 38.3**	**+1.3**
HLGC				*e*S	**Sn**	**12 52 10.7**	**+6.2**
	comp=N,338nm,0.6s						
HLGC				*e*			
	comp=E,290nm,0.4s						
LMGC	**Las Mercedes**	**2.88**	**276**	*i* P	**Pn**	**12 51 46.5**	**+0.8**
LMGC				*i* S	**Sn**	**12 52 20.6**	**+0.5**
	comp=N,610nm,0.5s						
LMGC				*e*			
	comp=E,791nm,0.7s						
HOJ	**Hope**	**3.20**	**236**	*e*P	**Pn**	**12 51 57.6**	**+7.5**
STH	**Stony Hill**	**3.20**	**238**	*e*P	**Pn**	**12 51 57.4**	**+7.2**
CVJ	**Coleyville**	**3.73**	**246**	⇓*e*P	**Pn**	**12 51 59.0**	**+1.5**
CCCC	**Cccc**	**3.83**	**292**	*e*P	**Pn**	**12 51 53.2**	**-5.6**
CCCC				*e*S	**Sn**	**12 52 36.2**	**-7.4**
MCJ	**Malvern**	**4.00**	**243**	⇑*e*P	**Pn**	**12 52 01.5**	**+0.4**
MCJ				*e*S	**Sn**	**12 52 47.8**	**+0.1**
NEJ	**Negril**	**4.42**	**250**	⇑*e*P	**Pn**	**12 52 06.2**	**-0.7**
MGV	**Manicaragua**	**6.08**	**293**	*e*P	**Pn**	**12 52 25.8**	**-4.0**
MGV				*e*S	**Sn**	**12 53 33.0**	**-6.0**

*ISCJB **10** 13:18:38.8±0.4, 2386N±003×12183E±003, h43^{km}±8^{km}, Error ellipse: s-maj=5.1km s-min=3.1km az=140.4*
*TAP **10** 13:18:38.7, 2390N×12177E, h49^{km}, ML2.9, C*
*JMA **10** 13:18:39.3±0.3, 2401N×12187E, h82^{km}, M2.3*
ISC 10 13:18:39.3±0.3**, 2387N**±003×**12182E**±003**, h41**^{km}±8^{km}**, n31, σ0^{s}65**/55**, 3C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.23**	**300**	*e*P	**Pn**	**13 18 47.0**	**+0.1**
	baz=295						
HWA				*e*S	**Sn**	**13 18 53.4**	**+1.2**
	baz=295						
TWD	**Chiawan**	**0.30**	**316**	⇓*i*P	**Pn**	**13 18 47.4**	**-0.2**
	baz=317						
TWD				S	**Sn**	**13 18 53.6**	**+0.1**
	baz=317						
ESL	**Shilin**	**0.36**	**262**	P	**Pn**	**13 18 48.0**	**-0.3**
	baz=263						
ESL				S	**Sn**	**13 18 54.6**	**0.0**
	baz=263						
ENA	**Nanau**	**0.56**	**353**	*e*P	**Pn**	**13 18 50.2**	**-0.7**
	baz=357						
EHY	**Hungye**	**0.58**	**232**	*e*P	**Pn**	**13 18 50.5**	**-0.6**
	baz=235						
EHY				*e*S	**Sn**	**13 18 58.7**	**-0.8**
	baz=235						
WHF	**Hehuan Shan**	**0.58**	**299**	⇑*i*P	**Pn**	**13 18 50.8**	**-0.3**
	baz=292						
WHF				S	**Sn**	**13 18 59.2**	**-0.3**
	baz=292						
TWF1	**Yuli**	**0.70**	**223**	⇑P	**Pn**	**13 18 52.1**	**-0.6**
	baz=228						
TWF1				*e*S	**Sn**	**13 19 01.8**	**-0.6**
	baz=228						
NNS	**Nan Shan**	**0.70**	**325**	P	**Pn**	**13 18 52.5**	**-0.3**
	baz=326						
NNS				*e*S	**Sn**	**13 19 01.8**	**-0.6**
	baz=326						
TWC	**Suao**	**0.74**	**2**	P	**Pn**	**13 18 53.1**	**-0.2**
	baz=6.0						
TWC				S	**Sn**	**13 19 03.4**	**-0.1**
	baz=6.0						
ENTT	**Nioudou**	**0.81**	**343**	*e*P	**Pn**	**13 18 53.9**	**-0.3**
	baz=338						
ENTT				S	**Sn**	**13 19 04.8**	**-0.2**
	baz=338						
SMLT	**Sun Moon Lake**	**0.84**	**271**	*e*P	**Pn**	**13 18 54.5**	**-0.2**
	baz=268						
SMLT				*e*S	**Sn**	**13 19 05.6**	**-0.3**
	baz=268						
TWE	**Neicheng**	**0.86**	**351**	*e*P	**Pn**	**13 18 54.7**	**-0.2**
	baz=345						
TWE				*e*S	**Sn**	**13 19 06.4**	**0.0**
	baz=345						
CHKT	**Chengkung**	**0.87**	**209**	*e*P	**Pn**	**13 18 54.5**	**-0.6**
	baz=198						
CHKT				*e*S	**Sn**	**13 19 05.6**	**-0.9**
	baz=198						
YUS	**Yu-Shan**	**0.88**	**245**	⇑P	**Pn**	**13 18 55.7**	**+0.6**
	baz=236						
YUS				*e*S	**Sn**	**13 19 07.2**	**+0.4**
	baz=236						
TYC	**Yuchr**	**0.88**	**273**	*e*P	**Pn**	**13 18 55.1**	**-0.1**
	baz=271						
TYC				*e*S	**Sn**	**13 19 06.4**	**-0.5**
	baz=271						
ALS	**Alishan**	**1.00**	**249**	*e*P	**Pn**	**13 18 57.4**	**+0.6**
	baz=240						
ALS				*e*S	**Sn**	**13 19 09.8**	**+0.2**
	baz=240						
NSTT	**Nanjuang**	**1.07**	**316**	*e*P	**Pn**	**13 18 58.1**	**+0.4**
	baz=304						
NSTT				*e*S	**Sn**	**13 19 11.1**	**-0.3**
	baz=304						
TWQ1	**Liyutan**	**1.07**	**297**	*e*P	**Pn**	**13 18 57.7**	**-0.1**
	baz=296						
CHN5	**Tsauling**	**1.08**	**256**	*e*P	**Pn**	**13 18 57.7**	**-0.2**
	baz=253						
WGK	**Gukeng**	**1.17**	**261**	*e*P	**Pn**	**13 18 59.8**	**+0.7**
	baz=258						
STYT	**Tauyuan**	**1.20**	**235**	*e*P	**Pn**	**13 18 59.8**	**+0.2**
	baz=228						
STYT				*e*S	**Sn**	**13 19 15.3**	**+0.6**
	baz=228						
CHN4	**Tsaushan**	**1.24**	**246**	*e*P	**Pn**	**13 19 01.1**	**+1.0**
	baz=243						
YOJ	**Yonaguni jima**	**1.24**	**61**	P	**Pn**	**13 19 00.3**	**+0.2**
YOJ				*e*S	**Sn**	**13 19 16.0**	**+0.4**
TWG	**Pinlang**	**1.25**	**214**	*e*P	**Pn**	**13 18 59.0**	**-1.2**
	baz=212						
TWG				*e*S	**Sn**	**13 19 14.0**	**-1.8**
	baz=212						
WTP	**Ta-pu**	**1.27**	**241**	*e*P	**Pn**	**13 19 00.8**	**+0.3**
	baz=230						
WTP				*e*S	**Sn**	**13 19 18.1**	**+1.8**
	baz=230						
CHN1	**Nanshi**	**1.37**	**241**	*e*P	**Pn**	**13 19 02.5**	**+0.7**
	baz=237						
CHN1				*e*S	**Sn**	**13 19 20.8**	**+2.1**
	baz=237						
IRIF	**Iriomote-Funau**	**1.81**	**75**	P	**Pn**	**13 19 08.1**	**+0.2**
IRIF				*e*S	**Sn**	**13 19 30.0**	**+0.4**
HATJ	**Hateruma jima**	**1.82**	**84**	P	**Pn**	**13 19 08.5**	**+0.4**
JKRS	**Kuro-shima**	**2.04**	**79**	P	**Pn**	**13 19 11.6**	**+0.6**
JKRS				*e*S	**Sn**	**13 19 35.8**	**+0.6**
JIJ	**Ishigaki jima**	**2.18**	**76**	P	**Pn**	**13 19 12.8**	**-0.2**
JIJ				*e*S	**Sn**	**13 19 37.8**	**-1.0**
JTJ	**Tarama**	**2.74**	**73**	P	**Pn**	**13 19 20.8**	**+0.1**

*ISCJB **10** 13:42:12.2±0.9, 37.17N±007×2689E±008, h26^{km}±11^{km}, Error ellipse: s-maj=11.7km s-min=10.3km az=178.0*
*ISK **10** 13:42:12.5, 3727N×2696E, h15^{km}, MD2.9*
*CSEM **10** 13:42:13.3±0.3, 37.17N×2707E, h30^{km}, MD2.9, Error ellipse: s-maj=8.7km s-min=4.1km az=40.0*
*ATH **10** 13:42:16.3, 3806N×27.10E, h10^{km}, MD2.8/3*
ISC 10 13:42:12.3±1.0**, 3717N**±007×**2689E**±008**, h24**^{km}±11^{km}**, n9, σ0^{s}72**/12**, 1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.35**	**107**	*e*PG	**Pb**	**13 42 20.3**	**+0.3**
BODT				*e*SG	**Sb**	**13 42 25.2**	**-0.1**
SMG	**Samos**	**0.54**	**356**	*e*PB	**Pb**	**13 42 24.3**	**+1.2**
MLSB	**Milas**	**0.72**	**80**	*e*PG	**Pb**	**13 42 25.4**	**-0.7**
MLSB				*e*SG	**Sb**	**13 42 35.3**	**-0.3**
APE	**Apeiranthos**	**1.09**	**265**	*e*PB	**Sn**	**13 42 46.3**	**0.0**
YER	**Yerkesik**	**1.11**	**91**	*e*PG	**Pn**	**13 42 33.4**	**+1.1**
BLCB	**Balcova**	**1.22**	**6**	*e*PN	**Pn**	**13 42 33.6**	**-0.2**
BLCB				*e*SN	**Sn**	**13 42 50.1**	**+0.5**
PRK	**Paraskevi**	**2.13**	**347**	⇑*i*PB	**Pn**	**13 42 41.7**	**-4.6**
BALY	**Balya**	**2.63**	**12**	*i* P	**Pb**	**13 42 58.4**	**-0.3**
BOZC	**Bozcaada**	**2.75**	**346**	*i* P	**Pn**	**13 42 53.4**	**-1.4**

*IDC **10** 14:07:14.4±5.7, 754S×12940E, h160^{km}±59^{km}, mb3.3/2, mb1 3.6/6, mb1mx3.4/16, mbtmp3.5/6, Error ellipse: s-maj=53.3km s-min=18.8km az=42.0*
*NEIC **10** 14:07:14.5±2.9, 753S×12935E, h159^{km}±33^{km}, mb4.6/2, Error ellipse: s-maj=34.7km s-min=21.8km az=53.0*
*ISCJB **10** 14:07:15.3±1.6, 766S±009×12933E±008, h185^{km}±17^{km}, mb3.5/2, Error ellipse: s-maj=17.9km s-min=8.7km az=35.0*
ISC 10 14:07:16.6±1.9**, 77S**±01×**12934E**±009**, h181**^{km}±21^{km}**, n11, σ1^{s}16**/18**, mb3.5**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.81**	**149**	*e*P	**Pn**	**14 08 41.8**	**+0.6**
	32nm,0.3s						
KAKA				*e*S	**Sn**	**14 09 47.4**	**-0.3**
BATI	**Baumata**	**6.12**	**246**	P	**Pn**	**14 08 45.6**	**+0.4**
	3.9nm,0.3s,baz=183,slow=11,SNR=8.8						
BATI				S	**Sn**	**14 09 55.0**	**0.0**
	6.8nm,0.3s,baz=328,slow=22,SNR=10						
FITZ	**Fitzroy Crossi**	**10.92**	**199**	*e*P	**Pn**	**14 09 47.8**	**-0.3**
	4.0nm,0.3s						
FITZ				*e*S	**Sn**	**14 11 45.4**	**-4.1**
FITZ	**Fitzroy Crossi**	**10.92**	**199**	P	**Pn**	**14 09 48.8**	**+0.7**
	0.7nm,0.3s,baz=31,slow=14,SNR=33						
FITZ				S	**Sn**	**14 11 47.3**	**-2.3**
	1.6nm,0.3s,baz=240,slow=23,SNR=8.9						
FITZ	**Fitzroy Crossi**	**10.92**	**199**	*e*Pn	**Pn**	**14 09 48.9**	**+0.8**
WRAB	**Tennant Creek**	**13.06**	**159**	*e*Pn	**Pn**	**14 10 15.7**	**+0.1**
	4.2nm,0.5s						
WRA	**Warramunga Arr**	**13.07**	**159**	P	**Pn**	**14 10 16.4**	**+0.8**
	1.7nm,0.3s,baz=341,slow=10,SNR=63						
WRA				S	**Sn**	**14 12 39.3**	**-1.7**
	2.5nm,0.3s,baz=328,slow=24,SNR=11						
WB2	**Warramunga Arr**	**13.07**	**159**	*e*P	**Pn**	**14 10 15.7**	**0.0**
WB2				*e*S	**Sn**	**14 12 38.6**	**-2.5**
ASAR	**Alice Springs**	**16.44**	**165**	P	**Pn**	**14 10 59.6**	**+2.5**
	0.9nm,0.3s,baz=333,slow=9.4,SNR=66						
ASAR				S	**S**	**14 14 03.8**	**+4.3**
	0.8nm,0.3s,baz=350,slow=26,SNR=8.8						
CMAR	**Chiang Mai Arr**	**39.71**	**311**	P	**P**	**14 14 30.9**	**-0.7**
	0.4nm,0.4s,mb3.5,baz=137,slow=7.7,SNR=4.3						
MKAR	**Makanchi Array**	**68.48**	**327**	P	**P**	**14 17 58.1**	**-1.1**
	0.6nm,0.6s,mb3.5,baz=117,slow=9.3,SNR=4.6						

*ISK **10** 14:08:05.7, 3606N×2564E, h55^{km}, MD3.6*
*ATH **10** 14:08:06.0, 3657N×2566E, h21^{km}±1^{km}, MD3.7/12, ML3.8*
*NEIC **10** 14:08:06.0, 3656N×2567E, h20^{km}, ML3.8(ATH), After ATH.*
*CSEM **10** 14:08:07.3±0.1, 3659N×2572E, h12^{km}, ML3.5, Error ellipse: s-maj=1.7km s-min=1.3km az=116.0*
*THE **10** 14:08:07.6, 3661N×2566E, h5^{km}, ML3.5*
*ISCJB **10** 14:08:07.4±0.4, 3657N±002×2564E±003, h12^{km}±3^{km}, Error ellipse: s-maj=4.1km s-min=3.3km az=21.7*
*DDA **10** 14:08:28.4, 3750N×2650E, h7^{km}±6^{km}, Md3.3*
ISC 10 14:08:07.9±0.4**, 3656N**±002×**2564E**±003**, h13**^{km}±3^{km}**, n46, σ1^{s}03**/64**, 2C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THR4	**Thira Island,**	**0.22**	**244**	*e*Pg	**Pg**	**14 08 13.2**	**+0.6**
SANT	**Santorini**	**0.23**	**219**	*e*Pg	**Pg**	**14 08 13.3**	**+0.4**
SANT	**Santorini**	**0.23**	**219**	P	**Pg**	**14 08 13.5**	**+0.6**
THR1	**Thera Island**	**0.23**	**219**	*e*Pg	**Pg**	**14 08 13.3**	**+0.4**
THR1				*e*Sg	**Sg**	**14 08 17.9**	**+1.6**
THR3	**Thira Island,**	**0.24**	**233**	*e*Pg	**Pg**	**14 08 13.7**	**+0.6**
THR5	**Thira Island,**	**0.27**	**240**	*e*Pg	**Pg**	**14 08 14.1**	**+0.5**
THR6	**Thira Island,**	**0.28**	**225**	*e*Pg	**Pg**	**14 08 14.4**	**+0.8**
APE	**Apeiranthos**	**0.52**	**350**	*e*Pg	**Pg**	**14 08 16.4**	**-1.7**
APE				*e*Sg	**Sg**	**14 08 23.5**	**-1.6**
APE	**Apeiranthos**	**0.52**	**350**	⇑*i*PN	**Pg**	**14 08 16.8**	**-1.3**
APE				*e*SN	**Sg**	**14 08 23.6**	**-1.5**
NPS	**Neapolis**	**1.29**	**181**	*e*PN	**Pn**	**14 08 30.8**	**-0.8**
NPS				*e*SN	**Sn**	**14 08 47.4**	**-1.4**
LAST	**Lasithi**	**1.40**	**185**	*e*Pg	**Pg**	**14 08 33.3**	**-1.4**
LAST				*e*Sg	**Sg**	**14 08 52.9**	**0.0**
LAST	**Lasithi**	**1.40**	**185**	P	**Pn**	**14 08 33.7**	**+0.6**
IDI	**Anoyia**	**1.40**	**206**	P	**Pn**	**14 08 33.5**	**+0.3**
BODT	**Bodrum**	**1.43**	**69**	*e*PN	**Pn**	**14 08 33.7**	**+0.1**
BODT				*e*SN	**Sn**	**14 08 54.1**	**+1.9**
SMG	**Samos**	**1.50**	**39**	*e*PN	**Pn**	**14 08 33.4**	**-1.1**
SMG				*e*SN	**Sn**	**14 08 53.3**	**-0.6**
SMG	**Samos**	**1.50**	**39**	*e*Pn	**Pn**	**14 08 32.7**	**-1.8**
SMG				*e*Sn	**Sn**	**14 08 53.3**	**-0.6**
ZKR	**Zakros**	**1.51**	**162**	*e*Pg	**Pg**	**14 08 34.6**	**-2.3**
ZKR				*e*Sg	**Sg**	**14 08 56.1**	**-0.4**
ZKR	**Zakros**	**1.51**	**162**	P	**Pn**	**14 08 35.4**	**+0.7**
ZKR				*e*Sg	**Sg**	**14 08 56.1**	**-0.4**
ZKR	**Zakros**	**1.51**	**162**	P	**Pn**	**14 08 35.4**	**+0.7**
BDRM	**Kayabasi**	**1.53**	**70**	*e*P	**Pn**	**14 08 35.5**	**+0.5**
BDRM				*e*S	**Sn**	**14 08 58.1**	**+3.3**
KARP	**Karpathos**	**1.59**	**129**	⇑*i*PN	**Pn**	**14 08 35.3**	**-0.5**
KARP				*e*SN	**Sn**	**14 08 56.1**	**-0.1**
VAM	**Vamos**	**1.64**	**226**	*e*PN	**Pn**	**14 08 35.7**	**-0.7**
VAM				*e*SN	**Sn**	**14 08 58.1**	**+0.8**
SIVA	**Sivas**	**1.68**	**204**	*e*Pb	**Pb**	**14 08 37.3**	**-1.3**
SIVA				*e*Sb	**Sb**	**14 09 00.3**	**+0.6**
SIVA	**Sivas**	**1.68**	**204**	P	**Pg**	**14 08 40.9**	**+0.8**
GCAM	**G?zelcaml?**	**1.71**	**48**	*e*P	**Pb**	**14 08 39.2**	**0.0**
GCAM				*e*S	**Sb**	**14 09 06.0**	**+5.4**
GCAM	**G?zelcaml?**	**1.71**	**48**	*e*P	**Pn**	**14 08 39.2**	**+1.8**
KARN	**Karanos**	**1.81**	**231**	*e*Pb	**Pb**	**14 08 38.9**	**-2.0**
KARN				*e*Sb	**Sb**	**14 09 03.3**	**-0.2**
MLSB	**Milas**	**1.86**	**66**	*e*PN	**Pn**	**14 08 39.0**	**-0.5**
KVR	**Kavouri**	**1.96**	**311**	*e*PN	**Pn**	**14 08 40.5**	**-0.4**
KVR	**Kavouri**	**1.96**	**311**	*e*Pn	**Pn**	**14 08 41.5**	**+0.6**
ARG	**Arkhangelos**	**2.03**	**99**	*e*PN	**Pn**	**14 08 41.8**	**-0.1**
ARG	**Arkhangelos**	**2.03**	**99**	*e*Pn	**Pn**	**14 08 42.0**	**+0.1**
ATH	**Athens Observa**	**2.09**	**313**	*e*PN	**Pn**	**14 08 42.0**	**-0.6**
ATH	**Athens Observa**	**2.09**	**313**	*e*Pn	**Pn**	**14 08 42.8**	**+0.2**
NAIG	**Nisos Aigina**	**2.10**	**306**	*e*Pn	**Pn**	**14 08 44.0**	**+1.3**
KYTH	**Kithira**	**2.12**	**263**	*e*PN	**Pn**	**14 08 43.0**	**0.0**
BLCB	**Balcova**	**2.14**	**31**	*e*PN	**Pn**	**14 08 46.0**	**+2.7**
DID	**Didima**	**2.15**	**297**	*e*Pn	**Pn**	**14 08 42.7**	**-0.7**
DID				*e*Sn	**Sn**	**14 09 10.3**	**+0.4**
VLI	**Veliai**	**2.18**	**275**	*e*PN	**Pn**	**14 08 44.0**	**+0.1**
YER	**Yerkesik**	**2.20**	**74**	*e*PN	**Pn**	**14 08 44.1**	**0.0**
IZM	**Izmir**	**2.25**	**35**	*e*PN	**Pn**	**14 08 48.6**	**+3.8**
LTK	**Loutraki**	**2.59**	**305**	*e*Pn	**Pn**	**14 08 49.3**	**-0.2**
LTK				*e*Sn	**Sn**	**14 09 20.6**	**-0.2**
PRK	**Paraskevi**	**2.73**	**10**	*e*PN	**Pn**	**14 08 50.5**	**-1.0**
LKR	**Lokris**	**2.96**	**316**	*e*PN	**Pn**	**14 08 54.6**	**0.0**
KULA	**Kula-Manisa**	**3.10**	**50**	*e*PN	**Pn**	**14 08 58.6**	**+2.1**
ELL	**Elmali**	**3.44**	**86**	*e*PN	**Pn**	**14 08 59.7**	**-1.5**

IDC 10 14:25:08.5±3.6**, 1171S×7422W, h0**^{km}**, mb3.7**/2**, mb1 3.8**/3**, mb1mx3.6**/18**, mbtmp3.5**/3**, ML3.3**/1**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/25**, Error ellipse: s-maj=150.1km s-min=33.0km az=39.0, Central Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.46**	**128**	Pn	Pn	14 26 59.1	+0.5
	0.2nm,0.3s,baz=297,slow=11,SNR=6.6						
BDFB	**Brasilia**	**25.75**	**102**	LR	LR	14 41 07.3	
	comp=Z,53nm,18.0s,baz=12,slow=37						
TXAR	**Lajitas Array**	**49.73**	**326**	P	P	14 34 02.8	0.0
	0.1nm,0.6s,baz=134,slow=10,SNR=4.5						
TORD	**Torodi Ar. Bea**	**79.24**	**74**	P	P	14 37 16.4	+0.1
	1.0nm,0.6s,baz=258,slow=5.6,SNR=5.5						

*NIED **10** 14:58:00, 4030N×14350E, h17^{km}, Mw3.8 Best double couple: M$_0$5.61000×10^{14} NP1:φ$_s$40.00000°, δ73.00000°, λ112.00000°. NP2:φ$_s$165.00000°, δ28.00000°, λ39.00000°.*
*JMA **10** 14:58:39.1±0.3, 4035N×14348E, h11^{km}±4^{km}, M3.9*
*ISCJB **10** 14:58:40.0±0.7, 4029N±003×14367E±007, h33^{km}, mb3.6/6, Error ellipse: s-maj=8.7km s-min=3.4km az=23.6*
*NEIC **10** 14:58:40.4±4.0, 4037N×14370E, h22^{km}±26^{km}, mb3.9/2, Error ellipse: s-maj=30.6km s-min=10.8km az=98.0*
*IDC **10** 14:58:43.2±4.2, 4032N×14359E, h39^{km}±34^{km}, mb3.4/4, mb1 3.5/6, mb1mx3.3/21, mbtmp3.4/6, ML3.3/2, Error ellipse: s-maj=55.3km s-min=22.6km az=81.0*
ISC 10 14:58:40.0±1.7**, 4031N**±004×**14364E**±009**, h19**^{km}±13^{km}**, n28, σ1^{s}12**/40**, mb3.6**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.41**	**255**	P	**Pn**	**14 59 03.1**	**-1.5**
JTH				*e*S	**Sn**	**14 59 19.8**	**-2.9**
MIYJ	**Miyakonagasawa**	**1.58**	**243**	P	**Pn**	**14 59 05.9**	**-1.1**
MIYJ				*e*S	**Sn**	**14 59 25.1**	**-1.7**
JANG	**Nango**	**1.62**	**273**	P	**Pn**	**14 59 06.1**	**-1.5**
ERM	**Erimo**	**1.74**	**348**	*e*Pn	**Pn**	**14 59 08.6**	**-0.6**
JOM	**Ohasama**	**1.99**	**246**	P	**Pn**	**14 59 12.4**	**-0.2**
JOM				*e*S	**Sn**	**14 59 37.1**	**+0.1**
JNBK	**Urakawa-nobuka**	**2.08**	**342**	P	**Pn**	**14 59 13.8**	**-0.1**
JNBK				S	**Sn**	**14 59 40.2**	**+1.0**
JOT	**Ohata**	**2.24**	**299**	P	**Pn**	**14 59 15.2**	**-0.8**
JMK	**Ichinoseki**	**2.31**	**235**	P	**Pn**	**14 59 17.1**	**+0.1**
JCH	**Churui**	**2.31**	**355**	P	**Pn**	**14 59 16.9**	**-0.2**
JCH				S	**Sn**	**14 59 43.7**	**-1.3**
JKB	**Kayabe**	**2.52**	**310**	P	**Pn**	**14 59 19.6**	**-0.3**
JKB				*e*S	**Sn**	**14 59 51.8**	**+1.7**
JAK	**Akkeshi**	**2.80**	**16**	P	**Pn**	**14 59 23.9**	**+0.1**
JAK				*e*S	**Sn**	**14 59 56.4**	**-0.6**
JYK	**Kaneyama**	**2.89**	**242**	P	**Pn**	**14 59 25.3**	**+0.3**
JFR	**Furan**	**2.96**	**345**	P	**Pn**	**14 59 26.8**	**+0.9**
JFR				*e*S	**Sn**	**15 00 00.4**	**-0.5**
JAR	**Ashorobuto**	**2.99**	**2**	P	**Pn**	**14 59 25.9**	**-0.4**
JAR				S	**Sn**	**14 59 59.7**	**-1.9**
JEW	**Eniwo**	**3.01**	**328**	P	**Pn**	**14 59 27.6**	**+0.9**
JEW				*e*S	**Sn**	**15 00 02.4**	**+0.1**
ASAJ	**Asahikawa**	**3.88**	**349**	Pn	**Pn**	**14 59 39.6**	**+1.0**
	1.2nm,0.3s,baz=268,slow=20,SNR=19						
ASAJ				Sn	**Sn**	**15 00 25.8**	**+2.1**
	1.8nm,0.3s,baz=304,slow=4.3,SNR=5.7						
MAJO	**Matsushiro**	**5.68**	**230**	*e*Pn	**Pn**	**15 00 04.5**	**+1.1**
	14nm,0.6s						
MAT	**Matsushiro**	**5.68**	**230**	P	**Pn**	**15 00 05.7**	**+2.3**
MAT				*e*S	**Sn**	**15 01 09.8**	**+1.7**

MJAR	Matsushiro Arr	5.68	230	Pn	Pn	15 00 04.7	+1.3
	1.3nm,0.3s,baz=39,slow=12,SNR=18						
MJAR	Matsushiro Arr	5.68	230	Pn	Pn	15 00 04.7	+1.3
JHJ	Hachijo jima 2	7.81	205	Pn	Pn	15 00 29.9	-2.7
	3.6nm,0.3s,baz=19,slow=9.4,SNR=11						
ULN	Ulaanbaatar	27.14	298	eP	P	15 04 21.2	-0.6
	0.6nm,0.5s,mb3.4						
SONM	Songino Array	27.59	298	P	P	15 04 27.0	+1.2
	0.7nm,0.6s,mb3.5,baz=87,slow=7.0,SNR=4.7						
ZALV	Zalesovo Beam	41.08	310	P	P	15 06 22.3	+0.1
	0.7nm,0.4s,mb3.6,baz=103,slow=6.5,SNR=3.0						
ZALV	Zalesovo Beam	41.08	310	P	P	15 06 22.3	+0.1
MKAR	Makanchi Array	43.94	300	P	P	15 06 45.3	-0.2
	1.0nm,0.8s,mb3.6,baz=75,slow=9.3,SNR=7.0						
TKM2	Tokmak 2	49.66	297	eP	P	15 07 31.0	+0.7
	2.1nm,0.6s,mb4.3						
WRA	Warramunga Arr	60.56	190	P	P	15 08 49.6	+0.5
	0.2nm,0.6s,mb3.5,baz=5.8,slow=7.0,SNR=4.1						

*NEIC **10** 15:18:21.4±0.8, 2.33N×128.05E, h200^{km}, mb3.8/1, Error ellipse: s-maj=22.0km s-min=12.6km az=67.0*

IDC 10 15:18:18.6±10.0**, 2.39N×128.22E, h172**^{km}±91^{km}**, mb3.3**/4**, mb1 3.4**/5**, mb1mx3.2**/16**, mbtmp3.4**/5**, Error ellipse: s-maj=93.7km s-min=17.7km az=59.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	11.21	229	P	Pn	15 20 54.1	-0.1
	0.7nm,0.3s,baz=61,slow=19,SNR=6.6						
WRAB	Tennant Creek	22.98	165	eP	P	15 23 08.4	0.0
	1.5nm,0.6s						
WRA	Warramunga Arr	22.99	165	P	P	15 23 08.8	+0.4
	1.5nm,0.5s,baz=345,slow=10,SNR=12						
ASAR	Alice Springs	26.48	168	P	P	15 23 40.4	+0.4
	0.2nm,0.7s,baz=4.5,slow=10.0,SNR=3.7						
ASAR				PcP	PcP	15 27 00.3	-0.3
	0.6nm,0.4s,baz=350,slow=2.0,SNR=17						
STKA	Stephens Creek	36.37	161	P	P	15 25 05.8	-0.5
	1.3nm,0.4s,baz=344,slow=8.8,SNR=16						
STKA	Stephens Creek	36.37	161	eP	P	15 25 06.4	+0.1
MKAR	Makanchi Array	59.50	325	P	P	15 28 03.7	+0.1
	1.0nm,0.6s,baz=122,slow=7.6,SNR=12						
KURK	Kurchatov	63.67	327	eP	P	15 28 30.4	-1.0

*NEIC **10** 15:27:05.2, 27.85S×69.69W, h108^{km}, MG3.9(GUC), After GUC.*

GUC 10 15:27:05.2±0.7**, 27.85S×69.69W, h108**^{km}±14^{km}**, ML3.9, 2C-6D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	Copiapo	0.77	310	⇓iP	Pn	15 27 24.4	+0.4
CPCH				iS	Sn	15 27 38.2	+0.1
CPCH				AML	AML	15 27 38.7	
	comp=N,16μm,0.1s						
CPCH				AML	AML	15 27 40.3	
	comp=E,21μm,0.1s						
CPCH	Copiapo	0.77	310	⇓iP	Pn	15 27 24.4	+0.4
CPCH				iS	Sn	15 27 38.2	+0.1
VACH	Vallenar	1.18	232	⇑iP	Pn	15 27 28.8	+0.6
VACH				iS	Sn	15 27 46.4	+0.7
CDCH	Caldera	1.27	307	⇓iP	Pn	15 27 29.4	+0.1
CDCH				iS	Sn	15 27 47.5	+0.1
CDCH				AML	AML	15 27 48.4	
	comp=N,643nm,0.1s						
CDCH	Caldera	1.27	307	⇓iP	Pn	15 27 29.4	+0.1
CDCH				iS	Sn	15 27 47.5	+0.1
LCO	Las Campanas	1.46	217	⇑iP	Pn	15 27 32.1	+0.8
LCO				iS	Sn	15 27 52.5	+1.3
TLL	Tololo Astrono	2.50	203	⇓iP	Pn	15 27 45.4	+0.8
TLL				iS	Sn	15 28 16.4	+1.6
TLL				AML	AML	15 28 18.0	
	comp=N,99nm,0.6s						
TLL	Tololo Astrono	2.50	203	⇓iP	Pn	15 27 45.4	+0.8
TLL				iS	Sn	15 28 16.4	+1.6

*ISCJB **10** 15:51:52.8±0.5, 37.75N±0.03×37.92E±0.04, h10^{km}, Error ellipse: s-maj=5.1km s-min=3.5km az=38.2*
*CSEM **10** 15:51:52.1±0.1, 37.75N×37.89E, h5^{km}, MD3.1, Error ellipse: s-maj=3.5km s-min=2.4km az=151.0*
*ISK **10** 15:51:52.2, 37.77N×37.91E, h5^{km}, MD2.9*
*DDA **10** 15:51:53.1, 37.72N×37.86E, h14^{km}, Md3.1*

ISC 10 15:51:53.1±0.5**, 37.75N**±0.03×**37.89E**±0.04**, h4**^{km}±9^{km}**, n14,** σ**0^{s}73**/21**, 1C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	Bozova	0.43	131	⇑iP	Pg	15 52 01.8	+0.4
ATAB				iS	Sg	15 52 07.8	+0.9
GZT	Gaziantep	0.47	213	⇓iP	Pg	15 52 02.2	0.0
GZT				iS	Sg	15 52 08.7	+0.3
AKCD	Akcadag	0.54	3	⇓iP	Pg	15 52 04.0	+0.4
AKCD				eS	Sg	15 52 12.5	+1.9
MALT	Malatya	0.70	37	PG	Pg	15 52 05.3	-1.3
MALT				eSG	Sg	15 52 14.9	-0.8
MYA	Malataya	0.71	36	PG	Pg	15 52 06.8	0.0
MYA				eSG	Sg	15 52 16.3	+0.2
GAZ	Gaziantep	0.79	223	ePG	Pg	15 52 08.3	0.0
URFA	Urfa	0.80	112	ePG	Pg	15 52 07.8	-0.7
KMRS	Kahramanmaras	0.82	253	ePG	Pg	15 52 08.1	-0.9
DARE	Darende-Malaty	1.20	357	ePG	Pg	15 52 09.9	-6.3
ANDN	Andirin	1.24	262	eP	Pg	15 52 15.9	-1.0
ANDN				eS	Sg	15 52 33.4	+0.5
ANDN	Andirin	1.24	262	eP	Pg	15 52 15.9	-1.0
ANDN				eS	Sg	15 52 33.3	+0.4
SARI	SarD1z-Kayseri	1.32	315	ePN	Pn	15 52 18.2	-0.1
PTK	Pertek	1.64	46	ePN	Pn	15 52 22.7	0.0
KOZT	Kozan	1.66	261	ePN	Pn	15 52 23.4	+0.4

IDC 10 15:52:00.0±3.9**, 7.15S×155.27E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.4**/15**, mbtmp3.4**/3**, Error ellipse: s-maj=115.3km s-min=39.5km az=117.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.95	236	P	P	15 57 17.4	+1.3
	0.5nm,0.6s,baz=62,slow=9.9,SNR=8.2						
ASAR	Alice Springs	26.27	229	P	P	15 57 36.8	-0.5
	0.3nm,0.9s,baz=53,slow=11,SNR=3.4						
MKAR	Makanchi Array	83.69	319	P	P	16 04 30.4	-0.4
	0.5nm,0.7s,baz=111,slow=6.8,SNR=3.8						

*ISCJB **10** 16:07:36.8±1.0, 37.12N±0.04×67.9E±0.1, h10^{km}, mb3.5/2, Error ellipse: s-maj=15.9km s-min=6.3km az=2.4*
*NNC **10** 16:07:37.2±2.0, 37.01N×68.08E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=18.2km s-min=14.5km az=142.0*
*IDC **10** 16:07:39.3±2.7, 36.59N×69.91E, h0^{km}, mb3.5/3, mb1 3.5/6, mb1mx3.4/24, mbtmp3.4/6, ML3.5/3, MS3.1/1, Ms1 3.1/1, ms1mx2.0/29, Error ellipse: s-maj=79.1km s-min=22.8km az=89.0*
*NEIC **10** 16:07:47.4±1.1, 36.65N×69.91E, h64^{km}±15^{km}, mb3.3/1, Error ellipse: s-maj=39.6km s-min=10.9km az=107.0*

ISC 10 16:07:38.9±1.0**, 37.06N**±0.05×**67.9E**±0.1**, h10**^{km}**, n23,** σ**1^{s}21**/26**, mb3.5**/2**, 3C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.68	159	eP	Pn	16 08 21.5	-0.5
KBL				eS	Sn	16 08 55.5	+1.0
KK31	Karatay Array	6.36	18	Pn	Pn	16 09 12.8	+0.1
	0.6nm,0.3s,baz=200,slow=13,SNR=29						
KK31				⇑Pg	Pg	16 09 34.0	-6.7
	0.6nm,0.3s,baz=210,slow=21,SNR=3.5						
KK31				⇑Sn	Sn	16 10 26.5	+1.2
	2.8nm,0.6s,baz=195,slow=20,SNR=4.3						
KK31				⇓Lg		16 11 00.9	
	4.8nm,0.5s,baz=195,slow=26,SNR=8.1						
AML	Almayashu	6.76	40	P	Pn	16 09 17.6	-0.5
	SNR=16						
AML	Almayashu	6.76	40	eP	Pn	16 09 17.2	-0.9
	8.8nm,0.6s						
EKS2	Erkin-Say	7.19	37	P	Pn	16 09 23.9	-0.1
	SNR=6.7						
EKS2	Erkin-Say	7.19	37	eP	Pn	16 09 23.7	-0.3
	3.0nm,0.5s						
AAK	Ala-Archa	7.53	40	P	Pn	16 09 30.1	+1.5
	SNR=6.5						
KZA	Kyzart	7.57	46	P	Pn	16 09 29.0	-0.3
	SNR=14						
KBK	Karagaybulak	7.79	42	P	Pn	16 09 32.6	+0.5
	SNR=10						
TKM2	Tokmak 2	8.31	43	⇑Pn	Pn	16 09 38.4	-1.0
	3.9nm,0.5s						
TKM2				⇓Sn	Sn	16 11 13.3	-0.1
	2.3nm,0.8s						
TKM2	Tokmak 2	8.31	43	P	Pn	16 09 38.9	-0.5
	SNR=8.7						
TKM2	Tokmak 2	8.31	43	eP	Pn	16 09 37.4	-2.0
	5.6nm,0.4s						
AB31	Akbulak array	13.49	337	P	Pn	16 10 49.9	-0.3
	1.0nm,0.7s,baz=164,slow=12,SNR=12						
MKAR	Makanchi Array	14.45	43	Pn	Pn	16 10 56.4	-6.9
	0.3nm,0.3s,baz=219,slow=15,SNR=2.2						
KURK	Kurchatov	15.66	26	Pn	Pn	16 11 13.4	-6.1
	0.0nm,0.3s,baz=216,slow=12,SNR=3.4						
KURK				Lg		16 15 43.2	
	0.0nm,0.3s,baz=42,slow=7.9,SNR=3.3						
KURK	Kurchatov	15.66	26	eP	Pn	16 11 21.9	+2.4
	1.0nm,0.5s						
KURK				Lg		16 15 43.2	
BVAR	Borovoye Array	16.06	5	Pn	Pn	16 11 27.0	+2.3
	0.4nm,0.3s,baz=228,slow=41,SNR=4.2						
BRVK	Borovoye	16.09	5	eP	Pn	16 11 33.5	+8.5
ZAA0	Zalesovo Array	20.55	29	eP	P	16 12 15.2	-2.1
ZALV	Zalesovo Beam	20.55	29	P	P	16 12 14.9	-2.4
	1.7nm,0.4s,baz=222,slow=10.0,SNR=7.5						
SONM	Songino Array	30.09	57	LR	LR	16 26 57.1	
	comp=Z,35nm,18.0s,baz=59,slow=40						
WRA	Warramunga Arr	84.41	120	P	P	16 20 05.6	-6.1
	0.3nm,0.6s,mb3.6,baz=325,slow=4.9,SNR=7.9						
ASAR	Alice Springs	86.63	123	P	P	16 20 16.9	-5.8
	0.2nm,0.6s,mb3.5,baz=309,slow=4.9,SNR=6.8						

*NIED **10** 16:16:00, 26.70N×141.40E, h200^{km}, Mw4.4 Best double couple: $M_0$4.94000×10^{15} NP1:ϕ_s85.00000°, δ76.00000°, λ158.00000°. NP2:ϕ_s180.00000°, δ69.00000°, λ15.00000°.*
*ISCJB **10** 16:16:33.5±2.4, 26.9N±0.1×142.1E±0.8, h161^{km}±19^{km}, Error ellipse: s-maj=124.0km s-min=21.0km az=178.2*
*JMA **10** 16:16:34.5, 26.72N×141.45E, h139^{km}, M3.8*

ISC 10 16:16:34.5±2.3**, 27.0N**±0.1×**142.2E**±0.9**, h158**^{km}±13^{km}**, n7,** σ**0^{s}79**/11**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	0.14	2	P	Pn	16 16 56.3	+0.6
CBIJ				S	Sn	16 17 12.9	+0.9
JHHJ	Haha-jima-NKT	0.33	180	P	Pn	16 16 55.6	-0.6
JHHJ				S	Sn	16 17 11.7	-1.0
JHJ2	Mitsune	6.47	342	P	Pn	16 18 07.7	+0.3
BSO1	Boso 1	7.74	353	P	Pn	16 18 25.1	+0.7
BSO1				eS	Sn	16 19 51.5	+0.6
JOD2	Odawara 2	8.69	343	P	Pn	16 18 37.5	+0.5
JYT	Yasato	9.40	350	P	Pn	16 18 46.2	-0.1
JHO	Hitachi	9.72	352	P	Pn	16 18 50.3	-0.3
JHO				eS	Sn	16 20 36.6	-1.8

IDC 10 16:20:56.7±59.0**, 20.56S×174.66W, h0**^{km}**, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.7**/17**, mbtmp3.9**/3**, MS3.6**/3**, Ms1 3.6**/3**, ms1mx3.0**/26**, Error ellipse: s-maj=1115.0km s-min=176.3km az=84.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	9.14	198	LR	LR	16 25 51.5	
	comp=Z,339nm,21.4s,baz=230,slow=32						
URZ	Urewera	19.02	200	LR	LR	16 30 16.6	
	comp=Z,142nm,20.8s,baz=337,slow=29						
STKA	Stephens Creek	40.59	245	eP	P	16 28 38.0	-0.2
	3.7nm,1.0s						
STKA	Stephens Creek	40.59	245	P	P	16 28 38.0	-0.2
	3.4nm,1.1s,baz=80,slow=9.3,SNR=4.7						
ASAR	Alice Springs	47.55	256	P	P	16 29 34.0	-0.2
	0.8nm,0.7s,baz=99,slow=6.9,SNR=15						
WB2	Warramunga Arr	47.68	261	eP	P	16 29 35.3	+0.1
WRA	Warramunga Arr	47.69	261	P	P	16 29 35.5	+0.2
	0.4nm,0.3s,baz=97,slow=8.2,SNR=34						
FITZ	Fitzroy Crossi	56.12	262	eP	P	16 30 37.8	-0.5
	3.4nm,1.2s						
ULM	Lac du Bonnet	98.67	40	LR	LR	17 13 38.0	
	comp=Z,39nm,18.4s,baz=58,slow=32						

*NIED **10** 16:31:00, 39.90N×141.90E, h59^{km}, Mw3.8 Best double couple: $M_0$6.06000×10^{14} NP1:ϕ_s103.00000°, δ82.00000°, λ104.00000°. NP2:ϕ_s222.00000°, δ16.00000°, λ30.00000°.*
*IDC **10** 16:31:11.5±2.5, 39.85N×142.60E, h89^{km}±24^{km}, mb3.2/4, mb1 3.2/6, mb1mx3.1/21, mbtmp3.1/6, Error ellipse: s-maj=40.4km s-min=17.1km az=93.0*
*ISCJB **10** 16:31:12.7±0.6, 39.94N±0.04×141.94E±0.09, h79^{km}±3^{km}, mb3.5/5, Error ellipse: s-maj=11.2km s-min=5.9km az=9.0*
*NEIC **10** 16:31:13.3±0.9, 39.75N×142.33E, h96^{km}±8^{km}, mb4.2/1, Error ellipse: s-maj=18.2km s-min=9.6km az=119.0*
*JMA **10** 16:31:14.2±0.1, 39.93N×141.88E, h72^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s75.00000°, δ30.00000°, λ169.00000°. NP2: ϕ_s175.00000°, δ84.00000°, λ61.00000°. Principal axes: T Plg43.0000°, Azm57.0000°; N Plg29.0000°, Azm178.0000°; P Plg33.0000°, Azm289.0000°;*
JMA Felt I J1.

ISC 10 16:31:13.9±0.6**, 39.94N**±0.04×**141.93E**±0.09**, h73**^{km}±4^{km}**, n23,** σ**0^{s}66**/32**, mb3.5**/5**, 9C-1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	0.05	271	⇑P	Pn	16 31 24.8	+0.4
JTH				S	Sn	16 31 32.3	+0.2
MIYJ	Miyakonagasawa	0.37	193	⇑P	Pn	16 31 26.2	+0.3
MIYJ				S	Sn	16 31 34.9	+0.2
JKZ	Kuzumaki	0.46	276	⇑P	Pn	16 31 26.8	+0.2
JKZ				S	Sn	16 31 35.8	-0.2
JANG	Nango	0.54	324	⇑P	Pn	16 31 27.3	0.0
JANG				S	Sn	16 31 37.0	-0.2
JOM	Ohasama	0.67	227	⇑P	Pn	16 31 28.6	-0.1
JOM				S	Sn	16 31 39.2	-0.5
JAH	Hinai	1.02	285	⇑P	Pn	16 31 32.6	-0.2
JAH				S	Sn	16 31 46.7	-0.2
JTM	Tenmabayashi	1.07	323	⇓P	Pn	16 31 33.5	+0.1
JTM				eS	Sn	16 31 47.6	-0.4
JMK	Ichinoseki	1.13	209	⇑P	Pn	16 31 33.8	-0.3
JMK				S	Sn	16 31 48.2	-1.0
JIO	Ouri	1.55	197	⇑P	Pn	16 31 39.2	-0.3
JYK	Kaneyama	1.58	230	⇑P	Pn	16 31 39.9	-0.1
JOT	Ohata	1.59	335	P	Pn	16 31 40.3	+0.2
JIW	Iwasaki	1.61	295	P	Pn	16 31 40.8	+0.5
ERM	Erimo	2.27	24	ePn	Pn	16 31 50.1	+0.9
ASAJ	Asahikawa	4.21	7	P	Pn	16 32 15.8	+0.4
	0.5nm,0.3s,baz=295,slow=31,SNR=7.6						
ASAJ				S	Sn	16 33 02.5	-0.8
	0.9nm,0.3s,baz=171,slow=16,SNR=3.7						
MAJO	Matsushiro	4.48	222	eP	Pn	16 32 19.6	+0.4
MJAR	Matsushiro Arr	4.48	222	P	Pn	16 32 20.6	+1.4
	0.5nm,0.3s,baz=30,slow=12,SNR=7.5						
SONM	Songino Array	26.61	299	P	P	16 36 46.9	+1.7
	0.4nm,0.5s,mb3.2,baz=111,slow=9.4,SNR=4.4						
ENH	Enshi	28.11	260	eP	P	16 36 58.8	+0.1
ZALV	Zalesovo Beam	40.31	310	P	P	16 38 43.4	-0.2
	0.4nm,0.4s,mb3.6,baz=99,slow=7.4,SNR=2.9						
MKAR	Makanchi Array	42.98	300	P	P	16 39 05.2	-0.3
	0.6nm,0.6s,mb3.5,baz=92,slow=8.7,SNR=7.9						
KURK	Kurchatov	44.51	306	eP	P	16 39 17.6	-0.2
	2.0nm,0.5s,mb4.1						
WRA	Warramunga Arr	59.99	188	P	P	16 41 08.3	-4.3
	0.2nm,0.7s,mb3.3,baz=6.0,slow=6.9,SNR=3.1						
WRA				pP	pP	16 41 30.2	-1.4
	0.3nm,0.8s,baz=4.4,slow=7.1,SNR=1.6						
PV10	Paradox Valley	78.57	49	eP	P	16 43 04.6	-2.8

IDC 10 17:12:11.8±5.2**, 7.45S×156.35E, h76**^{km}±57^{km}**, mb3.5**/5**, mb1 3.7**/6**, mb1mx3.4**/17**, mbtmp3.6**/6**, ML3.7**/1**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.7**/19**, Error ellipse: s-maj=49.7km s-min=25.7km az=136.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.07	119	P	Pn	17 13 11.7	+0.1
	4.8nm,0.3s,baz=258,slow=7.2,SNR=4.2						
HNR				S	Sn	17 14 10.7	+13
	8.2nm,0.3s,baz=120,slow=14,SNR=2.3						
CTA	Charters Tower	15.92	217	LR	LR	17 20 56.4	
	comp=Z,42nm,19.2s,baz=62,slow=33						
WRA	Warramunga Arr	24.68	238	P	P	17 17 26.5	+0.6
	3.5nm,0.6s,baz=61,slow=9.4,SNR=38						
ASAR	Alice Springs	26.90	231	P	P	17 17 45.9	-0.1
	0.4nm,0.5s,baz=61,slow=9.6,SNR=12						
FITZ	Fitzroy Crossi	31.71	248	P	P	17 18 28.0	-0.6
	1.2nm,0.8s,baz=84,slow=6.7,SNR=5.6						
FITZ				LR	LR	17 30 18.6	
	comp=Z,40nm,18.6s,baz=284,slow=34						
SONM	Songino Array	70.45	327	P	P	17 23 17.9	-0.1
	0.4nm,0.7s,baz=142,slow=7.3,SNR=3.2						
MKAR	Makanchi Array	84.63	318	P	P	17 24 38.8	+1.6
	0.2nm,0.2s,baz=124,slow=2.6,SNR=3.2						
CPUP	Villa Florida	133.14	137	PKP	PKPdf	17 31 17.1	-2.5
	0.9nm,0.5s,baz=230,slow=1.7,SNR=4.7						

*ISCJB **10** 17:23:46.9±0.8, 60.9S±0.1×190W±0.3, h10^{km}, mb4.1/5, MS4.0/16, Error ellipse: s-maj=23.1km s-min=10.9km az=146.2*
*IDC **10** 17:23:47.1±0.8, 60.62S×19.02W, h0^{km}, mb4.0/7, mb1 4.1/7, mb1mx3.9/18, mbtmp4.0/7, MS4.0/16, Ms1 4.0/16, ms1mx3.9/24, Error ellipse: s-maj=28.1km s-min=20.9km az=45.0*
*NEIC **10** 17:23:48.5±0.8, 60.70S×18.83W, h10^{km}, mb4.7/1, Error ellipse: s-maj=24.4km s-min=16.2km az=50.0*

ISC 10 17:23:48.9±0.8**, 60.8S**±0.1×**18.9W**±0.3**, h10**^{km}**, n30,** σ**1^{s}27**/17**, mb4.1**/5**, MS4.0**/16**, 1C-1D, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	10.78	161	e	Pn	17 26 22.5	-0.5
VNA1				e		17 26 25.0	
VNA1				eS	Sx	17 28 11.9	
VNA3	Neumayer Olymp	11.11	164	e	Pn	17 26 26.5	-0.9
VNA3				e		17 26 28.2	
VNA3				eS	Sx	17 28 18.5	
VNA2	Neumayer--Watz	11.16	160	e	Pn	17 26 27.3	-0.9
VNA2				e		17 26 29.2	
VNA2				eS	Sx	17 28 19.8	
SNAA	Sanae	12.61	156	e	Pn	17 26 46.7	-1.3
SNAA				e		17 26 50.5	
SNAA				eS	Sx	17 28 54.9	
SNAA	Sanae	12.61	156	eP	Pn	17 26 46.9	-1.1
	24nm,0.5s						
PMSA	Palmer Station	20.64	239	P	P	17 28 30.5	+2.4
	4.4nm,0.5s,baz=50,slow=22,SNR=4.7						
PMSA				LR	LR	17 34 53.0	
	comp=Z,250nm,19.8s,MS3.6,baz=85,slow=32						
SYO	Syowa Base	25.14	134	⇑eP	P	17 29 13.8	+0.3
SYO	Syowa Base	25.14	134	⇓eP	P	17 29 15.7	+2.2
USHA	Ushuaia	26.48	261	LR	LR	17 37 24.1	
	comp=Z,243nm,21.2s,MS3.7,baz=273,slow=31						
QSPA	South Pole Qui	29.42	180	P	P	17 29 53.3	+1.5
	4.4nm,0.8s,mb4.2,baz=209,slow=5.7,SNR=17						
QSPA				LR	LR	17 40 56.9	
	comp=Z,331nm,19.0s,MS4.0,baz=198,slow=35						
QSPA	South Pole Qui	29.42	180	P	P	17 29 53.3	+1.5
QSPA				LR	LR	17 40 56.9	
MAW	Mawson	33.71	137	P	P	17 30 32.1	+2.5
	6.4nm,0.8s,mb4.6,baz=230,slow=8.3,SNR=18						
MAW				LR	LR	17 42 03.1	
	comp=Z,342nm,21.7s,MS4.0,baz=253,slow=32						
MAW	Mawson	33.71	137	eP	P	17 30 31.5	+1.9
	8.4nm,0.8s,mb4.7						
MAW				LR	LR	17 42 03.0	
PLCA	Paso Flores	37.08	279	LR	LR	17 44 49.9	
	comp=Z,162nm,19.4s,MS3.8,baz=139,slow=34						
CPUP	Villa Florida	43.18	305	LR	LR	17 47 49.8	
	comp=Z,113nm,20.6s,MS3.8,baz=137,slow=34						
CFAA	Coronel Fontan	43.34	290	P	P	17 31 49.2	-1.7
	0.1nm,0.4s,baz=18,slow=14,SNR=2.4						
CFAA	Coronel Fontan	43.34	290	P	P	17 31 49.2	-1.7
BOSA	Boshof	43.59	63	LR	LR	17 45 47.2	
	comp=Z,151nm,20.0s,MS3.9,baz=43,slow=30						
BDFB	Brasilia	49.74	322	LR	LR	17 50 08.8	
	comp=Z,187nm,20.1s,MS4.1,baz=157,slow=32						
LPAZ	La Paz	56.60	299	P	P	17 33 31.3	-0.3
	0.6nm,0.4s,mb3.9,baz=98,slow=4.4,SNR=4.0						
LPAZ				LR	LR	17 56 17.1	
	comp=Z,82nm,20.7s,MS3.8,baz=97,slow=34						
DBIC	Dimbokro	68.18	15	LR	LR	17 59 24.0	
	comp=Z,56nm,18.3s,MS3.8,baz=162,slow=31						
KMBO	Kilima Mbogo	73.16	60	LR	LR	18 02 58.7	
	comp=Z,95nm,21.0s,MS4.0,baz=81,slow=32						
TORD	Torodi Ar. Bea	75.53	21	P	P	17 35 33.0	-0.2
	1.4nm,0.7s,mb4.0,baz=192,slow=6.3,SNR=7.1						
TORD				LR	LR	18 01 52.7	
	comp=Z,87nm,18.4s,MS4.1,baz=130,slow=30						
ROSC	El Rosal	78.23	303	LR	LR	18 07 25.7	
	comp=Z,67nm,20.6s,MS4.0,baz=4.7,slow=34						
STKA	Stephens Creek	86.28	163	LR	LR	18 11 24.4	
	comp=Z,387nm,20.7s,MS4.8,baz=204,slow=33						
ASAR	Alice Springs	92.97	155	P	P	17 37 01.9	-0.2
	0.2nm,0.7s,mb3.7,baz=191,slow=5.7,SNR=5.5						
CTA	Charters Tower	98.50	166	LR	LR	18 19 39.8	
	comp=Z,150nm,18.4s,MS4.5,baz=8.1,slow=34						
KEST	Kesra	98.95	23	LR	LR	18 17 24.9	
	comp=Z,26nm,20.2s,MS3.7,baz=248,slow=33						
SONM	Songino Array	146.62	88	PKPbc	PKPbc	17 43 29.1	-0.3
	0.6nm,0.6s,baz=199,slow=4.0,SNR=2.5						
KSRS	Korea Array	148.69	123	PKPbc	PKPbc	17 43 33.5	-1.9
	0.7nm,0.7s,baz=305,slow=34,SNR=2.7						

*CRAAG **10** 17:44:12.9, 36.18N×1.21E, Ml3.4*
*CSEM **10** 17:44:13.1±0.1, 36.18N×1.23E, h5^{km}, ML3.4, Error ellipse: s-maj=3.0km s-min=1.8km az=20.0*
*ISCJB **10** 17:44:14.1±0.6, 36.23N±0.05×1.27E±0.05, h10^{km}±7^{km}, Error ellipse: s-maj=8.7km s-min=5.7km az=151.2*
*MDD **10** 17:44:15.1±0.4, 36.14N×1.28E, h0^{km}, mb3.7/10, Error ellipse: s-maj=4.7km s-min=4.4km az=164.0, PRIMO*
*NEIC **10** 17:44:15.0, 36.19N×1.35E, h0^{km}, MG3.7(MDD), After MDD.*

ISC 10 17:44:14.5±0.8**, 36.23N**±0.06×**1.29E**±0.05**, h5**^{km}±10^{km}**, n47,** σ**1^{s}15**/82**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECHF	Ech Chlef	0.08	150	P	Pg	17 44 16.0	-0.3
ECHA	Ech Chlef	0.10	141	P	Pg	17 44 16.0	-0.6
EBNR	Beni Rached	0.20	71	P	Pg	17 44 19.2	+0.7
EANR	'Ain N'Sour	0.32	210	P	Pg	17 44 18.9	-1.7
ETRT	Tiaret	0.83	180	P	Pg	17 44 28.7	-1.8
EMHD	Djebel Mahouad	1.34	91	P	Pn	17 44 39.8	-0.1
ADJB	Djebel Djouab	1.74	92	P	Pn	17 44 47.0	+1.7
EMUR	La Murta	2.59	309	P	Pn	17 44 57.3	+0.3
	3.5nm,0.2s,SNR=7.9						
EMUR				S	Sn	17 45 29.6	+0.7
	11nm,0.4s,SNR=7.9						
EMUR	La Murta	2.59	309	P	Pn	17 44 56.8	-0.3
	3.5nm,0.2s,SNR=7.9						
EMUR				S	Sn	17 45 27.8	-1.1
	2.1nm,0.2s,SNR=7.9						
EMUR	La Murta	2.59	309	P	Pn	17 44 56.8	-0.3
EMUR				S	Sn	17 45 27.8	-1.1
EBEN	Beniarda	2.75	334	P	Pn	17 45 00.3	+1.0
	1.1nm,0.1s,SNR=7.1						
EBEN				S	Sn	17 45 31.8	-1.1
	21nm,0.4s,SNR=7.1						
EBEN	Beniarda	2.75	334	P	Pn	17 45 00.7	+1.4
	1.1nm,0.1s,SNR=7.1						
EBEN				S	Sn	17 45 33.0	+0.1
	4.2nm,0.3s,SNR=7.1						
EBEN	Beniarda	2.75	334	P	Pn	17 45 00.7	+1.4
EBEN				S	Sn	17 45 33.0	+0.1
EIBI	Ibiza	2.80	1	P	Pn	17 45 01.0	+1.1
	7.3nm,0.2s,SNR=16						
EIBI				S	Sn	17 45 33.0	-1.0
	17nm,0.2s,SNR=13						
EIBI	Ibiza	2.80	1	P	Pn	17 45 01.4	+1.5
	2.4nm,0.1s,SNR=16						
EIBI				S	Sn	17 45 33.2	-0.8
	17nm,0.2s,SNR=13						
EIBI	Ibiza	2.80	1	P	Pn	17 45 01.4	+1.5
EIBI				S	Sn	17 45 33.2	-0.8
ETOB	Tobarra	3.31	318	P	Pn	17 45 08.4	+1.5
	2.6nm,0.2s,SNR=13						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ETOB				S	Sn	17 45 45.8	-0.8
	5.4nm,0.2s						
ETOB	Tobarra	3.31	318	P	Pn	17 45 08.4	+1.5
	2.6nm,0.2s,SNR=13						
ETOB				S	Sn	17 45 45.8	-0.8
	1.8nm,0.2s						
EBER	Berja	3.43	283	P	Pn	17 45 08.2	-0.5
	1.4nm,0.1s,SNR=17						
EBER				S	Sn	17 45 49.0	-0.6
	8.9nm,0.6s,SNR=7.9						
EBER	Berja	3.43	283	P	Pn	17 45 08.2	-0.4
	1.4nm,0.1s,SNR=17						
EBER				S	Sn	17 45 49.0	-0.7
	0.9nm,0.2s,SNR=7.9						
EHUE	Huescar	3.49	298	P	Pn	17 45 10.7	+1.3
	0.3nm,0.2s,SNR=7.9						
EHUE				S	Sn	17 45 51.9	+0.8
	1.2nm,0.2s,SNR=7.9						
EHUE	Huescar	3.49	298	P	Pn	17 45 10.1	+0.7
	0.3nm,0.2s,SNR=7.9						
EHUE				S	Sn	17 45 51.7	+0.6
	0.6nm,0.2s,SNR=7.9						
EHUE	Huescar	3.49	298	P	Pn	17 45 10.1	+0.6
EHUE				S	Sn	17 45 51.7	+0.6
ETOS	Mallorca	3.74	18	P	Pn	17 45 12.3	-0.5
	0.6nm,0.2s,SNR=9.3						
ETOS				S	Sn	17 45 56.1	-1.0
	2.7nm,0.2s						
ETOS	Mallorca	3.74	18	P	Pn	17 45 12.1	-0.7
	0.6nm,0.2s,SNR=9.3						
ETOS	Mallorca	3.74	18	P	Pn	17 45 12.1	-0.7
ETOS				S	Sn	17 45 54.0	-3.2
ECHE	Chera	3.81	333	S	Sn	17 45 57.1	-1.8
	0.5nm,0.2s,SNR=4.9						
EQES	Quesada	3.83	296	P	Pn	17 45 15.8	+1.7
	3.2nm,0.1s,SNR=15						
EQES				S	Sn	17 46 00.4	+0.9
	6.6nm,0.2s						
EQES	Quesada	3.83	296	P	Pn	17 45 16.3	+2.2
	3.2nm,0.1s,SNR=15						
EQES				S	Sn	17 46 00.6	+1.1
	1.3nm,0.2s						
EQES	Quesada	3.83	296	P	Pn	17 45 16.3	+2.2
EQES				S	Sn	17 46 00.6	+1.1
EVIA	Vianos	3.86	310	P	Pn	17 45 14.6	0.0
	1.9nm,0.5s,SNR=7.9						
EVIA				S	Sn	17 46 01.2	+0.9
	4.1nm,0.2s,SNR=7.9						
EQUE	Quentar	3.92	286	P	Pn	17 45 16.1	+0.7
	2.2nm,0.2s,SNR=8.5						
EQUE				S	Sn	17 46 01.1	-0.7
	1.4nm,0.2s,SNR=4.0						
EQUE	Quentar	3.92	286	P	Pn	17 45 16.4	+1.0
	2.2nm,0.2s,SNR=8.5						
EQUE				S	Sn	17 46 02.3	+0.5
	0.7nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.36	342	P	Pn	17 45 24.0	+2.6
	1.2nm,0.1s,SNR=7.9						
EMOS				S	Sn	17 46 12.2	-0.4
	3.4nm,0.2s,SNR=6.0						
EMOS	Mosqueruela	4.36	342	P	Pn	17 45 23.5	+2.1
	1.2nm,0.1s,SNR=7.9						
EMOS				S	Sn	17 46 12.2	-0.3
	3.6nm,0.2s,SNR=6.0						
EMOS	Mosqueruela	4.36	342	P	Pn	17 45 23.5	+2.1
EMOS				S	Sn	17 46 12.2	-0.3
ERTA	Horta de San J	4.78	351	P	Pn	17 45 28.1	+0.9
	0.6nm,0.1s,SNR=7.9						
ERTA				S	Sn	17 46 21.4	-1.6
	5.8nm,0.3s,SNR=7.9						
ERTA	Horta de San J	4.78	351	P	Pn	17 45 27.4	+0.2
	0.4nm,0.1s,SNR=7.9						
ERTA				S	Sn	17 46 21.4	-1.6
	5.8nm,0.3s,SNR=7.9						
ERTA	Horta de San J	4.78	351	P	Pn	17 45 27.4	+0.2
ERTA				S	Sn	17 46 21.4	-1.6
EADA	Adamuz	5.07	294	P	Pn	17 45 32.0	+0.8
	0.1nm,0.1s,SNR=7.9						
EADA				S	Sn	17 46 28.8	-1.3
	0.9nm,0.2s,SNR=7.9						
EADA	Adamuz	5.07	294	P	Pn	17 45 30.8	-0.3
	0.1nm,0.1s,SNR=7.9						
EADA				S	Sn	17 46 29.2	-0.9
	0.2nm,0.1s,SNR=7.9						
EADA	Adamuz	5.07	294	P	Pn	17 45 30.8	-0.4
EADA				S	Sn	17 46 29.2	-0.8
EPOB	Poblet	5.12	358	P	Pn	17 45 33.7	+1.9
	1.5nm,0.4s,SNR=7.9						
EPOB				S	Sn	17 46 29.3	-2.1
	4.2nm,0.3s,SNR=7.9						
EPOB	Poblet	5.12	358	P	Pn	17 45 33.1	+1.2
	1.7nm,0.2s,SNR=7.9						
EPOB	Poblet	5.12	358	P	Pn	17 45 33.1	+1.2
EPOB				S	Sn	17 46 28.8	-2.6
ETOR	Torete	5.28	331	S	Sn	17 46 36.6	+1.3
	2.2nm,0.0s,SNR=4.0						
ETOR	Torete	5.28	331	S	Sn	17 46 34.3	-1.0
	1.0nm,0.1s,SNR=7.9						

*ISCJB **10** 17:56:02.0±0.5, 3754N±003×7234E±006, h137km±7km, mb3.7/7, Error ellipse: s-maj=7.8km s-min=4.3km az=166.9*

*IDC **10** 17:56:01.1±5.9, 3748N×7207E, h104km±51km, mb3.7/6, mb1 3.7/10, mb1mx3.4/24, mbtmp3.6/10, MS3.5/1, Ms1 3.5/1, ms1mx2.1/34, Error ellipse: s-maj=35.4km s-min=21.6km az=22.0*

*NEIC **10** 17:56:03.5±0.8, 3760N×7218E, h126km±8km, mb4.6/2, Error ellipse: s-maj=13.5km s-min=8.7km az=119.0*

*NNC **10** 17:56:07.1±0.8, 3791N×7195E, h113km±19km, mb3.2, mpv4.0, Error ellipse: s-maj=7.5km s-min=5.0km az=0.0*

ISC 10 17:56:02.8±0.4**, 3751N**±003×**7238E**±006**, h131**km±7km**, n44, σ1§17**/52**, mb3.7**/7**, 1C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	4.01	223	eP	Pn	17 57 03.5	+0.8
KBL				eS	Sn	17 57 49.9	+0.8
AML	Almayashu	4.72	12	P	Pn	17 57 12.2	+0.1
	SNR=59						
AML	Almayashu	4.72	12	eP	Pn	17 57 12.1	-0.1
KZA	Kyzart	5.07	25	P	Pn	17 57 17.2	+0.5
	SNR=29						
EKS2	Erkin-Say	5.25	11	P	Pn	17 57 19.2	0.0
	SNR=60						
EKS2	Erkin-Say	5.25	11	eP	Pn	17 57 19.1	-0.1
	32nm,0.4s						
EKS2				eS	Sn	17 58 16.1	-2.7
AAK	Ala-Archa	5.37	17	P	Pn	17 57 21.5	+0.8
	SNR=24						
KBK	Karagaybulak	5.50	20	P	Pn	17 57 23.5	+0.9
	SNR=10						
ULHL	Ulahol	5.58	31	P	Pn	17 57 24.3	+0.7
	SNR=12						
THN	Thein Dam	5.76	151	eP	Pn	17 57 29.0	+2.8
THN				eS	Sn	17 58 31.6	+0.5
KK31	Karatay Array	5.76	346	P	Pn	17 57 24.1	-1.9
	13nm,0.4s,baz=167,slow=12,SNR=448						
KK31				⇑S	Sn	17 58 24.3	-6.7
	40nm,0.6s,baz=167,slow=23,SNR=16						
DLH	Dalhousie	5.77	148	eP	Pn	17 57 30.0	+3.8
DLH				ex	Sn	17 58 35.0	+3.7
CHMS	Chumysh	5.77	18	P	Pn	17 57 26.6	+0.4
	SNR=22						
TKM2	Tokmak 2	5.94	24	⇓P	Pn	17 57 29.7	+1.3
	5.6nm,0.4s						
TKM2				⇓S	Sn	17 58 35.1	-0.1
	4.7nm,0.8s						
TKM2	Tokmak 2	5.94	24	P	Pn	17 57 30.0	+1.6
	SNR=20						
TKM2	Tokmak 2	5.94	24	eP	Pn	17 57 28.8	+0.4
	9.8nm,0.4s						
USP	Ospenovka	5.97	15	P	Pn	17 57 28.6	-0.3
	SNR=14						
SDNR	Sundarnagar	7.10	146	ex	x	17 57 52.0	
SDNR				eS	Sn	17 59 01.0	-2.3
SMLA	Simla	7.50	147	eP	Pn	17 57 51.7	+2.1
SMLA				i P		17 57 51.7	
SMLA				i S	Sn	17 59 10.2	-2.9
SMLA				ex	x	17 59 12.8	
	comp=N,1μm,0.3s						
SMLA				ex	x	17 59 13.4	
	comp=E,1μm,0.4s						
KLP	Kalpa	7.69	139	eP	Pn	17 57 57.0	+5.0
KLP				eS	Sn	17 59 17.0	-0.5
JOSI	Joshimath	9.14	137	ex	Pn	17 58 10.7	-0.9
JOSI				eS	Sn	17 59 49.4	-3.5
JOSI				AML	AML	17 59 57.5	
	comp=N,118nm,0.7s						
JOSI				AML	AML	17 59 58.4	
	comp=E,112nm,0.5s						
SONA	Sohna	10.05	155	eS	Sn	18 00 11.0	-3.7
MKAR	Makanchi Array	11.83	35	P	Pn	17 58 48.3	+1.1
	comp=E,0.1nm,0.3s,baz=217,slow=15,SNR=4.8						
DANN	Dangsing	13.21	130	eP	Pn	17 59 05.6	+0.2
KOLN	Koldanda	13.55	133	eP	Pn	17 59 09.7	0.0
	comp=E,5.0nm,0.2s						
GKN	Gorkha	14.00	129	eP	Pn	17 59 14.8	-0.7
	comp=E,6.4nm,0.2s						
KKN	Kakani	14.55	128	eP	Pn	17 59 21.1	-1.4
	comp=E,3.9nm,0.3s						
DMN	Daman	14.57	129	eP	Pn	17 59 22.0	-0.7
	comp=E,4.1nm,0.3s						
AB31	Akbulak array	14.79	326	⇓P	Pn	17 59 23.8	-1.4
	comp=E,0.3nm,0.3s,baz=139,slow=11,SNR=22						
JIRN	Jiri	15.22	126	eP	Pn	17 59 30.4	-0.4
	comp=E,12nm,0.3s						
BVAR	Borovoye Array	15.57	356	P	Pn	17 59 35.2	+0.2
	comp=E,0.7nm,0.3s,baz=163,slow=10,SNR=10						
RAMN	Ramite	15.97	127	eP	Pn	17 59 41.5	+1.3
AKTK	Aktyubinsk	16.50	326	P	Pn	17 59 45.3	-1.1
AKTK				S	Sx	18 02 33.2	
AKTO	Aktyubinsk	16.50	326	P	Pn	17 59 45.3	-1.1
	comp=E,0.9nm,0.3s,baz=138,slow=15,SNR=7.5						
AKTO				S	Sx	18 02 33.2	
	comp=E,0.2nm,0.3s,baz=340,slow=15,SNR=4.2						
ZALV	Zalesovo Beam	18.54	24	P	P	18 00 10.2	+1.1
	comp=E,0.3nm,0.3s,baz=202,slow=9.1,SNR=5.0						
AKASG	Malin Array Be	33.19	307	P	P	18 02 25.8	-1.0
	comp=E,0.3nm,0.4s,mb3.4,baz=84,slow=7.5,SNR=4.3						
ARCES	ARCESS Array B	40.64	337	P	P	18 03 30.0	+0.5
	comp=E,2.6nm,1.0s,mb3.8,baz=107,slow=8.1,SNR=6.1						
GERES	GERESS Array B	43.25	305	LR	LR	18 24 49.8	
	comp=E,49nm,18.2s,baz=270,slow=40						
NB2	NORSAR Subarra	44.24	322	P	P	18 03 58.7	0.0
	comp=Z,0.9nm,0.5s,mb3.7,baz=95,slow=7.9						
NOA	NORSAR Array B	44.24	322	P	P	18 03 59.0	+0.3
	baz=95,slow=7.7						
TORD	Torodi Ar. Bea	66.84	269	P	P	18 06 40.4	-0.5
	comp=Z,0.7nm,0.4s,mb3.8,baz=49,slow=5.8,SNR=9.7						
YKA	Yellowknife Ar	80.18	3	P	P	18 07 59.5	+1.4
	comp=Z,1.0nm,0.6s,mb3.6,baz=340,slow=5.9,SNR=3.7						
WRA	Warramunga Arr	81.60	123	P	P	18 08 09.7	+3.5
	comp=Z,0.2nm,0.5s,mb3.0,baz=302,slow=7.7,SNR=2.7						
STKA	Stephens Creek	94.51	127	P	P	18 09 08.4	+0.2
	comp=Z,2.1nm,0.8s,mb4.5,baz=319,slow=3.1,SNR=2.9						

IDC 10 18:03:57.7±22.0**, 1242S**×**16708E, h0**km**, mb4.3**/5**, mb1 4.4**/5**, mb1mx3.9**/18**, mbtmp4.3**/5**, Error ellipse: s-maj=400.2km s-min=75.4km az=73.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	30.39	226	P	P	18 10 11.8	+0.1
	3.9nm,1.0s,baz=66,slow=10.0,SNR=3.2						
WRA	Warramunga Arr	32.28	252	P	P	18 10 29.0	+0.5
	0.6nm,0.3s,baz=85,slow=9.0,SNR=25						
ASAR	Alice Springs	33.38	246	P	P	18 10 38.1	0.0
	2.5nm,0.3s,baz=70,slow=10,SNR=108						
FITZ	Fitzroy Crossi	40.31	257	P	P	18 11 36.3	-0.9
	0.5nm,0.3s,baz=66,slow=11,SNR=8.1						
BATI	Baumata	42.60	268	P	P	18 11 56.2	+0.1
	20nm,1.0s,baz=108,slow=3.2,SNR=3.3						

IDC 10 18:08:19.9±1.9**, 3350S**×**7786E, h0**km**, mb3.6**/6**, mb1 3.8**/6**, mb1mx3.6**/18**, mbtmp3.6**/6**, MS3.6**/3**, Ms1 3.5**/3**, ms1mx3.1**/26**, Error ellipse: s-maj=62.4km s-min=31.4km az=23.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	35.24	190	LR	LR	18 26 29.8	
	comp=Z,48nm,18.4s,baz=34,slow=31						
BOSA	Boshof	44.94	261	LR	LR	18 31 13.1	
	comp=Z,77nm,18.0s,baz=294,slow=31						
ASAR	Alice Springs	49.67	94	P	P	18 17 13.5	-0.1
	0.6nm,0.8s,baz=237,slow=8.0,SNR=5.8						
WRA	Warramunga Arr	51.66	90	P	P	18 17 28.6	0.0
	1.2nm,0.8s,baz=245,slow=7.5,SNR=6.5						
CMAR	Chiang Mai Arr	55.45	24	P	P	18 17 55.8	-0.6
	0.6nm,0.8s,baz=232,slow=6.9,SNR=4.2						
KURK	Kurchatov	83.85	0	P	P	18 20 51.5	+0.7
	0.1nm,0.6s,baz=211,slow=4.5,SNR=1.9						
TORD	Torodi Ar. Bea	85.96	289	P	P	18 21 01.8	-0.5
	0.7nm,0.8s,baz=111,slow=3.6,SNR=3.7						
TORD				LR	LR	18 58 21.7	
	comp=Z,34nm,18.3s,baz=110,slow=35						
ZALV	Zalesovo Beam	87.30	4	P	P	18 21 07.6	-0.3
	0.2nm,0.2s,baz=75,slow=1.7,SNR=2.4						

*IDC **10** 18:37:09.7±0.5, 1796S×17379W, h0km, mb4.7/22, mb1 4.8/23, mb1mx4.8/26, mbtmp4.8/23, ML4.8/1, MS4.0/21, Ms1 4.0/21, ms1mx3.9/26, Error ellipse: s-maj=20.6km s-min=12.0km az=141.0*

*GCMT **10** 18:37:11.3±0.4, 1788S×17343W, h70km±3km, MW5.0/61, Moment Tensor Solution. s38,c50; s61,c75; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.00±.18; $M_{\theta\theta}$0.47±.22; $M_{\phi\phi}$0.53±.21; $M_{r\theta}$-3.63±.10; $M_{\theta\phi}$2.51±.17; $M_{\phi r}$-0.39±.09; Best double couple: $M_0$4.50600×10^{16} NP1:ϕ_s184.00000°, δ33.00000°, λ-166.00000°. NP2: ϕ_s82.00000°, δ82.00000°, λ-58.00000°. Principal axes: T 4.6550, Plg30.0000°, Azm146.0000°; N -0.2980, Plg32.0000°, Azm257.0000°; P -4.3580, Plg43.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **10** 18:37:11.1, 1799S×17364W, h23km, mB5.3, mb5.0, Ms4.6, Msz4.2*

*NEIC **10** 18:37:11.3±0.1, 1793S×17380W, h10km, mb5.2/55, MS4.5/2, Error ellipse: s-maj=7.8km s-min=4.0km az=147.0*

*ISCJB **10** 18:37:13.7±0.2, 1783S±007×17390W±006, h33km, mb5.0/81, MS4.2/28, Error ellipse: s-maj=11.0km s-min=6.3km az=146.6*

*MOS **10** 18:37:18.6±1.7, 1669S×17373W, h33km, mb5.4/27, MS4.3/6, Error ellipse: s-maj=14.2km s-min=8.9km az=68.5*

*SZGRF **10** 18:37:19.2, 1682S×173.16W, h67km, Tonga Islands*

ISC 10 18:37:15.3±0.2**, 1794S**±005×**17385W**±006**, h35**km**, n358, σ0§79**/172**, mb5.0**/81**, MS4.2**/28**, 14C-32D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.48	27	Pn	Pn	18 38 16.2	-4.5
	68nm,0.3s,baz=70,slow=1.0,SNR=42						
AFI				Sn	Sx	18 38 59.1	
	475nm,0.3s,baz=34,slow=22,SNR=8.3						
AFI				LR	LR	18 39 35.0	
	comp=Z,1μm,19.9s,baz=178,slow=33						
AFI	Afiamalu	4.48	27	Pn	Pn	18 38 16.2	-4.5
AFI				Sn	Sx	18 38 59.1	
AFI				LR	LR	18 39 35.0	
RAO	Raoul Island	11.86	198	Sn	Sn	18 42 11.3	-1.7
	66nm,0.3s,baz=82,slow=22,SNR=5.0						
RAR	Rarotonga	13.66	106	Pn	Pn	18 40 23.1	-3.5
	4.8nm,0.3s,baz=263,slow=8.1,SNR=15						
RAR				Sn	Sx	18 42 39.8	
	1.9nm,0.3s,baz=110,slow=16,SNR=2.2						
RAR				LR	LR	18 44 35.9	
	comp=Z,267nm,19.8s,baz=334,slow=33						
DZM	Mont Dzumac	18.96	254	eP	Pn	18 41 39.8	+5.2
URZ	Urewera	21.73	200	P	P	18 42 02.9	-0.6
	28nm,0.3s,mb5.2,baz=16,slow=6.6,SNR=47						
URZ				S	Sx	18 45 49.7	
	3.4nm,0.4s,baz=1.0,slow=20,SNR=4.7						
PPT	Papeete	23.12	93	eLQ		18 46 57.8	
	1μm,27.5s						
PPT				eLR	LR	18 47 40.6	
	679nm,28.0s,baz=246						
PPT	Papeete	23.12	93	LR	LR	18 48 34.6	
	comp=Z,366nm,18.8s,MS3.9,baz=269,slow=30						
HNR	Honiara	26.80	285	LR	LR	18 52 02.7	
	comp=Z,301nm,19.4s,MS3.9,baz=106,slow=33						
RPZ	Rata Peaks	28.68	203	P	P	18 43 07.6	-1.3
	3.0nm,0.6s,mb4.2,baz=100,slow=21,SNR=2.4						
CTA	Charters Tower	37.72	260	eP	P	18 44 29.1	+1.2
	5.9nm,0.6s,mb4.5						
CTA	Charters Tower	37.72	260	P	P	18 44 28.3	+0.4
	4.8nm,0.9s,mb4.2,baz=95,slow=12,SNR=4.6						
CTA	Charters Tower	37.72	260	eP	P	18 44 29.1	+1.2
CTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
STKA	Stephens Creek	42.44	242	eP	P	18 45 08.8	+1.9
	comp=Z,4.1nm,0.7s,mb4.2						
STKA	Stephens Creek	42.44	242	P	P	18 45 07.2	+0.3
	comp=Z,3.6nm,0.9s,mb4.0,baz=134,slow=9.6,SNR=3.4						
STKA				LR	LR	18 59 34.2	
	comp=Z,213nm,19.1s,MS4.0,baz=30,slow=32						
WB2	Warramunga Arr	48.88	259	eP	P	18 45 57.3	-0.7
WRAB	Tennant Creek	48.88	259	⇓eP	P	18 45 58.2	+0.2
WRAB	Tennant Creek	48.88	259	eP	P	18 45 57.2	-0.8
	comp=Z,28nm,1.3s,mb5.1						
WRA	Warramunga Arr	48.89	259	P	P	18 45 57.4	-0.6
	comp=Z,2.3nm,0.4s,mb4.6,baz=97,slow=7.5,SNR=49						
WRA				S	S	18 52 54.1	-5.6
	comp=Z,0.6nm,0.9s,baz=146,slow=23,SNR=4.5						
ASAR	Alice Springs	48.96	254	P	P	18 45 58.1	-0.4
	comp=Z,18nm,0.9s,mb5.1,baz=86,slow=8.3,SNR=71						
ASAR				S	S	18 52 53.3	-7.3
	comp=Z,0.2nm,0.8s,baz=336,slow=29,SNR=4.4						
KAKA	Kakadu	51.92	268	eP	P	18 46 21.3	+0.3
	comp=Z,51nm,0.6s,mb5.6						
FITZ	Fitzroy Crossi	57.30	260	eP	P	18 47 00.9	+0.9
	comp=Z,5.4nm,0.4s,mb4.9						
FITZ	Fitzroy Crossi	57.30	260	P	P	18 47 01.4	+1.3
	comp=Z,0.8nm,0.5s,mb4.0,baz=143,slow=6.9,SNR=8.4						
FITZ				LR	LR	19 09 03.3	
	comp=Z,83nm,20.6s,MS3.8,baz=283,slow=33						
SBA	Scott Base	60.70	185	eP	P	18 47 26.2	+3.6
SBA				e		18 47 40.8	
SBA				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.3						
SBA	Scott Base	60.70	185	eP	P	18 47 26.2	+3.5
	comp=Z,23nm,0.9s,mb5.3						
SBA				e		18 47 40.8	
CBIJ	Chichi jima	61.83	315	LR	LR	19 10 36.7	
	comp=Z,190nm,18.4s,MS4.3,baz=135,slow=32						
NWAO	Narrogin (SRO)	63.02	242	LR	LR	19 11 43.4	
	comp=Z,124nm,18.7s,MS4.1,baz=23,slow=33						
DAV	Davao City (W)	64.74	287	LR	LR	19 14 04.6	
	comp=Z,96nm,20.9s,MS4.0,baz=166,slow=34						
MJAR	Matsushiro Arr	70.61	321	P	P	18 48 26.3	-0.8
	comp=Z,8.9nm,1.1s,mb4.6,baz=161,slow=6.9,SNR=15						
MJAR				LR	LR	19 13 43.0	
	comp=Z,121nm,20.7s,MS4.1,baz=110,slow=31						
MAJO	Matsushiro	70.61	321	eP	P	18 48 27.1	0.0
MAJO				e		18 48 45.2	
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
MAJO	Matsushiro	70.61	321	eP	P	18 48 27.1	-0.1
	comp=Z,8.9nm,1.0s,mb4.7						
MAJO				e		18 48 45.2	
MAT	Matsushiro	70.61	321	P	P	18 48 27.5	+0.4
JOW	Kunigami	71.65	307	LR	LR	19 13 24.0	
	comp=Z,177nm,21.4s,MS4.3,baz=136,slow=30						
QSPA	South Pole Qui	72.11	180	LR	LR	19 14 08.5	
	comp=Z,145nm,21.9s,MS4.2,baz=37,slow=31						
SAO	San Andreas Ge	73.50	42	eP	P	18 48 45.0	+0.5
SAO				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
SAO	San Andreas Ge	73.50	42	eP	P	18 48 45.0	+0.5
	comp=Z,38nm,1.1s,mb5.2						
HOPS	Hopland	73.91	39	eP	P	18 48 46.9	+0.1
	comp=Z,34nm,1.2s,mb5.2						
KIPM	Iron Peak	74.19	38	eP	P	18 48 48.9	+0.5
MWC	Mount Wilson	74.21	45	eP	P	18 48 48.2	-0.5
MWC				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.2						
MWC	Mount Wilson	74.21	45	eP	P	18 48 48.2	-0.5
	comp=Z,28nm,0.8s,mb5.2						
PET	Petropavlovsk	74.57	343	eP	P	18 48 57.4	+7.1
PET				eS	S	18 58 23.1	0.0
PET				pmax	pmax		
	comp=Z,100nm,15.4s						
ISA	Isabella	74.77	44	eP	P	18 48 51.9	0.0
ISA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
ISA	Isabella	74.77	44	eP	P	18 48 51.9	0.0
	comp=Z,30nm,1.0s,mb5.2						
PEA0B	Petropavlovsk-	74.91	343	eP	P	18 48 51.7	-0.6
PETK	Petropavlovsk-	74.91	343	P	P	18 48 52.1	-0.1
	comp=Z,37nm,0.7s,mb5.4,baz=127,slow=8.2,SNR=60						
PETK				LR	LR	19 22 29.5	
	comp=Z,46nm,18.6s,MS3.8,baz=156,slow=36						
CMB	Columbia Colle	74.95	41	eP	P	18 48 52.6	-0.3
CMB				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
CMB	Columbia Colle	74.95	41	eP	P	18 48 52.6	-0.3
	comp=Z,27nm,1.0s,mb5.1						
PFO	Pinyon Flat Ob	74.97	47	P	P	18 48 53.0	0.0
	comp=Z,9.4nm,0.9s,mb4.7,baz=232,slow=3.3,SNR=8.4						
PFO				LR	LR	19 12 39.6	
	comp=Z,74nm,19.9s,MS4.0,baz=327,slow=28						
OHCM	Honcut	75.08	39	eP	P	18 48 53.5	-0.1
WDC	Whiskeytown Da	75.23	38	eP	P	18 48 54.3	-0.2
WDC				pmax	pmax		
	comp=Z,46nm,1.6s,mb5.2						
WDC	Whiskeytown Da	75.23	38	eP	P	18 48 54.3	-0.1
	comp=Z,46nm,1.6s,mb5.2						
YSS	Yuzh-Sakhalins	75.47	331	⇑eP	P	18 48 55.6	-0.1
YSS				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.3						
GSC	Goldstone	75.67	45	eP	P	18 48 56.7	-0.4
GSC				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
GSC	Goldstone	75.67	45	eP	P	18 48 56.7	-0.4
	comp=Z,35nm,1.3s,mb5.1						
MTUM	Tungsten Hills	75.70	43	eP	P	18 48 57.5	+0.3
GLA	Glamis	75.80	48	eP	P	18 48 58.0	+0.1
GLA				e		18 49 17.2	
GLA				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
GLA	Glamis	75.80	48	eP	P	18 48 58.0	+0.1
	comp=Z,30nm,1.3s,mb5.1						
GLA				e		18 49 17.2	
YBH	Yreka Blue Hor	75.88	37	P	P	18 48 58.6	+0.4
	comp=Z,14nm,1.0s,mb4.8,baz=190,slow=1.1,SNR=26						
HUMO	Hull Mountain	76.30	36	eP	P	18 49 01.0	+0.5
	comp=Z,42nm,1.6s,mb5.1						
NVAR	Mina Array Bea	76.50	42	P	P	18 49 02.0	+0.3
	comp=Z,32nm,0.9s,mb5.3,baz=228,slow=10,SNR=131						
PAHR	Pah Rah Range	76.59	40	eP	P	18 49 01.8	-0.4
	comp=Z,31nm,1.2s,mb5.1						
LDFC	Landfair	76.70	46	eP	P	18 49 03.4	+0.4
TPNV	Topopah Spring	76.97	44	eP	P	18 49 04.5	0.0
TPNV				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
TPNV	Topopah Spring	76.97	44	eP	P	18 49 04.5	+0.1
	comp=Z,26nm,0.9s,mb5.2						
TPH	Tonopah	76.98	43	eP	P	18 49 04.2	-0.3
TPH				pmax	pmax		
	comp=Z,64nm,1.1s,mb5.5						
TPH	Tonopah	76.98	43	eP	P	18 49 04.2	-0.3
	comp=Z,64nm,1.1s,mb5.5						
MOD	Modoc	77.38	38	eP	P	18 49 06.6	0.0
	comp=Z,34nm,1.3s,mb5.1						
KDAK	Kodiak Island	77.48	11	P	P	18 49 06.2	-0.6
	comp=Z,11nm,0.6s,mb5.0,baz=169,slow=2.6,SNR=10						
KSRS	Korea Array	77.67	316	P	P	18 49 09.7	+1.3
	comp=Z,3.9nm,1.0s,mb4.3,baz=124,slow=5.6,SNR=11						
BMN	Battle Mountai	78.35	41	eP	P	18 49 11.9	-0.2
BMN				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
BMN	Battle Mountai	78.35	41	eP	P	18 49 11.9	-0.1
	comp=Z,33nm,1.1s,mb5.2						
WVOR	Wild Horse Val	78.68	38	P	P	18 49 13.8	0.0
BMW	Boistfort Moun	78.69	33	eP	P	18 49 12.3	-1.5
VFP	Flag Point	78.87	35	P	P	18 49 15.1	+0.2
NLWA	Neilton Lookou	78.97	32	eP	P	18 49 15.1	-0.2
	comp=Z,11nm,1.1s,mb4.7						
ARUT	Antelope Range	79.30	45	eP	P	18 49 17.8	+0.4
OSD	Olympics--Snow	79.34	32	P	P	18 49 18.0	+0.7
WUAZ	Wupatki	79.53	47	eP	P	18 49 19.0	+0.4
	comp=Z,31nm,1.3s,mb5.1						
HDW	Hoodsport	79.56	32	P	P	18 49 19.0	+0.5
ELK	Elko	79.77	41	P	P	18 49 19.9	+0.1
	comp=Z,6.6nm,0.9s,mb4.6,baz=238,slow=5.0,SNR=21						
ELK	Elko	79.77	41	P	P	18 49 19.9	+0.1
PGC	Sidney	80.02	31	eP	P	18 49 21.0	0.0
	comp=Z,37nm,1.0s,mb5.3						
SVW2	Sparrevohn	80.12	9	eP	P	18 49 20.6	-0.6

BBB Bella Bella 80.34 27 P **P 18 49 22.1 -0.5**
comp=Z,16nm,0.8s,mb5.0,baz=234,slow=4.3,SNR=5.5

SLKM Skilak Lake 80.47 12 *e*P **P 18 49 22.5 -0.6**
JCW Jim Creek 80.48 32 *e*P **P 18 49 23.3 -0.2**
MSU Marysvale 80.53 44 *e*P **P 18 49 24.8 +0.8**
RSW Rattlesnake Hi 80.57 35 *e*P **P 18 49 24.1 +0.2**
HAWA Hanford 80.60 35 *e*P **P 18 49 24.1 -0.1**
comp=Z,61nm,1.6s,mb5.3

RPW Rockport 80.86 32 *e*P **P 18 49 24.5 -1.0**
BMO Blue Mountains 80.90 37 *e*P **P 18 49 25.2 -0.6**
BMO pmax pmax
comp=Z,63nm,1.8s,mb5.2

BMO Blue Mountains 80.90 37 *e*P **P 18 49 25.2 -0.6**
comp=Z,63nm,1.8s,mb5.2

ETW Entiat 80.93 33 *e*P **P 18 49 25.3 -0.6**
ETW *e* 18 49 43.1
DUG Dugway 81.01 43 *e*P **P 18 49 26.1 -0.4**
DUG pmax pmax
comp=Z,12nm,1.3s,mb4.7

DUG Dugway 81.01 43 *e*P **P 18 49 26.1 -0.4**
comp=Z,12nm,1.3s,mb4.7

BGU Big Grassy Mou 81.26 42 *e*P **P 18 49 27.8 0.0**
TMUT Trail Mountain 81.59 44 *e*P **P 18 49 30.6 +1.0**
OD2 Odessa Site #2 81.66 34 *e*P **P 18 49 29.4 -0.4**
HLID Hailey 81.86 39 *e*P **P 18 49 31.1 +0.2**
comp=Z,45nm,1.6s,mb5.2

SRU San Rafael 81.94 45 *e*P **P 18 49 31.9 +0.4**
SRU pmax pmax
comp=Z,21nm,1.2s,mb4.9

SRU San Rafael 81.94 45 *e*P **P 18 49 31.9 +0.5**
comp=Z,21nm,1.2s,mb5.0

LAZ Ladron 82.01 50 *e*P **P 18 49 32.6 +0.7**
LENM Lemitar 82.02 50 *e*P **P 18 49 33.0 +1.0**
DAU Daniels Canyon 82.13 43 *e*P **P 18 49 32.4 0.0**
BNM Barren Site 82.27 51 *e*P **P 18 49 33.9 +0.6**
LPM Los Pinos Moun 82.34 50 *e*P **P 18 49 34.1 +0.5**
MVCO Mesa Verde 82.38 47 *e*P **P 18 49 34.0 +0.2**
comp=Z,5.5nm,0.7s,mb4.6

TXAR Lajitas Array 82.38 56 P **P 18 49 34.6 +0.6**
comp=Z,4.6nm,0.9s,mb4.4,baz=217,slow=6.0,SNR=48
TXAR LR LR 19 16 12.1
comp=Z,74nm,21.8s,MS4.0,baz=185,slow=28

KLR Kul'dur 82.41 327 *e*P **P 18 49 30.2 -3.5**
PV10 Paradox Valley 82.58 46 *e*P **P 18 49 34.5 -0.3**
ANMO Albuquerque 82.76 50 P **P 18 49 36.5 +0.6**
comp=Z,7.5nm,0.6s,mb4.9,baz=232,slow=6.6,SNR=24

ANMO Albuquerque 82.76 50 *d i*P **P 18 49 36.0 +0.2**
ANMO Albuquerque 82.76 50 P **P 18 49 36.5 +0.6**
PV01 Paradox Valley 82.78 46 *e*P **P 18 49 36.2 +0.3**
KTH Kantishna Hill 83.18 10 *e*P **P 18 49 36.1 -1.2**
TRF Thorofare Moun 83.19 10 *e*P **P 18 49 36.2 -1.1**
comp=Z,37nm,0.7s,mb5.5

QIZ Qiongzhong 83.46 292 P **P 18 49 38.0 -1.8**
QIZ S S 18 59 52.9 -6.3
QIZ AMB AMB
comp=Z,21nm,1.8s,mb4.9

QIZ LR LR
comp=E,52nm,24.2s

QIZ LR LR
comp=Z,75nm,26.1s,MS4.0

MCMT McKenzie Canyo 83.50 39 *e*P **P 18 49 39.8 +0.4**
RRI2 Red Ridge 83.63 41 *e*P **P 18 49 40.6 +0.5**
comp=Z,47nm,1.5s,mb5.4

BPAW Bear Paw Mtn. 83.68 10 *e*P **P 18 49 37.8 -2.0**
comp=Z,5.0nm,0.7s,mb4.8

HYT Haines Junctio 83.75 17 *e*P **P 18 49 43.5 +3.1**
REDW Red Top Meadow 83.93 41 *e*P **P 18 49 42.0 +0.3**
comp=Z,52nm,1.5s,mb5.4

TPAW Teton Pass 83.94 41 *e*P **P 18 49 41.6 -0.1**
comp=Z,4.6nm,0.5s,mb4.9

DLMT Dillon 83.94 38 *e*P **P 18 49 41.3 -0.3**
comp=Z,35nm,1.5s,mb5.3

MSO Missoula 83.97 37 *e*P **P 18 49 40.9 -0.8**
comp=Z,24nm,1.5s,mb5.1

SNOW Snow King Moun 84.04 41 *e*P **P 18 49 42.5 +0.2**
comp=Z,6.7nm,0.5s,mb5.0

IMW Indian Meadow 84.16 40 *e*P **P 18 49 42.9 +0.1**
comp=Z,13nm,0.8s,mb5.1

MOOW Moose Ponds 84.20 41 *e*P **P 18 49 42.5 -0.5**
comp=Z,32nm,1.9s,mb5.1

DLBC Dease Lake 84.21 21 P **P 18 49 42.7 0.0**
LOHW Long Hollow 84.21 41 *e*P **P 18 49 43.0 -0.1**
comp=Z,5.2nm,0.7s,mb4.8

QLMT Earthquake Lak 84.35 39 *e*P **P 18 49 44.3 +0.6**
CHMT Chamberlain Mo 84.41 37 *e*P **P 18 49 43.0 -1.0**
PDAR Pinedale Array 84.44 42 P **P 18 49 44.1 -0.1**
comp=Z,9.4nm,0.6s,mb5.1,baz=211,slow=3.1,SNR=79
PDAR LR LR 19 21 12.4
comp=Z,100nm,18.4s,MS4.2,baz=256,slow=31

BOZ Bozeman (W) 84.66 39 *e*P **P 18 49 44.5 -0.8**
BOZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.9

BOZ Bozeman (W) 84.66 39 *e*P **P 18 49 44.5 -0.8**
comp=Z,8.4nm,0.8s,mb4.9

SDCO Great Sand Dun 84.73 48 *e*P **P 18 49 46.1 +0.2**
comp=Z,10nm,1.1s,mb4.9

SEY Seymchan 84.85 345 *d i*P **P 18 49 45.5 -0.3**
COLA College 84.93 11 *d i*P **P 18 49 45.5 -0.7**
COLA College 84.93 11 *e*P **P 18 49 45.3 -0.9**
comp=Z,86nm,0.8s,mb5.9

MAW Mawson 85.26 199 P **P 18 49 47.7 -0.4**
comp=Z,1.8nm,0.6s,mb4.4,baz=112,slow=6.3,SNR=5.7
MAW LR LR 19 25 27.5
comp=Z,174nm,19.8s,MS4.5,baz=312,slow=34

RWWY Rawlins 85.42 44 *e*P **P 18 49 49.1 -0.2**
comp=Z,14nm,1.0s,mb5.0

RLMT Red Lodge 85.81 40 *e*P **P 18 49 51.6 +0.5**
comp=Z,2.5nm,0.7s,mb4.5

JCT Junction City 85.91 56 *e*P **P 18 49 52.0 +0.1**
JCT pmax pmax
comp=Z,12nm,1.0s,mb5.1

JCT Junction City 85.91 56 *e*P **P 18 49 52.0 0.0**
comp=Z,12nm,1.0s,mb5.1

DAWY Dawson 85.98 14 *e*P **P 18 49 51.3 -0.1**
COLD Coldfoot 86.71 9 *e*P **P 18 49 54.8 -0.2**
comp=Z,47nm,0.6s,mb5.9

BJI Beijing 86.90 314 P **P 18 49 58.3 +1.7**
BJI S S 19 00 25.0 -7.4
BJI AMB AMB
comp=Z,13nm,1.4s,mb5.0

BJI LR LR
comp=Z,95nm,23.7s,MS4.1

BJI Beijing 86.90 314 P **P 18 49 58.3 +1.7**
comp=Z,13nm,1.4s,mb5.0

BJI S S 19 00 25.0 -7.4
BJI LR LR
comp=Z,100nm,23.7s,MS4.1

BILL Bilibino 86.96 353 *e*P **P 18 49 58.1 +1.9**
BILL *e**PP pP 18 50 11.7 +4.4
EDM Edmonton 87.87 32 *e*P **P 18 50 00.0 -0.9**
PLCA Paso Flores 88.13 132 LR LR 19 21 48.4
comp=Z,65nm,18.7s,MS4.1,baz=80,slow=30

RSSD Black Hills 88.61 43 *e*P **P 18 50 04.3 -0.4**
RSSD pmax pmax
comp=Z,5.0nm,0.8s,mb4.9

RSSD Black Hills 88.61 43 *e*P **P 18 50 04.2 -0.4**
comp=Z,4.6nm,0.8s,mb4.9

HKT Hockley 88.89 58 *e*P **P 18 50 07.3 +1.0**
HKT pmax pmax
comp=Z,36nm,1.6s,mb5.5

HKT Hockley 88.89 58 *e*P **P 18 50 07.3 +1.0**
comp=Z,36nm,1.6s,mb5.5

HIA Hailar 88.96 323 *e*P **P 18 50 06.7 +0.6**
HIA pmax pmax
comp=Z,40nm,1.5s

HIA Hailar 88.96 323 *e*P **P 18 50 06.7 +0.6**
comp=Z,40nm,1.5s,mb5.5

XAN Xi'an 89.76 306 P **P 18 50 11.8 +1.5**
XAN AP pP 18 50 17.9 -3.5
XAN XP sP 18 50 21.0 -4.5
XAN AMB AMB
comp=Z,8.0nm,1.5s,mb4.8

CLNS Chul'man 90.24 331 *e*P **P 18 50 12.6 +0.6**
CLNS pmax pmax
comp=Z,53nm,1.1s,mb5.8

CLNS pmax pmax
comp=E,15nm,1.0s

CLNS pmax pmax
comp=N,19nm,1.3s

VNA3 Neumayer Olymp 90.38 175 *e*P **P 18 50 13.4 +0.8**
VNA3 *e* 18 50 17.3
VNA3 *e* 18 50 31.5
SNAA Sanae 90.40 177 *e*P **P 18 50 13.6 +0.9**
SNAA *e* 18 50 18.6
SNAA *e* 18 50 31.9
SNAA *e* 18 50 37.0
SNAA Sanae 90.40 177 *d i*P **P 18 50 13.5 +0.8**
DGMT Dagmar 90.47 39 *e*P **P 18 50 13.2 -0.1**
comp=N,28nm,1.1s,mb5.5

VNA2 Neumayer--Watz 90.87 176 *e*P **P 18 50 16.1 +1.3**
VNA2 *e* 18 50 20.6
VNA2 *e* 18 50 34.6
VNA2 *e* 18 50 40.7
VNA1 Neumayer--Stat 91.07 175 *e*P **P 18 50 17.3 +1.5**
VNA1 *e* 18 50 21.9
VNA1 *e* 18 50 35.4
VNA1 *e* 18 50 42.7
YAK Yakutsk 91.27 337 *e*P **P 18 50 14.7 -1.9**
YAK pmax pmax
comp=Z,21nm,0.9s,mb5.5

YAK pmax pmax
comp=E,5.0nm,1.2s

YAK pmax pmax
comp=N,4.0nm,1.0s

YAK Yakutsk 91.27 337 *e*P **P 18 50 15.5 -1.1**
comp=N,26nm,0.9s,mb5.6

MIAR Mount Ida 92.30 55 *e*P **P 18 50 22.4 +0.3**
MIAR pmax pmax
comp=Z,27nm,1.3s,mb5.4

MIAR Mount Ida 92.30 55 *e*P **P 18 50 22.4 +0.3**
comp=Z,27nm,1.3s,mb5.4

YKA Yellowknife Ar 92.59 24 P **P 18 50 22.1 -0.6**
comp=Z,2.0nm,0.6s,mb4.8,baz=236,slow=4.4,SNR=9.7
YKA LR LR 19 24 51.0
comp=Z,58nm,19.1s,MS4.0,baz=210,slow=31

YKA Yellowknife Ar 92.59 24 P **P 18 50 22.1 -0.6**
YKA LR LR 19 24 51.0
CMAR Chiang Mai Arr 93.00 288 P **P 18 50 28.1 +2.4**
comp=Z,1.8nm,1.0s,mb4.5,baz=109,slow=2.2,SNR=7.8

CIT Chita 93.72 324 *e*P **P 18 50 27.6 -0.6**
BOD Bodaibo 95.88 329 *e*P **P 18 50 36.8 -1.1**
ULN Ulaanbaatar 96.03 318 *e*P **P 18 50 40.6 +1.7**
ULM Lac du Bonnet 96.17 39 P **P 18 50 37.7 -1.7**
comp=Z,1.5nm,0.6s,mb4.6,baz=248,slow=5.3,SNR=5.8
ULM LR LR 19 27 01.5
comp=Z,210nm,20.5s,MS4.6,baz=258,slow=31

ULM Lac du Bonnet 96.17 39 P **P 18 50 37.7 -1.7**
ULM LR LR 19 27 01.5
SONM Songino Array 96.44 318 P **P 18 50 40.7 -0.1**
comp=Z,0.6nm,0.8s,mb4.1,baz=98,slow=3.1,SNR=4.9
SONM PP PP 18 54 31.2 -3.9
comp=Z,0.4nm,0.9s,baz=99,slow=7.4,SNR=3.5

TIXI Tiksi 97.32 344 *e*P **P 18 50 43.7 -0.5**
TIXI pmax pmax
comp=Z,9.0nm,1.1s,mb5.1

LPAZ La Paz 99.34 110 LR LR 19 25 38.6
comp=Z,87nm,19.2s,MS4.3,baz=258,slow=29

ZALV Zalesovo Beam 110.95 322 PKiKP PKiKP 18 55 44.0 -0.6
comp=Z,0.5nm,0.4s,baz=22,slow=0.3,SNR=4.1
ZALV PP PP 18 56 20.4 -2.8
comp=Z,1.4nm,1.0s,baz=261,slow=2.9,SNR=3.6

ZALV Zalesovo Beam 110.95 322 PKPdf PKiKP 18 55 44.0 -0.6
ZALV PP PP 18 56 20.4 -2.8
ZAL Zalesovo 110.96 322 PKiKP PKiKP 18 55 44.0 -0.6
ZAL 18 56 20.4
MKAR Makanchi Array 112.28 314 PKiKP PKiKP 18 55 46.6 -0.7
comp=Z,0.8nm,0.6s,baz=154,slow=1.3,SNR=7.7

KURK Kurchatov 114.75 318 *i*PKIKP PKiKP 18 55 52.0 +0.1
KURK MLR MLR
comp=Z,100nm,23.0s,MS4.4

BRVK Borovoye 119.66 321 *e*PKIKP PKPdf 18 56 01.4 +0.1
SVE Sverdlovsk 124.04 327 *i* PKIKP PKPdf 18 56 09.9 +0.3
SVE *e*SS SS 19 14 38.4 -3.2
SVE pmax pmax
comp=Z,8.0nm,0.7s

SVE MLR MLR
comp=Z,155nm,22.0s,MS4.6

ARU Arti 125.25 327 *i* PKIKP PKPdf 18 56 12.2 +0.3
ARU 18 58 03.4
ARU 19 03 10.0
ARU SS SS 19 14 46.3 -11
ARU Arti 125.25 327 *e*PKPdf PKPdf 18 56 12.0 +0.1
ARCES ARCESS Array B 127.05 352 PKP PKPdf 18 56 15.0 0.0
comp=Z,4.6nm,0.7s,baz=39,slow=0.8,SNR=24

OBN Obninsk 136.24 335 *i* PKIKP PKPdf 18 56 32.1 -0.7
OBN pmax pmax
comp=Z,4.0nm,0.7s

GNI Garni 140.08 312 *i* PKIKP PKPdf 18 56 39.6 -0.7
AKASG Malin Array Be 142.49 336 PKhKP 18 56 39.0
comp=Z,1.2nm,0.5s,baz=36,slow=3.4,SNR=8.4

KMBO Kilima Mbogo 144.00 241 PKP PKPdf 18 56 47.5 -0.6
comp=Z,5.3nm,0.9s,baz=49,slow=5.0,SNR=10

RUE Ruedersdorf 145.02 352 *e*PKPbc PKPbc 18 56 48.0 0.0
LVV L'vov 145.10 340 *i*PKIKP PKPdf 18 56 48.0 -0.9
MALT Malatya 145.31 312 *i*P PKPbc 18 56 50.4 +0.9
MALT Malatya 145.31 312 P PKPbc 18 56 50.4 +0.9
NRDL Niedersach Rie 145.38 356 *e*PKPbc PKPbc 18 56 49.1 -0.1
KWP Kalwaria 145.69 341 *e*PKP PKPdf 18 56 50.9 +0.9
KWP Kalwaria 145.69 341 *e*PKP PKPdf 18 56 50.9 +1.0
IBBN Ibbenburen 145.69 358 *e*PKPbc PKPbc 18 56 50.3 +0.1
OJC Ojcow 145.99 344 *e*PKIKP PKPdf 18 56 51.5 +1.1
OJC *e* 18 57 04.7
CLZ Clausthal 146.01 355 *e*PKPbc PKPbc 18 56 51.6 +0.4
WTSB Winterswijk 146.05 359 *e*PKiKP PKiKP 18 56 51.8 -2.8
comp=Z,356nm,0.9s

KSP Ksiaz 146.19 348 *e*PKP PKPdf 18 56 52.6 +1.9
KSP Ksiaz 146.19 348 *i*PKP PKPdf 18 56 52.5 +1.8
KSP *ep*PKP pPKPdf 18 57 10.4 +8.2
CLL Collm 146.27 352 *e*PKPbc PKPbc 18 56 52.0 0.0
CLL Collm 146.27 352 *i*PKPbc PKPbc 18 56 52.2 +0.2
comp=Z,109nm,1.0s

CLL *i* x x 18 57 11.5
STHS Stebnicka Huta 146.32 342 *i* PKP PKPab 18 56 53.4 +0.4
STHS *e* 18 57 06.7
KOLS Kolonicke sedl 146.44 341 *e*PKP PKPdf 18 56 52.6 +1.4
BUR08 Bucovina Ar. S 146.52 336 *e*PKPdf PKPab 18 56 53.7 -0.1
BURAR Bucovina Array 146.53 336 ⇑*i*P PKPab 18 56 54.9 +1.0
BURAR Bucovina Array 146.53 336 ⇑P PKPab 18 56 54.9 +1.0
BRG Berggiesshubel 146.56 351 *e*PKPbc PKPbc 18 56 52.9 0.0
BRG Berggiesshubel 146.56 351 *i* PKP PKPdf 18 56 52.6 +1.3
comp=Z,92nm,1.6s

BUG Bochum--Univer 146.57 359 *e*PKPbc PKPbc 18 56 52.9 0.0
UPC Upice 146.57 349 *e*PKP PKPbc 18 56 53.6 +0.7
NIE Niedzica 146.58 343 *e*PKPbc PKPbc 18 56 54.1 +1.1
FBE Freiberg 146.60 352 *e*PKPbc PKPbc 18 56 53.5 +0.5
DPC Dobruska-Polom 146.66 348 *e*PKP PKPbc 18 56 54.2 +1.0
DPC *ex* x 18 57 13.2
UZH Uzhgorod 146.69 340 ⇑*i*PKP2 PKPab 18 56 53.8 -0.7
CRVS Cervenica-Dubn 146.71 341 *e*PKP PKPab 18 56 54.2 -0.4
OKC Ostrava-Krasne 146.75 346 *e*PKP PKPdf 18 56 53.9 +2.2
TLCR 146.90 330 ⇑*i*P PKPab 18 56 54.9 -0.5
TLCR 146.90 330 ⇑P PKPab 18 56 54.9 -0.5
MORC Moravsky Berou 146.94 346 *i*P PKPbc 18 56 54.7 +0.7
MORC Moravsky Berou 146.94 346 P PKPbc 18 56 54.8 +0.8
UBBA Unterbreizbach 147.06 356 *e*PKPbc PKPbc 18 56 53.6 -0.7
MOX Moxa 147.08 354 *e*P PKPbc 18 56 54.6 +0.2
comp=Z,53nm,1.8s

MOX Moxa 147.08 354 *e*PKPbc PKPbc 18 56 54.2 -0.2
UCC Uccle 147.19 2 PKPbc PKPbc 18 56 54.4 -0.2
WERD Werda 147.20 353 *e*PKPbc PKPbc 18 56 55.2 +0.5
WERD *ep*PKPbc pPKPbc 18 57 14.1 +8.0
TANN Tannenbergstha 147.21 353 *e*PKPbc PKPbc 18 56 55.2 +0.5
BEBN Eben Emael 147.22 1 PKPab PKPab 18 56 55.6 -0.8
HGN Heimansgroeve 147.25 0 *e*PKiKP PKiKP 18 56 55.5 -1.7
GUNZ Gunzen 147.28 353 *e*PKPbc PKPbc 18 56 55.3 +0.4
PRU Pruhonice 147.33 350 *e*PKP PKPbc 18 56 55.6 +0.5
PRU *ex* x 18 57 14.3
WERN Wernitzgruen 147.35 353 *e*PKPbc PKPbc 18 56 55.8 +0.7
PLOR Plostina 147.38 333 *i*P PKPbc 18 56 56.3 +0.9
KECS Kecovo 147.38 342 *i* PKP PKPbc 18 56 56.0 +0.7
KECS *e* 18 57 13.8
NKC Novy Kostel 147.39 352 *e*PKP PKPbc 18 56 56.0 +0.8
NKC *ex* x 18 57 17.6
MEM Membach 147.41 0 PKPab PKPab 18 56 55.9 -1.3
MEM APKPab 18 57 15.8
VRAC Vranov 147.59 347 ⇑*i*P PKPbc 18 56 55.8 0.0
VRAC Vranov 147.59 347 P PKPbc 18 56 56.9 +1.1
BCLA Clavier 147.59 PKPbc PKPbc 18 56 57.5 +1.8
TIRR Tirgusor 147.63 330 ⇑*i*P PKPbc 18 56 56.5 +0.4
MANZ Manzenberg 147.68 353 *e*PKPbc PKPbc 18 56 56.6 +0.6
MANZ *ep*PKPbc pPKPbc 18 57 15.5 +8.1
HARR Harsova 147.69 330 ⇑*i*P PKPbc 18 56 57.3 +1.1
HARR Harsova 147.69 330 P PKPbc 18 56 57.2 +1.0
VYHS Vyhne 147.82 344 *e*PKP PKPbc 18 56 57.0 +0.5
TREC Trest 147.83 348 *e*PKP PKPbc 18 56 56.9 +0.4
TREC *ex* x 18 57 15.9
KOLL Kolacno 147.86 345 *i* PKP PKPbc 18 56 57.9 +1.3
ROTZ Rotzenmuhle 147.88 353 *e*PKPbc PKPbc 18 56 57.3 +0.7
ROTZ *ep*PKPbc pPKPbc 18 57 16.2 +8.2
DOU Dourbes 147.90 2 PKPbc PKPbc 18 56 56.2 -0.4
DOU APKPab 18 57 16.4
BAIF Baives 147.92 2 *e*PKIKP PKPdf 18 56 53.5 -0.2
comp=Z,38nm,1.3s

MLR Muntele Rosu 147.96 333 ⇑*i*P PKPbc 18 56 58.2 +1.2
MLR Muntele Rosu 147.96 333 P PKPbc 18 56 57.9 +0.9
PSZ Piszkesteto 148.06 342 ⇓*e*PKP PKPbc 18 56 57.6 +0.5
PSZ Piszkesteto 148.06 342 ⇑*i*P PKPbc 18 56 57.9 +0.8
PSZ Piszkesteto 148.06 342 P PKPbc 18 56 58.0 +0.9
GRF Grafenberg Arr 148.07 354 *e*PKPbc PKPbc 18 56 57.8 +0.7
DRGR 148.15 338 ⇓*i*P PKPbc 18 56 57.8 +0.4
DRGR 148.15 338 P PKPbc 18 56 58.1 +0.7
ANTO Ankara 148.25 319 ⇓*i*P PKPbc 18 56 58.4 +0.5
RUP Ruppelstein 148.31 359 PKP2 PKPbc 18 56 58.2 +0.5
KHC Kasperske Hory 148.31 351 *e*PKP PKPbc 18 56 58.4 +0.6
KHC *ex* x 18 57 16.8
MODS Modra-Piesok 148.32 346 *e*PKP PKPbc 18 56 59.4 +1.6
MODS *e* 18 57 17.5
MODS Modra-Piesok 148.32 346 *e*PKP PKPbc 18 56 59.4 +1.6
MODS *e* 18 57 17.6
TOD Tromm 148.34 357 PKP2 PKPbc 18 56 58.0 +0.2
WLF Walferdange 148.36 360 PKPbc PKPbc 18 56 58.7 +0.8
WLF APKPab 18 57 17.8
WLF Walferdange 148.36 360 *e*PKPbc PKPbc 18 56 58.7 +0.8
WLF Walferdange 148.36 360 *e*PKPbc PKPbc 18 56 58.5 +0.6
VOIR 148.38 334 ⇑*i*P PKPbc 18 56 57.1 -1.0
VOIR 148.38 334 P PKPbc 18 56 59.5 +1.5
WET Wettzell 148.40 352 *e*PKPbc PKPbc 18 56 58.6 +0.6
ZST Bratislava 148.53 346 *e*PKP PKPbc 18 56 59.9 +1.6
GEC2 GERESS Array S 148.57 350 *e*PKPbc PKPbc 18 56 58.9 +0.5
GEC2 *ep*PKPbc pPKPbc 18 57 18.6 +8.8
GERES GERESS Array B 148.57 350 PKPbc PKPbc 18 56 59.0 +0.6
comp=Z,10.0nm,0.9s,baz=48,slow=2.0,SNR=32

ROSF Rostrenen 148.73 12 *e*PKIKP PKPdf 18 56 54.7 -0.3
comp=Z,44nm,1.4s

FLN La Foliniere 148.79 8 *e*PKIKP PKPdf 18 56 54.6 -0.5
FLN *e*MLR MLR
comp=Z,63nm,20.8s,MS4.1

FLN La Foliniere 148.79 8 *e*PKPdf PKPdf 18 56 54.6 -0.5
FLN LR LR
comp=Z,60nm,20.8s,MS4.4

SGMF Saint Gilles 148.94 11 *e*PKIKP PKPdf 18 56 55.1 -0.3
LDF La Druitiere 149.00 8 *e*PKIKP PKPdf 18 56 55.0 -0.5
LANF Langenberg 149.01 358 PKP PKPbc 18 57 00.2 +0.6
CONA Conrad Observa 149.06 347 ⇓*i*P PKPbc 18 57 00.7 +1.0
comp=Z,94nm,1.7s,SNR=16

CSNA Conrad Observa 149.06 347 ⇓*i*P PKPbc 18 57 00.6 +0.9
comp=Z,86nm,1.7s

SOP Sopron 149.14 346 ⇓*e*PKP pPKPdf 18 57 00.8 -6.4
QUIF Quistinic 149.15 12 *e*PKIKP PKPdf 18 56 55.3 -0.4
STU Stuttgart 149.15 356 *e*PKPbc PKPbc 18 57 00.8 +0.9
STR Strasbourg 149.41 358 PKP PKPbc 18 57 01.0 +0.4
MOA Molln 149.44 349 *i* P PKPbc 18 57 01.1 +0.4
comp=Z,70nm,2.0s,SNR=5.8

BZS Buzias 149.55 338 ⇓*i*P PKPbc 18 57 01.5 +0.5
BZS Buzias 149.55 338 P PKPbc 18 57 01.5 +0.5
FUR Furstenfeldbru 149.57 353 *e*PKPbc PKPbc 18 57 01.3 +0.3
FUR *ep*PKPbc pPKPbc 18 57 20.7 +8.3
BFO Black Forest 149.64 357 *e*PKPbc PKPbc 18 57 01.5 +0.4
ZIMR 149.66 332 PKP2 PKPbc 18 57 02.5 +1.1
ARSA Arzberg 149.77 347 ⇓*i*P PKPbc 18 57 01.9 +0.4
comp=Z,77nm,2.2s,SNR=5.9

RJOB Jochberg 149.79 351 *e*PKPbc PKPbc 18 57 01.7 +0.2
ECH Echery 149.79 359 PKP PKPbc 18 57 01.5 0.0
ECH Echery 149.79 359 *e*PKPbc PKPbc 18 57 01.8 +0.3
THEF They Montfort 149.79 0 PKP PKPbc 18 57 01.8 +0.3
PKSM Moragy 149.97 343 ⇓*i*P PKPbc 18 57 02.2 +0.2
PKSM Moragy 149.97 343 P PKPbc 18 57 01.9 -0.1
FELD Feldberg im Sc 150.11 357 PKP PKPbc 18 57 02.3 0.0
MOF Molkenrain 150.16 359 PKP PKPbc 18 57 02.4 0.0
HINF Hinteralfeld 150.20 359 *e*PKIKP PKPdf 18 56 56.9 -0.5
RETA Reutte 150.29 354 ⇓*i*P PKPbc 18 57 03.2 +0.4
comp=Z,23nm,1.2s

KBA Koelnbreinsper 150.35 350 ⇓*i*P PKPbc 18 57 02.8 -0.1
comp=Z,73nm,3.1s

WATA Walderalm 150.35 353 ⇓*i*P PKPbc 18 57 03.2 +0.3
comp=Z,14nm,1.1s

MOTA Moosalm 150.40 353 ⇓*i*P PKPbc 18 57 03.3 +0.3
comp=Z,23nm,1.1s,SNR=7.1

WTTA Wattenberg 150.41 352 ⇓*i*P PKPbc 18 57 03.6 +0.6
comp=Z,60nm,1.5s,SNR=8.5

SOKA Soboth 150.42 348 ⇓*i*P PKPbc 18 57 03.0 -0.1
comp=Z,38nm,1.6s

PERS Pernice 150.44 347 *i* PKPbc PKPbc 18 57 02.9 -0.2
CSS Prodhromos 150.48 310 *e*PKPbc PKPbc 18 57 03.6 -0.1
DAVA Damuels 150.57 355 ⇓*i*P PKPbc 18 57 02.8 -0.6
comp=Z,109nm,1.6s,SNR=9.0

LOMF Lomont 150.67 359 PKP PKPbc 18 57 02.4 -1.2
LOR Lormes 150.69 3 *e*PKIKP PKPdf 18 56 58.1 -0.1
comp=Z,31nm,1.3s

LOR *e*MLR MLR
comp=Z,104nm,22.2s,MS4.3

LOR Lormes 150.69 3 *e*PKPdf PKPdf 18 56 58.1 -0.1
LOR LR LR
comp=Z,100nm,22.3s,MS4.6

MYKA Terra Mystica 150.73 349 ⇓*i*P PKPbc 18 57 03.2 -0.7
comp=Z,82nm,1.7s

FETA Feichten 150.76 354 ⇓*i*P PKPbc 18 57 04.5 +0.6
comp=Z,27nm,1.2s,SNR=9.1

ABTA Abfaltersbach 150.80 351 ⇑*i*P PKPbc 18 57 03.8 -0.2
comp=Z,49nm,1.3s,SNR=8.7

SSF Saint Saulge 150.88 4 *e*PKIKP PKPdf 18 56 58.3 -0.2
comp=Z,24nm,1.2s

MFF Saint Martin d 150.95 9 *e*PKIKP PKPdf 18 56 58.4 -0.2
comp=Z,21nm,1.1s

LJU Ljubljana 151.13 348 *i* PKPbc PKPbc 18 57 05.0 +0.3
AVF Avril sur Loir 151.14 4 *e*PKIKP PKPdf 18 56 58.4 -0.5
comp=Z,22nm,1.4s

SMF Signal de Mont 151.31 3 *e*PKIKP PKPdf 18 56 58.9 -0.3
comp=Z,7.7nm,0.8s

JAVS Javornik 151.36 348 *i* PKPbc PKPbc 18 57 05.2 -0.1
CABF La Chapelle 151.41 0 *e*PKIKP PKPdf 18 56 59.7 +0.4
comp=Z,26nm,1.3s

TUE Stuetta 151.43 355 *e*PKPbc PKPbc 18 57 06.2 +0.8
BOJS Bojanci 151.49 347 *i* PKPdf PKPdf 18 57 00.4 +0.9
BOJS *i* PKPbc PKPbc 18 57 06.0 +0.4
BOJS *e*PKPab PKPab 18 57 25.5 +11
TCF Toulx Ste Croi 151.55 6 *e*PKIKP PKPdf 18 56 59.4 -0.1
AGO Saint Agoulin 151.86 4 PKP PKPdf 18 57 07.3 +7.3
PLDF La Plantade 151.97 4 PKP PKPdf 18 57 07.4 +7.2
PYM Petit Puy Mans 152.15 5 PKP PKPdf 18 57 07.4 +6.9
RJF Les Rejaudoux 152.45 7 *e*PKIKP PKPdf 18 57 00.9 0.0
RJF *e*MLR MLR
comp=Z,91nm,21.0s,MS4.3

RJF Les Rejaudoux 152.45 7 *e*PKPdf PKPdf 18 57 00.9 0.0
RJF LR LR
comp=Z,90nm,21.0s,MS4.6

LPL La Plagne 152.50 359 *e*PKIKP PKPdf 18 57 01.7 +0.7
LPG La Plagne 152.52 359 *e*PKIKP PKPdf 18 57 01.5 +0.5
LBL Lubilhac 152.68 4 PKP PKPdf 18 57 08.8 +7.5
CAF Calviac 152.88 6 *e*PKIKP PKPdf 18 57 01.6 0.0
ORIF Oris-en-Rattie 153.10 0 *e*PKIKP PKPdf 18 57 02.1 +0.2
comp=Z,6.6nm,0.8s

ORIF *e*MLR MLR
comp=Z,71nm,20.2s,MS4.2

VIVF Saint-Julien-l 153.14 2 *e*PKIKP PKPdf 18 57 02.1 +0.1
MBDF Montbardon 153.29 359 *e*PKIKP PKPdf 18 57 02.1 -0.1
comp=Z,36nm,1.6s

LASF Ste Croix 153.88 4 *e*PKIKP PKPdf 18 57 03.2 +0.2
comp=Z,9.5nm,0.9s

SJPF Ste Jean 154.14 12 *e*PKIKP PKPdf 18 57 03.8 +0.4
APE Apeiranthos 154.43 322 ⇓*i*P PKPdf 18 56 59.7 -4.4
APE Apeiranthos 154.43 322 ⇓P PKPdf 18 56 59.7 -4.4
FRF La Foret Royal 154.46 359 *e*PKIKP PKPdf 18 57 04.1 +0.2
MTLF Montolieu 154.46 7 *e*PKIKP PKPdf 18 57 03.7 -0.2
comp=Z,14nm,1.2s

ETSF Etsaut 154.48 11 *e*PKIKP PKPdf 18 57 04.4 +0.5
EPF Esparros 154.51 10 *e*PKIKP PKPdf 18 57 04.2 +0.2
PGF Pioggiola 155.35 355 *e*PKIKP PKPdf 18 57 05.6 +0.5
comp=Z,9.9nm,0.9s

EVO Evora 156.05 28 *e*PKIKP PKPdf 18 57 06.2 0.0
comp=Z,15nm,1.1s

EVO *e*MLR MLR
comp=Z,88nm,22.2s,MS4.2

ESDC Sonseca Array 156.64 20 PKP PKPdf 18 57 05.0 -2.0
comp=Z,1.0nm,0.7s,baz=297,slow=37,SNR=3.7

ESDC PKPab PKPab 18 57 36.1 +0.2
comp=Z,1.5nm,0.6s,baz=328,slow=4.9,SNR=8.5

KEST Kesra 162.06 352 PKPab PKPab 18 57 59.0 -0.5
comp=Z,1.2nm,0.7s,baz=319,slow=9.1,SNR=4.4

TORD Torodi Ar. Bea 173.58 137 PKP PKPdf 18 57 21.1 -0.8
comp=Z,2.0nm,1.1s,baz=41,slow=1.3,SNR=5.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD				PKPab	PKPab	18 58 51.2	+0.1
	comp=Z,0.6nm,0.7s,baz=255,slow=3.7,SNR=4.4						
TORD	Torodi Ar. Bea	173.58	137	PKP	PKPdf	18 57 21.1	-0.8
TORD				PKPab	PKPab	18 58 51.2	+0.1

IDC ***10*** *18:42:40.0±18.0, 390N×12546E, h224^{km}±80^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.2/18, mbtmp3.6/5, Error ellipse: s-maj=225.7km s-min=57.5km az=176.0*
ISCJB ***10*** *18:42:44.2±1.7, 35N±03×1255E±05, h250^{km}±56^{km}, mb4.0/5, Error ellipse: s-maj=94.0km s-min=27.8km az=31.6*
ISC 10 18:42:44.9±1.9**, 34N**±03×**1255E**±05**, h235**^{km}±58^{km}**, n7, σ0^{s}51**/7**, mb4.0**/5**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	3.57	354	⇑iP	Pn	18 43 43.0	0.0
KAPI	Kappang	10.17	214	P	Pn	18 45 05.8	-0.1
	baz=31,slow=18						
FITZ	Fitzroy Crossi	21.41	180	P	P	18 47 15.4	+0.7
	2.6nm,0.4s,mb4.1,baz=3.9,slow=14,SNR=17						
WRA	Warramunga Arr	24.81	160	P	P	18 47 45.3	-0.3
	1.5nm,0.4s,mb4.0,baz=337,slow=10,SNR=5.5						
ASAR	Alice Springs	28.16	163	P	P	18 48 15.9	+0.4
	0.8nm,0.4s,mb3.7,baz=344,slow=7.3,SNR=5.3						
NWAO	Narrogin (SRO)	37.01	192	P	P	18 49 31.8	-0.3
	12nm,1.1s,mb4.3,baz=33,slow=8.2,SNR=4.4						
STKA	Stephens Creek	38.31	158	P	P	18 49 42.7	-0.4
	4.2nm,0.9s,mb4.0,baz=358,slow=4.0,SNR=2.9						

ISCJB ***10*** *18:50:29.8±0.4, 2421N±003×12232E±002, h44^{km}±15^{km}, Error ellipse: s-maj=5.0km s-min=2.8km az=164.9*
TAP ***10*** *18:50:29.8, 2427N×12226E, h56^{km}, ML3.0, C*
JMA ***10*** *18:50:29.9±0.2, 2449N×12237E, h70^{km}±2^{km}, M1.7*
ISC 10 18:50:30.3±0.4**, 2422N**±003×**12231E**±002**, h38**^{km}±28^{km}**, n33, σ0^{s}69**/65**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.56	292	P	Pn	18 50 41.8	-0.1
	baz=294						
ENA				eS	Sn	18 50 50.3	+0.3
	baz=294						
TWC	Suao	0.57	312	P	Pn	18 50 41.9	-0.2
	baz=312						
TWC				eS	Sn	18 50 50.1	-0.2
	baz=312						
TWD	Chiawan	0.67	258	P	Pn	18 50 43.0	-0.3
	baz=247						
TWD				S	Sn	18 50 52.9	+0.2
	baz=247						
YOJ	Yonaguni jima	0.68	69	P	Pn	18 50 43.6	+0.1
YOJ				S	Sn	18 50 53.6	+0.7
HWA	Hwalien	0.69	250	eP	Pn	18 50 43.5	-0.2
	baz=238						
HWA				eS	Sn	18 50 53.5	+0.3
	baz=238						
TWE	Neicheng	0.77	310	P	Pn	18 50 44.8	0.0
	baz=306						
TWE				eS	Sn	18 50 55.4	+0.3
	baz=306						
ENTT	Nioudou	0.80	302	P	Pn	18 50 45.1	0.0
	baz=295						
ENTT				eS	Sn	18 50 56.1	+0.3
	baz=295						
TWB1	Santiao Chiao	0.84	339	eP	Pn	18 50 44.6	-1.0
	baz=341						
TWB1				eS	Sn	18 50 55.2	-1.5
	baz=341						
NNS	Nan Shan	0.89	284	eP	Pn	18 50 46.1	-0.2
	baz=282						
NNS				eS	Sn	18 50 58.3	+0.4
	baz=282						
ESL	Shilin	0.90	243	P	Pn	18 50 46.1	-0.5
	baz=232						
ESL				eS	Sn	18 50 58.4	+0.1
	baz=232						
WHF	Hehuan Shan	0.96	266	eP	Pn	18 50 47.3	-0.1
	baz=253						
WHF				eS	Sn	18 50 60.0	+0.2
	baz=253						
TWA	Mucha	1.01	319	eP	Pn	18 50 48.1	+0.2
	baz=330						
TWA				eS	Sn	18 51 00.5	-0.4
	baz=330						
EHY	Hungye	1.15	232	eP	Pn	18 50 49.9	-0.1
	baz=239						
EHY				eS	Sn	18 51 03.7	-0.8
	baz=239						
TWS1	Kuangyinshan	1.20	317	eP	Pn	18 50 50.5	0.0
	baz=328						
TWS1				eS	Sn	18 51 05.2	-0.4
	baz=328						
NSTT	Nanjuang	1.26	289	eP	Pn	18 50 51.5	0.0
	baz=288						
NSTT				eS	Sn	18 51 07.8	+0.5
	baz=288						
TWF1	Yuli	1.27	227	eP	Pn	18 50 51.0	-0.6
	baz=235						
TWF1				eS	Sn	18 51 05.5	-1.9
	baz=235						
IRIF	Iriomote-Funau	1.30	85	P	Pn	18 50 51.8	-0.2
IRIF				S	Sn	18 51 08.0	-0.1
SMLT	Sun Moon Lake	1.34	256	eP	Pn	18 50 52.6	+0.1
	baz=247						
SMLT				eS	Sn	18 51 08.8	-0.2
	baz=247						
TYC	Yuchr	1.37	257	eP	Pn	18 50 53.3	+0.3
	baz=248						
TYC				eS	Sn	18 51 09.8	-0.1
	baz=248						
HATJ	Hateruma jima	1.37	97	P	Pn	18 50 53.5	+0.5
HATJ				eS	Sn	18 51 11.3	+1.4
TWQ1	Liyutan	1.41	275	eP	Pn	18 50 53.8	+0.2
	baz=274						
TWQ1				eS	Sn	18 51 11.4	+0.5
	baz=274						
CHKT	Chengkung	1.42	218	eP	Pn	18 50 52.6	-0.9
	baz=208						
CHKT				eS	Sn	18 51 08.9	-2.1
	baz=208						
YUS	Yu-Shan	1.44	240	eP	Pn	18 50 54.8	+0.8
	baz=230						
YUS				eS	Sn	18 51 11.6	-0.1
	baz=230						
JKRS	Kuro-shima	1.55	89	P	Pn	18 50 55.7	+0.3
JKRS				S	Sn	18 51 14.7	+0.4
ALS	Alishan	1.55	243	eP	Pn	18 50 56.0	+0.6
	baz=234						
ALS				eS	Sn	18 51 14.8	+0.4
	baz=234						
CHN5	Tsauling	1.62	248	eP	Pn	18 50 56.3	-0.1
	baz=236						
CHN5				eS	Sn	18 51 17.2	+1.2
	baz=236						
JIJ	Ishigaki jima	1.68	85	P	Pn	18 50 56.5	-0.7
JIJ				S	Sn	18 51 16.7	-0.7
STYT	Tauyuan	1.77	234	eP	Pn	18 50 58.8	+0.3
	baz=227						
STYT				eS	Sn	18 51 20.5	+0.6
	baz=227						
TWG	Pinlang	1.80	220	eP	Pn	18 50 57.8	-1.1
	baz=218						
TWG				eS	Sn	18 51 18.4	-2.1
	baz=218						
WTP	Ta-pu	1.84	238	eP	Pn	18 50 59.9	+0.5
	baz=228						
WTP				eS	Sn	18 51 22.3	+0.9
	baz=228						
CHN1	Nanshi	1.94	238	eP	Pn	18 51 01.8	+1.1
	baz=237						
CHN1				eS	Sn	18 51 24.4	+0.6
	baz=237						
SSD	Sandimen	2.13	227	eP	Pn	18 51 04.0	+0.5
	baz=226						
SSD				eS	Sn	18 51 30.1	+1.4
	baz=226						
JTJ	Tarama	2.22	79	P	Pn	18 51 04.4	-0.2

IDC ***10*** *18:53:23.2±1.2, 290S×13920E, h0^{km}, mb3.7/8, mb1 4.0/9, mb1mx3.8/15, mbtmp3.8/9, ML4.1/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/19, Error ellipse: s-maj=48.5km s-min=18.4km az=82.0*
ISCJB ***10*** *18:53:26.6±2.5, 305S±009×1390E±02, h33^{km}±25^{km}, mb3.6/7, MS3.8/1, Error ellipse: s-maj=29.4km s-min=11.4km az=20.4*
NEIC ***10*** *18:53:30.7±0.8, 309S×13905E, h55^{km}, mb4.0/2, Error ellipse: s-maj=26.7km s-min=9.8km az=90.0*
ISC 10 18:53:32.5±2.1**, 318S**±010×**1391E**±02**, h77**^{km}±20^{km}**, n18, σ0^{s}88**/20**, mb3.5**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	11.53	214	eP	Pn	18 56 13.4	-0.9
	38nm,0.6s						
KAKA				eS	Sn	18 58 22.4	+1.1
BATI	Baumata	16.83	245	P	Pn	18 57 27.2	+3.8
	2.4nm,0.3s,baz=289,slow=4.8,SNR=5.7						
WRAB	Tennant Creek	17.28	195	eP	Pn	18 57 28.6	-0.3
	6.9nm,0.6s						
WB2	Warramunga Arr	17.29	195	eP	Pn	18 57 28.7	-0.3
WRA	Warramunga Arr	17.30	195	P	Pn	18 57 28.2	-0.8
	0.7nm,0.3s,baz=18,slow=13,SNR=25						
WRA				S	S	19 00 35.8	-10
	0.1nm,0.3s,baz=17,slow=22,SNR=4.1						
FITZ	Fitzroy Crossi	19.84	221	eP	Pn	18 57 59.2	-0.4
	7.5nm,0.8s						
FITZ				eS	S	19 01 36.9	+0.1
FITZ	Fitzroy Crossi	19.84	221	P	Pn	18 57 59.3	-0.3
	1.8nm,0.6s,baz=35,slow=16,SNR=7.3						
FITZ				S	S	19 01 35.1	-1.7
	3.4nm,0.8s,baz=53,slow=18,SNR=4.5						
ASAR	Alice Springs	20.98	193	P	P	18 58 10.6	+1.1
	3.1nm,0.5s,baz=22,slow=9.2,SNR=88						
ASAR				S	S	19 02 04.4	+5.4
	1.7nm,0.8s,baz=16,slow=24,SNR=6.0						
STKA	Stephens Creek	28.64	176	P	P	18 59 25.1	+3.2
	1.8nm,0.9s,mb3.7,baz=340,slow=12,SNR=2.5						
CMAR	Chiang Mai Arr	45.01	300	P	P	19 01 41.1	+0.4
	0.1nm,0.4s,mb2.9,baz=112,slow=4.0,SNR=4.3						
DRV	Dumont d'Urvil	63.37	180	R		19 04 00.0	
MKAR	Makanchi Array	70.39	322	P	P	19 04 38.6	+0.3
	0.7nm,0.7s,mb3.6,baz=126,slow=6.2,SNR=5.0						
ZALV	Zalesovo Beam	72.53	330	P	P	19 04 50.3	-0.7
	0.3nm,0.4s,mb3.4,baz=87,slow=5.9,SNR=2.3						
ZALV				LR	LR	19 37 07.2	
	comp=Z,55nm,21.5s,baz=234,slow=36						
ZALV	Zalesovo Beam	72.53	330	P	P	19 04 50.3	-0.7
ZALV				LR	LR	19 37 07.2	
KURK	Kurchatov	74.32	325	P	P	19 05 01.5	-0.1
	0.4nm,0.6s,mb3.3,baz=115,slow=4.4,SNR=3.6						
BVAR	Borovoye Array	79.92	325	P	P	19 05 33.1	+0.2
	0.7nm,0.5s,mb3.8,baz=110,slow=8.1,SNR=4.9						
LPAZ	La Paz	146.86	127	PKPbc	PKPbc	19 13 08.8	+1.8
	0.8nm,0.7s,baz=58,slow=8.1,SNR=4.1						
LPAZ	La Paz	146.86	127	PKPbc	PKPbc	19 13 08.8	+1.7

JMA ***10*** *18:57:51.7±0.2, 2450N×12226E, h70^{km}, M1.8*
ISCJB ***10*** *18:57:52.3±0.4, 2422N±003×12225E±002, h44^{km}±14^{km}, Error ellipse: s-maj=5.0km s-min=2.9km az=161.4*
TAP ***10*** *18:57:52.4, 2426N×12220E, h51^{km}, ML2.8, C*
ISC 10 18:57:52.8±0.4**, 2424N**±003×**12225E**±002**, h41**^{km}±18^{km}**, n38, σ0^{s}59**/67**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.50	293	P	Pn	18 58 03.5	-0.1
	baz=298						
ENA				eS	Sn	18 58 11.7	+0.6
	baz=298						
TWC	Suao	0.52	316	eP	Pn	18 58 03.8	0.0
	baz=320						
TWC				eS	Sn	18 58 11.3	-0.3
	baz=320						
TWD	Chiawan	0.61	255	eP	Pn	18 58 04.6	-0.5
	baz=245						
TWD				eS	Sn	18 58 13.5	-0.3
	baz=245						
HWA	Hwalien	0.64	246	eP	Pn	18 58 04.9	-0.5
	baz=236						
HWA				eS	Sn	18 58 14.5	+0.1
	baz=236						
TWE	Neicheng	0.71	313	P	Pn	18 58 06.5	0.0
	baz=309						
TWE				S	Sn	18 58 16.3	0.0
	baz=309						
YOJ	Yonaguni jima	0.73	72	P	Pn	18 58 06.6	-0.1
YOJ				eS	Sn	18 58 17.6	+0.8
ENTT	Nioudou	0.74	303	P	Pn	18 58 07.0	+0.2
	baz=303						
ENTT				eS	Sn	18 58 17.4	+0.5
	baz=303						
TWB1	Santiao Chiao	0.80	343	eP	Pn	18 58 07.1	-0.6
	baz=345						
TWB1				eS	Sn	18 58 17.6	-0.8
	baz=345						
NNS	Nan Shan	0.82	285	P	Pn	18 58 07.8	-0.2
	baz=283						
NNS				eS	Sn	18 58 19.1	+0.2
	baz=283						
ESL	Shilin	0.85	241	eP	Pn	18 58 07.5	-0.8
	baz=230						
ESL				eS	Sn	18 58 19.3	-0.3
	baz=230						
WHF	Hehuan Shan	0.90	264	eP	Pn	18 58 08.7	-0.3
	baz=252						
WHF				eS	Sn	18 58 20.8	0.0
	baz=252						
NWF	Wu-fen Shan	0.93	333	eP	Pn	18 58 09.1	-0.4
	baz=345						
TWA	Mucha	0.95	321	eP	Pn	18 58 08.6	-1.2
	baz=333						
TWA				eS	Sn	18 58 22.7	+0.5
	baz=333						
EHY	Hungye	1.11	229	eP	Pn	18 58 11.7	-0.2
	baz=238						
TWS1	Kuangyinshan	1.14	319	eP	Pn	18 58 12.6	+0.2
	baz=329						
TWS1				eS	Sn	18 58 27.4	+0.5
	baz=329						
NSTT	Nanjuang	1.20	289	eP	Pn	18 58 12.7	-0.5
	baz=288						
NSTT				eS	Sn	18 58 28.6	+0.4
	baz=288						
TWF1	Yuli	1.24	225	eP	Pn	18 58 12.6	-1.0
	baz=235						
TWF1				eS	Sn	18 58 27.4	-1.7
	baz=235						
SMLT	Sun Moon Lake	1.28	254	eP	Pn	18 58 14.3	+0.1
	baz=245						
SMLT				eS	Sn	18 58 30.3	+0.1
	baz=245						
TYC	Yuchr	1.31	256	eP	Pn	18 58 14.8	+0.1
	baz=247						
TYC				eS	Sn	18 58 30.4	-0.5
	baz=247						
TWQ1	Liyutan	1.35	275	eP	Pn	18 58 15.2	+0.1
	baz=274						
TWQ1				eS	Sn	18 58 32.0	+0.1
	baz=274						
IRIF	Iriomote-Funau	1.36	86	P	Pn	18 58 14.8	-0.5
IRIF				eS	Sn	18 58 32.0	-0.1
CHKT	Chengkung	1.39	216	eP	Pn	18 58 14.2	-1.6
	baz=205						
YUS	Yu-Shan	1.40	238	eP	Pn	18 58 16.2	+0.4
	baz=228						
YUS				S	Sn	18 58 33.1	0.0
	baz=228						
HATJ	Hateruma jima	1.44	97	eS	Sn	18 58 35.2	+1.2
ALS	Alishan	1.50	242	eP	Pn	18 58 17.6	+0.3
	baz=232						
ALS				eS	Sn	18 58 35.8	+0.1
	baz=232						
CHN5	Tsauling	1.57	246	eP	Pn	18 58 18.7	+0.5
	baz=235						
CHN5				eS	Sn	18 58 37.3	0.0
	baz=235						
JKRS	Kuro-shima	1.61	90	P	Pn	18 58 19.0	+0.2
JKRS				eS	Sn	18 58 39.4	+1.1
WGK	Gukeng	1.63	251	eP	Pn	18 58 19.2	+0.1
	baz=238						
WGK				eS	Sn	18 58 39.4	+0.5
	baz=238						
STYT	Tauyuan	1.73	232	eP	Pn	18 58 20.8	+0.4
	baz=225						
STYT				eS	Sn	18 58 41.3	0.0
	baz=225						
JIJ	Ishigaki jima	1.74	85	P	Pn	18 58 19.9	-0.6
JIJ				eS	Sn	18 58 41.2	-0.2
CHN4	Tsaushan	1.75	240	eP	Pn	18 58 21.5	+0.8
	baz=230						
TWG	Pinlang	1.77	218	eP	Pn	18 58 20.6	-0.4
	baz=216						
WTP	Ta-pu	1.79	237	eP	Pn	18 58 21.9	+0.7
	baz=236						
WTP				eS	Sn	18 58 44.2	+1.5
	baz=236						
CHN1	Nanshi	1.89	237	eP	Pn	18 58 23.2	+0.6
	baz=236						
CHN1				eS	Sn	18 58 46.2	+1.0
	baz=236						
ECL	Taimali	2.02	216	eP	Pn	18 58 23.7	-0.6
	baz=215						
SSD	Sandimen	2.10	225	eP	Pn	18 58 26.4	+0.9
	baz=224						
SSD				eS	Sn	18 58 50.3	0.0
	baz=224						
EAST	Anshuo	2.25	215	eP	Pn	18 58 27.4	-0.1
	baz=207						
JTJ	Tarama	2.28	79	P	Pn	18 58 27.3	-0.6

IDC 10 18:58:16.9±11.0**, 184N**×**12718E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/15**, mbtmp3.6**/3**, Error ellipse: s-maj=174.6km s-min=164.7km az=143.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.76	162	P	P	19 03 20.9	0.0
	0.4nm,0.3s,baz=340,slow=11,SNR=8.4						
ASAR	Alice Springs	26.18	166	P	P	19 03 54.6	+1.3
	0.4nm,0.5s,baz=344,slow=9.7,SNR=2.9						
STKA	Stephens Creek	36.22	159	P	P	19 05 20.2	-1.4
	1.3nm,0.7s,baz=326,slow=7.3,SNR=3.4						

ISCJB ***10*** *19:00:17.4±0.7, 28N±0.1×1287E±03, h200^{km}, mb3.4/11, Error ellipse: s-maj=46.5km s-min=10.3km az=159.9*
NEIC ***10*** *19:00:18.7±0.6, 285N×12893E, h200^{km}, mb3.5/1, Error ellipse: s-maj=45.3km s-min=7.8km az=67.0*
IDC ***10*** *19:00:23.4±6.2, 272N×12875E, h246^{km}±65^{km}, mb3.1/10, mb1 3.2/10, mb1mx3.2/18, mbtmp3.1/10, Error ellipse: s-maj=42.1km s-min=11.7km az=67.0*
ISC 10 19:00:19.1±0.7**, 28N**±01×**1287E**±03**, h200**^{km}**, n12, σ0^{s}54**/12**, mb3.4**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB	Tennant Creek	23.21	167	eP	P	19 05 08.7	+0.3
	0.8nm,0.6s,mb3.4						
WRA	Warramunga Arr	23.21	167	P	P	19 05 08.1	-0.4
	0.5nm,0.4s,mb3.4,baz=343,slow=10,SNR=14						
WB2	Warramunga Arr	23.22	167	eP	P	19 05 08.9	+0.4
ASAR	Alice Springs	26.74	169	P	P	19 05 40.5	+0.2
	1.1nm,0.6s,mb3.7,baz=351,slow=7.8,SNR=15						
ASAR				PcP	PcP	19 08 57.8	-0.6
	0.2nm,0.4s,baz=3.0,slow=2.1,SNR=4.9						
CMAR	Chiang Mai Arr	33.09	300	P	P	19 06 37.2	+0.8
	0.5nm,0.8s,mb3.1,baz=130,slow=6.6,SNR=4.2						
KSRS	Korea Array	34.54	359	P	P	19 06 49.4	+0.8
	0.9nm,0.5s,mb3.6,baz=176,slow=9.6,SNR=4.6						
STKA	Stephens Creek	36.54	161	P	P	19 07 05.4	-0.3
	0.9nm,0.3s,mb3.8,baz=338,slow=9.7,SNR=14						
SONM	Songino Array	48.88	340	P	P	19 08 44.9	+0.4
	0.4nm,0.6s,mb2.9,baz=144,slow=7.2,SNR=3.5						
MKAR	Makanchi Array	59.50	325	P	P	19 10 00.9	-0.4
	0.2nm,0.3s,mb3.2,baz=117,slow=8.6,SNR=4.1						
ZALV	Zalesovo Beam	62.37	332	P	P	19 10 19.4	-1.0
	0.3nm,0.3s,mb3.4,baz=111,slow=7.9,SNR=2.6						
KURK	Kurchatov	63.64	327	P	P	19 10 28.2	-0.6
	0.8nm,0.5s,mb3.6,baz=127,slow=5.9,SNR=7.0						
BVAR	Borovoye Array	69.23	327	P	P	19 11 04.0	-0.3
	0.2nm,0.4s,mb3.1,baz=109,slow=11,SNR=2.4						

IDC ***10*** *19:04:28.0±3.3, 1907S×6508E, h0^{km}, mb4.0/10, mb1 4.2/10, mb1mx3.9/23, mbtmp4.0/10, MS3.8/6, Ms1 3.8/6, ms1mx3.5/18, Error ellipse: s-maj=98.6km s-min=23.7km az=56.0*
NEIC ***10*** *19:04:29.8±2.1, 1904S×65.10E, h10^{km}, mb4.6/1, Error ellipse: s-maj=64.0km s-min=14.5km az=55.0*
ISC 10 19:04:29.9±2.9**, 190S**±04×**651E**±05**, h10**^{km}**, n15, σ0^{s}45**/12**, mb4.0**/11**, MS3.8**/6**, Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	32.59	300	LR	LR	19 22 15.3	
	comp=Z,154nm,18.2s,MS3.7,baz=157,slow=33						
BOSA	Boshof	37.54	248	LR	LR	19 25 57.1	
	comp=Z,114nm,20.5s,MS3.7,baz=118,slow=34						
CMAR	Chiang Mai Arr	49.91	44	P	P	19 13 23.9	-0.1
	1.2nm,0.8s,mb4.0,baz=235,slow=8.6,SNR=11						
CMAR				LR	LR	19 31 05.5	
	comp=Z,102nm,19.4s,MS3.8,baz=167,slow=32						
FITZ	Fitzroy Crossi	57.13	100	P	P	19 14 17.3	+0.2
	1.5nm,0.8s,mb4.1,baz=241,slow=10,SNR=3.8						
ASAR	Alice Springs	63.70	108	P	P	19 15 01.8	-0.2
	2.4nm,0.7s,mb4.3,baz=273,slow=5.7,SNR=31						
WRA	Warramunga Arr	64.82	104	P	P	19 15 09.4	-0.1
	3.3nm,0.8s,mb4.4,baz=260,slow=5.4,SNR=25						
WRAB	Tennant Creek	64.83	104	eP	P	19 15 09.6	+0.1
	3.6nm,0.8s,mb4.5						
MKAR	Makanchi Array	67.33	13	P	P	19 15 24.9	0.0
	0.2nm,0.2s,mb3.7,baz=205,slow=22,SNR=2.9						
STKA	Stephens Creek	69.00	118	LR	LR	19 40 48.6	
	comp=Z,102nm,20.9s,MS4.0,baz=206,slow=32						
KURK	Kurchatov	70.45	9	P	P	19 15 44.0	-0.2
	0.2nm,0.3s,mb3.6,baz=331,slow=11,SNR=4.2						
BVAR	Borovoye Array	71.90	3	P	P	19 15 53.5	+0.6
	1.7nm,0.8s,mb4.0,baz=164,slow=6.0,SNR=9.3						
ZAA0	Zalesovo Array	74.63	12	eP	P	19 16 09.2	+0.1
ZALV	Zalesovo Beam	74.63	12	P	P	19 16 08.0	-1.1
	2.0nm,0.9s,mb4.1,baz=219,slow=3.8,SNR=7.8						
SONM	Songino Array	76.14	27	P	P	19 16 18.7	+0.8
	1.5nm,0.8s,mb4.0,baz=209,slow=7.1,SNR=12						
SONM				LR	LR	19 48 47.8	
	comp=Z,58nm,18.8s,MS3.9,baz=346,slow=35						
KSRS	Korea Array	81.50	46	P	P	19 16 47.4	-0.3
	1.7nm,1.0s,mb3.9,baz=245,slow=4.8,SNR=5.0						
KSRS				LR	LR	19 52 29.1	
	comp=Z,32nm,18.8s,MS3.7,baz=237,slow=35						

IDC 10 19:53:32.5±1.1**, 3300S**×**7787E, h0**^{km}**, mb3.9**/6**, mb1 4.0**/6**, mb1mx3.8**/19**, mbtmp3.9**/6**, Error ellipse: s-maj=77.7km s-min=21.6km az=3.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	46.01	266	P	P	20 01 58.0	+0.2
	3.5nm,1.0s,baz=119,slow=23,SNR=2.0						
LSZ	Lusaka	48.19	279	P	P	20 02 14.8	0.0
	2.2nm,0.7s,baz=130,slow=7.4,SNR=6.1						
ASAR	Alice Springs	49.70	94	P	P	20 02 26.2	-0.2
	0.7nm,0.8s,baz=251,slow=5.8,SNR=3.9						
WRA	Warramunga Arr	51.65	90	P	P	20 02 41.2	0.0
	1.6nm,0.8s,baz=245,slow=7.3,SNR=4.7						
TORD	Torodi Ar. Bea	85.81	288	P	P	20 06 14.0	-0.2
	0.9nm,1.1s,baz=128,slow=4.4,SNR=3.1						
ZALV	Zalesovo Beam	86.79	4	P	P	20 06 18.5	+0.5
	0.5nm,0.6s,baz=186,slow=6.9,SNR=3.8						

IDC 10 19:53:51.4±4.7**, 1910S**×**6497E, h0**^{km}**, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.6**/19**, mbtmp3.8**/5**, Error ellipse: s-maj=135.3km s-min=34.8km az=63.0, Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	50.06	44	P	P	20 02 48.3	+0.1
	0.7nm,1.0s,baz=236,slow=8.0,SNR=4.8						
ASAR	Alice Springs	63.80	108	P	P	20 04 25.8	0.0
	1.3nm,0.8s,baz=272,slow=6.0,SNR=15						
WRA	Warramunga Arr	64.93	104	P	P	20 04 33.4	+0.1
	1.3nm,0.8s,baz=261,slow=5.5,SNR=12						
ZALV	Zalesovo Beam	74.73	12	P	P	20 05 32.7	-0.1
	0.7nm,0.6s,baz=197,slow=4.6,SNR=3.9						
SONM	Songino Array	76.27	27	P	P	20 05 42.2	+0.5
	0.6nm,0.8s,baz=212,slow=5.3,SNR=4.3						

NNC 10 19:56:54.5±2.9**, 3892N**×**7017E, h0**^{km}**, mb3.7, mpv3.3,**

3C-2D, Error ellipse: s-maj=26.2km s-min=16.0km az=170.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	4.19	3	⇓Pn	Pn	19 58 00.3	+0.7
	2.0nm,0.5s,baz=169,slow=12,SNR=34						
KK31				⇑Pg	Pg	19 58 10.4	-4.4
	1.5nm,0.4s,baz=136,slow=10,SNR=13						
KK31				⇑Lg		19 59 08.1	
	13nm,0.6s,baz=186,slow=32,SNR=9.3						
TKM2	Tokmak 2	5.73	44	⇑Pn	Pn	19 58 21.0	+0.1
	4.4nm,0.6s						
TKM2				⇓Sn	Sn	19 59 28.6	+1.3
	6.7nm,0.8s						
AB31	Akbulak array	12.67	328	P	Pn	19 59 54.5	-1.3
	0.8nm,0.5s,baz=146,slow=12,SNR=8.1						

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*ISCJB **10** 20:20:44.5±0.5, 2150S±004×6660W±006, h213km±6km, mb4.1/10, Error ellipse: s-maj=9.2km s-min=6.0km az=18.0*

*IDC **10** 20:20:45.2±0.8, 2148S×6659W, h201km±8km, mb3.9/8, mb1 3.9/17, mb1mx3.8/27, mbtmp3.8/17, Error ellipse: s-maj=12.1km s-min=9.3km az=106.0*

*NEIC **10** 20:20:45.2±0.6, 2154S×6664W, h207km±6km, mb4.5/3, Error ellipse: s-maj=9.8km s-min=7.1km az=91.0*

*GUC **10** 20:20:47.4±0.7, 2234S×6683W, h250km, MD4.0*

ISC 10 20:20:45.4±0.5, 2148S±004×6657W±006, h203km±6km, n45, σ1s17/47, mb4.1/10, 3D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.44	242	P	Pn	20 21 30.0	+1.2
	19nm,0.3s,baz=60,slow=9.6,SNR=55						
LVC				S	Sn	20 22 02.3	-0.4
	252nm,0.3s,baz=222,slow=21,SNR=59						
LVC	Limon Verde	2.44	242	P	Pn	20 21 30.0	+1.2
LVC				S	Sn	20 22 02.3	-0.4
CEN1	Los Morros	3.85	240	⇓iP	Pn	20 21 48.0	+2.6
CEN1				i S	Sn	20 22 32.7	0.0
CEN1				AML	AML	20 22 38.3	
CPN1	Cerro Paranal	4.71	228	⇓iP	Pn	20 21 55.9	-0.3
CPN1				i S	Sn	20 22 47.5	-4.6
LPAZ	La Paz	5.37	344	P	Pn	20 22 06.8	+2.2
	22nm,0.3s,baz=158,slow=9.1,SNR=446						
LPAZ				S	Sn	20 23 07.6	+0.2
	1.6nm,0.3s,baz=267,slow=25,SNR=6.5						
LPAZ	La Paz	5.37	344	P	Pn	20 22 06.8	+2.1
LPAZ				S	Sn	20 23 07.6	+0.2
CDCH	Caldera	6.79	214	eP	Pn	20 22 19.3	-3.5
ARE	Arequipa	6.83	316	eP	Pn	20 22 23.0	-0.4
ARE				eS	Sn	20 23 34.0	-7.2
SIV	San Ignacio	7.55	45	P	Pn	20 22 33.6	+0.8
	10nm,0.3s,baz=224,slow=13,SNR=164						
SIV				S	Sn	20 23 56.7	-1.6
	baz=139,slow=23,SNR=4.9						
LCO	Las Campanas	8.37	206	⇓iP	Pn	20 22 41.0	-2.4
TLL	Tololo Astrono	9.45	203	eP	Pn	20 22 55.6	-1.8
CPUP	Villa Florida	9.73	122	P	Pn	20 23 02.6	+1.5
	0.3nm,0.3s,baz=302,slow=11,SNR=4.0						
CPUP	Villa Florida	9.73	122	eP	Pn	20 23 02.5	+1.4
	16nm,0.5s						
CFAA	Coronel Fontan	10.19	188	P	Pn	20 23 05.1	-1.8
	1.3nm,0.3s,baz=346,slow=12,SNR=37						
CFAA				S	Sn	20 24 51.8	-9.1
	0.9nm,0.3s,baz=283,slow=20,SNR=6.6						
NNA	Nana	13.63	312	P	Pn	20 23 52.1	+1.5
	2.3nm,0.3s,baz=146,slow=11,SNR=8.9						
NNA				S	S	20 26 10.0	-13
	0.9nm,0.3s,baz=154,slow=23,SNR=2.7						
ATAH	Atahualpa	18.38	320	P	P	20 24 45.2	0.0
	0.9nm,0.3s,baz=144,slow=14,SNR=5.2						
BDFB	Brasilia	18.52	75	P	P	20 24 47.7	+1.0
	1.7nm,0.3s,baz=232,slow=12,SNR=6.8						
PLCA	Paso Flores	19.48	189	P	P	20 24 57.3	+0.5
	1.0nm,0.3s,baz=6.1,slow=11,SNR=23						
SDV	Santo Domingo	30.44	352	eP	P	20 26 37.9	-1.1
	5.7nm,0.5s,mb4.5						
GRGR	Grenville	33.75	9	eP	P	20 27 07.0	-0.9
FDF	Fort de France	36.38	9	eP	P	20 27 28.6	-1.7
CMIG	Matias Romero	47.32	322	P	P	20 28 58.0	-0.8
	1.6nm,0.7s,mb3.5,baz=120,slow=7.2,SNR=4.2						
SHEL	Horse Pasture	57.58	96	eP	P	20 30 12.7	-1.5
VNA3	Neumayer Olymp	59.40	162	e	P	20 30 26.9	+0.9
VNA3				e		20 30 30.0	
VNA3				e		20 30 32.9	
VNA1	Neumayer--Stat	59.58	161	e	P	20 30 29.0	+1.8
VNA1				e		20 30 31.6	
VNA2	Neumayer--Watz	59.95	161	e	P	20 30 31.0	+1.3
VNA2				e		20 30 33.8	
VNA2				e		20 30 36.9	
SNAA	Sanae	61.59	161	e	P	20 30 41.4	+0.6
SNAA				e		20 30 44.2	
SNAA				e		20 30 46.9	
SNAA	Sanae	61.59	161	eP	P	20 30 41.2	+0.4
	7.0nm,1.3s,mb4.1						
DBIC	Dimbokro	66.65	72	P	P	20 31 14.0	-0.6
	3.7nm,0.8s,mb4.0,baz=256,slow=12,SNR=3.2						
PDAR	Pinedale Array	75.20	329	P	P	20 32 05.9	+0.5
	0.3nm,0.5s,mb3.2,baz=124,slow=8.1,SNR=3.2						
TOA0	Torodi Ar. Sit	75.31	69	eP	P	20 32 06.0	-0.6
TORD	Torodi Ar. Bea	75.31	69	P	P	20 32 06.1	-0.5
	4.7nm,0.5s,mb4.4,baz=256,slow=5.4,SNR=26						
TORD				pP	pP	20 33 00.3	+5.1
	3.6nm,0.8s,baz=250,slow=5.5,SNR=7.8						
TORD	Torodi Ar. Bea	75.31	69	P	P	20 32 06.1	-0.6
TORD				pP	pP	20 33 00.3	+5.1
TSUM	Tsumeb	77.96	106	P	P	20 32 22.1	+0.6
	3.3nm,0.7s,mb4.1,baz=240,slow=6.2,SNR=14						
BOSA	Boshof	81.53	117	P	P	20 32 40.6	+0.1
	5.2nm,0.7s,mb4.3,baz=251,slow=5.6,SNR=5.2						
LBTB	Lobatse	83.04	114	P	P	20 32 49.1	+0.6
	2.6nm,0.5s,mb4.2,baz=261,slow=7.7,SNR=4.2						
MAW	Mawson	83.71	163	P	P	20 32 51.5	+0.5
	3.7nm,0.6s,mb4.3,baz=226,slow=6.4,SNR=11						
ASAR	Alice Springs	130.90	205	PKP	PKPdf	20 39 32.0	-1.2
	1.2nm,0.5s,baz=134,slow=1.8,SNR=16						
WRA	Warramunga Arr	134.03	208	PKP	PKPdf	20 39 38.8	-0.4
	0.8nm,0.4s,baz=154,slow=2.0,SNR=16						
FITZ	Fitzroy Crossi	138.88	198	PKP	PKPdf	20 39 48.8	+0.6
	1.2nm,0.7s,baz=72,slow=3.2,SNR=5.1						
ZALV	Zalesovo Beam	140.99	27	PKP	PKPdf	20 39 51.2	+0.3
	1.1nm,0.5s,baz=298,slow=3.2,SNR=6.6						
ZALV	Zalesovo Beam	140.99	27	PKP	PKPdf	20 39 51.2	+0.3
MK31	Makanchi Array	144.32	38	eP	PKPdf	20 39 56.2	-0.8
MKAR	Makanchi Array	144.32	38	PKP	PKPdf	20 39 56.3	-0.7
	3.8nm,0.7s,baz=309,slow=4.4,SNR=13						
SONM	Songino Array	153.10	11	PKP	PKPdf	20 40 11.6	+0.5
	1.1nm,0.8s,baz=312,slow=0.5,SNR=7.6						

IDC 10 20:25:58.2±6.8, 1910S×6511E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.6/19, mbtmp3.8/4, Error ellipse: s-maj=182.6km s-min=41.1km az=70.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	49.97	44	P	P	20 34 54.2	-0.1
	0.6nm,0.8s,baz=243,slow=8.5,SNR=5.4						
ASAR	Alice Springs	63.68	108	P	P	20 36 31.9	+0.1
	1.1nm,0.6s,baz=277,slow=5.9,SNR=17						
WRA	Warramunga Arr	64.81	104	P	P	20 36 39.3	0.0
	1.4nm,0.7s,baz=260,slow=5.3,SNR=18						
SONM	Songino Array	76.21	27	P	P	20 37 48.6	+0.4
	0.4nm,0.8s,baz=224,slow=4.1,SNR=4.5						

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*IDC **10** 20:28:28.6±0.7, 1900S×6533E, h0km, mb4.3/13, mb1 4.4/14, mb1mx4.1/22, mbtmp4.3/14, ML4.1/1, MS4.4/12, Ms1 4.4/12, ms1mx4.3/19, Error ellipse: s-maj=23.1km s-min=17.9km az=75.0*

*GCMT **10** 20:28:30.6±0.2, 1880S×6540E, h12km, MW5.2/84, Moment Tensor Solution. s46,c66; s84,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.39±.10; $M_{\theta\theta}$1.10±.10; $M_{\phi\phi}$4.29±.10; $M_{r\theta}$-1.04±.33; $M_{\theta\phi}$-1.82±.09; $M_{\phi r}$4.04±.31; Best double couple: $M_0$6.70600×10^{16} NP1:ϕ_s330.00000°, δ26.00000°, λ-100.00000°. NP2: ϕ_s162.00000°, δ64.00000°, λ-85.00000°. Principal axes: T 6.5400, Plg19.0000°, Azm248.0000°; N 0.3310, Plg4.0000°, Azm339.0000°; P -6.8710, Plg70.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 20:28:30.6±0.3, 1895S×6549E, h10km, mb4.7/12 Error ellipse: s-maj=10.2km s-min=8.4km az=193.0*

*ISCJB **10** 20:28:30.9±0.4, 1892S±007×6550E±007, h24km, mb4.5/33, MS4.5/22, Error ellipse: s-maj=10.4km s-min=9.6km az=170.9*

*MOS **10** 20:28:31.0±0.7, 1897S×6547E, h25km, mb5.0/12, MS4.4/6, Error ellipse: s-maj=19.7km s-min=10.5km az=94.5*

*BJI **10** 20:28:32.7, 1837S×6605E, h10km, mB5.1, mb4.7, Ms4.9, Msz4.7*

ISC 10 20:28:33.2±0.4, 1893S±007×6548E±007, h25km±2.2km: pP-P, n79, σ0s92/68, mb4.5/33, MS4.5/22, 4C-3D, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	Ambohimpanom	17.27	267	eP	Pn	20 32 34.8	+2.1
OPO	Ambohidratompo	17.33	268	P	Pn	20 32 31.7	-1.8
	0.7nm,0.3s,baz=82,slow=12,SNR=7.3						
KMBO	Kilima Mbogo	32.84	299	LR	LR	20 46 15.3	
	comp=Z,844nm,18.8s,MS4.5,baz=135,slow=33						
BOSA	Boshof	37.90	248	LR	LR	20 48 43.2	
	comp=Z,610nm,18.1s,MS4.5,baz=92,slow=32						
NWAO	Narrogin (SRO)	48.15	118	LR	LR	20 53 00.9	
	comp=Z,351nm,21.6s,MS4.3,baz=282,slow=30						
MAW	Mawson	48.69	181	P	P	20 37 14.1	-0.9
	1.4nm,0.6s,mb4.2,baz=24,slow=13,SNR=2.1						
MAW				LR	LR	20 52 24.4	
	comp=Z,496nm,21.7s,MS4.5,baz=359,slow=30						
CMAR	Chiang Mai Arr	49.60	43	P	P	20 37 23.1	+0.5
	2.7nm,0.8s,mb4.3,baz=235,slow=8.8,SNR=22						
CMAR				LR	LR	20 54 54.9	
	comp=Z,592nm,21.3s,MS4.6,baz=216,slow=32						
SHL	Shillong	51.14	31	eP	P	20 37 35.0	+0.8
KBL	Kabul	53.27	4	eP	P	20 37 50.3	+0.4
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
KBL	Kabul	53.27	4	eP	P	20 37 50.3	+0.4
	comp=Z,3.9nm,0.8s,mb4.4						
LSA	Lhasa	54.31	28	eP	P	20 37 58.8	+1.2
LSA				pmax	pmax		
	comp=Z,26nm,1.8s,mb4.9						
LSA	Lhasa	54.31	28	eP	P	20 37 58.8	+1.2
	comp=Z,26nm,1.8s,mb4.8						
FITZ	Fitzroy Crossi	56.80	100	eP	P	20 38 16.0	+0.2
	comp=Z,6.3nm,0.8s,mb4.7						
FITZ	Fitzroy Crossi	56.80	100	P	P	20 38 16.2	+0.4
	comp=Z,3.1nm,0.8s,mb4.4,baz=241,slow=7.9,SNR=4.6						
FITZ				LR	LR	21 01 31.2	
	comp=Z,314nm,18.1s,MS4.5,baz=265,slow=35						
QIZ	Qiongzhong	57.60	52	P	P	20 38 18.3	-3.1
QIZ				S	S	20 46 16.5	-1.8
QIZ				XS	sS	20 46 26.3	-4.8
QIZ				LR	LR		
	comp=N,438nm,17.9s,MS4.8						
QIZ				LR	LR		
	comp=E,428nm,17.9s,MS4.8						
QIZ				LR	LR		
	comp=Z,660nm,18.0s,MS4.8						
EKS2	Erkin-Say	61.75	7	eP	P	20 38 49.6	+0.2
	comp=Z,13nm,1.6s,mb4.8						
GNI	Garni	61.87	342	⇑eP	P	20 38 51.5	+1.2
GNI				pmax	pmax		
	comp=Z,36nm,1.7s						
GNI	Garni	61.87	342	eP	P	20 38 51.3	+1.0
	comp=Z,18nm,1.0s,mb5.2						
ASAR	Alice Springs	63.39	108	P	P	20 39 00.8	-0.1
	comp=Z,2.5nm,0.6s,mb4.5,baz=273,slow=5.7,SNR=50						
WRA	Warramunga Arr	64.50	104	P	P	20 39 08.6	+0.3
	comp=Z,3.0nm,0.7s,mb4.5,baz=260,slow=5.4,SNR=48						
WRA				LR	LR	21 04 55.0	
	comp=Z,669nm,19.2s,MS4.8,baz=260,slow=34						
WB2	Warramunga Arr	64.51	104	eP	P	20 39 08.0	-0.4
WB2	Warramunga Arr	64.51	104	eP	P	20 39 08.3	0.0
WRAB	Tennant Creek	64.51	104	⇑eP	P	20 39 08.1	-0.3
WRAB	Tennant Creek	64.51	104	eP	P	20 39 08.3	-0.1
	comp=Z,10nm,0.8s,mb4.9						
SNAA	Sanae	65.39	199	eP	P	20 39 16.8	+3.6
SNAA				e		20 39 19.7	
SNAA				e	pP	20 39 22.8	+1.7
LZH	Lanzhou	65.66	33	eP	P	20 39 15.0	-0.4
LZH				AP	pP	20 39 23.2	-0.1
LZH				XP	sP	20 39 27.5	+1.2
LZH				PP	PP	20 41 43.0	+2.7
LZH				eS	S	20 48 02.0	+2.2
LZH				AMB	AMB		
	comp=Z,21nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,113nm,5.2s						
LZH				LR	LR		
	comp=N,486nm,16.3s						
LZH				LR	LR		
	comp=Z,618nm,17.8s,MS4.9						
LZH	Lanzhou	65.66	33	eP	P	20 39 15.0	-0.4
LZH				*PP	pP	20 39 23.2	-0.1
LZH				*SP	sP	20 39 27.5	+1.2
LZH						20 41 43.0	
LZH				eS	S	20 48 02.0	+2.2
LZH				*SS	sS	20 48 14.3	+1.5
LZH				eSS	SS	20 52 20.5	+5.8
LZH				pmax	pmax		
	comp=Z,21nm,1.5s,mb5.0						
LZH				MLR	MLR		
	comp=Z,620nm,17.8s,MS4.9						
LZH	Lanzhou	65.66	33	eP	P	20 39 15.0	-0.4
	comp=Z,21nm,1.5s,mb5.0						
LZH				pP	pP	20 39 23.2	-0.1
LZH				sP	sP	20 39 27.5	+1.2
LZH				PP	PP	20 41 43.0	+2.7
LZH				eS	S	20 48 02.0	+2.2
LZH				sS	sS	20 48 14.3	+1.5
LZH				eSS	SS	20 52 20.5	+5.8
LZH				LR	LR		
	comp=Z,620nm,17.8s,MS4.9						
WMQ	Urumqi	65.68	17	eP	P	20 39 15.4	+0.1
WMQ				AP	pP	20 39 22.0	-1.2
WMQ				XP	sP	20 39 26.0	-0.2
WMQ				PCP	PcP	20 39 52.0	+5.4
WMQ				SCS	ScS	20 49 03.0	-6.4
WMQ				AMB	AMB		
	comp=Z,18nm,1.7s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,197nm,6.0s						
WMQ				LR	LR		
	comp=N,743nm,19.0s,MS5.1						
WMQ				LR	LR		
	comp=E,634nm,16.1s,MS5.1						
WMQ				LR	LR		
	comp=Z,714nm,26.4s						
KIV	Kislovodsk	65.97	342	⇓eP	P	20 39 17.4	+0.2
KIV				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
KIV				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.1						
GTA	Gaotai	66.31	28	eP	P	20 39 19.7	+0.2
GTA				AP	pP	20 39 26.8	-0.6
GTA				XP	sP	20 39 30.6	+0.2
GTA				PP	PP	20 41 49.4	+3.4
GTA				S	S	20 48 09.0	+1.4
GTA				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.5						
GTA				AMB	AMB		
	comp=Z,87nm,6.0s						
GTA				LR	LR		
	comp=N,190nm,15.6s,MS4.5						
GTA				LR	LR		
	comp=E,188nm,16.5s,MS4.5						
GTA				LR	LR		
	comp=Z,299nm,18.6s,MS4.5						
VNA2	Neumayer--Watz	66.67	200	eP	P	20 39 22.2	+0.8
VNA2				e		20 39 25.1	
VNA2				e	pP	20 39 28.5	-0.8
XAN	Xi'an	66.97	38	P	P	20 39 23.4	-0.5
XAN				AP	pP	20 39 33.6	+1.8
XAN				XP	sP	20 39 37.7	+2.9
XAN				PP	PP	20 41 53.0	+1.1
XAN				S	S	20 48 13.4	-2.5
XAN				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.6						
XAN				AMB	AMB		
	comp=Z,82nm,4.7s						
XAN				LR	LR		
	comp=N,92nm,18.1s,MS4.3						
XAN				LR	LR		
	comp=E,132nm,17.6s,MS4.3						
XAN				LR	LR		
	comp=Z,213nm,20.5s,MS4.3						
MK31	Makanchi Array	67.15	12	eP	P	20 39 23.5	-1.2
MKAR	Makanchi Array	67.15	12	P	P	20 39 24.4	-0.3
	comp=Z,2.1nm,0.9s,mb4.2,baz=206,slow=5.3,SNR=8.9						
MKAR				LR	LR	21 07 02.4	
	comp=Z,254nm,19.1s,MS4.5,baz=189,slow=34						
VNA3	Neumayer Olymp	67.45	200	eP	P	20 39 30.3	+3.9
VNA3				e		20 39 33.1	
WHN	Wuhan	68.03	44	P	P	20 39 32.2	+1.6
STKA	Stephens Creek	68.73	118	LR	LR	21 04 58.7	
	comp=Z,470nm,20.9s,MS4.7,baz=218,slow=32						
KURK	Kurchatov	70.29	9	⇓eP	P	20 39 44.3	+0.1
KURK				pmax	pmax		
	comp=Z,18nm,2.2s,mb4.6						
KURK				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.5						
KURK	Kurchatov	70.29	9	eP	P	20 39 44.3	+0.1
QSPA	South Pole Qui	71.18	180	P	P	20 39 48.0	-1.3
	comp=Z,8.2nm,1.3s,mb4.5,baz=282,slow=3.9,SNR=8.6						
BRVK	Borovoye	71.80	3	eP	P	20 39 52.2	-1.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
BRVK	Borovoye	71.80	3	eP	P	20 39 52.1	-1.1
	comp=Z,7.0nm,1.1s,mb4.5						
HHC	Hu-ho-hao-te	73.26	35	eP	P	20 40 04.4	+2.1
HHC				AMB	AMB		
	comp=Z,16nm,0.5s,mb5.2						
HHC				AMB	AMB		
	comp=Z,143nm,6.4s						
ZAL	Zalesovo	74.44	12	P	P	20 40 08.1	-0.8
ZAA0	Zalesovo Array	74.46	12	eP	P	20 40 08.0	-1.0
ZALV	Zalesovo Beam	74.46	12	P	P	20 40 08.1	-0.9
	comp=Z,3.5nm,0.7s,mb4.4,baz=205,slow=6.7,SNR=15						
ARU	Arti	75.29	356	d iP	P	20 40 13.3	-0.4
ARU				e		20 43 02.1	
ARU				eS	S	20 49 52.0	+0.8
ARU				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
ARU				MLR	MLR		
	comp=Z,219nm,19.0s,MS4.5						
SVE	Sverdlovsk	75.57	357	eP	P	20 40 12.3	-3.0
SVE				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.7						
SVE				MLR	MLR		
	comp=Z,379nm,20.0s,MS4.7						
SONM	Songino Array	75.89	27	P	P	20 40 18.2	+0.8
	comp=Z,4.1nm,0.9s,mb4.3,baz=224,slow=6.1,SNR=24						
SONM				LR	LR	21 12 27.0	
	comp=Z,508nm,20.8s,MS4.8,baz=204,slow=35						
SONM	Songino Array	75.89	27	P	P	20 40 18.2	+0.8
SONM				LR	LR	21 12 27.0	
ULN	Ulaanbaatar	76.20	27	⇑eP	P	20 40 19.3	+0.2
ULN	Ulaanbaatar	76.20	27	eP	P	20 40 19.2	+0.1
	comp=Z,2.4nm,0.8s,mb4.2						
AKASG	Malin Array Be	76.31	337	P	P	20 40 19.2	-0.5
	comp=Z,1.8nm,0.7s,mb4.1,baz=145,slow=4.1,SNR=7.7						
KIEV	Kiev	76.31	337	eP	P	20 40 19.1	-0.6
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
KIEV	Kiev	76.31	337	eP	P	20 40 19.1	-0.6
	comp=Z,3.0nm,0.9s,mb4.2						
UZH	Uzhgorod	77.49	332	eP	P	20 40 26.2	-0.2
KOLS	Kolonicke sedl	77.72	332	eP	P	20 40 27.9	+0.2
OBN	Obninsk	77.75	343	⇑eP	P	20 40 28.2	+0.5
OBN				e		20 43 22.0	
OBN				eSS	SS	20 55 19.8	+0.6
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.2						
CRVS	Cervenica-Dubn	78.06	332	eP	P	20 40 29.9	+0.4
KECS	Kecovo	78.19	331	eP	P	20 40 30.6	+0.3
KECS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
KECS	Kecovo	78.19	331	eP	P	20 40 30.6	+0.3
	comp=Z,2.0nm,0.9s,mb4.0						
STHS	Stebnicka Huta	78.53	332	eP	P	20 40 32.2	0.0
STHS				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
STHS	Stebnicka Huta	78.53	332	eP	P	20 40 32.2	0.0
	comp=Z,2.7nm,1.3s,mb4.0						
VYHS	Vyhne	78.95	330	eP	P	20 40 34.0	-0.5
VYHS				pmax	pmax		
	comp=Z,63nm,4.3s						
VYHS	Vyhne	78.95	330	eP	P	20 40 34.0	-0.5
	comp=Z,63nm,4.3s						
KOLL	Kolacno	79.22	330	eP	P	20 40 35.9	-0.1
MODS	Modra-Piesok	79.61	330	eP	P	20 40 37.7	-0.4
KSRS	Korea Array	81.18	46	P	P	20 40 47.0	+0.1
	comp=Z,3.1nm,0.9s,mb4.2,baz=240,slow=6.1,SNR=9.8						
GERES	GERESS Array B	81.67	328	LR	LR	21 15 27.3	
	comp=Z,37nm,18.7s,MS3.8,baz=268,slow=34						
CBIJ	Chichi jima	87.25	60	LR	LR	21 17 17.3	
	comp=Z,192nm,19.3s,MS4.5,baz=111,slow=34						
MJAR	Matsushiro Arr	87.98	50	P	P	20 41 22.3	+1.1
	comp=Z,1.8nm,1.0s,mb4.3,baz=231,slow=6.5,SNR=5.6						
ARCES	ARCESS Array B	92.67	347	P	P	20 41 42.8	+0.4
	comp=Z,2.7nm,1.0s,mb4.6,baz=134,slow=5.2,SNR=7.0						
TIXI	Tiksi	99.87	17	i P	Pdif	20 42 11.5	-4.1
BILL	Bilibino	111.43	23	eP	Pdif	20 43 06.4	-0.6
BILL				eSS	SS	21 03 15.7	-2.1
ULM	Lac du Bonnet	145.39	339	PKPbc	PKPbc	20 48 07.6	-1.1
	comp=Z,3.6nm,0.6s,baz=58,slow=5.4,SNR=3.7						
ULM	Lac du Bonnet	145.39	339	PKPbc	PKPbc	20 48 07.6	-1.1
NVAR	Mina Array Bea	160.29	9	PKPab	PKPab	20 49 11.6	+0.4
	comp=Z,0.8nm,0.7s,baz=355,slow=3.2,SNR=7.2						
TXAR	Lajitas Array	165.68	318	PKPab	PKPab	20 49 33.6	-1.5
	comp=Z,0.6nm,0.8s,baz=74,slow=4.6,SNR=5.3						

GUC 10 20:36:57.4±0.8, 3262S×7105W, h10km±7km, MD3.6, ML1.8, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	Jahuel	0.39	99	eP	Pg	20 37 05.9	+0.9
JACH				i S	Sg	20 37 11.7	+1.5
CHNG	Los Chungos	0.83	332	⇓iP	Pg	20 37 13.0	-0.3
CHNG				i S	Sg	20 37 24.5	+0.3
CHNG				AML	AML	20 37 26.1	
	comp=E,111nm,0.5s						
FCH	Farellones	0.95	138	eP	Pg	20 37 15.3	-0.4
FCH				AML	AML	20 37 39.1	
	comp=N,37nm,0.4s						
TACH	Talagante	1.03	175	eP	Pg	20 37 15.9	-1.4
TACH				i S	Sg	20 37 30.1	-0.7
PCH	Pirque	1.09	156	⇑iP	Pg	20 37 17.9	-0.5
PCH				i S	Sg	20 37 32.9	+0.2
SFDO	San Fernando	1.99	179	eP	Pn	20 37 32.8	+1.7
SFDO				i S	Sn	20 37 58.9	+2.8

IDC 10 21:09:22.6±4.7, 1857S×6597E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/19, mbtmp3.8/5, Error ellipse: s-maj=133.2km s-min=34.1km az=63.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	49.03	43	P	P	21 18 11.3	-0.2
	0.6nm,0.9s,baz=234,slow=7.9,SNR=5.4						
ASAR	Alice Springs	63.06	108	P	P	21 19 52.1	0.0
	1.3nm,0.7s,baz=266,slow=6.4,SNR=16						
WRA	Warramunga Arr	64.14	104	P	P	21 19 59.5	+0.2
	1.4nm,0.8s,baz=258,slow=5.4,SNR=14						
ZALV	Zalesovo Beam	74.02	11	P	P	21 20 59.5	-0.3
	0.2nm,0.4s,baz=207,slow=6.3,SNR=3.7						
SONM	Songino Array	75.37	27	P	P	21 21 08.7	+0.8
	0.5nm,0.8s,baz=219,slow=6.3,SNR=5.0						

GUC 10 21:09:37.7±0.9, 3334S×7061W, h0km±3km, MD3.6, ML2.3, 4C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLCH	Cerro Calan	0.08	136	⇑iP	Pg	21 09 40.5	+1.3
CLCH				i S	Sg	21 09 42.6	+2.2
CLCH				AML	AML	21 09 46.6	
	comp=E,2μm,0.5s						
CLCH				AML	AML	21 09 47.2	
	comp=E,2μm,0.6s						
PEL	Peldehue	0.20	341	⇓iP	Pg	21 09 42.2	+0.6

PEL				iS	Sg	21 09 45.9	+1.6
PEL				AML	AML	21 09 47.1	
	comp=N,2μm,0.5s						
RCDM	Rinconada Maip	0.23	228	⇑iP	Pg	21 09 43.1	+1.1
RCDM				iS	Sg	21 09 47.0	+2.0
RCDM				AML	AML	21 09 47.5	
	comp=E,421nm,0.1s						
FCH	Farellones	0.26	88	⇑iP	Pg	21 09 43.8	+1.1
FCH				iS	Sg	21 09 48.3	+2.1
FCH				AML	AML	21 09 50.9	
	comp=E,339nm,0.3s						
PCH	Pirque	0.29	165	⇑iP	Pg	21 09 44.3	+1.0
TACH	Talagante	0.42	221	⇓iP	Pg	21 09 46.2	+0.5
TACH				iS	Sg	21 09 52.4	+1.2
SFDO	San Fernando	1.32	195	eP	Pg	21 10 01.9	-1.1
SFDO				iS	Sg	21 10 18.7	-1.4

*TEH **10** 21:11:03.3, 3473N×5297E, h6km, ML3.6*
*ISCJB **10** 21:11:45.3±0.3, 3476N±002×5299E±002, h10km, Error ellipse: s-maj=2.7km s-min=2.4km az=165.0*
*THR **10** 21:11:45.0±1.3, 3473N×5304E, h14km±12km, ML3.8*
*CSEM **10** 21:11:45.8±0.1, 3474N×5299E, h16km, ML3.6, Error ellipse: s-maj=1.3km s-min=1.3km az=156.0*
ISC 10 21:11:46.6±0.3**, 3477N**±002×**5297E**±002**, h10km, n48, σ0ˢ99**/76**, 3C-3D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAS	Lasjerd	0.61	359	ePg	Pg	21 11 58.8	+0.3
ILAS				eSg	Sg	21 12 07.3	+0.7
ILAS	Lasjerd	0.61	359	ePg	Pg	21 11 58.8	+0.3
ILAS				eSg	Sg	21 12 07.3	+0.7
ILAS				e		21 12 20.3	
ISFB	Sefidab	0.73	236	ePg	Pg	21 11 59.4	-1.4
ISFB				eSg	Sg	21 12 10.5	+0.1
ISFB	Sefidab	0.73	236	ePg	Pg	21 11 59.4	-1.4
ISFB				eSg	Sg	21 12 10.5	+0.1
ISFB				e		21 12 11.6	
IFIR	Firoozkooh	0.89	348	ePg	Pg	21 12 03.1	-0.7
IFIR				eSg	Sg	21 12 16.5	+1.1
IFIR	Firoozkooh	0.89	348	ePg	Pg	21 12 03.1	-0.7
IFIR				eSg	Sg	21 12 16.5	+1.1
IFIR				e		21 12 19.0	
IANJ	Anjilo	1.04	48	ePg	Pg	21 12 04.6	-2.0
IANJ				e		21 12 25.7	
IVRN	Varamin	1.05	283	⇑ePg	Pg	21 12 05.5	-1.3
IVRN				eSg	Sg	21 12 20.3	-0.2
IVRN				e		21 12 29.4	
ISHM	Shahmirzad	1.07	14	ePg	Pg	21 12 06.2	-1.0
ISHM				eSg	Sg	21 12 21.1	0.0
ISHM	Shahmirzad	1.07	14	ePg	Pg	21 12 06.2	-1.0
ISHM				eSg	Sg	21 12 21.1	0.0
ISHM				e		21 12 23.9	
IDMV	Damavand	1.12	317	⇑ePg	Pg	21 12 07.3	-0.8
IDMV				eSg	Sg	21 12 22.5	-0.1
IDMV	Damavand	1.12	317	⇑ePg	Pg	21 12 07.3	-0.8
IDMV				eSg	Sg	21 12 22.5	-0.1
IDMV				e		21 12 37.3	
DAMV	Damavand	1.19	317	ePg	Pg	21 12 08.6	-0.9
GHVR	GHOM	1.41	259	ePg	Pg	21 12 13.1	-0.7
GHVR				AML	AML	21 12 38.0	
	comp=E,732nm,0.4s						
GHVR				AML	AML	21 12 42.9	
	comp=N,680nm,0.4s						
IAFJ	Afjeh	1.50	317	ePn	Pg	21 12 14.8	-0.6
IAFJ				eSn	Sg	21 12 35.3	+0.5
IAFJ	Afjeh	1.50	317	ePn	Pg	21 12 14.8	-0.6
IAFJ				eSn	Sg	21 12 35.3	+0.5
IAFJ				e		21 12 38.9	
IR3	Iran Long-Peri	1.75	294	ePn	Pn	21 12 17.3	+0.3
IKLH	Kolahrood	1.85	219	⇓ePn	Pn	21 12 18.4	0.0
IKLH				eSn	Sn	21 12 42.2	+0.3
IKLH	Kolahrood	1.85	219	⇓ePn	Pn	21 12 18.4	0.0
IKLH				eSn	Sn	21 12 42.2	+0.3
IKLH				e	Sg	21 12 46.3	+0.2
CHTH	Charan	1.89	308	ePg	Pg	21 12 20.4	-2.5
CHTH				AML	AML	21 12 48.4	
	comp=N,752nm,0.4s						
CHTH				AML	AML	21 12 48.8	
	comp=E,591nm,0.8s						
IZEF	Zefreh	1.94	196	eSn	Sn	21 12 45.0	+0.9
IZEF	Zefreh	1.94	196	ePn	Pn	21 12 19.2	-0.5
IZEF				eSn	Sn	21 12 43.8	-0.3
IZEF				e		21 12 47.4	
NASN	Na'in	1.97	184	ePg	Pn	21 12 19.9	-0.1
NASN				eSg	Sg	21 12 46.4	-3.5
NASN				AML	AML	21 12 48.1	
	comp=N,485nm,0.3s						
NASN	Na'in	1.97	184	ePg	Pn	21 12 19.9	-0.1
	SNR=90						
NASN				eSg	Sg	21 12 46.4	-3.5
	SNR=90						
THKV	Tehran--Karaj	2.06	304	ePg	Pg	21 12 23.2	-3.0
THKV				AML	AML	21 12 55.3	
	comp=N,2μm,0.4s						
THKV				AML	AML	21 12 55.5	
	comp=E,860nm,0.5s						
IMHD	Mahdasht	2.10	297	ePn	Pn	21 12 23.1	+1.3
IMHD				e	Sg	21 12 54.3	+0.3
ASAO	Ashtian	2.44	266	ePn	Pn	21 12 27.5	+0.9
ASAO				eSg	Sg	21 13 03.5	-1.6
IGAR	Gharneh	2.48	199	ePn	Pn	21 12 28.5	+1.4
IGAR				e		21 13 11.7	
IRAZ	Razeghan	2.58	285	ePn	Pn	21 12 29.4	+1.0
IRAZ				eSn	Sn	21 13 00.1	+0.3
IRAZ	Razeghan	2.58	285	ePn	Pn	21 12 29.4	+1.0
IRAZ				eSn	Sn	21 13 00.1	+0.3
IRAZ				e		21 13 20.2	
IPIR	Pirpir	2.71	220	ePn	Pn	21 12 33.0	+2.8
IPIR				e	Sg	21 13 14.7	+1.1
ICHK	Chekchek	2.79	154	ePn	Pg	21 12 36.4	-3.7
ICHK				eSn	Sn	21 13 04.2	-0.8
ICHK				e	Sg	21 13 17.0	+0.8
IMEH	Mehriz	3.64	157	ePn	Pn	21 12 42.5	-0.5
IMEH				e		21 13 41.2	
MRVT	Maraveh tapeh	3.83	40	ePn	Pn	21 12 46.0	+0.4
IBAF	Bafgh	3.84	145	ePn	Pn	21 12 45.5	-0.3
IBAF				eSn	Sn	21 13 29.6	-1.4
IBAF	Bafgh	3.84	145	ePn	Pn	21 12 45.5	-0.3
IBAF				eSn	Sn	21 13 29.6	-1.4
IBAF				e		21 13 48.8	
IKOM	Komasi	4.55	264	ePn	Pn	21 12 56.5	+1.0
IKOM				e		21 14 26.0	
ISFR	Sfrayin	4.67	59	ePn	Pn	21 12 58.1	+0.9
ISFR				e		21 13 50.3	
IKRD	Kardeh	4.93	64	ePn	Pb	21 13 11.7	-1.3
IKRD				e		21 14 19.3	
IAKL	Akhelmad	5.05	67	ePn	Pn	21 13 03.0	+0.6
ITEG	Tejag	5.16	110	ePn	Pn	21 13 03.9	0.0
ITEG				e		21 13 06.8	
IPAY	Payeh	5.18	69	ePn	Pn	21 13 05.1	+0.8
IPAY				e		21 13 27.9	
ISRB	Sarab	5.26	307	ePn	Pn	21 13 06.2	+0.9
ISRB				e		21 13 36.9	
IMOG	Moghan	5.37	74	ePn	Pn	21 13 07.1	+0.4
IMOG				e		21 14 55.8	
IKOO	Kooshah	5.55	113	⇓ePn	Pn	21 13 09.2	-0.1
IKOO				e		21 13 14.8	
IBST	Bostanabad	5.72	303	ePn	Pn	21 13 12.9	+1.3
IBST				e		21 14 51.8	
IMYA	Miami	6.02	73	ePn	Pn	21 13 16.4	+0.7
IMYA				e		21 15 25.9	
IDAH	Dahanechah	6.09	107	ePn	Pn	21 13 17.2	+0.5
IDAH				e		21 14 03.3	

*ISCJB **10** 21:34:06.1±0.4, 24.15N±002×10423E±004, h10km, mb3.7/8, Error ellipse: s-maj=4.8km s-min=3.0km az=166.0*
*BJI **10** 21:34:09.5, 2431N×10400E, h19km, mB4.2, mb4.3, ML3.8, Ms3.9, Msz3.5*
*IDC **10** 21:34:09.4±1.2, 2442N×10392E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.5/20, mbtmp3.5/5, ML4.4/1, MS2.8/1, Ms1 2.8/1, ms1mx2.0/24, Error ellipse: s-maj=30.8km s-min=19.2km az=95.0*
*NEIC **10** 21:34:10.5±0.6, 2437N×10382E, h10km, mb3.9/4, Error ellipse: s-maj=12.1km s-min=8.6km az=76.0*
*PLV **10** 21:34:11.9±1.6, 2404N×10423E, h0km±8km, MD4.1*
ISC 10 21:34:09.0±0.3**, 2421N**±002×**10411E**±004**, h10km, n28, σ1ˢ48**/49**, mb3.7**/8**, 1C-1D, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	Kunming	1.54	307	PG	Pn	21 34 34.4	-2.1
KMI				SG	Sn	21 34 52.3	-4.3
KMI				Smax			
	comp=N,518nm,0.8s						
KMI				Smax			
	comp=E,604nm,0.8s						
DBV	Dienbien	2.98	200	ePN	Pn	21 34 58.4	+2.1
DBV				ePG	Pg	21 35 06.7	+0.6
DBV				eSG	Sg	21 35 44.5	-0.2
GYA	Guiyang	3.22	45	⇑iP	Pn	21 35 01.5	+1.8
GYA				PG	Pg	21 35 09.4	-1.4
GYA				S	Sn	21 35 42.5	+4.3
GYA				SG	Sg	21 35 52.0	-0.6
GYA				Smax			
	comp=N,430nm,0.7s						
GYA				Smax			
	comp=E,370nm,0.7s						
MTZV	Met	3.36	142	ePn	Pn	21 35 03.6	+2.1
MTZV				ePg	Pg	21 35 13.0	-0.4
MTZV				eSG	Sg	21 35 53.6	-3.2
BGV	Bac-Giang	3.50	146	ePn	Pn	21 35 05.0	+1.5
BGV				ePg	Pg	21 35 14.7	-1.5
BGV				eSg	Sg	21 35 58.3	-3.2
HNV	Hanoi	3.51	153	ePn	Pn	21 35 06.0	+2.3
HNV				ePg	Pg	21 35 15.7	-0.6
HNV				eSg	Sg	21 35 59.7	-2.2
DSV	Doi Son	4.00	154	ePn	Pn	21 35 11.6	+1.2
DSV				ePg	Pg	21 35 23.7	-2.0
DSV				eSg	Sg	21 36 13.3	-4.2
PLV	Phu-Lien	4.11	145	ePn	Pn	21 35 14.1	+2.2
PLV				ePg	Pg	21 35 26.8	-1.0
PLV				eSg	Sg	21 36 18.4	-2.8
LAVN	Lang Chanh	4.17	165	ePG	Pg	21 35 28.4	-0.6
LAVN				eSG	Sg	21 36 21.1	-1.9
CD2	Chengdu	6.68	357	eP	Pn	21 35 48.0	+0.7
CD2				PG	Pg	21 36 09.8	-7.2
CD2				S	Sn	21 36 59.0	-4.5
CD2				SG	Sg	21 37 35.5	-8.1
CD2				Smax			
	comp=N,40nm,1.7s						
CD2				Smax			
	comp=E,30nm,1.7s						
CD2				LR	LR		
	comp=E,1μm,10.8s						
CD2				LR	LR		
	comp=Z,330nm,7.2s						
CHG	Chiang Mai	7.20	223	⇓P	Sn	21 37 20.1	+3.8
	comp=Z,28nm,1.3s						
CHTO	Chiang Mai	7.20	223	ePn	Pn	21 35 54.2	-0.2
	comp=Z,1.9nm,0.4s						
CHTO				eSn	Sn	21 37 19.3	+3.0
CMAR	Chiang Mai Arr	7.47	221	Pn	Pn	21 35 59.8	+1.6
	comp=Z,1.5nm,0.3s,baz=30,slow=12,SNR=42						
CMAR				Pg	Pg	21 36 27.4	-4.8
	comp=Z,0.2nm,0.3s,baz=27,slow=16,SNR=14						
CMAR				Lg		21 38 07.8	
	comp=Z,0.2nm,0.3s,baz=49,slow=30,SNR=6.8						
XAN	Xi'an	10.66	22	P	Pn	21 36 41.6	-0.2
XAN				AP		21 36 46.1	
XAN				LG2		21 39 48.2	
XAN				AMB	AMB		
	comp=Z,5.0nm,0.6s						
XAN				AMB	AMB		
	comp=Z,45nm,6.7s						
XAN				LR	LR		
	comp=N,144nm,12.6s						
XAN				LR	LR		
	comp=E,415nm,11.7s						
XAN				LR	LR		
	comp=Z,121nm,8.5s						
WHN	Wuhan	11.07	53	P	Pn	21 36 50.0	+2.5
SONM	Songino Array	23.65	4	P	P	21 39 20.1	-0.5
	comp=Z,0.6nm,0.6s,mb3.2,baz=183,slow=10.0,SNR=6.4						
KSRS	Korea Array	24.26	51	LR	LR	21 49 06.4	
	comp=Z,24nm,20.4s,baz=255,slow=37						
TKM2	Tokmak 2	29.99	315	P	P	21 40 17.5	-0.2
AML	Almayashu	30.88	313	eP	P	21 40 24.7	-0.9
	comp=Z,0.8nm,0.3s,mb4.0						
EKS2	Erkin-Say	31.05	314	eP	P	21 40 27.0	-0.1
	comp=Z,0.6nm,0.6s,mb3.6						
KBL	Kabul	32.10	297	eP	P	21 40 34.7	-1.7
	comp=Z,0.7nm,0.4s,mb3.8						
KURK	Kurchatov	32.99	330	eP	P	21 40 43.0	-1.0
	comp=Z,0.8nm,0.6s,mb3.8						
ZALV	Zalesovo Beam	33.03	339	P	P	21 40 44.4	+0.1
	comp=Z,1.3nm,0.6s,mb4.0,baz=136,slow=8.4,SNR=7.4						
ZALV	Zalesovo Beam	33.03	339	P	P	21 40 44.4	+0.1
GNI	Garni	51.79	303	P	P	21 43 16.5	-0.6
WRA	Warramunga Arr	52.85	144	P	P	21 43 27.6	+2.5
	comp=Z,0.6nm,0.7s,mb3.6,baz=331,slow=8.5,SNR=6.8						
ASAR	Alice Springs	55.68	147	P	P	21 43 50.9	+5.3
	comp=Z,0.2nm,0.5s,mb3.4,baz=338,slow=7.0,SNR=3.3						
FIB	Fire Island	76.31	29	eP	P	21 45 59.1	+1.2

*MOS **10** 21:56:32.6±1.4, 1.17N×126.10E, h33km, mb5.2/26, MS4.1/8, Error ellipse: s-maj=12.2km s-min=6.2km az=112.3*
*BJI **10** 21:56:32.2, 073N×12637E, h51km, mB5.0, mb4.9, Ms4.5, Msz4.3*
*ISCJB **10** 21:56:33.5±0.2, 1.11N±003×12623E±003, h44km, mb5.0/84, MS4.1/24, Error ellipse: s-maj=4.5km s-min=3.5km az=41.3*
*NEIC **10** 21:56:34.9±0.9, 107N×12623E, h42km±8km, mb5.0/34, Error ellipse: s-maj=7.7km s-min=4.5km az=75.0*
*IDC **10** 21:56:34.7±2.7, 108N×126.11E, h38km±22km, mb4.6/15, mb1 4.6/18, mb1mx4.6/21, mbtmp4.6/18, ML4.6/3, MS4.0/8, Ms1 4.0/8, ms1mx3.6/26, Error ellipse: s-maj=23.0km s-min=9.0km az=76.0*
*GCMT **10** 21:56:34.9±0.3, 135N×126.14E, h30km±1km, MW5.0/61, Moment Tensor Solution. s37,c49; s61,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.49±.17; $M_{\theta\theta}$-1.51±.10; $M_{\phi\phi}$-0.97±.14; $M_{r\theta}$-0.88±.14; $M_{\theta\phi}$-1.64±.08; $M_{\phi r}$-2.19±.21; Best double couple: $M_0$3.60100×10^{16} NP1:ϕ_s69.00000°, δ29.00000°, λ124.00000°. NP2: ϕ_s211.00000°, δ66.00000°, λ73.00000°. Principal axes: T 3.5510, Plg64.0000°, Azm92.0000°; N 0.1030, Plg16.0000°, Azm218.0000°; P -3.6500, Plg20.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **10** 21:56:36, 125N×12635E, h50km, Mw5.3/14*
ISC 10 21:56:35.3±0.2**, 109N**±003×**12626E**±003**, h46km**±2.2km**: pP-P, n229, σ1ˢ28**/218**, mb5.0**/84**, MS4.1**/24**, 14C-22D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	Ternate	1.15	105	⇓eP	Pn	21 56 53.0	-2.0
TNE				eS	Sn	21 57 09.0	-0.5
MNI	Manado	1.47	284	P	Sn	21 57 15.3	-2.1
	0.0nm,0.0s						
LBMI	Labuha	2.12	144	P	Pn	21 57 08.0	-0.3
	0.0nm,0.0s						
AAI	Ambon	5.12	158	P	Pn	21 57 51.6	+2.0
	0.0nm,0.0s						
SWI	Sorong	5.36	111	P	Pn	21 57 54.0	+1.2
	0.0nm,0.0s						
DAV	Davao City (W)	5.98	353	Pn	Pn	21 58 00.4	-0.9
	58nm,0.3s,baz=275,slow=16,SNR=2.0						
KDI	Kendari	6.20	216	P	Pn	21 58 04.7	+0.4
	0.0nm,0.0s						
KDI	Kendari	6.20	216	⇑eP	Pn	21 58 05.1	+0.8
KDI				eS	Sn	21 59 20.6	+6.7
PCI	Palu	6.72	253	P	Pn	21 58 12.6	+1.0
	0.0nm,0.0s						
KAPI	Kappang	8.89	227	Pn	Pn	21 58 43.8	+2.5
	383nm,1.3s,SNR=5.9						
KAPI	Kappang	8.89	227	Pn	Pn	21 58 41.2	-0.1
	7.6nm,0.3s,baz=17,slow=8.4,SNR=12						
KAPI	Kappang	8.89	227	ePn	Pn	21 58 41.7	+0.4
MKS	Makassar	9.24	227	⇓eP	Pn	21 58 52.9	+6.9
SDKM	Sandakan	10.12	297	⇑P	Pn	21 58 58.4	+0.3
KDM	Kudat	11.04	302	⇑P	Pn	21 59 18.8	+8.0
KKM	Kota Kinabalu	11.17	296	⇑P	Pn	21 59 14.3	+1.8
KKM	Kota Kinabalu	11.17	296	⇓P	Pn	21 59 15.1	+2.6
KKM	Kota Kinabalu	11.17	296	ePn	Pn	21 59 13.9	+1.4
KKM				Sn	Sn	22 01 16.7	+0.7
BATI	Baumata	11.52	193	Pn	Pn	21 59 24.1	+6.9
	1.9nm,0.3s,baz=166,slow=2.8,SNR=5.9						
BBKI	Banjar Baru	12.28	248	P	Pn	21 59 28.8	+1.1
	0.0nm,0.0s						
BTM	Bintulu	13.34	279	⇓P	Pn	21 59 48.9	+6.7
SBUM	Sibu	14.10	276	⇑P	Pn	21 59 59.3	+6.8
SBUM	Sibu	14.10	276	⇑P	Pn	21 59 59.4	+6.9
KAKA	Kakadu	15.02	156	eP	Pn	22 00 01.3	-3.4
	12nm,0.6s						
KAKA				e		22 00 10.0	
KSM	Kuching	15.96	272	⇓P	Pn	22 00 20.4	+3.6
KSM	Kuching	15.96	272	ePn	Pn	22 00 19.1	+2.2
KSM				eSn	Sn	22 03 13.9	+1.1
KRKI	Karangkates	16.55	236	P	Pn	22 00 28.3	+3.9
	0.0nm,0.0s						
SJI	Sawahan	16.91	239	P	Pn	22 00 31.5	+2.7
	0.0nm,0.0s						
BJII	Banjamegara	18.51	243	P	Pn	22 00 48.2	-0.4
	0.0nm,0.0s						
FITZ	Fitzroy Crossi	19.08	182	eP	Pn	22 00 53.0	-2.3
	20nm,0.6s						
FITZ	Fitzroy Crossi	19.08	182	P	Pn	22 00 53.5	-1.9
	0.5nm,0.3s,baz=16,slow=13,SNR=15						
GUMO	Guam	22.21	55	LR	LR	22 09 40.1	
	comp=Z,241nm,21.2s,MS3.6,baz=235,slow=35						
GUMO	Guam	22.21	55	P	P	22 01 29.7	+1.6
WRAB	Tennant Creek	22.35	160	P	P	22 01 29.0	-0.4
	611nm,1.1s,mb5.9,SNR=21						
WRAB	Tennant Creek	22.35	160	⇓eP	P	22 01 28.9	-0.5
WRAB	Tennant Creek	22.35	160	eP	P	22 01 28.1	-1.3
	86nm,0.9s,mb5.2						
WRA	Warramunga Arr	22.35	160	P	P	22 01 28.3	-1.2
	34nm,0.7s,mb4.9,baz=336,slow=11,SNR=166						
WRA				S	S	22 05 32.6	-0.2
	7.4nm,1.0s,baz=342,slow=16,SNR=10						
WB2	Warramunga Arr	22.36	160	eP	P	22 01 28.2	-1.3
MYKOM	Kota Tinggi	22.42	272	⇓P	P	22 01 32.6	+2.3
COEN	Coen	22.46	132	eP	P	22 01 28.7	-2.0
	6.4nm,0.7s,mb4.2						
KGM	Kluang	22.95	273	⇓P	P	22 01 36.3	+0.3
MBWA	Marble Bar	23.02	196	eP	P	22 01 35.3	-1.2
PMG	Port Moresby	23.28	117	⇓eP	P	22 01 39.8	+0.4
PMG	Port Moresby	23.28	117	eP	P	22 01 38.9	-0.5
	21nm,0.9s,mb4.6						
NACB	Ninganchiao	23.39	349	eP	P	22 01 40.6	+0.3
KTGM	Kuala Trenggan	23.47	281	⇑P	P	22 01 41.7	+0.5
YHNB	Yeheng	23.91	349	eP	P	22 01 45.3	+0.3
	21nm,0.5s,mb4.8						
QIZ	Qiongzhong	24.02	319	P	P	22 01 42.8	-3.3
QIZ				AP		22 02 01.1	
QIZ				S	S	22 05 55.0	-5.2
QIZ				AMB	AMB		
	comp=Z,23nm,2.0s,mb4.3						
QIZ				LR	LR		
	comp=N,374nm,16.2s						
QIZ				LR	LR		
	comp=Z,442nm,22.1s						
FRIM	Kepong	24.71	275	⇑P	P	22 01 53.0	+0.5
QZH	Quanzhou	24.84	343	eP	P	22 01 56.1	+2.6
QZH				S	S	22 06 17.0	+3.6
QZH				LR	LR		
	comp=Z,900nm,20.8s,MS4.2						
IPM	Ipoh	25.43	278	⇓P	P	22 02 01.5	+2.5
IPM	Ipoh	25.43	278	⇓P	P	22 02 01.7	+2.6
JOW	Kunigami	25.67	4	P	P	22 02 02.4	+1.4
	comp=Z,75nm,0.9s,mb5.2,baz=186,slow=6.6,SNR=9.0						
ASAR	Alice Springs	25.70	164	P	P	22 02 03.0	+1.6
	comp=Z,19nm,0.6s,mb4.8,baz=348,slow=12,SNR=65						
ASAR				PcP	PcP	22 05 31.9	+0.9
	comp=Z,2.0nm,0.5s,baz=346,slow=2.1,SNR=6.5						
PPI	Padang Panjang	25.91	267	P	P	22 02 01.8	-1.6
	comp=Z,0.0nm,0.0s						
PSI	Prapat	27.38	274	⇑eP	P	22 02 14.7	-1.9
CTAO	Charters Tower	28.76	138	eP	P	22 02 28.1	-0.7
CTAO				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.6						
CTAO	Charters Tower	28.76	138	eP	P	22 02 28.1	-0.8
	comp=Z,17nm,1.3s,mb4.6						
WHN	Wuhan	31.40	340	P	P	22 02 56.3	+4.2
GYA	Guiyang	31.49	325	P	P	22 02 56.4	+3.5
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
GYA				AMB	AMB		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,570nm,17.6s,MS4.4						
GYA				LR	LR		
	comp=E,480nm,17.4s,MS4.4						
GYA				LR	LR		
	comp=Z,560nm,18.9s,MS4.3						
NJ2	Nanjing	31.58	348	eP	P	22 02 57.6	+4.0
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.2						
FORT	Forrest	31.74	177	eP	P	22 02 55.7	+0.7
	comp=Z,35nm,0.8s,mb5.2						
CMAR	Chiang Mai Arr	31.88	304	P	P	22 02 55.9	-0.6
	comp=Z,1.9nm,0.9s,mb3.9,baz=123,slow=7.0,SNR=12						
CMAR				PcP	PcP	22 05 47.6	+1.1
	comp=Z,4.1nm,0.9s,baz=140,slow=1.2,SNR=9.0						
CMAR				LR	LR	22 15 15.8	
	comp=Z,241nm,21.1s,MS3.9,baz=293,slow=35						
CMAR	Chiang Mai Arr	31.88	304	P	P	22 02 55.9	-0.6
CMAR						22 05 47.6	
CHTO	Chiang Mai	32.06	305	eP	P	22 02 57.6	-0.4
KMI	Kunming	32.97	318	P	P	22 03 09.5	+3.6
KMI				LR	LR		
	comp=N,215nm,24.3s,MS4.0						
KMI				LR	LR		
	comp=E,272nm,21.0s,MS4.0						
KMI				LR	LR		
	comp=Z,339nm,22.7s,MS4.0						
KLBR	Kellerberrin	33.49	193	eP	P	22 03 11.2	+0.8
	comp=Z,23nm,1.0s,mb5.1						
MUN	Mundaring	34.24	195	eP	P	22 03 16.9	0.0
STKA	Stephens Creek	35.86	157	eP	P	22 03 30.8	-0.1
	comp=Z,13nm,0.8s,mb4.9						
STKA	Stephens Creek	35.86	157	P	P	22 03 30.9	+0.1
	comp=Z,16nm,0.8s,mb5.0,baz=340,slow=8.1,SNR=21						
STKA				PcP	PcP	22 05 58.1	+0.6
	comp=Z,2.1nm,0.5s,baz=337,slow=5.8,SNR=3.9						
KSRS	Korea Array	36.22	2	P	P	22 03 34.9	+1.1
	comp=Z,8.7nm,0.7s,mb4.8,baz=179,slow=9.7,SNR=15						
KSRS				PcP	PcP	22 06 00.1	+1.6
	comp=Z,1.2nm,0.5s,baz=170,slow=4.2,SNR=5.6						
XAN	Xi'an	36.58	335	P	P	22 03 34.6	-2.3
XAN				AP	pP	22 03 47.8	-1.5
XAN				XP	sP	22 03 53.4	-1.4
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
XAN				AMB	AMB		
	comp=Z,46nm,5.5s						
XAN				LR	LR		
	comp=N,102nm,20.3s,MS3.9						
XAN				LR	LR		
	comp=E,184nm,19.1s,MS3.9						
XAN				LR	LR		
	comp=Z,316nm,21.1s,MS4.1						
MJAR	Matsushiro Arr	36.97	16	P	P	22 03 39.8	-0.4
	comp=Z,10nm,0.9s,mb4.7,baz=184,slow=9.6,SNR=30						
MJAR				PcP	PcP	22 06 00.9	+0.1
	comp=Z,2.7nm,0.9s,baz=204,slow=2.7,SNR=4.3						
MAJO	Matsushiro	36.97	16	eP	P	22 03 39.6	-0.6
MAJO				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.9						
MAJO	Matsushiro	36.97	16	eP	P	22 03 39.6	-0.6
	comp=Z,16nm,0.8s,mb4.9						
MAT	Matsushiro	36.97	16	P	P	22 03 40.6	+0.4
DL2	Dalian	37.87	354	P	P	22 03 48.4	+0.6
DL2				XP	sP	22 04 07.6	+1.9
DL2				eS	S	22 09 36.0	0.0
DL2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
DL2				LR	LR		
	comp=N,150nm,17.5s,MS4.0						
DL2				LR	LR		
	comp=E,110nm,17.5s,MS4.0						
DL2				LR	LR		
	comp=Z,190nm,19.1s,MS3.9						
BJT	Baijiatuau	39.82	348	eP	P	22 04 03.4	-0.7
BJI	Beijing	39.84	348	P	P	22 04 05.7	+1.4
BJI				AP	pP	22 04 19.9	+3.1
BJI				XP	sP	22 04 26.7	+4.5
BJI				PCP	PcP	22 06 10.2	+0.6
BJI				S	S	22 10 09.9	+4.3
BJI				AMB	AMB		

BJI LR LR
comp=N,130nm,21.6s,MS3.9
BJI LR LR
comp=E,136nm,21.1s,MS3.9
BJI LR LR
comp=Z,159nm,21.1s,MS3.8
BJI Beijing 39.84 348 P **P** **22 04 05.7 +1.4**
BJI *PP pP 22 04 19.9 +3.1
BJI 22 06 10.2
BJI S **S** **22 10 09.9 +4.3**
BJI pmax pmax
comp=Z,13nm,0.8s,mb4.7
BJI MLR MLR
comp=Z,160nm,21.1s,MS3.8
BJI Beijing 39.84 348 P **P** **22 04 05.7 +1.4**
comp=Z,13nm,0.8s,mb4.7
BJI pP pP 22 04 19.9 +3.1
BJI sP sP 22 04 26.7 +4.5
BJI PcP PcP 22 06 10.2 +0.6
BJI S **S** **22 10 09.9 +4.3**
BJI LR LR
comp=Z,160nm,21.1s,MS3.8
LZH Lanzhou 40.56 332 *e*P **P** **22 04 13.5 +3.2**
LZH AP pP 22 04 25.1 +2.3
LZH XP sP 22 04 29.1 +0.8
LZH AMB AMB
comp=Z,43nm,1.4s,mb4.9
LZH AMB AMB
comp=Z,160nm,5.9s
LZH LR LR
comp=N,401nm,16.4s
LZH LR LR
comp=Z,667nm,17.2s,MS4.6
LZH Lanzhou 40.56 332 *e*P **P** **22 04 13.5 +3.2**
LZH *PP pP 22 04 25.1 +2.3
LZH *SP sP 22 04 29.1 +0.8
LZH 22 05 51.2
LZH 22 06 14.0
LZH *e*S **S** **22 10 23.3 +6.8**
LZH *SS sS 22 10 42.0 +4.6
LZH SS SS 22 13 17.0 -0.8
LZH pmax pmax
comp=Z,43nm,1.4s,mb4.9
LZH MLR MLR
comp=Z,670nm,17.2s,MS4.6
LZH Lanzhou 40.56 332 *e*P **P** **22 04 13.5 +3.2**
comp=Z,43nm,1.4s,mb4.9
LZH pP pP 22 04 25.1 +2.3
LZH sP sP 22 04 29.1 +0.8
LZH PP PP 22 05 51.2 +6.7
LZH PcP PcP 22 06 14.0 +2.0
LZH *e*S **S** **22 10 23.3 +6.8**
LZH sS sS 22 10 42.0 +4.6
LZH SS SS 22 13 17.0 -0.8
LZH LR LR
comp=Z,670nm,17.2s,MS4.6
SHL Shillong 41.11 309 *e*P **P** **22 04 16.5 +1.4**
SHL *ex* x 22 06 16.5
HHC Hu-ho-hao-te 41.76 343 *e*P **P** **22 04 21.3 +1.2**
HHC AP pP 22 04 35.0 +2.4
HHC XP sP 22 04 40.3 +2.2
HHC PP PP 22 06 02.7 +5.3
HHC AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
HHC AMB AMB
comp=Z,54nm,7.2s
HHC LR LR
comp=N,226nm,14.5s,MS4.3
HHC LR LR
comp=E,179nm,14.0s,MS4.3
HHC LR LR
comp=Z,237nm,15.2s,MS4.2
MDJ Mudanjiang 43.44 3 P **P** **22 04 34.9 +1.2**
MDJ AP pP 22 04 48.2 +1.9
MDJ XP sP 22 04 54.3 +2.6
MDJ PP PP 22 06 19.4 +4.0
MDJ S **S** **22 11 03.4 +4.6**
MDJ AMB AMB
comp=Z,35nm,1.0s,mb5.0
MDJ AMB AMB
comp=Z,94nm,5.0s
MDJ LR LR
comp=N,73nm,8.4s
MDJ LR LR
comp=E,102nm,14.7s
MDJ LR LR
comp=Z,132nm,10.5s,MS4.1
MDJ Mudanjiang 43.44 3 *e*P **P** **22 04 34.1 +0.4**
comp=Z,38nm,0.9s,mb5.1
LSA Lhasa 43.87 314 P **P** **22 04 37.0 -0.4**
LSA AP pP 22 04 50.3 +0.3
LSA AMB AMB
comp=Z,20nm,0.9s,mb4.8
LSA LR LR
comp=N,100nm,14.0s,MS4.0
LSA LR LR
comp=E,60nm,12.0s,MS4.0
LSA LR LR
comp=Z,210nm,15.0s,MS4.2
LSA Lhasa 43.87 314 *e*P **P** **22 04 37.0 -0.4**
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
LSA Lhasa 43.87 314 *e*P **P** **22 04 37.0 -0.4**
comp=Z,8.7nm,0.6s,mb4.7
GTA Gaotai 45.13 331 *e*P **P** **22 04 46.3 -1.0**
GTA AP pP 22 04 57.1 -2.9
GTA XP sP 22 05 03.4 -2.0
GTA PP PP 22 06 31.2 -2.4
GTA S **S** **22 11 18.3 -5.3**
GTA AMB AMB
comp=Z,4.0nm,2.0s,mb3.9
GTA AMB AMB
comp=Z,49nm,6.0s
GTA LR LR
comp=N,171nm,15.6s,MS4.3
GTA LR LR
comp=E,250nm,18.0s,MS4.3
GTA LR LR
comp=Z,376nm,19.8s,MS4.3
TAPN Taplejung 45.24 309 *e*P **P** **22 04 47.2 -1.2**
ODAN Odare 45.26 308 *e*P **P** **22 04 46.6 -2.0**
comp=Z,35nm,1.0s,mb5.1
PALK Pallekele 45.83 279 P **P** **22 04 49.7 -3.6**
RAMN Ramite 45.93 308 *e*P **P** **22 04 52.4 -1.5**
comp=Z,23nm,0.7s,mb5.2
JIRN Jiri 46.58 308 *e*P **P** **22 04 58.3 -0.7**
comp=Z,18nm,0.5s,mb5.2
GUN Gumba 46.94 308 *e*P **P** **22 05 00.3 -1.5**
comp=Z,47nm,0.7s,mb5.5
KKN Kakani 47.35 308 *e*P **P** **22 05 03.2 -1.8**
comp=Z,26nm,0.8s,mb5.2
DMN Daman 47.41 308 *e*P **P** **22 05 03.9 -1.6**
comp=Z,25nm,0.9s,mb5.1
GKN Gorkha 47.96 308 *e*P **P** **22 05 08.0 -1.7**
comp=Z,18nm,0.7s,mb5.2
KLR Kul'dur 48.19 5 *e*P **P** **22 05 07.3 -3.8**
KLR pmax pmax
comp=Z,32nm,1.2s,mb5.2
HIA Hailar 48.32 354 *e*P **P** **22 05 12.4 +0.3**
HIA pmax pmax
comp=Z,16nm,0.8s
HIA Hailar 48.32 354 *e*P **P** **22 05 12.4 +0.3**
comp=Z,16nm,0.8s,mb5.1
KOLN Koldanda 48.68 307 *e*P **P** **22 05 13.8 -1.5**
comp=Z,56nm,0.7s,mb5.7
DANN Dangsing 48.81 308 *e*P **P** **22 05 15.0 -1.2**
comp=Z,72nm,0.7s,mb5.8
ULN Ulaanbaatar 49.48 343⇑ *e*P **P** **22 05 20.8 -0.2**
ULN Ulaanbaatar 49.48 343 *e*P **P** **22 05 20.2 -0.8**
comp=Z,8.1nm,0.8s,mb4.8
HYB Hyderabad 49.62 292 *i* P **P** **22 05 25.0 +2.4**
HYB Hyderabad 49.62 292 *e*P **P** **22 05 21.5 -1.1**
SONM Songino Array 49.65 343 P **P** **22 05 21.7 -0.6**
comp=Z,5.6nm,0.8s,mb4.7,baz=157,slow=7.0,SNR=19
SONM PcP PcP 22 06 44.2 +1.1
comp=Z,4.8nm,0.9s,baz=141,slow=3.5,SNR=6.8
SONM LR LR 22 29 21.4
comp=Z,181nm,19.2s,MS4.1,baz=250,slow=40
SONM Songino Array 49.65 343 P **P** **22 05 21.7 -0.6**
SONM 22 06 44.2
TLY Talaya 53.88 343 P **P** **22 05 53.8 0.0**
DDI Dehra Dun 54.15 307 *ex* x 22 05 54.0
WMQ Urumqi 54.63 326 P **P** **22 06 00.8 +1.4**
WMQ AP pP 22 06 13.5 +1.2
WMQ XP sP 22 06 19.0 +1.3
WMQ PCP PcP 22 07 02.0 +0.1
WMQ S **S** **22 13 36.0 +0.1**
WMQ XS sS 22 13 58.0 +0.4
WMQ SCS ScS 22 15 42.0 -2.8
WMQ AMB AMB
comp=Z,13nm,1.0s,mb4.9
WMQ AMB AMB
comp=Z,144nm,4.6s
WMQ LR LR
comp=N,637nm,17.6s
WMQ LR LR
comp=E,314nm,12.5s
WMQ LR LR
comp=Z,412nm,22.7s
MOY Mondy 54.70 341 *e*P **P** **22 06 01.3 +1.6**
CLNS Chul'man 55.59 359 *e*P **P** **22 06 07.2 +1.2**
CLNS pmax pmax
comp=Z,14nm,1.1s,mb4.9
CLNS pmax pmax
comp=E,4.0nm,1.0s
CLNS pmax pmax
comp=N,11nm,0.9s
BOD Bodaibo 57.40 352 *e*P **P** **22 06 19.5 +0.6**
BOD pmax pmax
comp=Z,19nm,1.4s,mb4.9
PETK Petropavlovsk- 58.03 22 P **P** **22 06 24.8 +1.3**
comp=Z,14nm,0.7s,mb5.1,baz=193,slow=4.8,SNR=20
PETK Petropavlovsk- 58.03 22 P **P** **22 06 24.8 +1.3**
PET Petropavlovsk 58.33 22 *i* P **P** **22 06 24.9 -0.6**
PET pmax pmax
comp=Z,19nm,0.8s,mb5.2
PET MLR MLR
comp=Z,100nm,14.0s,MS4.1
MK31 Makanchi Array 59.46 326 P **P** **22 06 32.1 -1.4**
MK31 pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
MKAR Makanchi Array 59.46 326 P **P** **22 06 32.0 -1.5**
comp=Z,2.5nm,0.5s,mb4.5,baz=129,slow=8.1,SNR=42
MKAR LR LR 22 33 28.3
comp=Z,268nm,19.4s,MS4.4,baz=265,slow=37
MKAR Makanchi Array 59.46 326 P **P** **22 06 32.0 -1.5**
MKAR LR LR 22 33 28.3
KSH Kashi 59.59 316 *e*P **P** **22 06 39.0 +4.4**
KSH *e*AP pP 22 06 51.0 +3.3
KSH *e*XP sP 22 06 57.1 +4.1
KSH *e*PCP PcP 22 07 22.1 +0.6
KSH *e*PP PP 22 08 53.1 +6.5
KSH *e*PPP 22 10 19.0
KSH *e*SCP ScP 22 11 20.0 +1.2
KSH *e*PCS PcS 22 11 25.0 +1.4
KSH *e*S **S** **22 14 44.4 +2.9**
KSH *e*XS sS 22 15 06.1 +2.7
KSH *e*SCS ScS 22 16 21.1 -0.1
KSH *e*SS SS 22 18 42.1 +4.4
KSH AMB AMB
comp=Z,366nm,6.0s
KSH LR LR
comp=Z,428nm,5.3s
YAK Yakutsk 60.84 2 *e*P **P** **22 06 42.4 -0.3**
YAK *e* pP 22 06 54.4 -1.4
YAK pmax pmax
comp=Z,28nm,0.9s,mb5.4
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK Yakutsk 60.84 2 *e*P **P** **22 06 43.0 +0.3**
comp=E,33nm,0.7s,mb5.6
TKM2 Tokmak 2 61.42 320 *e*P **P** **22 06 45.3 -1.7**
TKM2 pmax pmax
comp=Z,31nm,0.6s,mb5.6
TKM2 Tokmak 2 61.42 320 *e*P **P** **22 06 45.3 -1.7**
comp=Z,31nm,0.6s,mb5.6
AML Almayashu 62.31 318 *e*P **P** **22 06 53.4 +0.4**
comp=Z,6.0nm,1.5s,mb4.5
EKS2 Erkin-Say 62.49 319 *e*P **P** **22 06 53.2 -1.0**
comp=Z,13nm,1.1s,mb5.0
ZAA0 Zalesovo Array 62.73 334 *e*P **P** **22 06 55.4 -0.1**
ZALV Zalesovo Beam 62.73 334 P **P** **22 06 53.8 -1.7**
comp=Z,3.6nm,0.6s,mb4.7,baz=126,slow=4.6,SNR=16
ZALV LR LR 22 34 46.3
comp=Z,67nm,21.0s,MS3.8,baz=250,slow=37
ZAL Zalesovo 62.73 334 P **P** **22 06 53.8 -1.7**
KBL Kabul 62.77 309 *e*P **P** **22 06 53.9 -2.3**
KBL pmax pmax
comp=Z,13nm,0.8s,mb5.1
KBL Kabul 62.77 309 *e*P **P** **22 06 53.9 -2.3**
comp=Z,13nm,0.8s,mb5.1
KURK Kurchatov 63.72 328 P **P** **22 07 00.8 -1.3**
comp=Z,166nm,1.0s,mb6.0,SNR=14
KURK Kurchatov 63.72 328 P **P** **22 07 00.9 -1.2**
comp=Z,10nm,0.7s,mb5.0,baz=129,slow=6.2,SNR=25
KURK Kurchatov 63.72 328⇈ *e*P **P** **22 07 00.7 -1.4**
KURK pmax pmax
KURK MLR MLR
comp=Z,7.0nm,0.6s,mb4.9
comp=Z,100nm,17.0s,MS4.1
KURK Kurchatov 63.72 328 *e*P **P** **22 07 00.9 -1.2**
NVS Novosibirsk 64.01 334 *e*P **P** **22 07 02.8 -1.2**
NVS pmax pmax
comp=N,2.0nm,0.8s
NVS pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
NVS pmax pmax
comp=E,4.0nm,0.7s
SEY Seymchan 64.69 13⇓ *e*P **P** **22 07 10.3 +2.0**
KK31 Karatay Array 64.85 318 *i* P **P** **22 07 08.5 -1.2**
KK31 pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
CASY Casey 68.16 187 *e*P **P** **22 07 30.9 +0.5**
comp=Z,9.5nm,0.5s,mb5.1
VOSK Vostochnaya 68.82 328 P **P** **22 07 34.8 0.0**
VOSK pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
BVA0 Borovoye Array 69.28 328 *e*P **P** **22 07 37.0 -0.6**
BVA0 pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
BVAR Borovoye Array 69.28 328 P **P** **22 07 36.5 -1.1**
comp=Z,8.6nm,0.9s,mb4.7,baz=126,slow=7.7,SNR=26
BRVK Borovoye 69.35 328 P **P** **22 07 38.4 +0.4**
comp=Z,110nm,1.1s,mb5.7,SNR=6.6
BRVK Borovoye 69.35 328 *e*P **P** **22 07 38.3 +0.3**
TIXI Tiksi 70.47 1 *d i*P **P** **22 07 44.6 0.0**
TIXI pmax pmax
comp=Z,25nm,1.3s,mb5.0
TIXI MLR MLR
comp=Z,185nm,20.0s,MS4.3
TIXI Tiksi 70.47 1 *e*P **P** **22 07 43.8 -0.8**
comp=Z,14nm,0.9s,mb4.9
MIR Mirnyy 71.50 193⇓ *i*P **P** **22 07 53.0 +2.1**
MIR pmax pmax
comp=Z,100nm,1.0s,mb5.7
AB31 Akbulak array 73.90 321 *i* P **P** **22 08 03.7 -1.8**
AB31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
AKTK Aktyubinsk 75.43 322 P **P** **22 08 13.8 -0.5**
AKTO Aktyubinsk 75.43 322 P **P** **22 08 13.8 -0.5**
comp=Z,8.4nm,0.9s,mb4.7,baz=107,slow=6.0,SNR=20
SVE Sverdlovsk 75.96 329⇓ *e*P **P** **22 08 16.7 -0.5**
SVE *e*S S 22 18 04.2 +7.6
SVE *e* 22 18 45.6
SVE *e*SS SS 22 22 44.5 -5.4
SVE pmax pmax
comp=Z,45nm,1.3s,mb5.2
SVE MLR MLR
comp=Z,178nm,20.0s,MS4.4
ARU Arti 76.91 328 P **P** **22 08 21.5 -1.1**
comp=Z,97nm,0.7s,mb5.8,SNR=5.8
ARU Arti 76.91 328 *d i*P **P** **22 08 20.5 -2.1**
ARU *e* pP 22 08 31.4 -4.8
ARU *e*S S 22 18 07.5 +0.4
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.8
ARU Arti 76.91 328 *e*P **P** **22 08 21.2 -1.5**
MIB Mutribah 79.85 300 *e*P **P** **22 08 37.9 -1.6**
baz=300
MIB AMb AMB 22 08 46.6
comp=Z,42nm,0.9s,mb5.4,baz=300
NAY Al-Naaiem 79.89 299 *e*P **P** **22 08 38.2 -1.5**
baz=299
NAY AMb AMB 22 09 02.8
comp=Z,23nm,2.0s,mb4.8,baz=299
RST Umm Al-Ruwaisa 80.12 300 *e*P **P** **22 08 38.5 -2.5**
baz=300
RST AMb AMB 22 08 47.7
comp=Z,2.0nm,1.0s,mb4.0,baz=300
MAW Mawson 81.13 200⇓ *i*P **P** **22 08 46.7 +1.2**
comp=Z,7.8nm,1.1s,mb4.5
MAW Mawson 81.13 200 P **P** **22 08 46.9 +1.4**
comp=Z,8.5nm,0.9s,mb4.7,baz=55,slow=7.3,SNR=14
MAW LR LR 22 43 12.9
comp=Z,69nm,19.9s,MS4.0,baz=246,slow=34
MAW Mawson 81.13 200⇓ *i*P **P** **22 08 46.7 +1.2**
MAW pmax pmax
comp=Z,8.0nm,1.1s
SBA Scott Base 81.80 172 *e*P **P** **22 08 49.2 +0.3**
SBA pmax pmax
comp=Z,32nm,1.8s,mb5.0
SBA Scott Base 81.80 172 *e*P **P** **22 08 49.2 +0.3**
comp=Z,32nm,1.8s,mb5.0
GNI Garni 82.81 310 *i* P **P** **22 08 55.3 +0.3**
GNI Garni 82.81 310 *e*P **P** **22 08 54.6 -0.4**
comp=Z,14nm,0.9s,mb5.0
SVW2 Sparrevohn 83.33 29 *e*P **P** **22 08 58.5 +1.4**
TTA Tatalina 83.45 27 *e*P **P** **22 08 59.7 +2.0**
OHAK Old Harbor 83.91 33 *e*P **P** **22 09 01.7 +1.5**
KDAK Kodiak Island 84.36 32 *e*P **P** **22 09 04.2 +1.8**
KIV Kislovodsk 84.61 314⇈ *e*P **P** **22 09 06.2 +2.1**
KIV pmax pmax
comp=Z,22nm,2.1s,mb4.9
KIV Kislovodsk 84.61 314 *e*P **P** **22 09 04.2 +0.1**
comp=Z,13nm,0.9s,mb5.1
VRHR Novokhopersk 85.78 321 *e*P **P** **22 09 10.1 +0.3**
VRHR pmax pmax
comp=Z,40nm,0.7s,mb5.8
VRHR pmax pmax
comp=N,20nm,0.5s
VRHR pmax pmax
comp=E,50nm,0.9s
SLKM Skilak Lake 85.85 30 *e*P **P** **22 09 10.1 +0.2**
RC01 Rabbit Creek A 86.14 29 P **P** **22 09 04.5 -6.9**
comp=E,21nm,1.1s,mb5.3
PMR Palmer 86.47 28 P **P** **22 09 10.1 -2.8**
COLD Coldfoot 86.49 23 *e*P **P** **22 09 13.8 +0.9**
comp=E,12nm,1.0s,mb5.1
MCK McKinley 86.72 26 P **P** **22 09 14.1 0.0**
VRSR Storozhevoye 87.32 321 *e*P **P** **22 09 17.7 +0.4**
VRSR pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
VRSR pmax pmax
comp=N,4.0nm,0.9s
VRSR pmax pmax
comp=E,10.0nm,0.8s
MALT Malatya 87.63 308 *e*P **P** **22 09 18.7 -0.4**
MALT pmax pmax
comp=Z,16nm,1.2s,mb5.1
MALT Malatya 87.63 308 *e*P **P** **22 09 18.6 -0.4**
comp=Z,16nm,1.2s,mb5.1
DIV Divide 88.06 29 *e*P **P** **22 09 21.5 +0.9**
MOS Moscow 88.34 326 *e*P **P** **22 09 23.5 +1.5**
OBN Obninsk 88.94 325⇈ *e*P **P** **22 09 25.3 +0.4**
OBN *e*S S 22 19 54.1 -15
OBN *e*PS PS 22 21 17.1 -2.2
OBN *e*SS SS 22 26 06.4 +3.9
OBN pmax pmax
comp=Z,16nm,1.3s,mb5.2
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.2
KMBO Kilima Mbogo 89.03 269 *e*P **P** **22 09 27.5 +1.2**
KMBO pmax pmax
comp=Z,10.0nm,1.0s
KMBO Kilima Mbogo 89.03 269 *e*P **P** **22 09 27.5 +1.3**
comp=Z,9.7nm,1.0s,mb5.1
SYO Syowa Base 89.81 201⇓ *e*P **P** **22 09 27.8 -0.9**
SYO Syowa Base 89.81 201⇓ *e*PcP PcP 22 09 28.6 -1.3
DAWY Dawson 90.94 26 *e*P **P** **22 09 34.8 +0.8**
JOF Joensuu 91.30 333 *e*p **P** **22 09 36.4 +0.7**
comp=Z,7.4nm,1.1s,mb4.9
CSS Prodhromos 91.79 305 *e*P **P** **22 09 38.8 +0.1**
comp=Z,14nm,0.9s,mb5.3
ARCES ARCESS Array B 92.75 340 P **P** **22 09 45.2 +2.9**
comp=Z,1.7nm,0.7s,mb4.6,baz=69,slow=6.6,SNR=6.8
ARCES LR LR 23 00 48.6
comp=Z,78nm,19.0s,MS4.2,baz=197,slow=42
ARCES ARCESS Array B 92.75 340 P **P** **22 09 45.2 +2.9**
ARCES LR LR 23 00 48.6
AKASG Malin Array Be 93.63 321 LR LR 22 54 30.4
comp=Z,92nm,19.6s,MS4.2,baz=100,slow=37
KAF Kangasniemi 93.70 332 *e*p **P** **22 09 47.1 +0.2**
comp=Z,3.2nm,0.6s,mb4.9
KAF Kangasniemi 93.70 332 *e*P **P** **22 09 47.1 +0.2**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.9
DIB Dawson Inlet, 95.87 36 T 23 55 42.9
SNR=20
MLR Muntele Rosu 96.46 316⇓ *i*P **P** **22 10 05.1 +5.3**
BURAR Bucovina Array 96.64 318⇓ *i*P **P** **22 10 01.4 +0.8**
BUR08 Bucovina Ar. S 96.65 318 *e*P **P** **22 10 00.3 -0.3**
LSZ Lusaka 98.08 255 *e*P **P** **22 10 07.6 -0.2**
UZH Uzhgorod 98.39 319 *e*P **P** **22 10 09.2 +0.7**
UZH *e* pP 22 10 21.4 -0.9
DRGR 98.47 318⇑ *i*P **P** **22 10 11.1 +2.2**
SUR Sutherland 103.62 237 *e*Pdif Pdif 22 10 32.6 +1.1
ELK Elko 110.50 45 *e*PKIKP PKiKP 22 15 03.2 +0.1
ELK *e* 22 15 44.6
PDAR Pinedale Array 113.63 42 PKKPbc PKKPbc 22 25 52.9 -0.9
comp=Z,0.7nm,0.9s,baz=85,slow=2.0,SNR=4.3
ANMO Albuquerque 119.12 48 *e*PKIKP PKPdf 22 15 19.3 -0.5
ECSD EROS,Sioux Fal 121.20 35 *e*PKPdf PKPdf 22 15 24.0 +0.5
SCHQ Schefferville 123.23 9 PKP PKPdf 22 15 27.7 +0.7
comp=Z,4.3nm,0.9s,baz=180,slow=3.6,SNR=3.8
TOA0 Torodi Ar. Sit 123.25 286 *e*PKPdf PKPdf 22 15 28.4 +0.2
TORD Torodi Ar. Bea 123.25 286 PKP PKPdf 22 15 28.5 +0.3
comp=Z,7.8nm,0.8s,baz=60,slow=1.9,SNR=43
TORD PKKPbc PKKPbc 22 25 20.7 +2.5
comp=Z,2.2nm,0.8s,baz=275,slow=4.3,SNR=13
TORD Torodi Ar. Bea 123.25 286 PKP PKPdf 22 15 28.5 +0.3
TORD PKKPbc PKKPbc 22 25 20.7 +2.5
TXAR Lajitas Array 123.56 53 PKP PKPdf 22 15 29.6 +1.2
comp=Z,1.3nm,0.8s,baz=216,slow=0.9,SNR=19
JFWS Jewell Farm 125.28 32 *e*PKIKP PKPdf 22 15 31.8 +0.5
JCT Junction City 126.11 50 *e*PKIKP PKPdf 22 15 34.5 +1.2
CCM Cathedral Cave 127.92 38 *e*PKIKP PKPdf 22 15 36.6 +0.1
DBIC Dimbokro 130.61 280 PKP PKPdf 22 15 43.6 +1.3
comp=Z,5.4nm,1.0s,baz=133,slow=6.6,SNR=3.5
ACSO Alum Creek Sta 130.97 30 *e*PKPdf PKPdf 22 15 43.9 +1.6
WVT Waverly 131.24 37 *e*PKIKP PKPdf 22 15 44.1 +1.2
PLAL Pickwick Lake 131.84 38 *e*PKPdf PKPdf 22 15 44.2 +0.1
LRAL Lakeview Retre 133.79 40 *e*PKPdf PKPdf 22 15 49.5 +1.7
TKL Tuckaleechee C 133.94 34 *e*PKIKP PKPdf 22 15 47.0 -1.0
PLCA Paso Flores 137.70 161 PKP PKPdf 22 15 57.2 +2.4
comp=Z,1.9nm,0.7s,baz=157,slow=3.0,SNR=3.4
BBSR BB Station 145.14 16 *e*PKPdf PKPdf 22 16 09.3 +0.8
LPAZ La Paz 159.28 138 PKP PKPdf 22 16 30.8 +1.1
comp=Z,1.2nm,0.6s,baz=202,slow=5.5,SNR=6.6
SDV Santo Domingo 160.46 59 *e*PKPdf PKPdf 22 16 31.8 +0.7

ISCJB ***10*** *22:02:11.5± 0.4, 24 23N± 002× 104 26E± 006, h10km, mb3.9/2, MS3.8/2, Error ellipse: s-maj=7.5km s-min=3.5km az=2.3*
IDC ***10*** *22:02:14.4± 1.7, 24 37N× 103 87E, h0km, mb3.9/2, mb1 4.0/3, mb1mx3.5/20, mbtmp3.8/3, ML4.4/1, MS3.7/2, Ms1 3.7/2, ms1mx2.8/32, Error ellipse: s-maj=37.7km s-min=26.1km az=101.0*
BJI ***10*** *22:02:14.1, 24 36N× 104 00E, h16km, mB4.4, mb4.6, ML4.1, Ms3.8, Msz3.6*
NEIC ***10*** *22:02:16.4± 0.9, 24 36N× 103 82E, h10km, Error ellipse: s-maj=16.6km s-min=10.2km az=88.0*
PLV ***10*** *22:02:22.8± 1.6, 23 73N× 104 28E, h0km, 8km, MD4.1*
ISC 10 22:02:14.3± 0.4, 2419N± 002× 10402E± 005, h10km, n21, σ 1§ 56/41, mb3.9/2, MS3.8/2, 1C, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**1.49**	**309**	PG	**Pn**	**22 02 40.0**	**-1.2**
KMI				SG	**Sn**	**22 02 56.3**	**-4.4**
KMI				Smax			
	comp=N,2μm,0.9s						
KMI				Smax			
	comp=E,1μm,1.0s						
SLVN	**Son La**	**2.84**	**182**	*e*PG	**Pg**	**22 03 14.7**	**+5.9**
SLVN				*e*SG	**Sg**	**22 03 47.0**	**+1.3**
DBV	**Dienbien**	**2.93**	**198**	*e*PG	**Pg**	**22 03 12.0**	**+1.5**
DBV				*e*SG	**Sg**	**22 03 46.2**	**-2.4**
GYA	**Guiyang**	**3.29**	**46**⇑	*i*P	**Pn**	**22 03 07.6**	**+1.6**
GYA				S	**Sn**	**22 03 45.0**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GYA				SG	Sg	22 03 54.0	-6.1
GYA				Smax			
	comp=N,660nm,0.9s						
GYA				Smax			
	comp=E,760nm,0.9s						
MTZV	Met	3.39	140	ePn	Pn	22 03 10.2	+2.9
MTZV				ePg	Pg	22 03 18.1	-1.2
MTZV				eSg	Sg	22 03 55.7	-7.5
BGV	Bac-Giang	3.53	144	ePn	Pn	22 03 12.0	+2.8
BGV				ePg	Pg	22 03 20.7	-1.3
BGV				eSg	Sg	22 04 00.0	-7.7
HNV	Hanoi	3.53	152	ePn	Pn	22 03 13.5	+4.3
HNV				ePG	Pg	22 03 21.7	-0.3
HNV				eSG	Sg	22 04 02.3	-5.4
DSV	Doi Son	4.01	153	ePn	Pn	22 03 19.4	+3.5
DSV				ePg	Pg	22 03 30.8	-0.5
DSV				eSG	Sg	22 04 15.3	-7.9
PLV	Phu-Lien	4.14	144	ePn	Pn	22 03 20.5	+2.9
PLV				ePg	Pg	22 03 32.2	-1.5
PLV				eSg	Sg	22 04 19.6	-7.7
LAVN	Lang Chanh	4.17	164	ePG	Pg	22 03 33.9	-0.4
LAVN				eSG	Sg	22 04 22.1	-6.3
CD2	Chengdu	6.70	358	eP	Pn	22 03 52.5	-0.3
CD2				S	Sn	22 05 08.6	-0.6
CD2				Smax			
	comp=N,60nm,0.8s						
CD2				Smax			
	comp=E,60nm,0.8s						
CM31	Chiang Mai Arr	7.41	221	ePn	Pn	22 04 05.3	+2.7
CM31				Sn	Sn	22 05 24.3	-2.4
CMAR	Chiang Mai Arr	7.41	221	Pn	Pn	22 04 05.2	+2.7
	comp=E,1.5nm,0.3s,baz=31,slow=13,SNR=19						
CMAR				Pg	Pg	22 04 35.6	-0.6
	comp=E,0.1nm,0.3s,baz=31,slow=17,SNR=11						
CMAR				Lg		22 06 10.0	
	comp=E,0.2nm,0.3s,baz=46,slow=31,SNR=5.3						
LZH	Lanzhou	11.86	359	eP	Pn	22 05 04.6	+1.1
LZH				AP		22 05 08.5	
LZH				XP		22 05 11.5	
LZH				PP		22 05 14.2	
LZH				eS	Sn	22 07 16.0	+0.1
LZH				XS		22 07 20.5	
LZH				SS		22 07 29.0	
LZH				AMB	AMB		
	comp=Z,18nm,1.0s						
LZH				AMB	AMB		
	comp=Z,60nm,4.0s						
LZH				LR	LR		
	comp=E,300nm,12.0s						
LZH				LR	LR		
	comp=Z,410nm,13.0s						
LZH	Lanzhou	11.86	359	eP	Pn	22 05 04.6	+1.1
	comp=Z,18nm,1.0s						
LZH				pP		22 05 08.5	
LZH				sP		22 05 11.5	
LZH				PP		22 05 14.2	
LZH				eS	Sn	22 07 16.0	+0.1
LZH				sS		22 07 20.5	
LZH				SS		22 07 29.0	
HHC	Hu-ho-hao-te	17.78	19	eP	Pn	22 06 18.5	-3.3
HHC				AP	pP	22 06 22.3	-3.1
HHC				XP	sP	22 06 25.5	-1.3
HHC				PP		22 06 33.5	
HHC				S	Sn	22 09 34.0	-6.0
HHC				SS		22 09 55.8	
HHC				PCP	PcP	22 10 57.3	-1.9
HHC				SCS	ScS	22 18 09.7	-5.1
HHC				AMB	AMB		
	comp=Z,10.0nm,0.5s						
HHC				AMB	AMB		
	comp=Z,62nm,5.4s						
HHC				LR	LR		
	comp=N,139nm,10.9s						
HHC				LR	LR		
	comp=E,110nm,10.2s						
HHC				LR	LR		
	comp=Z,123nm,10.2s						
ZALV	Zalesovo Beam	33.03	339	P	P	22 08 49.2	-0.4
	comp=Z,2.5nm,0.6s,mb4.3,baz=142,slow=7.8,SNR=5.0						
ZALV	Zalesovo Beam	33.03	339	P	P	22 08 49.2	-0.4
PETK	Petropavlovsk-	49.37	40	LR	LR	22 35 46.1	
	comp=Z,60nm,18.4s,MS3.6,baz=214,slow=41						
WRA	Warramunga Arr	52.88	143	P	P	22 11 33.9	+3.3
	comp=Z,0.5nm,0.7s,mb3.5,baz=331,slow=8.5,SNR=6.4						
YKA	Yellowknife Ar	88.31	17	LR	LR	22 56 24.5	
	comp=Z,44nm,18.1s,MS3.9,baz=295,slow=37						

KRSC 10 22:23:52.2±3.1, 5252N×15408E, h543^{km}±83^{km}, ML4.5, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.89	150	P	P	22 25 03.4	+2.7
GNL	Ganaly	2.61	62	P	P	22 25 06.8	+2.7
RUS	Russkaya	2.71	90	P	P	22 25 07.4	+2.6
RUS				i S	S	22 26 02.1	-2.0
AVH	Avacha	2.92	73	P	P	22 25 09.3	+3.4
SPN	Mys Shipunski	3.65	79	P	P	22 25 13.3	+2.5
SPN				i S	S	22 26 12.6	-2.6
MKZ	Mys Kozlova	5.00	63	P	P	22 25 24.9	+3.6
MKZ				i S	S	22 26 32.1	-2.3
SRDR	Sredinnyy	5.03	39	P	P	22 25 24.8	+3.2
KBTR	Krutoberegovo	6.30	51	P	P	22 25 35.6	+2.6

MAN 10 22:30:16, 1173N×12535E, h32^{km}, mb3.9, ML2.7, MS2.3, 3D, Samar

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLP	Palo	0.66	213	⇓iP	Pn	22 30 28.9	-0.3
PLP				eS	Sb	22 30 37.9	-0.3
OCLP	Ormoc	0.99	227	eP	Pn	22 30 34.6	+1.0
OCLP				eS	Sn	22 30 48.2	+1.8
CNP	Catarman	1.02	319	eP	Pn	22 30 34.1	-0.1
CNP				eS	Sn	22 30 48.8	+1.4
MSLP	Maasin	1.65	197	eP	Pn	22 30 44.8	+2.0
MSLP				eS	Sn	22 31 04.1	+1.1
SCPH	Surigao	1.94	176	⇓eP	Pn	22 30 48.2	+1.5
RCP	Roxas	2.55	267	⇓eP	Pn	22 30 56.6	+1.4
OTRP	Odiongan	3.31	281	eP	Pn	22 31 06.3	+0.7

*ISCJB **10** 22:41:03.1±1.3, 1575S±0.08×168.43E±0.08, h255^{km}±13^{km}, mb4.2/13, Error ellipse: s-maj=13.7km s-min=11.6km az=150.9*
*IDC **10** 22:41:03.3±11.0, 1568S×168.41E, h240^{km}±101^{km}, mb3.8/7, mb1 4.0/7, mb1mx3.6/18, mbtmp3.8/7, Error ellipse: s-maj=60.2km s-min=21.7km az=34.0*
*NEIC **10** 22:41:03.5±1.1, 1572S×168.41E, h245^{km}±11^{km}, mb4.4/7, Error ellipse: s-maj=10.2km s-min=8.1km az=165.0*
ISC 10 22:41:03.4±1.4, 1573S±0.08×168.40E±0.08, h242^{km}±13^{km}, n41, σ0^{s}79/31, mb4.2/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.57	196	eP	Pn	22 42 39.5	+1.0
DZM				eS	S	22 43 53.5	-1.2
DZM	Mont Dzumac	6.57	196	ePn	Pn	22 42 39.4	+0.9
DZM				eS	S	22 43 55.6	+0.9
FUNA	Funafuti	12.75	57	P	Pn	22 43 55.5	-1.0
ARMA	Armidale	21.21	224	eP	P	22 45 31.6	+0.9
CTA	Charters Tower	21.51	255	P	P	22 45 34.0	+0.3
	3.4nm,0.4s,mb4.2,baz=80,slow=12,SNR=8.7						
CTAO	Charters Tower	21.51	255	eP	P	22 45 33.8	+0.1
PMG	Port Moresby	21.66	284	eP	P	22 45 34.6	-0.5
URZ	Urewera	23.71	163	P	P	22 45 54.2	+0.6
	4.8nm,0.3s,mb4.5,baz=126,slow=2.6,SNR=7.1						
SNZO	South Karori	26.06	169	eP	P	22 46 14.0	-0.7
STKA	Stephens Creek	29.21	232	eP	P	22 46 43.3	+0.6
	3.9nm,0.4s,mb4.4						
STKA	Stephens Creek	29.21	232	P	P	22 46 43.6	+0.9
	4.3nm,0.3s,mb4.5,baz=65,slow=9.3,SNR=27						
STKA	Stephens Creek	29.21	232	eP	P	22 46 43.6	+0.8
	7.8nm,0.8s,mb4.4						
RAR	Rarotonga	30.64	105	eP	P	22 46 56.0	+0.5
TAU	Tasmania Unive	32.54	209	P	P	22 47 11.2	-0.6
WB2	Warramunga Arr	32.65	258	eP	P	22 47 12.2	-0.8
WRAB	Tennant Creek	32.65	258	eP	P	22 47 12.0	-1.0
	2.1nm,0.7s,mb3.8						
WRA	Warramunga Arr	32.66	258	P	P	22 47 12.5	-0.6
	1.2nm,0.3s,mb3.9,baz=83,slow=7.8,SNR=30						
ASAR	Alice Springs	33.36	251	P	P	22 47 18.9	-0.2
	16nm,0.5s,mb4.8,baz=76,slow=9.3,SNR=240						
KNA	Kununurra	38.11	264	eP	P	22 47 59.5	0.0
	19nm,0.4s,mb5.0						
FITZ	Fitzroy Crossi	40.92	260	eP	P	22 48 22.9	+0.3
	13nm,0.7s,mb4.5						
MBWA	Marble Bar	46.35	256	eP	P	22 49 06.1	+0.3
SBA	Scott Base	62.14	180	eP	P	22 50 58.4	-0.1
CASY	Casey	63.02	203	eP	P	22 51 03.1	-1.2
	15nm,1.7s,mb4.3						
CMAR	Chiang Mai Arr	76.36	294	P	P	22 52 28.2	+1.8
	0.5nm,0.5s,mb3.4,baz=138,slow=4.0,SNR=5.0						
CHTO	Chiang Mai	76.49	294	eP	P	22 52 26.6	-0.5
MAW	Mawson	81.37	202	P	P	22 52 53.2	+0.4
	0.9nm,0.4s,mb3.7,baz=196,slow=3.8,SNR=3.7						
TRF	Thorofare Moun	85.16	17	P	P	22 53 13.3	+1.3
	18nm,1.6s,mb4.6						
LSA	Lhasa	87.02	302	eP	P	22 53 22.4	+0.6
SNAA	Sanae	92.61	183	eP	P	22 53 46.1	-1.0
	0.7nm,0.5s,mb4.0						
ARCES	ARCESS Array B	121.49	346	PKP	PKPdf	22 59 25.9	-1.4
	1.4nm,0.7s,baz=0.0,slow=0.0,SNR=8.1						
HINF	Hinteralfeld	144.57	338	ePKP1	PKPdf	23 00 11.4	+0.4
MEZF	Maizieres J'vi	144.58	341	ePKP1	PKPdf	23 00 12.1	+1.1
HAU	Haudompre	144.58	339	ePKP1	PKPdf	23 00 11.8	+0.8
LOR	Lormes	146.04	341	ePKP1	PKPbc	23 00 16.4	+1.6
	7.4nm,0.8s						
SSF	Saint Saulge	146.34	341	ePKP1	PKPbc	23 00 17.2	+1.5
LPL	La Plagne	146.55	336	ePKP1	PKPbc	23 00 18.2	+1.9
LPG	La Plagne	146.56	336	ePKP1	PKPbc	23 00 18.3	+2.0
	4.4nm,0.8s						
SMF	Signal de Mont	146.60	341	ePKP1	PKPbc	23 00 16.9	+0.5
	4.4nm,0.7s						
BGF	Bois d'Agland	146.99	342	ePKP1	PKPbc	23 00 18.9	+1.4
MFF	Saint Martin d	147.78	345	ePKP1	PKPbc	23 00 20.9	+1.3
	9.2nm,0.8s						
ETSF	Etsaut	151.32	343	ePKP1	PKPbc	23 00 29.6	+1.2
	3.3nm,0.6s						

IDC 10 22:54:20.7±25.0, 1394S×16722E, h192^{km}±209^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.5/17, mbtmp3.6/6, Error ellipse: s-maj=129.5km s-min=52.2km az=87.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	20.95	250	P	P	22 58 49.4	+0.6
	2.7nm,0.6s,baz=80,slow=11,SNR=5.6						
STKA	Stephens Creek	29.47	228	P	P	23 00 07.7	+0.9
	1.5nm,0.5s,baz=25,slow=9.9,SNR=5.2						
WRA	Warramunga Arr	31.98	255	P	P	23 00 28.2	-0.7
	1.2nm,0.6s,baz=86,slow=8.9,SNR=5.9						
ASAR	Alice Springs	32.91	248	P	P	23 00 36.5	-0.5
	2.0nm,0.5s,baz=74,slow=9.4,SNR=36						
SONM	Songino Array	81.84	324	P	P	23 06 18.8	+0.5
	0.4nm,0.6s,baz=131,slow=7.5,SNR=2.7						
MKAR	Makanchi Array	96.60	316	P	P	23 07 29.1	+0.5
	0.4nm,0.4s,baz=94,slow=3.9,SNR=4.5						
ARCES	ARCESS Array B	119.48	346	PKP	PKPdf	23 12 45.3	-1.5
	1.7nm,0.8s,baz=77,slow=1.9,SNR=13						
CDF	Champ du Feu	141.83	338	ePKP1	PKPdf	23 13 30.0	+0.6
CABF	La Chapelle	143.78	338	ePKP1	PKPdf	23 13 34.1	+1.2
SSF	Saint Saulge	144.28	341	ePKP1	PKPdf	23 13 32.6	-1.2
	7.4nm,0.8s						
LPL	La Plagne	144.46	336	ePKP1	PKPdf	23 13 33.7	-0.4
	7.2nm,0.9s						
LPG	La Plagne	144.47	336	ePKP1	PKPdf	23 13 33.9	-0.3
SMF	Signal de Mont	144.54	340	ePKP1	PKPdf	23 13 33.2	-1.0
	15nm,1.0s						
AVF	Avril sur Loir	144.57	341	ePKP1	PKPdf	23 13 33.2	-1.1
	17nm,1.1s						
SGMF	Saint Gilles	144.75	348	ePKP1	PKPdf	23 13 33.7	-0.9
	36nm,1.0s						
BGF	Bois d'Agland	144.94	341	ePKP1	PKPdf	23 13 34.7	-0.2
	7.5nm,0.6s						
MBDF	Montbardon	145.10	335	ePKP1	PKPbc	23 13 35.3	+0.1
	9.3nm,0.8s						
QUIF	Quistinic	145.20	349	ePKP1	PKPbc	23 13 35.1	-0.3
ORIF	Oris-en-Rattie	145.29	336	ePKP1	PKPbc	23 13 36.3	+0.5
	15nm,0.9s						
TCF	Toulx Ste Croi	145.38	342	ePKP1	PKPbc	23 13 36.1	+0.1
MFF	Saint Martin d	145.76	344	ePKP1	PKPbc	23 13 37.0	-0.1
	9.1nm,0.7s						
VIVF	Saint-Julien-l	145.80	338	ePKP1	PKPbc	23 13 38.3	+1.0
	5.8nm,0.8s						
PGF	Pioggiola	145.85	331	ePKP1	PKPbc	23 13 37.6	0.0
	10nm,0.7s						
FRF	La Foret Royal	146.10	334	ePKP1	PKPbc	23 13 38.1	-0.2
	11nm,0.6s						
SMRF	Simiane la Rot	146.20	336	ePKP1	PKPbc	23 13 38.3	-0.2
	9.1nm,0.8s						
LMR	La Mourre	146.34	334	ePKP1	PKPbc	23 13 38.8	-0.2
	8.7nm,0.7s						
LASF	Ste Croix	146.77	338	ePKP1	PKPbc	23 13 40.5	+0.3
	4.3nm,0.6s						
LFF	La Frestale	147.04	342	ePKP1	PKPbc	23 13 39.7	-1.2
MTLF	Montolieu	147.99	339	ePKP1	PKPbc	23 13 43.8	+0.3
	6.3nm,0.6s						
ETSF	Etsaut	149.28	342	ePKP1	PKPbc	23 13 47.5	+0.7
KEST	Kesra	150.57	321	PKPbc	PKPbc	23 13 50.6	+0.5
	1.8nm,0.7s,baz=286,slow=1.7,SNR=11						

*MOS **10** 22:59:45.6±1.5, 5588N×113.48E, h15^{km}, mb4.2/1, Error ellipse: s-maj=40.6km s-min=24.8km az=84.4*
BYKL 10 22:59:46.5±0.3, 5588N×113.45E, h14^{km}±5^{km}, 5C-3D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SVKR	Severomuysk	0.24	14	⇑iPg	Pg	22 59 52.4	+0.6
SVKR				i Sg	Sg	22 59 57.0	+1.6
SVKR				Pmax			
	636nm,0.1s						
SVKR				Smax			
	5μm,0.6s						
SVK	Severo-Muysk	0.31	7	ePG	Pg	22 59 52.2	-0.7
SVK				e		22 59 56.4	
SVK				pmax	pmax		
	comp=Z,646nm,0.5s						
SVK				smax			
	comp=N,5μm,1.0s						
UKT	Uakit	0.41	166	⇓iPg	Pg	22 59 53.7	-0.9
	comp=N,461nm,0.4s						
UKT				⇑iPg	Pg	22 59 53.7	-0.9
	comp=N,118nm,0.4s						
UKT				⇑iPg	Pg	22 59 53.7	-0.9
	comp=N,319nm,0.4s						
UKT				eSg	Sg	22 59 59.3	-0.7
UKT				Pmax			
	comp=N,166nm,0.2s						
UKT				Smax			
	comp=N,846nm,0.8s						
YOA	Uoyan	1.00	285	⇑iPG	Pg	23 00 04.9	-0.9
YOA				i		23 00 19.1	
YOA				pmax	pmax		
	comp=Z,360nm,0.2s						
YOA				smax			
	comp=N,1μm,0.5s						
YOA	Uoyan	1.00	285	ePg	Pg	23 00 04.9	-0.9
YOA				ePb	Pb	23 00 06.9	+1.3
YOA				eSg	Sg	23 00 19.1	+0.2
YOA				max			
	comp=N,362nm,0.2s						
YOA				Smax			
	comp=N,1μm,0.4s						
KMO	Kumora	1.27	271	ePG	Pg	23 00 09.0	-1.9
KMO				e		23 00 25.6	
KMO				pmax	pmax		
	comp=Z,96nm,0.3s						
KMO				smax			
	comp=E,629nm,0.4s						
KMO	Kumora	1.27	271	⇑iPg	Pg	23 00 08.8	-2.1
KMO				ePb	Pb	23 00 10.5	+0.4
KMO				eSg	Sg	23 00 25.7	-1.6
KMO				eSb	Sb	23 00 28.3	+2.1
KMO				max			
	comp=E,125nm,0.4s						
KMO				max			
	comp=E,636nm,0.8s						
NLYR	Nelyaty	1.40	63	⇓iPg	Pg	23 00 11.8	-1.6
NLYR				i Sg	Sg	23 00 30.5	-1.1
NLYR				Pmax			
	comp=E,66nm,0.2s						
NLYR				Smax			
	comp=E,229nm,0.9s						
YLYR	Ulyunkhan	1.65	233	⇓iPg	Pg	23 00 15.7	-2.4
YLYR				eSg	Sg	23 00 37.7	-1.8
YLYR				Pmax			
	comp=E,15nm,0.2s						
YLYR				Smax			
	comp=E,99nm,0.3s						
BOD	Bodaibo	1.97	9	ePN	Pn	23 00 21.0	+1.6
BOD				e		23 00 22.4	
BOD				e		23 00 48.9	
BOD				pmax	pmax		
	comp=Z,28nm,0.5s						
BOD				smax			
	comp=E,320nm,0.4s						
BOD	Bodaibo	1.97	9	ePn	Pn	23 00 19.6	+0.2
BOD				ePg	Pg	23 00 21.0	-3.2
BOD				eSn	Sn	23 00 45.0	+1.2
BOD				eSg	Sg	23 00 47.0	-2.7
BOD				Pmax			
	comp=E,28nm,0.5s						
BOD				Smax			
	comp=E,320nm,0.6s						
NIZ	Nizh Angarsk	2.21	269	ePn	Pn	23 00 23.4	+0.7
NIZ				ePg	Pg	23 00 25.4	-3.4
NIZ				eSn	Sn	23 00 51.6	+1.9
NIZ				eSg	Sg	23 00 54.9	-2.5
NIZ				Pmax			
	comp=E,23nm,0.4s						
NIZ				Smax			
	comp=E,82nm,0.3s						
CRS	Chara	2.87	67	ePN	Pn	23 00 32.0	+0.3
CRS				e		23 00 37.8	
CRS				e		23 01 15.6	
CRS				pmax	pmax		
	comp=Z,21nm,1.0s						
CRS				smax			
	comp=E,104nm,1.1s						
CRS	Chara	2.87	67	ePn	Pn	23 00 32.3	+0.6
CRS				ePg	Pg	23 00 38.0	-3.4
CRS				eSg	Sg	23 01 15.6	-2.9
CRS				Pmax			
	comp=E,25nm,1.1s						
CRS				Smax			
	comp=E,104nm,1.1s						
SYVR	Suvo	2.99	223	ePn	Pn	23 00 33.3	-0.1
SYVR				ePg	Pg	23 00 39.4	-4.4
SYVR				eSn	Sn	23 01 09.9	+0.9
SYVR				eSg	Sg	23 01 18.8	-3.7
SYVR				Pmax			
	comp=E,10.0nm,0.8s						
SYVR				Smax			
	comp=E,58nm,1.0s						
MXMB	Maximikha	3.79	228	eSg	Sg	23 01 46.4	-1.7
MXMB				Smax			
	comp=E,89nm,0.8s						
OGRR	Ongureny	4.07	239	ePn	Pn	23 00 48.5	+0.3
OGRR				ePg	Pg	23 00 59.0	-5.3
OGRR				eSg	Sg	23 01 52.3	-4.6
OGRR				Pmax			
	comp=E,6.0nm,0.9s						
OGRR				Smax			
	comp=E,24nm,1.1s						
HRMR	Khuramsha	5.74	225	eSg	Sg	23 02 45.6	-5.0
HRMR				Smax			
	comp=E,55nm,0.9s						
KPC	Khapcheranga	6.22	186	ePn	Pn	23 01 19.8	+2.0
KPC				ePg	Pg	23 01 39.1	-6.4
KPC				eSg	Sg	23 03 00.0	-6.0
KPC				Pmax			
	comp=E,5.0nm,1.5s						
KPC				Smax			
	comp=E,25nm,0.8s						
MOY	Mondy	8.50	245	eSg	Sn	23 04 08.4	+44
MOY				Smax			
	comp=E,19nm,1.8s						

*IDC **10** 23:01:52.5±2.9, 20.10S×69.14W, h87^{km}±28^{km}, mb3.6/4, mb1 3.9/7, mb1mx3.6/19, mbtmp3.8/7, Error ellipse: s-maj=31.5km s-min=18.9km az=125.0*
*ISCJB **10** 23:01:53.1±0.7, 2020S±0.06×69.07W±0.10, h117^{km}±11^{km}, mb3.7/3, Error ellipse: s-maj=15.8km s-min=8.1km az=156.2*
*NEIC **10** 23:01:54.6±1.0, 2030S×69.08W, h122^{km}±12^{km}, mb3.8/2, Error ellipse: s-maj=16.5km s-min=10.1km az=93.0*
ISC 10 23:01:54.2±0.7, 2021S±0.06×6907W±0.09, h112^{km}±10^{km}, n18, σ0^{s}99/21, mb3.7/3, Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.40	177	P	Pn	23 02 32.5	+0.1
	68nm,0.3s,baz=20,slow=10,SNR=337						
LVC				S	Sn	23 03 02.4	+0.7
	134nm,0.3s,baz=127,slow=22,SNR=21						
LVC	Limon Verde	2.40	177	P	Pn	23 02 32.5	+0.1
LVC				S	Sn	23 03 02.4	+0.7
LPAZ	La Paz	4.00	13	P	Pn	23 02 57.8	+4.2
	7.7nm,0.3s,baz=190,slow=8.2,SNR=278						
LPAZ	La Paz	4.00	13	P	Pn	23 02 57.8	+4.2
LPAZ				Sn	Sn	23 03 34.3	-5.3
ARE	Arequipa	4.38	328	eP	Pn	23 03 04.0	+5.3
ARE				eS	Sn	23 03 50.0	+1.3
SIV	San Ignacio	8.68	62	P	Pn	23 03 56.4	-0.6
	3.0nm,0.3s,baz=262,slow=10,SNR=41						
NNA	Nana	11.07	316	Pn	Pn	23 04 27.1	-2.1
CFAA	Coronel Fontan	11.37	176	P	Pn	23 04 32.2	-1.0
	0.0nm,0.3s,baz=357,slow=13,SNR=4.3						
CPUP	Villa Florida	12.39	122	P	Pn	23 04 46.0	-0.6
	1.0nm,0.3s,baz=295,slow=12,SNR=12						
PLCA	Paso Flores	20.50	183	P	P	23 06 25.0	+1.8
	3.4nm,0.8s,baz=2.1,slow=12,SNR=7.8						
PLCA	Paso Flores	20.50	183	eP	P	23 06 22.1	-1.1
	3.7nm,0.9s						
BDFB	Brasilia	20.54	81	P	P	23 06 24.4	+0.5
	1.5nm,0.3s,baz=249,slow=12,SNR=3.7						
OTAV	Otavalo	22.30	335	eP	P	23 06 42.2	-0.4
	5.7nm,1.5s,mb3.7						
AOPR	Arecibo Observ	38.38	4	P	P	23 09 04.2	-0.4
NVAR	Mina Array Bea	74.39	322	P	P	23 13 20.0	+0.2
	0.3nm,0.3s,mb3.5,baz=134,slow=6.4,SNR=2.8						
TORD	Torodi Ar. Bea	77.07	71	P	P	23 13 36.9	+1.4
	1.5nm,0.4s,mb4.1,baz=254,slow=5.5,SNR=24						
TORD	Torodi Ar. Bea	77.07	71	P	P	23 13 36.9	+1.4
SONM	Songino Array	152.20	7	PKPbc	PKPbc	23 21 39.2	+2.7
	0.4nm,0.4s,baz=11,slow=1.7,SNR=4.3						

IGQ 10 23:03:38.5, 183S×7733W, h12^{km}±2^{km}, Mb4.0, Ms3.8, 4C-12D, Error ellipse: s-maj=2.4km s-min=1.5km az=70.0, Ecuador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULBA	Ulba	1.14	290	P	Pb	23 04 00.3	+0.1
PATA	Patacocha	1.15	287	⇓P	Pb	23 04 00.5	+0.2
PATA	Patacocha	1.15	287	⇓S	Sb	23 04 15.4	+0.2
RUN5	Runtun	1.17	291	⇓P	Pb	23 04 00.6	-0.1
RUN5	Runtun	1.17	291	⇓S	Sb	23 04 15.4	-0.4
ARRY	Arrayan	1.17	286	⇓P	Pb	23 04 00.6	-0.1
RETU	Refugio	1.18	289	P	Pb	23 04 01.2	+0.4
RETU	Refugio	1.18	289	S	Sb	23 04 17.7	+1.6
JUI6	Juive	1.21	290	P	Pn	23 04 01.1	-0.2
JUI6	Juive	1.21	290	S	Sb	23 04 17.2	+0.3
BIL2	Estacion Bilba	1.23	288	P	Pn	23 04 01.8	+0.2
BIL2	Estacion Bilba	1.23	288	S	Sb	23 04 18.9	+1.4
PISA	Pisayambo	1.31	306	⇑P	Pn	23 04 03.4	+0.8
PISA	Pisayambo	1.31	306	⇑S	Sb	23 04 19.0	-0.8
IGUA	Igualata	1.35	285	⇓P	Pn	23 04 04.6	+1.4
IGUA	Igualata	1.35	285	⇓S	Sb	23 04 23.4	+2.3
TAMB	Tambo	1.54	318	⇓P	Pn	23 04 07.3	+1.6
TAMB	Tambo	1.54	318	⇓S	Sn	23 04 28.1	+2.5
VC1	Cotopaxi 1	1.60	318	P	Pn	23 04 08.3	+1.7
VC1	Cotopaxi 1	1.60	318	S	Sn	23 04 29.4	+2.2
ANTI	Antisana	1.61	329	⇓P	Pn	23 04 07.8	+1.0
CAMI	Rancho Maria	1.64	314	⇓P	Pn	23 04 09.5	+2.2
CAMI	Rancho Maria	1.64	314	⇓S	Sn	23 04 32.3	+4.0
LAV3	Lava3-Reventad	1.75	350	P	Pn	23 04 10.4	+1.7
LAV3	Lava3-Reventad	1.75	350	S	Sn	23 04 34.1	+3.1
CONE	Cono NE Rev Vo	1.78	350	P	Pn	23 04 11.3	+2.2
CONE	Cono NE Rev Vo	1.78	350	S	Sn	23 04 35.9	+4.2
QIL2	Quilotoa	1.85	301	P	Pn	23 04 13.1	+3.0
QIL2	Quilotoa	1.85	301	S	Sn	23 04 38.1	+4.6
CAYA	Cayambe	2.00	341	⇑P	Pn	23 04 15.0	+2.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAYA	**Cayambe**	**2.00**	**341**	⇑S	Sn	23 04 42.7	+5.4
JUA2	**San Juan 2**	**2.05**	**322**	P	Pn	23 04 16.8	+4.0
GGP	**Refugio Guagua**	**2.08**	**323**	P	Pn	23 04 16.6	+3.4
GGP	**Refugio Guagua**	**2.08**	**323**	S	Sn	23 04 44.7	+5.6
TERV	**Terraza Guagua**	**2.08**	**322**	P	Pn	23 04 17.1	+3.8
PINO	**Pino**	**2.10**	**323**	P	Pn	23 04 17.4	+3.8
PINO	**Pino**	**2.10**	**323**	S	Sn	23 04 45.9	+6.4
YANA	**Yana**	**2.11**	**324**	P	Pn	23 04 17.4	+3.7
YANA	**Yana**	**2.11**	**324**	S	Sn	23 04 45.9	+6.1

IDC ***10*** *23:59:18.2±0.9, 15.43S×173.27W, h0km, mb4.4/6, mb1 4.7/7, mb1mx4.3/20, mbtmp4.4/7, ML2.7/1, MS4.0/13, Ms1 4.0/13, ms1mx3.8/24, Error ellipse: s-maj=53.2km s-min=17.4km az=142.0*

ISCJB ***10*** *23:59:21.7±0.5, 15.47S±0.09×173.37W±0.09, h33km, mb4.5/14, MS4.0/11, Error ellipse: s-maj=15.1km s-min=10.6km az=135.3*

NEIC ***10*** *23:59:24.0±0.5, 15.51S×173.40W, h35km, mb4.6/8, Error ellipse: s-maj=12.1km s-min=9.8km az=125.0*

ISC 10 23:59:24.2±0.6**, 15.52S**±0.09×**173.42W**±0.10**, h35km, n40, σ0.92**/29**, mb4.5**/14**, MS4.0**/11**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.25**	**45**	Pn	**Pn**	**23 59 53.3**	**-5.7**
	144nm,0.3s,baz=360,slow=1.4,SNR=173						
AFI				Sn	**Sn**	**00 00 13.8**	**-12**
	784nm,0.3s,baz=72,slow=22,SNR=14						
AFI				LR	LR	00 00 39.0	
	comp=Z,2µm,19.1s,baz=254,slow=39						
FUNA	**Funafuti**	**10.02**	**313**	*e*Pn	**Pn**	**00 01 43.7**	**-2.0**
RAR	**Rarotonga**	**14.13**	**116**	LR	LR	00 06 11.3	
	comp=Z,582nm,19.9s,baz=350,slow=29						
RAO	**Raoul Island**	**14.29**	**196**	Pn	**Pn**	**00 02 42.5**	**-1.6**
PPT	**Papeete**	**22.94**	**98**	*e*LR	LR	00 09 32.4	
	719nm,27.0s						
PPT	**Papeete**	**22.94**	**98**	LR	LR	00 10 13.0	
	comp=Z,436nm,21.2s,MS3.9,baz=269,slow=29						
URZ	**Urewera**	**24.15**	**198**	P	**P**	**00 04 36.5**	**-0.5**
	6.8nm,0.5s,mb4.3,baz=3.4,slow=2.2,SNR=5.1						
URZ				LR	LR	00 12 58.4	
	comp=Z,232nm,19.1s,MS3.7,baz=228,slow=34						
HNR	**Honiara**	**26.68**	**280**	LR	LR	00 14 36.2	
	comp=Z,258nm,18.2s,MS3.8,baz=132,slow=34						
HNR	**Honiara**	**26.68**	**280**	*e*P	**P**	**00 05 00.6**	**+0.3**
	44nm,0.7s,mb5.1						
TAOE	**Nuku Hiva Isla**	**33.16**	**82**	*e*LR	LR	00 14 09.8	
	2µm,28.6s						
CTAO	**Charters Tower**	**38.60**	**257**	P	**P**	**00 06 44.1**	**-0.1**
STKA	**Stephens Creek**	**43.97**	**240**	*e*P	**P**	**00 07 28.9**	**+0.7**
	4.5nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**43.97**	**240**	P	**P**	**00 07 29.3**	**+1.1**
	5.3nm,0.6s,mb4.5,baz=90,slow=9.5,SNR=19						
STKA				LR	LR	00 23 21.6	
	comp=Z,198nm,21.8s,MS4.0,baz=25,slow=33						
STKA	**Stephens Creek**	**43.97**	**240**	*e*P	**P**	**00 07 28.6**	**+0.4**
	5.5nm,0.6s,mb4.5						
WB2	**Warramunga Arr**	**49.79**	**257**	*e*P	**P**	**00 08 14.2**	**+0.3**
WRAB	**Tennant Creek**	**49.79**	**257**	*e*P	**P**	**00 08 14.3**	**+0.4**
	1.1nm,0.5s,mb4.1						
WRA	**Warramunga Arr**	**49.80**	**257**	P	**P**	**00 08 13.8**	**-0.2**
	1.0nm,0.3s,mb4.3,baz=94,slow=7.8,SNR=10						
WRA				LR	LR	00 28 51.8	
	comp=Z,123nm,18.7s,MS3.9,baz=275,slow=36						
ASAR	**Alice Springs**	**50.06**	**252**	P	**P**	**00 08 16.4**	**+0.5**
	16nm,0.6s,mb5.3,baz=86,slow=8.2,SNR=192						
KAKA	**Kakadu**	**52.47**	**266**	*e*P	**P**	**00 08 36.4**	**+2.3**
	3.8nm,0.6s,mb4.5						
KAKA	**Kakadu**	**52.47**	**266**	*e*P	**P**	**00 08 35.1**	**+1.0**
FORT	**Forrest**	**55.35**	**243**	*e*P	**P**	**00 08 54.9**	**0.0**
	6.6nm,0.4s,mb5.0						
FITZ	**Fitzroy Crossi**	**58.17**	**258**	*e*P	**P**	**00 09 18.0**	**+2.9**
	3.1nm,1.1s,mb4.2						
FITZ	**Fitzroy Crossi**	**58.17**	**258**	*e*P	**P**	**00 09 17.0**	**+1.8**
	3.4nm,0.9s,mb4.4						
SBA	**Scott Base**	**63.13**	**185**	*e*P	**P**	**00 09 48.4**	**+0.3**
	1.5nm,0.7s,mb4.2						
MBWA	**Marble Bar**	**63.31**	**254**	*e*P	**P**	**00 09 50.2**	**+0.1**
KLBR	**Kellerberrin**	**64.17**	**242**	*e*P	**P**	**00 09 54.4**	**-1.2**
	32nm,1.4s,mb5.2						
DAV	**Davao City (W)**	**64.45**	**286**	P	**P**	**00 09 57.4**	**-0.3**
YSS	**Yuzh-Sakhalins**	**73.57**	**330**	P	**P**	**00 10 53.4**	**-0.2**
NVAR	**Mina Array Bea**	**74.42**	**42**	P	**P**	**00 10 58.1**	**-0.7**
	1.8nm,0.7s,mb4.1,baz=229,slow=11,SNR=7.9						
MSU	**Marysvale**	**78.52**	**45**	*e*P	**P**	**00 11 23.6**	**+1.5**
HLID	**Hailey**	**79.72**	**39**	*e*P	**P**	**00 11 28.5**	**0.0**
	2.4nm,0.9s,mb4.1						
TXAR	**Lajitas Array**	**80.69**	**56**	P	**P**	**00 11 33.7**	**-0.3**
	0.5nm,0.8s,mb3.5,baz=213,slow=9.0,SNR=5.7						
TXAR				LR	LR	00 37 55.7	
	comp=Z,98nm,21.8s,MS4.1,baz=5.0,slow=29						
TXAR	**Lajitas Array**	**80.69**	**56**	P	**P**	**00 11 33.7**	**-0.3**
TXAR				LR	LR	00 37 55.7	
PDAR	**Pinedale Array**	**82.36**	**42**	LR	LR	00 41 28.2	
	comp=Z,98nm,18.8s,MS4.2,baz=258,slow=31						
CMIG	**Matias Romero**	**83.94**	**70**	LR	LR	00 39 06.2	
	comp=Z,82nm,21.9s,MS4.1,baz=319,slow=28						
ULM	**Lac du Bonnet**	**94.03**	**39**	LR	LR	00 48 28.6	
	comp=Z,97nm,20.9s,MS4.2,baz=234,slow=31						
LPAZ	**La Paz**	**99.79**	**110**	LR	LR	00 46 43.8	
	comp=Z,55nm,21.4s,MS4.0,baz=186,slow=28						
ROSC	**El Rosal**	**100.02**	**88**	LR	LR	00 48 30.4	
	comp=Z,51nm,18.6s,MS4.1,baz=36,slow=30						
ARCES	**ARCESS Array B**	**124.72**	**352**	PKP	PKPdf	00 18 18.4	-1.1
	3.5nm,0.9s,baz=3.3,slow=8.5,SNR=4.1						
ARCES	**ARCESS Array B**	**124.72**	**352**	PKP	PKPdf	00 18 18.4	-1.2

NEIC 11 00:01:06.2, 36.69S×177.30E, h215km, MG4.1(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.19**	**138**	P	Pn	00 01 38.5	-0.2
URZ	**Urewera**	**1.57**	**185**	P	Pn	00 01 41.8	0.0
PUZ	**Puketiti**	**1.58**	**151**	P	Pn	00 01 42.0	+0.2
PUZ				S	S	00 02 08.9	-0.9
MWZ	**Matawai**	**1.65**	**174**	P	Pn	00 01 42.9	+0.4
KNZ	**Kokohu**	**2.35**	**173**	P	Pn	00 01 49.2	-0.1
BKZ	**Black Stump Fm**	**2.55**	**194**	P	Pn	00 01 51.0	-0.5
TWVZ	**Taurewa**	**2.80**	**211**	P	Pn	00 01 54.9	+0.7
NGZ	**Ngauruhoe**	**2.82**	**208**	P	Pn	00 01 55.0	+0.5
TUVZ	**Tukino**	**2.88**	**206**	P	Pn	00 01 55.3	+0.1
WNVZ	**Wahianoa**	**2.96**	**207**	P	Pn	00 01 55.9	-0.1
MOVZ	**Moawhango**	**2.98**	**204**	P	Pn	00 01 55.5	-0.8
TSZ	**Takapari Road**	**3.53**	**197**	P	Pn	00 02 01.2	-1.5
MRZ	**Mangatainoka R**	**4.19**	**198**	P	Pn	00 02 08.4	-2.3
KIW	**Kapiti Island**	**4.57**	**203**	P	Pn	00 02 12.6	-2.8
MTW	**Mount Morrison**	**4.68**	**197**	P	Pn	00 02 13.8	-3.0
CAW	**Cannon Point**	**4.74**	**201**	P	Pn	00 02 14.6	-3.0
PAWZ	**Paruwai Farm**	**4.91**	**197**	*e*P	Pn	00 02 16.4	-3.3
MRW	**Makara Radio**	**4.96**	**203**	*e*P	Pn	00 02 17.0	-3.4
MSWZ	**Moikau Station**	**4.98**	**198**	P	Pn	00 02 17.3	-3.3
SNZO	**South Karori**	**5.04**	**203**	P	Pn	00 02 18.2	-3.1
TCW	**Tory Channel**	**5.09**	**207**	*e*P	Pn	00 02 18.8	-3.2
NNZ	**Nelson**	**5.46**	**213**	*e*P	Pn	00 02 23.0	-3.6
NNZ				S	S	00 03 26.5	-4.0
THZ	**Tophouse**	**6.11**	**213**	*e*P	Pn	00 02 31.7	-3.2
THZ				S	S	00 03 42.3	-3.2
KHZ	**Kahutara**	**6.42**	**206**	P	Pn	00 02 35.6	-3.3
KHZ				S	S	00 03 49.4	-3.2

ISCJB ***11*** *00:14:37.1±3.5, 2.84N±0.06×78.48W±0.09, h12km±24km, mb3.5/5, Error ellipse: s-maj=15.3km s-min=8.6km az=22.2*

IDC ***11*** *00:14:37.0±1.0, 2.74N×78.47W, h0km, mb3.4/4, mb1 3.8/7, mb1mx3.7/22, mbtmp3.8/7, ML4.0/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/19, Error ellipse: s-maj=28.7km s-min=20.3km az=60.0*

NEIC ***11*** *00:14:42.2±1.4, 2.80N×78.39W, h38km±14km, mb3.9/2, Error ellipse: s-maj=16.6km s-min=9.9km az=95.0*

ISC 11 00:14:38.3±4.2**, 2.81N**±0.06×**78.50W**±0.09**, h8km**±28km**, n17, σ1.06**/15**, mb3.5**/5**, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**2.56**	**179**	*e*Pn	**Pn**	**00 15 21.4**	**+1.4**
OTAV				*e*Sn	**Sn**	**00 15 50.4**	**-0.9**
ROSC	**El Rosal**	**4.63**	**64**	Pn	**Pn**	**00 15 49.0**	**+0.5**
	6.6nm,0.3s,baz=282,slow=9.3,SNR=19						
ROSC				Sn	**Sn**	**00 16 43.2**	**+0.8**
	4.0nm,0.3s,baz=259,slow=19,SNR=7.8						
SDV	**Santo Domingo**	**9.88**	**52**	*e*Pn	**Pn**	**00 16 60.0**	**-0.7**
AOPR	**Arecibo Observ**	**19.25**	**36**	P	**Pn**	**00 19 02.6**	**-1.7**
SJG	**San Juan**	**19.43**	**38**	P	**Pn**	**00 19 05.7**	**-0.8**
	1.0nm,0.3s,baz=291,slow=14,SNR=2.2						
TEIG	**Tepich**	**19.77**	**332**	P	**Pn**	**00 19 11.3**	**+0.9**
	0.5nm,0.3s,baz=166,slow=19,SNR=2.1						
LPAZ	**La Paz**	**21.57**	**152**	P	**P**	**00 19 28.6**	**+0.2**
	1.5nm,0.7s,mb3.6,baz=346,slow=12,SNR=5.2						
LPAZ	**La Paz**	**21.57**	**152**	*e*P	**P**	**00 19 28.8**	**+0.4**
	1.1nm,0.6s,mb3.5						
SIV	**San Ignacio**	**25.41**	**138**	P	**P**	**00 20 06.6**	**+0.1**
	3.1nm,1.1s,mb3.8,baz=310,slow=12,SNR=9.9						
CPUP	**Villa Florida**	**35.47**	**146**	P	**P**	**00 21 33.7**	**-1.7**
	0.4nm,0.4s,mb3.7,baz=348,slow=9.3,SNR=3.1						
CPUP	**Villa Florida**	**35.47**	**146**	*e*P	**P**	**00 21 34.8**	**-0.6**
	2.9nm,0.5s,mb4.5						
TXAR	**Lajitas Array**	**35.60**	**320**	P	**P**	**00 21 36.2**	**-0.3**
	0.1nm,0.4s,mb3.1,baz=170,slow=7.2,SNR=2.6						
TORD	**Torodi Ar. Bea**	**79.82**	**77**	P	**P**	**00 26 50.8**	**+2.8**
	0.3nm,1.0s,mb3.2,baz=278,slow=5.5,SNR=4.1						
KURK	**Kurchatov**	**123.19**	**17**	PKP	PKPdf	00 33 36.2	+0.5
	0.3nm,0.6s,baz=309,slow=2.3,SNR=2.8						
ASAR	**Alice Springs**	**142.44**	**234**	PKP	PKPdf	00 34 10.2	-2.3
	0.1nm,0.3s,baz=116,slow=4.2,SNR=2.7						
WRA	**Warramunga Arr**	**143.71**	**240**	PKP	PKPdf	00 34 13.1	-1.8
	0.9nm,0.5s,baz=111,slow=3.0,SNR=5.4						
FITZ	**Fitzroy Crossi**	**151.88**	**236**	PKPbc	PKPbc	00 34 35.4	+0.6
	1.6nm,0.9s,baz=141,slow=6.5,SNR=5.7						

IDC ***11*** *00:28:29.1±1.0, 26.13S×176.91W, h0km, mb3.9/6, mb1 4.3/9, mb1mx4.1/18, mbtmp4.1/9, ML3.9/3, MS3.5/1, Ms1 3.4/1, ms1mx2.7/25, Error ellipse: s-maj=37.2km s-min=21.6km az=133.0*

ISCJB ***11*** *00:28:31.1±0.6, 26.20S±0.07×176.6W±0.1, h33km, mb4.0/8, Error ellipse: s-maj=16.3km s-min=8.3km az=27.5*

NEIC ***11*** *00:28:32.2±3.0, 26.18S×176.63W, h26km±24km, mb4.3/4, Error ellipse: s-maj=18.0km s-min=9.3km az=128.0*

ISC 11 00:28:31.4±4.5**, 26.21S**±0.08×**176.7W**±0.1**, h19km**±29km**, n18, σ1.10**/17**, mb4.0**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.22**	**200**	Pn	**Pn**	**00 29 23.0**	**+1.9**
	117nm,0.3s,baz=38,slow=19,SNR=5.4						
RAO				Sn	**Sn**	**00 29 58.5**	**-0.4**
	687nm,0.3s,baz=105,slow=23,SNR=17						
AFI	**Afiamalu**	**13.07**	**21**	Pn	**Pn**	**00 31 35.8**	**-0.4**
	4.0nm,0.3s,baz=194,slow=4.2,SNR=6.3						
AFI				Sn	Sx	00 33 53.5	
	6.7nm,0.3s,baz=196,slow=22,SNR=6.8						
AFI	**Afiamalu**	**13.07**	**21**	Pn	**Pn**	**00 31 35.8**	**-0.4**
AFI				Sn	Sx	00 33 53.5	
URZ	**Urewera**	**13.11**	**202**	Pn	**Pn**	**00 31 36.5**	**-0.1**
	0.6nm,0.3s,baz=342,slow=19,SNR=3.1						
URZ				Sn	Sx	00 33 48.9	
	2.8nm,0.3s,baz=145,slow=23,SNR=14						
RAR	**Rarotonga**	**16.25**	**76**	Pn	**Pn**	**00 32 17.5**	**-1.2**
	2.3nm,0.3s,baz=259,slow=16,SNR=3.1						
RAR				Sn	Sx	00 35 02.9	
	0.9nm,0.3s,baz=102,slow=19,SNR=3.1						
ASAR	**Alice Springs**	**44.67**	**262**	P	**P**	**00 36 42.8**	**-0.6**
	0.5nm,0.4s,mb3.7,baz=97,slow=8.0,SNR=9.7						
WRAB	**Tennant Creek**	**45.28**	**267**	*e*P	**P**	**00 36 49.5**	**+1.3**
	1.3nm,0.7s,mb3.9						
WRA	**Warramunga Arr**	**45.29**	**267**	P	**P**	**00 36 47.6**	**-0.6**
	0.8nm,0.5s,mb3.8,baz=108,slow=7.9,SNR=4.1						
FITZ	**Fitzroy Crossi**	**53.67**	**266**	P	**P**	**00 37 50.5**	**-1.8**
	1.8nm,1.1s,mb3.9,baz=83,slow=8.1,SNR=2.7						
FITZ	**Fitzroy Crossi**	**53.67**	**266**	P	**P**	**00 37 51.8**	**-0.5**
	3.4nm,1.0s,mb4.2						
MBWA	**Marble Bar**	**57.96**	**260**	P	**P**	**00 38 22.9**	**-0.1**
CASY	**Casey**	**59.39**	**207**	*e*P	**P**	**00 38 31.0**	**-1.2**
	1.9nm,0.6s,mb4.3						
MAW	**Mawson**	**76.63**	**200**	P	**P**	**00 40 20.2**	**-0.3**
	1.4nm,0.7s,mb4.0,baz=107,slow=7.8,SNR=4.2						
MAW	**Mawson**	**76.63**	**200**	*e*P	**P**	**00 40 20.6**	**+0.1**
	1.5nm,0.6s,mb4.1						
NVAR	**Mina Array Bea**	**84.37**	**42**	P	**P**	**00 41 04.9**	**+2.5**
	0.2nm,0.3s,mb3.7,baz=224,slow=8.5,SNR=3.7						
PDAR	**Pinedale Array**	**92.29**	**43**	P	**P**	**00 41 41.4**	**+1.2**
	0.4nm,0.4s,mb4.1,baz=189,slow=4.5,SNR=3.0						
NB2	**NORSAR Subarra**	**144.77**	**353**	PKP	PKPdf	00 48 05.2	-1.2
	comp=Z,1.1nm,0.9s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**144.77**	**353**	PKP	PKPdf	00 48 05.9	-0.5
	comp=Z,1.8nm,0.8s,baz=16,slow=2.5,SNR=5.1						

ISCJB ***11*** *00:34:18.5±1.1, 38.00N±0.02×86.27E±0.03, h5km±7km, mb4.5/64, MS3.8/22, Error ellipse: s-maj=4.7km s-min=3.3km az=44.3*

IDC ***11*** *00:34:20.1±0.5, 38.06N×86.45E, h0km, mb4.2/22, mb1 4.4/27, mb1mx4.4/30, mbtmp4.3/27, ML4.1/5, MS3.7/19, Ms1 3.7/19, ms1mx3.6/36, Error ellipse: s-maj=12.8km s-min=8.5km az=44.0*

BJI ***11*** *00:34:20.8, 38.18N×86.30E, h14km, mB4.5, mb4.5, ML5.0, Ms4.4, Msz4.1*

NEIC ***11*** *00:34:21.6±2.3, 38.05N×86.33E, h12km±14km, mb4.7/27, Error ellipse: s-maj=7.2km s-min=5.1km az=214.0*

MOS ***11*** *00:34:22.8±1.6, 38.06N×86.41E, h33km, mb4.8/34, Error ellipse: s-maj=9.1km s-min=5.1km az=117.4*

NNC ***11*** *00:34:27.8±1.7, 38.82N×86.32E, h0km, mb4.8, mpv5.1, Error ellipse: s-maj=15.2km s-min=11.8km az=105.0*

ISC 11 00:34:22.2±1.2**, 38.06N**±0.02×**86.35E**±0.03**, h15km**±8km**, n226, σ1.29**/243**, mb4.5**/64**, MS3.8**/22**, 21C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**8.23**	**283**	*i* P	**Pn**	**00 36 23.0**	**+1.9**
KSH				*e*AP		00 36 29.1	
KSH				*e*XP		00 36 34.2	
KSH				*e*S	**Sn**	**00 37 56.3**	**+2.5**
KSH				*e*XS		00 38 08.1	
KSH				LR	LR		
	comp=N,25µm,3.1s						
KSH				LR	LR		
	comp=E,17µm,2.1s						
KSH				LR	LR		
	comp=Z,5µm,10.8s						
ULHL	**Ulahol**	**8.79**	**302**	P	**Pn**	**00 36 28.9**	**+0.2**
	SNR=26						
KNDC	**Almaty**	**8.80**	**309**	⇑Pn	**Pn**	**00 36 30.0**	**+1.2**
	comp=Z,161nm,0.6s						
KNDC				⇑Sn	**Sn**	**00 38 08.5**	**+0.9**
	comp=Z,262nm,0.8s						
KNDC				⇑Lg		00 38 52.3	
	comp=Z,768nm,1.1s						
MK31	**Makanchi Array**	**9.23**	**342**	⇑Pn	**Pn**	**00 36 35.2**	**+0.6**
	comp=Z,18nm,0.6s,baz=160,slow=12,SNR=178						
MK31				⇑Sn	**Sn**	**00 38 15.2**	**-2.8**
	comp=Z,42nm,0.7s,baz=101,slow=23,SNR=4.9						
MK31				⇑Lg		00 38 55.9	
	comp=Z,78nm,0.7s						
MK31	**Makanchi Array**	**9.23**	**342**	P	**Pn**	**00 36 35.2**	**+0.6**
MK31						00 38 18.2	
MK31				pmax	pmax		
	comp=Z,11nm,0.3s						
MK31				smax			
	comp=Z,16nm,0.3s						
MK31				pmax	pmax		
	comp=Z,130nm,0.9s						
MK31				pmax	pmax		
	comp=Z,900nm,11.0s						
MK31	**Makanchi Array**	**9.23**	**342**	*e*Pn	**Pn**	**00 36 35.3**	**+0.6**
MKAR	**Makanchi Array**	**9.23**	**342**	Pn	**Pn**	**00 36 35.0**	**+0.3**
	comp=Z,2.6nm,0.3s,baz=150,slow=17,SNR=27						
MKAR				Sn	**Sn**	**00 38 16.2**	**-1.9**
	comp=Z,5.0nm,0.3s,baz=170,slow=26,SNR=3.8						
MKAR				Lg		00 39 21.1	
	comp=Z,2.6nm,0.3s,baz=158,slow=29,SNR=3.6						
MKAR				LR	LR	00 41 00.5	
	comp=Z,532nm,21.0s,baz=152,slow=43						
MKAR	**Makanchi Array**	**9.23**	**342**	P	**Pn**	**00 36 35.0**	**+0.4**
MKAR						00 38 16.2	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MKAR				smax			
	comp=N,5.0nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,532nm,21.0s						
LSA	**Lhasa**	**9.24**	**153**	P	**Pn**	**00 36 39.8**	**+4.9**
LSA	**Lhasa**	**9.24**	**153**	*e*Pn	**Pn**	**00 36 35.8**	**+0.9**
LSA				*e*Sn	**Sn**	**00 38 19.1**	**+0.5**
TKM2	**Tokmak 2**	**9.52**	**304**	⇓Pn	**Pn**	**00 36 38.5**	**-0.2**
	comp=Z,38nm,0.6s						
TKM2				⇑Sn	**Sn**	**00 38 24.4**	**-1.0**
	comp=Z,88nm,0.7s						
TKM2				⇑Lg		00 39 17.1	
	comp=Z,322nm,1.6s						
TKM2	**Tokmak 2**	**9.52**	**304**	P	**Pn**	**00 36 38.4**	**-0.3**
TKM2						00 38 24.3	
TKM2				pmax	pmax		
	comp=Z,38nm,0.6s						
TKM2				smax			
	comp=Z,88nm,0.7s						
TKM2				pmax	pmax		
	comp=Z,322nm,1.6s						
TKM2	**Tokmak 2**	**9.52**	**304**	P	**Pn**	**00 36 39.3**	**+0.6**
	SNR=14						
TKM2	**Tokmak 2**	**9.52**	**304**	*e*Pn	**Pn**	**00 36 38.0**	**-0.6**
	comp=Z,48nm,0.5s						
KBK	**Karagaybulak**	**9.84**	**301**	P	**Pn**	**00 36 43.7**	**+0.6**
	SNR=22						
DANN	**Dangsing**	**9.93**	**193**	*e*P	**Pn**	**00 36 42.4**	**-1.9**
	comp=Z,33nm,0.7s						
DLH	**Dalhousie**	**10.12**	**240**	*e*P	**Pn**	**00 36 50.0**	**+3.1**
FRU	**Bishkek**	**10.13**	**302**	*e*P	**Pn**	**00 36 51.0**	**+4.0**
FRU				MLR	MLR		
	comp=N,2µm,14.0s						
GUN	**Gumba**	**10.13**	**182**	*e*P	**Pn**	**00 36 47.7**	**+0.6**
	comp=N,97nm,0.9s						
AAK	**Ala-Archa**	**10.13**	**300**	P	**Pn**	**00 36 47.6**	**+0.5**
	SNR=7.7						
GKN	**Gorkha**	**10.13**	**189**	*e*P	**Pn**	**00 36 46.3**	**-0.9**
	comp=N,44nm,1.1s						
KKN	**Kakani**	**10.28**	**185**	*e*P	**Pn**	**00 36 48.2**	**-1.0**
	comp=N,28nm,0.9s						
THN	**Thein Dam**	**10.35**	**240**	*e*x	**Pn**	**00 36 48.1**	**-2.0**
JIRN	**Jiri**	**10.38**	**181**	*e*P	**Pn**	**00 36 50.6**	**+0.2**
	comp=N,31nm,0.7s						
USP	**Ospenovka**	**10.39**	**304**	P	**Pn**	**00 36 53.4**	**+2.8**
	SNR=14						
DMN	**Daman**	**10.48**	**186**	*e*P	**Pn**	**00 36 51.9**	**+0.1**
	comp=N,29nm,1.0s						
PKIN	**Phulchoki**	**10.49**	**185**	*e*P	**Pn**	**00 36 52.2**	**+0.2**
	comp=N,30nm,0.6s						
PKI	**Pulchoki**	**10.49**	**185**	*e*P	**Pn**	**00 36 51.9**	**-0.2**
	comp=N,69nm,1.0s						
AML	**Almayashu**	**10.51**	**297**	P	**Pn**	**00 36 51.9**	**-0.3**
	SNR=16						
AML	**Almayashu**	**10.51**	**297**	*e*Pn	**Pn**	**00 36 51.8**	**-0.4**
	comp=N,41nm,0.6s						
KOLN	**Koldanda**	**10.52**	**193**	*e*P	**Pn**	**00 36 50.3**	**-2.1**
	comp=N,43nm,0.9s						
GTA	**Gaotai**	**10.60**	**79**	P	**Pn**	**00 36 54.3**	**+0.8**
GTA				AP		00 36 57.5	
GTA				XP		00 37 00.6	
GTA				S	**Sn**	**00 38 51.5**	**-0.5**
GTA				SS		00 39 04.6	
GTA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
GTA				AMB	AMB		
	comp=Z,77nm,4.8s						
GTA				LR	LR		
	comp=N,771nm,8.4s						
GTA				LR	LR		
	comp=E,766nm,9.9s						
GTA				LR	LR		
	comp=Z,732nm,10.6s						
EKS2	**Erkin-Say**	**10.64**	**300**	P	**Pn**	**00 36 53.9**	**0.0**
	SNR=19						
EKS2	**Erkin-Say**	**10.64**	**300**	*e*Pn	**Pn**	**00 36 53.7**	**-0.2**
	comp=Z,65nm,1.0s						
TAPN	**Taplejung**	**10.74**	**174**	*e*P	**Pn**	**00 36 55.8**	**+0.3**
	comp=Z,47nm,0.9s						
RAMN	**Ramite**	**11.08**	**179**	*e*P	**Pn**	**00 36 59.1**	**-1.0**
	comp=Z,39nm,1.0s						
ODAN	**Odare**	**11.21**	**175**	*e*P	**Pn**	**00 37 01.4**	**-0.4**
	comp=Z,19nm,0.6s						
CHCP	**Chirah Chowk**	**11.49**	**251**	P	**Pn**	**00 37 01.5**	**-4.2**
CEP	**Cherat**	**12.44**	**254**	P	**Pn**	**00 37 12.7**	**-6.0**
CEP				S	**Sn**	**00 39 20.0**	**-17**
KK31	**Karatay Array**	**13.05**	**298**	⇓Pn	**Pn**	**00 37 32.0**	**+5.1**
	comp=Z,3.0nm,0.6s						
KK31				⇑Lg		00 41 07.7	
	comp=Z,44nm,1.1s						
KK31	**Karatay Array**	**13.05**	**298**	P	**Pn**	**00 37 31.9**	**+5.0**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KK31				pmax	pmax		
	comp=Z,37nm,0.9s						
SHL	**Shillong**	**13.31**	**158**	⇑*i*x	x	00 37 40.0	
KURBB	**Kurchatov Arra**	**13.74**	**339**	⇑Pn	**Pn**	**00 37 34.1**	**-2.2**
	comp=Z,3.6nm,0.7s						
KURBB				⇓Lg		00 41 22.8	
	comp=Z,17nm,1.1s						
KURK	**Kurchatov**	**13.79**	**339**	Pn	**Pn**	**00 37 34.3**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=155,slow=13,SNR=28						
KURK				Sn	**Sn**	**00 40 03.9**	**-5.9**
	comp=Z,0.2nm,0.3s,baz=278,slow=71,SNR=3.3						
KURK				Lg		00 41 42.3	
	baz=130,slow=32,SNR=2.7						
KURK				LR	LR	00 43 45.3	
	comp=Z,373nm,20.0s,baz=155,slow=41						
KURK	**Kurchatov**	**13.79**	**339**	P	**Pn**	**00 37 34.3**	**-2.7**
KURK				SN	**Sn**	**00 40 03.9**	**-5.9**
KURK				MLR	MLR		
	comp=Z,373nm,20.0s						
KURK	**Kurchatov**	**13.79**	**339**	*e*Pn	**Pn**	**00 37 35.6**	**-1.4**
KURK				Sn	**Sn**	**00 39 59.0**	**-11**
LZH	**Lanzhou**	**14.11**	**93**	*e*P	**Pn**	**00 37 40.9**	**-0.5**
LZH				AP		00 37 44.5	
LZH				PP		00 37 52.6	
LZH				*e*S	**Sn**	**00 40 16.3**	**-1.3**
LZH				SS		00 40 33.2	
LZH				AMB	AMB		
	comp=Z,18nm,1.0s						
LZH				AMB	AMB		
	comp=Z,90nm,4.4s						
LZH				LR	LR		
	comp=N,1µm,13.1s						
LZH				LR	LR		
	comp=Z,1µm,14.2s						
ZAA0	**Zalesovo Array**	**15.92**	**357**	*e*Pn	**Pn**	**00 38 03.4**	**-2.2**
ZAA0				*e*Sn	**Sn**	**00 40 53.6**	**-8.0**
ZALV	**Zalesovo Beam**	**15.92**	**357**	Pn	**Pn**	**00 38 04.0**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=178,slow=12,SNR=30						
ZALV				Sn	**Sn**	**00 40 58.9**	**-2.8**
	comp=Z,1.0nm,0.3s,baz=181,slow=22,SNR=4.8						
ZALV				LR	LR	00 45 08.8	
	comp=Z,286nm,21.2s,baz=186,slow=41						
ZALV	**Zalesovo Beam**	**15.92**	**357**	P	**Pn**	**00 38 04.0**	**-1.5**
ZALV						00 40 58.9	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				smax			
	comp=N,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,286nm,21.2s						
CD2	**Chengdu**	**16.02**	**111**	P	**Pn**	**00 38 08.2**	**+1.3**
CD2				AP	pP	00 38 15.8	+1.2
CD2				XP	sP	00 38 19.8	+3.2
CD2				PP		00 38 24.0	
CD2				S	**Sn**	**00 41 04.8**	**+0.7**
CD2				XS	sS	00 41 16.8	-7.8
CD2				SS		00 41 23.8	
CD2				AMB	AMB		
	comp=Z,20nm,0.7s						
CD2				AMB	AMB		
	comp=Z,30nm,4.2s						
CD2				LR	LR		
	comp=N,870nm,10.8s						
CD2				LR	LR		
	comp=E,600nm,12.0s						
CD2				LR	LR		
	comp=Z,810nm,12.0s						
NVS	**Novosibirsk**	**16.92**	**354**	*e*P	**Pn**	**00 38 15.8**	**-2.4**
NVS				*i* S	**Sn**	**00 41 19.6**	**-6.1**
NVS				pmax	pmax		
	comp=N,18nm,0.9s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,27nm,0.9s						
NVS				smax			
	comp=N,53nm,2.0s						
NVS				smax			
	comp=E,15nm,0.8s						

MOY Mondy 17.06 32 *e*P **Pn 00 38 25.1 +5.1**
MOY pmax pmax
comp=Z,22nm,1.5s
ZAK Zakamensk 17.24 39 *e*P **Pn 00 38 23.2 +1.0**
ZAK pmax pmax
comp=Z,19nm,1.3s
SONM Songino Array 17.58 50 P **Pn 00 38 27.5 +1.0**
comp=Z,0.4nm,0.3s,baz=252,slow=13,SNR=36
SONM S **Sn 00 41 43.8 +1.9**
comp=Z,0.2nm,0.3s,baz=234,slow=19,SNR=2.5
SONM Lg 00 43 40.6
comp=Z,0.0nm,0.3s,baz=241,slow=31,SNR=3.8
SONM LR LR 00 46 14.3
comp=Z,279nm,20.7s,baz=239,slow=41
SONM Songino Array 17.58 50 P **Pn 00 38 27.5 +1.0**
SONM S **Sn 00 41 43.8 +1.9**
SONM MLR MLR
comp=Z,279nm,20.7s
ULN Ulaanbaatar 17.99 50 *e*P **Pn 00 38 33.3 +1.7**
ULN pmax pmax
comp=Z,27nm,0.9s
ULN Ulaanbaatar 17.99 50 *e*Pn **Pn 00 38 33.3 +1.7**
comp=Z,27nm,0.9s
VOSK Vostochnaya 18.15 329 ⇓Pn **Pn 00 38 33.0 -0.4**
comp=Z,21nm,0.8s
VOSK ⇑Sn **Sn 00 41 47.5 -8.0**
comp=Z,8.0nm,1.1s
VOSK ⇓Lg 00 43 45.4
comp=Z,45nm,1.2s
BVA0 Borovoye Array 18.61 329 ⇑Pn **Pn 00 38 38.6 -0.5**
comp=Z,8.0nm,1.5s,baz=128,slow=13,SNR=72
BVA0 ⇓Lg 00 43 59.2
comp=Z,7.6nm,1.3s,baz=135,slow=26,SNR=3.9
BVA0 Borovoye Array 18.61 329 *i* P **Pn 00 38 39.1 0.0**
BVA0 pmax pmax
comp=Z,8.0nm,1.5s
BVAR Borovoye Array 18.61 329 P **Pn 00 38 39.6 +0.4**
comp=Z,0.9nm,0.3s,baz=124,slow=13,SNR=28
BVAR S **Sn 00 42 08.8 +2.1**
comp=Z,0.1nm,0.3s,baz=135,slow=20,SNR=2.4
BVAR Lg 00 44 13.6
baz=130,slow=27,SNR=2.7
BVAR LR LR 00 47 01.0
comp=Z,282nm,20.9s,baz=30,slow=41
BVAR Borovoye Array 18.61 329 P **Pn 00 38 39.6 +0.5**
BVAR S **Sn 00 42 08.8 +2.0**
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BVAR MLR MLR
comp=Z,282nm,20.9s
XAN Xi'an 18.68 96 P **Pn 00 38 36.6 -3.4**
XAN AP pP 00 38 43.9 -0.1
XAN XP sP 00 38 47.5 +1.5
XAN AMB AMB
comp=Z,10.0nm,0.9s
XAN AMB AMB
comp=Z,38nm,10.2s
BRVK Borovoye 18.68 329 *e*P **Pn 00 38 40.4 +0.5**
BRVK S **Sn 00 42 04.3 -4.1**
BRVK pmax pmax
comp=Z,32nm,0.7s
BRVK Borovoye 18.68 329 *e*P **Pn 00 38 40.4 +0.5**
comp=Z,32nm,0.7s
BRVK S **Sn 00 42 04.3 -4.1**
KMI Kunming 18.97 128 P **Pn 00 38 44.3 +0.6**
KMI AP pP 00 38 51.3 +4.0
KMI XP sP 00 38 54.7 +5.4
KMI PP 00 39 02.6
KMI S **Sn 00 42 18.5 +2.7**
KMI XS sS 00 42 28.6 +3.8
KMI AMB AMB
comp=Z,16nm,0.9s
KMI AMB AMB
comp=Z,84nm,4.9s
KMI LR LR
comp=N,489nm,12.1s
KMI LR LR
comp=E,648nm,10.9s
KMI LR LR
comp=Z,381nm,13.2s
HHC Hu-ho-hao-te 19.65 74 *e*P **Pn 00 38 52.0 +0.3**
HHC AP pP 00 38 55.8 +1.2
HHC XP sP 00 38 59.0 +2.4
HHC PP 00 39 10.7
HHC S **Sn 00 42 29.6 -2.4**
HHC XS sS 00 42 33.6 -4.7
HHC SS 00 42 55.3
HHC PCP PcP 00 43 10.4 +1.2
HHC SCP ScP 00 46 44.5 -0.2
HHC PCS PcS 00 46 46.4 0.0
HHC AMB AMB
comp=Z,24nm,1.0s
HHC AMB AMB
comp=Z,184nm,5.1s
HHC LR LR
comp=N,414nm,10.1s
HHC LR LR
comp=E,451nm,10.8s
HHC LR LR
comp=Z,354nm,11.6s
GYA Guiyang 20.66 118 ⇓*i* P **P 00 39 02.3 +0.9**
GYA AMB AMB
comp=Z,20nm,1.1s
HYB Hyderabad 21.68 201 *i* P **P 00 39 09.5 -2.9**
HYB Hyderabad 21.68 201 *e*P **P 00 39 09.5 -2.9**
AB31 Akbulak array 22.02 309 *i* P **P 00 39 14.9 -1.0**
AB31 pmax pmax
comp=Z,16nm,0.6s,mb4.6
CHTO Chiang Mai 22.10 147 *e*P **P 00 39 18.3 +1.4**
CHTO pmax pmax
comp=Z,4.0nm,0.8s,mb3.9
CHTO Chiang Mai 22.10 147 *e*P **P 00 39 18.3 +1.4**
comp=Z,4.5nm,0.8s,mb4.0
CMAR Chiang Mai Arr 22.42 147 P **P 00 39 18.9 -1.4**
comp=Z,4.9nm,0.8s,mb4.0,baz=336,slow=11,SNR=18
CMAR LR LR 00 49 07.6
comp=Z,86nm,19.6s,MS3.2,baz=305,slow=40
CMAR Chiang Mai Arr 22.42 147 P **P 00 39 18.9 -1.4**
CMAR pmax pmax
comp=Z,5.0nm,0.8s
CMAR MLR MLR
comp=Z,86nm,19.6s
BJI Beijing 23.20 76 P **P 00 39 29.5 +1.1**
BJI S **S 00 43 39.7 +0.2**
BJI AMB AMB
comp=Z,5.0nm,1.2s,mb3.8
BJI AMB AMB
comp=Z,97nm,5.3s
BJI LR LR
comp=N,215nm,11.1s
BJI LR LR
comp=E,511nm,21.4s
BJI LR LR
comp=Z,425nm,21.0s
AKTK Aktyubinsk 23.61 311 P **P 00 39 31.9 -0.6**
AKTK S **S 00 43 52.5 +6.6**
AKTK LR LR 00 49 06.9
AKTO Aktyubinsk 23.61 311 P **P 00 39 31.9 -0.6**
comp=Z,9.4nm,0.8s,mb4.3,baz=109,slow=11,SNR=19
AKTO S **S 00 43 52.5 +6.6**
comp=Z,2.0nm,0.9s,baz=108,slow=20,SNR=2.9
AKTO LR LR 00 49 06.9
comp=Z,51nm,18.7s,MS3.0,baz=120,slow=38
WHN Wuhan 24.25 100 P **P 00 39 42.3 +3.7**
SVE Sverdlovsk 25.34 326‖ *e*P **P 00 39 49.0 +0.8**
SVE *e*S **S 00 44 00.3 -13**
SVE pmax pmax
comp=Z,43nm,0.8s,mb5.0
SVE MLR MLR
comp=Z,439nm,12.0s,MS4.2
ARU Arti 26.05 324 *c i*P **P 00 39 53.6 -1.0**
ARU *e*S **S 00 44 20.6 -4.3**
ARU pmax pmax
comp=Z,5.0nm,1.7s,mb3.8
ARU MLR MLR
comp=Z,210nm,14.0s,MS3.8
ARU Arti 26.05 324 *e*P **P 00 39 53.8 -0.8**
comp=Z,15nm,0.6s,mb4.7
HIA Hailar 26.41 54 *e*P **P 00 39 57.6 -0.4**
BOD Bodaibo 26.77 33 *e*P **P 00 40 02.1 +1.0**
BOD pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
NJ2 Nanjing 27.18 93 *e*P **P 00 40 11.0 +5.9**
NJ2 S **S 00 44 41.0 -2.3**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
NJ2 AMB AMB
comp=Z,70nm,4.6s
NJ2 LR LR
comp=N,480nm,24.3s,MS4.4
NJ2 LR LR
comp=E,1µm,25.3s,MS4.4
NJ2 LR LR
comp=Z,1µm,25.4s,MS4.4
QIZ Qiongzhong 27.89 126 P **P 00 40 17.0 +5.4**
QIZ S **S 00 45 02.4 +7.8**
QIZ LR LR
comp=N,370nm,20.3s,MS4.1
QIZ LR LR
comp=E,380nm,19.6s,MS4.1
QIZ LR LR
comp=Z,391nm,14.7s,MS4.1
GNI Garni 32.15 287 P **P 00 40 53.3 +4.2**
comp=Z,1.4nm,0.4s,mb4.2,baz=322,slow=16,SNR=4.0
GNI LR LR 00 56 09.6
comp=Z,62nm,19.3s,MS3.3,baz=268,slow=41
GNI Garni 32.15 287‖ *e*P **P 00 40 53.5 +4.4**
GNI pmax pmax
comp=Z,14nm,1.5s
GNI MLR MLR
comp=Z,100nm,15.0s
GNI Garni 32.15 287 *e*P **P 00 40 53.3 +4.2**
GNI LR LR 00 56 09.6
KSRS Korea Array 32.68 78 P **P 00 40 53.5 -0.2**
comp=Z,4.5nm,0.8s,mb4.5,baz=280,slow=8.3,SNR=18
KSRS LR LR 00 55 39.5
comp=Z,186nm,19.9s,MS3.8,baz=109,slow=39
KSRS Korea Array 32.68 78 P **P 00 40 53.6 -0.1**
KSRS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KSRS MLR MLR
comp=Z,186nm,19.9s,MS3.8
KIV Kislovodsk 33.17 294 *i* P **P 00 41 00.9 +2.9**
KIV *i* 00 42 08.9
KIV *e* 00 43 41.9
KIV pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
KIV MLR MLR
comp=Z,100nm,15.0s,MS3.6
MIB Mutribah 33.21 267 *e*P **P 00 40 56.7 -1.8**
baz=266
MIB AMb AMB 00 41 02.0
comp=Z,61nm,0.9s,mb5.5,baz=266
NAY Al-Naaiem 33.52 267 *e*P **P 00 40 59.2 -2.0**
baz=266
NAY AMb AMB 00 41 04.2
comp=Z,37nm,1.2s,mb5.2,baz=266
RST Umm Al-Ruwaisa 33.61 267 *e*P **P 00 41 00.4 -1.6**
baz=266
RST AMb AMB 00 41 04.5
comp=Z,3.0nm,0.9s,mb4.2,baz=266
VSR Storozhevoye 35.44 307 *e*P **P 00 41 20.1 +2.6**
VSR pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
VSR pmax pmax
comp=N,3.0nm,0.8s
VSR pmax pmax
comp=E,4.0nm,0.9s
YAK Yakutsk 35.69 34 *e*P **P 00 41 19.2 -0.4**
YAK pmax pmax
comp=Z,14nm,0.8s,mb4.9
MOS Moscow 36.79 315 *e*P **P 00 41 25.3 -3.8**
MOS pmax pmax
comp=Z,39nm,0.8s,mb5.3
OBN Obninsk 37.31 314 *e*P **P 00 41 37.1 +3.6**
OBN *e* 00 42 58.6
OBN pmax pmax
comp=Z,16nm,1.0s,mb4.8
OBN MLR MLR
comp=Z,100nm,15.0s,MS3.7
OBN Obninsk 37.31 314 *e*P **P 00 41 33.8 +0.3**
MALT Malatya 37.33 286 *e*P **P 00 41 34.2 +0.3**
MALT pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
MALT Malatya 37.33 286 *e*P **P 00 41 34.2 +0.3**
comp=Z,6.1nm,1.0s,mb4.4
TIXI Tiksi 39.95 19*c i*P **P 00 41 55.5 +0.1**
TIXI pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
TIXI MLR MLR
comp=Z,200nm,19.0s,MS4.0
TIXI Tiksi 39.95 19 *e*P **P 00 41 55.6 +0.2**
comp=Z,12nm,0.9s,mb4.6
ASF Jabal al Asfar 40.49 277 P **P 00 42 01.2 +0.8**
comp=Z,2.9nm,0.9s,mb4.0,baz=239,slow=1.6,SNR=5.5
ASF Jabal al Asfar 40.49 277 P **P 00 42 01.2 +0.8**
ASF pmax pmax
comp=Z,3.0nm,0.9s
MJAR Matsushiro Arr 40.84 76 P **P 00 42 03.1 -0.1**
comp=Z,1.2nm,0.6s,mb3.7,baz=291,slow=9.8,SNR=5.8
MJAR Matsushiro Arr 40.84 76 P **P 00 42 03.1 -0.1**
MJAR pmax pmax
comp=Z,1.0nm,0.6s
JOF Joensuu 41.16 325 *ep* **P 00 42 05.7 +0.2**
comp=Z,9.0nm,0.6s,mb4.6
JOF Joensuu 41.16 325 *e*P **P 00 42 05.7 +0.2**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
MMAI Mount Meron Ar 41.34 279 P **P 00 42 09.6 +2.2**
comp=Z,0.8nm,0.5s,mb3.6,baz=69,slow=9.4,SNR=2.9
AKASG Malin Array Be 41.73 307 P **P 00 42 11.2 +0.8**
comp=Z,0.5nm,0.2s,mb3.8,baz=68,slow=7.3,SNR=5.7
AKASG Malin Array Be 41.73 307 P **P 00 42 11.2 +0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.2s
VSU Vasula 42.93 318 *i* P **P 00 42 24.1 +4.1**
EIL Elat 43.03 275 P **P 00 42 22.3 +1.0**
comp=Z,5.2nm,0.7s,mb4.4,baz=58,slow=3.7,SNR=5.4
KAF Kangasniemi 43.35 324 *ep* **P 00 42 25.0 +1.6**
comp=Z,0.5nm,0.3s,mb3.7,baz=96,slow=8.1
KAF Kangasniemi 43.35 324 *e*P **P 00 42 25.0 +1.6**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.0
VRI Vrincioaia 44.10 300⇑ *i*P **P 00 42 34.3 +4.7**
KEV Kevo 44.30 335 *ep* **P 00 42 33.2 +2.3**
comp=Z,8.8nm,0.7s,mb4.6
KEV Kevo 44.30 335 *e*P **P 00 42 31.0 +0.1**
KEV pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
KEV Kevo 44.30 335 *e*P **P 00 42 31.0 +0.1**
comp=Z,8.3nm,0.7s,mb4.6
ARCES ARCESS Array B 44.77 334 P **P 00 42 34.8 +0.2**
comp=Z,4.9nm,0.7s,mb4.4,baz=70,slow=7.0,SNR=9.0
ARCES LR LR 01 02 56.2
comp=Z,113nm,21.4s,MS3.8,baz=17,slow=38
ARCES ARCESS Array B 44.77 334 P **P 00 42 34.8 +0.2**
ARCES pmax pmax
comp=Z,5.0nm,0.7s
ARCES MLR MLR
comp=Z,113nm,21.4s
BURAR Bucovina Array 44.77 303⇑ *i*P **P 00 42 38.7 +3.7**
BUR08 Bucovina Ar. S 44.78 303 *e*P **P 00 42 37.9 +2.9**
BUR08 *e*PcP PcP 00 44 15.8 -1.1
VOIR 45.34 300⇑ *i*P **P 00 42 45.1 +5.5**
KWP Kalwaria 46.03 306 *e*P **P 00 42 44.9 0.0**
KWP *e* 00 44 18.8
KWP pmax pmax
comp=Z,12nm,0.8s,mb4.9
KWP Kalwaria 46.03 306⇓ *i*P **P 00 42 48.6 +3.7**
KWP Kalwaria 46.03 306 *e*P **P 00 42 44.9 0.0**
comp=Z,12nm,0.8s,mb4.9
KWP *e*PcP PcP 00 44 18.8 -2.4
DRGR 46.62 302⇓ *i*P **P 00 42 54.3 +4.7**
NIE Niedzica 47.60 306 *e*P **P 00 43 02.1 +4.9**
PSZ Piszkesteto 48.21 304 P **P 00 43 03.1 +1.1**
PKSM Moragy 49.48 302⇑ *i*P **P 00 43 16.6 +4.9**
PETK Petropavlovsk- 50.06 48 P **P 00 43 16.6 +0.6**
comp=Z,3.7nm,0.8s,mb4.5,baz=252,slow=3.0,SNR=7.0
PETK LR LR 01 06 10.4
comp=Z,150nm,19.3s,MS4.0,baz=272,slow=38
NB2 NORSAR Subarra 50.59 322 P **P 00 43 19.0 -0.9**
comp=Z,6.1nm,0.6s,mb4.7,baz=82,slow=7.9
NOA NORSAR Array B 50.59 322 P **P 00 43 19.6 -0.3**
comp=Z,8.5nm,0.8s,mb4.8,baz=81,slow=7.4,SNR=8.9
NOA LR LR 01 04 58.6
comp=Z,53nm,18.1s,MS3.6,baz=90,slow=36
NOA NORSAR Array B 50.59 322 P **P 00 43 19.7 -0.2**
NOA pmax pmax
comp=Z,9.0nm,0.8s
NOA MLR MLR
comp=Z,53nm,18.1s
BRG Berggiesshubel 51.23 309 *e*P **P 00 43 28.0 +3.1**
BRG pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
BRG MLR MLR
comp=N,110nm,14.3s,MS4.1
BRG MLR MLR
comp=E,84nm,14.7s,MS4.1
BRG MLR MLR
comp=Z,92nm,17.8s,MS3.9
BRG Berggiesshubel 51.23 309 *e*P **P 00 43 28.0 +3.1**
comp=Z,8.7nm,1.4s,mb4.5
BRG
comp=N,184nm,14.3s
BRG
comp=E,140nm,14.7s
BRG
comp=Z,154nm,17.8s
CLL Collm 51.69 310 *e*P **P 00 43 32.0 +3.7**
CLL pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CLL Collm 51.69 310 *e*(P) **P 00 43 32.0 +3.7**
comp=Z,4.0nm,0.7s,mb4.5
GERES GERESS Array B 51.95 307 P **P 00 43 29.7 -0.6**
comp=Z,0.7nm,0.7s,mb3.7,baz=72,slow=9.5,SNR=4.3
GERES LR LR 01 10 10.6
comp=Z,86nm,19.1s,MS3.8,baz=73,slow=41
GERES GERESS Array B 51.95 307 P **P 00 43 29.7 -0.6**
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES MLR MLR
comp=Z,86nm,19.1s
KAPI Kappang 52.90 137 LR LR 01 07 14.2
comp=Z,65nm,18.1s,MS3.7,baz=158,slow=37
GUMO Guam 57.03 99 LR LR 01 09 46.6
comp=Z,41nm,18.1s,MS3.6,baz=24,slow=37
LPG La Plagne 57.55 305 *e*P **P 00 44 10.5 -0.4**
comp=Z,24nm,0.8s,mb5.0
LPG La Plagne 57.55 305 *e*P **P 00 44 10.5 -0.4**
LPG pmax pmax
comp=Z,12nm,0.8s,mb5.0
LPG La Plagne 57.55 305 *e*P **P 00 44 10.5 -0.4**
comp=Z,12nm,0.8s,mb5.0
LPL La Plagne 57.55 305 *e*P **P 00 44 10.5 -0.5**
comp=Z,29nm,0.8s,mb5.1
LPL La Plagne 57.55 305 *e*P **P 00 44 10.5 -0.5**
LPL pmax pmax
comp=Z,15nm,0.8s,mb5.1
LPL La Plagne 57.55 305 *e*P **P 00 44 10.5 -0.5**
comp=Z,15nm,0.8s,mb5.1
SBF Sospel 57.74 303 *e*P **P 00 44 11.2 -1.2**
comp=Z,28nm,0.7s,mb5.1
SBF Sospel 57.74 303 *e*P **P 00 44 11.2 -1.2**
SBF pmax pmax
comp=Z,14nm,0.7s,mb5.1
SBF Sospel 57.74 303 *e*P **P 00 44 11.2 -1.2**
comp=Z,14nm,0.7s,mb5.1
MBDF Montbardon 57.84 304 *e*P **P 00 44 11.9 -1.1**
comp=Z,8.6nm,0.7s,mb4.6
MBDF Montbardon 57.84 304 *e*P **P 00 44 11.9 -1.1**
MBDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
MBDF Montbardon 57.84 304 *e*P **P 00 44 11.9 -1.1**
comp=Z,4.3nm,0.7s,mb4.6
ORIF Oris-en-Rattie 58.34 305 *e*P **P 00 44 15.8 -0.7**
comp=Z,11nm,0.7s,mb4.7
ORIF Oris-en-Rattie 58.34 305 *e*P **P 00 44 15.8 -0.7**
ORIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
ORIF Oris-en-Rattie 58.34 305 *e*P **P 00 44 15.8 -0.7**
comp=Z,5.4nm,0.7s,mb4.7
SMF Signal de Mont 58.95 307 *e*P **P 00 44 19.3 -1.4**
comp=Z,14nm,0.9s,mb4.7
SMF Signal de Mont 58.95 307 *e*P **P 00 44 19.3 -1.4**
SMF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
SMF Signal de Mont 58.95 307 *e*P **P 00 44 19.3 -1.4**
comp=Z,7.0nm,0.9s,mb4.7
AVF Avril sur Loir 59.19 307 *e*P **P 00 44 21.8 -0.6**
BGF Bois d'Agland 59.61 307 *e*P **P 00 44 25.5 +0.2**
comp=Z,11nm,0.8s,mb4.6
BGF Bois d'Agland 59.61 307 *e*P **P 00 44 25.5 +0.2**
BGF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BGF Bois d'Agland 59.61 307 *e*P **P 00 44 25.5 +0.2**
comp=Z,5.5nm,0.8s,mb4.6
KMBO Kilima Mbogo 59.69 241 P **P 00 44 26.1 -0.1**
comp=Z,1.7nm,0.8s,mb4.2,baz=52,slow=11,SNR=3.4
KMBO Kilima Mbogo 59.69 241 P **P 00 44 26.1 -0.1**
KMBO pmax pmax
comp=Z,2.0nm,0.8s
KEST Kesra 59.91 294 P **P 00 44 28.8 +1.3**
comp=Z,0.7nm,0.9s,mb3.7,baz=333,slow=9.0,SNR=2.7
LASF Ste Croix 60.01 304 *e*P **P 00 44 26.3 -1.8**
comp=Z,33nm,1.2s,mb4.9
TCF Toulx Ste Croi 60.12 307 *e*P **P 00 44 27.9 -0.9**
comp=Z,15nm,1.0s,mb4.7
TCF Toulx Ste Croi 60.12 307 *e*P **P 00 44 27.9 -0.9**
TCF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
TCF Toulx Ste Croi 60.12 307 *e*P **P 00 44 27.9 -0.9**
comp=Z,7.3nm,1.0s,mb4.7
MTLF Montolieu 61.40 304 *e*P **P 00 44 36.4 -1.2**
comp=Z,5.4nm,0.8s,mb4.4
MTLF Montolieu 61.40 304 *e*P **P 00 44 36.4 -1.2**
comp=Z,2.7nm,0.8s,mb4.4
ETSF Etsaut 63.41 305 *e*P **P 00 44 50.1 -0.9**
comp=Z,14nm,0.9s,mb4.8
ETSF Etsaut 63.41 305 *e*P **P 00 44 50.1 -0.9**
ETSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
ETSF Etsaut 63.41 305 *e*P **P 00 44 50.1 -0.9**
comp=Z,6.9nm,0.9s,mb4.8
IMA2 Indian Mountai 66.44 23 *e*P **P 00 45 11.4 +1.1**
COLD Coldfoot 66.66 21 *e*P **P 00 45 12.8 +1.1**
comp=Z,11nm,0.9s,mb4.9
FITZ Fitzroy Crossi 66.95 139 P **P 00 45 16.2 +2.1**
comp=Z,1.1nm,0.8s,mb3.9,baz=338,slow=11,SNR=4.3
FITZ Fitzroy Crossi 66.95 139 P **P 00 45 12.6 -1.6**
ESDC Sonseca Array 67.23 303 P **P 00 45 17.5 +1.7**
comp=Z,1.7nm,0.7s,mb4.2,baz=52,slow=6.3,SNR=8.4
PPLA Purkeypile 69.08 25 *e*P **P 00 45 28.4 +1.4**
DAWY Dawson 71.99 19 *e*P **P 00 45 44.4 -0.4**
WRAB Tennant Creek 73.21 133 *e*P **P 00 45 49.8 -2.8**
WRAB pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
WRAB Tennant Creek 73.21 133 *e*P **P 00 45 49.8 -2.8**
comp=Z,5.0nm,0.6s,mb4.6
WRA Warramunga Arr 73.21 133 P **P 00 45 51.1 -1.5**
comp=Z,1.1nm,0.4s,mb4.2,baz=330,slow=6.1,SNR=6.3
WRA Warramunga Arr 73.21 133 P **P 00 45 51.1 -1.5**
WRA pmax pmax
comp=Z,1.0nm,0.4s
WB2 Warramunga Arr 73.22 133 P **P 00 45 51.3 -1.3**
ASAR Alice Springs 75.91 136 P **P 00 46 07.0 -1.2**
comp=Z,1.4nm,0.8s,mb4.0,baz=333,slow=5.4,SNR=7.2
ASAR Alice Springs 75.91 136 P **P 00 46 07.0 -1.2**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
TORD Torodi Ar. Bea 77.86 277 P **P 00 46 17.4 -2.0**
comp=Z,6.7nm,0.6s,mb4.8,baz=46,slow=3.9,SNR=32
YKA Yellowknife Ar 78.38 10 P **P 00 46 21.0 -0.6**
comp=Z,5.4nm,0.8s,mb4.5,baz=334,slow=5.5,SNR=5.4
YKA LR LR 01 22 27.1
comp=Z,49nm,18.8s,MS3.9,baz=135,slow=37
YKA Yellowknife Ar 78.38 10 P **P 00 46 21.0 -0.6**
YKA pmax pmax
comp=Z,5.0nm,0.8s
YKA MLR MLR
comp=Z,49nm,18.8s
SCHQ Schefferville 84.65 345 LR LR 01 29 17.8
comp=Z,74nm,19.6s,MS4.1,baz=213,slow=39
STKA Stephens Creek 86.55 136 P **P 00 47 05.3 +0.8**
comp=Z,2.7nm,0.8s,mb4.5,baz=333,slow=6.8,SNR=2.8
DBIC Dimbokro 86.89 276 P **P 00 47 08.8 +2.1**
comp=Z,6.9nm,0.8s,mb5.0,baz=7.4,slow=6.3,SNR=13
DBIC LR LR 01 27 15.3
comp=Z,56nm,18.3s,MS4.0,baz=136,slow=36
DBIC Dimbokro 86.89 276 P **P 00 47 08.8 +2.1**
DBIC pmax pmax
comp=Z,7.0nm,0.8s
DBIC MLR MLR
comp=Z,56nm,18.3s
KIC Kosan Boka 86.98 276 *e*P **P 00 47 09.4 +2.2**
comp=Z,34nm,0.7s,mb5.7
TIC Toumodi 87.03 276 *e*P **P 00 47 07.9 +0.5**
comp=Z,116nm,1.3s
TIC Toumodi 87.03 276 *e*P **P 00 47 07.9 +0.5**
TIC pmax pmax

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,116nm,1.3s						
LIC	Lamto	87.29	276	eP	P	00 47 10.1	+1.4
	comp=Z,18nm,0.9s,mb5.0						
LIC	Lamto	87.29	276	eP	P	00 47 09.9	+1.2
	comp=Z,78nm,1.9s,mb5.6						
LIC	Lamto	87.29	276	eP	P	00 47 10.1	+1.4
	comp=Z,8.9nm,0.9s,mb5.0						
BOSA	Boshof	87.54	230	P	P	00 47 09.9	+0.5
	comp=Z,2.1nm,0.8s,mb4.4,baz=176,slow=11,SNR=3.7						
BOSA	Boshof	87.54	230	P	P	00 47 09.9	+0.5
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
JCW	Jim Creek	90.51	18	eP	P	00 47 23.1	-0.2
NEW	Newport	91.55	15	eP	P	00 47 27.9	-0.2
NEW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NEW	Newport	91.55	15	eP	P	00 47 27.9	-0.2
	comp=Z,2.1nm,0.8s,mb4.5						
LON	Longmire	91.88	19	eP	P	00 47 29.9	+0.2
LON				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
LON	Longmire	91.88	19	eP	P	00 47 29.9	+0.3
	comp=Z,2.6nm,0.7s,mb4.7						
CHMT	Chamberlain Mo	93.60	13	eP	P	00 47 38.6	+1.0
PDAR	Pinedale Array	98.26	12	LR	LR	01 36 47.6	
	comp=Z,51nm,19.4s,MS4.0,baz=222,slow=38						
NVAR	Mina Array Bea	100.57	19	P	Pdif	00 48 08.7	-0.5
	comp=Z,0.2nm,0.5s,baz=319,slow=6.5,SNR=3.0						
NVAR				PP	PP	00 52 10.0	-5.1
	comp=Z,0.3nm,0.2s,baz=4.3,slow=6.7,SNR=6.6						
NVAR	Mina Array Bea	100.57	19	P	Pdif	00 48 08.7	-0.5
NVAR				PP	PP	00 52 10.0	-5.1
TXAR	Lajitas Array	112.30	9	PP	PP	00 53 45.1	+3.7
	comp=Z,0.4nm,0.8s,baz=335,slow=5.5,SNR=4.0						
SNAA	Sanae	125.37	203	ePKPdf	PKPdf	00 53 24.2	+3.0
SNAA				e		00 53 28.4	
SNAA				e		00 53 37.3	
VNA2	Neumayer--Watz	126.64	204	ePKPdf	PKPdf	00 53 22.4	-1.2
VNA2				e		00 53 28.7	
VNA2				e		00 53 37.1	
VNA3	Neumayer Olymp	127.42	204	ePKPdf	PKPdf	00 53 23.5	-1.6
VNA3				e		00 53 28.5	
CPUP	Villa Florida	147.31	280	PKPbc	PKPbc	00 54 05.9	+0.6
	comp=Z,1.7nm,0.6s,baz=67,slow=1.4,SNR=6.3						
CPUP	Villa Florida	147.31	280	PKP2	PKPab	00 54 05.9	-1.2
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LPAZ	La Paz	148.79	307	PKPbc	PKPab	00 54 11.6	-1.6
	comp=Z,2.0nm,0.7s,baz=0.0,slow=1.0,SNR=12						
LPAZ	La Paz	148.79	307	PKP2	PKPab	00 54 11.6	-1.6
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						

NEIC 11 00:39:37.8, 1905N×6474W, h14km, MD3.5(RSPR), After RSPR., Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTP	Monte Pirata	1.22	219	eP	Pn	00 39 57.8	-2.8
MTP				eS	Sb	00 40 14.1	-2.3
HUMP	Col San Antoni	1.39	230	eP	Pn	00 39 59.9	-2.9
HUMP				eS	Sn	00 40 18.4	-2.6
CPD	Cerro la Pandu	1.51	228	eP	Pn	00 40 01.6	-2.8
CPD				eS	Sn	00 40 22.3	-1.6
SJG	San Juan	1.63	235	eP	Pn	00 40 03.0	-3.2
SJG				eS	Sn	00 40 24.4	-2.7
AOPR	Arecibo Observ	2.04	250	eP	Pn	00 40 08.4	-3.3
AOPR				eS	Sn	00 40 35.3	-1.7

ISCJB 11 00:58:46.9±1.7, 2453S±007×17983E±010, h482km±20km, mb3.9/11, Error ellipse: s-maj=14.1km s-min=10.8km az=24.2
NEIC 11 00:58:48.0±1.1, 2459S×17994E, h489km±13km, mb4.4/7, Error ellipse: s-maj=13.7km s-min=9.4km az=147.0
IDC 11 00:58:48.2±2.4, 2466S×17989E, h482km±28km, mb3.2/7, mb1 3.5/9, mb1mx3.3/18, mbtmp3.3/9, Error ellipse: s-maj=20.2km s-min=14.3km az=120.0
ISC 11 00:58:47.7±1.3, 2462S±007×17990E±010, h481km±16km, n31, σ0^{s}72/29, mb3.9/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	13.23	38	P	P	01 01 39.2	-0.5
	2.1nm,0.3s,baz=278,slow=7.1,SNR=3.2						
URZ	Urewera	13.81	189	P	P	01 01 45.8	+0.4
	1.5nm,0.3s,baz=37,slow=2.0,SNR=7.8						
URZ				S	S	01 04 12.0	-0.1
	1.2nm,0.3s,baz=41,slow=20,SNR=9.1						
SNZO	South Karori	17.20	193	eP	P	01 02 21.1	0.0
RPZ	Rata Peaks	20.39	199	P	P	01 02 50.5	-0.1
	12nm,1.0s,baz=26,slow=7.0,SNR=4.4						
RPZ				S	S	01 06 08.8	+0.6
	2.3nm,0.4s,baz=93,slow=17,SNR=3.2						
CTA	Charters Tower	31.39	271	eP	P	01 04 30.3	+1.9
	4.5nm,0.3s,mb4.4						
CTAO	Charters Tower	31.39	271	eP	P	01 04 27.7	-0.7
	5.8nm,0.3s,mb4.5						
TAU	Tasmania Unive	32.38	228	eP	P	01 04 36.6	0.0
STKA	Stephens Creek	34.38	249	eP	P	01 04 54.9	+1.2
	1.2nm,0.4s,mb3.7						
STKA	Stephens Creek	34.38	249	P	P	01 04 54.4	+0.7
	1.3nm,0.4s,mb3.8,baz=95,slow=8.3,SNR=7.8						
STKA	Stephens Creek	34.38	249	eP	P	01 04 54.4	+0.8
	9.0nm,1.5s,mb4.0						
ASAR	Alice Springs	41.83	261	P	P	01 05 55.0	+0.2
	0.8nm,0.4s,mb3.5,baz=92,slow=8.1,SNR=14						
WB2	Warramunga Arr	42.26	267	eP	P	01 05 58.3	+0.1
WRAB	Tennant Creek	42.26	267	eP	P	01 05 58.0	-0.2
	2.0nm,0.3s,mb4.0						
WRA	Warramunga Arr	42.27	267	P	P	01 05 58.3	0.0
	2.1nm,0.4s,mb4.0,baz=103,slow=8.1,SNR=8.0						
FORT	Forrest	45.98	250	eP	P	01 06 26.5	-0.4
	6.6nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	50.69	266	P	P	01 07 02.6	+0.3
	0.7nm,0.5s,mb3.2,baz=95,slow=11,SNR=3.8						
NWAO	Narrogin (SRO)	54.86	246	eP	P	01 07 31.3	-0.8
MBWA	Marble Bar	55.16	261	eP	P	01 07 34.2	-0.1
PMSA	Palmer Station	78.29	157	eP	P	01 09 57.4	+0.5
COCO	West Island	78.79	262	eP	P	01 09 59.6	-0.9
	26nm,0.8s,mb4.8						
SNAA	Sanae	83.95	179	e	P	01 10 25.1	-1.0
VNA3	Neumayer Olymp	84.17	177	e	P	01 10 26.7	-0.4
VNA2	Neumayer--Watz	84.58	178	e	P	01 10 29.1	-0.1
NVAR	Mina Array Bea	85.33	44	P	P	01 10 35.2	+1.9
	0.1nm,0.3s,mb2.9,baz=237,slow=6.3,SNR=3.8						
MVU	Marysvale	89.31	47	eP	P	01 10 51.3	-0.7
	3.0nm,0.5s,mb4.4						
TMUT	Trail Mountain	90.40	46	eP	P	01 10 56.1	-1.0
TXAR	Lajitas Array	90.89	58	P	P	01 11 01.0	+1.4
	0.5nm,0.8s,mb3.5,baz=211,slow=7.0,SNR=5.2						
ARCES	ARCESS Array B	132.57	348	PKP	PKPdf	01 17 06.0	-0.2
	4.6nm,1.0s,baz=56,slow=3.4,SNR=4.1						
NOA	NORSAR Array B	142.77	351	PKP	PKPdf	01 17 22.9	-2.2
	1.0nm,1.0s,baz=7.2,slow=2.8,SNR=2.8						
TOA0	Torodi Ar. Sit	168.47	189	ePKPdf	PKPdf	01 17 58.8	-0.7
TORD	Torodi Ar. Bea	168.47	189	PKPab	PKPab	01 19 11.1	-0.7
	0.7nm,1.0s,baz=184,slow=5.1,SNR=5.8						

ISCJB 11 01:01:31.9±0.5, 4250N±002×4331E±004, h10km, Error ellipse: s-maj=5.0km s-min=3.0km az=151.8
MOS 11 01:01:32.4±0.1, 4242N×4324E, h6km, mb4.2/1, Error ellipse: s-maj=50.0km s-min=13.1km az=100.6
CSEM 11 01:01:32.7±0.3, 4251N×4335E, h0km, mb4.2, Error ellipse: s-maj=2.8km s-min=1.2km az=59.0
TIF 11 01:01:32.5, 4255N×4341E, h13km±1km
ISC 11 01:01:32.7±0.5, 4251N±002×4333E±004, h5km±5km, n13, σ0^{s}88/24, 1C-1D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.11	52	P	Pg	01 01 35.5	+0.5
ONI				S	Sg	01 01 37.1	+0.5
GOR	Gori	0.78	132	P	Pg	01 01 48.1	+0.5
GOR				S	Sg	01 01 59.1	+1.3
KUBR	Kubataba	1.29	3	ePg	Pn	01 01 58.2	+0.8
KUBR				i Sg	Sn	01 02 15.8	+0.8
TBLG	Delisi	1.31	126	Pg	Pg	01 01 57.1	-0.6
TBLG				Sg	Sg	01 02 14.3	-0.3
SHAR	Shatzhatmas	1.32	339	⇓iPG	Pg	01 01 58.2	+0.2
SHAR				i S	Sn	01 02 15.3	-0.6
MTA	Mtatsminda	1.36	126	P	Pn	01 01 58.2	-0.1
MTA				S	Sn	01 02 16.1	-0.6
KIV0	Kislovodsk Arr	1.52	342	ePg	Pg	01 02 01.3	-0.5
KIV0				eSg	Sg	01 02 20.8	-0.6
KIV	Kislovodsk	1.52	342	⇑iPG	Pg	01 02 01.6	-0.2
KIV				eS	Sn	01 02 21.2	+0.5
PYA	Pyatigorsk	1.54	353	ePN	Pg	01 02 02.1	0.0
PYA				eS	Sg	01 02 21.7	-0.3
BCA	Borcka	1.66	231	ePN	Pg	01 02 04.1	-0.3
BCA				eSN	Sg	01 02 27.8	+1.8
DGRG	David-gareji	1.86	124	P	Pg	01 02 06.5	-1.8
DGRG				S	Sg	01 02 33.7	+1.4
KARS	Kars	1.90	185	ePN	Pg	01 02 08.6	-0.5
GNI	Garni	2.59	155	ePN	Pg	01 02 19.9	-2.3

IDC 11 01:07:36.5±2.7, 1.12N×9766E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.8/20, mbtmp3.9/7, ML4.5/1, Error ellipse: s-maj=117.8km s-min=18.6km az=61.0
ISCJB 11 01:07:37.2±1.1, 07N±01×970E±02, h33km, mb3.9/7, Error ellipse: s-maj=24.5km s-min=14.4km az=168.2
NEIC 11 01:07:42.6±1.7, 129N×9794E, h35km, mb3.8/1, Error ellipse: s-maj=65.9km s-min=11.9km az=64.0
ISC 11 01:07:40.0±1.2, 08N±01×972E±02, h35km, n10, σ0^{s}47/10, mb3.9/7, 2C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.61	37	⇑eP	Pn	01 07 52.0	-0.2
PSI	Prapat	2.62	41	⇑eP	Pn	01 08 20.2	+0.4
CMAR	Chiang Mai Arr	17.62	5	P	Pn	01 11 37.9	-4.9
	0.6nm,0.3s,baz=172,slow=13,SNR=5.0						
WRA	Warramunga Arr	41.83	122	P	P	01 15 26.8	-0.1
	1.2nm,1.0s,mb3.5,baz=297,slow=9.9,SNR=3.7						
WRAB	Tennant Creek	41.83	122	eP	P	01 15 26.5	-0.4
	1.5nm,0.7s,mb3.7						
ASAR	Alice Springs	43.16	127	P	P	01 15 37.0	-0.6
	0.5nm,0.6s,mb3.4,baz=307,slow=8.0,SNR=5.6						
SONM	Songino Array	47.51	8	P	P	01 16 11.6	-0.1
	0.4nm,0.5s,mb3.8,baz=190,slow=7.3,SNR=3.6						
MKAR	Makanchi Array	47.62	346	P	P	01 16 12.7	+0.1
	1.2nm,0.5s,mb4.2,baz=161,slow=8.7,SNR=7.3						
STKA	Stephens Creek	53.09	132	P	P	01 16 55.4	+1.1
	2.0nm,0.8s,mb4.1,baz=333,slow=6.8,SNR=2.3						
ZALV	Zalesovo Beam	53.94	351	P	P	01 16 59.9	-0.2
	2.5nm,0.6s,mb4.3,baz=183,slow=6.4,SNR=14						

IDC 11 01:44:41.4±4.1, 1395N×9067W, h0km, mb3.9/3, mb1 4.3/4, mb1mx3.8/20, mbtmp3.9/4, ML4.2/1, MS3.7/1, Ms1 3.6/1, ms1mx2.9/21, Error ellipse: s-maj=89.0km s-min=49.1km az=10.0
ISCJB 11 01:44:43.9±1.4, 1353N±006×9147W±005, h32km±10km, mb4.2/12, Error ellipse: s-maj=11.4km s-min=5.7km az=29.6
CASC 11 01:44:43.0±3.0, 1351N×9158W, h34km±19km, MD4.2, ML4.0, mb4.3(NEIC)
MEX 11 01:44:44.2±0.5, 1334N×9175W, h10km, MD4.6
NEIC 11 01:44:46.8±2.6, 1360N×9139W, h35km±16km, mb4.3/10, MD4.7(MEX), Error ellipse: s-maj=19.9km s-min=8.8km az=183.0
ISC 11 01:44:45.9±1.4, 1364N±007×9143W±004, h27km±10km, n69, σ1^{s}24/62, mb4.2/12, 3C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.70	343	i P	Pb	01 45 00.4	+0.9
FUG	Fuego 3	0.98	35	eP	Pn	01 45 03.2	-0.7
FG6		1.05	30	eP	Pn	01 45 04.3	-0.5
PCG	Pacaya	1.09	47	⇓eP	Pn	01 45 04.9	-0.5
NBG	Las Nubes	1.41	48	eP	Pn	01 45 10.0	+0.3
THIG		1.50	327	i P	Pn	01 45 09.0	-1.9
THIG				i S	Sn	01 45 29.3	-0.3
RTR	El Retiro	1.75	81	eP	x	01 45 12.8	
RBDL	Robledal	1.75	74	⇑eP	x	01 45 13.1	
RBDL				eS	x	01 45 38.0	
SBLS	San Blas	1.77	83	eP	x	01 45 12.5	
SNJE	San Jose	1.79	83	⇓eP	x	01 45 12.8	
SNJE				eS	x	01 45 40.6	
BOQS	Boqueron	2.09	87	⇓eP	x	01 45 17.3	
BOQS				eS	x	01 45 46.3	
SNET	Serv Nac Est T	2.14	89	eP	x	01 45 18.1	
SNET				eS	x	01 45 43.8	
SNET				i		01 45 52.1	
	comp=Z,1µm,0.8s						
MTO2	Montecristo 2	2.14	69	⇓eP	x	01 45 18.7	
MTO2				eS	x	01 45 45.9	
LFU	La Fuente	2.25	87	eP	x	01 45 20.4	
LFRS	El Faro	2.30	90	⇑eP	x	01 45 20.5	
LBRS	Las Brisas	2.32	87	⇑eP	x	01 45 20.9	
LBRS				eS	x	01 45 53.2	
SNVI	San Vicente	2.52	90	eP	x	01 45 24.0	
SNVI				eS	x	01 45 56.1	
CCIG	Comitan	2.71	345	i P	Pn	01 45 28.9	+1.2
CCIG				i S	Sn	01 46 02.8	+3.3
BLLM	Bellamira	3.11	93	eP	x	01 45 32.1	
BLLM				eS	x	01 46 11.7	
CAHU	Cacacuatique	3.13	87	⇓eP	x	01 45 31.2	
SCX	San Cristobal	3.29	339	eP	Pn	01 45 37.5	+1.9
CNCH	Conchagua	3.52	96	eP	x	01 45 38.3	
CNCH				eS	x	01 46 18.8	
TGIG		3.52	333	eP	Pn	01 45 39.5	+0.7
TGIG				i S	Sn	01 46 20.1	+0.6
TGUH	Tegucigalpa,Un	4.06	84	ePn	Pn	01 45 46.6	+0.5
TEL3	Telica 3	4.59	103	eP	Pn	01 45 52.3	-1.2
CMIG	Matias Romero	4.78	316	i P	Pn	01 45 55.5	-0.7
CMIG				i S	Sn	01 46 49.3	-1.4
CMIG	Matias Romero	4.78	316	i P	Pn	01 45 55.5	-0.7
CMIG				i S	Sn	01 46 52.0	+1.3
COPN	Copaltepe	4.94	107	eP	Pn	01 45 57.4	-0.9
APYN	Apoyeque	5.14	105	eP	Pn	01 46 00.8	-0.4
OXX	Oaxaca	6.15	304	eP	Pn	01 46 16.0	+1.1
VHO	Vista Hermosa	6.15	304	i P	Pn	01 46 12.5	-2.4
VHO				i S	Sn	01 47 22.1	-2.3
VHO	Vista Hermosa	6.15	304	i P	Pn	01 46 15.2	+0.3
VHO				i S	Sn	01 47 23.1	-1.3
PNIG	Pinotepa	7.03	294	i P	Pn	01 46 24.6	-2.4
PNIG				i S	Sn	01 47 41.2	-4.8
PNIG	Pinotepa	7.03	294	i P	Pn	01 46 27.0	+0.1
PNIG				i S	Sn	01 47 44.6	-1.4
TEIG	Tepich	7.21	24	eP	Pn	01 46 30.0	+0.5
TEIG	Tepich	7.21	24	i P	Pn	01 46 30.1	+0.7
TEIG	Tepich	7.21	24	ePn	Pn	01 46 30.3	+0.9
TPIG	Tehuac#an	7.42	311	i S	Sn	01 47 53.8	-1.9
PPM	Popocatepetl	8.76	309	i P	Pn	01 46 49.1	-1.7
PPM				eP		01 46 54.0	
PPM				i S	Sn	01 48 26.5	-2.2
PPM	Popocatepetl	8.76	309	eP	Pn	01 46 54.0	+3.2
PPM				i S	Sn	01 48 26.5	-2.2
MEIG	Mezcala	8.96	299	i S	Sn	01 48 29.1	-4.5
IIO	Organos	9.16	311	i P	Px	01 47 08.8	
CAIG	El Cayaco	9.17	293	i P	Pn	01 47 03.8	+7.3
MZVM		9.30	307	i P	Px	01 47 23.2	
PTVM	Pico Tres Padr	9.45	310	i P	Px	01 47 16.3	
TXAR	Lajitas Array	19.30	326	P	Pn	01 49 10.6	+0.7
	comp=Z,0.2nm,0.3s,baz=153,slow=12,SNR=29						
LRAL	Lakeview Retre	19.72	11	eP	Pn	01 49 13.3	-1.6
	comp=Z,9.6nm,1.1s						
GOGA	Godfrey	20.97	19	eP	P	01 49 25.5	-1.4
SWET	Sewanee	22.05	12	eP	P	01 49 37.3	-1.1
TKL	Tuckaleechee C	22.98	16	eP	P	01 49 46.8	-1.6
CCM	Cathedral Cave	24.31	0	eP	P	01 49 58.7	-2.5
BNM	Barren Site	24.64	329	eP	P	01 50 05.4	+1.3
LAZ	Ladron	25.09	328	eP	P	01 50 09.4	+1.1
ANMO	Albuquerque	25.19	330	eP	P	01 50 09.8	+0.6
	comp=Z,1.5nm,0.7s,mb3.6						
TUC	Tucson	25.66	320	eP	P	01 50 15.2	+1.7
	comp=Z,10nm,0.5s,mb4.6						
HWUT	Hardware Ranch	32.91	332	eP	P	01 51 18.9	+1.1
	comp=Z,3.4nm,0.9s,mb4.3						
PDAR	Pinedale Array	32.98	335	P	P	01 51 17.8	-0.5
	comp=Z,0.3nm,0.4s,mb3.5,baz=139,slow=5.9,SNR=1.9						
BGU	Big Grassy Mou	33.09	329	eP	P	01 51 20.3	+0.9
REDW	Red Top Meadow	34.00	334	eP	P	01 51 27.4	+0.2
	comp=Z,6.0nm,1.1s,mb4.4						
TPAW	Teton Pass	34.15	334	eP	P	01 51 29.0	+0.5
	comp=Z,8.7nm,1.5s,mb4.5						
NVAR	Mina Array Bea	34.30	321	P	P	01 51 32.2	+2.3
	comp=Z,2.2nm,0.8s,mb4.1,baz=134,slow=7.7,SNR=16						
MCMT	McKenzie Canyo	36.03	334	eP	P	01 51 46.1	+1.3
WVOR	Wild Horse Val	37.10	326	eP	P	01 51 54.9	+1.0
	comp=Z,5.1nm,1.0s,mb4.3						
BMO	Blue Mountains	38.10	330	eP	P	01 52 02.0	-0.3
	comp=Z,2.2nm,1.0s,mb3.8						
OD2	Odessa Site #2	40.62	331	eP	P	01 52 23.0	-0.3
HOOD	Mount Hood Mea	40.65	327	eP	P	01 52 25.3	+1.7
	comp=Z,16nm,0.8s,mb4.7						
LON	Longmire	41.68	328	eP	P	01 52 32.6	+0.6
	comp=Z,3.6nm,0.9s,mb4.0						
SCHQ	Schefferville	45.37	20	P	P	01 52 57.2	-4.4
	comp=Z,3.7nm,0.8s,mb4.2,baz=234,slow=7.2,SNR=3.5						
SCHQ				LR	LR	02 13 31.7	
	comp=Z,79nm,19.2s,baz=191,slow=39						
CMAR	Chiang Mai Arr	146.50	342	PKPbc	PKPbc	02 04 24.5	-0.9
	comp=Z,2.1nm,0.4s,baz=22,slow=2.9,SNR=4.1						

MAN 11 01:55:55, 4.17N×12747E, h22km, mb5.8, ML4.8, MS5.3
MOS 11 01:55:58.1±1.3, 490N×12750E, h33km, mb5.5/54, MS4.6/17, Error ellipse: s-maj=10.6km s-min=5.1km az=114.5
BJI 11 01:55:59.3, 441N×12760E, h82km, mB5.1, mb5.1, Ms4.7, Msz4.6
NEIC 11 01:56:02.0±1.0, 480N×12756E, h59km±9km, mb5.3/46, Error ellipse: s-maj=7.5km s-min=4.7km az=78.0
ISCJB 11 01:56:01.8±0.4, 483N±002×12748E±003, h70km±3km, mb5.3/134, Error ellipse: s-maj=5.1km s-min=3.2km az=172.4
GCMT 11 01:56:02.0±0.1, 483N×12750E, h57km±1km, MW5.5/101, Moment Tensor Solution. s84,c140; s101,c185; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.04±.02; $M_{\theta\theta}$0.74±.02; $M_{\phi\phi}$-1.78±.02; $M_{r\theta}$-0.53±.02; $M_{\theta\phi}$-0.31±.02; $M_{\phi r}$0.78±.02; Best double couple: $M_0$1.81400×10^{17} NP1:ϕ_s220.00000°, δ43.00000°, λ144.00000°. NP2:ϕ_s338.00000°, δ67.00000°, λ53.00000°. Principal axes: T 1.6360, Plg53.0000°, Azm203.0000°; N 0.3590, Plg34.0000°, Azm355.0000°; P -1.9910, Plg14.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
IDC 11 01:56:03.2±1.0, 484N×12756E, h70km±7km, mb5.0/21, mb1 5.0/25, mb1mx4.9/27, mbtmp5.0/25, MS4.4/23, Ms1 4.5/23, ms1mx4.4/26 Error ellipse: s-maj=14.1km s-min=7.0km az=79.0
DJA 11 01:56:05, 481N×12754E, h77km, Mw5.5/21
ISC 11 01:56:03.9±0.4, 481N±002×12748E±003, h75km±3km, h47km±3.3km:pP-P, n493, σ1^{s}21/463, mb5.3/134, 36C-21D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	2.45	330	eP	Pn	01 56 39.9	-1.8
MATI				eS	Sn	01 57 05.6	-5.1
DAV	Davao City (W)	2.94	320	P	Pn	01 56 48.9	+0.5
	194nm,0.3s,baz=137,slow=1.6,SNR=12						
DAV				S	Sn	01 57 30.9	+8.4
	587nm,0.3s,baz=60,slow=22,SNR=11						
DAV	Davao City (W)	2.94	320	⇑eP	Pn	01 56 48.4	+0.1
DAV	Davao City (W)	2.94	320	ePn	Pn	01 56 48.8	+0.4
DMPH	Davao City--Mi	2.99	319	⇑iP	Pn	01 56 48.5	-0.7
DMPH				i S	Sn	01 57 31.0	+7.1
KCP	Kidapawan	3.23	313	⇓eP	Pn	01 56 53.2	+0.9
KCP				i S	Sn	01 57 34.4	+4.7
BIPH	Bislig	3.53	342	⇑iP	Pn	01 56 53.5	-2.9
BIPH				i S	Sn	01 57 28.0	-9.1
BUKP	Musuan	3.88	322	eP	Pn	01 57 01.9	+0.7
BUKP				eS	Sn	01 57 53.9	+8.3
TNE	Ternate	4.00	182	⇓eP	Pn	01 57 05.0	+2.2
TNE				eS	Sn	01 57 53.0	+4.5
CTBH	Cotabato--PC H	4.01	307	⇑eP	Pn	01 57 02.9	-0.1
CTBH				i S	Sn	01 57 35.1	-14
BUTP	Butuan	4.53	336	eP	Pn	01 57 08.7	-1.3
SCPH	Surigao	5.32	338	⇑eP	Pn	01 57 18.4	-2.5
LBMI	Labuha	5.41	180	P	Pn	01 57 23.7	+1.6
	0.0nm,0.0s						
DCPH	Dipolog City	5.55	313	eP	Pn	01 57 27.4	+3.3
ZMPH	Zamboanga City	5.79	292	⇑eP	Pn	01 57 26.3	-1.1
MSLP	Maasin	5.89	334	eP	Pn	01 57 31.2	+2.5
TBP	Tagbilaran	6.03	324	eP	Pn	01 57 29.9	-0.7
LLP	Lapu-Lapu	6.49	328	⇑eP	Pn	01 57 37.1	+0.3
LLP				eS	Sn	01 58 48.4	-1.0
SWI	Sorong	6.78	146	P	Pn	01 57 40.8	-0.1
	0.0nm,0.0s						
OCLP	Ormoc	6.82	336	eP	Pn	01 57 46.2	+4.8
GUIM	Jordan	7.54	320	eP	Pn	01 57 54.0	+2.8
RCP	Roxas	8.18	325	⇑eP	Pn	01 58 03.3	+3.3
AAI	Ambon	8.47	175	P	Pn	01 58 06.2	+2.3
	0.0nm,0.0s						
AAI	Ambon	8.47	175	⇓eP	Pn	01 58 04.0	+0.1
AAI	Ambon	8.47	175	eS	Pn	01 58 09.0	+5.1
CUYO	Cuyo Island	8.77	314	eP	Pn	01 58 08.9	+0.9
OTRP	Odiongan	9.24	325	eP	Pn	01 58 17.8	+3.3
PCI	Palu	9.51	234	P	Pn	01 58 19.3	+1.1
	0.0nm,0.0s						
SJMP	San Jose	9.86	321	eP	Pn	01 58 24.1	+1.2
KDI	Kendari	9.97	209	P	Pn	01 58 22.6	-1.8
	529nm,1.0s						
KDI	Kendari	9.97	209	⇑eP	Pn	01 58 22.6	-1.8
ENPP	El Nido	10.20	309	eP	Pn	01 58 27.4	-0.1
BATP	Bataraza	10.39	293	eP	Pn	01 58 29.3	-0.9
BBSI	Bau Bau	11.34	206	P	Pn	01 58 42.3	-0.8
	0.0nm,0.0s						
LUBP	Lubang	11.38	322	eP	Pn	01 58 46.2	+2.5
SMKI	Samarinda	11.51	243	P	Pn	01 58 47.8	+2.3
	0.0nm,0.0s						
BALP	Baler	12.31	332	eP	Pn	01 58 59.8	+3.4
KAPI	Kappang	12.44	218	Pn	Pn	01 58 55.9	-2.2
	604nm,1.1s,SNR=9.1						
KAPI	Kappang	12.44	218	⇑P	Pn	01 58 56.2	-1.9
	SNR=13						
KAPI	Kappang	12.44	218	P	Pn	01 58 56.4	-1.7
	6.2nm,0.3s,baz=54,slow=6.3,SNR=20						
KAPI				S	Sn	02 01 14.9	-0.1
	1.2nm,0.3s,baz=84,slow=18,SNR=2.7						
KAPI				LR	LR	02 04 44.1	
	comp=Z,2µm,18.8s,baz=49,slow=42						
KAPI	Kappang	12.44	218	eP	Pn	01 58 55.6	-2.5
	76nm,0.8s						
SCZP	Santa Cruz	13.19	326	eP	Pn	01 59 14.4	+6.2
BBKI	Banjar Baru	15.06	237	P	Pn	01 59 33.4	+0.7
	0.0nm,0.0s						
PLKI	Palangkaraya	15.22	243	P	Pn	01 59 36.7	+2.0
	0.0nm,0.0s						
BATI	Baumata	15.39	194	P	Pn	01 59 38.0	+1.1
	0.0nm,0.0s						
BATI	Baumata	15.39	194	P	Pn	01 59 37.9	+1.0
	11nm,0.3s,baz=184,slow=1.7,SNR=31						
BATI				S	S	02 02 42.4	+3.9
	1.7nm,0.3s,baz=240,slow=20,SNR=3.3						
BATI				LR	LR	02 06 29.7	
	comp=Z,1µm,19.5s,baz=200,slow=41						
PBKI	Pangkalan Bun	17.47	245	P	Pn	02 00 02.7	-0.1
	0.0nm,0.0s						
MTNI	Mataram	17.48	220	P	Pn	02 00 03.1	+0.2
	0.0nm,0.0s						
KHKI	Kahang-Kahang	17.65	222	P	Pn	02 00 04.3	-0.6
	0.0nm,0.0s						
KMMI	Kalianget	17.91	229	P	Pn	02 00 09.5	+1.4
	0.0nm,0.0s						
KAKA	Kakadu	18.09	164	eP	Pn	02 00 07.7	-2.6
	62nm,0.5s						
DNP	Denpasar	18.14	222	P	Pn	02 00 11.9	+0.9
	0.0nm,0.0s						
NBBI	Negara	18.33	224	P	Pn	02 00 13.9	+0.7
	0.0nm,0.0s						
GUMO	Guam	19.24	62	P	Pn	02 00 21.6	-2.5
	4.6nm,0.3s,baz=284,slow=18,SNR=2.2						
GUMO				LR	LR	02 06 34.8	
	comp=Z,935nm,21.4s,baz=244,slow=33						
GUMO	Guam	19.24	62	P	Pn	02 00 21.6	-2.5
GUMO				pmax	pmax		
	comp=Z,5.0nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,935nm,21.4s						
KRKI	Karangkates	19.76	229	P	Pn	02 00 28.1	-2.2
	comp=Z,0.0nm,0.0s						
SJI	Sawahan	20.02	232	P	P	02 00 29.6	-1.3
	comp=Z,0.0nm,0.0s						
YHNB	Yeheng	20.60	344	eP	P	02 00 35.6	-1.5
	comp=Z,61nm,0.6s						
TPI	Tanjungpandan	21.19	250	P	P	02 00 42.6	-0.9
	comp=Z,0.0nm,0.0s						
BJII	Banjamegara	21.45	236	P	P	02 00 46.7	+0.4

comp=Z,0.0nm,0.0s
QZH Quanzhou 21.76 338⇓ *i* P **P 02 00 50.6 +1.1**
QZH S **S 02 04 45.0 -1.1**
QZH AMB AMB
comp=Z,200nm,1.0s,mb5.4
QZH LR LR
comp=N,2µm,16.9s
QZH LR LR
comp=E,1µm,14.6s
QZH LR LR
comp=Z,2µm,20.9s
JOW Kunigami 21.91 2 P **P 02 00 51.5 +0.4**
comp=Z,63nm,0.7s,mb5.0,baz=166,slow=6.6,SNR=12
JOW LR LR 02 08 07.7
comp=Z,1µm,19.0s,baz=78,slow=33
QIZ Qiongzhong 22.27 311 P **P 02 00 53.8 -1.2**
QIZ S **S 02 04 46.0 -10**
QIZ AMB AMB
comp=Z,13nm,1.2s,mb4.1
QIZ AMB AMB
comp=Z,198nm,7.2s
QIZ LR LR
comp=N,2µm,17.5s
QIZ LR LR
comp=Z,2µm,26.6s
GZH Guangzhou 22.73 324 P **P 02 01 01.7 +1.9**
GZH S **S 02 05 07.3 +4.3**
GZH LR LR
comp=N,1µm,25.0s
GZH LR LR
comp=E,1µm,22.8s
GZH LR LR
comp=Z,2µm,22.5s
FITZ Fitzroy Crossi 22.84 185⇓ *i* P **P 02 00 59.7 -1.2**
comp=Z,70nm,0.6s,mb5.2
FITZ *e*S **S 02 05 06.4 +1.7**
FITZ Fitzroy Crossi 22.84 185 P **P 02 01 00.3 -0.6**
comp=Z,23nm,0.6s,mb4.7,baz=19,slow=11,SNR=66
FITZ S **S 02 05 08.2 +3.5**
comp=Z,14nm,1.0s,baz=155,slow=16,SNR=3.8
FITZ ScP ScP 02 08 20.7 -0.5
comp=Z,6.6nm,1.0s,baz=8.1,slow=7.1,SNR=3.3
LEM Lembang 22.95 240 P **P 02 01 02.7 +0.5**
comp=Z,0.0nm,0.0s
CBJI Citeko 23.42 242 P **P 02 01 09.9 +3.3**
comp=Z,0.0nm,0.0s
DSRI Dabo 23.47 258 P **P 02 01 06.0 -1.1**
comp=Z,0.0nm,0.0s
DBJI Dramaga 23.57 242 P **P 02 01 07.7 -0.3**
comp=Z,0.0nm,0.0s
COEN Coen 24.29 140 *e*P **P 02 01 13.6 -0.9**
comp=Z,19nm,0.9s,mb4.4
KLI Kotabumi 24.55 247 P **P 02 01 15.2 -1.8**
comp=Z,0.0nm,0.0s
WRAB Tennant Creek 25.50 165 P **P 02 01 24.0 -1.4**
comp=Z,2µm,1.3s,mb6.3
WRAB Tennant Creek 25.50 165 *e*P **P 02 01 24.2 -1.2**
WRAB pmax pmax
comp=Z,346nm,1.1s,mb5.7
WRAB Tennant Creek 25.50 165 *e*P **P 02 01 24.2 -1.2**
comp=Z,346nm,1.1s,mb5.7
WRA Warramunga Arr 25.50 165 P **P 02 01 24.5 -1.0**
comp=Z,154nm,0.8s,mb5.5,baz=343,slow=9.8,SNR=68
WRA S **S 02 05 49.5 +2.0**
comp=Z,6.4nm,1.0s,baz=342,slow=15,SNR=3.8
WRA ScP ScP 02 08 28.0 -0.5
comp=Z,4.7nm,0.9s,baz=342,slow=3.6,SNR=5.7
WRA Warramunga Arr 25.50 165 P **P 02 01 24.5 -1.0**
WRA S **S 02 05 49.5 +1.9**
WRA pmax pmax
comp=Z,154nm,0.8s
WRA smax
comp=N,6.0nm,1.0s
WRA pmax pmax
comp=N,5.0nm,0.9s
WB2 Warramunga Arr 25.51 165⇓ *i* P **P 02 01 24.4 -1.1**
WB2 *e*S **S 02 05 44.2 -3.4**
CBIJ Chichi jima 26.23 31 P **P 02 01 29.4 -2.6**
comp=N,135nm,0.8s,mb5.4,baz=250,slow=16,SNR=7.6
CBIJ LR LR 02 10 08.1
comp=N,522nm,20.6s,baz=331,slow=32
KKTK Khon Kaen 26.77 297 P **P 02 01 38.0 +1.0**
comp=N,432nm,1.0s,mb5.9
SSE Sheshan 26.81 348 P **P 02 01 36.3 -0.9**
SSE S **S 02 06 11.1 +3.1**
SSE AMB AMB
comp=Z,17nm,1.0s,mb4.5
SSE AMB AMB
comp=Z,109nm,3.8s
SSE LR LR
comp=N,587nm,21.1s
SSE LR LR
comp=E,334nm,21.2s
SSE LR LR
comp=Z,760nm,18.4s
SNG Songkhla 26.82 276 P **P 02 01 37.0 -0.5**
comp=Z,280nm,0.9s,mb5.8
MBWA Marble Bar 26.90 196⇓ P **P 02 01 40.5 +2.4**
SNR=12
MBWA Marble Bar 26.90 196 *e*P **P 02 01 38.1 0.0**
comp=Z,173nm,0.9s,mb5.6
PPI Padang Panjang 27.55 260 P **P 02 01 42.8 -1.3**
comp=Z,0.0nm,0.0s
NJ2 Nanjing 28.28 344 *e*P **P 02 01 50.1 -0.2**
NJ2 S **S 02 06 36.5 +5.3**
NJ2 AMB AMB
comp=Z,30nm,0.9s,mb4.8
NJ2 AMB AMB
comp=Z,170nm,10.9s
NJ2 LR LR
comp=N,300nm,24.6s
NJ2 LR LR
comp=E,740nm,27.8s
NJ2 LR LR
comp=Z,740nm,27.9s
WHN Wuhan 28.43 336⇑ P **P 02 01 52.6 +0.9**
WHN S **S 02 06 31.9 -1.7**
WHN AMB AMB
comp=Z,292nm,10.1s
WHN LR LR
comp=N,1µm,11.4s
WHN LR LR
comp=E,544nm,10.6s
WHN LR LR
comp=Z,2µm,18.4s
PSI Prapat 28.56 267⇓ *e*P **P 02 01 51.7 -1.4**
NST Nakhon Sawan 28.95 294 P **P 02 01 55.0 -1.5**
GYA Guiyang 29.32 319⇓ *i* P **P 02 02 00.0 +0.4**
GYA PP PP 02 02 57.8 -9.3
GYA PCP PcP 02 05 07.4 +2.7
GYA S **S 02 06 53.8 +6.2**
GYA SS SS 02 08 26.6 -28
GYA AMB AMB
comp=Z,20nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,240nm,4.2s
GYA LR LR
comp=N,940nm,15.0s
GYA LR LR
comp=E,1µm,17.9s
GYA LR LR
comp=Z,1µm,18.0s
JHJ Hachijo jima 2 30.42 21 LR LR 02 12 07.8
comp=Z,1µm,21.1s,baz=212,slow=32
BDT Bhumibol Dam 30.50 296 P **P 02 02 12.0 +1.8**
CHRT Chiangrai 30.84 301 P **P 02 02 13.0 -0.2**
comp=Z,163nm,0.9s,mb5.8
CTA Charters Tower 30.86 144 *e*P **P 02 02 16.3 +3.0**
comp=Z,8.8nm,0.9s,mb4.5
CTA *e*S **S 02 07 12.5 +0.5**
CTA Charters Tower 30.86 144 *e*P ScP 02 08 45.4 +0.3
comp=Z,11nm,0.9s
CTA Charters Tower 30.86 144 ScP ScP 02 08 45.3 +0.2
comp=Z,14nm,0.9s,baz=290,slow=5.1,SNR=11
CTA LR LR 02 14 22.6
comp=Z,960nm,18.2s,baz=331,slow=36
CTA Charters Tower 30.86 144 *e*P **P 02 02 16.3 +3.0**
CTA *e*S **S 02 07 12.5 +0.5**
CTA pmax pmax
comp=Z,9.0nm,0.9s
CMAR Chiang Mai Arr 31.00 298 P **P 02 02 14.9 +0.3**
comp=Z,12nm,0.8s,mb4.7,baz=112,slow=7.0,SNR=34
CMAR PcP PcP 02 05 10.7 +1.5
comp=Z,2.7nm,0.5s,baz=138,slow=2.0,SNR=4.2
CMAR ScP ScP 02 08 46.4 +0.8
comp=Z,1.4nm,0.3s,baz=144,slow=3.5,SNR=4.7
CMAR LR LR 02 13 57.2
comp=Z,1µm,21.7s,baz=117,slow=35
CMAR Chiang Mai Arr 31.00 298 P **P 02 02 14.9 +0.4**
CMAR 02 05 10.7
CMAR pmax pmax
comp=Z,12nm,0.8s
CMAR pmax pmax
comp=Z,3.0nm,0.5s
CMAR pmax pmax
comp=N,1.0nm,0.3s
CMAR MLR MLR
comp=Z,1µm,21.7s
CHG Chiang Mai 31.13 299⇓ P **P 02 02 16.2 +0.5**
comp=Z,26nm,1.0s,mb4.9
CHTO Chiang Mai 31.13 299⇑ P **P 02 02 15.7 0.0**
SNR=10
CHTO Chiang Mai 31.13 299 *e*P **P 02 02 15.4 -0.3**
CHTO pmax pmax
comp=Z,35nm,1.1s,mb5.0
CHTO Chiang Mai 31.13 299 *e*P **P 02 02 15.4 -0.3**
comp=Z,35nm,1.1s,mb5.0
KMI Kunming 31.17 313 P **P 02 02 15.8 -0.2**
KMI S **S 02 07 15.3 -1.5**
KMI AMB AMB
comp=Z,31nm,1.0s,mb5.0
KMI AMB AMB
comp=Z,174nm,3.1s
KMI LR LR
comp=N,519nm,24.6s
KMI LR LR
comp=E,954nm,19.3s
KMI LR LR
comp=Z,2µm,24.6s
KSRS Korea Array 32.49 1 P **P 02 02 26.8 -0.6**
comp=Z,15nm,0.9s,mb4.7,baz=178,slow=10,SNR=33
KSRS PcP PcP 02 05 12.9 0.0
comp=Z,0.9nm,0.5s,baz=187,slow=3.2,SNR=2.2
KSRS ScP ScP 02 08 50.5 +0.2
comp=Z,2.8nm,0.7s,baz=186,slow=3.2,SNR=6.6
KSRS LR LR 02 17 21.8
comp=Z,416nm,18.2s,baz=192,slow=39
KSRS Korea Array 32.49 1 P **P 02 02 26.8 -0.6**
KSRS 02 05 12.9
KSRS pmax pmax
comp=Z,15nm,0.9s,mb4.7
KSRS pmax pmax
comp=Z,1.0nm,0.5s
KSRS pmax pmax
comp=N,3.0nm,0.7s
KSRS MLR MLR
comp=Z,416nm,18.2s
MAJO Matsushiro 33.08 16 *e*P **P 02 02 31.8 -0.8**
MAJO pmax pmax
comp=Z,14nm,0.7s,mb4.9
MAJO Matsushiro 33.08 16 *e*P **P 02 02 31.8 -0.8**
comp=Z,14nm,0.7s,mb4.9
MAT Matsushiro 33.08 16 P **P 02 02 32.3 -0.3**
MAT S **S 02 07 49.0 +2.8**
MJAR Matsushiro Arr 33.08 16 P **P 02 02 30.4 -2.2**
comp=Z,3.0nm,0.5s,mb4.4,baz=195,slow=9.0,SNR=11
MJAR LR LR 02 14 04.8
comp=Z,930nm,21.4s,baz=200,slow=33
XAN Xi'an 33.81 332 P **P 02 02 38.9 -0.1**
XAN PP PP 02 03 54.7 -2.1
XAN S **S 02 07 50.5 -7.1**
XAN AMB AMB
comp=Z,68nm,0.9s,mb5.5
XAN AMB AMB
comp=Z,139nm,9.5s
XAN LR LR
comp=N,242nm,40.0s
XAN LR LR
comp=E,719nm,32.9s
XAN LR LR
comp=Z,716nm,21.4s
CD2 Chengdu 34.24 322 P **P 02 02 42.4 -0.3**
CD2 PP PP 02 03 57.8 -3.8
CD2 PCP PcP 02 05 17.5 -0.4
CD2 S **S 02 08 08.2 +3.9**
CD2 PCS PcS 02 09 03.2 -1.1
CD2 SS SS 02 10 17.5 -18
CD2 AMB AMB
comp=Z,100nm,1.3s,mb5.5
CD2 AMB AMB
comp=Z,290nm,5.8s
CD2 LR LR
comp=N,2µm,22.8s
CD2 LR LR
comp=E,1µm,14.4s
CD2 LR LR
comp=Z,1µm,24.5s
DL2 Dalian 34.35 352 P **P 02 02 43.8 +0.2**
DL2 S **S 02 08 14.8 +9.0**
DL2 AMB AMB
comp=Z,30nm,0.9s,mb5.1
DL2 AMB AMB
comp=Z,100nm,7.8s
DL2 LR LR
comp=N,280nm,19.0s
DL2 LR LR
comp=E,150nm,18.8s
DL2 LR LR
comp=Z,350nm,18.4s
HNR Honiara 35.31 114 LR LR 02 15 42.0
comp=Z,674nm,20.1s,baz=293,slow=33
FORT Forrest 35.39 179 *e*P **P 02 02 51.8 -0.8**
comp=Z,79nm,0.6s,mb5.7
BJT Baijiatuau 36.51 345 *e*P **P 02 03 02.2 +0.1**
BJT pmax pmax
comp=Z,63nm,0.8s
BJT Baijiatuau 36.51 345 *e*P **P 02 03 02.1 +0.1**
comp=Z,63nm,0.8s,mb5.6
BJI Beijing 36.53 345 P **P 02 03 02.1 -0.1**
BJI PP PP 02 04 25.4 -1.3
BJI S **S 02 08 35.1 -4.0**
BJI AMB AMB
comp=Z,23nm,1.1s,mb5.0
BJI LR LR
comp=N,488nm,16.8s
BJI LR LR
comp=E,381nm,14.8s
BJI LR LR
comp=Z,472nm,31.7s
SNY Shenyang 37.02 355⇓ P **P 02 03 06.1 -0.3**
SNY S **S 02 08 44.0 -2.6**
SNY AMB AMB
comp=Z,18nm,1.4s,mb4.8
SNY AMB AMB
comp=Z,1µm,3.2s
SNY LR LR
comp=N,450nm,23.5s
SNY LR LR
comp=Z,589nm,31.4s
KLBR Kellerberrin 37.37 194 *e*P **P 02 03 09.3 -0.1**
comp=Z,77nm,1.0s,mb5.6
LZH Lanzhou 37.97 328 *e*P **P 02 03 15.2 +0.7**
LZH PP PP 02 04 45.5 +2.8
LZH *e*S **S 02 09 04.0 +2.8**
LZH SS SS 02 11 45.5 -5.4
LZH AMB AMB
comp=Z,203nm,1.4s,mb5.8
LZH AMB AMB
comp=Z,490nm,4.0s
LZH LR LR
comp=N,800nm,14.6s
LZH LR LR
comp=Z,2µm,20.0s
MUN Mundaring 38.12 196 *e*P **P 02 03 16.2 +0.4**
VLA Vladivostok 38.35 5 *i* P **P 02 03 19.3 +1.7**
HHC Hu-ho-hao-te 38.62 341 *e*P **P 02 03 20.5 +0.6**
HHC PP PP 02 04 52.7 +3.0
HHC PCP PcP 02 05 32.7 +1.8
HHC S **S 02 09 16.7 +5.8**
HHC PCS PcS 02 09 20.6 +0.5
HHC SS SS 02 11 58.5 -5.4
HHC AMB AMB
comp=Z,22nm,0.8s,mb5.0
HHC AMB AMB
comp=Z,224nm,4.6s
HHC LR LR
comp=N,416nm,15.8s
HHC LR LR
comp=E,348nm,13.2s
HHC LR LR
comp=Z,377nm,14.0s
NWAO Narrogin (SRO) 38.77 194 *e*P **P 02 03 21.3 +0.1**
NWAO pmax pmax
comp=Z,99nm,1.3s
NWAO Narrogin (SRO) 38.77 194 *e*P **P 02 03 21.3 +0.1**
comp=Z,98nm,1.3s,mb5.5
CN2 Changchun 38.87 358 *e*P **P 02 03 23.6 +1.7**
CN2 *e*S **S 02 09 21.8 +7.3**
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,22.0s
CN2 LR LR
comp=E,300nm,22.0s
CN2 LR LR
comp=Z,400nm,22.0s
STKA Stephens Creek 38.88 161 *e*P **P 02 03 21.1 -1.1**
comp=Z,99nm,1.0s,mb5.6
STKA Stephens Creek 38.88 161 P **P 02 03 21.7 -0.5**
comp=Z,102nm,0.7s,mb5.7,baz=337,slow=8.2,SNR=34
STKA S **S 02 09 11.7 -3.2**
comp=Z,7.7nm,0.9s,baz=315,slow=14,SNR=3.6
STKA LR LR 02 21 20.9
comp=Z,874nm,20.1s,baz=101,slow=39
MDJ Mudanjiang 39.69 2 P **P 02 03 29.2 +0.5**
MDJ PP PP 02 05 03.4 +2.1
MDJ PCP PcP 02 05 33.3 -0.8
MDJ PCS PcS 02 09 22.8 -1.3
MDJ S **S 02 09 33.6 +6.8**
MDJ AMB AMB
comp=Z,33nm,1.1s,mb5.1
MDJ AMB AMB
comp=Z,66nm,7.8s
MDJ LR LR
comp=N,664nm,29.8s
MDJ LR LR
comp=E,235nm,21.8s
MDJ LR LR
comp=Z,968nm,27.7s
SHL Shillong 39.86 305⇓ *i* P **P 02 03 29.0 -1.5**
SHL *ex* x 02 09 28.5
ASAJ Asahikawa 41.35 17 P **P 02 03 43.2 +0.8**
comp=Z,25nm,0.7s,mb5.2,baz=222,slow=13,SNR=14
ASAJ LR LR 02 18 21.2
comp=Z,1µm,21.7s,baz=330,slow=32
ARMA Armidale 41.97 148⇓ *i* P **P 02 03 47.4 -0.3**
LSA Lhasa 42.31 310 P **P 02 03 47.0 -3.5**
LSA S **S 02 10 06.6 +0.5**
LSA Lhasa 42.31 310 *e*P **P 02 03 51.8 +1.3**
LSA pmax pmax
comp=Z,27nm,0.8s,mb5.0
LSA Lhasa 42.31 310 *e*P **P 02 03 51.8 +1.3**
comp=Z,27nm,0.8s,mb5.0
GTA Gaotai 42.57 328 P **P 02 03 52.6 +0.1**
GTA PP PP 02 05 38.2 +5.6
GTA S **S 02 10 15.2 +5.5**
GTA SS SS 02 13 19.7 -2.6
GTA AMB AMB
comp=Z,8.0nm,1.1s,mb4.4
GTA AMB AMB
comp=Z,210nm,6.6s
GTA LR LR
comp=N,639nm,19.8s
GTA LR LR
comp=E,942nm,19.5s
GTA LR LR
comp=Z,1µm,20.7s
TAPN Taplejung 44.00 305 *e*P **P 02 04 03.8 -0.4**
comp=Z,147nm,0.7s,mb5.8
YSS Yuzh-Sakhalins 44.01 15⇑ *e*P **P 02 04 04.7 +0.8**
YSS pmax pmax
comp=Z,70nm,1.1s,mb5.3
YSS MLR MLR
comp=Z,200nm,18.0s
YSS Yuzh-Sakhalins 44.01 15 *e*P **P 02 04 03.5 -0.5**
comp=Z,27nm,0.8s,mb5.0
ODAN Odare 44.07 304 *e*P **P 02 04 04.3 -0.5**
comp=Z,148nm,0.7s,mb5.8
BOK Bokaro 44.27 299 *e*P **P 02 04 05.8 -0.6**
BOK AMb AMB 02 04 09.3
comp=Z,45nm,1.5s,mb5.0
KLR Kul'dur 44.41 4 *e*P **P 02 04 02.9 -4.2**
KLR *e* 02 14 38.5
KLR pmax pmax
comp=Z,45nm,1.2s,mb5.1
KLR MLR MLR
comp=N,800nm,13.0s
KLR MLR MLR
comp=E,500nm,13.0s
CAN Canberra 44.75 155 *e*P **P 02 04 11.0 +1.0**
RAMN Ramite 44.76 304 *e*P **P 02 04 09.4 -0.8**
comp=E,135nm,0.8s,mb5.8
CNB Canberra Magne 44.90 154 *e*P **P 02 04 14.2 +3.0**
VIS Vishakhapatnam 45.03 290 *e*P **P 02 04 12.2 -0.3**
VIS AMb AMB 02 04 15.1
comp=Z,66nm,1.0s,mb5.3
JIRN Jiri 45.36 305 *e*P **P 02 04 14.7 -0.3**
comp=Z,105nm,0.7s,mb5.7
TOO Toolangi 45.38 160 *e*P **P 02 04 15.7 +0.8**
GUN Gumba 45.71 305 *e*P **P 02 04 17.1 -0.7**
comp=Z,178nm,0.7s,mb5.9
PKI Pulchoki 45.97 304 *e*P **P 02 04 18.9 -0.9**
comp=Z,71nm,0.9s,mb5.4
PKIN Phulchoki 45.98 304 *e*P **P 02 04 19.5 -0.4**
comp=Z,72nm,1.0s,mb5.3
KKN Kakani 46.16 304 *e*P **P 02 04 20.1 -1.2**
comp=Z,78nm,0.7s,mb5.5
DMN Daman 46.23 304 *e*P **P 02 04 21.2 -0.7**
comp=Z,150nm,1.1s,mb5.6
ULN Ulaanbaatar 46.34 341⇑ P **P 02 04 22.5 +0.2**
SNR=31
ULN Ulaanbaatar 46.34 341 *e*P **P 02 04 22.1 -0.3**
ULN pmax pmax
comp=Z,61nm,1.1s,mb5.2
ULN Ulaanbaatar 46.34 341 *e*P **P 02 04 22.1 -0.3**
comp=Z,61nm,1.1s,mb5.2
SONM Songino Array 46.53 340 P **P 02 04 24.3 +0.4**
comp=Z,21nm,1.1s,mb4.8,baz=158,slow=7.8,SNR=48
SONM ScP ScP 02 09 46.2 +2.0
comp=Z,1.1nm,0.7s,baz=169,slow=1.5,SNR=2.9
SONM LR LR 02 25 21.3
comp=Z,385nm,21.6s,baz=270,slow=38
SONM Songino Array 46.53 340 P **P 02 04 24.3 +0.5**
SONM pmax pmax
comp=Z,21nm,1.1s
SONM pmax pmax
comp=N,1.0nm,0.7s
SONM MLR MLR
comp=Z,385nm,21.6s
DZM Mont Dzumac 46.56 127 *e*P **P 02 04 23.3 -1.2**
PALK Pallekele 46.57 275 *e*P **P 02 04 24.2 -0.5**
comp=Z,47nm,1.2s,mb5.1
GKN Gorkha 46.77 304 *e*P **P 02 04 24.8 -1.3**
comp=Z,68nm,0.7s,mb5.5
KOLN Koldanda 47.54 304 *e*P **P 02 04 30.9 -1.2**
comp=Z,122nm,0.7s,mb5.9
DANN Dangsing 47.61 304 *e*P **P 02 04 31.4 -1.3**
comp=Z,177nm,0.6s,mb6.1
HYB Hyderabad 49.47 289 *i* P **P 02 04 45.5 -1.6**
HYB *e*S **S 02 11 51.0 +1.7**
HYB Hyderabad 49.47 289 *e*P **P 02 04 45.5 -1.6**
HYB *e*S **S 02 11 48.0 -1.3**
NGP Nagpur 49.68 294 *e*P **P 02 04 45.9 -2.8**
NGP AMb AMB 02 04 48.4
comp=Z,74nm,1.9s,mb5.3
ZAK Zakamensk 49.77 340 *e*P **P 02 04 42.0 -6.8**
ZAK *e* 02 04 49.2
ZAK *e* 02 06 09.7
ZAK pmax pmax
comp=Z,13nm,1.3s,mb4.7
ZAK pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
KOD Kodaikanal 49.83 279 *e*P **P 02 04 49.0 -0.9**
KOD AMb AMB 02 04 51.2
comp=Z,132nm,1.3s,mb5.7
TRD Trivandrum 50.29 277 *e*P **P 02 04 52.1 -1.2**
TRD AMb AMB 02 04 54.2
comp=Z,87nm,0.8s,mb5.8
TLY Talaya 50.75 341 P **P 02 04 57.6 +1.4**
comp=Z,205nm,0.7s,mb6.3,SNR=5.2
TLY Talaya 50.75 341⇓ P **P 02 04 58.0 +1.8**
SNR=9.1
TLY Talaya 50.75 341 *e*P **P 02 04 57.7 +1.5**
TLY *e* 02 06 50.0
TLY *e*S **S 02 12 11.2 +5.2**

TLY eSS SS 02 14 45.6 -56
TLY pmax pmax
comp=Z,28nm,0.8s,mb5.3
TLY Talaya 50.75 341 eP **P 02 04 56.4 +0.2**
comp=Z,30nm,0.9s,mb5.3
AKL Akola 51.45 293 eP **P 02 05 01.0 -1.0**
AKL AMb AMB 02 05 03.7
comp=Z,187nm,1.4s,mb5.9
LATR Latur 51.49 290 eP **P 02 05 00.6 -1.7**
LATR AMb AMB 02 05 03.4
comp=Z,132nm,0.8s,mb6.0
MOY Mondy 51.64 339 eP **P 02 05 03.9 +1.1**
MOY pmax pmax
comp=Z,54nm,1.5s,mb5.4
CLNS Chul'man 51.92 358 eP **P 02 05 03.7 -1.1**
CLNS pmax pmax
comp=Z,27nm,1.1s,mb5.2
CLNS pmax pmax
comp=N,16nm,0.9s
CLNS pmax pmax
comp=E,13nm,0.9s
WMQ Urumqi 52.28 324⇓ *i* P **P 02 05 08.2 +0.4**
WMQ PCP PcP 02 06 20.5 +2.3
WMQ S **S 02 12 31.0 +3.6**
WMQ AMB AMB
comp=Z,86nm,0.9s,mb5.8
WMQ AMB AMB
comp=Z,436nm,3.6s
WMQ LR LR
comp=N,842nm,20.1s
WMQ LR LR
comp=E,695nm,20.0s
WMQ LR LR
comp=Z,912nm,24.0s
DDI Dehra Dun 52.96 305 eP **P 02 05 10.2 -2.9**
NDI New Delhi 53.17 302 eP **P 02 05 13.0 -1.6**
NDI eP 02 06 12.0
KAD Karad 53.59 288 eP **P 02 05 15.9 -1.9**
KAD AMb AMB 02 05 19.1
comp=Z,61nm,1.6s,mb5.4
GOA Goa 53.74 286 eP **P 02 05 17.7 -1.2**
GOA AMb AMB 02 05 21.4
comp=Z,80nm,0.6s,mb5.9
BOD Bodaibo 53.92 351 eP **P 02 05 18.8 -0.7**
BOD pmax pmax
comp=Z,36nm,1.1s,mb5.3
SMLA Simla 53.95 305 *i* P **P 02 05 19.9 -0.4**
SMLA *i* S **S 02 12 53.0 +2.5**
POO Poona 54.06 289 eP **P 02 05 19.7 -1.5**
POO AMb AMB 02 05 22.7
comp=Z,71nm,1.4s,mb5.5
PEA0B Petropavlovsk- 54.16 22 eP **P 02 05 21.7 +0.3**
PETK Petropavlovsk- 54.16 22 P **P 02 05 21.5 +0.2**
comp=Z,60nm,0.8s,mb5.7,baz=188,slow=3.8,SNR=60
PETK LR LR 02 29 56.8
comp=Z,155nm,18.6s,baz=218,slow=38
PET Petropavlovsk 54.45 23 eP **P 02 05 23.8 +0.3**
PET *e* 02 06 25.3
PET eS **S 02 13 00.5 +4.0**
PET pmax pmax
comp=Z,74nm,1.3s,mb5.6
PET pmax pmax
comp=Z,200nm,15.4s
PET Petropavlovsk 54.45 23 eP **P 02 05 23.3 -0.2**
comp=Z,33nm,0.6s,mb5.5
DLH Dalhousie 55.36 307 eP **P 02 05 30.0 -0.5**
THN Thein Dam 55.53 306 eP **P 02 05 29.5 -2.2**
MK31 Makanchi Array 57.11 325 P **P 02 05 42.3 -0.3**
MK31 pmax pmax
comp=Z,25nm,0.5s,mb5.5
MKAR Makanchi Array 57.11 325 P **P 02 05 42.2 -0.4**
comp=Z,30nm,0.4s,mb5.6,baz=118,slow=8.1,SNR=121
MKAR ScP ScP 02 10 30.2 +0.3
comp=Z,0.7nm,0.6s,baz=123,slow=5.3,SNR=2.3
MKAR S **S 02 13 32.3 +0.3**
comp=Z,1.2nm,0.8s,baz=128,slow=11,SNR=3.9
MKAR LR LR 02 32 15.2
comp=Z,583nm,18.7s,baz=115,slow=38
MKAR Makanchi Array 57.11 325 P **P 02 05 42.2 -0.4**
MKAR S **S 02 13 32.3 +0.3**
MKAR pmax pmax
comp=Z,30nm,0.4s
MKAR pmax pmax
comp=N,1.0nm,0.6s
MKAR smax
comp=N,1.0nm,0.8s
MKAR MLR MLR
comp=Z,583nm,18.7s
MKAR Makanchi Array 57.11 325 P **P 02 05 42.2 -0.4**
MKAR ScP ScP 02 10 30.2 +0.3
MKAR S **S 02 13 32.3 +0.3**
MKAR LR LR 02 32 15.2
YAK Yakutsk 57.12 1 eP **P 02 05 40.7 -1.7**
YAK *e* 02 06 30.9
YAK *e* 02 07 49.7
YAK eS **S 02 13 32.1 +0.5**
YAK *e* 02 15 22.6
YAK pmax pmax
comp=Z,148nm,1.0s,mb6.0
YAK pmax pmax
comp=E,8.0nm,1.2s
YAK pmax pmax
comp=N,44nm,0.9s
YAK pmax pmax
comp=Z,23nm,0.7s,mb5.3
YAK smax
comp=N,28μm,3.0s
YAK smax
comp=E,81μm,3.0s
YAK Yakutsk 57.12 1 eP **P 02 05 41.8 -0.6**
comp=E,149nm,0.9s,mb6.0
KSH Kashi 57.82 314 P **P 02 05 49.6 +1.8**
KSH ePCP PcP 02 06 41.6 +2.0
KSH ePP PP 02 07 59.0 +2.3
KSH ePCS PcS 02 10 41.6 +0.7
KSH eS **S 02 13 46.8 +5.2**
KSH eSS SS 02 17 38.1 +4.6
KSH LR LR
comp=N,757nm,8.9s
KSH LR LR
comp=E,1μm,14.0s
KSH LR LR
comp=Z,1μm,16.4s
KRAR Krasnoyarsk 58.03 338 *i* P **P 02 05 47.1 -1.8**
KRAR pmax pmax
comp=Z,35nm,0.4s,mb5.7
ULHL Ulahol 58.73 317 P **P 02 05 54.7 +0.6**
SNR=30
KZA Kyzart 59.34 317 P **P 02 05 59.2 +0.9**
SNR=38
TKM2 Tokmak 2 59.45 318 eP **P 02 05 59.1 +0.1**
TKM2 pmax pmax
comp=Z,61nm,1.1s,mb5.5
TKM2 Tokmak 2 59.45 318 P **P 02 05 59.2 +0.3**
SNR=41
TKM2 Tokmak 2 59.45 318 eP **P 02 05 59.1 +0.1**
comp=Z,61nm,1.1s,mb5.5
KBK Karagaybulak 59.77 317 P **P 02 06 02.0 +0.8**
SNR=18
ZAA0 Zalesovo Array 59.98 332 eP **P 02 06 01.2 -1.2**
ZALV Zalesovo Beam 59.98 332 P **P 02 06 01.6 -0.9**
comp=Z,31nm,0.7s,mb5.4,baz=131,slow=5.7,SNR=38
ZALV S **S 02 14 10.9 +1.8**
comp=Z,0.7nm,0.4s,baz=144,slow=10.0,SNR=3.8
ZALV LR LR 02 35 19.7
comp=Z,244nm,19.8s,baz=305,slow=39
ZALV Zalesovo Beam 59.98 332 P **P 02 06 01.6 -0.8**
ZALV S **S 02 14 10.9 +1.9**
ZALV pmax pmax
comp=Z,31nm,0.7s,mb5.5
ZALV smax
comp=N,1.0nm,0.4s
ZALV MLR MLR
comp=Z,244nm,19.8s
ZALV Zalesovo Beam 59.98 332 P **P 02 06 01.6 -0.9**
ZALV S **S 02 14 10.9 +1.8**
ZALV LR LR 02 35 19.7
CHMS Chumysh 60.04 318 P **P 02 06 02.9 -0.2**
SNR=19
FRU Bishkek 60.07 317⇑ *i* P **P 02 06 05.0 +1.7**
FRU pmax pmax
comp=Z,60nm,2.0s,mb5.3
FRU MLR MLR
comp=Z,500nm,12.0s
AAK Ala-Archa 60.07 317 P **P 02 06 03.6 +0.3**
SNR=15

USP Ospenovka 60.32 318 P **P 02 06 04.8 -0.2**
SNR=83
AML Almayashu 60.42 316 P **P 02 06 06.3 +0.6**
SNR=89
AML Almayashu 60.42 316 eP **P 02 06 06.4 +0.7**
comp=Z,116nm,1.2s,mb5.8
EKS2 Erkin-Say 60.57 317 P **P 02 06 06.5 -0.2**
SNR=69
EKS2 Erkin-Say 60.57 317 eP **P 02 06 06.8 +0.1**
comp=Z,74nm,1.0s,mb5.7
SEY Seymchan 60.82 13⇓ eP **P 02 06 08.4 +0.4**
KURK Kurchatov 61.24 327 P **P 02 06 10.3 -0.8**
comp=Z,2μm,0.6s,SNR=35
KURK Kurchatov 61.24 327 P **P 02 06 10.7 -0.4**
comp=Z,60nm,0.6s,mb5.8,baz=126,slow=5.8,SNR=64
KURK S **S 02 14 25.9 +0.6**
comp=Z,0.9nm,0.4s,baz=126,slow=6.4,SNR=2.5
KURK Kurchatov 61.24 327 P **P 02 06 10.7 -0.4**
KURK S **S 02 14 25.9 +0.6**
KURK pmax pmax
comp=Z,60nm,0.6s,mb5.8
KURK smax
comp=N,1.0nm,0.4s
NVS Novosibirsk 61.26 333 eP **P 02 06 09.9 -1.2**
NVS eS **S 02 14 22.7 -2.7**
NVS pmax pmax
comp=N,46nm,1.2s
NVS pmax pmax
comp=E,62nm,1.2s
NVS pmax pmax
comp=Z,78nm,1.2s,mb5.6
KK31 Karatay Array 62.96 316 P **P 02 06 22.2 -0.6**
KK31 pmax pmax
comp=Z,150nm,1.4s,mb5.7
TIXI Tiksi 66.76 0 eP **P 02 06 45.8 -1.1**
TIXI eS S 02 15 27.8 -5.2
TIXI pmax pmax
comp=Z,33nm,0.6s,mb5.3
TIXI Tiksi 66.76 0 eP **P 02 06 45.0 -1.9**
comp=Z,32nm,0.4s,mb5.5
BVA0 Borovoye Array 66.83 327 *i* P **P 02 06 46.9 -0.8**
BVA0 pmax pmax
comp=Z,37nm,1.3s,mb5.0
BVAR Borovoye Array 66.83 327 P **P 02 06 47.2 -0.5**
comp=Z,127nm,0.9s,mb5.8,baz=122,slow=7.2,SNR=105
BVAR S S 02 15 32.1 -2.3
comp=Z,0.4nm,0.4s,baz=94,slow=8.7,SNR=2.6
BVAR Borovoye Array 66.83 327 P **P 02 06 47.2 -0.5**
BVAR S S 02 15 32.1 -2.3
BVAR pmax pmax
comp=Z,127nm,0.9s
BRVK Borovoye 66.91 327 P **P 02 06 49.3 +1.1**
comp=Z,1μm,1.1s,SNR=57
BRVK Borovoye 66.91 327⇑ P **P 02 06 49.0 +0.8**
SNR=117
BRVK Borovoye 66.91 327 eP **P 02 06 47.8 -0.4**
BRVK pmax pmax
comp=Z,218nm,0.9s,mb6.0
BRVK Borovoye 66.91 327 eP **P 02 06 47.8 -0.3**
comp=Z,218nm,0.9s,mb6.0
BIDO Bidbid 69.17 293⇑ P **P 02 07 00.9 -2.1**
SNR=5.6
AB31 Akbulak array 71.80 320 *i* P **P 02 07 17.7 -0.7**
AB31 pmax pmax
comp=Z,94nm,0.9s,mb5.6
DRV Dumont d'Urvil 71.87 175 P **P 02 07 21.0 +2.5**
DRV S S 02 16 38.0 +4.9
DRV R 02 31 00.0
CASY Casey 71.97 187 eP **P 02 07 19.2 +0.1**
WHFO Wadi Hawf 73.05 287 P **P 02 07 26.1 -0.4**
SNR=6.7
AKTO Aktyubinsk 73.29 321 P **P 02 07 26.6 -0.7**
AKTO pmax pmax
comp=Z,26nm,1.0s,mb5.0
SVE Sverdlovsk 73.44 328⇑ eP **P 02 07 27.7 -0.3**
SVE *e* pP 02 07 43.0 -4.9
SVE eS S 02 16 52.7 +1.3
SVE *e* 02 17 23.4
SVE pmax pmax
comp=Z,47nm,1.0s,mb5.3
SVE MLR MLR
comp=Z,433nm,22.0s
ARU Arti 74.43 327 P **P 02 07 32.9 -0.9**
comp=Z,222nm,0.5s,mb6.2,SNR=7.9
ARU Arti 74.43 327 *d* iP **P 02 07 33.7 -0.1**
ARU *e* 02 07 46.7
ARU *e* 02 10 18.4
ARU ePPP 02 12 01.9
ARU eS S 02 17 08.7 +6.1
ARU eSS SS 02 21 53.9 +3.7
ARU pmax pmax
comp=Z,44nm,1.2s,mb5.1
ARU Arti 74.43 327 eP **P 02 07 32.6 -1.3**
comp=Z,32nm,0.8s,mb5.1
MIR Mirnyy 75.38 194 eP **P 02 07 40.0 +1.0**
MIR *i* pP 02 08 01.0 +2.0
MIR pmax pmax
comp=Z,200nm,1.0s,mb5.8
UMR Umm Al-Rimmam 78.75 299 eP **P 02 07 57.6 -1.2**
baz=299
UMR AMb AMB 02 08 00.8
comp=Z,213nm,1.4s,mb5.8,baz=299
RDF Al-Radifah 78.88 298 eP **P 02 07 58.9 -0.6**
baz=298
RDF AMb AMB 02 08 02.0
comp=Z,205nm,1.2s,mb5.8,baz=298
MIB Mutribah 79.08 299 eP **P 02 07 59.7 -0.9**
baz=299
MIB AMb AMB 02 08 02.5
comp=Z,306nm,0.9s,mb6.1,baz=299
NAY Al-Naaiem 79.16 299 eP **P 02 07 59.9 -1.1**
baz=299
NAY AMb AMB 02 08 02.9
comp=Z,121nm,1.3s,mb5.6,baz=299
RST Umm Al-Ruwaisa 79.37 299 eP **P 02 08 00.9 -1.3**
baz=299
RST AMb AMB 02 08 03.8
comp=Z,8.0nm,1.4s,mb4.4,baz=299
MAK Makhachkala 79.40 313 *c* iP **P 02 07 59.9 -2.2**
MAK *e* 02 08 12.6
MAK *e* 02 11 07.0
MAK *i* S S 02 17 53.4 -3.8
MAK *e* 02 18 17.8
MAK pmax pmax
comp=Z,275nm,1.8s,mb5.8
MAK MLR MLR
comp=Z,457nm,22.0s
SVW2 Sparrevohn 79.50 29 eP **P 02 08 02.2 0.0**
OHAK Old Harbor 80.15 33 eP **P 02 08 06.1 +0.3**
KDAK Kodiak Island 80.58 32 P **P 02 08 07.2 -0.9**
comp=Z,10nm,0.6s,mb4.8,baz=268,slow=3.7,SNR=12
DGRG David-gareji 80.92 311 P **P 02 08 11.7 +1.4**
IMA2 Indian Mountai 81.10 24 eP **P 02 08 10.6 -0.1**
MTA Mtatsminda 81.36 311 P **P 02 08 13.9 +1.3**
GNI Garni 81.37 310 eP **P 02 08 15.2 +2.5**
GNI Garni 81.37 310 eP **P 02 08 13.9 +1.2**
GNI pmax pmax
comp=Z,67nm,1.0s
GNI Garni 81.37 310 eP **P 02 08 13.9 +1.2**
comp=Z,67nm,1.0s,mb5.4
CHUM Lake Minchumin 81.39 26 eP **P 02 08 11.3 -0.9**
comp=Z,16nm,0.8s,mb4.9
TBLG Delisi 81.40 311 P **P 02 08 13.6 +0.7**
BHD Baghdad 81.62 303 ex x 02 08 12.0
BHD Baghdad 81.62 303 ex x 02 18 25.0
GOR Gori 81.88 312 P **P 02 08 13.1 -2.2**
CLDR Caldiran 82.00 309 eP **P 02 08 16.5 +0.5**
BPAW Bear Paw Mtn. 82.00 26 eP **P 02 08 15.5 0.0**
comp=Z,23nm,0.8s,mb5.0
SLKM Skilak Lake 82.04 30 eP **P 02 08 15.0 -0.8**
HAKT HAKKARI 82.16 307 *i* P **P 02 08 13.1 -3.8**
DYDN Diyadin 82.17 309 *i* P **P 02 08 20.5 +3.6**
TRF Thorofare Moun 82.25 27 eP **P 02 08 16.3 -0.5**
comp=Z,27nm,1.0s,mb5.0
ONI Oni 82.37 312 P **P 02 08 21.0 +3.1**
ABPO Ambohimpanom 82.38 250 eP **P 02 08 19.2 +0.8**
comp=Z,29nm,0.9s,mb5.1
SEW Seward 82.40 30 eP **P 02 08 16.5 -1.2**
COLD Coldfoot 82.61 23 eP **P 02 08 18.9 +0.2**
comp=Z,12nm,0.7s,mb4.8
KARS Kars 82.63 310 eP **P 02 08 20.3 +1.0**
MSL Mosul 82.64 306 ex x 02 08 21.0
MSL Mosul 82.64 306 ex x 02 18 34.0
MSL ex x 02 18 47.0
PMR Palmer 82.65 29 eP **P 02 08 19.3 +0.4**

PMR pmax pmax
comp=Z,34nm,1.0s,mb5.1
PMR Palmer 82.65 29 eP **P 02 08 19.3 +0.4**
comp=Z,34nm,1.0s,mb5.1
AGRB Hanur-Agry 82.71 309 eP **P 02 08 20.2 +0.5**
MCK McKinley 82.87 26 eP **P 02 08 20.6 +0.6**
MCK pmax pmax
comp=Z,30nm,1.0s,mb5.1
MCK McKinley 82.87 26 eP **P 02 08 20.6 +0.5**
comp=Z,30nm,1.0s,mb5.1
KIV Kislovodsk 82.94 314 P **P 02 08 22.7 +1.9**
SNR=9.6
KIV Kislovodsk 82.94 314 eP **P 02 08 21.9 +1.1**
KIV pmax pmax
comp=Z,40nm,0.7s,mb5.4
KIV Kislovodsk 82.94 314⇑ *i* P **P 02 08 23.1 +2.3**
KIV Kislovodsk 82.94 314⇑ P **P 02 08 23.1 +2.3**
SIRT Sirnak 83.17 307 eP **P 02 08 25.0 +2.8**
COLA College 83.41 25 eP **P 02 08 23.1 +0.3**
COLA pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
COLA College 83.41 25 eP **P 02 08 23.1 +0.3**
comp=Z,6.6nm,0.7s,mb4.6
ARTV Artvin 83.51 311 *i* P **P 02 08 25.0 +1.1**
HOMI Horasan 83.55 310 *i* P **P 02 08 22.0 -2.1**
VRHR Novokhopersk 83.68 321 eP **P 02 08 23.9 -0.6**
VRHR e*PP pP 02 08 36.1 -8.7
VRHR eS S 02 18 45.6 +4.5
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VRHR pmax pmax
comp=E,30nm,0.9s
VRHR smax
comp=E,100nm,1.4s
VRHR smax
comp=Z,110nm,3.5s
VRHR smax
comp=N,70nm,1.9s
BCA Borcka 83.74 311 eP **P 02 08 24.4 -0.6**
ERZM Erzurum 83.96 309 *i* P **P 02 08 27.5 +1.4**
BEST Besiri 84.08 307 *i* P **P 02 08 29.6 +2.8**
BNGL BINGOL 84.15 309 *i* P **P 02 08 30.1 +3.0**
DIV Divide 84.25 29 eP **P 02 08 27.9 +0.8**
comp=N,52nm,1.0s,mb5.3
MARD Mardin 84.49 307 *i* P **P 02 08 25.5 -3.4**
KOPT Kop Dagi 84.63 310 *i* P **P 02 08 28.6 -0.9**
PPT Papeete 84.73 108 eS S 02 18 52.6 -0.2
comp=N,183nm,25.0s
PPT eSS SS 02 24 25.0 -1.4
comp=N,274nm,30.8s
PPT Papeete 84.73 108 eLR LR 02 35 21.5
comp=N,902nm,28.8s
PPT Papeete 84.73 108 LR LR 02 39 35.0
comp=N,383nm,20.5s,baz=281,slow=31
BMRM Bremner River 84.82 29 eP **P 02 08 30.2 +0.2**
MAW Mawson 85.02 200 eP **P 02 08 32.6 +1.8**
comp=N,16nm,0.9s,mb5.0
MAW Mawson 85.02 200 P **P 02 08 30.9 0.0**
comp=N,17nm,0.8s,mb5.0,baz=56,slow=6.4,SNR=24
MAW LR LR 02 43 14.4
comp=N,135nm,21.7s,baz=61,slow=33
SOC Sochi 85.10 313 eP **P 02 08 31.7 -0.1**
SOC *e* 02 11 47.3
SOC eS S 02 18 53.4 -2.1
SOC eSS SS 02 24 29.3 -1.1
SOC pmax pmax
comp=Z,50nm,0.9s,mb5.4
MACK Trabzon 85.15 311 *i* P **P 02 08 30.2 -2.0**
VSR Storozhevoye 85.23 321 eP **P 02 08 30.4 -1.9**
VSR e*SP sP 02 08 47.0 -14
VSR eS S 02 18 56.8 +0.3
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,6.0nm,0.9s
VSR pmax pmax
comp=E,20nm,0.7s
VSR smax
comp=N,30nm,1.6s
VSR smax
comp=Z,10.0nm,2.4s
VSR smax
comp=E,20nm,1.2s
SBA Scott Base 85.30 172 eP **P 02 08 32.9 +0.8**
SBA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SBA Scott Base 85.30 172 eP **P 02 08 32.9 +0.8**
comp=Z,9.9nm,0.9s,mb4.7
GUMT Gumushane 85.39 310 eP **P 02 08 34.7 +1.4**
PTK Pertek 85.53 309 eP **P 02 08 34.6 +0.6**
SVRC Sivrice-ELAZID 85.61 308 eP **P 02 08 35.6 +1.1**
ESPY Espiye-Giresun 85.94 311 eP **P 02 08 36.1 0.0**
MOS Moscow 85.98 325 eP **P 02 08 35.5 -0.4**
MOS *e* 02 08 48.4
MOS eS S 02 19 00.7 -3.0
MOS pmax pmax
comp=Z,96nm,0.9s,mb5.7
MOS pmax pmax
comp=Z,121μm,1.0s
MOS MLR MLR
comp=Z,2μm,21.0s
URFA Urfa 86.04 307 eP **P 02 08 37.1 +0.5**
MALT Malatya 86.31 308 eP **P 02 08 38.5 +0.5**
MALT Malatya 86.31 308⇑ *i* P **P 02 08 38.7 +0.8**
MALT Malatya 86.31 308⇑ P **P 02 08 38.7 +0.8**
MYA Malataya 86.31 308 eP **P 02 08 39.7 +1.8**
ATAB Bozova 86.46 307 *i* P **P 02 08 39.2 +0.5**
OBN Obninsk 86.61 325 eP **P 02 08 38.1 -0.9**
OBN *i* 02 08 50.2
OBN *i* 02 12 10.1
OBN *i* S S 02 19 01.3 -8.6
OBN *i* SS SS 02 25 02.2 +10
OBN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
OBN Obninsk 86.61 325 eP **P 02 08 39.3 +0.2**
comp=Z,121nm,1.1s,mb5.7
ANN Anapa 86.68 315 eP **P 02 08 38.2 -1.4**
ANN e*PP pP 02 08 50.5 -9.5
ANN eS S 02 19 01.0 -10
ANN pmax pmax
comp=Z,120nm,1.5s,mb5.6
ANN MLR MLR
comp=Z,421nm,23.0s
AKCD Akcadag 86.71 308 *i* P **P 02 08 40.3 +0.5**
DARE Darende-Malaty 86.76 309 eP **P 02 08 43.2 +3.1**
RSDY Resadiye-TOKAT 87.03 310 eP **P 02 08 42.7 +1.3**
GZT Gaziantep 87.05 307 *i* P **P 02 08 41.6 0.0**
DAWY Dawson 87.08 26 eP **P 02 08 40.9 -0.2**
SVSK Karacayir 87.32 310 eP **P 02 08 44.9 +2.1**
GAZ Gaziantep 87.34 307 eP **P 02 08 42.5 -0.5**
KMRS Kahramanmaras 87.57 307 eP **P 02 08 45.0 +1.0**
SARI SarD1z-Kayseri 87.64 308 eP **P 02 08 46.8 +2.5**
KVT Kavak 87.96 311 eP **P 02 08 46.5 +0.7**
ANDN Andirin 88.00 307 *i* P **P 02 08 44.0 -2.1**
HTY Hatay 88.28 306 eP **P 02 08 48.3 +0.9**
BNN Bunyan 88.29 309 eP **P 02 08 48.6 +1.2**
KOZT Kozan 88.42 307 eP **P 02 08 52.0 +3.9**
JOF Joensuu 88.56 333 ep **P 02 08 47.5 -0.7**
comp=Z,4.0nm,0.4s,mb4.8
JOF Joensuu 88.56 333 eP **P 02 08 47.5 -0.7**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
CTKT Corum 88.94 310 *i* P **P 02 08 51.1 +0.6**
SIM Simferopol' 89.02 315 eP **P 02 08 51.5 +0.8**
SIM eS S 02 19 35.4 +2.2
SIM pmax pmax
comp=Z,30nm,0.8s,mb5.4
KEV Kevo 89.14 340 ep **P 02 08 48.2 -2.6**
comp=Z,1.1nm,0.4s,mb4.2
KEV Kevo 89.14 340 eP **P 02 08 48.2 -2.6**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
NIG Nigde 89.32 308 eP **P 02 08 53.0 +0.7**
CDAG Cicekdag 89.36 310 *i* P **P 02 08 51.9 -0.6**
MERS Mersin 89.51 307 eP **P 02 08 53.2 0.0**
ARCES ARCESS Array B 89.70 340 P **P 02 08 51.3 -2.1**
comp=Z,7.9nm,0.4s,mb5.2,baz=82,slow=6.4,SNR=31
ARCES **ARCESS Array B 89.70 340** P **P 02 08 51.3 -2.1**
ARCES pmax pmax
comp=Z,8.0nm,0.4s
MEST Erdemli 89.84 307 *i* P **P 02 08 55.2 +0.4**
KAMT Kaman 89.89 309 eP **P 02 08 54.4 -0.6**

BALT Daday 89.91 312 *i* P P 02 08 54.3 -0.7
IKL Isikli 90.25 306 *e*P P 02 08 55.2 -1.5
KMBO Kilima Mbogo 90.32 269 P P 02 08 58.5 +1.0
comp=Z,6.2nm,1.2s,mb4.6,baz=53,slow=6.9,SNR=6.6
KMBO LR LR 02 46 20.8
comp=Z,133nm,19.1s,baz=101,slow=33
LFK Lefkose 90.47 305 *e*P P 02 08 58.3 +0.5
ANTO Ankara 90.54 310 *e*P P 02 08 58.9 +0.9
ANTO pmax pmax
comp=Z,13nm,0.9s,mb5.1
ANTO Ankara 90.54 310 *e*P P 02 08 58.9 +0.9
comp=Z,13nm,0.9s,mb5.0
KAF Kangasniemi 90.99 333 *e*p P 02 08 58.8 -0.8
comp=Z,3.3nm,0.4s,mb4.8,baz=75,slow=4.4
KAF Kangasniemi 90.99 333 *e*P P 02 08 58.8 -0.8
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
HDMB Hadim 91.12 307 *e*P P 02 09 01.6 +0.8
KDHN Kadinhani 91.23 309 *i*P P 02 09 00.6 -0.6
KIZT Kizilcal 91.37 309 *e*P P 02 09 01.1 -0.7
AKASG Malin Array Be 91.53 321 P P 02 09 01.0 -1.3
comp=Z,6.9nm,0.8s,mb5.0,baz=63,slow=4.1,SNR=19
AKASG LR LR 02 56 58.3
comp=Z,209nm,21.5s,baz=45,slow=40
KIEV Kiev 91.54 321 *e*P P 02 09 02.4 0.0
KIEV pmax pmax
comp=Z,12nm,0.9s,mb5.1
KIEV Kiev 91.54 321 *e*P P 02 09 02.4 0.0
comp=Z,12nm,0.9s,mb5.1
MNK Minsk 91.70 325 *e*P P 02 09 02.0 -1.0
ESKT Eskisehir 92.08 310 *i*P P 02 08 59.5 -5.6
TLCR 92.71 316 ⇓*i*P P 02 09 09.0 +1.1
TLCR 92.71 316 ⇓P P 02 09 09.0 +1.1
TAOE Nuku Hiva Isla 93.07 99 *e*SP SP 02 21 21.8 -1.9
comp=Z,596nm,28.3s
TAOE Nuku Hiva Isla 93.07 99 *e*LR LR 02 38 48.9
comp=Z,3μm,29.6s
TIRR Tirgusor 93.11 315 ⇑*i*P P 02 09 10.5 +0.7
TIRR Tirgusor 93.11 315 P P 02 09 10.4 +0.6
GDZ Gediz 93.19 309 *i*P P 02 09 03.4 -6.9
ULDT Uludag 93.29 311 *i*P P 02 09 10.3 -0.4
HARR Harsova 93.41 315 ⇑*i*P P 02 09 12.3 +1.1
HARR Harsova 93.41 315 P P 02 09 11.9 +0.8
SYO Syowa Base 93.69 201 ⇑*e*X P 02 09 10.5 -1.4
SYO Syowa Base 93.69 201 ⇓*e*PcP PcP 02 09 14.0 +1.7
VRI Vrincioaia 94.03 317 ⇑*i*P P 02 09 15.7 +1.7
VRI Vrincioaia 94.03 317 P P 02 09 14.9 +1.0
PLOR Plostina 94.09 317 ⇑*i*P P 02 09 15.6 +1.4
SUW Suwalki 94.48 325 *e*P P 02 09 18.5 +2.7
SUW Suwalki 94.48 325 *e*P P 02 09 18.5 +2.7
MLR Muntele Rosu 94.64 316 ⇑*i*P P 02 09 18.0 +1.2
MLR Muntele Rosu 94.64 316 P P 02 09 17.4 +0.6
BURAR Bucovina Array 94.70 318 ⇑*i*P P 02 09 18.6 +1.6
BUR08 Bucovina Ar. S 94.70 318 *e*P P 02 09 17.5 +0.5
LVV L'vov 94.97 321 *e*P P 02 09 19.0 +0.8
KWP Kalwaria 95.85 321 *e*P P 02 09 23.8 +1.6
KWP Kalwaria 95.85 321 ⇑*i*P P 02 09 23.8 +1.6
KWP Kalwaria 95.85 321 *e*P P 02 09 23.8 +1.6
KOLS Kolonicke sedl 96.30 320 *e*P P 02 09 25.4 +1.1
KOLS Kolonicke sedl 96.30 320 *e*P P 02 09 25.4 +1.1
KOLS *e* 02 12 29.6
KOLS Kolonicke sedl 96.30 320 *e*P P 02 09 25.4 +1.1
KOLS *e* 02 12 29.6
UZH Uzhgorod 96.37 320 *e*P P 02 09 26.0 +1.4
UZH *e*PPP 02 15 18.6
UZH *e*S S 02 20 43.0 +4.4
DRGR 96.55 318 ⇑*i*P P 02 09 26.7 +1.3
DRGR 96.55 318 P P 02 09 26.9 +1.4
CRVS Cervenica-Dubn 96.83 320 *e*P P 02 09 27.9 +1.3
CRVS *e*pP pP 02 09 42.3 -4.9
CRVS Cervenica-Dubn 96.83 320 *e*P P 02 09 27.9 +1.3
CRVS *e* 02 09 42.4
STHS Stebnicka Huta 96.83 321 *e*P P 02 09 25.9 -0.7
STHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.9
STHS Stebnicka Huta 96.83 321 *e*P P 02 09 25.9 -0.7
comp=Z,5.7nm,1.3s,mb4.8
GZR Gura Zlata 96.84 317 P P 02 09 27.8 +1.0
NIE Niedzica 97.41 321 *e*P P 02 09 31.7 +2.4
KECS Kecovo 97.56 320 *e*P P 02 09 31.1 +1.1
KECS pmax pmax
comp=Z,4.0nm,0.8s,mb5.0
KECS Kecovo 97.56 320 *e*P P 02 09 31.1 +1.1
comp=Z,4.0nm,0.8s,mb5.0
BZS Buzias 97.58 317 ⇑*i*P P 02 09 31.0 +0.9
BZS Buzias 97.58 317 P P 02 09 30.9 +0.8
VAY Valandovo 97.95 313 *e*P P 02 09 29.5 -2.4
PSZ Piszkesteto 98.10 320 ⇑*i*P P 02 09 33.6 +1.2
PSZ Piszkesteto 98.10 320 ⇑P P 02 09 33.6 +1.2
NB2 NORSAR Subarra 98.16 334 P P 02 09 32.6 +0.3
comp=Z,6.6nm,0.8s,mb5.2,baz=65,slow=4.8
NOA NORSAR Array B 98.16 334 P P 02 09 32.7 +0.3
comp=Z,2.5nm,0.9s,mb4.8,baz=66,slow=4.6,SNR=5.9
NOA PP PP 02 13 34.5 +2.4
comp=Z,1.4nm,0.8s,baz=67,slow=7.4,SNR=3.4
NOA LR LR 02 59 37.9
comp=Z,445nm,20.4s,baz=50,slow=39
NOA NORSAR Array B 98.16 334 P P 02 09 32.7 +0.4
NOA 02 13 34.5
NOA pmax pmax
comp=Z,3.0nm,0.9s
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA NORSAR Array B 98.16 334 P P 02 09 32.7 +0.3
NOA PP PP 02 13 34.5 +2.4
NOA LR LR 02 59 37.9
YKA Yellowknife Ar 98.21 24 LR LR 02 52 42.9
comp=Z,131nm,21.8s,baz=250,slow=35
VYHS Vyhne 98.61 320 PDIF P 02 09 36.9 +2.2
VYHS Vyhne 98.61 320 *e*P P 02 09 36.9 +2.2
OKC Ostrava-Krasne 98.64 322 *e*PDIF P 02 09 36.5 +1.7
OKC Ostrava-Krasne 98.64 322 *e*Pdif P 02 09 36.5 +1.7
RKT Rikitea 98.80 113 *e*LR LR 02 41 33.0
comp=Z,393nm,35.0s
MORC Moravsky Berou 99.03 322 *e*P P 02 09 37.8 +1.3
MORC pmax pmax
comp=Z,4.0nm,1.1s,mb4.9
MORC Moravsky Berou 99.03 322 *e*P P 02 09 37.8 +1.3
comp=Z,3.6nm,1.1s,mb4.8
DPC Dobruska-Polom 99.58 323 *e*PDIF Pdif 02 09 41.8 +3.0
DPC AMS AMS 02 57 00.0
comp=Z,300nm,21.7s
TREC Trest 100.45 322 *e*PDIF Pdif 02 09 44.3 +1.6
TREC AMS AMS 02 56 00.0
comp=Z,300nm,31.0s
PRU Pruhonice 100.78 323 *e*PDIF Pdif 02 09 46.0 +1.8
PRU AMS AMS 02 57 50.0
comp=Z,300nm,20.0s
BRG Berggiesshubel 100.82 324 *e*P Pdif 02 09 46.1 +1.8
BRG *e* 02 13 55.9
BRG pmax pmax
comp=Z,3.0nm,1.0s
BRG MLR MLR
comp=N,67nm,11.2s
BRG MLR MLR
comp=E,187nm,27.4s
BRG MLR MLR
comp=Z,228nm,15.8s
BRG Berggiesshubel 100.82 324 *e*Pdiff Pdif 02 09 46.7 +2.4
BRG Berggiesshubel 100.82 324 *e*PKP Pdif 02 09 46.1 +1.7
comp=Z,5.7nm,0.9s
BRG *e* 02 09 54.9
comp=Z,7.7nm,1.2s
BRG *e* 02 13 55.9
comp=Z,12nm,1.6s
BRG
comp=N,112nm,11.2s
BRG
comp=E,312nm,27.4s
BRG
comp=Z,381nm,15.8s
FBE Freiberg 101.15 324 *e*Pdiff Pdif 02 09 48.2 +2.4
CLL Collm 101.21 324 *e*P Pdif 02 09 49.0 +2.9
CLL pmax pmax
comp=Z,8.0nm,1.3s
CLL MLR MLR
comp=Z,200nm,24.1s
CLL Collm 101.21 324 *e*Pdif Pdif 02 09 49.0 +2.9
comp=Z,8.0nm,1.3s
CLL *e*(pPdif) 02 10 07.0
CLL *e*PP PP 02 14 00.0 +4.5
CLL *e*PS PS 02 22 57.0 -2.9
CLL *e*(SS) 02 28 06.0
CLL *e*(SSS) 02 33 00.0
CLL *ex* x 02 34 42.0
CLL *ex* x 02 36 54.0
CLL Collm 101.21 324 *e*Pdif Pdif 02 09 49.0 +2.9
comp=Z,8.0nm,1.3s
CLL *e* 02 10 07.0
CLL LR LR
comp=Z,200nm,24.1s
SOKA Soboth 101.63 319 ⇓*i*P Pdif 02 09 50.5 +2.6
KHC Kasperske Hory 101.68 322 *e*PDIF Pdif 02 09 49.4 +1.2
KHC AMS AMS 02 58 10.0
comp=Z,300nm,23.1s
GEC2 GERESS Array S 101.71 322 *e*Pdiff Pdif 02 09 50.1 +1.8
GERES GERESS Array B 101.71 322 P Pdif 02 09 49.2 +0.9
comp=Z,2.9nm,1.0s,baz=69,slow=4.4,SNR=10
GERES PP PP 02 13 59.0 -0.4
comp=Z,1.8nm,1.0s,baz=67,slow=7.7,SNR=3.8
GERES GERESS Array B 101.71 322 P Pdif 02 09 49.2 +0.9
GERES 02 13 59.0
GERES pmax pmax
comp=Z,3.0nm,1.0s
GERES pmax pmax
comp=Z,2.0nm,1.0s
WET Wettzell 102.10 322 *e*Pdiff Pdif 02 09 53.3 +3.3
ROTZ Rotzenmuhle 102.27 323 *e*Pdiff Pdif 02 09 52.9 +2.1
MOX Moxa 102.27 324 *e*Pdiff Pdif 02 09 53.3 +2.5
MAIT Maitri 102.82 198 *e*Pdif Pdif 02 10 00.2 +7.0
GRA1 Grafenberg Arr 102.89 323 *e*Pdif Pdif 02 09 56.2 +2.7
GRA1 LR LR
comp=Z,300nm,19.7s
GRF Grafenberg Arr 102.89 323 *e*Pdiff Pdif 02 09 56.2 +2.7
GRF *e*L 03 02 20.9
comp=Z,254nm,19.7s
WTTA Wattenberg 103.58 321 ⇑*i*P Pdif 02 09 57.4 +0.7
comp=Z,8.5nm,1.1s
MEM Membach 105.50 326 P Pdif 02 10 05.7 +0.5
NVAR Mina Array Bea 105.64 48 PKKPab PKKPab 02 26 00.9 -0.4
comp=Z,0.6nm,0.6s,baz=138,slow=4.6,SNR=4.0
CDF Champ du Feu 105.78 323 *e*PKIKP PKiKP 02 14 16.9 -2.1
BCLA Clavier 105.99 326 P Pdif 02 10 07.3 0.0
comp=Z,23nm,2.6s
SNAA Sanae 106.44 195 *e*Pdiff Pdif 02 10 14.5 +5.2
DOU Dourbes 106.55 326 P Pdif 02 10 10.1 +0.3
comp=Z,11nm,2.9s
BAIF Baives 106.78 326 *e*PKIKP PKiKP 02 14 18.8 -2.0
VNA2 Neumayer--Watz 108.05 194 *e*Pdiff Pdif 02 10 22.0 +5.5
VNA2 *e* 02 14 26.0
LOR Lormes 108.35 323 *e*PKIKP PKiKP 02 14 21.7 -2.2
comp=Z,5.8nm,0.8s
VNA3 Neumayer Olymp 108.37 193 *e*Pdiff Pdif 02 10 23.5 +5.6
VNA3 *e* 02 14 24.4
SSF Saint Saulge 108.66 323 *e*PKIKP PKiKP 02 14 22.5 -1.9
AVF Avril sur Loir 108.88 323 *e*PKIKP PKiKP 02 14 23.1 -1.8
KEST Kesra 109.50 310 PP PP 02 14 58.8 +1.4
comp=Z,2.8nm,1.1s,baz=39,slow=6.5,SNR=4.2
TCF Toulx Ste Croi 109.82 323 *e*PKIKP PKiKP 02 14 24.9 -1.7
comp=Z,14nm,1.1s
PDAR Pinedale Array 110.06 41 PP PP 02 15 03.9 +2.8
comp=Z,0.8nm,0.8s,baz=279,slow=3.8,SNR=4.6
PDAR PKKPbc PKKPbc 02 25 30.8 +0.1
comp=Z,0.5nm,0.8s,baz=103,slow=4.0,SNR=3.8
PDAR PKKPab PKKPab 02 25 42.0 +0.3
comp=Z,2.7nm,1.0s,baz=117,slow=5.2,SNR=15
ESDC Sonseca Array 117.14 319 PP PP 02 15 56.2 +4.9
comp=Z,2.9nm,0.9s,baz=46,slow=7.3,SNR=4.9
SCHQ Schefferville 119.39 9 PKP PKPdf 02 14 44.0 -0.7
comp=Z,1.4nm,0.4s,baz=0.0,slow=1.0,SNR=4.5
SCHQ Schefferville 119.39 9 PKP PKPdf 02 14 44.0 -0.7
TXAR Lajitas Array 120.35 52 PKP PKPdf 02 14 46.5 -0.8
comp=Z,1.0nm,0.7s,baz=197,slow=1.0,SNR=12
TXAR PKKPab PKKPab 02 24 55.9 -0.4
comp=Z,1.1nm,0.9s,baz=170,slow=5.5,SNR=7.4
TXAR Lajitas Array 120.35 52 PKIKP PKPdf 02 14 46.6 -0.7
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR pmax pmax
comp=Z,1.0nm,0.9s
EVO Evora 120.38 320 *e*PKIKP PKPdf 02 14 47.5 +0.4
comp=Z,6.3nm,0.6s
JCT Junction City 122.79 49 *e*PKIKP PKPdf 02 14 51.7 -0.3
TORD Torodi Ar. Bea 123.28 289 PKP PKPdf 02 14 52.3 -1.0
comp=Z,10nm,0.9s,baz=55,slow=1.9,SNR=40
TORD PKKPab PKKPab 02 24 43.8 +0.1
comp=Z,0.6nm,0.8s,baz=260,slow=2.7,SNR=4.1
MIAR Mount Ida 124.98 41 *e*PKIKP PKPdf 02 14 56.7 +0.6
WVT Waverly 127.55 36 *e*PKIKP PKPdf 02 15 00.5 -0.4
MDV Middlebury 127.97 19 *e*PKPdf PKPdf 02 15 02.5 +1.0
PLAL Pickwick Lake 128.19 37 *e*PKPdf PKPdf 02 15 01.7 -0.5
LRAL Lakeview Retre 130.16 38 *e*PKPdf PKPdf 02 15 07.6 +1.6
KIC Kosan Boka 131.03 283 *e*PKIKP PKPdf 02 15 11.3 +3.1
comp=Z,43nm,0.7s
DBIC Dimbokro 131.07 283 PKP PKPdf 02 15 08.3 +0.1
comp=Z,10nm,0.8s,baz=117,slow=2.9,SNR=11
DBIC SKPbc SKPbc 02 18 26.2 -0.3
comp=Z,12nm,0.7s,baz=58,slow=5.1,SNR=14
DBIC SKP 02 18 36.3
comp=Z,8.8nm,1.1s,baz=86,slow=6.4,SNR=4.3
DBIC Dimbokro 131.07 283 PKIKP PKPdf 02 15 08.4 +0.2
DBIC pmax pmax
comp=Z,10.0nm,0.8s
DBIC pmax pmax
comp=N,13nm,0.7s
DBIC pmax pmax
comp=N,9.0nm,1.1s
DBIC Dimbokro 131.07 283 PKP PKPdf 02 15 08.3 +0.1
DBIC SKPbc SKPbc 02 18 26.2 -0.3
DBIC SKP 02 18 36.3
TIC Toumodi 131.24 283 *e*PKIKP PKPdf 02 15 11.6 +3.0
comp=N,168nm,1.5s
LIC Lamto 131.33 283 *e*PKIKP PKPdf 02 15 10.1 +1.4
comp=N,32nm,0.8s
LIC Lamto 131.33 283 *e*PKIKP PKPdf 02 15 11.6 +2.9
comp=N,48nm,0.8s
PLCA Paso Flores 140.74 158 PKhKP 02 15 21.3
comp=N,1.2nm,0.6s,baz=198,slow=5.3,SNR=5.4
PLCA PKP PKPdf 02 15 25.9 +0.5
comp=N,2.7nm,0.8s,baz=194,slow=5.0,SNR=6.1
PLCA SKPbc SKPbc 02 18 54.1 -1.4
comp=N,2.2nm,0.9s,baz=170,slow=5.7,SNR=3.1
PLCA Paso Flores 140.74 158 PKP 02 15 21.3
PLCA PKP PKPdf 02 15 25.9 +0.5
PLCA SKPbc SKPbc 02 18 54.1 -1.4
BCIP Isla Barro Col 149.44 63 *e*PKPdf PKPdf 02 15 41.7 +0.6
LCO Las Campanas 150.40 146 *e*PKPbc PKPbc 02 15 48.5 +1.0
MTP Monte Pirata 153.86 29 *e*PKPbc PKPbc 02 15 55.7 0.0
MTP *e*PKPab PKPab 02 16 08.8 0.0
ROSC El Rosal 156.19 67 PKPab PKPab 02 16 19.2 +0.2
comp=N,4.4nm,0.6s,baz=253,slow=3.0,SNR=2.9
CPUP Villa Florida 158.11 168 PKPab PKPab 02 16 27.9 +1.1
comp=N,3.3nm,0.7s,baz=163,slow=4.6,SNR=6.8
CPUP Villa Florida 158.11 168 PKP2 PKPab 02 16 27.9 +1.2
CPUP pmax pmax
comp=Z,3.0nm,0.7s
LPAZ La Paz 160.90 128 PKP PKPdf 02 15 56.4 -0.1
comp=Z,1.6nm,0.9s,baz=284,slow=4.2,SNR=6.5
LPAZ PKPab PKPab 02 16 40.1 +0.9
comp=Z,3.1nm,0.9s,baz=219,slow=4.3,SNR=4.0
LPAZ La Paz 160.90 128 PKIKP PKPdf 02 15 56.4 -0.1
LPAZ 02 16 40.2
LPAZ pmax pmax
comp=Z,2.0nm,0.9s
LPAZ pmax pmax
comp=Z,3.0nm,0.9s
LPAZ La Paz 160.90 128 PKP PKPdf 02 15 56.4 -0.1
LPAZ PKPab PKPab 02 16 40.1 +0.9
BDFB Brasilia 168.36 202 PKPab PKPab 02 17 13.8 +2.0
comp=Z,6.5nm,0.9s,baz=165,slow=4.4,SNR=6.5
BDFB Brasilia 168.36 202 PKP2 PKPab 02 17 13.9 +2.1
BDFB pmax pmax
comp=Z,7.0nm,0.9s

NEIC ***11*** *02:04:05.6±1.6, 481N×12752E, h90km±15km, mb4.2/2, Error ellipse: s-maj=24.5km s-min=8.0km az=73.0*
ISCJB ***11*** *02:04:08.0±1.6, 475N×009×1275E±02, h129km±15km, mb4.0/12, Error ellipse: s-maj=34.3km s-min=9.6km az=161.6*
IDC ***11*** *02:04:09.2±1.9, 472N×12742E, h122km±17km, mb3.9/11, mb1 3.9/12, mb1mx3.8/21, mbtmp3.9/12, Error ellipse: s-maj=32.4km s-min=11.0km az=73.0*

ISC 11 02:04:09.3±1.6, 473N×009×1275E±02, h123km±15km, n22, σ0§47/21, mb4.1/12, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PQL	Pirkuli	0.40	153	P	P	Pg	03 10 59.0	+0.6
	SNR=196							
SIZA	Siyzn	0.42	100	P	P	Pg	03 11 00.9	+2.1
	SNR=128							
SIZA				S	S	Sg	03 11 09.5	+5.3
AKT	Akhty	0.58	306	⇓*i*PG	P	Pg	03 10 58.5	-3.3
SEKA	Sheki	0.88	274	P	P	Pg	03 11 05.0	-2.5
	SNR=194							
URKR	Urkarakh	1.15	332	*i* PG	P	Pg	03 11 10.0	-2.9
URKR				*e*S	S	Sg	03 11 26.0	-1.8
URKR				pmax	pmax			
	comp=Z,1μm,0.1s							
URKR	Urkarakh	1.15	332	*i* Pg	P	Pg	03 11 10.0	-2.9
URKR				*e*Sg	S	Sg	03 11 26.0	-1.8
BRDA	Brd	1.26	226	P	P	Pg	03 11 13.2	-1.6
	SNR=13							
BRDA				S	S	Sg	03 11 32.2	+1.1
GOBA	Gobu	1.28	125	P	P	Pn	03 11 17.0	+1.4
	SNR=16							
GANJ	Ganja	1.62	253	P	P	Pn	03 11 17.2	-2.9

DAV Davao City (W) 2.98 321 P Pn 02 04 56.0 +0.5
150nm,0.3s,baz=52,slow=17,SNR=3.9
DAV S Sn 02 05 30.8 -0.3
82nm,0.3s,baz=90,slow=19,SNR=4.2
DAV Davao City (W) 2.98 321 P Pn 02 04 50.0 -5.5
DAV S Sn 02 05 30.8 -0.3
KAPI Kappang 12.37 219 S Sn 02 09 28.2 +11
1.5nm,0.3s,baz=188,slow=22,SNR=4.2
KAKA Kakadu 18.02 164 *e*P P 02 08 10.7 -0.2
15nm,0.9s
FITZ Fitzroy Crossi 22.76 184 P P 02 09 01.5 +0.1
2.0nm,0.8s,mb3.5,baz=14,slow=12,SNR=3.9
WRA Warramunga Arr 25.43 165 P P 02 09 25.5 -0.3
7.4nm,0.9s,mb4.1,baz=343,slow=10,SNR=8.5
WB2 Warramunga Arr 25.44 165 *e*P P 02 09 26.3 +0.5
ASAR Alice Springs 28.91 168 P P 02 09 56.8 0.0
baz=354,slow=7.7
STKA Stephens Creek 38.81 161 P P 02 11 22.1 -0.2
2.7nm,0.4s,mb4.4,baz=325,slow=9.5,SNR=4.8
SONM Songino Array 46.59 341 P P 02 12 25.1 +0.3
0.4nm,0.5s,mb3.4,baz=148,slow=6.0,SNR=2.7
PEA0B Petropavlovsk- 54.23 22 *e*P P 02 13 22.3 +0.1
PETK Petropavlovsk- 54.23 22 P P 02 13 22.8 +0.6
4.3nm,0.6s,mb4.6,baz=170,slow=4.6,SNR=16
MKAR Makanchi Array 57.16 325 P P 02 13 43.5 +0.3
1.7nm,0.4s,mb4.4,baz=122,slow=8.5,SNR=6.5
ZALV Zalesovo Beam 60.04 332 P P 02 14 02.6 -0.4
0.6nm,0.4s,mb4.0,baz=101,slow=2.2,SNR=2.5
AML Almayashu 60.47 316 *e*P P 02 14 06.9 +0.7
2.0nm,0.8s,mb4.2
KURK Kurchatov 61.30 327 P P 02 14 11.7 +0.1
1.6nm,0.5s,mb4.3,baz=127,slow=6.5,SNR=3.1
BVAR Borovoye Array 66.89 327 P P 02 14 48.3 +0.2
1.1nm,0.5s,mb3.9,baz=132,slow=8.2,SNR=5.2
KDAK Kodiak Island 80.66 32 P P 02 16 08.1 -0.3
4.7nm,0.8s,mb4.3,baz=333,slow=6.8,SNR=3.0
ARCES ARCESS Array B 89.77 340 P P 02 16 52.0 -1.4
1.8nm,0.7s,mb4.3,baz=79,slow=6.3,SNR=8.2
NVAR Mina Array Bea 105.70 48 Pdiff Pdif 02 18 03.4 -2.4
0.2nm,0.4s,baz=282,slow=4.5,SNR=3.6
NVAR PP PP 02 22 33.2 +3.4
0.3nm,0.6s,baz=295,slow=4.7,SNR=2.8
TXAR Lajitas Array 120.42 52 PKP PKPdf 02 22 47.3 +0.4
0.2nm,0.6s,baz=342,slow=1.1,SNR=2.5
TORD Torodi Ar. Bea 123.29 289 PKP PKPdf 02 22 52.8 +0.1
0.2nm,0.5s,baz=74,slow=1.7,SNR=2.6

CASC 11 02:06:56.0±2.7, 1356N×9132W, h0km±10km, MD4.2, 4C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JAT	Jato	0.82	338	*e*P	P	Pg	02 07 13.5	+1.8
FUG	Fuego 3	1.00	28	*e*P	P	Pg	02 07 16.4	+1.2
PCG	Pacaya	1.08	40	*e*P	P	Pg	02 07 16.0	-0.8
FG6		1.09	23	*e*P	P	Pg	02 07 18.2	+1.4
NBG	Las Nubes	1.40	43	⇑*e*P	P	Pn	02 07 23.2	+0.4
RTR	El Retiro	1.66	78	⇑*e*P	x		02 07 25.6	
SBLS	San Blas	1.68	80	*e*P	x		02 07 25.9	
RBDL	Robledal	1.68	71	*e*P	x		02 07 26.7	
RBDL				⇓*e*P	x		02 07 26.7	
RBDL				*e*S	x		02 07 52.9	
SNJE	San Jose	1.70	79	*e*P	x		02 07 26.1	
SNJE				⇑*i*P	x		02 07 26.1	
SNJE				*e*S	x		02 07 51.5	
BOQS	Boqueron	1.99	85	*e*P	x		02 07 31.5	
MTO2	Montecristo 2	2.08	66	⇑*e*P	x		02 07 32.0	
MTO2				*e*S	x		02 07 58.6	
LFRS	El Faro	2.20	88	*e*P	x		02 07 34.1	
LFRS				*e*S	x		02 08 03.0	
SNVI	San Vicente	2.42	88	*e*P	x		02 07 37.3	
SNVI				*e*S	x		02 08 09.4	
BLLM	Bellamira	3.00	92	⇓*e*P	x		02 07 47.0	

KRSC 11 02:53:06.0±0.6, 5584N×16153E, h70km±69km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BZMR	Bezymyannaya	0.59	280	*e*P	P	Pn	02 53 21.4	+1.7
BZMR				*i* S	S	Sn	02 53 32.1	+2.3
KRSR	Krestovskiy	0.66	305	*e*P	P	Pn	02 53 21.4	+1.0
KRSR				*i* S	S	Sn	02 53 31.8	+0.8
KIRR	Kirishev	0.68	280	P	P	Pn	02 53 22.7	+2.1
KIRR				*i* S	S	Sn	02 53 34.2	+2.8
KLY	Klyuchi	0.68	314	*e*P	P	Pn	02 53 20.7	0.0
KLY				*i* S	S	Sn	02 53 31.9	+0.4
KMNR	Kamenistaya	0.73	264	*e*P	P	Pn	02 53 23.3	+2.1
KMNR				*i* S	S	Sn	02 53 36.5	+4.0
KPT	Kopyto	0.75	280	*e*P	P	Pn	02 53 22.8	+1.4
KPT				*i* S	S	Sn	02 53 35.0	+2.2
BDR	Baidarnaya	0.75	346	*e*P	P	Pn	02 53 22.5	+1.1
BDR				*i* S	S	Sn	02 53 35.4	+2.5
KBTR	Krutoberegovo	0.81	62	*e*P	P	Pn	02 53 23.7	+1.6
KBTR				*i* S	S	Sn	02 53 36.8	+2.7
SRKR	Sorokina	0.84	346	*e*P	P	Pn	02 53 23.3	+0.8
SRKR				*i* S	S	Sn	02 53 36.7	+2.0
KOZ	Kozyrevsk	0.96	284	*e*P	P	Pn	02 53 24.8	+0.9
KOZ				*i* S	S	Sn	02 53 38.6	+1.4
TUMR	Tumrok	0.96	235	*e*P	P	Pn	02 53 26.3	+2.3
TUMR				*i* S	S	Sn	02 53 40.5	+3.1
SRDR	Sredinnyy	1.12	296	*e*P	P	Pn	02 53 26.4	+0.4
SRDR				*i* S	S	Sn	02 53 41.2	+0.3
MKZ	Mys Kozlova	1.29	175	*e*P	P	Pn	02 53 30.0	+1.8
MKZ				*i* S	S	Sn	02 53 47.9	+3.1
KII	Karymskiy	2.17	214	*e*P	P	Pn	02 53 42.0	+2.1
KII				*i* S	S	Sn	02 54 08.9	+3.2
SPN	Mys Shipunski	2.88	198	*e*P	P	Pn	02 53 50.5	+0.9
SPN				*i* S	S	Sn	02 54 23.8	+0.7
NLC	Nalytchevo	2.96	206	*e*P	P	Pn	02 53 52.6	+2.0
NLC				*i* S	S	Sn	02 54 27.2	+2.2
GNL	Ganaly	2.99	226	*e*P	P	Pn	02 53 53.2	+2.2
GNL				*i* S	S	Sn	02 54 27.9	+2.3
AVH	Avacha	3.05	213	*e*P	P	Pn	02 53 54.8	+3.0
AVH				*i* S	S	Sn	02 54 30.3	+3.2
PET	Petropavlovsk	3.28	212	*e*P	P	Pn	02 53 57.5	+2.5
PET				*i* S	S	Sn	02 54 35.2	+2.4
RUS	Russkaya	3.85	209	*e*P	P	Pn	02 54 04.6	+1.9
RUS				*i* S	S	Sn	02 54 47.8	+1.2
MIPR	Malaya Ipel'ka	4.54	220	*e*P	P	Pn	02 54 16.4	+4.2

ISCJB ***11*** *03:10:50.0±0.7, 4120N×003×4836E±004, h9km±5km, mb3.6/9, Error ellipse: s-maj=4.8km s-min=4.2km az=161.1*
CSEM ***11*** *03:10:49.7±0.1, 4113N×4822E, h2km, mb3.9/3, Error ellipse: s-maj=2.9km s-min=2.1km az=63.0*
IDC ***11*** *03:10:49.7±1.1, 4117N×4818E, h0km, mb3.8/6, mb1 3.9/9, mb1mx3.7/25, mbtmp3.9/9, ML3.8/2, Error ellipse: s-maj=27.0km s-min=10.7km az=145.0*
MOS ***11*** *03:10:51.1±1.9, 4115N×4830E, h18km, mb4.1/4, Error ellipse: s-maj=10.7km s-min=6.9km az=117.3*
NSSP ***11*** *03:10:53.6, 4147N×4757E, h15km, ML3.5*
NEIC ***11*** *03:10:54.9±1.2, 4116N×4832E, h42km±14km, mb3.8/2, Error ellipse: s-maj=14.0km s-min=8.1km az=178.0*

ISC 11 03:10:50.8±0.6, 4115N±002×4835E±004, h3km±4km, n65, σ1§34/88, mb3.6/8, 4C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PQL	Pirkuli	0.40	153	P	P	Pg	03 10 59.0	+0.6
	SNR=196							
SIZA	Siyzn	0.42	100	P	P	Pg	03 11 00.9	+2.1
	SNR=128							
SIZA				S	S	Sg	03 11 09.5	+5.3
AKT	Akhty	0.58	306	⇓*i*PG	P	Pg	03 10 58.5	-3.3
SEKA	Sheki	0.88	274	P	P	Pg	03 11 05.0	-2.5
	SNR=194							
URKR	Urkarakh	1.15	332	*i* PG	P	Pg	03 11 10.0	-2.9
URKR				*e*S	S	Sg	03 11 26.0	-1.8
URKR				pmax	pmax			
	comp=Z,1μm,0.1s							
URKR	Urkarakh	1.15	332	*i* Pg	P	Pg	03 11 10.0	-2.9
URKR				*e*Sg	S	Sg	03 11 26.0	-1.8
BRDA	Brd	1.26	226	P	P	Pg	03 11 13.2	-1.6
	SNR=13							
BRDA				S	S	Sg	03 11 32.2	+1.1
GOBA	Gobu	1.28	125	P	P	Pn	03 11 17.0	+1.4
	SNR=16							
GANJ	Ganja	1.62	253	P	P	Pn	03 11 17.2	-2.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	SNR=148						
GANJ				S	Sn	03 11 37.7	-3.8
MNSR	**Manas**	**1.62**	**343**	*e*PG	**Pg**	**03 11 19.5**	**-2.4**
MNSR				*i* S	**Sg**	**03 11 43.0**	**0.0**
MNSR				pmax	pmax		
	comp=Z,309nm,0.3s						
MNSR	**Manas**	**1.62**	**343**	*e*Pg	**Pg**	**03 11 19.5**	**-2.4**
	comp=Z,309nm,0.3s						
MNSR				*i* Sg	**Sg**	**03 11 43.0**	**0.0**
GLBA	**Clilabad**	**1.90**	**179**	P	**Pn**	**03 11 23.2**	**-0.8**
	SNR=6.9						
GLBA				S	**Sn**	**03 11 48.6**	**+0.1**
MAK	**Makhachkala**	**1.92**	**341**	*e*PN	**Pn**	**03 11 27.9**	**+3.6**
MAK				*i*		03 11 55.2	
MAK				pmax	pmax		
	comp=Z,172nm,0.4s						
MAK				smax			
	comp=E,1.0nm,0.4s						
MAK				smax			
	comp=N,2.0nm,0.5s						
MAK	**Makhachkala**	**1.92**	**341**	*e*Pn	**Pn**	**03 11 27.9**	**+3.6**
	comp=N,172nm,0.4s						
MAK				*i* Sg	**Sg**	**03 11 55.2**	**+2.8**
	comp=N,2.0nm,0.5s						
GRS	**Goris**	**2.26**	**224**	⇓P	**Pn**	**03 11 29.0**	**+0.1**
GRS				S	**Sn**	**03 11 56.0**	**-1.2**
DGRG	**David-gareji**	**2.27**	**279**	P	**Pn**	**03 11 29.3**	**+0.2**
DGRG				S	**Sn**	**03 12 01.0**	**+3.5**
MTA	**Mtatsminda**	**2.73**	**283**	P	**Pn**	**03 11 35.1**	**-0.4**
MTA				S	**Sn**	**03 12 12.6**	**+3.6**
TBLG	**Delisi**	**2.78**	**283**	PN	**Pn**	**03 11 36.0**	**-0.1**
TBLG				S	**Sn**	**03 12 13.9**	**+3.8**
TBLG	**Delisi**	**2.78**	**283**	P	**Pn**	**03 11 36.0**	**-0.1**
TBLG				S	**Sn**	**03 12 14.0**	**+3.8**
GNI	**Garni**	**2.92**	**251**	Pn	**Pn**	**03 11 39.3**	**+1.2**
	comp=N,11nm,0.3s,baz=235,slow=0.4,SNR=16						
GNI				Sn	**Sn**	**03 12 18.1**	**+4.4**
	comp=N,12nm,0.3s,baz=61,slow=7.4,SNR=4.4						
GNI	**Garni**	**2.92**	**251**	PN	**Pn**	**03 11 39.3**	**+1.2**
GNI						03 12 18.1	
GNI				pmax	pmax		
	comp=Z,11nm,0.3s						
GNI				smax			
	comp=N,12nm,0.3s						
NAX	**Nakhchivan**	**2.95**	**229**	P	**Pn**	**03 11 38.5**	**+0.1**
	SNR=13						
GOR	**Gori**	**3.29**	**286**	P	**Pn**	**03 11 43.4**	**+0.2**
GOR				S	**Sn**	**03 12 24.1**	**+1.3**
ONI	**Oni**	**3.93**	**293**	P	**Pn**	**03 11 53.2**	**+1.3**
ONI				S	**Sn**	**03 12 57.1**	**+19**
PYA	**Pyatigorsk**	**4.86**	**308**	*i* PN	**Pn**	**03 12 05.5**	**+0.8**
SHAR	**Shatzhatmas**	**4.94**	**304**	⇑*i*PN	**Pn**	**03 12 08.3**	**+2.5**
KIV	**Kislovodsk**	**5.04**	**306**	*e*PN	**Pn**	**03 12 11.8**	**+4.6**
KIV				*e*S	**Sn**	**03 13 12.8**	**+7.0**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ANN	**Anapa**	**8.80**	**298**	*e*P	**Pn**	**03 12 57.5**	**-1.2**
ANN				*e*S	**Sn**	**03 14 39.1**	**+0.8**
ANN				pmax	pmax		
	comp=Z,79nm,1.5s						
AKTK	**Aktyubinsk**	**11.47**	**33**	Pn	**Pn**	**03 13 34.8**	**-0.5**
AKTK	**Aktyubinsk**	**11.47**	**33**	Pn	**Pn**	**03 13 34.8**	**-0.5**
AKTK				Sn	**Sn**	**03 15 38.0**	**-5.8**
AKTO	**Aktyubinsk**	**11.47**	**33**	⇑Pn	**Pn**	**03 13 34.7**	**-0.6**
	comp=Z,0.3nm,0.5s						
AKTO				⇑Sn	**Sn**	**03 15 37.6**	**-6.2**
	comp=Z,0.8nm,0.6s						
AKTO	**Aktyubinsk**	**11.47**	**33**	Pn	**Pn**	**03 13 34.8**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=200,slow=10.0,SNR=8.5						
AKTO				Sn	**Sn**	**03 15 38.0**	**-5.8**
	comp=Z,0.4nm,0.3s,baz=30,slow=20,SNR=3.7						
AKTO	**Aktyubinsk**	**11.47**	**33**	P	**Pn**	**03 13 34.8**	**-0.5**
AKTO						03 15 38.0	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AB31	**Akbulak array**	**11.50**	**41**	Pn	**Pn**	**03 13 35.2**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=218,slow=12,SNR=19						
AB31				⇑Sn	**Sn**	**03 15 38.4**	**-6.2**
	comp=Z,2.2nm,0.6s,baz=218,slow=16,SNR=2.6						
AKASG	**Malin Array Be**	**16.34**	**312**	Pn	**Pn**	**03 14 41.4**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=121,slow=11,SNR=2.7						
ARU	**Arti**	**16.68**	**20**	*e*P	**Pn**	**03 14 48.4**	**+3.2**
ARU				*e*S	**Sn**	**03 17 57.7**	**+7.0**
KBL	**Kabul**	**17.60**	**105**	*e*P	**Pn**	**03 14 57.7**	**+0.7**
KBL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KBL	**Kabul**	**17.60**	**105**	*e*P	**Pn**	**03 14 57.7**	**+0.7**
	comp=Z,2.0nm,0.5s						
KBL	**Kabul**	**17.60**	**105**	*e*Pn	**Pn**	**03 14 57.7**	**+0.8**
	comp=Z,2.0nm,0.5s						
BUR08	**Bucovina Ar. S**	**17.74**	**299**	*e*Pn	**Pn**	**03 14 58.7**	**+0.1**
BUR08	**Bucovina Ar. S**	**17.74**	**299**	*e*Pn	**Pn**	**03 14 58.6**	**+0.1**
BRVK	**Borovoye**	**19.01**	**44**	*i* P	**Pn**	**03 15 13.8**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	**Borovoye**	**19.01**	**44**	*i* P	**Pn**	**03 15 13.8**	**-0.2**
	comp=Z,2.0nm,0.6s						
BVAR	**Borovoye Array**	**19.05**	**44**	P	**Pn**	**03 15 14.0**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=230,slow=12,SNR=10						
VSU	**Vasula**	**22.08**	**329**	*i* P	**P**	**03 15 47.6**	**+1.0**
KURK	**Kurchatov**	**22.98**	**55**	P	**P**	**03 15 56.7**	**+0.4**
	comp=Z,0.6nm,0.2s,mb3.6,baz=269,slow=10,SNR=3.5						
KURK	**Kurchatov**	**22.98**	**55**	P	**P**	**03 15 56.7**	**+0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb3.9						
KURK	**Kurchatov**	**22.98**	**55**	P	**P**	**03 15 56.7**	**+0.4**
MKAR	**Makanchi Array**	**24.94**	**65**	P	**P**	**03 16 14.5**	**-0.5**
	comp=Z,1.0nm,0.6s,mb3.5,baz=272,slow=9.1,SNR=6.3						
MKAR	**Makanchi Array**	**24.94**	**65**	P	**P**	**03 16 14.5**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**25.51**	**299**	P	**P**	**03 16 20.6**	**+0.4**
	comp=Z,0.3nm,0.4s,mb3.1,baz=90,slow=12,SNR=4.7						
HFS	**Hagfors**	**28.55**	**323**	P	**P**	**03 16 45.2**	**-2.2**
	comp=Z,2.2nm,0.7s,mb4.0,baz=126,slow=9.3,SNR=7.0						
HFS	**Hagfors**	**28.55**	**323**	P	**P**	**03 16 45.2**	**-2.2**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NB2	**NORSAR Subarra**	**30.05**	**324**	P	**P**	**03 16 58.0**	**-2.6**
	comp=Z,0.6nm,0.5s,mb3.6,baz=116,slow=8.6						
NOA	**NORSAR Array B**	**30.05**	**324**	P	**P**	**03 16 58.4**	**-2.3**
	baz=290,slow=4.8						
ARCES	**ARCESS Array B**	**30.87**	**345**	P	**P**	**03 17 07.2**	**-0.6**
	comp=Z,1.6nm,0.8s,mb3.9,baz=147,slow=11,SNR=3.5						
ARCES	**ARCESS Array B**	**30.87**	**345**	P	**P**	**03 17 07.2**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**30.87**	**345**	P	**P**	**03 17 07.2**	**-0.6**
LSA	**Lhasa**	**36.36**	**94**	*e*P	**P**	**03 17 55.6**	**-0.5**
LSA				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
LSA	**Lhasa**	**36.36**	**94**	*e*P	**P**	**03 17 55.6**	**-0.5**
	comp=Z,1.0nm,0.5s,mb4.0						
LSA	**Lhasa**	**36.36**	**94**	*e*P	**P**	**03 17 55.5**	**-0.5**
	comp=Z,1.0nm,0.5s,mb4.0						
TORD	**Torodi Ar. Bea**	**49.23**	**249**	P	**P**	**03 19 37.9**	**-2.6**
	comp=Z,0.3nm,0.9s,mb3.3,baz=202,slow=5.2,SNR=7.1						
DAWY	**Dawson**	**74.95**	**4**	*e*P	**P**	**03 22 32.0**	**-0.6**
DAWY	**Dawson**	**74.95**	**4**	*e*P	**P**	**03 22 32.0**	**-0.7**
WRA	**Warramunga Arr**	**99.93**	**108**	P	Pdif	03 24 37.8	+0.8
	comp=Z,0.1nm,0.5s,baz=321,slow=3.8,SNR=3.0						

*ISCJB **11** 03:12:03.9±0.2, 1548N±003×9457W±002, h31km, mb4.8/140, MS4.2/27, Error ellipse: s-maj=5.0km s-min=2.5km az=21.6*
*BJI **11** 03:12:04.9, 1540N×9460W, h30km, mB5.2, Ms5.0, Msz4.6*
*NEIC **11** 03:12:04.9±0.2, 1541N×9459W, mb4.9/120, MD4.8(MEX), Error ellipse: s-maj=5.3km s-min=3.0km az=207.0*
*GCMT **11** 03:12:04.9±0.3, 1560N×9479W, h32km, MW5.0/66, Moment Tensor Solution. s54,c72; s66,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.95±.16; $M_{\theta\theta}$-2.18±.11; $M_{\phi\phi}$-1.77±.14; $M_{r\theta}$1.80±.12; $M_{\theta\phi}$1.63±.07; $M_{\phi r}$-0.72±.16; Best double couple: $M_0$4.24700×10^{16} NP1:ϕ_s318.00000°,δ33.00000°,λ103.00000°. NP2: ϕ_s123.00000°,δ58.00000°,λ82.00000°. Principal axes: T 4.4520, Plg75.0000°, Azm10.0000°; N -0.4100, Plg7.0000°, Azm127.0000°; P -4.0410, Plg13.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **11** 03:12:04.6±0.8, 1555N×9451W, h33km, mb5.1/53, MS4.2/4 Error ellipse: s-maj=7.8km s-min=4.7km az=92.1*
*MEX **11** 03:12:05.6±3.6, 1537N×9478W, h21km±34km, MD4.8*
*IDC **11** 03:12:05.6±0.9, 1553N×9445W, h33km±5km, mb4.3/20, mb1 4.5/22, mb1mx4.5/25, mbtmp4.3/22, ML4.7/2, MS4.1/18, Ms1 4.1/18, ms1mx3.9/32, Error ellipse: s-maj=20.8km s-min=11.5km az=60.0*
*SZGRF **11** 03:12:10.9, 1652N×9500W, h34km, mb5.3, Oaxaca, Mexico*

ISC 11 03:12:05.9±0.2**, 1548N**±003×**9449W**±002**, h33**km±.8km**:pP-P, n688,** σ0.73/681**, mb4.8**/140**, MS4.2**/27**, 147C-163D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.58**	**281**	*i* P	**Pn**	**03 12 26.3**	**-5.3**
HUIG				*e*S	**Sn**	**03 12 41.8**	**-9.2**
CMIG	**Matias Romero**	**1.64**	**347**	Pn	**Pn**	**03 12 30.4**	**-2.1**
	708nm,0.3s,baz=156,slow=11,SNR=7114						
CMIG				Sn	**Sn**	**03 12 49.9**	**-2.6**
	2µm,0.3s,baz=66,slow=18,SNR=35						
CMIG				LR	LR	03 13 20.8	
	comp=Z,6µm,20.1s,baz=180,slow=47						
CMIG	**Matias Romero**	**1.64**	**347**	*i* P	**Pn**	**03 12 30.5**	**-2.0**
CMIG				*e*S	**Sn**	**03 12 51.5**	**-1.1**
CMIG	**Matias Romero**	**1.64**	**347**	Pn	**Pn**	**03 12 30.4**	**-2.1**
CMIG				Sn	**Sn**	**03 12 49.9**	**-2.6**
CMIG				*e*S	**Sn**	**03 12 51.5**	**-1.1**
CMIG				LR	LR	03 13 20.8	
TGIG		**1.84**	**45**	*i* P	**Pn**	**03 12 38.3**	**+3.0**
TGIG				*e*S	**Sn**	**03 13 02.3**	**+4.9**
SCX	**San Cristobal**	**2.18**	**55**	*i* P	**Pn**	**03 12 42.5**	**+2.6**
THIG		**2.23**	**105**	*i* P	**Pn**	**03 12 41.0**	**+0.4**
THIG				*i* S	**Sn**	**03 13 11.6**	**+4.6**
CCIG	**Comitan**	**2.40**	**70**	*i* P	**Pn**	**03 12 45.9**	**+2.9**
CCIG				*i* S	**Sn**	**03 13 17.7**	**+6.4**
CCIG	**Comitan**	**2.40**	**70**	*i* P	**Pn**	**03 12 46.3**	**+3.3**
CCIG				*e*S	**Sn**	**03 13 23.2**	**+12**
TUIG	**Tuzandepetl**	**2.54**	**2**	*i* P	**Pn**	**03 12 44.7**	**-0.2**
TUIG				*i* S	**Sn**	**03 13 16.6**	**+2.0**
TUIG	**Tuzandepetl**	**2.54**	**2**	*i* P	**Pn**	**03 12 44.7**	**-0.2**
TUIG				*e*S	**Sn**	**03 13 16.6**	**+2.0**
OXX	**Oaxaca**	**2.67**	**307**	*i* P	**Pn**	**03 12 45.5**	**-1.1**
VHO	**Vista Hermosa**	**2.67**	**307**	*i* P	**Pn**	**03 12 45.2**	**-1.5**
VHO				*i* S	**Sn**	**03 13 13.1**	**-4.8**
VHO	**Vista Hermosa**	**2.67**	**307**	*i* P	**Pn**	**03 12 45.2**	**-1.4**
VHO				*e*S	**Sn**	**03 13 14.0**	**-3.9**
PNIG	**Pinotepa**	**3.61**	**285**	*i* P	**Pn**	**03 12 55.5**	**-4.1**
PNIG				*i* S	**Sn**	**03 13 31.8**	**-9.3**
PNIG	**Pinotepa**	**3.61**	**285**	*i* P	**Pn**	**03 12 55.5**	**-4.1**
PNIG				*e*S	**Sn**	**03 13 31.7**	**-9.5**
TPIG	**Tehuac#an**	**4.01**	**317**	*i* P	**Pn**	**03 13 06.1**	**+1.1**
TPIG				*i* S	**Sn**	**03 13 47.6**	**-3.3**
SCIG	**Sabancuy**	**4.69**	**42**	*i* P	**Pn**	**03 13 15.7**	**+1.2**
SCIG				*i* S	**Sn**	**03 14 12.4**	**+4.7**
PPM	**Popocatepetl**	**5.32**	**313**	*e*P	**Pn**	**03 13 25.0**	**+1.9**
PPM				*i* P		03 13 25.0	
ACX	**Acapulco**	**5.39**	**286**	*e*P	**Pn**	**03 13 19.0**	**-5.1**
MEIG	**Mezcala**	**5.48**	**297**	*i* P	**Pn**	**03 13 23.9**	**-1.4**
YAIG	**Yautepec**	**5.51**	**308**	*i* P	**Pn**	**03 13 23.0**	**-2.7**
YAIG				*i* S	**Sn**	**03 14 21.1**	**-7.0**
YAIG	**Yautepec**	**5.51**	**308**	*i* P	**Pn**	**03 13 25.7**	**0.0**
YAIG				*i* S	**Sn**	**03 14 21.1**	**-7.0**
PLIG	**Platanillo**	**5.60**	**302**	*i* P	**Pn**	**03 13 27.4**	**+0.5**
PLIG				*i* S	**Sn**	**03 14 16.0**	**-14**
IIO	**Organos**	**5.74**	**316**	*i* P	Px	03 13 43.7	
CAIG	**El Cayaco**	**5.76**	**286**	*i* P	**Pn**	**03 13 26.2**	**-3.0**
MZVM		**5.83**	**310**	*i* P	Px	03 13 49.8	
UNM	**Universidad Na**	**5.88**	**311**	*e*P	Px	03 13 42.0	
UNM				*i* P		03 13 54.2	
UNM				*i* S	**Sn**	**03 14 32.8**	**-4.4**
PBVM	**Pinon**	**5.89**	**313**	*i* P	Px	03 13 44.2	
PTVM	**Pico Tres Padr**	**6.01**	**314**	*i* P	Px	03 13 54.9	
DEIG	**Demacu**	**6.45**	**319**	*i* P	**Pn**	**03 13 42.8**	**+4.1**
DEIG				*i* S	**Sn**	**03 14 56.9**	**+5.7**
ZIIG	**Zihuatanejo**	**7.01**	**288**	*i* P	**Pn**	**03 13 43.1**	**-3.2**
ZIIG				*i* S	**Sn**	**03 14 57.6**	**-7.4**
ZIIG	**Zihuatanejo**	**7.01**	**288**	*i* P	**Pn**	**03 13 43.1**	**-3.2**
ZIIG				*e*S	**Sn**	**03 14 51.8**	**-13**
TGUH	**Tegucigalpa,Un**	**7.13**	**101**	*e*Pn	**Pn**	**03 13 51.5**	**+3.6**
	200nm,1.1s						
TEIG	**Tepich**	**7.57**	**51**	Pn	**Pn**	**03 13 53.9**	**-0.1**
	30nm,0.3s,baz=252,slow=4.3,SNR=120						
TEIG				Sn	**Sn**	**03 15 19.2**	**+0.5**
	17nm,0.3s,baz=101,slow=22,SNR=3.2						
TEIG				LR	LR	03 17 17.9	
	comp=Z,1µm,19.3s,baz=15,slow=42						
TEIG	**Tepich**	**7.57**	**51**	*e*Pn	**Pn**	**03 13 54.1**	**+0.1**
	194nm,0.6s						
TEIG				*e*Sn	**Sn**	**03 15 15.7**	**-3.0**
MOIG	**Morelia**	**7.63**	**304**	*i* P	**Pn**	**03 13 55.9**	**+1.1**
MOIG				*i* S	**Sn**	**03 15 08.0**	**-12**
SFJM	**Santa Fe**	**9.53**	**303**	*e*P	**Pn**	**03 14 12.0**	**-8.9**
EZ5V		**9.56**	**296**	*i* S	**Sn**	**03 15 54.9**	**-13**
R15V		**9.78**	**293**	*i* P	**Pn**	**03 14 25.6**	**+1.3**
R15V				*i* S	**Sn**	**03 16 14.4**	**+1.4**
LNIG	**Linares**	**10.46**	**334**	*i* P	**Pn**	**03 14 34.6**	**+0.9**
ANIG	**Ahuacatlan**	**11.02**	**302**	*i* P	**Pn**	**03 14 43.2**	**+1.9**
HKT	**Hockley**	**14.45**	**355**	*e*P	**Pn**	**03 15 25.0**	**-3.2**
HKT				pmax	pmax		
	comp=Z,58nm,1.6s						
HKT	**Hockley**	**14.45**	**355**	*e*Pn	**Pn**	**03 15 25.0**	**-3.2**
	comp=Z,58nm,1.6s						
HPIG		**15.43**	**319**	*i* P	**Pn**	**03 15 43.0**	**+1.9**
JCT	**Junction City**	**15.70**	**343**	*e*P	**Pn**	**03 15 44.7**	**0.0**
JCT				pmax	pmax		
	comp=Z,68nm,0.8s						
JCT	**Junction City**	**15.70**	**343**	*e*P	**Pn**	**03 15 44.7**	**0.0**
	comp=Z,68nm,0.8s						
TXAR	**Lajitas Array**	**16.17**	**330**	Pn	**Pn**	**03 15 51.2**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=155,slow=12,SNR=42						
TXAR				LR	LR	03 23 20.2	
	comp=Z,255nm,19.1s,baz=0.0,slow=42						
NATX	**Nacogdoches**	**16.20**	**359**	*e*P	**Pn**	**03 15 50.5**	**-0.6**
	comp=Z,174nm,1.4s						
VBMS	**Vicksburg**	**17.05**	**12**	*e*P	**Pn**	**03 16 02.0**	**+0.2**
	comp=Z,74nm,1.0s						
LPIG	**La Paz**	**17.16**	**302**	P	**Pn**	**03 16 05.4**	**+2.1**
	comp=Z,1.8nm,0.3s,baz=208,slow=6.9,SNR=4.3						
DWPF	**Disney**	**17.44**	**42**	*e*P	**Pn**	**03 16 07.5**	**+0.8**
	comp=Z,48nm,0.8s						
LRAL	**Lakeview Retre**	**18.75**	**20**	*e*P	**Pn**	**03 16 22.0**	**-0.7**
	comp=Z,32nm,1.2s						
MIAR	**Mount Ida**	**19.00**	**2**	*e*P	**Pn**	**03 16 23.9**	**-1.8**
MIAR				pmax	pmax		
	comp=Z,46nm,1.0s						
MIAR	**Mount Ida**	**19.00**	**2**	*e*P	**Pn**	**03 16 23.9**	**-1.8**
	comp=Z,46nm,1.0s						
CGIG		**19.30**	**322**	*i* P	**Pn**	**03 16 28.8**	**-0.6**
UALR	**University of**	**19.31**	**5**	*e*P	**Pn**	**03 16 26.9**	**-2.5**
	comp=Z,17nm,0.6s						
OXF	**Oxford**	**19.49**	**13**	*e*P	**Pn**	**03 16 31.3**	**-0.3**
OXF				pmax	pmax		
	comp=Z,53nm,1.0s						
OXF	**Oxford**	**19.49**	**13**	*e*P	**Pn**	**03 16 31.3**	**-0.4**
	comp=Z,53nm,1.0s						
WMOK	**Wichita Mounta**	**19.56**	**349**	*e*P	**Pn**	**03 16 29.8**	**-2.6**
WMOK				pmax	pmax		
	comp=Z,28nm,0.8s						
WMOK	**Wichita Mounta**	**19.56**	**349**	*e*P	**Pn**	**03 16 29.8**	**-2.6**
	comp=Z,28nm,0.8s						
PLAL	**Pickwick Lake**	**20.25**	**15**	*e*P	**P**	**03 16 39.9**	**+1.3**
	comp=Z,21nm,1.1s						
HSIG		**20.30**	**314**	*i* P	**P**	**03 16 37.6**	**-1.5**
AMTX	**Amarillo**	**20.37**	**343**	*e*P	**P**	**03 16 39.2**	**-0.5**
	comp=Z,123nm,1.1s						
GOGA	**Godfrey**	**20.45**	**27**	*e*P	**P**	**03 16 43.6**	**+2.9**
GOGA				pmax	pmax		
	comp=Z,42nm,1.1s						
GOGA	**Godfrey**	**20.45**	**27**	*e*P	**P**	**03 16 43.6**	**+2.9**
	comp=Z,42nm,1.1s						
319A	**Douglas**	**20.80**	**322**	⇑P	**P**	**03 16 45.1**	**+0.6**
	baz=21,SNR=14						
SWET	**Sewanee**	**21.10**	**20**	*e*P	**P**	**03 16 48.4**	**+0.8**
219A	**White Tail Can**	**21.24**	**323**	⇑P	**P**	**03 16 49.8**	**+0.6**
	baz=21,SNR=48						
318A	**Bisbee**	**21.27**	**321**	⇓P	**P**	**03 16 50.0**	**+0.4**
	baz=21,SNR=66						
WVT	**Waverly**	**21.41**	**15**	*e*P	**P**	**03 16 49.7**	**-1.3**
WVT				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.4						
WVT	**Waverly**	**21.41**	**15**	*e*P	**P**	**03 16 49.7**	**-1.3**
	comp=Z,24nm,1.1s,mb4.4						
BNM	**Barren Site**	**21.57**	**332**	*e*P	**P**	**03 16 53.2**	**+0.5**
218A	**Dragoon**	**21.68**	**322**	⇑P	**P**	**03 16 54.6**	**+0.6**
	baz=22,SNR=30						
LPM	**Los Pinos Moun**	**21.70**	**332**	*e*P	**P**	**03 16 54.5**	**+0.2**
LENM	**Lemitar**	**21.74**	**331**	*e*P	**P**	**03 16 54.7**	**+0.1**
CPCT	**Cooper Cave**	**21.80**	**22**	*e*P	**P**	**03 16 56.2**	**+1.1**
NHSC	**New Hope**	**21.82**	**34**	*e*P	**P**	**03 16 57.7**	**+2.2**
	comp=Z,134nm,1.1s,mb5.3						
119A	**Ashpeak Ranch,**	**21.84**	**325**	⇓P	**P**	**03 16 56.1**	**+0.5**
	baz=22,SNR=17						
OTAV	**Otavalo**	**21.92**	**132**	P	**P**	**03 16 56.9**	**+0.2**
	comp=Z,32nm,1.5s,mb4.5						
217A	**Green Valley**	**22.01**	**320**	⇓P	**P**	**03 16 57.8**	**+0.3**
	baz=22,SNR=58						
LAZ	**Ladron**	**22.01**	**331**	*e*P	**P**	**03 16 58.2**	**+0.7**
118A	**Homack Ranch,**	**22.12**	**323**	⇑P	**P**	**03 16 59.0**	**+0.3**
	baz=22,SNR=22						
ANMO	**Albuquerque**	**22.16**	**333**	P	**P**	**03 16 59.9**	**+0.8**
	comp=Z,11nm,0.9s,mb4.3,baz=145,slow=12,SNR=27						
Z19A	**T-Link Ranch,**	**22.21**	**326**	⇓P	**P**	**03 16 59.9**	**+0.3**
	baz=22,SNR=5.7						
TKL	**Tuckaleechee C**	**22.26**	**24**	P	**P**	**03 17 00.7**	**+0.6**
	comp=Z,6.0nm,0.7s,mb4.1,baz=181,slow=7.3,SNR=5.5						
TKL				S	**S**	**03 21 06.2**	**+2.7**
	comp=Z,4.9nm,0.7s,baz=226,slow=18,SNR=3.5						
TKL				LR	LR	03 28 30.8	
	comp=Z,494nm,18.4s,MS4.0,baz=242,slow=44						
TKL	**Tuckaleechee C**	**22.26**	**24**	P	**P**	**03 17 00.7**	**+0.5**
TKL				S	**S**	**03 21 06.2**	**+2.7**
TUC	**Tucson**	**22.36**	**321**	*e*P	**P**	**03 17 01.3**	**0.0**
TUC				pmax	pmax		
	comp=Z,42nm,1.1s,mb4.8						
TUC	**Tucson**	**22.36**	**321**	*e*P	**P**	**03 17 01.3**	**0.0**
	comp=Z,42nm,1.1s,mb4.8						
ROSC	**El Rosal**	**22.45**	**116**	P	**P**	**03 17 06.8**	**+4.4**
	comp=Z,34nm,1.0s,mb4.7,baz=32,slow=0.6,SNR=23						
Z18A	**Geronimo**	**22.48**	**324**	⇑P	**P**	**03 17 02.8**	**+0.3**
	baz=22,SNR=7.6						
117A	**Oracle**	**22.52**	**322**	⇓P	**P**	**03 17 03.1**	**+0.2**
	baz=22,SNR=36						
216A	**Three Points,**	**22.56**	**320**	⇑P	**P**	**03 17 03.4**	**0.0**
	baz=22,SNR=15						
SIUC	**Southern Illin**	**22.63**	**11**	*e*P	**P**	**03 17 09.1**	**+5.1**
	comp=Z,80nm,1.1s,mb5.1						
CCM	**Cathedral Cave**	**22.67**	**7**	*e*P	**P**	**03 17 02.7**	**-1.7**
CCM				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.6						
CCM	**Cathedral Cave**	**22.67**	**7**	*e*P	**P**	**03 17 02.7**	**-1.7**
	comp=Z,28nm,1.1s,mb4.6						
Y19A	**Nutrioso**	**22.71**	**327**	⇓P	**P**	**03 17 05.3**	**+0.4**
	baz=23,SNR=29						
Z17A	**San Carlos Hig**	**22.89**	**324**	⇓P	**P**	**03 17 07.2**	**+0.4**
	baz=23,SNR=7.6						
Y18A	**Canyon Day Jun**	**23.00**	**325**	⇓P	**P**	**03 17 08.1**	**+0.1**
	baz=23,SNR=17						
X19A	**St. Johns**	**23.09**	**327**	⇑P	**P**	**03 17 09.2**	**+0.2**
	baz=23,SNR=18						
116A	**Eloy**	**23.10**	**320**	⇓P	**P**	**03 17 09.0**	**0.0**
	baz=23,SNR=10						
TZTN	**Tazewell**	**23.13**	**23**	*e*P	**P**	**03 17 08.9**	**-0.4**
	comp=Z,19nm,1.4s,mb4.3						
Y17A	**Roosevelt**	**23.39**	**324**	⇓P	**P**	**03 17 11.9**	**-0.2**
	baz=23,SNR=24						
214A	**Organ Pipe Nat**	**23.39**	**318**	⇓P	**P**	**03 17 11.9**	**-0.3**
	baz=23,SNR=13						
Z16A	**Peralta Trail,**	**23.47**	**322**	⇑P	**P**	**03 17 12.3**	**-0.5**
	baz=23,SNR=17						
115A	**Sonoran Desert**	**23.52**	**320**	⇑P	**P**	**03 17 13.1**	**-0.1**
	baz=24,SNR=11						
X18A	**Snowflake**	**23.52**	**327**	⇑P	**P**	**03 17 13.7**	**+0.4**
	baz=24,SNR=19						
KSU1	**Kansas State U**	**23.60**	**356**	*e*P	**P**	**03 17 12.6**	**-1.4**
	comp=Z,30nm,1.0s,mb4.7						
W19A	**Sanders**	**23.68**	**328**	⇓P	**P**	**03 17 14.8**	**+0.1**
	baz=24						
CBKS	**Cedar Bluff**	**23.70**	**350**	*e*P	**P**	**03 17 14.2**	**-0.6**
CBKS				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.1						
CBKS	**Cedar Bluff**	**23.70**	**350**	*e*P	**P**	**03 17 14.2**	**-0.6**
	comp=Z,72nm,1.0s,mb5.0						
WCI	**Wyandotte Cave**	**23.79**	**16**	*e*P	**P**	**03 17 15.7**	**0.0**
WCI				pmax	pmax		
	comp=Z,27nm,0.9s,mb4.7						
WCI	**Wyandotte Cave**	**23.79**	**16**	*e*P	**P**	**03 17 15.7**	**0.0**
	comp=Z,26nm,0.9s,mb4.7						
X17A	**Forest Lakes**	**23.84**	**325**	⇓P	**P**	**03 17 16.8**	**+0.6**
	baz=24,SNR=11						
W18A	**Petrified Fore**	**23.86**	**328**	⇓P	**P**	**03 17 16.5**	**+0.1**
	baz=24						
Y16A	**Circle Bar Ran**	**23.89**	**323**	⇑P	**P**	**03 17 17.0**	**+0.3**
	baz=24,SNR=16						
V19A	**Window Rock**	**23.99**	**330**	⇑P	**P**	**03 17 18.2**	**+0.6**
	baz=24,SNR=5.3						
SDV	**Santo Domingo**	**24.21**	**103**	P	**P**	**03 17 22.5**	**+2.7**
	comp=Z,5.7nm,0.3s,mb4.4,baz=12,slow=22,SNR=3.5						
SDV				LR	LR	03 27 56.2	
	comp=Z,501nm,18.1s,MS4.0,baz=7.1,slow=39						
SDCO	**Great Sand Dun**	**24.22**	**338**	*e*Pg	**P**	**03 17 20.2**	**+0.5**
	comp=Z,48nm,1.3s,mb4.8						
X16A	**Lo Mia Camp, P**	**24.25**	**324**	⇑P	**P**	**03 17 20.6**	**+0.6**
	baz=24,SNR=30						
W17A	**Winslow**	**24.34**	**326**	⇓P	**P**	**03 17 21.0**	**+0.2**
	baz=24						
Z14A	**Wintersburg**	**24.41**	**320**	⇓P	**P**	**03 17 21.4**	**0.0**
	baz=24,SNR=7.1						
V18A	**Ganado**	**24.42**	**328**	⇓P	**P**	**03 17 21.6**	**+0.1**
	baz=24,SNR=14						
Y15A	**Casa Rosa Ranc**	**24.44**	**322**	⇑P	**P**	**03 17 22.0**	**+0.3**
	baz=24,SNR=57						
113A	**Mohawk Valley,**	**24.54**	**318**	⇓P	**P**	**03 17 22.8**	**+0.2**
	baz=24,SNR=12						
BLO	**Bloomington**	**24.61**	**15**	*e*P	**P**	**03 17 21.9**	**-1.3**
BLO				*e**PP		03 17 30.3	
BLO				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.7						
BLO	**Bloomington**	**24.61**	**15**	*e*P	**P**	**03 17 21.9**	**-1.3**
	comp=Z,19nm,0.8s,mb4.7						
BLO				*e*pP		03 17 30.2	
X15A	**Humboldt**	**24.76**	**323**	⇓P	**P**	**03 17 24.8**	**+0.2**
	baz=25,SNR=32						
W16A	**Flagstaff**	**24.80**	**325**	⇓P	**P**	**03 17 25.2**	**+0.2**
	baz=25,SNR=13						
Y14A	**Wickenburg**	**24.83**	**321**	⇓P	**P**	**03 17 24.9**	**-0.4**
	baz=25,SNR=36						
ELN	**Prospectdale**	**24.86**	**27**	*e*P	**P**	**03 17 24.2**	**-1.3**
T19A	**Beclabito**	**24.88**	**331**	⇓P	**P**	**03 17 25.4**	**-0.3**
	baz=25,SNR=15						
112A	**Yuma**	**24.92**	**316**	⇓P	**P**	**03 17 25.5**	**-0.6**
	baz=25						
U18A	**Rough Rock, Ch**	**24.95**	**330**	⇑P	**P**	**03 17 26.1**	**-0.2**
	baz=25,SNR=15						
MVCO	**Mesa Verde**	**24.95**	**333**	⇓P	**P**	**03 17 26.5**	**+0.1**
	baz=25						
MVCO	**Mesa Verde**	**24.95**	**333**	*e*Pn	**P**	**03 17 26.8**	**+0.4**
	comp=Z,77nm,1.5s,mb5.0						
WUAZ	**Wupatki**	**25.03**	**326**	⇓P	**P**	**03 17 27.1**	**0.0**
	baz=25,SNR=41						
WUAZ	**Wupatki**	**25.03**	**326**	*e*P	**P**	**03 17 27.4**	**+0.4**
	comp=Z,63nm,1.0s,mb5.1						
X14A	**Yava**	**25.13**	**322**	⇑P	**P**	**03 17 28.0**	**0.0**
	baz=25,SNR=8.5						
Y13A	**Salome**	**25.26**	**320**	⇓P	**P**	**03 17 29.1**	**-0.1**
	baz=25,SNR=8.3						
W15A	**Williams**	**25.27**	**324**	⇑P	**P**	**03 17 29.6**	**+0.4**
	baz=25,SNR=9.1						
U16A	**Tuba City**	**25.37**	**327**	⇓P	**P**	**03 17 30.3**	**+0.2**
	baz=25,SNR=27						
GLA	**Glamis**	**25.40**	**317**	*e*P	**P**	**03 17 30.4**	**-0.1**
GLA				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.8						
GLA	**Glamis**	**25.40**	**317**	⇓P	**P**	**03 17 30.3**	**-0.2**
	baz=25,SNR=10						
GLA	**Glamis**	**25.40**	**317**	*e*P	**P**	**03 17 30.4**	**-0.1**
	comp=Z,23nm,0.8s,mb4.8						
U17A	**Shonto**	**25.48**	**329**	⇑P	**P**	**03 17 31.1**	**0.0**
	baz=25						
T18A	**Mexican Hat**	**25.52**	**331**	⇑P	**P**	**03 17 31.4**	**-0.2**
	baz=26,SNR=19						
Y12C	**Blythe**	**25.65**	**319**	⇑P	**P**	**03 17 32.5**	**-0.2**
	baz=26						
S19A	**Harvey Farm, M**	**25.68**	**332**	⇑P	**P**	**03 17 33.0**	**+0.1**
	baz=26						
V15A	**Kaibab Nationa**	**25.69**	**325**	⇑P	**P**	**03 17 33.3**	**+0.3**
	baz=26,SNR=18						
PV01	**Paradox Valley**	**25.76**	**334**	*e*P	**P**	**03 17 34.1**	**+0.5**
W14A	**Seligman**	**25.76**	**323**	⇑P	**P**	**03 17 33.9**	**+0.1**
	baz=26,SNR=7.6						
X13A	**Yucca**	**25.78**	**321**	⇓P	**P**	**03 17 33.8**	**-0.1**
	baz=26,SNR=6.9						
T17A	**Navajo Res., N**	**25.87**	**329**	⇓P	**P**	**03 17 34.9**	**+0.3**

baz=26,SNR=10
SWSC **Sam W. Stewart** 25.98 316 ⇓P P 03 17 35.9 +0.1
baz=26
DVTC **Desert V Tower** 26.02 315 ⇑P P 03 17 36.0 -0.1
baz=26
S18A **Hurst Farm, Bl** 26.03 331 ⇓P P 03 17 36.0 -0.1
baz=26,SNR=15
V14A **Boquillas Ranc** 26.07 324 ⇓P P 03 17 36.9 +0.4
baz=26,SNR=11
ISCO **Idaho Springs** 26.11 340 *e*P P 03 17 37.0 +0.3
ISCO pmax pmax
comp=Z,13nm,1.0s,mb4.4
ISCO **Idaho Springs** 26.11 340 *e*P P 03 17 37.0 +0.2
comp=Z,13nm,1.0s,mb4.4
W13A **Hualapai Mount** 26.16 322 ⇓P P 03 17 37.7 +0.4
baz=26
PV10 **Paradox Valley** 26.16 333 *e*P P 03 17 37.5 +0.2
BC3 **Big Chuckw Mtn** 26.19 317 ⇑P P 03 17 37.7 +0.1
baz=26,SNR=9.3
R19A **Curley Farm, L** 26.19 333 ⇓P P 03 17 37.5 0.0
baz=26
U15A **North Rim** 26.20 326 ⇑P P 03 17 38.1 +0.5
baz=26,SNR=12
T16A **Glen Canyon Da** 26.21 328 ⇑P P 03 17 38.0 +0.2
baz=26
IRM **Iron Mountain** 26.31 319 ⇓P P 03 17 38.8 +0.1
baz=26,SNR=8.9
S17A **Black Ridge (B** 26.37 330 ⇑P P 03 17 39.2 +0.1
baz=26
MONP **Monument Peak** 26.37 315 ⇑P P 03 17 39.0 -0.2
baz=26
R18A **Canyonlands Na** 26.55 332 ⇓P P 03 17 40.7 -0.1
baz=26
ACSO **Alum Creek Sta** 26.62 20 *e*P P 03 17 40.1 -1.3
comp=Z,9.1nm,1.0s,mb4.3
T15A **Red Dirt Ranch** 26.69 327 ⇓P P 03 17 42.4 +0.3
baz=27,SNR=11
V13A **Grand Canyon W** 26.73 323 ⇓P P 03 17 42.7 +0.2
baz=27,SNR=11
Q19A **Hogan Spring (** 26.74 334 ⇑P P 03 17 42.5 0.0
baz=27,SNR=7.5
BELC **Belle Mtn.** 26.76 317 ⇑P P 03 17 42.8 0.0
baz=27
PFO **Pinyon Flat Ob** 26.82 316 P P 03 17 43.4 +0.1
comp=Z,3.4nm,0.7s,mb4.0,baz=114,slow=3.4,SNR=4.2
PFO LR LR 03 28 54.5
comp=Z,850nm,18.9s,MS4.3,baz=139,slow=38
PFO **Pinyon Flat Ob** 26.82 316 ⇓P P 03 17 43.1 -0.2
baz=27
S16A **Weppner Ranch,** 26.83 329 ⇓P P 03 17 43.2 -0.1
baz=27,SNR=9.8
LDFC **Landfair** 26.88 320 *e*P P 03 17 44.6 +0.8
comp=Z,29nm,1.1s,mb4.7
R17A **Hanksville Air** 26.95 331 ⇓P P 03 17 44.2 -0.2
baz=27,SNR=12
GMRC **Granite Mounta** 27.03 319 ⇓P P 03 17 45.2 0.0
baz=27
T14A **Hurricane** 27.10 326 ⇓P P 03 17 46.0 +0.3
baz=27
U13A **Pakoon Wash** 27.12 324 ⇓P P 03 17 46.4 +0.4
baz=27,SNR=10.0
V12A **Nelson** 27.16 322 ⇓P P 03 17 46.4 +0.1
baz=27,SNR=13
S15A **Panguitch** 27.18 328 ⇑P P 03 17 46.9 +0.4
baz=27
P19A **Cripple Cowboy** 27.20 335 ⇓P P 03 17 46.9 +0.3
baz=27
R16A **Teasdale** 27.21 330 ⇓P P 03 17 47.0 +0.3
baz=27
Q18A **Rafter H Ranch** 27.24 333 ⇓P P 03 17 47.1 +0.1
baz=27,SNR=6.4
SRU **San Rafael** 27.42 332 *e*P P 03 17 48.5 -0.1
SRU pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
SRU **San Rafael** 27.42 332 ⇑P P 03 17 48.9 +0.3
baz=27
SRU **San Rafael** 27.42 332 *e*Pn P 03 17 48.5 -0.2
comp=Z,3.5nm,0.8s,mb3.9
PHWY **Pilot Hill** 27.42 342 *e*Pn P 03 17 48.8 +0.2
comp=Z,12nm,1.0s,mb4.4
U12A **Valley of Fire** 27.46 323 ⇓P P 03 17 49.3 +0.2
baz=27
HEC **Hector,Ludlow** 27.49 318 ⇑P P 03 17 49.8 +0.5
baz=27
T13A **Saint George** 27.52 325 ⇓P P 03 17 50.0 +0.5
baz=28,SNR=7.1
Q16A **Castle Valley** 27.56 331 ⇑P P 03 17 50.5 +0.6
baz=28
JFWS **Jewell Farm** 27.58 7 *e*P P 03 17 48.5 -1.5
JFWS pmax pmax
comp=Z,20nm,0.7s,mb4.9
JFWS **Jewell Farm** 27.58 7 *e*P P 03 17 48.5 -1.5
comp=Z,20nm,0.7s,mb4.8
V11A **Goodsprings** 27.58 321 ⇑P P 03 17 50.5 +0.4
baz=28
TUQ **Turquoise Moun** 27.62 320 ⇓P P 03 17 50.8 +0.4
baz=28
S14A **Cedar City** 27.66 327 ⇑P P 03 17 51.5 +0.7
baz=28,SNR=9.1
P18A **Preston Nutter** 27.72 333 ⇓P P 03 17 51.7 +0.3
baz=28,SNR=10
MSU **Marysvale** 27.73 329 *e*P P 03 17 51.3 -0.1
P17A **Butcher Ranch,** 27.82 332 ⇓P P 03 17 52.2 +0.1
baz=28
O19A **Miners Draw (B** 27.82 336 ⇓P P 03 17 52.4 +0.2
baz=28
TMUT **Trail Mountain** 27.89 331 *e*Pn P 03 17 53.0 +0.2
S13A **Holt Ranch, En** 27.90 326 ⇓P P 03 17 53.6 +0.7
baz=28,SNR=10
O18A **Roosevelt** 28.15 334 ⇓P P 03 17 55.7 +0.6
baz=28
Q15A **Fillmore** 28.20 330 ⇓P P 03 17 55.8 +0.1
baz=28
ECSD **EROS,Sioux Fal** 28.21 357 *e*P P 03 17 54.6 -1.1
comp=Z,22nm,1.0s,mb4.8
RWWY **Rawlins** 28.33 340 *e*Pn P 03 17 56.3 -0.4
comp=Z,40nm,1.2s,mb4.9
P16A **Fountain Green** 28.34 331 ⇑P P 03 17 57.4 +0.5
baz=28
R13A **O'Grain Ranch,** 28.40 326 ⇓P P 03 17 58.4 +1.1
baz=28,SNR=7.8
O17A **Robinson Place** 28.41 333 ⇑P P 03 17 58.0 +0.6
baz=28,SNR=18
U10A **Ash Meadows, A** 28.51 321 ⇓P P 03 17 58.9 +0.5
baz=28
N18A **Larsen Ranch,** 28.61 336 ⇑P P 03 17 59.3 0.0
baz=29,SNR=9.9
Q14A **Sevier Lake (B** 28.64 328 ⇑P P 03 18 00.0 +0.5
baz=29,SNR=8.4
O16A **Springville** 28.75 332 ⇓P P 03 18 00.7 +0.3
baz=29,SNR=5.4
DAU **Daniels Canyon** 28.81 333 *e*Pn P 03 18 01.5 +0.5
TPNV **Topopah Spring** 28.82 322 *e*P P 03 18 01.5 +0.4
TPNV *e* pP 03 18 11.1 +0.5
TPNV pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
TPNV **Topopah Spring** 28.82 322 ⇓P P 03 18 01.8 +0.7
baz=29
TPNV **Topopah Spring** 28.82 322 *e*P P 03 18 01.5 +0.4
comp=Z,6.8nm,1.1s,mb4.3
TPNV *e* pP 03 18 11.1 +0.5
R12A **Pony Springs,** 28.85 326 ⇑P P 03 18 02.1 +0.7
baz=29,SNR=6.6
S11A **Rachel** 29.00 324 ⇑P P 03 18 03.4 +0.7
baz=29,SNR=5.3
MPMC **Manual Prospec** 29.00 319 ⇓P P 03 18 02.8 0.0
baz=29,SNR=9.5
Q13A **Wheeler Ranch,** 29.00 327 ⇑P P 03 18 03.3 +0.7
baz=29,SNR=14
P14A **Drum Mountains** 29.00 329 ⇓P P 03 18 03.5 +0.8
baz=29
N17A **Moffit Pass** 29.06 334 ⇑P P 03 18 04.0 +0.7
baz=29
O15A **The Old Anders** 29.25 331 ⇓P P 03 18 05.7 +0.8
baz=29
N16A **Rees Ranch, Co** 29.28 333 ⇑P P 03 18 05.7 +0.5
baz=29
ARVC **Arvin** 29.30 316 ⇑P P 03 18 05.8 +0.4
baz=29
DUG **Dugway** 29.35 331 *e*P P 03 18 05.8 0.0
DUG pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
DUG **Dugway** 29.35 331 ⇓P P 03 18 06.4 +0.6
baz=29
DUG **Dugway** 29.35 331 *e*P P 03 18 05.8 0.0
comp=Z,4.0nm,1.1s,mb4.1
P13A **Bates Ranch, G** 29.37 328 ⇓P P 03 18 06.8 +0.8
baz=29,SNR=8.0

R11A **Troy Canyon, C** 29.40 325 ⇓P P 03 18 06.7 +0.5
baz=29,SNR=9.3
Q12A **Willow Creek R** 29.48 327 ⇓P P 03 18 07.5 +0.5
baz=29
GRAC **Grapevine Rang** 29.52 321 ⇓P P 03 18 07.9 +0.5
baz=30,SNR=9.1
S10A **Tonopah Range,** 29.68 323 ⇑P P 03 18 09.4 +0.7
baz=30,SNR=13
M16A **Huntsville** 29.71 333 ⇑P P 03 18 09.3 +0.3
baz=30,SNR=6.1
R10A **Warm Springs** 29.76 324 ⇓P P 03 18 10.1 +0.6
baz=30,SNR=8.8
N15A **Stansbury Isla** 29.76 332 ⇓P P 03 18 09.6 +0.1
baz=30,SNR=5.9
Q11A **Duckwater** 29.79 325 ⇓P P 03 18 10.4 +0.7
baz=30,SNR=6.8
PKM **Peak Mountain** 29.84 315 ⇑P P 03 18 10.4 +0.2
baz=30
P12A **McGill** 29.84 327 ⇑P P 03 18 10.8 +0.6
baz=30
VES **Vestal, Richgr** 29.89 317 ⇑P P 03 18 10.9 +0.3
baz=30,SNR=5.2
S09A **Goldfield** 29.91 322 ⇑P P 03 18 11.0 +0.2
baz=30,SNR=7.6
HWUT **Hardware Ranch** 29.92 334 *e*Pn P 03 18 10.7 -0.1
comp=Z,9.7nm,1.0s,mb4.5
BGU **Big Grassy Mou** 30.02 331 *e*P P 03 18 12.0 +0.2
N14A **Grayback Hills** 30.04 331 ⇓P P 03 18 12.3 +0.4
baz=30,SNR=14
PDAR **Pinedale Array** 30.11 338 P P 03 18 12.2 -0.2
comp=Z,3.2nm,0.9s,mb4.0,baz=145,slow=8.1,SNR=21
PDAR LR LR 03 32 59.1
comp=Z,212nm,19.4s,MS3.8,baz=266,slow=42
R09A **Tonopah** 30.17 323 ⇓P P 03 18 13.5 +0.4
baz=30,SNR=8.5
Q10A **Clear Creek Ra** 30.19 325 ⇓P P 03 18 14.2 +1.0
baz=30,SNR=5.3
M15A **Larsen Ranch,** 30.19 333 ⇓P P 03 18 13.4 +0.2
baz=30,SNR=9.6
L16A **Fish Haven** 30.20 334 ⇑P P 03 18 13.2 -0.1
baz=30,SNR=15
S08C **White Mtn Res** 30.33 321 ⇑P P 03 18 15.2 +0.6
baz=30,SNR=11
O12A **Currie** 30.35 328 ⇓P P 03 18 15.2 +0.6
baz=30,SNR=11
HELL **Mitchell Peak** 30.35 319 ⇓P P 03 18 15.0 +0.3
baz=30,SNR=9.6
N13A **Wendover, West** 30.53 330 ⇑P P 03 18 16.7 +0.5
baz=30
HVU **Hansel Valley** 30.59 333 *e*P P 03 18 17.1 +0.4
HVU pmax pmax
comp=Z,20nm,1.0s,mb4.9
HVU **Hansel Valley** 30.59 333 *e*P P 03 18 17.1 +0.3
comp=Z,20nm,1.0s,mb4.9
L15A **Malad City** 30.60 333 ⇓P P 03 18 16.9 +0.1
baz=31,SNR=5.9
M14A **Sheep Mountain** 30.63 332 ⇑P P 03 18 17.5 +0.4
baz=31,SNR=19
Q09A **Carvers** 30.63 324 ⇓P P 03 18 17.8 +0.6
baz=31
O11A **Cowboy Ranch,** 30.72 327 ⇑P P 03 18 18.4 +0.5
baz=31,SNR=9.7
P10A **Eureka** 30.78 326 ⇓P P 03 18 19.1 +0.7
baz=31
M13A **Montello** 30.90 330 ⇑P P 03 18 19.8 +0.4
baz=31,SNR=6.4
PKD **Parkfield** 30.91 316 ⇓P P 03 18 19.7 +0.1
baz=31
N12A **Clover Valley,** 30.94 329 ⇓P P 03 18 20.3 +0.5
baz=31,SNR=9.6
ELK **Elko** 30.96 328 *e*P P 03 18 20.5 +0.5
ELK *e**PP pP 03 18 28.6 -0.9
ELK pmax pmax
comp=Z,9.0nm,0.9s
ELK **Elko** 30.96 328 *e*P P 03 18 20.5 +0.5
comp=Z,8.8nm,0.9s,mb4.6
ELK *e*pP pP 03 18 28.6 -0.9
L14A **Malta** 31.00 332 ⇓P P 03 18 20.8 +0.4
baz=31,SNR=48
NVAR **Mina Array Bea** 31.02 322 P P 03 18 21.6 +1.0
comp=Z,9.3nm,0.9s,mb4.6,baz=144,slow=8.4,SNR=65
NVAR pP pP 03 18 30.6 +0.5
comp=Z,7.7nm,1.0s,baz=144,slow=7.7,SNR=10
NVAR PcP PcP 03 21 16.0 0.0
comp=Z,1.6nm,0.9s,baz=147,slow=4.6,SNR=3.6
Q08A **Gabbs** 31.08 323 ⇓P P 03 18 21.6 +0.5
baz=31
REDW **Red Top Meadow** 31.10 337 *e*Pn P 03 18 21.4 +0.2
comp=Z,34nm,1.1s,mb5.1
SNOW **Snow King Moun** 31.15 337 *e*P P 03 18 22.0 +0.3
comp=Z,50nm,1.0s,mb5.3
K15A **Arbon** 31.22 334 ⇓P P 03 18 22.4 +0.1
baz=31,SNR=9.8
LOHW **Long Hollow** 31.22 337 *e*P P 03 18 22.3 0.0
comp=Z,16nm,0.9s,mb4.8
TPAW **Teton Pass** 31.25 337 *e*P P 03 18 22.6 +0.1
comp=Z,31nm,1.2s,mb5.0
N11A **Elko Archery C** 31.26 328 ⇑P P 03 18 23.3 +0.6
baz=31
RRI2 **Red Ridge** 31.27 336 *e*P P 03 18 22.7 -0.1
comp=Z,24nm,1.1s,mb4.9
O10A **Cortez Mining,** 31.28 326 ⇑P P 03 18 23.4 +0.6
baz=31
M12A **Wells** 31.30 330 ⇑P P 03 18 23.4 +0.4
baz=31,SNR=16
U04C **Hernandez Rese** 31.31 317 ⇓P P 03 18 23.0 -0.2
baz=31,SNR=5.9
J16A **Bone** 31.33 336 ⇑P P 03 18 23.3 +0.1
baz=31
L13A **Double Diamond** 31.36 332 ⇓P P 03 18 23.7 +0.2
baz=31,SNR=8.6
K14A **Jones Ranch, D** 31.38 333 ⇓P P 03 18 23.7 -0.1
baz=31,SNR=5.8
MOOW **Moose Ponds** 31.39 337 *e*Pn P 03 18 23.4 -0.4
comp=Z,7.7nm,0.9s,mb4.5
V03C **Hunter Liggett** 31.42 316 ⇑P P 03 18 24.3 +0.1
baz=31,SNR=6.0
O09A **Fish Creek Ran** 31.56 326 ⇑P P 03 18 25.6 +0.3
baz=32,SNR=5.2
S05C **Merced** 31.59 318 ⇓P P 03 18 25.2 -0.4
baz=32
N10A **Dunphy** 31.59 327 ⇓P P 03 18 26.0 +0.5
baz=32
IMW **Indian Meadow** 31.59 337 *e*P P 03 18 25.4 -0.1
comp=Z,5.4nm,0.8s,mb4.4
M11A **Holland Ranch,** 31.75 329 ⇑P P 03 18 27.5 +0.5
baz=32,SNR=8.2
J15A **Blackfoot** 31.76 335 ⇑P P 03 18 27.1 +0.1
baz=32,SNR=7.0
R06C **Coleville** 31.76 321 ⇑P P 03 18 28.0 +0.9
baz=32
I16A **Newdale** 31.78 336 ⇑P P 03 18 27.4 +0.2
baz=32,SNR=7.2
K13A **Stover Farm, H** 31.87 332 ⇓P P 03 18 27.7 -0.3
baz=32
L12A **House Creek Ra** 31.91 330 ⇓P P 03 18 28.4 +0.1
baz=32,SNR=5.5
LKWY **Lake** 31.97 338 *e*P P 03 18 30.2 +1.4
LKWY *e**PP pP 03 18 37.4 -1.0
LKWY pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
LKWY **Lake** 31.97 338 *e*P P 03 18 30.2 +1.3
comp=Z,7.3nm,0.9s,mb4.5
LKWY *e*pP pP 03 18 37.4 -1.0
PACP **Pacheco Peak** 32.01 317 ⇑P P 03 18 29.1 -0.2
baz=32
CMB **Columbia Colle** 32.04 319 ⇓P P 03 18 29.3 -0.3
baz=32
RLMT **Red Ledge** 32.07 340 *e*P P 03 18 29.5 -0.2
comp=Z,34nm,1.3s,mb5.0
J14A **Carey** 32.16 333 ⇑P P 03 18 30.8 +0.3
baz=32,SNR=11
O08A **Rochester Mine** 32.18 325 ⇓P P 03 18 31.2 +0.4
baz=32
M10A **I.L. Ranch, Tu** 32.19 328 ⇑P P 03 18 31.4 +0.6
baz=32
N09A **Rock Creek Ran** 32.23 326 ⇓P P 03 18 31.5 +0.4
baz=32
K12A **Draper Farm, C** 32.23 331 ⇓P P 03 18 31.5 +0.3
baz=32,SNR=8.5
R05C **Kirkwood Meado** 32.26 321 ⇓P P 03 18 32.1 +0.7
baz=32
I15A **Monteview** 32.28 335 ⇓P P 03 18 32.1 +0.5
baz=32
L11A **Cat Creek Ranc** 32.28 330 ⇓P P 03 18 32.0 +0.3
baz=32,SNR=34
H16A **Russell Place,** 32.40 337 ⇑P P 03 18 33.1 +0.5
baz=32,SNR=8.2

O07A **Toulon** 32.50 324 ⇑P P 03 18 33.9 +0.3
baz=32,SNR=7.1
J13A **Cove Ranch, Pi** 32.50 333 ⇓P P 03 18 33.5 -0.1
baz=32,SNR=13
N08A **GE Springer Mi** 32.51 325 ⇓P P 03 18 33.7 +0.1
baz=32
R04C **Big Horse Ranc** 32.52 319 ⇑P P 03 18 34.6 +0.9
baz=32
L10A **Juniper Basin** 32.57 329 ⇓P P 03 18 34.5 +0.4
baz=32,SNR=11
QLMT **Earthquake Lak** 32.57 337 *e*P P 03 18 34.6 +0.5
M09A **Marrel Ranch,** 32.59 327 ⇓P P 03 18 35.0 +0.7
baz=32,SNR=7.4
I14A **Mackay** 32.62 334 ⇑P P 03 18 35.2 +0.7
baz=33,SNR=21
HLID **Hailey** 32.74 333 ⇑P P 03 18 35.7 +0.1
baz=33,SNR=29
HLID **Hailey** 32.74 333 *e*P P 03 18 35.5 -0.1
comp=Z,14nm,0.9s,mb4.9
AGMN **Agassiz Refuge** 32.74 358 *e*P P 03 18 34.0 -1.5
comp=Z,28nm,1.0s,mb5.2
AGMN *e*pP pP 03 18 44.5 -0.6
GCMT **Greycliff** 32.79 340 *e*P P 03 18 36.0 0.0
J12A **Stokes Ranch,** 32.80 332 ⇑P P 03 18 36.3 +0.1
baz=33
H15A **Lima** 32.86 336 ⇑P P 03 18 37.5 +0.9
baz=33,SNR=5.0
K11A **Parker Ranch,** 32.87 330 ⇓P P 03 18 36.7 -0.1
baz=33,SNR=8.0
I13A **Wildhorse Cree** 32.89 333 ⇑P P 03 18 37.4 +0.4
baz=33,SNR=20
BDM **Black Diamond** 32.93 318 ⇑P P 03 18 38.1 +0.7
baz=33
N07B **Gerlach** 32.97 325 ⇑P P 03 18 37.8 +0.1
baz=33,SNR=6.8
MCMT **McKenzie Canyo** 33.11 336 P P 03 18 40.0 +1.1
Q04C **Lincoln** 33.14 320 ⇑P P 03 18 39.9 +0.7
baz=33
H14A **Leadore** 33.15 335 ⇓P P 03 18 40.0 +0.8
baz=33,SNR=12
BEKR **Beckwourth** 33.16 322 ⇑P P 03 18 40.0 +0.6
baz=33,SNR=9.8
G15A **Dillon** 33.26 337 ⇑P P 03 18 40.8 +0.7
baz=33,SNR=29
MFID **Camas Ranch** 33.27 331 ⇑P P 03 18 40.0 -0.3
baz=33
K10A **MacKenzie Ranc** 33.28 329 ⇑P P 03 18 40.1 -0.3
baz=33,SNR=7.9
BOZ **Bozeman (W)** 33.34 338 *e*P P 03 18 40.8 -0.1
BOZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BOZ **Bozeman (W)** 33.34 338 *e*P P 03 18 40.8 -0.1
comp=Z,3.4nm,0.9s,mb4.3
N06A **Buffalo Meadow** 33.43 324 ⇓P P 03 18 42.1 +0.4
baz=33,SNR=15
DLMT **Dillon** 33.46 337 *e*P P 03 18 41.9 0.0
comp=Z,29nm,1.0s,mb5.2
H13A **Challis** 33.47 334 ⇓P P 03 18 42.4 +0.4
baz=33,SNR=22
OHCM **Honcut** 33.51 320 *e*P P 03 18 42.0 -0.4
L08A **Fields** 33.61 327 ⇓P P 03 18 43.2 0.0
baz=34,SNR=18
K09A **Rome** 33.65 328 ⇑P P 03 18 43.9 +0.3
baz=34,SNR=25
ORV **Oroville** 33.65 321 ⇑P P 03 18 44.0 +0.3
baz=34
MCCM **Marconi Confer** 33.70 317 ⇑P P 03 18 44.1 0.0
baz=34
G14A **Jackson** 33.70 336 ⇑P P 03 18 44.4 +0.4
baz=34,SNR=12
I11A **Placerville** 33.71 332 ⇑P P 03 18 44.6 +0.5
baz=34,SNR=42
H12A **Diamond D Ranc** 33.72 333 ⇓P P 03 18 44.6 +0.4
baz=34,SNR=56
F15A **Butte** 33.83 337 ⇓P P 03 18 45.3 +0.2
baz=34,SNR=22
MNRC **McLaughlin Nat** 33.84 319 ⇓P P 03 18 45.7 +0.4
baz=34
DGMT **Dagmar** 33.85 348 *e*P P 03 18 45.4 +0.2
comp=Z,12nm,0.9s,mb4.8
ELFS **Eagle Lake Fie** 33.86 323 ⇑P P 03 18 45.9 +0.4
baz=34
O04C **Chester** 33.88 322 ⇑P P 03 18 46.2 +0.6
baz=34
G13A **Cobalt** 33.89 335 ⇓P P 03 18 45.6 0.0
baz=34,SNR=15
WVOR **Wild Horse Val** 33.93 327 *e*P P 03 18 45.7 -0.3
WVOR pmax pmax
comp=Z,18nm,1.3s,mb4.8
WVOR **Wild Horse Val** 33.93 327 *e*P P 03 18 45.7 -0.3
comp=Z,18nm,1.3s,mb4.8
L07A **Adell** 34.02 326 ⇓P P 03 18 47.0 +0.2
baz=34,SNR=11
K08A **Mann Creek Ran** 34.06 328 ⇑P P 03 18 47.4 +0.2
baz=34,SNR=12
M06C **Likely Place G** 34.10 324 ⇑P P 03 18 47.7 +0.2
baz=34,SNR=9.3
F14A **Wisdom** 34.14 336 ⇑P P 03 18 47.7 -0.1
baz=34,SNR=7.7
J09A **Fry Pan Ranch,** 34.14 329 ⇓P P 03 18 48.0 +0.1
baz=34
I10A **Payette** 34.23 331 ⇓P P 03 18 48.9 +0.2
baz=34,SNR=5.1
H11A **Donnelly** 34.35 332 ⇑P P 03 18 49.6 0.0
baz=34,SNR=40
E15A **Deer Lodge** 34.38 338 ⇓P P 03 18 49.6 -0.3
baz=34,SNR=7.7
K07A **Rock Creek Ran** 34.43 327 ⇓P P 03 18 50.4 0.0
baz=34
MOD **Modoc** 34.46 325 ⇑P P 03 18 50.4 -0.2
baz=34,SNR=6.0
MOD **Modoc** 34.46 325 *e*P P 03 18 50.5 -0.1
comp=Z,5.1nm,0.9s,mb4.5
F13A **Darby** 34.50 335 ⇓P P 03 18 50.6 -0.3
baz=34,SNR=21
J08A **Circle Bar Ran** 34.51 328 ⇓P P 03 18 51.1 +0.1
baz=34,SNR=7.0
M05C **Lookout** 34.58 323 ⇑P P 03 18 51.6 -0.1
baz=34
H10A **Noah's Angus R** 34.59 332 ⇓P P 03 18 51.2 -0.5
baz=34,SNR=10.0
I09A **Lost Marbles R** 34.60 330 ⇓P P 03 18 51.7 -0.1
baz=34,SNR=18
E14A **Clinton** 34.69 337 ⇓P P 03 18 52.3 -0.3
baz=35,SNR=8.4
ULM **Lac du Bonnet** 34.69 358 P P 03 18 49.8 -2.7
comp=Z,17nm,1.0s,mb4.9,baz=178,slow=8.1,SNR=6.2
ULM LR LR 03 35 03.9
comp=Z,211nm,19.0s,MS3.9,baz=241,slow=40
ULM **Lac du Bonnet** 34.69 358 P P 03 18 49.8 -2.7
ULM LR LR 03 35 03.9
EGMT **Eagleton** 34.81 342 ⇓P P 03 18 53.4 -0.2
baz=35
EGMT **Eagleton** 34.81 342 *e*P P 03 18 53.4 -0.2
comp=Z,37nm,1.1s,mb5.2
F12A **Elk City** 34.85 334 ⇓P P 03 18 53.8 -0.2
baz=35,SNR=62
L05A **Lakeview** 34.85 325 ⇑P P 03 18 54.1 0.0
baz=35,SNR=7.8
D15A **Lincoln** 34.86 338 ⇑P P 03 18 53.6 -0.4
baz=35,SNR=5.2
J07A **Hines** 34.95 328 ⇑P P 03 18 54.3 -0.5
baz=35
I08A **Drewsey** 34.96 329 ⇑P P 03 18 54.6 -0.3
baz=35,SNR=7.9
E13A **Victor** 34.98 336 ⇑P P 03 18 54.7 -0.3
baz=35,SNR=27
G11A **Walters Elk Ra** 35.01 333 ⇓P P 03 18 54.8 -0.4
baz=35,SNR=50
CHMT **Chamberlain Mo** 35.01 337 *e*P P 03 18 55.0 -0.3
BMO **Blue Mountains** 35.05 331 *e*P P 03 18 55.0 -0.7
comp=Z,9.6nm,1.2s,mb4.6
BMO *e*pP pP 03 19 04.0 -1.2
H09A **Durkee** 35.08 331 ⇓P P 03 18 55.3 -0.6
baz=35,SNR=8.4
MSO **Missoula** 35.20 337 *e*P P 03 18 56.7 -0.3
comp=Z,9.6nm,1.0s,mb4.7
D14A **Greenough** 35.25 337 ⇑P P 03 18 56.8 -0.6
baz=35,SNR=9.7
M04C **Macdoel** 35.25 323 ⇑P P 03 18 57.2 -0.3
baz=35
G10A **Bishop Farm, J** 35.30 332 ⇓P P 03 18 57.1 -0.7
baz=35,SNR=25
F11A **Grangeville** 35.34 334 ⇑P P 03 18 57.2 -0.9
baz=35,SNR=5.6
O01C **Eel River Cons** 35.44 320 ⇑P P 03 18 58.9 -0.2
baz=35
H08A **Prairie City** 35.45 330 ⇓P P 03 18 59.0 -0.2

baz=35,SNR=6.9
E12A Beaver Dam Sad 35.51 335 ⇑P P 03 18 58.8 -0.8
baz=36
I07A Izee 35.55 328 ⇑P P 03 18 59.4 -0.6
baz=36,SNR=7.6
G09A Cove 35.59 331 ⇑P P 03 18 59.3 -1.0
baz=36,SNR=10
D13A Huson 35.62 336 ⇓P P 03 19 00.0 -0.5
baz=36,SNR=12
E11A Bogner Ranch, 35.73 334 ⇓P P 03 19 00.2 -1.3
baz=36,SNR=5.9
F10A Beach Ranch, E 35.87 333 ⇓P P 03 19 02.0 -0.8
baz=36,SNR=58
J05A Fort Rock 35.90 326 ⇑P P 03 19 02.2 -0.9
baz=36
C14A Swan Lake 35.91 338 ⇓P P 03 19 02.5 -0.6
baz=36
D12A Red Ives Fores 35.94 335 ⇑P P 03 19 02.3 -1.0
baz=36
H07A Lands Inn, Kim 35.94 329 ⇓P P 03 19 02.7 -0.7
baz=36,SNR=20
F09A S2 Ranch, Elgi 35.98 332 ⇑P P 03 19 02.9 -0.7
baz=36,SNR=11
C13A Hot Springs 36.15 337 ⇑P P 03 19 04.3 -0.8
baz=36,SNR=6.5
G08A Pilot Rock 36.16 330 ⇑P P 03 19 04.5 -0.7
baz=36,SNR=6.2
LNOR Lincton Mounta 36.27 332 *eP* P 03 19 05.1 -1.1
D11A Klaveano Farm, 36.33 335 ⇓P P 03 19 05.3 -1.4
baz=36
H06A Lindquist Farm 36.43 328 ⇑P P 03 19 06.2 -1.3
baz=36
F08A Pendleton 36.45 331 ⇓P P 03 19 06.2 -1.4
baz=36,SNR=5.4
G07A Ruggs Ranch, H 36.48 330 ⇓P P 03 19 07.0 -0.9
baz=36
I05A Bend 36.51 327 ⇑P P 03 19 07.5 -0.8
baz=36
C12B Naegeli Ranch, 36.52 336 ⇓P P 03 19 07.6 -0.7
baz=36
B13A Whitefish 36.69 338 ⇑P P 03 19 09.4 -0.3
baz=37,SNR=20
E09A Wood Farm, Sta 36.70 332 ⇓P P 03 19 08.3 -1.5
baz=37
D10A Wagner Farm, O 36.73 334 ⇓P P 03 19 08.5 -1.5
baz=37,SNR=8.5
C11A Tepee Creek (N 36.94 335 ⇑P P 03 19 11.0 -0.8
baz=37
WALA Waterton Lakes 37.06 339 *eP* P 03 19 12.7 -0.1
comp=Z,26nm,1.7s,mb4.8
A13A Flathead Natio 37.13 338 ⇑P P 03 19 13.1 -0.3
baz=37,SNR=8.0
B12A Libby 37.19 337 ⇑P P 03 19 13.9 0.0
baz=37,SNR=5.3
D09A Jones Farm, Ri 37.19 333 ⇑P P 03 19 13.2 -0.7
baz=37,SNR=17
HAWA Hanford 37.24 331 *eP* P 03 19 13.2 -1.2
comp=Z,5.2nm,0.9s,mb4.4
H04A Detroit Lake 37.35 327 ⇓P P 03 19 14.8 -0.6
baz=37,SNR=7.1
F06A Goldendale 37.38 329 ⇑P P 03 19 15.7 0.0
baz=37,SNR=5.8
K01A Sixes 37.41 323 ⇓P P 03 19 16.0 +0.1
baz=37
D08A Wollman Farm, 37.46 332 ⇑P P 03 19 15.7 -0.5
baz=37
B11A Sandpoint 37.46 336 ⇓P P 03 19 15.6 -0.6
baz=37,SNR=18
I03A Eugene 37.47 325 ⇓P P 03 19 15.7 -0.7
baz=37,SNR=5.1
HOOD Mount Hood Mea 37.51 328 *eP* P 03 19 16.5 -0.2
comp=Z,25nm,0.9s,mb4.9
E07A Sunnyside 37.51 331 ⇓P P 03 19 16.4 -0.3
baz=38
A12A Yaak River Ran 37.59 337 ⇓P P 03 19 17.0 -0.3
baz=38,SNR=8.1
OD2 Odessa Site #2 37.62 333 *eP* P 03 19 17.3 -0.2
NEW Newport 37.62 335 *eP* P 03 19 16.8 -0.8
NEW *e*PP pP 03 19 26.4 -0.8
NEW pmax pmax
comp=Z,8.0nm,0.8s
NEW Newport 37.62 335 *eP* P 03 19 16.8 -0.8
comp=Z,7.9nm,0.8s,mb4.5
NEW *ep*P pP 03 19 26.4 -0.8
C09A Chrisman Ranch 37.74 334 ⇑P P 03 19 18.0 -0.6
baz=38,SNR=6.5
F05A White Salmon 37.80 329 ⇓P P 03 19 19.4 +0.2
baz=38,SNR=9.9
G04A Mulino 37.86 327 ⇓P P 03 19 19.1 -0.5
baz=38
A11A Hall Mountain, 37.88 336 ⇑P P 03 19 19.7 -0.1
baz=38,SNR=14
D07A Quincy 38.04 332 ⇑P P 03 19 20.6 -0.5
baz=38
E06A Yakima 38.04 330 ⇓P P 03 19 21.3 +0.2
baz=38,SNR=9.1
C08A Higginbotham F 38.06 333 ⇑P P 03 19 21.1 -0.3
baz=38,SNR=25
B09A Rice 38.17 334 ⇓P P 03 19 21.5 -0.7
baz=38,SNR=22
G03A Yamhill 38.35 327 ⇑P P 03 19 23.4 -0.3
baz=38
A10A Northport 38.37 335 ⇓P P 03 19 23.4 -0.5
baz=38
WTV Waterville 38.40 332 P P 03 19 24.2 +0.1
E05A Randle 38.43 329 ⇓P P 03 19 24.0 -0.4
baz=38,SNR=7.4
D06A Cle Elum 38.44 331 ⇓P P 03 19 24.2 -0.3
baz=38,SNR=5.4
C07A Waterville 38.45 332 ⇓P P 03 19 24.1 -0.4
baz=38,SNR=10
ETW Entiat 38.50 332 P P 03 19 25.2 +0.2
LON Longmire 38.59 330 *eP* P 03 19 25.5 -0.2
LON pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
LON Longmire 38.59 330 *eP* P 03 19 25.4 -0.3
comp=Z,6.4nm,0.8s,mb4.4
B08A Colville Reser 38.63 333 ⇑P P 03 19 25.1 -1.0
baz=39
E04A Onalaska 38.93 329 ⇑P P 03 19 28.4 -0.2
baz=39
D05A Enumclaw 38.98 330 ⇓P P 03 19 28.9 -0.2
baz=39
B07A Winthrop 39.05 333 ⇑P P 03 19 28.6 -1.0
baz=39
A08A Turner Farm, O 39.05 334 ⇓P P 03 19 28.6 -1.0
baz=39
C05A Tolt Reservoir 39.20 331 ⇓P P 03 19 29.9 -1.0
baz=39
FFC Flin Flon 39.59 353 *eP* P 03 19 33.0 -1.0
FFC pmax pmax
comp=Z,25nm,1.4s,mb4.8
FFC Flin Flon 39.59 353 *eP* P 03 19 33.0 -1.0
comp=Z,24nm,1.4s,mb4.7
A07A Ashnola River, 39.60 333 ⇓P P 03 19 34.1 -0.1
baz=40,SNR=9.5
RPW Rockport 39.66 332 *eP* P 03 19 33.9 -0.8
RPW *ep*P pP 03 19 43.4 -1.0
JCW Jim Creek 39.67 331 *eP* P 03 19 33.5 -1.3
B06A Marblemount 39.70 332 ⇑P P 03 19 34.1 -0.9
baz=40
B05A Bryant 39.80 331 ⇓P P 03 19 34.9 -1.0
baz=40
D03A Wishkah Elem. 39.81 329 ⇓P P 03 19 36.5 +0.5
baz=40
HDW Hoodsport 39.82 330 P P 03 19 35.5 -0.5
C04A Brinnon 39.83 330 ⇑P P 03 19 35.0 -1.1
baz=40
NLWA Neilton Lookou 40.05 329 ⇓P P 03 19 37.8 -0.1
baz=40,SNR=9.2
NLWA Neilton Lookou 40.05 329 *eP* P 03 19 38.0 0.0
comp=Z,26nm,1.2s,mb4.8
A05A Maple Falls 40.32 332 ⇑P P 03 19 39.2 -1.0
baz=40
B04A Port Angeles 40.32 330 ⇑P P 03 19 39.7 -0.5
baz=40
A04A Legoe Bay, Lum 40.41 331 ⇓P P 03 19 40.1 -0.8
baz=40
EDM Edmonton 40.48 343 *eP* P 03 19 40.6 -0.8
EDM *e*PP pP 03 19 50.0 -1.1
LPAZ La Paz 40.91 139 P P 03 19 46.2 +0.8
comp=Z,1.2nm,0.7s,mb3.6,baz=288,slow=9.4,SNR=6.4
LPAZ La Paz 40.91 139 *eP* P 03 19 46.4 +1.0
LPAZ pmax pmax
comp=Z,2.0nm,0.8s
LPAZ La Paz 40.91 139 *eP* P 03 19 46.4 +1.0
comp=Z,2.0nm,0.8s,mb3.8
SCHQ Schefferville 44.73 22 P P 03 20 14.1 -1.8

comp=Z,5.6nm,0.9s,mb4.4,baz=169,slow=7.4,SNR=4.3
SCHQ LR LR 03 41 35.1
comp=Z,396nm,19.9s,MS4.3,baz=213,slow=40
SCHQ Schefferville 44.73 22 P P 03 20 14.1 -1.8
SCHQ LR LR 03 41 35.1
YKA Yellowknife Ar 49.05 348 P P 03 20 48.8 -0.8
comp=Z,6.9nm,0.8s,mb4.7,baz=155,slow=7.3,SNR=5.6
YKA LR LR 03 46 47.6
comp=Z,96nm,18.5s,MS3.8,baz=160,slow=42
DLBC Dease Lake 50.33 337 *eP* P 03 21 00.8 +1.5
TAOE Nuku Hiva Isla 51.29 245 *eS* S 03 28 21.6 -2.7
comp=Z,772nm,24.1s
TAOE *e*LR LR 03 35 39.3
comp=Z,1μm,24.7s,baz=58
CPUP Villa Florida 55.07 139 P P 03 21 33.0 -1.8
comp=Z,1.5nm,0.8s,mb4.1,baz=330,slow=10,SNR=3.6
BDFB Brasilia 55.35 122 P P 03 21 37.2 +0.2
comp=Z,5.7nm,0.7s,mb4.7,baz=280,slow=8.9,SNR=7.3
BDFB LR LR 03 45 11.4
comp=Z,239nm,18.8s,MS4.3,baz=334,slow=36
RC01 Rabbit Creek A 60.07 333 *eP* P 03 22 09.1 -0.5
comp=Z,13nm,0.9s,mb5.0
PLCA Paso Flores 60.18 159 P P 03 22 11.1 +0.5
comp=Z,5.8nm,1.0s,mb4.6,baz=325,slow=6.4,SNR=11
PLCA LR LR 03 42 07.0
comp=Z,179nm,19.1s,MS4.2,baz=14,slow=30
MCK McKinley 60.85 336 *eP* P 03 22 14.4 -0.4
comp=Z,11nm,1.1s,mb4.9
MCK *ep*P pP 03 22 24.3 -0.6
COLA College 60.95 337 *eP* P 03 22 14.7 -0.8
comp=Z,13nm,0.9s,mb5.0
TRF Thorofare Moun 61.28 335 *eP* P 03 22 17.3 -0.4
comp=Z,20nm,1.0s,mb5.2
KTH Kantishna Hill 61.58 335 *eP* P 03 22 18.9 -0.9
comp=Z,9.5nm,0.9s,mb4.9
BPAW Bear Paw Mtn. 61.83 335 *eP* P 03 22 20.6 -0.9
comp=Z,16nm,1.2s,mb5.0
BPAW *ep*P pP 03 22 30.5 -1.0
PPT Papeete 63.46 241 *eSS* SS 03 35 08.0 -3.9
comp=Z,103nm,24.5s
PPT *e*LR LR 03 41 18.0
comp=Z,250nm,25.8s,baz=60
PPT Papeete 63.46 241 LR LR 03 44 04.3
comp=Z,335nm,18.2s,MS4.6,baz=82,slow=30
PMAFR Mafra 76.77 53 *e*LR LR 03 50 34.5
comp=Z,124nm,22.0s
PFVI Vila Bisbo 77.43 55 *e*LR LR 03 50 35.2
comp=Z,115nm,22.0s
EVO Evora 77.82 53 *eP* P 03 23 58.5 -1.8
comp=Z,23nm,1.2s,mb4.7
EVO *e*MLR MLR
comp=Z,166nm,21.8s,MS4.0
MTE Manteigas 77.85 51 *eP* P 03 23 59.9 -0.5
MTE Manteigas 77.85 51 *e*LR LR 03 50 13.2
comp=Z,118nm,20.0s
PCBR Castelo Branco 78.00 52 *eP* P 03 24 01.0 -0.3
comp=Z,18nm,1.5s,mb4.8
PBEJ Beja 78.02 54 *eP* P 03 24 01.2 -0.2
PESTR Estremoz 78.08 53 *e*LR LR 03 51 41.3
comp=Z,126nm,20.0s
MVO Moncorvo 78.10 50 *eP* P 03 24 01.6 -0.2
comp=Z,19nm,1.4s,mb4.8
MVO Moncorvo 78.10 50 *e*LR LR 03 52 16.0
comp=Z,109nm,20.0s
PBDV Barranco-do-Ve 78.11 54 *eP* P 03 24 03.7 +1.7
comp=Z,37nm,1.2s,mb5.2
PBDV Barranco-do-Ve 78.11 54 *e*LR LR 03 50 54.9
comp=Z,152nm,20.0s
PMRV Marv??o 78.14 52 *eP* P 03 24 01.9 -0.2
comp=Z,13nm,1.8s,mb4.6
PMRV Marv??o 78.14 52 *e*LR LR 03 51 41.3
comp=Z,120nm,22.0s
PVAQ Vaqueiros 78.25 54 *e*LR LR 03 51 05.1
comp=Z,127nm,22.0s
PBAR Barrancos 78.64 53 *e*LR LR 03 50 30.0
comp=Z,93nm,20.0s
ROSF Rostrenen 79.40 43 *eP* P 03 24 08.1 -0.7
comp=Z,41nm,1.1s,mb5.0
ROSF Rostrenen 79.40 43 *eP* P 03 24 08.1 -0.7
ROSF pmax pmax
comp=Z,21nm,1.1s,mb5.0
ROSF Rostrenen 79.40 43 *eP* P 03 24 08.1 -0.7
comp=Z,21nm,1.1s,mb5.0
QUIF Quistinic 79.56 43 *eP* P 03 24 09.0 -0.7
comp=Z,46nm,1.2s,mb5.0
QUIF Quistinic 79.56 43 *eP* P 03 24 09.0 -0.7
QUIF pmax pmax
comp=Z,23nm,1.2s,mb5.0
QUIF Quistinic 79.56 43 *eP* P 03 24 09.0 -0.7
comp=Z,23nm,1.2s,mb5.0
SGMF Saint Gilles 79.89 43 *eP* P 03 24 10.5 -1.0
ECAB El Cabril 79.91 53 P P 03 24 11.6 -0.2
comp=Z,14nm,1.0s,mb4.9
GUD Guadarrama 80.34 51 ⇑P P 03 24 14.5 +0.5
comp=Z,22nm,0.9s,mb5.1
PAB San Pablo 80.42 52 *eP* P 03 24 14.6 +0.1
PAB pmax pmax
comp=Z,147nm,2.5s,mb5.5
PAB San Pablo 80.42 52 *eP* P 03 24 14.6 0.0
comp=Z,146nm,2.5s,mb5.5
EADA Adamuz 80.54 53 P P 03 24 15.3 +0.1
comp=Z,6.7nm,1.0s,mb4.5
ESDC Sonseca Array 80.69 51 P P 03 24 15.5 -0.4
comp=Z,8.2nm,0.9s,mb4.7,baz=294,slow=5.4,SNR=30
ESDC pP pP 03 24 25.2 -1.1
comp=Z,2.0nm,0.7s,baz=295,slow=4.6,SNR=6.3
EMIJ Mijas 80.73 55 P P 03 24 16.3 0.0
comp=Z,23nm,1.3s,mb5.0
GRR Gorron 80.97 42 *eP* P 03 24 16.9 -0.3
comp=Z,66nm,1.0s,mb5.2
GRR Gorron 80.97 42 *eP* P 03 24 16.9 -0.3
GRR pmax pmax
comp=Z,33nm,1.0s,mb5.2
GRR Gorron 80.97 42 *eP* P 03 24 16.9 -0.3
comp=Z,33nm,1.0s,mb5.2
ELOJ Sierra Loja 81.09 54 P P 03 24 19.0 +0.9
ELOJ pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
ELOJ Sierra Loja 81.09 54 P P 03 24 18.9 +0.8
comp=Z,2.0nm,0.5s,mb4.3
FLN La Foliniere 81.12 42 *eP* P 03 24 17.8 -0.3
comp=Z,37nm,0.8s,mb5.0
FLN *e*MLR MLR
comp=Z,172nm,20.8s,MS4.1
FLN La Foliniere 81.12 42 *eP* P 03 24 17.8 -0.3
FLN pmax pmax
comp=Z,19nm,0.8s,mb5.1
FLN MLR MLR
comp=Z,170nm,20.8s,MS4.4
FLN La Foliniere 81.12 42 *eP* P 03 24 17.8 -0.3
comp=Z,19nm,0.8s,mb5.1
FLN LR LR
comp=Z,170nm,20.8s,MS4.4
EBAN Banos Encina 81.15 53 P P 03 24 18.7 +0.3
EBAN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
EBAN Banos Encina 81.15 53 P P 03 24 18.7 +0.2
comp=Z,9.4nm,0.8s,mb4.8
ERON Agron 81.39 54 P P 03 24 20.5 +0.8
LDF La Druitiere 81.40 42 *eP* P 03 24 19.2 -0.3
comp=Z,36nm,1.0s,mb5.0
LDF La Druitiere 81.40 42 *eP* P 03 24 19.2 -0.3
LDF pmax pmax
comp=Z,18nm,1.0s,mb5.0
LDF La Druitiere 81.40 42 *eP* P 03 24 19.2 -0.3
comp=Z,18nm,1.0s,mb5.0
ECOG Cogollos-Vega 81.52 54 P P 03 24 21.1 +0.7
ECOG pmax pmax
comp=Z,15nm,0.8s,mb5.0
ECOG Cogollos-Vega 81.52 54 P P 03 24 21.1 +0.7
comp=Z,15nm,0.8s,mb5.0
MDT Midelt 81.67 58 LR LR 03 58 04.9
comp=Z,77nm,20.1s,MS4.1,baz=165,slow=34
EALK Alkurruntz 81.70 48 P P 03 24 21.1 -0.1
comp=Z,57nm,1.4s,mb5.3
EQES Quesada 81.78 53 P P 03 24 22.1 +0.3
comp=Z,13nm,0.9s,mb4.9
MFF Saint Martin d 81.85 44 *eP* P 03 24 21.3 -0.7
comp=Z,44nm,1.2s,mb5.0
MFF Saint Martin d 81.85 44 *eP* P 03 24 21.3 -0.7
MFF pmax pmax
comp=Z,22nm,1.2s,mb5.0
MFF Saint Martin d 81.85 44 *eP* P 03 24 21.3 -0.7
comp=Z,22nm,1.2s,mb5.0
ETOR Torete 81.86 50 P P 03 24 22.4 +0.3
ETOR pmax pmax
comp=Z,13nm,1.0s,mb4.8
ETOR Torete 81.86 50 P P 03 24 22.4 +0.3
comp=Z,13nm,1.0s,mb4.8
SJPF Ste Jean 81.93 48 *eP* P 03 24 22.2 -0.3
comp=Z,67nm,1.3s,mb5.1
SJPF Ste Jean 81.93 48 *eP* P 03 24 22.2 -0.3
SJPF pmax pmax
comp=Z,33nm,1.3s,mb5.1
SJPF Ste Jean 81.93 48 *eP* P 03 24 22.2 -0.3
comp=Z,33nm,1.3s,mb5.1
EVIA Vianos 82.03 52 P P 03 24 23.6 +0.5
EVIA pmax pmax
comp=Z,24nm,1.0s,mb5.1
EVIA Vianos 82.03 52 P P 03 24 23.6 +0.5
comp=Z,24nm,1.0s,mb5.1
EBER Berja 82.13 54 P P 03 24 24.3 +0.7
comp=Z,28nm,1.1s,mb5.1
EHUE Huescar 82.15 53 P P 03 24 23.9 +0.2
ETSF Etsaut 82.45 48 *eP* P 03 24 25.1 -0.1
comp=Z,28nm,1.1s,mb4.8
ETSF Etsaut 82.45 48 *eP* P 03 24 25.1 -0.1
ETSF pmax pmax
comp=Z,14nm,1.1s,mb4.8
ETSF Etsaut 82.45 48 *eP* P 03 24 25.1 -0.1
comp=Z,14nm,1.1s,mb4.8
ESAC San Caprasio 82.81 49 P P 03 24 27.6 +0.5
comp=Z,12nm,0.6s,mb5.1
LFF La Frestale 82.86 45 *eP* P 03 24 26.8 -0.5
comp=Z,56nm,1.2s,mb5.2
LFF La Frestale 82.86 45 *eP* P 03 24 26.8 -0.5
LFF pmax pmax
comp=Z,28nm,1.2s,mb5.2
LFF La Frestale 82.86 45 *eP* P 03 24 26.8 -0.5
comp=Z,28nm,1.2s,mb5.2
EBIE Bielsa 83.01 48 P P 03 24 28.6 +0.5
comp=Z,6.9nm,0.9s,mb4.7
EPF Esparros 83.06 47 *eP* P 03 24 27.9 -0.5
comp=Z,40nm,1.2s,mb5.0
EPF Esparros 83.06 47 *eP* P 03 24 27.9 -0.5
EPF pmax pmax
comp=Z,20nm,1.2s,mb5.0
EPF Esparros 83.06 47 *eP* P 03 24 27.9 -0.5
comp=Z,20nm,1.2s,mb5.0
EMOS Mosqueruela 83.14 50 P P 03 24 29.8 +1.0
comp=Z,12nm,0.8s,mb5.0
RJF Les Rejaudoux 83.30 45 *eP* P 03 24 28.7 -0.8
comp=Z,44nm,1.2s,mb5.0
RJF *e*MLR MLR
comp=Z,120nm,21.0s,MS4.0
RJF Les Rejaudoux 83.30 45 *eP* P 03 24 28.7 -0.8
RJF pmax pmax
comp=Z,22nm,1.2s,mb5.1
RJF MLR MLR
comp=Z,120nm,21.0s,MS4.2
RJF Les Rejaudoux 83.30 45 *eP* P 03 24 28.7 -0.8
comp=Z,22nm,1.2s,mb5.1
RJF LR LR
comp=Z,120nm,21.0s,MS4.2
TCF Toulx Ste Croi 83.51 44 *eP* P 03 24 29.9 -0.7
comp=Z,33nm,1.1s,mb5.1
TCF Toulx Ste Croi 83.51 44 *eP* P 03 24 29.9 -0.7
TCF pmax pmax
comp=Z,17nm,1.1s,mb5.1
TCF Toulx Ste Croi 83.51 44 *eP* P 03 24 29.9 -0.7
comp=Z,17nm,1.1s,mb5.1
HYF Humbligny 83.53 43 *eP* P 03 24 30.5 -0.2
UCC Uccle 83.64 39 AP pP 03 24 40.8 -0.8
BAIF Baives 83.75 40 *eP* P 03 24 31.3 -0.5
CAF Calviac 83.77 45 *eP* P 03 24 31.4 -0.6
comp=Z,13nm,1.0s,mb4.7
CAF Calviac 83.77 45 *eP* P 03 24 31.4 -0.6
CAF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
CAF Calviac 83.77 45 *eP* P 03 24 31.4 -0.6
comp=Z,6.7nm,1.0s,mb4.7
BGF Bois d'Agland 83.86 44 *eP* P 03 24 31.8 -0.6
DOU Dourbes 83.98 40 P P 03 24 33.0 +0.1
NB2 NORSAR Subarra 83.99 28 P P 03 24 33.0 +0.2
comp=Z,21nm,1.4s,mb5.1,baz=293,slow=5.1
NOA NORSAR Array B 83.99 28 P P 03 24 32.9 +0.1
comp=Z,6.0nm,0.9s,mb4.7,baz=298,slow=5.2,SNR=10
NOA pP pP 03 24 42.8 -0.4
comp=Z,7.6nm,1.2s,baz=293,slow=4.9,SNR=4.1
NOA LR LR 04 01 22.4
comp=Z,104nm,18.3s,MS4.2,baz=290,slow=35
NOA NORSAR Array B 83.99 28 P P 03 24 32.9 +0.1
NOA *PP pP 03 24 42.8 -0.4
GIVF Givet 84.12 40 *eP* P 03 24 33.8 +0.2
AVF Avril sur Loir 84.13 43 *eP* P 03 24 33.0 -0.8
comp=Z,13nm,0.8s,mb4.8
AVF Avril sur Loir 84.13 43 *eP* P 03 24 33.0 -0.8
AVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
AVF Avril sur Loir 84.13 43 *eP* P 03 24 33.0 -0.8
comp=Z,6.4nm,0.8s,mb4.8
SSF Saint Saulge 84.15 43 *eP* P 03 24 33.3 -0.6
comp=Z,14nm,0.9s,mb4.8
SSF Saint Saulge 84.15 43 *eP* P 03 24 33.3 -0.6
SSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
SSF Saint Saulge 84.15 43 *eP* P 03 24 33.3 -0.6
comp=Z,7.2nm,0.9s,mb4.8
PYM Petit Puy Mans 84.19 44 *eP* P 03 24 33.5 -0.6
MTLF Montolieu 84.31 47 *eP* P 03 24 34.2 -0.5
comp=Z,22nm,0.9s,mb5.0
MTLF Montolieu 84.31 47 *eP* P 03 24 34.2 -0.5
MTLF pmax pmax
comp=Z,11nm,0.9s,mb5.0
MTLF Montolieu 84.31 47 *eP* P 03 24 34.2 -0.5
comp=Z,11nm,0.9s,mb5.0
BCLA Clavier 84.32 39 P P 03 24 34.8 +0.2
comp=Z,18nm,2.6s,mb4.8
LOR Lormes 84.33 43 *eP* P 03 24 34.3 -0.5
comp=Z,50nm,1.2s,mb5.2
LOR *e*MLR MLR
comp=Z,118nm,18.8s,MS4.0
LOR Lormes 84.33 43 *eP* P 03 24 34.3 -0.5
LOR pmax pmax
comp=Z,25nm,1.2s,mb5.2
LOR MLR MLR
comp=Z,120nm,18.8s,MS4.3
LOR Lormes 84.33 43 *eP* P 03 24 34.3 -0.5
comp=Z,25nm,1.2s,mb5.2
LOR LR LR
comp=Z,120nm,18.8s,MS4.3
SMF Signal de Mont 84.49 43 *eP* P 03 24 34.8 -0.8
comp=Z,14nm,0.9s,mb4.8
SMF Signal de Mont 84.49 43 *eP* P 03 24 34.8 -0.8
SMF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
SMF Signal de Mont 84.49 43 *eP* P 03 24 34.8 -0.8
comp=Z,7.0nm,0.9s,mb4.8
LBL Lubilhac 84.49 45 *eP* P 03 24 35.3 -0.4
MEM Membach 84.69 39 P P 03 24 36.4 -0.1
MEZF Maizieres J'vi 84.73 41 *eP* P 03 24 36.6 -0.2
EJON La Jonquera 85.03 47 P P 03 24 38.9 +0.5
comp=Z,15nm,1.0s,mb5.1
WLF Walferdange 85.07 40 P P 03 24 38.7 +0.2
comp=Z,15nm,1.5s,mb4.9
LASF Ste Croix 85.24 46 *eP* P 03 24 39.6 +0.2
comp=Z,75nm,1.4s,mb5.3
THEF Thy Montfort 85.41 41 *eP* P 03 24 39.7 -0.5
ARCES ARCESS Array B 85.48 18 P P 03 24 39.1 -1.0
comp=Z,3.7nm,0.8s,mb4.6,baz=322,slow=3.7,SNR=6.4
ARCES LR LR 04 04 42.7
comp=Z,82nm,18.6s,MS4.2,baz=194,slow=37
VIVF Saint-Julien-l 85.57 45 *eP* P 03 24 41.3 +0.2
comp=Z,18nm,1.0s,mb5.0
VIVF Saint-Julien-l 85.57 45 *eP* P 03 24 41.3 +0.2
VIVF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
VIVF Saint-Julien-l 85.57 45 *eP* P 03 24 41.3 +0.2
comp=Z,9.1nm,1.0s,mb5.0
RUP Ruppelstein 85.62 40 *eP* P 03 24 41.4 +0.2
HAU Haudompre 85.71 41 *eP* P 03 24 41.0 -0.7
comp=Z,22nm,0.8s,mb5.2
HAU *e*MLR MLR
comp=Z,102nm,22.2s,MS3.9
HAU Haudompre 85.71 41 *eP* P 03 24 41.0 -0.7
HAU pmax pmax
comp=Z,11nm,0.8s,mb5.1
HAU MLR MLR
comp=Z,100nm,22.3s,MS4.2
HAU Haudompre 85.71 41 *eP* P 03 24 41.0 -0.7
comp=Z,11nm,0.8s,mb5.1
HAU LR LR
comp=Z,100nm,22.3s,MS4.2
CABF La Chapelle 85.98 43 *eP* P 03 24 42.9 -0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HINF	**Hinteralfeld**	**86.09**	**41**	*e*P	**P**	**03 24 42.7**	**-0.9**
ECH	**Echery**	**86.16**	**41**	*e*P	**P**	**03 24 43.5**	**-0.4**
ECH	**Echery**	**86.16**	**41**	*e*P	**P**	**03 24 43.8**	**-0.1**
ECH				*e*pP	pP	03 24 53.5	-0.8
CDF	**Champ du Feu**	**86.17**	**41**	*e*P	**P**	**03 24 43.3**	**-0.7**
	comp=Z,24nm,1.0s,mb5.1						
CDF	**Champ du Feu**	**86.17**	**41**	*e*P	**P**	**03 24 43.3**	**-0.7**
CDF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.1						
CDF	**Champ du Feu**	**86.17**	**41**	*e*P	**P**	**03 24 43.3**	**-0.7**
	comp=Z,12nm,1.0s,mb5.1						
LOMF	**Lomont**	**86.23**	**42**	*e*P	**P**	**03 24 43.6**	**-0.7**
MOF	**Molkenrain**	**86.26**	**41**	*e*P	**P**	**03 24 43.6**	**-0.8**
LANF	**Langenberg**	**86.31**	**40**	*e*P	**P**	**03 24 44.4**	**-0.3**
ORIF	**Oris-en-Rattie**	**86.37**	**44**	*e*P	**P**	**03 24 45.5**	**+0.5**
ORIF				*e*MLR	MLR		
	comp=Z,98nm,22.8s,MS3.9						
SEY	**Seymchan**	**86.41**	**335**⇑	*e*P	**P**	**03 24 43.9**	**-0.9**
SMRF	**Simiane la Rot**	**86.45**	**45**	*e*P	**P**	**03 24 45.6**	**+0.2**
	comp=Z,26nm,1.0s,mb5.1						
SMRF	**Simiane la Rot**	**86.45**	**45**	*e*P	**P**	**03 24 45.6**	**+0.2**
	comp=Z,26nm,1.0s,mb5.4						
LPL	**La Plagne**	**86.75**	**44**	*e*P	**P**	**03 24 47.2**	**+0.3**
LPG	**La Plagne**	**86.77**	**44**	*e*P	**P**	**03 24 47.4**	**+0.4**
FELD	**Feldberg im Sc**	**86.81**	**41**	*e*P	**P**	**03 24 46.1**	**-1.0**
BNI	**Bardonecchia**	**86.86**	**44**	*e*P	**P**	**03 24 48.2**	**+0.8**
BNI				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.4						
BNI	**Bardonecchia**	**86.86**	**44**	*e*P	**P**	**03 24 48.2**	**+0.8**
	comp=Z,35nm,1.4s,mb5.4						
MBDF	**Montbardon**	**87.03**	**44**	*e*P	**P**	**03 24 48.9**	**+0.6**
	comp=Z,13nm,0.8s,mb4.9						
MBDF	**Montbardon**	**87.03**	**44**	*e*P	**P**	**03 24 48.9**	**+0.6**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
MBDF	**Montbardon**	**87.03**	**44**	*e*P	**P**	**03 24 48.9**	**+0.6**
	comp=Z,6.7nm,0.8s,mb4.9						
SPAK	**Spaichingen-Ko**	**87.22**	**41**	*e*P	**P**	**03 24 47.8**	**-1.3**
LMR	**La Mourre**	**87.30**	**46**	*e*P	**P**	**03 24 49.7**	**+0.1**
	comp=Z,45nm,0.9s,mb5.4						
LMR	**La Mourre**	**87.30**	**46**	*e*P	**P**	**03 24 49.7**	**+0.1**
LMR				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.4						
LMR	**La Mourre**	**87.30**	**46**	*e*P	**P**	**03 24 49.7**	**+0.1**
	comp=Z,22nm,0.9s,mb5.4						
FRF	**La Foret Royal**	**87.32**	**46**	*e*P	**P**	**03 24 49.8**	**+0.1**
	comp=Z,26nm,0.9s,mb5.2						
FRF	**La Foret Royal**	**87.32**	**46**	*e*P	**P**	**03 24 49.8**	**+0.1**
	comp=Z,13nm,0.9s,mb5.2						
SBF	**Sospel**	**87.76**	**45**	*e*P	**P**	**03 24 51.2**	**-0.6**
LIC	**Lamto**	**87.85**	**84**⇑	*i*P	**P**	**03 24 52.5**	**-0.3**
	comp=Z,12nm,0.7s,mb5.0						
LIC	**Lamto**	**87.85**	**84**⇑	*i*P	**P**	**03 24 52.5**	**-0.3**
	comp=Z,6.3nm,0.7s,mb5.0						
DBIC	**Dimbokro**	**87.90**	**84**	P	**P**	**03 24 51.7**	**-1.3**
	comp=Z,2.3nm,0.8s,mb4.5,baz=299,slow=9.3,SNR=4.6						
DBIC	**Dimbokro**	**87.90**	**84**	P	**P**	**03 24 51.7**	**-1.3**
TUE	**Stuetta**	**88.15**	**42**	*e*P	**P**	**03 24 55.6**	**+2.0**
	comp=Z,5.9nm,0.7s,mb4.9						
TUE				*e*pP	pP	03 25 05.1	+1.1
GRA1	**Grafenberg Arr**	**88.16**	**39**	*e*P	**P**	**03 24 55.3**	**+1.8**
	comp=Z,22nm,1.5s,mb5.2						
GRA1				*e*pP	pP	03 25 05.3	+1.3
GRF	**Grafenberg Arr**	**88.16**	**39**	*e*P	**P**	**03 24 55.3**	**+1.8**
GRF				*e**PP	pP	03 25 05.3	+1.3
GRF				pmax	pmax		
	comp=Z,22nm,1.5s,mb5.2						
GRF	**Grafenberg Arr**	**88.16**	**39**	*e*P	**P**	**03 24 55.3**	**+1.8**
GRF				*e**PP	pP	03 25 05.3	+1.3
GRF				pmax	pmax		
	comp=Z,22nm,1.5s,mb5.2						
GRF	**Grafenberg Arr**	**88.16**	**39**	*e*P	**P**	**03 24 55.3**	**+1.8**
	comp=Z,22nm,1.5s,mb5.2						
GRF				*e*pP	pP	03 25 05.3	+1.3
DAVA	**Damuels**	**88.20**	**41**⇑	*i*P	**P**	**03 24 55.1**	**+1.3**
	comp=Z,11nm,1.1s,mb5.0						
DAVA	**Damuels**	**88.20**	**41**⇑	*i*PcP	PcP	03 24 55.1	-0.5
	comp=Z,11nm,1.1s						
DAVOX	**Davos/Dischmat**	**88.38**	**42**	P	**P**	**03 24 55.4**	**+0.7**
	comp=Z,4.1nm,0.8s,mb4.7,baz=322,slow=12,SNR=6.0						
CLL	**Collm**	**88.59**	**37**	*e*P	**P**	**03 24 57.0**	**+1.4**
CLL				*e*pP	pP	03 25 06.0	0.0
FETA	**Feichten**	**88.84**	**41**⇑	*i*P	**P**	**03 24 58.7**	**+1.8**
	comp=Z,5.7nm,1.2s,mb4.8						
FETA	**Feichten**	**88.84**	**41**⇑	*i*PcP	PcP	03 24 58.7	+0.3
	comp=Z,5.7nm,1.2s						
BRG	**Berggiesshubel**	**89.31**	**37**	*e*P	**P**	**03 24 58.6**	**-0.3**
BRG				*e*	pP	03 25 10.1	+0.7
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.8						
BRG	**Berggiesshubel**	**89.31**	**37**	*e*P	**P**	**03 24 58.6**	**-0.4**
	comp=Z,10nm,1.3s,mb5.0						
BRG				*e*	pP	03 25 10.1	+0.6
	comp=Z,4.7nm,1.0s						
KHC	**Kasperske Hory**	**89.80**	**39**⇑	*e*P	**P**	**03 25 01.1**	**-0.2**
GERES	**GERESS Array B**	**89.98**	**39**	P	**P**	**03 25 02.1**	**-0.1**
	comp=Z,3.0nm,1.0s,mb4.6,baz=294,slow=4.2,SNR=14						
GERES				LR	LR	04 07 54.5	
	comp=Z,79nm,18.5s,MS4.2,baz=277,slow=37						
KEST	**Kesra**	**91.91**	**52**	P	**P**	**03 25 11.8**	**+0.4**
	comp=Z,1.3nm,0.9s,mb4.2,baz=179,slow=2.3,SNR=3.9						
KEST				LR	LR	04 01 15.4	
	comp=Z,47nm,20.6s,MS3.9,baz=198,slow=32						
TORD	**Torodi Ar. Bea**	**92.37**	**76**	P	**P**	**03 25 12.2**	**-1.7**
	comp=Z,0.5nm,0.8s,mb3.9,baz=311,slow=4.0,SNR=5.5						
TORD				LR	LR	04 04 22.6	
	comp=Z,145nm,18.1s,MS4.5,baz=280,slow=34						
TAM	**Tamanrasset**	**93.01**	**66**	*e*P	**P**	**03 25 18.1**	**+1.4**
YSS	**Yuzh-Sakhalins**	**99.44**	**324**	*i* P	**P**	**03 25 47.1**	**+1.7**
YSS				pmax	pmax		
	comp=Z,35nm,1.6s,mb5.6						
CN2	**Changchun**	**110.63**	**330**	*e*PKP	PKiKP	03 30 35.6	+0.2
KURK	**Kurchatov**	**113.81**	**5**	PKiKP	PKiKP	03 30 38.9	-2.4
	comp=Z,0.3nm,0.5s,baz=344,slow=3.1,SNR=3.6						
KURK	**Kurchatov**	**113.81**	**5**	PKPdf	PKiKP	03 30 38.9	-2.4
BJI	**Beijing**	**117.82**	**334**	PKP	PKPdf	03 30 49.2	-0.1
BJI				SS	SS	03 48 10.4	-1.8
BJI				LR	LR		
	comp=N,93nm,11.2s,MS4.8						
BJI				LR	LR		
	comp=E,100nm,12.3s,MS4.8						
BJI				LR	LR		
	comp=Z,69nm,22.8s						
MKAR	**Makanchi Array**	**117.95**	**3**	PKP	PKPdf	03 30 47.3	-2.0
	comp=Z,1.3nm,0.9s,baz=4.3,slow=4.9,SNR=4.7						
HHC	**Hu-ho-hao-te**	**118.96**	**338**	*e*PKP	PKPdf	03 30 44.8	-6.7
HHC				XPKP		03 30 59.7	
HHC				PP	PP		
	comp=Z,83nm,7.7s						
HHC				LR	LR		
	comp=N,138nm,20.9s,MS4.7						
HHC				LR	LR		
	comp=E,156nm,21.0s,MS4.7						
HHC				LR	LR		
	comp=Z,92nm,20.1s,MS4.4						
WMQ	**Urumqi**	**120.95**	**358**	*e*PKP	PKPdf	03 30 56.0	+0.8
WMQ				LR	LR		
	comp=Z,153nm,22.4s,MS4.6						
BOSA	**Boshof**	**123.16**	**114**	PKP	PKPdf	03 30 59.3	-0.6
	comp=Z,3.8nm,1.0s,baz=220,slow=3.7,SNR=3.9						
LZH	**Lanzhou**	**125.86**	**342**	*e*PKP	PKPdf	03 31 05.2	+0.3
LZH				XPKP		03 31 22.1	
STKA	**Stephens Creek**	**126.66**	**242**	PKP	PKPdf	03 31 05.6	-0.8
	comp=Z,5.3nm,1.0s,baz=292,slow=5.6,SNR=4.4						
CD2	**Chengdu**	**130.65**	**339**	*e*PKP	PKPdf	03 31 13.7	-0.5
CD2				XPKP		03 31 28.1	
CD2				PP	PP	03 33 31.1	+3.2
CD2				PKS		03 34 48.7	
CD2				SKS	SKSdf	03 38 20.0	-3.6
CD2				SKKS	SKKSac	03 40 18.9	-4.8
CD2				SS	SS	03 50 52.1	-1.8
CD2				PP	PP		
	comp=Z,130nm,10.2s						
CD2				LR	LR		
	comp=N,160nm,18.6s						
CD2				LR	LR		
	comp=Z,150nm,16.4s,MS4.8						
WRA	**Warramunga Arr**	**133.40**	**257**	PKP	PKPdf	03 31 18.1	-1.5
	comp=Z,0.4nm,0.7s,baz=82,slow=2.1,SNR=4.8						
GYA	**Guiyang**	**133.51**	**334**	PDIF	Pdif	03 28 16.6	-0.1
GYA				PKP	PKPdf	03 31 22.0	+2.3
GYA				XPKP		03 31 34.5	
GYA				PP	PP	03 33 49.3	+2.8
GYA				PKS		03 34 54.8	
GYA				SKS	SKSdf	03 38 24.6	-4.3
GYA				SKKS	SKKSac	03 40 37.2	-4.2
GYA				SS	SS	03 51 37.4	+8.3
GYA				PP	PP		
	comp=Z,120nm,7.5s						
GYA				LR	LR		
	comp=N,140nm,20.4s,MS4.8						
GYA				LR	LR		
	comp=E,120nm,21.9s,MS4.8						
GYA				LR	LR		
	comp=Z,150nm,20.0s,MS4.7						
KMI	**Kunming**	**136.28**	**337**	PKP	PKPdf	03 31 23.1	-1.8
CMAR	**Chiang Mai Arr**	**143.77**	**338**	PKhKP		03 31 34.1	
	comp=Z,1.5nm,0.3s,baz=352,slow=4.7,SNR=5.8						
HYB	**Hyderabad**	**146.60**	**12**	*i* PKP	PKPdf	03 31 43.5	0.0
HYB	**Hyderabad**	**146.60**	**12**	*e*PKP	PKPdf	03 31 43.5	0.0

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*ISCJB **11** 03:35:19.4±4.4, 13.66S±0.08×77.70W±0.2, h19^{km}±35^{km}, mb3.4/3, Error ellipse: s-maj=33.8km s-min=11.1km az=165.0*
*NEIC **11** 03:35:21.7±1.4, 13.50S×77.08W, h35^{km}, Error ellipse: s-maj=33.5km s-min=12.7km az=70.0*
*IDC **11** 03:35:24.9±3.3, 13.65S×76.84W, h47^{km}±32^{km}, mb3.3/3, mb1 3.6/5, mb1mx3.4/18, mbtmp3.4/5, ML3.6/2, Error ellipse: s-maj=52.3km s-min=28.3km az=68.0*
ISC 11 03:35:23.5±2.2**, 13.6S**±0.1×**77.0W**±0.2**, h40**^{km}±24^{km}**, n10,** σ**0^{s}91**/12**, mb3.4**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**1.60**	**4**	*e*Pn	**Pn**	**03 35 47.6**	**-1.6**
NNA				*e*Sn	**Sn**	**03 36 09.1**	**+0.5**
ATAH	**Atahualpa**	**6.70**	**348**	P	**Pn**	**03 37 00.2**	**+0.8**
	1.3nm,0.3s,baz=143,slow=5.1,SNR=6.6						
ATAH				S	**Sn**	**03 38 24.0**	**+10**
	0.3nm,0.3s,baz=331,slow=19,SNR=1.5						
LPAZ	**La Paz**	**8.94**	**109**	P	**Pn**	**03 37 30.9**	**+0.7**
	0.3nm,0.3s,baz=286,slow=14,SNR=9.1						
LPAZ	**La Paz**	**8.94**	**109**	P	**Pn**	**03 37 30.9**	**+0.7**
OTAV	**Otavalo**	**13.82**	**354**	*e*Pn	**Pn**	**03 38 32.7**	**-4.2**
CPUP	**Villa Florida**	**22.34**	**128**	P	**P**	**03 40 16.9**	**-1.1**
	1.0nm,0.7s,mb3.3,baz=328,slow=13,SNR=2.9						
PLCA	**Paso Flores**	**27.61**	**169**	P	**P**	**03 41 07.5**	**+0.4**
	0.8nm,0.6s,mb3.5,baz=356,slow=12,SNR=4.2						
GLAT	**Glass**	**50.94**	**347**	*e*P	**P**	**03 44 15.3**	**-5.6**
TORD	**Torodi Ar. Bea**	**82.32**	**75**	P	**P**	**03 47 42.0**	**+0.3**
	0.4nm,0.8s,mb3.4,baz=252,slow=4.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**82.32**	**75**	P	**P**	**03 47 42.0**	**+0.3**

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*ISCJB **11** 03:43:37.2±1.6, 8.1S±0.1×117.8E±0.1, h201^{km}±17^{km}, mb3.9/4, Error ellipse: s-maj=24.9km s-min=13.0km az=145.8*
*DJA **11** 03:43:37, 7.90S×117.61E, h250^{km}, MLv4.1/5*
*NEIC **11** 03:43:39.7±1.8, 7.96S×117.94E, h217^{km}±19^{km}, mb4.0/2, Error ellipse: s-maj=28.1km s-min=12.6km az=67.0*
*IDC **11** 03:43:41.1±1.9, 7.96S×118.17E, h230^{km}±20^{km}, mb3.7/3, mb1 3.6/6, mb1mx3.3/18, mbtmp3.5/6, Error ellipse: s-maj=24.9km s-min=13.5km az=53.0*
ISC 11 03:43:39.0±1.5**, 8.3S**±0.1×**118.0E**±0.1**, h183**^{km}±16^{km}**, n13,** σ**1^{s}03**/15**, mb4.0**/4**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.67**	**28**	P	**Pn**	**03 44 35.1**	**-1.0**
	5.2nm,0.3s,baz=209,slow=6.7,SNR=20						
BATI	**Baumata**	**5.86**	**109**	S	**Sn**	**03 46 11.2**	**-0.1**
	11nm,0.3s,baz=323,slow=10,SNR=2.9						
FITZ	**Fitzroy Crossi**	**12.23**	**144**	*e*P	**Pn**	**03 46 34.8**	**+7.5**
	5.1nm,0.4s						
FITZ				*e*S	**Sn**	**03 48 42.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**12.23**	**144**	P	**Pn**	**03 46 31.7**	**+4.4**
	0.7nm,0.3s,baz=338,slow=9.6,SNR=26						
FITZ				S	**Sn**	**03 48 43.1**	**-0.3**
	0.2nm,0.3s,baz=191,slow=19,SNR=3.4						
KAKA	**Kakadu**	**14.82**	**108**	*e*P	**Pn**	**03 47 02.2**	**+2.4**
	4.2nm,0.4s						
WRA	**Warramunga Arr**	**19.57**	**128**	P	**P**	**03 47 54.0**	**+1.0**
	0.8nm,0.3s,baz=302,slow=12,SNR=33						
WRA				S	**S**	**03 51 22.8**	**-1.4**
	0.1nm,0.3s,baz=307,slow=17,SNR=3.8						
WB2	**Warramunga Arr**	**19.58**	**128**	*e*P	**P**	**03 47 53.9**	**+0.8**
WB2				*e*S	**S**	**03 51 37.4**	**+13**
NWAO	**Narrogin (SRO)**	**24.52**	**182**	P	**P**	**03 48 42.0**	**+0.4**
	13nm,0.9s,mb4.5,baz=0.0,slow=9.1,SNR=2.8						
SONM	**Songino Array**	**56.83**	**351**	P	**P**	**03 53 00.1**	**-4.0**
	0.6nm,0.4s,mb3.7,baz=169,slow=8.0,SNR=5.6						
CASY	**Casey**	**58.13**	**184**	*e*P	**P**	**03 53 12.3**	**-0.8**
	1.0nm,0.5s,mb3.9						
MAW	**Mawson**	**69.58**	**200**	P	**P**	**03 54 27.7**	**-0.1**
	1.8nm,0.6s,mb4.0,baz=52,slow=9.6,SNR=5.0						
TORD	**Torodi Ar. Bea**	**117.41**	**280**	PKP	PKPdf	04 01 58.8	-5.0
	0.3nm,0.9s,baz=107,slow=1.5,SNR=6.0						
SHEL	**Horse Pasture**	**119.36**	**247**	*e*PKPdf	PKPdf	04 02 05.0	-2.5

ISC 11 03:49:30.6±2.4**, 36.24N**±0.08×**71.3E**±0.3**, h35**^{km}**, n17,** σ**0^{s}95**/20**, 5C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.17**	**17**	P	**Pn**	**03 50 59.2**	**+0.1**
	SNR=71						
EKS2	**Erkin-Say**	**6.69**	**16**	P	**Pn**	**03 51 05.7**	**-0.5**
	SNR=25						
AAK	**Ala-Archa**	**6.84**	**20**	P	**Pn**	**03 51 08.6**	**+0.3**
	SNR=21						
KK31	**Karatay Array**	**6.88**	**355**	⇑Pn	**Pn**	**03 51 03.5**	**-5.4**
	0.6nm,0.3s,baz=178,slow=12						
KK31				⇑Pg	**Pn**	**03 51 17.3**	**+8.5**
	1.0nm,0.3s,baz=176,slow=12						
KK31				⇑Sn	**Sn**	**03 52 12.8**	**-13**
	6.8nm,0.7s,baz=186,slow=20,SNR=6.8						
KBK	**Karagaybulak**	**7.00**	**23**	P	**Pn**	**03 51 11.2**	**+0.7**
	SNR=6.9						
ULHL	**Ulahol**	**7.11**	**31**	P	**Pn**	**03 51 14.1**	**+2.0**
	SNR=25						
CHMS	**Chumysh**	**7.25**	**20**	P	**Pn**	**03 51 13.9**	**-0.1**
	SNR=5.6						
USP	**Ospenovka**	**7.43**	**18**	P	**Pn**	**03 51 15.0**	**-1.5**
	SNR=12						
TKM2	**Tokmak 2**	**7.45**	**25**	⇑Pn	**Pn**	**03 51 16.7**	**+0.1**
	5.0nm,0.4s						
TKM2				⇑Sn	**Sn**	**03 52 39.2**	**-0.6**
	3.2nm,0.6s						
TKM2	**Tokmak 2**	**7.45**	**25**	P	**Pn**	**03 51 17.0**	**+0.4**
	SNR=20						
DMN	**Daman**	**14.53**	**122**	*e*P	**Pn**	**03 52 53.8**	**+0.2**
	6.8nm,0.3s						
KKN	**Kakani**	**14.53**	**122**	*e*P	**Pn**	**03 52 54.0**	**+0.3**
	29nm,0.5s						
PKI	**Pulchoki**	**14.76**	**122**	*e*P	**Pn**	**03 52 57.4**	**+0.7**
	17nm,0.2s						
GUN	**Gumba**	**14.87**	**120**	*e*P	**Pn**	**03 52 58.9**	**+0.6**
	10.0nm,0.3s						
JIRN	**Jiri**	**15.24**	**120**	*e*P	**Pn**	**03 53 01.7**	**-1.4**
	10nm,0.3s						
RAMN	**Ramite**	**15.97**	**121**	*e*P	**Pn**	**03 53 09.3**	**-3.3**
	23nm,0.6s						
TAPN	**Taplejung**	**16.51**	**118**	*e*P	**Pn**	**03 53 14.2**	**-5.2**
	14nm,0.4s						

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*ISCJB **11** 04:08:14.7±1.6, 7.7S±0.1×129.08E±0.09, h223^{km}±20^{km}, mb3.1/2, Error ellipse: s-maj=18.9km s-min=11.1km az=37.8*
*IDC **11** 04:08:17.9±5.1, 7.83S×128.92E, h239^{km}±59^{km}, mb3.1/2, mb1 3.3/5, mb1mx3.2/15, mbtmp3.2/5, Error ellipse: s-maj=56.4km s-min=25.9km az=49.0*
*NEIC **11** 04:08:18.0±2.4, 7.77S×129.37E, h255^{km}±29^{km}, mb4.2/2, Error ellipse: s-maj=31.3km s-min=24.4km az=56.0*
ISC 11 04:08:17.3±1.5**, 7.91S**±0.10×**129.01E**±0.09**, h237**^{km}±19^{km}**, n9,** σ**0^{s}93**/11**, mb3.1**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.75**	**246**	P	**Pn**	**04 09 42.6**	**+0.5**
	8.3nm,0.3s,baz=157,slow=5.2,SNR=9.8						
BATI				S	**S**	**04 10 49.0**	**-0.8**
	21nm,0.3s,baz=69,slow=2.8,SNR=6.4						
KAKA	**Kakadu**	**5.84**	**145**	*e*Pn	**Pn**	**04 09 42.3**	**-0.9**
	16nm,0.3s						
FITZ	**Fitzroy Crossi**	**10.65**	**198**	P	**Pn**	**04 10 47.2**	**+3.0**
	0.2nm,0.3s,baz=15,slow=14,SNR=17						
FITZ				S	**S**	**04 12 43.5**	**-0.1**
	0.4nm,0.3s,baz=60,slow=16,SNR=3.5						
WRAB	**Tennant Creek**	**13.02**	**157**	*e*Pn	**Pn**	**04 11 14.5**	**+0.6**
	4.1nm,0.6s						
WRA	**Warramunga Arr**	**13.03**	**157**	P	**Pn**	**04 11 14.9**	**+0.9**
	0.5nm,0.3s,baz=340,slow=12,SNR=14						
WRA				S	**S**	**04 13 37.6**	**-1.3**
	1.5nm,0.3s,baz=329,slow=22,SNR=9.3						
WB2	**Warramunga Arr**	**13.03**	**157**	*e*Pn	**Pn**	**04 11 14.5**	**+0.5**
SONM	**Songino Array**	**59.00**	**342**	P	**P**	**04 17 51.4**	**-0.7**
	0.1nm,0.3s,mb2.9,baz=158,slow=4.7,SNR=3.5						
MKAR	**Makanchi Array**	**68.46**	**327**	P	**P**	**04 18 53.8**	**0.0**
	0.5nm,0.6s,mb3.3,baz=119,slow=7.8,SNR=3.7						
TMUT	**Trail Mountain**	**117.91**	**50**	*e*PKPdf	PKPdf	04 26 33.2	-2.9

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*BJI **11** 04:09:39.1, 39.47N×77.01E, h12^{km}, ML3.7*
*NNC **11** 04:09:40.4±5.8, 39.42N×76.39E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=59.5km s-min=42.5km az=123.0*
ISC 11 04:09:36.1±5.9**, 38.8N**±0.3×**76.7E**±0.3**, h20**^{km}±22^{km}**, n11,** σ**0^{s}81**/13**, 4C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.91**	**321**⇑	*i*PG	**Pg**	**04 09 53.8**	**0.0**
KSH				SG	**Sg**	**04 10 05.7**	**-0.1**
KSH				Smax			
	comp=N,6μm,0.4s						
KSH				Smax			
	comp=E,8μm,0.5s						
AML	**Almayashu**	**4.03**	**326**	P	**Pn**	**04 10 37.0**	**+0.3**
	SNR=17						
KBK	**Karagaybulak**	**4.06**	**341**	P	**Pn**	**04 10 39.6**	**+2.5**
	SNR=13						
AAK	**Ala-Archa**	**4.17**	**337**	P	**Pn**	**04 10 37.9**	**-0.6**
	SNR=7.0						
TKM2	**Tokmak 2**	**4.19**	**349**	⇓Pn	**Pn**	**04 10 37.5**	**-1.3**
	comp=E,10nm,0.3s						
TKM2				⇓Lg		04 11 31.3	
	comp=E,55nm,0.4s						
TKM2	**Tokmak 2**	**4.19**	**349**	P	**Pn**	**04 10 38.8**	**0.0**
	SNR=6.2						
CHMS	**Chumysh**	**4.43**	**341**	P	**Pn**	**04 10 41.6**	**-0.6**
	SNR=8.0						
EKS2	**Erkin-Say**	**4.44**	**331**	P	**Pn**	**04 10 42.5**	**+0.2**
	SNR=21						
USP	**Ospenovka**	**4.75**	**340**	P	**Pn**	**04 10 46.7**	**+0.1**
	SNR=5.1						
KK31	**Karatay Array**	**6.35**	**314**	⇑Pn	**Pn**	**04 11 09.2**	**+0.6**
	comp=E,0.2nm,0.2s,baz=142,slow=13,SNR=26						
KK31				⇑Pg	**Pn**	**04 11 28.6**	**+20**
	comp=E,3.2nm,0.5s,baz=140,slow=16,SNR=36						
KK31				⇓Lg		04 12 42.5	
	comp=E,5.7nm,0.6s,baz=162,slow=30,SNR=5.5						
AB31	**Akbulak array**	**15.91**	**316**	⇑Pn	**Pn**	**04 13 18.1**	**-0.6**
	comp=E,0.4nm,0.6s,baz=128,slow=11,SNR=5.8						

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*ISCJB **11** 04:22:06.5±0.6, 57.87S±0.10×25.7W±0.3, h33^{km}, mb4.0/7, Error ellipse: s-maj=24.3km s-min=9.0km az=151.9*
*NEIC **11** 04:22:10.3±2.9, 57.89S×25.66W, h54^{km}±26^{km}, mb3.8/1, Error ellipse: s-maj=22.1km s-min=12.3km az=51.0*
*IDC **11** 04:22:11.2±6.3, 57.90S×25.73W, h61^{km}±56^{km}, mb3.9/8, mb1 3.9/8, mb1mx3.8/16, mbtmp3.9/8, MS3.6/1, Ms1 3.4/1, ms1mx3.0/17, Error ellipse: s-maj=26.7km s-min=16.6km az=57.0*
ISC 11 04:22:07.4±7.8**, 57.9S**±0.2×**25.7W**±0.3**, h26**^{km}±60^{km}**, n27,** σ**0^{s}64**/19**, mb4.0**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.80**	**157**	*e*	**Pn**	**04 25 34.5**	**-0.1**
VNA1				*e*		04 25 41.7	
VNA3	**Neumayer Olymp**	**15.00**	**160**	*e*	**Pn**	**04 25 36.7**	**-0.6**
VNA3				*e*		04 25 44.5	
VNA3				*e*S	**Sn**	**04 28 08.2**	**-14**
VNA2	**Neumayer--Watz**	**15.19**	**157**	*e*	**Pn**	**04 25 40.1**	**+0.2**
VNA2				*e*		04 25 46.6	
SNAA	**Sanae**	**16.74**	**155**	*e*	**Pn**	**04 26 00.4**	**+0.6**
SNAA				*e*		04 26 07.4	
SNAA				*e*S	**Sn**	**04 28 50.7**	**-14**
SNAA	**Sanae**	**16.74**	**155**	*e*Pn	**Pn**	**04 26 00.4**	**+0.6**
	2.7nm,0.3s						
QSPA	**South Pole Qui**	**32.38**	**180**	P	**P**	**04 28 34.9**	**+0.6**
	2.6nm,0.6s,mb4.2,baz=201,slow=2.2,SNR=28						
QSPA				PcP	PcP	04 31 20.3	-0.7
	0.6nm,0.7s,baz=121,slow=5.9,SNR=3.8						
QSPA	**South Pole Qui**	**32.38**	**180**	P	**P**	**04 28 34.9**	**+0.6**
QSPA				PcP	PcP	04 31 20.3	-0.7
PLCA	**Paso Flores**	**33.17**	**281**	P	**P**	**04 28 41.4**	**-0.1**
	1.1nm,0.7s,mb3.9,baz=171,slow=6.5,SNR=5.1						
PLCA	**Paso Flores**	**33.17**	**281**	P	**P**	**04 28 41.4**	**-0.1**
MAW	**Mawson**	**38.20**	**142**	P	**P**	**04 29 23.6**	**-0.7**
	0.6nm,0.4s,mb3.7,baz=216,slow=15,SNR=3.7						
CPUP	**Villa Florida**	**38.64**	**311**	P	**P**	**04 29 27.4**	**-1.1**
	0.5nm,0.4s,mb3.6,baz=140,slow=6.2,SNR=2.6						
CPUP				PcP	PcP	04 31 38.7	-1.6
	0.5nm,0.5s,baz=112,slow=4.5,SNR=2.4						
CPUP	**Villa Florida**	**38.64**	**311**	P	**P**	**04 29 27.4**	**-1.1**
CPUP				PcP	PcP	04 31 38.7	-1.6
BDFB	**Brasilia**	**45.35**	**329**	P	**P**	**04 30 24.8**	**+1.5**
	3.3nm,0.6s,mb4.3,baz=145,slow=5.0,SNR=6.0						
BOSA	**Boshof**	**45.65**	**73**	LR	LR	04 45 05.4	
	comp=Z,62nm,19.6s,baz=143,slow=30						
LPAZ	**La Paz**	**52.11**	**305**	P	**P**	**04 31 15.1**	**-0.2**
	1.7nm,0.5s,mb4.2,baz=165,slow=6.4,SNR=15						
LPAZ				PcP	PcP	04 32 27.0	+0.1
	0.6nm,0.4s,baz=113,slow=5.4,SNR=3.1						
LPAZ	**La Paz**	**52.11**	**305**	P	**P**	**04 31 15.1**	**-0.2**
LPAZ				PcP	PcP	04 32 27.0	+0.1
DBIC	**Dimbokro**	**66.49**	**23**	P	**P**	**04 32 54.3**	**-0.3**
	1.7nm,0.4s,baz=182,slow=8.1,SNR=5.3						
TORD	**Torodi Ar. Bea**	**74.25**	**28**	P	**P**	**04 33 42.1**	**+0.2**
	2.4nm,0.6s,mb4.3,baz=198,slow=6.2,SNR=46						
TORD				pP	pP	04 33 58.5	+8.4
	3.6nm,0.7s,baz=200,slow=6.3,SNR=13						
PDAR	**Pinedale Array**	**122.00**	**300**	PKP	PKPdf	04 40 56.8	-1.7
	0.5nm,0.5s,baz=115,slow=6.7,SNR=7.9						
HWUT	**Hardware Ranch**	**122.04**	**298**	*e*PKPdf	PKPdf	04 40 57.6	-1.0
NVAR	**Mina Array Bea**	**122.86**	**291**	PKP	PKPdf	04 41 00.7	+0.5
	0.4nm,0.6s,baz=159,slow=3.1,SNR=5.9						
TPAW	**Teton Pass**	**123.21**	**300**	*e*PKPdf	PKPdf	04 41 00.5	-0.3
MOOW	**Moose Ponds**	**123.31**	**300**	*e*PKPdf	PKPdf	04 41 00.2	-0.8
RLMT	**Red Lodge**	**123.69**	**302**	*e*PKPdf	PKPdf	04 41 03.0	+1.4
ARCES	**ARCESS Array B**	**132.32**	**22**	PKP	PKPdf	04 41 16.1	-1.2
	1.7nm,0.7s,baz=234,slow=1.9,SNR=6.8						
YKA	**Yellowknife Ar**	**138.07**	**316**	PKP	PKPdf	04 41 26.5	-1.8
	0.8nm,0.3s,baz=135,slow=2.1,SNR=8.4						
SONM	**Songino Array**	**149.97**	**88**	PKPbc	PKPbc	04 41 53.1	-1.2
	1.7nm,0.4s,baz=224,slow=3.3,SNR=13						

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*ISCJB **11** 04:23:26.7±0.2, 49.35N±0.01×6.80E±0.02, h0^{km}, Error ellipse: s-maj=1.7km s-min=1.5km az=154.1*
*PRU **11** 04:23:27.5, 49.24N×6.80E, h2^{km}*
*STR **11** 04:23:28.4±0.2, 49.34N×6.83E, h1^{km}, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BGR **11** 04:23:28.6±0.3, 49.37N×6.85E, h1^{km}, ML2.8/9, Error ellipse: s-maj=4.4km s-min=4.4km az=144.0*
*CSEM **11** 04:23:28.8±0.0, 49.36N×6.83E, h1^{km}, ML3.4/25, Error ellipse: s-maj=0.8km s-min=0.7km az=125.0*
*LEDBW **11** 04:23:28.8±0.2, 49.380N±0.009×6.84E±0.02, h1^{km}, ML2.7, Error ellipse: s-maj=6.0km s-min=4.0km az=99.0*
*LDG **11** 04:23:28.8±0.1, 49.37N×6.83E, h1^{km}, Md3.4/3, Ml3.4/25, Error ellipse: s-maj=1.3km s-min=1.2km az=97.0, Suspected Mining induced.*
*NEIC **11** 04:23:28.8, 49.37N×6.83E, h1^{km}, ML2.9(STR), ML3.4(LDG), After LDG.*
*BNS **11** 04:23:29.6±0.6, 49.38N×6.84E, h1^{km}, ML2.3*
ISC 11 04:23:27.5±0.2**, 49.36N**±0.01×**6.80E**±0.01**, h0**^{km}**, n138,** σ**1^{s}19**/268**, 5C-2D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	**0.38**	**26**	P*	**Pg**	**04 23 35.5**	**+0.8**
RUP				*e*Pg	**Pg**	**04 23 35.6**	**+0.9**
	SNR=36						
RUP				*e*Sg	**Sg**	**04 23 41.1**	**+1.4**
	SNR=2.8						
RUP	**Ruppelstein**	**0.38**	**26**	Pg	**Pg**	**04 23 35.6**	**+0.8**
	SNR=36						
RUP				Sg	**Sg**	**04 23 41.1**	**+1.4**
	SNR=2.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.38	26	Pg	Pg	04 23 35.7	+0.9
RUP				Sg	Sg	04 23 41.1	+1.4
WLF	Walferdange	0.52	306	ePg	Pg	04 23 39.2	+1.7
	SNR=28						
WLF				eSg	Sg	04 23 45.6	+1.4
	SNR=5.1						
WLF	Walferdange	0.52	306	P	Pg	04 23 39.3	+1.8
WLF	Walferdange	0.52	306	Pg	Pg	04 23 39.2	+1.7
	SNR=28						
WLF				eSg	Sg	04 23 46.6	+2.4
WLF	Walferdange	0.52	306	ePg	Pg	04 23 39.3	+1.8
WLF				eSg	Sg	04 23 46.6	+2.4
LANF	Langenberg	0.76	120	ePg	Pg	04 23 42.5	+0.4
	SNR=23						
LANF				P*	Pb	04 23 42.7	-0.9
LANF	Langenberg	0.76	120	Pg	Pg	04 23 42.7	+0.6
KTD	Kalmit	0.84	93	ePg	Pg	04 23 44.6	+1.0
	SNR=6.0						
KTD				P*	Pb	04 23 44.7	-0.3
KTD				ePn	Pn	04 23 45.6	-1.0
	SNR=6.0						
KTD	Kalmit	0.84	93	Pg	Pg	04 23 44.7	+1.1
KTD	Kalmit	0.84	93	Pn	Pn	04 23 45.6	-1.0
	SNR=6.0						
KTD				Sg	Sg	04 23 56.0	+1.5
KTD	Kalmit	0.84	93	Pg	Pg	04 23 44.4	+0.8
KTD				Sg	Sg	04 23 56.0	+1.5
BGG	Burgeitz	0.91	22	ePg	Pg	04 23 46.2	+1.2
HILG	Hillesheim	0.93	355	ePg	Pg	04 23 46.7	+1.3
CDF	Champ du Feu	1.00	162	ePn	Pn	04 23 48.0	-0.8
	SNR=1.0						
CDF				eSg	Sg	04 24 00.3	+0.6
	311nm,0.6s,SNR=1.0						
CDF	Champ du Feu	1.00	162	ePn	Pn	04 23 48.0	-0.8
	SNR=1.0						
CDF				eSg	Sg	04 24 00.3	+0.6
	156nm,0.6s,SNR=1.0						
CDF	Champ du Feu	1.00	162	ePg	Pg	04 23 47.0	+0.3
CDF				ePn	Pn	04 23 48.0	-0.8
CDF				eSg	Sg	04 24 00.3	+0.6
STR	Strasbourg	1.01	140	Pg	Pg	04 23 46.7	-0.1
RFYF	Reffroy	1.14	230	ePg	Pg	04 23 51.2	+1.8
	baz=54						
RFYF				eSg	Sg	04 24 05.8	+1.6
	254nm,0.3s						
RFYF	Reffroy	1.14	230	ePg	Pg	04 23 51.2	+1.8
RFYF				eSg	Sg	04 24 05.8	+1.6
	127nm,0.3s						
ECH	Echery	1.17	168	Pg	Pg	04 23 50.6	+0.6
ECH				Sg	Sg	04 24 06.0	+0.8
ECH	Echery	1.17	168	P	Pg	04 23 50.7	+0.7
ECH				ePn	Pn	04 23 50.8	-0.4
	SNR=4.4						
ECH				ePg	Pg	04 23 51.2	+1.2
	SNR=44						
ECH				S	Sg	04 24 06.6	+1.4
ECH	Echery	1.17	168	Pn	Pn	04 23 50.8	-0.4
	SNR=4.4						
ECH	Echery	1.17	168	ePg	Pg	04 23 50.9	+0.9
ECH				Sg	Sg	04 24 06.0	+0.8
ECH	Echery	1.17	168	ePg	Pg	04 23 50.9	+0.9
ECH				eSg	Sg	04 24 06.8	+1.6
KOE	Koeppel	1.22	29	ePg	Pg	04 23 51.6	+0.7
STB	Steinbach	1.23	1	ePg	Pg	04 23 51.9	+0.8
STB				eSg	Sg	04 24 08.6	+1.5
	56nm,0.5s						
SWS	Schriesheim-Wi	1.25	84	P	Pg	04 23 51.0	-0.4
SWS				Sg	Sg	04 24 08.3	+0.7
THEF	They Montfort	1.26	206	Pg	Pg	04 23 52.1	+0.4
THEF				Sg	Sg	04 24 08.4	+0.4
THEF	They Montfort	1.26	206	ePg	Pg	04 23 52.3	+0.6
	SNR=23						
THEF				P		04 23 52.3	
THEF	They Montfort	1.26	206	Pn	Pn	04 23 52.3	0.0
THEF	They Montfort	1.26	206	Pg	Pg	04 23 52.3	+0.6
	SNR=23						
THEF				Sg	Sg	04 24 08.4	+0.4
KLL	Kalltalsperre	1.32	346	ePg	Pg	04 23 53.1	+0.2
LIBD	Limburg	1.32	156	ePn	Pn	04 23 54.0	+0.8
	SNR=6.1						
LIBD	Limburg	1.32	156	Pn	Pn	04 23 54.0	+0.7
	SNR=6.1						
LIBD				Sg	Sg	04 24 10.8	+0.7
LIBD	Limburg	1.32	156	Pg	Pg	04 23 53.5	+0.6
LIBD				Sg	Sg	04 24 10.8	+0.7
TOD	Tromm	1.33	79	ePn	Pn	04 23 52.0	-1.3
	SNR=1.9						
TOD				P		04 23 52.5	
TOD				ePg	Pg	04 23 52.8	-0.2
	SNR=19						
TOD				Sg	Sg	04 24 11.1	+0.9
TOD	Tromm	1.33	79	Pn	Pn	04 23 52.5	-0.8
TOD				S	Sg	04 24 11.1	+0.9
TOD	Tromm	1.33	79	Pg	Pg	04 23 52.8	-0.2
	SNR=19						
TOD				Sg	Sg	04 24 10.9	+0.7
TOD	Tromm	1.33	79	Pg	Pg	04 23 52.8	-0.2
TOD				Sg	Sg	04 24 10.9	+0.7
MEM	Membach	1.35	338	P	Pg	04 23 54.0	+0.7
MEM	Membach	1.35	338	P	Pg	04 23 54.0	+0.6
DREG	Dreilaegerbach	1.35	344	ePg	Pg	04 23 53.9	+0.5
HAU	Haudompre	1.39	193	ePg	Pg	04 23 54.8	+0.6
	SNR=1.0						
HAU				eSn	Sn	04 24 11.3	-1.9
	SNR=1.0						
HAU				eSg	Sg	04 24 13.0	+0.8
	171nm,0.4s,SNR=1.0						
HAU	Haudompre	1.39	193	ePg	Pg	04 23 54.8	+0.6
	SNR=1.0						
HAU				eSn	Sn	04 24 11.3	-1.9
	SNR=1.0						
HAU				eSg	Sg	04 24 13.0	+0.8
	85nm,0.4s,SNR=1.0						
HAU	Haudompre	1.39	193	ePn	Pn	04 23 53.3	-0.9
HAU				ePg	Pg	04 23 54.8	+0.6
HAU				eSn	Sn	04 24 11.3	-1.9
HAU				eSg	Sg	04 24 13.0	+0.8
BCLA	Clavier	1.43	318	P	Pn	04 23 54.6	-0.1
MEZF	Maizieres J'vi	1.44	234	ePg	Pg	04 23 56.3	+1.2
	baz=48,SNR=1.0						
MEZF				eSg	Sg	04 24 14.8	+1.0
	136nm,0.5s,SNR=1.0						
MEZF	Maizieres J'vi	1.44	234	ePg	Pg	04 23 56.3	+1.2
	SNR=1.0						
MEZF				eSg	Sg	04 24 14.8	+1.0
	68nm,0.5s,SNR=1.0						
BFO	Black Forest	1.45	135	P	Pn	04 23 54.1	-0.9
BFO				ePg	Pg	04 23 55.7	+0.5
	SNR=13						
BFO				Sg	Sg	04 24 14.8	+0.9
BFO	Black Forest	1.45	135	ePg	Pg	04 23 54.5	-0.7
BFO				eSg	Sg	04 24 14.6	+0.7
GIVF	Givet	1.48	301	ePg	Pg	04 23 57.0	+1.1
GIVF				eSn	Sn	04 24 14.0	-1.4
	SNR=1.0						
GIVF				eSg	Sg	04 24 16.2	+1.1
	110nm,0.4s						
GIVF	Givet	1.48	301	ePg	Pg	04 23 57.0	+1.1
GIVF				eSn	Sn	04 24 14.0	-1.4
	SNR=1.0						
GIVF				eSg	Sg	04 24 16.2	+1.1
	55nm,0.4s						
GIVF	Givet	1.48	301	ePn	Pn	04 23 55.8	+0.4
GIVF				ePg	Pg	04 23 57.0	+1.1
GIVF				eSn	Sn	04 24 14.0	-1.4
GIVF				eSg	Sg	04 24 16.2	+1.1
LBG	Lerchenberg	1.49	117	Pg	Pg	04 23 56.4	+0.3
LBG				Sg	Sg	04 24 16.2	+0.9
HGN	Heimansgroeve	1.51	339	ePg	Pg	04 23 56.6	+0.2
	40nm,0.6s						
HGN				eSg	Sg	04 24 17.4	+1.4
HGN	Heimansgroeve	1.51	339	eRg		04 24 39.9	
MOF	Molkenrain	1.53	172	Pg	Pg	04 23 57.3	+0.5
MOF				Sg	Sg	04 24 16.6	0.0
MOF	Molkenrain	1.53	172	Pn	Pn	04 23 57.5	+1.4
MOF				Sn	Sn	04 24 16.9	+0.3
HINF	Hinteralfeld	1.55	179	ePg	Pg	04 23 57.5	+0.3
HINF				eSg	Sg	04 24 18.0	+0.7
	177nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	1.55	179	ePg	Pg	04 23 57.5	+0.3
HINF				eSg	Sg	04 24 18.0	+0.7
	88nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	1.55	179	ePn	Pn	04 23 56.3	0.0
HINF				ePg	Pg	04 23 57.5	+0.3
HINF				eSg	Sg	04 24 18.0	+0.7
KIZ	Kirchzarten	1.59	152	Pg	Pg	04 23 58.3	+0.3
KIZ				Sg	Sg	04 24 19.9	+1.2
SFTF	Sexfontaines	1.65	226	ePn	Pn	04 23 57.6	0.0
	baz=54						
SFTF				eSg	Sg	04 24 19.6	-0.7
	97nm,0.4s,baz=48						
SFTF	Sexfontaines	1.65	226	ePn	Pn	04 23 57.6	0.0
SFTF				eSg	Sg	04 24 19.6	-0.7
	49nm,0.4s						
HOBG	Hohbusch	1.66	12	ePg	Pg	04 23 58.6	-0.7
STU	Stuttgart	1.68	110	ePn	Pn	04 23 57.8	-0.3
	SNR=1.3						
STU				eSn	Sn	04 24 18.2	-2.2
STU				eSg	Sg	04 24 21.8	+0.3
	SNR=1.9						
FELD	Feldberg im Sc	1.69	151	Pg	Pg	04 24 00.5	+0.6
FELD				Sg	Sg	04 24 22.4	+0.6
FELD	Feldberg im Sc	1.69	151	Pg	Pg	04 23 59.6	-0.3
FELD				Sg	Sg	04 24 21.9	+0.1
TUBL	Tuebingen-Lenn	1.72	118	Sg	Sg	04 24 24.3	+1.4
BAIF	Baives	1.82	293	ePg	Pg	04 24 02.9	+0.5
BAIF				eSg	Sg	04 24 26.9	+0.9
	85nm,0.5s						
BAIF	Baives	1.82	293	ePg	Pg	04 24 02.9	+0.5
BAIF				eSg	Sg	04 24 26.9	+0.9
	42nm,0.5s						
BAIF	Baives	1.82	293	ePn	Pn	04 23 59.0	-1.1
BAIF				ePg	Pg	04 24 02.9	+0.5
BAIF				eSg	Sg	04 24 26.9	+0.9
SPAK	Spaichingen-Ko	1.82	133	Pg	Pg	04 24 02.8	+0.4
SPAK				Sg	Sg	04 24 28.3	+2.3
SPAK	Spaichingen-Ko	1.82	133	Pg	Pg	04 24 02.8	+0.4
SPAK				Sg	Sg	04 24 26.7	+0.7
SPAK	Spaichingen-Ko	1.82	133	Pg	Pg	04 24 02.7	+0.3
SPAK				Sg	Sg	04 24 26.7	+0.7
SIND	Sindeldorf	1.83	89	P	Pn	04 23 58.6	-1.6
BUCH	Bad Urach	1.92	118	P	Pn	04 24 01.7	+0.4
BBS	Basel-Blauen	1.96	166	Pg	Pg	04 24 06.4	+1.4
BBS	Basel-Blauen	1.96	166	Pg	Pg	04 24 06.4	+1.3
BBS				Sg	Sg	04 24 31.8	+1.4
BBS	Basel-Blauen	1.96	166	Pg	Pg	04 24 03.6	-1.5
BBS				Sg	Sg	04 24 31.8	+1.4
GUT	Gutenstein	2.01	129	Pg	Pg	04 24 06.2	+0.2
LOMF	Lomont	2.02	180	Pg	Pg	04 24 06.7	+0.6
LOMF				Sg	Sg	04 24 33.1	+0.9
LOMF	Lomont	2.02	180	P	Pg	04 24 06.5	+0.4
LOMF				S	Sn	04 24 33.3	+4.7
LOMF	Lomont	2.02	180	Pg	Pg	04 24 06.5	+0.4
LOMF				Sg	Sg	04 24 33.1	+0.9
SISB	Singen-Schiene	2.21	139	P*	Pb	04 24 09.9	+1.6
SISB				S*	Sb	04 24 39.0	+2.8
UBBA	Unterbreizbach	2.52	54	eSg	Sg	04 24 48.3	-0.2
	SNR=2.0						
UBR	Ueberruh	2.77	126	P	Pn	04 24 13.4	+0.3
CABF	La Chapelle	2.80	190	ePn	Pn	04 24 12.8	-0.7
	SNR=1.0						
CABF				eSg	Sg	04 24 57.5	+0.2
	70nm,0.6s,SNR=1.0						
CABF	La Chapelle	2.80	190	ePn	Pn	04 24 12.8	-0.7
	SNR=1.0						
CABF				eSg	Sg	04 24 57.5	+0.2
	35nm,0.6s,SNR=1.0						
LOR	Lormes	2.87	224	ePn	Pn	04 24 13.8	-0.7
	baz=50,SNR=1.0						
LOR				eSn	Sn	04 24 47.5	-2.3
	baz=40,SNR=1.0						
LOR				eSg	Sg	04 24 58.5	-1.3
	34nm,0.4s,baz=42,SNR=1.0						
LOR	Lormes	2.87	224	ePn	Pn	04 24 13.8	-0.7
	SNR=1.0						
LOR				eSn	Sn	04 24 47.5	-2.3
	SNR=1.0						
LOR				eSg	Sg	04 24 58.5	-1.3
	17nm,0.4s,SNR=1.0						
GRA1	Grafenberg Arr	2.90	82	Pg	Pg	04 24 23.6	+0.5
GRA1				Sg	Sg	04 25 01.1	+0.5
GRF	Grafenberg Arr	2.90	82	ePg	Pg	04 24 23.6	+0.6
GRF				eSg	Sg	04 25 01.1	+0.5
DAVA	Damuels	2.92	134	⇑iPn	Pn	04 24 16.7	+1.5
DAVA				⇑iSn	Sn	04 24 51.8	+0.8
DAVA				⇑iSg	Sg	04 25 04.3	+3.0
	17nm,0.4s						
DAVA	Damuels	2.92	134	Pn	Pn	04 24 16.7	+1.5
DAVA				Sn	Sn	04 24 51.8	+0.8
DAVA				Sg	Sg	04 25 04.3	+2.9
	17nm,0.4s						
GTTG	Gvttingen	2.98	42	eSg	Sg	04 25 03.7	+0.6
	SNR=2.3						
SSF	Saint Saulge	3.19	225	ePn	Pn	04 24 17.9	-1.0
	SNR=1.0						
SSF				eSn	Sn	04 24 54.5	-3.0
	SNR=1.0						
SSF				eSg	Sg	04 25 09.7	-0.2
	41nm,0.4s						
SSF	Saint Saulge	3.19	225	ePn	Pn	04 24 17.9	-1.0
	SNR=1.0						
SSF				eSn	Sn	04 24 54.5	-3.0
	SNR=1.0						
SSF				eSg	Sg	04 25 09.7	-0.2
	20nm,0.4s						
FUR	Furstenfeldbru	3.19	110	ePn	Pn	04 24 17.1	-1.8
	SNR=1.4						
MOX	Moxa	3.36	66	ePg	Pg	04 24 29.3	-2.6
	SNR=2.1						
MOX				eSg	Sg	04 25 12.8	-2.6
	SNR=1.8						
MOX	Moxa	3.36	66	ePG	Pg	04 24 30.3	-1.6
MOX				eSG	Sg	04 25 14.4	-1.0
SMF	Signal de Mont	3.37	217	ePn	Pn	04 24 20.9	-0.4
	SNR=1.0						
SMF				eSn	Sn	04 24 58.0	-4.0
	SNR=1.0						
SMF				eSg	Sg	04 25 14.6	-1.1
	34nm,0.5s,SNR=1.0						
SMF	Signal de Mont	3.37	217	ePn	Pn	04 24 20.9	-0.4
	SNR=1.0						
SMF				eSn	Sn	04 24 58.0	-4.0
	SNR=1.0						
SMF				eSg	Sg	04 25 14.6	-1.1
	17nm,0.5s,SNR=1.0						
AVF	Avril sur Loir	3.46	223	ePn	Pn	04 24 21.4	-1.2
	SNR=1.0						
AVF				eSn	Sn	04 25 01.0	-3.3
	SNR=1.0						
AVF				eSg	Sg	04 25 18.0	-0.7
	24nm,0.5s,SNR=1.0						
AVF	Avril sur Loir	3.46	223	ePn	Pn	04 24 21.4	-1.2
	SNR=1.0						
AVF				eSn	Sn	04 25 01.0	-3.3
	SNR=1.0						
AVF				eSg	Sg	04 25 18.0	-0.7
	12nm,0.5s,SNR=1.0						
HYF	Humbligny	3.48	235	ePg	Pg	04 24 33.7	-0.5
HYF				eSg	Sg	04 25 17.8	-1.5
FETA	Feichten	3.52	130	⇑iPn	Pn	04 24 24.7	+1.2
FETA				⇓iPg	Pg	04 24 36.9	+1.9
FETA				⇑iSn	Sn	04 25 05.8	+0.1
FETA				⇓iSg	Sg	04 25 23.7	+3.1
	7.0nm,0.7s						
GUNZ	Gunzen	3.71	72	ePg	Pg	04 24 35.4	-3.3
GUNZ				eSg	Sg	04 25 25.9	-0.9
	SNR=2.2						
NKC	Novy Kostel	3.76	74	ePG	Pg	04 24 36.2	-3.4
NKC				eSG	Sg	04 25 26.9	-1.4
TANN	Tannenbergstha	3.81	72	ePg	Pg	04 24 37.6	-2.9
	SNR=1.9						
TANN				eSg	Sg	04 25 27.6	-2.2
	SNR=2.9						
LPL	La Plagne	3.85	181	eSg	Sg	04 25 30.6	-0.6
	8.6nm,0.5s,SNR=1.0						
LPL	La Plagne	3.85	181	eSg	Sg	04 25 30.6	-0.6
	4.3nm,0.5s,SNR=1.0						
BGF	Bois d'Agland	3.87	225	ePn	Pn	04 24 28.4	+0.2
	SNR=1.0						
BGF				eSn	Sn	04 25 11.1	-3.2
	SNR=1.0						
BGF				eSg	Sg	04 25 31.2	-0.5
	100nm,0.5s,SNR=1.0						
BGF	Bois d'Agland	3.87	225	ePn	Pn	04 24 28.4	+0.2
	SNR=1.0						
BGF				eSn	Sn	04 25 11.1	-3.2
	SNR=1.0						
BGF				eSg	Sg	04 25 31.2	-0.5
	50nm,0.5s,SNR=1.0						
LPG	La Plagne	3.87	181	ePn	Pn	04 24 29.4	+1.2
	SNR=1.0						
LPG				eSg	Sg	04 25 27.0	-4.8
	12nm,0.6s						
TCF	Toulx Ste Croi	4.36	227	eSn	Sn	04 25 22.6	-3.9
	9.5nm,0.4s,SNR=1.0						
TCF	Toulx Ste Croi	4.36	227	eSn	Sn	04 25 22.6	-3.9
	4.8nm,0.4s,SNR=1.0						
CLL	Collm	4.42	62	eSg	Sg	04 25 48.0	-1.5
	comp=Z,9.0nm,0.9s						
KHC	Kasperske Hory	4.45	90	ePN	Pn	04 24 35.6	-0.5
KHC				eSN	Sn	04 25 26.5	-2.0
KHC				eSG	Sg	04 25 49.0	-1.3
	comp=Z,9.5nm,1.0s						
GEC2	GERESS Array S	4.56	94	ePn	Pn	04 24 38.3	+0.5
	SNR=16						
GEC2				ePg	Pg	04 24 56.1	+1.2
	SNR=1.0						
GEC2				eSn	Sn	04 25 28.6	-2.8
GEC2				eSg	Sg	04 25 51.8	-2.3
	SNR=1.0						
VIVF	Saint-Julien-l	4.74	199	eSg	Sg	04 25 58.3	-1.4
	comp=Z,12nm,0.6s,SNR=1.0						
VIVF	Saint-Julien-l	4.74	199	eSg	Sg	04 25 58.3	-1.4
	comp=Z,6.0nm,0.6s,SNR=1.0						
FLN	La Foliniere	4.83	266	ePn	Pn	04 24 43.0	+1.6
	baz=91,SNR=1.0						
FLN				eSn	Sn	04 25 34.7	-3.2
	comp=Z,15nm,0.4s,SNR=1.0						
FLN	La Foliniere	4.83	266	ePn	Pn	04 24 43.0	+1.6
	SNR=1.0						
FLN				eSn	Sn	04 25 34.7	-3.2
	comp=Z,7.3nm,0.4s,SNR=1.0						
BRG	Berggiesshubel	4.84	69	SG	Sg	04 26 00.7	-2.1
	comp=Z,11nm,1.4s						
PRU	Pruhonice	5.06	80	eSG	Sg	04 26 08.9	-1.2
	comp=Z,7.5nm,1.0s						
GRR	Gorron	5.15	262	ePn	Pn	04 24 46.0	+0.2
	SNR=1.0						
GRR				eSn	Sn	04 25 42.7	-3.1
	comp=Z,13nm,0.3s,SNR=1.0						
GRR	Gorron	5.15	262	ePn	Pn	04 24 46.0	+0.2
	SNR=1.0						
GRR				eSn	Sn	04 25 42.7	-3.1
	comp=Z,6.5nm,0.3s,SNR=1.0						
MFF	Saint Martin d	5.42	242	eSn	Sn	04 25 49.2	-3.4
	comp=Z,5.3nm,0.6s,SNR=1.0						
MFF	Saint Martin d	5.42	242	eSn	Sn	04 25 49.2	-3.4
	comp=Z,2.7nm,0.6s,SNR=1.0						
SMRF	Simiane la Rot	5.46	189	ePn	Pn	04 24 49.0	-1.0
	SNR=1.0						
CAF	Calviac	5.49	218	ePn	Pn	04 24 49.5	-1.0
	SNR=1.0						
CAF				eSg	Sg	04 26 21.3	-2.5
	comp=Z,8.2nm,0.4s,SNR=1.0						
CAF	Calviac	5.49	218	ePn	Pn	04 24 49.5	-1.0
	SNR=1.0						
CAF				eSg	Sg	04 26 21.3	-2.5
	comp=Z,4.1nm,0.4s,SNR=1.0						
LASF	Ste Croix	5.66	202	eSg	Sg	04 26 27.9	-1.5
	comp=Z,12nm,0.6s,SNR=1.0						
LASF	Ste Croix	5.66	202	eSg	Sg	04 26 27.9	-1.5
	comp=Z,6.2nm,0.6s,SNR=1.0						
DPC	Dobruska-Polom	6.24	77	eSG	Sg	04 26 45.3	-2.4

CASC 11 04:28:52.9±3.0**, 1358N**×**9138W, h20**km±29km**, MD4.1, 1C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	0.78	342	eP	Pb	04 29 08.3	+0.5
FUG	Fuego 3	1.01	31	eP	Pb	04 29 11.3	-0.5
FG6		1.09	26	eP	Pn	04 29 12.9	-0.1
PCG	Pacaya	1.11	43	⇓eP	Pn	04 29 13.5	+0.3
NBG	Las Nubes	1.42	45	eP	Pn	04 29 18.9	+1.4
RTR	El Retiro	1.72	79	eP	x	04 29 21.2	
SBLS	San Blas	1.73	81	eP	x	04 29 21.4	
RBDL	Robledal	1.73	72	eP	x	04 29 22.0	
RBDL				eS	x	04 29 43.5	
SNJE	San Jose	1.75	80	⇑eP	x	04 29 21.8	
SNJE				eS	x	04 29 43.9	
BOQS	Boqueron	2.05	85	eP	x	04 29 26.0	
MTO2	Montecristo 2	2.13	67	eP	x	04 29 27.8	
MTO2				eS	x	04 29 56.2	
LFRS	El Faro	2.26	89	eP	x	04 29 29.5	
LFRS				eS	x	04 29 57.0	
LBRS	Las Brisas	2.28	86	eP	x	04 29 29.2	
SNVI	San Vicente	2.47	89	eP	x	04 29 32.2	
SNVI				eS	x	04 30 03.4	

ISK 11 04:57:30.4, 4007N×3895E, h6km, MD3.1
CSEM 11 04:57:30.2±0.1, 4007N×3897E, h5km, MD3.1, Error ellipse: s-maj=1.9km s-min=1.8km az=18.0
ISCJB 11 04:57:31.0±0.3, 4008N±003×3895E±003, h10km, Error ellipse: s-maj=4.2km s-min=3.1km az=163.7
DDA 11 04:57:31.0, 4007N×3889E, h3km, Md3.2
ISC 11 04:57:31.0±0.6**, 4006N**±003×**3893E**±003**, h1**km±6km**, n28, σ0s72**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMT	Gumushane	0.58	47	ePG	Pg	04 57 42.1	0.0
GUMT				eSG	Sg	04 57 49.5	-0.2
EZC	Erzincan	0.75	114	PG	Px	04 57 39.4	
EZC				eSG	Sx	04 57 45.8	
ESPY	Espiye-Giresun	0.86	350	ePG	Pg	04 57 47.6	0.0
ESPY				eSG	Sg	04 57 59.0	+0.3
GRSN	GIRESUNGRSN	0.99	330	i P	Pg	04 57 49.6	-0.4
GRSN				i S	Sg	04 58 03.0	0.0
KTUT	Trabzon	1.12	35	ePN	Pg	04 57 52.3	-0.2
KOPT	Kop Dagi	1.21	92	i P	Pg	04 57 53.1	-1.0
KOPT				i S	Sg	04 58 11.1	+1.4
PTK	Pertek	1.23	163	ePN	Pn	04 57 53.9	-1.3
RSDY	Resadiye-TOKAT	1.27	286	ePN	Pn	04 57 55.3	-0.5
DARE	Darende-Malaty	1.41	218	ePN	Pg	04 58 04.0	+6.0
SVSK	Karacayir	1.49	265	ePN	Pn	04 57 58.8	0.0
SVRC	Sivrice-ELAZID	1.71	170	ePN	Pn	04 58 01.8	-0.1
MYA	Malataya	1.78	193	ePN	Pn	04 58 02.9	+0.1
MALT	Malatya	1.79	193	ePN	Pn	04 58 01.9	-1.1
TOKT	Tokat	1.84	279	ePN	Pn	04 58 02.9	-0.8
PZAR	Pazar-Rize	1.87	53	ePN	Pn	04 58 04.3	+0.3
ERZM	Erzurum	1.88	94	i P	Pg	04 58 07.1	+0.1
ERZM				i S	Sx	04 58 44.0	
AKCD	Akcadag	1.93	204	i P	Pn	04 58 05.9	+1.0
AKCD				i S	Sg	04 58 32.6	-0.4
SARI	SarD1z-Kayseri	2.21	232	ePN	Pg	04 58 13.4	0.0
HOMI	Horasan	2.29	90	i P	Pg	04 58 15.5	+0.7
HOMI				i S	Sg	04 58 44.9	+0.4
KVT	Kavak	2.42	296	ePN	Pn	04 58 12.2	+0.6
BCA	Borcka	2.47	55	ePN	Pn	04 58 12.7	+0.4
ARTV	Artvin	2.54	63	i P	Pb	04 58 15.5	-1.8
ARTV				i S	Sb	04 58 48.8	-0.4
BNN	Bunyan	2.67	244	ePN	Pn	04 58 15.8	+0.7
YOZ	Yozgat	2.81	262	ePN	Pn	04 58 17.5	+0.6
KMRS	Kahramanmaras	3.01	212	ePN	Pn	04 58 20.9	+1.2
DIKM	Dikmen	3.20	301	ePN	Pn	04 58 23.1	+0.8
CTKT	Corum	3.21	281	eP	Pn	04 58 23.0	+0.6
CDAG	Cicekdag	3.53	264	i P	Pn	04 58 25.5	-1.4
CDAG				i S	Sb	04 59 17.7	+0.1

ISCJB 11 04:58:06.5±0.4, 3720S±008×961W±02, h10km, mb4.1/12, MS3.8/14, Error ellipse: s-maj=19.1km s-min=10.0km az=158.8
IDC 11 04:58:06.0±0.8, 3709S×9616W, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.1/16, mbtmp4.0/7, MS3.9/14, Ms1 3.8/14, ms1mx3.7/22, Error ellipse: s-maj=27.2km s-min=21.0km az=72.0
NEIC 11 04:58:08.4±0.5, 3712S×9604W, h10km, mb4.4/6, Error ellipse: s-maj=17.5km s-min=11.3km az=57.0
ISC 11 04:58:08.4±0.4**, 3718S**±008×**961W**±02**, h10**km**, n36, σ0s88**/24**, mb4.1**/12**, MS3.8**/14**, 1D, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	20.14	108	P	P	05 02 43.3	+0.7
	1.5nm,0.8s,baz=292,slow=11,SNR=3.3						
PLCA				LR	LR	05 08 38.6	
	comp=Z,257nm,19.9s,MS3.6,baz=273,slow=31						
CFAA	Coronel Fontan	23.59	85	P	P	05 03 18.1	-1.4

	0.2nm,0.7s,baz=222,slow=14,SNR=3.5						
CFAA				LR	LR	05 10 20.3	
	comp=Z,36nm,19.5s,MS2.8,baz=255,slow=31						
USHA	Ushuaia	25.82	142	LR	LR	05 11 33.3	
	comp=Z,441nm,21.3s,MS4.0,baz=247,slow=31						
LVC	Limon Verde	27.54	66	LR	LR	05 12 03.6	
	comp=Z,231nm,18.9s,MS3.8,baz=203,slow=30						
NNA	Nana	30.45	39	LR	LR	05 13 15.8	
	comp=Z,409nm,20.9s,MS4.0,baz=131,slow=30						
LPAZ	La Paz	32.29	57	P	P	05 04 38.5	+1.0
	1.6nm,0.9s,mb3.9,baz=208,slow=8.4,SNR=6.5						
LPAZ				LR	LR	05 15 35.2	
	comp=Z,40nm,18.3s,MS3.1,baz=119,slow=32						
LPAZ	La Paz	32.29	57	P	P	05 04 38.5	+1.0
LPAZ				LR	LR	05 15 35.2	
CPUP	Villa Florida	34.46	83	LR	LR	05 16 50.2	
	comp=Z,143nm,19.0s,MS3.7,baz=235,slow=33						
ROSC	El Rosal	46.47	31	LR	LR	05 23 40.5	
	comp=Z,124nm,18.4s,MS3.9,baz=147,slow=33						
BDFB	Brasilia	47.50	76	LR	LR	05 25 30.4	
	comp=Z,167nm,20.3s,MS4.0,baz=218,slow=35						
QSPA	South Pole Qui	53.05	180	P	P	05 07 25.9	+0.9
	1.6nm,0.7s,mb4.1,baz=104,slow=4.9,SNR=13						
VNA3	Neumayer Olymp	54.16	157	e	P	05 07 33.1	-0.2
VNA3				e		05 07 41.3	
VNA1	Neumayer--Stat	54.73	156	e	P	05 07 38.4	+0.9
VNA1				e		05 07 46.2	
VNA2	Neumayer--Watz	54.95	156	e	P	05 07 39.2	+0.1
VNA2				e		05 07 47.4	
SNAA	Sanae	56.19	158	e	P	05 07 47.4	-0.5
URZ	Urewera	66.05	239	LR	LR	05 29 54.6	
	comp=Z,209nm,18.7s,MS4.4,baz=307,slow=29						
TXAR	Lajitas Array	66.54	353	P	P	05 08 57.0	-1.4
	1.1nm,1.0s,mb3.9,baz=168,slow=7.7,SNR=9.2						
JCT	Junction City	67.39	357	eP	P	05 09 04.0	+0.2
	7.0nm,1.0s,mb4.7						
SYO	Syowa Base	69.18	164	⇓eP	P	05 09 13.0	-1.7
AFI	Afiamalu	70.41	267	LR	LR	05 33 01.1	
	comp=Z,95nm,20.5s,MS4.0,baz=100,slow=30						
MAW	Mawson	74.33	172	P	P	05 09 44.5	-1.1
	1.3nm,0.6s,mb4.0,baz=169,slow=16,SNR=4.7						
MSU	Marysvale	76.77	347	eP	P	05 10 00.3	+0.6
NVAR	Mina Array Bea	77.98	342	P	P	05 10 06.1	-0.4
	2.4nm,0.9s,mb4.1,baz=181,slow=6.0,SNR=17						
CMB	Columbia Colle	78.13	341	eP	P	05 10 07.2	-0.3
	2.1nm,0.8s,mb4.1						
DAU	Daniels Canyon	78.46	348	eP	P	05 10 09.9	+0.8
ELK	Elko	79.51	345	eP	P	05 10 15.6	+0.7
	3.2nm,1.0s,mb4.2						
PDAR	Pinedale Array	80.51	350	P	P	05 10 18.8	-1.5
	1.3nm,0.8s,mb3.9,baz=168,slow=7.6,SNR=11						
KIPM	Iron Peak	80.65	339	eP	P	05 10 21.7	+0.6
WDC	Whiskeytown Da	81.10	340	eP	P	05 10 23.3	-0.2
	2.2nm,0.8s,mb4.1						
TPAW	Teton Pass	81.42	349	eP	P	05 10 25.1	-0.1
	3.2nm,0.9s,mb4.2						
TPAW				ePcP	PcP	05 10 30.9	-0.2
HLID	Hailey	82.07	347	eP	P	05 10 29.3	+0.7
	3.4nm,0.8s,mb4.3						
HLID				ePcP	PcP	05 10 34.4	+0.4
PAF	Port-aux-Franc	93.00	171	eP	P	05 11 23.3	+1.5
DBIC	Dimbokro	94.95	85	LR	LR	05 50 43.0	
	comp=Z,40nm,18.2s,MS3.9,baz=310,slow=33						
SCHQ	Schefferville	95.02	16	LR	LR	05 48 49.5	
	comp=Z,58nm,18.6s,MS4.1,baz=148,slow=32						
CTA	Charters Tower	98.24	237	LR	LR	05 47 04.1	
	comp=Z,99nm,20.1s,MS4.3,baz=51,slow=30						
KSRS	Korea Array	145.25	284	PKPbc	PKPbc	05 17 44.4	-1.5
	0.7nm,0.3s,baz=116,slow=5.2,SNR=5.9						

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*NEIC **11** 05:26:39.1, 6403N×13936W, h1km, ML2.6(PGC), ML2.9(AEIC), After PGC.*

PGC 11 05:26:39.1, 6403N×13936W, h1km, ML2.6, 5D, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAWY	Dawson	0.04	338	⇓P	Pg	05 26 39.2	-0.6
DAWY				⇓S	Sg	05 26 41.8	+1.6
DAWY	Dawson	0.04	338	P	Pg	05 26 39.2	-0.6
BCA3	Beaver Creek A	1.46	229	P	Pn	05 27 03.0	-3.5
BCA3				S	Sg	05 27 26.0	+0.2
MENT	Mentasta	2.24	243	P	Pn	05 27 14.1	-3.2
MENT				S	Sn	05 27 48.8	+3.2
HYT	Haines Junctio	3.33	164	⇓Pn	Pn	05 27 31.4	-0.8
HYT				⇓Pg	Pg	05 27 40.3	-2.6
HYT				⇓Sg	Sg	05 28 23.1	-3.0
IL1	Eielson Array	3.35	286	P	Pn	05 27 28.8	-3.7
WHY	Whitehorse	3.98	146	⇑Sg	Sg	05 28 38.6	-8.1
WHY	Whitehorse	3.98	146	P	Pn	05 27 32.1	-9.0

IDC 11 05:27:27.7±2.3, 600S×15422E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/15, mbtmp3.5/2, Error ellipse: s-maj=147.0km s-min=43.0km az=131.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.78	233	P	P	05 32 42.9	+0.6
	1.8nm,0.8s,baz=57,slow=9.8,SNR=13						
WRA				PcP	PcP	05 36 25.9	-0.3
	0.3nm,0.5s,baz=55,slow=2.4,SNR=12						
ASAR	Alice Springs	26.28	226	P	P	05 33 04.3	-0.7
	0.3nm,0.5s,baz=59,slow=8.9,SNR=4.6						
TORD	Torodi Ar. Bea	152.02	287	PKPbc	PKPbc	05 47 26.0	-0.1
	1.1nm,0.6s,baz=61,slow=2.1,SNR=9.5						

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*NEIC **11** 06:16:35.4, 1550N×9483W, h66km, MD4.1(MEX), After MEX.*

MEX 11 06:16:36.4±0.7, 1551N×9483W, h50km±43km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.26	282	*i* P	Pn	06 16 56.2	-1.4
HUIG				*i* S	Sn	06 17 11.2	-2.2
CMIG	Matias Romero	1.58	358	*i* P	Pn	06 17 00.3	-1.6
CMIG				*i* S	Sn	06 17 19.5	-1.7
TGIG		2.07	52	*i* P	Pn	06 17 07.1	-1.6
TGIG				*i* S	Sn	06 17 31.1	-2.3
VHO	Vista Hermosa	2.40	311	*i* P	Pn	06 17 11.3	-1.9
VHO				*i* S	Sn	06 17 39.4	-2.1
VHO	Vista Hermosa	2.40	311	*i* P	Pn	06 17 15.0	+1.7
VHO				*i* S	Sn	06 17 41.1	-0.4
SCX	San Cristobal	2.44	60	*i* P	Pn	06 17 14.5	+0.7
SCX				*i* S	Sn	06 17 40.0	-2.4
THIG		2.55	103	*i* P	Pn	06 17 14.2	-1.1
THIG				*i* S	Sn	06 17 42.8	-2.2
CCIG	Comitan	2.71	73	*i* P	Pn	06 17 16.1	-1.3
CCIG				*i* S	Sn	06 17 47.0	-1.9
CCIG	Comitan	2.71	73	*i* P	Pn	06 17 16.1	-1.3
CCIG				*i* S	Sn	06 17 43.4	-5.5
PNIG	Pinotepa	3.29	286	*i* P	Pn	06 17 24.5	-0.9
PNIG				*i* S	Sn	06 18 00.9	-2.5
PNIG	Pinotepa	3.29	286	*i* P	Pn	06 17 22.8	-2.7
PNIG				*i* S	Sn	06 18 00.9	-2.5
PPM	Popocatepetl	5.07	315	*i* S	Sn	06 18 45.8	-1.3

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*IDC **11** 06:21:13.4±0.9, 906S×10962W, h0km, mb4.5/14, mb1 4.6/14, mb1mx4.6/17, mbtmp4.5/14, MS5.0/14, Ms1 5.0/14, ms1mx4.8/16, Error ellipse: s-maj=28.6km s-min=15.8km az=56.0*

*ISCJB **11** 06:21:13.3±0.5, 914S±006×10935W±008, h10km, mb5.0/68, MS5.0/20, Error ellipse: s-maj=11.7km s-min=7.5km az=150.5*

*GCMT **11** 06:21:15.3±0.1, 904S×10958W, h15km, MW5.5/105, Moment Tensor Solution. s81,c147; s105,c209; Duration: 1§4 Moment tensor: Scale 10^17 Nm; Mrr-0.17±.03; Mθθ0.41±.03; Mφφ-0.24±.03; Mrθ0.03±.04; Mθφ2.23±.03; Mφr0.21±.05; Best double couple: M0 2.26400×10^17 NP1:φs94.00000°, δ85.00000°, λ0.00000°. NP2:φs184.00000°, δ90.00000°, λ-175.00000°. Principal axes: T 2.3480, Plg4.0000°, Azm319.0000°; N -0.1680, Plg85.0000°, Azm187.0000°; P -2.1800, Plg4.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **11** 06:21:15.5±1.3, 888S×10908W, h10km, mb5.3/27 Error ellipse: s-maj=16.3km s-min=5.9km az=88.0*

*NEIC **11** 06:21:15.3±0.5, 9.12S×10943W, h10km, mb5.2/54, Error ellipse: s-maj=12.4km s-min=8.0km az=55.0*

*BJI **11** 06:21:16.2, 9.10S×10940W, h10km, Ms5.8, Msz5.4*

ISC 11 06:21:15.1±0.5, 918S±006×10939W±007, h10km, n245, σ1§27/198, mb5.0/68, MS5.0/20, 1C-3D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	Rikitea	28.14	237	*e*LR	LR	06 34 24.9	
	8μm,27.2s,baz=58						
CMIG	Matias Romero	29.78	29	P	P	06 27 21.9	-0.3
	24nm,1.0s,mb4.9,baz=213,slow=6.4,SNR=25						
CMIG				LR	LR	06 36 37.0	
	comp=Z,3μm,21.9s,MS4.9,baz=207,slow=31						
PBVM	Pinon	30.20	20	*i* P	P	06 27 25.8	-0.1
PTVM	Pico Tres Padr	30.33	19	*i* P	P	06 27 26.7	-0.3
IIO	Organos	30.46	20	*i* P	P	06 27 27.7	-0.5
CCIG	Comitan	30.52	34	*i* P	P	06 27 29.1	+0.3
ATAH	Atahualpa	30.76	88	P	P	06 27 34.5	+3.5
	3.5nm,0.8s,mb4.3,baz=119,slow=19,SNR=2.5						
ATAH				LR	LR	06 37 19.8	
	comp=Z,1μm,19.1s,MS4.6,baz=112,slow=31						
TGUH	Tegucigalpa,Un	31.85	44	*e*P	P	06 27 42.1	+1.5
OTAV	Otavalo	32.20	75	*e*P	P	06 27 46.1	+2.4
TEIG	Tepich	35.85	35	*e*P	P	06 28 16.0	+0.7
ROSC	El Rosal	37.63	70	P	P	06 28 33.0	+2.5
	3.3nm,0.8s,mb4.1,baz=87,slow=19,SNR=4.8						
ROSC				LR	LR	06 41 04.7	
	comp=Z,1μm,18.8s,MS4.7,baz=4.7,slow=32						
ROSC	El Rosal	37.63	70	P	P	06 28 33.0	+2.5
ROSC				LR	LR	06 41 04.7	
TXAR	Lajitas Array	38.68	8	P	P	06 28 38.3	-0.9
	1.7nm,1.0s,mb3.8,baz=198,slow=7.9,SNR=13						
TXAR				PcP	PcP	06 30 51.8	+0.5
	1.2nm,0.8s,baz=184,slow=5.3,SNR=3.9						
TXAR				LR	LR	06 41 35.8	
	comp=Z,946nm,19.0s,MS4.6,baz=120,slow=32						
TXAR	Lajitas Array	38.68	8	P	P	06 28 38.3	-0.9
TXAR						06 30 51.8	
TXAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PPT	Papeete	39.90	254	*e*S	S	06 35 01.6	+6.7
	comp=Z,1μm,27.0s						
PPT				*e*LQ		06 37 57.0	
	comp=Z,10μm,28.8s						
PPT				*e*LR	LR	06 39 49.9	
	comp=Z,4μm,24.8s,baz=81						
PPT	Papeete	39.90	254	LR	LR	06 40 39.3	
	comp=Z,2μm,20.2s,MS4.8,baz=82,slow=29						
JCT	Junction City	40.49	13	*e*P	P	06 28 54.5	+0.2
	comp=Z,65nm,1.8s,mb5.0						
LPAZ	La Paz	40.80	104	P	P	06 28 59.5	+2.4
	comp=Z,7.6nm,0.9s,mb4.3,baz=271,slow=5.7,SNR=23						
LPAZ				LR	LR	06 42 26.8	
	comp=Z,2μm,18.9s,MS4.9,baz=355,slow=31						
LPAZ	La Paz	40.80	104	P	P	06 28 59.5	+2.4
LPAZ				LR	LR	06 42 26.8	
LVC	Limon Verde	41.02	114	P	P	06 29 01.9	+3.1
	comp=Z,11nm,1.1s,mb4.4,baz=285,slow=9.0,SNR=3.7						
LVC	Limon Verde	41.02	114	*e*P	P	06 29 02.3	+3.5
	comp=Z,80nm,1.8s,mb5.0						
HKT	Hockley	41.03	18	*e*P	P	06 28 57.4	-1.3
HKT				pmax	pmax		
	comp=Z,40nm,1.7s,mb4.8						
HKT	Hockley	41.03	18	*e*P	P	06 28 57.4	-1.3
	comp=Z,40nm,1.7s,mb4.8						
TUC	Tucson	41.27	358	*e*P	P	06 29 02.0	+1.3
GDL2	Guadalupe Moun	41.42	6	*e*P	P	06 29 03.3	+1.4
BAR	Barrett	42.20	351	*e*P	P	06 29 07.6	-0.6
GLA	Glamis	42.31	353	*e*P	P	06 29 08.4	-0.8
GLA				pmax	pmax		
	comp=Z,41nm,1.6s,mb4.8						
GLA	Glamis	42.31	353	*e*P	P	06 29 08.4	-0.7
	comp=Z,41nm,1.6s,mb4.8						
SDV	Santo Domingo	42.57	66	P	P	06 29 13.3	+1.7
	comp=Z,9.3nm,0.4s,mb4.9,baz=28,slow=22,SNR=3.5						
PFO	Pinyon Flat Ob	43.08	351	P	P	06 29 19.2	+3.8
	comp=Z,4.8nm,1.0s,mb4.2,baz=157,slow=7.7,SNR=6.1						
PFO	Pinyon Flat Ob	43.08	351	P	P	06 29 19.2	+3.8
PFO				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
LENM	Lemitar	43.16	3	*e*P	P	06 29 17.6	+1.5
BNM	Barren Site	43.17	3	*e*P	P	06 29 17.0	+0.9
LPM	Los Pinos Moun	43.33	3	*e*P	P	06 29 20.0	+2.6
MWC	Mount Wilson	43.94	350	*e*P	P	06 29 22.4	+0.1
MWC				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.9						
MWC	Mount Wilson	43.94	350	*e*P	P	06 29 22.4	+0.1
	comp=Z,30nm,1.1s,mb4.9						
ANMO	Albuquerque	43.97	3	*e*P	P	06 29 23.6	+1.0
LDFC	Landfair	44.34	353	*e*P	P	06 29 26.5	+0.9
AMTX	Amarillo	44.42	9	*e*P	P	06 29 27.7	+1.5
	comp=Z,80nm,1.8s,mb5.2						
WUAZ	Wupatki	44.49	358	*e*P	P	06 29 29.8	+3.1
GSC	Goldstone	44.79	351	*e*P	P	06 29 29.3	+0.2
WMOK	Wichita Mounta	44.81	12	*e*P	P	06 29 28.9	-0.4
ISA	Isabella	45.41	350	*e*P	P	06 29 34.1	0.0
ISA				pmax	pmax		
	comp=Z,85nm,2.1s,mb5.2						
ISA	Isabella	45.41	350	*e*P	P	06 29 34.1	0.0
	comp=Z,85nm,2.1s,mb5.2						
PTRM	Twissleman Ran	45.74	348	*e*P	P	06 29 37.5	+0.9
SHPR	Sheep Range	45.76	354	*e*P	P	06 29 36.4	-0.4
MIAR	Mount Ida	45.99	18	*e*P	P	06 29 37.9	-0.8
MIAR				pmax	pmax		
	comp=Z,38nm,1.3s,mb5.2						
MIAR	Mount Ida	45.99	18	*e*P	P	06 29 37.9	-0.8
	comp=Z,38nm,1.3s,mb5.2						
MVCO	Mesa Verde	46.15	1	*e*P	P	06 29 40.0	+0.1
	comp=Z,79nm,1.8s,mb5.3						
TPNV	Topopah Spring	46.33	352	*e*P	P	06 29 41.9	+0.6
TPNV				pmax	pmax		
	comp=Z,83nm,1.9s,mb5.3						
TPNV	Topopah Spring	46.33	352	*e*P	P	06 29 41.9	+0.6
	comp=Z,83nm,1.9s,mb5.3						
PLCA	Paso Flores	46.58	139	P	P	06 29 44.7	+1.5
	comp=Z,15nm,1.1s,mb4.8,baz=292,slow=11,SNR=10						
PLCA				LR	LR	06 44 41.7	
	comp=Z,4μm,18.6s,MS5.4,baz=15,slow=30						
PLCA	Paso Flores	46.58	139	P	P	06 29 44.7	+1.5
PLCA				LR	LR	06 44 41.7	
UALR	University of	46.60	19	*e*P	P	06 29 42.9	-0.5
CCUT	Cedar City	46.63	356	*e*P	P	06 29 53.4	+10
SDCO	Great Sand Dun	46.82	4	*e*P	P	06 29 46.0	+0.8
	comp=Z,41nm,1.6s,mb5.1						
ARUT	Antelope Range	46.87	356	P	P	06 29 44.0	-1.5
PV01	Paradox Valley	47.07	1	*e*P	P	06 29 47.4	+0.3
MTUM	Tungsten Hills	47.08	350	*e*P	P	06 29 46.5	-0.7
SAO	San Andreas Ge	47.08	347	*e*P	P	06 29 49.1	+1.9
LRAL	Lakeview Retre	47.09	26	*e*P	P	06 29 46.4	-0.9
OXF	Oxford	47.40	23	*e*P	P	06 29 49.4	-0.3
OXF				pmax	pmax		
	comp=Z,67nm,1.2s,mb5.5						
OXF	Oxford	47.40	23	*e*P	P	06 29 49.4	-0.4
	comp=Z,67nm,1.2s,mb5.5						
MSU	Marysvale	47.51	357	*e*P	P	06 29 53.2	+2.7
TPH	Tonopah	47.57	352	*e*P	P	06 29 51.4	+0.4
TPH				pmax	pmax		
	comp=Z,47nm,1.4s,mb5.3						
TPH	Tonopah	47.57	352	*e*P	P	06 29 51.4	+0.4
	comp=Z,48nm,1.4s,mb5.3						
HBAR	Harrisburg	47.88	21	*e*P	P	06 29 53.7	+0.3
SRU	San Rafael	48.05	359	*e*P	P	06 29 57.3	+2.6
CMB	Columbia Colle	48.08	348	*e*P	P	06 29 54.8	-0.1
NVAR	Mina Array Bea	48.08	351	P	P	06 29 54.2	-0.7
	comp=Z,2.6nm,0.6s,mb4.4,baz=182,slow=10,SNR=20						
TMUT	Trail Mountain	48.25	358	*e*P	P	06 30 01.7	+5.4
PLAL	Pickwick Lake	48.33	24	*e*P	P	06 29 55.3	-1.6
WAKR	Walker	48.35	349	*e*P	P	06 29 58.6	+1.6
GNAR	Gosnell	48.47	21	*e*P	P	06 29 58.5	+0.5
CBKS	Cedar Bluff	48.58	10	*e*P	P	06 29 58.8	0.0
CBKS				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.3						
CBKS	Cedar Bluff	48.58	10	*e*P	P	06 29 58.8	0.0
	comp=Z,40nm,1.2s,mb5.3						
ISCO	Idaho Springs	48.85	4	*e*P	P	06 30 00.6	-0.2
NLU	North Lily Min	48.94	357	*e*P	P	06 30 01.2	-0.3
MPU	Maple Canyon	48.99	358	*e*P	P	06 30 04.9	+3.0
GLAT	Glass	49.01	22	*e*P	P	06 30 02.1	0.0
GOGA	Godfrey	49.01	29	*e*P	P	06 30 01.8	-0.4
GOGA				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.3						
GOGA	Godfrey	49.01	29	*e*P	P	06 30 01.8	-0.4
	comp=Z,29nm,1.0s,mb5.3						
DUG	Dugway	49.22	357	*e*P	P	06 30 05.6	+1.9
DUG				pmax	pmax		
	comp=Z,42nm,1.6s,mb5.2						
DUG	Dugway	49.22	357	*e*P	P	06 30 05.6	+1.9
	comp=Z,42nm,1.6s,mb5.2						
DAU	Daniels Canyon	49.37	358	*e*P	P	06 30 07.3	+2.5
SWET	Sewanee	49.41	25	*e*P	P	06 30 04.7	-0.5
WVT	Waverly	49.43	23	*e*P	P	06 30 04.2	-1.1
PAHR	Pah Rah Range	49.51	350	*e*P	P	06 30 10.6	+4.8
	comp=Z,45nm,1.8s,mb5.2						
OHCM	Honcut	49.55	348	*e*P	P	06 30 09.3	+3.1
JLU	Jordanelle	49.56	358	*e*P	P	06 30 08.7	+2.4
HOPS	Hopland	49.58	346	*e*P	P	06 30 09.4	+2.9
	comp=Z,50nm,1.5s,mb5.3						
NOQ	North Oquirrh	49.64	357	*e*P	P	06 30 09.8	+3.0
	comp=Z,72nm,1.7s,mb5.4						
CTU	Camp Tracy	49.67	358	*e*P	P	06 30 09.2	+2.2
	comp=Z,36nm,1.8s,mb5.1						
CCM	Cathedral Cave	49.95	19	*e*P	P	06 30 07.2	-2.1
CCM				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
CCM	Cathedral Cave	49.95	19	*e*P	P	06 30 07.2	-2.1
	comp=Z,18nm,0.8s,mb5.2						
BGU	Big Grassy Mou	49.96	356	*e*P	P	06 30 09.3	0.0
ELK	Elko	49.96	354	*e*P	P	06 30 09.6	+0.3
ELK				pmax	pmax		
	comp=Z,147nm,2.5s						
ELK	Elko	49.96	354	*e*P	P	06 30 09.6	+0.2
	comp=Z,147nm,2.5s,mb5.6						
FVM	French Village	50.15	20	*e*P	P	06 30 09.6	-1.2
CPCT	Cooper Cave	50.22	27	*e*P	P	06 30 11.4	+0.1
SPUT	South Promonto	50.31	357	*e*P	P	06 30 13.9	+2.0
SIUC	Southern Illin	50.32	21	*e*P	P	06 30 11.4	-0.7
	comp=Z,29nm,0.9s,mb5.3						
PHWY	Pilot Hill	50.36	4	*e*P	P	06 30 13.2	+0.9
KCPM	Cahto Peak	50.37	346	*e*P	P	06 30 13.0	+0.6
KIPM	Iron Peak	50.46	346	*e*P	P	06 30 13.6	+0.5
HWUT	Hardware Ranch	50.57	358	*e*P	P	06 30 12.6	-1.4
	comp=Z,29nm,1.4s,mb5.0						
RWWY	Rawlins	50.65	2	*e*P	P	06 30 14.7	+0.1
TKL	Tuckaleechee C	50.72	27	*e*P	P	06 30 14.8	-0.4
JSC	Jenkinsville	50.79	30	*e*P	P	06 30 15.1	-0.6
HVU	Hansel Valley	50.80	357	*e*P	P	06 30 17.2	+1.6
HVU				pmax	pmax		
	comp=Z,50nm,2.1s,mb5.1						
HVU	Hansel Valley	50.80	357	*e*P	P	06 30 17.2	+1.6
	comp=Z,50nm,2.1s,mb5.1						
WDC	Whiskeytown Da	50.98	347	*e*P	P	06 30 17.7	+0.7
KHMM	Horse Mountain	51.53	346	*e*P	P	06 30 24.7	+3.6
TZTN	Tazewell	51.56	27	*e*P	P	06 30 21.4	-0.1
	comp=Z,29nm,1.0s,mb5.2						
OLIL	Olney	51.63	21	*e*P	P	06 30 20.7	-1.2
	comp=Z,33nm,0.8s,mb5.3						
BW06	Boulder Array	51.69	360	*e*P	P	06 30 20.2	-2.1
PDAR	Pinedale Array	51.69	360	P	P	06 30 20.1	-2.2
	comp=Z,0.9nm,0.6s,mb3.9,baz=184,slow=8.1,SNR=7.3						
PDAR				LR	LR	06 49 21.8	
	comp=Z,2μm,18.3s,MS5.2,baz=189,slow=33						
MOD	Modoc	51.80	350	*e*P	P	06 30 22.9	-0.3
WCI	Wyandotte Cave	51.86	23	*e*P	P	06 30 22.9	-0.7
WCI				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
WCI	Wyandotte Cave	51.86	23	*e*P	P	06 30 22.9	-0.7
	comp=Z,19nm,1.0s,mb5.0						
WVOR	Wild Horse Val	52.05	351	*e*P	P	06 30 24.2	-0.8
WVOR				pmax	pmax		
	comp=Z,42nm,1.6s,mb5.1						
WVOR	Wild Horse Val	52.05	351	*e*P	P	06 30 24.2	-0.8
	comp=Z,42nm,1.6s,mb5.1						
CPUP	Villa Florida	52.07	116	P	P	06 30 25.9	+0.4
	comp=Z,5.0nm,1.0s,mb4.4,baz=265,slow=6.4,SNR=6.7						
CPUP				LR	LR	06 48 28.3	
	comp=Z,2μm,21.7s,MS5.1,baz=264,slow=31						
CPUP	Villa Florida	52.07	116	P	P	06 30 25.9	+0.3
CPUP				LR	LR	06 48 28.3	
YBH	Yreka Blue Hor	52.11	347	*e*P	P	06 30 25.8	+0.3
KRMB	Red Mountain	52.19	346	*e*P	P	06 30 29.2	+3.2
RRI2	Red Ridge	52.30	358	*e*P	P	06 30 25.1	-1.7
	comp=Z,32nm,1.4s,mb5.1						
REDW	Red Top Meadow	52.30	359	*e*P	P	06 30 25.8	-1.0
SNOW	Snow King Moun	52.40	359	*e*P	P	06 30 31.5	+3.9
	comp=Z,24nm,1.4s,mb4.9						
TPAW	Teton Pass	52.43	359	*e*P	P	06 30 28.8	+0.9
	comp=Z,25nm,1.3s,mb5.0						
LOHW	Long Hollow	52.55	359	*e*P	P	06 30 26.9	-1.8
BLO	Bloomington	52.59	22	*e*P	P	06 30 28.0	-1.1
BLO				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
BLO	Bloomington	52.59	22	*e*P	P	06 30 28.0	-1.1
	comp=Z,22nm,0.9s,mb5.1						
HLID	Hailey	52.69	355	*e*P	P	06 30 28.6	-1.0
	comp=Z,67nm,2.1s,mb5.2						
MOOW	Moose Ponds	52.69	359	*e*P	P	06 30 28.6	-1.1
	comp=Z,37nm,1.7s,mb5.0						
IMW	Indian Meadow	52.84	359	*e*P	P	06 30 29.2	-1.6
	comp=Z,24nm,1.2s,mb5.0						
HUMO	Hull Mountain	53.00	347	*e*P	P	06 30 31.1	-0.9
FLWY	Flagg Ranch	53.02	359	*e*P	P	06 30 30.8	-1.3
RSSD	Black Hills	53.27	5	*e*P	P	06 30 34.9	+0.9
ELN	Prospectdale	53.40	28	*e*P	P	06 30 34.7	-0.4
BLA	Blacksburg	53.54	29	*e*P	P	06 30 35.1	-1.0
BLA				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.3						
BLA	Blacksburg	53.54	29	*e*P	P	06 30 35.1	-1.0
	comp=Z,52nm,1.4s,mb5.3						
QLMT	Earthquake Lak	53.78	358	*e*P	P	06 30 40.0	+2.2
MCMT	McKenzie Canyo	53.84	357	*e*P	P	06 30 37.0	-1.1
ECSD	EROS,Sioux Fal	53.92	11	*e*P	P	06 30 37.5	-1.3
	comp=Z,36nm,1.6s,mb5.0						
RLMT	Red Lodge	54.05	0	*e*P	P	06 30 43.1	+3.5
	comp=Z,50nm,2.4s,mb5.0						
BMO	Blue Mountains	54.25	353	*e*P	P	06 30 42.9	+1.7
DLMT	Dillon	54.36	357	*e*P	P	06 30 43.5	+1.5
	comp=Z,28nm,1.4s,mb5.0						
BOZ	Bozeman (W)	54.61	358	*e*P	P	06 30 46.4	+2.7
BOZ				pmax	pmax		
	comp=Z,65nm,2.8s,mb5.2						
BOZ	Bozeman (W)	54.61	358	*e*P	P	06 30 46.4	+2.7
	comp=Z,65nm,2.8s,mb5.2						
JFWS	Jewell Farm	54.71	17	*e*P	P	06 30 43.6	-0.9
GCMT	Greycliff	54.72	360	*e*P	P	06 30 45.0	+0.5
LRM	Limekiln Ridge	54.81	357	*e*P	P	06 30 48.9	+3.6
HOOD	Mount Hood Mea	55.36	350	*e*P	P	06 30 49.4	+0.2
	comp=Z,46nm,1.4s,mb5.3						
LAO	LASA Array	55.68	3	*e*P	P	06 30 50.1	-1.4
	comp=Z,32nm,1.1s,mb5.3						
MCWV	Mont Chateau	55.78	27	*e*P	P	06 30 50.8	-1.5
MSO	Missoula	55.90	356	*e*P	P	06 30 53.3	+0.3
CHMT	Chamberlain Mo	55.94	357	*e*P	P	06 30 52.0	-1.3
HAWA	Hanford	56.06	352	*e*P	P	06 30 56.1	+1.9
	comp=Z,34nm,1.9s,mb5.0						
LON	Longmire	56.77	350	*e*P	P	06 30 57.7	-1.6
OD2	Odessa Site #2	56.92	352	*e*P	P	06 31 00.4	+0.1
EGMT	Eagleton	56.95	360	*e*P	P	06 31 00.2	-0.3
ETW	Entiat	57.36	351	*e*P	P	06 31 03.1	-0.3
DGMT	Dagmar	57.58	4	*e*P	P	06 31 04.0	-1.0
	comp=Z,34nm,1.1s,mb5.3						
NEW	Newport	57.60	354	*e*P	P	06 31 03.7	-1.4
NEW				pmax	pmax		
	comp=Z,21nm,1.6s						
NEW	Newport	57.60	354	*e*P	P	06 31 03.7	-1.4
	comp=Z,21nm,1.6s,mb4.9						
MVL	Millersville	57.70	30	*e*P	P	06 30 57.0	-9.0
	comp=Z,20nm,1.0s,mb5.1						
NLWA	Neilton Lookou	57.77	348	*e*P	P	06 31 06.9	+0.6
COWI	Conover	57.94	17	*e*P	P	06 31 06.6	-1.0
	comp=Z,18nm,0.8s,mb5.1						
WALA	Waterton Lakes	58.12	356	*e*P	P	06 31 09.7	+0.9
JCW	Jim Creek	58.19	350	*e*P	P	06 31 07.7	-1.6
RPW	Rockport	58.36	351	*e*P	P	06 31 14.3	+3.9
AGMN	Agassiz Refuge	58.46	11	*e*P	P	06 31 10.1	-1.0
	comp=Z,32nm,1.7s,mb5.1						
PGC	Sidney	58.90	349	*e*P	P	06 31 14.2	+0.1
EYMN	Ely	59.04	14	*e*P	P	06 31 14.7	-0.5
BINY	Binghamton	59.57	28	*e*P	P	06 31 17.4	-1.6
BDFB	Brasilia	60.12	103	P	P	06 31 23.5	+0.1
	comp=Z,11nm,1.0s,mb4.8,baz=260,slow=9.6,SNR=4.9						
BDFB				LR	LR	06 54 44.5	
	comp=Z,860nm,19.1s,MS4.9,baz=262,slow=33						
ULM	Lac du Bonnet	60.34	10	P	P	06 31 23.2	-0.9
	comp=Z,25nm,1.0s,mb5.2,baz=224,slow=3.9,SNR=7.6						
ULM	Lac du Bonnet	60.34	10	P	P	06 31 23.2	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NCB	**Newcomb**	**61.76**	**28**	*e*P	**P**	**06 31 33.7**	**-0.2**
LONY	**Lake Ozonia**	**62.09**	**27**	*e*P	**P**	**06 31 36.2**	**+0.1**
EDM	**Edmonton**	**62.24**	**357**	*e*P	**P**	**06 31 34.6**	**-2.3**
MDV	**Middlebury**	**62.27**	**29**	*e*P	**P**	**06 31 37.1**	**-0.3**
FRNY	**Flat Rock**	**62.71**	**28**	*e*P	**P**	**06 31 39.3**	**-1.0**
	comp=Z,21nm,1.1s,mb5.2						
DLBC	**Dease Lake**	**69.43**	**349**	*e*P	**P**	**06 32 22.5**	**-0.7**
YKA	**Yellowknife Ar**	**71.56**	**357**	LR	LR	07 01 01.6	
	comp=Z,652nm,18.2s,MS4.9,baz=175,slow=33						
SCHQ	**Schefferville**	**73.05**	**24**	P	**P**	**06 32 45.2**	**0.0**
	comp=Z,11nm,0.9s,mb4.8,baz=210,slow=3.7,SNR=3.7						
SCHQ				LR	LR	07 04 00.3	
	comp=Z,1μm,20.0s,MS5.1,baz=222,slow=35						
SCHQ	**Schefferville**	**73.05**	**24**	P	**P**	**06 32 45.2**	**0.0**
SCHQ				LR	LR	07 04 00.3	
DAWY	**Dawson**	**76.48**	**347**	*e*P	**P**	**06 33 03.3**	**-1.6**
PMR	**Palmer**	**77.06**	**342**	*e*P	**P**	**06 33 06.1**	**-2.1**
PMR				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
PMR	**Palmer**	**77.06**	**342**	*e*P	**P**	**06 33 06.1**	**-2.1**
	comp=Z,11nm,0.9s,mb4.8						
KTH	**Kantishna Hill**	**79.09**	**342**	*e*P	**P**	**06 33 17.1**	**-2.3**
	comp=Z,36nm,1.2s,mb5.2						
COLA	**College**	**79.23**	**344**	*d i*P	**P**	**06 33 20.8**	**+0.7**
SBA	**Scott Base**	**79.79**	**192**	*e*P	**P**	**06 33 26.1**	**+3.0**
COLD	**Coldfoot**	**81.66**	**345**	*e*P	**P**	**06 33 32.0**	**-1.2**
	comp=Z,15nm,1.1s,mb4.8						
VNA3	**Neumayer Olymp**	**84.49**	**161**	*e*P	**P**	**06 33 46.4**	**-1.5**
VNA3				*e*		06 33 53.0	
VNA1	**Neumayer--Stat**	**85.08**	**161**	*e*P	**P**	**06 33 49.5**	**-1.3**
VNA1				*e*		06 33 56.1	
VNA2	**Neumayer--Watz**	**85.29**	**161**	*e*P	**P**	**06 33 50.3**	**-1.6**
VNA2				*e*		06 33 57.0	
SNAA	**Sanae**	**86.49**	**162**	*e*P	**P**	**06 33 56.1**	**-1.7**
SNAA				*e*		06 34 02.5	
SNAA	**Sanae**	**86.49**	**162**	*e*P	**P**	**06 33 56.8**	**-1.0**
SNAA				pmax	pmax		
	comp=Z,12nm,1.3s						
SNAA	**Sanae**	**86.49**	**162**	*e*P	**P**	**06 33 56.8**	**-1.0**
	comp=Z,12nm,1.3s,mb5.0						
SFJD	**Kangerlussuaq**	**86.82**	**20**	LR	LR	07 11 48.9	
	comp=Z,730nm,19.1s,MS5.1,baz=198,slow=35						
DRV	**Dumont d'Urvil**	**89.60**	**202**	SS	SS	06 50 51.0	-8.0
DRV				L		07 00 00.0	
DRV				R		07 04 00.0	
PETK	**Petropavlovsk-**	**99.01**	**322**	LR	LR	07 10 55.8	
	comp=Z,934nm,21.4s,MS5.2,baz=115,slow=30						
PMAFR	**Mafra**	**103.55**	**52**	*e*LQ		07 05 08.0	
PMAFR				*e*LR	LR	07 10 14.2	
	comp=Z,446nm,20.0s						
PFVI	**Vila Bisbo**	**103.88**	**54**	*e*LQ		07 05 10.5	
PFVI				*e*LR	LR	07 10 21.3	
	comp=Z,450nm,20.0s						
PBDV	**Barranco-do-Ve**	**104.60**	**54**	*e*LQ		07 05 23.1	
PBDV				*e*LR	LR	07 10 34.4	
	comp=Z,494nm,22.0s						
KBS	**Kingsbay**	**104.76**	**10**	*e*SS	SS	06 54 29.4	-3.3
KBS				AMS	AMS	07 24 37.2	
	comp=Z,606nm,17.3s,MS5.2						
PVAQ	**Vaqueiros**	**104.77**	**54**	*e*SKSac	SKSac	06 46 14.5	+12
PVAQ				*i* P	PS	06 49 09.8	+14
PVAQ	**Vaqueiros**	**104.77**	**54**	*e*LQ		07 05 36.1	
PVAQ				*e*LR	LR	07 10 37.0	
	comp=Z,418nm,18.8s						
PESTR	**Estremoz**	**104.87**	**52**	*e*SKSac	SKSac	06 46 14.9	+12
PESTR				*i* P	PS	06 49 01.7	+4.7
PESTR	**Estremoz**	**104.87**	**52**	*e*LQ		07 05 22.8	
PESTR				*e*LR	LR	07 10 25.7	
	comp=Z,359nm,18.0s						
MTE	**Manteigas**	**104.90**	**51**	*i* P	PS	06 49 06.0	+8.8
MTE	**Manteigas**	**104.90**	**51**	*e*LQ		07 05 57.8	
MTE				*e*LR	LR	07 09 46.5	
	comp=Z,466nm,22.0s						
PMRV	**Marv??o**	**105.02**	**52**	*e*LR	LR	07 11 18.7	
	comp=Z,378nm,22.0s						
MVO	**Moncorvo**	**105.28**	**50**	*e*SKSac	SKSac	06 46 07.5	+2.8
MVO				*i* P		06 48 59.8	
MVO	**Moncorvo**	**105.28**	**50**	*e*LQ		07 06 05.1	
MVO				*e*LR	LR	07 10 39.4	
	comp=Z,296nm,20.0s						
PBAR	**Barrancos**	**105.31**	**53**	*i* P	PS	06 49 06.9	+5.4
PBAR	**Barrancos**	**105.31**	**53**	*e*LQ		07 05 51.0	
PBAR				*e*LR	LR	07 10 51.7	
	comp=Z,242nm,24.0s						
BER	**Bergen**	**110.04**	**29**	*e*SS	SS	06 55 44.5	-0.5
BER				AMS	AMS	07 21 17.1	
	comp=Z,249nm,24.2s,MS4.7						
TRO	**Tromso**	**111.27**	**17**	*e*SS	SS	06 56 01.6	+0.8
TRO				AMS	AMS	07 24 03.4	
	comp=Z,310nm,20.4s,MS4.9						
KONO	**Kongsberg**	**112.30**	**29**	*e*SS	SS	06 56 19.4	+4.3
KONO				AMS	AMS	07 22 25.0	
	comp=Z,277nm,21.7s,MS4.8						
BOSA	**Boshof**	**122.32**	**132**	PKP	PKPdf	06 40 10.8	-0.4
	comp=Z,6.3nm,1.1s,baz=247,slow=4.1,SNR=3.2						
AKASG	**Malin Array Be**	**126.40**	**31**	PKP	PKPdf	06 40 18.5	+0.2
	comp=Z,0.2nm,0.2s,baz=292,slow=2.8,SNR=2.5						
OBN	**Obninsk**	**126.85**	**24**	*i* PKIKP	PKPdf	06 40 21.7	+2.7
OBN				*i*		06 42 15.4	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.6s						
OBN				MLR	MLR		
	comp=Z,300nm,18.0s,MS5.0						
VSR	**Storozhevoye**	**130.77**	**26**	*e*PKHKP		06 39 56.0	
VSR				pmax	pmax		
	comp=N,10.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SONM	**Songino Array**	**131.05**	**329**	PKP	PKPdf	06 40 26.5	-0.7
	comp=Z,0.6nm,0.5s,baz=49,slow=4.9,SNR=3.5						
SONM	**Songino Array**	**131.05**	**329**	PKIKP	PKPdf	06 40 26.5	-0.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARU	**Arti**	**131.93**	**9**	PKIKP	PKPdf	06 40 31.7	+3.0
ZALV	**Zalesovo Beam**	**133.91**	**348**	PKP	PKPdf	06 40 32.2	-0.2
	comp=Z,0.8nm,0.5s,baz=348,slow=6.1,SNR=3.2						
ZALV	**Zalesovo Beam**	**133.91**	**348**	PKIKP	PKPdf	06 40 32.2	-0.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**133.91**	**348**	PKP	PKPdf	06 40 32.2	-0.2
ANN	**Anapa**	**134.40**	**33**	*e*PKIKP	PKPdf	06 40 34.7	+1.0
KURK	**Kurchatov**	**138.06**	**352**	*i* PKIKP	PKPdf	06 40 42.2	+1.9
GTA	**Gaotai**	**140.16**	**324**	*e*PKP	PKPdf	06 40 50.3	+5.8
MKAR	**Makanchi Array**	**141.21**	**347**	PKP	PKPdf	06 40 44.5	-1.7
	comp=Z,0.6nm,0.6s,baz=42,slow=2.3,SNR=3.6						
MKAR	**Makanchi Array**	**141.21**	**347**	PKIKP	PKPdf	06 40 44.5	-1.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KMBO	**Kilima Mbogo**	**145.23**	**105**	PKPbc	PKPbc	06 40 56.3	+2.4
	comp=Z,0.6nm,0.4s,baz=229,slow=18,SNR=4.1						
KMBO	**Kilima Mbogo**	**145.23**	**105**	PKIKP	PKPdf	06 40 56.3	+2.0
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FRU	**Bishkek**	**146.29**	**355**	⇓*e*PKP2	PKPab	06 40 56.0	-1.0
FRU				pmax	pmax		
	comp=Z,120nm,2.0s						
FRU				MLR	MLR		
	comp=Z,500nm,20.0s,MS5.3						
NANT	**Nan**	**149.32**	**291**	⇑P	PKPdf	06 41 03.0	+2.1
	comp=Z,81nm,1.0s						
CHG	**Chiang Mai**	**150.93**	**292**	⇓P	PKPab	06 41 11.5	-4.9
	comp=Z,12nm,1.0s						
CHTO	**Chiang Mai**	**150.93**	**292**	*e*PKIKP	PKPbc	06 41 08.4	-0.7
CMAR	**Chiang Mai Arr**	**151.02**	**292**	PKPbc	PKPbc	06 41 09.6	+0.2
	comp=Z,4.4nm,0.7s,baz=354,slow=0.4,SNR=5.6						
CMAR	**Chiang Mai Arr**	**151.02**	**292**	PKIKP	PKPbc	06 41 09.6	+0.3
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						

TAP 11 06:38:39.6,2272N×12103E,h8^{km},ML3.5,10C-7D,B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**0.10**	**22**	⇑*i*P	Pg	06 38 42.6	+0.6
	baz=20						
TWG				*i* S	Sg	06 38 44.4	+0.7
	baz=20						
TTN	**Taitung**	**0.11**	**75**	⇓*i*P	Pg	06 38 43.5	+1.3
	baz=74						
TTN				*i* S	Sg	06 38 46.5	+2.6
	baz=74						
ECL	**Taimali**	**0.14**	**209**	⇓*i*P	Pg	06 38 42.9	+0.2
	baz=210						
ECL				*e*S	Sg	06 38 45.0	+0.2
	baz=210						
SSD	**Sandimen**	**0.37**	**273**	⇓*i*P	Pg	06 38 47.2	+0.3
	baz=277						
SSD				S	Sg	06 38 51.5	-0.2
	baz=277						
EAST	**Anshuo**	**0.38**	**206**	⇓*i*P	Pg	06 38 47.4	+0.4
	baz=215						
EAST				*e*S	Sg	06 38 52.2	+0.2
	baz=215						
TAW	**Tawu**	**0.39**	**199**	P	Pg	06 38 47.5	+0.3
	baz=200						
TAW				S	Sg	06 38 52.5	+0.3
	baz=200						
ELDTW	**Lidau**	**0.46**	**359**	⇑*i*P	Pg	06 38 49.0	+0.4
	baz=356						
ELDTW				S	Sg	06 38 54.9	+0.1
	baz=356						
CHKT	**Chengkung**	**0.48**	**40**	⇓*i*P	Pg	06 38 49.9	+0.8
	baz=38						
CHKT				*e*S	Sg	06 38 57.5	+2.0
	baz=38						
STYT	**Tauyuan**	**0.50**	**330**	⇑*i*P	Pg	06 38 50.2	+0.7
	baz=328						
STYT				S	Sg	06 38 56.8	+0.8
	baz=328						
SCZT	**Fangliau**	**0.52**	**227**	⇓*i*P	Pg	06 38 50.1	+0.4
	baz=231						
SGST	**Jiashian**	**0.55**	**311**	⇑*i*P	Pg	06 38 51.3	+1.1
	baz=306						
SGST				*e*S	Sg	06 39 00.7	+3.3
	baz=306						
TWM1	**Shoushan**	**0.57**	**280**	*e*P	Pg	06 38 52.3	+1.7
	baz=284						
TWM1				*e*S	Sg	06 39 00.9	+2.9
	baz=284						
WTP	**Ta-pu**	**0.65**	**324**	⇑*i*P	Pg	06 38 53.5	+1.4
	baz=327						
WTP				*e*S	Sg	06 39 03.6	+3.0
	baz=327						
CHN1	**Nanshi**	**0.65**	**315**	⇑P	Pg	06 38 53.9	+1.6
	baz=314						
CHN1				*e*S	Sg	06 39 05.2	+4.4
	baz=314						
TWF1	**Yuli**	**0.67**	**21**	⇓P	Pg	06 38 53.1	+0.5
	baz=11						
TWF1				*e*S	Sg	06 39 01.6	+0.2
	baz=11						
KAU	**Kaohsiung**	**0.69**	**257**	*e*P	Pg	06 38 57.0	+4.2
	baz=265						
TWP	**Hsiaoliuchiu**	**0.72**	**239**	*e*P	Pg	06 38 56.8	+3.2
	baz=229						
TWK	**Hsinying**	**0.74**	**317**	⇑*i*P	Pg	06 38 55.6	+1.8
	baz=316						
TWK				*e*S	Sg	06 39 06.1	+2.7
	baz=316						
CHN4	**Tsaushan**	**0.74**	**327**	⇑*i*P	Pg	06 38 55.5	+1.5
	baz=326						
CHN4				S	Sg	06 39 06.5	+2.8
	baz=326						
HEN	**Hengchun**	**0.76**	**201**	*e*P	Pg	06 38 54.5	+0.1
	baz=188						
YUS	**Yu-Shan**	**0.77**	**355**	⇑*i*P	Pg	06 38 54.9	+0.5
	baz=359						
YUS				S	Sg	06 39 05.4	+1.0
	baz=359						
TAI1	**Yung-k'ang**	**0.80**	**293**	*e*P	Pg	06 38 57.8	+2.6
	baz=293						
TWK1	**Hengchun**	**0.80**	**195**	*e*P	Pg	06 38 55.8	+0.6
	baz=183						
ALS	**Alishan**	**0.81**	**345**	⇑*i*P	Pg	06 38 55.9	+0.6
	baz=343						
ALS				S	Sg	06 39 08.2	+2.4
	baz=343						
EHY	**Hungye**	**0.82**	**19**	*e*P	Pg	06 38 55.1	-0.4
	baz=8.0						
EHY				*e*S	Sg	06 39 07.0	+0.7
	baz=8.0						
LAY	**Lan-yu**	**0.83**	**145**	*e*P	Pg	06 38 53.9	-1.8
	baz=146						
SCLT	**Jiali**	**0.89**	**300**	*e*P	Pg	06 38 59.3	+2.5
	baz=300						
SCLT				*e*S	Sg	06 39 14.1	+5.6
	baz=300						
CHN5	**Tsauling**	**0.93**	**340**	*e*P	Pg	06 38 58.0	+0.5
	baz=346						
CHN5				*e*S	Sg	06 39 12.5	+2.9
	baz=346						
CHN2	**Minshiung**	**0.95**	**328**	*e*P	Pg	06 39 00.1	+2.1
	baz=326						
CHN2				*e*S	Sg	06 39 13.3	+2.9
	baz=326						
WGK	**Gukeng**	**1.05**	**336**	P	Pg	06 39 01.4	+1.5
	baz=334						
WGK				*e*S	Sg	06 39 15.9	+2.5
	baz=334						
SMLT	**Sun Moon Lake**	**1.16**	**354**	P	Pg	06 39 02.5	+0.5
	baz=352						
SMLT				S	Sg	06 39 19.9	+2.9
	baz=352						
TYC	**Yuchr**	**1.19**	**352**	P	Pb	06 39 03.0	+0.6
	baz=350						
TYC				S	Sg	06 39 21.0	+3.2
	baz=350						
WNT	**Mingjian**	**1.19**	**345**	*e*P	Pb	06 39 03.8	+1.3
	baz=346						
WHF	**Hehuan Shan**	**1.43**	**9**	*e*P	Pn	06 39 06.1	+0.2
	baz=12						
WHF				*e*S	Sn	06 39 26.8	+1.8
	baz=12						
TWD	**Chiawan**	**1.45**	**21**	*e*P	Pn	06 39 07.8	+1.6
	baz=37						
TCU	**Taichung**	**1.45**	**347**	*e*P	Pn	06 39 06.7	+0.4
	baz=349						
PNG	**Penghu**	**1.60**	**302**	*e*P	Pn	06 39 09.5	+1.3
	baz=302						
TWQ1	**Liyutan**	**1.63**	**352**	*e*P	Pn	06 39 10.7	+2.0
	baz=350						
TWQ1				*e*S	Sn	06 39 33.8	+3.8
	baz=350						
NSY	**Sanyi**	**1.70**	**352**	*e*P	Pn	06 39 11.8	+2.2
	baz=333						
NSY				*e*S	Sn	06 39 36.8	+5.2
	baz=333						
ENA	**Nanau**	**1.82**	**21**	*e*P	Pn	06 39 11.1	-0.2
	baz=37						
NSTT	**Nanjuang**	**1.90**	**359**	*e*P	Pn	06 39 15.6	+3.2
	baz=348						
NSK	**Sanguang**	**1.97**	**9**	*e*P	Pn	06 39 15.8	+2.5
	baz=12						
ENTT	**Nioudou**	**1.97**	**14**	*e*P	Pn	06 39 15.5	+2.1
	baz=33						
TWC	**Suao**	**2.02**	**22**	*e*P	Pn	06 39 15.0	+0.9
	baz=36						

*IDC **11** 07:39:50.1±6.9,1121S×16489E,h0^{km},mb4.0/4, mb1 4.1/5,mb1mx3.9/17,mbtmp4.0/5,MS3.6/3,Ms1 3.6/3, ms1mx3.1/29,Error ellipse: s-maj=197.2km s-min=35.4km az=122.0*

*NEIC **11** 07:39:52.0±1.7,1161S×16547E,h35^{km},mb4.4/2,Error ellipse: s-maj=30.7km s-min=19.3km az=63.0*

*ISCJB **11** 07:39:54.4±5.8,119S±02×1655E±02,h74^{km}±56^{km}, mb4.0/5,Error ellipse: s-maj=36.3km s-min=28.6km az=153.3*

ISC 11 07:39:56.2±4.8**,119S**±02×**1655E**±02**,h78**^{km}±50^{km}**,n12,** σ**0^{s}54**/11**,mb4.0**/5**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.20**	**175**	*e*P	**Pn**	**07 42 19.2**	**-0.4**
DZM	**Mont Dzumac**	**10.20**	**175**	*e*Pn	**Pn**	**07 42 19.4**	**-0.2**
DZM				*e*Sn	**Sn**	**07 44 12.5**	**+0.2**
CTA	**Charters Tower**	**20.22**	**244**	P	**P**	**07 44 26.1**	**+1.1**
	0.2nm,0.3s,baz=68,slow=11,SNR=6.1						
CTA				LR	LR	07 50 44.5	
	comp=Z,170nm,18.7s,baz=48,slow=33						
CTAO	**Charters Tower**	**20.22**	**244**	*e*P	**P**	**07 44 26.1**	**+1.0**
	37nm,2.1s						
AFI	**Afiamalu**	**22.24**	**98**	LR	LR	07 51 21.7	
	comp=Z,102nm,20.8s,baz=123,slow=30						
STKA	**Stephens Creek**	**29.70**	**224**	LR	LR	07 56 25.5	
	comp=Z,194nm,19.7s,baz=21,slow=34						
WB2	**Warramunga Arr**	**30.98**	**251**	*e*P	**P**	**07 46 05.3**	**-1.1**
WRA	**Warramunga Arr**	**30.99**	**251**	P	**P**	**07 46 06.6**	**+0.2**
	3.7nm,0.9s,mb4.1,baz=78,slow=9.3,SNR=21						
ASAR	**Alice Springs**	**32.23**	**244**	P	**P**	**07 46 16.9**	**-0.3**
	1.6nm,0.9s,mb3.8,baz=74,slow=9.6,SNR=14						
FITZ	**Fitzroy Crossi**	**38.95**	**256**	*e*P	**P**	**07 47 14.8**	**-0.2**
	5.4nm,0.7s,mb4.5						
SONM	**Songino Array**	**79.18**	**324**	P	**P**	**07 51 52.9**	**+0.3**
	0.5nm,0.8s,mb3.4,baz=129,slow=2.0,SNR=3.6						
MKAR	**Makanchi Array**	**93.95**	**317**	P	**P**	**07 53 05.5**	**+0.1**
	0.7nm,0.7s,mb4.1,baz=90,slow=6.1,SNR=5.0						

NEIC 11 07:42:49.4±3.5**,2422N**×**10994W,h10**^{km}**,mb3.8**/10**,Error ellipse: s-maj=46.1km s-min=15.1km az=192.0,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLA	**Glamis**	**9.79**	**335**	*e*Pn	Pn	07 45 09.4	-0.9
	6.8nm,0.8s						
PFO	**Pinyon Flat Ob**	**10.95**	**330**	*e*Pn	Pn	07 45 26.3	+0.1
	28nm,1.6s						
ANMO	**Albuquerque**	**11.11**	**15**	*e*Pn	Pn	07 45 28.2	-0.2
	30nm,2.4s						
LDFC	**Landfair**	**11.71**	**339**	*e*Pn	Pn	07 45 38.6	+2.0
	22nm,1.3s						
LDFC				Sn	Sn	07 47 45.0	-2.5
GSC	**Goldstone**	**12.54**	**333**	*e*Pn	Pn	07 45 48.5	+0.5
	12nm,1.2s						
ARUT	**Antelope Range**	**13.85**	**348**	*e*Pn	Pn	07 46 07.0	+1.1
ISCO	**Idaho Springs**	**15.96**	**12**	Pn	Pn	07 46 35.4	+1.4
	6.4nm,1.2s						
DUG	**Dugway**	**16.11**	**352**	*e*Pn	Pn	07 46 35.6	-0.4
	4.8nm,1.0s						
DAU	**Daniels Canyon**	**16.18**	**356**	*e*Pn	Pn	07 46 36.9	0.0
JLU	**Jordanelle**	**16.38**	**356**	*e*Pn	Pn	07 46 40.5	+1.1
CBKS	**Cedar Bluff**	**16.93**	**28**	*e*Pn	Pn	07 46 46.7	+0.3
	29nm,1.1s						
HWUT	**Hardware Ranch**	**17.39**	**356**	*e*P	Pn	07 46 51.7	-0.4
	17nm,1.2s						
RRI2	**Red Ridge**	**19.11**	**357**	*e*P	Pn	07 47 13.3	+0.1
	15nm,1.4s						
TPAW	**Teton Pass**	**19.24**	**358**	*e*P	Pn	07 47 14.7	0.0
	5.5nm,1.1s						
TPAW				*e*pP	pP	07 47 18.0	+1.4
LOHW	**Long Hollow**	**19.35**	**359**	*e*P	Pn	07 47 13.8	-2.3
	2.2nm,0.8s						
WVOR	**Wild Horse Val**	**19.54**	**340**	*e*P	Pn	07 47 18.5	+0.1
	3.3nm,0.9s						
IMW	**Indian Meadow**	**19.64**	**358**	*e*P	Pn	07 47 17.3	-2.3
	10nm,1.2s						
HBAR	**Harrisburg**	**20.14**	**51**	*e*P	P	07 47 25.4	+1.7
QLMT	**Earthquake Lak**	**20.60**	**357**	*e*P	P	07 47 30.6	+2.1
MCMT	**McKenzie Canyo**	**20.69**	**354**	*e*P	P	07 47 29.8	+0.1
GCMT	**Greycliff**	**21.52**	**1**	*e*P	P	07 47 37.6	-1.0
ECSD	**EROS,Sioux Fal**	**22.32**	**26**	*e*P	P	07 47 45.3	-1.8
	4.5nm,1.0s						
LNOR	**Lincton Mounta**	**22.63**	**345**	*e*P	P	07 47 49.8	-0.6
CHMT	**Chamberlain Mo**	**22.80**	**354**	*e*P	P	07 47 51.3	-0.9

*NEIC **11** 07:48:57.8,4005N×1666E,h7^{km},ML2.6(ROM),After ROM.*

*CSEM **11** 07:48:57.1±0.1,4004N×1666E,h25^{km},ML3.7/5,Error ellipse: s-maj=2.3km s-min=1.7km az=80.0*

ROM 11 07:48:57.8±0.3**,4005N**×**1666E,h7**^{km}±4^{km}**,Md2.7**/19**, Ml2.6**/17**,2D,Error ellipse: s-maj=3.0km s-min=2.5km az=108.0,Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORI	**Oriolo Calabro**	**0.16**	**274**	⇓*i*Pg	Pg	07 49 02.3	+1.2
	3μm,0.3s						
CRAC	**Craco**	**0.36**	**331**	⇓*i*Pg	Pg	07 49 05.8	+1.0
CRAC				Sg	Sg	07 49 12.6	+3.1
	2μm,0.3s						
SCHR	**S. Chirico Rap**	**0.47**	**288**	Pg	Pg	07 49 07.7	+0.8
SCHR				Sg	Sg	07 49 15.6	+2.5
	174nm,0.2s						
MIGL	**Miglionico**	**0.58**	**343**	Pg	Pg	07 49 08.5	-0.4
MIGL				Sg	Sg	07 49 17.7	+1.2
	940nm,0.4s						
SIRI	**Monte Sirino -**	**0.62**	**282**	Pg	Pg	07 49 09.6	-0.2
SIRI				Sg	Sg	07 49 20.5	+2.6
	255nm,0.2s						
CUC	**Castrocucco**	**0.65**	**265**	Pg	Pg	07 49 10.2	-0.1
CUC				Sg	Sg	07 49 19.6	+0.8
	121nm,0.4s						
PTRP	**Pietrapertosa**	**0.66**	**316**	Pg	Pg	07 49 11.2	+0.8
	313nm,0.4s						
MCEL	**Monticello**	**0.71**	**293**	Pg	Pg	07 49 11.0	-0.5
MCEL				Sg	Sg	07 49 22.4	+1.6
	244nm,0.3s						
MTSN	**Montesano sull**	**0.73**	**287**	Pg	Pg	07 49 11.2	-0.6
MTSN				Sg	Sg	07 49 23.0	+1.7
	293nm,0.2s						
SG1	**Sgolgore (BA)**	**0.79**	**1**	*e*Pg	Pg	07 49 14.5	+1.5
SG1				*e*Sg	Sg	07 49 25.3	+2.1
NOCI	**Noci**	**0.80**	**23**	Pg	Pg	07 49 13.9	+0.7
NOCI				Sg	Sg	07 49 25.0	+1.5
	254nm,0.2s						
AMUR	**Altamura**	**0.86**	**357**	Pg	Pg	07 49 14.1	-0.2
AMUR				Sg	Sg	07 49 27.1	+1.7
	198nm,0.4s						
CARO	**Carolei**	**0.87**	**203**	Pg	Pg	07 49 16.4	+2.0
	119nm,0.6s						
TIP	**Timpagrande**	**0.88**	**175**	Pg	Pg	07 49 15.0	+0.4
	26nm,0.4s						
TIP	**Timpagrande**	**0.88**	**175**	*e*Pg	Pg	07 49 14.5	-0.1
TIP				*e*Sg	Sg	07 49 25.2	-0.7
TIP	**Timpagrande**	**0.88**	**175**	*e*Pg	Pg	07 49 14.5	-0.1
TIP				*e*Sg	Sg	07 49 25.2	-0.7
PE1	**Pezze di Greco**	**0.95**	**37**	*e*Pg	Pg	07 49 16.6	+0.5
PE1				*e*Sg	Sg	07 49 29.6	+1.2
BULG	**Bulgheria - Ca**	**0.98**	**272**	Pg	Pg	07 49 16.7	0.0
SERS	**Sersale**	**1.01**	**179**	Pg	Pg	07 49 16.9	-0.3
	43nm,0.5s						
MRVN	**Minervino Murg**	**1.07**	**341**	Pg	Pg	07 49 18.5	+0.2
MRVN				Sg	Sg	07 49 32.8	+0.6
	97nm,0.5s						
CMPR	**Campora**	**1.07**	**285**	Pg	Pg	07 49 18.8	+0.4
	93nm,0.4s						
CDRU	**Civita di Ruta**	**1.13**	**293**	Pg	Pg	07 49 17.9	-1.5
	59nm,0.4s						
SGO	**Sicignano**	**1.15**	**297**	Pg	Pg	07 49 20.2	+0.3
	34nm,0.2s						

*IDC **11** 08:36:06.2±2.0,5359N×8790E,h0^{km},mb1 3.2/2, mb1mx3.0/24,mbtmp3.2/2,ML3.0/2,Error ellipse: s-maj=19.9km s-min=4.0km az=101.0*

*NNC **11** 08:36:15.7±3.3,5320N×87.13E,h0^{km},mb3.2,mpv2.9, Error ellipse: s-maj=24.6km s-min=19.4km az=46.0*

ISC 11 08:36:10.7±2.4**,5364N**±008×**875E**±02**,h10**^{km}**,n6,** σ**1^{s}20**/12**,7C-2D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.62**	**282**	Pn	**Pn**	**08 36 38.2**	**-1.1**
	1.6nm,0.3s,baz=100,slow=16,SNR=11						
ZALV				Pg	**Pg**	**08 36 44.1**	**+2.3**
	4.4nm,0.3s,baz=108,slow=14,SNR=16						
ZALV				Lg		08 37 04.8	
	3.7nm,0.3s,baz=101,slow=23,SNR=8.4						
KURK	**Kurchatov**	**6.20**	**245**	⇓Pn	**Pn**	**08 37 41.0**	**-1.1**
	2.5nm,1.0s						
KURK				⇓Sn	**Sn**	**08 38 53.1**	**+0.1**
	1.8nm,0.6s						
KURK				⇑Lg		08 39 20.7	
	6.1nm,0.9s						
KURK	**Kurchatov**	**6.20**	**245**	Pn	**Pn**	**08 37 43.2**	**+1.1**
	0.1nm,0.3s,baz=61,slow=14,SNR=6.9						
KURK				Sn	**Sn**	**08 38 58.2**	**+5.2**
	baz=178,slow=22,SNR=2.5						
KURK				Lg		08 39 32.8	
	0.1nm,0.3s,baz=130,slow=27,SNR=7.6						
KURBB	**Kurchatov Arra**	**6.29**	**245**	⇑Pn	**Pn**	**08 37 42.8**	**-0.6**
	0.4nm,0.3s						
KURBB				⇑Sn	**Sn**	**08 38 54.4**	**-0.9**
	0.5nm,0.7s						
KURBB				⇑Lg		08 39 23.5	
	1.0nm,0.6s						
MK31	**Makanchi Array**	**7.62**	**208**	⇑Pn	**Pn**	**08 38 04.9**	**+3.2**
	0.1nm,0.2s,baz=33,slow=13,SNR=4.0						
MK31				⇑Sn	**Sn**	**08 39 28.9**	**+0.9**
	0.9nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MK31				⇑Lg		08 39 59.3	
	1.4nm,0.7s,baz=30,slow=28,SNR=3.7						
MKAR	Makanchi Array	7.62	208	Pn	Pn	08 38 00.8	-0.9
	0.2nm,0.3s,baz=31,slow=16,SNR=4.3						
MKAR				Sn	Sn	08 39 27.8	-0.2
	0.1nm,0.3s,baz=33,slow=24,SNR=2.5						
MKAR				Lg		08 40 08.0	
	0.2nm,0.3s,baz=35,slow=24,SNR=5.9						

IDC 11 08:46:48.7±1.6, 811N×14150E, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.7/18, mbtmp3.8/5, ML4.4/1, MS3.3/7, Ms1 3.3/7, ms1mx3.0/28, Error ellipse: s-maj=58.6km s-min=21.8km az=91.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	6.37	31	Pn	Pn	08 48 23.3	-0.6
	9.0nm,0.3s,baz=161,slow=9.8,SNR=5.8						
GUMO				Sn	Sn	08 49 28.5	-9.0
	11nm,0.3s,baz=5.3,slow=22,SNR=7.0						
GUMO				LR	LR	08 50 36.1	
	comp=Z,168nm,19.0s,baz=221,slow=36						
JHJ	Hachijo jima 2	24.94	357	LR	LR	09 01 15.2	
	comp=Z,40nm,18.2s,baz=0.5,slow=35						
HNR	Honiara	25.32	133	LR	LR	09 00 56.4	
	comp=Z,27nm,18.9s,baz=319,slow=34						
CTA	Charters Tower	28.41	171	LR	LR	09 02 14.6	
	comp=Z,86nm,20.2s,baz=46,slow=33						
WRA	Warramunga Arr	28.75	194	P	P	08 52 48.6	+0.4
	0.9nm,0.9s,baz=14,slow=9.8,SNR=8.3						
KSRS	Korea Array	31.70	339	LR	LR	09 03 33.1	
	comp=Z,82nm,21.0s,baz=12,slow=32						
ASAR	Alice Springs	32.44	193	P	P	08 53 20.4	-0.4
	0.4nm,0.6s,baz=17,slow=13,SNR=6.8						
SONM	Songino Array	49.51	329	P	P	08 55 41.3	+0.2
	0.4nm,0.5s,baz=130,slow=8.1,SNR=3.1						
SONM				LR	LR	09 14 29.8	
	comp=Z,43nm,20.4s,baz=67,slow=34						
MKAR	Makanchi Array	63.25	319	P	P	08 57 19.4	+0.2
	1.0nm,0.8s,baz=96,slow=7.2,SNR=7.2						
ARCES	ARCESS Array B	91.23	342	LR	LR	09 45 45.3	
	comp=Z,19nm,19.0s,baz=46,slow=39						

IDC 11 08:49:51.9±2.5, 1142S×16508E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.7/3, MS4.6/1, Ms1 4.6/1, ms1mx2.9/25, Error ellipse: s-maj=278.6km s-min=33.4km az=151.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.74	250	P	P	08 56 09.5	+0.5
	1.9nm,1.1s,baz=78,slow=9.2,SNR=6.2						
ASAR	Alice Springs	32.04	243	P	P	08 56 20.1	-0.4
	0.5nm,0.8s,baz=76,slow=8.5,SNR=4.5						
RAR	Rarotonga	35.04	111	LR	LR	09 08 47.3	
	comp=Z,877nm,20.0s,baz=314,slow=32						
NVAR	Mina Array Bea	86.77	50	P	P	09 02 38.6	+0.4
	0.1nm,0.5s,baz=242,slow=7.8,SNR=4.4						

ISCJB 11 08:49:55.4±0.2, 4249N±002×118E±001, h3^{km}±2^{km}, Error ellipse: s-maj=2.6km s-min=1.7km az=14.0
NEIC 11 08:49:56.3, 4255N×119E, h5^{km}, ML3.6(LDG), MN2.8(MDD), After STR.
NEIC Felt [III] in the Rialp area, Spain.
LDG 11 08:49:56.9±0.1, 4249N×119E, h5^{km}, Ml3.6/13, Error ellipse: s-maj=1.8km s-min=1.7km az=6.0
STR 11 08:49:56.3±0.2, 4255N×119E, h5^{km}, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
MRB 11 08:49:56.8±0.1, 4250N×120E, h4^{km}±11^{km}, ML2.8/1, Error ellipse: s-maj=0.6km s-min=0.2km az=343.0
CSEM 11 08:49:56.6±0.1, 4251N×119E, h2^{km}, ML3.6/13, Error ellipse: s-maj=1.1km s-min=1.0km az=28.0
MDD 11 08:49:57.2±0.2, 4248N×119E, h0^{km}, mbLg2.8/38, Error ellipse: s-maj=1.9km s-min=1.5km az=25.0, PRIMO
MDD EMS: III INTENSIDAD MIMA.

ISC 11 08:49:56.2±0.2, 4252N±001×120E±001, h6^{km}±2^{km}, n127, σ1§23/219, 4C-3D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSOR	Sort	0.15	200	P	Pg	08 49 59.5	+0.3
SALF	Salau	0.24	358	P	Pg	08 50 02.4	+1.4
SALF				S	Sg	08 50 06.1	+1.8
CORG	Organya	0.30	163	P	Pg	08 50 02.0	0.0
CORG				S	Sg	08 50 06.0	+0.1
	500nm,0.1s						
CTRE	Tremp	0.37	239	P	Pg	08 50 03.5	+0.1
CTRE				S	Sg	08 50 08.3	+0.1
	527nm,0.1s						
MLS	Moulis	0.45	350	Pg	Pg	08 50 05.9	+1.0
MLS				Sg	Sg	08 50 09.5	-1.3
MLS	Moulis	0.45	350	P	Pg	08 50 06.0	+1.1
MLS				S	Sg	08 50 13.0	+2.2
MELF	Melles	0.48	318	P	Pg	08 50 06.4	+0.8
MELF				S	Sg	08 50 12.8	+0.9
CLLI	Llivia	0.57	93	S	Sg	08 50 15.0	+0.3
	163nm,0.2s						
VALF	Valcebollere	0.61	100	Pg	Pg	08 50 08.3	+0.3
VALF				Sg	Sg	08 50 16.6	+0.6
VALF	Valcebollere	0.61	100	P	Pg	08 50 08.2	+0.2
VALF				S	Sg	08 50 17.4	+1.4
EMIR	Miracle	0.65	158	⇓Pg	Pg	08 50 08.7	+0.1
	27nm,0.1s,SNR=18						
EMIR				Lg		08 50 17.0	
	245nm,0.1s,SNR=7.9						
EMIR	Miracle	0.65	158	Pg	Pg	08 50 08.7	0.0
	27nm,0.1s,SNR=18						
LPEF	Le Peyrat	0.68	50	P	Pg	08 50 10.6	+1.4
LPEF				S	Sg	08 50 20.4	+2.3
CARF	Carcanieres	0.70	73	P	Pg	08 50 10.2	+0.5
CARF				S	Sg	08 50 19.6	+0.9
RESF	Ens	0.70	295	P	Pg	08 50 09.8	+0.1
RESF				S	Sg	08 50 19.2	+0.4
CAVN	Les Avellanes	0.71	208	P	Pg	08 50 09.8	-0.2
CAVN				S	Sg	08 50 22.5	+3.3
	192nm,0.2s						
CAVN	Les Avellanes	0.71	208	S	Sg	08 50 22.6	+3.4
	383nm,0.2s						
CBRU	Bruguera	0.76	107	P	Pg	08 50 10.9	+0.1
CBRU				S	Sg	08 50 21.8	+1.1
	53nm,0.2s						
CBRU	Bruguera	0.76	107	P	Pg	08 50 11.0	+0.2
CBRU				S	Sg	08 50 21.8	+1.1
	106nm,0.2s						
EBIE	Bielsa	0.80	283	⇓Pg	Pg	08 50 11.3	-0.3
	19nm,0.1s,SNR=18						
EBIE				Lg		08 50 22.1	
	111nm,0.1s,SNR=27						
EBIE	Bielsa	0.80	283	Pg	Pg	08 50 11.3	-0.3
	24nm,0.3s,SNR=18						
EBIE	Bielsa	0.80	283	⇓Pg	Pg	08 50 11.3	-0.2
EBIE				Lg		08 50 21.1	
EPF	Esparros	0.82	309	ePg	Pg	08 50 12.2	+0.3
	SNR=1.0						
EPF				eSg	Sg	08 50 21.7	-0.8
	588nm,0.3s,SNR=1.0						
EPF	Esparros	0.82	309	ePg	Pg	08 50 12.2	+0.3
	SNR=1.0						
EPF				eSg	Sg	08 50 21.7	-0.8
	294nm,0.3s,SNR=1.0						
CORI	Orista	0.83	130	P	Pg	08 50 12.1	-0.1
CORI				S	Sg	08 50 23.7	+0.7
	84nm,0.2s						
CORI	Orista	0.83	130	P	Pg	08 50 12.2	0.0
CORI				S	Sg	08 50 23.7	+0.7
	167nm,0.2s						
VIEF	Viey	0.94	293	P	Pg	08 50 13.9	-0.4
VIEF				S	Sg	08 50 26.4	-0.1
LABF	Labassere	0.98	303	Pg	Pg	08 50 15.1	0.0
LABF				Sg	Sg	08 50 28.2	+0.3
LABF	Labassere	0.98	303	P	Pg	08 50 15.1	-0.1
LABF				S	Sg	08 50 28.3	+0.4
FILF	Fillols	1.01	87	Pg	Pg	08 50 13.7	-1.8
FILF				Sg	Sg	08 50 26.1	-2.5
FILF	Fillols	1.01	87	P	Pg	08 50 13.8	-1.7
FILF				S	Sg	08 50 26.2	-2.3
LRDF	Laroque-de-Fa	1.07	66	P	Pg	08 50 17.8	+1.0
LRDF				S	Sg	08 50 32.6	+1.9
MTLF	Montolieu	1.11	42	ePg	Pg	08 50 17.7	+0.1
	SNR=1.0						
MTLF				eSg	Sg	08 50 32.3	+0.3
	177nm,0.2s,SNR=1.0						
MTLF	Montolieu	1.11	42	ePg	Pg	08 50 17.7	+0.1
	SNR=1.0						
MTLF				eSg	Sg	08 50 32.3	+0.3
	89nm,0.2s,SNR=1.0						
CBEU	Beuda	1.12	103	S	Sg	08 50 33.8	+1.5
	79nm,0.4s						
EPOB	Poblet	1.17	185	⇑Pg	Pg	08 50 17.9	-0.7
	120nm,0.1s,SNR=18						
EPOB				Lg		08 50 32.6	
	110nm,0.1s,SNR=23						
EPOB	Poblet	1.17	185	Pg	Pg	08 50 17.9	-0.7
	39nm,0.3s,SNR=18						
CGAR	Garraf	1.22	182	S	Sg	08 50 38.0	+2.5
	59nm,0.1s						
SJAF	Saint Jean de	1.24	91	P	Pb	08 50 20.0	-0.1
SJAF				S	Sg	08 50 36.4	+0.2
EJON	La Jonquera	1.25	93	Pg	Pg	08 50 20.1	-0.1
	7.4nm,0.2s,SNR=7.9						
EJON				Lg		08 50 38.0	
	29nm,0.1s,SNR=7.9						
EJON	La Jonquera	1.25	93	Pg	Pg	08 50 20.1	-0.1
	9.0nm,0.1s,SNR=7.9						
REYF	Montagne du Re	1.30	296	P	Pn	08 50 20.6	-0.2
REYF				S	Sb	08 50 38.5	+0.6
FDAF	Les Forges d'A	1.34	284	P	Pn	08 50 20.9	-0.5
FDAF				S	Sb	08 50 39.2	+0.1
ETSF	Etsaut	1.35	287	ePn	Pn	08 50 21.2	-0.4
	SNR=1.0						
ETSF				eSn	Sn	08 50 38.3	-1.6
	331nm,0.4s,SNR=1.0						
ETSF	Etsaut	1.35	287	ePn	Pn	08 50 21.2	-0.4
	SNR=1.0						
ETSF				eSn	Sn	08 50 38.3	-1.6
	165nm,0.4s,SNR=1.0						
CCAS	Cassa de la Se	1.42	116	S	Sb	08 50 41.8	+0.5
	58nm,0.2s						
CPAL	Palau Saverder	1.47	97	S	Sn	08 50 43.1	+0.4
	30nm,0.1s						
ESAC	San Caprasio	1.47	238	⇑Pg	Pg	08 50 23.3	-1.2
	92nm,0.2s,SNR=18						
ESAC				Lg		08 50 42.5	
	508nm,0.3s,SNR=37						
ESAC	San Caprasio	1.47	238	Pg	Pg	08 50 23.3	-1.2
	108nm,0.3s,SNR=46						
ATE	Arette	1.51	293	Pg	Pg	08 50 24.3	-0.9
ATE				Sg	Sg	08 50 44.8	0.0
ATE	Arette	1.51	293	P	Pn	08 50 24.3	+0.5
ATE				S	Sn	08 50 44.9	+1.1
ERTA	Horta de San J	1.69	203	Pn	Pn	08 50 25.7	-0.5
	0.5nm,0.1s,SNR=7.9						
ERTA				⇑Pg	Pg	08 50 27.3	-1.3
	55nm,0.1s,SNR=18						
ERTA				Lg		08 50 48.7	
	50nm,0.1s,SNR=7.4						
ERTA	Horta de San J	1.69	203	Pn	Pn	08 50 25.8	-0.4
	0.5nm,0.1s,SNR=7.9						
ERTA	Horta de San J	1.69	203	Pg	Pg	08 50 27.3	-1.3
	58nm,0.2s,SNR=18						
ERTA	Horta de San J	1.69	203	Pn	Pn	08 50 25.8	-0.4
ERTA				⇑Pg	Pg	08 50 27.3	-1.3
ERTA				Lg		08 50 48.7	
LARF	Larrau	1.69	289	Pg	Pg	08 50 27.7	-1.0
LARF				Sg	Sg	08 50 51.1	+0.5
LARF	Larrau	1.69	289	P	Pn	08 50 27.8	+1.4
LARF				S	Sn	08 50 51.4	+3.1
ORDF	Ordiarp	1.72	295	P	Pn	08 50 29.1	+2.4
ORDF				S	Sn	08 50 52.1	+3.2
SJPF	Ste Jean	1.88	289	ePg	Pg	08 50 31.8	-0.5
	SNR=1.0						
SJPF				eSn	Sn	08 50 53.9	+0.9
	77nm,0.3s,SNR=1.0						
SJPF	Ste Jean	1.88	289	ePg	Pg	08 50 31.8	-0.5
	SNR=1.0						
SJPF				eSn	Sn	08 50 53.9	+0.9
	38nm,0.3s,SNR=1.0						
EORO	Oroz-Betelu	1.89	282	Pg	Pg	08 50 30.7	-1.7
	9.5nm,0.2s,SNR=55						
EORO				Lg		08 50 58.2	
	32nm,0.2s,SNR=8.6						
EORO	Oroz-Betelu	1.89	282	Pg	Pg	08 50 31.6	-0.8
	18nm,0.4s,SNR=55						
IPRE	Itoiz	1.91	280	Pg	Pg	08 50 33.2	+0.4
	8.8nm,0.2s,SNR=6.7						
IPRE				Lg		08 50 58.5	
	17nm,0.3s,SNR=10						
IPRE	Itoiz	1.91	280	Pg	Pg	08 50 32.5	-0.3
	10nm,0.3s,SNR=6.7						
OSSF	Osses	1.96	293	P	Pn	08 50 31.9	+1.9
OSSF				S	Sn	08 50 57.4	+2.7
IZUN	Zunzarren	1.99	281	Pn	Pn	08 50 32.4	+2.1
	0.2nm,0.1s,SNR=7.9						
IZUN				Pg	Pg	08 50 34.0	-0.4
	1.9nm,0.1s,SNR=7.9						
IZUN				Lg		08 51 01.2	
	21nm,0.3s,SNR=7.9						
IZUN	Zunzarren	1.99	281	Pg	Pg	08 50 33.7	-0.6
	1.9nm,0.1s,SNR=7.9						
IUNC	Unciti	2.01	278	Pg	Pg	08 50 34.9	+0.2
	16nm,0.3s,SNR=8.9						
IUNC				Lg		08 51 01.7	
	17nm,0.2s,SNR=7.1						
IUNC	Unciti	2.01	278	Pg	Pg	08 50 34.8	+0.1
	16nm,0.3s,SNR=8.9						
EARA	Aranguren	2.07	278	Pg	Pg	08 50 35.3	-0.6
	6.3nm,0.1s,SNR=4.0						
EARA				Lg		08 51 02.9	
	43nm,0.2s,SNR=6.7						
EARA	Aranguren	2.07	278	Pg	Pg	08 50 35.0	-0.8
	26nm,0.3s,SNR=4.0						
IUSE	Utxeti	2.07	283	Pg	Pg	08 50 35.3	-0.5
	13nm,0.3s,SNR=17						
IUSE				Lg		08 51 02.9	
	7.1nm,0.1s,SNR=6.5						
IUSE	Utxeti	2.07	283	Pg	Pg	08 50 35.1	-0.8
	13nm,0.3s,SNR=17						
ELIZ	Elizondo	2.11	289	Pn	Pn	08 50 34.4	+2.4
	1.5nm,0.1s,SNR=53						
ELIZ				Pg	Pg	08 50 36.2	-0.4
	28nm,0.4s,SNR=7.9						
ELIZ				Lg		08 51 05.3	
	33nm,0.2s,SNR=8.4						
ELIZ	Elizondo	2.11	289	Pn	Pn	08 50 34.4	+2.4
ELIZ				Pg	Pg	08 50 36.1	-0.5
ELIZ				Lg		08 51 05.3	
EALK	Alkurruntz	2.11	290	Pn	Pn	08 50 34.4	+2.3
	2.7nm,0.2s,SNR=39						
EALK				Pg	Pg	08 50 36.0	-0.7
	43nm,0.4s,SNR=7.9						
EALK				Lg		08 51 03.4	
	74nm,0.3s,SNR=16						
EALK	Alkurruntz	2.11	290	Pg	Pg	08 50 36.0	-0.7
	43nm,0.4s,SNR=7.9						
LFF	La Frestale	2.45	352	ePn	Pn	08 50 37.3	+0.6
	SNR=1.0						
LFF				eSn	Sn	08 51 04.9	-2.0
	144nm,0.3s,SNR=1.0						
LFF	La Frestale	2.45	352	ePn	Pn	08 50 37.3	+0.6
	SNR=1.0						
LFF				eSn	Sn	08 51 04.9	-2.0
	72nm,0.3s,SNR=1.0						
LASF	Ste Croix	2.49	50	ePn	Pn	08 50 38.3	+1.1
	SNR=1.0						
LASF				eSg	Sg	08 51 15.5	-0.6
	45nm,0.4s,SNR=1.0						
LASF	Ste Croix	2.49	50	ePn	Pn	08 50 38.3	+1.1
	SNR=1.0						
LASF				eSg	Sg	08 51 15.5	-0.6
	22nm,0.4s,SNR=1.0						
CAF	Calviac	2.49	14	ePn	Pn	08 50 38.8	+1.5
	SNR=1.0						
CAF				eSn	Sn	08 51 06.0	-1.9
	SNR=1.0						
CAF				eSg	Sg	08 51 14.5	-1.7
	43nm,0.2s,SNR=1.0						
CAF	Calviac	2.49	14	ePn	Pn	08 50 38.8	+1.5
	SNR=1.0						
CAF				eSn	Sn	08 51 06.0	-1.9
	SNR=1.0						
CAF				eSg	Sg	08 51 14.5	-1.7
	22nm,0.2s,SNR=1.0						
EMOS	Mosqueruela	2.49	211	Pg	Pg	08 50 39.9	-4.0
	2.8nm,0.2s,SNR=16						
EMOS				Lg		08 51 13.2	
	6.3nm,0.2s,SNR=5.0						
EMOS	Mosqueruela	2.49	211	Pg	Pg	08 50 40.2	-3.7
	8.4nm,0.3s,SNR=16						
EMOS	Mosqueruela	2.49	211	Pg	Pg	08 50 40.2	-3.8
EMOS				Lg		08 51 13.2	
RJF	Les Rejaudoux	2.80	5	ePg	Pg	08 50 49.4	-0.4
	SNR=1.0						
RJF				eSn	Sn	08 51 15.0	-0.5
	43nm,0.2s,SNR=1.0						
RJF	Les Rejaudoux	2.80	5	ePg	Pg	08 50 49.4	-0.4
	SNR=1.0						
RJF				eSn	Sn	08 51 15.0	-0.5
	21nm,0.2s,SNR=1.0						
ETOR	Torete	2.97	236	Pn	Pn	08 50 44.3	+0.4
	6.3nm,0.2s,SNR=11						
ETOR				Pg	Pg	08 50 52.8	-0.3
	31nm,0.3s,SNR=15						
ETOR				Sn	Sn	08 51 20.0	+0.2
	33nm,0.3s,SNR=10						
ETOR				Lg		08 51 30.8	
	43nm,0.3s,SNR=4.6						
ETOR	Torete	2.97	236	Pn	Pn	08 50 44.1	+0.2
	9.1nm,0.2s,SNR=11						
ETOR	Torete	2.97	236	Pg	Pg	08 50 52.5	-0.6
	31nm,0.3s,SNR=15						
ETOR				Sn	Sn	08 51 19.0	-0.8
	58nm,0.3s,SNR=10						
ETOR	Torete	2.97	236	Pn	Pn	08 50 44.1	+0.3
ETOR				Pg	Pg	08 50 52.5	-0.6
ETOR				Sn	Sn	08 51 18.9	-0.8
ETOR				Lg		08 51 30.8	
ETOS	Mallorca	3.00	156	Pn	Pn	08 50 43.9	-0.4
	0.9nm,0.1s,SNR=7.9						
ETOS				Sn	Sn	08 51 18.6	-2.0
	5.2nm,0.2s,SNR=7.9						
ETOS				Lg		08 51 32.5	
	12nm,0.4s,SNR=7.9						
ETOS	Mallorca	3.00	156	Pn	Pn	08 50 43.9	-0.4
	0.4nm,0.2s,SNR=7.9						
ETOS				Sn	Sn	08 51 18.6	-2.0
	6.0nm,0.3s,SNR=7.9						
ECHE	Chera	3.35	210	Pn	Pn	08 50 49.0	-0.1
	0.9nm,0.2s,SNR=7.9						
ECHE				Pg	Pg	08 50 57.8	-2.6
	3.8nm,0.3s,SNR=6.4						
ECHE				Lg		08 51 41.6	
	4.0nm,0.3s,SNR=7.9						
ECHE	Chera	3.35	210	Pg	Pg	08 50 57.8	-2.6
	3.1nm,0.3s,SNR=6.4						
ECHE	Chera	3.35	210	Pn	Pn	08 50 49.0	-0.1
ECHE				Pg	Pg	08 50 57.8	-2.6
ECHE				Lg		08 51 41.6	
VIVF	Saint-Julien-l	3.44	46	ePg	Pg	08 51 00.0	-2.1
	SNR=1.0						
VIVF				eSg	Sg	08 51 43.2	-3.4
	15nm,0.2s,SNR=1.0						
VIVF	Saint-Julien-l	3.44	46	ePg	Pg	08 51 00.0	-2.1
	SNR=1.0						
VIVF				eSg	Sg	08 51 43.2	-3.4
	7.6nm,0.2s,SNR=1.0						
ELAN	Lanestosa	3.48	283	Pn	Pn	08 50 53.1	+2.2
	0.8nm,0.1s,SNR=5.3						
ELAN				Pg	Pg	08 50 59.5	-3.4
	2.3nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	08 51 33.7	+1.3
	7.2nm,0.3s,SNR=7.9						
ELAN	Lanestosa	3.48	283	Pn	Pn	08 50 52.4	+1.5
	3.5nm,0.3s,SNR=5.3						
ELAN				Sn	Sn	08 51 31.5	-0.9
	2.5nm,0.4s,SNR=7.9						
ELAN	Lanestosa	3.48	283	Pn	Pn	08 50 52.4	+1.5
ELAN				Sn	Sn	08 51 31.5	-0.9
EIBI	Ibiza	3.49	178	Pn	Pn	08 50 49.4	-1.6
	0.1nm,0.2s,SNR=7.9						
EIBI				Pg	Pg	08 50 59.1	-4.0
	1.7nm,0.1s,SNR=4.0						
EIBI				Sn	Sn	08 51 30.9	-1.6
	2.5nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.49	178	Pn	Pn	08 50 49.9	-1.1
	0.1nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	08 51 30.8	-1.7
	0.8nm,0.1s,SNR=7.9						
EIBI	Ibiza	3.49	178	Pn	Pn	08 50 49.9	-1.1
EIBI				Sn	Sn	08 51 30.8	-1.8
TCF	Toulx Ste Croi	3.84	11	eSn	Sn	08 51 37.6	-3.6
	SNR=1.0						
TCF				eSg	Sg	08 51 58.2	-1.3
	18nm,0.2s,SNR=1.0						
TCF	Toulx Ste Croi	3.84	11	eSn	Sn	08 51 37.6	-3.6
	SNR=1.0						
TCF				eSg	Sg	08 51 58.2	-1.3
	8.8nm,0.2s,SNR=1.0						
EBEN	Beniarda	3.96	196	Pn	Pn	08 50 56.7	-0.8
	0.9nm,0.2s,SNR=7.9						
EBEN				Pg	Pg	08 51 07.9	-4.2
	3.1nm,0.3s,SNR=7.9						
EBEN	Beniarda	3.96	196	Pn	Pn	08 50 56.7	-0.8
LMR	La Mourre	3.98	76	ePn	Pn	08 50 59.9	+2.1
	SNR=1.0						
FRF	La Foret Royal	4.13	74	eSn	Sn	08 51 47.7	-0.6
	SNR=1.0						
FRF				eSg	Sg	08 52 07.3	-1.4
	8.4nm,0.4s,SNR=1.0						
FRF	La Foret Royal	4.13	74	eSn	Sn	08 51 47.7	-0.6
	SNR=1.0						
FRF				eSg	Sg	08 52 07.3	-1.4
	4.2nm,0.4s,SNR=1.0						
MFF	Saint Martin d	4.20	347	ePn	Pn	08 51 02.4	+1.7
	SNR=1.0						
MFF				eSn	Sn	08 51 44.7	-5.3
	SNR=1.0						
MFF				eSg	Sg	08 52 07.8	-3.2
	22nm,0.4s,SNR=1.0						
MFF	Saint Martin d	4.20	347	ePn	Pn	08 51 02.4	+1.7
	SNR=1.0						
MFF				eSn	Sn	08 51 44.7	-5.3
	SNR=1.0						
MFF				eSg	Sg	08 52 07.8	-3.2
	11nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	4.21	16	ePg	Pg	08 51 15.5	-1.3
	SNR=1.0						
BGF				eSn	Sn	08 51 48.2	-2.1
	SNR=1.0						
BGF				eSg	Sg	08 52 08.8	-2.5
	59nm,0.3s,SNR=1.0						
BGF	Bois d'Agland	4.21	16	ePg	Pg	08 51 15.5	-1.3
	SNR=1.0						
BGF				eSn	Sn	08 51 48.2	-2.1
	SNR=1.0						
BGF				eSg	Sg	08 52 08.8	-2.5
	30nm,0.3s,SNR=1.0						
GUD	Guadarrama	4.43	247	Pn	Pn	08 51 04.2	+0.2
	0.3nm,0.2s,SNR=5.3						
GUD				Sn	Sn	08 51 52.3	-3.5
	3.5nm,0.3s,SNR=4.5						
GUD				Lg		08 52 14.0	
	5.1nm,0.4s,SNR=7.9						
GUD	Guadarrama	4.43	247	Pn	Pn	08 51 04.2	+0.3
GUD				Sn	Sn	08 51 52.0	-3.8
GUD	Guadarrama	4.43	247	Pn	Pn	08 51 04.2	+0.2
GUD				Sn	Sn	08 51 52.0	-3.8
GUD				Lg		08 52 14.0	
AVF	Avril sur Loir	4.54	19	eSg	Sg	08 52 19.9	-2.1
	9.5nm,0.3s,SNR=1.0						
AVF	Avril sur Loir	4.54	19	eSg	Sg	08 52 19.9	-2.1
	4.8nm,0.3s,SNR=1.0						
EARI	Arriondas	4.77	282	Pn	Pn	08 51 10.7	+2.1
ESDC	Sonseca Array	4.83	236	Pn	Pn	08 51 08.2	-1.1
	2.3nm,0.3s,baz=54,slow=13,SNR=17						
ESDC				Sn	Sn	08 52 01.1	-4.4
	0.9nm,0.2s,baz=53,slow=24,SNR=4.5						
ESDC				Lg		08 52 27.6	
	0.9nm,0.3s,baz=55,slow=28,SNR=4.6						
ESDC	Sonseca Array	4.83	236	Pn	Pn	08 51 08.2	-1.2
PAB	San Pablo	5.14	237	ePn	Pn	08 51 12.6	-1.1
PAB	San Pablo	5.14	237	ePn	Pn	08 51 12.6	-1.1
PAB				Sn	Sn	08 52 08.8	-4.5
ROSF	Rostrenen	6.62	333	ePn	Pn	08 51 34.6	+0.7
	SNR=1.0						

CASC 11 08:55:54.2±2.7, 1318N×8960W, h52^{km}±27^{km}, MD4.0, ML3.5, 3C-11D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.62	35	⇓eP	x	08 56 06.5	
SNET				eS	x	08 56 16.5	
SNET				i		08 56 21.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,2µm,0.2s						
BOQS	**Boqueron**	**0.64**	**29**⇑	*i*P	x	08 56 07.2	
BOQS				*e*S	x	08 56 18.0	
SBLS	**San Blas**	**0.66**	**358**⇓	*e*P	x	08 56 07.4	
SBLS				*e*S	x	08 56 17.8	
LFRS	**El Faro**	**0.68**	**50**⇓	*i*P	x	08 56 07.6	
SNJE	**San Jose**	**0.69**	**359**⇓	*e*P	x	08 56 07.6	
SNJE				*e*S	x	08 56 21.9	
RTR	**El Retiro**	**0.72**	**356**	*e*P	x	08 56 08.2	
LFU	**La Fuente**	**0.74**	**40**⇓	*e*P	x	08 56 08.6	
LBRS	**Las Brisas**	**0.78**	**44**⇓	*i*P	x	08 56 09.2	
SNVI	**San Vicente**	**0.85**	**60**⇓	*e*P	x	08 56 10.0	
SNVI				*e*S	x	08 56 21.3	
RBDL	**Robledal**	**0.93**	**355**⇓	*e*P	x	08 56 11.3	
MTO2	**Montecristo 2**	**1.24**	**11**⇓	*i*P	x	08 56 15.7	
MTO2				*e*S	x	08 56 33.2	
VSM	**San Miguel**	**1.31**	**79**⇑	*e*P	x	08 56 16.7	
VSM				*e*S	x	08 56 34.8	
BLLM	**Bellamira**	**1.35**	**79**	*e*P	x	08 56 16.9	
BLLM				*e*S	x	08 56 35.1	
CAHU	**Cacacuatique**	**1.47**	**66**⇓	*e*P	x	08 56 18.6	
PCG	**Pacaya**	**1.56**	**321**	*e*P	Pn	08 56 20.8	+1.2
PCG				*e*S	Sn	08 56 38.7	+0.1
NBG	**Las Nubes**	**1.58**	**333**⇓	*e*P	Pn	08 56 21.6	+1.7
CNCH	**Conchagua**	**1.72**	**87**⇑	*e*P	x	08 56 21.9	
CNCH				*e*S	x	08 56 43.4	
FUG	**Fuego 3**	**1.75**	**316**	*e*P	Pn	08 56 22.9	+0.8
FUG				*e*S	Sn	08 56 44.6	+1.3
FG6		**1.86**	**318**	*e*P	Pn	08 56 24.7	+1.1
FG6				*e*S	Sn	08 56 46.8	+0.8
JAT	**Jato**	**2.28**	**300**	*e*P	Pn	08 56 30.5	+1.1
TGUH	**Tegucigalpa,Un**	**2.42**	**69**	*e*P	Pn	08 56 31.4	+0.1
TGUH				*e*S	Sn	08 57 00.7	+0.8
CNGN	**Cerro Negro**	**2.91**	**103**	*e*P	Pn	08 56 39.0	+1.0
APYN	**Apoyeque**	**3.30**	**106**	*e*P	Pn	08 56 44.3	+0.9
CHI2		**17.80**	**117**	*e*P		08 56 33.4	

*ISCJB **11** 09:12:30.3±0.5, 677N±005×7291W±005, h167km±5km, mb3.6/5, Error ellipse: s-maj=10.2km s-min=5.9km az=142.9*
*IDC **11** 09:12:30.8±0.7, 673N×7294W, h156km±8km, mb3.5/6, mb1 3.8/9, mb1mx3.5/22, mbtmp3.6/9, Error ellipse: s-maj=21.9km s-min=7.7km az=132.0*
*FUNV **11** 09:12:30.9, 673N×7312W, h160km, MW3.8*
*NEIC **11** 09:12:31.5±0.6, 663N×7294W, h170km±7km, mb4.2/1, Error ellipse: s-maj=15.2km s-min=8.7km az=137.0*
ISC 11 09:12:31.3±0.5**, 677N**±005×**7290W**±005**, h160**km±6km**, n35, σ1**s**04**/41**, mb3.6**/5**, 1C-12D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.24**	**28**⇓	*i*P	**Pn**	**09 13 00.1**	**+1.0**
CAPV				*e*S	**Sn**	**09 13 20.7**	**+0.2**
ROSC	**El Rosal**	**2.37**	**217**	P	**Pn**	**09 13 12.1**	**+0.7**
	62nm,0.3s,baz=112,slow=20,SNR=174						
ROSC				S	**Sn**	**09 13 41.2**	**-1.1**
	80nm,0.3s,baz=101,slow=18,SNR=16						
SOCV	**Socops**	**2.53**	**53**⇓	*i*P	**Pn**	**09 13 14.8**	**+1.6**
VIGV	**El Vigia**	**2.56**	**36**⇓	*i*P	**Pn**	**09 13 14.6**	**+0.9**
SDV	**Santo Domingo**	**3.08**	**47**	P	**Pn**	**09 13 21.7**	**+1.6**
	80nm,0.3s,baz=225,slow=2.7,SNR=38						
SDV				S	**Sn**	**09 13 58.2**	**+0.3**
	36nm,0.3s,baz=267,slow=21,SNR=12						
ELOV	**Elorza**	**3.40**	**86**⇓	*e*P	**Pn**	**09 13 26.1**	**+2.0**
ELOV				*e*S	**Sn**	**09 14 04.6**	**-0.5**
VIRV	**Villa del Rosa**	**3.75**	**7**⇓	*i*P	**Pn**	**09 13 27.1**	**-1.4**
VIRV				*e*S	**Sn**	**09 14 08.9**	**-4.3**
SANV	**Sanarito**	**4.30**	**51**⇓	*e*P	**Pn**	**09 13 36.4**	**+0.7**
CURV	**Curarigua**	**4.34**	**42**⇓	*i*P	**Pn**	**09 13 36.9**	**+0.6**
CURV				*e*S	**Sn**	**09 14 25.1**	**-1.9**
DABV	**Dabajuro**	**4.70**	**28**	*e*P	**Pn**	**09 13 41.2**	**+0.3**
DABV				*e*S	**Sn**	**09 14 33.2**	**-2.1**
TEPV	**Terepaima**	**4.85**	**49**⇓	*i*P	**Pn**	**09 13 43.8**	**+0.8**
SIQV	**Siquisique**	**4.92**	**38**⇓	*i*P	**Pn**	**09 13 44.0**	**+0.1**
BAUV	**El Baul**	**5.28**	**65**⇓	*i*P	**Pn**	**09 13 48.3**	**-0.3**
BAUV				*e*S	**Sn**	**09 14 47.9**	**-1.1**
JACV	**Jacura**	**5.88**	**43**	*e*P	**Pn**	**09 13 56.9**	**+0.3**
IMOV	**Isla Los Monje**	**5.90**	**19**	*e*P	**Pn**	**09 13 55.8**	**-1.0**
TURV	**Turiamo**	**6.20**	**53**	*e*P	**Pn**	**09 14 01.2**	**+0.4**
CAOV	**Caicara del Or**	**6.55**	**85**⇓	*e*P	**Pn**	**09 14 05.4**	**-0.1**
CAOV				*e*S	**Sn**	**09 15 16.2**	**-3.2**
MERV	**Las Mercedes**	**6.99**	**69**	*e*P	**Pn**	**09 14 10.6**	**-0.7**
MERV				*e*S	**Sn**	**09 15 25.5**	**-4.3**
BIRV	**Birongo**	**7.52**	**60**⇓	*e*P	**Pn**	**09 14 18.0**	**-0.3**
CUPV	**Cœpira**	**7.76**	**65**	*e*P	**Pn**	**09 14 21.4**	**-0.1**
OTAV	**Otavalo**	**8.53**	**221**	*e*P	**Pn**	**09 14 29.4**	**-2.4**
	3.8nm,0.4s						
PCRV	**Puerto La Cruz**	**8.85**	**67**	P	**Pn**	**09 14 37.8**	**+1.8**
	2.0nm,0.3s,baz=9.6,slow=15,SNR=7.6						
TEIG	**Tepich**	**20.04**	**313**	P	**P**	**09 16 52.7**	**+0.7**
	3.0nm,0.4s,baz=83,slow=22,SNR=6.3						
TXAR	**Lajitas Array**	**36.66**	**312**	P	**P**	**09 19 22.3**	**-0.4**
	0.4nm,0.4s,mb3.4,baz=129,slow=9.0,SNR=11						
TXAR				PcP	PcP	09 21 43.5	+1.3
	0.3nm,0.5s,baz=128,slow=6.4,SNR=5.0						
TXAR	**Lajitas Array**	**36.66**	**312**	P	**P**	**09 19 22.3**	**-0.4**
TXAR				PcP	PcP	09 21 43.5	+1.3
ULM	**Lac du Bonnet**	**47.41**	**340**	P	**P**	**09 20 48.8**	**-0.6**
	3.2nm,0.7s,mb4.0,baz=280,slow=11,SNR=5.6						
MSU	**Marysvale**	**47.49**	**318**	*e*P	**P**	**09 20 51.0**	**+0.8**
PDAR	**Pinedale Array**	**48.25**	**324**	P	**P**	**09 20 55.9**	**-0.1**
	0.5nm,0.5s,mb3.4,baz=122,slow=8.4,SNR=5.2						
NVAR	**Mina Array Bea**	**51.68**	**315**	P	**P**	**09 21 22.3**	**+0.3**
	0.2nm,0.6s,mb3.0,baz=193,slow=6.1,SNR=3.6						
NVAR	**Mina Array Bea**	**51.68**	**315**	P	**P**	**09 21 22.3**	**+0.3**
YKA	**Yellowknife Ar**	**63.39**	**340**	P	**P**	**09 22 43.1**	**-0.2**
	3.0nm,0.6s,mb4.3,baz=133,slow=6.3,SNR=7.4						
MKAR	**Makanchi Array**	**122.30**	**20**	PKP	PKPdf	09 31 07.5	0.0
	0.3nm,0.3s,baz=254,slow=2.6,SNR=2.7						
ASAR	**Alice Springs**	**149.26**	**234**	PKPbc	PKPbc	09 32 00.8	-1.1
	1.6nm,0.5s,baz=121,slow=2.5,SNR=10						
WB2	**Warramunga Arr**	**150.49**	**241**⇑	*i*P	PKPbc	09 32 04.3	-0.7
WRA	**Warramunga Arr**	**150.50**	**241**	PKP	PKPdf	09 31 58.2	-1.3
	0.3nm,0.7s,baz=98,slow=1.9,SNR=6.7						
WRA				PKPbc	PKPbc	09 32 04.3	-0.7
	1.9nm,0.4s,baz=108,slow=2.5,SNR=83						

TAP 11 09:18:15.8, 2213N×12133E, h11km±1km**, ML2.3, 2C, C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.23**	**113**	*i* P	Pg	09 18 21.3	+0.8
	baz=113						
LAY				*i* S	Sg	09 18 24.8	+1.1
	baz=113						
TAW	**Tawu**	**0.46**	**300**	*e*P	Pg	09 18 26.3	+1.5
	baz=299						
TAW				*e*S	Sg	09 18 33.1	+2.2
	baz=299						
TAW	**Tawu**	**0.46**	**300**	*e*P	Pg	09 18 26.5	+1.7
	baz=282						
TAW				*e*S	Sg	09 18 33.1	+2.2
	baz=282						
EAST	**Anshuo**	**0.51**	**300**⇑	*i*P	Pg	09 18 27.1	+1.3
	baz=299						
EAST				*e*S	Sg	09 18 34.5	+2.0
	baz=299						
EAST	**Anshuo**	**0.51**	**300**⇑	*i*P	Pg	09 18 27.2	+1.4
	baz=297						
EAST				S	Sg	09 18 34.0	+1.4
	baz=297						
TWK1	**Hengchun**	**0.52**	**249**	*e*P	Pg	09 18 27.0	+1.1
	baz=249						
TWK1				*e*S	Sg	09 18 35.3	+2.6
	baz=249						
TWK1	**Hengchun**	**0.52**	**249**	*e*P	Pg	09 18 27.4	+1.5
	baz=237						
TWK1				*e*S	Sg	09 18 35.3	+2.6
	baz=237						
HEN	**Hengchun**	**0.56**	**258**	*e*P	Pg	09 18 28.8	+2.2
	baz=257						
HEN	**Hengchun**	**0.56**	**258**	*e*P	Pg	09 18 28.9	+2.2
	baz=238						
ECL	**Taimali**	**0.58**	**324**	*e*P	Pg	09 18 27.2	+0.1
	baz=323						
ECL				*e*S	Sg	09 18 35.7	+0.9
	baz=323						
ECL	**Taimali**	**0.58**	**324**	P	Pg	09 18 27.3	+0.2
	baz=320						
ECL				*e*S	Sg	09 18 36.3	+1.6
	baz=320						
SCZT	**Fangliau**	**0.70**	**291**	*e*P	Pg	09 18 30.0	+0.7
	baz=290						
SCZT	**Fangliau**	**0.70**	**291**	*e*P	Pg	09 18 30.0	+0.7
	baz=283						
TWG	**Pinlang**	**0.73**	**341**	*e*P	Pg	09 18 30.7	+0.8
	baz=341						
TWG	**Pinlang**	**0.73**	**341**	*e*P	Pg	09 18 31.0	+1.1
	baz=342						
TWG				*e*S	Sg	09 18 39.1	-0.3
	baz=342						
SSD	**Sandimen**	**0.89**	**314**	*e*P	Pg	09 18 33.5	+0.6
	baz=311						
STYT	**Tauyuan**	**1.16**	**333**	*e*P	Pb	09 18 38.9	+1.1
	baz=345						
TWF1	**Yuli**	**1.22**	**359**	*e*P	Pn	09 18 38.4	-0.5
	baz=358						
CHN1	**Nanshi**	**1.28**	**325**	*e*P	Pn	09 18 40.9	+1.2
	baz=324						
WTP	**Ta-pu**	**1.29**	**330**	*e*P	Pn	09 18 40.2	+0.4
	baz=329						

*NEIC **11** 09:51:02.4, 1678N×9480W, h110km, MD4.4(MEX), After MEX.*
MEX 11 09:51:02.4±2.4**, 1678N**×**9480W, h110**km±33km**, MD4.4, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**1.30**	**16**	*i* P	Pn	09 51 25.0	-1.9
TUIG				*i* S	Sn	09 51 43.4	-2.0
TGIG		**1.61**	**90**	*i* P	Pn	09 51 29.8	-0.7
TGIG				*i* S	Sn	09 51 50.4	-1.4
HUIG	**Huatulco**	**1.61**	**232**	*i* P	Pn	09 51 28.3	-2.2
HUIG				*i* S	Sn	09 51 50.7	-1.3
OXX	**Oaxaca**	**1.87**	**280**	*i* P	Pn	09 51 33.5	-0.2
OXX				*i* S	Sn	09 51 58.5	+0.9
VHO	**Vista Hermosa**	**1.87**	**279**	*i* P	Pn	09 51 33.3	-0.5
VHO				*i* S	Sn	09 51 57.1	-0.7
SCX	**San Cristobal**	**2.07**	**91**	*i* P	Pn	09 51 36.5	+0.2
SCX				*i* S	Sn	09 52 01.0	-1.3
CCIG	**Comitan**	**2.60**	**101**	*i* P	Pn	09 51 43.1	0.0
CCIG				*i* S	Sn	09 52 11.4	-3.1
TPIG	**Tehuac#an**	**2.94**	**304**	*i* P	Pn	09 51 46.0	-1.5
TPIG				*i* S	Sn	09 52 20.2	-2.2
THIG		**3.07**	**127**	*i* P	Pn	09 52 03.3	+14
THIG				*i* S	Sn	09 52 26.0	+0.5
PNIG	**Pinotepa**	**3.21**	**264**	*i* P	Pn	09 51 48.6	-2.7
PNIG				*i* S	Sn	09 52 21.6	-7.4
SCIG	**Sabancuy**	**4.07**	**57**	*i* P	Pn	09 51 59.7	-3.0
SCIG				*i* S	Sn	09 52 43.4	-6.1
PPM	**Popocatepetl**	**4.30**	**303**	*e*P	Pn	09 52 06.5	+0.8
PPM				*i* P		09 52 09.0	
IIO	**Organos**	**4.66**	**307**	*i* P	Pn	09 52 09.3	-1.4
MEIG	**Mezcala**	**4.74**	**285**	*i* P	Pn	09 52 11.5	-0.3
MEIG				*i* S	Sn	09 53 01.4	-4.4
PLIG	**Platanillo**	**4.76**	**290**	*i* P	Pn	09 52 11.7	-0.3
MZVM		**4.85**	**300**	*i* P	Pn	09 52 13.9	+0.7
ACX	**Acapulco**	**4.90**	**272**	*e*P	Pn	09 52 08.0	-5.9

*IDC **11** 10:02:58.5±1.9, 547S×14618E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.4/16, mbtmp3.5/4, ML3.3/2, Error ellipse: s-maj=47.3km s-min=34.8km az=142.0*
*NEIC **11** 10:03:00.0±1.4, 510S×14585E, h10km, mb3.8/2, Error ellipse: s-maj=30.3km s-min=20.0km az=80.0*
*ISCJB **11** 10:03:07.2±5.8, 56S±04×1465E±02, h118km±48km, mb3.4/2, Error ellipse: s-maj=73.7km s-min=21.2km az=159.1*
ISC 11 10:03:07.9±5.4**, 55S**±04×**1465E**±02**, h116**km±42km**, n11, σ1**s**17**/9**, mb3.4**/2**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.91**	**170**	*e*P	**Pn**	**10 04 07.6**	**+1.4**
COEN	**Coen**	**8.98**	**201**	*e*P	**Pn**	**10 05 13.7**	**-1.2**
	6.4nm,0.4s						
HNR	**Honiara**	**13.90**	**107**	Pn	**Pn**	**10 06 19.7**	**-0.4**
	38nm,0.3s,baz=187,slow=23,SNR=20						
CTA	**Charters Tower**	**14.47**	**181**	Pn	**Pn**	**10 06 26.6**	**-0.7**
	0.0nm,0.3s,baz=354,slow=18,SNR=2.1						
WRAB	**Tennant Creek**	**18.55**	**218**	*e*P	**P**	**10 07 16.6**	**+0.9**
	2.5nm,0.9s						
WRA	**Warramunga Arr**	**18.57**	**218**	P	**P**	**10 07 13.8**	**-2.1**
	0.2nm,0.3s,baz=39,slow=12,SNR=12						
ASAR	**Alice Springs**	**21.72**	**213**	P	**P**	**10 07 51.4**	**+1.5**
	0.9nm,0.8s,mb3.1,baz=40,slow=7.8,SNR=9.9						
FITZ	**Fitzroy Crossi**	**23.88**	**237**	*e*P	**P**	**10 08 11.2**	**+0.2**
	2.9nm,0.5s,mb3.9						
FITZ	**Fitzroy Crossi**	**23.88**	**237**	P	**P**	**10 08 11.3**	**+0.3**
	1.5nm,0.6s,mb3.5,baz=51,slow=11,SNR=15						
TORD	**Torodi Ar. Bea**	**144.47**	**285**	PKP	PKPdf	10 22 35.7	+4.1
	0.5nm,0.5s,baz=67,slow=2.6,SNR=9.1						
DBIC	**Dimbokro**	**151.48**	**274**	PKPbc	PKPbc	10 22 55.6	+6.2
	3.7nm,0.7s,baz=89,slow=0.6,SNR=5.3						

*ISCJB **11** 10:05:22.2±0.6, 417N±0.1×2915W±007, h10km, mb4.3/28, MS3.2/8, Error ellipse: s-maj=18.7km s-min=7.6km az=174.7*
*IDC **11** 10:05:22.3±0.8, 4169N×2914W, h0km, mb4.0/14, mb1 4.1/15, mb1mx4.0/28, mbtmp4.0/15, ML5.0/1, MS3.3/9, Ms1 3.3/9, ms1mx3.0/38, Error ellipse: s-maj=25.4km s-min=15.9km az=168.0*
*NEIC **11** 10:05:24.0±0.4, 4169N×2911W, h10km, mb4.6/13, Error ellipse: s-maj=15.0km s-min=6.3km az=176.0*
*CSEM **11** 10:05:25.6±0.1, 4187N×2915W, h33km, mb4.4/23, Error ellipse: s-maj=5.4km s-min=2.4km az=166.0*
*MOS **11** 10:05:26.0±0.9, 4181N×2922W, h33km, mb4.4/9, Error ellipse: s-maj=40.1km s-min=15.2km az=55.8*
ISC 11 10:05:24.1±0.6**, 417N**±01×**2911W**±007**, h10**km**, n68, σ0**s**77**/64**, mb4.3**/28**, MS3.2**/8**, 1C, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**19.16**	**88**	P	**Pn**	**10 09 48.9**	**+0.4**
	1.0nm,0.3s,baz=288,slow=12,SNR=6.5						
ESDC				LR	LR	10 16 03.7	
	comp=Z,80nm,18.4s,baz=290,slow=33						
MDT	**Midelt**	**21.36**	**107**	LR	LR	10 16 38.6	
	comp=Z,69nm,20.5s,MS3.0,baz=348,slow=32						
EKA	**Eskdalemuir Ar**	**21.79**	**42**	P	**P**	**10 10 17.3**	**+1.3**
	1.9nm,0.7s,mb3.6,baz=242,slow=8.4,SNR=6.6						
EKA	**Eskdalemuir Ar**	**21.79**	**42**	P	**P**	**10 10 17.3**	**+1.3**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DAVOX	**Davos/Dischmat**	**28.19**	**66**	LR	LR	10 21 18.1	
	comp=Z,48nm,20.8s,MS3.1,baz=256,slow=34						
GERES	**GERESS Array B**	**30.64**	**62**	P	**P**	**10 11 37.4**	**-1.0**
	comp=Z,0.6nm,0.7s,mb3.5,baz=302,slow=7.7,SNR=4.9						
GERES				LR	LR	10 22 29.8	
	comp=Z,56nm,18.1s,MS3.3,baz=280,slow=34						
GERES	**GERESS Array B**	**30.64**	**62**	P	**P**	**10 11 37.4**	**-1.0**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES				MLR	MLR		
	comp=Z,56nm,18.2s						
NOA	**NORSAR Array B**	**31.05**	**38**	LR	LR	10 23 32.0	
	comp=Z,11nm,20.3s,MS2.5,baz=240,slow=35						
BUR08	**Bucovina Ar. S**	**38.41**	**62**	*e*P	**P**	**10 12 45.7**	**+0.2**
BUR08	**Bucovina Ar. S**	**38.41**	**62**	*e*P	**P**	**10 12 45.7**	**+0.2**
TORD	**Torodi Ar. Bea**	**39.06**	**128**	P	**P**	**10 12 50.4**	**-0.9**
	comp=Z,1.8nm,0.8s,mb3.9,baz=319,slow=8.1,SNR=12						
TORD				LR	LR	10 27 18.4	
	comp=Z,38nm,18.4s,MS3.2,baz=265,slow=34						
ARCES	**ARCESS Array B**	**39.40**	**27**	P	**P**	**10 12 52.6**	**-1.0**
	comp=Z,3.3nm,0.9s,mb4.1,baz=42,slow=20,SNR=4.0						
ARCES	**ARCESS Array B**	**39.40**	**27**	P	**P**	**10 12 52.6**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	**40.42**	**57**	P	**P**	**10 13 01.3**	**-1.0**
	comp=Z,2.2nm,0.8s,mb3.9,baz=274,slow=8.5,SNR=4.7						
AKASG	**Malin Array Be**	**40.42**	**57**	*e*P	**P**	**10 13 02.5**	**+0.3**
AKASG	**Malin Array Be**	**40.42**	**57**	P	**P**	**10 13 01.3**	**-1.0**
CCM	**Cathedral Cave**	**46.92**	**287**	*e*P	**P**	**10 13 54.1**	**-0.7**
	comp=Z,6.6nm,1.0s,mb4.5						
CCM	**Cathedral Cave**	**46.92**	**287**	*e*P	**P**	**10 13 54.1**	**-0.7**
	comp=Z,6.6nm,1.0s,mb4.5						
ECSD	**EROS,Sioux Fal**	**48.39**	**296**	*e*P	**P**	**10 14 05.7**	**-0.4**
	comp=Z,6.3nm,1.0s,mb4.6						
ECSD	**EROS,Sioux Fal**	**48.39**	**296**	*e*P	**P**	**10 14 05.7**	**-0.4**
	comp=Z,6.3nm,1.0s,mb4.6						
MIAR	**Mount Ida**	**50.17**	**284**	*e*P	**P**	**10 14 19.4**	**-0.5**
	comp=Z,6.8nm,1.0s,mb4.6						
MIAR	**Mount Ida**	**50.17**	**284**	*e*P	**P**	**10 14 19.4**	**-0.4**
	comp=Z,6.8nm,1.0s,mb4.6						
ARU	**Arti**	**55.41**	**42***c*	*i*P	**P**	**10 14 58.2**	**0.0**
ARU				*e*		10 16 58.8	
ARU				*e*S	**S**	**10 22 44.4**	**+1.9**
ARU				pmax	pmax		
	comp=Z,9.0nm,2.1s,mb4.4						
ARU	**Arti**	**55.41**	**42**	*i* P	**P**	**10 14 58.2**	**0.0**
	comp=Z,9.0nm,2.1s,mb4.4						
AMTX	**Amarillo**	**55.83**	**289**	*e*P	**P**	**10 15 01.4**	**-0.2**
	comp=Z,12nm,1.1s,mb4.8						
AMTX	**Amarillo**	**55.83**	**289**	*e*P	**P**	**10 15 01.4**	**-0.2**
	comp=Z,12nm,1.1s,mb4.8						
RLMT	**Red Lodge**	**56.05**	**303**	*e*P	**P**	**10 15 02.1**	**-0.9**
	comp=Z,8.2nm,1.4s,mb4.6						
RLMT	**Red Lodge**	**56.05**	**303**	*e*P	**P**	**10 15 02.1**	**-0.9**
	comp=Z,8.2nm,1.4s,mb4.6						
WALA	**Waterton Lakes**	**57.07**	**309**	*e*P	**P**	**10 15 10.0**	**-0.2**
	comp=Z,11nm,1.4s,mb4.7						
WALA	**Waterton Lakes**	**57.07**	**309**	*e*P	**P**	**10 15 10.0**	**-0.2**
	comp=Z,11nm,1.4s,mb4.7						
PDAR	**Pinedale Array**	**57.34**	**300**	P	**P**	**10 15 11.7**	**-0.5**
	comp=Z,1.8nm,0.8s,mb4.2,baz=65,slow=8.3,SNR=17						
PDAR				LR	LR	10 38 01.3	
	comp=Z,30nm,19.2s,MS3.4,baz=276,slow=34						
ANMO	**Albuquerque**	**59.17**	**291**	*e*P	**P**	**10 15 24.4**	**-0.7**
HWUT	**Hardware Ranch**	**59.20**	**300**	*e*P	**P**	**10 15 25.1**	**-0.2**
	comp=Z,4.8nm,1.0s,mb4.5						
HWUT	**Hardware Ranch**	**59.20**	**300**	*e*P	**P**	**10 15 25.1**	**-0.2**
	comp=Z,4.9nm,1.0s,mb4.5						
DAU	**Daniels Canyon**	**59.61**	**299**	*e*P	**P**	**10 15 28.6**	**+0.5**
DAU	**Daniels Canyon**	**59.61**	**299**	*e*P	**P**	**10 15 28.6**	**+0.5**
BNM	**Barren Site**	**59.71**	**290**	*e*P	**P**	**10 15 29.9**	**+1.0**
BNM	**Barren Site**	**59.71**	**290**	*e*P	**P**	**10 15 29.9**	**+1.0**
TXAR	**Lajitas Array**	**60.20**	**284**	P	**P**	**10 15 32.1**	**-0.2**
	comp=Z,1.1nm,0.6s,mb4.1,baz=72,slow=7.0,SNR=20						
TXAR				LR	LR	10 38 17.7	
	comp=Z,40nm,21.1s,MS3.5,baz=185,slow=33						
DUG	**Dugway**	**60.74**	**299**	*e*P	**P**	**10 15 36.1**	**+0.3**
	comp=Z,4.0nm,0.8s,mb4.6						
DUG	**Dugway**	**60.74**	**299**	*e*P	**P**	**10 15 36.1**	**+0.3**
	comp=Z,4.0nm,0.8s,mb4.6						
MSU	**Marysvale**	**61.20**	**297**	*e*P	**P**	**10 15 39.9**	**+0.9**
MSU	**Marysvale**	**61.20**	**297**	*e*P	**P**	**10 15 39.9**	**+0.9**
ELK	**Elko**	**62.02**	**301**	*e*P	**P**	**10 15 45.5**	**+1.0**
	comp=Z,2.3nm,0.8s,mb4.4						
ELK	**Elko**	**62.02**	**301**	*e*P	**P**	**10 15 45.5**	**+1.0**
	comp=Z,2.3nm,0.8s,mb4.4						
BVAR	**Borovoye Array**	**63.05**	**42**	P	**P**	**10 15 50.7**	**-0.4**
	comp=Z,1.7nm,0.6s,mb4.3,baz=316,slow=4.1,SNR=7.2						
BVAR				LR	LR	10 44 16.2	
	comp=Z,46nm,18.7s,MS3.7,baz=38,slow=37						
BVAR	**Borovoye Array**	**63.05**	**42**	P	**P**	**10 15 50.7**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR				MLR	MLR		
	comp=Z,46nm,18.7s						
WVOR	**Wild Horse Val**	**63.26**	**304**	*e*P	**P**	**10 15 53.3**	**+0.5**
	comp=Z,4.9nm,1.0s,mb4.6						
MOD	**Modoc**	**64.59**	**304**	*e*P	**P**	**10 16 02.4**	**+0.9**
	comp=Z,8.2nm,1.4s,mb4.6						
MOD	**Modoc**	**64.59**	**304**	*e*P	**P**	**10 16 02.4**	**+0.9**
	comp=Z,8.2nm,1.4s,mb4.6						
NVAR	**Mina Array Bea**	**65.27**	**300**	P	**P**	**10 16 05.2**	**-0.9**
	comp=Z,0.4nm,0.8s,mb3.5,baz=57,slow=5.5,SNR=3.7						
LPAZ	**La Paz**	**68.02**	**221**	P	**P**	**10 16 25.2**	**+1.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=59,slow=11,SNR=3.8						
LPAZ	**La Paz**	**68.02**	**221**	P	**P**	**10 16 25.2**	**+1.5**
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**68.51**	**41**	P	**P**	**10 16 26.6**	**+0.2**
	comp=Z,2.9nm,0.8s,mb4.2,baz=313,slow=6.7,SNR=7.3						
KURK	**Kurchatov**	**68.51**	**41**	P	**P**	**10 16 26.6**	**+0.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KURK	**Kurchatov**	**68.51**	**41**	*e*P	**P**	**10 16 24.4**	**-2.0**
	comp=Z,4.9nm,0.8s,mb4.5						
ZALV	**Zalesovo Beam**	**69.22**	**35**	P	**P**	**10 16 31.4**	**+0.6**
	comp=Z,1.3nm,0.3s,mb4.3,baz=318,slow=8.4,SNR=3.5						
ZALV	**Zalesovo Beam**	**69.22**	**35**	P	**P**	**10 16 31.4**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
AML	**Almayashu**	**71.38**	**50**	*e*P	**P**	**10 16 45.2**	**+1.0**
	comp=Z,3.0nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**72.93**	**42**	P	**P**	**10 16 53.1**	**-0.3**
	comp=Z,2.5nm,0.8s,mb4.2,baz=325,slow=5.9,SNR=12						
MKAR	**Makanchi Array**	**72.93**	**42**	P	**P**	**10 16 53.1**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YAK	**Yakutsk**	**75.23**	**10**	*e*P	**P**	**10 16 59.2**	**-7.3**
YAK				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
BOD	**Bodaibo**	**76.17**	**19**	*e*P	**P**	**10 17 11.3**	**-0.7**
SONM	**Songino Array**	**82.56**	**28**	P	**P**	**10 17 47.6**	**+0.6**
	comp=Z,1.9nm,0.9s,mb4.1,baz=329,slow=5.6,SNR=9.5						
SONM	**Songino Array**	**82.56**	**28**	P	**P**	**10 17 47.6**	**+0.6**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	**Ulaanbaatar**	**82.77**	**28**	*e*P	**P**	**10 17 47.2**	**-0.9**
ASAR	**Alice Springs**	**157.12**	**44**	PKPab	PKPab	10 25 49.9	-0.8
	comp=Z,0.9nm,0.8s,baz=330,slow=3.9,SNR=6.8						
ASAR	**Alice Springs**	**157.12**	**44**	PKP2	PKPab	10 25 49.9	-0.8
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						

*ISCJB **11** 10:07:42.3±1.1, 2749S±005×702W±02, h103km±11km, Error ellipse: s-maj=35.7km s-min=8.4km az=4.7*
*GUC **11** 10:07:44.6±0.9, 2751S×7029W, h89km±6km, MD3.2, ML3.6*
*NEIC **11** 10:07:44.6, 2751S×7029W, h89km, MD3.2(GUC), After GUC.*
ISC 11 10:07:43.2±1.1**, 2749S**±005×**702W**±02**, h98**km±12km**, n9, σ0**s**60**/16**, 1C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**0.20**	**312**	*e*P	**Pn**	**10 07 57.5**	**+0.4**
CPCH				*i* S	**Sn**	**10 08 07.4**	**-0.2**
CPCH				AML	AML	10 08 09.1	
	comp=E,12µm,0.0s						
CPCH	**Copiapo**	**0.20**	**312**	*e*P	**Pn**	**10 07 57.5**	**+0.4**
CPCH				*i* S	**Sn**	**10 08 07.4**	**-0.2**
CDCH	**Caldera**	**0.71**	**306**⇑	*i*P	**Pn**	**10 08 01.0**	**+0.5**
CDCH				*i* S	**Sn**	**10 08 12.7**	**-0.7**
VACH	**Vallenar**	**1.19**	**205**	*e*P	**Pn**	**10 08 05.7**	**0.0**
VACH				*i* S	**Sn**	**10 08 22.6**	**0.0**
VACH				AML	AML	10 08 25.6	
	comp=E,2µm,0.1s						
VACH	**Vallenar**	**1.19**	**205**	*e*P	**Pn**	**10 08 05.7**	**0.0**
VACH				*i* S	**Sn**	**10 08 22.6**	**0.0**
LCO	**Las Campanas**	**1.58**	**197**	*e*P	**Pn**	**10 08 10.6**	**+0.2**
CPN1	**Cerro Paranal**	**2.86**	**356**	*e*P	**Pn**	**10 08 27.8**	**+0.7**
CPN1				*i* S	**Sn**	**10 09 01.6**	**+0.8**
CPN1				AML	AML	10 09 02.1	
	comp=E,66nm,0.5s						
CEN1	**Los Morros**	**4.08**	**360**	*e*P	**Pn**	**10 08 43.3**	**-0.3**
CEN1				*i* S	**Sn**	**10 09 18.6**	**-12**
LPAZ	**La Paz**	**11.31**	**10**	*e*P	**Pn**	**10 10 20.4**	**-1.4**
	comp=E,2.6nm,0.5s						

*ISK **11** 10:13:49.9, 3996N×3352E, h8km, MD2.8*
*DDA **11** 10:13:49.8, 3993N×3353E, h7km±4km, Md3.0*
*CSEM **11** 10:13:49.4±0.1, 3995N×3356E, h2km, MD3.0, Error ellipse: s-maj=2.2km s-min=1.4km az=83.0*
*ISCJB **11** 10:13:50.2±0.8, 3996N±003×3355E±005, h1km±8km, Error ellipse: s-maj=6.7km s-min=4.8km az=166.7*
ISC 11 10:13:50.9±0.7**, 3996N**±003×**3355E**±005**, h8**km±7km**, n14, σ0**s**93**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.54**	**350**	*i* P	**Pg**	**10 14 00.5**	**-0.8**
ELDT				*i* S	**Sg**	**10 14 08.4**	**0.0**
KAMT	**Kaman**	**0.60**	**168**	*e*PG	**Pg**	**10 14 02.3**	**-0.2**
KAMT				*e*SG	**Sg**	**10 14 11.0**	**+0.7**
CANT	**Cankiri**	**0.65**	**5**	*e*PG	**Pg**	**10 14 03.2**	**-0.2**
CDAG	**Cicekdag**	**0.72**	**118**	*i* P	**Pg**	**10 14 04.4**	**-0.3**
CDAG				*i* S	**Sg**	**10 14 13.8**	**-0.2**
CORM	**Corum**	**0.86**	**75**	*e*PG	**Pg**	**10 14 06.9**	**-0.5**
CORM				*e*SG	**Sg**	**10 14 20.1**	**+1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ILGA	**Ilgaz**	**1.10**	**7**	*i* P	**Pg**	**10 14 10.6**	**-1.5**
ILGA				*i* S	**Sg**	**10 14 28.4**	**+2.0**
TOS	**Tosya**	**1.14**	**18**	*e*PN	**Pn**	**10 14 11.3**	**-1.8**
CTKT	**Corum**	**1.16**	**55**	*i* P	**Pg**	**10 14 12.8**	**-0.3**
SGKT	**Sivrigoynuk**	**1.30**	**299**	*i* P	**Pn**	**10 14 11.7**	**-3.6**
SGKT				*i* S	**Sb**	**10 14 33.4**	**+1.0**
YOZ	**Yozgat**	**1.40**	**103**	*e*PN	**Pn**	**10 14 16.7**	**-0.1**
BALT	**Daday**	**1.58**	**356**	*i* P	**Pn**	**10 14 19.9**	**+0.7**
KIZT	**Kizilcal**	**1.68**	**231**	*e*PN	**Pn**	**10 14 20.4**	**-0.2**
KDHN	**Kadinhani**	**1.82**	**218**	*i* P	**Pn**	**10 14 23.1**	**+0.6**
DIKM	**Dikmen**	**2.13**	**37**	*e*PN	**Pn**	**10 14 26.9**	**+0.2**

*IDC **11** 10:28:22.9±0.9, 2939N×6634E, h0^{km}, mb3.8/13, mb1 4.0/13, mb1mx3.8/27, mbtmp3.9/13, MS3.3/13, Ms1 3.4/13, ms1mx3.1/42, Error ellipse: s-maj=21.7km s-min=18.7km az=28.0*
*NEIC **11** 10:28:24.3±0.9, 2938N×6642E, h10^{km}, mb4.4/1, Error ellipse: s-maj=19.6km s-min=16.3km az=124.0*
*MOS **11** 10:28:26.7±1.3, 2943N×6635E, h33^{km}, mb4.1/11, Error ellipse: s-maj=22.9km s-min=11.0km az=82.7*
*ISCJB **11** 10:28:28.0±0.6, 2965N±006×6638E±005, h33^{km}, mb4.0/16, MS3.3/13, Error ellipse: s-maj=9.2km s-min=5.6km az=23.4*
*BJI **11** 10:28:28.4, 30.16N×6606E, h9^{km}, mB4.6, mb4.4*
ISC 11 10:28:30.1±0.5**, 2960N**±006×**6638E**±004**, h35**^{km}**, n61, σ1^{s}49**/64**, mb4.0**/16**, MS3.3**/13**, 1C, Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**5.42**	**24**	*e*P	**Pn**	**10 29 49.8**	**+1.4**
	34nm,0.8s						
BHJ	**Bhuj**	**6.96**	**154**	*e*P	**Pn**	**10 30 08.8**	**-0.8**
BHJ				*e*S	**Sn**	**10 31 23.0**	**-4.5**
BHJ				AML	AML	10 31 30.8	
	comp=N,85nm,0.4s						
BHJ				AML	AML	10 31 31.2	
	comp=E,78nm,0.3s						
AJM	**Ajmer**	**7.93**	**111**	*e*P	**Pn**	**10 30 24.3**	**+1.4**
AJM				*e*S	**Sn**	**10 31 47.8**	**-3.7**
THN	**Thein Dam**	**8.50**	**68**	*e*P	**Pn**	**10 30 32.8**	**+2.2**
THN				*e*x	x	10 32 11.6	
DLH	**Dalhousie**	**8.73**	**68**	*e*P	**Pn**	**10 30 35.0**	**+1.2**
DLH				*e*S	**Sn**	**10 32 10.0**	**-1.0**
SDNR	**Sundarnagar**	**9.33**	**76**	*e*P	**Pn**	**10 30 43.6**	**+1.6**
SDNR				*e*S	**Sn**	**10 32 24.6**	**-1.0**
SMLA	**Simla**	**9.44**	**78**⇑	*i*P	**Pn**	**10 30 45.0**	**+1.4**
SMLA				*i* S	**Sn**	**10 32 28.3**	**-0.2**
SMLA				*i* S	**Sn**	**10 32 29.6**	**+1.1**
SMLA				*e*x	x	10 32 36.0	
	comp=N,331nm,0.4s						
SMLA				*e*x	x	10 32 37.0	
	comp=E,244nm,0.2s						
AYAN	**Aya Nagar**	**9.47**	**94**	*e*P	**Pn**	**10 30 46.1**	**+2.1**
AYAN				*e*S	**Sn**	**10 32 24.9**	**-4.4**
SONA	**Sohna**	**9.47**	**96**	*e*P	**Pn**	**10 30 44.6**	**+0.6**
SONA				*e*S	**Sn**	**10 32 26.9**	**-2.4**
NDI	**New Delhi**	**9.52**	**93**	*e*P	**Pn**	**10 30 46.0**	**+1.4**
NDI				*e*S	**Sn**	**10 32 28.0**	**-2.4**
KLP	**Kalpa**	**10.41**	**76**	*e*P	**Pn**	**10 30 57.7**	**+0.9**
KLP				*e*S	**Sn**	**10 32 49.8**	**-2.5**
KLP				AML	AML	10 33 00.7	
	comp=E,119nm,0.6s						
KLP				AML	AML	10 33 01.5	
	comp=N,113nm,0.6s						
AML	**Almayashu**	**13.83**	**23**	*e*P	**Pn**	**10 31 41.5**	**-2.0**
	comp=N,18nm,0.6s						
EKS2	**Erkin-Say**	**14.33**	**23**	*e*P	**Pn**	**10 31 48.4**	**-2.0**
	comp=N,2.8nm,0.6s						
KOLN	**Koldanda**	**15.22**	**93**	*e*P	**Pn**	**10 32 02.1**	**-0.3**
	comp=N,17nm,0.4s						
DANN	**Dangsing**	**15.27**	**90**	*e*P	**Pn**	**10 32 02.6**	**-0.3**
	comp=N,56nm,0.6s						
GKN	**Gorkha**	**16.09**	**91**	*e*P	**Pn**	**10 32 13.3**	**-0.2**
	comp=N,17nm,0.4s						
DMN	**Daman**	**16.57**	**92**	*e*P	**Pn**	**10 32 19.9**	**+0.2**
	comp=N,8.2nm,0.4s						
KKN	**Kakani**	**16.68**	**92**	*e*P	**Pn**	**10 32 21.1**	**0.0**
PKI	**Pulchoki**	**16.84**	**92**	*e*P	**Pn**	**10 32 24.2**	**+1.1**
	comp=N,6.9nm,0.3s						
GUN	**Gumba**	**17.18**	**91**	*e*P	**Pn**	**10 32 28.5**	**+1.1**
	comp=N,90nm,0.6s						
JIRN	**Jiri**	**17.50**	**92**	*e*P	**Pn**	**10 32 32.3**	**+1.0**
	comp=N,59nm,0.6s						
RAMN	**Ramite**	**18.00**	**94**	*e*P	**Pn**	**10 32 39.8**	**+2.3**
	comp=N,31nm,0.6s						
ODAN	**Odare**	**18.71**	**93**	*e*P	**Pn**	**10 32 49.1**	**+2.9**
	comp=N,29nm,0.7s						
TAPN	**Taplejung**	**18.88**	**92**	*e*P	**Pn**	**10 32 50.9**	**+2.7**
	comp=N,15nm,0.7s						
MKAR	**Makanchi Array**	**21.17**	**31**	P	**P**	**10 33 10.7**	**-1.5**
	comp=N,3.3nm,0.6s,mb3.9,baz=206,slow=9.1,SNR=12						
MKAR				LR	LR	10 42 01.7	
	comp=N,73nm,20.4s,MS3.0,baz=210,slow=38						
MKAR	**Makanchi Array**	**21.17**	**31**	P	**P**	**10 33 10.7**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,73nm,20.4s						
LSA	**Lhasa**	**21.52**	**84**	P	**P**	**10 33 21.2**	**+5.1**
AKTK	**Aktyubinsk**	**21.75**	**345**	P	**P**	**10 33 19.7**	**+1.4**
AKTK				LR	LR	10 42 34.6	
AKTO	**Aktyubinsk**	**21.75**	**345**	P	**P**	**10 33 19.7**	**+1.4**
	comp=Z,2.8nm,0.7s,mb3.8,baz=153,slow=13,SNR=4.7						
AKTO				LR	LR	10 42 34.6	
	comp=Z,60nm,18.5s,MS3.0,baz=334,slow=39						
AKTO	**Aktyubinsk**	**21.75**	**345**	P	**P**	**10 33 19.7**	**+1.4**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
AKTO				MLR	MLR		
	comp=Z,60nm,18.5s,MS3.0						
WMQ	**Urumqi**	**22.13**	**44**	*e*P	**P**	**10 33 21.8**	**-0.7**
WMQ				AP		10 33 27.5	
WMQ				XP	sP	10 33 31.0	-5.2
WMQ				AMB	AMB		
	comp=Z,12nm,1.5s,mb4.1						
WMQ				AMB	AMB		
	comp=Z,89nm,3.6s						
KURK	**Kurchatov**	**23.02**	**20**	P	**P**	**10 33 28.9**	**-2.9**
	comp=Z,1.7nm,0.7s,mb3.6,baz=212,slow=9.1,SNR=7.6						
KURK				LR	LR	10 43 41.6	
	comp=Z,94nm,18.1s,MS3.3,baz=230,slow=40						
KURK	**Kurchatov**	**23.02**	**20**	P	**P**	**10 33 28.9**	**-2.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
KURK				MLR	MLR		
	comp=Z,94nm,18.1s,MS3.3						
BVAR	**Borovoye Array**	**23.59**	**6**	P	**P**	**10 33 35.9**	**-1.6**
	comp=Z,3.6nm,0.5s,mb4.0,baz=180,slow=12,SNR=18						
BVAR	**Borovoye Array**	**23.59**	**6**	P	**P**	**10 33 35.9**	**-1.6**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BRVK	**Borovoye**	**23.62**	**6**	*e*P	**P**	**10 33 39.9**	**+2.2**
BRVK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.2						
BRVK	**Borovoye**	**23.62**	**6**	*e*P	**P**	**10 33 39.9**	**+2.1**
	comp=Z,12nm,1.1s,mb4.2						
ASF	**Jabal al Asfar**	**25.40**	**283**	LR	LR	10 44 58.7	
	comp=Z,46nm,20.0s,MS3.0,baz=215,slow=39						
MMAI	**Mount Meron Ar**	**26.64**	**285**	LR	LR	10 46 01.2	
	comp=Z,50nm,20.4s,MS3.1,baz=145,slow=40						
EIL	**Elat**	**27.28**	**278**	LR	LR	10 46 01.2	
	comp=Z,109nm,18.6s,MS3.5,baz=107,slow=39						
ZALV	**Zalesovo Beam**	**27.78**	**24**	P	**P**	**10 34 15.0**	**-0.4**
	comp=Z,0.7nm,0.3s,mb3.7,baz=202,slow=7.2,SNR=3.3						
ZALV	**Zalesovo Beam**	**27.78**	**24**	P	**P**	**10 34 15.0**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
CMAR	**Chiang Mai Arr**	**31.64**	**103**	LR	LR	10 48 43.2	
	comp=Z,39nm,20.0s,MS3.1,baz=305,slow=39						
SONM	**Songino Array**	**35.66**	**48**	P	**P**	**10 35 25.3**	**+0.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=250,slow=7.7,SNR=3.4						
XAN	**Xi'an**	**36.23**	**72**	P	**P**	**10 35 38.9**	**+9.2**
XAN				AMB	AMB		
	comp=Z,7.0nm,0.5s,mb4.8						
XAN				AMB	AMB		
	comp=Z,24nm,5.2s						
GERES	**GERESS Array B**	**44.13**	**311**	P	**P**	**10 36 34.3**	**-0.7**
	comp=Z,0.7nm,0.5s,mb3.6,baz=123,slow=4.9,SNR=5.2						
GERES				LR	LR	10 55 43.1	
	comp=Z,36nm,18.5s,MS3.3,baz=264,slow=37						
GERES	**GERESS Array B**	**44.13**	**311**	P	**P**	**10 36 34.3**	**-0.7**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES				MLR	MLR		
	comp=Z,36nm,18.5s						
ARCES	**ARCESS Array B**	**46.24**	**341**	P	**P**	**10 36 49.6**	**-1.8**
	comp=Z,3.2nm,0.8s,mb4.3,baz=50,slow=3.8,SNR=8.8						
ARCES				LR	LR	10 57 31.1	
	comp=Z,46nm,19.5s,MS3.4,baz=101,slow=38						
ARCES	**ARCESS Array B**	**46.24**	**341**	P	**P**	**10 36 49.6**	**-1.8**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,47nm,19.5s						
HFS	**Hagfors**	**46.40**	**327**	P	**P**	**10 36 53.0**	**+0.2**
	comp=Z,1.5nm,0.7s,mb4.0,baz=121,slow=14,SNR=3.7						
HFS	**Hagfors**	**46.40**	**327**	P	**P**	**10 36 53.0**	**+0.2**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	**NORSAR Array B**	**47.83**	**327**	P	**P**	**10 37 03.9**	**0.0**
	baz=111,slow=7.4						
NOA				LR	LR	11 02 01.3	
	comp=Z,22nm,18.0s,MS3.2,baz=90,slow=42						
KSRS	**Korea Array**	**51.11**	**64**	P	**P**	**10 37 29.9**	**+0.6**
	comp=Z,1.8nm,0.6s,mb4.2,baz=276,slow=7.7,SNR=9.7						
KSRS				LR	LR	11 02 01.5	
	comp=Z,31nm,18.1s,MS3.4,baz=354,slow=39						
KSRS	**Korea Array**	**51.11**	**64**	P	**P**	**10 37 29.9**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
KSRS				MLR	MLR		
	comp=Z,31nm,18.1s,MS3.4						
ASAJ	**Asahikawa**	**60.64**	**53**	LR	LR	11 05 28.6	
	comp=Z,34nm,19.2s,MS3.5,baz=331,slow=37						
TORD	**Torodi Ar. Bea**	**61.72**	**269**	P	**P**	**10 38 42.9**	**-2.3**
	comp=Z,0.4nm,0.6s,mb3.8,baz=58,slow=6.1,SNR=7.5						
PETK	**Petropavlovsk-**	**67.67**	**41**	LR	LR	11 12 35.0	
	comp=Z,31nm,18.8s,MS3.6,baz=98,slow=39						
WRA	**Warramunga Arr**	**81.90**	**118**	P	**P**	**10 40 44.0**	**-2.2**
	comp=Z,0.2nm,0.2s,mb3.6,baz=276,slow=18,SNR=8.6						
ASAR	**Alice Springs**	**83.73**	**122**	P	**P**	**10 40 53.0**	**-2.6**
	comp=Z,0.5nm,0.6s,mb3.8,baz=307,slow=5.2,SNR=9.9						
ASAR	**Alice Springs**	**83.73**	**122**	P	**P**	**10 40 53.1**	**-2.5**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**120.64**	**350**	PKP	PKPdf	10 47 17.4	-1.2
	comp=Z,0.2nm,0.8s,baz=324,slow=6.2,SNR=3.5						

*ISCJB **11** 10:52:33.5±0.8, 3348N±004×14047E±007, h69^{km}±7^{km}, mb3.4/2, Error ellipse: s-maj=10.4km s-min=6.0km az=9.0*
*JMA **11** 10:52:34.8±0.1, 3355N×14046E, h55^{km}±3^{km}, M3.1*
*IDC **11** 10:52:36.5±2.5, 3334N×14010E, h71^{km}±17^{km}, mb3.0/2, mb1 3.3/3, mb1mx3.1/20, mbtmp3.0/3, Error ellipse: s-maj=69.4km s-min=11.0km az=80.0*
ISC 11 10:52:34.6±0.8**, 3349N**±004×**14048E**±008**, h59**^{km}±9^{km}**, n14, σ1^{s}05**/25**, mb3.4**/2**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.67**	**236**	P	**Pn**	**10 52 48.7**	**+0.3**
JHJ2				S	**Sn**	**10 52 58.6**	**+0.1**
JHJ	**Hachijo jima 2**	**0.69**	**238**	P	**Pn**	**10 52 48.9**	**+0.2**
	209nm,0.3s,baz=230,slow=21,SNR=243						
JHJ				S	**Sn**	**10 52 58.5**	**-0.3**
	680nm,0.3s,baz=237,slow=23,SNR=108						
BSO1	**Boso 1**	**1.23**	**20**	P	**Pn**	**10 52 55.0**	**-0.7**
BSO1				*e*S	**Sn**	**10 53 10.9**	**-0.5**
BSO3	**Boso 3**	**1.31**	**1**	P	**Pn**	**10 52 56.6**	**-0.1**
BSO3				S	**Sn**	**10 53 13.2**	**0.0**
BSO4	**Boso 4**	**1.50**	**356**	P	**Pn**	**10 52 59.9**	**+0.6**
BSO4				S	**Sn**	**10 53 18.3**	**+0.4**
JIM2	**Oshima 3**	**1.50**	**325**	P	**Pn**	**10 52 58.9**	**-0.4**
JIM2				S	**Sn**	**10 53 15.9**	**-2.0**
JIZS	**Izushimoda**	**1.81**	**313**	P	**Pn**	**10 53 03.6**	**+0.2**
JIZS				S	**Sn**	**10 53 24.6**	**-0.6**
KTJJ	**Kamata 2**	**1.85**	**321**	P	**Pn**	**10 53 03.9**	**-0.1**
KTJJ				S	**Sn**	**10 53 24.8**	**-1.5**
JOD2	**Odawara 2**	**2.11**	**327**	P	**Pn**	**10 53 07.5**	**0.0**
JOD2				S	**Sn**	**10 53 30.5**	**-2.1**
TK04	**Tokai 4**	**2.34**	**293**	P	**Pn**	**10 53 11.7**	**+1.0**
MJAR	**Matsushiro Arr**	**3.57**	**329**	P	**Pn**	**10 53 29.4**	**+1.9**
	1.6nm,0.3s,baz=157,slow=12,SNR=26						
MJAR				S	**Sn**	**10 54 09.9**	**+1.5**
	1.5nm,0.3s,baz=285,slow=33,SNR=7.2						
MAT	**Matsushiro**	**3.57**	**329**	P	**Pn**	**10 53 30.2**	**+2.7**
MAT				S	**Sn**	**10 54 10.2**	**+1.8**
WRA	**Warramunga Arr**	**53.45**	**187**	P	**P**	**11 01 47.5**	**-1.2**
	0.3nm,0.6s,mb3.4,baz=3.5,slow=7.7,SNR=7.2						
ASAR	**Alice Springs**	**57.18**	**187**	P	**P**	**11 02 15.3**	**-0.2**
	0.2nm,0.6s,mb3.3,baz=9.2,slow=7.5,SNR=5.1						

*ISCJB **11** 10:57:18.7±1.7, 3389N±005×3601E±009, h0^{km}, Error ellipse: s-maj=11.9km s-min=6.5km az=155.4*
*CSEM **11** 10:57:20.7, 3372N×3551E, h10^{km}, ML2.8, After GRAL*
*GRAL **11** 10:57:20.7±0.3, 3372N×3551E, h10^{km}±7^{km}, MD2.8, Fault plane solution: NP1:ϕ_s105.89000°, δ41.41000°, λ-40.89000°.*
*GII **11** 10:57:20.2±1.4, 3375N×3594E, h0^{km}, ML2.1/2, EXPLOSION*
ISC 11 10:57:21.1±1.2**, 3384N**±004×**3592E**±009**, h0**^{km}**, n10, σ0^{s}98**/17**, 3C, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.23**	**286**⇑	*e*P	**Pg**	**10 57 25.0**	**-0.4**
BHL				*e*S	**Sg**	**10 57 28.2**	**-0.2**
RCY	**Rachaya**	**0.36**	**193**⇑	*e*P	**Pg**	**10 57 27.2**	**-0.8**
RCY				*e*S	**Sg**	**10 57 32.1**	**-0.6**
HWQ	**Hawqa**	**0.44**	**3**⇑	*e*P	**Pg**	**10 57 32.7**	**+3.2**
HRI	**Mount Hermon**	**0.59**	**195**	Pg	**Pg**	**10 57 31.2**	**-1.2**
HRI				Sg	**Sg**	**10 57 40.7**	**+0.6**
KSDI	**Kefar Szold**	**0.68**	**198**	Pg	**Pg**	**10 57 33.3**	**-0.8**
KSDI				Sg	**Sg**	**10 57 43.9**	**+0.9**
KSHT	**Keshet**	**0.86**	**186**	Sg	**Sg**	**10 57 50.1**	**+1.4**
MMA0	**Mount Meron ar**	**0.93**	**208**	Pg	**Pg**	**10 57 38.4**	**-0.4**
MMA0				Sg	**Sg**	**10 57 52.7**	**+1.9**
MMLI	**Mount Malkishu**	**1.46**	**197**	Pn	**Pn**	**10 57 47.4**	**-1.3**
MMLI				Sn	**Sn**	**10 58 08.1**	**-0.4**
HMDT	**Nahal Hemdat**	**1.62**	**192**	Pn	**Pn**	**10 57 50.1**	**-0.7**
HMDT				Sn	**Sn**	**10 58 12.0**	**-0.3**
SLTI	**Sal'it**	**1.76**	**205**	Sn	**Sn**	**10 58 16.4**	**+0.6**

*ISCJB **11** 11:01:17.4±0.3, 1259N±004×8758W±004, h94^{km}±3^{km}, mb4.5/56, Error ellipse: s-maj=8.5km s-min=3.8km az=38.6*
*IDC **11** 11:01:17.3±0.6, 1279N×87.19W, h80^{km}±4^{km}, mb3.9/13, mb1 4.1/13, mb1mx4.0/22, mbtmp3.9/13, MS3.4/8, Ms1 3.4/8, ms1mx3.1/29, Error ellipse: s-maj=20.7km s-min=11.9km az=57.0*
*CASC **11** 11:01:17.5±2.9, 1259N×8765W, h79^{km}±15^{km}, MD4.5, ML4.6, mb4.6(NEIC)*
*NEIC **11** 11:01:17.8±0.4, 1254N×8761W, mb4.6/41, Error ellipse: s-maj=8.5km s-min=5.7km az=214.0*
ISC 11 11:01:18.5±0.3**, 1262N**±004×**8756W**±004**, h87**^{km}±3^{km}**, h88**^{km}±1.9^{km}**:pP-P, n158, σ0^{s}95**/138**, mb4.5**/56**, 8C-16D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LEON	**Leon**	**0.68**	**107**⇓	*e*P	**Pn**	**11 01 32.7**	**-1.9**
TEL3	**Telica 3**	**0.70**	**94**⇓	*i*P	**Pn**	**11 01 33.6**	**-1.2**
CNCH	**Conchagua**	**0.71**	**338**⇓	*i*P	x	11 01 32.9	
TELN	**Telica**	**0.71**	**91**⇓	*i*P	**Pn**	**11 01 34.1**	**-0.8**
CNGN	**Cerro Negro**	**0.85**	**98**	*e*P	**Pn**	**11 01 35.5**	**-0.8**
CNGN				*e*S	**Sn**	**11 01 50.3**	**+0.7**
CNGN				AML	AML	11 01 59.6	
	comp=E,7μm,0.3s						
MOMN	**Momotombo**	**1.02**	**102**⇓	*i*P	**Pn**	**11 01 37.8**	**-0.4**
MOMN				*e*S	**Sn**	**11 01 53.6**	**+0.6**
COPN	**Copaltepe**	**1.04**	**115**⇑	*e*P	**Pn**	**11 01 37.3**	**-1.2**
COPN				*e*S	**Sn**	**11 01 54.4**	**+0.9**
BLLM	**Bellamira**	**1.05**	**321**⇓	*e*P	x	11 01 36.9	
VSM	**San Miguel**	**1.06**	**319**⇓	*i*P	x	11 01 37.1	
VSM				*e*S	x	11 01 55.6	
CSAN		**1.19**	**111**⇑	*i*P	**Pn**	**11 01 39.7**	**-0.7**
APYN	**Apoyeque**	**1.24**	**108**⇑	*i*P	**Pn**	**11 01 40.3**	**-0.6**
XAVN	**Gruta Xavier**	**1.29**	**111**⇓	*i*P	**Pn**	**11 01 40.9**	**-0.6**
CAHU	**Cacacuatique**	**1.31**	**331**⇓	*e*P	x	11 01 40.5	
CAHU				*e*S	x	11 01 58.5	
TISN	**Laguna Tiscapa**	**1.35**	**110**⇑	*e*P	**Pn**	**11 01 41.5**	**-0.7**
TISN				*e*S	**Sn**	**11 02 00.2**	**+0.1**
MGAN	**Managua**	**1.36**	**110**⇑	*e*P	**Pn**	**11 01 42.6**	**+0.1**
MGAN				*e*S	**Sn**	**11 02 00.2**	**-0.3**
MGAN				AML	AML	11 02 01.2	
	comp=E,24μm,0.7s						
HUEN		**1.38**	**101**⇓	*i*P	**Pn**	**11 01 42.1**	**-0.6**
WILN	**Americas 2**	**1.42**	**109**	*e*P	**Pn**	**11 01 41.2**	**-1.9**
TICN	**Ticuantepe**	**1.42**	**114**⇓	*e*P	**Pn**	**11 01 42.7**	**-0.5**
TICN				*e*S	**Sn**	**11 02 02.7**	**+1.0**
TGUH	**Tegucigalpa,Un**	**1.46**	**11**⇓	*i*P	**Pn**	**11 01 43.9**	**+0.2**
TGUH				*e*S	**Sn**	**11 02 02.9**	**+0.3**
TGUH				AML	AML	11 02 04.9	
	comp=N,51μm,0.5s						
TGUH	**Tegucigalpa,Un**	**1.46**	**11**	*e*P	**Pn**	**11 01 43.7**	**0.0**
MASN	**Masaya**	**1.51**	**114**⇓	*e*P	**Pn**	**11 01 43.4**	**-0.9**
SNVI	**San Vicente**	**1.59**	**309**	*e*P	x	11 01 43.6	
SNVI				*e*S	x	11 02 03.0	
APON	**Apoyo**	**1.62**	**115**⇓	*e*P	**Pn**	**11 01 45.3**	**-0.3**
APON				*e*S	**Sn**	**11 02 08.6**	**+2.4**
LFRS	**El Faro**	**1.77**	**304**⇑	*i*P	x	11 01 45.9	
LFRS				*e*S	x	11 02 07.5	
LBRS	**Las Brisas**	**1.82**	**308**	*e*P	x	11 01 46.9	
LFU	**La Fuente**	**1.89**	**307**	*e*P	x	11 01 47.6	
LFU				*e*S	x	11 02 11.3	
SNET	**Serv Nac Est T**	**1.94**	**303**	*e*P	x	11 01 48.2	
SNET				*e*S	x	11 02 11.0	
SNET				*i*		11 02 14.0	
	comp=Z,6μm,0.4s						
BOQS	**Boqueron**	**2.01**	**304**⇓	*e*P	x	11 01 49.5	
BOQS				*e*S	x	11 02 14.7	
SSN	**San Juan del S**	**2.12**	**128**	*e*P	**Pn**	**11 01 50.4**	**-1.8**
CONN	**Concepcion**	**2.16**	**119**	*e*P	**Pn**	**11 01 52.4**	**-0.4**
MADN	**Villa Maderas**	**2.32**	**121**	*e*P	**Pn**	**11 01 52.9**	**-1.9**
SBLS	**San Blas**	**2.35**	**301**⇑	*e*P	x	11 01 54.1	
SNJE	**San Jose**	**2.35**	**302**	*e*P	x	11 01 53.8	
RTR	**El Retiro**	**2.40**	**302**	*e*P	x	11 01 54.8	
RTR				*e*S	x	11 02 21.3	
MTO2	**Montecristo 2**	**2.49**	**316**	*e*P	x	11 01 55.9	
RBDL	**Robledal**	**2.55**	**306**	*e*P	x	11 01 56.4	
RBDL				*e*S	x	11 02 25.5	
CUI		**3.04**	**129**	*e*P	**Pn**	**11 02 04.4**	**-0.1**
2RIO	**Dos Rios de Up**	**3.08**	**132**	*e*P	**Pn**	**11 01 59.9**	**-5.2**
2RIO				*e*S	**Sn**	**11 02 31.5**	**-10**
VCR	**Vista de Mar**	**3.12**	**142**	*e*P	**Pn**	**11 02 05.8**	**+0.2**
NBG	**Las Nubes**	**3.34**	**306**⇑	*e*P	**Pn**	**11 02 09.2**	**+0.5**
PCG	**Pacaya**	**3.45**	**301**	*e*S	**Sn**	**11 02 51.5**	**+1.5**
JCR	**Jicaral**	**3.65**	**139**	*e*P	**Pn**	**11 02 12.7**	**-0.1**
FUG	**Fuego 3**	**3.67**	**300**	*e*P	**Pn**	**11 02 13.9**	**+0.7**
FG6		**3.76**	**301**	*e*P	**Pn**	**11 02 16.0**	**+1.6**
FG6				*e*S	**Sn**	**11 02 58.0**	**+0.4**
CGA2	**Cerro Gallo 2**	**3.99**	**130**	*e*P	**Pn**	**11 02 20.0**	**+2.6**
PRS1	**Puriscal**	**4.12**	**129**	*e*P	**Pn**	**11 02 20.2**	**+1.0**
JAT	**Jato**	**4.31**	**294**	*e*P	**Pn**	**11 02 21.6**	**-0.2**
JAT				*e*S	**Sn**	**11 03 03.5**	**-7.4**
LCR2	**La Lucha 2**	**4.51**	**129**	*e*P	**Pn**	**11 02 26.3**	**+1.7**
BUS	**Buena Vista**	**4.81**	**129**	*e*P	**Pn**	**11 02 30.0**	**+1.3**
CNI	**Changuinola**	**5.88**	**122**	*e*P	**Pn**	**11 02 44.7**	**+1.5**
BRU2	**Volcan**	**6.11**	**128**	*e*P	**Pn**	**11 02 48.0**	**+1.7**
TEIG	**Tepich**	**7.60**	**355**	P	**Pn**	**11 03 08.5**	**+2.0**
	comp=Z,3.9nm,0.3s,baz=188,slow=21,SNR=28						
CMIG	**Matias Romero**	**8.36**	**303**	P	**Pn**	**11 03 15.5**	**-1.5**
	comp=Z,1.7nm,0.3s,baz=125,slow=10.0,SNR=23						
CMIG				S	**Sn**	**11 04 47.1**	**-2.7**
	comp=Z,3.0nm,0.3s,baz=103,slow=22,SNR=5.9						
CHI2		**15.79**	**119**⇓	*i*P	Px	11 01 31.6	
LAPE	**La Pedrera**	**16.52**	**106**	*e*P	Px	11 02 00.9	
SDV	**Santo Domingo**	**17.04**	**101**	P	**Pn**	**11 05 11.6**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=331,slow=12,SNR=3.6						
NATX	**Nacogdoches**	**20.14**	**342**	*e*P	**P**	**11 05 46.5**	**+0.8**
LRAL	**Lakeview Retre**	**20.33**	**1**	*e*P	**P**	**11 05 49.1**	**+1.3**
	comp=Z,12nm,0.6s						
GOGA	**Godfrey**	**21.03**	**10**	*e*P	**P**	**11 05 56.9**	**+1.6**
	comp=Z,60nm,0.7s,mb5.0						
JCT	**Junction City**	**21.08**	**329**	*e*P	**P**	**11 05 54.9**	**-0.9**
	comp=Z,10nm,0.6s,mb4.3						
SJG	**San Juan**	**21.35**	**73**	P	**P**	**11 06 00.0**	**+1.2**
	comp=Z,11nm,0.2s,mb4.8,baz=307,slow=19,SNR=3.6						
ATAH	**Atahualpa**	**21.51**	**154**	P	**P**	**11 06 05.1**	**+4.5**
	comp=Z,3.1nm,0.6s,mb3.8,baz=173,slow=22,SNR=4.0						
ATAH				LR	LR	11 13 30.7	
	comp=Z,104nm,19.8s,baz=56,slow=34						
OXF	**Oxford**	**21.86**	**356**	*e*P	**P**	**11 06 04.6**	**+0.5**
	comp=Z,32nm,1.0s,mb4.6						
MTP	**Monte Pirata**	**21.90**	**73**	*e*P	**P**	**11 06 05.5**	**+0.8**
JSC	**Jenkinsville**	**22.31**	**14**	*e*P	**P**	**11 06 10.3**	**+1.4**
TXAR	**Lajitas Array**	**22.38**	**320**	P	**P**	**11 06 09.3**	**-0.3**
	comp=Z,7.1nm,0.6s,mb4.2,baz=140,slow=9.6,SNR=92						
TXAR				PcP	PcP	11 10 01.8	0.0
	comp=Z,0.5nm,0.6s,baz=142,slow=6.5,SNR=3.6						
TXAR				ScP	ScP	11 13 32.5	+0.8
	comp=Z,0.8nm,0.7s,baz=150,slow=5.8,SNR=11						
TXAR				LR	LR	11 14 56.6	
	comp=Z,38nm,20.6s,baz=180,slow=36						
MIAR	**Mount Ida**	**22.50**	**347**	*e*P	**P**	**11 06 10.8**	**-0.1**
	comp=Z,16nm,0.6s,mb4.5						
SWET	**Sewanee**	**22.55**	**3**	*e*P	**P**	**11 06 11.6**	**+0.2**
PCRV	**Puerto La Cruz**	**22.60**	**94**	P	**P**	**11 06 08.3**	**-3.8**
	comp=Z,7.3nm,0.7s,mb4.1,baz=318,slow=14,SNR=2.2						
PCRV				LR	LR	11 15 28.9	
	comp=Z,42nm,21.1s,baz=278,slow=38						
PCRV	**Puerto La Cruz**	**22.60**	**94**	P	**P**	**11 06 08.3**	**-3.8**
PCRV				LR	LR	11 15 28.9	
CPCT	**Cooper Cave**	**22.90**	**6**	*e*P	**P**	**11 06 15.4**	**+0.4**
TKL	**Tuckaleechee C**	**23.19**	**8**	P	**P**	**11 06 18.5**	**+0.7**
	comp=Z,17nm,0.8s,mb4.5,baz=182,slow=10,SNR=22						
WVT	**Waverly**	**23.41**	**359**	*e*P	**P**	**11 06 18.0**	**-1.7**
	comp=Z,2.4nm,0.4s,mb3.9						
PARMO	**Parma**	**24.02**	**356**	*e*P	**P**	**11 06 25.1**	**-0.3**
TZTN	**Tazewell**	**24.09**	**8**	*e*P	**P**	**11 06 26.4**	**+0.4**
	comp=Z,7.0nm,0.4s,mb4.3						
WMOK	**Wichita Mounta**	**24.26**	**337**	*e*P	**P**	**11 06 26.5**	**-1.0**
	comp=Z,7.7nm,0.6s,mb4.2						
LPIG	**La Paz**	**24.38**	**301**	LR	LR	11 15 54.7	
	comp=Z,70nm,19.2s,baz=30,slow=36						
ELN	**Prospectdale**	**25.25**	**13**	*e*P	**P**	**11 06 37.6**	**+1.1**
WCI	**Wyandotte Cave**	**25.53**	**2**	*e*P	**P**	**11 06 38.3**	**-0.7**
	comp=Z,13nm,0.6s,mb4.5						
CCM	**Cathedral Cave**	**25.55**	**353**	*e*P	**P**	**11 06 37.7**	**-1.4**
	comp=Z,8.6nm,0.6s,mb4.4						
AMTX	**Amarillo**	**25.60**	**332**	*e*P	**P**	**11 06 39.2**	**-0.5**
	comp=Z,9.1nm,0.6s,mb4.4						
BNM	**Barren Site**	**27.57**	**324**	*e*P	**P**	**11 06 58.1**	**+0.7**
LAZ	**Ladron**	**28.05**	**324**	*e*P	**P**	**11 07 02.9**	**+1.2**
ANMO	**Albuquerque**	**28.07**	**326**	P	**P**	**11 07 02.4**	**+0.6**
	comp=Z,1.7nm,0.7s,mb3.7,baz=167,slow=9.7,SNR=11						
SDCO	**Great Sand Dun**	**29.71**	**330**	*e*P	**P**	**11 07 17.0**	**+0.6**
	comp=Z,2.6nm,0.7s,mb4.0						
MVCO	**Mesa Verde**	**30.84**	**326**	*e*P	**P**	**11 07 27.0**	**+0.6**
	comp=Z,6.2nm,0.6s,mb4.5						
PV01	**Paradox Valley**	**31.56**	**327**	*e*P	**P**	**11 07 32.7**	**0.0**
ECSD	**EROS,Sioux Fal**	**31.97**	**348**	*e*P	**P**	**11 07 34.5**	**-1.7**
	comp=Z,7.1nm,0.6s,mb4.6						
PHWY	**Pilot Hill**	**32.58**	**335**	*e*P	**P**	**11 07 42.1**	**+0.5**
	comp=Z,4.1nm,0.6s,mb4.4						
SRU	**San Rafael**	**33.32**	**326**	*e*P	**P**	**11 07 48.5**	**+0.4**
	comp=Z,4.9nm,0.6s,mb4.5						
MSU	**Marysvale**	**33.82**	**324**	*e*P	**P**	**11 07 52.7**	**+0.3**
TMUT	**Trail Mountain**	**33.82**	**326**	*e*P	**P**	**11 07 53.0**	**+0.6**
RSSD	**Black Hills**	**34.44**	**339**	*e*P	**P**	**11 07 58.1**	**+0.4**
	comp=Z,5.5nm,0.6s,mb4.6						
LPAZ	**La Paz**	**34.55**	**146**	P	**P**	**11 08 00.0**	**+1.0**
	comp=Z,1.1nm,0.6s,mb3.9,baz=343,slow=6.6,SNR=7.8						
JLU	**Jordanelle**	**34.89**	**327**	*e*P	**P**	**11 08 02.1**	**+0.6**
CTU	**Camp Tracy**	**35.11**	**327**	*e*P	**P**	**11 08 03.4**	**-0.1**
	comp=Z,8.7nm,0.8s,mb4.6						
DUG	**Dugway**	**35.33**	**326**	*e*P	**P**	**11 08 06.0**	**+0.6**
	comp=Z,2.5nm,0.6s,mb4.2						
PDAR	**Pinedale Array**	**35.58**	**332**	P	**P**	**11 08 07.5**	**0.0**
	comp=Z,2.3nm,0.5s,mb4.3,baz=123,slow=9.5,SNR=24						
PDAR				PcP	PcP	11 10 33.6	-1.1
	comp=Z,0.3nm,0.5s,baz=145,slow=3.6,SNR=3.6						
HWUT	**Hardware Ranch**	**35.68**	**328**	*e*P	**P**	**11 08 08.3**	**0.0**
	comp=Z,15nm,0.6s,mb5.1						
SPUT	**South Promonto**	**35.92**	**327**	*e*P	**P**	**11 08 10.8**	**+0.3**
BGU	**Big Grassy Mou**	**35.96**	**326**	*e*P	**P**	**11 08 11.1**	**+0.3**
AHID	**Auburn Hatcher**	**36.30**	**330**	*e*P	**P**	**11 08 13.8**	**0.0**
	comp=Z,12nm,0.6s,mb5.0						
HVU	**Hansel Valley**	**36.43**	**328**	*e*P	**P**	**11 08 15.1**	**+0.3**
	comp=Z,6.9nm,0.8s,mb4.6						
REDW	**Red Top Meadow**	**36.64**	**331**	*e*P	**P**	**11 08 16.9**	**+0.4**
	comp=Z,30nm,0.6s,mb5.4						
SNOW	**Snow King Moun**	**36.67**	**331**	*e*P	**P**	**11 08 17.1**	**+0.3**
	comp=Z,31nm,0.6s,mb5.4						
LOHW	**Long Hollow**	**36.71**	**332**	*e*P	**P**	**11 08 17.4**	**+0.2**
	comp=Z,3.4nm,0.4s,mb4.6						

TPAW	**Teton Pass**	**36.78**	**331**	*e*P	**P**	**11 08 18.0**	**+0.3**
	comp=Z,16nm,0.6s,mb5.1						
RRI2	**Red Ridge**	**36.85**	**331**	*e*P	**P**	**11 08 18.6**	**+0.2**
	comp=Z,9.8nm,0.6s,mb4.9						
MOOW	**Moose Ponds**	**36.88**	**332**	*e*P	**P**	**11 08 18.5**	**-0.1**
	comp=Z,5.6nm,0.7s,mb4.6						
IMW	**Indian Meadow**	**37.09**	**332**	*e*P	**P**	**11 08 20.5**	**+0.1**
	comp=Z,6.9nm,0.6s,mb4.8						
RLMT	**Red Lodge**	**37.31**	**334**	*e*P	**P**	**11 08 21.9**	**-0.3**
	comp=Z,4.1nm,0.5s,mb4.6						
LAO	**LASA Array**	**37.43**	**339**	*e*P	**P**	**11 08 22.0**	**-1.2**
	comp=Z,6.1nm,0.8s,mb4.6						
YFT	**Old Faithful**	**37.47**	**332**	*e*P	**P**	**11 08 24.3**	**+0.8**
NVAR	**Mina Array Bea**	**37.51**	**319**	P	**P**	**11 08 25.2**	**+1.2**
	comp=Z,2.4nm,0.6s,mb4.2,baz=132,slow=6.7,SNR=35						
NVAR				pP	pP	11 08 45.3	+0.9
	comp=Z,1.3nm,0.7s,baz=136,slow=7.1,SNR=3.9						
NVAR				PcP	PcP	11 10 41.0	+0.4
	comp=Z,0.8nm,0.7s,baz=145,slow=3.9,SNR=5.9						
NVAR				pPcP		11 11 02.8	
	comp=Z,1.1nm,0.7s,baz=146,slow=3.5,SNR=6.5						
NVAR				ScP	ScP	11 14 21.3	+1.1
	comp=Z,0.9nm,0.7s,baz=129,slow=3.5,SNR=8.2						
YMR	**Madison River**	**37.69**	**332**	*e*P	**P**	**11 08 26.1**	**+0.7**
	comp=Z,10nm,0.8s,mb4.7						
ULM	**Lac du Bonnet**	**38.14**	**351**	P	**P**	**11 08 27.0**	**-2.1**
	comp=Z,5.6nm,0.4s,mb4.7,baz=170,slow=11,SNR=15						
ULM				pP	pP	11 08 48.5	-1.0
	comp=Z,6.8nm,0.8s,baz=246,slow=5.1,SNR=2.8						
DGMT	**Dagmar**	**38.33**	**342**	*e*P	**P**	**11 08 30.3**	**-0.4**
	comp=Z,41nm,0.6s,mb5.4						
HLID	**Hailey**	**38.54**	**328**	*e*P	**P**	**11 08 32.6**	**0.0**
	comp=Z,3.7nm,0.7s,mb4.3						
BOZ	**Bozeman (W)**	**38.75**	**333**	*e*P	**P**	**11 08 34.0**	**-0.3**
	comp=Z,3.3nm,0.5s,mb4.4						
PAHR	**Pah Rah Range**	**38.93**	**320**	*e*P	**P**	**11 08 35.7**	**-0.2**
	comp=Z,4.1nm,0.7s,mb4.4						
DLMT	**Dillon**	**38.97**	**332**	*e*P	**P**	**11 08 36.6**	**+0.5**
	comp=Z,5.6nm,0.6s,mb4.6						
WVOR	**Wild Horse Val**	**40.11**	**324**	*e*P	**P**	**11 08 45.4**	**-0.2**
	comp=Z,6.2nm,0.6s,mb4.6						
LBCM	**Butte Creek Ri**	**40.81**	**320**	P	**P**	**11 08 51.3**	**-0.1**
LTIM	**Timbered Crate**	**41.08**	**320**	P	**P**	**11 08 53.7**	**0.0**
KIPM	**Iron Peak**	**41.64**	**317**	*e*P	**P**	**11 08 58.4**	**+0.1**
LNOR	**Lincton Mounta**	**42.13**	**328**	*e*P	**P**	**11 09 01.4**	**-0.8**
HAWA	**Hanford**	**43.13**	**328**	*e*P	**P**	**11 09 09.2**	**-1.0**
	comp=Z,5.2nm,0.7s,mb4.4						
IRO	**Indian Ridge**	**43.16**	**323**	P	**P**	**11 09 10.1**	**-0.5**
RSW	**Rattlesnake Hi**	**43.16**	**328**	*e*P	**P**	**11 09 10.2**	**-0.4**
OD2	**Odessa Site #2**	**43.38**	**329**	*e*P	**P**	**11 09 12.3**	**0.0**
MDW	**Midway**	**43.39**	**328**	P	**P**	**11 09 11.9**	**-0.5**
FFC	**Flin Flon**	**43.51**	**348**	*e*P	**P**	**11 09 12.0**	**-1.2**
	comp=Z,20nm,1.1s,mb4.8						
HOOD	**Mount Hood Mea**	**43.60**	**325**	*e*P	**P**	**11 09 14.6**	**+0.5**
	comp=Z,11nm,0.7s,mb4.7						
EBG	**Ellensburg**	**44.01**	**327**	P	**P**	**11 09 17.3**	**0.0**
WTV	**Waterville**	**44.21**	**329**	P	**P**	**11 09 18.9**	**0.0**
SCHQ	**Schefferville**	**45.15**	**17**	P	**P**	**11 09 24.9**	**-1.4**
	comp=Z,20nm,0.6s,mb5.0,baz=214,slow=6.2,SNR=52						
SCHQ				pP	pP	11 09 45.0	-2.2
	comp=Z,6.0nm,0.6s,baz=207,slow=2.1,SNR=3.5						
SCHQ				LR	LR	11 31 00.9	
	comp=Z,46nm,18.6s,baz=25,slow=40						
EDM	**Edmonton**	**45.42**	**338**	*e*P	**P**	**11 09 26.6**	**-1.8**
EDM				*e*pP	pP	11 09 48.4	-1.0
RPW	**Rockport**	**45.49**	**329**	P	**P**	**11 09 28.0**	**-1.0**
CPUP	**Villa Florida**	**48.61**	**143**	P	**P**	**11 09 52.3**	**-1.4**
	comp=Z,1.5nm,0.5s,mb4.1,baz=331,slow=8.3,SNR=6.4						
YKA	**Yellowknife Ar**	**53.42**	**345**	P	**P**	**11 10 27.6**	**-1.6**
	comp=Z,1.7nm,0.6s,mb4.3,baz=102,slow=22,SNR=4.5						
YKA	**Yellowknife Ar**	**53.42**	**345**	P	**P**	**11 10 27.6**	**-1.6**
PLCA	**Paso Flores**	**55.37**	**164**	P	**P**	**11 10 44.5**	**+1.0**
	comp=Z,1.3nm,0.8s,mb4.0,baz=315,slow=5.6,SNR=5.3						
PPT	**Papeete**	**68.17**	**245**	*e*LR	LR	11 32 22.9	
	comp=Z,122nm,29.8s						
EKA	**Eskdalemuir Ar**	**76.55**	**36**	P	**P**	**11 12 55.4**	**-3.9**
	comp=Z,1.4nm,1.0s,mb3.6,baz=269,slow=5.0,SNR=4.4						
EKA				pP	pP	11 13 17.1	-4.9
	comp=Z,2.2nm,0.8s,baz=270,slow=4.7,SNR=4.0						
ESDC	**Sonseca Array**	**77.17**	**52**	LR	LR	11 39 05.4	
	comp=Z,35nm,21.8s,baz=110,slow=30						
SPITS	**Spitsbergen Ar**	**80.56**	**12**	PP	PP	11 16 17.6	-7.5
	comp=Z,17nm,1.0s,baz=14,slow=14,SNR=3.8						
NOA	**NORSAR Array B**	**83.27**	**29**	pP	pP	11 13 55.0	-3.5
	comp=Z,1.5nm,0.8s,baz=286,slow=5.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**86.48**	**77**	P	**P**	**11 13 49.4**	**-3.0**
	comp=Z,0.2nm,0.5s,mb3.3,baz=251,slow=4.4,SNR=3.3						
AFI	**Afiamalu**	**87.50**	**255**	LR	LR	11 44 42.4	
	comp=Z,82nm,19.6s,baz=103,slow=30						
GERES	**GERESS Array B**	**87.88**	**40**	LR	LR	11 49 56.5	
	comp=Z,25nm,22.0s,baz=275,slow=33						
SONM	**Songino Array**	**118.55**	**349**	PKP	PKPdf	11 19 54.2	-2.2
	comp=Z,0.3nm,0.3s,baz=354,slow=21,SNR=2.2						
KSRS	**Korea Array**	**120.08**	**328**	PKP	PKPdf	11 19 58.2	-1.4
	comp=Z,0.8nm,0.6s,baz=342,slow=1.9,SNR=5.9						
WB2	**Warramunga Arr**	**139.20**	**254**	*e*P	PKPdf	11 20 37.6	+1.4
WRA	**Warramunga Arr**	**139.21**	**254**	PKhKP		11 20 28.6	
	comp=Z,0.7nm,0.7s,baz=88,slow=2.3,SNR=4.8						
WRA				PKP	PKPdf	11 20 37.8	+1.5
	comp=Z,2.1nm,0.5s,baz=90,slow=2.3,SNR=39						
WRA				pPKP	pPKPdf	11 20 57.3	-3.2
	comp=Z,1.2nm,0.8s,baz=90,slow=2.3,SNR=4.3						
WRA	**Warramunga Arr**	**139.21**	**254**	PKP		11 20 28.6	
WRA				PKP	PKPdf	11 20 37.8	+1.6
WRA				pPKP	pPKPdf	11 20 57.3	-3.2
ASAR	**Alice Springs**	**139.23**	**248**	PKhKP		11 20 30.0	
	comp=Z,0.2nm,0.6s,baz=216,slow=37,SNR=5.4						
ASAR				PKP	PKPdf	11 20 38.0	+1.8
	comp=Z,0.9nm,0.6s,baz=89,slow=1.6,SNR=12						
ASAR				pPKP	pPKPdf	11 20 57.8	-2.7
	comp=Z,1.1nm,0.7s,baz=113,slow=1.9,SNR=5.3						
ASAR				SKPbc	SKPbc	11 24 04.8	+1.0
	comp=Z,0.3nm,0.6s,baz=114,slow=2.7,SNR=5.0						
FITZ	**Fitzroy Crossi**	**147.56**	**256**	PKPbc	PKPbc	11 20 53.7	+0.1
	comp=Z,1.8nm,0.7s,baz=254,slow=2.9,SNR=7.2						
FITZ				pPKPbc	pPKPbc	11 21 15.1	-2.7
	comp=Z,3.1nm,0.8s,baz=177,slow=5.8,SNR=5.3						
CMAR	**Chiang Mai Arr**	**148.46**	**348**	PKPbc	PKPbc	11 20 54.5	-1.5
	comp=Z,2.6nm,0.7s,baz=341,slow=3.7,SNR=10						

*IDC **11** 11:03:34.1±2.2, 1042S×10733E, h0km, mb4.0/7, mb1 4.2/9, mb1mx4.0/18, mbtmp4.1/9, ML4.2/2, MS3.4/11, Ms1 3.4/11, ms1mx3.2/29, Error ellipse: s-maj=78.8km s-min=17.0km az=50.0*
*NEIC **11** 11:03:35.3±0.6, 1048S×10736E, h10km, mb4.3/4, Error ellipse: s-maj=22.3km s-min=10.9km az=218.0*
*DJA **11** 11:03:37, 1020S×10726E, h33km, MLv5.0/6*
*ISCJB **11** 11:03:38.4±1.8, 105S±02×1073E±01, h52km±23km, mb4.1/9, MS3.5/9, Error ellipse: s-maj=34.9km s-min=12.5km az=34.9*
ISC 11 11:03:39.2±1.7**, 105S**±02×**1073E**±01**, h40**km±21km**, n23,** σ**0.89**/15**, mb4.1**/9**, MS3.5**/9**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.58**	**271**	*e*P	**Pn**	**11 04 04.9**	**+0.2**
KAPI	**Kappang**	**13.53**	**67**	LR	LR	11 12 35.6	
	comp=Z,89nm,19.5s,baz=261,slow=40						
MBWA	**Marble Bar**	**15.98**	**133**	*e*P	**Pn**	**11 07 17.8**	**-3.5**
	23nm,0.7s						
BATI	**Baumata**	**16.14**	**90**	Pn	**Pn**	**11 07 23.7**	**+0.4**
	2.1nm,0.3s,baz=277,slow=8.1,SNR=2.5						
BATI				Sn	Sx	11 10 03.5	
	2.9nm,0.3s,baz=1.3,slow=20,SNR=2.6						
FITZ	**Fitzroy Crossi**	**19.33**	**115**	*e*P	**Pn**	**11 08 04.4**	**+1.9**
	5.8nm,0.6s						
FITZ				*e*S	Sx	11 11 19.3	
FITZ	**Fitzroy Crossi**	**19.33**	**115**	P	**Pn**	**11 08 01.9**	**-0.7**
	0.3nm,0.3s,baz=279,slow=7.6,SNR=11						
FITZ				S	Sx	11 11 18.5	
	0.2nm,0.3s,baz=119,slow=16,SNR=6.2						
FITZ				LR	LR	11 14 11.7	
	comp=Z,84nm,21.6s,baz=302,slow=33						
DAV	**Davao City (W)**	**25.26**	**47**	LR	LR	11 19 28.3	
	comp=Z,50nm,19.9s,MS3.0,baz=250,slow=38						
WRA	**Warramunga Arr**	**27.72**	**113**	P	**P**	**11 09 23.6**	**-0.4**
	2.5nm,0.9s,mb3.9,baz=284,slow=11,SNR=11						
WRAB	**Tennant Creek**	**27.73**	**113**	*e*P	**P**	**11 09 24.6**	**+0.5**
	4.8nm,1.1s,mb4.0						
ASAR	**Alice Springs**	**28.56**	**121**	P	**P**	**11 09 30.2**	**-1.3**
	0.5nm,0.9s,mb3.2,baz=289,slow=8.7,SNR=3.2						
CMAR	**Chiang Mai Arr**	**29.94**	**344**	P	**P**	**11 09 42.4**	**-1.2**
	1.8nm,0.8s,mb3.9,baz=178,slow=8.3,SNR=8.3						
STKA	**Stephens Creek**	**38.17**	**129**	P	**P**	**11 10 56.1**	**+1.2**
	2.8nm,0.8s,mb4.0,baz=289,slow=6.0,SNR=3.2						
STKA				LR	LR	11 26 24.5	
	comp=Z,122nm,18.7s,MS3.7,baz=341,slow=36						
CTA	**Charters Tower**	**38.71**	**109**	LR	LR	11 25 29.3	
	comp=Z,113nm,19.7s,MS3.7,baz=42,slow=34						
GUMO	**Guam**	**44.34**	**58**	LR	LR	11 30 03.6	
	comp=Z,21nm,20.9s,MS3.0,baz=271,slow=36						
KSRS	**Korea Array**	**51.51**	**21**	LR	LR	11 33 36.3	
	comp=Z,24nm,21.3s,MS3.2,baz=242,slow=35						
SONM	**Songino Array**	**58.10**	**359**	P	**P**	**11 13 28.7**	**+0.3**
	1.3nm,0.5s,mb4.2,baz=178,slow=8.4,SNR=10						
SONM				LR	LR	11 39 28.5	
	comp=Z,51nm,20.7s,MS3.6,baz=2.6,slow=37						
MKAR	**Makanchi Array**	**61.27**	**341**	P	**P**	**11 13 50.9**	**+0.7**
	3.0nm,0.6s,mb4.6,baz=142,slow=7.8,SNR=21						
MKAR				LR	LR	11 43 49.9	
	comp=Z,20nm,18.5s,MS3.3,baz=354,slow=40						
KURK	**Kurchatov**	**65.88**	**340**	*e*P	**P**	**11 14 20.6**	**+0.1**
	7.2nm,1.0s,mb4.7						
BVAR	**Borovoye Array**	**70.69**	**337**	LR	LR	11 47 35.4	
	comp=Z,34nm,18.2s,MS3.6,baz=332,slow=37						
PETK	**Petropavlovsk-**	**76.53**	**29**	P	**P**	**11 15 24.9**	**-0.1**
	1.3nm,0.5s,mb4.1,baz=170,slow=1.4,SNR=13						
PETK	**Petropavlovsk-**	**76.53**	**29**	P	**P**	**11 15 24.9**	**-0.1**
BOSA	**Boshof**	**78.07**	**243**	LR	LR	11 44 02.9	
	comp=Z,77nm,18.6s,MS4.1,baz=116,slow=31						
TXAR	**Lajitas Array**	**145.59**	**53**	PKPbc	PKPbc	11 23 16.5	+2.4
	0.7nm,0.7s,baz=257,slow=2.2,SNR=11						

IDC 11 11:18:31.9±27.0**, 2092S**×**17490W, h0**km**, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.9**/18**, mbtmp4.1**/4**, Error ellipse: s-maj=494.8km s-min=140.6km az=76.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.33**	**264**	P	P	11 25 39.2	+1.4
	3.2nm,0.6s,baz=96,slow=12,SNR=9.0						
STKA	**Stephens Creek**	**40.23**	**245**	P	P	11 26 09.5	-1.0
	1.0nm,0.4s,baz=85,slow=11,SNR=3.2						
ASAR	**Alice Springs**	**47.24**	**257**	P	P	11 27 06.8	-0.2
	1.9nm,0.7s,baz=94,slow=8.0,SNR=19						
WRA	**Warramunga Arr**	**47.41**	**262**	P	P	11 27 08.1	-0.3
	1.0nm,0.4s,baz=96,slow=7.9,SNR=62						

*ISK **11** 11:20:16.9, 3937N×2769E, h7km, MD3.0*
*CSEM **11** 11:20:16.4±0.1, 3935N×2769E, h5km, MD3.0, Error ellipse: s-maj=1.4km s-min=1.1km az=96.0*
*ISCJB **11** 11:20:17.2±0.5, 3937N±002×2770E±003, h5km±4km, Error ellipse: s-maj=4.4km s-min=3.6km az=160.4*
*DDA **11** 11:20:17.0, 3938N×2770E, h8km±3km, Md3.1*
ISC 11 11:20:17.7±0.4**, 3937N**±002×**2769E**±003**, h9**km±4km**, n28,** σ**0.56**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.31**	**28**	*e*PG	**Pg**	**11 20 23.5**	**-0.3**
BALB				*e*SG	**Sg**	**11 20 28.2**	**+0.3**
BALY	**Balya**	**0.38**	**351**	*i* P	**Pg**	**11 20 25.0**	**-0.1**
BALY				*i* S	**Sg**	**11 20 30.4**	**+0.3**
AKS	**Akhisar**	**0.49**	**169**	*e*PG	**Pg**	**11 20 27.1**	**-0.2**
AKS				*e*SG	**Sg**	**11 20 34.5**	**+0.7**
AKHS	**Akhisar**	**0.50**	**169**	*i* P	**Pg**	**11 20 27.0**	**-0.3**
AKHS				*i* S	**Sg**	**11 20 34.8**	**+0.9**
DURS	**Dursunbey**	**0.65**	**69**	*i* P	**Pg**	**11 20 29.5**	**-0.7**
AYVA	**Ayvalik**	**0.78**	**266**	*i* P	**Pg**	**11 20 32.6**	**-0.2**
AYVA				*i* S	**Sg**	**11 20 44.4**	**+1.6**
DEMI	**Demirci**	**0.86**	**112**	*i* P	**Pg**	**11 20 33.9**	**-0.3**
DEMI				*i* S	**Sg**	**11 20 45.8**	**+0.5**
EDC	**Edincik**	**0.99**	**8**	*e*PG	**Pg**	**11 20 35.7**	**-1.0**
IZM	**Izmir**	**1.02**	**199**	*e*PG	**Pg**	**11 20 36.0**	**-1.3**
KCT	**Karacabey**	**1.03**	**29**	*e*PG	**Pg**	**11 20 37.3**	**-0.3**
BLCB	**Balcova**	**1.10**	**208**	*e*PN	**Pn**	**11 20 38.5**	**-0.9**
KULA	**Kula-Manisa**	**1.14**	**138**	*e*PN	**Pn**	**11 20 39.0**	**-0.8**
LPK	**Lapseki**	**1.23**	**325**	*e*PN	**Pn**	**11 20 41.1**	**-0.1**
MRMT	**Marmara Adasi**	**1.24**	**357**	*e*PN	**Pn**	**11 20 41.5**	**+0.2**
BOZC	**Bozcaada**	**1.35**	**291**	*i* P	**Pn**	**11 20 42.1**	**-0.7**
BOZC				*i* S	**Sb**	**11 21 00.6**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.38**	**343**	*e*PN	**Pn**	**11 20 43.0**	**-0.2**
SART	**Tekirdag**	**1.38**	**344**	*i* P	**Pn**	**11 20 42.9**	**-0.3**
GDZ	**Gediz**	**1.42**	**101**	*i* P	**Pn**	**11 20 44.1**	**+0.4**
GDZ				*i* S	**Sn**	**11 21 02.8**	**+0.3**
GEMT	**Gemlik**	**1.57**	**47**	*e*PN	**Pn**	**11 20 45.8**	**0.0**
TKR	**Tekirdag**	**1.63**	**356**	*e*PN	**Pn**	**11 20 46.9**	**+0.4**
KHAL	**Karahalli**	**1.72**	**125**	*i* P	**Pn**	**11 20 47.6**	**-0.2**
YLV	**Yalova**	**1.76**	**47**	*e*PN	**Pn**	**11 20 48.6**	**+0.2**
ENEZ	**Enez**	**1.81**	**320**	*e*PN	**Pn**	**11 20 49.2**	**+0.2**
ADVT	**Abdulvahap**	**1.90**	**55**	*e*PN	**Pn**	**11 20 50.2**	**-0.1**
SLVT	**Silivri**	**1.90**	**12**	*e*PN	**Pn**	**11 20 51.1**	**+0.8**
HRT	**Hereke**	**2.10**	**46**	*e*PN	**Pn**	**11 20 53.6**	**+0.6**
KLYT	**Kilyos**	**2.15**	**28**	*e*PN	**Pn**	**11 20 54.1**	**+0.3**
SILT	**Sile**	**2.33**	**39**	*e*PN	**Pn**	**11 20 56.6**	**+0.4**

*SGS **11** 11:20:24.7, 30.12N×36.19E, h7km*
*CSEM **11** 11:20:24.7, 30.12N×36.19E, h7km, ML2.8, After SNSN*
*ISCJB **11** 11:20:26.1±0.7, 2983N±003×3620E±004, h0km, Error ellipse: s-maj=5.6km s-min=4.2km az=152.7*
*GII **11** 11:20:26.6±1.6, 2986N×36.10E, h0km, ML2.1/4, EXPLOSION*
ISC 11 11:20:26.2±0.8**, 2983N**±003×**3624E**±004**, h0**km**, n16,** σ**0.97**/27**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.04**	**265**	Pg	**Pg**	**11 20 46.1**	**+0.1**
AQBJ				Sg	**Sg**	**11 21 00.9**	**+1.4**
HRFI	**Mount Harif**	**1.06**	**282**	Pg	**Pg**	**11 20 45.7**	**-0.9**
HRFI				Sg	**Sg**	**11 21 02.6**	**+2.3**
EIL	**Elat**	**1.13**	**262**	Pg	**Pg**	**11 20 47.5**	**-0.3**
EIL				Sg	**Sg**	**11 21 02.2**	**-0.2**
HQLS		**1.15**	**243**	P	**Pg**	**11 20 47.2**	**-1.0**
HQLS		**1.15**	**243**	P	**Pg**	**11 20 47.2**	**-1.0**
HQLS				S	**Sg**	**11 21 03.9**	**+0.8**
MBRI	**Mt Berech**	**1.15**	**269**	Pg	**Pg**	**11 20 48.4**	**+0.2**
MBRI				Sg	**Sg**	**11 21 03.3**	**+0.1**
ZFRI	**Zfri**	**1.17**	**309**	Pg	**Pg**	**11 20 47.8**	**-0.8**
ZFRI				Sg	**Sg**	**11 21 04.6**	**+0.8**
PRNI	**Paran**	**1.19**	**296**	Pg	**Pg**	**11 20 47.7**	**-1.3**
PRNI				Sg	**Sg**	**11 21 04.3**	**-0.1**
JLOS		**1.27**	**211**	P	**Pg**	**11 20 50.4**	**-0.1**
KRMI	**Paran Flat**	**1.34**	**283**	Pg	**Pg**	**11 20 50.6**	**-1.4**
KRMI				Sg	**Sg**	**11 21 08.0**	**-1.4**
TBKS	**Tabuk**	**1.62**	**171**	S	**Sn**	**11 21 19.5**	**+1.9**
TBKS	**Tabuk**	**1.62**	**171**	P	**Pn**	**11 20 55.9**	**-0.1**
MZDA	**Masada**	**1.66**	**333**	Pn	**Pn**	**11 20 56.1**	**-0.4**
MZDA				Sn	**Sn**	**11 21 18.9**	**+0.4**
DSI	**Dead Sea**	**1.89**	**337**	Pn	**Pn**	**11 20 59.8**	**+0.1**
DSI				Sn	**Sn**	**11 21 26.6**	**+2.4**
KZIT	**Kziot**	**1.92**	**305**	Pn	**Pn**	**11 21 00.2**	**0.0**
KZIT				Sn	**Sn**	**11 21 24.9**	**-0.1**
RSHS		**1.98**	**220**	P	**Pn**	**11 20 59.6**	**-1.2**

*ISCJB **11** 11:48:30.1±0.4, 4936N±002×680E±004, h0km, Error ellipse: s-maj=3.8km s-min=2.8km az=153.7*
*LDG **11** 11:48:31.3±0.1, 4938N×687E, h1km, Md2.6/1, Ml2.7/6, Error ellipse: s-maj=2.3km s-min=1.6km az=63.0, Suspected Mining induced.*
*NEIC **11** 11:48:31.3, 4938N×687E, h1km, ML2.4(STR), ML2.7(LDG), After LDG.*
*CSEM **11** 11:48:31.0±0.1, 4939N×685E, h1km, ML2.7/6, Error ellipse: s-maj=2.4km s-min=1.4km az=55.0, Suspected Mining induced.*
ISC 11 11:48:30.9±0.4**, 4938N**±002×**684E**±004**, h0**km**, n26,** σ**0.76**/44**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	**0.35**	**24**	Pg	**Pg**	**11 48 38.4**	**+0.7**
RUP				Sg	**Sg**	**11 48 42.4**	**+0.1**
WLF	**Walferdange**	**0.53**	**303**	P	**Pg**	**11 48 42.2**	**+1.1**
WLF	**Walferdange**	**0.53**	**303**	P	**Pg**	**11 48 42.1**	**+1.0**
LANF	**Langenberg**	**0.75**	**122**	Pg	**Pg**	**11 48 45.3**	**+0.1**
LANF				Sg	**Sg**	**11 48 58.0**	**+3.1**
CDF	**Champ du Feu**	**1.01**	**163**	*e*Pn	**Pn**	**11 48 50.6**	**-1.7**
CDF				*e*Sg	**Sg**	**11 49 03.6**	**+0.3**
	19nm,0.2s						
CDF	**Champ du Feu**	**1.01**	**163**	*e*Pn	**Pn**	**11 48 50.6**	**-1.7**
CDF				*e*Sg	**Sg**	**11 49 03.6**	**+0.3**
	9.6nm,0.2s						
CDF	**Champ du Feu**	**1.01**	**163**	*e*Pg	**Pg**	**11 48 50.1**	**-0.1**
CDF				*e*Pn	**Pn**	**11 48 50.6**	**-1.7**
CDF				*e*Sg	**Sg**	**11 49 03.6**	**+0.3**
RFYF	**Reffroy**	**1.17**	**231**	*e*Pg	**Pg**	**11 48 53.8**	**+0.4**
	baz=52						
RFYF				*e*Sg	**Sg**	**11 49 10.1**	**+1.6**
	51nm,0.3s						
RFYF	**Reffroy**	**1.17**	**231**	*e*Pg	**Pg**	**11 48 53.8**	**+0.4**
RFYF				*e*Sg	**Sg**	**11 49 10.1**	**+1.6**
	25nm,0.3s						
ECH	**Echery**	**1.18**	**170**	Pg	**Pg**	**11 48 53.8**	**+0.3**
ECH				Sg	**Sg**	**11 49 09.9**	**+1.1**
THEF	**They Montfort**	**1.28**	**206**	Pg	**Pg**	**11 48 54.7**	**-0.8**
THEF				Sg	**Sg**	**11 49 11.6**	**-0.5**
MEM	**Membach**	**1.34**	**337**	P	**Pg**	**11 48 56.2**	**-0.5**
MEM	**Membach**	**1.34**	**337**	P	**Pg**	**11 48 56.1**	**-0.6**
HAU	**Haudompre**	**1.41**	**194**	*e*Pg	**Pg**	**11 48 57.3**	**-0.7**
HAU				*e*Sg	**Sg**	**11 49 16.2**	**0.0**
	19nm,0.3s						
HAU	**Haudompre**	**1.41**	**194**	*e*Pg	**Pg**	**11 48 57.3**	**-0.7**
HAU				*e*Sg	**Sg**	**11 49 16.2**	**0.0**
	9.4nm,0.3s						
BFO	**Black Forest**	**1.44**	**136**	*e*Pg	**Pg**	**11 48 58.5**	**+0.1**
	SNR=3.6						
BFO				*e*Sg	**Sg**	**11 49 15.7**	**-1.3**
	SNR=4.6						
GIVF	**Givet**	**1.50**	**300**	*e*Pg	**Pg**	**11 48 59.8**	**+0.2**
GIVF				*e*Sg	**Sg**	**11 49 18.7**	**-0.3**
	29nm,0.6s						
GIVF	**Givet**	**1.50**	**300**	*e*Pg	**Pg**	**11 48 59.8**	**+0.2**
GIVF				*e*Sg	**Sg**	**11 49 18.7**	**-0.3**
	14nm,0.6s						
MOF	**Molkenrain**	**1.54**	**173**	Pg	**Pg**	**11 49 00.1**	**-0.3**
MOF				Sg	**Sg**	**11 49 20.4**	**+0.1**
DOU	**Dourbes**	**1.62**	**297**	P	**Pn**	**11 49 00.9**	**+0.1**
DOU	**Dourbes**	**1.62**	**297**	P	**Pn**	**11 49 00.8**	**0.0**
SFTF	**Sexfontaines**	**1.67**	**226**	*e*Sg	**Sg**	**11 49 24.7**	**+0.1**
	9.4nm,0.3s,baz=43						
SFTF	**Sexfontaines**	**1.67**	**226**	*e*Sg	**Sg**	**11 49 24.7**	**+0.1**
	4.7nm,0.3s						
FELD	**Feldberg im Sc**	**1.69**	**152**	Pg	**Pg**	**11 49 03.2**	**-0.1**
BAIF	**Baives**	**1.84**	**293**	*e*Pg	**Pg**	**11 49 05.2**	**-1.0**
BAIF				*e*Sg	**Sg**	**11 49 29.9**	**-0.1**
	11nm,0.5s						
BAIF	**Baives**	**1.84**	**293**	*e*Pg	**Pg**	**11 49 05.2**	**-1.0**
BAIF				*e*Sg	**Sg**	**11 49 29.9**	**-0.1**
	5.7nm,0.5s						

GUC 11 11:49:44.5±0.3**, 3418S**×**7004W, h6**km±2km**, MD3.5, ML1.9, 3C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CICH	**Cipreses**	**0.34**	**245**	⇑*i*P	Pg	11 49 51.4	+0.2
CICH				*i* S	Sg	11 49 56.6	+0.9
LMEL	**Las Melosas**	**0.35**	**338**	⇑*i*P	Pg	11 49 51.5	+0.2
LMEL				*i* S	Sg	11 49 57.1	+1.2
LMEL				AML	AML	11 49 57.5	
	comp=N,258nm,0.3s						
CACH	**El Canelo**	**0.47**	**277**	⇑*i*P	Pg	11 49 53.4	-0.1
CACH				*i* S	Sg	11 49 59.8	+0.3
CHCH	**Chadas Angostu**	**0.56**	**295**	*i* P	Pg	11 49 55.1	-0.1
CHCH				*i* S	Sg	11 50 03.2	+0.6
LNV	**Longovilo**	**1.16**	**281**	*e*P	Pg	11 50 04.6	-2.1

KRSC 11 11:49:45.4±0.5**, 5239N**×**16070E, h17**km±16km**, ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.82**	**330**	*e*P	Pb	11 50 01.6	+0.4
SPN				*i* S	Sb	11 50 13.4	+1.5
NLC	**Nalytchevo**	**1.14**	**314**	*e*P	Pn	11 50 06.3	-0.2
NLC				*i* S	Sb	11 50 22.1	+1.1
RUS	**Russkaya**	**1.34**	**273**	*e*P	Pn	11 50 09.9	+0.6
RUS				*i* S	Sn	11 50 27.5	+0.8
PET	**Petropavlovsk**	**1.40**	**298**	*e*P	Pn	11 50 10.9	+0.8
PET				*i* S	Sn	11 50 29.6	+1.5
AVH	**Avacha**	**1.48**	**307**	*e*P	Pn	11 50 12.2	+1.0
AVH				*i* S	Sn	11 50 32.0	+1.9
GNL	**Ganaly**	**2.12**	**309**	*e*P	Pn	11 50 21.8	+1.8
GNL				*i* S	Sn	11 50 47.6	+1.8
MKZ	**Mys Kozlova**	**2.26**	**15**	*e*P	Pn	11 50 21.7	-0.2
MKZ				*i* S	Sn	11 50 49.0	-0.3
MIPR	**Malaya Ipel'ka**	**2.42**	**269**	*e*P	Pn	11 50 26.1	+2.0
MIPR				*i* S	Sn	11 50 55.8	+2.5
TUMR	**Tumrok**	**2.92**	**354**	*e*P	Pn	11 50 33.3	+2.4
KMNR	**Kamenistaya**	**3.38**	**356**	*e*P	Pn	11 50 40.2	+2.8
KMNR				*i* S	Sn	11 51 19.0	+1.9
ZLN	**Zelenaya**	**3.63**	**1**	*e*P	Pn	11 50 43.7	+2.9
ZLN				*i* S	Sn	11 51 26.4	+3.2

*BJI **11** 11:55:16.2, 1192S×167.15E, h237km, mB4.7, mb4.6*
*NEIC **11** 11:55:17.0±0.1, 1222S×167.17E, mb4.6/41, Error ellipse: s-maj=5.5km s-min=4.0km az=134.0*
*IDC **11** 11:55:17.3±0.7, 1224S×167.18E, h245km±6km, mb4.2/22, mb1 4.3/23, mb1mx4.3/24, mbtmp4.2/23, Error ellipse: s-maj=12.2km s-min=9.3km az=116.0*
*ISCJB **11** 11:55:18.1±1.5, 1231S±005×167.12E±005, h269km±14km, mb4.5/71, Error ellipse: s-maj=7.9km s-min=7.3km az=30.1*
*MOS **11** 11:55:18.8±0.8, 1220S×16709E, h272km, mb4.7/25, Error ellipse: s-maj=10.5km s-min=9.6km az=143.6*
ISC 11 11:55:19.7±1.4**, 1227S**±005×**16712E**±005**, h270**km±14km**, h247**km±3.1km**:pP-P, n209,** σ**0.74**/161**, mb4.5**/71**, 17C-5D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.59**	**291**	P	**Pn**	**11 57 07.3**	**-0.6**
	11nm,0.3s,baz=157,slow=6.3,SNR=5.1						
PMG	**Port Moresby**	**19.81**	**276**	*e*P	**P**	**11 59 30.9**	**+0.4**
PMG				pmax	pmax		
	comp=Z,24nm,0.8s						
PMG	**Port Moresby**	**19.81**	**276**	*e*P	**P**	**11 59 30.9**	**+0.3**
	comp=Z,24nm,0.8s						
CTA	**Charters Tower**	**21.48**	**246**	⇓*i*P	**P**	**11 59 48.0**	**+0.7**
	comp=Z,22nm,0.7s,mb4.6						
CTA	**Charters Tower**	**21.48**	**246**	P	**P**	**11 59 48.1**	**+0.8**
	comp=Z,26nm,0.7s,mb4.7,baz=77,slow=12,SNR=60						
CTA	**Charters Tower**	**21.48**	**246**	⇓*i*P	**P**	**11 59 48.0**	**+0.7**
CTA				pmax	pmax		
	comp=Z,22nm,0.7s						
CTAO	**Charters Tower**	**21.48**	**246**	*e*P	**P**	**11 59 47.9**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,23nm,0.6s,mb4.7						
CTAO	**Charters Tower**	**21.48**	**246**	*e*P	**P**	**11 59 47.9**	**+0.5**
	comp=Z,23nm,0.6s,mb4.7						
COEN	**Coen**	**23.38**	**263**	*e*P	**P**	**12 00 05.9**	**+1.1**
	comp=Z,8.8nm,0.8s,mb4.1						
URZ	**Urewera**	**27.37**	**163**	P	**P**	**12 00 40.0**	**-0.3**
	comp=Z,7.4nm,0.5s,mb4.4,baz=349,slow=9.2,SNR=12						
BKZ	**Black Stump Fm**	**28.05**	**164**	P	**P**	**12 00 45.8**	**-0.5**
TSZ	**Takapari Road**	**28.76**	**166**	P	**P**	**12 00 52.7**	**+0.2**
MRZ	**Mangatainoka R**	**29.24**	**167**	P	**P**	**12 00 55.3**	**-1.5**
NNZ	**Nelson**	**29.35**	**170**	P	**P**	**12 00 59.4**	**+1.6**
CAW	**Cannon Point**	**29.56**	**168**	P	**P**	**12 00 58.6**	**-1.0**
THZ	**Tophouse**	**29.81**	**171**	P	**P**	**12 01 03.1**	**+1.3**
STKA	**Stephens Creek**	**30.52**	**226**	⇓*i*P	**P**	**12 01 09.0**	**+0.8**
	comp=Z,3.6nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**30.52**	**226**	P	**P**	**12 01 09.3**	**+1.1**
	comp=Z,3.9nm,0.5s,mb4.2,baz=39,slow=7.8,SNR=17						
STKA	**Stephens Creek**	**30.52**	**226**	*e*P	**P**	**12 01 08.9**	**+0.7**
RPZ	**Rata Peaks**	**31.51**	**175**	P	**P**	**12 01 17.5**	**+0.8**
	comp=Z,11nm,0.5s,mb4.7,baz=302,slow=2.9,SNR=20						
WB2	**Warramunga Arr**	**32.34**	**252**	⇓*i*P	**P**	**12 01 23.4**	**-0.9**
WRAB	**Tennant Creek**	**32.34**	**252**	*e*P	**P**	**12 01 23.1**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
WRAB	**Tennant Creek**	**32.34**	**252**	*e*P	**P**	**12 01 23.1**	**-1.1**
	comp=Z,7.0nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**32.36**	**252**	P	**P**	**12 01 23.6**	**-0.7**
	comp=Z,4.8nm,0.5s,mb4.3,baz=85,slow=8.9,SNR=90						
WRA				PP	PP	12 02 43.8	+0.1
	comp=Z,2.6nm,0.9s,baz=82,slow=10,SNR=4.4						
WRA				S	**S**	**12 06 13.0**	**-5.2**
	comp=Z,0.6nm,0.7s,baz=80,slow=14,SNR=3.0						
WRA				ScP	ScP	12 07 25.7	+2.6
	comp=Z,0.6nm,0.8s,baz=79,slow=3.7,SNR=4.7						
WRA	**Warramunga Arr**	**32.36**	**252**	P	**P**	**12 01 23.6**	**-0.8**

WRA 12 02 43.8
WRA S S **12 06 13.0 -5.2**
ASAR Alice Springs 33.48 246 P P **12 01 33.3 -0.7**
comp=Z,3.5nm,0.4s,mb4.3,baz=69,slow=9.4,SNR=86
ASAR pP pP 12 02 22.4 -5.1
comp=Z,2.6nm,0.5s,baz=74,slow=9.8,SNR=4.8
ASAR sP sP 12 02 50.5 -8.3
comp=Z,5.1nm,0.6s,baz=77,slow=9.4,SNR=4.5
ASAR PP PP 12 02 56.0 0.0
comp=Z,3.4nm,1.0s,baz=75,slow=9.9,SNR=4.6
ASAR S S **12 06 33.7 -1.7**
comp=Z,0.7nm,0.7s,baz=80,slow=15,SNR=5.3
ASAR ScP ScP 12 07 29.2 +2.3
comp=Z,1.9nm,1.0s,baz=80,slow=3.6,SNR=8.4
ASAR Alice Springs 33.48 246 P P **12 01 33.3 -0.7**
ASAR 12 02 56.1
ASAR S S **12 06 33.7 -1.7**
FITZ Fitzroy Crossi 40.38 256 *e*P P **12 02 31.9 -0.1**
comp=Z,7.3nm,1.0s,mb4.0
FITZ Fitzroy Crossi 40.38 256 P P **12 02 32.3 +0.3**
comp=Z,3.2nm,0.6s,mb3.8,baz=85,slow=11,SNR=32
FORT Forrest 40.47 237 *j*P P **12 02 32.5 0.0**
comp=Z,26nm,0.5s,mb4.8
MBWA Marble Bar 46.09 252 *e*P P **12 03 16.8 -0.6**
MJAR Matsushiro Arr 55.68 332 P P **12 04 27.4 -0.8**
comp=Z,6.8nm,0.7s,mb4.2,baz=170,slow=8.5,SNR=26
MJAR pP pP 12 05 21.2 -6.0
comp=Z,0.8nm,0.6s,baz=126,slow=14,SNR=1.9
ASAJ Asahikawa 60.40 340 P P **12 05 01.4 +0.7**
comp=Z,13nm,0.6s,mb4.6,baz=196,slow=13,SNR=21
ASAJ Asahikawa 60.40 340 P P **12 05 01.4 +0.7**
ASAJ pmax pmax
comp=Z,13nm,0.6s
KSRS Korea Array 61.64 325 P P **12 05 09.5 +0.3**
comp=Z,3.0nm,0.8s,mb4.0,baz=137,slow=6.8,SNR=10
KSRS PcP PcP 12 05 48.1 +0.2
comp=Z,1.0nm,0.7s,baz=128,slow=5.0,SNR=3.1
KSRS Korea Array 61.64 325 P P **12 05 09.5 +0.3**
KSRS 12 05 48.1
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.5
YSS Yuzh-Sakhalins 62.87 341 *i*P P **12 05 17.6 +0.6**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.0
SBA Scott Base 65.58 180 *e*P P **12 05 35.2 +1.0**
SBA pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
SBA Scott Base 65.58 180 *e*P P **12 05 35.2 +1.0**
comp=Z,6.1nm,0.8s,mb4.4
PEA0B Petropavlovsk- 65.62 354 *e*P P **12 05 35.0 +0.3**
PETK Petropavlovsk- 65.62 354 P P **12 05 34.9 +0.2**
comp=Z,5.3nm,0.7s,mb4.4,baz=132,slow=7.5,SNR=11
CASY Casey 65.74 202 *i*P P **12 05 35.4 0.0**
MDJ Mudanjiang 66.06 332 P P **12 05 38.8 +1.1**
MDJ AMB AMB
comp=Z,11nm,0.9s,mb4.6
MDJ AMB AMB
comp=Z,36nm,5.4s
MDJ Mudanjiang 66.06 332 *e*P P **12 05 38.5 +0.8**
KLR Kul'dur 68.72 336 *e*P P **12 05 51.3 -2.9**
KLR pmax pmax
comp=Z,45nm,1.6s,mb5.0
CMAR Chiang Mai Arr 73.83 293 P P **12 06 27.0 +1.6**
comp=Z,6.0nm,0.9s,mb4.2,baz=115,slow=4.3,SNR=24
CMAR pP pP 12 07 24.2 -3.8
comp=Z,0.4nm,0.3s,baz=1.8,slow=28,SNR=1.6
CHTO Chiang Mai 73.95 294 *e*P P **12 06 26.4 +0.3**
CHTO pmax pmax
comp=Z,9.0nm,1.3s,mb4.2
CHTO Chiang Mai 73.95 294 *e*P P **12 06 26.4 +0.4**
comp=Z,8.9nm,1.3s,mb4.2
HIA Hailar 74.10 330 *e*P P **12 06 26.3 +0.1**
SEY Seymchan 75.84 353 *e*P P **12 06 35.7 -0.2**
OHAK Old Harbor 76.56 21 *e*P P **12 06 39.2 -0.8**
LZH Lanzhou 76.57 312 *e*P P **12 06 42.2 +1.6**
LZH AMB AMB
comp=Z,27nm,1.4s,mb4.8
LZH AMB AMB
comp=Z,60nm,4.0s
KDAK Kodiak Island 77.23 21 P P **12 06 43.5 -0.2**
comp=Z,14nm,1.0s,mb4.6,baz=128,slow=8.3,SNR=3.4
YAK Yakutsk 79.65 343 *e*P P **12 06 56.8 0.0**
YAK pmax pmax
comp=Z,17nm,0.8s,mb4.8
ULN Ulaanbaatar 80.08 324 *e*P P **12 07 00.2 +0.7**
ULN pmax pmax
comp=Z,13nm,1.3s,mb4.5
ULN Ulaanbaatar 80.08 324 *e*P P **12 07 00.2 +0.7**
comp=Z,13nm,1.3s,mb4.5
SLKM Skilak Lake 80.09 20 *e*P P **12 06 58.8 -0.4**
SONM Songino Array 80.45 323 P P **12 07 01.9 +0.5**
comp=Z,2.7nm,0.7s,mb4.1,baz=144,slow=5.5,SNR=18
RC01 Rabbit Creek A 80.68 20 *e*P P **12 07 01.9 -0.4**
comp=Z,13nm,0.6s,mb4.8
GTA Gaotai 80.87 314 *e*P P **12 07 05.2 +1.3**
GTA AMB AMB
comp=Z,7.0nm,1.1s,mb4.3
PMR Palmer 81.25 20 *e*P P **12 07 04.5 -0.8**
PMR pmax pmax
comp=Z,13nm,0.6s,mb4.8
PMR Palmer 81.25 20 *e*P P **12 07 04.5 -0.8**
comp=Z,13nm,0.6s,mb4.8
CHUM Lake Minchumin 82.00 17 *e*P P **12 07 08.6 -0.6**
comp=Z,7.0nm,0.5s,mb4.7
DIV Divide 82.06 21 *e*P P **12 07 09.4 -0.1**
comp=Z,9.7nm,0.7s,mb4.6
KTH Kantishna Hill 82.15 18 *e*P P **12 07 08.8 -1.2**
comp=Z,13nm,0.8s,mb4.7
BOD Bodaibo 82.21 334 *e*P P **12 07 10.1 -0.3**
TRF Thorofare Moun 82.26 18 *e*P P **12 07 09.7 -0.9**
comp=Z,17nm,0.8s,mb4.8
BMRM Bremner River 82.36 22 *e*P P **12 07 10.3 -0.8**
KIPM Iron Peak 82.52 47 *e*P P **12 07 12.9 +0.5**
BPAW Bear Paw Mtn. 82.54 17 *e*P P **12 07 10.5 -1.5**
comp=Z,3.1nm,0.5s,mb4.4
MCK McKinley 82.88 18 *e*P P **12 07 13.0 -0.7**
MCK pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
MCK McKinley 82.88 18 *e*P P **12 07 13.0 -0.8**
comp=Z,9.2nm,0.6s,mb4.8
ZAK Zakamensk 83.47 325 *e*P P **12 07 16.9 -0.1**
ZAK pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.8
WDC Whiskeytown Da 83.48 46 *e*P P **12 07 16.7 -0.6**
WDC pmax pmax
comp=Z,15nm,1.3s,mb4.7
WDC Whiskeytown Da 83.48 46 *e*P P **12 07 16.7 -0.6**
comp=Z,15nm,1.3s,mb4.7
OHCM Honcut 83.77 48 *e*P P **12 07 18.3 -0.6**
YBH Yreka Blue Hor 83.79 45 P P **12 07 19.6 +0.7**
comp=Z,13nm,0.8s,mb4.8,baz=171,slow=1.1,SNR=35
YBH Yreka Blue Hor 83.79 45 P P **12 07 19.6 +0.7**
YBH pmax pmax
comp=Z,13nm,0.8s
YBH Yreka Blue Hor 83.79 45 *e*P P **12 07 19.4 +0.5**
HUMO Hull Mountain 83.96 44 *e*P P **12 07 20.1 +0.4**
comp=Z,17nm,0.9s,mb4.9
COLA College 84.03 18 *e*P P **12 07 18.4 -1.1**
COLA pmax pmax
comp=Z,30nm,0.8s,mb5.2
COLA College 84.03 18 *e*P P **12 07 18.4 -1.2**
comp=Z,30nm,0.8s,mb5.2
MAW Mawson 84.09 202 *i*P P **12 07 20.1 +0.1**
comp=Z,6.2nm,0.8s,mb4.5
MAW Mawson 84.09 202 P P **12 07 20.5 +0.5**
comp=Z,8.3nm,0.8s,mb4.6,baz=103,slow=5.4,SNR=17
MAW Mawson 84.09 202 *i*P P **12 07 20.1 +0.1**
MAW pmax pmax
comp=Z,6.0nm,0.8s
LHEM Herd Peak 84.10 45 P P **12 07 21.2 +0.8**
CMB Columbia Colle 84.11 49 *e*P P **12 07 20.6 0.0**
CMB pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
CMB Columbia Colle 84.11 49 *e*P P **12 07 20.6 0.0**
comp=Z,4.6nm,0.8s,mb4.4
COLD Coldfoot 85.11 15 *e*P P **12 07 25.6 +0.7**
comp=Z,13nm,0.9s,mb4.8
PAHR Pah Rah Range 85.42 48 *e*P P **12 07 27.7 +0.7**
comp=Z,19nm,1.2s,mb4.8
MOD Modoc 85.53 46 *e*P P **12 07 27.6 +0.1**
comp=Z,18nm,1.2s,mb4.8
FL2 Flat Top 2 85.74 41 P P **12 07 29.2 +0.8**
NVAR Mina Array Bea 85.79 49 P P **12 07 29.2 +0.3**
comp=Z,4.0nm,0.8s,mb4.3,baz=235,slow=9.2,SNR=35
NVAR pP pP 12 08 29.9 -3.5
comp=Z,0.2nm,0.8s,baz=152,slow=35,SNR=1.6
NVAR Mina Array Bea 85.79 49 P P **12 07 29.2 +0.3**
NVAR pP pP 12 08 29.9 -3.5
HDW Hoodsport 85.85 40 P P **12 07 29.6 +0.7**
TDL Tradedollar La 85.88 41 P P **12 07 29.7 +0.6**
PGC Sidney 86.01 38 *e*P P **12 07 29.7 0.0**
comp=Z,44nm,1.4s,mb5.1
CROR Criterion Ridg 86.17 43 P P **12 07 30.9 +0.3**
DAWY Dawson 86.21 21 *e*P P **12 07 29.2 -1.1**
TAPN Taplejung 86.37 299 *e*P P **12 07 31.8 -0.2**
comp=Z,9.0nm,0.6s,mb4.8
ODAN Odare 86.52 298 *e*P P **12 07 33.3 +0.6**
comp=Z,35nm,0.9s,mb5.2
GLA Glamis 86.83 55 *e*P P **12 07 34.8 +0.7**
GLA pmax pmax
comp=Z,21nm,1.4s,mb4.8
GLA Glamis 86.83 55 *e*P P **12 07 34.8 +0.7**
comp=Z,21nm,1.4s,mb4.8
TPNV Topopah Spring 86.87 51 *e*P P **12 07 34.1 -0.1**
TPNV pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
TPNV Topopah Spring 86.87 51 *e*P P **12 07 34.1 0.0**
comp=Z,1.9nm,0.6s,mb4.1
WVOR Wild Horse Val 86.88 46 *e*P P **12 07 34.2 +0.1**
WVOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
WVOR Wild Horse Val 86.88 46 *e*P P **12 07 34.2 +0.2**
comp=Z,8.2nm,1.0s,mb4.5
TWW Tennaway 87.03 41 P P **12 07 35.6 +0.9**
RPW Rockport 87.11 39 P P **12 07 34.9 -0.1**
LDFC Landfair 87.19 53 *e*P P **12 07 36.5 +0.7**
comp=Z,4.7nm,0.6s,mb4.5
RAMN Ramite 87.22 298 *e*P P **12 07 36.5 +0.4**
comp=Z,9.6nm,0.5s,mb4.9
TBM Table Mountain 87.22 41 P P **12 07 36.1 +0.5**
ETW Entiat 87.55 40 *e*P P **12 07 37.1 0.0**
TIXI Tiksi 87.55 349 *e*P P **12 07 35.8 -0.8**
TIXI pmax pmax
comp=Z,6.0nm,1.4s,mb4.2
RSW Rattlesnake Hi 87.59 42 *e*P P **12 07 37.6 +0.3**
JIRN Jiri 87.75 299 *e*P P **12 07 39.3 +0.7**
comp=Z,5.6nm,0.4s,mb4.8
GUN Gumba 88.08 299 *e*P P **12 07 40.6 +0.5**
PKI Pulchoki 88.40 299 *e*P P **12 07 41.5 -0.1**
OD2 Odessa Site #2 88.50 41 *e*P P **12 07 40.2 -1.4**
KKN Kakani 88.57 299 *e*P P **12 07 42.9 +0.5**
DMN Daman 88.67 298 *e*P P **12 07 43.4 +0.5**
comp=Z,30nm,0.7s,mb5.2
ELK Elko 88.76 48 *e*P P **12 07 43.4 +0.4**
ELK pmax pmax
comp=Z,11nm,1.0s
ELK Elko 88.76 48 *e*P P **12 07 43.4 +0.4**
comp=Z,11nm,1.0s,mb4.6
GKN Gorkha 89.17 299 *e*P P **12 07 44.8 -0.4**
ARUT Antelope Range 89.25 51 *e*P P **12 07 45.7 +0.3**
NEW Newport 89.80 40 *e*P P **12 07 47.4 -0.2**
NEW pmax pmax
comp=Z,9.0nm,0.9s
NEW Newport 89.80 40 *e*P P **12 07 47.4 -0.3**
comp=Z,9.4nm,0.9s,mb4.6
DANN Dangsing 90.01 299 *e*P P **12 07 48.8 -0.3**
HLID Hailey 90.17 45 *e*P P **12 07 50.1 +0.6**
comp=Z,11nm,1.1s,mb4.6
WUAZ Wupatki 90.25 54 *e*P P **12 07 51.0 +0.9**
comp=Z,3.6nm,0.9s,mb4.2
DUG Dugway 90.38 49 *e*P P **12 07 50.8 +0.2**
DUG pmax pmax
comp=Z,5.0nm,1.1s,mb4.3
DUG Dugway 90.38 49 *e*P P **12 07 50.8 +0.3**
comp=Z,4.7nm,1.1s,mb4.2
MSU Marysvale 90.41 51 *e*P P **12 07 51.9 +1.2**
BGU Big Grassy Mou 90.42 48 *e*P P **12 07 50.5 -0.2**
TMUT Trail Mountain 91.34 50 *e*P P **12 07 55.5 +0.5**
HWUT Hayware Ranch 91.67 48 *e*P P **12 07 56.3 -0.1**
comp=Z,1.2nm,0.7s,mb3.9
DLMT Dillon 91.92 44 *e*P P **12 07 58.1 +0.5**
comp=Z,12nm,1.1s,mb4.7
RRI2 Red Ridge 92.28 46 *e*P P **12 07 59.6 +0.3**
comp=Z,7.3nm,1.3s,mb4.5
BOZ Bozeman (W) 92.65 44 *e*P P **12 08 01.5 +0.6**
BOZ pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
BOZ Bozeman (W) 92.65 44 *e*P P **12 08 01.5 +0.5**
comp=Z,4.7nm,1.4s,mb4.2
IMW Indian Meadow 92.69 46 *e*P P **12 08 01.4 +0.3**
comp=Z,2.2nm,0.8s,mb4.1
PV10 Paradox Valley 92.76 51 *e*P P **12 08 00.5 -1.1**
PV01 Paradox Valley 93.07 52 *e*P P **12 08 02.7 -0.3**
PDAR Pinedale Array 93.39 47 P P **12 08 03.7 -0.7**
comp=Z,1.1nm,0.9s,mb3.8,baz=182,slow=2.8,SNR=7.3
ANMO Albuquerque 94.03 55 *i*e P **12 08 05.9 -1.6**
TXAR Lajitas Array 95.23 61 P P **12 08 13.0 -0.1**
comp=Z,1.2nm,0.6s,mb4.2,baz=226,slow=5.5,SNR=20
TXAR Lajitas Array 95.23 61 P P **12 08 13.0 -0.1**
MK31 Makanchi Array 95.33 317 *e*P P **12 08 13.2 0.0**
MKAR Makanchi Array 95.33 317 P P **12 08 13.4 +0.2**
comp=Z,9.6nm,0.7s,mb5.1,baz=96,slow=6.4,SNR=61
ZALV Zalesovo Beam 95.33 324 P P **12 08 12.0 -1.0**
comp=Z,0.9nm,0.5s,mb4.2,baz=116,slow=6.8,SNR=4.7
ZALV Zalesovo Beam 95.33 324 P P **12 08 12.0 -1.0**
YKA Yellowknife Ar 95.44 27 P P **12 08 12.0 -1.2**
comp=Z,3.2nm,0.6s,mb4.6,baz=259,slow=5.0,SNR=6.5
SNAA Sanae 95.98 183 *e*P P **12 08 14.5 -1.2**
SNAA *e* 12 08 16.7
SNAA *e* 12 08 25.4
SNAA Sanae 95.98 183 *i*e P P **12 08 15.1 -0.6**
VNA3 Neumayer Olymp 96.65 181 *e*P P **12 08 17.7 -1.0**
VNA3 *e* 12 08 19.9
VNA3 *e* 12 08 28.9
VNA2 Neumayer--Watz 96.92 182 *e*P P **12 08 19.2 -0.7**
VNA2 *e* 12 08 21.2
VNA2 *e* 12 08 30.8
VNA1 Neumayer--Stat 97.22 182 *e*P P **12 08 20.9 -0.4**
VNA1 *e* 12 08 23.0
VNA1 *e* 12 08 29.8
KEV Kevo 117.33 345 *e*p PKPdf 12 13 31.9 -0.5
ARCES ARCESS Array B 117.85 346 PKP PKPdf 12 13 33.1 -0.3
comp=Z,7.4nm,0.6s,baz=90,slow=2.6,SNR=64
SCHQ Schefferville 120.33 33 PKP PKPdf 12 13 37.6 -0.9
comp=Z,3.5nm,0.6s,baz=277,slow=3.2,SNR=7.7
JOF Joensuu 120.57 338 *e*p PKPdf 12 13 38.3 -0.5
OBN Obninsk 122.55 329 *e*PKIKP PKPdf 12 13 41.9 -0.9
KAF Kangasniemi 122.86 339 *e*p PKPdf 12 13 42.4 -0.8
BOSA Boshof 125.12 222 PKP PKPdf 12 13 48.5 -0.1
comp=Z,4.1nm,1.1s,baz=226,slow=8.7,SNR=3.1
NB2 NORSAR Subarra 128.23 345 PKPdf PKPdf 12 13 53.7 +0.2
comp=Z,1.5nm,0.6s,baz=32,slow=1.7
NOA NORSAR Array B 128.23 345 PKP PKPdf 12 13 53.9 +0.4
comp=Z,2.4nm,0.6s,baz=32,slow=2.0,SNR=8.8
AKASG Malin Array Be 128.62 327 PKP PKPdf 12 13 54.4 -0.2
comp=Z,0.2nm,0.3s,baz=40,slow=1.4,SNR=5.9
GERES GERESS Array B 137.39 334 PKP PKPdf 12 14 12.0 +0.9
comp=Z,1.4nm,0.5s,baz=64,slow=3.1,SNR=9.3
BAIF Baives 139.79 343 *e*PKP1 PKPdf 12 14 14.1 -1.4
CABF La Chapelle 142.21 339 *e*PKP1 PKPdf 12 14 18.1 -1.8
comp=Z,29nm,1.0s
GRR Gorron 142.63 347 *e*PKP1 PKPdf 12 14 17.8 -2.8
comp=Z,17nm,0.8s
SSF Saint Saulge 142.68 341 *e*PKP1 PKPdf 12 14 17.6 -3.1
comp=Z,9.0nm,0.7s
LPL La Plagne 142.90 337 *e*PKP1 PKPdf 12 14 19.8 -1.4
LPG La Plagne 142.91 337 *e*PKP1 PKPdf 12 14 18.7 -2.5
SGMF Saint Gilles 143.11 348 *e*PKP1 PKPdf 12 14 18.9 -2.6
comp=Z,12nm,0.6s
MBDF Montbardon 143.54 336 *e*PKP1 PKPdf 12 14 20.1 -2.2
comp=Z,10nm,0.7s
ORIF Oris-en-Rattie 143.72 337 *i*PKP1 PKPdf 12 14 21.2 -1.4
comp=Z,38nm,0.7s
TCF Toulx Ste Croi 143.77 342 *e*PKP1 PKPdf 12 14 20.9 -1.8
comp=Z,25nm,0.9s
SSB Saint Sauveur 143.90 339 *e*PKIKP PKPdf 12 14 21.0 -1.9
SBF Sospel 143.99 335 *i*PKP1 PKPdf 12 14 21.4 -1.7
comp=Z,84nm,0.7s
MFF Saint Martin d 144.13 345 *e*PKP1 PKPdf 12 14 21.9 -1.4
comp=Z,26nm,0.7s
VIVF Saint-Julien-l 144.22 338 *e*PKP1 PKPdf 12 14 22.8 -0.7
comp=Z,47nm,1.1s
PGF Pioggiola 144.35 332 *i*PKP1 PKPdf 12 14 22.9 -0.9
comp=Z,69nm,0.7s
FRF La Foret Royal 144.56 335 *i*PKP1 PKPdf 12 14 23.4 -0.7
comp=Z,58nm,0.9s
SMRF Simiane la Rot 144.64 337 *e*PKP1 PKPdf 12 14 23.9 -0.4
comp=Z,27nm,0.9s
LMR La Mourre 144.80 335 *i*PKP1 PKPdf 12 14 24.3 -0.3
comp=Z,44nm,0.8s
RJF Les Rejaudoux 144.86 342 *e*PKP1 PKPdf 12 14 24.8 +0.2
comp=Z,98nm,1.2s
CAF Calviac 145.04 341 *e*PKP1 PKPbc 12 14 25.4 +0.5
comp=Z,14nm,0.8s
LASF Ste Croix 145.19 339 *i*PKP1 PKPbc 12 14 26.1 +0.7
comp=Z,14nm,0.7s
LFF La Frestale 145.42 343 *i*PKP1 PKPbc 12 14 26.3 +0.2
comp=Z,33nm,0.6s
MTLF Montolieu 146.40 340 *i*PKP1 PKPbc 12 14 29.5 +0.5
comp=Z,23nm,0.7s
ETSF Etsaut 147.67 343 *e*PKP1 PKPbc 12 14 28.5 -4.0
comp=Z,9.7nm,0.8s
KEST Kesra 149.20 323 PKPbc PKPbc 12 14 37.5 +0.9
comp=Z,5.5nm,0.7s,baz=209,slow=1.8,SNR=18
PBRG Braganca 150.09 351 *e*PKPbc PKPbc 12 14 39.3 +0.7
MVO Moncorvo 150.77 351 *e*PKPbc PKPbc 12 14 40.9 +0.7
PTO Porto 151.00 353 *e*PKPbc PKPbc 12 14 41.5 +0.7
PVIS Viseu 151.33 352 *e*PKPbc PKPbc 12 14 42.1 +0.5
ESDC Sonseca Array 151.59 345 PKP PKPdf 12 14 36.5 +0.8
comp=Z,1.6nm,0.7s,baz=296,slow=37,SNR=3.5
ESDC PKPbc PKPbc 12 14 42.3 +0.1
comp=Z,4.1nm,0.6s,baz=12,slow=3.4,SNR=15
ESDC PKPab PKPab 12 14 52.4 +0.7
comp=Z,4.4nm,0.7s,baz=15,slow=4.2,SNR=8.0
MTE Manteigas 151.59 351 *e*PKPbc PKPbc 12 14 42.7 +0.5
PAB San Pablo 151.81 346 *e*PKIKP PKPbc 12 14 43.2 +0.5
PCBR Castelo Branco 152.13 351 *e*PKPbc PKPbc 12 14 43.7 +0.3
PTOM Tomar 152.48 353 *e*PKPbc PKPbc 12 14 44.8 +0.6
PMRV Marv??o 152.52 351 *e*PKPbc PKPbc 12 14 44.5 +0.2
EVO Evora 153.49 351 *e*PKP1 PKPbc 12 14 45.2 -1.2
comp=Z,30nm,1.3s
PBAR Barrancos 153.68 350 *e*PKPab PKPab 12 15 01.2 +0.6
PBEJ Beja 153.97 351 *e*PKPab PKPab 12 15 03.0 +1.2
PVAQ Vaqueiros 154.55 350 *e*PKPab PKPab 12 15 04.6 +0.3
TORD Torodi Ar. Bea 165.75 275 PKP PKPdf 12 14 52.4 -0.7
comp=Z,2.7nm,1.0s,baz=29,slow=1.3,SNR=8.4
TORD PKPab PKPab 12 15 54.3 +0.3
comp=Z,3.1nm,0.9s,baz=75,slow=4.7,SNR=12
DBIC Dimbokro 170.32 236 PKP PKPdf 12 14 57.5 +1.3
comp=Z,7.4nm,1.2s,baz=90,slow=2.0,SNR=3.0

IDC 11 12:09:07.1±29.0, 1932S×17660W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.9/16, mbtmp4.3/3, Error ellipse: s-maj=551.8km s-min=144.5km az=87.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.49**	**243**	P	P	12 16 39.4	-0.1
	2.0nm,0.4s,baz=64,slow=9.5,SNR=5.6						
ASAR	**Alice Springs**	**46.08**	**255**	P	P	12 17 33.1	0.0
	2.5nm,0.5s,baz=96,slow=7.8,SNR=48						
WRA	**Warramunga Arr**	**46.08**	**261**	P	P	12 17 33.4	+0.1
	1.2nm,0.3s,baz=97,slow=7.3,SNR=94						
FITZ	**Fitzroy Crossi**	**54.50**	**261**	P	P	12 18 36.9	-0.2
	baz=99,slow=9.7						

IDC 11 12:09:29.7±2.8, 1695S×7034W, h0km, mb3.9/2, mb1 4.0/5, mb1mx3.7/20, mbtmp3.9/5, ML4.1/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/28, Error ellipse: s-maj=51.1km s-min=23.7km az=124.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.22**	**73**	Pn	Pn	12 10 09.3	+1.5
	5.2nm,0.3s,baz=248,slow=13,SNR=119						
LPAZ				Sn	Sn	12 10 37.1	+1.2
	3.3nm,0.3s,baz=332,slow=21,SNR=3.1						
LVC	**Limon Verde**	**5.79**	**167**	Pn	Pn	12 10 55.9	-1.0
	0.5nm,0.3s,baz=349,slow=11,SNR=6.4						
LVC				Sn	Sn	12 12 08.7	+4.6
	0.6nm,0.3s,baz=79,slow=23,SNR=3.1						
SIV	**San Ignacio**	**8.94**	**85**	Pn	Pn	12 11 39.5	-0.7
	1.3nm,0.3s,baz=268,slow=12,SNR=19						
CPUP	**Villa Florida**	**15.27**	**130**	LR	LR	12 19 25.1	
	comp=Z,63nm,20.5s,baz=300,slow=39						
PLCA	**Paso Flores**	**23.70**	**180**	P	P	12 14 43.5	+0.2
	2.6nm,1.0s,baz=356,slow=8.5,SNR=3.2						
PCRV	**Puerto La Cruz**	**27.54**	**12**	LR	LR	12 26 31.8	
	comp=Z,39nm,18.9s,baz=167,slow=37						
TORD	**Torodi Ar. Bea**	**77.17**	**72**	P	P	12 21 25.9	0.0
	1.5nm,1.0s,baz=251,slow=5.2,SNR=4.9						

BEO 11 12:14:49.7±1.2, 4238N×2419E, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VTS	**Vitosha**	**0.76**	**287**	*e*Pg	Pg	12 15 03.0	-1.2
VTS				*e*Sg	Sg	12 15 13.7	-0.3
VTS	**Vitosha**	**0.76**	**287**	*e*Pg	Pg	12 15 03.9	-0.3
VTS				*e*Sg	Sg	12 15 13.8	-0.2
ZAPS	**Zavoj**	**1.45**	**308**	*e*Pn	Pn	12 15 16.7	-0.5
ZAPS				*e*Sg	Sg	12 15 35.9	-0.5
ZAPS	**Zavoj**	**1.45**	**308**	*e*Pg	Pg	12 15 17.1	-0.4
ZAPS				*e*Sg	Sg	12 15 37.3	+0.9
BARS	**Barje**	**1.81**	**285**	*e*Pn	Pn	12 15 22.1	0.0
BARS				*e*Sg	Sg	12 15 46.7	-1.0
BARS	**Barje**	**1.81**	**285**	*e*Pn	Pn	12 15 23.4	+1.3
BARS				*e*Sn	Sn	12 15 47.6	+1.9

ISCJB ***11*** *12:38:13.4±0.9, 3061S×007×179.1W±0.1, h88km±11km, mb4.1/5, Error ellipse: s-maj=20.3km s-min=9.5km az=21.5*
NEIC ***11*** *12:38:13.3±1.0, 3044S×17950W, h35km, mb4.2/2, Error ellipse: s-maj=21.6km s-min=14.7km az=128.0*
IDC ***11*** *12:38:14.7±1.6, 3059S×17902W, h83km±125km, mb3.9/4, mb1 4.0/6, mb1mx3.7/17, mbtmp3.9/6, ML3.6/2, Error ellipse: s-maj=211.2km s-min=14.4km az=111.0*
ISC 11 12:38:14.7±0.8, 3059S±007×1790W±01, h89km±10km, n16, σ0s91/20, mb4.1/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.62**	**35**	P	**Pn**	**12 38 42.0**	**+0.1**
	247nm,0.3s,baz=276,slow=22,SNR=11						
RAO				S	**Sn**	**12 39 02.6**	**+0.1**
	249nm,0.3s,baz=83,slow=22,SNR=6.3						
RAO	**Raoul Island**	**1.62**	**35**	P	**Pn**	**12 38 42.0**	**+0.1**
RAO				S	**Sn**	**12 39 02.6**	**+0.1**
URZ	**Urewera**	**8.31**	**202**	P	**Pn**	**12 40 11.3**	**-0.9**
	0.2nm,0.3s,baz=173,slow=13,SNR=6.2						
URZ				S	**Sn**	**12 41 44.9**	**+0.5**
	3.7nm,0.3s,baz=350,slow=23,SNR=15						
RPZ	**Rata Peaks**	**15.31**	**208**	P	**Pn**	**12 41 45.6**	**-0.1**
	1.0nm,0.3s,baz=25,slow=11,SNR=8.2						
RPZ				S	**S**	**12 44 25.1**	**-20**
	0.3nm,0.3s,baz=79,slow=22,SNR=3.3						
CTA	**Charters Tower**	**32.99**	**280**	P	**P**	**12 44 42.9**	**+1.6**
	10nm,1.2s,mb4.5,baz=95,slow=11,SNR=5.6						
CTAO	**Charters Tower**	**32.99**	**280**	*e*P	**P**	**12 44 43.0**	**+1.7**
	3.0nm,0.5s,mb4.4						
STKA	**Stephens Creek**	**33.61**	**257**	P	**P**	**12 44 48.4**	**+1.8**
	2.2nm,0.6s,mb4.2,baz=114,slow=11,SNR=7.3						
STKA	**Stephens Creek**	**33.61**	**257**	*e*P	**P**	**12 44 48.1**	**+1.5**
ASAR	**Alice Springs**	**42.25**	**268**	P	**P**	**12 45 59.2**	**-0.1**
	0.7nm,0.5s,mb3.7,baz=105,slow=7.7,SNR=15						
WB2	**Warramunga Arr**	**43.24**	**273**	*e*P	**P**	**12 46 06.3**	**-1.1**
WRAB	**Tennant Creek**	**43.25**	**273**	*e*P	**P**	**12 46 06.7**	**-0.7**
	2.1nm,0.8s,mb3.9						
WRA	**Warramunga Arr**	**43.25**	**273**	P	**P**	**12 46 06.4**	**-1.1**
	1.2nm,0.3s,mb4.1,baz=110,slow=8.1,SNR=22						
SNAA	**Sanae**		**77.99**	**179**	*e*	**P**	**12 50 02.2**	**-0.6**
VNA3	**Neumayer Olymp**		**78.18**	**176**	*e*	**P**	**12 50 03.9**	**+0.1**
VNA2	**Neumayer--Watz**		**78.60**	**177**	*e*	**P**	**12 50 07.7**	**+1.6**
VNA1	**Neumayer--Stat**		**78.83**	**177**	*e*	**P**	**12 50 06.6**	**-0.8**

CSEM ***11*** *12:49:49.6±0.1, 3762N×2923E, h25km, MD2.7, Error ellipse: s-maj=3.9km s-min=1.8km az=45.0*
ISK ***11*** *12:49:50.2, 3765N×2929E, h16km, MD2.9*
ISCJB ***11*** *12:49:51.2±0.8, 3765N±005×2923E±009, h24km±9km, Error ellipse: s-maj=13.1km s-min=6.4km az=158.2*
DDA ***11*** *12:49:51.5, 3770N×2931E, h7km±6km, Md2.7*
ISC 11 12:49:51.3±0.7, 3765N±005×2925E±010, h22km±9km, n9, σ0s84/15, Turkey

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DNZL	Cakiroluk	0.16	283	iP	Pb	12 49 56.5	+0.2
DNZL				iS	Sb	12 49 60.0	+0.4
DENT	Denizli	0.20	301	ePG	Pb	12 49 55.8	-0.8
DENT				eSG	Sb	12 49 59.6	-0.6
GOLH	Golhisar	0.48	149	iP	Pb	12 50 00.7	-0.4
GOLH				iS	Sb	12 50 08.6	+0.8
KHAL	Karahalli	0.74	15	iP	Pb	12 50 04.1	-1.5
KHAL				iS	Sb	12 50 14.7	-0.6
TKTP	Tekketepe	0.93	65	iP	Pb	12 50 10.0	+1.2
TKTP				iS	Sb	12 50 25.2	+4.4
KULA	Kula-Manisa	0.98	332	ePG	Pb	12 50 09.8	+0.2
KULA				eSG	Sb	12 50 23.9	+1.8
ISP	Isparta	1.02	79	ePG	Pn	12 50 10.4	+0.1
ELL	Elmali	1.05	149	ePG	Pn	12 50 10.0	-0.6
SHUT	Suhut-Afyon	1.37	48	ePN	Pn	12 50 14.9	-0.2

CASC 11 13:32:01.4±2.1, 1342N×9211W, h65km±66km, MD4.0, 4C-1D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAT	Jato	1.00	27	⇑eP	Pn	13 32 20.4	+0.6
JAT				eS	Sn	13 32 33.8	+0.4
FUG	Fuego 3	1.60	50	⇑eP	Pn	13 32 28.2	+0.6
FUG				eS	Sn	13 32 51.1	+3.7
FG6		1.65	46	⇑eP	Pn	13 32 28.9	+0.7
FG6				eS	Sn	13 32 48.5	+0.1
PCG	Pacaya	1.75	56	eP	Pn	13 32 30.8	+1.2
NBG	Las Nubes	2.07	56	⇓eP	Pn	13 32 35.9	+2.0
RTR	El Retiro	2.44	79	eP	x	13 32 39.4	
RBDL	Robledal	2.46	73	eP	x	13 32 39.7	
SNJE	San Jose	2.48	79	eP	x	13 32 39.4	
SNJE				eS	x	13 33 10.1	
BOQS	Boqueron	2.77	83	eP	x	13 32 43.7	
LFRS	El Faro	2.98	86	eP	x	13 32 46.8	
LFRS				eS	x	13 33 21.6	
SNVI	San Vicente	3.19	86	eP	x	13 32 49.8	
CNCH	Conchagua	4.17	91	⇑eP	x	13 33 03.0	

*ISCJB **11** 13:58:43.3±4.1, 096N±007×1270E±02, h2km±26km, mb3.8/7, Error ellipse: s-maj=26.3km s-min=11.3km az=170.6*
*NEIC **11** 13:58:50.0±2.6, 092N×12701E, h35km±27km, mb4.2/2, Error ellipse: s-maj=22.1km s-min=9.2km az=64.0*
*IDC **11** 13:58:50.9±5.2, 089N×12698E, h45km±57km, mb3.6/7, mb1 3.7/9, mb1mx3.6/18, mbtmp3.6/9, ML3.7/2, Error ellipse: s-maj=40.8km s-min=19.1km az=70.0*
*DJA **11** 13:58:53, 094N×12670E, h66km, MLv4.1/6*
ISC 11 13:58:51.4±2.9, 086N±010×1270E±02, h50km±29km, n15, σ0.s66/19, mb3.8/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	9.27	231	P	Pn	14 01 02.6	0.0
	3.6nm,0.3s,baz=356,slow=2.9,SNR=14						
KAPI				S	Sn	14 02 39.0	-6.5
	2.8nm,0.3s,baz=5.7,slow=21,SNR=5.7						
KAPI	Kappang	9.27	231	eP	Pn	14 01 02.3	-0.2
KAPI				S	Sn	14 02 39.0	-6.5
FITZ	Fitzroy Crossi	18.88	184	eP	Pn	14 03 08.7	-0.1
	2.4nm,1.1s						
FITZ	Fitzroy Crossi	18.88	184	P	Pn	14 03 07.7	-1.1
	0.1nm,0.3s,baz=0.0,slow=13,SNR=2.6						
WRAB	Tennant Creek	21.89	161	eP	P	14 03 40.7	+0.4
WRA	Warramunga Arr	21.90	161	P	P	14 03 40.7	+0.3
	1.6nm,0.3s,mb3.9,baz=336,slow=11,SNR=61						
WRA				S	S	14 07 38.6	-0.9
	0.3nm,0.7s,baz=321,slow=22,SNR=3.6						
WB2	Warramunga Arr	21.90	161	eP	P	14 03 40.8	+0.3
ASAR	Alice Springs	25.29	165	P	P	14 04 13.6	+0.3
	1.2nm,0.3s,mb3.8,baz=343,slow=8.3,SNR=39						
ASAR				S	S	14 08 41.9	+6.1
	0.8nm,0.8s,baz=343,slow=21,SNR=7.1						
MJAR	Matsushiro Arr	37.00	15	P	P	14 05 54.8	-1.4
	0.5nm,0.5s,mb3.6,baz=198,slow=7.8,SNR=3.1						
SONM	Songino Array	50.08	342	P	P	14 07 42.2	+1.0
	0.5nm,0.8s,mb3.6,baz=151,slow=7.9,SNR=3.3						
PETK	Petropavlovsk-	57.99	21	P	P	14 08 39.3	+0.5
	0.9nm,0.5s,mb4.0,baz=147,slow=1.8,SNR=6.6						
MKAR	Makanchi Array	60.05	326	P	P	14 08 53.2	+0.1
	0.6nm,0.5s,mb3.9,baz=123,slow=8.8,SNR=5.7						
KURK	Kurchatov	64.28	328	P	P	14 09 20.5	-1.0
	0.6nm,0.5s,mb3.9,baz=126,slow=6.0,SNR=6.9						
KURK	Kurchatov	64.28	328	eP	P	14 09 20.9	-0.6
MALT	Malatya	88.33	308	eP	P	14 11 38.4	+0.4
	8.3nm,0.7s						

*DDA **11** 14:11:01.8, 3996N×3987E, h7km±4km, Md3.1*
*ISK **11** 14:11:02.2, 4001N×4000E, h9km, MD2.9*
*CSEM **11** 14:11:02.0±0.1, 4000N×4000E, h8km, MD3.1, Error ellipse: s-maj=2.2km s-min=1.7km az=99.0*
*ISCJB **11** 14:11:03.1±0.9, 4002N±004×3994E±004, h5km±7km, Error ellipse: s-maj=7.1km s-min=4.8km az=35.8*
ISC 11 14:11:04.3±0.6, 4005N±003×3999E±005, h15km±5km, n13, σ1.s19/20, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EZC	Erzincan	0.33	203	PG	Pg	14 11 13.4	+2.3
KOPT	Kop Dagi	0.39	95	iP	Pg	14 11 10.9	-1.4
KOPT				iS	Sg	14 11 18.7	+1.1
GUMT	Gumushane	0.56	316	PG	Pg	14 11 14.6	-0.8
GUMT				eSG	Sg	14 11 23.3	+0.5
MACK	Trabzon	0.90	349	iP	Pb	14 11 21.3	-0.4
MACK				iS	Sb	14 11 35.1	+1.5
KTUT	Trabzon	0.95	350	ePG	Pg	14 11 21.8	-0.9
KTUT				eSG	Sg	14 11 35.7	+0.6
ERZM	Erzurum	1.07	98	iP	Pb	14 11 22.8	-1.8
ERZM				iS	Sb	14 11 40.5	+2.1
PTK	Pertek	1.25	202	ePN	Pn	14 11 25.7	-1.5
ESPY	Espiye-Giresun	1.29	312	ePN	Pn	14 11 26.9	-0.9
PZAR	Pazar-Rize	1.32	31	ePN	Pn	14 11 27.6	-0.6
GRSN	GIRESUNGRSN	1.57	304	iP	Pn	14 11 31.4	-0.3
GRSN				iS	Sn	14 11 52.5	+0.7
ELZG	Elazig	1.74	207	iP	Pn	14 11 32.6	-1.4
ELZG				iS	Sn	14 11 57.9	+2.0
BCA	Borcka	1.86	41	ePN	Pn	14 11 35.9	+0.2
SVSK	Karacayir	2.30	268	ePN	Pn	14 11 42.0	+0.3

*IDC **11** 14:12:22.6±1.5, 2184S×16982E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.8/16, mbtmp3.8/7, MS3.5/3, Ms1 3.5/3, ms1mx2.9/19, Error ellipse: s-maj=35.9km s-min=31.9km az=89.0*
*ISCJB **11** 14:12:24.0±0.9, 221S±02×17004E±007, h33km, mb3.6/7, MS3.6/2, Error ellipse: s-maj=27.7km s-min=9.6km az=4.1*
*NEIC **11** 14:12:28.0±3.7, 2180S×16981E, h40km±26km, Error ellipse: s-maj=30.3km s-min=27.1km az=85.0*
ISC 11 14:12:25.7±0.9, 222S±02×17006E±010, h35km, n19, σ0.s72/15, mb3.6/7, MS3.6/2, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.35	271	eP	Pn	14 13 15.6	-0.1
DZM				eS	Sn	14 13 54.0	-0.3
DZM	Mont Dzumac	3.35	271	ePn	Pn	14 13 15.1	-0.6
DZM				eSn	Sn	14 13 53.5	-0.8
RAO	Raoul Island	12.91	125	LR	LR	14 19 26.4	
	comp=Z,132nm,21.6s,baz=214,slow=32						
STKA	Stephens Creek	27.06	243	P	P	14 18 06.3	+1.3
	2.0nm,0.8s,mb3.7,baz=89,slow=13,SNR=6.6						
STKA				LR	LR	14 27 37.8	
	comp=Z,70nm,18.4s,MS3.3,baz=188,slow=34						
ASAR	Alice Springs	33.28	260	P	P	14 19 00.5	+0.4
	0.3nm,0.7s,mb3.3,baz=85,slow=10.0,SNR=4.2						
WB2	Warramunga Arr	33.35	267	eP	pP	14 19 11.6	+0.7
WB2	Warramunga Arr	33.35	267	eP	P	14 19 00.8	0.0
WRA	Warramunga Arr	33.36	267	P	P	14 19 00.3	-0.6
	0.4nm,0.8s,mb3.4,baz=98,slow=8.0,SNR=6.1						
FITZ	Fitzroy Crossi	41.79	267	eP	pP	14 20 24.7	+2.2
	5.5nm,0.8s						
FITZ	Fitzroy Crossi	41.79	267	P	P	14 20 13.5	+1.3
	1.4nm,1.0s,mb3.5,baz=131,slow=9.3,SNR=2.8						
CBIJ	Chichi jima	55.93	330	LR	LR	14 41 51.0	
	comp=Z,105nm,20.6s,MS3.9,baz=230,slow=32						
QSPA	South Pole Qui	67.87	180	P	P	14 23 24.9	+4.9
	2.1nm,0.8s,mb4.2,baz=63,slow=3.0,SNR=8.0						
QSPA	South Pole Qui	67.87	180	P	P	14 23 24.9	+4.9
KSRS	Korea Array	71.37	326	P	P	14 23 41.8	-0.3
	0.4nm,0.7s,mb3.5,baz=120,slow=7.1,SNR=4.0						
VNA3	Neumayer Olymp	86.81	180	e	P	14 25 05.2	-0.9
VNA3				e		14 25 10.4	
VNA3				e	pP	14 25 15.2	-2.0
VNA2	Neumayer--Watz	87.11	181	e	P	14 25 07.0	-0.6
VNA2				e		14 25 12.0	
VNA2				e	pP	14 25 16.5	-2.2
SONM	Songino Array	90.03	323	P	P	14 25 21.9	+0.3
	0.2nm,0.3s,mb3.9,baz=141,slow=0.9,SNR=3.3						
BRG	Berggiesshubel	145.85	333	eP	PKPdf	14 32 00.2	-0.3
	3.3nm,0.7s						
BRG				e		15 53 17.5	
BRG				e		15 53 40.6	
GERES	GERESS Array B	147.44	331	PKPbc	PKPbc	14 32 07.0	+1.2
	0.4nm,0.4s,baz=12,slow=5.0,SNR=4.2						

*ISCJB **11** 14:12:38.5±0.6, 5201N±004×15871E±007, h66km±5km, mb3.7/10, Error ellipse: s-maj=9.1km s-min=3.8km az=38.8*
*MOS **11** 14:12:38.5±1.6, 52.12N×158.42E, h63km, mb4.0/7, Error ellipse: s-maj=20.7km s-min=7.2km az=77.3*
*KRSC **11** 14:12:38.9±0.7, 5203N×15878E, h55km±45km, ML4.2*
*NEIC **11** 14:12:41.5±0.9, 5225N×15850E, h77km±7km, mb4.1/1, Error ellipse: s-maj=13.8km s-min=9.6km az=132.0*
*IDC **11** 14:12:42.1±1.7, 52.14N×15850E, h82km±15km, mb3.5/10, mb1 3.8/10, mb1mx3.5/23, mbtmp3.5/10, MS3.0/3, Ms1 3.0/3, ms1mx2.4/26, Error ellipse: s-maj=23.6km s-min=15.9km az=149.0*
ISC 11 14:12:39.5±0.6, 5198N±004×15867E±007, h56km±6km, n51, σ1.s14/74, mb3.8/10, MS3.0/3, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUS	Russkaya	0.47	348	eP	Pn	14 12 49.7	-1.1
RUS				iS	Sn	14 12 57.8	-1.1
GRL	Gorelyy	0.68	328	eP	Pn	14 12 53.2	-0.1
GRL				iS	Sn	14 13 04.5	+1.2
PET	Petropavlovsk	1.05	359	eP	Pn	14 12 56.9	-1.1
PET				iS	Sn	14 13 10.4	-1.3
PET	Petropavlovsk	1.05	359	ePn	Pn	14 12 56.6	-1.4
PET				eSn	Sn	14 13 06.9	-4.7
MIPR	Malaya Ipel'ka	1.22	285	eP	Pn	14 13 00.7	+0.5
MIPR				iS	Sn	14 13 17.5	+1.8
NLC	Nalytchevo	1.27	19	eP	Pn	14 12 58.6	-2.2
NLC				iS	Sn	14 13 13.1	-3.7
PEA0B	Petropavlovsk-	1.28	333	ePn	Pn	14 13 00.8	-0.2
PEA0B				eSn	Sn	14 13 16.5	-0.7
PETK	Petropavlovsk-	1.28	333	P	Pn	14 13 01.0	-0.1
	37nm,0.3s,baz=117,slow=18,SNR=862						
PETK				S	Sn	14 13 17.8	+0.6
	56nm,0.3s,baz=122,slow=33,SNR=30						
AVH	Avacha	1.29	2	eP	Pn	14 13 00.8	-0.4
AVH				iS	Sn	14 13 17.8	+0.3
SPN	Mys Shipunski	1.39	36	eP	Pn	14 13 01.7	-0.9
SPN				iS	Sn	14 13 19.2	-0.7
GNL	Ganaly	1.78	346	eP	Pn	14 13 08.0	+0.2
GNL				iS	Sn	14 13 28.9	-0.3
SKR	Severo-Kuril's	2.06	232	⇑iPN	Pn	14 13 09.7	-1.9
SKR				iS	Sn	14 13 33.6	-2.6
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,140nm,0.5s						
SKR				smax			
	comp=N,640nm,0.4s						
SKR				smax			
	comp=E,1μm,0.3s						
KII	Karymskiy	2.12	12	eP	Pn	14 13 12.7	+0.3
KII				iS	Sn	14 13 37.7	+0.2
ALID	Alaid	2.25	242	eP	Pn	14 13 14.6	+0.4
ALID				iS	Sn	14 13 40.4	-0.3
MKZ	Mys Kozlova	3.17	34	eP	Pn	14 13 27.5	+0.7
MKZ				iS	Sn	14 14 02.4	-0.9
TUMR	Tumrok	3.43	14	eP	Pn	14 13 31.7	+1.4
TUMR				iS	Sn	14 14 10.6	+1.0
KMNR	Kamenistaya	3.90	13	eP	Pn	14 13 38.4	+1.7
KMNR				iS	Sn	14 14 22.1	+0.9
KPT	Kopyto	4.10	12	eP	Pn	14 13 40.1	+0.6
KPT				iS	Sn	14 14 25.2	-0.9
BZMR	Bezymyannaya	4.11	14	eP	Pn	14 13 40.8	+1.2
BZMR				iS	Sn	14 14 25.7	-0.6
KOZ	Kozyrevsk	4.15	9	eP	Pn	14 13 41.7	+1.5
KOZ				iS	Sn	14 14 27.5	+0.1
KOZR	Kozyr	4.16	9	PN	Pn	14 13 41.7	+1.4
KOZR				S	Sn	14 14 27.5	-0.1
ZLN	Zelenaya	4.24	16	P	Pn	14 13 42.4	+1.0
ZLN				iS	Sn	14 14 29.1	-0.4
KRSR	Krestovskiy	4.39	14	P	Pn	14 13 44.9	+1.4
KRSR				iS	Sn	14 14 33.7	+0.4
SRDR	Sredinnyy	4.39	8	eP	Pn	14 13 44.5	+1.0
SRDR				iS	Sn	14 14 33.1	-0.2
KLY	Klyuchi	4.50	14	eP	Pn	14 13 46.6	+1.7
KLY				eS	Sn	14 14 35.5	-0.4
KBTR	Krutoberegovo	4.89	28	eP	Pn	14 13 50.5	+0.2
KBTR				iS	Sn	14 14 43.4	-2.1
SEY	Seymchan	11.49	345	ePN	Pn	14 15 17.9	-2.6
ERM	Erimo	14.51	233	eP	Pn	14 16 04.1	+2.7
YAK	Yakutsk	18.56	314	eP	Pn	14 16 48.2	-3.8
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YAK	Yakutsk	18.56	314	eP	Pn	14 16 48.0	-4.0
	comp=Z,7.3nm,0.6s						
MJAR	Matsushiro Arr	21.17	231	P	P	14 17 21.8	+1.9
	comp=Z,1.6nm,0.6s,mb3.6,baz=32,slow=7.8,SNR=6.5						
MJAR	Matsushiro Arr	21.17	231	P	P	14 17 21.8	+2.0
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	Tiksi	23.75	337	eP	P	14 17 45.5	-0.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
TIXI	Tiksi	23.75	337	P	P	14 17 43.6	-2.5
SONM	Songino Array	33.32	284	LR	LR	14 33 17.7	
	comp=Z,32nm,18.8s,MS3.1,baz=313,slow=37						
YKA	Yellowknife Ar	44.58	41	LR	LR	14 40 25.9	
	comp=Z,7.7nm,18.2s,MS2.7,baz=195,slow=37						
KURK	Kurchatov	47.59	302	P	P	14 21 07.3	-1.9
	comp=Z,0.7nm,0.8s,mb3.8,baz=63,slow=7.9,SNR=7.3						
KURK	Kurchatov	47.59	302	P	P	14 21 07.3	-1.9
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
KURK	Kurchatov	47.59	302	eP	P	14 21 06.7	-2.4
MKAR	Makanchi Array	47.86	296	P	P	14 21 10.1	-1.2
	comp=Z,0.4nm,0.2s,mb4.0,baz=52,slow=6.8,SNR=3.2						
MKAR				LR	LR	14 41 39.8	
	comp=Z,23nm,19.2s,MS3.2,baz=80,slow=36						
NVAR	Mina Array Bea	56.95	68	P	P	14 22 19.8	+1.0
	comp=Z,0.5nm,0.5s,mb3.8,baz=298,slow=6.9,SNR=6.1						
CMAR	Chiang Mai Arr	57.10	258	P	P	14 22 20.6	+0.6
	comp=Z,0.9nm,0.7s,mb3.9,baz=29,slow=6.8,SNR=6.5						
CMAR	Chiang Mai Arr	57.10	258	P	P	14 22 20.6	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PDAR	Pinedale Array	58.83	59	P	P	14 22 32.2	+0.4
	comp=Z,0.7nm,0.6s,mb3.9,baz=294,slow=1.5,SNR=6.1						
NOA	NORSAR Array B	64.37	343	P	P	14 23 07.0	-1.8
	comp=Z,1.1nm,0.8s,mb3.9,baz=24,slow=6.7,SNR=3.4						
NOA	NORSAR Array B	64.37	343	P	P	14 23 07.0	-1.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	71.88	66	P	P	14 23 56.5	+0.1
	comp=Z,0.7nm,0.4s,mb3.9,baz=297,slow=4.8,SNR=13						
TXAR	Lajitas Array	71.88	66	P	P	14 23 56.5	+0.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	74.70	204	P	P	14 24 12.4	-0.5
	comp=Z,0.5nm,0.5s,mb3.7,baz=19,slow=6.0,SNR=12						
WRA	Warramunga Arr	74.70	204	P	P	14 24 12.4	-0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HGN	Heimansgroeve	75.06	342	ex	x	14 24 02.6	

*ISK **11** 15:12:02.9, 3732N×2826E, h11km, MD2.8*
*CSEM **11** 15:12:02.8±0.2, 3720N×2823E, h25km, MD2.8, Error ellipse: s-maj=6.6km s-min=4.4km az=179.0*
*DDA **11** 15:12:03.6, 37.19N×28.16E, h29km*
*ISCJB **11** 15:12:04.2±0.7, 3726N±005×2824E±005, h18km±11km, Error ellipse: s-maj=8.8km s-min=5.9km az=17.7*
ISC 11 15:12:04.1±0.7, 3725N±005×2823E±004, h19km±5km, n8, σ0.s73/14, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.12	161	ePG	Pg	15 12 06.7	-1.5
YER				eSG	Sg	15 12 11.2	+0.3
MLSB	Milas	0.37	278	ePG	Pg	15 12 11.0	-0.9
MLSB				eSG	Sg	15 12 17.2	0.0
TURN	Turunc	0.48	142	iP	Pg	15 12 13.1	-0.7
TURN				iS	Sg	15 12 21.6	+1.3
AYDN	Tasoluk	0.50	326	iP	Pg	15 12 14.1	-0.2
AYDN				iS	Sg	15 12 21.8	+0.8
BDRM	Kayabasi	0.66	254	iP	Pb	15 12 16.7	-0.2
BDRM				iS	Sb	15 12 25.7	+0.1
BODT	Bodrum	0.76	256	ePG	Pg	15 12 18.7	-0.4
BODT				eSG	Sg	15 12 30.2	+1.0
DNZL	Cakiroluk	0.78	55	iP	Pb	15 12 19.6	+0.6
KULA	Kula-Manisa	1.31	15	ePN	Pn	15 12 27.0	-0.3

IDC 11 15:13:15.9±44.0, 1541S×17167W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/18, mbtmp3.9/3, Error ellipse: s-maj=869.4km s-min=187.3km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.48	240	P	P	15 21 37.3	+0.2
	1.2nm,0.8s,baz=90,slow=6.1,SNR=4.3						
WRA	Warramunga Arr	51.47	257	P	P	15 22 23.0	-0.5
	0.6nm,0.8s,baz=95,slow=7.1,SNR=11						
ASAR	Alice Springs	51.69	252	P	P	15 22 25.2	+0.2
	3.0nm,0.6s,baz=88,slow=8.0,SNR=132						

*SKO **11** 15:14:03.5, 4123N×23.17E, h31km*
*CSEM **11** 15:14:05.8±0.3, 4126N×23.16E, h15km, ML2.6, Error ellipse: s-maj=6.6km s-min=2.6km az=33.0*
*ISCJB **11** 15:14:06.5±1.1, 4122N±007×2302E±007, h33km, Error ellipse: s-maj=10.7km s-min=5.0km az=33.1*
*THE **11** 15:14:07.0, 41.19N×23.15E, h8km, ML2.6*
ISC 11 15:14:05.5±1.4, 4125N±006×2318E±007, h14km±18km, n10, σ0.s44/20, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KNT	Kendrikon	0.23	247	ePg	Pg	15 14 10.7	+0.1
KNT				eSg	Sg	15 14 13.7	-0.3
SOH	Sokhos	0.45	163	ePg	Pg	15 14 14.7	+0.3
SOH				eSg	Sg	15 14 20.4	-0.1
VAY	Valandovo	0.47	279	ePg	Pg	15 14 14.2	-0.5
VAY				eSg	Sg	15 14 21.2	+0.2
VAY	Valandovo	0.47	279	ePg	Pg	15 14 14.2	-0.5
VAY				eSg	Sg	15 14 21.1	+0.1
THE	Thessaloniki	0.64	195	ePg	Pg	15 14 18.2	+0.2
THE				eSg	Sg	15 14 26.2	-0.3
HORT	Hortiatis	0.66	185	ePg	Pg	15 14 18.4	+0.1
HORT				eSg	Sg	15 14 26.9	0.0
GRG	Griva	0.66	244	ePg	Pg	15 14 18.6	+0.2
GRG				eSg	Sg	15 14 27.6	+0.6
PLG	Polygyros	0.90	167	ePg	Pg	15 14 22.5	-0.4
PLG				eSg	Sg	15 14 35.0	+0.3
OUR	Ouranopolis	1.10	146	ePg	Pg	15 14 27.1	+0.4
OUR				eSg	Sg	15 14 41.9	+0.8
PAIG	Paliouri	1.38	164	ePg	Pg	15 14 31.0	-1.0
PAIG				eSg	Sg	15 14 49.1	-0.7

*NEIC **11** 15:21:14.9, 1801N×9968W, h110km, MD3.8(MEX), After MEX.*
MEX 11 15:21:14.2±0.5, 1810N×10029W, h86km±11km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MEIG	Mezcala	0.66	105	iP	Pn	15 21 29.0	-1.0
MEIG				iS	Sn	15 21 40.2	-1.5
PLIG	Platanillo	0.81	69	iP	Pn	15 21 30.4	-1.0
PLIG				iS	Sn	15 21 42.9	-1.4
PLIG	Platanillo	0.81	69	iP	Pn	15 21 30.4	-1.0
PLIG				iS	Sn	15 21 41.7	-2.7
ACX	Acapulco	1.28	164	eP	Pn	15 21 35.5	-1.5
ACX				iS	Sn	15 21 51.7	-2.4
MZVM		1.48	43	iP	Pn	15 21 37.2	-2.3
MZVM				iS	Sn	15 21 55.9	-2.8
PPM	Popocatepetl	1.85	58	iP	Pn	15 21 42.8	-1.5
PPM				iS	Sn	15 22 05.6	-1.6
PPM	Popocatepetl	1.85	58	iP	Pn	15 21 36.4	-7.9
PPM				iS	Sn	15 22 05.8	-1.4
IIO	Organos	2.10	45	iP	Pn	15 21 47.2	-0.4
IIO				iS	Sn	15 22 13.0	-0.1
EZ5V		3.42	294	iP	Pn	15 22 05.3	-0.1
EZ5V				iS	Sn	15 22 44.3	-0.6
R15V		3.66	288	iP	Pn	15 22 07.2	-1.3
R15V				iS	Sn	15 22 48.7	-1.9

*ISCJB **11** 16:07:13.9±0.5, 2271N±002×12156E±003, h18km±7km, Error ellipse: s-maj=4.9km s-min=3.8km az=172.7*
*TAP **11** 16:07:14.9, 2273N×12148E, h17km, ML3.4, C*
*JMA **11** 16:07:15.9±0.2, 2257N×12175E, h36km, M3.1*
ISC 11 16:07:13.9±0.4, 2272N±002×12154E±002, h14km±3km, n49, σ0.s69/73, 8C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TTN	Taitung	0.36	276	⇑iP	Pg	16 07 21.7	+0.5
	baz=276						
TTN				iS	Sg	16 07 26.9	+0.8
	baz=276						
CHKT	Chengkung	0.41	338	⇓iP	Pg	16 07 22.8	+0.7
	baz=355						
CHKT				iS	Sg	16 07 28.5	+0.8
	baz=355						
TWG	Pinlang	0.44	283	⇑iP	Pg	16 07 22.5	-0.1
	baz=285						
TWG				eS	Sg	16 07 29.3	+0.7
	baz=285						
ECL	Taimali	0.55	257	⇑iP	Pg	16 07 24.8	0.0
	baz=268						
ECL				S	Sg	16 07 31.7	-0.4
	baz=268						
TWF1	Yuli	0.67	341	P	Pg	16 07 27.1	+0.1
	baz=355						
TWF1				eS	Sg	16 07 35.2	-0.6
	baz=355						
ELDTW	Lidau	0.67	315	P	Pg	16 07 26.4	-0.6
	baz=318						
ELDTW				S	Sg	16 07 34.8	-1.0
	baz=318						
LAY	Lan-yu	0.68	179	P	Pg	16 07 27.3	+0.2
	baz=161						
LAY				eS	Sg	16 07 36.6	+0.5
	baz=161						
TAW	Tawu	0.69	239	eP	Pg	16 07 27.1	-0.3
	baz=236						
EAST	Anshuo	0.72	242	⇑P	Pg	16 07 27.6	-0.3
	baz=248						
EAST				eS	Sg	16 07 37.0	-0.4
	baz=248						
EHY	Hungye	0.81	346	eP	Pg	16 07 29.2	-0.4
	baz=358						
EHY				eS	Sg	16 07 40.5	+0.2
	baz=358						
SSD	Sandimen	0.83	272	⇑iP	Pb	16 07 29.2	-1.0
	baz=263						
STYT	Tauyuan	0.84	302	⇑P	Pb	16 07 29.7	-0.6
	baz=304						
STYT				S	Sg	16 07 40.2	-1.1
	baz=304						
SCZT	Fangliau	0.91	248	eP	Pb	16 07 30.8	-0.7
	baz=247						
YUS	Yu-Shan	0.94	325	eP	Pb	16 07 31.5	-0.4
	baz=328						
SGST	Jiashian	0.95	293	⇑eP	Pb	16 07 32.1	0.0
	baz=294						
SGST				eS	Sb	16 07 43.8	-0.8
	baz=294						
WTP	Ta-pu	1.00	302	⇑P	Pb	16 07 32.9	-0.1
	baz=303						
WTP				eS	Sb	16 07 45.9	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=303						
HEN	Hengchun	1.02	226	eP	Pb	16 07 32.5	-0.9
	baz=224						
TWK1	Hengchun	1.02	221	eP	Pb	16 07 32.8	-0.6
	baz=209						
TWM1	Shoushan	1.03	276	eP	Pb	16 07 33.3	-0.2
	baz=283						
ALS	Alishan	1.04	320	eP	Pb	16 07 33.4	-0.2
	baz=330						
CHN1	Nanshi	1.04	297	eP	Pb	16 07 34.1	+0.5
	baz=311						
CHN1				eS	Sb	16 07 47.1	0.0
	baz=311						
CHN4	Tsaushan	1.07	306	eP	Pb	16 07 34.5	+0.2
	baz=308						
CHN4				eS	Sb	16 07 48.7	+0.6
	baz=308						
ESL	Shilin	1.09	355	eP	Pb	16 07 33.3	-1.3
	baz=346						
TWK	Hsinying	1.11	300	eP	Pb	16 07 35.0	+0.2
	baz=314						
TWK				eS	Sb	16 07 48.9	-0.3
	baz=314						
TWP	Hsiaoliuchiu	1.15	251	eP	Pn	16 07 36.8	+1.3
	baz=251						
CHN5	Tsauling	1.18	318	eP	Pn	16 07 36.1	+0.1
	baz=320						
CHN5				eS	Sb	16 07 51.9	+0.8
	baz=320						
CHN2	Minshiung	1.27	310	eP	Pn	16 07 38.3	+1.1
	baz=312						
CHN2				eS	Sb	16 07 54.9	+1.1
	baz=312						
SMLT	Sun Moon Lake	1.30	333	eP	Pn	16 07 37.6	0.0
	baz=345						
WGK	Gukeng	1.31	317	eP	Pn	16 07 38.2	+0.3
	baz=320						
TYC	Yuchr	1.33	332	eP	Pn	16 07 38.8	+0.7
	baz=345						
TYC				eS	Sn	16 07 55.9	+0.3
	baz=345						
TWD	Chiawan	1.36	2	P	Pn	16 07 37.3	-1.1
	baz=17						
WNT	Mingjian	1.40	326	eP	Pn	16 07 39.9	+0.9
	baz=329						
WHF	Hehuan Shan	1.44	350	eP	Pn	16 07 39.2	-0.4
	baz=4.0						
TCU	Taichung	1.63	331	eP	Pn	16 07 41.9	-0.3
	baz=334						
ENA	Nanau	1.71	6	eP	Pn	16 07 42.5	-0.8
	baz=8.0						
NNS	Nan Shan	1.72	355	eP	Pn	16 07 43.6	+0.2
	baz=357						
TWQ1	Liyutan	1.77	337	eP	Pn	16 07 44.6	+0.6
	baz=339						
NSY	Sanyi	1.83	337	eP	Pn	16 07 44.4	-0.6
	baz=339						
ENTT	Nioudou	1.91	1	eP	Pn	16 07 45.5	-0.6
	baz=2.0						
NSTT	Nanjuang	1.97	346	eP	Pn	16 07 47.7	+0.9
	baz=359						
TWE	Neicheng	2.00	3	eP	Pn	16 07 47.0	-0.2
	baz=5.0						
PNG	Penghu	2.01	295	eP	Pn	16 07 47.3	-0.1
	baz=297						
YOJ	Yonaguni jima	2.20	38	P	Pn	16 07 51.6	+1.6
YOJ				eS	Sn	16 08 17.9	+0.8
HATJ	Hateruma jima	2.48	57	P	Pn	16 07 54.3	+0.5
HATJ				eS	Sn	16 08 22.4	-1.4
IRIF	Iriomote-Funau	2.58	51	P	Pn	16 07 56.0	+0.8
IRIF				eS	Sn	16 08 26.1	-0.3
JKRS	Kuro-shima	2.73	56	P	Pn	16 07 58.0	+0.7
JKRS				eS	Sn	16 08 29.3	-0.8
JIJ	Ishigaki jima	2.90	55	P	Pn	16 08 00.1	+0.5
JIJ				eS	Sn	16 08 33.1	-1.2
JTJ	Tarama	3.48	56	P	Pn	16 08 08.8	+1.2
JTJ				eS	Sn	16 08 47.6	-1.0
JOGS	Gusukube	4.09	59	P	Pn	16 08 16.7	+0.7

*ISCJB **11** 16:35:35.0±0.8, 7.00S±0.08×125.5E±0.1, h485km±12km, mb3.7/13, Error ellipse: s-maj=23.1km s-min=8.6km az=156.1*
*IDC **11** 16:35:36.9±1.4, 7.07S×125.50E, h494km±20km, mb3.3/12, mb1 3.4/14, mb1mx3.4/20, mbtmp3.4/14, Error ellipse: s-maj=21.9km s-min=10.9km az=68.0*
*NEIC **11** 16:35:36.0±0.7, 7.01S×125.57E, h484km±12km, mb3.9/4, Error ellipse: s-maj=16.5km s-min=6.9km az=57.0*
ISC 11 16:35:36.0±0.8, **7.06S**±0.08×**125.5E**±0.1, **h482**km±12km, **n26**, σ**0.83**/29, **mb3.7**/13, **3C, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	3.62	210	P	P	16 36 51.8	+1.7
	232nm,0.3s,baz=12,slow=1.8,SNR=357						
BATI				S	S	16 37 48.3	-2.0
	43nm,0.3s,baz=147,slow=3.3,SNR=7.6						
KAPI	Kappang	6.07	289	P	P	16 37 12.7	+0.4
FITZ	Fitzroy Crossi	10.98	179	⇑iP	P	16 38 04.9	+1.3
	21nm,0.3s						
FITZ	Fitzroy Crossi	10.98	179	P	P	16 38 04.9	+1.3
	4.8nm,0.3s,baz=12,slow=10,SNR=151						
FITZ				S	S	16 40 04.6	-0.7
	1.0nm,0.3s,baz=184,slow=19,SNR=24						
FITZ	Fitzroy Crossi	10.98	179	eP	P	16 38 04.7	+1.0
WRAB	Tennant Creek	15.41	147	eP	P	16 38 50.9	+0.1
	4.6nm,0.4s						
WRA	Warramunga Arr	15.41	147	P	P	16 38 51.1	+0.2
	3.1nm,0.3s,baz=324,slow=11,SNR=202						
WRA				S	S	16 41 31.6	-0.1
	baz=325,slow=20,SNR=4.1						
WB2	Warramunga Arr	15.42	147	⇑iP	P	16 38 51.1	+0.2
CTA	Charters Tower	23.93	125	eP	P	16 40 10.1	-1.0
	0.6nm,0.2s,mb3.7						
CTA	Charters Tower	23.93	125	P	P	16 40 10.2	-0.9
	1.1nm,0.4s,mb3.7,baz=35,slow=3.6,SNR=3.8						
CTAO	Charters Tower	23.93	125	eP	P	16 40 10.3	-0.8
	0.9nm,0.4s,mb3.5						
NWAO	Narrogin (SRO)	26.86	196	P	P	16 40 37.3	+0.4
	3.0nm,0.3s,mb4.2,baz=45,slow=5.8,SNR=14						
NWAO	Narrogin (SRO)	26.86	196	eP	P	16 40 37.0	+0.1
STKA	Stephens Creek	28.90	151	⇑iP	P	16 40 55.9	+1.1
	6.3nm,0.9s,mb4.0						
STKA	Stephens Creek	28.90	151	P	P	16 40 56.3	+1.5
	6.6nm,0.7s,mb4.2,baz=317,slow=9.9,SNR=15						
STKA	Stephens Creek	28.90	151	eP	P	16 40 55.9	+1.0
KSRS	Korea Array	44.34	3	P	P	16 43 02.9	+0.7
	0.8nm,0.5s,mb3.5,baz=184,slow=8.9,SNR=5.5						
MJAR	Matsushiro Arr	44.98	15	P	P	16 43 06.7	-0.6
	2.5nm,0.6s,mb3.8,baz=194,slow=8.8,SNR=8.3						
MAJO	Matsushiro	44.98	15	eP	P	16 43 06.0	-1.2
	2.9nm,0.6s,mb3.9						
RPZ	Rata Peaks	53.98	140	P	P	16 44 13.3	-0.6
	3.8nm,0.7s,mb3.8,baz=129,slow=6.5,SNR=3.8						
SONM	Songino Array	57.20	345	P	P	16 44 36.6	+0.4
	1.1nm,0.7s,mb3.3,baz=160,slow=8.6,SNR=8.8						
PETK	Petropavlovsk-	65.86	21	P	P	16 45 33.8	+0.9
	2.3nm,0.5s,mb4.0,baz=178,slow=3.1,SNR=8.1						
MKAR	Makanchi Array	65.90	329	P	P	16 45 33.0	-0.2
	1.1nm,0.6s,mb3.7,baz=127,slow=7.6,SNR=8.3						
ZALV	Zalesovo Beam	69.73	336	P	P	16 45 55.6	-0.9
	1.4nm,0.5s,mb3.7,baz=134,slow=4.9,SNR=7.8						
KURK	Kurchatov	70.30	330	P	P	16 45 59.9	-0.1
	0.8nm,0.7s,mb3.4,baz=137,slow=3.9,SNR=6.0						
BVAR	Borovoye Array	75.78	329	P	P	16 46 31.4	-0.1
	1.1nm,0.7s,mb3.5,baz=134,slow=6.4,SNR=6.0						

*IDC **11** 16:36:08.4±0.4, 5.80S×105.42E, h0km, mb4.5/22, mb1 4.6/23, mb1mx4.6/25, mbtmp4.5/23, ML5.0/1, MS3.8/12, Ms1 3.9/12, ms1mx3.6/31, Error ellipse: s-maj=17.3km s-min=10.8km az=58.0*
*NEIC **11** 16:36:09.9±0.1, 5.73S×105.53E, h10km, mb5.0/31, MS4.1/4, Error ellipse: s-maj=8.2km s-min=4.1km az=52.0*
*ISCJB **11** 16:36:09.7±1.1, 5.80S±0.04×105.44E±0.04, h18km±8km, mb4.9/85, MS4.2/28, Error ellipse: s-maj=7.8km s-min=5.3km az=147.5*
*BJI **11** 16:36:09.9, 5.70S×105.50E, h10km, mB5.0, mb4.6, Ms4.8, Msz4.5*
*MOS **11** 16:36:12.2±1.2, 5.70S×105.56E, h33km, mb5.2/37, Error ellipse: s-maj=12.0km s-min=6.0km az=118.7*
*DJA **11** 16:36:16, 6.02S×105.48E, h33km, MLv5.1/14*
ISC 11 16:36:10.8±1.2, **5.80S**±0.04×**105.45E**±0.04, **h14**km±7km, **h14**km±1.1km**:pP-P, n280,** σ**1.07**/245, **mb4.9**/85, **MS4.2**/28, **15C-21D, Sunda Strait**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBJI	Serang	0.75	115	P	Pg	16 36 24.7	-0.6
	0.0nm,0.0s						
KLI	Kotabumi	1.10	328	P	Pb	16 36 35.5	+3.8
	0.0nm,0.0s						
TNG	Tangerang	1.24	107	P	Pn	16 36 34.3	+0.5
	0.0nm,0.0s						
DBJI	Dramaga	1.49	120	P	Pn	16 36 37.0	-0.2
	0.0nm,0.0s						
CBJI	Citeko	1.52	114	P	Pn	16 36 40.4	+2.8
	0.0nm,0.0s						
SKJI	Sukabumi	1.62	138	P	Pn	16 36 37.2	-1.8
	0.0nm,0.0s						
LEM	Lembang	2.38	115	P	Pn	16 36 51.5	+2.0
	0.0nm,0.0s						
PPBI	Pangkal Pinang	3.68	11	P	Pn	16 37 13.2	+5.9
	0.0nm,0.0s						
TPI	Tanjungpandan	3.74	36	P	Pn	16 37 12.8	+4.7
	0.0nm,0.0s						
XMIS	Christmas Isla	4.66	178	ePn	Pn	16 37 12.4	-8.3
PPI	Padang Panjang	7.32	316	P	Pn	16 38 04.4	+7.0
	0.0nm,0.0s						
BATI	Baumata	18.55	105	P	Pn	16 40 28.7	+1.1
	4.9nm,0.3s,baz=272,slow=2.0,SNR=6.2						
MBWA	Marble Bar	20.61	139	P	P	16 40 49.2	-0.5
	SNR=6.0						
MBWA	Marble Bar	20.61	139	eP	P	16 40 48.6	-1.2
	44nm,1.2s						
NST	Nakhon Sawan	21.98	346	P	P	16 41 10.0	+5.5
KKTK	Khon Kaen	22.15	353	P	P	16 41 11.0	+4.7
FITZ	Fitzroy Crossi	23.19	124	eP	P	16 41 16.2	-1.3
	29nm,1.0s,mb4.7						
FITZ	Fitzroy Crossi	23.19	124	P	P	16 41 16.3	-1.2
	5.6nm,0.6s,mb4.2,baz=314,slow=12,SNR=14						
FITZ				LR	LR	16 50 33.9	
	comp=Z,142nm,18.7s,MS3.5,baz=127,slow=37						
BDT	Bhumibol Dam	23.77	345	P	P	16 41 25.0	+1.9
DAV	Davao City (W)	23.81	58	P	P	16 41 22.6	-1.0
	101nm,0.4s,mb5.6,baz=218,slow=8.5,SNR=2.3						
DAV				LR	LR	16 51 17.9	
	comp=Z,157nm,19.5s,MS3.5,baz=250,slow=38						
NANT	Nan	24.89	349	⇑P	P	16 41 36.0	+2.6
	188nm,1.0s,mb5.6						
CMAR	Chiang Mai Arr	24.94	345	P	P	16 41 33.9	0.0
	4.4nm,1.1s,mb3.9,baz=181,slow=8.5,SNR=17						
CMAR				PcP	PcP	16 45 11.6	+2.1
	3.1nm,1.0s,baz=208,slow=2.8,SNR=9.2						
CMAR				LR	LR	16 51 30.7	
	comp=Z,164nm,21.7s,MS3.5,baz=180,slow=37						
CMAR	Chiang Mai Arr	24.94	345	P	P	16 41 33.9	0.0
CMAR						16 45 11.6	
CMAR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CMAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR				MLR	MLR		
	comp=Z,164nm,21.7s						
QIZ	Qiongzhong	25.05	10	P	P	16 41 34.3	-0.5
QIZ				XP	sP	16 41 39.2	-1.6
QIZ				S	S	16 45 58.7	-0.1
QIZ				XS	sS	16 46 04.7	-1.1
QIZ				LR	LR		
	comp=E,871nm,14.9s						
QIZ				LR	LR		
	comp=Z,556nm,12.3s,MS4.3						
CHG	Chiang Mai	25.29	345	⇑P	P	16 41 41.8	+4.8
	comp=Z,41nm,1.4s,mb4.8						
CHTO	Chiang Mai	25.29	345	P	P	16 41 38.2	+1.3
	SNR=6.8						
CHTO	Chiang Mai	25.29	345	eP	P	16 41 36.0	-1.0
CHTO				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.6						
CHTO	Chiang Mai	25.29	345	eP	P	16 41 36.0	-1.0
	comp=Z,24nm,1.3s,mb4.6						
CHRT	Chiangrai	26.11	348	⇑P	P	16 41 49.0	+4.5
	comp=Z,105nm,1.2s,mb5.2						
MUN	Mundaring	27.92	160	eP	P	16 42 01.3	+0.6
KLBR	Kellerberrin	28.13	157	eP	P	16 42 01.4	-1.1
	comp=Z,9.0nm,0.6s,mb4.6						
NWAO	Narrogin (SRO)	29.14	159	P	P	16 42 10.9	-0.6
	comp=Z,13nm,1.1s,mb4.6,baz=19,slow=10.0,SNR=3.3						
NWAO				LR	LR	16 52 07.1	
	comp=Z,264nm,19.6s,MS3.9,baz=340,slow=33						
NWAO	Narrogin (SRO)	29.14	159	P	P	16 42 10.9	-0.6
NWAO				pmax	pmax		
	comp=Z,13nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,264nm,19.6s						
KMI	Kunming	30.85	355	P	P	16 42 29.2	+2.5
KMI				AP	pP	16 42 32.2	+1.2
KMI				PP	PP	16 43 32.2	-4.3
KMI				S	S	16 47 33.9	+3.7
KMI				XS	sS	16 47 38.8	+1.6
KMI				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.4						
KMI				LR	LR		
	comp=N,2µm,10.6s,MS5.0						
KMI				LR	LR		
	comp=E,1µm,10.6s,MS5.0						
KMI				LR	LR		
	comp=Z,1µm,10.1s,MS4.9						
WRA	Warramunga Arr	31.40	119	P	P	16 42 31.0	-0.6
	comp=Z,15nm,0.6s,mb5.0,baz=295,slow=9.9,SNR=30						
WRA				PcP	PcP	16 45 25.2	-0.1
	comp=Z,1.4nm,0.6s,baz=316,slow=2.2,SNR=7.2						
WRA	Warramunga Arr	31.40	119	P	P	16 42 31.0	-0.6
WRA						16 45 25.2	
WRA				pmax	pmax		
	comp=Z,15nm,0.6s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	31.40	119	P	P	16 42 31.0	-0.6
WRA				PcP	PcP	16 45 25.2	-0.1
WRAB	Tennant Creek	31.40	119	P	P	16 42 31.9	+0.2
	comp=Z,186nm,0.6s,mb6.1,SNR=14						
WRAB	Tennant Creek	31.40	119	eP	P	16 42 30.6	-1.1
WB2	Warramunga Arr	31.41	119	eP	P	16 42 30.8	-0.9
GYA	Guiyang	32.09	2	⇓iP	P	16 42 39.8	+2.2
GYA				PP	PP	16 43 46.7	-3.6
GYA				PCP	PcP	16 45 28.6	+1.6
GYA				S	S	16 47 47.8	-1.7
GYA				SCP	ScP	16 49 11.3	+0.9
GYA				SS	SS	16 49 44.7	-23
GYA				SCS	ScS	16 53 08.2	-0.9
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
GYA				AMB	AMB		
	comp=Z,170nm,5.7s						
GYA				LR	LR		
	comp=N,610nm,11.7s,MS4.7						
GYA				LR	LR		
	comp=E,720nm,11.4s,MS4.7						
GYA				LR	LR		
	comp=Z,590nm,11.4s,MS4.5						
CD2	Chengdu	36.54	358	P	P	16 43 16.8	+0.7
CD2				AP	pP	16 43 21.1	+0.7
CD2				XP	sP	16 43 23.8	+1.7
CD2				PP	PP	16 44 41.2	+1.7
CD2				PCP	PcP	16 45 40.1	+0.4
CD2				S	S	16 48 58.5	+0.3
CD2				XS	sS	16 49 05.8	+0.5
CD2				PCS	PcS	16 49 27.1	-0.4
CD2				SS	SS	16 51 22.0	-16
CD2				SCS	ScS	16 53 30.8	-1.8
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
CD2				AMB	AMB		
	comp=Z,40nm,6.4s						
CD2				LR	LR		
	comp=N,770nm,10.8s,MS4.9						
CD2				LR	LR		
	comp=E,890nm,10.8s,MS4.9						
CD2				LR	LR		
	comp=Z,1µm,9.6s						
ODAN	Odare	36.88	333	eP	P	16 43 16.1	-3.0
WHN	Wuhan	37.13	13	eP	P	16 43 23.0	+1.9
WHN				S	S	16 49 14.4	+7.2
WHN				LR	LR		
	comp=N,596nm,10.6s,MS4.7						
WHN				LR	LR		
	comp=E,407nm,11.0s,MS4.7						
WHN				LR	LR		
	comp=Z,487nm,14.5s,MS4.4						
TAPN	Taplejung	37.15	333	eP	P	16 43 18.1	-3.3
	comp=Z,55nm,1.3s,mb5.2						
RAMN	Ramite	37.32	332	eP	P	16 43 20.5	-2.4
COEN	Coen	37.99	105	eP	P	16 43 28.3	-0.4
	comp=Z,70nm,1.6s,mb5.1						
JIRN	Jiri	38.12	332	eP	P	16 43 28.8	-0.8
PKI	Pulchoki	38.42	331	eP	P	16 43 30.9	-1.2
GUN	Gumba	38.47	332	eP	P	16 43 31.4	-1.2
KAD	Karad	38.49	307	eP	P	16 43 33.6	+0.8
KAD				AML	AML	16 43 46.9	
	comp=E,1.9nm,0.2s						
KAD				AML	AML	16 43 47.5	
	comp=N,2.5nm,0.4s						
DMN	Daman	38.60	330	eP	P	16 43 32.4	-1.2
KKN	Kakani	38.66	331	eP	P	16 43 33.4	-0.7
	comp=N,46nm,1.3s,mb5.0						
GKN	Gorkha	39.15	330	eP	P	16 43 37.5	-0.8
POO	Poona	39.44	308	eP	P	16 43 38.0	-2.8
KOLN	Koldanda	39.49	329	eP	P	16 43 40.3	-0.8
	comp=N,9.9nm,0.6s,mb4.7						
NJ2	Nanjing	39.75	18	eP	P	16 43 42.4	-0.8
NJ2				S	S	16 49 44.0	-2.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,80nm,11.0s						
NJ2				LR	LR		
	comp=N,240nm,21.5s,MS4.1						
NJ2				LR	LR		
	comp=E,250nm,25.2s,MS4.1						
NJ2				LR	LR		
	comp=Z,230nm,24.0s,MS3.9						
XAN	Xi’an	39.76	5	P	P	16 43 44.8	+1.6
XAN				AP	pP	16 43 52.3	+4.7
XAN				XP	sP	16 43 56.1	+6.8
XAN				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.3						
DANN	Dangsing	39.88	329	eP	P	16 43 43.6	-0.7
	comp=Z,67nm,1.2s,mb5.2						
PMG	Port Moresby	41.48	98	d iP	P	16 43 57.2	-0.6
LZH	Lanzhou	41.69	358	eP	P	16 44 00.1	+0.9
LZH				AP	pP	16 44 03.4	-0.1
LZH				XP	sP	16 44 05.1	-0.1
LZH				PP	PP	16 45 41.0	+5.3
LZH				eS	S	16 50 10.0	-5.6
LZH				eSS	SS	16 53 16.8	-4.7
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.7						
LZH				AMB	AMB		
	comp=Z,120nm,4.6s						
LZH				LR	LR		
	comp=E,830nm,14.7s						
LZH				LR	LR		
	comp=Z,1µm,15.5s,MS4.8						
CTA	Charters Tower	42.08	114	eP	P	16 44 02.6	-0.1
	comp=Z,16nm,1.3s,mb4.5						
CTA	Charters Tower	42.08	114	P	P	16 44 02.8	+0.1
	comp=Z,27nm,1.2s,mb4.8,baz=281,slow=9.8,SNR=18						
CTA				PcP	PcP	16 45 58.0	+0.5
	comp=Z,1.7nm,0.6s,baz=329,slow=8.7,SNR=3.4						
CTA				LR	LR	17 02 36.3	
	comp=Z,117nm,20.4s,MS3.8,baz=275,slow=38						
CTA	Charters Tower	42.08	114	P	P	16 44 02.8	+0.1
CTA						16 45 58.0	
CTA				pmax	pmax		
	comp=Z,27nm,1.2s						
CTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CTA				MLR	MLR		
	comp=Z,117nm,20.4s						
CTAO	Charters Tower	42.08	114	eP	P	16 44 02.6	-0.1
CTAO				pmax	pmax		
	comp=Z,39nm,1.3s,mb4.9						
CTAO	Charters Tower	42.08	114	eP	P	16 44 02.6	-0.1
	comp=Z,39nm,1.3s,mb4.9						
STKA	Stephens Creek	42.58	132	eP	P	16 44 06.0	-0.6
	comp=Z,28nm,0.6s,mb5.2						
STKA	Stephens Creek	42.58	132	P	P	16 44 06.7	+0.1
	comp=Z,26nm,0.5s,mb5.2,baz=305,slow=8.2,SNR=78						
STKA				LR	LR	17 00 08.4	
	comp=Z,183nm,22.0s,MS3.9,baz=317,slow=34						
GTA	Gaotai	45.28	354	P	P	16 44 29.3	+1.2
GTA				AP	pP	16 44 33.5	+1.0
GTA				XP	sP	16 44 36.9	+2.7
GTA				PCP	PcP	16 46 08.6	+0.8
GTA				PP	PP	16 46 17.0	+2.8
GTA				S	S	16 51 09.6	+1.5
GTA				XS	sS	16 51 18.8	+3.5
GTA				SS	SS	16 54 24.6	-7.1
GTA				AMB	AMB		
	comp=Z,14nm,1.4s,mb4.6						
GTA				AMB	AMB		
	comp=Z,55nm,5.7s						
GTA				LR	LR		
	comp=N,232nm,18.0s,MS4.5						
GTA				LR	LR		
	comp=E,443nm,17.4s,MS4.5						
GTA				LR	LR		
	comp=Z,306nm,19.8s,MS4.2						
BJI	Beijing	46.67	11	P	P	16 44 38.5	-0.5
BJI				PP	PP	16 46 28.3	-0.6
BJI				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.3						
BJI				AMB	AMB		
	comp=Z,129nm,4.0s						
BJI				LR	LR		
	comp=N,589nm,13.6s,MS4.8						
BJI				LR	LR		
	comp=E,342nm,13.0s,MS4.8						
BJI				LR	LR		
	comp=Z,256nm,14.3s,MS4.3						
HHC	Hu-ho-hao-te	46.76	6	eP	P	16 44 40.3	+0.6
HHC				AP	pP	16 44 45.0	+0.9
HHC				XP	sP	16 44 47.5	+1.7
HHC				PCP	PcP	16 46 13.3	+0.3
HHC				PP	PP	16 46 29.9	+0.1
HHC				SCP	ScP	16 50 05.6	-0.8
HHC				PCS	PcS	16 50 07.6	-0.1
HHC				S	S	16 51 29.5	+0.2
HHC				XS	sS	16 51 36.6	+0.1
HHC				SCS	ScS	16 54 31.6	-2.6
HHC				SS	SS	16 54 48.4	-7.6
HHC				AMB	AMB		
	comp=Z,17nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,84nm,5.9s						
HHC				LR	LR		
	comp=N,493nm,13.5s,MS4.7						
HHC				LR	LR		
	comp=E,329nm,13.7s,MS4.7						
HHC				LR	LR		
	comp=Z,362nm,13.5s,MS4.5						
KSRS	Korea Array	47.87	24	P	P	16 44 49.0	+0.6
	comp=Z,8.2nm,1.1s,mb4.7,baz=201,slow=8.1,SNR=21						
KSRS	Korea Array	47.87	24	P	P	16 44 49.0	+0.6
KSRS				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
TOO	Toolangi	48.23	137	eP	P	16 44 53.0	+1.8
CAN	Canberra	49.65	132	eP	P	16 45 02.5	+0.3
CNB	Canberra Magne	49.91	132	eP	P	16 45 05.1	+0.9
WMQ	Urumqi	51.93	344	P	P	16 45 19.5	+0.3
WMQ				AP	pP	16 45 24.0	+0.4
WMQ				XP	sP	16 45 26.5	+1.2
WMQ				PCP	PcP	16 46 33.0	+1.3
WMQ				eS	S	16 52 40.0	-1.8
WMQ				XS	sS	16 52 51.0	+1.9
WMQ				AMB	AMB		
	comp=Z,19nm,1.3s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,102nm,3.9s						
WMQ				LR	LR		
	comp=N,345nm,10.0s,MS4.7						
WMQ				LR	LR		
	comp=E,260nm,13.6s,MS4.7						
WMQ				LR	LR		
	comp=Z,243nm,12.9s,MS4.4						
MJAR	Matsushiro Arr	52.10	34	P	P	16 45 19.9	-0.6
	comp=Z,2.0nm,0.8s,mb4.1,baz=222,slow=6.1,SNR=6.3						
MJAR	Matsushiro Arr	52.10	34	P	P	16 45 19.9	-0.7
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	Matsushiro Arr	52.10	34	P	P	16 45 19.9	-0.7
CN2	Changchun	52.57	18	eP	P	16 45 25.4	+1.4
CN2				eXP	sP	16 45 32.4	+2.3

CN2 eS S 16 52 51.6 +1.0
CN2 AMB AMB
comp=Z,20nm,1.0s,mb5.0
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,15.0s,MS4.4
CN2 LR LR
comp=E,200nm,15.0s,MS4.4
CN2 LR LR
comp=Z,200nm,17.0s,MS4.2
KBL Kabul 52.82 322 P P 16 45 25.8 -0.2
KBL pmax pmax
comp=Z,11nm,1.1s,mb4.7
KBL Kabul 52.82 322 P P 16 45 25.8 -0.2
comp=Z,10nm,1.1s,mb4.7
SONM Songino Array 53.41 1 P P 16 45 31.4 +1.4
comp=Z,8.2nm,1.1s,mb4.6,baz=182,slow=8.1,SNR=36
SONM PcP PcP 16 46 37.2 0.0
comp=Z,1.9nm,0.8s,baz=174,slow=3.4,SNR=9.8
SONM LR LR 17 11 21.9
comp=Z,175nm,18.4s,MS4.2,baz=174,slow=40
SONM Songino Array 53.41 1 P P 16 45 31.4 +1.3
SONM 16 46 37.2
SONM pmax pmax
comp=Z,8.0nm,1.1s
SONM pmax pmax
comp=Z,2.0nm,0.8s
SONM MLR MLR
comp=Z,175nm,18.4s
VLA Vladivostok 54.27 24 *e*P P 16 45 37.2 +0.7
VLA pmax pmax
comp=Z,21nm,1.3s,mb4.9
SMDO Samad 54.47 304 ⇓P P 16 45 39.6 +1.3
SNR=5.3
BIDO Bidbid 54.60 304 ⇑P P 16 45 40.6 +1.3
SNR=9.7
MDJ Mudanjiang 54.68 21 P P 16 45 39.7 +0.3
MDJ AP pP 16 45 43.5 -0.3
MDJ XP sP 16 45 45.4 -0.1
MDJ PCP PcP 16 46 42.9 +0.8
MDJ PP PP 16 47 48.1 +6.0
MDJ SCP ScP 16 50 41.2 +0.8
MDJ PCS PcS 16 50 43.3 +1.7
MDJ S S **16 53 27.3 +8.2**
MDJ SCS ScS 16 55 29.2 +0.8
MDJ AMB AMB
comp=Z,5.0nm,1.0s,mb4.5
MDJ AMB AMB
comp=Z,55nm,5.1s
MDJ LR LR
comp=E,167nm,17.5s,MS4.3
MDJ LR LR
comp=N,119nm,13.9s,MS4.3
MDJ LR LR
comp=Z,137nm,10.2s,MS4.3
BSY Bisya 55.04 303 ⇓P P 16 45 43.7 +1.3
SNR=6.9
HOQ Hoqain 55.30 304 ⇑P P 16 45 45.5 +1.2
SNR=8.7
UCH Uchtor 55.48 332 *e*P P 16 45 45.0 -0.3
comp=Z,25nm,0.3s,mb5.7
ZAK Zakamensk 55.98 358 *e*P P 16 45 49.1 +0.4
ZAK pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
HIA Hailar 56.24 11 *e*P P 16 45 49.7 -0.8
HIA MLR MLR
comp=Z,160nm,20.0s
MK31 Makanchi Array 56.25 341 *e*P P 16 45 50.0 -0.7
MKAR Makanchi Array 56.25 341 P P 16 45 49.8 -0.8
comp=Z,4.0nm,1.0s,mb4.4,baz=141,slow=7.8,SNR=15
MKAR PcP PcP 16 46 48.5 +0.4
comp=Z,1.4nm,0.7s,baz=120,slow=4.8,SNR=3.7
MKAR LR LR 17 12 57.9
comp=Z,80nm,19.9s,MS3.8,baz=55,slow=39
MKAR Makanchi Array 56.25 341 P P 16 45 49.8 -0.9
MKAR 16 46 48.5
MKAR pmax pmax
comp=Z,4.0nm,1.0s
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR MLR MLR
comp=Z,80nm,19.9s
ASHO Ashiyiah 56.81 304 ⇓P P 16 45 55.8 +0.7
SNR=5.6
HATD Hatta, Dubai 56.81 305 ⇑P P 16 45 55.7 +0.6
SNR=11
TLY Talaya 57.27 359 *e*P P 16 46 00.0 +2.2
TLY pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
MOY Mondy 57.37 357 *e*P P 16 45 59.1 +0.6
KLR Kul'dur 59.41 20 *e*P P 16 46 09.2 -3.6
KLR pmax pmax
comp=Z,46nm,1.8s,mb5.2
CASY Casey 60.48 178 *e*P P 16 46 19.6 -0.3
KURK Kurchatov 60.86 341 P P 16 46 21.8 -0.9
comp=Z,41nm,1.2s,mb5.4,SNR=5.5
KURK Kurchatov 60.86 341 P P 16 46 21.2 -1.5
comp=Z,3.3nm,1.0s,mb4.4,baz=160,slow=6.4,SNR=13
KURK Kurchatov 60.86 341 *e*P P 16 46 20.7 -2.0
KURK pmax pmax
comp=Z,12nm,1.3s,mb4.9
KURK MLR MLR
comp=Z,114nm,21.0s,MS4.0
KURK Kurchatov 60.86 341 *e*P P 16 46 20.7 -2.1
comp=Z,12nm,1.3s,mb4.9
KURK LR LR
comp=Z,114nm,21.0s,MS4.0
ZAA0 Zalesovo Array 62.00 346 *e*P P 16 46 28.7 -1.7
ZALV Zalesovo Beam 62.00 346 P P 16 46 29.7 -0.7
comp=Z,10nm,1.0s,mb4.9,baz=142,slow=5.1,SNR=32
ZALV LR LR 17 16 13.8
comp=Z,71nm,19.0s,MS3.9,baz=142,slow=39
ZALV Zalesovo Beam 62.00 346 P P 16 46 29.7 -0.7
ZALV pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ZALV MLR MLR
comp=Z,71nm,19.0s,MS3.9
YSS Yuzh-Sakhalins 62.03 28 ⇓*i*P P 16 46 31.1 +0.4
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.4
NVS Novosibirsk 63.20 346 *e*P P 16 46 35.6 -2.8
NVS pmax pmax
comp=N,6.0nm,1.3s
NVS pmax pmax
comp=E,7.0nm,1.3s
NVS pmax pmax
comp=Z,8.0nm,1.3s,mb4.7
BOD Bodaibo 63.78 5 *e*P P 16 46 42.0 -0.2
BOD pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
RDF Al-Radifah 65.47 305 *e*P P 16 46 53.1 -0.7
baz=305
RDF AMb AMB 16 46 57.2
comp=Z,76nm,1.7s,mb5.5,baz=305
UMR Umm Al-Rimmam 65.57 306 *e*P P 16 46 53.9 -0.6
baz=306
UMR AMb AMB 16 46 57.1
comp=Z,79nm,1.3s,mb5.6,baz=306
BVAR Borovoye Array 65.67 338 P P 16 46 53.1 -1.5
comp=Z,0.7nm,0.6s,mb3.9,baz=147,slow=8.8,SNR=6.6
BVAR Borovoye Array 65.67 338 P P 16 46 53.1 -1.5
BVAR pmax pmax
comp=Z,1.0nm,0.6s
NAY Al-Naaiem 65.84 306 *e*P P 16 46 55.1 -1.1
baz=305
NAY AMb AMB 16 46 58.6
comp=Z,20nm,1.1s,mb5.1,baz=305
RST Umm Al-Ruwaisa 66.13 306 *e*P P 16 46 56.9 -1.2
baz=306
RST AMb AMB 16 47 00.2
comp=Z,48nm,1.3s,mb5.4,baz=306
MAW Mawson 68.07 196 *e*P P 16 47 09.9 +0.2
comp=Z,3.6nm,0.9s,mb4.4
MAW Mawson 68.07 196 P P 16 47 09.0 -0.6
comp=Z,3.7nm,0.8s,mb4.5,baz=45,slow=8.8,SNR=9.8
MAW LR LR 17 13 38.9
comp=Z,142nm,18.1s,MS4.2,baz=69,slow=33
MAW Mawson 68.07 196 P P 16 47 09.0 -0.7
MAW pmax pmax
comp=Z,4.0nm,0.8s
MAW MLR MLR
comp=Z,142nm,18.1s
KMBO Kilima Mbogo 68.20 271 P P 16 47 12.0 +0.5
comp=Z,1.1nm,0.5s,mb4.1,baz=248,slow=23,SNR=3.4
KMBO Kilima Mbogo 68.20 271 P P 16 47 12.0 +0.5
KMBO pmax pmax
comp=Z,1.0nm,0.5s
RPZ Rata Peaks 68.46 135 P P 16 47 12.4 -0.2
comp=Z,6.6nm,0.6s,mb4.8,baz=333,slow=2.4,SNR=8.9
AKTK Aktyubinsk 69.32 330 P P 16 47 16.6 -1.1
AKTO Aktyubinsk 69.32 330 P P 16 47 16.6 -1.1
comp=Z,1.7nm,0.5s,mb4.2,baz=120,slow=8.8,SNR=6.1
AKTO Aktyubinsk 69.32 330 P P 16 47 16.6 -1.1
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
YAK Yakutsk 70.17 12 *e*P P 16 47 21.3 -1.4
YAK pmax pmax
comp=Z,21nm,1.1s,mb5.0
YAK pmax pmax
comp=N,7.0nm,1.4s
YAK pmax pmax
comp=E,7.0nm,1.4s
YAK Yakutsk 70.17 12 P P 16 47 20.4 -2.4
comp=E,22nm,0.9s,mb5.1
YAK LR LR
comp=Z,119nm,21.0s,MS4.1
GNI Garni 72.02 315 P P 16 47 35.0 +0.5
comp=Z,2.0nm,0.3s,mb4.5,baz=353,slow=18,SNR=5.1
GNI Garni 72.02 315 ⇑*e*P P 16 47 34.7 +0.2
GNI pmax pmax
comp=Z,48nm,1.5s
DGRG David-gareji 72.13 317 P P 16 47 36.1 +1.1
SVE Sverdlovsk 72.29 336 *e*P P 16 47 35.8 +0.1
SVE pmax pmax
comp=Z,25nm,1.4s,mb5.0
MTA Mtatsminda 72.63 317 P P 16 47 38.2 +0.2
TBLG Delisi 72.68 317 P P 16 47 38.7 +0.4
ARU Arti 72.89 335 *d*⇓*i*P P 16 47 38.4 -0.8
ARU *e* 16 47 54.0
ARU *e* 16 50 18.9
ARU *e*S S 16 57 04.1 -1.0
ARU *e*SS SS 17 01 47.9 +2.3
ARU pmax pmax
comp=Z,16nm,1.2s,mb4.8
ARU Arti 72.89 335 *e*P P 16 47 37.3 -1.9
comp=Z,26nm,1.4s,mb5.0
PETK Petropavlovsk- 73.31 30 P P 16 47 41.8 0.0
comp=Z,1.5nm,0.6s,mb4.1,baz=219,slow=6.9,SNR=3.7
PET Petropavlovsk 73.74 30 *e*P P 16 47 42.0 -2.3
PET pmax pmax
comp=Z,27nm,1.3s,mb5.0
KIV Kislovodsk 74.97 318 P P 16 47 52.1 +0.4
SNR=7.5
KIV Kislovodsk 74.97 318 *e*P P 16 47 51.6 -0.1
KIV pmax pmax
comp=Z,42nm,1.4s,mb5.2
KIV Kislovodsk 74.97 318 *e*P P 16 47 50.6 -1.0
comp=Z,24nm,1.1s,mb5.0
MALT Malatya 75.90 312 *e*P P 16 47 55.2 -2.0
MALT pmax pmax
comp=Z,34nm,1.4s,mb5.1
MALT Malatya 75.90 312 ⇑*i*P P 16 47 56.7 -0.5
MALT Malatya 75.90 312 *e*P P 16 47 55.2 -2.0
comp=Z,34nm,1.4s,mb5.1
SYO Syowa Base 76.10 200 ⇓*e*P P 16 47 56.5 -1.2
SOC Sochi 76.81 317 *e*P P 16 48 01.3 -0.9
SOC *e*S S 16 57 46.1 -3.3
SOC *e* 16 58 19.8
SOC *e*SS SS 17 02 47.5 +1.6
SOC pmax pmax
comp=Z,32nm,1.0s,mb5.2
SBA Scott Base 78.50 169 *e*P P 16 48 11.5 +0.4
SBA pmax pmax
comp=Z,30nm,1.5s,mb5.0
SBA Scott Base 78.50 169 *e*P P 16 48 11.5 +0.4
comp=Z,30nm,1.5s,mb5.0
BOSA Boshof 78.65 242 P P 16 48 12.6 -0.3
comp=Z,2.8nm,0.8s,mb4.3,baz=72,slow=4.5,SNR=3.3
BOSA Boshof 78.65 242 P P 16 48 12.6 -0.3
BOSA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ANN Anapa 78.78 318 *e*P P 16 48 11.8 -1.4
ANN *e*S S 16 58 10.3 -0.3
ANN pmax pmax
comp=Z,68nm,1.4s,mb5.4
TIXI Tiksi 78.81 7 *e*P P 16 48 11.4 -1.4
TIXI pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
TIXI Tiksi 78.81 7 *e*P P 16 48 10.5 -2.3
comp=Z,4.5nm,0.8s,mb4.5
VSR Storozhevoye 80.00 324 *e*P P 16 48 18.4 -1.3
VSR pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=N,7.0nm,2.2s
ANTO Ankara 80.55 312 P P 16 48 23.3 +0.4
SNR=6.2
ANTO Ankara 80.55 312 *e*P P 16 48 23.0 +0.1
ANTO pmax pmax
comp=Z,29nm,1.3s,mb5.0
ANTO Ankara 80.55 312 *e*P P 16 48 23.0 0.0
comp=Z,29nm,1.3s,mb5.0
SIM Simferopol' 81.06 317 *e*P P 16 48 25.7 +0.2
SIM *e*S S 16 58 33.4 -1.3
SIM pmax pmax
comp=Z,25nm,1.4s,mb5.0
MOS Moscow 82.55 328 *i*P P 16 48 32.6 -0.6
MOS pmax pmax
comp=Z,61nm,1.3s,mb5.5
OBN Obninsk 82.89 327 *e*P P 16 48 34.9 0.0
OBN *i* 16 48 48.9
OBN pmax pmax
comp=Z,89nm,1.6s,mb5.5
OBN Obninsk 82.89 327 *e*P P 16 48 34.6 -0.3
comp=Z,87nm,1.3s,mb5.6
TIRR Tirgusor 84.85 316 ⇓*i*P P 16 48 45.6 +0.4
TIRR Tirgusor 84.85 316 ⇓P P 16 48 45.6 +0.4
KIS Kishinev 85.17 318 *e*P P 16 48 46.0 -0.7
MAIT Maitri 85.79 199 *e*P P 16 48 51.2 +1.8
AKASG Malin Array Be 85.81 322 P P 16 48 49.1 -0.7
comp=Z,3.4nm,0.7s,mb4.7,baz=87,slow=3.9,SNR=26
AKASG Malin Array Be 85.81 322 P P 16 48 49.1 -0.7
AKASG pmax pmax
comp=Z,3.0nm,0.7s
KIEV Kiev 85.81 322 *e*P P 16 48 48.4 -1.5
KIEV pmax pmax
comp=Z,28nm,1.4s,mb5.3
KIEV Kiev 85.81 322 *e*P P 16 48 48.4 -1.5
comp=Z,28nm,1.4s,mb5.3
VRI Vrincioaia 86.32 317 ⇓*i*P P 16 48 53.6 +1.1
VRI Vrincioaia 86.32 317 P P 16 48 53.7 +1.2
PLOR Plostina 86.37 317 P P 16 48 53.9 +1.1
MLR Muntele Rosu 86.78 316 ⇓*i*P P 16 48 55.4 +0.6
MLR Muntele Rosu 86.78 316 P P 16 48 55.7 +0.9
VOIR 87.39 316 ⇓*i*P P 16 48 59.2 +1.5
VOIR 87.39 316 P P 16 48 58.2 +0.5
BURAR Bucovina Array 87.69 318 ⇓*i*P P 16 49 00.1 +1.0
BURAR Bucovina Array 87.69 318 ⇓P P 16 49 00.1 +0.9
BUR08 Bucovina Ar. S 87.71 318 *e*P P 16 48 59.3 +0.1
LVV L'vov 88.87 320 *e*P P 16 49 04.2 -0.5
GZR Gura Zlata 88.96 316 P P 16 49 06.3 +1.1
VSU Vasula 89.03 329 *d*⇓*i*P P 16 49 04.0 -1.2
DRGR 89.23 317 ⇓*i*P P 16 49 07.5 +1.1
DRGR 89.23 317 P P 16 49 07.2 +0.8
KWP Kalwaria 89.69 320 *e*P P 16 49 08.8 +0.3
KWP pmax pmax
comp=Z,35nm,1.3s,mb5.5
KWP Kalwaria 89.69 320 ⇓*i*P P 16 49 08.9 +0.4
KWP Kalwaria 89.69 320 *e*P P 16 49 08.8 +0.3
comp=Z,35nm,1.3s,mb5.5
UZH Uzhgorod 89.80 319 *e*P P 16 49 09.2 +0.2
UZH *e* 16 49 17.2
BZS Buzias 89.80 316 ⇑*i*P P 16 49 09.1 0.0
BZS Buzias 89.80 316 P P 16 49 09.4 +0.3
KOLS Kolonicke sedl 89.86 319 *e*P P 16 49 09.8 +0.5
SNAA Sanae 90.20 197 *e*P P 16 49 10.8 +0.3
SNAA *e* 16 49 12.5
SNAA *e* 16 49 15.0 -0.2
SNAA Sanae 90.20 197 *e*P P 16 49 11.0 +0.5
SNAA pmax pmax
comp=Z,12nm,1.1s
SNAA Sanae 90.20 197 *e*P P 16 49 11.0 +0.5
comp=Z,12nm,1.1s,mb5.2
CRVS Cervenica-Dubn 90.38 319 *e*P P 16 49 12.2 +0.4
STHS Stebnicka Huta 90.60 319 *e*P P 16 49 13.6 +0.8
STHS pmax pmax
comp=Z,11nm,1.3s,mb5.0
STHS Stebnicka Huta 90.60 319 *e*P P 16 49 13.6 +0.8
comp=Z,11nm,1.3s,mb5.0
KECS Kecovo 90.97 318 *e*P P 16 49 14.4 -0.1
KECS pmax pmax
comp=Z,6.0nm,1.5s,mb4.7
KECS Kecovo 90.97 318 *e*P P 16 49 14.4 -0.1
comp=Z,5.8nm,1.5s,mb4.7
PSZ Piszkesteto 91.28 318 *e*P P 16 49 15.8 -0.2
PSZ pmax pmax
comp=Z,10.0nm,1.1s,mb5.1
PSZ Piszkesteto 91.28 318 ⇓*i*P P 16 49 16.4 +0.4
PSZ Piszkesteto 91.28 318 *e*P P 16 49 15.8 -0.1
comp=Z,9.8nm,1.1s,mb5.0
VNA2 Neumayer--Watz 91.84 198 *e*P P 16 49 18.7 +0.5
VNA2 *e* 16 49 19.9
VNA2 *e* pP 16 49 22.8 0.0
ARCES ARCESS Array B 91.88 340 LR LR 17 34 43.7
comp=Z,70nm,21.9s,MS4.1,baz=296,slow=38
PKSM Moragy 91.94 316 ⇑*i*P P 16 49 19.3 +0.3
PKSM Moragy 91.94 316 ⇑P P 16 49 19.3 +0.3
VYHS Vyhne 92.06 318 *e*P P 16 49 20.2 +0.7
VNA1 Neumayer--Stat 92.22 198 *e*P P 16 49 20.9 +1.0
VNA1 *e* 16 49 21.8
VNA1 *e* pP 16 49 24.4 -0.2
VNA3 Neumayer Olymp 92.39 197 *e*P P 16 49 21.1 +0.4
VNA3 *e* 16 49 22.4
VNA3 *e* pP 16 49 24.8 -0.5
OKC Ostrava-Krasne 92.65 320 *e*P P 16 49 23.3 +1.1
MORC Moravsky Berou 93.03 320 ⇑*i*P P 16 49 24.6 +0.6
MORC Moravsky Berou 93.03 320 ⇑P P 16 49 24.6 +0.5
MODS Modra-Piesok 93.08 318 *e*P P 16 49 23.9 -0.4
DPC Dobruska-Polom 93.86 320 *e*P P 16 49 29.0 +1.2
ARSA Arzberg 94.17 317 ⇓*i*P P 16 49 29.5 +0.2
comp=Z,6.7nm,1.1s,mb5.0
ARSA Arzberg 94.17 317 ⇓*i*PcP PcP 16 49 29.5 -0.2
comp=Z,6.7nm,1.1s
SOKA Soboth 94.46 316 ⇑*i*P P 16 49 31.6 +0.9
SOKA Soboth 94.46 316 ⇑*i*PcP PcP 16 49 31.6 +0.5
BRG Berggiesshubel 95.41 320 *e*P P 16 49 34.6 -0.3
BRG pmax pmax
comp=Z,5.0nm,1.6s,mb4.7
BRG Berggiesshubel 95.41 320 *e*(P) P 16 49 34.6 -0.3
comp=Z,8.2nm,1.6s,mb4.9
GEC2 GERESS Array S 95.48 318 *e*P P 16 49 35.1 -0.2
GEC2 pmax pmax
comp=Z,9.0nm,1.4s,mb5.0
GEC2 GERESS Array S 95.48 318 *e*P P 16 49 35.1 -0.2
comp=Z,9.0nm,1.4s,mb5.0
GERES GERESS Array B 95.48 318 P P 16 49 34.7 -0.6
comp=Z,0.7nm,0.7s,mb4.2,baz=64,slow=3.1,SNR=9.6
GERES GERESS Array B 95.48 318 P P 16 49 34.7 -0.6
GERES pmax pmax
comp=Z,1.0nm,0.7s
KHC Kasperske Hory 95.57 319 *e*P P 16 49 38.8 +3.1
WET Wettzell 96.03 319 *e*P P 16 49 37.9 +0.1
WET pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
WET Wettzell 96.03 319 *e*P P 16 49 37.9 +0.1
comp=Z,10.0nm,1.4s,mb5.0
WERN Wernitzgruen 96.39 320 *e*P P 16 49 39.9 +0.5
comp=Z,92nm,3.0s
MANZ Manzenberg 96.55 320 *e*P P 16 49 41.1 +1.0
comp=Z,10.0nm,1.5s,mb5.0
MOX Moxa 96.88 320 *e*P P 16 49 41.0 -0.6
comp=Z,8.0nm,1.6s,mb4.9
NOA NORSAR Array B 97.09 331 LR LR 17 45 08.5
comp=Z,33nm,18.4s,MS3.9,baz=45,slow=43
GRA1 Grafenberg Arr 97.12 319 *e*P P 16 49 43.2 +0.5
comp=Z,6.0nm,0.7s,mb5.1
GRF Grafenberg Arr 97.12 319 *e*P P 16 49 43.2 +0.5
GRF pmax pmax
comp=Z,6.0nm,0.7s,mb5.1
GRF Grafenberg Arr 97.12 319 *e*P P 16 49 43.2 +0.5
GRF pmax pmax
comp=Z,6.0nm,0.7s,mb5.1
GRF Grafenberg Arr 97.12 319 *e*P P 16 49 43.2 +0.5
comp=Z,6.0nm,0.7s,mb5.1
ETW Entiat 122.92 35 *e*PKPdf PKPdf 16 55 06.9 +0.1
HUMO Hull Mountain 123.73 42 *e*PKPdf PKPdf 16 55 06.8 -1.8
LNOR Lincton Mounta 125.04 36 *e*PKIKP PKPdf 16 55 11.5 +0.6
WVOR Wild Horse Val 126.62 40 *e*PKIKP PKPdf 16 55 14.3 +0.2
MSO Missoula 126.94 33 *e*P PKPdf 16 55 14.7 +0.2
DLMT Dillon 128.58 34 *e*PKPdf PKPdf 16 55 18.4 +0.7
HLID Hailey 128.62 37 *e*PKPdf PKPdf 16 55 18.5 +0.7
HLID LR LR
comp=Z,72nm,19.0s,MS4.4
NVAR Mina Array Bea 128.80 44 PKP PKPdf 16 55 18.9 +0.5
comp=Z,1.7nm,1.0s,baz=277,slow=2.5,SNR=11
BOZ Bozeman (W) 128.93 33 *e*PKIKP PKPdf 16 55 18.5 +0.1
SCHQ Schefferville 130.72 354 PKP PKPdf 16 55 21.5 0.0
comp=Z,5.6nm,1.1s,baz=225,slow=2.9,SNR=4.3
REDW Red Top Meadow 130.80 35 *e*PKPdf PKPdf 16 55 22.6 +0.6
PDAR Pinedale Array 131.91 35 PKP PKPdf 16 55 22.9 -1.2
comp=Z,2.6nm,1.2s,baz=336,slow=3.3,SNR=8.8
RSSD Black Hills 133.90 29 *e*PKIKP PKPdf 16 55 28.1 +0.3
SDCO Great Sand Dun 137.53 37 *e*PKPdf PKPdf 16 55 35.0 +0.2
LAZ Ladron 138.56 42 *e*PKPdf PKPdf 16 55 37.7 +0.9
TXAR Lajitas Array 143.89 46 PKP PKPdf 16 55 45.0 -1.5
comp=Z,2.0nm,0.7s,baz=270,slow=1.3,SNR=20
TXAR Lajitas Array 143.89 46 PKIKP PKPdf 16 55 45.1 -1.4
TXAR pmax pmax
comp=Z,2.0nm,0.7s
CPUP Villa Florida 143.96 207 PKP PKPdf 16 55 45.1 -1.6
comp=Z,1.3nm,0.6s,baz=77,slow=1.8,SNR=4.4
CPUP Villa Florida 143.96 207 PKIKP PKPdf 16 55 45.1 -1.6
CPUP pmax pmax
comp=Z,1.0nm,0.6s
CCM Cathedral Cave 144.48 23 *e*PKIKP PKPdf 16 55 44.5 -2.8
JCT Junction City 145.84 41 *e*PKP2 PKPab 16 55 49.4 -1.4
MCWV Mont Chateau 145.96 7 *e*PKPdf PKPdf 16 55 50.2 +0.4
BDFB Brasilia 146.17 231 PKPbc PKPbc 16 55 51.4 -0.3
comp=Z,7.8nm,0.7s,baz=130,slow=6.0,SNR=6.1
BDFB Brasilia 146.17 231 PKP2 PKPbc 16 55 51.4 -0.3
BDFB pmax pmax
comp=Z,8.0nm,0.7s
MIAR Mount Ida 146.42 29 *e*PKP2 PKPab 16 55 50.8 -2.0
UALR University of 146.81 27 *e*PKPdf PKPdf 16 55 51.3 -0.1
WVT Waverly 147.44 20 *e*PKP2 PKPbc 16 55 54.0 -0.9
NATX Nacogdoches 148.04 34 *e*PKPbc PKPbc 16 55 57.1 +0.4
ELN Prospectdale 148.21 9 *e*PKPbc PKPbc 16 55 56.0 -0.9
URVA University of 148.26 5 *e*PKPbc PKPbc 16 55 56.4 -0.6
OXF Oxford 148.29 24 *e*PKP2 PKPbc 16 55 56.3 -0.9
TZTN Tazewell 148.31 14 *e*PKPbc PKPbc 16 55 56.8 -0.4
HKT Hockley 148.70 37 *e*PKP2 PKPbc 16 55 57.7 -0.7
SWET Sewanee 148.90 18 *e*PKPbc PKPbc 16 55 57.7 -1.1
CPCT Cooper Cave 149.10 16 *e*PKPbc PKPbc 16 55 58.8 -0.4
TKL Tuckaleechee C 149.10 15 *e*PKP2 PKPbc 16 55 58.3 -0.9
LRAL Lakeview Retre 150.53 22 *e*PKPbc PKPbc 16 56 01.9 -0.9
JSC Jenkinsville 150.99 12 *e*PKIKP PKPbc 16 56 03.4 -0.5
LVC Limon Verde 151.23 191 *e*PKPbc PKPbc 16 56 06.0 +1.2
GOGA Godfrey 151.30 16 *e*PKIKP PKPbc 16 56 04.1 -0.5
BRAL Brewton 152.31 24 *e*PKPbc PKPbc 16 56 07.4 +0.4
LPAZ La Paz 157.15 196 PKP PKPdf 16 56 08.2 +0.9
comp=Z,0.8nm,0.8s,baz=58,slow=8.3,SNR=3.9
LPAZ PKPab PKPab 16 56 39.5 +1.8
comp=Z,1.2nm,0.8s,baz=237,slow=12,SNR=4.7
LPAZ La Paz 157.15 196 PKIKP PKPdf 16 56 08.2 +0.9
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
LPAZ pmax pmax
comp=Z,1.0nm,0.8s

BJI 11 16:44:35.7,3984N×7651E,h8km,ML3.2
ISC 11 16:44:34.1±5.1,**397N**±03×**767E**±03,**h10**km,**n11**,σ**0**:**81**/12,
2C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.58**	**257**	⇓*i*PG		**Pg**	**16 44 45.0**	**-0.4**
KSH				SG		**Sg**	**16 44 53.3**	**+0.3**
KSH				Smax				
	comp=N,5μm,0.3s							
KSH				Smax				
	comp=E,3μm,0.2s							
ULHL	**Ulahol**	**2.61**	**352**	P		**Pn**	**16 45 17.1**	**+0.7**
	SNR=20							
KBK	**Karagaybulak**	**3.28**	**337**	P		**Pn**	**16 45 25.3**	**-0.3**
	SNR=22							
AML	**Almayashu**	**3.37**	**318**	P		**Pn**	**16 45 25.4**	**-1.3**
	SNR=40							
TKM2	**Tokmak 2**	**3.37**	**346**	⇑Pn		**Pn**	**16 45 27.2**	**+0.5**
	comp=E,7.9nm,0.3s							
TKM2				⇓Lg			16 46 12.6	
	comp=E,67nm,0.5s							
TKM2	**Tokmak 2**	**3.37**	**346**	P		**Pn**	**16 45 27.2**	**+0.5**
	SNR=19							

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AAK	Ala-Archa	3.41	331	P	Pn	16 45 27.0	-0.3
	SNR=12						
CHMS	Chumysh	3.65	337	P	Pn	16 45 30.6	-0.1
	SNR=6.7						
EKS2	Erkin-Say	3.73	325	P	Pn	16 45 31.4	-0.3
	SNR=7.6						
USP	Ospenovka	3.97	336	P	Pn	16 45 34.9	-0.2
	SNR=11						
KK31	Karatay Array	5.79	308	⇓Pn	Pn	16 46 03.0	+3.0
	comp=E,0.5nm,0.3s,baz=114,slow=17						
KK31				⇑Lg		16 47 27.0	
	comp=E,3.3nm,0.5s,baz=121,slow=28						

MAN 11 16:49:54,709N×12662E,h26km,mb4.3,ML3.1,MS2.9, 3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.39	248	eP	Pb	16 50 04.1	+1.7
MATI				eS	Sb	16 50 12.5	+4.4
DMPH	Davao City--Mi	1.10	270	⇓iP	Pn	16 50 16.4	+2.7
DMPH				i S	Sn	16 50 17.5	-11
BIPH	Bislig	1.12	347	⇓iP	Pn	16 50 11.1	-2.9
BIPH				i S	Sn	16 50 23.9	-4.6
BUKP	Musuan	1.73	297	eP	Pn	16 50 23.1	+0.6
BUTP	Butuan	2.11	332	eP	Pn	16 50 28.5	+0.9
SCPH	Surigao	2.90	337	⇓eP	Pn	16 50 42.3	+3.8
PAGZ	Pagadian	3.30	283	eP	Pn	16 50 45.4	+1.4

NEIC 11 16:50:43.7,2442S×6954W,h80km,MD3.9(GUC),After GUC.
GUC 11 16:50:43.7±0.7,2442S×6954W,h80km,MD3.9,ML3.7, 3C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPN1	Cerro Paranal	0.82	255	eP	Pn	16 51 01.2	+0.6
CPN1				i S	Sn	16 51 14.7	+1.5
CPN1				i S	Sn	16 51 15.1	+1.9
CPN1				AML	AML	16 51 19.5	
	comp=E,2µm,0.3s						
ANCH	Antofagasta	1.08	312	⇑iP	Pn	16 51 04.3	+0.6
ANCH				i S	Sn	16 51 19.5	+0.8
ANCH				AML	AML	16 51 23.4	
	comp=E,2µm,0.1s						
ANCH	Antofagasta	1.08	312	⇑iP	Pn	16 51 04.3	+0.6
ANCH				i S	Sn	16 51 19.5	+0.8
CEN1	Los Morros	1.19	329	⇑iP	Pn	16 51 04.4	-0.6
CEN1				i S	Sn	16 51 20.3	-0.8
CEN1				AML	AML	16 51 23.6	
	comp=N,672nm,0.5s						
LVC	Limon Verde	1.88	18	ePn	Pn	16 51 12.9	-1.1
CDCH	Caldera	2.89	204	eP	Pn	16 51 25.6	-2.0
CDCH				i S	Sn	16 52 00.1	-1.2
CPCH	Copiapo	3.02	194	⇓eP	Pn	16 51 30.7	+1.4
CPCH				i S	Sn	16 52 06.2	+1.8
CPCH				AML	AML	16 52 16.0	
	comp=N,2µm,0.2s						
CPCH	Copiapo	3.02	194	⇓eP	Pn	16 51 30.7	+1.4
CPCH				i S	Sn	16 52 06.2	+1.8
TLL	Tololo Astrono	5.84	191	eP	Pn	16 52 11.6	+3.9
TLL				i S	Sn	16 53 08.3	-4.9

CASC 11 16:52:42.0±2.2,1302N×8968W,h46km±49km,MD4.0, ML3.8,11C-2D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.79	33	⇑iP	x	16 52 56.9	
SNET				eS	x	16 53 08.7	
SNET				i		16 53 11.5	
	comp=Z,3µm,0.2s						
BOQS	Boqueron	0.81	28	⇓iP	x	16 52 57.5	
BOQS				eS	x	16 53 09.9	
SBLS	San Blas	0.82	4	eP	x	16 52 57.4	
SBLS				eS	x	16 53 10.2	
SNJE	San Jose	0.85	5	⇑eP	x	16 52 57.6	
SNJE				eS	x	16 53 10.2	
LFRS	El Faro	0.85	45	⇑iP	x	16 52 57.6	
RTR	El Retiro	0.87	2	eP	x	16 52 58.1	
LBRS	Las Brisas	0.94	41	eP	x	16 52 59.1	
SNVI	San Vicente	1.01	54	⇑eP	x	16 53 00.0	
SNVI				eS	x	16 53 14.1	
RBDL	Robledal	1.09	360	⇑iP	x	16 53 01.2	
MTO2	Montecristo 2	1.41	13	i P	x	16 53 05.3	
MTO2				eS	x	16 53 23.1	
VSM	San Miguel	1.43	73	⇑eP	x	16 53 06.1	
VSM				eS	x	16 53 24.6	
BLLM	Bellamira	1.46	73	⇑eP	x	16 53 06.3	
BLLM				eS	x	16 53 25.6	
CAHU	Cacacuatique	1.61	62	⇑eP	x	16 53 08.2	
CAHU				eS	x	16 53 29.7	
PCG	Pacaya	1.64	327	⇓eP	Pn	16 53 09.2	+0.8
PCG				eS	Sn	16 53 29.2	+1.0
NBG	Las Nubes	1.69	337	⇑eP	Pn	16 53 10.7	+1.6
CNCH	Conchagua	1.81	82	⇑eP	x	16 53 11.0	
CNCH				eS	x	16 53 33.4	
CNCH				eS	x	16 53 36.0	
FUG	Fuego 3	1.82	322	⇑eP	Pn	16 53 11.8	+1.0
FUG				eS	Sn	16 53 33.5	+0.9
FG6		1.93	323	eP	Pn	16 53 15.7	+3.4
FG6				eS	Sn	16 53 35.9	+0.5
JAT	Jato	2.30	304	eP	Pn	16 53 18.4	+0.9
TGUH	Tegucigalpa,Un	2.56	66	eP	Pn	16 53 20.9	0.0
LEON	Leon	2.78	102	eP	Pn	16 53 23.2	-0.8
LEON				eS	Sn	16 53 54.5	-1.9
COPN	Copaltepe	3.12	105	eP	Pn	16 53 28.6	-0.2

ISCJB 11 16:56:39.5±0.5,2457N±004×12246E±002,h6km±4km, Error ellipse: s-maj=6.0km s-min=2.7km az=10.9
JMA 11 16:56:39.5±0.1,2473N×12245E,h20km±2km,M2.0
TAP 11 16:56:39.9,2456N×12235E,h5km,ML2.9,D
ISC 11 16:56:39.9±0.4,2457N±003×12247E±002,h10km±4km, n28,σ0s86/46,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.51	103	P	Pg	16 56 50.6	+0.8
YOJ				eS	Sg	16 56 58.4	+1.9
TWC	Suao	0.56	274	i P	Pg	16 56 49.8	-1.0
	baz=276						
TWC				eS	Sg	16 56 58.3	0.0
	baz=276						
TWB1	Santiao Chiao	0.61	315	P	Pg	16 56 52.2	+0.4
	baz=323						
TWB1				S	Sg	16 56 59.8	0.0
	baz=323						
ENA	Nanau	0.68	258	⇑iP	Pg	16 56 52.0	-1.0
	baz=256						
ENA				eS	Sg	16 57 00.8	-1.0
	baz=256						
ILA	Ilan	0.68	286	eP	Pg	16 56 52.9	-0.1
	baz=290						
TWE	Neicheng	0.74	282	P	Pg	16 56 53.5	-0.7
	baz=284						
TWE				S	Sg	16 57 04.3	+0.4
	baz=284						
NWF	Wu-fen Shan	0.80	309	P	Pg	16 56 55.9	+0.6
	baz=314						
NWF				S	Sg	16 57 06.9	+1.2
	baz=314						
ENTT	Nioudou	0.82	275	eP	Pg	16 56 55.2	-0.6
	baz=276						
ENTT				eS	Sg	16 57 06.7	+0.2
	baz=276						
TWA	Mucha	0.90	297	eP	Pg	16 56 56.6	-0.6
	baz=300						
TWA				eS	Sg	16 57 08.8	-0.1
	baz=300						
TWD	Chiawan	0.93	238	eP	Pg	16 56 57.5	-0.3
	baz=235						
TWD				eS	Sg	16 57 11.6	+1.6
	baz=235						
HWA	Hwalien	0.98	233	eP	Pg	16 57 01.0	+2.2
	baz=229						
NNS	Nan Shan	1.00	263	eP	Pg	16 56 58.2	-1.0
	baz=262						
NNS				eS	Sg	16 57 11.3	-1.0
	baz=262						
NSK	Sanguang	1.01	276	eP	Pg	16 56 58.6	-0.8
	baz=277						
TWY	Chenhua	1.05	312	eP	Pg	16 57 00.3	+0.1
	baz=316						
TWY				eS	Sg	16 57 14.2	+0.4
	baz=316						
TWS1	Kuangyinshan	1.09	299	eP	Pg	16 57 01.3	+0.5
	baz=302						
TWS1				eS	Sg	16 57 14.5	-0.5
	baz=302						
IRIF	Iriomote-Funau	1.18	101	P	Pb	16 57 01.4	-0.9
IRIF				eS	Sg	16 57 17.7	-0.1
WHF	Hehuan Shan	1.18	249	eP	Pb	16 57 01.0	-1.3
	baz=247						
WHF				eS	Sg	16 57 16.5	-1.3
	baz=247						
ESL	Shilin	1.21	232	eP	Pb	16 57 03.5	+0.7
	baz=228						
HATJ	Hateruma jima	1.32	113	P	Pn	16 57 04.2	-0.2
HATJ				eS	Sb	16 57 21.7	-0.2
NSTT	Nanjuang	1.33	273	eP	Pn	16 57 04.6	0.0
	baz=273						
JKRS	Kuro-shima	1.45	103	P	Pn	16 57 05.9	-0.2
JKRS				eS	Sn	16 57 24.6	-0.5
JIJ	Ishigaki jima	1.54	97	P	Pn	16 57 07.0	-0.4
JIJ				eS	Sn	16 57 25.8	-1.7
TWQ1	Liyutan	1.56	262	eP	Pn	16 57 08.7	+1.0
	baz=261						
TWQ1				eS	Sn	16 57 28.7	+0.7
	baz=261						
SMLT	Sun Moon Lake	1.59	245	eP	Pn	16 57 08.8	+0.7
	baz=243						
TYC	Yuchr	1.61	246	eP	Pn	16 57 10.0	+1.6
	baz=244						
YUS	Yu-Shan	1.76	232	eP	Pn	16 57 10.7	+0.3
	baz=230						
ALS	Alishan	1.85	235	eP	Pn	16 57 12.8	+1.2
	baz=233						
WTP	Ta-pu	2.15	232	eP	Pn	16 57 15.4	-0.3
	baz=230						

IDC 11 17:01:16.0±0.9,494N×95.11E,h0km,mb4.3/11, mb1 4.4/11,mb1mx4.1/21,mbtmp4.3/11,Error ellipse: s-maj=36.0km s-min=15.4km az=49.0
ISCJB 11 17:01:33.8±3.1,5.1N±0.1×953E±02,h168km±26km, mb4.3/32,Error ellipse: s-maj=32.4km s-min=8.4km az=140.8
BJI 11 17:01:33.1,510N×9540E,h159km,mb4.4
NEIC 11 17:01:35.1±3.0,510N×9536E,h160km±25km,mb4.2/11, Error ellipse: s-maj=29.6km s-min=6.6km az=54.0
ISC 11 17:01:33.3±3.3,50N±01×952E±02,h148km±28km,n49, σ0s90/46,mb4.3/32,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNG	Songkhla	5.76	68	P	Pn	17 02 51.0	-5.7
	160nm,0.9s						
CM31	Chiang Mai Arr	13.82	15	ePn	Pn	17 04 43.6	+0.5
CMAR	Chiang Mai Arr	13.82	15	Pn	Pn	17 04 44.3	+1.2
	0.9nm,0.3s,baz=210,slow=12,SNR=46						
CHG	Chiang Mai	14.17	14	P	Pn	17 04 49.8	+2.4
CHTO	Chiang Mai	14.17	14	ePn	Pn	17 04 48.3	+0.9
	7.5nm,0.8s						
KSM	Kuching	15.45	103	ePn	Pn	17 05 03.8	+0.3
ODAN	Odare	22.96	342	eP	P	17 06 24.4	-0.5
	9.7nm,0.6s,mb4.4						
RAMN	Ramite	23.30	340	eP	P	17 06 27.7	-0.3
	5.1nm,0.5s,mb4.2						
TAPN	Taplejung	23.33	343	eP	P	17 06 26.6	-1.6
	6.0nm,0.4s,mb4.4						
JIRN	Jiri	24.10	340	eP	P	17 06 33.9	-1.4
	10nm,0.3s,mb4.8						
GUN	Gumba	24.43	340	eP	P	17 06 37.1	-1.2
	13nm,0.5s,mb4.7						
DMN	Daman	24.44	338	eP	P	17 06 37.6	-0.8
	1.9nm,0.2s,mb4.2						
KKN	Kakani	24.54	338	eP	P	17 06 38.6	-0.7
	4.1nm,0.3s,mb4.4						
LSA	Lhasa	24.84	352	P	P	17 06 39.8	-2.2
LSA	Lhasa	24.84	352	eP	P	17 06 41.8	-0.2
	3.9nm,0.4s,mb4.3						
GKN	Gorkha	24.97	337	eP	P	17 06 42.6	-0.6
	11nm,0.3s,mb4.9						
KOLN	Koldanda	25.18	335	eP	P	17 06 44.8	-0.3
	14nm,0.5s,mb4.8						
DANN	Dangsing	25.63	336	eP	P	17 06 48.5	-0.6
	16nm,0.3s,mb5.1						
KAPI	Kappang	26.44	112	P	P	17 06 55.1	-1.5
	8.7nm,1.0s,mb4.3,baz=267,slow=19,SNR=2.7						
BATI	Baumata	32.10	118	P	P	17 07 45.6	-1.2
	17nm,0.8s,mb4.8,baz=294,slow=20,SNR=2.8						
GTA	Gaotai	34.47	6	eP	P	17 08 06.8	-0.2
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.3						
FITZ	Fitzroy Crossi	37.78	128	P	P	17 08 34.6	-0.8
	comp=Z,0.6nm,0.5s,mb3.5,baz=241,slow=13,SNR=4.5						
UCH	Uchtor	41.38	337	eP	P	17 09 06.6	+1.8
	comp=Z,2.9nm,0.6s,mb4.1						
TKM2	Tokmak 2	41.56	338	eP	P	17 09 07.0	+0.7
	comp=Z,2.2nm,0.4s,mb4.1						
AML	Almayashu	41.63	336	eP	P	17 09 07.3	+0.5
	comp=Z,8.8nm,0.8s,mb4.4						
EKS2	Erkin-Say	42.04	336	eP	P	17 09 10.0	-0.2
	comp=Z,1.8nm,0.5s,mb4.0						
MK31	Makanchi Array	43.08	347	eP	P	17 09 18.6	0.0
MKAR	Makanchi Array	43.08	347	P	P	17 09 18.7	+0.1
	comp=Z,4.5nm,0.5s,mb4.4,baz=160,slow=8.1,SNR=40						
MKAR	Makanchi Array	43.08	347	P	P	17 09 18.7	+0.1
SONM	Songino Array	43.71	11	P	P	17 09 22.9	-0.6
	comp=Z,0.5nm,0.3s,mb3.5,baz=190,slow=8.5,SNR=7.7						
SONM				PcP	PcP	17 11 10.3	+2.4
	comp=Z,0.5nm,0.4s,baz=188,slow=3.9,SNR=5.2						
KSRS	Korea Array	43.94	38	P	P	17 09 26.8	+1.1
	comp=Z,1.3nm,0.7s,mb3.7,baz=215,slow=8.1,SNR=7.2						
WRA	Warramunga Arr	45.75	124	P	P	17 09 40.8	+0.6
	comp=Z,6.0nm,0.6s,mb4.4,baz=301,slow=9.6,SNR=72						
WRAB	Tennant Creek	45.76	124	eP	P	17 09 40.5	+0.3
	comp=Z,3.6nm,0.6s,mb4.2						
WB2	Warramunga Arr	45.76	124	eP	P	17 09 40.6	+0.4
KURK	Kurchatov	47.62	346	eP	P	17 09 53.7	-0.4
	comp=Z,2.3nm,0.6s,mb4.0						
ZAA0	Zalesovo Array	49.50	352	eP	P	17 10 07.8	-0.8
ZALV	Zalesovo Beam	49.50	352	P	P	17 10 08.7	+0.1
	comp=Z,2.5nm,0.3s,mb4.2,baz=188,slow=7.7,SNR=24						
BRVK	Borovoye	52.08	341	eP	P	17 10 27.6	-0.2
	comp=Z,8.5nm,0.6s,mb4.5						
ARU	Arti	58.92	337	eP	P	17 11 16.5	-0.2
	comp=Z,4.6nm,0.9s,mb4.3						
TIXI	Tiksi	69.80	11	eP	P	17 12 26.7	-0.4
	comp=Z,2.3nm,0.4s,mb4.3						
JOF	Joensuu	73.87	335	ep	P	17 12 52.2	+0.6
KAF	Kangasniemi	75.80	333	ep	P	17 13 03.9	+1.2
KEV	Kevo	77.86	341	ep	P	17 13 15.4	+1.3
ARCES	ARCESS Array B	78.29	340	P	P	17 13 17.6	+1.1
	comp=Z,2.4nm,0.5s,mb4.1,baz=90,slow=5.9,SNR=37						
GERES	GERESS Array B	80.66	319	P	P	17 13 31.2	+1.4
	comp=Z,1.6nm,0.6s,mb3.8,baz=105,slow=4.5,SNR=16						
TORD	Torodi Ar. Bea	92.31	283	P	P	17 14 29.0	+1.4
	comp=Z,0.2nm,0.6s,mb3.3,baz=83,slow=3.3,SNR=2.5						
NVAR	Mina Array Bea	126.74	33	PKP	PKPdf	17 20 22.4	+2.6
	comp=Z,0.3nm,0.5s,baz=275,slow=3.1,SNR=3.2						
PDAR	Pinedale Array	127.37	23	PKP	PKPdf	17 20 22.3	+1.5
	comp=Z,0.5nm,0.5s,baz=146,slow=1.8,SNR=3.0						
TXAR	Lajitas Array	141.30	27	PKP	PKPdf	17 20 48.1	+0.9
	comp=Z,0.3nm,0.6s,baz=152,slow=1.0,SNR=4.8						

SKO 11 17:52:13.0,4244N×1878E,h69km
TIR 11 17:52:14.9±0.9,4230N×1894E,h6km±3km
CSEM 11 17:52:14.1±0.2,4221N×1891E,h8km,ML2.8/10,Error ellipse: s-maj=3.8km s-min=2.1km az=24.0
PDG 11 17:52:15.7±0.2,4230N×1894E,h5km±1km,MD2.7/5, ML2.8/10,Error ellipse: s-maj=0.4km s-min=0.4km az=0.0
ISCJB 11 17:52:15.2±0.5,4228N±002×1892E±003,h10km,Error ellipse: s-maj=3.9km s-min=2.3km az=39.2
BEO 11 17:52:16.3±1.4,4224N×1886E,h2km±4km,ML2.6/2
ISC 11 17:52:16.2±0.5,4229N±002×1890E±003,h10km,n31, σ1s34/62,3C-8D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUM	Brajici-Budva	0.01	345	⇓iPg	Pg	17 52 16.2	-1.8
BUM				eSg	Sg	17 52 17.5	-1.7
BUM	Brajici-Budva	0.01	345	i PG	Pg	17 52 16.2	-1.8
BUM				i SG	Sg	17 52 17.5	-1.7
PDG	Podgorica	0.30	62	i PG	Pg	17 52 20.5	-1.7
PDG				i SG	Sg	17 52 25.1	-1.2
TTG	Podgorica	0.30	62	⇑iPg	Pg	17 52 20.5	-1.7
TTG				i Sg	Sg	17 52 25.1	-1.2
HCY	Herceg Novi	0.34	298	⇓iPg	Pg	17 52 22.3	-0.6
HCY				i Sg	Sg	17 52 28.1	+0.6
ULC	Ulcinj	0.41	141	⇓iPg	Pg	17 52 23.4	-0.9
ULC				eSg	Sg	17 52 30.0	+0.2
ULC	Ulcinj	0.41	141	i PG	Pg	17 52 23.4	-0.9
ULC				i SG	Sg	17 52 30.0	+0.2
NKY	Niksic	0.53	8	⇑iPg	Pg	17 52 25.3	-1.2
NKY				i Sg	Sg	17 52 33.4	-0.1
TREB	Trebinje	0.59	317	ePg	Pg	17 52 27.0	-0.7
TREB				eSg	Sg	17 52 35.8	+0.3
BRY	Bratogost	0.67	337	⇓iPg	Pg	17 52 28.1	-1.0
BRY				eSg	Sg	17 52 38.8	+0.9
BRY	Bratogost	0.67	337	i PG	Pg	17 52 28.1	-1.0
BRY				i SG	Sg	17 52 38.8	+0.9
PVY	Plav	0.85	68	⇑iPg	Pg	17 52 30.5	-2.1
PVY				eSg	Sg	17 52 43.4	-0.2
PVY	Plav	0.85	68	i PG	Pg	17 52 30.5	-2.1
PVY				i SG	Sg	17 52 43.4	-0.2
UPM	Unac-Piva	0.92	0	⇓iPg	Pg	17 52 32.2	-1.6
UPM				eSg	Sg	17 52 46.3	+0.5
BEY	Berane	0.94	51	i PG	Pg	17 52 33.0	-1.3
BEY				i SG	Sg	17 52 46.8	+0.3
BEY	Berane	0.94	51	⇓iPg	Pg	17 52 33.0	-1.3
BEY				eSg	Sg	17 52 46.8	+0.3
IVA	Berane	0.94	51	⇓iPg	Pg	17 52 33.0	-1.3
IVA				eSg	Sg	17 52 46.8	+0.3
STON	Ston	1.06	304	ePg	Pg	17 52 34.8	-1.9
STON				Sg	Sg	17 52 51.8	+1.3
STON	Ston	1.06	304	ePg	Pg	17 52 34.7	-1.9
STON				Sg	Sg	17 52 51.8	+1.3
PLE	Pljevlja	1.10	19	⇓iPg	Pg	17 52 35.8	-1.6
PLE				i Sg	Sg	17 52 52.4	+0.7
SJES	Sjenica	1.25	39	ePg	Pg	17 52 39.4	-0.9
SJES				eSg	Sg	17 52 57.5	+1.0
BBLS	Lazići	1.62	13	ePn	Pn	17 52 46.0	+1.2
BBLS				eSn	Sn	17 53 08.6	+2.9
OHR	Ohrid	1.84	129	ePn	Pg	17 52 51.2	-0.3
OHR				eSg	Sg	17 53 16.8	+1.4
OHR	Ohrid	1.84	129	ePn	Pg	17 52 51.1	-0.4
OHR				eSg	Sg	17 53 16.8	+1.4
SKO	Skopje	1.91	99	ePn	Pg	17 52 52.1	-0.8
SKO				eSg	Sg	17 53 17.5	-0.1
DIVS	Divibare	1.98	23	ePn	Pn	17 52 51.9	+2.2
DIVS				eSn	Sn	17 53 17.0	+2.5
DIVS	Divibare	1.98	23	ePn	Pn	17 52 51.9	+2.2
DIVS				eSn	Sn	17 53 17.1	+2.6
KRUS	Krusevo	1.98	117	ePn	Pn	17 52 52.4	+2.7
KRUS				eSg	Sg	17 53 21.1	+1.3
KRUS	Krusevo	1.98	117	ePn	Pn	17 52 52.4	+2.7
KRUS				eSg	Sg	17 53 21.0	+1.2
BIA	Bitola	2.21	124	ePn	Pn	17 52 56.8	+3.8
BIA				eSg	Sg	17 53 28.6	+1.3
BLY	Banja Luka	2.76	334	ePn	Pn	17 53 02.8	+2.3
BLY				eSn	Sn	17 53 37.0	+3.2

NEIC 11 17:59:38.8±1.5,672S×10436E,h10km,Error ellipse: s-maj=71.3km s-min=9.9km az=53.0
DJA 11 17:59:43,691S×10443E,h30km,MLv3.9/4
IDC 11 17:59:37.7±1.9,664S×10446E,h0km,mb3.7/9, mb1 3.9/10,mb1mx3.7/20,mbtmp3.8/10,ML4.6/1,Error ellipse: s-maj=85.9km s-min=15.7km az=50.0,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	19.32	102	P	Pn	18 04 04.2	-1.4
	1.8nm,0.3s,baz=304,slow=21,SNR=9.0						
CMAR	Chiang Mai Arr	25.52	348	P	P	18 05 08.5	+0.4
	0.4nm,0.6s,baz=181,slow=8.8,SNR=5.4						
WRA	Warramunga Arr	31.87	117	P	P	18 06 04.3	-0.5
	0.7nm,0.5s,baz=286,slow=13,SNR=12						
ASAR	Alice Springs	32.96	124	P	P	18 06 14.2	-0.1
	0.3nm,0.6s,baz=303,slow=8.0,SNR=5.2						
STKA	Stephens Creek	42.77	131	P	P	18 07 37.5	+0.4
	1.6nm,1.0s,baz=318,slow=12,SNR=3.8						
SONM	Songino Array	54.26	2	P	P	18 09 06.0	+0.6
	0.4nm,0.4s,baz=177,slow=10,SNR=4.8						
MKAR	Makanchi Array	56.73	342	P	P	18 09 23.2	0.0
	0.9nm,0.4s,baz=157,slow=9.4,SNR=11						
MKAR	Makanchi Array	56.73	342	P	P	18 09 23.2	0.0
KURK	Kurchatov	61.33	342	P	P	18 09 54.5	-0.5
	0.9nm,0.6s,baz=151,slow=6.7,SNR=7.2						
ZALV	Zalesovo Beam	62.59	347	P	P	18 10 03.0	-0.5
	1.3nm,0.3s,baz=151,slow=5.8,SNR=9.1						
BVAR	Borovoye Array	66.08	338	P	P	18 10 25.9	-0.4
	0.4nm,0.5s,baz=128,slow=6.4,SNR=4.5						
TXAR	Lajitas Array	145.18	46	PKPbc	PKPbc	18 19 18.1	+0.5
	0.8nm,0.7s,baz=325,slow=2.3,SNR=4.4						

NEIC 11 18:15:06.2,3052S×7139W,h11km,ML3.7(GUC),After GUC.
GUC 11 18:15:06.2±1.1,3052S×7139W,h11km±3km,MD3.9, ML3.7,5C-6D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.19	119	⇑iP	Pg	18 15 10.5	+0.2
OVCH				i S	Sg	18 15 13.8	+0.8
OVCH				AML	AML	18 15 14.2	
	comp=N,23µm,0.2s						
OVCH	Ovalle	0.19	119	⇑iP	Pg	18 15 10.5	+0.2
OVCH				i S	Sg	18 15 13.8	+0.8
TLL	Tololo Astrono	0.62	56	⇓iP	Pg	18 15 18.7	+0.5
TLL				i S	Sg	18 15 28.1	+1.8
TLL				AML	AML	18 15 30.2	
	comp=N,2µm,0.3s						
TLL	Tololo Astrono	0.62	56	⇓iP	Pg	18 15 18.7	+0.5
TLL				i S	Sg	18 15 28.1	+1.8
LSCH	La Serena	0.62	12	⇓iP	Pg	18 15 18.3	+0.1
LSCH				i S	Sg	18 15 27.5	+1.1
LSCH				AML	AML	18 15 28.0	
	comp=N,1µm,0.2s						
LSCH	La Serena	0.62	12	⇓iP	Pg	18 15 18.3	+0.1
LSCH				i S	Sg	18 15 27.5	+1.1
CHNG	Los Chungos	1.36	184	eP	Pn	18 15 28.4	-2.8
CHNG				i S	Sb	18 15 45.6	-3.6
CHNG				AML	AML	18 15 49.1	
	comp=E,746nm,0.5s						
LCO	Las Campanas	1.62	22	⇑iP	Pn	18 15 34.6	0.0
LCO				i S	Sn	18 15 56.0	+0.6
PTCH	Petorca	1.78	167	⇑iP	Pn	18 15 36.1	-0.9
PTCH				i S	Sn	18 15 58.1	-1.5
PTCH				AML	AML	18 15 59.7	
	comp=E,924nm,0.2s						
PTCH	Petorca	1.78	167	⇑iP	Pn	18 15 36.1	-0.9
PTCH				S	Sn	18 15 58.1	-1.5
VACH	Vallenar	2.01	16	eP	Pn	18 15 41.5	+1.4
VACH				i S	Sn	18 16 08.1	+2.9
VACH				AML	AML	18 16 12.7	
	comp=E,2µm,0.2s						
VACH	Vallenar	2.01	16	eP	Pn	18 15 41.5	+1.4
VACH				i S	Sn	18 16 08.1	+2.9
JACH	Jahuel	2.26	163	eP	Pn	18 15 44.8	+1.3
JACH				i S	Sn	18 16 12.6	+1.3
ROCH	El Roble	2.47	173	i S	Sn	18 16 19.7	+3.3
PEL	Peldehue	2.69	167	⇓iP	Pn	18 15 50.6	+1.3
PEL				i S	Sn	18 16 23.6	+1.8
PEL				AML	AML	18 16 29.5	
	comp=E,793nm,0.3s						
FCH	Farellones	2.95	162	eP	Pn	18 15 55.0	+2.0
FCH				eS	Sn	18 16 31.2	+2.7
FCH				AML	AML	18 16 35.0	
	comp=E,228nm,0.1s						
CLCH	Cerro Calan	2.96	166	eP	Pn	18 15 55.0	+1.9
CLCH				i S	Sn	18 16 31.6	+3.0
CLCH				AML	AML	18 16 42.3	
	comp=E,443nm,0.5s						
CLCH				AML	AML	18 16 42.4	
	comp=E,600nm,0.6s						
ANTU	Antumapu	3.11	168	AML	AML	18 16 41.5	
	comp=E,416nm,0.6s						
TACH	Talagante	3.15	173	⇓iP	Pn	18 15 56.4	+0.7
TACH				i S	Sn	18 16 35.4	+2.1
PCH	Pirque	3.18	167	eP	Pn	18 15 57.8	+1.7
PCH				i S	Sn	18 16 36.7	+2.6

LMEL	**Las Melosas**	**3.47**	**163**	AML	AML	18 16 50.0	
	comp=N,182nm,0.3s						
SFDO	**San Fernando**	**4.10**	**176**	*e*P	Pn	18 16 08.9	+0.2
SFDO				*i* S	Sn	18 16 57.6	+1.0

*ISCJB **11** 18:21:16.2±1.6, 36.12N±008×70.8E±02, h33^{km}, Error ellipse: s-maj=23.7km s-min=5.7km az=152.2*
*NNC **11** 18:21:28.1±4.4, 37.24N×70.50E, h0^{km}, mb4.0, mpv3.9, Error ellipse: s-maj=35.7km s-min=33.6km az=71.0*
ISC 11 18:21:22.6±1.7**, 3621N**±007×**715E**±02**, h35^{km}, n19, σ0^{s}88**/24**, 4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.14**	**136**	*e*x	**Pn**	**18 22 41.9**	**+4.9**
THN				*e*S	**Sn**	**18 23 41.2**	**+6.1**
DLH	**Dalhousie**	**5.20**	**133**	*e*x	**Sn**	**18 23 42.0**	**+5.3**
DLH				*e*x	x	18 23 50.0	
AML	**Almayashu**	**6.16**	**15**	P	**Pn**	**18 22 51.3**	**+0.3**
	SNR=47						
UCH	**Uchtor**	**6.46**	**20**	P	**Pn**	**18 22 55.7**	**+0.6**
	SNR=7.0						
SDNR	**Sundarnagar**	**6.54**	**134**	*e*S	**Sn**	**18 24 08.5**	**-1.2**
KZA	**Kyzart**	**6.55**	**25**	P	**Pn**	**18 22 56.9**	**+0.5**
	SNR=13						
EKS2	**Erkin-Say**	**6.69**	**15**	P	**Pn**	**18 22 58.5**	**+0.2**
	SNR=20						
AAK	**Ala-Archa**	**6.83**	**19**	P	**Pn**	**18 23 00.9**	**+0.7**
	SNR=10						
KK31	**Karatay Array**	**6.93**	**354**	⇑Pn	**Pn**	**18 22 59.4**	**-2.2**
	2.8nm,0.2s,baz=179,slow=12						
KK31				⇓Sn	**Sn**	**18 24 10.7**	**-8.4**
	10nm,0.4s,baz=183,slow=22						
SMLA	**Simla**	**6.93**	**135**	*i* x	**Pn**	**18 23 06.0**	**+4.4**
SMLA				*i* S	**Sn**	**18 24 19.9**	**+0.7**
SMLA				*e*x	x	18 24 26.1	
	comp=E,351nm,0.3s						
SMLA				*e*x	x	18 24 28.2	
	comp=N,551nm,0.4s						
KBK	**Karagaybulak**	**6.98**	**22**	P	**Pn**	**18 23 02.8**	**+0.6**
	SNR=5.4						
CHMS	**Chumysh**	**7.24**	**19**	P	**Pn**	**18 23 06.1**	**+0.4**
	SNR=15						
KLP	**Kalpa**	**7.30**	**128**	*e*P	Pn	18 23 27.9	+21
KLP				*e*S	**Sn**	**18 24 24.3**	**-4.1**
KLP				AML	AML	18 24 36.7	
	comp=E,101nm,0.4s						
KLP				AML	AML	18 24 37.1	
	comp=N,94nm,0.5s						
TKM2	**Tokmak 2**	**7.42**	**24**	⇑Pn	**Pn**	**18 23 08.9**	**+0.6**
	comp=N,5.0nm,0.5s						
TKM2				⇑Sn	**Sn**	**18 24 29.8**	**-1.3**
	comp=N,4.5nm,0.9s						
TKM2	**Tokmak 2**	**7.42**	**24**	P	**Pn**	**18 23 08.9**	**+0.6**
	SNR=17						
USP	**Ospenovka**	**7.42**	**17**	P	**Pn**	**18 23 07.9**	**-0.5**
	SNR=24						
JOSI	**Joshimath**	**8.79**	**128**	*e*x	**Pn**	**18 23 34.8**	**+7.6**
JOSI				*e*S	**Sn**	**18 24 58.9**	**-6.1**
JOSI				AML	AML	18 25 17.4	
	comp=N,40nm,0.5s						
JOSI				AML	AML	18 25 17.6	
	comp=E,59nm,0.4s						
SONA	**Sohna**	**9.24**	**148**	*e*S	**Sn**	**18 25 15.8**	**-0.2**
SONA				AML	AML	18 25 19.4	
	comp=N,12nm,0.3s						
SONA				AML	AML	18 25 20.0	
	comp=E,14nm,0.2s						
AB31	**Akbulak array**	**15.53**	**331**	⇑Pn	**Pn**	**18 24 51.0**	**-7.7**
	comp=E,0.3nm,0.4s,baz=160,slow=13,SNR=16						
AB31				⇓Sn	Sn	18 27 27.0	-23
	comp=E,3.9nm,0.8s,baz=147,slow=23,SNR=9.6						

*SKO **11** 18:23:18.9, 39.74N×20.62E, h4^{km}*
*ISCJB **11** 18:23:18.9±0.6, 39.82N±002×20.64E±004, h3^{km}±6^{km}, Error ellipse: s-maj=5.1km s-min=4.0km az=4.7*
*ATH **11** 18:23:19.7, 39.79N×20.61E, h20^{km}, MD3.3/5*
*CSEM **11** 18:23:19.7±0.1, 39.86N×20.63E, h5^{km}, MD3.3, Error ellipse: s-maj=2.0km s-min=1.8km az=106.0*
*NEIC **11** 18:23:19.8, 39.79N×20.61E, h19^{km}, MD3.3(ATH), After ATH.*
*THE **11** 18:23:19.9, 39.82N×20.63E, h2^{km}, ML3.2*
ISC 11 18:23:19.9±0.5**, 3982N**±002×**2063E**±004**, h8^{km}**±5^{km}**, n22, σ0^{s}93**/38**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.23**	**133**	⇑*i*PB	**Pg**	**18 23 24.8**	**+0.2**
JAN				*e*SB	**Sg**	**18 23 29.0**	**+1.2**
IGT	**Igoumenitsa**	**0.37**	**219**	*e*Pg	**Pg**	**18 23 27.3**	**+0.2**
IGT				*e*Sg	**Sg**	**18 23 32.0**	**+0.2**
MEV	**Metsovon**	**0.46**	**94**	*e*Pg	**Pg**	**18 23 28.7**	**-0.2**
MEV				*e*Sg	**Sg**	**18 23 35.7**	**+0.8**
KEK	**Kerkira**	**0.65**	**261**	*e*PN	**Pg**	**18 23 32.1**	**-0.3**
KZN	**Kozani**	**1.00**	**61**	*e*PN	**Pn**	**18 23 39.5**	**-0.8**
THL	**Klokotos Trika**	**1.10**	**103**	*e*Pg	**Pg**	**18 23 39.9**	**-1.1**
THL				*e*Sg	**Sg**	**18 23 56.0**	**+0.7**
FNA	**Florina**	**1.12**	**30**	*e*Pg	**Pg**	**18 23 41.2**	**-0.3**
FNA				*e*Sg	**Sg**	**18 23 57.3**	**+1.3**
EVR	**Evrytania**	**1.28**	**134**	*e*PN	**Pn**	**18 23 43.6**	**-0.6**
EVR	**Evrytania**	**1.28**	**134**	*e*Pn	**Pn**	**18 23 44.6**	**+0.4**
OHR	**Ohrid**	**1.30**	**6**	*e*Pg	**Pg**	**18 23 44.3**	**-0.6**
OHR				*e*Sg	**Sg**	**18 24 02.8**	**+1.1**
OHR	**Ohrid**	**1.30**	**6**	*e*Pg	**Pg**	**18 23 43.9**	**-1.0**
OHR				*e*Sg	**Sg**	**18 24 03.2**	**+1.5**
OHR	**Ohrid**	**1.30**	**6**	*e*Pg	**Pg**	**18 23 43.8**	**-1.1**
OHR				*e*Sg	**Sg**	**18 24 03.1**	**+1.4**
BIA	**Bitola**	**1.31**	**24**	*e*Pg	**Pg**	**18 23 43.9**	**-1.2**
BIA				*e*Sg	**Sg**	**18 24 02.7**	**+0.6**
BIA	**Bitola**	**1.31**	**24**	*e*Pg	**Pg**	**18 23 42.9**	**-2.2**
BIA				*e*Sg	**Sg**	**18 24 02.3**	**+0.2**
LIT	**Litokhoron**	**1.46**	**78**	*e*Pg	**Pg**	**18 23 46.2**	**-1.7**
LIT				*e*Sg	**Sg**	**18 24 07.2**	**+0.4**
AGG	**Agios Georgios**	**1.54**	**121**	*e*Pg	**Pg**	**18 23 47.7**	**-1.8**
AGG				*e*Sg	**Sg**	**18 24 09.3**	**-0.1**
KRUS	**Krusevo**	**1.62**	**17**	*e*Pn	**Pn**	**18 23 49.9**	**+1.0**
KRUS				*e*Sg	**Sg**	**18 24 12.8**	**+0.8**
KRUS	**Krusevo**	**1.62**	**17**	*e*Pn	**Pn**	**18 23 49.8**	**+1.0**
KRUS				*e*Sg	**Sg**	**18 24 12.7**	**+0.7**
VLS	**Valsamata**	**1.64**	**181**	*e*PN	**Pn**	**18 23 49.4**	**+0.3**
VLS				*e*SN	**Sn**	**18 24 11.2**	**+0.8**
VLS	**Valsamata**	**1.64**	**181**	*e*Pn	**Pn**	**18 23 50.4**	**+1.3**
VLS				*e*Sn	**Sn**	**18 24 11.2**	**+0.8**
GRG	**Griva**	**1.77**	**49**	*e*Pb	**Pb**	**18 23 51.1**	**-1.5**
KNT	**Kendrikon**	**2.19**	**51**	*e*Pn	**Pn**	**18 23 56.6**	**0.0**

*ISCJB **11** 18:58:34.8±0.9, 23.68N±009×94.58E±009, h102^{km}±8^{km}, mb3.6/9, Error ellipse: s-maj=17.4km s-min=10.7km az=40.9*
*NEIC **11** 18:58:36.8±0.9, 23.70N×94.70E, h106^{km}±9^{km}, mb4.6/1, Error ellipse: s-maj=24.3km s-min=8.1km az=60.0*
*IDC **11** 18:58:37.3±3.7, 23.70N×94.73E, h110^{km}±36^{km}, mb3.4/9, mb1 3.4/10, mb1mx3.3/22, mbtmp3.3/10, Error ellipse: s-maj=39.1km s-min=16.3km az=63.0*
ISC 11 18:58:36.5±0.9**, 2367N**±009×**9455E**±009**, h100**^{km}±7^{km}**, n25, σ0^{s}80**/27**, mb3.6**/9**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.24**	**333**	*e*P	**Pn**	**18 59 02.0**	**+2.4**
IMP				*e*S	**Sn**	**18 59 16.0**	**-1.1**
SHL	**Shillong**	**3.08**	**308**	*e*PN	**Pn**	**18 59 24.0**	**+0.8**
SHL				*e*SN	**Sn**	**18 59 56.5**	**-2.7**
CMAR	**Chiang Mai Arr**	**6.61**	**141**	P	**Pn**	**19 00 10.7**	**-0.4**
	0.1nm,0.3s,baz=312,slow=13,SNR=4.1						
LSA	**Lhasa**	**6.73**	**334**	*e*Pn	**Pn**	**19 00 13.8**	**+1.1**
	12nm,0.5s						
LSA				*e*Sn	Sx	19 01 20.4	
TAPN	**Taplejung**	**7.18**	**302**	*e*Pn	**Pn**	**19 00 18.7**	**-0.1**
TAPN				*e*Sn	Sx	19 01 32.6	
ODAN	**Odare**	**7.22**	**298**	*e*Pn	**Pn**	**19 00 19.1**	**-0.2**
ODAN				*e*Sn	Sx	19 01 33.9	
	111nm,0.4s						
RAMN	**Ramite**	**7.90**	**296**	*e*Pn	**Pn**	**19 00 29.3**	**+0.7**
RAMN				*e*Sn	Sx	19 01 49.7	
	28nm,0.2s						
JIRN	**Jiri**	**8.52**	**300**	*e*Pn	**Pn**	**19 00 36.7**	**-0.4**
JIRN				*e*Sn	Sx	19 02 04.5	
	44nm,0.3s						
GUN	**Gumba**	**8.88**	**300**	*e*Pn	**Pn**	**19 00 41.7**	**-0.2**
GUN				*e*Sn	Sx	19 02 13.6	
	54nm,0.4s						
PKI	**Pulchoki**	**9.12**	**297**	*e*Pn	**Pn**	**19 00 45.8**	**+0.6**
KKN	**Kakani**	**9.31**	**298**	*e*Pn	**Pn**	**19 00 47.7**	**-0.1**
KKN				*e*Sn	Sx	19 02 23.9	
	15nm,0.2s						
DMN	**Daman**	**9.38**	**297**	*e*Pn	**Pn**	**19 00 48.9**	**+0.2**
DMN				*e*Sn	Sx	19 02 26.2	
	25nm,0.5s						
GKN	**Gorkha**	**9.92**	**298**	*e*Pn	**Pn**	**19 00 55.4**	**-0.6**
GKN				*e*Sn	Sx	19 02 38.2	
	57nm,0.3s						
KOLN	**Koldanda**	**10.68**	**295**	*e*Pn	**Pn**	**19 01 06.5**	**+0.1**
KOLN				*e*Sn	Sx	19 02 56.9	
	45nm,0.4s						
MKAR	**Makanchi Array**	**25.09**	**340**	P	**P**	**19 03 52.5**	**+0.8**
	4.5nm,0.7s,mb4.0,baz=143,slow=11,SNR=18						
MKAR				pP	pP	19 04 17.9	+4.3
	2.9nm,0.8s,baz=150,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**25.09**	**340**	P	**P**	**19 03 52.5**	**+0.8**
MKAR				pP	pP	19 04 17.9	+4.3
SONM	**Songino Array**	**25.90**	**18**	P	**P**	**19 03 58.0**	**-1.0**
	0.1nm,0.3s,mb2.7,baz=196,slow=9.3,SNR=2.5						
KURK	**Kurchatov**	**29.70**	**339**	P	**P**	**19 04 32.6**	**-0.2**
	0.5nm,0.6s,mb3.3,baz=154,slow=8.1,SNR=2.8						
ZALV	**Zalesovo Beam**	**31.11**	**349**	P	**P**	**19 04 45.1**	**-0.2**
	0.4nm,0.3s,mb3.6,baz=152,slow=6.7,SNR=4.1						
BVAR	**Borovoye Array**	**34.57**	**334**	P	**P**	**19 05 15.8**	**+0.4**
	0.9nm,0.6s,mb3.8,baz=137,slow=12,SNR=6.2						
WRA	**Warramunga Arr**	**58.17**	**135**	P	**P**	**19 08 19.5**	**-0.8**
	0.5nm,0.4s,mb3.9,baz=321,slow=7.5,SNR=12						
ARCES	**ARCESS Array B**	**60.72**	**338**	P	**P**	**19 08 37.4**	**+0.2**
	1.3nm,0.6s,mb4.1,baz=77,slow=7.6,SNR=5.5						
NOA	**NORSAR Array B**	**66.39**	**328**	P	**P**	**19 09 14.0**	**-0.5**
	baz=84,slow=5.6						
GERES	**GERESS Array B**	**66.67**	**315**	P	**P**	**19 09 16.7**	**+0.2**
	0.4nm,0.6s,mb3.5,baz=94,slow=6.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**87.38**	**283**	P	**P**	**19 11 13.6**	**+0.5**
	0.4nm,0.7s,mb3.4,baz=69,slow=4.6,SNR=15						

*NEIC **11** 19:04:56.3, 16.56N×93.94W, h128^{km}, MD3.9(MEX), After MEX.*
MEX 11 19:04:56.1±0.6**, 1659N**×**9395W, h130**^{km}±11^{km}**, MD3.9, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.81**	**76**	*i* P	Pn	19 05 16.3	-1.1
TGIG				*i* S	Sn	19 05 32.1	-1.4
SCX	**San Cristobal**	**1.27**	**83**	*i* P	Pn	19 05 20.1	-1.6
SCX				*i* S	Sn	19 05 39.1	-2.0
CCIG	**Comitan**	**1.76**	**100**	*i* P	Pn	19 05 26.5	-0.8
CCIG				*i* S	Sn	19 05 46.5	-4.5
CCIG				*i* S	Sn	19 05 49.5	-1.5
HUIG	**Huatulco**	**2.23**	**249**	*i* P	Pn	19 05 30.9	-2.0
HUIG				*i* S	Sn	19 06 00.2	-1.0
OXX	**Oaxaca**	**2.70**	**281**	*e*P	Pn	19 05 39.0	+0.1
OXX				*i* S	Sn	19 06 13.0	+1.2
VHO	**Vista Hermosa**	**2.71**	**281**	*i* P	Pn	19 05 39.3	+0.3
VHO				*i* S	Sn	19 06 11.7	-0.4
PNIG	**Pinotepa**	**4.01**	**268**	*i* P	Pn	19 05 54.3	-1.8
PNIG				*i* S	Sn	19 06 40.2	-2.3
PNIG	**Pinotepa**	**4.01**	**268**	*i* P	Pn	19 05 50.4	-5.7
PPM	**Popocatepetl**	**5.09**	**300**	*i* P	Pn	19 06 08.8	-1.6
PPM				*i* S	Sn	19 07 07.1	-1.3
CAIG	**El Cayaco**	**6.07**	**275**	*i* P	Pn	19 06 21.8	-1.8
CAIG				*i* S	Sn	19 07 29.6	-2.3
CAIG	**El Cayaco**	**6.07**	**275**	*i* P	Pn	19 06 21.8	-1.8
CAIG				*i* S	Sn	19 07 20.9	-11

MAN 11 19:17:59, 861N×**12668E, h20^{km}, mb4.2, ML3.0, MS2.8, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.52**	**217**	⇑*i*P	Pb	19 18 11.2	+1.6
BIPH				*i* S	Sb	19 18 21.5	+4.9
BUTP	**Butuan**	**1.10**	**289**	*e*P	Pn	19 18 17.8	-1.5
BUTP				*e*S	Sb	19 18 35.0	+1.6
SCPH	**Surigao**	**1.66**	**315**	⇓*e*P	Pn	19 18 18.6	-8.3
MATI	**Mati**	**1.70**	**194**	*e*P	Pn	19 18 27.8	+0.2
BUKP	**Musuan**	**1.75**	**246**	*e*P	Pn	19 18 30.8	+2.5

IDC 11 19:59:36.7±2.9**, 1409S**×**7735W, h0^{km}, mb4.1**/1**, mb1 4.2**/4**, mb1mx3.8**/19**, mbtmp4.2**/4**, ML3.7**/2**, Error ellipse: s-maj=82.7km s-min=27.1km az=57.0, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**7.12**	**352**	Pn	Pn	20 01 20.1	-2.0
	0.8nm,0.3s,baz=108,slow=9.6,SNR=3.4						
ATAH				Sn	Sn	20 02 41.9	-1.9
	0.9nm,0.3s,baz=352,slow=14,SNR=2.2						
LPAZ	**La Paz**	**9.16**	**105**	Pn	Pn	20 01 52.2	+2.0
	0.4nm,0.3s,baz=299,slow=8.4,SNR=9.0						
LPAZ				Sn	Sn	20 03 44.6	+10
	baz=232,slow=19,SNR=2.4						
LVC	**Limon Verde**	**11.66**	**138**	Pn	Pn	20 02 23.4	-1.0
	9.6nm,0.3s,baz=13,slow=13,SNR=130						
TORD	**Torodi Ar. Bea**	**82.82**	**75**	P	P	20 12 03.1	-0.4
	1.5nm,0.9s,baz=265,slow=4.8,SNR=6.7						
SONM	**Songino Array**	**146.21**	**355**	PKPbc	PKPbc	20 19 19.3	+0.2
	0.3nm,0.5s,baz=355,slow=1.3,SNR=4.2						

GUC 11 20:11:28.5±0.8**, 3264S**×**7107W, h21^{km}**±4^{km}**, MD3.6, ML2.2, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.41**	**96**	⇑*i*P	Pb	20 11 36.9	-0.1
JACH				*e*S	Sb	20 11 42.8	0.0
PEL	**Peldehue**	**0.60**	**147**	⇓*i*P	Pb	20 11 40.1	-0.1
PEL				*i* S	Sb	20 11 49.1	+0.9
PEL				AML	AML	20 11 51.1	
	comp=N,233nm,0.4s						
CHNG	**Los Chungos**	**0.84**	**334**	⇑*i*P	Pb	20 11 43.9	-0.4
CHNG				*i* S	Sb	20 11 55.7	+0.5
CHNG				AML	AML	20 11 58.1	
	comp=E,104nm,0.3s						
FCH	**Farellones**	**0.95**	**136**	*e*P	Pb	20 11 46.2	-0.1
FCH				*i* S	Sb	20 12 00.5	+2.1
FCH				AML	AML	20 12 15.8	
	comp=E,52nm,0.3s						
TACH	**Talagante**	**1.01**	**174**	⇓*i*P	Pb	20 11 47.0	-0.4
TACH				*i* S	Sb	20 12 01.1	+0.9
PCH	**Pirque**	**1.08**	**154**	⇑*i*P	Pn	20 11 48.4	0.0
PCH				*i* S	Sb	20 12 04.0	+1.8
LNV	**Longovilo**	**1.34**	**192**	*e*P	Pn	20 11 51.8	-0.1
LMEL	**Las Melosas**	**1.41**	**149**	⇓*i*P	Pn	20 11 54.0	+1.1
LMEL				*i* S	Sn	20 12 13.1	+2.3
LMEL				AML	AML	20 12 15.3	
	comp=N,111nm,0.2s						
CACH	**El Canelo**	**1.52**	**165**	*e*P	Pn	20 11 56.4	+1.9
CACH				*i* S	Sn	20 12 17.5	+3.9
CICH	**Cipreses**	**1.76**	**162**	*e*P	Pn	20 12 00.0	+2.3
CICH				*i* S	Sn	20 12 24.0	+4.5
SFDO	**San Fernando**	**1.97**	**179**	*e*P	Pn	20 12 03.5	+2.9
SFDO				*i* S	Sn	20 12 29.8	+5.2
TLL	**Tololo Astrono**	**2.48**	**5**	*e*P	Pn	20 12 11.8	+4.2
TLL				*i* S	Sn	20 12 46.3	+9.1
TLL				AML	AML	20 12 51.5	
	comp=N,49nm,0.5s						

*DJA **11** 20:16:52, 2.83S×129.48E, h25^{km}, MLv3.8/5*
IDC 11 20:16:46.5±1.5**, 273S**×**13001E, h0^{km}, mb3.7**/3**, mb1 4.1**/6**, mb1mx3.7**/18**, mbtmp3.9**/6**, ML3.9**/3**, MS3.2**/2**, Ms1 3.2**/2**, ms1mx2.5**/27**, Error ellipse: s-maj=53.5km s-min=22.5km az=74.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**9.74**	**220**	LR	LR	20 23 14.9	
	comp=Z,155nm,18.1s,baz=325,slow=40						
KAPI	**Kappang**	**10.49**	**257**	Pn	Pn	20 19 20.3	+2.1
	1.2nm,0.3s,baz=59,slow=11,SNR=4.8						
FITZ	**Fitzroy Crossi**	**15.87**	**195**	*e*P	Pn	20 20 31.3	0.0
	2.0nm,0.3s						
FITZ	**Fitzroy Crossi**	**15.87**	**195**	Pn	Pn	20 20 29.1	-2.2
	0.1nm,0.3s,baz=26,slow=14,SNR=4.7						
WRA	**Warramunga Arr**	**17.62**	**166**	P	Pn	20 20 53.3	-0.2
	0.8nm,0.3s,baz=345,slow=12,SNR=24						
WB2	**Warramunga Arr**	**17.62**	**166**	*e*P	Pn	20 20 55.4	+1.8
ASAR	**Alice Springs**	**21.15**	**170**	P	P	20 21 33.9	+0.6
	6.7nm,0.6s,baz=349,slow=10,SNR=150						
HNR	**Honiara**	**30.48**	**104**	LR	LR	20 36 28.9	
	comp=Z,37nm,18.9s,baz=353,slow=39						
MKAR	**Makanchi Array**	**64.70**	**326**	P	P	20 27 27.3	+0.9
	0.8nm,0.9s,baz=137,slow=5.9,SNR=2.6						
KURK	**Kurchatov**	**68.92**	**328**	P	P	20 27 52.2	-1.1
	0.1nm,0.4s,baz=122,slow=5.8,SNR=3.1						

*SZGRF **11** 20:20:45.0, 31.86S×178.41W, h33^{km}, Kermadec Islands region*
*BJI **11** 20:20:47.8, 30.28S×179.14W, h330^{km}, mB4.7, mb4.6*
*ISCJB **11** 20:20:48.8±0.6, 30.65S±004×179.70W±006, h331^{km}±6^{km}, mb4.5/43, Error ellipse: s-maj=9.3km s-min=5.5km az=33.7*
*NEIC **11** 20:20:49.3±0.6, 30.66S×179.66W, h330^{km}±6^{km}, mb4.6/25, Error ellipse: s-maj=9.9km s-min=5.3km az=125.0*
*MOS **11** 20:20:51.5±2.3, 30.23S×179.68W, h344^{km}, mb4.8/24, Error ellipse: s-maj=12.4km s-min=11.1km az=93.8*
*IDC **11** 20:20:52.1±0.9, 30.34S×179.62W, h346^{km}±7^{km}, mb4.2/19, mb1 4.2/20, mb1mx4.2/23, mbtmp4.2/20, Error ellipse: s-maj=10.3km s-min=8.9km az=175.0*
*DJA **11** 20:21:04, 31.00S×179.63E, h438^{km}, mb4.6/7*
ISC 11 20:20:47.8±0.7**, 3053S**±005×**17965W**±006**, h306**^{km}±7^{km}**, n358, σ1^{s}03**/169**, mb4.5**/43**, 47C-14D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.97**	**50**	P	**Pn**	**20 21 41.2**	**+6.3**
	801nm,0.3s,baz=114,slow=3.3,SNR=44						
RAO				S	**S**	**20 22 07.3**	**-5.1**
	608nm,0.3s,baz=282,slow=23,SNR=6.5						
MXZ	**Matakaoa Point**	**7.22**	**193**	*e*P	**Pn**	**20 22 33.5**	**+1.7**
WIZ	**White Island**	**7.46**	**200**	*e*P	**Pn**	**20 22 40.1**	**+5.4**
PUZ	**Puketiti**	**7.72**	**192**	*e*P	**Pn**	**20 22 39.3**	**+1.4**
PUZ				S	**S**	**20 24 08.3**	**+1.1**
MARZ	**Manawahe**	**8.04**	**201**	*e*P	**Pn**	**20 22 47.8**	**+6.1**
MWZ	**Matawai**	**8.13**	**196**	*e*P	**Pn**	**20 22 44.6**	**+1.7**
URZ	**Urewera**	**8.16**	**198**	P	**Pn**	**20 22 45.7**	**+2.5**
	24nm,0.3s,baz=307,slow=3.1,SNR=41						
URZ				S	**S**	**20 24 16.5**	**-0.6**
	80nm,0.3s,baz=66,slow=21,SNR=16						
URZ	**Urewera**	**8.16**	**198**	*e*P	**Pn**	**20 22 44.6**	**+1.3**
TAZ	**Tarawera**	**8.31**	**201**	*e*P	**Pn**	**20 22 51.4**	**+6.3**
BKZ	**Black Stump Fm**	**9.18**	**199**	*e*P	**Pn**	**20 22 57.1**	**+1.4**
BKZ				S	**S**	**20 24 39.5**	**-0.4**
WTVZ	**West Tongariro**	**9.41**	**203**	*e*P	**Pn**	**20 23 02.5**	**+3.9**
NGZ	**Ngauruhoe**	**9.46**	**203**	*e*P	**Pn**	**20 23 02.6**	**+3.4**
TUVZ	**Tukino**	**9.53**	**203**	*e*P	**Pn**	**20 23 01.0**	**+1.0**
WNVZ	**Wahianoa**	**9.60**	**203**	*e*P	**Pn**	**20 23 01.8**	**+0.9**
MOVZ	**Moawhango**	**9.62**	**202**	*e*P	**Pn**	**20 23 01.1**	**-0.1**
VRZ	**Vera Road**	**9.73**	**207**	P	**Pn**	**20 23 06.4**	**+4.0**
PKE	**Pukeiti**	**10.10**	**209**	*e*P	**Pn**	**20 23 13.3**	**+6.3**
TSZ	**Takapari Road**	**10.16**	**199**	*e*P	**Pn**	**20 23 06.7**	**-1.0**
WAZ	**Wanganui**	**10.20**	**204**	P	**Pn**	**20 23 10.2**	**+2.0**
MRZ	**Mangatainoka R**	**10.83**	**200**	P	**Pn**	**20 23 14.5**	**-1.4**
KIW	**Kapiti Island**	**11.21**	**202**	*e*P	**Pn**	**20 23 19.0**	**-1.6**
MTW	**Mount Morrison**	**11.31**	**199**	*e*P	**Pn**	**20 23 20.2**	**-1.5**
CAW	**Cannon Point**	**11.39**	**201**	*e*P	**Pn**	**20 23 21.3**	**-1.4**
PAWZ	**Paruwai Farm**	**11.54**	**199**	*e*P	**Pn**	**20 23 24.4**	**-0.1**
PAWZ				S	**S**	**20 25 28.4**	**-4.7**
MRW	**Makara Radio**	**11.61**	**202**	P	**Pn**	**20 23 25.3**	**-0.1**
MSWZ	**Moikau Station**	**11.62**	**199**	P	**Pn**	**20 23 25.3**	**-0.2**
SNZO	**South Karori**	**11.69**	**201**	*e*Pn	**Pn**	**20 23 27.1**	**+0.8**
TCW	**Tory Channel**	**11.74**	**203**	*e*P	**Pn**	**20 23 24.8**	**-2.1**
NNZ	**Nelson**	**12.06**	**206**	*e*P	**Pn**	**20 23 29.6**	**-1.3**
QRZ	**Quartz Range**	**12.08**	**210**	*e*P	**Pn**	**20 23 31.3**	**+0.3**
BSWZ	**Blackbirch Sta**	**12.32**	**203**	*e*P	**Pn**	**20 23 32.3**	**-1.7**
THZ	**Tophouse**	**12.71**	**206**	*e*P	**Pn**	**20 23 36.6**	**-2.1**
KHZ	**Kahutara**	**13.06**	**203**	*e*P	**Pn**	**20 23 41.1**	**-1.8**
DSZ	**Denniston Nort**	**13.14**	**209**	*e*P	**Pn**	**20 23 42.5**	**-1.4**
LTZ	**Lake Taylor**	**13.83**	**206**	*e*P	**Pn**	**20 23 50.2**	**-1.9**
LTZ				S	**S**	**20 26 17.7**	**-6.3**
MQZ	**McQueen's Vall**	**14.51**	**203**	*e*P	**P**	**20 23 59.0**	**0.0**
WVZ	**Waitaha Valley**	**14.69**	**209**	*e*P	**P**	**20 24 00.9**	**-0.1**
WVZ				S	**S**	**20 26 35.7**	**-5.6**
DZM	**Mont Dzumac**	**15.04**	**301**	*e*P	**P**	**20 24 10.0**	**+4.8**
DZM	**Mont Dzumac**	**15.04**	**301**	*e*P	**P**	**20 24 09.7**	**+4.6**
RPZ	**Rata Peaks**	**15.09**	**207**	P	**P**	**20 24 06.0**	**+0.6**
	1.8nm,0.3s,baz=137,slow=1.3,SNR=10						
RPZ				S	**S**	**20 26 44.7**	**-4.7**
	4.6nm,0.3s,baz=351,slow=18,SNR=16						
RPZ	**Rata Peaks**	**15.09**	**207**	*e*P	**P**	**20 24 05.4**	**0.0**
FOZ	**Fox Glacier**	**15.53**	**210**	*e*P	**P**	**20 24 10.9**	**+0.7**
JCZ	**Jackson Bay**	**16.34**	**211**	P	**P**	**20 24 18.8**	**-0.3**
JCZ				S	**S**	**20 27 13.7**	**-0.7**
AFI	**Afiamalu**	**18.06**	**25**	P	**P**	**20 24 37.2**	**-0.8**
	5.0nm,0.3s,baz=353,slow=17,SNR=6.0						
AFI				S	**S**	**20 27 39.7**	**-9.3**
	2.7nm,0.3s,baz=233,slow=20,SNR=5.6						
AFI	**Afiamalu**	**18.06**	**25**	P	**P**	**20 24 37.2**	**-0.8**
AFI				S	**S**	**20 27 39.7**	**-9.3**
AFI				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AFI				smax			
	comp=N,3.0nm,0.3s						
HNR	**Honiara**	**28.33**	**314**	P	**P**	**20 26 14.8**	**+0.5**
	comp=N,71nm,0.6s,mb5.3,baz=168,slow=8.1,SNR=7.1						
HNR	**Honiara**	**28.33**	**314**	P	**P**	**20 26 14.8**	**+0.5**
HNR				pmax	pmax		
	comp=Z,71nm,0.6s,mb5.3						
CTA	**Charters Tower**	**32.42**	**281**	*e*P	**P**	**20 26 53.1**	**+3.1**
	comp=Z,16nm,0.6s,mb4.7						
CTA	**Charters Tower**	**32.42**	**281**	P	**P**	**20 26 52.4**	**+2.3**
	comp=Z,22nm,0.7s,mb4.8,baz=102,slow=10,SNR=40						
CTA				ScP	ScP	20 32 39.3	-4.3
	comp=Z,3.2nm,0.7s,baz=139,slow=3.5,SNR=5.2						
CTA	**Charters Tower**	**32.42**	**281**	P	**P**	**20 26 52.4**	**+2.4**
CTA				pmax	pmax		
	comp=Z,22nm,0.7s						
CTA				pmax	pmax		
	comp=N,3.0nm,0.7s						
CTAO	**Charters Tower**	**32.42**	**281**	*e*P	**P**	**20 26 52.1**	**+2.1**
CTAO				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.8						
CTAO	**Charters Tower**	**32.42**	**281**	*e*P	**P**	**20 26 52.1**	**+2.1**
	comp=Z,20nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**33.06**	**257**	*e*P	**P**	**20 26 58.0**	**+2.6**
	comp=Z,3.4nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**33.06**	**257**	P	**P**	**20 26 57.9**	**+2.5**
	comp=Z,3.8nm,0.5s,mb4.2,baz=97,slow=9.0,SNR=10.0						
STKA				PP	PP	20 28 23.4	+6.0
	comp=Z,6.7nm,0.8s,baz=97,slow=6.1,SNR=4.4						
STKA				ScP	ScP	20 32 39.4	-6.2
	comp=Z,2.2nm,0.8s,baz=138,slow=3.0,SNR=3.6						
STKA	**Stephens Creek**	**33.06**	**257**	*e*P	**P**	**20 26 57.9**	**+2.5**
	comp=Z,6.8nm,0.8s,mb4.2						
STKA				*e*P		20 26 58.0	
STKA	**Stephens Creek**	**33.06**	**257**	P	sP	20 28 23.5	-6.5
ASAR	**Alice Springs**	**41.68**	**268**	P	**P**	**20 28 08.0**	**+0.6**
	comp=Z,3.5nm,0.5s,mb3.9,baz=108,slow=7.5,SNR=64						
ASAR				ScP	ScP	20 33 14.7	-3.6
	comp=Z,5.3nm,0.7s,baz=113,slow=4.5,SNR=16						
ASAR				S	**S**	**20 33 59.0**	**-1.9**
	comp=Z,1.5nm,0.8s,baz=111,slow=15,SNR=6.9						
ASAR	**Alice Springs**	**41.68**	**268**	P	**P**	**20 28 08.0**	**+0.6**
ASAR				S	**S**	**20 33 59.0**	**-1.8**
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ASAR				pmax	pmax		
	comp=N,5.0nm,0.7s						
ASAR				smax			
	comp=N,2.0nm,0.8s						
WB2	**Warramunga Arr**	**42.67**	**273**	⇑*i*P	**P**	**20 28 15.8**	**+0.4**
WB2				*e*SCP	ScP	20 33 17.6	-4.7
WB2				*e*S	**S**	**20 34 07.2**	**-8.1**
WRAB	**Tennant Creek**	**42.68**	**273**	*e*P	**P**	**20 28 15.6**	**+0.2**
WRAB				*e*S	**S**	**20 34 08.0**	**-7.4**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.2						
WRAB	**Tennant Creek**	**42.68**	**273**	*e*P	**P**	**20 28 15.6**	**+0.2**
	comp=Z,7.2nm,0.4s,mb4.3						
WRAB				*e*S	**S**	**20 34 08.0**	**-7.4**
WRA	**Warramunga Arr**	**42.68**	**273**	P	**P**	**20 28 15.9**	**+0.5**
	comp=Z,8.5nm,0.3s,mb4.4,baz=111,slow=8.0,SNR=103						
WRA				PcP	PcP	20 30 00.2	-0.9

comp=Z,2.9nm,0.7s,baz=125,slow=3.0,SNR=6.2
WRA ScP ScP 20 33 18.1 -4.3
comp=Z,3.0nm,0.7s,baz=104,slow=3.8,SNR=9.5
WRA S **S** **20 34 11.2 -4.3**
comp=Z,5.7nm,0.8s,baz=108,slow=15,SNR=13
WRA Warramunga Arr 42.68 273 P **P** **20 28 15.9 +0.4**
WRA 20 30 00.2
WRA S **S** **20 34 11.2 -4.2**
WRA pmax pmax
comp=Z,9.0nm,0.4s
WRA pmax pmax
comp=Z,3.0nm,0.7s
WRA pmax pmax
comp=N,3.0nm,0.7s
WRA smax
comp=N,6.0nm,0.8s
FORT Forrest 44.64 256 *e*P **P** **20 28 31.0 +0.2**
comp=N,19nm,0.7s,mb4.4
FITZ Fitzroy Crossi 50.94 271 *e*P **P** **20 29 20.2 +1.2**
comp=N,14nm,0.9s,mb4.3
FITZ *e* 20 30 48.4
FITZ *e*S **S** **20 36 09.0 -2.8**
FITZ Fitzroy Crossi 50.94 271 P **P** **20 29 20.3 +1.3**
comp=N,5.9nm,0.8s,mb4.0,baz=141,slow=10,SNR=22
FITZ ScP ScP 20 33 53.8 -3.3
comp=N,2.9nm,0.9s,baz=141,slow=13,SNR=3.2
FITZ S **S** **20 36 09.1 -2.7**
comp=N,1.4nm,0.9s,baz=228,slow=23,SNR=7.1
CASY Casey 54.36 208 *e*P **P** **20 29 41.8 -1.3**
comp=N,12nm,1.0s,mb4.2
MBWA Marble Bar 54.80 265 *e*P **P** **20 29 47.1 +0.2**
comp=N,11nm,1.0s,mb4.2
MBWA PcP PcP 20 30 43.7 -1.6
GUMO Guam 55.59 317 P **P** **20 29 50.8 -1.7**
comp=N,39nm,0.7s,mb5.0,baz=176,slow=16,SNR=5.0
GUMO Guam 55.59 317 P **P** **20 29 50.8 -1.7**
GUMO pmax pmax
comp=Z,39nm,0.7s,mb5.0
BATI Baumata 56.26 278 P **P** **20 29 59.5 +2.1**
baz=153,slow=3.0
QSPA South Pole Qui 59.58 180 P **P** **20 30 21.7 +2.4**
comp=Z,10.0nm,0.6s,mb4.5,baz=31,slow=1.3,SNR=115
QSPA S **S** **20 38 06.9 +2.8**
comp=Z,2.7nm,1.1s,baz=196,slow=13,SNR=9.1
MAW Mawson 71.68 201 P **P** **20 31 36.3 -0.1**
comp=Z,1.4nm,0.8s,mb3.6,baz=101,slow=5.2,SNR=3.1
MAW Mawson 71.68 201 P **P** **20 31 36.3 0.0**
MAW pmax pmax
comp=Z,1.0nm,0.8s
MJAR Matsushiro Arr 77.55 326 P **P** **20 32 09.3 -0.8**
comp=Z,8.4nm,1.0s,mb4.4,baz=165,slow=5.4,SNR=13
MJAR Matsushiro Arr 77.55 326 P **P** **20 32 09.4 -0.8**
MJAR pmax pmax
comp=Z,8.0nm,1.0s
MAJO Matsushiro 77.55 326 *e*P **P** **20 32 08.9 -1.3**
MAJO pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
MAJO Matsushiro 77.55 326 *e*P **P** **20 32 08.9 -1.3**
comp=Z,9.4nm,1.0s,mb4.5
MAT Matsushiro 77.55 326 P **P** **20 32 09.9 -0.3**
SNAA Sanae 78.06 179 *e*P **P** **20 32 12.8 +0.3**
SNAA *e* 20 32 21.5
SNAA *e* 20 33 35.3
SNAA Sanae 78.06 179 *e*P **P** **20 32 12.6 +0.1**
SNAA *e**PP pP 20 33 29.9 +6.8
SNAA pmax pmax
comp=Z,22nm,1.4s
SNAA Sanae 78.06 179 *e*P **P** **20 32 12.6 0.0**
comp=Z,22nm,1.4s,mb4.7
SNAA *e*pP pP 20 33 29.9 +6.8
VNA3 Neumayer Olymp 78.26 177 *e*P **P** **20 32 14.0 +0.3**
VNA3 *e* 20 32 22.0
VNA3 *e* 20 33 36.3
VNA2 Neumayer--Watz 78.68 177 *e*P **P** **20 32 16.8 +0.9**
VNA2 *e* 20 32 24.2
VNA2 *e* 20 33 39.6
VNA1 Neumayer--Stat 78.92 177 *e*P **P** **20 32 18.1 +0.9**
VNA1 *e* 20 32 25.0
VNA1 *e* 20 33 40.6
ERM Erimo 79.91 333 ⇓*i*P **P** **20 32 23.8 +1.0**
ASAJ Asahikawa 81.91 334 P **P** **20 32 34.1 +0.9**
comp=Z,21nm,0.8s,mb4.9,baz=240,slow=8.6,SNR=14
ASAJ Asahikawa 81.91 334 P **P** **20 32 34.2 +0.9**
ASAJ pmax pmax
comp=Z,21nm,0.8s
PLCA Paso Flores 83.45 134 P **P** **20 32 42.2 +0.7**
comp=Z,5.9nm,1.0s,mb4.4,baz=214,slow=3.9,SNR=8.0
PLCA Paso Flores 83.45 134 P **P** **20 32 42.3 +0.8**
PLCA pmax pmax
comp=Z,6.0nm,1.0s
KSRS Korea Array 83.53 321 P **P** **20 32 42.0 +0.3**
comp=Z,7.7nm,0.8s,mb4.6,baz=142,slow=5.8,SNR=34
KSRS Korea Array 83.53 321 P **P** **20 32 42.1 +0.3**
KSRS pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
YSS Yuzh-Sakhalins 84.25 335 ⇓*i*P **P** **20 32 45.2 +0.1**
YSS pmax pmax
comp=N,30nm,0.9s
YSS pmax pmax
comp=Z,80nm,0.9s,mb5.5
NJ2 Nanjing 85.26 312 *e*P **P** **20 32 49.1 -1.4**
NJ2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
PEA0B Petropavlovsk- 85.59 347 *e*P **P** **20 32 50.8 -0.8**
PETK Petropavlovsk- 85.59 347 P **P** **20 32 51.2 -0.3**
comp=Z,22nm,0.7s,mb5.1,baz=124,slow=6.9,SNR=49
PETK Petropavlovsk- 85.59 347 P **P** **20 32 51.3 -0.3**
PETK pmax pmax
comp=Z,22nm,0.7s,mb5.1
KIPM Iron Peak 87.26 40 *e*P **P** **20 33 00.1 +0.1**
PFO Pinyon Flat Ob 87.35 48 *e*P **P** **20 33 00.7 +0.2**
PFO pmax pmax
comp=Z,28nm,1.5s,mb4.9
PFO Pinyon Flat Ob 87.35 48 *e*P **P** **20 33 00.7 +0.2**
comp=Z,28nm,1.5s,mb4.9
ISA Isabella 87.40 46 *e*P **P** **20 33 00.7 0.0**
ISA pmax pmax
comp=Z,18nm,1.0s,mb4.9
ISA Isabella 87.40 46 *e*P **P** **20 33 00.7 0.0**
comp=Z,18nn,1.0s,mb4.9
CMB Columbia Colle 87.82 43 *e*P **P** **20 33 02.4 -0.2**
CMB pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
CMB Columbia Colle 87.82 43 *e*P **P** **20 33 02.4 -0.2**
comp=Z,4.7nm,0.6s,mb4.5
MDJ Mudanjiang 87.94 326 P **P** **20 33 03.6 +0.6**
MDJ AMB AMB
comp=Z,12nm,0.9s,mb4.7
MDJ AMB AMB
comp=Z,52nm,3.5s
MDJ Mudanjiang 87.94 326 *e*P **P** **20 33 02.5 -0.6**
comp=Z,6.6nm,0.8s,mb4.5
GSC Goldstone 88.20 47 *e*P **P** **20 33 04.4 -0.1**
GSC pmax pmax
comp=Z,23nm,1.4s,mb4.8
GSC Goldstone 88.20 47 *e*P **P** **20 33 04.4 -0.1**
comp=Z,23nm,1.4s,mb4.8
KRMB Red Mountain 86.23 38 *e*P **P** **20 33 05.0 +0.5**
WDC Whiskeytown Da 88.32 40 *e*P **P** **20 33 05.1 +0.2**
WDC pmax pmax
comp=Z,16nm,1.3s,mb4.7
WDC Whiskeytown Da 88.32 40 *e*P **P** **20 33 05.1 +0.1**
comp=Z,16nm,1.3s,mb4.7
KEBM Edson Butte 88.95 37 *e*P **P** **20 33 07.9 +0.1**
YBH Yreka Blue Hor 89.02 39 P **P** **20 33 08.1 0.0**
comp=Z,9.0nm,1.1s,mb4.5,baz=170,slow=2.0,SNR=14
YBH Yreka Blue Hor 89.02 39 *e*P **P** **20 33 07.9 -0.3**
YBH pmax pmax
comp=Z,15nm,1.2s
YBH Yreka Blue Hor 89.02 39 *e*P **P** **20 33 07.9 -0.2**
comp=Z,15nn,1.2s,mb4.7
YBH P 20 33 08.1
LTIM Timbered Crate 89.31 40 P **P** **20 33 09.8 +0.3**
NVAR Mina Array Bea 89.31 44 P **P** **20 33 09.6 0.0**
comp=Z,5.5nm,0.9s,mb4.4,baz=222,slow=8.6,SNR=30
NVAR Mina Array Bea 89.31 44 P **P** **20 33 09.6 0.0**
CN2 Changchun 89.39 324 *e*P **P** **20 33 09.3 -0.6**
CN2 AMB AMB
comp=Z,40nm,1.1s,mb5.2
HUMO Hull Mountain 89.49 38 *e*P **P** **20 33 10.4 0.0**
comp=Z,26nn,1.4s,mb4.9
TPNV Topopah Spring 89.60 46 *e*P **P** **20 33 11.1 +0.1**
TPNV pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
TPNV Topopah Spring 89.60 46 *e*P **P** **20 33 11.1 +0.1**
comp=Z,7.7nm,0.9s,mb4.5

BUOR Burton Butte 89.65 39 P **P** **20 33 11.7 +0.6**
TPH Tonopah 89.72 44 *e*P **P** **20 33 10.9 -0.7**
TPH pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
TPH Tonopah 89.72 44 *e*P **P** **20 33 10.8 -0.7**
comp=Z,5.5nm,0.8s,mb4.4
BBOR Butler Butte 89.83 38 P **P** **20 33 12.2 +0.3**
HSO Harness Mounta 90.06 37 P **P** **20 33 13.8 +0.8**
TUC Tucson 90.31 52 *e*P **P** **20 33 14.7 +0.3**
TUC pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
TUC Tucson 90.31 52 *e*P **P** **20 33 14.7 +0.3**
comp=Z,7.2nm,0.8s,mb4.5
KLR Kul'dur 90.44 331 *e*P **P** **20 33 10.2 -4.4**
MOD Modoc 90.45 40 P **P** **20 33 14.4 -0.4**
KDAK Kodiak Island 90.87 14 P **P** **20 33 16.3 -0.1**
comp=Z,15nn,1.0s,mb4.8,baz=265,slow=3.4,SNR=4.2
KDAK Kodiak Island 90.87 14 P **P** **20 33 16.3 -0.1**
KDAK pmax pmax
comp=Z,15nn,1.0s,mb4.8
BMN Battle Mountai 91.24 43 *e*P **P** **20 33 18.4 -0.1**
BMN pmax pmax
comp=Z,14nn,1.2s,mb4.7
BMN Battle Mountai 91.24 43 *e*P **P** **20 33 18.4 -0.2**
comp=Z,14nn,1.2s,mb4.7
WVOR Wild Horse Val 91.73 40 *e*P **P** **20 33 20.3 -0.5**
WVOR pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
WVOR Wild Horse Val 91.73 40 *e*P **P** **20 33 20.3 -0.5**
comp=Z,6.6nm,1.0s,mb4.5
VIPM Ingram Point 92.03 38 P **P** **20 33 22.1 0.0**
CMAR Chiang Mai Arr 92.10 290 P **P** **20 33 24.1 +1.1**
comp=Z,1.1nm,0.8s,mb3.9,baz=133,slow=4.4,SNR=5.8
CMAR Chiang Mai Arr 92.10 290 P **P** **20 33 24.1 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
ELK Elko 92.61 43 *e*P **P** **20 33 24.1 -0.7**
ELK pmax pmax
comp=Z,5.0nm,1.0s
ELK Elko 92.61 43 *e*P **P** **20 33 24.1 -0.8**
comp=Z,5.4nm,1.0s,mb4.4
TXAR Lajitas Array 93.66 58 P **P** **20 33 28.8 -1.2**
comp=Z,1.1nm,0.9s,mb3.9,baz=204,slow=5.5,SNR=5.3
TXAR Lajitas Array 93.66 58 P **P** **20 33 28.8 -1.2**
TXAR pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 93.66 58 P **P** **20 33 28.8 -1.2**
ANMO Albuquerque 94.78 52 *e*P **P** **20 33 33.4 -1.5**
HLID Hailey 94.84 41 *e*P **P** **20 33 35.0 0.0**
comp=Z,2.2nm,0.8s,mb4.3
SEY Seymchan 95.79 348⇑*e*P **P** **20 33 38.0 -0.8**
COLA College 98.28 13 *e*P **P** **20 33 50.9 +0.9**
BILL Bilibino 98.83 355 *e*P Pdif 20 33 51.8 -1.4
BILL pmax pmax
comp=Z,1.0nm,1.5s,mb3.9
YAK Yakutsk 100.83 338 *e*P Pdif 20 33 59.7 -2.4
SONM Songino Array 102.29 318 P Pdif 20 34 07.2 -1.4
comp=Z,0.4nm,0.8s,baz=93,slow=3.0,SNR=2.7
SONM PKiKP PKiKP 20 38 27.9 -0.4
comp=Z,0.4nm,0.9s,baz=116,slow=3.4,SNR=3.9
SONM PKKPbc PKKPbc 20 50 10.1 -0.4
comp=Z,0.2nm,0.5s,baz=256,slow=3.0,SNR=3.8
SONM Songino Array 102.29 318 P Pdif 20 34 07.2 -1.4
SONM *i* 20 38 27.9
BOSA Boshof 116.57 204 PKP PKPdf 20 38 55.6 -0.4
comp=Z,3.8nm,1.0s,baz=46,slow=10,SNR=3.6
BOSA Boshof 116.57 204 PKIKP PKPdf 20 38 55.6 -0.4
BOSA pmax pmax
comp=Z,4.0nm,1.0s
MK31 Makanchi Array 116.77 310 *e*PKIKP PKPdf 20 38 53.7 -1.9
MKAR Makanchi Array 116.77 310 PKP PKPdf 20 38 53.8 -1.9
comp=Z,1.4nm,0.5s,baz=64,slow=2.8,SNR=12
MKAR PKKPbc PKKPbc 20 49 22.5 -1.3
comp=Z,0.7nm,0.6s,baz=300,slow=5.3,SNR=3.8
MKAR Makanchi Array 116.77 310 PKIKP PKPdf 20 38 53.8 -1.8
MKAR 20 49 22.5
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 117.19 319 PKP PKPdf 20 38 54.1 -2.1
comp=Z,1.4nm,0.6s,baz=20,slow=0.4,SNR=7.7
ZALV Zalesovo Beam 117.19 319 PKIKP PKPdf 20 38 54.1 -2.1
ZALV pmax pmax
comp=Z,1.0nm,0.6s
NVS Novosibirsk 118.31 319 *e*PKIKP PKPdf 20 38 56.0 -2.3
NVS pmax pmax
comp=N,4.0nm,1.4s
NVS pmax pmax
comp=E,6.0nm,1.4s
NVS pmax pmax
comp=Z,8.0nm,1.4s
KURK Kurchatov 120.11 314 PKP PKPdf 20 39 00.1 -1.8
comp=Z,7.2nn,0.7s,baz=95,slow=1.5,SNR=69
KURK Kurchatov 120.11 314 *e*PKPdf PKPdf 20 39 00.1 -1.8
KURK PKP PKPdf 20 39 00.1 -1.8
TKM2 Tokmak 2 120.29 305 P PKPdf 20 39 01.4 -1.1
SNR=10
TKM2 Tokmak 2 120.29 305 *e*PKPdf PKPdf 20 39 00.9 -1.7
KBK Karagaybulak 120.69 304 P PKPdf 20 39 02.3 -1.0
SNR=8.3
UCH Uchtor 120.89 304 *e*PKPdf PKPdf 20 39 03.3 -0.4
CHMS Chumysh 120.91 305 P PKPdf 20 39 02.4 -1.3
SNR=8.3
USP Ospenovka 121.16 305 P PKPdf 20 39 02.9 -1.2
SNR=10
AML Almayashu 121.45 303 P PKPdf 20 39 04.5 -0.3
SNR=19
AML Almayashu 121.45 303 *e*PKPdf PKPdf 20 39 03.1 -1.6
EKS2 Erkin-Say 121.52 304 P PKPdf 20 39 04.0 -0.9
SNR=15
EKS2 Erkin-Say 121.52 304 *e*PKPdf PKPdf 20 39 03.9 -1.0
KK31 Karatay Array 123.96 304 PKIKP PKPdf 20 39 08.1 -1.5
KK31 pmax pmax
comp=Z,11nm,0.7s
VOSK Vostochnaya 125.12 315 PKIKP PKPdf 20 39 09.7 -1.8
VOSK pmax pmax
comp=Z,14nm,0.8s
BVA0 Borovoye Array 125.50 316 *i* PKIKP PKPdf 20 39 10.5 -1.7
BVA0 pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 125.50 316 PKP PKPdf 20 39 11.0 -1.2
comp=Z,9.5nm,0.8s,baz=107,slow=1.5,SNR=59
BVAR Borovoye Array 125.50 316 PKIKP PKPdf 20 39 11.0 -1.2
BVAR pmax pmax
comp=Z,10.0nm,0.8s
BRVK Borovoye 125.57 316 *e*PKIKP PKPdf 20 39 10.4 -1.9
SCHQ Schefferville 127.29 42 PKP PKPdf 20 39 13.7 -1.8
comp=Z,7.1nm,0.9s,baz=37,slow=2.5,SNR=5.7
SVE Sverdlovsk 131.10 321 *e*PKIKP PKPdf 20 39 21.4 -1.3
SVE pmax pmax
comp=Z,6.0nm,0.7s
AB31 Akbulak array 131.91 311 PKIKP PKPdf 20 39 23.7 -0.8
ARU Arti 132.28 320 PKIKP PKPdf 20 39 23.7 -1.3
ARU PP PP 20 41 47.0 -5.1
ARU Arti 132.28 320 *e*PKPdf PKPdf 20 39 23.7 -1.3
KMBO Kilima Mbogo 132.84 235 SKPbc SKPbc 20 42 22.1 -3.7
comp=Z,2.3nm,0.8s,baz=73,slow=6.7,SNR=6.5
AKTK Aktyubinsk 133.14 312 PKP PKPdf 20 39 26.1 -0.7
AKTK SKPbc SKPbc 20 42 20.4 -5.1
AKTO Aktyubinsk 133.14 312 PKP PKPdf 20 39 26.1 -0.7
comp=Z,5.6nm,0.7s,baz=106,slow=3.2,SNR=23
AKTO SKPbc SKPbc 20 42 20.4 -5.1
comp=Z,2.0nm,0.8s,baz=60,slow=5.8,SNR=5.2
AKTO Aktyubinsk 133.14 312 PKIKP PKPdf 20 39 25.2 -1.6
AKTO pmax pmax
comp=Z,1.0nm,0.8s
KEV Kevo 137.93 347 *ep* PKPdf 20 39 27.3 -7.8
ARCES ARCESS Array B 138.41 347 PKHKP 20 39 25.6
comp=Z,5.2nm,0.7s,baz=39,slow=1.7,SNR=32
ARCES PKP PKPdf 20 39 35.4 -0.6
comp=Z,7.8nm,0.7s,baz=90,slow=1.8,SNR=13
ARCES SKPbc SKPbc 20 42 36.4 -4.7
comp=Z,4.8nm,0.8s,baz=28,slow=2.9,SNR=5.9
ARCES ARCESS Array B 138.41 347 PKHKP 20 39 25.6
ARCES 20 39 35.4
ARCES 20 42 36.4
ARCES pmax pmax
comp=Z,5.0nm,0.7s
ARCES pmax pmax
comp=Z,8.0nm,0.7s
ARCES pmax pmax
comp=N,5.0nm,0.8s
ARE0 ARCESS Array S 138.41 347 *e*PKPpre 20 39 24.2
JOF Joensuu 142.01 338 *ep* PKPdf 20 39 36.7 -6.0

comp=N,2.2nm,0.3s
GNI Garni 142.87 297 PKP PKPdf 20 39 41.8 -3.1
comp=N,3.9nm,0.6s,baz=27,slow=6.8,SNR=2.8
GNI Garni 142.87 297 PKIKP PKPdf 20 39 41.8 -3.2
GNI pmax pmax
comp=Z,4.0nm,0.6s
MOS Moscow 143.63 325 *e*PKHKP PKPdf 20 39 42.0 -3.8
MOS *e* 20 42 57.1
MOS pmax pmax
comp=Z,69nm,1.0s
GOF Gofitskoye 143.72 306 *e*PKIKP PKPdf 20 39 50.3 +4.0
GOF pmax pmax
comp=Z,50nm,1.3s
KIV Kislovodsk 144.12 304 *i* PKIKP PKPdf 20 39 45.6 -1.4
KIV pmax pmax
comp=Z,15nm,1.2s
KIV Kislovodsk 144.12 304 ⇓*i*P PKPdf 20 39 45.2 -1.8
KIV Kislovodsk 144.12 304 *e*PKPdf PKPdf 20 39 45.3 -1.7
KAF Kangasniemi 144.18 339 *ep* PKPdf 20 39 42.8 -3.7
comp=Z,67nm,0.6s,baz=43,slow=3.2
OBN Obninsk 144.46 324 ⇓*i*PKIKP PKPdf 20 39 45.2 -2.0
OBN pmax pmax
comp=Z,154nm,1.0s
OBN Obninsk 144.46 324 *e*PKPdf PKPdf 20 39 45.2 -2.0
VOR Voronezh 144.46 318 PKIKP PKPdf 20 39 44.5 -2.9
VOR pmax pmax
comp=Z,160nm,1.0s
VSR Storozhevoye 144.67 317 *e*PKIKP PKPdf 20 39 46.0 -1.7
VSR pmax pmax
comp=Z,40nm,0.8s
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,30nm,0.9s
SOC Sochi 146.31 304 *i* PKP2 PKPab 20 39 52.5 -1.6
VSU Vasula 146.75 335 ⇓*i*PKIKP PKPdf 20 39 50.2 -0.8
ANN Anapa 147.68 307 *i* PKIKP PKPdf 20 39 54.0 +1.0
ANN pmax pmax
comp=Z,63nm,0.9s
MALT Malatya 147.82 294⇑*i*P PKPdf 20 39 55.4 +1.9
MALT Malatya 147.82 294 *e*PKPdf PKPdf 20 39 52.2 -1.3
MALT *e*PKPbc PKPbc 20 39 55.0 -1.9
NB2 NORSAR Subarra 148.65 350 PKP PKPbc 20 39 56.8 -1.4
comp=Z,3.0nm,0.7s,baz=33,slow=3.0
NOA NORSAR Array B 148.65 350 PKP PKPdf 20 39 53.0 -1.1
baz=16,slow=4.2
NOA PKPbc PKPbc 20 39 56.8 -1.4
comp=Z,23nm,0.7s,baz=16,slow=4.2,SNR=41
NOA NORSAR Array B 148.65 350 PKIKP PKPdf 20 39 53.0 -1.1
NOA 20 39 56.8
NOA pmax pmax
comp=Z,23nm,0.7s
ASF Jabal al Asfar 148.84 283 PKPbc PKPbc 20 40 00.1 +0.4
comp=Z,9.4nm,0.8s,baz=337,slow=3.3,SNR=20
ASF Jabal al Asfar 148.84 283 PKP2 PKPbc 20 40 00.1 +0.5
ASF pmax pmax
comp=Z,9.0nm,0.8s
NAO01 NORSAR Array S 148.88 350 *e*PKPbc PKPbc 20 39 57.5 -1.3
NAO01 *e*PKPab PKPab 20 40 02.0 -1.9
HFS Hagfors 149.07 347 PKP PKPdf 20 39 53.8 -1.0
comp=Z,27nn,0.7s,baz=0.0,slow=2.0,SNR=33
HFS PKPbc PKPbc 20 39 57.4 -1.9
comp=Z,27nn,0.7s,baz=76,slow=1.9,SNR=13
HFS Hagfors 149.07 347 PKHKP PKPdf 20 39 53.8 -1.0
HFS pmax pmax
comp=Z,27nn,0.7s
HFS pmax pmax
comp=Z,27nn,0.7s
SIM Simferopol' 149.91 308 *i* PKHKP PKPbc 20 40 01.4 -0.4
SIM *e* 20 40 08.0
SIM pmax pmax
comp=Z,26nn,0.6s
EIL Elat 150.12 277 PKPbc PKPbc 20 40 02.5 -0.3
comp=Z,25nn,0.7s,baz=28,slow=2.3,SNR=25
MMAI Mount Meron Ar 150.18 284 PKPbc PKPbc 20 40 03.0 +0.1
comp=Z,33nn,0.8s,baz=72,slow=5.4,SNR=55
MMAI pPKPbc pPKPbc 20 41 28.1 +9.2
comp=Z,4.6nn,0.8s,baz=88,slow=4.8,SNR=3.7
KONO Kongsberg 150.22 351⇑*i*PKHKP PKPbc 20 40 00.9 -1.2
AKASG Malin Array Be 150.53 321 PKPbc PKPbc 20 40 01.9 -1.2
comp=Z,32nn,0.8s,baz=51,slow=2.5,SNR=85
AKASG PKPab PKPab 20 40 09.5 -1.5
comp=Z,8.9nn,0.7s,baz=44,slow=4.7,SNR=9.0
AKASG Malin Array Be 150.53 321 PKIKP PKPbc 20 40 01.9 -1.2
AKASG 20 40 09.5
AKASG pmax pmax
comp=Z,32nn,0.8s
AKASG pmax pmax
comp=Z,9.0nn,0.7s
KIEV Kiev 150.54 321 *e*PKIKP PKPbc 20 40 01.4 -1.7
SUW Suwalki 151.33 331 *e*PKP PKPbc 20 40 03.8 -1.0
SUW Suwalki 151.33 331 *e*PKPbc PKPbc 20 40 03.6 -1.3
SUW *e*PKP PKPbc 20 40 03.8 -1.0
SUW *e*PKPab PKPab 20 40 12.7 -1.6
ANTO Ankara 152.03 298⇑*i*P PKPdf 20 40 04.1 +4.1
ANTO Ankara 152.03 298⇑P PKPdf 20 40 04.1 +4.1
GKP Gorka Klasztor 154.16 336 *e*PKP PKPab 20 40 25.6 -0.7
GKP Gorka Klasztor 154.16 336 *e*PKP PKPab 20 40 25.6 -0.6
VRI Vrincioaia 154.39 314⇑*i*P PKPab 20 40 28.5 +1.0
VRI Vrincioaia 154.39 314⇑P PKPab 20 40 28.5 +1.1
BUR08 Bucovina Ar. S 154.40 319 *e*PKPbc PKPbc 20 40 11.9 +0.2
BUR08 *e*PKPab PKPab 20 40 27.4 0.0
BURAR Bucovina Array 154.41 319⇓*i*P PKPab 20 40 21.5 -6.0
BURAR Bucovina Array 154.41 319⇓P PKPab 20 40 21.4 -6.0
PLOR Plostina 154.44 314⇓*i*P PKPab 20 40 28.3 +0.6
KWP Kalwaria 154.54 325 *e*PKPbc PKPbc 20 40 10.6 -1.4
KWP *e*PKPab PKPab 20 40 27.3 -0.6
KWP *e*PKP PKPab 20 40 27.9 -0.1
MLR Muntele Rosu 155.05 314⇑*i*P PKPab 20 40 30.9 +0.6
MLR Muntele Rosu 155.05 314⇑P PKPab 20 40 30.9 +0.6
EKA Eskdalemuir Ar 155.08 5 PKPab PKPab 20 40 27.9 -2.2
comp=Z,1.4nm,0.7s,baz=323,slow=3.0,SNR=4.5
EKA Eskdalemuir Ar 155.08 5 PKP2 PKPab 20 40 27.9 -2.2
EKA pmax pmax
comp=Z,1.0nm,0.7s
KOLS Kolonicke sedl 155.21 324 *e*PKP PKPab 20 40 28.8 -2.1
LIC Lamto 155.30 167 *e*PKP2 PKPab 20 40 31.2 -0.8
comp=Z,9.7nm,0.7s
UZH Uzhgorod 155.39 323 *e*PKP2 PKPab 20 40 30.3 -1.4
STHS Stebnicka Huta 155.40 326 *e*PKP PKPab 20 40 31.5 -0.2
OJC Ojcow 155.51 329 *e*PKP2 PKPab 20 40 31.4 -0.7
BSEG Bad Segeberg 155.52 346 *e*PKPab PKPab 20 40 31.2 -0.8
CRVS Cervenica-Dubn 155.64 325 *e*PKP PKPab 20 40 32.3 -0.4
DBIC Dimbokro 155.76 167 PKP PKPdf 20 40 05.8 -0.3
comp=Z,6.7nm,1.0s,baz=106,slow=2.6,SNR=7.6
DBIC PKPab PKPab 20 40 34.0 -0.1
comp=Z,3.1nm,0.9s,baz=178,slow=7.1,SNR=3.6
DBIC Dimbokro 155.76 167 PKIKP PKPdf 20 40 05.8 -0.3
DBIC 20 40 34.0
DBIC pmax pmax
comp=Z,7.0nm,1.0s
DBIC pmax pmax
comp=Z,3.0nm,0.9s
DBIC Dimbokro 155.76 167 PKP PKPdf 20 40 05.8 -0.3
DBIC PKPab PKPab 20 40 34.0 -0.1
NIE Niedzica 155.84 327 *e*PKP PKPab 20 40 33.5 -0.1
RUE Ruedersdorf 155.95 340 *e*PKPab PKPab 20 40 33.2 -0.7
DRGR 156.28 319⇑*i*P PKPab 20 40 35.3 -0.3
KECS Kecovo 156.40 325 *i* PKP PKPab 20 40 35.6 -0.4
KSP Ksiaz 156.48 334 *e*PKP PKPab 20 40 36.1 -0.1
KSP Ksiaz 156.48 334 *e*PKP2 PKPab 20 40 35.9 -0.3
OKC Ostrava-Krasne 156.51 330 *e*PKPab PKPab 20 40 34.9 -1.5
LIKS Likavka 156.66 328 *e*PKP PKPab 20 40 35.3 -1.8
LIKS Likavka 156.66 328 *e*PKP PKPab 20 40 35.4 -1.7
MORC Moravsky Berou 156.82 331 ⇓*i*P PKPab 20 40 37.4 -0.3
MORC Moravsky Berou 156.82 331 *e*PKPdf PKPdf 20 40 05.7 -0.6
MORC *e*PKPdif 20 40 15.3
UPC Upice 156.85 334 *e*PKPab PKPab 20 40 35.8 -2.1
DPC Dobruska-Polom 156.86 333 *e*PKPab PKPab 20 40 37.4 -0.5
NRDL Niedersach Rie 156.91 345 *e*PKPab PKPab 20 40 37.0 -1.0
PSZ Piszkesteto 157.07 325 *e*PKP2 PKPab 20 40 36.5 -2.4
VYHS Vyhne 157.19 327 *e*PKP PKPab 20 40 38.5 -0.9
CLL Collm 157.21 339 *i* PKPdiff 20 40 17.0
CLL ⇑*i*PKPab PKPab 20 40 38.6 -0.8
comp=Z,25nn,0.8s
BRG Berggiesshubel 157.29 337⇑*i*PKP2 PKPab 20 40 38.9 -0.8
BRG pmax pmax
comp=Z,11nn,0.8s
BRG Berggiesshubel 157.29 337 *e*PKPab PKPab 20 40 39.1 -0.6
BRG Berggiesshubel 157.29 337⇑*i*PKP PKPab 20 40 38.9 -0.8
comp=Z,19nn,0.8s
KOLL Kolacno 157.33 328 *e*PKP PKPab 20 40 39.9 -0.1
PVCC Panska Ves 157.36 336 *e*PKPab PKPab 20 40 39.8 -0.3
FBE Freiberg 157.44 338 *e*PKPab PKPab 20 40 40.0 -0.4

CLZ	Clausthal	157.46	344	ePKPab	PKPab	20 40 39.8	-0.6
IBBN	Ibbenburen	157.57	348	ePKPab	PKPab	20 40 40.1	-0.8
VRAC	Vranov	157.57	331	PKPab	PKPab	20 40 40.7	-0.3
	comp=Z,7.3nm,0.7s,baz=38,slow=3.1,SNR=9.4						
VRAC	Vranov	157.57	331	PKP2	PKPab	20 40 40.7	-0.3
VRAC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VRAC	Vranov	157.57	331	⇑iP	PKPab	20 40 40.4	-0.6
BZS	Buzias	157.58	318	⇓iP	PKPab	20 40 37.6	-3.6
PRU	Pruhonice	157.82	335	ePKPab	PKPab	20 40 41.6	-0.5
MODS	Modra-Piesok	157.99	329	ePKP	PKPab	20 40 42.8	-0.1
TREC	Trest	158.03	333	ePKPab	PKPab	20 40 42.1	-0.9
TANN	Tannenbergstha	158.16	339	ePKPab	PKPab	20 40 43.1	-0.4
WERD	Werda	158.18	339	ePKPab	PKPab	20 40 43.0	-0.6
ZST	Bratislava	158.20	329	ePKP	PKPab	20 40 43.8	0.0
MOX	Moxa	158.21	340	eP	PKPab	20 40 42.9	-0.8
	comp=Z,16nm,1.0s						
MOX	Moxa	158.21	340	ePKP2	PKPab	20 40 42.9	-0.8
MOX				pmax	pmax		
	comp=Z,16nm,1.0s						
MOX	Moxa	158.21	340	ePKPab	PKPab	20 40 43.1	-0.6
GUNZ	Gunzen	158.25	339	ePKPab	PKPab	20 40 43.6	-0.3
WERN	Wernitzgruen	158.30	339	ePKPab	PKPab	20 40 43.9	-0.2
NKC	Novy Kostel	158.32	339	ePKPab	PKPab	20 40 43.9	-0.3
BUG	Bochum--Univer	158.49	348	ePKPab	PKPab	20 40 44.5	-0.4
UBBA	Unterbreizbach	158.49	343	ePKPab	PKPab	20 40 43.4	-1.5
MANZ	Manzenberg	158.65	339	ePKPab	PKPab	20 40 45.2	-0.4
ROTZ	Rotzenmuhle	158.81	338	ePKPab	PKPab	20 40 46.2	-0.1
PKSM	Moragy	158.85	323	⇓iP	PKPab	20 40 45.4	-1.3
KHC	Kasperske Hory	158.88	335	ePKPab	PKPab	20 40 46.3	-0.4
CONA	Conrad Observa	158.95	330		PKPab	20 40 46.3	-0.7
	comp=Z,14nm,0.8s						
CSNA	Conrad Observa	158.95	330	⇑iP	PKPab	20 40 46.3	-0.8
	comp=Z,13nm,0.8s						
GEC2	GERESS Array S	159.08	335	ePKPab	PKPab	20 40 47.0	-0.6
GERES	GERESS Array B	159.08	335	PKP	PKPdf	20 40 08.1	-0.9
	comp=Z,0.6nm,0.8s,baz=320,slow=5.6,SNR=3.8						
GERES				PKPab	PKPab	20 40 46.9	-0.6
	comp=Z,4.2nm,0.8s,baz=35,slow=4.9,SNR=21						
GERES	GERESS Array B	159.08	335	PKIKP	PKPdf	20 40 08.1	-1.0
GERES						20 40 46.9	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WET	Wettzell	159.12	336	ePKPab	PKPab	20 40 47.4	-0.3
GRF	Grafenberg Arr	159.18	340	ePKPab	PKPab	20 40 47.6	-0.3
HGN	Heimansgroeve	159.36	350	ePKiKP	PKPab	20 40 47.6	-1.1
	comp=Z,32nm,0.9s						
GIVF	Givet	160.16	351	ePKP2	PKPab	20 40 49.9	-2.3
SOKA	Soboth	160.27	329	⇑iP	PKPab	20 40 51.9	-0.9
BAIF	Baives	160.28	353	⇑iPKP2	PKPab	20 40 51.5	-1.2
	comp=Z,102nm,1.6s						
RJOB	Jochberg	160.34	334	ePKPab	PKPab	20 40 52.9	-0.2
WLF	Walferdange	160.39	349	ePKPab	PKPab	20 40 52.5	-0.7
FUR	Furstenfeldbru	160.50	338	ePKPab	PKPab	20 40 53.7	-0.1
STU	Stuttgart	160.58	342	ePKPab	PKPab	20 40 53.3	-0.8
WTTA	Wattenberg	161.16	336	⇓iP	PKPab	20 40 56.0	-0.7
	comp=Z,9.8nm,0.8s						
BFO	Black Forest	161.21	343	ePKPab	PKPab	20 40 55.9	-0.9
ABTA	Abfaltersbach	161.27	333	⇓iP	PKPab	20 40 55.0	-2.2
	comp=Z,10nm,0.8s						
ABTA	Abfaltersbach	161.27	333	⇑iPKPab	PKPab	20 40 55.7	-1.5
	comp=Z,10nm,0.8s						
RETA	Reutte	161.27	338	⇑iP	PKPab	20 40 56.8	-0.3
	comp=Z,18nm,0.8s						
MOTA	Moosalm	161.28	337	⇑iP	PKPab	20 40 56.8	-0.4
	comp=Z,11nm,1.0s						
CDF	Champ du Feu	161.38	345	⇑iPKP2	PKPab	20 40 56.5	-1.1
	comp=Z,17nm,0.9s						
FETA	Feichten	161.68	337	⇑iP	PKPab	20 40 58.8	-0.2
	comp=Z,10nm,0.9s						
MEZF	Maizieres J'vi	161.70	350	⇑iPKP2	PKPab	20 40 57.9	-1.1
	comp=Z,36nm,0.9s						
DAVA	Damuels	161.72	339	⇓iP	PKPab	20 40 58.7	-0.5
	comp=Z,24nm,1.1s						
FLN	La Foliniere	161.78	2	ePKP2	PKPab	20 40 57.3	-2.0
HAU	Haudompre	161.95	347	⇑iPKP2	PKPab	20 40 58.9	-1.2
	comp=Z,30nm,0.9s						
ROSF	Rostrenen	162.00	8	⇑iPKP2	PKPab	20 40 59.0	-1.3
	comp=Z,29nm,0.9s						
HINF	Hinteralfeld	162.03	346	⇑iPKP2	PKPab	20 40 59.0	-1.4
	comp=Z,7.5nm,0.9s						
SGMF	Saint Gilles	162.16	6	⇑iPKP2	PKPab	20 40 59.8	-1.2
	comp=Z,71nm,1.3s						
DAVOX	Davos/Dischmat	162.17	338	PKPab	PKPab	20 41 01.1	0.0
	comp=Z,12nm,0.8s,baz=49,slow=2.9,SNR=11						
QUIF	Quistinic	162.43	8	⇑iPKP2	PKPab	20 41 00.7	-1.5
	comp=Z,78nm,1.2s						
TORD	Torodi Ar. Bea	162.66	184	PKP	PKPdf	20 40 13.0	-0.9
	comp=Z,3.3nm,0.9s,baz=303,slow=1.3,SNR=17						
TORD				PKPab	PKPab	20 41 03.5	-0.4
	comp=Z,4.1nm,0.7s,baz=176,slow=4.3,SNR=18						
TORD				pPKPab	pPKPab	20 42 23.4	+6.3
	comp=Z,1.2nm,0.8s,baz=180,slow=4.0,SNR=3.6						
TORD	Torodi Ar. Bea	162.66	184	PKP	PKPdf	20 40 13.0	-0.9
TORD				PKPab	PKPab	20 41 03.5	-0.4
TORD				pPKPab	pPKPab	20 42 23.4	+6.3
LOR	Lormes	163.07	352	⇑iPKP2	PKPab	20 41 03.8	-1.2
	comp=Z,20nm,1.0s						
SSF	Saint Saulge	163.31	352	⇑iPKP2	PKPab	20 41 04.9	-1.2
	comp=Z,30nm,0.8s						
CABF	La Chapelle	163.34	346	ePKP2	PKPab	20 41 04.7	-1.5
	comp=Z,17nm,0.9s						
AVF	Avril sur Loir	163.60	353	⇑iPKP2	PKPab	20 41 06.0	-1.3
	comp=Z,20nm,0.9s						
SMF	Signal de Mont	163.68	351	⇑iPKP2	PKPab	20 41 06.6	-1.1
	comp=Z,56nm,0.9s						
BGF	Bois d'Agland	163.88	354	⇑iPKP2	PKPab	20 41 07.3	-1.3
	comp=Z,29nm,1.1s						
MFF	Saint Martin d	163.95	1	⇑iPKP2	PKPab	20 41 08.6	-0.3
	comp=Z,19nm,1.1s						
TCF	Toulx Ste Croi	164.20	355	⇑iPKP2	PKPab	20 41 08.5	-1.5
	comp=Z,14nm,1.1s						
LPL	La Plagne	164.23	343	⇑iPKP2	PKPab	20 41 10.1	-0.1
	comp=Z,22nm,0.9s						
LPG	La Plagne	164.24	343	⇑iPKP2	PKPab	20 41 10.3	+0.1
	comp=Z,36nm,0.9s						
MBDF	Montbardon	164.95	342	⇑iPKP2	PKPab	20 41 12.8	-0.6
	comp=Z,11nm,0.7s						
ORIF	Oris-en-Rattie	164.99	345	⇑iPKP2	PKPab	20 41 13.2	-0.4
	comp=Z,25nm,0.8s						
RJF	Les Rejaudoux	165.22	357	⇑iPKP2	PKPab	20 41 12.9	-1.6
	comp=Z,17nm,1.1s						
VIVF	Saint-Julien-l	165.30	348	⇑iPKP2	PKPab	20 41 14.1	-0.8
	comp=Z,45nm,1.3s						
SBF	Sospel	165.55	339	⇑iPKP2	PKPab	20 41 15.0	-1.1
	comp=Z,55nm,0.8s						
CAF	Calviac	165.57	355	ePKP2	PKPab	20 41 14.0	-2.1
LFF	La Frestale	165.61	359	⇑iPKP2	PKPab	20 41 14.8	-1.5
	comp=Z,9.0nm,0.7s						
SMRF	Simiane la Rot	165.96	344	ePKP2	PKPab	20 41 17.6	-0.2
	comp=Z,72nm,1.4s						
FRF	La Foret Royal	166.06	341	⇑iPKP2	PKPab	20 41 17.3	-1.0
	comp=Z,33nm,1.0s						
PGF	Pioggiola	166.15	332	ePKP2	PKPab	20 41 17.6	-1.2
LMR	La Mourre	166.31	341	⇑iPKP2	PKPab	20 41 18.6	-0.8
	comp=Z,53nm,0.9s						
MTLF	Montolieu	167.13	354	ePKP2	PKPab	20 41 21.1	-1.9
ETSF	Etsaut	167.63	3	ePKP2	PKPab	20 41 23.3	-2.0
	comp=Z,6.2nm,0.8s						
EVO	Evora	169.46	39	⇑iPKIKP	PKPdf	20 40 17.4	-1.2
	comp=Z,29nm,1.3s						
ESDC	Sonseca Array	170.22	20	PKP	PKPdf	20 40 18.9	-0.1
	comp=Z,2.6nm,0.8s,baz=2.6,slow=3.8,SNR=7.3						
ESDC				PKPab	PKPab	20 41 36.1	-0.7
	comp=Z,1.5nm,0.7s,baz=327,slow=3.2,SNR=7.9						

*IDC **11** 20:37:05.7±5.9, 2021S×169.11E, h0^{km}, mb3.9/6, mb1 4.0/6, mb1mx3.8/17, mbtmp3.9/6, Error ellipse: s-maj=146.2km s-min=33.0km az=30.0*

ISC 11 20:37:20.3±1.5**, 215S**±03×**1681E**±01**, h35^{km}, n7, σ1^{s}37**/8**, mb3.8**/5**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	1.68	250	eP	Pn	20 37 43.4	-3.8
DZM				eS	Sn	20 38 07.2	-0.3
CTA	Charters Tower	20.51	270	P	P	20 41 55.3	-0.3
	2.7nm,0.7s,baz=71,slow=13,SNR=2.6						
STKA	Stephens Creek	25.81	241	P	P	20 42 50.4	+2.1
	1.4nm,0.8s,mb3.5,baz=65,slow=11,SNR=3.8						
WRA	Warramunga Arr	31.62	267	P	P	20 43 40.6	+0.4
	0.4nm,0.6s,mb3.4,baz=94,slow=8.2,SNR=3.4						
ASAR	Alice Springs	31.64	260	P	P	20 43 41.9	+1.5
	1.4nm,0.8s,mb3.8,baz=79,slow=9.0,SNR=14						
FITZ	Fitzroy Crossi	40.05	267	P	P	20 44 49.9	-2.5
	2.7nm,1.0s,mb3.9,baz=130,slow=16,SNR=3.0						
QSPA	South Pole Qui	68.57	180	P	P	20 48 18.2	-0.8
	1.8nm,0.8s,mb4.0,baz=64,slow=0.7,SNR=8.7						

*NEIC **11** 21:15:50.6, 1727N×10067W, h11^{km}, MD4.0(MEX), After MEX.*

MEX 11 21:15:50.4±1.4**, 1726N×10068W, h10^{km}, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.45	118	iP	Pg	21 15 59.4	+0.3
CAIG				iS	Sg	21 16 06.7	+1.7
CAIG	El Cayaco	0.45	118	iP	Pg	21 15 59.4	+0.2
CAIG				iS	Sg	21 16 06.7	+1.7
ZIIG	Zihuatanejo	0.82	295	iP	Pg	21 16 04.0	-2.4
ZIIG				iS	Sg	21 16 15.3	-1.8
ACX	Acapulco	0.83	118	iP	Pg	21 16 02.9	-3.5
ACX				iS	Sg	21 16 14.2	-3.0
ACX	Acapulco	0.83	118	iP	Pg	21 16 04.0	-2.4
ACX				iS	Sg	21 16 13.1	-4.1
MEIG	Mezcala	1.21	57	eP	Pn	21 16 09.2	-4.2
MEIG				iS	Sb	21 16 24.4	-4.7
PLIG	Platanillo	1.59	45	iP	Pn	21 16 15.1	-3.6
PLIG				iS	Sn	21 16 35.3	-3.9
PNIG	Pinotepa	2.59	109	iP	Pn	21 16 29.7	-2.7
PNIG				iS	Sn	21 17 00.2	-3.7
PNIG	Pinotepa	2.59	109	iP	Pn	21 16 33.0	+0.6
PNIG				iS	Sn	21 17 09.3	+5.3
PPM	Popocatepetl	2.65	47	eP	Pn	21 16 27.0	-6.3
PPM				iP		21 16 29.4	
PPM				iS	Sn	21 17 02.4	-3.1
IIO	Organos	2.97	38	iP	Pn	21 16 30.9	-6.8
IIO	Organos	2.97	38	iP	Pn	21 16 45.4	+7.7
IIO				iS	Sn	21 17 03.5	-10
R15V		3.67	302	iP	Pn	21 16 44.9	-2.3
R15V				iS	Sn	21 17 26.1	-4.5
VHO	Vista Hermosa	3.78	92	iP	Pn	21 16 44.3	-4.4
VHO	Vista Hermosa	3.78	92	iS	Sn	21 17 38.3	+5.0
HUIG	Huatulco	4.63	108	iP	Pn	21 16 56.4	-4.1

MAN 11 21:19:39, 1014N×12515E, h15^{km}, mb4.3, ML3.1, MS2.9, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.28	269	eP	Pg	21 19 46.8	+1.8
SCPH	Surigao	0.49	136	⇓eP	Pg	21 19 46.6	-2.2
SCPH				eS	Sg	21 19 54.4	-1.0
PLP	Palo	1.03	351	⇑eP	Pb	21 19 58.2	-0.3
PLP				eS	Sb	21 20 13.9	+2.0
OCLP	Ormoc	1.05	330	eP	Pb	21 19 59.8	+1.0
LLP	Lapu-Lapu	1.17	279	eP	Pn	21 19 59.5	-1.3
LLP				eS	Sb	21 20 17.9	+1.9
BUTP	Butuan	1.26	158	eP	Pn	21 20 01.6	-0.4
TBP	Tagbilaran	1.34	251	eP	Pn	21 20 03.5	+0.3
TBP				eS	Sn	21 20 21.9	+1.1

*IDC **11** 21:26:39.6±2.2, 2351S×17990W, h498^{km}±25^{km}, mb3.5/11, mb1 3.7/12, mb1mx3.6/18, mbtmp3.5/12, Error ellipse: s-maj=16.9km s-min=14.5km az=157.0*
*ISCJB **11** 21:26:40.7±2.1, 2347S±007×1799E±0.1, h521^{km}±25^{km}, mb4.0/17, Error ellipse: s-maj=14.8km s-min=11.2km az=7.8*
*NEIC **11** 21:26:41.7±1.5, 2346S×17994E, h523^{km}±18^{km}, mb4.2/9, Error ellipse: s-maj=13.0km s-min=10.2km az=153.0*

ISC 11 21:26:38.7±1.8**, 2354S**±007×**1799W**±01**, h489^{km}**±21^{km}**, n36, σ0^{s}84**/32**, mb4.0**/17**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.89	189	S	S	21 32 23.9	+0.1
	0.9nm,0.3s,baz=69,slow=22,SNR=6.8						
FUNA	Funafuti	14.95	357	P	P	21 29 47.9	-0.8
RAR	Rarotonga	18.79	87	P	P	21 30 25.1	-1.9
	2.3nm,0.3s,baz=265,slow=11,SNR=3.2						
RAR	Rarotonga	18.79	87	eP	P	21 30 31.1	+4.1
RPZ	Rata Peaks	21.45	198	P	P	21 30 52.3	+1.4
	3.7nm,0.7s,mb4.0,baz=354,slow=1.7,SNR=4.4						
CTA	Charters Tower	31.53	270	eP	P	21 32 21.5	+1.4
	17nm,0.4s,mb4.8						
CTA	Charters Tower	31.53	270	P	P	21 32 21.4	+1.2
	20nm,0.4s,mb4.9,baz=94,slow=11,SNR=33						
CTAO	Charters Tower	31.53	270	eP	P	21 32 21.3	+1.2
	19nm,0.4s,mb4.9						
PMG	Port Moresby	34.43	289	eP	P	21 32 45.4	+0.6
	16nm,0.7s,mb4.5						
STKA	Stephens Creek	34.91	248	eP	P	21 32 49.3	+0.7
	4.1nm,1.4s,mb3.7						
STKA	Stephens Creek	34.91	248	P	P	21 32 49.4	+0.8
	2.1nm,0.5s,mb3.8,baz=110,slow=10,SNR=6.2						
WB2	Warramunga Arr	42.48	266	eP	P	21 33 49.8	-0.5
WRAB	Tennant Creek	42.48	266	eP	P	21 33 49.9	-0.5
	6.2nm,0.8s,mb4.1						
WRA	Warramunga Arr	42.49	266	P	P	21 33 50.0	-0.4
	3.2nm,0.3s,mb4.2,baz=90,slow=6.0,SNR=71						
WRA				ScP	ScP	21 38 34.7	-1.5
	1.2nm,0.9s,baz=101,slow=4.2,SNR=5.8						
FORT	Forrest	46.49	249	eP	P	21 34 20.6	-0.6
	12nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	50.91	265	eP	P	21 34 54.5	+0.1
	5.6nm,0.8s,mb4.0						
MBWA	Marble Bar	55.49	260	eP	P	21 35 26.1	-0.9
	2.1nm,0.4s,mb3.8						
QSPA	South Pole Qui	66.55	180	P	P	21 36 39.9	+1.1
	3.4nm,0.6s,mb4.2,baz=353,slow=1.4,SNR=20						
MAW	Mawson	78.11	200	P	P	21 37 45.9	-0.2
	1.2nm,0.6s,mb3.5,baz=144,slow=8.7,SNR=4.5						
PETK	Petropavlovsk-	78.76	346	P	P	21 37 49.8	+0.1
	1.2nm,0.6s,mb3.6,baz=123,slow=5.9,SNR=4.2						
PETK	Petropavlovsk-	78.76	346	P	P	21 37 49.8	+0.1
PMSA	Palmer Station	79.22	157	P	P	21 37 52.1	0.0
NVAR	Mina Array Bea	84.45	44	P	P	21 38 19.6	+0.4
	0.6nm,0.6s,mb3.3,baz=218,slow=8.1,SNR=5.5						
SNAA	Sanae	85.03	179	e	P	21 38 20.3	-1.3
SNAA	Sanae	85.03	179	eP	P	21 38 20.1	-1.5
	0.8nm,0.4s,mb3.7						
VNA3	Neumayer Olymp	85.23	177	e	P	21 38 21.2	-1.4
VNA2	Neumayer--Watz	85.65	178	e	P	21 38 23.3	-1.3
PLCA	Paso Flores	88.48	134	P	P	21 38 39.2	+0.7
	1.7nm,0.9s,mb3.8,baz=236,slow=3.6,SNR=3.3						
PPLA	Purkeypile	88.91	12	P	P	21 38 39.9	+0.1
HIA	Hailar	90.13	325	P	P	21 38 45.9	0.0
TXAR	Lajitas Array	90.19	58	P	P	21 38 47.6	+1.0
	1.2nm,0.7s,mb3.9,baz=221,slow=5.6,SNR=10						
PDAR	Pinedale Array	92.39	44	P	P	21 38 57.3	+0.9
	0.5nm,0.5s,mb3.7,baz=191,slow=4.3,SNR=2.9						
ARCES	ARCESS Array B	131.54	348	PKP	PKPdf	21 44 52.6	-1.9
	3.6nm,1.0s,baz=56,slow=3.1,SNR=6.5						
AKASG	Malin Array Be	144.70	328	PKP	PKPdf	21 45 17.5	-1.5
	2.0nm,0.5s,baz=46,slow=3.9,SNR=6.6						
CLL	Collm	150.53	343	i PKPbc	PKPbc	21 45 33.4	-1.0
	comp=Z,5.0nm,0.8s						
CLL				ePKPab	PKPab	21 45 44.0	+0.8
TORD	Torodi Ar. Bea	169.55	189	PKPab	PKPab	21 47 05.9	-0.9
	comp=Z,0.4nm,0.6s,baz=167,slow=6.1,SNR=4.6						

*ISCJB **11** 21:28:22.2±0.9, 1005N±006×12526E±006, h26^{km}±7^{km}, Error ellipse: s-maj=11.4km s-min=8.0km az=35.2*
*MAN **11** 21:28:22, 1003N×125.19E, h17^{km}, mb4.9, ML3.8, MS3.9*

ISC 11 21:28:22.4±0.9**, 1005N**±006×**12526E**±006**, h23^{km}**±8^{km}**, n12, σ0^{s}72**/16**, 3D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.35	139	⇓eP	Pb	21 28 30.1	0.0
MSLP	Maasin	0.40	282	eP	Pb	21 28 30.2	-0.8
MSLP				eS	Sb	21 28 37.4	+0.6
BUTP	Butuan	1.13	162	eP	Pn	21 28 42.4	-0.4
PLP	Palo	1.14	346	⇓eP	Pn	21 28 41.9	-1.1
OCLP	Ormoc	1.19	327	eP	Pn	21 28 43.5	-0.1
LLP	Lapu-Lapu	1.30	282	eP	Pn	21 28 44.3	-0.8
LLP				eS	Sn	21 29 01.5	-0.3
TBP	Tagbilaran	1.42	256	eP	Pn	21 28 46.6	-0.3
TBP				eS	Sn	21 29 05.0	+0.2
BUKP	Musuan	2.16	185	eP	Pn	21 28 57.8	+0.8
CNP	Catarman	2.52	347	eP	Pn	21 29 03.1	+1.2
GUIM	Jordan	2.69	283	eP	Pn	21 29 04.1	-0.2
RCP	Roxas	2.89	302	⇓eP	Pn	21 29 08.5	+1.4
RCP				eS	Sn	21 29 24.8	-16
PVCP	Virac	3.69	343	eP	Pn	21 29 09.7	-8.3

*ISCJB **11** 21:29:56.9±0.7, 3861N±004×6989E±0.1, h33^{km}, Error ellipse: s-maj=11.4km s-min=5.8km az=169.1*
*NNC **11** 21:29:59.9±1.7, 3901N×6985E, h0^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=12.6km s-min=10.5km az=2.0*

ISC 11 21:29:59.5±0.7**, 3861N**±004×**6976E**±010**, h35^{km}, n7, σ1^{s}27**/13**, 5C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	4.53	7	⇑Pn	Pn	21 31 07.0	+1.5
	4.4nm,0.7s,baz=198,slow=19,SNR=38						
KK31				⇑Sn	Sn	21 31 59.8	+2.9
	4.3nm,0.5s						
KK31				Lg		21 32 09.5	
	19nm,0.7s,baz=198,slow=22,SNR=8.9						
CEP	Cherat	5.08	159	P	Pn	21 31 12.9	-0.3
CEP				S	Sn	21 32 04.0	-6.6
CHCP	Chirah Chowk	5.70	149	P	Pn	21 31 18.2	-3.4
THW	Thamme Wali	6.02	164	P	Pn	21 31 25.9	-0.2
THW				S	Sn	21 32 35.0	+1.2
TKM2	Tokmak 2	6.18	44	⇑Pn	Pn	21 31 27.8	-0.4
	6.3nm,0.6s						
TKM2				⇓Sn	Sn	21 32 36.6	-1.0
	7.5nm,0.8s						
TKM2				⇓Lg		21 33 03.4	
	6.4nm,0.8s						
AB31	Akbulak array	12.77	330	Pn	Pn	21 32 59.2	+0.9
	0.8nm,0.6s,baz=143,slow=12,SNR=14						
AB31				Sn	Sn	21 35 16.2	-2.9
	1.5nm,0.7s,baz=151,slow=23,SNR=4.3						
AKTO	Aktyubinsk	14.47	329	⇑Pn	Pn	21 33 21.4	-0.2
	0.3nm,0.8s						
AKTO				⇑Sn	Sn	21 35 59.9	-0.7
	0.3nm,0.8s						

*ISCJB **11** 21:33:33.7±2.4, 1074S±0.10×1615E±0.1, h45^{km}±19^{km}, mb3.8/7, MS3.3/2, Error ellipse: s-maj=23.9km s-min=15.3km az=160.6*
*IDC **11** 21:33:33.9±1.8, 1075S×16152E, h31^{km}±6^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.7/16, mbtmp3.7/7, ML4.1/1, MS3.3/3, Ms1 3.2/3, ms1mx2.6/24, Error ellipse: s-maj=42.3km s-min=26.1km az=92.0*
*NEIC **11** 21:33:34.9±1.9, 1072S×16154E, h41^{km}±15^{km}, mb3.9/5, Error ellipse: s-maj=18.3km s-min=13.1km az=89.0*

ISC 11 21:33:34.7±2.4**, 107S**±01×**1616E**±01**, h37^{km}**±19^{km}**, h32^{km}**±1.8^{km}**:pP-P, n18, σ0^{s}94**/18**, mb3.8**/7**, MS3.3**/2**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.02	309	Pn	Pn	21 34 06.4	+0.1
	141nm,0.3s,baz=170,slow=6.1,SNR=43						
HNR				Sn	Sn	21 34 29.9	-0.3
	368nm,0.3s,baz=160,slow=21,SNR=17						
CTA	Charters Tower	17.44	236	eP	Pn	21 37 36.6	+1.4
	6.8nm,0.8s						
CTA	Charters Tower	17.44	236	P	Pn	21 37 36.4	+1.2
	0.5nm,0.3s,baz=64,slow=13,SNR=16						
CTA				LR	LR	21 43 03.5	
	comp=Z,45nm,18.2s,baz=231,slow=33						
CTAO	Charters Tower	17.44	236	ePn	Pn	21 37 34.2	-1.0
	10nm,0.9s						
AFI	Afiamalu	26.25	100	LR	LR	21 46 54.6	
	comp=Z,101nm,19.0s,MS3.4,baz=133,slow=30						
RAO	Raoul Island	26.62	137	P	P	21 39 09.4	-0.4
WRAB	Tennant Creek	27.75	247	eP	P	21 39 21.2	+1.1
	1.5nm,0.5s,mb3.9						
WB2	Warramunga Arr	27.76	247	eP	P	21 39 22.8	+2.7
WRA	Warramunga Arr	27.77	247	P	P	21 39 19.4	-0.8
	0.9nm,0.5s,mb3.6,baz=76,slow=10,SNR=12						
STKA	Stephens Creek	28.00	218	eP	P	21 39 21.9	-0.3
	4.9nm,1.7s,mb3.9						
STKA	Stephens Creek	28.00	218	P	P	21 39 21.6	-0.5
	1.9nm,1.0s,mb3.7,baz=49,slow=11,SNR=3.6						
STKA				LR	LR	21 49 55.1	
	comp=Z,55nm,19.7s,MS3.1,baz=197,slow=35						
FITZ	Fitzroy Crossi	35.50	254	eP	P	21 40 26.8	-1.4
	3.8nm,0.9s,mb4.3						
COCO	West Island	63.31	262	eP	P	21 43 59.6	-0.8
ENH	Enshi	64.52	311	P	P	21 44 07.7	-0.3
CMAR	Chiang Mai Arr	68.21	295	P	P	21 44 31.5	-0.4
	0.1nm,0.3s,mb3.3,baz=66,slow=5.7,SNR=2.7						
CMAR				pP	pP	21 44 42.0	-1.2
	0.8nm,0.9s,baz=119,slow=6.5,SNR=4.3						
SONM	Songino Array	75.99	325	P	P	21 45 19.2	+1.3
	0.5nm,0.6s,mb3.6,baz=133,slow=6.1,SNR=4.8						
SONM				pP	pP	21 45 28.5	-0.8
	0.6nm,0.8s,baz=134,slow=6.4,SNR=3.7						
MKAR	Makanchi Array	90.47	318	P	P	21 46 32.6	+0.1
	0.2nm,0.5s,mb3.7,baz=87,slow=6.4,SNR=3.9						
MKAR				pP	pP	21 46 41.8	-2.3
	0.3nm,0.5s,baz=95,slow=5.3,SNR=2.3						
TKM2	Tokmak 2	94.26	313	eP	P	21 46 50.4	+0.3

*ISCJB **11** 21:50:56.0±0.9, 3644N±003×12979E±004, h8^{km}±5^{km}, Error ellipse: s-maj=5.9km s-min=3.8km az=150.7*
*JMA **11** 21:50:55.9±0.1, 3646N×12979E, h12^{km}, M2.8*
*KMA **11** 21:50:59.2, 3646N×12947E, ML2.7*

ISC 11 21:50:56.4±0.9**, 3644N**±003×**12976E**±005**, h7^{km}**±5^{km}**, n23, σ1^{s}03**/35**, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSULJ	Uljin	0.39	313	P	Pg	21 51 03.7	-0.3
KSULJ				S	Sg	21 51 07.8	-1.3
KSPHA	Pohang	0.40	232	P	Pg	21 51 04.8	+0.6
KSPHA				S	Sg	21 51 09.9	+0.5
KSAND	Andong	0.86	279	P	Pg	21 51 12.0	-1.0
KSULS	Ulsan	0.95	202	P	Pg	21 51 14.9	+0.2
KSULS				S	Sg	21 51 27.6	+0.4
KSDAG	Daegu	0.97	226	P	Pg	21 51 14.7	-0.4
KSDAG				S	Sg	21 51 27.2	-0.4
KSYOW	Yeongwol	1.28	305	P	Pn	21 51 19.7	-1.0
KSYOW				S	Sb	21 51 34.9	-2.6
KSBUS	Busan	1.30	204	P	Pn	21 51 20.9	0.0
KSBUS				S	Sb	21 51 38.0	-0.1
KSCPR	CHUPUNGNYEONG	1.46	262	P	Pn	21 51 22.5	-0.7
KSCPR				S	Sn	21 51 40.6	-2.0
KSCHJ	Chungju	1.50	287	P	Pn	21 51 23.1	-0.7
KSDGY	Daegwallycong	1.52	325	P	Pn	21 51 24.0	0.0
KSDGY				S	Sn	21 51 42.9	-1.1
KSBON	Boeun	1.58	273	P	Pn	21 51 25.1	+0.2
KSWJU	Wonju	1.67	306	P	Pn	21 51 26.4	+0.2
KSJIN	Jinju	1.90	228	P	Pn	21 51 31.0	+1.7
JTU	Tsushima	1.94	189	P	Pn	21 51 29.6	-0.1
JTU				S	Sn	21 51 54.1	-0.1
KSIJA	INJE	2.03	320	P	Pn	21 51 33.5	+2.5
KSCEA	Cheonan	2.05	281	P	Pn	21 51 32.6	+1.3
KSCHC	Chuncheon	2.05	311	P	Pn	21 51 32.9	+1.6
KSICN	Icheon	2.06	295	P	Pn	21 51 32.9	+1.4
KSICN				S	Sn	21 51 59.0	+1.6
KSSKC	Sokcho	2.09	332	P	Pn	21 51 34.5	+2.6
JTY	Toyota	2.42	154	P	Pn	21 51 36.4	0.0
JTY				S	Sn	21 52 06.2	0.0
JGT	Gotsu	2.52	123	P	Pn	21 51 37.5	-0.3
JGT				S	Sn	21 52 08.2	-0.6
JHIK	Hikimi	2.60	136	S	Sn	21 52 09.7	-1.0
JHT	Toyohira	2.80	129	S	Sn	21 52 15.3	-0.3

*IDC **11** 22:00:37.5±1.0, 1125S×16576E, h0^{km}, mb4.2/10, mb1 4.4/11, mb1mx4.2/18, mbtmp4.3/11, ML4.6/1, MS3.1/2, Ms1 3.1/2, ms1mx2.8/22, Error ellipse: s-maj=30.5km s-min=21.4km az=144.0*
*ISCJB **11** 22:00:39.0±4.4, 114S±0.1×16565E±0.09, h18^{km}±30^{km}, mb4.2/12, Error ellipse: s-maj=20.0km s-min=11.3km az=34.2*
*NEIC **11** 22:00:42.7±0.4, 1133S×16570E, h35^{km}, mb4.4/7, Error ellipse: s-maj=13.5km s-min=9.4km az=163.0*

ISC 11 22:00:43.1±1.9**, 1134S**±010×**16569E**±010**, h37^{km}**±15^{km}**, n30, σ0^{s}65**/29**, mb4.2**/12**, Santa Cruz Islands**

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

HNR	Honiara	5.96	288	Pn	Pn	22 02 08.1	-0.8
	16nm,0.3s,baz=201,slow=13,SNR=3.4						
HNR				Sn	Sn	22 03 16.5	+0.6
	45nm,0.3s,baz=204,slow=14,SNR=4.1						
HNR				LR	LR	22 04 18.9	
	comp=Z,115nm,19.3s,baz=174,slow=37						
HNR	Honiara	5.96	288	Pn	Pn	22 02 08.1	-0.8
HNR				Sn	Sn	22 03 16.5	+0.6
HNR				LR	LR	22 04 18.9	
DZM	Mont Dzumac	10.70	176	eP	Pn	22 03 14.0	+0.2
PMG	Port Moresby	18.33	274	P	Pn	22 04 55.0	+0.3
CTA	Charters Tower	20.61	243	eP	P	22 05 20.4	+1.0
	8.1nm,0.9s						
CTA	Charters Tower	20.61	243	P	P	22 05 20.6	+1.2
	9.8nm,0.8s,baz=65,slow=12,SNR=15						
CTA				LR	LR	22 12 20.1	
	comp=Z,89nm,19.2s,baz=230,slow=34						
CTAO	Charters Tower	20.61	243	eP	P	22 05 20.1	+0.7
	15nm,1.0s						
STKA	Stephens Creek	30.19	224	eP	P	22 06 50.4	+0.3
	3.1nm,0.6s,mb4.2						
STKA	Stephens Creek	30.19	224	P	P	22 06 50.7	+0.6
	3.9nm,0.7s,mb4.2,baz=38,slow=8.8,SNR=13						
WRAB	Tennant Creek	31.32	250	eP	P	22 06 59.1	-1.0
	4.4nm,0.6s,mb4.5						
WB2	Warramunga Arr	31.32	250	eP	P	22 06 59.4	-0.8
WB2	Warramunga Arr	31.32	250	eP	P	22 06 59.1	-1.1
WRA	Warramunga Arr	31.33	250	P	P	22 06 59.7	-0.5
	7.4nm,0.7s,mb4.6,baz=81,slow=9.1,SNR=45						
FITZ	Fitzroy Crossi	39.25	255	eP	P	22 08 07.8	-0.6
	4.9nm,0.7s,mb4.3						
MBWA	Marble Bar	45.05	251	eP	P	22 08 55.5	-0.2
	5.9nm,0.8s,mb4.5						
CMAR	Chiang Mai Arr	72.18	294	P	P	22 12 06.0	+1.3
	1.8nm,0.7s,mb4.1,baz=121,slow=4.5,SNR=12						
SONM	Songino Array	78.87	324	P	P	22 12 43.0	+0.5
	0.9nm,0.8s,mb3.7,baz=152,slow=6.6,SNR=7.3						
YBH	Yreka Blue Hor	84.14	46	P	P	22 13 10.4	0.0
	0.8nm,0.7s,mb4.0,baz=267,slow=6.4,SNR=3.6						
MAW	Mawson	84.43	202	P	P	22 13 12.5	+1.0
	3.3nm,0.8s,mb4.5,baz=66,slow=3.8,SNR=6.9						
MAW	Mawson	84.43	202	eP	P	22 13 10.9	-0.6
	3.9nm,0.8s,mb4.6						
NVAR	Mina Array Bea	86.26	50	P	P	22 13 20.9	-0.3
	0.5nm,0.8s,mb3.8,baz=241,slow=8.3,SNR=3.7						
MKAR	Makanchi Array	93.70	317	P	P	22 13 55.9	0.0
	1.4nm,0.8s,mb4.5,baz=111,slow=6.6,SNR=8.4						
MKAR	Makanchi Array	93.70	317	P	P	22 13 55.9	0.0
ZALV	Zalesovo Beam	93.76	324	P	P	22 13 55.5	-0.6
	0.3nm,0.4s,mb4.1,baz=116,slow=6.8,SNR=3.8						
ZALV	Zalesovo Beam	93.76	324	P	P	22 13 55.5	-0.6
PMSA	Palmer Station	95.46	161	eP	P	22 14 04.4	+0.7
SNAA	Sanae	96.82	184	eP	P	22 14 09.6	-0.2
TRQA	Tornquist	113.67	140	PKiKP	PKiKP	22 19 17.1	-1.0
KEST	Kesra	147.62	322	PKPbc	PKPbc	22 20 22.0	-2.1
	1.3nm,0.8s,baz=282,slow=4.0,SNR=4.3						
TORD	Torodi Ar. Bea	164.25	278	PKP	PKPdf	22 20 44.9	+1.2
	0.5nm,0.8s,baz=22,slow=2.5,SNR=3.8						

NEIC 11 22:10:51.4, 4016S×17355E, h206^{km}, MG3.8(WEL)**, After WEL., Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWEZ	Newall Road	0.92	16	P	Pn	22 11 21.4	+0.1
NEZ	North Egmont	0.98	26	P	Pn	22 11 21.8	+0.1
PKE	Pukeiti	1.02	19	P	Pn	22 11 21.9	0.0
PKE				S	Sn	22 11 45.2	-0.4
QRZ	Quartz Range	1.02	229	P	Pn	22 11 21.5	-0.4
QRZ				S	Sn	22 11 44.0	-1.6
NNZ	Nelson	1.07	187	P	Pn	22 11 22.1	0.0
NNZ				S	Sn	22 11 45.1	-1.1
WAZ	Wanganui	1.18	70	P	Pn	22 11 23.5	+0.5
TCW	Tory Channel	1.19	153	P	Pn	22 11 23.6	+0.6
KIW	Kapiti Island	1.25	125	P	Pn	22 11 23.8	+0.3
KIW				S	Sn	22 11 47.1	-1.4
MRW	Makara Radio	1.38	141	P	Pn	22 11 24.7	+0.2
VRZ	Vera Road	1.39	42	P	Pn	22 11 23.9	-0.8
SNZO	South Karori	1.45	143	P	Pn	22 11 25.1	0.0
CAW	Cannon Point	1.49	130	P	Pn	22 11 25.6	+0.1
BSWZ	Blackbirch Sta	1.57	171	P	Pn	22 11 26.4	+0.2
BHW	Baring Head	1.60	142	P	Pn	22 11 26.1	-0.3
MRZ	Mangatainoka R	1.63	109	P	Pn	22 11 26.5	-0.2
THZ	Tophouse	1.68	197	P	Pn	22 11 26.8	-0.3
WNVZ	Wahianoa	1.78	63	P	Pn	22 11 27.8	-0.4
DRZ	Dome Shelter	1.79	61	P	Pn	22 11 28.1	-0.1
FWVZ	Far West T-bar	1.79	60	P	Pn	22 11 27.8	-0.4
MTW	Mount Morrison	1.79	125	P	Pn	22 11 28.0	-0.2
MSWZ	Moikau Station	1.80	135	P	Pn	22 11 28.1	-0.2
TWVZ	Taurewa	1.82	54	P	Pn	22 11 27.6	-0.9
MOVZ	Moawhango	1.86	67	P	Pn	22 11 28.1	-0.8
NGZ	Ngauruhoe	1.86	59	P	Pn	22 11 28.4	-0.6
PAWZ	Paruwai Farm	1.88	131	P	Pn	22 11 29.1	+0.1
PAWZ				S	Sn	22 11 57.3	-1.2
HIZ	Hauiti	1.93	32	P	Pn	22 11 28.4	-1.3
KATZ	Kakaramea	2.04	55	P	Pn	22 11 30.3	-0.4
DSZ	Denniston Nort	2.06	219	P	Pn	22 11 30.1	-0.8
DSZ				S	Sn	22 11 58.6	-3.3
KHZ	Kahutara	2.26	180	P	Pn	22 11 32.0	-0.9
BKZ	Black Stump Fm	2.48	67	P	Pn	22 11 34.2	-1.2
LTZ	Lake Taylor	2.79	200	P	Pn	22 11 37.7	-1.1
URZ	Urewera	3.35	57	P	Pn	22 11 43.0	-2.5
KNZ	Kokohu	3.38	72	P	Pn	22 11 44.6	-1.2
MWZ	Matawai	3.58	61	P	Pn	22 11 46.2	-2.1
WVZ	Waitaha Valley	3.60	215	P	Pn	22 11 46.4	-1.9
MQZ	McQueen's Vall	3.61	190	P	Pn	22 11 45.8	-2.7
PUZ	Puketiti	4.21	62	P	Pn	22 11 53.2	-2.8
FOZ	Fox Glacier	4.46	219	P	Pn	22 11 55.6	-3.4
MXZ	Matakaoa Point	4.53	57	P	Pn	22 11 57.0	-3.0
LBZ	Lake Benmore	4.91	209	P	Pn	22 12 02.0	-2.6
JCZ	Jackson Bay	5.29	221	P	Pn	22 12 06.8	-2.7
ODZ	Otahua Downs	5.33	203	P	Pn	22 12 08.3	-1.7

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*CSEM **11** 22:20:56.8±0.1, 3776N×2928E, h12^{km}, MD3.0, Error ellipse: s-maj=2.5km s-min=2.1km az=122.0*
*ISCJB **11** 22:20:57.9±0.6, 3779N±003×2927E±004, h8^{km}±5^{km}, Error ellipse: s-maj=5.7km s-min=4.7km az=29.5*
*ISK **11** 22:20:57.5, 3779N×2923E, h17^{km}, MD3.0*
*DDA **11** 22:20:58.3, 3783N×2923E, h7^{km}±3^{km}, Md2.9*
ISC 11 22:20:58.2±0.5**, 3778N**±003×**2925E**±004**, h14**^{km}±4^{km}**, n14,** σ**0**^{s}**84**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	Denizli	0.18	261	ePG	Pg	22 21 01.9	-0.4
DENT				eSG	Sg	22 21 05.3	+0.1
DNZL	Cakiroluk	0.19	240	i P	Pg	22 21 02.4	-0.1
DNZL				i S	Sg	22 21 06.2	+0.8
GOLH	Golhisar	0.60	156	i P	Pg	22 21 08.9	-1.0
GOLH				i S	Sg	22 21 20.4	+2.6
KHAL	Karahalli	0.62	18	i P	Pg	22 21 09.3	-1.0
KHAL				i S	Sg	22 21 17.9	-0.5
KULA	Kula-Manisa	0.87	328	ePG	Pg	22 21 14.2	-0.7
KULA				eSG	Sg	22 21 26.9	+0.5
TKTP	Tekketepe	0.88	73	i P	Pg	22 21 15.8	+0.5
TKTP				i S	Sg	22 21 32.3	+5.5
YER	Yerkesik	1.01	230	ePG	Pg	22 21 17.0	-0.7
AYDN	Tasoluk	1.10	264	i P	Pb	22 21 19.2	+0.3
AYDN				i S	Sb	22 21 33.8	+0.7
MLSB	Milas	1.27	248	ePN	Pn	22 21 20.4	-1.2
SHUT	Suhut-Afyon	1.28	53	ePN	Pn	22 21 21.6	-0.1
GDZ	Gediz	1.32	8	i P	Pn	22 21 21.5	-0.7
GDZ				i S	Sb	22 21 41.0	+1.5
DEMI	Demirci	1.33	342	i P	Pn	22 21 22.9	+0.6
DEMI				i S	Sb	22 21 40.6	+0.8
ALT	Altintas	1.44	28	ePN	Pn	22 21 23.6	-0.3
IZM	Izmir	1.69	292	ePN	Pn	22 21 26.5	-0.8

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*ISCJB **11** 23:01:38.1±0.4, 4828N±003×658E±002, h15^{km}±3^{km}, Error ellipse: s-maj=5.0km s-min=2.7km az=179.0*
*STR **11** 23:01:38.2±0.7, 4843N×667E, h10^{km}, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **11** 23:01:39.4±0.1, 4832N×667E, h10^{km}, Md2.9/4, Ml2.4/10, Error ellipse: s-maj=1.6km s-min=1.1km az=175.0*
*CSEM **11** 23:01:39.4±0.1, 4832N×667E, h10^{km}, ML2.4/10, Error ellipse: s-maj=1.5km s-min=0.8km az=1.0*
ISC 11 23:01:38.8±0.4**, 4832N**±003×**663E**±003**, h18**^{km}±3^{km}**, n43,** σ**0**^{s}**75**/76**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAU	Haudompre	0.37	210	ePg	Pg	23 01 46.9	+0.5
	SNR=1.0						
HAU				eSg	Sg	23 01 51.9	+0.3
	12nm,0.2s,SNR=1.0						
HAU	Haudompre	0.37	210	ePg	Pg	23 01 46.9	+0.5
	SNR=1.0						
HAU				eSg	Sg	23 01 51.9	+0.3
	6.1nm,0.2s,SNR=1.0						
ECH	Echery	0.37	106	Pg	Pg	23 01 46.2	-0.3
ECH				Sg	Sg	23 01 50.8	-1.0
THEF	They Montfort	0.44	258	Pg	Pg	23 01 48.0	+0.3
THEF				Sg	Sg	23 01 54.2	+0.5
CDF	Champ du Feu	0.44	78	ePg	Pg	23 01 47.3	-0.5
	SNR=1.0						
CDF				eSg	Sg	23 01 52.8	-1.1
	28nm,0.3s,SNR=1.0						
CDF	Champ du Feu	0.44	78	ePg	Pg	23 01 47.3	-0.5
	SNR=1.0						
CDF				eSg	Sg	23 01 52.8	-1.1
	14nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	0.53	163	ePg	Pg	23 01 49.5	+0.2
HINF	Hinteralfeld	0.53	163	ePn	Pg	23 01 51.4	+2.1
	SNR=1.0						
HINF				eSg	Sg	23 01 56.4	0.0
	SNR=1.0						
HINF				eSn	Sg	23 01 59.4	+3.0
	7.9nm,0.2s						
HINF	Hinteralfeld	0.53	163	ePn	Pg	23 01 51.4	+2.1
	SNR=1.0						
HINF				eSg	Sg	23 01 56.4	0.0
	SNR=1.0						
HINF				eSn	Sg	23 01 59.4	+3.0
	4.0nm,0.2s						
MOF	Molkenrain	0.58	144	Pg	Pg	23 01 51.7	+1.4
MOF				Sg	Sg	23 02 00.8	+2.7
LIBD	Limburg	0.68	104	Pg	Pg	23 01 52.0	-0.1
LIBD				Sg	Sg	23 02 01.2	+0.1
RFYF	Reffroy	0.82	292	ePn	Pn	23 01 55.8	+0.3
	baz=106						
RFYF				eSn	Sn	23 02 07.6	+0.4
	22nm,0.2s						
RFYF	Reffroy	0.82	292	ePn	Pn	23 01 55.8	+0.3
	baz=106						
RFYF				eSn	Sn	23 02 07.6	+0.4
	11nm,0.2s						
LOMF	Lomont	0.98	172	Pg	Pg	23 01 58.4	+0.6
FELD	Feldberg im Sc	1.03	115	Pg	Pg	23 01 58.4	-0.3
FELD				Sg	Sg	23 02 11.2	-0.9
MEZF	Maizieres J'vi	1.06	280	ePg	Pg	23 01 59.9	+0.5
	baz=105						
MEZF				eSg	Sg	23 02 14.3	+1.0
	12nm,0.2s,baz=108						
MEZF	Maizieres J'vi	1.06	280	ePg	Pg	23 01 59.9	+0.5
	baz=105						
MEZF				eSg	Sg	23 02 14.3	+1.0
	5.8nm,0.2s,baz=108						
SFTF	Sexfontaines	1.07	264	ePn	Pn	23 01 59.4	+0.6
SFTF	Sexfontaines	1.07	264	ePg	Pg	23 02 00.1	+0.7
	baz=92						
SFTF				eSg	Sg	23 02 14.0	+0.6
	15nm,0.2s						
SFTF	Sexfontaines	1.07	264	ePg	Pg	23 02 00.1	+0.7
	baz=92						
SFTF				eSg	Sg	23 02 14.0	+0.6
	7.7nm,0.2s						
CABF	La Chapelle	1.75	192	ePn	Pn	23 02 08.6	+0.4
CABF	La Chapelle	1.75	192	ePg	Pg	23 02 12.5	+0.1
CABF				eSg	Sg	23 02 35.4	+0.2
	2.7nm,0.2s						
CABF	La Chapelle	1.75	192	ePg	Pg	23 02 12.5	+0.1
CABF				eSg	Sg	23 02 35.4	+0.2
	1.4nm,0.2s						
LOR	Lormes	2.14	242	ePn	Pn	23 02 13.9	+0.3
	baz=70,SNR=1.0						
LOR	Lormes	2.14	242	ePg	Pg	23 02 19.8	-0.1
	baz=64,SNR=1.0						
LOR				eSg	Sg	23 02 46.9	-0.8
	4.7nm,0.2s,baz=66,SNR=1.0						
LOR	Lormes	2.14	242	ePg	Pg	23 02 19.8	-0.1
	baz=64,SNR=1.0						
LOR				eSg	Sg	23 02 46.9	-0.8
	2.3nm,0.2s,baz=66,SNR=1.0						
SSF	Saint Saulge	2.46	240	ePg	Pg	23 02 25.1	-0.8
	SNR=1.0						
SSF				eSn	Sn	23 02 46.0	-1.4
	SNR=1.0						
SSF				eSg	Sg	23 02 57.1	-0.6
	1.9nm,0.2s,SNR=1.0						
SSF	Saint Saulge	2.46	240	ePn	Pn	23 02 17.9	0.0
	SNR=1.0						
SSF	Saint Saulge	2.46	240	ePg	Pg	23 02 25.1	-0.8
	SNR=1.0						
SSF				eSn	Sn	23 02 46.0	-1.4
	SNR=1.0						
SSF				eSg	Sg	23 02 57.1	-0.6
	0.9nm,0.2s,SNR=1.0						
SMF	Signal de Mont	2.52	229	ePn	Pn	23 02 18.9	+0.1
SMF	Signal de Mont	2.52	229	ePg	Pg	23 02 26.5	-0.7
	SNR=1.0						
SMF				eSg	Sg	23 02 59.3	-0.6
	4.8nm,0.3s,SNR=1.0						
SMF	Signal de Mont	2.52	229	ePg	Pg	23 02 26.5	-0.7
	SNR=1.0						
SMF				eSg	Sg	23 02 59.3	-0.6
	2.4nm,0.3s,SNR=1.0						
AVF	Avril sur Loir	2.69	237	ePn	Pn	23 02 21.2	+0.1
	SNR=1.0						
AVF	Avril sur Loir	2.69	237	ePg	Pg	23 02 29.6	-0.8
	SNR=1.0						
AVF				eSg	Sg	23 03 04.1	-1.2
	1.2nm,0.2s,SNR=1.0						
AVF	Avril sur Loir	2.69	237	ePg	Pg	23 02 29.6	-0.8
	SNR=1.0						
AVF				eSg	Sg	23 03 04.1	-1.2
	0.6nm,0.2s,SNR=1.0						
BGF	Bois d'Agland	3.11	237	ePn	Pn	23 02 27.3	+0.4
BGF	Bois d'Agland	3.11	237	ePg	Pg	23 02 37.3	-1.1
BGF				eSg	Sg	23 03 18.2	-0.5
	5.1nm,0.4s,SNR=1.0						
BGF	Bois d'Agland	3.11	237	ePg	Pg	23 02 37.3	-1.1
BGF				eSg	Sg	23 03 18.2	-0.5
	2.5nm,0.4s,SNR=1.0						
TCF	Toulx Ste Croi	3.63	238	eSg	Sg	23 03 35.2	0.0
	0.9nm,0.2s,SNR=1.0						
TCF	Toulx Ste Croi	3.63	238	eSg	Sg	23 03 35.2	0.0
	0.4nm,0.2s,SNR=1.0						
LDF	La Druitiere	4.50	276	ePn	Pn	23 02 46.1	+0.2
CAF	Calviac	4.63	224	ePn	Pn	23 02 47.2	-0.5
GRR	Gorron	4.99	274	ePn	Pn	23 02 53.0	+0.3

NEIC 11 23:03:14.8, 3856S×17576E, h156^{km}, MG4.5(WEL)**, 2C, After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATZ	Hinemaiaia	0.42	142	P	Pn	23 03 36.5	+0.1
HATZ				S	Sn	23 03 52.5	-0.5
TWVZ	Taurewa	0.57	206	P	Pn	23 03 37.2	+0.1
TWVZ				S	Sn	23 03 53.9	-0.4
WTVZ	West Tongariro	0.57	193	⇑P	Pn	23 03 37.4	+0.3
WTVZ				S	Sn	23 03 54.8	+0.5
NGZ	Ngauruhoe	0.63	191	P	Pn	23 03 37.4	-0.1
WPVZ	Whakapapa	0.67	194	P	Pn	23 03 37.9	+0.2
HIZ	Hauiti	0.71	273	P	Pn	23 03 37.8	-0.2
TUVZ	Tukino	0.71	187	P	Pn	23 03 38.3	+0.3
TUVZ				S	Sn	23 03 55.7	-0.1
FWVZ	Far West T-bar	0.71	193	P	Pn	23 03 38.3	+0.3
DRZ	Dome Shelter	0.73	192	P	Pn	23 03 38.5	+0.4
WNVZ	Wahianoa	0.78	189	⇑P	Pn	23 03 38.7	+0.3
BKZ	Black Stump Fm	0.83	137	P	Pn	23 03 38.9	+0.1
MOVZ	Moawhango	0.85	180	P	Pn	23 03 38.8	-0.1
VRZ	Vera Road	0.96	234	P	Pn	23 03 39.5	-0.3
URZ	Urewera	1.10	75	P	Pn	23 03 40.6	-0.4
RAEZ	Rainy Point	1.29	235	P	Pn	23 03 43.0	+0.3
WAZ	Wanganui	1.34	207	P	Pn	23 03 42.9	-0.2
MWZ	Matawai	1.41	81	P	Pn	23 03 43.7	-0.1
NEZ	North Egmont	1.48	241	P	Pn	23 03 44.6	+0.1
DFE	Dawson Falls	1.50	239	P	Pn	23 03 45.2	+0.4
TSZ	Takapari Road	1.51	174	P	Pn	23 03 44.6	-0.2
MKAZ	Moumakai	1.52	342	P	Pn	23 03 44.8	-0.2
PKE	Pukeiti	1.52	245	P	Pn	23 03 44.8	-0.2
KNZ	Kokohu	1.56	108	P	Pn	23 03 45.7	+0.3
NWEZ	Newall Road	1.64	244	P	Pn	23 03 46.0	-0.2
PUZ	Puketiti	2.02	77	P	Pn	23 03 50.1	-0.4
MRZ	Mangatainoka R	2.10	184	P	Pn	23 03 50.1	-1.3
MXZ	Matakaoa Point	2.24	64	P	Pn	23 03 52.8	-0.3
KIW	Kapiti Island	2.39	196	P	Pn	23 03 53.0	-1.8
MTW	Mount Morrison	2.60	184	P	Pn	23 03 55.2	-2.2
MRW	Makara Radio	2.79	197	P	Pn	23 03 57.4	-2.3
WEL	Wellington	2.83	195	P	Pn	23 03 57.9	-2.3
PAWZ	Paruwai Farm	2.83	185	P	Pn	23 03 57.9	-2.3
SNZO	South Karori	2.86	196	P	Pn	23 03 58.1	-2.5
MSWZ	Moikau Station	2.88	188	P	Pn	23 03 58.4	-2.4
TCW	Tory Channel	2.88	203	P	Pn	23 03 58.4	-2.5
BHW	Baring Head	2.93	193	P	Pn	23 03 58.8	-2.6
NNZ	Nelson	3.23	214	P	Pn	23 04 02.1	-3.1
QRZ	Quartz Range	3.37	227	P	Pn	23 04 03.5	-3.5
BSWZ	Blackbirch Sta	3.47	204	P	Pn	23 04 05.4	-2.8
THZ	Tophouse	3.88	213	P	Pn	23 04 10.0	-3.5
KHZ	Kahutara	4.21	203	P	Pn	23 04 14.6	-3.2
DSZ	Denniston Nort	4.40	222	P	Pn	23 04 16.1	-4.2
LTZ	Lake Taylor	4.98	211	P	Pn	23 04 23.7	-4.3
CRLZ	Canterbury Las	5.54	204	P	Pn	23 04 30.6	-4.8
MQZ	McQueen's Vall	5.65	204	P	Pn	23 04 31.5	-5.3
WVZ	Waitaha Valley	5.91	219	P	Pn	23 04 35.0	-5.2
RPZ	Rata Peaks	6.26	213	P	Pn	23 04 40.2	-4.6
FOZ	Fox Glacier	6.78	221	P	Pn	23 04 45.6	-6.2
LBZ	Lake Benmore	7.17	214	P	Pn	23 04 51.6	-5.4
ODZ	Otahua Downs	7.52	209	P	Pn	23 04 56.4	-5.2
JCZ	Jackson Bay	7.62	221	P	Pn	23 04 57.0	-6.0
WKZ	Wanaka	8.04	217	P	Pn	23 05 03.1	-5.4

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*ISCJB **11** 23:30:54.9±1.8, 30N±03×1292E±07, h33^{km}, mb3.8/6, Error ellipse: s-maj=112.3km s-min=11.2km az=154.5*
*NEIC **11** 23:30:57.5±1.4, 273N×12882E, h35^{km}, mb3.9/2, Error ellipse: s-maj=90.2km s-min=7.9km az=65.0*
*IDC **11** 23:30:57.3±1.6, 123N×12523E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.7/17, mbtmp3.8/4, MS3.0/1, Ms1 3.0/1, ms1mx2.2/29, Error ellipse: s-maj=191.8km s-min=20.3km az=65.0*
*DJA **11** 23:30:59, 038S×12469E, h45^{km}, MLv4.0/2*
ISC 11 23:30:57.6±1.9**, 27N**±04×**1289E**±08**, h35**^{km}**, n13,** σ**0**^{s}**48**/12**, mb3.8**/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	13.86	202	LR	LR	23 37 33.6	
	comp=Z,81nm,21.2s,baz=133,slow=35						
WRAB	Tennant Creek	23.16	167	eP	P	23 36 00.9	-0.3
	3.6nm,0.8s,mb3.9						
WRA	Warramunga Arr	23.17	167	P	P	23 36 00.8	-0.4
	3.3nm,0.7s,mb3.9,baz=335,slow=11,SNR=18						
WB2	Warramunga Arr	23.17	167	eP	P	23 36 01.0	-0.3
QIZ	Qiongzhong	24.66	312	P	P	23 36 15.3	0.0
ASAR	Alice Springs	26.70	170	P	P	23 36 34.8	+1.1
	0.7nm,0.3s,mb3.6,baz=344,slow=11,SNR=16						
LSA	Lhasa	44.68	311	P	P	23 39 07.2	-0.1
MKAR	Makanchi Array	59.58	325	P	P	23 40 57.4	-0.4
	0.4nm,0.4s,mb3.8,baz=130,slow=8.0,SNR=7.1						
TKM2	Tokmak 2	61.89	318	eP	P	23 41 13.1	-0.5
EKS2	Erkin-Say	63.01	317	eP	P	23 41 21.6	+0.5
	0.7nm,0.7s,mb3.9						
KURK	Kurchatov	63.72	327	P	P	23 41 26.2	+0.7
	0.7nm,0.6s,mb3.9,baz=127,slow=6.3,SNR=8.8						
KURK	Kurchatov	63.72	327	eP	P	23 41 25.8	+0.2
MALT	Malatya	88.66	308	P	P	23 43 47.5	0.0

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*BJI **11** 23:46:31.0, 6147N×15239W, h88^{km}, mB5.1, mb4.7, Ms4.4, Msz3.8*
*ISCJB **11** 23:46:33.2±0.2, 6174N±003×15167W±006, h104^{km}, mb4.3/40, Error ellipse: s-maj=4.7km s-min=2.7km az=135.1*
*NEIC **11** 23:46:34.1, 6154N×15153W, h101^{km}, mb4.3/14, After AEIC.*
NEIC Felt [III] at Anchorage, Eagle River, Fort Richardson, Palmer and Wasilla; [II] at Elmendorf AFB. Also felt at Chugiak, Girdwood, Tyonek and Willow.
*IDC **11** 23:46:34.5±0.5, 6175N×15171W, h106^{km}±3^{km}, mb3.9/19, mb1 4.0/21, mb1mx4.0/25, mbtmp3.9/21, MS3.0/4, Ms1 3.0/4, ms1mx2.7/36, Error ellipse: s-maj=17.5km s-min=8.2km az=34.0*
ISC 11 23:46:35.2±0.2**, 6178N**±003×**15165W**±006**, h106**^{km}**, h106**^{km}±1.5^{km}**:pP-P, n283,** σ**0**^{s}**73**/283**, mb4.3**/40**, 80C-79D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIB	Fire Island	0.94	130	ePn	Pn	23 46 52.9	-2.4
FIB				S	Sn	23 47 05.5	-5.1
RC01	Rabbit Creek A	1.15	126	P	Pn	23 46 54.2	-3.4
RC01				S	Sn	23 47 09.8	-4.7
PPLA	Purkeypile	1.15	348	P	Pn	23 46 58.5	+0.9
PMR	Palmer	1.21	98	P	Pn	23 46 55.3	-3.1
PMR				S	Sn	23 47 12.3	-3.5
SLKM	Skilak Lake	1.45	151	P	Pn	23 46 56.6	-4.4
TRF	Thorofare Moun	1.79	20	P	Pn	23 47 06.4	+1.2
KTH	Kantishna Hill	1.81	10	P	Pn	23 47 06.7	+1.2
SEW	Seward	1.99	147	P	Pn	23 47 02.9	-5.0
SVW2	Sparrevohn	2.01	252	eP	Pn	23 47 01.1	-6.9
MCK	McKinley	2.32	31	P	Pn	23 47 12.9	+0.8
TT01	Tatalina	2.33	301	P	Pn	23 47 12.1	-0.1
TTA	Tatalina	2.34	301	eP	Pn	23 47 12.2	-0.1
BPAW	Bear Paw Mtn.	2.35	7	P	Pn	23 47 13.0	+0.6
DIV	Divide	2.89	100	P	Pn	23 47 15.7	-3.8
EYAK	Cordova Ski Ar	3.11	111	P	Pn	23 47 19.2	-3.3
HARP	HAARP	3.12	75	P	Pn	23 47 21.5	-1.0
BMRM	Bremner River	3.49	100	P	Pn	23 47 23.2	-4.3
MID	Middleton Isla	3.52	130	P	Pn	23 47 23.1	-4.8
COLA	College	3.55	27	P	Pn	23 47 28.8	+0.5
RAGM	Ragged Mountai	3.66	109	P	Pn	23 47 25.1	-4.7
IL1	Eielson Array	3.69	33	P	Pn	23 47 30.6	+0.4
MENT	Mentasta	3.87	69	eP	Pn	23 47 31.8	-0.8
MENT				eSn	Sn	23 48 16.8	-0.3
KDAK	Kodiak Island	4.04	187	P	Pn	23 47 28.9	-6.0
	24nm,0.3s,baz=36,slow=8.2,SNR=198						
KDAK				S	Sn	23 48 19.3	-1.8
	31nm,0.3s,baz=29,slow=19,SNR=5.7						
KDAK	Kodiak Island	4.04	187	ePn	Pn	23 47 29.0	-5.9
KDAK				eSn	Sn	23 48 09.4	-12
IM3	Indian Mountai	4.32	348	P	Pn	23 47 39.8	+1.1
IMA2	Indian Mountai	4.40	349	eP	Pn	23 47 40.6	+0.9
OHAK	Old Harbor	4.65	191	P	Pn	23 47 37.3	-5.8
BCA3	Beaver Creek A	4.76	70	P	Pn	23 47 43.2	-1.4
COLD	Coldfoot	5.51	6	P	Pn	23 47 56.3	+1.7
DAWY	Dawson	6.05	62	P	Pn	23 48 01.5	-0.4
PNL	Peninsula	6.37	104	P	Pn	23 48 02.5	-3.9
BM3	Burnt Mountain	6.42	25	P	Pn	23 48 07.7	+0.7
HYT	Haines Junctio	6.88	92	ePn	Pn	23 48 11.1	-2.1
HYT				eSn	Sn	23 49 22.1	-7.7
DHAK	Deception Hill	7.17	106	ePn	Pn	23 48 14.4	-2.8
SDPT	Sand Point	7.92	220	ePn	Pn	23 48 26.0	-1.5
SDPT				eSn	Sn	23 49 46.8	-8.6
WHY	Whitehorse	8.17	90	P	Pn	23 48 27.6	-3.1
SKAG	Skagway	8.35	99	eP	Pn	23 48 31.0	-2.2
SIT	Sitka	9.56	112	ePn	Pn	23 48 44.7	-4.9
SIT				eSn	Sn	23 50 17.5	-17
DLBC	Dease Lake	11.28	98	ePn	Pn	23 49 10.2	-2.5
BBB	Bella Bella	15.93	116	P	Pn	23 50 14.0	+1.1
	0.2nm,0.3s,baz=315,slow=16,SNR=2.9						
BBB				S	S	23 53 01.7	-14
	0.6nm,0.3s,baz=4.4,slow=13,SNR=9.6						
ADK	Adak	16.79	245	ePn	Pn	23 50 19.8	-3.8
YKA	Yellowknife Ar	17.18	71	P	Pn	23 50 26.1	-2.1
	0.2nm,0.3s,baz=273,slow=10.0,SNR=3.4						
YKA				pP	pP	23 50 49.3	+1.7
	0.4nm,0.3s,baz=282,slow=10,SNR=4.0						
YKA				PcP	PcP	23 55 04.5	-0.8
	0.2nm,0.3s,baz=275,slow=1.4,SNR=7.0						
YKA				LR	LR	23 57 21.6	
	comp=Z,23nm,20.8s,baz=285,slow=38						
YKA	Yellowknife Ar	17.18	71	P	Pn	23 50 26.1	-2.1
YKA				pP	pP	23 50 49.4	+1.7
YKA				PcP	PcP	23 55 04.5	-0.8
YKA				LR	LR	23 57 21.6	
A07A	Ashnola River,	21.58	112	⇑P	P	23 51 16.2	+0.2
	baz=22						
EDM	Edmonton	21.98	95	P	P	23 51 19.0	-1.2
D05A	Enumclaw	22.31	117	⇑P	P	23 51 22.7	-1.0
	baz=22						
C07A	Waterville	22.75	114	⇑P	P	23 51 27.2	-1.1
	baz=23						

A10A Northport 22.89 108 ⇑P P 23 51 28.5 -1.0
baz=23
E05A Randle 22.90 118 ⇓P P 23 51 28.1 -1.6
baz=23
B09A Rice 23.04 110 ⇑P P 23 51 30.5 -0.4
baz=23
C08A Higginbotham F 23.12 112 ⇓P P 23 51 30.3 -1.3
baz=23
F04A Amboy 23.13 120 ⇓P P 23 51 30.9 -0.8
baz=23
A11A Hall Mountain, 23.45 107 ⇓P P 23 51 34.3 -0.3
baz=23
F05A White Salmon 23.57 119 ⇓P P 23 51 35.9 +0.2
baz=24
E07A Sunnyside 23.71 115 ⇓P P 23 51 36.6 -0.4
baz=24
F06A Goldendale 23.95 118 ⇑P P 23 51 39.5 +0.4
baz=24
I02A Mapleton 24.15 125 ⇓P P 23 51 41.3 +0.3
baz=24
H04A Detroit Lake 24.24 121 ⇑P P 23 51 41.4 -0.4
baz=24
G07A Ruggs Ranch, H 24.82 117 ⇓P P 23 51 46.2 -0.8
baz=25
E11A Bogner Ranch, 25.46 111 ⇓P P 23 51 52.5 -0.4
baz=25
HUMO Hull Mountain 25.67 125 *e*P P 23 51 55.7 +0.8
20nm,1.8s,mb4.2
HUMO *ep*P pP 23 52 20.1 +2.1
J05A Fort Rock 25.79 122 ⇓P P **23 51 56.1 +0.2**
baz=26
BMO Blue Mountains 26.16 114 *ep*P pP 23 52 22.4 0.0
F12A Elk City 26.35 111 ⇑P P **23 52 00.3 -0.6**
baz=26
K05A Summer Lake 26.39 122 ⇓P P 23 52 01.8 +0.5
baz=26
YBH Yreka Blue Hor 26.52 126 P P 23 52 02.7 +0.3
1.6nm,0.9s,mb3.5,baz=336,slow=4.4,SNR=10
YBH pP pP 23 52 23.3 -2.4
1.7nm,0.8s,baz=284,slow=2.7,SNR=2.7
YBH LR LR 00 00 24.4
comp=Z,59nm,21.9s,baz=329,slow=31
YBH Yreka Blue Hor 26.52 126 ⇓P P 23 52 02.8 +0.3
baz=26
YBH Yreka Blue Hor 26.52 126 *e*P P 23 52 03.4 +1.0
YBH *ep*P pP 23 52 27.8 +2.2
K06A Valley Falls 26.59 121 ⇑P P 23 52 03.4 +0.3
baz=26
H10A Noah's Angus R 26.61 114 ⇓P P 23 52 03.2 -0.1
baz=26
D15A Lincoln 26.61 106 ⇑P P 23 52 03.0 -0.3
baz=26
F13A Darby 26.74 109 ⇓P P 23 52 03.8 -0.6
baz=27
M02C Callahan 26.75 126 ⇓P P 23 52 04.9 +0.3
baz=27
M04C Macdoel 26.81 124 ⇓P P 23 52 05.7 +0.6
baz=27
L05A Lakeview 26.98 123 ⇑P P 23 52 07.0 +0.4
baz=27
N02C Big Bar 27.07 128 ⇓P P 23 52 06.8 -0.7
baz=27
K07A Rock Creek Ran 27.09 120 ⇑P P 23 52 07.9 +0.3
baz=27
EGMT Eagleton 27.17 101 *e*P P 23 52 07.8 -0.4
8.6nm,0.9s,mb4.3
EGMT *ep*P pP 23 52 31.9 +0.4
G13A Cobalt 27.32 110 ⇓P P 23 52 09.3 -0.3
baz=27
MOD Modoc 27.32 122 ⇓P P 23 52 09.8 +0.2
baz=27
MOD Modoc 27.32 122 *e*P P 23 52 10.2 +0.6
K08A Mann Creek Ran 27.37 119 ⇑P P 23 52 10.6 +0.5
baz=27
M05C Lookout 27.44 124 ⇓P P 23 52 10.9 +0.2
baz=27
H12A Diamond D Ranc 27.47 112 ⇓P P 23 52 11.5 +0.5
baz=27
F15A Butte 27.53 107 ⇓P P 23 52 10.8 -0.7
baz=28
WVOR Wild Horse Val 27.56 119 *e*P P 23 52 12.3 +0.6
5.2nm,0.9s,mb4.1
WDC Whiskeytown Da 27.57 127 ⇓P P 23 52 11.8 -0.1
baz=28
L07A Adell 27.61 121 ⇑P P 23 52 12.7 +0.5
baz=28
K09A Rome 27.72 118 ⇑P P 23 52 13.2 0.0
baz=28
O02C Red Bluff 27.83 128 ⇓P P 23 52 13.8 -0.4
baz=28
M06C Likely Place G 27.84 123 ⇓P P 23 52 14.8 +0.6
baz=28
L08A Fields 27.88 119 ⇓P P 23 52 14.8 +0.2
baz=28,SNR=11
PETK Petropavlovsk- 27.92 275 P P 23 52 15.0 +0.2
2.6nm,0.7s,mb3.9,baz=71,slow=12,SNR=4.2
PETK LR LR 00 04 44.3
comp=Z,23nm,18.2s,baz=204,slow=39
PETK Petropavlovsk- 27.92 275 P P 23 52 15.0 +0.2
PETK LR LR 00 04 44.3
MFID Camas Ranch 27.95 114 ⇓P P 23 52 15.3 +0.1
baz=28
K10A MacKenzie Ranc 28.01 117 ⇓P P 23 52 15.5 -0.3
baz=28
H14A Leadore 28.08 110 ⇑P P 23 52 16.0 -0.4
baz=28
M07A Soldier Meadow 28.21 121 ⇓P P 23 52 18.0 +0.5
baz=28
ELFS Eagle Lake Fie 28.24 124 ⇓P P 23 52 18.5 +0.7
baz=28
I13A Wildhorse Cree 28.30 112 ⇓P P 23 52 17.9 -0.4
baz=28,SNR=11
GASB Alder Springs 28.31 128 ⇑P P 23 52 19.0 +0.5
baz=28
K11A Parker Ranch, 28.38 116 ⇑P P 23 52 19.1 +0.1
baz=28
HLID Hailey 28.44 113 ⇓P P 23 52 19.7 0.0
baz=28
N06A Buffalo Meadow 28.48 123 ⇑P P 23 52 20.2 +0.2
baz=28
L10A Juniper Basin 28.76 117 ⇓P P 23 52 22.6 +0.2
baz=29
L11A Cat Creek Ranc 28.99 116 ⇑P P 23 52 24.9 +0.5
baz=29
J14A Carey 29.03 112 ⇑P P 23 52 25.0 +0.2
baz=29
BEKR Beckwourth 29.03 125 ⇑P P 23 52 24.8 0.0
baz=29
N08A GE Springer Mi 29.14 121 P P 23 52 26.1 +0.2
baz=29,SNR=8.2
M10A I.L. Ranch, Tu 29.19 118 ⇓P P 23 52 26.7 +0.4
baz=29
L12A House Creek Ra 29.32 115 ⇓P P 23 52 27.9 +0.5
baz=29
N09A Rock Creek Ran 29.33 120 ⇑P P 23 52 27.9 +0.4
baz=29
P05C Yuba Gap, Truc 29.42 125 ⇑P P 23 52 28.1 -0.2
baz=29
O08A Rochester Mine 29.55 121 ⇑P P 23 52 29.7 +0.3
baz=29,SNR=5.1
IMW Indian Meadow 29.73 108 *e*P P 23 52 32.1 +1.1
5.7nm,0.8s,mb4.2
IMW *ep*P pP 23 52 56.5 +2.1
WCN Washoe City 29.75 124 ⇓P P 23 52 31.5 +0.2
baz=30
K14A Jones Ranch, D 29.80 112 ⇑P P 23 52 32.5 +0.8
baz=30
J16A Bone 29.91 110 ⇑P P 23 52 32.8 +0.2
baz=30
M12A Wells 29.96 116 ⇓P P 23 52 33.2 +0.1
baz=30
RRI2 Red Ridge 29.99 109 *e*P P 23 52 34.1 +0.8
4.3nm,0.8s,mb4.1
TPAW Teton Pass 30.04 109 *e*P P 23 52 34.8 +1.0
O09A Fish Creek Ran 30.05 120 ⇑P P 23 52 34.1 +0.3
baz=30
R05C Kirkwood Meado 30.14 125 ⇑P P 23 52 34.3 -0.4
baz=30
M13A Montello 30.33 115 ⇓P P 23 52 36.7 +0.4
baz=30
N12A Clover Valley, 30.38 117 ⇓P P 23 52 37.3 +0.6
baz=30
ELK Elko 30.38 117 P P 23 52 37.4 +0.7
4.0nm,0.8s,mb4.1,baz=315,slow=8.4,SNR=17
ELK Elko 30.38 117 P P 23 52 37.4 +0.7
R06C Coleville 30.54 125 ⇑P P 23 52 38.4 +0.1
baz=30
M14A Sheep Mountain 30.57 114 ⇓P P 23 52 39.1 +0.7
baz=30
O11A Cowboy Ranch, 30.71 118 ⇑P P 23 52 40.2 +0.5
baz=31
Q08A Gabbs 30.86 122 ⇑P P 23 52 41.3 +0.3
baz=31
S06C San Francisco 30.95 126 ⇓P P 23 52 41.7 -0.1
baz=31
M15A Larsen Ranch, 31.00 113 ⇓P P 23 52 42.5 +0.3
baz=31
NVAR Mina Array Bea 31.08 123 P P 23 52 43.1 +0.2
2.4nm,0.6s,mb4.1,baz=317,slow=9.6,SNR=22
NVAR pP pP 23 53 05.7 -0.7
1.7nm,0.7s,baz=305,slow=9.9,SNR=5.8
NVAR PcP PcP 23 55 35.5 -0.3
2.1nm,0.7s,baz=280,slow=2.9,SNR=12
NVAR Mina Array Bea 31.08 123 P P **23 52 43.1 +0.2**
NVAR pP pP 23 53 05.7 -0.7
NVAR PcP PcP 23 55 35.5 -0.3
R07C Lee Vining 31.08 125 ⇓P P 23 52 43.6 +0.6
baz=31
P11A Circle Ranch, 31.16 119 ⇓P P 23 52 44.0 +0.3
baz=31
PACP Pacheco Peak 31.17 129 ⇓P P 23 52 43.4 -0.4
baz=31
N14A Grayback Hills 31.17 114 ⇑P P 23 52 43.8 +0.1
baz=31
PDAR Pinedale Array 31.24 108 P P 23 52 44.2 -0.1
1.1nm,0.5s,mb3.8,baz=326,slow=4.3,SNR=7.3
PDAR pP pP 23 53 07.2 -0.6
1.0nm,0.5s,baz=307,slow=8.4,SNR=3.6
PDAR PcP PcP 23 55 35.1 -1.0
1.8nm,0.8s,baz=11,slow=0.8,SNR=6.6
N15A Stansbury Isla 31.43 113 ⇑P P 23 52 46.4 +0.4
baz=31
M16A Huntsville 31.48 112 ⇓P P 23 52 46.9 +0.5
baz=31
Q10A Clear Creek Ra 31.51 120 ⇓P P 23 52 47.1 +0.4
baz=31
P12A McGill 31.58 118 ⇓P P 23 52 47.6 +0.2
baz=32
R09A Tonopah 31.73 122 ⇑P P 23 52 48.7 0.0
baz=32,SNR=7.3
Q11A Duckwater 31.80 119 ⇓P P 23 52 49.6 +0.3
baz=32
S08C White Mtn Res 31.93 124 ⇑P P 23 52 50.9 +0.4
baz=32
P13A Bates Ranch, G 31.97 117 ⇓P P 23 52 50.8 0.0
baz=32
Q12A Willow Creek R 31.98 118 ⇓P P 23 52 51.4 +0.6
baz=32
R10A Warm Springs 32.01 121 ⇑P P 23 52 51.5 +0.5
baz=32
S09A Goldfield 32.12 123 ⇓P P 23 52 51.8 -0.2
baz=32,SNR=6.5
S10A Tonopah Range, 32.20 122 ⇑P P 23 52 52.6 -0.2
baz=32,SNR=7.0
ULM Lac du Bonnet 32.20 85 P P 23 52 52.5 -0.1
5.8nm,0.6s,mb4.5,baz=296,slow=8.4,SNR=6.5
ULM pP pP 23 53 15.0 -1.2
5.4nm,0.8s,baz=296,slow=11,SNR=4.1
ULM PcP PcP 23 55 36.1 -2.5
2.1nm,0.8s,baz=332,slow=3.8,SNR=4.4
P14A Drum Mountains 32.26 115 ⇓P P 23 52 53.2 -0.1
baz=32,SNR=5.6
N18A Larsen Ranch, 32.62 110 ⇓P P 23 52 56.4 +0.1
baz=32
Q14A Sevier Lake (B 32.68 116 ⇓P P 23 52 56.7 -0.2
baz=33
RSSD Black Hills 32.74 100 *e*P P 23 52 57.7 +0.3
4.4nm,0.4s,mb4.6
O17A Robinson Place 32.78 112 ⇑P P 23 52 58.9 +1.1
baz=33,SNR=5.8
N19A John Jarvie Ra 32.91 110 ⇑P P 23 52 59.0 +0.1
baz=33
S12A Delamar Landin 33.18 120 ⇑P P 23 53 01.6 +0.2
baz=33
T11A Corn Creek, Al 33.34 120 ⇑P P 23 53 03.0 +0.2
baz=33
FURC Furnace Creek, 33.35 123 ⇓P P 23 53 02.9 +0.1
baz=33
O19A Miners Draw (B 33.41 110 ⇓P P 23 53 03.6 +0.3
baz=33
ISA Isabella 33.42 126 ⇓P P 23 53 03.1 -0.3
baz=33
MPMC Manual Prospec 33.45 124 ⇑P P 23 53 04.3 +0.6
baz=33
MSU Marysvale 33.54 116 *e*P P 23 53 04.9 +0.4
PKM Peak Mountain 33.59 128 ⇑P P 23 53 04.8 -0.1
baz=34
U10A Ash Meadows, A 33.60 123 ⇓P P 23 53 04.7 -0.3
baz=34
S13A Holt Ranch, En 33.62 118 ⇑P P 23 53 05.2 +0.1
baz=34,SNR=7.1
ARUT Antelope Range 33.62 118 *e*P P 23 53 05.2 +0.1
SRU San Rafael 33.76 113 ⇑P P 23 53 06.6 +0.2
baz=34,SNR=9.2
Q18A Rafter H Ranch 33.94 113 ⇑P P 23 53 08.5 +0.6
baz=34
P19A Cripple Cowboy 34.02 111 ⇑P P 23 53 08.5 -0.1
baz=34
R16A Teasdale 34.03 115 ⇑P P 23 53 09.3 +0.6
baz=34,SNR=5.9
T13A Saint George 34.07 119 ⇓P P 23 53 09.2 +0.2
baz=34
R17A Hanksville Air 34.26 114 ⇓P P 23 53 10.2 -0.4
baz=34
T14A Hurricane 34.38 118 ⇑P P 23 53 12.0 +0.3
baz=34
GSC Goldstone 34.38 124 ⇓P P 23 53 12.1 +0.4
baz=34
GSC Goldstone 34.38 124 *e*P P 23 53 12.2 +0.4
5.3nm,1.0s,mb4.3
S16A Weppner Ranch, 34.45 116 ⇑P P 23 53 12.6 +0.2
baz=34
U13A Pakoon Wash 34.57 120 ⇑P P 23 53 13.6 +0.3
baz=34
TUQ Turquoise Moun 34.62 123 ⇑P P 23 53 14.3 +0.5
baz=34
T15A Red Dirt Ranch 34.71 117 ⇑P P 23 53 14.9 +0.3
baz=35
V12A Nelson 34.80 121 ⇑P P 23 53 15.2 -0.1
baz=35
S17A Black Ridge (B 34.87 115 ⇓P P 23 53 15.7 -0.2
baz=35
U14A Mt Trumbull 34.89 119 ⇓P P 23 53 16.0 -0.1
baz=35
R19A Curley Farm, L 34.99 112 ⇓P P 23 53 17.0 +0.1
baz=35
V13A Grand Canyon W 35.04 120 ⇓P P 23 53 17.8 +0.4
baz=35,SNR=5.8
S18A Hurst Farm, Bl 35.17 114 ⇑P P 23 53 18.3 -0.2
baz=35
GMRC Granite Mounta 35.29 123 ⇓P P 23 53 19.6 0.0
baz=35
PV01 Paradox Valley 35.43 112 *e*P P 23 53 20.6 -0.1
PV01 *e*PcP PcP 23 55 47.5 -0.5
V14A Boquillas Ranc 35.59 119 ⇑P P **23 53 22.4 +0.2**
baz=36
T18A Mexican Hat 35.69 114 ⇑P P 23 53 22.1 -0.8
baz=36,SNR=8.2
V15A Kaibab Nationa 35.82 118 ⇑P P 23 53 24.5 +0.4
baz=36
BELC Belle Mtn. 35.84 124 ⇓P P 23 53 24.0 -0.3
baz=36
W14A Seligman 35.96 120 ⇑P P 23 53 25.7 +0.4
baz=36,SNR=7.9
IRM Iron Mountain 36.04 123 ⇑P P 23 53 26.4 +0.5
baz=36
X13A Yucca 36.19 121 ⇑P P 23 53 27.4 +0.1
baz=36
T19A Beclabito 36.32 113 ⇑P P 23 53 28.5 +0.2
baz=36
PDMCI Parker Dam,Lak 36.32 122 ⇑P P 23 53 28.6 +0.2
baz=36
BC3 Big Chuckw Mtn 36.36 124 ⇑P P 23 53 28.3 -0.4
baz=36
WUAZ Wupatki 36.42 117 *e*P P 23 53 29.9 +0.8
WUAZ *ep*P pP 23 53 55.1 +2.1
Y12C Blythe 36.65 123 ⇓P P 23 53 31.5 +0.4
baz=36
MONP Monument Peak 36.66 126 ⇑P P 23 53 31.3 +0.1
baz=37
X14A Yava 36.69 120 ⇓P P 23 53 32.0 +0.5
baz=37,SNR=7.3
V18A Ganado 36.87 115 ⇓P P 23 53 33.0 +0.1
baz=37
X15A Humboldt 36.94 119 ⇑P P 23 53 34.4 +0.8
baz=37
SDCO Great Sand Dun 37.12 109 *e*P P **23 53 35.8 +0.7**
GLA Glamis 37.14 124 ⇓P P **23 53 35.4 +0.1**
baz=37
X16A Lo Mia Camp, P 37.33 118 ⇑P P 23 53 37.5 +0.6
baz=37
Y15A Casa Rosa Ranc 37.36 120 ⇑P P 23 53 37.6 +0.5
baz=37,SNR=7.5
X17A Forest Lakes 37.67 118 ⇑P P 23 53 40.6 +0.8
baz=38
X18A Snowflake 37.87 117 ⇑P P 23 53 41.6 +0.2
baz=38
X19A St. Johns 38.23 116 ⇓P P 23 53 44.8 +0.3
baz=38
Y19A Nutrioso 38.65 116 ⇑P P 23 53 48.9 +0.9
baz=39
117A Oracle 39.22 119 ⇓P P 23 53 53.3 +0.6
baz=39
216A Three Points, 39.42 120 ⇑P P 23 53 55.1 +0.7
baz=39
118A Homack Ranch, 39.48 118 ⇑P P 23 53 55.4 +0.5
baz=39
119A Ashpeak Ranch, 39.65 117 ⇓P P 23 53 57.2 +0.8
baz=40
217A Green Valley 39.88 120 ⇓P P 23 53 58.5 +0.3
baz=40
218A Dragoon 40.03 119 ⇑P P 23 53 59.7 +0.2
baz=40
219A White Tail Can 40.34 118 ⇑P P 23 54 02.2 +0.2
baz=40
318A Bisbee 40.52 119 ⇓P P 23 54 03.8 +0.4
baz=40
WMOK Wichita Mounta 42.66 104 *e*P P **23 54 20.3 -0.6**
TXAR Lajitas Array 45.04 114 P P **23 54 40.0 0.0**
2.3nm,0.7s,mb4.0,baz=326,slow=6.5,SNR=18
TXAR PcP PcP 23 56 18.1 -0.9
0.7nm,0.6s,baz=96,slow=1.4,SNR=6.4
OXF Oxford 47.23 95 *e*P P **23 54 56.6 -0.6**
13nm,0.7s,mb4.8
HIA Hailar 47.76 298 *e*P P **23 55 00.4 -0.6**
ARCES ARCESS Array B 48.96 1 P P **23 55 09.5 -0.4**
2.0nm,0.7s,mb4.2,baz=12,slow=6.2,SNR=7.0
ARCES PcP PcP 23 56 31.8 -0.6
4.9nm,0.8s,baz=7.4,slow=3.8,SNR=8.1
TKL Tuckaleechee C 48.97 90 *e*P P **23 55 09.9 -0.6**
CN2 Changchun 49.51 289 *e*P P **23 55 13.4 -1.1**
CN2 *e*AP pP 23 55 39.4 -0.1
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
CN2 AMB AMB
comp=Z,200nm,3.0s
LRAL Lakeview Retre 49.59 94 *e*P P **23 55 13.5 -1.7**
comp=Z,5.3nm,0.8s,mb4.5
KSRS Korea Array 53.44 282 P P **23 55 43.3 -0.5**
comp=Z,3.0nm,0.7s,mb4.5,baz=34,slow=6.5,SNR=11
KSRS pP pP 23 56 09.9 +0.7
comp=Z,3.2nm,0.8s,baz=38,slow=7.2,SNR=5.3
SONM Songino Array 54.28 306 P P **23 55 50.9 +1.1**
comp=Z,11nm,0.8s,mb5.0,baz=32,slow=7.5,SNR=62
ZAA0 Zalesovo Array 56.33 324 *e*P P **23 56 03.5 -0.9**
ZALV Zalesovo Beam 56.33 324 P P **23 56 03.8 -0.6**
comp=Z,3.0nm,0.6s,mb4.5,baz=27,slow=7.1,SNR=18
ZALV pP pP 23 56 29.2 -0.8
comp=Z,1.1nm,0.5s,baz=29,slow=7.0,SNR=3.5
BJI Beijing 56.64 293 P P **23 56 05.9 -0.9**
NOA NORSAR Array B 56.81 10 pP pP 23 56 33.3 +0.1
comp=Z,1.1nm,0.8s,baz=351,slow=6.7,SNR=3.2
HHC Hu-ho-hao-te 57.95 297 *e*P P **23 56 14.7 -1.3**
HHC AP pP 23 56 36.6 -5.1
HHC XP sP 23 56 45.6 -7.8
HHC PCP PcP 23 57 06.7 -0.3
HHC PP PP 23 58 25.2 +0.1
HHC AMB AMB
comp=Z,15nm,0.7s,mb5.1
HHC AMB AMB
comp=Z,98nm,6.4s
HHC LR LR
comp=N,125nm,18.0s
HHC LR LR
comp=E,96nm,16.4s
HHC LR LR
comp=Z,64nm,17.9s
BVAR Borovoye Array 60.80 332 P P **23 56 34.6 -0.8**
comp=Z,1.1nm,0.6s,mb4.1,baz=31,slow=6.9,SNR=9.3
BVAR pP pP 23 57 00.2 -1.1
comp=Z,3.0nm,0.7s,baz=35,slow=8.0,SNR=9.3
KURK Kurchatov 60.93 326 P P **23 56 35.2 -1.1**
comp=Z,1.4nm,0.7s,mb4.1,baz=28,slow=6.5,SNR=6.2
KURK pP pP 23 57 02.5 +0.3
comp=Z,1.5nm,0.5s,baz=28,slow=7.0,SNR=6.2
MKAR Makanchi Array 63.45 322 P P **23 56 52.0 -1.2**
comp=Z,1.0nm,0.7s,mb3.9,baz=51,slow=4.8,SNR=8.4
MKAR pP pP 23 57 18.3 -1.0
comp=Z,1.0nm,0.7s,baz=24,slow=6.8,SNR=4.2
MKAR Makanchi Array 63.45 322 P P **23 56 52.0 -1.2**
MKAR pP pP 23 57 18.3 -0.9
GTA Gaotai 63.95 305 P P **23 56 56.8 +0.2**
GTA AMB AMB
comp=Z,11nm,1.0s,mb4.6
WMQ Urumqi 64.43 316 *e*P P **23 57 02.0 +2.3**
WMQ AP pP 23 57 20.0 -5.8
WMQ AMB AMB
comp=Z,6.0nm,0.7s,mb4.5
LZH Lanzhou 65.20 300 *e*P P **23 57 04.5 -0.3**
LZH AP pP 23 57 31.0 0.0
LZH PCP PcP 23 57 36.8 +0.4
LZH XP sP 23 57 39.1 -3.5
LZH PP PP 23 59 31.1 +2.2
LZH AMB AMB
comp=Z,30nm,1.4s,mb4.9
LZH AMB AMB
comp=Z,60nm,4.0s
CLL Collm 66.60 10 *ep*P pP 23 57 38.0 -1.8
BAIF Baives 66.85 17 *e*P P **23 57 15.2 +0.1**
BAIF *ep*P pP 23 57 41.7 +0.3
ROSF Rostrenen 67.34 22 *e*P P **23 57 17.9 -0.3**
ROSF *ep*P pP 23 57 42.9 -1.7
AKASG Malin Array Be 67.87 359 P P **23 57 20.4 -1.0**
comp=Z,4.8nm,0.5s,mb4.5,baz=6.2,slow=6.0,SNR=17
AKASG pP pP 23 57 48.4 +0.5
comp=Z,2.2nm,0.6s,baz=6.1,slow=5.9,SNR=3.4
CDF Champ du Feu 68.87 15 *e*P P **23 57 27.3 -0.4**
TKM2 Tokmak 2 68.91 325 *e*P P **23 57 28.1 0.0**
comp=Z,1.4nm,0.7s,mb3.9
GERES GERESS Array B 69.10 10 P P **23 57 29.4 +0.2**
comp=Z,0.2nm,0.5s,mb3.2,baz=296,slow=3.7,SNR=5.4
GERES pP pP 23 57 54.8 -0.9
comp=Z,0.6nm,0.6s,baz=316,slow=3.7,SNR=4.3
GERES LR LR 00 28 54.6
comp=Z,22nm,18.8s,baz=225,slow=37
LOR Lormes 69.53 18 *e*P P **23 57 31.4 -0.5**
MFF Saint Martin d 69.56 21 *e*P P **23 57 31.7 -0.4**
EKS2 Erkin-Say 69.64 326 *e*P P **23 57 32.2 -0.4**
comp=Z,187nm,1.1s
EKS2 *e*PcP PcP 23 57 54.8 -0.1
SSF Saint Saulge 69.69 18 *e*P P **23 57 32.4 -0.4**
comp=Z,7.6nm,1.0s,mb4.2
SSF Saint Saulge 69.69 18 *e*P P **23 57 32.4 -0.4**
comp=Z,3.8nm,1.0s,mb4.2
SSF *ep*P pP 23 57 58.8 -0.5
CD2 Chengdu 69.71 298 *e*P P **23 57 33.2 0.0**
CD2 AP pP 23 57 54.2 -5.6
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CD2 AMB AMB
comp=Z,20nm,4.5s
AVF Avril sur Loir 69.93 18 *e*P P **23 57 33.5 -0.8**
AVF *ep*P pP 23 58 00.0 -0.8
SMF Signal de Mont 70.14 18 *e*P P **23 57 35.0 -0.6**
comp=Z,7.2nm,0.8s,mb4.2
SMF Signal de Mont 70.14 18 *e*P P **23 57 35.0 -0.6**
comp=Z,3.6nm,0.8s,mb4.2
AML Almayashu 70.16 326 *e*P P **23 57 36.1 +0.3**
comp=Z,3.0nm,0.6s,mb4.3
AML *e*PcP PcP 23 58 01.0 +3.9
CABF La Chapelle 70.49 16 *e*P P **23 57 37.6 -0.1**
BUR08 Bucovina Ar. S 70.90 2 *e*P P **23 57 39.9 -0.3**
BUR08 *e*PcP PcP 23 58 02.1 +2.0
BURAR Bucovina Array 70.93 2⇑*i*P P **23 57 40.1 -0.3**
DRGR 71.69 4⇓*i*P P **23 57 45.2 +0.3**
VRI Vrincioaia 72.70 1⇑*i*P P **23 57 50.2 -0.8**
ETSF Etsaut 73.09 22 *e*P P **23 57 53.4 +0.1**
comp=Z,5.9nm,0.8s,mb4.2
ETSF Etsaut 73.09 22 *e*P P **23 57 53.4 +0.1**
comp=Z,3.0nm,0.8s,mb4.2
GZR Gura Zlata 73.09 4⇓*i*P P **23 57 54.0 +0.7**
HARR Harsova 73.89 0⇑*i*P P **23 57 58.1 +0.1**

KIV	**Kislovodsk**	**73.98**	**349**	*eP*		**P**	**23 57 57.1**	**-1.4**
KMI	**Kunming**	**75.20**	**295**	P		**P**	**23 58 07.7**	**+1.8**
KMI				AP		pP	23 58 31.1	-1.6
KMI				AMB		AMB		
	comp=Z,6.0nm,0.8s,mb4.4							
ESDC	**Sonseca Array**	**75.56**	**25**	P		**P**	**23 58 08.0**	**+0.3**
	comp=Z,1.5nm,0.8s,mb3.8,baz=336,slow=5.3,SNR=8.1							
ESDC				pP		pP	23 58 34.4	-0.2
	comp=Z,4.5nm,0.8s,baz=342,slow=5.3,SNR=10							
KEST	**Kesra**	**81.61**	**16**	P		**P**	**23 58 41.0**	**+0.1**
	comp=Z,1.1nm,0.9s,mb3.7,baz=312,slow=5.6,SNR=4.7							
KEST				pP		pP	23 59 09.2	+0.9
	comp=Z,1.8nm,0.8s,baz=319,slow=3.4,SNR=4.2							
CMAR	**Chiang Mai Arr**	**82.71**	**296**	P		**P**	**23 58 45.6**	**-1.3**
	comp=Z,4.3nm,0.9s,mb4.3,baz=9.3,slow=5.8,SNR=16							
CMAR				pP		pP	23 59 12.4	-1.8
	comp=Z,2.5nm,0.6s,baz=6.7,slow=5.7,SNR=3.4							
KMBO	**Kilima Mbogo**	**119.13**	**350**	PKP		PKPdf	00 05 10.5	-1.0
	comp=Z,0.7nm,0.5s,baz=64,slow=22,SNR=4.5							
LBTB	**Lobatse**	**143.20**	**4**	PKP		PKPdf	00 05 52.7	-3.5
	comp=Z,3.6nm,0.6s,baz=145,slow=2.9,SNR=11							
LBTB				pPKP		pPKPdf	00 06 23.0	-2.1
	comp=Z,5.3nm,0.9s,baz=235,slow=2.0,SNR=2.8							
LBTB	**Lobatse**	**143.20**	**4**	PKP		PKPdf	00 05 52.7	-3.5
LBTB				pPKP		pPKPdf	00 06 23.0	-2.1
CASY	**Casey**	**146.18**	**226**	*eP*		PKPdf	00 05 58.7	-1.3
BOSA	**Boshof**	**146.77**	**5**	PKPbc		PKPbc	00 06 03.5	-0.7
	comp=Z,9.6nm,0.9s,baz=159,slow=3.7,SNR=8.6							
BOSA				pPKPbc		pPKPbc	00 06 31.0	-1.7
	comp=Z,8.6nm,1.0s,baz=332,slow=5.7,SNR=2.8							
QSPA	**South Pole Qui**	**151.59**	**180**	PKP		PKPdf	00 06 05.5	-2.9
	comp=Z,3.0nm,1.0s,baz=268,slow=5.4,SNR=4.8							
QSPA				PKPbc		PKPbc	00 06 13.2	-1.5
	comp=Z,11nm,0.6s,baz=2.1,slow=0.4,SNR=101							
SYO	**Syowa Base**	**171.38**	**208**⇑	*eP*		PKPab	00 07 44.5	-5.9

ATH **12** *00:22:07.7,3651N×2572E,h5km, MD3.2/8*
NEIC **12** *00:22:07.8,3653N×2570E,h4km, MD3.2(ATH), ML2.8(THE), After ATH.*
ISCJB **12** *00:22:08.0±0.5,3658N±002×2569E±004,h12km±4km, Error ellipse: s-maj=5.6km s-min=4.0km az=14.3*
THE **12** *00:22:08.7,3662N×2564E,h2km, ML2.8*
CSEM **12** *00:22:09.0±0.1,3652N×2570E,h15km, ML2.8, Error ellipse: s-maj=3.0km s-min=2.1km az=44.0*

ISC 12 00:22:08.3±0.5, 3658N±003×2569E±004, h14km±4km, n35, σ0s98/52, 1C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR4	**Thira Island,**	**0.26**	**244**	*eP*g	**Pg**	**00 22 13.9**	**+0.1**
THR4				*eS*g	**Sg**	**00 22 17.6**	**0.0**
THR4	**Thira Island,**	**0.26**	**244**	*eP*g	**Pg**	**00 22 13.9**	**+0.1**
THR4				*eS*g	**Sg**	**00 22 17.6**	**0.0**
SANT	**Santorini**	**0.27**	**222**	*eP*g	**Pg**	**00 22 14.2**	**+0.1**
SANT				*eS*g	**Sg**	**00 22 18.2**	**+0.2**
SANT	**Santorini**	**0.27**	**222**	*eP*	**Pg**	**00 22 14.1**	**0.0**
SANT	**Santorini**	**0.27**	**222**	*eP*g	**Pg**	**00 22 14.2**	**+0.1**
SANT				*eS*g	**Sg**	**00 22 18.2**	**+0.2**
SANT	**Santorini**	**0.27**	**222**	*eP*	**Pg**	**00 22 14.1**	**+0.1**
SANT				*eS*	**Sg**	**00 22 17.2**	**-0.8**
THR1	**Thera Island**	**0.27**	**222**	*eP*g	**Pg**	**00 22 14.2**	**+0.1**
THR1				*eS*g	**Sg**	**00 22 18.5**	**+0.5**
THR3	**Thira Island,**	**0.28**	**234**	*eP*g	**Pg**	**00 22 14.4**	**+0.1**
THR5	**Thira Island,**	**0.32**	**240**	*eP*g	**Pg**	**00 22 14.9**	**+0.2**
THR5				*eS*g	**Sg**	**00 22 19.9**	**+0.8**
THR5	**Thira Island,**	**0.32**	**240**	*eP*g	**Pg**	**00 22 14.9**	**+0.1**
THR5				*eS*g	**Sg**	**00 22 20.0**	**+0.8**
THR6	**Thira Island,**	**0.32**	**227**	*eP*g	**Pg**	**00 22 15.2**	**+0.3**
THR6				*eS*g	**Sg**	**00 22 20.8**	**+1.5**
APE	**Apeiranthos**	**0.51**	**346**	*eP*g	**Pg**	**00 22 17.5**	**-0.9**
APE				*eS*g	**Sg**	**00 22 25.0**	**-0.1**
APE	**Apeiranthos**	**0.51**	**346**⇑	*i*PB	**Pb**	**00 22 17.6**	**-1.4**
APE	**Apeiranthos**	**0.51**	**346**⇑	*i*Pg	**Pg**	**00 22 17.4**	**-0.9**
APE				S	**Sg**	**00 22 25.0**	**-0.1**
NPS	**Neapolis**	**1.31**	**183**	*eP*B	**Pb**	**00 22 31.5**	**-1.1**
NPS	**Neapolis**	**1.31**	**183**	*eP*g	**Pg**	**00 22 31.8**	**-1.7**
SMG	**Samos**	**1.46**	**39**	*eP*B	**Pb**	**00 22 36.2**	**+1.1**
BDRM	**Kayabasi**	**1.49**	**70**	*i* P	**Pn**	**00 22 36.9**	**+2.3**
ZKR	**Zakros**	**1.52**	**163**	*eP*g	**Pg**	**00 22 35.6**	**-1.9**
ZKR				*eS*g	**Sg**	**00 22 58.2**	**+1.0**
KARP	**Karpathos**	**1.57**	**130**	*eP*B	**Pb**	**00 22 36.2**	**-0.9**
GCAM	**G?zelcaml?**	**1.67**	**47**	*i* P	**Pn**	**00 22 40.6**	**+3.5**
GCAM	**G?zelcaml?**	**1.67**	**47**	*i* P	**Pn**	**00 22 40.6**	**+3.6**
GCAM				*eS*	**Sn**	**00 23 04.4**	**+6.2**
VAM	**Vamos**	**1.68**	**226**	*eP*B	**Pb**	**00 22 39.0**	**+0.1**
SIVA	**Sivas**	**1.71**	**205**	*eP*B	**Pb**	**00 22 38.8**	**-0.6**
SIVA				*eS*b	**Sb**	**00 23 01.8**	**+1.1**
KARN	**Karanos**	**1.85**	**231**	*eP*b	**Pb**	**00 22 40.0**	**-1.8**
KARN				*eS*b	**Sb**	**00 23 04.5**	**-0.4**
KARN	**Karanos**	**1.85**	**231**	*eP*b	**Pb**	**00 22 40.0**	**-1.9**
KARN				*eS*b	**Sb**	**00 23 04.5**	**-0.3**
KVR	**Kavouri**	**1.98**	**310**	*eP*N	**Pn**	**00 22 45.5**	**+4.2**
KVR	**Kavouri**	**1.98**	**310**	*eP*n	**Pn**	**00 22 42.5**	**+1.2**
AYDN	**Tasoluk**	**2.06**	**58**	*i* P	**Pn**	**00 22 42.9**	**+0.5**
ATH	**Athens Observa**	**2.10**	**312**	*eP*N	**Pn**	**00 22 47.0**	**+4.0**
ATH	**Athens Observa**	**2.10**	**312**	*eP*g	**Pg**	**00 22 47.6**	**-1.0**
NAIG	**Nisos Aigina**	**2.12**	**305**	*eP*N	**Pn**	**00 22 47.8**	**+4.6**
DID	**Didima**	**2.17**	**296**	*eP*n	**Pn**	**00 22 44.0**	**+0.1**
DID				*eS*n	**Sn**	**00 23 10.7**	**+0.2**
KDAG	**Bornova**	**2.21**	**34**	*i* P	**Pn**	**00 22 49.5**	**+4.9**
VLI	**Veliai**	**2.22**	**275**	*eP*n	**Pn**	**00 22 44.5**	**0.0**

ISK **12** *00:43:56.5,3964N×2761E,h11km, MD2.9*
CSEM **12** *00:43:56.4±0.1,3964N×2762E,h12km, MD2.9, Error ellipse: s-maj=1.6km s-min=1.3km az=82.0*
ISCJB **12** *00:43:57.2±0.4,3966N±003×2762E±004,h11km±4km, Error ellipse: s-maj=5.4km s-min=4.6km az=34.6*
DDA **12** *00:43:58.0,3961N×2763E,h7km±1km, Md2.9*

ISC 12 00:43:57.5±0.4, 3965N±003×2763E±004, h14km±4km, n21, σ0s58/28, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.09**	**355**⇑	*i*P	**Pg**	**00 44 01.0**	**+0.6**
BALY				*i* S	**Sg**	**00 44 03.4**	**+0.8**
BALB	**Balikesir**	**0.20**	**94**	PG	**Pg**	**00 44 01.5**	**-0.4**
BALB				SG	**Sg**	**00 44 04.9**	**-0.1**
DURS	**Dursunbey**	**0.66**	**94**	*i* P	**Pg**	**00 44 09.8**	**-0.4**
DURS				*i* S	**Sg**	**00 44 19.0**	**+0.1**
EDC	**Edincik**	**0.71**	**15**	*eP*G	**Pg**	**00 44 10.8**	**-0.6**
EDC				*eSG*	**Sg**	**00 44 21.4**	**+0.6**
BNT	**Bandirma**	**0.74**	**18**	*eP*G	**Pg**	**00 44 11.5**	**-0.3**
DST	**Dursunbey**	**0.77**	**93**	*eP*G	**Pg**	**00 44 11.8**	**-0.7**
AKHS	**Akhisar**	**0.79**	**169**	*i* P	**Pg**	**00 44 12.5**	**-0.3**
AKHS				*i* S	**Sg**	**00 44 23.4**	**+0.3**
AKS	**Akhisar**	**0.79**	**169**	*eP*G	**Pg**	**00 44 11.9**	**-0.8**
AYVA	**Ayvalik**	**0.80**	**245**	*i* P	**Pg**	**00 44 13.4**	**+0.3**
AYVA				*i* S	**Sg**	**00 44 24.6**	**+1.0**
KCT	**Karacabey**	**0.83**	**42**	*eP*G	**Pg**	**00 44 13.2**	**-0.4**
MRMT	**Marmara Adasi**	**0.95**	**358**	*eP*G	**Pg**	**00 44 15.5**	**-0.3**
LPK	**Lapseki**	**0.98**	**317**	*eP*G	**Pg**	**00 44 15.6**	**-0.8**
EZN	**Ezine**	**1.02**	**280**	*eP*G	**Pg**	**00 44 16.7**	**-0.4**
DEMI	**Demirci**	**1.04**	**126**	*i* P	**Pb**	**00 44 17.6**	**+0.4**
DEMI				*i* S	**Sb**	**00 44 31.8**	**+1.1**
RKY	**Sarkoy-Tekirda**	**1.09**	**342**	*eP*N	**Pn**	**00 44 18.1**	**-0.2**
MFT	**Murefte**	**1.16**	**347**	*eP*N	**Pn**	**00 44 19.6**	**+0.3**
IZM	**Izmir**	**1.29**	**193**	*eP*N	**Pn**	**00 44 20.3**	**-0.7**
BLCB	**Balcova**	**1.35**	**200**	*eP*N	**Pn**	**00 44 21.1**	**-0.7**
KULA	**Kula-Manisa**	**1.39**	**144**	*eP*N	**Pn**	**00 44 23.1**	**+0.6**
ENEZ	**Enez**	**1.56**	**314**	*eP*N	**Pn**	**00 44 24.9**	**+0.1**
YLV	**Yalova**	**1.62**	**55**	*eP*N	**Pn**	**00 44 26.6**	**+1.0**

ISCJB **12** *00:52:29.5±0.6,5134N±007×17901E±004,h39km±4km, mb4.2/26,MS3.3/8, Error ellipse: s-maj=11.8km s-min=4.2km az=3.8*
MOS **12** *00:52:29.8±0.8,5132N×17905E,h45km,mb4.4/17, Error ellipse: s-maj=13.2km s-min=11.8km az=23.9*
NEIC **12** *00:52:29.9±0.8,5118N×17901E,h36km±6km, mb4.4/11, ML4.0(PMR), ML4.1(AEIC), Error ellipse: s-maj=12.1km s-min=5.2km az=175.0*
IDC **12** *00:52:36.8±4.9,5132N×17903E,h95km±44km, mb3.8/14, mb1 4.0/15,mb1mx3.8/26,mbtmp3.8/15,MS3.3/9, Ms1 3.3/9,ms1mx3.1/35, Error ellipse: s-maj=23.7km s-min=12.5km az=168.0*

ISC 12 00:52:30.2±0.8, 5127N±007×17900E±004, h31km±4km,

n224, σ0s60/221, mb4.2/26, MS3.3/8, 73C-67D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.22**	**61**	P	**Pb**	**00 52 35.9**	**-0.7**
AMKA				S	**Sb**	**00 52 41.2**	**+0.2**
ADK	**Adak**	**2.76**	**76**	P	**Pn**	**00 53 12.7**	**+0.4**
ADK				S	**Sn**	**00 53 46.0**	**+1.5**
SMY	**Shemya**	**3.36**	**298**	*e*Pn	**Pn**	**00 53 21.8**	**+1.3**
SMY				*e*Sn	**Sn**	**00 53 59.3**	**0.0**
FX1	**Attu Island--F**	**3.94**	**296**	P	**Pn**	**00 53 29.5**	**+1.0**
NIKO	**Nikolski**	**7.67**	**72**	*e*Pn	**Pn**	**00 54 17.8**	**-1.9**
UNV	**Unalaska Valle**	**9.20**	**68**	*e*Pn	**Pn**	**00 54 40.4**	**-0.2**
UNV				*e*Sn	**Sn**	**00 56 22.3**	**-0.6**
SDPT	**Sand Point**	**12.92**	**64**	*e*Pn	**Pn**	**00 55 31.5**	**+0.1**
PETK	**Petropavlovsk-**	**13.19**	**286**	P	**Pn**	**00 55 39.9**	**+4.8**
	0.3nm,0.3s,baz=91,slow=18,SNR=6.7						
PETK				LR	LR	01 00 37.0	
	comp=Z,63nm,21.8s,baz=276,slow=36						
KDAK	**Kodiak Island**	**17.64**	**57**	*e*Pn	**Pn**	**00 56 30.7**	**-2.6**
	58nm,1.6s						
TT01	**Tatalina**	**17.74**	**39**	P	**Pn**	**00 56 35.5**	**+1.0**
BILL	**Bilibino**	**17.93**	**344**	*e*P	**Pn**	**00 56 41.0**	**+4.2**
BILL				pmax	pmax		
	comp=Z,16nm,1.0s						
RC01	**Rabbit Creek A**	**19.79**	**48**	*e*P	**Pn**	**00 56 57.8**	**-1.4**
	comp=Z,4μm,1.2s						
KTH	**Kantishna Hill**	**20.10**	**41**	*e*P	**P**	**00 57 01.7**	**+0.8**
	comp=Z,21nm,0.9s						
PMR	**Palmer**	**20.21**	**47**	*e*P	**P**	**00 57 02.5**	**+0.4**
BPAW	**Bear Paw Mtn.**	**20.30**	**39**	*e*P	**P**	**00 57 03.8**	**+0.7**
	comp=Z,4.5nm,0.7s						
DIV	**Divide**	**21.67**	**49**	*e*P	**P**	**00 57 17.2**	**-0.7**
COLA	**College**	**21.85**	**39**	*e*P	**P**	**00 57 19.9**	**+0.1**
COLD	**Coldfoot**	**22.07**	**32**	*e*P	**P**	**00 57 23.8**	**+1.8**
	comp=Z,5.0nm,1.0s,mb3.9						
MENT	**Mentasta**	**23.00**	**45**	P	**P**	**00 57 31.3**	**-0.7**
YSS	**Yuzh-Sakhalins**	**23.95**	**274**	*e*P	**P**	**00 57 41.8**	**+0.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.1						
DAWY	**Dawson**	**25.13**	**43**	*e*P	**P**	**00 57 51.4**	**-0.5**
ASAJ	**Asahikawa**	**25.32**	**268**	P	**P**	**00 57 55.1**	**+1.3**
	comp=Z,8.0nm,0.7s,mb4.4,baz=94,slow=7.0,SNR=5.9						
ASAJ				LR	LR	01 06 12.0	
	comp=Z,42nm,20.5s,MS2.9,baz=4.3,slow=32						
ASAJ	**Asahikawa**	**25.32**	**268**	P	**P**	**00 57 55.2**	**+1.3**
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ASAJ				MLR	MLR		
	comp=Z,42nm,20.5s						
HYT	**Haines Junctio**	**25.64**	**51**	*e*P	**P**	**00 57 56.6**	**+0.1**
MJAR	**Matsushiro Arr**	**32.41**	**259**	P	**P**	**00 58 57.4**	**+0.3**
	comp=Z,1.1nm,0.3s,mb4.2,baz=57,slow=9.1,SNR=4.1						
MJAR				LR	LR	01 10 26.6	
	comp=Z,62nm,20.5s,MS3.3,baz=145,slow=33						
MAJO	**Matsushiro**	**32.41**	**259**	*e*P	**P**	**00 58 54.1**	**-2.9**
YKA	**Yellowknife Ar**	**36.30**	**46**	P	**P**	**00 59 29.6**	**-0.8**
	comp=Z,1.9nm,0.6s,mb4.2,baz=281,slow=8.2,SNR=6.3						
YKA				LR	LR	01 16 08.0	
	comp=Z,42nm,18.2s,MS3.2,baz=195,slow=39						
YKA	**Yellowknife Ar**	**36.30**	**46**	P	**P**	**00 59 29.6**	**-0.8**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA				MLR	MLR		
	comp=Z,42nm,18.3s						
YKA	**Yellowknife Ar**	**36.30**	**46**	P	**P**	**00 59 29.6**	**-0.9**
YKA				LR	LR	01 16 08.0	
BOD	**Bodaibo**	**36.93**	**306**	*e*P	**P**	**00 59 34.7**	**-1.1**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
C04A	**Brinnon**	**37.02**	**72**	⇑P	**P**	**00 59 37.2**	**+0.5**
	baz=37						
HIA	**Hailar**	**37.04**	**291**	*e*P	**P**	**00 59 38.1**	**+1.3**
D05A	**Enumclaw**	**37.85**	**72**	⇑P	**P**	**00 59 44.0**	**+0.2**
	baz=38						
A07A	**Ashnola River,**	**37.93**	**69**	⇓P	**P**	**00 59 44.2**	**-0.2**
	baz=38						
G03A	**Yamhill**	**38.00**	**76**	⇓P	**P**	**00 59 44.9**	**-0.1**
	baz=38						
F04A	**Amboy**	**38.21**	**74**	⇓P	**P**	**00 59 47.2**	**+0.4**
	baz=38						
KSRS	**Korea Array**	**38.26**	**269**	P	**P**	**00 59 47.7**	**+0.4**
	comp=Z,0.6nm,0.3s,mb3.8,baz=54,slow=8.8,SNR=5.0						
KSRS				LR	LR	01 16 11.2	
	comp=Z,31nm,19.3s,MS3.1,baz=80,slow=37						
KSRS	**Korea Array**	**38.26**	**269**	P	**P**	**00 59 47.7**	**+0.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
KSRS				MLR	MLR		
	comp=Z,31nm,19.3s,MS3.1						
H03A	**Soap Creek Ran**	**38.31**	**77**	⇓P	**P**	**00 59 48.5**	**+0.8**
	baz=38						
B07A	**Winthrop**	**38.36**	**70**	⇓P	**P**	**00 59 48.3**	**+0.2**
	baz=38						
A08A	**Turner Farm, O**	**38.63**	**68**	⇓P	**P**	**00 59 50.7**	**+0.4**
	baz=39						
B08A	**Colville Reser**	**38.87**	**69**	⇑P	**P**	**00 59 52.7**	**+0.3**
	baz=39						
H04A	**Detroit Lake**	**38.99**	**76**	⇓P	**P**	**00 59 53.8**	**+0.5**
	baz=39						
C08A	**Higginbotham F**	**39.31**	**70**	⇑P	**P**	**00 59 56.1**	**+0.1**
	baz=39						
I04A	**Tendick Farm,**	**39.32**	**77**	⇑P	**P**	**00 59 56.3**	**+0.2**
	baz=39						
NEW	**Newport**	**40.21**	**68**	*e*P	**P**	**01 00 02.8**	**-0.7**
YBH	**Yreka Blue Hor**	**40.26**	**80**	LR	LR	01 15 23.2	
	comp=Z,30nm,18.4s,MS3.2,baz=331,slow=34						
YBH	**Yreka Blue Hor**	**40.26**	**80**	⇓P	**P**	**01 00 05.1**	**+1.1**
	baz=40						
J05A	**Fort Rock**	**40.31**	**77**	⇓P	**P**	**01 00 05.3**	**+0.9**
	baz=40						
A11A	**Hall Mountain,**	**40.32**	**67**	⇓P	**P**	**01 00 04.5**	**+0.1**
	baz=40						
N02C	**Big Bar**	**40.41**	**82**	⇓P	**P**	**01 00 05.4**	**+0.2**
	baz=40						
F08A	**Pendleton**	**40.47**	**72**	⇓P	**P**	**01 00 05.2**	**-0.5**
	baz=40						
E09A	**Wood Farm, Sta**	**40.48**	**71**	⇓P	**P**	**01 00 05.5**	**-0.2**
	baz=40						
L04A	**Klamath Falls**	**40.52**	**79**	⇓P	**P**	**01 00 06.3**	**+0.1**
	baz=40						
G08A	**Pilot Rock**	**40.62**	**73**	⇓P	**P**	**01 00 06.9**	**0.0**
	baz=41						
H07A	**Lands Inn, Kim**	**40.63**	**75**	⇑P	**P**	**01 00 07.1**	**+0.1**
	baz=41						
D10A	**Wagner Farm, O**	**40.72**	**70**	⇓P	**P**	**01 00 07.5**	**-0.2**
	baz=41						
M04C	**Macdoel**	**40.77**	**80**	⇑P	**P**	**01 00 09.3**	**+1.1**
	baz=41						
K05A	**Summer Lake**	**40.83**	**78**	⇑P	**P**	**01 00 08.9**	**+0.3**
	baz=41						
M03C	**McCloud**	**40.88**	**80**	⇑P	**P**	**01 00 09.9**	**+0.8**
	baz=41						
I07A	**Izee**	**40.94**	**75**	⇑P	**P**	**01 00 10.0**	**+0.5**
	baz=41						
J06A	**Christmas Vall**	**40.99**	**77**	⇑P	**P**	**01 00 10.4**	**+0.4**
	baz=41						
WDC	**Whiskeytown Da**	**41.02**	**81**	⇓P	**P**	**01 00 10.7**	**+0.4**
	baz=41						
O02C	**Red Bluff**	**41.10**	**82**	⇑P	**P**	**01 00 11.2**	**+0.3**
	baz=41						
E10A	**Myers Farm, Un**	**41.11**	**71**	⇓P	**P**	**01 00 11.2**	**+0.3**
	baz=41						
K06A	**Valley Falls**	**41.18**	**77**	⇑P	**P**	**01 00 11.8**	**+0.3**
	baz=41						
G09A	**Cove**	**41.34**	**73**	⇓P	**P**	**01 00 12.6**	**-0.3**
	baz=41						
M05C	**Lookout**	**41.44**	**80**	⇓P	**P**	**01 00 13.8**	**+0.1**
	baz=41						
I08A	**Drewsey**	**41.60**	**75**	⇑P	**P**	**01 00 14.4**	**-0.6**
	baz=42						
MOD	**Modoc**	**41.65**	**78**	⇓P	**P**	**01 00 15.4**	**0.0**
	baz=42						
G10A	**Bishop Farm, J**	**41.73**	**72**	⇑P	**P**	**01 00 15.7**	**-0.3**
	baz=42,SNR=5.3						
BMO	**Blue Mountains**	**41.85**	**73**	*e*P	**P**	**01 00 17.1**	**+0.1**
D12A	**Red Ives Fores**	**41.85**	**69**	⇓P	**P**	**01 00 16.6**	**-0.4**
	baz=42						
K07A	**Rock Creek Ran**	**41.86**	**77**	⇓P	**P**	**01 00 17.4**	**+0.3**
	baz=42,SNR=6.1						
A14A	**Double T Ranch**	**42.00**	**66**	⇑P	**P**	**01 00 18.0**	**-0.2**
	baz=42						
E12A	**Beaver Dam Sad**	**42.06**	**70**	⇑P	**P**	**01 00 18.8**	**+0.2**
	baz=42						
L07A	**Adell**	**42.18**	**78**	⇑P	**P**	**01 00 19.6**	**-0.1**
	baz=42						
I10A	**Payette**	**42.57**	**74**	⇑P	**P**	**01 00 22.9**	**0.0**
	baz=42						
F12A	**Elk City**	**42.59**	**71**	P	**P**	**01 00 23.4**	**+0.3**
	baz=42,SNR=5.5						
M07A	**Soldier Meadow**	**42.64**	**78**	⇑P	**P**	**01 00 23.8**	**+0.3**
	baz=43,SNR=5.4						
L08A	**Fields**	**42.69**	**77**	⇑P	**P**	**01 00 23.9**	**+0.1**
	baz=43						
H11A	**Donnelly**	**42.70**	**72**	⇓P	**P**	**01 00 23.8**	**-0.1**
	baz=43						
B15A	**Bradely Ranch,**	**42.83**	**66**	⇓P	**P**	**01 00 24.3**	**-0.6**
	baz=43						
D14A	**Greenough**	**42.92**	**68**	⇑P	**P**	**01 00 24.9**	**-0.8**
	baz=43						
O06A	**Flanigan**	**42.95**	**80**	⇑P	**P**	**01 00 26.2**	**+0.2**
	baz=43						
C15A	**Salmond Ranch,**	**43.08**	**67**	⇑P	**P**	**01 00 26.4**	**-0.5**
	baz=43						
N07B	**Gerlach**	**43.12**	**79**	⇑P	**P**	**01 00 27.6**	**+0.2**
	baz=43						
I11A	**Placerville**	**43.17**	**73**	⇓P	**P**	**01 00 27.3**	**-0.5**
	baz=43						
K10A	**MacKenzie Ranc**	**43.26**	**75**	⇓P	**P**	**01 00 28.4**	**-0.1**
	baz=43						
H12A	**Diamond D Ranc**	**43.48**	**72**	⇓P	**P**	**01 00 29.7**	**-0.5**
	baz=43						
D15A	**Lincoln**	**43.51**	**68**	⇑P	**P**	**01 00 30.4**	**0.0**
	baz=43						
O07A	**Toulon**	**43.54**	**80**	⇑P	**P**	**01 00 31.1**	**+0.3**
	baz=44						
G13A	**Cobalt**	**43.55**	**71**	⇑P	**P**	**01 00 31.1**	**+0.2**
	baz=44						
N08A	**GE Springer Mi**	**43.63**	**78**	⇓P	**P**	**01 00 31.7**	**+0.2**
	baz=44						
R05C	**Kirkwood Meado**	**43.67**	**82**	⇓P	**P**	**01 00 32.3**	**+0.4**
	baz=44						
K11A	**Parker Ranch,**	**43.77**	**75**	⇓P	**P**	**01 00 32.8**	**+0.2**
	baz=44						
L10A	**Juniper Basin**	**43.90**	**76**	⇑P	**P**	**01 00 33.5**	**-0.1**
	baz=44						
O08A	**Rochester Mine**	**43.91**	**79**	⇓P	**P**	**01 00 33.6**	**-0.2**
	baz=44						
N09A	**Rock Creek Ran**	**43.97**	**78**	⇑P	**P**	**01 00 34.2**	**0.0**
	baz=44						
J12A	**Stokes Ranch,**	**44.06**	**74**	⇑P	**P**	**01 00 35.1**	**+0.2**
	baz=44						
R06C	**Coleville**	**44.17**	**82**	⇑P	**P**	**01 00 36.5**	**+0.7**
	baz=44						
M10A	**I.L. Ranch, Tu**	**44.18**	**76**	⇓P	**P**	**01 00 35.9**	**0.0**
	baz=44						
I13A	**Wildhorse Cree**	**44.28**	**72**	⇑P	**P**	**01 00 36.2**	**-0.4**
	baz=44,SNR=7.2						
L11A	**Cat Creek Ranc**	**44.28**	**75**	⇑P	**P**	**01 00 36.8**	**+0.1**
	baz=44,SNR=6.3						
HLID	**Hailey**	**44.30**	**73**	⇓P	**P**	**01 00 36.6**	**-0.2**
	baz=44						
HLID	**Hailey**	**44.30**	**73**	*e*P	**P**	**01 00 37.0**	**+0.2**
	comp=Z,3.4nm,0.8s,mb4.1						
S06C	**San Francisco**	**44.31**	**83**	⇓P	**P**	**01 00 37.0**	**0.0**
	baz=44						
H14A	**Leadore**	**44.33**	**71**	⇑P	**P**	**01 00 37.1**	**0.0**
	baz=44						
S05C	**Merced**	**44.34**	**84**	⇓P	**P**	**01 00 36.5**	**-0.7**
	baz=44						
K12A	**Draper Farm, C**	**44.53**	**74**	⇓P	**P**	**01 00 38.9**	**+0.3**
	baz=44						
J13A	**Cove Ranch, Pi**	**44.53**	**73**	⇓P	**P**	**01 00 38.8**	**+0.1**
	baz=44						
G15A	**Dillon**	**44.55**	**70**	⇑P	**P**	**01 00 38.9**	**+0.2**
	baz=44						
O09A	**Fish Creek Ran**	**44.57**	**78**	⇓P	**P**	**01 00 39.6**	**+0.5**
	baz=44						
I14A	**Mackay**	**44.66**	**72**	⇑P	**P**	**01 00 39.5**	**-0.3**
	baz=45						
M11A	**Holland Ranch,**	**44.69**	**76**	⇓P	**P**	**01 00 40.0**	**0.0**
	baz=45						
L12A	**House Creek Ra**	**44.74**	**75**	⇑P	**P**	**01 00 40.5**	**+0.1**
	baz=45,SNR=5.2						
BOZ	**Bozeman (W)**	**44.78**	**69**	*e*P	**P**	**01 00 40.1**	**-0.6**
BOZ				pmax	pmax		
	comp=Z,16nm,1.9s,mb4.5					

baz=47
S12A Delamar Landin 47.58 80 ⇑P P 01 01 03.4 +0.6
baz=48
T11A Corn Creek, Al 47.59 80 ⇓P P 01 01 02.6 -0.2
baz=48,SNR=7.2
BW06 Boulder Array 47.65 71 *e*P **P 01 01 03.2 0.0**
comp=Z,4.2nm,0.8s,mb4.5
PDAR Pinedale Array 47.65 71 P **P 01 01 03.1 -0.1**
comp=Z,3.8nm,0.7s,mb4.6,baz=304,slow=3.9,SNR=28
Q14A Sevier Lake (B 47.69 77 ⇑P P 01 01 03.9 +0.3
baz=48
S13A Holt Ranch, En 48.21 79 ⇑P P 01 01 07.5 -0.2
baz=48
T13A Saint George 48.54 80 ⇑P P 01 01 10.3 +0.1
baz=48
N18A Larsen Ranch, 48.66 73 ⇓P P 01 01 10.7 -0.4
baz=49
U13A Pakoon Wash 48.89 80 ⇑P P 01 01 12.2 -0.7
baz=49
GMRC Granite Mounta 48.89 83 ⇓P P 01 01 12.1 -0.8
baz=49
N19A John Jarvie Ra 49.01 73 ⇓P P 01 01 13.1 -0.6
baz=49
P18A Preston Nutter 49.14 75 ⇓P P 01 01 14.9 +0.1
baz=49
R16A Teasdale 49.23 77 ⇑P P 01 01 15.8 +0.3
baz=49
V13A Grand Canyon W 49.24 81 ⇓P P 01 01 15.8 +0.3
baz=49
SRU San Rafael 49.30 75 ⇓P P 01 01 16.6 +0.6
baz=49
U14A Mt Trumbull 49.37 80 ⇑P P 01 01 17.0 +0.4
baz=49
O19A Miners Draw (B 49.41 73 ⇑P P 01 01 16.2 -0.5
baz=49,SNR=9.5
T15A Red Dirt Ranch 49.48 79 ⇑P P 01 01 18.0 +0.6
baz=49
S16A Weppner Ranch, 49.52 77 ⇓P P 01 01 18.0 +0.3
baz=49
Q18A Rafter H Ranch 49.54 75 ⇓P P 01 01 17.6 -0.2
baz=50
IRM Iron Mountain 49.61 83 ⇑P P 01 01 18.3 -0.2
baz=50
R17A Hanksville Air 49.62 76 ⇑P P 01 01 18.6 +0.1
baz=50
W13A Hualapai Mount 49.78 82 ⇓P P 01 01 19.3 -0.4
baz=50
P19A Cripple Cowboy 49.91 74 ⇑P P 01 01 20.3 -0.2
baz=50
U15A North Rim 49.91 79 ⇑P P 01 01 20.8 +0.1
baz=50,SNR=6.0
V14A Boquillas Ranc 49.92 81 ⇓P P 01 01 21.0 +0.2
baz=50
S17A Black Ridge (B 50.06 77 ⇑P P 01 01 21.6 -0.1
baz=50
X13A Yucca 50.15 82 ⇑P P 01 01 22.4 -0.1
baz=50
Q19A Hogan Spring (50.16 75 ⇑P P 01 01 22.2 -0.4
baz=50
W14A Seligman 50.21 81 ⇑P P 01 01 23.1 +0.1
baz=50
SPITS Spitsbergen Ar 50.38 355 P **P 01 01 22.7 -0.9**
comp=Z,3.1nm,0.5s,mb4.6,baz=98,slow=5.9,SNR=4.6
SPITS Spitsbergen Ar 50.38 355 P **P 01 01 22.7 -1.0**
SPITS pmax pmax
comp=Z,3.0nm,0.5s
V15A Kaibab Nationa 50.38 80 ⇑P P 01 01 24.1 -0.2
baz=50
X15A Humboldt 51.21 81 ⇓P P 01 01 30.3 -0.2
baz=51
Y15A Casa Rosa Ranc 51.50 82 ⇑P P 01 01 32.5 -0.2
baz=51
T19A Beclabito 51.66 77 ⇓P P 01 01 33.9 +0.1
baz=52
X16A Lo Mia Camp, P 51.75 81 ⇑P P 01 01 34.8 +0.3
baz=52
X18A Snowflake 52.60 79 ⇑P P 01 01 40.7 -0.1
baz=52
ZALV Zalesovo Beam 53.09 312 P **P 01 01 43.8 -0.4**
comp=Z,0.9nm,0.6s,mb3.9,baz=31,slow=8.6,SNR=3.4
ZALV Zalesovo Beam 53.09 312 P **P 01 01 43.8 -0.4**
ZALV pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
NVS Novosibirsk 53.26 314 *e*P **P 01 01 44.3 -1.1**
ANMO Albuquerque 54.46 77 *e*P **P 01 01 54.0 -0.5**
ARE0 ARCESS Array S 57.95 349 P **P 01 02 18.6 -0.3**
KURK Kurchatov 58.08 313 *e*P **P 01 02 18.8 -1.3**
KURK pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KURK Kurchatov 58.08 313 *e*P **P 01 02 18.8 -1.3**
comp=Z,2.9nm,0.6s,mb4.5
MK31 Makanchi Array 59.01 307 *e*P **P 01 02 25.8 -0.8**
MKAR Makanchi Array 59.01 307 P **P 01 02 26.0 -0.6**
comp=Z,0.8nm,0.4s,mb4.1,baz=41,slow=5.8,SNR=8.2
MKAR Makanchi Array 59.01 307 *e*P **P 01 02 29.1 +2.5**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
TXAR Lajitas Array 60.03 80 P **P 01 02 33.1 -0.8**
comp=Z,0.5nm,0.7s,mb3.6,baz=296,slow=4.0,SNR=5.6
TXAR Lajitas Array 60.03 80 P **P 01 02 33.2 -0.7**
TXAR pmax pmax
comp=Z,1.0nm,0.7s
GLMI Grayling 60.20 55 *e*P **P 01 02 32.3 -2.5**
ARU Arti 61.95 327 *c*P **P 01 02 41.8 -4.7**
ARU *e*'PP pP 01 02 50.5 -5.5
ARU *e* 01 03 22.0
ARU *e*S **S 01 10 59.8 -8.4**
ARU pmax pmax
comp=Z,13nm,2.5s,mb4.6
AKTO Aktyubinsk 66.96 323 LR LR 01 35 14.0
comp=Z,50nm,19.2s,MS3.8,baz=226,slow=38
NOA NORSAR Array B 67.61 354 P **P 01 03 21.6 -1.7**
comp=Z,0.8nm,0.8s,mb3.8,baz=9.5,slow=6.4,SNR=3.3
NOA NORSAR Array B 67.61 354 *e*P **P 01 03 24.2 +0.9**
NOA pmax pmax
comp=Z,1.0nm,0.9s
NAO01 NORSAR Array S 67.83 354 *e*P **P 01 03 24.1 -0.5**
BUR08 Bucovina Ar. S 78.93 342 *e*P **P 01 04 29.9 -0.4**
WRAB Tennant Creek 80.98 222 *i*P **P 01 04 40.5 -1.0**
WRA Warramunga Arr 80.99 222 P **P 01 04 40.0 -1.7**
comp=Z,1.7nm,0.5s,mb4.2,baz=34,slow=6.2,SNR=9.3
WRA Warramunga Arr 80.99 222 P **P 01 04 40.0 -1.6**
WRA pmax pmax
comp=Z,2.0nm,0.5s
ASAR Alice Springs 84.49 221 P **P 01 04 59.2 -0.5**
comp=Z,1.3nm,0.7s,mb4.2,baz=21,slow=5.5,SNR=13
ASAR Alice Springs 84.49 221 P **P 01 04 59.2 -0.5**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
TORD Torodi Ar. Bea 115.81 357 PKP PKPdf 01 11 07.9 -1.8
comp=Z,0.5nm,1.1s,baz=339,slow=2.3,SNR=7.9
MAW Mawson 145.56 217 PKPbc PKPbc 01 12 02.0 -1.9
comp=Z,0.8nm,0.5s,baz=62,slow=6.9,SNR=6.4
MAW Mawson 145.56 217 PKP2 PKPbc 01 12 02.0 -1.9
MAW pmax pmax
comp=Z,1.0nm,0.5s
BOSA Boshof 150.00 309 PKPbc PKPbc 01 12 16.1 -1.1
comp=Z,4.1nm,0.8s,baz=126,slow=6.5,SNR=5.2
BOSA Boshof 150.00 309 PKP2 PKPbc 01 12 16.1 -1.1
BOSA pmax pmax
comp=Z,4.0nm,0.8s

IDC 12 01:05:44.5±4.0, 1968S×17560W, h65km±44km, mb3.9/2, mb1 4.1/4, mb1mx3.7/18, mbtmp4.0/4, ML2.4/1, Error ellipse: s-maj=60.1km s-min=29.6km az=125.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.81**	**33**	P	Pn	01 07 22.0	+0.2
	4.0nm,0.3s,baz=169,slow=10,SNR=2.5						
URZ	**Urewera**	**19.56**	**197**	P	Pn	01 10 06.8	-2.1
	0.7nm,0.3s,baz=3.8,slow=15,SNR=3.7						
ASAR	**Alice Springs**	**46.90**	**256**	P	P	01 14 09.1	+0.3
	4.6nm,0.7s,baz=89,slow=8.3,SNR=45						
WRA	**Warramunga Arr**	**46.95**	**261**	P	P	01 14 08.7	-0.5
	1.0nm,0.5s,baz=94,slow=6.1,SNR=7.9						
GERES	**GERESS Array B**	**149.96**	**348**	PKPbc	PKPbc	01 25 27.2	-0.2
	0.8nm,0.9s,baz=35,slow=2.4,SNR=5.1						

*CSEM **12** 01:07:03.2±0.1, 3760N×2992E, h2km, MD3.2*
*ISCJB **12** 01:07:04.6±0.5, 3757N±004×2994E±003, h7km±6km, Error ellipse: s-maj=6.5km s-min=3.8km az=170.6*
*DDA **12** 01:07:04.6, 3755N×2993E, h7km±6km, Md3.2*
*ISK **12** 01:07:04.0, 3756N×2991E, h9km, MD3.4*

ISC 12 01:07:05.2±0.5, 3757N±003×2994E±003, h9km±4km, n26, σ0s98/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.45**	**223**	*i* P	**Pg**	**01 07 13.3**	**-0.6**
GOLH				*i* S	**Sg**	**01 07 20.8**	**+1.1**
BCK	**Bucak**	**0.52**	**101**	*e*PG	**Pg**	**01 07 15.0**	**-0.3**
BCK				*e*SG	**Sg**	**01 07 24.0**	**+1.8**
ISP	**Isparta**	**0.53**	**58**	*e*PG	**Pg**	**01 07 14.9**	**-0.5**
ISP				*e*SG	**Sg**	**01 07 23.4**	**+1.1**
DNZL	**Cakiroluk**	**0.72**	**280**	*i* P	**Pg**	**01 07 18.0**	**-1.1**
DNZL				*i* S	**Sg**	**01 07 29.5**	**+1.0**
DENT	**Denizli**	**0.75**	**285**	*e*PG	**Pg**	**01 07 18.4**	**-1.1**
ELL	**Elmali**	**0.82**	**182**	*e*PG	**Pg**	**01 07 19.7**	**-1.2**
ANTB	**Antalya**	**0.87**	**139**	*e*PG	**Pg**	**01 07 21.6**	**-0.3**
KHAL	**Karahalli**	**0.88**	**336**	*i* P	**Pg**	**01 07 21.1**	**-1.0**
KHAL				*i* S	**Sg**	**01 07 35.1**	**+1.6**
SHUT	**Suhut-Afyon**	**1.10**	**26**	*e*PN	**Pn**	**01 07 25.7**	**-1.0**
TURN	**Turunc**	**1.27**	**238**	*i* P	**Pn**	**01 07 34.4**	**+5.2**
TURN				*i* S	**Sb**	**01 07 56.4**	**+11**
KULA	**Kula-Manisa**	**1.39**	**313**	*e*PN	**Pn**	**01 07 30.8**	**+0.1**
ALT	**Altintas**	**1.49**	**5**	*e*PN	**Pn**	**01 07 31.4**	**-0.7**
GDZ	**Gediz**	**1.56**	**347**	*i* P	**Pn**	**01 07 33.7**	**+0.6**
GDZ				*i* S	**Sn**	**01 07 57.7**	**+4.2**
AYDN	**Tasoluk**	**1.64**	**274**	*i* P	**Pn**	**01 07 34.5**	**+0.3**
AYDN				*i* S	**Sn**	**01 07 57.1**	**+1.7**
MLSB	**Milas**	**1.75**	**262**	*e*PN	**Pn**	**01 07 35.6**	**0.0**
DEMI	**Demirci**	**1.76**	**327**	*i* P	**Pn**	**01 07 33.6**	**-2.2**
DEMI				*i* S	**Sn**	**01 08 03.9**	**+5.5**
KONT	**Konya--Tatoy**	**1.95**	**78**	*e*PN	**Pn**	**01 07 38.5**	**+0.1**
KIZT	**Kizilcal**	**2.01**	**49**	*e*PN	**Pn**	**01 07 39.4**	**+0.1**
LADK	**Ladik-KONYA**	**2.02**	**71**	*e*PN	**Pn**	**01 07 39.1**	**-0.3**
BDRM	**Kayabasi**	**2.05**	**257**	*e*P	**Pn**	**01 07 41.9**	**+2.1**
BDRM				*i* S	**Sn**	**01 08 11.5**	**+5.9**
HDMB	**Hadim**	**2.12**	**106**	*e*PN	**Pn**	**01 07 41.1**	**+0.4**
BODT	**Bodrum**	**2.16**	**257**	*e*PN	**Pn**	**01 07 41.3**	**0.0**
IZM	**Izmir**	**2.27**	**292**	*e*PN	**Pn**	**01 07 41.9**	**-1.0**
BLCB	**Balcova**	**2.43**	**291**	*e*PN	**Pn**	**01 07 44.0**	**-1.0**
BALB	**Balikesir**	**2.63**	**323**	*e*PN	**Pn**	**01 07 48.1**	**+0.4**
KAMT	**Kaman**	**3.46**	**58**	*e*PN	**Pn**	**01 07 59.2**	**0.0**

*ISCJB **12** 01:23:14.6±1.1, 2358S×007×669W±03, h223km±26km, mb3.8/2, Error ellipse: s-maj=43.3km s-min=11.3km az=4.4*
*IDC **12** 01:23:14.1±1.4, 2366S×6670W, h192km±28km, mb3.7/2, mb1 3.5/7, mb1mx3.3/19, mbtmp3.4/7, Error ellipse: s-maj=38.1km s-min=13.7km az=92.0*
*NEIC **12** 01:23:15.4±1.0, 2360S×6674W, h206km±23km, Error ellipse: s-maj=34.5km s-min=12.3km az=100.0*

ISC 12 01:23:15.4±1.1, 2355S±008×668W±03, h207km±25km, n12, σ0s99/18, mb3.8/2, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.16**	**295**	P	**Pn**	**01 23 57.1**	**+0.9**
	42nm,0.3s,baz=123,slow=6.9,SNR=365						
LVC				S	**Sn**	**01 24 27.7**	**-0.2**
	39nm,0.3s,baz=306,slow=20,SNR=34						
LVC	**Limon Verde**	**2.16**	**295**	P	**Pn**	**01 23 57.1**	**+0.9**
LVC				S	**Sn**	**01 24 27.7**	**-0.2**
LPAZ	**La Paz**	**7.33**	**350**	P	**Pn**	**01 25 01.4**	**+1.4**
	1.4nm,0.3s,baz=161,slow=7.4,SNR=24						
LPAZ				S	**Sn**	**01 26 22.1**	**-1.3**
	baz=295,slow=20,SNR=1.4						
LPAZ	**La Paz**	**7.33**	**350**	P	**Pn**	**01 25 01.4**	**+1.4**
LPAZ				S	**Sn**	**01 26 22.1**	**-1.3**
CFAA	**Coronel Fontan**	**8.13**	**189**	P	**Pn**	**01 25 09.1**	**-1.2**
	0.2nm,0.3s,baz=4.1,slow=9.3,SNR=41						
CFAA				S	**Sn**	**01 26 33.0**	**-9.0**
	0.3nm,0.3s,baz=158,slow=15,SNR=9.0						
CFAA	**Coronel Fontan**	**8.13**	**189**	P	**Pn**	**01 25 09.1**	**-1.1**
CFAA				S	**Sn**	**01 26 33.0**	**-9.0**
PLCA	**Paso Flores**	**17.43**	**190**	P	**P**	**01 27 04.8**	**+0.4**
	0.1nm,0.3s,baz=243,slow=3.5,SNR=2.0						
PLCA	**Paso Flores**	**17.43**	**190**	P	**P**	**01 27 04.8**	**+0.4**
BDFB	**Brasilia**	**19.34**	**69**	P	**P**	**01 27 26.0**	**+0.6**
	0.4nm,0.3s,baz=242,slow=11,SNR=8.1						
DBIC	**Dimbokro**	**67.48**	**72**	P	**P**	**01 33 48.0**	**-1.5**
	11nm,1.4s,mb4.3,baz=279,slow=13,SNR=3.3						
TORD	**Torodi Ar. Bea**	**76.23**	**69**	P	**P**	**01 34 42.2**	**+0.8**
	0.5nm,0.5s,mb3.4,baz=258,slow=5.7,SNR=21						
TORD	**Torodi Ar. Bea**	**76.23**	**69**	P	**P**	**01 34 42.2**	**+0.8**

*IDC **12** 01:28:34.9±1.9, 3810N×7165E, h0km, mb3.8/2, mb1 3.9/7, mb1mx3.6/27, mbtmp3.9/7, ML3.6/5, MS2.7/2, Ms1 2.7/2, ms1mx2.1/37, Error ellipse: s-maj=30.3km s-min=20.4km az=137.0*
*MOS **12** 01:28:42.1±1.9, 3870N×7138E, h33km, mb4.0/2, Error ellipse: s-maj=29.3km s-min=10.4km az=77.4*
*NNC **12** 01:28:43.5±1.3, 3893N×7096E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=10.1km s-min=7.7km az=10.0*
*ISCJB **12** 01:28:44.1±0.6, 3858N±003×7138E±008, h90km±11km, mb3.7/2, Error ellipse: s-maj=9.9km s-min=4.6km az=168.3*
*NEIC **12** 01:28:45.2±1.1, 3863N×7136E, h69km±16km, Error ellipse: s-maj=23.0km s-min=10.8km az=121.0*

ISC 12 01:28:45.1±0.5, 3861N±003×7129E±007, h73km±12km, n41, σ1s51/51, mb3.7/2, 6C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.96**	**27**	P	**Pn**	**01 29 43.4**	**+0.1**
	SNR=38						
AML	**Almayashu**	**3.96**	**27**	*e*Pn	**Pn**	**01 29 43.1**	**-0.2**
UCH	**Uchtor**	**4.37**	**33**	P	**Pn**	**01 29 51.3**	**+2.4**
	SNR=18						
UCH	**Uchtor**	**4.37**	**33**	*e*Pn	**Pn**	**01 29 50.0**	**+1.2**
KBL	**Kabul**	**4.45**	**205**	*e*Pn	**Pn**	**01 29 50.5**	**+0.4**
KBL				*e*Sn	**Sn**	**01 30 47.1**	**+6.6**
EKS2	**Erkin-Say**	**4.46**	**24**	P	**Pn**	**01 29 52.3**	**+2.1**
	SNR=25						
EKS2	**Erkin-Say**	**4.46**	**24**	*e*Pn	**Pn**	**01 29 51.1**	**+1.0**
EKS2				*e*Sn	**Sn**	**01 30 36.7**	**-4.1**
KK31	**Karatay Array**	**4.52**	**353**	Pn	**Pn**	**01 29 51.8**	**+0.7**
	9.5nm,0.3s,baz=182,slow=13,SNR=297						
KK31				⇓Sn	**Sn**	**01 30 44.7**	**+2.5**
	28nm,0.5s						
AAK	**Ala-Archa**	**4.70**	**30**	P	**Pn**	**01 29 51.3**	**-2.1**
	SNR=18						
CEP	**Cherat**	**4.81**	**174**	⇓P	**Pn**	**01 29 55.5**	**+0.6**
CEP				S	**Sn**	**01 30 58.0**	**+8.7**
KBK	**Karagaybulak**	**4.90**	**33**	P	**Pn**	**01 29 59.0**	**+2.8**
	SNR=6.6						
CHMS	**Chumysh**	**5.11**	**30**	P	**Pn**	**01 30 01.0**	**+2.1**
	SNR=13						
CHCP	**Chirah Chowk**	**5.20**	**162**	P	**Pn**	**01 29 59.2**	**-1.0**
USP	**Ospenovka**	**5.24**	**27**	P	**Pn**	**01 30 02.6**	**+1.8**
	SNR=24						
TKM2	**Tokmak 2**	**5.40**	**36**	⇑Pn	**Pn**	**01 30 04.2**	**+1.2**
TKM2				⇑Sn	**Sn**	**01 31 07.6**	**+3.8**
	24nm,0.8s						
TKM2	**Tokmak 2**	**5.40**	**36**	*e*PN	**Pn**	**01 30 03.5**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,11nm,0.4s						
TKM2	**Tokmak 2**	**5.40**	**36**	P	**Pn**	**01 30 05.7**	**+2.7**
	SNR=22						
TKM2	**Tokmak 2**	**5.40**	**36**	*e*Pn	**Pn**	**01 30 03.5**	**+0.5**
	comp=Z,11nm,0.4s						
THW	**Thamme Wali**	**5.82**	**176**	P	**Pn**	**01 30 10.8**	**+2.1**
THN	**Thein Dam**	**7.14**	**148**	*e*P	**Pn**	**01 30 25.4**	**-1.4**
THN				*e*S	**Sn**	**01 31 46.8**	**+0.3**
DDI	**Dehra Dun**	**9.97**	**144**	*ex*	**Pn**	**01 31 04.6**	**-0.9**
DDI				*ex*	**Sn**	**01 32 54.8**	**-0.9**
MKAR	**Makanchi Array**	**11.49**	**41**	Pn	**Pn**	**01 31 25.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=221,slow=13,SNR=6.1						
KURK	**Kurchatov**	**13.17**	**21**	Pn	**Pn**	**01 31 44.6**	**-4.1**
	comp=Z,0.1nm,0.3s,baz=216,slow=13,SNR=5.0						
AB31	**Akbulak array**	**13.40**	**326**	⇑Pn	**Pn**	**01 31 49.0**	**-2.9**
	comp=Z,1.7nm,0.5s,baz=147,slow=12,SNR=66						
AB31				⇑Sn	**Sn**	**01 34 15.7**	**-3.3**
	comp=Z,4.7nm,0.8s						
VOSK	**Vostochnaya**	**14.11**	**359**	⇓Pn	**Pn**	**01 31 58.4**	**-2.8**
	comp=Z,2.2nm,0.8s						
BVA0	**Borovoye Array**	**14.43**	**358**	Pn	**Pn**	**01 32 03.8**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=201,slow=43,SNR=26						
BVAR	**Borovoye Array**	**14.43**	**358**	Pn	**Pn**	**01 32 03.9**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=171,slow=12,SNR=16						
BVAR				LR	LR	01 37 59.8	
	comp=Z,32nm,19.4s,baz=355,slow=38						
BRVK	**Borovoye**	**14.46**	**358**	⇓Pn	**Pn**	**01 32 03.8**	**-2.0**
	comp=Z,2.6nm,0.6s						
BRVK	**Borovoye**	**14.46**	**358**	*e*P	**Pn**	**01 32 04.3**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**14.46**	**358**	*e*P	**Pn**	**01 32 04.3**	**-1.5**
	comp=Z,3.2nm,0.6s						
AKTK	**Aktyubinsk**	**15.12**	**326**	Pn	**Pn**	**01 32 15.6**	**+1.4**
AKTK				Sn	**Sn**	**01 35 01.3**	**+0.8**
AKTO	**Aktyubinsk**	**15.12**	**326**	⇑Pn	**Pn**	**01 32 13.2**	**-1.1**
	comp=Z,1.0nm,0.8s						
AKTO				⇑Sn	**Sn**	**01 34 57.4**	**-3.1**
	comp=Z,1.2nm,1.8s						
AKTO	**Aktyubinsk**	**15.12**	**326**	Pn	**Pn**	**01 32 15.6**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=129,slow=13,SNR=6.0						
AKTO				Sn	**Sn**	**01 35 01.3**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=178,slow=20,SNR=3.5						
ZAA0	**Zalesovo Array**	**17.91**	**27**	*e*P	**Pn**	**01 32 47.9**	**-1.0**
ZALV	**Zalesovo Beam**	**17.91**	**27**	P	**Pn**	**01 32 48.3**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=216,slow=11,SNR=14						
ZALV				LR	LR	01 39 52.4	
	comp=Z,18nm,18.1s,baz=355,slow=37						
ZALV	**Zalesovo Beam**	**17.91**	**27**	P	**Pn**	**01 32 48.3**	**-0.7**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,18nm,18.1s						
ZAK	**Zakamensk**	**25.47**	**52**	*e*P	**P**	**01 34 05.8**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ARCES	**ARCESS Array B**	**39.29**	**337**	P	**P**	**01 36 09.2**	**+2.9**
	comp=Z,1.2nm,0.6s,mb3.9,baz=109,slow=6.8,SNR=7.8						
ARCES	**ARCESS Array B**	**39.29**	**337**	P	**P**	**01 36 09.2**	**+2.9**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DAV	**Davao City (W)**	**58.00**	**108**	LR	LR	02 08 16.9	
	comp=Z,460nm,18.8s,baz=170,slow=41						
TORD	**Torodi Ar. Bea**	**66.02**	**268**	P	**P**	**01 39 25.3**	**+1.2**
	comp=Z,0.4nm,0.5s,mb3.5,baz=54,slow=4.6,SNR=16						

*BJI **12** 01:55:35.1, 108S×1470E, h10km, mB5.1, mb5.1, Ms4.6, Msz4.3*
*IDC **12** 01:55:38.7±0.5, 087S×1464E, h0km, mb5.0/25, mb1 5.0/26, mb1mx5.0/27, mbtmp5.0/26, ML4.5/1, MS4.2/20, Ms1 4.2/20, ms1mx4.1/29, Error ellipse: s-maj=16.9km s-min=9.9km az=91.0*
*ISCJB **12** 01:55:39.6±0.2, 086S±003×1466.2E±004, h14km, mb5.0/105, MS4.3/30, Error ellipse: s-maj=5.5km s-min=4.3km az=1.7*
*MOS **12** 01:55:41.7±0.9, 082S×1465.4E, h28km, mb5.2/30, Error ellipse: s-maj=12.3km s-min=6.7km az=96.2*
*GCMT **12** 01:55:44.5±0.2, 081S×1466.1E, h12km, MW5.1/81, Moment Tensor Solution. s48,c71; s81,c153; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=4.24±.12; Mθθ=-5.52±.08; Mφφ=1.28±.13; Mrθ=0.88±.28; Mθφ=1.34±.09; Mφr=1.64±.37; Best double couple: Mo=5.44500×10^16 NP1:θs=79.00000°, δ=43.00000°, λ=56.00000°. NP2: φs=301.00000°, δ=56.00000°, λ=117.00000°. Principal axes: T 4.9760, Plg67.0000°, Azm266.0000°; N 0.9380, Plg22.0000°, Azm105.0000°; P -5.9140, Plg7.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **12** 01:55:44.5±0.9, 088S×1465.7E, h38km, 8km, mb5.0/45 Error ellipse: s-maj=5.0km s-min=4.2km az=92.0*
*DJA **12** 01:55:48, 099S×1464.5E, h48km, Mw5.3/11*

ISC 12 01:55:40.9±1.2, 086S±003×1466.5E±004, h12km±7km, h14km±1.3km:pP-P, n228, σ0s88/210, mb5.0/105, MS4.3/30, 14C-9D, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.50**	**177**	*e*P	**Pn**	**01 57 45.3**	**+1.3**
PMG				pmax	pmax		
	comp=Z,191nm,1.0s						
PMG	**Port Moresby**	**8.50**	**177**	*e*Pn	**Pn**	**01 57 45.3**	**+1.3**
	comp=Z,191nm,1.0s						
COEN	**Coen**	**13.46**	**195**	*e*Pn	**Pn**	**01 58 52.6**	**+0.7**
	comp=Z,33nm,0.9s						
GUMO	**Guam**	**14.47**	**353**	LR	LR	02 03 46.3	
	comp=Z,471nm,21.0s,baz=84,slow=34						
CTA	**Charters Tower**	**19.11**	**181**	*e*P	**Pn**	**02 00 05.0**	**+0.4**
	comp=Z,34nm,0.9s						
CTA				*e*		02 03 38.9	
CTA				*e*S	**Sn**	**02 03 44.8**	**+6.0**
CTA				*e*		02 05 08.7	
CTA	**Charters Tower**	**19.11**	**181**	P	**Pn**	**02 00 05.0**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=358,slow=12,SNR=35						
CTA	**Charters Tower**	**19.11**	**181**	*e*P	**Pn**	**02 00 05.0**	**+0.4**
CTA				*e*S	**Sn**	**02 03 44.8**	**+6.0**
CTA				pmax	pmax		
	comp=Z,34nm,0.9s						
CTAO	**Charters Tower**	**19.11**	**181**	*e*P	**Pn**	**02 00 04.9**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,56nm,1.0s						
CTAO	**Charters Tower**	**19.11**	**181**	*e*P	**Pn**	**02 00 04.9**	**+0.2**
	comp=Z,56nm,1.0s						
WRAB	**Tennant Creek**	**22.45**	**212**	P	**P**	**02 00 39.0**	**-1.0**
	comp=Z,616nm,1.0s,mb6.0						
WRAB	**Tennant Creek**	**22.45**	**212**	*e*P	**P**	**02 00 38.8**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,136nm,1.0s,mb5.3						
WRAB	**Tennant Creek**	**22.45**	**212**	*e*P	**P**	**02 00 38.8**	**-1.2**
	comp=Z,136nm,1.0s,mb5.3						
DAV	**Davao City (W)**	**22.45**	**291**	P	**P**	**02 00 40.1**	**0.0**
	comp=Z,154nm,0.4s,mb5.8,baz=225,slow=2.9,SNR=2.0						
WB2	**Warramunga Arr**	**22.46**	**212**	⇓*i*P	**P**	**02 00 39.1**	**-1.0**
WB2				*e*S	**S**	**02 04 44.8**	**-2.1**
WRA	**Warramunga Arr**	**22.47**	**212**	P	**P**	**02 00 39.2**	**-1.0**
	comp=Z,45nm,0.7s,mb5.0,baz=32,slow=11,SNR=94						
WRA				LR	LR	02 09 40.4	
	comp=Z,1μm,21.9s,MS4.3,baz=30,slow=38						
BATI	**Baumata**	**24.67**	**247**	P	**P**	**02 01 03.2**	**+1.3**
	comp=Z,89nm,0.5s,mb5.6,baz=115,slow=1.5,SNR=14						
ASAR	**Alice Springs**	**25.82**	**208**	P	**P**	**02 01 12.2**	**0.0**
	comp=Z,32nm,0.5s,mb5.1,baz=36,slow=7.5,SNR=423						
ASAR				S	**S**	**02 05 42.7**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=92,slow=27,SNR=2.5						
FITZ	**Fitzroy Crossi**	**26.82**	**229**	*e*P	**P**	**02 01 20.4**	**-1.0**
	comp=Z,66nm,1.0s,mb5.1						
FITZ				*e*S	**S**	**02 05 56.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**26.82**	**229**	P	**P**	**02 01 20.7**	**-0.7**
	comp=Z,16nm,0.5s,mb4.8,baz=44,slow=9.3,SNR=99						
FITZ				LR	LR	02 12 51.2	
	comp=Z,676nm,19.4s,MS4.2,baz=238,slow=38						
KAPI	**Kappang**	**27.18**	**261**	P	**P**	**02 01 23.5**	**-1.2**
	comp=Z,8.8nm,1.0s,mb4.3,baz=204,slow=18,SNR=3.5						
CBIJ	**Chichi jima**

comp=Z,20nm,1.0s,mb4.8
MAJO Matsushiro 38.04 349 *e*P P **02 02 58.0 -1.2**
comp=Z,20nm,1.0s,mb4.8
MAT Matsushiro 38.04 349 P P **02 02 58.5 -0.7**
MAT S **S** **02 08 46.0 -5.5**
KLBR Kellerberrin 40.99 219 *e*P P **02 03 22.8 -1.1**
comp=Z,36nm,1.2s,mb4.9
QIZ Qiongzhong 41.20 301 P P **02 03 25.5 -0.3**
QIZ XP sP 02 03 30.0 -1.1
QIZ S **S** **02 09 41.5 +2.1**
QIZ AMB AMB
comp=Z,32nm,1.2s,mb4.8
QIZ AMB AMB
comp=Z,103nm,4.2s
QIZ LR LR
comp=N,255nm,19.3s
QIZ LR LR
comp=Z,267nm,18.6s,MS4.1
KSRS Korea Array 41.88 337 P P **02 03 30.8 -0.4**
comp=Z,5.2nm,0.9s,mb4.2,baz=157,slow=8.9,SNR=21
KSRS PcP PcP 02 05 26.4 -0.5
comp=Z,1.9nm,0.7s,baz=161,slow=3.0,SNR=7.1
KSRS LR LR 02 20 27.9
comp=Z,317nm,19.6s,MS4.2,baz=150,slow=36
NJ2 Nanjing 42.00 324 *e*P P **02 03 32.5 +0.3**
NJ2 AP pP 02 03 37.1 +1.1
NJ2 XP sP 02 03 40.2 +2.7
NJ2 PP PP 02 05 13.3 +3.8
NJ2 S **S** **02 09 50.0 -1.0**
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb4.9
NJ2 AMB AMB
comp=Z,1μm,4.0s
NJ2 LR LR
comp=N,230nm,17.9s,MS4.4
NJ2 LR LR
comp=E,330nm,16.6s,MS4.4
NJ2 LR LR
comp=Z,240nm,19.7s,MS4.1
NWAO Narrogin (SRO) 42.22 218 P P **02 03 33.4 -0.6**
comp=Z,8.2nm,0.9s,mb4.4,baz=78,slow=6.6,SNR=3.3
ERM Erimo 42.80 356 *e*P P **02 03 36.8 -1.7**
AFI Afiamalu 43.11 109 LR LR 02 20 15.9
comp=Z,286nm,18.4s,MS4.2,baz=40,slow=34
WHN Wuhan 43.82 318 P P **02 03 47.7 +0.7**
WHN LR LR
comp=Z,355nm,20.0s,MS4.3
ASAJ Asahikawa 44.93 356 LR LR 02 20 18.3
comp=Z,198nm,21.4s,MS4.0,baz=348,slow=33
FRIM Kepong 45.19 275 ⇓P P **02 03 58.5 +0.2**
IPM Ipoh 45.90 277 ⇓P P **02 04 04.7 +0.8**
URZ Urewera 46.55 147 P P **02 04 07.8 -0.7**
comp=Z,3.8nm,0.6s,mb4.5,baz=312,slow=3.9,SNR=4.5
URZ LR LR 02 20 48.9
comp=Z,562nm,19.9s,MS4.5,baz=129,slow=32
GYA Guiyang 47.15 308⇑*i*P P **02 04 14.7 +1.2**
GYA PCP PcP 02 05 47.4 +2.2
GYA PP PP 02 06 05.0 +0.5
GYA SCP ScP 02 09 40.7 +1.5
GYA S **S** **02 11 07.9 +1.9**
GYA SS SS 02 14 28.3 -5.1
GYA AMB AMB
comp=Z,20nm,0.9s,mb5.0
GYA AMB AMB
comp=Z,130nm,5.2s
GYA LR LR
comp=N,610nm,18.7s,MS4.8
GYA LR LR
comp=E,720nm,17.4s,MS4.8
GYA LR LR
comp=Z,590nm,18.0s,MS4.6
MDJ Mudanjiang 47.76 344 P P **02 04 17.3 -0.6**
MDJ XP sP 02 04 21.7 -1.5
MDJ PP PP 02 06 08.3 -1.5
MDJ SCP ScP 02 09 40.8 -0.5
MDJ PCS PcS 02 09 42.1 -0.2
MDJ S **S** **02 11 14.3 +0.2**
MDJ AMB AMB
comp=Z,16nm,0.8s,mb5.1
MDJ AMB AMB
comp=Z,113nm,5.9s
MDJ LR LR
comp=N,215nm,33.5s
MDJ LR LR
comp=E,157nm,17.8s
MDJ LR LR
comp=Z,277nm,19.3s
RPZ Rata Peaks 47.89 156 P P **02 04 19.2 +0.2**
comp=Z,32nm,0.8s,mb5.4,baz=331,slow=2.5,SNR=16
CN2 Changchun 48.34 339 *e*P P **02 04 22.3 -0.1**
CN2 XP sP 02 04 29.3 +1.5
CN2 *e*S **S** **02 11 21.3 -1.1**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,21.0s,MS4.3
CN2 LR LR
comp=E,200nm,21.0s,MS4.3
CN2 LR LR
comp=Z,300nm,19.0s,MS4.3
BJI Beijing 49.31 329 P P **02 04 28.4 -1.5**
BJI PP PP 02 06 24.8 +0.8
BJI S **S** **02 11 36.3 +0.1**
BJI SS SS 02 15 10.8 +2.8
BJI AMB AMB
comp=Z,9.0nm,1.2s,mb4.7
BJI AMB AMB
comp=Z,165nm,4.6s
BJI LR LR
comp=E,139nm,25.3s
BJI LR LR
comp=Z,290nm,40.1s
XAN Xi'an 49.58 318 P P **02 04 31.9 -0.2**
XAN AP pP 02 04 43.3 +7.3
XAN AMB AMB
comp=Z,24nm,1.4s,mb5.0
KMI Kunming 49.71 304 P P **02 04 34.7 +1.4**
KMI AP pP 02 04 38.5 +1.4
KMI XP sP 02 04 40.1 +1.5
KMI PP PP 02 06 29.9 +2.0
KMI S **S** **02 11 42.8 +0.5**
KMI SS SS 02 15 11.8 -3.1
KMI AMB AMB
comp=Z,15nm,1.2s,mb4.9
KMI LR LR
comp=N,192nm,15.0s,MS4.3
KMI LR LR
comp=E,108nm,14.1s,MS4.3
KMI LR LR
comp=Z,191nm,17.7s,MS4.2
CMAR Chiang Mai Arr 50.66 295 P P **02 04 40.5 -0.1**
comp=Z,3.3nm,0.6s,mb4.5,baz=115,slow=5.5,SNR=20
CMAR PcP PcP 02 05 58.9 +0.8
comp=Z,2.3nm,0.5s,baz=90,slow=2.3,SNR=4.0
CHTO Chiang Mai 50.77 295 *e*P P **02 04 41.9 +0.6**
CHTO *e* 02 05 58.4
CHTO pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CHTO Chiang Mai 50.77 295 *e*P P **02 04 41.9 +0.5**
comp=Z,6.1nm,0.9s,mb4.5
CHTO *e*PcP PcP 02 05 58.4 0.0
KLR Kul'dur 51.53 348 *e*P P **02 04 42.0 -4.5**
KLR pmax pmax
comp=Z,80nm,1.8s,mb5.3
CD2 Chengdu 51.54 312 P P **02 04 47.6 +0.6**
CD2 AP pP 02 04 52.9 +2.0
CD2 XP sP 02 04 55.8 +3.5
CD2 PP PP 02 06 45.2 +0.7
CD2 PCS PcS 02 09 58.0 -1.0
CD2 S **S** **02 12 06.3 -1.2**
CD2 SS SS 02 15 40.4 -3.5
CD2 AMB AMB
comp=Z,80nm,1.0s,mb5.6
CD2 AMB AMB
comp=Z,120nm,5.4s
CD2 LR LR
comp=N,300nm,18.6s,MS4.5
CD2 LR LR
comp=E,280nm,19.2s,MS4.5
CD2 LR LR
comp=Z,310nm,19.2s,MS4.3
HHC Hu-ho-hao-te 52.34 327 *e*P P **02 04 51.7 -1.1**
HHC AP pP 02 04 55.1 -1.6
HHC XP sP 02 04 57.5 -0.6
HHC PCP PcP 02 06 02.4 -1.4
HHC PP PP 02 06 51.0 -0.6
HHC SCP ScP 02 09 57.9 -3.1
HHC PCS PcS 02 09 59.0 -3.1
HHC S **S** **02 12 15.9 -2.3**
HHC SCS ScS 02 14 37.8 -5.0
HHC SS SS 02 15 52.0 -4.2
HHC AMB AMB
comp=Z,23nm,0.7s,mb5.2
HHC AMB AMB
comp=Z,145nm,7.1s
HHC LR LR
comp=N,218nm,17.1s,MS4.4
HHC LR LR
comp=E,238nm,16.8s,MS4.4
HHC LR LR
comp=Z,294nm,16.6s,MS4.4
BTO Baotou 53.04 325 *e*P P **02 04 57.9 -0.1**
LZH Lanzhou 54.17 317 ⇓P P **02 05 07.4 +1.1**
LZH AP pP 02 05 10.6 +0.4
LZH XP sP 02 05 12.0 +0.3
LZH PP PP 02 07 10.6 +2.5
LZH SCP ScP 02 10 07.5 -1.6
LZH S **S** **02 12 43.0 -0.2**
LZH SS SS 02 16 24.5 -0.7
LZH AMB AMB
comp=Z,67nm,1.3s,mb5.4
LZH AMB AMB
comp=Z,210nm,4.9s
LZH LR LR
comp=N,1μm,16.6s
LZH LR LR
comp=Z,1μm,17.9s,MS5.1
PEA0B Petropavlovsk- 54.57 8 *e*P P **02 05 08.9 0.0**
PETK Petropavlovsk- 54.57 8 P P **02 05 09.1 +0.2**
comp=Z,11nm,0.6s,mb5.1,baz=169,slow=7.9,SNR=26
PETK LR LR 02 24 08.4
comp=Z,329nm,21.5s,MS4.4,baz=189,slow=31
PET Petropavlovsk 54.63 9 *e*P P **02 05 09.4 +0.1**
PET *e*S **S** **02 13 02.0 +13**
PET pmax pmax
comp=Z,22nm,0.9s,mb5.2
PET Petropavlovsk 54.63 9 *e*P P **02 05 09.0 -0.3**
HIA Hailar 55.06 339 *e*P P **02 05 12.2 -0.3**
HIA pmax pmax
comp=Z,11nm,0.8s
HIA Hailar 55.06 339 *e*P P **02 05 12.2 -0.4**
comp=Z,11nm,0.8s,mb5.0
GTA Gaotai 58.64 319 ⇑P P **02 05 39.1 +0.9**
GTA AP pP 02 05 43.5 +1.4
GTA XP sP 02 05 46.1 +2.6
GTA PP PP 02 07 51.7 +3.7
GTA S **S** **02 13 44.1 +1.7**
GTA XS sS 02 13 52.2 +3.3
GTA SS SS 02 17 40.1 +4.6
GTA AMB AMB
comp=Z,33nm,1.2s,mb5.2
GTA AMB AMB
comp=Z,151nm,6.3s
GTA LR LR
comp=N,155nm,19.8s,MS4.3
GTA LR LR
comp=E,169nm,20.4s,MS4.3
GTA LR LR
comp=Z,196nm,19.2s,MS4.2
SHL Shillong 59.03 301 *i*P P **02 05 42.0 +0.8**
ULN Ulaanbaatar 59.49 330 *e*P P **02 05 44.6 +0.7**
ULN pmax pmax
comp=Z,18nm,0.9s,mb5.1
ULN Ulaanbaatar 59.49 330 *e*P P **02 05 44.6 +0.7**
comp=Z,18nm,0.9s,mb5.1
SONM Songino Array 59.80 330 P P **02 05 46.7 +0.7**
comp=Z,9.8nm,0.8s,mb4.9,baz=149,slow=6.8,SNR=59
SONM PcP PcP 02 06 32.8 +0.2
comp=Z,2.7nm,0.6s,baz=141,slow=3.8,SNR=5.1
SONM LR LR 02 30 01.6
comp=Z,141nm,19.6s,MS4.1,baz=133,slow=34
SONM Songino Array 59.80 330 P P **02 05 46.7 +0.7**
SONM 02 06 32.8
LSA Lhasa 60.97 305 P P **02 05 55.1 +0.7**
LSA Lhasa 60.97 305 *e*P P **02 05 54.9 +0.5**
ZAK Zakamensk 63.01 330⇓*i*P P **02 06 07.7 0.0**
ZAK pmax pmax
comp=Z,25nm,1.0s,mb5.3
TAPN Taplejung 63.13 301 *e*P P **02 06 09.7 +0.7**
comp=Z,135nm,1.2s,mb5.9
ODAN Odare 63.27 301 *e*P P **02 06 10.8 +0.9**
comp=Z,99nm,1.1s,mb5.8
TLY Talaya 63.67 332 *e*P P **02 06 12.7 +0.7**
TLY *e*S **S** **02 14 52.0 +5.9**
TLY pmax pmax
comp=Z,18nm,1.1s,mb5.0
TLY Talaya 63.67 332 *e*P P **02 06 12.4 +0.3**
comp=Z,12nm,1.0s,mb4.9
IRK Irkutsk 63.75 332 *e*P P **02 06 12.7 +0.2**
IRK pmax pmax
comp=Z,22nm,1.9s,mb4.9
SEY Seymchan 63.78 3⇑*e*P P **02 06 12.5 0.0**
RAMN Ramite 63.97 301 *e*P P **02 06 15.4 +0.9**
comp=Z,127nm,1.6s,mb5.7
BOD Bodaibo 64.03 341 *e*P P **02 06 13.7 -0.6**
BOD pmax pmax
comp=Z,13nm,1.0s,mb4.9
YAK Yakutsk 64.05 351⇑*e*P P **02 06 14.0 -0.3**
YAK pmax pmax
comp=Z,34nm,1.1s,mb5.3
JIRN Jiri 64.51 301 *e*P P **02 06 19.1 +1.0**
comp=Z,117nm,1.4s,mb5.7
PPT Papeete 64.78 109 *e*S **S** **02 14 55.1 -5.9**
comp=Z,46nm,24.2s
PPT Papeete 64.78 109 *e*LR LR 02 25 46.5
comp=Z,129nm,22.2s
PPT Papeete 64.78 109 LR LR 02 30 49.1
comp=Z,117nm,19.5s,MS4.1,baz=277,slow=33
GUN Gumba 64.84 301 *e*P P **02 06 21.3 +1.1**
comp=Z,155nm,1.1s,mb5.9
MOY Mondy 64.94 331 *e*P P **02 06 21.3 +0.9**
MOY pmax pmax
comp=Z,45nm,3.3s
PKI Pulchoki 65.16 301 *e*P P **02 06 22.9 +0.6**
comp=Z,61nm,1.2s,mb5.5
KKN Kakani 65.33 301 *e*P P **02 06 24.0 +0.6**
comp=Z,77nm,1.0s,mb5.7
DMN Daman 65.43 301 *e*P P **02 06 24.8 +0.8**
comp=Z,126nm,1.2s,mb5.8
GKN Gorkha 65.93 301 *e*P P **02 06 27.8 +0.5**
comp=Z,123nm,1.2s,mb5.8
KOLN Koldanda 66.76 301 *e*P P **02 06 33.2 +0.6**
comp=Z,41nm,0.9s,mb5.5
DANN Dangsing 66.77 301 *e*P P **02 06 33.3 +0.7**
comp=Z,81nm,1.0s,mb5.7
WMQ Urumqi 68.72 318 *e*P P **02 06 43.2 -1.4**
WMQ XP sP 02 06 50.0 -0.1
WMQ AMB AMB
comp=Z,26nm,0.8s,mb5.2
WMQ AMB AMB
comp=Z,153nm,5.4s
WMQ LR LR
comp=Z,202nm,20.6s,MS4.3
CASY Casey 70.09 195 *e*P P **02 06 51.8 -0.9**
BILL Bilibino 70.10 8 *e*P P **02 06 51.6 -1.1**
BILL *e* 02 06 57.4
BILL pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
DDI Dehra Dun 72.06 302 *ex* P **02 07 04.3 -1.1**
TAOE Nuku Hiva Isla 73.27 99 *e*LR LR 02 29 42.5
comp=Z,401nm,22.4s
TIXI Tiksi 73.30 354⇑*e*P P **02 07 11.9 0.0**
TIXI pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MK31 Makanchi Array 73.36 320 *i* P P **02 07 12.5 -0.2**
MK31 pmax pmax
comp=Z,15nm,0.9s,mb4.9
MKAR Makanchi Array 73.36 320 P P **02 07 13.0 +0.3**
comp=Z,9.1nm,0.9s,mb4.7,baz=99,slow=7.5,SNR=36
MKAR LR LR 02 40 00.7
comp=Z,124nm,18.2s,MS4.2,baz=351,slow=36
POO Poona 73.99 289⇓*i*P P **02 07 14.0 -3.0**
comp=Z,30nm,1.0s,mb5.2
ZAA0 Zalesovo Array 74.52 327 *e*P P **02 07 18.5 -0.9**
ZALV Zalesovo Beam 74.52 327 P P **02 07 18.9 -0.4**
comp=Z,19nm,0.8s,mb5.1,baz=107,slow=5.8,SNR=36
ZALV LR LR 02 38 48.0
comp=Z,128nm,20.4s,MS4.2,baz=82,slow=35
MIR Mirnyy 75.47 199⇑*i*P P **02 07 26.0 +1.4**
MIR pmax pmax
comp=Z,100nm,1.2s,mb5.6
NVS Novosibirsk 75.72 328 *e*P P **02 07 25.1 -1.2**
NVS pmax pmax
comp=N,23nm,1.6s
NVS pmax pmax
comp=E,36nm,1.6s
NVS pmax pmax
comp=Z,47nm,1.6s,mb5.2
TKM2 Tokmak 2 76.80 314 *e*P P **02 07 33.3 +0.6**
TKM2 pmax pmax
comp=Z,11nm,0.8s,mb4.8
TKM2 Tokmak 2 76.80 314 P P **02 07 33.5 +0.8**
SNR=14
TKM2 Tokmak 2 76.80 314 *e*P P **02 07 33.3 +0.6**
comp=Z,11nm,0.8s,mb4.8
KZA Kyzart 76.86 314 P P **02 07 35.0 +2.0**
SNR=15
KURK Kurchatov 76.93 323 P P **02 07 33.6 +0.4**
comp=Z,180nm,1.0s,mb6.0,SNR=27
KURK Kurchatov 76.93 323 P P **02 07 33.3 +0.1**
comp=Z,12nm,0.9s,mb4.8,baz=103,slow=6.0,SNR=47
UCH Uchtor 77.42 314 P P **02 07 38.2 +2.0**
SNR=6.0
UCH Uchtor 77.42 314 *e*P P **02 07 37.5 +1.3**
comp=Z,18nm,1.3s,mb4.8
CHMS Chumysh 77.43 314 P P **02 07 36.8 +0.6**
SNR=7.7
FRU Bishkek 77.48 314 *e*P P **02 07 36.5 0.0**
FRU pmax pmax
comp=Z,40nm,2.0s,mb5.0
AAK Ala-Archa 77.53 314 P P **02 07 37.2 +0.4**
SNR=5.3
USP Ospenovka 77.67 315 P P **02 07 38.1 +0.5**
SNR=11
SBA Scott Base 77.67 176 *e*P P **02 07 37.7 +0.8**
SBA pmax pmax
comp=Z,15nm,1.2s,mb4.8
SBA Scott Base 77.67 176 *e*P P **02 07 37.7 +0.8**
comp=Z,15nm,1.2s,mb4.8
SLKM Skilak Lake 77.84 27 *e*P P **02 07 37.7 -0.4**
AML Almayashu 78.00 313 P P **02 07 41.0 +1.6**
SNR=22
AML Almayashu 78.00 313 *e*P P **02 07 40.7 +1.3**
comp=Z,31nm,1.0s,mb5.2
SEW Seward 78.03 27 *e*P P **02 07 39.2 0.0**
EKS2 Erkin-Say 78.05 314 P P **02 07 40.6 +0.9**
SNR=10
EKS2 Erkin-Say 78.05 314 *e*P P **02 07 40.2 +0.5**
comp=Z,11nm,0.9s,mb4.8
RC01 Rabbit Creek A 78.29 26 *e*P P **02 07 39.9 -0.7**
comp=Z,67nm,1.0s,mb5.5
CHUM Lake Minchumin 78.41 23 *e*P P **02 07 41.2 0.0**
comp=Z,65μm,1.4s
PMR Palmer 78.76 26 *e*P P **02 07 42.6 -0.6**
PMR pmax pmax
comp=Z,28nm,0.9s,mb5.2
PMR Palmer 78.76 26 *e*P P **02 07 42.6 -0.6**
comp=Z,28nm,0.9s,mb5.2
KTH Kantishna Hill 78.82 24 *e*P P **02 07 43.1 -0.4**
comp=Z,33nm,1.0s,mb5.2
BPAW Bear Paw Mtn. 79.03 23 *e*P P **02 07 43.8 -0.9**
comp=Z,15nm,1.0s,mb4.9
MCK McKinley 79.70 24 *e*P P **02 07 47.5 -0.8**
MCK pmax pmax
comp=Z,39nm,1.0s,mb5.3
MCK McKinley 79.70 24 *e*P P **02 07 47.5 -0.8**
comp=Z,39nm,1.0s,mb5.3
DIV Divide 80.09 27 *e*P P **02 07 50.6 +0.1**
comp=Z,26nm,0.9s,mb5.2
KK31 Karatay Array 80.49 314 *i*P P **02 07 52.6 -0.4**
KK31 pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BMRM Bremner River 80.58 27 *e*P P **02 07 52.8 -0.3**
COLA College 80.59 23 *e*P P **02 07 51.4 -1.7**
COLA pmax pmax
comp=Z,12nm,0.8s,mb4.9
COLA College 80.59 23 *e*P P **02 07 51.4 -1.6**
comp=Z,12nm,0.8s,mb4.9
COLD Coldfoot 80.67 21 *e*P P **02 07 53.8 +0.3**
comp=Z,9.7nm,0.9s,mb4.7
BVA0 Borovoye Array 82.44 324 *i*P P **02 08 02.6 -0.5**
BVA0 pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BVAR Borovoye Array 82.44 324 P P **02 08 03.2 0.0**
comp=Z,15nm,0.8s,mb5.0,baz=103,slow=6.3,SNR=52
BVAR LR LR 02 40 34.9
comp=Z,60nm,21.8s,MS3.9,baz=270,slow=33
BRVK Borovoye 82.52 324 P P **02 08 03.5 0.0**
comp=Z,140nm,0.8s,mb6.0,SNR=5.4
BRVK Borovoye 82.52 324 *e*P P **02 08 03.3 -0.2**
BRVK pmax pmax
comp=Z,58nm,1.4s,mb5.4
BRVK Borovoye 82.52 324 *e*P P **02 08 03.3 -0.2**
comp=Z,58nm,1.4s,mb5.4
PNL Peninsula 82.68 29 *e*P P **02 08 04.3 +0.1**
comp=Z,13nm,0.8s,mb5.0
DAWY Dawson 83.80 25 *e*P P **02 08 09.8 -0.1**
HYT Haines Junctio 83.87 29 *e*P P **02 08 10.6 +0.3**
SKAG Skagway 84.66 30 *e*P P **02 08 14.3 -0.1**
comp=Z,8.4nm,0.8s,mb4.9
VIB Van Inlet 85.18 37 T 03 42 27.5
SNR=11
DIB Dawson Inlet, 85.21 37 T 03 42 29.1
SNR=64
MAW Mawson 86.83 202 *e*P P **02 08 24.1 -0.9**
comp=Z,3.5nm,1.0s,mb4.5
MAW Mawson 86.83 202 P P **02 08 24.0 -1.0**
comp=Z,9.2nm,1.0s,mb5.0,baz=69,slow=4.6,SNR=13
MAW LR LR 02 43 53.2
comp=Z,182nm,19.2s,MS4.5,baz=68,slow=33
MAW Mawson 86.83 202 *e*P P **02 08 24.1 -0.9**
MAW pmax pmax
comp=Z,4.0nm,1.0s
DLBC Dease Lake 87.22 32 *e*P P **02 08 27.2 +0.1**
AB31 Akbulak array 88.49 319 *i*P P **02 08 31.2 -2.2**
AB31 pmax pmax
comp=Z,1.0nm,0.4s,mb4.4
QSPA South Pole Qui 89.07 180 P P **02 08 35.2 -0.3**
comp=Z,12nm,0.9s,mb5.2,baz=338,slow=3.1,SNR=23
ARU Arti 89.65 326*d*iP P **02 08 36.1 -2.6**
ARU *PP pP 02 08 49.3 +6.6
ARU *e* 02 12 09.0
ARU *e*S S 02 19 00.8 -29
ARU pmax pmax
comp=Z,13nm,1.0s,mb5.2
ARU Arti 89.65 326 *e*P P **02 08 36.4 -2.2**
comp=Z,10nm,0.8s,mb5.2
AKTK Aktyubinsk 89.79 320 P P **02 08 38.0 -1.4**
AKTO Aktyubinsk 89.79 320 P P **02 08 38.0 -1.4**
comp=Z,4.8nm,0.8s,mb4.8,baz=97,slow=5.4,SNR=14
AKTO Aktyubinsk 89.79 320 *i*P P **02 08 37.4 -2.0**
AKTO pmax pmax
comp=Z,1.0nm,1.0s,mb4.1
HEBO Mount Hebo 90.32 45 *e*P P **02 08 42.7 +0.7**
HUMO Hull Mountain 90.87 48 *e*P P **02 08 45.3 +0.7**
comp=Z,4.9nm,0.9s,mb4.8
YBH Yreka Blue Hor 91.05 48 *e*P P **02 08 46.2 +0.7**
YBH pmax pmax
comp=Z,9.0nm,1.3s
YBH Yreka Blue Hor 91.05 48 *e*P P **02 08 46.2 +0.7**
comp=Z,8.7nm,1.3s,mb4.9
WDC Whiskeytown Da 91.17 50 *e*P P **02 08 46.7 +0.6**
WDC pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
WDC Whiskeytown Da 91.17 50 *e*P P **02 08 46.7 +0.6**
comp=Z,7.0nm,1.1s,mb4.9
RPW Rockport 91.86 42 *e*P P **02 08 48.8 -0.3**
ETW Entiat 92.67 43 *e*P P **02 08 53.1 +0.2**
MOD Modoc 92.84 48 *e*P P **02 08 54.2 +0.4**
comp=Z,7.5nm,1.0s,mb5.1
EPH Ephrata 93.18 43 P P **02 08 55.6 +0.4**
HAWA Hanford 93.26 44 *e*P P **02 08 56.1 +0.4**
comp=Z,24nm,1.5s,mb5.4
OD2 Odessa Site #2 93.78 43 P P **02 08 58.4 +0.4**
WVOR Wild Horse Val 94.06 48 *e*P P **02 08 59.5 +0.1**
WVOR pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
WVOR Wild Horse Val 94.06 48 *e*P P **02 08 59.5 +0.1**
comp=Z,3.6nm,0.9s,mb4.8
LNOR Lincton Mounta 94.15 44 *e*P P **02 08 59.7 0.0**
MTUM Tungsten Hills 94.33 53 *e*P P **02 09 01.3 +0.6**
NVAR Mina Array Bea 94.49 52 P P **02 09 02.3 +0.8**
comp=Z,2.0nm,0.8s,mb4.6,baz=256,slow=7.0,SNR=14
NEW Newport 94.79 42 *e*P P **02 09 02.6 0.0**

NEW pmax pmax
comp=Z,3.0nm,0.7s
NEW Newport 94.79 42 *e*P **P 02 09 02.6 0.0**
comp=Z,3.1nm,0.7s,mb4.8
YKA Yellowknife Ar 94.81 27 P **P 02 09 01.8 -0.5**
comp=Z,3.6nm,0.7s,mb4.9,baz=276,slow=5.0,SNR=6.4
YKA LR LR 02 51 33.5
comp=Z,122nm,20.6s,MS4.3,baz=210,slow=35
BMO Blue Mountains 94.90 45 P **P 02 09 03.3 +0.1**
SYO Syowa Base 95.26 200⇑ *e*P **P 02 09 02.4 -1.9**
TPNV Topopah Spring 96.20 53 *e*P **P 02 09 10.6 +1.3**
TPNV pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
TPNV Topopah Spring 96.20 53 *e*P **P 02 09 10.6 +1.3**
comp=Z,3.0nm,0.9s,mb4.7
HLID Hailey 97.07 46 *e*P **P 02 09 13.3 +0.2**
comp=Z,2.3nm,0.7s,mb4.7
BOZ Bozeman (W) 98.81 44 *e*P **P 02 09 21.7 +0.8**
BOZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.8
BOZ Bozeman (W) 98.81 44 *e*P **P 02 09 21.7 +0.8**
comp=Z,3.5nm,0.9s,mb4.9
RRI2 Red Ridge 99.34 46 *e*P **P 02 09 24.1 +0.8**
comp=Z,3.3nm,0.8s,mb4.9
HWUT Hardware Ranch 99.38 48 *e*P **P 02 09 23.8 +0.3**
comp=Z,4.1nm,1.2s,mb4.8
IMW Indian Meadow 99.53 46 *e*P **P 02 09 23.4 -0.8**
comp=Z,1.8nm,0.8s,mb4.5
TPAW Teton Pass 99.58 46 *e*P **P 02 09 25.5 +1.1**
comp=Z,2.0nm,0.9s,mb4.5
PDAR Pinedale Array 100.70 47 P Pdif 02 09 29.6 +0.5
comp=Z,0.6nm,0.5s,baz=222,slow=2.0,SNR=5.3
GERES GERESS Array B 117.47 327 PKP PKPdf 02 14 26.3 -0.5
comp=Z,1.0nm,0.6s,baz=83,slow=1.2,SNR=12
WTTA Wattenberg 119.52 326⇓ *i*P PKPdf 02 14 30.4 -0.4
comp=Z,5.6nm,1.3s
SCHQ Schefferville 119.65 22 PKP PKPdf 02 14 30.1 -0.7
comp=Z,2.1nm,0.9s,baz=41,slow=11,SNR=3.5
FETA Feichten 120.16 327⇑ *i*P PKPdf 02 14 29.4 -2.6
comp=Z,3.9nm,1.0s
DAVA Damuels 120.46 327⇑ *i*P PKPdf 02 14 30.5 -2.0
comp=Z,6.2nm,1.1s
LPL La Plagne 123.27 327 *e*PKP1 PKPdf 02 14 37.7 -0.3
comp=Z,5.6nm,0.8s
LPG La Plagne 123.27 327 *e*PKP1 PKPdf 02 14 37.8 -0.2
comp=Z,3.1nm,0.6s
BNI Bardonecchia 123.59 327 *e*PKIKP PKPdf 02 14 38.6 -0.1
MBDF Montbardon 123.75 326 *e*PKP1 PKPdf 02 14 38.5 -0.5
ORIF Oris-en-Rattie 124.11 327 *e*PKP1 PKPdf 02 14 38.9 -0.8
comp=Z,4.8nm,0.6s
FRF La Foret Royal 124.55 325 *e*PKP1 PKPdf 02 14 39.8 -0.8
comp=Z,3.8nm,0.7s
LMR La Mourre 124.77 325 *e*PKP1 PKPdf 02 14 40.2 -0.8
comp=Z,8.5nm,0.8s
SMRF Simiane la Rot 124.89 326 *e*PKP1 PKPdf 02 14 41.1 -0.1
comp=Z,4.7nm,0.6s
TCF Toulx Ste Croi 125.09 330 *e*PKP1 PKPdf 02 14 40.3 -1.2
comp=Z,11nm,1.0s
PLCA Paso Flores 126.55 145 PKP PKPdf 02 14 44.6 +0.1
comp=Z,2.2nm,0.9s,baz=269,slow=3.0,SNR=7.0
KEST Kesra 127.35 316 PKP PKPdf 02 14 45.6 -0.5
comp=Z,1.3nm,0.9s,baz=315,slow=7.1,SNR=3.2
ROSC El Rosal 138.89 84 PKP PKPdf 02 15 08.7 +0.3
comp=Z,3.0nm,0.3s,baz=299,slow=23,SNR=4.4
LPAZ La Paz 141.67 118 PKhKP 02 15 08.7
comp=Z,1.8nm,0.6s,baz=277,slow=3.4,SNR=7.2
TORD Torodi Ar. Bea 143.21 291 PKhKP 02 15 11.4
comp=Z,5.6nm,0.9s,baz=51,slow=3.0,SNR=30
TORD PP PP 02 18 24.6 -2.0
comp=Z,1.3nm,1.0s,baz=69,slow=4.4,SNR=4.7
CPUP Villa Florida 144.41 141 PKP PKPdf 02 15 16.3 -1.7
comp=Z,1.6nm,0.5s,baz=300,slow=1.1,SNR=9.5
KIC Kosan Boka 150.94 282⇑ *i*PKIKP PKPbc 02 15 34.3 -0.5
comp=Z,86nm,0.7s
DBIC Dimbokro 151.00 282 PKPbc PKPbc 02 15 34.4 -0.5
comp=Z,18nm,0.6s,baz=58,slow=2.7,SNR=71
DBIC Dimbokro 151.00 282 PKPbc PKPbc 02 15 34.4 -0.5
TIC Toumodi 151.17 282⇑ *i*PKIKP PKPbc 02 15 34.6 -0.7
comp=Z,61nm,0.6s
LIC Lamto 151.25 281⇑ *i*PKP1 PKPbc 02 15 34.9 -0.6
comp=Z,44nm,0.7s
LIC Lamto 151.25 281⇑ *i*PKIKP PKPbc 02 15 34.9 -0.6
comp=Z,73nm,0.7s
BDFB Brasilia 158.11 139 PKP PKPdf 02 15 39.3 +0.4
comp=Z,0.5nm,0.4s,baz=162,slow=19,SNR=1.7
BDFB PKPab PKPab 02 16 12.6 +0.2
comp=Z,4.5nm,0.7s,baz=162,slow=5.6,SNR=8.1

IDC 12 02:07:27.6±14.0**, 1082S**×**16598E, h0**km**, mb3.9/4, mb1 4.1/4, mb1mx3.7/17, mbtmp3.9/4, Error ellipse: s-maj=235.0km s-min=121.4km az=56.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.11**	**242**	P	P	02 12 14.3	+0.3
	3.9nm,0.8s,baz=62,slow=13,SNR=6.7						
STKA	**Stephens Creek**	**30.76**	**223**	P	P	02 13 45.5	+0.6
	0.8nm,0.5s,baz=30,slow=14,SNR=3.0						
WRA	**Warramunga Arr**	**31.77**	**250**	P	P	02 13 54.6	+0.7
	2.2nm,0.7s,baz=81,slow=9.0,SNR=12						
ASAR	**Alice Springs**	**33.10**	**243**	P	P	02 14 04.2	-1.4
	0.7nm,0.8s,baz=76,slow=9.0,SNR=6.2						

*ISCJB **12** 02:18:42.8±0.7, 1779S±006×7017W±008, h129km±8km, mb4.0/5, Error ellipse: s-maj=12.4km s-min=9.8km az=164.7*
*NEIC **12** 02:18:43.0±1.2, 1752S×6980W, h91km±18km, Error ellipse: s-maj=32.9km s-min=13.7km az=48.0*
*IDC **12** 02:18:45.6±1.9, 1785S×6990W, h128km±13km, mb3.8/5, mb1 3.8/7, mb1mx3.5/19, mbtmp3.8/7, Error ellipse: s-maj=28.9km s-min=11.0km az=104.0*
ISC 12 02:18:44.1±0.7**, 1779S**±006×**7016W**±008**, h121**km±8km**, n10**, σ1**§02/14, mb4.0/5, 1D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**1.83**	**316**	⇓ *i*P	**Pn**	**02 19 14.6**	**-1.0**
ARE				*i* S	**Sn**	**02 19 39.5**	**-0.1**
LPAZ	**La Paz**	**2.44**	**53**	P	**Pn**	**02 19 23.4**	**+0.2**
	12nm,0.3s,baz=235,slow=7.4,SNR=523						
LPAZ				S	**Sn**	**02 19 53.8**	**+0.5**
	1.8nm,0.3s,baz=15,slow=17,SNR=8.0						
LPAZ	**La Paz**	**2.44**	**53**	P	**Pn**	**02 19 23.4**	**+0.2**
LPAZ				S	**Sn**	**02 19 53.8**	**+0.5**
LVC	**Limon Verde**	**4.94**	**167**	P	**Pn**	**02 19 57.8**	**+1.6**
	2.0nm,0.3s,baz=350,slow=9.9,SNR=27						
LVC				S	**Sn**	**02 20 51.8**	**-0.6**
	10nm,0.3s,baz=319,slow=9.2,SNR=13						
BDFB	**Brasilia**	**21.31**	**88**	P	**P**	**02 23 19.5**	**-1.8**
	4.2nm,1.1s,mb3.7,baz=221,slow=5.7,SNR=3.7						
DBIC	**Dimbokro**	**68.87**	**75**	P	**P**	**02 29 36.0**	**-0.2**
	4.2nm,0.6s,mb4.5,baz=233,slow=6.2,SNR=22						
ULM	**Lac du Bonnet**	**71.44**	**343**	P	**P**	**02 29 51.5**	**+0.5**
	1.4nm,0.4s,mb4.2,baz=149,slow=10.0,SNR=5.0						
TORD	**Torodi Ar. Bea**	**77.26**	**72**	P	**P**	**02 30 25.1**	**-0.4**
	2.6nm,0.7s,mb4.0,baz=258,slow=5.4,SNR=27						
YKA	**Yellowknife Ar**	**87.31**	**341**	P	**P**	**02 31 19.9**	**+3.2**
	0.8nm,0.7s,mb3.8,baz=137,slow=4.3,SNR=3.5						
YKA	**Yellowknife Ar**	**87.31**	**341**	P	**P**	**02 31 19.9**	**+3.2**

*IDC **12** 02:36:01.1±1.0, 348S×13076E, h0km, mb4.0/7, mb1 4.1/8, mb1mx4.0/16, mbtmp4.0/8, ML3.7/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/29, Error ellipse: s-maj=51.5km s-min=17.8km az=68.0*
*NEIC **12** 02:36:02.3±11.0, 348S×13075E, h10km±70km, mb4.0/4, Error ellipse: s-maj=26.8km s-min=14.9km az=48.0*
*ISCJB **12** 02:36:03.7±0.6, 363S±006×1306E±0.1, h33km, mb3.9/7, Error ellipse: s-maj=18.8km s-min=7.9km az=173.8*
*DJA **12** 02:36:10, 301S×13093E, h33km, MLv4.0/5*
ISC 12 02:36:05.1±0.8**, 363S**±007×**1309E**±02**, h35**km**, n17, σ1**§38/20, mb3.9/7, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**9.73**	**227**	Pn	**Pn**	**02 38 27.4**	**+4.7**
	5.0nm,0.3s,baz=143,slow=3.4,SNR=4.4						
BATI				LR	LR	02 42 42.8	
	comp=Z,180nm,19.4s,baz=88,slow=41						
KAPI	**Kappang**	**11.23**	**263**	Pn	**Pn**	**02 38 48.6**	**+5.4**
	0.5nm,0.3s,baz=236,slow=16,SNR=2.5						
FITZ	**Fitzroy Crossi**	**15.29**	**199**	*e*P	**Pn**	**02 39 38.4**	**0.0**
	4.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**15.29**	**199**	Pn	**Pn**	**02 39 38.5**	**+0.1**
	0.2nm,0.3s,baz=50,slow=14,SNR=10						
FITZ				Sn	**S**	**02 42 24.3**	**-18**
	0.1nm,0.3s,baz=180,slow=18,SNR=2.9						
WRAB	**Tennant Creek**	**16.55**	**169**	*e*P	**Pn**	**02 39 56.7**	**+2.2**
	5.9nm,0.8s						
WRA	**Warramunga Arr**	**16.55**	**169**	Pn	**Pn**	**02 39 52.9**	**-1.7**
	0.3nm,0.3s,baz=352,slow=13,SNR=5.4						
WRA				Sn	**S**	**02 42 52.6**	**-16**
	0.3nm,0.3s,baz=356,slow=22,SNR=4.1						
WB2	**Warramunga Arr**	**16.56**	**169**	*e*P	**Pn**	**02 39 54.3**	**-0.3**
WB2				*e*S	**S**	**02 42 51.9**	**-16**
ASAR	**Alice Springs**	**20.13**	**172**	P	**P**	**02 40 39.9**	**+3.8**
	5.1nm,0.6s,baz=351,slow=11,SNR=76						
ASAR				S	**S**	**02 44 17.5**	**-3.0**
	0.6nm,0.9s,baz=355,slow=30,SNR=2.7						
MBWA	**Marble Bar**	**20.55**	**211**	*e*P	**P**	**02 40 41.9**	**+1.1**
	11nm,1.0s						
CTA	**Charters Tower**	**22.16**	**139**	P	**P**	**02 41 00.8**	**+2.8**
	2.0nm,0.6s,mb3.7,baz=303,slow=6.6,SNR=5.2						
STKA	**Stephens Creek**	**29.84**	**162**	P	**P**	**02 42 11.8**	**+2.7**
	1.5nm,0.3s,mb4.2,baz=333,slow=9.0,SNR=3.3						
CMAR	**Chiang Mai Arr**	**38.40**	**306**	P	**P**	**02 43 23.6**	**+0.1**
	0.7nm,0.3s,mb3.8,baz=133,slow=6.6,SNR=3.0						
KSRS	**Korea Array**	**40.97**	**356**	P	**P**	**02 43 45.0**	**+0.5**
	0.7nm,0.4s,mb3.6,baz=187,slow=6.1,SNR=3.9						
KSRS				LR	LR	03 00 37.5	
	comp=Z,32nm,18.5s,baz=179,slow=36						
SONM	**Songino Array**	**55.58**	**340**	P	**P**	**02 45 36.9**	**-0.1**
	0.5nm,0.4s,mb3.9,baz=170,slow=8.0,SNR=4.8						
MKAR	**Makanchi Array**	**65.95**	**326**	P	**P**	**02 46 47.0**	**-0.7**
	1.8nm,0.9s,mb4.1,baz=120,slow=8.0,SNR=7.4						
KURK	**Kurchatov**	**70.16**	**328**	*e*P	**P**	**02 47 13.1**	**-0.9**
	1.4nm,0.6s,mb4.1						
TORD	**Torodi Ar. Bea**	**128.99**	**284**	PKP	PKPdf	02 55 10.9	+0.7
	0.2nm,0.5s,baz=110,slow=1.5,SNR=5.3						

*MOS **12** 03:12:38.2±0.9, 3647N×7089E, h192km, mb4.3/10, Error ellipse: s-maj=17.9km s-min=9.2km az=84.1*
*BJI **12** 03:12:39.9, 3652N×7100E, h199km, mb4.1*
*NEIC **12** 03:12:40.5±1.3, 3649N×7101E, h202km±11km, mb4.2/4, Error ellipse: s-maj=12.0km s-min=8.8km az=207.0*
*ISCJB **12** 03:12:40.6±0.4, 3653N±003×7104E±006, h213km±5km, mb4.0/14, Error ellipse: s-maj=8.0km s-min=3.9km az=159.6*
*IDC **12** 03:12:44.3±3.1, 3655N×7101E, h239km±29km, mb3.6/11, mb1 3.7/16, mb1mx3.5/27, mbtmp3.5/16, Error ellipse: s-maj=14.0km s-min=11.8km az=135.0*
*NNC **12** 03:12:47.0±4.1, 3748N×7064E, h0km, mb4.5, mpv4.0, Error ellipse: s-maj=31.8km s-min=30.2km az=48.0*
ISC 12 03:12:41.5±0.4**, 3655N**±003×**7103E**±006**, h209**km±5km**, n88, σ1**§02/110, mb4.0/14, 4C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.81**	**165**	⇓P	**Pn**	**03 13 30.2**	**+0.7**
CEP				S	**Sn**	**03 14 07.0**	**0.0**
CHCP	**Chirah Chowk**	**3.42**	**147**	P	**Pn**	**03 13 37.2**	**+0.7**
THW	**Thamme Wali**	**3.79**	**171**	⇓P	**Pn**	**03 13 41.0**	**-0.1**
SARP	**Sargodha**	**4.81**	**163**	⇓P	**Pn**	**03 13 54.7**	**+0.9**
THN	**Thein Dam**	**5.64**	**135**	*e*P	**Pn**	**03 14 03.9**	**-0.4**
THN				*ex*	x	03 15 07.9	
AML	**Almayashu**	**5.95**	**20**	P	**Pn**	**03 14 08.2**	**+0.2**
	SNR=17						
AML	**Almayashu**	**5.95**	**20**	*e*Pn	**Pn**	**03 14 08.2**	**+0.1**
	51nm,0.4s						
AML				*e*Sn	**Sn**	**03 15 13.0**	**-3.8**
UCH	**Uchtor**	**6.28**	**24**	P	**Pn**	**03 14 12.8**	**+0.4**
	SNR=15						
UCH	**Uchtor**	**6.28**	**24**	*e*Pn	**Pn**	**03 14 12.4**	**0.0**
UCH				*e*Sn	**Sn**	**03 15 21.4**	**-3.2**
EKS2	**Erkin-Say**	**6.46**	**18**	P	**Pn**	**03 14 15.2**	**+0.4**
	SNR=19						
EKS2	**Erkin-Say**	**6.46**	**18**	*e*Pn	**Pn**	**03 14 14.9**	**+0.2**
	6.9nm,0.5s						
EKS2				*e*Sn	**Sn**	**03 15 24.2**	**-4.7**
KK31	**Karatay Array**	**6.56**	**357**	⇓Pn	**Pn**	**03 14 15.0**	**-1.0**
	2.1nm,0.2s,baz=183,slow=14,SNR=261						
KK31				⇑Sn	**Sn**	**03 15 23.8**	**-7.3**
	39nm,0.3s,baz=182,slow=21						
AAK	**Ala-Archa**	**6.64**	**23**	P	**Pn**	**03 14 17.8**	**+0.7**
	SNR=12						
KBK	**Karagaybulak**	**6.81**	**25**	P	**Pn**	**03 14 20.7**	**+1.5**
	SNR=8.3						
ULHL	**Ulol**	**6.98**	**34**	P	**Pn**	**03 14 21.7**	**+0.3**
	SNR=7.0						
SDNR	**Sundarnagar**	**7.05**	**134**	*e*P	**Pn**	**03 14 21.0**	**-1.4**
SDNR				*e*S	**Sn**	**03 15 35.4**	**-7.3**
USP	**Ospenovka**	**7.22**	**21**	P	**Pn**	**03 14 24.6**	**+0.1**
	SNR=6.8						
TKM2	**Tokmak 2**	**7.27**	**28**	⇑Pn	**Pn**	**03 14 25.6**	**+0.4**
	14nm,0.6s						
TKM2				⇑Sn	**Sn**	**03 15 41.7**	**-6.1**
	10nm,0.6s						
TKM2	**Tokmak 2**	**7.27**	**28**	*e*PN	**Pn**	**03 14 25.0**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,15nm,0.4s						
TKM2	**Tokmak 2**	**7.27**	**28**	P	**Pn**	**03 14 25.7**	**+0.5**
	SNR=6.6						
TKM2	**Tokmak 2**	**7.27**	**28**	*e*Pn	**Pn**	**03 14 25.0**	**-0.2**
	comp=Z,15nm,0.4s						
SMLA	**Simla**	**7.43**	**135**	*i* P	**Pn**	**03 14 27.1**	**-0.4**
SMLA				*i* S	**Sn**	**03 15 46.4**	**-5.4**
SMLA				*ex*	x	03 15 51.3	
	comp=E,1μm,0.4s						
SMLA				*ex*	x	03 15 52.6	
	comp=N,568nm,0.4s						
KLP	**Kalpa**	**7.80**	**128**	*e*P	**Pn**	**03 14 32.0**	**-0.2**
KLP				*e*S	**Sn**	**03 15 52.4**	**-8.1**
KLP				AML	AML	03 15 59.3	
	comp=N,318nm,1.0s						
DDI	**Dehra Dun**	**8.54**	**135**	*ex*	x	03 14 29.6	
DDI				*ex*	x	03 16 16.1	
JOSI	**Joshimath**	**9.29**	**128**	*e*P	**Pn**	**03 14 51.1**	**-0.3**
JOSI				*e*S	**Sn**	**03 16 28.1**	**-7.7**
JOSI				AML	AML	03 16 32.8	
	comp=N,196nm,1.1s						
JOSI				AML	AML	03 16 37.0	
	comp=E,196nm,0.6s						
NDI	**New Delhi**	**9.42**	**145**	*e*P	**Pn**	**03 14 51.0**	**-2.1**
NDI				*e*S	**Sn**	**03 16 29.0**	**-10**
KUDL	**Kundal**	**9.56**	**150**	*e*P	**Pn**	**03 14 53.1**	**-2.0**
KUDL				*e*S	**Sn**	**03 16 31.7**	**-11**
KUDL				AML	AML	03 16 38.3	
	comp=N,20nm,0.7s						
SONA	**Sohna**	**9.72**	**147**	*e*P	**Pn**	**03 14 55.8**	**-1.3**
SONA				*e*S	**Sn**	**03 16 36.5**	**-10**
SONA				AML	AML	03 16 41.0	
	comp=E,38nm,0.7s						
SONA				AML	AML	03 16 42.9	
	comp=N,15nm,0.4s						
MK31	**Makanchi Array**	**13.24**	**36**	*e*P	**Pn**	**03 15 41.6**	**+0.1**
MKAR	**Makanchi Array**	**13.24**	**36**	P	**Pn**	**03 15 41.5**	**0.0**
MKAR				S	**S**	**03 18 12.7**	**+3.8**
	baz=209,slow=15,SNR=2.4						
MKAR	**Makanchi Array**	**13.24**	**36**	P	**Pn**	**03 15 41.5**	**0.0**
MKAR				S	**S**	**03 18 12.7**	**+3.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
DANN	**Dangsing**	**13.49**	**124**	*e*P	**Pn**	**03 15 44.6**	**-0.3**
	comp=Z,78nm,0.6s						
KOLN	**Koldanda**	**13.77**	**126**	*e*P	**Pn**	**03 15 47.5**	**-0.8**
	comp=Z,31nm,0.5s						
GKN	**Gorkha**	**14.31**	**123**	*e*P	**Pn**	**03 15 54.5**	**-0.4**
	comp=Z,135nm,0.6s						
DMN	**Daman**	**14.88**	**123**	*e*P	**Pn**	**03 16 02.0**	**+0.1**
	comp=Z,53nm,0.5s						
KKN	**Kakani**	**14.88**	**122**	*e*P	**Pn**	**03 16 01.9**	**0.0**
	comp=Z,117nm,0.5s						
AB31	**Akbulak array**	**15.05**	**331**	⇑Pn	**Pn**	**03 16 05.5**	**+1.7**
	comp=Z,5.0nm,0.5s,baz=154,slow=12,SNR=5.1						
AB31				⇓Sn	**S**	**03 18 46.0**	**-4.5**
	comp=Z,4.4nm,0.7s						
PKIN	**Phulchoki**	**15.10**	**122**	*e*P	**Pn**	**03 16 04.5**	**0.0**
	comp=Z,53nm,0.4s						
PKI	**Pulchoki**	**15.11**	**122**	*e*P	**Pn**	**03 16 04.6**	**-0.1**
	comp=Z,52nm,0.4s						
KURK	**Kurchatov**	**15.18**	**19**	P	**Pn**	**03 16 04.7**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=214,slow=8.2,SNR=6.8						
KURK	**Kurchatov**	**15.18**	**19**	*e*P	**Pn**	**03 16 05.0**	**-0.3**
GUN	**Gumba**	**15.22**	**120**	*e*P	**Pn**	**03 16 06.1**	**+0.1**
	comp=Z,55nm,0.4s						
JIRN	**Jiri**	**15.59**	**120**	*e*P	**Pn**	**03 16 11.1**	**+0.6**
	comp=Z,113nm,0.5s						
RAMN	**Ramite**	**16.32**	**121**	*e*P	**P**	**03 16 19.3**	**+0.9**
	comp=Z,59nm,0.6s						
BVAR	**Borovoye Array**	**16.48**	**359**	P	**P**	**03 16 19.9**	**0.0**
	comp=Z,1.9nm,0.3s,baz=154,slow=14,SNR=16						
BVAR				S	**S**	**03 19 22.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=159,slow=20,SNR=4.1						
BVAR	**Borovoye Array**	**16.48**	**359**	P	**P**	**03 16 19.9**	**0.0**
BVAR				S	**S**	**03 19 22.6**	**+1.3**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTK	**Aktyubinsk**	**16.75**	**330**	P	**P**	**03 16 22.8**	**-0.1**
AKTK				S	**S**	**03 19 25.4**	**-1.4**
AKTO	**Aktyubinsk**	**16.75**	**330**	P	**P**	**03 16 22.8**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=143,slow=8.6,SNR=20						
AKTO				S	**S**	**03 19 25.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=324,slow=19,SNR=4.1						
AKTO	**Aktyubinsk**	**16.75**	**330**	P	**P**	**03 16 22.8**	**0.0**
AKTO				S	**S**	**03 19 25.4**	**-1.4**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TAPN	**Taplejung**	**16.85**	**118**	*e*P	**P**	**03 16 26.5**	**+2.3**
	comp=Z,42nm,0.6s						
ODAN	**Odare**	**16.92**	**120**	*e*P	**P**	**03 16 27.7**	**+2.7**
	comp=Z,30nm,0.5s						
LSA	**Lhasa**	**18.17**	**106**	P	**P**	**03 16 40.8**	**+2.3**
ZALV	**Zalesovo Beam**	**19.86**	**25**	P	**P**	**03 16 57.1**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=220,slow=12,SNR=7.0						
ZALV				S	**S**	**03 20 26.3**	**-2.0**
	baz=222,slow=21,SNR=2.5						
ZALV	**Zalesovo Beam**	**19.86**	**25**	P	**P**	**03 16 57.1**	**+0.6**
ZALV				S	**S**	**03 20 26.3**	**-2.0**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ONI	**Oni**	**22.04**	**294**	P	**P**	**03 17 21.8**	**+2.7**
SONM	**Songino Array**	**28.29**	**55**	P	**P**	**03 18 16.7**	**+1.4**
	comp=Z,0.3nm,0.4s,mb3.3,baz=273,slow=11,SNR=2.9						
AKASG	**Malin Array Be**	**32.93**	**309**	P	**P**	**03 18 56.7**	**+0.7**
	comp=Z,1.0nm,0.5s,mb3.6,baz=79,slow=8.3,SNR=3.7						
AKASG	**Malin Array Be**	**32.93**	**309**	P	**P**	**03 18 56.7**	**+0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	**Joensuu**	**35.84**	**330**	*e*p	**P**	**03 19 21.1**	**+0.3**
	comp=Z,8.8nm,0.3s,mb4.8						
JOF	**Joensuu**	**35.84**	**330**	*e*P	**P**	**03 19 21.1**	**+0.3**
JOF				pmax	pmax		
	comp=Z,9.0nm,0.3s,mb4.8						
KAF	**Kangasniemi**	**37.60**	**327**	*e*p	**P**	**03 19 35.2**	**-0.4**
	comp=Z,7.1nm,0.8s,mb4.2,baz=111,slow=8.5						
KAF	**Kangasniemi**	**37.60**	**327**	*e*P	**P**	**03 19 35.2**	**-0.4**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
KEV	**Kevo**	**40.77**	**338**	*e*p	**P**	**03 20 00.6**	**-1.1**
	comp=Z,6.1nm,0.5s,mb4.3						
KEV	**Kevo**	**40.77**	**338**	*e*P	**P**	**03 20 00.6**	**-1.1**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.3						
ARCES	**ARCESS Array B**	**41.11**	**338**	P	**P**	**03 20 05.5**	**+0.9**
	comp=Z,5.7nm,0.6s,mb4.2,baz=112,slow=7.9,SNR=64						
ARCES	**ARCESS Array B**	**41.11**	**338**	P	**P**	**03 20 05.5**	**+1.0**
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NB2	**NORSAR Subarra**	**44.36**	**323**	P	**P**	**03 20 30.5**	**-0.2**
	comp=Z,1.9nm,0.6s,mb3.6,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.36**	**323**	P	**P**	**03 20 30.8**	**+0.1**
	comp=Z,2.7nm,0.6s,mb3.8,baz=97,slow=7.7,SNR=8.6						
NOA	**NORSAR Array B**	**44.36**	**323**	P	**P**	**03 20 30.8**	**+0.1**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KMBO	**Kilima Mbogo**	**48.88**	**228**	*e*P	**P**	**03 21 07.3**	**+1.0**
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KMBO	**Kilima Mbogo**	**48.88**	**228**	*e*P	**P**	**03 21 07.3**	**+1.0**
	comp=Z,2.6nm,0.7s,mb3.7						
KEST	**Kesra**	**49.04**	**288**	P	**P**	**03 21 06.8**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=316,slow=12,SNR=6.2						
TORD	**Torodi Ar. Bea**	**65.74**	**269**	P	**P**	**03 23 02.4**	**-1.8**
	comp=Z,1.7nm,0.4s,mb4.0,baz=52,slow=6.1,SNR=84						
BOSA	**Boshof**	**77.80**	**220**	P	**P**	**03 24 15.6**	**0.0**
	comp=Z,4.2nm,0.9s,mb4.1,baz=340,slow=2.0,SNR=6.4						
BOSA	**Boshof**	**77.80**	**220**	P	**P**	**03 24 15.6**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
BOSA	**Boshof**	**77.80**	**220**	P	**P**	**03 24 15.6**	**0.0**
YKA	**Yellowknife Ar**	**81.20**	**3**	P	**P**	**03 24 34.1**	**+0.6**
	comp=Z,1.7nm,0.4s,mb4.0,baz=351,slow=5.4,SNR=19						
YKA	**Yellowknife Ar**	**81.20**	**3**	P	**P**	**03 24 34.1**	**+0.6**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
WRA	**Warramunga Arr**	**82.00**	**122**	P	**P**	**03 24 37.2**	**-1.0**
	comp=Z,1.0nm,0.4s,mb3.8,baz=322,slow=4.9,SNR=9.3						
WRA	**Warramunga Arr**	**82.00**	**122**	P	**P**	**03 24 37.2**	**-1.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WB2	**Warramunga Arr**	**82.00**	**122**	*e*P	**P**	**03 24 37.7**	**-0.6**
WB2	**Warramunga Arr**	**82.00**	**122**	*e*P	**P**	**03 24 37.3**	**-1.0**
ASAR	**Alice Springs**	**84.26**	**125**	P	**P**	**03 24 49.4**	**-0.4**
	comp=Z,1.2nm,0.5s,mb3.9,baz=311,slow=5.0,SNR=16						
ASAR	**Alice Springs**	**84.26**	**125**	P	**P**	**

ZAA0	**Zalesovo Array**	**50.61**	**351**	*e*P	**P**	**03 28 20.5**	**-0.1**
ZALV	**Zalesovo Beam**	**50.61**	**351**	P	**P**	**03 28 20.8**	**+0.1**
	7.3nm,0.5s,mb4.9,baz=179,slow=7.1,SNR=31						
NAY	**Al-Naaiem**	**52.62**	**304**	*e*P	**P**	**03 28 36.2**	**0.0**
	baz=307						
NAY				AMb	AMB	03 28 37.5	
	comp=Z,7.0nm,0.7s,mb4.7,baz=307						
MIB	**Mutribah**	**52.73**	**305**	*e*P	**P**	**03 28 37.2**	**+0.4**
	baz=307						
MIB				AMb	AMB	03 28 37.8	
	comp=Z,16nm,0.8s,mb5.0,baz=307						
RST	**Umm Al-Ruwaisa**	**52.91**	**304**	*e*P	**P**	**03 28 38.0**	**-0.3**
	baz=307						
RST				AMb	AMB	03 28 38.8	
	comp=Z,11nm,0.7s,mb4.9,baz=307						
BVAR	**Borovoye Array**	**53.24**	**341**	P	**P**	**03 28 39.0**	**-1.2**
	comp=Z,2.9nm,0.8s,mb4.3,baz=134,slow=11,SNR=9.7						
STKA	**Stephens Creek**	**56.04**	**133**	P	**P**	**03 29 00.6**	**-0.3**
	comp=Z,1.5nm,0.7s,mb4.1,baz=304,slow=3.6,SNR=3.1						
STKA	**Stephens Creek**	**56.04**	**133**	P	**P**	**03 29 00.6**	**-0.3**
AKTK	**Aktyubinsk**	**56.25**	**332**	P	**P**	**03 29 01.7**	**-0.4**
AKTO	**Aktyubinsk**	**56.25**	**332**	P	**P**	**03 29 01.7**	**-0.4**
	comp=Z,1.1nm,0.3s,mb4.3,baz=89,slow=8.3,SNR=6.3						
ARCES	**ARCESS Array B**	**79.53**	**340**	P	**P**	**03 31 28.2**	**+0.2**
	comp=Z,1.4nm,0.5s,mb4.2,baz=94,slow=5.8,SNR=16						
GERES	**GERESS Array B**	**82.00**	**319**	P	**P**	**03 31 41.5**	**-0.2**
	comp=Z,0.5nm,0.5s,mb3.7,baz=115,slow=6.0,SNR=5.9						
NOA	**NORSAR Array B**	**84.03**	**331**	P	**P**	**03 31 50.8**	**-1.1**
	comp=Z,1.1nm,0.8s,mb4.1,baz=97,slow=4.1,SNR=2.7						
KEST	**Kesra**	**85.07**	**305**	P	**P**	**03 31 58.2**	**+0.5**
	comp=Z,1.4nm,0.7s,mb4.2,baz=246,slow=6.5,SNR=6.4						
LPG	**La Plagne**	**86.72**	**315**	*e*P	**P**	**03 32 06.1**	**+0.4**
	comp=Z,5.1nm,0.8s,mb4.5						
LPG	**La Plagne**	**86.72**	**315**	*e*P	**P**	**03 32 06.1**	**+0.4**
	comp=Z,2.5nm,0.8s,mb4.5						
LPL	**La Plagne**	**86.74**	**315**	*e*P	**P**	**03 32 06.2**	**+0.5**
	comp=Z,6.0nm,0.7s,mb4.7						
LPL	**La Plagne**	**86.74**	**315**	*e*P	**P**	**03 32 06.2**	**+0.5**
	comp=Z,3.0nm,0.7s,mb4.6						
MBDF	**Montbardon**	**86.74**	**314**	*e*P	**P**	**03 32 07.5**	**+1.7**
	comp=Z,6.6nm,0.9s,mb4.5						
MBDF	**Montbardon**	**86.74**	**314**	*e*P	**P**	**03 32 07.5**	**+1.7**
	comp=Z,3.3nm,0.9s,mb4.6						
HAU	**Haudompre**	**86.89**	**318**	*e*P	**P**	**03 32 06.8**	**+0.4**
CABF	**La Chapelle**	**87.14**	**316**	*e*P	**P**	**03 32 07.4**	**-0.3**
ORIF	**Oris-en-Rattie**	**87.37**	**315**	*e*P	**P**	**03 32 09.2**	**+0.4**
	comp=Z,9.0nm,0.9s,mb4.7						
ORIF	**Oris-en-Rattie**	**87.37**	**315**	*e*P	**P**	**03 32 09.2**	**+0.4**
	comp=Z,4.5nm,0.9s,mb4.7						
BAIF	**Baives**	**88.18**	**320**	*e*P	**P**	**03 32 12.4**	**-0.2**
	comp=Z,6.4nm,0.6s,mb4.7						
BAIF	**Baives**	**88.18**	**320**	*e*P	**P**	**03 32 12.4**	**-0.2**
	comp=Z,3.2nm,0.6s,mb4.7						
LOR	**Lormes**	**88.62**	**317**	*e*P	**P**	**03 32 14.7**	**0.0**
	comp=Z,5.0nm,0.7s,mb4.7						
LOR	**Lormes**	**88.62**	**317**	*e*P	**P**	**03 32 14.7**	**0.0**
	comp=Z,2.5nm,0.7s,mb4.7						
SMF	**Signal de Mont**	**88.68**	**316**	*e*P	**P**	**03 32 15.0**	**0.0**
	comp=Z,2.8nm,0.5s,mb4.5						
SMF	**Signal de Mont**	**88.68**	**316**	*e*P	**P**	**03 32 15.0**	**0.0**
	comp=Z,1.4nm,0.5s,mb4.5						
SSF	**Saint Saulge**	**88.87**	**317**	*e*P	**P**	**03 32 16.0**	**+0.1**
	comp=Z,4.4nm,0.7s,mb4.6						
SSF	**Saint Saulge**	**88.87**	**317**	*e*P	**P**	**03 32 16.0**	**+0.1**
	comp=Z,2.2nm,0.7s,mb4.6						
AVF	**Avril sur Loir**	**89.00**	**317**	*e*P	**P**	**03 32 15.9**	**-0.6**
CAF	**Calviac**	**90.07**	**315**	*e*P	**P**	**03 32 21.8**	**+0.2**
	comp=Z,1.4nm,0.5s,mb4.3						
CAF	**Calviac**	**90.07**	**315**	*e*P	**P**	**03 32 21.8**	**+0.2**
	comp=Z,0.7nm,0.5s,mb4.2						
TORD	**Torodi Ar. Bea**	**93.42**	**283**	P	**P**	**03 32 37.5**	**-0.2**
	comp=Z,0.3nm,0.7s,mb3.8,baz=100,slow=6.6,SNR=6.4						
TORD	**Torodi Ar. Bea**	**93.42**	**283**	P	**P**	**03 32 37.5**	**-0.2**
ESDC	**Sonseca Array**	**95.20**	**310**	P	**P**	**03 32 45.5**	**+0.1**
	comp=Z,0.5nm,0.7s,mb4.0,baz=145,slow=41,SNR=3.0						
ULM	**Lac du Bonnet**	**124.94**	**9**	PKP	PKPdf	03 38 20.6	-1.0
	comp=Z,2.9nm,0.9s,baz=300,slow=7.9,SNR=4.3						
NVAR	**Mina Array Bea**	**127.07**	**34**	PKP	PKPdf	03 38 26.8	+0.8
	comp=Z,0.3nm,0.6s,baz=329,slow=3.8,SNR=4.1						
TXAR	**Lajitas Array**	**141.76**	**29**	PKP	PKPdf	03 38 53.5	-0.2
	comp=Z,0.5nm,0.7s,baz=354,slow=5.0,SNR=4.4						
TXAR	**Lajitas Array**	**141.76**	**29**	PKP	PKPdf	03 38 53.5	-0.2
CPUP	**Villa Florida**	**146.29**	**226**	PKPbc	PKPbc	03 39 01.9	-0.9
	comp=Z,0.5nm,0.4s,baz=131,slow=9.3,SNR=2.9						

PRU ***12*** *03:23:05.1, 50.26N×1860E, h0km*

WAR 12 03:23:03.7, 50.21N×1828E, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
RAC	**Raciborz**	**0.14**	**203**	*e*Pg	Pg	Pg	03 23 11.6	+5.3
RAC				*e*Sg	Sg	Sg	03 23 17.3	+9.2
OKC	**Ostrava-Krasne**	**0.38**	**193**	*e*PG	Pg	Pg	03 23 14.1	+3.1
OKC				*e*SG	Sg	Sg	03 23 21.0	+5.1
	comp=Z,31nm,0.5s							
DPC	**Dobruska-Polom**	**1.26**	**277**	*e*PG	Pg	Pg	03 23 31.3	+3.4
DPC				*e*SG	Sg	Sg	03 23 51.9	+7.6
	comp=Z,14nm,0.4s							
NIE	**Niedzica**	**1.54**	**120**	*e*Pg	Pg	Pg	03 23 28.5	-4.6
NIE				*e*Sg	Sg	Sg	03 23 47.5	-5.5
KOLL	**Kolacno**	**1.64**	**177**	*e*PN	Pn	Pn	03 23 34.8	+1.1
KOLL				*e*SN	Sn	Sn	03 23 57.3	+1.9
VYHS	**Vyhne**	**1.76**	**168**	*e*PN	Pn	Pn	03 23 34.0	-1.3
VYHS				*e*SN	Sn	Sn	03 23 58.5	+0.1
STHS	**Stebnicka Huta**	**2.08**	**111**	*e*PN	Pn	Pn	03 23 37.8	-2.0
STHS				*e*SN	Sn	Sn	03 24 03.0	-3.3
ZST	**Bratislava**	**2.16**	**201**	*e*SN	Sn	Sn	03 24 13.6	+5.3
KECS	**Kecovo**	**2.25**	**139**	*e*PN	Pn	Pn	03 23 43.8	+1.7
KECS				*e*SN	Sn	Sn	03 24 11.0	+0.4
PRU	**Pruhonice**	**2.42**	**266**	*e*SG	Sg	Sg	03 24 25.4	+4.1
	comp=Z,4.5nm,0.6s							
CRVS	**Cervenica-Dubn**	**2.45**	**121**	*e*PN	Pn	Pn	03 23 45.5	+0.6
CRVS				*e*SN	Sn	Sn	03 24 15.3	-0.2
BRG	**Berggiesshubel**	**2.84**	**285**	SG	Sg	Sg	03 24 42.1	+7.1
	comp=Z,3.7nm,0.6s							
KHC	**Kasperske Hory**	**3.24**	**252**	*e*SG	Sg	Sg	03 24 51.6	+3.9
	comp=Z,5.9nm,0.5s							
CLL	**Collm**	**3.53**	**290**	*e*Sg	Sg	Sg	03 25 06.0	+9.1

ISCJB ***12*** *03:25:23.5±1.1, 46S±02×688E±02, h10km, mb4.2/11, MS3.6/13, Error ellipse: s-maj=32.7km s-min=16.2km az=136.1*

IDC ***12*** *03:25:23.9±1.2, 465N×6878E, h0km, mb4.1/10, mb1 4.2/10, mb1mx3.9/23, mbtmp4.1/10, MS3.6/13, Ms1 3.6/13, ms1mx3.3/34, Error ellipse: s-maj=39.0km s-min=20.3km az=43.0*

NEIC ***12*** *03:25:25.4±0.8, 466N×6878E, h10km, mb4.5/1, Error ellipse: s-maj=25.4km s-min=14.1km az=224.0*

ISC 12 03:25:25.5±1.1, 47S±02×688E±02, h10km, n24, σ0s88/13, mb4.2/11, MS3.6/13, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
KMBO	**Kilima Mbogo**	**31.68**	**275**	LR	LR	LR	03 41 47.2	
	comp=Z,98nm,19.6s,MS3.5,baz=219,slow=31							
CMAR	**Chiang Mai Arr**	**37.57**	**51**	P	**P**	**03 32 41.5**	**+1.2**
	1.2nm,0.8s,mb3.7,baz=241,slow=9.2,SNR=4.4							
CMAR				PcP	PcP	PcP	03 34 59.6	+1.2
	0.8nm,0.3s,baz=227,slow=3.3,SNR=4.2							
CMAR				LR	LR	LR	03 44 42.1	
	comp=Z,72nm,20.7s,MS3.5,baz=59,slow=31							
BOSA	**Boshof**	**47.64**	**235**	LR	LR	LR	03 50 54.4	
	comp=Z,72nm,19.0s,MS3.7,baz=1.9,slow=32							
TKM2	**Tokmak 2**	**47.76**	**7**	*e*P	**P**	**03 34 03.6**	**+0.9**
	3.0nm,0.6s,mb4.5							
KAPI	**Kappang**	**50.78**	**93**	P	**P**	**03 34 24.8**	**-1.6**
	4.0nm,0.4s,mb4.7,baz=241,slow=19,SNR=4.2							
KAPI				LR	LR	LR	03 53 19.8	
	comp=Z,64nm,19.7s,MS3.6,baz=151,slow=33							
MKAR	**Makanchi Array**	**52.61**	**12**	P	**P**	**03 34 38.8**	**-0.7**
	1.2nm,0.6s,mb4.0,baz=198,slow=7.6,SNR=7.8							
MKAR				PcP	PcP	PcP	03 35 48.8	-0.7
	0.9nm,0.6s,baz=213,slow=4.0,SNR=4.4							
MKAR				LR	LR	LR	03 58 39.3	
	comp=Z,28nm,19.4s,MS3.3,baz=358,slow=38							
KURK	**Kurchatov**	**55.80**	**8**	LR	LR	LR	03 56 43.9	
	comp=Z,32nm,21.6s,MS3.4,baz=190,slow=34							
FITZ	**Fitzroy Crossi**	**57.09**	**108**	LR	LR	LR	03 57 11.6	
	comp=Z,39nm,18.3s,MS3.5,baz=97,slow=33							
BVAR	**Borovoye Array**	**57.48**	**1**	LR	LR	LR	03 59 06.9	
	comp=Z,36nm,19.7s,MS3.5,baz=85,slow=35							
ZAA0	**Zalesovo Array**	**59.92**	**11**	*e*P	**P**	**03 35 30.4**	**-1.1**
ZALV	**Zalesovo Beam**	**59.92**	**11**	P	**P**	**03 35 30.7**	**-0.8**
	4.0nm,0.6s,mb4.6,baz=213,slow=6.6,SNR=15							
ZALV				LR	LR	LR	04 01 44.0	
	comp=Z,26nm,21.8s,MS3.3,baz=257,slow=36							
SONM	**Songino Array**	**61.81**	**28**	P	**P**	**03 35 45.0**	**+0.4**
	1.9nm,0.8s,mb4.2,baz=216,slow=6.6,SNR=11							
SONM				LR	LR	LR	04 02 29.9	
	comp=Z,140nm,20.3s,MS4.1,baz=349,slow=36							
AKASG	**Malin Array Be**	**64.76**	**333**	P	**P**	**03 36 05.3**	**+1.3**
	1.8nm,0.5s,mb4.4,baz=120,slow=5.4,SNR=5.8							
ASAR	**Alice Springs**	**65.37**	**114**	P	**P**	**03 36 08.7**	**+0.1**
	1.1nm,0.8s,mb3.9,baz=283,slow=6.3,SNR=9.3							
WRA	**Warramunga Arr**	**65.46**	**110**	P	**P**	**03 36 09.7**	**+0.5**
	3.6nm,0.9s,mb4.4,baz=284,slow=6.2,SNR=17							
WB2	**Warramunga Arr**	**65.47**	**110**	*e*P	**P**	**03 36 09.7**	**+0.4**
KSRS	**Korea Array**	**69.02**	**47**	LR	LR	04 08 03.6		
	comp=Z,45nm,18.9s,MS3.7,baz=273,slow=37							
MJAR	**Matsushiro Arr**	**76.45**	**51**	LR	LR	04 12 13.9		
	comp=Z,59nm,18.7s,MS3.9,baz=140,slow=37							
HFS	**Hagfors**	**77.55**	**335**	P	**P**	**03 37 20.6**	**-0.7**
	4.6nm,1.0s,mb4.4,baz=177,slow=10,SNR=2.9							
ESDC	**Sonseca Array**	**79.81**	**312**	P	**P**	**03 37 34.2**	**0.0**
	0.6nm,0.6s,mb3.7,baz=84,slow=6.4,SNR=3.7							
ASAJ	**Asahikawa**	**81.71**	**44**	LR	LR	04 13 38.7		
	comp=Z,30nm,18.5s,MS3.7,baz=175,slow=35							
PDAR	**Pinedale Array**	**142.03**	**358**	PKP	PKPdf	03 44 58.7	+0.6	
	0.7nm,1.0s,baz=54,slow=7.5,SNR=3.9							
NVAR	**Mina Array Bea**	**145.77**	**10**	PKPbc	PKPbc	03 45 06.4	+1.2	
	3.7nm,0.8s,baz=356,slow=3.3,SNR=32							
TXAR	**Lajitas Array**	**154.44**	**345**	PKPbc	PKPbc	03 45 26.1	-1.0	
	0.4nm,0.7s,baz=326,slow=3.6,SNR=3.9							

ISCJB ***12*** *03:36:06.0±0.5, 5141N±003×1609E±003, h0km, Error ellipse: s-maj=4.1km s-min=2.3km az=18.5*

WAR ***12*** *03:36:07.9, 5149N×1611E, ML2.7, Mining Induced*

IPEC ***12*** *03:36:07.2±0.3, 5149N×1613E, h8km±1km, ML2.3/3, Error ellipse: s-maj=1.8km s-min=0.7km az=32.0*

CSEM ***12*** *03:36:07.6±0.1, 5146N×1610E, h1km, ML3.5/10, Error ellipse: s-maj=2.2km s-min=1.3km az=23.0*

NEIC ***12*** *03:36:07.2±0.9, 5147N×1611E, h5km, ML2.5(BRA), ML2.9(SZGRF), Error ellipse: s-maj=10.7km s-min=3.7km az=15.0*

PRU ***12*** *03:36:08.7, 5143N×1605E, h0km*

VIE ***12*** *03:36:09.0±0.5, 5130N×1614E, h0km, mb2.4/3, ML2.9/4, Error ellipse: s-maj=3.0km s-min=2.9km az=108.0, Suspected Mining induced.*

ISC 12 03:36:06.8±0.6, 5148N±003×1609E±003, h0km, n52, σ0s86/101, 3C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
KSP	**Ksiaz**	**0.65**	**168**	*e*Pg	**Pg**	**Pg**	**03 36 19.9**	**+0.7**
KSP				*e*Sg	**Sg**	**Sg**	**03 36 29.1**	**+1.5**
KSP	**Ksiaz**	**0.65**	**168**	*e*Pg	**Pg**	**Pg**	**03 36 19.8**	**+0.6**
KSP				*e*Sg	**Sg**	**Sg**	**03 36 28.6**	**+1.0**
KSP	**Ksiaz**	**0.65**	**168**	*e*Pg	**Pg**	**Pg**	**03 36 19.9**	**+0.7**
KSP				*e*			03 36 22.3	
KSP				*e*Sg	**Sg**	**Sg**	**03 36 28.8**	**+1.2**
UPC	**Upice**	**0.97**	**183**	*e*PG	**Pg**	**Pg**	**03 36 25.8**	**+0.4**
DPC	**Dobruska-Polom**	**1.14**	**172**	*e*Pg	**Pg**	**Pg**	**03 36 28.6**	**0.0**
DPC				*e*Sg	**Sg**	**Sg**	**03 36 43.0**	**-0.4**
DPC	**Dobruska-Polom**	**1.14**	**172**	*e*PG	**Pg**	**Pg**	**03 36 28.6**	**0.0**
DPC				*e*SG	**Sg**	**Sg**	**03 36 43.5**	**+0.1**
	comp=Z,86nm,0.5s							
PVCC	**Panska Ves**	**1.35**	**226**	*e*Pn	**Pn**	**Pn**	**03 36 32.7**	**-0.2**
PVCC				Sg	**Sg**	**Sg**	**03 36 50.9**	**+0.7**
	comp=Z,182nm,0.2s							
PVCC	**Panska Ves**	**1.35**	**226**	*e*PG	**Pg**	**Pg**	**03 36 32.5**	**-0.2**
PVCC				*e*SG	**Sg**	**Sg**	**03 36 50.9**	**+0.7**
	comp=Z,182nm,0.2s							
BRG	**Berggiesshubel**	**1.48**	**247**	Pg	**Pg**	**Pg**	**03 36 35.5**	**+0.4**
BRG				*e*Sg	**Sg**	**Sg**	**03 36 54.9**	**+0.6**
BRG	**Berggiesshubel**	**1.48**	**247**	PN	**Pn**	**Pn**	**03 36 34.6**	**0.0**
BRG				PG	**Pg**	**Pg**	**03 36 35.5**	**+0.4**
BRG				SG	**Sg**	**Sg**	**03 36 55.3**	**+1.0**
	comp=Z,82nm,0.5s							
RUE	**Ruedersdorf**	**1.74**	**306**	*e*Pn	**Pn**	**Pn**	**03 36 36.9**	**-1.4**
PRU	**Pruhonice**	**1.79**	**214**	*e*PN	**Pn**	**Pn**	**03 36 38.7**	**-0.1**
PRU				*e*PG	**Pg**	**Pg**	**03 36 39.9**	**-1.1**
PRU				*e*SG	**Sg**	**Sg**	**03 37 03.8**	**-0.4**
	comp=Z,54nm,0.4s							
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn	**Pn**	**Pn**	**03 36 40.4**	**-0.5**
MORC				*e*Sg	**Sg**	**Sg**	**03 37 08.2**	**-0.8**
	comp=Z,34nm,0.4s							
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn	**Pn**	**Pn**	**03 36 40.1**	**-0.9**
MORC				*e*Sn	**Sn**	**Sn**	**03 37 05.9**	**-0.1**
CLL	**Collm**	**1.94**	**266**	*e*Pn	**Pn**	**Pn**	**03 36 41.0**	**0.0**
CLL				*i* Pg	**Pg**	**Pg**	**03 36 43.2**	**-0.8**
CLL				*i* x	x	x	03 36 47.6	
CLL				*i* Sg	**Sg**	**Sg**	**03 37 09.1**	**0.0**
	comp=Z,27nm,0.6s							
CLL	**Collm**	**1.94**	**266**	*i* Pg	**Pg**	**Pg**	**03 36 43.2**	**-0.8**
CLL				*e*Sg	**Sg**	**Sg**	**03 37 08.8**	**-0.3**
CLL	**Collm**	**1.94**	**266**	*e*Pn	**Pn**	**Pn**	**03 36 41.0**	**0.0**
CLL				*i* Pg	**Pg**	**Pg**	**03 36 43.2**	**-0.8**
CLL				*i* Sg	**Sg**	**Sg**	**03 37 09.1**	**0.0**
OKC	**Ostrava-Krasne**	**2.10**	**141**	*e*PG	**Pg**	**Pg**	**03 36 46.5**	**-0.5**
OKC				*e*SG	**Sg**	**Sg**	**03 37 12.9**	**-1.4**
	comp=Z,34nm,0.6s							
VRAC	**Vranov**	**2.20**	**171**	*e*Pn	**Pn**	**Pn**	**03 36 44.9**	**+0.4**
VRAC				*e*Sg	**Sg**	**Sg**	**03 37 16.1**	**-1.2**
	comp=Z,14nm,0.3s							
TREC	**Trest**	**2.22**	**190**	*e*PN	**Pn**	**Pn**	**03 36 45.9**	**+1.1**
TREC				*e*PG	**Pg**	**Pg**	**03 36 48.6**	**-0.7**
KRUC	**Moravsky**	**2.43**	**175**	*e*Pn	**Pn**	**Pn**	**03 36 48.3**	**+0.6**
KRUC				*e*Sg	**Sg**	**Sg**	**03 37 22.9**	**-1.8**
	comp=Z,10nm,0.2s							
NKC	**Novy Kostel**	**2.62**	**243**	*e*Pn	**Pn**	**Pn**	**03 36 50.6**	**+0.3**
NKC	**Novy Kostel**	**2.62**	**243**	Pg	**Sg**	**Sg**	**03 36 56.3**	**-0.7**
NKC				*e*Sg	**Sg**	**Sg**	**03 37 30.1**	**-0.9**
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	**Pn**	**Pn**	**03 36 50.9**	**+0.6**
NKC				*e*PG	**Pg**	**Pg**	**03 36 56.3**	**-0.7**
NKC				*e*SG	**Sg**	**Sg**	**03 37 31.0**	**0.0**
	comp=Z,77nm,0.7s							
OJC	**Ojcow**	**2.67**	**117**	*e*Pg	**Pg**	**Pg**	**03 36 57.4**	**-0.5**
OJC				*e*Sg	**Sg**	**Sg**	**03 37 32.8**	**+0.4**
KHC	**Kasperske Hory**	**2.85**	**215**	*e*Pn	**Pn**	**Pn**	**03 36 53.7**	**+0.3**
KHC	**Kasperske Hory**	**2.85**	**215**	*e*PN	**Pn**	**Pn**	**03 36 53.2**	**-0.2**
KHC				*e*PG	**Pg**	**Pg**	**03 36 59.5**	**-1.9**
KHC				*e*SN	**Sn**	**Sn**	**03 37 28.7**	**+0.3**
KHC				*e*SG	**Sg**	**Sg**	**03 37 37.3**	**-1.0**
	comp=Z,24nm,0.6s							
MOX	**Moxa**	**2.94**	**255**	*e*PG	**Pg**	**Pg**	**03 37 03.2**	**0.0**
MOX				*e*SG	**Sg**	**Sg**	**03 37 42.6**	**+1.3**
GEC2	**GERESS Array S**	**3.05**	**211**	*e*Pn	**Pn**	**Pn**	**03 36 57.3**	**+1.1**
GEC2				*e*Sg	**Sg**	**Sg**	**03 37 45.7**	**+1.0**
WET	**Wettzell**	**3.11**	**223**	*e*Pn	**Pn**	**Pn**	**03 36 57.2**	**+0.1**
WET	**Wettzell**	**3.11**	**223**	*e*Pn	**Pn**	**Pn**	**03 36 57.5**	**+0.4**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*PG	**Pg**	**Pg**	**03 37 08.1**	**0.0**
MODS				*e*SG	**Sg**	**Sg**	**03 37 50.8**	**+1.2**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*Pg	**Pg**	**Pg**	**03 37 08.1**	**0.0**
MODS				*e*Sg	**Sg**	**Sg**	**03 37 50.8**	**+1.2**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*Pg	**Pg**	**Pg**	**03 37 08.1**	**0.0**
MODS				*e*Sg	**Sg**	**Sg**	**03 37 50.8**	**+1.2**
KOLL	**Kolacno**	**3.27**	**152**	*e*PG	**Pg**	**Pg**	**03 37 10.3**	**+1.0**
KOLL				*e*SG	**Sg**	**Sg**	**03 37 53.9**	**+2.3**
KOLL	**Kolacno**	**3.27**	**152**	*e*Pg	**Pg**	**Pg**	**03 37 10.3**	**+1.0**
KOLL				*e*Sg	**Sg**	**Sg**	**03 37 53.9**	**+2.3**
KOLL	**Kolacno**	**3.27**	**152**	*e*Pg	**Pg**	**Pg**	**03 37 10.3**	**+1.0**
KOLL				*e*Sg	**Sg**	**Sg**	**03 37 53.9**	**+2.3**
ZST	**Bratislava**	**3.35**	**168**	*e*Sg	**Sg**	**Sg**	**03 37 52.4**	**-2.0**
ZST	**Bratislava**	**3.35**	**168**	*e*SG	**Sg**	**Sg**	**03 37 52.4**	**-2.0**
VYHS	**Vyhne**	**3.48**	**148**	*e*PG	**Pg**	**Pg**	**03 37 13.4**	**+0.1**
VYHS				*e*SG	**Sg**	**Sg**	**03 37 57.7**	**-0.6**
VYHS	**Vyhne**	**3.48**	**148**	*e*Pg	**Pg**	**Pg**	**03 37 13.4**	**+0.1**
VYHS				*e*Sg	**Sg**	**Sg**	**03 37 57.7**	**-0.6**
VYHS	**Vyhne**	**3.48**	**148**	*e*Pg	**Pg**	**Pg**	**03 37 13.4**	**+0.1**
VYHS				*e*Sg	**Sg**	**Sg**	**03 37 57.7**	**-0.6**
CONA	**Conrad Observa**	**3.56**	**182**	⇓*i*Pn	**Pn**	**Pn**	**03 37 03.1**	**-0.1**
CONA				⇓*i*Sg	**Sg**	**Sg**	**03 38 01.1**	**+0.1**
	comp=Z,16nm,0.4s							
CSNA	**Conrad Observa**	**3.56**	**182**	⇑*i*Pn	**Pn**	**Pn**	**03 37 03.0**	**-0.2**
CSNA				⇑*i*Sg	**Sg**	**Sg**	**03 38 01.0**	**0.0**
	comp=Z,14nm,0.4s							
CSNA	**Conrad Observa**	**3.56**	**182**	Sg	**Sg**	**Sg**	**03 38 01.0**	**0.0**
	comp=Z,14nm,0.4s							
MOA	**Molln**	**3.82**	**199**	⇑*i*Pn	**Pn**	**Pn**	**03 37 07.3**	**+0.5**
MOA				⇓*i*Sg	**Sg**	**Sg**	**03 38 10.3**	**+0.8**
	comp=Z,14nm,0.5s							
STHS	**Stebnicka Huta**	**3.89**	**120**	*e*PG	**Pg**	**Pg**	**03 37 22.3**	**+1.0**
STHS				*e*SG	**Sg**	**Sg**	**03 38 12.5**	**+0.9**
STHS	**Stebnicka Huta**	**3.89**	**120**	*e*Pg	**Pg**	**Pg**	**03 37 22.3**	**+1.0**
STHS				*e*Sg	**Sg**	**Sg**	**03 38 12.5**	**+0.9**
KECS	**Kecovo**	**4.13**	**135**	*e*PG	**Pg**	**Pg**	**03 37 25.6**	**-0.3**
KECS				*e*SG	**Sg**	**Sg**	**03 38 22.9**	**+3.6**
KECS	**Kecovo**	**4.13**	**135**	*e*Pg	**Pg**	**Pg**	**03 37 25.6**	**-0.3**
KECS				*e*Sg	**Sg**	**Sg**	**03 38 22.9**	**+3.6**
KWP	**Kalwaria**	**4.61**	**111**	*e*Pg	**Pg**	**Pg**	**03 37 31.2**	**-3.8**

IDC 12 03:47:41.8±5.6, 3933N×11079E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.5/23, mbtmp3.8/4, ML3.0/1, Error ellipse: s-maj=116.8km s-min=24.9km az=84.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
SONM	**Songino Array**	**9.08**	**341**			Pn	03 49 54.3	+0.3
	0.2nm,0.3s,baz=154,slow=13,SNR=29							
SONM				Lg			03 52 29.2	
	0.3nm,0.3s,baz=157,slow=26,SNR=3.3							
MKAR	**Makanchi Array**	**22.04**	**299**	P		P	03 52 37.8	0.0
	2.1nm,0.8s,baz=95,slow=13,SNR=12							
CMAR	**Chiang Mai Arr**	**23.20**	**210**	P		P	03 52 50.1	-0.2
	1.4nm,0.3s,baz=8.5,slow=10,SNR=6.4							
KURK	**Kurchatov**	**25.23**	**307**	P		P	03 53 09.8	+0.7
	1.2nm,0.2s,baz=106,slow=10,SNR=4.1							

JMA 12 04:22:07.3±0.3, 3452N×14290E, h60km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
BSO1	**Boso 1**	**1.59**	**275**	P		Pn	04 22 33.7	+0.5
BSO1				*e*S		Sn	04 22 53.8	+1.1
JYT	**Yasato**	**2.79**	**308**	*e*S		Sn	04 23 23.9	+1.9
JHO	**Hitachi**	**2.82**	**318**	P		Pn	04 22 51.4	+1.5
JHO				S		Sn	04 23 21.4	-1.3
JHJ2	**Mitsune**	**2.93**	**242**	P		Pn	04 22 52.2	+0.8
JHJ2				*e*S	

1.0nm,0.1s,SNR=18
EBAD S Sn 04 39 13.7 +1.2
8.7nm,0.0s,SNR=11
EBAD Badajoz 2.14 13 P Pn 04 38 47.7 +0.6
1.0nm,0.1s,SNR=18
EBAD S Sn 04 39 13.8 +1.3
18nm,0.1s,SNR=11
EBAD Badajoz 2.14 13 ⇓P Pn 04 38 47.7 +0.6
EBAD S Sn 04 39 13.8 +1.2
PESTR Estremoz 2.19 1 *e*Pn Pn 04 38 48.5 +0.7
PESTR *e*Sn Sn 04 39 14.4 +0.6
PESTR A 04 39 16.0
6.7nm,0.1s
PESTR Estremoz 2.19 1 *e*Pn Pn 04 38 48.5 +0.7
PESTR *e*Sn Sn 04 39 14.4 +0.6
6.7nm,0.1s
ECAB El Cabril 2.26 51 P Pn 04 38 49.7 +1.0
2.5nm,0.1s,SNR=6.9
ECAB S Sn 04 39 14.8 -0.7
4.8nm,0.1s,SNR=5.8
ECAB El Cabril 2.26 51 P Pn 04 38 49.6 +0.8
1.3nm,0.3s,SNR=6.9
ECAB S Sn 04 39 15.1 -0.4
4.3nm,0.1s,SNR=5.8
ECAB El Cabril 2.26 51 P Pn 04 38 49.6 +0.8
ECAB S Sn 04 39 15.1 -0.4
EMIJ Mijas 2.32 92 P Pn 04 38 49.0 -0.4
0.2nm,0.1s,SNR=4.0
EMIJ S Sn 04 39 16.0 -0.8
2.8nm,0.2s,SNR=5.5
EMIJ Mijas 2.32 92 P Pn 04 38 49.3 -0.2
0.2nm,0.1s,SNR=7.9
EMIJ S Sn 04 39 16.1 -0.7
2.2nm,0.2s,SNR=5.5
EMIJ Mijas 2.32 92 P Pn 04 38 49.3 -0.2
EMIJ S Sn 04 39 16.1 -0.7
PMAFR Mafra 2.62 331 *e*Pn Pn 04 38 54.2 +0.5
PMAFR *e*Sn Sn 04 39 23.6 -0.7
PMAFR A 04 39 25.4
26nm,0.2s
PMAFR Mafra 2.62 331 *e*Pn Pn 04 38 54.2 +0.5
PMAFR *e*Sn Sn 04 39 23.6 -0.7
26nm,0.2s
PMRV Marv??o 2.76 4 *e*Pn Pn 04 38 56.4 +0.8
PMRV *e*Sn Sn 04 39 27.4 -0.3
PMRV A 04 39 29.8
7.3nm,0.1s
PMRV Marv??o 2.76 4 *e*Pn Pn 04 38 56.4 +0.8
PMRV *e*Sn Sn 04 39 27.4 -0.3
7.3nm,0.1s
EADA Adamuz 2.87 58 P Pn 04 38 57.9 +0.9
1.6nm,0.1s,SNR=19
EADA S Sn 04 39 29.6 -0.6
4.5nm,0.1s,SNR=7.9
EADA Adamuz 2.87 58 P Pn 04 38 57.9 +0.9
1.6nm,0.1s,SNR=19
EADA S Sn 04 39 30.1 -0.2
4.5nm,0.1s,SNR=7.9
EADA Adamuz 2.87 58 P Pn 04 38 57.9 +0.9
EADA S Sn 04 39 30.1 -0.1
PTOM Tomar 3.00 349 *e*Pn Pn 04 38 59.7 +0.8
PTOM *e*Sn Sn 04 39 33.0 -0.6
PTOM A 04 39 35.6
14nm,0.1s
PTOM Tomar 3.00 349 *e*Pn Pn 04 38 59.7 +0.8
PTOM *e*Sn Sn 04 39 33.0 -0.6
14nm,0.1s
PCBR Castelo Branco 3.17 2 *e*Pn Pn 04 39 02.0 +0.9
PCBR *e*Sn Sn 04 39 37.4 -0.3
PCBR A 04 39 39.6
8.2nm,0.1s
PCBR Castelo Branco 3.17 2 *e*Pn Pn 04 39 02.0 +0.9
PCBR *e*Sn Sn 04 39 37.4 -0.3
8.2nm,0.1s
EQUE Quentar 3.41 80 P Pn 04 39 05.8 +1.3
0.1nm,0.1s,SNR=7.9
EQUE S Sn 04 39 43.0 -0.7
0.8nm,0.2s,SNR=7.9
EQUE Quentar 3.41 80 P Pn 04 39 06.2 +1.7
SNR=7.9
EQUE S Sn 04 39 43.0 -0.7
0.8nm,0.2s,SNR=7.9
EBAN Banos Encina 3.42 63 P Pn 04 39 04.8 +0.3
1.5nm,0.1s,SNR=7.9
EBAN S Sn 04 39 41.4 -2.4
2.6nm,0.1s,SNR=6.6
EBAN Banos Encina 3.42 63 P Pn 04 39 05.0 +0.4
1.5nm,0.1s,SNR=7.9
EBAN S Sn 04 39 41.4 -2.4
1.4nm,0.1s,SNR=6.6
EBAN Banos Encina 3.42 63 P Pn 04 39 05.0 +0.5
EBAN S Sn 04 39 41.4 -2.4
MTE Manteigas 3.73 1 *e*Pn Pn 04 39 09.6 +0.8
MTE *e*Sn Sn 04 39 51.7 +0.4
MTE A 04 39 54.3
11nm,0.3s
MTE Manteigas 3.73 1 *e*Pn Pn 04 39 09.6 +0.8
MTE *e*Sn Sn 04 39 51.7 +0.4
11nm,0.3s
EQES Quesada 3.82 71 P Pn 04 39 11.0 +0.9
0.2nm,0.1s,SNR=7.9
EQES S Sn 04 39 52.6 -1.2
0.6nm,0.1s,SNR=7.9
EQES Quesada 3.82 71 P Pn 04 39 11.4 +1.3
SNR=7.9
EQES S Sn 04 39 53.8 0.0
0.6nm,0.1s,SNR=7.9
EQES Quesada 3.82 71 P Pn 04 39 11.4 +1.3
EQES S Sn 04 39 53.8 0.0
PVIS Viseu 4.04 357 *e*Pn Pn 04 39 14.1 +1.0
PVIS *e*Sn Sn 04 39 58.5 -0.7
PVIS A 04 40 01.9
4.7nm,0.1s
PVIS Viseu 4.04 357 *e*Pn Pn 04 39 14.1 +1.0
PVIS *e*Sn Sn 04 39 58.5 -0.7
4.7nm,0.1s
ESDC Sonseca Array 4.17 43 P Pn 04 39 15.9 +0.9
1.2nm,0.1s,baz=228,slow=13,SNR=5.4
ESDC S Sn 04 39 59.5 -2.9
1.3nm,0.3s,baz=55,slow=6.0,SNR=6.8
ESDC Sonseca Array 4.17 43 P Pn 04 39 15.9 +1.0
1.2nm,0.1s,SNR=5.4
CZD Col de Zad 4.21 149 P Pn 04 39 14.0 -1.5
CZD S Sn 04 39 57.0 -6.4
CZD Col de Zad 4.21 149 *i* P Pn 04 39 14.0 -1.5
MVO Moncorvo 4.51 6 *e*Pn Pn 04 39 20.2 +0.6
MVO *e*Sn Sn 04 40 09.5 -1.2
MVO A 04 40 12.6
11nm,0.1s
MVO Moncorvo 4.51 6 *e*Pn Pn 04 39 20.2 +0.6
MVO *e*Sn Sn 04 40 09.5 -1.2
11nm,0.1s
EVIA Vianos 4.53 63 P Pn 04 39 19.9 0.0
1.0nm,0.1s,SNR=7.9
EVIA S Sn 04 40 09.2 -2.0
1.1nm,0.1s,SNR=7.9
EVIA Vianos 4.53 63 P Pn 04 39 19.4 -0.4
SNR=7.9
EVIA S Sn 04 40 09.2 -2.0
0.9nm,0.1s,SNR=7.9
EVIA Vianos 4.53 63 P Pn 04 39 19.4 -0.4
EVIA S Sn 04 40 09.2 -2.0
PVRL Vila Real 4.60 359 *e*Sn Sn 04 40 11.6 -1.2
PVRL A 04 40 15.0
12nm,0.2s
PVRL Vila Real 4.60 359 *e*Sn Sn 04 40 11.6 -1.2
12nm,0.2s
GUD Guadarrama 4.82 34 P Pn 04 39 25.1 +1.4
0.7nm,0.2s,SNR=7.9
GUD S Sn 04 40 15.9 -2.3
1.5nm,0.4s,SNR=7.9
PBRG Braganca 5.18 8 *e*Pn Pn 04 39 29.5 +0.9
PBRG *e*Sn Sn 04 40 25.8 -1.2
PBRG A 04 40 29.0
5.6nm,0.1s
PBRG Braganca 5.18 8 *e*Pn Pn 04 39 29.5 +0.9
PBRG *e*Sn Sn 04 40 25.8 -1.2
5.6nm,0.1s
ELOB Lobios 5.20 357 P Pn 04 39 29.8 +0.8
0.6nm,0.1s,SNR=7.9
ELOB S Sn 04 40 26.0 -1.6
2.6nm,0.1s,SNR=7.9
ELOB Lobios 5.20 357 P Pn 04 39 29.9 +0.9
0.8nm,0.2s,SNR=7.9
ELOB Lobios 5.20 357 P Pn 04 39 29.9 +1.0
ELOB S Sn 04 40 26.2 -1.4
ECAL Calabor 5.31 7 P Pn 04 39 31.6 +1.1
1.1nm,0.1s,SNR=7.9
ECAL S Sn 04 40 29.7 -0.7
2.6nm,0.1s,SNR=7.9
ECAL Calabor 5.31 7 P Pn 04 39 31.7 +1.2
0.5nm,0.1s,SNR=7.9
ECAL Calabor 5.31 7 P Pn 04 39 31.7 +1.2
ECAL S Sn 04 40 29.3 -1.0
ETOR Torete 6.02 45 P Pn 04 39 41.6 +1.3
6.4nm,0.1s,SNR=8.3
ETOR S Sn 04 40 45.3 -2.5
8.4nm,0.2s,SNR=6.9
ETOR Torete 6.02 45 P Pn 04 39 41.6 +1.4
ETOR S Sn 04 40 45.3 -2.5

*CASC **12** 05:04:38.7±2.7, 1298N×9177W, h108km±109km, MD4.3*
*IDC **12** 05:04:42.6±2.1, 1340N×9137W, h0km, mb3.7/3, mb1 4.0/7, mb1mx3.8/24, mbtmp3.7/7, ML3.6/4, MS3.4/6, Ms1 3.4/6, ms1mx3.0/41, Error ellipse: s-maj=46.7km s-min=25.7km az=33.0*
*ISCJB **12** 05:04:43.1±1.3, 1312N×9155W×007, h33km±14km, mb3.9/2, MS3.4/5, Error ellipse: s-maj=17.9km s-min=7.8km az=33.2*
*NEIC **12** 05:04:46.5±1.1, 1325N×9151W, h35km, MD4.6(MEX), Error ellipse: s-maj=19.5km s-min=11.4km az=212.0*
*MEX **12** 05:04:55.9±0.6, 1397N×9200W, h143km±7km, MD4.6*
ISC 12 05:04:46.0±2.8, 1324N±009×9146W±007, h35km±24km, n40, σ1§17/37, mb3.9/2, MS3.4/5, 8C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAT	**Jato**	**1.08**	**351**	⇑*e*P		**Pn**	**05 05 04.9**	**+0.1**
FUG	**Fuego 3**	**1.34**	**26**	⇑*e*P		**Pn**	**05 05 07.5**	**-0.7**
FG6		**1.42**	**23**	⇑*e*P		**Pn**	**05 05 09.4**	**0.0**
FG6				*e*S		**Sn**	**05 05 36.1**	**+9.2**
NBG	**Las Nubes**	**1.72**	**39**	⇑*e*P		**Pn**	**05 05 14.0**	**+0.6**
NBG				*e*S		**Sn**	**05 05 41.1**	**+6.9**
THIG		**1.83**	**335**	*i* P		**Pn**	**05 05 17.2**	**+2.2**
THIG				*i* S		**Sn**	**05 05 35.9**	**-1.1**
RTR	**El Retiro**	**1.88**	**70**	*e*P		x	05 05 14.5	
SBLS	**San Blas**	**1.88**	**71**	*e*P		x	05 05 14.4	
SNJE	**San Jose**	**1.91**	**71**	*e*P		x	05 05 15.1	
RBDL	**Robledal**	**1.93**	**63**	⇑*e*P		x	05 05 15.6	
BOQS	**Boqueron**	**2.17**	**77**	*e*P		x	05 05 18.8	
MTO2	**Montecristo 2**	**2.34**	**60**	*e*P		x	05 05 21.8	
LFRS	**El Faro**	**2.36**	**81**	⇑*e*P		x	05 05 22.2	
LBRS	**Las Brisas**	**2.40**	**78**	⇓*e*P		x	05 05 22.6	
SNVI	**San Vicente**	**2.58**	**82**	*e*P		x	05 05 25.0	
SNVI				*e*S		x	05 06 01.4	
CCIG	**Comitan**	**3.09**	**348**	*i* P		**Pn**	**05 05 33.5**	**+1.1**
CCIG				*i* S		**Sn**	**05 06 02.0**	**-6.2**
CCIG	**Comitan**	**3.09**	**348**	*i* P		**Pn**	**05 05 33.5**	**+1.1**
CCIG				*i* S		**Sn**	**05 06 01.0**	**-7.2**
VSM	**San Miguel**	**3.10**	**86**	*e*P		x	05 05 32.4	
BLLM	**Bellamira**	**3.14**	**86**	⇑*e*P		x	05 05 33.0	
BLLM				*e*P		x	05 05 33.5	
BLLM				*e*S		x	05 06 11.6	
CNCH	**Conchagua**	**3.53**	**89**	⇑*e*P		x	05 05 37.4	
CNCH				*e*S		x	05 06 21.4	
SCX	**San Cristobal**	**3.65**	**342**	*i* P		**Pn**	**05 05 41.0**	**+0.9**
SCX				*e*S		**Sn**	**05 06 15.0**	**-7.0**
TGIG		**3.86**	**336**	*i* P		**Pn**	**05 05 41.3**	**-1.7**
TGIG				*i* S		**Sn**	**05 06 18.2**	**-9.0**
CMIG	**Matias Romero**	**5.06**	**320**	Pn		**Pn**	**05 05 58.2**	**-1.2**
	0.8nm,0.3s,baz=134,slow=9.7,SNR=19							
CMIG				Sn		**Sn**	**05 06 57.4**	**+0.7**
	1.0nm,0.3s,baz=102,slow=10,SNR=3.7							
CMIG	**Matias Romero**	**5.06**	**320**	Pn		**Pn**	**05 05 58.2**	**-1.2**
CMIG				Sn		**Sn**	**05 06 57.4**	**+0.7**
VHO	**Vista Hermosa**	**6.36**	**307**	*i* P		**Pn**	**05 06 16.5**	**-0.8**
VHO				*i* S		**Sn**	**05 07 18.0**	**-11**
VHO	**Vista Hermosa**	**6.36**	**307**	*i* P		**Pn**	**05 06 20.5**	**+3.2**
JTS	**JuntasAbangare**	**7.01**	**114**	Pn		**Pn**	**05 06 26.6**	**+0.3**
	1.1nm,0.3s,baz=319,slow=19,SNR=5.3							
JTS				Sn		**Sn**	**05 07 43.7**	**-1.2**
	1.1nm,0.3s,baz=300,slow=20,SNR=2.9							
JTS	**JuntasAbangare**	**7.01**	**114**	Pn		**Pn**	**05 06 27.5**	**+1.2**
JTS				Sn		**Sn**	**05 07 44.5**	**-0.3**
PNIG	**Pinotepa**	**7.17**	**297**	*i* P		**Pn**	**05 06 26.7**	**-1.7**
PNIG				*i* S		**Sn**	**05 07 37.4**	**-11**
PNIG	**Pinotepa**	**7.17**	**297**	*i* P		**Pn**	**05 06 27.6**	**-0.8**
PNIG				*i* S		**Sn**	**05 07 38.6**	**-10**
TEIG	**Tepich**	**7.58**	**23**	Pn		**Pn**	**05 06 33.6**	**-0.5**
	1.6nm,0.3s,baz=176,slow=12,SNR=11							
TEIG				LR		LR	05 09 51.4	
	comp=Z,231nm,19.7s,baz=301,slow=42							
TEIG	**Tepich**	**7.58**	**23**	*e*Pn		**Pn**	**05 06 35.2**	**+1.1**
TEIG				LR		LR	05 09 51.4	
TXAR	**Lajitas Array**	**19.61**	**327**	P		**Pn**	**05 09 11.9**	**-1.1**
	0.1nm,0.3s,baz=148,slow=12,SNR=12							
LPIG	**La Paz**	**20.80**	**304**	LR		LR	05 17 25.6	
	comp=Z,25nm,19.1s,MS2.6,baz=46,slow=37							
TKL	**Tuckaleechee C**	**23.37**	**16**	P		**P**	**05 09 50.1**	**-1.6**
	5.0nm,0.8s,mb4.0,baz=191,slow=13,SNR=5.4							
TKL				LR		LR	05 19 52.5	
	comp=Z,78nm,18.6s,MS3.2,baz=188,slow=39							
PDAR	**Pinedale Array**	**33.32**	**335**	P		**P**	**05 11 21.5**	**+1.0**
	0.1nm,0.4s,baz=171,slow=8.2,SNR=2.5							
NVAR	**Mina Array Bea**	**34.59**	**321**	P		**P**	**05 11 33.6**	**+2.0**
	1.0nm,0.7s,mb3.9,baz=145,slow=8.7,SNR=9.2							
SCHQ	**Schefferville**	**45.75**	**20**	LR		LR	05 31 48.3	
	comp=Z,54nm,19.6s,MS3.5,baz=90,slow=36							
JMIC	**Jan Mayen**	**75.27**	**20**	LR		LR	05 52 35.3	
	comp=Z,69nm,18.1s,MS4.0,baz=260,slow=38							
ARCES	**ARCESS Array B**	**86.69**	**18**	LR		LR	05 54 22.9	
	comp=Z,40nm,20.2s,MS3.8,baz=203,slow=34							
CMAR	**Chiang Mai Arr**	**146.87**	**342**	PKPbc		PKPbc	05 24 26.2	+0.7
	1.5nm,0.6s,baz=342,slow=4.3,SNR=8.3							

*ISCJB **12** 05:06:04.3±0.6, 1903S±005×6773W±009, h234km±9km, Error ellipse: s-maj=14.1km s-min=8.0km az=163.1*
*IDC **12** 05:06:04.6±1.0, 1909S×6787W, h240km±16km, mb3.8/1, mb1 3.5/6, mb1mx3.2/21, mbtmp3.5/6, Error ellipse: s-maj=23.6km s-min=14.4km az=80.0*
*NEIC **12** 05:06:05.6±0.6, 1904S×6775W, h231km±15km, mb4.4/1, Error ellipse: s-maj=14.8km s-min=9.9km az=71.0*
ISC 12 05:06:05.0±0.6, 1901S±005×6783W±009, h232km±9km, n12, σ1§21/16, 1C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.73**	**354**	P		**Pn**	**05 06 54.5**	**+1.0**
	6.6nm,0.3s,baz=180,slow=8.0,SNR=245							
LPAZ				S		**S**	**05 07 30.2**	**-1.4**
	7.7nm,0.3s,baz=190,slow=14,SNR=18							
LPAZ	**La Paz**	**2.73**	**354**	*e*Pn		**Pn**	**05 06 54.5**	**+1.0**
LVC	**Limon Verde**	**3.72**	**196**	P		**Pn**	**05 07 05.8**	**+1.1**
	8.1nm,0.3s,baz=23,slow=8.9,SNR=115							
LVC				S		**S**	**05 07 50.5**	**-1.5**
	7.2nm,0.3s,baz=282,slow=23,SNR=14							
LVC	**Limon Verde**	**3.72**	**196**	*e*Pn		**Pn**	**05 07 05.8**	**+1.0**
ARE	**Arequipa**	**4.31**	**305**	⇑*i*P		**Pn**	**05 07 14.0**	**+2.1**
NNA	**Nana**	**11.14**	**308**	P		**Pn**	**05 08 39.9**	**+1.5**
	3.3nm,0.3s,baz=137,slow=11,SNR=8.6							
NNA				S		**S**	**05 10 41.5**	**-1.7**
	0.9nm,0.3s,baz=202,slow=19,SNR=3.2							
NNA	**Nana**	**11.14**	**308**	Pn		**Pn**	**05 08 40.3**	**+1.9**
CPUP	**Vila Florida**	**12.12**	**129**	P		**Pn**	**05 08 51.0**	**+0.4**
	0.7nm,0.3s,baz=281,slow=12,SNR=7.0							
CFAA	**Coronel Fontan**	**12.54**	**182**	P		**Pn**	**05 08 55.4**	**-0.4**
	0.0nm,0.3s,baz=341,slow=14,SNR=2.6							
CFAA				S		**S**	**05 11 07.2**	**-8.3**
	0.1nm,0.3s,baz=117,slow=21,SNR=7.6							
BDFB	**Brasilia**	**19.21**	**83**	P		**P**	**05 10 11.8**	**-0.1**
	0.5nm,0.3s,baz=246,slow=12,SNR=6.4							
TRQA	**Tornquist**	**19.65**	**166**	*e*P		**P**	**05 10 16.7**	**+0.3**
	36nm,2.6s							
TORD	**Torodi Ar. Bea**	**75.57**	**70**	P		**P**	**05 17 23.6**	**-1.2**
	1.3nm,0.4s,baz=253,slow=5.4,SNR=26							

*IDC **12** 05:24:41.9±0.8, 1424S×16648E, h0km, mb4.3/12, mb1 4.5/12, mb1mx4.3/19, mbtmp4.3/12, MS3.8/14, Ms1 3.8/14, ms1mx3.6/25, Error ellipse: s-maj=25.5km s-min=19.4km az=131.0*
*LDG **12** 05:24:41.3±0.1, 1424S×16808E, h10km, Mb4.6/3, Error ellipse: s-maj=18.2km s-min=3.4km az=93.0*
*ISCJB **12** 05:24:45.6±0.5, 1450S±006×16643E±007, h33km, mb4.3/16, MS3.8/13, Error ellipse: s-maj=11.0km s-min=8.4km az=148.5*
*NEIC **12** 05:24:47.5±0.6, 1431S×16647E, mb4.5/6, Error ellipse: s-maj=17.0km s-min=12.0km az=169.0*
ISC 12 05:24:47.1±0.5, 1443S±006×16651E±008, h35km, h35km±1.9km:pP-P, n64, σ1§39/31, mb4.3/16, MS3.8/13, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.60**	**180**	*e*P		**Pn**	**05 26 34.6**	**-0.8**
DZM				*e*S		**Sn**	**05 27 59.1**	**-1.1**
HNR	**Honiara**	**8.12**	**307**	LR		LR	05 29 21.2	
	comp=Z,276nm,21.9s,baz=78,slow=35							
HNR	**Honiara**	**8.12**	**307**	Pn		**Pn**	**05 26 43.1**	**+0.6**
HNR				Sn		**Sn**	**05 28 11.0**	**-2.1**
CTA	**Charters Tower**	**20.13**	**251**	*e*P		**P**	**05 29 20.5**	**+2.2**
	15nm,0.9s							
CTA	**Charters Tower**	**20.13**	**251**	P		**P**	**05 29 20.6**	**+2.3**
	18nm,0.9s,baz=74,slow=12,SNR=34							
CTA				LR		LR	05 36 04.6	
	comp=Z,359nm,20.2s,MS3.7,baz=47,slow=34							
CTAO	**Charters Tower**	**20.13**	**251**	*e*P		**P**	**05 29 20.6**	**+2.3**
	25nm,1.0s							
CTAO				*e*pP			05 29 28.1	
RAO	**Raoul Island**	**20.61**	**138**	LR		LR	05 35 22.7	
	comp=Z,178nm,19.1s,MS3.5,baz=129,slow=31							
AFI	**Afiamalu**	**21.06**	**91**	P		**P**	**05 29 31.6**	**+3.3**
	54nm,0.9s,mb4.9,baz=88,slow=21,SNR=4.7							
AFI				LR		LR	05 35 12.6	
	comp=Z,195nm,20.0s,MS3.5,baz=130,slow=30							
COEN	**Coen**	**22.62**	**268**	*e*P		**P**	**05 29 46.1**	**+1.1**
	6.2nm,1.0s,mb4.0							
URZ	**Urewera**	**25.52**	**160**	P		**P**	**05 30 14.4**	**+2.0**
	13nm,0.9s,mb4.4,baz=3.4,slow=7.5,SNR=9.2							
STKA	**Stephens Creek**	**28.63**	**228**	P		**P**	**05 30 41.0**	**+0.7**
	8.5nm,0.6s,mb4.7,baz=45,slow=7.0,SNR=19							
STKA				LR		LR	05 42 14.3	
	comp=Z,435nm,18.7s,MS4.1,baz=28,slow=37							
WB2	**Warramunga Arr**	**31.17**	**255**	*e*P		**P**	**05 31 02.2**	**-0.8**
WRAB	**Tennant Creek**	**31.17**	**255**	*e*P		**P**	**05 31 02.5**	**-0.5**
	32nm,2.2s,mb4.8							
WRA	**Warramunga Arr**	**31.18**	**255**	P		**P**	**05 31 02.2**	**-0.9**
	4.4nm,0.9s,mb4.3,baz=85,slow=9.2,SNR=30							
WRA				LR		LR	05 43 14.6	
	comp=Z,216nm,18.6s,MS3.8,baz=70,slow=36							
ASAR	**Alice Springs**	**32.09**	**248**	P		**P**	**05 31 10.4**	**-0.6**
	4.1nm,0.6s,mb4.4,baz=74,slow=9.5,SNR=79							
GUMO	**Guam**	**35.13**	**321**	LR		LR	05 44 07.5	
	comp=Z,47nm,19.4s,MS3.2,baz=153,slow=33							
FORT	**Forrest**	**38.82**	**239**	P		**P**	**05 32 09.0**	**+0.2**
	12nm,1.7s,mb4.4							
FITZ	**Fitzroy Crossi**	**39.34**	**259**	*e*P		**P**	**05 32 13.1**	**-0.2**
	8.0nm,0.6s,mb4.6							
FITZ	**Fitzroy Crossi**	**39.34**	**259**	P		**P**	**05 32 13.0**	**-0.4**
	5.0nm,0.8s,mb4.3,baz=103,slow=9.4,SNR=17							
FITZ				LR		LR	05 48 42.6	
	comp=Z,175nm,18.1s,MS3.9,baz=269,slow=37							
FITZ	**Fitzroy Crossi**	**39.34**	**259**	*e*P		**P**	**05 32 13.6**	**+0.3**
	15nm,0.6s,mb4.9							
FITZ				*e*pP		pP	05 32 24.8	+1.1
BATI	**Baumata**	**42.02**	**271**	LR		LR	05 48 02.3	
	comp=Z,156nm,18.3s,MS3.9,baz=86,slow=33							
PPT	**Papeete**	**42.26**	**100**	*e*LR		LR	05 44 37.1	
	199nm,26.0s,baz=256							
PPT	**Papeete**	**42.26**	**100**	LR		LR	05 45 44.4	
	comp=Z,155nm,18.6s,MS3.9,baz=288,slow=30							
MBWA	**Marble Bar**	**44.91**	**254**	*e*P		**P**	**05 32 59.7**	**+0.9**
KAPI	**Kappang**	**46.94**	**277**	LR		LR	05 51 44.6	
	comp=Z,47nm,21.7s,MS3.4,baz=291,slow=35							
NWAO	**Narrogin (SRO)**	**48.27**	**239**	LR		LR	05 54 57.6	
	comp=Z,194nm,18.9s,MS4.1,baz=192,slow=38							
PETK	**Petropavlovsk-**	**67.69**	**354**	P		**P**	**05 35 38.2**	**-2.2**
	3.2nm,0.8s,mb4.4,baz=156,slow=8.1,SNR=5.6							
CMAR	**Chiang Mai Arr**	**74.15**	**294**	P		**P**	**05 36 22.0**	**+1.5**
	1.2nm,0.4s,mb4.2,baz=126,slow=4.0,SNR=3.2							
SONM	**Songino Array**	**81.82**	**324**	P		**P**	**05 37 03.5**	**+1.0**
	0.2nm,0.4s,mb3.4,baz=120,slow=5.2,SNR=4.4							
MAW	**Mawson**	**81.88**	**202**	P		**P**	**05 37 04.2**	**+1.7**
	2.3nm,0.9s,mb4.1,baz=102,slow=7.2,SNR=6.7							
YBH	**Yreka Blue Hor**	**85.73**	**45**	P		**P**	**05 37 21.4**	**-1.2**
	0.7nm,0.7s,mb4.0,baz=235,slow=11,SNR=4.6							
NVAR	**Mina Array Bea**	**87.64**	**49**	P		**P**	**05 37 31.5**	**-0.5**
	0.2nm,0.5s,mb3.6,baz=236,slow=6.4,SNR=4.5							
SYO	**Syowa Base**	**88.78**	**197**	⇑*e*P		**P**	**05 37 38.5**	**+1.6**
SNAA	**Sanae**	**93.80**	**183**	*e*		**P**	**05 37 58.0**	**-2.2**
SNAA				*e*			05 38 01.3	
SNAA				*e*		pP	05 38 07.8	-3.6
VNA3	**Neumayer Olymp**	**94.50**	**181**	*e*		**P**	**05 38 01.0**	**-2.4**
VNA3				*e*			05 38 04.4	
VNA3				*e*		pP	05 38 12.1	-2.5
VNA2	**Neumayer--Watz**	**94.75**	**182**	*e*		**P**	**05 38 02.8**	**-1.7**
VNA2				*e*			05 38 06.1	
VNA2				*e*		pP	05 38 12.9	-2.9
PDAR	**Pinedale Array**	**95.29**	**47**	LR		LR	06 12 13.2	
	comp=Z,48nm,20.1s,MS4.0,baz=88,slow=30							
MKAR	**Makanchi Array**	**96.48**	**317**	P		**P**	**05 38 14.1**	**+1.4**
	0.8nm,0.7s,mb4.2,baz=91,slow=6.1,SNR=4.4							
TXAR	**Lajitas Array**	**96.79**	**62**	LR		LR	06 11 49.8	
	comp=Z,54nm,19.9s,MS4.0,baz=50,slow=29							
ARCES	**ARCESS Array B**	**119.78**	**345**	PKP		PKPdf	05 43 33.8	+0.8
	1.4nm,0.5s,baz=357,slow=1.8,SNR=12							
GERES	**GERESS Array B**	**139.04**	**333**	SKPbc		SKPbc	05 47 43.3	+0.8
	1.4nm,0.8s,baz=50,slow=2.3,SNR=8.9							
CABF	**La Chapelle**	**143.97**	**337**	*e*PKP1		PKPdf	05 44 18.0	-0.9
LOR	**Lormes**	**144.21**	**340**	*e*PKP1		PKPdf	05 44 18.2	-1.1
SSF	**Saint Saulge**	**144.51**	**340**	*e*PKP1		PKPdf	05 44 19.4	-0.4
GRR	**Gorron**	**144.57**	**345**	*e*PKP1		PKPdf	05 44 18.7	-1.2
SMF	**Signal de Mont**	**144.75**	**339**	*e*PKP1		PKPdf	05 44 17.4	-2.9
	17nm,1.1s							
AVF	**Avril sur Loir**	**144.79**	**340**	*e*PKP1		PKPdf	05 44 17.3	-3.0
	7.3nm,0.6s							
SGMF	**Saint Gilles**	**145.08**	**347**	*e*PKP1		PKPbc	05 44 18.1	-2.1
	72nm,1.1s							
ROSF	**Rostrenen**	**145.15**	**348**	*e*PKP1		PKPbc	05 44 18.1	-2.3
	50nm,1.1s							
BGF	**Bois d'Agland**	**145.17**	**340**	*e*PKP1		PKPbc	05 44 18.7	-1.9
	34nm,1.0s							
MBDF	**Montbardon**	**145.24**	**334**	*e*PKP1		PKPbc	05 44 19.8	-1.1
	18nm,0.9s							
ORIF	**Oris-en-Rattie**	**145.45**	**335**	*e*PKP1		PKPbc	05 44 20.3	-1.2
	20nm,0.6s							
QUIF	**Quistinic**	**145.53**	**348**	*e*PKP1		PKPbc	05 44 19.2	-2.5
	41nm,1.0s							
TCF	**Toulx Ste Croi**	**145.61**	**341**	*e*PKP1		PKPbc	05 44 20.3	-1.7
	18nm,1.0s							
SBF	**Sospel**	**145.65**	**333**	*e*PKP1		PKPbc	05 44 20.4	-1.8
	56nm,0.9s							
PGF	**Pioggiola**	**145.93**	**330**	*e*PKP1		PKPbc	05 44 22.6	-0.5
	75nm,1.3s							
VIVF	**Saint-Julien-l**	**145.98**	**337**	*e*PKP1		PKPbc	05 44 21.1	-2.1
	19nm,1.0s							
FRF	**La Foret Royal**	**146.23**	**333**	*e*PKP1		PKPbc	05 44 22.1	-1.9
SMRF	**Simiane la Rot**	**146.35

RSPR ***12*** *05:54:04.8, 1944N×6584W, h10km±31km, MD3.5/14, MD3.5/14*
NEIC ***12*** *05:54:04.8, 1944N×6584W, h10km, MD3.5(RSPR), After RSPR.*

ISC 12 05:54:02.6±2.0, 1938N±008×6585W±005, h11km±15km, n18, σ047/29, 12C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**1.11**	**180**	↑*eP*		**Pb**	**05 54 23.4**	**-0.3**
CBYP				*eS*		**Sb**	**05 54 38.8**	**+0.7**
HUMP	**Col San Antoni**	**1.24**	**180**	↑*eP*		**Pn**	**05 54 25.1**	**-0.7**
HUMP	**Col San Antoni**	**1.24**	**180**	↑*eP*		**Pn**	**05 54 25.8**	**+0.1**
SJG	**San Juan**	**1.30**	**193**	↓*iP*		**Pn**	**05 54 26.5**	**-0.1**
SJG				*eS*		**Sb**	**05 54 43.8**	**+0.2**
MTP	**Monte Pirata**	**1.31**	**167**	↑*eP*		**Pn**	**05 54 26.5**	**-0.3**
AOPR	**Arecibo Observ**	**1.34**	**220**	↑*eP*		**Pn**	**05 54 26.4**	**-0.8**
AOPR				*eS*		**Sb**	**05 54 44.0**	**-0.9**
CPD	**Cerro la Pandu**	**1.34**	**183**	↑*eP*		**Pn**	**05 54 26.8**	**-0.4**
LRS	**Lares**	**1.44**	**221**	↑*eP*		**Pn**	**05 54 28.9**	**+0.4**
CELP	**Cerrillos**	**1.47**	**208**	↓*eP*		**Pn**	**05 54 29.0**	**0.0**
CELP				*eS*		**Sn**	**05 54 48.8**	**+0.5**
CELP	**Cerrillos**	**1.47**	**208**	↓*eP*		**Pn**	**05 54 29.4**	**+0.4**
CELP				*eS*		**Sn**	**05 54 48.8**	**+0.5**
AGPR	**Aguadilla, PR**	**1.50**	**233**	↑*eP*		**Pn**	**05 54 29.3**	**-0.1**
OBIP	**Obispado Ponce**	**1.51**	**208**	↑*eP*		**Pn**	**05 54 29.6**	**0.0**
OBIP				*eS*		**Sn**	**05 54 48.5**	**+0.8**
TBVI	**Tortola**	**1.51**	**129**	↑*eP*		**Pn**	**05 54 29.7**	**+0.2**
TBVI				*eS*		**Sn**	**05 54 49.1**	**-0.2**
TBVI	**Tortola**	**1.51**	**129**	↑*eP*		**Pn**	**05 54 29.7**	**+0.2**
TBVI				*eS*		**Sn**	**05 54 49.0**	**-0.3**
ICM	**Isla Caja Muer**	**1.61**	**203**	↑*eP*		**Pn**	**05 54 31.3**	**+0.4**
LSP	**Las Mesas**	**1.68**	**224**	↓*eP*		**Pn**	**05 54 32.3**	**+0.5**
LSP				*eS*		**Sn**	**05 54 53.2**	**-0.1**
LSP	**Las Mesas**	**1.68**	**224**	↓*eP*		**Pn**	**05 54 32.3**	**+0.5**
LSP				*eS*		**Sn**	**05 54 53.2**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.82**	**221**	↓*eP*		**Pn**	**05 54 34.5**	**+0.7**
CRPR				*eS*		**Sn**	**05 54 57.2**	**+0.4**

PRE 12 06:00:01.0±0.8, 2167S×3242E, h5km, ML3.9, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MOPA	**Mopani**	**2.06**	**207**	*eP*		Pn	06 00 37.5	+1.2
MOPA				*eS*		Sn	06 01 02.6	+0.2
MOPA				AML		AML	06 01 35.4	
	comp=Z,1μm,0.5s							
MSNA	**Messina**	**2.32**	**253**	*eP*		Pn	06 00 40.3	+0.5
MSNA				*eS*		Sn	06 01 10.1	+1.4
MSNA				AML		AML	06 01 39.2	
	comp=Z,268nm,0.6s							
LBTB	**Lobatse**	**7.09**	**241**	*eP*		Pn	06 01 46.4	+1.0
LBTB				*eS*		Sn	06 03 03.7	-2.8
LBTB				AML		AML	06 04 03.5	
	comp=Z,38nm,0.8s							

IDC ***12*** *06:25:12.7±2.2, 864S×13127E, h0km, mb3.6/1, mb1 3.9/4, mb1mx3.7/15, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=64.9km s-min=25.5km az=77.0*
ISCJB ***12*** *06:25:17.3±3.1, 885±01×1309E±02, h44km±35km, Error ellipse: s-maj=28.5km s-min=13.6km az=153.3*
NEIC ***12*** *06:25:18.6±1.4, 872S×13102E, h35km, Error ellipse: s-maj=32.1km s-min=15.5km az=69.0*

ISC 12 06:25:17.9±3.5, 873S±009×1310E±02, h28km±29km, n9, σ1§05/17, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.65**	**208**	*eP*		**Pn**	**06 27 49.3**	**+0.6**
	3.6nm,0.3s							
FITZ				*eS*		**Sn**	**06 29 41.0**	**-6.0**
FITZ	**Fitzroy Crossi**	**10.65**	**208**	Pn		**Pn**	**06 27 48.5**	**-0.2**
	0.8nm,0.3s,baz=40,slow=11,SNR=22							
FITZ				Sn		**Sn**	**06 29 41.3**	**-5.7**
	0.6nm,0.3s,baz=233,slow=18,SNR=5.4							
FITZ	**Fitzroy Crossi**	**10.65**	**208**	*e*Pn		**Pn**	**06 27 49.4**	**+0.7**
FITZ				*e*Sn		**Sn**	**06 29 46.4**	**-0.6**
WRAB	**Tennant Creek**	**11.62**	**164**	*e*Pn		**Pn**	**06 28 02.9**	**+1.0**
WRAB				*e*Sn		**Sn**	**06 30 10.9**	**+0.2**
WRA	**Warramunga Arr**	**11.62**	**164**	Pn		**Pn**	**06 28 01.9**	**-0.1**
	0.4nm,0.3s,baz=348,slow=13,SNR=15							
WRA				Sn		**Sn**	**06 30 09.7**	**-1.2**
	0.7nm,0.3s,baz=350,slow=24,SNR=6.8							
WB2	**Warramunga Arr**	**11.63**	**164**	*e*P		**Pn**	**06 28 03.3**	**+1.3**
WB2				*e*S		**Sn**	**06 30 11.1**	**+0.2**
WB2	**Warramunga Arr**	**11.63**	**164**	*e*Pn		**Pn**	**06 28 01.2**	**-0.8**
WB2				*e*Sn		**Sn**	**06 30 11.6**	**+0.6**
ASAR	**Alice Springs**	**15.12**	**170**	Pn		**Pn**	**06 28 47.8**	**-1.9**
	0.2nm,0.3s,baz=344,slow=9.6,SNR=13							
ASAR				Sn		**Sn**	**06 31 39.5**	**+3.2**
	0.2nm,0.3s,baz=322,slow=18,SNR=4.7							
MKAR	**Makanchi Array**	**70.17**	**327**	P		**P**	**06 36 28.0**	**+0.1**
	0.4nm,0.6s,baz=110,slow=7.2,SNR=3.9							

NEIC ***12*** *07:05:58.3, 3407S×7161W, h45km, MD3.7(GUC), After GUC.*

GUC 12 07:05:58.3±0.8, 3407S×7161W, h45km±2km, MD3.7, ML2.8, 6C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.20**	**55**	↑*iP*		Pn	07 06 06.2	+0.1
LNV				*i* S		Sn	07 06 12.4	+0.7
TACH	**Talagante**	**0.70**	**53**	↑*iP*		Pn	07 06 11.9	0.0
TACH				*i* S		Sn	07 06 23.1	+1.5
SFDO	**San Fernando**	**0.73**	**138**	↑*iP*		Pn	07 06 12.9	+0.7
SFDO				*i* S		Sn	07 06 24.2	+1.8
CHCH	**Chadas Angostu**	**0.81**	**80**	↑*iP*		Pn	07 06 14.0	+0.7
CHCH				*i* S		Sn	07 06 25.2	+1.0
CACH	**El Canelo**	**0.84**	**93**	↓*iP*		Pn	07 06 15.0	+1.3
CACH				*i* S		Sn	07 06 27.9	+2.9
ANTU	**Antumapu**	**0.96**	**59**	↓*iP*		Pn	07 06 16.0	+0.7
ANTU				*i* S		Sn	07 06 29.6	+1.9
ANTU				AML		AML	07 06 30.0	
	comp=N,739nm,0.2s							
SAN	**Santiago**	**1.00**	**52**	↓*iP*		Pn	07 06 16.8	+0.8
SAN				*i* S		Sn	07 06 30.6	+1.7
SAN				AML		AML	07 06 31.1	
	comp=N,419nm,0.3s							
SAN	**Santiago**	**1.00**	**52**	↓*iP*		Pn	07 06 16.8	+0.8
SAN				*i* S		Sn	07 06 30.6	+1.7
CICH	**Cipreses**	**1.02**	**104**	↑*iP*		Pn	07 06 17.0	+0.9
PCH	**Pirque**	**1.02**	**64**	↓*iP*		Pn	07 06 17.0	+0.8
PCH				*i* S		Sn	07 06 31.2	+1.9
CLCH	**Cerro Calan**	**1.12**	**53**	↓*iP*		Pn	07 06 18.4	+0.9
CLCH				↓*iP*			07 06 18.5	
CLCH				*i* S		Sn	07 06 34.3	+2.5
CLCH				AML		AML	07 06 35.7	
	comp=N,302nm,0.7s							
SJCH	**San Jose de Ma**	**1.13**	**68**	*eP*		Pn	07 06 18.0	+0.3
SJCH				*i* S		Sn	07 06 33.9	+1.8
SJCH				AML		AML	07 06 35.7	
	comp=N,260nm,0.2s							
SJCH	**San Jose de Ma**	**1.13**	**68**	*eP*		Pn	07 06 18.0	+0.3
SJCH				*i* S		Sn	07 06 33.9	+1.8
LMEL	**Las Melosas**	**1.19**	**80**	*i* S		Sn	07 06 36.2	+2.7
LMEL				AML		AML	07 06 37.3	
	comp=N,698nm,0.1s							
PEL	**Peldehue**	**1.21**	**40**	↑*iP*		Pn	07 06 19.6	+0.9
PEL				*i* S		Sn	07 06 35.9	+2.0
PEL				AML		AML	07 06 37.9	
	comp=N,352nm,0.4s							
FCH	**Farellones**	**1.33**	**56**	↓*iP*		Pn	07 06 21.4	+1.0
FCH				*i* S		Sn	07 06 39.0	+2.2
FCH				AML		AML	07 06 43.7	
	comp=E,230nm,0.2s							
JACH	**Jahuel**	**1.63**	**32**	*i* S		Sn	07 06 46.8	+2.5
LCO	**Las Campanas**	**5.11**	**9**	Pn		Pn	07 07 10.3	-1.9

CSEM ***12*** *07:07:49.5, 3847N×2173E, h38km, MD3.0/3, After ATH*

ATH 12 07:07:49.5, 3847N×2173E, h38km±1km, MD3.0/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.45**	**8**	*e*PB		Pn	07 07 59.9	+0.4
EVR				*e*SB		Sn	07 08 07.4	+0.9
RLS	**Riolos of Patr**	**0.46**	**207**	*e*PB		Pn	07 08 00.1	+0.5
RLS				*e*SB		Sn	07 08 07.9	+1.2
VLS	**Valsamata**	**0.94**	**252**	*e*PN		Pn	07 08 07.7	+1.5
VLS				*e*SN		Sn	07 08 21.3	+2.8

IDC ***12*** *07:10:26.0±1.2, 1304N×8722W, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.6/22, mbtmp3.5/6, ML3.0/2, MS3.1/2, Ms1 3.1/2, ms1mx2.5/27, Error ellipse: s-maj=50.1km s-min=14.6km az=51.0*
ISCJB ***12*** *07:10:30.8±1.0, 1246N±006×8786W±009, h53km±17km, mb3.6/4, Error ellipse: s-maj=15.8km s-min=8.2km az=151.8*
CASC ***12*** *07:10:31.4±2.6, 1248N×8785W, h50km±33km, MD4.0, ML3.5*

ISC 12 07:10:31.4±0.8, 1246N±006×8786W±007, h44km±16km, n44, σ1§04/34, mb3.6/4, 9C-15D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.81**	**2**	↓*iP*		x	07 10 46.5	
CNCH				*e*S		x	07 10 58.5	
LEON	**Leon**	**0.95**	**93**	↓*eP*		**Pn**	**07 10 47.2**	**-1.1**
LEON				*e*S		**Sn**	**07 11 01.0**	**+0.3**
LEON				AML		AML	07 11 01.6	
	comp=Z,4μm,0.4s							
TEL3	**Telica 3**	**1.00**	**84**	↓*eP*		**Pn**	**07 10 48.4**	**-0.6**
TELN	**Telica**	**1.02**	**82**	↓*eP*		**Pn**	**07 10 49.0**	**-0.2**
BLLM	**Bellamira**	**1.04**	**339**	*eP*		x	07 10 49.6	
BLLM				*e*S		x	07 11 03.7	
VSM	**San Miguel**	**1.04**	**337**	↑*eP*		x	07 10 50.1	
VSM				*e*S		x	07 11 05.5	
CNGN	**Cerro Negro**	**1.14**	**88**	↓*eP*		**Pn**	**07 10 50.0**	**-0.8**
CNGN				*e*S		**Sn**	**07 11 07.3**	**+2.1**
COPN	**Copaltepe**	**1.27**	**103**	↑*eP*		**Pn**	**07 10 51.9**	**-0.8**
COPN				*e*S		**Sn**	**07 11 07.9**	**-0.8**
COPN				AML		AML	07 11 11.1	
	comp=Z,788nm,0.5s							
MOMN	**Momotombo**	**1.29**	**92**	↓*eP*		**Pn**	**07 10 52.6**	**-0.4**
MOMN				*e*S		**Sn**	**07 11 09.7**	**+0.5**
MOMN				AML		AML	07 11 10.8	
	comp=Z,28nm,0.4s							
CAHU	**Cacacuatique**	**1.34**	**345**	↓*eP*		x	07 10 54.4	
CAHU				*e*S		x	07 11 11.6	
CSAN		**1.44**	**101**	↓*eP*		**Pn**	**07 10 54.5**	**-0.4**
CSAN				*e*S		**Sn**	**07 11 12.4**	**-0.2**
SNVI	**San Vicente**	**1.49**	**320**	↓*eP*		x	07 10 56.1	
SNVI				*e*S		x	07 11 13.9	
APYN	**Apoyeque**	**1.50**	**99**	↓*eP*		**Pn**	**07 10 55.4**	**-0.4**
APYN				AML		AML	07 11 18.5	
	comp=Z,1μm,0.3s							
XAVN	**Gruta Xavier**	**1.53**	**102**	↑*eP*		**Pn**	**07 10 56.0**	**-0.3**
TISN	**Laguna Tiscapa**	**1.59**	**101**	↓*eP*		**Pn**	**07 10 56.6**	**-0.4**
MGAN	**Managua**	**1.61**	**101**	↓*eP*		**Pn**	**07 10 56.6**	**-0.7**
MGAN				↑*eP*			07 10 56.7	
LFRS	**El Faro**	**1.64**	**315**	*eP*		x	07 10 57.9	
LFRS				*e*S		x	07 11 17.0	
TICN	**Ticuantepe**	**1.65**	**105**	↑*eP*		**Pn**	**07 10 57.4**	**-0.5**
TICN				AML		AML	07 11 25.5	
	comp=Z,2μm,0.5s							
HUEN		**1.66**	**94**	↓*iP*		**Pn**	**07 10 57.4**	**-0.6**
WILN	**Americas 2**	**1.66**	**100**	↑*eP*		**Pn**	**07 10 57.6**	**-0.5**
TGUH	**Tegucigalpa,Un**	**1.68**	**20**	↓*iP*		**Pn**	**07 10 58.7**	**+0.3**
TGUH				*e*S		**Sn**	**07 11 19.8**	**+1.0**
LBRS	**Las Brisas**	**1.71**	**318**	*eP*		x	07 10 59.4	
LBRS				*e*S		x	07 11 20.3	
LFU	**La Fuente**	**1.77**	**316**	*eP*		x	07 11 21.1	
LFU				*e*S		x	07 11 21.2	
SNET	**Serv Nac Est T**	**1.81**	**312**	*eP*		x	07 11 00.0	
SNET				*e*S		x	07 11 21.3	
SNET				*i*			07 11 27.0	
	comp=Z,1μm,0.3s							
BOQS	**Boqueron**	**1.87**	**313**	↑*eP*		x	07 11 01.5	
BOQS				*e*S		x	07 11 24.0	
BOQS				AML		x	07 11 27.5	
	comp=Z,55nm,0.2s							
SBLS	**San Blas**	**2.19**	**309**	*eP*		x	07 11 06.5	
SBLS				*e*S		x	07 11 32.6	
SNJE	**San Jose**	**2.20**	**310**	*eP*		x	07 11 05.9	
RTR	**El Retiro**	**2.25**	**310**	*e*S		x	07 11 35.4	
MTO2	**Montecristo 2**	**2.42**	**323**	*eP*		x	07 11 10.4	
RBDL	**Robleda**	**2.42**	**313**	*eP*		x	07 11 39.4	
JTS	**JuntasAbangare**	**3.58**	**127**	Pn		**Pn**	**07 11 23.4**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=103,slow=22,SNR=4.1							
JTS				Pg		**Pn**	**07 11 31.0**	**+6.6**
	comp=Z,11nm,0.3s,baz=307,slow=15,SNR=38							
JTS				Lg			07 12 16.6	
	comp=Z,3.2nm,0.3s,baz=306,slow=23,SNR=10							
JCR	**Jicaral**	**3.75**	**134**	*eP*		**Pn**	**07 11 27.7**	**+0.9**
CGA2	**Cerro Gallo 2**	**4.13**	**126**	*eP*		**Pn**	**07 11 32.8**	**+0.8**
PRS1	**Puriscal**	**4.27**	**125**	*eP*		**Pn**	**07 11 36.1**	**+2.2**
LCR2	**La Lucha 2**	**4.65**	**125**	↑*eP*		**Pn**	**07 11 42.8**	**+3.6**
BUS	**Buena Vista**	**4.96**	**125**	↓*eP*		**Pn**	**07 11 46.6**	**+3.3**
CMIG	**Matias Romero**	**8.20**	**305**	Pn		**Pn**	**07 12 30.4**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=135,slow=11,SNR=4.6							
CMIG				Sn		**Sn**	**07 13 56.6**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=60,slow=20,SNR=1.8							
ROSC	**El Rosal**	**15.36**	**118**	LR		LR	07 19 08.9	
	comp=Z,29nm,19.4s,baz=28,slow=35							
CHI2		**15.97**	**118**	↑*eP*		Px	07 10 46.2	
CHI2				*e*S		Sx	07 10 57.9	
SDV	**Santo Domingo**	**17.30**	**100**	LR		LR	07 21 48.6	
	comp=Z,147nm,18.2s,baz=352,slow=41							
TXAR	**Lajitas Array**	**22.31**	**321**	P		**P**	**07 15 25.2**	**-0.1**
	comp=Z,1.6nm,0.9s,mb3.5,baz=145,slow=11,SNR=14							
PDAR	**Pinedale Array**	**35.57**	**332**	P		**P**	**07 17 23.6**	**-0.9**
	comp=Z,0.4nm,0.6s,mb3.6,baz=124,slow=9.3,SNR=4.5							
NVAR	**Mina Array Bea**	**37.43**	**319**	P		**P**	**07 17 41.1**	**+0.7**
	comp=Z,0.1nm,0.4s,mb3.0,baz=138,slow=6.1,SNR=2.9							
NVAR				PcP		PcP	07 19 58.2	-0.3
	comp=Z,0.1nm,0.3s,baz=159,slow=3.9,SNR=3.6							
SCHQ	**Schefferville**	**45.38**	**17**	P		**P**	**07 18 40.3**	**-5.1**
	comp=Z,3.9nm,0.9s,mb4.3,baz=236,slow=7.3,SNR=3.7							

CSEM ***12*** *07:21:49.2±0.1, 3911N×2759E, h10km, MD3.0, Error ellipse: s-maj=2.3km s-min=1.9km az=109.0*
ISK ***12*** *07:21:49.8, 3909N×2755E, h12km, MD2.7*
ISCJB ***12*** *07:21:50.1±0.6, 3910N±003×2754E±005, h7km±8km, Error ellipse: s-maj=6.5km s-min=5.2km az=7.9*
DDA ***12*** *07:21:50.3, 3908N×2757E, h7km±5km, Md3.0*

ISC 12 07:21:50.6±0.6, 3909N±003×2756E±005, h15km±7km, n11, σ0§97/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.29**	**137**	*e*PG		**Pg**	**07 21 55.5**	**-1.2**
AKS				*e*SG		**Sg**	**07 22 01.6**	**+0.7**
AKHS	**Akhisar**	**0.29**	**137**	*i* P		**Pg**	**07 21 56.1**	**-0.7**
AKHS				*i* S		**Sg**	**07 22 01.5**	**+0.7**
BALY	**Balya**	**0.65**	**4**	*i* P		**Pg**	**07 22 02.5**	**-0.8**
BALY				*i* S		**Sg**	**07 22 13.0**	**+1.1**
KDAG	**Bornova**	**0.73**	**199**	*i* P		**Pg**	**07 22 04.8**	**0.0**
KDAG				*i* S		**Sg**	**07 22 17.1**	**+2.8**
IZM	**Izmir**	**0.73**	**199**	*e*PG		**Pg**	**07 22 04.3**	**-0.5**
IZM				*e*SG		**Sg**	**07 22 14.8**	**+0.3**
BLCB	**Balcova**	**0.81**	**210**	*e*PG		**Pg**	**07 22 05.9**	**-0.5**
DURS	**Dursunbey**	**0.87**	**54**	*i* P		**Pb**	**07 22 06.2**	**-1.2**
DURS				*i* S		**Sb**	**07 22 21.2**	**+2.3**
DEMI	**Demirci**	**0.90**	**93**	*i* P		**Pb**	**07 22 07.5**	**-0.5**
DEMI				*i* S		**Sb**	**07 22 19.9**	**+0.2**
DST	**Dursunbey**	**0.97**	**58**	*e*PG		**Pg**	**07 22 09.2**	**-0.2**
KULA	**Kula-Manisa**	**1.03**	**124**	*e*PG		**Pg**	**07 22 09.7**	**-0.9**
EZN	**Ezine**	**1.20**	**308**	*e*PN		**Pn**	**07 22 13.0**	**0.0**

IDC 12 07:23:10.4±2.2, 1221S×16555E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.8/17, mbtmp3.8/5, MS3.3/2, Ms1 3.2/2, ms1mx2.7/25, Error ellipse: s-maj=121.2km s-min=30.0km az=147.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.11**	**245**	P		P	07 27 47.9	+2.1
	1.5nm,0.6s,baz=82,slow=14,SNR=3.1							
CTA				LR		LR	07 33 51.0	
	comp=Z,52nm,18.5s,baz=54,slow=32							
STKA	**Stephens Creek**	**29.48**	**225**	LR		LR	07 40 15.6	
	comp=Z,74nm,18.4s,baz=26,slow=35							
WRA	**Warramunga Arr**	**30.92**	**252**	P		P	07 29 29.0	-0.1
	0.8nm,0.8s,baz=82,slow=9.0,SNR=6.3							
ASAR	**Alice Springs**	**32.11**	**245**	P		P	07 29 38.6	-1.0
	0.5nm,0.6s,baz=70,slow=9.2,SNR=6.7							
NVAR	**Mina Array Bea**	**86.92**	**50**	P		P	07 35 57.8	+0.4
	0.1nm,0.6s,baz=255,slow=4.5,SNR=4.1							
MKAR	**Makanchi Array**	**94.23**	**317**	P		P	07 36 31.6	+0.2
	0.3nm,0.3s,baz=96,slow=6.1,SNR=3.6							

ISCJB ***12*** *07:37:37.1±0.4, 3273N±002×11735W±003, h10km, Error ellipse: s-maj=3.6km s-min=2.4km az=145.9*
ECX ***12*** *07:37:38.3±0.4, 3279N×11731W, h4km±2km, MD2.7, ML2.7*

ISC 12 07:37:37.4±0.4, 3271N±002×11736W±003, h10km, n51, σ1§21/76, 37C-28D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
109C	**Camp Elliot, M**	**0.28**	**50**	↑P		**Pg**	**07 37 42.0**	**-1.0**
	baz=0.2,SNR=139							
109C				↑S		**Sg**	**07 37 45.6**	**-1.2**
	baz=0.2							
DPP	**Dos Picos Cty**	**0.46**	**50**	↓*eP*		**Pg**	**07 37 45.0**	**-1.3**
EML	**El Monte Cty P**	**0.47**	**67**	↓*eP*		**Pg**	**07 37 45.5**	**-1.1**
BAR	**Barrett**	**0.58**	**93**	↓*eP*		**Pg**	**07 37 48.0**	**-0.7**
CBX	**Cerro Bola**	**0.71**	**124**	↑*eP*		**Pg**	**07 37 51.0**	**-0.1**
CBX				*e*S		**Sg**	**07 38 01.1**	**+0.8**
MONP	**Monument Peak**	**0.81**	**77**	↓P		**Pg**	**07 37 51.6**	**-1.4**
	baz=0.8,SNR=140							
MONP				↓S		**Sg**	**07 38 02.0**	**-1.6**
	baz=0.8							
MURC	**Murrieta**	**0.90**	**9**	↓P		**Pg**	**07 37 52.7**	**-2.0**
	baz=0.8,SNR=56							
MURC				↑S		**Sg**	**07 38 04.2**	**-2.2**
	baz=0.8							
ENX	**Ensenada**	**1.01**	**144**	*eP*		**Pg**	**07 37 56.7**	**-0.2**
ENX				*e*S		**Sg**	**07 38 11.1**	**+1.1**
ENX				↓*e*			07 38 12.3	
	comp=N,248nm,0.5s							
SCI	**San Clemente I**	**1.03**	**285**	↑S		**Sg**	**07 38 10.3**	**-0.5**
	baz=1.0							
DVTC	**Desert V Tower**	**1.06**	**92**	↑P		**Pg**	**07 37 56.5**	**-1.3**
	baz=1.0,SNR=22							
DVTC				↑S		**Sg**	**07 38 10.5**	**-1.1**
	baz=1.0							
RMX	**La Rumorosa**	**1.09**	**95**	*eP*		**Pb**	**07 37 57.1**	**-1.2**
RMX				*e*S		**Sg**	**07 38 11.0**	**-1.4**
PBX	**Punta Banda**	**1.10**	**151**	*eP*		**Pb**	**07 37 58.2**	**-0.3**
PBX				*e*S		**Sg**	**07 38 14.1**	**+1.2**
PBX				↑*e*			07 38 15.8	
	comp=N,197nm,0.4s							
CIS	**Catalina Islan**	**1.12**	**309**	↑P		**Pb**	**07 37 56.9**	**-2.0**
	baz=1.1,SNR=22							
CIS				↑S		**Sb**	**07 38 12.0**	**-1.5**
	baz=1.1							
PFO	**Pinyon Flat Ob**	**1.18**	**40**	↑P		**Pb**	**07 37 57.8**	**-2.0**
	baz=1.1,SNR=142							
PFO				↑S		**Sb**	**07 38 12.6**	**-2.5**
	baz=1.1							
ECNX	**Esteban Cantu**	**1.23**	**148**	*eP*		**Pn**	**07 38 00.3**	**-0.3**
ECNX				*e*P			07 37 56.8	
ECNX				*e*S		**Sb**	**07 38 11.6**	**-5.0**
ECNX				*e*S		**Sb**	**07 38 17.9**	**+1.2**
SWSC	**Sam W. Stewart**	**1.34**	**80**	↑P		**Pn**	**07 38 01.2**	**-0.9**
	baz=1.3,SNR=81							
SWSC				↓S		**Sb**	**07 38 18.5**	**-1.3**
	baz=1.3							
BFSC	**Mount Baldy St**	**1.55**	**351**	↓P		**Pn**	**07 38 04.2**	**-0.7**
	baz=1.5,SNR=21							
BFSC				↓S		**Sn**	**07 38 23.6**	**-1.5**
	baz=1.5							
BBRC	**Big Bear Sol-O**	**1.59**	**13**	↓P		**Pn**	**07 38 04.9**	**-0.7**
	baz=1.5,SNR=23							
BBRC				↓S		**Sn**	**07 38 25.5**	**-0.8**
	baz=1.5							
BELC	**Belle Mtn.**	**1.72**	**41**	↑P		**Pn**	**07 38 06.7**	**-0.6**
	baz=1.6,SNR=48							
BELC				↓S		**Sn**	**07 38 29.8**	**+0.4**
	baz=1.6							
DECC	**Green Verdugo**	**1.74**	**332**	↑S		**Sn**	**07 38 30.0**	**+0.2**
	baz=1.7							
BC3	**Big Chuckw Mtn**	**1.86**	**59**	↑Pb		**Pb**	**07 38 10.3**	**-1.1**
	baz=1.8,SNR=15							
BC3				↓S		**Sn**	**07 38 33.6**	**+0.8**
	baz=1.8							
GLA	**Glamis**	**2.16**	**80**	↓P		**Pn**	**07 38 13.0**	**-0.4**
	baz=2.1							
EDW2	**Edwards Air Fo**	**2.23**	**347**	↑P		**Pn**	**07 38 14.2**	**-0.1**
	baz=2.2							
HEC	**Hector,Ludlow**	**2.28**	**22**	↑Pb		**Pb**	**07 38 17.5**	**-1.2**
	baz=2.2							
HEC				↑Sb		**Sb**	**07 38 46.7**	**-0.3**
	baz=2.2							
SPX	**San Pedro Mart**	**2.31**	**135**	*e*PN		**Pn**	**07 38 17.6**	**+2.1**
IRM	**Iron Mountain**	**2.35**	**51**	P		**Pn**	**07 38 15.8**	**-0.2**
	baz=2.3,SNR=5.7							

ellipse: s-maj=9.8km s-min=7.1km az=43.5
*NNC **12** 07:52:50.8±3.7, 53.18N×87.36E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=29.2km s-min=17.5km az=55.0*

ISC 12 07:52:51.4±1.0, 5359N±006×8769E±010, h35km, n12, σ0°76/21, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.74**	**283**	*e*Pn	**Pn**	**07 53 18.1**	**-1.0**
ZAA0				Sn	**Sn**	**07 53 40.0**	**0.0**
ZALV	**Zalesovo Beam**	**1.74**	**283**	Pg	**Pn**	**07 53 18.3**	**-0.7**
	16nm,0.3s,baz=103,slow=14,SNR=144						
ZALV				Lg		07 53 43.2	
	18nm,0.3s,baz=105,slow=22,SNR=8.2						
KURK	**Kurchatov**	**6.28**	**246**	⇓Pn	**Pn**	**07 54 20.8**	**-0.6**
	4.2nm,0.6s,baz=60,slow=14						
KURK				⇑Sn	**Sn**	**07 55 30.4**	**-1.4**
	2.8nm,0.6s						
KURK				⇑Lg		07 56 01.0	
	18nm,0.6s						
KURK	**Kurchatov**	**6.28**	**246**	Pn	**Pn**	**07 54 22.9**	**+1.5**
	0.7nm,0.3s,baz=62,slow=14,SNR=40						
KURK				Sn	**Sn**	**07 55 32.6**	**+0.8**
	0.2nm,0.3s,baz=62,slow=14,SNR=4.2						
KURK				Lg		07 56 07.3	
	0.1nm,0.3s,baz=63,slow=32,SNR=3.6						
KURK	**Kurchatov**	**6.28**	**246**	*e*Pn	**Pn**	**07 54 21.9**	**+0.6**
KURK				Sn	**Sn**	**07 55 38.4**	**+6.6**
KURK				Lg		07 56 07.3	
MK31	**Makanchi Array**	**7.63**	**209**	Pn	**Pn**	**07 54 40.3**	**+0.4**
	3.1nm,0.6s,baz=33,slow=14,SNR=36						
MK31				⇓Sn	**Sn**	**07 56 04.9**	**-0.2**
	3.6nm,0.7s,baz=28,slow=26						
MK31				⇑Lg		07 56 37.3	
	11nm,0.7s,baz=25,slow=31						
MKAR	**Makanchi Array**	**7.63**	**209**	Pn	**Pn**	**07 54 40.4**	**+0.5**
	1.4nm,0.3s,baz=29,slow=13,SNR=46						
MKAR				Sn	**Sn**	**07 56 04.6**	**-0.6**
	0.4nm,0.3s,baz=29,slow=28,SNR=9.9						
MKAR				Lg		07 56 46.6	
	0.6nm,0.3s,baz=25,slow=32,SNR=9.9						
MKAR	**Makanchi Array**	**7.63**	**209**	Pn	**Pn**	**07 54 40.4**	**+0.5**
MKAR				Sn	**Sn**	**07 56 04.6**	**-0.6**
MKAR				Lg		07 56 46.6	
VOSK	**Vostochnaya**	**10.08**	**272**	⇓Pn	**Pn**	**07 55 12.4**	**-0.9**
	1.2nm,0.6s						
VOSK				⇑Sn	**Sn**	**07 57 06.4**	**+1.3**
	4.4nm,0.6s						
BVA0	**Borovoye Array**	**10.37**	**274**	⇑Sn	**Sn**	**07 57 12.9**	**+0.7**
	0.5nm,0.6s						
BVAR	**Borovoye Array**	**10.37**	**274**	Pn	**Pn**	**07 55 17.3**	**-0.1**
	0.3nm,0.3s,baz=82,slow=13,SNR=4.7						
BVAR				Sn	**Sn**	**07 57 08.1**	**-4.1**
	0.5nm,0.3s,baz=80,slow=26,SNR=9.0						
SONM	**Songino Array**	**13.16**	**108**	Pn	**Pn**	**07 55 56.1**	**+0.5**
	0.1nm,0.3s,baz=295,slow=14,SNR=2.6						
SONM				Lg		07 59 45.7	
	0.1nm,0.3s,baz=301,slow=34,SNR=2.8						

*ISCJB **12** 08:01:29.6±4.0, 236S±0.1×1799W±0.2, h504km±47km, mb3.8/10, Error ellipse: s-maj=26.3km s-min=18.0km az=147.1*
*NEIC **12** 08:01:30.0±2.8, 2362S×17981W, h499km±34km, mb4.0/3, Error ellipse: s-maj=24.3km s-min=14.6km az=194.0*
*IDC **12** 08:01:30.2±3.1, 2368S×17981W, h499km±31km, mb3.4/8, mb1 3.5/9, mb1mx3.3/18, mbtmp3.4/9, Error ellipse: s-maj=30.3km s-min=20.5km az=39.0*

ISC 12 08:01:31.4±3.7, 238S±002×1798W±002, h514km±45km, n16, σ0°62/17, mb3.9/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.67**	**190**	P	**P**	**08 04 37.9**	**+0.2**
	2.2nm,0.3s,baz=11,slow=3.4,SNR=13						
URZ				S	**S**	**08 07 10.4**	**-1.0**
	0.2nm,0.3s,baz=75,slow=20,SNR=4.2						
URZ	**Urewera**	**14.67**	**190**	*e*P	**P**	**08 04 38.1**	**+0.4**
RPZ	**Rata Peaks**	**21.26**	**198**	P	**P**	**08 05 41.1**	**+0.7**
	4.0nm,0.4s,mb4.4,baz=10,slow=6.7,SNR=9.0						
CTA	**Charters Tower**	**31.63**	**270**	P	**P**	**08 07 12.8**	**+0.8**
	7.4nm,0.3s,mb4.6,baz=95,slow=11,SNR=31						
CTA	**Charters Tower**	**31.63**	**270**	P	**P**	**08 07 12.8**	**+0.8**
STKA	**Stephens Creek**	**34.91**	**248**	P	**P**	**08 07 40.2**	**+0.6**
	2.2nm,0.7s,mb3.8,baz=109,slow=12,SNR=4.3						
STKA	**Stephens Creek**	**34.91**	**248**	P	**P**	**08 07 40.2**	**+0.6**
ASAR	**Alice Springs**	**42.21**	**260**	P	**P**	**08 08 39.1**	**+0.1**
	2.2nm,0.6s,mb3.9,baz=100,slow=7.3,SNR=30						
ASAR				ScP	ScP	08 13 24.7	+1.8
	0.1nm,0.4s,baz=107,slow=4.6,SNR=4.3						
WB2	**Warramunga Arr**	**42.56**	**266**	*e*P	**P**	**08 08 41.1**	**-0.7**
WRAB	**Tennant Creek**	**42.56**	**266**	*e*P	**P**	**08 08 41.5**	**-0.3**
	5.5nm,1.5s,mb3.9						
WRA	**Warramunga Arr**	**42.57**	**266**	P	**P**	**08 08 41.3**	**-0.6**
	1.8nm,0.3s,mb4.0,baz=103,slow=8.3,SNR=168						
FITZ	**Fitzroy Crossi**	**50.99**	**265**	*e*P	**P**	**08 09 45.5**	**-0.2**
	2.6nm,0.7s,mb3.7						
FITZ	**Fitzroy Crossi**	**50.99**	**265**	P	**P**	**08 09 45.2**	**-0.4**
	1.3nm,0.5s,mb3.5,baz=108,slow=6.4,SNR=6.3						
MAW	**Mawson**	**77.92**	**200**	P	**P**	**08 12 36.4**	**+1.0**
	1.0nm,0.7s,mb3.3,baz=155,slow=8.7,SNR=4.6						
WRAK	**Wrangell Islan**	**89.38**	**24**	*e*P	**P**	**08 13 31.8**	**-0.7**
	3.0nm,0.4s,mb4.5						
TXAR	**Lajitas Array**	**90.23**	**58**	P	**P**	**08 13 37.1**	**0.0**
	0.1nm,0.6s,mb2.8,baz=211,slow=6.2,SNR=5.3						

*ISCJB **12** 08:11:34.0±0.7, 3276N±002×11736W±003, h4km±4km, Error ellipse: s-maj=4.6km s-min=3.1km az=151.7*
*NEIC **12** 08:11:35.2, 3277N×11734W, h10km, ML2.5(PAS), After PAS.*
*ECX **12** 08:11:36.1±0.3, 3279N×11731W, h7km, MD2.4, ML2.4*

ISC 12 08:11:34.4±0.5, 3276N±002×11736W±003, h4km±4km, n33, σ0°88/53, 11C-19D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
109C	**Camp Elliot, M**	**0.25**	**59**	⇓P	**Pg**	**08 11 39.8**	**+0.5**
	baz=0.2,SNR=68						
109C				⇓S	**Sg**	**08 11 43.2**	**+0.7**
	baz=0.2						
DPP	**Dos Picos Cty**	**0.42**	**56**	⇓*e*P	**Pg**	**08 11 42.8**	**+0.2**
EML	**El Monte Cty P**	**0.45**	**73**	*e*P	**Pg**	**08 11 43.3**	**+0.2**
BAR	**Barrett**	**0.58**	**98**	⇑*e*P	**Pg**	**08 11 45.7**	**0.0**
BAR	**Barrett**	**0.58**	**98**	*e*Pg	**Pg**	**08 11 45.8**	**+0.1**
BAR				*e*Sg	**Sg**	**08 11 53.3**	**0.0**
CBX	**Cerro Bola**	**0.74**	**127**	*e*P	**Pg**	**08 11 48.9**	**+0.3**
CBX				*e*S	**Sg**	**08 11 58.7**	**+0.5**
MONP	**Monument Peak**	**0.80**	**80**	⇑P	**Pg**	**08 11 49.4**	**-0.4**
	baz=0.7,SNR=9.7						
MONP				⇑S	**Sg**	**08 11 59.8**	**-0.4**
	baz=0.7						
MURC	**Murrieta**	**0.85**	**9**	P	**Pg**	**08 11 50.6**	**-0.1**
	baz=0.8,SNR=17						
MURC				⇓S	**Sg**	**08 12 02.4**	**+0.6**
	baz=0.8						
ENX	**Ensenada**	**1.05**	**146**	⇑*e*P	**Pg**	**08 11 54.5**	**-0.2**
ENX				*e*S	**Sg**	**08 12 08.6**	**+0.3**
ENX				*e*		08 12 10.2	
	comp=N,145nm,0.6s						
DVTC	**Desert V Tower**	**1.07**	**95**	⇓P	**Pg**	**08 11 54.5**	**-0.4**
	baz=1.0,SNR=19						
DVTC				⇓S	**Sg**	**08 12 08.3**	**-0.4**
	baz=1.0						
CIS	**Catalina Islan**	**1.09**	**307**	⇓P	**Pg**	**08 11 54.9**	**-0.4**
	baz=1.1						
CIS				⇑S	**Sg**	**08 12 09.8**	**+0.4**
	baz=1.1						
RMX	**La Rumorosa**	**1.09**	**98**	*e*P	**Pg**	**08 11 54.8**	**-0.5**
RMX				*e*S	**Sg**	**08 12 08.8**	**-0.7**
PFO	**Pinyon Flat Ob**	**1.14**	**42**	⇓P	**Pg**	**08 11 55.6**	**-0.6**
	baz=1.1,SNR=14						
PFO				⇓S	**Sg**	**08 12 10.3**	**-0.7**
	baz=1.1						
PFO	**Pinyon Flat Ob**	**1.14**	**42**	*e*Pg	**Pg**	**08 11 55.5**	**-0.7**
PFO				*e*Sg	**Sg**	**08 12 10.1**	**-0.8**
PBX	**Punta Banda**	**1.15**	**152**	*e*	**Sg**	**08 12 13.7**	**+2.3**
	comp=N,86nm,0.4s						
ECNX	**Esteban Cantu**	**1.28**	**149**	*e*P	**Pg**	**08 11 58.2**	**-0.7**
ECNX				*e*P		08 11 54.7	
ECNX				*e*S	**Sg**	**08 12 09.1**	**-6.4**
ECNX				*e*S	**Sg**	**08 12 15.6**	**+0.2**
SWSC	**Sam W. Stewart**	**1.33**	**82**	⇓Pb	**Pb**	**08 11 59.1**	**-0.8**
	baz=1.3,SNR=14						
SWSC				⇓S	**Sg**	**08 12 16.4**	**-0.8**
	baz=1.3						
BFSC	**Mount Baldy St**	**1.50**	**350**	⇑Pb	**Pb**	**08 12 02.0**	**-0.7**
	baz=1.5						
BFSC				⇓S	**Sn**	**08 12 21.6**	**-0.4**
	baz=1.5						
BBRC	**Big Bear Sol-O**	**1.54**	**14**	⇓Pb	**Pb**	**08 12 02.8**	**-0.7**
	baz=1.5						
BBRC				⇑Sb	**Sb**	**08 12 23.6**	**+0.1**
	baz=1.5						
MWC	**Mount Wilson**	**1.57**	**338**	*e*Pn	**Pn**	**08 12 03.2**	**+0.1**
MWC				Sn	**Sn**	**08 12 23.1**	**-0.8**
BELC	**Belle Mtn.**	**1.68**	**42**	⇑Pb	**Pb**	**08 12 04.7**	**-1.2**
	baz=1.6,SNR=20						
BELC				⇓Sb	**Sb**	**08 12 27.5**	**0.0**
	baz=1.6						
BC3	**Big Chuckw Mtn**	**1.83**	**60**	⇓Sb	**Sb**	**08 12 32.0**	**+0.3**
	baz=1.8						
GLA	**Glamis**	**2.15**	**82**	*e*Pn	**Pn**	**08 12 10.3**	**-0.8**
EDW2	**Edwards Air Fo**	**2.18**	**346**	⇑S	**Sn**	**08 12 37.9**	**-1.0**
	baz=2.1						
IRM	**Iron Mountain**	**2.31**	**52**	⇓Sb	**Sb**	**08 12 46.4**	**+0.7**
	baz=2.2						
SPX	**San Pedro Mart**	**2.35**	**136**	*e*PN	**Pn**	**08 12 14.9**	**+1.1**
112A	**Yuma**	**2.36**	**95**	⇑P	**Pn**	**08 12 13.1**	**-0.8**
	baz=2.3						
112A				⇑S	**Sn**	**08 12 42.2**	**-1.0**
	baz=2.3						
GMRC	**Granite Mounta**	**2.46**	**35**	⇓Sb	**Sb**	**08 12 51.4**	**+1.4**
	baz=2.4						
GSC	**Goldstone**	**2.58**	**10**	*e*Pn	**Pn**	**08 12 18.4**	**+1.5**
GSC				Sn	**Sn**	**08 12 50.7**	**+2.0**
TUQ	**Turquoise Moun**	**2.92**	**24**	⇓Sb	**Sb**	**08 13 05.4**	**+2.2**
	baz=2.9						
LDFC	**Landfair**	**2.97**	**38**	*e*Pn	**Pn**	**08 12 22.5**	**+0.1**
ISA	**Isabella**	**3.04**	**343**	⇓S	**Sn**	**08 12 58.4**	**-1.7**
	baz=3.0						
TPNV	**Topopah Spring**	**4.28**	**12**	*e*Pn	**Pn**	**08 12 42.5**	**+2.2**

*NEIC **12** 08:12:42.3±2.0, 737S×12821E, h72km±20km, mb4.4/6, Error ellipse: s-maj=14.4km s-min=13.0km az=79.0*
*ISCJB **12** 08:12:45.7±1.5, 762S±007×12824E±007, h121km±15km, mb4.2/11, Error ellipse: s-maj=12.9km s-min=8.5km az=136.1*
*IDC **12** 08:12:47.9±2.3, 744S×12821E, h126km±20km, mb3.8/9, mb1 3.9/11, mb1mx3.9/16, mbtmp3.9/11, MS2.6/2, Ms1 2.6/2, ms1mx2.4/24, Error ellipse: s-maj=24.1km s-min=12.4km az=75.0*
*DJA **12** 08:12:55, 833S×12820E, h90km, mb4.9/2*

ISC 12 08:12:43.4±1.7, 743S±008×12825E±007, h81km±17km, n31, σ1°05/33, mb4.2/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.31**	**238**	P	**Pn**	**08 14 04.3**	**+4.2**
	61nm,0.3s,baz=124,slow=1.4,SNR=22						
BATI				S	**Sn**	**08 15 00.3**	**+0.3**
	89nm,0.3s,baz=76,slow=22,SNR=25						
FITZ	**Fitzroy Crossi**	**10.91**	**193**	*e*P	**Pn**	**08 15 15.7**	**-0.9**
	16nm,0.4s						
FITZ				*e*S	**Sn**	**08 17 07.8**	**-9.0**
FITZ	**Fitzroy Crossi**	**10.91**	**193**	P	**Pn**	**08 15 16.1**	**-0.5**
	3.7nm,0.3s,baz=26,slow=12,SNR=56						
FITZ				S	**Sn**	**08 17 11.1**	**-5.8**
	3.0nm,0.3s,baz=322,slow=20,SNR=17						
FITZ				LR	LR	08 19 52.5	
	comp=Z,27nm,18.9s,baz=308,slow=39						
FITZ	**Fitzroy Crossi**	**10.91**	**193**	*e*Pn	**Pn**	**08 15 16.0**	**-0.6**
	20nm,0.4s						
FITZ				*e*Sn	**Sn**	**08 17 13.0**	**-3.8**
WRAB	**Tennant Creek**	**13.76**	**155**	*e*Pn	**Pn**	**08 15 54.4**	**-0.5**
	52nm,0.9s						
WRAB				*e*Sn	**Sn**	**08 18 20.8**	**-5.5**
WRA	**Warramunga Arr**	**13.77**	**155**	P	**Pn**	**08 15 54.4**	**-0.6**
	4.5nm,0.3s,baz=326,slow=13,SNR=134						
WRA				S	**Sn**	**08 18 19.6**	**-6.8**
	3.1nm,0.3s,baz=330,slow=24,SNR=7.6						
WRA				LR	LR	08 21 56.2	
	comp=Z,30nm,19.2s,baz=295,slow=40						
WB2	**Warramunga Arr**	**13.77**	**155**	*e*P	**Pn**	**08 15 54.0**	**-1.1**
WB2				*e*S	**Sn**	**08 18 14.9**	**-12**
MBWA	**Marble Bar**	**15.94**	**210**	*e*Pn	**Pn**	**08 16 24.9**	**+1.9**
	8.0nm,0.4s						
COEN	**Coen**	**16.03**	**115**	*e*Pn	**Pn**	**08 16 26.3**	**+2.2**
	3.0nm,0.4s						
ASAR	**Alice Springs**	**17.03**	**162**	P	**Pn**	**08 16 37.1**	**+0.7**
	0.1nm,0.3s,baz=338,slow=10,SNR=4.1						
ASAR				S	**S**	**08 19 35.8**	**-15**
	0.6nm,0.3s,baz=346,slow=26,SNR=4.4						
ASAR				ScP	ScP	08 24 37.9	-7.9
	0.1nm,0.3s,baz=350,slow=2.0,SNR=4.1						
CTA	**Charters Tower**	**21.51**	**128**	P	**P**	**08 17 25.9**	**0.0**
	0.8nm,0.4s,mb3.5,baz=300,slow=14,SNR=2.1						
FORT	**Forrest**	**23.23**	**180**	*e*P	**P**	**08 17 43.5**	**0.0**
	40nm,0.6s,mb4.9						
KLBR	**Kellerberrin**	**25.96**	**201**	*e*P	**P**	**08 18 08.2**	**-0.2**
	92nm,2.0s,mb4.9						
MUN	**Mundaring**	**26.88**	**203**	*e*P	**P**	**08 18 17.0**	**+0.3**
STKA	**Stephens Creek**	**27.32**	**155**	*e*P	**P**	**08 18 21.5**	**+0.9**
	3.8nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**27.32**	**155**	P	**P**	**08 18 21.2**	**+0.6**
	3.9nm,0.5s,mb4.2,baz=330,slow=8.3,SNR=13						
NWAO	**Narrogin (SRO)**	**27.35**	**200**	P	**P**	**08 18 20.1**	**-0.8**
	13nm,0.8s,mb4.5,baz=89,slow=2.5,SNR=6.1						
TOO	**Toolangi**	**33.84**	**155**	*e*P	**P**	**08 19 20.6**	**+2.6**
CMAR	**Chiang Mai Arr**	**38.70**	**312**	P	**P**	**08 19 60.0**	**+0.2**
	1.9nm,0.6s,mb4.1,baz=138,slow=7.1,SNR=7.4						
KSRS	**Korea Array**	**44.65**	**360**	P	**P**	**08 20 48.9**	**+0.9**
	2.9nm,0.5s,mb4.2,baz=176,slow=9.5,SNR=16						
MJAR	**Matshiro Arr**	**44.73**	**11**	P	**P**	**08 20 46.8**	**-1.8**
	1.1nm,0.7s,mb3.7,baz=205,slow=8.6,SNR=4.1						
SONM	**Songino Array**	**58.32**	**343**	P	**P**	**08 22 30.0**	**+0.2**
	0.7nm,0.4s,mb4.0,baz=158,slow=7.2,SNR=7.2						
MKAR	**Makanchi Array**	**67.65**	**328**	P	**P**	**08 23 30.4**	**-1.4**
	0.7nm,0.4s,mb3.9,baz=127,slow=8.3,SNR=8.9						
MAW	**Mawson**	**73.92**	**201**	*e*P	**P**	**08 24 09.0**	**-0.4**
	1.5nm,0.4s,mb4.1						
MAW	**Mawson**	**73.92**	**201**	P	**P**	**08 24 09.2**	**-0.2**
	2.0nm,0.5s,mb4.2,baz=74,slow=7.0,SNR=8.3						
TXAR	**Lajitas Array**	**126.63**	**59**	PKP	PKPdf	08 31 36.8	-1.3
	0.1nm,0.4s,baz=180,slow=2.3,SNR=5.6						
TORD	**Torodi Ar. Bea**	**127.19**	**281**	PKP	PKPdf	08 31 36.7	-2.7
	0.6nm,0.7s,baz=30,slow=2.0,SNR=6.9						
TORD	**Torodi Ar. Bea**	**127.19**	**281**	PKP	PKPdf	08 31 36.7	-2.7
CPUP	**Villa Florida**	**146.00**	**171**	PKPbc	PKPbc	08 32 13.5	-1.2
	1.2nm,0.3s,baz=176,slow=2.3,SNR=23						
LPAZ	**La Paz**	**151.39**	**146**	PKPbc	PKPbc	08 32 28.8	0.0
	2.0nm,0.4s,baz=56,slow=3.1,SNR=33						
LPAZ				PKPab	PKPab	08 32 38.2	+1.0
	1.1nm,0.7s,baz=222,slow=2.6,SNR=10						
LPAZ	**La Paz**	**151.39**	**146**	PKPbc	PKPbc	08 32 28.8	0.0
LPAZ				PKPab	PKPab	08 32 38.2	+1.0

*SGS **12** 08:24:32.9, 3021N×3629E, h7km*
*CSEM **12** 08:24:32.9, 3021N×3629E, h7km, ML2.6, After SNSN*
*GII **12** 08:24:36.0±1.5, 2988N×3612E, h0km, ML2.2/3, EXPLOSION*

ISC 12 08:24:34.8±1.3, 2984N±004×3630E±007, h0km, n10, σ0°59/16, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.11**	**281**	Pg	**Pg**	**08 24 56.4**	**+0.3**
HRFI				Sg	**Sg**	**08 25 10.2**	**-0.3**
EIL	**Elat**	**1.19**	**262**	Pg	**Pg**	**08 24 57.3**	**-0.1**
EIL				Sg	**Sg**	**08 25 12.9**	**0.0**
HQLS		**1.20**	**244**	P	**Pg**	**08 24 56.9**	**-1.0**
MBRI	**Mt Berech**	**1.21**	**268**	Pg	**Pg**	**08 24 57.6**	**-0.2**
MBRI				Sg	**Sg**	**08 25 13.6**	**+0.1**
ZFRI	**Zfri**	**1.21**	**307**	Pg	**Pg**	**08 24 56.7**	**-1.1**
ZFRI				Sg	**Sg**	**08 25 14.4**	**+0.9**
PRNI	**Paran**	**1.23**	**295**	Pg	**Pg**	**08 24 58.2**	**-0.2**
PRNI				Sg	**Sg**	**08 25 14.3**	**-0.2**
JLOS		**1.31**	**213**	P	**Pg**	**08 24 60.0**	**+0.2**
MZDA	**Masada**	**1.68**	**331**	Pn	**Pn**	**08 25 05.5**	**+0.2**
MZDA				Sn	**Sn**	**08 25 28.1**	**+0.6**
BDAS	**Al Bad'**	**1.75**	**217**	S	**Sn**	**08 25 30.7**	**+1.3**
BDAS	**Al Bad'**	**1.75**	**217**	P	**Pn**	**08 25 05.9**	**-0.4**

IDC 12 08:26:52.4±1.0, 3828N×3113W, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.6/23, mbtmp3.6/5, MS3.4/7, Ms1 3.4/7, ms1mx3.0/32, Error ellipse: s-maj=23.7km s-min=19.5km az=75.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**1.93**	**80**	*e*P	Pg	08 27 38.7	+9.4
CALA				*e*S	Sx	08 27 44.5	
HOR	**Horta**	**1.98**	**82**	*e*P	Pg	08 27 39.5	+9.2
HOR				*e*S	Sx	08 27 46.1	
PICO	**Pico**	**2.13**	**83**	*e*S	Sx	08 27 50.7	
ROSA	**Rosais**	**2.31**	**78**	*e*S	Sx	08 27 53.0	
PMAN	**Manadas**	**2.41**	**81**	*e*P	Pn	08 27 51.2	+18
ESDC	**Sonseca Array**	**21.14**	**78**	P	P	08 31 40.5	+1.8
	0.3nm,0.4s,baz=286,slow=11,SNR=6.3						
ESDC				LR	LR	08 38 36.8	
	comp=Z,40nm,18.6s,baz=195,slow=33						
BBTS	**Babate**	**26.84**	**147**	LR	LR	08 40 19.5	
	comp=Z,59nm,20.7s,baz=340,slow=30						
SCHQ	**Schefferville**	**29.20**	**316**	LR	LR	08 43 11.3	
	comp=Z,116nm,18.6s,baz=95,slow=34						
TORD	**Torodi Ar. Bea**	**38.40**	**122**	P	P	08 34 15.0	-0.6
	2.4nm,1.1s,baz=307,slow=8.6,SNR=7.3						
TORD				LR	LR	08 50 53.4	
	comp=Z,53nm,19.9s,baz=235,slow=38						
DBIC	**Dimbokro**	**39.45**	**136**	LR	LR	08 48 07.2	
	comp=Z,87nm,19.2s,baz=281,slow=32						
YKA	**Yellowknife Ar**	**53.99**	**325**	LR	LR	08 57 10.2	
	comp=Z,19nm,19.0s,baz=130,slow=34						
PDAR	**Pinedale Array**	**57.75**	**301**	P	P	08 36 46.2	+1.2
	0.6nm,0.8s,baz=68,slow=8.2,SNR=4.4						
TXAR	**Lajitas Array**	**59.54**	**285**	P	P	08 36 58.3	+0.6
	1.0nm,0.9s,baz=80,slow=6.9,SNR=5.8						
LPAZ	**La Paz**	**64.43**	**220**	P	P	08 37 30.4	-0.1
	0.8nm,0.8s,baz=34,slow=7.2,SNR=4.6						
NVAR	**Mina Array Bea**	**65.65**	**301**	P	P	08 37 42.1	+3.7
	0.2nm,0.6s,baz=80,slow=5.4,SNR=3.8						
BOSA	**Boshof**	**84.88**	**133**	LR	LR	09 16 32.1	
	comp=Z,88nm,21.5s,baz=166,slow=35						

*MOS **12** 09:04:28.8±0.7, 5245N×15943E, h49km, mb4.0/4, Error ellipse: s-maj=24.5km s-min=9.3km az=74.9*
*ISCJB **12** 09:04:30.2±0.5, 5257N±003×15927E±007, h63km±4km, mb3.7/8, Error ellipse: s-maj=8.1km s-min=3.3km az=38.1*
*KRSC **12** 09:04:30.4±0.1, 5258N×15932E, h47km±37km, ML4.1*
*NEIC **12** 09:04:32.1±1.4, 5278N×15905E, h71km±12km, Error ellipse: s-maj=34.2km s-min=18.9km az=159.0*
*IDC **12** 09:04:32.5±1.7, 5271N×15896E, h77km±18km, mb3.4/8, mb1 3.7/9, mb1mx3.5/24, mbtmp3.5/9, Error ellipse: s-maj=34.8km s-min=16.5km az=146.0*

ISC 12 09:04:31.3±0.5, 5256N±003×15926E±007, h54km±5km, n43, σ0°92/64, mb3.7/8, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.47**	**255**	*e*P	**Pn**	**09 04 41.9**	**-0.6**
RUS				*e*S	**Sn**	**09 04 50.4**	**-0.2**
PET	**Petropavlovsk**	**0.59**	**322**	*e*P	**Pn**	**09 04 43.1**	**-0.8**
PET				*e*S	**Sn**	**09 04 51.8**	**-1.2**
PET	**Petropavlovsk**	**0.59**	**322**	⇓*i*Pn	**Pn**	**09 04 42.9**	**-1.0**
PET				*e*Sn	**Sn**	**09 04 52.0**	**-1.1**
NLC	**Nalytchevo**	**0.61**	**5**	*e*P	**Pn**	**09 04 43.1**	**-1.1**
NLC				*e*S	**Sn**	**09 04 52.5**	**-1.0**
SPN	**Mys Shipunski**	**0.71**	**40**	*e*P	**Pn**	**09 04 44.9**	**-0.5**
SPN				*e*S	**Sn**	**09 04 55.5**	**-0.1**
GRL	**Gorelyy**	**0.72**	**270**	*e*P	**Pn**	**09 04 45.7**	**+0.2**
GRL				*e*S	**Sn**	**09 04 57.0**	**+1.1**
AVH	**Avacha**	**0.77**	**336**	*e*P	**Pn**	**09 04 45.6**	**-0.6**
AVH				*e*S	**Sn**	**09 04 56.8**	**-0.2**
PEA0B	**Petropavlovsk-**	**1.09**	**301**	*e*Pn	**Pn**	**09 04 49.6**	**-0.8**
PEA0B				*e*Sn	**Sn**	**09 05 03.1**	**-1.4**
PETK	**Petropavlovsk-**	**1.09**	**301**	P	**Pn**	**09 04 49.6**	**-0.8**
	47nm,0.3s,baz=105,slow=18,SNR=1519						
PETK				S	**Sn**	**09 05 03.5**	**-1.0**
	102nm,0.3s,baz=93,slow=25,SNR=54						
PETK	**Petropavlovsk-**	**1.09**	**301**	P	**Pn**	**09 04 49.6**	**-0.8**
PETK				S	**Sn**	**09 05 03.5**	**-1.0**
GNL	**Ganaly**	**1.39**	**326**	*e*P	**Pn**	**09 04 53.8**	**-0.5**
GNL				*e*S	**Sn**	**09 05 12.2**	**+0.6**
KII	**Karymskiy**	**1.48**	**4**	*e*P	**Pn**	**09 04 55.6**	**0.0**
KII				*e*S	**Sn**	**09 05 14.5**	**+0.6**
MIPR	**Malaya Ipel'ka**	**1.56**	**260**	*e*P	**Pn**	**09 04 56.9**	**+0.3**
MIPR				*e*S	**Sn**	**09 05 16.9**	**+1.2**
MKZ	**Mys Kozlova**	**2.49**	**35**	*e*P	**Pn**	**09 05 08.3**	**-1.0**
MKZ				*e*S	**Sn**	**09 05 36.4**	**-2.0**
SKR	**Severo-Kuril's**	**2.71**	**227**	*e

WRA	**Warramunga Arr**	**31.18**	**252**	P	P	09 14 58.5	-0.2
	0.5nm,0.8s,baz=83,slow=9.2,SNR=5.4						
WRA				pP	pP	09 15 10.9	+0.8
	0.7nm,0.7s,baz=83,slow=8.9,SNR=5.4						
WRA				pPcP		09 18 05.3	
	0.7nm,0.8s,baz=79,slow=3.2,SNR=5.4						
WRA				LR	LR	09 26 45.0	
	comp=Z,29nm,18.2s,baz=195,slow=35						
ASAR	**Alice Springs**	**32.35**	**245**	P	P	09 15 08.2	-0.8
	0.7nm,0.7s,baz=71,slow=9.4,SNR=14						
ASAR				pP	pP	09 15 20.9	+0.5
	2.2nm,0.6s,baz=69,slow=9.5,SNR=14						
ASAR				pPcP		09 18 09.3	
	1.0nm,0.9s,baz=76,slow=2.7,SNR=5.9						
SONM	**Songino Array**	**79.77**	**324**	P	P	09 20 47.3	+0.3
	0.2nm,0.4s,baz=122,slow=5.7,SNR=4.2						
MKAR	**Makanchi Array**	**94.53**	**317**	P	P	09 21 59.9	+0.5
	0.6nm,0.3s,baz=92,slow=6.2,SNR=7.1						
MKAR				pP	pP	09 22 10.9	-1.2
	1.5nm,0.6s,baz=94,slow=6.2,SNR=4.1						
TORD	**Torodi Ar. Bea**	**164.54**	**275**	PKP	PKPdf	09 28 43.3	-0.2
	0.4nm,0.8s,baz=102,slow=3.4,SNR=2.3						

CSEM ***12*** *09:15:44.5, 3563N×2759E, h23km, MD3.0/3, After ATH*
NEIC ***12*** *09:15:44.5, 3563N×2759E, h23km, MD3.0(ATH), After ATH.*

ATH 12 09:15:44.5, 3563N×2759E, h23km±2km, MD3.0/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.36**	**257**	*e*PB	Pb	09 15 52.0	-0.3
KARP				*e*SB	Sb	09 15 58.3	+0.7
ARG	**Arkhangelos**	**0.73**	**36**	*e*PN	Pn	09 15 59.0	-0.4
ARG				*e*SN	Sn	09 16 09.5	-0.3
NPS	**Neapolis**	**1.66**	**258**	*e*PN	Pn	09 16 14.1	+2.0

ISC 12 09:25:44.9±1.0, 3734N±007×2807E±007, h10km, n7, σ0§55/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSB	**Milas**	**0.24**	**259**	*e*PG	**Pg**	**09 25 49.4**	**-0.4**
MLSB				*e*SG	**Sg**	**09 25 54.0**	**+0.9**
YER	**Yerkesik**	**0.27**	**141**	*e*PG	**Pg**	**09 25 50.8**	**+0.5**
AYDN	**Tasoluk**	**0.35**	**335**	*i* P	**Pg**	**09 25 52.2**	**+0.4**
BDRM	**Kayabasi**	**0.57**	**241**	*i* P	**Pg**	**09 25 55.7**	**-0.3**
TURN	**Turunc**	**0.63**	**138**	*i* P	**Pg**	**09 25 56.7**	**-0.5**
BODT	**Bodrum**	**0.67**	**245**	*e*PG	**Pg**	**09 25 57.5**	**-0.3**
GCAM	**G?zelcaml?**	**0.76**	**299**	*i* P	**Pg**	**09 26 00.0**	**+0.5**
GCAM				*i* S	**Sg**	**09 26 08.5**	**-0.8**

NIC ***12*** *09:32:33.0±0.2, 3483N×3231E, h16km, ML3.5, MW3.2*
NIC Felt earthquake; Maximum Intensity 2; Felt I–II MM at Paphos.
ISCJB ***12*** *09:32:34.3±1.1, 3485N±006×3237E±005, h6km±5km, Error ellipse: s-maj=10.8km s-min=6.5km az=20.9*
CSEM ***12*** *09:32:34.2±0.2, 3488N×3243E, h3km±1km, Mw3.2, Error ellipse: s-maj=6.1km s-min=3.8km az=175.0*
ISK ***12*** *09:32:36.2, 3487N×3254E, h22km, MD3.5*

ISC 12 09:32:33.8±1.4, 3482N±007×3231E±006, h1km±6km, n20, σ0§93/26, 2C-1D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPCY	**Paphos**	**0.07**	**22**	⇓*i* P	**Pg**	**09 32 36.2**	**+1.0**
AKMC	**Akamas**	**0.21**	**4**	P	**Pg**	**09 32 38.0**	**+0.1**
ALFC	**Alevga**	**0.41**	**35**	⇑P	**Pg**	**09 32 41.2**	**-0.5**
	52nm,0.2s						
ALFC				S	**Sg**	**09 32 47.8**	**+0.7**
ALFC	**Alevga**	**0.41**	**35**	⇑*e*P	**Pg**	**09 32 41.2**	**-0.5**
	52nm,0.2s						
SZAC	**Souni-Zanaja**	**0.47**	**97**	P	**Pg**	**09 32 42.6**	**-0.3**
SZAC				S	**Sg**	**09 32 49.9**	**+0.8**
LEF	**Lefka**	**0.56**	**58**	*e*PG	**Pg**	**09 32 43.6**	**-1.0**
LEF				*e*SG	**Sg**	**09 32 50.5**	**-1.4**
MAMC	**Mammari**	**0.82**	**64**	P	**Pg**	**09 32 49.9**	**+0.3**
CSS	**Prodhromos**	**0.85**	**80**	P	**Pg**	**09 32 49.1**	**-1.0**
	11nm,0.5s						
CSS				S	**Sg**	**09 33 02.0**	**+0.9**
LFK	**Lefkose**	**1.10**	**65**	*e*PG	**Pg**	**09 32 53.6**	**-1.3**
PHNC	**Paralimni**	**1.43**	**82**	P	**Pn**	**09 33 00.9**	**+0.1**
PHNC				S	**Sg**	**09 33 21.8**	**+2.2**
EREN	**Erenkoy**	**1.68**	**64**	*e*PN	**Pn**	**09 33 03.3**	**-1.0**
IKL	**Isikli**	**1.81**	**38**	*e*PN	**Pn**	**09 33 04.5**	**-1.5**
HDMB	**Hadim**	**2.15**	**4**	*e*PN	**Pn**	**09 33 10.6**	**-0.2**
MEST	**Erdemli**	**2.31**	**40**	*i* P	**Pn**	**09 33 13.1**	**+0.1**
MERS	**Mersin**	**2.72**	**41**	*e*PN	**Pn**	**09 33 17.6**	**-1.0**
ELL	**Elmali**	**2.74**	**315**	*e*PN	**Pn**	**09 33 22.3**	**+3.4**
KARA	**Karaisali**	**3.30**	**42**	*e*PN	**Pn**	**09 33 26.5**	**0.0**
YURE	**YUREGIR**	**3.36**	**52**	*i* P	**Pn**	**09 33 27.5**	**+0.1**
YURE				*i* S	**Sn**	**09 34 08.7**	**+0.8**
NIG	**Nigde**	**3.77**	**29**	*e*PN	**Pn**	**09 33 33.7**	**+0.6**
KOZT	**Kozan**	**3.89**	**46**	*e*PN	**Pn**	**09 33 35.2**	**+0.5**

ISCJB ***12*** *09:50:35.1±0.6, 3362S±002×7064W±004, h27km±5km, Error ellipse: s-maj=5.6km s-min=3.9km az=8.7*
GUC ***12*** *09:50:35.0±1.0, 3363S×7061W, h23km±4km, MD3.5, ML2.5*
NEIC ***12*** *09:50:35.0, 3363S×7061W, h23km, ML2.5(GUC), After GUC.*

ISC 12 09:50:35.1±0.7, 3363S±003×7064W±004, h27km±6km, n18, σ0§35/35, 7C-8D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANTU	**Antumapu**	**0.06**	**5**	*i* P	**Pb**	**09 50 39.7**	**+0.1**
ANTU				*i* S	**Sb**	**09 50 42.9**	**+0.1**
ANTU				AML	AML	09 50 43.0	
	comp=N,4μm,0.1s						
ANTU	**Antumapu**	**0.06**	**5**	*i* P	**Pb**	**09 50 39.7**	**+0.1**
ANTU				*i* S	**Sb**	**09 50 42.9**	**+0.1**
SAN	**Santiago**	**0.17**	**354**	⇓*i* P	**Pb**	**09 50 40.5**	**-0.1**
SAN				*i* S	**Sb**	**09 50 44.3**	**0.0**
SAN				AML	AML	09 50 44.5	
	comp=E,487nm,0.3s						
SAN				AML	AML	09 50 44.5	
	comp=N,2μm,0.1s						
SAN	**Santiago**	**0.17**	**354**	⇓*i* P	**Pb**	**09 50 40.5**	**-0.1**
SAN				*i* S	**Sb**	**09 50 44.3**	**0.0**
FSR	**Penalolen**	**0.17**	**33**	*e*P	**Pb**	**09 50 40.5**	**-0.1**
FSR				*i* S	**Sb**	**09 50 44.4**	**+0.1**
FSR				AML	AML	09 50 44.5	
	comp=E,666nm,0.1s						
SJCH	**San Jose de Ma**	**0.24**	**94**	⇑*i* P	**Pb**	**09 50 40.6**	**-0.7**
SJCH				*i* S	**Sb**	**09 50 44.9**	**-0.8**
SJCH				AML	AML	09 50 45.5	
	comp=N,605nm,0.1s						
SJCH	**San Jose de Ma**	**0.24**	**94**	⇑*i* P	**Pb**	**09 50 40.6**	**-0.7**
SJCH				*i* S	**Sb**	**09 50 44.9**	**-0.8**
CLCH	**Cerro Calan**	**0.24**	**21**	⇓*i* P	**Pb**	**09 50 41.5**	**0.0**
CLCH				*i* S	**Sb**	**09 50 46.0**	**+0.3**
CLCH				AML	AML	09 50 47.0	
	comp=N,695nm,0.4s						
TACH	**Talagante**	**0.25**	**264**	⇓*i* P	**Pb**	**09 50 41.6**	**+0.1**
TACH				*i* S	**Sb**	**09 50 46.1**	**+0.2**
TACH	**Talagante**	**0.25**	**264**	⇓*i* P	**Pb**	**09 50 41.6**	**+0.1**
TACH				*i* S	**Sb**	**09 50 46.1**	**+0.2**
CHCH	**Chadas Angostu**	**0.31**	**182**	⇑*i* P	**Pb**	**09 50 42.3**	**0.0**
CHCH				*i* S	**Sb**	**09 50 47.0**	**-0.3**
FCH	**Farellones**	**0.42**	**45**	⇓*i* P	**Pb**	**09 50 44.2**	**+0.2**
FCH				*i* S	**Sb**	**09 50 50.3**	**+0.3**
FCH				AML	AML	09 50 50.6	
	comp=N,1μm,0.1s						
LMEL	**Las Melosas**	**0.43**	**121**	⇑*i* P	**Pb**	**09 50 44.0**	**-0.2**
LMEL				*i* S	**Sb**	**09 50 50.3**	**0.0**
LMEL				AML	AML	09 50 51.0	
	comp=N,961nm,0.2s						
PEL	**Peldehue**	**0.48**	**355**	⇑*i* P	**Pb**	**09 50 44.9**	**-0.1**
PEL				*i* S	**Sb**	**09 50 52.0**	**+0.2**
PEL				AML	AML	09 50 52.8	
	comp=N,454nm,0.6s						
CACH	**El Canelo**	**0.49**	**176**	⇓*i* P	**Pb**	**09 50 45.6**	**+0.4**
CACH				*i* S	**Sb**	**09 50 52.9**	**+0.8**
CICH	**Cipreses**	**0.72**	**165**	⇑*i* P	**Pb**	**09 50 48.8**	**-0.2**
CICH				*i* S	**Sb**	**09 50 58.9**	**+0.5**
LNV	**Longovilo**	**0.72**	**243**	⇓*i* P	**Pb**	**09 50 48.4**	**-0.6**
LNV				*i* S	**Sb**	**09 50 58.2**	**-0.4**
SFDO	**San Fernando**	**1.03**	**197**	⇑*i* P	**Pn**	**09 50 53.8**	**0.0**

ISCJB ***12*** *09:54:28.2±0.5, 1126S±008×3450E±008, h29km, mb4.0/10, MS3.7/2, Error ellipse: s-maj=12.6km s-min=8.8km az=137.6*
NEIC ***12*** *09:54:29.6±0.4, 1122S×3454E, mb3.8/2, Error ellipse: s-maj=12.4km s-min=8.8km az=126.0*
IDC ***12*** *09:54:30.1±0.8, 1129S×3454E, h30km±6km, mb3.9/10, mb1 4.0/14, mb1mx3.9/27, mbtmp3.9/14, ML1.8/1, MS3.6/6, Ms1 3.5/6, ms1mx3.3/29, Error ellipse: s-maj=21.8km s-min=17.4km az=99.0*

ISC 12 09:54:28.8±3.6, 1121S±006×3453E±008, h19km±23km, h30km±.9km: pP-P, n29, σ1§00/32, mb4.0/10, MS3.7/2, Malawi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**7.38**	**236**	Pn	**Pn**	**09 56 16.6**	**+1.1**
	3.0nm,0.3s,baz=51,slow=11,SNR=22						
LSZ				Sn	**Sn**	**09 57 29.4**	**-9.3**
	10nm,0.3s,baz=64,slow=12,SNR=3.0						
LSZ				Lg		09 58 18.4	
	34nm,0.3s,baz=333,slow=23,SNR=9.8						
LSZ				LR	LR	09 59 24.4	
	comp=Z,364nm,19.6s,baz=136,slow=40						
LSZ	**Lusaka**	**7.38**	**236**	*e*Pn	**Pn**	**09 56 17.3**	**+1.8**
LSZ				Sn	**Sn**	**09 57 37.1**	**-1.6**
LSZ				Lg		09 58 18.4	
LSZ				LR	LR	09 59 24.4	
KMBO	**Kilima Mbogo**	**10.38**	**15**	Pn	**Pn**	**09 56 55.6**	**-1.1**
	1.7nm,0.3s,baz=209,slow=20,SNR=6.9						
KMBO				Sn	**Sn**	**09 58 46.1**	**-6.4**
	1.8nm,0.3s,baz=107,slow=21,SNR=4.8						
KMBO				Lg		09 59 48.4	
	4.7nm,0.3s,baz=92,slow=20,SNR=11						
KMBO				LR	LR	10 01 02.5	
	comp=Z,215nm,18.5s,baz=112,slow=38						
OPO	**Ambohidratompo**	**14.25**	**122**	Pn	**Pn**	**09 57 50.0**	**+0.4**
	0.8nm,0.3s,baz=279,slow=15,SNR=4.5						
OPO				Sn	**Sn**	**10 00 16.8**	**-10**
	0.5nm,0.3s,baz=238,slow=18,SNR=2.7						
LBTB	**Lobatse**	**16.13**	**210**	Pn	**Pn**	**09 58 10.0**	**-4.6**
	3.1nm,0.3s,baz=36,slow=11,SNR=6.6						
LBTB				Sn	**Sn**	**10 01 00.2**	**-13**
	1.3nm,0.3s,baz=338,slow=12,SNR=5.6						
LBTB				Lg		10 02 43.2	
	1.5nm,0.3s,baz=132,slow=15,SNR=4.9						
LBTB	**Lobatse**	**16.13**	**210**	Pn	**Pn**	**09 58 14.8**	**+0.3**
	22nm,0.7s						
LBTB				Lg		10 02 43.2	
TSUM	**Tsumeb**	**18.17**	**242**	P	**Pn**	**09 58 38.3**	**-1.8**
	0.2nm,0.3s,baz=81,slow=19,SNR=2.9						
TSUM				Lg		10 03 59.4	
	0.4nm,0.3s,baz=147,slow=12,SNR=4.5						
TSUM				LR	LR	10 05 56.6	
	comp=Z,168nm,21.4s,baz=325,slow=38						
TSUM	**Tsumeb**	**18.17**	**242**	Pn	**Pn**	**09 58 39.7**	**-0.4**
	1.4nm,0.7s						
TSUM				Lg		10 03 59.5	
TSUM				LR	LR	10 05 56.6	
BOSA	**Boshof**	**19.37**	**205**	P	**Pn**	**09 58 51.2**	**-3.4**
	0.7nm,0.3s,baz=29,slow=12,SNR=12						
BOSA				S	**Sn**	**10 02 31.4**	**0.0**
	0.2nm,0.3s,baz=92,slow=20,SNR=3.7						
BOSA				Lg		10 04 29.7	
	0.8nm,0.3s,baz=299,slow=22,SNR=4.0						
BOSA				LR	LR	10 06 16.4	
	comp=Z,176nm,20.4s,baz=209,slow=37						
BOSA	**Boshof**	**19.37**	**205**	P	**Pn**	**09 58 51.2**	**-3.4**
BOSA				S	**Sn**	**10 02 31.4**	**0.0**
BOSA				Lg		10 04 29.7	
BOSA				LR	LR	10 06 16.4	
SUR	**Sutherland**	**24.57**	**209**	Lg		10 07 03.8	
	12nm,0.8s,baz=315,slow=20,SNR=2.9						
TORD	**Torodi Ar. Bea**	**40.59**	**306**	P	**P**	**10 02 07.5**	**0.0**
	2.1nm,0.9s,mb3.8,baz=110,slow=8.1,SNR=11						
MAW	**Mawson**	**59.38**	**168**	P	**P**	**10 04 29.4**	**0.0**
	1.8nm,0.7s,mb4.2,baz=288,slow=7.7,SNR=10						
MAW				LR	LR	10 27 26.1	
	comp=Z,62nm,20.7s,MS3.7,baz=227,slow=33						
ESDC	**Sonseca Array**	**61.97**	**327**	LR	LR	10 34 08.0	
	comp=Z,45nm,18.4s,MS3.7,baz=165,slow=38						
GERES	**GERESS Array B**	**62.56**	**345**	P	**P**	**10 04 52.6**	**+1.3**
	0.3nm,0.2s,mb4.0,baz=160,slow=8.2,SNR=3.9						
SNAA	**Sanae**	**64.53**	**192**	*e*	**P**	**10 05 03.4**	**-0.7**
SNAA				*e*		10 05 05.9	
VNA2	**Neumayer--Watz**	**65.01**	**194**	*e*	**P**	**10 05 08.4**	**+1.2**
VNA2				*e*		10 05 10.8	
VNA2				*e*		10 05 17.8	
VNA1	**Neumayer--Stat**	**65.03**	**194**	*e*	**P**	**10 05 08.4**	**+1.1**
VNA1				*e*		10 05 11.0	
VNA3	**Neumayer Olymp**	**65.77**	**194**	*e*	**P**	**10 05 13.2**	**+1.1**
VNA3				*e*		10 05 15.2	
VNA3				*e*		10 05 22.3	
MK31	**Makanchi Array**	**71.77**	**32**	*e*P	**P**	**10 05 50.2**	**+0.3**
MK31				*e*pP	pP	10 05 59.7	+3.6
MKAR	**Makanchi Array**	**71.77**	**32**	P	**P**	**10 05 50.0**	**+0.1**
	1.8nm,0.6s,mb4.2,baz=226,slow=6.6,SNR=17						
MKAR				pP	pP	10 05 58.5	+2.3
	0.9nm,0.6s,baz=223,slow=5.8,SNR=3.8						
QSPA	**South Pole Qui**	**78.89**	**180**	P	**P**	**10 06 30.7**	**+0.4**
	1.7nm,1.0s,mb3.9,baz=218,slow=3.6,SNR=7.0						
ARCES	**ARCESS Array B**	**80.79**	**357**	P	**P**	**10 06 40.2**	**-0.4**
	2.7nm,0.7s,mb4.3,baz=186,slow=6.0,SNR=5.8						
SONM	**Songino Array**	**86.39**	**40**	P	**P**	**10 07 11.0**	**+1.2**
	0.5nm,0.6s,mb3.9,baz=247,slow=3.0,SNR=4.6						
SONM				pP	pP	10 07 19.9	+3.7
	0.2nm,0.4s,baz=258,slow=5.7,SNR=3.2						
FITZ	**Fitzroy Crossi**	**87.62**	**108**	P	**P**	**10 07 15.8**	**-0.7**
	1.5nm,0.8s,mb4.2,baz=212,slow=13,SNR=3.0						
ASAR	**Alice Springs**	**93.98**	**115**	P	**P**	**10 07 44.9**	**-1.2**
	0.7nm,1.0s,mb4.1,baz=222,slow=3.4,SNR=5.0						
WRA	**Warramunga Arr**	**95.27**	**111**	P	**P**	**10 07 50.3**	**-1.8**
	0.4nm,0.9s,mb3.9,baz=257,slow=3.1,SNR=2.8						
NVAR	**Mina Array Bea**	**143.63**	**323**	PKP	PKPdf	10 14 01.8	-1.0
	1.9nm,0.8s,baz=64,slow=4.1,SNR=19						
NVAR				pPKP	pPKPdf	10 14 13.7	+4.3
	3.0nm,0.9s,baz=72,slow=2.8,SNR=13						
NVAR	**Mina Array Bea**	**143.63**	**323**	PKP	PKPdf	10 14 01.8	-1.0
NVAR				pPKP	pPKPdf	10 14 13.7	+4.3

ISCJB ***12*** *10:08:53.0±4.0, 376S±008×1302E±0.1, h6km±27km, mb3.6/2, Error ellipse: s-maj=24.8km s-min=13.5km az=169.6*
IDC ***12*** *10:08:55.2±1.5, 355S×13024E, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.8/16, mbtmp3.9/5, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/26, Error ellipse: s-maj=55.6km s-min=26.0km az=80.0*
NEIC ***12*** *10:08:58.9±0.8, 385S×13030E, h35km, Error ellipse: s-maj=19.9km s-min=10.9km az=69.0*

ISC 12 10:08:54.0±5.0, 377S±008×1304E±01, h2km±33km, n10, σ0§54/11, mb3.6/2, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**9.22**	**226**	LR	LR	10 15 12.7	
	comp=Z,141nm,18.8s,baz=102,slow=41						
KAPI	**Kappang**	**10.64**	**263**	Pn	**Pn**	**10 11 27.7**	**-0.1**
	1.7nm,0.3s,baz=90,slow=19,SNR=4.9						
FITZ	**Fitzroy Crossi**	**14.97**	**198**	Pn	**Pn**	**10 12 32.6**	**+5.7**
	0.2nm,0.3s,baz=29,slow=14,SNR=6.0						
FITZ				Sn	**Sn**	**10 15 13.5**	**0.0**
	0.1nm,0.3s,baz=190,slow=19,SNR=2.3						
FITZ	**Fitzroy Crossi**	**14.97**	**198**	Pn	**Pn**	**10 12 27.4**	**+0.5**
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**16.54**	**167**	Pn	**Pn**	**10 12 47.1**	**-0.2**
	0.2nm,0.3s,baz=352,slow=13,SNR=8.8						
WRA				Sn	**Sn**	**10 15 45.7**	**-5.8**
	0.4nm,0.3s,baz=356,slow=23,SNR=7.1						
WB2	**Warramunga Arr**	**16.54**	**167**	*e*P	**Pn**	**10 12 47.1**	**-0.2**
WB2				*e*S	**Sn**	**10 15 43.8**	**-7.8**
ASAR	**Alice Springs**	**20.07**	**170**	P	**P**	**10 13 32.6**	**+3.7**
	7.3nm,0.6s,baz=352,slow=9.9,SNR=79						
SONM	**Songino Array**	**55.52**	**341**	P	**P**	**10 18 31.1**	**+0.4**
	0.2nm,0.5s,mb3.4,baz=142,slow=5.7,SNR=2.0						
MKAR	**Makanchi Array**	**65.75**	**326**	P	**P**	**10 19 40.0**	**-0.5**
	0.4nm,0.5s,mb3.7,baz=108,slow=9.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**128.46**	**284**	PKP	PKPdf	10 28 04.3	+0.6
	0.3nm,0.8s,baz=42,slow=3.1,SNR=2.5						

IDC ***12*** *10:18:21.5±1.4, 343S×13076E, h0km, mb3.9/2, mb1 4.0/3, mb1mx3.6/15, mbtmp3.8/3, ML3.5/1, Error ellipse: s-maj=94.2km s-min=30.1km az=75.0*
ISCJB ***12*** *10:18:22.2±1.8, 365S±002×1313E±04, h33km, Error ellipse: s-maj=55.7km s-min=19.1km az=166.5*
NEIC ***12*** *10:18:24.6±1.2, 363S×13130E, h35km, mb4.1/1, Error ellipse: s-maj=45.7km s-min=14.4km az=78.0*

ISC 12 10:18:24.3±1.8, 365S±002×1313E±04, h35km, n8, σ0§14/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**15.44**	**201**	Pn	**Pn**	**10 21 59.6**	**0.0**
	0.2nm,0.3s,baz=18,slow=13,SNR=6.5						
WRAB	**Tennant Creek**	**16.49**	**170**	*e*Pn	**Pn**	**10 22 13.0**	**-0.1**
	36nm,2.3s						
WRA	**Warramunga Arr**	**16.50**	**170**	Pn	**Pn**	**10 22 13.3**	**+0.1**
	0.2nm,0.3s,baz=349,slow=13,SNR=10						
ASAR	**Alice Springs**	**20.10**	**173**	P	**P**	**10 23 00.3**	**+5.2**
	5.5nm,0.5s,baz=351,slow=11,SNR=71						
MKAR	**Makanchi Array**	**66.15**	**325**	P	**P**	**10 29 08.3**	**0.0**
	0.8nm,0.8s,baz=118,slow=7.5,SNR=5.1						
MKAR	**Makanchi Array**	**66.15**	**325**	P	**P**	**10 29 08.3**	**0.0**
TORD	**Torodi Ar. Bea**	**129.35**	**284**	PKP	PKPdf	10 37 31.5	+1.3
	0.2nm,0.6s,baz=60,slow=2.0,SNR=2.5						
LPAZ	**La Paz**	**152.43**	**136**	PKPbc	PKPbc	10 38 22.3	+4.5
	0.4nm,0.5s,baz=270,slow=3.0,SNR=3.1						

IDC ***12*** *10:20:31.8±0.8, 341S×13084E, h0km, mb3.8/8, mb1 4.0/9, mb1mx4.0/13, mbtmp3.9/9, ML3.5/1, MS4.0/9, Ms1 4.0/9, ms1mx3.6/27, Error ellipse: s-maj=39.0km s-min=12.6km az=75.0*
NEIC ***12*** *10:20:37.1±0.5, 351S×13082E, h35km, mb4.3/6, Error ellipse: s-maj=15.3km s-min=8.8km az=65.0*
BJI ***12*** *10:20:38.5, 333S×13141E, h34km, mB5.1, mb4.7, Ms4.3, Msz4.0*
ISCJB ***12*** *10:20:39.2±1.3, 366S±004×13086E±009, h69km±13km, mb4.1/15, Error ellipse: s-maj=14.7km s-min=6.4km az=163.3*
DJA ***12*** *10:20:41, 309S×13096E, h28km, MLv4.5/6*

ISC 12 10:20:40.2±1.3, 367S±005×13082E±009, h60km±14km, n41, σ1§39/41, mb4.1/15, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**2.62**	**270**	P	**Pn**	**10 21 21.4**	**+1.3**
	0.0nm,0.0s						
AAI	**Ambon**	**2.62**	**270**	P	**Pn**	**10 21 21.4**	**+1.3**
	0.0nm,0.0s						
LBMI	**Labuha**	**4.48**	**312**	P	**Pn**	**10 21 45.5**	**-0.1**
	0.0nm,0.0s						
BATI	**Baumata**	**9.62**	**227**	Pn	**Pn**	**10 23 00.1**	**+4.0**
	2.9nm,0.3s,baz=136,slow=4.1,SNR=3.1						
BATI				LR	LR	10 26 57.6	
	comp=Z,2μm,21.9s,baz=234,slow=39						
KAPI	**Kappang**	**11.11**	**263**	Pn	**Pn**	**10 23 21.5**	**+5.1**
	1.1nm,0.3s,baz=79,slow=14,SNR=3.4						
KAPI	**Kappang**	**11.11**	**263**	Pn	**Pn**	**10 23 13.8**	**-2.7**
FITZ	**Fitzroy Crossi**	**15.21**	**199**	*e*P	**Pn**	**10 24 12.1**	**+0.6**
	16nm,1.4s						
FITZ				*e*S	**S**	**10 26 58.5**	**-14**
FITZ	**Fitzroy Crossi**	**15.21**	**199**	Pn	**Pn**	**10 24 10.3**	**-1.1**
	0.2nm,0.3s,baz=26,slow=15,SNR=3.7						
FITZ	**Fitzroy Crossi**	**15.21**	**199**	Pn	**Pn**	**10 24 11.8**	**+0.3**
	22nm,0.9s						
FITZ				*e*Sn	**Sn**	**10 26 58.9**	**-0.1**
COEN	**Coen**	**15.91**	**131**	*e*Pn	**Pn**	**10 24 19.7**	**-0.8**
	13nm,0.9s						
COEN				Sn	**Sn**	**10 27 09.6**	**-6.4**
WRAB	**Tennant Creek**	**16.53**	**168**	Pn	**Pn**	**10 24 29.1**	**+1.0**
	30nm,0.9s						
WRAB				*e*Sn	**Sn**	**10 27 27.6**	**-3.3**
WRA	**Warramunga Arr**	**16.53**	**168**	Pn	**Pn**	**10 24 25.2**	**-3.0**
	0.4nm,0.3s,baz=355,slow=13,SNR=7.1						
WRA				Sn	**Sn**	**10 27 30.3**	**-0.7**
	1.5nm,0.3s,baz=0.2,slow=23,SNR=5.2						
WB2	**Warramunga Arr**	**16.54**	**168**	*e*P	**Pn**	**10 24 26.9**	**-1.3**
WB2				*e*S	**S**	**10 27 25.6**	**-14**
WB2	**Warramunga Arr**	**16.54**	**168**	Pn	**Pn**	**10 24 29.1**	**+0.8**
WB2				*e*Sn	**Sn**	**10 27 32.9**	**+1.8**
ASAR	**Alice Springs**	**20.10**	**172**	P	**P**	**10 25 10.1**	**+1.0**
	4.2nm,0.5s,baz=351,slow=11,SNR=12						
ASAR				S	**S**	**10 29 01.6**	**+10**
	9.4nm,1.1s,baz=0.5,slow=27,SNR=4.4						
MBWA	**Marble Bar**	**20.45**	**211**	P	**P**	**10 25 12.2**	**-0.7**
	19nm,1.6s						
GUMO	**Guam**	**22.10**	**39**	LR	LR	10 33 31.1	
	comp=Z,160nm,20.2s,baz=270,slow=36						
CTA	**Charters Tower**	**22.20**	**139**	*e*P	**P**	**10 25 34.5**	**+2.9**
	6.9nm,0.8s,mb4.1						
CTA	**Charters Tower**	**22.20**	**139**	P	**P**	**10 25 30.9**	**-0.7**
	1.9nm,0.6s,mb3.7,baz=337,slow=13,SNR=2.5						
STKA	**Stephens Creek**	**29.83**	**161**	*e*P	**P**	**10 26 47.7**	**+6.0**
	6.5nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**29.83**	**161**	P	**P**	**10 26 42.9**	**+1.2**
	1.4nm,0.4s,

ISC 12 11:00:47.2±1.0, 2982N±004×3632E±006, h0km, n15, σ0§86/23, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.10	266	Pg	Pg	11 01 08.2	-0.1
HRFI	Mount Harif	1.13	281	Pg	Pg	11 01 08.3	-0.6
HRFI				Sg	Sg	11 01 24.6	+1.0
EIL	Elat	1.20	263	Pg	Pg	11 01 10.6	+0.5
EIL				Sg	Sg	11 01 26.4	+0.8
HQLS		1.21	245	P	Pg	11 01 09.2	-1.1
MBRI	Mt Berech	1.22	269	Pg	Pg	11 01 10.2	-0.3
MBRI				Sg	Sg	11 01 26.9	+0.6
ZFRI	Zfri	1.23	307	Pg	Pg	11 01 09.8	-0.9
ZFRI				Sg	Sg	11 01 26.1	-0.6
PRNI	Paran	1.25	295	Pg	Pg	11 01 10.0	-1.3
PRNI				Sg	Sg	11 01 27.1	-0.5
JLOS		1.30	214	P	Pg	11 01 12.5	+0.4
KRMI	Paran Flat	1.41	283	Pg	Pg	11 01 13.3	-1.0
KRMI				Sg	Sg	11 01 32.4	-0.2
MZDA	Masada	1.70	331	Pn	Pn	11 01 17.7	-0.4
MZDA				Sn	Sn	11 01 41.7	+1.1
BDAS	Al Bad'	1.74	218	S	Sn	11 01 44.9	+3.2
BDAS	Al Bad'	1.74	218	P	Pn	11 01 18.8	+0.1
KZIT	Kziot	1.98	304	Pn	Pn	11 01 22.1	+0.1
KZIT				Sn	Sn	11 01 47.5	0.0
RSHS		2.01	222	P	Pn	11 01 21.8	-0.6
HMDT	Nahal Hemdat	2.52	345	Sn	Sn	11 02 02.8	+2.0

IDC 12 11:02:46.2±42.0, 2995S×17661W, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.6/15, mbtmp3.7/3, Error ellipse: s-maj=780.0km s-min=185.7km az=98.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.76	256	P	P	11 09 46.9	0.0
	3.9nm,1.1s,baz=102,slow=15,SNR=4.7						
ASAR	Alice Springs	44.34	266	P	P	11 10 57.9	-0.4
	0.2nm,0.7s,baz=100,slow=7.0,SNR=4.8						
WRA	Warramunga Arr	45.29	271	P	P	11 11 06.0	+0.1
	0.3nm,0.3s,baz=111,slow=8.1,SNR=9.8						

*JMA **12** 11:05:31.4±0.2, 2338N×12292E, h58km, M2.4*

TAP 12 11:05:31.5, 2342N×12268E, h98km±1km, ML3.1, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.08	16	P	Pn	11 05 50.7	-1.9
HWA	Hwalien	1.13	299	eP	Pn	11 05 53.0	-0.2
	baz=299						
HWA				eS	Sn	11 06 08.6	-1.0
	baz=299						
TWD	Chiawan	1.19	303	eP	Pn	11 05 53.2	-0.7
	baz=303						
TWD				eS	Sn	11 06 09.9	-0.9
	baz=303						
HATJ	Hateruma jima	1.21	58	P	Pn	11 05 50.2	-3.9
HATJ				S	Sn	11 06 04.0	-7.1
ESL	Shilin	1.21	289	eP	Pn	11 05 53.4	-0.7
	baz=286						
ESL				eS	Sn	11 06 09.6	-1.6
	baz=286						
EHY	Hungye	1.25	274	eP	Pn	11 05 54.7	+0.1
	baz=276						
EHY				eS	Sn	11 06 11.4	-0.7
	baz=276						
CHKT	Chengkung	1.25	255	eP	Pn	11 05 53.1	-1.5
	baz=254						
CHKT				eS	Sn	11 06 09.2	-2.9
	baz=254						
TWF1	Yuli	1.27	267	eP	Pn	11 05 54.8	-0.1
	baz=267						
TWF1				eS	Sn	11 06 11.9	-0.7
	baz=267						
IRIF	Iriomote-Funau	1.32	46	P	Pn	11 05 52.4	-3.0
IRIF				S	Sn	11 06 07.9	-5.6
TWC	Suao	1.41	327	eP	Pn	11 05 56.2	-0.2
	baz=327						
TWC				eS	Sn	11 06 14.7	-0.7
	baz=327						
JKRS	Kuro-shima	1.46	56	P	Pn	11 05 54.2	-2.9
JKRS				S	Sn	11 06 10.5	-6.0
WHF	Hehuan Shan	1.48	299	eP	Pn	11 05 58.1	+0.7
	baz=293						
WHF				eS	Sn	11 06 17.4	+0.3
	baz=293						
ELDTW	Lidau	1.55	262	eP	Pn	11 05 58.4	+0.2
	baz=259						
ELDTW				eS	Sn	11 06 17.2	-1.3
	baz=259						
NNS	Nan Shan	1.57	310	eP	Pn	11 05 59.5	+1.0
	baz=310						
NNS				eS	Sn	11 06 19.4	+0.5
	baz=310						
ENTT	Nioudou	1.58	320	eP	Pn	11 05 59.4	+0.8
	baz=320						
ENTT				eS	Sn	11 06 19.7	+0.4
	baz=320						
TWG	Pinlang	1.60	248	eP	Pn	11 05 59.2	+0.3
	baz=248						
TWG				eS	Sn	11 06 19.0	-0.6
	baz=248						
JIJ	Ishigaki jima	1.63	55	P	Pn	11 05 56.0	-3.2
JIJ				S	Sn	11 06 14.5	-5.8
SMLT	Sun Moon Lake	1.70	286	eP	Pn	11 06 00.3	+0.2
	baz=284						
SMLT				eS	Sn	11 06 22.6	+0.8
	baz=284						
ALS	Alishan	1.73	273	eP	Pn	11 06 02.5	+2.0
	baz=279						
ALS				eS	Sn	11 06 23.9	+1.4
	baz=279						
LAY	Lan-yu	1.73	217	eP	Pn	11 05 59.2	-1.3
	baz=221						
TYC	Yuchr	1.74	286	eP	Pn	11 06 01.9	+1.3
	baz=291						
TYC				eS	Sn	11 06 23.3	+0.5
	baz=291						
STYT	Tauyuan	1.79	262	eP	Pn	11 06 02.3	+1.1
	baz=262						
STYT				eS	Sn	11 06 24.5	+0.6
	baz=262						
ECL	Taimali	1.79	243	P	Pn	11 06 01.2	-0.1
	baz=249						
ECL				eS	Sn	11 06 23.4	-0.7
	baz=249						
CHN5	Tsauling	1.85	276	eP	Pn	11 06 02.9	+0.9
	baz=282						
CHN5				eS	Sn	11 06 28.2	+3.0
	baz=282						
WTP	Ta-pu	1.91	265	eP	Pn	11 06 05.0	+2.2
	baz=258						
CHN4	Tsaushan	1.92	268	eP	Pn	11 06 02.6	-0.4
	baz=272						
CHN4				eS	Sn	11 06 29.0	+2.1
	baz=272						
NSTT	Nanjuang	1.95	308	eP	Pn	11 06 04.6	+1.3
	baz=308						
NSTT				eS	Sn	11 06 28.8	+1.1
	baz=308						
EAST	Anshuo	1.98	239	P	Pn	11 06 04.0	+0.3
	baz=243						
EAST				eS	Sn	11 06 27.8	-0.6
	baz=243						
CHN1	Nanshi	2.00	264	eP	Pn	11 06 05.9	+2.0
	baz=273						
CHN1				eS	Sn	11 06 32.0	+3.3
	baz=273						
SSD	Sandimen	2.01	251	eP	Pn	11 06 05.2	+1.2
	baz=249						
TWK	Hsinying	2.02	266	eP	Pn	11 06 05.8	+1.5
	baz=266						
TWK				eS	Sn	11 06 30.5	+1.2
	baz=266						
TWS1	Kuangyinshan	2.03	326	eP	Pn	11 06 04.7	+0.3
	baz=316						
TWS1				eS	Sn	11 06 30.4	+0.9
	baz=316						
JTJ	Tarama	2.21	56	P	Pn	11 06 04.3	-2.4
JTJ				S	Sn	11 06 29.0	-4.6

*CSEM **12** 11:10:19.4, 3019N×3641E, h5km, ML3.1, After SNSN*
*SGS **12** 11:10:19.4, 3019N×3641E, h5km*
*ISCJB **12** 11:10:22.9±0.7, 2979N±003×3622E±004, h0km, Error ellipse: s-maj=5.4km s-min=4.3km az=7.0*
*GII **12** 11:10:23.8±0.8, 2985N×3611E, h0km, ML2.3/6, EXPLOSION*

ISC 12 11:10:23.1±0.7, 2978N±003×3626E±004, h0km, n19, σ0§90/31, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	Aqaba	1.05	268	Pg	Pg	11 10 43.0	-0.3
HRFI	Mount Harif	1.09	284	Pg	Pg	11 10 43.1	-0.9
HRFI				Sg	Sg	11 10 58.8	+0.7
EIL	Elat	1.14	265	Pg	Pg	11 10 45.1	+0.1
EIL				Sg	Sg	11 11 01.3	+1.5
HQLS		1.14	246	P	Pg	11 10 44.6	-0.5
MBRI	Mt Berech	1.17	271	Pg	Pg	11 10 45.0	-0.5
MBRI				Sg	Sg	11 11 02.0	+1.4
ZFRI	Zfri	1.21	310	Pg	Pg	11 10 45.4	-1.0
ZFRI				Sg	Sg	11 11 01.5	-0.6
PRNI	Paran	1.23	298	Pg	Pg	11 10 45.2	-1.4
PRNI				Sg	Sg	11 11 02.4	-0.1
JLOS		1.23	213	P	Pg	11 10 47.4	+0.6
KRMI	Paran Flat	1.37	285	Pg	Pg	11 10 48.1	-1.3
KRMI				Sg	Sg	11 11 06.9	-0.3
RMNI	Mount Ramon	1.53	303	Pn	Pn	11 10 50.6	-1.1
TBKS	Tabuk	1.57	171	P	Pn	11 10 51.5	-0.8
BDAS	Al Bad'	1.68	217	S	Sn	11 11 18.7	+2.7
BDAS	Al Bad'	1.68	217	P	Pn	11 10 53.4	-0.4
MZDA	Masada	1.71	334	Pn	Pn	11 10 53.8	-0.4
MZDA				Sn	Sn	11 11 16.8	0.0
RTMI	Retamim	1.86	314	Pn	Pn	11 10 55.9	-0.3
RTMI				Sn	Sn	11 11 19.9	-0.5
DSI	Dead Sea	1.94	337	Pn	Pn	11 10 57.7	+0.3
DSI				Sn	Sn	11 11 23.6	+1.1
KZIT	Kziot	1.96	306	Pn	Pn	11 10 57.4	-0.3
KZIT				Sn	Sn	11 11 22.4	-0.6
HMDT	Nahal Hemdat	2.55	346	Pn	Pn	11 11 06.7	+1.0
HMDT				Sn	Sn	11 11 38.4	+0.9
MMLI	Mount Malkishu	2.75	345	Pn	Pn	11 11 09.6	+1.1
MMLI				Sn	Sn	11 11 43.6	+1.2

*BJI **12** 11:10:19.3, 4090S×10141E, h25km, mB7.8, mb6.1, Ms8.6, Msz8.4*
*IDC **12** 11:10:21.4±0.3, 4375S×10147E, h0km, mb5.6/34, mb1 5.5/34, mb1mx5.5/34, mbtmp5.6/34, ML5.1/1, MS8.1/25, Ms1 8.1/25, ms1mx8.0/35, Error ellipse: s-maj=10.5km s-min=7.8km az=34.0*
*ISCJB **12** 11:10:24.9±0.1, 4445S±002×10142E±002, h34km, mb6.7/227, MS8.4/170, Error ellipse: s-maj=3.5km s-min=2.4km az=27.5*
*DJA **12** 11:10:24, 4595S×10122E, h10km, Mw8.0/58*
*GCMT **12** 11:10:26.8±0.1, 3785S×10099E, h24km, MW8.5/109, Moment Tensor Solution. s86,c207; s109,c470; Duration: 42s7 Moment tensor: Scale 10^{21}Nm; M_{rr}1.80±.01; $M_{\theta\theta}$-0.89±.00; $M_{\phi\phi}$-0.91±.01; $M_{r\theta}$5.45±.10; $M_{\theta\phi}$0.97±.00; $M_{r\phi}$-3.46±.09; Best double couple: M_o6.71100×10^{21} NP1:ϕ_s328.00000°,δ9.00000°, λ114.00000°. NP2:ϕ_s123.00000°,δ82.00000°,λ86.00000°. Principal axes: T 6.7220, Plg53.0000°, Azm29.0000°; N -0.0240, Plg3.0000°, Azm123.0000°; P -6.7010, Plg37.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=200s.*
*NEIC **12** 11:10:26.8±0.1, 4445S×10137E, h34km, mb6.9/128, ME8.2, MS8.5/107 Error ellipse: s-maj=5.2km s-min=3.1km az=37.0 Broadband fault plane solution: P waves. NP1: ϕ_s310.00000°,δ10.00000°,λ90.00000°. NP2: ϕ_s130.00000°,δ80.00000°,λ90.00000°. Principal axes: T Plg55.0000°, Azm40.0000°; N Plg0.0000°, Azm0.0000°; P Plg35.0000°, Azm220.0000°; Complex earthquake observed on broadband displacement seismograms. A small event is followed by at least one larger event about 10 seconds later. Depth based on first large event. Energy computed from BB mechanism.*
NEIC Thailand. Twenty-five people killed and at least 161 injured, 56,425 buildings damaged or destroyed and roads damaged in Bengkulu and Sumatera Barat. Power and telephone outages occurred. Felt [VI] at Bengkulu; [V] at Padang; [IV] at Lampung, Palembang, Pekanbaru and Sibolga; [III] at Jambi; [II] at Banten and Serang. Also felt at Medan. Felt [IV] at Duri and [III] at Jakarta, Java. Also felt at Bekasi and Kuningan. Felt [III] at Kuala Lumpur and Petaling Jaya, Malaysia and in Singapore. Also felt at Batang Berjuntai, Batu Pahat, Gelugor, Johor Bahru, Kertih, Kuala Selangor, Muar, Penang, Pontian Kecil, Putrajaya, Sekudai and Subang Jaya, Malaysia and by people in high-rise buildings at Bangkok, Thailand and Male, Maldives. A seiche was observed in Khlong Saensaep in Bangkok, Thailand and sink holes which may have been caused by the earthquake appeared at 3 locations in Ipoh, Malaysia. A tsunami was generated which caused some building damage [included above] in the Serangai area, north of Bengkulu. Tsunami wave heights [in cm, peak-to-trough] were recorded at the following tide stations in the Indian Ocean: 24 at Cocos Island, Australia; 9 on Diego Garcia; 227 at Padang, 52 at Cilacap, 42 at Prigi, 30 at Sibolga, 16 at Sabang and 4.5 at Benoa, Indonesia; 8 at Lamu, Kenya; 23 at Hanimadu, 21 at Male and 13 at Gan, Maldives; 114 at Rodrigues, Mauritius; 131 at Salalah and Sur Masirah, Oman; 40 at Point La Rue, Seychelles; 60 at Colombo and at Trincomalee, Sri Lanka; 8 on Phuket.
*MOS **12** 11:10:28.5±3.0, 3865S×10202E, h34km, mb6.9/70, MS8.3/53 Error ellipse: s-maj=7.8km s-min=3.8km az=124.4*
*IGIL **12** 11:10:29.7, 4525N×10137E, h34km, MS8.3*
*SZGRF **12** 11:10:34.6, 3455N×10156E, h33km, mb7.0, MS8.2, Southern Sumatera, Indonesia*

ISC 12 11:10:26.9±0.1, 4465S±002×10140E±002, h36km, h36km±.9km:pP-P,n2086,σ1§10/842, mb6.7/227, MS8.4/170, 389C-283D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLI	Kotabumi	3.47	97	P	Pn	11 11 19.2	+0.8
	0.0nm,0.0s						
KLI	Kotabumi	3.47	97	P	Pn	11 11 19.8	+1.4
JMBI	JAMBI	3.60	39	P	Pn	11 11 22.2	+2.0
	0.0nm,0.0s						
BLSI	Bandar Lampung	3.94	103	P	Pn	11 11 25.0	+0.1
	0.0nm,0.0s						
PPI	Padang Panjang	4.10	346	P	Pn	11 11 26.6	-0.5
	0.0nm,0.0s						
PPI	Padang Panjang	4.10	346	P	Pn	11 11 26.2	-0.9
RGRI	Rengat	4.19	13	P	Pn	11 11 29.2	+0.8
	0.0nm,0.0s						
SBJI	Serang	4.99	109	P	Pn	11 11 39.2	-0.2
	0.0nm,0.0s						
SBJI	Serang	4.99	109	P	Pn	11 11 40.3	+0.9
PPBI	Pangkal Pinang	5.26	64	P	Pn	11 11 43.8	+0.8
	0.0nm,0.0s						
TNG	Tangerang	5.50	108	P	Pn	11 11 46.3	0.0
	0.0nm,0.0s						
TNG	Tangerang	5.50	108	P	Pn	11 11 48.1	+1.8
DBJI	Dramaga	5.72	112	P	Pn	11 11 49.3	-0.1
	0.0nm,0.0s						
SKJI	Sukabumi	5.72	116	P	Pn	11 11 47.8	-1.6
	0.0nm,0.0s						
CBJI	Citeko	5.77	110	P	Pn	11 11 52.2	+2.2
	0.0nm,0.0s						
CBJI	Citeko	5.77	110	P	Pn	11 11 52.8	+2.8
TPI	Tanjungpandan	6.47	75	P	Pn	11 12 00.6	+0.9
	0.0nm,0.0s						
TPI	Tanjungpandan	6.47	75	P	Pn	11 12 03.5	+3.8
LEM	Lembang	6.62	111	P	Pn	11 12 02.5	+0.7
	0.0nm,0.0s						
LEM	Lembang	6.62	111	P	Pn	11 12 02.9	+1.1
MYKOM	Kota Tinggi	6.68	22	⇓P	Pn	11 12 04.4	+1.9
KGM	Kluang	6.72	17	⇑P	Pn	11 12 05.1	+2.0
TRSI	Tarutung	6.89	339	P	Pn	11 12 05.0	-0.5
	0.0nm,0.0s						
JCJI	Jatiwangi	7.13	107	P	Pn	11 12 09.1	+0.3
	0.0nm,0.0s						
JCJI	Jatiwangi	7.13	107	P	Pn	11 12 10.6	+1.8
XMIS	Christmas Isla	7.32	145	P	Pn	11 12 11.2	-0.1
XMIS				eS	Sn	11 13 28.3	-4.9
FRIM	Kepong	7.65	2	⇑P	Pn	11 12 16.9	+0.9
CLJI	Cilicap	8.24	113	P	Pn	11 12 22.4	-1.6
	0.0nm,0.0s						
BJII	Banjamegara	8.75	109	P	Pn	11 12 30.7	-0.3
	0.0nm,0.0s						
IPM	Ipoh	8.89	358	⇑P	Pn	11 12 35.0	+2.0
COCO	West Island	8.90	210	Pn	Pn	11 12 27.3	-5.8
	130µm,0.9s,SNR=48						
COCO	West Island	8.90	210	ePn	Pn	11 12 27.7	-5.4
	15µm,0.9s						
UGM	Wanagama	9.70	111	P	Pn	11 12 43.8	-0.2
KTGM	Kuala Trenggan	9.88	10	⇓P	Pn	11 12 47.6	+1.1
PBKI	Pangkalan Bun	10.40	81	P	Pn	11 12 55.1	+1.5
	0.0nm,0.0s						
KSM	Kuching	10.68	57	⇓P	Pn	11 13 00.4	+2.9
KSM	Kuching	10.68	57	ePn	Pn	11 12 58.6	+1.1
SJI	Sawahan	10.81	108	P	Pn	11 12 57.9	-1.4
	0.0nm,0.0s						
STKI	Sintang	11.03	66	P	Pn	11 13 04.5	+2.2
	0.0nm,0.0s						
KRKI	Karangkates	11.59	109	P	Pn	11 13 07.4	-2.5
	0.0nm,0.0s						
KRKI	Karangkates	11.59	109	P	Pn	11 13 09.2	-0.7
BSI	Banda Aceh	11.62	328	P	Pn	11 13 07.7	-2.6
	0.0nm,0.0s						
PLKI	Palangkaraya	12.72	80	P	Pn	11 13 27.0	+1.6
	0.0nm,0.0s						
KMMI	Kalianget	12.77	102	P	Pn	11 13 24.9	-1.1
	0.0nm,0.0s						
KMMI	Kalianget	12.77	102	P	Pn	11 13 27.5	+1.5
SBUM	Sibu	12.81	58	⇑P	Pn	11 13 32.1	+5.4
BBKI	Banjar Baru	13.45	86	P	Pn	11 13 35.9	+0.5
	0.0nm,0.0s						
DNP	Denpasar	14.35	108	P	Pn	11 13 43.4	-4.2
	0.0nm,0.0s						
SMKI	Samarinda	16.29	76	P	Pn	11 14 15.3	+2.2
	0.0nm,0.0s						
NNT	Nongplab	17.02	354	P	Pn	11 14 21.0	-1.3
KKM	Kota Kinabalu	18.11	55	⇓P	Pn	11 14 37.2	+1.4
KKM	Kota Kinabalu	18.11	55	eP	Pn	11 14 36.3	+0.5
KAPI	Kappang	18.30	92	P	Pn	11 14 36.6	-1.6
	13µm,1.3s,SNR=31						
KAPI	Kappang	18.30	92	P	Pn	11 14 35.6	-2.5
	SNR=137						
KAPI	Kappang	18.30	92	P	Pn	11 14 35.5	-2.7
	5.5nm,0.3s,baz=278,slow=10,SNR=30						
KAPI	Kappang	18.30	92	P	Pn	11 14 35.9	-2.3
	13µm,1.3s,SNR=31						
KAPI	Kappang	18.30	92	ePn	Pn	11 14 34.6	-3.6
TSM	Tawau	18.62	62	⇓P	Pn	11 14 44.5	+2.5
SDKM	Sandakan	18.70	58	⇓P	Pn	11 14 44.6	+1.6
PCI	Palu	18.75	80	P	Pn	11 14 43.6	-0.1
	0.0nm,0.0s						
KDM	Kudat	19.11	54	⇓P	Pn	11 14 47.2	-0.7
MYLDM	Lahad Datu	19.59	61	⇓P	Pn	11 14 52.5	-1.1
UBT	Ubonrachathani	19.91	10	⇓PN	Pn	11 14 55.5	-1.9
NST	Nakhon Sawan	20.05	356	P	P	11 14 57.0	-0.1
KKTK	Khon Kaen	20.71	4	P	P	11 15 04.0	-0.3
	5µm,0.5s						
BBSI	Bau Bau	21.12	94	P	P	11 15 06.2	-2.6
	0.0nm,0.0s						
KDI	Kendari	21.17	89	P	P	11 15 08.7	-0.6
	0.0nm,0.0s						
BDT	Bhumibol Dam	21.70	354	P	P	11 15 13.0	-1.9
	251nm,0.8s,mb5.7						
PPR	Puerto Princes	22.32	51	⇓eP	pP	11 15 30.0	-1.1
BATI	Baumata	22.80	106	P	P	11 15 24.3	-2.4
	0.0nm,0.0s						
BATI	Baumata	22.80	106	P	P	11 15 25.0	-1.7
	321nm,0.8s,mb5.8,baz=217,slow=2.0,SNR=21						
BATI				S	S	11 19 42.9	+9.1
	3µm,0.7s,baz=315,slow=24,SNR=4.7						
CM31	Chiang Mai Arr	22.90	354	eP	P	11 15 25.8	-1.9
	8.2nm,1.0s						
CMAR	Chiang Mai Arr	22.90	354	P	P	11 15 25.6	-2.1
	327nm,0.7s,mb5.8,baz=187,slow=9.5,SNR=110						
CMAR				LR	LR	11 25 57.6	
	comp=Z,13774µm,18.1s,MS8.4,baz=186,slow=41						
CHG	Chiang Mai	23.26	354	⇑P	P	11 15 27.4	-4.0
	230nm,0.8s,mb5.7						
CHTO	Chiang Mai	23.26	354	P	P	11 15 29.8	-1.6
	SNR=561						
CHTO	Chiang Mai	23.26	354	eP	P	11 15 29.6	-1.8
	11µm,2.1s,mb6.9						
CHTO				LR	LR		
	comp=Z,10819µm,19.0s,MS8.3						
ZMPH	Zamboanga City	23.54	61	eP	P	11 15 33.7	-0.6
PALK	Pallekele	23.71	299	P	pP	11 15 46.1	+0.3
	comp=Z,3µm,2.8s,SNR=14						
PALK	Pallekele	23.71	299	P	pP	11 15 45.6	-0.2
	comp=Z,2µm,2.8s,SNR=14						
PALK	Pallekele	23.71	299	⇑P	pP	11 15 45.0	-0.8
	SNR=71						
PALK	Pallekele	23.71	299	eP	P	11 15 37.1	+1.2
MNI	Manado	24.15	76	P	P	11 15 36.9	-3.0
	comp=Z,0.0nm,0.0s						
CHRT	Chiangrai	24.23	356	⇑P	P	11 15 39.5	-1.0
	comp=Z,3µm,0.8s,mb6.8						
MBWA	Marble Bar	24.34	135	P	P	11 15 43.0	+1.5
	SNR=34						
MBWA	Marble Bar	24.34	135	eP	P	11 15 40.3	-1.3
	comp=Z,12µm,2.0s,mb7.0						
IPIL	Ipil	24.38	60	eP	P	11 15 45.5	+3.5
IPIL				eS	Px	11 16 12.8	
QIZ	Qiongzhong	24.78	19	P	P	11 15 45.3	-0.2
QIZ				AP		11 15 55.8	
QIZ				XP	sP	11 16 00.2	+0.3
QIZ				S	S	11 20 08.7	+2.9
QIZ				XS	sS	11 20 22.3	-0.2
QIZ				LR	LR		
	comp=N,4275µm,18.2s,MS8.2						
QIZ				LR	LR		
	comp=E,4904µm,19.9s,MS8.2						
QIZ				LR	LR		
	comp=Z,5302µm,29.3s						
QIZ	Qiongzhong	24.78	19	eP	P	11 15 45.5	-0.1
	comp=Z,15µm,1.5s,mb7.3						
PAGZ	Pagadian	25.11	61	eP	P	11 15 48.5	-0.1
DCPH	Dipolog City	25.44	59	eP	pP	11 16 00.8	-1.0
CTBH	Cotabato--PC H	25.59	63	eP	P	11 15 52.9	-0.1
CTBH				/ S	Px	11 16 49.0	
GUIM	Jordan	25.88	54	eP	pP	11 16 05.2	-0.5
KALP	Kalibo	26.29	52	eP	pP	11 16 11.3	+1.9
LBMI	Labuha	26.35	82	P	P	11 15 58.6	-1.3
	comp=Z,0.0nm,0.0s						
RCP	Roxas	26.54	53	eP	P	11 16 02.2	+0.6
BUKP	Musuan	26.60	63	eP	P	11 16 03.4	+1.3
BUKP				eS	Px	11 16 58.4	
DAV	Davao City (W)	26.72	65	P	P	11 16 03.0	-0.2
	comp=Z,179nm,0.6s,mb5.8,baz=52,slow=21,SNR=3.5						
DAV				S	S	11 20 52.0	+15
	comp=Z,587nm,0.9s,baz=206,slow=12,SNR=2.3						
DAV				LR	LR	11 27 22.5	
	comp=Z,4583µm,21.8s,MS8.0,baz=321,slow=38						
DAV	Davao City (W)	26.72	65	eP	P	11 16 09.0	+5.8
DAV	Davao City (W)	26.72	65	eP	P	11 16 03.5	+0.3
	comp=Z,12µm,1.3s,mb7.3						
DAV				LR	LR		
	comp=Z,4437µm,20.0s,MS8.0						
LLP	Lapu-Lapu	26.85	57	eP	P	11 16 05.1	+0.7
MATI	Mati	27.28	66	eP	pP	11 16 17.4	-0.9
MDRS	Chennai	27.29	310	eP	P	11 16 07.4	-0.9
MDRS				AMb	AMB	11 16 31.1	
	comp=Z,2µm,1.8s,mb6.2						
FITZ	Fitzroy Crossi	27.31	122	eP	P	11 16 07.1	-1.4
	comp=Z,1µm,0.8s,mb6.4						
FITZ	Fitzroy Crossi	27.31	122	P	P	11 16 07.4	-1.1
	comp=Z,93nm,0.8s,mb5.3,baz=308,slow=9.5,SNR=92						
FITZ				S	S	11 20 59.1	+13
	comp=Z,256nm,0.8s,baz=54,slow=20,SNR=2.1						
TRD	Trivandrum	27.57	298	eP	P	11 16 09.8	-1.0
TRD				AMb	AMB	11 16 41.8	
	comp=Z,2µm,1.6s,mb6.4						
MMPH	Masbate	27.70	53	eP	pP	11 16 21.5	-0.7
GQP	Guinayangan	27.74	49	eP	pP	11 16 19.2	-3.2
PCPH	Palayan	27.86	44	eP	P	11 16 11.6	-1.9
BIPH	Bislig	27.89	63	⇑P	P	11 16 11.6	-2.2
KOD

BCPH	**Baguio City Da**	**28.09**	**42**⇓	*e*P		**P**	**11 16 19.5**	**+4.1**		
BCPH				*e*S		S	11 21 21.4	+23		
PLP	**Palo**	**28.14**	**56**⇓	*e*P		**P**	**11 16 19.2**	**+3.3**		
VIS	**Vishakhapatnam**	**28.35**	**322**	*e*P		**P**	**11 16 18.6**	**+0.9**		
VIS				AMb		AMB	11 17 16.2			
	comp=Z,4μm,2.0s,mb6.7									
VIS				*i* x		x	11 21 16.1			
DGAR	**Diego Garcia**	**28.93**	**263**	PFAKE			11 16 40.0	+17		
DGAR				LR		LR				
	comp=Z,7138μm,20.0s,MS8.3									
BWNR	**Bhubaneshwar**	**28.98**	**329**	*ex*		x	11 16 12.0			
VJD	**Vijayawada**	**29.25**	**316**	*ex*		x	11 16 36.0			
HKC	**Hong Kong Obse**	**29.39**	**25**⇑	*i*P		**P**	**11 16 28.0**	**+1.0**		
KMI	**Kunming**	**29.44**	**2**	⇑P		**P**	**11 16 28.2**	**+0.9**		
KMI				AP		pP	11 16 35.0	-2.5		
KMI				XP		sP	11 16 38.0	-3.8		
KMI				PP		PP	11 17 23.5	-11		
KMI				S		**S**	**11 21 18.6**	**-0.6**		
KMI				AMB		AMB				
	comp=Z,2μm,1.4s,mb6.6									
CAL	**Calcutta**	**29.72**	**335**	*e*P		**P**	**11 16 29.4**	**-0.5**		
CAL				*ex*		x	11 21 52.5			
IMP	**Imphal**	**29.96**	**346**	*i* P		**P**	**11 16 32.0**	**0.0**		
IMP				*i* x		x	11 20 48.0			
SWI	**Sorong**	**30.04**	**84**	P		**P**	**11 16 29.9**	**-3.0**		
	comp=Z,0.0nm,0.0s									
MUN	**Mundaring**	**30.70**	**155**	*e*P		**P**	**11 16 37.5**	**-0.9**		
MNCY	**Minicoy**	**30.99**	**294**	*i* x		x	11 16 51.0			
MNCY				*i* x		x	11 27 45.0			
KLBR	**Kellerberrin**	**31.05**	**152**	*e*P		**P**	**11 16 39.4**	**-2.2**		
	comp=Z,265nm,1.5s,mb5.8									
GYA	**Guiyang**	**31.16**	**9**⇑	*i*P		**P**	**11 16 41.3**	**-1.2**		
GYA				AP		pP	11 16 50.8	-1.9		
GYA				XP		sP	11 16 54.5	-2.5		
GYA				PP		PP	11 17 50.4	-3.0		
GYA				PCP		PcP	11 19 39.2	+2.0		
GYA				S		**S**	**11 21 45.1**	**-1.1**		
GYA				SS		SS	11 23 35.4	-25		
GYA				LR		LR				
	comp=N,3321μm,20.1s,MS8.4									
GYA				LR		LR				
	comp=E,8241μm,20.0s,MS8.4									
GYA				LR		LR				
	comp=Z,8377μm,20.0s,MS8.4									
SHL	**Shillong**	**31.25**	**343**⇑	*i*P		**P**	**11 16 43.6**	**+0.3**		
SHL				*i* x		x	11 21 44.0			
HYB	**Hyderabad**	**31.33**	**315**	*e*P		**P**	**11 16 44.5**	**+0.4**		
HYB				*e*S		**S**	**11 21 56.0**	**+7.0**		
HYB				pmax		pmax				
	comp=Z,407nm,0.8s,mb6.3									
HYB	**Hyderabad**	**31.33**	**315**	*i* P		**P**	**11 16 46.0**	**+1.9**		
	comp=Z,407nm,0.8s,mb6.3									
HYB				*e*S		**S**	**11 21 50.0**	**+1.0**		
HYB	**Hyderabad**	**31.33**	**315**	*e*P		**P**	**11 16 44.5**	**+0.4**		
	comp=Z,407nm,0.8s,mb6.3									
HYB				*e*S		**S**	**11 21 56.0**	**+7.0**		
BOK	**Bokaro**	**31.90**	**332**	*e*P		**P**	**11 16 49.6**	**+0.5**		
BOK				AMb		AMB	11 17 15.9			
	comp=Z,6μm,1.6s,mb7.2									
NWAO	**Narrogin (SRO)**	**31.95**	**154**	P		pP	11 16 57.2	-2.4		
	SNR=10									
NWAO	**Narrogin (SRO)**	**31.95**	**154**	P		**P**	**11 16 50.8**	**+1.4**		
	comp=Z,58nm,0.9s,mb5.4,baz=320,slow=8.2,SNR=10									
NWAO				LR		LR	11 30 55.4			
	comp=Z,2197μm,18.2s,MS7.9,baz=330,slow=38									
NWAO	**Narrogin (SRO)**	**31.95**	**154**	*e*P		**P**	**11 16 50.4**	**+1.0**		
LATR	**Latur**	**33.41**	**314**	*e*P		**P**	**11 17 02.4**	**0.0**		
LATR				AMb		AMB	11 17 31.3			
	comp=Z,1μm,2.3s,mb6.5									
SLGI	**Shiliguri**	**33.43**	**339**	*e*P		**P**	**11 17 01.0**	**-1.4**		
NGP	**Nagpur**	**33.59**	**320**	*e*P		**P**	**11 17 02.4**	**-1.5**		
NGP				AMb		AMB	11 17 23.1			
	comp=Z,2μm,1.8s,mb6.6									
NGP				*i* x		x	11 22 40.4			
QZH	**Quanzhou**	**33.67**	**29**⇑	*i*P		**P**	**11 17 03.7**	**-0.9**		
QZH				LR		LR				
	comp=N,5986μm,14.3s,MS8.6									
QZH				LR		LR				
	comp=E,5547μm,14.8s,MS8.6									
QZH				LR		LR				
	comp=Z,7114μm,14.8s,MS8.5									
GOA	**Goa**	**33.74**	**307**⇓	*i*P		pP	11 17 13.1	-2.5		
GOA				*i* S		**S**	**11 22 34.1**	**+7.4**		
GTK	**Gangtok**	**33.94**	**339**	*ex*		x	11 17 00.0			
ODAN	**Odare**	**33.96**	**337**	*e*P		**P**	**11 17 06.9**	**-0.1**		
	comp=Z,2μm,0.9s,mb7.0									
TAPN	**Taplejung**	**34.28**	**338**	*e*P		**P**	**11 17 10.0**	**+0.2**		
	comp=Z,3μm,1.0s,mb7.1									
RAMN	**Ramite**	**34.35**	**336**	*e*P		**P**	**11 17 10.6**	**+0.2**		
KAD	**Karad**	**34.50**	**310**	*e*P		**P**	**11 17 11.4**	**-0.4**		
KAD				AMb		AMB	11 17 54.3			
	comp=Z,2μm,1.2s,mb6.8									
JBP	**Jabalpur**	**34.51**	**324**	*ex*		x	11 17 18.1			
JBP				*ex*		x	11 22 48.9			
NACB	**Ninganchiao**	**34.60**	**34**	*e*P		**P**	**11 17 13.2**	**+0.6**		
	comp=Z,10μm,1.0s,mb7.7									
AKL	**Akola**	**34.61**	**317**	*e*P		**P**	**11 17 12.9**	**+0.1**		
AKL				AMb		AMB	11 18 30.8			
	comp=Z,3μm,2.9s,mb6.8									
YHNB	**Yeheng**	**34.88**	**33**	*e*P		**P**	**11 17 15.8**	**+0.8**		
	comp=Z,2μm,1.0s,mb7.0									
YHNB				LR		LR				
	comp=Z,3867μm,20.0s,MS8.2									
JIRN	**Jiri**	**35.15**	**336**	*e*P		**P**	**11 17 17.9**	**+0.6**		
	comp=Z,2μm,1.0s,mb7.1									
ALBI	**Allahabad**	**35.18**	**328**	*ex*		x	11 17 22.0			
TATO	**Taipei**	**35.18**	**33**	*e*P		**P**	**11 17 17.7**	**0.0**		
	comp=Z,6μm,1.9s,mb7.2									
CD2	**Chengdu**	**35.25**	**4**⇑	*i*P		**P**	**11 17 17.0**	**-1.1**		
CD2				AP		pP	11 17 26.3	-2.1		
CD2				XP		sP	11 17 29.8	-2.9		
CD2				PP		PP	11 18 33.9	-4.7		
CD2				PCP		PcP	11 19 47.9	-0.6		
CD2				S		**S**	**11 22 47.9**	**-1.6**		
CD2				PCS		PcS	11 23 35.9	+0.4		
CD2				SCS		ScS	11 27 34.8	-1.1		
CD2				AMB		AMB				
	comp=Z,2μm,1.1s,mb7.0									
CD2				AMB		AMB				
	comp=Z,385μm,8.4s									
LSA	**Lhasa**	**35.36**	**344**	P		**P**	**11 17 20.0**	**+0.9**		
LSA				LR		LR				
	comp=N,4460μm,25.3s									
LSA				LR		LR				
	comp=E,9120μm,52.0s									
LSA				LR		LR				
	comp=Z,8390μm,25.0s,MS8.4									
LSA	**Lhasa**	**35.36**	**344**	*e*P		**P**	**11 17 20.6**	**+1.5**		
LSA				*e*S		**S**	**11 22 55.2**	**+3.9**		
LSA				pmax		pmax				
	comp=Z,5μm,1.1s,mb7.4									
LSA				MLR		MLR				
	comp=Z,3539μm,22.0s,MS8.1									
LSA	**Lhasa**	**35.36**	**344**	*e*P		**P**	**11 17 20.6**	**+1.5**		
	comp=Z,5μm,1.1s,mb7.4									
LSA				*e*S		**S**	**11 22 55.2**	**+3.9**		
LSA				LR		LR				
	comp=Z,3539μm,22.0s,MS8.1									
PKI	**Pulchoki**	**35.39**	**335**	*e*P		**P**	**11 17 19.7**	**+0.3**		
	comp=Z,5μm,1.4s,mb7.3									
PKIN	**Phulchoki**	**35.40**	**335**	*e*P		**P**	**11 17 19.8**	**+0.3**		
	comp=Z,5μm,1.3s,mb7.3									
POO	**Poona**	**35.48**	**311**	*e*P		**P**	**11 17 20.4**	**+0.1**		
POO				AMb		AMB	11 18 16.7			
	comp=Z,2μm,1.2s,mb7.0									
GUN	**Gumba**	**35.49**	**336**	*e*P		**P**	**11 17 21.1**	**+0.8**		
	comp=Z,1μm,0.8s,mb6.9									
DMN	**Daman**	**35.55**	**335**	*e*P		**P**	**11 17 21.2**	**+0.4**		
	comp=Z,3μm,1.1s,mb7.1									
WRA	**Warramunga Arr**	**35.58**	**118**	P		**P**	**11 17 19.8**	**-1.4**		
	comp=Z,84nm,0.9s,mb5.7,baz=291,slow=10.0,SNR=131									
WRA				S		**S**	**11 23 04.7**	**+10**		
	comp=Z,153nm,1.1s,baz=286,slow=15,SNR=2.8									
WRAB	**Tennant Creek**	**35.58**	**118**	P		**P**	**11 17 20.0**	**-1.2**		
	comp=Z,5μm,0.7s,mb7.6,SNR=55									
WRAB	**Tennant Creek**	**35.58**	**118**	*e*P		**P**	**11 17 20.0**	**-1.2**		
WRAB				pmax		pmax				
	comp=Z,3μm,0.9s,mb7.2									
WRAB	**Tennant Creek**	**35.58**	**118**	*e*P		**P**	**11 17 20.0**	**-1.2**		
	comp=Z,3μm,0.9s,mb7.2									
WRAB				*e*ScP		ScP	11 23 33.5	+0.3		
WB2	**Warramunga Arr**	**35.59**	**118**⇑	*i*P		**P**	**11 17 19.8**	**-1.4**		
WB2				*e*S		**S**	**11 22 59.8**	**+4.7**		
KKN	**Kakani**	**35.64**	**335**	*e*P		**P**	**11 17 21.8**	**+0.3**		
	comp=Z,7μm,1.0s,mb7.5									
GKN	**Gorkha**	**36.10**	**334**	*e*P		**P**	**11 17 25.6**	**+0.1**		
	comp=Z,17μm,1.3s,mb7.8									
FORT	**Forrest**	**36.27**	**139**	*e*P		**P**	**11 17 33.2**	**+6.2**		
	comp=Z,465nm,0.7s,mb6.5									
FORT	**Forrest**	**36.27**	**139**	*e*P		**P**	**11 17 27.6**	**+0.6**		
KOLN	**Koldanda**	**36.35**	**333**	*e*P		**P**	**11 17 28.0**	**+0.3**		
	comp=Z,2μm,0.9s,mb7.0									
BOM	**Bombay**	**36.48**	**310**	*e*P		**P**	**11 17 34.8**	**+5.9**		
BOM				*ex*		x	11 18 46.7			
	comp=Z,5μm,2.0s									
BOM				*e*S		**S**	**11 23 17.4**	**+8.6**		
ASAR	**Alice Springs**	**36.70**	**124**	P		**P**	**11 17 29.9**	**-0.9**		
	comp=Z,46nm,0.9s,mb5.3,baz=297,slow=7.6,SNR=126									
ASAR				S		S	11 23 34.0	+22		
	comp=Z,103nm,0.8s,baz=300,slow=16,SNR=3.5									
DANN	**Dangsing**	**36.78**	**334**	*e*P		**P**	**11 17 31.7**	**+0.4**		
	comp=Z,8μm,1.0s,mb7.5									
WHN	**Wuhan**	**36.95**	**19**	P		**P**	**11 17 32.4**	**-0.3**		
WHN				AP		pP	11 17 43.9	+0.9		
WHN				LR		LR				
	comp=N,5689μm,14.2s,MS8.6									
WHN				LR		LR				
	comp=E,3000μm,14.0s,MS8.6									
WHN				LR		LR				
	comp=Z,6366μm,15.5s,MS8.5									
JHNI	**Jhansi**	**37.11**	**324**	*i* x		x	11 17 37.0			
XAN	**Xi'an**	**38.95**	**10**	P		**P**	**11 17 48.5**	**-1.0**		
XAN				AP		pP	11 17 59.9	0.0		
XAN				XP		sP	11 18 05.6	+1.5		
XAN				AMB		AMB				
	comp=Z,225nm,0.8s,mb6.0									
XAN				LR		LR				
	comp=N,2011μm,22.1s,MS8.4									
XAN				LR		LR				
	comp=E,5712μm,19.8s,MS8.4									
XAN				LR		LR				
	comp=Z,10003μm,21.2s,MS8.6									
PTH	**Pithoragarh**	**39.45**	**330**	*e*P		**P**	**11 17 54.9**	**+1.1**		
PTH				*ex*		x	11 24 13.0			
NJ2	**Nanjing**	**39.93**	**23**	*e*P		**P**	**11 17 59.2**	**+1.4**		
NJ2				AP		pP	11 18 09.8	+1.7		
NJ2				XP		sP	11 18 13.7	+1.3		
NJ2				S		**S**	**11 24 03.5**	**+2.9**		
NJ2				XS		sS	11 24 18.5	+0.8		
NJ2				AMB		AMB				
	comp=Z,50nm,1.0s									
NJ2				AMB		AMB				
	comp=Z,138μm,10.8s									
NJ2				LR		LR				
	comp=N,1846μm,25.4s,MS8.1									
NJ2				LR		LR				
	comp=E,3120μm,26.2s,MS8.1									
NJ2				LR		LR				
	comp=Z,2968μm,26.2s,MS8.0									
SONA	**Sohna**	**40.08**	**326**	*e*P		**P**	**11 17 58.9**	**-0.1**		
SONA				AMb		AMB	11 18 46.4			
	comp=Z,4μm,0.0s									
ASOR	**Ausora**	**40.09**	**327**	*e*P		**P**	**11 18 00.1**	**+1.0**		
ASOR				AMb		AMB	11 18 47.1			
	comp=Z,32μm,2.0s,mb7.7									
SSE	**Sheshan**	**40.09**	**27**	⇑P		**P**	**11 17 59.1**	**0.0**		
SSE				AP		pP	11 18 07.7	-1.8		
SSE				XP		sP	11 18 12.1	-1.6		
SSE				S		**S**	**11 24 04.6**	**+1.6**		
SSE				XS		sS	11 24 19.7	-0.4		
SSE				SCS		ScS	11 27 59.4	-4.0		
SSE				AMB		AMB				
	comp=Z,62μm,12.0s									
SSE				LR		LR				
	comp=N,2952μm,19.7s,MS8.4									
SSE				LR		LR				
	comp=E,4715μm,19.8s,MS8.4									
SSE				LR		LR				
	comp=Z,3919μm,21.3s,MS8.2									
AJM	**Ajmer**	**40.21**	**321**	*e*P		**P**	**11 17 59.7**	**-0.5**		
AJM				AMb		AMB	11 18 31.9			
	comp=Z,3μm,1.4s,mb6.8									
AYAN	**Aya Nagar**	**40.23**	**326**	*ex*		x	11 18 06.3			
AYAN				AMb		AMB	11 18 46.7			
	comp=Z,6μm,2.4s,mb6.9									
KUDL	**Kundal**	**40.34**	**325**	*e*P		**P**	**11 18 00.8**	**-0.3**		
KUDL				AMb		AMB	11 18 49.6			
	comp=Z,3μm,1.5s,mb6.8									
NDI	**New Delhi**	**40.34**	**326**	*e*P		**P**	**11 17 59.0**	**-2.2**		
LZH	**Lanzhou**	**40.40**	**3**	⇑P		**P**	**11 18 01.8**	**+0.2**		
LZH				AP		pP	11 18 06.8	-5.2		
LZH				XP		sP	11 18 09.2	-7.0		
LZH				PP		PP	11 19 39.1	+4.0		
LZH				S		**S**	**11 24 08.0**	**+0.5**		
LZH				AMB		AMB				
	comp=Z,198μm,5.8s									
LZH				LR		LR				
	comp=N,9999μm,18.4s									
LZH				LR		LR				
	comp=Z,9999μm,21.4s,MS8.6									
JOW	**Kunigami**	**40.54**	**38**	P		**P**	**11 18 02.2**	**-0.7**		
	comp=Z,137nm,1.0s,mb5.5,baz=238,slow=6.8,SNR=8.8									
JOW				S		**S**	**11 24 22.4**	**+13**		
	comp=Z,272nm,1.3s,baz=174,slow=6.4,SNR=1.9									
JOW				LR		LR	11 35 29.6			
	comp=Z,2255μm,20.9s,MS8.0,baz=241,slow=37									
JOSI	**Joshimath**	**40.60**	**330**	*e*P		**P**	**11 18 03.6**	**+0.3**		
JOSI				AMb		AMB	11 18 49.5			
	comp=Z,45μm,1.8s,mb7.8									
RTK	**Rohtak**	**41.05**	**326**	*ex*		x	11 17 52.2			
RTK				AMb		AMB	11 18 34.7			
	comp=Z,5μm,1.1s,mb7.0									
DDI	**Dehra Dun**	**41.17**	**329**	*e*P		**P**	**11 18 06.5**	**-1.6**		
DDI				*ex*		x	11 24 36.5			
BHJ	**Bhuj**	**41.46**	**313**	*ex*		x	11 18 17.3			
BHJ				AMb		AMB	11 18 31.6			
	comp=Z,2μm,1.3s,mb6.5									
BHJ				*ex*		x	11 24 36.7			
KKR	**Kurukshetra**	**41.55**	**327**	*e*P		**P**	**11 18 11.3**	**+0.1**		
KKR				AMb		AMB	11 18 57.8			
	comp=Z,18μm,2.3s,mb7.3									
KLP	**Kalpa**	**42.05**	**330**	*e*P		**P**	**11 18 16.0**	**+0.8**		
KLP				AMb		AMB	11 19 13.7			
	comp=Z,8μm,1.1s,mb7.3									
COEN	**Coen**	**42.24**	**106**	*e*P		**P**	**11 18 15.6**	**-1.4**		
	comp=Z,86μm,2.1s,mb8.0									
COEN				*e*S		**S**	**11 24 38.5**	**+3.1**		
SMLA	**Simla**	**42.28**	**328**	*i* P		**P**	**11 18 17.2**	**+0.1**		
SMLA				*ex*		x	11 18 20.9			
	comp=Z,312nm,0.7s									
SMLA				*i* x		x	11 24 44.0			
SDNR	**Sundarnagar**	**42.67**	**329**	*e*P		**P**	**11 18 19.0**	**-1.3**		
SDNR				*ex*		x	11 24 24.0			
BHK	**Bhakra**	**42.90**	**328**	*ex*		x	11 18 34.6			
JASL	**Jaisalmer**	**42.93**	**318**	*e*P		**P**	**11 18 23.4**	**+1.0**		
TIA	**Tai'an**	**43.06**	**19**	P		**P**	**11 18 21.7**	**-1.6**		
TIA				AMB		AMB				
	comp=Z,127nm,1.0s,mb5.6									
TIA				LR		LR				
	comp=N,2177μm,17.0s,MS8.3									
TIA				LR		LR				
	comp=E,2618μm,17.0s,MS8.3									
TIY	**Taiyuan**	**43.20**	**13**	P		**P**	**11 18 24.9**	**+0.5**		
TIY				S		**S**	**11 24 50.2**	**+1.3**		
TIY				LR		LR				
	comp=N,4925μm,16.9s,MS8.5									
TIY				LR		LR				
	comp=E,2490μm,17.3s,MS8.5									
TIY				LR		LR				
	comp=Z,4875μm,18.7s,MS8.4									
GTA	**Gaotai**	**43.68**	**358**	P		**P**	**11 18 28.5**	**+0.2**		
GTA				AP		pP	11 18 38.4	-0.3		
GTA				XP		sP	11 18 41.8	-1.2		
GTA				S		**S**	**11 24 57.8**	**+2.0**		
GTA				XS		sS	11 25 14.0	+0.9		
GTA				SS		SS	11 28 07.0	-5.2		
GTA				AMB		AMB				
	comp=Z,214nm,1.5s,mb5.7									
GTA				AMB		AMB				
	comp=Z,12μm,7.2s									
GTA				LR		LR				
	comp=N,8269μm,19.2s,MS8.8									
GTA				LR		LR				
	comp=E,8015μm,19.2s,MS8.8									
GTA				LR		LR				
	comp=Z,12355μm,19.8s,MS8.8									
DLH	**Dalhousie**	**44.02**	**329**	*e*P		**P**	**11 18 31.0**	**-0.1**		
DLH				*ex*		x	11 25 14.0			
THN	**Thein Dam**	**44.06**	**328**	*e*P		**P**	**11 18 29.4**	**-2.1**		
THN				*ex*		x	11 25 13.2			
JMU	**Jammu**	**44.72**	**328**	*ex*		x	11 18 47.5			
BTO	**Baotou**	**45.54**	**9**	*e*P		**P**	**11 18 42.6**	**-0.5**		
BTO				S		**S**	**11 25 19.7**	**-3.1**		
PMG	**Port Moresby**	**45.66**	**99**	*e*P		**P**	**11 18 44.1**	**-0.5**		
PMG				*e**PP		pP	11 18 53.1	-2.0		
PMG				*e**SP		sP	11 18 57.1	-2.2		
MSEY	**Mahe Island**	**45.77**	**268**	P		sP	11 18 59.2	-0.9		
	SNR=41									
MSEY	**Mahe Island**	**45.77**	**268**	*e*P		**P**	**11 18 44.4**	**-1.0**		
	comp=Z,2μm,1.8s,mb6.8									
SRNI	**Srinagar**	**45.82**	**329**	*ex*		x	11 19 03.0			
SRNI				*ex*		x	11 19 23.0			
HHC	**Hu-ho-hao-te**	**46.05**	**11**⇑	*i*P		**P**	**11 18 47.7**	**+0.6**		
HHC				AP		pP	11 18 51.4	-6.2		
HHC				XP		sP	11 18 53.6	-8.2		
HHC				PCP		PcP	11 20 23.6	+0.4		
HHC				PP		PP	11 20 35.9	+0.3		
HHC				SCP		ScP	11 24 14.5	+0.7		
HHC				PCS		PcS	11 24 16.5	-1.0		
HHC				S		**S**	**11 25 33.3**	**+3.2**		
HHC				SCS		ScS	11 28 40.3	+0.2		
HHC				SS		SS	11 28 51.3	-4.3		
HHC				AMB		AMB				
	comp=Z,213nm,1.1s,mb6.0									
HHC				AMB		AMB				
	comp=Z,37μm,7.4s									
HHC				LR		LR				
	comp=N,3523μm,18.6s,MS8.7									
HHC				LR		LR				
	comp=E,7885μm,18.3s,MS8.7									
HHC				LR		LR				
	comp=Z,5666μm,20.2s,MS8.5									
CTA	**Charters Tower**	**46.32**	**114**	*e*P		**P**	**11 18 48.9**	**-0.7**		
	comp=Z,1μm,1.0s,mb6.8									
CTA				*e*S		**S**	**11 25 38.1**	**+3.4**		
CTA	**Charters Tower**	**46.32**	**114**	P		**P**	**11 18 49.0**	**-0.6**		
	comp=Z,111nm,0.8s,mb5.8,baz=287,slow=9.4,SNR=96									
CTA				S		**S**	**11 25 46.8**	**+12**		
	comp=Z,314nm,1.3s,baz=42,slow=21,SNR=9.8									
CTA				LR		LR	11 39 44.0			
	comp=Z,940μm,22.0s,MS7.7,baz=281,slow=38									
CTA	**Charters Tower**	**46.32**	**114**	*e*P		**P**	**11 18 48.9**	**-0.7**		
CTA				*e*S		**S**	**11 25 38.1**	**+3.4**		
CTA				pmax		pmax				
	comp=Z,1μm,1.0s									
CTAO	**Charters Tower**	**46.32**	**114**	*e*P		**P**	**11 18 50.1**	**+0.4**		
CTAO				*e*S		**S**	**11 25 46.5**	**+12**		
BJI	**Beijing**	**46.33**	**16**	P		**P**	**11 18 51.7**	**+2.4**		
BJI				PP		PP	11 20 39.6	+1.0		
BJI				S		**S**	**11 25 38.3**	**+4.2**		
BJI				LR		LR				
	comp=N,6501μm,21.8s,MS8.7									
BJI				LR		LR				
	comp=E,5060μm,17.8s,MS8.7									
BJI				LR		LR				
	comp=Z,7675μm,21.4s,MS8.6									
STKA	**Stephens Creek**	**46.49**	**131**⇑	*i*P		**P**	**11 18 50.1**	**-0.7**		
	comp=Z,386nm,0.6s,mb6.5									
STKA				*e*S		**S**	**11 25 44.2**	**+7.4**		
STKA	**Stephens Creek**	**46.49**	**131**	P		**P**	**11 18 50.8**	**0.0**		
	comp=Z,54nm,0.9s,mb5.5,baz=300,slow=8.0,SNR=51									
STKA				S		**S**	**11 25 38.7**	**+1.8**		
	comp=Z,96nm,0.8s,baz=134,slow=23,SNR=2.0									
GUMO	**Guam**	**46.73**	**67**	P		**P**	**11 18 51.8**	**-1.1**		
	comp=Z,80nm,0.6s,mb5.8,baz=185,slow=9.5,SNR=8.1									
GUMO				LR		LR	11 39 01.9			
	comp=Z,650μm,21.8s,MS7.5,baz=229,slow=37									
GUMO	**Guam**	**46.73**	**67**	P		**P**	**11 18 51.8**	**-1.1**		
GUMO				pmax		pmax				
	comp=Z,80nm,0.6s,mb5.8									
GUMO				MLR		MLR				
	comp=Z,650μm,21.8s,MS7.5									
GUMO	**Guam**	**46.73**	**67**	*e*P		**P**	**11 18 49.3**	**-3.6**		
	comp=Z,2μm,0.8s,mb7.0									
GUMO				LR		LR				
	comp=Z,807μm,21.0s,MS7.7									
DL2	**Dalian**	**47.03**	**22**⇑	*i*P		**P**	**11 18 53.8**	**-1.1**		
DL2				AP		pP	11 19 04.5	-0.9		
DL2				PP		PP	11 20 46.3	+0.3		
DL2				S		**S**	**11 25 45.7**	**+1.4**		
DL2				AMB		AMB				
	comp=Z,1μm,1.2s,mb6.7									
DL2				AMB		AMB				
	comp=Z,222μm,9.7s									
DL2				LR		LR				
	comp=N,1784μm,19.0s,MS8.3									
DL2				LR		LR				
	comp=E,3049μm,18.6s,MS8.3									
DL2				LR		LR				
	comp=Z,2218μm,19.7s,MS8.1									
RER	**Riviere de l'E**	**47.29**	**245**	*e*P		**P**	**11 19 01.7**	**+4.5**		
INCN	**Inchon**	**47.89**	**27**	P		**P**	**11 19 01.2**	**-0.3**		
	SNR=48									
INCN

BSY Bisya 50.94 304 ⇑P P 11 19 26.2 +1.1
SNR=46
HOQ Hoqain 51.22 305 ⇑P P 11 19 28.4 +1.2
SNR=39
RBK Rabkut 51.43 296 ⇓P pP 11 19 35.7 -3.8
SNR=31
ULHL Ulahol 51.81 336 P P 11 19 31.2 -0.1
SNR=63
PAF Port-aux-Franc 51.95 205 eP P 11 19 31.9 -0.4
WHFO Wadi Hawf 51.97 297 ⇑P pP 11 19 40.3 -3.3
SNR=35
TOO Toolangi 51.98 135 eP P 11 19 33.7 +1.0
TOO eS S 11 27 09.4 +16
KZA Kyzart 52.07 335 P P 11 19 34.5 +1.2
SNR=128
ABTO Aybut 52.19 296 ⇓P pP 11 19 42.3 -2.9
SNR=39
SONM Songino Array 52.26 4 P P 11 19 35.0 +0.5
comp=Z,508nm,0.8s,mb6.5,baz=184,slow=8.4,SNR=694
SONM LR LR 11 45 12.6
comp=Z,1420µm,18.6s,MS8.0,baz=192,slow=40
SONM Songino Array 52.26 4 P P 11 19 35.0 +0.5
SONM pmax pmax
comp=Z,508nm,0.8s
SONM MLR MLR
comp=Z,420µm,18.6s
ULN Ulaanbaatar 52.34 5 P P 11 19 35.7 +0.5
SNR=1044
ULN Ulaanbaatar 52.34 5 eP P 11 19 36.3 +1.2
ULN pmax pmax
comp=Z,3µm,0.9s,mb7.2
ULN Ulaanbaatar 52.34 5 eP P 11 19 35.5 +0.4
comp=Z,3µm,0.9s,mb7.2
UCH Uchtor 52.50 335 P P 11 19 37.8 +1.3
SNR=23
UCH Uchtor 52.50 335 eP P 11 19 37.6 +1.2
comp=Z,772nm,0.6s,mb6.8
UCH epP pP 11 19 44.9 -2.2
UCH esP sP 11 19 49.8 -1.5
TKM2 Tokmak 2 52.63 336 eP P 11 19 37.4 0.0
TKM2 e*PP pP 11 19 45.1 -2.9
TKM2 e*SP sP 11 19 50.5 -1.7
TKM2 pmax pmax
comp=Z,461nm,1.2s,mb6.3
TKM2 Tokmak 2 52.63 336 P P 11 19 37.3 -0.1
SNR=128
TKM2 Tokmak 2 52.63 336 eP P 11 19 37.4 0.0
comp=Z,460nm,1.2s,mb6.3
TKM2 epP pP 11 19 45.1 -2.9
TKM2 esP sP 11 19 50.5 -1.7
KBK Karagaybulak 52.68 336 P P 11 19 39.1 +1.4
SNR=21
CN2 Changchun 52.71 22 eP P 11 19 36.8 -1.1
CN2 eS S 11 27 04.4 +1.1
CN2 AMB AMB
comp=Z,330nm,0.9s,mb6.3
ASHO Ashiyiah 52.74 306 ⇑P P 11 19 39.7 +1.1
SNR=39
HATD Hatta, Dubai 52.74 306 ⇓P P 11 19 41.1 +2.5
SNR=33
AML Almayashu 52.77 334 P P 11 19 38.7 +0.2
SNR=71
AML Almayashu 52.77 334 eP P 11 19 38.8 +0.3
comp=Z,8µm,1.4s,mb7.4
AML LR LR
comp=Z,3598µm,21.0s,MS8.4
AAK Ala-Archa 52.84 335 P P 11 19 39.1 +0.1
SNR=30
FRU Bishkek 52.96 335⇑ iP P 11 19 39.0 -0.8
FRU iS S 11 27 20.0 +13
FRU pmax pmax
comp=E,130µm,19.0s
CHMS Chumysh 53.04 336 P P 11 19 40.8 +0.4
SNR=27
BANOM Banah 53.12 307 ⇓P P 11 19 47.0 +5.7
SNR=24
EKS2 Erkin-Say 53.17 335 P P 11 19 41.5 +0.1
SNR=332
EKS2 Erkin-Say 53.17 335 eP P 11 19 41.7 +0.3
comp=E,3µm,0.8s,mb7.3
EKS2 LR LR
comp=Z,4038µm,22.0s,MS8.4
MAJO Matsushiro 53.34 37 eP P 11 19 41.7 -1.1
MAJO pmax pmax
comp=Z,2µm,1.1s,mb7.0
MAJO Matsushiro 53.34 37 eP P 11 19 41.7 -1.1
comp=Z,2µm,1.1s,mb7.0
MAT Matsushiro 53.34 37 P P 11 19 41.6 -1.2
MAT S S 11 27 17.7 +5.4
MJAR Matsushiro Arr 53.34 37 P P 11 19 40.9 -1.9
comp=Z,183nm,0.9s,mb6.0,baz=217,slow=7.0,SNR=154
MJAR PKP2bc 11 50 29.1
comp=Z,8.8nm,1.1s,baz=309,slow=3.6,SNR=6.1
MJAR Matsushiro Arr 53.34 37 P P 11 19 40.9 -1.9
MJAR ⇑e 11 50 29.1
USP Ospenovka 53.37 336 P P 11 19 41.7 -1.1
SNR=87
CAN Canberra 53.54 131 P P 11 19 44.5 +0.2
CAN Canberra 53.54 131 eP P 11 19 44.7 +0.4
MK31 Makanchi Array 53.76 344 iP P 11 19 45.2 -0.4
MK31 pmax pmax
comp=Z,4µm,0.9s,mb7.3
MK31 Makanchi Array 53.76 344 eP P 11 19 45.5 -0.2
MKAR Makanchi Array 53.76 344 P P 11 19 44.9 -0.8
comp=Z,122nm,0.7s,mb6.0,baz=146,slow=7.3,SNR=501
MKAR S S 11 27 34.2 +17
comp=Z,33nm,1.0s,baz=258,slow=22,SNR=2.1
MKAR LR LR 11 49 17.8
comp=Z,2072µm,18.8s,MS8.2,baz=161,slow=44
MKAR Makanchi Array 53.76 344 P P 11 19 44.9 -0.8
MKAR S S 11 27 34.2 +17
MKAR LR LR 11 49 17.8
CNB Canberra Magne 53.81 131 eP P 11 19 51.7 +5.4
ARMA Armidale 53.85 125 eP P 11 19 47.9 +1.2
ARMA eS S 11 27 31.3 +12
RIV Riverview 54.62 129 eP P 11 19 53.2 +1.0
ZAK Zakamensk 54.65 1⇑ iP P 11 19 52.7 +0.7
ZAK pmax pmax
comp=Z,627nm,1.7s,mb6.4
OPO Ambohidratompo 54.72 250 P P 11 19 53.8 +0.7
comp=Z,11nm,0.8s,baz=65,slow=5.1,SNR=12
VLA Vladivostok 54.80 27d iP P 11 19 52.0 -1.3
VLA pmax pmax
comp=Z,3µm,2.1s,mb7.0
VLA MLR MLR
comp=Z,1166µm,19.0s,MS8.0
VLA Vladivostok 54.80 27 iP P 11 19 52.1 -1.2
KK31 Karatay Array 54.97 333 iP P 11 19 53.3 -1.2
KK31 pmax pmax
comp=Z,1µm,1.0s,mb6.9
MDJ Mudanjiang 55.01 24 P P 11 19 54.0 -0.7
MDJ AP pP 11 20 03.2 -2.2
MDJ XP sP 11 20 06.9 -2.7
MDJ PCP PcP 11 20 55.3 -0.8
MDJ PP PP 11 22 00.7 +2.5
MDJ SCP ScP 11 24 51.6 -0.6
MDJ PCS PcS 11 24 55.4 -0.4
MDJ S S 11 27 28.5 -6.0
MDJ XS sS 11 27 48.9 -3.2
MDJ SCS ScS 11 29 40.9 -0.3
MDJ AMB AMB
comp=Z,155nm,1.2s,mb5.9
MDJ AMB AMB
comp=Z,50µm,9.5s
MDJ LR LR
comp=N,1777µm,16.9s,MS8.5
MDJ LR LR
comp=E,2736µm,18.0s,MS8.5
MDJ LR LR
comp=Z,3383µm,16.4s,MS8.5
MDJ Mudanjiang 55.01 24 eP P 11 19 54.2 -0.5
comp=Z,2µm,1.1s,mb7.0
MDJ epP pP 11 20 04.8 -0.7
MDJ esP sP 11 20 10.1 +0.5
MUKL Al Mukalla 55.21 291 eP P 11 19 57.5 +0.8
TAU Tasmania Unive 55.81 140 eP P 11 20 01.5 +0.9
TAU pmax pmax
comp=Z,4µm,2.0s,mb7.1
TAU Tasmania Unive 55.81 140 eP P 11 20 01.5 +0.9
comp=Z,4µm,2.0s,mb7.1
HIA Hailar 55.84 14 eP P 11 19 59.9 -0.7
HIA pmax pmax
comp=Z,1µm,0.9s
HIA MLR MLR
comp=Z,7010µm,19.0s

HIA Hailar 55.84 14 eP P 11 19 59.9 -0.7
comp=Z,1µm,0.9s,mb6.9
HIA LR LR
comp=Z,7010µm,19.0s,MS8.8
MOY Mondy 55.91 360 eP P 11 20 01.4 +0.3
MOY pmax pmax
comp=Z,4µm,2.1s,mb7.1
TLY Talaya 55.96 2 P P 11 20 02.2 +0.8
comp=Z,6µm,0.9s,mb7.6,SNR=59
TLY Talaya 55.96 2 P P 11 20 02.2 +0.8
SNR=427
TLY Talaya 55.96 2 eP P 11 20 02.2 +0.8
TLY eS S 11 27 58.5 +12
TLY pmax pmax
comp=Z,6µm,1.2s,mb7.5
TLY MLR MLR
comp=Z,4930µm,18.0s,MS8.6
TLY Talaya 55.96 2 eP P 11 20 02.9 +1.4
comp=Z,774nm,0.8s,mb6.8
IRK Irkutsk 56.54 2⇓ iP P 11 20 06.4 +0.8
IRK eS S 11 28 01.1 +6.5
IRK pmax pmax
comp=Z,6µm,2.5s,mb7.2
CIT Chita 57.21 9 eP P 11 20 11.3 +1.0
CIT e 11 21 08.6
CIT e 11 28 14.6
CIT pmax pmax
comp=Z,3µm,1.8s,mb7.1
ABKT Ailbek 58.22 320 P P 11 20 17.8 +0.1
comp=Z,3µm,1.2s,mb7.2,SNR=18
VAN Vannovskaya 58.24 320 eP P 11 20 18.0 +0.2
VAN S S 11 28 34.0 +17
HNR Honiara 58.28 98 P P 11 20 17.7 -0.8
comp=Z,388nm,0.9s,mb6.4,baz=202,slow=3.9,SNR=16
HNR Honiara 58.28 98 eP P 11 20 17.7 -0.9
comp=Z,9µm,1.1s,mb7.7
HNR LR LR
comp=Z,785µm,22.0s,MS7.8
BDHA Al Bayda' 58.33 289 eP P 11 20 19.9 +1.0
KURK Kurchatov 58.35 343 P P 11 20 17.9 -0.5
SNR=613
KURK Kurchatov 58.35 343 P P 11 20 17.1 -1.3
comp=Z,74nm,0.7s,mb5.8,baz=161,slow=6.5,SNR=170
KURK S S 11 28 31.1 +13
comp=Z,13nm,0.8s,baz=174,slow=7.2,SNR=2.3
KURK LR LR 11 50 40.5
comp=Z,5333µm,20.1s,MS8.7,baz=170,slow=42
KURK Kurchatov 58.35 343 P P 11 20 17.1 -1.3
KURK S S 11 28 31.1 +13
KURK pmax pmax
comp=Z,74nm,0.7s,mb5.8
KURK MLR MLR
comp=Z,333µm,20.1s,MS7.5
KURK Kurchatov 58.35 343 eP P 11 20 18.4 +0.1
comp=Z,1µm,0.9s,mb6.9
KURK LR LR
comp=Z,6423µm,20.0s,MS8.7
LBOS 58.60 289 eP P 11 20 22.0 +1.2
LBOS AMb AMB 11 20 23.5
comp=Z,333nm,1.3s,mb6.2
LBOS iS S 11 28 23.6 +0.7
TRBA At Turbah 59.52 288 eP P 11 20 28.2 +1.1
KLR Kul'dur 59.63 23 eP P 11 20 27.5 +0.2
ERM Erimo 59.82 35 P P 11 20 28.3 -0.5
comp=Z,7µm,0.7s,mb7.8,SNR=16
ERM Erimo 59.82 35 eP P 11 20 28.4 -0.4
ERM eS S 11 28 49.0 +11
ERM pmax pmax
comp=Z,1µm,0.8s,mb7.0
ERM MLR MLR
comp=Z,1210µm,21.0s,MS8.0
ERM Erimo 59.82 35 eP P 11 20 28.4 -0.3
comp=Z,1µm,0.8s,mb7.0
ERM eS S 11 28 49.0 +11
ERM LR LR
comp=Z,1210µm,21.0s,MS8.0
ZAA0 Zalesovo Array 59.84 349 eP P 11 20 27.9 -0.7
ZALV Zalesovo Beam 59.84 349 P P 11 20 27.6 -1.0
comp=Z,238nm,0.7s,mb6.3,baz=178,slow=4.8,SNR=311
ZALV LR LR 11 52 22.0
comp=Z,756µm,19.9s,MS7.8,baz=49,slow=42
KRAR Krasnoyarsk 60.67 355d iP P 11 20 33.9 -0.4
KRAR pmax pmax
comp=Z,1µm,1.1s,mb6.9
KRAR MLR MLR
comp=Z,407µm,19.0s,MS7.6
NVS Novosibirsk 60.99 348 iP P 11 20 35.9 -0.6
NVS iS S 11 29 08.3 +16
NVS pmax pmax
comp=Z,4µm,1.4s,mb7.4
NVS pmax pmax
comp=N,956nm,0.9s
NVS pmax pmax
comp=E,2µm,0.9s
RDF Al-Radifah 61.42 306 eP P 11 20 40.2 +0.3
baz=306
RDF AMb AMB 11 21 45.5
comp=Z,6µm,1.9s,mb7.4,baz=306
UMR Umm Al-Rimmam 61.54 307 eP P 11 20 40.0 -0.7
baz=307
UMR AMb AMB 11 21 46.5
comp=Z,7µm,1.8s,mb7.5,baz=307
NAY Al-Naaiem 61.79 307 eP P 11 20 41.8 -0.6
baz=306
NAY AMb AMB 11 21 47.2
comp=Z,2µm,1.7s,mb7.0,baz=306
CASY Casey 62.03 176 eP P 11 20 41.7 -1.7
CASY LR LR
comp=Z,1669µm,22.0s,MS8.2
RST Umm Al-Ruwaisa 62.09 307 eP P 11 20 43.9 -0.6
baz=307
RST AMb AMB 11 21 49.0
comp=Z,5µm,1.7s,mb7.4,baz=307
MIR Mirnyy 62.25 184⇑ iP P 11 20 45.0 +0.2
MIR i 11 21 34.0
MIR i 11 23 12.0
MIR iS S 11 29 26.0 +18
MIR iPS 11 29 44.0
MIR i 11 30 36.0
MIR pmax pmax
comp=Z,100nm,1.5s,mb5.7
MIR pmax pmax
comp=Z,16µm,10.0s
MIR MLR MLR
comp=Z,1160µm,18.0s,MS8.1
VOSK Vostochnaya 62.51 340 P P 11 20 46.1 -0.6
VOSK pmax pmax
comp=Z,5µm,1.5s,mb7.4
YSS Yuzh-Sakhalins 62.85 31a iP P 11 20 48.0 -1.1
YSS e*PP pP 11 20 58.0 -2.0
YSS e*SP sP 11 21 06.0 +1.9
YSS e 11 21 28.0
YSS eS S 11 29 10.0 -6.1
YSS ePPS 11 29 33.0
YSS eSS SS 11 33 13.0 -8.9
YSS pmax pmax
comp=Z,5µm,6.0s
YSS pmax pmax
comp=N,350nm,1.2s
YSS pmax pmax
comp=Z,950nm,1.2s,mb6.8
YSS Yuzh-Sakhalins 62.85 31 eP P 11 20 49.2 +0.1
comp=Z,2µm,0.8s,mb7.2
BOD Bodaibo 62.91 8⇓ iP P 11 20 48.3 -1.0
BOD e pP 11 20 58.7 -1.4
BOD pmax pmax
comp=Z,310nm,1.3s,mb6.3
BVA0 Borovoye Array 62.96 340 iP P 11 20 48.5 -1.2
BVA0 pmax pmax
comp=Z,737nm,1.8s,mb6.5
BVAR Borovoye Array 62.96 340 P P 11 20 48.3 -1.4
comp=Z,86nm,0.7s,mb6.0,baz=144,slow=8.5,SNR=227
BVAR PKP2bc 11 50 02.7
comp=Z,2.1nm,0.8s,baz=36,slow=2.8,SNR=3.7
BVAR LR LR 11 52 00.6
comp=Z,3015µm,21.4s,MS8.4,baz=149,slow=40
BVAR Borovoye Array 62.96 340 P P 11 20 48.3 -1.4
BVAR ⇑e 11 50 02.7
BVAR LR LR 11 52 00.6
BRVK Borovoye 63.03 340 P P 11 20 48.5 -1.7
comp=Z,2µm,0.7s,mb7.5,SNR=32
BRVK Borovoye 63.03 340 P P 11 20 48.8 -1.4
SNR=338
BRVK Borovoye 63.03 340 P P 11 20 49.3 -0.9
BRVK pmax pmax
comp=Z,4µm,1.3s,mb7.4

BRVK Borovoye 63.03 340 eP P 11 20 49.6 -0.5
BRVK LR LR
comp=Z,3093µm,19.0s,MS8.5
CLNS Chul'man 64.03 14 eP P 11 20 56.3 -0.4
CLNS e 11 23 14.9
CLNS ePPP 11 24 47.3
CLNS eS S 11 29 32.0 +1.6
CLNS pmax pmax
comp=Z,860nm,0.9s,mb6.8
CLNS pmax pmax
comp=E,590nm,1.0s
CLNS pmax pmax
comp=N,613nm,1.1s
KMBO Kilima Mbogo 64.14 271 P P 11 21 07.9 +10
SNR=35
KMBO Kilima Mbogo 64.14 271 P P 11 20 59.7 +1.4
comp=N,2.6nm,0.7s,baz=77,slow=23,SNR=5.6
KMBO S S 11 29 42.8 +9.4
comp=N,12nm,1.0s,baz=19,slow=11,SNR=1.7
KMBO LR LR 11 48 15.0
comp=N,1649µm,18.1s,MS8.3,baz=82,slow=35
KMBO Kilima Mbogo 64.14 271 eP P 11 21 00.0 +1.7
comp=N,68nm,1.1s,mb5.6
AB31 Akbulak array 64.46 331 iP P 11 20 58.6 -1.1
AB31 pmax pmax
comp=Z,6µm,1.1s,mb7.6
AB31 Akbulak array 64.46 331 iP P 11 20 58.7 -1.0
DZM Mont Dzumac 65.23 112 eP P 11 21 05.8 +0.6
DZM Mont Dzumac 65.23 112 eP P 11 21 06.0 +0.7
BHD Baghdad 65.64 310 ex x 11 21 07.0
BHD ix x 11 29 48.0
AKTK Aktyubinsk 66.17 331 P P 11 21 09.3 -1.5
AKTK S S 11 29 59.8 +2.8
AKTK LR LR 11 54 27.7
AKTO Aktyubinsk 66.17 331 P P 11 21 09.3 -1.5
comp=Z,47nm,1.1s,mb5.4,baz=133,slow=6.1,SNR=56
AKTO S S 11 29 59.8 +2.8
comp=Z,32nm,0.9s,baz=169,slow=21,SNR=2.2
AKTO LR LR 11 54 27.7
comp=Z,1820µm,19.3s,MS8.3,baz=136,slow=40
AKTO Aktyubinsk 66.17 331 P P 11 21 09.3 -1.5
AKTO S S 11 29 59.8 +2.8
AKTO smax
comp=N,32nm,0.9s
AKTO MLR MLR
comp=Z,820µm,19.3s,MS8.0
MAK Makhachkala 67.74 320c iP P 11 21 27.0 +6.1
MAK iS S 11 30 25.5 +9.3
MAK i 11 31 10.6
MAK iSS SS 11 34 46.3 +8.2
MAK pmax pmax
comp=N,1µm,0.9s
MAK pmax pmax
comp=Z,1µm,0.9s,mb7.0
MAK pmax pmax
comp=E,3µm,1.8s
MAK MLR MLR
comp=Z,1191µm,20.0s,MS8.1
MAK MLR MLR
comp=E,3247µm,27.0s
MAK MLR MLR
comp=N,1291µm,25.0s
MSL Mosul 67.84 312 ex x 11 21 18.0
MSL ix x 11 21 46.0
MSL ix x 11 23 48.0
MSL ix x 11 30 18.0
MSL ix x 11 30 23.0
MSL ix x 11 31 17.0
HKR Hakkari 67.86 314 eP 11 23 30.9
HAKT HAKKARI 67.88 314⇑ iP pP 11 21 28.1 -4.7
MCQ Macquarie Isla 67.99 148 eP P 11 21 19.9 -2.4
GNI Garni 68.26 316 eP P 11 21 24.6 +0.4
GNI Garni 68.26 316 P P 11 21 25.2 +1.0
SNR=63
GNI Garni 68.26 316 P P 11 21 24.1 -0.2
comp=N,3.9nm,0.3s,baz=252,slow=3.4,SNR=9.1
GNI S S 11 30 28.6 +6.1
comp=N,8.1nm,0.3s,baz=195,slow=19,SNR=2.5
GNI LR LR 11 53 46.7
comp=N,768µm,21.1s,MS7.9,baz=102,slow=38
GNI Garni 68.26 316 eP P 11 21 24.7 +0.4
comp=N,612nm,1.3s,mb6.5
GNI LR LR
comp=Z,838µm,20.0s,MS8.0
MAW Mawson 68.27 195 eP P 11 21 22.8 -1.0
comp=Z,133nm,0.9s,mb6.0
MAW Mawson 68.27 195 P P 11 21 23.0 -0.8
comp=Z,17nm,0.8s,baz=31,slow=6.7,SNR=33
MAW S S 11 30 32.0 +10
comp=Z,16nm,1.0s,baz=54,slow=14,SNR=1.8
MAW LR LR 11 46 34.2
comp=Z,1701µm,20.7s,MS8.3,baz=32,slow=32
MAW PKP2bc 11 49 40.1
comp=Z,12nm,1.0s,baz=280,slow=6.5,SNR=4.7
MAW Mawson 68.27 195 P P 11 21 23.0 -0.8
MAW S S 11 30 32.0 +10
MAW smax
comp=N,16nm,1.0s
CLDR Caldiran 68.39 315 eP pP 11 22 29.6 +54
TVAN Van 68.50 314⇑ iP sP 11 21 37.7 -3.1
VANB Van 68.54 314 eP 11 23 32.2
DYDN Diyadin 68.72 315⇑ iP P 11 21 28.8 +1.7
MTA Mtatsminda 68.91 318 P P 11 21 28.1 -0.2
MTA S S 11 30 44.0 +14
TBLG Delisi 68.97 318 P pP 11 21 39.3 -0.3
AGRB Hanur-Agry 69.23 315 eP P 11 21 30.7 +0.4
SVE Sverdlovsk 69.48 337⇑ eP P 11 21 31.3 -0.1
SVE e 11 31 32.5
SVE pmax pmax
comp=Z,285µm,19.5s
SVE MLR MLR
comp=Z,463µm,22.0s,MS7.7
GOR Gori 69.50 318 P pP 11 21 43.7 +0.8
KARS Kars 69.59 316 eP pP 11 21 40.0 -3.5
YAK Yakutsk 69.77 14c iP P 11 21 31.3 -1.9
YAK e*PP pP 11 21 40.7 -3.4
YAK e 11 21 53.4
YAK e 11 24 05.8
YAK eS S 11 30 39.7 +0.1
YAK pmax pmax
comp=Z,390nm,1.1s,mb6.2
YAK pmax pmax
comp=N,109nm,1.1s
YAK pmax pmax
comp=E,87nm,1.1s
YAK pmax pmax
comp=Z,2µm,1.6s,mb6.8
YAK pmax pmax
comp=E,905nm,1.3s
YAK pmax pmax
comp=N,579nm,1.5s
YAK MLR MLR
comp=Z,5215µm,19.0s,MS8.8
YAK MLR MLR
comp=N,4323µm,20.0s,MS8.7
YAK MLR MLR
comp=E,634µm,18.0s,MS8.7
YAK Yakutsk 69.77 14 eP P 11 21 32.2 -1.0
YAK epP pP 11 21 41.6 -2.6
YAK esP sP 11 21 47.4 -0.8
MARD Mardin 69.92 312⇓ iP P 11 21 35.3 +0.7
ARU Arti 70.01 336 P P 11 21 33.4 -1.3
comp=E,5µm,1.0s,mb7.4,SNR=46
ARU Arti 70.01 336c iP P 11 21 33.6 -1.1
ARU e 11 21 52.4
ARU e 11 24 16.8
ARU eS S 11 30 43.8 +1.2
ARU e 11 31 29.8
ARU pmax pmax
comp=Z,334nm,1.7s,mb6.0
ARU MLR MLR
comp=Z,2704µm,20.0s,MS8.5
ARU Arti 70.01 336 eP P 11 21 34.4 -0.4
comp=Z,2µm,1.2s,mb7.0
ARU LR LR
comp=Z,2663µm,20.0s,MS8.5
HOMI Horasan 70.18 315⇑ iP pP 11 21 43.1 -4.0
ONI Oni 70.20 318 P P 11 21 37.4 +1.2
ONI S S 11 30 58.5 +13
BNGL BINGOL 70.28 314⇑ iP pP 11 21 45.4 -2.3
ERZM Erzurum 70.50 315⇑ iP pP 11 21 42.2 -6.9
DIYA Diyarbakir 70.63 313⇑ iP pP 11 21 43.7 -6.3
ARTV Artvin 70.64 316 iP pP 11 21 46.3 -3.6
SLAT Slait 70.89 288 iP pP 11 21 50.4 -1.5
SLAT iS S 11 31 00.1 +5.8

SLAT AMS AMS 11 51 13.8
comp=N,271µm,19.5s
BCA Borcka 70.95 317 *eP* **P 11 21 45.0 +4.1**
JAWL J.Aulia 70.97 288 *i* P pP 11 21 49.7 -2.7
JAWL *i* S S 11 31 03.9 +8.6
MRKH Merkhyat 71.16 288 *e* **P 11 21 32.7 -10**
baz=99,slow=4.8
MRKH *i* P 11 21 50.6
MRKH *i* S S 11 31 05.8 +8.3
MRKH AMS AMS 11 44 19.4
comp=N,143µm,19.5s
KOPT Kop Dagi 71.16 315⇑ *i* P pP 11 21 49.1 -4.0
KIV Kislovodsk 71.31 319 P **P 11 21 42.7 -0.2**
comp=N,3µm,1.4s,mb7.0,SNR=11
KIV Kislovodsk 71.31 319 P **P 11 21 42.8 -0.1**
SNR=73
KIV Kislovodsk 71.31 319*c i* P **P 11 21 42.2 -0.7**
KIV *i* S S 11 31 03.3 +5.1
KIV *i* SS SS 11 35 36.9 +3.8
KIV pmax pmax
comp=Z,933nm,1.4s,mb6.5
KIV pmax pmax
comp=Z,35µm,6.8s
KIV Kislovodsk 71.31 319⇑ *i* P **P 11 21 46.6 +3.7**
KIV Kislovodsk 71.31 319 *eP* **P 11 21 43.1 +0.2**
comp=Z,2µm,1.0s,mb7.0
KIV LR LR
comp=Z,1433µm,19.0s,MS8.2
PZAR Pazar-Rize 71.34 316 *eP* **P 11 21 50.1 +6.9**
SVRC Sivrice-ELAZID 71.40 313 *eP* pP 11 21 53.9 -0.7
URFA Urfa 71.42 312 *eP* pP 11 21 51.4 -3.4
PTK Pertek 71.53 313 *eP* **P 11 21 44.4 0.0**
EZC Erzincan 71.54 314 *eP* pP 11 21 56.5 +1.0
ELZG Elazig 71.68 313⇑ *iP* pP 11 21 51.5 -4.7
WVZ Waitaha Valley 71.92 134 *eP* **P 11 21 49.3 +2.6**
MALT Malatya 72.02 313 *eP* **P 11 21 45.5 -1.8**
MALT Malatya 72.02 313⇑ *iP* **P 11 21 52.3 +5.0**
MALT Malatya 72.02 313 *eP* **P 11 21 46.3 -1.0**
comp=Z,2µm,1.4s,mb6.9
MALT LR LR
comp=Z,1523µm,19.0s,MS8.3
EIL Elat 72.02 303 LR LR 11 53 26.7
comp=Z,2299µm,19.7s,MS8.4,baz=104,slow=36
MYA Malatya 72.02 313 *eP* **P 11 21 53.9 +6.6**
MACK Trabzon 72.05 316⇑ *iP* pP 11 21 52.9 -5.5
GUMT Gumusane 72.05 314 *eP* **P 11 21 53.9 +6.4**
KTUT Trabzon 72.05 316 *eP* pP 11 21 56.5 -2.0
SKR Severo-Kuril's 72.14 33 *eP* **P 11 21 46.0 -1.8**
SKR *i* pP 11 21 56.2 -2.6
SKR *i* pP 11 21 57.0 -1.8
SKR *i* S S 11 31 28.0 +20
SKR pmax pmax
comp=N,320nm,1.2s
SKR pmax pmax
comp=E,300nm,1.2s
SKR pmax pmax
comp=Z,650nm,1.2s,mb6.4
SKR MLR MLR
comp=Z,1470µm,20.0s,MS8.2
SKR MLR MLR
comp=N,585µm,16.0s
GZT Gaziantep 72.32 311⇓ *iP* **P 11 21 49.9 +0.7**
AKCD Akcadag 72.38 312⇑ *iP* pP 11 21 56.8 -3.7
RCY Rachaya 72.42 307⇑ *eP* **P 11 21 51.0 +1.1**
GAZ Gaziantep 72.53 311 *eP* **P 11 21 55.2 +4.8**
LSZ Lusaka 72.65 255 P sP 11 22 04.5 -2.2
SNR=35
LSZ Lusaka 72.65 255 P **P 11 21 51.4 -0.1**
comp=N,7.1nm,1.0s,mb4.6,baz=97,slow=5.7,SNR=7.7
LSZ S S 11 31 13.4 -1.2
comp=N,17nm,1.0s,baz=60,slow=13,SNR=1.7
LSZ LR LR 11 49 32.4
comp=N,2293µm,21.5s,MS8.4,baz=91,slow=32
LSZ Lusaka 72.65 255 P **P 11 21 51.4 -0.1**
LSZ Lusaka 72.65 255 *eP* **P 11 21 51.5 -0.1**
comp=N,971nm,1.4s,mb6.5
LSZ LR LR
comp=Z,2154µm,21.0s,MS8.4
BHL Bhannes 72.68 307⇑ *eP* **P 11 21 50.8 -0.5**
DARE Darende-Malaty 72.70 313 *eP* **P 11 21 56.5 +5.1**
ESPY Espiye-Giresun 72.75 315 *eP* pP 11 21 59.0 -3.6
QRZ Quartz Range 72.84 131 *eP* pP 11 21 59.8 -3.5
KMRS Kahramanmaras 72.87 311 *eP* pP 11 22 00.3 -3.1
LTZ Lake Taylor 72.97 133 *eP* pP 11 22 00.3 -3.7
COBT Iskenderun 73.03 310⇑ *iP* sP 11 22 03.9 -4.6
GRSN GIRESUNGRSN 73.08 315⇑ *iP* pP 11 22 01.7 -2.9
SOC Sochi 73.11 318*c iP* **P 11 21 52.4 -1.3**
SOC *e* pP 11 22 02.9 -1.8
SOC *e* 11 22 08.0
SOC *e* 11 24 42.6
SOC *i* S S 11 31 22.1 +3.2
SOC *e* 11 31 59.2
SOC pmax pmax
comp=Z,154nm,0.8s,mb6.0
SOC pmax pmax
comp=Z,547nm,1.8s,mb6.2
SOC Sochi 73.11 318 *iP* **P 11 21 53.3 -0.4**
THZ Tophouse 73.27 132 *eP* **P 11 21 55.0 +0.3**
ANDN Andirin 73.31 311 *iP* pP 11 22 02.9 -3.2
SARI SarD1z-Kayseri 73.42 312 *eP* pP 11 22 05.4 -1.2
NNZ Nelson 73.54 132 *eP* **P 11 22 02.5 +6.2**
RSDY Resadiye-TOKAT 73.56 314 *eP* **P 11 22 02.9 +6.5**
YURE YUREGIR 73.61 310⇑ *iP* pP 11 22 03.3 -4.5
SVSK Karacayir 73.62 314 *eP* **P 11 21 01.6 +4.8**
KOZT Kozan 73.67 311 *eP* **P 11 21 59.8 +2.7**
KRTS Karatas 73.72 310 *eP* pP 11 22 06.7 -1.8
TOKT Tokat 74.09 314 *eP* pP 11 22 06.7 -3.9
BNN Bunyan 74.10 312 *eP* pP 11 22 08.0 -2.7
KARA Karaisali 74.18 311 *eP* **P 11 22 05.4 +5.3**
PEA0B Petropavlovsk- 74.23 31 *eP* **P 11 21 59.4 -0.7**
PETK Petropavlovsk- 74.23 31 P **P 11 21 59.0 -1.0**
comp=Z,24nm,0.7s,baz=208,slow=3.8,SNR=46
PETK LR LR 11 57 09.0
comp=Z,868µm,19.7s,MS8.1,baz=147,slow=38
PHNC Paralimni 74.28 308 P sP 11 22 19.6 +3.7
comp=Z,17nm,1.0s
EREN Erenkoy 74.33 309 *eP* pP 11 22 10.6 -1.5
MKAZ Moumakai 74.38 127 P **P 11 22 07.5 +6.1**
MERS Mersin 74.46 310 *eP* pP 11 22 12.6 -0.2
SNZO South Karori 74.54 132 *eP* **P 11 22 02.5 +0.3**
comp=Z,2µm,1.1s,mb6.9
MEST Erdemli 74.67 310⇓ *iP* **P 11 22 02.9 -0.1**
PET Petropavlovsk 74.68 32⇑ *iP* **P 11 22 01.0 -1.7**
PET *e* 11 24 54.7
PET *e*PPP 11 26 34.7
PET *e*S S 11 31 38.0 +1.8
PET pmax pmax
comp=Z,130nm,0.8s,mb5.9
PET pmax pmax
comp=Z,82µm,25.5s
PET pmax pmax
comp=Z,81µm,17.6s
PET pmax pmax
comp=Z,238µm,20.0s
PET pmax pmax
comp=Z,167µm,18.9s
PET smax
comp=N,245nm,2.3s
PET smax
comp=N,52µm,14.1s
PET smax
comp=N,203µm,26.6s
PET smax
comp=E,238µm,27.1s
PET MLR MLR
comp=Z,1674µm,22.0s,MS8.3
PET MLR MLR
comp=Z,1166µm,20.0s
PET Petropavlovsk 74.68 32 *eP* **P 11 22 02.0 -0.7**
comp=Z,2µm,0.7s,mb7.1
PET *e*S S 11 31 52.0 +16
KVT Kavak 74.71 315 *eP* pP 11 22 11.8 -2.3
YOZ Yozgat 74.75 313 *eP* pP 11 22 11.8 -2.6
LFK Lefkose 74.76 308 *eP* pP 11 22 10.6 -4.0
NIG Nigde 74.78 311 *eP* pP 11 22 11.8 -2.8
CSS Prodhromos 74.82 308 P pP 11 22 14.6 -0.4
comp=Z,35nm,1.0s
CSS Prodhromos 74.82 308 *eP* **P 11 22 03.7 -0.2**
comp=Z,4µm,1.3s,mb7.1
CSS LR LR
comp=Z,2698µm,19.0s,MS8.6
IKL Isikli 74.92 309 *eP* **P 11 22 04.1 -0.4**
FWVZ Far West T-bar 74.93 129 P pP 11 22 12.8 -2.7
MAMC Mammari 74.97 308 P pP 11 22 16.7 +0.9
ANN Anapa 75.09 319 *eP* **P 11 22 03.7 -1.5**
ANN *e* 11 25 01.2
ANN *e*S S 11 31 41.6 +0.5
ANN *e* 11 32 27.0
ANN *e*SS SS 11 36 38.1 +7.3
ANN pmax pmax
comp=Z,173µm,15.0s
VRHR Novokhopersk 75.14 326 *eP* pP 11 22 14.3 -2.1
VRHR *e*PP pP 11 22 28.6 +12
VRHR *e* 11 25 01.9
VRHR *e*S S 11 31 43.9 +2.5
VRHR *e*SS SS 11 36 38.6 +7.4
VRHR pmax pmax
comp=Z,74µm,10.1s
VRHR pmax pmax
comp=N,21µm,9.5s
VRHR pmax pmax
comp=E,34µm,11.3s
VRHR pmax pmax
comp=E,83µm,21.4s
VRHR pmax pmax
comp=Z,128µm,21.4s
VRHR pmax pmax
comp=N,63µm,21.9s
VRHR smax
comp=N,175µm,22.5s
VRHR smax
comp=Z,42µm,15.1s
VRHR smax
comp=E,148µm,21.9s
LEF Lefka 75.21 308 *eP* **P 11 22 11.8 +5.7**
LBTB Lobatse 75.26 245 PFAKE 11 22 20.0 +13
LBTB LR LR
comp=Z,837µm,19.0s,MS8.1
CORM Corum 75.42 313 *eP* pP 11 22 14.4 -3.9
CDAG Cicekdag 75.44 313⇑ *iP* pP 11 22 13.4 -5.0
CTKT Corum 75.45 314⇓ *iP* pP 11 22 14.0 -4.4
ALFC Alevga 75.45 308 P sP 11 22 22.7 0.0
comp=Z,21nm,0.7s
DIKM Dikmen 75.46 315 *eP* pP 11 22 18.2 -0.2
PPCY Paphos 75.58 308 P sP 11 22 21.8 -1.6
BOYT Boyabat 75.63 315⇓ *iP* pP 11 22 19.1 -0.4
BKZ Black Stump Fm 75.64 129 P **P 11 22 07.9 -0.7**
BOSA Boshof 75.71 242 P **P 11 22 10.1 +0.8**
comp=Z,7.5nm,0.7s,baz=132,slow=1.1,SNR=10
BOSA S S 11 31 52.1 +3.5
comp=Z,14nm,1.0s,baz=66,slow=10,SNR=1.6
BOSA PKPPKP 11 49 30.7
comp=Z,9.7nm,1.0s,baz=270,slow=10,SNR=3.9
BOSA LR LR 11 49 44.4
comp=Z,1963µm,21.9s,MS8.4,baz=87,slow=31
BOSA Boshof 75.71 242 P **P 11 22 10.1 +0.9**
BOSA S S 11 31 52.2 +3.5
BOSA smax
comp=N,14nm,1.0s
BYBT Boyabat 75.75 315 *eP* pP 11 22 18.2 -1.9
KAMT Kaman 75.84 312 *eP* **P 11 22 09.3 -0.4**
SYO Syowa Base 76.00 199⇑ *iX* 11 22 08.0
SYO Syowa Base 76.00 199⇓ *iP* pP 11 22 20.0 -1.1
URZ Urewera 76.03 128 S S 11 31 58.5 +6.6
comp=N,83nm,1.3s,baz=314,slow=1.2,SNR=2.9
HDMB Hadim 76.05 310 *eP* pP 11 22 19.5 -2.5
TOS Tosya 76.14 314 *eP* pP 11 22 19.5 -2.9
CANT Cankiri 76.29 313 *eP* pP 11 22 18.2 -5.0
ILGA Ilgaz 76.36 314⇑ *iP* pP 11 22 19.2 -4.5
MWZ Matawai 76.37 128 *eP* pP 11 22 19.2 -4.6
KONT Konya--Tatoy 76.43 311 *eP* pP 11 22 22.1 -2.0
BZK Bozkurt 76.45 315 *eP* pP 11 22 20.8 -3.3
LADK Ladik-KONYA 76.50 311 *eP* pP 11 22 20.8 -3.7
VSR Storozhevoye 76.58 325 *eP* pP 11 22 22.6 -2.1
VSR *e*PP pP 11 22 37.0 +12
VSR *e* 11 25 16.2
VSR *e*S S 11 31 58.8 +1.5
VSR *e*SS SS 11 36 49.7 -3.4
VSR pmax pmax
comp=Z,21µm,9.8s
VSR pmax pmax
comp=N,6µm,10.1s
VSR pmax pmax
comp=E,18µm,12.4s
VSR pmax pmax
comp=Z,52µm,21.8s
VSR pmax pmax
comp=N,21µm,22.4s
VSR pmax pmax
comp=E,53µm,18.9s
VSR smax
comp=N,119µm,20.3s
VSR smax
comp=Z,6µm,13.6s
ANTO Ankara 76.67 313 *eP* pP 11 22 20.1 -5.4
ANTO Ankara 76.67 313 P **P 11 22 14.4 0.0**
SNR=27
ANTO Ankara 76.67 313 *eP* **P 11 22 14.0 -0.4**
ANTO pmax pmax
comp=Z,2µm,1.2s,mb6.8
ANTO MLR MLR
comp=Z,1094µm,20.0s,MS8.2
ANTO Ankara 76.67 313⇑ *iP* **P 11 22 19.4 +5.0**
ANTO Ankara 76.67 313 *eP* **P 11 22 14.0 -0.4**
comp=Z,2µm,1.2s,mb6.8
ANTO LR LR
comp=Z,1094µm,20.0s,MS8.2
LOD Lodumlu 76.70 313 *eP* **P 11 22 19.5 +5.0**
BALT Daday 76.75 314⇓ *iP* **P 11 22 14.9 +0.2**
KDHN Kadinhani 76.78 311⇑ *iP* pP 11 22 20.9 -5.2
VOR Voronezh 76.78 326 *eP* **P 11 22 13.0 -1.7**
VOR *e*S S 11 31 59.0 -0.4
VOR pmax pmax
comp=Z,9µm,2.0s,mb7.3
PUZ Puketiti 76.92 128 *eP* **P 11 22 17.3 +1.4**
KIZT Kizilcal 77.06 311 *eP* **P 11 22 20.8 +4.2**
FUNA Funafuti 77.30 98 *eP* **P 11 22 19.7 +1.2**
comp=Z,2µm,1.1s,mb7.0
SIM Simferopol' 77.35 318*de*P pP 11 22 28.3 -0.9
SIM *i* 11 22 35.5
SIM *e*S S 11 32 03.7 -2.2
SIM PS 11 33 01.0
SEY Seymchan 77.39 21*c iP* **P 11 22 17.3 -0.6**
SGKT Sivrigoynuk 77.42 313⇑ *iP* PcP 11 22 29.2 +0.3
ANTB Antalya 77.44 309 *eP* **P 11 22 20.8 +2.0**
BCK Bucak 77.64 310 *eP* **P 11 22 25.9 +6.0**
ISP Isparta 77.81 310 *eP* **P 11 22 20.0 -0.8**
ISP Isparta 77.81 310 *eP* **P 11 22 21.9 +1.1**
ISP pmax pmax
comp=Z,4µm,1.8s,mb7.1
ISP MLR MLR
comp=Z,1711µm,19.0s,MS8.4
ISP Isparta 77.81 310⇓ *iP* **P 11 22 25.3 +4.5**
ISP Isparta 77.81 310 *eP* **P 11 22 21.9 +1.1**
comp=Z,4µm,1.8s,mb7.1
ISP LR LR
comp=Z,1711µm,19.0s,MS8.4
SHUT Suhut-Afyon 77.96 311 *eP* pP 11 22 29.8 -3.0
ELL Elmali 77.98 309 *eP* pP 11 22 32.3 -0.6
MDU Mudurnu 78.00 313 *eP* **P 11 22 27.2 +5.4**
ESKT Eskisehir 78.00 312⇑ *iP* **P 11 22 20.2 -1.6**
TIXI Tiksi 78.06 9*c iP* **P 11 22 19.4 -2.1**
TIXI *e* 11 25 19.2
TIXI pmax pmax
comp=E,289nm,1.9s
TIXI pmax pmax
comp=Z,1µm,1.9s,mb6.6
TIXI pmax pmax
comp=N,238nm,1.1s
TIXI MLR MLR
comp=Z,5612µm,19.0s,MS8.9
TIXI MLR MLR
comp=E,911µm,18.0s,MS8.7
TIXI MLR MLR
comp=N,3132µm,18.0s,MS8.7
TIXI Tiksi 78.06 9 *eP* **P 11 22 19.7 -1.8**
comp=N,2µm,1.0s,mb7.0
KDZE Karadeniz Ereo 78.08 314 *eP* pP 11 22 29.8 -3.5
KSL Kastellorizon 78.08 308 *eP* pP 11 22 32.0 -1.5
HENT Hendek 78.33 313⇑ *iP* **P 11 22 26.1 +2.4**
GOLH Golhisar 78.38 309⇑ *iP* pP 11 22 30.9 -4.2
ALT Altintas 78.43 311 *eP* **P 11 22 27.2 +3.0**
ALT Altintas 78.43 311 *iP* PcP 11 22 40.5 +7.1
GPA Golpazari 78.61 312 *eP* **P 11 22 25.9 +0.7**
KHAL Karahalli 78.72 310⇑ *iP* pP 11 22 31.6 -5.3
DNZL Cakiroluk 78.89 310⇑ *iP* pP 11 22 34.4 -3.5
GDZ Gediz 78.91 311⇑ *iP* pP 11 22 34.4 -3.6
DENT Denizli 78.91 310 *eP* **P 11 22 32.3 +5.4**
TURN Turunc 79.03 309⇑ *iP* pP 11 22 35.1 -3.6
ADVT Abdulvahap 79.07 312 *eP* **P 11 22 28.5 +0.8**
HRT Hereke 79.23 313 *eP* pP 11 22 36.7 -3.0
ARG Arkhangelos 79.24 308 *eP* **P 11 22 28.5 -0.3**
MOS Moscow 79.31 329 *eP* **P 11 22 28.3 -0.4**
MOS *e* 11 25 29.0
MOS *e*PPP 11 27 20.1
MOS *i* S S 11 32 33.4 +6.9
MOS pmax pmax
comp=Z,2µm,1.8s,mb6.8
SILT Sile 79.33 313 *eP* pP 11 22 37.5 -2.8
YER Yerkesik 79.34 309 *eP* pP 11 22 37.5 -2.9
YLV Yalova 79.38 313 *eP* pP 11 22 38.6 -1.7
KULA Kula-Manisa 79.39 310 *eP* pP 11 22 40.0 -0.6
ULDT Uludag 79.44 312⇑ *iP* **P 11 22 30.2 +0.4**
DEMI Demirci 79.48 311⇑ *iP* pP 11 22 35.2 -5.9
GEMT Gemlik 79.48 312 *eP* pP 11 22 34.9 -6.2
OBN Obninsk 79.61 328 P **P 11 22 30.8 +0.5**
comp=Z,5µm,1.1s,mb7.3,SNR=6.5
OBN Obninsk 79.61 328*c iP* **P 11 22 29.4 -0.9**
OBN *i* 11 25 29.9
OBN *i* S S 11 32 37.2 +7.5
OBN *i* SS SS 11 37 38.0 -0.5
OBN pmax pmax
comp=Z,1µm,1.3s,mb6.8
OBN pmax pmax
comp=Z,29µm,4.8s
OBN Obninsk 79.61 328 *eP* **P 11 22 30.3 0.0**
comp=Z,4µm,1.1s,mb7.2
OBN *e*S S 11 32 55.8 +26
SUR Sutherland 79.68 238 P sP 11 22 45.0 -1.4
SNR=12
SUR Sutherland 79.68 238 LR LR 11 51 57.4
comp=Z,425µm,21.1s,MS7.8,baz=85,slow=31
SUR Sutherland 79.68 238 *eP* **P 11 22 34.3 +3.1**
comp=Z,2µm,1.5s,mb6.9
SUR LR LR
comp=Z,1458µm,22.0s,MS8.3
DST Dursunbey 79.68 311 *eP* **P 11 22 29.8 -1.3**
RAO Raoul Island 79.71 119 P **P 11 22 33.8 +2.3**
ISK Istanbul-Kandi 79.74 313 *eP* **P 11 22 36.2 +4.8**
MLSB Milas 79.77 309 *eP* pP 11 22 42.6 -0.2
AYDN Tasoluk 79.78 309 *iP* PcP 11 22 39.6 +0.4
DURS Dursunbey 79.80 311⇑ *iP* pP 11 22 36.1 -6.7
KLYT Kilyos 79.80 313 *eP* pP 11 22 37.5 -5.3
KARP Karpathos 79.85 307⇑ *iP* pP 11 22 39.5 -3.7
BDRM Kayabasi 79.97 309⇑ *iP* **P 11 22 30.6 -2.1**
BGKT Bogazkoy 79.98 313 *eP* pP 11 22 38.7 -5.0
BODT Bodrum 80.08 309 *eP* **P 11 22 36.2 +2.9**
AKHS Akhisar 80.12 311⇑ *iP* pP 11 22 40.5 -4.1
AKS Akhisar 80.12 311 *eP* pP 11 22 40.0 -4.6
ELBA Catalca 80.22 313⇑ *iP* **P 11 22 37.9 +3.9**
BALB Balikesir 80.25 311 *eP* pP 11 22 41.3 -4.0
GCAM G?zelcaml? 80.28 309⇑ *iP* pP 11 22 40.5 -5.0
BNT Bandirma 80.40 312 *eP* **P 11 22 40.1 +5.1**
SLVT Silivri 80.40 313 *eP* pP 11 22 43.9 -2.2
KDAG Bornova 80.42 310⇓ *iP* **P 11 22 35.5 +0.4**
IZM Izmir 80.42 310 *eP* **P 11 22 36.2 +1.1**
BALY Balya 80.47 311⇑ *iP* pP 11 22 40.5 -6.0
BLCB Balcova 80.59 310 *eP* pP 11 22 47.5 +0.4
SMG Samos 80.59 309 *eP* **P 11 22 35.4 -0.6**
MRMT Marmara Adasi 80.70 312 *eP* pP 11 22 46.7 -1.0
CRLT Corlu 80.72 313 *eP* pP 11 22 46.4 -1.4
TKR Tekirdag 80.83 313 *eP* pP 11 22 43.9 -4.5
MFT Murefte 80.97 312 *eP* pP 11 22 44.3 -4.8
TLCR 81.00 317 P pP 11 22 49.0 -0.2
SART Tekirdag 81.02 312⇑ *iP* PcP 11 22 44.6 -0.1
RKY Sarkoy-Tekirda 81.03 312 *eP* pP 11 22 45.1 -4.3
NPS Neapolis 81.03 307 *eP* pP 11 22 47.5 -2.0
PSN Preselentsi 81.04 315 *iP* sP 11 22 48.1 -5.4
AYVA Ayvalik 81.07 311⇑ *iP* **P 11 22 38.1 -0.4**
TIRR Tirgusor 81.08 316 P **P 11 22 38.4 -0.1**
TIRR pmax pmax
comp=Z,1µm,1.0s,mb6.8
TIRR Tirgusor 81.08 316⇓ *iP* **P 11 22 44.4 +5.9**
TIRR Tirgusor 81.08 316 *eP* **P 11 22 38.3 -0.2**
comp=Z,1µm,1.0s,mb6.8
LAST Lasithi 81.11 306 *eP* pP 11 22 44.9 -5.1
LPK Lapseki 81.26 312 *eP* **P 11 22 40.0 +0.5**
PRK Paraskevi 81.37 311 *eP* pP 11 22 48.1 -3.2
PRK Paraskevi 81.37 311⇑ *iP* pP 11 22 46.4 -4.9
THR1 Thera Island 81.38 308 *eP* pP 11 22 50.5 -0.9
SANT Santorini 81.38 308 *eP* **P 11 22 45.9 +5.6**
SANT Santorini 81.38 308 *eP* **P 11 22 38.5 -1.7**
comp=Z,5µm,1.5s,mb7.2
THR6 Thira Island, 81.42 308 *eP* pP 11 22 51.1 -0.5
THR3 Thira Island, 81.43 308 *eP* pP 11 22 51.1 -0.6
THR4 Thira Island, 81.45 308 *eP* pP 11 22 51.8 0.0
EZN Ezine 81.46 311 *eP* pP 11 22 49.0 -2.8
APE Apeiranthos 81.47 308 *eP* **P 11 22 46.6 +5.9**
APE Apeiranthos 81.47 308 *eP* **P 11 22 46.0 +5.3**
APE Apeiranthos 81.47 308⇑ *iP* **P 11 22 46.2 +5.5**
APE Apeiranthos 81.47 308⇑ *iP* **P 11 22 46.9 +6.2**
APE Apeiranthos 81.47 308 P **P 11 22 40.4 -0.3**
PRD Provadia 81.47 315 *iP* **P 11 22 46.9 +6.3**
HARR Harsova 81.48 316⇓ *iP* **P 11 22 40.8 +0.2**
HARR Harsova 81.48 316 P **P 11 22 41.0 +0.5**
THR5 Thira Island, 81.48 308 *eP* pP 11 22 51.1 -0.8
KIS Kishinev 81.49 319 *eP* **P 11 22 39.0 -1.6**
KIS *e* 11 25 48.0
KIS *i* S S 11 32 55.0 +5.2
KIS pmax pmax
comp=Z,2µm,2.1s,mb6.8
KIS pmax pmax
comp=Z,97µm,16.0s
KIS pmax pmax
comp=Z,119µm,22.0s
KIS pmax pmax
comp=Z,205µm,19.0s
KIS Kishinev 81.49 319 *eP* **P 11 22 39.0 -1.6**
comp=Z,2µm,2.1s,mb6.8
KIS Kishinev 81.49 319 *eP* PP 11 26 07.0 +20
comp=Z,128µm,25.0s
KIS Kishinev 81.49 319 *eP*PP PKiKP 11 28 07.0 +1.9
KIS *i* S S 11 32 55.0 +5.2
comp=Z,38µm,16.0s
BOZC Bozcaada 81.67 311⇑ *iP* pP 11 22 48.4 -4.5
ENEZ Enez 81.79 312 *eP* pP 11 22 53.4 -0.1
JMB Yambol 81.88 314 *iP* pP 11 22 52.3 -1.6
ALN Alexandroupoli 81.91 312 *eP* pP 11 22 49.7 -4.4
GVD Gavdhos 82.17 306 *eP* pP 11 22 55.5 -0.1
VAM Vamos 82.19 306 *eP* **P 11 22 44.4 -0.2**
AKASG Malin Array Be 82.27 322 P **P 11 22 44.0 -0.7**
comp=Z,15nm,0.8s,baz=84,slow=4.3,SNR=47
AKASG S S 11 33 05.6 +7.9
comp=Z,12nm,0.9s,baz=47,slow=5.7,SNR=3.4
AKASG PKPPKP 11 49 19.9
comp=Z,0.3nm,0.3s,baz=242,slow=4.0,SNR=2.5
AKASG LR LR 12 05 15.5
comp=Z,1058µm,19.9s,MS8.2,baz=100,slow=40
AKASG Malin Array Be 82.27 322 P **P 11 22 44.0 -0.6**
AKASG S S 11 33 05.6 +7.9
AKASG smax
comp=N,13nm,0.9s
KIEV Kiev 82.28 322 P **P 11 22 43.9 -0.8**
KIEV pmax pmax
comp=Z,570nm,0.9s,mb6.5
KIEV Kiev 82.28 322 *eP* **P 11 22 43.7 -1.0**
LIA Limnos Island 82.33 311 *eP* pP 11 22 52.0 -4.4
LIA Limnos Island 82.33 311 *eP* **P 11 22 50.3 +5.1**
RDO Rodhopi 82.34 312 *eP* **P 11 22 44.5 -0.7**
IAS Iasi 82.37 319⇑ *iP* **P 11 22 54.2 +9.0**
IAS Iasi 82.37 319⇑ *iP* **P 11 22 48.5 +3.3**
LOS Limnos 82.42 311 *eP* **P 11 22 46.0 +0.3**
SZH Strazhica 82.53 315 *iP* pP 11 22 57.9 +0.6
KDZ Kurdzhali 82.54 313 *iP* **P 11 22 53.1 +6.9**
VRI Vrincioaia 82.59 317⇑ *iP* **P 11 22 50.6 +4.2**
VRI Vrincioaia 82.59 317⇑ *iP* **P 11 22 46.9 +0.5**
VRI Vrincioaia 82.59 317 P **P 11 22 47.4 +1.0**
VRI ⇑P 11 22 50.5
PLOR Plostina 82.64 317 P **P 11 22 45.1 -1.6**
TSUM Tsumeb 82.71 251 *eP* **P 11 22 49.0 +1.4**
comp=Z,346nm,1.2s,mb6.3
PVL Pavlikeni 82.95 314 *iP* **P 11 22 50.8 +2.5**
KVR Kavouri 83.00 309 *eP* **P 11 22 58.5 +10**
ZIMR 83.02 315 P **P 11 22 49.4 +0.7**
MLR Muntele Rosu 83.04 317⇓ *iP* **P 11 22 54.2 +5.5**
MLR Muntele Rosu 83.04 317⇑ *iP* **P 11 22 56.4 +7.7**
MLR Muntele Rosu 83.04 317 P **P 11 22 49.4 +0.6**
ATH Athens Observa 83.06 309⇑ *iP* **P 11 22 56.6 +7.5**
PLD Plovdiv 83.16 313 *iP* pP 11 23 00.6 0.0
AOS Alonnisos 83.17 310 *eP* pP 11 23 00.6 -0.2

SMY	**Shemya**	**83.17**	**36**	*e*P		**P**		**11 22 50.4**	**+1.2**
SMY					pmax	pmax				
	comp=Z,4µm,1.2s,mb7.3									
SMY					MLR	MLR				
	comp=Z,584µm,20.0s,MS8.0									
SMY	**Shemya**	**83.17**	**36**	*e*P		**P**		**11 22 50.4**	**+1.2**
	comp=Z,4µm,1.2s,mb7.3									
SMY					LR	LR				
	comp=Z,584µm,20.0s,MS8.0									
NAIG	**Nisos Aigina**	**83.20 309**		*e*P		pP	11 22 58.5	-2.4		
KYTH	**Kithira**	**83.28 307**		*e*P		**P**	**11 22 50.0**	**-0.2**		
OUR	**Ouranopolis**	**83.33 311**		*e*P		pP	11 23 00.6	-0.9		
DID	**Didima**	**83.35 308**		*e*P		**P**	**11 22 55.3**	**+4.8**		
PAIG	**Paliouri**	**83.47 311**		*e*P		**P**	**11 22 56.1**	**+5.0**		
NVR	**Nevrokopi**	**83.62 312**		*e*P		**P**	**11 22 50.6**	**-1.3**		
VOIR		**83.64 316**	⇑	*i*P		**P**	**11 22 56.5**	**+4.7**		
VOIR		**83.64 316**	⇑	*i*P		**P**	**11 22 53.2**	**+1.4**		
VOIR		**83.64 316**	⇑⇑	P		**P**	**11 22 53.2**	**+1.4**		
PGB	**Panagyurishte**	**83.64 314**		*i* P		pP	11 23 02.1	-1.0		
LTK	**Loutraki**	**83.66 309**		*e*P		**P**	**11 22 56.6**	**+4.5**		
NEO	**Neokhori**	**83.70 310**		*e*P		pP	11 23 05.7	+2.2		
XOR	**Xorichti**	**83.73 310**		*e*P		**P**	**11 22 50.6**	**-1.9**		
PLG	**Polygyros**	**83.73 311**		*e*P		pP	11 23 02.4	-1.2		
PLG	**Polygyros**	**83.73 311**		*e*P		**P**	**11 22 57.7**	**+5.3**		
LKR	**Lokris**	**83.75 310**		*e*P		pP	11 23 00.7	-3.0		
LKR	**Lokris**	**83.75 310**		*e*P		**P**	**11 22 56.8**	**+4.3**		
MMB	**Musomiste**	**83.77 313**		*i* P		**P**	**11 22 52.0**	**-0.6**		
SOH	**Sokhos**	**83.89 312**		*e*P		**P**	**11 22 58.8**	**+5.6**		
VLX	**Vlachokerasia**	**84.00 308**		*e*P		**P**	**11 22 59.6**	**+5.7**		
BURAR	**Bucovina Array**	**84.02 319**		P		**P**	**11 22 55.4**	**+1.7**		
BURAR	**Bucovina Array**	**84.02 319**	⇑	*i*P		**P**	**11 22 54.2**	**+0.5**		
BURAR	**Bucovina Array**	**84.02 319**	⇑	P		**P**	**11 22 54.2**	**+0.5**		
BUR08	**Bucovina Ar. S**	**84.04 319**		*e*P		**P**	**11 22 54.7**	**+0.9**		
HORT	**Hortiatis**	**84.04 311**		*e*P		**P**	**11 22 59.5**	**+5.6**		
THE	**Thessaloniki**	**84.14 311**		*e*P		**P**	**11 23 01.5**	**+7.0**		
MNK	**Minsk**	**84.16 326**	⇓	*e*P		**P**	**11 22 51.0**	**-3.3**		
MNK				*e*			11 22 58.0			
MNK				*e*			11 26 16.0			
MNK				*e*PPP			11 28 00.0			
MNK				*e*S		S	11 33 16.0	-0.6		
MNK				*e*PS			11 34 10.0			
MNK				*e*SS		SS	11 38 48.0	+1.8		
MNK				*e*SSS			11 42 16.0			
MNK					pmax	pmax				
	comp=Z,2µm,1.0s,mb7.2									
MNK					pmax	pmax				
	comp=Z,364µm,22.0s									
MNK					pmax	pmax				
	comp=Z,158µm,16.0s									
MNK					smax					
	comp=N,325µm,20.0s									
MNK					smax					
	comp=E,295µm,20.0s									
MNK					MLR	MLR				
	comp=E,485µm,20.0s,MS8.0									
MNK					MLR	MLR				
	comp=Z,667µm,16.0s,MS8.1									
MNK					MLR	MLR				
	comp=N,302µm,14.0s,MS8.0									
CRAR	**CRAIOVA**	**84.27 315**		P		pP	11 23 06.9	+0.6		
CRAR	**CRAIOVA**	**84.27 315**	⇑	*i*P		pP	11 23 03.8	-2.5		
KNT	**Kendrikon**	**84.29 312**		*e*P		pP	11 23 06.1	-0.3		
ITM	**Ithomi**	**84.32 308**		*e*P		**P**	**11 23 00.1**	**+4.6**		
AGG	**Agios Georgios**	**84.33 310**		*e*P		**P**	**11 23 00.7**	**+5.2**		
VTS	**Vitosha**	**84.34 313**	⇓	*i*P		**P**	**11 22 55.4**	**-0.1**		
VTS	**Vitosha**	**84.34 313**		P		**P**	**11 22 55.7**	**+0.3**		
MIDW	**Midway**	**84.39**	**61**	*e*P		**P**	**11 22 56.1**	**0.0**		
	comp=N,906nm,0.9s,mb6.9									
LIT	**Litokhoron**	**84.40 311**		*e*P		**P**	**11 23 01.1**	**+5.3**		
PUL	**Pulkovo**	**84.44 331**		*e*P		**P**	**11 22 55.8**	**+0.2**		
VAY	**Valandovo**	**84.57 312**		*e*P		**P**	**11 22 55.1**	**-1.6**		
VAY				*e*S		S	11 33 22.6	+1.4		
GRG	**Griva**	**84.62 312**		*e*P		**P**	**11 23 01.9**	**+4.9**		
THL	**Klokotos Trika**	**84.67 310**		*e*P		**P**	**11 23 01.9**	**+4.7**		
THL	**Klokotos Trika**	**84.67 310**	⇑	*i*P		**P**	**11 23 02.5**	**+5.3**		
EVR	**Evrytania**	**84.71 310**		*e*P		**P**	**11 23 01.2**	**+3.7**		
RLS	**Riolos of Patr**	**84.83 309**		*e*P		**P**	**11 22 56.7**	**-1.4**		
STIP	**Stip**	**84.92 312**		*e*P		**P**	**11 22 56.8**	**-1.6**		
BILL	**Bilibino**	**84.97**	**20**	*c i*P		**P**	**11 22 57.2**	**-0.9**		
BILL				*i*			11 26 12.3			
BILL				*i* S		S	11 33 24.4	+0.2		
BILL					pmax	pmax				
	comp=Z,1µm,1.3s,mb6.9									
BILL					pmax	pmax				
	comp=Z,100µm,8.1s									
BILL	**Bilibino**	**84.97**	**20**	*e*P		**P**	**11 22 58.0**	**-0.1**		
	comp=Z,974nm,1.0s,mb6.9									
KZN	**Kozani**	**84.98 311**		*e*P		**P**	**11 23 04.3**	**+5.5**		
JOF	**Joensuu**	**85.03 334**		*e*p		**P**	**11 22 57.6**	**-0.9**		
	comp=Z,1µm,1.0s,mb6.9									
JOF	**Joensuu**	**85.03 334**		*e*P		**P**	**11 22 57.6**	**-0.9**		
JOF					pmax	pmax				
	comp=Z,1µm,1.0s,mb6.9									
GZR	**Gura Zlata**	**85.19 316**	⇓	P		pP	11 23 11.2	+0.3		
GZR	**Gura Zlata**	**85.19 316**	⇓	*i*P		pP	11 23 11.1	+0.2		
GZR	**Gura Zlata**	**85.19 316**		P		**P**	**11 23 00.1**	**+0.4**		
LVV	**L'vov**	**85.28 321**		*e*P		pP	11 23 10.0	-1.2		
MEV	**Metsovon**	**85.30 310**		*e*P		pP	11 23 11.0	-0.6		
FNA	**Florina**	**85.36 311**		*e*P		**P**	**11 23 06.1**	**+5.5**		
KFL	**Anninata**	**85.36 309**		*e*P		pP	11 23 11.7	-0.3		
BIA	**Bitola**	**85.44 312**		*e*P		**P**	**11 22 59.4**	**-1.6**		
DRGR		**85.51 317**	⇑	*i*P		**P**	**11 23 07.4**	**+6.1**		
DRGR		**85.51 317**		P		**P**	**11 23 01.9**	**+0.6**		
QSPA	**South Pole Qui**	**85.51 180**		LR		LR	11 59 17.8			
	comp=Z,716µm,19.9s,MS8.1,baz=143,slow=34									
SKO	**Skopje**	**85.52 313**		*e*P		**P**	**11 22 59.8**	**-1.6**		
VLS	**Valsamata**	**85.53 309**		*e*P		pP	11 23 12.2	-0.6		
VLS	**Valsamata**	**85.53 309**		*e*P		**P**	**11 23 07.2**	**+5.6**		
KRUS	**Krusevo**	**85.55 312**		*e*P		**P**	**11 23 00.1**	**-1.5**		
LVZ	**Lovozero**	**85.56 340**		P		**P**	**11 23 01.4**	**+0.4**		
	comp=Z,4µm,0.7s,mb7.8,SNR=10									
LVZ	**Lovozero**	**85.56 340**	*c*	*i*P		**P**	**11 23 00.3**	**-0.7**		
LVZ					pmax	pmax				
	comp=Z,972nm,2.1s,mb6.7									
LVZ					MLR	MLR				
	comp=Z,873µm,19.0s,MS8.2									
LVZ	**Lovozero**	**85.56 340**	⇑	*i*P		**P**	**11 23 00.4**	**-0.6**		
LVZ					LR	LR				
	comp=Z,4215µm,22.0s,MS8.8									
JAN	**Janina**	**85.57 310**		*e*P		**P**	**11 23 08.3**	**+6.6**		
MAIT	**Maitri**	**85.70 199**		*e*P		pP	11 23 11.4	-1.6		
MAIT				*e*PP		PP	11 26 49.7	+29		
MAIT				*e*SS		SS	11 38 47.3	-21		
VSU	**Vasula**	**85.82 329**	*c*	*i*P		**P**	**11 23 02.2**	**-0.3**		
OHR	**Ohrid**	**85.85 312**		*e*P		**P**	**11 23 01.4**	**-1.6**		
OHR				*e*PP		PP	11 26 17.9	-5.1		
AFI	**Afiamalu**	**85.87 104**		P		**P**	**11 23 05.7**	**+2.0**		
	comp=Z,88nm,1.1s,mb5.9,baz=224,slow=6.3,SNR=4.2									
AFI				S		S	11 33 39.0	+3.8		
	comp=Z,24nm,0.8s,baz=180,slow=23,SNR=1.7									
AFI	**Afiamalu**	**85.87 104**		P		**P**	**11 23 05.7**	**+2.0**		
AFI				S		S	11 33 39.0	+3.9		
AFI					pmax	pmax				
	comp=Z,88nm,1.1s,mb5.9									
AFI					smax					
	comp=N,24nm,0.9s									
AFI	**Afiamalu**	**85.87 104**		*e*P		**P**	**11 23 04.7**	**+1.0**		
	comp=N,131nm,1.3s,mb6.0									
AFI					LR	LR				
	comp=Z,340µm,22.0s,MS7.7									
APA	**Apatity**	**85.87 339**	⇑	*i*P		**P**	**11 23 02.6**	**0.0**		
APA				*i* S		S	11 33 36.0	+2.9		
APA					pmax	pmax				
	comp=Z,313µm,20.0s									
APA					smax					
	comp=N,508µm,24.0s									
APA					smax					
	comp=E,514µm,24.0s									
IGT	**Igoumenitsa**	**85.94 310**		*e*P		pP	11 23 14.5	-0.3		
AMKA	**Amchitka**	**85.95**	**38**	*e*P		**P**	**11 23 02.8**	**-0.5**		
	comp=E,60nm,1.2s,mb5.7									
BZS	**Buzias**	**86.04 316**	⇓	P		**P**	**11 23 08.4**	**+4.5**		
BZS	**Buzias**	**86.04 316**	⇑	*i*P		pP	11 23 10.3	-4.8		
BZS	**Buzias**	**86.04 316**		P		**P**	**11 23 04.4**	**+0.5**		
KWP	**Kalwaria**	**86.08 320**		*e*P		**P**	**11 23 10.1**	**+6.1**		
KWP				*e*PP		PP	11 26 46.1	+22		
KWP				*e*S		S	11 33 48.4	+13		
KWP					LMZ		12 08 17.5			
	comp=E,1260µm,24.1s									
KWP	**Kalwaria**	**86.08 320**	⇓	*i*P		**P**	**11 23 08.0**	**+4.0**		
KWP	**Kalwaria**	**86.08 320**		*e*P		**P**	**11 23 04.4**	**+0.4**		
	comp=E,4µm,1.4s,mb7.5									
KWP				⇓	P		11 23 08.0			
KWP					LR	LR				
	comp=Z,1234µm,20.0s,MS8.3									
UZH	**Uzhgorod**	**86.15 319**		*e*P		**P**	**11 23 04.3**	**-0.1**		
UZH				*e*		pP	11 23 12.3	-3.3		
UZH				*e*S		S	11 33 40.3	+3.8		
UZH				*e*SS		SS	11 39 27.0	+11		
KOLS	**Kolonicke sedl**	**86.22 320**		*e*P		**P**	**11 23 05.8**	**+1.1**		
KOLS				*e*		pP	11 23 18.1	+2.2		
KOLS				*e*S		S	11 33 48.0	+11		
KOLS	**Kolonicke sedl**	**86.22 320**		*e*P		**P**	**11 23 05.8**	**+1.1**		
KOLS				*e*pP		pP	11 23 18.1	+2.2		
KOLS				*e*			11 23 47.8			
KOLS				*e*PP		PP	11 26 43.3	+18		
KOLS				*e*S		S	11 33 48.0	+11		
KOLS	**Kolonicke sedl**	**86.22 320**		*e*P		**P**	**11 23 05.8**	**+1.1**		
KOLS				*e*		pP	11 23 18.1	+2.2		
KOLS				*e*			11 23 47.8			
KOLS				*e*PP		PP	11 26 43.3	+18		
KOLS				*e*S		S	11 33 48.0	+11		
KOLS				*e*			11 49 28.9			
TIM	**Timisoara**	**86.33 316**	⇓	*i*P		sP	11 23 21.8	+1.2		
KEK	**Kerkira**	**86.38 310**	⇑	*i*P		**P**	**11 23 12.0**	**+6.3**		
TIR	**Tirane**	**86.58 312**		*e*P		**P**	**11 23 06.3**	**-0.4**		
TIR					pmax	pmax				
	comp=Z,899nm,1.0s,mb7.0									
TIR	**Tirane**	**86.58 312**		*e*P		**P**	**11 23 06.3**	**-0.4**		
	comp=Z,899nm,1.0s,mb7.0									
SUW	**Suwalki**	**86.69 325**		*e*P		pP	11 23 17.1	-1.1		
SUW				*e*			11 23 45.7			
SUW				*e*PP		PP	11 27 04.7	+35		
SUW				*e*S		S	11 33 52.8	+11		
SUW					LMZ		12 08 40.5			
	comp=Z,1291µm,22.7s									
SUW	**Suwalki**	**86.69 325**		*e*P		**P**	**11 23 06.9**	**0.0**		
SUW					pmax	pmax				
	comp=Z,5µm,1.1s,mb7.7									
SUW	**Suwalki**	**86.69 325**		*e*P		**P**	**11 23 06.9**	**0.0**		
	comp=Z,5µm,1.1s,mb7.7									
SUW				*e*S		S	11 33 52.8	+11		
PVY	**Plav**	**86.93 313**	⇑	*i*P		pP	11 23 16.4	-2.0		
CRVS	**Cervenica-Dubn**	**86.74 319**		*e*P		**P**	**11 23 07.1**	**-0.2**		
CRVS				*e*			11 23 22.8			
CRVS				*e*S		S	11 33 52.4	+10		
CRVS	**Cervenica-Dubn**	**86.74 319**		*e*P		**P**	**11 23 07.1**	**-0.2**		
CRVS				*e*pP		pP	11 23 22.8	+4.3		
CRVS				*e*			11 23 54.2			
CRVS				*e*PP		PP	11 26 50.8	+21		
CRVS				*e*S		S	11 33 52.4	+10		
CRVS	**Cervenica-Dubn**	**86.74 319**		*e*P		**P**	**11 23 07.1**	**-0.2**		
CRVS				*e*			11 23 22.8			
CRVS				*e*			11 23 54.3			
CRVS				*e*PP		PP	11 26 50.8	+21		
CRVS				*e*S		S	11 33 52.4	+10		
IVA	**Berane**	**86.79 313**	⇑	*i*P		pP	11 23 15.8	-3.1		
STHS	**Stebnicka Huta**	**86.97 320**		*e*P		**P**	**11 23 09.0**	**+0.6**		
STHS				*e*		pP	11 23 21.7	+2.1		
STHS					pmax	pmax				
	comp=Z,450nm,0.8s,mb6.8									
STHS	**Stebnicka Huta**	**86.97 320**		*e*P		**P**	**11 23 09.0**	**+0.6**		
STHS				*e*pP		pP	11 23 21.7	+2.1		
STHS				*e*			11 23 55.2			
STHS	**Stebnicka Huta**	**86.97 320**		*e*P		**P**	**11 23 09.0**	**+0.6**		
	comp=Z,450nm,0.8s,mb6.8									
STHS				*e*		pP	11 23 21.7	+2.1		
STHS				*e*			11 23 55.2			
KAF	**Kangasniemi**	**87.00 333**		*ep*		**P**	**11 23 07.8**	**-0.4**		
	comp=Z,1µm,0.9s,mb7.1,baz=99,slow=4.5									
KAF	**Kangasniemi**	**87.00 333**		*e*P		**P**	**11 23 07.8**	**-0.4**		
KAF					pmax	pmax				
	comp=Z,1µm,0.9s,mb7.1									
ULC	**Ulcinj**	**87.13 312**	⇑	*i*P		pP	11 23 16.7	-3.9		
TTG	**Podgorica**	**87.19 313**	⇑	*i*P		pP	11 23 16.2	-4.7		
PLE	**Pljevlja**	**87.23 314**	⇑	*i*P		pP	11 23 20.6	-0.4		
KECS	**Kecovo**	**87.30 319**		*e*P		**P**	**11 23 09.8**	**-0.2**		
KECS				*e*		pP	11 23 20.7	-0.5		
KECS				*e*S		S	11 33 57.0	+9.3		
KECS					pmax	pmax				
	comp=Z,269nm,1.1s,mb6.4									
KECS	**Kecovo**	**87.30 319**		*e*P		**P**	**11 23 09.8**	**-0.2**		
	comp=Z,269nm,1.1s,mb6.4									
KECS				*e*		pP	11 23 20.7	-0.5		
KECS				*e*			11 23 34.7			
KECS				*e*S		S	11 33 57.0	+9.3		
KECS				*e*			11 52 23.6			
BUM	**Brajici-Budva**	**87.44 313**	⇑	*i*P		pP	11 23 18.1	-4.0		
NKY	**Niksic**	**87.44 313**	⇑	*i*P		pP	11 23 18.5	-3.5		
UPM	**Unac-Piva**	**87.56 313**	⇑	*i*P		pP	11 23 21.2	-1.4		
NIE	**Niedzica**	**87.57 320**		*e*P		**P**	**11 23 12.3**	**+1.0**		
NIE				*e*pP		pP	11 23 23.1	+0.6		
PSZ	**Piszkesteto**	**87.60 318**		P		**P**	**11 23 11.9**	**+0.4**		
PSZ					pmax	pmax				
	comp=Z,840nm,1.1s,mb6.9									
PSZ	**Piszkesteto**	**87.60 318**		*e*pP		pP	11 23 22.5	-0.2		
PSZ	**Piszkesteto**	**87.60 318**	⇑	*i*P		**P**	**11 23 12.0**	**+0.5**		
PSZ	**Piszkesteto**	**87.60 318**		*e*P		**P**	**11 23 11.6**	**+0.1**		
	comp=Z,844nm,1.1s,mb6.9									
WAR	**Warsaw**	**87.62 323**		*e*P		pP	11 23 22.4	-0.3		
WAR				*e*S		S	11 34 05.8	+15		
WAR				*e*SS		SS	11 39 47.1	+10		
WAR					LMZ		12 08 08.0			
	comp=Z,1887µm,23.9s									
WAR	**Warsaw**	**87.62 323**		*e*P		pP	11 23 22.4	-0.3		
WAR				*e*SS		SS	11 39 47.1	+10		
WAR	**Warsaw**	**87.62 323**		*e*P		pP	11 23 22.4	-0.3		
WAR				*e*S		S	11 34 05.8	+15		
WAR				*e*SS		SS	11 39 47.1	+10		
WAR					LR	LR				
	comp=Z,1887µm,23.9s,MS8.4									
HCY	**Herceg Novi**	**87.75 313**	⇑	*i*P		pP	11 23 21.6	-2.0		
BRY	**Bratogost**	**87.78 313**	⇑	*i*P		pP	11 23 23.0	-0.7		
OJC	**Ojcow**	**88.03 321**		*e*P		**P**	**11 23 14.1**	**+0.6**		
OJC				*e**PP		pP	11 23 24.1	-0.6		
OJC				*e*S		S	11 34 03.3	+8.7		
OJC	**Ojcow**	**88.03 321**		*e*P		**P**	**11 23 14.1**	**+0.6**		
OJC				*e*pP		pP	11 23 24.1	-0.6		
OJC				*e*SKKSac		SKKSac	11 33 52.7	+3.2		
OJC				*e*S		S	11 34 03.3	+8.7		
OJC					LR	LR				
	comp=Z,1910µm,21.2s,MS8.5									
BUD	**Budapest**	**88.11 318**		*e*pP		pP	11 23 24.7	-0.5		
PKSM	**Moragy**	**88.18 316**	⇑	*i*P		**P**	**11 23 20.1**	**+5.8**		
PKSM	**Moragy**	**88.18 316**		P		**P**	**11 23 14.6**	**+0.3**		
VYHS	**Vyhne**	**88.39 319**		*e*P		**P**	**11 23 14.2**	**-1.0**		
VYHS				*e*		pP	11 23 25.4	-1.0		
VYHS				*e*S		S	11 34 07.8	+10		
VYHS					pmax	pmax				
	comp=Z,244nm,1.4s,mb6.2									
VYHS	**Vyhne**	**88.39 319**		*e*P		**P**	**11 23 14.2**	**-1.0**		
VYHS				*e*pP		pP	11 23 25.4	-1.0		
VYHS				*e*			11 23 46.0			
VYHS				*e*PP		PP	11 27 03.0	+20		
VYHS				*e*S		S	11 34 07.8	+10		
VYHS				*e*			11 49 17.3			
VYHS	**Vyhne**	**88.39 319**		*e*P		**P**	**11 23 14.2**	**-1.0**		
	comp=Z,244nm,1.4s,mb6.2									
VYHS				*e*		pP	11 23 25.4	-1.0		
VYHS				*e*			11 23 46.0			
VYHS				*e*PP		PP	11 27 03.0	+20		
VYHS				*e*S		S	11 34 07.8	+10		
VYHS				*e*			11 49 17.3			
VYHS					LR	LR				
	comp=Z,641µm,22.0s,MS8.0									
STON	**Ston**	**88.39 313**		P		**P**	**11 23 13.7**	**-1.6**		
ADK	**Adak**	**88.50**	**38**	P		**P**	**11 23 14.7**	**-0.9**		
ADK					pmax	pmax				
	comp=Z,5µm,1.5s,mb7.5									
ADK	**Adak**	**88.50**	**38**	*e*P		**P**	**11 23 14.6**	**-1.1**		
	comp=Z,5µm,1.5s,mb7.5									
TIP	**Timpagrande**	**88.64 309**		*e*P		**P**	**11 23 16.9**	**+0.2**		
	comp=Z,22nm,1.3s,mb5.3									
KOLL	**Kolacno**	**88.68 319**		*e*P		**P**	**11 23 16.8**	**+0.2**		
KOLL				*e*		pP	11 23 28.5	+0.7		
KOLL	**Kolacno**	**88.68 319**		*e*P		**P**	**11 23 16.8**	**+0.2**		
KOLL				*e*pP		pP	11 23 28.5	+0.7		
KOLL				*e*S		S	11 34 14.3	+13		
KEV	**Kevo**	**88.80 340**		*ep*		**P**	**11 23 15.0**	**-1.7**		
	comp=Z,1µm,0.9s,mb7.2									
KEV	**Kevo**	**88.80 340**		P		**P**	**11 23 16.4**	**-0.3**		
KEV					pmax	pmax				
	comp=Z,2µm,1.3s,mb7.4									
GRI	**Girifalco**	**88.86 309**		P		**P**	**11 23 18.9**	**+1.3**		
GRI					pmax	pmax				
	comp=Z,6µm,2.4s,mb7.5									
GRI	**Girifalco**	**88.86 309**		P		**P**	**11 23 18.9**	**+1.3**		
	comp=Z,6µm,2.4s,mb7.5									
ORI	**Oriolo Calabro**	**88.98 310**		P		**P**	**11 23 27.1**	**+8.9**		
OKC	**Ostrava-Krasne**	**89.03 320**		*e*P		**P**	**11 23 17.9**	**-0.3**		
OKC				*e*PP		PP	11 27 07.6	+19		
OKC				*e*S		S	11 34 18.6	+15		
OKC					AMS	AMS	12 13 00.0			
	comp=Z,1096µm,19.9s									
OKC	**Ostrava-Krasne**	**89.03 320**		*e*P		**P**	**11 23 17.9**	**-0.3**		
OKC				*e*PP		PP	11 27 07.6	+19		
OKC				*e*S		S	11 34 18.6	+15		
RAC	**Raciborz**	**89.03 320**		*e*P		**P**	**11 23 24.9**	**+6.7**		
RAC				*e*			11 26 53.6			
RAC				*e*S		S	11 34 14.4	+10		
RAC				*e*SS		SS	11 40 07.1	+9.3		
RAC	**Raciborz**	**89.03 320**		*e*P		**P**	**11 23 24.9**	**+6.7**		
RAC				*e*PP		PP	11 26 53.6	+5.3		
RAC				*e*S		S	11 34 14.4	+10		
RAC				*e*SS		SS	11 40 07.1	+9.3		
RAC					LR	LR				
	comp=Z,1930µm,20.0s,MS8.5									
SOI	**Samo**	**89.06 308**		P		**P**	**11 23 26.6**	**+8.0**		
CEL	**Celeste**	**89.20 308**		*e*P		**P**	**11 23 20.4**	**+1.1**		
	comp=Z,2µm,1.0s,mb7.4									
ARCES	**ARCESS Array B**	**89.25 340**		P		**P**	**11 23 18.7**	**-0.1**		
	comp=Z,51nm,0.7s,mb6.0,baz=100,slow=5.0,SNR=93									
ARCES	**ARCESS Array B**	**89.25 340**		P		**P**	**11 23 18.7**	**-0.1**		
ARCES					pmax	pmax				
	comp=Z,51nm,0.7s									
PTRP	**Pietrapertosa**	**89.33 311**		P		pP	11 23 29.4	-1.7		
	comp=Z,3µm,1.2s									
MTTG	**Motta San Giov**	**89.33 308**		P		pP	11 23 29.1	-2.1		
	comp=Z,3µm,1.2s									
SCLL	**Scilla**	**89.34 308**		P		**P**	**11 23 21.2**	**+1.2**		
MODS	**Modra-Piesok**	**89.40 318**		*e*P		**P**	**11 23 19.5**	**-0.4**		
MODS				*e*		pP	11 23 32.2	+1.0		
MODS				*e*S		S	11 34 15.7	+8.1		
MODS	**Modra-Piesok**	**89.40 318**		*e*P		**P**	**11 23 19.5**	**-0.4**		
MODS				*e*pP		pP	11 23 32.2	+1.0		
MODS				*e*PP		PP	11 27 07.6	+16		
MODS				*e*S		S	11 34 15.7	+8.1		
MODS				*e*			11 49 21.0			
MORC	**Moravsky Berou**	**89.41 320**		*e*P		**P**	**11 23 20.6**	**+0.6**		
MORC					pmax	pmax				
	comp=Z,3µm,1.8s,mb7.4									
MORC	**Moravsky Berou**	**89.41 320**	⇑	*i*P		**P**	**11 23 27.1**	**+7.1**		
MORC	**Moravsky Berou**	**89.41 320**		*e*P		**P**	**11 23 20.6**	**+0.7**		
	comp=Z,3µm,1.8s,mb7.4									
CUC	**Castrocucco**	**89.45 310**		*e*P		**P**	**11 23 20.1**	**-0.3**		
	comp=Z,915nm,1.0s,mb7.1									
CUC					LR	LR				
	comp=Z,1269µm,22.0s,MS8.3									
MSI	**Messina ING**	**89.47 308**		P		pP	11 23 33.1	+1.3		
ZST	**Bratislava**	**89.49 318**		*e*P		**P**	**11 23 19.7**	**-0.7**		
ZST				*e*		pP	11 23 31.9	+0.2		
ZST					pmax	pmax				
	comp=Z,2µm,1.5s,mb7.2									
ZST	**Bratislava**	**89.49 318**		*e*P		**P**	**11 23 19.7**	**-0.7**		
ZST				*e*pP		pP	11 23 31.9	+0.2		
ZST				*e*PP		PP	11 27 19.3	+27		
ZST				*e*S		S	11 34 23.7	+15

PERS *i* pP 11 23 38.6 +1.5
PERS *e*PP PP 11 27 32.9 +31
PERS *e*S S 11 34 30.1 +11
TREC Trest 90.68 319 *e*P **P** **11 23 25.6 -0.3**
TREC *e*S S 11 34 33.1 +14
TREC AMS AMS 12 14 20.0
comp=Z,1565µm,20.9s
SGG Gregorio Mates 90.68 311 P pP 11 23 34.6 -2.8
SOKA Soboth 90.72 317⇑*i*P **P** **11 23 33.0 +6.9**
SOKA Soboth 90.72 317⇓*i*PcP PcP 11 23 26.9 -0.3
SOKA ⇑*i*pP pP 11 23 37.8 +0.4
MIDA Miranda 90.80 312 P pP 11 23 35.4 -2.5
RNI2 Rionero Sannit 90.88 312 P pP 11 23 36.3 -2.0
MCT Mte Cammarata 90.92 307 P pP 11 23 39.9 +1.3
RFI Roccamonfina 90.97 311 P pP 11 23 37.7 -1.0
LJU Ljubljana 91.00 316 *e*P **P** **11 23 27.3 -0.2**
LJU *e* pP 11 23 38.7 -0.1
LJU *e*S S 11 34 32.7 +10
LJU *e*SS SS 11 40 37.7 +11
LJU Ljubljana 91.00 316 *e*P **P** **11 23 27.3 -0.2**
LJU *e* pP 11 23 38.6 -0.1
LJU *e* 11 23 59.4
LJU *i* 11 24 11.5
LJU *e*PP PP 11 27 25.9 +22
LJU *e*S S 11 34 32.7 +10
LJU *e*SS SS 11 40 37.7 +11
OBKA Obir 91.03 316⇑*i*P **P** **11 23 34.3 +6.7**
comp=Z,66µm,8.6s,SNR=7.5
OBKA Obir 91.03 316⇓*i*PcP PcP 11 23 28.4 -0.3
comp=Z,66µm,8.6s,SNR=7.5
OBKA ⇑*i*pP pP 11 23 39.4 +0.5
SDI San Donato 91.13 312 P **P** **11 23 34.5 +6.3**
SDI pmax pmax
comp=Z,5µm,2.2s,mb7.4
SDI San Donato 91.13 312 P **P** **11 23 34.5 +6.3**
comp=Z,5µm,2.2s,mb7.4
JAVS Javornik 91.31 316 *e*P **P** **11 23 28.4 -0.6**
JAVS *e* pP 11 23 39.5 -0.7
JAVS *e*PP PP 11 27 24.0 +17
MOA Molln 91.35 318⇑*i*P **P** **11 23 35.0 +5.9**
comp=Z,108µm,14.0s,SNR=10
MOA Molln 91.35 318⇓*i*P **P** **11 23 29.3 +0.2**
comp=Z,108µm,14.0s,SNR=10
MOA ⇓*i*pP pP 11 23 40.3 0.0
VENT Ventotene 91.35 311 P sP 11 23 44.3 -0.3
PRU Pruhonice 91.36 320 *e*P **P** **11 23 28.7 -0.4**
PRU *e*x x 11 27 27.0
PRU *e*S S 11 34 34.5 +8.9
PRU AMS AMS 12 10 30.0
comp=Z,1560µm,21.7s
PVCC Panska Ves 91.39 320 *e*S S 11 34 35.8 +10
PVCC AMS AMS 12 12 50.0
comp=Z,1481µm,19.9s
VOY Vojsko 91.44 316 *e*P **P** **11 23 29.5 0.0**
VOY *e* 11 23 57.4
VOY *e* 11 24 05.0
PTQR Pietraquaria 91.47 312 P pP 11 23 40.4 -0.6
AQU L'Aquila 91.49 312 P pP 11 23 40.8 -0.3
TRO Tromso 91.53 340 *e*P **P** **11 23 29.6 +0.2**
TRO AMS AMS 12 10 32.8
comp=Z,2071µm,15.3s,MS8.7
TRO Tromso 91.53 340 *e*P **P** **11 23 29.3 -0.1**
TRO LR LR
comp=Z,2071µm,15.3s,MS8.7
MYKA Terra Mystica 91.67 316⇑*i*P **P** **11 23 36.5 +5.9**
comp=Z,2032µm,7.1s
MYKA Terra Mystica 91.67 316⇓*i*PcP PcP 11 23 30.9 -0.6
comp=Z,2032µm,7.1s
MYKA ⇑*i*pP pP 11 23 42.1 +0.3
FIAM Fiamignano 91.69 312 P pP 11 23 40.7 -1.4
comp=Z,6µm,2.5s
CING Cingoli 91.72 313 P pP 11 23 39.1 -3.1
NRCA Norcia 91.74 313 P pP 11 23 37.4 -4.9
ERC Erice 91.78 308 P pP 11 23 41.9 -0.7
GERES GERESS Array B 91.81 319 P **P** **11 23 31.7 +0.6**
comp=Z,11nm,0.8s,baz=92,slow=4.7,SNR=68
BRG Berggiesshubel 91.82 321 *i* P **P** **11 23 31.7 +0.5**
BRG *i* pP 11 23 42.6 +0.2
BRG 11 27 18.0
BRG SS SS 11 40 38.0 0.0
BRG MLR MLR
comp=N,458µm,20.0s,MS8.2
BRG MLR MLR
comp=E,722µm,20.6s,MS8.2
BRG MLR MLR
comp=Z,1080µm,20.2s,MS8.3
BRG Berggiesshubel 91.82 321 *e*P **P** **11 23 36.7 +5.5**
comp=Z,2µm,1.4s,mb7.2
BRG Berggiesshubel 91.82 321 *i* P **P** **11 23 31.7 +0.6**
comp=Z,34nm,1.2s,mb5.6
BRG *i* pP 11 23 42.6 +0.2
comp=Z,436nm,1.6s
BRG *i* 11 23 56.0
comp=Z,873nm,1.5s
BRG *i* 11 24 29.6
comp=Z,2µm,1.4s
BRG PP PP 11 27 18.0 +7.6
BRG S S 11 34 42.0 +12
BRG *i* 11 35 31.6
comp=Z,1µm,3.0s
BRG SS SS 11 40 38.0 0.0
BRG *i* PKPPKP 11 49 22.8
comp=Z,225nm,2.8s
BRG
comp=N,765µm,20.0s
BRG
comp=E,1206µm,20.6s
BRG
comp=Z,1804µm,20.2s
BRG Berggiesshubel 91.82 321 *i* P **P** **11 23 31.7 +0.6**
comp=Z,20nm,1.2s,mb5.3
BRG *i* pP 11 23 42.6 +0.2
BRG *i* 11 23 56.0
BRG *i* 11 24 29.6
BRG PP PP 11 27 18.0 +7.6
BRG S S 11 34 42.0 +12
BRG *i* 11 35 31.6
BRG SS SS 11 40 38.0 0.0
BRG *i* P'P' 11 49 22.8
BRG LR LR
comp=Z,1080µm,20.2s,MS8.3
PTCC Patocco-Chiusa 91.85 316 P **P** **11 23 31.2 -0.2**
VNA2 Neumayer--Watz 91.87 198 *e*P **P** **11 23 31.7 +0.7**
VNA2 *e* 11 23 37.9
VNA2 *e* pP 11 23 40.3 -2.0
VNA2 *e* pP 11 23 43.8 +1.5
VNA2 *e* 11 23 47.6
VNA2 *e* 11 23 55.3
SNTG Esanatoglia 91.90 313 P pP 11 23 40.8 -2.2
KBA Koelnbreinsper 91.91 317⇑*i*P **P** **11 23 37.4 +5.8**
comp=Z,107µm,14.4s,SNR=15
KBA Koelnbreinsper 91.91 317⇓*i*P **P** **11 23 31.4 -0.2**
comp=Z,107µm,14.4s,SNR=15
KBA ⇓*i*pP pP 11 23 43.1 +0.2
KHC Kasperske Hory 91.91 319 *e*P **P** **11 23 37.4 +5.8**
KHC *e*PP PP 11 27 15.4 +4.2
KHC *e*S S 11 34 40.4 +10
KHC AMS AMS 12 13 10.0
comp=Z,1582µm,19.5s
GMNA Gemona 91.92 316 P pP 11 23 39.8 -3.2
PESA Pesaro 92.02 314 P pP 11 23 43.1 -0.5
FSSB Fossombrone 92.05 313 P **P** **11 23 34.2 +1.8**
RUE Ruedersdorf 92.05 322 *e*P **P** **11 23 37.2 +5.0**
comp=Z,3µm,1.4s,mb7.5
RUE Ruedersdorf 92.05 322 *e*P **P** **11 23 32.9 +0.7**
comp=Z,2µm,1.1s,mb7.3
ASS Assisi 92.10 313 P pP 11 23 43.1 -0.8
ROM9 Roma 92.11 312 P sP 11 23 51.3 +3.2
VNA1 Neumayer--Stat 92.23 198 *e*P **P** **11 23 33.7 +1.0**
VNA1 *e* 11 23 39.7
VNA1 *e* pP 11 23 42.2 -1.8
VNA1 *e* pP 11 23 45.6 +1.6
VNA1 *e* 11 23 49.5
VNA1 *e* 11 23 55.7
FVI Forni Avoltri 92.26 316 P **P** **11 23 31.2 -2.1**
RSM Repubblica di 92.30 314 P pP 11 23 45.4 +0.5
WET Wettzell 92.37 319 *e*P **P** **11 23 39.3 +5.5**
WET pmax pmax
comp=Z,2µm,1.5s,mb7.2
WET Wettzell 92.37 319 *e*P **P** **11 23 39.3 +5.5**
comp=Z,2µm,1.5s,mb7.2
BADI Badiali 92.42 313 P pP 11 23 43.6 -1.8
CLL Collm 92.44 321 *e*P **P** **11 23 39.2 +5.2**
comp=Z,1µm,1.7s,mb7.0
CLL Collm 92.44 321 *e*P **P** **11 23 34.0 0.0**
CLL LmV 11 15 00.0
comp=Z,1033µm,18.7s
CLL ⇓*i*P(2) pP 11 23 45.1 -0.2
comp=Z,261nm,1.5s
CLL *e*Plp 11 23 52.0
comp=Z,141µm,22.1s
CLL *i* x x 11 23 58.5
comp=Z,405nm,1.4s
CLL *i* x x 11 24 31.3
comp=Z,1µm,1.6s
CLL *e*PP PP 11 27 15.0 -0.3
CLL *e*x x 11 27 47.0
CLL *e*S S 11 34 49.0 +14
comp=N,434µm,26.8s
CLL *e*S S 11 34 49.0 +14
comp=E,147µm,22.4s
CLL *e*x x 11 35 05.0
CLL *e*x x 11 35 36.0
CLL *e*PPS 11 36 18.0
CLL *e*SS SS 11 40 42.0 -5.0
CLL *e*x x 11 42 06.0
CLL *e*SSS 11 44 48.0
CLL *e*SSSS 11 48 06.0
CLL *e*PKPPKP 11 49 23.0
CLL *e*x x 11 50 46.0
CLL Collm 92.44 321 *e*P **P** **11 23 34.0 0.0**
CLL *i* 11 23 58.5
CLL *i* 11 24 31.3
CLL *e*PP PP 11 27 15.0 -0.3
CLL *e*S S 11 34 49.0 +14
CLL *e*P'P' 11 49 23.0
ABTA Abfaltersbach 92.45 317⇓*i*P **P** **11 23 38.5 +4.3**
comp=E,53µm,11.8s,SNR=11
ABTA Abfaltersbach 92.45 317⇓*i*P **P** **11 23 33.9 -0.3**
comp=E,53µm,11.8s,SNR=11
ABTA ⇑*i*pP pP 11 23 45.6 +0.1
VNA3 Neumayer Olymp 92.45 198 *e*P **P** **11 23 34.4 +0.7**
VNA3 *e* 11 23 40.4
VNA3 *e* pP 11 23 42.3 -2.7
VNA3 *e* pP 11 23 46.1 +1.1
VNA3 *e* 11 23 49.2
VNA3 *e* 11 23 57.0
RGN Rugen 92.48 324 *e*P **P** **11 23 39.4 +5.3**
comp=Z,2µm,1.3s,mb7.2
SEST Monte Rota 92.65 317 P pP 11 23 44.8 -1.6
STEI Steigen 92.65 338 *e*P **P** **11 23 34.7 +0.1**
STEI *e*pP pP 11 23 45.1 -0.8
NKC Novy Kostel 92.72 320 *e*P pP 11 23 41.6 -5.0
NKC *e*S S 11 34 44.5 +6.7
NKC AMS AMS 12 13 40.0
comp=Z,1686µm,20.8s
NKC Novy Kostel 92.72 320 *e*P pP 11 23 41.6 -5.0
NKC *e*S S 11 34 44.5 +6.7
TANN Tannenbergstha 92.73 320 *e*P **P** **11 23 41.1 +5.7**
comp=Z,1µm,1.5s,mb7.0
SFI Santa Sofia 92.74 314 P **P** **11 23 36.3 +0.7**
MOR8 Moi Rana 92.82 336 *e*P **P** **11 23 36.9 +1.5**
MOR8 *e*pP pP 11 23 44.6 -2.1
VMG Vicchio 92.96 314 P pP 11 23 46.8 -1.1
CTI Castel Tesino 93.00 316 P **P** **11 23 42.8 +6.0**
FIU Minerbio Fiu 93.03 314 P sP 11 23 54.0 +1.7
COP Copenhagen 93.07 325⇑*e*P pP 11 23 47.0 -1.1
COP *e*S S 11 34 36.4 -4.2
COP pmax pmax
comp=Z,330nm,1.0s,mb6.7
COP MLR MLR
comp=Z,940µm,21.0s,MS8.2
COP Copenhagen 93.07 325⇑*i*P pP 11 23 47.0 -1.1
comp=Z,333nm,1.0s
COP *e*S S 11 34 36.4 -4.2
COP *i* 11 34 55.4
COP
comp=Z,938µm,21.0s
WTTA Wattenberg 93.08 317⇑*i*P **P** **11 23 43.0 +5.9**
comp=Z,89µm,13.8s,SNR=10.0
WTTA Wattenberg 93.08 317⇓*i*P **P** **11 23 36.9 -0.2**
comp=Z,89µm,13.8s,SNR=10.0
WTTA ⇑*i*pP pP 11 23 48.5 +0.2
SEI Scarperia 93.10 314 P sP 11 23 51.5 -1.1
WATA Walderalm 93.13 317⇑*i*P pP 11 23 45.9 -2.7
comp=Z,1µm,1.4s,SNR=6.4
WATA Walderalm 93.13 317⇓*i*P **P** **11 23 37.0 -0.3**
comp=Z,1µm,1.4s,mb7.1,SNR=6.4
WATA ⇑*i*pP pP 11 23 48.2 -0.3
MAON Monte Argentar 93.17 312 P pP 11 23 48.1 -0.8
FLOS Flostrand 93.26 336 *e*P **P** **11 23 40.8 +3.3**
MOX Moxa 93.28 320 *e*P **P** **11 23 38.1 +0.2**
MOX *e* pP 11 23 49.2 0.0
comp=Z,520nm,1.6s
MOX *e* 11 24 35.8
comp=Z,1µm,1.6s
MOX Moxa 93.28 320 *e*P **P** **11 23 38.1 +0.2**
MOX *e* pP 11 23 49.2 0.0
MOX Moxa 93.28 320 *e*P **P** **11 23 43.4 +5.5**
comp=Z,910nm,1.3s,mb7.0
MOX Moxa 93.28 320 *e*P **P** **11 23 38.1 +0.2**
comp=Z,520nm,1.6s,mb6.7
MOX *e* pP 11 23 49.2 0.0
MOX *e* 11 24 35.8
LOF Lofoten 93.31 338 *e*P **P** **11 23 41.0 +3.4**
RAVA Ravarino 93.31 314 P pP 11 23 50.7 +1.2
APPI Appiano 93.32 316 P pP 11 23 46.9 -2.6
GRFL Gerfalco 93.33 313 P pP 11 23 45.0 -4.6
KONS Konsvik 93.37 336 *e*P **P** **11 23 45.3 +7.4**
FUR Furstenfeldbru 93.37 318 *e*P **P** **11 23 43.5 +5.1**
FUR pmax pmax
comp=Z,2µm,1.7s,mb7.2
FUR Furstenfeldbru 93.37 318 *e*P **P** **11 23 43.5 +5.1**
comp=Z,2µm,1.7s,mb7.2
NIKO Nikolski 93.38 37 *e*P **P** **11 23 38.0 -0.4**
comp=Z,3µm,0.9s,mb7.7
HSP Hornsund 93.38 347 *e*P **P** **11 23 43.5 +5.6**
STOK Stokkvaagen 93.40 336 *e*P **P** **11 23 43.1 +4.9**
MOTA Moosalm 93.45 317⇓*i*P **P** **11 23 39.6 +0.9**
comp=Z,1µm,1.6s,mb7.2,SNR=9.4
MOTA Moosalm 93.45 317⇑*i*P **P** **11 23 38.5 -0.3**
comp=Z,1µm,1.6s,mb7.2,SNR=9.4
MOTA ⇑*i*pP pP 11 23 49.9 -0.1
GRA1 Grafenberg Arr 93.48 319 *e*P **P** **11 23 44.6 +5.7**
comp=Z,2µm,1.5s,mb7.3
GRF Grafenberg Arr 93.48 319 *e*P **P** **11 23 44.6 +5.7**
GRF pmax pmax
comp=Z,2µm,1.5s,mb7.3
GRF Grafenberg Arr 93.48 319 *e*P **P** **11 23 44.6 +5.7**
GRF *e* 11 27 32.0
GRF *e*S S 11 34 53.8 +9.2
GRF pmax pmax
comp=Z,2µm,1.5s,mb7.3
GRF Grafenberg Arr 93.48 319 *e*P **P** **11 23 44.6 +5.7**
comp=Z,2µm,1.5s,mb7.3
GRF *e*PP PP 11 27 32.0 +8.4
GRF *e*S S 11 34 53.8 +9.2
GRFO Grafenberg 93.48 319 *e*P **P** **11 23 44.8 +5.9**
comp=Z,2µm,1.6s,mb7.2
GRFO *e*L 12 16 16.1
comp=E,991µm,20.7s
GSCL Gusciola 93.67 314 P **P** **11 23 38.9 -1.0**
PII Pisa 93.68 313 P pP 11 23 50.3 -0.9
RETA Reutte 93.69 317⇑*i*P **P** **11 23 45.5 +5.7**
comp=E,51µm,9.2s,SNR=12
RETA Reutte 93.69 317⇓*i*P **P** **11 23 39.6 -0.3**
comp=E,51µm,9.2s,SNR=12
RETA ⇓*i*pP pP 11 23 50.9 -0.2
FETA Feichten 93.69 317⇑*i*P pP 11 23 46.6 -4.5
comp=E,71µm,13.7s,SNR=12
FETA Feichten 93.69 317⇓*i*PcP PcP 11 23 40.0 -0.4
comp=E,71µm,13.7s,SNR=12
FETA ⇓*i*pP pP 11 23 51.1 0.0
MAIM Mastiano 93.72 314 P pP 11 23 48.7 -2.7
NSS Namsos 93.75 334 *e*P **P** **11 23 38.8 -0.9**
NSS AMS AMS 12 13 52.9
comp=Z,2328µm,16.9s,MS8.7
NSS Namsos 93.75 334 *e*P **P** **11 23 39.2 -0.5**
NSS LR LR
comp=Z,2329µm,27.3s,MS8.5
ERBM Eremo 93.80 314 P pP 11 23 49.3 -2.4
VLC Villacollemand 93.80 314 *e*P **P** **11 23 40.5 0.0**
comp=Z,219nm,0.9s,mb6.6
NB2 NORSAR Subarra 93.96 331 P **P** **11 23 40.3 -0.5**
comp=Z,344nm,1.1s,mb6.7,baz=93,slow=4.6
NOA NORSAR Array B 93.96 331 P **P** **11 23 40.6 -0.2**
comp=Z,6.1nm,0.8s,mb5.1,baz=94,slow=4.6,SNR=9.7
NOA LR LR 12 11 24.6
comp=Z,1545µm,21.3s,MS8.4,baz=100,slow=39
NAO01 NORSAR Array S 94.11 331 *e*P **P** **11 23 40.7 -0.8**
comp=Z,208nm,0.8s,mb6.6
NAO01 *e*pP pP 11 23 49.9 -2.9
NAO01 *e*sP sP 11 23 52.4 -4.5
BSEG Bad Segeberg 94.21 324 *e*P **P** **11 23 47.4 +5.3**
BSEG pmax pmax
comp=Z,974nm,1.7s,mb7.0
BSEG Bad Segeberg 94.21 324 *e*P **P** **11 23 47.4 +5.3**
comp=Z,974nm,1.7s,mb7.0
KEST Kesra 94.24 305 P **P** **11 23 43.9 +1.2**
comp=Z,4.1nm,0.9s,baz=310,slow=3.1,SNR=11
KEST LR LR 12 07 30.2
comp=Z,727µm,19.7s,MS8.1,baz=199,slow=36
KBS Kingsbay 94.25 349 *e*P **P** **11 23 45.3 +3.5**
KBS *e* 11 34 33.3
KBS AMS AMS 12 15 52.5
comp=Z,2630µm,19.0s,MS8.7
KBS Kingsbay 94.25 349 *e*P **P** **11 23 41.2 -0.6**
KBS *e**PP pP 11 23 50.6 -2.5
KBS *e**SP sP 11 23 53.7 -3.5
KBS pmax pmax
comp=Z,392nm,1.1s,mb6.8
KBS Kingsbay 94.25 349 *e*P **P** **11 23 41.2 -0.6**
comp=Z,392nm,1.1s,mb6.8
KBS *e*pP pP 11 23 50.6 -2.5
KBS *e*sP sP 11 23 53.7 -3.4
KBS *e* 11 34 33.3
DAVA Damuels 94.28 317⇑*i*P **P** **11 23 41.9 -0.7**
comp=Z,64µm,11.2s,SNR=13
DAVA Damuels 94.28 317⇓*i*PcP PcP 11 23 42.8 -0.2
comp=Z,64µm,11.2s,SNR=13
DAVA ⇓*i*pP pP 11 23 54.0 +0.1
TNA Tin City 94.31 25 *e*P **P** **11 23 41.2 -1.1**
comp=Z,284nm,1.1s,mb6.6
VSL Villasalto 94.37 309 *e*P **P** **11 23 43.1 -0.1**
comp=Z,414nm,1.2s,mb6.7
BOB Bobbio (Coli) 94.50 314 P **P** **11 23 51.1 +7.4**
TUE Stuetta 94.62 316 *e*P **P** **11 23 43.3 -0.9**
comp=Z,519nm,1.5s,mb6.7
TUE *e*pP pP 11 23 54.8 -0.6
CORF Corte 94.63 312 *e*P pP 11 23 56.1 +0.5
KONO Kongsberg 94.73 329 *e*P **P** **11 23 46.6 +2.3**
KONO *e* 11 35 07.8
KONO AMS AMS 12 15 35.8
comp=Z,1467µm,19.0s,MS8.5
KONO Kongsberg 94.73 329*c*iP **P** **11 23 43.3 -1.1**
PGF Pioggiola 94.75 312 *e*P **P** **11 23 52.9 +8.0**
comp=Z,522nm,1.2s,mb6.5
PGF Pioggiola 94.75 312 *e*P **P** **11 23 52.9 +8.0**
PGF pmax pmax
comp=Z,261nm,1.2s,mb6.5
PGF Pioggiola 94.75 312 *e*P pP 11 23 52.9 -3.3
comp=Z,261nm,1.2s
STU Stuttgart 94.78 318 *e*P **P** **11 23 45.2 +0.4**
STU *e**PP pP 11 23 55.9 -0.2
STU pmax pmax
comp=Z,1µm,1.6s,mb7.1
STU Stuttgart 94.78 318 *e*P **P** **11 23 50.1 +5.3**
comp=Z,1µm,1.6s,mb7.0
STU Stuttgart 94.78 318 *e*P **P** **11 23 45.1 +0.3**
comp=Z,1µm,1.6s,mb7.1
STU *e*pP pP 11 23 55.9 -0.3
UNV Unalaska Valle 94.81 36 *e*P **P** **11 23 47.7 +2.8**
comp=Z,504nm,1.1s,mb6.9
UNV *e*P pP 11 23 59.6 +3.4
MUD Monsted U'grnd 94.92 326⇑*i*P pP 11 23 54.4 -2.2
MUD *e* 11 27 43.7
MUD pmax pmax
comp=Z,710nm,1.4s,mb6.9
MUD MLR MLR
comp=Z,1200µm,21.0s,MS8.3
MUD Monsted U'grnd 94.92 326⇑*i*P pP 11 23 54.4 -2.2
comp=Z,710nm,1.4s
MUD *e* 11 27 43.7
MUD *i*S S 11 34 45.4 -11
MUD *i* 11 35 11.3
MUD
comp=Z,1233µm,21.0s
VAI Varese 95.00 316 P pP 11 23 54.0 -3.2
DOMB Dombas 95.01 332 *e*P pP 11 23 55.3 -1.5
SPAK Spaichingen-Ko 95.04 318 *e*P pP 11 23 59.1 +1.8
TOD Tromm 95.05 319 *e*P pP 11 23 59.3 +1.9
AKUT Akutan 95.25 36 *e*P **P** **11 23 46.8 -0.1**
comp=Z,613nm,0.6s,mb7.2
BFO Black Forest 95.35 318 P pP 11 23 58.8 +0.1
comp=Z,489nm,1.4s,SNR=11
BFO Black Forest 95.35 318 *e*P **P** **11 23 52.7 +5.2**
BFO pmax pmax
comp=Z,656nm,1.7s,mb6.8
BFO Black Forest 95.35 318 *e*P **P** **11 23 52.7 +5.2**
comp=Z,656nm,1.7s,mb6.8
BFO Black Forest 95.35 318 *e*P **P** **11 23 47.1 -0.3**
BFO LR LR
comp=Z,914µm,21.0s,MS8.2
FIN Finale Ligure 95.37 314 P **P** **11 23 54.9 +7.2**
KTD Kalmit 95.52 319 *e*P pP 11 24 01.9 +2.4
ORO Oropa 95.55 315 P pP 11 23 58.7 -1.0
FELD Feldberg im Sc 95.56 318 *e*P pP 11 24 01.7 +2.0
HLG Helgoland 95.65 324 *e*P **P** **11 23 54.0 +5.3**
comp=Z,715nm,1.2s,mb7.0
LANF Langenberg 95.70 319 *e*P pP 11 24 03.1 +2.8
MOL Molde 95.71 332 *e*P **P** **11 23 57.4 +8.6**
MOL *e* 11 35 02.3
MOL AMS AMS 12 14 51.0
comp=Z,2357µm,20.8s,MS8.6
MOL Molde 95.71 332 *e*P pP 11 23 58.7 -1.4
MOL LR LR
comp=Z,2348µm,21.0s,MS8.6
STR Strasbourg 95.72 318 *e*P pP 11 24 01.2 +0.7
IBBN Ibbenburen 95.73 322 *e*P **P** **11 23 54.3 +5.2**
comp=Z,523nm,1.3s,mb6.8
ABSA Djebel Ababsia 95.77 306 P sP 11 24 07.0 +2.0
CMAH Djebel Manchou 95.83 306 P sP 11 24 06.0 +0.7
LIBD Limburg 95.83 318 *e*P pP 11 23 59.8 -1.2
SAOF Saorge 95.84 314 *e*P pP 11 24 00.9 -0.2
ABH Alteburg 95.87 320 *e*P pP 11 24 00.1 -1.0
BBS Basel-Blauen 95.89 317 *e*P **P** **11 23 59.8 +10**
SBF Sospel 95.92 313 *e*P **P** **11 23 57.9 +7.7**
comp=Z,904nm,1.2s,mb6.8
SBF Sospel 95.92 313 *e*P **P** **11 23 57.9 +7.7**
SBF pmax pmax
comp=Z,452nm,1.2s,mb6.8
SBF Sospel 95.92 313 *e*P pP 11 23 57.9 -3.6
comp=Z,452nm,1.2s
AUTN L'Aution 95.93 314 *e*P pP 11 24 01.5 0.0
REVF Revere 95.97 313 *e*P pP 11 24 01.7 0.0
LUCF Luceram 95.99 314 *e*P pP 11 24 02.7 +0.9
BUG Bochum--Univer 96.04 321 *e*P **P** **11 23 55.8 +5.3**
comp=Z,385nm,1.2s,mb6.7
CDF Champ du Feu 96.05 318 *e*P **P** **11 23 58.3 +7.6**
comp=Z,303nm,1.4s,mb6.2
CDF Champ du Feu 96.05 318 *e*P **P** **11 23 58.3 +7.6**
CDF pmax pmax
comp=Z,152nm,1.4s,mb6.2
CDF Champ du Feu 96.05 318 *e*P pP 11 23 58.3 -3.6
comp=Z,152nm,1.4s
TOUF Mont Tournerai 96.06 314 *e*P pP 11 24 03.0 +0.9
ECH Echery 96.13 318 *e*P pP 11 24 04.8 +2.5
ECH Echery 96.13 318 *e*P **P** **11 23 50.7 -0.3**
ECH *e**PP pP 11 24 00.4 -1.9
ECH *e* 11 24 04.8
MVIF Mont Vial 96.13 314 *e*P pP 11 24 02.7 +0.3
LSD Lago del Serru 96.15 315 P **P** **11 24 00.0 +8.8**
MOF Molkenrain 96.15 318 *e*P pP 11 24 04.3 +1.9
RUP Ruppelstein 96.19 319 *e*P **P** **11 24 00.3 +9.1**
CALN Calern 96.32 313 *e*P pP 11 24 02.9 -0.4
WTSB Winterswijk 96.33 322⇑*e*P pP 11 24 02.1 -1.0
WTSB Winterswijk 96.33 322 *e*PP PP 11 28 04.3 +19
WTSB Winterswijk 96.33 322 *e*PPP 11 29 47.3
WTSB Winterswijk 96.33 322 *e*Sdif S 11 35 11.3 +2.1
BLS5 Blasjo 96.33 329 *e*P **P** **11 24 00.1 +8.4**
HINF Hinteralfeld 96.33 317 *e*P **P** **11 23 59.5 +7.5**
SURF Saint Ours 96.37 314 *e*P pP 11 24 02.5 -1.0
MBDF Montbardon 96.40 314 *e*P **P** **11 23 59.6 +7.2**
LPG La Plagne 96.42 315 *e*P **P** **11 24 00.4 +8.0**
comp=Z,364nm,1.1s,mb6.4
LPG La Plagne 96.42 315 *e*P **P** **11 24 00.4 +8.0**
LPG pmax pmax
comp=Z,182nm,1.1s,mb6.4
LPG La Plagne 96.42 315 *e*P pP 11 24 00.4 -3.3
comp=Z,182nm,1.1s
LPL La Plagne 96.43 315 *e*P **P** **11 24 00.4 +7.9**

comp=Z,252nm,1.0s,mb6.3
LPL La Plagne 96.43 315 *e*P **P** 11 24 00.4 +7.9
LPL pmax pmax
comp=Z,126nm,1.0s,mb6.3
LPL La Plagne 96.43 315 *e*P pP 11 24 00.4 -3.3
comp=Z,126nm,1.0s
BNI Bardonecchia 96.47 315 *e*P **P** **11 23 51.8 -0.8**
BNI pmax pmax
comp=Z,262nm,1.3s,mb6.5
BNI MLR MLR
comp=Z,1387µm,20.0s,MS8.4
BNI Bardonecchia 96.47 315 *e*P **P** **11 23 51.8 -0.8**
comp=Z,262nm,1.3s,mb6.5
BNI LR LR
comp=Z,1387µm,20.0s,MS8.4
FRF La Foret Royal 96.49 313 *e*P **P** **11 24 00.6 +7.8**
comp=Z,640nm,1.3s,mb6.6
FRF La Foret Royal 96.49 313 *e*P **P** **11 24 00.6 +7.8**
FRF pmax pmax
comp=Z,320nm,1.3s,mb6.6
FRF La Foret Royal 96.49 313 *e*P pP 11 24 00.6 -3.5
comp=Z,320nm,1.3s
LMR La Mourre 96.59 313 *e*P **P** **11 24 01.0 +7.7**
comp=Z,600nm,1.6s,mb6.5
LMR La Mourre 96.59 313 *e*P **P** **11 24 01.0 +7.7**
LMR pmax pmax
comp=Z,300nm,1.6s,mb6.5
LMR La Mourre 96.59 313 *e*P pP 11 24 01.0 -3.6
comp=Z,300nm,1.6s
RAR Rarotonga 96.60 112 P **P** **11 23 54.9 +1.1**
comp=Z,3.8nm,0.4s,baz=91,slow=13,SNR=3.0
RAR PP PP 11 27 53.6 +5.1
comp=Z,35nm,1.1s,baz=135,slow=2.9,SNR=3.6
RAR Rarotonga 96.60 112 P **P** **11 23 54.9 +1.1**
RAR 11 27 53.6
RAR pmax pmax
comp=Z,35nm,1.1s
HAU Haudompre 96.67 318 *e*P **P** **11 24 01.0 +7.5**
comp=Z,536nm,1.4s,mb6.5
HAU *e*MLR MLR
comp=Z,1731µm,21.8s,MS8.2
HAU Haudompre 96.67 318 *e*P **P** **11 24 01.0 +7.5**
HAU pmax pmax
comp=Z,268nm,1.4s,mb6.5
HAU MLR MLR
comp=Z,1731µm,21.8s,MS8.5
HAU Haudompre 96.67 318 *e*P pP 11 24 01.0 -3.8
comp=Z,268nm,1.4s
HAU LR LR
comp=Z,1731µm,21.8s,MS8.5
WLF Walferdange 96.78 319 P pP 11 24 05.1 -0.1
comp=Z,131nm,1.7s
WLF Walferdange 96.78 319 *e*P **P** **11 23 54.6 +0.7**
WLF *e*PP pP 11 24 04.3 -0.9
WLF pmax pmax
comp=Z,262nm,1.4s,mb6.5
WLF Walferdange 96.78 319 *e*P **P** **11 23 59.7 +5.8**
comp=Z,524nm,1.2s,mb6.8
WLF Walferdange 96.78 319 *e*P **P** **11 23 54.6 +0.7**
comp=Z,262nm,1.4s,mb6.5
WLF *e*pP pP 11 24 04.3 -0.9
MEM Membach 96.85 320 P **P** **11 23 54.1 -0.1**
comp=Z,42nm,1.5s,mb5.6
BER Bergen 96.86 330 *e*P **P** **11 24 02.5 +8.4**
BER *e* 11 35 18.1
BER *e*SS SS 11 41 54.9 +5.7
BER AMS AMS 12 13 30.4
comp=Z,1668µm,20.0s,MS8.5
GDM Grand'Maison 96.86 315 *e*P pP 11 24 04.5 -1.2
CABF La Chapelle 96.87 316 *e*P **P** **11 24 02.5 +8.1**
comp=Z,842nm,1.7s,mb6.6
CABF La Chapelle 96.87 316 *e*P **P** **11 24 02.5 +8.1**
CABF pmax pmax
comp=Z,421nm,1.7s,mb6.6
CABF La Chapelle 96.87 316 *e*P pP 11 24 02.5 -3.2
comp=Z,421nm,1.7s
HGN Heimansgroeve 96.89 320⇑ *e*P pP 11 24 04.5 -1.2
HGN Heimansgroeve 96.89 320 *e*PP PP 11 28 06.4 +16
HGN Heimansgroeve 96.89 320 *e*SKS S 11 35 25.0 +11
HGN Heimansgroeve 96.89 320 *e*ScSP PS 11 37 03.9 +24
HGN Heimansgroeve 96.89 320 *e*SS SS 11 42 22.6 +32
THEF They Montfort 96.91 318 *e*P pP 11 24 06.7 +0.8
TAVF Tavernes 96.92 313 *e*P pP 11 24 08.0 +2.0
STOF St-Etienne Org 97.03 314 *e*P pP 11 24 08.3 +1.8
ORIF Oris-en-Rattie 97.04 315 *e*P **P** **11 24 03.1 +7.9**
comp=Z,757nm,1.5s,mb6.6
ORIF *e*MLR MLR
comp=Z,1528µm,20.5s,MS8.2
ORIF Oris-en-Rattie 97.04 315 *e*P **P** **11 24 03.1 +7.9**
ORIF pmax pmax
comp=Z,379nm,1.5s,mb6.6
ORIF Oris-en-Rattie 97.04 315 *e*P pP 11 24 03.1 -3.4
comp=Z,378nm,1.5s
BEBN Eben Emael 97.05 320 P pP 11 24 05.4 -1.0
TAM Tamanrasset 97.12 292 *e*P **P** **11 23 56.4 +0.3**
GRN Grenoble 97.13 315 *e*P pP 11 24 06.1 -0.8
VILF Villemus 97.17 313 *e*P pP 11 24 08.5 +1.4
PUYF Puyloubier 97.18 313 *e*P pP 11 24 08.0 +0.8
BERF Bertagne 97.19 313 *e*P pP 11 24 08.0 +0.7
RFYF Reffroy 97.24 318 *e*P **P** **11 24 03.8 +7.7**
comp=Z,342nm,1.5s,mb6.2
RFYF Reffroy 97.24 318 *e*P **P** **11 24 03.8 +7.7**
comp=Z,342nm,1.5s,mb6.6
SMRF Simiane la Rot 97.27 314 *e*P **P** **11 24 04.8 +8.5**
comp=Z,696nm,1.5s,mb6.5
SMRF Simiane la Rot 97.27 314 *e*P pP 11 24 04.8 -2.8
comp=Z,696nm,1.5s
BCLA Clavier 97.30 320 P **P** **11 24 03.3 +7.1**
comp=Z,58nm,1.7s,mb5.7
GELF Grande-Etoile 97.38 313 *e*P pP 11 24 08.3 +0.2
TREF Trevaresse 97.41 313 *e*P pP 11 24 07.8 -0.4
OCF Saint Nazaire 97.45 314 *e*P pP 11 24 06.7 -1.7
OG26 St.-Nazaire-De 97.45 314 *e*P pP 11 24 06.7 -1.7
MEZF Maizieres J'vi 97.53 318 *e*P **P** **11 24 05.2 +7.8**
comp=Z,1µm,1.9s,mb6.8
MEZF Maizieres J'vi 97.53 318 *e*P pP 11 24 05.2 -3.4
comp=Z,1µm,1.9s
SFTF Sexfontaines 97.55 318 *e*P **P** **11 24 06.5 +9.1**
comp=Z,466nm,1.1s,mb6.7,baz=98
SFTF Sexfontaines 97.55 318 *e*P pP 11 24 06.5 -2.2
comp=Z,466nm,1.0s
PRAF Pradon 97.56 313 *e*P pP 11 24 08.5 -0.4
GIVF Givet 97.62 320 *e*P **P** **11 24 05.6 +7.9**
comp=Z,155nm,0.9s,mb6.2
GIVF Givet 97.62 320 *e*P **P** **11 24 05.6 +7.9**
GIVF pmax pmax
comp=Z,77nm,0.9s,mb6.2
GIVF Givet 97.62 320 *e*P pP 11 24 05.6 -3.4
comp=Z,77nm,0.9s
DOU Dourbes 97.77 320 P **P** **11 24 00.7 +2.3**
comp=Z,60nm,1.6s,mb5.9
UCC Uccle 97.89 321 P **P** **11 24 04.2 +5.3**
VIVF Saint-Julien-l 97.89 315 *e*P **P** **11 24 07.0 +7.9**
comp=Z,292nm,1.3s,mb6.4
VIVF Saint-Julien-l 97.89 315 *e*P **P** **11 24 07.0 +7.9**
VIVF pmax pmax
comp=Z,146nm,1.3s,mb6.3
VIVF Saint-Julien-l 97.89 315 *e*P pP 11 24 07.0 -3.4
comp=Z,146nm,1.3s
SSB Saint Sauveur 97.98 315 *e*P pP 11 24 08.8 -2.0
SSB Saint Sauveur 97.98 315 *e*P **P** **11 24 02.1 +2.6**
BAIF Baives 98.02 320 *e*P **P** **11 24 07.5 +8.0**
comp=Z,257nm,1.1s,mb6.4
BAIF Baives 98.02 320 *e*P **P** **11 24 07.5 +8.0**
BAIF pmax pmax
comp=Z,128nm,1.1s,mb6.4
BAIF Baives 98.02 320 *e*P pP 11 24 07.5 -3.3
comp=Z,128nm,1.1s
SDPT Sand Point 98.28 35 *e*P **P** **11 24 01.3 +0.7**
comp=Z,1µm,1.3s,mb7.3
LOR Lormes 98.38 317 *e*P **P** **11 24 08.9 +7.7**
comp=Z,251nm,1.2s,mb6.3
LOR *e*MLR MLR
comp=Z,1272µm,22.2s,MS8.1
LOR Lormes 98.38 317 *e*P **P** **11 24 08.9 +7.7**
LOR pmax pmax
comp=Z,126nm,1.2s,mb6.3
LOR MLR MLR
comp=Z,1272µm,22.3s,MS8.4
LOR Lormes 98.38 317 *e*P pP 11 24 08.9 -3.6
comp=Z,126nm,1.2s
LOR LR LR
comp=Z,1272µm,22.3s,MS8.4
SMF Signal de Mont 98.42 316 *e*P **P** **11 24 09.0 +7.6**
comp=Z,906nm,1.8s,mb6.7
SMF Signal de Mont 98.42 316 *e*P **P** **11 24 09.0 +7.6**
SMF pmax pmax
comp=Z,453nm,1.8s,mb6.7
SMF Signal de Mont 98.42 316 *e*P pP 11 24 09.0 -3.7
comp=Z,453nm,1.8s
LASF Ste Croix 98.50 314 *e*P **P** **11 24 09.9 +8.1**
comp=Z,503nm,1.6s,mb6.5
COLF Collangettes 98.56 315 *e*P pP 11 24 11.3 -2.1
PLDF La Plantade 98.60 316 *e*P pP 11 24 12.8 -0.7
SSF Saint Saulge 98.63 317 *e*P **P** **11 24 10.2 +7.9**
comp=Z,283nm,1.6s,mb6.3
SSF Saint Saulge 98.63 317 *e*P **P** **11 24 10.2 +7.9**
SSF pmax pmax
comp=Z,141nm,1.6s,mb6.2
SSF Saint Saulge 98.63 317 *e*P pP 11 24 10.2 -3.4
comp=Z,141nm,1.6s
AVF Avril sur Loir 98.74 316 *e*P **P** **11 24 10.5 +7.6**
comp=Z,522nm,1.7s,mb6.5
AVF Avril sur Loir 98.74 316 *e*P **P** **11 24 10.5 +7.6**
AVF pmax pmax
comp=Z,261nm,1.7s,mb6.5
AVF Avril sur Loir 98.74 316 *e*P pP 11 24 10.5 -3.7
comp=Z,261nm,1.7s
LBL Lubilhac 98.89 315 *e*P **P** **11 24 13.1 +10**
AGO Saint Agoulin 98.93 316 *e*P pP 11 24 12.8 -2.2
PYM Petit Puy Mans 99.03 315 *e*P **P** **11 24 12.8 +8.6**
BGF Bois d'Agland 99.10 316 *e*P **P** **11 24 12.6 +8.1**
comp=Z,958nm,1.8s,mb6.7
BGF Bois d'Agland 99.10 316 *e*P **P** **11 24 12.6 +8.1**
BGF pmax pmax
comp=Z,479nm,1.8s,mb6.7
BGF Bois d'Agland 99.10 316 *e*P pP 11 24 12.6 -3.2
comp=Z,479nm,1.8s
EJON La Jonquera 99.27 312 P sP 11 24 25.2 +4.5
MENF Mencas 99.30 320 *e*P pP 11 24 15.7 -0.9
CHGN Chignik 99.35 34 *e*P pP 11 24 15.7 -0.9
ETOS Mallorca 99.44 309 P sP 11 24 25.9 +4.4
TCF Toulx Ste Croi 99.56 316 *e*P **P** **11 24 14.6 +8.1**
comp=Z,575nm,1.9s,mb6.4
TCF Toulx Ste Croi 99.56 316 *e*P **P** **11 24 14.6 +8.1**
TCF pmax pmax
comp=Z,287nm,1.9s,mb6.4
TCF Toulx Ste Croi 99.56 316 *e*P pP 11 24 14.6 -3.2
comp=Z,287nm,1.9s
TTA Tatalina 99.68 27 P pP 11 24 17.5 -0.5
MTLF Montolieu 99.72 313 *e*P Pdif 11 24 15.4 +8.4
comp=Z,445nm,1.7s
MTLF Montolieu 99.72 313 *e*P Pdif 11 24 15.4 +8.4
MTLF pmax pmax
comp=Z,222nm,1.7s,mb6.3
MTLF Montolieu 99.72 313 *e*P Pdif 11 24 15.4 +8.4
comp=Z,222nm,1.7s
CAF Calviac 99.74 315 *e*P Pdif 11 24 15.7 +8.6
comp=Z,456nm,1.7s
CAF Calviac 99.74 315 *e*P Pdif 11 24 15.7 +8.6
CAF pmax pmax
comp=Z,228nm,1.7s,mb6.3
CAF Calviac 99.74 315 *e*P Pdif 11 24 15.7 +8.6
comp=Z,228nm,1.7s
TFO1 Folkestone 99.90 321⇑ *e*P Pdif 11 24 11.1 +3.2
IMA2 Indian Mountai 100.09 24 *e*P Pdif 11 24 08.6 -0.1
RJF Les Rejaudoux 100.11 315 *e*P Pdif 11 24 17.3 +8.5
comp=Z,760nm,1.8s
RJF *e*MLR MLR
comp=Z,1273µm,22.8s,MS8.1
RJF Les Rejaudoux 100.11 315 *e*P Pdif 11 24 17.3 +8.5
RJF pmax pmax
comp=Z,380nm,1.8s
RJF MLR MLR
comp=Z,1273µm,22.8s,MS8.4
RJF Les Rejaudoux 100.11 315 *e*P Pdif 11 24 17.3 +8.5
comp=Z,380nm,1.8s
RJF LR LR
comp=Z,1273µm,22.8s,MS8.4
LRW Lerwick 100.11 330⇑ *e*P Pdif 11 24 19.0 +10
SVW2 Sparrevohn 100.18 29 *e*P Pdif 11 24 23.7 +15
TORD Torodi Ar. Bea 100.44 282 P Pdif 11 24 09.6 -0.7
comp=Z,0.5nm,0.7s,baz=72,slow=4.7,SNR=3.0
TORD PP PP 11 28 19.7 +1.6
comp=Z,19nm,1.0s,baz=59,slow=5.6,SNR=3.4
TORD PKKP PKKPbc 11 40 36.9 +10
comp=Z,6.7nm,0.8s,baz=300,slow=2.7,SNR=4.1
EIBI Ibiza 100.61 309 P Pdif 11 24 31.0 +20
JMIC Jan Mayen 100.62 342 *e* Pdif 11 24 23.0 +12
JMIC *e*PP PP 11 28 24.5 +6.7
JMIC AMS AMS 12 16 20.4
comp=Z,1491µm,26.9s,MS8.4
EPOB Poblet 100.68 311 P Pdif 11 24 31.5 +20
LFF La Frestale 100.68 315 *e*P Pdif 11 24 20.0 +8.7
comp=Z,468nm,1.6s
LFF La Frestale 100.68 315 *e*P Pdif 11 24 20.0 +8.7
LFF pmax pmax
comp=Z,234nm,1.6s
LFF La Frestale 100.68 315 *e*P Pdif 11 24 20.0 +8.7
comp=Z,234nm,1.6s
LDF La Druitiere 100.95 319 *e*P Pdif 11 24 20.3 +7.8
comp=Z,249nm,1.3s
LDF La Druitiere 100.95 319 *e*P Pdif 11 24 20.3 +7.8
LDF pmax pmax
comp=Z,125nm,1.3s
LDF La Druitiere 100.95 319 *e*P Pdif 11 24 20.3 +7.8
comp=Z,124nm,1.3s
DAG Danmarks Havn 100.97 348/ *i*P Pdif 11 24 20.3 +7.7
DAG pmax pmax
comp=Z,28nm,0.6s
DAG Danmarks Havn 100.97 348/ *i*P Pdif 11 24 20.3 +7.7
comp=Z,28nm,0.6s
SKP1 Kophill 101.05 322 *e*P Pdif 11 24 17.0 +4.1
CHUM Lake Minchumin 101.13 26 *e*Pdif Pdif 11 24 14.6 +1.3
comp=Z,514nm,1.4s
MFF Saint Martin d 101.16 316 *e*P Pdif 11 24 21.4 +8.0
comp=Z,197nm,1.1s
MFF Saint Martin d 101.16 316 *e*P Pdif 11 24 21.4 +8.0
MFF pmax pmax
comp=Z,99nm,1.1s
MFF Saint Martin d 101.16 316 *e*P Pdif 11 24 21.4 +8.0
comp=Z,99nm,1.1s
COLD Coldfoot 101.17 22 *e*Pdif Pdif 11 24 13.9 +0.4
comp=Z,200nm,1.1s
FLN La Foliniere 101.17 319 *e*P Pdif 11 24 21.3 +7.8
FLN *e*MLR MLR
comp=Z,1059µm,23.0s,MS8.0
FLN La Foliniere 101.17 319 *e*P Pdif 11 24 21.3 +7.8
FLN LR LR
comp=Z,1059µm,23.0s,MS8.3
CWF Charnwood Fore 101.23 323⇑ *e*P Pdif 11 24 17.5 +3.8
HPK Haverah Park 101.25 324⇑ *e*P Pdif 11 24 19.3 +5.5
ERTA Horta de San J 101.27 311 P Pdif 11 24 34.0 +20
EBIE Bielsa 101.28 312 P Pdif 11 24 34.4 +20
KBI1 Birley Grange 101.29 323 *e*P Pdif 11 24 23.4 +9.4
XSO Sourhope Farm 101.39 326 *e*P Pdif 11 24 22.1 +7.6
PPLA Purkeypile 101.41 27 *e*P Pdif 11 24 27.8 +13
LHO Holmfirth 101.44 324 *e*P Pdif 11 24 24.9 +10
GRR Gorron 101.46 318 *e*P Pdif 11 24 22.8 +8.0
comp=Z,229nm,1.2s
GRR Gorron 101.46 318 *e*P Pdif 11 24 22.8 +8.0
GRR pmax pmax
comp=Z,114nm,1.2s
GRR Gorron 101.46 318 *e*P Pdif 11 24 22.8 +8.0
comp=Z,114nm,1.2s
XAL Allendale 101.46 325 *e*P Pdif 11 24 21.9 +7.2
KIP Kipapa 101.47 69 *e*P Pdif 11 24 21.8 +7.0
KIP Kipapa 101.47 69 PFAKE 11 24 30.0 +15
KIP LR LR
comp=Z,483µm,22.0s,MS8.0
KWE Weaver Farm 101.51 323 *e*P Pdif 11 24 24.5 +9.5
MLA1 Latheron 101.52 329 *e*P Pdif 11 24 26.4 +11
MCD Coleburn Disti 101.59 328 *e*P Pdif 11 24 23.0 +7.6
BPAW Bear Paw Mtn. 101.65 25 *e*Pdif Pdif 11 24 15.3 -0.3
comp=Z,323nm,1.1s
SWN1 Swindon 101.69 322⇑ *e*P Pdif 11 24 19.3 +3.5
STNC Stoke 101.72 323⇑ *e*P Pdif 11 24 22.2 +6.3
ESAC San Caprasio 101.81 312 P Pdif 11 24 36.5 +20
EDI Edinburgh 101.84 326⇑ *e*P Pdif 11 24 23.4 +6.9
EMOS Mosqueruela 101.92 310 P Pdif 11 24 35.5 +19
ECK Cauldkaine Hil 101.93 325 *e*P Pdif 11 24 25.3 +8.5
ESK Eskdalemuir 101.95 326 *e*P Pdif 11 24 26.9 +10
ESK AMS AMS 12 21 07.2
comp=Z,782µm,20.0s,MS8.2
ESK Eskdalemuir 101.95 326 *e*P Pdif 11 24 28.5 +12
ESK LR LR
comp=Z,1305µm,21.0s,MS8.4
OHAK Old Harbor 102.01 32 *e*P Pdif 11 24 31.5 +14
HAE Alders End 102.08 322 *e*P Pdif 11 24 27.3 +10
JLP Les Platons 102.18 319 *e*P Pdif 11 24 25.4 +7.4
HLM1 Long Mynd 102.21 323 *e*P Pdif 11 24 27.2 +9.1
MDO Dochfour 102.21 328 *e*P Pdif 11 24 29.2 +11
JSA Saint Aubin 102.23 319⇑ *e*P Pdif 11 24 25.8 +7.6
KDAK Kodiak Island 102.28 32 P Pdif 11 24 17.0 -1.4
comp=Z,7.1nm,0.8s
KDAK PP PP 11 28 35.0 +4.4
comp=Z,106nm,1.1s,baz=304,slow=14,SNR=5.6
KDAK Kodiak Island 102.28 32 P Pdif 11 24 17.0 -1.4
KDAK P 11 24 32.8
KDAK PP PP 11 28 35.0 +4.4
KDAK LR LR
comp=Z,544µm,22.0s,MS8.0
HGH Gray Hill 102.29 322 *e*P Pdif 11 24 27.4 +9.0
MCH1 Michaelchurch 102.36 322⇑ *e*P Pdif 11 24 26.9 +8.2
ECHE Chera 102.36 309 P Pdif 11 24 40.3 +22
EALK Alkurruntz 102.44 313 P Pdif 11 24 39.4 +20
ELIZ Elizondo 102.47 313 P Pdif 11 24 39.4 +20
HTR Trewern Hill 102.51 322 *e*P Pdif 11 24 28.8 +9.4
PGBU Glenifferbraes 102.58 326⇑ *e*P Pdif 11 24 28.7 +8.9
SGMF Saint Gilles 102.60 318 *e*P Pdif 11 24 27.7 +7.9
MCK McKinley 102.62 25 P Pdif 11 24 12.4 -7.5
MCK McKinley 102.62 25 *e*Pdif Pdif 11 24 19.2 -0.7
comp=Z,366nm,1.2s
WPM1 Penmaenmawr 102.70 324 *e*P Pdif 11 24 31.9 +12
COLA College 102.75 24⇑ *i*P Pdif 11 24 19.5 -1.0
COLA *e*P 11 24 29.6
GIM North Isle of 102.85 325 *e*P Pdif 11 24 31.1 +10
YLL Llanberis 102.88 323 *e*P Pdif 11 24 32.0 +11
RRR Rubha Reidh 102.88 328 *e*P Pdif 11 24 30.7 +10
GAL1 Galloway 102.88 325⇑ *e*P Pdif 11 24 26.9 +5.8
KPL Plockton 102.91 328 P Pdif 11 24 29.9 +8.6
KPL Plockton 102.91 328⇑ *e*P Pdif 11 24 25.2 +4.0
KPL ⇑ *e*P 11 24 29.9
WME Myndd Eilian 102.91 324 *e*P Pdif 11 24 28.9 +7.7
RC01 Rabbit Creek A 102.96 28 *e*Pdif Pdif 11 24 34.3 +13
WLF1 Llynfaes 102.99 324⇑ *e*P Pdif 11 24 27.3 +5.7
WIM Isle of Man 103.00 325 *e*P Pdif 11 24 31.4 +10
OLHC Oulhaca 103.03 305 P Pdif 11 24 25.0 +3.3
QUIF Quistinic 103.05 318 *e*P Pdif 11 24 29.5 +7.7
YRE Yr Eifl 103.06 323 *e*P Pdif 11 24 33.2 +11
ROSF Rostrenen 103.06 318 *e*P Pdif 11 24 29.8 +7.9
comp=Z,121nm,1.4s
ROSF Rostrenen 103.06 318 *e*P Pdif 11 24 29.8 +7.9
ROSF pmax pmax
comp=Z,61nm,1.4s
ROSF Rostrenen 103.06 318 *e*P Pdif 11 24 29.8 +7.9
comp=Z,60nm,1.4s
ETOR Torete 103.08 311 P Pdif 11 24 42.2 +20
KAR1 Arisaig 103.09 327 *e*P Pdif 11 24 31.9 +10
YRC Rhoscolyn 103.10 324 *e*P Pdif 11 24 32.5 +10
PMR Palmer 103.11 28 *e*P Pdif 11 24 25.7 +3.6
PMR pmax pmax
comp=Z,46nm,2.5s
PMR Palmer 103.11 28 *e*Pdif Pdif 11 24 25.7 +3.6
comp=Z,46nm,2.5s
DYA Yadsworthy 103.18 321⇑ *e*P Pdif 11 24 26.9 +4.5
SEW Seward 103.34 29 P Pdif 11 24 36.7 +14
HTL Hartland 103.43 321⇑ *e*P Pdif 11 24 30.3 +6.8
EVIA Vianos 103.63 309 P Pdif 11 24 44.6 +20
KHU Kahuku 103.71 71 P Pdif 11 24 19.8 -5.0
GMM Mts of Mourne 103.71 325 *e*P Pdif 11 24 33.9 +9.1
ELAN Lanestosa 103.84 313 P Pdif 11 24 45.6 +20
DLF Lyons Farm 104.24 324 *e*P Pdif 11 24 47.2 +20
DMUB Kingscourt 104.34 325 *e*P Pdif 11 24 39.7 +12
ESDC Sonseca Array 104.65 310 Pdiff Pdif 11 24 47.2 +18
comp=Z,0.4nm,0.4s,baz=68,slow=5.0,SNR=4.2
ESDC PP PP 11 28 49.1 +0.1
comp=Z,24nm,1.1s,baz=64,slow=7.2,SNR=4.7
ESDC PKKP PKKPbc 11 40 36.1 +21
comp=Z,6.5nm,0.8s,baz=269,slow=3.7,SNR=4.9
ESDC Sonseca Array 104.65 310 P Pdif 11 24 48.1 +19
ESLA Sonseca Array 104.65 310 PFAKE 11 24 40.0 +11
ESLA LR LR
comp=Z,2869µm,19.0s,MS8.8
DCN Croghan 104.67 324 *e*P Pdif 11 24 45.5 +16
GUD Guadarrama 104.69 311 P Pdif 11 24 47.5 +18
MENT Mentasta 105.11 25 *e*P Pdif 11 24 43.4 +12
EARI Arriondas 105.12 314 P Pdif 11 24 44.3 +13
BMRM Bremner River 105.39 28 *e*Pdif Pdif 11 24 32.9 +0.6
BMRM *e*PKPdf PKiKP 11 28 43.0 -2.7
RAGM Ragged Mountai 105.54 28 *e*P Pdif 11 24 45.4 +12
PBRG Braganca 106.46 312 *e*Pdif Pdif 11 24 49.1 +12
PBRG *i*P 11 29 32.3
DAWY Dawson 106.46 24 *e*Pdif Pdif 11 24 39.4 +2.4
KIC Kosan Boka 106.50 275 *e*P Pdif 11 24 51.5 +14
comp=Z,598nm,1.9s
DBIC Dimbokro 106.62 276 Pdiff Pdif 11 24 49.4 +12
comp=Z,3.6nm,0.9s,baz=64,slow=7.2,SNR=3.3
DBIC PKKP PKKPbc 11 40 27.2 +19
comp=Z,14nm,0.9s,baz=209,slow=2.1,SNR=3.9
DBIC Dimbokro 106.62 276 P Pdif 11 24 49.4 +12
DBIC pmax pmax
comp=Z,4.0nm,0.9s
DBIC pmax pmax
comp=Z,15nm,0.9s
DBIC Dimbokro 106.62 276 Pdif Pdif 11 24 49.4 +12
DBIC PKKP PKKPbc 11 40 27.2 +19
DBIC LR LR
comp=Z,1448µm,19.0s,MS8.6
PAE Paea 106.65 110 *e*PKiKP PKiKP 11 28 47.9 -1.4
comp=Z,2µm,1.3s
PPT Papeete 106.67 110 *e*PKiKP PKiKP 11 28 48.4 -0.9
comp=Z,313nm,1.6s
PPT Papeete 106.67 110 *e*PP PP 11 29 05.7 +1.2
comp=Z,206µm,28.2s
PPT Papeete 106.67 110 *e*PS PS 11 38 27.3 +2.6
comp=Z,328µm,28.0s
PPT Papeete 106.67 110 *e*LQ 11 55 37.5
comp=Z,4173µm,39.2s
PPT *e*LR LR 12 00 07.1
comp=Z,1278µm,24.8s
LIC Lamto 106.77 275⇓ *i*P Pdif 11 25 03.0 +25
LIC *e*MLR MLR
comp=Z,1467µm,19.5s,MS8.2
LIC Lamto 106.77 275 *e*P Pdif 11 24 50.5 +12
comp=Z,73nm,1.1s
MVO Moncorvo 106.78 312 *e*Pdif Pdif 11 24 50.2 +12
MVO Moncorvo 106.78 312 *e*PP PP 11 29 03.7 -0.9
MVO Moncorvo 106.78 312 *e*LQ 11 55 13.3
MVO *e*LR LR 12 02 36.8
comp=Z,648µm,20.0s
TIC Toumodi 106.78 276 *e*P Pdif 11 24 54.7 +16
comp=Z,203nm,1.2s
TIAR Tiarei 106.89 110 *e*PKiKP PKiKP 11 28 48.6 -1.1
comp=Z,2µm,1.1s
TVO Taravao 106.94 110 *e*PKiKP PKiKP 11 28 48.6 -1.2
comp=Z,2µm,1.3s
EBAD Badajoz 107.12 309 P Pdif 11 24 58.2 +18
PBAR Barrancos 107.22 308 *e*PP PP 11 29 19.5 +11
PBAR Barrancos 107.22 308 *e*LQ 11 55 21.3
PBAR *e*LR LR 12 03 32.1
comp=Z,690µm,20.0s
PVRL Vila Real 107.27 312 *e*Pdif Pdif 11 25 01.2 +21
PVRL Vila Real 107.27 312 *e*PP PP 11 29 17.1 +8.9
MTE Manteigas 107.28 311 *e*Pdif Pdif 11 24 52.8 +12
MTE Manteigas 107.28 311 *e*PP PP 11 29 01.8 -6.6
MTE *i*P 11 38 49.7
MTE Manteigas 107.28 311 *e*LQ 11 55 23.5
MTE *e*LR LR 12 03 06.0
comp=Z,561µm,20.0s
PMRV Marv??o 107.31 310 *e*Pdif Pdif 11 24 51.3 +11
PMRV Marv??o 107.31 310 *e*PP PP 11 29 11.4 +2.8
PMRV Marv??o 107.31 310 *e*LQ 11 55 20.3
PMRV *e*LR LR 12 03 17.4
comp=Z,526µm,18.0s
PCBR Castelo Branco 107.32 310 *e*Pdif Pdif 11 24 56.6 +16
PCBR Castelo Branco 107.32 310 *e*PP PP 11 29 16.6 +7.9
ELOB Lobios 107.42 312 P Pdif 11 25 00.6 +19
PCAB Cabril 107.43 312 *e*Pdif Pdif 11 24 59.1 +18
PCAB *i*P 11 29 13.4
PVIS Viseu 107.49 311 *e*Pdif Pdif 11 24 56.9 +15
PVIS Viseu 107.49 311 *e*PP PP 11 29 12.6 +2.7
BORG Borgarnes 107.52 338 PFAKE 11 29 00.0 +10
BORG LR LR
comp=Z,1167µm,21.0s,MS8.4
PESTR Estremoz 107.55 309 *e*Pdif Pdif 11 24 52.0 +10
PESTR Estremoz 107.55 309 *e*PP PP 11 29 17.3 +6.9
PESTR Estremoz 107.55 309 *e*LQ 11 55 30.8
PESTR *e*LR LR 12 03 17.4
comp=Z,522µm,20.0s
SUMG Summit 107.66 348 *e*P Pdif 11 24 51.3 +9.0
comp=Z,40nm,1.0s
EGRO El Granado 107.66 308 P Pdif 11 25 00.6 +18
PVAQ Vaqueiros 107.86 308 *e*Pdif Pdif 11 24 53.0 +10

PVAQ Vaqueiros 107.86 308 *e*PP PP 11 29 21.9 +9.2
PVAQ Vaqueiros 107.86 308 *e*LQ 11 55 30.8
PVAQ *e*LR LR 12 03 52.5
comp=Z,682µm,22.0s
PBEJ Beja 107.89 308 *e*Pdif Pdif 11 24 50.0 +6.7
PBEJ *i* P 11 29 25.9
EMAZ Mazaricos 107.90 314 P Pdif 11 25 03.5 +20
EVO Evora 107.93 309 *e*PKIKP PKiKP 11 29 00.7 +10
comp=Z,319nm,1.5s
EVO *e*MLR MLR
comp=Z,573µm,22.2s,MS7.8
EVO Evora 107.93 309 *e*Pdif Pdif 11 24 54.7 +11
EVO Evora 107.93 309 *e*PP PP 11 29 21.6 +8.4
MEH Mehetia 108.03 110 *e*PKiKP PKiKP 11 28 50.9 -1.0
comp=Z,6µm,1.3s
PBDV Barranco-do-Ve 108.05 308 *e*Pdif Pdif 11 24 53.1 +9.0
PBDV Barranco-do-Ve 108.05 308 *e*LQ 11 55 44.5
PBDV *e*LR LR 12 03 54.3
comp=Z,648µm,18.0s
PTOM Tomar 108.06 310 *e*Pdif Pdif 11 25 03.1 +19
PTOM Tomar 108.06 310 *e*PP PP 11 29 16.3 +2.2
PNL Peninsula 108.27 28 *e*Pdif Pdif 11 24 47.6 +2.6
MORF Marmelete 108.61 308 *e*Pdif Pdif 11 24 59.1 +13
MORF Marmelete 108.61 308 *e*LR LR 12 09 34.1
comp=Z,836µm,18.0s
PTEO Sao Teotonio 108.63 308 *e*Pdif Pdif 11 25 04.3 +18
PTEO *i* P 11 28 44.2
HYT Haines Junctio 108.65 26 *e*Pdif Pdif 11 24 47.4 +0.7
PMOR Pomariorio Ree 108.71 107 *e*PKiKP PKiKP 11 28 52.0 -1.2
comp=Z,595nm,1.4s
LIS Lisbon 108.78 309 *e*P Pdif 11 24 56.9 +10
LIS *e*S SKSac 11 35 24.2 -0.9
LIS *e*S SKSac 11 35 26.6 +1.5
PFVI Vila Bisbo 108.78 308 *e*Pdif Pdif 11 24 57.4 +10
PFVI Vila Bisbo 108.78 308 *i* P PS 11 39 04.2 +19
PFVI Vila Bisbo 108.78 308 *e*LQ 11 53 28.0
PFVI *e*LR LR 12 00 40.2
comp=Z,670µm,22.0s
PMAFR Mafra 108.84 310 *e*Pdif Pdif 11 24 59.2 +12
PMAFR Mafra 108.84 310 *e*PP PP 11 29 32.2 +12
PMAFR Mafra 108.84 310 *e*LQ 11 55 58.9
PMAFR *e*LR LR 12 03 59.5
comp=Z,603µm,20.0s
VAH Vaihoa 108.93 108 *e*PKiKP PKiKP 11 28 52.1 -1.5
comp=Z,345nm,1.2s
PMSA Palmer Station 110.10 187 PKKP PKKPbc 11 40 16.6 +18
comp=Z,37nm,0.9s,baz=316,slow=6.1,SNR=4.8
SKAG Skagway 110.23 27 *e*Pdif Pdif 11 24 55.1 +1.3
SIT Sitka 111.33 29 *e*P Pdif 11 25 13.7 +15
DLBC Dease Lake 113.13 27 Pdiff Pdif 11 25 05.2 -1.4
baz=239,slow=12
DLBC PKiKP PKiKP 11 28 59.8 -0.5
baz=310,slow=8.0
DLBC Dease Lake 113.13 27 *e*Pdif Pdif 11 25 07.3 +0.6
DLBC PKPdf PKiKP 11 28 59.8 -0.5
CRAG Craig 113.15 30 *e*P Pdif 11 25 19.6 +13
SFJD Kangerlussuaq 114.65 348 PKhKP 11 28 54.6
baz=340,slow=8.7
SFJD PP PP 11 30 01.9 +1.7
comp=Z,45nm,0.8s,baz=6.8,slow=4.1,SNR=3.9
SFJD Kangerlussuaq 114.65 348↑ *i*P Pdif 11 25 23.2 +10
SFJD *i* S SP 11 39 40.0 +6.1
SFJD *i* 11 46 07.3
SFJD pmax pmax
comp=Z,80nm,1.4s
SFJD MLR MLR
comp=Z,1300µm,22.0s,MS8.5
SFJD Kangerlussuaq 114.65 348↑ *i*P Pdif 11 25 23.2 +10
comp=Z,80nm,1.4s
SFJD *i* 11 29 52.4
SFJD *i* S SP 11 39 40.0 +6.1
SFJD *e* 11 40 09.4
SFJD *i* 11 46 07.3
SFJD
comp=Z,1259µm,22.0s
ASCN Ascension 114.74 259 PFAKE 11 29 20.0 +15
ASCN LR LR
comp=Z,1085µm,20.0s,MS8.4
YKA Yellowknife Ar 116.29 18 Pdiff Pdif 11 25 29.3 +8.6
comp=Z,1.8nm,0.9s,baz=166,slow=34,SNR=3.9
YKA PKP PKPdf 11 29 05.3 -1.0
comp=Z,7.1nm,0.9s,baz=312,slow=3.8,SNR=3.4
YKA PP PP 11 30 05.2 -6.7
comp=Z,72nm,0.8s,baz=304,slow=1.5,SNR=6.1
YKA PKKPbc PKKPbc 11 39 47.8 +10
comp=Z,2.7nm,0.9s,baz=139,slow=4.3,SNR=4.2
YKA Yellowknife Ar 116.29 18 P Pdif 11 25 29.3 +8.6
YKA 11 29 05.3
YKA 11 39 47.8
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA pmax pmax
comp=Z,3.0nm,0.9s
BBB Bella Bella 117.36 32 PKP PKPdf 11 29 09.8 +1.2
comp=Z,7.0nm,0.6s,baz=249,slow=4.2,SNR=3.3
RKT Rikitea 118.57 119 *e*PKiKP PKiKP 11 29 10.5 -1.4
comp=Z,264nm,1.3s
RKT Rikitea 118.57 119 *e*PP PP 11 30 30.8 +1.7
comp=Z,129µm,28.5s
RKT Rikitea 118.57 119 *e*PS PS 11 40 19.1 +2.4
comp=Z,497µm,30.0s
RKT *e*SS SS 11 46 49.5 +4.7
comp=Z,729µm,33.0s
RKT Rikitea 118.57 119 *e*LQ 12 00 34.3
comp=Z,766µm,35.5s
RKT *e*LR LR 12 05 39.3
comp=Z,1024µm,49.0s
PSMN Pico do Norte, 121.38 311 *e*PKP PKPdf 11 29 23.9 +7.0
EFI East Falkland 121.39 195 PFAKE 11 29 30.0 +14
EFI LR LR
comp=Z,284µm,19.0s,MS7.9
CMLA Cha da Macela 121.45 312 *e*PKP PKPdf 11 29 31.2 +14
CMLA Cha da Macela 121.45 312 *e*PP PP 11 31 01.1 +13
CMLA *e*P PS 11 40 58.3 +16
CMLA *e*SS SS 11 47 23.0 +1.8
CMLA Cha da Macela 121.45 312 *i* LQ 12 01 07.9
CMLA *e*LR LR 12 07 29.0
CMLA Cha da Macela 121.45 312 PFAKE 11 29 30.0 +13
CMLA LR LR
comp=Z,474µm,21.0s,MS8.1
C03A Quillayute Air 121.55 35↓P Pdif 11 25 52.7 +8.6
baz=122
PDA Ponta Delgada 121.56 312 *e*PP PP 11 30 52.2 +2.9
PGC Sidney 121.78 33 *e*PKPdf PKPdf 11 29 17.5 +0.3
B04A Port Angeles 122.08 34↑P Pdif 11 25 54.6 +8.2
baz=122
A04A Legoe Bay, Lum 122.14 33↑P Pdif 11 25 55.2 +8.5
baz=122
NLWA Neilton Lookou 122.24 35↑P Pdif 11 25 56.4 +9.2
baz=122
NLWA Neilton Lookou 122.24 35 *e*PKPdf PKPdf 11 29 19.5 +1.3
A05A Maple Falls 122.32 32↑P Pdif 11 25 57.0 +10
baz=122
D03A Wishkah Elem. 122.45 35↓P Pdif 11 25 56.8 +8.7
baz=122
C04A Brinnon 122.57 34↓P Pdif 11 25 57.8 +9.2
baz=122
A06A Chilliwack 122.58 32↑P Pdif 11 25 58.0 +9.3
baz=123
B05A Bryant 122.74 33↓P Pdif 11 25 58.7 +9.3
baz=123
JCW Jim Creek 122.87 33 *e*PKPdf PKPdf 11 29 19.6 +0.2
E03A Lebam 122.88 36↓P Pdif 11 25 58.7 +8.7
baz=123
B06A Marblemount 122.92 33↑P Pdif 11 25 59.4 +9.2
baz=123
RPW Rockport 122.95 33 P PKPdf 11 29 19.7 +0.2
D04A Dobbs Creek Ra 123.00 35↑P Pdif 11 25 59.7 +9.2
baz=123
ROSA Rosais 123.07 314 *e*PKP pPKPdf 11 29 32.6 +0.9
BMW Boistfort Moun 123.11 35 *e*PKIKP PKPdf 11 29 21.3 +1.4
A07A Ashnola River, 123.19 32↓P Pdif 11 26 00.7 +9.3
baz=123
F03A Seaside 123.22 36↓P Pdif 11 26 00.9 +9.4
baz=123
C05A Tolt Reservoir 123.29 34↓P Pdif 11 26 00.9 +9.1
baz=123
PICO Pico 123.29 314 *e*PKP pPKPdf 11 29 33.3 +1.2
E04A Onalaska 123.34 35↓P Pdif 11 26 01.2 +9.1
baz=123
D05A Enumclaw 123.42 34↑P Pdif 11 26 01.5 +9.1
baz=123
CALA Caldeira 123.46 314 *e*PKP pPKPdf 11 29 32.6 +0.2
HEBO Mount Hebo 123.48 37 *e*PKPdf PKPdf 11 29 22.1 +1.5
C06A Tall Timber Ra 123.59 33↓P Pdif 11 26 02.3 +9.1
baz=124
H02A Toledo 123.62 38↓P Pdif 11 26 02.2 +8.9
baz=124
EDM Edmonston 123.67 24 *e*PKIKP PKPdf 11 29 20.9 +0.2
B07A Winthrop 123.68 32↑P Pdif 11 26 02.2 +8.7
baz=124
G03A Yamhill 123.71 37↑P Pdif 11 26 03.4 +10
TDL Tradedollar La 123.76 35 P PKPdf 11 29 22.2 +1.1
LON Longmire 123.77 34 *e*PKIKP PKPdf 11 29 22.0 +0.9
A08A Turner Farm, O 123.82 31↑P Pdif 11 26 02.9 +8.7
baz=124
F04A Amboy 123.88 36↓P Pdif 11 26 03.2 +8.7
baz=124
E05A Randle 123.91 35↓P Pdif 11 26 03.0 +8.5
baz=124
WPW White Pass 123.95 34 P PKPdf 11 29 22.2 +0.8
H03A Soap Creek Ran 124.05 37↓P Pdif 11 26 04.0 +8.8
baz=124
D06A Cle Elum 124.05 34↑P Pdif 11 26 04.3 +9.1
baz=124
TWW Teanaway 124.07 34 P PKPdf 11 29 22.7 +1.0
I02A Mapleton 124.07 38↓P Pdif 11 26 04.8 +9.5
baz=124
ETW Entiat 124.09 33 *e*PKPdf PKPdf 11 29 22.2 +0.5
COR Corvallis 124.09 37 *e*PKIKP PKPdf 11 29 23.2 +1.4
B08A Colville Reser 124.16 32↓P Pdif 11 26 04.9 +9.2
baz=124
A09A Danville 124.16 31↑P Pdif 11 26 04.6 +8.9
baz=124
C07A Waterville 124.18 33↓P Pdif 11 26 05.5 +10
baz=124
TBM Table Mountain 124.20 34 P PKPdf 11 29 23.0 +1.0
G04A Mulino 124.25 36↓P Pdif 11 26 05.1 +9.0
baz=124
K01A Sixes 124.28 40↓P Pdif 11 26 05.8 +10
baz=124
KEBM Edson Butte 124.34 40 *e*PKPdf PKPdf 11 29 23.8 +1.5
E06A Yakima 124.36 34↑P Pdif 11 26 05.8 +9.2
baz=124
EBG Ellensburg 124.37 34 P PKPdf 11 29 22.8 +0.5
I03A Eugene 124.43 38↑P Pdif 11 26 06.5 +10
baz=124
F05A White Salmon 124.46 35↑P Pdif 11 26 07.2 +10
baz=124
FCC Fort Churchill 124.52 10 *e*PKIKP PKPdf 11 29 22.7 +0.5
D07A Quincy 124.53 33↓P Pdif 11 26 07.2 +10
baz=124
J02A Umpqua 124.56 39↓P Pdif 11 26 07.6 +10
baz=124
VLL Laurance Lake 124.57 36 P PKPdf 11 29 23.9 +1.2
C08A Higginbotham F 124.67 32↓P Pdif 11 26 07.2 +9.3
baz=125
HOOD Mount Hood Mea 124.67 36 *e*PKPdf PKPdf 11 29 23.8 +0.9
A10A Northport 124.68 30↑P Pdif 11 26 07.2 +9.2
baz=125
H04A Detroit Lake 124.71 37↑P Pdif 11 26 04.9 +6.8
baz=125
B09A Rice 124.74 31↓P Pdif 11 26 06.5 +8.2
baz=125
BROR Big Rock Looko 124.78 37 P PKPdf 11 29 23.9 +0.8
G05A Wamic 124.91 36↓P Pdif 11 26 07.0 +8.0
baz=125
F06A Goldendale 124.92 35↓P Pdif 11 26 06.3 +7.2
baz=125
K02A Glendale 124.92 39↑P Pdif 11 26 06.2 +7.1
baz=125
J03A Ideyld Park 124.94 38↑P Pdif 11 26 06.1 +7.0
baz=125
E07A Sunnyside 124.97 34↓P Pdif 11 26 06.9 +7.6
baz=125
M01C Crescent City 124.98 41↑P Pdif 11 26 06.7 +7.4
baz=125
I04A Tendick Farm, 125.06 38↓P Pdif 11 26 07.3 +7.7
baz=125
C09A Chrisman Ranch 125.06 32↑P Pdif 11 26 07.3 +7.6
baz=125
HBO Huckleberry Mo 125.08 38 P PKPdf 11 29 26.8 +3.0
OD2 Odessa Site #2 125.09 32 P PKPdf 11 29 24.0 +0.4
L02A Cave Junction 125.16 40↓P Pdif 11 26 08.1 +7.9
baz=125
D08A Wollman Farm, 125.18 33↑P Pdif 11 26 07.8 +7.6
baz=125
BKCOR Black Crater 125.21 37 P PKPdf 11 29 25.1 +1.1
WRD Warden 125.22 33 P PKPdf 11 29 24.7 +0.8
RSW Rattlesnake Hi 125.22 34 *e*PKPdf PKPdf 11 29 25.3 +1.3
CROR Criterion Ridg 125.25 36 P PKPdf 11 29 24.9 +0.9
HAWA Hanford 125.25 34 *e*PKPdf PKPdf 11 29 24.9 +0.9
HAWA LR LR
comp=Z,979µm,21.0s,MS8.4
A11A Hall Mountain, 125.29 30↑P Pdif 11 26 08.4 +7.7
baz=125
B10A Chitwood Farm, 125.29 31↑P Pdif 11 26 08.5 +7.8
baz=125
H05A Madras 125.30 36↑P Pdif 11 26 08.3 +7.6
baz=125
G06A Carlson Farm, 125.31 35↓P Pdif 11 26 09.1 +8.3
baz=125
F07A Phinny Hill Vi 125.33 34↓P Pdif 11 26 09.1 +8.2
baz=125
HUMO Hull Mountain 125.34 39↓P Pdif 11 26 09.3 +8.3
baz=125
HUMO Hull Mountain 125.34 39 *e*PKPdf PKPdf 11 29 25.5 +1.2
HUMO LR LR
comp=Z,960µm,22.0s,MS8.4
E08A Dider Farm, El 125.45 33↓P Pdif 11 26 09.9 +8.5
baz=125
D09A Jones Farm, Ri 125.51 32↓P Pdif 11 26 10.4 +8.7
baz=126
J04A Umpqua Nationa 125.54 38↓P Pdif 11 26 10.9 +9.1
baz=126
I05A Bend 125.54 37↓P Pdif 11 26 10.8 +8.9
baz=126
JCC Jacoby Creek 125.55 42↓P Pdif 11 26 10.8 +8.9
baz=126
C10A Spilker Farm, 125.56 31↑P Pdif 11 26 11.0 +9.1
baz=126
B11A Sandpoint 125.63 30↓P Pdif 11 26 10.1 +7.9
baz=126
A12A Yaak River Ran 125.65 29↓P Pdif 11 26 11.2 +8.9
baz=126
H06A Lindquist Farm 125.77 36↑P Pdif 11 26 11.9 +9.1
baz=126
G07A Ruggs Ranch, H 125.84 35↑P Pdif 11 26 11.5 +8.4
baz=126
E09A Wood Farm, Sta 125.94 33↑P Pdif 11 26 12.5 +8.9
baz=126
YBH Yreka Blue Hor 125.95 40 Pdiff Pdif 11 26 09.3 +5.7
comp=Z,0.4nm,0.2s,baz=227,slow=19,SNR=4.2
YBH PKP PKPdf 11 29 26.1 +0.6
comp=Z,7.3nm,0.8s,baz=69,slow=3.0,SNR=4.8
YBH PP PP 11 31 21.4 +2.9
comp=Z,42nm,1.0s,baz=167,slow=18,SNR=1.1
YBH Yreka Blue Hor 125.95 40 P Pdif 11 26 09.3 +5.6
YBH 11 29 26.1
YBH 11 31 21.4
YBH pmax pmax
comp=Z,7.0nm,0.8s
YBH pmax pmax
comp=Z,42nm,1.0s
YBH Yreka Blue Hor 125.95 40↑P Pdif 11 26 12.4 +8.8
baz=126
YBH Yreka Blue Hor 125.95 40 Pdif Pdif 11 26 09.3 +5.7
YBH PKP PKPdf 11 29 26.1 +0.6
YBH PP PP 11 31 21.4 +2.9
YBH LR LR
comp=Z,350µm,21.0s,MS8.0
BUOR Burton Butte 125.96 39 P PKPdf 11 29 26.4 +0.9
B12A Libby 126.00 30↓P Pdif 11 26 12.7 +8.9
baz=126
O01C Eel River Cons 126.02 42↓P Pdif 11 26 12.4 +8.5
baz=126
N02C Big Bar 126.03 41↓P Pdif 11 26 12.4 +8.4
baz=126
F08A Pendleton 126.03 34↓P Pdif 11 26 12.8 +8.8
baz=126
M02C Callahan 126.03 40↑P Pdif 11 26 12.7 +8.7
baz=126
J05A Fort Rock 126.05 38↓P Pdif 11 26 12.3 +8.3
baz=126
D10A Wagner Farm, O 126.06 32↓P Pdif 11 26 12.2 +8.1
baz=126
C11A Tepee Creek (N 126.08 31↑P Pdif 11 26 12.6 +8.4
baz=126
K04A Chilquin 126.11 39↑P Pdif 11 26 12.9 +8.6
baz=126
G08A Pilot Rock 126.23 35↓P Pdif 11 26 12.9 +8.0
baz=126
L04A Klamath Falls 126.24 39↓P Pdif 11 26 13.5 +8.5
baz=126
A13A Flathead Natio 126.25 29↓P Pdif 11 26 13.2 +8.2
baz=126
LNOR Lincton Mounta 126.26 34 *e*PKIKP PKPdf 11 29 26.4 +0.5
I06A Prineville 126.30 37↑P Pdif 11 26 13.3 +8.1
baz=126
H07A Lands Inn, Kim 126.30 36↑P Pdif 11 26 13.7 +8.5
baz=126
KCPM Cahto Peak 126.40 43 *e*PKPdf PKPdf 11 29 27.7 +1.3
WALA Waterton Lakes 126.40 28 *e*PKPdf PKPdf 11 29 28.4 +2.3
KIPM Iron Peak 126.41 42 *e*PKPdf PKPdf 11 29 27.7 +1.3
FFC Flin Flon 126.43 17 *e*PKIKP PKPdf 11 29 26.2 +0.2
FFC Flin Flon 126.43 17 PFAKE 11 29 40.0 +14
FFC LR LR
comp=Z,2161µm,22.0s,MS8.8
M04C Macdoel 126.48 40↓P Pdif 11 26 15.1 +9.1
baz=126
E10A Myers Farm, Un 126.51 32↑P Pdif 11 26 13.6 +7.4
baz=126
D11A Klaveano Farm, 126.56 31↑P Pdif 11 26 13.8 +7.4
baz=126
C12B Naegeli Ranch, 126.56 30↓P Pdif 11 26 14.5 +8.2
baz=126
F09A S2 Ranch, Elgi 126.56 34↑P Pdif 11 26 15.0 +8.7
baz=126
K05A Summer Lake 126.57 38↑P Pdif 11 26 15.3 +8.9
baz=126
M03C McCloud 126.57 40↓P Pdif 11 26 15.5 +9.2
baz=126
B13A Whitefish 126.61 29↓P Pdif 11 26 15.0 +8.4
baz=127
I07A Izee 126.63 36↑P Pdif 11 26 14.7 +8.0
baz=127
WDC Whiskeytown Da 126.65 41 *e*PKIKP PKPdf 11 29 27.3 +0.4
WDC Whiskeytown Da 126.65 41↓P Pdif 11 26 15.6 +8.8
baz=127
O02C Red Bluff 126.69 42↓P Pdif 11 26 15.4 +8.5
baz=127
J06A Christmas Vall 126.72 37↑P Pdif 11 26 16.5 +9.4
baz=127
F10A Beach Ranch, E 126.77 33↑P Pdif 11 26 16.8 +9.5
baz=127
H08A Prairie City 126.86 35↓P Pdif 11 26 16.9 +9.2
baz=127
G09A Cove 126.90 34↓P Pdif 11 26 16.8 +8.9
baz=127
K06A Valley Falls 126.92 38↓P Pdif 11 26 17.2 +9.3
baz=127
L05A Lakeview 126.97 39↑P Pdif 11 26 17.9 +10
baz=127
GASB Alder Springs 127.00 42↓P Pdif 11 26 17.6 +9.3
baz=127
C13A Hot Springs 127.03 30↑P Pdif 11 26 18.1 +10
baz=127
D12A Red Ives Fores 127.06 31↓P Pdif 11 26 18.7 +10
baz=127
E11A Bogner Ranch, 127.07 32↓P Pdif 11 26 18.8 +10
baz=127
HOPS Hopland 127.08 43↑P Pdif 11 26 19.0 +10
baz=127
HOPS Hopland 127.08 43 *e*PKPdf PKPdf 11 29 28.8 +1.1
HOPS LR LR
comp=Z,811µm,22.0s,MS8.4
M05C Lookout 127.15 40↓P Pdif 11 26 18.4 +9.4
baz=127
J07A Hines 127.16 37↑P Pdif 11 26 19.1 +10
baz=127
G10A Bishop Farm, J 127.26 34↓P Pdif 11 26 18.4 +8.9
baz=127
I08A Drewsey 127.28 36↑P Pdif 11 26 18.6 +9.0
baz=127
H09A Durkee 127.34 34↑P Pdif 11 26 18.6 +8.8
baz=127
E12A Beaver Dam Sad 127.37 32↑P Pdif 11 26 19.2 +9.2
baz=127
C14A Swan Lake 127.38 29↑P Pdif 11 26 19.0 +9.1
baz=127
MOD Modoc 127.38 39↑P Pdif 11 26 18.9 +8.9
baz=127
MOD Modoc 127.38 39 PFAKE 11 29 40.0 +12
MOD LR LR
comp=Z,1192µm,21.0s,MS8.6
F11A Grangeville 127.40 32↑P Pdif 11 26 19.3 +9.2
baz=127
BMO Blue Mountains 127.43 34 PFAKE 11 29 40.0 +12
BMO LR LR
comp=Z,1018µm,22.0s,MS8.5
D13A Huson 127.49 30↑P Pdif 11 26 20.0 +9.5
baz=127
MNRC McLaughlin Nat 127.56 43↓P Pdif 11 26 20.7 +10
baz=128
K07A Rock Creek Ran 127.59 37↑P Pdif 11 26 20.8 +10
baz=128
MCCM Marconi Confer 127.62 44↑P Pdif 11 26 20.8 +10
baz=128
MCCM Marconi Confer 127.62 44 *e*PKPdf PKPdf 11 29 27.7 -1.1
MCCM LR LR
comp=Z,599µm,21.0s,MS8.2
NSHM Sehlena R 127.63 43 *e*PKPdf PKPdf 11 29 32.3 +3.5
G11A Walters Elk Ra 127.66 33↑P Pdif 11 26 20.8 +10
baz=128
M06C Likely Place G 127.66 40↑P Pdif 11 26 19.8 +8.6
baz=128
J08A Circle Bar Ran 127.66 36↑P Pdif 11 26 21.0 +10
baz=128
I09A Lost Marbles R 127.72 35↑P Pdif 11 26 20.4 +8.9
baz=128
O04C Chester 127.73 41↑P Pdif 11 26 21.0 +9.4
baz=128
FARB Farallon Islan 127.75 45↓P Pdif 11 26 20.6 +9.0
baz=128
ELFS Eagle Lake Fie 127.81 40↓P Pdif 11 26 20.4 +8.5
baz=128
CVS Carmenet Viney 127.81 44↓P Pdif 11 26 21.4 +9.5
baz=128
ORV Oroville 127.86 42↓P Pdif 11 26 21.5 +9.4
baz=128
H10A Noah's Angus R 127.91 34↓P Pdif 11 26 21.9 +10
baz=128
L07A Adell 127.92 38↓P Pdif 11 26 21.3 +8.9
baz=128
MSO Missoula 127.93 30 *e*PKPdf PKPdf 11 29 29.7 +0.6
F12A Elk City 127.97 32↑P Pdif 11 26 22.4 +10
baz=128
D14A Greenough 127.97 30↑P Pdif 11 26 21.6 +9.0
baz=128
Q03C Winters 127.97 43↓P Pdif 11 26 22.1 +9.4
baz=128
K08A Mann Creek Ran 128.02 37↓P Pdif 11 26 22.8 +10
baz=128
O05C Quincy 128.03 41↓P Pdif 11 26 23.1 +10
baz=128
E13A Victor 128.06 31↓P Pdif 11 26 22.7 +10
baz=128
J09A Fry Pan Ranch, 128.09 36↓P Pdif 11 26 23.0 +10
baz=128
I10A Payette 128.19 35↑P Pdif 11 26 23.2 +10
baz=128
H11A Donnelly 128.24 33↑P Pdif 11 26 23.3 +9.5
baz=128
Q04C Lincoln 128.31 43↓P Pdif 11 26 22.7 +8.6
baz=128
N06A Buffalo Meadow 128.31 40↓P Pdif 11 26 23.4 +9.3
baz=128
M07A Soldier Meadow 128.38 39↑P Pdif 11 26 23.7 +9.3
baz=128
BDM Black Diamond 128.41 44↑P Pdif 11 26 24.1 +9.5
baz=128
JRSC Jasper Ridge 128.42 45↑P Pdif 11 26 23.9 +9.3
baz=128
L08A Fields 128.42 37↓P Pdif 11 26 24.0 +9.3
baz=128
F13A Darby 128.43 31↓P Pdif 11 26 23.8 +9.1
baz=128
E14A Clinton 128.44 30↓P Pdif 11 26 23.2 +8.5
baz=128
BEKR Beckwourth 128.45 41↓P Pdif 11 26 24.0 +9.2
baz=128
D15A Lincoln 128.48 29↑P Pdif 11 26 23.6 +8.7
baz=128
K09A Rome 128.50 36↓P Pdif 11 26 24.2 +9.2
baz=128
P05C Yuba Gap, Truc 128.58 42↑P Pdif 11 26 24.5 +9.2
baz=129
J10A Berg Farm, Mel 128.61 35↓P Pdif 11 26 24.8 +9.3
baz=129

O06A Flanigan 128.63 40 ⇓P Pdif 11 26 25.0 +9.4
baz=129
WENL Wente Vineyard 128.65 44 ⇑P Pdif 11 26 26.0 +10
baz=129
I11A Placerville 128.77 34 ⇓P Pdif 11 26 26.0 +10
baz=129
LAVA Lava Cap Winer 128.78 42 ⇓P Pdif 11 26 25.9 +10
baz=129
N07B Gerlach 128.84 39 ⇑P Pdif 11 26 25.8 +9.3
baz=129
P06A Stead Airport, 128.85 41 ⇑P Pdif 11 26 25.9 +9.4
baz=129
E15A Deer Lodge 128.85 30 ⇓P Pdif 11 26 25.6 +9.0
baz=129
SCHQ Schefferville 128.89 351 PKP PKPdf 11 29 33.0 +2.3
comp=Z,31nm,1.1s,baz=2.9,slow=0.9,SNR=3.6
SCHQ Schefferville 128.89 351 PKP PKPdf 11 29 33.0 +2.3
R04C Big Horse Ranc 128.90 43 ⇑P Pdif 11 26 25.6 +8.8
baz=129
F14A Wisdom 128.91 31 ⇓P Pdif 11 26 25.9 +9.1
baz=129
L09A Wilkinson Ranc 128.93 37 ⇓P Pdif 11 26 26.0 +9.1
baz=129
G13A Cobalt 128.95 32 ⇓P Pdif 11 26 26.7 +10
baz=129
K10A MacKenzie Ranc 128.95 36 ⇑P Pdif 11 26 26.2 +9.2
baz=129
H12A Diamond D Ranc 128.97 33 ⇓P Pdif 11 26 27.2 +10
baz=129
EGMT Eagleton 129.06 27 ePKPdf PKPdf 11 29 31.4 +0.2
EGMT LR LR
comp=Z,1288µm,20.0s,MS8.6
WCN Washoe City 129.14 41 ⇑P Pdif 11 26 27.5 +10
baz=129
MFID Camas Ranch 129.16 35 ⇓P Pdif 11 26 27.5 +10
baz=129
PAHR Pah Rah Range 129.17 41 ePKPdf PKPdf 11 29 33.2 +1.5
O07A Toulon 129.25 40 ⇓P Pdif 11 26 28.0 +10
baz=129
R05C Kirkwood Meado 129.25 42 ⇓P Pdif 11 26 28.0 +10
baz=129
G14A Jackson 129.25 31 ⇑P Pdif 11 26 28.1 +10
baz=129
PACP Pacheco Peak 129.27 45 ⇑P Pdif 11 26 28.6 +10
baz=129
SAO San Andreas Ge 129.28 45 ePKIKP PKPdf 11 29 31.6 -0.4
H13A Challis 129.28 33 ⇓P Pdif 11 26 28.2 +10
baz=129
F15A Butte 129.34 30 ⇑P Pdif 11 26 28.2 +10
baz=129
N08A GE Springer Mi 129.37 39 ⇑P Pdif 11 26 28.2 +9.3
baz=129
CMB Columbia Colle 129.38 43 ePKIKP PKPdf 11 29 33.3 +1.2
CMB MLR MLR
comp=Z,484µm,21.0s,MS8.2
CMB Columbia Colle 129.38 43 ⇑P Pdif 11 26 29.1 +10
baz=129
M09A Marrel Ranch, 129.41 38 ⇑P Pdif 11 26 28.8 +10
baz=129
K11A Parker Ranch, 129.44 35 ⇑P Pdif 11 26 28.1 +9.0
baz=129
P07A Fallon 129.58 40 ⇑P Pdif 11 26 29.4 +10
baz=130
L10A Juniper Basin 129.61 36 ⇓P Pdif 11 26 29.6 +10
baz=130
O08A Rochester Mine 129.63 39 ⇓P Pdif 11 26 29.4 +9.4
baz=130
J12A Stokes Ranch, 129.67 34 ⇑P Pdif 11 26 30.2 +10
baz=130
N09A Rock Creek Ran 129.70 38 ⇑P Pdif 11 26 29.7 +9.4
baz=130
H14A Leadore 129.72 32 ⇓P Pdif 11 26 30.5 +10
baz=130
R06C Coleville 129.76 42 ⇑P Pdif 11 26 30.7 +10
baz=130
S05C Merced 129.77 44 ⇓P Pdif 11 26 31.0 +10
baz=130
V03C Hunter Liggett 129.78 46 ⇓P Pdif 11 26 31.5 +11
baz=130
I13A Wildhorse Cree 129.79 33 ⇑P Pdif 11 26 31.2 +10
baz=130
G15A Dillon 129.81 31 ⇓P Pdif 11 26 31.7 +11
baz=130
S06C San Francisco 129.83 43 ⇓P Pdif 11 26 30.7 +10
baz=130
HLID Hailey 129.85 34 ⇓P Pdif 11 26 31.5 +11
baz=130
HLID Hailey 129.85 34 PFAKE 11 29 40.0 +7.1
HLID LR LR
comp=Z,939µm,22.0s,MS8.4
BOZ Bozeman (W) 129.90 30 ePKIKP PKPdf 11 29 33.5 +0.6
BOZ MLR MLR
comp=Z,896µm,19.0s,MS8.5
M10A LL. Ranch, Tu 129.91 37 ⇓P Pdif 11 26 31.3 +10
baz=130
U04C Hernandez Rese 129.94 45 ⇑P Pdif 11 26 32.4 +11
baz=130
Q07A Schurz 129.96 41 ⇓P Pdif 11 26 31.9 +10
baz=130
L11A Cat Creek Ranc 129.98 36 ⇓P Pdif 11 26 32.2 +11
baz=130
P08A Dixie Valley 130.01 40 ⇑P Pdif 11 26 32.0 +10
baz=130
J13A Cove Ranch, Pi 130.09 34 ⇑P Pdif 11 26 33.0 +11
baz=130
H15A Lima 130.10 32 ⇑P Pdif 11 26 32.7 +11
baz=130
BMN Battle Mountai 130.13 39 ePKIKP PKPdf 11 29 35.1 +1.6
BMN MLR MLR
comp=Z,825µm,21.0s,MS8.4
I14A Mackay 130.14 33 ⇑P Pdif 11 26 32.8 +11
baz=130
K12A Draper Farm, C 130.18 35 ⇓P Pdif 11 26 33.6 +11
baz=130
R07C Lee Vining 130.26 42 ⇑P Pdif 11 26 33.2 +10
baz=130
O09A Fish Creek Ran 130.31 39 ⇓P Pdif 11 26 32.5 +10
baz=130
PKD Parkfield 130.31 45 ⇑P Pdif 11 26 32.9 +10
baz=130
T06C Millerton Lake 130.37 44 ⇓P Pdif 11 26 33.5 +10
baz=130
N10A Dunphy 130.41 38 ⇓P Pdif 11 26 33.1 +10
baz=130
M11A Holland Ranch, 130.41 37 ⇓P Pdif 11 26 33.8 +10
baz=130
L12A House Creek Ra 130.42 35 ⇓P Pdif 11 26 33.8 +10
baz=130
U05C Westside ANR, 130.42 45 ⇓P Pdif 11 26 35.0 +12
baz=130
J14A Carey 130.50 33 ⇓P Pdif 11 26 34.3 +10
baz=130
NVAR Mina Array Bea 130.57 41 PKP PKPdf 11 29 36.8 +2.4
comp=Z,9.2nm,0.7s,baz=271,slow=2.9,SNR=6.5
Q08A Gabbs 130.57 41 ⇑P Pdif 11 26 34.7 +10
baz=130
I15A Monteview 130.61 32 ⇑P Pdif 11 26 35.3 +11
baz=131
K13A Stover Farm, H 130.63 34 ⇑P Pdif 11 26 36.0 +12
baz=131
MLAC Mammoth Lakes 130.64 43 ⇑P Pdif 11 26 36.2 +12
baz=131
O10A Cortez Mining, 130.66 38 ⇑P Pdif 11 26 35.2 +11
baz=131
PTRM Twissleman Ran 130.69 45 ePKPdf PKPdf 11 29 35.6 +0.9
P09A Austin 130.69 39 ⇑P Pdif 11 26 35.5 +11
baz=131
R08A Mina 130.74 41 ⇓P Pdif 11 26 36.4 +11
baz=131
H16A Russell Place, 130.76 31 ⇑P Pdif 11 26 35.9 +11
baz=131
V05C Boulder Hill, 130.81 45 ⇓P Pdif 11 26 36.6 +11
baz=131
N11A Elko Archery C 130.81 37 ⇓P Pdif 11 26 35.3 +10
baz=131
YMR Madison River 130.93 30 ePKPdf PKPdf 11 29 36.5 +1.7
M12A Wells 130.94 36 ⇑P Pdif 11 26 35.9 +10
baz=131
DGMT Dagmar 131.00 22 ePKPdf PKPdf 11 29 35.2 +0.3
DGMT LR LR
comp=Z,1451µm,21.0s,MS8.7
HELL Mitchell Peak 131.01 44 ⇑P Pdif 11 26 37.4 +11
baz=131
SMMC Simmler 131.01 46 ⇑P Pdif 11 26 38.1 +12
baz=131
J15A Blackfoot 131.04 33 ⇓P Pdif 11 26 37.3 +11
baz=131
RCTC Rector, Farmer 131.05 44 ⇓P Pdif 11 26 38.1 +12
baz=131
L13A Double Diamond 131.07 35 ⇓P Pdif 11 26 37.4 +11
baz=131
Q09A Carvers 131.07 40 ⇑P Pdif 11 26 36.8 +10
baz=131
P10A Eureka 131.08 39 ⇑P Pdif 11 26 37.2 +11
baz=131
ELK Elko 131.16 37 PKP PKPdf 11 29 37.1 +1.6
comp=Z,8.0nm,0.7s,baz=292,slow=5.9,SNR=6.5
ELK PP PP 11 32 01.6 +9.1
comp=Z,47nm,1.0s,baz=332,slow=8.5,SNR=1.3
ELK Elko 131.16 37 ePKPdf PKPdf 11 29 37.6 +2.2
ELK LR LR
comp=Z,1022µm,22.0s,MS8.5
S08C White Mtn Res 131.16 42 ⇓P Pdif 11 26 37.7 +11
baz=131
K14A Jones Ranch, D 131.21 34 ⇓P Pdif 11 26 38.1 +11
baz=131
N12A Clover Valley, 131.21 37 ⇑P Pdif 11 26 37.3 +10
baz=131
I16A Newdale 131.22 31 ⇓P Pdif 11 26 37.2 +10
baz=131
O11A Cowboy Ranch, 131.28 38 ⇑P Pdif 11 26 38.3 +11
baz=131
LKWY Lake 131.28 30 PKIKP PKPdf 11 29 39.9 +4.3
LKWY Lake 131.28 30 PFAKE 11 29 50.0 +14
LKWY LR LR
comp=Z,2211µm,20.0s,MS8.9
PKM Peak Mountain 131.34 46 ⇓P Pdif 11 26 38.4 +11
baz=131
TIN Tinemaha 131.36 43 ⇓P Pdif 11 26 38.8 +11
baz=131
VES Vestal, Richgr 131.40 45 ⇑P Pdif 11 26 38.1 +10
baz=131
M13A Montello 131.41 36 ⇑P Pdif 11 26 38.8 +11
baz=131
RLMT Red Lodge 131.44 29 ePKPdf PKPdf 11 29 37.4 +1.5
K15A Arbon 131.47 33 ⇓P Pdif 11 26 39.1 +11
baz=131
TPH Tonopah 131.47 41 ePKIKP PKPdf 11 29 38.2 +2.1
TPH MLR MLR
comp=Z,642µm,22.0s,MS8.3
FLWY Flagg Ranch 131.48 31 ePKPdf PKPdf 11 29 38.4 +2.5
R09A Tonopah 131.48 41 ⇑P Pdif 11 26 38.9 +11
baz=132
L14A Malta 131.51 34 ⇑P Pdif 11 26 38.4 +10
baz=132
P11A Circle Ranch, 131.56 39 ⇑P Pdif 11 26 38.9 +10
baz=132
J16A Bone 131.56 32 ⇓P Pdif 11 26 39.2 +11
baz=132
DCID1 Drake Creek 131.57 32 ePKPdf PKPdf 11 29 38.0 +1.8
Q10A Clear Creek Ra 131.58 40 ⇓P Pdif 11 26 39.5 +11
baz=132
LAO LASA Array 131.62 25 ePKPdf PKPdf 11 29 37.2 +1.1
LAO LR LR
comp=Z,1359µm,21.0s,MS8.6
S09A Goldfield 131.67 41 ⇓P Pdif 11 26 39.6 +11
baz=132
RRI2 Red Ridge 131.67 32 ePKPdf PKPdf 11 29 37.3 +1.0
MOOW Moose Ponds 131.69 31 ePKPdf PKPdf 11 29 37.1 +0.7
N13A Wendover, West 131.71 36 ⇓P Pdif 11 26 39.9 +11
baz=132
O12A Currie 131.75 37 ⇑P Pdif 11 26 39.3 +10
baz=132
TPAW Teton Pass 131.76 31 ePKPdf PKPdf 11 29 38.5 +2.0
CWC Cottonwood Cre 131.78 43 ⇓P Pdif 11 26 40.3 +11
baz=132
M14A Sheep Mountain 131.79 35 ⇑P Pdif 11 26 39.9 +10
baz=132
LOHW Long Hollow 131.86 31 ePKPdf PKPdf 11 29 38.3 +1.6
K16A Soda Springs 131.88 33 ⇓P Pdif 11 26 40.5 +10
baz=132
SNOW Snow King Moun 131.88 31 ePKPdf PKPdf 11 29 37.8 +1.1
REDW Red Top Meadow 131.90 32 ePKPdf PKPdf 11 29 38.0 +1.3
BSC Santa Cruz Isl 131.91 47 ⇑P Pdif 11 26 40.8 +11
baz=132
ISA Isabella 131.91 45 ePKIKP PKPdf 11 29 38.1 +1.1
ISA MLR MLR
comp=Z,706µm,21.0s,MS8.3
ISA Isabella 131.91 45 ⇓P Pdif 11 26 39.9 +10
baz=132
ARVC Arvin 131.93 45 ⇑P Pdif 11 26 39.9 +10
baz=132
HVU Hansel Valley 131.94 34 ePKIKP PKPdf 11 29 37.8 +0.9
R10A Warm Springs 131.95 40 ⇑P Pdif 11 26 40.2 +10
baz=132
GRAC Grapevine Rang 131.97 42 ⇑P Pdif 11 26 40.6 +10
baz=132
S10A Tonopah Range, 131.97 41 ⇓P Pdif 11 26 40.6 +10
baz=132
L15A Malad City 132.00 34 ⇓P Pdif 11 26 39.6 +9.0
baz=132
Q11A Duckwater 132.04 39 ⇑P Pdif 11 26 40.8 +10
baz=132
ULM Lac du Bonnet 132.10 15 Pdiff Pdif 11 26 40.4 +9.4
comp=Z,1.9nm,0.8s,baz=329,slow=11,SNR=1.5
ULM PKhKP 11 29 32.7
comp=Z,21nm,0.8s,baz=321,slow=5.7,SNR=4.8
ULM PP PP 11 32 02.6 +4.8
comp=Z,63nm,0.8s,baz=334,slow=2.4,SNR=1.1
P12A McGill 132.13 38 ⇓P Pdif 11 26 40.5 +9.4
baz=132
AHID Auburn Hatcher 132.19 32 ePKPdf PKPdf 11 29 36.3 -1.0
AHID LR LR
comp=Z,1086µm,19.0s,MS8.6
DAC Darwin (Calif) 132.20 43 PFAKE 11 29 50.0 +12
DAC LR LR
comp=Z,587µm,20.0s,MS8.3
OSI Osito Adit 132.26 46 ⇑P Pdif 11 26 42.0 +10
baz=132
BLG Laguna Peak 132.26 47 ⇑P Pdif 11 26 42.2 +10
baz=132
N14A Grayback Hills 132.30 36 ⇓P Pdif 11 26 42.3 +10
baz=132
M15A Larsen Ranch, 132.33 34 ⇑P Pdif 11 26 42.5 +11
baz=132
SNCC San Nicolas Is 132.34 48 ⇓P Pdif 11 26 43.5 +11
baz=132
BGU Big Grassy Mou 132.35 35 ePKPdf PKPdf 11 29 38.9 +1.2
R11A Troy Canyon, C 132.38 40 ⇑P Pdif 11 26 42.2 +10
baz=132
MPMC Manual Prospec 132.39 44 ⇓P Pdif 11 26 42.8 +11
baz=132
SPUT South Promonto 132.43 35 ePKPdf PKPdf 11 29 39.2 +1.4
Q12A Willow Creek R 132.44 39 ⇑P Pdif 11 26 42.4 +10
baz=132
L16A Fish Haven 132.52 33 ⇑P Pdif 11 26 42.2 +9.3
baz=132
LRMC Laurel Mountai 132.56 44 ⇑P Pdif 11 26 43.1 +10
baz=132
FURC Furnace Creek, 132.60 43 ⇓P Pdif 11 26 42.9 +10
baz=133
EDW2 Edwards Air Fo 132.65 45 ⇑P Pdif 11 26 43.7 +10
baz=133
N15A Stansbury Isla 132.66 35 ⇓P Pdif 11 26 43.5 +10
baz=133
S11A Rachel 132.68 41 ⇓P Pdif 11 26 43.7 +10
baz=133
P13A Bates Ranch, G 132.69 38 ⇓P Pdif 11 26 43.5 +10
baz=133
HWUT Hardware Ranch 132.72 34 ePKPdf PKPdf 11 29 39.6 +1.2
HWUT LR LR
comp=Z,1075µm,20.0s,MS8.6
DECC Green Verdugo 132.73 46 ⇑P Pdif 11 26 43.6 +10
baz=133
TPNV Topopah Spring 132.74 42 ePKIKP PKPdf 11 29 38.6 +0.1
M16A Huntsville 132.89 34 ⇑P Pdif 11 26 44.3 +10
baz=133
MWC Mount Wilson 132.93 46 ePKIKP PKPdf 11 29 40.3 +1.3
DUG Dugway 132.94 36 ePKIKP PKPdf 11 29 41.1 +2.3
DUG MLR MLR
comp=Z,678µm,20.0s,MS8.4
U10A Ash Meadows, A 132.98 42 ⇑P Pdif 11 26 43.8 +8.9
baz=133
BW06 Boulder Array 133.00 31 ePKPdf PKPdf 11 29 38.4 -0.5
BW06 LR LR
comp=Z,1052µm,20.0s,MS8.6
PDAR Pinedale Array 133.00 31 Pdiff Pdif 11 26 47.2 +12
comp=Z,0.1nm,0.3s,baz=58,slow=8.6,SNR=2.2
PDAR PKP PKPdf 11 29 38.4 -0.4
comp=Z,3.7nm,0.6s,baz=232,slow=3.2,SNR=4.6
Q13A Wheeler Ranch, 133.00 38 ⇓P Pdif 11 26 44.7 +10
baz=133
R12A Pony Springs, 133.01 39 ⇓P Pdif 11 26 45.1 +10
baz=133
FMP Fort Macarthur 133.02 47 ⇑P Pdif 11 26 44.8 +10
baz=133
NOQ North Oquirrh 133.05 35 ePKPdf PKPdf 11 29 40.1 +1.1
CIS Catalina Islan 133.09 47 ⇑P Pdif 11 26 45.7 +10
baz=133
O15A The Old Anders 133.09 36 ⇓P Pdif 11 26 44.9 +10
baz=133
P14A Drum Mountains 133.18 37 ⇓P Pdif 11 26 45.8 +10
baz=133
SCI San Clemente I 133.19 48 ⇑P Pdif 11 26 46.4 +11
baz=133
BFSC Mount Baldy St 133.21 46 ⇑P Pdif 11 26 45.8 +10
baz=133
CTU Camp Tracy 133.23 35 ePKPdf PKPdf 11 29 39.6 +0.2
T11A Corn Creek, Al 133.25 41 ⇑P Pdif 11 26 45.8 +10
baz=133
GSC Goldstone 133.26 44 ePKIKP PKPdf 11 29 41.7 +2.1
GSC MLR MLR
comp=Z,597µm,20.0s,MS8.3
GSC Goldstone 133.26 44 ⇓P Pdif 11 26 46.3 +10
baz=133
N16A Rees Ranch, Co 133.28 34 ⇓P Pdif 11 26 46.2 +10
baz=133
S12A Delamar Landin 133.28 40 ⇑P Pdif 11 26 46.6 +10
baz=133
SHOC Shoshone 133.30 43 ⇑P Pdif 11 26 47.1 +11
baz=133
RRX Edison Barstow 133.35 45 ⇑P Pdif 11 26 47.0 +10
baz=133
Q14A Sevier Lake (B 133.43 38 ⇑P Pdif 11 26 46.8 +10
baz=133
JLU Jordanelle 133.46 35 ePKPdf PKPdf 11 29 41.0 +1.2
R13A O'Grain Ranch, 133.50 39 ⇓P Pdif 11 26 47.7 +10
baz=134
NLU North Lily Min 133.53 36 ePKPdf PKPdf 11 29 40.9 +1.0
N17A Moffit Pass 133.58 34 ⇑P Pdif 11 26 47.4 +10
baz=134
U11A Corn Creek 133.61 42 ⇑P Pdif 11 26 48.8 +11
baz=134
P15A Leamington 133.66 36 ⇓P Pdif 11 26 48.1 +10
baz=134
O16A Springville 133.70 35 ⇑P Pdif 11 26 48.3 +10
baz=134
DAU Daniels Canyon 133.70 35 ePKIKP PKPdf 11 29 42.4 +2.2
BBRC Big Bear Sol-O 133.72 45 ⇓P Pdif 11 26 48.4 +10
baz=134
MPU Maple Canyon 133.75 35 ePKPdf PKPdf 11 29 41.1 +0.8
TUQ Turquoise Moun 133.80 43 ⇑P Pdif 11 26 48.5 +10
baz=134
HEC Hector,Ludlow 133.84 44 ⇓P Pdif 11 26 48.8 +10
baz=134
MURC Murrieta 133.86 46 ⇑P Pdif 11 26 49.4 +11
baz=134
T12A Moapa 133.88 41 ⇑P Pdif 11 26 49.7 +11
baz=134
AGMN Agassiz Refuge 133.90 16 ePKPdf PKPdf 11 29 42.4 +2.1
AGMN LR LR
comp=Z,1225µm,20.0s,MS8.6
V11A Goodsprings 133.91 43 ⇓P Pdif 11 26 49.6 +11
baz=134
S13A Holt Ranch, En 133.93 40 ⇓P Pdif 11 26 49.3 +10
baz=134
Q15A Fillmore 133.97 37 ⇑P Pdif 11 26 49.8 +11
baz=134
P16A Fountain Green 134.00 36 ⇑P Pdif 11 26 50.1 +11
baz=134
R14A James Farms, M 134.01 38 ⇓P Pdif 11 26 50.1 +11
baz=134
ARUT Antelope Range 134.07 39 ePKIKP PKPdf 11 29 42.2 +1.2
ARUT e 11 29 50.9
O17A Robinson Place 134.14 35 ⇑P Pdif 11 26 50.8 +11
baz=134
U12A Valley of Fire 134.17 41 ⇓P Pdif 11 26 50.3 +10
baz=134
N18A Larsen Ranch, 134.19 33 ⇑P Pdif 11 26 50.1 +10
baz=134
T13A Saint George 134.23 40 ⇓P Pdif 11 26 51.5 +11
baz=134
S14A Cedar City 134.26 39 ⇑P Pdif 11 26 50.9 +10
baz=134
CCUT Cedar City 134.26 39 ePKPdf PKPdf 11 29 40.4 -1.0
109C Camp Elliot, M 134.29 47 ⇑P Pdif 11 26 51.6 +11
baz=134
GMRC Granite Mounta 134.33 44 ⇑P Pdif 11 26 50.8 +10
baz=134
V12A Nelson 134.36 42 ⇑P Pdif 11 26 51.3 +10
baz=134
MVU Marysvale 134.38 37 PFAKE 11 29 50.0 +8.4
MVU LR LR
comp=Z,677µm,20.0s,MS8.4
PFO Pinyon Flat Ob 134.39 46 PKhKP 11 29 35.3
comp=Z,5.1nm,1.0s,baz=235,slow=16,SNR=2.0
PFO PP PP 11 32 16.8 +3.2
comp=Z,31nm,0.6s,baz=326,slow=7.3,SNR=1.1
PFO Pinyon Flat Ob 134.39 46 ⇓P Pdif 11 26 51.1 +10
baz=134
PFO Pinyon Flat Ob 134.39 46 ePKPdf PKPdf 11 29 43.3 +1.5
MSU Marysvale 134.40 37 PKIKP PKPdf 11 29 42.7 +1.1
MSU Marysvale 134.40 37 ePKPdf PKPdf 11 29 45.1 +3.5
PLCA Paso Flores 134.42 189 PKP PKPdf 11 29 42.8 +1.1
comp=Z,3.0nm,0.9s,baz=234,slow=18,SNR=3.9
TMUT Trail Mountain 134.47 36 ePKPdf PKPdf 11 29 42.5 +0.8
O18A Roosevelt 134.50 34 ⇑P Pdif 11 26 51.9 +10
baz=134
BELC Belle Mtn. 134.51 45 ⇓P Pdif 11 26 51.8 +10
baz=134
N19A John Jarvie Ra 134.52 33 ⇓P Pdif 11 26 51.9 +10
baz=134
R15A Junction 134.53 38 ⇑P Pdif 11 26 51.9 +10
baz=134
LDFC Landfair 134.55 43 ePKPdf PKPdf 11 29 43.7 +1.7
U13A Pakoon Wash 134.55 41 ⇑P Pdif 11 26 52.5 +11
baz=134
W12A Cal Nev Ari 134.59 43 ⇑P Pdif 11 26 52.4 +10
baz=135
RSSD Black Hills 134.60 26 ePKIKP PKPdf 11 29 42.6 +0.8
P17A Butcher Ranch, 134.62 35 ⇓P Pdif 11 26 52.8 +11
baz=135
BAR Barrett 134.71 47 ePKPdf PKPdf 11 29 43.4 +1.0
BAR LR LR
comp=Z,484µm,22.0s,MS8.2
T14A Hurricane 134.74 40 ⇓P Pdif 11 26 53.5 +11
baz=135
Q16A Castle Valley 134.74 36 ⇑P Pdif 11 26 53.1 +10
baz=135
MONP Monument Peak 134.79 47 ⇑P Pdif 11 26 53.5 +11
baz=135
P18A Preston Nutter 134.80 35 ⇑P Pdif 11 26 53.5 +11
baz=135
S15A Panguitch 134.81 38 ⇑P Pdif 11 26 53.9 +11
baz=135
V13A Grand Canyon W 134.87 42 ⇓P Pdif 11 26 54.0 +11
baz=135
R16A Teasdale 134.96 37 ⇓P Pdif 11 26 54.3 +11
baz=135
O19A Miners Draw (B 134.97 33 ⇓P Pdif 11 26 53.7 +10
baz=135
TRQA Tornquist 134.97 199 ePKPdf PKPdf 11 29 41.5 -1.2
RWWY Rawlins 134.98 30 ePKPdf PKPdf 11 29 43.4 +0.8
SRU San Rafael 134.99 36 ePKIKP PKPdf 11 29 44.6 +1.9
SRU San Rafael 134.99 36 ⇑P Pdif 11 26 54.1 +10
baz=135
CAM3 Guarapari 135.02 235 eP PKPdf 11 29 51.0 +7.7
CAM3 i 11 29 59.8
CAM3 i 11 30 03.7
CAM3 i 11 30 08.9
CAM3 i 11 30 13.7
CAM3 i 11 30 23.9
CAM3 i 11 30 32.2
CAM3 i 11 31 05.5
CAM3 i 11 31 21.9
IRM Iron Mountain 135.02 44 ⇑P Pdif 11 26 54.0 +10
baz=135
NEE2 Needles Airpor 135.06 43 ⇑P Pdif 11 26 54.5 +10
baz=135
U14A Mt Trumbull 135.06 40 ⇑P Pdif 11 26 54.0 +10
baz=135
BC3 Big Chuckw Mtn 135.08 45 ⇓P Pdif 11 26 54.5 +10
baz=135
DVTC Desert V Tower 135.13 47 ⇓P Pdif 11 26 55.3 +11
baz=135
T15A Red Dirt Ranch 135.21 39 ⇑P Pdif 11 26 54.9 +10
baz=135
SWSC Sam W. Stewart 135.21 46 ⇓P Pdif 11 26 55.8 +11
baz=135
Q18A Rafter H Ranch 135.22 35 ⇑P Pdif 11 26 55.2 +10
baz=135
S16A Weppner Ranch, 135.25 38 ⇑P Pdif 11 26 55.6 +11

baz=135
EYMN Ely 135.29 12 *e*PKPdf PKPdf 11 29 43.5 +0.6
EYMN LR LR
comp=Z,1842µm,20.0s,MS8.8
R17A Hanksville Air 135.34 36 ⇑P Pdif 11 26 55.3 +10
baz=135
W13A Hualapai Mount 135.37 42 ⇓P Pdif 11 26 55.8 +10
baz=135
P19A Cripple Cowboy 135.51 34 ⇑P Pdif 11 26 56.0 +10
baz=136
V14A Boquillas Ranc 135.57 41 ⇓P Pdif 11 26 56.5 +10
baz=136
U15A North Rim 135.62 40 ⇑P Pdif 11 26 56.7 +10
baz=136
PDMCI Parker Dam,Lak 135.65 43 ⇓P Pdif 11 26 57.6 +11
baz=136
Y12C Blythe 135.68 44 ⇑P Pdif 11 26 57.6 +11
baz=136
X13A Yucca 135.69 43 ⇓P Pdif 11 26 57.1 +10
baz=136
T16A Glen Canyon Da 135.78 39 ⇓P Pdif 11 26 57.8 +10
baz=136
S17A Black Ridge (B 135.79 37 ⇓P Pdif 11 26 58.0 +11
baz=136
Q19A Hogan Spring (135.82 35 ⇑P Pdif 11 26 58.6 +11
baz=136
W14A Seligman 135.84 42 ⇓P Pdif 11 26 58.8 +11
baz=136
R18A Canyonlands Na 135.84 36 ⇓P Pdif 11 26 58.7 +11
baz=136
GLA Glamis 135.85 45 *e*PKIKP PKPdf 11 29 45.6 +1.1
GLA MLR MLR
comp=Z,529µm,20.0s,MS8.3
GLA Glamis 135.85 45 ⇑P Pdif 11 26 58.5 +11
baz=136
V15A Kaibab Nationa 136.07 40 ⇓P Pdif 11 26 59.4 +11
baz=136
Y13A Salome 136.13 44 ⇓P Pdif 11 26 59.5 +11
baz=136
PHWY Pilot Hill 136.14 29 *e*PKPdf PKPdf 11 29 45.2 +0.5
T17A Navajo Res., N 136.20 38 ⇓P Pdif 11 27 00.2 +11
baz=136
S18A Hurst Farm, BI 136.24 37 ⇓P Pdif 11 26 59.5 +10
baz=136
R19A Curley Farm, L 136.27 35 ⇑P Pdif 11 27 00.0 +11
baz=136
112A Yuma 136.29 46 ⇑P Pdif 11 26 59.6 +10
baz=136
PV10 Paradox Valley 136.34 35 *e*PKPdf PKPdf 11 29 43.9 -1.3
W15A Williams 136.40 41 ⇑P Pdif 11 27 01.5 +11
baz=136
X14A Yava 136.40 42 ⇑P Pdif 11 27 01.5 +11
baz=136
U16A Tuba City 136.54 39 ⇓P Pdif 11 27 02.0 +11
baz=136
U17A Shonto 136.54 38 ⇓P Pdif 11 27 01.2 +10
baz=136
Y14A Wickenburg 136.63 43 ⇓P Pdif 11 27 02.3 +11
baz=137
T18A Mexican Hat 136.68 37 ⇓P Pdif 11 27 02.3 +11
baz=137
S19A Harvey Farm, M 136.71 36 ⇓P Pdif 11 27 01.9 +10
baz=137
113A Mohawk Valley, 136.75 45 ⇓P Pdif 11 27 02.8 +11
baz=137
WUAZ Wupatki 136.77 40 *e*PKPdf PKPdf 11 29 46.5 +0.3
PV01 Paradox Valley 136.77 35 *e*PKPdf PKPdf 11 29 47.6 +1.6
X15A Humboldt 136.83 42 ⇓P Pdif 11 27 02.8 +11
baz=137
W16A Flagstaff 136.93 41 ⇓P Pdif 11 27 03.3 +11
baz=137
Z14A Wintersburg 136.99 44 ⇑P Pdif 11 27 04.5 +12
baz=137
Y15A Casa Rosa Ranc 137.07 43 ⇑P Pdif 11 27 04.4 +11
baz=137
U18A Rough Rock, Ch 137.15 38 ⇑P Pdif 11 27 04.7 +11
baz=137
ISCO Idaho Springs 137.19 31 *e*PKIKP PKPdf 11 29 47.2 +0.4
ISCO MLR MLR
comp=Z,1239µm,21.0s,MS8.6
T19A Beclabito 137.39 37 ⇓P Pdif 11 27 06.0 +12
baz=137
X16A Lo Mia Camp, P 137.39 41 ⇑P Pdif 11 27 06.4 +12
baz=137
MVCO Mesa Verde 137.44 36 *e*PKPdf PKPdf 11 29 50.2 +2.9
W17A Winslow 137.47 40 ⇑P Pdif 11 27 06.1 +11
baz=137
COWI Conover 137.53 11 *e*PKPdf PKPdf 11 29 47.8 +0.6
COWI LR LR
comp=Z,2295µm,22.0s,MS8.9
V18A Ganado 137.56 39 ⇓P Pdif 11 27 06.1 +11
baz=138
Z15A Gila River Ind 137.58 43 ⇑P Pdif 11 27 06.8 +12
baz=138
Y16A Circle Bar Ran 137.69 42 ⇓P Pdif 11 27 07.4 +12
baz=138
ECSD EROS,Sioux Fal 137.78 19 *e*PKPdf PKPdf 11 29 47.5 -0.3
ECSD LR LR
comp=Z,1738µm,22.0s,MS8.8
X17A Forest Lakes 137.86 41 ⇓P Pdif 11 27 08.5 +12
baz=138
115A Sonoran Desert 137.86 44 ⇑P Pdif 11 27 07.6 +11
baz=138
214A Organ Pipe Nat 137.87 45 ⇑P Pdif 11 27 08.2 +12
baz=138
OGNE Ogallala 138.03 27 *e*PKPdf PKPdf 11 29 50.1 +1.8
Z16A Peralta Trail, 138.04 43 ⇑P Pdif 11 27 09.0 +12
baz=138
W18A Petrified Fore 138.06 39 ⇑P Pdif 11 27 08.4 +11
baz=138
V19A Window Rock 138.11 38 ⇑P Pdif 11 27 08.6 +11
baz=138
Y17A Roosevelt 138.22 42 ⇑P Pdif 11 27 09.8 +12
baz=138
W19A Sanders 138.29 39 ⇑P Pdif 11 27 10.0 +11
baz=138
X18A Snowflake 138.30 40 ⇑P Pdif 11 27 10.1 +12
baz=138
116A Eloy 138.31 44 ⇓P Pdif 11 27 10.3 +12
baz=138
PKME Peaks-Kenny Pk 138.55 350 *e*PKPdf PKPdf 11 29 50.7 +1.6
CCHI Chillan 138.69 188 *e*P pPKPdf 11 30 03.7 +2.4
Y18A Canyon Day Jun 138.71 41 ⇑P Pdif 11 27 11.0 +11
baz=139
Z17A San Carlos Hig 138.71 42 ⇓P Pdif 11 27 11.3 +11
baz=139
SPB Sao Paulo 138.75 226 *e*PKPdf PKPdf 11 29 48.6 -1.5
SPB *ep*PKPdf pPKPdf 11 29 59.6 -2.1
SDCO Great Sand Dun 138.76 33 *e*PKPdf PKPdf 11 29 47.0 -2.7
VAO Valinhos 138.77 227 *e*P PKPdf 11 30 00.1 +10
VAO *i* 11 30 08.6
VAO *i* 11 30 31.6
VAO *i* 11 30 56.5
VAO *i* 11 31 21.7
X19A St. Johns 138.79 40 ⇓P Pdif 11 27 11.9 +11
baz=139
216A Three Points, 138.80 44 ⇓P Pdif 11 27 13.0 +12
baz=139
117A Oracle 138.96 43 ⇑P Pdif 11 27 12.9 +11
baz=139
TUC Tucson 139.09 44 *e*PKIKP PKPdf 11 29 51.7 +1.2
Y19A Nutrioso 139.11 40 ⇓P Pdif 11 27 13.7 +12
baz=139
Z18A Geronimo 139.13 42 ⇓P Pdif 11 27 13.7 +11
baz=139
217A Green Valley 139.37 44 ⇑P Pdif 11 27 14.3 +11
baz=139
118A Homack Ranch, 139.44 42 ⇓P Pdif 11 27 14.9 +11
baz=139
GLMI Grayling 139.46 7 *e*PKPdf PKPdf 11 29 51.5 +0.7
Z19A T-Link Ranch, 139.51 41 ⇑P Pdif 11 27 14.8 +11
baz=140
FRNY Flat Rock 139.55 354 *e*PKPdf PKPdf 11 29 49.4 -1.6
FRNY *ep*PKPdf pPKPdf 11 29 58.9 -3.6
218A Dragoon 139.79 43 ⇑P Pdif 11 27 15.2 +10
baz=140
119A Ashpeak Ranch, 139.81 42 ⇓P Pdif 11 27 16.0 +11
baz=140
LONY Lake Ozonia 139.85 356 *e*PKPdf PKPdf 11 29 52.4 +0.9
LONY LR LR
comp=Z,1397µm,22.0s,MS8.7
SADO Sadowa 139.85 1 PKP PKPdf 11 29 52.3 +0.8
baz=82,slow=4.4
SADO PP PP 11 32 47.1 +0.7
baz=7.8,slow=4.7
LBNH Lisbon 139.95 353 *e*PKIKP PKPdf 11 29 50.9 -0.8
LBNH MLR MLR
comp=Z,1739µm,22.0s,MS8.8
318A Bisbee 140.14 44 ⇑P Pdif 11 27 17.4 +11
baz=140
LAZ Ladron 140.15 38 *e*PKPdf PKPdf 11 29 54.5 +2.2
ANMO Albuquerque 140.19 37 PKhKP 11 29 46.8
comp=Z,9.0nm,0.8s,baz=313,slow=9.1,SNR=6.9
ANMO PP PP 11 32 43.9 -5.5
comp=Z,72nm,1.1s,baz=18,slow=3.2,SNR=1.9
ANMO Albuquerque 140.19 37 *e*PKPdf PKPdf 11 29 53.0 +0.6
ANMO LR LR
comp=Z,1125µm,20.0s,MS8.6
219A White Tail Can 140.31 43 ⇑P Pdif 11 27 18.4 +11
baz=140
MDV Middlebury 140.34 354 *e*PKPdf PKPdf 11 29 52.1 -0.3
JFWS Jewell Farm 140.34 13 *e*PKIKP PKPdf 11 29 52.3 -0.1
JFWS MLR MLR
comp=Z,1826µm,22.0s,MS8.8
LENM Lemitar 140.41 38 *e*PKPdf PKPdf 11 29 54.8 +1.9
NCB Newcomb 140.47 355 *e*PKPdf PKPdf 11 29 55.5 +2.8
Y22C IRIS PASSCAL I 140.50 38 ⇓P Pdif 11 27 18.4 +10
baz=140
LPM Los Pinos Moun 140.52 38 *e*PKPdf PKPdf 11 29 54.4 +1.3
HNH Hanover 140.52 353 *e*PKPdf PKPdf 11 29 53.8 +1.0
BNM Barren Site 140.63 38 *e*PKPdf PKPdf 11 29 54.2 +1.0
319A Douglas 140.67 44 ⇓P Pdif 11 27 18.9 +10
baz=141
CBKS Cedar Bluff 140.78 26 *e*PKHKP 11 29 48.3
CBKS MLR MLR
comp=Z,1873µm,20.0s,MS8.8
ACCN Adirondack Com 141.00 354 *e*PKPdf PKPdf 11 29 55.2 +1.6
ACCN *ep*PKPdf pPKPdf 11 30 02.4 -2.8
LMEL Las Melosas 141.08 191 *e*P pPKPdf 11 30 05.3 -0.4
CLCH Cerro Calan 141.58 191 ⇑*i*P PKPdf 11 30 01.6 +6.6
FCH Farellones 141.60 191 *e*P PKPdf 11 30 01.0 +6.0
HRV Adam Dziewonsk 141.60 352 *e*PKIKP PKPdf 11 29 54.5 -0.2
HRV MLR MLR
comp=Z,1384µm,22.0s,MS8.7
WES Weston 141.69 351 *e*PKIKP PKPdf 11 29 55.2 +0.3
WES *e* 11 30 04.8
KSU1 Kansas State U 141.85 23 *e*PKPdf PKPdf 11 29 52.1 -3.1
KSU1 LR LR
comp=Z,1469µm,22.0s,MS8.7
PEL Peldehue 141.85 191 ⇓*i*P PKPdf 11 30 02.6 +7.1
QUA2 Belchertown 141.94 352 *e*PKPdf PKPdf 11 29 52.6 -2.7
QUA2 *ep*PKPdf pPKPdf 11 30 04.9 -2.1
BRYW Bryant College 142.18 351 *e*PKPdf PKPdf 11 29 53.7 -2.1
BINY Binghamton 142.35 357 *e*PKPdf PKPdf 11 29 56.8 +0.7
BINY LR LR
comp=Z,1376µm,22.0s,MS8.7
CFAA Coronel Fontan 142.80 195 PKhKP 11 29 53.0
comp=Z,0.6nm,0.7s,baz=194,slow=8.3,SNR=3.9
AMTX Amarillo 142.95 32 *e*PKPdf PKPdf 11 29 55.2 -2.2
AMTX *ep*PKPdf pPKPdf 11 30 06.3 -2.7
AMTX LR LR
comp=Z,1121µm,21.0s,MS8.6
ALLY Alegheny Colle 142.95 2 *e*PKPdf PKPdf 11 29 59.3 +2.1
CPUP Villa Florida 143.10 213 PKhKP 11 29 54.8
comp=Z,0.6nm,0.4s,baz=87,slow=2.7,SNR=5.5
CPUP Villa Florida 143.10 213 *e*PKPdf PKPdf 11 29 55.1 -2.8
CPUP LR LR
comp=Z,46µm,20.0s,MS7.2
PAL Palisades 143.38 354 *e*PKIKP PKPdf 11 30 00.9 +3.0
CPNY Central Park 143.59 354 *e*PKPdf PKPdf 11 29 58.0 -0.3
BDFB Brasilia 143.72 236 PKhKP 11 29 56.5
comp=Z,12nm,1.0s,baz=43,slow=3.9,SNR=7.5
BDFB Brasilia 143.72 236 PKP PKPdf 11 29 56.5 -2.7
BDFB LR LR
comp=Z,853µm,20.0s,MS8.5
BRNJ Basking Ridge 143.76 355 *e*PKPdf PKPdf 11 29 59.2 +0.6
LPIG La Paz 143.76 54 PKP PKPdf 11 29 57.6 -1.5
comp=Z,11nm,0.3s,baz=235,slow=3.2,SNR=5.6
ACSO Alum Creek Sta 144.17 6 *e*PKPdf PKPdf 11 29 57.2 -2.2
ACSO LR LR
comp=Z,2006µm,22.0s,MS8.8
SLM Saint Louis 144.38 16 *e*PKIKP PKPdf 11 29 57.5 -2.3
SLM *e* 11 30 08.2
WMOK Wichita Mounta 144.54 29 *e*PKIKP PKPdf 11 29 58.7 -1.5
CCM Cathedral Cave 144.63 17 PKHKP 11 29 57.7
CCM Cathedral Cave 144.63 17 *e*PKPdf PKPdf 11 29 58.0 -2.2
BLO Bloomington 144.71 11 *e*PKIKP PKPdf 11 29 58.7 -1.6
BLO *e* 11 30 09.7
TLL Tololo Astrono 144.76 192 *e*P PKPdf 11 29 56.3 -4.4
OLIL Olney 144.81 13 *e*PKPdf PKPdf 11 29 59.0 -1.5
OLIL *ep*PKPdf pPKPdf 11 30 08.9 -3.2
FVM French Village 144.93 16 PKHKP 11 29 58.0
FVM French Village 144.93 16 *e*PKPab PKPdf 11 29 59.7 -1.0
MCWV Mont Chateau 144.95 2 *e*PKPab PKPdf 11 29 59.3 -1.4
MCWV *ep*PKPdf pPKPdf 11 30 09.8 -2.5
MCWV LR LR
comp=Z,1853µm,20.0s,MS8.8
SDMD Soldier's Deli 145.18 358 *e*PKPbc PKPbc 11 29 59.8 -0.9
SDMD *ep*PKPdf pPKPdf 11 30 09.9 -2.8
SIUC Southern Illin 145.51 15 *e*PKPdf PKPdf 11 30 00.9 -0.8
USIN University of 145.64 13 *e*PKPdf PKPdf 11 30 01.9 -0.1
WCI Wyandotte Cave 145.67 11 *e*PKIKP PKPdf 11 30 01.5 -0.5
WCI *e* 11 30 10.8
TXAR Lajitas Array 145.72 41 PKPbc PKPbc 11 30 02.4 -0.4
comp=Z,200nm,1.0s,baz=301,slow=1.1,SNR=181
TXAR Lajitas Array 145.72 41 PKIKP PKPdf 11 30 02.4 0.0
TXAR pmax pmax
comp=Z,200nm,1.0s
LCO Las Campanas 145.86 192 *e*PKPab PKPab 11 30 03.9 +0.3
LCO *ep*PKPdf pPKPdf 11 30 11.8 -2.4
PARMO Parma 146.36 16 *e*PKPbc PKPbc 11 30 04.3 -0.2
PVMO Portageville 146.61 16 *e*PKPdf PKPdf 11 30 03.8 +0.2
GLAT Glass 146.85 16 *e*PKPbc PKPbc 11 30 05.9 0.0
UTMT University of 146.90 15 *e*PKPbc PKPbc 11 30 06.1 +0.1
GNAR Gosnell 146.93 17 *e*PKPbc PKPbc 11 30 05.5 -0.6
MIAR Mount Ida 147.00 23 *e*PKP2 PKPab 11 30 06.2 -1.6
URVA University of 147.03 358 *e*PKPbc PKPbc 11 30 06.5 +0.1
HBAR Harrisburg 147.12 18 *e*PKPbc PKPbc 11 30 06.2 -0.5
HALT Halls 147.18 16 *e*PKPbc PKPbc 11 30 06.5 -0.3
HALT *e*PKPab PKPab 11 30 08.4 0.0
UALR University of 147.26 21 *e*PKPbc PKPbc 11 30 06.8 -0.3
JCT Junction City 147.30 35 *e*PKP2 PKPab 11 30 07.7 -1.4
JCT MLR MLR
comp=Z,1263µm,20.0s,MS8.7
MAIG Mazatlaan 147.31 53 *e*P PKPdf 11 30 08.0 +2.8
ELN Prospectdale 147.33 3 *e*PKPdf PKPdf 11 30 04.7 -0.2
ELN *e*PKPbc PKPbc 11 30 06.7 -0.5
ELN *e*PKPab PKPab 11 30 08.1 -0.9
WVT Waverly 147.36 14 *e*PKPbc PKPbc 11 30 06.8 -0.5
WVT *ep*PKPdf pPKPdf 11 30 13.8 -2.7
BLA Blacksburg 147.37 3 *e*PKIKP PKPdf 11 30 06.8 +1.9
BLA MLR MLR
comp=Z,1362µm,20.0s,MS8.7
MET Memphis--Engin 147.74 18 *e*PKPbc PKPbc 11 30 08.1 -0.3
TZTN Tazewell 147.75 7 *e*PKPbc PKPbc 11 30 07.9 -0.5
OXF Oxford 148.47 17 PKIKP PKPdf 11 30 07.2 +0.4
OXF Oxford 148.47 17 *e*PKPbc PKPbc 11 30 09.7 -0.6
TKL Tuckaleechee C 148.59 8 PKIKP PKPdf 11 30 07.1 +0.1
TKL Tuckaleechee C 148.59 8 *e*PKPbc PKPbc 11 30 10.2 -0.4
SWET Sewanee 148.66 12 *e*PKPbc PKPbc 11 30 09.9 -0.9
SWET *e*PKPab PKPab 11 30 15.0 +0.7
CPCT Cooper Cave 148.69 9 *e*PKPbc PKPbc 11 30 10.3 -0.6
NATX Nacogdoches 148.94 27 *e*PKPbc PKPbc 11 30 12.1 +0.4
BBSR BB Station 149.33 336 *e*PKPbc PKPbc 11 30 12.7 +0.1
CNNC Cliffs of the 149.37 359 PFAKE 11 30 20.0 +12
CNNC LR LR
comp=Z,1458µm,21.0s,MS8.8
HKT Hockley 149.87 31 *e*PKIKP PKPdf 11 30 10.2 +1.0
HKT *e* 11 30 15.2
HKT Hockley 149.87 31 *e*PKPdf PKPdf 11 30 10.2 +1.0
HKT *e*PKPbc PKPbc 11 30 15.2 +1.1
HKT LR LR
comp=Z,1467µm,20.0s,MS8.8
VBMS Vicksburg 150.22 21 *e*PKPbc PKPbc 11 30 15.3 +0.5
JSC Jenkinsville 150.23 4 *e*PKPbc PKPbc 11 30 14.7 -0.1
LRAL Lakeview Retre 150.51 14 *e*PKPdf PKPdf 11 30 10.1 0.0
LRAL *e*PKPbc PKPbc 11 30 14.8 -0.7
LRAL LR LR
comp=Z,1865µm,20.0s,MS8.9
KVTX Kingsville 150.59 37 *e*PKPbc PKPbc 11 30 17.7 +1.9
KVTX LR LR
comp=Z,1017µm,20.0s,MS8.6
GOGA Godfrey 150.84 8 *e*PKIKP PKPdf 11 30 10.6 0.0
GOGA *e* 11 30 16.0
GOGA *e* 11 30 23.4
GOGA Godfrey 150.84 8 *e*PKPdf PKPdf 11 30 10.6 0.0
GOGA *e*PKPbc PKPbc 11 30 16.0 -0.2
GOGA *e*PKPab PKPab 11 30 23.4 +0.1
GOGA LR LR
comp=Z,1477µm,21.0s,MS8.8
CEN1 Los Morros 151.13 196 *e*P pPKPdf 11 30 23.2 +0.3
COW Cow Castle Cre 151.16 4 *e*PKPbc PKPbc 11 30 17.3 +0.3
SFJM Santa Fe 151.39 54 *i*P pPKPdf 11 30 19.0 -4.4
NHSC New Hope 151.47 3 *e*PKPbc PKPbc 11 30 17.5 -0.2
NHSC *e*PKPab PKPab 11 30 25.2 -0.7
LVC Limon Verde 151.47 199 PKPbc PKPbc 11 30 19.1 +1.1
comp=Z,30nm,1.1s,baz=146,slow=1.4,SNR=9.4
LVC Limon Verde 151.47 199 *e*PKPbc PKPbc 11 30 18.9 +0.9
LVC LR LR
comp=Z,365µm,21.0s,MS8.2
BRAL Brewton 152.42 16 *e*PKPbc PKPbc 11 30 20.2 +0.3
BRAL LR LR
comp=Z,967µm,20.0s,MS8.6
MOIG Morelia 153.29 54 *i*P pPKPdf 11 30 22.3 -4.0
MOIG *eS* 11 34 22.5
ZIIG Zihuatanejo 154.08 58 *e*P PKPdf 11 30 17.0 +1.2
PTVM Pico Tres Padr 154.98 51 *e*P pPKPdf 11 30 27.0 -1.7
UNM Universidad Na 155.08 52 *e*PKIKP PKPdf 11 30 16.8 -0.3
PBVM Pinon 155.09 52 *e*P pPKPdf 11 30 25.1 -3.7
IIO Organos 155.29 51 *e*P pPKPdf 11 30 27.0 -2.1
PLIG Platanillo 155.32 54 *i*P pPKPdf 11 30 28.2 -0.9
PLIG *eS* 11 34 35.0
CAIG El Cayaco 155.35 58 *i*P pPKPdf 11 30 25.5 -3.7
YAIG Yautepec 155.42 53 *i*P pPKPdf 11 30 27.6 -1.6
PPM Popocatepetl 155.66 52 *e*PKIKP PKPdf 11 30 18.9 +1.0
ACX Acapulco 155.74 58 *e*P pPKPdf 11 30 24.5 -5.2
DWPF Disney 156.33 6 *e*PKPdf pPKPdf 11 30 18.4 -0.2
LPAZ La Paz 156.93 206 PKP PKPdf 11 30 19.3 -0.4
comp=Z,1.7nm,0.9s,baz=59,slow=2.6,SNR=7.0
LPAZ La Paz 156.93 206 *e*PKPdf PKPdf 11 30 19.6 0.0
LPAZ LR LR
comp=Z,519µm,20.0s,MS8.4
LVIG Laguna Verde 156.95 47 *e*P PKPdf 11 30 24.0 +4.4
PNIG Pinotepa 157.47 57 *e*P PKPdf 11 30 22.9 +2.6
ARE Arequipa 158.05 199 PKIKP pPKPdf 11 30 34.0 +1.3
VHO Vista Hermosa 158.25 53 *e*P PKPdf 11 30 26.7 +5.4
OXX Oaxaca 158.26 53 *i*P PKPdf 11 30 25.9 +4.6
ANWB Willy Bob 158.94 310 *e*PKPab PKPab 11 30 58.0 -0.3
ANWB *e*PKPbc pPKPab 11 31 11.2 +1.6
BBGH Gun Hill 159.31 296 *e*P 11 30 40.5
BBGH Gun Hill 159.31 296 PFAKE pPKPdf 11 30 30.0 -4.2
BBGH LR LR
comp=Z,1318µm,22.0s,MS8.7
BPA Boggy Peak 159.36 309 *e* pPKPdf 11 30 29.7 -4.5
HUIG Huatulco 159.45 56 *e*P pPKPdf 11 30 29.9 -4.5
TUIG Tuzandepetl 159.47 48 *e*P PKPdf 11 30 20.8 -1.9
STMA St. Maarten, A 159.70 313 *e* pPKPdf 11 30 31.5 -3.1
LZG Guadaloupe-1 159.81 306 *e*P pPKPdf 11 30 33.9 -0.9
TBG Guadaloupe-3 159.86 305 *e*P pPKPdf 11 30 34.2 -0.6
DBCT Belle View Cho 159.91 304 *e* pPKPdf 11 30 34.6 -0.3
MDN Morne-Daniel 159.93 304 *e* pPKPdf 11 30 30.2 -4.7
DFBT Forest Bistro 159.94 303 *e* pPKPdf 11 30 34.9 -0.1
DSHT Scott's Head 159.96 303 *e* pPKPdf 11 30 30.9 -4.1
FDF Fort de France 160.01 302 *e*P pPKPdf 11 30 34.5 -0.6
BIM Bigot 160.05 301 *e*P pPKPdf 11 30 35.8 +0.7
SLB Belfond 160.34 299 *e* pPKPdf 11 30 32.7 -2.7
BHS Barnard House 160.65 298 *e* pPKPdf 11 30 33.2 -2.6
SSV Crater Summit 160.69 298 *e* pPKPdf 11 30 34.2 -1.6
BOT Bacolet 161.08 292 *e*P 11 30 43.2
TPR Prospect 161.13 292 *e*P pPKPdf 11 30 35.0 -1.3
TPR Prospect 161.13 292 *e* PKPab 11 30 59.3 -8.8
SOR Soroa 161.29 13 *e*P PKPdf 11 30 24.6 0.0
MTP Monte Pirata 161.38 318 *e*PKPdf PKPdf 11 30 24.0 -0.8
MTP *ep*PKPdf pPKPdf 11 30 35.0 -1.5
HUMP Col San Antoni 161.55 318 *e*PKPdf PKPdf 11 30 24.9 -0.1
GRW Mount Saint Ca 161.58 296 *e*P pPKPdf 11 30 41.4 +4.7
GRGR Grenville 161.59 295 PFAKE 11 30 40.0 +15
GRGR LR LR
comp=Z,741µm,21.0s
TBH Brigand Hill 161.62 290 *e*P PKPdf 11 30 34.6 +9.4
CPD Cerro la Pandu 161.67 318 *e*PKIKP PKPdf 11 30 24.7 -0.4
CPD *e* 11 30 34.9
TEIG Tepich 161.72 30⇑*e*P pPKPdf 11 30 33.9 -2.8
TEIG Tepich 161.72 30 *e*PKPdf PKPdf 11 30 24.6 -0.5
TEIG *ep*PKPdf pPKPdf 11 30 31.9 -4.8
SJG San Juan 161.77 319 PP PP 11 35 08.0 +15
comp=Z,20nm,0.7s,baz=32,slow=9.5,SNR=1.9
TRN Trinidad (W) 161.88 291 *e*P pPKPdf 11 30 34.5 -2.6
TRN Trinidad (W) 161.88 291 *e* PKPab 11 31 00.4 -11
AOPR Arecibo Observ 161.98 321 *e*PKPdf PKPdf 11 30 24.6 -0.8
AOPR *ep*PKPdf pPKPdf 11 30 35.2 -1.9
TPP Pointe-a-Pierr 162.03 290 *e*P pPKPdf 11 30 40.5 +3.3
AGPR Aguadilla, PR 162.11 322 *e*PKPdf PKPdf 11 30 26.2 +0.7
CCIG Comitan 162.27 48 *e*P PKPdf 11 30 25.8 0.0
MGV Manicaragua 162.41 4 *e*P PKPdf 11 30 31.1 +5.3
HLGC Holguin 163.49 352 *e*P pPKPdf 11 30 39.9 +1.4
NNA Nana 163.56 186 PKP PKPdf 11 30 27.3 +0.2
comp=Z,3.1nm,0.4s,baz=230,slow=17,SNR=3.0
NNA Nana 163.56 186 *e*PKPdf PKPdf 11 30 26.8 -0.3
NNA *ep*PKPdf pPKPdf 11 30 35.2 -3.5
MASC Masc 163.81 345 *e*P PKPdf 11 30 37.0 +10
RCC Rio Carpintero 164.31 350 *e*P PKPdf 11 30 37.0 +9.4
LMGC Las Mercedes 164.42 354 *e*P PKPdf 11 30 32.5 +4.8
PCRV Puerto La Cruz 165.03 293 PP PP 11 35 25.0 +13
comp=Z,41nm,1.0s,baz=340,slow=1.8,SNR=2.1
SBLS San Blas 165.69 49⇑*e*P x 11 30 37.2
BOQS Boqueron 166.01 48 *e*P x 11 30 35.4
CVJ Coleyville 166.28 356⇓*e*P pPKPdf 11 30 40.8 -0.1
GWJ Greenwich 166.35 352⇓*e*P pPKPdf 11 30 41.0 0.0
STH Stony Hill 166.36 353⇓*e*P pPKPdf 11 30 40.6 -0.4
SNVI San Vicente 166.41 47 *e*P x 11 30 37.5
HOJ Hope 166.42 352⇓*e*P pPKPdf 11 30 40.9 -0.2
MCJ Malvern 166.59 356 *e*P PKPdf 11 30 34.3 +4.8
CAHU Cacacuatique 166.76 45 *e*P x 11 30 39.6
VSM San Miguel 166.95 46⇑*e*P x 11 30 38.8
TGUH Tegucigalpa,Un 167.20 41⇑*e*P pPKPdf 11 30 38.7 -3.1
TGUH Tegucigalpa,Un 167.20 41 *e*PKPdf PKPdf 11 30 29.4 -0.7
CNCH Conchagua 167.36 46 *e*P x 11 30 37.8
TELN Telica 168.53 45 *e*P PKPdf 11 30 38.6 +7.6
TEL3 Telica 3 168.54 45 *e*P pPKPdf 11 30 37.2 -5.5
ATAH Atahualpa 168.61 181 PKP PKPdf 11 30 33.1 +2.0
comp=Z,2.2nm,0.4s,baz=179,slow=1.1,SNR=2.4
LEON Leon 168.62 46 *e*P pPKPdf 11 30 39.1 -3.6
CNGN Cerro Negro 168.70 45⇑*e*P pPKPdf 11 30 39.9 -2.9
MOMN Momotombo 168.87 44⇑*e*P pPKPdf 11 30 39.5 -3.4
COPN Copaltepe 168.99 45 *e*P pPKPdf 11 30 38.1 -4.9
CSAN 169.11 45⇑*e*P pPKPdf 11 30 41.3 -1.7
HUEN 169.18 43 *e*P pPKPdf 11 30 38.7 -4.4
XAVN Gruta Xavier 169.20 45 *e*P pPKPdf 11 30 39.8 -3.3
MGAN Managua 169.26 44⇑*e*P pPKPdf 11 30 39.8 -3.4
MASN Masaya 169.44 45 *e*P pPKPdf 11 30 40.4 -2.9
APON Apoyo 169.54 44⇑*e*P pPKPdf 11 30 41.0 -2.4
MADN Villa Maderas 170.27 44 *e*P pPKPdf 11 30 39.3 -4.5
CRZC La Cruz 170.54 47 *e*P pPKPdf 11 30 39.8 -4.1
SDV Santo Domingo 170.95 299⇓*e*P pPKPdf 11 30 40.0 -4.2
SDV Santo Domingo 170.95 299 *e*PKPdf PKPdf 11 30 31.7 -0.8
SDV *ep*PKPdf pPKPdf 11 30 41.9 -2.2
VCR Vista de Mar 171.04 51 *e*P PKPdf 11 30 38.8 +6.2
JTS JuntasAbangare 171.45 47 PP PP 11 35 53.8 +10
comp=Z,21nm,1.0s,baz=3.0,slow=9.1,SNR=1.9
JTS JuntasAbangare 171.45 47 *e*PKIKP PKPdf 11 30 31.0 -1.7
JTS *e* 11 30 41.2
JTS MLR MLR
comp=Z,592µm,20.0s
JCR Jicaral 171.62 50 *e*P pPKPdf 11 30 41.3 -3.2
CGA2 Cerro Gallo 2 171.99 46 *e*P PKPdf 11 30 39.1 +6.1
PRS1 Puriscal 172.12 46 *e*P PKPdf 11 30 41.6 +8.6
LCR2 La Lucha 2 172.50 45 *e*P pPKPdf 11 30 39.1 -5.8
BUS Buena Vista 172.81 45 *e*P PKPdf 11 30 39.4 +6.0
LIO Limon 172.96 38 *e*P pPKPdf 11 30 41.1 -3.9
BAR1 173.34 44 *e*P pPKPdf 11 30 42.5 -2.7
ACR Cerro Adams 173.85 47 *e*P PKPdf 11 30 40.7 +6.9
BRU2 Volcan 174.09 43 *e*P pPKPdf 11 30 41.6 -3.9
CHI2 175.15 272 *e*P PKPdf 11 30 40.3 +6.1
BCIP Isla Barro Col 175.17 15 *e*P pPKPdf 11 30 41.7 -4.1
BCIP Isla Barro Col 175.17 15 *e*PKPdf PKPdf 11 30 32.3 -1.9
BCIP LR LR
comp=Z,1249µm,21.0s
ROSC El Rosal 175.72 275 PKP PKPdf 11 30 33.1 -1.2
comp=Z,4.7nm,0.4s,baz=276,slow=23,SNR=5.7
ROSC PP PP 11 36 22.7 +17
comp=Z,35nm,0.9s,baz=162,slow=9.6,SNR=1.7
ROSC El Rosal 175.72 275 *e*PKPdf PKPdf 11 30 34.5 +0.1
OTAV Otavalo 175.80 182⇑*e*P pPKPdf 11 30 43.4 -2.7
OTAV Otavalo 175.80 182 *e*PKPdf PKPdf 11 30 34.7 +0.3

*ISCJB **12** 11:23:02.2±0.5, 257S±009×1018E±01, h10km, mb5.0/16,*
Error ellipse: s-maj=19.3km s-min=12.8km az=171.7
*IDC **12** 11:23:06.9±4.8, 253S×10173E, h26km±30km, mb4.9/16,*

mb1 4.9/16,mb1mx4.9/21,mbtmp4.9/16,Error ellipse: s-maj=24.3km s-min=18.2km az=95.0
*NEIC **12** 11:23:07.6±0.3,259S×10179E,h35km,mb5.0/1,Error ellipse: s-maj=15.5km s-min=9.5km az=79.0*

ISC 12 11:23:09.7±6.1,256S±010×1018E±01,h52km±55km,n28, σ0°74/21,mb5.0/16,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.07**	**352**	P	**P**	**11 27 50.0**	**+0.2**
	16nm,0.9s,mb4.3,baz=181,slow=9.3,SNR=3.5						
ASAR	**Alice Springs**	**37.48**	**127**	P	**P**	**11 30 18.4**	**-0.2**
	26nm,0.8s,mb5.1,baz=297,slow=7.9,SNR=4.4						
ASAR				ScP	ScP	11 36 22.7	+3.3
	7.0nm,0.9s,baz=294,slow=3.8,SNR=5.1						
KSRS	**Korea Array**	**46.62**	**29**	P	**P**	**11 31 33.6**	**+0.8**
	10nm,0.9s,mb4.8,baz=235,slow=8.5,SNR=9.7						
SONM	**Songino Array**	**50.35**	**4**	P	**P**	**11 32 01.0**	**-0.3**
	39nm,1.0s,mb5.4,baz=189,slow=5.7,SNR=4.8						
MKAR	**Makanchi Array**	**52.06**	**343**	P	**P**	**11 32 13.5**	**-0.7**
	14nm,0.6s,mb5.0,baz=152,slow=7.6,SNR=6.2						
MKAR	**Makanchi Array**	**52.06**	**343**	P	**P**	**11 32 13.5**	**-0.7**
OPO	**Ambohidratompo**	**55.74**	**249**	P	**P**	**11 32 41.7**	**+0.1**
	11nm,0.9s,mb4.9,baz=24,slow=6.0,SNR=3.7						
ZALV	**Zalesovo Beam**	**58.06**	**348**	P	**P**	**11 32 56.1**	**-1.3**
	34nm,0.8s,mb5.4,baz=165,slow=6.0,SNR=2.2						
BVAR	**Borovoye Array**	**61.34**	**339**	P	**P**	**11 33 19.5**	**-0.3**
	17nm,0.6s,mb5.3,baz=142,slow=8.0,SNR=7.5						
CASY	**Casey**	**63.89**	**176**	*e*P	**P**	**11 33 37.6**	**+0.9**
MAW	**Mawson**	**70.19**	**195**	P	**P**	**11 34 17.8**	**+1.1**
	24nm,1.1s,mb5.1,baz=15,slow=8.5,SNR=4.6						
MAW	**Mawson**	**70.19**	**195**	*e*P	**P**	**11 34 14.6**	**-2.1**
	16nm,1.0s,mb4.9						
MAW				P		11 34 17.8	
EIL	**Elat**	**71.33**	**302**	P	**P**	**11 34 25.2**	**+0.8**
	32nm,0.8s,mb5.3,baz=198,slow=0.3,SNR=11						
PETK	**Petropavlovsk-**	**72.41**	**32**	P	**P**	**11 34 31.4**	**+1.1**
	5.6nm,0.8s,mb4.5,baz=14,slow=0.6,SNR=4.2						
PETK				PKKPbc	PKKPbc	11 54 19.5	+2.3
	12nm,1.1s,baz=94,slow=5.9,SNR=4.0						
PETK	**Petropavlovsk-**	**72.41**	**32**	P	**P**	**11 34 31.4**	**+1.1**
PETK				PKKPbc	PKKPbc	11 54 19.5	+2.3
BKZ	**Black Stump Fm**	**76.53**	**130**	P	**P**	**11 34 53.6**	**-1.0**
BOSA	**Boshof**	**76.96**	**241**	P	**P**	**11 34 57.1**	**-0.1**
	13nm,1.1s,mb4.8,baz=90,slow=11,SNR=2.0						
AKASG	**Malin Array Be**	**81.02**	**322**	P	**P**	**11 35 18.5**	**-0.5**
	15nm,0.9s,mb4.9,baz=85,slow=4.8,SNR=3.4						
ARCES	**ARCESS Array B**	**87.61**	**340**	P	**P**	**11 35 51.8**	**-0.1**
	51nm,1.1s,mb5.7,baz=97,slow=4.4,SNR=6.9						
GERES	**GERESS Array B**	**90.65**	**319**	P	**P**	**11 36 07.2**	**+0.5**
	4.5nm,0.9s,mb4.8,baz=64,slow=3.4,SNR=2.6						
NOA	**NORSAR Array B**	**92.50**	**331**	P	**P**	**11 36 15.4**	**+0.4**
	6.5nm,0.8s,mb5.1,baz=85,slow=5.4,SNR=3.3						
NVAR	**Mina Array Bea**	**128.88**	**41**	PKP	PKPdf	11 42 13.1	+1.1
	2.8nm,1.0s,baz=336,slow=2.0,SNR=2.5						
TXAR	**Lajitas Array**	**144.02**	**40**	PKP	PKPdf	11 42 40.0	-0.3
	11nm,0.7s,baz=294,slow=1.6,SNR=16						
TXAR	**Lajitas Array**	**144.02**	**40**	PKP	PKPdf	11 42 40.0	-0.3
CFAA	**Coronel Fontan**	**144.72**	**195**	PKP	PKPdf	11 42 41.2	-0.2
	8.9nm,0.6s,baz=204,slow=2.2,SNR=13						
CFAA	**Coronel Fontan**	**144.72**	**195**	PKP	PKPdf	11 42 41.2	-0.2
CPUP	**Villa Florida**	**144.90**	**214**	PKP	PKPdf	11 42 42.3	+0.5
	52nm,0.9s,baz=48,slow=3.9,SNR=4.8						
BDFB	**Brasilia**	**145.09**	**238**	PKPbc	PKPbc	11 42 42.5	+0.6
	39nm,1.0s,baz=315,slow=6.0,SNR=6.7						

IDC 12 11:25:09.4±1.8,341S×10027E,h0km,mb4.7/10, mb1 4.7/10,mb1mx4.6/21,mbtmp4.7/10,Error ellipse: s-maj=60.5km s-min=26.7km az=53.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.77**	**357**	P	P	11 30 02.1	-0.8
	5.6nm,0.8s,baz=186,slow=9.1,SNR=3.0						
ASAR	**Alice Springs**	**38.22**	**125**	P	P	11 32 30.4	-0.9
	6.0nm,0.7s,baz=291,slow=8.1,SNR=2.9						
KSRS	**Korea Array**	**48.10**	**30**	P	P	11 33 51.5	+0.5
	7.1nm,0.9s,baz=225,slow=7.9,SNR=6.0						
SONM	**Songino Array**	**51.31**	**5**	P	P	11 34 15.5	+0.2
	19nm,0.7s,baz=189,slow=10.0,SNR=18						
SONM				PcP	PcP	11 35 30.9	+0.6
	5.1nm,0.6s,baz=184,slow=3.9,SNR=5.4						
MKAR	**Makanchi Array**	**52.45**	**344**	P	P	11 34 23.7	-0.1
	25nm,0.7s,baz=155,slow=8.3,SNR=11						
KURK	**Kurchatov**	**57.03**	**344**	P	P	11 34 56.1	-0.9
	9.2nm,0.9s,baz=169,slow=7.2,SNR=5.0						
ZALV	**Zalesovo Beam**	**58.60**	**349**	P	P	11 35 07.8	-0.1
	12nm,0.8s,baz=180,slow=10,SNR=3.7						
BVAR	**Borovoye Array**	**61.59**	**340**	P	P	11 35 28.1	-0.5
	3.6nm,0.7s,baz=134,slow=8.3,SNR=3.2						
PETK	**Petropavlovsk-**	**73.93**	**32**	P	P	11 36 45.9	-0.5
	2.2nm,0.6s,baz=143,slow=1.1,SNR=6.2						
ARCES	**ARCESS Array B**	**87.89**	**340**	P	P	11 38 01.2	+0.7
	3.3nm,0.7s,baz=114,slow=4.4,SNR=4.3						
TXAR	**Lajitas Array**	**145.64**	**39**	PKPbc	PKPbc	11 44 51.0	+0.2
	8.9nm,0.7s,baz=294,slow=0.9,SNR=12						

IDC 12 11:27:02.7±20.0,2049S×17835W,h520km±206km, mb4.0/3,mb1 4.1/4,mb1mx3.8/17,mbtmp4.0/4,Error ellipse: s-maj=159.4km s-min=34.2km az=35.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.14**	**192**	P	P	11 30 43.0	-0.1
	4.1nm,0.3s,baz=352,slow=9.5,SNR=19						
CTA	**Charters Tower**	**33.17**	**264**	P	P	11 32 56.6	+0.5
	16nm,0.4s,baz=89,slow=12,SNR=10						
ASAR	**Alice Springs**	**44.20**	**257**	P	P	11 34 25.3	-0.2
	13nm,0.8s,baz=90,slow=8.3,SNR=12						
WRA	**Warramunga Array**	**44.28**	**262**	P	P	11 34 25.5	-0.6
	7.5nm,0.5s,baz=96,slow=7.5,SNR=1.2						
AKASG	**Malin Array Be**	**142.85**	**331**	PKP	PKPdf	11 45 36.2	-0.4
	5.8nm,0.4s,baz=45,slow=4.1,SNR=20						

IDC 12 11:27:50.2±1.8,365S×10010E,h0km,mb4.5/9,mb1 4.6/9, mb1mx4.4/21,mbtmp4.5/9,Error ellipse: s-maj=66.9km s-min=24.4km az=56.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.00**	**357**	P	P	11 32 47.5	+1.3
	4.2nm,0.7s,baz=186,slow=8.5,SNR=3.8						
ASAR	**Alice Springs**	**38.22**	**124**	P	P	11 35 11.8	-0.4
	3.7nm,0.4s,baz=300,slow=7.6,SNR=6.4						
KSRS	**Korea Array**	**48.39**	**30**	P	P	11 36 33.2	-0.8
	6.2nm,1.0s,baz=229,slow=6.5,SNR=5.0						
SONM	**Songino Array**	**51.57**	**5**	P	P	11 36 57.9	-0.1
	5.7nm,0.5s,baz=190,slow=9.4,SNR=8.7						
MKAR	**Makanchi Array**	**52.64**	**345**	P	P	11 37 06.2	+0.2
	5.0nm,0.5s,baz=155,slow=7.8,SNR=7.5						
KURK	**Kurchatov**	**57.21**	**344**	P	P	11 37 38.7	-0.4
	3.3nm,0.7s,baz=169,slow=6.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**58.80**	**350**	P	P	11 37 49.2	-0.9
	5.9nm,0.7s,baz=138,slow=4.5,SNR=4.7						
BVAR	**Borovoye Array**	**61.76**	**340**	P	P	11 38 09.8	-0.7
	3.8nm,0.7s,baz=141,slow=8.8,SNR=4.7						
ARCES	**ARCESS Array B**	**88.05**	**340**	P	P	11 40 42.8	+0.7
	3.7nm,0.8s,baz=141,slow=3.0,SNR=3.6						
TXAR	**Lajitas Array**	**145.93**	**39**	PKPbc	PKPbc	11 47 33.0	+0.6
	7.4nm,0.5s,baz=236,slow=0.6,SNR=23						

IDC 12 11:29:35.5±1.9,103N×9716E,h0km,mb4.6/7,mb1 4.6/8, mb1mx4.4/22,mbtmp4.5/8,ML4.9/1,Error ellipse: s-maj=44.7km s-min=41.5km az=64.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.40**	**6**	P	Pn	11 33 39.0	-1.0
	1.5nm,0.3s,baz=195,slow=12,SNR=8.3						
KSRS	**Korea Array**	**46.01**	**34**	P	P	11 38 00.1	-0.7
	13nm,0.9s,baz=222,slow=8.9,SNR=20						
SONM	**Songino Array**	**47.30**	**8**	P	P	11 38 10.8	0.0
	9.2nm,0.5s,baz=190,slow=9.2,SNR=12						
MKAR	**Makanchi Array**	**47.39**	**346**	P	P	11 38 12.2	+0.7
	4.2nm,0.5s,baz=158,slow=8.6,SNR=5.6						
MJAR	**Matsushiro Arr**	**51.84**	**42**	P	P	11 38 46.3	+0.7
	0.9nm,0.4s,baz=221,slow=7.9,SNR=5.1						
KURK	**Kurchatov**	**51.94**	**345**	P	P	11 38 46.1	0.0
	3.7nm,0.8s,baz=165,slow=7.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**53.72**	**351**	P	P	11 38 59.2	0.0
	8.8nm,0.5s,baz=168,slow=6.3,SNR=6.5						
BVAR	**Borovoye Array**	**56.39**	**341**	P	P	11 39 17.8	-0.8
	2.5nm,0.5s,baz=134,slow=10,SNR=3.5						
TXAR	**Lajitas Array**	**143.83**	**32**	PKP	PKPdf	11 49 11.4	-2.1
	1.1nm,0.8s,baz=221,slow=1.0,SNR=3.1						
TXAR				SKPbc	SKPbc	11 52 54.2	+0.4
	2.0nm,0.5s,baz=226,slow=0.8,SNR=7.2						
CPUP	**Villa Florida**	**144.86**	**222**	PKP	PKPdf	11 49 14.7	-0.7
	1.7nm,0.6s,baz=127,slow=6.0,SNR=3.4						

*IDC **12** 11:30:06.6±0.5,4.27S×10136E,h0km,mb5.2/22, mb1 5.2/22,mb1mx5.1/28,mbtmp5.2/22,Error ellipse: s-maj=19.6km s-min=11.3km az=54.0*
*BJI **12** 11:30:07.8,4.20S×10138E,h18km,mb5.8*
*MOS **12** 11:30:09.2±0.8,4.30S×10129E,h35km,mb5.6/29,Error ellipse: s-maj=15.5km s-min=8.4km az=101.3*
*NEIC **12** 11:30:11.6±0.3,4.26S×10137E,h35km,mb5.3/2,Error ellipse: s-maj=11.2km s-min=6.7km az=63.0*
*ISCJB **12** 11:30:15.2±4.0,4.28S±007×10141E±008,h87km±37km, mb5.4/48,Error ellipse: s-maj=14.8km s-min=8.4km az=143.1*

ISC 12 11:30:16.5±3.4,429S±007×10142E±008,h81km±31km, n96,σ0°71/88,mb5.4/48,2C-3D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.73**	**354**	P	**P**	**11 35 10.2**	**-1.8**
	59nm,0.8s,mb5.0,baz=184,slow=8.4,SNR=33						
CMAR	**Chiang Mai Arr**	**22.73**	**354**	P	**P**	**11 35 10.2**	**-1.8**
CMAR				pmax	pmax		
	comp=Z,59nm,0.8s						
BATI	**Baumata**	**22.83**	**106**	P	**P**	**11 35 12.8**	**-0.3**
	comp=Z,95nm,0.7s,mb5.3,baz=90,slow=24,SNR=28						
FITZ	**Fitzroy Crossi**	**27.39**	**122**	P	**P**	**11 35 54.1**	**-0.5**
	comp=Z,14nm,0.6s,mb4.7,baz=300,slow=7.7,SNR=14						
NWAO	**Narrogin (SRO)**	**32.10**	**154**	P	**P**	**11 36 35.5**	**-0.6**
	comp=Z,19nm,0.6s,mb5.0,baz=322,slow=13,SNR=16						
NWAO	**Narrogin (SRO)**	**32.10**	**154**	P	**P**	**11 36 35.5**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,19nm,0.6s						
ODAN	**Odare**	**33.81**	**337**	*e*P	**P**	**11 36 51.6**	**+0.6**
	comp=Z,333nm,1.0s,mb6.1						
TAPN	**Taplejung**	**34.12**	**338**	*e*P	**P**	**11 36 54.7**	**+0.9**
	comp=Z,377nm,1.0s,mb6.2						
RAMN	**Ramite**	**34.20**	**336**	*e*P	**P**	**11 36 54.8**	**+0.4**
	comp=Z,279nm,1.1s,mb6.0						
JIRN	**Jiri**	**35.00**	**336**	*e*P	**P**	**11 37 01.7**	**+0.4**
PKI	**Pulchoki**	**35.24**	**335**	*e*P	**P**	**11 37 03.5**	**+0.1**
	comp=Z,113nm,1.2s,mb5.6						
GUN	**Gumba**	**35.34**	**336**	*e*P	**P**	**11 37 04.9**	**+0.6**
	comp=Z,183nm,0.5s,mb6.2						
DMN	**Daman**	**35.40**	**335**	*e*P	**P**	**11 37 05.2**	**+0.4**
	comp=Z,196nm,1.1s,mb5.8						
KKN	**Kakani**	**35.49**	**335**	*e*P	**P**	**11 37 05.3**	**-0.2**
	comp=Z,234nm,1.0s,mb6.0						
WRA	**Warramunga Arr**	**35.64**	**119**	P	**P**	**11 37 07.1**	**+0.1**
	comp=Z,19nm,0.7s,mb5.2,baz=301,slow=9.5,SNR=9.3						
WRA	**Warramunga Arr**	**35.64**	**119**	P	**P**	**11 37 07.1**	**+0.1**
WRA				pmax	pmax		
	comp=Z,19nm,0.7s						
GKN	**Gorkha**	**35.95**	**334**	*e*P	**P**	**11 37 09.6**	**+0.1**
	comp=Z,486nm,1.1s,mb6.3						
KOLN	**Koldanda**	**36.21**	**333**	*e*P	**P**	**11 37 12.0**	**+0.3**
DANN	**Dangsing**	**36.63**	**333**	*e*P	**P**	**11 37 14.2**	**-1.1**
	comp=Z,389nm,1.0s,mb6.3						
ASAR	**Alice Springs**	**36.78**	**125**	P	**P**	**11 37 16.9**	**+0.2**
	comp=Z,19nm,0.7s,mb5.2,baz=293,slow=8.2,SNR=24						
ASAR	**Alice Springs**	**36.78**	**125**	P	**P**	**11 37 16.9**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,19nm,0.7s						
NJ2	**Nanjing**	**39.76**	**23**	*e*P	**P**	**11 37 40.8**	**-0.8**
NJ2				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.4						
CTA	**Charters Tower**	**46.37**	**114**	*e*P	**P**	**11 38 35.7**	**+0.6**
CTA	**Charters Tower**	**46.37**	**114**	P	**P**	**11 38 35.4**	**+0.3**
	comp=Z,11nm,0.8s,mb4.6,baz=293,slow=11,SNR=3.9						
CTA	**Charters Tower**	**46.37**	**114**	P	**P**	**11 38 35.4**	**+0.3**
CTA				pmax	pmax		
	comp=Z,11nm,0.9s						
KSRS	**Korea Array**	**48.30**	**28**	P	**P**	**11 38 50.9**	**+1.1**
	comp=Z,37nm,0.9s,mb5.2,baz=216,slow=8.0,SNR=22						
KSRS	**Korea Array**	**48.30**	**28**	P	**P**	**11 38 50.9**	**+1.1**
KSRS				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.2						
WMQ	**Urumqi**	**49.46**	**347**	P	**P**	**11 38 59.5**	**+1.0**
WMQ				XP	sP	11 39 07.5	-20
WMQ				AMB	AMB		
	comp=Z,240nm,0.8s,mb6.2						
SONM	**Songino Array**	**52.09**	**4**	P	**P**	**11 39 19.5**	**+1.3**
	comp=Z,57nm,0.9s,mb5.6,baz=185,slow=9.2,SNR=26						
SONM				PcP	PcP	11 40 30.4	+1.2
	comp=Z,11nm,0.7s,baz=188,slow=4.4,SNR=4.7						
SONM	**Songino Array**	**52.09**	**4**	P	**P**	**11 39 19.5**	**+1.3**
SONM						11 40 30.4	
SONM				pmax	pmax		
	comp=Z,57nm,0.9s						
SONM				pmax	pmax		
	comp=Z,11nm,0.7s						
ULN	**Ulaanbaatar**	**52.17**	**5**	*e*P	**P**	**11 39 19.9**	**+1.1**
ULN	**Ulaanbaatar**	**52.17**	**5**	*e*P	**P**	**11 39 19.0**	**+0.2**
AML	**Almayashu**	**52.63**	**334**	*e*P	**P**	**11 39 23.2**	**+1.0**
	comp=Z,20nm,0.7s,mb5.2						
EKS2	**Erkin-Say**	**53.02**	**335**	*e*P	**P**	**11 39 25.9**	**+0.7**
	comp=Z,41nm,0.7s,mb5.6						
MAT	**Matsushiro**	**53.19**	**37**	P	**P**	**11 39 26.5**	**-0.1**
MJAR	**Matsushiro Arr**	**53.19**	**37**	P	**P**	**11 39 26.1**	**-0.5**
	comp=Z,22nm,0.9s,mb5.2,baz=217,slow=7.4,SNR=28						
MJAR	**Matsushiro Arr**	**53.19**	**37**	P	**P**	**11 39 26.1**	**-0.5**
MJAR				pmax	pmax		
	comp=Z,22nm,0.9s						
MKAR	**Makanchi Array**	**53.60**	**344**	P	**P**	**11 39 29.1**	**-0.2**
	comp=Z,53nm,0.9s,mb5.6,baz=148,slow=8.4,SNR=21						
MKAR	**Makanchi Array**	**53.60**	**344**	P	**P**	**11 39 29.2**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,53nm,0.9s						
VLA	**Vladivostok**	**54.64**	**27**	*e*P	**P**	**11 39 37.2**	**+0.2**
VLA				pmax	pmax		
	comp=Z,88nm,1.6s,mb5.5						
OPO	**Ambohidratompo**	**54.80**	**250**	P	**P**	**11 39 40.2**	**+1.6**
	comp=Z,3.3nm,0.9s,mb4.3,baz=67,slow=13,SNR=2.5						
HIA	**Hailar**	**55.67**	**14**	*e*P	**P**	**11 39 44.2**	**0.0**
TLY	**Talaya**	**55.78**	**2**	*e*P	**P**	**11 39 45.3**	**+0.3**
KURK	**Kurchatov**	**58.19**	**343**	P	**P**	**11 40 01.8**	**-0.3**
	comp=Z,31nm,0.9s,mb5.3,baz=160,slow=6.7,SNR=14						
KURK	**Kurchatov**	**58.19**	**343**	⇓*i*P	**P**	**11 40 02.3**	**+0.2**
KURK				pmax	pmax		
	comp=Z,138nm,1.5s,mb5.8						
HNR	**Honiara**	**58.28**	**98**	P	**P**	**11 40 03.4**	**0.0**
	comp=Z,104nm,0.9s,mb5.8,baz=273,slow=4.6,SNR=4.3						
HNR	**Honiara**	**58.28**	**98**	P	**P**	**11 40 03.4**	**0.0**
HNR				pmax	pmax		
	comp=Z,104nm,0.9s,mb5.9						
ZAA0	**Zalesovo Array**	**59.67**	**349**	*e*P	**P**	**11 40 12.3**	**+0.1**
ZALV	**Zalesovo Beam**	**59.67**	**349**	P	**P**	**11 40 12.4**	**+0.2**
	comp=Z,66nm,0.8s,mb5.7,baz=160,slow=4.7,SNR=22						
ZALV	**Zalesovo Beam**	**59.67**	**349**	P	**P**	**11 40 12.4**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.7						
KRAR	**Krasnoyarsk**	**60.50**	**354**	*e*P	**P**	**11 40 17.6**	**-0.3**
KRAR				pmax	pmax		
	comp=Z,102nm,1.3s,mb5.7						
CASY	**Casey**	**62.21**	**176**	*e*P	**P**	**11 40 29.1**	**-0.2**
YSS	**Yuzh-Sakhalins**	**62.69**	**31**	*e*P	**P**	**11 40 33.1**	**+0.3**
YSS				pmax	pmax		
	comp=Z,89nm,1.0s,mb5.7						
BVAR	**Borovoye Array**	**62.81**	**340**	P	**P**	**11 40 32.6**	**-0.8**
	comp=Z,24nm,0.8s,mb5.2,baz=142,slow=7.5,SNR=15						
BVAR	**Borovoye Array**	**62.81**	**340**	P	**P**	**11 40 32.6**	**-0.8**
BVAR				pmax	pmax		
	comp=Z,24nm,0.8s						
BRVK	**Borovoye**	**62.87**	**339**	*e*P	**P**	**11 40 32.5**	**-1.4**
AKTK	**Aktyubinsk**	**66.03**	**331**	P	**P**	**11 40 53.8**	**-0.8**
AKTO	**Aktyubinsk**	**66.03**	**331**	P	**P**	**11 40 53.8**	**-0.8**
	comp=Z,9.5nm,0.5s,mb4.8,baz=108,slow=6.0,SNR=8.1						
AKTO	**Aktyubinsk**	**66.03**	**331**	P	**P**	**11 40 53.8**	**-0.7**
AKTO				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
GNI	**Garni**	**68.15**	**316**	⇑*e*P	**P**	**11 41 06.9**	**-1.3**
GNI	**Garni**	**68.15**	**316**	⇑*e*P	**P**	**11 41 06.0**	**-2.2**
MAW	**Mawson**	**68.44**	**195**	P	**P**	**11 41 09.8**	**+0.3**
	comp=Z,14nm,0.8s,mb4.8,baz=357,slow=6.1,SNR=6.7						
MAW	**Mawson**	**68.44**	**195**	P	**P**	**11 41 09.8**	**+0.3**
MAW				pmax	pmax		
	comp=Z,14nm,0.9s						
SVE	**Sverdlovsk**	**69.32**	**337**	*e*P	**P**	**11 41 15.4**	**+0.3**
SVE				pmax	pmax		
	comp=Z,115nm,1.1s,mb5.6						
YAK	**Yakutsk**	**69.60**	**14**	*e*P	**P**	**11 41 16.4**	**-0.3**
YAK				pmax	pmax		
	comp=Z,150nm,1.2s,mb5.7						
ARU	**Arti**	**69.86**	**336**	*d i*P	**P**	**11 41 16.8**	**-1.6**
ARU				*e*S	S	11 50 24.5	+2.9
ARU				SS	SS	11 54 53.6	+1.5
ARU				pmax	pmax		
	comp=Z,69nm,1.2s,mb5.4						
ARU	**Arti**	**69.86**	**336**	⇓*i*P	**P**	**11 41 16.9**	**-1.5**
KIV	**Kislovodsk**	**71.19**	**319**	*e*P	**P**	**11 41 25.7**	**-1.1**
KIV				pmax	pmax		
	comp=Z,71nm,1.8s,mb5.2						
KIV	**Kislovodsk**	**71.19**	**319**	*e*P	**P**	**11 41 25.8**	**-1.0**
EIL	**Elat**	**71.94**	**303**	P	**P**	**11 41 32.3**	**+0.6**
	comp=Z,29nm,0.9s,mb5.1,baz=71,slow=1.4,SNR=11						
PETK	**Petropavlovsk-**	**74.07**	**31**	P	**P**	**11 41 43.9**	**+0.2**
	comp=Z,9.8nm,0.8s,mb4.6,baz=214,slow=1.0,SNR=15						
PETK	**Petropavlovsk-**	**74.07**	**31**	P	**P**	**11 41 43.9**	**+0.2**
PET	**Petropavlovsk**	**74.53**	**32**	*e*P	**P**	**11 41 47.0**	**+0.7**
PET				pmax	pmax		
	comp=Z,117nm,2.7s,mb5.1						
SEY	**Seymchan**	**77.22**	**21**	*e*P	**P**	**11 42 02.1**	**+0.6**
SIM	**Simferopol'**	**77.23**	**318**	*e*P	**P**	**11 42 02.0**	**0.0**
SIM				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.1						
TIXI	**Tiksi**	**77.89**	**9**	*e*P	**P**	**11 42 04.4**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,62nm,1.5s,mb5.1						
TIXI	**Tiksi**	**77.89**	**9**	*e*P	**P**	**11 42 04.5**	**-0.5**
OBN	**Obninsk**	**79.47**	**328**	*e*P	**P**	**11 42 14.0**	**-0.1**
OBN				pmax	pmax		
	comp=Z,140nm,1.5s,mb5.6						
AKASG	**Malin Array Be**	**82.15**	**322**	P	**P**	**11 42 27.9**	**-0.5**
	comp=Z,8.8nm,0.8s,mb4.6,baz=86,slow=4.3,SNR=7.0						
AKASG	**Malin Array Be**	**82.15**	**322**	P	**P**	**11 42 28.0**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BILL	**Bilibino**	**84.80**	**20**	*e*P	**P**	**11 42 41.5**	**-0.2**
BILL				pmax	pmax		
	comp=Z,58nm,1.2s,mb5.4						
BILL	**Bilibino**	**84.80**	**20**	*e*P	**P**	**11 42 41.6**	**-0.1**
LVZ	**Lovozero**	**85.40**	**340**	*e*P	**P**	**11 42 44.4**	**-0.3**
LVZ				pmax	pmax		
	comp=Z,86nm,1.4s,mb5.5						
LVZ	**Lovozero**	**85.40**	**340**	*e*P	**P**	**11 42 44.5**	**-0.2**
VSU	**Vasula**	**85.68**	**329**	*e*P	**P**	**11 42 45.3**	**-0.9**
ARCES	**ARCESS Array B**	**89.09**	**340**	P	**P**	**11 43 03.5**	**+1.0**
	comp=Z,18nm,0.8s,mb5.1,baz=114,slow=3.0,SNR=5.5						
ARCES	**ARCESS Array B**	**89.09**	**340**	P	**P**	**11 43 03.5**	**+1.1**
ARCES				pmax	pmax		
	comp=Z,18nm,0.9s						
ARCES	**ARCESS Array B**	**89.09**	**340**	P	**P**	**11 43 03.5**	**+1.0**
NVAR	**Mina Array Bea**	**130.42**	**41**	PKP	PKPdf	11 49 21.3	+3.1
	comp=Z,0.5nm,0.4s,baz=250,slow=1.8,SNR=8.1						
NVAR	**Mina Array Bea**	**130.42**	**41**	PKP	PKPdf	11 49 21.3	+3.1
ELK	**Elko**	**131.01**	**37**	PKP	PKPdf	11 49 21.8	+2.6
	comp=Z,2.1nm,0.5s,baz=56,slow=5.1,SNR=5.1						
ELK	**Elko**	**131.01**	**37**	PKIKP	PKPdf	11 49 21.8	+2.6
ELK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ULM	**Lac du Bonnet**	**131.93**	**15**	PKP	PKPdf	11 49 22.2	+1.6
	comp=Z,5.8nm,0.9s,baz=325,slow=5.2,SNR=4.3						
PDAR	**Pinedale Array**	**132.84**	**31**	PKP	PKPdf	11 49 24.2	+1.6
	comp=Z,0.9nm,0.7s,baz=63,slow=2.5,SNR=5.4						

OSI	**Osito Adit**	**1.35**	**312**	*e*Pn	**Pn**	**11 30 48.7**	**-0.4**
OSI				*e*Sg	**Sg**	**11 31 09.4**	**+1.0**
BLG	**Laguna Peak**	**1.36**	**287**	P	**Pn**	**11 30 48.4**	**-0.8**
	baz=1.4,SNR=107						
BLG				⇓Sb	**Sb**	**11 31 07.6**	**+0.6**
	baz=1.4						
HEC	**Hector,Ludlow**	**1.48**	**41**	⇓Pb	**Pb**	**11 30 51.4**	**-0.5**
	baz=1.5,SNR=115						
HEC				⇓Sb	**Sb**	**11 31 11.1**	**+0.5**
	baz=1.5						
DVTC	**Desert V Tower**	**1.58**	**131**	⇑Sb	**Sb**	**11 31 13.7**	**+0.3**
	baz=1.6						
SWSC	**Sam W. Stewart**	**1.62**	**118**	⇑Sb	**Sb**	**11 31 15.4**	**+0.7**
	baz=1.6						
GSC	**Goldstone**	**1.69**	**20**	⇓Pb	**Pb**	**11 30 54.6**	**-0.8**
	baz=1.7,SNR=94						
GSC				⇓Sb	**Sb**	**11 31 16.4**	**-0.1**
	baz=1.7						
GSC	**Goldstone**	**1.69**	**20**	*e*Pn	**Pn**	**11 30 54.5**	**+0.8**
GSC				*e*Sn	**Sn**	**11 31 15.3**	**+0.3**
BC3	**Big Chuckw Mtn**	**1.71**	**91**	⇑Sb	**Sb**	**11 31 17.7**	**+0.4**
	baz=1.7						
SNCC	**San Nicolas Is**	**1.75**	**255**	⇑P	**Pn**	**11 30 54.0**	**-0.6**
	baz=1.8,SNR=23						
SNCC				⇑S	**Sn**	**11 31 15.8**	**-0.8**
	baz=1.8						
LRMC	**Laurel Mountai**	**1.77**	**355**	⇑Pb	**Pb**	**11 30 55.8**	**-1.0**
	baz=1.8						
LRMC				⇓Sb	**Sb**	**11 31 18.7**	**-0.1**
	baz=1.8						
ARVC	**Arvin**	**1.79**	**323**	⇑Sb	**Sb**	**11 31 20.3**	**+0.9**
	baz=1.8						
BSC	**Santa Cruz Isl**	**1.79**	**280**	⇑P	**Pn**	**11 30 54.5**	**-0.7**
	baz=1.8						
GMRC	**Granite Mounta**	**1.86**	**55**	⇑Sb	**Sb**	**11 31 22.2**	**+0.7**
	baz=1.9						
IRM	**Iron Mountain**	**2.01**	**77**	⇓Sb	**Sb**	**11 31 27.0**	**+1.3**
	baz=2.0						
ISA	**Isabella**	**2.10**	**338**	⇑Sb	**Sb**	**11 31 30.1**	**+1.6**
	baz=2.1						
ISA	**Isabella**	**2.10**	**338**	*e*Pn	**Pn**	**11 31 02.8**	**+3.4**
ISA				*e*Sg	**Sg**	**11 31 30.7**	**-1.6**

IDC 12 11:36:31.0±1.8,274S×10012E,h0km,mb4.4/9,mb1 4.4/9, mb1mx4.3/21,mbtmp4.4/9,Error ellipse: s-maj=66.3km s-min=24.7km az=56.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.09**	**357**	P	P	11 41 16.0	-1.2
	2.0nm,0.5s,baz=186,slow=10,SNR=6.5						
ASAR	**Alice Springs**	**38.73**	**125**	P	P	11 43 56.7	-0.5
	3.8nm,0.8s,baz=304,slow=8.4,SNR=5.8						
KSRS	**Korea Array**	**47.59**	**30**	P	P	11 45 08.2	-0.5
	2.0nm,0.7s,baz=226,slow=7.8,SNR=5.6						
SONM	**Songino Array**	**50.66**	**5**	P	P	11 45 32.9	+0.9
	9.1nm,0.9s,baz=186,slow=9.4,SNR=7.7						
MKAR	**Makanchi Array**	**51.77**	**344**	P	P	11 45 40.6	+0.3
	10.0nm,0.7s,baz=149,slow=8.4,SNR=11						
KURK	**Kurchatov**	**56.34**	**344**	P	P	11 46 13.3	-0.3
	1.4nm,0.6s,baz=164,slow=7.0,SNR=9.5						
ZALV	**Zalesovo Beam**	**57.91**	**349**	P	P	11 46 24.5	-0.2
	4.4nm,0.7s,baz=169,slow=5.5,SNR=4.2						
BVAR	**Borovoye Array**	**60.91**	**340**	P	P	11 46 44.9	-0.6
	0.8nm,0.4s,baz=138,slow=9.4,SNR=2.6						
ARCES	**ARCESS Array B**	**87.20**	**340**	P	P	11 49 18.6	-0.3
	2.8nm,0.8s,baz=112,slow=1.3,SNR=3.6						
TXAR	**Lajitas Array**	**145.21**	**38**	PKPbc	PKPbc	11 56 11.1	+0.1
	5.5nm,0.8s,baz=280,slow=1.0,SNR=21						

IDC 12 11:37:58.3±4.6,353S×10016E,h0km,mb4.3/3,mb1 4.3/3, mb1mx3.8/20,mbtmp4.3/3,Error ellipse: s-maj=147.5km s-min=74.0km az=47.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**51.44**	**5**	P	P	11 47 05.1	-0.1
	4.8nm,0.6s,baz=189,slow=9.6,SNR=6.1						
MKAR	**Makanchi Array**	**52.54**	**345**	P	P	11 47 14.0	+0.7
	0.7nm,0.3s,baz=152,slow=9.7,SNR=3.8						
BVAR	**Borovoye Array**	**61.67**	**340**	P	P	11 48 17.5	-0.4
	1.6nm,0.5s,baz=152,slow=6.5,SNR=3.4						
TXAR	**Lajitas Array**	**145.81**	**39**	PKPbc	PKPbc	11 57 39.5	-0.6
	0.6nm,0.5s,baz=239,slow=0.8,SNR=4.9						

*BJI **12** 11:39:52.3,333S×10036E,h10km,mB5.7,mb5.5*
*IDC **12** 11:39:56.9±0.6,279S×10025E,h0km,mb5.0/18, mb1 5.1/18,mb1mx5.0/23,mbtmp5.0/18,Error ellipse: s-maj=22.3km s-min=14.3km az=51.0*
*ISCJB **12** 11:40:00.1±0.5,286S±007×10019E±005,h33km, mb5.3/33,Error ellipse: s-maj=9.8km s-min=7.0km az=11.6*
*MOS **12** 11:40:01.0±1.4,262S×10036E,h33km,mb5.2/15,Error ellipse: s-maj=19.9km s-min=11.0km az=101.0*
*NEIC **12** 11:40:01.8±0.3,284S×10022E,h35km,mb5.5/3,Error ellipse: s-maj=15.7km s-min=9.9km az=60.0*

ISC 12 11:40:02.0±0.5,292S±007×10019E±005,h35km,n144, σ0s82/89,mb5.3/33,10C-11D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGM	**Kluang**	**5.82**	**33**	⇑P	**Pn**	**11 41 26.2**	**+0.4**
MYKOM	**Kota Tinggi**	**5.94**	**38**	⇑P	**Pn**	**11 41 26.2**	**-1.3**
FRIM	**Kepong**	**6.28**	**13**	⇑P	**Pn**	**11 41 26.2**	**-6.0**
IPM	**Ipoh**	**7.40**	**6**	⇓P	**Pn**	**11 41 48.8**	**+1.2**
KTGM	**Kuala Trenggan**	**8.71**	**20**	⇓P	**Pn**	**11 42 06.9**	**+1.4**
KSM	**Kuching**	**11.02**	**67**	⇑P	**Pn**	**11 42 41.9**	**+4.7**
SBUM	**Sibu**	**13.16**	**66**	⇓P	**Pn**	**11 43 09.8**	**+3.4**
BTM	**Bintulu**	**14.25**	**65**	⇓P	**Pn**	**11 43 25.7**	**+4.3**
KKM	**Kota Kinabalu**	**18.32**	**61**	⇑P	**Pn**	**11 44 14.1**	**+0.7**
SDKM	**Sandakan**	**19.00**	**63**	⇑P	**Pn**	**11 44 21.6**	**-0.1**
TSM	**Tawau**	**19.07**	**68**	⇑P	**Pn**	**11 44 22.5**	**0.0**
KDM	**Kudat**	**19.28**	**59**	⇑P	**Pn**	**11 44 25.2**	**+0.2**
MYLDM	**Lahad Datu**	**19.99**	**66**	⇑P	**Pn**	**11 44 35.8**	**+2.3**
CMAR	**Chiang Mai Arr**	**21.28**	**357**	P	**P**	**11 44 42.9**	**-2.7**
	19nm,0.7s,mb4.5,baz=186,slow=9.5,SNR=30						
CMAR				PcP	PcP	11 48 50.8	+1.2
	5.3nm,0.9s,baz=219,slow=3.5,SNR=5.0						
CMAR	**Chiang Mai Arr**	**21.28**	**357**	P	**P**	**11 44 42.9**	**-2.6**
CMAR						11 48 50.8	
CMAR				pmax	pmax		
	comp=Z,19nm,0.7s						
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BATI	**Baumata**	**24.40**	**108**	P	**P**	**11 45 17.1**	**-0.3**
	comp=Z,16nm,0.4s,mb4.8,baz=333,slow=6.8,SNR=3.7						
ODAN	**Odare**	**32.08**	**338**	*e*P	**P**	**11 46 26.2**	**+0.4**
TAPN	**Taplejung**	**32.41**	**339**	*e*P	**P**	**11 46 28.8**	**+0.1**
	comp=Z,176nm,0.9s,mb5.9						
RAMN	**Ramite**	**32.47**	**337**	*e*P	**P**	**11 46 29.9**	**+0.7**
	comp=Z,86nm,0.8s,mb5.6						
JIRN	**Jiri**	**33.26**	**337**	*e*P	**P**	**11 46 36.7**	**+0.6**
	comp=Z,156nm,0.8s,mb6.0						
PKI	**Pulchoki**	**33.49**	**336**	*e*P	**P**	**11 46 38.1**	**0.0**
GUN	**Gumba**	**33.61**	**337**	*e*P	**P**	**11 46 39.5**	**+0.4**
	comp=Z,94nm,0.6s,mb5.9						
DMN	**Daman**	**33.65**	**335**	*e*P	**P**	**11 46 39.6**	**+0.1**
	comp=Z,74nm,0.9s,mb5.6						
KKN	**Kakani**	**33.74**	**336**	*e*P	**P**	**11 46 40.3**	**0.0**
	comp=Z,106nm,0.8s,mb5.8						
GKN	**Gorkha**	**34.20**	**335**	*e*P	**P**	**11 46 44.1**	**-0.1**
	comp=Z,141nm,0.4s,mb5.7						
KOLN	**Koldanda**	**34.44**	**333**	*e*P	**P**	**11 46 46.5**	**+0.1**
	comp=Z,74nm,0.8s,mb5.7						
DANN	**Dangsing**	**34.87**	**334**	*e*P	**P**	**11 46 49.9**	**-0.2**
	comp=Z,112nm,0.5s,mb6.0						
WRA	**Warramunga Arr**	**37.37**	**120**	P	**P**	**11 47 11.4**	**-0.2**
	comp=Z,8.4nm,0.9s,mb4.6,baz=297,slow=9.1,SNR=5.2						
WRA	**Warramunga Arr**	**37.37**	**120**	P	**P**	**11 47 11.4**	**-0.2**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ASAR	**Alice Springs**	**38.56**	**125**	P	**P**	**11 47 21.7**	**+0.1**
	comp=Z,17nm,0.8s,mb4.8,baz=299,slow=8.1,SNR=26						
ASAR	**Alice Springs**	**38.56**	**125**	P	**P**	**11 47 21.7**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,17nm,0.8s						
LZH	**Lanzhou**	**38.96**	**5**	*e*P	**P**	**11 47 24.1**	**-0.6**
LZH				AP	pP	11 47 27.8	-7.1
LZH				XP	sP	11 47 29.6	-10
LZH				AMB	AMB		
	comp=Z,57nm,1.2s,mb5.2						
LZH				AMB	AMB		
	comp=Z,256nm,5.0s						
THN	**Thein Dam**	**42.13**	**329**	*e*P	**P**	**11 47 43.6**	**-7.4**
THN				*e*S	S	11 53 42.8	-26
KSRS	**Korea Array**	**47.72**	**30**	P	**P**	**11 48 34.8**	**-0.6**
	comp=Z,19nm,1.0s,mb5.1,baz=225,slow=8.3,SNR=47						
KSRS	**Korea Array**	**47.72**	**30**	P	**P**	**11 48 34.8**	**-0.6**
KSRS				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
WMQ	**Urumqi**	**47.87**	**348**	⇓P	**P**	**11 48 37.2**	**+0.8**
WMQ				AMB	AMB		
	comp=Z,444nm,1.0s,mb6.5						
CTA	**Charters Tower**	**48.04**	**114**	*e*P	**P**	**11 48 38.2**	**0.0**
	comp=Z,32nm,0.8s,mb5.4						
CTA	**Charters Tower**	**48.04**	**114**	P	**P**	**11 48 38.2**	**0.0**
	baz=287,slow=11						
TKM2	**Tokmak 2**	**50.75**	**337**	*e*P	**P**	**11 48 59.0**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.4						
TKM2	**Tokmak 2**	**50.75**	**337**	P	**P**	**11 48 58.2**	**-0.3**
	SNR=16						
TKM2	**Tokmak 2**	**50.75**	**337**	*e*P	**P**	**11 48 59.0**	**+0.6**
	comp=Z,48nm,0.9s,mb5.4						
KBK	**Karagaybulak**	**50.78**	**336**	P	**P**	**11 48 59.6**	**+0.8**
	SNR=8.6						
SONM	**Songino Array**	**50.84**	**5**	P	**P**	**11 48 59.4**	**+0.3**
	comp=Z,75nm,0.8s,mb5.7,baz=186,slow=8.6,SNR=82						
SONM				PcP	PcP	11 50 15.6	+0.2
	comp=Z,7.7nm,0.7s,baz=192,slow=4.4,SNR=2.9						
SONM	**Songino Array**	**50.84**	**5**	P	**P**	**11 48 59.4**	**+0.4**
SONM						11 50 15.6	
SONM				pmax	pmax		
	comp=Z,75nm,0.8s						
SONM				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AML	**Almayashu**	**50.87**	**335**	P	**P**	**11 48 59.8**	**+0.4**
	SNR=8.9						
CHMS	**Chumysh**	**51.15**	**336**	P	**P**	**11 49 01.7**	**+0.2**
	SNR=7.4						
EKS2	**Erkin-Say**	**51.27**	**335**	P	**P**	**11 49 01.6**	**-0.8**
	SNR=17						
EKS2	**Erkin-Say**	**51.27**	**335**	*e*P	**P**	**11 49 03.1**	**+0.7**
	comp=Z,61nm,0.9s,mb5.5						
USP	**Ospenovka**	**51.48**	**336**	P	**P**	**11 49 04.1**	**+0.2**
	SNR=16						
MKAR	**Makanchi Array**	**51.96**	**344**	P	**P**	**11 49 07.2**	**-0.3**
	comp=Z,81nm,0.7s,mb5.8,baz=147,slow=8.1,SNR=110						
MKAR	**Makanchi Array**	**51.96**	**344**	P	**P**	**11 49 07.2**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,81nm,0.7s						
MAT	**Matsushiro**	**52.87**	**38**	P	**P**	**11 49 14.0**	**-0.4**
MJAR	**Matsushiro Arr**	**52.87**	**38**	P	**P**	**11 49 13.1**	**-1.4**
	comp=Z,22nm,1.0s,mb5.0,baz=219,slow=7.6,SNR=26						
MJAR	**Matsushiro Arr**	**52.87**	**38**	P	**P**	**11 49 13.1**	**-1.3**
MJAR				pmax	pmax		
	comp=Z,22nm,1.0s						
ZAK	**Zakamensk**	**53.16**	**2**	*e*P	**P**	**11 49 15.9**	**-0.4**
ZAK				*e*		11 50 24.3	
ZAK				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
ZAK				pmax	pmax		
	comp=Z,47nm,2.0s,mb5.1						
TOO	**Toolangi**	**53.92**	**136**	*e*P	**P**	**11 49 16.3**	**-5.9**
OPO	**Ambohidratompo**	**54.12**	**249**	P	**P**	**11 49 25.6**	**+1.7**
	comp=Z,4.4nm,0.9s,mb4.4,baz=58,slow=13,SNR=3.9						
KURK	**Kurchatov**	**56.54**	**344**	P	**P**	**11 49 39.9**	**-0.9**
	comp=Z,45nm,0.9s,mb5.5,baz=161,slow=6.9,SNR=44						
KURK	**Kurchatov**	**56.54**	**344**	P	**P**	**11 49 39.9**	**-0.8**
KURK				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.5						
ZALV	**Zalesovo Beam**	**58.10**	**349**	P	**P**	**11 49 51.1**	**-0.6**
	comp=Z,59nm,0.9s,mb5.6,baz=163,slow=5.6,SNR=30						
ZALV	**Zalesovo Beam**	**58.10**	**349**	P	**P**	**11 49 51.2**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.6						
BVAR	**Borovoye Array**	**61.11**	**340**	P	**P**	**11 50 11.1**	**-1.3**
	comp=Z,8.0nm,0.7s,mb5.0,baz=147,slow=8.5,SNR=8.7						
BVAR	**Borovoye Array**	**61.11**	**340**	P	**P**	**11 50 11.1**	**-1.3**
BVAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BOD	**Bodaibo**	**61.56**	**8**	*e*P	**P**	**11 50 14.8**	**-0.6**
BOD				pmax	pmax		
	comp=Z,135nm,2.2s,mb5.7						
YSS	**Yuzh-Sakhalins**	**62.16**	**32**	*e*P	**P**	**11 50 17.6**	**-2.1**
PETK	**Petropavlovsk-**	**73.56**	**32**	P	**P**	**11 51 30.5**	**-0.8**
	comp=Z,7.2nm,0.7s,mb4.7,baz=282,slow=7.2,SNR=4.3						
TIXI	**Tiksi**	**76.73**	**9**	P	**P**	**11 51 54.7**	**+5.5**
TIRR	**Tirgusor**	**79.14**	**316**	⇓*i*P	**P**	**11 52 02.6**	**-0.6**
AKASG	**Malin Array Be**	**80.32**	**322**	P	**P**	**11 52 08.3**	**-1.1**
	comp=Z,1.4nm,0.4s,baz=85,slow=4.1,SNR=6.7						
AKASG	**Malin Array Be**	**80.32**	**322**	P	**P**	**11 52 08.3**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
VRI	**Vrincioaia**	**80.65**	**317**	⇓*i*P	**P**	**11 52 11.6**	**+0.3**
MLR	**Muntele Rosu**	**81.10**	**317**	⇓*i*P	**P**	**11 52 14.0**	**+0.3**
BURAR	**Bucovina Array**	**82.07**	**319**	⇑*i*P	**P**	**11 52 19.4**	**+0.6**
BZS	**Buzias**	**84.10**	**316**	⇓*i*P	**P**	**11 52 27.9**	**-1.4**
KOLS	**Kolonicke sedl**	**84.27**	**320**	*e*P	**P**	**11 52 30.4**	**+0.3**
KOLS	**Kolonicke sedl**	**84.27**	**320**	*e*	**P**	**11 52 30.4**	**+0.3**
STHS	**Stebnicka Huta**	**85.03**	**320**	*e*P	**P**	**11 52 34.6**	**+0.7**
STHS	**Stebnicka Huta**	**85.03**	**320**	*e*	**P**	**11 52 34.6**	**+0.7**
PSZ	**Piszkesteto**	**85.65**	**318**	⇓*i*P	**P**	**11 52 37.3**	**+0.2**
PKSM	**Moragy**	**86.24**	**316**	⇓*i*P	**P**	**11 52 40.0**	**0.0**
ARCES	**ARCESS Array B**	**87.40**	**340**	P	**P**	**11 52 45.0**	**-0.2**
	comp=Z,11nm,0.7s,mb5.2,baz=107,slow=4.4,SNR=21						
ARCES	**ARCESS Array B**	**87.40**	**340**	P	**P**	**11 52 45.0**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,11nm,0.7s						
ARCES	**ARCESS Array B**	**87.40**	**340**	P	**P**	**11 52 45.0**	**-0.2**
GERES	**GERESS Array B**	**89.86**	**319**	P	**P**	**11 52 57.4**	**+0.1**
	comp=Z,5.4nm,0.9s,mb4.9,baz=92,slow=4.0,SNR=9.3						
GERES	**GERESS Array B**	**89.86**	**319**	P	**P**	**11 52 57.4**	**+0.1**
GERES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NB2	**NORSAR Subarra**	**92.04**	**331**	P	**P**	**11 53 06.3**	**-0.8**
	comp=Z,2.0nm,0.7s,mb4.6,baz=92,slow=5.1						
NOA	**NORSAR Array B**	**92.04**	**331**	P	**P**	**11 53 06.5**	**-0.5**
	comp=Z,4.9nm,1.0s,mb4.8,baz=95,slow=4.6,SNR=6.4						
NOA	**NORSAR Array B**	**92.04**	**331**	P	**P**	**11 53 06.6**	**-0.5**
NOA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KEST	**Kesra**	**92.37**	**305**	P	**P**	**11 53 10.2**	**+0.9**
	comp=Z,8.1nm,0.9s,mb5.0,baz=286,slow=3.4,SNR=13						
YKA	**Yellowknife Ar**	**115.19**	**17**	PKP	PKiKP	11 58 38.4	-0.9
	comp=Z,1.6nm,0.8s,baz=335,slow=2.2,SNR=5.6						
YKA	**Yellowknife Ar**	**115.19**	**17**	PKIKP	PKiKP	11 58 38.4	-0.9
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HAWA	**Hanford**	**124.63**	**33**	*e*PKPdf	PKPdf	11 58 58.4	+0.5
SCHQ	**Schefferville**	**127.18**	**351**	PKP	PKPdf	11 59 02.7	+0.1
	comp=Z,6.7nm,1.0s,baz=270,slow=1.0,SNR=3.1						
WVOR	**Wild Horse Val**	**127.59**	**36**	PKIKP	PKPdf	11 59 05.3	+1.5
HLID	**Hailey**	**129.22**	**32**	*e*PKPdf	PKPdf	11 59 07.0	+0.2
NVAR	**Mina Array Bea**	**130.19**	**40**	PKP	PKPdf	11 59 10.0	+1.2
	comp=Z,1.8nm,0.7s,baz=262,slow=2.7,SNR=11						
ULM	**Lac du Bonnet**	**130.92**	**14**	PKP	PKPdf	11 59 09.7	-0.1
	comp=Z,7.9nm,0.8s,baz=293,slow=4.3,SNR=6.2						
BGU	**Big Grassy Mou**	**131.77**	**34**	*e*PKPdf	PKPdf	11 59 12.4	+0.6
PDAR	**Pinedale Array**	**132.28**	**30**	PKP	PKPdf	11 59 13.4	+0.7
	comp=Z,1.6nm,1.0s,baz=211,slow=0.9,SNR=6.6						
DUG	**Dugway**	**132.39**	**34**	PKIKP	PKPdf	11 59 13.9	+1.0
DUG	**Dugway**	**132.39**	**34**	*e*PKPdf	PKPdf	11 59 14.9	+2.0
PV10	**Paradox Valley**	**135.75**	**33**	*e*PKPdf	PKPdf	11 59 20.5	+1.2
WUAZ	**Wupatki**	**136.34**	**38**	*e*PKPdf	PKPdf	11 59 21.6	+1.1
ANMO	**Albuquerque**	**139.65**	**35**	PKHKP		11 59 20.4	
ANMO				pmax	pmax		
	comp=Z,24nm,1.8s						
ANMO	**Albuquerque**	**139.65**	**35**	*e*PKPdf	PKPdf	11 59 20.2	-6.4
BDFB	**Brasilia**	**143.53**	**239**	PKP	PKPdf	11 59 32.2	-1.9
	comp=Z,6nm,0.8s,baz=124,slow=3.6,SNR=3.0						
BDFB	**Brasilia**	**143.53**	**239**	PKIKP	PKPdf	11 59 32.2	-1.8
BDFB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CPUP	**Villa Florida**	**143.69**	**215**	PKhKP		11 59 31.5	
	comp=Z,2.2nm,0.8s,baz=159,slow=3.8,SNR=5.0						
CPUP	**Villa Florida**	**143.69**	**215**	PKIKP	PKPdf	11 59 31.5	-2.6
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WMOK	**Wichita Mounta**	**143.76**	**27**	PKIKP	PKPdf	11 59 32.1	-1.9
WMOK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CFAA	**Coronel Fontan**	**143.94**	**197**	PKhKP		11 59 32.6	
	comp=Z,0.3nm,0.5s,baz=84,slow=1.5,SNR=3.9						
SIUC	**Southern Illin**	**144.31**	**13**	*e*PKPdf	PKPdf	11 59 32.8	-2.0
WCI	**Wyandotte Cave**	**144.36**	**9**	PKIKP	PKPdf	11 59 32.2	-2.7
WCI				pmax	pmax		
	comp=Z,24nm,1.0s						
WCI	**Wyandotte Cave**	**144.36**	**9**	*e*PKPdf	PKPdf	11 59 32.2	-2.7
PARMO	**Parma**	**145.19**	**14**	*e*PKPdf	PKPdf	11 59 35.5	-0.9
TXAR	**Lajitas Array**	**145.31**	**38**	PKPbc	PKPbc	11 59 37.0	+0.5
	comp=Z,39nm,0.8s,baz=295,slow=1.0,SNR=139						
TXAR	**Lajitas Array**	**145.31**	**38**	PKIKP	PKPdf	11 59 37.1	+0.3
TXAR				pmax	pmax		
	comp=Z,39nm,0.8s						
URVA	**University of**	**145.46**	**357**	*e*PKPbc	PKPbc	11 59 36.4	-0.4
GLAT	**Glass**	**145.68**	**14**	*e*PKPbc	PKPbc	11 59 37.4	-0.2
ELN	**Prospectdale**	**145.85**	**1**	*e*PKPbc	PKPbc	11 59 36.7	-1.4
BLA	**Blacksburg**	**145.87**	**1**	PKP2	PKPab	11 59 37.4	-1.1
BLA				pmax	pmax		
	comp=Z,41nm,1.1s						
BLA	**Blacksburg**	**145.87**	**1**	*e*PKPbc	PKPbc	11 59 37.2	-0.9
HBAR	**Harrisburg**	**146.01**	**16**	*e*PKPbc	PKPbc	11 59 38.6	0.0
HALT	**Halls**	**146.01**	**14**	*e*PKPbc	PKPbc	11 59 38.1	-0.5
MIAR	**Mount Ida**	**146.03**	**21**	PKP2	PKPab	11 59 38.3	-0.9
MIAR				pmax	pmax		
	comp=Z,49nm,0.9s						
MIAR	**Mount Ida**	**146.03**	**21**	*e*PKPbc	PKPbc	11 59 38.4	-0.3
WVT	**Waverly**	**146.13**	**12**	*e*PKP2	PKPab	11 59 38.3	-1.2
UALR	**University of**	**146.23**	**19**	*e*PKPbc	PKPbc	11 59 38.8	-0.5
TZTN	**Tazewell**	**146.37**	**5**	*e*PKPbc	PKPbc	11 59 38.7	-0.9
JCT	**Junction City**	**146.70**	**33**	*e*PKP2	PKPab	11 59 39.7	-2.2
TKL	**Tuckaleechee C**	**147.22**	**6**	*e*PKIKP	PKPdf	11 59 39.5	-0.4
TKL				*e*		11 59 41.1	
OXF	**Oxford**	**147.32**	**15**	PKP2	PKPab	11 59 41.8	-2.4
OXF				pmax	pmax		
	comp=Z,110nm,1.0s						
OXF	**Oxford**	**147.32**	**15**	*e*PKPbc	PKPbc	11 59 41.7	-0.7
CPCT	**Cooper Cave**	**147.34**	**7**	*e*PKPdf	PKPdf	11 59 40.4	+0.3
CPCT				*e*PKPbc	PKPbc	11 59 41.9	-0.6
SWET	**Sewanee**	**147.37**	**9**	*e*PKPbc	PKPbc	11 59 41.2	-1.3
NATX	**Nacogdoches**	**148.09**	**24**	*e*PKPbc	PKPbc	11 59 45.0	+0.4
JSC	**Jenkinsville**	**148.77**	**2**	*e*PKIKP	PKPdf	11 59 42.6	+0.1
HKT	**Hockley**	**149.12**	**28**	*e*PKPbc	PKPbc	11 59 48.1	+0.8
GOGA	**Godfrey**	**149.48**	**6**	PKP2	PKPbc	11 59 47.9	-0.2
GOGA				pmax	pmax		
	comp=Z,82nm,1.5s						
GOGA	**Godfrey**	**149.48**	**6**	*e*PKPbc	PKPbc	11 59 47.6	-0.5
BRAL	**Brewton**	**151.24**	**13**	*e*PKPbc	PKPbc	11 59 52.6	+0.3
LVC	**Limon Verde**	**152.48**	**202**	PKPbc	PKPbc	11 59 57.0	+1.6
	comp=Z,9.9nm,1.0s,baz=4.7,slow=4.9,SNR=4.9						
LPAZ	**La Paz**	**157.69**	**211**	PKP	PKPdf	11 59 57.3	+1.6
	comp=Z,1.4nm,1.0s,baz=66,slow=2.3,SNR=4.8						
LPAZ	**La Paz**	**157.69**	**211**	PKIKP	PKPdf	11 59 57.3	+1.5
LPAZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						

IDC 12 11:42:25.5±2.2,415S×10063E,h0km,mb4.5/8,mb1 4.6/8, mb1mx4.3/20,mbtmp4.5/8,Error ellipse: s-maj=96.8km s-min=20.0km az=54.0,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.52**	**356**	P	P	11 47 26.7	-0.3
	4.3nm,0.8s,baz=186,slow=8.7,SNR=4.5						
WRA	**Warramunga Arr**	**36.40**	**118**	P	P	11 49 31.5	-0.4
	2.3nm,0.3s,baz=304,slow=8.9,SNR=6.6						
ASAR	**Alice Springs**	**37.51**	**124**	P	P	11 49 41.4	+0.1
	3.1nm,0.5s,baz=300,slow=7.9,SNR=5.6						
SONM	**Songino Array**	**

CFAA Coronel Fontan 143.52 196 PKP PKPdf 12 04 59.4 -2.1
0.5nm,0.7s,baz=232,slow=4.5,SNR=4.7
TXAR Lajitas Array 145.52 39 PKPbc PKPbc 12 05 05.5 +0.4
8.3nm,0.7s,baz=292,slow=1.2,SNR=26
LVC Limon Verde 152.10 201 PKPbc PKPbc 12 05 22.5 +0.1
8.2nm,0.7s,baz=140,slow=1.3,SNR=6.6
LPAZ La Paz 157.40 209 PKPab PKPab 12 05 55.1 +0.7
1.0nm,0.8s,baz=121,slow=11,SNR=4.8

IDC 12 11:46:03.8±1.1,331S×10219E,h0km,mb4.6/6,mb1 4.7/6, mb1mx4.3/20,mbtmp4.6/6,Error ellipse: s-maj=51.3km s-min=26.4km az=55.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**36.71**	**126**	P	P	11 53 13.3	+0.4
	16nm,0.8s,baz=302,slow=8.0,SNR=7.1						
KURK	**Kurchatov**	**57.49**	**342**	P	P	11 55 55.0	+0.4
	2.6nm,0.9s,baz=161,slow=7.1,SNR=4.1						
BVAR	**Borovoye Array**	**62.18**	**339**	P	P	11 56 26.7	-0.1
	7.2nm,0.7s,baz=147,slow=8.3,SNR=5.6						
PETK	**Petropavlovsk-**	**72.84**	**31**	P	P	11 57 33.8	-0.5
	3.0nm,0.7s,baz=220,slow=3.2,SNR=4.3						
AKASG	**Malin Array Be**	**81.86**	**322**	P	P	11 58 25.5	+0.5
	0.8nm,0.4s,baz=77,slow=4.3,SNR=4.1						
ARCES	**ARCESS Array B**	**88.45**	**340**	P	P	11 58 57.4	-0.2
	4.1nm,0.7s,baz=102,slow=5.1,SNR=5.0						
CFAA	**Coronel Fontan**	**144.10**	**194**	PKP	PKPdf	12 05 41.2	-1.1
	1.2nm,0.5s,baz=161,slow=2.1,SNR=9.0						
CPUP	**Villa Florida**	**144.49**	**213**	PKP	PKPdf	12 05 42.9	-0.2
	13nm,0.8s,baz=129,slow=1.6,SNR=2.9						
BDFB	**Brasilia**	**145.02**	**237**	PKPbc	PKPbc	12 05 42.3	-1.2
	4.9nm,0.6s,baz=138,slow=3.8,SNR=5.0						

*IDC **12** 11:48:46.2±1.2,299S×101.12E,h0km,mb4.5/13, mb1 4.6/13,mb1mx4.4/22,mbtmp4.5/13,Error ellipse: s-maj=48.5km s-min=16.5km az=52.0*
*NEIC **12** 11:48:51.7±0.7,291S×101.23E,h35km,Error ellipse: s-maj=33.0km s-min=9.2km az=54.0*
*ISCJB **12** 11:48:53.2±6.8,28S±02×101.4E±02,h59km±62km, mb4.9/19,Error ellipse: s-maj=44.5km s-min=13.2km az=136.9*
ISC 12 11:48:55.3±5.6,29S±02×1014E±02,h63km±52km,n30, σ0§68/28,mb4.9/19,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.33**	**354**	P	P	**11 53 35.6**	**-1.7**
	3.1nm,0.8s,mb3.7,baz=186,slow=10,SNR=5.6						
ODAN	**Odare**	**32.50**	**336**	*eP*	P	**11 55 20.7**	**+0.6**
	62nm,0.7s,mb5.6						
TAPN	**Taplejung**	**32.81**	**337**	*eP*	P	**11 55 23.5**	**+0.6**
RAMN	**Ramite**	**32.90**	**335**	*eP*	P	**11 55 24.5**	**+0.8**
JIRN	**Jiri**	**33.70**	**335**	*eP*	P	**11 55 31.1**	**+0.5**
	96nm,0.9s,mb5.7						
GUN	**Gumba**	**34.05**	**335**	*eP*	P	**11 55 34.3**	**+0.7**
	89nm,0.7s,mb5.8						
DMN	**Daman**	**34.12**	**334**	*eP*	P	**11 55 34.9**	**+0.6**
KKN	**Kakani**	**34.20**	**334**	*eP*	P	**11 55 35.0**	**+0.1**
GKN	**Gorkha**	**34.66**	**333**	*eP*	P	**11 55 38.4**	**-0.6**
	23nm,0.4s,mb5.5						
KOLN	**Koldanda**	**34.94**	**332**	*eP*	P	**11 55 41.5**	**+0.1**
	50nm,0.7s,mb5.5						
DANN	**Dangsing**	**35.36**	**333**	*eP*	P	**11 55 45.1**	**+0.1**
	62nm,0.4s,mb5.8						
WRA	**Warramunga Arr**	**36.38**	**120**	P	P	**11 55 53.7**	**-0.1**
	4.9nm,0.4s,mb4.8,baz=307,slow=8.9,SNR=12						
ASAR	**Alice Springs**	**37.64**	**126**	P	P	**11 56 04.5**	**0.0**
	1.7nm,0.5s,mb4.1,baz=295,slow=7.6,SNR=5.2						
CTA	**Charters Tower**	**47.00**	**115**	P	P	**11 57 20.7**	**0.0**
	2.3nm,0.5s,mb4.4,baz=276,slow=9.7,SNR=3.9						
CTA	**Charters Tower**	**47.00**	**115**	P	P	**11 57 20.7**	**0.0**
KSRS	**Korea Array**	**47.10**	**29**	P	P	**11 57 21.9**	**+0.8**
	2.1nm,0.9s,mb4.0,baz=237,slow=9.1,SNR=4.9						
SONM	**Songino Array**	**50.69**	**4**	P	P	**11 57 49.5**	**+1.1**
	12nm,0.8s,mb4.8,baz=184,slow=9.6,SNR=7.0						
SONM				PcP	PcP	11 59 04.6	-0.3
	1.8nm,1.0s,baz=198,slow=3.8,SNR=4.4						
MKAR	**Makanchi Array**	**52.24**	**344**	P	P	**11 57 59.5**	**-0.6**
	6.9nm,0.6s,mb4.8,baz=157,slow=9.3,SNR=14						
MKAR	**Makanchi Array**	**52.24**	**344**	P	P	**11 57 59.5**	**-0.6**
KURK	**Kurchatov**	**56.83**	**343**	P	P	**11 58 32.2**	**-1.0**
	5.0nm,0.6s,mb4.7,baz=158,slow=6.4,SNR=11						
KURK	**Kurchatov**	**56.83**	**343**	P	P	**11 58 32.2**	**-1.0**
ZAA0	**Zalesovo Array**	**58.28**	**349**	*eP*	P	**11 58 42.9**	**-0.5**
ZALV	**Zalesovo Beam**	**58.28**	**349**	P	P	**11 58 42.8**	**-0.6**
	40nm,0.8s,mb5.5,baz=170,slow=5.2,SNR=24						
BVAR	**Borovoye Array**	**61.48**	**339**	P	P	**11 59 04.0**	**-1.3**
	6.7nm,0.5s,mb5.0,baz=141,slow=9.1,SNR=12						
PETK	**Petropavlovsk-**	**72.91**	**32**	P	P	**12 00 17.8**	**+0.1**
	2.8nm,0.7s,mb4.3,baz=290,slow=2.8,SNR=7.7						
PETK	**Petropavlovsk-**	**72.91**	**32**	P	P	**12 00 17.8**	**+0.1**
ARCES	**ARCESS Array B**	**87.76**	**340**	P	P	**12 01 36.9**	**-0.1**
	2.6nm,0.8s,mb4.5,baz=98,slow=5.5,SNR=7.0						
GERES	**GERESS Array B**	**90.60**	**319**	P	P	**12 01 50.9**	**+0.1**
	1.6nm,0.7s,mb4.5,baz=90,slow=4.0,SNR=6.3						
NVAR	**Mina Array Bea**	**129.40**	**40**	PKP	PKPdf	12 07 58.3	+1.0
	1.5nm,0.9s,baz=270,slow=4.3,SNR=4.2						
TXAR	**Lajitas Array**	**144.54**	**40**	PKP	PKPdf	12 08 24.6	-0.8
	6.0nm,0.6s,baz=223,slow=0.6,SNR=18						

IDC 12 11:51:00.7±2.6,366S×10220E,h0km,mb4.2/2,mb1 4.3/2, mb1mx3.7/18,mbtmp4.2/2,Error ellipse: s-maj=111.8km s-min=37.1km az=62.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**36.51**	**126**	P	P	11 58 08.1	0.0
	3.1nm,0.7s,baz=297,slow=7.9,SNR=5.1						
SONM	**Songino Array**	**51.41**	**4**	P	P	12 00 07.4	+0.1
	1.6nm,0.8s,baz=178,slow=8.5,SNR=3.9						
CPUP	**Villa Florida**	**144.20**	**212**	PKP	PKPdf	12 10 38.8	-0.7
	4.5nm,0.9s,baz=104,slow=4.9,SNR=6.5						
TXAR	**Lajitas Array**	**144.59**	**41**	PKP	PKPdf	12 10 39.8	-0.2
	1.1nm,0.9s,baz=215,slow=2.7,SNR=3.2						

*IDC **12** 11:52:00.7±0.9,443S×101.22E,h0km,mb4.6/13, mb1 4.7/13,mb1mx4.5/20,mbtmp4.6/13,Error ellipse: s-maj=32.0km s-min=15.8km az=64.0*
*ISCJB **12** 11:52:03.8±0.7,44S±01×1013E±01,h33km,mb5.0/19, Error ellipse: s-maj=23.8km s-min=10.3km az=144.0*
ISC 12 11:52:07.0±6.4,44S±01×1013E±01,h43km±61km,n25, σ0§95/24,mb5.0/19,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.82**	**354**	P	P	**11 57 04.8**	**-1.5**
	24nm,0.9s,mb4.6,baz=185,slow=8.3,SNR=30						
ODAN	**Odare**	**33.84**	**337**	*eP*	P	**11 58 46.6**	**+1.1**
	62nm,0.8s,mb5.6						
TAPN	**Taplejung**	**34.17**	**338**	*eP*	P	**11 58 49.2**	**+1.0**
	91nm,0.9s,mb5.7						
RAMN	**Ramite**	**34.23**	**336**	*eP*	P	**11 58 49.8**	**+1.0**
	80nm,1.1s,mb5.6						
JIRN	**Jiri**	**35.03**	**336**	*eP*	P	**11 58 56.8**	**+1.1**
	86nm,0.9s,mb5.7						
PKI	**Pulchoki**	**35.27**	**335**	*eP*	P	**11 58 57.3**	**-0.5**
GUN	**Gumba**	**35.38**	**336**	*eP*	P	**11 58 59.6**	**+0.9**
	67nm,0.7s,mb5.7						
KKN	**Kakani**	**35.52**	**335**	*eP*	P	**11 58 59.9**	**0.0**
	73nm,1.1s,mb5.5						
WRA	**Warramunga Arr**	**35.72**	**118**	P	P	**11 59 01.5**	**-0.3**
	4.2nm,0.8s,mb4.4,baz=304,slow=9.1,SNR=5.0						
GKN	**Gorkha**	**35.98**	**334**	*eP*	P	**11 59 02.8**	**-1.0**
DANN	**Dangsing**	**36.66**	**334**	*eP*	P	**11 59 07.3**	**-2.4**
ASAR	**Alice Springs**	**36.84**	**124**	P	P	**11 59 14.0**	**+2.6**
	1.3nm,0.8s,baz=300,slow=7.7,SNR=2.3						
CTA	**Charters Tower**	**46.46**	**114**	P	P	**12 00 29.8**	**-0.3**
	7.9nm,1.0s,mb4.6,baz=298,slow=8.6,SNR=4.3						
STKA	**Stephens Creek**	**46.63**	**131**	P	P	**12 00 31.1**	**-0.2**
	2.0nm,0.8s,mb4.1,baz=321,slow=6.5,SNR=2.8						
KSRS	**Korea Array**	**48.46**	**28**	P	P	**12 00 45.6**	**+0.3**
	10nm,0.8s,mb4.9,baz=217,slow=8.0,SNR=30						
SONM	**Songino Array**	**52.20**	**4**	P	P	**12 01 14.7**	**+1.3**
	23nm,0.8s,mb5.2,baz=183,slow=9.2,SNR=29						
MAT	**Matsushiro**	**53.36**	**37**	P	P	**12 01 21.8**	**-0.4**
MJAR	**Matsushiro Arr**	**53.36**	**37**	P	P	**12 01 21.3**	**-0.9**
	7.9nm,0.9s,mb4.7,baz=216,slow=6.9,SNR=15						
MKAR	**Makanchi Array**	**53.66**	**344**	P	P	**12 01 24.6**	**+0.4**
	11nm,0.8s,mb4.9,baz=149,slow=7.9,SNR=18						
KURK	**Kurchatov**	**58.24**	**343**	P	P	**12 01 56.4**	**-0.6**
	8.5nm,0.8s,mb4.8,baz=158,slow=7.8,SNR=5.9						
ZALV	**Zalesovo Beam**	**59.74**	**349**	P	P	**12 02 07.2**	**0.0**
	12nm,0.8s,mb5.0,baz=186,slow=4.8,SNR=12						
BVAR	**Borovoye Array**	**62.85**	**340**	P	P	**12 02 28.3**	**0.0**
	3.4nm,0.6s,mb4.7,baz=113,slow=31,SNR=6.0						
MAW	**Mawson**	**68.30**	**195**	P	P	**12 03 02.6**	**-0.7**
	2.7nm,0.8s,mb4.3,baz=4.1,slow=7.6,SNR=5.1						
ARCES	**ARCESS Array B**	**89.14**	**340**	P	P	**12 04 57.1**	**-0.4**
	2.1nm,0.8s,mb4.5,baz=106,slow=6.8,SNR=3.9						
TXAR	**Lajitas Array**	**145.75**	**41**	PKPbc	PKPbc	12 11 43.0	+1.0
	7.9nm,0.8s,baz=272,slow=1.1,SNR=20						

IDC 12 11:57:04.7±4.7,474S×10352E,h0km,mb3.8/3,mb1 3.8/3, mb1mx3.5/19,mbtmp3.8/3,Error ellipse: s-maj=179.0km s-min=91.4km az=61.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**52.41**	**2**	P	P	12 06 18.9	+0.1
	0.7nm,0.6s,baz=185,slow=12,SNR=2.3						
MKAR	**Makanchi Array**	**54.65**	**342**	P	P	12 06 35.1	-0.1
	1.4nm,0.6s,baz=148,slow=8.2,SNR=4.8						
KURK	**Kurchatov**	**59.25**	**342**	P	P	12 07 07.5	-0.3
	0.6nm,0.8s,baz=158,slow=7.1,SNR=2.1						
TXAR	**Lajitas Array**	**144.50**	**43**	PKP	PKPdf	12 16 43.4	-0.5
	0.5nm,0.6s,baz=253,slow=1.0,SNR=4.6						

*IDC **12** 11:58:57.3±1.4,279S×10069E,h0km,mb4.2/13, mb1 4.3/13,mb1mx4.1/22,mbtmp4.2/13,Error ellipse: s-maj=56.1km s-min=15.4km az=56.0*
*ISCJB **12** 11:59:00.9±1.1,27S±02×1008E±02,h33km,mb4.3/15, Error ellipse: s-maj=42.7km s-min=11.9km az=144.1*
*NEIC **12** 11:59:02.9±0.8,274S×10080E,h35km,mb4.7/2,Error ellipse: s-maj=38.7km s-min=8.8km az=54.0*
ISC 12 11:59:03.2±1.1,27S±02×1008E±02,h35km,n16,σ0§65/15, mb4.3/15,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.12**	**355**	P	P	**12 03 44.8**	**-0.2**
	3.2nm,0.7s,mb3.7,baz=186,slow=9.0,SNR=7.4						
WRA	**Warramunga Arr**	**36.92**	**120**	P	P	**12 06 08.7**	**-0.3**
	1.5nm,0.4s,mb4.2,baz=303,slow=9.1,SNR=7.4						
ASAR	**Alice Springs**	**38.16**	**126**	P	P	**12 06 19.0**	**-0.5**
	1.1nm,0.5s,mb3.8,baz=300,slow=8.2,SNR=6.4						
KSRS	**Korea Array**	**47.22**	**30**	P	P	**12 07 32.8**	**+0.1**
	0.7nm,0.7s,mb3.7,baz=223,slow=7.7,SNR=4.3						
CTA	**Charters Tower**	**47.54**	**115**	P	P	**12 07 35.8**	**+0.2**
	1.4nm,0.3s,mb4.4,baz=243,slow=7.4,SNR=4.1						
STKA	**Stephens Creek**	**48.06**	**132**	P	P	**12 07 40.0**	**+0.7**
	1.1nm,0.5s,mb4.2,baz=326,slow=7.8,SNR=4.8						
SONM	**Songino Array**	**50.58**	**5**	P	P	**12 07 59.5**	**+1.3**
	4.0nm,0.5s,mb4.6,baz=187,slow=9.5,SNR=17						
TKM2	**Tokmak 2**	**50.82**	**336**	*eP*	P	**12 08 00.8**	**+0.6**
	6.7nm,0.8s,mb4.6						
EKS2	**Erkin-Say**	**51.36**	**335**	*eP*	P	**12 08 05.3**	**+1.0**
	7.7nm,0.8s,mb4.7						
MKAR	**Makanchi Array**	**51.94**	**344**	P	P	**12 08 08.4**	**-0.1**
	4.1nm,0.6s,mb4.5,baz=148,slow=8.0,SNR=14						
KURK	**Kurchatov**	**56.52**	**343**	P	P	**12 08 41.2**	**-0.6**
	0.9nm,0.4s,mb4.2,baz=184,slow=6.6,SNR=6.1						
ZALV	**Zalesovo Beam**	**58.02**	**349**	P	P	**12 08 52.3**	**-0.1**
	5.2nm,0.7s,mb4.7,baz=181,slow=6.1,SNR=9.0						
BVAR	**Borovoye Array**	**61.14**	**340**	P	P	**12 09 12.6**	**-1.2**
	1.3nm,0.5s,mb4.3,baz=140,slow=9.7,SNR=4.5						
PETK	**Petropavlovsk-**	**73.04**	**32**	P	P	**12 10 28.9**	**-0.6**
	1.3nm,0.7s,mb4.0,baz=251,slow=9.0,SNR=3.4						
ARCES	**ARCESS Array B**	**87.42**	**340**	P	P	**12 11 46.1**	**-0.4**
	4.2nm,1.0s,mb4.6,baz=96,slow=8.3,SNR=2.9						
TXAR	**Lajitas Array**	**144.75**	**39**	PKP	PKPdf	12 18 36.3	-0.8
	1.6nm,0.6s,baz=235,slow=0.7,SNR=19						

IDC 12 12:01:26.0±2.5,369S×10117E,h0km,mb4.0/7,mb1 4.1/7, mb1mx3.8/20,mbtmp4.0/7,Error ellipse: s-maj=121.0km s-min=17.6km az=54.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.14**	**119**	P	P	12 08 29.9	-0.3
	0.7nm,0.3s,baz=308,slow=8.7,SNR=12						
ASAR	**Alice Springs**	**37.32**	**125**	P	P	12 08 40.1	-0.2
	1.6nm,0.4s,baz=300,slow=7.9,SNR=14						
STKA	**Stephens Creek**	**47.16**	**131**	P	P	12 10 00.8	+0.3
	1.3nm,0.6s,baz=284,slow=7.9,SNR=5.2						
SONM	**Songino Array**	**51.52**	**4**	P	P	12 10 33.6	+0.2
	0.9nm,0.5s,baz=179,slow=8.4,SNR=3.2						
MKAR	**Makanchi Array**	**52.97**	**344**	P	P	12 10 44.2	0.0
	1.0nm,0.3s,baz=156,slow=8.9,SNR=6.3						
KURK	**Kurchatov**	**57.55**	**343**	P	P	12 11 17.0	-0.2
	0.4nm,0.4s,baz=154,slow=6.7,SNR=5.1						
BVAR	**Borovoye Array**	**62.17**	**340**	P	P	12 11 48.6	-0.4
	0.9nm,0.4s,baz=120,slow=8.2,SNR=3.4						
TXAR	**Lajitas Array**	**145.28**	**40**	PKPbc	PKPbc	12 21 06.0	-0.2
	1.1nm,0.5s,baz=241,slow=1.0,SNR=11						

IDC 12 12:03:59.3±2.6,451S×10113E,h0km,mb3.8/7,mb1 4.0/7, mb1mx3.8/19,mbtmp3.8/7,Error ellipse: s-maj=86.4km s-min=28.4km az=54.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.92**	**355**	P	P	12 09 04.4	-0.6
	1.8nm,0.6s,baz=184,slow=8.0,SNR=12						
WRA	**Warramunga Arr**	**35.79**	**118**	P	P	12 11 00.6	+0.1
	0.6nm,0.7s,baz=305,slow=9.2,SNR=2.5						
KSRS	**Korea Array**	**48.63**	**29**	P	P	12 12 44.5	-0.4
	0.5nm,0.7s,baz=207,slow=8.1,SNR=4.3						
SONM	**Songino Array**	**52.33**	**4**	P	P	12 13 13.7	+0.9
	2.6nm,0.8s,baz=184,slow=9.0,SNR=10						
MKAR	**Makanchi Array**	**53.73**	**344**	P	P	12 13 23.4	+0.3
	0.8nm,0.6s,baz=152,slow=8.0,SNR=5.1						
KURK	**Kurchatov**	**58.31**	**343**	P	P	12 13 55.8	-0.1
	0.8nm,0.8s,baz=158,slow=7.0,SNR=2.8						
ZALV	**Zalesovo Beam**	**59.83**	**349**	P	P	12 14 05.6	-0.7
	0.8nm,0.3s,baz=178,slow=4.0,SNR=3.7						
TXAR	**Lajitas Array**	**145.93**	**41**	PKPbc	PKPbc	12 23 40.3	-1.2
	0.5nm,0.6s,baz=258,slow=1.5,SNR=5.8						

*IDC **12** 12:04:19.0±0.9,304S×10088E,h0km,mb4.2/12, mb1 4.3/12,mb1mx4.1/24,mbtmp4.2/12,Error ellipse: s-maj=36.9km s-min=15.0km az=61.0*
*ISCJB **12** 12:04:22.7±0.8,29S±01×1011E±02,h33km,mb4.3/13, Error ellipse: s-maj=32.6km s-min=10.7km az=146.5*
*NEIC **12** 12:04:24.4±1.4,304S×10093E,h35km,mb4.7/2,Error ellipse: s-maj=70.1km s-min=8.8km az=52.0*
ISC 12 12:04:24.9±0.8,30S±01×1010E±02,h35km,n23,σ0§68/20, mb4.3/13,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.62**	**120**	P	P	**12 11 27.6**	**-0.6**
	2.2nm,0.5s,mb4.3,baz=304,slow=9.0,SNR=14						
WRAB	**Tennant Creek**	**36.62**	**120**	*eP*	P	**12 11 28.7**	**+0.5**
WB2	**Warramunga Arr**	**36.63**	**120**	*eP*	P	**12 11 27.9**	**-0.4**
ASAR	**Alice Springs**	**37.85**	**126**	P	P	**12 11 38.8**	**+0.1**
	1.3nm,0.5s,mb3.9,baz=299,slow=8.1,SNR=12						
CTA	**Charters Tower**	**47.26**	**115**	P	P	**12 12 54.3**	**-0.8**
	1.3nm,0.3s,mb4.3,baz=317,slow=7.7,SNR=2.6						
KSRS	**Korea Array**	**47.34**	**29**	P	P	**12 12 55.8**	**+0.3**
	1.4nm,0.8s,mb3.9,baz=219,slow=8.6,SNR=5.8						
STKA	**Stephens Creek**	**47.74**	**132**	*eP*	P	**12 12 59.2**	**+0.5**
	29nm,2.0s,mb5.0						
STKA				*e*		12 13 12.2	
STKA	**Stephens Creek**	**47.74**	**132**	P	P	**12 12 58.9**	**+0.2**
	2.9nm,0.5s,mb4.5,baz=315,slow=4.5,SNR=13						
SONM	**Songino Array**	**50.81**	**5**	P	P	**12 13 23.0**	**+1.2**
	3.8nm,0.8s,mb4.4,baz=185,slow=8.9,SNR=14						
SONM	**Songino Array**	**50.81**	**5**	P	P	**12 13 23.0**	**+1.2**
TKM2	**Tokmak 2**	**51.13**	**336**	P	P	**12 13 25.1**	**+0.8**
	4.0nm,0.7s,mb4.5						
MKAR	**Makanchi Array**	**52.24**	**344**	P	P	**12 13 32.0**	**-0.5**
	1.3nm,0.4s,mb4.2,baz=148,slow=8.2,SNR=7.1						
MKAR	**Makanchi Array**	**52.24**	**344**	P	P	**12 13 32.0**	**-0.5**
KURK	**Kurchatov**	**56.83**	**343**	P	P	**12 14 04.5**	**-1.2**
	1.5nm,0.7s,mb4.1,baz=162,slow=6.9,SNR=6.4						
KURK	**Kurchatov**	**56.83**	**343**	P	P	**12 14 04.5**	**-1.2**
ZAA0	**Zalesovo Array**	**58.31**	**349**	*eP*	P	**12 14 16.8**	**+0.7**
ZALV	**Zalesovo Beam**	**58.31**	**349**	P	P	**12 14 15.4**	**-0.7**
	10nm,0.8s,mb4.9,baz=167,slow=5.2,SNR=10.0						
ASAJ	**Asahikawa**	**59.84**	**34**	P	P	**12 14 27.1**	**+0.2**
	1.6nm,0.4s,mb4.4,baz=232,slow=9.2,SNR=8.8						
BVAR	**Borovoye Array**	**61.45**	**339**	P	P	**12 14 36.9**	**-0.8**
	1.1nm,0.5s,mb4.2,baz=152,slow=6.7,SNR=4.9						
QSPA	**South Pole Qui**	**87.00**	**180**	P	P	**12 17 06.7**	**+0.6**
	0.6nm,0.6s,mb4.0,baz=301,slow=5.9,SNR=5.2						
CPUP	**Villa Florida**	**144.13**	**214**	PKP	PKPdf	12 23 56.1	-1.7
	0.4nm,0.3s,baz=51,slow=2.0,SNR=3.7						
BDFB	**Brasilia**	**144.23**	**238**	PKP	PKPdf	12 23 56.1	-2.1
	11nm,0.6s,baz=51,slow=0.2,SNR=5.0						
TXAR	**Lajitas Array**	**144.82**	**39**	PKP	PKPdf	12 23 58.1	-0.8
	1.2nm,0.6s,baz=268,slow=1.3,SNR=11						

*BJI **12** 12:06:02.5,463S×10134E,h23km,mB5.6,mb5.3*
*IDC **12** 12:06:03.8±0.6,421S×10122E,h0km,mb4.7/21, mb1 4.7/22,mb1mx4.6/27,mbtmp4.7/22,ML4.4/1,Error ellipse: s-maj=22.0km s-min=12.1km az=52.0*
*MOS **12** 12:06:08.3±1.2,413S×10127E,h41km,mb5.2/15,Error ellipse: s-maj=16.7km s-min=8.7km az=98.6*
*NEIC **12** 12:06:09.4±0.4,418S×10131E,h35km,mb5.0/6,Error ellipse: s-maj=15.1km s-min=6.8km az=50.0*
*ISCJB **12** 12:06:11.2±3.7,420S±008×10137E±009,h70km±34km, mb5.0/52,Error ellipse: s-maj=18.2km s-min=8.1km az=138.4*
ISC 12 12:06:11.1±3.0,424S±008×10135E±009,h52km±27km, n82,σ0§87/71,mb5.0/52,4C-2D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**18.36**	**93**	P	Pn	**12 10 21.1**	**-1.0**
	1.1nm,0.3s,baz=236,slow=4.9,SNR=5.4						
CMAR	**Chiang Mai Arr**	**22.68**	**354**	P	P	**12 11 06.1**	**-2.1**
	28nm,0.9s,mb4.7,baz=183,slow=8.6,SNR=61						
BATI	**Baumata**	**22.91**	**106**	P	P	**12 11 10.2**	**-0.5**
	20nm,0.5s,mb4.8,baz=292,slow=15,SNR=4.7						
CHTO	**Chiang Mai**	**23.03**	**354**	*eP*	P	**12 11 11.8**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.6						
CHTO	**Chiang Mai**	**23.03**	**354**	*eP*	P	**12 11 11.8**	**-0.2**
	comp=Z,24nm,1.0s,mb4.6						
KMI	**Kunming**	**29.21**	**3**	P	P	**12 12 08.7**	**+0.7**
KMI				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
ODAN	**Odare**	**33.73**	**337**	*eP*	P	**12 12 48.3**	**+0.5**
	comp=Z,93nm,0.9s,mb5.7						
TAPN	**Taplejung**	**34.05**	**338**	*eP*	P	**12 12 51.1**	**+0.6**
	comp=Z,145nm,1.0s,mb5.9						
RAMN	**Ramite**	**34.13**	**336**	*eP*	P	**12 12 51.9**	**+0.7**
	comp=Z,64nm,0.9s,mb5.6						
JIRN	**Jiri**	**34.92**	**336**	*eP*	P	**12 12 59.0**	**+1.0**
	comp=Z,139nm,0.9s,mb5.9						
CD2	**Chengdu**	**35.02**	**4**	*eP*	P	**12 12 58.7**	**-0.2**
CD2				AMB	AMB		
	comp=Z,90nm,0.8s,mb5.8						
PKI	**Pulchoki**	**35.17**	**335**	*eP*	P	**12 13 00.5**	**+0.4**
GUN	**Gumba**	**35.27**	**336**	*eP*	P	**12 13 01.9**	**+0.9**
	comp=Z,101nm,0.8s,mb5.8						
DMN	**Daman**	**35.33**	**335**	*eP*	P	**12 13 02.2**	**+0.7**
	comp=Z,22nm,0.8s,mb5.1						
KKN	**Kakani**	**35.41**	**335**	*eP*	P	**12 13 02.6**	**+0.3**
	comp=Z,54nm,0.8s,mb5.5						
WRA	**Warramunga Arr**	**35.72**	**119**	P	P	**12 13 05.3**	**+0.3**
	comp=Z,6.3nm,0.9s,mb4.5,baz=299,slow=10,SNR=12						
WRAB	**Tennant Creek**	**35.73**	**119**	*eP*	P	**12 13 13.3**	**+8.2**
WB2	**Warramunga Arr**	**35.73**	**119**	*eP*	P	**12 13 05.6**	**+0.5**
GKN	**Gorkha**	**35.87**	**334**	*eP*	P	**12 13 06.5**	**+0.3**
	comp=Z,77nm,1.0s,mb5.6						
KOLN	**Koldanda**	**36.13**	**333**	*eP*	P	**12 13 08.9**	**+0.5**
	comp=Z,58nm,0.7s,mb5.6						
DANN	**Dangsing**	**36.56**	**333**	*eP*	P	**12 13 12.5**	**+0.4**
	comp=Z,85nm,0.9s,mb5.6						
ASAR	**Alice Springs**	**36.86**	**125**	P	P	**12 13 14.6**	**-0.2**
	comp=Z,2.9nm,0.8s

comp=Z,30nm,1.2s,mb5.1
YAK **Yakutsk** 69.56 14 ⇓*i* P **P** 12 17 14.2 -0.1
YAK pmax pmax
comp=Z,30nm,0.9s,mb5.2
ARU **Arti** 69.78 336 *d i* P **P** 12 17 14.6 -1.2
ARU *e* S S 12 26 18.1 -2.9
ARU pmax pmax
comp=Z,15nm,1.0s,mb4.9
ASF **Jabal al Asfar** 70.98 306 P **P** 12 17 23.4 -0.3
comp=Z,3.1nm,0.9s,mb4.2,baz=171,slow=3.0,SNR=3.8
PETK **Petropavlovsk-** 74.06 31 P **P** 12 17 41.1 -0.3
comp=Z,5.9nm,1.0s,mb4.5,baz=193,slow=4.2,SNR=6.9
PET **Petropavlovsk** 74.52 32 *e* P **P** 12 17 44.5 +0.4
PET pmax pmax
comp=Z,31nm,1.4s,mb5.0
SEY **Seymchan** 77.19 21 *e* P **P** 12 18 00.2 +1.0
OBN **Obninsk** 79.39 328 *e* P **P** 12 18 10.8 -0.7
OBN *i* 12 18 19.4
OBN pmax pmax
comp=Z,11nm,1.2s,mb4.7
BUR08 **Bucovina Ar. S** 83.84 319 *e* P **P** 12 18 35.8 +0.6
ARCES **ARCESS Array B** 89.02 340 P **P** 12 19 00.5 +0.4
comp=Z,5.2nm,0.9s,mb4.9,baz=107,slow=4.2,SNR=7.0
ARCES **ARCESS Array B** 89.02 340 P **P** 12 19 00.5 +0.4
SNAA **Sanae** 90.44 198 *e* P **P** 12 19 14.0 +7.3
GERES **GERESS Array B** 91.61 319 P **P** 12 19 11.8 -0.7
comp=Z,0.4nm,0.3s,mb4.2,baz=90,slow=5.3,SNR=7.4
NVAR **Mina Array Bea** 130.43 41 PKP PKPdf 12 25 17.9 +1.6
comp=Z,1.3nm,0.7s,baz=260,slow=3.0,SNR=14
NVAR **Mina Array Bea** 130.43 41 PKP PKPdf 12 25 17.9 +1.6
ELK **Elko** 131.00 37 PKP PKPdf 12 25 19.5 +2.2
comp=Z,1.0nm,0.7s,baz=66,slow=19,SNR=3.5
ELK **Elko** 131.00 37 PKP PKPdf 12 25 19.5 +2.1
PDAR **Pinedale Array** 132.82 31 PKP PKPdf 12 25 21.9 +1.1
comp=Z,0.3nm,0.7s,baz=242,slow=3.2,SNR=3.9
BDFB **Brasilia** 143.81 236 PKP PKPdf 12 25 42.8 +1.2
comp=Z,6.2nm,0.3s,baz=178,slow=1.9,SNR=3.8
TXAR **Lajitas Array** 145.58 41 PKPbc PKPbc 12 25 45.6 +1.0
comp=Z,18nm,1.0s,baz=279,slow=2.4,SNR=45
URVA **University of** 146.81 358 *e* PKPbc PKPbc 12 25 49.3 +1.3
MIAR **Mount Ida** 146.81 23 *e* PKIKP PKPdf 12 25 46.0 -0.3
MIAR *e* 12 25 48.9
JCT **Junction City** 147.14 35 *e* PKP2 PKPab 12 25 50.1 -0.7
WVT **Waverly** 147.15 14 *e* PKPdf PKPdf 12 25 47.5 +0.7
WVT *e* PKPbc PKPbc 12 25 49.0 0.0
WVT *e* PKPab PKPab 12 25 50.8 +0.2

IDC 12 12:10:05.3±3.1, 233S×10074E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/20, mbtmp3.8/6, Error ellipse: s-maj=147.5km s-min=21.5km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.20**	**121**	P	P	12 17 18.9	+0.3
	0.6nm,0.4s,baz=305,slow=8.9,SNR=5.1						
ASAR	**Alice Springs**	**38.47**	**126**	P	P	12 17 28.9	-0.4
	0.6nm,0.4s,baz=300,slow=7.5,SNR=5.0						
STKA	**Stephens Creek**	**48.39**	**132**	P	P	12 18 49.3	0.0
	1.7nm,0.7s,baz=93,slow=6.1,SNR=2.8						
SONM	**Songino Array**	**50.20**	**5**	P	P	12 19 02.7	-0.1
	1.0nm,0.8s,baz=192,slow=8.0,SNR=3.6						
MKAR	**Makanchi Array**	**51.54**	**344**	P	P	12 19 13.6	+0.7
	0.8nm,0.6s,baz=146,slow=8.2,SNR=4.0						
KURK	**Kurchatov**	**56.12**	**343**	P	P	12 19 45.5	-0.9
	0.8nm,0.6s,baz=158,slow=5.3,SNR=2.8						
TXAR	**Lajitas Array**	**144.50**	**38**	PKP PKPdf		12 29 43.7	-0.8
	0.3nm,0.4s,baz=224,slow=3.8,SNR=2.5						

*NEIC **12** 12:13:00.3±0.5, 1864N×14652E, h35km, Error ellipse: s-maj=21.8km s-min=11.0km az=96.0*
*ISCJB **12** 12:13:02.9±2.2, 1855N±007×1463E±02, h75km±21km, mb4.1/18, Error ellipse: s-maj=26.4km s-min=11.6km az=178.0*
*IDC **12** 12:13:03.7±3.0, 1855N×14640E, h67km±28km, mb3.9/14, mb1 4.1/16, mb1mx3.9/25, mbtmp3.9/16, ML4.4/2, Error ellipse: s-maj=23.3km s-min=12.8km az=85.0*
ISC 12 12:13:04.3±2.0, 1856N±007×1463E±02, h73km±19km, n28, σ0§89/27, mb4.1/18, 5C-1D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.14**	**196**	P	Pn	12 14 19.3	+0.6
	22nm,0.3s,baz=305,slow=2.0,SNR=17						
GUMO				S	Sn	12 15 16.4	-0.3
	14nm,0.3s,baz=191,slow=23,SNR=3.0						
MJAR	**Matsushiro Arr**	**19.29**	**340**	P	Pn	12 17 22.4	-2.6
	0.7nm,0.3s,baz=223,slow=9.5,SNR=5.6						
KSRS	**Korea Array**	**24.79**	**323**	P	P	12 18 18.8	-0.6
	1.5nm,0.5s,mb3.7,baz=138,slow=8.9,SNR=8.0						
ASAJ	**Asahikawa**	**25.67**	**354**	P	P	12 18 28.6	+1.4
	2.3nm,0.4s,mb3.9,baz=225,slow=5.7,SNR=6.3						
PETK	**Petropavlovsk-**	**35.60**	**12**	P	P	12 19 54.5	-0.1
	2.7nm,0.9s,mb4.2,baz=172,slow=11,SNR=3.6						
PETK	**Petropavlovsk-**	**35.60**	**12**	P	P	12 19 54.5	-0.1
WB2	**Warramunga Arr**	**40.03**	**198**	*e*P	P	12 20 32.4	+0.1
WRA	**Warramunga Arr**	**40.03**	**198**	P	P	12 20 31.0	-1.3
	1.2nm,0.3s,mb4.2,baz=23,slow=8.4,SNR=21						
WRA				PcP	PcP	12 22 36.9	+0.8
	1.8nm,0.5s,baz=16,slow=3.5,SNR=7.4						
SONM	**Songino Array**	**43.63**	**321**	P	P	12 21 02.6	+1.2
	1.4nm,0.5s,mb4.0,baz=134,slow=8.5,SNR=9.5						
ASAR	**Alice Springs**	**43.69**	**197**	P	P	12 21 03.2	+1.2
	0.7nm,0.4s,mb3.8,baz=21,slow=7.0,SNR=13						
STKA	**Stephens Creek**	**50.35**	**185**	*e*P	P	12 21 53.3	-0.6
	4.3nm,0.4s,mb4.7						
ZALV	**Zalesovo Beam**	**58.49**	**322**	P	P	12 22 53.4	+0.7
	0.9nm,0.3s,mb4.3,baz=106,slow=11,SNR=3.5						
MK31	**Makanchi Array**	**58.99**	**314**	⇑Pn	P	12 23 03.1	+6.7
	0.4nm,0.2s,mb4.0,baz=83,slow=14,SNR=7.0						
MK31				⇑Lg		12 25 00.9	
	22nm,0.6s,baz=80,slow=32						
KURK	**Kurchatov**	**61.78**	**318**	⇑Pn	P	12 23 24.1	+8.9
KURK				⇓Lg		12 26 07.1	
	28nm,0.6s						
KURK	**Kurchatov**	**61.78**	**318**	P	P	12 23 15.9	+0.7
	2.3nm,0.4s,mb4.5,baz=90,slow=7.4,SNR=6.4						
KURBB	**Kurchatov Arra**	**61.83**	**318**	⇑Pn	P	12 23 24.1	+8.5
	0.1nm,0.2s,mb3.5						
KURBB				⇑Lg		12 26 06.9	
	8.6nm,0.6s						
BVAR	**Borovoye Array**	**66.97**	**320**	P	P	12 23 49.5	+0.4
	5.0nm,0.5s,mb4.7,baz=95,slow=7.5,SNR=19						
YKA	**Yellowknife Ar**	**77.83**	**28**	P	P	12 24 53.3	-0.2
	2.0nm,0.8s,mb3.9,baz=287,slow=5.6,SNR=7.7						
YKA	**Yellowknife Ar**	**77.83**	**28**	P	P	12 24 53.3	-0.2
YBH	**Yreka Blue Hor**	**78.58**	**50**	P	P	12 24 58.4	+0.3
	0.8nm,0.6s,mb3.7,baz=81,slow=16,SNR=6.3						
NVAR	**Mina Array Bea**	**82.75**	**52**	P	P	12 25 20.6	+0.1
	1.5nm,0.7s,mb3.9,baz=268,slow=6.3,SNR=15						
NVAR	**Mina Array Bea**	**82.75**	**52**	P	P	12 25 20.6	+0.1
ARCES	**ARCESS Array B**	**82.81**	**342**	P	P	12 25 19.9	-0.3
	4.3nm,0.7s,mb4.4,baz=71,slow=7.2,SNR=17						
ELK	**Elko**	**84.26**	**49**	P	P	12 25 28.2	0.0
	1.7nm,0.7s,mb4.0,baz=315,slow=4.3,SNR=6.2						
ELK	**Elko**	**84.26**	**49**	P	P	12 25 28.2	0.0
JOF	**Joensuu**	**84.40**	**335**	*ep*	P	12 25 26.8	-1.6
	12nm,0.5s,mb5.0						
PLCA	**Paso Flores**	**141.47**	**133**	PKP	PKPdf	12 32 27.2	+0.1
	1.2nm,0.8s,baz=244,slow=4.0,SNR=3.4						
LPAZ	**La Paz**	**147.07**	**91**	PKPbc	PKPbc	12 32 39.5	-0.2
	1.0nm,0.5s,baz=227,slow=1.1,SNR=5.3						

IDC 12 12:13:29.2±4.6, 322S×10035E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.6/19, mbtmp3.8/3, Error ellipse: s-maj=194.0km s-min=31.5km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**38.26**	**125**	P	P	12 20 51.1	-0.2
	0.6nm,0.7s,baz=301,slow=7.4,SNR=4.0						
SONM	**Songino Array**	**51.12**	**5**	P	P	12 22 33.8	+0.2
	1.7nm,0.6s,baz=182,slow=9.2,SNR=7.7						
MKAR	**Makanchi Array**	**52.29**	**344**	P	P	12 22 42.1	-0.4
	0.5nm,0.4s,baz=144,slow=8.9,SNR=4.1						
TXAR	**Lajitas Array**	**145.44**	**39**	PKPbc	PKPbc	12 33 09.6	-0.3
	1.0nm,0.6s,baz=309,slow=1.2,SNR=11						

*IDC **12** 12:15:06.5±1.8, 402S×10120E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.2/21, mbtmp4.2/10, Error ellipse: s-maj=60.6km s-min=17.2km az=60.0*
*ISCJB **12** 12:15:09.3±1.2, 405S±02×1013E±02, h33km, mb4.3/12, Error ellipse: s-maj=43.0km s-min=12.0km az=143.5*
*NEIC **12** 12:15:11.9±1.2, 393S×10133E, h35km, mb4.5/2, Error ellipse: s-maj=50.4km s-min=11.7km az=54.0*
ISC 12 12:15:11.8±1.2, 405S±02×1013E±02, h35km, n16, σ1§13/15, mb4.3/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.42**	**354**	P	P	12 20 06.8	-0.7
	6.5nm,0.8s,mb4.1,baz=183,slow=8.6,SNR=28						
WRA	**Warramunga Arr**	**35.89**	**119**	P	P	12 22 07.7	-1.1
	2.1nm,0.6s,mb4.2,baz=300,slow=9.0,SNR=6.8						
WB2	**Warramunga Arr**	**35.90**	**119**	*e*P	P	12 22 08.3	-0.6
ASAR	**Alice Springs**	**37.06**	**125**	P	P	12 22 18.1	-0.5
	1.1nm,0.6s,mb3.9,baz=296,slow=7.9,SNR=7.0						
CTA	**Charters Tower**	**46.60**	**114**	P	P	12 23 38.8	+1.9
	1.0nm,0.3s,mb4.2,baz=256,slow=8.3,SNR=3.8						
STKA	**Stephens Creek**	**46.88**	**131**	*e*P	P	12 23 45.8	+7.0
	4.9nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**46.88**	**131**	P	P	12 23 40.1	+1.3
	3.1nm,0.7s,mb4.4,baz=333,slow=11,SNR=1.9						
KSRS	**Korea Array**	**48.10**	**29**	P	P	12 23 48.6	+0.5
	4.3nm,1.0s,mb4.5,baz=217,slow=7.7,SNR=13						
SONM	**Songino Array**	**51.80**	**4**	P	P	12 24 17.5	+1.5
	7.5nm,1.0s,mb4.6,baz=186,slow=8.7,SNR=15						
TKM2	**Tokmak 2**	**52.16**	**336**	*e*P	P	12 24 19.6	+0.8
	7.9nm,0.8s,mb4.7						
EKS2	**Erkin-Say**	**52.70**	**335**	*e*P	P	12 24 24.1	+1.3
	3.1nm,0.8s,mb4.3						
MJAR	**Matsushiro Arr**	**53.03**	**37**	P	P	12 24 25.1	-0.3
	2.6nm,0.9s,mb4.2,baz=230,slow=5.3,SNR=6.6						
KURK	**Kurchatov**	**57.87**	**343**	P	P	12 24 59.8	-0.1
	3.9nm,0.9s,mb4.4,baz=150,slow=7.1,SNR=2.6						
ZAA0	**Zalesovo Array**	**59.35**	**349**	P	P	12 25 08.0	-2.2
BVAR	**Borovoye Array**	**62.48**	**340**	P	P	12 25 30.3	-1.2
	1.6nm,0.6s,mb4.3,baz=141,slow=9.6,SNR=3.6						
TXAR	**Lajitas Array**	**145.43**	**40**	PKPbc	PKPbc	12 34 47.4	+0.6
	5.3nm,1.0s,baz=282,slow=2.4,SNR=19						

IDC 12 12:17:42.6±2.6, 294S×10059E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/19, mbtmp3.8/4, Error ellipse: s-maj=111.0km s-min=25.1km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.33**	**356**	P	P	12 22 30.9	-0.5
	0.5nm,0.4s,baz=174,slow=9.1,SNR=2.4						
WRA	**Warramunga Arr**	**37.02**	**120**	P	P	12 24 55.1	+0.8
	0.4nm,0.4s,baz=297,slow=8.9,SNR=4.2						
ASAR	**Alice Springs**	**38.23**	**126**	P	P	12 25 03.7	-0.9
	1.2nm,0.5s,baz=300,slow=8.1,SNR=7.3						
MKAR	**Makanchi Array**	**52.09**	**344**	P	P	12 26 54.4	+0.1
	1.6nm,0.6s,baz=160,slow=8.9,SNR=1.6						
BDFB	**Brasilia**	**143.86**	**238**	PKP	PKPdf	12 37 20.6	-0.4
	5.7nm,0.3s,baz=123,slow=1.5,SNR=3.2						
TXAR	**Lajitas Array**	**145.08**	**39**	PKPbc	PKPbc	12 37 21.9	-0.3
	0.8nm,0.7s,baz=223,slow=1.4,SNR=5.2						

*BJI **12** 12:21:37.9, 3.19S×100.25E, h10km, mB5.3, mb5.2, Ms5.1, Msz4.8*
*MOS **12** 12:21:45.0±0.9, 265S×10031E, h33km, mb5.3/29, Error ellipse: s-maj=12.1km s-min=6.3km az=107.1*
*IDC **12** 12:21:47.4±2.7, 270S×10036E, h38km±21km, mb4.6/29, mb1 4.7/30, mb1mx4.7/32, mbtmp4.7/30, ML4.8/1, Error ellipse: s-maj=17.1km s-min=8.8km az=45.0*
*NEIC **12** 12:21:47.1±0.2, 271S×10028E, h35km, mb5.2/28, Error ellipse: s-maj=8.1km s-min=4.9km az=47.0*
NEIC Felt [III] at Bengkulu and [II] at Padang, Sumatra. Also felt in Singapore.
*ISCJB **12** 12:21:47.8±0.9, 274S±004×10030E±005, h59km±7km, mb5.1/87, Error ellipse: s-maj=9.4km s-min=5.0km az=140.5*
*DJA **12** 12:21:53, 265S×10004E, h79km, MLv5.8/14*
ISC 12 12:21:49.9±0.8, 275S±004×10031E±005, h61km±6km, h9km±5.7km: pP-P, n208, σ0§90/191, mb5.1/87, 18C-7D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RGRI	**Rengat**	**3.13**	**40**	P	Pn	12 22 37.1	+0.3
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.51**	**72**	P	Pn	12 22 43.0	+1.0
	0.0nm,0.0s						
TRSI	**Tarutung**	**4.94**	**344**	P	Pn	12 22 57.3	-4.2
	0.0nm,0.0s						
KLI	**Kotabumi**	**5.00**	**115**	P	Pn	12 23 02.5	+0.1
	0.0nm,0.0s						
BLSI	**Bandar Lampung**	**5.57**	**118**	P	Pn	12 23 10.2	0.0
	0.0nm,0.0s						
KGM	**Kluang**	**5.61**	**32**	⇑P	Pn	12 23 11.0	+0.2
MYKOM	**Kota Tinggi**	**5.74**	**38**	⇑P	Pn	12 23 11.0	-1.5
FRIM	**Kepong**	**6.09**	**12**	⇑P	Pn	12 23 17.0	-0.4
SBJI	**Serang**	**6.70**	**120**	P	Pn	12 23 25.2	-0.5
	0.0nm,0.0s						
IPM	**Ipoh**	**7.22**	**6**	⇓P	Pn	12 23 31.9	-0.9
DBJI	**Dramaga**	**7.45**	**121**	P	Pn	12 23 37.4	+1.5
	0.0nm,0.0s						
LEM	**Lembang**	**8.33**	**119**	P	Pn	12 23 48.7	+0.7
	0.0nm,0.0s						
KTGM	**Kuala Trenggan**	**8.51**	**19**	⇑P	Pn	12 23 51.2	+0.7
KSM	**Kuching**	**10.84**	**67**	⇑P	Pn	12 24 22.4	0.0
SJI	**Sawahan**	**12.44**	**114**	P	Pn	12 24 43.2	-0.9
	0.0nm,0.0s						
SBUM	**Sibu**	**12.98**	**67**	⇓P	Pn	12 24 54.3	+2.7
BTM	**Bintulu**	**14.07**	**65**	⇑P	Pn	12 25 06.4	+0.1
KKM	**Kota Kinabalu**	**18.13**	**61**	*e*P	Pn	12 25 58.1	+0.5
TSM	**Tawau**	**18.90**	**68**	⇑P	Pn	12 26 07.4	+0.6
KDM	**Kudat**	**19.09**	**60**	⇑P	Pn	12 26 07.4	-1.7
KAPI	**Kappang**	**19.53**	**97**	P	Pn	12 26 11.8	-2.5
	786nm,1.1s,SNR=22						
KAPI	**Kappang**	**19.53**	**97**	P	Pn	12 26 10.7	-3.7
	2.9nm,0.3s,baz=269,slow=11,SNR=16						
KAPI	**Kappang**	**19.53**	**97**	*e*P	Pn	12 26 11.4	-2.9
	68nm,1.2s						
PCI	**Palu**	**19.60**	**85**	P	Pn	12 26 14.9	-0.3
	0.0nm,0.0s						
MYLDM	**Lahad Datu**	**19.81**	**67**	⇓P	Pn	12 26 18.5	+0.8
CMAR	**Chiang Mai Arr**	**21.12**	**356**	P	P	12 26 26.6	-3.1
	15nm,0.6s,mb4.5,baz=186,slow=10,SNR=35						
CMAR				PcP	PcP	12 30 35.2	+1.2
	3.4nm,0.8s,baz=212,slow=3.7,SNR=7.7						
CHTO	**Chiang Mai**	**21.47**	**356**	P	P	12 26 31.1	-2.4
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb3.9						
CHTO	**Chiang Mai**	**21.47**	**356**	P	P	12 26 31.1	-2.4
	comp=Z,7.3nm,1.1s,mb3.9						
QIZ	**Qiongzhong**	**23.59**	**23**	P	P	12 26 54.3	-1.0
QIZ	**Qiongzhong**	**23.59**	**23**	*e*P	P	12 26 54.6	-0.6
	comp=Z,56nm,1.1s,mb4.9						
BATI	**Baumata**	**24.34**	**109**	P	P	12 27 00.8	-1.5
	comp=Z,20nm,0.5s,mb4.8,baz=12,slow=5.0,SNR=3.3						
MNI	**Manado**	**24.88**	**81**	P	P	12 27 07.4	+0.3
	comp=Z,0.0nm,0.0s						
LBMI	**Labuha**	**27.26**	**86**	P	P	12 27 23.1	-5.6
	comp=Z,0.0nm,0.0s						
KMI	**Kunming**	**27.81**	**5**	P	P	12 27 34.3	+0.9
KMI				AMB	AMB		
	comp=Z,22nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**29.14**	**123**	*e*P	P	12 27 44.9	-0.5
	comp=Z,22nm,0.8s,mb4.9						
FITZ				*e*PCP	PcP	12 30 53.5	+1.5
FITZ	**Fitzroy Crossi**	**29.14**	**123**	P	P	12 27 44.9	-0.5
	comp=Z,6.0nm,0.8s,mb4.4,baz=283,slow=6.6,SNR=4.4						
SWI	**Sorong**	**30.99**	**87**	P	P	12 28 00.4	-1.4
	comp=Z,0.0nm,0.0s						
ODAN	**Odare**	**31.98**	**338**	*e*P	P	12 28 10.6	+0.4
	comp=Z,92nm,0.7s,mb5.7						
TAPN	**Taplejung**	**32.30**	**339**	*e*P	P	12 28 14.3	+1.2
	comp=Z,181nm,0.9s,mb5.9						
RAMN	**Ramite**	**32.36**	**337**	*e*P	P	12 28 14.5	+0.9
	comp=Z,73nm,0.7s,mb5.6						
JIRN	**Jiri**	**33.16**	**337**	*e*P	P	12 28 21.4	+0.8
	comp=Z,135nm,0.7s,mb6.0						
PKI	**Pulchoki**	**33.39**	**335**	*e*P	P	12 28 22.9	+0.3
	comp=Z,27nm,0.5s,mb5.4						
LSA	**Lhasa**	**33.44**	**345**	P	P	12 28 23.9	+0.9
LSA	**Lhasa**	**33.44**	**345**	*e*P	P	12 28 24.1	+1.1
LSA				pmax	pmax		
	comp=Z,117nm,1.1s,mb5.7						
LSA	**Lhasa**	**33.44**	**345**	*e*P	P	12 28 24.1	+1.0
	comp=Z,117nm,1.1s,mb5.7						
GUN	**Gumba**	**33.50**	**336**	*e*P	P	12 28 24.3	+0.7
	comp=Z,88nm,0.4s,mb6.0						
DMN	**Daman**	**33.55**	**335**	*e*P	P	12 28 24.3	+0.3
	comp=Z,42nm,0.8s,mb5.4						
CD2	**Chengdu**	**33.64**	**5**	⇑*i* P	P	12 28 24.0	-0.7
CD2				AP	pP	12 28 31.5	-8.4
CD2				XP	sP	12 28 34.5	-13
CD2				PP	PP	12 29 40.2	-1.7
CD2				S	S	12 33 48.9	+5.7
CD2				XS	sS	12 33 56.2	-13
CD2				SS	SS	12 35 54.6	-16
CD2				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
KKN	**Kakani**	**33.64**	**336**	*e*P	P	12 28 25.0	+0.2
	comp=Z,95nm,0.8s,mb5.8						
NWAO	**Narrogin (SRO)**	**33.95**	**154**	P	P	12 28 27.6	+0.2
	comp=Z,15nm,1.1s,mb4.8,baz=111,slow=17,SNR=1.9						
GKN	**Gorkha**	**34.10**	**335**	*e*P	P	12 28 29.1	+0.3
	comp=Z,41nm,0.4s,mb5.7						
KOLN	**Koldanda**	**34.35**	**333**	*e*P	P	12 28 31.2	+0.3
	comp=Z,44nm,0.7s,mb5.5						
DANN	**Dangsing**	**34.78**	**334**	*e*P	P	12 28 35.0	+0.4
	comp=Z,150nm,0.5s,mb6.2						
WHN	**Wuhan**	**35.72**	**21**	P	P	12 28 45.0	+2.3
WRA	**Warramunga Arr**	**37.35**	**120**	P	P	12 28 56.1	-0.7
	comp=Z,6.2nm,0.5s,mb4.7,baz=304,slow=9.0,SNR=48						
WRA				PcP	PcP	12 31 16.1	+1.1
	comp=Z,4.0nm,0.8s,baz=308,slow=2.6,SNR=5.0						
WRA				S	S	12 34 40.3	-0.3
	comp=Z,5.3nm,0.9s,baz=292,slow=16,SNR=5.8						
WRAB	**Tennant Creek**	**37.36**	**120**	P	P	12 28 56.0	-0.8
	comp=Z,177nm,1.1s,mb5.8,SNR=15						
WRAB	**Tennant Creek**	**37.36**	**120**	*e*P	P	12 28 56.7	-0.1
WRAB				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
WRAB	**Tennant Creek**	**37.36**	**120**	*e*P	P	12 28 56.7	-0.2
	comp=Z,15nm,0.6s,mb5.0						
WB2	**Warramunga Arr**	**37.36**	**120**	*e*P	P	12 28 56.0	-0.9
WB2				*e*PCP	PcP	12 31 16.1	+1.1
FORT	**Forrest**	**38.27**	**140**	*e*P	P	12 29 14.2	+10
	comp=Z,23nm,0.7s,mb5.0						
ASAR	**Alice Springs**	**38.56**	**126**	P	P	12 29 06.7	-0.3
	comp=Z,24nm,0.9s,mb4.9,baz=302,slow=8.0,SNR=41						
ASAR				S	S	12 35 01.6	+2.7
	comp=Z,2.8nm,0.7s,baz=294,slow=16,SNR=7.4						
LZH	**Lanzhou**	**38.78**	**5**	*e*P	P	12 29 09.0	+0.5
LZH				AP	pP	12 29 12.9	-11
LZH				XP	sP	12 29 16.0	-15
LZH				AMB	AMB		
	comp=Z,51nm,1.1s,mb5.2						
LZH				AMB	AMB		
	comp=Z,253nm,5.0s						
NJ2	**Nanjing**	**38.84**	**26**	*e*P	P	12 29 09.6	+0.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
SMLA	**Simla**	**40.26**	**329**	*i* P	P	12 29 20.4	-0.6
GTA	**Gaotai**	**41.96**	**359**	*e*P	P	12 29 35.1	+0.3
GTA				AP	pP	12 29 38.7	-12
GTA				XP	sP	12 29 40.2	-17
GTA				AMB	AMB		
	comp=Z,52nm,1.2s,mb5.0						
THN	**Thein Dam**	**42.05**	**328**	*e*P	P	12 29 33.1	-2.5
HHC	**Hu-ho-hao-te**	**44.60**	**12**	*e*P	P	12 29 56.5	+0.5
HHC				S	S	12 36 32.5	+5.0
GUMO	**Guam**	**47.09**	**69**	P	P	12 30 13.6	-2.5
	comp=Z,20nm,0.5s,mb5.3,baz=164,slow=7.4,SNR=4.1						
GUMO	**Guam**	**47.09**	**69**	*e*P	P	12 30 14.7	-1.4
GUMO				pmax	pmax		
	comp=Z,88nm,1.2s,mb5.6						
GUMO	**Guam**	**47.09**	**69**	*e*P	P	12 30 14.7	-1.4
	comp=Z,88nm,1.2s,mb5.6						
KSRS	**Korea Array**	**47.51**	**30**	P	P	12 30 19.1	+0.1
	comp=Z,17nm,1.0s,mb5.0,baz=224,slow=8.5,SNR=38						
WMQ	**Urumqi**	**47.73**	**348**	⇑*i* P	P	12 30 21.5	+0.9
WMQ				AP	pP	12 30 26.0	-10
WMQ				AMB	AMB		
	comp=Z,77nm,0.9s,mb5.7						
CTA	**Charters Tower**	**48.00**	**115**	*e*P	P	12 30 23.3	+0.2
	comp=Z,29nm,0.9s,mb5.3						
CTA	**Charters Tower**	**48.00**	**115**	P	P	12 30 22.8	-0.3
	comp=Z,39nm,0.9s,mb5.4,baz=287,slow=9.3,SNR=44						
CTA	**Charters Tower**	**48.00**	**115**	*e*P	P	12 30 23.3	+0.2
CTA				pmax	pmax		
	comp=Z,29nm,0.9s						
CTAO	**Charters Tower**	**48.00**	**115**	*e*P	P	12 30 23.6	+0.5
CTAO				pmax	pmax		
	comp=Z,2μm,3.4s						
CTAO	**Charters Tower**	**48.00**	**115**	*e*P	P	12 30 23.6	+0.5
	comp=Z,2μm,3.4s						
STKA	**Stephens Creek**	**48.42**	**131**	*e*P	P	12 30 26.8	+0.6
	comp=Z,22nm,0.9s,mb5.2						
STKA				*e*PCP	PcP	12 31 51.5	-0.3
STKA	**Stephens Creek**	**48.42**	**131**	P	P	12 30 26.9	+0.7
	comp=Z,22nm,0.8s,mb5.2,baz=303,slow=6.5,SNR=27						
UCH	**Uchtor**	**50.51**	**335**	P	P	12 30 43.0	+1.2
	SNR=8.6						
SONM	**Songino Array**	**50.66**	**5**	P	P	12 30 43.9	+1.0
	comp=Z,76nm,0.8s,mb5.7,baz=188,slow=8.9,SNR=167						
SONM				PcP	PcP	12 32 00.5	+1.0
	comp=Z,9.9nm,0.7s,baz=188,slow=4.5,SNR=6.1						
KBK	**Karagaybulak**	**50.68**	**336**	P	P	12 30 44.5	+

MDJ	**Mudanjiang**	**53.93**	**26**	*e*P		**P**	**12 31 07.5**	**+0.4**
	comp=Z,26nm,1.0s,mb5.1								
TOO	**Toolangi**	**53.96**	**136**	*e*P		**P**	**12 31 09.5**	**+1.9**
HVS	**Khovu-Aksy**	**53.98**	**355**	*e*P		**P**	**12 31 07.7**	**+0.3**
MOY	**Mondy**	**54.22**	**1**	*e*P		**P**	**12 31 10.0**	**+0.9**
TLY	**Talaya**	**54.30**	**3**	P		**P**	**12 31 10.4**	**+0.6**
	comp=Z,150nm,0.7s,mb6.0,SNR=8.4								
TLY	**Talaya**	**54.30**	**3**	⇑*i*P		**P**	**12 31 10.0**	**+0.2**
TLY				pmax	pmax				
	comp=Z,22nm,1.0s,mb5.0								
TLY	**Talaya**	**54.30**	**3**	*e*P		**P**	**12 31 11.1**	**+1.3**
	comp=Z,15nm,0.7s,mb5.0								
HIA	**Hailar**	**54.48**	**16**	⇑*i*P		**P**	**12 31 11.1**	**0.0**
HIA	**Hailar**	**54.48**	**16**	*e*P		**P**	**12 31 11.1**	**0.0**
	comp=Z,29nm,1.2s,mb5.1								
KURK	**Kurchatov**	**56.41**	**344**	P		**P**	**12 31 24.2**	**-0.8**
	comp=Z,48nm,0.8s,mb5.6,baz=162,slow=6.6,SNR=37								
KURK	**Kurchatov**	**56.41**	**344**	*c i*P		**P**	**12 31 25.1**	**+0.1**
KURK				pmax	pmax				
	comp=Z,132nm,1.2s,mb5.8								
KURK	**Kurchatov**	**56.41**	**344**	*e*P		**P**	**12 31 24.9**	**0.0**
	comp=Z,80nm,0.8s,mb5.8								
ZAA0	**Zalesovo Array**	**57.96**	**349**	*e*P		**P**	**12 31 35.7**	**-0.1**
ZALV	**Zalesovo Beam**	**57.96**	**349**	P		**P**	**12 31 35.6**	**-0.2**
	comp=Z,44nm,0.8s,mb5.5,baz=164,slow=6.0,SNR=82								
KRAR	**Krasnoyarsk**	**58.88**	**355**	*e*P		**P**	**12 31 41.2**	**-1.0**
KRAR				pmax	pmax				
	comp=Z,55nm,1.3s,mb5.4								
ASAJ	**Asahikawa**	**60.06**	**34**	P		**P**	**12 31 50.6**	**0.0**
	comp=Z,8.3nm,0.4s,mb5.1,baz=238,slow=14,SNR=18								
VOSK	**Vostochnaya**	**60.54**	**340**	P		**P**	**12 31 47.7**	**-6.0**
VOSK				pmax	pmax				
	comp=Z,8.0nm,0.5s,mb5.1								
BVA0	**Borovoye Array**	**60.99**	**340**	*i* P		**P**	**12 31 55.5**	**-1.2**
BVA0				pmax	pmax				
	comp=Z,3.0nm,1.1s,mb4.3								
BVAR	**Borovoye Array**	**60.99**	**340**	P		**P**	**12 31 55.9**	**-0.8**
	comp=Z,6.8nm,0.5s,mb5.1,baz=138,slow=8.7,SNR=15								
BRVK	**Borovoye**	**61.06**	**340**	*e*P		**P**	**12 31 56.6**	**-0.6**
BRVK				pmax	pmax				
	comp=Z,19nm,1.1s,mb5.1								
BRVK	**Borovoye**	**61.06**	**340**	*e*P		**P**	**12 31 56.6**	**-0.5**
	comp=Z,19nm,1.1s,mb5.1								
BOD	**Bodaibo**	**61.38**	**8**	⇑*i*P		**P**	**12 31 59.9**	**+0.7**
BOD				pmax	pmax				
	comp=Z,51nm,0.8s,mb5.7								
YSS	**Yuzh-Sakhalins**	**61.96**	**32**	⇑*e*P		**P**	**12 32 03.8**	**+0.4**
YSS				*e*			12 32 12.1		
YSS				pmax	pmax				
	comp=Z,110nm,1.1s,mb5.9								
YSS				pmax	pmax				
	comp=N,30nm,1.0s								
YSS				pmax	pmax				
	comp=E,30nm,1.0s								
YSS	**Yuzh-Sakhalins**	**61.96**	**32**	*e*P		**P**	**12 32 03.8**	**+0.4**
	comp=E,73nm,1.0s,mb5.8								
AB31	**Akbulak array**	**62.45**	**331**	*i* P		**P**	**12 32 05.6**	**-1.0**
AB31				pmax	pmax				
	comp=Z,25nm,0.7s,mb5.5								
AB31	**Akbulak array**	**62.45**	**331**	⇑*e*P		**P**	**12 32 05.7**	**-0.9**
AKTK	**Aktyubinsk**	**64.16**	**331**	P		**P**	**12 32 16.5**	**-1.4**
AKTO	**Aktyubinsk**	**64.16**	**331**	P		**P**	**12 32 16.5**	**-1.4**
	comp=Z,7.5nm,0.9s,mb4.7,baz=130,slow=6.7,SNR=15								
AKTO	**Aktyubinsk**	**64.16**	**331**	*i* P		**P**	**12 32 16.6**	**-1.3**
AKTO				pmax	pmax				
	comp=Z,7.0nm,1.5s,mb4.5								
GNI	**Garni**	**66.28**	**316**	P		**P**	**12 32 32.0**	**+0.1**
	comp=Z,3.1nm,0.3s,mb4.8,baz=241,slow=19,SNR=2.9								
SVE	**Sverdlovsk**	**67.49**	**338**	*e*P		**P**	**12 32 38.4**	**-0.8**
SVE				pmax	pmax				
	comp=Z,36nm,1.3s,mb5.2								
ARU	**Arti**	**68.02**	**336**	*c i*P		**P**	**12 32 41.7**	**-0.8**
ARU				*e*S		S	12 41 40.4	+3.4	
ARU				SS		SS	12 45 56.8	-3.6	
ARU				pmax	pmax				
	comp=Z,13nm,1.0s,mb4.9								
ARU	**Arti**	**68.02**	**336**	*e*P		**P**	**12 32 41.9**	**-0.6**
	comp=Z,12nm,1.1s,mb4.8								
YAK	**Yakutsk**	**68.39**	**14**	⇑*i*P		**P**	**12 32 44.1**	**-0.6**
YAK				pmax	pmax				
	comp=Z,100nm,1.0s,mb5.8								
YAK	**Yakutsk**	**68.39**	**14**	*e*P		**P**	**12 32 44.2**	**-0.6**
	comp=Z,82nm,0.9s,mb5.8								
ASF	**Jabal al Asfar**	**69.28**	**306**	P		**P**	**12 32 50.3**	**-0.6**
	comp=Z,4.8nm,0.9s,mb4.4,baz=26,slow=1.9,SNR=5.1								
KIV	**Kislovodsk**	**69.31**	**319**	⇓*i*P		**P**	**12 32 50.7**	**-0.2**
KIV				*i*			12 32 58.7		
KIV				pmax	pmax				
	comp=Z,16nm,1.0s,mb4.9								
KIV	**Kislovodsk**	**69.31**	**319**	*e*P		**P**	**12 32 50.8**	**-0.1**
MAW	**Mawson**	**69.63**	**194**	P		**P**	**12 32 52.4**	**0.0**
	comp=Z,0.6nm,0.4s,mb3.9,baz=0.0,slow=4.0,SNR=2.4								
MALT	**Malatya**	**70.07**	**312**	*e*P		**P**	**12 32 54.4**	**-1.3**
MALT				pmax	pmax				
	comp=Z,14nm,1.1s,mb4.8								
MALT	**Malatya**	**70.07**	**312**	*e*P		**P**	**12 32 54.4**	**-1.2**
	comp=Z,14nm,1.1s,mb4.8								
MMAI	**Mount Meron Ar**	**70.73**	**306**	P		**P**	**12 32 59.9**	**+0.1**
	comp=Z,1.6nm,0.5s,mb4.2,baz=122,slow=9.0,SNR=3.9								
PETK	**Petropavlovsk-**	**73.36**	**32**	P		**P**	**12 33 14.9**	**-0.1**
	comp=Z,7.3nm,0.7s,mb4.7,baz=209,slow=3.0,SNR=15								
PET	**Petropavlovsk**	**73.82**	**32**	*e*P		**P**	**12 33 18.0**	**+0.2**
PET				pmax	pmax				
	comp=Z,33nm,0.9s,mb5.3								
PET	**Petropavlovsk**	**73.82**	**32**	*e*P		**P**	**12 33 18.1**	**+0.3**
VSR	**Storozhevoye**	**74.57**	**325**	*e*P		**P**	**12 33 21.0**	**-1.2**
VSR				pmax	pmax				
	comp=N,10.0nm,0.7s								
VSR				pmax	pmax				
	comp=Z,10.0nm,0.7s,mb4.8								
VSR				pmax	pmax				
	comp=E,20nm,0.9s								
BOSA	**Boshof**	**75.57**	**241**	P		**P**	**12 33 29.8**	**+1.4**
	comp=E,1.3nm,0.7s,mb3.9,baz=112,slow=16,SNR=3.1								
TIXI	**Tiksi**	**76.55**	**9**	*e*P		**P**	**12 33 32.4**	**-0.7**
TIXI				pmax	pmax				
	comp=Z,20nm,0.9s,mb5.0								
OBN	**Obninsk**	**77.59**	**328**	⇓*i*P		**P**	**12 33 39.2**	**-0.1**
OBN				*i*			12 33 47.2		
OBN				pmax	pmax				
	comp=Z,30nm,1.2s,mb5.1								
OBN	**Obninsk**	**77.59**	**328**	*e*P		**P**	**12 33 39.3**	**0.0**
AKASG	**Malin Array Be**	**80.27**	**322**	P		**P**	**12 33 52.8**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=88,slow=4.3,SNR=7.9								
VRI	**Vrincioaia**	**80.61**	**317**	⇓*i*P		**P**	**12 33 56.5**	**+0.5**
BURAR	**Bucovina Array**	**82.03**	**319**	⇓*i*P		**P**	**12 34 04.6**	**+1.1**
JOF	**Joensuu**	**83.03**	**335**	*e*p		**P**	**12 34 07.0**	**-1.3**
	comp=Z,8.5nm,0.8s,mb4.8								
JOF	**Joensuu**	**83.03**	**335**	*e*P		**P**	**12 34 07.0**	**-1.3**
JOF				pmax	pmax				
	comp=Z,9.0nm,0.8s,mb4.8								
LVZ	**Lovozero**	**83.59**	**340**	*e*P		**P**	**12 34 10.2**	**-0.9**
LVZ				pmax	pmax				
	comp=Z,15nm,1.2s,mb5.0								
LVZ	**Lovozero**	**83.59**	**340**	*e*P		**P**	**12 34 10.3**	**-0.8**
BILL	**Bilibino**	**83.75**	**20**	*e*P		**P**	**12 34 12.9**	**+0.9**
BILL				pmax	pmax				
	comp=Z,6.0nm,1.2s,mb4.6								
KOLS	**Kolonicke sedl**	**84.22**	**320**	*e*P		**P**	**12 34 15.8**	**+1.0**
STHS	**Stebnicka Huta**	**84.97**	**320**	*e*P		**P**	**12 34 19.3**	**+0.8**
STHS				pmax	pmax				
	comp=Z,9.0nm,0.9s,mb4.9								
STHS	**Stebnicka Huta**	**84.97**	**320**	*e*P		**P**	**12 34 19.3**	**+0.8**
	comp=Z,9.4nm,0.9s,mb4.9								
KAF	**Kangasniemi**	**84.99**	**333**	*e*p		**P**	**12 34 17.7**	**-0.6**
	comp=Z,14nm,0.9s,mb5.1								
KAF	**Kangasniemi**	**84.99**	**333**	*e*P		**P**	**12 34 17.7**	**-0.6**
KAF				pmax	pmax				
	comp=Z,14nm,0.9s,mb5.1								
KECS	**Kecovo**	**85.31**	**319**	*e*P		**P**	**12 34 20.0**	**-0.2**
KECS				*e*			12 34 28.8		
KECS				pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.5								
KECS	**Kecovo**	**85.31**	**319**	*e*P		**P**	**12 34 20.0**	**-0.2**
	comp=Z,4.4nm,0.9s,mb4.6								
KECS				*e*			12 34 28.8		
LIKS	**Likavka**	**86.30**	**319**	*e*P		**P**	**12 34 25.3**	**+0.2**
LIKS				pmax	pmax				
	comp=Z,52nm,0.9s,mb5.8								
LIKS	**Likavka**	**86.30**	**319**	*e*P		**P**	**12 34 25.3**	**+0.2**
	comp=Z,52nm,0.9s,mb5.8								
VYHS	**Vyhne**	**86.39**	**319**	*e*P		**P**	**12 34 25.9**	**+0.3**
KEV	**Kevo**	**86.84**	**340**	*e*p		**P**	**12 34 26.9**	**-0.4**
	comp=Z,6.3nm,0.7s,mb5.0								
KEV	**Kevo**	**86.84**	**340**	*e*P		**P**	**12 34 26.9**	**-0.4**
KEV				pmax	pmax				
	comp=Z,6.0nm,0.7s,mb4.9								
ARCES	**ARCESS Array B**	**87.28**	**340**	P		**P**	**12 34 29.2**	**-0.3**
	comp=Z,12nm,0.8s,mb5.2,baz=100,slow=5.0,SNR=26								
BOJS	**Bojanci**	**88.47**	**316**	*i* P		**P**	**12 34 36.2**	**+0.6**
PERS	**Pernice**	**88.68**	**317**	*e*P		**P**	**12 34 37.4**	**+0.8**
VISS	**Visnje**	**88.79**	**316**	*i* P		**P**	**12 34 37.5**	**+0.3**
JAVS	**Javornik**	**89.34**	**316**	*i* P		**P**	**12 34 36.1**	**-3.6**
GERES	**GERESS Array B**	**89.81**	**319**	P		**P**	**12 34 42.2**	**+0.3**
	comp=Z,3.7nm,0.9s,mb4.7,baz=99,slow=4.5,SNR=20								
BRG	**Berggiesshubel**	**89.82**	**321**	*i* P		**P**	**12 34 40.9**	**-0.9**
BRG				*i*			12 34 51.3		
BRG				pmax	pmax				
	comp=Z,2.0nm,0.4s,mb4.8								
BRG	**Berggiesshubel**	**89.82**	**321**	*i* P		**P**	**12 34 40.9**	**-1.0**
	comp=Z,2.8nm,0.4s,mb4.9								
BRG				*i*			12 34 51.3		
	comp=Z,2.2nm,0.4s								
CLL	**Collm**	**90.44**	**321**	*e*P		**P**	**12 34 54.0**	**+9.3**
NB2	**NORSAR Subarra**	**91.95**	**331**	P		**P**	**12 34 51.4**	**-0.1**
	comp=Z,6.4nm,1.0s,mb4.9,baz=93,slow=4.8								
NOA	**NORSAR Array B**	**91.95**	**331**	P		**P**	**12 34 50.6**	**-0.9**
	comp=Z,2.5nm,0.9s,mb4.6,baz=95,slow=5.0,SNR=5.5								
KEST	**Kesra**	**92.37**	**305**	P		**P**	**12 34 55.4**	**+1.3**
	comp=Z,4.1nm,0.9s,mb4.8,baz=287,slow=4.0,SNR=11								
YKA	**Yellowknife Ar**	**115.00**	**17**	PKP	PKiKP		12 40 23.1	-0.5	
	comp=Z,1.4nm,0.8s,baz=320,slow=2.3,SNR=3.7								
KIPM	**Iron Peak**	**125.86**	**41**	*e*PKPdf		PKPdf	12 40 47.4	+2.2	
NVAR	**Mina Array Bea**	**129.98**	**40**	PKP	PKPdf		12 40 53.7	+0.6	
	comp=Z,1.3nm,0.8s,baz=260,slow=3.1,SNR=11								
ULM	**Lac du Bonnet**	**130.73**	**14**	PKP	PKPdf		12 40 55.0	+0.8	
	comp=Z,6.9nm,0.8s,baz=354,slow=3.0,SNR=4.8								
PDAR	**Pinedale Array**	**132.08**	**30**	PKP	PKPdf		12 40 58.0	+1.0	
	comp=Z,0.5nm,0.6s,baz=254,slow=1.6,SNR=2.9								
MSU	**Marysvale**	**133.68**	**36**	*e*PKIKP		PKPdf	12 41 03.4	+3.3	
PV10	**Paradox Valley**	**135.55**	**33**	*e*PKPdf		PKPdf	12 41 05.4	+1.8	
CPUP	**Villa Florida**	**143.90**	**215**	PKhKP		PKPdf	12 41 17.1	-2.0	
	comp=Z,0.4nm,0.4s,baz=125,slow=6.2,SNR=3.7								
TXAR	**Lajitas Array**	**145.10**	**38**	PKPbc		PKPbc	12 41 21.4	+0.8	
	comp=Z,36nm,0.8s,baz=278,slow=1.0,SNR=168								
TXAR	**Lajitas Array**	**145.10**	**38**	PKPbc		PKPbc	12 41 21.4	+0.7	
URVA	**University of**	**145.29**	**357**	*e*PKPbc		PKPbc	12 41 21.3	+0.3	
GLAT	**Glass**	**145.49**	**14**	*e*PKPbc		PKPbc	12 41 22.4	+0.7	
GNAR	**Gosnell**	**145.60**	**15**	*e*PKPbc		PKPbc	12 41 22.6	+0.6	
ELN	**Prospectdale**	**145.68**	**2**	*e*PKPbc		PKPbc	12 41 22.0	-0.2	
MIAR	**Mount Ida**	**145.83**	**21**	*e*PKP2		PKPab	12 41 23.3	+0.1	
TZTN	**Tazewell**	**146.19**	**6**	*e*PKPdf		PKPdf	12 41 24.2	+1.5	
JCT	**Junction City**	**146.50**	**33**	*e*PKP2		PKPab	12 41 26.1	+0.2	
CPCT	**Cooper Cave**	**147.16**	**7**	*e*PKPbc		PKPbc	12 41 27.2	+0.5	
SWET	**Sewanee**	**147.19**	**9**	*e*PKPbc		PKPbc	12 41 26.4	-0.3	
JSC	**Jenkinsville**	**148.60**	**2**	*e*PKP2		PKPbc	12 41 31.3	+0.8	
BRAL	**Brewton**	**151.05**	**13**	*e*PKPbc		PKPbc	12 41 37.9	+1.2	
LPAZ	**La Paz**	**157.90**	**211**	PKP		PKPdf	12 41 42.8	+2.1	
	comp=Z,0.7nm,0.6s,baz=304,slow=3.6,SNR=3.7								

IDC 12 12:25:30.5±2.5, 331S×10019E, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.0/21, mbtmp4.1/8, Error ellipse: s-maj=106.7km s-min=19.7km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.66**	**357**	P		P	12 30 23.3	+0.5
	2.1nm,0.7s,baz=192,slow=8.6,SNR=5.7							
WRA	**Warramunga Arr**	**37.19**	**119**	P		P	12 32 41.7	-2.0
	0.9nm,0.4s,baz=305,slow=8.3,SNR=4.6							
WB2	**Warramunga Arr**	**37.20**	**119**	*e*P		P	12 32 49.1	+5.4
ASAR	**Alice Springs**	**38.34**	**125**	P		P	12 32 55.0	+1.5
	1.7nm,0.4s,baz=298,slow=7.7,SNR=6.2							
SONM	**Songino Array**	**51.22**	**5**	P		P	12 34 35.7	+0.1
	5.4nm,0.6s,baz=189,slow=9.5,SNR=11							
MKAR	**Makanchi Array**	**52.33**	**345**	P		P	12 34 43.6	-0.4
	2.1nm,0.6s,baz=151,slow=8.2,SNR=6.5							
KURK	**Kurchatov**	**56.91**	**344**	P		P	12 35 17.3	+0.1
	1.4nm,0.9s,baz=159,slow=6.8,SNR=3.0							
ZALV	**Zalesovo Beam**	**58.48**	**349**	P		P	12 35 28.1	-0.1
	3.2nm,0.8s,baz=183,slow=5.8,SNR=7.1							
BVAR	**Borovoye Array**	**61.47**	**340**	P		P	12 35 47.8	-0.9
	0.8nm,0.4s,baz=128,slow=12,SNR=3.0							
TXAR	**Lajitas Array**	**145.61**	**39**	PKPbc		PKPbc	12 45 11.5	-0.2
	2.0nm,0.5s,baz=230,slow=0.8,SNR=13							

JMA 12 12:25:44.3±0.1, 2718N×12995E, h45km, M3.8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JTK	**Tokunoshima**	**1.07**	**304**	P		Pn	12 26 03.2	+0.3
JTK				S		Sn	12 26 16.5	-0.2
JZK	**Kikaishima**	**1.13**	**1**	P		Pn	12 26 04.3	+0.6
JZK				S		Sn	12 26 19.3	+1.2
JAM	**Amami Oshima**	**1.26**	**346**	P		Pn	12 26 05.7	+0.2
JAM				S		Sn	12 26 20.8	-0.5
JOW	**Kunigami**	**1.53**	**257**	P		Pn	12 26 10.2	+1.0
JOW				S		Sn	12 26 28.9	+0.9
JMZ	**Minamidaito 2**	**1.77**	**140**	P		Pn	12 26 13.0	+0.5
JMZ				S		Sn	12 26 34.2	+0.4
JIH	**Iheya**	**1.77**	**266**	P		Pn	12 26 13.4	+0.9
JIH				S		Sn	12 26 34.6	+0.8
JJT2	**Tamagusuku 2**	**2.23**	**243**	P		Pn	12 26 20.1	+1.4
JJT2				S		Sn	12 26 46.7	+1.7
NAH1	**Naha**	**2.24**	**245**	P		Pn	12 26 20.3	+1.4
NAH1				S		Sn	12 26 46.9	+1.5
JAGN	**Aguni-jima**	**2.49**	**257**	P		Pn	12 26 23.3	+1.0
JAGN				S		Sn	12 26 51.5	0.0
JNN	**Nakanoshima**	**2.65**	**359**	S		Sn	12 26 56.1	+0.6
JKE	**Kume jima 2**	**2.95**	**254**	P		Pn	12 26 30.0	+1.3
JKE				S		Sn	12 27 04.2	+1.3

*ISCJB **12** 12:26:09.9±3.5, 36S±02×1015E±02, h43km±29km, mb4.4/17, Error ellipse: s-maj=38.5km s-min=10.6km az=138.8*
*NEIC **12** 12:26:11.1±0.8, 368S×10146E, h35km, mb4.7/5, Error ellipse: s-maj=27.3km s-min=7.6km az=50.0*
*IDC **12** 12:26:12.0±3.6, 364S×10154E, h43km±31km, mb4.0/15, mb1 4.1/16, mb1mx4.0/24, mbtmp4.0/16, ML4.1/1, Error ellipse: s-maj=47.0km s-min=12.1km az=53.0*
ISC 12 12:26:12.2±3.3, 36S±02×1016E±02, h44km±27km, n26, σ0$77/25, mb4.4/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAPI	**Kappang**	**18.19**	**95**	P		**Pn**	**12 30 22.0**	**+0.3**
	0.6nm,0.3s,baz=256,slow=12,SNR=2.5							
CMAR	**Chiang Mai Arr**	**22.10**	**353**	P		**P**	**12 31 04.3**	**+0.5**
	3.1nm,0.6s,mb3.9,baz=182,slow=8.6,SNR=6.2							
BATI	**Baumata**	**22.88**	**108**	P		**P**	**12 31 11.0**	**-1.2**
	16nm,0.5s,mb4.7,baz=63,slow=4.5,SNR=3.8							
FITZ	**Fitzroy Crossi**	**27.61**	**123**	*e*P		**P**	**12 31 56.3**	**+0.5**
	7.3nm,0.8s,mb4.4							
FITZ	**Fitzroy Crossi**	**27.61**	**123**	P		**P**	**12 31 56.2**	**+0.4**
	4.0nm,0.8s,mb4.1,baz=279,slow=9.0,SNR=3.5							
WRA	**Warramunga Arr**	**35.83**	**120**	P		**P**	**12 33 08.1**	**+0.2**
	2.6nm,0.4s,mb4.5,baz=307,slow=9.4,SNR=8.4							
ASAR	**Alice Springs**	**37.04**	**125**	P		**P**	**12 33 18.4**	**+0.2**
	2.0nm,0.4s,mb4.3,baz=301,slow=7.6,SNR=4.6							
ASAR				S		**S**	**12 39 01.7**	**+0.6**
	1.0nm,0.8s,baz=302,slow=14,SNR=4.3							
CTA	**Charters Tower**	**46.50**	**114**	*e*P		**P**	**12 34 35.9**	**+0.3**
	15nm,1.5s,mb4.7							
CTA	**Charters Tower**	**46.50**	**114**	P		**P**	**12 34 35.0**	**-0.6**
	1.6nm,0.6s,mb4.1,baz=281,slow=5.2,SNR=2.5							
STKA	**Stephens Creek**	**46.91**	**131**	*e*P		**P**	**12 34 39.1**	**+0.5**
	6.2nm,0.4s,mb4.9							
STKA	**Stephens Creek**	**46.91**	**131**	P		**P**	**12 34 38.5**	**-0.1**
	4.4nm,0.6s,mb4.6,baz=312,slow=7.6,SNR=5.3							
KSRS	**Korea Array**	**47.65**	**29**	P		**P**	**12 34 43.5**	**-0.8**
	2.3nm,1.0s,mb4.2,baz=220,slow=8.4,SNR=5.3							
SONM	**Songino Array**	**51.42**	**4**	P		**P**	**12 35 14.2**	**+1.4**
	3.1nm,0.7s,mb4.3,baz=193,slow=7.6,SNR=4.3							
TKM2	**Tokmak 2**	**51.94**	**336**	*e*P		**P**	**12 35 16.9**	**+0.1**
	7.3nm,0.8s,mb4.7							
EKS2	**Erkin-Say**	**52.49**	**334**	*e*P		**P**	**12 35 21.2**	**+0.3**
	7.2nm,0.8s,mb4.7							
MJAR	**Matsushiro Arr**	**52.58**	**37**	P		**P**	**12 35 22.2**	**+0.6**
	1.1nm,0.5s,mb4.0,baz=187,slow=8.2,SNR=4.5							
MK31	**Makanchi Array**	**53.01**	**344**	*e*P		**P**	**12 35 25.5**	**+0.8**
MKAR	**Makanchi Array**	**53.01**	**344**	P		**P**	**12 35 25.4**	**+0.8**
	2.2nm,0.5s,mb4.4,baz=157,slow=9.0,SNR=6.9							
MKAR	**Makanchi Array**	**53.01**	**344**	P		**P**	**12 35 25.4**	**+0.8**
KURK	**Kurchatov**	**57.60**	**343**	P		**P**	**12 35 56.4**	**-1.2**
	0.7nm,0.4s,mb4.1,baz=184,slow=6.5,SNR=4.2							
ZALV	**Zalesovo Beam**	**59.05**	**349**	P		**P**	**12 36 07.1**	**-0.5**
	2.5nm,0.3s,mb4.7,baz=150,slow=7.3,SNR=6.7							
BVAR	**Borovoye Array**	**62.24**	**339**	P		**P**	**12 36 28.0**	**-1.4**
	1.8nm,0.5s,mb4.5,baz=141,slow=9.3,SNR=4.6							
PETK	**Petropavlovsk-**	**73.43**	**31**	P		**P**	**12 37 39.0**	**-0.8**
	1.1nm,0.8s,mb3.9,baz=238,slow=14,SNR=3.4							
PETK	**Petropavlovsk-**	**73.43**	**31**	P		**P**	**12 37 39.0**	**-0.8**
TXAR	**Lajitas Array**	**144.98**	**40**	PKPbc	PKPdf		12 45 45.7	+0.3
	1.8nm,0.6s,baz=310,slow=1.3,SNR=7.1							
TXAR	**Lajitas Array**	**144.98**	**40**	PKPbc	PKPdf		12 45 45.7	+0.3

IDC 12 12:34:37.9±1.8, 438S×10119E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.9/19, mbtmp3.9/8, Error ellipse: s-maj=65.6km s-min=19.6km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.80**	**354**	P		P	12 39 43.2	+0.9
	2.6nm,0.6s,baz=183,slow=8.3,SNR=16							
WRA	**Warramunga Arr**	**35.80**	**118**	P		P	12 41 37.5	-1.7
	0.5nm,0.5s,baz=306,slow=9.1,SNR=5.7							
ASAR	**Alice Springs**	**36.92**	**124**	P		P	12 41 50.2	+1.5
	1.3nm,0.8s,baz=299,slow=8.0,SNR=5.7							
KSRS	**Korea Array**	**48.49**	**29**	P		P	12 43 22.1	-0.3
	1.5nm,0.7s,baz=216,slow=8.2,SNR=8.4							
SONM	**Songino Array**	**52.19**	**4**	P		P	12 43 50.6	+0.3
	3.9nm,0.8s,baz=186,slow=9.0,SNR=16							
MKAR	**Makanchi Array**	**53.62**	**344**	P		P	12 44 00.9	0.0
	1.8nm,0.8s,baz=144,slow=8.4,SNR=14							
KURK	**Kurchatov**	**58.21**	**343**	P		P	12 44 32.7	-1.1
	1.4nm,0.8s,baz=161,slow=6.3,SNR=5.5							
ZALV	**Zalesovo Beam**	**59.71**	**349**	P		P	12 44 43.5	-0.6
	1.0nm,0.5s,baz=190,slow=4.5,SNR=4.8							
BDFB	**Brasilia**	**143.60**	**236**	PKP	PKPdf		12 54 16.4	+0.6
	3.6nm,0.3s,baz=167,slow=2.8,SNR=3.4							
TXAR	**Lajitas Array**	**145.79**	**41**	PKPbc		PKPbc	12 54 19.4	-0.3
	1.3nm,0.8s,baz=285,slow=1.1,SNR=11							

IDC 12 12:36:12.1±4.6, 311S×10092E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.6/3, Error ellipse: s-maj=174.1km s-min=31.4km az=60.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.65**	**120**	P		P	12 43 19.4	-1.2
	0.2nm,0.4s,baz=295,slow=8.2,SNR=4.2							
ASAR	**Alice Springs**	**37.86**	**126**	P		P

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.22**	**119**	P	P	12 51 53.5	-0.6
	0.2nm,0.4s,baz=305,slow=9.0,SNR=3.3						
ASAR	**Alice Springs**	**38.41**	**125**	P	P	12 52 04.4	+0.3
	0.3nm,0.7s,baz=284,slow=7.6,SNR=2.5						
SONM	**Songino Array**	**50.93**	**5**	P	P	12 53 44.3	+0.7
	0.7nm,0.6s,baz=207,slow=6.0,SNR=3.7						
MKAR	**Makanchi Array**	**52.09**	**344**	P	P	12 53 52.4	0.0
	1.2nm,0.7s,baz=146,slow=8.8,SNR=5.5						
KURK	**Kurchatov**	**56.67**	**344**	P	P	12 54 24.7	-1.0
	0.4nm,0.6s,baz=164,slow=6.6,SNR=2.6						
TXAR	**Lajitas Array**	**145.32**	**39**	PKPbc	PKPbc	13 04 20.7	-0.3
	0.6nm,0.7s,baz=275,slow=1.0,SNR=6.1						

NEIC 12 12:45:36.0, 5561N×15335W, h19km, ML3.6(AEIC), **After AEIC., South of Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**1.62**	**1**	P	Pn	12 46 01.8	-1.6
OHAK				S	Sn	12 46 21.6	-2.2
KDAK	**Kodiak Island**	**2.22**	**11**	P	Pn	12 46 10.1	-1.7
KDAK				S	Sn	12 46 35.4	-3.2
CHGN	**Chignik**	**2.93**	**286**	*eP*	Pn	12 46 19.0	-2.5
SVW2	**Sparrevohn**	**5.63**	**349**	P	Pn	12 46 57.6	-0.9
EYAK	**Cordova Ski Ar**	**6.38**	**36**	P	Pn	12 47 07.0	-1.9
PMR	**Palmer**	**6.39**	**18**	*eP*	Pn	12 47 06.7	-2.3
RAGM	**Ragged Mountai**	**6.64**	**40**	P	Pn	12 47 10.6	-1.8
BMRM	**Bremner River**	**7.08**	**37**	P	Pn	12 47 16.9	-1.5
TT01	**Tatalina**	**7.45**	**351**	P	Pn	12 47 21.4	-2.0
MCK	**McKinley**	**8.45**	**13**	*e*Pn	Pn	12 47 37.8	+0.7
PNL	**Peninsula**	**8.51**	**56**	P	Pn	12 47 36.6	-1.5
BPAW	**Bear Paw Mtn.**	**8.60**	**7**	P	Pn	12 47 37.4	-1.8
IL1	**Eielson Array**	**9.73**	**17**	P	Pn	12 47 52.5	-2.2
ILB	**Eielson Array**	**9.73**	**17**	P	Pn	12 47 52.4	-2.3

IDC **12** *12:45:53.5±2.5,* **439S×10121E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.7/19, mbtmp3.7/7, Error ellipse: s-maj=87.4km s-min=21.7km az=57.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.81**	**354**	P	P	12 50 57.9	-0.3
	0.9nm,0.3s,baz=183,slow=8.7,SNR=7.3						
WRA	**Warramunga Arr**	**35.78**	**118**	P	P	12 52 54.9	+0.2
	0.8nm,0.7s,baz=307,slow=9.3,SNR=4.6						
ASAR	**Alice Springs**	**36.90**	**124**	P	P	12 53 03.4	-0.9
	0.2nm,0.5s,baz=297,slow=7.0,SNR=3.4						
KSRS	**Korea Array**	**48.49**	**29**	P	P	12 54 37.5	-0.6
	1.1nm,0.8s,baz=209,slow=7.9,SNR=4.5						
SONM	**Songino Array**	**52.21**	**4**	P	P	12 55 06.6	+0.6
	1.4nm,0.6s,baz=190,slow=8.8,SNR=7.6						
MKAR	**Makanchi Array**	**53.64**	**344**	P	P	12 55 16.7	0.0
	0.9nm,0.6s,baz=140,slow=7.7,SNR=5.3						
KURK	**Kurchatov**	**58.23**	**343**	P	P	12 55 48.4	-1.1
	0.5nm,0.7s,baz=163,slow=7.1,SNR=3.4						
TXAR	**Lajitas Array**	**145.79**	**41**	PKPbc	PKPbc	13 05 35.8	+0.5
	1.0nm,0.8s,baz=290,slow=2.3,SNR=8.0						

IDC **12** *12:51:12.0±3.0, 330S×10040E, h0km, mb3.8/7, mb1 3.8/7, mb1mx3.7/20, mbtmp3.8/7, Error ellipse: s-maj=134.0km s-min=21.2km az=53.0*
ISCJB **12** *12:51:16.7±1.3, 30S±02×1007E±03, h33km, mb3.9/10, Error ellipse: s-maj=47.7km s-min=14.4km az=144.5*
NEIC **12** *12:51:19.1±1.2, 298S×10076E, h35km, mb4.1/2, Error ellipse: s-maj=46.3km s-min=13.9km az=54.0*
ISC 12 12:51:19.1±1.3, 30S±02×1008E±03, h35km, n13, σ1s05/12, mb3.9/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**33.77**	**36**	*eP*	**P**	**12 57 58.1**	**+0.3**
	4.6nm,1.5s,mb4.2						
WRA	**Warramunga Arr**	**36.84**	**120**	P	**P**	**12 58 23.4**	**-0.9**
	0.3nm,0.3s,mb3.5,baz=302,slow=9.0,SNR=6.5						
ASAR	**Alice Springs**	**38.06**	**126**	P	**P**	**12 58 33.8**	**-0.8**
	0.2nm,0.6s,mb3.1,baz=299,slow=7.7,SNR=3.0						
STKA	**Stephens Creek**	**47.93**	**131**	P	**P**	**12 59 56.4**	**+2.0**
	1.5nm,0.8s,mb4.1,baz=321,slow=14,SNR=2.4						
SONM	**Songino Array**	**50.86**	**5**	P	**P**	**13 00 17.2**	**+0.8**
	2.9nm,0.8s,mb4.3,baz=184,slow=9.2,SNR=11						
EKS2	**Erkin-Say**	**51.58**	**335**	*eP*	**P**	**13 00 23.4**	**+1.5**
	1.9nm,0.8s,mb4.1						
MKAR	**Makanchi Array**	**52.19**	**344**	P	**P**	**13 00 26.6**	**+0.3**
	0.8nm,0.5s,mb3.9,baz=142,slow=7.6,SNR=7.2						
MAJO	**Matsushiro**	**52.58**	**38**	*eP*	**P**	**13 00 24.0**	**-5.5**
	47nm,0.4s						
KURK	**Kurchatov**	**56.77**	**343**	P	**P**	**13 00 58.8**	**-0.7**
	0.8nm,0.9s,mb3.8,baz=164,slow=6.3,SNR=3.0						
ZALV	**Zalesovo Beam**	**58.28**	**349**	P	**P**	**13 01 09.0**	**-1.1**
	1.0nm,0.6s,mb4.0,baz=163,slow=5.4,SNR=3.6						
ZALV	**Zalesovo Beam**	**58.28**	**349**	P	**P**	**13 01 09.0**	**-1.1**
BVAR	**Borovoye Array**	**61.37**	**340**	P	**P**	**13 01 30.4**	**-1.0**
	0.3nm,0.4s,mb3.8,baz=168,slow=7.4,SNR=4.6						
TXAR	**Lajitas Array**	**145.01**	**39**	PKPbc	PKPbc	13 10 52.1	-0.7
	0.6nm,0.6s,baz=308,slow=1.5,SNR=8.5						

IDC 12 12:51:33.0±3.7, 2456N×9494E, h127km±38km, mb3.5/4, mb1 3.4/5, mb1mx3.2/24, mbtmp3.3/5, Error ellipse: s-maj=143.5km s-min=17.6km az=60.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**0.94**	**284**	*eP*	Pn	12 51 52.0	-3.1
IMP				*eS*	Sn	12 52 07.0	-4.8
CMAR	**Chiang Mai Arr**	**7.13**	**148**	P	Pn	12 53 14.8	0.0
	0.2nm,0.3s,baz=323,slow=13,SNR=4.6						
MKAR	**Makanchi Array**	**24.38**	**339**	P	P	12 56 39.5	+0.3
	3.7nm,0.5s,baz=147,slow=9.4,SNR=20						
KURK	**Kurchatov**	**29.00**	**338**	P	P	12 57 19.7	-0.8
	0.5nm,0.5s,baz=146,slow=9.0,SNR=3.6						
WRA	**Warramunga Arr**	**58.55**	**126**	P	P	13 01 16.2	-0.2
	0.7nm,0.6s,baz=322,slow=7.5,SNR=5.4						
ASAR	**Alice Springs**	**61.04**	**139**	P	P	13 01 33.7	+0.3
	0.6nm,0.7s,baz=320,slow=6.3,SNR=4.9						

IDC 12 12:53:24.7±4.1, 308S×10088E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/19, mbtmp3.7/4, Error ellipse: s-maj=170.7km s-min=24.6km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.69**	**120**	P	P	13 00 33.2	-0.5
	0.3nm,0.4s,baz=305,slow=8.5,SNR=5.5						
ASAR	**Alice Springs**	**37.91**	**126**	P	P	13 00 44.1	+0.2
	0.6nm,0.5s,baz=300,slow=7.9,SNR=7.4						
SONM	**Songino Array**	**50.93**	**5**	P	P	13 02 28.8	+1.0
	1.0nm,0.6s,baz=181,slow=10,SNR=5.2						
MKAR	**Makanchi Array**	**52.30**	**344**	P	P	13 02 37.1	-0.9
	0.2nm,0.4s,baz=145,slow=6.7,SNR=4.6						
TXAR	**Lajitas Array**	**145.00**	**39**	PKPbc	PKPbc	13 13 03.6	-0.4
	0.5nm,0.6s,baz=264,slow=0.9,SNR=6.3						

IDC **12** *12:55:04.2±2.0, 311S×10009E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/20, mbtmp3.9/8, Error ellipse: s-maj=87.7km s-min=17.0km az=58.0*
ISCJB **12** *12:55:06.6±2.2, 31S±04×1000E±06, h33km, mb3.9/8, Error ellipse: s-maj=94.2km s-min=14.4km az=148.4*
NEIC **12** *12:55:09.3±0.8, 307S×100.14E, h35km, Error ellipse: s-maj=38.5km s-min=10.8km az=60.0*
ISC 12 12:55:09.4±2.1, 31S±03×1002E±05, h35km, n12, σ0s55/10, mb3.9/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.41**	**357**	P	**P**	**12 59 53.8**	**-0.6**
	0.7nm,0.6s,mb3.2,baz=186,slow=10,SNR=4.9						
WRA	**Warramunga Arr**	**37.32**	**119**	P	**P**	**13 02 18.6**	**-0.1**
	0.4nm,0.4s,mb3.6,baz=320,slow=11,SNR=9.6						
ASAR	**Alice Springs**	**38.51**	**125**	P	**P**	**13 02 28.2**	**-0.4**
	0.6nm,0.7s,mb3.5,baz=297,slow=8.1,SNR=6.1						
STKA	**Stephens Creek**	**48.33**	**131**	P	**P**	**13 03 48.1**	**+0.4**
	1.1nm,0.9s,mb3.9,baz=298,slow=18,SNR=2.0						
SONM	**Songino Array**	**50.97**	**5**	P	**P**	**13 04 08.6**	**+1.1**
	2.7nm,0.7s,mb4.3,baz=186,slow=8.9,SNR=10						
MKAR	**Makanchi Array**	**52.08**	**344**	P	**P**	**13 04 16.3**	**+0.4**
	2.8nm,0.7s,mb4.3,baz=141,slow=7.8,SNR=19						
MKAR	**Makanchi Array**	**52.08**	**344**	P	**P**	**13 04 16.3**	**+0.4**
KURK	**Kurchatov**	**56.66**	**344**	P	**P**	**13 04 48.9**	**-0.2**
	1.1nm,0.2s,mb4.5,baz=156,slow=6.2,SNR=6.1						
ZALV	**Zalesovo Beam**	**58.22**	**349**	P	**P**	**13 04 59.5**	**-0.6**
	1.3nm,0.4s,mb4.4,baz=119,slow=1.9,SNR=5.6						
ZALV	**Zalesovo Beam**	**58.22**	**349**	P	**P**	**13 04 59.5**	**-0.6**
BDFB	**Brasilia**	**143.45**	**239**	PKP	PKPdf	13 14 41.2	-0.2
	2.5nm,0.4s,baz=33,slow=0.4,SNR=2.9						
TXAR	**Lajitas Array**	**145.42**	**38**	PKPbc	PKPbc	13 14 45.4	+1.0
	1.3nm,0.7s,baz=320,slow=0.8,SNR=14						

IDC **12** *12:59:16.4±1.5, 294S×10047E, h0km, mb4.4/12, mb1 4.5/13, mb1mx4.3/23, mbtmp4.4/13, ML4.5/1, Error ellipse: s-maj=48.6km s-min=13.7km az=56.0*
BJI **12** *12:59:17.3, 307S×10036E, h23km, mB5.7, mb4.8*
ISCJB **12** *12:59:19.7±1.2, 29S±0.1×1005E±02, h33km, mb4.5/17, Error ellipse: s-maj=34.6km s-min=9.1km az=144.8*
NEIC **12** *12:59:22.2±0.9, 292S×10054E, h35km, mb4.9/4, Error ellipse: s-maj=30.6km s-min=8.4km az=56.0*
ISC 12 12:59:22.3±1.1, 29S±01×1006E±02, h35km, n24, σ0s82/22, mb4.5/17, 1C, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**19.23**	**97**	P	**Pn**	**13 03 44.6**	**-0.2**
	1.5nm,0.3s,baz=255,slow=16,SNR=4.5						
CMAR	**Chiang Mai Arr**	**21.29**	**356**	P	**P**	**13 04 04.8**	**-1.1**
	4.8nm,0.8s,mb3.9,baz=185,slow=9.7,SNR=24						
CHTO	**Chiang Mai**	**21.64**	**356**	*eP*	**P**	**13 04 09.5**	**-0.3**
BATI	**Baumata**	**24.03**	**109**	P	**P**	**13 04 34.3**	**0.0**
	14nm,0.6s,mb4.6,baz=293,slow=7.7,SNR=3.0						
FITZ	**Fitzroy Crossi**	**28.83**	**123**	P	**P**	**13 05 18.6**	**+1.2**
	1.4nm,0.3s,mb4.1,baz=334,slow=7.9,SNR=4.3						
LSA	**Lhasa**	**33.65**	**345**	*eP*	**P**	**13 06 01.2**	**+1.4**
	14nm,0.8s,mb5.0						
CD2	**Chengdu**	**33.76**	**5**	*eP*	**P**	**13 06 00.2**	**-0.5**
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	**37.04**	**120**	P	**P**	**13 06 28.5**	**-0.6**
	comp=Z,1.7nm,0.5s,mb4.1,baz=299,slow=8.7,SNR=27						
ASAR	**Alice Springs**	**38.25**	**126**	P	**P**	**13 06 38.4**	**-1.0**
	comp=Z,1.0nm,0.4s,mb3.9,baz=303,slow=7.7,SNR=16						
GTA	**Gaotai**	**42.11**	**359**	⇑P	**P**	**13 07 11.7**	**+0.7**
GTA				AP	pP	13 07 16.2	-5.2
GTA				XP	sP	13 07 18.7	-6.8
GTA				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.1						
KSRS	**Korea Array**	**47.50**	**30**	P	**P**	**13 07 53.5**	**-0.5**
	comp=Z,5.1nm,1.1s,mb4.5,baz=221,slow=9.0,SNR=14						
CTAO	**Charters Tower**	**47.69**	**115**	P	**P**	**13 07 56.8**	**+1.0**
STKA	**Stephens Creek**	**48.12**	**131**	P	**P**	**13 07 58.5**	**-0.4**
	comp=Z,1.2nm,0.7s,mb4.0,baz=325,slow=8.6,SNR=3.3						
SONM	**Songino Array**	**50.78**	**5**	P	**P**	**13 08 19.6**	**+0.6**
	comp=Z,8.8nm,0.9s,mb4.7,baz=188,slow=7.8,SNR=34						
ULN	**Ulaanbaatar**	**50.87**	**6**	*eP*	**P**	**13 08 21.4**	**+1.7**
	comp=Z,14nm,1.2s,mb4.8						
MKAR	**Makanchi Array**	**52.05**	**344**	P	**P**	**13 08 28.4**	**0.0**
	comp=Z,9.5nm,0.8s,mb4.8,baz=150,slow=8.2,SNR=60						
MJAR	**Matsushiro Arr**	**52.61**	**38**	P	**P**	**13 08 32.5**	**-0.3**
	comp=Z,3.0nm,1.1s,mb4.1,baz=223,slow=7.6,SNR=6.6						
KURK	**Kurchatov**	**56.63**	**343**	P	**P**	**13 09 00.6**	**-1.1**
	comp=Z,4.5nm,0.8s,mb4.6,baz=159,slow=6.9,SNR=9.1						
KURK	**Kurchatov**	**56.63**	**343**	*eP*	**P**	**13 09 01.7**	**0.0**
	comp=Z,6.9nm,0.9s,mb4.7						
ZAA0	**Zalesovo Array**	**58.16**	**349**	*eP*	**P**	**13 09 12.2**	**-0.2**
ZALV	**Zalesovo Beam**	**58.16**	**349**	P	**P**	**13 09 11.1**	**-1.3**
	comp=Z,16nm,1.0s,mb5.0,baz=160,slow=4.7,SNR=28						
YSS	**Yuzh-Sakhalins**	**61.94**	**31**	*eP*	**P**	**13 09 39.2**	**+0.7**
	comp=Z,18nm,1.0s,mb5.2						
TXAR	**Lajitas Array**	**145.05**	**39**	PKPbc	PKPbc	13 18 56.6	+0.5
	comp=Z,5.5nm,0.8s,baz=278,slow=1.2,SNR=40						
JCT	**Junction City**	**146.47**	**33**	*eP*	PKPdf	13 19 00.6	+1.5

BJI **12** *13:02:02.3, 333S×101.17E, h31km, mB6.2, mb5.6, Ms6.3, Msz6.2*
MOS **12** *13:02:06.2±0.8, 283S×10139E, h33km, mb5.8/97, Error ellipse: s-maj=8.2km s-min=4.3km az=120.5*
NEIC **12** *13:02:07.4±0.1, 293S×10138E, h35km, mb5.6/103, Error ellipse: s-maj=4.7km s-min=3.0km az=38.0*
ISCJB **12** *13:02:08.0±0.1, 294S±003×10128E±002, h49km, mb5.7/210, MS6.3/5, Error ellipse: s-maj=4.3km s-min=2.9km az=25.5*
IDC **12** *13:02:09.6±0.4, 288S×10146E, h52km±3km, mb5.2/27, mb1 5.2/28, mb1mx5.2/28, mbtmp5.2/28, Error ellipse: s-maj=10.5km s-min=7.8km az=51.0*
SZGRF **12** *13:02:11.4, 271S×10149E, h60km, mb5.6, Southern Sumatera, Indonesia*
DJA **12** *13:02:11, 309S×10102E, h82km, MLv6.2/10*
ISC 12 13:02:09.8±0.1, 297S±003×10124E±002, h51km, h51km±1.8km: pP-P, n1077, σ0s95/614, mb5.7/208, MS6.3/5, 296C-191D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMBI	**JAMBI**	**2.75**	**61**	P	**Pn**	**13 02 53.6**	**+2.2**
	0.0nm,0.0s						
BLSI	**Bandar Lampung**	**4.66**	**121**	P	**Pn**	**13 03 18.7**	**+1.1**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**4.96**	**81**	P	**Pn**	**13 03 23.1**	**+1.3**
	0.0nm,0.0s						
KGM	**Kluang**	**5.37**	**23**	⇓P	**Pn**	**13 03 30.6**	**+3.1**
MYKOM	**Kota Tinggi**	**5.40**	**29**	⇓P	**Pn**	**13 03 31.8**	**+3.9**
TRSI	**Tarutung**	**5.46**	**335**	P	**Pn**	**13 03 32.4**	**+3.7**
	0.0nm,0.0s						
SBJI	**Serang**	**5.80**	**123**	P	**Pn**	**13 03 36.4**	**+3.1**
	0.0nm,0.0s						
FRIM	**Kepong**	**6.18**	**4**	⇑P	**Pn**	**13 03 42.1**	**+3.5**
DBJI	**Dramaga**	**6.55**	**123**	P	**Pn**	**13 03 44.5**	**+0.9**
	0.0nm,0.0s						
CBJI	**Citeko**	**6.56**	**122**	P	**Pn**	**13 03 47.3**	**+3.5**
	7µm,1.1s						
SKJI	**Sukabumi**	**6.64**	**127**	P	**Pn**	**13 03 44.6**	**-0.3**
	0.0nm,0.0s						
IPM	**Ipoh**	**7.40**	**358**	⇓P	**Pn**	**13 04 02.1**	**+6.8**
KTGM	**Kuala Trenggan**	**8.46**	**13**	⇑P	**Pn**	**13 04 14.7**	**+4.8**
XMIS	**Christmas Isla**	**8.65**	**150**	*e*Pn	**Pn**	**13 04 04.2**	**-8.3**
XMIS				*eS*	**Sn**	**13 05 33.4**	**-15**
KSM	**Kuching**	**10.09**	**64**	⇑P	**Pn**	**13 04 39.0**	**+6.9**
COCO	**West Island**	**10.14**	**205**	Pn	**Pn**	**13 04 28.1**	**-4.8**
	15µm,0.9s,SNR=23						
COCO	**West Island**	**10.14**	**205**	⇓P	**Pn**	**13 04 30.5**	**-2.3**
	SNR=15						
COCO	**West Island**	**10.14**	**205**	*e*Pn	**Pn**	**13 04 25.7**	**-7.2**
	1µm,0.8s						
PBKI	**Pangkalan Bun**	**10.43**	**89**	P	**Pn**	**13 04 38.7**	**+1.9**
	0.0nm,0.0s						
STKI	**Sintang**	**10.67**	**74**	P	**Pn**	**13 04 45.3**	**+5.2**
	0.0nm,0.0s						
SJI	**Sawahan**	**11.50**	**115**	P	**Pn**	**13 04 51.8**	**+0.3**
	0.0nm,0.0s						
SBUM	**Sibu**	**12.23**	**64**	⇓P	**Pn**	**13 05 07.9**	**+6.5**
KRKI	**Karangkates**	**12.29**	**115**	P	**Pn**	**13 05 03.1**	**+0.8**
	0.0nm,0.0s						
KMMI	**Kalianget**	**13.31**	**108**	P	**Pn**	**13 05 16.7**	**+0.5**
	0.0nm,0.0s						
BTM	**Bintulu**	**13.34**	**63**	⇓P	**Pn**	**13 05 22.0**	**+5.5**
BBKI	**Banjar Baru**	**13.59**	**92**	P	**Pn**	**13 05 22.5**	**+2.5**
	0.0nm,0.0s						
IGBI	**Denpasar**	**15.00**	**113**	P	**Pn**	**13 05 33.5**	**-5.3**
	0.0nm,0.0s						
MTNI	**Mataram**	**15.88**	**111**	P	**Pn**	**13 05 45.1**	**-5.0**
	0.0nm,0.0s						
SMKI	**Samarinda**	**16.16**	**81**	P	**Pn**	**13 05 59.2**	**+5.5**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**17.43**	**59**	⇓P	**Pn**	**13 06 12.7**	**+3.1**
KKM	**Kota Kinabalu**	**17.43**	**59**	*eP*	**Pn**	**13 06 11.7**	**+2.1**
SDKM	**Sandakan**	**18.09**	**62**	⇓P	**Pn**	**13 06 21.0**	**+3.4**
TSM	**Tawau**	**18.12**	**67**	⇑P	**Pn**	**13 06 20.2**	**+2.2**
KDM	**Kudat**	**18.41**	**58**	⇓P	**Pn**	**13 06 24.7**	**+3.2**
KAPI	**Kappang**	**18.58**	**97**	Pn	**Pn**	**13 06 22.5**	**-1.1**
	3µm,0.9s,SNR=58						
KAPI	**Kappang**	**18.58**	**97**	⇓P	**Pn**	**13 06 22.1**	**-1.5**
	SNR=29						
KAPI	**Kappang**	**18.58**	**97**	P	**Pn**	**13 06 21.7**	**-1.9**
	21nm,0.3s,baz=281,slow=10,SNR=47						
KAPI	**Kappang**	**18.58**	**97**	*eP*	**Pn**	**13 06 21.5**	**-2.0**
	451nm,0.9s						
MYLDM	**Lahad Datu**	**19.05**	**65**	⇓P	**Pn**	**13 06 32.7**	**+3.4**
KKTK	**Khon Kaen**	**19.25**	**5**	P	**Pn**	**13 06 29.4**	**-2.1**
	2µm,0.5s						
BDT	**Bhumibol Dam**	**20.21**	**354**	P	**P**	**13 06 38.5**	**-2.0**
	49nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.41**	**354**	P	**P**	**13 06 51.1**	**-2.4**
	93nm,0.8s,mb5.2,baz=185,slow=10.0,SNR=59						
CMAR				PcP	PcP	13 10 56.1	+0.4
	15nm,0.7s,baz=208,slow=2.8,SNR=13						
CMAR				ScP	ScP	13 14 28.4	-0.3
	6.7nm,0.9s,baz=208,slow=3.6,SNR=7.6						
CMAR	**Chiang Mai Arr**	**21.41**	**354**	P	**P**	**13 06 51.2**	**-2.3**
CMAR						13 10 56.1	
CMAR				pmax	pmax		
	comp=Z,93nm,0.8s						
CMAR				pmax	pmax		
	comp=Z,15nm,0.7s						
CMAR				pmax	pmax		
	comp=N,7.0nm,0.9s						
BBSI	**Bau Bau**	**21.42**	**97**	P	**P**	**13 06 53.1**	**-0.7**
	comp=N,0.0nm,0.0s						
CHTO	**Chiang Mai**	**21.76**	**354**	⇑P	**P**	**13 06 55.9**	**-1.4**
	SNR=14						
CHTO	**Chiang Mai**	**21.76**	**354**	*eP*	**P**	**13 06 54.2**	**-3.1**
CHTO				pmax	pmax		
	comp=Z,66nm,0.9s,mb5.1						
CHTO	**Chiang Mai**	**21.76**	**354**	*eP*	**P**	**13 06 54.2**	**-3.1**
	comp=Z,66nm,0.8s,mb5.1						
PALK	**Pallekele**	**22.88**	**296**	P	**P**	**13 07 08.5**	**-0.8**
	comp=Z,113nm,1.3s,mb5.1						
BATI	**Baumata**	**23.40**	**109**	P	**P**	**13 07 09.3**	**-5.2**
	comp=Z,0.0nm,0.0s						
BATI	**Baumata**	**23.40**	**109**	P	**P**	**13 07 12.0**	**-2.5**
	comp=Z,124nm,0.7s,mb5.5,baz=314,slow=1.5,SNR=18						
BATI				S	**S**	**13 11 14.2**	**-10**
	comp=Z,183nm,0.7s,baz=301,slow=23,SNR=12						
QIZ	**Qiongzhong**	**23.45**	**21**	P	**P**	**13 07 14.6**	**-0.2**
QIZ				S	**S**	**13 11 24.8**	**+0.3**
QIZ				AMB	AMB		
	comp=Z,125nm,1.0s,mb5.3						
QIZ	**Qiongzhong**	**23.45**	**21**	*eP*	**P**	**13 07 15.1**	**+0.3**
	comp=Z,111nm,0.8s,mb5.3						
CUYO	**Cuyo Island**	**24.00**	**55**	*eP*	**P**	**13 07 20.6**	**+0.6**
BUSP	**Coron**	**24.01**	**51**	*eP*	**P**	**13 07 20.7**	**+0.6**
DCPH	**Dipolog City**	**24.86**	**62**	*eP*	**P**	**13 07 29.9**	**+2.0**
SJMP	**San Jose**	**25.01**	**52**	*eP*	**P**	**13 07 29.9**	**+0.7**
CTBH	**Cotabato--PC H**	**25.10**	**66**	*eP*	**P**	**13 07 30.7**	**+0.7**
CTBH				*i* S	pP	13 07 47.4	+4.4
GUIM	**Jordan**	**25.18**	**57**	*eP*	**P**	**13 07 31.4**	**+0.6**
MBWA	**Marble Bar**	**25.51**	**137**	*eP*	**P**	**13 07 32.0**	**-1.7**
	comp=Z,186nm,1.3s,mb5.5						
KALP	**Kalibo**	**25.54**	**55**	⇑*eP*	**P**	**13 07 40.0**	**+6.0**
OTRP	**Odiongan**	**25.66**	**53**	*eP*	**P**	**13 07 35.6**	**+0.5**
RCP	**Roxas**	**25.81**	**56**	⇑*eP*	**P**	**13 07 37.5**	**+1.0**
TBP	**Tagbilaran**	**25.81**	**61**	*eP*	**P**	**13 07 36.2**	**-0.3**
NBP	**Mount Natib**	**25.90**	**47**	⇑*eP*	**P**	**13 07 37.2**	**0.0**
LBPH	**Los Banos**	**26.09**	**49**	⇑*eP*	**P**	**13 07 39.8**	**+0.9**
BUKP	**Musuan**	**26.10**	**65**	*eP*	**P**	**13 07 39.4**	**+0.3**
LBMI	**Labuha**	**26.35**	**85**	P	**P**	**13 07 40.4**	**-1.0**
	comp=Z,0.0nm,0.0s						
AUQP	**San Andres**	**26.74**	**52**	*eP*	**P**	**13 07 44.9**	**+0.1**
TRD	**Trivandrum**	**26.76**	**295**	*eP*	**P**	**13 07 45.2**	**+0.2**
TRD				AMb	AMB	13 08 03.8	
	comp=Z,61nm,0.9s,mb5.2						
POLP	**Polilio Island**	**27.02**	**49**	*eP*	**P**	**13 07 47.7**	**+0.4**
KOD	**Kodaikanal**	**27.06**	**299**	*eP*	**P**	**13 07 49.3**	**+1.6**
KOD				AMb	AMB	13 08 16.9	
	comp=Z,64nm,1.2s,mb5.0						
VIS	**Vishakhapatnam**	**27.10**	**320**	*eP*	**P**	**13 07 48.6**	**+0.6**
VIS				AMb	AMB	13 07 51.1	
	comp=Z,300nm,1.9s,mb5.5						
OCLP	**Ormoc**	**27.11**	**59**	*eP*	**P**	**13 07 49.0**	**+0.9**
BWNR	**Bhubaneshwar**	**27.64**	**327**	*eP*	**P**	**13 07 52.0**	**-0.8**
CNP	**Catarman**	**27.90**	**56**	*eP*	**P**	**13 07 55.6**	**+0.4**
KMI	**Kunming**	**27.96**	**3**	P	**P**	**13 07 55.5**	**-0.2**
KMI				PP	PP	13 08 46.8	-13
KMI				AMB	AMB		
	comp=Z,41

LSA pmax pmax
comp=Z,39nm,0.7s,mb5.5
LSA Lhasa 33.89 344 *e*P **P 13 08 47.2 -0.6**
comp=Z,39nm,0.7s,mb5.4
PKI Pulchoki 33.98 334 *e*P **P 13 08 49.7 +1.0**
comp=Z,326nm,0.8s,mb6.3
PKIN Phulchoki 33.99 334 *e*P **P 13 08 49.6 +0.9**
comp=Z,240nm,0.7s,mb6.2
GUN Gumba 34.08 335 *e*P **P 13 08 51.0 +1.5**
comp=Z,1µm,0.7s,mb7.0
DMN Daman 34.15 334 *e*P **P 13 08 51.1 +1.0**
comp=Z,490nm,0.8s,mb6.5
KKN Kakani 34.23 334 *e*P **P 13 08 51.8 +1.0**
comp=Z,933nm,0.8s,mb6.8
POO Poona 34.40 309 *e*P **P 13 08 52.5 +0.1**
POO AMb AMB 13 08 54.4
comp=Z,52nm,0.7s,mb5.5
GKN Gorkha 34.69 334 *e*P **P 13 08 55.8 +1.0**
KOLN Koldanda 34.97 332 *e*P **P 13 08 58.4 +1.2**
comp=Z,977nm,0.7s,mb6.8
DANN Dangsing 35.38 333 *e*P **P 13 09 02.0 +1.2**
WHN Wuhan 35.60 20⇑*i*P **P 13 09 03.0 +0.4**
WRA Warramunga Arr 36.44 120 P **P 13 09 08.2 -1.8**
comp=Z,113nm,0.4s,mb6.1,baz=304,slow=8.9,SNR=701
WRA PcP PcP 13 11 33.1 -0.2
comp=Z,17nm,0.7s,baz=300,slow=2.4,SNR=5.7
WRA S **S 13 14 41.2 -7.1**
comp=Z,17nm,0.8s,baz=296,slow=16,SNR=7.9
WRA P3KPbc 13 39 44.4
comp=Z,0.8nm,0.8s,baz=112,slow=4.6,SNR=5.4
WRA Warramunga Arr 36.44 120 P **P 13 09 08.2 -1.8**
WRA 13 11 33.1
WRA S **S 13 14 41.2 -7.2**
WRA pmax pmax
comp=Z,113nm,0.4s
WRA pmax pmax
comp=Z,17nm,0.7s
WRA smax
comp=N,17nm,0.8s
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 36.44 120 P **P 13 09 08.2 -1.8**
WRA PcP PcP 13 11 33.1 -0.2
WRA S **S 13 14 41.2 -7.1**
WRA *e* 13 39 44.4
WRAB Tennant Creek 36.45 120 P **P 13 09 08.0 -2.0**
comp=Z,2µm,0.5s
WRAB Tennant Creek 36.45 120 *e*P **P 13 09 08.3 -1.7**
WRAB pmax pmax
comp=Z,206nm,0.6s,mb6.2
WRAB Tennant Creek 36.45 120 *e*P **P 13 09 08.3 -1.7**
comp=Z,206nm,0.6s,mb6.2
WB2 Warramunga Arr 36.45 120 *e*P **P 13 09 08.3 -1.8**
WB2 *e* pP 13 09 19.6 -3.8
WB2 *e*PCP PcP 13 11 33.1 -0.3
WB2 *e*S **S 13 14 36.4 -12**
FORT Forrest 37.51 140 *e*P **P 13 09 21.0 +2.1**
comp=Z,30nm,0.6s,mb5.2
FORT *e* 13 09 28.2
FORT *e*PCP PcP 13 11 36.9 +0.5
XAN Xi'an 37.52 11 P **P 13 09 18.1 -0.8**
XAN AP pP 13 09 26.3 -6.0
XAN XP sP 13 09 30.4 -7.9
XAN AMB AMB
comp=Z,353nm,0.8s,mb6.1
ASAR Alice Springs 37.69 126 P **P 13 09 19.4 -1.1**
comp=Z,88nm,0.6s,mb5.7,baz=300,slow=8.3,SNR=487
ASAR PcP PcP 13 11 36.7 -0.4
comp=Z,20nm,0.7s,baz=308,slow=2.4,SNR=6.1
ASAR S **S 13 15 02.8 -4.5**
comp=Z,26nm,0.7s,baz=298,slow=15,SNR=21
ASAR Alice Springs 37.69 126 P **P 13 09 19.5 -1.0**
ASAR 13 11 36.7
ASAR S **S 13 15 02.8 -4.5**
ASAR pmax pmax
comp=Z,88nm,0.6s
ASAR pmax pmax
comp=Z,20nm,0.7s
ASAR smax
comp=N,26nm,0.7s
PTH Pithoragarh 38.09 330 *e*P **P 13 09 25.4 +1.6**
PTH *ex* x 13 15 01.9
NJ2 Nanjing 38.64 24 *e*P **P 13 09 28.4 0.0**
NJ2 AP pP 13 09 38.5 -3.3
NJ2 XP sP 13 09 41.9 -5.9
NJ2 PP PP 13 10 59.2 +1.5
NJ2 S **S 13 15 23.0 +1.6**
NJ2 XS sS 13 15 39.5 -4.5
NJ2 AMB AMB
comp=Z,30nm,0.7s,mb5.1
NJ2 AMB AMB
comp=Z,23µm,11.8s
NJ2 LR LR
comp=N,24µm,22.2s,MS6.2
NJ2 LR LR
comp=E,35µm,24.4s,MS6.2
NJ2 LR LR
comp=Z,35µm,24.8s,MS6.1
SONA Sohna 38.77 325 *e*P **P 13 09 29.1 -0.4**
SONA *e*S pP 13 09 44.9 +1.9
SONA AML AML 13 09 47.2
comp=N,37nm,0.4s
SONA AML AML 13 09 48.7
comp=E,37nm,0.5s
AYAN Aya Nagar 38.92 325 *e*P **P 13 09 30.7 -0.1**
AYAN *e*S pP 13 09 44.9 +0.7
LZH Lanzhou 38.93 3 *e*P **P 13 09 30.3 -0.4**
LZH AP pP 13 09 38.1 -6.1
LZH XP sP 13 09 41.9 -8.3
LZH PP PP 13 11 04.7 +3.9
LZH AMB AMB
comp=Z,110nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,426nm,4.2s
NDI New Delhi 39.02 325 *e*S **P 13 09 29.0 -2.6**
KUDL Kundal 39.03 324 *e*P **P 13 09 31.7 -0.1**
KUDL *e*S x 13 09 53.8
JOSI Joshimath 39.24 330 *e*P **P 13 09 34.1 +0.7**
JOSI *e*S x 13 09 57.2
JOSI AML AML 13 10 23.9
comp=N,545nm,0.5s
JOSI AML AML 13 10 30.8
comp=E,305nm,0.8s
JAY Jayapura 39.43 90 P **P 13 09 32.2 -3.1**
comp=E,0.0nm,0.0s
DDI Dehra Dun 39.83 328 *e*S **P 13 09 39.0 +0.7**
KLP Kalpa 40.69 329 *e*P **P 13 09 44.3 -1.1**
KLP *e*S x 13 10 11.6
KLP AML AML 13 10 25.0
comp=N,187nm,0.7s
KLP AML AML 13 10 26.9
comp=E,306nm,0.5s
SMLA Simla 40.93 328 *e*P **P 13 09 47.5 +0.1**
SMLA AMb AMB 13 10 03.5
comp=Z,319nm,0.6s,mb6.1
SMLA Simla 40.93 328 *i* x x 13 09 47.8
SMLA *ex* x 13 09 48.9
comp=Z,625nm,0.6s
SDNR Sundarnagar 41.33 328 *e*P **P 13 09 51.4 +0.7**
BHK Bhakra 41.56 327 *e*P **P 13 09 52.8 +0.2**
TIA Tai'an 41.71 19 *e*P **P 13 09 53.2 -0.5**
GTA Gaotai 42.19 358⇑P **P 13 09 57.1 -0.5**
GTA AMB AMB
comp=Z,24nm,1.1s,mb4.7
DLH Dalhousie 42.67 328 *e*P **P 13 10 00.0 -1.6**
DLH *ex* x 13 10 29.0
THN Thein Dam 42.72 328 *e*P **P 13 10 01.4 -0.6**
THN *ex* x 13 15 35.8
COEN Coen 42.82 107 *e*P **P 13 10 00.4 -2.6**
comp=Z,14nm,1.0s,mb4.7
HHC Hu-ho-hao-te 44.62 11 *e*P **P 13 10 17.8 +0.6**
HHC S **S 13 16 54.3 +4.7**
HHC AMB AMB
comp=Z,84nm,0.8s,mb5.6
HHC AMB AMB
comp=Z,24µm,6.1s
BJT Baijiatuau 44.92 16 *e*P **P 13 10 19.3 -0.3**
BJT pmax pmax
comp=Z,64nm,0.6s
BJT Baijiatuau 44.92 16 *e*P **P 13 10 19.2 -0.3**
comp=Z,64nm,0.6s,mb5.6
BJI Beijing 44.94 16 P **P 13 10 19.8 +0.1**
BJI AMB AMB
comp=Z,85nm,0.6s,mb5.8
DL2 Dalian 45.72 22 P **P 13 10 25.7 -0.2**
DL2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
PMG Port Moresby 46.07 100 *e*P **P 13 10 26.6 -2.5**
PMG pmax pmax
comp=Z,41nm,0.7s
PMG Port Moresby 46.07 100 *e*P **P 13 10 26.6 -2.5**
comp=Z,41nm,0.7s,mb5.5
GUMO Guam 46.31 68 P **P 13 10 27.5 -3.4**
comp=Z,180nm,0.6s,mb6.2,baz=173,slow=6.2,SNR=31
GUMO Guam 46.31 68 *e*P **P 13 10 27.4 -3.5**
GUMO pmax pmax
comp=Z,127nm,0.6s,mb6.0
GUMO Guam 46.31 68 *e*P **P 13 10 27.4 -3.6**
comp=Z,127nm,0.6s,mb6.0
INCN Inchon 46.65 28 *e*P **P 13 10 32.1 -1.2**
comp=Z,46nm,0.8s,mb5.5
CTA Charters Tower 47.07 115 *e*P **P 13 10 35.6 -1.3**
comp=Z,113nm,0.7s,mb5.9
CTA *e* pP 13 10 52.8 +2.2
CTA *e*PCP PcP 13 12 07.1 -1.2
CTA Charters Tower 47.07 115 PcP PcP 13 12 07.2 -1.2
comp=Z,20nm,0.7s,baz=12,slow=3.3,SNR=2.9
CTA Charters Tower 47.07 115 *e*P **P 13 10 35.6 -1.3**
CTA *e* pP 13 10 52.8 +2.2
CTA *e* 13 12 07.1
CTA pmax pmax
comp=Z,113nm,0.7s
CTAO Charters Tower 47.07 115 *e*P **P 13 10 35.4 -1.5**
CTAO pmax pmax
comp=Z,136nm,0.8s,mb5.9
CTAO Charters Tower 47.07 115 *e*P **P 13 10 35.4 -1.5**
comp=Z,136nm,0.8s,mb5.9
KSRS Korea Array 47.24 29 P **P 13 10 37.7 -0.2**
comp=Z,49nm,0.8s,mb5.5,baz=229,slow=8.1,SNR=173
KSRS PcP PcP 13 12 07.3 -1.2
comp=Z,8.2nm,0.9s,baz=238,slow=2.4,SNR=4.7
KSRS ScP ScP 13 15 56.5 -1.9
comp=Z,1.8nm,0.8s,baz=220,slow=5.0,SNR=5.9
KSRS Korea Array 47.24 29 P **P 13 10 37.7 -0.2**
KSRS 13 12 07.4
KSRS pmax pmax
comp=Z,49nm,0.8s,mb5.5
KSRS pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KSRS pmax pmax
comp=N,2.0nm,0.8s
STKA Stephens Creek 47.59 132 *e*P **P 13 10 40.1 -0.6**
comp=N,83nm,0.6s,mb5.9
STKA Stephens Creek 47.59 132 P **P 13 10 40.1 -0.6**
comp=N,62nm,0.6s,mb5.8,baz=308,slow=7.6,SNR=118
STKA ScP ScP 13 15 59.2 -0.9
comp=N,7.0nm,0.8s,baz=346,slow=4.2,SNR=2.9
WMQ Urumqi 48.14 347⇑*i*P **P 13 10 45.2 +0.5**
WMQ XP sP 13 10 59.0 -5.5
KSH Kashi 48.24 334 *e*P **P 13 10 46.0 +0.4**
KSH *e*AP pP 13 10 55.1 -4.3
KSH *e*XP sP 13 10 59.4 -5.9
KSH *e*PCP PcP 13 12 14.1 +2.0
KSH *e*PP PP 13 12 37.1 -1.4
KSH *e*SCP ScP 13 16 04.0 +1.4
KSH *e*PCS PcS 13 16 08.1 +0.2
KSH *e*S **S 13 17 40.1 -1.4**
KSH *e*XS sS 13 17 57.3 -7.4
KSH *e*SCS ScS 13 20 33.2 -1.0
KSH *e*SS SS 13 21 04.0 -7.6
KSH AMB AMB
comp=Z,50µm,13.3s
KSH LR LR
comp=N,64µm,14.3s,MS6.9
KSH LR LR
comp=E,66µm,15.0s,MS6.9
KSH LR LR
comp=Z,69µm,17.7s,MS6.7
WBK Wadi Bani Khal 48.45 304⇑P **P 13 10 47.6 +0.1**
SNR=6.4
SNY Shenyang 48.99 22⇑P **P 13 10 50.2 -1.1**
SNY AMB AMB
comp=Z,11nm,0.3s,mb5.4
JMDO Jabal Madar 49.07 303⇑P **P 13 10 52.3 0.0**
SNR=5.3
SMDO Samad 49.41 304⇓P **P 13 10 54.8 -0.1**
SNR=7.6
BIDO Bidbid 49.55 304⇓P **P 13 10 55.7 -0.2**
SNR=11
BSY Bisya 49.98 303⇑P **P 13 10 58.8 -0.4**
SNR=7.0
HOQ Hoqain 50.25 304⇑P **P 13 11 00.7 -0.5**
SNR=6.8
SONM Songino Array 50.80 4 P **P 13 11 05.6 +0.7**
comp=Z,120nm,0.7s,mb5.9,baz=186,slow=9.2,SNR=289
SONM PcP PcP 13 12 20.8 -0.4
comp=Z,16nm,0.6s,baz=188,slow=3.7,SNR=6.4
SONM ScP ScP 13 16 11.2 -2.1
comp=Z,3.7nm,0.9s,baz=191,slow=2.6,SNR=5.4
SONM Songino Array 50.80 4 P **P 13 11 05.6 +0.7**
SONM 13 12 20.8
SONM pmax pmax
comp=Z,121nm,0.7s
SONM pmax pmax
comp=Z,16nm,0.6s
SONM pmax pmax
comp=N,4.0nm,0.9s
ULN Ulaanbaatar 50.88 5 P **P 13 11 06.4 +0.9**
SNR=27
ULN Ulaanbaatar 50.88 5 *e*P **P 13 11 06.0 +0.5**
ULN pmax pmax
comp=Z,161nm,1.1s,mb5.9
ULN Ulaanbaatar 50.88 5 *e*P **P 13 11 06.0 +0.5**
comp=Z,162nm,1.1s,mb5.9
UCH Uchtor 51.09 335 P **P 13 11 08.5 +1.3**
SNR=31
TKM2 Tokmak 2 51.21 336 P **P 13 11 08.8 +0.7**
SNR=443
TKM2 Tokmak 2 51.21 336 *e*P **P 13 11 08.6 +0.4**
TKM2 *e* pP 13 11 22.3 +0.2
KBK Karagaybulak 51.26 335 P **P 13 11 09.7 +1.2**
SNR=59
AML Almayashu 51.37 334 P **P 13 11 10.5 +1.2**
SNR=60
AML Almayashu 51.37 334 *e*P **P 13 11 10.2 +0.9**
comp=Z,368nm,0.8s,mb6.4
CN2 Changchun 51.39 22 *e*P **P 13 11 08.7 -0.7**
CN2 *e*S **S 13 18 26.5 +1.1**
CN2 AMB AMB
comp=Z,90nm,0.7s,mb5.8
CN2 AMB AMB
comp=Z,300nm,15.0s
CN2 LR LR
comp=N,13µm,19.0s,MS6.3
CN2 LR LR
comp=E,25µm,19.0s,MS6.3
CN2 LR LR
comp=Z,35µm,15.0s,MS6.5
AAK Ala-Archa 51.43 335 P **P 13 11 10.7 +0.9**
SNR=44
FRU Bishkek 51.55 335 *i* P **P 13 11 12.0 +1.4**
FRU pmax pmax
comp=Z,220nm,2.2s,mb5.7
CHMS Chumysh 51.62 335 P **P 13 11 11.4 +0.2**
SNR=46
EKS2 Erkin-Say 51.76 334 P **P 13 11 13.2 +1.0**
SNR=27
EKS2 Erkin-Say 51.76 334 *e*P **P 13 11 13.1 +0.8**
comp=Z,368nm,0.8s,mb6.4
USP Ospenovka 51.95 335 P **P 13 11 13.5 -0.1**
SNR=173
MAJO Matsushiro 52.26 38 *e*P **P 13 11 15.2 -0.9**
MAJO pmax pmax
comp=Z,49nm,1.0s,mb5.4
MAJO Matsushiro 52.26 38 *e*P **P 13 11 15.2 -0.9**
comp=Z,49nm,1.0s,mb5.4
MAT Matsushiro 52.26 38 P **P 13 11 15.6 -0.5**
MJAR Matsushiro Arr 52.27 38 P **P 13 11 15.2 -0.9**
comp=Z,19nm,0.7s,mb5.2,baz=212,slow=7.4,SNR=54
MJAR pP pP 13 11 27.6 -2.4
comp=Z,15nm,0.7s,baz=207,slow=7.3,SNR=9.9
MJAR ScP ScP 13 16 19.0 -0.9
comp=Z,5.0nm,0.8s,baz=212,slow=4.3,SNR=8.5
MJAR Matsushiro Arr 52.27 38 P **P 13 11 15.2 -0.9**
MJAR *PP pP 13 11 27.6 -2.4
MJAR pmax pmax
comp=Z,19nm,0.7s
MJAR pmax pmax
comp=Z,15nm,0.7s
MJAR pmax pmax
comp=N,5.0nm,0.8s
MJAR Matsushiro Arr 52.27 38 P **P 13 11 15.2 -0.9**
MJAR pP pP 13 11 27.6 -2.4
MJAR ScP ScP 13 16 19.0 -0.9
MKAR Makanchi Array 52.30 344 P **P 13 11 15.9 -0.2**
comp=N,126nm,0.8s,mb5.9,baz=154,slow=5.4,SNR=30
MKAR Makanchi Array 52.30 344 P **P 13 11 15.9 -0.2**
MKAR pmax pmax
comp=Z,125nm,0.8s
TOO Toolangi 53.16 136 *e*P **P 13 11 23.6 +0.9**
TOO *e* 13 11 31.0
ZAK Zakamensk 53.17 2⇓*i*P **P 13 11 21.9 -0.6**
ZAK *e* 13 12 29.7
ZAK pmax pmax
comp=Z,37nm,0.9s,mb5.3
ZAK pmax pmax
comp=Z,39nm,1.2s,mb5.2
ZAK pmax pmax
comp=Z,15nm,0.9s,mb4.9
ZAK pmax pmax
comp=Z,5.0nm,1.6s,mb4.2
VLA Vladivostok 53.56 28 *e*P **P 13 11 24.8 -0.7**
MDJ Mudanjiang 53.73 25 P **P 13 11 26.5 -0.2**
MDJ AP pP 13 11 35.6 -5.1
MDJ XP sP 13 11 39.6 -7.0
MDJ S **S 13 18 53.7 -3.5**
MDJ AMB AMB
comp=Z,29nm,0.7s,mb5.3
MDJ Mudanjiang 53.73 25 *e*P **P 13 11 26.1 -0.6**
comp=Z,25nm,0.8s,mb5.2
HVS Khovu-Aksy 54.28 354*d i*P **P 13 11 38.4 +7.8**
HVS pmax pmax
comp=Z,241nm,0.7s,mb6.2
MOY Mondy 54.43 360 *e*P **P 13 11 31.9 +0.2**
MOY pmax pmax
comp=Z,145nm,2.2s,mb5.5
HIA Hailar 54.45 15 *e*P **P 13 11 30.6 -1.3**
HIA pmax pmax
comp=Z,21nm,0.8s
HIA Hailar 54.45 15 *e*P **P 13 11 30.6 -1.2**
comp=Z,22nm,0.8s,mb5.1
TLY Talaya 54.48 2 P **P 13 11 33.1 +1.0**
comp=Z,702nm,0.8s,mb6.6,SNR=42
TLY Talaya 54.48 2 P **P 13 11 33.2 +1.2**
SNR=40
TLY Talaya 54.48 2*c i*P **P 13 11 31.9 -0.2**
TLY pmax pmax
comp=Z,103nm,1.0s,mb5.7
TLY Talaya 54.48 2 *e*P **P 13 11 32.7 +0.6**
comp=Z,88nm,0.8s,mb5.7
ARMA Armidale 54.84 126 *e*P **P 13 11 35.9 +0.8**
ARMA *e*PCP PcP 13 12 25.8 -11
CNB Canberra Magne 54.92 132 *e*P **P 13 11 34.2 -1.4**
IRK Irkutsk 55.07 2⇓*i*P **P 13 11 35.9 -0.4**
IRK *e* 13 19 38.1
IRK pmax pmax
comp=Z,112nm,2.9s,mb5.4
OPO Ambohidratompo 55.08 249 P **P 13 11 39.5 +2.5**
comp=Z,3.7nm,0.7s,mb4.5,baz=41,slow=9.8,SNR=4.6
RIV Riverview 55.69 130 *e*P **P 13 11 41.1 -0.1**
KURK Kurchatov 56.88 343 P **P 13 11 49.9 +0.6**
comp=Z,1µm,0.6s
KURK Kurchatov 56.88 343⇓P **P 13 11 49.5 +0.2**
SNR=51
KURK Kurchatov 56.88 343 P **P 13 11 48.7 -0.6**
comp=Z,94nm,0.6s,mb6.0,baz=161,slow=7.1,SNR=178
KURK pP pP 13 12 02.5 -1.0
comp=Z,96nm,0.8s,baz=168,slow=7.3,SNR=14
KURK S **S 13 19 36.5 -2.7**
comp=Z,1.1nm,0.8s,baz=173,slow=13,SNR=3.9
KURK Kurchatov 56.88 343 P **P 13 11 48.7 -0.6**
KURK *PP pP 13 12 02.5 -0.9
KURK S **S 13 19 36.5 -2.7**
KURK pmax pmax
comp=Z,95nm,0.6s,mb6.0
KURK pmax pmax
comp=Z,97nm,0.8s,mb5.9
KURK smax
comp=N,1.0nm,0.9s
KURK Kurchatov 56.88 343 *e*P **P 13 11 49.0 -0.3**
comp=N,168nm,0.8s,mb6.1
ABKT Ailbek 56.98 320 P **P 13 11 50.9 +0.6**
comp=N,376nm,0.7s,mb6.5,SNR=15
KLR Kul'dur 58.32 23 *e*P **P 13 11 55.2 -4.3**
KLR pmax pmax
comp=E,120nm,1.8s
KLR pmax pmax
comp=Z,300nm,1.8s,mb6.0
ZAA0 Zalesovo Array 58.35 349 *e*P **P 13 11 58.9 -0.7**
ZALV Zalesovo Beam 58.35 349 P **P 13 11 59.1 -0.4**
comp=Z,900nm,0.8s,mb6.9,baz=170,slow=5.2,SNR=726
ZALV S **S 13 19 56.1 -2.2**
comp=Z,1.5nm,0.3s,baz=152,slow=11,SNR=3.7
ZALV Zalesovo Beam 58.35 349 P **P 13 11 59.1 -0.4**
ZALV S **S 13 19 56.1 -2.2**
ZALV pmax pmax
comp=Z,900nm,0.8s,mb6.8
ZALV smax
comp=N,2.0nm,0.3s
HNR Honiara 58.66 99 *e*P **P 13 11 59.1 -3.4**
HNR pmax pmax
comp=Z,140nm,0.8s,mb6.0
HNR Honiara 58.66 99 *e*P **P 13 11 59.1 -3.4**
comp=Z,140nm,0.8s,mb6.0
ERM Erimo 58.71 36 P **P 13 12 03.7 +1.4**
comp=Z,315nm,0.9s,mb6.3,SNR=5.3
ERM Erimo 58.71 36 *e*P **P 13 12 02.3 0.0**
ERM pmax pmax
comp=Z,40nm,0.8s,mb5.5
ERM Erimo 58.71 36 *e*P **P 13 12 02.3 0.0**
comp=Z,40nm,0.8s,mb5.5
KRAR Krasnoyarsk 59.18 355*c i*P **P 13 12 04.4 -0.9**
KRAR pmax pmax
comp=Z,460nm,0.8s,mb6.6
NVS Novosibirsk 59.51 348 *i* P **P 13 12 06.5 -1.1**
NVS *e*S **S 13 20 05.2 -8.1**
NVS pmax pmax
comp=N,143nm,0.8s
NVS pmax pmax
comp=Z,143nm,0.8s,mb6.0
NVS pmax pmax
comp=E,106nm,0.9s
NVS smax
comp=N,191nm,1.9s
NVS smax
comp=E,107nm,1.7s
RDF Al-Radifah 60.42 306 *e*P **P 13 12 14.1 -0.2**
baz=306
RDF AMb AMB 13 12 15.2
comp=Z,172nm,0.8s,mb6.1,baz=306
UMR Umm Al-Rimmam 60.52 306 *e*P **P 13 12 15.1 0.0**
baz=306
UMR AMb AMB 13 12 16.0
comp=Z,222nm,0.8s,mb6.3,baz=306
NAY Al-Naaiem 60.79 306 *e*P **P 13 12 16.6 -0.3**
baz=306
NAY AMb AMB 13 12 17.5
comp=Z,80nm,0.7s,mb6.0,baz=306
RST Umm Al-Ruwaisa 61.08 306 *e*P **P 13 12 18.4 -0.5**
baz=306
RST AMb AMB 13 12 19.3
comp=Z,144nm,0.7s,mb6.2,baz=306
BOD Bodaibo 61.46 8 *e*P **P 13 12 19.9 -0.9**
BOD pmax pmax
comp=Z,119nm,0.8s,mb6.1
BRVK Borovoye 61.58 339 P **P 13 12 20.4 -1.3**
comp=Z,723nm,0.8s,mb6.9,SNR=36
BRVK Borovoye 61.58 339 P **P 13 12 21.1 -0.7**
SNR=26
BRVK Borovoye 61.58 339 P **P 13 12 20.8 -0.9**
BRVK pmax pmax
comp=Z,75nm,0.7s,mb5.9
BRVK Borovoye 61.58 339 *e*P **P 13 12 20.5 -1.2**
comp=Z,75nm,0.7s,mb5.9
YSS Yuzh-Sakhalins 61.66 31⇑*i*P **P 13 12 22.1 -0.3**
YSS *e* pP 13 12 34.8 -1.8
YSS *e* 13 13 08.9
YSS pmax pmax
comp=Z,410nm,1.0s,mb6.5
YSS pmax pmax
comp=N,110nm,0.9s
YSS pmax pmax
comp=E,150nm,1.0s
YSS Yuzh-Sakhalins 61.66 31 *e*P **P 13 12 22.1 -0.3**
comp=E,324nm,0.8s,mb6.5
CLNS Chul'man 62.63 14 *e*P **P 13 12 28.6 -0.1**
CLNS *e**PP pP 13 12 36.7 -6.3

CLNS *e* 13 13 09.0
CLNS pmax pmax
comp=N,44nm,0.7s
CLNS pmax pmax
comp=Z,101nm,0.9s,mb6.0
CLNS pmax pmax
comp=E,41nm,0.9s
CASY Casey 63.53 176 *eP* **P 13 12 34.7 +0.2**
KMBO Kilima Mbogo 63.96 270 P **P 13 12 40.1 +1.7**
comp=E,4.6nm,0.7s,mb4.6,baz=56,slow=9.9,SNR=11
KMBO pP pP 13 12 54.0 +1.3
comp=E,15nm,1.0s,baz=47,slow=9.9,SNR=9.4
KMBO Kilima Mbogo 63.96 270 P **P 13 12 40.1 +1.7**
KMBO *PP pP 13 12 54.0 +1.3
KMBO pmax pmax
comp=Z,5.0nm,0.7s
KMBO pmax pmax
comp=Z,15nm,1.0s
KMBO Kilima Mbogo 63.96 270 *eP* **P 13 12 39.9 +1.5**
comp=Z,44nm,1.4s,mb5.3
DZM Mont Dzumac 65.94 113 *eP* **P 13 12 50.3 -0.8**
DZM Mont Dzumac 65.94 113 *eP* **P 13 12 50.2 -0.9**
GNI Garni 67.08 316 P **P 13 12 59.0 +1.0**
SNR=9.6
GNI Garni 67.08 316 P **P 13 12 58.6 +0.6**
comp=Z,48nm,0.8s,mb5.6,baz=16,slow=10,SNR=8.4
GNI Garni 67.08 316 P **P 13 12 58.7 +0.7**
GNI pmax pmax
comp=Z,67nm,0.9s
GNI Garni 67.08 316 *eP* **P 13 12 58.5 +0.6**
comp=Z,67nm,0.9s,mb5.7
MTA Mtatsminda 67.71 318 P **P 13 13 02.4 +0.5**
TBLG Delisi 67.76 318 P **P 13 13 02.8 +0.5**
SVE Sverdlovsk 68.05 337⇓ *eP* **P 13 13 03.5 -0.2**
SVE pmax pmax
comp=Z,173nm,1.0s,mb6.0
YAK Yakutsk 68.37 14*c iP* **P 13 13 04.2 -1.5**
YAK pmax pmax
comp=Z,569nm,0.7s,mb6.7
YAK Yakutsk 68.37 14 *eP* **P 13 13 04.3 -1.4**
comp=Z,564nm,0.8s,mb6.7
ARU Arti 68.59 336 P **P 13 13 06.5 -0.6**
comp=Z,523nm,0.9s,mb6.5,SNR=36
ARU Arti 68.59 336*c iP* **P 13 13 06.3 -0.8**
ARU *e* 13 13 26.1
ARU *eS* S 13 22 07.3 +1.6
ARU SS SS 13 26 27.1 -3.8
ARU pmax pmax
comp=Z,85nm,0.8s,mb5.7
ARU Arti 68.59 336 *eP* **P 13 13 06.2 -0.9**
comp=Z,78nm,0.9s,mb5.6
MAW Mawson 69.66 195 P **P 13 13 14.7 +1.1**
comp=Z,10nm,1.0s,mb4.7,baz=348,slow=14,SNR=17
MAW PKPPKP 13 41 15.7
comp=Z,4.4nm,0.9s,baz=274,slow=5.7,SNR=8.7
MAW Mawson 69.66 195 P **P 13 13 14.7 +1.1**
MAW pmax pmax
comp=Z,10.0nm,1.0s
MAW pmax pmax
comp=Z,4.0nm,0.9s
MAW Mawson 69.66 195 *eP* **P 13 13 14.3 +0.7**
comp=Z,43nm,0.9s,mb5.4
KIV Kislovodsk 70.08 319 P **P 13 13 16.3 -0.3**
comp=Z,346nm,0.8s,mb6.3,SNR=5.5
KIV Kislovodsk 70.08 319 P **P 13 13 17.2 +0.5**
SNR=8.6
KIV Kislovodsk 70.08 319*c iP* **P 13 13 16.8 +0.2**
KIV pmax pmax
comp=Z,75nm,1.1s,mb5.5
KIV Kislovodsk 70.08 319⇓ *iP* **P 13 13 17.0 +0.4**
KIV Kislovodsk 70.08 319 *eP* **P 13 13 16.6 0.0**
comp=Z,60nm,0.8s,mb5.6
ASF Jabal al Asfar 70.15 306 P **P 13 13 18.7 +1.3**
comp=Z,27nm,0.8s,mb5.2,baz=340,slow=4.3,SNR=41
ASF Jabal al Asfar 70.15 306 P **P 13 13 18.7 +1.3**
ASF pmax pmax
comp=Z,27nm,0.8s
GOF Gofitskoye 70.33 320 *eP* pP 13 13 32.0 -0.6
GOF pmax pmax
comp=Z,70nm,1.3s,mb5.4
MALT Malatya 70.90 312 P **P 13 13 22.2 +0.4**
MALT pmax pmax
comp=Z,24nm,0.8s,mb5.2
MALT Malatya 70.90 312⇑ *iP* **P 13 13 21.1 -0.7**
MALT Malatya 70.90 312 *eP* **P 13 13 20.6 -1.1**
comp=Z,24nm,0.8s,mb5.2
SKR Severo-Kuril's 70.99 33 *eP* **P 13 13 21.5 -0.5**
SKR *e* pP 13 13 33.5 -3.0
SKR pmax pmax
comp=N,80nm,0.9s
SKR pmax pmax
comp=E,110nm,0.9s
SKR pmax pmax
comp=Z,440nm,0.9s,mb6.4
EIL Elat 71.08 303 P **P 13 13 23.7 +0.6**
comp=Z,52nm,0.7s,mb5.6,baz=104,slow=4.2
GZT Gaziantep 71.22 311 *iP* **P 13 13 24.4 +0.6**
SOC Sochi 71.90 318 *eP* **P 13 13 26.4 -1.3**
SOC *e* pP 13 13 37.0 -5.2
SOC pmax pmax
comp=Z,92nm,0.7s,mb5.8
SOC Sochi 71.90 318 *iP* **P 13 13 27.1 -0.6**
GRSN GIRESUNGRSN 71.92 315 *iP* **P 13 13 27.7 -0.2**
LSZ Lusaka 72.87 255 P **P 13 13 35.0 +1.0**
comp=Z,6.0nm,0.7s,mb4.7,baz=101,slow=5.3,SNR=6.5
LSZ Lusaka 72.87 255 P **P 13 13 35.0 +1.0**
LSZ pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
LSZ Lusaka 72.87 255 *eP* **P 13 13 34.4 +0.4**
comp=Z,4.7nm,0.6s,mb4.6
PETK Petropavlovsk- 73.05 32 P **P 13 13 33.5 -0.8**
comp=Z,86nm,0.7s,mb5.8,baz=1.9,slow=1.9,SNR=204
PETK Petropavlovsk- 73.05 32 P **P 13 13 33.5 -0.8**
PET Petropavlovsk 73.51 32*c iP* **P 13 13 36.3 -0.7**
PET pmax pmax
comp=Z,307nm,0.8s,mb6.3
PET Petropavlovsk 73.51 32 *eP* **P 13 13 36.1 -0.9**
comp=Z,298nm,0.8s,mb6.3
MEST Erdemli 73.60 309 *iP* **P 13 13 38.1 +0.1**
CSS Prodhromos 73.79 308 *eP* **P 13 13 39.1 0.0**
comp=Z,46nm,0.8s,mb5.5
ANN Anapa 73.88 318 *eP* **P 13 13 37.2 -2.2**
ANN pmax pmax
comp=Z,12nm,0.7s,mb4.9
CTKT Corum 74.31 314 *iP* **P 13 13 42.1 +0.1**
VOR Voronezh 75.47 325 *eP* **P 13 13 46.5 -1.9**
VOR pmax pmax
comp=Z,300nm,1.6s,mb6.0
ANTO Ankara 75.55 312 P **P 13 13 48.8 -0.4**
ANTO *e* pP 13 14 03.7 -0.1
ANTO pmax pmax
comp=Z,20nm,0.7s,mb5.2
ANTO Ankara 75.55 312⇑ *iP* **P 13 13 48.8 -0.4**
ANTO Ankara 75.55 312 *eP* **P 13 13 48.6 -0.6**
comp=Z,20nm,0.6s,mb5.2
ANTO *e* pP 13 14 03.2 -0.6
BALT Daday 75.60 314 *iP* **P 13 13 49.0 -0.4**
LBTB Lobatse 75.73 245 P **P 13 13 51.3 +0.7**
comp=Z,3.1nm,0.5s,mb4.5,baz=121,slow=5.5,SNR=9.1
LBTB pP pP 13 14 06.2 +0.9
comp=Z,14nm,0.7s,baz=126,slow=7.2,SNR=8.6
LBTB Lobatse 75.73 245 P **P 13 13 51.3 +0.7**
LBTB *PP pP 13 14 06.2 +1.0
LBTB pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
LBTB pmax pmax
comp=Z,14nm,0.7s,mb5.0
SIM Simferopol' 76.14 318*de* **P P 13 13 52.7 +0.3**
SIM pmax pmax
comp=Z,69nm,0.8s,mb5.6
BOSA Boshof 76.28 241 P **P 13 13 54.4 +0.8**
comp=Z,5.6nm,0.5s,mb4.7,baz=92,slow=6.1,SNR=15
BOSA pP pP 13 14 10.1 +1.9
comp=Z,32nm,0.7s,baz=90,slow=6.4,SNR=15
BOSA Boshof 76.28 241 P **P 13 13 54.4 +0.8**
BOSA *PP pP 13 14 10.1 +1.9
BOSA pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
BOSA pmax pmax
comp=Z,32nm,0.7s,mb5.4
BOSA Boshof 76.28 241 P **P 13 13 54.4 +0.8**
BOSA pP pP 13 14 10.1 +1.8
SGKT Sivrigoynuk 76.29 313 *iP* **P 13 13 53.4 0.0**
TIXI Tiksi 76.62 9 *eP* **P 13 13 52.8 -1.8**
TIXI pmax pmax
comp=Z,119nm,1.0s,mb5.8
TIXI Tiksi 76.62 9 *eP* **P 13 13 52.6 -1.9**
comp=Z,82nm,0.7s,mb5.8
ISP Isparta 76.73 310 *eP* **P 13 13 55.8 -0.1**
ESKT Eskisehir 76.90 312 *iP* **P 13 13 56.2 -0.6**
HENT Hendek 77.20 313 *iP* **P 13 13 58.2 -0.3**
SYO Syowa Base 77.35 199‖ *eP* **P 13 13 58.6 -0.2**
SYO Syowa Base 77.35 199‖ *ePcP* PcP 13 14 07.8 -1.3
SYO Syowa Base 77.35 199‖ *esP* sP 13 14 13.2 -6.0
MOS Moscow 77.96 329 *eP* **P 13 14 01.1 -1.3**
MOS *i* *PP pP 13 14 18.9 +1.8
MOS *eS* S 13 23 57.9 +6.0
MOS pmax pmax
comp=Z,160nm,0.8s,mb6.0
OBN Obninsk 78.27 328 P **P 13 14 03.9 -0.2**
comp=Z,1µm,0.6s,mb7.0,SNR=5.3
OBN Obninsk 78.27 328*c iP* **P 13 14 03.8 -0.3**
OBN *i* pP 13 14 21.7 +2.9
OBN pmax pmax
comp=Z,121nm,0.6s,mb6.0
OBN Obninsk 78.27 328 *eP* **P 13 14 03.6 -0.5**
comp=Z,105nm,0.7s,mb5.9
ULDT Uludag 78.33 312 *iP* **P 13 14 04.7 -0.1**
KDAG Bornova 79.35 310 *iP* **P 13 14 10.7 +0.3**
TLCR 79.81 317⇑ *iP* **P 13 14 12.9 +0.1**
TIRR Tirgusor 79.91 316 *eP* **P 13 14 13.0 -0.3**
TIRR *e* pP 13 14 28.0 -0.1
TIRR pmax pmax
comp=Z,46nm,0.7s,mb5.5
TIRR Tirgusor 79.91 316⇓ *iP* **P 13 14 13.3 0.0**
TIRR Tirgusor 79.91 316 *eP* **P 13 14 13.0 -0.3**
comp=Z,46nm,0.7s,mb5.5
TIRR *e* pP 13 14 27.9 -0.1
LAST Lasithi 80.11 306 *eP* **P 13 14 14.9 +0.3**
KIS Kishinev 80.27 319⇑ *iP* **P 13 14 14.0 -1.2**
KIS pmax pmax
comp=Z,280nm,0.7s,mb6.3
KIS Kishinev 80.27 319⇑ *iP* **P 13 14 14.0 -1.2**
comp=Z,300nm,0.7s,mb6.3
PRK Paraskevi 80.28 310 *eP* **P 13 14 15.8 +0.3**
HARR Harsova 80.30 316 P **P 13 14 15.8 +0.4**
SUR Sutherland 80.33 238 P **P 13 14 17.7 +1.8**
comp=Z,58nm,0.8s,mb5.6
APE Apeiranthos 80.42 308 *eP* **P 13 14 15.5 -0.8**
APE Apeiranthos 80.42 308⇑ *iP* **P 13 14 15.1 -1.2**
ALN Alexandroupoli 80.80 312 *eP* **P 13 14 17.7 -0.5**
AKASG Malin Array Be 81.00 322 P **P 13 14 18.2 -0.9**
comp=Z,26nm,0.7s,mb5.3,baz=88,slow=4.3,SNR=73
AKASG PP PP 13 17 23.0 -1.4
comp=Z,3.0nm,0.6s,baz=80,slow=7.3,SNR=4.8
AKASG Malin Array Be 81.00 322 P **P 13 14 18.2 -0.9**
AKASG 13 17 23.0
AKASG pmax pmax
comp=Z,27nm,0.7s
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 81.00 322 P **P 13 14 18.2 -0.9**
AKASG PP PP 13 17 23.0 -1.4
KIEV Kiev 81.01 322 P **P 13 14 18.2 -0.9**
KIEV *e* pP 13 14 30.2 -3.7
KIEV pmax pmax
comp=Z,29nm,0.8s,mb5.3
KIEV Kiev 81.01 322 *eP* **P 13 14 18.1 -1.0**
comp=Z,28nm,0.8s,mb5.2
KIEV *e* pP 13 14 33.0 -0.8
LIA Limnos Island 81.24 311 *eP* **P 13 14 20.5 -0.1**
VRI Vrincioaia 81.40 317⇑ *iP* **P 13 14 21.9 +0.6**
VRI Vrincioaia 81.40 317 P **P 13 14 22.0 +0.7**
KARN Karanos 81.41 306 *eP* **P 13 14 22.2 +0.7**
PLOR Plostina 81.45 317 P **P 13 14 22.3 +0.8**
PLOR Plostina 81.45 317⇓ *iP* **P 13 14 22.2 +0.7**
MLR Muntele Rosu 81.85 317⇑ *iP* **P 13 14 24.4 +0.7**
MLR Muntele Rosu 81.85 317 P **P 13 14 24.3 +0.6**
SMY Shemya 82.06 36 *eP* **P 13 14 23.5 -1.1**
SMY pmax pmax
comp=Z,382nm,1.2s,mb6.2
SMY Shemya 82.06 36 *eP* **P 13 14 23.5 -1.1**
comp=Z,382nm,1.2s,mb6.2
DID Didima 82.30 308 *eP* **P 13 14 24.8 -1.5**
PAIG Paliouri 82.38 311 *eP* **P 13 14 25.9 -0.7**
VOIR 82.45 316⇑ *iP* **P 13 14 26.5 -0.3**
VOIR 82.45 316 P **P 13 14 26.6 -0.2**
LTK Loutraki 82.60 309 *eP* **P 13 14 26.2 -1.5**
BURAR Bucovina Array 82.80 319⇑ *iP* **P 13 14 29.6 +1.0**
BURAR Bucovina Array 82.80 319⇑ **P 13 14 29.6 +1.1**
BUR08 Bucovina Ar. S 82.82 319 *eP* **P 13 14 29.3 +0.7**
MNK Minsk 82.84 326⇑ *eP* **P 13 14 25.0 -3.6**
MNK pmax pmax
comp=Z,390nm,1.0s,mb6.4
VLX Vlachokerasia 82.95 308 *eP* **P 13 14 29.4 -0.2**
TSUM Tsumeb 83.04 251 *eP* **P 13 14 31.4 +0.9**
comp=Z,34nm,0.9s,mb5.4
PUL Pulkovo 83.06 331 *eP* **P 13 14 29.9 +0.3**
VTS Vitosha 83.21 313 P **P 13 14 30.5 -0.3**
AGG Agios Georgios 83.26 310 *eP* **P 13 14 29.8 -1.4**
LIT Litokhoron 83.31 311 *eP* **P 13 14 30.6 -0.8**
VAY Valandovo 83.45 312 *eP* **P 13 14 29.5 -2.6**
JOF Joensuu 83.62 334 *ep* **P 13 14 31.3 -1.2**
comp=Z,37nm,0.8s,mb5.6
JOF Joensuu 83.62 334 *eP* **P 13 14 31.3 -1.2**
JOF pmax pmax
comp=Z,37nm,0.8s,mb5.6
BILL Bilibino 83.64 20⇑ *iP* **P 13 14 31.4 -1.1**
BILL pmax pmax
comp=Z,39nm,0.9s,mb5.5
BILL Bilibino 83.64 20 *eP* **P 13 14 29.9 -2.6**
comp=Z,38nm,0.9s,mb5.5
GZR Gura Zlata 84.02 316⇓ *iP* **P 13 14 35.3 +0.4**
GZR Gura Zlata 84.02 316 P **P 13 14 34.8 0.0**
LVV L'vov 84.03 321 *eP* **P 13 14 33.6 -1.2**
LVZ Lovozero 84.11 340 P **P 13 14 34.6 -0.3**
comp=Z,381nm,0.7s,mb6.6,SNR=6.5
LVZ Lovozero 84.11 340*c iP* **P 13 14 34.1 -0.8**
LVZ pmax pmax
comp=Z,82nm,1.3s,mb5.7
DRGR 84.31 317⇑ *iP* **P 13 14 37.1 +0.7**
DRGR 84.31 317 P **P 13 14 36.8 +0.4**
BIA Bitola 84.33 312 *eP* **P 13 14 34.3 -2.3**
SKO Skopje 84.40 312 *eP* **P 13 14 34.9 -2.0**
APA Apatity 84.43 339⇓ *iP* **P 13 14 35.0 -1.5**
APA pmax pmax
comp=Z,39nm,1.0s,mb5.5
APA MLR MLR
comp=Z,27µm,24.0s,MS6.5
KRUS Krusevo 84.44 312 *eP* **P 13 14 36.3 -0.9**
VSU Vasula 84.46 329 *eP* **P 13 14 36.6 -0.2**
OHR Ohrid 84.74 312 *eP* **P 13 14 36.5 -2.2**
KWP Kalwaria 84.83 320 *eP* **P 13 14 39.4 +0.4**
KWP Kalwaria 84.83 320⇓ *iP* **P 13 14 39.3 +0.4**
KWP Kalwaria 84.83 320 *eP* **P 13 14 39.3 +0.4**
BZS Buzias 84.86 316⇓ *iP* **P 13 14 39.5 +0.4**
BZS Buzias 84.86 316 P **P 13 14 39.3 +0.1**
IGT Igoumenitsa 84.87 310 *eP* **P 13 14 38.9 -0.4**
UZH Uzhgorod 84.92 319 *eP* **P 13 14 37.0 -2.4**
UZH *i* pP 13 14 47.7 -6.5
KOLS Kolonicke sedl 84.99 319 *iP* **P 13 14 40.6 +0.9**
KOLS *epP* pP 13 14 45.8 -8.8
SUW Suwalki 85.39 325 *eP* **P 13 14 41.5 -0.1**
CRVS Cervenica-Dubn 85.51 319 *iP* **P 13 14 42.7 +0.4**
KAF Kangasniemi 85.60 333 *ep* **P 13 14 41.5 -1.0**
comp=Z,39nm,0.7s,mb5.8
KAF Kangasniemi 85.60 333 *eP* **P 13 14 41.5 -1.0**
KAF pmax pmax
comp=Z,39nm,0.7s,mb5.8
STHS Stebnicka Huta 85.73 320 *iP* **P 13 14 44.1 +0.7**
STHS pmax pmax
comp=Z,46nm,0.7s,mb5.8
STHS Stebnicka Huta 85.73 320 *iP* **P 13 14 44.1 +0.7**
comp=Z,46nm,0.7s,mb5.8
KECS Kecovo 86.08 319 *iP* **P 13 14 45.3 +0.1**
KECS pmax pmax
comp=Z,20nm,0.7s,mb5.5
KECS Kecovo 86.08 319 *iP* **P 13 14 45.3 +0.1**
comp=Z,20nm,0.7s,mb5.4
NIE Niedzica 86.33 320 *eP* **P 13 14 47.5 +1.1**
PSZ Piszkesteto 86.39 318 P **P 13 14 46.7 0.0**
PSZ pmax pmax
comp=Z,19nm,0.7s,mb5.4
PSZ Piszkesteto 86.39 318⇑ *eP* **P 13 14 47.0 +0.3**
PSZ Piszkesteto 86.39 318⇓ *iP* **P 13 14 47.1 +0.4**
PSZ Piszkesteto 86.39 318 *eP* **P 13 14 46.4 -0.3**
comp=Z,19nm,0.7s,mb5.4
OJC Ojcow 86.78 320 *eP* **P 13 14 48.7 +0.1**
BUD Budapest 86.91 318⇑ *eP* **P 13 14 49.5 +0.3**
PKSM Moragy 87.00 316⇑ *iP* **P 13 14 49.7 0.0**
PKSM Moragy 87.00 316 P **P 13 14 49.8 +0.1**
MAIT Maitri 87.05 199 *eP* **P 13 14 51.8 +2.3**
MAIT *ep*P pP 13 15 02.8 -1.6
VYHS Vyhne 87.17 319 *eP* **P 13 14 50.5 0.0**
KEV Kevo 87.35 340 *ep* **P 13 14 49.3 -1.6**
comp=Z,35nm,0.8s,mb5.6
KEV Kevo 87.35 340 P **P 13 14 50.9 0.0**
KEV pmax pmax
comp=Z,47nm,1.1s,mb5.6
KOLL Kolacno 87.46 319 *iP* **P 13 14 52.2 +0.3**
KOLL *ep*P pP 13 14 59.1 -7.7
TIP Timpagrande 87.57 309 *eP* **P 13 14 53.1 +0.5**
comp=Z,19nm,0.9s,mb5.3
OKC Ostrava-Krasne 87.79 320⇑ *iP* **P 13 14 53.8 +0.4**
OKC *ep*P pP 13 15 08.1 -0.3
ARCES ARCESS Array B 87.80 340 P **P 13 14 52.8 -0.3**
comp=Z,38nm,0.8s,mb5.7,baz=98,slow=5.1,SNR=61
ARCES pP pP 13 15 07.8 -0.2
comp=Z,21nm,0.8s,baz=104,slow=4.1,SNR=6.5
ARCES PP PP 13 18 20.9 +1.6
comp=Z,13nm,0.9s,baz=98,slow=8.9,SNR=6.2
ARCES ARCESS Array B 87.80 340 P **P 13 14 52.8 -0.3**
ARCES *PP pP 13 15 07.8 -0.2
ARCES 13 18 20.9
ARCES pmax pmax
comp=Z,38nm,0.8s
ARCES pmax pmax
comp=Z,21nm,0.8s
ARCES pmax pmax
comp=Z,13nm,0.9s
ARCES ARCESS Array B 87.80 340 P **P 13 14 52.8 -0.3**
ARCES pP pP 13 15 07.8 -0.2
ARCES PP PP 13 18 20.9 +1.6
MORC Moravsky Berou 88.17 320 *eP* **P 13 14 55.3 +0.1**
MORC pmax pmax
comp=Z,46nm,0.8s,mb5.8
MORC Moravsky Berou 88.17 320⇑ *iP* **P 13 14 56.0 +0.8**
MORC Moravsky Berou 88.17 320 *eP* **P 13 14 55.3 +0.1**
comp=Z,46nm,0.8s,mb5.8
MODS Modra-Piesok 88.18 318 *eP* **P 13 14 55.9 +0.6**
MODS *ep*P pP 13 15 01.0 -9.3
MODS *e* pP 13 15 11.5 +1.2
ZST Bratislava 88.28 318 *iP* **P 13 14 56.3 +0.5**
ZST *e* 13 15 04.2
ZST *e* pP 13 15 11.0 +0.3
ZST pmax pmax
comp=Z,48nm,0.7s,mb5.8
ZST Bratislava 88.28 318 *iP* **P 13 14 56.3 +0.5**
comp=Z,48nm,0.7s,mb5.8
ZST *e* 13 15 04.2
ZST *e* pP 13 15 11.0 +0.3
MTTG Motta San Giov 88.29 308 P **P 13 14 57.2 +1.1**
CUC Castrocucco 88.38 310 *eP* **P 13 14 55.2 -1.3**
comp=Z,30nm,0.8s,mb5.6
SOP Sopron 88.59 318⇑ *eP* **P 13 14 57.4 +0.1**
FG4 Candela 88.70 311 P **P 13 14 58.7 +0.7**
GKP Gorka Klasztor 88.77 323 *eP* **P 13 14 58.4 +0.4**
GKP Gorka Klasztor 88.77 323 *eP* **P 13 14 58.4 +0.4**
SGO Sicignano 88.81 311 P **P 13 14 58.9 +0.4**
SGO pmax pmax
comp=Z,25nm,0.7s,mb5.7
SGO Sicignano 88.81 311 P **P 13 14 58.9 +0.4**
comp=Z,25nm,0.7s,mb5.7
FG5 Orsara di Pugl 88.91 311 P **P 13 14 59.3 +0.4**
DPC Dobruska-Polom 89.01 320⇑ *iP* **P 13 15 00.2 +1.0**
DPC *ex* x 13 15 16.7
CSSN Cassano Irpino 89.05 311 P **P 13 14 59.8 +0.2**
comp=Z,30nm,0.6s,mb5.8
CONA Conrad Observa 89.08 318⇑ *iP* **P 13 14 59.7 +0.1**
comp=Z,20nm,0.8s,mb5.5
CSNA Conrad Observa 89.08 318⇑ *iP* **P 13 14 59.7 +0.1**
comp=Z,18nm,0.8s,mb5.5
KSP Ksiaz 89.08 321 *eP* **P 13 15 00.9 +1.4**
KSP Ksiaz 89.08 321⇑ *iP* **P 13 15 00.3 +0.8**
KSP *ep*P pP 13 15 14.2 -0.3
CRES Cresnjev 89.16 316 *iP* **P 13 15 00.4 +0.4**
UPC Upice 89.23 320⇑ *iP* **P 13 15 00.9 +0.7**
UPC *ep*P pP 13 15 13.8 -1.4
ARSA Arzberg 89.24 317⇑ *iP* **P 13 15 00.9 +0.6**
comp=Z,40nm,0.8s,mb5.8
ARSA Arzberg 89.24 317⇑ *iPcP* **P 13 15 00.9 +0.6**
comp=Z,40nm,0.8s,mb5.8
BOJS Bojanci 89.28 315 *iP* **P 13 15 01.1 +0.5**
TREC Trest 89.45 319⇑ *iP* **P 13 15 01.6 +0.3**
TREC *ep*P pP 13 15 16.5 +0.3
PERS Pernice 89.47 317 *iP* **P 13 15 02.1 +0.7**
SOKA Soboth 89.53 317⇑ *iP* **P 13 15 02.3 +0.6**
comp=Z,62nm,0.9s,mb5.9
SOKA Soboth 89.53 317⇑ *iPcP* **P 13 15 02.3 +0.6**
comp=Z,62nm,0.9s,mb5.9
VISS Visnje 89.59 316 *iP* **P 13 15 02.6 +0.6**
OBKA Obir 89.85 316⇑ *iP* **P 13 15 03.7 +0.5**
comp=Z,30nm,0.8s,mb5.7
OBKA Obir 89.85 316⇑ *iPcP* **P 13 15 03.7 +0.5**
comp=Z,30nm,0.8s,mb5.7
SDI San Donato 90.03 312 P **P 13 15 03.8 -0.4**
SDI pmax pmax
comp=Z,17nm,0.6s,mb5.5
SDI San Donato 90.03 312 P **P 13 15 03.8 -0.4**
comp=Z,17nm,0.6s,mb5.5
PRU Pruhonice 90.12 320⇑ *iP* **P 13 15 04.8 +0.4**
PRU *ex* x 13 15 20.9
JAVS Javornik 90.14 316 *iP* **P 13 15 04.7 +0.1**
MOA Molln 90.14 316⇑ *iP* **P 13 15 04.7 +0.1**
comp=Z,26nm,0.8s,mb5.5
PVCC Panska Ves 90.15 320⇑ *iP* **P 13 15 05.0 +0.5**
VOY Vojsko 90.27 316⇑ *eP* **P 13 15 05.2 0.0**
VOY *e* pP 13 15 22.2 +2.1
PTQR Pietraquaria 90.36 312 P **P 13 15 06.4 +0.7**
comp=Z,29nm,0.5s,mb5.9
AQU L'Aquila 90.38 312 P **P 13 15 06.7 +0.9**
AQU pmax pmax
comp=Z,71nm,0.8s,mb6.0
AQU L'Aquila 90.38 312 P **P 13 15 06.7 +0.9**
comp=Z,71nm,0.8s,mb6.0
MYKA Terra Mystica 90.48 316⇑ *iP* **P 13 15 06.5 +0.4**
comp=Z,19nm,0.6s,mb5.6
MYKA Terra Mystica 90.48 316⇑ *iPcP* **P 13 15 06.5 +0.4**
comp=Z,19nm,0.6s,mb5.6
BRG Berggiesshubel 90.57 321 *iP* **P 13 15 07.2 +0.7**
BRG *i* pP 13 15 23.4 +2.0
BRG pmax pmax
comp=Z,28nm,0.8s,mb5.6
BRG Berggiesshubel 90.57 321 *eP* **P 13 15 06.9 +0.4**
comp=Z,46nm,0.8s,mb5.9
BRG *ep*P pP 13 15 23.2 +1.8
BRG Berggiesshubel 90.57 321 *iP* **P 13 15 07.2 +0.7**
comp=Z,46nm,0.8s,mb5.8
BRG *i* pP 13 15 23.4 +1.9
comp=Z,18nm,0.9s
GEC2 GERESS Array S 90.59 319 *eP* **P 13 15 07.1 +0.5**
GEC2 *e**PP pP 13 15 23.4 +1.8
GEC2 pmax pmax
comp=Z,45nm,0.9s,mb5.8
GEC2 GERESS Array S 90.59 319 *eP* **P 13 15 07.1 +0.5**
comp=Z,45nm,0.9s,mb5.8
GEC2 *ep*P pP 13 15 23.4 +1.8
GERES GERESS Array B 90.59 319 P **P 13 15 07.0 +0.4**
comp=Z,22nm,0.7s,mb5.6,baz=90,slow=5.3,SNR=153
GERES pP pP 13 15 23.2 +1.6
comp=Z,9.9nm,0.8s,baz=96,slow=4.2,SNR=5.0
GERES PP PP 13 18 32.3 -10
comp=Z,0.4nm,0.3s,baz=91,slow=8.1,SNR=2.9
GERES GERESS Array B 90.59 319 P **P 13 15 07.0 +0.4**
GERES *PP pP 13 15 23.2 +1.6
GERES pmax pmax
comp=Z,22nm,0.7s
GERES pmax pmax
comp=Z,10.0nm,0.8s
NRCA Norcia 90.62 313 P **P 13 15 06.8 -0.1**
comp=Z,24nm,0.8s,mb5.6
PTCC Patocco-Chiusa 90.67 316 P **P 13 15 07.1 +0.1**
comp=Z,63nm,0.8s,mb6.0
KHC Kasperske Hory 90.69 319⇑ *iP* **P 13 15 07.3 +0.2**
KHC *ep*P pP 13 15 21.6 -0.4
KBA Koelnbreinsper 90.71 317⇑ *iP* **P 13 15 07.1 -0.2**
comp=Z,23nm,0.9s,mb5.5
GMNA Gemona 90.74 316 P **P 13 15 07.5 +0.1**
comp=Z,196nm,0.7s,mb6.5
SNTG Esanatoglia 90.77 313 P **P 13 15 08.2 +0.6**
comp=Z,34nm,1.2s,mb5.5
RUE Ruedersdorf 90.78 322 *eP* **P 13 15 07.8 +0.4**
comp=Z,87nm,1.0s,mb6.0
RUE Ruedersdorf 90.78 322 *eP* **P 13 15 07.5 +0.1**

comp=Z,89nm,1.1s,mb6.0
FSSB Fossombrone 90.91 314 P **P** **13 15 09.0 +0.8**
comp=Z,25nm,0.7s,mb5.7
FBE Freiberg 90.94 321 *e*P **P** **13 15 08.7 +0.5**
comp=Z,42nm,0.9s,mb5.8
FVI Forni Avoltri 91.07 316 P **P** **13 15 07.2 -1.7**
RJOB Jochberg 91.12 318 *e*P **P** **13 15 08.9 -0.2**
comp=Z,23nm,0.8s,mb5.6
WET Wettzell 91.15 319 *e*P **P** **13 15 09.6 +0.4**
WET pmax pmax
comp=Z,42nm,0.9s,mb5.8
WET Wettzell 91.15 319 *e*P **P** **13 15 09.6 +0.4**
comp=Z,42nm,0.9s,mb5.8
CLL Collm 91.19 321⇑*i*P **P** **13 15 09.2 -0.1**
CLL *i* pP 13 15 25.8 +1.5
CLL pmax pmax
comp=Z,21nm,0.9s,mb5.5
CLL Collm 91.19 321 *e*P **P** **13 15 09.3 0.0**
comp=Z,21nm,0.9s,mb5.5
CLL Collm 91.19 321⇑*i*P **P** **13 15 09.2 -0.1**
comp=Z,21nm,0.9s,mb5.5
CLL *i* (sP) sP 13 15 25.8 -4.2
ABTA Abfaltersbach 91.26 317⇑*i*P **P** **13 15 08.7 -1.1**
comp=Z,22nm,0.9s,mb5.5
NKC Novy Kostel 91.48 320⇑*i*P **P** **13 15 11.5 +0.8**
NKC *e*pP pP 13 15 23.3 -2.4
TANN Tannenbergstha 91.48 320 *e*P **P** **13 15 11.0 +0.3**
comp=Z,15nm,1.0s,mb5.3
TANN *e*pP pP 13 15 28.3 +2.6
WERN Wernitzgruen 91.53 320 *e*P **P** **13 15 11.3 +0.4**
comp=Z,19nm,0.9s,mb5.4
GUNZ Gunzen 91.56 320 *e*P **P** **13 15 11.5 +0.4**
comp=Z,22nm,0.9s,mb5.5
WERD Werda 91.58 320 *e*P **P** **13 15 11.4 +0.2**
comp=Z,22nm,0.9s,mb5.5
WERD *e*pP pP 13 15 28.7 +2.5
SFI Santa Sofia 91.60 314 P **P** **13 15 12.5 +1.1**
SNAA Sanae 91.60 198 *e*P **P** **13 15 10.8 -0.1**
SNAA *e* pP 13 15 22.5 -3.4
SNAA *e* pP 13 15 29.9 +4.0
SNAA Sanae 91.60 198 *e*P **P** **13 15 11.1 +0.2**
SNAA pmax pmax
comp=Z,34nm,1.1s
SNAA Sanae 91.60 198 *e*P **P** **13 15 11.1 +0.2**
comp=Z,34nm,1.1s,mb5.6
ROTZ Rotzenmuhle 91.62 320 *e*P **P** **13 15 12.2 +0.8**
comp=Z,30nm,1.0s,mb5.6
MANZ Manzenberg 91.69 320 *e*P **P** **13 15 12.5 +0.8**
comp=Z,40nm,1.0s,mb5.7
CTI Castel Tesino 91.83 316 P **P** **13 15 13.0 +0.6**
WTTA Wattenberg 91.89 317⇑*i*P **P** **13 15 12.6 -0.1**
comp=Z,49nm,0.7s,mb5.9
WATA Walderalm 91.93 317⇑*i*P **P** **13 15 12.3 -0.5**
comp=Z,19nm,1.0s,mb5.4
MOX Moxa 92.03 320 *e*P **P** **13 15 13.4 +0.1**
comp=Z,36nm,1.3s,mb5.5
MOX *e* pP 13 15 31.5 +3.3
comp=Z,60nm,1.6s
MOX Moxa 92.03 320 *e*P **P** **13 15 13.4 +0.1**
MOX *e* pP 13 15 31.5 +3.3
MOX pmax pmax
comp=Z,36nm,1.3s,mb5.5
MOX Moxa 92.03 320 *e*P **P** **13 15 12.9 -0.4**
comp=Z,18nm,0.9s,mb5.4
MOX *e*pP pP 13 15 30.5 +2.3
GRA1 Grafenberg Arr 92.25 319 *e*P **P** **13 15 14.9 +0.6**
comp=Z,43nm,1.0s,mb5.7
GRA1 *e*PP PP 13 18 55.5 +0.3
GRF Grafenberg Arr 92.25 319 *e*P **P** **13 15 14.9 +0.6**
GRF *e* 13 18 55.5
GRF pmax pmax
comp=Z,43nm,1.0s,mb5.7
GRF Grafenberg Arr 92.25 319 *e*P **P** **13 15 14.9 +0.6**
GRF *e* 13 18 55.5
GRF pmax pmax
comp=Z,43nm,1.0s,mb5.7
GRF Grafenberg Arr 92.25 319 *e*P **P** **13 15 14.9 +0.6**
comp=Z,43nm,1.0s,mb5.7
GRF *e*PP PP 13 18 55.5 +0.3
MOTA Moosalm 92.25 317⇑*i*P **P** **13 15 14.0 -0.3**
comp=Z,24nm,0.8s,mb5.5
GRFO Grafenberg 92.25 319 *e*P **P** **13 15 14.9 +0.6**
GRFO pmax pmax
comp=Z,41nm,1.1s,mb5.7
GRFO Grafenberg 92.25 319 *e*P **P** **13 15 14.9 +0.6**
comp=Z,41nm,1.1s,mb5.7
RETA Reutte 92.49 317⇑*i*P **P** **13 15 15.4 0.0**
comp=Z,40nm,0.7s,mb5.9
RETA Reutte 92.49 317⇑*i*PcP **P** **13 15 15.4 0.0**
comp=Z,40nm,0.7s,mb5.9
FETA Feichten 92.50 317⇑*i*P **P** **13 15 15.8 +0.3**
comp=Z,26nm,0.8s,mb5.6
FETA Feichten 92.50 317⇑*i*PcP **P** **13 15 15.8 +0.3**
comp=Z,26nm,0.8s,mb5.6
NB2 NORSAR Subarra 92.59 331 P **P** **13 15 14.8 -0.8**
comp=Z,16nm,0.8s,mb5.5,baz=94,slow=4.6
NOA NORSAR Array B 92.59 331 P **P** **13 15 14.9 -0.7**
comp=Z,12nm,0.8s,mb5.4,baz=93,slow=4.6,SNR=29
NOA pP pP 13 15 30.5 -0.1
comp=Z,7.9nm,0.8s,baz=93,slow=4.6,SNR=6.4
NOA PP PP 13 18 49.6 -7.8
comp=Z,3.6nm,0.8s,baz=93,slow=6.8,SNR=3.6
NOA NORSAR Array B 92.59 331 P **P** **13 15 14.9 -0.7**
NOA *PP pP 13 15 30.5 -0.1
NOA pmax pmax
comp=Z,12nm,0.8s
NOA pmax pmax
comp=Z,8.0nm,0.8s
NOA pmax pmax
comp=Z,4.0nm,0.8s
CLZ Clausthal 92.85 322 *e*P **P** **13 15 17.2 +0.2**
CLZ pmax pmax
comp=Z,22nm,0.9s,mb5.6
CLZ Clausthal 92.85 322 *e*P **P** **13 15 17.2 +0.2**
comp=Z,22nm,0.9s,mb5.6
BSEG Bad Segeberg 92.92 324 *e*P **P** **13 15 17.5 +0.2**
BSEG pmax pmax
comp=Z,30nm,1.2s,mb5.6
BSEG Bad Segeberg 92.92 324 *e*P **P** **13 15 17.5 +0.2**
comp=Z,30nm,1.2s,mb5.6
NRDL Niedersach Rie 93.02 322 *e*P **P** **13 15 17.6 -0.2**
comp=Z,27nm,0.9s,mb5.7
UBBA Unterbreizbach 93.06 321 *e*P **P** **13 15 17.8 -0.2**
comp=Z,9.0nm,0.9s,mb5.2
DAVA Damuels 93.08 317⇑*i*P **P** **13 15 18.6 +0.4**
comp=Z,50nm,0.8s,mb6.0
DAVA Damuels 93.08 317⇑*i*PcP **P** **13 15 18.6 +0.4**
comp=Z,50nm,0.8s,mb6.0
KEST Kesra 93.25 305 P **P** **13 15 20.6 +1.4**
comp=Z,8.1nm,0.8s,mb5.2,baz=42,slow=0.8,SNR=20
KONO Kongsberg 93.37 329 *e*P **P** **13 15 18.5 -0.7**
TUE Stuetta 93.44 316 *e*P **P** **13 15 19.5 -0.4**
comp=Z,8.6nm,0.7s,mb5.3
VNA1 Neumayer--Stat 93.59 198 *e*P **P** **13 15 20.8 +0.8**
VNA1 *e* pP 13 15 32.6 -2.4
VNA1 *e* pP 13 15 40.0 +5.0
PGF Pioggiola 93.64 312⇑*i*P **P** **13 15 20.9 0.0**
comp=Z,27nm,0.8s,mb5.4
PGF Pioggiola 93.64 312⇑*i*P **P** **13 15 20.9 0.0**
comp=Z,13nm,0.8s,mb5.4
BFO Black Forest 94.14 318 P **P** **13 15 22.7 -0.3**
comp=Z,99nm,0.7s,mb6.3,SNR=6.3
BFO Black Forest 94.14 318 P **P** **13 15 22.7 -0.3**
BFO pmax pmax
comp=Z,10.0nm,0.8s,mb5.3
BFO Black Forest 94.14 318 *e*P **P** **13 15 22.6 -0.4**
comp=Z,13nm,0.9s,mb5.4
SBF Sospel 94.78 314⇑*i*P **P** **13 15 25.8 -0.3**
comp=Z,37nm,0.7s,mb5.6
SBF Sospel 94.78 314⇑*i*P **P** **13 15 25.8 -0.3**
SBF pmax pmax
comp=Z,19nm,0.7s,mb5.6
SBF Sospel 94.78 314⇑*i*P **P** **13 15 25.8 -0.3**
comp=Z,18nm,0.7s,mb5.6
CDF Champ du Feu 94.84 318⇑*i*P **P** **13 15 25.7 -0.5**
comp=Z,14nm,0.8s,mb5.2
CDF Champ du Feu 94.84 318⇑*i*P **P** **13 15 25.7 -0.5**
CDF pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
CDF Champ du Feu 94.84 318⇑*i*P **P** **13 15 25.7 -0.5**
comp=Z,6.8nm,0.8s,mb5.1
LPG La Plagne 95.25 315⇑*i*P **P** **13 15 28.2 0.0**
comp=Z,26nm,0.8s,mb5.4
LPG La Plagne 95.25 315⇑*i*P **P** **13 15 28.2 0.0**
LPG pmax pmax
comp=Z,13nm,0.8s,mb5.4
LPG La Plagne 95.25 315⇑*i*P **P** **13 15 28.2 0.0**
comp=Z,13nm,0.8s,mb5.4
MBDF Montbardon 95.25 314 *e*P **P** **13 15 27.3 -0.9**
comp=Z,14nm,0.9s,mb5.1
MBDF Montbardon 95.25 314 *e*P **P** **13 15 27.3 -0.9**
MBDF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
MBDF Montbardon 95.25 314 *e*P **P** **13 15 27.3 -0.9**
comp=Z,6.8nm,0.9s,mb5.1
LPL La Plagne 95.26 315⇑*i*P **P** **13 15 28.2 0.0**
comp=Z,27nm,0.8s,mb5.4
LPL La Plagne 95.26 315⇑*i*P **P** **13 15 28.2 0.0**
LPL pmax pmax
comp=Z,14nm,0.8s,mb5.4
LPL La Plagne 95.26 315⇑*i*P **P** **13 15 28.2 0.0**
comp=Z,14nm,0.8s,mb5.4
BNI Bardonecchia 95.31 315 *e*P **P** **13 15 28.4 -0.1**
BNI pmax pmax
comp=Z,5.0nm,0.6s,mb5.1
BNI Bardonecchia 95.31 315 *e*P **P** **13 15 28.4 -0.1**
comp=Z,4.9nm,0.6s,mb5.1
FRF La Foret Royal 95.36 313⇑*i*P **P** **13 15 28.5 -0.2**
comp=Z,25nm,0.9s,mb5.3
FRF La Foret Royal 95.36 313⇑*i*P **P** **13 15 28.5 -0.2**
FRF pmax pmax
comp=Z,13nm,0.9s,mb5.4
FRF La Foret Royal 95.36 313⇑*i*P **P** **13 15 28.5 -0.2**
comp=Z,13nm,0.9s,mb5.3
HAU Haudompre 95.47 318⇑*i*P **P** **13 15 28.5 -0.6**
comp=Z,36nm,0.7s,mb5.6
HAU Haudompre 95.47 318⇑*i*P **P** **13 15 28.5 -0.6**
HAU pmax pmax
comp=Z,18nm,0.7s,mb5.6
HAU Haudompre 95.47 318⇑*i*P **P** **13 15 28.5 -0.6**
comp=Z,18nm,0.7s,mb5.6
WLF Walferdange 95.54 319 *e*P **P** **13 15 29.8 +0.4**
comp=Z,18nm,1.1s,mb5.4
CABF La Chapelle 95.69 316⇑*i*P **P** **13 15 30.0 -0.1**
comp=Z,25nm,1.0s,mb5.3
CABF La Chapelle 95.69 316⇑*i*P **P** **13 15 30.0 -0.1**
CABF pmax pmax
comp=Z,13nm,1.0s,mb5.3
CABF La Chapelle 95.69 316⇑*i*P **P** **13 15 30.0 -0.1**
comp=Z,13nm,1.0s,mb5.3
ORIF Oris-en-Rattie 95.88 315⇑*i*P **P** **13 15 30.9 -0.2**
comp=Z,11nm,0.8s,mb5.0
ORIF Oris-en-Rattie 95.88 315⇑*i*P **P** **13 15 30.9 -0.2**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
ORIF Oris-en-Rattie 95.88 315⇑*i*P **P** **13 15 30.9 -0.2**
comp=Z,5.7nm,0.8s,mb5.0
SMRF Simiane la Rot 96.13 314⇑*i*P **P** **13 15 32.5 +0.3**
comp=Z,17nm,0.9s,mb5.2
SMRF Simiane la Rot 96.13 314⇑*i*P **P** **13 15 32.5 +0.3**
comp=Z,17nm,0.9s,mb5.5
MEZF Maizieres J'vi 96.31 318 *e*P **P** **13 15 32.5 -0.5**
GIVF Givet 96.38 320⇑*i*P **P** **13 15 32.8 -0.4**
comp=Z,18nm,0.8s,mb5.3
GIVF Givet 96.38 320⇑*i*P **P** **13 15 32.8 -0.4**
GIVF pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
GIVF Givet 96.38 320⇑*i*P **P** **13 15 32.8 -0.4**
comp=Z,9.3nm,0.8s,mb5.3
VIVF Saint-Julien-l 96.74 315⇑*i*P **P** **13 15 34.5 -0.5**
comp=Z,14nm,1.0s,mb5.0
VIVF Saint-Julien-l 96.74 315⇑*i*P **P** **13 15 34.5 -0.5**
VIVF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
VIVF Saint-Julien-l 96.74 315⇑*i*P **P** **13 15 34.5 -0.5**
comp=Z,6.8nm,1.0s,mb5.0
BAIF Baives 96.78 320⇑*i*P **P** **13 15 34.8 -0.2**
comp=Z,28nm,0.8s,mb5.4
BAIF Baives 96.78 320⇑*i*P **P** **13 15 34.8 -0.2**
BAIF pmax pmax
comp=Z,14nm,0.8s,mb5.4
BAIF Baives 96.78 320⇑*i*P **P** **13 15 34.8 -0.2**
comp=Z,14nm,0.8s,mb5.4
SSB Saint Sauveur 96.81 315 *e*P **P** **13 15 35.2 -0.1**
LOR Lormes 97.18 317⇑*i*P **P** **13 15 36.5 -0.4**
comp=Z,23nm,0.8s,mb5.4
LOR Lormes 97.18 317⇑*i*P **P** **13 15 36.5 -0.4**
LOR pmax pmax
comp=Z,12nm,0.8s,mb5.4
LOR Lormes 97.18 317⇑*i*P **P** **13 15 36.5 -0.4**
comp=Z,12nm,0.8s,mb5.4
SMF Signal de Mont 97.23 316⇑*i*P **P** **13 15 36.5 -0.7**
comp=Z,35nm,1.1s,mb5.4
SMF Signal de Mont 97.23 316⇑*i*P **P** **13 15 36.5 -0.7**
SMF pmax pmax
comp=Z,17nm,1.1s,mb5.4
SMF Signal de Mont 97.23 316⇑*i*P **P** **13 15 36.5 -0.7**
comp=Z,18nm,1.1s,mb5.4
LASF Ste Croix 97.36 314 *e*P **P** **13 15 37.7 -0.1**
SSF Saint Saulge 97.43 317⇑*i*P **P** **13 15 37.6 -0.5**
comp=Z,14nm,0.9s,mb5.1
SSF Saint Saulge 97.43 317⇑*i*P **P** **13 15 37.6 -0.5**
SSF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
SSF Saint Saulge 97.43 317⇑*i*P **P** **13 15 37.6 -0.5**
comp=Z,6.8nm,0.9s,mb5.1
AVF Avril sur Loir 97.56 317⇑*i*P **P** **13 15 38.1 -0.5**
comp=Z,9.8nm,0.8s,mb5.1
AVF Avril sur Loir 97.56 317⇑*i*P **P** **13 15 38.1 -0.5**
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb5.1
AVF Avril sur Loir 97.56 317⇑*i*P **P** **13 15 38.1 -0.5**
comp=Z,4.9nm,0.8s,mb5.1
BGF Bois d'Agland 97.92 316⇑*i*P **P** **13 15 40.1 -0.2**
comp=Z,17nm,0.8s,mb5.3
BGF Bois d'Agland 97.92 316⇑*i*P **P** **13 15 40.1 -0.2**
BGF pmax pmax
comp=Z,9.0nm,0.8s,mb5.3
BGF Bois d'Agland 97.92 316⇑*i*P **P** **13 15 40.1 -0.2**
comp=Z,8.6nm,0.8s,mb5.3
IMA2 Indian Mountai 98.80 23 *e*P **P** **13 15 42.2 -1.6**
LDF La Druitiere 99.73 319 *e*P Pdif 13 15 47.8 -0.4
comp=Z,15nm,0.8s
LDF La Druitiere 99.73 319 *e*P Pdif 13 15 47.8 -0.4
LDF pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
LDF La Druitiere 99.73 319 *e*P Pdif 13 15 47.8 -0.4
comp=Z,7.5nm,0.8s
COLD Coldfoot 99.86 22 *e*P Pdif 13 15 47.5 -1.2
comp=Z,6.0nm,1.1s
FLN La Foliniere 99.95 319 *e*P Pdif 13 15 48.7 -0.4
comp=Z,19nm,0.8s
FLN La Foliniere 99.95 319 *e*P Pdif 13 15 48.7 -0.4
FLN pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
FLN La Foliniere 99.95 319 *e*P Pdif 13 15 48.7 -0.4
comp=Z,9.4nm,0.8s
TORD Torodi Ar. Bea 99.95 283 P Pdif 13 15 50.0 +0.9
comp=Z,1.1nm,0.8s,baz=94,slow=5.2,SNR=4.6
TORD PKiKP PKiKP 13 20 17.8 -0.3
comp=Z,3.4nm,1.1s,baz=59,slow=1.8,SNR=5.1
TORD PKKPbc PKKPbc 13 32 08.3 -0.9
comp=Z,0.7nm,0.5s,baz=307,slow=3.6,SNR=7.0
GRR Gorron 100.24 319 *e*P Pdif 13 15 50.4 0.0
ESDC Sonseca Array 103.58 310 PP PP 13 20 19.5 -2.8
comp=Z,1.1nm,0.6s,baz=82,slow=9.2,SNR=3.2
KIC Kosan Boka 106.19 276 *e*PKP1 PKiKP 13 20 28.9 -0.7
LIC Lamto 106.47 276 *e*PKP1 PKiKP 13 20 29.0 -1.1
TIC Toumodi 106.47 276 *e*PKP1 PKiKP 13 20 28.0 -2.1
PNL Peninsula 107.03 28 *e*PKiKP PKiKP 13 20 29.6 -0.2
HYT Haines Junctio 107.39 26 *e*PKiKP PKiKP 13 20 30.0 -0.4
DLBC Dease Lake 111.87 26 *e*PKPdf PKiKP 13 20 38.0 -0.9
YKA Yellowknife Ar 114.93 17 PKP PKiKP 13 20 43.0 -1.7
comp=Z,3.3nm,0.7s,baz=346,slow=2.1,SNR=21
YKA Yellowknife Ar 114.93 17 PKiKP PKiKP 13 20 43.0 -1.7
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA Yellowknife Ar 114.93 17 PKP PKiKP 13 20 43.0 -1.7
B04A Port Angeles 120.94 33⇑P PKPdf 13 20 56.3 -0.3
baz=121
A04A Legoe Bay, Lum 120.98 32⇓P PKPdf 13 20 56.3 -0.5
baz=121
NLWA Neilton Lookou 121.11 34⇓P PKPdf 13 20 56.6 -0.4
baz=121
NLWA Neilton Lookou 121.11 34 *e*PKPdf PKPdf 13 20 56.8 -0.2
A05A Maple Falls 121.15 32⇓P PKPdf 13 20 56.2 -0.8
baz=121
D03A Wishkah Elem. 121.32 34⇓P PKPdf 13 20 56.8 -0.7
baz=121
A06A Chilliwack 121.41 31⇓P PKPdf 13 20 56.6 -0.9
baz=121
C04A Brinnon 121.42 33⇑P PKPdf 13 20 57.1 -0.5
baz=121
B05A Bryant 121.58 33⇑P PKPdf 13 20 57.4 -0.5
baz=121
JCW Jim Creek 121.71 33 *e*PKPdf PKPdf 13 20 57.6 -0.5
B06A Marblemount 121.75 32⇑P PKPdf 13 20 57.6 -0.6
baz=122
E03A Lebam 121.76 35⇓P PKPdf 13 20 57.8 -0.5
baz=122
RPW Rockport 121.78 32 *e*PKPdf PKPdf 13 20 56.7 -1.6
BMW Boistfort Moun 121.99 35 *e*PKiKP PKPdf 13 20 58.8 +0.1
A07A Ashton River, 122.00 31⇑P PKPdf 13 20 58.1 -0.5
baz=122
F03A Seaside 122.11 35⇑P PKPdf 13 20 58.8 -0.2
baz=122
C05A Tolt Reservoir 122.14 33⇓P PKPdf 13 20 58.4 -0.6
baz=122
E04A Onalaska 122.21 34⇑P PKPdf 13 20 58.7 -0.5
baz=122
D05A Enumclaw 122.28 34⇑P PKPdf 13 20 58.7 -0.5
baz=122
EDM Edmonton 122.38 24 PKiKP PKPdf 13 20 58.6 -0.7
EDM Edmonton 122.38 24 *e*PKPdf PKPdf 13 20 57.8 -1.5
C06A Tall Timber Ra 122.43 32⇑P PKPdf 13 20 58.9 -0.6
baz=122
B07A Winthrop 122.51 31⇑P PKPdf 13 20 59.1 -0.5
baz=122
H02A Toledo 122.54 37⇑P PKPdf 13 21 00.2 +0.4
baz=122
G03A Yamhill 122.61 36⇓P PKPdf 13 21 00.1 +0.2
baz=122
A08A Turner Farm, O 122.63 31⇑P PKPdf 13 20 59.4 -0.5
baz=122
LON Longmire 122.63 34 *e*PKiKP PKPdf 13 20 59.2 -0.8
F04A Amboy 122.76 35⇓P PKPdf 13 20 59.9 -0.4
baz=123
MPOR Mary's Peak 122.90 37 P PKPdf 13 21 00.8 +0.3
D06A Cle Elum 122.90 33⇑P PKPdf 13 21 00.0 -0.5
baz=123
TWW Teanaway 122.92 33 P PKPdf 13 21 00.5 0.0
ETW Entiat 122.93 32 *e*PKPdf PKPdf 13 20 59.7 -0.8
H03A Soap Creek Ran 122.96 37⇓P PKPdf 13 21 01.0 +0.4
baz=123
A09A Danville 122.97 30⇓P PKPdf 13 21 00.1 -0.4
baz=123
B08A Colville Reser 122.98 31⇑P PKPdf 13 20 60.0 -0.6
baz=123
I02A Mapleton 123.00 38⇑P PKPdf 13 21 00.8 0.0
baz=123
C07A Waterville 123.02 32⇓P PKPdf 13 20 59.8 -0.9
baz=123
TBM Table Mountain 123.05 33 P PKPdf 13 21 00.4 -0.4
G04A Mulino 123.14 36⇓P PKPdf 13 21 00.9 0.0
baz=123
E06A Yakima 123.22 34⇓P PKPdf 13 21 00.7 -0.4
baz=123
EBG Ellensburg 123.22 33 P PKPdf 13 21 00.9 -0.2
K01A Sixes 123.24 39⇑P PKPdf 13 21 00.9 -0.3
baz=123
F05A White Salmon 123.34 35⇑P PKPdf 13 21 00.9 -0.4
baz=123
I03A Eugene 123.35 37⇑P PKPdf 13 21 01.4 -0.1
baz=123
D07A Quincy 123.37 33⇓P PKPdf 13 21 01.0 -0.4
baz=123
A10A Northport 123.47 30⇓P PKPdf 13 21 01.1 -0.4
baz=123
C08A Higginbotham F 123.49 32⇓P PKPdf 13 21 00.9 -0.6
baz=123
J02A Umpqua 123.50 38⇑P PKPdf 13 21 01.7 -0.1
baz=123
B09A Rice 123.54 30⇑P PKPdf 13 21 01.3 -0.3
baz=123
H04A Detroit Lake 123.61 36⇓P PKPdf 13 21 01.3 -0.6
baz=123
F06A Goldendale 123.79 34⇑P PKPdf 13 21 02.3 +0.1
baz=124
G05A Wamic 123.79 35⇓P PKPdf 13 21 02.1 -0.1
baz=124
E07A Sunnyside 123.83 33⇑P PKPdf 13 21 02.1 -0.2
baz=124
MDW Midway 123.84 33 PKiKP PKPdf 13 21 02.0 -0.3
K02A Glendale 123.87 39⇓P PKPdf 13 21 02.5 0.0
baz=124
OD2 Odessa Site #2 123.92 32 P PKPdf 13 21 01.7 -0.7
M01C Crescent City 123.95 40⇓P PKPdf 13 21 02.5 -0.2
baz=124
I04A Tendick Farm, 123.97 37⇑P PKPdf 13 21 02.0 -0.6
baz=124
D08A Wollman Farm, 124.02 32⇓P PKPdf 13 21 02.3 -0.3
baz=124
RSW Rattlesnake Hi 124.07 33 *e*PKPdf PKPdf 13 21 02.4 -0.4
A11A Hall Mountain, 124.07 29⇓P PKPdf 13 21 02.7 0.0
baz=124
HAWA Hanford 124.10 33 *e*PKPdf PKPdf 13 21 02.4 -0.4
BKCOR Black Crater 124.12 36 P PKPdf 13 21 03.0 +0.1
L02A Cave Junction 124.12 39⇓P PKPdf 13 21 02.9 -0.1
baz=124
H2OWA Water 124.16 33 P PKPdf 13 21 02.9 0.0
NEW Newport 124.17 30 *e*PKPdf PKPdf 13 21 02.2 -0.6
G06A Carlson Farm, 124.19 35⇓P PKPdf 13 21 02.9 -0.1
baz=124
F07A Phinny Hill Vi 124.19 34⇑P PKPdf 13 21 02.9 -0.1
baz=124
H05A Madras 124.19 36⇑P PKPdf 13 21 03.1 +0.1
baz=124
HUMO Hull Mountain 124.29 39⇓P PKPdf 13 21 03.4 +0.1
baz=124
HUMO Hull Mountain 124.29 39 *e*PKPdf PKPdf 13 21 02.9 -0.4
E08A Dider Farm, El 124.30 33⇑P PKPdf 13 21 03.2 0.0
baz=124
D09A Jones Farm, Ri 124.34 32⇓P PKPdf 13 21 02.8 -0.4
baz=124
C10A Spilker Farm, 124.36 31⇓P PKPdf 13 21 02.9 -0.3
baz=124
B11A Sandpoint 124.42 30⇑P PKPdf 13 21 03.2 -0.1
baz=124
A12A Yaak River Ran 124.43 29⇑P PKPdf 13 21 03.3 0.0
baz=124
I05A Bend 124.45 36⇓P PKPdf 13 21 03.6 +0.1
baz=124
J04A Umpqua Nationa 124.47 37⇓P PKPdf 13 21 03.8 +0.2
baz=124
JCC Jacoby Creek 124.54 41⇓P PKPdf 13 21 03.6 -0.2
baz=124
H06A Lindquist Farm 124.66 35⇑P PKPdf 13 21 03.7 -0.2
baz=124
G07A Ruggs Ranch, H 124.72 34⇑P PKPdf 13 21 03.5 -0.5
baz=124
E09A Wood Farm, Sta 124.77 32⇓P PKPdf 13 21 03.6 -0.5
baz=125
B12A Libby 124.78 29⇑P PKPdf 13 21 03.7 -0.3
baz=125
C11A Tepee Creek (N 124.88 30⇓P PKPdf 13 21 03.7 -0.5
baz=125
D10A Wagner Farm, O 124.88 31⇑P PKPdf 13 21 04.0 -0.2
baz=125
F08A Pendleton 124.88 33⇑P PKPdf 13 21 04.0 -0.3
baz=125
YBH Yreka Blue Hor 124.91 39 PKiKP PKPdf 13 21 04.2 -0.3
YBH Yreka Blue Hor 124.91 39⇑P PKPdf 13 21 04.0 -0.5
baz=125
YBH Yreka Blue Hor 124.91 39 *e*PKPdf PKPdf 13 21 03.0 -1.5
J05A Fort Rock 124.97 37⇑P PKPdf 13 21 04.6 +0.1
baz=125
M02C Callahan 125.00 40⇑P PKPdf 13 21 04.9 +0.2
baz=125
N02C Big Bar 125.01 41⇓P PKPdf 13 21 04.6 -0.1
baz=125
A13A Flathead Natio 125.02 28⇓P PKPdf 13 21 04.2 -0.2
baz=125
K04A Chilquin 125.04 38⇑P PKPdf 13 21 04.3 -0.4
baz=125
FFC Flin Flon 125.06 16 PKiKP PKPdf 13 21 03.1 -1.3
FFC Flin Flon 125.06 16 *e*PKPdf PKPdf 13 21 02.9 -1.4
G08A Pilot Rock 125.10 34⇑P PKPdf 13 21 04.6 -0.2
baz=125
LNOR Lincton Mounta 125.11 33 PKiKP PKPdf 13 21 03.7 -1.0
LNOR Lincton Mounta 125.11 33 *e*PKPdf PKPdf 13 21 03.6 -1.2
WALA Waterton Lakes 125.17 28 *e*PKPdf PKPdf 13 21 03.0 -1.7
H07A Lands Inn, Kim 125.18 35⇓P PKPdf 13 21 05.0 +0.1
baz=125
L04A Klamath Falls 125.19 38⇓P PKPdf 13 21 04.8 -0.2
baz=125
I06A Prineville 125.19 36⇓P PKPdf 13 21 05.1 +0.1
baz=125
E10A Myers Farm, Un 125.34 32⇑P PKPdf 13 21 04.6 -0.5
baz=125
D11A Klaveano Farm, 125.37 31⇑P PKPdf 13 21 04.3 -0.9

	baz=125									
B13A	Whitefish	125.39	29	⇑P		PKPdf	13 21 04.9	-0.3		
	baz=125									
F09A	S2 Ranch, Elgi	125.41	33	⇓P		PKPdf	13 21 05.2	-0.1		
	baz=125									
KIPM	Iron Peak	125.42	42	*e*PKPdf		PKPdf	13 21 05.3	-0.3		
M04C	Macdoel	125.44	39	⇓P		PKPdf	13 21 05.5	+0.1		
	baz=125									
K05A	Summer Lake	125.49	37	⇓P		PKPdf	13 21 06.0	+0.4		
	baz=125									
I07A	Izee	125.52	35	⇑P		PKPdf	13 21 05.9	+0.3		
	baz=125									
M03C	McCloud	125.53	39	⇑P		PKPdf	13 21 05.5	-0.2		
	baz=125									
F10A	Beach Ranch, E	125.61	32	⇑P		PKPdf	13 21 05.5	-0.2		
	baz=125									
WDC	Whiskeytown Da	125.63	40	PKIKP		PKPdf	13 21 05.5	-0.4		
WDC	Whiskeytown Da	125.63	40	⇑P		PKPdf	13 21 05.4	-0.5		
	baz=126									
WDC	Whiskeytown Da	125.63	40	*e*PKPdf		PKPdf	13 21 04.6	-1.3		
J06A	Christmas Vall	125.63	36	⇑P		PKPdf	13 21 05.9	+0.1		
	baz=125									
O02C	Red Bluff	125.68	41	⇓P		PKPdf	13 21 06.3	+0.2		
	baz=126									
LASM	Arnica Sink	125.70	39	P		PKPdf	13 21 06.1	+0.1		
H08A	Prairie City	125.73	34	⇑P		PKPdf	13 21 06.0	0.0		
	baz=126									
G09A	Cove	125.75	33	⇑P		PKPdf	13 21 05.5	-0.5		
	baz=126									
C13A	Hot Springs	125.82	29	⇓P		PKPdf	13 21 05.3	-0.7		
	baz=126									
K06A	Valley Falls	125.84	37	⇑P		PKPdf	13 21 06.5	+0.2		
	baz=126									
D12A	Red Ives Fores	125.86	30	⇑P		PKPdf	13 21 05.0	-1.1		
	baz=126									
E11A	Bogner Ranch,	125.89	31	⇑P		PKPdf	13 21 05.6	-0.6		
	baz=126									
L05A	Lakeview	125.91	38	⇓P		PKPdf	13 21 06.7	+0.3		
	baz=126									
GASB	Alder Springs	126.00	41	⇑P		PKPdf	13 21 07.2	+0.5		
	baz=126									
J07A	Hines	126.06	36	⇑P		PKPdf	13 21 06.9	+0.3		
	baz=126									
HOPS	Hopland	126.10	42	⇓P		PKPdf	13 21 06.6	-0.2		
	baz=126									
HOPS	Hopland	126.10	42	*e*PKPdf		PKPdf	13 21 06.3	-0.6		
M05C	Lookout	126.10	39	⇓P		PKPdf	13 21 06.7	-0.1		
	baz=126									
G10A	Bishop Farm, J	126.11	33	⇑P		PKPdf	13 21 06.0	-0.6		
	baz=126									
C14A	Swan Lake	126.16	29	⇑P		PKPdf	13 21 06.0	-0.7		
	baz=126									
I08A	Drewsey	126.16	35	⇑P		PKPdf	13 21 06.9	+0.1		
	baz=126									
E12A	Beaver Dam Sad	126.19	31	⇓P		PKPdf	13 21 06.4	-0.4		
	baz=126									
H09A	Durkee	126.21	34	⇑P		PKPdf	13 21 06.4	-0.4		
	baz=126									
F11A	Grangeville	126.23	32	⇓P		PKPdf	13 21 05.8	-1.1		
	baz=126									
LBCM	Butte Creek Ri	126.26	40	P		PKPdf	13 21 07.1	0.0		
D13A	Huson	126.28	30	⇓P		PKPdf	13 21 06.0	-1.0		
	baz=126									
BMO	Blue Mountains	126.28	33	PKIKP		PKPdf	13 21 05.9	-1.1		
BMO	Blue Mountains	126.28	33	*e*PKPdf		PKPdf	13 21 05.0	-2.0		
MOD	Modoc	126.32	38	⇑P		PKPdf	13 21 07.2	0.0		
	baz=126									
MOD	Modoc	126.32	38	*e*PKPdf		PKPdf	13 21 07.0	-0.1		
G11A	Walters Elk Ra	126.49	32	⇑P		PKPdf	13 21 06.6	-0.8		
	baz=126									
K07A	Rock Creek Ran	126.50	37	⇑P		PKPdf	13 21 07.8	+0.3		
	baz=126									
J08A	Circle Bar Ran	126.56	35	⇓P		PKPdf	13 21 07.8	+0.2		
	baz=126									
MNRC	McLaughlin Nat	126.58	42	⇑P		PKPdf	13 21 08.1	+0.3		
	baz=126									
I09A	Lost Marbles R	126.60	34	⇓P		PKPdf	13 21 07.1	-0.5		
	baz=126									
MCCM	Marconi Confer	126.66	43	⇑P		PKPdf	13 21 07.3	-0.7		
	baz=126									
O04C	Chester	126.71	40	⇑P		PKPdf	13 21 08.2	+0.2		
	baz=126									
D14A	Greenough	126.76	29	⇑P		PKPdf	13 21 06.9	-0.9		
	baz=127									
H10A	Noah's Angus R	126.76	33	⇓P		PKPdf	13 21 07.3	-0.7		
	baz=127									
F12A	Elk City	126.79	31	⇓P		PKPdf	13 21 07.3	-0.6		
	baz=127									
L07A	Adell	126.84	37	⇑P		PKPdf	13 21 08.6	+0.4		
	baz=127									
CVS	Carmenet Viney	126.84	43	⇑P		PKPdf	13 21 08.3	0.0		
	baz=127									
ORV	Oroville	126.85	41	⇑P		PKPdf	13 21 07.7	-0.6		
	baz=127									
E13A	Victor	126.87	30	⇓P		PKPdf	13 21 07.5	-0.6		
	baz=127									
K08A	Mann Creek Ran	126.93	36	⇑P		PKPdf	13 21 08.3	0.0		
	baz=127									
J09A	Fry Pan Ranch,	126.98	35	⇑P		PKPdf	13 21 08.4	0.0		
	baz=127									
Q03C	Winters	126.99	42	⇑P		PKPdf	13 21 08.3	-0.3		
	baz=127									
O05C	Quincy	127.01	40	⇓P		PKPdf	13 21 08.4	-0.2		
	baz=127									
WVOR	Wild Horse Val	127.02	36	*e*PKIKP		PKPdf	13 21 07.8	-0.7		
I10A	Payette	127.05	34	⇑P		PKPdf	13 21 08.4	-0.1		
	baz=127									
H11A	Donnelly	127.09	33	⇑P		PKPdf	13 21 08.2	-0.3		
	baz=127									
E14A	Clinton	127.23	30	⇓P		PKPdf	13 21 08.2	-0.6		
	baz=127									
F13A	Darby	127.24	31	⇑P		PKPdf	13 21 08.1	-0.7		
	baz=127									
D15A	Lincoln	127.26	29	⇓P		PKPdf	13 21 08.6	-0.2		
	baz=127									
N06A	Buffalo Meadow	127.27	39	⇑P		PKPdf	13 21 09.3	+0.3		
	baz=127									
M07A	Soldier Meadow	127.31	38	⇓P		PKPdf	13 21 09.6	+0.5		
	baz=127									
Q04C	Lincoln	127.31	42	⇓P		PKPdf	13 21 09.5	+0.3		
	baz=127									
L08A	Fields	127.34	37	⇑P		PKPdf	13 21 09.7	+0.5		
	baz=127									
K09A	Rome	127.39	36	⇑P		PKPdf	13 21 09.6	+0.4		
	baz=127									
SCHQ	Schefferville	127.39	351	PKP		PKPdf	13 21 08.4	-0.4		
	comp=Z,13nm,0.7s,baz=37,slow=3.5,SNR=10									
SCHQ				PP		PP	13 23 05.8	-2.5		
	comp=Z,12nm,1.0s,baz=59,slow=7.7,SNR=3.5									
BEKR	Beckwourth	127.42	40	⇓P		PKPdf	13 21 09.4	0.0		
	baz=127									
BDM	Black Diamond	127.44	43	⇓P		PKPdf	13 21 09.4	0.0		
	baz=127									
JRSC	Jasper Ridge	127.47	44	⇓P		PKPdf	13 21 09.6	+0.1		
	baz=127									
J10A	Berg Farm, Mel	127.49	34	⇑P		PKPdf	13 21 09.5	+0.1		
	baz=127									
P05C	Yuba Gap, Truc	127.57	41	⇑P		PKPdf	13 21 09.5	-0.1		
	baz=127									
O06A	Flanigan	127.60	39	⇓P		PKPdf	13 21 09.7	0.0		
	baz=127									
I11A	Placerville	127.63	33	⇓P		PKPdf	13 21 09.5	-0.1		
	baz=127									
E15A	Deer Lodge	127.64	29	⇓P		PKPdf	13 21 09.2	-0.3		
	baz=127									
WENL	Wente Vineyard	127.69	43	⇓P		PKPdf	13 21 09.5	-0.5		
	baz=128									
F14A	Wisdom	127.71	30	⇓P		PKPdf	13 21 09.7	0.0		
	baz=128									
G13A	Cobalt	127.77	31	⇓P		PKPdf	13 21 09.0	-0.8		
	baz=128									
LAVA	Lava Cap Winer	127.78	41	⇓P		PKPdf	13 21 10.1	0.0		
	baz=128									
N07B	Gerlach	127.78	38	⇓P		PKPdf	13 21 10.5	+0.4		
	baz=128									
EGMT	Eagleton	127.80	26	*e*PKPdf		PKPdf	13 21 08.8	-1.1		
H12A	Diamond D Ranc	127.81	32	⇓P		PKPdf	13 21 09.8	-0.2		
	baz=128									
P06A	Stead Airport,	127.82	40	⇑P		PKPdf	13 21 10.0	-0.1		
	baz=128									
K10A	MacKenzie Ranc	127.84	35	⇑P		PKPdf	13 21 10.5	+0.5		
	baz=128									
L09A	Wilkinson Ranc	127.84	36	⇓P		PKPdf	13 21 10.3	+0.2		
	baz=128									
MFID	Camas Ranch	128.02	34	⇑P		PKPdf	13 21 10.5	+0.1		
	baz=128									
G14A	Jackson	128.06	31	⇓P		PKPdf	13 21 10.3	-0.1		
	baz=128									
H13A	Challis	128.12	32	⇓P		PKPdf	13 21 10.5	-0.1		
	baz=128									
WCN	Washoe City	128.12	40	⇑P		PKPdf	13 21 11.2	+0.5		
	baz=128									
F15A	Butte	128.13	30	⇑P		PKPdf	13 21 10.0	-0.5		
	baz=128									
PAHR	Pah Rah Range	128.14	40	*e*PKPdf		PKPdf	13 21 10.3	-0.4		
O07A	Toulon	128.20	39	⇓P		PKPdf	13 21 10.9	0.0		
	baz=128									
R05C	Kirkwood Meado	128.24	41	⇓P		PKPdf	13 21 11.1	+0.1		
	baz=128									
N08A	GE Springer Mi	128.30	38	⇑P		PKPdf	13 21 11.5	+0.5		
	baz=128									
PACP	Pacheco Peak	128.32	44	⇓P		PKPdf	13 21 11.6	+0.4		
	baz=128									
K11A	Parker Ranch,	128.32	35	⇓P		PKPdf	13 21 11.1	+0.1		
	baz=128									
M09A	Marrel Ranch,	128.33	37	⇑P		PKPdf	13 21 11.7	+0.6		
	baz=128									
SAO	San Andreas Ge	128.33	44	*e*PKIKP		PKPdf	13 21 10.5	-0.7		
CMB	Columbia Colle	128.40	42	⇓P		PKPdf	13 21 11.4	+0.1		
	baz=128									
CMB	Columbia Colle	128.40	42	*e*PKPdf		PKPdf	13 21 10.9	-0.4		
DLMT	Dillon	128.42	30	*e*PKPdf		PKPdf	13 21 11.2	+0.1		
L10A	Juniper Basin	128.51	36	⇑P		PKPdf	13 21 12.0	+0.7		
	baz=128									
J12A	Stokes Ranch,	128.53	34	⇑P		PKPdf	13 21 11.7	+0.3		
	baz=128									
H14A	Leadore	128.54	31	⇑P		PKPdf	13 21 11.8	+0.5		
	baz=128									
O08A	Rochester Mine	128.58	38	⇑P		PKPdf	13 21 12.0	+0.5		
	baz=128									
G15A	Dillon	128.61	30	⇑P		PKPdf	13 21 11.8	+0.4		
	baz=128									
I13A	Wildhorse Cree	128.63	32	⇓P		PKPdf	13 21 11.9	+0.4		
	baz=128									
N09A	Rock Creek Ran	128.63	37	⇑P		PKPdf	13 21 12.1	+0.5		
	baz=128									
HLID	Hailey	128.70	33	⇑P		PKPdf	13 21 12.0	+0.3		
	baz=128									
HLID	Hailey	128.70	33	*e*PKPdf		PKPdf	13 21 11.9	+0.2		
R06C	Coleville	128.75	41	⇑P		PKPdf	13 21 12.6	+0.7		
	baz=129									
S06C	San Francisco	128.84	42	⇑P		PKPdf	13 21 12.4	+0.3		
	baz=129									
V03C	Hunter Liggett	128.85	45	⇑P		PKPdf	13 21 12.9	+0.7		
	baz=129									
L11A	Cat Creek Ranc	128.86	35	⇓P		PKPdf	13 21 12.7	+0.6		
	baz=129									
H15A	Lima	128.92	31	⇑P		PKPdf	13 21 12.5	+0.5		
	baz=129									
J13A	Cove Ranch, Pi	128.94	33	⇓P		PKPdf	13 21 12.2	+0.1		
	baz=129									
I14A	Mackay	128.97	32	⇑P		PKPdf	13 21 12.4	+0.2		
	baz=129									
U04C	Hernandez Rese	129.00	44	⇓P		PKPdf	13 21 13.0	+0.5		
	baz=129									
K12A	Draper Farm, C	129.04	34	⇓P		PKPdf	13 21 12.9	+0.5		
	baz=129									
O09A	Fish Creek Ran	129.24	38	⇓P		PKPdf	13 21 13.4	+0.6		
	baz=129									
R07C	Lee Vining	129.26	41	⇑P		PKPdf	13 21 13.7	+0.8		
	baz=129									
L12A	House Creek Ra	129.30	35	⇓P		PKPdf	13 21 13.6	+0.8		
	baz=129									
M11A	Holland Ranch,	129.31	36	⇑P		PKPdf	13 21 13.9	+1.0		
	baz=129									
J14A	Carey	129.35	33	⇓P		PKPdf	13 21 13.4	+0.4		
	baz=129									
PKD	Parkfield	129.38	44	⇑P		PKPdf	13 21 13.4	+0.2		
	baz=129									
T06C	Millerton Lake	129.40	43	⇑P		PKPdf	13 21 13.4	+0.1		
	baz=129									
I15A	Monteview	129.43	31	⇓P		PKPdf	13 21 13.6	+0.6		
	baz=129									
K13A	Stover Farm, H	129.49	34	⇑P		PKPdf	13 21 14.0	+0.8		
	baz=129									
Q08A	Gabbs	129.54	40	⇓P		PKPdf	13 21 13.6	+0.2		
	baz=129									
NVAR	Mina Array Bea	129.55	40	PKhKP			13 21 01.4			
	comp=Z,0.5nm,0.6s,baz=283,slow=4.5,SNR=5.6									
NVAR				PKP		PKPdf	13 21 13.9	+0.4		
	comp=Z,7.4nm,0.6s,baz=279,slow=2.6,SNR=26									
NVAR				SKPbc			13 24 30.6			
	comp=Z,7.6nm,0.8s,baz=267,slow=5.4,SNR=11									
H16A	Russell Place,	129.56	30	⇑P		PKPdf	13 21 13.9	+0.6		
	baz=129									
DGMT	Dagmar	129.69	22	*e*PKPdf		PKPdf	13 21 13.0	-0.5		
PTRM	Twissleman Ran	129.76	45	*e*PKPdf		PKPdf	13 21 14.4	+0.4		
M12A	Wells	129.83	35	⇑P		PKPdf	13 21 14.5	+0.6		
	baz=130									
J15A	Blackfoot	129.87	32	⇓P		PKPdf	13 21 14.6	+0.7		
	baz=130									
L13A	Double Diamond	129.94	34	⇓P		PKPdf	13 21 14.9	+0.9		
	baz=130									
HELL	Mitchell Peak	130.04	43	⇓P		PKPdf	13 21 14.0	-0.5		
	baz=130									
K14A	Jones Ranch, D	130.06	33	⇑P		PKPdf	13 21 14.5	+0.2		
	baz=130									
S08C	White Mtn Res	130.16	41	⇑P		PKPdf	13 21 15.0	+0.4		
	baz=130									
O11A	Cowboy Ranch,	130.20	37	⇑P		PKPdf	13 21 15.1	+0.4		
	baz=130									
RLMT	Red Lodge	130.21	28	*e*PKPdf		PKPdf	13 21 14.4	-0.1		
IMW	Indian Meadow	130.29	30	*e*PKPdf		PKPdf	13 21 15.6	+0.9		
M13A	Montello	130.29	35	⇑P		PKPdf	13 21 15.5	+0.7		
	baz=130									
M13A	Montello	130.29	35	⇓S		PKPdf	13 21 15.5	+0.7		
	baz=1.6									
K15A	Arbon	130.31	33	⇑P		PKPdf	13 21 15.4	+0.6		
	baz=130									
L14A	Malta	130.37	34	⇑P		PKPdf	13 21 15.2	+0.3		
	baz=130									
J16A	Bone	130.39	31	⇑P		PKPdf	13 21 15.3	+0.4		
	baz=130									
TPH	Tonopah	130.45	40	*e*PKIKP		PKPdf	13 21 15.3	+0.1		
R09A	Tonopah	130.45	40	⇑P		PKPdf	13 21 15.8	+0.6		
	baz=130									
RRI2	Red Ridge	130.49	31	*e*PKPdf		PKPdf	13 21 14.7	-0.4		
MOOW	Moose Ponds	130.50	30	*e*PKPdf		PKPdf	13 21 15.1	0.0		
TPAW	Teton Pass	130.58	31	*e*PKPdf		PKPdf	13 21 15.5	+0.2		
S09A	Goldfield	130.65	41	⇓P		PKPdf	13 21 16.0	+0.4		
	baz=130									
O12A	Currie	130.66	36	⇓P		PKPdf	13 21 16.2	+0.7		
	baz=130									
M14A	Sheep Mountain	130.66	34	⇓P		PKPdf	13 21 16.1	+0.6		
	baz=130									
LOHW	Long Hollow	130.66	30	*e*PKPdf		PKPdf	13 21 15.0	-0.4		
SNOW	Snow King Moun	130.69	31	*e*PKPdf		PKPdf	13 21 15.3	-0.2		
ULM	Lac du Bonnet	130.71	14	PKP		PKPdf	13 21 14.3	-1.0		
	comp=Z,34nm,0.6s,baz=345,slow=2.4,SNR=6.0									
ULM				PP		PP	13 23 27.8	-2.2		
	comp=Z,4.9nm,0.8s,baz=328,slow=11,SNR=3.0									
ULM	Lac du Bonnet	130.71	14	PKP		PKPdf	13 21 14.3	-1.0		
ULM				PP		PP	13 23 27.8	-2.2		
K16A	Soda Springs	130.71	32	⇑P		PKPdf	13 21 15.7	+0.2		
	baz=130									
REDW	Red Top Meadow	130.72	31	*e*PKPdf		PKPdf	13 21 15.1	-0.4		
CWC	Cottonwood Cre	130.81	42	⇓P		PKPdf	13 21 16.1	+0.2		
	baz=131									
L15A	Malad City	130.86	33	⇓P		PKPdf	13 21 16.0	+0.1		
	baz=131									
S10A	Tonopah Range,	130.94	40	⇓P		PKPdf	13 21 17.3	+1.2		
	baz=131									
ISA	Isabella	130.96	44	⇑P		PKPdf	13 21 16.1	-0.1		
	baz=131									
GRAC	Grapevine Rang	130.97	41	⇑P		PKPdf	13 21 16.6	+0.4		
	baz=131									
Q11A	Duckwater	130.99	38	⇑P		PKPdf	13 21 16.5	+0.3		
	baz=131									
ARVC	Arvin	131.00	44	⇑P		PKPdf	13 21 16.8	+0.5		
	baz=131									
P12A	McGill	131.06	37	⇑P		PKPdf	13 21 17.1	+0.8		
	baz=131									
N14A	Grayback Hills	131.18	35	⇑P		PKPdf	13 21 16.8	+0.3		
	baz=131									
M15A	Larsen Ranch,	131.19	34	⇓P		PKPdf	13 21 16.5	0.0		
	baz=131									
BGU	Big Grassy Mou	131.22	35	*e*PKPdf		PKPdf	13 21 15.9	-0.6		
L16A	Fish Haven	131.36	32	⇓P		PKPdf	13 21 17.4	+0.6		
	baz=131									
MPMC	Manual Prospec	131.41	43	⇓P		PKPdf	13 21 17.6	+0.6		
	baz=131									
N15A	Stansbury Isla	131.53	34	⇑P		PKPdf	13 21 17.2	+0.1		
	baz=131									
HWUT	Hardware Ranch	131.57	33	*e*PKPdf		PKPdf	13 21 16.4	-0.8		
S11A	Rachel	131.65	40	⇑P		PKPdf	13 21 17.4	-0.1		
	baz=132									
EDW2	Edwards Air Fo	131.71	44	⇓P		PKPdf	13 21 18.1	+0.4		
	baz=132									
TPNV	Topopah Spring	131.73	41	*e*PKIKP		PKPdf	13 21 17.6	-0.1		
PDAR	Pinedale Array	131.80	30	PKhKP			13 21 12.1			
	comp=Z,2.1nm,0.7s,baz=111,slow=2.2,SNR=5.7									
PDAR				PKP		PKPdf	13 21 16.4	-1.2		
	comp=Z,5.0nm,0.6s,baz=180,slow=0.5,SNR=21									
PDAR				PP		PP	13 23 32.0	-5.5		
	comp=Z,2.3nm,0.9s,baz=11,slow=3.0,SNR=3.9									
PDAR				SKPbc		SKPbc	13 24 37.7	-1.6		
	comp=Z,7.1nm,1.0s,baz=333,slow=1.7,SNR=8.4									
DUG	Dugway	131.83	35	*e*PKIKP		PKPdf	13 21 17.4	-0.3		
Q13A	Wheeler Ranch,	131.92	37	⇑P		PKPdf	13 21 18.4	+0.5		
	baz=132									
P14A	Drum Mountains	132.08	36	⇓P		PKPdf	13 21 19.0	+0.7		
	baz=132									
N16A	Rees Ranch, Co	132.14	34	⇑P		PKPdf	13 21 18.8	+0.5		
	baz=132									
T11A	Corn Creek, Al	132.23	40	⇓P		PKPdf	13 21 19.7	+1.1		
	baz=132									
S12A	Delamar Landin	132.24	39	⇓P		PKPdf	13 21 19.5	+0.9		
	baz=132									
BFSC	Mount Baldy St	132.28	45	⇑P		PKPdf	13 21 18.6	-0.2		
	baz=132									
GSC	Goldstone	132.30	43	⇓P		PKPdf	13 21 19.3	+0.5		
	baz=132									
GSC	Goldstone	132.30	43	*e*PKPdf		PKPdf	13 21 19.0	+0.2		
JLU	Jordanelle	132.33	34	*e*PKPdf		PKPdf	13 21 18.8	+0.2		
NLU	North Lily Min	132.41	35	*e*PKPdf		PKPdf	13 21 18.7	-0.1		
N17A	Moffit Pass	132.43	33	⇑P		PKPdf	13 21 19.1	+0.3		
	baz=132									
P15A	Leamington	132.55	35	⇑P		PKPdf	13 21 19.8	+0.7		
	baz=132									
DAU	Daniels Canyon	132.56	34	*e*PKIKP		PKPdf	13 21 19.1	0.0		
BBRC	Big Bear Sol-O	132.79	44	⇓P		PKPdf	13 21 20.2	+0.5		
	baz=133									
TUQ	Turquoise Moun	132.82	42	⇓P		PKPdf	13 21 20.1	+0.4		
	baz=133									
Q15A	Fillmore	132.87	36	⇓P		PKPdf	13 21 20.9	+1.2		
	baz=133									
S13A	Holt Ranch, En	132.88	39	⇓P		PKPdf	13 21 20.5	+0.7		
	baz=133									
HEC	Hector,Ludlow	132.88	43	⇓P		PKPdf	13 21 20.7	+0.8		
	baz=132									
MURC	Murrieta	132.94	45	⇑P		PKPdf	13 21 20.5	+0.5		
	baz=133									
O17A	Robinson Place	133.00	34	⇑P		PKPdf	13 21 20.8	+0.9		
	baz=133									
U12A	Valley of Fire	133.15	40	⇓P		PKPdf	13 21 21.2	+0.9		
	baz=133									
S14A	Cedar City	133.19	38	⇑P		PKPdf	13 21 21.1	+0.7		
	baz=133									
T13A	Saint George	133.19	39	⇑P		PKPdf	13 21 20.9	+0.5		
	baz=133									
MSU	Marysvale	133.31	36	*e*PKIKP		PKPdf	13 21 21.5	+0.9		
RSSD	Black Hills	133.33	25	*e*PKIKP		PKPdf	13 21 19.8	-0.6		
N19A	John Jarvie Ra	133.35	32	⇓P		PKPdf	13 21 20.5	-0.1		
	baz=133									
O18A	Roosevelt	133.35	33	⇑P		PKPdf	13 21 21.1	+0.5		
	baz=133									
V12A	Nelson	133.36	41	⇑P		PKPdf	13 21 20.9	+0.1		
	baz=133									
GMRC	Granite Mounta	133.37	43	⇓P		PKPdf	13 21 21.5	+0.7		
	baz=133									
PFO	Pinyon Flat Ob	133.46	45	⇑P		PKPdf	13 21 21.0	0.0		
	baz=133									
PFO	Pinyon Flat Ob	133.46	45	*e*PKPdf		PKPdf	13 21 20.9	-0.1		
P17A	Butcher Ranch,	133.50	34	⇓P		PKPdf	13 21 21.5	+0.6		
	baz=133									
U13A	Pakoon Wash	133.53	40	⇑P		PKPdf	13 21 21.3	+0.3		
	baz=133									
LDFC	Landfair	133.57	42	*e*PKPdf		PKPdf	13 21 20.8	-0.3		
BELC	Belle Mtn.	133.57	44	⇓P		PKPdf	13 21 21.5	+0.3		
	baz=133									
Q16A	Castle Valley	133.63	35	⇓P		P

X15A	Humboldt	135.82	41	⇓P		PKPdf	13 21 27.0 +1.6
	baz=136						
PLCA	Paso Flores	135.86	189	PKP		PKPdf	13 21 23.2 -2.1
	comp=Z,3.6nm,0.7s,baz=111,slow=2.6,SNR=8.8						
PLCA	Paso Flores	135.86	189	PKIKP		PKPdf	13 21 23.2 -2.1
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
W16A	Flagstaff	135.90	40	⇓P		PKPdf	13 21 26.9 +1.4
	baz=136						
Z14A	Wintersburg	136.02	43	⇓P		PKPdf	13 21 26.9 +1.1
	baz=136						
U18A	Rough Rock, Ch	136.07	37	⇓P		PKPdf	13 21 26.8 +1.0
	baz=136						
Y15A	Casa Rosa Ranc	136.08	41	⇑P		PKPdf	13 21 27.0 +1.1
	baz=136						
COWI	Conover	136.10	10	*e*PKPdf		PKPdf	13 21 24.7 -0.8
T19A	Beclabito	136.29	36	⇑P		PKPdf	13 21 27.4 +1.2
	baz=136						
MVCO	Mesa Verde	136.33	35	*e*PKPdf		PKPdf	13 21 24.8 -1.5
X16A	Lo Mia Camp, P	136.38	40	⇓P		PKPdf	13 21 27.2 +0.8
	baz=136						
ECSD	EROS,Sioux Fal	136.43	19	*e*PKPpre			13 21 21.0
ECSD				*e*PKPdf		PKPdf	13 21 25.5 -0.8
V18A	Ganado	136.50	38	⇑P		PKPdf	13 21 27.6 +1.0
	baz=136						
Y16A	Circle Bar Ran	136.69	41	⇓P		PKPdf	13 21 27.6 +0.6
	baz=136						
X17A	Forest Lakes	136.84	40	⇓P		PKPdf	13 21 28.3 +1.0
	baz=137						
115A	Sonoran Desert	136.90	43	⇓P		PKPdf	13 21 28.3 +0.8
	baz=137						
214A	Organ Pipe Nat	136.93	44	⇑P		PKPdf	13 21 28.3 +0.8
	baz=137						
W18A	Petrified Fore	137.01	38	⇓P		PKPdf	13 21 28.1 +0.5
	baz=137						
V19A	Window Rock	137.03	37	⇑P		PKPdf	13 21 28.9 +1.2
	baz=137						
Y17A	Roosevelt	137.22	41	⇓P		PKPdf	13 21 29.0 +0.9
	baz=137						
X18A	Snowflake	137.26	39	⇑P		PKPdf	13 21 29.0 +1.0
	baz=137						
116A	Eloy	137.34	43	⇑P		PKPdf	13 21 29.2 +0.9
	baz=137						
SDCO	Great Sand Dun	137.60	32	*e*PKPdf		PKPdf	13 21 28.4 -0.2
Y18A	Canyon Day Jun	137.69	40	⇓P		PKPdf	13 21 29.9 +1.1
	baz=138						
Z17A	San Carlos Hig	137.71	41	⇑P		PKPdf	13 21 30.0 +1.0
	baz=138						
X19A	St. Johns	137.74	39	⇑P		PKPdf	13 21 30.0 +1.1
	baz=138						
216A	Three Points,	137.84	43	⇓P		PKPdf	13 21 29.6 +0.4
	baz=138						
117A	Oracle	137.98	42	⇑P		PKPdf	13 21 30.1 +0.7
	baz=138						
Y19A	Nutrioso	138.07	39	⇓P		PKPdf	13 21 30.5 +0.9
	baz=138						
TUC	Tucson	138.11	42	*e*PKIKP		PKPdf	13 21 29.9 +0.2
217A	Green Valley	138.41	43	⇓P		PKPdf	13 21 31.0 +0.8
	baz=138						
118A	Homack Ranch,	138.45	41	⇓P		PKPdf	13 21 31.2 +0.9
	baz=138						
Z19A	T-Link Ranch,	138.49	40	⇑P		PKPdf	13 21 31.3 +0.9
	baz=138						
119A	Ashpeak Ranch,	138.80	41	⇑P		PKPdf	13 21 31.7 +0.8
	baz=139						
218A	Dragoon	138.81	42	⇑P		PKPdf	13 21 32.0 +1.0
	baz=139						
MDV	Middlebury	138.85	354	*e*PKPdf		PKPdf	13 21 30.3 -0.4
JFWS	Jewell Farm	138.93	13	*e*PKIKP		PKPdf	13 21 29.5 -1.4
LAZ	Ladron	139.07	37	*e*PKPdf		PKPdf	13 21 31.5 +0.1
ANMO	Albuquerque	139.09	36	*e*PKIKP		PKPdf	13 21 31.7 +0.3
318A	Bisbee	139.17	43	⇓P		PKPdf	13 21 32.6 +1.0
	baz=139						
219A	White Tail Can	139.32	41	⇓P		PKPdf	13 21 32.6 +0.6
	baz=139						
LPM	Los Pinos Moun	139.44	37	PKPdf		PKPdf	13 21 31.1 -0.9
BNM	Barren Site	139.55	37	*e*PKPpre			13 21 24.7
BNM				*e*PKPdf		PKPdf	13 21 32.1 -0.2
319A	Douglas	139.69	42	⇓P		PKPdf	13 21 33.6 +1.0
	baz=140						
KSU1	Kansas State U	140.54	22	*e*PKPdf		PKPdf	13 21 33.2 -0.7
ACSO	Alum Creek Sta	142.71	5	*e*PKPpre			13 21 31.8
LPIG	La Paz	143.01	53	*i* P		PKPdf	13 21 37.2 -1.6
MVL	Millersville	143.08	357	*e*PKPdf			13 21 25.8
CCM	Cathedral Cave	143.26	17	PKIKP		PKPdf	13 21 34.7 -4.1
CCM	Cathedral Cave	143.26	17	*e*PKPpre		PKPdf	13 21 34.2 -4.6
BLO	Bloomington	143.28	10	*e*PKHKP		PKPdf	13 21 33.8 -5.0
WMOK	Wichita Mounta	143.32	28	*e*PKHKP		PKPdf	13 21 34.2 -4.8
FVM	French Village	143.55	16	*e*PKHKP		PKPdf	13 21 34.2 -5.1
USIN	University of	144.23	12	*e*PKP		PKPdf	13 21 37.9 -2.6
WCI	Wyandotte Cave	144.24	10	*e*PKIKP		PKPdf	13 21 37.5 -3.0
WCI	Wyandotte Cave	144.24	10	*e*PKPpre			13 21 36.7
CPUP	Villa Florida	144.25	214	PKP		PKPdf	13 21 39.5 -1.4
	comp=Z,12nm,0.8s,baz=172,slow=2.9,SNR=24						
CPUP	Villa Florida	144.25	214	PKIKP		PKPdf	13 21 39.5 -1.4
CPUP				pmax	pmax		
	comp=Z,12nm,0.8s						
BDFB	Brasilia	144.40	238	PKP		PKPdf	13 21 40.4 -1.0
	comp=Z,18nm,0.7s,baz=176,slow=4.3,SNR=11						
BDFB				pPKP		pPKPdf	13 21 55.3 -1.6
	comp=Z,21nm,0.6s,baz=156,slow=4.6,SNR=4.5						
BDFB	Brasilia	144.40	238	PKIKP		PKPdf	13 21 40.4 -1.0
BDFB							13 21 55.3
BDFB				pmax	pmax		
	comp=Z,18nm,0.7s						
BDFB				pmax	pmax		
	comp=Z,21nm,0.6s						
TXAR	Lajitas Array	144.69	40	PKP		PKPdf	13 21 40.4 -1.2
	comp=Z,100nm,0.7s,baz=293,slow=1.2,SNR=608						
TXAR				pPKP		pPKPdf	13 21 54.9 -2.2
	comp=Z,52nm,0.7s,baz=236,slow=1.6,SNR=9.1						
TXAR	Lajitas Array	144.69	40	PKIKP		PKPdf	13 21 40.4 -1.2
TXAR							13 21 54.9
TXAR				pmax	pmax		
	comp=Z,100nm,0.7s						
TXAR				pmax	pmax		
	comp=Z,52nm,0.7s						
UTMT	University of	145.51	14	*e*PKPdf		PKPdf	13 21 41.0 -1.8
MIAR	Mount Ida	145.69	22	*e*PKP2		PKPab	13 21 42.4 -1.5
ELN	Prospectdale	145.86	3	*e*PKP		PKPdf	13 21 42.0 -1.4
BLA	Blacksburg	145.89	2	PKP2		PKPab	13 21 42.8 -1.7
BLA	Blacksburg	145.89	2	*e*PKPdf		PKPdf	13 21 42.1 -1.3
WVT	Waverly	145.96	13	PKP2		PKPab	13 21 42.4 -2.4
WVT	Waverly	145.96	13	*e*PKPdf		PKPdf	13 21 42.0 -1.6
JCT	Junction City	146.17	34	*e*PKP2		PKPab	13 21 43.4 -2.4
TZTN	Tazewell	146.30	7	*e*PKPdf		PKPdf	13 21 43.0 -1.1
TKL	Tuckaleechee C	147.15	8	PKIKP		PKPdf	13 21 45.1 -0.5
TKL	Tuckaleechee C	147.15	8	*e*PKPdf		PKPdf	13 21 44.3 -1.3
SWET	Sewanee	147.23	11	*e*PKPdf		PKPdf	13 21 43.8 -1.9
SWET				*e*PKPbc		PKPbc	13 21 46.1 -1.9
LCO	Las Campanas	147.27	193	PKPbc		PKPbc	13 21 48.6 +0.3
CNNC	Cliffs of the	147.88	359	*e*PKPbc		PKPbc	13 21 49.0 -0.8
BBSR	BB Station	147.91	337	PKPdf		PKPdf	13 21 46.0 -0.9
BBSR				*e*PKPbc		PKPbc	13 21 49.2 -0.8
JSC	Jenkinsville	148.76	4	*e*PKIKP		PKPdf	13 21 47.2 -1.1
JSC				*e*			13 21 51.0
GOGA	Godfrey	149.40	8	*e*PKPdf		PKPdf	13 21 48.4 -0.9
GOGA				*e*PKPbc		PKPbc	13 21 52.5 -1.2
KVTX	Kingsville	149.48	35	*e*PKPbc		PKPbc	13 21 54.3 +0.2
COW	Cow Castle Cre	149.69	3	*e*PKPbc		PKPbc	13 21 53.8 -0.7
SFJM	Santa Fe	150.62	52	*i* P		PKPbc	13 21 55.8 -1.3
COLM	Colima	150.79	55	*i* P		PKPbc	13 21 57.6 +0.1
BRAL	Brewton	151.03	15	*e*PKPdf		PKPdf	13 21 51.9 -0.1
BRAL				*e*PKPbc		PKPbc	13 21 57.0 -0.8
ZIIG	Zihuatanejo	153.40	55	*i* P		PKPdf	13 21 47.0 -8.8
PPM	Popocatepetl	154.84	49	*i* PKIKP		PKPdf	13 21 49.9 -7.9
OXX	Oaxaca	157.47	50	*i* P		PKPdf	13 21 60.0 -1.3
LPAZ	La Paz	158.17	208	PKP		PKPdf	13 22 02.8 +0.6
	comp=Z,5.1nm,1.0s,baz=33,slow=2.7,SNR=12						
LPAZ	La Paz	158.17	208	PKIKP		PKPdf	13 22 02.8 +0.6
LPAZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ROSC	El Rosal	175.19	293	PKP		PKPdf	13 22 16.4 +1.2
	comp=Z,6.9nm,0.3s,baz=100,slow=23,SNR=4.0						
OTAV	Otavalo	177.27	187	*e*PKPdf		PKPdf	13 22 15.3 -0.4

BJI **12** *13:07:29.9, 438S×10097E, h11km, mB5.3, mb4.9*
IDC **12** *13:07:36.8±0.7, 352S×10058E, h0km, mb4.6/15, mb1 4.7/16, mb1mx4.6/22, mbtmp4.6/16, ML4.6/1, Error ellipse: s-maj=24.0km s-min=16.0km az=63.0*
ISCJB **12** *13:07:39.4±0.6, 358S±009×10076E±009, h33km, mb4.8/25, Error ellipse: s-maj=14.3km s-min=10.9km az=43.2*
MOS **12** *13:07:40.4±1.3, 344S×10061E, h33km, mb5.1/3, Error ellipse: s-maj=23.0km s-min=12.3km az=102.2*
NEIC **12** *13:07:41.9±0.5, 353S×10075E, h35km, mb5.0/4, Error ellipse: s-maj=15.5km s-min=10.7km az=48.0*

ISC 12 13:07:41.6±0.6, 360S±009×10077E±009, h35km, (h17km±6.9km: pP-P), n40, σ0.9 97/35, mb4.8/25, 1C, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	18.16	58	*e*Pn		Pn		13 11 51.0	0.0
KAPI	Kappang	18.98	95	P		Pn		13 12 00.7	-0.4
	2.0nm,0.3s,baz=256,slow=8.6,SNR=4.7								
KAPI	Kappang	18.98	95	*e*P		Pn		13 12 00.1	-1.0
CMAR	Chiang Mai Arr	21.99	355	P		P		13 12 30.9	-1.9
	10nm,0.8s,mb4.3,baz=185,slow=11,SNR=8.4								
WRA	Warramunga Arr	36.54	119	P		P		13 14 45.0	+0.9
	7.7nm,0.8s,mb4.6,baz=283,slow=7.7,SNR=10								
WRAB	Tennant Creek	36.54	119	*e*P		P		13 14 42.1	-2.1
ASAR	Alice Springs	37.70	125	P		P		13 14 57.5	+3.5
	3.0nm,0.4s,mb4.4,baz=299,slow=7.8,SNR=9.4								
XAN	Xi'an	38.22	11	P		P		13 14 57.5	-0.6
XAN				AP		pP		13 15 06.6	-1.7
XAN				XP		sP		13 15 11.1	-1.4
XAN				AMB		AMB			
	comp=Z,46nm,1.0s,mb5.2								
LZH	Lanzhou	39.58	4	*e*P		P		13 15 10.3	+0.8
LZH				AP		pP		13 15 13.6	-6.2
LZH				XP		sP		13 15 15.4	-8.6
LZH				AMB		AMB			
	comp=Z,44nm,1.0s,mb5.1								
LZH				AMB		AMB			
	comp=Z,168nm,4.7s								
GTA	Gaotai	42.80	359	⇑P		P		13 15 36.6	+0.6
GTA				AP		pP		13 15 40.4	-5.9
GTA				XP		sP		13 15 41.8	-8.7
GTA				AMB		AMB			
	comp=Z,29nm,1.3s,mb4.8								
KSRS	Korea Array	48.01	29	P		P		13 16 17.8	+0.5
	comp=Z,19nm,1.0s,mb5.1,baz=218,slow=8.0,SNR=24								
WMQ	Urumqi	48.65	347	P		P		13 16 23.2	+1.2
WMQ				AP		pP		13 16 28.5	-4.0
WMQ				XP		sP		13 16 34.0	-2.7
WMQ				AMB		AMB			
	comp=Z,43nm,1.1s,mb5.4								
SONM	Songino Array	51.45	5	P		P		13 16 44.6	+1.3
	comp=Z,16nm,0.9s,mb5.0,baz=189,slow=8.5,SNR=11								
ULN	Ulaanbaatar	51.54	5	*e*P		P		13 16 44.9	+1.0
ULN				pmax		pmax			
	comp=Z,22nm,1.1s,mb5.0								
ULN	Ulaanbaatar	51.54	5	*e*P		P		13 16 44.9	+1.0
	comp=Z,22nm,1.1s,mb5.0								
TKM2	Tokmak 2	51.59	337	*e*P		P		13 16 45.0	+0.6
TKM2				pmax		pmax			
	comp=Z,5.0nm,0.5s,mb4.7								
TKM2	Tokmak 2	51.59	337	*e*P		P		13 16 45.0	+0.5
	comp=Z,4.7nm,0.5s,mb4.7								
EKS2	Erkin-Say	52.13	335	*e*P		P		13 16 49.1	+0.8
	comp=Z,13nm,0.8s,mb4.9								
MKAR	Makanchi Array	52.77	344	P		P		13 16 53.6	+0.6
	comp=Z,1.9nm,0.4s,mb4.4,baz=155,slow=8.9,SNR=11								
MJAR	Matsushiro Arr	53.04	38	P		P		13 16 55.1	-0.2
	comp=Z,7.6nm,1.1s,mb4.6,baz=220,slow=7.5,SNR=6.6								
KURK	Kurchatov	57.35	343	P		P		13 17 25.6	-0.5
	comp=Z,11nm,0.9s,mb4.9,baz=160,slow=7.5,SNR=5.2								
ZAA0	Zalesovo Array	58.87	349	*e*P		P		13 17 36.0	-0.6
ZALV	Zalesovo Beam	58.87	349	P		P		13 17 36.6	0.0
	comp=Z,36nm,1.0s,mb5.3,baz=170,slow=4.5,SNR=12								
BVAR	Borovoye Array	61.94	340	P		P		13 17 56.9	-0.8
	comp=Z,6.3nm,0.7s,mb4.9,baz=138,slow=9.6,SNR=9.6								
YSS	Yuzh-Sakhalins	62.43	31	*e*P		P		13 18 01.0	-0.1
YSS				*e*		pP		13 18 11.1	-0.7
YSS	Yuzh-Sakhalins	62.43	31	*e*P		P		13 18 01.1	0.0
	comp=Z,26nm,0.9s,mb5.4								
MAW	Mawson	68.94	195	P		P		13 18 44.6	+1.9
	comp=Z,24nm,0.9s,mb4.1,baz=61,slow=4.6,SNR=3.8								
PETK	Petropavlovsk-	73.82	32	P		P		13 19 11.9	-0.5
	comp=Z,1.1nm,0.7s,mb3.9,baz=306,slow=3.0,SNR=3.0								
BOSA	Boshof	75.57	242	P		P		13 19 21.5	-1.6
	comp=Z,4.3nm,1.0s,mb4.3,baz=94,slow=8.9,SNR=3.6								
BOSA	Boshof	75.57	242	P		P		13 19 21.5	-1.6
OBN	Obninsk	78.55	328	*e*P		P		13 19 38.5	-0.8
OBN				pmax		pmax			
	comp=Z,10.0nm,0.7s,mb4.8								
ARCES	ARCESS Array B	88.23	340	P		P		13 20 28.5	-0.2
	comp=Z,4.4nm,1.0s,mb4.7,baz=102,slow=6.5,SNR=3.7								
ARCES	ARCESS Array B	88.23	340	P		P		13 20 28.5	-0.2
GERES	GERESS Array B	90.75	319	P		P		13 20 39.9	-1.1
	comp=Z,0.6nm,0.4s,mb4.3,baz=98,slow=5.4,SNR=3.5								
CLL	Collm	91.38	321	*e*P		P		13 20 44.0	+0.1
	comp=Z,5.0nm,0.9s,mb4.8								
NVAR	Mina Array Bea	130.33	40	PKP		PKPdf		13 26 50.9	+2.2
	comp=Z,0.8nm,0.7s,baz=267,slow=3.6,SNR=3.9								
PDAR	Pinedale Array	132.57	30	PKP		PKPdf		13 26 53.6	+0.8
	comp=Z,0.4nm,0.6s,baz=302,slow=2.0,SNR=2.1								
TXAR	Lajitas Array	145.47	40	PKPbc		PKPbc		13 27 18.1	+1.4
	comp=Z,14nm,0.7s,baz=265,slow=0.7,SNR=44								
MIAR	Mount Ida	146.44	22	*e*PKP2		PKPab		13 27 19.5	-0.9
JCT	Junction City	146.94	34	*e*PKP2		PKPab		13 27 20.1	-2.4

IDC 12 13:12:08.1±4.4, 392S×10176E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/18, mbtmp4.0/3, Error ellipse: s-maj=222.6km s-min=42.0km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	35.52	119	P		P		13 19 07.3	+0.2
	0.9nm,0.3s,baz=301,slow=10,SNR=17								
ASAR	Alice Springs	36.71	125	P		P		13 19 17.3	0.0
	1.3nm,0.8s,baz=305,slow=8.1,SNR=5.0								
STKA	Stephens Creek	46.57	131	P		P		13 20 37.4	-0.5
	3.1nm,0.8s,baz=333,slow=11,SNR=3.0								
PDAR	Pinedale Array	132.35	31	PKP		PKPdf		13 31 24.4	-0.2
	0.3nm,0.5s,baz=295,slow=2.6,SNR=3.3								
TXAR	Lajitas Array	145.07	41	PKPbc		PKPbc		13 31 47.2	-0.5
	0.6nm,0.5s,baz=259,slow=0.9,SNR=5.5								

IDC 12 13:14:10.8±3.7, 364S×10073E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/20, mbtmp3.4/4, Error ellipse: s-maj=153.8km s-min=24.5km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.56	119	P		P		13 21 17.7	-0.9
	0.3nm,0.4s,baz=305,slow=8.9,SNR=3.8								
ASAR	Alice Springs	37.72	125	P		P		13 21 28.3	-0.1
	0.6nm,1.0s,baz=298,slow=7.8,SNR=5.7								
SONM	Songino Array	51.49	5	P		P		13 23 19.4	+1.4
	0.4nm,0.5s,baz=182,slow=8.7,SNR=2.7								
KURK	Kurchatov	57.37	343	P		P		13 23 58.7	-2.1
	0.1nm,0.3s,baz=166,slow=6.1,SNR=4.4								
TXAR	Lajitas Array	145.52	40	PKPbc		PKPbc		13 33 52.5	+0.8
	0.2nm,0.4s,baz=31,slow=2.1,SNR=2.7								

IDC 12 13:14:31.9±4.0, 434S×10097E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.6/4, Error ellipse: s-maj=145.7km s-min=65.1km az=64.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	22.74	355	P		P		13 19 35.5	-0.2
	0.8nm,0.6s,baz=184,slow=8.0,SNR=4.2								
SONM	Songino Array	52.17	5	P		P		13 23 44.2	0.0
	0.5nm,0.5s,baz=184,slow=8.9,SNR=3.6								
MKAR	Makanchi Array	53.53	344	P		P		13 23 54.5	+0.2
	1.0nm,0.7s,baz=142,slow=7.3,SNR=4.4								
KURK	Kurchatov	58.11	343	P		P		13 24 26.3	-0.7
	0.2nm,0.3s,baz=144,slow=6.5,SNR=2.3								
TXAR	Lajitas Array	145.90	40	PKPbc		PKPbc		13 34 13.8	-0.3
	0.3nm,0.4s,baz=197,slow=3.9,SNR=3.7								

IDC 12 13:15:23.3±3.5, 368S×10024E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.8/20, mbtmp3.9/6, Error ellipse: s-maj=152.1km s-min=19.8km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.96	119	P		P		13 22 34.4	-0.1
	0.6nm,0.4s,baz=304,slow=8.6,SNR=6.9								
ASAR	Alice Springs	38.09	125	P		P		13 22 44.0	-0.1
	1.2nm,0.5s,baz=299,slow=7.6,SNR=13								
SONM	Songino Array	51.59	5	P		P		13 24 31.4	+0.2
	2.3nm,0.6s,baz=192,slow=9.2,SNR=9.6								
MKAR	Makanchi Array	52.70	345	P		P		13 24 40.3	+0.7
	0.6nm,0.6s,baz=138,slow=7.7,SNR=2.8								
KURK	Kurchatov	57.28	344	P		P		13 25 11.8	-0.8
	0.3nm,0.5s,baz=156,slow=7.0,SNR=2.4								
ZALV	Zalesovo Beam	58.86	349	P		P		13 25 22.9	-0.7
	0.9nm,0.3s,baz=183,slow=5.2,SNR=1.9								
TXAR	Lajitas Array	145.87	39	PKPbc		PKPbc		13 35 05.5	+0.1
	0.9nm,0.6s,baz=281,slow=0.7,SNR=6.8								

BJI **12** *13:17:11.2, 376S×10075E, h26km, mB5.8, mb5.3, Ms5.8, Msz5.8*
ISCJB **12** *13:17:15.0±0.2, 333S±003×10067E±003, h25km, mb5.2/118, Error ellipse: s-maj=5.1km s-min=3.4km az=36.5*
IDC **12** *13:17:16.3±2.2, 330S×10075E, h23km±13km, mb4.9/34, mb1 4.9/34, mb1mx4.9/34, mbtmp4.8/34, Error ellipse: s-maj=13.8km s-min=8.6km az=45.0*
MOS **12** *13:17:16.4±1.1, 317S×10084E, h33km, mb5.5/42, Error ellipse: s-maj=10.1km s-min=5.6km az=112.1*
DJA **12** *13:17:19, 343S×10049E, h42km, MLv5.6/12*
NEIC **12** *13:17:19.1±1.1, 326S×10072E, h43km±9km, mb5.2/34, Error ellipse: s-maj=6.6km s-min=3.9km az=49.0*

ISC 12 13:17:17.0±0.2, 336S±003×10064E±003, h26km, h26km±1.3km: pP-P, n324, σ0.9 96/293, mb5.2/118, 21C-23D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RGRI	Rengat	3.43	30	P		Pn		13 18 10.6	+1.8
	0.0nm,0.0s								
KLI	Kotabumi	4.47	110	P		Pn		13 18 23.3	+0.2
	0.0nm,0.0s								
BLSI	Bandar Lampung	5.01	114	P		Pn		13 18 32.0	+1.5
	0.0nm,0.0s								
PPBI	Pangkal Pinang	5.62	78	P		Pn		13 18 40.9	+2.0
	0.0nm,0.0s								
KGM	Kluang	5.97	27	⇓P		Pn		13 18 45.0	+1.2
MYKOM	Kota Tinggi	6.04	32	⇓P		Pn		13 18 45.6	+1.0
FRIM	Kepong	6.62	9	⇑P		Pn		13 18 54.8	+2.1
DBJI	Dramaga	6.87	118	P		Pn		13 18 57.4	+1.3
	0.0nm,0.0s								
CBJI	Citeko	6.90	116	P		Pn		13 19 01.5	+5.0
	0.0nm,0.0s								
SKJI	Sukabumi	6.92	122	P		Pn		13 18 57.1	+0.3
	0.0nm,0.0s								
LEM	Lembang	7.76	117	P		Pn		13 19 10.0	+1.7
	0.0nm,0.0s								
IPM	Ipoh	7.79	3	⇑P		Pn		13 19 11.3	+2.5
KTGM	Kuala Trenggan	8.98	16	⇓P		Pn		13 19 26.3	+1.2
KSM	Kuching	10.79	64	⇑P		Pn		13 19 53.7	+3.8
KSM	Kuching	10.79	64	P		Pn		13 19 51.1	+1.2
SJI	Sawahan	11.90	112	P		Pn		13 20 05.5	+0.4
	0.0nm,0.0s								
SBUM	Sibu	12.93	64	⇓P		Pn		13 20 22.1	+2.9
BBKI	Banjar Baru	14.18	91	P		Pn		13 20 40.1	+3.8
	0.0nm,0.0s								
MTNI	Mataram	16.31	109	P		Pn		13 21 00.6	-3.8
	0.0nm,0.0s								
SMKI	Samarinda	16.81	80	P		Pn		13 21 14.0	+3.2
	0.0nm,0.0s								
KKM	Kota Kinabalu	18.14	59	⇑P		Pn		13 21 27.6	+0.4
KKM	Kota Kinabalu	18.14	59	*e*P		Pn		13 21 28.0	+0.7
SDKM	Sandakan	18.80	62	⇓P		Pn		13 21 35.4	+0.2
TSM	Tawau	18.82	66	⇓P		Pn		13 21 36.2	+0.6
KDM	Kudat	19.12	58	⇓P		Pn		13 21 38.6	-0.5
KAPI	Kappang	19.13	96	P		Pn		13 21 37.8	-1.5
	541nm,0.8s,SNR=16								
KAPI	Kappang	19.13	96	P		Pn		13 21 37.7	-1.7
	SNR=10								
KAPI	Kappang	19.13	96	*e*P		Pn		13 21 37.0	-2.4
	143nm,1.1s								
MYLDM	Lahad Datu	19.75	65	⇑P		Pn		13 21 46.2	-0.6
CMAR	Chiang Mai Arr	21.74	356	P		P		13 22 04.0	-2.5
	36nm,0.9s,mb4.8,baz=184,slow=9.9,SNR=48								
CMAR				PcP		PcP		13 26 07.5	+0.6
	5.3nm,0.8s,baz=216,slow=3.3,SNR=10								
CHTO	Chiang Mai	22.09	356	*e*P		P		13 22 06.2	-4

WRA PcP PcP 13 26 44.8 -0.1
comp=Z,4.4nm,0.7s,baz=304,slow=2.7,SNR=4.8
WRA S **S** **13 30 03.9 -1.4**
comp=Z,3.5nm,0.8s,baz=296,slow=16,SNR=6.2
WRA Warramunga Arr 36.77 119 *i* P **P** **13 24 21.7 -1.0**
WRA pmax pmax
comp=Z,14nm,0.6s
WRAB Tennant Creek 36.78 119 P **P** **13 24 22.9 +0.1**
comp=Z,279nm,0.4s,mb6.4,SNR=48
WRAB Tennant Creek 36.78 119 *e*P **P** **13 24 22.0 -0.8**
WB2 Warramunga Arr 36.78 119 *e*P **P** **13 24 21.9 -0.9**
WB2 *e*PCP PcP 13 26 44.8 -0.1
WB2 *e*S **S** **13 30 02.5 -3.0**
FORT Forrest 37.60 139 *e*P **P** **13 24 30.8 +1.2**
comp=Z,18nm,0.7s,mb4.9
ASAR Alice Springs 37.95 125 P **P** **13 24 32.4 -0.3**
comp=Z,34nm,0.5s,mb5.3,baz=299,slow=8.2,SNR=72
ASAR PcP PcP 13 26 48.4 0.0
comp=Z,4.4nm,0.8s,baz=320,slow=2.9,SNR=4.5
ASAR S **S** **13 30 22.6 -0.6**
comp=Z,1.8nm,0.7s,baz=296,slow=14,SNR=5.1
XAN Xi'an 38.01 11 P **P** **13 24 31.7 -1.2**
XAN AP pP 13 24 40.0 -0.9
XAN XP sP 13 24 44.1 0.0
XAN AMB AMB
comp=Z,94nm,0.9s,mb5.5
PTH Pithoragarh 38.12 330 *e*P **P** **13 24 34.9 +0.9**
LZH Lanzhou 39.35 4 *e*P **P** **13 24 44.3 +0.1**
LZH AP pP 13 24 47.3 -4.9
LZH PCP PcP 13 26 53.6 +1.2
LZH AMB AMB
comp=Z,54nm,1.0s,mb5.2
DDI Dehra Dun 39.84 329 *ex* **P** **13 24 44.6 -3.8**
SMLA Simla 40.94 329 *i* x **P** **13 24 57.5 0.0**
GTA Gaotai 42.56 359 ⇓P **P** **13 25 10.6 0.0**
GTA AP pP 13 25 16.6 -2.0
GTA XP sP 13 25 19.6 -2.2
GTA AMB AMB
comp=Z,27nm,1.1s,mb4.9
THN Thein Dam 42.73 328 *ex* **P** **13 25 10.7 -1.4**
HHC Hu-ho-hao-te 45.11 12 ⇓P **P** **13 25 31.7 +0.6**
HHC S **S** **13 32 11.1 +2.3**
HHC AMB AMB
comp=Z,70nm,1.0s,mb5.5
BJT Baijiatuan 45.46 17 *e*P **P** **13 25 33.8 0.0**
BJT pmax pmax
comp=Z,19nm,0.6s
BJT Baijiatuan 45.46 17 *e*P **P** **13 25 33.8 0.0**
comp=Z,19nm,0.6s,mb5.1
BJI Beijing 45.48 17 P **P** **13 25 33.7 -0.3**
BJI AMB AMB
comp=Z,40nm,1.1s,mb5.2
DL2 Dalian 46.30 23 P **P** **13 25 40.3 -0.2**
DL2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
GUMO Guam 47.00 68 P **P** **13 25 42.3 -4.2**
comp=Z,39nm,0.6s,mb5.5,baz=180,slow=9.8,SNR=6.7
CTA Charters Tower 47.45 114 *e*P **P** **13 25 49.6 -0.3**
comp=Z,17nm,0.7s,mb5.1
CTA Charters Tower 47.45 114 P **P** **13 25 49.4 -0.5**
comp=Z,20nm,0.6s,mb5.2,baz=289,slow=9.3,SNR=38
CTA PcP PcP 13 27 19.8 -0.4
comp=Z,2.6nm,0.5s,baz=264,slow=9.2,SNR=1.9
CTA Charters Tower 47.45 114 *e*P **P** **13 25 49.6 -0.3**
CTA pmax pmax
comp=Z,17nm,0.7s
CTAO Charters Tower 47.45 114 *e*P **P** **13 25 49.4 -0.5**
CTAO pmax pmax
comp=Z,21nm,0.7s,mb5.2
CTAO Charters Tower 47.45 114 *e*P **P** **13 25 49.4 -0.6**
comp=Z,21nm,0.7s,mb5.2
STKA Stephens Creek 47.78 131 *e*P **P** **13 25 52.4 +0.1**
comp=Z,22nm,0.6s,mb5.4
STKA Stephens Creek 47.78 131 P **P** **13 25 52.5 +0.2**
comp=Z,26nm,0.6s,mb5.4,baz=305,slow=8.1,SNR=68
KSRS Korea Array 47.87 29 P **P** **13 25 52.1 -0.7**
comp=Z,50nm,1.0s,mb5.5,baz=221,slow=8.2,SNR=119
KSRS PcP PcP 13 27 20.6 -0.7
comp=Z,4.3nm,0.9s,baz=218,slow=4.8,SNR=4.2
KSH Kashi 48.32 334 *e*P **P** **13 25 57.1 +0.8**
KSH *e*AP pP 13 26 01.0 -3.4
KSH *e*XP sP 13 26 04.2 -3.4
KSH *e*PCP PcP 13 27 24.1 +1.3
KSH *e*PP PP 13 27 48.0 -1.1
KSH *e*SCP ScP 13 31 17.0 +1.1
KSH *e*PCS PcS 13 31 18.1 -0.5
KSH *e*S **S** **13 32 54.6 -0.2**
KSH *e*SCS ScS 13 35 46.1 -1.5
KSH *e*SS SS 13 36 18.0 -6.8
WMQ Urumqi 48.38 347 ⇓*i*P **P** **13 25 57.4 +0.7**
WMQ AP pP 13 26 04.5 -0.3
WMQ XP sP 13 26 13.0 +5.0
WMQ AMB AMB
comp=Z,79nm,0.8s,mb5.8
SMDO Samad 49.13 304 P **P** **13 26 03.8 +1.0**
SNR=5.7
SNY Shenyang 49.57 22 ⇑P **P** **13 26 04.7 -1.1**
SNY AMB AMB
comp=Z,52nm,0.9s,mb5.6
KZA Kyzart 50.76 336 P **P** **13 26 13.0 -1.8**
SNR=15
UCH Uchtor 51.19 335 P **P** **13 26 18.5 +0.5**
SNR=8.2
SONM Songino Array 51.22 5 P **P** **13 26 19.0 +0.8**
comp=Z,151nm,0.8s,mb6.0,baz=186,slow=8.6,SNR=395
SONM PcP PcP 13 27 33.3 +0.1
comp=Z,9.7nm,0.7s,baz=192,slow=2.7,SNR=4.3
SONM ScP ScP 13 31 29.8 +1.7
comp=Z,0.8nm,0.5s,baz=166,slow=4.4,SNR=3.1
SONM Songino Array 51.22 5 P **P** **13 26 19.0 +0.8**
SONM 13 27 33.3
ULN Ulaanbaatar 51.31 6 ⇑P **P** **13 26 19.2 +0.3**
SNR=41
ULN Ulaanbaatar 51.31 6 *e*P **P** **13 26 19.3 +0.4**
ULN pmax pmax
comp=Z,63nm,0.9s,mb5.5
ULN Ulaanbaatar 51.31 6 *e*P **P** **13 26 19.3 +0.4**
comp=Z,63nm,0.9s,mb5.5
TKM2 Tokmak 2 51.32 337 P **P** **13 26 19.6 +0.6**
SNR=78
KBK Karagaybulak 51.36 336 P **P** **13 26 20.5 +1.1**
SNR=12
AML Almayashu 51.45 334 P **P** **13 26 20.9 +0.9**
SNR=8.9
AML Almayashu 51.45 334 *e*P **P** **13 26 19.9 -0.1**
AAK Ala-Archa 51.53 335 P **P** **13 26 21.3 +0.7**
SNR=7.7
FRU Bishkek 51.64 336 *i* P **P** **13 26 22.0 +0.6**
CHMS Chumysh 51.73 336 P **P** **13 26 22.1 +0.1**
SNR=12
EKS2 Erkin-Say 51.85 335 P **P** **13 26 23.9 +0.9**
SNR=55
EKS2 Erkin-Say 51.85 335 *e*P **P** **13 26 23.5 +0.5**
comp=Z,47nm,0.8s,mb5.5
CN2 Changchun 51.97 23 *e*P **P** **13 26 22.6 -1.3**
CN2 *e*S **S** **13 33 44.1 -1.4**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
CN2 AMB AMB
comp=Z,19μm,13.0s
USP Ospenovka 52.05 336 P **P** **13 26 24.5 +0.1**
SNR=30
MKAR Makanchi Array 52.50 344 P **P** **13 26 27.5 -0.2**
comp=Z,38nm,0.7s,mb5.4,baz=148,slow=7.8,SNR=156
MKAR Makanchi Array 52.50 344 ⇑*e*P **P** **13 26 27.5 -0.2**
MKAR Makanchi Array 52.50 344 P **P** **13 26 27.5 -0.2**
MAJO Matsushiro 52.93 38 *e*P **P** **13 26 29.5 -1.6**
MAJO pmax pmax
comp=Z,15nm,1.0s,mb4.9
MAJO Matsushiro 52.93 38 *e*P **P** **13 26 29.5 -1.7**
comp=Z,15nm,1.0s,mb4.9
MAT Matsushiro 52.93 38 P **P** **13 26 30.4 -0.7**
MJAR Matsushiro Arr 52.93 38 P **P** **13 26 29.9 -1.3**
comp=Z,18nm,0.9s,mb5.0,baz=217,slow=7.4,SNR=42
TOO Toolangi 53.30 136 *e*P **P** **13 26 42.3 +8.4**
ZAK Zakamensk 53.57 2 ⇑*i*P **P** **13 26 35.3 -0.3**
ZAK *e* pP 13 26 42.9 -0.9
ZAK *e* 13 27 41.8
ZAK pmax pmax
comp=Z,14nm,1.0s,mb4.8
ZAK pmax pmax
comp=Z,13nm,1.3s,mb4.7
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
VLA Vladivostok 54.18 28*c i*P **P** **13 26 38.2 -1.9**
VLA pmax pmax
comp=Z,51nm,1.1s,mb5.4
MDJ Mudanjiang 54.33 25 P **P** **13 26 40.2 -1.0**
MDJ AP pP 13 26 49.3 -0.1
MDJ XP sP 13 26 53.2 +0.6
MDJ S **S** **13 34 15.9 -1.6**
MDJ AMB AMB
comp=Z,28nm,0.8s,mb5.2
MDJ Mudanjiang 54.33 25 *e*P **P** **13 26 40.6 -0.6**
comp=Z,23nm,0.9s,mb5.1
OPO Ambohidratompo 54.38 250 P **P** **13 26 43.0 +0.9**
comp=Z,4.6nm,0.8s,mb4.5,baz=86,slow=8.4,SNR=6.9
MOY Mondy 54.81 0 *e*P **P** **13 26 43.9 -0.7**
MOY pmax pmax
comp=Z,57nm,1.9s,mb5.3
TLY Talaya 54.88 2 P **P** **13 26 45.3 +0.2**
comp=Z,183nm,0.9s,mb6.1,SNR=7.5
TLY Talaya 54.88 2 ⇑P **P** **13 26 45.2 +0.1**
SNR=12
TLY Talaya 54.88 2 *e*P **P** **13 26 45.4 +0.3**
TLY *e* 13 27 00.8
TLY pmax pmax
comp=Z,38nm,1.1s,mb5.3
TLY Talaya 54.88 2 *i* P **P** **13 26 44.5 -0.6**
HIA Hailar 54.97 15 *e*P **P** **13 26 44.7 -1.1**
HIA pmax pmax
comp=Z,31nm,1.1s
HIA Hailar 54.97 15 *e*P **P** **13 26 44.7 -1.0**
comp=Z,31nm,1.1s,mb5.2
ARMA Armidale 55.10 125 *e*P **P** **13 26 48.3 +1.1**
CNB Canberra Magne 55.11 131 *e*P **P** **13 26 47.7 +0.6**
IRK Irkutsk 55.47 3 ⇓*i*P **P** **13 26 49.3 0.0**
IRK *e* 13 27 44.7
IRK pmax pmax
comp=Z,69nm,2.2s,mb5.3
RIV Riverview 55.90 129 *e*P **P** **13 26 52.7 -0.2**
ABKT Ailbek 56.89 320 P **P** **13 26 59.2 -0.6**
comp=Z,165nm,1.0s,mb6.0,SNR=9.1
ABKT Ailbek 56.89 320 P **P** **13 26 59.8 0.0**
comp=Z,165nm,1.0s,mb6.0,SNR=9.1
ABKT Ailbek 56.89 320 P **P** **13 26 59.4 -0.4**
comp=Z,165nm,1.0s,mb6.0,SNR=9.1
KURK Kurchatov 57.08 344 P **P** **13 27 00.1 -0.7**
comp=Z,411nm,1.0s,mb6.4,SNR=51
KURK Kurchatov 57.08 344 ⇓P **P** **13 27 01.1 +0.2**
SNR=17
KURK Kurchatov 57.08 344 P **P** **13 26 60.0 -0.9**
comp=Z,34nm,0.9s,mb5.4,baz=162,slow=6.7,SNR=82
KURK PcP PcP 13 27 55.0 -0.5
comp=Z,5.5nm,0.7s,baz=168,slow=3.1,SNR=4.6
KURK Kurchatov 57.08 344 *e*P **P** **13 27 00.2 -0.6**
KURK *e* pP 13 27 08.8 -0.3
KURK pmax pmax
comp=Z,70nm,0.9s,mb5.7
KURK Kurchatov 57.08 344 *e*P **P** **13 27 00.2 -0.6**
comp=Z,70nm,0.9s,mb5.7
KURK *e* pP 13 27 08.8 -0.2
ZAA0 Zalesovo Array 58.61 349 *e*P **P** **13 27 10.8 -0.8**
ZAA0 *e* pP 13 27 19.1 -0.7
ZALV Zalesovo Beam 58.61 349 P **P** **13 27 11.0 -0.5**
comp=Z,85nm,0.8s,mb5.8,baz=170,slow=4.5,SNR=118
KLR Kul'dur 58.91 23 *e*P **P** **13 27 09.2 -4.5**
KRAR Krasnoyarsk 59.51 355 *e*P **P** **13 27 15.7 -2.0**
KRAR pmax pmax
comp=Z,73nm,1.1s,mb5.6
NVS Novosibirsk 59.76 348 *i* P **P** **13 27 17.9 -1.6**
NVS pmax pmax
comp=N,25nm,1.1s
NVS pmax pmax
comp=E,16nm,1.1s
NVS pmax pmax
comp=Z,39nm,1.1s,mb5.3
RDF Al-Radifah 60.16 306 *e*P **P** **13 27 21.7 -1.1**
baz=306
RDF AMb AMB 13 27 31.4
comp=Z,57nm,1.4s,mb5.4,baz=306
UMR Umm Al-Rimmam 60.27 307 *e*P **P** **13 27 22.7 -0.8**
baz=307
UMR AMb AMB 13 27 23.9
comp=Z,68nm,0.8s,mb5.7,baz=307
NAY Al-Naaiem 60.53 306 *e*P **P** **13 27 24.1 -1.1**
baz=306
NAY AMb AMB 13 27 25.7
comp=Z,33nm,1.0s,mb5.4,baz=306
RST Umm Al-Ruwaisa 60.83 306 *e*P **P** **13 27 26.1 -1.2**
baz=306
RST AMb AMB 13 27 27.6
comp=Z,42nm,0.8s,mb5.6,baz=306
BVAR Borovoye Array 61.67 340 P **P** **13 27 31.4 -1.1**
comp=Z,22nm,0.7s,mb5.4,baz=149,slow=8.5,SNR=92
BRVK Borovoye 61.73 340 P **P** **13 27 31.7 -1.2**
comp=Z,159nm,0.6s,mb6.3,SNR=10
BRVK Borovoye 61.73 340 ⇑P **P** **13 27 32.9 0.0**
SNR=9.1
BRVK Borovoye 61.73 340 *e*P **P** **13 27 31.5 -1.4**
BRVK pmax pmax
comp=Z,31nm,1.0s,mb5.4
BRVK Borovoye 61.73 340 *e*P **P** **13 27 31.5 -1.5**
comp=Z,31nm,1.0s,mb5.4
BOD Bodaibo 61.92 8 ⇑*i*P **P** **13 27 33.5 -0.6**
BOD *e* pP 13 27 41.5 -0.9
BOD pmax pmax
comp=Z,28nm,0.9s,mb5.4
BOD pmax pmax
comp=Z,24nm,1.1s,mb5.2
YSS Yuzh-Sakhalins 62.29 31 *e*P **P** **13 27 36.2 -0.6**
YSS *e* pP 13 27 44.5 -0.7
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 62.29 31 *e*P **P** **13 27 36.1 -0.7**
comp=Z,53nm,1.0s,mb5.6
YSS *e* pP 13 27 44.3 -0.8
CLNS Chul'man 63.15 15 *e*P **P** **13 27 34.7 -7.6**
CLNS pmax pmax
comp=N,14nm,0.9s
CLNS pmax pmax
comp=Z,21nm,1.0s,mb5.2
CLNS pmax pmax
comp=E,16nm,1.0s
CASY Casey 63.19 176 *e*P **P** **13 27 50.6 +8.1**
KMBO Kilima Mbogo 63.37 270 P **P** **13 27 45.4 +0.7**
comp=E,0.9nm,0.3s,mb4.4,baz=39,slow=21,SNR=4.7
AKTK Aktyubinsk 64.84 331 P **P** **13 27 52.5 -1.1**
AKTO Aktyubinsk 64.84 331 P **P** **13 27 52.5 -1.1**
comp=E,13nm,0.9s,mb5.0,baz=136,slow=7.3,SNR=25
DZM Mont Dzumac 66.34 113 *e*P **P** **13 28 04.0 0.0**
GNI Garni 66.94 316 P **P** **13 28 07.0 -0.3**
comp=E,2.7nm,0.3s,mb4.7,baz=320,slow=17,SNR=2.2
GNI Garni 66.94 316 *e*P **P** **13 28 07.9 +0.6**
GNI pmax pmax
comp=Z,15nm,1.0s
SVE Sverdlovsk 68.17 338 ⇓*e*P **P** **13 28 14.7 0.0**
SVE pmax pmax
comp=Z,60nm,1.0s,mb5.6
ARU Arti 68.69 336 P **P** **13 28 17.7 -0.3**
comp=Z,133nm,1.0s,mb5.8,SNR=6.5
ARU Arti 68.69 336*c i*P **P** **13 28 16.9 -1.1**
ARU *e*S S 13 37 17.5 -1.9
ARU pmax pmax
comp=Z,33nm,1.2s,mb5.1
ARU Arti 68.69 336 *e*P **P** **13 28 17.1 -0.9**
YAK Yakutsk 68.89 14 *d i*P **P** **13 28 17.5 -1.6**
YAK pmax pmax
comp=Z,148nm,1.2s,mb5.8
YAK Yakutsk 68.89 14 *e*P **P** **13 28 17.0 -2.1**
YAK *e* 13 28 35.7
MAW Mawson 69.14 195 P **P** **13 28 21.4 +0.7**
comp=Z,1.9nm,0.7s,mb4.1,baz=48,slow=6.9,SNR=8.6
ASF Jabal al Asfar 69.89 306 P **P** **13 28 26.9 +0.9**
comp=Z,7.9nm,0.9s,mb4.7,baz=348,slow=5.5,SNR=9.4
KIV Kislovodsk 69.98 319 ⇑*e*P **P** **13 28 26.0 -0.3**
KIV pmax pmax
comp=Z,30nm,1.1s,mb5.1
KIV Kislovodsk 69.98 319 *e*P **P** **13 28 26.1 -0.2**
MALT Malatya 70.72 312 *e*P **P** **13 28 29.4 -1.5**
MALT pmax pmax
comp=Z,14nm,1.1s,mb4.8
MALT Malatya 70.72 312 *e*P **P** **13 28 29.4 -1.5**
comp=Z,14nm,1.1s,mb4.8
EIL Elat 70.79 303 P **P** **13 28 31.8 +0.3**
comp=Z,25nm,0.8s,mb5.2,baz=76,slow=0.8,SNR=16
EIL Elat 70.79 303 P **P** **13 28 31.8 +0.3**
SOC Sochi 71.78 318 *e*P **P** **13 28 34.2 -3.0**
SOC *e* pP 13 28 42.9 -2.8
SOC pmax pmax
comp=Z,27nm,1.2s,mb5.0
LSZ Lusaka 72.20 255 P **P** **13 28 40.5 +0.3**
comp=Z,5.9nm,0.8s,mb4.6,baz=83,slow=6.0,SNR=7.2
LSZ Lusaka 72.20 255 *e*P **P** **13 28 40.5 +0.2**
LSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LSZ Lusaka 72.20 255 *e*P **P** **13 28 40.5 +0.2**
comp=Z,4.2nm,0.8s,mb4.4
PETK Petropavlovsk- 73.69 32 P **P** **13 28 47.2 -1.1**
comp=Z,14nm,0.8s,mb4.9,baz=225,slow=0.7,SNR=36
PET Petropavlovsk 74.15 32 *e*P **P** **13 28 49.9 -1.2**
PET pmax pmax
comp=Z,52nm,1.0s,mb5.4
PET Petropavlovsk 74.15 32 *e*P **P** **13 28 49.8 -1.3**
comp=Z,52nm,0.9s,mb5.5
VSR Storozhevoye 75.25 325 *e*P **P** **13 28 56.5 -0.9**
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.2
VSR pmax pmax
comp=N,7.0nm,0.5s
VSR pmax pmax
comp=E,20nm,0.9s
BOSA Boshof 75.57 241 P **P** **13 29 00.0 +0.2**
comp=E,7.2nm,0.8s,mb4.7,baz=106,slow=5.3,SNR=7.8
SYO Syowa Base 76.80 199 ⇓*e*X 13 29 13.0
TIXI Tiksi 77.09 9 *e*P **P** **13 29 05.3 -2.2**
TIXI pmax pmax
comp=Z,32nm,1.1s,mb5.2
OBN Obninsk 78.27 328 ⇑*i*P **P** **13 29 14.0 -0.5**
OBN pmax pmax
comp=Z,43nm,0.8s,mb5.4
OBN Obninsk 78.27 328 *e*P **P** **13 29 14.0 -0.5**
AKASG Malin Array Be 80.94 322 P **P** **13 29 28.1 -0.9**
comp=Z,1.9nm,0.5s,mb4.3,baz=79,slow=4.6,SNR=16
AKASG Malin Array Be 80.94 322 *i* P **P** **13 29 27.5 -1.5**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
VRI Vrincioaia 81.27 317 ⇓*i*P **P** **13 29 31.4 +0.5**
VRI Vrincioaia 81.27 317 ⇓P **P** **13 29 31.4 +0.4**
MLR Muntele Rosu 81.72 317 P **P** **13 29 33.8 +0.5**
comp=Z,12nm,0.8s,mb4.8,baz=131,slow=3.7,SNR=12
MLR Muntele Rosu 81.72 317 ⇓*i*P **P** **13 29 33.5 +0.2**
MLR Muntele Rosu 81.72 317 ⇓P **P** **13 29 33.5 +0.2**
BURAR Bucovina Array 82.69 319 ⇑*i*P **P** **13 29 39.4 +1.0**
BURAR Bucovina Array 82.69 319 ⇑P **P** **13 29 39.4 +1.1**
BUR08 Bucovina Ar. S 82.71 319 *e*P **P** **13 29 39.1 +0.7**
JOF Joensuu 83.70 334 *ep* **P** **13 29 43.0 -0.2**
comp=Z,14nm,0.9s,mb5.1
JOF Joensuu 83.70 334 *e*P **P** **13 29 43.0 -0.2**
JOF pmax pmax
comp=Z,15nm,0.9s,mb5.1
GZR Gura Zlata 83.88 316 ⇓*i*P **P** **13 29 44.5 0.0**
GZR Gura Zlata 83.88 316 ⇓P **P** **13 29 44.5 -0.1**
DRGR 84.19 318 ⇑*i*P **P** **13 29 46.7 +0.6**
DRGR 84.19 318 ⇑P **P** **13 29 46.7 +0.6**
BILL Bilibino 84.20 20 *e*P **P** **13 29 44.1 -1.6**
BILL pmax pmax
comp=Z,12nm,0.9s,mb5.0
BILL Bilibino 84.20 20 *e*P **P** **13 29 44.2 -1.5**
LVZ Lovozero 84.26 340 *e*P **P** **13 29 45.5 -0.5**
LVZ pmax pmax
comp=Z,30nm,1.3s,mb5.3
APA Apatity 84.57 339 *i* **P** **13 29 47.5 -0.1**
APA pmax pmax
comp=Z,40nm,1.2s,mb5.4
APA MLR MLR
comp=Z,20μm,21.0s
BZS Buzias 84.72 316 ⇓*i*P **P** **13 29 48.2 -0.6**
BZS Buzias 84.72 316 ⇓P **P** **13 29 48.2 -0.6**
UZH Uzhgorod 84.82 319 *e*P **P** **13 29 42.6 -6.6**
UZH *e* 13 29 47.8
KOLS Kolonicke sedl 84.89 320 *e*P **P** **13 29 50.2 +0.6**
KOLS *ep*P pP 13 29 55.5 -2.6
SUW Suwalki 85.35 325 *e*P **P** **13 29 51.8 0.0**
SUW Suwalki 85.35 325 *e*P **P** **13 29 51.8 0.0**
CRVS Cervenica-Dubn 85.41 319 *e*P **P** **13 29 52.3 +0.1**
CRVS Cervenica-Dubn 85.41 319 *e*P **P** **13 29 52.4 +0.2**
STHS Stebnicka Huta 85.64 320 *e*P **P** **13 29 53.7 +0.4**
STHS pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
STHS Stebnicka Huta 85.64 320 *e*P **P** **13 29 53.7 +0.4**
comp=Z,10nm,0.8s,mb5.1
KAF Kangasniemi 85.67 333 *ep* **P** **13 29 52.0 -1.2**
comp=Z,25nm,1.0s,mb5.4
KAF Kangasniemi 85.67 333 *e*P **P** **13 29 52.0 -1.2**
KAF pmax pmax
comp=Z,25nm,1.0s,mb5.4
KECS Kecovo 85.97 319 *e*P **P** **13 29 54.3 -0.7**
KECS *e* pP 13 30 03.5 -0.1
KECS pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
KECS Kecovo 85.97 319 *e*P **P** **13 29 54.3 -0.7**
KECS *ep*P pP 13 30 03.4 -0.2
KECS Kecovo 85.97 319 *e*P **P** **13 29 54.3 -0.7**
comp=Z,4.7nm,0.8s,mb4.8
KECS *e* pP 13 30 03.5 -0.1
LIKS Likavka 86.97 319 *e*P **P** **13 30 00.1 +0.3**
VYHS Vyhne 87.06 319 *e*P **P** **13 30 00.4 +0.1**
KEV Kevo 87.51 340 *ep* **P** **13 30 00.0 -2.0**
comp=Z,17nm,0.9s,mb5.3
KEV Kevo 87.51 340 *e*P **P** **13 30 00.0 -2.0**
KEV pmax pmax
comp=Z,17nm,0.9s,mb5.3
OKC Ostrava-Krasne 87.70 320 *e*P **P** **13 30 03.0 -0.4**
ARCES ARCESS Array B 87.95 340 P **P** **13 30 04.2 0.0**
comp=Z,18nm,0.8s,mb5.3,baz=101,slow=5.1,SNR=31
MODS Modra-Piesok 88.07 318 *e*P **P** **13 30 05.1 -0.1**
MODS pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
MODS Modra-Piesok 88.07 318 *e*P **P** **13 30 05.1 -0.1**
comp=Z,5.7nm,1.1s,mb4.7
MORC Moravsky Berou 88.08 320 *e*P **P** **13 30 05.1 -0.1**
MORC pmax pmax
comp=Z,1.0nm,0.8s,mb4.1
MORC Moravsky Berou 88.08 320 *e*P **P** **13 30 05.1 -0.1**
comp=Z,0.8nm,0.8s,mb4.0
DPC Dobruska-Polom 88.93 320 *e*P **P** **13 30 09.8 +0.6**
DPC *ep*P pP 13 30 18.9 +1.1
BOJS Bojanci 89.13 315 *i* P **P** **13 30 10.3 +0.1**
UPC Upice 89.14 321 *e*P **P** **13 30 10.6 +0.4**
PERS Pernice 89.34 317 *i* P **P** **13 30 11.4 +0.2**
ZAVS Zavodnje 89.38 316 *i* P **P** **13 30 11.5 +0.1**
VISS Visnje 89.45 316 *e*P **P** **13 30 11.9 +0.2**
JAVS Javornik 90.00 316 *i* P **P** **13 30 14.1 -0.2**
PRU Pruhonice 90.03 320 *e*P **P** **13 30 14.3 0.0**
PRU *ep*P pP 13 30 23.3 +0.3
PVCC Panska Ves 90.06 320 *e*P **P** **13 30 14.1 -0.4**
PVCC *ep*P pP 13 30 23.5 +0.4
GEC2 GERESS Array S 90.48 319 *e*P **P** **13 30 16.9 +0.4**
GEC2 pmax pmax
comp=Z,11nm,1.0s,mb5.1
GEC2 GERESS Array S 90.48 319 *e*P **P** **13 30 16.9 +0.4**
comp=Z,11nm,1.0s,mb5.1
GERES GERESS Array B 90.48 319 P **P** **13 30 17.0 +0.5**
comp=Z,4.6nm,0.7s,mb4.9,baz=90,slow=4.3,SNR=25
BRG Berggiesshubel 90.49 321 *i* P **P** **13 30 16.8 +0.3**
BRG *i* 13 30 35.2
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
BRG Berggiesshubel 90.49 321 *e*P **P** **13 30 16.9 +0.4**
comp=Z,11nm,1.0s,mb5.1
BRG Berggiesshubel 90.49 321 *i* P **P** **13 30 16.8 +0.3**
comp=Z,11nm,1.0s,mb5.2
BRG *i* 13 30 35.2
comp=Z,3.7nm,0.8s
KHC Kasperske Hory 90.58 319 *e*P **P** **13 30 16.6 -0.4**
KHC *ep*P pP 13 30 25.3 -0.3
FBE Freiberg 90.86 321 *e*P **P** **13 30 18.6 +0.4**
comp=Z,10.0nm,0.9s,mb5.2
WET Wettzell 91.04 319 *e*P **P** **13 30 19.4 +0.3**
WET pmax pmax
comp=Z,13nm,1.1s,mb5.2
WET Wettzell 91.04 319 *e*P **P** **13 30 19.4 +0.3**
comp=Z,13nm,1.1s,mb5.2
SNAA Sanae 91.06 198 *e*P **P** **13 30 19.4 +0.7**
SNAA *e* pP 13 30 27.8 +0.4
SNAA Sanae 91.06 198 *e*P **P** **13 30 19.5 +0.8**
CLL Collm 91.11 321 *i* P **P** **13 30 19.0 -0.4**
CLL pmax pmax
comp=Z,14nm,1.4s,mb5.1
CLL Collm 91.11 321 *e*P **P** **13 30 19.3 -0.1**
comp=Z,14nm,1.4s,mb5.1
CLL Collm 91.11 321 *i* P **P** **13 30 19.0 -0.4**

	comp=Z,14nm,1.4s,mb5.1							
HFS	**Hagfors**	**91.36**	**330**	P		**P**	**13 30 20.2**	**-0.1**
	comp=Z,7.8nm,0.9s,mb5.0,baz=132,slow=2.2,SNR=5.5							
WERN	**Wernitzgruen**	**91.44**	**320**	*e*P		**P**	**13 30 21.5**	**+0.6**
	comp=Z,5.0nm,0.8s,mb4.9							
GUNZ	**Gunzen**	**91.47**	**320**	*e*P		**P**	**13 30 21.6**	**+0.5**
	comp=Z,7.0nm,1.1s,mb4.9							
WERD	**Werda**	**91.50**	**320**	*e*P		**P**	**13 30 21.5**	**+0.3**
	comp=Z,9.0nm,1.1s,mb5.0							
ROTZ	**Rotzenmuhle**	**91.52**	**320**	*e*P		**P**	**13 30 22.2**	**+0.9**
	comp=Z,8.0nm,1.1s,mb5.0							
MANZ	**Manzenberg**	**91.60**	**320**	*e*P		**P**	**13 30 22.5**	**+0.9**
	comp=Z,13nm,1.1s,mb5.2							
GRA1	**Grafenberg Arr**	**92.15**	**319**	*e*P		**P**	**13 30 25.0**	**+0.8**
	comp=Z,14nm,0.8s,mb5.3							
GRF	**Grafenberg Arr**	**92.15**	**319**	*e*P		**P**	**13 30 25.0**	**+0.8**
GRF					pmax	pmax		
	comp=Z,14nm,0.8s,mb5.3							
GRF	**Grafenberg Arr**	**92.15**	**319**	*e*P		**P**	**13 30 25.0**	**+0.8**
GRF					pmax	pmax		
	comp=Z,14nm,0.8s,mb5.3							
GRF	**Grafenberg Arr**	**92.15**	**319**	*e*P		**P**	**13 30 25.0**	**+0.8**
	comp=Z,14nm,0.8s,mb5.3							
NB2	**NORSAR Subarra**	**92.63**	**331**	P		**P**	**13 30 25.5**	**-0.7**
	comp=Z,5.6nm,0.9s,mb5.0,baz=93,slow=4.6							
NOA	**NORSAR Array B**	**92.63**	**331**	P		**P**	**13 30 25.8**	**-0.4**
	comp=Z,2.9nm,0.8s,mb4.7,baz=93,slow=4.7,SNR=5.5							
DAVOX	**Davos/Dischmat**	**92.94**	**317**	P		**P**	**13 30 28.1**	**+0.1**
	comp=Z,4.7nm,0.6s,mb5.1,baz=343,slow=9.8,SNR=4.2							
NRDL	**Niedersach Rie**	**92.96**	**322**	*e*P		**P**	**13 30 28.1**	**+0.2**
	comp=Z,10.0nm,1.0s,mb5.2							
KEST	**Kesra**	**92.99**	**305**	P		**P**	**13 30 29.7**	**+1.3**
	comp=Z,4.3nm,0.9s,mb4.9,baz=259,slow=0.8,SNR=8.6							
DAVOS	**Davos**	**93.00**	**317**	P		**P**	**13 30 28.1**	**-0.1**
VNA1	**Neumayer--Stat**	**93.04**	**198**	*e*P		**P**	**13 30 29.1**	**+1.2**
VNA1				*e*		pP	13 30 37.6	+1.1
TORD	**Torodi Ar. Bea**	**99.46**	**283**	P		**P**	**13 30 57.3**	**-0.9**
	comp=Z,0.7nm,0.8s,mb4.2,baz=67,slow=4.2,SNR=2.7							
TORD					PKiKP	PKiKP	13 35 28.0	+0.2
	comp=Z,0.5nm,0.9s,baz=72,slow=4.7,SNR=2.9							
TORD					PKKP	PKKPbc	13 47 21.4	+0.4
	comp=Z,0.3nm,0.5s,baz=309,slow=3.8,SNR=4.2							
YKA	**Yellowknife Ar**	**115.47**	**17**	PKP		PKPdf	13 35 54.9	-1.3
	comp=Z,1.3nm,0.8s,baz=338,slow=2.0,SNR=4.1							
ETW	**Entiat**	**123.57**	**32**	*e*PKPdf		PKPdf	13 36 11.8	-0.5
HAWA	**Hanford**	**124.75**	**33**	*e*PKPdf		PKPdf	13 36 14.4	-0.2
NEW	**Newport**	**124.79**	**30**	*e*PKIKP		PKPdf	13 36 14.7	+0.1
KIPM	**Iron Peak**	**126.09**	**42**	*e*PKPdf		PKPdf	13 36 17.5	+0.2
NSHM	**Saint Helena R**	**127.34**	**43**	*e*PKPdf		PKPdf	13 36 20.6	+0.9
WVOR	**Wild Horse Val**	**127.68**	**36**	*e*PKIKP		PKPdf	13 36 20.2	-0.1
SCHQ	**Schefferville**	**127.68**	**351**	PKP		PKPdf	13 36 19.5	-0.4
	comp=Z,7.8nm,0.9s,baz=42,slow=10,SNR=4.2							
DLMT	**Dillon**	**129.04**	**30**	*e*PKPdf		PKPdf	13 36 22.8	0.0
HLID	**Hailey**	**129.35**	**33**	*e*PKPdf		PKPdf	13 36 24.1	+0.6
NVAR	**Mina Array Bea**	**130.23**	**40**	PKP		PKPdf	13 36 26.2	+1.0
	comp=Z,2.0nm,0.7s,baz=265,slow=2.6,SNR=15							
NVAR					SKPbc	SKPbc	13 39 45.9	-0.7
	comp=Z,0.7nm,0.8s,baz=278,slow=4.9,SNR=3.8							
RRI2	**Red Ridge**	**131.12**	**31**	*e*PKPdf		PKPdf	13 36 27.7	+0.9
ULM	**Lac du Bonnet**	**131.23**	**14**	PKP		PKPdf	13 36 26.2	-0.6
	comp=Z,6.9nm,0.8s,baz=307,slow=3.1,SNR=5.1							
LOHW	**Long Hollow**	**131.29**	**30**	*e*PKPdf		PKPdf	13 36 27.9	+0.7
HWUT	**Hardware Ranch**	**132.22**	**33**	*e*PKPdf		PKPdf	13 36 28.9	-0.1
TPNV	**Topopah Spring**	**132.41**	**41**	*e*PKIKP		PKPdf	13 36 28.9	-0.6
PDAR	**Pinedale Array**	**132.43**	**30**	PKP		PKPdf	13 36 29.4	+0.1
	comp=Z,1.1nm,0.7s,baz=144,slow=1.7,SNR=6.1							
GSC	**Goldstone**	**132.98**	**43**	*e*PKIKP		PKPdf	13 36 30.9	+0.3
DAU	**Daniels Canyon**	**133.21**	**34**	*e*PKIKP		PKPdf	13 36 31.6	+0.7
MSU	**Marysvale**	**133.97**	**36**	*e*PKIKP		PKPdf	13 36 34.6	+2.3
PV10	**Paradox Valley**	**135.86**	**34**	*e*PKPdf		PKPdf	13 36 37.1	+1.3
WUAZ	**Wupatki**	**136.40**	**39**	*e*PKPdf		PKPdf	13 36 39.3	+2.3
ECSD	**EROS,Sioux Fal**	**136.98**	**18**	*e*PKPdf		PKPdf	13 36 36.7	-1.1
MVCO	**Mesa Verde**	**136.99**	**35**	*e*PKPdf		PKPdf	13 36 38.7	+0.7
CPUP	**Villa Florida**	**142.59**	**215**	PKP		PKPdf	13 36 47.4	-2.9
	comp=Z,4.1nm,0.7s,baz=69,slow=1.4,SNR=13							
BDFB	**Brasilia**	**143.69**	**238**	PKP		PKPdf	13 36 48.4	-2.3
	comp=Z,3.2nm,0.6s,baz=83,slow=8.1,SNR=2.8							
WMOK	**Wichita Mounta**	**143.94**	**28**	*e*PKIKP		PKPdf	13 36 47.2	-3.4
WCI	**Wyandotte Cave**	**144.72**	**9**	*e*PKIKP		PKPdf	13 36 49.8	-2.1
TXAR	**Lajitas Array**	**145.36**	**39**	PKPbc		PKPbc	13 36 53.5	+0.3
	comp=Z,67nm,0.8s,baz=296,slow=0.9,SNR=445							
TXAR	**Lajitas Array**	**145.36**	**39**	PKPbc		PKPbc	13 36 53.5	+0.3
ELN	**Prospectdale**	**146.27**	**2**	*e*PKPdf		PKPdf	13 36 54.2	-0.3
MIAR	**Mount Ida**	**146.27**	**21**	*e*PKP2		PKPab	13 36 55.0	-1.5
UALR	**University of**	**146.49**	**20**	*e*PKPbc		PKPbc	13 36 55.4	-1.0
JCT	**Junction City**	**146.81**	**33**	*e*PKPdf		PKPdf	13 36 55.5	-0.2
JCT				*e*		PKPbc	13 36 57.4	-0.1
TKL	**Tuckaleechee C**	**147.60**	**7**	*e*PKIKP		PKPdf	13 36 56.4	-0.5
TKL				*e*			13 36 58.3	
JSC	**Jenkinsville**	**149.18**	**3**	*e*PKP2		PKPbc	13 37 02.7	-1.0
HKT	**Hockley**	**149.29**	**29**	*e*PKIKP		PKPdf	13 36 58.9	-0.9
HKT				*e*			13 37 04.2	
GOGA	**Godfrey**	**149.85**	**7**	*e*PKPbc		PKPbc	13 37 04.2	-1.2
GOGA				*e*PKPab		PKPab	13 37 09.3	-1.5
LVC	**Limon Verde**	**152.25**	**201**	*e*PKPbc		PKPbc	13 37 12.2	+0.9
LPAZ	**La Paz**	**157.55**	**209**	PKP		PKPdf	13 37 12.6	+0.6
	comp=Z,0.7nm,0.8s,baz=207,slow=2.3,SNR=2.9							

IDC ***12*** *13:21:10.0±1.6,366S×10130E,h0km,mb4.3/11, mb1 4.4/11,mb1mx4.2/20,mbtmp4.3/11, Error ellipse: s-maj=54.6km s-min=18.6km az=56.0*

ISCJB ***12*** *13:21:13.3±1.1,36S±02×1014E±02,h33km,mb4.4/14, Error ellipse: s-maj=39.5km s-min=11.6km az=143.9*

NEIC ***12*** *13:21:15.7±1.1,350S×10149E,h35km,mb4.7/3, Error ellipse: s-maj=46.6km s-min=12.2km az=54.0*

ISC 12 13:21:15.8±1.1,36S±02×1014E±02,h35km,n19,σ0s95/17, mb4.4/14,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
				Op				
CHTO	**Chiang Mai**	**22.40**	**354**	*e*P		**P**	**13 26 08.0**	**-3.3**
WRA	**Warramunga Arr**	**35.98**	**119**	P		**P**	**13 28 13.9**	**+0.3**
	3.8nm,0.7s,mb4.4,baz=294,slow=9.8,SNR=5.4							
WRAB	**Tennant Creek**	**35.99**	**119**	P		**P**	**13 28 13.3**	**-0.3**
	5.9nm,0.7s,mb4.6							
ASAR	**Alice Springs**	**37.19**	**125**	P		**P**	**13 28 23.8**	**0.0**
	0.9nm,0.3s,mb4.0,baz=302,slow=7.8,SNR=4.1							
STKA	**Stephens Creek**	**47.05**	**131**	P		**P**	**13 29 44.2**	**+0.1**
	2.4nm,0.6s,mb4.3,baz=330,slow=12,SNR=3.3							
KSRS	**Korea Array**	**47.70**	**29**	P		**P**	**13 29 50.3**	**+1.2**
	3.4nm,0.8s,mb4.4,baz=218,slow=8.3,SNR=8.2							
SONM	**Songino Array**	**51.40**	**4**	P		**P**	**13 30 18.9**	**+1.9**
	7.4nm,0.8s,mb4.7,baz=184,slow=9.3,SNR=7.2							
TKM2	**Tokmak 2**	**51.85**	**336**	*e*P		**P**	**13 30 21.3**	**+0.8**
	112nm,2.1s,mb5.4							
EKS2	**Erkin-Say**	**52.40**	**334**	*e*P		**P**	**13 30 25.1**	**+0.5**
	4.5nm,0.8s,mb4.5							
MJAR	**Matsushiro Arr**	**52.65**	**37**	P		**P**	**13 30 26.1**	**-0.5**
	1.7nm,0.5s,mb4.2,baz=199,slow=7.9,SNR=6.2							
MKAR	**Makanchi Array**	**52.94**	**344**	P		**P**	**13 30 29.0**	**+0.5**
	1.9nm,0.6s,mb4.2,baz=154,slow=9.6,SNR=7.1							
MKAR	**Makanchi Array**	**52.94**	**344**	P		**P**	**13 30 29.0**	**+0.5**
KURK	**Kurchatov**	**57.53**	**343**	P		**P**	**13 31 00.3**	**-1.2**
	2.3nm,0.8s,mb4.3,baz=161,slow=6.2,SNR=3.3							
ZAA0	**Zalesovo Array**	**58.99**	**349**	*e*P		**P**	**13 31 11.6**	**0.0**
ZALV	**Zalesovo Beam**	**58.99**	**349**	P		**P**	**13 31 12.0**	**+0.3**
	3.0nm,0.5s,mb4.6,baz=183,slow=5.9,SNR=4.8							
BVAR	**Borovoye Array**	**62.16**	**339**	P		**P**	**13 31 32.2**	**-1.1**
	2.6nm,0.7s,mb4.5,baz=157,slow=7.9,SNR=4.3							
PETK	**Petropavlovsk-**	**73.49**	**32**	P		**P**	**13 32 43.2**	**-1.5**
	1.6nm,0.8s,mb4.0,baz=100,slow=4.3,SNR=7.2							
WMOK	**Wichita Mounta**	**143.78**	**29**	*e*PKPpre			13 40 42.1	
TXAR	**Lajitas Array**	**145.06**	**40**	PKPbc		PKPbc	13 40 47.8	-1.8
	1.6nm,0.6s,baz=251,slow=0.9,SNR=7.3							

ISCJB ***12*** *13:24:32.7±0.5,3584N±002×363W±003,h7km±3km, Error ellipse: s-maj=3.6km s-min=3.0km az=176.4*

SFS ***12*** *13:24:34.0,3585N×355W,h0km, ML2.9*

CSEM ***12*** *13:24:34.6±0.1,3568N×344W,h12km, ML3.7/16, Error ellipse: s-maj=1.6km s-min=1.4km az=128.0*

NEIC ***12*** *13:24:34.6,3584N×355W,h0km, MN3.0(MDD), After MDD.*

MDD ***12*** *13:24:34.3±0.3,3582N×355W,h0km, mbLg3.1/16, Error ellipse: s-maj=3.0km s-min=2.8km az=153.0, PRIMO*

CNRM ***12*** *13:24:36.1,3580N×336W,h30km, MD3.8*

INMG ***12*** *13:24:36.3±1.3,3577N×346W,h29km±7km, ML2.9, Error ellipse: s-maj=5.8km s-min=2.9km az=0.0*

LDG ***12*** *13:24:36.1±0.2,3587N×352W,h2km, Ml3.1/3, Error ellipse: s-maj=4.7km s-min=3.0km az=174.0*

ISC 12 13:24:33.6±0.4,3582N±002×361W±003,h5km±3km,n119,

σ1s28/191,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
				Op				
EALB	**Alboran**	**0.48**	**76**	Pg		**Pg**	**13 24 42.4**	**-0.4**
	181nm,0.1s,SNR=29							
EALB				Lg			13 24 47.8	
	3µm,0.3s							
EALB	**Alboran**	**0.48**	**76**	Pg		**Pg**	**13 24 42.5**	**-0.4**
	51nm,0.1s,SNR=29							
EALB	**Alboran**	**0.48**	**76**	Pg		**Pg**	**13 24 42.5**	**-0.4**
EALB				Lg			13 24 48.3	
MPAL	**Palemas**	**0.66**	**204**	*i* P		**Pg**	**13 24 49.0**	**+2.9**
MPAL				*i* S		**Sg**	**13 25 00.0**	**+5.4**
TOU	**Touzarine**	**0.87**	**188**	*i* P		**Pg**	**13 24 51.0**	**+0.8**
TOU				*i* S		**Sg**	**13 25 02.0**	**+0.5**
ZAI	**Zaio**	**1.11**	**140**	*i* P		**Pg**	**13 24 53.0**	**-1.8**
ZAI				*i* S		**Sg**	**13 25 04.0**	**-5.2**
EMAL	**Malaga-Limoner**	**1.15**	**325**	Pg		**Pg**	**13 25 00.0**	**+4.5**
	40nm,0.2s,SNR=7.9							
EMAL				Lg			13 25 16.5	
	419nm,0.2s,SNR=7.9							
EMAL	**Malaga-Limoner**	**1.15**	**325**	*e*P		**Pg**	**13 24 56.0**	**+0.5**
EMAL	**Malaga-Limoner**	**1.15**	**325**	Pg		**Pg**	**13 25 00.6**	**+5.1**
	40nm,0.2s,SNR=7.9							
EMAL	**Malaga-Limoner**	**1.15**	**325**	Pg		**Pg**	**13 25 00.6**	**+5.1**
EMAL				Lg			13 25 16.5	
EMIJ	**Mijas**	**1.19**	**309**	Pg		**Pg**	**13 24 56.7**	**+0.2**
	8.0nm,0.2s,SNR=19							
EMIJ				Lg			13 25 11.9	
	594nm,0.5s							
EMIJ	**Mijas**	**1.19**	**309**	Pg		**Pg**	**13 24 56.7**	**+0.2**
EMIJ				Lg			13 25 12.7	
ERON	**Agron**	**1.20**	**353**	Pg		**Pg**	**13 24 55.6**	**-1.0**
	9.1nm,0.2s,SNR=7.9							
ERON				Lg			13 25 13.1	
	79nm,0.2s,SNR=7.9							
ERON	**Agron**	**1.20**	**353**	Pg		**Pg**	**13 24 55.5**	**-1.1**
ERON				Lg			13 25 13.1	
EBER	**Berja**	**1.22**	**28**	Pg		**Pg**	**13 24 55.3**	**-1.6**
	50nm,0.3s,SNR=26							
EBER				Lg			13 25 11.9	
	925nm,0.6s,SNR=11							
EQUE	**Quentar**	**1.39**	**6**	Pg		**Pg**	**13 24 59.1**	**-1.0**
	14nm,0.3s,SNR=24							
EQUE				Lg			13 25 17.3	
	96nm,0.2s,SNR=16							
EQUE	**Quentar**	**1.39**	**6**	Pg		**Pg**	**13 24 59.2**	**-0.9**
	3.8nm,0.3s,SNR=24							
ELOJ	**Sierra Loja**	**1.39**	**342**	Pg		**Pg**	**13 25 01.3**	**+1.1**
	6.3nm,0.2s,SNR=15							
ELOJ				Lg			13 25 20.0	
	92nm,0.3s,SNR=19							
ELOJ	**Sierra Loja**	**1.39**	**342**	Pg		**Pg**	**13 25 00.8**	**+0.6**
	6.3nm,0.2s,SNR=15							
ELOJ	**Sierra Loja**	**1.39**	**342**	Pg		**Pg**	**13 25 00.8**	**+0.6**
ELOJ				Lg			13 25 19.4	
ECEU	**Ceuta**	**1.43**	**273**	Pg		**Pg**	**13 25 00.1**	**-1.0**
	8.8nm,0.2s,SNR=6.1							
ECEU				Sn		**Sn**	**13 25 19.7**	**+0.3**
	20nm,0.2s,SNR=4.0							
ECEU	**Ceuta**	**1.43**	**273**	Sn		**Sn**	**13 25 20.3**	**+0.9**
	30nm,0.3s,SNR=4.0							
REAL	**Reales**	**1.45**	**297**	P		**Pn**	**13 25 00.0**	**-0.4**
REAL				S		**Sb**	**13 25 16.0**	**-3.7**
ECOG	**Cogollos-Vega**	**1.45**	**1**	Pg		**Pg**	**13 25 00.6**	**-0.8**
	10nm,0.2s,SNR=12							
ECOG				Lg			13 25 21.0	
	97nm,0.3s,SNR=12							
ENIJ	**Nijar**	**1.61**	**44**	Pn		**Pn**	**13 25 01.6**	**-1.1**
	20nm,0.3s,SNR=24							
ENIJ				Sn		**Sn**	**13 25 23.3**	**-0.5**
	66nm,0.3s,SNR=6.7							
ENIJ	**Nijar**	**1.61**	**44**	Pn		**Pn**	**13 25 01.6**	**-1.1**
	5.0nm,0.2s,SNR=24							
ENIJ				Sn		**Sn**	**13 25 23.6**	**-0.2**
	19nm,0.2s,SNR=6.7							
ENIJ	**Nijar**	**1.61**	**44**	Pn		**Pn**	**13 25 01.6**	**-1.1**
ENIJ				Sn		**Sn**	**13 25 23.6**	**-0.3**
EJIF	**Jimena Fronter**	**1.63**	**293**	Pg		**Pg**	**13 25 04.8**	**0.0**
	4.2nm,0.3s,SNR=7.9							
EJIF				Sn		**Sn**	**13 25 26.1**	**+1.9**
	43nm,0.2s,SNR=7.9							
EJIF	**Jimena Fronter**	**1.63**	**293**	Pg		**Pg**	**13 25 04.8**	**+0.1**
	4.2nm,0.3s,SNR=7.9							
EJIF				Sn		**Sn**	**13 25 25.7**	**+1.5**
	33nm,0.3s,SNR=7.9							
EJIF	**Jimena Fronter**	**1.63**	**293**	Pg		**Pg**	**13 25 04.8**	**0.0**
EJIF				Sn		**Sn**	**13 25 25.7**	**+1.5**
TZK	**Tazeka**	**1.79**	**195**	*i* P		**Pn**	**13 25 06.0**	**+0.8**
TZK				*i* S		**Sn**	**13 25 26.0**	**-2.3**
EQES	**Quesada**	**2.02**	**12**	Pn		**Pn**	**13 25 09.7**	**+1.4**
	14nm,0.2s,SNR=26							
EQES				Sn		**Sn**	**13 25 36.1**	**+2.2**
	272nm,0.4s,SNR=5.0							
EQES	**Quesada**	**2.02**	**12**	Pn		**Pn**	**13 25 09.6**	**+1.3**
	14nm,0.2s,SNR=26							
EQES				Sn		**Sn**	**13 25 34.6**	**+0.6**
	395nm,0.5s,SNR=5.0							
EQES	**Quesada**	**2.02**	**12**	Pn		**Pn**	**13 25 09.6**	**+1.3**
EQES				Sn		**Sn**	**13 25 34.6**	**+0.6**
ESPR	**Espera**	**2.09**	**301**	Pn		**Pn**	**13 25 10.8**	**+1.6**
	1.1nm,0.1s,SNR=7.9							
ESPR	**Espera**	**2.09**	**301**	Pn		**Pn**	**13 25 10.6**	**+1.4**
	1.4nm,0.3s,SNR=7.9							
ESPR	**Espera**	**2.09**	**301**	Pn		**Pn**	**13 25 10.6**	**+1.4**
TGT	**Taghat**	**2.11**	**214**	*i* P		**Pn**	**13 25 10.0**	**+0.5**
TGT				*i* S		**Sn**	**13 25 35.0**	**-1.2**
EBAN	**Banos Encina**	**2.34**	**357**	Pn		**Pn**	**13 25 13.7**	**+1.0**
	0.8nm,0.2s,SNR=7.9							
EBAN				Pg		**Pg**	**13 25 15.8**	**-2.6**
	2.3nm,0.2s,SNR=11							
EBAN				Lg			13 25 48.3	
	50nm,0.6s,SNR=5.0							
EBAN	**Banos Encina**	**2.34**	**357**	Pg		**Pg**	**13 25 17.6**	**-0.8**
	2.3nm,0.2s,SNR=11							
EBAN	**Banos Encina**	**2.34**	**357**	Pn		**Pn**	**13 25 13.7**	**+1.0**
EBAN				Pg		**Pg**	**13 25 17.6**	**-0.8**
EBAN				Lg			13 25 47.3	
EADA	**Adamuz**	**2.46**	**342**	Pn		**Pn**	**13 25 15.1**	**+0.8**
	1.0nm,0.1s,SNR=7.9							
EADA				Pg		**Pg**	**13 25 18.5**	**-2.3**
	5.7nm,0.2s,SNR=41							
EADA				Lg			13 25 49.1	
	60nm,0.3s,SNR=5.0							
EADA	**Adamuz**	**2.46**	**342**	Pn		**Pn**	**13 25 15.1**	**+0.7**
	1.7nm,0.3s,SNR=7.9							
EADA	**Adamuz**	**2.46**	**342**	Pg		**Pg**	**13 25 19.1**	**-1.7**
	5.7nm,0.2s,SNR=41							
EADA	**Adamuz**	**2.46**	**342**	Pn		**Pn**	**13 25 15.1**	**+0.8**
EADA				Pg		**Pg**	**13 25 19.1**	**-1.7**
EADA				Lg			13 25 49.4	
ECAB	**El Cabril**	**2.67**	**328**	Pn		**Pn**	**13 25 17.8**	**+0.6**
	0.5nm,0.0s,SNR=7.9							
ECAB				Pg		**Pg**	**13 25 24.0**	**-0.8**
	5.7nm,0.1s,SNR=16							
ECAB				Sn		**Sn**	**13 25 48.3**	**-1.6**
	6.9nm,0.2s,SNR=7.9							
ECAB				Lg			13 25 59.6	
	42nm,0.4s,SNR=6.7							
ECAB	**El Cabril**	**2.67**	**328**	Pn		**Pn**	**13 25 17.8**	**+0.6**
	0.5nm,0.2s,SNR=7.9							
ECAB	**El Cabril**	**2.67**	**328**	Pg		**Pg**	**13 25 24.0**	**-0.8**
	2.3nm,0.2s,SNR=16							
ECAB	**El Cabril**	**2.67**	**328**	Pn		**Pn**	**13 25 17.8**	**+0.6**
ECAB				Pg		**Pg**	**13 25 24.0**	**-0.8**
ECAB				Sn		**Sn**	**13 25 49.1**	**-0.8**
ECAB				Lg			13 25 59.6	
MIF	**Mishlifen**	**2.75**	**209**	*i* P		**Pn**	**13 25 18.0**	**-0.4**
MIF				*i* S		**Sn**	**13 25 49.0**	**-3.0**
EMUR	**La Murta**	**2.77**	**43**	Pn		**Pn**	**13 25 18.5**	**-0.1**
	1.2nm,0.3s,SNR=7.9							
EMUR				Pg		**Pg**	**13 25 25.7**	**-1.0**
	28nm,0.4s,SNR=4.9							
EMUR				Sn		**Sn**	**13 25 49.8**	**-2.6**
	28nm,0.5s,SNR=6.7							
EMUR	**La Murta**	**2.77**	**43**	Pn		**Pn**	**13 25 19.2**	**+0.6**
	1.2nm,0.3s,SNR=7.9							
EMUR	**La Murta**	**2.77**	**43**	Pg		**Pg**	**13 25 25.7**	**-1.0**
	5.8nm,0.3s,SNR=4.9							
EMUR				Sn		**Sn**	**13 25 52.5**	**+0.1**
	28nm,0.5s,SNR=6.7							
EMUR	**La Murta**	**2.77**	**43**	Pn		**Pn**	**13 25 19.2**	**+0.6**
EMUR				Pg		**Pg**	**13 25 25.7**	**-1.0**
EMUR				Sn		**Sn**	**13 25 52.5**	**0.0**
EVIA	**Vianos**	**2.95**	**17**	Pg		**Pg**	**13 25 28.4**	**-1.6**
	39nm,0.6s,SNR=7.9							
EVIA				Lg			13 26 08.8	
	74nm,0.7s,SNR=7.9							
EVIA	**Vianos**	**2.95**	**17**	Pg		**Pg**	**13 25 28.4**	**-1.6**
EVIA				Lg			13 26 08.8	
CZD	**Col de Zad**	**3.02**	**203**	*i* P		**Pn**	**13 25 23.0**	**+0.9**
CZD				*i* S		**Sn**	**13 25 55.0**	**-3.7**
EMIN	**Mina Concepcio**	**3.13**	**309**	Pn		**Pn**	**13 25 24.6**	**+1.1**
	0.9nm,0.2s,SNR=12							
EMIN				Pg		**Pg**	**13 25 31.9**	**-1.6**
	4.2nm,0.2s,SNR=12							
EMIN				Sn		**Sn**	**13 26 00.5**	**-0.8**
	11nm,0.4s							
EMIN	**Mina Concepcio**	**3.13**	**309**	Pn		**Pn**	**13 25 24.6**	**+1.1**
	0.9nm,0.2s,SNR=12							
EMIN	**Mina Concepcio**	**3.13**	**309**	Pg		**Pg**	**13 25 31.9**	**-1.6**
	3.4nm,0.2s,SNR=12							
EGRO	**El Granado**	**3.55**	**300**	Pn		**Pn**	**13 25 30.7**	**+1.4**
	19nm,0.3s,SNR=29							
EGRO				Sn		**Sn**	**13 26 10.6**	**-1.0**
	8.5nm,0.3s							
EGRO	**El Granado**	**3.55**	**300**	Pn		**Pn**	**13 25 30.7**	**+1.4**
	19nm,0.3s,SNR=29							
EGRO				Sn		**Sn**	**13 26 11.0**	**-0.6**
	8.5nm,0.3s							
EGRO	**El Granado**	**3.55**	**300**	Pn		**Pn**	**13 25 30.7**	**+1.5**
EGRO				Sn		**Sn**	**13 26 11.0**	**-0.6**
PBAR	**Barrancos**	**3.61**	**312**	*e*Pn		**Pn**	**13 25 31.0**	**+0.9**
PBAR				*e*Sn		**Sn**	**13 26 13.4**	**+0.3**
PVAQ	**Vaqueiros**	**3.66**	**297**	*e*Pn		**Pn**	**13 25 31.9**	**+1.1**
PVAQ				*e*Sn		**Sn**	**13 26 14.2**	**-0.1**
PVAQ				A			13 26 17.6	
	26nm,0.3s							
PVAQ	**Vaqueiros**	**3.66**	**297**	*e*Pn		**Pn**	**13 25 31.9**	**+1.1**
PVAQ				*e*Sn		**Sn**	**13 26 14.2**	**-0.1**
	26nm,0.3s							
PBDV	**Barranco-do-Ve**	**3.75**	**293**	*e*Pn		**Pn**	**13 25 33.5**	**+1.4**
PBDV				*e*Sn		**Sn**	**13 26 16.2**	**-0.5**
PBDV				A			13 26 18.7	
	25nm,0.3s							
PBDV	**Barranco-do-Ve**	**3.75**	**293**	*e*Pn		**Pn**	**13 25 33.5**	**+1.4**
PBDV				*e*Sn		**Sn**	**13 26 16.2**	**-0.5**
	25nm,0.3s							
KIB	**El Ksiba**	**3.81**	**213**	*i* P		**Pn**	**13 25 32.0**	**-0.9**
KIB				*i* S		**Sn**	**13 26 15.0**	**-3.1**
ZFT	**Errachidia**	**3.83**	**189**	*i* P		**Pn**	**13 25 32.0**	**-1.2**
ZFT				*i* S		**Sn**	**13 26 15.0**	**-3.6**
ESDC	**Sonseca Array**	**3.85**	**356**	Pn		**Pn**	**13 25 35.0**	**+1.5**
	baz=174,slow=12,SNR=82							
ESDC				Sn		**Sn**	**13 26 15.

ELOB	**Lobios**	**6.96**	**331**	Pn		**Pn**		**13 26 17.7**	**+1.6**
ELOB				Sn		**Sn**		**13 27 31.2**	**-4.5**
ETSF	**Etsaut**	**7.45**	**18**	*e*Pn		**Pn**		**13 26 22.0**	**-0.9**
ETSF				*e*Sn		**Sn**		**13 27 42.0**	**-5.7**
	0.8nm,0.3s								
ETSF	**Etsaut**	**7.45**	**18**	Pn		**Pn**		**13 26 22.0**	**-0.9**
ETSF				Sn		**Sn**		**13 27 42.0**	**-5.7**
	0.4nm,0.3s								
SJPF	**Ste Jean**	**7.51**	**14**	*e*Pn		**Pn**		**13 26 23.0**	**-0.7**
SJPF				*e*Sn		**Sn**		**13 27 43.9**	**-5.3**
	2.2nm,0.4s								
SJPF	**Ste Jean**	**7.51**	**14**	Pn		**Pn**		**13 26 23.0**	**-0.7**
SJPF				Sn		**Sn**		**13 27 43.9**	**-5.3**
	1.1nm,0.4s								

IDC 12 13:27:32.5±6.3, 489S×10066E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.3/19, mbtmp3.5/2, Error ellipse: s-maj=288.3km s-min=48.7km az=51.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.03**	**118**	P	P	13 34 35.8	0.0
	0.3nm,0.3s,baz=301,slow=9.1,SNR=11						
ASAR	**Alice Springs**	**37.07**	**124**	P	P	13 34 44.8	+0.1
	0.2nm,0.4s,baz=293,slow=8.0,SNR=5.1						
TXAR	**Lajitas Array**	**146.52**	**41**	PKPbc	PKPbc	13 47 15.7	-0.8
	0.6nm,0.5s,baz=237,slow=0.7,SNR=11						

*ISCJB **12** 13:28:19.3±0.3, 3589N±002×353W±002, h10km, Error ellipse: s-maj=2.9km s-min=2.5km az=160.5*
*MDD **12** 13:28:20.9±0.3, 3584N×354W, h0km, mbLg2.9/16, Error ellipse: s-maj=2.9km s-min=2.7km az=169.0, PRIMO*
*CSEM **12** 13:28:20.0±0.1, 3569N×3.19W, h30km, ML3.4/19, Error ellipse: s-maj=2.2km s-min=1.3km az=101.0*
*NEIC **12** 13:28:21.3, 3589N×353W, h0km, MN2.7(MDD), After MDD.*
*CNRM **12** 13:28:22.2, 3584N×344W, h30km, MD3.8*
*SFS **12** 13:28:22.0, 3593N×353W, h0km, ML2.6*
*INMG **12** 13:28:22.2±1.5, 3571N×354W, h17km±8km, ML2.8, Error ellipse: s-maj=6.3km s-min=5.2km az=1.0*
*LDG **12** 13:28:23.2±0.2, 3595N×351W, h2km, Ml3.0/4, Error ellipse: s-maj=4.9km s-min=2.9km az=170.0*

ISC 12 13:28:20.5±0.5, 3584N±002×347W±003, h17km±3km, n119, σ1§50/204, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EALB	**Alboran**	**0.37**	**74**	Pg	**Pg**	**13 28 28.8**	**+0.6**
	88nm,0.1s,SNR=20						
EALB				Lg		13 28 34.2	
	913nm,0.3s,SNR=26						
EALB	**Alboran**	**0.37**	**74**	Pg	**Pg**	**13 28 28.7**	**+0.5**
	88nm,0.1s,SNR=20						
EALB	**Alboran**	**0.37**	**74**	Pg	**Pg**	**13 28 28.7**	**+0.5**
EALB				Lg		13 28 34.2	
MPAL	**Palemas**	**0.72**	**213**	*i* P	**Pb**	**13 28 35.0**	**+0.4**
MPAL				*i* S	**Sb**	**13 28 46.0**	**+1.8**
TOU	**Touzarine**	**0.91**	**195**	*i* P	**Pb**	**13 28 36.0**	**-1.7**
TOU				*i* S	**Sb**	**13 28 50.0**	**+0.6**
ZAI	**Zaio**	**1.05**	**146**	P	**Pb**	**13 28 40.0**	**-0.1**
ZAI				S	**Sb**	**13 28 53.0**	**-0.5**
ZAI	**Zaio**	**1.05**	**146**	*i* P	**Pb**	**13 28 40.0**	**-0.1**
EBER	**Berja**	**1.16**	**24**	Pg	**Pg**	**13 28 41.6**	**-1.2**
	17nm,0.3s,SNR=16						
EBER				Lg		13 28 57.8	
	427nm,0.5s,SNR=11						
EBER	**Berja**	**1.16**	**24**	Pg	**Pg**	**13 28 41.5**	**-1.4**
	5.1nm,0.2s,SNR=16						
EBER	**Berja**	**1.16**	**24**	Pg	**Pg**	**13 28 41.5**	**-1.4**
EBER				Lg		13 28 58.3	
EMAL	**Malaga-Limoner**	**1.21**	**320**	Pg	**Pg**	**13 28 46.2**	**+2.4**
	25nm,0.1s,SNR=7.9						
EMAL				Lg		13 29 03.0	
	401nm,0.2s,SNR=7.9						
EMAL	**Malaga-Limoner**	**1.21**	**320**	Pg	**Pg**	**13 28 45.9**	**+2.1**
	83nm,0.3s,SNR=7.9						
EMAL				*e*S	**Sb**	**13 28 59.2**	**+1.1**
EMAL	**Malaga-Limoner**	**1.21**	**320**	Pg	**Pg**	**13 28 45.9**	**+2.0**
EMAL				Lg		13 29 03.0	
ERON	**Agron**	**1.21**	**347**	Pg	**Pg**	**13 28 42.2**	**-1.7**
	25nm,0.3s,SNR=7.9						
ERON				Lg		13 28 59.4	
	116nm,0.3s,SNR=7.9						
ERON	**Agron**	**1.21**	**347**	Lg		13 28 56.3	
	40nm,0.3s,SNR=7.9						
ERON	**Agron**	**1.21**	**347**	Pg	**Pg**	**13 28 42.1**	**-1.9**
ERON				Lg		13 28 56.3	
EMIJ	**Mijas**	**1.28**	**305**	Pg	**Pg**	**13 28 43.0**	**-2.3**
	10nm,0.2s,SNR=23						
EMIJ				Lg		13 28 59.1	
	140nm,0.2s,SNR=13						
EQUE	**Quentar**	**1.36**	**1**	Pg	**Pg**	**13 28 45.5**	**-1.3**
	4.9nm,0.3s,SNR=27						
EQUE				Lg		13 29 02.9	
	81nm,0.5s,SNR=14						
EQUE	**Quentar**	**1.36**	**1**	Pg	**Pg**	**13 28 45.5**	**-1.4**
	4.9nm,0.3s,SNR=27						
ELOJ	**Sierra Loja**	**1.42**	**337**	Pg	**Pg**	**13 28 47.7**	**-0.2**
	8.4nm,0.2s,SNR=12						
ELOJ				Lg		13 29 06.2	
	87nm,0.4s,SNR=5.0						
ELOJ	**Sierra Loja**	**1.42**	**337**	Pg	**Pg**	**13 28 47.7**	**-0.2**
ELOJ				Lg		13 29 04.5	
ECOG	**Cogollos-Vega**	**1.44**	**357**	Pg	**Pg**	**13 28 46.9**	**-1.4**
	9.9nm,0.3s,SNR=13						
ECOG				Lg		13 29 07.6	
	80nm,0.4s,SNR=14						
ECOG	**Cogollos-Vega**	**1.44**	**357**	Pg	**Pg**	**13 28 46.9**	**-1.4**
ECOG				Lg		13 29 06.2	
ENIJ	**Nijar**	**1.52**	**42**	Pn	**Pn**	**13 28 47.2**	**+0.3**
	13nm,0.2s,SNR=6.4						
ENIJ				Lg		13 29 09.1	
	140nm,0.5s,SNR=6.4						
ENIJ	**Nijar**	**1.52**	**42**	Pg	**Pg**	**13 28 48.5**	**-1.3**
	9.7nm,0.4s,SNR=6.4						
ENIJ	**Nijar**	**1.52**	**42**	Pg	**Pg**	**13 28 48.5**	**-1.3**
ENIJ				Lg		13 29 09.1	
REAL	**Reales**	**1.55**	**295**	P	**Pn**	**13 28 46.6**	**-0.6**
REAL				S	**Sn**	**13 29 06.8**	**-0.1**
ECEU	**Ceuta**	**1.55**	**273**	Pn	**Pn**	**13 28 47.0**	**-0.3**
	6.1nm,0.3s,SNR=4.7						
ECEU				Sn	**Sn**	**13 29 06.3**	**-0.8**
	48nm,0.3s,SNR=7.5						
ECEU	**Ceuta**	**1.55**	**273**	Pn	**Pn**	**13 28 47.0**	**-0.3**
	6.1nm,0.3s,SNR=4.7						
EJIF	**Jimena Fronter**	**1.73**	**291**	Pn	**Pn**	**13 28 51.3**	**+1.6**
	7.0nm,0.2s,SNR=7.9						
EJIF				Sn	**Sn**	**13 29 12.5**	**+1.1**
	121nm,0.5s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.73**	**291**	Pn	**Pn**	**13 28 50.4**	**+0.6**
	8.6nm,0.3s,SNR=7.9						
EJIF				Sn	**Sn**	**13 29 12.5**	**+1.0**
	121nm,0.5s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.73**	**291**	Pn	**Pn**	**13 28 50.4**	**+0.6**
EJIF				Sn	**Sn**	**13 29 12.5**	**+1.1**
TZK	**Tazeka**	**1.84**	**199**	*i* P	**Pn**	**13 28 52.0**	**+0.7**
TZK				*i* S	**Sn**	**13 29 12.0**	**-2.1**
MOMI	**Momias**	**1.89**	**286**	P	**Pn**	**13 28 59.2**	**+7.2**
MOMI				S	**Sn**	**13 29 20.1**	**+4.7**
LIJA	**Lijar**	**1.89**	**305**	*i* P	**Pn**	**13 28 55.5**	**+3.5**
EQES	**Quesada**	**1.99**	**9**	Pn	**Pn**	**13 28 56.0**	**+2.7**
	5.8nm,0.1s,SNR=25						
EQES				Sn	**Sn**	**13 29 22.0**	**+4.2**
	202nm,0.4s,SNR=11						
EQES	**Quesada**	**1.99**	**9**	Pn	**Pn**	**13 28 56.1**	**+2.8**
EQES				Lg		13 29 22.2	
ESPR	**Espera**	**2.19**	**299**	Pn	**Pn**	**13 28 56.7**	**+0.7**
	0.2nm,0.1s,SNR=8.5						
ESPR				Lg		13 29 28.7	
	43nm,0.3s,SNR=6.0						
ESPR	**Espera**	**2.19**	**299**	Pn	**Pn**	**13 28 58.8**	**+2.8**
	6.2nm,0.4s,SNR=8.5						
ESPR	**Espera**	**2.19**	**299**	Pn	**Pn**	**13 28 58.8**	**+2.8**
ESPR				Lg		13 29 28.7	
TGT	**Taghat**	**2.19**	**217**	*i* P	**Pn**	**13 28 56.0**	**-0.1**
TGT				*i* S	**Sn**	**13 29 21.0**	**-1.8**
EBAN	**Banos Encina**	**2.34**	**354**	Pg	**Pg**	**13 29 02.1**	**-3.3**
	5.3nm,0.2s,SNR=7.9						
EBAN				Lg		13 29 33.8	
	39nm,0.4s,SNR=7.9						

EADA	**Adamuz**	**2.49**	**339**	Pn		**Pn**		**13 29 02.1**	**+1.9**
	1.1nm,0.2s,SNR=33								
EADA				Pg		**Pg**		**13 29 05.3**	**-3.0**
	5.0nm,0.2s,SNR=8.0								
EADA				Sn		**Sn**		**13 29 29.9**	**-0.2**
	8.7nm,0.3s,SNR=7.7								
EADA				Lg				13 29 36.6	
	20nm,0.2s,SNR=5.1								
EADA	**Adamuz**	**2.49**	**339**	Pn		**Pn**		**13 29 01.9**	**+1.7**
	1.1nm,0.2s,SNR=33								
EADA	**Adamuz**	**2.49**	**339**	Pg		**Pg**		**13 29 05.3**	**-3.0**
	5.0nm,0.2s,SNR=8.0								
EADA				Sn		**Sn**		**13 29 29.9**	**-0.2**
	8.7nm,0.3s,SNR=7.7								
EADA	**Adamuz**	**2.49**	**339**	Pn		**Pn**		**13 29 01.9**	**+1.7**
EADA				Pg		**Pg**		**13 29 05.3**	**-3.0**
EADA				Sn		**Sn**		**13 29 29.9**	**-0.2**
EADA				Lg				13 29 36.6	
EMUR	**La Murta**	**2.68**	**41**	Pn		**Pn**		**13 29 06.0**	**+3.1**
	2.9nm,0.3s,SNR=7.9								
EMUR				Pg		**Pg**		**13 29 10.8**	**-1.2**
	1.7nm,0.2s,SNR=7.9								
EMUR				Sn		**Sn**		**13 29 38.7**	**+3.8**
	15nm,0.4s,SNR=4.8								
EMUR	**La Murta**	**2.68**	**41**	Pn		**Pn**		**13 29 05.8**	**+3.0**
EMUR				Pg		**Pg**		**13 29 10.8**	**-1.2**
EMUR				Sn		**Sn**		**13 29 34.0**	**-0.8**
ECAB	**El Cabril**	**2.73**	**326**	Pg		**Pg**		**13 29 08.9**	**-3.9**
	0.8nm,0.0s,SNR=12								
ECAB				Sn		**Sn**		**13 29 35.5**	**-0.5**
	16nm,0.4s,SNR=4.9								
ECAB				Lg				13 29 46.9	
	23nm,0.3s,SNR=7.7								
ECAB	**El Cabril**	**2.73**	**326**	Pg		**Pg**		**13 29 08.9**	**-3.9**
	13nm,0.4s,SNR=12								
ECAB				Sn		**Sn**		**13 29 35.5**	**-0.5**
	16nm,0.4s,SNR=4.9								
ECAB	**El Cabril**	**2.73**	**326**	Pg		**Pg**		**13 29 08.9**	**-3.9**
ECAB				Sn		**Sn**		**13 29 35.5**	**-0.5**
ECAB				Lg				13 29 43.7	
MIF	**Mishlifen**	**2.83**	**211**	*i* P		**Pn**		**13 29 04.0**	**-0.8**
MIF				*i* S		**Sn**		**13 29 36.0**	**-2.4**
EVIA	**Vianos**	**2.90**	**15**	Pg		**Pg**		**13 29 13.9**	**-2.2**
	45nm,0.6s,SNR=7.9								
CZD	**Col de Zad**	**3.09**	**205**	*i* P		**Pn**		**13 29 08.0**	**-0.4**
CZD				*i* S		**Sn**		**13 29 41.0**	**-3.9**
EMIN	**Mina Concepcio**	**3.21**	**308**	Pn		**Pn**		**13 29 10.9**	**+0.7**
	1.4nm,0.2s,SNR=9.9								
EMIN				Pg		**Pg**		**13 29 18.4**	**-3.7**
	1.5nm,0.2s,SNR=8.2								
EMIN				Sn		**Sn**		**13 29 47.4**	**-0.6**
	7.6nm,0.3s,SNR=5.9								
EMIN				Lg				13 30 00.5	
	7.4nm,0.4s,SNR=4.0								
EMIN	**Mina Concepcio**	**3.21**	**308**	Pn		**Pn**		**13 29 10.9**	**+0.8**
	1.4nm,0.2s,SNR=9.9								
EMIN	**Mina Concepcio**	**3.21**	**308**	Pg		**Pg**		**13 29 18.1**	**-4.0**
	0.9nm,0.1s,SNR=8.2								
EMIN	**Mina Concepcio**	**3.21**	**308**	Pn		**Pn**		**13 29 10.9**	**+0.7**
EMIN				Pg		**Pg**		**13 29 18.1**	**-4.0**
EMIN				Sn		**Sn**		**13 29 47.4**	**-0.6**
EMIN				Lg				13 30 01.0	
EGRO	**El Granado**	**3.65**	**299**	Pn		**Pn**		**13 29 17.2**	**+1.1**
	16nm,0.4s,SNR=16								
EGRO				Sn		**Sn**		**13 29 56.5**	**-2.1**
	18nm,0.4s,SNR=5.2								
EGRO	**El Granado**	**3.65**	**299**	Pn		**Pn**		**13 29 17.2**	**+1.1**
	16nm,0.4s,SNR=16								
EGRO				Sn		**Sn**		**13 29 58.0**	**-0.6**
	18nm,0.4s,SNR=5.2								
EGRO	**El Granado**	**3.65**	**299**	Pn		**Pn**		**13 29 17.2**	**+1.1**
EGRO				Sn		**Sn**		**13 29 58.0**	**-0.7**
PBAR	**Barrancos**	**3.69**	**310**	*e*Pn		**Pn**		**13 29 19.6**	**+2.9**
PBAR				*e*Sn		**Sn**		**13 30 00.0**	**+0.2**
	13nm,0.6s								
PBAR	**Barrancos**	**3.69**	**310**	*e*Pn		**Pn**		**13 29 19.6**	**+2.9**
PBAR				*e*Sn		**Sn**		**13 30 00.0**	**+0.2**
	13nm,0.6s								
PVAQ	**Vaqueiros**	**3.76**	**296**	*e*Pn		**Pn**		**13 29 18.6**	**+0.9**
PVAQ				*e*Sn		**Sn**		**13 30 00.7**	**-0.8**
PVAQ				A				13 30 04.7	
	20nm,0.3s								
PVAQ	**Vaqueiros**	**3.76**	**296**	*e*Pn		**Pn**		**13 29 18.6**	**+0.9**
PVAQ				*e*Sn		**Sn**		**13 30 00.7**	**-0.8**
	20nm,0.3s								
ESDC	**Sonseca Array**	**3.85**	**354**	Pn		**Pn**		**13 29 20.4**	**+1.5**
	2.0nm,0.2s,baz=176,slow=12,SNR=12								
ESDC				Sn		**Sn**		**13 30 02.4**	**-1.3**
	1.8nm,0.4s,baz=172,slow=16,SNR=4.2								
ESDC	**Sonseca Array**	**3.85**	**354**	Pn		**Pn**		**13 29 20.4**	**+1.5**
	2.0nm,0.2s,SNR=12								
ESDC				Sn		**Sn**		**13 30 02.4**	**-1.3**
	1.8nm,0.4s,SNR=4.2								
PBDV	**Barranco-do-Ve**	**3.86**	**293**	*e*Pn		**Pn**		**13 29 20.2**	**+1.2**
PBDV				*e*Sn		**Sn**		**13 30 02.9**	**-1.0**
PBDV				A				13 30 04.9	
	16nm,0.3s								
PBDV	**Barranco-do-Ve**	**3.86**	**293**	*e*Pn		**Pn**		**13 29 20.2**	**+1.2**
PBDV				*e*Sn		**Sn**		**13 30 02.9**	**-1.0**
	16nm,0.3s								
ZFT	**Errachidia**	**3.87**	**191**	*i* P		**Pn**		**13 29 18.0**	**-1.1**
ZFT				*i* S		**Sn**		**13 30 00.0**	**-4.1**
KIB	**El Ksiba**	**3.89**	**214**	*e*P		**Pn**		**13 29 20.0**	**+0.5**
KIB				*i* S		**Sn**		**13 30 02.0**	**-2.7**
EBAD	**Badajoz**	**4.06**	**317**	Pn		**Pn**		**13 29 23.4**	**+1.7**
	1.0nm,0.2s,SNR=7.9								
EBAD				Pg		**Pg**		**13 29 34.8**	**-3.4**
	2.5nm,0.2s,SNR=4.0								
EBAD				Sn		**Sn**		**13 30 07.4**	**-1.4**
	20nm,0.2s,SNR=5.2								
EBAD	**Badajoz**	**4.06**	**317**	Pn		**Pn**		**13 29 23.1**	**+1.3**
	1.8nm,0.3s,SNR=7.9								
EBAD	**Badajoz**	**4.06**	**317**	Pn		**Pn**		**13 29 23.1**	**+1.3**
EBAD				Pg		**Pg**		**13 29 34.8**	**-3.4**
EBAD				Sn		**Sn**		**13 30 07.4**	**-1.4**
PBEJ	**Beja**	**4.15**	**303**	*e*Pn		**Pn**		**13 29 24.9**	**+1.9**
PBEJ				*e*Sn		**Sn**		**13 30 10.7**	**-0.3**
PBEJ				A				13 30 12.3	
	6.3nm,0.3s								
PBEJ	**Beja**	**4.15**	**303**	*e*Pn		**Pn**		**13 29 24.9**	**+1.9**
PBEJ				*e*Sn		**Sn**		**13 30 10.7**	**-0.3**
	6.3nm,0.3s								
MORF	**Marmelete**	**4.42**	**291**	*e*Pn		**Pn**		**13 29 27.8**	**+1.0**
MORF				*e*Sn		**Sn**		**13 30 16.8**	**-1.0**
MORF				A				13 30 18.7	
	12nm,0.2s								
MORF	**Marmelete**	**4.42**	**291**	*e*Pn		**Pn**		**13 29 27.8**	**+1.0**
MORF				*e*Sn		**Sn**		**13 30 16.8**	**-1.0**
	12nm,0.2s								
TZC	**Tazercounte**	**4.46**	**215**	*i* P		**Pn**		**13 29 28.0**	**+0.8**
TZC				*i* S		**Sn**		**13 30 15.0**	**-3.6**
PESTR	**Estremoz**	**4.46**	**314**	*e*Sn		**Sn**		**13 30 18.7**	**-0.2**
PFVI	**Vila Bisbo**	**4.51**	**288**	*e*Pn		**Pn**		**13 29 29.1**	**+1.2**
PFVI				*e*Sn		**Sn**		**13 30 18.1**	**-1.8**
PFVI				A				13 30 29.0	
	14nm,0.8s								
PFVI	**Vila Bisbo**	**4.51**	**288**	*e*Pn		**Pn**		**13 29 29.1**	**+1.2**
PFVI				*e*Sn		**Sn**		**13 30 18.1**	**-1.8**
	14nm,0.8s								
EVO	**Evora**	**4.52**	**308**	*e*Pn		**Pn**		**13 29 31.0**	**+2.9**
EVO				*e*Sn		**Sn**		**13 30 20.9**	**+0.7**
	18nm,0.4s								
EVO	**Evora**	**4.52**	**308**	*e*Pn		**Pn**		**13 29 30.2**	**+2.1**
EVO				*e*Sn		**Sn**		**13 30 19.9**	**-0.3**
EVO				A				13 30 21.5	
	8.4nm,0.3s								
EVO	**Evora**	**4.52**	**308**	*e*Pn		**Pn**		**13 29 30.2**	**+2.1**
EVO				*e*Sn		**Sn**		**13 30 19.9**	**-0.3**
	8.4nm,0.3s								
PTEO	**Sao Teotonio**	**4.56**	**294**	*e*Pn		**Pn**		**13 29 30.2**	**+1.6**
PTEO				*e*Sn		**Sn**		**13 30 20.1**	**-1.0**
PTEO				A				13 30 25.4	
	25nm,0.5s								
PTEO	**Sao Teotonio**	**4.56**	**294**	*e*Pn		**Pn**		**13 29 30.2**	**+1.6**
PTEO				*e*Sn		**Sn**		**13 30 20.1**	**-1.0**
	25nm,0.5s								
EVOP	**Sao Brissos**	**4.59**	**307**	*e*Pn		**Pn**		**13 29 31.0**	**+2.0**
EVOP				*e*Sn		**Sn**		**13 30 20.9**	**-1.0**
	9.2nm,0.4s								
MOE	**Montemor**	**4.73**	**306**	*e*Pn		**Pn**		**13 29 32.7**	**+1.7**
MOE				*e*Sn		**Sn**		**13 30 25.5**	**+0.1**
PMRV	**Marv??o**	**4.75**	**320**	*e*Pn		**Pn**		**13 29 33.9**	**+2.7**
PMRV				*e*Sn		**Sn**		**13 30 26.4**	**+0.6**
PMRV				A				13 31 06.2	
	10nm,0.3s								
PMRV	**Marv??o**	**4.75**	**320**	*e*Pn		**Pn**		**13 29 33.9**	**+2.7**
PMRV				*e*Sn		**Sn**		**13 30 26.4**	**+0.6**
	10nm,0.3s								
GUD	**Guadarrama**	**4.83**	**354**	Pn		**Pn**		**13 29 35.1**	**+2.7**
	1.1nm,0.2s,SNR=7.9								
GUD				Sn		**Sn**		**13 30 26.3**	**-1.5**
	3.5nm,0.4s,SNR=4.0								
GUD				Lg				13 30 53.7	
	9.3nm,0.5s,SNR=4.6								
GUD	**Guadarrama**	**4.83**	**354**	Pn		**Pn**		**13 29 32.0**	**-0.3**
GUD				Sn		**Sn**		**13 30 26.9**	**-0.9**
GUD	**Guadarrama**	**4.83**	**354**	Pn		**Pn**		**13 29 32.0**	**-0.3**
GUD				Sn		**Sn**		**13 30 26.9**	**-0.9**
GUD				Lg				13 30 52.7	
EIBI	**Ibiza**	**4.98**	**49**	Pn		**Pn**		**13 29 38.6**	**+4.2**
	2.7nm,0.3s,SNR=7.9								
EIBI	**Ibiza**	**4.98**	**49**	Sn		**Sn**		**13 30 28.0**	**-3.5**
EIBI	**Ibiza**	**4.98**	**49**	Pn		**Pn**		**13 29 38.1**	**+3.8**
EIBI				Sn		**Sn**		**13 30 28.0**	**-3.5**
ETOR	**Torete**	**5.10**	**12**	Pn		**Pn**		**13 29 39.1**	**+3.1**
	4.3nm,0.5s,SNR=7.9								
ETOR				Pg		**Pg**		**13 29 53.7**	**-4.4**
	8.1nm,0.4s,SNR=6.1								
ETOR				Lg				13 31 03.1	
	24nm,0.5s,SNR=7.9								
ETOR	**Torete**	**5.10**	**12**	Pn		**Pn**		**13 29 38.2**	**+2.2**
ETOR	**Torete**	**5.10**	**12**	Pn		**Pn**		**13 29 38.2**	**+2.2**
ETOR				Pg		**Pg**		**13 29 53.7**	**-4.4**
ETOR				Lg				13 31 02.3	
PCBR	**Castelo Branco**	**5.10**	**323**	*e*Pn		**Pn**		**13 29 37.9**	**+1.8**
PCBR				*e*Sn		**Sn**		**13 30 32.7**	**-1.9**
PCBR				A				13 30 37.9	
	7.4nm,0.5s								
PCBR	**Castelo Branco**	**5.10**	**323**	*e*Pn		**Pn**		**13 29 37.9**	**+1.8**
PCBR				*e*Sn		**Sn**		**13 30 32.7**	**-1.9**
	7.4nm,0.5s								
MTE	**Manteigas**	**5.57**	**326**	*e*Pn		**Pn**		**13 29 48.1**	**+5.5**
MTE				*e*Sn		**Sn**		**13 30 47.3**	**+1.1**
MTE				A				13 31 22.0	
	15nm,0.8s								
MTE	**Manteigas**	**5.57**	**326**	Pn		**Pn**		**13 29 48.1**	**+5.5**
MTE				Sn		**Sn**		**13 30 47.3**	**+1.1**
	7.7nm,0.8s								
ERTA	**Horta de San J**	**5.92**	**29**	Pn		**Pn**		**13 29 51.6**	**+4.3**
	2.4nm,0.3s,SNR=4.0								
ERTA				Sn		**Sn**		**13 30 51.8**	**-2.9**
	0.1nm,0.1s,SNR=4.0								
ERTA	**Horta de San J**	**5.92**	**29**	Pn		**Pn**		**13 29 52.2**	**+4.9**
ERTA				Sn		**Sn**		**13 30 51.8**	**-2.9**
MVO	**Moncorvo**	**6.01**	**333**	*e*Pn		**Pn**		**13 29 51.0**	**+2.5**
MVO				*e*Sn		**Sn**		**13 30 54.8**	**-2.0**
ETOS	**Mallorca**	**6.33**	**50**	Pn		**Pn**		**13 29 55.8**	**+2.8**
ETOS				Sn		**Sn**		**13 31 01.9**	**-3.0**
ECAL	**Calabor**	**6.61**	**338**	Pn		**Pn**		**13 29 59.6**	**+2.9**
	0.2nm,0.2s,SNR=5.0								
ECAL	**Calabor**	**6.61**	**338**	Pn		**Pn**		**13 29 58.8**	**+2.1**
ECAL	**Calabor**	**6.61**	**338**	Pn		**Pn**		**13 29 58.8**	**+2.0**
ECAL				Sn		**Sn**		**13 31 07.0**	**-4.6**
ECAL				Lg				13 31 49.5	
ELOB	**Lobios**	**7.01**	**331**	Pn		**Pn**		**13 30 04.5**	**+2.3**
	0.7nm,0.2s,SNR=7.9								
ELOB				Sn		**Sn**		**13 31 18.9**	**-2.5**
	0.3nm,0.1s,SNR=7.9								
ELOB	**Lobios**	**7.01**	**331**	Pn		**Pn**		**13 30 04.6**	**+2.4**
ETSF	**Etsaut**	**7.40**	**17**	*e*Pn		**Pn**		**13 30 08.9**	**+1.2**
ETSF				*e*Sn		**Sn**		**13 31 27.1**	**-4.1**
	1.1nm,0.3s								
ETSF	**Etsaut**	**7.40**	**17**	*e*Pn		**Pn**		**13 30 08.9**	**+1.2**
ETSF				*e*Sn		**Sn**		**13 31 27.1**	**-4.1**
	0.6nm,0.3s								
SJPF	**Ste Jean**	**7.47**	**13**	*e*Pn		**Pn**		**13 30 09.5**	**+0.9**
SJPF				*e*Sn		**Sn**		**13 31 29.0**	**-3.8**
	0.8nm,0.3s								
SJPF	**Ste Jean**	**7.47**	**13**	*e*Pn		**Pn**		**13 30 09.5**	**+0.9**
SJPF				*e*Sn		**Sn**		**13 31 29.0**	**-3.8**
	0.4nm,0.3s								
EPF	**Esparros**	**7.76**	**21**	*e*Pn		**Pn**		**13 30 12.9**	**+0.3**
EPF				*e*Sn		**Sn**		**13 31 36.3**	**-3.7**
	1.3nm,0.3s								
EPF	**Esparros**	**7.76**	**21**	*e*Pn		**Pn**		**13 30 12.9

0.7nm,0.7s,baz=188,slow=9.9,SNR=2.6
MKAR Makanchi Array 52.75 345 P P 13 45 46.9 0.0
0.2nm,0.4s,baz=158,slow=8.7,SNR=2.7
TXAR Lajitas Array 145.99 39 PKPbc PKPbc 13 56 11.8 -0.9
0.2nm,0.4s,baz=327,slow=1.5,SNR=3.6

IDC 12 13:37:27.3±5.8,333S×10181E,h0km,mb3.5/2,mb1 3.7/2, mb1mx3.3/18,mbtmp3.5/2,Error ellipse: s-maj=373.3km s-min=68.8km az=45.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.77**	**120**	P	P	13 44 28.7	+0.4
	0.4nm,0.5s,baz=301,slow=8.9,SNR=4.0						
ASAR	**Alice Springs**	**37.02**	**126**	P	P	13 44 38.5	-0.5
	0.4nm,0.8s,baz=292,slow=8.0,SNR=3.6						
TXAR	**Lajitas Array**	**144.59**	**40**	PKP	PKPdf	13 57 06.4	-0.2
	0.3nm,0.5s,baz=288,slow=0.6,SNR=4.4						

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*IDC **12** 13:43:25.3±0.6,334S×13095E,h0km,mb4.3/12, mb1 4.4/13,mb1mx4.3/16,mbtmp4.3/13,ML3.7/1,Error ellipse: s-maj=28.9km s-min=13.7km az=74.0*
*BJI **12** 13:43:27.2,340S×13090E,h13km,mB5.0,mb4.6*
*DJA **12** 13:43:27,315S×13108E,h0km,MLv4.6/5*
*NEIC **12** 13:43:27.2±6.2,338S×13092E,h13km±38km,mb4.7/9, Error ellipse: s-maj=16.8km s-min=8.5km az=62.0*
*ISCJB **12** 13:43:28.5±1.1,350S±005×13098E±007,h41km±10km, mb4.6/25,Error ellipse: s-maj=12.0km s-min=7.3km az=162.1*

ISC 12 13:43:30.9±1.0,351S±005×13097E±007,h44km±9km, h8km±5.3km:pP-P,n63,σ1§20/67,mb4.6/25,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**2.04**	**274**	P	**Pn**	**13 44 04.5**	**+1.7**
	0.0nm,0.0s						
SWI	**Sorong**	**2.64**	**6**	P	**Sn**	**13 44 36.5**	**-5.4**
	0.0nm,0.0s						
AAI	**Ambon**	**2.77**	**266**	P	**Pn**	**13 44 13.3**	**+0.4**
	0.0nm,0.0s						
AAI	**Ambon**	**2.77**	**266**	P	**Pn**	**13 44 13.4**	**+0.5**
	0.0nm,0.0s						
LBMI	**Labuha**	**4.49**	**309**	P	**Pn**	**13 44 34.1**	**-2.3**
	0.0nm,0.0s						
BAKI	**Biak**	**5.63**	**66**	P	**Pn**	**13 44 52.8**	**+0.7**
	0.0nm,0.0s						
BATI	**Baumata**	**9.84**	**227**	P	**Pn**	**13 45 54.0**	**+4.1**
	0.0nm,0.0s						
BATI	**Baumata**	**9.84**	**227**	Pn	**Pn**	**13 45 53.7**	**+3.8**
	15nm,0.3s,baz=108,slow=0.9,SNR=28						
KAPI	**Kappang**	**11.29**	**262**	Pn	**Pn**	**13 46 10.1**	**+0.4**
	0.5nm,0.3s,baz=90,slow=9.1,SNR=3.0						
KAPI	**Kappang**	**11.29**	**262**	*eP*	**Pn**	**13 46 09.9**	**+0.2**
	24nm,0.8s						
FITZ	**Fitzroy Crossi**	**15.41**	**199**	*eP*	**Pn**	**13 47 03.4**	**-2.1**
	5.4nm,0.3s						
FITZ				*eS*	**Sn**	**13 49 48.2**	**-7.0**
FITZ	**Fitzroy Crossi**	**15.41**	**199**	Pn	**Pn**	**13 47 02.9**	**-2.6**
	0.7nm,0.3s,baz=44,slow=13,SNR=19						
FITZ				Sn	**Sn**	**13 49 49.6**	**-5.6**
	0.4nm,0.3s,baz=252,slow=20,SNR=2.9						
FITZ	**Fitzroy Crossi**	**15.41**	**199**	*eP*	**Pn**	**13 47 03.5**	**-2.0**
FITZ				*eS*	**Sn**	**13 49 48.2**	**-7.0**
WRAB	**Tennant Creek**	**16.66**	**169**	*eP*	**Pn**	**13 47 17.4**	**-3.9**
	16nm,0.6s						
WRAB				*eS*	**Sn**	**13 50 13.7**	**-12**
WRA	**Warramunga Arr**	**16.66**	**169**	Pn	**Pn**	**13 47 16.9**	**-4.5**
	0.7nm,0.3s,baz=348,slow=14,SNR=21						
WRA				Sn	**Sn**	**13 50 19.1**	**-6.4**
	1.2nm,0.3s,baz=333,slow=23,SNR=5.7						
WB2	**Warramunga Arr**	**16.66**	**169**	*eP*	**Pn**	**13 47 18.5**	**-2.9**
WB2				*eS*	**Sn**	**13 50 15.0**	**-11**
WB2	**Warramunga Arr**	**16.66**	**169**	*eP*	**Pn**	**13 47 19.3**	**-2.1**
WB2				*eS*	**Sn**	**13 50 15.0**	**-11**
ASAR	**Alice Springs**	**20.24**	**172**	P	**P**	**13 48 04.1**	**+1.6**
	15nm,0.4s,baz=351,slow=11,SNR=187						
ASAR				S	**S**	**13 51 43.6**	**-3.7**
	1.1nm,0.7s,baz=358,slow=27,SNR=4.7						
CTA	**Charters Tower**	**22.22**	**139**	*eP*	**P**	**13 48 25.7**	**+1.8**
	5.2nm,0.8s,mb4.0						
CTA	**Charters Tower**	**22.22**	**139**	P	**P**	**13 48 25.8**	**+2.0**
	5.5nm,0.7s,mb4.1,baz=316,slow=11,SNR=11						
CTAO	**Charters Tower**	**22.22**	**139**	*eP*	**P**	**13 48 25.4**	**+1.5**
	14nm,1.1s,mb4.3						
FORT	**Forrest**	**27.26**	**185**	*eP*	**P**	**13 49 12.9**	**+1.8**
	28nm,0.7s,mb4.9						
FORT	**Forrest**	**27.26**	**185**	*eP*	**P**	**13 49 12.4**	**+1.2**
STKA	**Stephens Creek**	**29.94**	**162**	*eP*	**P**	**13 49 36.4**	**+1.5**
	3.5nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**29.94**	**162**	P	**P**	**13 49 36.7**	**+1.8**
	2.3nm,0.4s,mb4.3,baz=334,slow=9.5,SNR=11						
KLBR	**Kellerberrin**	**30.58**	**203**	*eP*	**P**	**13 49 40.8**	**+0.2**
	53nm,1.4s,mb5.2						
NWAO	**Narrogin (SRO)**	**31.97**	**202**	P	**P**	**13 49 52.5**	**-0.3**
	19nm,1.1s,mb4.8,baz=126,slow=15,SNR=6.2						
CNB	**Canberra Magne**	**35.95**	**154**	*eP*	**P**	**13 50 32.5**	**+5.2**
TOO	**Toolangi**	**36.42**	**160**	*eP*	**P**	**13 50 34.7**	**+3.3**
CMAR	**Chiang Mai Arr**	**38.36**	**306**	P	**P**	**13 50 48.2**	**+0.2**
	1.8nm,0.7s,mb3.9,baz=133,slow=7.1,SNR=12						
KMI	**Kunming**	**39.51**	**318**	P	**P**	**13 50 59.6**	**+2.0**
KMI				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.6						
MJAR	**Matsushiro Arr**	**40.41**	**9**	P	**P**	**13 51 02.5**	**-2.4**
	comp=Z,1.8nm,0.9s,mb3.8,baz=196,slow=9.0,SNR=5.5						
KSRS	**Korea Array**	**40.85**	**356**	P	**P**	**13 51 08.1**	**-0.4**
	comp=Z,1.2nm,0.7s,mb3.7,baz=175,slow=9.0,SNR=7.3						
CD2	**Chengdu**	**42.95**	**325**	*eP*	**P**	**13 51 29.4**	**+3.6**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
LZH	**Lanzhou**	**46.85**	**330**	*eP*	**P**	**13 52 03.4**	**+6.7**
LZH				AP	pP	13 52 06.9	-2.0
LZH				XP	sP	13 52 08.7	-5.3
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,103nm,5.1s						
GTA	**Gaotai**	**51.44**	**329**	*eP*	**P**	**13 52 32.9**	**+1.1**
GTA				AP	pP	13 52 37.5	-6.6
GTA				XP	sP	13 52 40.0	-9.2
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.2						
TAPN	**Taplejung**	**51.77**	**309**	*eP*	**P**	**13 52 34.1**	**-0.4**
	comp=Z,12nm,0.4s,mb5.2						
ODAN	**Odare**	**51.78**	**308**	*eP*	**P**	**13 52 34.3**	**-0.2**
	comp=Z,38nm,1.0s,mb5.3						
RAMN	**Ramite**	**52.44**	**308**	*eP*	**P**	**13 52 39.4**	**-0.1**
	comp=Z,30nm,0.6s,mb5.4						
JIRN	**Jiri**	**53.10**	**309**	*eP*	**P**	**13 52 44.2**	**-0.1**
GUN	**Gumba**	**53.46**	**309**	*eP*	**P**	**13 52 46.7**	**-0.3**
KKN	**Kakani**	**53.87**	**308**	*eP*	**P**	**13 52 49.3**	**-0.7**
DMN	**Daman**	**53.93**	**308**	*eP*	**P**	**13 52 50.0**	**-0.4**
GKN	**Gorkha**	**54.48**	**308**	*eP*	**P**	**13 52 53.8**	**-0.6**
KOLN	**Koldanda**	**55.19**	**307**	*eP*	**P**	**13 52 59.4**	**-0.1**
ULN	**Ulaanbaatar**	**55.29**	**341**	*eP*	**P**	**13 53 00.8**	**+1.0**
DANN	**Dangsing**	**55.32**	**308**	*eP*	**P**	**13 52 59.9**	**-0.6**
SONM	**Songino Array**	**55.48**	**340**	P	**P**	**13 53 01.3**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.9,baz=143,slow=6.4,SNR=5.4						
WMQ	**Urumqi**	**61.05**	**325**	*eP*	**P**	**13 53 42.3**	**+2.1**
WMQ				AP	pP	13 53 46.5	-6.3
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.8						
YAK	**Yakutsk**	**65.36**	**359**	*eP*	**P**	**13 54 07.9**	**-0.5**
	comp=Z,17nm,0.8s,mb5.1						
MK31	**Makanchi Array**	**65.88**	**326**	*eP*	**P**	**13 54 11.2**	**-0.9**
MKAR	**Makanchi Array**	**65.88**	**326**	P	**P**	**13 54 11.9**	**-0.1**
	comp=Z,0.7nm,0.3s,mb4.1,baz=116,slow=8.6,SNR=20						
AML	**Almayashu**	**68.85**	**318**	*eP*	**P**	**13 54 32.9**	**+1.8**
	comp=Z,9.7nm,1.0s,mb4.7						
ZAA0	**Zalesovo Array**	**68.92**	**333**	*eP*	**P**	**13 54 30.3**	**-0.8**
ZALV	**Zalesovo Beam**	**68.92**	**333**	P	**P**	**13 54 30.1**	**-1.1**
	comp=Z,1.6nm,0.8s,mb4.0,baz=81,slow=4.7,SNR=6.0						
KURK	**Kurchatov**	**70.08**	**328**	*eP*	**P**	**13 54 37.7**	**-0.7**
	comp=Z,7.3nm,0.8s,mb4.7						
BRVK	**Borovoye**	**75.73**	**327**	*eP*	**P**	**13 55 11.5**	**-0.3**
	comp=Z,35nm,1.6s,mb5.0						
MAW	**Mawson**	**78.53**	**201**	P	**P**	**13 55 28.8**	**+1.5**
	comp=Z,1.5nm,0.6s,mb4.1,baz=79,slow=7.7,SNR=13						
ARCES	**ARCESS Array B**	**98.66**	**340**	P	**P**	**13 57 04.4**	**-0.6**
	comp=Z,1.6nm,0.7s,mb4.6,baz=78,slow=6.3,SNR=6.4						
TORD	**Torodi Ar. Bea**	**128.99**	**284**	PKP	PKPdf	14 02 35.7	+0.7
	comp=Z,0.3nm,0.4s,baz=76,slow=1.7,SNR=4.2						
CPUP	**Villa Florida**	**149.27**	**165**	PKPbc	PKPbc	14 03 17.4	+1.8
	comp=Z,1.1nm,0.5s,baz=290,slow=1.4,SNR=5.5						
LPAZ	**La Paz**	**152.73**	**137**	PKPbc	PKPbc	14 03 27.2	+3.2
	comp=Z,1.1nm,0.4s,baz=359,slow=2.5,SNR=8.8						
LPAZ	**La Paz**	**152.73**	**137**	PKPbc	PKPbc	14 03 27.2	+3.2

IDC 12 13:45:17.5±4.2,359S×10010E,h0km,mb3.8/3,mb1 3.9/3, mb1mx3.6/19,mbtmp3.8/3,Error ellipse: s-maj=180.6km s-min=61.9km az=69.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.94**	**357**	P	P	13 50 14.0	+1.2
	0.3nm,0.3s,baz=182,slow=8.9,SNR=4.1						
SONM	**Songino Array**	**51.51**	**5**	P	P	13 54 25.0	+0.2
	2.4nm,0.8s,baz=184,slow=9.0,SNR=6.6						
ZALV	**Zalesovo Beam**	**58.74**	**350**	P	P	13 55 16.1	-0.9
	1.1nm,0.5s,baz=159,slow=4.3,SNR=2.6						
TXAR	**Lajitas Array**	**145.89**	**39**	PKPbc	PKPbc	14 04 59.3	-0.3
	0.7nm,0.6s,baz=270,slow=1.0,SNR=10						

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*NEIC **12** 13:51:22.3±2.5,312S×100.18E,h35km,Error ellipse: s-maj=111.0km s-min=13.8km az=54.0*

IDC 12 13:51:17.0±4.1,313S×10013E,h0km,mb3.6/5,mb1 3.7/5, mb1mx3.5/19,mbtmp3.6/5,Error ellipse: s-maj=175.5km s-min=22.1km az=55.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.33**	**119**	P	P	13 58 31.3	-0.1
	0.2nm,0.5s,baz=308,slow=9.2,SNR=4.7						
ASAR	**Alice Springs**	**38.50**	**125**	P	P	13 58 41.0	-0.2
	0.3nm,0.6s,baz=297,slow=8.2,SNR=3.7						
SONM	**Songino Array**	**51.05**	**5**	P	P	14 00 21.1	+0.1
	1.0nm,0.5s,baz=185,slow=8.1,SNR=6.5						
MK31	**Makanchi Array**	**52.14**	**345**	*eP*	P	14 00 29.6	+0.4
MKAR	**Makanchi Array**	**52.14**	**345**	P	P	14 00 29.4	+0.3
	1.1nm,0.7s,baz=147,slow=8.2,SNR=10						
ZALV	**Zalesovo Beam**	**58.29**	**349**	P	P	14 01 12.6	-0.9
	0.4nm,0.3s,baz=184,slow=7.1,SNR=4.7						
TXAR	**Lajitas Array**	**145.51**	**38**	PKPbc	PKPbc	14 10 58.1	+0.1
	0.5nm,0.6s,baz=337,slow=2.3,SNR=7.3						

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*BJI **12** 13:53:20.4,479S×10123E,h38km,mB5.2,mb5.0*
*IDC **12** 13:53:21.3±0.8,419S×10124E,h0km,mb4.6/17, mb1 4.7/18,mb1mx4.6/23,mbtmp4.7/18,ML4.0/1,Error ellipse: s-maj=25.7km s-min=12.7km az=55.0*
*ISCJB **12** 13:53:22.3±0.4,437S±005×10105E±005,h24km, mb4.9/55,Error ellipse: s-maj=8.7km s-min=4.6km az=40.9*
*NEIC **12** 13:53:24.6±4.6,416S×10129E,h21km±31km,mb4.7/12, Error ellipse: s-maj=16.9km s-min=6.2km az=55.0*
*MOS **12** 13:53:25.1±1.0,411S×10131E,h39km,mb5.0/28,Error ellipse: s-maj=14.7km s-min=8.0km az=100.3*
*DJA **12** 13:53:26,426S×10108E,h30km,MLv5.0/6*

ISC 12 13:53:24.9±0.4,433S±005×10110E±005,h26km, h26km±1.0km:pP-P,n130,σ1§15/123,mb4.9/55,7C-11D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMBI	**JAMBI**	**3.69**	**44**	P	**Pn**	**13 54 21.2**	**+0.8**
	0.0nm,0.0s						
KLI	**Kotabumi**	**3.78**	**98**	P	**Pn**	**13 54 24.3**	**+2.7**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.91**	**350**	P	**Pn**	**13 54 23.1**	**-0.3**
	0.0nm,0.0s						
RGRI	**Rengat**	**4.14**	**17**	P	**Pn**	**13 54 27.3**	**+0.7**
	0.0nm,0.0s						
DBJI	**Dramaga**	**6.04**	**112**	P	**Pn**	**13 54 53.2**	**+0.5**
	0.0nm,0.0s						
CBJI	**Citeko**	**6.09**	**110**	P	**Pn**	**13 54 56.4**	**+3.0**
	0.0nm,0.0s						
MYKOM	**Kota Tinggi**	**6.67**	**24**	⇓P	**Pn**	**13 55 07.9**	**+6.6**
KGM	**Kluang**	**6.68**	**19**	⇓P	**Pn**	**13 55 11.1**	**+10**
LEM	**Lembang**	**6.95**	**111**	P	**Pn**	**13 55 06.5**	**+1.4**
	0.0nm,0.0s						
FRIM	**Kepong**	**7.54**	**4**	⇓P	**Pn**	**13 55 13.7**	**+0.5**
IPM	**Ipoh**	**8.75**	**360**	⇓P	**Pn**	**13 55 31.8**	**+1.9**
BJII	**Banjamegara**	**9.07**	**110**	P	**Pn**	**13 55 34.8**	**+0.5**
	0.0nm,0.0s						
KTGM	**Kuala Trenggan**	**9.81**	**12**	⇓P	**Pn**	**13 55 47.6**	**+3.2**
KSM	**Kuching**	**10.86**	**58**	⇓P	**Pn**	**13 56 03.5**	**+4.7**
SJI	**Sawahan**	**11.13**	**108**	P	**Pn**	**13 56 03.0**	**+0.4**
	63nm,1.0s						
BSI	**Banda Aceh**	**11.35**	**329**	P	**Pn**	**13 56 02.0**	**-3.6**
	0.0nm,0.0s						
SBUM	**Sibu**	**13.00**	**59**	⇑P	**Pn**	**13 56 32.8**	**+4.7**
BTM	**Bintulu**	**14.12**	**58**	⇑P	**Pn**	**13 56 47.8**	**+4.4**
KKM	**Kota Kinabalu**	**18.28**	**56**	⇑P	**Pn**	**13 57 38.0**	**+1.1**
KAPI	**Kappang**	**18.61**	**93**	P	**Pn**	**13 57 39.0**	**-2.0**
	0.5nm,0.3s,baz=280,slow=11,SNR=6.8						
KAPI	**Kappang**	**18.61**	**93**	*eP*	**Pn**	**13 57 38.9**	**-2.0**
TSM	**Tawau**	**18.82**	**63**	⇓P	**Pn**	**13 57 44.3**	**+0.8**
SDKM	**Sandakan**	**18.88**	**59**	⇑P	**Pn**	**13 57 44.8**	**+0.6**
PCI	**Palu**	**19.02**	**80**	P	**Pn**	**13 57 45.8**	**-0.2**
	0.0nm,0.0s						
KDM	**Kudat**	**19.27**	**55**	⇓P	**Pn**	**13 57 50.3**	**+1.3**
MYLDM	**Lahad Datu**	**19.78**	**62**	⇓P	**Pn**	**13 57 56.0**	**+1.0**
KDI	**Kendari**	**21.47**	**90**	P	**P**	**13 58 08.4**	**-3.3**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**22.74**	**355**	P	**P**	**13 58 22.9**	**-2.3**
	22nm,0.9s,mb4.6,baz=184,slow=8.6,SNR=70						
CMAR	**Chiang Mai Arr**	**22.74**	**355**	P	**P**	**13 58 22.9**	**-2.3**
CMAR				pmax	pmax		
	comp=Z,22nm,0.9s						
CHTO	**Chiang Mai**	**23.10**	**355**	*eP*	**P**	**13 58 27.9**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.6						
CHTO	**Chiang Mai**	**23.10**	**355**	*eP*	**P**	**13 58 27.9**	**-1.0**
	comp=Z,24nm,1.0s,mb4.6						
BATI	**Baumata**	**23.12**	**106**	P	**P**	**13 58 28.2**	**-1.1**
	comp=Z,8.2nm,0.3s,mb4.6,baz=2.5,slow=1.7,SNR=4.3						
FITZ	**Fitzroy Crossi**	**27.63**	**122**	*eP*	**P**	**13 59 10.4**	**-0.3**
	comp=Z,15nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**27.63**	**122**	P	**P**	**13 59 10.4**	**-0.2**
	comp=Z,7.9nm,0.8s,mb4.4,baz=291,slow=7.4,SNR=14						
KMI	**Kunming**	**29.32**	**3**	P	**P**	**13 59 26.5**	**+0.9**
KMI				AP	pP	13 59 34.1	+0.9
KMI				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.7						
ODAN	**Odare**	**33.72**	**338**	*eP*	**P**	**14 00 05.4**	**+1.1**
	comp=Z,73nm,0.9s,mb5.6						
TAPN	**Taplejung**	**34.05**	**338**	*eP*	**P**	**14 00 08.4**	**+1.3**
	comp=Z,117nm,1.0s,mb5.8						
RAMN	**Ramite**	**34.11**	**337**	*eP*	**P**	**14 00 09.3**	**+1.6**
	comp=Z,47nm,0.9s,mb5.4						
JIRN	**Jiri**	**34.91**	**336**	*eP*	**P**	**14 00 16.0**	**+1.4**
	comp=Z,91nm,0.9s,mb5.7						
CD2	**Chengdu**	**35.13**	**4**	P	**P**	**14 00 15.5**	**-1.0**
CD2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4						
PKI	**Pulchoki**	**35.15**	**335**	*eP*	**P**	**14 00 17.7**	**+1.1**
LSA	**Lhasa**	**35.16**	**345**	P	**P**	**14 00 16.7**	**0.0**
GUN	**Gumba**	**35.25**	**336**	*eP*	**P**	**14 00 18.8**	**+1.3**
	comp=Z,61nm,0.7s,mb5.7						
DMN	**Daman**	**35.30**	**335**	*eP*	**P**	**14 00 18.9**	**+0.9**
KKN	**Kakani**	**35.39**	**335**	*eP*	**P**	**14 00 19.6**	**+0.9**
	comp=Z,40nm,0.8s,mb5.4						
GKN	**Gorkha**	**35.85**	**335**	*eP*	**P**	**14 00 23.5**	**+0.8**
	comp=Z,53nm,1.0s,mb5.4						
WRA	**Warramunga Arr**	**35.90**	**118**	P	**P**	**14 00 22.5**	**-0.8**
	comp=Z,7.6nm,0.9s,mb4.6,baz=291,slow=10,SNR=29						
WRA	**Warramunga Arr**	**35.90**	**118**	P	**P**	**14 00 22.5**	**-0.8**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WRAB	**Tennant Creek**	**35.91**	**118**	*eP*	**P**	**14 00 22.5**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**35.91**	**118**	*eP*	**P**	**14 00 22.5**	**-0.8**
	comp=Z,8.3nm,0.8s,mb4.7						
WB2	**Warramunga Arr**	**35.91**	**118**	*eP*	**P**	**14 00 22.7**	**-0.6**
WB2	**Warramunga Arr**	**35.91**	**118**	*eP*	**P**	**14 00 22.7**	**-0.6**
KOLN	**Koldanda**	**36.10**	**333**	*eP*	**P**	**14 00 25.8**	**+1.0**
	comp=Z,41nm,0.7s,mb5.5						
DANN	**Dangsing**	**36.53**	**334**	*eP*	**P**	**14 00 29.9**	**+1.4**
	comp=Z,57nm,0.9s,mb5.4						
WHN	**Wuhan**	**36.92**	**19**	*eP*	**P**	**14 00 29.5**	**-2.3**
ASAR	**Alice Springs**	**37.02**	**124**	P	**P**	**14 00 32.9**	**+0.1**
	comp=Z,3.9nm,0.8s,mb4.3,baz=298,slow=7.8,SNR=32						
ASAR				PcP	PcP	14 02 53.8	+0.3
	comp=Z,1.5nm,0.8s,baz=301,slow=2.7,SNR=6.2						
ASAR	**Alice Springs**	**37.02**	**124**	P	**P**	**14 00 32.9**	**+0.1**
ASAR						14 02 53.8	
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
XAN	**Xi'an**	**38.87**	**10**	P	**P**	**14 00 47.0**	**-1.2**
XAN				AP	pP	14 00 54.3	-1.7
XAN				XP	sP	14 00 57.9	-1.2
XAN				AMB	AMB		
	comp=Z,24nm,1.3s,mb4.8						
NJ2	**Nanjing**	**39.93**	**24**	*eP*	**P**	**14 00 53.6**	**-3.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
LZH	**Lanzhou**	**40.29**	**3**	*eP*	**P**	**14 01 00.8**	**+0.8**
LZH				AP	pP	14 01 06.1	-1.7
LZH				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,127nm,4.2s						
GTA	**Gaotai**	**43.54**	**359**	P	**P**	**14 01 26.7**	**+0.2**
GTA				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.7						
CTA	**Charters Tower**	**46.64**	**114**	*eP*	**P**	**14 01 51.7**	**+0.2**
	comp=Z,8.4nm,1.1s,mb4.6						
CTA	**Charters Tower**	**46.64**	**114**	P	**P**	**14 01 50.8**	**-0.8**
	comp=Z,16nm,1.1s,mb4.8,baz=287,slow=9.1,SNR=7.3						
CTA	**Charters Tower**	**46.64**	**114**	P	**P**	**14 01 50.8**	**-0.7**
CTA				pmax	pmax		
	comp=Z,16nm,1.2s						
CTAO	**Charters Tower**	**46.64**	**114**	*eP*	**P**	**14 01 51.5**	**0.0**
CTAO				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
CTAO	**Charters Tower**	**46.64**	**114**	*eP*	**P**	**14 01 51.5**	**-0.1**
	comp=Z,16nm,1.2s,mb4.8						
STKA	**Stephens Creek**	**46.80**	**131**	*eP*	**P**	**14 01 53.3**	**+0.7**
	comp=Z,4.2nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**46.80**	**131**	P	**P**	**14 01 53.5**	**+0.9**
	comp=Z,5.0nm,0.8s,mb4.5,baz=296,slow=9.8,SNR=11						
KSRS	**Korea Array**	**48.49**	**29**	P	**P**	**14 02 04.8**	**-0.8**
	comp=Z,14nm,0.9s,mb5.0,baz=216,slow=8.2,SNR=49						
KSRS	**Korea Array**	**48.49**	**29**	P	**P**	**14 02 04.8**	**-0.8**
KSRS				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
WMQ	**Urumqi**	**49.43**	**347**	⇑*iP*	**P**	**14 02 13.4**	**+0.7**
WMQ				AP	pP	14 02 21.0	+0.4
WMQ				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.4						
SONM	**Songino Array**	**52.15**	**5**	P	**P**	**14 02 33.8**	**+0.7**
	comp=Z,19nm,0.8s,mb5.0,baz=185,slow=8.5,SNR=92						
SONM	**Songino Array**	**52.15**	**5**	P	**P**	**14 02 33.8**	**+0.7**
SONM				pmax	pmax		
	comp=Z,19nm,0.9s						
ULN	**Ulaanbaatar**	**52.24**	**5**	*eP*	**P**	**14 02 34.1**	**+0.4**
ULN				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
ULN	**Ulaanbaatar**	**52.24**	**5**	*eP*	**P**	**14 02 34.1**	**+0.4**
	comp=Z,15nm,1.0s,mb4.9						
AML	**Almayashu**	**52.53**	**334**	*eP*	**P**	**14 02 36.9**	**+0.9**
	comp=Z,4.2nm,0.6s,mb4.5						
CN2	**Changchun**	**52.70**	**22**	*eP*	**P**	**14 02 35.1**	**-2.1**
CN2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
EKS2	**Erkin-Say**	**52.92**	**335**	*eP*	**P**	**14 02 39.3**	**+0.4**
	comp=Z,2μm,2.7s						
EKS2				*e*	pP	14 02 47.7	+0.8
MAJO	**Matsushiro**	**53.42**	**37**	*eP*	**P**	**14 02 40.0**	**-2.7**
MAJO				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
MAJO	**Matsushiro**	**53.42**	**37**	*eP*	**P**	**14 02 40.0**	**-2.7**
	comp=Z,11nm,1.1s,mb4.7						
MAT	**Matsushiro**	**53.42**	**37**	P	**P**	**14 02 41.8**	**-0.9**
MJAR	**Matsushiro Arr**	**53.42**	**37**	P	**P**	**14 02 41.1**	**-1.6**
	comp=Z,8.4nm,1.0s,mb4.6,baz=220,slow=7.6,SNR=18						
MJAR	**Matsushiro Arr**	**53.42**	**37**	P	**P**	**14 02 41.2**	**-1.5**
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK31	**Makanchi Array**	**53.55**	**344**	*iP*	**P**	**14 02 43.1**	**-0.4**
MK31				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
MK31	**Makanchi Array**	**53.55**	**344**	*eP*	**P**	**14

OBN *i* pP 14 05 36.0 -0.6
OBN pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
BILL Bilibino 84.95 20 *e*P **P 14 05 56.3 -1.1**
BILL pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
ARCES ARCESS Array B 89.02 340 P **P 14 06 17.0 -0.2**
comp=Z,4.1nm,0.8s,mb4.8,baz=108,slow=6.0,SNR=6.7
ARCES ARCESS Array B 89.02 340 P **P 14 06 17.0 -0.2**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
SNAA Sanae 90.28 198 *e*P **P 14 06 25.6 +2.5**
SNAA *e* pP 14 06 33.0 +1.5
SNAA Sanae 90.28 198 *e*P **P 14 06 26.3 +3.2**
GERES GERESS Array B 91.51 319 P **P 14 06 30.1 +0.9**
comp=Z,0.9nm,0.3s,mb4.6,baz=92,slow=4.4,SNR=3.7
GERES GERESS Array B 91.51 319 P **P 14 06 30.1 +0.8**
GERES pmax pmax
comp=Z,1.0nm,0.3s
DLMT Dillon 129.65 31 *e*PKPdf PKPdf 14 12 33.4 +1.5
NVAR Mina Array Bea 130.66 41 PKP PKPdf 14 12 35.1 +1.0
comp=Z,0.5nm,0.7s,baz=249,slow=2.1,SNR=5.5
WMOK Wichita Mounta 144.57 29 *e*PKIKP PKPdf 14 12 57.6 -2.1
WCI Wyandotte Cave 145.59 10 *e*PKIKP PKPdf 14 13 00.2 -1.2
TXAR Lajitas Array 145.81 41 PKPbc PKPbc 14 13 03.1 +0.6
comp=Z,16nm,1.0s,baz=281,slow=1.9,SNR=74
MIAR Mount Ida 147.00 23 *e*PKP2 PKPbc 14 13 04.3 -1.5
JCT Junction City 147.36 35 *e*PKP2 PKPbc 14 13 07.0 0.0

IDC 12 13:57:57.9±4.2, 334S×10058E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/19, mbtmp3.9/5, Error ellipse: s-maj=177.0km s-min=23.7km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.83**	**119**	P		P	14 05 06.7	-1.4
	0.8nm,0.4s,baz=302,slow=8.7,SNR=3.5							
ASAR	**Alice Springs**	**38.01**	**125**	P		P	14 05 19.4	+1.4
	0.8nm,0.4s,baz=297,slow=7.7,SNR=4.1							
SONM	**Songino Array**	**51.21**	**5**	P		P	14 07 03.6	+0.6
	1.7nm,0.7s,baz=182,slow=9.9,SNR=8.2							
MKAR	**Makanchi Array**	**52.46**	**344**	P		P	14 07 12.5	+0.1
	0.8nm,0.7s,baz=156,slow=9.1,SNR=5.6							
ZALV	**Zalesovo Beam**	**58.58**	**349**	P		P	14 07 56.0	-0.4
	0.7nm,0.4s,baz=146,slow=5.4,SNR=3.8							
TXAR	**Lajitas Array**	**145.38**	**39**	PKPbc		PKPbc	14 17 37.5	-1.0
	0.8nm,0.5s,baz=275,slow=0.7,SNR=10							

*ISCJB **12** 13:58:11.9±1.4, 167S±03×1774W±02, h358km±23km, mb3.6/6, Error ellipse: s-maj=61.4km s-min=19.0km az=145.7*
*IDC **12** 13:58:12.5±1.6, 1685S×17723W, h358km±23km, mb3.4/6, mb1 3.6/7, mb1mx3.3/18, mbtmp3.4/7, Error ellipse: s-maj=54.9km s-min=15.4km az=146.0*
*NEIC **12** 13:58:13.6±1.2, 1683S×17730W, h369km±17km, mb4.0/1, Error ellipse: s-maj=45.7km s-min=13.8km az=146.0*
ISC 12 13:58:12.3±1.4, 168S±03×1773W±03, h350km±23km, n12, σ0§76/13, mb3.6/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**6.06**	**63**	P		Pn	13 59 45.2	+1.3
	3.6nm,0.3s,baz=270,slow=23,SNR=8.3							
AFI				S		S	14 00 57.1	-1.0
	6.3nm,0.3s,baz=23,slow=23,SNR=8.1							
AFI	**Afiamalu**	**6.06**	**63**	*e*Pn		Pn	13 59 45.8	+1.9
AFI				*e*S		S	14 00 56.8	-1.3
CTA	**Charters Tower**	**34.67**	**259**	P		P	14 04 30.8	+0.5
	2.2nm,0.6s,mb3.5,baz=67,slow=7.7,SNR=2.6							
CTA	**Charters Tower**	**34.67**	**259**	P		P	14 04 30.8	+0.4
CNB	**Canberra Magne**	**34.94**	**232**	*e*P		P	14 04 32.6	+0.2
STKA	**Stephens Creek**	**40.09**	**240**	*e*P		P	14 05 15.1	-0.1
	5.0nm,0.6s,mb3.9							
STKA	**Stephens Creek**	**40.09**	**240**	P		P	14 05 15.3	+0.1
	5.9nm,0.5s,mb4.1,baz=75,slow=8.4,SNR=11							
WRA	**Warramunga Arr**	**45.87**	**258**	P		P	14 06 00.4	-0.9
	0.8nm,0.3s,mb3.3,baz=84,slow=6.6,SNR=3.0							
ASAR	**Alice Springs**	**46.10**	**253**	P		P	14 06 02.5	-0.6
	5.6nm,0.4s,mb4.1,baz=89,slow=7.9,SNR=39							
PETK	**Petropavlovsk-**	**72.86**	**345**	P		P	14 09 03.8	+0.3
	0.9nm,0.5s,mb3.7,baz=108,slow=8.3,SNR=6.6							
TXAR	**Lajitas Array**	**84.51**	**57**	P		P	14 10 07.2	+0.1
	0.3nm,0.8s,mb3.2,baz=205,slow=5.5,SNR=3.4							
ARCES	**ARCESS Array B**	**125.39**	**350**	PKP		PKPdf	14 16 29.5	-1.9
	1.7nm,0.8s,baz=5.7,slow=0.9,SNR=3.6							

*IDC **12** 13:58:26.6±0.8, 346S×13089E, h0km, mb4.2/10, mb1 4.3/11, mb1mx4.2/17, mbtmp4.2/11, ML4.1/1, Error ellipse: s-maj=37.2km s-min=15.2km az=77.0*
*ISCJB **12** 13:58:29.6±0.5, 351S±006×1309E±0.1, h33km, mb4.3/13, Error ellipse: s-maj=16.0km s-min=7.6km az=161.5*
*NEIC **12** 13:58:29.9±4.8, 349S×13091E, h20km±33km, mb4.3/4, Error ellipse: s-maj=20.1km s-min=9.3km az=50.0*
ISC 12 13:58:32.0±2.1, 354S±008×1309E±01, h37km±19km, n35, σ1§17/35, mb4.3/13, Seram

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	**Baumata**	**9.78**	**227**	Pn		Pn	14 00 55.2	+5.0
	6.5nm,0.3s,baz=111,slow=1.1,SNR=8.9							
BATI				Sn		Sn	14 02 33.5	-5.4
	baz=81,slow=19,SNR=2.4							
KAPI	**Kappang**	**11.23**	**262**	Pn		Pn	14 01 11.6	+1.6
	0.6nm,0.3s,baz=125,slow=16,SNR=3.4							
FITZ	**Fitzroy Crossi**	**15.37**	**199**	*e*P		Pn	14 02 04.5	-1.8
	7.5nm,0.6s							
FITZ	**Fitzroy Crossi**	**15.37**	**199**	Pn		Pn	14 02 04.4	-1.9
	0.5nm,0.3s,baz=36,slow=13,SNR=13							
FITZ				Sn		Sn	14 04 48.3	-7.2
	0.3nm,0.3s,baz=194,slow=19,SNR=2.7							
FITZ	**Fitzroy Crossi**	**15.37**	**199**	*e*P		Pn	14 02 04.3	-1.9
WRAB	**Tennant Creek**	**16.64**	**169**	*e*P		Pn	14 02 21.3	-1.2
WRA	**Warramunga Arr**	**16.64**	**169**	Pn		Pn	14 02 16.9	-5.7
	0.5nm,0.3s,baz=359,slow=13,SNR=13							
WRA				Sn		Sn	14 05 19.2	-7.2
	0.7nm,0.3s,baz=354,slow=23,SNR=5.9							
WB2	**Warramunga Arr**	**16.65**	**169**	P		Pn	14 02 21.8	-0.9
ASAR	**Alice Springs**	**20.22**	**172**	P		P	14 03 05.3	+1.4
	14nm,0.6s,baz=351,slow=11,SNR=108							
ASAR				S		S	14 06 46.0	-2.9
	1.5nm,0.7s,baz=357,slow=27,SNR=4.9							
KSM	**Kuching**	**21.19**	**283**	*e*P		P	14 03 14.7	+0.1
CTA	**Charters Tower**	**22.23**	**139**	*e*P		P	14 03 26.7	+1.1
	3.9nm,0.9s,mb3.8							
CTA	**Charters Tower**	**22.23**	**139**	P		P	14 03 26.4	+0.8
	2.9nm,0.6s,mb3.9,baz=311,slow=12,SNR=3.9							
CTAO	**Charters Tower**	**22.23**	**139**	*e*P		P	14 03 26.3	+0.7
FORT	**Forrest**	**27.23**	**185**	*e*P		P	14 04 13.2	+0.6
	13nm,0.5s,mb4.7							
FORT	**Forrest**	**27.23**	**185**	*e*P		P	14 04 13.0	+0.4
STKA	**Stephens Creek**	**29.93**	**162**	P		P	14 04 37.4	+0.9
	2.7nm,0.8s,mb4.0,baz=353,slow=8.7,SNR=4.9							
STKA	**Stephens Creek**	**29.93**	**162**	P		P	14 04 37.4	+0.8
KLBR	**Kellerberrin**	**30.53**	**202**	*e*P		P	14 04 41.8	-0.1
	243nm,2.0s,mb5.7							
NWAO	**Narrogin (SRO)**	**31.92**	**202**	P		P	14 04 53.4	-0.7
	16nm,1.0s,mb4.8,baz=76,slow=4.2,SNR=3.3							
NWAO	**Narrogin (SRO)**	**31.92**	**202**	P		P	14 04 53.4	-0.7
TOO	**Toolangi**	**36.41**	**160**	*e*P		P	14 05 35.6	+2.6
KSRS	**Korea Array**	**40.88**	**356**	P		P	14 06 09.6	-0.9
	0.8nm,0.6s,mb3.5,baz=179,slow=9.9,SNR=6.0							
SONM	**Songino Array**	**55.49**	**340**	P		P	14 08 04.4	+1.3
	0.9nm,0.9s,mb3.8,baz=148,slow=8.4,SNR=3.5							
MK31	**Makanchi Array**	**65.87**	**326**	*e*P		P	14 09 13.4	-0.5
MKAR	**Makanchi Array**	**65.87**	**326**	P		P	14 09 13.4	-0.5
	1.9nm,0.7s,mb4.2,baz=121,slow=8.1,SNR=12							
ZALV	**Zalesovo Beam**	**68.92**	**333**	P		P	14 09 31.6	-1.4
	1.1nm,0.6s,mb4.0,baz=126,slow=3.8,SNR=5.0							
KURK	**Kurchatov**	**70.08**	**328**	*e*P		P	14 09 39.4	-0.8
	1.9nm,0.6s,mb4.2							
BRVK	**Borovoye**	**75.72**	**327**	*e*P		P	14 10 12.8	-0.9
	3.7nm,0.7s,mb4.4							
MAW	**Mawson**	**78.49**	**201**	*e*P		P	14 10 30.4	+1.5
	1.7nm,0.6s,mb4.2							
MAW	**Mawson**	**78.49**	**201**	P		P	14 10 30.4	+1.5
	2.1nm,0.7s,mb4.2,baz=84,slow=7.5,SNR=13							
OPO	**Ambohidratompo**	**82.94**	**252**	P		P	14 10 55.1	+1.3
	2.3nm,0.8s,mb4.3,baz=80,slow=11,SNR=3.6							
TORD	**Torodi Ar. Bea**	**128.95**	**284**	PKP		PKPdf	14 17 37.2	+0.3
	0.7nm,0.8s,baz=109,slow=1.4,SNR=4.3							
TORD	**Torodi Ar. Bea**	**128.95**	**284**	PKP		PKPdf	14 17 37.2	+0.3
LPAZ	**La Paz**	**152.75**	**137**	PKPbc		PKPbc	14 18 25.7	-0.3
	0.9nm,0.5s,baz=180,slow=2.0,SNR=6.6							
LPAZ	**La Paz**	**152.75**	**137**	*e*PKPbc		PKPbc	14 18 28.1	+2.1

*ISCJB **12** 14:00:40.2±1.1, 44S±02×1012E±02, h25km, mb4.0/13, Error ellipse: s-maj=41.7km s-min=12.5km az=145.7*
*NEIC **12** 14:00:42.2±0.9, 446S×101.11E, mb3.9/1, Error ellipse: s-maj=37.8km s-min=9.3km az=55.0*
*IDC **12** 14:00:42.8±1.1, 440S×101.17E, h26km±3km, mb3.8/12, mb1 3.9/12, mb1mx3.8/20, mbtmp3.8/12, Error ellipse: s-maj=41.4km s-min=13.4km az=55.0*
ISC 12 14:00:42.7±1.1, 44S±02×1012E±02, h27km, h27km±.6km:pP-P, n18, σ0§59/16, mb4.0/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.83**	**354**	P		P	14 05 44.4	+0.6
	3.3nm,0.7s,mb3.9,baz=184,slow=8.4,SNR=23							
CMAR				pP			14 05 51.8	
	1.8nm,0.5s,baz=182,slow=8.4,SNR=9.0							
CHTO	**Chiang Mai**	**23.18**	**355**	*e*P		P	14 05 47.6	+0.1
	3.0nm,0.7s,mb3.8							
WRA	**Warramunga Arr**	**35.77**	**118**	P		P	14 07 40.6	+0.8
	0.7nm,0.5s,mb3.9,baz=298,slow=9.0,SNR=2.6							
ASAR	**Alice Springs**	**36.89**	**124**	P		P	14 07 49.5	+0.2
	0.8nm,0.5s,mb3.8,baz=306,slow=7.9,SNR=3.3							
ASAR				pP		pP	14 07 57.0	-0.2
	1.0nm,0.5s,baz=293,slow=7.2,SNR=3.4							
STKA	**Stephens Creek**	**46.67**	**131**	P		P	14 09 08.9	-0.3
	1.9nm,0.5s,mb4.2,baz=353,slow=4.7,SNR=5.2							
KSRS	**Korea Array**	**48.51**	**29**	P		P	14 09 22.1	-1.2
	1.9nm,0.9s,mb4.1,baz=220,slow=8.6,SNR=6.8							
KSRS				pP		pP	14 09 30.9	-0.6
	1.0nm,0.7s,baz=224,slow=7.0,SNR=3.7							
SONM	**Songino Array**	**52.22**	**4**	P		P	14 09 52.2	+1.0
	2.1nm,0.8s,mb4.1,baz=183,slow=9.8,SNR=8.3							
SONM				pP		pP	14 09 59.8	+0.3
	3.1nm,0.7s,baz=186,slow=9.8,SNR=9.6							
MK31	**Makanchi Array**	**53.66**	**344**	P		P	14 10 01.5	-0.4
MKAR	**Makanchi Array**	**53.66**	**344**	P		P	14 10 02.2	+0.3
	1.3nm,0.7s,mb4.0,baz=152,slow=10.0,SNR=4.5							
MKAR				pP		pP	14 10 09.9	-0.2
	3.4nm,0.8s,baz=139,slow=8.0,SNR=5.2							
KURK	**Kurchatov**	**58.24**	**343**	P		P	14 10 34.8	+0.1
	0.5nm,0.5s,mb3.8,baz=154,slow=6.5,SNR=3.0							
KURK				pP		pP	14 10 42.5	-0.4
	1.3nm,0.6s,baz=159,slow=7.2,SNR=3.3							
ZAA0	**Zalesovo Array**	**59.74**	**349**	*e*P		P	14 10 45.2	+0.2
ZAA0				*e*		pP	14 10 53.0	-0.3
ZALV	**Zalesovo Beam**	**59.74**	**349**	P		P	14 10 45.0	0.0
	2.4nm,0.6s,mb4.4,baz=186,slow=4.1,SNR=6.8							
ZALV				pP		pP	14 10 52.7	-0.6
	2.8nm,0.6s,baz=174,slow=4.5,SNR=6.5							
ZALV	**Zalesovo Beam**	**59.74**	**349**	P		P	14 10 45.0	+0.1
ZALV				pP		pP	14 10 52.7	-0.6
BVAR	**Borovoye Array**	**62.84**	**340**	P		P	14 11 06.0	0.0
	0.7nm,0.7s,mb3.9,baz=143,slow=5.2,SNR=2.0							
BVAR				pP		pP	14 11 13.3	-1.1
	2.0nm,0.6s,baz=139,slow=8.9,SNR=4.8							
PETK	**Petropavlovsk-**	**74.28**	**31**	P		P	14 12 16.6	-0.9
	0.7nm,0.7s,mb3.7,baz=222,slow=1.8,SNR=4.9							
AKASG	**Malin Array Be**	**82.11**	**322**	P		P	14 13 00.1	-0.7
	0.6nm,0.3s,mb4.0,baz=147,slow=11,SNR=4.0							
TXAR	**Lajitas Array**	**145.80**	**41**	PKPbc		PKPbc	14 20 21.5	+1.4
	1.1nm,0.7s,baz=280,slow=1.2,SNR=14							
TXAR				pPKPbc		pPKPbc	14 20 29.6	+0.6
	1.4nm,0.5s,baz=272,slow=0.2,SNR=14							
TXAR	**Lajitas Array**	**145.80**	**41**	PKPbc		PKPbc	14 20 21.5	+1.4
TXAR				pPKPbc		pPKPbc	14 20 29.6	+0.6

*BJI **12** 14:04:46.0, 509S×101.14E, h15km, mB5.3, mb5.0, Ms5.2, Msz4.8*
*ISCJB **12** 14:04:54.3±0.3, 425S±005×10120E±005, h24km, mb5.0/64, Error ellipse: s-maj=8.4km s-min=4.5km az=41.5*
*DJA **12** 14:04:54, 466S×10080E, h15km, MLv5.3/4*
*NEIC **12** 14:04:56.1±0.3, 420S×101.19E, mb4.9/18, Error ellipse: s-maj=8.8km s-min=5.6km az=222.0*
*IDC **12** 14:04:56.5±0.6, 4.14S×10124E, h25km±3km, mb4.6/20, mb1 4.7/21, mb1mx4.6/23, mbtmp4.6/21, ML4.1/1, Error ellipse: s-maj=19.9km s-min=10.7km az=45.0*
*MOS **12** 14:04:56.7±0.8, 4.11S×101130E, h41km, mb5.1/35, Error ellipse: s-maj=13.3km s-min=7.8km az=102.8*
ISC 12 14:04:56.4±0.3, 426S±005×10117E±004, h26km, h26km±1.0km:pP-P, n150, σ0§99/139, mb5.0/64, 5C-2D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JMBI	**JAMBI**	**3.59**	**43**	P		Pn	14 05 53.0	+2.5
	0.0nm,0.0s							
KLI	**Kotabumi**	**3.72**	**99**	P		Pn	14 05 54.5	+2.2
	0.0nm,0.0s							
RGRI	**Rengat**	**4.06**	**17**	P		Pn	14 05 57.7	+0.8
	0.0nm,0.0s							
DBJI	**Dramaga**	**6.00**	**113**	P		Pn	14 06 24.7	+1.1
	0.0nm,0.0s							
SKJI	**Sukabumi**	**6.01**	**117**	P		Pn	14 06 22.4	-1.4
	0.0nm,0.0s							
CBJI	**Citeko**	**6.05**	**111**	P		Pn	14 06 28.0	+3.7
	910nm,0.9s							
LEM	**Lembang**	**6.91**	**112**	P		Pn	14 06 38.1	+2.1
	0.0nm,0.0s							
BJII	**Banjamegara**	**9.03**	**110**	P		Pn	14 07 04.4	-0.8
	0.0nm,0.0s							
KSM	**Kuching**	**10.77**	**58**	P		Pn	14 07 28.9	-0.1
SJI	**Sawahan**	**11.09**	**109**	P		Pn	14 07 33.8	+0.3
	0.0nm,0.0s							
BSI	**Banda Aceh**	**11.33**	**329**	P		Pn	14 07 34.9	-1.9
	0.0nm,0.0s							
KKM	**Kota Kinabalu**	**18.18**	**56**	*e*P		Pn	14 09 08.6	+1.4
KAPI	**Kappang**	**18.54**	**93**	P		Pn	14 09 09.0	-2.6
	0.6nm,0.3s,baz=282,slow=7.5,SNR=9.8							
KAPI	**Kappang**	**18.54**	**93**	*e*P		Pn	14 09 09.1	-2.5
	53nm,1.0s							
PCI	**Palu**	**18.94**	**80**	P		Pn	14 09 17.3	+0.8
	0.0nm,0.0s							
KKTK	**Khon Kaen**	**20.53**	**5**	P		P	14 09 33.2	+0.2
	432nm,0.7s							
KDI	**Kendari**	**21.40**	**90**	P		P	14 09 42.8	+0.3
	0.0nm,0.0s							
CMAR	**Chiang Mai Arr**	**22.68**	**355**	P		P	14 09 54.1	-1.9
	26nm,0.9s,mb4.7,baz=183,slow=8.6,SNR=56							
CMAR				PcP		PcP	14 13 48.4	+0.1
	1.4nm,0.8s,baz=212,slow=2.8,SNR=5.0							
CMAR	**Chiang Mai Arr**	**22.68**	**355**	P		P	14 09 54.2	-1.9
CMAR							14 13 48.4	
CMAR				pmax		pmax		
	comp=Z,26nm,0.9s							
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.9s							
CHG	**Chiang Mai**	**23.04**	**355**	⇓P		P	14 09 59.0	-0.8
	comp=Z,26nm,1.1s,mb4.6							
CHTO	**Chiang Mai**	**23.04**	**355**	*e*P		P	14 09 59.3	-0.5
CHTO				pmax		pmax		
	comp=Z,24nm,1.0s,mb4.6							
CHTO	**Chiang Mai**	**23.04**	**355**	*e*P		P	14 09 59.2	-0.5
	comp=Z,24nm,1.0s,mb4.6							
BATI	**Baumata**	**23.07**	**106**	P		P	14 09 58.7	-1.6
	comp=Z,18nm,0.6s,mb4.7,baz=315,slow=2.9,SNR=4.2							
QIZ	**Qiongzhong**	**24.67**	**20**	P		P	14 10 15.3	0.0
LBMI	**Labuha**	**26.55**	**83**	P		P	14 10 32.7	+0.2
	comp=Z,0.0nm,0.0s							
FITZ	**Fitzroy Crossi**	**27.61**	**122**	*e*P		P	14 10 41.9	-0.1
	comp=Z,22nm,1.0s,mb4.7							
FITZ	**Fitzroy Crossi**	**27.61**	**122**	P		P	14 10 41.1	-0.8
	comp=Z,13nm,0.9s,mb4.6,baz=288,slow=5.7,SNR=16							
KMI	**Kunming**	**29.25**	**3**	P		P	14 10 57.7	+1.3
KMI				AP		pP	14 11 03.5	-0.6
KMI				AMB		AMB		
	comp=Z,19nm,1.1s,mb4.7							
GYA	**Guiyang**	**31.00**	**10**	P		P	14 11 16.0	+4.1
GYA				PP		PP	14 12 18.6	-3.7
GYA				S		S	14 16 20.7	+5.4
GYA				AMB		AMB		
	comp=Z,20nm,0.8s,mb5.0							
GYA				AMB		AMB		
	comp=Z,130nm,4.7s							
GYA				LR		LR		
	comp=N,710nm,14.9s							
GYA				LR		LR		
	comp=E,520nm,15.8s							
GYA				LR		LR		
	comp=Z,690nm,15.4s							
ODAN	**Odare**	**33.69**	**337**	*e*P		P	14 11 36.4	+0.9
	comp=Z,92nm,0.9s,mb5.7							
TAPN	**Taplejung**	**34.01**	**338**	*e*P		P	14 11 39.3	+1.0
	comp=Z,140nm,0.9s,mb5.9							
RAMN	**Ramite**	**34.08**	**336**	*e*P		P	14 11 40.3	+1.4
	comp=Z,61nm,0.8s,mb5.6							
JIRN	**Jiri**	**34.87**	**336**	*e*P		P	14 11 47.1	+1.3
	comp=Z,132nm,0.9s,mb5.9							
CD2	**Chengdu**	**35.06**	**4**	P		P	14 11 46.9	-0.4
CD2				AP		pP	14 11 51.3	-3.7
CD2				XP		sP	14 11 54.0	-4.2
CD2				PP		PP	14 13 05.9	-1.3
CD2				S		S	14 17 18.9	+0.6
CD2				AMB		AMB		
	comp=Z,60nm,0.9s,mb5.5							
LSA	**Lhasa**	**35.11**	**345**	P		P	14 11 48.7	+0.9
LSA	**Lhasa**	**35.11**	**345**	*e*P		P	14 11 48.1	+0.3
LSA				pmax		pmax		
	comp=Z,7.0nm,0.8s,mb4.6							
LSA	**Lhasa**	**35.11**	**345**	*e*P		P	14 11 48.1	+0.3
	comp=Z,7.1nm,0.8s,mb4.7							
PKI	**Pulchoki**	**35.11**	**335**	*e*P		P	14 11 48.7	+0.9
GUN	**Gumba**	**35.22**	**336**	*e*P		P	14 11 50.1	+1.3
	comp=Z,39nm,0.5s,mb5.6							
DMN	**Daman**	**35.27**	**335**	*e*P		P	14 11 50.0	+0.8
	comp=Z,46nm,1.1s,mb5.3							
KKN	**Kakani**	**35.36**	**335**	*e*P		P	14 11 50.6	+0.6
	comp=Z,69nm,1.1s,mb5.5							
GKN	**Gorkha**	**35.82**	**335**	*e*P		P	14 11 54.7	+0.8
	comp=Z,94nm,1.2s,mb5.6							
WRA	**Warramunga Arr**	**35.87**	**119**	P		P	14 11 53.9	-0.6
	comp=Z,12nm,0.9s,mb4.8,baz=292,slow=10,SNR=38							
WRA	**Warramunga Arr**	**35.87**	**119**	P		P	14 11 53.9	-0.6
WRA				pmax		pmax		
	comp=Z,12nm,0.9s							
WRAB	**Tennant Creek**	**35.88**	**119**	*e*P		P	14 11 53.9	-0.6
WRAB				pmax		pmax		
	comp=Z,12nm,0.8s,mb4.9							
WRAB	**Tennant Creek**	**35.88**	**119**	*e*P		P	14 11 53.9	-0.6
	comp=Z,12nm,0.8s,mb4.9							
WB2	**Warramunga Arr**	**35.88**	**119**	*e*P		P	14 11 54.2	-0.4
KOLN	**Koldanda**	**36.07**	**333**	*e*P		P	14 11 57.1	+1.0
	comp=Z,34nm,0.8s,mb5.3							
DANN	**Dangsing**	**36.50**	**334**	*e*P		P	14 12 00.6	+0.9
	comp=Z,102nm,1.2s,mb5.5							
WHN	**Wuhan**	**36.83**	**19**	P		P	14 12 02.4	-0.1
ASAR	**Alice Springs**	**37.00**	**125**	P		P	14 12 04.2	+0.1
	comp=Z,7.3nm,0.8s,mb4.6,baz=296,slow=7.8,SNR=46							
ASAR				PcP		PcP	14 14 25.3	+0.3
	comp=Z,1.9nm,0.8s,baz=292,slow=2.1,SNR=7.6							
ASAR	**Alice Springs**	**37.00**	**125**	P		P	14 12 04.2	+0.1
ASAR							14 14 25.3	
ASAR				pmax		pmax		
	comp=Z,7.0nm,0.8s							
ASAR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
XAN	**Xi'an**	**38.79**	**10**	P		P	14 12 18.4	-0.6
XAN				AP		pP	14 12 26.1	-0.7
XAN				XP		sP	14 12 29.9	0.0
XAN				AMB		AMB		
	comp=Z,27nm,1.1s,mb4.9							
NJ2	**Nanjing**	**39.84**	**24**	*e*P		P	14 12 29.2	+1.4
NJ2				AMB		AMB		
	comp=Z,20nm,0.5s,mb5.1							
LZH	**Lanzhou**	**40.22**	**3**	*e*P		P	14 12 32.0	+1.1
LZH				AP		pP	14 12 39.4	+0.7
LZH				XP		sP	14 12 42.0	+0.2
LZH				AMB		AMB		
	comp=Z,104nm,1.3s,mb5.4							
LZH				AMB		AMB		
	comp=Z,423nm,4.2s							
GTA	**Gaotai**	**43.47**	**358**	*e*P		P	14 12 57.9	+0.4
GTA				AP		pP	14 13 02.4	-2.9
GTA				XP		sP	14 13 05.0	-3.4
GTA				AMB		AMB		
	comp=Z,12nm,1.4s,mb4.4							
HHC	**Hu-ho-hao-te**	**45.89**	**11**	*e*P		P	14 13 17.6	+0.9
HHC				S		S	14 20 00.3	+0.7
HHC				AMB		AMB		
	comp=Z,45nm,1.0s,mb5.3							
PMG	**Port Moresby**	**45.92**	**99**	*e*P		P	14 13 17.3	-0.1
BJI	**Beijing**	**46.20**	**16**	P		P	14 13 19.1	0.0
BJI				AMB		AMB		
	comp=Z,20nm,1.1s,mb5.0							
CTA	**Charters Tower**	**46.60**	**114**	*e*P		P	14 13 23.1	+0.4
	comp=Z,11nm,1.2s,mb4.7							
CTA	**Charters Tower**	**46.60**	**114**	P		P	14 13 22.9	+0.2
	comp=Z,17nm,1.1s,mb4.9,baz=285,slow=9.3,SNR=11							
CTA	**Charters Tower**	**46.60**	**114**	*e*P		P	14

TLY					pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0							
KURK	**Kurchatov**	**58.09**	**343**		P	**P**	**14 14 46.6**	**-0.9**
	comp=Z,15nm,0.9s,mb5.0,baz=160,slow=6.2,SNR=16							
KURK	**Kurchatov**	**58.09**	**343**	*c*	*i*P	**P**	**14 14 46.9**	**-0.5**
KURK					pmax	pmax		
	comp=Z,44nm,1.3s,mb5.3							
KURK	**Kurchatov**	**58.09**	**343**		*e*P	**P**	**14 14 46.7**	**-0.7**
KLR	**Kul'dur**	**59.53**	**23**		*e*P	**P**	**14 14 52.8**	**-4.7**
ZAA0	**Zalesovo Array**	**59.59**	**349**		*e*P	**P**	**14 14 57.1**	**-0.7**
ZAA0					*e*	pP	14 15 05.0	-0.9
ZALV	**Zalesovo Beam**	**59.59**	**349**		P	**P**	**14 14 57.2**	**-0.6**
	comp=Z,16nm,0.7s,mb5.2,baz=176,slow=4.5,SNR=60							
ZALV					pP	pP	14 15 04.7	-1.2
	comp=Z,14nm,0.7s,baz=182,slow=4.1,SNR=13							
ZALV	**Zalesovo Beam**	**59.59**	**349**		P	**P**	**14 14 57.2**	**-0.6**
ZALV					*PP	pP	14 15 04.7	-1.2
ZALV					pmax	pmax		
	comp=Z,16nm,0.7s,mb5.2							
ZALV					pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1							
ZALV	**Zalesovo Beam**	**59.59**	**349**		P	**P**	**14 14 57.2**	**-0.6**
ZALV					pP	pP	14 15 04.7	-1.2
KRAR	**Krasnoyarsk**	**60.45**	**355**		*e*P	**P**	**14 15 02.9**	**-0.8**
KRAR					pmax	pmax		
	comp=Z,65nm,1.4s,mb5.5							
BVAR	**Borovoye Array**	**62.70**	**340**		P	**P**	**14 15 17.8**	**-1.1**
	comp=Z,8.2nm,0.7s,mb5.0,baz=146,slow=8.5,SNR=39							
BVAR					pP	pP	14 15 25.4	-1.6
	comp=Z,8.6nm,0.7s,baz=152,slow=8.7,SNR=15							
BVAR	**Borovoye Array**	**62.70**	**340**		P	**P**	**14 15 17.8**	**-1.1**
BVAR					*PP	pP	14 15 25.4	-1.6
BVAR					pmax	pmax		
	comp=Z,8.0nm,0.7s							
BVAR					pmax	pmax		
	comp=Z,9.0nm,0.7s							
BOD	**Bodaibo**	**62.74**	**8**		*e*P	**P**	**14 15 18.5**	**-0.6**
BOD					pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0							
BRVK	**Borovoye**	**62.76**	**340**		*e*P	**P**	**14 15 16.9**	**-2.4**
BRVK					pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0							
BRVK	**Borovoye**	**62.76**	**340**		*e*P	**P**	**14 15 16.9**	**-2.4**
	comp=Z,9.4nm,0.8s,mb5.0							
YSS	**Yuzh-Sakhalins**	**62.79**	**31**⇑		*e*P	**P**	**14 15 19.2**	**-0.5**
YSS					*e*	pP	14 15 27.0	-0.8
YSS					pmax	pmax		
	comp=Z,40nm,0.9s,mb5.5							
YSS	**Yuzh-Sakhalins**	**62.79**	**31**		*e*P	**P**	**14 15 19.0**	**-0.6**
	comp=Z,47nm,1.1s,mb5.5							
YSS					*e*	pP	14 15 26.9	-0.9
KMBO	**Kilima Mbogo**	**63.91**	**271**		pP	pP	14 15 35.9	+0.1
	comp=Z,1.2nm,0.5s,baz=99,slow=19,SNR=2.5							
MAW	**Mawson**	**68.40**	**195**		pP	pP	14 16 03.5	-0.2
	comp=Z,3.9nm,0.9s,baz=21,slow=8.7,SNR=7.3							
YAK	**Yakutsk**	**69.63**	**14**⇑		*i*P	**P**	**14 16 01.8**	**-1.4**
YAK					pmax	pmax		
	comp=Z,56nm,1.4s,mb5.3							
YAK	**Yakutsk**	**69.63**	**14**		*e*P	**P**	**14 16 01.7**	**-1.5**
	comp=Z,21nm,0.8s,mb5.1							
ARU	**Arti**	**69.73**	**336**	*c*	*i*P	**P**	**14 16 03.2**	**-0.8**
ARU					*e*		14 18 34.2	
ARU					*e*S	S	14 25 09.0	-2.2
ARU					SS	SS	14 29 43.3	+3.3
ARU					pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9							
ARU	**Arti**	**69.73**	**336**		*e*P	**P**	**14 16 02.9**	**-1.1**
	comp=Z,15nm,1.1s,mb4.8							
ASF	**Jabal al Asfar**	**70.85**	**306**		P	**P**	**14 16 11.6**	**+0.3**
	comp=Z,7.2nm,1.1s,mb4.5,baz=295,slow=6.8,SNR=6.1							
ASF					pP	pP	14 16 19.8	+0.3
	comp=Z,3.7nm,0.9s,baz=12,slow=2.5,SNR=3.5							
ASF	**Jabal al Asfar**	**70.85**	**306**		P	**P**	**14 16 11.6**	**+0.3**
ASF					*PP	pP	14 16 19.8	+0.2
ASF					pmax	pmax		
	comp=Z,7.0nm,1.1s							
ASF					pmax	pmax		
	comp=Z,4.0nm,0.9s							
KIV	**Kislovodsk**	**71.01**	**319**		*e*P	**P**	**14 16 11.8**	**-0.2**
KIV					pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7							
PETK	**Petropavlovsk-**	**74.18**	**32**		P	**P**	**14 16 29.8**	**-0.9**
	comp=Z,5.3nm,0.8s,mb4.5,baz=165,slow=0.6,SNR=9.4							
PETK					pP	pP	14 16 37.9	-1.1
	comp=Z,3.5nm,0.8s,baz=191,slow=3.9,SNR=4.9							
PETK	**Petropavlovsk-**	**74.18**	**32**		P	**P**	**14 16 29.8**	**-0.9**
PETK					*PP	pP	14 16 37.9	-1.0
PETK					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
PETK					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4							
PETK	**Petropavlovsk-**	**74.18**	**32**		P	**P**	**14 16 29.8**	**-0.9**
PETK					pP	pP	14 16 37.9	-1.1
PET	**Petropavlovsk**	**74.64**	**32**		*e*P	**P**	**14 16 32.5**	**-0.8**
PET					pmax	pmax		
	comp=Z,34nm,1.3s,mb5.1							
BOSA	**Boshof**	**75.61**	**242**		pP	pP	14 16 47.2	-0.6
	comp=Z,7.3nm,1.0s,baz=191,slow=1.2,SNR=4.2							
TIXI	**Tiksi**	**77.90**	**9**		*e*P	**P**	**14 16 48.3**	**-3.2**
TIXI					pmax	pmax		
	comp=Z,36nm,1.6s,mb5.0							
OBN	**Obninsk**	**79.32**	**328**⇓		*i*P	**P**	**14 16 59.5**	**-0.2**
OBN					*i*	pP	14 17 07.4	-0.6
OBN					pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8							
AKASG	**Malin Array Be**	**81.98**	**322**		P	**P**	**14 17 12.9**	**-1.1**
	comp=Z,0.6nm,0.3s,mb3.9,baz=78,slow=4.1,SNR=5.9							
AKASG	**Malin Array Be**	**81.98**	**322**		P	**P**	**14 17 12.9**	**-1.1**
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.4s							
BUR08	**Bucovina Ar. S**	**83.74**	**319**		*e*P	**P**	**14 17 23.7**	**+0.5**
BILL	**Bilibino**	**84.86**	**20**		*e*P	**P**	**14 17 28.3**	**-0.2**
BILL					pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8							
KOLS	**Kolonicke sedl**	**85.92**	**320**		*e*P	**P**	**14 17 34.5**	**+0.3**
KECS	**Kecovo**	**87.00**	**319**		*e*P	**P**	**14 17 38.5**	**-1.0**
KECS					pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.5							
KECS	**Kecovo**	**87.00**	**319**		*e*P	**P**	**14 17 38.5**	**-1.0**
	comp=Z,2.5nm,1.0s,mb4.4							
ARCES	**ARCESS Array B**	**88.98**	**340**		P	**P**	**14 17 47.5**	**-1.0**
	comp=Z,8.7nm,0.9s,mb5.1,baz=76,slow=5.1,SNR=11							
ARCES					pP	pP	14 17 56.6	-0.3
	comp=Z,5.8nm,0.9s,baz=104,slow=8.9,SNR=4.3							
ARCES	**ARCESS Array B**	**88.98**	**340**		P	**P**	**14 17 47.5**	**-1.0**
ARCES					*PP	pP	14 17 56.6	-0.3
ARCES					pmax	pmax		
	comp=Z,9.0nm,0.9s							
ARCES					pmax	pmax		
	comp=Z,6.0nm,0.9s							
MORC	**Moravsky Berou**	**89.11**	**320**		*e*P	**P**	**14 17 49.3**	**-0.2**
MORC					pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5							
MORC	**Moravsky Berou**	**89.11**	**320**		*e*P	**P**	**14 17 49.3**	**-0.2**
	comp=Z,2.1nm,0.8s,mb4.5							
SNAA	**Sanae**	**90.36**	**198**		*e*P	**P**	**14 17 56.3**	**+1.3**
SNAA					*e*	pP	14 18 04.5	+1.1
SNAA	**Sanae**	**90.36**	**198**		*e*P	**P**	**14 17 56.0**	**+1.0**
SNAA					pmax	pmax		
	comp=Z,5.0nm,1.0s							
SNAA	**Sanae**	**90.36**	**198**		*e*P	**P**	**14 17 56.0**	**+1.0**
	comp=Z,5.1nm,1.0s,mb4.8							
GERES	**GERESS Array B**	**91.51**	**319**		P	**P**	**14 18 00.7**	**0.0**
	comp=Z,1.7nm,0.8s,mb4.4,baz=97,slow=4.4,SNR=9.8							
GERES					pP	pP	14 18 09.0	-0.2
	comp=Z,1.3nm,0.7s,baz=87,slow=5.5,SNR=3.7							
GERES	**GERESS Array B**	**91.51**	**319**		P	**P**	**14 18 00.7**	**0.0**
GERES					*PP	pP	14 18 09.0	-0.2
GERES					pmax	pmax		
	comp=Z,2.0nm,0.8s							
GERES					pmax	pmax		
	comp=Z,1.0nm,0.7s							
CLL	**Collm**	**92.15**	**321**		*e*P	**P**	**14 18 03.0**	**-0.6**
VNA1	**Neumayer--Stat**	**92.35**	**198**		*e*P	**P**	**14 18 06.0**	**+1.8**
VNA1					*e*	pP	14 18 13.7	+1.1
EGMT	**Eagleton**	**128.98**	**26**		*e*PKPdf	PKPdf	14 24 02.7	+0.7
NVAR	**Mina Array Bea**	**130.57**	**41**		PKP	PKPdf	14 24 06.1	+0.7
	comp=Z,0.9nm,0.6s,baz=289,slow=4.5,SNR=4.3							
NVAR	**Mina Array Bea**	**130.57**	**41**		PKP	PKPdf	14 24 06.1	+0.7
ULM	**Lac du Bonnet**	**131.97**	**15**		PKP	PKPdf	14 24 06.7	-1.0
	comp=Z,2.5nm,0.6s,baz=271,slow=2.2,SNR=4.2							
PDAR	**Pinedale Array**	**132.94**	**31**		PKP	PKPdf	14 24 10.1	+0.3
	comp=Z,0.4nm,0.7s,baz=153,slow=1.7,SNR=4.0							
WMOK	**Wichita Mounta**	**144.48**	**29**		*e*PKIKP	PKPdf	14 24 28.7	-2.4
SIUC	**Southern Illin**	**145.38**	**15**		*e*PKP	PKPdf	14 24 31.9	-0.7
WCI	**Wyandotte Cave**	**145.51**	**10**		*e*PKIKP	PKPdf	14 24 31.9	-0.8
TXAR	**Lajitas Array**	**145.72**	**41**		PKPbc	PKPbc	14 24 34.3	+0.6
	comp=Z,22nm,1.0s,baz=280,slow=2.2,SNR=90							
TXAR					pPKPbc	pPKPbc	14 24 42.7	+0.4
	comp=Z,7.6nm,0.7s,baz=282,slow=0.3,SNR=12							
TXAR	**Lajitas Array**	**145.72**	**41**		PKIKP	PKPdf	14 24 34.3	+0.9
TXAR							14 24 42.7	
TXAR					pmax	pmax		
	comp=Z,23nm,1.0s							
TXAR					pmax	pmax		
	comp=Z,8.0nm,0.7s							
MIAR	**Mount Ida**	**146.91**	**23**		*e*PKP2	PKPab	14 24 36.5	-1.9
JCT	**Junction City**	**147.26**	**35**		*e*PKPdf	PKPdf	14 24 36.4	+0.5
JCT					*e*PKPbc	PKPbc	14 24 38.4	+0.1

IDC ***12*** *14:07:54.5±2.2, 359S×10022E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, Error ellipse: s-maj=100.2km s-min=17.6km az=56.0*

ISCJB ***12*** *14:07:56.8±1.7, 36S±03×1000E±04, h33km, mb4.1/10, Error ellipse: s-maj=70.2km s-min=11.9km az=146.1*

NEIC ***12*** *14:07:59.8±1.1, 355S×10023E, h35km, mb4.3/1, Error ellipse: s-maj=46.7km s-min=8.1km az=56.0*

ISC 12 14:07:59.6±1.6, 36S±03×1002E±04, h35km, n15, σ0§44/14, mb4.1/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.93**	**357**			P	**P**	**14 12 49.7**	**-0.5**
	1.2nm,0.7s,mb3.4,baz=184,slow=9.6,SNR=5.4								
WRA	**Warramunga Arr**	**37.05**	**119**			P	**P**	**14 15 05.9**	**-0.7**
	0.9nm,0.4s,mb4.0,baz=304,slow=8.2,SNR=8.1								
WB2	**Warramunga Arr**	**37.06**	**119**			*e*P	**P**	**14 15 07.5**	**+0.9**
ASAR	**Alice Springs**	**38.19**	**125**			P	**P**	**14 15 15.7**	**-0.5**
	1.3nm,0.4s,mb4.0,baz=299,slow=7.9,SNR=5.8								
STKA	**Stephens Creek**	**47.97**	**131**			P	**P**	**14 16 35.4**	**+0.2**
	2.0nm,0.9s,mb4.2,baz=309,slow=14,SNR=2.8								
SONM	**Songino Array**	**51.49**	**5**			P	**P**	**14 17 02.0**	**+0.4**
	3.7nm,0.6s,mb4.5,baz=191,slow=8.8,SNR=8.7								
SONM						PcP	PcP	14 18 16.0	+0.5
	0.4nm,0.3s,baz=222,slow=1.9,SNR=2.9								
ULN	**Ulaanbaatar**	**51.58**	**6**			*e*P	**P**	**14 17 02.6**	**+0.3**
	1.8nm,0.5s,mb4.3								
MK31	**Makanchi Array**	**52.59**	**345**			*e*P	**P**	**14 17 10.2**	**+0.4**
MKAR	**Makanchi Array**	**52.59**	**345**			P	**P**	**14 17 10.2**	**+0.4**
	1.4nm,0.5s,mb4.1,baz=143,slow=8.7,SNR=4.5								
KURK	**Kurchatov**	**57.17**	**344**			P	**P**	**14 17 42.7**	**-0.1**
	0.8nm,0.6s,mb4.0,baz=169,slow=6.1,SNR=2.3								
KURK	**Kurchatov**	**57.17**	**344**			P	**P**	**14 17 42.7**	**-0.1**
ZAA0	**Zalesovo Array**	**58.75**	**349**			*e*P	**P**	**14 17 53.4**	**-0.5**
ZALV	**Zalesovo Beam**	**58.75**	**349**			P	**P**	**14 17 53.9**	**0.0**
	1.3nm,0.5s,mb4.2,baz=142,slow=7.3,SNR=4.8								
BVAR	**Borovoye Array**	**61.73**	**340**			P	**P**	**14 18 14.0**	**-0.3**
	0.8nm,0.6s,mb4.0,baz=134,slow=12,SNR=3.5								
TXAR	**Lajitas Array**	**145.82**	**39**			PKPbc	PKPbc	14 27 37.0	+1.1
	1.5nm,0.5s,baz=251,slow=0.7,SNR=13								

ISCJB ***12*** *14:13:21.2±0.6, 432S±008×10080E±0.10, h33km, mb4.1/10, Error ellipse: s-maj=14.3km s-min=10.9km az=164.9*

IDC ***12*** *14:13:22.8±1.8, 427S×10087E, h25km±5km, mb3.9/9, mb1 4.0/9, mb1mx3.8/21, mbtmp3.9/9, Error ellipse: s-maj=67.8km s-min=16.2km az=54.0*

NEIC ***12*** *14:13:22.3±0.4, 431S×10084E, mb4.1/1, Error ellipse: s-maj=10.0km s-min=7.7km az=73.0*

ISC 12 14:13:19.3±6.0, 429S±008×10082E±010, h3km±39km, n20, σ0§56/18, mb4.1/10, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COCO	**West Island**	**8.79**	**206**		*e*Pn		**Pn**	**14 15 27.2**	**0.0**
	43nm,0.3s								
KSM	**Kuching**	**11.07**	**59**		P		**Pn**	**14 15 58.4**	**-0.3**
KKM	**Kota Kinabalu**	**18.48**	**56**		*e*P		**Pn**	**14 17 37.1**	**+0.5**
CMAR	**Chiang Mai Arr**	**22.68**	**355**		P		**P**	**14 18 21.9**	**-0.1**
	2.9nm,0.8s,mb3.8,baz=183,slow=8.3,SNR=12								
WRA	**Warramunga Arr**	**36.16**	**118**		P		**P**	**14 20 23.1**	**-0.1**
	0.8nm,0.5s,mb3.9,baz=303,slow=9.0,SNR=11								
WRA					pP		pP	14 20 29.7	+5.5
	1.4nm,0.4s,baz=302,slow=8.9,SNR=7.6								
WRAB	**Tennant Creek**	**36.17**	**118**		*e*P		**P**	**14 20 22.8**	**-0.5**
WB2	**Warramunga Arr**	**36.17**	**118**		*e*P		**P**	**14 20 23.9**	**+0.6**
ASAR	**Alice Springs**	**37.27**	**124**		P		**P**	**14 20 32.9**	**+0.2**
	0.7nm,0.5s,mb3.8,baz=299,slow=7.5,SNR=9.9								
ASAR					pP		pP	14 20 40.1	+6.5
	1.5nm,0.6s,baz=297,slow=8.0,SNR=8.9								
KSRS	**Korea Array**	**48.59**	**29**		P		**P**	**14 22 03.2**	**-0.9**
	1.5nm,0.8s,mb4.1,baz=211,slow=8.4,SNR=5.4								
SONM	**Songino Array**	**52.13**	**5**		P		**P**	**14 22 31.7**	**+0.9**
	3.0nm,0.7s,mb4.3,baz=186,slow=9.0,SNR=14								
ULN	**Ulaanbaatar**	**52.22**	**5**		*e*P		**P**	**14 22 31.5**	**0.0**
	1.1nm,0.4s,mb4.1								
MK31	**Makanchi Array**	**53.44**	**344**		*e*P		**P**	**14 22 41.2**	**+0.7**
MKAR	**Makanchi Array**	**53.44**	**344**		P		**P**	**14 22 41.2**	**+0.7**
	3.4nm,0.7s,mb4.4,baz=144,slow=8.5,SNR=19								
MKAR	**Makanchi Array**	**53.44**	**344**		P		**P**	**14 22 41.2**	**+0.7**
KURK	**Kurchatov**	**58.02**	**344**		P		**P**	**14 23 12.3**	**-1.0**
	0.5nm,0.3s,mb4.2,baz=160,slow=6.2,SNR=2.9								
KURK	**Kurchatov**	**58.02**	**344**		P		**P**	**14 23 13.9**	**+0.5**
ZALV	**Zalesovo Beam**	**59.55**	**349**		P		**P**	**14 23 23.3**	**-0.6**
	3.4nm,0.7s,mb4.5,baz=181,slow=5.3,SNR=5.4								
BVAR	**Borovoye Array**	**62.60**	**340**		P		**P**	**14 23 44.0**	**-0.7**
	1.1nm,0.6s,mb4.2,baz=120,slow=8.8,SNR=5.8								
TXAR	**Lajitas Array**	**145.96**	**40**		PKPbc	PKPbc		14 33 01.5	+0.4
	1.4nm,0.8s,baz=290,slow=3.6,SNR=7.8								
TXAR					pPKPbc	pPKPbc		14 33 09.3	+7.2
	1.1nm,0.8s,baz=232,slow=1.4,SNR=4.5								
TXAR	**Lajitas Array**	**145.96**	**40**		PKPbc	PKPbc		14 33 01.5	+0.4
TXAR					pPKPbc	pPKPbc		14 33 09.3	+7.2

IDC 12 14:15:33.8±9.3, 384S×10105E, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.4/19, mbtmp3.6/2, Error ellipse: s-maj=413.2km s-min=54.0km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.17**	**119**			P	P	14 22 38.3	-0.1
	0.2nm,0.3s,baz=283,slow=9.7,SNR=7.2								
ASAR	**Alice Springs**	**37.34**	**125**			P	P	14 22 48.3	+0.1
	0.4nm,0.4s,baz=297,slow=7.8,SNR=5.5								
TXAR	**Lajitas Array**	**145.47**	**40**			PKPbc	PKPbc	14 35 13.9	-0.7
	0.3nm,0.5s,baz=318,slow=1.2,SNR=4.1								

IDC 12 14:19:10.6±5.5, 463S×10087E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/19, mbtmp3.7/3, Error ellipse: s-maj=242.0km s-min=50.0km az=54.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.95**	**118**			P	P	14 26 13.4	+0.2
	0.7nm,0.4s,baz=300,slow=10,SNR=12								
ASAR	**Alice Springs**	**37.04**	**124**			P	P	14 26 22.1	-0.4
	0.7nm,0.6s,baz=292,slow=7.9,SNR=10								
STKA	**Stephens Creek**	**46.77**	**130**			P	P	14 27 42.2	+0.2
	1.6nm,1.0s,baz=303,slow=15,SNR=2.8								
TXAR	**Lajitas Array**	**146.19**	**41**			PKPbc	PKPbc	14 38 53.0	-0.7
	0.4nm,0.5s,baz=216,slow=0.8,SNR=5.1								

BJI ***12*** *14:25:04.4, 302S×10030E, h33km, mB5.6, mb4.9, Ms5.4, Msz5.1*

ISCJB ***12*** *14:25:04.6±0.4, 291S±005×10011E±005, h26km, mb4.8/52, Error ellipse: s-maj=8.6km s-min=5.3km az=43.3*

MOS ***12*** *14:25:06.8±1.1, 263S×10029E, h33km, mb4.9/27, Error ellipse: s-maj=15.4km s-min=8.1km az=100.5*

IDC ***12*** *14:25:06.9±0.8, 274S×10025E, h24km±3km, mb4.4/20, mb1 4.5/21, mb1mx4.4/25, mbtmp4.4/21, ML4.8/1, Error ellipse: s-maj=21.7km s-min=11.2km az=51.0*

NEIC ***12*** *14:25:06.6±0.3, 278S×10020E, mb4.9/15, Error ellipse: s-maj=10.6km s-min=5.5km az=52.0*

DJA ***12*** *14:25:21, 253S×10133E, h30km, MLv5.0/6*

ISC 12 14:25:06.8±0.4, 293S±005×10015E±005, h27km, h27km±1.9km:pP-P, n128, σ1§09/123, mb4.8/52, 12C-3D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**2.47**	**6**			P	**Pn**	**14 25 44.9**	**-0.4**
	0.0nm,0.0s								
KGM	**Kluang**	**5.85**	**33**		⇓	P	**Pn**	**14 26 33.1**	**+1.3**
MYKOM	**Kota Tinggi**	**5.97**	**38**		⇑	P	**Pn**	**14 26 34.9**	**+1.4**
FRIM	**Kepong**	**6.30**	**14**		⇑	P	**Pn**	**14 26 39.0**	**+1.0**
IPM	**Ipoh**	**7.41**	**7**		⇑	P	**Pn**	**14 26 54.5**	**+1.2**
LEM	**Lembang**	**8.39**	**118**			P	**Pn**	**14 27 10.8**	**+4.1**
	0.0nm,0.0s								
KTGM	**Kuala Trenggan**	**8.73**	**20**		⇑	P	**Pn**	**14 27 14.3**	**+2.9**
SBUM	**Sibu**	**13.20**	**66**		⇓	P	**Pn**	**14 28 16.8**	**+4.3**
BTM	**Bintulu**	**14.29**	**65**		⇑	P	**Pn**	**14 28 30.5**	**+3.0**
KKM	**Kota Kinabalu**	**18.36**	**61**		⇑	P	**Pn**	**14 29 21.9**	**+2.3**
KKM	**Kota Kinabalu**	**18.36**	**61**		*e*P		**Pn**	**14 29 19.8**	**+0.2**
SDKM	**Sandakan**	**19.04**	**63**		⇓	P	**Pn**	**14 29 28.3**	**+0.4**
KDM	**Kudat**	**19.31**	**60**		⇑	P	**Pn**	**14 29 31.6**	**+0.4**
KAPI	**Kappang**	**19.66**	**97**		P		**Pn**	**14 29 32.3**	**-3.1**
	3.0nm,0.3s,baz=262,slow=9.6,SNR=13								
KAPI	**Kappang**	**19.66**	**97**		*e*P		**Pn**	**14 29 33.1**	**-2.3**
MYLDM	**Lahad Datu**	**20.03**	**66**		⇑	P	**P**	**14 29 42.3**	**+4.5**
CM31	**Chiang Mai Arr**	**21.29**	**357**		*e*P		**P**	**14 29 49.3**	**-2.0**
CMAR	**Chiang Mai Arr**	**21.29**	**357**		P		**P**	**14 29 48.5**	**-2.9**
	9.6nm,0.9s,mb4.1,baz=186,slow=9.7,SNR=33								
CMAR					PcP		PcP	14 33 56.5	+0.8
	1.3nm,0.8s,baz=214,slow=2.0,SNR=6.0								
CMAR	**Chiang Mai Arr**	**21.29**	**357**		P		**P**	**14 29 48.5**	**-2.9**
CMAR								14 33 56.5	
CMAR					pmax		pmax		
	comp=Z,10.0nm,0.9s								
CMAR					pmax		pmax		
	comp=Z,1.0nm,0.8s								
CHTO	**Chiang Mai**	**21.64**	**357**		*e*P		**P**	**14 29 53.4**	**-1.8**
CHTO					pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.1								
CHTO	**Chiang Mai**	**21.64**	**357**		*e*P		**P**	**14 29 53.4**	**-1.7**
	comp=Z,6.3nm,0.8s,mb4.1								
BATI	**Baumata**	**24.44**	**108**		P		**P**	**14 30 23.1**	**-0.4**
	comp=Z,13nm,0.4s,mb4.7,baz=117,slow=23,SNR=5.8								
DAV	**Davao City (W)**	**27.26**	**69**		P		**P**	**14 30 47.0**	**-2.1**
	comp=Z,112nm,0.4s,mb5.8,baz=269,slow=18,SNR=3.6								
FITZ	**Fitzroy Crossi**	**29.18**	**123**		*e*P		**P**	**14 31 06.1**	**-0.1**
	comp=Z,12nm,0.9s,mb4.6								
FITZ	**Fitzroy Crossi**	**29.18**	**123**		P		**P**	**14 31 06.4**	**+0.3**
	comp=Z,2.2nm,0.6s,mb4.1,baz=281,slow=6.3,SNR=4.7								
ODAN	**Odare**	**32.08**	**338**		*e*P		**P**	**14 31 32.4**	**+0.8**
	comp=Z,40nm,0.8s,mb5.3								
TAPN	**Taplejung**	**32.41**	**339**		*e*P		**P**	**14 31 35.4**	**+0.9**
	comp=Z,53nm,0.9s,mb5.4								
RAMN	**Ramite**	**32.46**	**337**		*e*P		**P**	**14 31 36.2**	**+1.2**
	comp=Z,21nm,0.6s,mb5.1								
JIRN	**Jiri**	**33.25**	**337**		*e*P		**P**	**14 31 42.6**	**+0.7**
	comp=Z,47nm,0.7s,mb5.5								
PKI	**Pulchoki**	**33.49**	**336**		*e*P		**P**	**14 31 45.4**	**+1.5**
LSA	**Lhasa**	**33.57**	**346**		*e*P		**P**	**14 31 44.4**	**-0.3**
	comp=Z,28nm,1.0s,mb5.2								
DMN	**Daman**	**33.64**	**335**		*e*P		**P**	**14 31 46.1**	**+0.8**
KKN	**Kakani**	**33.73**	**336**		*e*P		**P**	**14 31 46.3**	**+0.2**
	comp=Z,42nm,0.8s,mb5.4								
CD2	**Chengdu**	**33.83**	**6**		*e*P		**P**	**14 31 44.5**	**-2.4**
CD2					AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.8								
GKN	**Gorkha**	**34.19**	**335**		*e*P		**P**	**14 31 50.3**	**+0.3**
KOLN	**Koldanda**	**34.43**	**333**		*e*P		**P**	**14 31 52.7**	**+0.5**
	comp=Z,19nm,0.7s,mb5.2								
DANN	**Dangsing**	**34.86**	**334**		*e*P		**P**	**14 31 56.5**	**+0.6**
	com

SONM *PP pP 14 34 13.0 -0.4
SONM 14 35 21.8
SONM pmax pmax
comp=Z,22nm,0.9s
SONM pmax pmax
comp=Z,13nm,0.8s
SONM pmax pmax
comp=Z,3.0nm,0.8s
AML Almayashu 50.86 335 P **P** **14 34 06.3 +1.1**
SNR=9.2
ULN Ulaanbaatar 50.94 6 *eP* **P** **14 34 06.1 +0.3**
ULN pmax pmax
comp=Z,18nm,1.0s,mb5.0
ULN Ulaanbaatar 50.94 6 *eP* **P** **14 34 06.1 +0.3**
comp=Z,18nm,1.0s,mb5.0
EKS2 Erkin-Say 51.26 335 P **P** **14 34 09.2 +1.0**
SNR=38
USP Ospenovka 51.47 336 P **P** **14 34 10.2 +0.4**
SNR=14
CN2 Changchun 51.77 23 *eP* **P** **14 34 11.1 -1.0**
CN2 AMB AMB
comp=Z,40nm,0.9s,mb5.3
MKAR Makanchi Array 51.96 344 P **P** **14 34 13.4 +0.1**
comp=Z,27nm,0.6s,mb5.3,baz=148,slow=8.1,SNR=175
MKAR Makanchi Array 51.96 344 P **P** **14 34 13.5 +0.1**
MKAR pmax pmax
comp=Z,27nm,0.6s
MAT Matsushiro 52.90 38 P **P** **14 34 20.5 -0.1**
MJAR Matsushiro Arr 52.90 38 P **P** **14 34 19.6 -1.0**
comp=Z,6.1nm,0.9s,mb4.5,baz=217,slow=7.2,SNR=18
MJAR Matsushiro Arr 52.90 38 P **P** **14 34 19.6 -1.0**
MJAR pmax pmax
comp=Z,6.0nm,0.9s
ZAK Zakamensk 53.17 3 *eP* **P** **14 34 21.3 -1.0**
ZAK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
MDJ Mudanjiang 54.16 26 P **P** **14 34 29.1 -0.5**
MDJ AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
MDJ AMB AMB
comp=Z,9μm,13.3s
MDJ Mudanjiang 54.16 26 *eP* **P** **14 34 29.5 -0.2**
comp=Z,10.0nm,1.1s,mb4.7
TLY Talaya 54.48 3 *eP* **P** **14 34 32.4 +0.5**
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
HIA Hailar 54.69 16 *eP* **P** **14 34 32.7 -0.7**
HIA pmax pmax
comp=Z,16nm,1.1s
HIA Hailar 54.69 16 *eP* **P** **14 34 32.7 -0.8**
comp=Z,16nm,1.1s,mb5.0
KURK Kurchatov 56.53 344 P **P** **14 34 46.1 -0.5**
comp=Z,7.6nm,0.9s,mb4.7,baz=198,slow=4.2,SNR=16
KURK Kurchatov 56.53 344 ⇑*iP* **P** **14 34 46.4 -0.2**
KURK pmax pmax
comp=Z,29nm,0.8s,mb5.4
ZALV Zalesovo Beam 58.10 349 P **P** **14 34 57.2 -0.5**
comp=Z,15nm,0.8s,mb5.1,baz=163,slow=5.7,SNR=57
ZALV Zalesovo Beam 58.10 349 P **P** **14 34 57.2 -0.5**
ZALV pmax pmax
comp=Z,15nm,0.8s,mb5.1
ZALV Zalesovo Beam 58.10 349 P **P** **14 34 57.2 -0.5**
KRAR Krasnoyarsk 59.05 355 ⇑*iP* **P** **14 35 03.3 -0.9**
KRAR pmax pmax
comp=Z,18nm,1.4s,mb4.9
BVAR Borovoye Array 61.10 340 P **P** **14 35 17.3 -1.1**
comp=Z,2.6nm,0.6s,mb4.5,baz=138,slow=7.8,SNR=14
BVAR pP pP 14 35 23.6 -3.3
comp=Z,3.8nm,0.6s,baz=140,slow=9.2,SNR=12
BVAR Borovoye Array 61.10 340 P **P** **14 35 17.3 -1.0**
BVAR *PP pP 14 35 23.6 -3.3
BVAR pmax pmax
comp=Z,3.0nm,0.6s
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 61.16 340 P **P** **14 35 17.5 -1.3**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
BRVK Borovoye 61.16 340 P **P** **14 35 17.5 -1.2**
comp=Z,3.2nm,0.6s,mb4.6
BOD Bodaibo 61.57 8 *eP* **P** **14 35 21.2 -0.2**
BOD pmax pmax
comp=Z,18nm,0.9s,mb5.2
YSS Yuzh-Sakhalins 62.19 32 *eP* **P** **14 35 25.0 -0.8**
YSS *e* pP 14 35 33.0 -1.3
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 62.19 32 *eP* **P** **14 35 25.4 -0.4**
comp=Z,27nm,1.0s,mb5.3
YSS *e* pP 14 35 33.5 -0.8
AKTK Aktyubinsk 64.24 332 P **P** **14 35 38.4 -1.0**
AKTO Aktyubinsk 64.24 332 P **P** **14 35 38.4 -1.0**
comp=Z,3.1nm,0.9s,mb4.3,baz=108,slow=6.8,SNR=7.9
AKTO Aktyubinsk 64.24 332 P **P** **14 35 38.4 -0.9**
AKTO pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
ARU Arti 68.11 337*c* *iP* **P** **14 36 03.2 -0.9**
ARU *eS* S 14 45 01.2 -0.9
ARU SS SS 14 49 27.8 +2.7
ARU pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
YAK Yakutsk 68.60 14 *eP* **P** **14 36 04.9 -2.1**
YAK pmax pmax
comp=Z,25nm,1.0s,mb5.1
YAK pmax pmax
comp=E,7.0nm,1.5s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK Yakutsk 68.60 14 *eP* **P** **14 36 05.1 -1.9**
comp=N,30nm,1.0s,mb5.2
YAK *e* pP 14 36 13.8 -1.8
MALT Malatya 70.07 313 *eP* **P** **14 36 15.5 -1.1**
MALT pmax pmax
comp=Z,31nm,2.0s,mb4.9
MALT Malatya 70.07 313 *eP* **P** **14 36 15.5 -1.1**
comp=Z,31nm,2.0s,mb4.9
PETK Petropavlovsk- 73.59 32 P **P** **14 36 36.5 -0.9**
comp=Z,2.2nm,0.8s,mb4.1,baz=134,slow=0.8,SNR=5.5
PETK pP pP 14 36 44.5 -1.6
comp=Z,2.9nm,0.8s,baz=184,slow=4.5,SNR=5.0
PETK Petropavlovsk- 73.59 32 P **P** **14 36 36.5 -0.9**
PETK *PP pP 14 36 44.6 -1.5
PETK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
PETK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BOSA Boshof 75.34 241 pP pP 14 36 56.9 -0.1
comp=Z,2.4nm,0.6s,baz=82,slow=1.9,SNR=2.5
OBN Obninsk 77.66 328 *eP* **P** **14 37 00.3 -0.4**
OBN *e* 14 37 11.2
OBN pmax pmax
comp=Z,11nm,1.0s,mb4.7
AKASG Malin Array Be 80.31 322 P **P** **14 37 14.2 -1.1**
comp=Z,0.6nm,0.5s,mb3.8,baz=88,slow=3.0,SNR=5.1
AKASG Malin Array Be 80.31 322 P **P** **14 37 14.3 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
BUR08 Bucovina Ar. S 82.07 319 *eP* **P** **14 37 25.4 +0.6**
QSPA South Pole Qui 87.04 180 P **P** **14 37 51.1 +1.8**
comp=Z,0.6nm,0.5s,mb4.0,baz=334,slow=6.8,SNR=12
QSPA South Pole Qui 87.04 180 P **P** **14 37 51.1 +1.8**
ARCES ARCESS Array B 87.39 340 P **P** **14 37 50.5 -0.7**
comp=Z,4.6nm,0.7s,mb4.8,baz=116,slow=2.8,SNR=9.1
ARCES ARCESS Array B 87.39 340 P **P** **14 37 50.5 -0.7**
ARCES pmax pmax
comp=Z,5.0nm,0.7s
GERES GERESS Array B 89.84 319 P **P** **14 38 04.0 +0.8**
comp=Z,1.0nm,0.7s,mb4.3,baz=94,slow=5.4,SNR=8.1
GERES pP pP 14 38 12.0 0.0
comp=Z,0.3nm,0.4s,baz=106,slow=4.9,SNR=3.6
GERES GERESS Array B 89.84 319 P **P** **14 38 04.0 +0.8**
GERES *PP pP 14 38 12.0 0.0
GERES pmax pmax
comp=Z,1.0nm,0.7s
BRG Berggiesshubel 89.85 321 *eP* **P** **14 38 12.1 +8.9**
BRG pmax pmax
comp=Z,3.0nm,1.2s,mb4.5
BRG Berggiesshubel 89.85 321 *eP* **P** **14 38 12.1 +9.0**
comp=Z,5.5nm,1.2s,mb4.8
KEST Kesra 92.34 305 P **P** **14 38 16.2 +1.1**
comp=Z,1.7nm,0.8s,mb4.4,baz=28,slow=3.2,SNR=4.1
NVAR Mina Array Bea 130.22 40 PKP PKPdf 14 44 14.9 0.0
comp=Z,0.6nm,0.7s,baz=258,slow=2.0,SNR=5.6
CPUP Villa Florida 143.66 215 PKP PKPdf 14 44 42.1 +2.1
comp=Z,2.5nm,0.8s,baz=284,slow=4.2,SNR=2.2
CPUP Villa Florida 143.66 215 PKIKP PKPdf 14 44 42.1 +2.0
CPUP pmax pmax
comp=Z,3.0nm,0.8s
TXAR Lajitas Array 145.34 38 PKPbc PKPbc 14 44 43.6 +0.9
comp=Z,13nm,0.8s,baz=286,slow=0.8,SNR=132
TXAR Lajitas Array 145.34 38 PKIKP PKPdf 14 44 43.7 +0.8
TXAR pmax pmax
comp=Z,13nm,0.8s
MIAR Mount Ida 146.05 21 *e*PKP2 PKPab 14 44 44.5 -0.8
JCT Junction City 146.73 32 *e*PKP2 PKPab 14 44 46.2 -1.8
CPCT Cooper Cave 147.35 7 *e*PKPbc PKPbc 14 44 48.3 -0.2

*ISCJB **12** 14:30:10.6±0.3,2390N±002×12178E±002,h20km±4km,*
Error ellipse: s-maj=4.3km s-min=2.2km az=40.6
*TAP **12** 14:30:10.7,2393N×12170E,h23km,ML3.1,B*
*JMA **12** 14:30:10.2±0.3,2394N×12168E,h76km,M2.7*
ISC 12 14:30:10.6±0.4,2391N±002×12176E±002,h17km±2km,
n54,σ0°91/90,5C-5D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.16**	**295**	⇑*iP*	**Pg**	**14 30 15.3**	**+0.4**
HWA	baz=298			*i* S	**Sg**	**14 30 19.1**	**+1.3**
	baz=298						
TWD	**Chiawan**	**0.23**	**318**	⇓*iP*	**Pg**	**14 30 16.0**	**0.0**
TWD	baz=333			*i* S	**Sg**	**14 30 19.6**	**+0.1**
	baz=333						
ESF	**Shoufeng Towns**	**0.24**	**261**	P	**Pg**	**14 30 15.9**	**-0.1**
ESF	baz=250			S	**Sg**	**14 30 20.5**	**+0.8**
	baz=250						
TEGC	**Jichi Village**	**0.28**	**226**	*eP*	**Pg**	**14 30 17.4**	**+0.5**
TEGC	baz=210			*eS*	**Sg**	**14 30 23.8**	**+2.7**
	baz=210						
ESL	**Shilin**	**0.32**	**253**	⇑*iP*	**Pg**	**14 30 17.1**	**-0.3**
ESL	baz=245			S	**Sg**	**14 30 21.6**	**-0.3**
	baz=245						
WHF	**Hehuan Shan**	**0.51**	**297**	⇑*iP*	**Pg**	**14 30 20.3**	**-0.6**
WHF	baz=292			*i* S	**Sg**	**14 30 27.1**	**-0.7**
	baz=292						
ENA	**Nanau**	**0.52**	**358**	⇓*iP*	**Pg**	**14 30 20.8**	**-0.2**
ENA	baz=360			*eS*	**Sg**	**14 30 28.3**	**+0.4**
	baz=360						
EHY	**Hungye**	**0.57**	**225**	P	**Pg**	**14 30 21.0**	**-0.9**
EHY	baz=220			S	**Sg**	**14 30 29.2**	**-0.4**
	baz=220						
NNS	**Nan Shan**	**0.64**	**326**	⇑*iP*	**Pg**	**14 30 22.7**	**-0.5**
NNS	baz=329			S	**Sg**	**14 30 30.7**	**-1.1**
	baz=329						
TWF1	**Yuli**	**0.70**	**218**	⇓*iP*	**Pb**	**14 30 23.1**	**-1.2**
TWF1	baz=225			*eS*	**Sg**	**14 30 34.1**	**+0.4**
	baz=225						
TWC	**Suao**	**0.70**	**6**	*iP*	**Pb**	**14 30 24.1**	**-0.2**
TWC	baz=3.0			*i* S	**Sg**	**14 30 34.5**	**+0.8**
	baz=3.0						
ENTT	**Nioudou**	**0.75**	**346**	P	**Pb**	**14 30 24.8**	**-0.4**
ENTT	baz=342			*eS*	**Sb**	**14 30 34.6**	**-0.5**
	baz=342						
SMLT	**Sun Moon Lake**	**0.79**	**268**	P	**Pb**	**14 30 25.1**	**-0.7**
SMLT	baz=272			S	**Sb**	**14 30 35.2**	**-1.0**
	baz=272						
TWE	**Neicheng**	**0.81**	**354**	P	**Pb**	**14 30 25.6**	**-0.7**
TWE	baz=356			*eS*	**Sb**	**14 30 35.5**	**-1.4**
	baz=356						
TYC	**Yuchr**	**0.83**	**270**	⇑P	**Pb**	**14 30 25.6**	**-1.0**
TYC	baz=273			S	**Sb**	**14 30 35.8**	**-1.6**
	baz=273						
NSK	**Sanguang**	**0.85**	**334**	*eP*	**Pb**	**14 30 26.1**	**-0.8**
	baz=337						
YUS	**Yu-Shan**	**0.85**	**241**	⇓*iP*	**Pb**	**14 30 26.7**	**-0.3**
YUS	baz=237			S	**Sb**	**14 30 37.5**	**-0.6**
	baz=237						
CHKT	**Chengkung**	**0.89**	**204**	*eP*	**Pb**	**14 30 26.8**	**-0.7**
	baz=189						
EGS		**0.94**	**9**	*eP*	**Pb**	**14 30 29.3**	**+0.8**
	baz=11						
ALS	**Alishan**	**0.96**	**246**	⇓P	**Pb**	**14 30 28.5**	**-0.4**
ALS	baz=242			*eS*	**Sb**	**14 30 39.2**	**-2.0**
	baz=242						
WNT	**Mingjian**	**0.99**	**268**	*eP*	**Pb**	**14 30 28.9**	**-0.4**
WNT	baz=266			*eS*	**Sb**	**14 30 42.5**	**+0.6**
	baz=266						
ELDTW	**Lidau**	**0.99**	**224**	*eP*	**Pb**	**14 30 27.6**	**-1.7**
	baz=214						
NSTT	**Nanjuang**	**1.00**	**316**	P	**Pb**	**14 30 28.8**	**-0.7**
NSTT	baz=317			*eS*	**Sb**	**14 30 40.7**	**-1.6**
	baz=317						
TWQ1	**Liyutan**	**1.00**	**296**	*eP*	**Pb**	**14 30 29.6**	**+0.1**
TWQ1	baz=304			*eS*	**Sb**	**14 30 44.4**	**+1.9**
	baz=304						
TCU	**Taichung**	**1.02**	**284**	*eP*	**Pb**	**14 30 30.5**	**+0.6**
TCU	baz=282			*eS*	**Sb**	**14 30 45.9**	**+2.9**
	baz=282						
CHN5	**Tsauling**	**1.04**	**253**	P	**Pb**	**14 30 30.0**	**-0.2**
CHN5	baz=240			*eS*	**Sb**	**14 30 43.5**	**0.0**
	baz=240						
NSY	**Sanyi**	**1.04**	**299**	*eP*	**Pb**	**14 30 31.5**	**+1.2**
	baz=298						
TWA	**Mucha**	**1.08**	**351**	*eP*	**Pb**	**14 30 30.3**	**-0.5**
	baz=354						
TWB1	**Santiao Chiao**	**1.11**	**11**	*eP*	**Pn**	**14 30 31.6**	**+0.2**
TWB1	baz=11			*eS*	**Sb**	**14 30 46.6**	**+1.0**
	baz=11						
WGK	**Gukeng**	**1.12**	**259**	*eP*	**Pn**	**14 30 31.6**	**+0.1**
WGK	baz=256			*eS*	**Sb**	**14 30 46.9**	**+1.0**
	baz=256						
NWF	**Wu-fen Shan**	**1.16**	**1**	*eP*	**Pn**	**14 30 32.7**	**+0.7**
NWF	baz=349			*eS*	**Sb**	**14 30 48.2**	**+1.4**
	baz=349						
STYT	**Tauyuan**	**1.18**	**231**	P	**Pn**	**14 30 31.6**	**-0.8**
STYT	baz=228			*eS*	**Sb**	**14 30 47.2**	**-0.4**
	baz=228						
CHN4	**Tsaushan**	**1.21**	**243**	*eP*	**Pn**	**14 30 32.8**	**+0.1**
CHN4	baz=231			S	**Sb**	**14 30 49.6**	**+1.3**
	baz=231						
TWS1	**Kuangyinshan**	**1.23**	**345**	*eP*	**Pn**	**14 30 33.5**	**+0.6**
	baz=347						
WTP	**Ta-pu**	**1.24**	**238**	*eP*	**Pn**	**14 30 32.9**	**-0.3**
WTP	baz=234			*eS*	**Sb**	**14 30 50.0**	**+0.6**
	baz=234						
TWG	**Pinlang**	**1.26**	**210**	*eP*	**Pn**	**14 30 30.7**	**-2.6**
	baz=197						
YOJ	**Yonaguni jima**	**1.27**	**64**	P	**Pn**	**14 30 33.3**	**-0.2**
YOJ				S	**Sb**	**14 30 50.8**	**+0.8**
YOJ	**Yonaguni jima**	**1.27**	**64**	*eP*	**Pn**	**14 30 33.1**	**-0.4**
	baz=80						
TWK	**Hsinying**	**1.33**	**242**	*eP*	**Pn**	**14 30 34.9**	**+0.4**
TWK	baz=238			*eS*	**Sn**	**14 30 52.8**	**+1.1**
	baz=238						
CHN1	**Nanshi**	**1.34**	**238**	P	**Pn**	**14 30 34.7**	**+0.2**
CHN1	baz=234			S	**Sn**	**14 30 53.1**	**+1.2**
	baz=234						
WTCT	**Ta-ch'eng**	**1.36**	**268**	*eP*	**Pn**	**14 30 35.2**	**+0.5**
	baz=265						
SGST	**Jiashian**	**1.36**	**233**	*eP*	**Pn**	**14 30 34.6**	**-0.2**
	baz=229						
WSF	**Szhu**	**1.44**	**259**	*eP*	**Pn**	**14 30 36.5**	**+0.7**
	baz=255						
ECL	**Taimali**	**1.50**	**210**	*eP*	**Pn**	**14 30 34.1**	**-2.6**
	baz=199						
SSD	**Sandimen**	**1.56**	**222**	*eP*	**Pn**	**14 30 37.6**	**+0.2**
	baz=220						
SSD				*eS*	**Sn**	**14 30 59.3**	**+2.0**
	baz=220						
TWM1	**Shoushan**	**1.64**	**229**	*eP*	**Pn**	**14 30 40.0**	**+1.4**
	baz=225						
EAST	**Anshuo**	**1.74**	**209**	*eP*	**Pn**	**14 30 40.0**	**+0.1**
	baz=200						
IRIF	**Iriomote-Funau**	**1.85**	**76**	P	**Pn**	**14 30 41.4**	**-0.1**
IRIF				S	**Sn**	**14 31 04.6**	**+0.2**
SCZT	**Fangliau**	**1.86**	**215**	*eP*	**Pn**	**14 30 42.9**	**+1.3**
	baz=204						
HATJ	**Hateruma jima**	**1.87**	**85**	P	**Pn**	**14 30 41.6**	**-0.3**
HATJ				S	**Sn**	**14 31 05.3**	**+0.2**
PNG	**Penghu**	**2.05**	**261**	*eP*	**Pn**	**14 30 44.1**	**-0.1**
	baz=254						
JKRS	**Kuro-shima**	**2.08**	**81**	P	**Pn**	**14 30 45.0**	**+0.3**
JKRS				S	**Sn**	**14 31 11.0**	**+0.8**
JIJ	**Ishigaki jima**	**2.22**	**78**	P	**Pn**	**14 30 46.1**	**-0.5**
JIJ				S	**Sn**	**14 31 12.8**	**-0.9**
JTJ	**Tarama**	**2.78**	**74**	P	**Pn**	**14 30 54.2**	**-0.1**

IDC 12 14:32:41.0±4.2,347S×10151E,h0km,mb3.9/5,mb1 4.0/5,
mb1mx3.7/18,mbtmp3.9/5,Error ellipse:
s-maj=231.5km s-min=21.6km az=54.0,Southern
Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**35.96**	**120**	P	P	14 39 44.2	+0.5
	0.6nm,0.4s,baz=302,slow=9.1,SNR=10						
ASAR	**Alice Springs**	**37.18**	**126**	P	P	14 39 53.4	-0.7
	0.6nm,0.3s,baz=302,slow=8.1,SNR=13						
STKA	**Stephens Creek**	**47.05**	**132**	P	P	14 41 14.8	+0.2
	2.8nm,1.1s,baz=312,slow=13,SNR=4.3						
MKAR	**Makanchi Array**	**52.85**	**344**	P	P	14 41 58.5	+0.2
	1.0nm,0.6s,baz=146,slow=8.3,SNR=5.4						
ZALV	**Zalesovo Beam**	**58.89**	**349**	P	P	14 42 41.2	-0.3
	0.8nm,0.4s,baz=172,slow=5.8,SNR=4.0						
TXAR	**Lajitas Array**	**144.90**	**40**	PKP	PKPdf	14 52 20.6	-0.3
	0.5nm,0.6s,baz=261,slow=0.9,SNR=8.1						

GUC 12 14:34:40.4±0.9,3161S×7143W,h3km±9km,MD3.6,ML2.9,
1C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.28**	**192**	⇓*iP*	Pg	14 34 45.9	0.0
CHNG				*i* S	Sg	14 34 50.8	+1.3
CHNG				AML	AML	14 34 51.5	
	comp=N,3μm,0.3s						
JACH	**Jahuel**	**1.28**	**147**	*eP*	Pg	14 35 04.5	-0.5
JACH				*i* S	Sg	14 35 22.3	+0.6
TLL	**Tololo Astrono**	**1.53**	**21**	⇓*iP*	Pn	14 35 08.4	-0.3
TLL				*i* S	Sn	14 35 31.4	+2.4
TLL				AML	AML	14 35 40.2	
	comp=N,158nm,0.6s						
PEL	**Peldehue**	**1.66**	**158**	⇑*iP*	Pn	14 35 09.1	-1.2
PEL				*i* S	Sn	14 35 32.8	+0.7
PEL				AML	AML	14 35 33.5	
	comp=E,546nm,0.3s						
CLCH	**Cerro Calan**	**1.94**	**157**	*eP*	Pn	14 35 13.6	-0.5
CLCH				*i* S	Sn	14 35 39.2	+0.2
CLCH				AML	AML	14 35 44.8	
	comp=N,247nm,0.7s						
FCH	**Farellones**	**1.97**	**151**	*eP*	Pn	14 35 14.1	-0.5
FCH				*i* S	Sn	14 35 40.7	+1.0
FCH				AML	AML	14 35 43.1	
	comp=E,93nm,0.3s						
PCH	**Pirque**	**2.15**	**159**	*i* S	Sn	14 35 46.0	+1.7
CACH	**El Canelo**	**2.60**	**165**	*i* S	Sn	14 35 59.6	+4.3

*ISCJB **12** 14:35:34.5±0.8,2047S±007×178.12W±0.10,h529km±12km,*
mb3.7/12,Error ellipse: s-maj=15.4km s-min=9.6km
az=30.0
*IDC **12** 14:35:34.4±1.9,2053S×17809W,h514km±23km,mb3.3/11,*
mb1 3.5/13,mb1mx3.4/20,mbtmp3.3/13,Error ellipse:
s-maj=18.9km s-min=12.9km az=133.0
*NEIC **12** 14:35:37.0±2.7,2057S×178.18W,h547km±31km,mb4.0/2,*
Error ellipse: s-maj=20.7km s-min=19.0km az=47.0
ISC 12 14:35:35.3±1.0,2056S±008×1781W±01,h526km±12km,
n26,σ0°77/26,mb3.7/12,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**8.66**	**179**	S	**S**	**14 39 20.6**	**+0.1**
	31nm,0.3s,baz=252,slow=20,SNR=3.2						
AFI	**Afiamalu**	**8.96**	**43**	P	**P**	**14 37 42.1**	**-0.1**
	6.4nm,0.3s,baz=129,slow=16,SNR=14						
AFI				S	**S**	**14 39 22.3**	**-4.1**
	5.7nm,0.3s,baz=204,slow=22,SNR=6.7						
AFI	**Afiamalu**	**8.96**	**43**	*eP*	**P**	**14 37 42.6**	**+0.3**
AFI				*eS*	**S**	**14 39 21.3**	**-5.2**
DZM	**Mont Dzumac**	**14.48**	**261**	*eP*	**P**	**14 38 40.3**	**+0.6**
URZ	**Urewera**	**18.12**	**192**	P	**P**	**14 39 14.5**	**-0.8**
	0.8nm,0.3s,baz=132,slow=12,SNR=7.3						
CTA	**Charters Tower**	**33.39**	**264**	P	**P**	**14 41 30.5**	**+0.3**
	2.0nm,0.5s,mb3.9,baz=76,slow=12,SNR=4.3						
CTA	**Charters Tower**	**33.39**	**264**	P	**P**	**14 41 30.5**	**+0.3**
CTAO	**Charters Tower**	**33.39**	**264**	*eP*	**P**	**14 41 31.5**	**+1.3**
	1.6nm,0.4s,mb3.9						
STKA	**Stephens Creek**	**37.67**	**244**	P	**P**	**14 42 06.6**	**+0.9**
	0.8nm,0.4s,mb3.6,baz=82,slow=11,SNR=5.5						
STKA	**Stephens Creek**	**37.67**	**244**	*eP*	**P**	**14 42 06.7**	**+1.0**
ASAR	**Alice Springs**	**44.41**	**257**	P	**P**	**14 42 59.5**	**+0.2**
	2.8nm,0.5s,mb4.1,baz=95,slow=7.5,SNR=54						
WRAB	**Tennant Creek**	**44.49**	**262**	*eP*	**P**	**14 42 59.4**	**-0.5**
	1.8nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**44.49**	**262**	P	**P**	**14 42 59.4**	**-0.6**
	1.1nm,0.3s,mb3.9,baz=96,slow=7.6,SNR=59						
FITZ	**Fitzroy Crossi**	**52.92**	**262**	P	**P**	**14 44 02.3**	**-0.3**
	1.5nm,0.5s,mb3.6,baz=147,slow=6.1,SNR=7.7						
QSPA	**South Pole Qui**	**69.51**	**180**	P	**P**	**14 45 51.3**	**+0.9**
	2.9nm,1.0s,mb3.8,baz=166,slow=0.8,SNR=11						
KKM	**Kota Kinabalu**	**69.68**	**285**	*eP*	**P**	**14 45 50.0**	**-2.6**
MJAR	**Matsushiro Arr**	**70.20**	**324**	P	**P**	**14 45 54.8**	**-0.3**
	2.3nm,0.6s,mb3.9,baz=199,slow=20,SNR=11						
PETK	**Petropavlovsk-**	**76.30**	**345**	P	**P**	**14 46 29.6**	**-0.1**
	2.3nm,0.6s,mb3.8,baz=101,slow=7.7,SNR=4.6						
KSRS	**Korea Array**	**76.87**	**319**	P	**P**	**14 46 33.9**	**+0.8**
	1.6nm,0.5s,mb3.7,baz=126,slow=5.9,SNR=12						
NVAR	**Mina Array Bea**	**81.14**	**43**	P	**P**	**14 46 56.9**	**+1.1**
	0.4nm,0.6s,mb3.0,baz=213,slow=10,SNR=3.6						
VNA3	**Neumayer Olymp**	**88.09**	**176**	*e*	**P**	**14 47 28.8**	**-0.4**
VNA2	**Neumayer--Watz**	**88.53**	**177**	*e*	**P**	**14 47 31.3**	**0.0**
VNA1	**Neumayer--Stat**	**88.76**	**177**	*e*	**P**	**14 47 31.6**	**-0.8**
PDAR	**Pinedale Array**	**89.07**	**43**	P	**P**	**14 47 34.8**	**+0.6**
	0.4nm,0.5s,mb3.5,baz=198,slow=0.6,SNR=3.0						
AKASG	**Malin Array Be**	**143.02**	**331**	PKhKP		14 54 05.1	
	3.9nm,0.5s,baz=41,slow=4.0,SNR=5.0						
GERES	**GERESS Array B**	**150.23**	**344**	PKPbc	PKPbc	14 54 26.3	-0.4
	3.4nm,0.9s,baz=29,slow=2.2,SNR=2.6						

*ISCJB **12** 14:36:49.0±0.8,2407S±007×668W±02,h215km±19km,*
Error ellipse: s-maj=23.9km s-min=10.7km az=177.8
*IDC **12** 14:36:49.5±1.0,2407S×6686W,h209km±22km,mb3.1/1,*
mb1 3.2/6,mb1mx3.1/19,mbtmp3.1/6,Error ellipse:
s-maj=29.6km s-min=15.0km az=81.0
*NEIC **12** 14:36:50.0±0.8,2400S×6678W,h210km±17km,mb3.7/1,*
Error ellipse: s-maj=20.4km s-min=13.1km az=74.0
ISC 12 14:36:49.7±0.8,2410S±007×668W±02,h207km±19km,n8,
σ0°87/11,Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.43**	**307**	P	**Pn**	**14 37 34.3**	**+1.0**
	25nm,0.3s,baz=127,slow=5.3,SNR=169						
LVC				S	**Sn**	**14 38 07.3**	**0.0**
	16nm,0.3s,baz=286,slow=18,SNR=16						
LVC	**Limon Verde**	**2.43**	**307**	*e*Pn	**Pn**	**14 37 34.1**	**+0.8**
LVC				*e*Sn	**Sn**	**14 38 06.6**	**-0.7**
CFAA	**Coronel Fontan**	**7.58**	**189**	P	**Pn**	**14 38 39.1**	**+1.7**
	0.1nm,0.3s,baz=28,slow=13,SNR=9.4						
CFAA				S	**Sn**	**14 40 02.2**	**-1.2**
	0.4nm,0.3s,baz=194,slow=15,SNR=7.6						
LPAZ	**La Paz**	**7.87**	**351**	P	**Pn**	**14 38 40.6**	**-0.7**
	1.1nm,0.3s,baz=183,slow=7.4,SNR=27						
LPAZ	**La Paz**	**7.87**	**351**	*eP*	**Pn**	**14 38 40.4**	**-0.9**
	3.5nm,0.6s						

CPUP	Villa Florida	8.87	106	P		Pn	14 38 54.0	-0.2
	0.3nm,0.3s,baz=265,slow=17,SNR=4.0							
BDFB	Brasilia	19.56	68	P		P	14 41 02.5	+0.4
	0.4nm,0.3s,baz=229,slow=9.3,SNR=3.6							
TORD	Torodi Ar. Bea	76.44	69	P		P	14 48 16.6	-0.4
	0.4nm,0.7s,baz=253,slow=5.9,SNR=6.4							

IDC ***12*** *14:36:57.4±1.3,323S×10096E,h0km,mb4.2/13, mb1 4.3/14,mb1mx4.1/24,mbtmp4.2/14,ML4.2/1,Error ellipse: s-maj=57.4km s-min=13.4km az=52.0*

ISCJB ***12*** *14:37:01.5±0.8,31S±02×1012E±02,h33km,mb4.5/20, Error ellipse: s-maj=35.6km s-min=7.8km az=136.9*

NEIC ***12*** *14:37:02.7±0.6,321S×10104E,h35km,mb4.7/1,Error ellipse: s-maj=25.6km s-min=6.8km az=50.0*

ISC 12 14:37:03.6±0.8,32S±02×1012E±02,h35km,n29,σ0s69/28, mb4.5/20,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	18.61	96	P	Pn	14 41 19.4	+0.8
	0.7nm,0.3s,baz=318,slow=5.4,SNR=4.2						
CMAR	Chiang Mai Arr	21.61	354	P	P	14 41 50.4	-0.3
	1.5nm,0.6s,mb3.6,baz=185,slow=8.6,SNR=12						
FITZ	Fitzroy Crossi	28.17	124	P	P	14 42 52.9	-0.1
	1.4nm,0.6s,mb3.8,baz=339,slow=8.6,SNR=4.7						
ODAN	Odare	32.70	337	*e*P	P	14 43 33.1	+0.2
	26nm,0.9s,mb5.2						
TAPN	Taplejung	33.02	338	*e*P	P	14 43 36.4	+0.8
RAMN	Ramite	33.10	336	*e*P	P	14 43 37.2	+0.8
	8.6nm,0.4s,mb5.0						
JIRN	Jiri	33.90	336	*e*P	P	14 43 44.0	+0.7
PKI	Pulchoki	34.15	335	*e*P	P	14 43 45.8	+0.3
GUN	Gumba	34.25	335	*e*P	P	14 43 46.8	+0.5
	44nm,0.6s,mb5.6						
DMN	Daman	34.31	334	*e*P	P	14 43 47.4	+0.5
KKN	Kakani	34.39	335	*e*P	P	14 43 47.7	+0.1
GKN	Gorkha	34.86	334	*e*P	P	14 43 52.2	+0.6
	10nm,0.4s,mb5.1						
KOLN	Koldanda	35.13	332	*e*P	P	14 43 54.5	+0.6
	12nm,0.6s,mb5.0						
DANN	Dangsing	35.55	333	*e*P	P	14 43 57.9	+0.4
	34nm,0.5s,mb5.6						
WRA	Warramunga Arr	36.38	120	P	P	14 44 04.7	-0.1
	3.6nm,0.4s,mb4.7,baz=303,slow=9.0,SNR=52						
WRAB	Tennant Creek	36.38	120	*e*P	P	14 44 04.4	-0.5
	3.6nm,0.3s,mb4.8						
ASAR	Alice Springs	37.60	126	P	P	14 44 15.8	+0.6
	1.2nm,0.5s,mb3.9,baz=301,slow=8.1,SNR=17						
CTA	Charters Tower	47.03	115	P	P	14 45 31.8	-0.2
	1.2nm,0.4s,mb4.2,baz=310,slow=7.9,SNR=3.0						
STKA	Stephens Creek	47.48	132	P	P	14 45 35.6	+0.2
	1.2nm,0.5s,mb4.1,baz=308,slow=7.2,SNR=5.6						
SONM	Songino Array	51.01	5	P	P	14 46 01.8	-0.2
	2.0nm,0.6s,mb4.2,baz=184,slow=9.7,SNR=13						
MKAR	Makanchi Array	52.48	344	P	P	14 46 11.9	-1.0
	3.0nm,0.5s,mb4.5,baz=150,slow=8.6,SNR=31						
KURK	Kurchatov	57.07	343	P	P	14 46 44.6	-1.5
	1.3nm,0.6s,mb4.2,baz=162,slow=7.2,SNR=6.5						
KURK	Kurchatov	57.07	343	*e*P	P	14 46 45.2	-0.9
ZALV	Zalesovo Beam	58.54	349	P	P	14 46 55.0	-1.4
	17nm,0.8s,mb5.1,baz=167,slow=5.3,SNR=56						
BVAR	Borovoye Array	61.70	339	P	P	14 47 16.3	-1.7
	1.2nm,0.4s,mb4.3,baz=134,slow=8.5,SNR=8.9						
ARCES	ARCESS Array B	87.98	340	P	P	14 49 49.0	-0.6
	1.6nm,0.8s,mb4.3,baz=96,slow=3.7,SNR=5.2						
ARCES	ARCESS Array B	87.98	340	P	P	14 49 49.0	-0.6
GERES	GERESS Array B	90.71	319	P	P	14 50 02.8	-0.1
	0.2nm,0.2s,mb4.0,baz=79,slow=5.1,SNR=4.2						
TXAR	Lajitas Array	144.88	40	PKPbc	PKPdf	14 56 36.5	-1.2
	1.9nm,0.7s,baz=287,slow=1.0,SNR=23						

BJI ***12*** *14:39:59.3,369S×10127E,h29km,mB6.1,mb5.9,Ms5.9, Msz5.9*

MOS ***12*** *14:40:03.5±0.9,307S×10150E,h27km,mb6.2/103, MS5.9/4,Error ellipse: s-maj=8.1km s-min=3.9km az=123.2*

ISCJB ***12*** *14:40:05.6±0.1,324S±002×10137E±002,h47km, mb5.9/255,MS5.9/18,Error ellipse: s-maj=3.7km s-min=2.5km az=29.5*

NEIC ***12*** *14:40:05.7±0.1,316S×10146E,h35km,mb5.9/130,Error ellipse: s-maj=4.5km s-min=2.7km az=40.0*

NEIC Felt [III] at Padang, Padangpanjang and Painan. Also felt at Lubuklinggau.

IDC ***12*** *14:40:07.6±0.4,311S×10161E,h52km±3km,mb5.4/32, mb1 5.4/33,mb1mx5.4/33,mbtmp5.4/33,MS5.8/2, Ms1 5.9/2,ms1mx4.8/44,Error ellipse: s-maj=10.0km s-min=6.1km az=47.0*

DJA ***12*** *14:40:08,337S×10114E,h72km,Mw6.5/14*

SZGRF ***12*** *14:40:10.2,320S×10071E,h54km,mb6.1,Southern Sumatera, Indonesia*

ISC 12 14:40:07.5±0.1,326S±002×10133E±002,h49km, h49km±1.6km:pP-P,n1264,σ1s00/783,mb5.9/255,MS5.9/18, 334C-199D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMBI	JAMBI	2.82	55	P	Pn	14 40 51.7	+1.6
	0.0nm,0.0s						
PPI	Padang Panjang	2.94	341	P	Pn	14 40 52.5	+0.8
	0.0nm,0.0s						
KLI	Kotabumi	3.86	114	P	Pn	14 41 06.1	+1.7
	0.0nm,0.0s						
PPBI	Pangkal Pinang	4.92	77	P	Pn	14 41 19.8	+0.8
	0.0nm,0.0s						
KGM	Kluang	5.61	21	⇓P	Pn	14 41 31.6	+3.2
MYKOM	Kota Tinggi	5.62	27	⇓P	Pn	14 41 31.8	+3.3
DBJI	Dramaga	6.31	121	P	Pn	14 41 39.4	+1.3
	0.0nm,0.0s						
TPI	Tanjungpandan	6.34	86	P	Pn	14 41 38.6	+0.2
	0.0nm,0.0s						
SKJI	Sukabumi	6.40	126	P	Pn	14 41 40.0	+0.8
	0.0nm,0.0s						
FRIM	Kepong	6.46	3	⇓P	Pn	14 41 42.8	+2.7
LEM	Lembang	7.20	120	P	Pn	14 41 51.5	+1.3
	0.0nm,0.0s						
IPM	Ipoh	7.70	358	⇑P	Pn	14 42 01.2	+4.2
XMIS	Christmas Isla	8.36	149	*e*P	Pn	14 41 58.2	-7.9
XMIS				*e*S	Sn	14 43 24.7	-14
KTGM	Kuala Trenggan	8.72	12	⇑P	Pn	14 42 14.2	+3.1
BJII	Banjamegara	9.27	116	P	Pn	14 42 20.6	+2.0
	0.0nm,0.0s						
COCO	West Island	9.92	206	Pn	Pn	14 42 23.4	-4.2
	8µm,0.6s,SNR=32						
COCO	West Island	9.92	206	⇑P	Pn	14 42 26.7	-0.9
	SNR=5.6						
COCO	West Island	9.92	206	*e*P	Pn	14 42 23.1	-4.4
	527nm,0.8s						
KSM	Kuching	10.13	62	⇑P	Pn	14 42 32.7	+2.3
KSM	Kuching	10.13	62	*e*Pn	Pn	14 42 31.4	+0.9
SJI	Sawahan	11.30	114	P	Pn	14 42 46.8	+0.4
	0.0nm,0.0s						
SBUM	Sibu	12.28	63	⇑P	Pn	14 43 05.4	+5.7
KMMI	Kalianget	13.14	107	P	Pn	14 43 12.7	+1.2
	0.0nm,0.0s						
BTM	Bintulu	13.39	61	⇑P	Pn	14 43 20.0	+5.1
IGBI	Denpasar	14.80	113	P	Pn	14 43 29.1	-4.8
	0.0nm,0.0s						
KHKI	Kahang-Kahang	15.08	110	P	Pn	14 43 35.9	-1.7
	0.0nm,0.0s						
MTNI	Mataram	15.69	111	P	Pn	14 43 41.4	-4.1
	0.0nm,0.0s						
NNT	Nongplab	15.83	354	P	Pn	14 43 46.5	-0.7
KKM	Kota Kinabalu	17.50	58	⇑P	Pn	14 44 11.8	+3.5
KKM	Kota Kinabalu	17.50	58	*e*P	Pn	14 44 10.3	+2.1
SDKM	Sandakan	18.15	61	⇓P	Pn	14 44 19.2	+3.1
TSM	Tawau	18.16	66	⇑P	Pn	14 44 18.7	+2.5
KAPI	Kappang	18.46	96	Pn	Pn	14 44 19.2	-0.7
	4µm,1.0s,SNR=53						
KAPI	Kappang	18.46	96	⇑P	Pn	14 44 15.5	-4.4
	SNR=76						
KAPI	Kappang	18.46	96	P	Pn	14 44 17.5	-2.4
	17nm,0.3s,baz=283,slow=10,SNR=41						
KAPI	Kappang	18.46	96	*e*P	Pn	14 44 18.4	-1.5
	845nm,1.0s						
KDM	Kudat	18.48	57	⇑P	Pn	14 44 22.9	+2.7
PCI	Palu	18.64	83	P	Pn	14 44 22.6	+0.5
	2µm,1.4s						
UBT	Ubonrachathani	18.75	11	⇑P	Pn	14 44 22.5	-0.8
	590nm,1.0s						
NST	Nakhon Sawan	18.85	356	P	Pn	14 44 21.2	-3.4
	127nm,0.7s						
MYLDM	Lahad Datu	19.09	64	⇓P	Pn	14 44 29.9	+2.4
KKTK	Khon Kaen	19.53	4	P	Pn	14 44 30.2	-2.5
	2µm,0.8s						
BDT	Bhumibol Dam	20.50	354	P	P	14 44 39.5	-2.1
	80nm,0.8s						
KDI	Kendari	21.26	93	P	P	14 44 50.0	+0.1
	0.0nm,0.0s						
CMAR	Chiang Mai Arr	21.71	354	P	P	14 44 51.6	-3.0
	138nm,0.9s,mb5.4,baz=185,slow=9.8,SNR=130						
CMAR				PcP	PcP	14 48 53.9	-0.5
	23nm,0.9s,baz=209,slow=3.3,SNR=7.7						
CMAR				ScP	ScP	14 52 27.1	-0.6
	12nm,1.0s,baz=228,slow=3.5,SNR=8.0						
CMAR				LR	LR	14 54 26.4	
	comp=Z,19µm,19.2s,MS5.5,baz=150,slow=40						
CMAR	Chiang Mai Arr	21.71	354	P	P	14 44 51.6	-3.0
CMAR						14 48 53.9	
CMAR				pmax	pmax		
	comp=Z,138nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,23nm,0.9s						
CMAR				pmax	pmax		
	comp=N,12nm,1.0s						
CMAR				MLR	MLR		
	comp=Z,19µm,19.2s						
CHG	Chiang Mai	22.06	354	⇓P	P	14 44 55.5	-2.8
	comp=Z,142nm,0.9s,mb5.4						
CHTO	Chiang Mai	22.06	354	P	P	14 44 56.0	-2.3
	SNR=51						
CHTO	Chiang Mai	22.06	354	*e*P	P	14 44 54.8	-3.5
CHTO				pmax	pmax		
	comp=Z,160nm,1.0s,mb5.4						
CHTO	Chiang Mai	22.06	354	*e*P	P	14 44 54.8	-3.5
	comp=Z,156nm,1.0s,mb5.4						
ZMPH	Zamboanga City	23.05	64	⇑*e*P	P	14 45 09.3	+0.4
PALK	Pallekele	23.09	297	⇓P	P	14 45 10.8	+1.4
	SNR=5.6						
PALK	Pallekele	23.09	297	*e*P	P	14 45 11.3	+2.0
	comp=Z,215nm,1.4s,mb5.4						
BATI	Baumata	23.21	108	P	P	14 45 07.3	-3.4
	comp=Z,0.0nm,0.0s						
BATI	Baumata	23.21	108	P	P	14 45 07.6	-3.1
	comp=Z,121nm,0.5s,mb5.6,baz=310,slow=1.8,SNR=20						
BATI				S	S	14 49 09.3	-10
	comp=Z,203nm,0.6s,baz=263,slow=7.2,SNR=7.7						
QIZ	Qiongzhong	23.68	20	P	P	14 45 15.1	+0.2
QIZ				XP	sP	14 45 27.7	-5.4
QIZ				S	S	14 49 27.7	+1.3
QIZ				AMB	AMB		
	comp=Z,262nm,1.4s,mb5.5						
QIZ	Qiongzhong	23.68	20	*e*P	P	14 45 14.8	-0.1
	comp=Z,417nm,1.3s,mb5.7						
IPIL	Ipil	23.87	63	*e*P	P	14 45 17.0	+0.3
PAGZ	Pagadian	24.61	63	*e*P	P	14 45 24.6	+1.1
DCPH	Dipolog City	24.91	62	⇑*e*P	P	14 45 28.2	+2.0
CTBH	Cotabato--PC H	25.13	65	*e*P	P	14 45 28.4	+0.2
CTBH				*i*S	sP	14 45 54.2	+7.6
MBWA	Marble Bar	25.24	136	⇑P	P	14 45 28.2	-0.9
	SNR=6.3						
MBWA	Marble Bar	25.24	136	*e*P	P	14 45 28.4	-0.7
	comp=Z,84nm,0.8s,mb5.3						
GUIM	Jordan	25.26	57	*e*P	P	14 45 30.0	+0.6
KALP	Kalibo	25.63	54	⇑*e*P	P	14 45 35.3	+2.6
OTRP	Odiongan	25.76	53	*e*P	P	14 45 34.2	+0.3
TBP	Tagbilaran	25.88	60	*e*P	P	14 45 34.6	-0.3
RCP	Roxas	25.89	55	⇑*e*P	P	14 45 35.9	+0.8
BUKP	Musuan	26.14	65	*e*P	P	14 45 37.6	+0.3
LLP	Lapu-Lapu	26.27	59	⇑*e*P	P	14 45 40.3	+1.8
LBMI	Labuha	26.28	85	P	P	14 45 38.3	-0.4
	comp=Z,0.0nm,0.0s						
DAV	Davao City (W)	26.29	67	P	P	14 45 37.4	-1.3
	comp=Z,126nm,0.4s,mb5.8,baz=280,slow=1.1,SNR=3.2						
DAV	Davao City (W)	26.29	67	⇑*e*P	P	14 45 37.4	-1.3
MDRS	Chennai	26.48	308	*e*P	P	14 45 41.9	+1.5
MDRS				AMb	AMB	14 45 44.8	
	comp=Z,278nm,1.1s,mb5.7						
MATI	Mati	26.87	68	*e*P	P	14 45 46.1	+2.1
TRD	Trivandrum	26.97	296	*e*P	P	14 45 45.3	+0.4
KOD	Kodaikanal	27.28	300	*e*P	P	14 45 48.2	+0.5
KOD				AMb	AMB	14 46 12.8	
	comp=Z,153nm,0.4s,mb5.9						
VIS	Vishakhapatnam	27.38	320	*e*P	P	14 45 49.6	+1.1
VIS				AMb	AMB	14 45 54.1	
	comp=Z,322nm,1.7s,mb5.6						
BWNR	Bhubaneshwar	27.93	328	*e*P	P	14 45 52.0	-1.4
BWNR				*ex*	x	14 50 51.0	
FITZ	Fitzroy Crossi	28.01	124	*e*P	P	14 45 52.6	-1.5
	comp=Z,168nm,0.8s,mb5.7						
FITZ				*e*PCP	PcP	14 49 09.3	+1.0
FITZ				*e*S	S	14 50 31.6	-3.8
FITZ	Fitzroy Crossi	28.01	124	P	P	14 45 52.7	-1.5
	comp=Z,91nm,0.8s,mb5.5,baz=297,slow=7.2,SNR=134						
FITZ				S	S	14 50 30.9	-4.4
	comp=Z,15nm,0.8s,baz=108,slow=21,SNR=6.6						
KMI	Kunming	28.25	3	P	P	14 45 57.1	+1.0
KMI				AP	pP	14 46 06.3	-2.4
KMI				XP	sP	14 46 11.1	-3.4
KMI				PP	PP	14 46 49.4	-11
KMI				PCP	PcP	14 49 08.8	0.0
KMI				S	S	14 50 40.3	+1.5
KMI				SCP	ScP	14 52 45.3	-0.7
KMI				PCS	PcS	14 52 49.1	-2.0
KMI				SCS	ScS	14 56 37.4	-1.5
KMI				AMB	AMB		
	comp=Z,96nm,1.0s,mb5.4						
KMI				LR	LR		
	comp=N,22µm,19.5s,MS5.8						
KMI				LR	LR		
	comp=E,10µm,19.5s,MS5.8						
KMI				LR	LR		
	comp=Z,28µm,19.5s,MS5.9						
IMP	Imphal	28.79	346	*e*P	P	14 46 00.0	-0.9
IMP				*ex*	PcP	14 49 10.0	-0.1
GYA	Guiyang	29.99	10	⇑*i*P	P	14 46 13.8	+2.2
GYA				PP	PP	14 47 11.9	-8.2
GYA				PCP	PcP	14 49 14.0	+0.9
GYA				S	S	14 51 11.2	+5.0
GYA				SCP	ScP	14 52 44.3	-7.2
GYA				SS	SS	14 52 47.5	-28
GYA				SCS	ScS	14 56 49.4	+2.4
GYA				AMB	AMB		
	comp=Z,180nm,0.8s,mb5.8						
GYA				LR	LR		
	comp=N,30µm,17.7s,MS6.1						
GYA				LR	LR		
	comp=E,26µm,16.4s,MS6.1						
GYA				LR	LR		
	comp=Z,28µm,17.0s,MS6.0						
SWI	Sorong	30.00	86	P	P	14 46 10.1	-1.8
	comp=Z,0.0nm,0.0s						
SHL	Shillong	30.08	343	⇑*i*P	P	14 46 13.0	+0.6
SHL				*ex*	S	14 51 04.0	-3.7
SHL				*e*SCS	ScS	14 56 47.0	-0.5
HYB	Hyderabad	30.45	313	*e*P	P	14 46 17.0	+1.2
HYB				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.4						
HYB	Hyderabad	30.45	313	*i*P	P	14 46 17.0	+1.2
	comp=Z,80nm,1.0s,mb5.4						
HYB	Hyderabad	30.45	313	*e*P	P	14 46 17.0	+1.2
	comp=Z,80nm,1.0s,mb5.4						
BOK	Bokaro	30.81	332	*e*P	P	14 46 20.0	+1.1
BOK				AMb	AMB	14 46 24.5	
	comp=Z,1µm,1.0s,mb6.6						
MUN	Mundaring	31.81	156	*e*P	P	14 46 29.3	+1.7
MUN				*e*PCP	PcP	14 49 18.3	+0.4
KLBR	Kellerberrin	32.15	153	*e*P	P	14 46 32.8	+2.3
	comp=Z,149nm,1.4s,mb5.6						
KLBR				*e*PCP	PcP	14 49 18.6	-0.2
LATR	Latur	32.55	312	*e*P	P	14 46 33.5	-0.7
LATR				AMb	AMB	14 46 36.6	
	comp=Z,110nm,1.3s,mb5.6						
NGP	Nagpur	32.63	319	*e*P	P	14 46 34.5	-0.4
NGP				AMb	AMB	14 46 54.7	
	comp=Z,218nm,0.9s,mb6.1						
QZH	Quanzhou	32.67	30	⇑*i*P	P	14 46 35.5	+0.3
QZH				S	S	14 51 48.1	0.0
QZH				AMB	AMB		
	comp=Z,470nm,1.2s,mb6.3						
ODAN	Odare	32.83	337	*e*P	P	14 46 37.1	+0.5
	comp=Z,3µm,1.1s,mb7.1						
GOA	Goa	32.99	305	*e*P	P	14 46 38.5	+0.4
GOA				AMb	AMB	14 47 01.8	
	comp=Z,108nm,1.1s,mb5.7						
NWAO	Narrogin (SRO)	33.06	155	P	P	14 46 39.0	+0.5
	comp=Z,16nm,0.7s,mb5.0,baz=324,slow=12,SNR=12						
NWAO	Narrogin (SRO)	33.06	155	P	P	14 46 39.0	+0.5
NWAO				pmax	pmax		
	comp=Z,16nm,0.7s						
TAPN	Taplejung	33.15	337	*e*P	P	14 46 40.3	+1.0
RAMN	Ramite	33.23	336	*e*P	P	14 46 41.1	+1.0
	comp=Z,637nm,0.7s,mb6.7						
NACB	Ninganchiao	33.65	35	*e*P	P	14 46 44.0	+0.2
	comp=Z,786nm,0.9s,mb6.6						
KAD	Karad	33.70	308	*e*P	P	14 46 44.3	+0.1
KAD				AMb	AMB	14 46 47.5	
	comp=Z,123nm,1.1s,mb5.8						
AKL	Akola	33.70	316	*e*P	P	14 46 44.8	+0.5
YHNB	Yeheng	33.92	34	*e*P	P	14 46 46.0	-0.1
	comp=Z,186nm,1.0s,mb6.0						
JIRN	Jiri	34.03	336	*e*P	P	14 46 48.0	+1.0
CD2	Chengdu	34.06	4	P	P	14 46 46.3	-0.9
CD2				XP	sP	14 46 55.0	-11
CD2				PP	PP	14 48 01.0	-4.1
CD2				PCP	PcP	14 49 23.1	-1.0
CD2				S	S	14 52 11.4	+1.9
CD2				PCS	PcS	14 53 08.3	-2.0
CD2				SS	SS	14 54 20.1	-18
CD2				SCS	ScS	14 57 07.3	0.0
CD2				AMB	AMB		
	comp=Z,240nm,0.8s,mb6.2						
CD2				LR	LR		
	comp=N,19µm,19.2s						
CD2				LR	LR		
	comp=Z,25µm,21.0s,MS5.9						
ALBI	Allahabad	34.14	327	*e*P	P	14 46 46.5	-1.5
LSA	Lhasa	34.19	344	P	P	14 46 49.1	+0.7
LSA				S	S	14 52 09.6	-2.1
LSA				AMB	AMB		
	comp=Z,250nm,1.0s,mb6.1						
LSA	Lhasa	34.19	344	*e*P	P	14 46 48.3	-0.1
LSA				pmax	pmax		
	comp=Z,234nm,0.9s,mb6.1						
LSA	Lhasa	34.19	344	*e*P	P	14 46 48.3	-0.1
	comp=Z,234nm,0.9s,mb6.1						
PKI	Pulchoki	34.28	334	*e*P	P	14 46 49.6	+0.4
	comp=Z,1µm,1.1s,mb6.7						
PKIN	Phulchoki	34.29	334	*e*P	P	14 46 49.7	+0.4
GUN	Gumba	34.38	335	*e*P	P	14 46 50.9	+0.9
DMN	Daman	34.45	334	*e*P	P	14 46 51.2	+0.6
	comp=Z,1µm,0.9s,mb6.8						
KKN	Kakani	34.53	334	*e*P	P	14 46 51.9	+0.6
	comp=Z,1µm,0.8s,mb6.9						
POO	Poona	34.66	310	*e*P	P	14 46 53.4	+0.8
POO				AMb	AMB	14 46 55.7	
	comp=Z,129nm,1.0s,mb5.8						
GKN	Gorkha	34.99	334	*e*P	P	14 46 55.9	+0.6
KOLN	Koldanda	35.27	332	*e*P	P	14 46 58.6	+0.9
	comp=Z,2µm,0.8s,mb7.0						
DANN	Dangsing	35.68	333	*e*P	P	14 47 02.1	+0.8
WHN	Wuhan	35.84	19	⇓P	P	14 47 03.3	+0.7
WHN				AP	pP	14 47 11.0	-4.4
WHN				XP	sP	14 47 15.7	-5.4
WHN				AMB	AMB		
	comp=Z,161nm,1.0s,mb5.9						
WRA	Warramunga Arr	36.22	120	P	P	14 47 04.1	-1.8
	comp=Z,129nm,0.5s,mb6.1,baz=303,slow=9.0,SNR=432						
WRA				S	S	14 52 37.0	-6.0
	comp=Z,38nm,0.9s,baz=293,slow=16,SNR=12						
WRA	Warramunga Arr	36.22	120	P	P	14 47 04.1	-1.9
WRA				S	S	14 52 37.0	-6.1
WRA				pmax	pmax		
	comp=Z,129nm,0.5s						
WRA				smax			
	comp=N,38nm,0.9s						
WRAB	Tennant Creek	36.22	120	P	P	14 47 04.0	-2.0
	comp=N,2µm,0.5s,mb7.3						
WRAB	Tennant Creek	36.22	120	P	P	14 47 06.5	+0.5
WRAB				pmax	pmax		
	comp=Z,190nm,0.7s,mb6.1						
WRAB	Tennant Creek	36.22	120	*e*P	P	14 47 04.2	-1.8
	comp=Z,194nm,0.6s,mb6.2						
WRAB				*e*S	S	14 52 37.8	-5.4
WB2	Warramunga Arr	36.23	120	*e*P	P	14 47 04.2	-1.9
WB2				*e*PCP	PcP	14 49 30.9	+0.2
WB2				*e*S	S	14 52 34.4	-8.8
FORT	Forrest	37.23	140	*e*P	P	14 47 15.0	+0.5
FORT				*e*PCP	PcP	14 49 34.6	+1.1
ASAR	Alice Springs	37.44	126	P	P	14 47 15.2	-1.1
	comp=Z,109nm,0.4s,mb6.0,baz=301,slow=7.8,SNR=580						
ASAR				PcP	PcP	14 49 34.4	0.0
	comp=Z,32nm,0.8s,baz=314,slow=2.8,SNR=8.0						
ASAR				S	S	14 52 58.8	-2.9
	comp=Z,24nm,0.7s,baz=295,slow=14,SNR=17						
ASAR	Alice Springs	37.44	126	P	P	14 47 15.3	-1.1
ASAR				AP		14 49 34.4	
ASAR				S	S	14 52 58.8	-2.9
ASAR				pmax	pmax		
	comp=Z,109nm,0.4s						
ASAR				pmax	pmax		
	comp=Z,32nm,0.8s						
ASAR				smax			
	comp=N,24nm,0.7s						
XAN	Xi'an	37.78	10	P	P	14 47 17.8	-1.3
XAN				AP	pP	14 47 24.4	-7.5
XAN				XP	sP	14 47 27.7	-10
XAN				AMB	AMB		
	comp=Z,33nm,1.0s,mb5.0						
PTH	Pithoragarh	38.39	330	*e*P	P	14 47 24.9	+0.7
PTH				*ex*	S	14 53 12.0	-3.8
NJ2	Nanjing	38.87	24	*e*P	P	14 47 28.5	+0.3
NJ2				AP	pP	14 47 33.2	-7.9
NJ2				XP	sP	14 47 35.9	-11
NJ2				PP	PP	14 49 02.6	+4.6
NJ2				S	S	14 53 25.0	+2.1
NJ2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,1µm,5.2s						
NJ2				LR	LR		
	comp=N,7µm,19.5s,MS5.6						
NJ2				LR	LR		
	comp=E,5µm,19.2s,MS5.6						
NJ2				LR	LR		
	comp=Z,7µm,16.5s,MS5.5						
SSE	Sheshan	39.06	28	P	P	14 47 30.6	+0.8
SSE				AMB	AMB		
	comp=Z,212nm,1.5s,mb5.7						
SSE				AMB	AMB		
	comp=

GTA					SCP	ScP	14 53 37.4	+0.4	SNY					XP	sP	14 49 02.9	-7.0		comp=Z,811nm,1.1s,mb6.7								
GTA					S	**S**	**14 54 20.6**	**+4.0**	SNY					S	**S**	**14 56 03.8**	**+10**	**ARMA**	**Armidale**	**54.59**	**125**	*e*P	**P**	**14 49 32.4**	**+1.1**
GTA					SCS	ScS	14 57 52.2	-3.2	SNY					AMB	AMB			ARMA				*e*PCP	PcP	14 50 27.2	-6.8
GTA					AMB	AMB				comp=Z,109nm,1.3s,mb5.7								**CNB**	**Canberra Magne**	**54.65**	**132**	*e*P	**P**	**14 49 31.4**	**-0.2**
	comp=Z,71nm,1.7s,mb5.0								SNY					AMB	AMB			CNB				*e*PCP	PcP	14 50 44.7	+11
GTA					LR	LR				comp=Z,7μm,14.5s								**HIA**	**Hailar**	**54.70**	**15**	*e*P	**P**	**14 49 30.2**	**-1.5**
	comp=N,12μm,19.8s,MS5.9								SNY					LR	LR			HIA				pmax	pmax		
GTA					LR	LR				comp=N,11μm,20.8s,MS6.0									comp=Z,115nm,0.8s							
	comp=E,11μm,19.2s,MS5.9								SNY					LR	LR			**HIA**	**Hailar**	**54.70**	**15**	*e*P	**P**	**14 49 30.2**	**-1.5**
GTA					LR	LR				comp=E,10μm,19.4s,MS6.0									comp=Z,115nm,0.8s,mb6.0							
	comp=Z,26μm,21.0s,MS6.1								SNY					LR	LR			**MOY**	**Mondy**	**54.72**	**360**	*e*P	**P**	**14 49 31.7**	**0.0**
DLH	**Dalhousie**	**42.97**	**328**	*e*P	**P**	**14 48 01.0**	**-1.0**		comp=Z,16μm,21.6s,MS6.0									MOY				pmax	pmax		
THN	**Thein Dam**	**43.02**	**328**	*e*P	**P**	**14 48 01.0**	**-1.4**	**JMDO**	**Jabal Madar**	**49.31**	**303**	P	**P**	**14 48 53.4**	**+1.4**		comp=Z,434nm,2.3s,mb6.1								
THN				*ex*	**S**	**14 54 24.4**	**-0.2**		SNR=14									**TLY**	**Talaya**	**54.77**	**2**	P	**P**	**14 49 32.7**	**+0.6**
BTO	**Baotou**	**44.37**	**9**	*e*P	**P**	**14 48 12.7**	**-0.4**	**SMDO**	**Samad**	**49.65**	**304**	P	**P**	**14 48 56.3**	**+1.7**		comp=Z,2μm,0.9s,mb7.2								
HHC	**Hu-ho-hao-te**	**44.88**	**11**	⇑P	**P**	**14 48 18.0**	**+0.8**		SNR=19									**TLY**	**Talaya**	**54.77**	**2**	P	**P**	**14 49 32.6**	**+0.5**
HHC				AP	pP	14 48 21.6	-8.7	**BIDO**	**Bidbid**	**49.79**	**305**	P	**P**	**14 48 57.1**	**+1.4**		SNR=174								
HHC				PCP	PcP	14 49 59.8	+1.6		SNR=17									**TLY**	**Talaya**	**54.77**	**2**	*e*P	**P**	**14 49 32.4**	**+0.3**
HHC				PP	PP	14 50 04.5	+1.6	**BSY**	**Bisya**	**50.22**	**303**	P	**P**	**14 49 00.2**	**+1.3**	TLY				pmax	pmax		
HHC				PCS	PcS	14 53 51.9	+0.2		SNR=18										comp=Z,350nm,0.9s,mb6.4							
HHC				S	**S**	**14 54 55.8**	**+4.2**	**HOQ**	**Hoqain**	**50.49**	**304**	P	**P**	**14 49 02.1**	**+1.1**	**TLY**	**Talaya**	**54.77**	**2**	*e*P	**P**	**14 49 32.3**	**+0.2**
HHC				SS	SS	14 58 08.9	-5.5		SNR=18										comp=Z,260nm,0.8s,mb6.3							
HHC				SCS	ScS	14 58 12.5	+2.1	**ULHL**	**Ulahol**	**50.69**	**336**	P	**P**	**14 49 03.0**	**+0.8**	**OPO**	**Ambohidratompo**	**55.06**	**250**	P	**P**	**14 49 36.9**	**+2.0**
HHC				AMB	AMB				SNR=16										comp=Z,9.7nm,0.8s,mb4.9,baz=74,slow=7.0,SNR=14							
	comp=Z,183nm,0.9s,mb5.9							**KZA**	**Kyzart**	**50.96**	**335**	P	**P**	**14 49 05.4**	**+1.2**	**IRK**	**Irkutsk**	**55.35**	**2**	*i* P	**P**	**14 49 36.7**	**+0.4**
HHC				LR	LR				SNR=16									IRK				*e*S	**S**	**14 57 19.2**	**+2.2**
	comp=N,8μm,22.5s,MS5.8							**SONM**	**Songino Array**	**51.08**	**4**	P	**P**	**14 49 05.2**	**+0.2**	IRK				pmax	pmax		
HHC				LR	LR				comp=Z,303nm,1.0s,mb6.2,baz=184,slow=8.7,SNR=628										comp=Z,652nm,2.0s,mb6.3							
	comp=E,7μm,20.7s,MS5.8							SONM				pP	pP	14 49 18.2	-0.1	**RIV**	**Riverview**	**55.43**	**129**	*e*P	**P**	**14 49 38.1**	**+0.8**
HHC				LR	LR				comp=Z,167nm,0.9s,baz=186,slow=8.6,SNR=13									**CIT**	**Chita**	**56.05**	**9**	*e*P	**P**	**14 49 41.3**	**0.0**
	comp=Z,30μm,22.0s,MS6.2							SONM				PcP	PcP	14 50 20.4	+0.2	CIT				*e*	pP	14 49 49.9	-4.8
BJT	**Baijiatuau**	**45.17**	**16**	*e*P	**P**	**14 48 19.4**	**-0.1**		comp=Z,36nm,0.7s,baz=189,slow=4.1,SNR=9.4									CIT				*e*	pP	14 49 55.8	+1.1
BJT				pmax	pmax			SONM				pPcP		14 50 34.3		CIT				*e*		14 50 35.2	
	comp=Z,307nm,1.1s								comp=Z,18nm,0.6s,baz=182,slow=3.6,SNR=4.2									CIT				*e*		14 57 22.7	
BJT	**Baijiatuau**	**45.17**	**16**	*e*P	**P**	**14 48 19.4**	**-0.1**	SONM				ScP	ScP	14 54 11.1	-1.7	CIT				pmax	pmax		
	comp=Z,306nm,1.1s,mb6.0								comp=Z,20nm,1.1s,baz=190,slow=4.6,SNR=6.4										comp=Z,688nm,1.4s,mb6.5							
BJI	**Beijing**	**45.20**	**16**	P	**P**	**14 48 19.8**	**+0.1**	**SONM**	**Songino Array**	**51.08**	**4**	P	**P**	**14 49 05.2**	**+0.3**	**KURK**	**Kurchatov**	**57.19**	**343**	P	**P**	**14 49 48.4**	**-1.0**
BJI				S	**S**	**14 54 56.7**	**+0.6**	SONM				*PP	pP	14 49 18.2	-0.1		comp=Z,3μm,0.8s								
BJI				AMB	AMB			SONM						14 50 20.4		**KURK**	**Kurchatov**	**57.19**	**343**	P	**P**	**14 49 48.6**	**-0.8**
	comp=Z,177nm,1.6s,mb5.6							SONM				pmax	pmax				SNR=202								
BJI				LR	LR				comp=Z,303nm,1.0s									**KURK**	**Kurchatov**	**57.19**	**343**	P	**P**	**14 49 48.2**	**-1.2**
	comp=N,11μm,21.0s,MS5.9							SONM				pmax	pmax						comp=Z,151nm,0.8s,mb6.1,baz=158,slow=6.6,SNR=85							
BJI				LR	LR				comp=Z,167nm,0.9s									KURK				pP	pP	14 50 01.9	-1.0
	comp=E,11μm,21.8s,MS5.9							SONM				pmax	pmax						comp=Z,250nm,0.8s,baz=161,slow=6.9,SNR=16							
BJI				LR	LR				comp=Z,36nm,0.7s									KURK				PcP	PcP	14 50 43.2	-0.3
	comp=Z,22μm,26.0s,MS6.0							SONM				pmax	pmax						comp=Z,55nm,0.9s,baz=156,slow=3.6,SNR=3.5							
PMG	**Port Moresby**	**45.92**	**100**	*e*P	**P**	**14 48 23.2**	**-2.7**		comp=Z,19nm,0.6s									**KURK**	**Kurchatov**	**57.19**	**343**	*e*P	**P**	**14 49 48.3**	**-1.1**
PMG				pmax	pmax			SONM				pmax	pmax					KURK				*e*	pP	14 50 02.2	-0.7
	comp=Z,61nm,0.8s								comp=N,20nm,1.1s									KURK				pmax	pmax		
PMG	**Port Moresby**	**45.92**	**100**	*e*P	**P**	**14 48 23.2**	**-2.8**	**ULN**	**Ulaanbaatar**	**51.16**	**5**	P	**P**	**14 49 05.3**	**-0.3**		comp=Z,786nm,1.1s,mb6.7								
	comp=Z,61nm,0.8s,mb5.6								SNR=160									**KURK**	**Kurchatov**	**57.19**	**343**	*e*P	**P**	**14 49 48.3**	**-1.1**
DL2	**Dalian**	**45.95**	**22**	P	**P**	**14 48 25.4**	**-0.3**	**ULN**	**Ulaanbaatar**	**51.16**	**5**	P	**P**	**14 49 06.5**	**+0.9**		comp=Z,786nm,1.1s,mb6.7								
DL2				XP	sP	14 48 38.7	-5.8	ULN				pmax	pmax			KURK				*e*	pP	14 50 02.2	-0.7
DL2				PCP	PcP	14 50 02.1	+0.2		comp=Z,230nm,1.0s,mb6.1									**ABKT**	**Ailbek**	**57.26**	**320**	P	**P**	**14 49 49.8**	**-0.4**
DL2				PP	PP	14 50 15.9	+1.7	**ULN**	**Ulaanbaatar**	**51.16**	**5**	*e*P	**P**	**14 49 05.7**	**+0.1**		comp=Z,754nm,1.0s,mb6.7,SNR=39								
DL2				SCP	ScP	14 53 50.6	-0.6		comp=Z,228nm,1.0s,mb6.1									**BDHA**	**Al Bayda'**	**57.88**	**289**	*e*P	**P**	**14 49 56.7**	**+1.7**
DL2				PCS	PcS	14 53 55.9	-0.3	**WHFO**	**Wadi Hawf**	**51.38**	**296**	P	**P**	**14 49 08.1**	**+0.3**	BDHA				AMb	AMB	14 49 57.9	
DL2				S	**S**	**14 55 11.5**	**+4.4**		SNR=5.8										comp=Z,51nm,0.8s,mb5.6							
DL2				SCS	ScS	14 58 13.6	-3.8	**UCH**	**Uchtor**	**51.39**	**335**	P	**P**	**14 49 09.3**	**+1.9**	**LBOS**		**58.15**	**288**	*e*P	**P**	**14 49 58.7**	**+1.8**
DL2				AMB	AMB				SNR=60									LBOS				AMb	AMB	14 50 00.1	
	comp=Z,80nm,1.1s,mb5.6							**UCH**	**Uchtor**	**51.39**	**335**	*e*P	**P**	**14 49 07.6**	**+0.2**		comp=Z,434nm,1.2s,mb6.3								
DL2				AMB	AMB				comp=Z,145nm,1.0s,mb5.9									**HNR**	**Honiara**	**58.52**	**99**	P	**P**	**14 49 58.0**	**-1.5**
	comp=Z,2μm,8.3s							**TKM2**	**Tokmak 2**	**51.51**	**336**	P	**P**	**14 49 08.4**	**+0.1**		comp=Z,317nm,0.9s,mb6.4,baz=234,slow=3.8,SNR=17								
DL2				LR	LR			TKM2				pmax	pmax			**HNR**	**Honiara**	**58.52**	**99**	P	**P**	**14 49 57.9**	**-1.6**
	comp=N,5μm,17.7s,MS5.7								comp=Z,420nm,0.9s,mb6.4									HNR				pmax	pmax		
DL2				LR	LR			**TKM2**	**Tokmak 2**	**51.51**	**336**	*e*P	**P**	**14 49 08.2**	**-0.1**		comp=Z,400nm,1.0s,mb6.4								
	comp=E,4μm,18.2s,MS5.7								comp=Z,420nm,0.9s,mb6.4									**HNR**	**Honiara**	**58.52**	**99**	*e*P	**P**	**14 49 58.0**	**-1.6**
DL2				LR	LR			**KBK**	**Karagaybulak**	**51.56**	**335**	P	**P**	**14 49 09.4**	**+0.7**		comp=Z,399nm,0.9s,mb6.5								
	comp=Z,8μm,19.2s,MS5.7								SNR=98									**KLR**	**Kul'dur**	**58.55**	**23**	*e*P	**P**	**14 49 54.2**	**-4.8**
GUMO	**Guam**	**46.33**	**68**	P	**P**	**14 48 25.4**	**-3.6**	**CN2**	**Changchun**	**51.62**	**22**	*e*P	**P**	**14 49 07.8**	**-1.3**	KLR				*e*S	**S**	**14 58 00.0**	**+0.7**
	comp=Z,171nm,0.5s,mb6.2,baz=175,slow=6.5,SNR=34							CN2				*e*S	**S**	**14 56 28.1**	**+1.4**	**ZAA0**	**Zalesovo Array**	**58.65**	**349**	*e*P	**P**	**14 49 58.4**	**-1.2**
GUMO	**Guam**	**46.33**	**68**	P	**P**	**14 48 25.5**	**-3.5**	CN2				AMB	AMB			**ZALV**	**Zalesovo Beam**	**58.65**	**349**	P	**P**	**14 49 58.6**	**-1.0**
GUMO				pmax	pmax				comp=Z,40nm,1.0s,mb5.3										comp=Z,820nm,0.8s,mb6.8,baz=166,slow=4.0,SNR=777							
	comp=N,120nm,0.5s,mb6.1							CN2				AMB	AMB			ZALV				pP	pP	14 50 12.6	-0.5
GUMO	**Guam**	**46.33**	**68**	*e*P	**P**	**14 48 25.3**	**-3.7**		comp=Z,7μm,11.0s										comp=Z,674nm,1.1s,baz=155,slow=4.9,SNR=7.5							
	comp=Z,120nm,0.5s,mb6.1							CN2				LR	LR			ZALV				S	**S**	**14 57 57.1**	**-3.3**
INCN	**Inchon**	**46.86**	**28**	P	**P**	**14 48 32.2**	**-0.6**		comp=N,6μm,20.0s,MS5.7										comp=Z,8.3nm,0.6s,baz=156,slow=15,SNR=13							
	SNR=8.2							CN2				LR	LR			ZALV				PKP2bc		15 19 46.7	
INCN	**Inchon**	**46.86**	**28**	*e*P	**P**	**14 48 31.3**	**-1.6**		comp=E,4μm,20.0s,MS5.7										comp=Z,3.0nm,0.9s,baz=261,slow=2.9,SNR=4.2							
	comp=Z,47nm,0.9s,mb5.4							CN2				LR	LR			**ZALV**	**Zalesovo Beam**	**58.65**	**349**	P	**P**	**14 49 58.7**	**-0.9**
CTA	**Charters Tower**	**46.87**	**115**	*e*P	**P**	**14 48 31.9**	**-1.3**		comp=Z,12μm,21.0s,MS5.9									ZALV				*PP	pP	14 50 12.6	-0.6
	comp=Z,396nm,0.8s,mb6.4							**AML**	**Almayashu**	**51.67**	**334**	P	**P**	**14 49 10.0**	**+0.5**	ZALV				S	**S**	**14 57 57.1**	**-3.3**
CTA				*e*PCP	PP	14 50 28.0	+3.9		SNR=115									ZALV				pmax	pmax		
CTA				*e*S	**S**	**14 55 18.4**	**-2.4**	**AML**	**Almayashu**	**51.67**	**334**	*e*P	**P**	**14 49 09.8**	**+0.3**		comp=Z,820nm,0.8s,mb6.8								
CTA	**Charters Tower**	**46.87**	**115**	P	**P**	**14 48 32.0**	**-1.2**	**AAK**	**Ala-Archa**	**51.73**	**335**	P	**P**	**14 49 10.4**	**+0.4**	ZALV				pmax	pmax		
	comp=Z,484nm,0.8s,mb6.5,baz=288,slow=9.7,SNR=410								SNR=87										comp=Z,674nm,1.1s,mb6.6							
CTA				ScP	ScP	14 53 54.8	-0.7	**FRU**	**Bishkek**	**51.85**	**335**	⇑*i* P	**P**	**14 49 11.0**	**+0.2**	ZALV				smax			
	comp=Z,16nm,1.0s,baz=287,slow=2.2,SNR=5.3							FRU				*i*	pP	14 49 24.0	-0.2		comp=N,8.0nm,0.6s								
CTA				S	**S**	**14 55 16.9**	**-3.9**	FRU				*e*S	**S**	**14 56 30.0**	**+0.2**	ZALV				pmax	pmax		
	comp=Z,8.7nm,1.0s,baz=41,slow=20,SNR=5.8							FRU				pmax	pmax				comp=Z,3.0nm,0.9s,mb4.3								
CTA	**Charters Tower**	**46.87**	**115**	P	**P**	**14 48 32.0**	**-1.2**		comp=Z,910nm,2.3s,mb6.3									**ZALV**	**Zalesovo Beam**	**58.65**	**349**	P	**P**	**14 49 58.6**	**-1.0**
CTA				S	**S**	**14 55 16.9**	**-3.9**	FRU				smax					comp=N,250nm,2.5s									ZALV				pP	pP	14 50 12.6	-0.5
CTA				pmax	pmax				comp=N,250nm,2.5s									**CHMS**	**Chumysh**	**51.92**	**335**	P	**P**	**14 49 11.0**	**-0.4**	ZALV				S	**S**	**14 57 57.1**	**-3.3**
	comp=Z,484nm,0.8s							**CHMS**	**Chumysh**	**51.92**	**335**	P	**P**	**14 49 11.0**	**-0.4**		SNR=113							ZALV				⇑*e*		15 19 46.7	
CTA				pmax	pmax				SNR=113									**ASHO**	**Ashiyiah**	**52.00**	**305**	P	**P**	**14 49 13.9**	**+1.6**
	comp=N,16nm,1.0s							**ASHO**	**Ashiyiah**	**52.00**	**305**	P	**P**	**14 49 13.9**	**+1.6**		SNR=10							**ERM**	**Erimo**	**58.89**	**35**	P	**P**	**14 50 01.0**	**-0.5**
CTA				smax					SNR=10									**HATD**	**Hatta, Dubai**	**52.00**	**305**	P	**P**	**14 49 14.3**	**+2.0**		comp=Z,852nm,0.9s,mb6.8,SNR=15							
	comp=N,9.0nm,1.0s							**HATD**	**Hatta, Dubai**	**52.00**	**305**	P	**P**	**14 49 14.3**	**+2.0**	**ERM**	**Erimo**	**58.89**	**35**	P	**P**	**14 50 01.3**	**-0.2**
CTAO	**Charters Tower**	**46.87**	**115**	*e*P	**P**	**14 48 31.8**	**-1.4**		SNR=12									ERM				pmax	pmax		
CTAO				pmax	pmax			**EKS2**	**Erkin-Say**	**52.06**	**334**	P	**P**	**14 49 12.8**	**+0.4**		comp=Z,120nm,0.9s,mb5.9								
	comp=Z,511nm,0.8s,mb6.5								SNR=829									**ERM**	**Erimo**	**58.89**	**35**	*e*P	**P**	**14 50 01.1**	**-0.4**
CTAO	**Charters Tower**	**46.87**	**115**	*e*P	**P**	**14 48 31.8**	**-1.5**	**EKS2**	**Erkin-Say**	**52.06**	**334**	*e*P	**P**	**14 49 12.6**	**+0.2**		comp=Z,116nm,0.9s,mb5.9								
	comp=Z,511nm,0.8s,mb6.5								comp=N,516nm,0.8s,mb6.5									**TRBA**	**At Turbah**	**59.09**	**287**	*e*P	**P**	**14 50 05.1**	**+1.7**
STKA	**Stephens Creek**	**47.33**	**132**	*e*P	**P**	**14 48 35.9**	**-0.7**	**USP**	**Ospenovka**	**52.25**	**335**	P	**P**	**14 49 13.5**	**-0.3**	TRBA				AMb	AMB	14 50 06.2	
	comp=Z,93nm,0.6s,mb5.9								SNR=203										comp=Z,65nm,1.2s,mb5.5							
STKA				*e*PCP	PcP	14 50 07.5	+0.5	**MAJO**	**Matsushiro**	**52.44**	**38**	P	**P**	**14 49 16.0**	**+0.7**	**KRAR**	**Krasnoyarsk**	**59.48**	**354**	*c i* P	**P**	**14 50 04.3**	**-1.0**
STKA				*e*S	**S**	**14 55 25.4**	**-1.6**	MAJO				pmax	pmax			KRAR				pmax	pmax		
STKA	**Stephens Creek**	**47.33**	**132**	P	**P**	**14 48 35.9**	**-0.7**		comp=Z,140nm,1.2s,mb5.8										comp=Z,952nm,1.1s,mb6.7							
	comp=Z,47nm,0.6s,mb5.6,baz=309,slow=7.5,SNR=164							**MAJO**	**Matsushiro**	**52.44**	**38**	*e*P	**P**	**14 49 13.9**	**-1.4**	**NVS**	**Novosibirsk**	**59.81**	**348**	*i* P	**P**	**14 50 05.9**	**-1.7**
STKA				S	**S**	**14 55 25.8**	**-1.2**		comp=Z,144nm,1.2s,mb5.8									NVS				pmax	pmax		
	comp=Z,15nm,1.0s,baz=66,slow=20,SNR=5.9							**MAT**	**Matsushiro**	**52.44**	**38**	P	**P**	**14 49 14.3**	**-1.0**		comp=N,432nm,1.6s								
KSRS	**Korea Array**	**47.45**	**29**	P	**P**	**14 48 36.3**	**-1.1**	**MJAR**	**Matsushiro Arr**	**52.44**	**38**	P	**P**	**14 49 13.5**	**-1.8**	NVS				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.5,baz=221,slow=7.8,SNR=186								comp=Z,102nm,0.9s,mb5.8,baz=216,slow=7.3,SNR=174										comp=Z,520nm,1.6s,mb6.3							
KSRS				pP	pP	14 48 49.9	-0.8	MJAR				pP	pP	14 49 26.5	-2.2	NVS				pmax	pmax		
	comp=Z,105nm,0.9s,baz=224,slow=8.0,SNR=16								comp=Z,58nm,1.0s,baz=226,slow=7.7,SNR=9.6										comp=E,175nm,1.3s							
KSRS				PcP	PcP	14 50 07.2	-0.1	MJAR				ScP	ScP	14 54 17.5	-1.5	**RDF**	**Al-Radifah**	**60.66**	**306**	*e*P	**P**	**14 50 13.1**	**-0.9**
	comp=Z,15nm,1.0s,baz=224,slow=4.0,SNR=2.6								comp=Z,14nm,0.9s,baz=219,slow=5.1,SNR=15										baz=306							
KSRS				ScP	ScP	14 53 55.6	-2.0	**MJAR**	**Matsushiro Arr**	**52.44**	**38**	P	**P**	**14 49 13.5**	**-1.8**	RDF				AMb	AMB	14 50 15.7	
	comp=Z,6.0nm,1.1s,baz=211,slow=4.1,SNR=4.8							MJAR				*PP	pP	14 49 26.5	-2.2		comp=Z,320nm,1.2s,mb6.3,baz=306								
KSRS	**Korea Array**	**47.45**	**29**	P	**P**	**14 48 36.3**	**-1.1**	MJAR				pmax	pmax			**UMR**	**Umm Al-Rimmam**	**60.77**	**307**	*e*P	**P**	**14 50 14.0**	**-0.7**
KSRS				*PP	pP	14 48 49.9	-0.7		comp=Z,102nm,0.9s										baz=306							
KSRS						14 50 07.2		MJAR				pmax	pmax			UMR				AMb	AMB	14 50 16.6	
KSRS				pmax	pmax				comp=Z,58nm,1.0s										comp=Z,374nm,1.4s,mb6.3,baz=306							
	comp=Z,72nm,1.0s,mb5.6							MJAR				pmax	pmax			**NAY**	**Al-Naaiem**	**61.03**	**306**	*e*P	**P**	**14 50 15.6**	**-0.9**
KSRS				pmax	pmax				comp=N,14nm,0.9s										baz=306							
	comp=Z,105nm,0.9s,mb5.8							**MKAR**	**Makanchi Array**	**52.60**	**344**	P	**P**	**14 49 15.7**	**-0.7**	NAY				AMb	AMB	14 50 27.0	
KSRS				pmax	pmax				comp=N,310nm,0.7s,mb6.4,baz=155,slow=7.4,SNR=547										comp=Z,162nm,0.6s,mb6.3,baz=306							
	comp=Z,15nm,1.0s,mb4.9							MKAR				S	**S**	**14 56 37.4**	**-2.5**	**MIB**	**Mutribah**	**61.17**	**307**	*e*P	**P**	**14 50 16.9**	**-0.4**
KBL	**Kabul**	**48.33**	**324**	*e*P	**P**	**14 48 43.5**	**-0.8**		comp=N,7.0nm,1.0s,baz=150,slow=18,SNR=5.0										baz=307							
	comp=Z,0.4nm,0.2s							MKAR				PKP2bc		15 19 56.1		MIB				AMb	AMB	14 50 19.9	
WMQ	**Urumqi**	**48.45**	**347**	⇑*i* P	**P**	**14 48 45.5**	**+0.5**		comp=N,1.5nm,0.9s,baz=341,slow=3.1,SNR=4.1										comp=Z,408nm,1.2s,mb6.4,baz=307							
WMQ				AP	pP	14 48 50.0	-8.3	**MKAR**	**Makanchi Array**	**52.60**	**344**	P	**P**	**14 49 15.7**	**-0.6**	**RST**	**Umm Al-Ruwaisa**	**61.33**	**306**	*e*P	**P**	**14 50 17.5**	**-1.0**
WMQ				PCP	PcP	14 50 10.0	-0.7	MKAR				S	**S**	**14 56 37.4**	**-2.6**		baz=306								
WMQ				PP	PP	14 50 34.0	-4.2	MKAR				pmax	pmax			RST				AMb	AMB	14 50 28.7	
WMQ				S	**S**	**14 55 41.0**	**-1.4**		comp=Z,310nm,0.7s										comp=Z,248nm,0.6s,mb6.5,baz=306							
WMQ				AMB	AMB			MKAR				smax				**BOD**	**Bodaibo**	**61.73**	**8**	*e*P	**P**	**14 50 19.6**	**-1.0**
	comp=Z,1μm,0.8s,mb6.9								comp=N,7.0nm,1.0s							BOD				pmax	pmax		
WMQ				AMB	AMB			MKAR				pmax	pmax				comp=Z,391nm,0.9s,mb6.5								
	comp=Z,2μm,3.7s								comp=Z,2.0nm,0.9s									**BVAR**	**Borovoye Array**	**61.82**	**339**	P	**P**	**14 50 19.8**	**-1.5**
WMQ				LR	LR			**MKAR**	**Makanchi Array**	**52.60**	**344**	P	**P**	**14 49 15.7**	**-0.7**		comp=Z,162nm,0.9s,mb6.2,baz=142,slow=7.5,SNR=285								
	comp=N,10μm,19.8s,MS5.9							MKAR				S	**S**	**14 56 37.4**	**-2.6**	BVAR				pP	pP	14 50 33.9	-1.0
WMQ				LR	LR			MKAR				⇑*e*		15 19 56.1			comp=Z,104nm,0.7s,baz=146,slow=8.8,SNR=13								
	comp=E,9μm,19.0s,MS5.9							**TOO**	**Toolangi**	**52.89**	**136**	*e*P	**P**	**14 49 19.8**	**+1.1**	BVAR				PKP2bc		15 19 37.4	
WMQ				LR	LR			TOO				*e*PCP	PcP	14 50 28.3	+1.0		comp=Z,1.9nm,0.8s,baz=304,slow=0.5,SNR=5.0								
	comp=Z,10μm,24.3s							**ZAK**	**Zakamensk**	**53.46**	**2**	*i* P	**P**	**14 49 22.6**	**0.0**	**BVAR**	**Borovoye Array**	**61.82**	**339**	P	**P**	**14 50 19.8**	**-1.5**
KSH	**Kashi**	**48.54**	**334**	⇑*i* P	**P**	**14 48 46.5**	**+0.7**	ZAK				*e*		14 50 29.6		BVAR				*PP	pP	14 50 33.9	-1.1
KSH				*e*AP	pP	14 48 50.1	-9.0	ZAK				*e*		14 59 02.5		BVAR				pmax	pmax		
KSH				*e*XP	sP	14 48 53.3	-11	ZAK				pmax	pmax				comp=Z,162nm,0.9s								
KSH				*e*PCP	PcP	14 50 10.9	-0.2		comp=Z,128nm,1.1s,mb5.8									BVAR				pmax	pmax		
KSH				*e*PP	PP	14 50 38.1	-1.0	ZAK				pmax	pmax				comp=Z,104nm,0.7s								
KSH				*e*SCP	ScP	14 54 04.1	+2.0		comp=Z,46nm,1.7s,mb5.1									BVAR				pmax	pmax		
KSH				*e*PCS	PcS	14 54 06.0	-1.1	ZAK				pmax	pmax				comp=Z,2.0nm,0.8s								
KSH				*e*S	**S**	**14 55 46.0**	**+2.1**		comp=Z,19nm,1.1s,mb4.9									**BVAR**	**Borovoye Array**	**61.82**	**339**	P	**P**	**14 50 19.8**	**-1.5**
KSH				*e*SCS	ScS	14 58 35.2	+0.8	ZAK				pmax	pmax			BVAR				pP	pP	14 50 33.9	-1.1
KSH				*e*SS	SS	14 59 11.0	-3.6		comp=Z,12nm,1.6s,mb4.6									BVAR				⇑*e*		15 19 37.4	
KSH				LR	LR			**VLA**	**Vladivostok**	**53.77**	**27**	*d i* P	**P**	**14 49 23.9**	**-1.1**	**YSS**	**Yuzh-Sakhalins**	**61.86**	**31**	α *i* P	**P**	**14 50 21.0**	**-0.7**
	comp=N,17μm,17.1s,MS6.3							VLA				pmax	pmax			YSS				*e*	pP	14 50 34.0	-1.3
KSH				LR	LR				comp=Z,204nm,0.9s,mb6.1									YSS				*e*		14 52 41.2	
	comp=E,26μm,17.8s,MS6.3							**VLA**	**Vladivostok**	**53.77**	**27**	*i* P	**P**	**14 49 23.0**	**-2.0**	YSS				pmax	pmax		
KSH				LR	LR			**MDJ**	**Mudanjiang**	**

comp=E,1μm,1.0s,mb6.9,SNR=50
BRVK Borovoye 61.88 339 P P 14 50 20.6 -1.2
SNR=68
BRVK Borovoye 61.88 339 P P 14 50 20.4 -1.3
BRVK pmax pmax
comp=Z,150nm,0.9s,mb6.1
BRVK Borovoye 61.88 339 *eP* **P 14 50 20.1 -1.6**
comp=Z,149nm,0.8s,mb6.2
CLNS Chul'man 62.89 14 *eP* **P 14 50 27.8 -0.6**
CLNS *e**PP pP 14 50 36.4 -5.6
CLNS *e* 14 51 04.8
CLNS *e* 14 52 46.5
CLNS *e*PPP 14 54 14.1
CLNS *e*S **S 14 58 57.1 +2.8**
CLNS *e*SS SS 15 03 05.9 +5.5
CLNS pmax pmax
comp=Z,359nm,1.0s,mb6.5
CLNS pmax pmax
comp=E,150nm,1.0s
CLNS pmax pmax
comp=N,215nm,1.1s
CLNS smax
comp=N,5990μm,19.7s
CLNS smax
comp=E,2574μm,16.2s
CLNS MLR MLR
comp=Z,9μm,25.0s,MS5.8
CLNS MLR MLR
comp=N,9μm,24.0s
CLNS MLR MLR
comp=E,7μm,18.0s
CASY Casey 63.23 176 *eP* **P 14 50 31.0 +0.5**
MIR Mirnyy 63.44 184⇓ *iP* pP 14 50 50.0 +4.4
MIR *i* PcP 14 51 12.0 +3.7
MIR pmax pmax
comp=Z,200nm,1.5s,mb6.0
KMBO Kilima Mbogo 64.06 270 P **P 14 50 39.4 +2.4**
SNR=5.5
KMBO Kilima Mbogo 64.06 270 P **P 14 50 38.0 +1.0**
comp=Z,4.9nm,0.8s,mb4.6,baz=62,slow=9.5,SNR=11
KMBO Kilima Mbogo 64.06 270 *eP* **P 14 50 38.6 +1.6**
KMBO pmax pmax
comp=Z,30nm,1.0s
KMBO Kilima Mbogo 64.06 270 *eP* **P 14 50 38.6 +1.6**
comp=Z,30nm,1.0s,mb5.3
BHD Baghdad 64.83 309 *ex* x 14 50 40.0
BHD *ex* x 14 59 17.0
AKTO Aktyubinsk 65.09 331 S S 14 59 18.4 -3.6
comp=Z,2.7nm,0.8s,baz=285,slow=22,SNR=9.7
DZM Mont Dzumac 65.74 113 *eP* **P 14 50 47.8 0.0**
DZM Mont Dzumac 65.74 113 *eP* **P 14 50 47.3 -0.5**
GNI Garni 67.35 316 P **P 14 50 59.5 +1.8**
SNR=16
GNI Garni 67.35 316 P **P 14 50 58.3 +0.6**
comp=Z,34nm,0.8s,mb5.4,baz=89,slow=0.8,SNR=21
GNI Garni 67.35 316 P **P 14 50 58.3 +0.6**
GNI pmax pmax
comp=Z,34nm,0.8s
GNI Garni 67.35 316 *eP* **P 14 50 57.9 +0.2**
comp=Z,145nm,1.0s,mb6.0
MTA Mtatsminda 67.98 318 P **P 14 51 01.8 +0.1**
TBLG Delisi 68.04 318 P **P 14 51 03.3 +1.3**
SVE Sverdlovsk 68.35 337⇑ *eP* **P 14 51 02.6 -1.0**
SVE pmax pmax
comp=Z,405nm,1.1s,mb6.4
YAK Yakutsk 68.63 14 *eP* **P 14 51 01.4 -3.8**
YAK *e**PP pP 14 51 12.6 -6.5
YAK *e*S S 14 59 58.1 -6.1
YAK *e* 15 00 54.0
YAK pmax pmax
comp=Z,790nm,0.8s,mb6.7
YAK pmax pmax
comp=N,350nm,1.5s
YAK pmax pmax
comp=E,172nm,1.1s
YAK smax
comp=N,123μm,2.5s
YAK smax
comp=E,124μm,1.9s
YAK MLR MLR
comp=Z,10μm,21.0s,MS6.0
YAK MLR MLR
comp=E,7μm,20.0s,MS6.0
YAK MLR MLR
comp=N,5μm,19.0s,MS6.0
YAK Yakutsk 68.63 14 *eP* **P 14 51 03.1 -2.1**
comp=N,1μm,0.8s,mb6.8
ARU Arti 68.89 336 P **P 14 51 05.0 -2.0**
comp=N,1μm,1.2s,mb6.7,SNR=26
ARU Arti 68.89 336*c iP* **P 14 51 05.8 -1.2**
ARU *e* 14 51 30.8
ARU *e* 14 53 34.9
ARU *e*PPP 14 55 16.2
ARU *e*S S 15 00 07.1 -0.4
ARU *e*SS SS 15 04 29.2 -4.5
ARU pmax pmax
comp=Z,322nm,1.2s,mb6.1
ARU Arti 68.89 336⇑ *iP* **P 14 51 06.1 -0.9**
ONI Oni 69.27 318 P **P 14 51 10.9 +1.3**
MAW Mawson 69.40 195 *eP* **P 14 51 08.8 -1.2**
comp=Z,22nm,1.0s,mb5.0
MAW Mawson 69.40 195 P **P 14 51 11.4 +1.4**
comp=Z,12nm,0.8s,mb4.9,baz=27,slow=6.4,SNR=32
MAW Mawson 69.40 195 P **P 14 51 11.4 +1.4**
MAW pmax pmax
comp=Z,12nm,0.8s
KIV Kislovodsk 70.36 319 P **P 14 51 16.0 -0.3**
comp=Z,1μm,1.2s,mb6.7,SNR=20
KIV Kislovodsk 70.36 319 P **P 14 51 16.3 0.0**
SNR=41
KIV Kislovodsk 70.36 319*c iP* **P 14 51 16.0 -0.3**
KIV *i* pP 14 51 31.2 +1.0
KIV *i* 14 51 38.1
KIV *i* S S 15 00 25.6 +0.4
KIV pmax pmax
comp=Z,239nm,1.1s,mb6.0
KIV Kislovodsk 70.36 319 *eP* **P 14 51 16.3 0.0**
comp=Z,273nm,1.1s,mb6.1
ASF Jabal al Asfar 70.40 306 P **P 14 51 17.6 +0.8**
comp=Z,67nm,1.0s,mb5.5,baz=347,slow=3.5,SNR=71
ASF Jabal al Asfar 70.40 306 P **P 14 51 17.6 +0.8**
ASF pmax pmax
comp=Z,67nm,1.0s
GOF Gofitskoye 70.61 320⇓ *iP* pP 14 51 31.5 -0.2
GOF *i* S S 15 00 34.5 +6.4
GOF pmax pmax
comp=Z,340nm,1.3s,mb6.1
GOF smax
comp=N,40nm,0.8s
MALT Malatya 71.16 312 *eP* **P 14 51 20.4 -0.9**
MALT pmax pmax
comp=Z,110nm,1.1s,mb5.7
MALT Malatya 71.16 312 *eP* **P 14 51 19.8 -1.6**
comp=Z,105nm,1.1s,mb5.7
SKR Severo-Kuril's 71.18 33 *eP* **P 14 51 20.1 -1.0**
SKR pmax pmax
comp=N,80nm,0.9s
SKR pmax pmax
comp=E,110nm,0.9s
SKR pmax pmax
comp=Z,490nm,0.9s,mb6.4
SOC Sochi 72.17 318*c iP* **P 14 51 26.8 -0.5**
SOC *e* pP 14 51 41.3 +0.1
SOC *i* S S 15 00 41.6 -4.7
SOC pmax pmax
comp=Z,193nm,0.9s,mb6.0
SOC Sochi 72.17 318 *i* P **P 14 51 27.1 -0.2**
TUZ Tuapeka 72.66 137 P **P 14 51 29.5 -0.7**
WVZ Waitaha Valley 72.80 134 P **P 14 51 30.3 -0.8**
LSZ Lusaka 72.89 255 P **P 14 51 33.4 +1.3**
comp=Z,3.7nm,0.4s,mb4.7,baz=97,slow=5.7,SNR=8.1
LSZ Lusaka 72.89 255 P **P 14 51 33.4 +1.3**
LSZ pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
LSZ Lusaka 72.89 255 *eP* **P 14 51 33.0 +0.9**
comp=Z,46nm,1.1s,mb5.3
RPZ Rata Peaks 73.16 135 P **P 14 51 32.5 -0.6**
comp=Z,33nm,0.7s,mb5.4,baz=218,slow=1.4,SNR=30
PEA0B Petropavlovsk- 73.25 32 *eP* **P 14 51 32.6 -0.8**
PETK Petropavlovsk- 73.25 32 P **P 14 51 32.1 -1.3**
comp=Z,106nm,0.8s,mb5.8,baz=204,slow=3.4,SNR=165
QRZ Quartz Range 73.68 132 *eP* **P 14 51 35.8 -0.5**
PET Petropavlovsk 73.70 32*c iP* **P 14 51 35.4 -0.7**
PET pmax pmax
comp=Z,363nm,0.9s,mb6.3
PET Petropavlovsk 73.70 32 *eP* **P 14 51 35.1 -1.1**
comp=Z,409nm,0.9s,mb6.4
CSS Prodhromos 74.04 308 *eP* **P 14 51 38.2 -0.3**
comp=Z,152nm,1.0s,mb5.9
VRHR Novokhopersk 74.11 326 *eP* **P 14 51 37.3 -1.3**
VRHR *e*S S 15 01 03.4 -4.6
VRHR pmax pmax
comp=Z,420nm,0.8s,mb6.4
VRHR pmax pmax
comp=N,90nm,0.4s
VRHR pmax pmax
comp=E,420nm,1.0s
VRHR smax
comp=E,250nm,1.4s
VRHR smax
comp=Z,10.0nm,0.8s
VRHR smax
comp=N,140nm,0.9s
THZ Tophouse 74.12 132 P **P 14 51 38.0 -0.9**
ANN Anapa 74.15 318 *eP* **P 14 51 36.6 -2.4**
ANN pmax pmax
comp=Z,61nm,1.3s,mb5.4
VSR Storozhevoye 75.56 325 *eP* **P 14 51 45.4 -1.6**
VSR *e*S S 15 01 18.5 -5.6
VSR pmax pmax
comp=Z,130nm,0.6s,mb6.0
VSR pmax pmax
comp=N,50nm,1.0s
VSR pmax pmax
comp=E,90nm,0.7s
VSR smax
comp=N,140nm,1.0s
VSR smax
comp=Z,10.0nm,1.7s
VSR smax
comp=E,40nm,1.1s
LBTB Lobatse 75.70 245 *eP* **P 14 51 46.0 -2.3**
LBTB pmax pmax
comp=Z,19nm,0.6s,mb5.2
LBTB Lobatse 75.70 245 *eP* **P 14 51 46.0 -2.3**
comp=Z,19nm,0.6s,mb5.2
VOR Voronezh 75.76 325 *eP* **P 14 51 46.0 -2.1**
VOR pmax pmax
comp=Z,1μm,1.0s,mb6.7
ANTO Ankara 75.81 312 P **P 14 51 49.5 +0.8**
SNR=14
ANTO Ankara 75.81 312 P **P 14 51 48.1 -0.5**
ANTO pmax pmax
comp=Z,110nm,1.0s,mb5.7
ANTO Ankara 75.81 312⇑ *iP* **P 14 51 47.9 -0.7**
ANTO Ankara 75.81 312 *eP* **P 14 51 47.8 -0.9**
comp=Z,105nm,1.0s,mb5.7
BOSA Boshof 76.22 241 P **P 14 51 52.6 +1.3**
comp=Z,6.6nm,0.6s,mb4.7,baz=82,slow=4.4,SNR=13
BOSA LR LR 15 21 26.3
comp=Z,8μm,18.8s,MS6.0,baz=168,slow=32
SIM Simferopol' 76.42 318*de* **P 14 51 52.6 +0.6**
SIM *e* pP 14 52 06.0 0.0
SIM pmax pmax
comp=Z,122nm,0.7s,mb5.9
BKZ Black Stump Fm 76.45 129 P **P 14 51 51.0 -1.3**
URZ Urewera 76.83 128 P **P 14 51 53.9 -0.6**
comp=Z,7.4nm,0.3s,mb5.0,baz=274,slow=6.6,SNR=17
TIXI Tiksi 76.89 9*c iP* **P 14 51 52.6 -1.5**
TIXI pmax pmax
comp=Z,156nm,1.3s,mb5.8
TIXI Tiksi 76.89 9 *eP* **P 14 51 51.6 -2.5**
comp=Z,105nm,0.6s,mb5.9
ISP Isparta 76.99 310 *eP* **P 14 51 54.9 -0.5**
ISP Isparta 76.99 310 *eP* **P 14 51 54.0 -1.4**
SYO Syowa Base 77.11 199⇓ *eP* **P 14 51 55.4 0.0**
SYO Syowa Base 77.11 199⇓ *es*P pP 14 52 02.8 -6.7
SYO Syowa Base 77.11 199⇓ *es*P sP 14 52 05.0 -10
MOS Moscow 78.25 329 *eP* **P 14 51 58.9 -3.1**
MOS *e**PP pP 14 52 16.1 0.0
MOS *e* 14 54 57.0
MOS *i* S S 15 01 47.4 -5.9
MOS *e**SS sS 15 02 14.5 -2.4
MOS pmax pmax
comp=Z,1μm,1.8s,mb6.5
MOS pmax pmax
comp=Z,504μm,1.0s
ARG Arkhangelos 78.46 308 *eP* **P 14 52 04.0 +0.4**
OBN Obninsk 78.56 328 P **P 14 52 03.5 -0.2**
comp=Z,2μm,1.0s,mb7.1,SNR=8.9
OBN Obninsk 78.56 328*c iP* **P 14 52 03.1 -0.6**
OBN *i* pP 14 52 18.1 +0.3
OBN *i* 14 54 57.0
OBN *i* S S 15 01 53.8 -2.7
OBN pmax pmax
comp=Z,311nm,0.9s,mb6.2
OBN Obninsk 78.56 328 *eP* **P 14 52 02.8 -0.9**
comp=Z,345nm,0.9s,mb6.3
KARP Karpathos 79.08 307 *eP* **P 14 52 07.4 +0.4**
ZKR Zakros 79.75 306 *eP* **P 14 52 11.4 +0.7**
SMG Samos 79.79 309 *eP* **P 14 52 13.0 -0.6**
TLCR 80.08 317⇑ *iP* **P 14 52 11.9 -0.3**
TLCR 80.08 317⇑ *eP* **P 14 52 11.9 -0.4**
TIRR Tirgusor 80.18 316 P **P 14 52 12.4 -0.4**
TIRR pmax pmax
comp=Z,130nm,1.0s,mb5.8
TIRR Tirgusor 80.18 316⇓ *iP* **P 14 52 12.0 -0.8**
TIRR Tirgusor 80.18 316 *eP* **P 14 52 11.8 -1.0**
comp=Z,126nm,0.9s,mb5.8
SUR Sutherland 80.25 238 *eP* **P 14 52 15.9 +2.5**
NPS Neapolis 80.26 306 *eP* **P 14 52 14.4 +0.9**
LAST Lasithi 80.35 306 *eP* **P 14 52 14.9 +1.0**
CHOS Chios island 80.53 310 *eP* **P 14 52 15.3 +0.5**
PRK Paraskevi 80.54 310 *eP* **P 14 52 14.3 -0.6**
KIS Kishinev 80.55 319⇑ *iP* **P 14 52 14.0 -0.7**
KIS *e* pP 14 52 26.0 -2.8
KIS pmax pmax
comp=Z,520nm,1.4s,mb6.3
KIS Kishinev 80.55 319⇑ *iP* **P 14 52 14.0 -0.7**
comp=Z,500nm,1.4s,mb6.2
HARR Harsova 80.57 316⇑ *iP* **P 14 52 15.0 +0.1**
HARR Harsova 80.57 316 P **P 14 52 15.1 +0.2**
PRD Provadia 80.59 315 *i* P **P 14 52 16.4 +1.4**
SANT Santorini 80.60 308 *eP* **P 14 52 14.0 -1.3**
comp=Z,200nm,1.4s,mb5.9
THR1 Thera Island 80.60 308 *eP* **P 14 52 15.4 +0.2**
THR6 Thira Island, 80.64 307 *eP* **P 14 52 15.7 +0.2**
THR3 Thira Island, 80.65 308 *eP* **P 14 52 15.6 +0.1**
APE Apeiranthos 80.68 308 *eP* **P 14 52 15.1 -0.5**
APE Apeiranthos 80.68 308 *eP* **P 14 52 14.4 -1.2**
APE Apeiranthos 80.68 308⇑ *iP* **P 14 52 14.0 -1.6**
ALN Alexandroupoli 81.06 312 *eP* **P 14 52 17.3 -0.2**
AKASG Malin Array Be 81.29 322 P **P 14 52 17.2 -1.3**
comp=Z,84nm,0.9s,mb5.7,baz=82,slow=4.3,SNR=155
AKASG PP PP 14 55 22.1 -2.6
comp=Z,22nm,1.1s,baz=87,slow=6.5,SNR=9.3
AKASG Malin Array Be 81.29 322 P **P 14 52 17.3 -1.3**
AKASG 14 55 22.1
AKASG pmax pmax
comp=Z,84nm,0.9s
AKASG pmax pmax
comp=Z,22nm,1.1s
KIEV Kiev 81.30 322 P **P 14 52 17.3 -1.3**
KIEV pmax pmax
comp=Z,100nm,1.0s,mb5.7
KIEV Kiev 81.30 322 *eP* **P 14 52 17.1 -1.5**
comp=Z,103nm,0.9s,mb5.8
VAM Vamos 81.43 306 *eP* **P 14 52 19.9 +0.2**
RDO Rodhopi 81.49 312 *eP* **P 14 52 19.2 -0.6**
LIA Limnos Island 81.50 311 *eP* **P 14 52 19.9 -0.1**
KARN Karanos 81.65 306 *eP* **P 14 52 22.1 +1.3**
VRI Vrincioaia 81.67 317⇓ *iP* **P 14 52 20.9 +0.2**
VRI Vrincioaia 81.67 317 P **P 14 52 21.1 +0.4**
DIM Dimitrovgrad 81.68 313 *i* P **P 14 52 22.3 +1.5**
PLOR Plostina 81.72 317 P **P 14 52 22.7 +1.7**
MLR Muntele Rosu 82.12 317⇑ *iP* **P 14 52 23.2 +0.1**
MLR Muntele Rosu 82.12 317 P **P 14 52 23.2 +0.1**
ZIMR 82.13 315 P **P 14 52 24.1 +0.9**
OUR Ouranopolis 82.49 311 *eP* **P 14 52 25.3 +0.2**
DID Didima 82.56 308 *eP* **P 14 52 24.2 -1.3**
PAIG Paliouri 82.64 311 *eP* **P 14 52 25.9 -0.1**
VLI Veliai 82.66 307 *eP* **P 14 52 25.2 -0.9**
VOIR 82.73 316⇑ *iP* **P 14 52 26.0 -0.2**
VOIR 82.73 316 P **P 14 52 26.6 +0.3**
NVR Nevrokopi 82.77 312 *eP* **P 14 52 26.0 -0.5**
LTK Loutraki 82.85 309 *eP* **P 14 52 26.1 -0.9**
PLG Polygyros 82.90 311 *eP* **P 14 52 27.3 +0.1**
PLG Polygyros 82.90 311 *eP* **P 14 52 26.0 -1.2**
LKR Lokris 82.94 309 *eP* **P 14 52 26.9 -0.6**
LKR Lokris 82.94 309 *eP* **P 14 52 25.9 -1.6**
TSUM Tsumeb 83.03 251 *eP* **P 14 52 27.6 -0.8**
comp=Z,413nm,2.4s,mb6.0
BURAR Bucovina Array 83.08 319⇑ *iP* **P 14 52 28.7 +0.7**
BURAR Bucovina Array 83.08 319 P **P 14 52 28.8 +0.8**
BUR08 Bucovina Ar. S 83.09 319 *eP* **P 14 52 28.3 +0.2**
MNK Minsk 83.13 326⇓ *iP* **P 14 52 24.0 -4.1**
MNK pmax pmax
comp=Z,1μm,1.0s,mb6.8
MNK pmax pmax
comp=E,710nm,1.2s
VLX Vlachokerasia 83.21 308 *eP* **P 14 52 28.5 -0.4**
PUL Pulkovo 83.36 331 *eP* **P 14 52 30.1 +0.9**
KKB Krupnik 83.43 313 *i* P **P 14 52 30.8 +0.8**
VTS Vitosha 83.47 313 *i* P **P 14 52 29.5 -0.7**
VTS Vitosha 83.47 313 P **P 14 52 30.0 -0.1**
AGG Agios Georgios 83.51 310 *eP* **P 14 52 29.2 -1.2**
ITM Ithomi 83.53 308 *eP* **P 14 52 30.3 -0.3**
LIT Litokhoron 83.57 311 *eP* **P 14 52 29.6 -1.1**
VAY Valandovo 83.72 312 *eP* **P 14 52 30.1 -1.3**
GRG Griva 83.78 312 *eP* **P 14 52 31.8 0.0**
THL Klokotos Trika 83.84 310 *eP* **P 14 52 30.4 -1.7**
THL Klokotos Trika 83.84 310 *eP* **P 14 52 30.4 -1.7**
BILL Bilibino 83.88 20*c iP* **P 14 52 30.8 -0.9**
BILL *i* S S 15 02 47.8 -3.4
BILL pmax pmax
comp=Z,59nm,1.3s,mb5.6
BILL Bilibino 83.88 20 *eP* **P 14 52 30.6 -1.0**
comp=Z,342nm,1.8s,mb6.2
EVR Evrytania 83.90 310 *eP* **P 14 52 31.4 -1.1**
JOF Joensuu 83.92 334 *ep* **P 14 52 30.8 -1.2**
comp=Z,93nm,0.9s,mb5.9
JOF Joensuu 83.92 334 *eP* **P 14 52 30.8 -1.2**
JOF pmax pmax
comp=Z,93nm,0.9s,mb5.9
RLS Riolos of Patr 84.03 309 *eP* **P 14 52 33.6 +0.5**
GZR Gura Zlata 84.29 316⇑ *iP* **P 14 52 34.7 +0.4**
GZR Gura Zlata 84.29 316 P **P 14 52 34.7 +0.4**
LVV L'vov 84.31 321 *eP* **P 14 52 34.3 0.0**
LVV *e* 14 55 47.1
LVV *e*S S 15 02 52.1 -4.2
LVZ Lovozero 84.42 340 P **P 14 52 33.7 -0.7**
comp=Z,728nm,0.7s,mb6.9,SNR=8.4
LVZ Lovozero 84.42 340*c iP* **P 14 52 33.4 -1.0**
LVZ pmax pmax
comp=Z,128nm,1.0s,mb6.0
LVZ Lovozero 84.42 340⇑ *iP* **P 14 52 33.5 -0.9**
FNA Florina 84.52 311 *eP* **P 14 52 35.1 -0.5**
DRGR 84.59 317⇑ *iP* **P 14 52 36.5 +0.8**
DRGR 84.59 317 P **P 14 52 36.2 +0.4**
SKO Skopje 84.66 312 *eP* **P 14 52 35.6 -0.6**
KRUS Krusevo 84.71 312 *eP* **P 14 52 35.7 -0.8**
VLS Valsamata 84.73 309 *eP* **P 14 52 37.0 +0.3**
VLS Valsamata 84.73 309 *eP* **P 14 52 37.2 +0.6**
APA Apatity 84.73 339⇓ *iP* **P 14 52 35.4 -0.6**
APA *i* pP 14 52 48.8 -1.4
APA pmax pmax
comp=Z,83nm,1.0s,mb5.8
APA MLR MLR
comp=Z,10μm,18.0s,MS6.2
JAN Janina 84.75 310 *eP* **P 14 52 37.3 +0.6**
VSU Vasula 84.76 329 *eP* **P 14 52 35.7 -0.6**
OHR Ohrid 85.00 312 *eP* **P 14 52 36.2 -1.7**
KWP Kalwaria 85.11 320 *eP* **P 14 52 39.2 +0.9**
KWP Kalwaria 85.11 320 P **P 14 52 37.9 -0.4**
KWP pmax pmax
comp=Z,310nm,1.3s,mb6.3
KWP Kalwaria 85.11 320⇑ *iP* **P 14 52 39.0 +0.7**
KWP Kalwaria 85.11 320 *eP* **P 14 52 39.2 +0.9**
IGT Igoumenitsa 85.12 310 *eP* **P 14 52 38.1 -0.5**
BZS Buzias 85.13 316⇓ *iP* **P 14 52 38.0 -0.5**
BZS Buzias 85.13 316 P **P 14 52 38.4 0.0**
UZH Uzhgorod 85.20 319⇑ *iP* **P 14 52 38.0 -0.8**
UZH *i* pP 14 52 49.5 -3.5
KOLS Kolonicke sedl 85.27 319 *i* P **P 14 52 39.6 +0.5**
KOLS *e* 14 52 59.5
SUW Suwalki 85.67 325 *eP* **P 14 52 40.5 -0.5**
SUW Suwalki 85.67 325 *eP* **P 14 52 40.5 -0.5**
TIR Tirane 85.73 312 P **P 14 52 41.9 +0.3**
TIR pmax pmax
comp=Z,55nm,0.9s,mb5.8
TIR Tirane 85.73 312 *eP* **P 14 52 41.2 -0.4**
comp=Z,55nm,0.9s,mb5.8
CRVS Cervenica-Dubn 85.79 319 *eP* **P 14 52 42.4 +0.7**
PVY Plav 85.83 313⇑ *iP* **P 14 52 41.4 -0.7**
KAF Kangasniemi 85.90 333 *ep* **P 14 52 41.0 -1.0**
comp=Z,104nm,0.8s,mb6.1
KAF Kangasniemi 85.90 333 *eP* **P 14 52 41.0 -1.0**
KAF pmax pmax
comp=Z,104nm,0.8s,mb6.1
IVA Berane 85.92 313⇑ *iP* **P 14 52 41.3 -1.2**
STHS Stebnicka Huta 86.02 320 *eP* **P 14 52 43.2 +0.4**
STHS *e* pP 14 52 56.2 -0.8
STHS pmax pmax
comp=Z,86nm,1.0s,mb5.9
STHS Stebnicka Huta 86.02 320 *eP* **P 14 52 43.2 +0.4**
comp=Z,86nm,1.0s,mb5.9
STHS *e* pP 14 52 56.2 -0.8
AFI Afiamalu 86.21 104 *eP* **P 14 52 44.6 +0.1**
AFI pmax pmax
comp=Z,107nm,0.8s,mb6.1
AFI Afiamalu 86.21 104 *eP* **P 14 52 44.6 0.0**
comp=Z,107nm,0.8s,mb6.1
ULC Ulcinj 86.28 312⇑ *iP* **P 14 52 42.8 -1.5**
TTG Podgorica 86.33 313⇑ *iP* **P 14 52 42.5 -2.0**
PLE Pljevlja 86.36 314⇑ *iP* **P 14 52 45.1 +0.5**
KECS Kecovo 86.36 319 *eP* **P 14 52 44.3 -0.2**
KECS pmax pmax
comp=Z,32nm,1.1s,mb5.5
KECS Kecovo 86.36 319 *eP* **P 14 52 44.2 -0.3**
KECS *e*PP PP 14 56 06.4 +0.2
KECS Kecovo 86.36 319 *eP* **P 14 52 44.3 -0.2**
comp=Z,32nm,1.1s,mb5.5
KECS *e*PP PP 14 56 06.4 +0.2
NKY Niksic 86.57 313⇑ *iP* **P 14 52 44.3 -1.4**
BUM Brajici-Budva 86.58 313⇑ *iP* **P 14 52 44.3 -1.4**
NIE Niedzica 86.62 320 *eP* **P 14 52 46.9 +1.1**
PSZ Piszkesteto 86.66 318 P **P 14 52 45.9 -0.1**
PSZ pmax pmax
comp=Z,96nm,1.1s,mb5.9
PSZ Piszkesteto 86.66 318⇑ *eP* **P 14 52 46.6 +0.6**
PSZ Piszkesteto 86.66 318⇑ *iP* **P 14 52 43.0 -3.0**
PSZ Piszkesteto 86.66 318 *eP* **P 14 52 45.6 -0.4**
comp=Z,96nm,1.1s,mb5.9
UPM Unac-Piva 86.69 313⇑ *iP* **P 14 52 44.6 -1.7**
QSPA South Pole Qui 86.71 180 P **P 14 52 46.3 +0.7**
comp=Z,5.8nm,1.0s,mb4.8,baz=332,slow=2.6,SNR=26
QSPA pP pP 14 53 01.6 +1.7
comp=Z,24nm,0.9s,baz=298,slow=4.5,SNR=12
MAIT Maitri 86.81 199 *eP* **P 14 52 49.9 +3.6**
HCY Herceg Novi 86.89 313⇑ *iP* **P 14 52 45.9 -1.4**
BRY Bratogost 86.92 313⇑ *iP* **P 14 52 45.5 -1.9**
OJC Ojcow 87.07 320 *eP* **P 14 52 47.5 -0.4**
BUD Budapest 87.18 318⇑ *eP* **P 14 52 48.9 +0.3**
PKSM Moragy 87.27 316⇑ *iP* **P 14 52 48.0 -1.0**
PKSM Moragy 87.27 316 P **P 14 52 48.9 -0.1**
VYHS Vyhne 87.44 319 *eP* **P 14 52 49.9 +0.1**
VYHS pmax pmax
comp=Z,39nm,1.8s,mb5.3
VYHS Vyhne 87.44 319 *eP* **P 14 52 49.8 0.0**
VYHS Vyhne 87.44 319 *eP* **P 14 52 49.9 +0.1**
comp=Z,39nm,1.8s,mb5.3
ADK Adak 87.60 38 P **P 14 52 49.6 -0.9**
ADK pmax pmax
comp=Z,310nm,1.5s,mb6.3
ADK Adak 87.60 38 *eP* **P 14 52 49.0 -1.5**
comp=Z,312nm,1.5s,mb6.3
KEV Kevo 87.65 340 *ep* **P 14 52 47.9 -2.5**
comp=Z,117nm,0.9s,mb6.1
KEV Kevo 87.65 340 P **P 14 52 49.8 -0.6**
KEV pmax pmax
comp=Z,110nm,0.9s,mb6.1
KOLL Kolacno 87.74 319 *i* P **P 14 52 51.8 +0.6**
TIP Timpagrande 87.83 309 *eP* **P 14 52 52.5 +0.6**
comp=Z,123nm,1.4s,mb5.9
GRI Girifalco 88.06 309 P **P 14 52 56.7 +3.7**
OKC Ostrava-Krasne 88.07 320⇑ *iP* **P 14 52 52.7 -0.1**
RAC Raciborz 88.07 320 *eP* **P 14 52 53.4 +0.7**
ARCES ARCESS Array B 88.10 340 P **P 14 52 52.2 -0.3**
comp=Z,144nm,0.9s,mb6.2,baz=99,slow=3.9,SNR=141
ARCES PP PP 14 56 18.8 -0.9
comp=Z,44nm,1.1s,baz=99,slow=7.9,SNR=7.8
ARCES ARCESS Array B 88.10 340 P **P 14 52 52.2 -0.3**

ARCES 14 56 18.8
ARCES pmax pmax
comp=Z,144nm,0.9s
ARCES pmax pmax
comp=Z,44nm,1.1s
ORI Oriolo Calabro 88.16 310 P **P** **14 52 55.3 +1.9**
ORI pmax pmax
comp=Z,340nm,1.3s,mb6.4
ORI Oriolo Calabro 88.16 310 P **P** **14 52 55.3 +1.9**
comp=Z,340nm,1.3s,mb6.4
SOI Samo 88.27 308 P **P** **14 52 54.6 +0.6**
SOI pmax pmax
comp=Z,175nm,1.7s,mb6.0
SOI Samo 88.27 308 P **P** **14 52 54.6 +0.6**
comp=Z,175nm,1.7s,mb6.0
MORC Moravsky Berou 88.45 320⇓ *i* P **P** **14 52 53.7 -0.9**
MORC Moravsky Berou 88.45 320 P **P** **14 52 55.0 +0.5**
MODS Modra-Piesok 88.46 318 *i* P **P** **14 52 55.7 +1.1**
MODS *e* PP PP 14 56 18.1 -5.0
PTRP Pietrapertosa 88.50 311 P **P** **14 52 55.9 +0.9**
comp=Z,352nm,1.1s,mb6.5
MTTG Motta San Giov 88.55 308 P **P** **14 52 56.8 +1.5**
comp=Z,178nm,1.1s,mb6.3
SCLL Scilla 88.55 308 P **P** **14 52 56.0 +0.7**
comp=Z,132nm,1.3s,mb6.1
ZST Bratislava 88.56 318 *e* P **P** **14 52 55.6 +0.5**
ZST pmax pmax
comp=Z,104nm,1.1s,mb6.1
ZST Bratislava 88.56 318 *e* P **P** **14 52 55.6 +0.5**
comp=Z,104nm,1.1s,mb6.1
ZST *e* PP PP 14 56 23.3 -0.6
CUC Castrocucco 88.64 310 *e* P **P** **14 52 54.9 -0.8**
comp=Z,158nm,1.4s,mb6.2
KTK1 Kautokeino 88.77 339 *e* P **P** **14 52 55.1 -0.5**
KTK1 AMb AMB 14 52 57.5
comp=Z,152nm,1.2s,mb6.2
KTK1 Kautokeino 88.77 339 *e* P **P** **14 52 55.1 -0.5**
comp=Z,152nm,1.2s,mb6.2
SOP Sopron 88.86 318⇑ *e* P **P** **14 52 57.1 +0.6**
RGNG Rignano Grg 88.96 312 P **P** **14 52 57.1 -0.1**
FG4 Candela 88.97 311 P **P** **14 52 57.8 +0.6**
FG4 pmax pmax
comp=Z,601nm,0.8s,mb7.0
FG4 Candela 88.97 311 P **P** **14 52 57.8 +0.6**
comp=Z,601nm,0.8s,mb7.0
VRAC Vranov 89.01 319⇑ *i* P **P** **14 52 57.8 +0.6**
VRAC Vranov 89.01 319 P **P** **14 52 58.0 +0.8**
GKP Gorka Klasztor 89.05 323 *e* P **P** **14 52 58.0 +0.7**
GKP Gorka Klasztor 89.05 323 *e* P **P** **14 52 58.0 +0.7**
SGO Sicignano 89.07 311 P **P** **14 52 58.2 +0.5**
SGO pmax pmax
comp=Z,148nm,1.1s,mb6.2
SGO Sicignano 89.07 311 P **P** **14 52 58.2 +0.5**
comp=Z,148nm,1.1s,mb6.2
FG5 Orsara di Pugl 89.17 311 P **P** **14 52 59.3 +1.2**
FG5 pmax pmax
comp=Z,170nm,1.1s,mb6.3
FG5 Orsara di Pugl 89.17 311 P **P** **14 52 59.3 +1.2**
comp=Z,170nm,1.1s,mb6.3
FG2 Serracapriola 89.29 312 P **P** **14 52 59.2 +0.5**
comp=Z,2µm,1.7s,mb7.3
DPC Dobruska-Polom 89.30 320⇑ *i* P **P** **14 52 59.1 +0.6**
DPC *ex* x 14 53 14.4
CSSN Cassano Irpino 89.31 311 P **P** **14 52 58.7 -0.1**
comp=Z,153nm,1.1s,mb6.2
CONA Conrad Observa 89.36 318⇑ *i* P **P** **14 52 58.6 -0.3**
comp=Z,57nm,1.1s,mb5.8,SNR=30
CSNA Conrad Observa 89.36 318⇑ *i* P **P** **14 52 58.5 -0.3**
comp=Z,54nm,1.2s,mb5.8
KSP Ksiaz 89.36 321 *e* P **P** **14 53 00.2 +1.4**
KSP Ksiaz 89.36 321⇑ *e* P **P** **14 52 58.9 +0.1**
KSP *e* pP pP 14 53 08.0 -5.1
GROS Grobnik 89.46 316⇓ *i* P **P** **14 52 59.4 +0.1**
ARSA Arzberg 89.52 317 *i* P **P** **14 52 59.8 +0.2**
comp=Z,140nm,1.3s,mb6.1,SNR=49
BOJS Bojanci 89.55 315 *i* P **P** **14 52 59.8 0.0**
BOJS *i* pP 14 53 11.4 -2.7
TREC Trest 89.73 319⇑ *e* P **P** **14 53 00.9 +0.3**
TREC *ex* x 14 53 16.6
PERS Pernice 89.74 317 *i* P **P** **14 53 00.8 +0.1**
SOKA Soboth 89.80 317⇑ *i* P **P** **14 53 01.3 +0.3**
comp=Z,184nm,1.2s,mb6.3
RNI2 Rionero Sannit 90.04 312 P **P** **14 53 01.5 -0.7**
comp=Z,298nm,1.6s,mb6.4
LJU Ljubljana 90.10 316 *i* P **P** **14 53 02.7 +0.3**
OBKA Obir 90.12 316⇑ *i* P **P** **14 53 02.8 +0.3**
comp=Z,99nm,1.1s,mb6.0,SNR=34
RFI Roccamonfina 90.13 311 P **P** **14 53 03.7 +1.1**
comp=Z,144nm,2.5s,mb5.9
INTR Introdacqua 90.24 312 P **P** **14 53 07.3 +4.2**
SDI San Donato 90.29 312 P **P** **14 53 03.3 -0.1**
SDI pmax pmax
comp=Z,124nm,1.4s,mb6.0
SDI San Donato 90.29 312 P **P** **14 53 03.3 -0.1**
comp=Z,124nm,1.4s,mb6.0
TRO Tromso 90.38 340 *e* P **P** **14 53 02.8 -0.4**
PRU Pruhonice 90.40 320⇑ *e* P **P** **14 53 03.8 +0.1**
JAVS Javornik 90.41 316 *i* P **P** **14 53 04.5 +0.6**
MOA Molln 90.42 318⇑ *i* P **P** **14 53 03.5 -0.3**
comp=Z,70nm,1.6s,mb5.8,SNR=13
PVCC Panska Ves 90.43 320⇑ *e* P **P** **14 53 04.1 +0.3**
PVCC *ex* x 14 53 20.1
AQU L'Aquila 90.64 312 P **P** **14 53 05.9 +0.9**
AQU pmax pmax
comp=Z,208nm,1.1s,mb6.4
AQU L'Aquila 90.64 312 P **P** **14 53 05.9 +0.9**
comp=Z,208nm,1.1s,mb6.4
MYKA Terra Mystica 90.75 316⇑ *i* P **P** **14 53 05.3 -0.2**
comp=Z,110nm,1.2s,mb6.1
BRG Berggiesshubel 90.85 321⇑ *i* P **P** **14 53 05.9 +0.1**
BRG *i* pP 14 53 20.3 +0.2
BRG 14 56 41.2
BRG pmax pmax
comp=Z,88nm,1.3s,mb5.9
BRG pmax pmax
comp=Z,26nm,1.4s,mb5.4
BRG Berggiesshubel 90.85 321 *e* P **P** **14 53 05.9 +0.1**
comp=Z,147nm,1.3s,mb6.2
BRG Berggiesshubel 90.85 321⇑ *i* P **P** **14 53 05.9 +0.2**
comp=Z,147nm,1.3s,mb6.2
BRG *i* pP 14 53 20.3 +0.2
comp=Z,100nm,1.5s
BRG PP PP 14 56 41.2 -0.9
comp=Z,43nm,1.4s
BRG *e* 15 03 31.7
comp=Z,3.0nm,1.1s
BRG *e* 15 04 01.1
comp=Z,6.8nm,1.1s
BRG *e* PKPPKP 15 18 28.0
comp=Z,0.8nm,0.7s
BRG Berggiesshubel 90.85 321⇑ *i* P **P** **14 53 05.9 +0.2**
comp=Z,88nm,1.3s,mb5.9
BRG *i* pP 14 53 20.3 +0.2
BRG PP PP 14 56 41.2 -0.9
BRG *e* 15 03 31.7
BRG *e* 15 04 01.1
CING Cingoli 90.86 313 P **P** **14 53 06.7 +0.7**
comp=Z,106nm,1.4s,mb6.0
GEC2 GERESS Array S 90.87 319 *e* P **P** **14 53 06.0 +0.1**
GEC2 pmax pmax
comp=Z,230nm,1.5s,mb6.3
GEC2 GERESS Array S 90.87 319 *e* P **P** **14 53 06.0 +0.1**
comp=Z,230nm,1.5s,mb6.3
GERES GERESS Array B 90.87 319 P **P** **14 53 05.9 0.0**
comp=Z,52nm,1.0s,mb5.8,baz=94,slow=4.0,SNR=112
GERES GERESS Array B 90.87 319 P **P** **14 53 05.9 0.0**
GERES pmax pmax
comp=Z,52nm,1.0s
NRCA Norcia 90.88 313 P **P** **14 53 05.8 -0.3**
comp=Z,53nm,1.0s,mb5.8
PTCC Patocco-Chiusa 90.94 316 P **P** **14 53 05.9 -0.4**
comp=Z,144nm,1.1s,mb6.2
KHC Kasperske Hory 90.97 319⇑ *i* P **P** **14 53 06.1 -0.2**
KHC *ex* x 14 53 20.4
KBA Koelnbreinsper 90.99 317⇑ *i* P **P** **14 53 06.6 +0.1**
comp=Z,68nm,1.2s,mb5.8,SNR=7.1
GMNA Gemona 91.01 316 P **P** **14 53 06.5 -0.1**
comp=Z,1µm,1.2s,mb7.1
SNTG Esanatoglia 91.03 313 P **P** **14 53 07.7 +0.9**
comp=Z,39nm,1.0s,mb5.7
RUE Ruedersdorf 91.06 322 *e* P **P** **14 53 07.1 +0.4**
comp=Z,351nm,1.3s,mb6.5
RUE Ruedersdorf 91.06 322 *e* P **P** **14 53 07.0 +0.3**
comp=Z,308nm,1.3s,mb6.5
FSSB Fossombrone 91.18 314 P **P** **14 53 08.4 +0.9**
comp=Z,224nm,1.5s,mb6.3

FBE Freiberg 91.23 321 *e* P **P** **14 53 07.6 +0.1**
comp=Z,154nm,1.3s,mb6.2
FVI Forni Avoltri 91.35 316 P **P** **14 53 06.0 -2.2**
SNAA Sanae 91.36 198 *e* P **P** **14 53 09.1 +1.4**
SNAA *e* pP 14 53 19.4 -2.7
SNAA *e* pP 14 53 24.9 +2.8
SNAA *e* 15 10 27.0
SNAA Sanae 91.36 198 *e* P **P** **14 53 08.8 +1.1**
SNAA pmax pmax
comp=Z,20nm,1.1s
SNAA Sanae 91.36 198 *e* P **P** **14 53 08.8 +1.0**
comp=Z,20nm,1.1s,mb5.4
RJOB Jochberg 91.40 318 *e* P **P** **14 53 07.6 -0.8**
comp=Z,66nm,1.2s,mb5.8
WET Wettzell 91.43 319 *e* P **P** **14 53 08.5 0.0**
WET pmax pmax
comp=Z,159nm,1.3s,mb6.2
WET Wettzell 91.43 319 *e* P **P** **14 53 08.5 0.0**
comp=Z,159nm,1.3s,mb6.2
CLL Collm 91.47 321 *i* P **P** **14 53 09.1 +0.5**
CLL *e* pP 14 53 23.0 0.0
CLL pmax pmax
comp=Z,84nm,1.2s,mb6.0
CLL Collm 91.47 321 *e* P **P** **14 53 08.2 -0.4**
comp=Z,84nm,1.2s,mb6.0
CLL Collm 91.47 321 *i* P **P** **14 53 09.1 +0.5**
comp=Z,84nm,1.2s,mb6.0
CLL *es* P sP 14 53 23.0 -5.3
CLL *e* PP PP 14 56 47.0 0.0
CLL *ex* x 14 57 08.0
CLL Collm 91.47 321 *i* P **P** **14 53 09.1 +0.5**
comp=Z,84nm,1.2s,mb6.0
CLL *e* pP 14 53 23.0 0.0
ABTA Abfaltersbach 91.54 317⇑ *i* P **P** **14 53 07.9 -1.1**
comp=Z,52nm,1.1s,mb5.8,SNR=15
BADI Badiali 91.56 313 P **P** **14 53 09.6 +0.4**
comp=Z,215nm,2.3s,mb6.1
HFS Hagfors 91.62 330 PP PP 14 56 39.8 -8.0
comp=Z,11nm,0.8s,baz=93,slow=7.4,SNR=5.3
MOR8 Moi Rana 91.70 336 *e* P **P** **14 53 08.7 -0.7**
MOR8 AMb AMB 14 53 10.9
comp=Z,91nm,1.2s,mb6.0
MOR8 Moi Rana 91.70 336 *e* P **P** **14 53 08.7 -0.7**
comp=Z,91nm,1.2s,mb6.0
NKC Novy Kostel 91.77 320⇑ *e* P **P** **14 53 10.5 +0.5**
NKC *ex* x 14 53 28.6
TANN Tannenbergstha 91.77 320 *e* P **P** **14 53 10.0 0.0**
comp=Z,72nm,1.4s,mb5.8
TANN *e* pP pP 14 53 25.1 +0.8
WERN Wernitzgruen 91.81 320 *e* P **P** **14 53 10.4 +0.2**
comp=Z,61nm,1.2s,mb5.8
GUNZ Gunzen 91.85 320 *e* P **P** **14 53 10.4 0.0**
comp=Z,88nm,1.2s,mb6.0
GUNZ *e* pP pP 14 53 26.5 +1.8
SFI Santa Sofia 91.86 314 P **P** **14 53 12.0 +1.4**
SFI pmax pmax
comp=Z,282nm,1.6s,mb6.3
SFI Santa Sofia 91.86 314 P **P** **14 53 12.0 +1.4**
comp=Z,282nm,1.6s,mb6.3
WERD Werda 91.87 320 *e* P **P** **14 53 10.4 -0.1**
comp=Z,80nm,1.2s,mb5.9
ROTZ Rotzenmuhle 91.90 320 *e* P **P** **14 53 11.1 +0.5**
comp=Z,92nm,1.2s,mb6.0
MANZ Manzenberg 91.97 320 *e* P **P** **14 53 11.4 +0.4**
comp=Z,151nm,1.2s,mb6.2
MANZ *e* pP pP 14 53 27.2 +1.9
VMG Vicchio 92.08 314 P **P** **14 53 12.6 +0.9**
comp=Z,77nm,1.2s,mb5.9
CTI Castel Tesino 92.10 316 P **P** **14 53 11.7 0.0**
CTI pmax pmax
comp=Z,59nm,1.1s,mb5.8
CTI Castel Tesino 92.10 316 P **P** **14 53 11.7 0.0**
comp=Z,59nm,1.1s,mb5.8
SPB4 Spitsbergen Ar 92.14 348 *e* P **P** **14 53 09.7 -1.5**
WTTA Wattenberg 92.16 317 *i* P **P** **14 53 11.4 -0.5**
comp=Z,79nm,1.1s,mb6.0,SNR=23
LOF Lofoten 92.17 338 *e* P **P** **14 53 13.5 +2.0**
WATA Walderalm 92.21 317⇑ *i* P **P** **14 53 11.3 -0.8**
comp=Z,77nm,1.3s,mb5.9,SNR=6.5
MOX Moxa 92.31 320 *e* P **P** **14 53 13.3 +0.7**
comp=Z,120nm,1.5s,mb6.0
MOX *e* pP 14 53 28.3 +1.4
MOX *e* 14 56 52.7
MOX Moxa 92.31 320 *e* P **P** **14 53 13.3 +0.7**
MOX *e* pP 14 53 28.3 +1.4
MOX *e* 14 56 52.7
MOX pmax pmax
comp=Z,120nm,1.5s,mb6.0
MOX Moxa 92.31 320 *e* P **P** **14 53 12.5 -0.1**
comp=Z,80nm,1.2s,mb5.9
APPI Appiano 92.41 316 P **P** **14 53 12.5 -0.6**
comp=Z,106nm,2.0s,mb5.8
FUR Furstenfeldbru 92.44 318 *e* P **P** **14 53 12.6 -0.6**
FUR pmax pmax
comp=Z,126nm,1.3s,mb6.1
FUR Furstenfeldbru 92.44 318 *e* P **P** **14 53 12.6 -0.6**
comp=Z,126nm,1.3s,mb6.1
GRFL Gerfalco 92.47 313 P **P** **14 53 13.4 0.0**
comp=Z,9.1nm,0.6s,mb5.3
MOTA Moosalm 92.53 317⇑ *i* P **P** **14 53 12.9 -0.7**
comp=Z,74nm,1.1s,mb6.0,SNR=20
GRA1 Grafenberg Arr 92.53 319 *e* P **P** **14 53 13.8 +0.2**
comp=Z,121nm,1.3s,mb6.2
GRA1 *e* PP PP 14 56 53.9 -1.5
GRF Grafenberg Arr 92.53 319 *e* P **P** **14 53 13.8 +0.2**
GRF *e* 14 56 53.9
GRF pmax pmax
comp=Z,121nm,1.3s,mb6.2
GRF Grafenberg Arr 92.53 319 *e* P **P** **14 53 13.8 +0.2**
GRF *e* 14 56 53.9
GRF pmax pmax
comp=Z,121nm,1.3s,mb6.2
GRF Grafenberg Arr 92.53 319 *e* P **P** **14 53 13.8 +0.2**
comp=Z,121nm,1.3s,mb6.2
GRF *e* PP PP 14 56 53.9 -1.5
GRFO Grafenberg 92.53 319 *e* P **P** **14 53 13.9 +0.3**
GRFO pmax pmax
comp=Z,116nm,1.3s,mb6.2
GRFO Grafenberg 92.53 319 *e* P **P** **14 53 13.9 +0.3**
comp=Z,116nm,1.3s,mb6.2
NSS Namsos 92.64 334 *e* P **P** **14 53 12.3 -1.4**
RETA Reutte 92.76 317⇑ *i* P **P** **14 53 14.3 -0.4**
comp=Z,95nm,1.4s,mb6.0,SNR=18
FETA Feichten 92.77 317 *i* P **P** **14 53 14.6 -0.1**
comp=Z,61nm,1.2s,mb5.9,SNR=29
GSCL Gusciola 92.79 314 P **P** **14 53 16.0 +1.1**
comp=Z,112nm,1.4s,mb6.1
NB2 NORSAR Subarra 92.89 331 P **P** **14 53 14.0 -0.9**
comp=Z,67nm,1.2s,mb6.0,baz=97,slow=4.6
NOA NORSAR Array B 92.89 331 P **P** **14 53 14.2 -0.7**
comp=Z,30nm,1.0s,mb5.7,baz=95,slow=5.0,SNR=28
NOA PP PP 14 56 48.8 -9.0
comp=Z,10nm,1.0s,baz=93,slow=7.0,SNR=4.0
NOA NORSAR Array B 92.89 331 P **P** **14 53 14.3 -0.6**
NOA pmax pmax
comp=Z,30nm,1.0s
NOA pmax pmax
comp=Z,10.0nm,1.0s
MABI Malga Bissina 92.89 316 P **P** **14 53 14.9 -0.4**
comp=Z,29nm,1.2s,mb5.6
ERBM Eremo 92.92 314 P **P** **14 53 16.5 +1.0**
VNA2 Neumayer--Watz 92.98 198 *e* P **P** **14 53 18.0 +2.8**
VNA2 *e* pP 14 53 28.0 -1.6
VNA2 *e* pP 14 53 31.7 +2.1
VNA2 *e* 15 10 23.0
KBS Kingsbay 93.06 349 *e* P **P** **14 53 13.4 -2.1**
CLZ Clausthal 93.13 322 *e* P **P** **14 53 16.1 -0.2**
CLZ *e** PP pP 14 53 31.8 +1.2
CLZ pmax pmax
comp=Z,74nm,1.3s,mb6.0
CLZ Clausthal 93.13 322 *e* P **P** **14 53 16.1 -0.2**
comp=Z,74nm,1.3s,mb6.0
CLZ *e* pP pP 14 53 31.8 +1.2
BSEG Bad Segeberg 93.21 324 *e* P **P** **14 53 16.7 +0.1**
BSEG pmax pmax
comp=Z,66nm,1.1s,mb6.0
BSEG Bad Segeberg 93.21 324 *e* P **P** **14 53 16.7 +0.1**
comp=Z,66nm,1.1s,mb6.0
NRDL Niedersach Rie 93.31 322 *e* P **P** **14 53 17.1 0.0**
comp=Z,63nm,1.2s,mb5.9
VNA1 Neumayer--Stat 93.34 198 *e* P **P** **14 53 19.7 +2.8**
VNA1 *e* pP 14 53 33.4 +2.2
VNA1 *e* pP 14 53 36.5 +5.3
VNA1 *e* 15 10 22.0
UBBA Unterbreizbach 93.35 321 *e* P **P** **14 53 16.9 -0.4**
comp=Z,41nm,1.4s,mb5.7
UBBA *e* pP pP 14 53 32.2 +0.6
DAVA Damuels 93.36 317⇑ *i* P **P** **14 53 17.3 -0.2**
comp=Z,102nm,1.2s,mb6.1,SNR=27
KEST Kesra 93.50 305 P **P** **14 53 19.4 +1.0**
comp=Z,18nm,1.0s,mb5.5,baz=312,slow=0.9,SNR=40
VSL Villasalto 93.56 309 *e* P **P** **14 53 18.5 -0.1**
comp=Z,39nm,1.3s,mb5.7
VNA3 Neumayer Olymp 93.57 198 *e* P pP 14 53 33.7 +1.4
VNA3 *e* 14 53 37.2
VNA3 *e* 15 10 21.8
KONO Kongsberg 93.67 329⇑ *e* P **P** **14 53 19.5 +0.9**
TUE Stuetta 93.71 316 *e* P **P** **14 53 18.8 -0.2**
comp=Z,26nm,1.1s,mb5.6
STU Stuttgart 93.84 319 *e* P **P** **14 53 19.2 -0.4**
comp=Z,150nm,2.1s,mb6.0
PGF Pioggiola 93.90 312⇑ *i* P **P** **14 53 20.4 +0.3**
comp=Z,104nm,1.4s,mb5.8
PGF Pioggiola 93.90 312⇑ *i* P **P** **14 53 20.4 +0.3**
PGF pmax pmax
comp=Z,52nm,1.4s,mb5.8
PGF Pioggiola 93.90 312⇑ *i* P **P** **14 53 20.4 +0.3**
comp=Z,52nm,1.4s,mb5.8
TOD Tromm 94.10 319 *e* P **P** **14 53 20.9 +0.1**
SPAK Spaichingen-Ko 94.11 318 *e* P **P** **14 53 21.4 +0.5**
BFO Black Forest 94.41 318 P **P** **14 53 22.7 +0.4**
comp=Z,123nm,1.2s,mb6.2,SNR=6.6
BFO Black Forest 94.41 318 *e* P **P** **14 53 22.0 -0.3**
BFO pmax pmax
comp=Z,35nm,1.2s,mb5.7
BFO Black Forest 94.41 318 *e* P **P** **14 53 22.0 -0.3**
comp=Z,35nm,1.2s,mb5.7
FIN Finale Ligure 94.49 314 P **P** **14 53 22.6 -0.1**
KTD Kalmit 94.57 319 *e* P **P** **14 53 23.4 +0.4**
FELD Feldberg im Sc 94.63 318 *e* P **P** **14 53 23.6 +0.3**
IBBN Ibbenburen 94.75 322 *e* P **P** **14 53 23.3 -0.4**
comp=Z,95nm,1.4s,mb6.0
LANF Langenberg 94.76 319 *e* P **P** **14 53 24.3 +0.5**
LIBD Limburg 94.90 318 *e* P **P** **14 53 24.5 0.0**
ABH Alteburg 94.92 320 *e* P **P** **14 53 25.2 +0.7**
BBS Basel-Blauen 94.97 317 *e* P **P** **14 53 25.2 +0.4**
SBF Sospel 95.05 314 *e* P **P** **14 53 25.4 +0.1**
BUG Bochum--Univer 95.07 321 *e* P **P** **14 53 24.6 -0.6**
comp=Z,46nm,1.3s,mb5.8
CDF Champ du Feu 95.11 318⇑ *i* P **P** **14 53 25.3 -0.2**
comp=Z,58nm,1.3s,mb5.5
CDF Champ du Feu 95.11 318⇑ *i* P **P** **14 53 25.3 -0.2**
CDF pmax pmax
comp=Z,29nm,1.3s,mb5.5
CDF Champ du Feu 95.11 318⇑ *i* P **P** **14 53 25.3 -0.2**
comp=Z,29nm,1.3s,mb5.5
ECH Echery 95.20 318 *e* P **P** **14 53 25.7 -0.2**
ECH Echery 95.20 318 P **P** **14 53 25.4 -0.5**
ECH Echery 95.20 318 *e* P **P** **14 53 25.3 -0.6**
MOF Molkenrain 95.22 318 *e* P **P** **14 53 26.2 +0.2**
RUP Ruppelstein 95.23 319 *e* P **P** **14 53 26.3 +0.3**
HINF Hinteralfeld 95.41 318 *e* P **P** **14 53 26.3 -0.5**
LOMF Lomont 95.44 317 *e* P **P** **14 53 26.4 -0.6**
MBDF Montbardon 95.52 314 *e* P **P** **14 53 27.0 -0.4**
LPG La Plagne 95.52 315⇑ *i* P **P** **14 53 27.7 +0.3**
comp=Z,36nm,1.0s,mb5.5
LPG La Plagne 95.52 315⇑ *i* P **P** **14 53 27.7 +0.3**
LPG pmax pmax
comp=Z,18nm,1.0s,mb5.5
LPG La Plagne 95.52 315⇑ *i* P **P** **14 53 27.7 +0.3**
comp=Z,18nm,1.0s,mb5.5
LPL La Plagne 95.53 315⇑ *i* P **P** **14 53 27.7 +0.2**
comp=Z,50nm,1.0s,mb5.6
LPL La Plagne 95.53 315⇑ *i* P **P** **14 53 27.7 +0.2**
LPL pmax pmax
comp=Z,25nm,1.0s,mb5.6
LPL La Plagne 95.53 315⇑ *i* P **P** **14 53 27.7 +0.2**
comp=Z,25nm,1.0s,mb5.6
BNI Bardonecchia 95.58 315 P **P** **14 53 27.7 0.0**
BNI pmax pmax
comp=Z,13nm,1.1s,mb5.3
BNI Bardonecchia 95.58 315 *e* P **P** **14 53 27.5 -0.2**
comp=Z,13nm,1.1s,mb5.3
FRF La Foret Royal 95.63 313⇑ *i* P **P** **14 53 28.1 +0.2**
comp=Z,53nm,1.1s,mb5.6
FRF La Foret Royal 95.63 313⇑ *i* P **P** **14 53 28.1 +0.2**
FRF pmax pmax
comp=Z,27nm,1.1s,mb5.6
FRF La Foret Royal 95.63 313⇑ *i* P **P** **14 53 28.1 +0.2**
comp=Z,27nm,1.1s,mb5.6
LMR La Mourre 95.73 313⇑ *i* P **P** **14 53 28.5 +0.1**
comp=Z,41nm,1.1s,mb5.5
LMR La Mourre 95.73 313⇑ *i* P **P** **14 53 28.5 +0.1**
LMR pmax pmax
comp=Z,21nm,1.1s,mb5.5
LMR La Mourre 95.73 313⇑ *i* P **P** **14 53 28.5 +0.1**
comp=Z,21nm,1.1s,mb5.5
HAU Haudompre 95.74 318⇑ *i* P **P** **14 53 28.2 -0.2**
comp=Z,108nm,1.3s,mb5.8
HAU Haudompre 95.74 318⇑ *i* P **P** **14 53 28.2 -0.2**
HAU pmax pmax
comp=Z,54nm,1.3s,mb5.8
HAU Haudompre 95.74 318⇑ *i* P **P** **14 53 28.2 -0.2**
comp=Z,54nm,1.3s,mb5.8
WLF Walferdange 95.83 319 P **P** **14 53 29.7 +1.0**
comp=Z,29nm,1.7s,mb5.4
WLF Walferdange 95.83 319 *e* P **P** **14 53 28.5 -0.2**
comp=Z,52nm,1.3s,mb5.8
MEM Membach 95.89 320 P **P** **14 53 29.3 +0.4**
CABF La Chapelle 95.96 316⇑ *i* P **P** **14 53 29.6 +0.2**
comp=Z,98nm,1.3s,mb5.8
CABF La Chapelle 95.96 316⇑ *i* P **P** **14 53 29.6 +0.2**
CABF pmax pmax
comp=Z,49nm,1.3s,mb5.8
CABF La Chapelle 95.96 316⇑ *i* P **P** **14 53 29.6 +0.2**
comp=Z,49nm,1.3s,mb5.8
THEF They Montfort 95.98 318 *e* P **P** **14 53 29.3 -0.1**
TAVF Tavernes 96.05 313 *e* P **P** **14 53 29.3 -0.6**
ORIF Oris-en-Rattie 96.15 315⇑ *i* P **P** **14 53 30.5 +0.2**
comp=Z,39nm,1.3s,mb5.4
ORIF Oris-en-Rattie 96.15 315⇑ *i* P **P** **14 53 30.5 +0.2**
ORIF pmax pmax
comp=Z,20nm,1.3s,mb5.4
ORIF Oris-en-Rattie 96.15 315⇑ *i* P **P** **14 53 30.5 +0.2**
comp=Z,20nm,1.3s,mb5.4
PUYF Puyloubier 96.31 313 *e* P **P** **14 53 30.3 -0.8**
BERF Bertagne 96.33 313 *e* P **P** **14 53 31.0 -0.1**
BCLA Clavier 96.34 320 P **P** **14 53 30.9 -0.1**
comp=Z,10nm,1.4s,mb5.1
SMRF Simiane la Rot 96.39 314 *e* P **P** **14 53 32.1 +0.7**
comp=Z,83nm,1.6s,mb5.6
SMRF Simiane la Rot 96.39 314 *e* P **P** **14 53 32.1 +0.7**
comp=Z,83nm,1.6s,mb5.6
GELF Grande-Etoile 96.52 313 *e* P **P** **14 53 31.7 -0.3**
TREF Trevaresse 96.54 313 *e* P **P** **14 53 32.9 +0.8**
GIVF Givet 96.67 320⇑ *i* P **P** **14 53 32.5 0.0**
comp=Z,36nm,1.0s,mb5.5
GIVF Givet 96.67 320⇑ *i* P **P** **14 53 32.5 0.0**
GIVF pmax pmax
comp=Z,18nm,1.0s,mb5.5
GIVF Givet 96.67 320⇑ *i* P **P** **14 53 32.5 0.0**
comp=Z,18nm,1.0s,mb5.5
DOU Dourbes 96.81 320 P **P** **14 53 33.4 +0.2**
UCC Uccle 96.92 321 P **P** **14 53 33.9 +0.3**
VIVF Saint-Julien-l 97.01 315⇑ *i* P **P** **14 53 34.1 -0.1**
comp=Z,31nm,1.3s,mb5.3
VIVF Saint-Julien-l 97.01 315⇑ *i* P **P** **14 53 34.1 -0.1**
VIVF pmax pmax
comp=Z,16nm,1.3s,mb5.3
VIVF Saint-Julien-l 97.01 315⇑ *i* P **P** **14 53 34.1 -0.1**
comp=Z,16nm,1.3s,mb5.3
BAIF Baives 97.06 320⇑ *i* P **P** **14 53 34.5 +0.2**
comp=Z,66nm,1.1s,mb5.7
BAIF Baives 97.06 320⇑ *i* P **P** **14 53 34.5 +0.2**
BAIF pmax pmax
comp=Z,33nm,1.1s,mb5.7
BAIF Baives 97.06 320⇑ *i* P **P** **14 53 34.5 +0.2**
comp=Z,33nm,1.1s,mb5.7
LOR Lormes 97.46 317⇑ *i* P **P** **14 53 36.1 0.0**
comp=Z,75nm,1.3s,mb5.7
LOR Lormes 97.46 317⇑ *i* P **P** **14 53 36.1 0.0**
LOR pmax pmax
comp=Z,38nm,1.3s,mb5.7
LOR Lormes 97.46 317⇑ *i* P **P** **14 53 36.1 0.0**
comp=Z,38nm,1.3s,mb5.7
SMF Signal de Mont 97.50 316⇑ *i* P **P** **14 53 36.2 -0.2**
comp=Z,89nm,1.3s,mb5.8
SMF Signal de Mont 97.50 316⇑ *i* P **P** **14 53 36.2 -0.2**
SMF pmax pmax
comp=Z,44nm,1.3s,mb5.8
SMF Signal de Mont 97.50 316⇑ *i* P **P** **14 53 36.2 -0.2**

comp=Z,44nm,1.3s,mb5.8
LASF Ste Croix 97.63 314 ⇑*i*P P 14 53 37.1 +0.1
comp=Z,28nm,1.2s,mb5.3
SSF Saint Saulge 97.71 317 ⇑*i*P P 14 53 37.3 0.0
comp=Z,54nm,1.3s,mb5.6
SSF Saint Saulge 97.71 317 ⇑*i*P P 14 53 37.3 0.0
SSF pmax pmax
comp=Z,27nm,1.3s,mb5.6
SSF Saint Saulge 97.71 317 ⇑*i*P P 14 53 37.3 0.0
comp=Z,27nm,1.3s,mb5.6
AVF Avril sur Loir 97.83 317 ⇑*i*P P 14 53 37.8 0.0
comp=Z,52nm,1.3s,mb5.6
AVF Avril sur Loir 97.83 317 ⇑*i*P P 14 53 37.8 0.0
AVF pmax pmax
comp=Z,26nm,1.3s,mb5.6
AVF Avril sur Loir 97.83 317 ⇑*i*P P 14 53 37.8 0.0
comp=Z,26nm,1.3s,mb5.6
BGF Bois d'Agland 98.19 316 ⇑*i*P P 14 53 39.9 +0.4
comp=Z,64nm,1.2s,mb5.7
BGF Bois d'Agland 98.19 316 ⇑*i*P P 14 53 39.9 +0.4
BGF pmax pmax
comp=Z,32nm,1.2s,mb5.7
BGF Bois d'Agland 98.19 316 ⇑*i*P P 14 53 39.9 +0.4
comp=Z,32nm,1.2s,mb5.7
TCF Toulx Ste Croi 98.65 316 *e*P P 14 53 40.8 -0.7
comp=Z,22nm,1.2s,mb5.2
TCF Toulx Ste Croi 98.65 316 *e*P P 14 53 40.8 -0.7
TCF pmax pmax
comp=Z,11nm,1.3s,mb5.2
TCF Toulx Ste Croi 98.65 316 *e*P P 14 53 40.8 -0.7
comp=Z,11nm,1.3s,mb5.2
CAF Calviac 98.86 315 *e*P P 14 53 43.0 +0.5
comp=Z,79nm,1.7s,mb5.7
CAF Calviac 98.86 315 *e*P P 14 53 43.0 +0.5
CAF pmax pmax
comp=Z,40nm,1.7s,mb5.7
CAF Calviac 98.86 315 *e*P P 14 53 43.0 +0.5
comp=Z,40nm,1.7s,mb5.7
MTLF Montolieu 98.86 313 ⇑*i*P P 14 53 42.8 +0.3
comp=Z,38nm,1.4s,mb5.4
MTLF Montolieu 98.86 313 ⇑*i*P P 14 53 42.8 +0.3
MTLF pmax pmax
comp=Z,19nm,1.4s,mb5.4
MTLF Montolieu 98.86 313 ⇑*i*P P 14 53 42.8 +0.3
comp=Z,19nm,1.4s,mb5.4
IMA2 Indian Mountai 99.03 24 *e*P P 14 53 41.8 -1.0
LDF La Druitiere 100.01 319 *e*P Pdif 14 53 47.3 -0.1
TORD Torodi Ar. Bea 100.11 283 P Pdif 14 53 49.4 +1.6
comp=Z,3.5nm,1.1s,baz=96,slow=5.1,SNR=12
TORD pP 14 54 04.1
comp=Z,4.1nm,1.0s,baz=82,slow=3.1,SNR=9.4
TORD PP PP 14 57 57.8 +2.9
comp=Z,2.0nm,1.1s,baz=57,slow=5.3,SNR=3.2
TORD PKiKP PKiKP 14 58 16.3 -0.1
comp=Z,3.2nm,0.9s,baz=98,slow=2.0,SNR=10.0
TORD PKKPbc PKKPbc 15 10 07.5 +0.8
comp=Z,0.9nm,0.5s,baz=303,slow=3.1,SNR=6.9
TORD Torodi Ar. Bea 100.11 283 P Pdif 14 53 49.4 +1.6
TORD pP 14 54 04.1
TORD PP PP 14 57 57.8 +2.9
FLN La Foliniere 100.23 319 ⇑*i*P Pdif 14 53 48.3 -0.1
comp=Z,45nm,1.1s
FLN La Foliniere 100.23 319 ⇑*i*P Pdif 14 53 48.3 -0.1
FLN pmax pmax
comp=Z,22nm,1.1s
FLN La Foliniere 100.23 319 ⇑*i*P Pdif 14 53 48.3 -0.1
comp=Z,22nm,1.1s
MFF Saint Martin d 100.25 317 ⇑*i*P Pdif 14 53 48.7 +0.3
comp=Z,55nm,1.4s
MFF Saint Martin d 100.25 317 ⇑*i*P Pdif 14 53 48.7 +0.3
MFF pmax pmax
comp=Z,33nm,1.4s
MFF Saint Martin d 100.25 317 ⇑*i*P Pdif 14 53 48.7 +0.3
comp=Z,32nm,1.4s
EPF Esparros 100.25 313 *e*P Pdif 14 53 49.2 +0.7
GRR Gorron 100.52 318 *e*P Pdif 14 53 49.9 +0.2
comp=Z,42nm,1.2s
GRR Gorron 100.52 318 *e*P Pdif 14 53 49.9 +0.2
GRR pmax pmax
comp=Z,21nm,1.2s
GRR Gorron 100.52 318 *e*P Pdif 14 53 49.9 +0.2
comp=Z,21nm,1.2s
EKA Eskdalemuir Ar 100.90 326 PP PP 14 57 57.8 -1.9
comp=Z,7.1nm,0.9s,baz=87,slow=6.9,SNR=5.6
EKA PKKPbc PKKPbc 15 10 04.9 -0.9
comp=Z,0.8nm,0.5s,baz=257,slow=3.0,SNR=3.7
ETSF Etsaut 100.92 313 ⇑*i*P Pdif 14 53 52.5 +1.1
SGMF Saint Gilles 101.66 319 *e*P Pdif 14 53 54.8 +0.1
QUIF Quistinic 102.12 318 *e*P Pdif 14 53 56.8 0.0
comp=Z,30nm,1.1s
QUIF Quistinic 102.12 318 *e*P Pdif 14 53 56.8 0.0
QUIF pmax pmax
comp=Z,15nm,1.1s
QUIF Quistinic 102.12 318 *e*P Pdif 14 53 56.8 0.0
comp=Z,15nm,1.1s
ROSF Rostrenen 102.12 319 *e*P Pdif 14 53 55.9 -0.9
ESDC Sonseca Array 103.84 310 PP PP 14 58 23.2 +1.0
comp=Z,8.7nm,1.1s,baz=64,slow=6.0,SNR=6.1
ESDC PKKPbc PKKPbc 15 09 54.8 -1.8
comp=Z,0.2nm,0.3s,baz=298,slow=3.3,SNR=4.2
MID Middleton Isla 104.03 29 *e*P Pdif 14 54 04.2 -1.1
DBIC Dimbokro 106.44 276 PKiKP PKiKP 14 58 27.8 -0.2
comp=Z,1.2nm,0.5s,baz=131,slow=4.5,SNR=4.8
DBIC PKKP PKKPab 15 10 02.7 -1.3
comp=Z,5.8nm,0.9s,baz=326,slow=0.9,SNR=5.7
DBIC Dimbokro 106.44 276 PKPdf PKiKP 14 58 27.8 -0.2
DBIC PKKP PKKPab 15 10 02.7 -1.4
YKA Yellowknife Ar 115.18 18 PKP PKiKP 14 58 41.2 -1.9
comp=Z,7.0nm,0.9s,baz=314,slow=2.2,SNR=17
YKA PP PP 14 59 31.7 -11
comp=Z,4.1nm,0.9s,baz=318,slow=7.7,SNR=7.2
YKA PKKP PKKPdf 15 09 35.9 -8.7
comp=Z,2.6nm,1.0s,baz=134,slow=4.2,SNR=5.5
YKA Yellowknife Ar 115.18 18 PKiKP PKiKP 14 58 41.2 -1.9
YKA pmax pmax
comp=Z,7.0nm,0.9s
YKA pmax pmax
comp=Z,4.0nm,1.0s
YKA pmax pmax
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 115.18 18 PKP PKiKP 14 58 41.2 -1.9
YKA PP PP 14 59 31.8 -11
YKA PKKP PKKPdf 15 09 35.9 -8.7
B04A Port Angeles 121.12 34 ⇓P PKPdf 14 58 54.5 -0.6
baz=121
A04A Legoe Bay, Lum 121.18 33 ⇓P PKPdf 14 58 54.5 -0.6
baz=121
NLWA Neilton Lookou 121.30 34 ⇓P PKPdf 14 58 54.8 -0.6
baz=121
A05A Maple Falls 121.34 32 ⇑P PKPdf 14 58 54.8 -0.6
baz=121
D03A Wishkah Elem. 121.51 35 ⇑P PKPdf 14 58 55.3 -0.5
baz=121
A06A Chilliwack 121.60 32 ⇑P PKPdf 14 58 55.4 -0.6
baz=122
HDW Hoodsport 121.61 34 P PKPdf 14 58 56.0 +0.1
C04A Brinnon 121.61 34 ⇑P PKPdf 14 58 55.6 -0.3
baz=122
CMW Cultus Mountai 121.67 33 P PKPdf 14 58 55.9 -0.2
B05A Bryant 121.77 33 ⇓P PKPdf 14 58 55.8 -0.5
baz=122
JCW Jim Creek 121.91 33 *e*PKPdf PKPdf 14 58 56.2 -0.3
E03A Lebam 121.94 35 ⇑P PKPdf 14 58 56.2 -0.5
baz=122
B06A Marblemount 121.95 32 ⇑P PKPdf 14 58 56.1 -0.5
baz=122
RPW Rockport 121.98 32 *e*PKPdf PKPdf 14 58 55.3 -1.3
BMW Boistfort Moun 122.17 35 *e*PKiKP PKPdf 14 58 56.9 -0.2
A07A Ashnola River, 122.20 31 ⇑P PKPdf 14 58 56.6 -0.5
baz=122
F03A Seaside 122.29 36 ⇑P PKPdf 14 58 56.7 -0.6
baz=122
C05A Tolt Reservoir 122.33 33 ⇓P PKPdf 14 58 56.8 -0.5
baz=122
E04A Onalaska 122.40 35 ⇑P PKPdf 14 58 56.9 -0.7
baz=122
D05A Enumclaw 122.46 34 ⇑P PKPdf 14 58 57.1 -0.5
baz=122
EDM Edmonton 122.61 24 PKiKP PKPdf 14 58 56.8 -0.9
EDM Edmonton 122.61 24 *e*PKPdf PKPdf 14 58 56.3 -1.4
C06A Tall Timber Ra 122.62 32 ⇓P PKPdf 14 58 57.3 -0.6
baz=122
B07A Winthrop 122.70 32 ⇑P PKPdf 14 58 57.4 -0.6
baz=123
H02A Toledo 122.71 37 ⇓P PKPdf 14 58 57.7 -0.5
baz=123
G03A Yamhill 122.79 36 ⇓P PKPdf 14 58 57.7 -0.6
baz=123
TDL Tradedollar La 122.82 35 P PKPdf 14 58 58.0 -0.3
NLW Nelson Butte 122.83 32 P PKPdf 14 58 58.2 -0.1
A08A Turner Farm, O 122.83 31 ⇓P PKPdf 14 58 57.8 -0.5
baz=123
LVP Lakeview Peak 122.87 35 P PKPdf 14 58 58.9 +0.4
F04A Amboy 122.94 35 ⇑P PKPdf 14 58 58.1 -0.5
baz=123
MPOR Mary's Peak 123.07 37 P PKPdf 14 58 59.3 +0.4
D06A Clatlum 123.09 33 ⇑P PKPdf 14 58 58.3 -0.5
baz=123
ETW Entiat 123.12 32 *e*PKPdf PKPdf 14 58 58.2 -0.7
H03A Soap Creek Ran 123.13 37 ⇓P PKPdf 14 58 58.6 -0.4
baz=123
A09A Danville 123.17 30 ⇑P PKPdf 14 58 58.5 -0.4
baz=123
I02A Mapleton 123.17 38 ⇓P PKPdf 14 58 58.8 -0.3
baz=123
B08A Colville Reser 123.18 31 ⇑P PKPdf 14 58 58.4 -0.6
baz=123
C07A Waterville 123.21 32 ⇑P PKPdf 14 58 58.5 -0.6
baz=123
RNO Roman Nose 123.28 38 P PKPdf 14 58 59.4 +0.1
G04A Mulino 123.32 36 ⇑P PKPdf 14 58 58.8 -0.6
baz=123
K01A Sixes 123.40 39 ⇓P PKPdf 14 58 59.2 -0.4
baz=123
E06A Yakima 123.40 34 ⇑P PKPdf 14 58 59.2 -0.3
baz=123
KEBM Edson Butte 123.45 39 *e*PKPdf PKPdf 14 58 59.9 +0.2
F05A White Salmon 123.52 35 ⇓P PKPdf 14 58 59.3 -0.4
baz=123
I03A Eugene 123.53 37 ⇓P PKPdf 14 58 59.3 -0.5
baz=123
D07A Quincy 123.56 33 ⇓P PKPdf 14 58 59.3 -0.5
baz=123
J02A Umpqua 123.67 38 ⇓P PKPdf 14 58 59.6 -0.4
baz=124
A10A Nehport 123.68 30 ⇓P PKPdf 14 58 59.5 -0.4
baz=124
C08A Higginbotham F 123.69 32 ⇑P PKPdf 14 58 59.6 -0.4
baz=124
B09A Rice 123.75 31 ⇓P PKPdf 14 58 59.6 -0.5
baz=124
H04A Detroit Lake 123.79 36 ⇓P PKPdf 14 58 59.7 -0.5
baz=124
F06A Goldendale 123.97 34 ⇓P PKPdf 14 59 00.3 -0.3
baz=124
G05A Wamic 123.97 35 ⇓P PKPdf 14 59 00.4 -0.1
baz=124
E07A Sunnyside 124.02 33 ⇑P PKPdf 14 59 00.5 -0.2
baz=124
C09A Chrisman Ranch 124.08 31 ⇑P PKPdf 14 59 00.5 -0.2
baz=124
OD2 Odessa Site #2 124.11 32 P PKPdf 14 59 00.2 -0.5
M01C Crescent City 124.12 40 ⇑P PKPdf 14 59 00.6 -0.4
baz=124
I04A Tendick Farm, 124.15 37 ⇓P PKPdf 14 59 00.6 -0.4
baz=124
D08A Wollman Farm, 124.21 32 ⇓P PKPdf 14 59 00.8 -0.2
baz=124
RSW Rattlesnake Hi 124.26 33 *e*PKPdf PKPdf 14 59 01.0 -0.1
A11A Hall Mountain, 124.28 29 ⇓P PKPdf 14 59 01.0 -0.1
baz=124
L02A Cave Junction 124.29 39 ⇑P PKPdf 14 59 01.1 -0.2
baz=124
NEW Newport 124.37 30 PKiKP PKPdf 14 59 01.2 0.0
NEW Newport 124.37 30 *e*PKPdf PKPdf 14 59 00.2 -1.0
G06A Carlson Farm, 124.37 35 ⇓P PKPdf 14 59 01.3 -0.1
baz=124
H05A Madras 124.37 36 ⇑P PKPdf 14 59 01.3 -0.1
baz=124
F07A Phinny Hill Vi 124.38 34 ⇓P PKPdf 14 59 01.3 0.0
baz=124
HUMO Hull Mountain 124.46 39 ⇑P PKPdf 14 59 01.5 -0.1
baz=124
E08A Dider Farm, El 124.49 33 ⇓P PKPdf 14 59 01.4 -0.2
baz=124
D09A Jones Farm, Ri 124.53 32 ⇓P PKPdf 14 59 01.4 -0.2
baz=124
I05A Bend 124.62 36 ⇑P PKPdf 14 59 01.8 -0.1
baz=124
B11A Sandpoint 124.63 30 ⇑P PKPdf 14 59 01.6 -0.2
baz=124
J04A Umpqua Nationa 124.64 38 ⇑P PKPdf 14 59 01.9 0.0
baz=124
A12A Yaak River Ran 124.64 29 ⇓P PKPdf 14 59 01.6 -0.1
baz=124
JCC Jacoby Creek 124.70 41 ⇑P PKPdf 14 59 02.1 0.0
baz=125
VIPM Ingram Point 124.81 36 PKiKP PKPdf 14 59 02.3 +0.1
H06A Lindquist Farm 124.84 35 ⇑P PKPdf 14 59 02.1 -0.1
baz=125
G07A Ruggs Ranch, H 124.90 34 ⇑P PKPdf 14 59 02.0 -0.4
baz=125
E09A Wood Farm, Sta 124.97 32 ⇓P PKPdf 14 59 02.1 -0.3
baz=125
B12A Libby 124.99 29 ⇑P PKPdf 14 59 02.0 -0.4
baz=125
F08A Pendleton 125.07 33 ⇓P PKPdf 14 59 02.4 -0.3
baz=125
YBH Yreka Blue Hor 125.08 39 ⇓P PKPdf 14 59 02.6 -0.2
baz=125
D10A Wagner Farm, O 125.08 31 ⇓P PKPdf 14 59 02.4 -0.3
baz=125
C11A Tepee Creek (N 125.08 30 ⇓P PKPdf 14 59 02.1 -0.6
baz=125
J05A Fort Rock 125.14 37 ⇓P PKPdf 14 59 02.9 0.0
baz=125
M02C Callahan 125.17 40 ⇑P PKPdf 14 59 02.9 -0.1
baz=125
N02C Big Bar 125.17 41 ⇑P PKPdf 14 59 02.8 -0.2
baz=125
O01C Eel River Cons 125.18 42 ⇓P PKPdf 14 59 02.9 -0.2
baz=125
K04A Chilquin 125.21 38 ⇑P PKPdf 14 59 02.8 -0.2
baz=125
A13A Flathead Natio 125.23 28 ⇑P PKPdf 14 59 02.9 0.0
baz=125
G08A Pilot Rock 125.28 34 ⇓P PKPdf 14 59 02.9 -0.2
baz=125
LNOR Lincton Mounta 125.30 33 PKiKP PKPdf 14 59 02.4 -0.7
LNOR Lincton Mounta 125.30 33 *e*PKPdf PKPdf 14 59 02.3 -0.8
FFC Flin Flon 125.31 16 PKiKP PKPdf 14 59 01.6 -1.2
FFC Flin Flon 125.31 16 *e*PKPdf PKPdf 14 59 01.1 -1.8
L04A Klamath Falls 125.35 39 ⇓P PKPdf 14 59 03.0 -0.3
baz=125
H07A Lands Inn, Kim 125.36 35 ⇓P PKPdf 14 59 03.0 -0.2
baz=125
I06A Prineville 125.37 36 ⇑P PKPdf 14 59 03.1 -0.2
baz=125
E10A Myers Farm, Un 125.54 32 ⇑P PKPdf 14 59 03.2 -0.3
baz=125
C12B Naegeli Ranch, 125.56 30 ⇓P PKPdf 14 59 03.2 -0.4
baz=125
KIPM Iron Peak 125.57 42 *e*PKPdf PKPdf 14 59 04.0 +0.1
D11A Klaveano Farm, 125.57 31 ⇑P PKPdf 14 59 03.1 -0.5
baz=125
B13A Whitefish 125.60 29 ⇑P PKPdf 14 59 03.3 -0.3
baz=125
M04C Macdoel 125.60 39 ⇑P PKPdf 14 59 03.5 -0.3
baz=126
F09A S2 Ranch, Elgi 125.60 33 ⇓P PKPdf 14 59 03.4 -0.3
baz=126
K05A Summer Lake 125.66 38 ⇑P PKPdf 14 59 03.8 -0.1
baz=126
M03C McCloud 125.69 40 ⇑P PKPdf 14 59 03.7 -0.3
baz=126
I07A Izee 125.70 35 ⇓P PKPdf 14 59 03.8 -0.1
baz=126
WDC Whiskeytown Da 125.79 41 PKiKP PKPdf 14 59 03.5 -0.7
WDC Whiskeytown Da 125.79 41 ⇓P PKPdf 14 59 03.8 -0.4
baz=126
WDC Whiskeytown Da 125.79 41 *e*PKPdf PKPdf 14 59 02.8 -1.4
F10A Beach Ranch, E 125.80 32 ⇑P PKPdf 14 59 03.9 -0.2
baz=126
J06A Christmas Vall 125.81 37 ⇓P PKPdf 14 59 04.0 -0.1
baz=126
O02C Red Bluff 125.84 41 ⇓P PKPdf 14 59 04.3 0.0
baz=126
LASM Arnica Sink 125.86 39 P PKPdf 14 59 04.3 0.0
H08A Prairie City 125.92 35 ⇑P PKPdf 14 59 04.2 -0.1
baz=126
G09A Cove 125.94 33 ⇓P PKPdf 14 59 04.0 -0.3
baz=126
K06A Valley Falls 126.01 37 ⇓P PKPdf 14 59 04.6 0.0
baz=126
C13A Hot Springs 126.03 29 ⇑P PKPdf 14 59 04.0 -0.5
baz=126
D12A Red Ives Fores 126.07 30 ⇓P PKPdf 14 59 03.8 -0.7
baz=126
L05A Lakeview 126.08 38 ⇓P PKPdf 14 59 04.9 +0.2
baz=126
E11A Bogner Ranch, 126.09 31 ⇓P PKPdf 14 59 03.9 -0.7
baz=126
GASB Alder Springs 126.15 42 ⇑P PKPdf 14 59 05.2 +0.2
baz=126
J07A Hines 126.24 36 ⇑P PKPdf 14 59 05.3 +0.3
baz=126
HOPS Hopland 126.25 43 ⇓P PKPdf 14 59 04.7 -0.5
baz=126
M05C Lookout 126.27 39 ⇓P PKPdf 14 59 05.0 -0.1
baz=126
G10A Bishop Farm, J 126.30 33 ⇓P PKPdf 14 59 04.5 -0.5
baz=126
I08A Drewsey 126.35 35 ⇓P PKPdf 14 59 05.2 +0.1
baz=126
C14A Swan Lake 126.36 29 ⇑P PKPdf 14 59 04.7 -0.4
baz=126
E12A Beaver Dam Sad 126.38 31 ⇓P PKPdf 14 59 04.7 -0.4
baz=126
H09A Durkee 126.39 34 ⇓P PKPdf 14 59 04.9 -0.3
baz=126
F11A Grangeville 126.43 32 ⇑P PKPdf 14 59 04.7 -0.5
baz=126
BMO Blue Mountains 126.47 34 PKiKP PKPdf 14 59 04.6 -0.8
BMO Blue Mountains 126.47 34 *e*PKPdf PKPdf 14 59 04.3 -1.1
D13A Huson 126.49 30 ⇓P PKPdf 14 59 04.8 -0.5
baz=126
MOD Modoc 126.49 38 ⇓P PKPdf 14 59 05.7 +0.2
baz=126
MOD Modoc 126.49 38 *e*PKPdf PKPdf 14 59 05.0 -0.6
K07A Rock Creek Ran 126.68 37 ⇓P PKPdf 14 59 05.9 +0.1
baz=126
G11A Walters Elk Ra 126.69 32 ⇑P PKPdf 14 59 05.3 -0.5
baz=126
MNRC McLaughlin Nat 126.73 42 ⇑P PKPdf 14 59 06.5 +0.4
baz=127
J08A Circle Bar Ran 126.73 36 ⇓P PKPdf 14 59 06.1 +0.2
baz=127
M06C Likely Place G 126.77 39 ⇑P PKPdf 14 59 06.1 0.0
baz=127
I09A Lost Marbles R 126.78 35 ⇓P PKPdf 14 59 05.8 -0.2
baz=127
MCCM Marconi Confer 126.80 43 ⇑P PKPdf 14 59 06.4 +0.2
baz=127
O04C Chester 126.87 40 ⇓P PKPdf 14 59 06.3 0.0
baz=127
MSO Missoula 126.93 30 *e*PKPdf PKPdf 14 59 05.2 -1.0
FARB Farallon Islan 126.94 44 ⇓P PKPdf 14 59 05.9 -0.7
baz=127
ELFS Eagle Lake Fie 126.94 40 ⇓P PKPdf 14 59 06.4 0.0
baz=127
H10A Noah's Angus R 126.95 33 ⇑P PKPdf 14 59 05.7 -0.6
baz=127
D14A Greenough 126.96 29 ⇑P PKPdf 14 59 05.6 -0.7
baz=127
F12A Elk City 126.99 31 ⇑P PKPdf 14 59 05.5 -0.8
baz=127
CVS Carmenet Viney 126.99 43 ⇑P PKPdf 14 59 06.7 +0.2
baz=127
ORV Oroville 127.01 41 ⇑P PKPdf 14 59 06.3 -0.3
baz=127
L07A Adell 127.01 37 ⇑P PKPdf 14 59 07.1 +0.6
baz=127
E13A Victor 127.07 30 ⇓P PKPdf 14 59 06.1 -0.3
baz=127
K08A Mann Creek Ran 127.10 36 ⇑P PKPdf 14 59 06.8 +0.1
baz=127
J09A Fry Pan Ranch, 127.16 35 ⇑P PKPdf 14 59 07.2 +0.5
baz=127
O05C Quincy 127.17 40 ⇑P PKPdf 14 59 07.2 +0.3
baz=127
WVOR Wild Horse Val 127.19 37 *e*PKiKP PKPdf 14 59 06.9 +0.1
I10A Payette 127.24 34 ⇓P PKPdf 14 59 07.0 +0.2
baz=127
H11A Donnelly 127.28 33 ⇑P PKPdf 14 59 06.9 0.0
baz=127
N06A Buffalo Meadow 127.43 39 ⇑P PKPdf 14 59 07.9 +0.5
baz=127
E14A Clinton 127.44 30 ⇓P PKPdf 14 59 07.2 0.0
baz=127
F13A Darby 127.44 31 ⇓P PKPdf 14 59 06.6 -0.6
baz=127
Q04C Lincoln 127.47 42 ⇓P PKPdf 14 59 08.2 +0.7
baz=127
D15A Lincoln 127.47 29 ⇓P PKPdf 14 59 07.3 +0.1
baz=127
M07A Soldier Meadow 127.48 38 ⇑P PKPdf 14 59 08.0 +0.6
baz=127
L08A Fields 127.51 37 ⇓P PKPdf 14 59 08.4 +0.9
baz=127
K09A Rome 127.57 36 ⇓P PKPdf 14 59 08.1 +0.6
baz=127
BEKR Beckwourth 127.58 40 ⇓P PKPdf 14 59 07.7 +0.1
baz=128
BDM Black Diamond 127.59 43 ⇓P PKPdf 14 59 07.9 +0.1
baz=128
JRSC Jasper Ridge 127.61 44 ⇓P PKPdf 14 59 08.0 +0.2
baz=128
J10A Berg Farm, Mel 127.67 35 ⇑P PKPdf 14 59 08.1 +0.4
baz=128
SCHQ Schefferville 127.69 351 PKP PKPdf 14 59 06.8 -0.6
comp=Z,17nm,0.7s,baz=2.1,slow=2.0,SNR=15
SCHQ PP PP 15 01 03.7 -4.5
comp=Z,16nm,0.8s,baz=25,slow=4.5,SNR=6.2
SCHQ Schefferville 127.69 351 PKP PKPdf 14 59 06.8 -0.6
SCHQ PP PP 15 01 03.7 -4.5
P05C Yuba Gap, Truc 127.73 41 ⇑P PKPdf 14 59 08.1 +0.2
baz=128
O06A Flanigan 127.76 40 ⇑P PKPdf 14 59 08.0 0.0
baz=128
I11A Placerville 127.82 34 ⇑P PKPdf 14 59 08.3 +0.3
baz=128
WENL Wente Vineyard 127.83 43 ⇓P PKPdf 14 59 08.3 +0.1
baz=128
E15A Deer Lodge 127.85 29 ⇓P PKPdf 14 59 07.5 -0.5
baz=128
F14A Wisdom 127.92 30 ⇑P PKPdf 14 59 08.3 +0.2
baz=128
LAVA Lava Cap Winer 127.93 42 ⇓P PKPdf 14 59 08.4 0.0
baz=128
N07B Gerlach 127.95 39 ⇓P PKPdf 14 59 08.7 +0.3
baz=128
G13A Cobalt 127.97 32 ⇑P PKPdf 14 59 08.1 -0.2
baz=128
H12A Diamond D Ranc 128.00 32 ⇑P PKPdf 14 59 08.6 +0.3
baz=128
EGMT Eagleton 128.02 26 *e*PKPdf PKPdf 14 59 08.0 -0.3
L09A Wilkinson Ranc 128.02 37 ⇓P PKPdf 14 59 09.1 +0.7
baz=128
K10A MacKenzie Ranc 128.02 35 ⇑P PKPdf 14 59 09.0 +0.6
baz=128
MFID Camas Ranch 128.21 34 ⇓P PKPdf 14 59 09.5 +0.7
baz=128
G14A Jackson 128.26 31 ⇓P PKPdf 14 59 09.7 +0.9
baz=128
WCN Washoe City 128.28 41 ⇑P PKPdf 14 59 09.8 +0.7
baz=128
H13A Challis 128.31 32 ⇓P PKPdf 14 59 09.3 +0.4
baz=128
F15A Butte 128.33 30 ⇑P PKPdf 14 59 09.0 +0.1
baz=128
O07A Toulon 128.37 39 ⇓P PKPdf 14 59 09.6 +0.4
baz=128
R05C Kirkwood Meado 128.40 41 ⇓P PKPdf 14 59 10.0 +0.7
baz=128
PACP Pacheco Peak 128.46 44 ⇑P PKPdf 14 59 10.3 +0.9
baz=128
N08A GE Springer Mi 128.47 38 ⇑P PKPdf 14 59 09.9 +0.5
baz=128
K11A Parker Ranch, 128.50 35 ⇓P PKPdf 14 59 09.8 +0.5
baz=128
CMB Columbia Colle 128.55 42 ⇓P PKPdf 14 59 09.9 +0.3
baz=128
DLMT Dillon 128.62 30 *e*PKPdf PKPdf 14 59 09.4 -0.1
L10A Juniper Basin 128.69 36 ⇓P PKPdf 14 59 10.8 +1.1
baz=128
J12A Stokes Ranch, 128.72 34 ⇓P PKPdf 14 59 10.4 +0.7
baz=129
H14A Leadore 128.74 31 ⇑P PKPdf 14 59 10.2 +0.5
baz=129
N09A Rock Creek Ran 128.80 38 ⇓P PKPdf 14 59 11.1 +1.1
baz=129
G15A Dillon 128.81 30 ⇓P PKPdf 14 59 10.3 +0.5

baz=129
I13A **Wildhorse Cree** 128.82 33 ⇓P PKPdf 14 59 10.6 +0.7
baz=129
HLID **Hailey** 128.89 33 ⇑P PKPdf 14 59 10.9 +0.8
baz=129
HLID **Hailey** 128.89 33 *e*PKPdf PKPdf 14 59 10.4 +0.4
R06C **Coleville** 128.91 41 ⇓P PKPdf 14 59 11.3 +1.0
baz=129
S05C **Merced** 128.95 43 ⇓P PKPdf 14 59 10.8 +0.4
baz=129
M10A **I.L. Ranch, Tu** 128.99 36 ⇑P PKPdf 14 59 11.5 +1.2
baz=129
S06C **San Francisco** 128.99 42 ⇓P PKPdf 14 59 11.4 +1.0
baz=129
V03C **Hunter Liggett** 128.99 45 ⇑P PKPdf 14 59 11.3 +0.9
baz=129
L11A **Cat Creek Ranc** 129.04 35 ⇑P PKPdf 14 59 11.7 +1.3
baz=129
H15A **Lima** 129.12 31 ⇓P PKPdf 14 59 11.0 +0.6
baz=129
J13A **Cove Ranch, Pi** 129.13 33 ⇑P PKPdf 14 59 11.5 +1.0
baz=129
U04C **Hernandez Rese** 129.14 44 ⇑P PKPdf 14 59 11.7 +1.0
baz=129
I14A **Mackay** 129.17 32 ⇓P PKPdf 14 59 11.1 +0.6
baz=129
K12A **Draper Farm, C** 129.23 34 ⇑P PKPdf 14 59 11.3 +0.5
baz=129
O09A **Fish Creek Ran** 129.41 38 ⇓P PKPdf 14 59 11.9 +0.7
baz=129
L12A **House Creek Ra** 129.48 35 ⇓P PKPdf 14 59 12.3 +1.1
baz=129
M11A **Holland Ranch,** 129.49 36 ⇑P PKPdf 14 59 12.4 +1.2
baz=129
N10A **Dunphy** 129.50 37 ⇑P PKPdf 14 59 12.1 +0.8
baz=129
PKD **Parkfield** 129.52 45 ⇓P PKPdf 14 59 12.3 +0.9
baz=129
J14A **Carey** 129.54 33 ⇑P PKPdf 14 59 12.3 +1.0
baz=129
T06C **Millerton Lake** 129.55 43 ⇓P PKPdf 14 59 12.3 +0.8
baz=129
I15A **Monteview** 129.62 31 ⇓P PKPdf 14 59 12.2 +0.8
baz=130
K13A **Stover Farm, H** 129.68 34 ⇓P PKPdf 14 59 12.7 +1.1
baz=130
Q08A **Gabbs** 129.71 40 ⇑P PKPdf 14 59 12.8 +1.0
baz=130
NVAR **Mina Array Bea** 129.71 41 PKhKP 14 59 00.6
comp=Z,0.8nm,0.7s,baz=254,slow=3.3,SNR=4.5
NVAR PKP PKPdf 14 59 12.7 +0.9
comp=Z,18nm,0.8s,baz=222,slow=4.1,SNR=4.3
NVAR PP PP 15 01 16.8 -5.6
comp=Z,2.4nm,0.8s,baz=276,slow=9.0,SNR=3.6
NVAR SKPbc 15 02 28.4
comp=Z,14nm,0.9s,baz=267,slow=5.2,SNR=13
H16A **Russell Place,** 129.76 30 ⇑P PKPdf 14 59 12.8 +1.1
baz=130
O10A **Cortez Mining,** 129.76 38 ⇑P PKPdf 14 59 13.1 +1.3
baz=130
PTRM **Twissleman Ran** 129.90 45 *e*PKPdf PKPdf 14 59 13.1 +0.9
N11A **Elko Archery C** 129.90 37 ⇓P PKPdf 14 59 13.3 +1.3
baz=130
YMR **Madison River** 129.93 30 *e*PKPdf PKPdf 14 59 12.9 +0.9
M12A **Wells** 130.01 35 ⇑P PKPdf 14 59 13.3 +1.1
baz=130
J15A **Blackfoot** 130.07 32 ⇓P PKPdf 14 59 13.4 +1.1
baz=130
L13A **Double Diamond** 130.12 34 ⇑P PKPdf 14 59 13.5 +1.1
baz=130
MTUM **Tungsten Hills** 130.13 42 *e*PKPdf PKPdf 14 59 13.6 +1.0
HELL **Mitchell Peak** 130.19 43 ⇑P PKPdf 14 59 13.2 +0.5
baz=130
P10A **Eureka** 130.19 38 ⇑P PKPdf 14 59 13.8 +1.1
baz=130
Q09A **Carvers** 130.20 40 ⇓P PKPdf 14 59 13.9 +1.2
baz=130
SMMC **Simmler** 130.22 45 ⇓P PKPdf 14 59 14.0 +1.2
baz=130
ELK **Elko** 130.24 36 PKIKP PKPdf 14 59 13.2 +0.5
ELK **Elko** 130.24 36 *e*PKPdf PKPdf 14 59 13.0 +0.3
K14A **Jones Ranch, D** 130.25 33 ⇑P PKPdf 14 59 13.8 +1.1
baz=130
N12A **Clover Valley,** 130.29 36 ⇓P PKPdf 14 59 14.2 +1.4
baz=130
S08C **White Mtn Res** 130.31 42 ⇑P PKPdf 14 59 14.6 +1.7
baz=130
O11A **Cowboy Ranch,** 130.37 37 ⇑P PKPdf 14 59 14.1 +1.1
baz=130
RLMT **Red Lodge** 130.42 28 *e*PKPdf PKPdf 14 59 13.7 +0.7
M13A **Montello** 130.47 35 ⇑P PKPdf 14 59 14.3 +1.2
baz=130
K15A **Arbon** 130.50 33 ⇑P PKPdf 14 59 14.0 +0.9
baz=130
PKM **Peak Mountain** 130.55 45 ⇑P PKPdf 14 59 15.0 +1.5
baz=130
L14A **Malta** 130.56 34 ⇑P PKPdf 14 59 14.1 +0.8
baz=130
J16A **Bone** 130.59 32 ⇓P PKPdf 14 59 14.1 +0.9
baz=130
R09A **Tonopah** 130.61 40 ⇓P PKPdf 14 59 14.1 +0.6
baz=130
P11A **Circle Ranch,** 130.66 38 ⇑P PKPdf 14 59 15.3 +1.7
baz=130
Q10A **Clear Creek Ra** 130.70 39 ⇓P PKPdf 14 59 14.4 +0.8
baz=131
S09A **Goldfield** 130.81 41 ⇑P PKPdf 14 59 15.0 +1.1
baz=131
O12A **Currie** 130.83 37 ⇑P PKPdf 14 59 15.2 +1.4
baz=131
M14A **Sheep Mountain** 130.85 34 ⇑P PKPdf 14 59 15.2 +1.4
baz=131
SNOW **Snow King Moun** 130.90 31 *e*PKPdf PKPdf 14 59 14.1 +0.2
K16A **Soda Springs** 130.91 32 ⇑P PKPdf 14 59 14.3 +0.4
baz=131
CWC **Cottonwood Cre** 130.96 43 ⇓P PKPdf 14 59 14.9 +0.7
baz=131
ULM **Lac du Bonnet** 130.97 15 PKP PKPdf 14 59 13.3 -0.5
comp=Z,29nm,0.7s,baz=349,slow=1.8,SNR=22
ULM PP PP 15 01 25.2 -4.4
comp=Z,13nm,1.0s,baz=338,slow=6.7,SNR=5.4
ULM SKPbc SKPbc 15 02 31.8 -2.5
comp=Z,17nm,0.7s,baz=331,slow=7.1,SNR=7.5
ULM **Lac du Bonnet** 130.97 15 PKP PKPdf 14 59 13.3 -0.5
ULM PP PP 15 01 25.2 -4.4
ULM SKPbc SKPbc 15 02 31.8 -2.5
HVU **Hansel Valley** 130.98 34 *e*PKIKP PKPdf 14 59 12.9 -1.2
L15A **Malad City** 131.05 33 ⇑P PKPdf 14 59 15.0 +0.8
baz=131
R10A **Warm Springs** 131.08 40 ⇓P PKPdf 14 59 15.2 +0.9
baz=131
ISA **Isabella** 131.10 44 ⇑P PKPdf 14 59 15.0 +0.5
baz=131
S10A **Tonopah Range,** 131.10 40 ⇓P PKPdf 14 59 15.7 +1.3
baz=131
GRAC **Grapevine Rang** 131.12 42 ⇑P PKPdf 14 59 15.3 +0.8
baz=131
Q11A **Duckwater** 131.16 39 ⇓P PKPdf 14 59 15.4 +0.9
baz=131
P12A **McGill** 131.23 37 ⇓P PKPdf 14 59 15.5 +0.9
baz=131
N14A **Grayback Hills** 131.37 35 ⇓P PKPdf 14 59 15.5 +0.7
baz=131
M15A **Larsen Ranch,** 131.38 34 ⇑P PKPdf 14 59 14.7 -0.1
baz=131
R11A **Troy Canyon, C** 131.50 39 ⇓P PKPdf 14 59 16.2 +1.1
baz=131
Q12A **Willow Creek R** 131.55 38 ⇑P PKPdf 14 59 15.6 +0.4
baz=131
L16A **Fish Haven** 131.56 33 ⇑P PKPdf 14 59 16.0 +0.8
baz=131
MPMC **Manual Prospec** 131.56 43 ⇑P PKPdf 14 59 15.9 +0.6
baz=131
N15A **Stansbury Isla** 131.72 34 ⇓P PKPdf 14 59 16.0 +0.4
baz=132
LRMC **Laurel Mountai** 131.74 44 ⇓P PKPdf 14 59 16.3 +0.6
baz=132
FURC **Furnace Creek,** 131.76 42 ⇓P PKPdf 14 59 16.5 +0.8
baz=132
P13A **Bates Ranch, G** 131.78 37 ⇓P PKPdf 14 59 16.5 +0.9
baz=132
S11A **Rachel** 131.81 40 ⇑P PKPdf 14 59 16.4 +0.6
baz=132
EDW2 **Edwards Air Fo** 131.85 44 ⇑P PKPdf 14 59 16.7 +0.8
baz=132
M16A **Huntsville** 131.93 33 ⇑P PKPdf 14 59 16.5 +0.6
baz=132
PDAR **Pinedale Array** 132.00 31 PKhKP 14 58 59.5
comp=Z,0.9nm,0.9s,baz=48,slow=2.2,SNR=4.3
PDAR PKP PKPdf 14 59 14.8 -1.2
comp=Z,7.1nm,0.7s,baz=163,slow=0.9,SNR=3.9
PDAR PP PP 15 01 31.9 -5.0
comp=Z,4.0nm,1.0s,baz=325,slow=1.8,SNR=3.9
PDAR SKPbc SKPbc 15 02 36.8 -1.5
comp=Z,12nm,0.8s,baz=55,slow=0.9,SNR=12
DUG **Dugway** 132.01 35 PKIKP PKPdf 14 59 16.2 +0.1
DUG **Dugway** 132.01 35 *e*PKPdf PKPdf 14 59 15.3 -0.8
Q13A **Wheeler Ranch,** 132.09 37 ⇓P PKPdf 14 59 17.1 +0.9
baz=132
R12A **Pony Springs,** 132.12 38 ⇑P PKPdf 14 59 17.2 +0.8
baz=132
O15A **The Old Anders** 132.15 35 ⇓P PKPdf 14 59 17.5 +1.1
baz=132
P14A **Drum Mountains** 132.26 36 ⇓P PKPdf 14 59 17.4 +0.8
baz=132
CIS **Catalina Islan** 132.32 46 ⇑P PKPdf 14 59 17.6 +0.7
baz=132
N16A **Rees Ranch, Co** 132.33 34 ⇓P PKPdf 14 59 17.2 +0.5
baz=132
T11A **Corn Creek, Al** 132.39 40 ⇑P PKPdf 14 59 17.5 +0.6
baz=132
S12A **Delamar Landin** 132.41 39 ⇓P PKPdf 14 59 17.5 +0.6
baz=132
BFSC **Mount Baldy St** 132.42 45 ⇓P PKPdf 14 59 17.3 +0.3
baz=132
GSC **Goldstone** 132.44 43 ⇑P PKPdf 14 59 17.6 +0.5
baz=132
SHOC **Shoshone** 132.47 42 ⇓P PKPdf 14 59 17.6 +0.6
baz=132
Q14A **Sevier Lake (B** 132.52 37 ⇓P PKPdf 14 59 17.9 +0.8
baz=132
R13A **O'Grain Ranch,** 132.61 38 ⇑P PKPdf 14 59 18.0 +0.7
baz=132
P15A **Leamington** 132.73 36 ⇑P PKPdf 14 59 18.0 +0.5
baz=133
DAU **Daniels Canyon** 132.75 34 *e*PKIKP PKPdf 14 59 18.0 +0.5
U11A **Corn Creek** 132.76 41 ⇑P PKPdf 14 59 18.4 +0.8
baz=133
TUQ **Turquoise Moun** 132.97 42 ⇓P PKPdf 14 59 18.6 +0.5
baz=133
HEC **Hector,Ludlow** 133.03 43 ⇑P PKPdf 14 59 18.8 +0.6
baz=133
S13A **Holt Ranch, En** 133.04 39 ⇑P PKPdf 14 59 19.1 +1.0
baz=133
Q15A **Fillmore** 133.05 36 ⇓P PKPdf 14 59 18.6 +0.5
baz=133
V11A **Goodsprings** 133.07 42 ⇓P PKPdf 14 59 18.9 +0.7
baz=133
MURC **Murrieta** 133.08 45 ⇓P PKPdf 14 59 18.8 +0.5
baz=133
ARUT **Antelope Range** 133.18 38 *e*PKIKP PKPdf 14 59 19.4 +1.0
O17A **Robinson Place** 133.19 34 ⇓P PKPdf 14 59 19.2 +0.9
baz=133
N18A **Larsen Ranch,** 133.23 32 ⇑P PKPdf 14 59 18.6 +0.3
baz=133
U12A **Valley of Fire** 133.31 40 ⇑P PKPdf 14 59 19.8 +1.1
baz=133
T13A **Saint George** 133.36 39 ⇓P PKPdf 14 59 19.8 +1.1
baz=133
S14A **Cedar City** 133.36 38 ⇓P PKPdf 14 59 19.6 +0.9
baz=133
MSU **Marysvale** 133.48 37 *e*PKIKP PKPdf 14 59 19.6 +0.7
GMRC **Granite Mounta** 133.51 43 ⇓P PKPdf 14 59 20.0 +1.0
baz=133
V12A **Nelson** 133.52 41 ⇓P PKPdf 14 59 20.0 +1.0
baz=133
O18A **Roosevelt** 133.54 33 ⇑P PKPdf 14 59 19.5 +0.5
baz=130
RSSD **Black Hills** 133.55 25 *e*PKIKP PKPdf 14 59 18.6 -0.2
PFO **Pinyon Flat Ob** 133.60 45 ⇓P PKPdf 14 59 19.5 +0.2
baz=134
PFO **Pinyon Flat Ob** 133.60 45 *e*PKPdf PKPdf 14 59 19.8 +0.5
P17A **Butcher Ranch,** 133.68 35 ⇑P PKPdf 14 59 19.5 +0.3
baz=134
U13A **Pakoon Wash** 133.69 40 ⇑P PKPdf 14 59 20.0 +0.6
baz=134
BELC **Belle Mtn.** 133.71 44 ⇑P PKPdf 14 59 20.3 +0.8
baz=134
Q16A **Castle Valley** 133.81 36 ⇑P PKPdf 14 59 20.1 +0.6
baz=134
P18A **Preston Nutter** 133.85 34 ⇓P PKPdf 14 59 20.5 +0.9
baz=134
RWWY **Rawlins** 133.98 30 *e*PKPdf PKPdf 14 59 19.0 -0.7
O19A **Miners Draw (B** 134.00 33 ⇓P PKPdf 14 59 20.3 +0.5
baz=134
MONP **Monument Peak** 134.01 46 ⇓P PKPdf 14 59 20.6 +0.6
baz=134
V13A **Grand Canyon W** 134.01 41 ⇓P PKPdf 14 59 20.6 +0.6
baz=134
R16A **Teasdale** 134.04 36 ⇑P PKPdf 14 59 21.1 +1.1
baz=134
SRU **San Rafael** 134.05 35 ⇑P PKPdf 14 59 20.5 +0.6
baz=134
EYMN **Ely** 134.13 12 *e*PKPdf PKPdf 14 59 18.8 -1.0
U14A **Mt Trumbull** 134.19 40 ⇑P PKPdf 14 59 21.3 +1.0
baz=134
IRM **Iron Mountain** 134.21 43 ⇑P PKPdf 14 59 21.1 +0.7
baz=134
Q18A **Rafter H Ranch** 134.28 35 ⇑P PKPdf 14 59 21.1 +0.7
baz=134
BC3 **Big Chuckw Mtn** 134.28 44 ⇑P PKPdf 14 59 21.7 +1.2
baz=134
T15A **Red Dirt Ranch** 134.32 38 ⇓P PKPdf 14 59 21.7 +1.2
baz=134
S16A **Weppner Ranch,** 134.34 37 ⇑P PKPdf 14 59 21.6 +1.0
baz=134
DVTC **Desert V Tower** 134.36 46 ⇑P PKPdf 14 59 21.4 +0.7
baz=134
R17A **Hanksville Air** 134.41 36 ⇑P PKPdf 14 59 21.5 +0.9
baz=134
SWSC **Sam W. Stewart** 134.43 45 ⇑P PKPdf 14 59 21.5 +0.7
baz=134
W13A **Hualapai Mount** 134.52 42 ⇑P PKPdf 14 59 21.9 +0.9
baz=134
P19A **Cripple Cowboy** 134.55 33 ⇓P PKPdf 14 59 21.7 +0.8
baz=134
V14A **Boquillas Ranc** 134.71 40 ⇓P PKPdf 14 59 22.5 +1.2
baz=135
U15A **North Rim** 134.74 39 ⇓P PKPdf 14 59 22.8 +1.4
baz=135
PDMCI **Parker Dam,Lak** 134.82 43 ⇑P PKPdf 14 59 21.9 +0.3
baz=135
X13A **Yucca** 134.86 42 ⇓P PKPdf 14 59 22.4 +0.8
baz=135
Q19A **Hogan Spring (** 134.87 34 ⇓P PKPdf 14 59 22.0 +0.6
baz=135
Y12C **Blythe** 134.87 44 ⇓P PKPdf 14 59 21.9 +0.2
baz=135
S17A **Black Ridge (B** 134.88 37 ⇑P PKPdf 14 59 22.2 +0.6
baz=135
T16A **Glen Canyon Da** 134.88 38 ⇓P PKPdf 14 59 22.5 +1.0
baz=135
R18A **Canyonlands Na** 134.90 35 ⇓P PKPdf 14 59 22.6 +1.0
baz=135
W14A **Seligman** 134.98 41 ⇓P PKPdf 14 59 23.2 +1.4
baz=135
GLA **Glamis** 135.05 45 ⇓P PKPdf 14 59 22.7 +0.7
baz=135
GLA **Glamis** 135.05 45 *e*PKPdf PKPdf 14 59 22.1 +0.1
V15A **Kaibab Nationa** 135.20 40 ⇓P PKPdf 14 59 23.4 +1.2
baz=135
T17A **Navajo Res., N** 135.30 37 ⇑P PKPdf 14 59 23.5 +1.2
baz=135
Y13A **Salome** 135.31 43 ⇓P PKPdf 14 59 23.6 +1.1
baz=135
S18A **Hurst Farm, Bl** 135.32 36 ⇓P PKPdf 14 59 22.9 +0.5
baz=135
R19A **Curley Farm, L** 135.33 35 ⇑P PKPdf 14 59 23.0 +0.6
baz=135
PV10 **Paradox Valley** 135.40 34 *e*PKPdf PKPdf 14 59 23.6 +1.1
W15A **Williams** 135.53 40 ⇑P PKPdf 14 59 24.0 +1.1
baz=135
X14A **Yava** 135.56 42 ⇑P PKPdf 14 59 23.7 +0.8
baz=135
PLCA **Paso Flores** 135.59 189 PKP PKPdf 14 59 22.1 -0.7
comp=Z,3.2nm,0.7s,baz=169,slow=1.3,SNR=8.4
PLCA SKPbc SKPbc 15 02 49.6 -0.7
comp=Z,3.3nm,0.9s,baz=193,slow=5.2,SNR=2.9
PLCA **Paso Flores** 135.59 189 PKIKP PKPdf 14 59 22.1 -0.7
PLCA pmax pmax
comp=Z,3.0nm,0.7s
PLCA pmax pmax
comp=N,3.0nm,0.9s
U17A **Shonto** 135.64 38 ⇓P PKPdf 14 59 24.1 +1.1
baz=136
U16A **Tuba City** 135.65 38 ⇑P PKPdf 14 59 23.9 +0.8
baz=136
T18A **Mexican Hat** 135.76 36 ⇓P PKPdf 14 59 24.1 +0.8
baz=136
S19A **Harvey Farm, M** 135.78 35 ⇑P PKPdf 14 59 24.1 +0.8
baz=136
Y14A **Wickenburg** 135.79 42 ⇓P PKPdf 14 59 23.7 +0.3
baz=136
PV01 **Paradox Valley** 135.83 34 *e*PKPdf PKPdf 14 59 24.1 +0.7
113A **Mohawk Valley,** 135.95 44 ⇑P PKPdf 14 59 24.0 +0.3
baz=136
X15A **Humboldt** 135.98 41 ⇓P PKPdf 14 59 24.4 +0.7
baz=136
W16A **Flagstaff** 136.06 40 ⇓P PKPdf 14 59 25.0 +1.1
baz=136
Z14A **Wintersburg** 136.17 43 ⇓P PKPdf 14 59 24.6 +0.5
baz=136
ISCO **Idaho Springs** 136.20 30 PKIKP PKPdf 14 59 24.3 +0.4
ISCO **Idaho Springs** 136.20 30 *e*PKPdf PKPdf 14 59 23.9 0.0
Y15A **Casa Rosa Ranc** 136.23 42 ⇑P PKPdf 14 59 25.1 +0.9
baz=136
U18A **Rough Rock, Ch** 136.24 37 ⇑P PKPdf 14 59 25.2 +1.0
baz=136
T19A **Beclabito** 136.47 36 ⇑P PKPdf 14 59 25.4 +0.8
baz=136
X16A **Lo Mia Camp, P** 136.54 41 ⇑P PKPdf 14 59 25.7 +1.0
baz=136
W17A **Winslow** 136.59 39 ⇑P PKPdf 14 59 26.3 +1.5
baz=136
V18A **Ganado** 136.67 38 ⇓P PKPdf 14 59 26.2 +1.2
baz=136
ECSD **EROS,Sioux Fal** 136.67 19 PKPpre 14 59 11.5
Y16A **Circle Bar Ran** 136.84 41 ⇑P PKPdf 14 59 26.4 +1.1
baz=137
X17A **Forest Lakes** 137.00 40 ⇓P PKPdf 14 59 26.9 +1.3
baz=137
115A **Sonoran Desert** 137.04 43 ⇑P PKPdf 14 59 26.8 +1.1
baz=137
214A **Organ Pipe Nat** 137.07 44 ⇓P PKPdf 14 59 27.0 +1.2
baz=137
W18A **Petrified Fore** 137.18 38 ⇑P PKPdf 14 59 27.4 +1.4
baz=137
Z16A **Peralta Trail,** 137.20 42 ⇓P PKPdf 14 59 27.1 +1.1
baz=137
V19A **Window Rock** 137.21 37 ⇑P PKPdf 14 59 27.4 +1.5
baz=137
Y17A **Roosevelt** 137.37 41 ⇑P PKPdf 14 59 27.3 +1.0
baz=137
W19A **Sanders** 137.40 38 ⇑P PKPdf 14 59 27.6 +1.3
baz=137
X18A **Snowflake** 137.42 39 ⇑P PKPdf 14 59 27.9 +1.5
baz=137
Y18A **Canyon Day Jun** 137.85 40 ⇓P PKPdf 14 59 28.7 +1.5
baz=138
Z17A **San Carlos Hig** 137.86 41 ⇑P PKPdf 14 59 28.6 +1.4
baz=138
X19A **St. Johns** 137.90 39 ⇓P PKPdf 14 59 28.9 +1.6
baz=138
216A **Three Points,** 137.98 43 ⇑P PKPdf 14 59 28.9 +1.4
baz=138
117A **Oracle** 138.13 42 ⇓P PKPdf 14 59 29.3 +1.6
baz=138
Y19A **Nutrioso** 138.23 39 ⇑P PKPdf 14 59 29.7 +1.9
baz=138
TUC **Tucson** 138.26 43 *e*PKIKP PKPdf 14 59 28.4 +0.4
217A **Green Valley** 138.56 43 ⇑P PKPdf 14 59 29.7 +1.1
baz=138
118A **Homack Ranch,** 138.60 42 ⇑P PKPdf 14 59 30.1 +1.5
baz=138
Z19A **T-Link Ranch,** 138.65 40 ⇑P PKPdf 14 59 30.2 +1.5
baz=138
218A **Dragoon** 138.96 42 ⇓P PKPdf 14 59 30.4 +1.1
baz=139
119A **Ashpeak Ranch,** 138.96 41 ⇓P PKPdf 14 59 30.6 +1.4
baz=139
MDV **Middlebury** 139.14 354 *e*PKPdf PKPdf 14 59 29.1 -0.2
ANMO **Albuquerque** 139.27 36 *e*PKHKP 14 59 19.6
ANMO *e* 14 59 30.0
318A **Bisbee** 139.32 43 ⇓P PKPdf 14 59 31.1 +1.1
baz=139
219A **White Tail Can** 139.47 42 ⇑P PKPdf 14 59 31.5 +1.3
baz=139
LENM **Lemitar** 139.51 37 *e*PKPdf PKPdf 14 59 30.7 +0.5
LPM **Los Pinos Moun** 139.61 37 *e*PKPdf PKPdf 14 59 30.7 +0.3
BNM **Barren Site** 139.72 37 *e*PKPpre 14 59 23.1
319A **Douglas** 139.84 42 ⇑P PKPdf 14 59 32.1 +1.2
baz=140
KSU1 **Kansas State U** 140.77 22 PKPdf PKPdf 14 59 31.8 -0.5
BINY **Binghamton** 141.16 357 *e*PKPdf PKPdf 14 59 32.9 -0.1
SLM **Saint Louis** 143.24 15 *e*PKHKP 14 59 31.0
CCM **Cathedral Cave** 143.51 17 PKHKP 14 59 31.9
CCM **Cathedral Cave** 143.51 17 PKPpre 14 59 30.4
WMOK **Wichita Mounta** 143.53 28 *e*PKIKP PKPdf 14 59 33.1 -4.3
BLO **Bloomington** 143.55 10 *e*PKIKP PKPdf 14 59 33.6 -3.7
OLIL **Olney** 143.66 12 *e*PKPpre 14 59 33.8
MCWV **Mont Chateau** 143.75 2 *e*PKPpre 14 59 33.8
FVM **French Village** 143.81 16 *e*PKHKP 14 59 33.1
CFAA **Coronel Fontan** 143.93 195 PKP PKPdf 14 59 36.3 -1.9
comp=N,1.9nm,0.3s,baz=163,slow=4.5,SNR=26
SDMD **Soldier's Deli** 143.98 358 *e*PKPpre 14 59 34.0
CPUP **Villa Florida** 144.06 214 PKP PKPdf 14 59 37.2 -1.3
comp=N,1.9nm,0.8s,baz=141,slow=2.5,SNR=36
CPUP **Villa Florida** 144.06 214 PKIKP PKPdf 14 59 37.3 -1.3
CPUP pmax pmax
comp=Z,19nm,0.8s
CPUP **Villa Florida** 144.06 214 *e*PKPdf PKPdf 14 59 36.1 -2.5
BDFB **Brasilia** 144.32 237 PKP PKPdf 14 59 38.0 -1.3
comp=Z,10nm,0.5s,baz=104,slow=3.7,SNR=14
BDFB **Brasilia** 144.32 237 PKIKP PKPdf 14 59 38.0 -1.3
BDFB pmax pmax
comp=Z,10.0nm,0.5s
SIUC **Southern Illin** 144.37 14 *e*PKPdf PKPdf 14 59 36.1 -2.7
USIN **University of** 144.49 12 *e*PKPdf PKPdf 14 59 36.8 -2.2
WCI **Wyandotte Cave** 144.51 10 *e*PKIKP PKPdf 14 59 35.8 -3.2
TXAR **Lajitas Array** 144.85 40 PKP PKPdf 14 59 38.5 -1.3
comp=Z,120nm,0.8s,baz=284,slow=1.1,SNR=550
TXAR SKPbc SKPbc 15 03 13.7 -1.8
comp=Z,13nm,0.9s,baz=232,slow=1.4,SNR=5.6
TXAR **Lajitas Array** 144.85 40 PKIKP PKPdf 14 59 38.6 -1.3
TXAR pmax pmax
comp=Z,120nm,0.8s
TXAR pmax pmax
comp=N,13nm,0.9s
PARMO **Parma** 145.23 16 *e*PKPdf PKPdf 14 59 39.0 -1.3
GLAT **Glass** 145.72 15 *e*PKPdf PKPdf 14 59 40.8 -0.4
UTMT **University of** 145.76 15 *e*PKPdf PKPdf 14 59 41.0 -0.2
GNAR **Gosnell** 145.81 16 *e*PKP PKPdf 14 59 41.3 0.0
URVA **University of** 145.84 358 *e*PKPdf PKPdf 14 59 40.4 -1.0
MIAR **Mount Ida** 145.93 22 *e*PKP2 PKPab 14 59 40.8 -1.9
HBAR **Harrisburg** 146.00 18 *e*PKPbc PKPbc 14 59 41.5 -0.9
HALT **Halls** 146.05 16 *e*PKPdf PKPdf 14 59 41.3 -0.4
UALR **University of** 146.17 20 *e*PKPdf PKPdf 14 59 40.2 -1.8
BLA **Blacksburg** 146.18 3 PKP2 PKPab 14 59 41.7 -1.9
BLA **Blacksburg** 146.18 3 *e*PKPdf PKPdf 14 59 41.5 -0.4
WVT **Waverly** 146.22 13 PKP2 PKPdf 14 59 41.2 -0.8
WVT **Waverly** 146.22 13 *e*PKPdf PKPdf 14 59 41.1 -0.9
JCT **Junction City** 146.35 34 *e*PKP2 PKPdf 14 59 42.0 -0.4
TZTN **Tazewell** 146.58 7 *e*PKPdf PKPdf 14 59 42.4 -0.2
MAIG **Mazatlaan** 146.63 51 *i* P PKPbc 14 59 44.6 0.0
LCO **Las Campanas** 147.01 193 *e*PKPbc PKPbc 14 59 46.2 +0.6
OXF **Oxford** 147.34 17 *e*PKIKP PKPdf 14 59 42.6 -1.3
OXF *e* 14 59 44.9
TKL **Tuckaleechee C** 147.42 8 *e*PKIKP PKPdf 14 59 43.3 -0.7
SWET **Sewanee** 147.50 11 *e*PKPdf PKPdf 14 59 43.1 -1.1
SWET *e*PKPbc PKPbc 14 59 44.8 -2.0
CPCT **Cooper Cave** 147.52 9 *e*PKPdf PKPdf 14 59 43.6 -0.6
CPCT *e*PKPbc PKPbc 14 59 45.5 -1.2
NATX **Nacogdoches** 147.91 26 *e*PKPdf PKPdf 14 59 44.4 -0.6
NATX *e*PKPbc PKPbc 14 59 47.4 -0.6
CNNC **Cliffs of the** 148.17 359 *e*PKPbc PKPbc 14 59 47.9 -0.7
BBSR **BB Station** 148.21 337 *e*PKPdf PKPdf 14 59 44.9 -0.6
BBSR *e*PKPbc PKPbc 14 59 48.1 -0.6
HKT **Hockley** 148.87 30 *e*PKIKP PKPdf 14 59 47.0 +0.4
HKT *e* 14 59 50.7
JSC **Jenkinsville** 149.04 4 PKIKP PKPdf 14 59 47.1 +0.4
JSC **Jenkinsville** 149.04 4 *e*PKPbc PKPbc 14 59 49.5 -1.3
VBMS **Vicksburg** 149.12 20 *e*PKPbc PKPbc 14 59 50.2 -0.9
LRAL **Lakeview Retre** 149.37 14 *e*PKPdf PKPdf 14 59 46.3 -1.0
KVTX **Kingsville** 149.66 35 *e*PKPbc PKPbc 14 59 53.4 +0.9
GOGA **Godfrey** 149.67 8 *e*PKPdf PKPdf 14 59 46.8 -1.0
GOGA *e*PKPbc PKPbc 14 59 51.1 -1.3
COW **Cow Castle Cre** 149.97 3 *e*PKPbc PKPbc 14 59 52.9 -0.3
NHSC **New Hope** 150.28 3 *e*PKPbc PKPbc 14 59 52.6 -1.3
SFJM **Santa Fe** 150.73 52 *i* P PKPbc 14 59 55.9 +0.6
COLM **Colima** 150.88 55 *i* P PKPbc 14 59 55.5 -0.2

BRAL	**Brewton**	**151.29**	**15**	PKPdf	PKPdf	14 59 50.3	-0.1
BRAL				*e*PKPbc	PKPbc	14 59 56.1	-0.3
LVC	**Limon Verde**	**152.57**	**200**	PKP	PKPdf	14 59 53.8	+1.3
	comp=N,6.9nm,1.0s,baz=329,slow=2.5,SNR=5.2						
LVC				PKPbc	PKPbc	15 00 01.3	+1.8
	comp=N,27nm,0.7s,baz=231,slow=0.8,SNR=18						
LVC	**Limon Verde**	**152.57**	**200**	*e*PKPdf	PKPdf	14 59 53.5	+0.9
LVC				*e*PKPbc	PKPbc	15 00 00.6	+1.1
ZIIG	**Zihuatanejo**	**153.49**	**56**	*i* P	PKPdf	14 59 55.2	+1.2
SIV	**San Ignacio**	**154.14**	**222**	PKP	PKPdf	14 59 54.7	-0.2
	comp=N,3.7nm,0.7s,baz=107,slow=1.6,SNR=16						
SIV				PKPbc	PKPbc	15 00 03.3	+0.2
	comp=N,9.8nm,0.9s,baz=122,slow=3.7,SNR=15						
CAIG	**El Cayaco**	**154.76**	**56**	*i* P	PKPbc	15 00 05.0	+0.6
PPM	**Popocatepetl**	**154.95**	**50**	*i* PKIKP	PKPdf	14 59 57.6	+1.6
DWPF	**Disney**	**155.15**	**6**	*e*PKPbc	PKPdf	15 00 04.4	+8.4
DWPF				*e*PKPab	PKPab	15 00 20.0	-0.6
PNIG	**Pinotepa**	**156.85**	**54**	*i* P	PKPdf	15 00 00.0	+1.5
VHO	**Vista Hermosa**	**157.58**	**51**	*i* P	PKPdf	14 59 59.1	-0.3
LPAZ	**La Paz**	**157.96**	**208**	PKP	PKPdf	15 00 00.8	+0.9
	comp=N,7.0nm,1.0s,baz=62,slow=3.1,SNR=19						
LPAZ	**La Paz**	**157.96**	**208**	PKIKP	PKPdf	15 00 00.8	+0.9
LPAZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ATAH	**Atahualpa**	**169.80**	**182**	PKP	PKPdf	15 00 11.8	+1.0
	comp=Z,21nm,1.2s,baz=289,slow=4.0,SNR=12						
ROSC	**El Rosal**	**175.39**	**290**	PKP	PKPdf	15 00 13.2	-0.1
	comp=Z,5.3nm,0.3s,baz=92,slow=20,SNR=14						
OTAV	**Otavalo**	**176.99**	**184**	*e*PKPdf	PKPdf	15 00 13.7	+0.1

***IDC 12** 14:52:24.6±4.9,**314S×10129E,h0**km**,mb3.7/3,mb1 3.9/3,mb1mx3.6/18,mbtmp3.7/3,Error ellipse:* **s-maj=191.2km s-min=32.6km az=60.0,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.31**	**120**	P	P	14 59 29.4	-1.0
	0.9nm,0.9s,baz=309,slow=9.2,SNR=4.6						
ASAR	**Alice Springs**	**37.55**	**126**	P	P	14 59 42.0	+1.1
	0.4nm,0.4s,baz=300,slow=7.8,SNR=5.2						
SONM	**Songino Array**	**50.96**	**4**	P	P	15 01 28.6	+0.8
	1.1nm,0.8s,baz=194,slow=10,SNR=3.6						
TXAR	**Lajitas Array**	**144.78**	**40**	PKP	PKPdf	15 12 02.4	-1.9
	0.9nm,0.7s,baz=255,slow=0.7,SNR=8.2						

*IDC **12** 14:54:27.5±2.1,342S×10061E,h0**km**,mb4.1/8,mb1 4.3/8,mb1mx4.0/19,mbtmp4.2/8,Error ellipse: s-maj=77.7km s-min=17.6km az=59.0*
*ISCJB **12** 14:54:30.3±1.2,34S±02×1006E±03,h33**km**,mb4.2/9,Error ellipse: s-maj=45.6km s-min=11.6km az=146.9*
*NEIC **12** 14:54:32.2±1.5,347S×10052E,h35**km**,mb4.1/1,Error ellipse: s-maj=62.1km s-min=9.1km az=58.0*
ISC 12 14:54:32.4±1.2,34S±02×1006E±03,h35km,n15,σ0s60/13,mb4.2/9,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.82**	**356**	P	P	14 59 20.6	-1.1
	2.8nm,0.8s,mb3.7,baz=186,slow=8.2,SNR=11						
WRA	**Warramunga Arr**	**36.78**	**119**	P	P	15 01 36.9	-0.2
	0.9nm,0.3s,mb4.0,baz=308,slow=8.7,SNR=16						
WRAB	**Tennant Creek**	**36.79**	**119**	*e*P	P	15 01 37.5	+0.4
	1.7nm,0.6s,mb4.0						
WB2	**Warramunga Arr**	**36.79**	**119**	*e*P	P	15 01 36.9	-0.2
ASAR	**Alice Springs**	**37.95**	**125**	P	P	15 01 46.6	-0.2
	1.9nm,0.4s,mb4.1,baz=293,slow=8.0,SNR=5.5						
STKA	**Stephens Creek**	**47.77**	**131**	P	P	15 03 06.3	0.0
	1.2nm,0.7s,mb4.0,baz=290,slow=13,SNR=3.2						
KSRS	**Korea Array**	**47.97**	**29**	P	P	15 03 07.3	-0.4
	1.7nm,0.9s,mb4.1,baz=217,slow=8.3,SNR=7.7						
SONM	**Songino Array**	**51.31**	**5**	P	P	15 03 34.2	+1.2
	5.0nm,0.7s,mb4.6,baz=187,slow=9.4,SNR=31						
ULN	**Ulaanbaatar**	**51.40**	**6**	*e*P	P	15 03 34.8	+1.1
MK31	**Makanchi Array**	**52.56**	**344**	*e*P	P	15 03 41.7	-0.6
MKAR	**Makanchi Array**	**52.56**	**344**	P	P	15 03 42.5	+0.2
	3.0nm,0.7s,mb4.3,baz=152,slow=9.1,SNR=19						
ZALV	**Zalesovo Beam**	**58.68**	**349**	P	P	15 04 26.1	-0.1
	3.0nm,0.7s,mb4.5,baz=172,slow=4.5,SNR=11						
BRG	**Berggiesshubel**	**90.51**	**321**	*e*	pP	15 07 30.7	0.0
BRG				*e*	pP	15 07 41.0	-0.8
TXAR	**Lajitas Array**	**145.46**	**39**	PKPbc	PKPbc	15 14 08.5	+1.0
	2.5nm,0.6s,baz=257,slow=0.8,SNR=27						
TXAR	**Lajitas Array**	**145.46**	**39**	PKPbc	PKPbc	15 14 08.5	+1.0

IDC 12 14:56:06.7±1.3,2142S×6672W,h224km±15km,mb3.3/2,mb1 3.2/5,mb1mx3.1/18,mbtmp2.9/5,Error ellipse: s-maj=28.1km s-min=14.2km az=109.0,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.35**	**239**	P	Pn	14 56 51.4	+0.8
	0.4nm,0.3s,baz=49,slow=9.3,SNR=4.0						
LVC				S	S	14 57 25.9	+0.8
	2.4nm,0.3s,baz=257,slow=20,SNR=21						
LPAZ	**La Paz**	**5.28**	**345**	P	Pn	14 57 27.6	+2.4
	0.5nm,0.3s,baz=156,slow=10.0,SNR=13						
LPAZ				S	S	14 58 28.8	+1.2
	baz=43,slow=19,SNR=2.4						
SIV	**San Ignacio**	**7.60**	**46**	P	Pn	14 57 53.6	-1.3
	0.4nm,0.3s,baz=250,slow=14,SNR=6.9						
TXAR	**Lajitas Array**	**61.75**	**323**	P	P	15 06 01.3	-0.3
	1.0nm,0.9s,baz=138,slow=9.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**75.41**	**69**	P	P	15 07 26.6	+0.4
	0.5nm,0.5s,baz=236,slow=5.7,SNR=4.8						

*IDC **12** 15:01:12.2±1.9,430S×10150E,h0**km**,mb4.0/9,mb1 4.1/9,mb1mx3.9/18,mbtmp4.0/9,Error ellipse: s-maj=64.4km s-min=17.2km az=59.0*
*ISCJB **12** 15:01:14.5±1.4,43S±02×1014E±03,h33**km**,mb4.0/11,Error ellipse: s-maj=49.2km s-min=13.6km az=147.7*
*NEIC **12** 15:01:17.3±1.2,428S×10153E,h35**km**,mb4.3/2,Error ellipse: s-maj=47.2km s-min=11.0km az=58.0*
ISC 12 15:01:17.1±1.4,43S±02×1015E±03,h35km,n13,σ0s74/12,mb4.0/11,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.77**	**354**	P	P	15 06 15.2	-1.4
	4.9nm,0.9s,mb3.9,baz=183,slow=8.4,SNR=26						
WRA	**Warramunga Arr**	**35.57**	**119**	P	P	15 08 11.0	-0.4
	0.9nm,0.7s,mb3.8,baz=304,slow=9.1,SNR=9.2						
ASAR	**Alice Springs**	**36.72**	**125**	P	P	15 08 21.6	+0.5
	0.3nm,0.5s,mb3.4,baz=298,slow=7.5,SNR=8.7						
STKA	**Stephens Creek**	**46.52**	**131**	P	P	15 09 41.0	-0.3
	1.5nm,0.9s,mb3.9,baz=311,slow=11,SNR=4.4						
KSRS	**Korea Array**	**48.30**	**28**	P	P	15 09 55.3	+0.2
	2.2nm,0.8s,mb4.2,baz=218,slow=8.0,SNR=12						
SONM	**Songino Array**	**52.11**	**4**	P	P	15 10 25.2	+1.5
	5.1nm,0.8s,mb4.5,baz=186,slow=9.5,SNR=28						
ULN	**Ulaanbaatar**	**52.20**	**5**	P	P	15 10 25.4	+1.1
	3.3nm,0.8s,mb4.3						
MJAR	**Matsushiro Arr**	**53.18**	**37**	P	P	15 10 31.2	-0.7
	0.5nm,0.5s,mb3.7,baz=223,slow=9.5,SNR=4.3						
MK31	**Makanchi Array**	**53.65**	**344**	*e*P	P	15 10 35.2	+0.1
MKAR	**Makanchi Array**	**53.65**	**344**	P	P	15 10 35.2	+0.1
	2.4nm,0.8s,mb4.2,baz=147,slow=8.5,SNR=19						
KURK	**Kurchatov**	**58.24**	**343**	*e*P	P	15 11 07.3	-0.5
	1.8nm,0.7s,mb4.2						
ZALV	**Zalesovo Beam**	**59.71**	**349**	P	P	15 11 17.9	-0.1
	2.3nm,0.8s,mb4.3,baz=188,slow=4.8,SNR=9.2						
TXAR	**Lajitas Array**	**145.56**	**41**	PKPbc	PKPbc	15 20 53.6	+1.0
	0.9nm,0.6s,baz=270,slow=1.1,SNR=9.9						

IDC 12 15:01:56.8±4.3,362S×10152E,h0km,mb3.7/5,mb1 3.9/5,mb1mx3.7/18,mbtmp3.8/5,Error ellipse: s-maj=191.2km s-min=21.8km az=55.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.08**	**353**	P	P	15 06 53.6	0.0
	1.1nm,0.6s,baz=182,slow=8.4,SNR=4.5						
WRA	**Warramunga Arr**	**35.88**	**120**	P	P	15 08 58.8	0.0
	0.9nm,0.4s,baz=299,slow=9.1,SNR=6.9						
ASAR	**Alice Springs**	**37.08**	**125**	P	P	15 09 08.7	-0.4
	0.5nm,0.3s,baz=300,slow=8.0,SNR=4.4						
MKAR	**Makanchi Array**	**52.99**	**344**	P	P	15 11 16.2	+1.0
	0.5nm,0.4s,baz=153,slow=8.6,SNR=3.9						
ZALV	**Zalesovo Beam**	**59.03**	**349**	P	P	15 11 57.1	-1.3
	0.5nm,0.3s,baz=165,slow=6.0,SNR=2.5						
TXAR	**Lajitas Array**	**145.00**	**40**	PKPbc	PKPbc	15 21 36.5	+0.4
	0.9nm,0.5s,baz=295,slow=0.4,SNR=8.7						

*IDC **12** 15:07:01.0±2.3,123N×12659E,h0**km**,mb4.0/3,mb1 4.1/5,mb1mx3.7/17,mbtmp3.9/5,ML3.6/2,MS4.7/1,Ms1 4.7/1,ms1mx3.4/43,Error ellipse: s-maj=51.4km s-min=38.4km az=95.0*
*ISCJB **12** 15:07:06.2±1.3,10N±01×1265E±02,h33**km**,mb4.0/3,Error ellipse: s-maj=24.7km s-min=19.0km az=153.1*
*NEIC **12** 15:07:08.1±0.7,099N×12664E,h35**km**,Error ellipse: s-maj=21.1km s-min=12.7km az=76.0*
ISC 12 15:07:08.6±1.3,09N±01×1266E±02,h35km,n11,σ0s45/9,mb4.0/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**6.17**	**351**	LR	LR	15 11 05.0	
	comp=Z,7μm,20.0s,baz=296,slow=41						
KAPI	**Kappang**	**9.03**	**229**	Pn	**Pn**	**15 09 16.6**	**+0.2**
	0.6nm,0.3s,baz=46,slow=16,SNR=3.6						
FITZ	**Fitzroy Crossi**	**18.94**	**183**	*e*P	**Pn**	**15 11 27.1**	**-0.4**
	2.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.94**	**183**	P	**Pn**	**15 11 26.8**	**-0.8**
	0.2nm,0.3s,baz=9.6,slow=13,SNR=5.7						
FITZ	**Fitzroy Crossi**	**18.94**	**183**	*e*P	**Pn**	**15 11 27.1**	**-0.4**
WRA	**Warramunga Arr**	**22.10**	**160**	P	**P**	**15 12 00.8**	**-0.1**
	4.1nm,0.5s,mb4.1,baz=336,slow=11,SNR=26						
WB2	**Warramunga Arr**	**22.10**	**160**	*e*P	**P**	**15 12 01.8**	**+0.9**
ASAR	**Alice Springs**	**25.47**	**164**	P	**P**	**15 12 33.6**	**+0.1**
	1.2nm,0.3s,mb3.8,baz=345,slow=12,SNR=18						
STKA	**Stephens Creek**	**35.60**	**158**	P	**P**	**15 14 02.4**	**-0.6**
	1.2nm,0.4s,mb4.2,baz=338,slow=9.0,SNR=6.2						
ZAA0	**Zalesovo Array**	**63.00**	**334**	*e*P	**P**	**15 17 31.8**	**0.0**
TXAR	**Lajitas Array**	**123.39**	**54**	PKP	PKPdf	15 26 00.4	-2.3
	0.2nm,0.5s,baz=214,slow=1.6,SNR=5.0						

*MOS **12** 15:07:34.5±1.6,4681N×15286E,h53**km**,mb4.0/6,Error ellipse: s-maj=18.1km s-min=12.3km az=136.5*
*ISCJB **12** 15:07:36.4±1.3,4694N±009×1529E±01,h64**km**±11**km**,mb3.8/8,Error ellipse: s-maj=18.5km s-min=6.8km az=142.6*
*IDC **12** 15:07:39.6±2.9,4698N×15268E,h75**km**±26**km**,mb3.5/9,mb1 3.7/12,mb1mx3.5/25,mbtmp3.5/12,MS4.9/1,Ms1 4.9/1,ms1mx3.1/32,Error ellipse: s-maj=26.4km s-min=17.2km az=146.0*
*NEIC **12** 15:07:39.5±1.2,4696N×15274E,h76**km**±10**km**,mb4.1/1,Error ellipse: s-maj=14.0km s-min=8.6km az=139.0*
ISC 12 15:07:38.4±1.1,4692N±009×1529E±01,h67km±10km,n29,σ0s82/31,mb3.6/8,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.89**	**246**	*e*PN	**Pn**	**15 08 30.2**	**-5.5**
KUR				*e*S	**Sn**	**15 09 13.5**	**-6.6**
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax			
	comp=N,340nm,0.7s						
KUR				smax			
	comp=E,220nm,0.7s						
SKR	**Severo-Kuril's**	**4.32**	**28**	*e*PN	**Pn**	**15 08 41.5**	**-0.1**
SKR				*e*S	**Sn**	**15 09 29.0**	**-1.7**
SKR				pmax	pmax		
	comp=Z,90nm,1.0s						
SKR				smax			
	comp=N,80nm,0.5s						
SKR				smax			
	comp=E,50nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.73**	**242**	PN	**Pn**	**15 08 54.7**	**-6.1**
YUK				S	**Sn**	**15 10 05.0**	**-0.2**
YUK				smax			
	comp=N,190nm,0.5s						
YUK				smax			
	comp=E,230nm,0.5s						
PETK	**Petropavlovsk-**	**6.92**	**25**	P	**Pn**	**15 09 17.9**	**+0.9**
	comp=E,0.2nm,0.3s,baz=180,slow=10,SNR=6.4						
YSS	**Yuzh-Sakhalins**	**6.95**	**274**	*e*PN	**Pn**	**15 09 18.2**	**+0.7**
YSS				*e*S	**Sn**	**15 10 35.6**	**+0.5**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS	**Yuzh-Sakhalins**	**6.95**	**274**	*e*P	**Pn**	**15 09 18.0**	**+0.5**
	comp=Z,8.6nm,0.3s						
ASAJ	**Asahikawa**	**7.76**	**253**	P	**Pn**	**15 09 28.8**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=61,slow=9.4,SNR=22						
ASAJ				LR	LR	15 12 39.5	
	comp=Z,9μm,20.8s,baz=10,slow=39						
ASAJ	**Asahikawa**	**7.76**	**253**	PN	**Pn**	**15 09 28.8**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,9μm,20.8s						
MJAR	**Matsushiro Arr**	**15.07**	**232**	P	**Pn**	**15 11 06.7**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=34,slow=9.2,SNR=5.0						
YAK	**Yakutsk**	**20.10**	**327**	*e*P	**P**	**15 12 07.8**	**+1.5**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
YAK	**Yakutsk**	**20.10**	**327**	*e*Pn	**P**	**15 12 07.8**	**+1.4**
	comp=Z,4.9nm,0.4s						
KSRS	**Korea Array**	**20.71**	**252**	P	**P**	**15 12 12.6**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=54,slow=11,SNR=5.0						
KSRS	**Korea Array**	**20.71**	**252**	P	**P**	**15 12 12.6**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**46.74**	**297**	P	**P**	**15 15 59.5**	**-1.1**
	comp=Z,0.3nm,0.4s,mb3.4,baz=69,slow=6.6,SNR=5.2						
KURK	**Kurchatov**	**47.15**	**303**	P	**P**	**15 16 03.3**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.5,baz=70,slow=8.3,SNR=7.3						
KURK	**Kurchatov**	**47.15**	**303**	P	**P**	**15 16 03.3**	**-0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
CMAR	**Chiang Mai Arr**	**52.27**	**256**	P	**P**	**15 16 42.5**	**-0.5**
	comp=Z,1.0nm,0.7s,mb4.0,baz=38,slow=7.3,SNR=7.9						
CMAR	**Chiang Mai Arr**	**52.27**	**256**	P	**P**	**15 16 42.6**	**-0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PDAR	**Pinedale Array**	**64.76**	**54**	P	**P**	**15 18 11.3**	**+1.8**
	comp=Z,0.6nm,0.7s,mb3.5,baz=349,slow=1.5,SNR=4.3						
NB2	**NORSAR Subarra**	**68.02**	**341**	P	**P**	**15 18 29.9**	**-0.2**
	comp=Z,1.7nm,0.6s,mb4.0,baz=27,slow=6.2						
NOA	**NORSAR Array B**	**68.02**	**341**	P	**P**	**15 18 29.9**	**-0.1**
	comp=Z,2.8nm,0.7s,mb4.2,baz=28,slow=6.2,SNR=6.4						
NOA	**NORSAR Array B**	**68.02**	**341**	P	**P**	**15 18 30.0**	**-0.1**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**71.33**	**326**	P	**P**	**15 18 49.9**	**-0.7**
	comp=Z,0.5nm,0.3s,mb3.8,baz=33,slow=6.5,SNR=4.8						
AKASG	**Malin Array Be**	**71.33**	**326**	P	**P**	**15 18 49.9**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**72.32**	**198**	P	**P**	**15 18 56.6**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.6,baz=7.3,slow=4.5,SNR=5.3						
ASAR	**Alice Springs**	**72.32**	**198**	P	**P**	**15 18 56.6**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**77.53**	**60**	P	**P**	**15 19 27.6**	**+0.7**
	comp=Z,0.2nm,0.5s,mb3.1,baz=311,slow=4.7,SNR=5.3						
PLCA	**Paso Flores**	**148.36**	**95**	PKPbc	PKPbc	15 27 17.4	+0.8
	comp=Z,1.4nm,0.7s,baz=270,slow=4.0,SNR=4.4						
PLCA	**Paso Flores**	**148.36**	**95**	PKP2	PKPab	15 27 17.4	-2.6
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*BJI **12** 15:07:31.5,386S×10129E,h28**km**,mB5.1,mb4.9*
*NEIC **12** 15:07:34.7±6.5,332S×10126E,h12**km**,38**km**,mb4.7/9,Error ellipse: s-maj=21.4km s-min=5.6km az=53.0*
*MOS **12** 15:07:36.6±0.9,320S×10138E,h33**km**,mb4.9/24,Error ellipse: s-maj=15.5km s-min=8.0km az=101.4*
*IDC **12** 15:07:38.9±2.9,324S×10133E,h38**km**±22**km**,mb4.3/19,mb1 4.4/20,mb1mx4.2/25,mbtmp4.3/20,ML4.1/1,Error ellipse: s-maj=29.8km s-min=11.5km az=53.0*
*ISCJB **12** 15:07:41.1±1.6,328S±009×10139E±009,h76**km**±12**km**,mb4.7/43,Error ellipse: s-maj=20.5km s-min=7.2km az=43.2*
*DJA **12** 15:07:41,234S×10123E,h15**km**,mb5.1/4*
ISC 12 15:07:42.2±1.5,332S±009×10138E±009,h69km±11km,h13km±6.3km:pP-P,n101,σ0s84/98,mb4.7/43,4C,

Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**3.01**	**341**	P	**Pn**	**15 08 26.5**	**-1.1**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.10**	**18**	P	**Pn**	**15 08 30.2**	**+1.3**
	0.0nm,0.0s						
KAPI	**Kappang**	**18.40**	**96**	P	**Pn**	**15 11 50.1**	**-2.7**
	0.7nm,0.3s,baz=82,slow=22,SNR=3.2						
KAPI	**Kappang**	**18.40**	**96**	*e*P	**Pn**	**15 11 51.1**	**-1.6**
PCI	**Palu**	**18.60**	**83**	P	**Pn**	**15 11 56.8**	**+1.7**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**21.77**	**354**	P	**P**	**15 12 25.2**	**-3.2**
	6.4nm,0.9s,mb4.0,baz=185,slow=9.0,SNR=26						
CMAR	**Chiang Mai Arr**	**21.77**	**354**	P	**P**	**15 12 25.2**	**-3.2**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CHTO	**Chiang Mai**	**22.12**	**354**	*e*P	**P**	**15 12 31.1**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
CHTO	**Chiang Mai**	**22.12**	**354**	*e*P	**P**	**15 12 31.1**	**-1.1**
	comp=Z,6.6nm,1.0s,mb3.9						
FITZ	**Fitzroy Crossi**	**27.94**	**123**	*e*P	**P**	**15 13 26.4**	**+0.1**
	comp=Z,6.8nm,0.9s,mb4.2						
FITZ	**Fitzroy Crossi**	**27.94**	**123**	P	**P**	**15 13 26.4**	**+0.1**
	comp=Z,3.3nm,0.6s,mb4.0,baz=320,slow=7.8,SNR=8.1						
ODAN	**Odare**	**32.91**	**337**	*e*P	**P**	**15 14 10.5**	**+0.5**
	comp=Z,54nm,0.7s,mb5.5						
TAPN	**Taplejung**	**33.22**	**337**	*e*P	**P**	**15 14 13.6**	**+0.8**
	comp=Z,108nm,0.9s,mb5.7						
RAMN	**Ramite**	**33.31**	**335**	*e*P	**P**	**15 14 14.5**	**+1.0**
JIRN	**Jiri**	**34.10**	**336**	*e*P	**P**	**15 14 21.5**	**+1.1**
LSA	**Lhasa**	**34.26**	**344**	P	**P**	**15 14 21.7**	**-0.1**
LSA	**Lhasa**	**34.26**	**344**	*e*P	**P**	**15 14 22.4**	**+0.6**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.7						
LSA	**Lhasa**	**34.26**	**344**	*e*P	**P**	**15 14 22.4**	**+0.7**
	comp=Z,4.6nm,0.4s,mb4.7						
PKI	**Pulchoki**	**34.36**	**334**	*e*P	**P**	**15 14 23.0**	**+0.4**
PKIN	**Phulchoki**	**34.37**	**334**	*e*P	**P**	**15 14 23.0**	**+0.3**
	comp=Z,12nm,0.6s,mb4.9						
GUN	**Gumba**	**34.45**	**335**	*e*P	**P**	**15 14 24.4**	**+0.9**
	comp=Z,55nm,0.5s,mb5.7						
DMN	**Daman**	**34.52**	**334**	*e*P	**P**	**15 14 24.6**	**+0.6**
KKN	**Kakani**	**34.60**	**334**	*e*P	**P**	**15 14 25.2**	**+0.5**
GKN	**Gorkha**	**35.07**	**334**	*e*P	**P**	**15 14 29.2**	**+0.4**
	comp=Z,44nm,0.7s,mb5.4						
KOLN	**Koldanda**	**35.34**	**332**	*e*P	**P**	**15 14 31.9**	**+0.8**
	comp=Z,64nm,0.7s,mb5.6						
DANN	**Dangsing**	**35.76**	**333**	*e*P	**P**	**15 14 35.3**	**+0.6**
	comp=Z,66nm,0.6s,mb5.8						
WRA	**Warramunga Arr**	**36.14**	**120**	P	**P**	**15 14 38.0**	**-0.1**
	comp=Z,2.4nm,0.3s,mb4.7,baz=301,slow=11,SNR=56						
WRA				S	**S**	**15 20 13.7**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=294,slow=16,SNR=7.5						
WRA	**Warramunga Arr**	**36.14**	**120**	P	**P**	**15 14 38.0**	**-0.1**
WRA				S	**S**	**15 20 13.7**	**+0.6**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
WRA				smax			
	comp=N,2.0nm,0.9s						
WRAB	**Tennant Creek**	**36.15**	**120**	*e*P	**P**	**15 14 37.5**	**-0.7**
WB2	**Warramunga Arr**	**36.15**	**120**	*e*P	**P**	**15 14 38.1**	**-0.1**
ASAR	**Alice Springs**	**37.37**	**126**	P	**P**	**15 14 48.6**	**+0.1**
	comp=N,5.3nm,0.6s,mb4.6,baz=302,slow=8.1,SNR=24						
ASAR				PcP	PcP	15 17 07.6	+1.2
	comp=N,1.6nm,0.8s,baz=308,slow=2.9,SNR=7.8						
ASAR				S	**S**	**15 20 33.0**	**+1.3**
	comp=N,1.2nm,0.8s,baz=300,slow=14,SNR=6.7						
ASAR	**Alice Springs**	**37.37**	**126**	P	**P**	**15 14 48.6**	**+0.1**
ASAR						15 17 07.6	
ASAR				S	**S**	**15 20 33.0**	**+1.3**
ASAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ASAR				smax			
	comp=N,1.0nm,0.8s						
XAN	**Xi'an**	**37.83**	**10**	P	**P**	**15 14 52.0**	**-0.2**
XAN				AP	pP	15 15 03.5	-5.6
XAN				XP	sP	15 15 09.2	-7.9
XAN				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.7						
LZH	**Lanzhou**	**39.27**	**3**	*e*P	**P**	**15 15 03.2**	**-1.0**
LZH				AP	pP	15 15 08.5	-13
LZH				AMB	AMB		
	comp=Z,17nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,69nm,4.2s						
GTA	**Gaotai**	**42.54**	**358**	*e*P	**P**	**15 15 33.7**	**+2.6**
GTA				AP	pP	15 15 38.2	-10
GTA				XP	sP	15 15 40.6	-16
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb3.9						
CTA	**Charters Tower**	**46.79**	**115**	*e*P	**P**	**15 16 05.9**	**+0.6**
	comp=Z,15nm,0.8s,mb4.8						
CTA	**Charters Tower**	**46.79

ZAK					pmax	pmax		
	comp=Z,2.0nm,2.0s,mb3.8							
HIA	**Hailar**	**54.74**	**15**	*e*P	**P**		**15 17 03.9**	**-0.7**
MOY	**Mondy**	**54.78**	**360**	*e*P	**P**		**15 17 05.3**	**+0.6**
TLY	**Talaya**	**54.82**	**2**	*e*P	**P**		**15 17 05.8**	**+0.7**
TLY					pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8							
KURK	**Kurchatov**	**57.26**	**343**	P	**P**		**15 17 21.6**	**-0.9**
	comp=Z,8.3nm,0.7s,mb4.8,baz=161,slow=6.8,SNR=41							
KURK	**Kurchatov**	**57.26**	**343**	P	**P**		**15 17 21.6**	**-0.9**
KURK					pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9							
KURK	**Kurchatov**	**57.26**	**343**	*e*P	**P**		**15 17 21.8**	**-0.7**
ZALV	**Zalesovo Beam**	**58.72**	**349**	P	**P**		**15 17 32.1**	**-0.5**
	comp=Z,12nm,0.6s,mb5.1,baz=160,slow=4.7,SNR=33							
ZALV	**Zalesovo Beam**	**58.72**	**349**	P	**P**		**15 17 32.2**	**-0.4**
ZALV					pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1							
NVS	**Novosibirsk**	**59.88**	**348**	*e*P	**P**		**15 17 26.4**	**-14**
ASAJ	**Asahikawa**	**59.93**	**33**	P	**P**		**15 17 42.0**	**+0.8**
	comp=Z,4.7nm,0.5s,mb4.8,baz=232,slow=8.4,SNR=12							
ASAJ	**Asahikawa**	**59.93**	**33**	P	P		**15 17 42.1**	**+0.9**
ASAJ					pmax	pmax		
	comp=Z,5.0nm,0.5s							
BOD	**Bodaibo**	**61.78**	**8**	*e*P	**P**		**15 17 53.4**	**-0.1**
BOD					pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9							
YSS	**Yuzh-Sakhalins**	**61.88**	**31⇑**	*e*P	**P**		**15 17 54.1**	**-0.3**
YSS					pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3							
BVAR	**Borovoye Array**	**61.89**	**339**	P	**P**		**15 17 53.3**	**-1.0**
	comp=Z,3.9nm,0.6s,mb4.6,baz=141,slow=7.6,SNR=17							
BVAR	**Borovoye Array**	**61.89**	**339**	P	**P**		**15 17 53.3**	**-1.0**
BVAR					pmax	pmax		
	comp=Z,4.0nm,0.6s							
BRVK	**Borovoye**	**61.96**	**339**	*e*P	**P**		**15 17 53.7**	**-1.1**
BRVK					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5							
BRVK	**Borovoye**	**61.96**	**339**	*e*P	**P**		**15 17 53.7**	**-1.1**
	comp=Z,4.5nm,0.8s,mb4.5							
AKTK	**Aktyubinsk**	**65.17**	**331**	P	**P**		**15 18 15.2**	**-0.8**
AKTO	**Aktyubinsk**	**65.17**	**331**	P	**P**		**15 18 15.2**	**-0.8**
	comp=Z,2.5nm,0.8s,mb4.1,baz=100,slow=3.0,SNR=8.1							
AKTO	**Aktyubinsk**	**65.17**	**331**	P	**P**		**15 18 15.2**	**-0.8**
AKTO					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2							
SVE	**Sverdlovsk**	**68.42**	**337**	*e*P	**P**		**15 18 36.4**	**-0.1**
SVE					pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8							
YAK	**Yakutsk**	**68.67**	**14***c*	*i*P	**P**		**15 18 36.9**	**-1.1**
YAK					pmax	pmax		
	comp=Z,22nm,0.7s,mb5.1							
YAK	**Yakutsk**	**68.67**	**14**	*e*P	**P**		**15 18 36.8**	**-1.2**
	comp=Z,29nm,0.8s,mb5.2							
ARU	**Arti**	**68.96**	**336***c*	*i*P	**P**		**15 18 38.2**	**-1.7**
ARU				*e*			15 21 17.5	
ARU				*e*S	S		15 27 40.2	+1.1
ARU					pmax	pmax		
	comp=Z,13nm,1.7s,mb4.5							
PETK	**Petropavlovsk-**	**73.27**	**32**	P	**P**		**15 19 06.2**	**+0.2**
	comp=Z,2.3nm,0.6s,mb4.2,baz=212,slow=5.3,SNR=3.7							
PETK	**Petropavlovsk-**	**73.27**	**32**	P	**P**		**15 19 06.2**	**+0.2**
PETK					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1							
OBN	**Obninsk**	**78.64**	**328**	*e*P	**P**		**15 19 36.5**	**0.0**
OBN					pmax	pmax		
	comp=Z,12nm,0.9s,mb4.7							
AKASG	**Malin Array Be**	**81.36**	**322**	P	**P**		**15 19 50.8**	**-0.6**
	comp=Z,0.4nm,0.3s,mb3.8,baz=77,slow=5.5,SNR=4.4							
ARCES	**ARCESS Array B**	**88.17**	**340**	P	**P**		**15 20 25.1**	**-0.1**
	comp=Z,3.4nm,0.8s,mb4.4,baz=114,slow=5.9,SNR=6.5							
ARCES	**ARCESS Array B**	**88.17**	**340**	P	**P**		**15 20 25.1**	**-0.1**
ARCES					pmax	pmax		
	comp=Z,3.0nm,0.8s							
GERES	**GERESS Array B**	**90.94**	**319**	P	**P**		**15 20 38.7**	**+0.1**
	comp=Z,1.1nm,0.7s,mb4.1,baz=67,slow=3.5,SNR=8.7							
GERES	**GERESS Array B**	**90.94**	**319**	P	**P**		**15 20 38.7**	**+0.1**
GERES					pmax	pmax		
	comp=Z,1.0nm,0.7s							
NVAR	**Mina Array Bea**	**129.72**	**41**	PKP	PKPdf		15 26 46.1	+2.1
	comp=Z,0.7nm,0.7s,baz=280,slow=3.0,SNR=6.1							
PDAR	**Pinedale Array**	**132.03**	**31**	PKP	PKPdf		15 26 49.2	+1.0
	comp=Z,0.3nm,0.5s,baz=72,slow=2.9,SNR=2.9							
PDAR				SKPbc	SKPbc		15 30 10.1	+1.5
	comp=Z,0.7nm,0.9s,baz=22,slow=1.6,SNR=4.4							
CPUP	**Villa Florida**	**144.04**	**214**	PKP	PKPdf		15 27 10.5	-0.3
CPUP	**Villa Florida**	**144.04**	**214**	PKP	PKPdf		15 27 10.5	-0.3
TXAR	**Lajitas Array**	**144.86**	**40**	PKP	PKPdf		15 27 12.5	+0.4
	comp=Z,3.7nm,0.7s,baz=279,slow=0.7,SNR=40							
TXAR	**Lajitas Array**	**144.86**	**40**	PKIKP	PKPdf		15 27 12.5	+0.4
TXAR					pmax	pmax		
	comp=Z,4.0nm,0.7s							
MIAR	**Mount Ida**	**145.96**	**22**	*e*PKP2	PKPab		15 27 14.7	-0.5

*BJI **12** 15:18:32.2, 459S×101 53E, h27km, mB4.6, mb4.7*
*IDC **12** 15:18:34.3±1.3, 395S×101 46E, h0km, mb4.3/14, mb1 4.4/14, mb1mx4.3/21, mbtmp4.3/14, Error ellipse: s-maj=47.7km s-min=13.6km az=56.0*
*ISCJB **12** 15:18:36.8±1.1, 40S±02×101 4E±02, h33km, mb4.3/17, Error ellipse: s-maj=37.6km s-min=10.2km az=145.8*
*NEIC **12** 15:18:38.9±0.7, 407S×101 33E, h35km, mb4.4/2, Error ellipse: s-maj=29.0km s-min=7.0km az=55.0*
ISC 12 15:18:42.1±6.9, 40S±02×1014E±02, h62km±62km, n26, σ0s74/25, mb4.3/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMAR	**Chiang Mai Arr**	**22.47**	**354**	P		**P**	**15 23 36.0**	**-0.2**
	4.9nm,0.7s,mb4.0,baz=184,slow=8.8,SNR=26							
FITZ	**Fitzroy Crossi**	**27.51**	**122**	*e*P		**P**	**15 24 23.0**	**0.0**
	6.4nm,0.6s,mb4.4							
FITZ				*e*			15 24 30.7	
FITZ	**Fitzroy Crossi**	**27.51**	**122**	P		**P**	**15 24 23.1**	**+0.1**
	4.5nm,0.8s,mb4.2,baz=281,slow=5.1,SNR=16							
FITZ	**Fitzroy Crossi**	**27.51**	**122**	*e*P		**P**	**15 24 23.0**	**0.0**
FITZ				*e*			15 24 30.7	
CD2	**Chengdu**	**34.80**	**3**	*e*P		**P**	**15 25 27.0**	**0.0**
CD2					AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9							
WRA	**Warramunga Arr**	**35.75**	**119**	P		**P**	**15 25 34.9**	**-0.4**
	comp=Z,2.8nm,0.8s,mb4.3,baz=301,slow=9.8,SNR=40							
WB2	**Warramunga Arr**	**35.76**	**119**	*e*P		**P**	**15 25 35.3**	**-0.1**
ASAR	**Alice Springs**	**36.92**	**125**	P		**P**	**15 25 45.5**	**+0.2**
	comp=Z,3.0nm,0.9s,mb4.1,baz=298,slow=7.5,SNR=33							
GTA	**Gaotai**	**43.24**	**358**	*e*P		**P**	**15 26 39.2**	**+1.9**
GTA					AP	pP	15 26 43.9	-9.1
GTA					XP	sP	15 26 46.3	-14
GTA					AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.0							
STKA	**Stephens Creek**	**46.75**	**131**	*e*P		**P**	**15 27 05.8**	**+0.4**
	comp=Z,4.6nm,0.6s,mb4.6							
STKA	**Stephens Creek**	**46.75**	**131**	P		**P**	**15 27 05.9**	**+0.5**
	comp=Z,5.6nm,0.7s,mb4.6,baz=300,slow=11,SNR=18							
KSRS	**Korea Array**	**48.06**	**29**	P		**P**	**15 27 13.6**	**-1.8**
	comp=Z,3.9nm,0.9s,mb4.4,baz=214,slow=7.7,SNR=13							
SONM	**Songino Array**	**51.82**	**4**	P		**P**	**15 27 44.5**	**+0.8**
	comp=Z,2.0nm,0.6s,mb4.2,baz=185,slow=9.4,SNR=15							
ULN	**Ulaanbaatar**	**51.90**	**5**	*e*P		**P**	**15 27 45.5**	**+1.2**
	comp=Z,3.3nm,1.2s,mb4.1							
MJAR	**Matsushiro Arr**	**52.97**	**37**	P		**P**	**15 27 52.4**	**0.0**
	comp=Z,1.6nm,0.9s,mb4.0,baz=201,slow=6.7,SNR=4.5							
MK31	**Makanchi Array**	**53.35**	**344**	*e*P		**P**	**15 27 55.0**	**-0.1**
MKAR	**Makanchi Array**	**53.35**	**344**	P		**P**	**15 27 55.1**	**0.0**
	comp=Z,3.1nm,0.5s,mb4.5,baz=153,slow=8.3,SNR=35							
KURK	**Kurchatov**	**57.94**	**343**	P		**P**	**15 28 27.3**	**-0.6**
	comp=Z,2.6nm,0.8s,mb4.3,baz=164,slow=6.8,SNR=16							
KURK	**Kurchatov**	**57.94**	**343**	*e*P		**P**	**15 28 27.4**	**-0.4**
ZALV	**Zalesovo Beam**	**59.41**	**349**	P		**P**	**15 28 37.8**	**-0.2**
	comp=Z,6.7nm,0.8s,mb4.7,baz=160,slow=4.7,SNR=24							
BVAR	**Borovoye Array**	**62.56**	**339**	P		**P**	**15 28 58.7**	**-0.8**
	comp=Z,1.7nm,0.5s,mb4.4,baz=141,slow=7.6,SNR=13							
BRVK	**Borovoye**	**62.63**	**339**	*e*P		**P**	**15 28 58.9**	**-1.0**
PETK	**Petropavlovsk-**	**73.83**	**31**	P		**P**	**15 30 10.0**	**0.0**
	comp=Z,1.2nm,1.0s,mb3.8,baz=222,slow=0.3,SNR=5.2							
ARCES	**ARCESS Array B**	**88.85**	**340**	P		**P**	**15 31 29.5**	**+0.5**
	comp=Z,1.5nm,0.8s,mb4.4,baz=87,slow=6.2,SNR=5.1							
ARCES	**ARCESS Array B**	**88.85**	**340**	P		P	**15 31 29.5**	**+0.5**
TXAR	**Lajitas Array**	**145.36**	**41**	PKPbc		PKPbc	15 38 15.2	+1.6
	comp=Z,2.2nm,0.9s,baz=290,slow=1.9,SNR=17							

*JMA **12** 15:21:37.3±0.3, 2251N×122 00E, h84km, M3.6*

TAP 12 15:21:36.0, 2247N×121 78E, h14km, ML3.9, 12C-3D, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LAY	**Lan-yu**	**0.48**	**207**	*i*P		Pg	15 21 44.9	-0.6
	baz=207							
LAY				*e*S		Sg	15 21 50.5	-1.4
	baz=207							
TTN	**Taitung**	**0.65**	**296**	*e*P		Pg	15 21 48.9	+0.2
	baz=309							
TTN				*e*S		Sg	15 21 57.9	+0.5
	baz=309							
CHKT	**Chengkung**	**0.74**	**329⇑**	*i*P		Pg	15 21 49.4	-0.9
	baz=338							
CHKT				*i*	S	Sg	15 21 59.1	-1.0
	baz=338							
TWG	**Pinlang**	**0.74**	**298**	⇑P		Pg	15 21 50.0	-0.5
	baz=314							
TWG				*e*S		Sg	15 22 00.4	+0.1
	baz=314							
ECL	**Taimali**	**0.78**	**280⇑**	*i*P		Pg	15 21 50.8	-0.3
	baz=294							
ECL				*e*S		Sg	15 22 01.2	-0.2
	baz=294							
TAW	**Tawu**	**0.83**	**263**	*e*P		Pg	15 21 51.1	-1.0
	baz=262							
TAW				*e*S		Sg	15 22 01.1	-1.9
	baz=262							
EAST	**Anshuo**	**0.87**	**265⇑**	*i*P		Pg	15 21 52.0	-0.8
	baz=264							
EAST					S	Sg	15 22 02.9	-1.4
	baz=264							
TWF1	**Yuli**	**0.99**	**333**	⇓P		Pb	15 21 53.3	-1.6
	baz=340							
TWF1				*e*S		Sb	15 22 06.6	-1.2
	baz=340							
ELDTW	**Lidau**	**1.01**	**316⇑**	*i*P		Pb	15 21 53.7	-1.5
	baz=324							
ELDTW				*e*S		Sb	15 22 06.5	-1.8
	baz=324							
TWK1	**Hengchun**	**1.05**	**240**	*e*P		Pb	15 21 54.1	-1.7
	baz=231							
TWK1				*e*S		Sb	15 22 06.6	-2.8
	baz=231							
HEN	**Hengchun**	**1.07**	**245**	*e*P		Pb	15 21 55.5	-0.9
	baz=244							
HEN				*e*S		Sb	15 22 08.3	-1.9
	baz=244							
SCZT	**Fangliau**	**1.08**	**265**	*e*P		Pb	15 21 54.8	-1.6
	baz=265							
SSD	**Sandimen**	**1.10**	**285**	⇑P		Pb	15 21 55.6	-1.2
	baz=294							
EHY	**Hungye**	**1.12**	**338**	P		Pb	15 21 55.3	-1.8
	baz=345							
EHY				*e*S		Sb	15 22 09.7	-1.8
	baz=345							
STYT	**Tauyuan**	**1.17**	**306⇑**	*i*P		Pn	15 21 57.0	-1.0
	baz=306							
STYT				*e*S		Sb	15 22 11.8	-1.3
	baz=306							
SGST	**Jiashian**	**1.27**	**299**	*e*P		Pn	15 21 59.5	+0.2
	baz=299							
YUS	**Yu-Shan**	**1.27**	**323**	⇑P		Pn	15 21 58.6	-0.7
	baz=322							
YUS				*e*S		Sb	15 22 13.9	-2.1
	baz=322							
TWM1	**Shoushan**	**1.31**	**286**	*e*P		Pn	15 22 00.8	+1.0
	baz=295							
TWP	**Hsiaoliuchiu**	**1.32**	**265**	*e*P		Pn	15 22 01.8	+1.8
	baz=249							
WTP	**Ta-pu**	**1.33**	**306⇑**	*i*P		Pn	15 22 00.2	+0.1
	baz=305							
WTP				*e*S		Sb	15 22 18.3	+0.7
	baz=305							
CHN1	**Nanshi**	**1.36**	**302⇑**	*i*P		Pn	15 22 01.3	+0.7
	baz=310							
CHN1				*e*S		Sn	15 22 20.7	+2.3
	baz=310							
KAU	**Kaohsiung**	**1.37**	**274**	*e*P		Pn	15 22 02.9	+2.3
	baz=275							
ALS	**Alishan**	**1.37**	**319**	*e*P		Pn	15 22 00.5	-0.2
	baz=326							
ALS				*e*S		Sn	15 22 17.0	-1.8
	baz=326							
ESL	**Shilin**	**1.38**	**347**	⇓*i*P		Pn	15 21 58.7	-2.1
	baz=355							
ESL				*e*S		Sn	15 22 15.8	-3.1
	baz=355							
CHN4	**Tsaushan**	**1.41**	**309**	⇑P		Pn	15 22 01.7	+0.5
	baz=308							
CHN4				*e*S		Sn	15 22 20.6	+1.0
	baz=308							
TWK	**Hsinying**	**1.44**	**304**	*e*P		Pn	15 22 02.1	+0.5
	baz=316							
TWK				*e*S		Sn	15 22 21.5	+1.2
	baz=316							
HWA	**Hwalien**	**1.51**	**354**	*e*P		Pn	15 22 00.8	-1.8
	baz=5.0							
HWA				*e*S		Sn	15 22 19.5	-2.6
	baz=5.0							
CHN5	**Tsauling**	**1.52**	**318**	⇑P		Pn	15 22 03.6	+0.8
	baz=317							
CHN5				*e*S		Sn	15 22 23.8	+1.6
	baz=317							
CHN2	**Minshiung**	**1.60**	**312**	*e*P		Pn	15 22 05.3	+1.4
	baz=311							
TWD	**Chiawan**	**1.61**	**354**	P		Pn	15 22 01.8	-2.3
	baz=5.0							
TWD				*e*S		Sn	15 22 21.1	-3.6
	baz=5.0							
SCLT	**Jiali**	**1.63**	**296**	*e*P		Pn	15 22 05.3	+1.0
	baz=295							
SCLT				*e*S		Sn	15 22 26.8	+1.8
	baz=295							
SMLT	**Sun Moon Lake**	**1.63**	**330**	*e*P		Pn	15 22 03.3	-0.9
	baz=338							
SMLT				*e*S		Sn	15 22 23.9	-1.1
	baz=338							
WGK	**Gukeng**	**1.65**	**317**	*e*P		Pn	15 22 06.0	+1.4
	baz=316							
WGK				*e*S		Sn	15 22 28.1	+2.4
	baz=316							
TYC	**Yuchr**	**1.66**	**329**	*e*P		Pn	15 22 05.0	+0.3
	baz=341							
TYC				*e*S		Sn	15 22 26.4	+0.5
	baz=341							
CHN8	**Yiju**	**1.69**	**301**	*e*P		Pn	15 22 06.3	+1.2
	baz=301							
WNT	**Mingjian**	**1.73**	**324**	*e*P		Pn	15 22 06.5	+0.8
	baz=338							
WNT				*e*S		Sn	15 22 29.0	+1.5
	baz=338							
WHF	**Hehuan Shan**	**1.74**	**344**	*e*P		Pn	15 22 04.6	-1.2
	baz=343							
WHF				*e*S		Sn	15 22 24.6	-3.1
	baz=343							
WSF	**Szhu**	**1.85**	**309**	*e*P		Pn	15 22 06.3	-1.0
	baz=309							
ENA	**Nanau**	**1.95**	**359**	*e*P		Pn	15 22 07.0	-1.7
	baz=9.0							
ENA				*e*S		Sn	15 22 30.1	-2.9
	baz=9.0							
TCU	**Taichung**	**1.96**	**329**	*e*P		Pn	15 22 10.3	+1.5
	baz=328							
NNS	**Nan Shan**	**2.00**	**349**	*e*P		Pn	15 22 08.2	-1.2
	baz=348							
NNS				*e*S		Sn	15 22 31.3	-2.9
	baz=348							
TWQ1	**Liyutan**	**2.09**	**334**	*e*P		Pn	15 22 12.3	+1.7
	baz=332							
TWQ1				*e*S		Sn	15 22 38.8	+2.3
	baz=332							
TWC	**Suao**	**2.13**	**2**	P		Pn	15 22 09.9	-1.3
	baz=1.0							
TWC				*e*S		Sn	15 22 35.3	-2.2
	baz=1.0							
NSY	**Sanyi**	**2.15**	**334**	*e*P		Pn	15 22 13.3	+1.8
	baz=333							
NSY				*e*S		Sn	15 22 40.7	+2.7
	baz=333							
ENTT	**Nioudou**	**2.17**	**355**	*e*P		Pn	15 22 10.5	-1.2
	baz=5.0							
ENTT				*e*S		Sn	15 22 36.4	-2.1
	baz=5.0							
TWE	**Neicheng**	**2.25**	**357**	*e*P		Pn	15 22 11.9	-0.9
	baz=6.0							
TWE				*e*S		Sn	15 22 38.1	-2.2
	baz=6.0							
NSTT	**Nanjuang**	**2.27**	**342**	*e*P		Pn	15 22 13.5	+0.4
	baz=340							
NSTT				*e*S		Sn	15 22 40.3	-0.6
	baz=340							
YOJ	**Yonaguni jima**	**2.28**	**29**	P		Pn	15 22 11.9	-1.4
YOJ						S	Sn	15 22 38.9	-2.3
PNG	**Penghu**	**2.33**	**298**	*e*P		Pn	15 22 13.6	-0.3
	baz=298							
EGS		**2.37**	**3**	*e*P		Pn	15 22 13.8	-0.7
	baz=13							
HATJ	**Hateruma jima**	**2.44**	**49**	P		Pn	15 22 13.5	-1.9
HATJ						S	Sn	15 22 40.5	-4.6
TWA	**Mucha**	**2.51**	**356**	*e*P		Pn	15 22 15.5	-0.9
	baz=355							
TWB1	**Santiao Chiao**	**2.54**	**4**	*e*P		Pn	15 22 15.4	-1.4
	baz=16							
IRIF	**Iriomote-Funau**	**2.58**	**44**	P		Pn	15 22 15.7	-1.6
IRIF						S	Sn	15 22 44.6	-3.9
NWF	**Wu-fen Shan**	**2.59**	**360**	*e*P		Pn	15 22 17.9	+0.4
	baz=10.0							
TWS1	**Kuangyinshan**	**2.64**	**353**	*e*P		Pn	15 22 18.9	+0.7
	baz=6.0							
JKRS	**Kuro-shima**	**2.70**	**49**	P		Pn	15 22 17.4	-1.6
JKRS						S	Sn	15 22 46.9	-4.6
JIJ	**Ishigaki jima**	**2.87**	**49**	P		Pn	15 22 19.1	-2.3
JIJ						S	Sn	15 22 50.5	-5.3
JTJ	**Tarama**	**3.44**	**51**	P		Pn	15 22 27.5	-1.7
JTJ						S	Sn	15 23 05.0	-4.8
KNM	**Kinmen**	**3.64**	**303**	*e*P		Pn	15 22 33.4	+1.5
	baz=302							
JMJ	**Miyako jima 2**	**3.98**	**53**	S		Sn	15 23 19.1	-3.9
JOGS	**Gusukube**	**4.03**	**55**	S		Sn	15 23 20.6	-3.7

IDC 12 15:24:11.8±3.1, 345S×101 49E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/19, mbtmp3.5/6, Error ellipse: s-maj=142.5km s-min=20.2km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**35.98**	**120**	P		P	15 31 14.4	-0.4
	0.4nm,0.4s,baz=304,slow=8.9,SNR=7.5							
ASAR	**Alice Springs**	**37.20**	**126**	P		P	15 31 25.2	+0.1
	0.4nm,0.4s,baz=352,slow=8.7,SNR=17							
SONM	**Songino Array**	**51.25**	**4**	P		P	15 33 17.7	+0.4
	0.8nm,0.6s,baz=188,slow=11,SNR=6.8							
MKAR	**Makanchi Array**	**52.82**	**344**	P		P	15 33 29.4	+0.4
	0.2nm,0.3s,baz=146,slow=8.0,SNR=3.1							
KURK	**Kurchatov**	**57.41**	**343**	P		P	15 34 01.2	-1.0
	0.2nm,0.8s,baz=167,slow=7.2,SNR=2.5							
ZALV	**Zalesovo Beam**	**58.87**	**349**	P		P	15 34 12.0	-0.3
	0.6nm,0.5s,baz=134,slow=4.2,SNR=2.8							
TXAR	**Lajitas Array**	**144.90**	**40**	PKP		PKPdf	15 43 52.1	+0.4
	0.6nm,0.5s,baz=235,slow=0.8,SNR=12							

*BJI **12** 15:26:31.5, 362S×100 92E, h27km, mB5.2, mb4.9, Ms5.3, Msz5.1*
*IDC **12** 15:26:32.2±0.6, 326S×100 92E, h0km, mb4.6/21, mb1 4.7/22, mb1mx4.5/29, mbtmp4.6/22, ML4.4/1, Error ellipse: s-maj=22.9km s-min=10.1km az=48.0*
*ISCJB **12** 15:26:34.9±0.4, 321S±006×100 93E±006, h26km, mb4.9/55, Error ellipse: s-maj=10.9km s-min=5.0km az=42.9*
*MOS **12** 15:26:35.6±0.8, 3.16S×100 97E, h33km, mb5.0/28, Error ellipse: s-maj=13.8km s-min=7.5km az=104.0*
*NEIC **12** 15:26:37.6±0.3, 320S×100 97E, h35km, mb4.9/11, Error ellipse: s-maj=12.9km s-min=5.6km az=48.0*
*DJA **12** 15:26:44, 296S×100 69E, h30km, MLv4.8/9*
ISC 12 15:26:36.9±0.4, 326S±006×100 93E±006, h28km, h28km±4.9km:pP-P, n126, σ1s00/124, mb4.9/55, 7C-3D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PPI	**Padang Panjang**	**2.84**	**349**	P		**Pn**	**15 27 21.5**	**+1.1**
	0.0nm,0.0s							
JMBI	**JAMBI**	**3.16**	**59**	P		**Pn**	**15 27 24.2**	**-0.6**
	0.0nm,0.0s							
RGRI	**Rengat**	**3.22**	**26**	P		**Pn**	**15 27 29.1**	**+3.5**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.32**	**78**	P		**Pn**	**15 27 58.1**	**+3.6**
	0.0nm,0.0s							
DBJI	**Dramaga**	**6.66**	**120**	P		**Pn**	**15 28 16.3**	**+3.4**
	0.0nm,0.0s							
CBJI	**Citeko**	**6.68**	**118**	P		**Pn**	**15 28 17.2**	**+3.9**
	0.0nm,0.0s							
LEM	**Lembang**	**7.54**	**118**	P		**Pn**	**15 28 27.6**	**+2.5**
	0.0nm,0.0s							
BSI	**Banda Aceh**	**10.36**	**327**	P		**Pn**	**15 29 01.1**	**-2.7**
	0.0nm,0.0s							
BBKI	**Banjar Baru**	**13.89**	**91**	P		**Pn**	**15 30 00.4**	**+8.3**
	0.0nm,0.0s							
KAPI	**Kappang**	**18.85**	**96**	P		**Pn**	**15 30 55.1**	**-0.6**
	1.2nm,0.3s,baz=278,slow=18,SNR=5.1							
KAPI	**Kappang**	**18.85**	**96**	*e*P		**Pn**	**15 30 54.5**	**-1.3**
PCI	**Palu**	**19.04**	**83**	P		**Pn**	**15 30 59.9**	**+2.0**
	0.0nm,0.0s							
CM31	**Chiang Mai Arr**	**21.67**	**355**	*e*P		**P**	**15 31 23.3**	**-2.2**
	11nm,0.8s,mb4.3							
CMAR	**Chiang Mai Arr**	**21.67**	**355**	P		**P**	**15 31 22.9**	**-2.6**
	2.8nm,0.4s,mb4.0,baz=185,slow=10,SNR=29							
CMAR					PcP	PcP	15 35 27.1	+0.6
	0.9nm,0.6s,baz=207,slow=2.9,SNR=5.4							
CMAR	**Chiang Mai Arr**	**21.67**	**355**	P		**P**	**15 31 23.0**	**-2.5**
CMAR							15 35 27.1

ASAR 15 36 07.7
ASAR S **S** 15 39 41.3 +1.3
ASAR pmax pmax
comp=Z,8.0nm,0.5s
ASAR pmax pmax
comp=Z,2.0nm,0.5s
ASAR smax
comp=N,2.0nm,1.0s
XAN Xi'an 37.86 11 P **P** 15 33 50.7 -0.7
XAN AP pP 15 34 02.2 +2.5
XAN XP sP 15 34 07.9 +4.8
LZH Lanzhou 39.24 4 *e*P **P** 15 34 03.0 0.0
LZH AP pP 15 34 07.3 -4.0
LZH AMB AMB
comp=Z,18nm,1.4s,mb4.6
LZH AMB AMB
comp=Z,93nm,5.1s
GTA Gaotai 42.47 359 *e*P **P** 15 34 30.0 +0.4
GTA AP pP 15 34 34.4 -3.6
GTA XP sP 15 34 37.0 -4.3
GTA AMB AMB
comp=Z,7.0nm,1.0s,mb4.2
CTA Charters Tower 47.23 114 P **P** 15 35 07.8 -0.1
comp=Z,6.2nm,0.9s,mb4.6,baz=303,slow=9.0,SNR=8.9
CTA Charters Tower 47.23 114 P **P** 15 35 07.8 0.0
CTA pmax pmax
comp=Z,6.0nm,0.9s
CTAO Charters Tower 47.23 114 *e*P **P** 15 35 07.4 -0.4
CTAO pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CTAO Charters Tower 47.23 114 *e*P **P** 15 35 07.4 -0.5
comp=Z,3.1nm,0.7s,mb4.3
STKA Stephens Creek 47.62 131 *e*P **P** 15 35 11.1 +0.4
comp=Z,5.7nm,0.5s,mb4.9
STKA Stephens Creek 47.62 131 P **P** 15 35 10.7 -0.1
comp=Z,6.6nm,0.6s,mb4.8,baz=307,slow=8.1,SNR=22
KSRS Korea Array 47.64 29 P **P** 15 35 09.8 -0.9
comp=Z,7.4nm,0.9s,mb4.7,baz=221,slow=8.0,SNR=29
KSRS Korea Array 47.64 29 P **P** 15 35 09.8 -0.9
KSRS pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
WMQ Urumqi 48.36 347⇑ *i*P **P** 15 35 16.9 +0.7
WMQ XP sP 15 35 28.8 +0.8
WMQ AMB AMB
comp=Z,28nm,0.8s,mb5.3
SONM Songino Array 51.11 5 P **P** 15 35 38.1 +1.0
comp=Z,33nm,0.8s,mb5.3,baz=186,slow=9.6,SNR=208
SONM PcP PcP 15 36 52.2 -0.2
comp=Z,2.7nm,0.5s,baz=191,slow=4.6,SNR=7.5
SONM Songino Array 51.11 5 P **P** 15 35 38.1 +1.1
SONM 15 36 52.2
SONM pmax pmax
comp=Z,33nm,0.8s
SONM pmax pmax
comp=Z,3.0nm,0.5s
ULN Ulaanbaatar 51.20 5 *e*P **P** 15 35 37.9 +0.2
ULN pmax pmax
comp=Z,18nm,0.8s,mb5.0
ULN Ulaanbaatar 51.20 5 *e*P **P** 15 35 37.9 +0.3
comp=Z,18nm,0.8s,mb5.0
TKM2 Tokmak 2 51.35 336 *e*P **P** 15 35 39.3 +0.3
TKM2 pmax pmax
comp=Z,35nm,0.6s,mb5.5
TKM2 Tokmak 2 51.35 336 P **P** 15 35 39.7 +0.7
SNR=60
TKM2 Tokmak 2 51.35 336 *e*P **P** 15 35 39.3 +0.3
comp=Z,34nm,0.6s,mb5.5
KBK Karagaybulak 51.40 336 P **P** 15 35 40.5 +1.2
SNR=12
AML Almayashu 51.50 334 P **P** 15 35 41.0 +1.0
SNR=7.1
CHMS Chumysh 51.76 336 P **P** 15 35 42.2 +0.2
SNR=7.2
CN2 Changchun 51.77 22 *e*P **P** 15 35 41.6 -0.5
CN2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
EKS2 Erkin-Say 51.89 335 P **P** 15 35 43.8 +0.8
SNR=48
EKS2 Erkin-Say 51.89 335 *e*P **P** 15 35 43.6 +0.6
comp=Z,33nm,0.8s,mb5.3
MK31 Makanchi Array 52.49 344 *e*P **P** 15 35 47.1 -0.2
MKAR Makanchi Array 52.49 344 P **P** 15 35 47.2 -0.1
comp=Z,11nm,0.7s,mb4.9,baz=146,slow=8.0,SNR=95
MKAR Makanchi Array 52.49 344 P **P** 15 35 47.2 -0.1
MKAR pmax pmax
comp=Z,11nm,0.7s
MKAR Makanchi Array 52.49 344 P **P** 15 35 47.2 -0.1
MJAR Matsushiro Arr 52.68 38 P **P** 15 35 48.0 -1.0
comp=Z,3.4nm,0.7s,mb4.4,baz=211,slow=7.5,SNR=13
MJAR Matsushiro Arr 52.68 38 P **P** 15 35 48.0 -1.0
MJAR pmax pmax
comp=Z,3.0nm,0.7s
ZAK Zakamensk 53.47 2⇓ *i*P **P** 15 35 54.5 0.0
ZAK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ZAK pmax pmax
comp=Z,2.0nm,1.9s,mb3.7
MDJ Mudanjiang 54.12 25 P **P** 15 35 59.3 -0.1
MDJ AMB AMB
comp=Z,7.0nm,0.8s,mb4.6
MDJ AMB AMB
comp=Z,2μm,12.1s
MOY Mondy 54.72 0 *e*P **P** 15 36 04.3 +0.7
TLY Talaya 54.78 2 *e*P **P** 15 36 04.8 +0.7
TLY pmax pmax
comp=Z,19nm,0.8s,mb5.2
TLY Talaya 54.78 2 *e*P **P** 15 36 04.6 +0.6
comp=Z,7.7nm,0.8s,mb4.8
HIA Hailar 54.80 15 *e*P **P** 15 36 03.6 -0.7
IRK Irkutsk 55.37 2 *e*P **P** 15 36 08.8 +0.5
IRK pmax pmax
comp=Z,23nm,1.8s,mb4.9
CIT Chita 56.11 9 *e*P **P** 15 36 14.2 +0.6
KURK Kurchatov 57.07 343 P **P** 15 36 19.6 -0.9
comp=Z,8.0nm,0.7s,mb4.8,baz=163,slow=6.9,SNR=38
KURK PcP PcP 15 37 14.9 -0.2
comp=Z,2.1nm,0.8s,baz=155,slow=3.9,SNR=3.8
KURK Kurchatov 57.07 343 P **P** 15 36 19.6 -0.9
KURK 15 37 15.0
KURK pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KURK pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
ZAA0 Zalesovo Array 58.57 349 *e*P **P** 15 36 29.5 -1.4
ZALV Zalesovo Beam 58.57 349 P **P** 15 36 30.4 -0.5
comp=Z,16nm,0.7s,mb5.2,baz=184,slow=5.9,SNR=66
ZALV Zalesovo Beam 58.57 349 P **P** 15 36 30.5 -0.5
ZALV pmax pmax
comp=Z,16nm,0.7s,mb5.2
KLR Kul'dur 58.71 23 *e*P **P** 15 36 28.0 -4.0
KRAR Krasnoyarsk 59.44 355 *e*P **P** 15 36 35.5 -1.4
KRAR pmax pmax
comp=Z,13nm,1.0s,mb4.9
NVS Novosibirsk 59.73 348 *i*P **P** 15 36 37.4 -1.5
ASAJ Asahikawa 60.13 34 P **P** 15 36 42.0 0.0
comp=Z,4.5nm,0.5s,mb4.8,baz=253,slow=7.6,SNR=16
ASAJ Asahikawa 60.13 34 P **P** 15 36 42.0 0.0
ASAJ pmax pmax
comp=Z,5.0nm,0.5s
BVAR Borovoye Array 61.68 340 P **P** 15 36 51.3 -1.0
comp=Z,9.1nm,0.5s,mb5.2,baz=144,slow=9.1,SNR=58
BVAR Borovoye Array 61.68 340 P **P** 15 36 51.3 -1.0
BVAR pmax pmax
comp=Z,9.0nm,0.5s
BRVK Borovoye 61.74 340 *e*P **P** 15 36 51.3 -1.4
BRVK pmax pmax
comp=Z,5.0nm,0.5s,mb4.9
BRVK Borovoye 61.74 340 *e*P **P** 15 36 51.3 -1.4
comp=Z,4.8nm,0.5s,mb4.9
BOD Bodaibo 61.79 8 *e*P **P** 15 36 52.9 0.0
BOD pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
YSS Yuzh-Sakhalins 62.06 31⇓ *e*P **P** 15 36 55.0 0.0
YSS Yuzh-Sakhalins 62.06 31 *e*P **P** 15 36 55.1 +0.1
comp=Z,12nm,0.8s,mb5.1
AKTK Aktyubinsk 64.90 331 P **P** 15 37 12.6 -1.1
AKTO Aktyubinsk 64.90 331 P **P** 15 37 12.6 -1.1
comp=Z,2.0nm,0.5s,mb4.5,baz=110,slow=5.8,SNR=9.2
AKTO Aktyubinsk 64.90 331 P **P** 15 37 12.6 -1.1
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
SVE Sverdlovsk 68.19 337 *e*P **P** 15 37 34.1 -0.5
SVE pmax pmax
comp=Z,21nm,1.1s,mb5.1
YAK Yakutsk 68.73 14⇑ *i*P **P** 15 37 36.4 -1.4
YAK pmax pmax
comp=Z,21nm,0.6s,mb5.2
YAK Yakutsk 68.73 14 *e*P **P** 15 37 36.1 -1.7
comp=Z,21nm,0.7s,mb5.2
ARU Arti 68.73 336 *d i*P **P** 15 37 36.7 -1.2
ARU *e* 15 40 05.9
ARU *e*S S 15 46 38.4 -0.9
ARU *e*SS SS 15 51 09.9 +5.4
ARU pmax pmax
comp=Z,14nm,1.0s,mb4.8
ASF Jabal al Asfar 70.08 306 P **P** 15 37 46.2 -0.6
comp=Z,3.1nm,0.8s,mb4.3,baz=34,slow=4.0,SNR=4.4
ASF Jabal al Asfar 70.08 306 P **P** 15 37 46.2 -0.6
ASF pmax pmax
comp=Z,3.0nm,0.8s
KIV Kislovodsk 70.10 319 *e*P **P** 15 37 46.5 -0.2
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.8
LSZ Lusaka 72.50 255 P **P** 15 38 01.5 -0.2
comp=Z,0.7nm,0.5s,mb3.9,baz=100,slow=17,SNR=3.7
LSZ Lusaka 72.50 255 P **P** 15 38 01.5 -0.3
LSZ pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
PETK Petropavlovsk- 73.45 32 P **P** 15 38 05.9 -0.8
comp=Z,3.0nm,0.6s,mb4.4,baz=216,slow=1.1,SNR=11
PETK Petropavlovsk- 73.45 32 P **P** 15 38 05.9 -0.8
PETK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
SIM Simferopol' 76.15 318 *e*P **P** 15 38 22.2 -0.3
SIM pmax pmax
comp=Z,14nm,0.6s,mb5.1
OBN Obninsk 78.35 328 *e*P **P** 15 38 34.2 -0.4
OBN pmax pmax
comp=Z,15nm,1.5s,mb4.7
VRI Vrincioaia 81.40 317⇑ *i*P **P** 15 38 51.3 0.0
VRI Vrincioaia 81.40 317⇑ P **P** 15 38 51.3 0.0
MLR Muntele Rosu 81.85 317⇑ *i*P **P** 15 38 53.2 -0.5
MLR Muntele Rosu 81.85 317⇑ P **P** 15 38 53.2 -0.5
BURAR Bucovina Array 82.81 319⇑ *i*P **P** 15 38 59.5 +0.8
BILL Bilibino 84.01 20 *e*P **P** 15 38 59.6 -4.8
BILL *e* pP 15 39 09.6 -3.8
BILL pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ARCES ARCESS Array B 87.97 340 P **P** 15 39 23.6 -0.3
comp=Z,5.3nm,0.7s,mb4.9,baz=110,slow=3.9,SNR=15
ARCES ARCESS Array B 87.97 340 P **P** 15 39 23.6 -0.3
ARCES pmax pmax
comp=Z,5.0nm,0.7s
GERES GERESS Array B 90.60 319 P **P** 15 39 36.3 -0.5
comp=Z,0.9nm,0.7s,mb4.2,baz=100,slow=5.5,SNR=7.1
GERES GERESS Array B 90.60 319 P **P** 15 39 36.3 -0.4
GERES pmax pmax
comp=Z,1.0nm,0.7s
SNAA Sanae 91.24 198 *e*P **P** 15 39 39.9 +0.7
SNAA *e* pP 15 39 49.4 +1.1
TXAR Lajitas Array 145.11 39 PKPbc PKPbc 15 46 12.3 +0.3
comp=Z,9.2nm,0.6s,baz=281,slow=1.0,SNR=153
TXAR Lajitas Array 145.11 39 PKIKP PKPdf 15 46 12.3 -0.2
TXAR pmax pmax
comp=Z,9.0nm,0.6s
TXAR Lajitas Array 145.11 39 PKPbc PKPbc 15 46 12.3 +0.3
JCT Junction City 146.58 34 *e*PKPdf PKPdf 15 46 14.1 -0.9
JCT *e*PKPbc PKPbc 15 46 16.1 -0.3

*IDC **12** 15:29:51.6±2.5,395S×100**93**E,h0km,mb3.8/9,mb1 3.9/9,mb1mx3.8/22,mbtmp3.8/9,Error ellipse: s-maj=107.7km s-min=17.1km az=53.0*
*ISCJB **12** 15:29:53.7±2.2,4.1S±0.4×100**8**E±0.5,h33km,mb3.9/10,Error ellipse: s-maj=87.7km s-min=12.1km az=143.3*
*NEIC **12** 15:29:56.9±1.5,392S×101**00**E,h35km,mb4.4/1,Error ellipse: s-maj=63.3km s-min=9.1km az=54.0*
ISC 12 15:29:56.7±2.1,**39S**±0.3×**1010E**±0.5,**h35**km,**n14**,σ0**s59**/12,
mb3.9/10,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.35**	**355**	P		**P**	**15 34 51.9**	**+0.2**
	0.7nm,0.7s,mb3.2,baz=182,slow=8.2,SNR=5.2							
WRA	**Warramunga Arr**	**36.20**	**119**	P		**P**	**15 36 56.9**	**+0.5**
	0.6nm,0.3s,mb4.0,baz=300,slow=10,SNR=8.1							
WRAB	**Tennant Creek**	**36.20**	**119**	*e*P		**P**	**15 36 56.3**	**-0.1**
	1.8nm,0.4s,mb4.3							
WB2	**Warramunga Arr**	**36.21**	**119**	*e*P		**P**	**15 36 56.1**	**-0.4**
ASAR	**Alice Springs**	**37.34**	**125**	P		**P**	**15 37 07.0**	**+0.8**
	0.9nm,0.5s,mb3.9,baz=296,slow=7.8,SNR=4.6							
CTA	**Charters Tower**	**46.91**	**114**	P		**P**	**15 38 23.4**	**-0.8**
	0.7nm,0.3s,mb4.0,baz=269,slow=14,SNR=7.8							
CTA	**Charters Tower**	**46.91**	**114**	P		**P**	**15 38 23.4**	**-0.8**
SONM	**Songino Array**	**51.78**	**5**	P		**P**	**15 39 01.1**	**+0.2**
	0.9nm,0.5s,mb4.0,baz=190,slow=8.9,SNR=4.0							
MKAR	**Makanchi Array**	**53.15**	**344**	P		**P**	**15 39 11.0**	**-0.1**
	0.5nm,0.5s,mb3.7,baz=153,slow=7.9,SNR=4.2							
KURK	**Kurchatov**	**57.73**	**343**	P		**P**	**15 39 45.0**	**+1.0**
	0.3nm,0.5s,mb3.6,baz=164,slow=7.3,SNR=2.8							
ZALV	**Zalesovo Beam**	**59.24**	**349**	P		**P**	**15 39 53.6**	**-0.8**
	0.8nm,0.3s,mb4.2,baz=165,slow=6.8,SNR=4.9							
BVAR	**Borovoye Array**	**62.33**	**340**	P		**P**	**15 40 14.8**	**-0.6**
	0.5nm,0.5s,mb3.9,baz=134,slow=8.3,SNR=3.1							
TXAR	**Lajitas Array**	**145.60**	**40**	PKPbc		PKPbc	15 49 33.2	+0.9
	0.6nm,0.5s,baz=221,slow=0.3,SNR=7.0							
TXAR	**Lajitas Array**	**145.60**	**40**	PKPbc		PKPbc	15 49 33.2	+0.9

*IDC **12** 15:30:39.9±1.4,360S×101**06**E,h0km,mb4.1/12,mb1 4.3/12,mb1mx4.1/22,mbtmp4.2/12,Error ellipse: s-maj=69.4km s-min=14.9km az=54.0*
*ISCJB **12** 15:30:43.3±1.1,35S±02×1012E±03,h33km,mb4.2/14,Error ellipse: s-maj=49.3km s-min=10.2km az=143.4*
*NEIC **12** 15:30:45.4±0.7,352S×101**18**E,h35km,mb4.4/2,Error ellipse: s-maj=33.1km s-min=7.1km az=54.0*
ISC 12 15:30:45.5±1.0,**35S**±02×**1012E**±03,**h35**km,**n21**,σ0**s64**/19,
mb4.2/14,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.95**	**354**	P		**P**	**15 35 34.8**	**-1.5**
	2.4nm,0.5s,mb3.9,baz=185,slow=8.3,SNR=5.3							
FITZ	**Fitzroy Crossi**	**27.99**	**123**	P		**P**	**15 36 33.1**	**-0.2**
	1.4nm,0.9s,mb3.6,baz=326,slow=11,SNR=1.8							
WRA	**Warramunga Arr**	**36.21**	**119**	P		**P**	**15 37 45.4**	**0.0**
	1.6nm,0.5s,mb4.2,baz=301,slow=9.0,SNR=6.4							
WRAB	**Tennant Creek**	**36.22**	**119**	*e*P		**P**	**15 37 45.5**	**+0.1**
	4.2nm,0.5s,mb4.6							
ASAR	**Alice Springs**	**37.41**	**125**	P		**P**	**15 37 56.0**	**+0.5**
	0.9nm,0.7s,mb3.7,baz=316,slow=8.8,SNR=4.5							
STKA	**Stephens Creek**	**47.26**	**131**	P		**P**	**15 39 14.8**	**-0.8**
	2.1nm,0.9s,mb4.1,baz=299,slow=7.7,SNR=2.9							
SONM	**Songino Array**	**51.35**	**4**	P		**P**	**15 39 47.4**	**+1.0**
	5.8nm,0.9s,mb4.5,baz=186,slow=8.8,SNR=12							
SONM				PcP		PcP	15 41 00.8	-0.1
	0.9nm,0.5s,baz=194,slow=3.4,SNR=3.4							
ULN	**Ulaanbaatar**	**51.43**	**5**	*e*P		**P**	**15 39 47.8**	**+0.8**
	3.3nm,1.0s,mb4.2							
TKM2	**Tokmak 2**	**51.69**	**336**	*e*P		**P**	**15 39 49.7**	**+0.6**
MK31	**Makanchi Array**	**52.81**	**344**	*e*P		**P**	**15 39 57.7**	**+0.4**
MKAR	**Makanchi Array**	**52.81**	**344**	P		**P**	**15 39 57.8**	**+0.5**
	1.8nm,0.6s,mb4.2,baz=147,slow=7.2,SNR=6.4							
KURK	**Kurchatov**	**57.39**	**343**	P		**P**	**15 40 30.2**	**-0.1**
	1.0nm,0.6s,mb4.0,baz=161,slow=6.9,SNR=4.7							
ZAA0	**Zalesovo Array**	**58.88**	**349**	*e*P		**P**	**15 40 40.2**	**-0.5**
ZALV	**Zalesovo Beam**	**58.88**	**349**	P		**P**	**15 40 40.6**	**0.0**
	4.8nm,0.8s,mb4.6,baz=179,slow=4.5,SNR=8.6							
BVAR	**Borovoye Array**	**62.01**	**340**	P		**P**	**15 41 01.5**	**-0.6**
	3.0nm,0.5s,mb4.7,baz=144,slow=9.1,SNR=13							
BRVK	**Borovoye**	**62.08**	**339**	*e*P		**P**	**15 41 01.6**	**-1.0**
ARCES	**ARCESS Array B**	**88.30**	**340**	P		**P**	**15 43 33.5**	**+0.5**
	2.5nm,0.8s,mb4.5,baz=100,slow=3.2,SNR=4.0							
ARCES	**ARCESS Array B**	**88.30**	**340**	P		**P**	**15 43 33.5**	**+0.5**
GERES	**GERESS Array B**	**90.97**	**319**	P		**P**	**15 43 46.1**	**+0.2**
	0.2nm,0.4s,mb3.8,baz=115,slow=5.1,SNR=5.8							
TXAR	**Lajitas Array**	**145.15**	**40**	PKPbc		PKPbc	15 50 20.0	+0.4
	2.0nm,0.7s,baz=305,slow=0.6,SNR=11							
TXAR	**Lajitas Array**	**145.15**	**40**	PKPbc		PKPbc	15 50 20.0	+0.4

*IDC **12** 15:34:39.9±2.4,423S×100**94**E,h0km,mb3.8/8,mb1 3.9/8,mb1mx3.8/21,mbtmp3.8/8,Error ellipse: s-maj=103.2km s-min=19.3km az=54.0*
*ISCJB **12** 15:34:42.2±2.1,43S±0.4×1007E±0.5,h33km,mb3.9/9,Error ellipse: s-maj=86.9km s-min=13.6km az=143.5*
*NEIC **12** 15:34:45.4±1.5,4.17S×100**96**E,h35km,mb3.9/1,Error ellipse: s-maj=63.5km s-min=10.3km az=54.0*
ISC 12 15:34:45.3±2.0,**42S**±03×**1009E**±05,**h35**km,**n15**,σ0**s59**/14,

mb3.9/9,1C,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
IPM	**Ipoh**	**8.61**	**1**	⇑P		**Pn**	**15 36 56.1**	**+8.5**
CMAR	**Chiang Mai Arr**	**22.59**	**355**	P		**P**	**15 39 42.6**	**-0.2**
	1.7nm,0.8s,mb3.5,baz=184,slow=8.2,SNR=10							
WRA	**Warramunga Arr**	**36.10**	**118**	P		**P**	**15 41 43.5**	**-0.6**
	0.4nm,0.5s,mb3.6,baz=301,slow=9.1,SNR=6.0							
WRAB	**Tennant Creek**	**36.11**	**118**	*e*P		**P**	**15 41 45.5**	**+1.3**
	0.7nm,0.4s,mb3.9							
ASAR	**Alice Springs**	**37.23**	**124**	P		**P**	**15 41 53.0**	**-0.7**
	0.4nm,0.5s,mb3.5,baz=298,slow=7.4,SNR=5.5							
SONM	**Songino Array**	**52.03**	**5**	P		**P**	**15 43 51.3**	**0.0**
	1.6nm,0.7s,mb4.0,baz=184,slow=9.6,SNR=9.7							
MK31	**Makanchi Array**	**53.38**	**344**	*e*P		**P**	**15 44 01.8**	**+0.5**
MKAR	**Makanchi Array**	**53.38**	**344**	P		**P**	**15 44 01.9**	**+0.6**
	2.0nm,0.7s,mb4.2,baz=148,slow=8.0,SNR=16							
MKAR	**Makanchi Array**	**53.38**	**344**	P		**P**	**15 44 01.9**	**+0.6**
KURK	**Kurchatov**	**57.96**	**343**	P		**P**	**15 44 33.7**	**-0.5**
	1.0nm,0.8s,mb3.9,baz=155,slow=6.8,SNR=4.6							
KURK	**Kurchatov**	**57.96**	**343**	P		**P**	**15 44 33.7**	**-0.5**
ZALV	**Zalesovo Beam**	**59.48**	**349**	P		**P**	**15 44 44.5**	**-0.2**
	1.5nm,0.6s,mb4.2,baz=178,slow=4.0,SNR=6.1							
ZALV	**Zalesovo Beam**	**59.48**	**349**	P		**P**	**15 44 44.5**	**-0.2**
BVAR	**Borovoye Array**	**62.55**	**340**	P		**P**	**15 45 05.3**	**-0.2**
	0.6nm,0.6s,mb3.9,baz=148,slow=8.5,SNR=3.7							
TXAR	**Lajitas Array**	**145.81**	**40**	PKPbc		PKPbc	15 54 22.2	+0.7
	0.4nm,0.5s,baz=264,slow=1.3,SNR=5.4							

*BJI **12** 15:34:59.3,486S×101**07**E,h14km,mB5.5,mb5.1,Ms5.2,Msz5.2*
*IDC **12** 15:35:04.7±0.4,403S×101**16**E,h0km,mb4.8/26,mb1 4.9/27,mb1mx4.8/29,mbtmp4.8/27,ML4.4/1,Error ellipse: s-maj=14.1km s-min=10.9km az=42.0*
*DJA **12** 15:35:06,431S×10083E,h10km,Mw5.6/12*
*ISCJB **12** 15:35:06.4±0.2,4.18S±003×10108E±003,h23km,mb5.1/84,MS5.2/5,Error ellipse: s-maj=5.8km s-min=3.8km az=41.9*
*MOS **12** 15:35:08.4±1.2,398S×10128E,h33km,mb5.3/31,Error ellipse: s-maj=10.6km s-min=6.3km az=106.6*
*NEIC **12** 15:35:09.9±0.2,408S×10118E,h35km,mb5.0/29,Error ellipse: s-maj=8.0km s-min=5.6km az=47.0*
ISC 12 15:35:08.5±0.2,**420S**±003×**10108E**±003,**h24**km,
h24km±1.3km:**pP-P,n380,**σ1**s14**/217,**mb5.1**/84,**MS5.2**/5,
101C-83D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PPI	**Padang Panjang**	**3.77**	**350**	P		**Pn**	**15 36 05.4**	**+0.2**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.44**	**68**	P		**Pn**	**15 36 29.2**	**+1.1**
	0.0nm,0.0s							
DBJI	**Dramaga**	**6.11**	**113**	P		**Pn**	**15 36 37.7**	**+0.3**
	0.0nm,0.0s							
CBJI	**Citeko**	**6.16**	**111**	P		**Pn**	**15 36 41.4**	**+3.4**
	2μm,0.8s							
MYKOM	**Kota Tinggi**	**6.56**	**25**⇓	P		**Pn**	**15 36 46.1**	**+2.6**
KGM	**Kluang**	**6.56**	**20**⇓	P		**Pn**	**15 36 48.3**	**+4.7**
LEM	**Lembang**	**7.01**	**112**	P		**Pn**	**15 36 52.2**	**+2.4**
	340nm,1.2s							
FRIM	**Kepong**	**7.40**	**4**⇑	P		**Pn**	**15 36 56.1**	**+1.0**
IPM	**Ipoh**	**8.62**	**360**⇓	P		**Pn**	**15 37 14.9**	**+3.2**
COCO	**West Island**	**8.98**	**208**	Pn		**Pn**	**15 37 13.5**	**-3.3**
	3μm,0.9s,SNR=6.3							
COCO	**West Island**	**8.98**	**208**	*e*Pn		**Pn**	**15 37 13.0**	**-3.8**
	271nm,0.9s							
BJII	**Banjamegara**	**9.13**	**110**	P		**Pn**	**15 37 19.3**	**+0.4**
	0.0nm,0.0s							
KTGM	**Kuala Trenggan**	**9.68**	**12**⇑	P		**Pn**	**15 37 27.3**	**+0.9**
KSM	**Kuching**	**10.81**	**59**⇑	P		**Pn**	**15 37 44.7**	**+2.9**
KSM	**Kuching**	**10.81**	**59**	*e*Pn		**Pn**	**15 37 35.2**	**-6.6**
BSI	**Banda Aceh**	**11.23**	**329**	P		**Pn**	**15 37 45.3**	**-2.2**
	0.0nm,0.0s							
SBUM	**Sibu**	**12.94**	**60**⇑	P		**Pn**	**15 38 16.8**	**+5.8**
BTM	**Bintulu**	**14.07**	**59**⇓	P		**Pn**	**15 38 31.6**	**+5.2**
KHKI	**Kahang-Kahang**	**15.02**	**107**	P		**Pn**	**15 38 39.4**	**0.0**
	0.0nm,0.0s							
KKM	**Kota Kinabalu**	**18.22**	**56**⇑	P		**Pn**	**15 39 22.6**	**+2.7**
KKM	**Kota Kinabalu**	**18.22**	**56**	*e*P		**Pn**	**15 39 21.0**	**+1.1**
KAPI	**Kappang**	**18.63**	**93**	P		**Pn**	**15 39 22.2**	**-2.7**
	1.1nm,0.3s,baz=289,slow=7.9,SNR=5.9							
KAPI	**Kappang**	**18.63**	**93**	*e*P		**Pn**	**15 39 23.4**	**-1.5**
	75nm,1.0s							
TSM	**Tawau**	**18.78**	**64**⇑	P		**Pn**	**15 39 22.6**	**-4.1**
TSM	**Tawau**	**18.78**	**64**⇑	P		**Pn**	**15 39 28.6**	**+1.9**
SDKM	**Sandakan**	**18.83**	**59**⇑	P		**Pn**	**15 39 28.7**	**+1.3**
PCI	**Palu**	**19.02**	**81**	P		**Pn**	**15 39 30.1**	**+0.4**
	447nm,1.5s							
KDM	**Kudat**	**19.21**	**55**⇓	P		**Pn**	**15 39 34.2**	**+2.2**
MYLDM	**Lahad Datu**	**19.74**	**62**⇓	P		**Pn**	**15 39 39.7**	**+1.4**
KKTK	**Khon Kaen**	**20.47**	**5**	P		**P**	**15 39 43.4**	**-1.2**
	556nm,0.9s							
BDT	**Bhumibol Dam**	**21.40**	**355**	P		**P**	**15 39 53.0**	**-1.6**
	27nm,0.8s,mb4.6							
KDI	**Kendari**	**21.49**	**90**	P		**P**	**15 39 55.5**	**-0.2**
	0.0nm,0.0s							
CMAR	**Chiang Mai Arr**	**22.61**	**355**	P		**P**	**15 40 05.3**	**-2.2**
	53nm,0.9s,mb5.0,baz=184,slow=8.3,SNR=86							
CHG	**Chiang Mai**	**22.96**	**355**⇓	P		**P**	**15 40 10.3**	**-0.9**
	56nm,0.9s,mb5.0							
CHTO	**Chiang Mai**	**22.96**	**355**	*e*P		**P**	**15 40 08.4**	**-2.8**
CHTO				pmax		pmax		
	comp=Z,59nm,1.0s,mb5.0							
CHTO	**Chiang Mai**	**22.96**	**355**	*e*P		**P**	**15 40 08.4**	**-2.9**
	comp=Z,59nm,1.0s,mb5.0							
BATI	**Baumata**	**23.18**	**106**	P		**P**	**15 40 13.2**	**-0.5**
	comp=Z,46nm,0.6s,mb5.1,baz=239,slow=2.7,SNR=9.5							
BATI				S		**S**	**15 44 20.2**	**-3.8**
	comp=Z,36nm,0.9s,baz=116,slow=23,SNR=8.1							
QIZ	**Qiongzhong**	**24.64**	**20**	P		**P**	**15 40 26.7**	**-0.6**
QIZ				AP			15 40 35.2	
QIZ				S		**S**	**15 44 47.6**	**+0.1**
QIZ				AMB		AMB		
	comp=Z,34nm,1.0s,mb4.8							
QIZ	**Qiongzhong**	**24.64**	**20**	*e*P		**P**	**15 40 27.3**	**0.0**
	comp=Z,41nm,1.1s,mb4.9							
FITZ	**Fitzroy Crossi**	**27.72**	**122**⇑	*i*P		**P**	**15 40 54.8**	**-0.4**
	comp=Z,25nm,0.9s,mb4.8							
FITZ				*e*		pP	15 41 01.5	-1.0
FITZ	**Fitzroy Crossi**	**27.72**	**122**	P		**P**	**15 40 54.8**	**-0.4**
	comp=Z,21nm,1.1s,mb4.7,baz=290,slow=7.2,SNR=21							
KMI	**Kunming**	**29.19**	**3**	P		**P**	**15 41 08.8**	**+0.6**
KMI				AP		pP	15 41 16.9	+1.5
KMI				XP		sP	15 41 20.4	+2.0
KMI				PP		PP	15 42 08.2	-6.2
KMI				S		**S**	**15 46 05.5**	**+6.2**
KMI				SS		SS	15 47 44.7	-19
KMI				SCP		ScP	15 47 47.5	-8.2
KMI				SCS		ScS	15 51 42.5	-7.5
KMI				AMB		AMB		
	comp=Z,40nm,0.9s,mb5.2							
KMI				LR		LR		
	comp=N,3μm,13.6s,MS5.0							
KMI				LR		LR		
	comp=E,2μm,18.1s,MS5.0

JIRN Jiri 34.77 336 *e*P **P 15 41 58.6 +1.4**
comp=Z,304nm,0.9s
CD2 Chengdu 35.00 4 P **P 15 41 59.8 +0.7**
CD2 AP pP 15 42 05.2 -1.2
CD2 XP sP 15 42 07.8 -1.6
CD2 PP PP 15 43 20.3 +1.5
CD2 S **S 15 47 33.6 +3.8**
CD2 XS sS 15 47 41.3 -0.6
CD2 SS SS 15 49 51.8 -11
CD2 AMB AMB
comp=Z,130nm,0.9s,mb5.9
PKI Pulchoki 35.01 335 *e*P **P 15 41 59.9 +0.6**
LSA Lhasa 35.02 345 P **P 15 41 59.5 +0.2**
LSA AMB AMB
comp=Z,20nm,1.0s,mb5.0
LSA Lhasa 35.02 345 *e*P **P 15 42 00.4 +1.1**
LSA pmax pmax
comp=Z,32nm,1.2s,mb5.1
LSA Lhasa 35.02 345 *e*P **P 15 42 00.4 +1.1**
comp=Z,32nm,1.2s,mb5.1
GUN Gumba 35.12 336 *e*P **P 15 42 01.4 +1.2**
comp=Z,131nm,0.7s,mb6.0
DMN Daman 35.17 335 *e*P **P 15 42 01.5 +0.9**
comp=Z,55nm,0.9s,mb5.5
KKN Kakani 35.26 335 *e*P **P 15 42 02.0 +0.6**
comp=Z,101nm,0.9s,mb5.7
GKN Gorkha 35.72 335 *e*P **P 15 42 05.9 +0.6**
comp=Z,173nm,1.1s,mb5.9
KOLN Koldanda 35.97 333 *e*P **P 15 42 08.4 +0.9**
comp=Z,60nm,0.7s,mb5.6
WRA Warramunga Arr 35.98 119 P **P 15 42 07.2 -0.6**
comp=Z,10nm,0.7s,mb4.9,baz=301,slow=9.0,SNR=39
WRAB Tennant Creek 35.99 119 P **P 15 42 07.0 -0.8**
comp=Z,192nm,0.9s,mb6.0,SNR=15
WRAB Tennant Creek 35.99 119 *e*P **P 15 42 06.8 -1.0**
WRAB pmax pmax
comp=Z,22nm,0.8s,mb5.1
WRAB Tennant Creek 35.99 119 *e*P **P 15 42 06.8 -1.0**
comp=Z,22nm,0.8s,mb5.1
WB2 Warramunga Arr 35.99 119⇑*i*P **P 15 42 07.1 -0.7**
WB2 Warramunga Arr 35.99 119 *e*P **P 15 42 06.8 -1.0**
WB2 ⇑*i*P 15 42 07.1
DANN Dangsing 36.40 334 *e*P **P 15 42 11.8 +0.6**
comp=Z,145nm,1.0s,mb5.9
FORT Forrest 36.68 139 *e*P **P 15 42 15.0 +1.4**
comp=Z,9.0nm,0.7s,mb4.7
FORT *e* pP 15 42 22.5 +1.6
WHN Wuhan 36.80 19⇑P **P 15 42 14.9 +0.4**
ASAR Alice Springs 37.11 125 P **P 15 42 17.4 0.0**
comp=Z,10nm,0.6s,mb4.8,baz=296,slow=7.8,SNR=53
ASAR PcP PcP 15 44 37.6 0.0
comp=Z,1.6nm,0.7s,baz=296,slow=2.3,SNR=3.7
ASAR S **S 15 48 01.3 -1.1**
comp=Z,2.6nm,1.1s,baz=295,slow=15,SNR=5.0
XAN Xi'an 38.74 10 P **P 15 42 30.5 -0.4**
XAN AP pP 15 42 37.5 -0.8
XAN XP sP 15 42 41.0 -0.2
XAN AMB AMB
comp=Z,62nm,1.0s,mb5.3
NJ2 Nanjing 39.81 24 *e*P **P 15 42 39.6 -0.3**
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.0
NDI New Delhi 39.94 326 *ex* **P 15 42 42.0 +1.0**
LZH Lanzhou 40.15 3⇓P **P 15 42 43.5 +0.9**
LZH AP pP 15 42 47.2 -2.8
LZH XP sP 15 42 48.5 -4.5
LZH PP PP 15 44 18.5 +3.2
LZH AMB AMB
comp=Z,103nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,456nm,5.3s
LZH LR LR
comp=E,3μm,17.4s
LZH LR LR
comp=Z,4μm,19.3s,MS5.2
DDI Dehra Dun 40.78 329 *ex* **P 15 42 45.1 -2.8**
SMLA Simla 41.88 329 *i*x **P 15 42 57.0 0.0**
GTA Gaotai 43.40 359⇑P **P 15 43 09.4 +0.2**
GTA AP pP 15 43 13.8 -2.8
GTA XP sP 15 43 16.5 -3.1
GTA AMB AMB
comp=Z,16nm,1.0s,mb4.7
HHC Hu-ho-hao-te 45.84 11 *e*P **P 15 43 29.7 +1.1**
HHC S **S 15 50 12.6 +1.3**
HHC AMB AMB
comp=Z,40nm,1.0s,mb5.3
HHC AMB AMB
comp=Z,2μm,5.4s
PMG Port Moresby 46.02 99 *e*P **P 15 43 30.1 -0.4**
PMG pmax pmax
comp=Z,99nm,1.5s
PMG Port Moresby 46.02 99 *e*P **P 15 43 30.1 -0.5**
comp=Z,99nm,1.5s,mb5.5
BJT Baijiatuan 46.13 16 *e*P **P 15 43 31.1 +0.2**
BJT pmax pmax
comp=Z,14nm,0.6s
BJT Baijiatuan 46.13 16 *e*P **P 15 43 31.1 +0.1**
comp=Z,14nm,0.6s,mb5.1
BJI Beijing 46.16 16 P **P 15 43 30.9 -0.2**
BJI AMB AMB
comp=Z,27nm,1.0s,mb5.1
CTA Charters Tower 46.72 114 *e*P **P 15 43 35.5 -0.4**
comp=Z,20nm,1.4s,mb4.8
CTA *e* pP 15 43 43.1 -0.3
CTA Charters Tower 46.72 114 P **P 15 43 35.8 -0.1**
comp=Z,43nm,1.2s,mb5.2,baz=292,slow=9.8,SNR=16
CTA Charters Tower 46.72 114 *e*P **P 15 43 35.5 -0.4**
CTA *e* pP 15 43 43.1 -0.3
CTA pmax pmax
comp=Z,20nm,1.4s
CTAO Charters Tower 46.72 114 *e*P **P 15 43 35.6 -0.3**
CTAO pmax pmax
comp=Z,90nm,1.3s,mb5.5
CTAO Charters Tower 46.72 114 *e*P **P 15 43 35.5 -0.3**
comp=Z,90nm,1.3s,mb5.5
STKA Stephens Creek 46.90 131 *e*P **P 15 43 37.7 +0.5**
comp=Z,9.1nm,1.1s,mb4.6
STKA *e* pP 15 43 45.7 +1.0
STKA Stephens Creek 46.90 131 P **P 15 43 37.8 +0.6**
comp=Z,9.2nm,0.8s,mb4.7,baz=302,slow=8.4,SNR=11
DL2 Dalian 46.91 22 P **P 15 43 36.3 -0.7**
DL2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
KSRS Korea Array 48.38 29 P **P 15 43 46.7 -1.8**
comp=Z,22nm,1.0s,mb5.2,baz=216,slow=8.1,SNR=62
KSH Kashi 49.27 334 *e*P **P 15 43 54.0 -1.3**
KSH *e*AP pP 15 43 57.0 -5.8
KSH *e*XP sP 15 44 01.1 -4.6
KSH *e*PCP PcP 15 45 18.1 +0.1
KSH *e*PP PP 15 45 47.0 -2.4
KSH *e*SCP ScP 15 49 11.1 -0.8
KSH *e*PCS PcS 15 49 13.2 -1.2
KSH *e*S **S 15 50 57.3 -2.7**
KSH *e*SCS ScS 15 53 42.0 -3.9
KSH AMB AMB
comp=Z,434nm,2.1s,mb6.1
KSH LR LR
comp=N,2μm,11.8s,MS5.5
KSH LR LR
comp=E,2μm,14.0s,MS5.5
KSH LR LR
comp=Z,4μm,21.7s
WMQ Urumqi 49.29 347⇑*i*P **P 15 43 55.8 +0.4**
WMQ AP pP 15 44 01.4 -1.5
WMQ XP sP 15 44 04.0 -1.9
WMQ PCP PcP 15 45 19.0 +1.0
WMQ *e*S **S 15 51 01.0 +0.7**
WMQ AMB AMB
comp=Z,88nm,0.7s,mb5.9
WMQ AMB AMB
comp=Z,246nm,4.3s
ULHL Ulahol 51.44 336 P **P 15 44 11.9 +0.3**
SNR=17
KZA Kyzart 51.70 336 P **P 15 44 14.9 +1.3**
SNR=9.4
SONM Songino Array 52.02 5 P **P 15 44 16.1 +0.2**
comp=Z,48nm,0.8s,mb5.5,baz=186,slow=8.5,SNR=113
SONM PcP PcP 15 45 27.4 -0.6
comp=Z,3.1nm,0.6s,baz=182,slow=3.9,SNR=4.6
ULN Ulaanbaatar 52.10 5 *e*P **P 15 44 16.7 +0.2**
ULN pmax pmax
comp=Z,37nm,1.0s,mb5.3
ULN Ulaanbaatar 52.10 5 *e*P **P 15 44 16.7 +0.2**
comp=Z,37nm,1.0s,mb5.3
TKM2 Tokmak 2 52.26 336 *e*P **P 15 44 17.7 -0.1**
TKM2 pmax pmax
comp=Z,21nm,0.8s,mb5.1
TKM2 Tokmak 2 52.26 336 P **P 15 44 18.1 +0.3**
SNR=18
TKM2 Tokmak 2 52.26 336 *e*P **P 15 44 17.7 -0.1**
comp=Z,21nm,0.8s,mb5.1
KBK Karagaybulak 52.30 336 P **P 15 44 19.2 +1.1**
SNR=8.6
AML Almayashu 52.40 334 *e*P **P 15 44 18.8 -0.1**
comp=Z,10.0nm,0.7s,mb4.8
CN2 Changchun 52.58 22 *e*P **P 15 44 19.2 -0.9**
CN2 *e*XP sP 15 44 26.2 -4.4
CN2 *e*S **S 15 51 45.6 -0.1**
CN2 AMB AMB
comp=Z,30nm,1.0s,mb5.2
CN2 AMB AMB
comp=Z,700nm,10.0s
CN2 LR LR
comp=N,1μm,18.0s,MS5.2
CN2 LR LR
comp=E,2μm,18.0s,MS5.2
CN2 LR LR
comp=Z,2μm,20.0s,MS5.1
FRU Bishkek 52.59 336 *e*P **P 15 44 21.5 +1.3**
EKS2 Erkin-Say 52.79 335 P **P 15 44 22.2 +0.5**
SNR=13
EKS2 Erkin-Say 52.79 335 *e*P **P 15 44 21.9 +0.1**
comp=Z,24nm,0.8s,mb5.2
USP Osenovka 52.99 336 P **P 15 44 23.1 -0.1**
SNR=12
MAJO Matsushiro 53.32 37 *e*P **P 15 44 23.6 -2.2**
MAJO pmax pmax
comp=Z,25nm,1.2s,mb5.0
MAJO Matsushiro 53.32 37 *e*P **P 15 44 23.6 -2.2**
comp=Z,25nm,1.2s,mb5.0
MAT Matsushiro 53.32 37 P **P 15 44 24.8 -1.0**
MJAR Matsushiro Arr 53.32 37 P **P 15 44 23.7 -2.1**
comp=Z,21nm,1.1s,mb5.0,baz=218,slow=7.6,SNR=30
MK31 Makanchi Array 53.42 344 *e*P **P 15 44 25.8 -0.5**
MKAR Makanchi Array 53.42 344 P **P 15 44 26.1 -0.2**
comp=Z,42nm,0.7s,mb5.5,baz=149,slow=7.8,SNR=137
CAN Canberra 53.96 131 P **P 15 44 29.2 -1.3**
ZAK Zakamensk 54.39 2⇓*i*P **P 15 44 33.0 -0.3**
ZAK *e* 15 45 36.2
ZAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ZAK pmax pmax
comp=Z,4.0nm,1.6s,mb4.1
OPO Ambohidratompo 54.51 250 P **P 15 44 35.8 +1.0**
comp=Z,3.6nm,0.9s,mb4.4,baz=102,slow=9.1,SNR=3.2
VLA Vladivostok 54.71 27 *e*P **P 15 44 34.2 -1.6**
VLA pmax pmax
comp=Z,30nm,1.3s,mb5.2
VLA Vladivostok 54.71 27 *e*P **P 15 44 34.3 -1.5**
MDJ Mudanjiang 54.90 25 P **P 15 44 36.4 -0.7**
MDJ AP pP 15 44 45.3 +0.6
MDJ XP sP 15 44 48.9 +1.3
MDJ S **S 15 52 16.6 -0.6**
MDJ AMB AMB
comp=Z,16nm,1.0s,mb5.0
MDJ AMB AMB
comp=Z,2μm,13.3s
MDJ Mudanjiang 54.90 25 *e*P **P 15 44 37.0 -0.1**
comp=Z,23nm,1.1s,mb5.1
MOY Mondy 55.65 360 *e*P **P 15 44 43.1 +0.8**
MOY pmax pmax
comp=Z,37nm,2.1s,mb5.0
HIA Hailar 55.66 15 *e*P **P 15 44 41.4 -1.1**
TLY Talaya 55.70 2 P **P 15 44 43.6 +0.8**
comp=Z,126nm,0.8s,mb6.0,SNR=13
TLY Talaya 55.70 2 *e*P **P 15 44 43.1 +0.3**
TLY pmax pmax
comp=Z,22nm,0.9s,mb5.2
TLY Talaya 55.70 2 *e*P **P 15 44 43.0 +0.2**
comp=Z,17nm,0.8s,mb5.1
IRK Irkutsk 56.29 2 *e*P **P 15 44 47.2 +0.3**
IRK pmax pmax
comp=Z,42nm,2.9s,mb5.0
CIT Chita 57.00 9 *e*P **P 15 44 50.2 -1.8**
KURK Kurchatov 58.00 343 P **P 15 44 58.2 -0.9**
comp=Z,375nm,0.9s,SNR=34
KURK Kurchatov 58.00 343 P **P 15 44 57.6 -1.5**
comp=Z,30nm,0.9s,mb5.3,baz=160,slow=6.4,SNR=55
KURK Kurchatov 58.00 343*c i*P **P 15 44 58.6 -0.5**
KURK pmax pmax
comp=Z,69nm,1.0s,mb5.6
KURK Kurchatov 58.00 343 *e*P **P 15 44 58.3 -0.8**
comp=Z,62nm,0.9s,mb5.6
HNR Honiara 58.63 98 P **P 15 45 04.4 +0.2**
comp=Z,59nm,0.9s,mb5.6,baz=189,slow=3.7,SNR=4.1
KLR Kul'dur 59.50 23 *e*P **P 15 45 05.0 -4.6**
KLR *e* pP 15 45 12.7 -4.5
KLR pmax pmax
comp=Z,43nm,1.4s,mb5.3
ZAA0 Zalesovo Array 59.51 349 *e*P **P 15 45 08.6 -0.9**
ZALV Zalesovo Beam 59.51 349 P **P 15 45 08.8 -0.7**
comp=Z,52nm,0.8s,mb5.6,baz=175,slow=5.2,SNR=93
ZALV Zalesovo Beam 59.51 349 P **P 15 45 08.8 -0.7**
KRAR Krasnoyarsk 60.38 355 *e*P **P 15 45 14.3 -1.1**
KRAR pmax pmax
comp=Z,55nm,1.1s,mb5.5
NVS Novosibirsk 60.67 348 *i*P **P 15 45 16.0 -1.4**
NVS pmax pmax
comp=N,26nm,1.5s
NVS pmax pmax
comp=Z,24nm,1.5s,mb5.1
NVS pmax pmax
comp=E,15nm,1.4s
CASY Casey 62.33 176 *e*P **P 15 45 28.4 -0.1**
CASY *e* pP 15 45 36.2 0.0
BVAR Borovoye Array 62.60 340 P **P 15 45 29.4 -1.1**
comp=E,11nm,0.6s,mb5.1,baz=147,slow=8.8,SNR=49
BRVK Borovoye 62.67 340 P **P 15 45 29.1 -1.9**
comp=E,109nm,0.6s,mb6.2,SNR=7.0
BRVK Borovoye 62.67 340⇑*i*P **P 15 45 29.7 -1.3**
BOD Bodaibo 62.69 8 *e*P **P 15 45 29.6 -1.4**
BOD pmax pmax
comp=Z,19nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 62.78 31⇑*e*P **P 15 45 31.0 -0.9**
YSS *e* pP 15 45 39.0 -0.6
YSS *e* 15 45 44.0
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 62.78 31 *e*P **P 15 45 30.6 -1.3**
comp=Z,47nm,1.0s,mb5.6
KMBO Kilima Mbogo 63.81 271 P **P 15 45 40.0 +0.5**
comp=Z,0.5nm,0.4s,baz=65,slow=19,SNR=1.8
CLNS Chul'man 63.85 14 *e*P **P 15 45 36.9 -1.8**
CLNS pmax pmax
comp=N,11nm,1.2s
CLNS pmax pmax
comp=E,12nm,1.2s
CLNS pmax pmax
comp=Z,12nm,1.0s
AKTK Aktyubinsk 65.79 331 P **P 15 45 50.0 -1.5**
AKTO Aktyubinsk 65.79 331 P **P 15 45 50.0 -1.5**
comp=Z,6.3nm,1.0s,mb4.6,baz=141,slow=5.1,SNR=10
MAW Mawson 68.44 195 *e*P **P 15 46 08.5 +0.4**
comp=Z,1.7nm,0.9s,mb4.1
MAW *e* pP 15 46 16.4 +0.6
MAW Mawson 68.44 195 P **P 15 46 08.3 +0.2**
comp=Z,1.8nm,0.8s,mb4.2,baz=9.5,slow=6.6,SNR=5.8
MAW Mawson 68.44 195 *e*P **P 15 46 08.5 +0.4**
MAW *e* pP 15 46 16.4 +0.6
MAW pmax pmax
comp=Z,2.0nm,0.9s
SVE Sverdlovsk 69.11 338 *e*P **P 15 46 12.0 -0.4**
SVE pmax pmax
comp=Z,45nm,1.0s,mb5.3
YAK Yakutsk 69.59 14 *e*P **P 15 46 13.4 -1.8**
YAK pmax pmax
comp=Z,47nm,1.0s,mb5.4
YAK pmax pmax
comp=N,19nm,1.2s
YAK pmax pmax
comp=E,12nm,1.1s
YAK Yakutsk 69.59 14 *e*P **P 15 46 13.4 -1.8**
comp=E,56nm,1.0s,mb5.5
ARU Arti 69.64 336 P **P 15 46 15.3 -0.3**
comp=E,126nm,0.8s,mb5.9,SNR=6.9
ARU Arti 69.64 336*d i*P **P 15 46 14.5 -1.1**
ARU *e*S S 15 55 22.1 -0.4
ARU *e*SS SS 15 59 50.0 -0.9
ARU pmax pmax
comp=Z,25nm,1.0s,mb5.1
ARU Arti 69.64 336 *e*P **P 15 46 14.4 -1.3**
comp=Z,29nm,1.1s,mb5.1
KIV Kislovodsk 70.90 319 *e*P **P 15 46 24.3 +0.7**
KIV pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
KIV Kislovodsk 70.90 319 *e*P **P 15 46 24.4 +0.8**
MALT Malatya 71.60 313 *e*P **P 15 46 26.6 -1.5**
MALT *e* pP 15 46 34.4 -1.5
MALT pmax pmax
comp=Z,17nm,1.4s,mb4.8
MALT Malatya 71.60 313 *e*P **P 15 46 26.6 -1.4**
comp=Z,17nm,1.4s,mb4.8
MALT *e* pP 15 46 34.4 -1.4
LSZ Lusaka 72.41 255 P **P 15 46 35.2 +1.9**
comp=Z,1.1nm,0.7s,baz=146,slow=3.6,SNR=2.0
PETK Petropavlovsk- 74.17 32 P **P 15 46 41.9 -1.0**
comp=Z,8.4nm,0.9s,mb4.7,baz=207,slow=2.7,SNR=12
PET Petropavlovsk 74.62 32 *e*P **P 15 46 45.0 -0.6**
PET pmax pmax
comp=Z,27nm,0.9s,mb5.2
ANN Anapa 74.68 319 *e*P **P 15 46 53.3 +7.2**
ANN pmax pmax
comp=Z,20nm,1.2s,mb4.9
LBTB Lobatse 75.08 245 P **P 15 46 49.5 +0.7**
comp=Z,2.5nm,0.9s,mb4.1,baz=163,slow=14,SNR=1.7
BOSA Boshof 75.56 242 P **P 15 46 54.5 +2.9**
comp=Z,3.9nm,0.8s,mb4.4,baz=121,slow=5.7,SNR=2.3
OBN Obninsk 79.21 328 *e*P **P 15 47 11.5 +0.1**
OBN pmax pmax
comp=Z,43nm,1.2s,mb5.2
AKASG Malin Array Be 81.87 322 P **P 15 47 24.3 -1.5**
comp=Z,0.6nm,0.3s,mb4.0,baz=84,slow=3.7,SNR=4.0
AKASG Malin Array Be 81.87 322 *i*P **P 15 47 27.2 +1.5**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 81.87 322 P **P 15 47 24.3 -1.5**
VRI Vrincioaia 82.18 317⇑*i*P pP 15 47 40.5 +5.1
MLR Muntele Rosu 82.62 317⇑*i*P **P 15 47 30.4 +0.6**
MLR Muntele Rosu 82.62 317⇑P **P 15 47 30.4 +0.5**
BURAR Bucovina Array 83.61 319⇑*i*P **P 15 47 35.7 +0.8**
BURAR Bucovina Array 83.61 319⇑P **P 15 47 35.7 +0.9**
BILL Bilibino 84.83 20 *e*P **P 15 47 39.9 -0.7**
BILL *e* pP 15 47 47.6 -1.0
BILL pmax pmax
comp=Z,13nm,1.0s,mb5.0
KOLS Kolonicke sedl 85.81 320 *e*P **P 15 47 47.1 +1.2**
CRVS Cervenica-Dubn 86.33 319 *e*P **P 15 47 47.9 -0.6**
STHS Stebnicka Huta 86.56 320 *e*P **P 15 47 50.1 +0.5**
STHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
STHS Stebnicka Huta 86.56 320 *e*P **P 15 47 50.1 +0.5**
comp=Z,4.7nm,1.1s,mb4.6
KECS Kecovo 86.89 319 *e*P **P 15 47 51.2 -0.1**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.4
KECS Kecovo 86.89 319 *e*P **P 15 47 51.2 -0.1**
comp=Z,3.1nm,1.1s,mb4.5
VYHS Vyhne 87.98 319 *e*P **P 15 47 56.0 -0.5**
ARCES ARCESS Array B 88.89 340 P **P 15 48 00.5 +0.1**
comp=Z,7.5nm,0.9s,mb5.0,baz=104,slow=5.1,SNR=9.7
MODS Modra-Piesok 88.99 318 *e*P **P 15 47 58.8 -2.5**
MODS Modra-Piesok 88.99 318 *e*P **P 15 47 58.9 -2.4**
GOLS Golise 89.83 316 *i*P **P 15 48 05.9 +0.6**
DPC Dobruska-Polom 89.85 320 *e*P **P 15 48 05.9 +0.6**
DPC *ex* x 15 48 13.5
BOJS Bojanci 90.03 315 *i*P **P 15 48 07.0 +0.7**
UPC Upice 90.07 320 *e*P **P 15 48 06.6 +0.3**
UPC *ex* x 15 48 29.2
PERS Pernice 90.24 317 *i*P **P 15 48 07.0 -0.2**
SOKA Soboth 90.31 317⇑*i*P **P 15 48 08.3 +0.8**
comp=Z,10nm,1.4s,mb5.0
SOKA Soboth 90.31 317⇑*i*PcP **P 15 48 08.3 +0.8**
comp=Z,10nm,1.4s,mb5.0
SNAA Sanae 90.40 198 *e*P pP 15 48 16.7 +1.3
SNAA Sanae 90.40 198 P **P 15 48 09.3 +1.8**
SNAA *e* pP 15 48 17.3 +1.9
SNAA pmax pmax
comp=Z,11nm,1.0s
SNAA Sanae 90.40 198 P **P 15 48 09.3 +1.9**
comp=Z,12nm,1.0s,mb5.2
SNAA *e* pP 15 48 17.3 +1.9
PRU Pruhonice 90.95 320 *e*P **P 15 48 10.7 +0.3**
GERES GERESS Array B 91.40 319 P **P 15 48 11.0 -1.5**
comp=Z,1.1nm,0.6s,mb4.3,baz=83,slow=4.2,SNR=11
BRG Berggiesshubel 91.41 321 *e*P **P 15 48 13.5 +1.0**
BRG pmax pmax
comp=Z,3.0nm,1.2s,mb4.5
BRG Berggiesshubel 91.41 321 *e*P **P 15 48 13.5 +1.0**
comp=Z,4.8nm,1.2s,mb4.7
KHC Kasperske Hory 91.50 319 *e*P **P 15 48 12.7 -0.3**
VNA2 Neumayer--Watz 92.02 198 *e*P **P 15 48 13.7 -1.3**
VNA2 *e* 15 48 23.5
CLL Collm 92.04 321 *e*(P) **P 15 48 18.0 +2.6**
VNA1 Neumayer--Stat 92.38 198 *e*P pP 15 48 26.1 +1.4
VNA3 Neumayer Olymp 92.61 198 *e*P pP 15 48 27.8 +2.1
YKA Yellowknife Ar 116.14 18 PKP PKPdf 15 53 49.2 -0.1
comp=Z,0.3nm,0.4s,baz=305,slow=4.4,SNR=4.3
A07A Ashnola River, 123.13 31⇓P PKPdf 15 54 03.4 +0.2
baz=123
H02A Toledo 123.60 37⇓P PKPdf 15 54 04.0 -0.2
baz=124
F04A Amboy 123.85 35⇓P PKPdf 15 54 04.8 +0.2
baz=124
H03A Soap Creek Ran 124.03 37⇓P PKPdf 15 54 05.5 +0.5
baz=124
B08A Colville Reser 124.10 31⇑P PKPdf 15 54 05.6 +0.6
baz=124
C07A Waterville 124.13 32⇓P PKPdf 15 54 05.4 +0.3
baz=124
E06A Yakima 124.31 34⇑P PKPdf 15 54 06.3 +0.8
baz=124
J02A Umpqua 124.55 38⇓P PKPdf 15 54 06.6 +0.6
baz=125
A10A Northport 124.61 30⇑P PKPdf 15 54 06.1 +0.1
baz=125
C08A Higginbotham F 124.61 32⇑P PKPdf 15 54 06.1 +0.1
baz=125
B09A Rice 124.67 31⇓P PKPdf 15 54 06.4 +0.3
baz=125
H04A Detroit Lake 124.68 36⇓P PKPdf 15 54 06.4 +0.1
baz=125
K02A Glendale 124.92 39⇓P PKPdf 15 54 07.2 +0.4
baz=125
E07A Sunnyside 124.93 33⇓P PKPdf 15 54 07.2 +0.5
baz=125
I04A Tendick Farm, 125.04 37⇑P PKPdf 15 54 07.1 +0.1
baz=125
D08A Wollman Farm, 125.13 33⇓P PKPdf 15 54 07.7 +0.7
baz=125
L02A Cave Junction 125.16 40⇓P PKPdf 15 54 07.7 +0.4
baz=125
A11A Hall Mountain, 125.21 29⇓P PKPdf 15 54 07.8 +0.7
baz=125
G06A Carlson Farm, 125.27 35⇓P PKPdf 15 54 07.3 -0.1
baz=125
HUMO Hull Mountain 125.34 39⇑P PKPdf 15 54 08.2 +0.6
baz=125
E08A Dider Farm, El 125.40 33⇑P PKPdf 15 54 08.0 +0.4
baz=125
D09A Jones Farm, Ri 125.45 32⇑P PKPdf 15 54 07.9 +0.3
baz=125
J04A Umpqua Nationa 125.52 38⇑P PKPdf 15 54 08.1 +0.2
baz=126
H06A Lindquist Farm 125.74 36⇑P PKPdf 15 54 08.0 -0.3
baz=126
YBH Yreka Blue Hor 125.95 40⇑P PKPdf 15 54 08.7 -0.1
baz=126
C11A Tepee Creek (N 126.01 30⇓P PKPdf 15 54 08.6 -0.1
baz=126
J05A Fort Rock 126.03 37⇑P PKPdf 15 54 10.0 +1.1
baz=126
N02C Big Bar 126.03 41⇑P PKPdf 15 54 09.5 +0.5
baz=126
M02C Callahan 126.04 40⇑P PKPdf 15 54 09.6 +0.7
baz=126
A13A Flathead Natio 126.17 28⇑P PKPdf 15 54 09.1 +0.2
baz=126
G08A Pilot Rock 126.19 34⇑P PKPdf 15 54 09.2 +0.1
baz=126
L04A Klamath Falls 126.23 39⇑P PKPdf 15 54 09.3 0.0
baz=126
H07A Lands Inn, Kim 126.27 35⇑P PKPdf 15 54 09.6 +0.3
baz=126
M04C Macdoel 126.48 39⇓P PKPdf 15 54 09.6 -0.3
baz=126
B13A Whitefish 126.53 29⇓P PKPdf 15 54 10.1 +0.4
baz=126

K05A	Summer Lake	126.55	38	⇑P		PKPdf	15 54 10.3	+0.4
	baz=127							
I07A	Izee	126.60	36	⇓P		PKPdf	15 54 10.7	+0.7
	baz=127							
O02C	Red Bluff	126.70	41	⇓P		PKPdf	15 54 10.7	+0.4
	baz=127							
J06A	Christmas Vall	126.70	37	⇓P		PKPdf	15 54 10.5	+0.3
	baz=127							
F10A	Beach Ranch, E	126.72	33	⇑P		PKPdf	15 54 10.5	+0.3
	baz=127							
H08A	Prairie City	126.82	35	⇓P		PKPdf	15 54 10.2	-0.2
	baz=127							
G09A	Cove	126.86	34	⇑P		PKPdf	15 54 09.9	-0.6
	baz=127							
K06A	Valley Falls	126.90	37	⇑P		PKPdf	15 54 10.5	-0.1
	baz=127							
C13A	Hot Springs	126.96	30	⇓P		PKPdf	15 54 10.3	-0.3
	baz=127							
L05A	Lakeview	126.96	39	⇑P		PKPdf	15 54 12.5	+1.8
	baz=127							
D12A	Red Ives Fores	126.99	31	⇑P		PKPdf	15 54 10.1	-0.5
	baz=127							
GASB	Alder Springs	127.01	42	⇓P		PKPdf	15 54 11.7	+0.8
	baz=127							
E11A	Bogner Ranch,	127.01	32	⇑P		PKPdf	15 54 10.4	-0.3
	baz=127							
M05C	Lookout	127.14	39	⇓P		PKPdf	15 54 11.6	+0.5
	baz=127							
G10A	Bishop Farm, J	127.21	33	⇑P		PKPdf	15 54 11.2	+0.1
	baz=127							
I08A	Drewsey	127.25	35	⇓P		PKPdf	15 54 11.2	0.0
	baz=127							
C14A	Swan Lake	127.30	29	⇑P		PKPdf	15 54 11.5	+0.4
	baz=127							
F11A	Grangeville	127.35	32	⇑P		PKPdf	15 54 11.9	+0.6
	baz=127							
MOD	Modoc	127.37	38	⇓P		PKPdf	15 54 12.5	+1.0
	baz=127							
D13A	Huson	127.42	30	⇑P		PKPdf	15 54 11.6	+0.2
	baz=127							
B15A	Bradely Ranch,	127.47	28	⇓P		PKPdf	15 54 11.5	0.0
	baz=128							
K07A	Rock Creek Ran	127.57	37	⇑P		PKPdf	15 54 12.5	+0.6
	baz=128,SNR=5.4							
MNRC	McLaughlin Nat	127.58	43	⇑P		PKPdf	15 54 12.5	+0.5
	baz=128							
J08A	Circle Bar Ran	127.63	36	⇓P		PKPdf	15 54 12.6	+0.6
	baz=128							
C15A	Salmond Ranch,	127.84	28	⇓P		PKPdf	15 54 12.7	+0.5
	baz=128							
ORV	Oroville	127.87	42	⇑P		PKPdf	15 54 12.3	-0.2
	baz=128							
D14A	Greenough	127.89	29	⇓P		PKPdf	15 54 11.9	-0.4
	baz=128							
F12A	Elk City	127.91	32	⇓P		PKPdf	15 54 12.1	-0.3
	baz=128							
E13A	Victor	128.00	30	⇑P		PKPdf	15 54 12.2	-0.3
	baz=128							
K08A	Mann Creek Ran	128.00	37	⇑P		PKPdf	15 54 13.2	+0.5
	baz=128							
C16A	Fuhringer Ranc	128.22	28	⇓P		PKPdf	15 54 12.7	-0.3
	baz=128							
N06A	Buffalo Meadow	128.31	39	⇓P		PKPdf	15 54 13.0	-0.3
	baz=128							
M07A	Soldier Meadow	128.36	38	⇓P		PKPdf	15 54 12.7	-0.7
	baz=128							
D15A	Lincoln	128.40	29	⇑P		PKPdf	15 54 13.0	-0.3
	baz=128							
L08A	Fields	128.40	37	⇓P		PKPdf	15 54 13.8	+0.3
	baz=128							
BEKR	Beckwourth	128.45	41	⇑P		PKPdf	15 54 13.8	+0.2
	baz=128							
K09A	Rome	128.47	36	⇓P		PKPdf	15 54 14.0	+0.5
	baz=128							
P05C	Yuba Gap, Truc	128.59	41	⇑P		PKPdf	15 54 14.3	+0.4
	baz=129							
O06A	Flanigan	128.63	40	⇑P		PKPdf	15 54 14.3	+0.3
	baz=129							
E15A	Deer Lodge	128.78	30	⇓P		PKPdf	15 54 14.3	+0.3
	baz=129							
LAVA	Lava Cap Winer	128.79	42	⇓P		PKPdf	15 54 14.7	+0.4
	baz=129							
C17A	Wharram Farm,	128.80	27	⇑P		PKPdf	15 54 14.5	+0.4
	baz=129							
M08A	Happy Creek Ra	128.82	38	⇓P		PKPdf	15 54 14.6	+0.3
	baz=129							
N07B	Gerlach	128.83	39	⇑P		PKPdf	15 54 14.9	+0.5
	baz=129							
G13A	Cobalt	128.89	32	⇑P		PKPdf	15 54 14.7	+0.4
	baz=129							
H12A	Diamond D Ranc	128.92	33	⇓P		PKPdf	15 54 14.4	0.0
	baz=129							
K10A	MacKenzie Ranc	128.92	36	⇓P		PKPdf	15 54 14.6	+0.2
	baz=129							
MFID	Camas Ranch	129.12	34	⇓P		PKPdf	15 54 16.8	+2.0
	baz=129							
H13A	Challis	129.23	32	⇓P		PKPdf	15 54 15.7	+0.7
	baz=129							
O07A	Toulon	129.24	39	⇓P		PKPdf	15 54 15.5	+0.4
	baz=129							
R05C	Kirkwood Meado	129.26	42	⇓P		PKPdf	15 54 15.7	+0.5
	baz=129							
F15A	Butte	129.26	30	⇑P		PKPdf	15 54 15.6	+0.6
	baz=129							
PACP	Pacheco Peak	129.31	44	⇑P		PKPdf	15 54 16.3	+0.9
	baz=129							
CMB	Columbia Colle	129.40	43	⇑P		PKPdf	15 54 16.1	+0.6
	baz=129							
K11A	Parker Ranch,	129.41	35	⇓P		PKPdf	15 54 16.1	+0.7
	baz=129							
L10A	Juniper Basin	129.58	36	⇑P		PKPdf	15 54 16.8	+1.0
	baz=130							
J12A	Stokes Ranch,	129.63	34	⇑P		PKPdf	15 54 17.3	+1.5
	baz=130							
H14A	Leadore	129.66	32	⇓P		PKPdf	15 54 16.8	+1.0
	baz=130							
I13A	Wildhorse Cree	129.74	33	⇑P		PKPdf	15 54 16.7	+0.7
	baz=130							
G15A	Dillon	129.74	31	⇓P		PKPdf	15 54 16.9	+1.0
	baz=130							
HLID	Hailey	129.81	33	⇓P		PKPdf	15 54 17.0	+0.9
	baz=130							
S06C	San Francisco	129.84	42	⇓P		PKPdf	15 54 17.4	+1.1
	baz=130							
L11A	Cat Creek Ranc	129.95	36	⇑P		PKPdf	15 54 17.9	+1.5
	baz=130							
U04C	Hernandez Rese	129.98	45	⇓P		PKPdf	15 54 17.4	+0.8
	baz=130							
H15A	Lima	130.04	31	⇓P		PKPdf	15 54 18.2	+1.7
	baz=130							
J13A	Cove Ranch, Pi	130.05	33	⇑P		PKPdf	15 54 17.9	+1.3
	baz=130							
I14A	Mackay	130.08	32	⇓P		PKPdf	15 54 17.8	+1.2
	baz=130							
O09A	Fish Creek Ran	130.29	38	⇑P		PKPdf	15 54 18.0	+0.9
	baz=130							
M11A	Holland Ranch,	130.38	36	⇓P		PKPdf	15 54 18.3	+1.0
	baz=130							
L12A	House Creek Ra	130.38	35	⇑P		PKPdf	15 54 18.6	+1.4
	baz=130							
T06C	Millerton Lake	130.40	43	⇑P		PKPdf	15 54 18.2	+0.8
	baz=130							
NVAR	Mina Array Bea	130.57	41	PKP		PKPdf	15 54 19.3	+1.6
	comp=Z,1.2nm,0.7s,baz=275,slow=3.1,SNR=9.8							
NVAR				SKPbc		SKPbc	15 57 40.5	+0.6
	comp=Z,2.2nm,1.1s,baz=271,slow=4.8,SNR=7.0							
H16A	Russell Place,	130.69	30	⇓P		PKPdf	15 54 19.1	+1.3
	baz=131							
M12A	Wells	130.91	36	⇓P		PKPdf	15 54 19.6	+1.4
	baz=131							
J15A	Blackfoot	130.99	32	⇓P		PKPdf	15 54 19.9	+1.5
	baz=131							
S08C	White Mtn Res	131.17	42	⇑P		PKPdf	15 54 19.8	+0.9
	baz=131							
L14A	Malta	131.46	34	⇑P		PKPdf	15 54 20.9	+1.6
	baz=132							
O12A	Currie	131.73	37	⇑P		PKPdf	15 54 21.2	+1.3
	baz=132							
M14A	Sheep Mountain	131.75	35	⇓P		PKPdf	15 54 21.5	+1.6
	baz=132							
S10A	Tonopah Range,	131.97	41	⇑P		PKPdf	15 54 22.1	+1.8
	baz=132							
Q11A	Duckwater	132.03	39	⇑P		PKPdf	15 54 22.3	+1.8
	baz=132							
P12A	McGill	132.12	38	⇑P		PKPdf	15 54 22.4	+1.8
	baz=132							
R11A	Troy Canyon, C	132.37	39	⇑P		PKPdf	15 54 22.4	+1.2
	baz=132							
MPMC	Manual Prospec	132.41	43	⇑P		PKPdf	15 54 22.7	+1.5
	baz=132							
N15A	Stansbury Isla	132.62	35	⇑P		PKPdf	15 54 23.2	+1.7
	baz=133							
P13A	Bates Ranch, G	132.67	37	⇓P		PKPdf	15 54 22.7	+1.0
	baz=133							
PDAR	Pinedale Array	132.93	31	PKP		PKPdf	15 54 23.6	+1.6
	comp=Z,0.4nm,0.4s,baz=90,slow=3.0,SNR=4.1							
P14A	Drum Mountains	133.15	36	⇑P		PKPdf	15 54 23.8	+1.3
	baz=133							
S12A	Delamar Landin	133.28	40	⇑P		PKPdf	15 54 23.7	+0.9
	baz=133							
Q14A	Sevier Lake (B	133.41	37	⇑P		PKPdf	15 54 24.3	+1.3
	baz=133							
S13A	Holt Ranch, En	133.92	39	⇑P		PKPdf	15 54 25.6	+1.6
	baz=134							
O17A	Robinson Place	134.10	34	⇓P		PKPdf	15 54 25.1	+0.8
	baz=134							
N18A	Larsen Ranch,	134.14	33	⇑P		PKPdf	15 54 25.0	+0.7
	baz=134							
GMRC	Granite Mounta	134.36	44	⇑P		PKPdf	15 54 26.0	+1.0
	baz=134							
MSU	Marysvale	134.38	37	*e*PKIKP		PKPdf	15 54 26.7	+1.8
V12A	Nelson	134.38	42	⇑P		PKPdf	15 54 25.9	+0.9
	baz=134							
V13A	Grand Canyon W	134.88	41	⇓P		PKPdf	15 54 26.6	+0.7
	baz=135							
SRU	San Rafael	134.95	35	⇓P		PKPdf	15 54 26.9	+1.0
	baz=135							
Q18A	Rafter H Ranch	135.18	35	⇑P		PKPdf	15 54 26.6	+0.2
	baz=135							
S16A	Weppner Ranch,	135.24	37	⇓P		PKPdf	15 54 27.4	+0.9
	baz=135							
R17A	Hanksville Air	135.31	36	⇓P		PKPdf	15 54 27.4	+0.8
	baz=135							
V14A	Boquillas Ranc	135.58	41	⇑P		PKPdf	15 54 28.4	+1.1
	baz=136							
U15A	North Rim	135.62	39	⇓P		PKPdf	15 54 28.3	+1.0
	baz=136							
Q19A	Hogan Spring (	135.78	34	⇑P		PKPdf	15 54 28.6	+1.1
	baz=136							
R18A	Canyonlands Na	135.81	35	⇓P		PKPdf	15 54 28.4	+0.8
	baz=136							
V15A	Kaibab Nationa	136.07	40	⇑P		PKPdf	15 54 29.4	+1.2
	baz=136							
T17A	Navajo Res., N	136.18	38	⇑P		PKPdf	15 54 29.9	+1.6
	baz=136							
S18A	Hurst Farm, Bl	136.21	36	⇓P		PKPdf	15 54 30.0	+1.6
	baz=136							
R19A	Curley Farm, L	136.24	35	⇓P		PKPdf	15 54 29.3	+0.9
	baz=136							
PV10	Paradox Valley	136.30	35	*e*P		PKPdf	15 54 29.6	+1.1
U17A	Shonto	136.53	38	⇑P		PKPdf	15 54 30.8	+1.9
	baz=136							
U16A	Tuba City	136.53	39	⇓P		PKPdf	15 54 30.7	+1.7
	baz=136							
T18A	Mexican Hat	136.65	37	⇑P		PKPdf	15 54 31.1	+1.9
	baz=137							
S19A	Harvey Farm, M	136.68	36	⇓P		PKPdf	15 54 30.3	+1.1
	baz=137							
Y15A	Casa Rosa Ranc	137.09	42	⇓P		PKPdf	15 54 31.4	+1.3
	baz=137							
Y17A	Roosevelt	138.24	41	⇓P		PKPdf	15 54 33.6	+1.4
	baz=138							
ANMO	Albuquerque	140.17	36	⇑*i*PKIKP		PKPdf	15 54 38.4	+2.7
219A	White Tail Can	140.33	42	⇓P		PKPdf	15 54 36.7	+0.7
	baz=140							
CPUP	Villa Florida	143.15	213	PKP		PKPdf	15 54 46.3	+5.0
	comp=Z,0.3nm,0.3s,baz=152,slow=4.6,SNR=4.0							
WMOK	Wichita Mounta	144.46	29	*e*PKIKP		PKPdf	15 54 40.8	-2.6
WMOK				*e*			15 54 49.7	
OLIL	Olney	144.62	12	*e*PKP		PKPdf	15 54 41.8	-1.7
MCWV	Mont Chateau	144.69	1	*e*PKP		PKPdf	15 54 41.9	-1.7
FVM	French Village	144.77	16	*e*PKIKP		PKPdf	15 54 41.4	-2.4
USIN	University of	145.45	12	*e*PKP		PKPdf	15 54 44.2	-0.7
WCI	Wyandotte Cave	145.46	10	*e*PKIKP		PKPdf	15 54 44.0	-1.0
TXAR	Lajitas Array	145.72	40	PKPbc		PKPbc	15 54 46.5	+0.4
	comp=Z,46nm,1.1s,baz=270,slow=1.3,SNR=94							
TXAR	Lajitas Array	145.72	40	PKPbc		PKPbc	15 54 46.5	+0.4
URVA	University of	146.76	358	*e*PKPbc		PKPbc	15 54 48.7	-0.2
MIAR	Mount Ida	146.88	22	*e*PKPbc		PKPbc	15 54 48.5	-0.8
MIAR				*e*			15 54 59.5	
WVT	Waverly	147.18	13	*e*PKP2		PKPbc	15 54 49.0	-1.1
JCT	Junction City	147.26	35	*e*PKPbc		PKPbc	15 54 48.8	-1.8
JCT				*e*			15 54 59.4	
SWET	Sewanee	148.46	11	*e*PKPbc		PKPbc	15 54 52.0	-1.6
CPCT	Cooper Cave	148.47	9	*e*PKPbc		PKPbc	15 54 52.8	-0.8
JSC	Jenkinsville	149.99	4	*e*PKP2		PKPbc	15 54 57.1	-0.4
LRAL	Lakeview Retre	150.33	14	*e*PKPbc		PKPbc	15 54 56.4	-1.9

ISCJB ***12*** *15:47:24.1±6.6,227S±02×1707E±0.1,h28km±45km, mb3.8/7,Error ellipse: s-maj=38.7km s-min=17.3km az=10.2*

NEIC ***12*** *15:47:25.6±1.3,2277S×17074E,h35km,Error ellipse: s-maj=67.4km s-min=15.7km az=169.0*

IDC ***12*** *15:47:28.4±12.0,2301S×17074E,h61km±106km,mb3.5/7, mb1 3.7/7,mb1mx3.6/16,mbtmp3.5/7,Error ellipse: s-maj=116.5km s-min=48.7km az=164.0*

ISC 12 15:47:25.4±6.7,227S±02×1707E±0.1,h28km±45km,n15, σ0§94/13,mb3.8/7,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
DZM	Mont Dzumac	3.97	278	*e*P		Pn		15 48 24.4	-0.2
DZM				*e*S		Sn		15 49 10.6	+0.4
DZM	Mont Dzumac	3.97	278	*e*Pn		Pn		15 48 24.3	-0.2
DZM				*e*S		Sn		15 49 10.4	+0.2
CTA	Charters Tower	22.89	272	P		P		15 52 28.9	+1.8
	1.9nm,0.8s,mb3.6,baz=90,slow=9.1,SNR=3.9								
ASAR	Alice Springs	33.77	261	P		P		15 54 05.2	+0.1
	1.0nm,0.6s,mb3.9,baz=79,slow=9.1,SNR=23								
WRA	Warramunga Arr	33.92	268	P		P		15 54 05.1	-1.3
	0.2nm,0.5s,mb3.3,baz=89,slow=5.9,SNR=6.8								
FITZ	Fitzroy Crossi	42.35	268	P		P		15 55 15.5	-1.9
	1.6nm,0.9s,mb3.6,baz=87,slow=8.9,SNR=3.5								
CMAR	Chiang Mai Arr	81.14	294	P		P		15 59 39.9	+1.0
	1.1nm,0.6s,mb4.0,baz=136,slow=4.0,SNR=10								
VNA3	Neumayer Olymp	86.34	180	*e*		P		16 00 04.8	+0.2
VNA2	Neumayer--Watz	86.65	181	*e*		P		16 00 06.4	+0.3
NVAR	Mina Array Bea	90.06	48	P		P		16 00 22.9	+0.2
	0.5nm,0.6s,mb4.0,baz=218,slow=5.6,SNR=4.1								
SONM	Songino Array	90.75	323	P		P		16 00 25.2	-0.6
	0.7nm,0.6s,mb4.2,baz=141,slow=5.5,SNR=7.1								
ARCES	ARCESS Array B	128.71	345	PKP		PKPdf		16 06 28.4	-0.9
	2.0nm,0.8s,baz=38,slow=2.2,SNR=6.4								
EKA	Eskdalemuir Ar	147.06	354	PKPbc		PKPbc		16 07 03.8	-1.5
	2.8nm,0.5s,baz=356,slow=2.5,SNR=19								
GERES	GERESS Array B	148.13	331	PKPbc		PKPbc		16 07 07.6	-0.8
	1.6nm,0.6s,baz=45,slow=2.1,SNR=6.0								
DAVOX	Davos/Dischmat	151.39	332	PKPbc		PKPbc		16 07 16.2	-0.3
	5.9nm,0.6s,baz=17,slow=5.8,SNR=7.3								

IDC 12 15:47:38.9±2.3,097N×9737E,h0km,mb3.8/7,mb1 3.8/8, mb1mx3.7/22,mbtmp3.8/8,Error ellipse: s-maj=97.7km s-min=19.2km az=57.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
CMAR	Chiang Mai Arr	17.45	5	P		Pn		15 51 43.6	-0.2
	0.1nm,0.3s,baz=185,slow=9.9,SNR=12								
WRA	Warramunga Arr	41.77	122	P		P		15 55 30.4	0.0
	0.3nm,0.6s,baz=304,slow=9.2,SNR=2.4								
ASAR	Alice Springs	43.12	127	P		P		15 55 41.2	-0.1
	0.2nm,0.6s,baz=293,slow=7.8,SNR=3.6								
SONM	Songino Array	47.33	8	P		P		15 56 14.5	+0.1
	0.4nm,0.5s,baz=170,slow=11,SNR=3.6								
MKAR	Makanchi Array	47.51	346	P		P		15 56 16.1	+0.3
	1.2nm,0.5s,baz=162,slow=8.4,SNR=13								
KURK	Kurchatov	52.06	345	P		P		15 56 49.6	-0.8
	0.8nm,0.2s,baz=170,slow=7.2,SNR=4.8								
ZALV	Zalesovo Beam	53.81	351	P		P		15 57 03.4	+0.1
	1.4nm,0.6s,baz=178,slow=5.6,SNR=6.5								
BVAR	Borovoye Array	56.52	341	P		P		15 57 22.7	-0.2
	0.6nm,0.7s,baz=138,slow=5.2,SNR=3.4								

IDC 12 15:54:03.4±2.3,336S×10011E,h0km,mb3.8/7,mb1 3.9/7, mb1mx3.7/19,mbtmp3.8/7,Error ellipse: s-maj=81.0km s-min=19.1km az=57.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
CMAR	Chiang Mai Arr	21.71	357	P		P		15 58 54.8	-1.4
	0.8nm,0.7s,baz=187,slow=8.7,SNR=6.7								
WRA	Warramunga Arr	37.22	119	P		P		16 01 16.0	-0.8
	0.7nm,0.5s,baz=302,slow=9.1,SNR=13								
ASAR	Alice Springs	38.38	125	P		P		16 01 26.7	+0.1
	0.9nm,0.7s,baz=298,slow=7.6,SNR=12								
SONM	Songino Array	51.28	5	P		P		16 03 09.1	+0.1
	1.7nm,0.7s,baz=188,slow=10,SNR=11								
MKAR	Makanchi Array	52.36	345	P		P		16 03 17.5	+0.4
	1.9nm,0.6s,baz=149,slow=7.9,SNR=26								
MJAR	Matsushiro Arr	53.26	38	P		P		16 03 24.9	+0.9
	1.7nm,0.6s,baz=198,slow=9.4,SNR=5.3								
ZALV	Zalesovo Beam	58.52	349	P		P		16 04 00.8	-0.5
	2.2nm,0.8s,baz=187,slow=6.0,SNR=8.7								
CLL	Collm	90.79	321	*i* PKPdf		P		16 07 03.6	-4.9
CLL				*i* PKPbc		P		16 07 04.5	-4.0
	comp=Z,6.0nm,0.4s								
TXAR	Lajitas Array	145.70	39	PKPbc		PKPbc		16 13 45.1	+0.2
	comp=Z,2.2nm,0.8s,baz=285,slow=1.0,SNR=23								

IDC 12 16:03:29.6±2.1,357S×13062E,h0km,mb3.7/3,mb1 3.8/4, mb1mx3.6/15,mbtmp3.7/4,ML3.5/1,Error ellipse: s-maj=107.9km s-min=18.9km az=75.0,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
FITZ	Fitzroy Crossi	15.24	198	Pn		Pn		16 07 06.7	+0.4
	0.1nm,0.3s,baz=24,slow=14,SNR=6.9								
FITZ				Sn		Sn		16 09 53.3	-2.6
	0.1nm,0.3s,baz=198,slow=20,SNR=1.9								
WRA	Warramunga Arr	16.67	168	Pn		Pn		16 07 21.0	-3.8
	0.1nm,0.3s,baz=344,slow=13,SNR=6.4								
WRA				Sn		Sn		16 10 19.9	-11
	0.2nm,0.3s,baz=335,slow=22,SNR=4.8								
ASAR	Alice Springs	20.23	171	P		P		16 08 08.0	+1.6
	2.9nm,0.5s,baz=351,slow=11,SNR=40								
ASAR				S				16 11 55.0	+0.7
	0.8nm,0.8s,baz=351,slow=23,SNR=4.1								
STKA	Stephens Creek	29.99	161	P		P		16 09 39.9	0.0
	1.5nm,1.0s,baz=0.9,slow=10,SNR=3.1								
MKAR	Makanchi Array	65.73	326	P		P		16 14 16.0	-0.2
	0.2nm,0.3s,baz=113,slow=8.2,SNR=4.1								

IDC ***12*** *16:07:16.1±1.5,357S×10094E,h0km,mb4.1/9,mb1 4.2/9, mb1mx4.0/19,mbtmp4.1/9,Error ellipse: s-maj=55.8km s-min=16.3km az=62.0*

BJI ***12*** *16:07:16.5,350S×10100E,h12km,mB4.8,mb4.7*

ISCJB ***12*** *16:07:18.7±1.2,36S±02×1009E±02,h33km,mb4.2/14, Error ellipse: s-maj=38.6km s-min=12.5km az=147.2*

NEIC ***12*** *16:07:21.4±1.1,352S×10099E,h35km,mb4.5/2,Error ellipse: s-maj=44.1km s-min=11.5km az=55.0*

ISC 12 16:07:21.2±1.2,36S±02×1009E±02,h35km,n16,σ0§83/15, mb4.2/14,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
CMAR	Chiang Mai Arr	21.99	355	P		P		16 12 10.6	-1.8
	4.4nm,0.9s,mb3.9,baz=187,slow=8.5,SNR=17								
WRA	Warramunga Arr	36.39	119	P		P		16 14 21.6	-0.9
	0.7nm,0.3s,mb4.0,baz=305,slow=8.9,SNR=11								
WRA				PcP		PcP		16 16 46.3	-0.3
	0.1nm,0.4s,baz=303,slow=2.0,SNR=2.8								
ASAR	Alice Springs	37.57	125	P		P		16 14 32.6	+0.1
	0.4nm,0.3s,mb3.6,baz=300,slow=7.6,SNR=8.9								
ASAR				PcP		PcP		16 16 50.5	+0.4
	0.3nm,0.9s,baz=320,slow=2.8,SNR=3.2								
XAN	Xi'an	38.17	11	P		P		16 14 37.5	+0.1
XAN				AMB		AMB			
	comp=Z,8.0nm,0.9s,mb4.5								
LZH	Lanzhou	39.56	4	*e*P		P		16 14 50.0	+1.0
LZH				AP		pP		16 14 55.3	-4.0
LZH				XP		sP		16 14 58.0	-5.5
LZH				AMB		AMB			
	comp=Z,19nm,1.4s,mb4.6								
LZH				AMB		AMB			
	comp=Z,89nm,4.7s								
GTA	Gaotai	42.80	359	*e*P		P		16 15 16.6	+1.0
GTA				AP		pP		16 15 21.0	-4.9
GTA				XP		sP		16 15 23.6	-6.5
GTA				AMB		AMB			
	comp=Z,3.0nm,1.3s,mb3.9								
STKA	Stephens Creek	47.40	131	P		P		16 15 52.9	+0.6
	comp=Z,4.0nm,1.1s,mb4.3,baz=291,slow=8.6,SNR=2.7								
KSRS	Korea Array	47.92	29	P		P		16 15 56.0	-0.2
	comp=Z,5.2nm,1.0s,mb4.5,baz=218,slow=8.5,SNR=17								
SONM	Songino Array	51.43	5	P		P		16 16 24.3	+1.6
	comp=Z,3.3nm,0.8s,mb4.3,baz=186,slow=8.7,SNR=20								
TKM2	Tokmak 2	51.65	336	*e*P		P		16 16 25.0	+0.4
EKS2	Erkin-Say	52.19	335	*e*P		P		16 16 28.0	-0.6
	comp=Z,10nm,1.2s,mb4.6								
MKAR	Makanchi Array	52.80	344	P		P		16 16 33.1	+0.1
	comp=Z,1.2nm,0.5s,mb4.1,baz=149,slow=8.5,SNR=20								
MJAR	Matsushiro Arr	52.93	38	P		P		16 16 33.9	-0.3
	comp=Z,1.8nm,0.8s,mb4.0,baz=214,slow=9.2,SNR=5.4								
KURK	Kurchatov	57.39	343	*e*P		P		16 17 05.9	-0.1
	comp=Z,2.9nm,0.9s,mb4.3

WMQ				XP	sP			16 20 57.0	-0.2
WMQ				AMB	AMB				
	comp=Z,14nm,1.0s,mb5.0								
CTA	**Charters Tower**	**48.13**	**115**	P	**P**			**16 20 44.2**	**-0.1**
	comp=Z,6.3nm,0.9s,mb4.7,baz=274,slow=9.7,SNR=8.2								
STKA	**Stephens Creek**	**48.52**	**131**	*eP*	**P**			**16 20 48.3**	**+1.2**
	comp=Z,2.6nm,0.5s,mb4.5								
STKA	**Stephens Creek**	**48.52**	**131**	P	**P**			**16 20 48.0**	**+1.0**
	comp=Z,4.3nm,0.8s,mb4.5,baz=319,slow=10,SNR=4.6								
TKM2	**Tokmak 2**	**50.61**	**337**	*eP*	**P**			**16 21 03.6**	**+0.8**
	comp=Z,10nm,0.8s,mb4.8								
TKM2				*e*				16 21 09.2	
SONM	**Songino Array**	**50.70**	**5**	P	**P**			**16 21 04.4**	**+1.0**
	comp=Z,13nm,0.8s,mb4.9,baz=188,slow=8.9,SNR=60								
SONM				PcP	PcP			16 22 20.9	+0.7
	comp=Z,1.5nm,0.7s,baz=180,slow=3.7,SNR=3.0								
AML	**Almayashu**	**50.74**	**335**	*eP*	**P**			**16 21 04.9**	**+1.2**
	comp=Z,121nm,0.6s								
CN2	**Changchun**	**51.64**	**23**	*eP*	**P**			**16 21 09.9**	**-0.6**
CN2				AMB	AMB				
	comp=Z,20nm,0.9s,mb5.0								
MKAR	**Makanchi Array**	**51.82**	**344**	P	**P**			**16 21 12.3**	**+0.6**
	comp=Z,13nm,0.7s,mb5.0,baz=148,slow=8.5,SNR=95								
MJAR	**Matsushiro Arr**	**52.79**	**39**	P	**P**			**16 21 18.4**	**-0.8**
	comp=Z,2.7nm,0.8s,mb4.2,baz=218,slow=7.9,SNR=7.4								
KURK	**Kurchatov**	**56.40**	**344**	P	**P**			**16 21 44.9**	**-0.2**
	comp=Z,9.4nm,0.8s,mb4.9,baz=163,slow=7.0,SNR=38								
KURK	**Kurchatov**	**56.40**	**344**	*eP*	**P**			**16 21 44.9**	**-0.2**
ZAA0	**Zalesovo Array**	**57.96**	**349**	*eP*	**P**			**16 21 55.5**	**-0.6**
ZALV	**Zalesovo Beam**	**57.96**	**349**	P	**P**			**16 21 56.0**	**0.0**
	comp=Z,8.5nm,0.8s,mb4.8,baz=173,slow=6.0,SNR=31								
AKTK	**Aktyubinsk**	**64.12**	**332**	P	**P**			**16 22 36.4**	**-1.5**
AKTO	**Aktyubinsk**	**64.12**	**332**	P	**P**			**16 22 36.4**	**-1.5**
	comp=Z,1.5nm,0.8s,mb4.1,baz=125,slow=6.4,SNR=5.5								
PETK	**Petropavlovsk-**	**73.46**	**32**	P	**P**			**16 23 35.8**	**-0.3**
	comp=Z,2.0nm,0.7s,mb4.2,baz=239,slow=2.9,SNR=6.2								
ARCES	**ARCESS Array B**	**87.26**	**340**	P	**P**			**16 24 50.4**	**+0.6**
	comp=Z,3.1nm,0.8s,mb4.6,baz=99,slow=6.0,SNR=5.6								
ARCES	**ARCESS Array B**	**87.26**	**340**	P	**P**			**16 24 50.4**	**+0.6**
TXAR	**Lajitas Array**	**145.22**	**38**	PKPbc	PKPbc			16 31 42.7	+1.1
	comp=Z,6.1nm,0.8s,baz=283,slow=1.0,SNR=69								
MIAR	**Mount Ida**	**145.91**	**20**	*e*PKPbc	PKPbc			16 31 43.6	+0.1
JCT	**Junction City**	**146.60**	**32**	*e*PKPbc	PKPbc			16 31 46.5	+0.7

IDC ***12*** *16:13:54.7±2.2, 4.04S×10071E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.9/20, mbtmp3.9/8, Error ellipse: s-maj=77.3km s-min=20.1km az=56.0*

ISCJB ***12*** *16:13:57.3±2.0, 4.1S±0.3×1006E±0.4, h33km, mb4.0/8, Error ellipse: s-maj=67.9km s-min=17.0km az=146.1*

NEIC ***12*** *16:13:59.8±2.1, 4.05S×10069E, h35km, mb4.2/1, Error ellipse: s-maj=87.8km s-min=14.6km az=56.0*

ISC 12 16:14:00.1±1.9, 40S±0.3×1008E±0.4, h35km, n12, σ0=83/11, mb4.0/8, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.40**	**355**	P	**P**	**16 18 56.0**	**+0.4**
	2.4nm,0.7s,mb3.8,baz=184,slow=8.8,SNR=6.8						
WRA	**Warramunga Ar**	**36.36**	**119**	P	**P**	**16 20 59.7**	**-1.4**
	0.7nm,0.7s,mb3.7,baz=292,slow=9.8,SNR=2.5						
ASAR	**Alice Springs**	**37.49**	**125**	P	**P**	**16 21 12.2**	**+1.5**
	0.6nm,0.4s,mb3.8,baz=296,slow=7.3,SNR=4.1						
KSRS	**Korea Array**	**48.38**	**29**	P	**P**	**16 22 38.4**	**-0.3**
	1.1nm,0.8s,mb3.9,baz=224,slow=8.2,SNR=4.5						
SONM	**Songino Array**	**51.86**	**5**	P	**P**	**16 23 05.4**	**+0.5**
	1.8nm,0.7s,mb4.1,baz=192,slow=8.4,SNR=5.3						
MKAR	**Makanchi Array**	**53.15**	**344**	P	**P**	**16 23 14.8**	**+0.3**
	2.5nm,0.8s,mb4.2,baz=144,slow=8.9,SNR=5.5						
MKAR	**Makanchi Array**	**53.15**	**344**	P	**P**	**16 23 14.8**	**+0.3**
KURK	**Kurchatov**	**57.73**	**344**	P	**P**	**16 23 46.6**	**-0.7**
	1.0nm,0.8s,mb3.9,baz=154,slow=7.2,SNR=3.2						
KURK	**Kurchatov**	**57.73**	**344**	*eP*	**P**	**16 23 46.9**	**-0.4**
	2.6nm,1.0s,mb4.2						
ZALV	**Zalesovo Beam**	**59.27**	**349**	P	**P**	**16 23 57.5**	**-0.5**
	3.8nm,0.8s,mb4.5,baz=172,slow=4.2,SNR=5.1						
ZALV	**Zalesovo Beam**	**59.27**	**349**	P	**P**	**16 23 57.5**	**-0.5**
TXAR	**Lajitas Array**	**145.80**	**40**	PKPbc	PKPbc	16 33 36.2	-0.1
	0.9nm,0.9s,baz=260,slow=1.6,SNR=4.7						

CSEM ***12*** *16:24:12.2, 1206N×4439E, h3km, ML3.8, After DHMR*

DHMR 12 16:24:12.2±0.9, 1206N×4439E, h3km±6km, ML3.8, 2C, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRBA	**At Turbah**	**1.19**	**347**	*i* P	Pg	16 24 34.9	-0.2
TRBA				*i* S	Sg	16 24 51.7	+1.1
UDYN	**Al 'Udayn**	**1.94**	**348**	↑*i* P	Pn	16 24 47.3	+1.3
UDYN				*i* S	Sn	16 25 13.9	+3.0
UDYN				AML	AML	16 25 21.0	
	comp=N,2μm,0.3s						
UDYN	**Al 'Udayn**	**1.94**	**348**	↑*i* P	Pn	16 24 47.3	+1.3
UDYN				*i* S	Sn	16 25 13.9	+3.0
	comp=N,867nm,0.3s						
LBOS		**1.98**	**25**	*i* P	Pn	16 24 47.6	+0.9
LBOS				*i* S	Sn	16 25 15.9	+3.9
BDHA	**Al Bayda'**	**2.22**	**31**	*i* P	Pn	16 24 51.3	+1.4
BDHA				*i* S	Sn	16 25 22.8	+4.9
BDHA				AML	AML	16 25 31.7	
	comp=Z,616nm,0.6s						

IDC ***12*** *16:26:27.3±1.7, 4.05S×10096E, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.8/21, mbtmp3.8/10, Error ellipse: s-maj=68.3km s-min=16.4km az=56.0*

ISCJB ***12*** *16:26:30.2±1.5, 4.0S±0.2×1010E±0.3, h33km, mb3.9/11, Error ellipse: s-maj=56.9km s-min=13.4km az=148.0*

NEIC ***12*** *16:26:32.8±1.4, 3.98S×10105E, h35km, mb4.2/1, Error ellipse: s-maj=63.0km s-min=11.2km az=58.0*

ISC 12 16:26:32.9±1.5, 40S±0.2×1011E±0.3, h35km, n13, σ0=79/12, mb3.9/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**22.38**	**355**	*eP*	**P**	**16 31 27.4**	**-0.9**
	8.4nm,0.9s,mb4.2						
CMAR	**Chiang Mai Arr**	**22.38**	**355**	P	**P**	**16 31 29.3**	**+1.0**
	0.6nm,0.4s,mb3.4,baz=180,slow=8.5,SNR=9.3						
WRA	**Warramunga Ar**	**36.09**	**119**	P	**P**	**16 33 30.7**	**-1.0**
	0.4nm,0.5s,mb3.6,baz=302,slow=9.1,SNR=7.6						
ASAR	**Alice Springs**	**37.24**	**125**	P	**P**	**16 33 41.0**	**-0.4**
	0.3nm,0.4s,mb3.5,baz=298,slow=7.7,SNR=17						
STKA	**Stephens Creek**	**47.05**	**131**	P	**P**	**16 35 02.9**	**+1.5**
	3.9nm,1.1s,mb4.3,baz=354,slow=9.2,SNR=2.9						
KSRS	**Korea Array**	**48.17**	**29**	P	**P**	**16 35 09.7**	**-0.2**
	0.5nm,0.6s,mb3.8,baz=222,slow=6.7,SNR=4.7						
SONM	**Songino Array**	**51.79**	**5**	P	**P**	**16 35 38.3**	**+1.1**
	1.8nm,0.8s,mb4.0,baz=188,slow=9.4,SNR=12						
SONM				PcP	PcP	16 36 50.0	0.0
	0.4nm,0.7s,baz=192,slow=4.8,SNR=2.2						
MKAR	**Makanchi Array**	**53.20**	**344**	P	**P**	**16 35 47.4**	**-0.2**
	1.3nm,0.6s,mb4.1,baz=146,slow=8.0,SNR=12						
MKAR	**Makanchi Array**	**53.20**	**344**	P	**P**	**16 35 47.4**	**-0.2**
KURK	**Kurchatov**	**57.78**	**343**	P	**P**	**16 36 20.0**	**-0.5**
	1.1nm,0.9s,mb3.9,baz=160,slow=6.6,SNR=5.9						
ZALV	**Zalesovo Beam**	**59.28**	**349**	P	**P**	**16 36 30.9**	**-0.1**
	1.4nm,0.5s,mb4.2,baz=164,slow=6.0,SNR=9.6						
BVAR	**Borovoye Array**	**62.38**	**340**	P	**P**	**16 36 51.7**	**-0.3**
	0.4nm,0.4s,mb3.9,baz=165,slow=7.4,SNR=3.1						
TXAR	**Lajitas Array**	**145.54**	**40**	PKPbc	PKPbc	16 46 08.9	+0.6
	1.0nm,0.9s,baz=263,slow=1.5,SNR=7.7						

IDC 12 16:28:29.8±4.1, 323S×10105E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/19, mbtmp3.3/4, Error ellipse: s-maj=168.2km s-min=25.2km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.47**	**120**	P	P	16 35 36.1	-0.8
	0.2nm,0.6s,baz=303,slow=9.0,SNR=3.5						
ASAR	**Alice Springs**	**37.69**	**126**	P	P	16 35 47.6	+0.4
	0.2nm,0.4s,baz=299,slow=9.1,SNR=3.7						
SONM	**Songino Array**	**51.06**	**5**	P	P	16 37 34.4	+0.6
	0.3nm,0.5s,baz=187,slow=6.8,SNR=3.3						
MKAR	**Makanchi Array**	**52.49**	**344**	P	P	16 37 44.0	-0.5
	0.2nm,0.2s,baz=146,slow=10,SNR=2.3						
TXAR	**Lajitas Array**	**145.00**	**40**	PKPbc	PKPbc	16 48 08.8	-0.3
	0.3nm,0.5s,baz=251,slow=1.6,SNR=5.5						

IDC 12 16:29:26.8±6.3, 331S×10199E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.3/18, mbtmp3.5/2, Error ellipse: s-maj=426.6km s-min=71.8km az=45.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Ar**	**35.62**	**120**	P	P	16 36 26.8	+0.2
	0.5nm,0.4s,baz=303,slow=8.9,SNR=6.9						
ASAR	**Alice Springs**	**36.88**	**126**	P	P	16 36 37.1	-0.2
	0.2nm,0.4s,baz=300,slow=7.5,SNR=4.6						
TXAR	**Lajitas Array**	**144.47**	**41**	PKP	PKPdf	16 49 05.6	-0.4
	0.2nm,0.5s,baz=256,slow=1.2,SNR=4.1						

IDC 12 16:32:12.7±3.2, 303S×10153E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.6/19, mbtmp3.6/6, Error ellipse: s-maj=146.3km s-min=20.4km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.16**	**120**	P	P	16 39 16.9	-0.2
	0.2nm,0.4s,baz=300,slow=9.0,SNR=6.7						
ASAR	**Alice Springs**	**37.41**	**126**	P	P	16 39 27.8	0.0
	0.4nm,0.5s,baz=301,slow=8.2,SNR=10						
SONM	**Songino Array**	**50.84**	**4**	P	P	16 41 16.4	+1.4
	0.3nm,0.2s,baz=179,slow=5.4,SNR=4.1						
MKAR	**Makanchi Array**	**52.44**	**343**	P	P	16 41 27.2	+0.2
	0.4nm,0.4s,baz=154,slow=7.8,SNR=7.1						
KURK	**Kurchatov**	**57.03**	**343**	P	P	16 41 59.2	-1.1
	0.5nm,0.5s,baz=165,slow=6.4,SNR=6.3						
ZALV	**Zalesovo Beam**	**58.47**	**348**	P	P	16 42 09.8	-0.5
	0.4nm,0.4s,baz=159,slow=6.0,SNR=3.2						

IDC 12 16:32:42.6±2.9, 082S×10058E, h0km, mb3.7/7, mb1 3.7/7, mb1mx3.6/20, mbtmp3.7/7, Error ellipse: s-maj=137.4km s-min=21.1km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.10**	**122**	P	P	16 40 04.1	+0.6
	0.4nm,0.4s,baz=302,slow=9.0,SNR=6.6						
ASAR	**Alice Springs**	**39.49**	**128**	P	P	16 40 14.3	-0.9
	0.3nm,0.5s,baz=300,slow=8.2,SNR=3.0						
SONM	**Songino Array**	**48.73**	**5**	P	P	16 41 29.3	+0.4
	0.4nm,0.7s,baz=187,slow=9.8,SNR=3.2						
MKAR	**Makanchi Array**	**50.06**	**344**	P	P	16 41 40.3	+1.1
	0.5nm,0.4s,baz=152,slow=8.2,SNR=5.4						
KURK	**Kurchatov**	**54.65**	**343**	P	P	16 42 12.6	-0.6
	0.3nm,0.5s,baz=153,slow=7.4,SNR=4.1						
ZALV	**Zalesovo Beam**	**56.13**	**349**	P	P	16 42 23.2	-0.5
	1.1nm,0.4s,baz=170,slow=5.3,SNR=7.4						
BVAR	**Borovoye Array**	**59.29**	**339**	P	P	16 42 45.4	-0.6
	0.3nm,0.4s,baz=158,slow=5.9,SNR=3.7						

BJI ***12*** *16:36:52.0, 397S×101.10E, h10km, mB5.9, mb5.7, Ms5.8, Msz5.7*

MOS ***12*** *16:37:02.7±1.0, 300S×101.43E, h33km, mb6.1/100, MS5.4/29, Error ellipse: s-maj=8.1km s-min=3.8km az=122.5*

ISCJB ***12*** *16:37:04.0±0.1, 323S±002×10132E±002, h49km, mb5.8/254, MS5.5/63, Error ellipse: s-maj=3.6km s-min=2.4km az=23.0*

NEIC ***12*** *16:37:03.9±0.1, 3.15S×101.40E, h35km, mb5.8/129, MS5.6/3, Error ellipse: s-maj=4.8km s-min=2.8km az=216.0*

NEIC Felt [V] at Bengkulu and Painan; [IV] at Padang. Felt at Palembang. Felt [II] at Jakarta, Java.

IDC ***12*** *16:37:05.3±1.0, 3.16S×101.54E, h49km±8km, mb5.4/32, mb1 5.4/33, mb1mx5.4/33, mbtmp5.5/33, ML5.1/1, MS5.4/29, Ms1 5.4/29, ms1mx5.3/36, Error ellipse: s-maj=10.3km s-min=6.7km az=43.0*

DJA ***12*** *16:37:06, 337S×101.10E, h57km, Mw6.1/33*

SZGRF ***12*** *16:37:08.7, 349S×100.29E, h53km, mb5.9, Southern Sumatera, Indonesia*

ISC 12 16:37:05.9±0.1, 324S±002×10128E±002, h51km, h51km±1.4km; pP-P, n1359, σ1=90/845, mb5.8/254, MS5.5/63, 280C-185D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMBI	**JAMBI**	**2.84**	**56**	P	**Pn**	**16 37 50.1**	**+1.3**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**2.90**	**342**	P	**Pn**	**16 37 50.1**	**+0.5**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.05**	**20**	P	**Pn**	**16 37 53.6**	**+1.9**
	0.0nm,0.0s						
KLI	**Kotabumi**	**3.91**	**114**	P	**Pn**	**16 38 06.2**	**+2.7**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**4.96**	**78**	P	**Pn**	**16 38 18.3**	**+0.4**
	0.0nm,0.0s						
KGM	**Kluang**	**5.60**	**21**	↑P	**Pn**	**16 38 30.0**	**+3.4**
MYKOM	**Kota Tinggi**	**5.61**	**27**	↓P	**Pn**	**16 38 31.3**	**+4.4**
TRSI	**Tarutung**	**5.72**	**336**	P	**Pn**	**16 38 31.4**	**+3.1**
	0.0nm,0.0s						
DBJI	**Dramaga**	**6.37**	**121**	P	**Pn**	**16 38 38.0**	**+0.9**
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**6.38**	**86**	P	**Pn**	**16 38 37.2**	**-0.1**
	0.0nm,0.0s						
CBJI	**Citeko**	**6.38**	**120**	P	**Pn**	**16 38 41.4**	**+4.0**
	0.0nm,0.0s						
FRIM	**Kepong**	**6.44**	**3**	↓P	**Pn**	**16 38 41.1**	**+3.0**
SKJI	**Sukabumi**	**6.45**	**126**	P	**Pn**	**16 38 39.1**	**+0.8**
	0.0nm,0.0s						
LEM	**Lembang**	**7.25**	**120**	P	**Pn**	**16 38 51.2**	**+2.0**
	0.0nm,0.0s						
IPM	**Ipoh**	**7.67**	**358**	↑P	**Pn**	**16 38 59.4**	**+4.3**
XMIS	**Christmas Isla**	**8.40**	**149**	*e*Pn	**Pn**	**16 38 56.9**	**-8.2**
KTGM	**Kuala Trenggan**	**8.71**	**12**	↑P	**Pn**	**16 39 12.2**	**+2.9**
BJII	**Banjamegara**	**9.32**	**116**	P	**Pn**	**16 39 18.5**	**+0.8**
	0.0nm,0.0s						
COCO	**West Island**	**9.93**	**206**	Pn	**Pn**	**16 39 21.4**	**-4.6**
	13μm,0.6s,SNR=11						
COCO	**West Island**	**9.93**	**206**	*e*Pn	**Pn**	**16 39 20.2**	**-5.7**
	718nm,0.6s						
KSM	**Kuching**	**10.16**	**63**	↓P	**Pn**	**16 39 32.0**	**+2.8**
KSM	**Kuching**	**10.16**	**63**	*e*Pn	**Pn**	**16 39 30.1**	**+0.9**
SNG	**Songkhla**	**10.37**	**356**	P	**Pn**	**16 39 27.0**	**-5.0**
	1μm,1.1s						
PBKI	**Pangkalan Bun**	**10.38**	**87**	P	**Pn**	**16 39 33.4**	**+1.1**
	0.0nm,0.0s						
BSI	**Banda Aceh**	**10.54**	**325**	P	**Pn**	**16 39 32.9**	**-1.4**
	0.0nm,0.0s						
SJI	**Sawahan**	**11.35**	**114**	P	**Pn**	**16 39 45.0**	**-0.4**
	0.0nm,0.0s						
SBUM	**Sibu**	**12.30**	**63**	↓P	**Pn**	**16 40 04.4**	**+5.9**
KMMI	**Kalianget**	**13.19**	**107**	P	**Pn**	**16 40 11.1**	**+0.6**
	0.0nm,0.0s						
BTM	**Bintulu**	**13.41**	**62**	↑P	**Pn**	**16 40 19.7**	**+6.0**
BBKI	**Banjar Baru**	**13.54**	**91**	P	**Pn**	**16 40 18.3**	**+3.0**
	0.0nm,0.0s						
IGBI	**Denpasar**	**14.85**	**113**	P	**Pn**	**16 40 30.7**	**-2.2**
	0.0nm,0.0s						
DNP	**Denpasar**	**14.86**	**112**	P	**Pn**	**16 40 31.3**	**-1.7**
	0.0nm,0.0s						
KHKI	**Kahang-Kahang**	**15.13**	**110**	P	**Pn**	**16 40 35.6**	**-0.9**
	292nm,0.8s						
MTNI	**Mataram**	**15.74**	**111**	P	**Pn**	**16 40 40.1**	**-4.3**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**17.53**	**58**	*e*P	**Pn**	**16 41 08.7**	**+1.9**
SDKM	**Sandakan**	**18.18**	**61**	↓P	**Pn**	**16 41 17.4**	**+2.7**
TSM	**Tawau**	**18.19**	**66**	↓P	**Pn**	**16 41 16.3**	**+1.4**
KAPI	**Kappang**	**18.50**	**96**	Pn	**Pn**	**16 41 18.3**	**-0.4**
	4μm,1.0s,SNR=58						
KAPI	**Kappang**	**18.50**	**96**	P	**Pn**	**16 41 16.0**	**-2.7**
	6.0nm,0.3s,baz=286,slow=12,SNR=19						
KAPI				LR	LR	16 49 31.3	
	comp=Z,12μm,18.5s,baz=77,slow=41						
KAPI	**Kappang**	**18.50**	**96**	*e*P	**Pn**	**16 41 17.4**	**-1.3**
	792nm,1.0s						
KDM	**Kudat**	**18.51**	**57**	↑P	**Pn**	**16 41 21.0**	**+2.2**
PCI	**Palu**	**18.68**	**83**	P	**Pn**	**16 41 21.2**	**+0.3**
	1μm,1.4s						
UBT	**Ubonrachathani**	**18.73**	**11**	↑P	**Pn**	**16 41 21.5**	**+0.1**
	347nm,1.0s						
NST	**Nakhon Sawan**	**18.82**	**357**	P	**Pn**	**16 41 20.5**	**-2.0**
MYLDM	**Lahad Datu**	**19.12**	**64**	↑P	**Pn**	**16 41 27.2**	**+1.0**
KKTK	**Khon Kaen**	**19.51**	**4**	↓P	**Pn**	**16 41 28.5**	**-2.2**
	1μm,0.6s						
BATP	**Bataraza**	**20.35**	**54**	*e*P	**P**	**16 41 40.1**	**+1.8**
BDT	**Bhumibol Dam**	**20.47**	**354**	P	**P**	**16 41 37.0**	**-2.5**
	40nm,0.8s						
KDI	**Kendari**	**21.30**	**93**	P	**P**	**16 41 49.6**	**+1.0**
	0.0nm,0.0s						
PPR	**Puerto Princes**	**21.66**	**53**	↓*e*P	**P**	**16 41 57.0**	**+4.6**
CMAR	**Chiang Mai Arr**	**21.68**	**354**	P	**P**	**16 41 49.7**	**-2.8**
	57nm,0.9s,mb5.0,baz=185,slow=9.9,SNR=172						
CMAR				PcP	PcP	16 45 53.2	+0.8
	19nm,0.8s,baz=214,slow=2.6,SNR=9.9						
CMAR				ScP	ScP	16 49 25.8	+0.3
	9.2nm,0.8s,baz=213,slow=3.4,SNR=11						
CMAR				LR	LR	16 50 49.6	
	comp=Z,11μm,19.2s,MS5.3,baz=320,slow=38						
CMAR	**Chiang Mai Arr**	**21.68**	**354**	P	**P**	**16 41 49.7**	**-2.8**
CMAR						16 45 53.2	
CMAR				pmax	pmax		
	comp=Z,57nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,19nm,0.8s						
CMAR				pmax	pmax		
	comp=N,9.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,11μm,19.2s						
CHG	**Chiang Mai**	**22.03**	**354**	↓P	**P**	**16 41 53.6**	**-2.7**
	comp=Z,84nm,0.9s,mb5.2						
CHTO	**Chiang Mai**	**22.03**	**354**	*eP*	**P**	**16 41 52.6**	**-3.7**
CHTO				pmax	pmax		
	comp=Z,82nm,1.0s,mb5.1						
CHTO	**Chiang Mai**	**22.03**	**354**	*eP*	**P**	**16 41 52.5**	**-3.7**
	comp=Z,82nm,1.0s,mb5.1						
PALK	**Pallekele**	**23.04**	**297**	*eP*	**P**	**16 42 07.1**	**+0.1**
	comp=Z,142nm,1.3s,mb5.2						
ENPP	**El Nido**	**23.06**	**51**	*eP*	**P**	**16 42 07.2**	**+0.1**
ZMPH	**Zamboanga City**	**23.08**	**64**	↑*eP*	**P**	**16 42 08.0**	**+0.5**
BATI	**Baumata**	**23.27**	**108**	P	**P**	**16 42 06.2**	**-3.2**
	comp=Z,0.0nm,0.0s						
BATI	**Baumata**	**23.27**	**108**	P	**P**	**16 42 05.7**	**-3.7**
	comp=Z,35nm,0.4s,mb5.1,baz=308,slow=2.6,SNR=22						
BATI				S	**S**	**16 46 10.1**	**-7.8**
	comp=Z,94nm,0.7s,baz=11,slow=18,SNR=7.4						
QIZ	**Qiongzhong**	**23.68**	**21**	P	**P**	**16 42 11.8**	**-1.2**
QIZ				XP	sP	16 42 20.8	-11
QIZ				S	**S**	**16 46 25.8**	**+1.5**
QIZ				XS	sS	16 46 37.7	-8.4
QIZ				AMB	AMB		
	comp=Z,188nm,1.4s,mb5.3						
QIZ				AMB	AMB		
	comp=Z,2μm,9.4s						
QIZ				LR	LR		
	comp=N,10μm,23.0s						
QIZ				LR	LR		
	comp=Z,14μm,26.4s,MS5.3						
IPIL	**Ipil**	**23.89**	**63**	*eP*	**P**	**16 42 15.2**	**+0.1**
CUYO	**Cuyo Island**	**24.12**	**54**	*eP*	**P**	**16 42 18.0**	**+0.9**
BUSP	**Coron**	**24.14**	**51**	*eP*	**P**	**16 42 17.8**	**+0.5**
PAGZ	**Pagadian**	**24.64**	**63**	*eP*	**P**	**16 42 24.4**	**+2.5**
SJMP	**San Jose**	**25.13**	**51**	*eP*	**P**	**16 42 26.4**	**0.0**
LUBP	**Lubang**	**25.26**	**48**	*eP*	**P**	**16 42 27.2**	**-0.3**
GUIM	**Jordan**	**25.29**	**57**	*eP*	**P**	**16 42 28.0**	**+0.2**
MBWA	**Marble Bar**	**25.29**	**136**	*eP*	**P**	**16 42 27.3**	**-0.4**
	comp=Z,196nm,1.1s,mb5.5						
OTRP	**Odiongan**	**25.78**	**53**	*eP*	**P**	**16 42 32.2**	**-0.1**
TBP	**Tagbilaran**	**25.90**	**60**	*eP*	**P**	**16 42 32.7**	**-0.7**
NBP	**Mount Natib**	**26.05**	**46**	↑*eP*	**P**	**16 42 35.0**	**+0.3**
BUKP	**Musuan**	**26.16**	**65**	*eP*	**P**	**16 42 36.1**	**+0.3**
LLP	**Lapu-Lapu**	**26.30**	**59**	↑*eP*	**P**	**16 42 35.5**	**-1.4**
DAV	**Davao City (W)**	**26.32**	**67**	P	**P**	**16 42 38.7**	**+1.5**
	comp=Z,139nm,0.4s,mb5.8,baz=162,slow=4.7,SNR=4.1						
DAV				LR	LR	16 53 51.1	
	comp=Z,9μm,21.6s,MS5.3,baz=57,slow=39						
DAV	**Davao City (W)**	**26.32**	**67**	↑*eP*	**P**	**16 42 35.7**	**-1.5**
MDRS	**Chennai**	**26.43**	**308**	*eP*	**P**	**16 42 37.0**	**-1.1**
MDRS				AMb	AMB	16 42 41.5	
	comp=Z,105nm,0.5s,mb5.6						
MATI	**Mati**	**26.90**	**68**	*eP*	**P**	**16 42 42.8**	**+0.4**
TRD	**Trivandrum**	**26.92**	**296**	*eP*	**P**	**16 42 42.6**	**+0.1**
TRD				AMb	AMB	16 42 48.9	
	comp=Z,118nm,1.5s,mb5.2						
OCLP	**Ormoc**	**27.21**	**58**	*eP*	**P**	**16 42 46.5**	**+1.3**
KOD	**Kodaikanal**	**27.23**	**300**	*eP*	**P**	**16 42 47.7**	**+2.3**
VIS	**Vishakhapatnam**	**27.34**	**320**	*eP*	**P**	**16 42 45.8**	**-0.4**
VIS				AMb	AMB	16 42

comp=Z,1μm,0.8s,mb7.0
GOA Goa 32.94 305⇑ *e*P **P** **16 43 36.1 +0.3**
GOA *e*S **S** **16 48 52.0 +1.4**
NWAO Narrogin (SRO) 33.10 155 P **P** **16 43 37.2 +0.2**
comp=Z,43nm,0.9s,mb5.4,baz=323,slow=9.9,SNR=14
NWAO LR LR 16 55 43.1
comp=Z,13μm,20.9s,MS5.6,baz=326,slow=34
NWAO Narrogin (SRO) 33.10 155 P **P** **16 43 37.2 +0.2**
NWAO pmax pmax
comp=Z,43nm,0.9s
NWAO MLR MLR
comp=Z,13μm,21.0s
TAPN Taplejung 33.11 338 *e*P **P** **16 43 37.9 +0.7**
comp=Z,2μm,0.9s,mb7.1
RAMN Ramite 33.19 336 *e*P **P** **16 43 38.8 +0.9**
JBP Jabalpur 33.47 323 *e*P **P** **16 43 41.2 +0.8**
JBP *e*S **S** **16 48 58.4 -0.2**
KAD Karad 33.65 308 *e*P **P** **16 43 42.6 +0.7**
KAD AMb AMB 16 43 46.6
comp=Z,104nm,1.5s,mb5.5
KAD *e*S **S** **16 49 03.0 +1.4**
AKL Akola 33.65 316 *e*P **P** **16 43 43.4 +1.4**
NACB Ninganchiao 33.66 35 *e*P **P** **16 43 42.4 +0.4**
comp=Z,558nm,0.9s,mb6.5
YHNB Yeheng 33.92 34 *e*P **P** **16 43 44.0 -0.3**
comp=Z,157nm,1.1s,mb5.9
JIRN Jiri 33.99 336 *e*P **P** **16 43 45.6 +0.8**
comp=Z,2μm,0.9s,mb7.1
CD2 Chengdu 34.04 4 P **P** **16 43 44.4 -0.8**
CD2 AP pP 16 43 48.9 -9.5
CD2 XP sP 16 43 51.9 -12
CD2 PP PP 16 44 58.8 -4.3
CD2 PCP PcP 16 46 21.4 -0.8
CD2 S **S** **16 49 09.4 +2.2**
CD2 PCS PcS 16 50 06.4 -2.0
CD2 SCS ScS 16 54 05.4 +0.3
CD2 AMB AMB
comp=Z,180nm,0.8s,mb6.0
CD2 AMB AMB
comp=Z,1μm,5.5s
CD2 LR LR
comp=N,16μm,21.0s,MS6.0
CD2 LR LR
comp=E,22μm,18.0s,MS6.0
CD2 LR LR
comp=Z,25μm,21.6s,MS5.9
ALBI Allahabad 34.09 327 *e*P **P** **16 43 44.5 -1.3**
LSA Lhasa 34.16 344 P **P** **16 43 45.8 -0.5**
LSA LR LR
comp=N,5μm,27.7s
LSA LR LR
comp=E,9μm,46.6s
LSA LR LR
comp=Z,9μm,24.8s,MS5.4
PKI Pulchoki 34.24 334 *e*P **P** **16 43 47.3 +0.3**
PKIN Phulchoki 34.25 334 *e*P **P** **16 43 48.1 +1.0**
GUN Gumba 34.34 335 *e*P **P** **16 43 48.5 +0.6**
comp=Z,1μm,0.6s,mb7.0
DMN Daman 34.40 334 *e*P **P** **16 43 48.8 +0.4**
comp=Z,427nm,0.8s,mb6.4
KKN Kakani 34.49 334 *e*P **P** **16 43 49.5 +0.4**
comp=Z,1μm,0.8s,mb6.8
POO Poona 34.61 310 *e*P **P** **16 43 51.7 +1.4**
POO AMb AMB 16 43 56.2
comp=Z,82nm,1.0s,mb5.6
POO *e*S **S** **16 49 17.2 +0.9**
GKN Gorkha 34.95 334 *e*P **P** **16 43 53.5 +0.3**
KOLN Koldanda 35.22 332 *e*P **P** **16 43 56.1 +0.6**
comp=Z,1μm,0.8s,mb7.0
BOM Bombay 35.62 309 *ex* **P** **16 43 56.1 -3.0**
BOM *ex* x 16 44 32.6
comp=Z,140nm,1.5s
BOM *ex* x 16 49 04.0
DANN Dangsing 35.64 333 *e*P **P** **16 43 59.7 +0.6**
comp=Z,1μm,0.7s,mb6.9
WHN Wuhan 35.83 19 ⇑P **P** **16 44 00.6 -0.1**
WHN XP sP 16 44 14.2 -5.7
WHN PP PP 16 45 27.1 +4.1
WHN PCP PcP 16 46 27.8 +0.4
WHN S **S** **16 49 34.3 -0.6**
WHN SCP ScP 16 50 10.0 +0.5
WHN PCS PcS 16 50 12.5 -2.4
WHN AMB AMB
comp=Z,105nm,0.9s,mb5.8
WHN AMB AMB
comp=Z,1μm,9.4s
WHN LR LR
comp=N,1μm,10.4s,MS5.6
WHN LR LR
comp=E,6μm,12.4s,MS5.6
WHN LR LR
comp=Z,8μm,15.7s,MS5.6
WRA Warramunga Arr 36.27 120 P **P** **16 44 02.2 -2.4**
comp=Z,244nm,0.9s,mb6.1,baz=292,slow=10,SNR=341
WRA PcP PcP 16 46 28.4 -0.6
comp=Z,19nm,0.8s,baz=309,slow=1.3,SNR=5.7
WRA S **S** **16 49 37.3 -4.5**
comp=Z,42nm,0.9s,baz=293,slow=16,SNR=17
WRA LR LR 17 00 45.3
comp=Z,4μm,21.4s,MS5.2,baz=295,slow=39
WRA Warramunga Arr 36.27 120 P **P** **16 44 02.2 -2.4**
WRA 16 46 28.4
WRA S **S** **16 49 37.3 -4.5**
WRA pmax pmax
comp=Z,245nm,1.0s
WRA pmax pmax
comp=Z,19nm,0.8s
WRA smax
comp=N,42nm,0.9s
WRA MLR MLR
comp=Z,4μm,21.4s
WRAB Tennant Creek 36.27 120 P **P** **16 44 02.0 -2.6**
comp=Z,2μm,0.9s,mb7.0
WRAB Tennant Creek 36.27 120 *e*P **P** **16 44 02.1 -2.5**
WRAB *e*S **S** **16 49 37.7 -4.2**
WRAB pmax pmax
comp=Z,270nm,0.9s,mb6.2
WRAB Tennant Creek 36.27 120 *e*P **P** **16 44 02.1 -2.5**
comp=Z,270nm,0.9s,mb6.2
WRAB *e*S **S** **16 49 37.7 -4.2**
WB2 Warramunga Arr 36.28 120⇑ *i*P **P** **16 44 02.3 -2.4**
FORT Forrest 37.28 140 *e*P **P** **16 44 13.5 +0.5**
comp=Z,68nm,0.6s,mb5.7
FORT *e*PCP PcP 16 46 32.9 +1.1
ASAR Alice Springs 37.49 126 P **P** **16 44 13.4 -1.6**
comp=Z,118nm,0.7s,mb5.8,baz=302,slow=7.6,SNR=360
ASAR PcP PcP 16 46 32.6 0.0
comp=Z,28nm,0.8s,baz=318,slow=3.4,SNR=8.2
ASAR S **S** **16 49 56.9 -3.6**
comp=Z,36nm,0.8s,baz=293,slow=14,SNR=18
ASAR Alice Springs 37.49 126 P **P** **16 44 13.4 -1.6**
ASAR 16 46 32.7
ASAR S **S** **16 49 56.9 -3.6**
ASAR pmax pmax
comp=Z,118nm,0.7s
ASAR pmax pmax
comp=Z,28nm,0.8s
ASAR smax
comp=N,36nm,0.8s
XAN Xi'an 37.77 10 P **P** **16 44 15.8 -1.3**
XAN AP pP 16 44 22.2 -8.2
XAN XP sP 16 44 25.4 -11
XAN PP PP 16 45 51.2 +7.0
XAN AMB AMB
comp=Z,254nm,0.9s,mb6.0
XAN LR LR
comp=N,1μm,35.0s
XAN LR LR
comp=E,10μm,24.5s
XAN LR LR
comp=Z,13μm,20.5s
PTH Pithoragarh 38.34 330 *e*P **P** **16 44 22.0 0.0**
PTH *ex* **S** **16 50 11.0 -2.1**
NJ2 Nanjing 38.86 24 *e*P **P** **16 44 27.6 +1.3**
NJ2 AP pP 16 44 33.0 -6.7
NJ2 XP sP 16 44 35.9 -10
NJ2 PP PP 16 46 01.1 +4.9
NJ2 S **S** **16 50 24.0 +3.1**
NJ2 XS sS 16 50 35.0 -8.3
NJ2 AMB AMB
comp=Z,30nm,0.7s,mb5.1
NJ2 AMB AMB
comp=Z,2μm,5.2s
NJ2 LR LR
comp=N,3μm,23.4s,MS5.5
NJ2 LR LR
comp=E,7μm,24.2s,MS5.5
NJ2 LR LR
comp=Z,6μm,24.3s,MS5.3
SSE Sheshan 39.06 28 ⇑P **P** **16 44 28.9 +0.9**
SSE AP pP 16 44 31.9 -9.4
SSE XP sP 16 44 33.0 -14
SSE S **S** **16 50 25.7 +1.9**
SSE AMB AMB
comp=Z,134nm,0.9s,mb5.7
SSE AMB AMB
comp=Z,651nm,6.4s
SSE LR LR
comp=N,7μm,21.6s,MS5.5
SSE LR LR
comp=E,2μm,21.7s,MS5.5
SSE LR LR
comp=Z,7μm,25.5s,MS5.4
LZH Lanzhou 39.19 3 ⇓P **P** **16 44 29.3 +0.3**
LZH AP pP 16 44 32.3 -10
LZH XP sP 16 44 34.3 -14
LZH PP PP 16 46 04.0 +4.2
LZH S **S** **16 50 28.0 +2.3**
LZH SS SS 16 53 17.0 -3.4
LZH SCS ScS 16 54 33.1 -0.5
LZH AMB AMB
comp=Z,232nm,1.0s,mb5.9
LZH AMB AMB
comp=Z,1μm,4.2s
LZH LR LR
comp=N,16μm,17.3s
LZH LR LR
comp=Z,25μm,20.3s,MS6.0
AJM Ajmer 39.20 321 *e*P **P** **16 44 30.2 +0.9**
AJM AMb AMB 16 44 35.2
comp=Z,202nm,1.3s,mb5.7
NDI New Delhi 39.27 326 *e*P **P** **16 44 29.0 -0.8**
NDI *e*S **S** **16 50 28.0 +1.0**
JOW Kunigami 39.66 39 P **P** **16 44 34.0 +0.8**
comp=Z,100nm,1.0s,mb5.5,baz=270,slow=7.2,SNR=13
DDI Dehra Dun 40.08 328 *e*P **P** **16 44 33.8 -2.7**
DDI *ex* x 16 50 44.8
BHJ Bhuj 40.55 312 *e*P **P** **16 44 41.3 +0.8**
BHJ AMb AMB 16 44 47.9
comp=Z,191nm,2.0s,mb5.4
SMLA Simla 41.18 328 *i* P **P** **16 44 45.3 -0.3**
SMLA *ex* x 16 44 47.2
comp=Z,949nm,0.7s
SMLA *i* S **S** **16 50 54.8 -0.8**
SDNR Sundarnagar 41.58 328 *e*P **P** **16 44 49.0 +0.2**
SDNR *e*S **S** **16 51 02.0 +0.5**
BHK Bhakra 41.81 327 *e*P **P** **16 44 50.8 +0.1**
TIY Taiyuan 42.04 13 P **P** **16 44 53.3 +0.8**
TIY S **S** **16 51 09.6 +1.6**
TIY LR LR
comp=N,11μm,16.7s,MS5.9
TIY LR LR
comp=E,2μm,13.2s,MS5.9
TIY LR LR
comp=Z,13μm,18.7s
GTA Gaotai 42.46 358 ⇑P **P** **16 44 55.5 -0.4**
GTA AP pP 16 45 00.0 -9.4
GTA XP sP 16 45 02.5 -13
GTA PCP PcP 16 46 47.4 -0.7
GTA SCP ScP 16 50 36.6 +1.8
GTA S **S** **16 51 16.4 +2.2**
GTA SCS ScS 16 54 50.9 -2.2
GTA AMB AMB
comp=Z,58nm,1.1s,mb5.1
GTA AMB AMB
comp=Z,2μm,6.0s
GTA LR LR
comp=N,10μm,19.2s,MS5.8
GTA LR LR
comp=E,7μm,19.8s,MS5.8
GTA LR LR
comp=Z,19μm,21.0s,MS6.0
COEN Coen 42.69 107 *e*P **P** **16 44 54.7 -3.5**
comp=Z,21nm,0.9s,mb4.9
DLH Dalhousie 42.92 328 *e*P **P** **16 45 00.0 +0.2**
DLH *ex* x 16 45 16.0
THN Thein Dam 42.97 328 *e*P **P** **16 44 58.4 -1.8**
THN *e*S **S** **16 51 22.6 +0.6**
BTO Baotou 44.36 10 *e*P **P** **16 45 10.3 -0.9**
HHC Hu-ho-hao-te 44.87 11 ⇑P **P** **16 45 15.7 +0.5**
HHC AP pP 16 45 19.2 -10
HHC XP sP 16 45 21.8 -13
HHC PCP PcP 16 46 57.4 +1.1
HHC PP PP 16 47 01.7 +0.8
HHC SCP ScP 16 50 48.0 +3.4
HHC PCS PcS 16 50 50.0 +0.2
HHC S **S** **16 51 52.6 +3.2**
HHC SCS ScS 16 55 10.6 +2.4
HHC AMB AMB
comp=Z,144nm,1.3s,mb5.6
HHC AMB AMB
comp=Z,2μm,8.2s
HHC LR LR
comp=N,7μm,20.3s,MS5.7
HHC LR LR
comp=E,7μm,19.7s,MS5.7
HHC LR LR
comp=Z,9μm,20.8s,MS5.7
BJT Baijiatuau 45.16 16 *e*P **P** **16 45 17.8 +0.2**
BJT pmax pmax
comp=Z,169nm,1.1s
BJT Baijiatuau 45.16 16 *e*P **P** **16 45 17.8 +0.2**
comp=Z,169nm,1.1s,mb5.8
BJI Beijing 45.18 16 P **P** **16 45 17.8 0.0**
BJI PP PP 16 47 05.1 +0.8
BJI SS SS 16 55 21.2 +3.2
BJI AMB AMB
comp=Z,121nm,1.5s,mb5.5
BJI AMB AMB
comp=Z,2μm,3.7s
BJI LR LR
comp=N,11μm,18.6s,MS5.9
BJI LR LR
comp=E,6μm,21.5s,MS5.9
BJI LR LR
comp=Z,8μm,25.2s,MS5.6
DL2 Dalian 45.95 22⇑ *i*P **P** **16 45 22.9 -0.9**
DL2 AP pP 16 45 32.5 -4.9
DL2 XP sP 16 45 37.4 -5.9
DL2 PCP PcP 16 47 00.2 +0.2
DL2 SCP ScP 16 50 49.3 +0.2
DL2 S **S** **16 52 03.5 -1.5**
DL2 XS sS 16 52 20.6 -7.2
DL2 AMB AMB
comp=Z,60nm,0.9s,mb5.5
DL2 AMB AMB
comp=Z,870nm,7.1s
DL2 LR LR
comp=N,2μm,19.9s,MS5.3
DL2 LR LR
comp=E,3μm,19.5s,MS5.3
DL2 LR LR
comp=Z,4μm,18.0s,MS5.4
PMG Port Moresby 45.97 100 *e*P **P** **16 45 21.9 -2.6**
PMG pmax pmax
comp=Z,46nm,0.8s
PMG Port Moresby 45.97 100 *e*P **P** **16 45 21.9 -2.6**
comp=Z,46nm,0.8s,mb5.5
GUMO Guam 46.36 68 P **P** **16 45 23.2 -4.3**
comp=Z,109nm,0.5s,mb6.1,baz=191,slow=4.7,SNR=19
GUMO LR LR 17 05 27.9
comp=Z,1μm,20.3s,MS4.9,baz=61,slow=37
GUMO Guam 46.36 68 P **P** **16 45 23.2 -4.3**
GUMO pmax pmax
comp=Z,109nm,0.5s,mb6.0
GUMO MLR MLR
comp=Z,1μm,20.3s,MS4.9
INCN Inchon 46.86 28 *e*P **P** **16 45 30.3 -0.7**
comp=Z,44nm,1.0s,mb5.3
CTA Charters Tower 46.92 115 *e*P **P** **16 45 30.1 -1.7**
comp=Z,369nm,0.9s,mb6.3
CTA *e*S **S** **16 52 17.5 -2.0**
CTA Charters Tower 46.92 115 P **P** **16 45 30.1 -1.6**
comp=Z,431nm,0.9s,mb6.4,baz=289,slow=9.5,SNR=259
CTA LR LR 17 06 27.8
comp=Z,4μm,21.4s,MS5.3,baz=284,slow=38
CTA Charters Tower 46.92 115 *e*P **P** **16 45 30.1 -1.7**
CTA *e*S **S** **16 52 17.5 -2.0**
CTA pmax pmax
comp=Z,369nm,0.9s
CTAO Charters Tower 46.92 115 *e*P **P** **16 45 30.0 -1.8**
CTAO pmax pmax
comp=Z,417nm,0.8s,mb6.4
CTAO Charters Tower 46.92 115 *e*P **P** **16 45 30.0 -1.8**
comp=Z,417nm,0.8s,mb6.4
STKA Stephens Creek 47.37 132 *i*P **P** **16 45 33.9 -1.3**
comp=Z,126nm,0.7s,mb6.0
STKA *e*S **S** **16 52 22.6 -3.1**
STKA Stephens Creek 47.37 132 P **P** **16 45 34.2 -1.0**
comp=Z,48nm,0.9s,mb5.4,baz=297,slow=7.5,SNR=2.8
STKA S **S** **16 52 24.9 -0.8**
comp=Z,7.0nm,0.9s,baz=64,slow=22,SNR=5.5
STKA LR LR 17 05 37.4
comp=Z,8μm,21.4s,MS5.6,baz=299,slow=36
KSRS Korea Array 47.45 29 P **P** **16 45 35.0 -0.5**
comp=Z,96nm,1.1s,mb5.6,baz=219,slow=7.7,SNR=127
KSRS ScP ScP 16 50 54.7 -0.8
comp=Z,3.9nm,0.8s,baz=220,slow=4.8,SNR=5.2
KSRS LR LR 17 10 22.5
comp=Z,2μm,18.2s,MS5.2,baz=239,slow=42
KSRS Korea Array 47.45 29 P **P** **16 45 35.1 -0.5**
KSRS pmax pmax
comp=Z,96nm,1.1s,mb5.6
KSRS pmax pmax
comp=N,4.0nm,0.8s
KSRS MLR MLR
comp=Z,2μm,18.2s,MS5.2
WMQ Urumqi 48.41 347⇑ *i*P **P** **16 45 43.1 +0.2**
WMQ AP pP 16 45 47.5 -9.1
WMQ XP sP 16 45 50.0 -13
WMQ PP PP 16 47 35.0 -1.1
WMQ S **S** **16 52 41.5 +1.6**
WMQ AMB AMB
comp=Z,774nm,0.9s,mb6.7
WMQ AMB AMB
comp=Z,2μm,3.6s
WMQ LR LR
comp=N,7μm,21.0s,MS5.7
WMQ LR LR
comp=E,6μm,21.6s,MS5.7
WMQ LR LR
comp=Z,9μm,26.8s
KSH Kashi 48.50 334⇑ *i*P **P** **16 45 44.0 +0.3**
KSH *e*AP pP 16 45 48.3 -9.1
KSH *e*XP sP 16 45 51.3 -12
KSH *e*PCP PcP 16 47 10.1 +1.0
KSH *e*PP PP 16 47 36.0 -0.9
KSH *e*SCP ScP 16 51 03.2 +3.4
KSH *e*PCS PcS 16 51 05.1 0.0
KSH *e*S **S** **16 52 42.1 +0.8**
KSH *e*SCS ScS 16 55 33.1 +1.1
KSH *e*SS SS 16 56 07.0 -5.0
KSH AMB AMB
comp=Z,6μm,3.4s
KSH LR LR
comp=N,14μm,23.5s
KSH LR LR
comp=E,4μm,16.3s
KSH LR LR
comp=Z,13μm,22.4s,MS5.9
SNY Shenyang 49.22 22 ⇑P **P** **16 45 48.7 -0.5**
SNY AP pP 16 46 00.3 -2.6
SNY XP sP 16 46 03.0 -5.8
SNY S **S** **16 52 53.2 +1.8**
SNY AMB AMB
comp=Z,80nm,1.3s,mb5.6
SNY AMB AMB
comp=Z,961nm,6.3s
SNY LR LR
comp=Z,8μm,14.9s,MS5.8
CBIJ Chichi jima 49.66 50 P **P** **16 45 49.7 -3.1**
comp=Z,64nm,0.5s,mb5.9,baz=267,slow=18,SNR=14
ULHL Ulahol 50.65 336 P **P** **16 46 00.9 +0.9**
SNR=187
SONM Songino Array 51.05 4 P **P** **16 46 02.9 0.0**
comp=Z,154nm,0.9s,mb6.0,baz=186,slow=8.1,SNR=464
SONM PcP PcP 16 47 18.4 +0.1
comp=Z,61nm,0.8s,baz=188,slow=4.3,SNR=11
SONM ScP ScP 16 51 10.0 -0.5
comp=Z,6.1nm,0.9s,baz=181,slow=3.8,SNR=3.8
SONM LR LR 17 10 55.4
comp=Z,9μm,19.5s,MS5.8,baz=186,slow=40
SONM Songino Array 51.05 4 P **P** **16 46 02.9 0.0**
SONM 16 47 18.4
SONM pmax pmax
comp=Z,154nm,0.9s
SONM pmax pmax
comp=Z,61nm,0.8s
SONM pmax pmax
comp=N,6.0nm,0.9s
SONM MLR MLR
comp=Z,9μm,19.5s
ULN Ulaanbaatar 51.14 5 P **P** **16 46 03.6 0.0**
ULN pmax pmax
comp=Z,130nm,1.0s,mb5.8
ULN Ulaanbaatar 51.14 5 *e*P **P** **16 46 03.4 -0.2**
comp=Z,128nm,0.9s,mb5.8
AAA Alma-Ata 51.23 337 *e*P **P** **16 46 03.6 -0.8**
AAA *e*S **S** **16 53 18.3 -1.0**
AAA pmax pmax
comp=Z,3μm,5.0s
AAA smax
comp=N,2μm,6.2s
AAA MLR MLR
comp=Z,3μm,25.0s,MS5.2
UCH Uchtor 51.35 335 P **P** **16 46 05.5 +0.2**
SNR=46
UCH Uchtor 51.35 335 *e*P **P** **16 46 05.2 -0.1**
comp=Z,113nm,1.0s,mb5.8
TKM2 Tokmak 2 51.47 336 *e*P **P** **16 46 05.9 -0.3**
TKM2 pmax pmax
comp=Z,417nm,0.9s,mb6.4
TKM2 Tokmak 2 51.47 336 P **P** **16 46 05.8 -0.3**
SNR=504
TKM2 Tokmak 2 51.47 336 *e*P **P** **16 46 05.9 -0.3**
comp=Z,417nm,0.9s,mb6.4
KBK Karagaybulak 51.52 335 P **P** **16 46 07.0 +0.5**
SNR=124
CN2 Changchun 51.62 22 *e*P **P** **16 46 06.0 -1.2**
CN2 *e*XP sP 16 46 13.0 -14
CN2 *e*S **S** **16 53 25.0 +0.4**
CN2 AMB AMB
comp=Z,30nm,0.7s,mb5.3
CN2 AMB AMB
comp=Z,5μm,11.0s
CN2 LR LR
comp=N,4μm,16.0s,MS5.7
CN2 LR LR
comp=E,4μm,16.0s,MS5.7
CN2 LR LR
comp=Z,4μm,20.0s,MS5.4
AML Almayashu 51.63 334 P **P** **16 46 07.7 +0.3**
SNR=135
AML Almayashu 51.63 334 *e*P **P** **16 46 07.4 0.0**
comp=Z,192nm,0.7s,mb6.1
AAK Ala-Archa 51.69 335 P **P** **16 46 08.1 +0.3**
SNR=82
FRU Bishkek 51.80 335⇑ *i*P **P** **16 46 09.0 +0.3**
FRU *i* pP 16 46 22.0 -0.5
FRU *e*S **S** **16 53 28.0 +0.8**
FRU pmax pmax
comp=Z,650nm,2.2s,mb6.2
FRU MLR MLR
comp=Z,4μm,24.0s,MS5.4
CHMS Chumysh 51.88 335 P **P** **16 46 08.6 -0.6**
SNR=95
EKS2 Erkin-Say 52.02 334 P **P** **16 46 10.5 +0.3**
SNR=486
EKS2 Erkin-Say 52.02 334 *e*P **P** **16 46 10.3 0.0**
comp=Z,470nm,0.8s,mb6.5
USP Ospenovka 52.21 335 P **P** **16 46 11.1 -0.5**
SNR=258
MAJO Matsushiro 52.44 38 P **P** **16 46 12.4 -1.1**
MAJO pmax pmax
comp=Z,85nm,1.0s,mb5.6
MAJO Matsushiro 52.44 38 *e*P **P** **16 46 12.0 -1.5**
comp=Z,85nm,0.9s,mb5.7
MAT Matsushiro 52.44 38 P **P** **16 46 13.3 -0.2**
MJAR Matsushiro Arr 52.44 38 P **P** **16 46 12.5 -1.0**
comp=Z,70nm,0.9s,mb5.6,baz=216,slow=7.3,SNR=146
MJAR ScP ScP 16 51 16.5 -0.4
comp=Z,9.1nm,0.9s,baz=218,slow=5.0,SNR=12
MJAR Matsushiro Arr 52.44 38 P **P** **16 46 12.5 -1.0**
MJAR pmax pmax
comp=Z,70nm,0.9s
MJAR pmax pmax

comp=N,9.0nm,0.9s
MK31 Makanchi Array 52.56 344 *i* P **P** **16 46 13.3 -0.9**
MK31 pmax pmax
comp=Z,114nm,0.4s,mb6.2
MK31 Makanchi Array 52.56 344 *eP* **P** **16 46 13.5 -0.7**
MKAR Makanchi Array 52.56 344 P **P** **16 46 13.3 -0.8**
comp=Z,205nm,0.8s,mb6.1,baz=151,slow=8.1,SNR=660
MKAR LR LR 17 14 32.4
comp=Z,1μm,19.1s,MS4.9,baz=161,slow=43
MKAR Makanchi Array 52.56 344 P **P** **16 46 13.4 -0.8**
MKAR pmax pmax
comp=Z,205nm,0.8s
MKAR MLR MLR
comp=Z,1μm,19.1s
TOO Toolangi 52.94 136 *eP* **P** **16 46 17.1 -0.1**
ZAK Zakamensk 53.44 2 *eP* **P** **16 46 20.2 -0.4**
ZAK *e* pP 16 46 32.2 -2.2
ZAK *e* 16 47 26.0
ZAK *e* 16 53 51.4
ZAK *e* 16 56 02.7
ZAK pmax pmax
comp=Z,92nm,0.9s,mb5.7
ZAK pmax pmax
comp=Z,41nm,1.0s,mb5.3
ZAK pmax pmax
comp=Z,30nm,1.8s,mb4.9
VLA Vladivostok 53.77 28*d* *i*P **P** **16 46 22.7 -0.5**
VLA pmax pmax
comp=Z,180nm,1.0s,mb6.0
VLA Vladivostok 53.77 28 *i* P **P** **16 46 22.8 -0.4**
KK31 Karatay Array 53.83 332 *i* P **P** **16 46 22.6 -1.0**
KK31 pmax pmax
comp=Z,41nm,0.7s,mb5.5
KK31 Karatay Array 53.83 332 *i* P **P** **16 46 22.7 -0.9**
MDJ Mudanjiang 53.95 25 P **P** **16 46 23.5 -0.9**
MDJ AP pP 16 46 29.8 -8.5
MDJ XP sP 16 46 32.5 -12
MDJ SCP ScP 16 51 23.0 -0.2
MDJ S **S** **16 53 58.4 +2.1**
MDJ AMB AMB
comp=Z,150nm,0.9s,mb5.9
MDJ AMB AMB
comp=Z,1μm,7.9s
MDJ LR LR
comp=N,5μm,21.3s,MS5.5
MDJ LR LR
comp=E,2μm,24.0s,MS5.5
MDJ LR LR
comp=Z,6μm,20.4s,MS5.7
CAN Canberra 54.44 132 *eP* **P** **16 46 28.1 -0.1**
HVS Khovu-Aksy 54.55 354*c* *i*P **P** **16 46 37.2 +8.5**
HVS pmax pmax
comp=Z,412nm,1.2s,mb6.3
ARMA Armidale 54.64 125 *eP* **P** **16 46 30.8 +1.0**
ARMA *e* pP 16 46 45.5 +1.8
HIA Hailar 54.69 15⇑ *i*P **P** **16 46 28.2 -1.5**
MOY Mondy 54.69 360 *eP* **P** **16 46 29.9 +0.2**
MOY pmax pmax
comp=Z,350nm,2.7s,mb5.9
CNB Canberra Magne 54.70 132 *eP* **P** **16 46 30.1 -0.1**
CNB *e* pP 16 46 46.2 +2.1
TLY Talaya 54.74 2 P **P** **16 46 30.6 +0.5**
comp=Z,2μm,0.8s,mb7.1,SNR=49
TLY Talaya 54.74 2 *eP* **P** **16 46 31.0 +0.9**
TLY *e* 16 48 25.8
TLY *e*PPP 16 49 44.9
TLY pmax pmax
comp=Z,251nm,0.9s,mb6.2
TLY MLR MLR
comp=Z,9μm,18.0s,MS5.9
TLY Talaya 54.74 2 *eP* **P** **16 46 30.4 +0.3**
comp=Z,210nm,0.8s,mb6.2
OPO Ambohidratompo 55.03 250 P **P** **16 46 34.6 +1.9**
comp=Z,9.7nm,0.8s,mb4.9,baz=75,slow=7.5,SNR=11
IRK Irkutsk 55.33 2⇑ *i*P **P** **16 46 27.9 -6.4**
IRK *e* pP 16 46 41.8 -6.4
IRK *e*S **S** **16 54 11.6 -3.0**
IRK pmax pmax
comp=Z,460nm,2.6s,mb6.0
RIV Riverview 55.48 129 *eP* **P** **16 46 37.4 +1.6**
RIV *e* pP 16 46 50.3 +0.6
CIT Chita 56.03 9 *eP* **P** **16 46 38.6 -0.7**
CIT *e* pP 16 46 52.3 -1.0
CIT *e* 16 48 41.7
CIT pmax pmax
comp=Z,442nm,1.4s,mb6.3
KURK Kurchatov 57.15 343 P **P** **16 46 46.1 -1.2**
comp=Z,153nm,0.7s,mb6.1,baz=158,slow=8.3,SNR=134
KURK Kurchatov 57.15 343 P **P** **16 46 46.4 -0.9**
KURK pmax pmax
comp=Z,512nm,0.9s,mb6.6
KURK Kurchatov 57.15 343 *eP* **P** **16 46 46.3 -1.0**
comp=Z,512nm,0.9s,mb6.5
ABKT Ailbek 57.21 320 P **P** **16 46 48.2 +0.2**
comp=Z,643nm,0.9s,mb6.7,SNR=29
LBOS 58.10 288 *eP* **P** **16 46 56.8 +2.1**
KLR Kul'dur 58.55 23 *eP* **P** **16 46 52.6 -4.5**
KLR *e* pP 16 47 10.7 -0.5
KLR *e* 16 54 55.8
KLR *e* 16 56 33.2
HNR Honiara 58.57 99 P **P** **16 46 56.5 -1.5**
comp=Z,294nm,0.9s,mb6.3,baz=150,slow=2.6,SNR=17
HNR LR LR 17 12 10.2
comp=Z,2μm,21.8s,MS5.1,baz=117,slow=36
HNR Honiara 58.57 99 *eP* **P** **16 46 56.0 -2.0**
HNR pmax pmax
comp=Z,418nm,1.0s,mb6.4
HNR Honiara 58.57 99 *eP* **P** **16 46 56.0 -2.0**
comp=Z,418nm,1.0s,mb6.4
ZAA0 Zalesovo Array 58.62 349 *eP* **P** **16 46 56.3 -1.3**
ZAA0 *e* pP 16 47 10.0 -1.6
ZALV Zalesovo Beam 58.62 349 P **P** **16 46 56.3 -1.2**
comp=Z,611nm,0.8s,mb6.7,baz=175,slow=5.0,SNR=622
ZALV S **S** **16 54 56.9 -1.0**
comp=Z,12nm,0.8s,baz=164,slow=12,SNR=11
ZALV LR LR 17 15 33.8
comp=Z,3μm,20.1s,MS5.4,baz=155,slow=39
ZALV Zalesovo Beam 58.62 349 P **P** **16 46 56.3 -1.2**
ZALV S **S** **16 54 56.9 -1.0**
ZALV pmax pmax
comp=Z,611nm,0.8s,mb6.7
ZALV smax
comp=N,12nm,0.8s
ZALV MLR MLR
comp=Z,3μm,20.1s,MS5.4
ERM Erimo 58.89 36 P **P** **16 46 59.7 0.0**
comp=Z,704nm,0.8s,mb6.7,SNR=13
ERM Erimo 58.89 36 *eP* **P** **16 46 59.5 -0.2**
ERM pmax pmax
comp=Z,91nm,0.8s,mb5.9
ERM Erimo 58.89 36 *eP* **P** **16 46 59.5 -0.2**
comp=Z,92nm,0.8s,mb5.9
TRBA At Turbah 59.04 287 *eP* **P** **16 47 03.7 +2.4**
KRAR Krasnoyarsk 59.45 355*c* *i*P **P** **16 47 02.0 -1.2**
KRAR pmax pmax
comp=Z,791nm,1.3s,mb6.6
NVS Novosibirsk 59.78 348 *eP* **P** **16 47 03.8 -1.7**
NVS *e*S **S** **16 55 05.7 -7.2**
NVS pmax pmax
comp=Z,263nm,1.1s,mb6.2
NVS pmax pmax
comp=N,266nm,1.6s
NVS pmax pmax
comp=E,152nm,1.3s
NVS smax
comp=N,180nm,1.6s
NVS smax
comp=E,175nm,1.5s
ASAJ Asahikawa 59.92 33 P **P** **16 47 06.5 -0.3**
comp=E,120nm,0.7s,mb6.0,baz=245,slow=7.2,SNR=132
ASAJ Asahikawa 59.92 33 P **P** **16 47 06.5 -0.2**
ASAJ pmax pmax
comp=Z,120nm,0.7s
KBD Kabd 60.59 306 *eP* **P** **16 47 11.5 -0.1**
baz=306
KBD AMb AMB 16 47 13.7
comp=Z,153nm,1.1s,mb6.0,baz=306
RDF Al-Radifah 60.61 306 *eP* **P** **16 47 11.4 -0.4**
baz=306
RDF AMb AMB 16 47 14.2
comp=Z,278nm,1.1s,mb6.3,baz=306
UMR Umm Al-Rimmam 60.72 307 *eP* **P** **16 47 11.9 -0.5**
baz=306
UMR AMb AMB 16 47 14.5
comp=Z,367nm,9.2s,baz=306
NAY Al-Naaiem 60.98 306 *eP* **P** **16 47 13.4 -0.9**
baz=306
NAY AMb AMB 16 47 15.6
comp=Z,118nm,0.9s,mb6.0,baz=306
MIB Mutribah 61.12 307 *eP* **P** **16 47 14.6 -0.7**
baz=306
MIB AMb AMB 16 47 17.3
comp=Z,383nm,1.0s,mb6.5,baz=306
RST Umm Al-Ruwaisa 61.27 306 *eP* **P** **16 47 15.1 -1.2**
baz=306
RST AMb AMB 16 47 17.4
comp=Z,215nm,0.8s,mb6.3,baz=306
VOSK Vostochnaya 61.33 340 P **P** **16 47 14.8 -1.3**
VOSK pmax pmax
comp=Z,131nm,0.8s,mb6.1
BOD Bodaibo 61.72 8 *eP* **P** **16 47 17.4 -1.3**
BOD pmax pmax
comp=Z,296nm,0.9s,mb6.4
BVA0 Borovoye Array 61.78 339 *i* P **P** **16 47 17.6 -1.6**
BVA0 pmax pmax
comp=Z,28nm,0.9s,mb5.4
BVAR Borovoye Array 61.78 339 P **P** **16 47 17.4 -1.8**
comp=Z,157nm,0.8s,mb6.2,baz=143,slow=8.1,SNR=357
BVAR Borovoye Array 61.78 339 P **P** **16 47 17.4 -1.8**
BVAR pmax pmax
comp=Z,157nm,0.8s
BRVK Borovoye 61.85 339 P **P** **16 47 18.9 -0.7**
comp=Z,934nm,0.6s,mb7.1,SNR=23
BRVK Borovoye 61.85 339 P **P** **16 47 18.0 -1.6**
BRVK pmax pmax
comp=Z,168nm,1.1s,mb6.1
BRVK Borovoye 61.85 339 *eP* **P** **16 47 17.8 -1.8**
comp=Z,120nm,0.8s,mb6.1
YSS Yuzh-Sakhalins 61.86 31α*eP* **P** **16 47 18.6 -1.3**
YSS *e**PP pP 16 47 29.5 -4.5
YSS *e**SP sP 16 47 35.6 -4.2
YSS *e* 16 48 05.7
YSS *e*S **S** **16 55 42.0 +2.2**
YSS pmax pmax
comp=N,220nm,0.9s
YSS pmax pmax
comp=E,200nm,0.9s
YSS pmax pmax
comp=Z,620nm,0.9s,mb6.7
YSS Yuzh-Sakhalins 61.86 31 *eP* **P** **16 47 18.7 -1.1**
comp=Z,495nm,0.8s,mb6.7
CLNS Chul'man 62.87 14 *eP* **P** **16 47 26.2 -0.2**
CLNS *e**PP pP 16 47 35.4 -5.2
CLNS *e* 16 48 02.2
CLNS *e* 16 49 42.6
CLNS *e*S **S** **16 55 52.6 +0.5**
CLNS pmax pmax
comp=Z,285nm,1.0s,mb6.3
CLNS pmax pmax
comp=E,108nm,0.9s
CLNS pmax pmax
comp=N,149nm,0.9s
CLNS smax
comp=N,167μm,10.2s
CLNS smax
comp=E,258μm,11.5s
CLNS MLR MLR
comp=N,5μm,21.0s,MS5.8
CLNS MLR MLR
comp=Z,6μm,20.0s,MS5.8
CLNS MLR MLR
comp=E,3μm,16.0s,MS5.8
CASY Casey 63.26 176 *eP* **P** **16 47 29.2 +0.4**
AB31 Akbulak array 63.33 331 *i* P **P** **16 47 28.1 -1.5**
AB31 pmax pmax
comp=Z,405nm,0.8s,mb6.6
AB31 Akbulak array 63.33 331⇑ *eP* **P** **16 47 28.2 -1.4**
MIR Mirnyy 63.46 184α *i*P pP 16 47 45.0 +0.6
MIR *i* 16 48 07.0
MIR *i*S **S** **16 56 02.0 +2.8**
MIR *i*PS 16 56 30.0
MIR pmax pmax
comp=Z,100nm,1.0s,mb5.9
MIR pmax pmax
comp=Z,2μm,3.0s
MIR MLR MLR
comp=Z,4μm,20.0s,MS5.6
KMBO Kilima Mbogo 64.01 270 P **P** **16 47 37.5 +2.7**
comp=Z,6.2nm,0.8s,mb4.7,baz=58,slow=9.9,SNR=18
KMBO LR LR 17 09 50.1
comp=Z,4μm,21.0s,MS5.5,baz=89,slow=31
KMBO Kilima Mbogo 64.01 270 P **P** **16 47 37.5 +2.7**
KMBO pmax pmax
comp=Z,6.0nm,0.8s
KMBO MLR MLR
comp=Z,4μm,21.0s
KMBO Kilima Mbogo 64.01 270 *eP* **P** **16 47 36.2 +1.4**
comp=Z,81nm,1.5s,mb5.5
BHD Baghdad 64.78 309 *ex* x 16 47 37.0
BHD *ex* x 16 56 14.0
AKTK Aktyubinsk 65.05 331 P **P** **16 47 39.2 -1.6**
AKTK LR LR 17 19 41.1
AKTO Aktyubinsk 65.05 331 P **P** **16 47 39.2 -1.6**
comp=Z,88nm,1.0s,mb5.8,baz=131,slow=8.2,SNR=111
AKTO LR LR 17 19 41.1
comp=Z,3μm,21.9s,MS5.4,baz=230,slow=39
AKTO Aktyubinsk 65.05 331 P **P** **16 47 39.2 -1.7**
AKTO pmax pmax
comp=Z,88nm,1.0s,mb5.7
AKTO MLR MLR
comp=Z,3μm,21.9s,MS5.4
DZM Mont Dzumac 65.80 113 *eP* **P** **16 47 46.2 0.0**
MAK Makhachkala 66.73 320 *eP* **P** **16 47 47.0 -4.8**
MAK *e* 16 50 18.9
MAK *i*S S 16 56 34.6 -5.6
MAK *i* 16 57 45.5
MAK pmax pmax
comp=Z,424nm,1.8s,mb6.2
MAK pmax pmax
comp=Z,1299μm,3.3s
MAK smax
comp=E,760μm,3.4s
MAK smax
comp=N,4910μm,9.5s
MSL Mosul 66.94 312 *ex* x 16 47 56.0
MSL *ex* x 16 48 12.5
MSL *ex* x 16 56 42.0
HAKT HAKKARI 66.96 313 *i* P **P** **16 47 53.7 +0.3**
GNI Garni 67.30 316 P **P** **16 47 56.4 +0.9**
comp=N,30nm,0.8s,mb5.4,baz=349,slow=8.6,SNR=14
GNI LR LR 17 18 34.7
comp=N,908nm,21.9s,MS5.0,baz=103,slow=37
GNI Garni 67.30 316 P **P** **16 47 56.4 +0.9**
GNI pmax pmax
comp=Z,30nm,0.8s
GNI MLR MLR
comp=Z,908nm,21.9s
GNI Garni 67.30 316 *eP* **P** **16 47 56.7 +1.2**
comp=Z,193nm,1.2s,mb6.0
DGRG David-gareji 67.44 318 S S 16 56 50.3 +1.5
TBLG Delisi 67.99 318 P **P** **16 48 01.1 +1.3**
SVE Sverdlovsk 68.31 337‖ *eP* **P** **16 48 01.9 +0.4**
SVE pmax pmax
comp=Z,352nm,1.0s,mb6.3
GOR Gori 68.52 318 P **P** **16 48 04.7 +1.6**
YAK Yakutsk 68.62 14*c* *i*P **P** **16 48 01.1 -2.2**
YAK *e**PP pP 16 48 11.4 -6.2
YAK *e* 16 48 28.3
YAK *e* 16 50 29.7
YAK *e*S S 16 56 55.2 -6.8
YAK *e* 16 57 57.4
YAK pmax pmax
comp=Z,822nm,1.0s,mb6.6
YAK pmax pmax
comp=E,139nm,1.2s
YAK pmax pmax
comp=N,235nm,1.3s
YAK pmax pmax
comp=Z,82nm,2.5s,mb5.2
YAK pmax pmax
comp=E,87nm,1.9s
YAK pmax pmax
comp=N,65nm,1.7s
YAK smax
comp=N,163μm,3.7s
YAK smax
comp=E,66μm,1.4s
YAK MLR MLR
comp=Z,8μm,22.0s,MS5.9
YAK MLR MLR
comp=N,3μm,18.0s,MS5.8
YAK MLR MLR
comp=E,4μm,19.0s,MS5.8
YAK Yakutsk 68.62 14 *eP* **P** **16 48 01.3 -2.0**
comp=E,850nm,0.8s,mb6.7
ARU Arti 68.85 336 P **P** **16 48 04.3 -0.6**
comp=E,876nm,1.1s,mb6.6,SNR=31
ARU Arti 68.85 336*c* *i*P **P** **16 48 03.4 -1.5**
ARU *e* 16 48 29.4
ARU *e* 16 50 33.1
ARU *e*PPP 16 52 14.7
ARU *e*S S 16 57 04.5 -0.4
ARU pmax pmax
comp=Z,197nm,1.2s,mb5.9
ARU Arti 68.85 336 *eP* **P** **16 48 02.3 -2.6**
comp=Z,178nm,1.0s,mb6.0
MARD Mardin 69.02 312 *i* P **P** **16 48 06.7 +0.3**
ONI Oni 69.22 318 P **P** **16 48 08.3 +0.8**
ONI S S 16 57 06.2 -3.6
HOMI Horasan 69.24 315 *i* P **P** **16 48 08.3 +0.6**
MAW Mawson 69.42 195 *eP* **P** **16 48 09.3 +1.1**
comp=Z,69nm,1.1s,mb5.5
MAW Mawson 69.42 195 P **P** **16 48 09.5 +1.2**
comp=Z,14nm,0.9s,mb4.9,baz=25,slow=7.4,SNR=25
MAW LR LR 17 12 05.1
comp=Z,8μm,21.5s,MS5.9,baz=113,slow=30
MAW Mawson 69.42 195 P **P** **16 48 09.5 +1.3**
MAW pmax pmax
comp=Z,14nm,0.9s
MAW MLR MLR
comp=Z,8μm,21.5s
ERZM Erzurum 69.57 315 *i* P **P** **16 48 10.5 +0.8**
ARTV Artvin 69.68 316 *i* P **P** **16 48 10.3 0.0**
DIYA Diyarbakir 69.73 312 *i* P **P** **16 48 11.2 +0.5**
KIV Kislovodsk 70.31 319 P **P** **16 48 15.4 +1.2**
comp=Z,944nm,0.9s,mb6.7,SNR=21
KIV Kislovodsk 70.31 319*c* *i*P **P** **16 48 14.8 +0.6**
KIV *i* pP 16 48 30.9 +2.4
KIV *e* 16 50 51.5
KIV *i*S S 16 57 22.8 +0.2
KIV pmax pmax
comp=Z,161nm,1.0s,mb5.9
KIV MLR MLR
comp=Z,1μm,20.0s,MS5.2
KIV Kislovodsk 70.31 319⇑ *i*P **P** **16 48 14.2 0.0**
KIV Kislovodsk 70.31 319 *eP* **P** **16 48 14.7 +0.5**
comp=Z,172nm,1.0s,mb5.9
ASF Jabal al Asfar 70.35 306 P **P** **16 48 15.5 +0.8**
comp=Z,49nm,0.9s,mb5.4,baz=342,slow=3.9,SNR=72
ASF LR LR 17 20 35.8
comp=Z,3μm,18.2s,MS5.6,baz=82,slow=37
ASF Jabal al Asfar 70.35 306 P **P** **16 48 15.5 +0.8**
ASF pmax pmax
comp=Z,49nm,0.9s
ASF MLR MLR
comp=Z,3μm,18.2s
MALT Malatya 71.11 312 P **P** **16 48 17.5 -1.7**
MALT pmax pmax
comp=Z,92nm,1.0s,mb5.7
MALT Malatya 71.11 312⇑ *i*P **P** **16 48 18.1 -1.1**
MALT Malatya 71.11 312 *eP* **P** **16 48 17.2 -1.9**
comp=Z,92nm,1.0s,mb5.7
SKR Severo-Kuril's 71.18 33 *eP* **P** **16 48 18.5 -0.8**
SKR *e* 16 48 25.0
SKR pmax pmax
comp=N,110nm,1.0s
SKR pmax pmax
comp=E,130nm,1.0s
SKR pmax pmax
comp=Z,560nm,1.0s,mb6.5
EIL Elat 71.27 303 P **P** **16 48 20.6 +0.3**
comp=Z,92nm,0.9s,mb5.7,baz=91,slow=1.6,SNR=72
EIL LR LR 17 18 44.7
comp=Z,3μm,20.5s,MS5.6,baz=113,slow=35
GZT Gaziantep 71.44 311 *i* P **P** **16 48 21.2 +0.1**
MMAI Mount Meron Ar 71.80 306 LR LR 17 21 35.3
comp=Z,3μm,19.1s,MS5.6,baz=115,slow=37
BHL Bhannes 71.85 307⇑ *eP* **P** **16 48 24.3 +0.6**
SOC Sochi 72.13 318*c* *i*P **P** **16 48 24.4 -0.8**
SOC *e* pP 16 48 35.4 -4.2
SOC *e* 16 50 59.5
SOC *e*S S 16 57 40.0 -3.7
SOC *e*SS SS 17 02 19.9 -2.1
SOC pmax pmax
comp=Z,206nm,0.9s,mb6.1
SOC Sochi 72.13 318 *i* P **P** **16 48 25.0 -0.2**
GRSN GIRESUNGRSN 72.14 315 *i* P **P** **16 48 23.7 -1.6**
COBT Iskenderun 72.16 310 *i* P **P** **16 48 25.5 0.0**
ANDN Andirin 72.42 311 *i* P **P** **16 48 26.7 -0.4**
YURE YUREGIR 72.73 310 *i* P **P** **16 48 29.4 +0.5**
LSZ Lusaka 72.85 255 P **P** **16 48 31.0 +1.0**
comp=Z,4.0nm,0.5s,mb4.6
LSZ LR LR 17 18 21.6
comp=Z,4μm,18.9s,MS5.8,baz=186,slow=34
LSZ Lusaka 72.85 255 P **P** **16 48 31.0 +1.0**
LSZ pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
LSZ MLR MLR
comp=Z,4μm,18.9s,MS5.8
LSZ Lusaka 72.85 255 *eP* **P** **16 48 30.7 +0.7**
comp=Z,80nm,1.2s,mb5.5
PEA0B Petropavlovsk- 73.25 32 *eP* **P** **16 48 30.6 -1.0**
PETK Petropavlovsk- 73.25 32 P **P** **16 48 30.9 -0.7**
comp=Z,84nm,0.8s,mb5.7,baz=206,slow=3.4,SNR=133
PETK LR LR 17 26 05.8
comp=Z,1μm,18.8s,MS5.3,baz=296,slow=40
PET Petropavlovsk 73.71 32 *eP* **P** **16 48 33.7 -0.6**
PET pmax pmax
comp=Z,415nm,0.8s,mb6.4
PET Petropavlovsk 73.71 32 *eP* **P** **16 48 33.5 -0.8**
comp=Z,248nm,0.8s,mb6.2
MEST Erdemli 73.80 309 *i* P **P** **16 48 34.6 -0.6**
CSS Prodhromos 73.99 308 P **P** **16 48 36.2 -0.2**
comp=Z,2.9nm,1.1s
CSS Prodhromos 73.99 308 *eP* **P** **16 48 36.3 0.0**
comp=Z,127nm,1.0s,mb5.8
ANN Anapa 74.11 318 *eP* **P** **16 48 34.2 -2.6**
ANN *e* pP 16 48 50.8 -0.5
ANN *e*S S 16 58 00.8 -5.3
ANN pmax pmax
comp=Z,41nm,1.3s,mb5.2
MAMC Mammari 74.13 308 P **P** **16 48 36.0 -1.2**
CDAG Cicekdag 74.53 313 *i* P **P** **16 48 38.9 -0.5**
CTKT Corum 74.53 314 *i* P **P** **16 48 38.7 -0.7**
ALFC Alevga 74.62 308 P **P** **16 48 39.4 -0.6**
comp=Z,1.3nm,0.7s
PPCY Paphos 74.75 307 P **P** **16 48 40.5 -0.3**
ILGA Ilgaz 75.44 314 *i* P **P** **16 48 44.6 0.0**
VSR Storozhevoye 75.52 325 *eP* **P** **16 48 43.0 -1.8**
VSR pmax pmax
comp=Z,130nm,0.7s,mb6.0
VSR pmax pmax
comp=N,20nm,0.5s
VSR pmax pmax
comp=E,40nm,0.4s
LBTB Lobatse 75.67 245 *eP* **P** **16 48 46.7 +0.4**
LBTB pmax pmax
comp=Z,88nm,1.4s,mb5.5
LBTB Lobatse 75.67 245 *eP* **P** **16 48 46.7 +0.4**
comp=Z,88nm,1.4s,mb5.5
VOR Voronezh 75.71 325⇑ *i*P **P** **16 48 45.0 -0.9**
VOR pmax pmax
comp=Z,640nm,1.4s,mb6.4
ANTO Ankara 75.76 312 P **P** **16 48 46.2 -0.3**
ANTO pmax pmax
comp=Z,83nm,1.0s,mb5.6
ANTO Ankara 75.76 312⇑ *i*P **P** **16 48 46.1 -0.4**
ANTO Ankara 75.76 312 *eP* **P** **16 48 45.8 -0.7**
comp=Z,83nm,0.9s,mb5.7
BALT Daday 75.82 314 *i* P **P** **16 48 46.0 -0.8**
KDHN Kadinhani 75.89 311 *i* P **P** **16 48 45.5 -1.7**
BOSA Boshof 76.19 241 P **P** **16 48 49.3 +0.1**
comp=Z,7.5nm,0.7s,mb4.7,baz=81,slow=6.0,SNR=16
BOSA LR LR 17 15 43.7
comp=Z,4μm,21.7s,MS5.7,baz=14,slow=30
BOSA Boshof 76.19 241 P **P** **16 48 49.3 +0.1**
BOSA pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
BOSA MLR MLR
comp=Z,4μm,21.7s,MS5.7
SIM Simferopol' 76.37 318*c* *i*P **P** **16 48 50.2 +0.4**
SIM *e* pP 16 49 04.0 -0.4
SIM *e*S S 16 58 31.1 -0.1
SIM pmax pmax
comp=Z,131nm,0.8s,mb5.9
SGKT Sivrigoynuk 76.50 313 *i* P **P** **16 48 49.6 -1.1**

TIXI Tiksi 76.87 9 *e*P **P 16 48 49.6 -2.5**
TIXI pmax pmax
comp=Z,252nm,1.8s,mb5.8
TIXI pmax pmax
comp=N,51nm,1.4s
TIXI pmax pmax
comp=E,47nm,2.2s
TIXI MLR MLR
comp=Z,8μm,18.0s,MS6.1
TIXI MLR MLR
comp=N,6μm,19.0s,MS5.9
TIXI MLR MLR
comp=E,952nm,17.0s,MS5.9
TIXI Tiksi 76.87 9 *e*P **P 16 48 49.3 -2.9**
comp=E,178nm,1.1s,mb5.9
ISP Isparta 76.94 310 *e*P **P 16 48 53.4 +0.2**
ISP pmax pmax
comp=Z,51nm,0.8s,mb5.5
ISP Isparta 76.94 310 ⇓*i*P **P 16 48 50.3 -2.9**
ISP Isparta 76.94 310 *e*P **P 16 48 53.4 +0.2**
comp=Z,51nm,0.8s,mb5.5
ESKT Eskisehir 77.11 312 *i*P **P 16 48 53.2 -0.9**
SYO Syowa Base 77.12 199⇑*e*P **P 16 48 51.6 -2.0**
SYO Syowa Base 77.12 199⇑*e*P **P 16 48 57.2 +3.6**
SYO Syowa Base 77.12 199⇓*e*sP sP 16 49 05.0 -8.8
HENT Hendek 77.42 313 *i*P **P 16 48 53.9 -1.9**
GOLH Golhisar 77.52 309 *i*P **P 16 48 54.6 -1.9**
KHAL Karahalli 77.84 310 *i*P **P 16 48 56.9 -1.4**
GDZ Gediz 78.03 311 *i*P **P 16 48 58.2 -1.0**
TURN Turunc 78.18 309 *i*P **P 16 48 59.8 -0.3**
MOS Moscow 78.21 329 *e*P **P 16 48 57.6 -2.3**
MOS *e* pP 16 49 09.1 -5.4
MOS *e* 16 51 56.2
MOS *i*S S 16 58 46.4 -4.3
MOS *e* 16 59 10.0
MOS pmax pmax
comp=Z,700nm,1.0s,mb6.5
MOS pmax pmax
comp=Z,508μm,0.9s
MOS MLR MLR
comp=Z,3μm,23.0s,MS5.5
ARG Arkhangelos 78.41 308 *e*P **P 16 49 02.0 +0.6**
OBN Obninsk 78.52 328*c i*P **P 16 49 00.8 -0.8**
OBN *i* pP 16 49 15.7 -0.5
OBN *e* 16 51 56.1
OBN *i*S S 16 58 53.4 -0.6
OBN pmax pmax
comp=Z,385nm,0.7s,mb6.4
OBN MLR MLR
comp=Z,3μm,24.0s,MS5.5
OBN Obninsk 78.52 328 *e*P **P 16 49 01.0 -0.6**
comp=Z,357nm,0.8s,mb6.3
ULDT Uludag 78.54 312 *i*P **P 16 49 01.4 -0.7**
DURS Dursunbey 78.91 311 *i*P **P 16 49 03.7 -0.4**
AYDN Tasoluk 78.92 309 *i*P **P 16 49 04.2 -0.1**
KARP Karpathos 79.03 307 *e*P **P 16 49 05.2 +0.3**
BDRM Kayabasi 79.13 309 *i*P **P 16 49 03.7 -1.7**
AKHS Akhisar 79.24 310 *i*P **P 16 49 05.1 -0.9**
GCAM G?zlcaml? 79.43 309 *i*P **P 16 49 07.3 +0.3**
KDAG Bornova 79.55 310 *i*P **P 16 49 08.0 +0.3**
BALY Balya 79.58 311 *i*P **P 16 49 07.1 -0.7**
ZKR Zakros 79.70 306 *e*P **P 16 49 09.1 +0.6**
SMG Samos 79.74 309 *e*P **P 16 49 08.0 -0.6**
TLCR 80.04 317⇑*i*P **P 16 49 10.7 +0.6**
TLCR 80.04 317 P **P 16 49 10.8 +0.6**
PSN Preselentsi 80.10 315 *i*P **P 16 49 11.2 +0.7**
SART Tekirdag 80.12 312 *i*P **P 16 49 09.8 -0.9**
TIRR Tirgusor 80.13 316 P **P 16 49 10.4 -0.2**
TIRR pmax pmax
comp=Z,120nm,0.9s,mb5.8
TIRR Tirgusor 80.13 316⇑*i*P **P 16 49 10.2 -0.4**
TIRR Tirgusor 80.13 316 *e*P **P 16 49 09.4 -1.2**
comp=Z,122nm,0.9s,mb5.8
AYVA Ayvalik 80.19 311 *i*P **P 16 49 10.5 -0.6**
NPS Neapolis 80.21 306⇑*i*P **P 16 49 12.3 +1.0**
SUR Sutherland 80.23 238 *e*P **P 16 49 13.0 +1.5**
comp=Z,300nm,1.6s,mb6.0
LAST Lasithi 80.30 306 *e*P **P 16 49 12.0 +0.2**
CHOS Chios island 80.48 310 *e*P **P 16 49 13.1 +0.4**
PRK Paraskevi 80.49 310 *e*P **P 16 49 13.6 +0.8**
PRK Paraskevi 80.49 310 *e*P **P 16 49 13.3 +0.5**
KIS Kishinev 80.50 319⇑*i*P **P 16 49 12.0 -0.6**
KIS *e* pP 16 49 27.0 -0.2
KIS *e*S S 16 59 14.0 -1.4
KIS pmax pmax
comp=Z,510nm,0.8s,mb6.5
KIS smax
comp=N,900nm,10.0s
KIS MLR MLR
comp=Z,2μm,19.0s,MS5.4
KIS Kishinev 80.50 319 *i*P **P 16 49 12.0 -0.6**
comp=Z,500nm,0.8s,mb6.5
KIS *e*S S 16 59 14.0 -1.4
comp=Z,900nm,10.0s
KIS LRM 17 33 38.0
comp=Z,2μm,19.0s
HARR Harsova 80.52 316⇑*i*P **P 16 49 13.4 +0.7**
HARR Harsova 80.52 316 P **P 16 49 13.1 +0.3**
PRD Provadia 80.54 315 *i*P **P 16 49 13.1 +0.2**
SANT Santorini 80.55 308 *e*P **P 16 49 11.9 -1.2**
THR3 Thira Island, 80.60 308 *e*P **P 16 49 13.8 +0.4**
THR4 Thira Island, 80.61 308 *e*P **P 16 49 13.6 +0.1**
APE Apeiranthos 80.63 308 *e*P **P 16 49 13.0 -0.5**
APE Apeiranthos 80.63 308 *e*P **P 16 49 13.3 -0.2**
APE Apeiranthos 80.63 308*c i*P **P 16 49 13.0 -0.5**
APE Apeiranthos 80.63 308⇑*i*P **P 16 49 12.6 -0.9**
BOZC Bozcaada 80.78 311 *i*P **P 16 49 13.5 -0.8**
SIVA Sivas 80.81 306 *e*P **P 16 49 15.7 +1.1**
JMB Yambol 80.95 314 *i*P **P 16 49 15.8 +0.7**
ALN Alexandroupoli 81.01 312 *e*P **P 16 49 14.9 -0.5**
AKASG Malin Array Be 81.24 322 P **P 16 49 15.2 -1.2**
comp=Z,66nm,0.8s,mb5.6,baz=84,slow=4.5,SNR=145
AKASG PP PP 16 52 22.2 -0.3
comp=Z,9.3nm,0.8s,baz=94,slow=6.2,SNR=6.0
AKASG LR LR 17 33 08.9
comp=Z,1μm,19.8s,MS5.2,baz=90,slow=41
AKASG Malin Array Be 81.24 322 P **P 16 49 15.2 -1.2**
AKASG 16 52 22.2
AKASG pmax pmax
comp=Z,66nm,0.8s
AKASG pmax pmax
comp=Z,9.0nm,0.8s
AKASG MLR MLR
comp=Z,1μm,19.8s
KIEV Kiev 81.25 322 *e*P **P 16 49 14.8 -1.7**
KIEV pmax pmax
comp=Z,102nm,0.9s,mb5.8
KIEV Kiev 81.25 322 *e*P **P 16 49 14.8 -1.7**
comp=Z,102nm,0.9s,mb5.8
VAM Vamos 81.38 306⇑*i*P **P 16 49 18.8 +1.3**
RDO Rodhopi 81.44 312 *e*P **P 16 49 17.8 +0.1**
LIA Limnos Island 81.45 311 *e*P **P 16 49 17.8 0.0**
KARN Karanos 81.60 306 *e*P **P 16 49 19.8 +1.1**
VRI Vrincioaia 81.62 317⇓*i*P **P 16 49 19.4 +0.8**
VRI Vrincioaia 81.62 317 P **P 16 49 18.9 +0.4**
KDZ Kurdzhali 81.63 313 *i*P **P 16 49 18.4 -0.3**
PLOR Plostina 81.67 317⇓*i*P **P 16 49 20.4 +1.6**
MLR Muntele Rosu 82.07 317⇑*i*P **P 16 49 21.5 +0.5**
MLR Muntele Rosu 82.07 317 P **P 16 49 21.6 +0.7**
ZIMR 82.08 315 P **P 16 49 22.2 +1.1**
ATH Athens Observa 82.21 309 *e*P **P 16 49 20.8 -1.1**
DID Didima 82.50 308 *e*P **P 16 49 22.2 -1.2**
PAIG Paliouri 82.59 311 *e*P **P 16 49 23.8 0.0**
VLI Veliai 82.61 307 *e*P **P 16 49 23.2 -0.8**
VOIR 82.68 316⇓*i*P **P 16 49 24.3 +0.2**
VOIR 82.68 316 P **P 16 49 24.9 +0.8**
NVR Nevrokopi 82.72 312 *e*P **P 16 49 22.8 -1.6**
LTK Loutraki 82.80 309 *e*P **P 16 49 23.9 -1.1**
PLG Polygyros 82.85 311 *e*P **P 16 49 25.3 +0.2**
PLG Polygyros 82.85 311 *e*P **P 16 49 24.9 -0.2**
MMB Musomiste 82.86 312 *i*P **P 16 49 23.7 -1.4**
LKR Lokris 82.89 309 *e*P **P 16 49 24.4 -0.9**
LKR Lokris 82.89 309 *e*P **P 16 49 24.4 -1.0**
SOH Sokhos 83.00 312 *e*P **P 16 49 25.1 -0.8**
TSUM Tsumeb 83.00 251 *e*P **P 16 49 27.3 +1.0**
comp=Z,38nm,1.0s,mb5.4
BURAR Bucovina Array 83.03 319⇑*i*P **P 16 49 26.4 +0.5**
BURAR Bucovina Array 83.03 319 P **P 16 49 26.5 +0.6**
BUR08 Bucovina Ar. S 83.05 319 *e*P **P 16 49 26.4 +0.4**
MNK Minsk 83.09 326 *e*P **P 16 49 23.0 -3.0**
MNK pmax pmax
comp=E,550nm,1.2s
MNK pmax pmax
comp=Z,870nm,1.0s,mb6.7
HORT Hortiatis 83.15 311 *e*P **P 16 49 26.4 -0.3**
VLX Vlachokerasia 83.16 308 *e*P **P 16 49 27.7 +0.9**
THE Thessaloniki 83.25 311 *e*P **P 16 49 26.9 -0.3**
PUL Pulkovo 83.32 331⇑*i*P **P 16 49 27.0 -0.1**
KNT Kendrikon 83.40 312 *e*P **P 16 49 27.8 -0.1**
VTS Vitosha 83.42 313 *i*P **P 16 49 28.7 +0.7**
VTS Vitosha 83.42 313 P **P 16 49 28.0 0.0**
AGG Agios Georgios 83.46 310 *e*P **P 16 49 27.3 -1.1**
ITM Ithomi 83.48 308 *e*P **P 16 49 28.6 +0.2**
LIT Litokhoron 83.52 311 *e*P **P 16 49 28.0 -0.6**
VAY Valandovo 83.67 312 *e*P **P 16 49 28.9 -0.5**
GRG Griva 83.73 312 *e*P **P 16 49 29.4 -0.2**
THL Klokotos Trika 83.79 310 *e*P **P 16 49 29.0 -1.0**
THL Klokotos Trika 83.79 310 *e*P **P 16 49 28.1 -1.9**
EVR Evrytania 83.85 310 *e*P **P 16 49 30.6 +0.3**
BILL Bilibino 83.87 20*c i*P **P 16 49 29.1 -0.6**
BILL *i* pP 16 49 43.7 -0.8
BILL *e* 16 52 42.7
BILL pmax pmax
comp=Z,35nm,1.2s,mb5.4
BILL Bilibino 83.87 20 *e*P **P 16 49 27.5 -2.2**
comp=Z,19nm,1.8s,mb4.9
JOF Joensuu 83.88 334 *e*p **P 16 49 29.5 -0.4**
comp=Z,91nm,0.8s,mb6.0
JOF Joensuu 83.88 334 *e*P **P 16 49 29.5 -0.4**
JOF pmax pmax
comp=Z,91nm,0.8s,mb6.0
RLS Riolos of Patr 83.98 309⇑*i*P **P 16 49 31.9 +0.9**
KZN Kozani 84.10 311 *e*P **P 16 49 31.8 +0.2**
GZR Gura Zlata 84.24 316⇑*i*P **P 16 49 32.9 +0.8**
GZR Gura Zlata 84.24 316 P **P 16 49 32.7 +0.6**
LVV L'vov 84.26 321*d i*P **P 16 49 32.7 +0.6**
LVV *e* pP 16 49 50.5 +3.6
LVV *e* 16 52 43.3
LVV *e*S S 16 59 52.9 -0.8
LVV MLR MLR
comp=Z,820nm,19.6s,MS5.1
LVV MLR MLR
comp=N,250nm,19.4s,MS5.2
LVV MLR MLR
comp=E,1μm,19.7s,MS5.2
LVZ Lovozero 84.38 340 P **P 16 49 31.1 -1.2**
comp=E,853nm,0.8s,mb6.9,SNR=14
LVZ Lovozero 84.38 340*c i*P **P 16 49 31.7 -0.6**
LVZ pmax pmax
comp=Z,110nm,1.1s,mb5.9
DRGR 84.54 317⇓*i*P **P 16 49 34.3 +0.7**
DRGR 84.54 317 P **P 16 49 34.6 +1.0**
BIA Bitola 84.55 312 *e*P **P 16 49 32.0 -1.8**
SKO Skopje 84.61 312 *e*P **P 16 49 32.9 -1.2**
KRUS Krusevo 84.66 312 *e*P **P 16 49 33.0 -1.4**
VLS Valsamata 84.68 309 *e*P **P 16 49 34.4 -0.1**
VLS Valsamata 84.68 309 *e*P **P 16 49 33.9 -0.7**
APA Apatity 84.69 339⇑*i*P **P 16 49 33.4 -0.5**
APA *i* pP 16 49 44.0 -4.7
APA pmax pmax
comp=Z,94nm,1.0s,mb5.9
APA MLR MLR
comp=Z,5μm,21.0s,MS5.8
JAN Janina 84.69 310 *e*P **P 16 49 35.3 +0.7**
LKD Levkas 84.71 309 *e*P **P 16 49 35.0 +0.3**
VSU Vasula 84.72 329*c i*P **P 16 49 34.0 -0.2**
OHR Ohrid 84.95 312 *e*P **P 16 49 33.9 -1.9**
KWP Kalwaria 85.07 320 *e*P **P 16 49 37.2 +1.0**
KWP Kalwaria 85.07 320 P **P 16 49 35.6 -0.6**
KWP pmax pmax
comp=Z,140nm,1.0s,mb6.0
KWP Kalwaria 85.07 320⇑*i*P **P 16 49 37.2 +1.0**
KWP Kalwaria 85.07 320 *e*P **P 16 49 37.2 +1.0**
IGT Igoumenitsa 85.07 310 *e*P **P 16 49 36.1 -0.4**
BZS Buzias 85.08 316⇓*i*P **P 16 49 36.0 -0.4**
BZS Buzias 85.08 316 P **P 16 49 36.9 +0.5**
UZH Uzhgorod 85.15 319 *e*P **P 16 49 35.8 -0.9**
UZH *i* 16 49 43.7
UZH *i*S S 17 00 02.0 -0.6
KOLS Kolonicke sedl 85.22 319 *e*P **P 16 49 38.1 +1.1**
KOLS *e*PP PP 16 52 55.2 +0.1
KEK Kerkira 85.51 310 *e*P **P 16 49 39.1 +0.4**
SUW Suwalki 85.63 325 *e*P **P 16 49 39.5 +0.6**
SUW Suwalki 85.63 325 P **P 16 49 38.9 0.0**
SUW *e* 16 49 44.0
SUW pmax pmax
comp=Z,740nm,1.0s,mb6.9
SUW Suwalki 85.63 325 *e*P **P 16 49 39.5 +0.6**
CRVS Cervenica-Dubn 85.74 319 *e*P **P 16 49 39.3 -0.3**
CRVS *e*PP PP 16 53 03.0 +3.6
PVY Plav 85.78 313⇑*i*P **P 16 49 39.2 -0.7**
KAF Kangasniemi 85.86 333 *e*p **P 16 49 39.5 -0.4**
comp=Z,105nm,0.8s,mb6.1
KAF Kangasniemi 85.86 333 *e*P **P 16 49 39.5 -0.4**
KAF pmax pmax
comp=Z,105nm,0.8s,mb6.1
IVA Berane 85.88 313⇑*i*P **P 16 49 39.6 -0.8**
STHS Stebnicka Huta 85.97 320 *e*P **P 16 49 40.8 +0.1**
STHS pmax pmax
comp=Z,76nm,0.9s,mb5.9
STHS Stebnicka Huta 85.97 320 *e*P **P 16 49 40.8 +0.1**
comp=Z,76nm,0.9s,mb5.9
ULC Ulcinj 86.22 312⇑*i*P **P 16 49 42.5 +0.4**
AFI Afiamalu 86.26 104 P **P 16 49 44.0 +1.1**
AFI *e* pP 16 50 02.6 +4.9
AFI pmax pmax
comp=Z,120nm,1.0s,mb6.1
AFI Afiamalu 86.26 104 *e*P **P 16 49 43.4 +0.5**
comp=Z,124nm,0.9s,mb6.1
TTG Podgorica 86.28 313⇑*i*P **P 16 49 42.5 +0.1**
PLE Pljevlja 86.31 314⇑*i*P **P 16 49 43.4 +0.9**
KECS Kecovo 86.31 319 *e*P **P 16 49 41.9 -0.5**
KECS pmax pmax
comp=Z,30nm,0.8s,mb5.6
KECS Kecovo 86.31 319 *e*P **P 16 49 41.9 -0.5**
comp=Z,30nm,0.8s,mb5.6
NKY Niksic 86.52 313⇑*i*P **P 16 49 43.9 +0.3**
BUM Brajici-Budva 86.53 313⇑*i*P **P 16 49 44.0 +0.4**
NIE Niedzica 86.57 320 *e*P **P 16 49 45.0 +1.4**
PSZ Piszkesteto 86.61 318 P **P 16 49 43.2 -0.7**
PSZ pmax pmax
comp=Z,69nm,1.0s,mb5.8
PSZ Piszkesteto 86.61 318⇑*e*P **P 16 49 44.7 +0.8**
PSZ Piszkesteto 86.61 318⇓*i*P **P 16 49 43.9 0.0**
PSZ Piszkesteto 86.61 318 *e*P **P 16 49 42.4 -1.5**
comp=Z,69nm,0.9s,mb5.9
UPM Unac-Piva 86.64 313⇑*i*P **P 16 49 44.3 +0.2**
MAIT Maitri 86.82 199 *e*P **P 16 49 47.4 +2.9**
HCY Herceg Novi 86.84 313⇑*i*P **P 16 49 44.1 -1.1**
BRY Bratogost 86.87 313⇑*i*P **P 16 49 44.5 -0.8**
OJC Ojcow 87.02 320 *e*P **P 16 49 46.6 +0.8**
OJC *e*PcP PcP 16 49 48.4 +0.4
OJC *e*S S 17 00 22.7 +1.9
OJC LR LR
comp=Z,1μm,21.1s,MS5.3
BUD Budapest 87.13 318⇑*e*P **P 16 49 47.0 +0.5**
PKSM Moragy 87.22 316⇓*i*P **P 16 49 46.5 -0.4**
PKSM Morągy 87.22 316 P **P 16 49 47.0 +0.1**
VYHS Vyhne 87.40 319 *e*P **P 16 49 47.3 -0.4**
VYHS pmax pmax
comp=Z,23nm,1.5s,mb5.2
VYHS Vyhne 87.40 319 *e*P **P 16 49 47.3 -0.4**
VYHS *e*PP PP 16 53 30.2 +17
VYHS *e*S S 17 00 16.5 -8.0
VYHS Vyhne 87.40 319 *e*P **P 16 49 47.3 -0.4**
comp=Z,23nm,1.5s,mb5.2
VYHS *e*PP PP 16 53 30.2 +17
VYHS *e*S S 17 00 16.5 -8.0
STON Ston 87.48 313 P **P 16 49 42.7 -5.5**
KEV Kevo 87.62 340 *e*p **P 16 49 47.5 -0.8**
comp=Z,98nm,0.8s,mb6.1
KEV Kevo 87.62 340 *e*P **P 16 49 47.5 -0.8**
KEV pmax pmax
comp=Z,98nm,0.8s,mb6.1
KOLL Kolacno 87.69 319 *e*P **P 16 49 49.5 +0.4**
KOLL *e*pP pP 16 50 06.0 +2.1
TIP Timpagrande 87.78 309 *e*P **P 16 49 51.0 +1.3**
comp=Z,96nm,1.3s,mb5.9
OKC Ostrava-Krasne 88.02 320 *e*P **P 16 49 51.1 +0.4**
OKC AMS AMS 17 38 20.0
comp=Z,1μm,17.6s
RAC Raciborz 88.02 320 *e*P **P 16 49 52.4 +1.7**
RAC Raciborz 88.02 320 *e*P **P 16 49 49.6 -1.1**
ARCES ARCESS Array B 88.06 340 P **P 16 49 50.0 -0.4**
comp=Z,101nm,0.8s,mb6.1,baz=98,slow=4.2,SNR=148
ARCES PP PP 16 53 19.8 +2.3
comp=Z,28nm,0.9s,baz=108,slow=7.9,SNR=7.6
ARCES LR LR 17 32 57.4
comp=Z,2μm,21.7s,MS5.5,baz=106,slow=38
ARCES ARCESS Array B 88.06 340 P **P 16 49 50.0 -0.4**
ARCES 16 53 19.8
ARCES pmax pmax
comp=Z,101nm,0.8s
ARCES pmax pmax
comp=Z,28nm,0.9s
ARCES MLR MLR
comp=Z,2μm,21.7s
ORI Oriolo Calabro 88.11 310 P **P 16 49 53.3 +2.0**
ORI pmax pmax
comp=Z,263nm,1.1s,mb6.4
ORI Oriolo Calabro 88.11 310 P **P 16 49 53.3 +2.0**
comp=Z,263nm,1.1s,mb6.4
SOI Samo 88.22 308 P **P 16 49 53.3 +1.4**
SOI pmax pmax
comp=Z,89nm,1.1s,mb5.9
SOI Samo 88.22 308 P **P 16 49 53.3 +1.4**
comp=Z,89nm,1.1s,mb5.9
MORC Moravsky Berou 88.40 320 P **P 16 49 52.4 -0.1**
MORC pmax pmax
comp=Z,95nm,0.9s,mb6.0
MORC Moravsky Berou 88.40 320⇓*i*P **P 16 49 52.7 +0.2**
MORC Moravsky Berou 88.40 320 *e*P **P 16 49 52.0 -0.4**
comp=Z,95nm,0.9s,mb6.0
MODS Modra-Piesok 88.41 318 *e*P **P 16 49 53.5 +1.0**
MODS *e* pP 16 50 07.6 +0.2
MODS *e*S S 17 00 20.2 -14
MODS pmax pmax
comp=Z,64nm,1.2s,mb5.7
MODS Modra-Piesok 88.41 318 *e*P **P 16 49 53.5 +1.0**
comp=Z,64nm,1.2s,mb5.7
MODS *e* pP 16 50 07.6 +0.2
MODS *e*S S 17 00 20.2 -14
PTRP Pietrapertosa 88.45 311 P **P 16 49 54.2 +1.3**
MTTG Motta San Giov 88.50 308 P **P 16 49 54.2 +1.0**
SCLL Scilla 88.50 308 P **P 16 49 51.3 -1.9**
ZST Bratislava 88.51 318 *e*P **P 16 49 53.6 +0.6**
ZST pmax pmax
comp=Z,76nm,0.9s,mb6.0
ZST Bratislava 88.51 318 *e*P **P 16 49 53.6 +0.6**
comp=Z,76nm,0.9s,mb6.0
ZST *e*S S 17 00 27.7 -7.4
CUC Castrocucco 88.58 310 *e*P **P 16 49 53.6 +0.1**
comp=Z,67nm,0.9s,mb6.0
SISC Sisak 88.71 315 P **P 16 49 54.5 +0.5**
SOP Sopron 88.81 318⇑*e*P **P 16 49 55.2 +0.7**
RGNG Rignano Grg 88.91 312 P **P 16 49 55.7 +0.6**
FG4 Candela 88.92 311 P **P 16 49 55.4 +0.3**
VRAC Vranov 88.97 319⇓*i*P **P 16 49 55.8 +0.7**
VRAC Vranov 88.97 319 P **P 16 49 56.0 +0.8**
GKP Gorka Klasztor 89.01 323 *e*P **P 16 49 56.1 +0.9**
GKP Gorka Klasztor 89.01 323 *e*P **P 16 49 56.1 +0.9**
SGO Sicignano 89.02 311 P **P 16 49 56.8 +1.2**
SGO pmax pmax
comp=Z,6.0nm,0.5s,mb5.2
SGO Sicignano 89.02 311 P **P 16 49 56.8 +1.2**
comp=Z,6.4nm,0.5s,mb5.2
FG5 Orsara di Pugl 89.12 311 P **P 16 49 57.2 +1.2**
FG2 Serracapriola 89.24 312 P **P 16 49 57.8 +1.2**
DPC Dobruska-Polom 89.25 320 *e*P **P 16 49 56.8 +0.4**
DPC *e*pP pP 16 50 08.2 -3.1
CSSN Cassano Irpino 89.26 311 P **P 16 49 57.2 +0.5**
comp=Z,16nm,0.9s,mb5.3
CONA Conrad Observa 89.31 318⇑*i*P **P 16 49 56.9 +0.1**
comp=Z,52nm,1.3s,mb5.7,SNR=25
CSNA Conrad Observa 89.31 318⇑*i*P **P 16 49 56.2 -0.6**
comp=Z,48nm,1.3s,mb5.7
KSP Ksiaz 89.32 321 *e*P **P 16 49 58.3 +1.5**
KSP Ksiaz 89.32 321⇑*e*P **P 16 49 57.5 +0.8**
KSP *e*pP pP 16 50 10.2 -1.4
CRES Cresnjev 89.39 316 *i*P **P 16 49 57.2 0.0**
CIGN Sant'Elia a Pi 89.42 312 P **P 16 49 57.2 -0.2**
PSB1 Pescosannita 89.45 311 P **P 16 49 56.2 -1.4**
comp=Z,204nm,1.8s,mb6.2
UPC Upice 89.46 320 *e*P **P 16 49 58.1 +0.7**
UPC *e*sP sP 16 50 13.7 -4.2
ARSA Arzberg 89.47 317 *i*P **P 16 49 58.2 +0.7**
comp=Z,74nm,0.9s,mb6.0,SNR=38
ARSA Arzberg 89.47 317 *i*PcP **P 16 49 58.2 +0.7**
comp=Z,74nm,0.9s,mb6.0,SNR=38
BOJS Bojanci 89.50 315 *i*P **P 16 49 57.5 -0.2**
BOJS *e* pP 16 50 13.2 +0.6
TREC Trest 89.68 319 *e*P **P 16 49 59.6 +1.1**
NVLJ Novalja 89.69 314 P **P 16 49 58.1 -0.5**
PERS Pernice 89.69 317 *i*P **P 16 49 59.1 +0.5**
PERS *i* pP 16 50 14.2 +0.7
SOKA Soboth 89.75 317⇑*i*P **P 16 49 59.6 +0.7**
comp=Z,135nm,1.0s,mb6.2
SOKA Soboth 89.75 317⇑*i*PcP **P 16 49 59.6 +0.7**
comp=Z,135nm,1.0s,mb6.2
SGG Gregorio Mates 89.79 311 P **P 16 49 57.4 -1.8**
comp=Z,69nm,0.8s,mb6.0
MIDA Miranda 89.91 312 P **P 16 49 59.6 -0.1**
comp=Z,102nm,1.1s,mb6.1
RNI2 Rionero Sannit 89.99 312 P **P 16 49 58.8 -1.3**
comp=Z,266nm,1.5s,mb6.3
LJU Ljubljana 90.05 316 *i*P **P 16 50 00.9 +0.6**
LJU *e* pP 16 50 16.0 +0.9
OBKA Obir 90.07 316⇑*i*P **P 16 50 00.8 +0.4**
comp=Z,92nm,1.4s,mb5.9,SNR=23
OBKA Obir 90.07 316⇑*i*PcP **P 16 50 00.8 +0.4**
comp=Z,92nm,1.4s,mb5.9,SNR=23
RFI Roccamonfina 90.08 311 P **P 16 50 02.4 +1.9**
comp=Z,9.7nm,1.2s,mb5.0
INTR Introdacqua 90.19 312 P **P 16 50 00.2 -0.8**
comp=Z,120nm,0.9s,mb6.2
SDI San Donato 90.24 312 P **P 16 50 01.2 -0.1**
SDI pmax pmax
comp=Z,17nm,1.1s,mb5.3
SDI San Donato 90.24 312 P **P 16 50 01.2 -0.1**
comp=Z,17nm,1.1s,mb5.3
PRU Pruhonice 90.36 320 *e*P **P 16 50 02.3 +0.7**
PRU *e*pP pP 16 50 13.7 -2.8
PRU AMS AMS 17 39 40.0
comp=Z,2μm,25.5s
JAVS Javornik 90.36 316 *i*P **P 16 50 02.6 +0.9**
JAVS *e* pP 16 50 21.3 +4.7
MOA Molln 90.37 318⇑*i*P **P 16 50 01.7 -0.1**
comp=Z,37nm,0.8s,mb5.8,SNR=14
PVCC Panska Ves 90.38 320 *e*P **P 16 50 02.8 +1.1**
PVCC *e*sP sP 16 50 17.2 -5.0
PVCC Panska Ves 90.38 320 *e*P **P 16 50 02.8 +1.1**
PVCC *e* pP 16 50 17.2 +0.6
PVCC *e* pP 16 50 18.3 +1.7
VVLD Villa Vallelon 90.39 312 P **P 16 50 01.8 -0.2**
comp=Z,118nm,1.9s,mb5.9
TERO Teramo 90.46 312 P **P 16 50 02.1 -0.2**
comp=Z,51nm,0.9s,mb5.9
VOY Vojsko 90.49 316⇓*e*P **P 16 50 02.7 +0.4**
VOY *e* pP 16 50 18.5 +1.3
VOY *e* 16 50 34.7
AOI Ancona 90.52 313 P **P 16 50 02.1 -0.4**
PTQR Pietraquaria 90.57 312 P **P 16 50 03.4 +0.6**
comp=Z,16nm,0.6s,mb5.5
AQU L'Aquila 90.59 312 P **P 16 50 03.9 +1.0**
AQU pmax pmax
comp=Z,87nm,1.2s,mb6.0
AQU L'Aquila 90.59 312 P **P 16 50 03.9 +1.0**
comp=Z,87nm,1.2s,mb6.0
MYKA Terra Mystica 90.71 316⇑*i*P **P 16 50 03.0 -0.3**
comp=Z,53nm,1.0s,mb5.8
FIAM Fiamignano 90.80 312 P **P 16 50 03.8 0.0**
BRG Berggiesshubel 90.81 321 *i*P **P 16 50 03.6 -0.1**
BRG *i* pP 16 50 19.5 +1.0
BRG 16 53 39.2
BRG pmax pmax
comp=Z,48nm,1.0s,mb5.8
BRG pmax pmax
comp=Z,18nm,1.2s,mb5.3
BRG Berggiesshubel 90.81 321 *e*P **P 16 50 04.2 +0.5**
comp=Z,103nm,1.2s,mb6.0
BRG *e*S S 17 00 55.0 -1.3
BRG Berggiesshubel 90.81 321 *i*P **P 16 50 03.6 -0.1**
comp=Z,80nm,1.0s,mb6.0
BRG *i* pP 16 50 19.5 +1.0
comp=Z,71nm,1.5s
BRG PP PP 16 53 39.2 -0.7
comp=Z,30nm,1.2s
BRG *e* 17 00 36.8
comp=Z,0.8nm,0.6s
CING Cingoli 90.81 313 P **P 16 50 04.2 +0.3**
comp=Z,25nm,1.0s,mb5.5

GEC2 **GERESS Array S 90.82 319** *e*P **P** 16 50 04.3 +0.5
GEC2 *e**PP pP 16 50 20.0 +1.4
GEC2 *e*S S 17 00 56.2 -0.4
GEC2 pmax pmax
comp=Z,221nm,1.6s,mb6.2
GEC2 GERESS Array S 90.82 319 *e*P **P** **16 50 04.3 +0.5**
comp=Z,221nm,1.6s,mb6.2
GEC2 *e*pP pP 16 50 20.0 +1.4
GEC2 *e*S S 17 00 56.2 -0.4
GERES GERESS Array B 90.82 319 P **P** **16 50 03.9 +0.1**
comp=Z,36nm,0.8s,mb5.8,baz=92,slow=4.0,SNR=195
GERES GERESS Array B 90.82 319 P **P** **16 50 03.9 +0.1**
GERES pmax pmax
comp=Z,36nm,0.8s
NRCA Norcia 90.83 313 P **P** **16 50 04.5 +0.5**
comp=Z,1.8nm,0.2s,mb5.0
CERT Cerreto 90.88 312 P **P** **16 50 03.0 -1.2**
PTCC Patocco-Chiusa 90.89 316 P **P** **16 50 04.2 0.0**
comp=Z,19nm,1.2s,mb5.3
KHC Kasperske Hory 90.92 319 *e*P **P** **16 50 04.1 -0.1**
KHC *e*pP pP 16 50 15.9 -3.2
KHC AMS AMS 17 40 00.0
comp=Z,2µm,21.5s
KBA Koelnbreinsper 90.94 317⇑ *i*P **P** **16 50 04.0 -0.4**
comp=Z,56nm,1.4s,mb5.7,SNR=14
GMNA Gemona 90.96 316 P **P** **16 50 04.7 +0.2**
comp=Z,137nm,1.3s,mb6.1
SNTG Esanatoglia 90.99 313 P **P** **16 50 05.7 +1.0**
comp=Z,18nm,1.0s,mb5.4
RUE Ruedersdorf 91.02 322 *e*P **P** **16 50 05.3 +0.7**
comp=Z,270nm,1.2s,mb6.5
RUE *e*S S 17 00 57.3 -0.9
RUE Ruedersdorf 91.02 322 *e*P **P** **16 50 04.0 -0.6**
comp=Z,278nm,1.3s,mb6.4
RUE *e* pP 16 50 17.6 -1.8
PESA Pesaro 91.10 314 P **P** **16 50 06.6 +1.4**
comp=Z,137nm,1.0s,mb6.2
FSSB Fossombrone 91.13 314 P **P** **16 50 05.6 +0.2**
comp=Z,18nm,0.6s,mb5.6
FBE Freiberg 91.18 321 *e*P **P** **16 50 05.9 +0.5**
comp=Z,113nm,1.2s,mb6.1
FVI Forni Avoltri 91.30 316 P **P** **16 50 04.6 -1.5**
FVI pmax pmax
comp=Z,47nm,1.1s,mb5.7
FVI Forni Avoltri 91.30 316 P **P** **16 50 04.6 -1.5**
comp=Z,47nm,1.1s,mb5.7
RJOB Jochberg 91.35 318 *e*P **P** **16 50 05.8 -0.5**
comp=Z,51nm,1.0s,mb5.8
SNAA Sanae 91.37 198 *e*P **P** **16 50 07.6 +1.7**
SNAA *e* 16 50 10.3
SNAA *e* pP 16 50 21.9 +1.1
SNAA *e* 17 07 25.5
SNAA Sanae 91.37 198 *e*P **P** **16 50 07.6 +1.7**
SNAA pmax pmax
comp=Z,46nm,1.1s
SNAA Sanae 91.37 198 *e*P **P** **16 50 07.6 +1.7**
comp=Z,46nm,1.1s,mb5.7
WET Wettzell 91.38 319 *e*P **P** **16 50 06.8 +0.4**
WET *e*S S 17 01 01.7 +0.1
WET pmax pmax
comp=Z,128nm,1.3s,mb6.1
WET Wettzell 91.38 319 *e*P **P** **16 50 06.8 +0.4**
comp=Z,128nm,1.3s,mb6.1
WET *e*S S 17 01 01.7 +0.1
RSM Repubblica di 91.38 314 P **P** **16 50 07.2 +0.7**
RSM pmax pmax
comp=Z,49nm,1.5s,mb5.6
RSM Repubblica di 91.38 314 P **P** **16 50 07.2 +0.7**
comp=Z,49nm,1.5s,mb5.6
CLL Collm 91.42 321 *i* P **P** **16 50 07.2 +0.7**
CLL *e* pP 16 50 22.0 +0.6
CLL pmax pmax
comp=Z,64nm,1.1s,mb5.9
CLL MLR MLR
comp=Z,2µm,26.3s,MS5.4
CLL Collm 91.42 321 *e*P **P** **16 50 06.5 0.0**
comp=Z,64nm,1.1s,mb5.9
CLL *e*S S 17 00 59.2 -2.8
CLL Collm 91.42 321 *i* P **P** **16 50 07.2 +0.7**
comp=Z,64nm,1.1s,mb5.9
CLL *e*sP sP 16 50 22.0 -5.0
CLL *e*PP PP 16 53 46.0 +1.3
CLL Collm 91.42 321 *i* P **P** **16 50 07.2 +0.7**
comp=Z,64nm,1.1s,mb5.9
CLL *e* pP 16 50 22.0 +0.6
CLL LR LR
comp=Z,2µm,26.3s,MS5.4
ABTA Abfaltersbach 91.49 317⇑ *i*P **P** **16 50 06.7 -0.3**
comp=Z,40nm,1.1s,mb5.7,SNR=20
BADI Badiali 91.51 313 P **P** **16 50 07.1 0.0**
SEST Monte Rota 91.69 317 P **P** **16 50 08.2 +0.3**
NKC Novy Kostel 91.72 320 *e*P **P** **16 50 08.7 +0.8**
NKC *e*pP pP 16 50 20.3 -2.5
NKC AMS AMS 17 38 20.0
comp=Z,2µm,23.4s
NKC Novy Kostel 91.72 320 *e*P **P** **16 50 08.7 +0.8**
NKC *e* pP 16 50 20.3 -2.5
TANN Tannenbergstha 91.72 320 *e*P **P** **16 50 08.3 +0.4**
comp=Z,58nm,1.3s,mb5.8
TANN *e*S S 17 01 04.7 0.0
WERN Wernitzgruen 91.77 320 *e*P **P** **16 50 08.7 +0.6**
comp=Z,47nm,1.1s,mb5.7
GUNZ Gunzen 91.80 320 *e*P **P** **16 50 08.7 +0.4**
comp=Z,74nm,1.2s,mb5.9
SFI Santa Sofia 91.81 314 P **P** **16 50 09.6 +1.1**
WERD Werda 91.82 320 *e*P **P** **16 50 08.7 +0.3**
comp=Z,58nm,1.1s,mb5.8
ROTZ Rotzenmuhle 91.85 320 *e*P **P** **16 50 09.4 +0.9**
comp=Z,73nm,1.2s,mb5.9
ROTZ *e*pP pP 16 50 24.0 +0.6
ROTZ *e*S S 17 01 07.5 +1.6
MANZ Manzenberg 91.92 320 *e*P **P** **16 50 09.7 +0.8**
comp=Z,124nm,1.3s,mb6.1
MANZ *e*S S 17 01 07.2 +0.7
VMG Vicchio 92.04 314 P **P** **16 50 06.1 -3.5**
CTI Castel Tesino 92.05 316 P **P** **16 50 10.0 +0.4**
SPITS Spitsbergen Ar 92.10 348 LR LR 17 38 47.2
comp=Z,3µm,20.4s,MS5.7,baz=0.0,slow=40
WTTA Wattenberg 92.11 317⇑ *i*P **P** **16 50 09.1 -0.7**
comp=Z,76nm,0.9s,mb6.0,SNR=26
WATA Walderalm 92.16 317⇑ *i*P **P** **16 50 09.2 -0.8**
comp=Z,40nm,1.1s,mb5.7,SNR=14
MOX Moxa 92.27 320 *e*P **P** **16 50 10.7 +0.2**
comp=Z,97nm,1.4s,mb5.9
MOX *e* pP 16 50 25.2 -0.1
MOX *e* 16 53 48.5
MOX Moxa 92.27 320 *e*P **P** **16 50 10.7 +0.2**
MOX *e* pP 16 50 25.2 -0.1
MOX *e* 16 53 48.5
MOX pmax pmax
comp=Z,97nm,1.4s,mb5.9
MOX Moxa 92.27 320 *e*P **P** **16 50 10.8 +0.3**
comp=Z,72nm,1.3s,mb5.8
MOX *e*pP pP 16 50 26.2 +0.9
MOX *e*S S 17 01 09.0 -0.6
FNVD Fontana Vidola 92.35 314 P **P** **16 50 10.9 -0.1**
APPI Appiano 92.36 316 P **P** **16 50 10.4 -0.6**
FUR Furstenfeldbru 92.39 318 *e*P **P** **16 50 10.8 -0.3**
FUR *e*S S 17 01 08.8 -2.0
FUR pmax pmax
comp=Z,54nm,0.8s,mb5.9
FUR Furstenfeldbru 92.39 318 *e*P **P** **16 50 10.8 -0.3**
comp=Z,54nm,0.8s,mb5.9
FUR *e*S S 17 01 08.8 -2.0
ZCCA Zocca 92.46 314 P **P** **16 50 11.4 -0.1**
MOTA Moosalm 92.48 317⇑ *i*P **P** **16 50 11.2 -0.3**
comp=Z,57nm,1.0s,mb5.9,SNR=27
GRA1 Grafenberg Arr 92.48 319 *e*P **P** **16 50 12.1 +0.6**
comp=Z,94nm,1.3s,mb6.0
GRA1 *e*PP PP 16 53 51.9 -1.2
GRA1 *e*S S 17 01 09.8 -1.8
GRF Grafenberg Arr 92.48 319 *e*P **P** **16 50 12.1 +0.6**
GRF *e* 16 53 51.9
GRF *e*S S 17 01 09.8 -1.8
GRF pmax pmax
comp=Z,94nm,1.3s,mb6.0
GRF Grafenberg Arr 92.48 319 *e*P **P** **16 50 12.1 +0.6**
GRF *e* 16 53 51.9
GRF *e*S S 17 01 09.8 -1.8
GRF pmax pmax
comp=Z,94nm,1.3s,mb6.0
GRF Grafenberg Arr 92.48 319 *e*P **P** **16 50 12.1 +0.6**
comp=Z,94nm,1.3s,mb6.0
GRF *e*PP PP 16 53 51.9 -1.2
GRF *e*S S 17 01 09.8 -1.8

RETA Reutte 92.72 317⇓ *i*P **P** **16 50 12.1 -0.5**
comp=Z,59nm,0.8s,mb6.1,SNR=32
FETA Feichten 92.72 317⇑ *i*P **P** **16 50 12.9 +0.2**
comp=Z,41nm,0.9s,mb5.9,SNR=25
FETA Feichten 92.72 317⇑ *i*PcP **P** **16 50 12.9 +0.2**
comp=Z,41nm,0.9s,mb5.9,SNR=25
GSCL Gusciola 92.74 314 P **P** **16 50 14.3 +1.5**
NB2 NORSAR Subarra 92.84 331 P **P** **16 50 12.1 -0.8**
comp=Z,45nm,1.0s,mb5.8,baz=93,slow=4.6
NOA NORSAR Array B 92.84 331 P **P** **16 50 12.5 -0.4**
comp=Z,28nm,0.9s,mb5.7,baz=95,slow=5.0,SNR=45
NOA PP PP 16 53 56.6 +1.0
comp=Z,11nm,0.8s,baz=90,slow=7.6,SNR=8.9
NOA LR LR 17 38 40.8
comp=Z,2µm,21.9s,MS5.5,baz=105,slow=40
NOA NORSAR Array B 92.84 331 P **P** **16 50 12.5 -0.4**
NOA 16 53 56.6
NOA pmax pmax
comp=Z,28nm,0.9s
NOA pmax pmax
comp=Z,11nm,0.8s
NOA MLR MLR
comp=Z,2µm,21.9s
MABI Malga Bissina 92.84 316 P **P** **16 50 14.0 +0.8**
ERBM Eremo 92.87 314 P **P** **16 50 15.1 +1.7**
BRMO Bormio 92.95 316 P **P** **16 50 14.3 +0.6**
VNA2 Neumayer--Watz 92.99 198 *e*P **P** **16 50 16.1 +2.7**
VNA2 *e* 16 50 18.9
VNA2 *e* pP 16 50 30.8 +2.5
VNA2 *e* pP 16 50 35.4 +7.1
VNA2 *e* 16 55 04.0
VNA2 *e* 17 07 21.4
KBS Kingsbay 93.03 349 *e*P **P** **16 50 12.4 -1.0**
CLZ Clausthal 93.09 322 *e*P **P** **16 50 14.5 +0.3**
CLZ pmax pmax
comp=Z,45nm,1.0s,mb5.8
CLZ Clausthal 93.09 322 *e*P **P** **16 50 14.5 +0.3**
comp=Z,45nm,1.0s,mb5.8
CLZ *e*S S 17 01 17.1 +0.3
BSEG Bad Segeberg 93.16 324 *e*P **P** **16 50 14.7 +0.2**
BSEG *e**PP pP 16 50 30.2 +0.8
BSEG pmax pmax
comp=Z,61nm,1.0s,mb6.0
BSEG Bad Segeberg 93.16 324 *e*P **P** **16 50 14.7 +0.2**
comp=Z,61nm,1.0s,mb6.0
BSEG *e*pP pP 16 50 30.2 +0.8
NRDL Niedersach Rie 93.26 322 *e*P **P** **16 50 15.4 +0.4**
comp=Z,48nm,1.0s,mb5.9
NRDL *e*S S 17 01 17.2 -1.1
UBBA Unterbreizbach 93.30 321 *e*P **P** **16 50 15.2 0.0**
comp=Z,25nm,1.0s,mb5.6
UBBA *e*pP pP 16 50 30.5 +0.4
UBBA *e*S S 17 01 17.1 -1.6
DAVA Damuels 93.31 317 *i* P **P** **16 50 15.9 +0.5**
comp=Z,89nm,0.9s,mb6.2,SNR=27
DAVA Damuels 93.31 317 *i* PcP **P** **16 50 15.9 +0.5**
comp=Z,89nm,0.9s,mb6.2,SNR=27
VNA1 Neumayer--Stat 93.35 198 *e*P **P** **16 50 18.0 +2.9**
VNA1 *e* 16 50 20.8
VNA1 *e* pP 16 50 33.6 +3.7
VNA1 *e* pP 16 50 37.5 +7.6
VNA1 *e* 17 07 20.6
KEST Kesra 93.44 305 P **P** **16 50 17.4 +1.1**
comp=Z,14nm,0.9s,mb5.4,baz=342,slow=0.9,SNR=36
VSL Villasalto 93.51 309 *e*P **P** **16 50 16.8 +0.4**
comp=Z,43nm,1.1s,mb5.8
VNA3 Neumayer Olymp 93.58 198 *e*P **P** **16 50 18.2 +2.1**
VNA3 *e* 16 50 21.3
VNA3 *e* pP 16 50 33.1 +2.1
VNA3 *e* 16 50 37.9
VNA3 *e* 16 55 05.6
VNA3 *e* 17 07 19.5
KONO Kongsberg 93.62 329 *e*P **P** **16 50 16.7 +0.2**
TUE Stuetta 93.66 316 *e*P **P** **16 50 17.1 +0.2**
comp=Z,31nm,1.2s,mb5.6
STU Stuttgart 93.79 319 *e*P **P** **16 50 17.4 -0.1**
comp=Z,36nm,0.9s,mb5.8
STU *e*S S 17 01 21.2 -2.0
PGF Pioggiola 93.85 312 *e*P **P** **16 50 17.9 -0.1**
comp=Z,108nm,1.4s,mb5.8
PGF Pioggiola 93.85 312 *e*P **P** **16 50 17.9 -0.1**
PGF pmax pmax
comp=Z,54nm,1.4s,mb5.8
PGF Pioggiola 93.85 312 *e*P **P** **16 50 17.9 -0.1**
comp=Z,54nm,1.4s,mb5.8
TOD Tromm 94.05 319 *e*P **P** **16 50 19.2 +0.5**
SPAK Spaichingen-Ko 94.06 318 *e*P **P** **16 50 18.8 0.0**
BFO Black Forest 94.36 318 P **P** **16 50 20.2 0.0**
comp=Z,120nm,0.9s,mb6.3,SNR=7.7
BFO Black Forest 94.36 318 P **P** **16 50 20.0 -0.2**
BFO pmax pmax
comp=Z,18nm,0.9s,mb5.5
BFO Black Forest 94.36 318 *e*P **P** **16 50 19.7 -0.5**
comp=Z,22nm,1.0s,mb5.5
FIN Finale Ligure 94.44 314 P **P** **16 50 19.5 -1.1**
FELD Feldberg im Sc 94.58 318 *e*P **P** **16 50 21.3 +0.1**
IBBN Ibbenburen 94.70 322 *e*P **P** **16 50 22.4 +0.8**
comp=Z,41nm,0.8s,mb5.9
IBBN *e*S S 17 01 30.6 -0.3
LANF Langenberg 94.71 319 *e*P **P** **16 50 21.3 -0.4**
LIBD Limburg 94.85 318 *e*P **P** **16 50 22.3 -0.1**
BBS Basel-Blauen 94.92 317 *e*P **P** **16 50 22.3 -0.5**
SBF Sospel 95.00 314 *e*P **P** **16 50 22.9 -0.3**
comp=Z,103nm,1.2s,mb5.8
SBF Sospel 95.00 314 *e*P **P** **16 50 22.9 -0.3**
SBF pmax pmax
comp=Z,52nm,1.2s,mb5.8
SBF Sospel 95.00 314 *e*P **P** **16 50 22.9 -0.3**
comp=Z,52nm,1.2s,mb5.8
AUTN L'Aution 95.01 314 *e*P **P** **16 50 23.6 +0.4**
BUG Bochum--Univer 95.02 321 *e*P **P** **16 50 22.9 -0.2**
comp=Z,34nm,1.1s,mb5.7
BUG *e*S S 17 01 30.3 -3.4
REVF Revere 95.05 313 *e*P **P** **16 50 23.1 -0.3**
CDF Champ du Feu 95.07 318 *e*P **P** **16 50 22.9 -0.5**
comp=Z,38nm,1.1s,mb5.4
CDF Champ du Feu 95.07 318 *e*P **P** **16 50 22.9 -0.5**
CDF pmax pmax
comp=Z,19nm,1.1s,mb5.4
CDF Champ du Feu 95.07 318 *e*P **P** **16 50 22.9 -0.5**
comp=Z,19nm,1.1s,mb5.4
TOUF Mont Tournerai 95.14 314 *e*P **P** **16 50 24.4 +0.6**
ECH Echery 95.15 318 *e*P **P** **16 50 22.9 -0.9**
ECH Echery 95.15 318 *e*P **P** **16 50 23.8 0.0**
MOF Molkenrain 95.17 318 *e*P **P** **16 50 23.8 -0.1**
RUP Ruppelstein 95.19 319 *e*P **P** **16 50 24.3 +0.4**
MVIF Mont Vial 95.21 314 *e*P **P** **16 50 24.7 +0.6**
HINF Hinteralfeld 95.36 318 *e*P **P** **16 50 23.9 -0.8**
LOMF Lomont 95.39 317 *e*P **P** **16 50 24.3 -0.6**
MBDF Montbardon 95.47 314 *e*P **P** **16 50 24.5 -0.8**
comp=Z,19nm,0.9s,mb5.2
MBDF Montbardon 95.47 314 *e*P **P** **16 50 24.5 -0.8**
MBDF pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
MBDF Montbardon 95.47 314 *e*P **P** **16 50 24.5 -0.8**
comp=Z,9.4nm,0.9s,mb5.2
LPG La Plagne 95.47 315 *e*P **P** **16 50 25.3 0.0**
comp=Z,34nm,0.8s,mb5.5
LPG La Plagne 95.47 315 *e*P **P** **16 50 25.3 0.0**
LPG pmax pmax
comp=Z,17nm,0.8s,mb5.5
LPG La Plagne 95.47 315 *e*P **P** **16 50 25.3 0.0**
comp=Z,17nm,0.8s,mb5.5
LPL La Plagne 95.48 315 *e*P **P** **16 50 25.3 -0.1**
comp=Z,54nm,1.0s,mb5.7
LPL La Plagne 95.48 315 *e*P **P** **16 50 25.3 -0.1**
LPL pmax pmax
comp=Z,27nm,1.0s,mb5.6
LPL La Plagne 95.48 315 *e*P **P** **16 50 25.3 -0.1**
comp=Z,27nm,1.0s,mb5.6
BNI Bardonecchia 95.53 315 P **P** **16 50 26.1 +0.5**
BNI *e* pP 16 50 41.4 +0.9
BNI pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
BNI Bardonecchia 95.53 315 *e*P **P** **16 50 25.6 0.0**
comp=Z,8.4nm,0.8s,mb5.2
FRF La Foret Royal 95.58 313 *e*P **P** **16 50 25.7 -0.1**
comp=Z,46nm,1.1s,mb5.5
FRF La Foret Royal 95.58 313 *e*P **P** **16 50 25.7 -0.1**
FRF pmax pmax
comp=Z,23nm,1.1s,mb5.5
FRF La Foret Royal 95.58 313 *e*P **P** **16 50 25.7 -0.1**
comp=Z,23nm,1.1s,mb5.5
HAU Haudompre 95.70 318 *e*P **P** **16 50 25.7 -0.6**
comp=Z,53nm,0.9s,mb5.7

HAU Haudompre 95.70 318 *e*P **P** **16 50 25.7 -0.6**
HAU pmax pmax
comp=Z,26nm,0.9s,mb5.7
HAU Haudompre 95.70 318 *e*P **P** **16 50 25.7 -0.6**
comp=Z,26nm,0.9s,mb5.7
WLF Walferdange 95.78 319 P **P** **16 50 27.5 +0.9**
WLF pmax pmax
comp=Z,29nm,1.4s,mb5.5
WLF Walferdange 95.78 319 *e*P **P** **16 50 27.1 +0.5**
comp=Z,37nm,1.2s,mb5.7
WLF *e*S S 17 01 38.4 -2.0
WLF Walferdange 95.78 319 *e*P **P** **16 50 27.2 +0.6**
comp=Z,29nm,1.4s,mb5.5
MEM Membach 95.84 320 P **P** **16 50 27.0 +0.2**
comp=Z,12nm,1.1s,mb5.2
CABF La Chapelle 95.91 316 *e*P **P** **16 50 27.3 0.0**
comp=Z,64nm,1.1s,mb5.7
CABF La Chapelle 95.91 316 *e*P **P** **16 50 27.3 0.0**
CABF pmax pmax
comp=Z,32nm,1.1s,mb5.7
CABF La Chapelle 95.91 316 *e*P **P** **16 50 27.3 0.0**
comp=Z,32nm,1.1s,mb5.7
THEF They Montfort 95.93 318 *e*P **P** **16 50 26.4 -0.9**
ORIF Oris-en-Rattie 96.10 315 *e*P **P** **16 50 28.1 -0.1**
comp=Z,16nm,0.8s,mb5.2
ORIF Oris-en-Rattie 96.10 315 *e*P **P** **16 50 28.1 -0.1**
ORIF pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
ORIF Oris-en-Rattie 96.10 315 *e*P **P** **16 50 28.1 -0.1**
comp=Z,8.1nm,0.8s,mb5.2
BCLA Clavier 96.30 320 P **P** **16 50 29.5 +0.5**
comp=Z,8.3nm,1.7s,mb4.9
SMRF Simiane la Rot 96.34 314 *e*P **P** **16 50 29.7 +0.4**
comp=Z,36nm,1.2s,mb5.4
SMRF Simiane la Rot 96.34 314 *e*P **P** **16 50 29.7 +0.4**
comp=Z,36nm,1.2s,mb5.7
MEZF Maizieres J'vi 96.54 318 *e*P **P** **16 50 29.8 -0.3**
comp=Z,26nm,0.8s,mb5.4
MEZF Maizieres J'vi 96.54 318 *e*P **P** **16 50 29.8 -0.3**
comp=Z,26nm,0.8s,mb5.7
TAM Tamanrasset 96.55 292 P **P** **16 50 32.9 +2.2**
TAM Tamanrasset 96.55 292 *e*P **P** **16 50 32.4 +1.7**
GIVF Givet 96.62 320 *e*P **P** **16 50 30.0 -0.4**
comp=Z,24nm,0.9s,mb5.3
GIVF Givet 96.62 320 *e*P **P** **16 50 30.0 -0.4**
GIVF pmax pmax
comp=Z,12nm,0.9s,mb5.3
GIVF Givet 96.62 320 *e*P **P** **16 50 30.0 -0.4**
comp=Z,12nm,0.9s,mb5.3
DOU Dourbes 96.77 320 P **P** **16 50 31.4 +0.3**
comp=Z,11nm,1.3s,mb5.1
UCC Uccle 96.88 321 P **P** **16 50 31.9 +0.3**
VIVF Saint-Julien-l 96.96 315 *e*P **P** **16 50 31.7 -0.4**
comp=Z,24nm,1.1s,mb5.2
VIVF Saint-Julien-l 96.96 315 *e*P **P** **16 50 31.7 -0.4**
VIVF pmax pmax
comp=Z,12nm,1.1s,mb5.2
VIVF Saint-Julien-l 96.96 315 *e*P **P** **16 50 31.7 -0.4**
comp=Z,12nm,1.1s,mb5.2
BAIF Baives 97.02 320 *e*P **P** **16 50 32.1 -0.1**
comp=Z,53nm,1.0s,mb5.6
BAIF Baives 97.02 320 *e*P **P** **16 50 32.1 -0.1**
BAIF pmax pmax
comp=Z,27nm,1.0s,mb5.6
BAIF Baives 97.02 320 *e*P **P** **16 50 32.1 -0.1**
comp=Z,27nm,1.0s,mb5.6
LOR Lormes 97.41 317 *e*P **P** **16 50 33.6 -0.5**
comp=Z,35nm,1.0s,mb5.5
LOR Lormes 97.41 317 *e*P **P** **16 50 33.6 -0.5**
LOR pmax pmax
comp=Z,17nm,1.0s,mb5.4
LOR Lormes 97.41 317 *e*P **P** **16 50 33.6 -0.5**
comp=Z,17nm,1.0s,mb5.4
SMF Signal de Mont 97.45 316 *e*P **P** **16 50 33.8 -0.5**
comp=Z,32nm,0.9s,mb5.4
SMF Signal de Mont 97.45 316 *e*P **P** **16 50 33.8 -0.5**
SMF pmax pmax
comp=Z,16nm,0.9s,mb5.5
SMF Signal de Mont 97.45 316 *e*P **P** **16 50 33.8 -0.5**
comp=Z,16nm,0.9s,mb5.5
LASF Ste Croix 97.58 314 *e*P **P** **16 50 34.8 -0.1**
comp=Z,30nm,1.4s,mb5.3
PLDF La Plantade 97.65 316 *e*P **P** **16 50 35.4 +0.2**
SSF Saint Saulge 97.66 317 *e*P **P** **16 50 34.7 -0.5**
comp=Z,37nm,1.3s,mb5.5
SSF Saint Saulge 97.66 317 *e*P **P** **16 50 34.7 -0.5**
SSF pmax pmax
comp=Z,18nm,1.3s,mb5.4
SSF Saint Saulge 97.66 317 *e*P **P** **16 50 34.7 -0.5**
comp=Z,18nm,1.3s,mb5.5
AVF Avril sur Loir 97.78 317 *e*P **P** **16 50 35.2 -0.6**
comp=Z,45nm,1.4s,mb5.5
AVF Avril sur Loir 97.78 317 *e*P **P** **16 50 35.2 -0.6**
AVF pmax pmax
comp=Z,23nm,1.4s,mb5.5
AVF Avril sur Loir 97.78 317 *e*P **P** **16 50 35.2 -0.6**
comp=Z,23nm,1.4s,mb5.5
LBL Lubilhac 97.95 315 *e*P **P** **16 50 37.0 +0.5**
BGF Bois d'Agland 98.14 316 *e*P **P** **16 50 37.3 -0.1**
comp=Z,35nm,1.0s,mb5.6
BGF Bois d'Agland 98.14 316 *e*P **P** **16 50 37.3 -0.1**
BGF pmax pmax
comp=Z,18nm,1.0s,mb5.6
BGF Bois d'Agland 98.14 316 *e*P **P** **16 50 37.3 -0.1**
comp=Z,18nm,1.0s,mb5.5
MENF Mencas 98.29 320 *e*P **P** **16 50 38.1 +0.1**
TCF Toulx Ste Croi 98.60 316 *e*P **P** **16 50 39.2 -0.3**
CAF Calviac 98.81 315 *e*P **P** **16 50 40.5 +0.1**
MTLF Montolieu 98.81 313 *e*P **P** **16 50 40.2 -0.2**
comp=Z,27nm,1.4s,mb5.3
MTLF Montolieu 98.81 313 *e*P **P** **16 50 40.2 -0.2**
MTLF pmax pmax
comp=Z,13nm,1.4s,mb5.3
MTLF Montolieu 98.81 313 *e*P **P** **16 50 40.2 -0.2**
comp=Z,13nm,1.4s,mb5.3
IMA2 Indian Mountai 99.02 24 *e*P **P** **16 50 40.6 -0.3**
RJF Les Rejaudoux 99.17 315 *e*P **P** **16 50 42.1 +0.1**
JMIC Jan Mayen 99.43 342 LR LR 17 42 04.2
comp=Z,2µm,21.5s,MS5.6,baz=103,slow=39
LFF La Frestale 99.74 315 *e*P Pdif 16 50 43.8 -0.5
LDF La Druitiere 99.96 319 *e*P Pdif 16 50 45.0 -0.3
comp=Z,28nm,1.0s
LDF La Druitiere 99.96 319 *e*P Pdif 16 50 45.0 -0.3
LDF pmax pmax
comp=Z,14nm,1.0s,mb5.3
LDF La Druitiere 99.96 319 *e*P Pdif 16 50 45.0 -0.3
comp=Z,14nm,1.0s
TORD Torodi Ar. Bea 100.06 283 P Pdif 16 50 46.3 +0.6
comp=Z,2.8nm,0.9s,baz=78,slow=4.0,SNR=13
TORD PP PP 16 55 01.3 +8.6
comp=Z,2.7nm,1.0s,baz=68,slow=6.6,SNR=4.3
TORD PKiKP PKiKP 16 55 13.8 -0.7
comp=Z,2.7nm,0.8s,baz=119,slow=1.8,SNR=6.1
TORD Torodi Ar. Bea 100.06 283 P Pdif 16 50 46.3 +0.6
TORD PP PP 16 55 01.3 +8.6
COLD Coldfoot 100.08 22 *e*Pdif Pdif 16 50 45.1 -0.7
comp=Z,39nm,0.6s
FLN La Foliniere 100.18 319 *e*P Pdif 16 50 45.9 -0.4
comp=Z,20nm,0.8s
FLN La Foliniere 100.18 319 *e*P Pdif 16 50 45.9 -0.4
FLN pmax pmax
comp=Z,10.0nm,0.8s
FLN La Foliniere 100.18 319 *e*P Pdif 16 50 45.9 -0.4
comp=Z,9.9nm,0.8s
MFF Saint Martin d 100.20 317 *e*P Pdif 16 50 46.1 -0.3
comp=Z,23nm,1.2s
MFF Saint Martin d 100.20 317 *e*P Pdif 16 50 46.1 -0.3
MFF pmax pmax
comp=Z,12nm,1.2s
MFF Saint Martin d 100.20 317 *e*P Pdif 16 50 46.1 -0.3
comp=Z,12nm,1.2s
GRR Gorron 100.47 318 *e*P Pdif 16 50 47.4 -0.2
comp=Z,42nm,1.3s
GRR Gorron 100.47 318 *e*P Pdif 16 50 47.4 -0.2
GRR pmax pmax
comp=Z,21nm,1.3s
GRR Gorron 100.47 318 *e*P Pdif 16 50 47.4 -0.2
comp=Z,21nm,1.3s
BPAW Bear Paw Mtn. 100.60 25 *e*Pdif Pdif 16 50 43.5 -4.7
comp=Z,45nm,1.4s
ETSF Etsaut 100.87 313 *e*P Pdif 16 50 49.9 +0.5
SJPF Ste Jean 101.33 313 *e*P Pdif 16 50 51.8 +0.4
comp=Z,52nm,1.5s
SJPF Ste Jean 101.33 313 *e*P Pdif 16 50 51.8 +0.4
SJPF pmax pmax
comp=Z,26nm,1.5s

SJPF	Ste Jean	101.33	313	*e*P	Pdif	16 50 51.8	+0.4		
	comp=Z,26nm,1.5s								
ROSF	Rostrenen	102.08	319	*e*P	Pdif	16 50 53.5	-1.2		
DBIC	Dimbokro	106.39	276	PKiKP	PKiKP	16 55 25.9	-0.2		
	comp=Z,2.8nm,0.7s,baz=95,slow=3.6,SNR=3.2								
DLBC	Dease Lake	112.08	26	PKiKP	PKiKP	16 55 35.1	-0.3		
	baz=297,slow=3.9								
SFJD	Kangerlussuaq	113.44	348	*i* P	PP	16 56 32.4	+3.4		
	comp=Z,23nm,1.1s								
YKA	Yellowknife Ar	115.17	18	PKP	PKiKP	16 55 39.5	-1.7		
	comp=Z,7.5nm,0.9s,baz=315,slow=2.2,SNR=18								
YKA				PP	PP	16 56 30.8	-10		
	comp=Z,3.9nm,1.0s,baz=324,slow=7.4,SNR=5.1								
YKA	Yellowknife Ar	115.17	18	PKIKP	PKiKP	16 55 39.5	-1.7		
YKA				pmax	pmax				
	comp=Z,8.0nm,0.9s								
YKA				pmax	pmax				
	comp=Z,4.0nm,1.0s								
YKA	Yellowknife Ar	115.17	18	PKP	PKiKP	16 55 39.5	-1.7		
YKA				PP	PP	16 56 30.8	-10		
BBB	Bella Bella	116.38	31	PKP	PKPdf	16 55 43.7	-0.1		
	comp=Z,16nm,0.8s,baz=245,slow=3.8,SNR=3.3								
BBB	Bella Bella	116.38	31	PKP	PKPdf	16 55 43.7	-0.2		
B04A	Port Angeles	121.13	34	⇑P	PKPdf	16 55 53.1	0.0		
	baz=121								
OSD	Olympics--Snow	121.16	34	P	PKPdf	16 55 54.0	+0.8		
A04A	Legoe Bay, Lum	121.18	33	⇓P	PKPdf	16 55 53.3	+0.1		
	baz=121								
NLWA	Neilton Lookou	121.30	34	⇓P	PKPdf	16 55 53.2	-0.3		
	baz=121								
A05A	Maple Falls	121.35	32	⇓P	PKPdf	16 55 52.9	-0.7		
	baz=121								
USHA	Ushuaia	121.51	187	PKP	PKPdf	16 55 53.9	+0.2		
	comp=Z,18nm,0.8s,baz=57,slow=3.7,SNR=5.4								
D03A	Wishkah Elem.	121.51	35	⇑P	PKPdf	16 55 53.9	0.0		
	baz=121								
A06A	Chilliwack	121.61	32	⇑P	PKPdf	16 55 53.3	-0.7		
	baz=121								
C04A	Brinnon	121.62	34	⇑P	PKPdf	16 55 54.3	+0.2		
	baz=121								
B05A	Bryant	121.78	33	⇓P	PKPdf	16 55 53.9	-0.5		
	baz=122								
JCW	Jim Creek	121.91	33	P	PKPdf	16 55 54.8	+0.2		
E03A	Lebam	121.95	35	⇓P	PKPdf	16 55 54.7	-0.1		
	baz=122								
B06A	Marblemount	121.95	32	⇓P	PKPdf	16 55 54.2	-0.5		
	baz=122								
RPW	Rockport	121.98	32	*e*PKPdf	PKPdf	16 55 53.7	-1.1		
BMW	Boistfort Moun	122.18	35	*e*PKiKP	PKPdf	16 55 55.6	+0.4		
A07A	Ashnola River,	122.21	31	⇓P	PKPdf	16 55 54.8	-0.4		
	baz=122								
F03A	Seaside	122.29	36	⇓P	PKPdf	16 55 55.8	+0.3		
	baz=122								
C05A	Tolt Reservoir	122.33	33	⇓P	PKPdf	16 55 55.1	-0.3		
	baz=122								
D05A	Enumclaw	122.47	34	⇓P	PKPdf	16 55 55.7	0.0		
	baz=122								
C06A	Tall Timber Ra	122.63	32	⇑P	PKPdf	16 55 55.9	-0.2		
	baz=122								
B07A	Winthrop	122.71	32	⇑P	PKPdf	16 55 55.7	-0.4		
	baz=122								
H02A	Toledo	122.72	37	⇓P	PKPdf	16 55 56.8	+0.5		
	baz=122								
G03A	Yamhill	122.80	36	⇑P	PKPdf	16 55 57.3	+0.9		
	baz=123								
LON	Longmire	122.82	34	PKiKP	PKPdf	16 55 56.6	+0.1		
LON	Longmire	122.82	34	*e*PKPdf	PKPdf	16 55 56.2	-0.2		
A08A	Turner Farm, O	122.83	31	⇑P	PKPdf	16 55 56.3	-0.1		
	baz=123								
F04A	Amboy	122.95	35	⇑P	PKPdf	16 55 56.6	-0.1		
	baz=123								
D06A	Cle Elum	123.09	33	⇑P	PKPdf	16 55 57.3	+0.4		
	baz=123								
H03A	Soap Creek Ran	123.14	37	⇓P	PKPdf	16 55 57.4	+0.3		
	baz=123								
A09A	Danville	123.17	30	⇑P	PKPdf	16 55 57.4	+0.3		
	baz=123								
B08A	Colville Reser	123.18	31	⇑P	PKPdf	16 55 56.6	-0.5		
	baz=123								
I02A	Mapleton	123.18	38	⇑P	PKPdf	16 55 57.6	+0.4		
	baz=123								
COR	Corvallis	123.19	37	*e*PKiKP	PKPdf	16 55 57.6	+0.4		
C07A	Waterville	123.21	32	⇓P	PKPdf	16 55 56.5	-0.7		
	baz=123								
TBM	Table Mountain	123.24	33	P	PKPdf	16 55 57.2	0.0		
G04A	Mulino	123.33	36	⇑P	PKPdf	16 55 57.9	+0.4		
	baz=123								
E06A	Yakima	123.41	34	⇑P	PKPdf	16 55 57.8	+0.2		
	baz=123								
K01A	Sixes	123.41	39	⇑P	PKPdf	16 55 57.8	+0.1		
	baz=123								
KEBM	Edson Butte	123.46	39	*e*PKPdf	PKPdf	16 55 57.8	0.0		
F05A	White Salmon	123.53	35	⇓P	PKPdf	16 55 57.8	-0.1		
	baz=123								
I03A	Eugene	123.53	37	⇑P	PKPdf	16 55 57.9	0.0		
	baz=123								
D07A	Quincy	123.57	33	⇑P	PKPdf	16 55 57.7	-0.1		
	baz=123								
VLL	Laurance Lake	123.64	35	P	PKPdf	16 55 58.6	+0.6		
A10A	Northport	123.68	30	⇑P	PKPdf	16 55 57.7	-0.3		
	baz=123								
J02A	Umpqua	123.68	38	⇓P	PKPdf	16 55 58.4	+0.2		
	baz=124								
C08A	Higginbotham F	123.69	32	⇓P	PKPdf	16 55 58.1	0.0		
	baz=124								
B09A	Rice	123.75	31	⇓P	PKPdf	16 55 58.1	0.0		
	baz=124								
H04A	Detroit Lake	123.79	36	⇑P	PKPdf	16 55 58.2	-0.1		
	baz=124								
KBO	Bosley Butte	123.87	40	*e*PKPdf	PKPdf	16 55 59.0	+0.4		
F06A	Goldendale	123.98	34	⇓P	PKPdf	16 55 59.1	+0.4		
	baz=124								
G05A	Wamic	123.98	35	⇓P	PKPdf	16 55 59.1	+0.4		
	baz=124								
E07A	Sunnyside	124.02	33	⇓P	PKPdf	16 55 59.0	+0.2		
	baz=124								
C09A	Chrisman Ranch	124.08	31	⇑P	PKPdf	16 55 58.6	-0.2		
	baz=124								
M01C	Crescent City	124.13	40	⇓P	PKPdf	16 55 58.9	-0.2		
	baz=124								
I04A	Tendick Farm,	124.16	37	⇑P	PKPdf	16 55 59.3	+0.2		
	baz=124								
HBO	Huckleberry Mo	124.18	37	P	PKPdf	16 55 59.2	+0.1		
D08A	Wollman Farm,	124.22	32	⇑P	PKPdf	16 55 59.4	+0.3		
	baz=124								
RSW	Rattlesnake Hi	124.26	33	*e*PKPdf	PKPdf	16 55 59.8	+0.5		
A11A	Hall Mountain,	124.28	29	⇓P	PKPdf	16 55 59.9	+0.8		
	baz=124								
HAWA	Hanford	124.30	33	*e*PKPdf	PKPdf	16 55 58.9	-0.4		
L02A	Cave Junction	124.30	39	⇑P	PKPdf	16 55 59.9	+0.5		
	baz=124								
CROR	Criterion Ridg	124.32	35	P	PKPdf	16 55 59.4	0.0		
NEW	Newport	124.37	30	PKIKP	PKPdf	16 55 59.1	-0.3		
NEW			*e*			16 56 09.1			
NEW	Newport	124.37	30	*e*PKPdf	PKPdf	16 55 58.6	-0.8		
G06A	Carlson Farm,	124.38	35	⇑P	PKPdf	16 55 59.8	+0.4		
	baz=124								
H05A	Madras	124.38	36	⇑P	PKPdf	16 55 59.9	+0.4		
	baz=124								
F07A	Phinny Hill Vi	124.38	34	⇑P	PKPdf	16 56 00.2	+0.7		
	baz=124								
REDWA	Red Mountain	124.41	33	P	PKPdf	16 55 59.9	+0.4		
HUMO	Hull Mountain	124.47	39	⇑P	PKPdf	16 56 00.3	+0.6		
	baz=124								
HUMO	Hull Mountain	124.47	39	*e*PKPdf	PKPdf	16 55 59.6	-0.2		
E08A	Dider Farm, El	124.49	33	⇑P	PKPdf	16 56 00.3	+0.6		
	baz=124								
D09A	Jones Farm, Ri	124.54	32	⇓P	PKPdf	16 55 59.6	-0.1		
	baz=124								
C10A	Spilker Farm,	124.57	31	⇓P	PKPdf	16 55 59.8	+0.1		
	baz=124								
B11A	Sandpoint	124.63	30	⇑P	PKPdf	16 56 00.3	+0.5		
	baz=124								
I05A	Bend	124.63	36	⇓P	PKPdf	16 56 00.4	+0.4		
	baz=124								
A12A	Yaak River Ran	124.64	29	⇑P	PKPdf	16 56 00.6	+0.7		
	baz=124								
J04A	Umpqua Nationa	124.64	38	⇑P	PKPdf	16 56 00.3	+0.3		
	baz=124								
JCC	Jacoby Creek	124.71	41	⇓P	PKPdf	16 56 00.7	+0.5		
	baz=124								
H06A	Lindquist Farm	124.84	35	⇓P	PKPdf	16 56 00.9	+0.5		
	baz=125								
G07A	Ruggs Ranch, H	124.91	34	⇑P	PKPdf	16 56 00.5	0.0		
	baz=125								
E09A	Wood Farm, Sta	124.97	32	⇑P	PKPdf	16 56 00.6	0.0		
	baz=125								
F08A	Pendleton	125.08	33	⇑P	PKPdf	16 56 00.7	-0.1		
	baz=125								
D10A	Wagner Farm, O	125.08	31	⇓P	PKPdf	16 56 01.0	+0.2		
	baz=125								
C11A	Tepee Creek (N	125.09	30	⇑P	PKPdf	16 56 00.4	-0.4		
	baz=125								
YBH	Yreka Blue Hor	125.09	39	PKIKP	PKPdf	16 56 01.1	+0.1		
YBH	Yreka Blue Hor	125.09	39	⇓P	PKPdf	16 56 00.8	-0.2		
	baz=125								
YBH	Yreka Blue Hor	125.09	39	*e*PKPdf	PKPdf	16 56 00.9	0.0		
J05A	Fort Rock	125.15	37	⇓P	PKPdf	16 56 01.3	+0.3		
	baz=125								
M02C	Callahan	125.17	40	⇓P	PKPdf	16 56 01.7	+0.5		
	baz=125								
N02C	Big Bar	125.18	41	⇓P	PKPdf	16 56 01.1	-0.1		
	baz=125								
O01C	Eel River Cons	125.19	42	⇑P	PKPdf	16 56 01.6	+0.4		
	baz=125								
G08A	Pilot Rock	125.29	34	⇓P	PKPdf	16 56 01.4	+0.2		
	baz=125								
FFC	Flin Flon	125.30	16	PKIKP	PKPdf	16 56 00.4	-0.5		
FFC	Flin Flon	125.30	16	*e*PKPdf	PKPdf	16 55 59.9	-1.0		
LNOR	Lincton Mounta	125.30	33	PKIKP	PKPdf	16 56 00.5	-0.7		
LNOR	Lincton Mounta	125.30	33	*e*PKPdf	PKPdf	16 56 00.3	-1.0		
L04A	Klamath Falls	125.36	39	⇓P	PKPdf	16 56 01.8	+0.3		
	baz=125								
H07A	Lands Inn, Kim	125.37	35	⇑P	PKPdf	16 56 02.1	+0.7		
	baz=125								
I06A	Prineville	125.38	36	⇑P	PKPdf	16 56 01.7	+0.3		
	baz=125								
E10A	Myers Farm, Un	125.54	32	⇑P	PKPdf	16 56 01.4	-0.3		
	baz=125								
C12B	Naegeli Ranch,	125.56	30	⇓P	PKPdf	16 56 01.4	-0.3		
	baz=125								
KCPM	Cahto Peak	125.57	42	*e*PKPdf	PKPdf	16 56 02.3	+0.3		
D11A	Klaveano Farm,	125.57	31	⇑P	PKPdf	16 56 01.2	-0.5		
	baz=125								
KIPM	Iron Peak	125.58	42	*e*PKPdf	PKPdf	16 56 01.9	-0.1		
B13A	Whitefish	125.60	29	⇓P	PKPdf	16 56 01.3	-0.4		
	baz=125								
F09A	S2 Ranch, Elgi	125.61	33	⇑P	PKPdf	16 56 01.5	-0.3		
	baz=125								
M04C	Macdoel	125.61	39	⇑P	PKPdf	16 56 02.3	+0.3		
	baz=125								
K05A	Summer Lake	125.67	38	⇑P	PKPdf	16 56 02.5	+0.5		
	baz=125								
M03C	McCloud	125.70	40	⇑P	PKPdf	16 56 02.1	-0.1		
	baz=126								
I07A	Izee	125.71	35	⇑P	PKPdf	16 56 02.2	+0.1		
	baz=126								
WDC	Whiskeytown Da	125.80	41	⇓P	PKPdf	16 56 02.0	-0.3		
	baz=126								
WDC	Whiskeytown Da	125.80	41	*e*PKPdf	PKPdf	16 56 01.5	-0.8		
F10A	Beach Ranch, E	125.81	32	⇓P	PKPdf	16 56 02.0	-0.2		
	baz=126								
J06A	Christmas Vall	125.82	37	⇓P	PKPdf	16 56 02.3	0.0		
	baz=126								
O02C	Red Bluff	125.85	41	⇑P	PKPdf	16 56 02.6	+0.1		
	baz=126								
H08A	Prairie City	125.92	35	⇓P	PKPdf	16 56 02.2	-0.2		
	baz=126								
G09A	Cove	125.95	33	⇓P	PKPdf	16 56 02.1	-0.4		
	baz=126								
K06A	Valley Falls	126.02	37	⇑P	PKPdf	16 56 02.7	0.0		
	baz=126								
C13A	Hot Springs	126.03	29	⇓P	PKPdf	16 56 02.0	-0.5		
	baz=126								
D12A	Red Ives Fores	126.07	30	⇑P	PKPdf	16 56 01.7	-0.9		
	baz=126								
L05A	Lakeview	126.09	38	⇑P	PKPdf	16 56 03.3	+0.4		
	baz=126								
E11A	Bogner Ranch,	126.09	31	⇓P	PKPdf	16 56 02.3	-0.5		
	baz=126								
LTIM	Timbered Crate	126.16	39	P	PKPdf	16 56 03.2	+0.2		
GASB	Alder Springs	126.17	42	⇓P	PKPdf	16 56 03.8	+0.7		
	baz=126								
J07A	Hines	126.24	36	⇓P	PKPdf	16 56 03.6	+0.5		
	baz=126								
HOPS	Hopland	126.26	43	⇑P	PKPdf	16 56 03.8	+0.5		
	baz=126								
HOPS	Hopland	126.26	43	*e*PKPdf	PKPdf	16 56 03.5	+0.2		
M05C	Lookout	126.28	39	⇑P	PKPdf	16 56 03.5	+0.3		
	baz=126								
G10A	Bishop Farm, J	126.30	33	⇑P	PKPdf	16 56 02.4	-0.7		
	baz=126								
I08A	Drewsey	126.35	35	⇓P	PKPdf	16 56 03.3	0.0		
	baz=126								
C14A	Swan Lake	126.36	29	⇑P	PKPdf	16 56 02.8	-0.4		
	baz=126								
E12A	Beaver Dam Sad	126.39	31	⇑P	PKPdf	16 56 03.0	-0.3		
	baz=126								
H09A	Durkee	126.40	34	⇑P	PKPdf	16 56 03.2	-0.1		
	baz=126								
F11A	Grangeville	126.43	32	⇓P	PKPdf	16 56 02.8	-0.6		
	baz=126								
BMO	Blue Mountains	126.48	33	PKIKP	PKPdf	16 56 03.3	-0.2		
BMO	Blue Mountains	126.48	33	*e*PKPdf	PKPdf	16 56 02.6	-0.9		
D13A	Huson	126.49	30	⇓P	PKPdf	16 56 03.1	-0.3		
	baz=126								
MOD	Modoc	126.50	38	⇑P	PKPdf	16 56 03.8	+0.2		
	baz=126								
MOD	Modoc	126.50	38	*e*PKPdf	PKPdf	16 56 03.8	+0.2		
K07A	Rock Creek Ran	126.68	37	⇓P	PKPdf	16 56 04.4	+0.4		
	baz=126								
G11A	Walters Elk Ra	126.69	32	⇑P	PKPdf	16 56 03.7	-0.2		
	baz=126								
J08A	Circle Bar Ran	126.74	36	⇑P	PKPdf	16 56 04.6	+0.6		
	baz=126								
MNRC	McLaughlin Nat	126.74	42	⇑P	PKPdf	16 56 04.6	+0.3		
	baz=126								
M06C	Likely Place G	126.78	39	⇑P	PKPdf	16 56 04.5	+0.3		
	baz=127								
I09A	Lost Marbles R	126.79	35	⇓P	PKPdf	16 56 04.5	+0.3		
	baz=127								
NSHM	Saint Helena R	126.81	43	*e*PKPdf	PKPdf	16 56 04.7	+0.3		
MCCM	Marconi Confer	126.81	43	⇑P	PKPdf	16 56 04.3	0.0		
	baz=127								
MCCM	Marconi Confer	126.81	43	*e*PKPdf	PKPdf	16 56 04.6	+0.3		
O04C	Chester	126.88	40	⇓P	PKPdf	16 56 04.3	-0.1		
	baz=127								
MSO	Missoula	126.93	30	*e*PKPdf	PKPdf	16 56 03.2	-1.1		
ELFS	Eagle Lake Fie	126.95	40	⇑P	PKPdf	16 56 04.9	+0.4		
	baz=127								
FARB	Farallon Islan	126.95	44	⇑P	PKPdf	16 56 04.7	+0.1		
	baz=127								
H10A	Noah's Angus R	126.95	33	⇑P	PKPdf	16 56 04.2	-0.3		
	baz=127								
D14A	Greenough	126.96	29	⇑P	PKPdf	16 56 03.7	-0.7		
	baz=127								
F12A	Elk City	126.99	31	⇓P	PKPdf	16 56 04.5	0.0		
	baz=127								
CVS	Carmenet Viney	127.00	43	⇓P	PKPdf	16 56 05.0	+0.3		
	baz=127								
L07A	Adell	127.02	37	⇓P	PKPdf	16 56 05.1	+0.4		
	baz=127								
ORV	Orrville	127.02	41	⇓P	PKPdf	16 56 04.3	-0.4		
	baz=127								
E13A	Victor	127.07	30	⇑P	PKPdf	16 56 04.4	-0.2		
	baz=127								
K08A	Mann Creek Ran	127.11	36	⇓P	PKPdf	16 56 05.3	+0.6		
	baz=127								
J09A	Fry Pan Ranch,	127.16	35	⇓P	PKPdf	16 56 05.2	+0.3		
	baz=127								
O05C	Quincy	127.18	40	⇓P	PKPdf	16 56 05.1	+0.1		
	baz=127								
WVOR	Wild Horse Val	127.20	37	*e*PKiKP	PKPdf	16 56 05.5	+0.5		
WVOR	Wild Horse Val	127.20	37	*e*PKPdf	PKPdf	16 56 05.0	+0.1		
I10A	Payette	127.24	34	⇓P	PKPdf	16 56 05.3	+0.3		
	baz=127								
H11A	Donnelly	127.28	33	⇓P	PKPdf	16 56 05.2	+0.1		
	baz=127								
E14A	Clinton	127.44	30	⇑P	PKPdf	16 56 05.2	-0.1		
	baz=127								
N06A	Buffalo Meadow	127.44	39	⇓P	PKPdf	16 56 06.0	+0.5		
	baz=127								
F13A	Darby	127.44	31	⇑P	PKPdf	16 56 05.1	-0.2		
	baz=127								
D15A	Lincoln	127.47	29	⇑P	PKPdf	16 56 05.6	+0.3		
	baz=127								
M07A	Soldier Meadow	127.49	38	⇑P	PKPdf	16 56 06.1	+0.5		
	baz=127								
L08A	Fields	127.52	37	⇓P	PKPdf	16 56 06.4	+0.8		
	baz=127								
K09A	Rome	127.58	36	⇓P	PKPdf	16 56 06.5	+0.8		
	baz=127								
BEKR	Beckwourth	127.59	40	⇓P	PKPdf	16 56 06.5	+0.7		
	baz=127								
BDM	Black Diamond	127.60	43	⇑P	PKPdf	16 56 06.6	+0.7		
	baz=127								
JRSC	Jasper Ridge	127.62	44	⇓P	PKPdf	16 56 06.2	+0.3		
	baz=127								
SCHQ	Schefferville	127.66	351	PKP	PKPdf	16 56 06.0	+0.5		
	comp=Z,18nm,0.9s,baz=54,slow=2.5,SNR=9.6								
SCHQ				PP	PP	16 58 08.0	+1.8		
	comp=Z,9.4nm,0.7s,baz=344,slow=3.6,SNR=3.9								
SCHQ	Schefferville	127.66	351	PKP	PKPdf	16 56 06.0	+0.5		
SCHQ				PP	PP	16 58 08.0	+1.8		
J10A	Berg Farm, Mel	127.68	35	⇓P	PKPdf	16 56 06.0	+0.2		
	baz=127								
P05C	Yuba Gap, Truc	127.74	41	⇓P	PKPdf	16 56 06.3	+0.2		
	baz=128								
O06A	Flanigan	127.77	40	⇓P	PKPdf	16 56 06.4	+0.2		
	baz=128								
WENL	Wente Vineyard	127.84	43	⇓P	PKPdf	16 56 06.9	+0.5		
	baz=128								
E15A	Deer Lodge	127.85	29	⇑P	PKPdf	16 56 06.3	+0.3		
	baz=128								
LAVA	Lava Cap Winer	127.94	42	⇑P	PKPdf	16 56 06.7	+0.2		
	baz=128								
N07B	Gerlach	127.96	38	⇓P	PKPdf	16 56 07.1	+0.6		
	baz=128								
G13A	Cobalt	127.97	31	⇓P	PKPdf	16 56 06.2	-0.2		
	baz=128								
P06A	Stead Airport,	128.00	40	⇑P	PKPdf	16 56 06.9	+0.4		
	baz=128								
H12A	Diamond D Ranc	128.00	32	⇑P	PKPdf	16 56 06.9	+0.5		
	baz=128								
EGMT	Eagleton	128.01	26	*e*PKPdf	PKPdf	16 56 06.5	+0.2		
L09A	Wilkinson Ranc	128.02	36	⇓P	PKPdf	16 56 06.8	+0.3		
	baz=128								
K10A	MacKenzie Ranc	128.03	35	⇑P	PKPdf	16 56 06.7	+0.2		
	baz=128								
MFID	Camas Ranch	128.22	34	⇑P	PKPdf	16 56 07.2	+0.3		
	baz=128								
G14A	Jackson	128.26	31	⇓P	PKPdf	16 56 07.4	+0.5		
	baz=128								
WCN	Washoe City	128.29	40	⇓P	PKPdf	16 56 07.6	+0.4		
	baz=128								
PAHR	Pah Rah Range	128.31	40	*e*PKPdf	PKPdf	16 56 07.6	+0.5		
H13A	Challis	128.31	32	⇑P	PKPdf	16 56 07.4	+0.3		
	baz=128								
F15A	Butte	128.34	30	⇑P	PKPdf	16 56 07.3	+0.2		
	baz=128								
O07A	Toulon	128.37	39	⇑P	PKPdf	16 56 07.6	+0.3		
	baz=128								
R05C	Kirkwood Meado	128.41	41	⇑P	PKPdf	16 56 07.8	+0.4		
	baz=128								
PACP	Pacheco Peak	128.48	44	⇑P	PKPdf	16 56 08.2	+0.6		
	baz=128								
N08A	GE Springer Mi	128.48	38	⇑P	PKPdf	16 56 08.2	+0.7		
	baz=128								
SAO	San Andreas Ge	128.49	44	*e*PKiKP	PKPdf	16 56 07.7	+0.1		
K11A	Parker Ranch,	128.51	35	⇓P	PKPdf	16 56 08.2	+0.8		
	baz=128								
M09A	Marrel Ranch,	128.51	37	⇓P	PKPdf	16 56 08.2	+0.7		
	baz=128								
CMB	Columbia Colle	128.56	42	⇑P	PKPdf	16 56 08.1	+0.4		
	baz=128								
CMB	Columbia Colle	128.56	42	*e*PKPdf	PKPdf	16 56 08.2	+0.5		
DLMT	Dillon	128.62	30	*e*PKPdf	PKPdf	16 56 08.1	+0.5		
L10A	Juniper Basin	128.69	36	⇓P	PKPdf	16 56 08.4	+0.6		
	baz=128								
J12A	Stokes Ranch,	128.73	34	⇓P	PKPdf	16 56 08.6	+0.8		
	baz=128								
H14A	Leadore	128.74	31	⇓P	PKPdf	16 56 08.0	+0.2		
	baz=128								
N09A	Rock Creek Ran	128.81	38	⇑P	PKPdf	16 56 09.1	+1.0		
	baz=129								
G15A	Dillon	128.81	30	⇑P	PKPdf	16 56 08.5	+0.6		
	baz=129								
I13A	Wildhorse Cree	128.82	33	⇓P	PKPdf	16 56 08.7	+0.7		
	baz=129								
BOZ	Bozeman (W)	128.90	29	*e*PKiKP	PKPdf	16 56 08.7	+0.6		
BOZ	Bozeman (W)	128.90	29	*e*PKPdf	PKPdf	16 56 08.1	0.0		
HLID	Hailey	128.90	33	⇑P	PKPdf	16 56 09.0	+0.8		
	baz=129								
HLID	Hailey	128.90	33	*e*PKPdf	PKPdf	16 56 08.5	+0.3		
R06C	Coleville	128.92	41	⇓P	PKPdf	16 56 09.0	+0.7		
	baz=129								
S05C	Merced	128.96	43	⇑P	PKPdf	16 56 09.0	+0.5		
	baz=129								
M10A	I.L. Ranch, Tu	129.00	36	⇑P	PKPdf	16

baz=130
O11A Cowboy Ranch, 130.38 37 ⇑P PKPdf 16 56 11.8 +0.7
baz=130
RLMT Red Lodge 130.42 28 *e*PKPdf PKPdf 16 56 11.9 +0.9
M13A Montello 130.48 35 ⇑P PKPdf 16 56 11.8 +0.5
baz=130
K15A Arbon 130.51 33 ⇑P PKPdf 16 56 11.6 +0.4
baz=130
L14A Malta 130.56 34 ⇓P PKPdf 16 56 11.7 +0.3
baz=130
LAO LASA Array 130.56 25 *e*PKPdf PKPdf 16 56 11.2 -0.1
PKM Peak Mountain 130.57 45 ⇑P PKPdf 16 56 12.2 +0.6
baz=130
J16A Bone 130.59 31 ⇑P PKPdf 16 56 11.9 +0.5
baz=130
TPH Tonopah 130.62 40 *e*PKIKP PKPdf 16 56 12.7 +1.1
R09A Tonopah 130.62 40 ⇑P PKPdf 16 56 12.0 +0.4
baz=130
P11A Circle Ranch, 130.67 38 ⇑P PKPdf 16 56 12.2 +0.5
baz=130
RRI2 Red Ridge 130.69 31 *e*PKPdf PKPdf 16 56 11.7 +0.1
MOOW Moose Ponds 130.70 30 *e*PKPdf PKPdf 16 56 11.6 0.0
Q10A Clear Creek Ra 130.71 39 ⇑P PKPdf 16 56 12.0 +0.3
baz=130
TPAW Teton Pass 130.78 31 *e*PKPdf PKPdf 16 56 11.5 -0.3
N13A Wendover, West 130.78 36 ⇓P PKPdf 16 56 12.3 +0.4
baz=130
S09A Goldfield 130.82 41 ⇑P PKPdf 16 56 12.6 +0.6
baz=131
O12A Currie 130.84 37 ⇓P PKPdf 16 56 12.4 +0.4
baz=131
M14A Sheep Mountain 130.85 34 ⇓P PKPdf 16 56 12.5 +0.6
baz=131
LOHW Long Hollow 130.87 30 *e*PKPdf PKPdf 16 56 11.8 -0.1
SNOW Snow King Moun 130.90 31 *e*PKPdf PKPdf 16 56 12.7 +0.7
K16A Soda Springs 130.91 32 ⇓P PKPdf 16 56 12.0 0.0
baz=131
REDW Red Top Meadow 130.92 31 *e*PKPdf PKPdf 16 56 11.8 -0.2
ULM Lac du Bonnet 130.95 15 PKP PKPdf 16 56 10.6 -1.3
comp=Z,36nm,0.7s,baz=354,slow=2.7,SNR=23
ULM SKPbc SKPbc 16 59 31.3 -0.8
comp=Z,7.2nm,0.6s,baz=14,slow=4.1,SNR=4.7
ULM Lac du Bonnet 130.95 15 PKP PKPdf 16 56 10.6 -1.3
ULM SKPbc SKPbc 16 59 31.3 -0.8
CWC Cottonwood Cre 130.97 43 ⇑P PKPdf 16 56 12.6 +0.3
baz=131
HVU Hansel Valley 130.99 34 PKIKP PKPdf 16 56 12.5 +0.3
HVU Hansel Valley 130.99 34 *e*PKPdf PKPdf 16 56 12.3 +0.1
L15A Malad City 131.05 33 ⇑P PKPdf 16 56 12.5 +0.2
baz=131
R10A Warm Springs 131.09 40 ⇑P PKPdf 16 56 13.0 +0.5
baz=131
S10A Tonopah Range, 131.11 40 ⇓P PKPdf 16 56 13.4 +0.8
baz=131
ISA Isabella 131.12 44 PKIKP PKPdf 16 56 11.8 -0.8
ISA *e* 16 56 26.4
ISA Isabella 131.12 44 ⇓P PKPdf 16 56 13.1 +0.4
baz=131
ISA Isabella 131.12 44 PKPdf PKPdf 16 56 11.7 -1.0
GRAC Grapevine Rang 131.13 42 ⇑P PKPdf 16 56 13.3 +0.7
baz=131
Q11A Duckwater 131.16 39 ⇓P PKPdf 16 56 13.1 +0.5
baz=131
P12A McGill 131.24 37 ⇑P PKPdf 16 56 13.4 +0.6
baz=131
N14A Grayback Hills 131.37 35 ⇑P PKPdf 16 56 13.5 +0.5
baz=131
M15A Larsen Ranch, 131.38 34 ⇑P PKPdf 16 56 13.3 +0.3
baz=131
BGU Big Grassy Mou 131.41 35 *e*PKPdf PKPdf 16 56 12.8 -0.2
SPUT South Promonto 131.49 34 *e*PKPdf PKPdf 16 56 11.8 -1.4
R11A Troy Canyon, C 131.50 39 ⇓P PKPdf 16 56 13.9 +0.6
baz=131
Q12A Willow Creek R 131.55 38 ⇓P PKPdf 16 56 13.7 +0.4
baz=131
MPMC Manual Prospec 131.57 43 ⇓P PKPdf 16 56 14.1 +0.6
baz=131
N15A Stansbury Isla 131.72 34 ⇑P PKPdf 16 56 13.9 +0.3
baz=132
LRMC Laurel Mountai 131.75 43 ⇓P PKPdf 16 56 14.3 +0.4
baz=132
HWUT Hardware Ranch 131.77 33 *e*PKPdf PKPdf 16 56 13.7 0.0
FURC Furnace Creek, 131.77 42 ⇑P PKPdf 16 56 14.0 +0.2
baz=132
P13A Bates Ranch, G 131.79 37 ⇓P PKPdf 16 56 14.1 +0.3
baz=132
EDW2 Edwards Air Fo 131.87 44 ⇓P PKPdf 16 56 14.5 +0.4
baz=132
TPNV Topopah Spring 131.90 41 *e*PKIKP PKPdf 16 56 14.5 +0.4
PDAR Pinedale Array 132.01 31 PKhKP 16 55 57.2
comp=Z,0.6nm,0.8s,baz=0.0,slow=0.0,SNR=4.0
PDAR PKP PKPdf 16 56 13.2 -0.9
comp=Z,6.1nm,0.7s,baz=96,slow=3.0,SNR=5.6
PDAR PP PP 16 58 36.8 +1.7
comp=Z,3.2nm,1.0s,baz=304,slow=3.4,SNR=3.9
PDAR SKPbc SKPbc 16 59 35.7 -0.5
comp=Z,8.4nm,0.8s,baz=29,slow=0.6,SNR=10
PDAR Pinedale Array 132.01 31 PKP PKPdf 16 56 13.2 -0.9
PDAR PP PP 16 58 36.8 +1.7
PDAR SKPbc SKPbc 16 59 35.7 -0.5
DUG Dugway 132.02 35 *e*PKPdf PKPdf 16 56 14.7 +0.5
Q13A Wheeler Ranch, 132.10 37 ⇑P PKPdf 16 56 14.6 +0.2
baz=132
R12A Pony Springs, 132.13 38 ⇑P PKPdf 16 56 14.6 +0.1
baz=132
U10A Ash Meadows, A 132.15 42 ⇑P PKPdf 16 56 15.4 +0.8
baz=132
O15A The Old Anders 132.16 35 ⇑P PKPdf 16 56 14.9 +0.4
baz=132
P14A Drum Mountains 132.26 36 ⇑P PKPdf 16 56 15.3 +0.6
baz=132
CTU Camp Tracy 132.29 34 *e*PKPdf PKPdf 16 56 15.6 +0.9
N16A Rees Ranch, Co 132.33 34 ⇓P PKPdf 16 56 15.5 +0.8
baz=132
T11A Corn Creek, Al 132.40 40 ⇓P PKPdf 16 56 15.8 +0.8
baz=132
S12A Delamar Landin 132.41 39 ⇑P PKPdf 16 56 16.1 +1.1
baz=132
GSC Goldstone 132.46 43 PKIKP PKPdf 16 56 15.6 +0.4
GSC Goldstone 132.46 43 ⇑P PKPdf 16 56 15.8 +0.6
baz=132
GSC Goldstone 132.46 43 PKPdf PKPdf 16 56 14.9 -0.3
SHOC Shoshone 132.48 42 ⇑P PKPdf 16 56 15.9 +0.7
baz=132
Q14A Sevier Lake (B 132.53 37 ⇓P PKPdf 16 56 15.6 +0.4
baz=132
NLU North Lily Min 132.60 35 *e*PKPdf PKPdf 16 56 16.0 +0.7
R13A O'Grain Ranch, 132.62 38 ⇓P PKPdf 16 56 15.8 +0.4
baz=132
N17A Moffit Pass 132.63 33 ⇑P PKPdf 16 56 15.5 +0.1
baz=132
P15A Leamington 132.74 36 ⇑P PKPdf 16 56 15.9 +0.4
baz=132
AGMN Agassiz Refuge 132.75 16 *e*PKPdf PKPdf 16 56 13.9 -1.5
O16A Springville 132.76 34 ⇓P PKPdf 16 56 16.0 +0.4
baz=132
MPU Maple Canyon 132.81 35 PKPdf PKPdf 16 56 15.2 -0.5
TUQ Turquoise Moun 132.98 42 ⇑P PKPdf 16 56 16.8 +0.6
baz=133
T12A Moapa 133.03 40 ⇓P PKPdf 16 56 16.8 +0.6
baz=133
HEC Hector,Ludlow 133.04 43 ⇓P PKPdf 16 56 17.2 +0.9
baz=133
Q15A Fillmore 133.05 36 ⇑P PKPdf 16 56 17.0 +0.8
baz=133
S13A Holt Ranch, En 133.05 39 ⇑P PKPdf 16 56 17.3 +1.0
baz=133
MURC Murrieta 133.09 45 ⇑P PKPdf 16 56 17.0 +0.5
baz=133
O17A Robinson Place 133.19 34 ⇑P PKPdf 16 56 17.2 +0.7
baz=133
N18A Larsen Ranch, 133.23 32 ⇑P PKPdf 16 56 16.8 +0.4
baz=133
U12A Valley of Fire 133.32 40 ⇑P PKPdf 16 56 17.2 +0.5
baz=133
T13A Saint George 133.37 39 ⇑P PKPdf 16 56 17.4 +0.6
baz=133
S14A Cedar City 133.37 38 ⇑P PKPdf 16 56 17.5 +0.7
baz=133
GMRC Granite Mounta 133.53 43 ⇓P PKPdf 16 56 18.0 +0.8
baz=133
V12A Nelson 133.53 41 ⇓P PKPdf 16 56 17.9 +0.7
baz=133
TMUT Trail Mountain 133.54 35 *e*PKPdf PKPdf 16 56 17.9 +0.8
RSSD Black Hills 133.54 25 *e*PKHKP 16 56 02.3
RSSD *e* 16 56 16.8
O18A Roosevelt 133.55 33 ⇓P PKPdf 16 56 17.7 +0.6
baz=133
N19A John Jarvie Ra 133.55 32 ⇑P PKPdf 16 56 17.3 +0.2
baz=133
PFO Pinyon Flat Ob 133.62 45 PKIKP PKPdf 16 56 18.6 +1.2
PFO Pinyon Flat Ob 133.62 45 ⇑P PKPdf 16 56 17.7 +0.3
baz=133
PFO Pinyon Flat Ob 133.62 45 *e*PKPdf PKPdf 16 56 18.5 +1.0
P17A Butcher Ranch, 133.69 35 ⇑P PKPdf 16 56 17.8 +0.5
baz=133
U13A Pakoon Wash 133.70 40 ⇑P PKPdf 16 56 17.9 +0.4
baz=134
BELC Belle Mtn. 133.72 44 ⇑P PKPdf 16 56 18.2 +0.6
baz=134
LDFC Landfair 133.73 42 *e*PKPdf PKPdf 16 56 18.5 +0.9
Q16A Castle Valley 133.81 35 ⇑P PKPdf 16 56 18.2 +0.6
baz=134
P18A Preston Nutter 133.86 34 ⇑P PKPdf 16 56 18.3 +0.6
baz=134
T14A Hurricane 133.86 39 ⇓P PKPdf 16 56 18.4 +0.7
baz=134
S15A Panguitch 133.92 38 ⇑P PKPdf 16 56 18.6 +0.8
baz=134
BAR Barrett 133.95 46 *e*PKPdf PKPdf 16 56 18.6 +0.5
RWWY Rawlins 133.98 30 *e*PKPdf PKPdf 16 56 17.4 -0.5
O19A Miners Draw (B 134.00 33 ⇑P PKPdf 16 56 18.2 +0.3
baz=134
MONP Monument Peak 134.02 46 ⇑P PKPdf 16 56 19.0 +0.8
baz=134
V13A Grand Canyon W 134.02 41 ⇓P PKPdf 16 56 18.7 +0.6
baz=134
R16A Teasdale 134.05 36 ⇓P PKPdf 16 56 19.0 +0.9
baz=134
SRU San Rafael 134.06 35 PKIKP PKPdf 16 56 18.5 +0.4
SRU San Rafael 134.06 35 ⇓P PKPdf 16 56 18.9 +0.8
baz=134
SRU San Rafael 134.06 35 *e*PKPdf PKPdf 16 56 18.1 0.0
EYMN Ely 134.12 12 *e*PKPdf PKPdf 16 56 17.2 -0.7
U14A Mt Trumbull 134.20 40 ⇑P PKPdf 16 56 19.4 +1.0
baz=134
IRM Iron Mountain 134.22 43 ⇓P PKPdf 16 56 19.5 +1.0
baz=134
NEE2 Needles Airpor 134.24 42 ⇓P PKPdf 16 56 19.0 +0.4
baz=134
Q18A Rafter H Ranch 134.28 35 ⇑P PKPdf 16 56 19.2 +0.7
baz=134
BC3 Big Chuckw Mtn 134.29 44 ⇑P PKPdf 16 56 19.5 +0.8
baz=134
T15A Red Dirt Ranch 134.32 38 ⇓P PKPdf 16 56 19.3 +0.7
baz=134
S16A Weppner Ranch, 134.35 37 ⇓P PKPdf 16 56 19.3 +0.7
baz=134
DVTC Desert V Tower 134.37 46 ⇓P PKPdf 16 56 19.3 +0.4
baz=134
R17A Hanksville Air 134.42 36 ⇑P PKPdf 16 56 19.4 +0.7
baz=134
SWSC Sam W. Stewart 134.44 45 ⇑P PKPdf 16 56 19.5 +0.5
baz=134
W13A Hualapai Mount 134.53 41 ⇑P PKPdf 16 56 20.3 +1.2
baz=134
P19A Cripple Cowboy 134.55 33 ⇓P PKPdf 16 56 19.7 +0.8
baz=134
V14A Boquillas Ranc 134.72 40 ⇓P PKPdf 16 56 20.5 +1.1
baz=134
U15A North Rim 134.75 39 ⇓P PKPdf 16 56 20.5 +1.0
baz=134
PDMCI Parker Dam,Lak 134.83 43 ⇓P PKPdf 16 56 20.5 +0.8
baz=135
X13A Yucca 134.87 42 ⇑P PKPdf 16 56 20.4 +0.7
baz=135
Q19A Hogan Spring (134.87 34 ⇑P PKPdf 16 56 19.9 +0.3
baz=135
Y12C Blythe 134.88 43 ⇑P PKPdf 16 56 20.6 +0.8
baz=135
S17A Black Ridge (B 134.88 37 ⇑P PKPdf 16 56 20.6 +0.9
baz=135
T16A Glen Canyon Da 134.89 38 ⇑P PKPdf 16 56 20.6 +0.9
baz=135
R18A Canyonlands Na 134.91 35 ⇓P PKPdf 16 56 20.3 +0.6
baz=135
W14A Seligman 134.99 41 ⇑P PKPdf 16 56 20.8 +0.8
baz=135
GLA Glamis 135.06 44 ⇓P PKPdf 16 56 20.9 +0.8
baz=135
GLA Glamis 135.06 44 *e*PKPdf PKPdf 16 56 20.7 +0.6
PHWY Pilot Hill 135.13 29 *e*PKPdf PKPdf 16 56 19.4 -0.7
V15A Kaibab Nationa 135.21 39 ⇑P PKPdf 16 56 21.3 +1.0
baz=135
T17A Navajo Res., N 135.30 37 ⇑P PKPdf 16 56 21.6 +1.1
baz=135
Y13A Salome 135.32 43 ⇑P PKPdf 16 56 21.4 +0.8
baz=135
S18A Hurst Farm, BI 135.32 36 ⇑P PKPdf 16 56 21.0 +0.5
baz=135
R19A Curley Farm, L 135.34 35 ⇓P PKPdf 16 56 21.4 +0.9
baz=135
PV10 Paradox Valley 135.40 34 *e*PKPdf PKPdf 16 56 22.1 +1.5
W15A Williams 135.54 40 ⇑P PKPdf 16 56 22.1 +1.1
baz=135
X14A Yava 135.57 42 ⇓P PKPdf 16 56 22.2 +1.2
baz=135
PLCA Paso Flores 135.61 189 PKP PKPdf 16 59 19.1 -1.8
comp=Z,7.0nm,0.9s,baz=192,slow=0.9,SNR=3.8
PLCA SKPbc SKPbc 16 59 48.2 -0.1
comp=Z,5.2nm,1.0s,baz=177,slow=4.6,SNR=3.9
PLCA Paso Flores 135.61 189 PKIKP PKPdf 16 56 19.1 -1.9
PLCA pmax pmax
comp=Z,7.0nm,1.0s
PLCA pmax pmax
comp=N,5.0nm,1.0s
PLCA Paso Flores 135.61 189 PKP PKPdf 16 56 19.1 -1.8
PLCA SKPbc SKPbc 16 59 48.2 -0.1
U17A Shonto 135.65 38 ⇑P PKPdf 16 56 22.1 +1.0
baz=135
U16A Tuba City 135.66 38 ⇓P PKPdf 16 56 22.2 +1.1
baz=135
T18A Mexican Hat 135.77 36 ⇓P PKPdf 16 56 22.1 +0.7
baz=136
S19A Harvey Farm, M 135.78 35 ⇑P PKPdf 16 56 22.6 +1.2
baz=136
Y14A Wickenburg 135.81 42 ⇓P PKPdf 16 56 22.5 +1.0
baz=136
PV01 Paradox Valley 135.84 34 *e*PKPdf PKPdf 16 56 21.9 +0.4
WUAZ Wupatki 135.90 39 *e*PKPdf PKPdf 16 56 22.7 +1.0
113A Mohawk Valley, 135.96 44 ⇑P PKPdf 16 56 22.3 +0.4
baz=136
X15A Humboldt 135.99 41 ⇓P PKPdf 16 56 22.7 +0.9
baz=136
W16A Flagstaff 136.07 40 ⇑P PKPdf 16 56 23.1 +1.2
baz=136
Z14A Wintersburg 136.18 43 ⇑P PKPdf 16 56 23.0 +0.7
baz=136
Y15A Casa Rosa Ranc 136.25 42 ⇑P PKPdf 16 56 23.1 +0.8
baz=136
U18A Rough Rock, Ch 136.25 37 ⇓P PKPdf 16 56 23.2 +1.0
baz=136
COWI Conover 136.35 11 *e*PKPpre 16 56 14.2
T19A Beclabito 136.47 36 ⇑P PKPdf 16 56 23.4 +0.7
baz=136
MVCO Mesa Verde 136.52 35 *e*PKPdf PKPdf 16 56 23.2 +0.5
X16A Lo Mia Camp, P 136.55 41 ⇑P PKPdf 16 56 23.8 +0.9
baz=136
W17A Winslow 136.60 39 ⇓P PKPdf 16 56 24.0 +1.0
baz=136
ECSD EROS,Sioux Fal 136.66 19 *e*PKPpre 16 56 10.3
ECSD *e*PKPdf PKPdf 16 56 22.2 -0.6
W18A Ganado 136.68 38 ⇑P PKPdf 16 56 24.2 +1.1
baz=136
Y16A Circle Bar Ran 136.85 41 ⇑P PKPdf 16 56 24.3 +0.9
baz=137
X17A Forest Lakes 137.01 40 ⇓P PKPdf 16 56 24.6 +0.8
baz=137
115A Sonoran Desert 137.06 43 ⇑P PKPdf 16 56 24.6 +0.7
baz=137
214A Organ Pipe Nat 137.09 44 ⇑P PKPdf 16 56 24.5 +0.6
baz=137
W18A Petrified Fore 137.19 38 ⇓P PKPdf 16 56 24.9 +0.8
baz=137
V19A Window Rock 137.22 37 ⇓P PKPdf 16 56 25.2 +1.1
baz=137
Z16A Peralta Trail, 137.22 42 ⇓P PKPdf 16 56 25.0 +0.9
baz=137
Y17A Roosevelt 137.38 41 ⇑P PKPdf 16 56 25.5 +1.1
baz=137
W19A Sanders 137.41 38 ⇓P PKPdf 16 56 25.6 +1.1
baz=137
X18A Snowflake 137.43 39 ⇓P PKPdf 16 56 25.6 +1.1
baz=137
116A Eloy 137.50 43 ⇑P PKPdf 16 56 25.9 +1.2
baz=137
SDCO Great Sand Dun 137.79 32 *e*PKPdf PKPdf 16 56 25.3 +0.2
Y18A Canyon Day Jun 137.86 40 ⇑P PKPdf 16 56 26.4 +1.1
baz=138
Z17A San Carlos Hig 137.87 41 ⇑P PKPdf 16 56 26.5 +1.1
baz=138
X19A St. Johns 137.91 39 ⇓P PKPdf 16 56 26.6 +1.2
baz=138
216A Three Points, 138.00 43 ⇓P PKPdf 16 56 26.7 +1.1
baz=138
117A Oracle 138.14 42 ⇑P PKPdf 16 56 26.9 +1.1
baz=138
Y19A Nutrioso 138.24 39 ⇑P PKPdf 16 56 27.1 +1.1
baz=138
TUC Tucson 138.27 42 *e*PKIKP PKPdf 16 56 26.7 +0.6
Z18A Geronimo 138.29 41 ⇑P PKPdf 16 56 26.9 +0.8
baz=138
217A Green Valley 138.57 43 ⇑P PKPdf 16 56 27.2 +0.5
baz=138
118A Homack Ranch, 138.61 41 ⇑P PKPdf 16 56 27.3 +0.6
baz=138
Z19A T-Link Ranch, 138.66 40 ⇑P PKPdf 16 56 27.3 +0.5
baz=138
119A Ashpeak Ranch, 138.97 41 ⇓P PKPdf 16 56 28.2 +0.8
baz=139
218A Dragoon 138.97 42 ⇑P PKPdf 16 56 28.2 +0.8
baz=139
JFWS Jewell Farm 139.18 13 PKIKP PKPdf 16 56 26.9 -0.6
JFWS Jewell Farm 139.18 13 *e*PKPdf PKPdf 16 56 26.8 -0.7
ANMO Albuquerque 139.28 36 *e*PKHKP 16 56 20.1
ANMO *e* 16 56 28.3
ANMO MLR MLR
comp=Z,1μm,21.0s
318A Bisbee 139.33 43 ⇓P PKPdf 16 56 28.9 +0.8
baz=139
219A White Tail Can 139.48 42 ⇓P PKPdf 16 56 29.2 +0.8
baz=139
319A Douglas 139.85 42 ⇓P PKPdf 16 56 30.0 +1.0
baz=140
KSU1 Kansas State U 140.76 22 *e*PKPpre 16 56 24.1
BINY Binghamton 141.13 357 *e*PKPdf PKPdf 16 56 30.8 -0.2
AMTX Amarillo 141.97 31 *e*PKPpre PKPdf 16 56 29.0 -3.8
ACSO Alum Creek Sta 142.97 5 *e*PKPpre PKPdf 16 56 29.5 -4.9
MVL Millersville 143.34 357 *e*PKPpre 16 56 22.5
CCM Cathedral Cave 143.50 17 *e*PKPpre PKPdf 16 56 31.6 -3.8
WMOK Wichita Mounta 143.53 28 *e*PKHKP PKPdf 16 56 30.7 -4.8
MCWV Mont Chateau 143.73 1 *e*PKPpre PKPdf 16 56 32.1 -3.6
CFAA Coronel Fontan 143.94 195 PKP PKPdf 16 56 35.0 -1.3
comp=Z,2.7nm,0.6s,baz=176,slow=3.4,SNR=45
SDMD Soldier's Deli 143.95 358 *e*PKPpre PKPdf 16 56 32.6 -3.5
CPUP Villa Florida 144.06 214 PKP PKPdf 16 56 35.5 -1.1
comp=Z,24nm,0.8s,baz=106,slow=2.4,SNR=34
CPUP Villa Florida 144.06 214 PKIKP PKPdf 16 56 35.6 -1.1
CPUP pmax pmax
comp=Z,24nm,0.8s
BDFB Brasilia 144.30 237 PKP PKPdf 16 56 36.6 -0.7
comp=Z,29nm,0.9s,baz=142,slow=5.3,SNR=23
BDFB Brasilia 144.30 237 PKIKP PKPdf 16 56 36.6 -0.7
BDFB pmax pmax
comp=Z,29nm,0.9s
WCI Wyandotte Cave 144.49 10 *e*PKIKP PKPdf 16 56 34.0 -3.1
TXAR Lajitas Array 144.86 40 PKP PKPdf 16 56 36.5 -1.5
comp=Z,87nm,0.7s,baz=280,slow=1.1,SNR=236
TXAR PP PP 16 59 50.9 -4.2
comp=Z,5.4nm,1.1s,baz=320,slow=3.7,SNR=4.1
TXAR SKPbc SKPbc 17 00 12.1 -1.3
comp=Z,4.7nm,0.7s,baz=318,slow=1.2,SNR=5.3
TXAR Lajitas Array 144.86 40 PKIKP PKPdf 16 56 36.5 -1.5
TXAR 16 59 50.9
TXAR pmax pmax
comp=Z,87nm,0.7s
TXAR pmax pmax
comp=Z,5.0nm,1.1s
TXAR pmax pmax
comp=N,5.0nm,0.7s
PARMO Parma 145.22 16 *e*PKP PKPdf 16 56 37.4 -1.0
GLAT Glass 145.71 15 *e*PKP PKPdf 16 56 39.1 -0.2
GNAR Gosnell 145.80 16 *e*PKPdf PKPdf 16 56 38.9 -0.5
MIAR Mount Ida 145.92 22 *e*PKPdf PKPdf 16 56 39.0 -0.6
HBAR Harrisburg 145.99 18 *e*PKPdf PKPdf 16 56 39.5 -0.3
HALT Halls 146.04 16 *e*PKPdf PKPdf 16 56 39.2 -0.6
BLA Blacksburg 146.15 2 *e*PKP2 PKPdf 16 56 40.1 +0.1
BLA Blacksburg 146.15 2 *e*PKPdf PKPdf 16 56 39.0 -1.0
WVT Waverly 146.20 13 PKP2 PKPdf 16 56 39.3 -0.8
WVT Waverly 146.20 13 *e*PKP PKPdf 16 56 39.2 -0.9
JCT Junction City 146.36 34 *e*PKP2 PKPdf 16 56 40.6 +0.1
MET Memphis--Engin 146.61 17 PKPdf PKPdf 16 56 41.3 +0.5
MAIG Mazatlaan 146.65 51 *i* P PKPab 16 56 43.2 -0.8
LCO Las Campanas 147.03 193 *e*PKPdf PKPdf 16 56 42.2 +0.5
LCO *e*PKPbc PKPbc 16 56 45.2 +1.4
OXF Oxford 147.33 16 *e*PKP2 PKPbc 16 56 43.5 -0.9
TKL Tuckaleechee C 147.40 8 PKPbc PKPdf 16 56 42.6 +0.5
comp=N,101nm,0.8s,baz=117,slow=2.4,SNR=49
TKL Tuckaleechee C 147.40 8 PKP2 PKPdf 16 56 42.6 +0.5
TKL pmax pmax
comp=Z,101nm,0.8s
TKL Tuckaleechee C 147.40 8 *e*PKPdf PKPdf 16 56 41.7 -0.4
SWET Sewanee 147.48 11 *e*PKPdf PKPdf 16 56 42.9 +0.6
CPCT Cooper Cave 147.50 9 *e*PKPdf PKPdf 16 56 42.2 -0.1
NATX Nacogdoches 147.90 26 *e*PKPdf PKPdf 16 56 43.2 +0.2
NATX *e*PKPbc PKPbc 16 56 46.0 -0.1
CNNC Cliffs of the 148.15 359 *e*PKPbc PKPbc 16 56 46.4 -0.3
BBSR BB Station 148.17 337 *e*PKPdf PKPdf 16 56 43.4 -0.1
BBSR *e*PKPbc PKPbc 16 56 46.6 -0.1
HKT Hockley 148.87 30 *e*PKIKP PKPdf 16 56 44.9 +0.2
HKT *e* 16 56 49.1
JSC Jenkinsville 149.02 4 *e*PKP2 PKPbc 16 56 48.3 -0.6
VBMS Vicksburg 149.11 20 *e*PKPbc PKPbc 16 56 48.6 -0.6
LRAL Lakeview Retre 149.36 14 *e*PKPbc PKPbc 16 56 48.7 -1.0
GOGA Godfrey 149.65 8 *e*PKPdf PKPdf 16 56 45.6 -0.3
GOGA *e*PKPbc PKPbc 16 56 50.0 -0.5
GOGA *e*PKPab PKPab 16 56 55.0 -0.6
KVTX Kingsville 149.67 35 *e*PKPbc PKPbc 16 56 51.9 +1.2
COW Cow Castle Cre 149.95 3 *e*PKPdf PKPdf 16 56 46.2 -0.1
COW *e*PKPbc PKPbc 16 56 50.9 -0.3
NHSC New Hope 150.25 2 *e*PKPbc PKPbc 16 56 51.5 -0.4
SFJM Santa Fe 150.75 52 *i* P PKPdf 16 56 53.2 -0.3
BRAL Brewton 151.27 15 *e*PKPdf PKPdf 16 56 48.9 +0.5
BRAL *e*PKPbc PKPbc 16 56 53.8 -0.6
LVC Limon Verde 152.58 200 *e*PKPdf PKPdf 16 56 52.2 +1.5
LVC *e*PKPbc PKPbc 16 56 59.3 +1.6
MOIG Morelia 152.64 52 *i* P PKPdf 16 56 51.3 +0.5
SIV San Ignacio 154.12 222 PKP PKPdf 16 56 53.5 +0.5
comp=Z,4.9nm,0.8s,baz=100,slow=2.8,SNR=21
SIV PKPbc PKPbc 16 57 00.2 -0.9
comp=Z,8.5nm,0.8s,baz=111,slow=3.5,SNR=17
SIV PKPab PKPab 16 57 15.2 +0.5
comp=Z,15nm,0.8s,baz=138,slow=5.3,SNR=9.8
DWPF Disney 155.13 6 *e*PKP PKPdf 16 56 54.6 +0.5
DWPF *e*PKPbc PKPdf 16 57 02.4 +8.3
DWPF *e*PKPab PKPab 16 57 17.0 -1.6
VHO Vista Hermosa 157.60 51 *i* P PKPdf 16 56 58.1 +0.5
LPAZ La Paz 157.96 208 PKP PKPdf 16 56 59.6 +1.6
comp=Z,7.0nm,1.0s,baz=82,slow=2.6,SNR=22
LPAZ PKPbc PKPdf 16 57 10.8 +13
comp=Z,8.8nm,0.9s,baz=97,slow=4.1,SNR=11
LPAZ PKPab PKPab 16 57 33.3 +2.2
comp=Z,27nm,1.5s,baz=243,slow=4.5,SNR=2.8
LPAZ La Paz 157.96 208 PKIKP PKPdf 16 56 59.6 +1.5
LPAZ 16 57 10.8
LPAZ 16 57 33.3
LPAZ pmax pmax
comp=Z,7.0nm,1.0s
LPAZ pmax pmax
comp=Z,9.0nm,0.9s
LPAZ pmax pmax
comp=Z,27nm,1.5s
CMIG Matias Romero 158.99 48 PKP PKPdf 16 56 59.0 -0.3
comp=Z,13nm,0.8s,baz=317,slow=1.8,SNR=18
CMIG PKPab PKPab 16 57 34.9 -0.8
comp=Z,11nm,0.8s,baz=295,slow=6.0,SNR=5.0
HUMP Col San Antoni 160.55 321 *e*PKPdf PKPdf 16 56 59.6 -1.5
TEIG Tepich 160.71 28 PKP PKPdf 16 57 01.1 -0.1
comp=Z,25nm,1.0s,baz=20,slow=5.1,SNR=8.2
TEIG PKPab PKPab 16 57 42.1 -0.9
comp=Z,7.5nm,0.8s,baz=338,slow=4.1,SNR=3.8
SDV Santo Domingo 170.20 305 PKP PKPdf 16 57 08.4 -0.8
comp=Z,7.1nm,0.3s,baz=218,slow=1.3,SNR=5.1
SDV PKPab PKPab 16 58 24.8 -0.4
comp=Z,12nm,0.4s,baz=172,slow=6.9,SNR=4.4
ROSC El Rosal 175.34 290 PKP PKPdf 16 57 10.3 -1.1
comp=Z,6.5nm,0.4s,baz=257,slow=4.8,SNR=8.0
OTAV Otavalo 177.01 185 *e*PKPdf PKPdf 16 57 12.2 +0.4

*ISCJB **12** 16:40:40.2±3.8, 14 35S×010.6×763.4W±02, h13km±26km, mb3.7/7, Error ellipse: s-maj=29.6km s-min=9.4km az=152.0*

*IDC **12** 16:40:40.1±1.0, 14 38S×76 33W, h0km, mb3.9/5, mb1 4.0/9, mb1mx4.0/18, mbtmp3.9/9, ML3.5/4, Error ellipse: s-maj=39.6km s-min=17.0km az=56.0*

*NEIC **12** 16:40:42.4±6.5, 14 38S×76 48W, h18km±40km, Error ellipse: s-maj=29.9km s-min=13.0km az=59.0*

ISC 12 16:40:42.3±4.1, 1430S±010×763W±02, h13km±27km, n23, σ0§94/24, mb3.7/7, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.37**	**346**	Pn		**Pn**		**16 41 19.9**	**-1.1**
	27nm,0.3s,baz=171,slow=12,SNR=28								
NNA				Sn		**Sn**		**16 41 48.4**	**-1.6**
	70nm,0.3s,baz=182,slow=8.9,SNR=6.6								
NNA	**Nana**	**2.37**	**346**	*e*Pn		**Pn**		**16 41 19.7**	**-1.2**
NNA				*e*S		**Sn**		**16 41 53.5**	**+3.4**
ARE	**Arequipa**	**5.07**	**116**	*e*P		**Pn**		**16 42 03.0**	**+5.0**
ARE				*e*S		**Sn**		**16 43 15.0**	**+19**
ATAH	**Atahualpa**	**7.56**	**344**	Pn		**Pn**		**16 42 33.1**	**+0.9**
	1.0nm,0.3s,baz=222,slow=7.7,SNR=4.0								
ATAH				Sn		**Sn**		**16 43 56.9**	**-1.0**
	1.2nm,0.3s,baz=197,slow=12,SNR=1.9								
LPAZ	**La Paz**	**8.08**	**105**	Pn		**Pn**		**16 42 44.8**	**+5.3**
	0.7nm,0.3s,baz=296,slow=9.2,SNR=17								
LPAZ	**La Paz**	**8.08**	**105**	*e*P		**Pn**		**16 42 44.5**	**+5.0**
LVC	**Limon Verde**	**10.80**	**141**	Pn		**Pn**		**16 43 17.3**	**+0.5**
	1.1nm,0.3s,baz=326,slow=10,SNR=8.4								
LVC				Sn		**Sn**		**16 45 14.0**	**-3.6**
	1.8nm,0.3s,baz=88,slow=22,SNR=9.2								
LVC				Lg				16 46 19.0	
	0.2nm,0.3s,baz=117,slow=17,SNR=4.2								
LVC	**Limon Verde**	**10.80**	**141**	*e*P		**Pn**		**16 43 16.8**	**0.0**
LVC				Sn		**Sn**		**16 45 14.0**	**-3.6**
LVC				Lg				16 46 19.0	
SIV	**San Ignacio**	**14.75**	**98**	Pn		**Pn**		**16 44 10.9**	**+0.2**
	0.1nm,0.3s,baz=267,slow=18,SNR=2.8								
CFAA	**Coronel Fontan**	**18.72**	**158**	P		**Pn**		**16 45 00.1**	**-1.0**
	0.0nm,0.3s,baz=297,slow=4.5,SNR=2.8								
CPUP	**Villa Florida**	**21.37**	**127**	P		**P**		**16 45 29.4**	**-0.3**
	0.8nm,0.5s,mb3.3,baz=295,slow=10,SNR=4.1								
PLCA	**Paso Flores**	**26.80**	**170**	P		**P**		**16 46 26.6**	**+4.5**
	0.6nm,0.7s,mb3.2,baz=342,slow=9.6,SNR=3.1								
TXAR	**Lajitas Array**	**50.82**	**329**	P		**P**		**16 49 43.0**	**+0.3**
	0.6nm,0.7s,mb3.6,baz=151,slow=8.6,SNR=7.8								
PDAR	**Pinedale Array**	**64.50**	**333**	P		**P**		**16 51 20.0**	**+1.2**
	0.3nm,0.6s,mb3.5,baz=124,slow=7.7,SNR=2.4								
NVAR	**Mina Array Bea**	**65.58**	**325**	P		**P**		**16 51 31.8**	**+5.9**
	0.4nm,0.6s,mb3.6,baz=149,slow=6.1,SNR=4.2								
DBIC	**Dimbokro**	**73.81**	**79**	P		**P**		**16 52 17.4**	**+0.2**
	1.9nm,0.6s,mb4.2,baz=244,slow=13,SNR=4.3								
DBIC	**Dimbokro**	**73.81**	**79**	P		**P**		**16 52 17.4**	**+0.2**
TORD	**Torodi Ar. Bea**	**81.85**	**74**	P		**P**		**16 53 02.5**	**+0.5**
	6.0nm,0.8s,mb4.6,baz=271,slow=4.0,SNR=19								
NWAO	**Narrogin (SRO)**	**131.30**	**195**	PKP		PKPdf		16 59 53.6	-1.3
	33nm,1.1s,baz=180,slow=2.0,SNR=3.0								
ASAR	**Alice Springs**	**132.11**	**218**	PKP		PKPdf		16 59 55.7	-1.1
	0.3nm,1.0s,baz=135,slow=2.1,SNR=3.2								
ASAR	**Alice Springs**	**132.11**	**218**	PKP		PKPdf		16 59 55.6	-1.1
WRA	**Warramunga Arr**	**134.57**	**222**	PKP		PKPdf		17 00 00.6	-0.8
	0.2nm,0.4s,baz=122,slow=1.8,SNR=4.4								
SONM	**Songino Array**	**146.50**	**357**	PKPbc		PKPbc		17 00 22.6	-0.8
	0.5nm,0.6s,baz=321,slow=1.8,SNR=3.1								

*BJI **12** 16:53:19.7, 360S×100 41E, h28km, mB5.4, mb5.1, Ms5.2, Msz5.0*

*ISCJB **12** 16:53:22.2±0.3, 323S±004×100 34E±004, h23km, mb5.0/80, MS5.0/2, Error ellipse: s-maj=7.0km s-min=4.0km az=41.1*

*DJA **12** 16:53:23, 327S×100 08E, h10km, Mw5.6/4*

*MOS **12** 16:53:25.2±1.1, 2 95S×100 54E, h37km, mb5.2/32, Error ellipse: s-maj=12.1km s-min=6.4km az=105.0*

*IDC **12** 16:53:26.8±2.1, 2 99S×100 70E, h30km±14km, mb4.8/19, mb1 4.8/20, mb1mx4.8/22, mbtmp4.8/20, ML5.0/1, Error ellipse: s-maj=19.4km s-min=9.6km az=49.0*

*NEIC **12** 16:53:27.1±1.9, 307S×100 46E, h42km±15km, mb5.0/18, Error ellipse: s-maj=13.4km s-min=5.8km az=58.0*

ISC 12 16:53:24.2±0.3, 324S±004×10032E±004, h23km, h23km±3.1km; pP-P, n204, σ1§03/181, mb5.0/80, MS5.0/2, 19C-10D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**2.76**	**2**	P		**Pn**		**16 54 07.5**	**+0.3**
	0.0nm,0.0s								
RGRI	**Rengat**	**3.50**	**35**	P		**Pn**		**16 54 18.5**	**+1.1**
	0.0nm,0.0s								
KGM	**Kluang**	**6.01**	**30**	⇑P		**Pn**		**16 54 54.3**	**+2.3**
MYKOM	**Kota Tinggi**	**6.11**	**35**	⇑P		**Pn**		**16 54 54.0**	**+0.7**
FRIM	**Kepong**	**6.56**	**11**	⇑P		**Pn**		**16 55 00.1**	**+0.7**
DBJI	**Dramaga**	**7.20**	**117**	P		**Pn**		**16 55 09.5**	**+1.3**
	301nm,1.0s								
CBJI	**Citeko**	**7.23**	**116**	P		**Pn**		**16 55 12.4**	**+3.7**
	1µm,0.8s								
SKJI	**Sukabumi**	**7.25**	**121**	P		**Pn**		**16 55 08.4**	**-0.5**
	0.0nm,0.0s								
IPM	**Ipoh**	**7.70**	**5**	⇑P		**Pn**		**16 55 17.0**	**+2.0**
LEM	**Lembang**	**8.10**	**116**	P		**Pn**		**16 55 21.9**	**+1.4**
	0.0nm,0.0s								
KTGM	**Kuala Trenggan**	**8.96**	**18**	⇓P		**Pn**		**16 55 35.4**	**+3.0**
BJII	**Banjamegara**	**10.19**	**114**	P		**Pn**		**16 55 50.6**	**+1.3**
	0.0nm,0.0s								
KSM	**Kuching**	**11.02**	**65**	⇓P		**Pn**		**16 56 04.9**	**+4.2**
KSM	**Kuching**	**11.02**	**65**	*e*Pn		**Pn**		**16 56 01.8**	**+1.1**
SJI	**Sawahan**	**12.23**	**112**	P		**Pn**		**16 56 17.3**	**0.0**
	100nm,0.8s								
SBUM	**Sibu**	**13.17**	**65**	⇓P		**Pn**		**16 56 34.3**	**+4.3**
BTM	**Bintulu**	**14.27**	**64**	⇓P		**Pn**		**16 56 51.8**	**+6.8**
KKM	**Kota Kinabalu**	**18.35**	**60**	⇓P		**Pn**		**16 57 37.8**	**+0.3**
SDKM	**Sandakan**	**19.02**	**62**	⇓P		**Pn**		**16 57 37.8**	**-7.8**
SDKM	**Sandakan**	**19.02**	**62**	⇓P		**Pn**		**16 57 46.0**	**+0.4**
TSM	**Tawau**	**19.07**	**67**	⇓P		**Pn**		**16 57 47.0**	**+0.8**
KDM	**Kudat**	**19.32**	**59**	⇑P		**Pn**		**16 57 48.9**	**-0.3**
KAPI	**Kappang**	**19.46**	**96**	P		**Pn**		**16 57 48.8**	**-2.1**
	5.0nm,0.3s,baz=271,slow=8.4,SNR=34								
KAPI	**Kappang**	**19.46**	**96**	*e*P		**Pn**		**16 57 47.6**	**-3.3**
PCI	**Palu**	**19.64**	**84**	P		**Pn**		**16 57 52.3**	**-0.7**
	0.0nm,0.0s								
MYLDM	**Lahad Datu**	**19.99**	**65**	⇑P		**Pn**		**16 58 00.2**	**+3.0**
CMAR	**Chiang Mai Arr**	**21.60**	**356**	P		**P**		**16 58 10.9**	**-1.8**
	15nm,0.9s,mb4.4,baz=186,slow=9.4,SNR=44								
CMAR				PcP		PcP		17 02 15.8	+1.3
	2.8nm,0.8s,baz=218,slow=3.2,SNR=9.1								
CMAR	**Chiang Mai Arr**	**21.60**	**356**	P		**P**		**16 58 10.9**	**-1.8**
CMAR								17 02 15.8	
CMAR				pmax		pmax			
	comp=Z,15nm,0.9s								
CMAR				pmax		pmax			
	comp=Z,3.0nm,0.8s								
CHTO	**Chiang Mai**	**21.95**	**357**	*e*P		**P**		**16 58 13.9**	**-2.6**
KDI	**Kendari**	**22.27**	**93**	P		**P**		**16 58 21.0**	**+1.0**
	comp=Z,0.0nm,0.0s								
QIZ	**Qiongzhong**	**24.03**	**23**	*e*P		**P**		**16 58 36.7**	**-1.0**
	comp=Z,22nm,1.1s,mb4.5								
BATI	**Baumata**	**24.18**	**108**	P		**P**		**16 58 37.1**	**-2.1**
	comp=Z,40nm,0.6s,mb5.1,baz=131,slow=0.9,SNR=9.8								
BATI				S		**S**		**17 02 48.8**	**-7.6**
	comp=Z,15nm,0.6s,baz=342,slow=7.4,SNR=5.5								
KMI	**Kunming**	**28.29**	**5**	P		**P**		**16 59 16.4**	**+0.3**
KMI					AMB	AMB			
	comp=Z,17nm,1.4s,mb4.5								
FITZ	**Fitzroy Crossi**	**28.87**	**123**	*e*P		**P**		**16 59 20.9**	**-0.5**
	comp=Z,14nm,0.6s,mb4.9								
FITZ	**Fitzroy Crossi**	**28.87**	**123**	P		**P**		**16 59 21.1**	**-0.4**
	comp=Z,6.6nm,0.8s,mb4.4,baz=306,slow=5.1,SNR=18								
FITZ	**Fitzroy Crossi**	**28.87**	**123**	*e*P		**P**		**16 59 20.6**	**-0.8**
ODAN	**Odare**	**32.42**	**338**	*e*P		**P**		**16 59 53.6**	**+0.9**
	comp=Z,37nm,0.7s,mb5.3								
TAPN	**Taplejung**	**32.75**	**339**	*e*P		**P**		**16 59 57.1**	**+1.5**
	comp=Z,102nm,1.0s,mb5.7								
RAMN	**Ramite**	**32.80**	**337**	*e*P		**P**		**16 59 57.4**	**+1.3**
	comp=Z,19nm,0.6s,mb5.2								
NWAO	**Narrogin (SRO)**	**33.52**	**154**	P		**P**		**17 00 04.7**	**+2.5**
	comp=Z,52nm,1.2s,mb5.3,baz=281,slow=4.7,SNR=3.3								
NWAO	**Narrogin (SRO)**	**33.52**	**154**	P		**P**		**17 00 04.7**	**+2.5**
NWAO				pmax		pmax			
	comp=Z,52nm,1.2s								
NWAO	**Narrogin (SRO)**	**33.52**	**154**	P		**P**		**17 00 04.7**	**+2.5**
JIRN	**Jiri**	**33.60**	**337**	*e*P		**P**		**17 00 04.2**	**+1.2**
	comp=Z,39nm,0.7s,mb5.5								
LSA	**Lhasa**	**33.91**	**346**	P		**P**		**17 00 06.9**	**+1.3**
LSA					AMB	AMB			
	comp=Z,30nm,0.8s,mb5.3								
GUN	**Gumba**	**33.95**	**337**	*e*P		**P**		**17 00 07.2**	**+1.2**
	comp=Z,61nm,0.6s,mb5.7								
DMN	**Daman**	**33.99**	**335**	*e*P		**P**		**17 00 07.0**	**+0.6**
	comp=Z,30nm,0.9s,mb5.2								
KKN	**Kakani**	**34.08**	**336**	*e*P		**P**		**17 00 07.8**	**+0.6**
	comp=Z,43nm,0.8s,mb5.5								
GKN	**Gorkha**	**34.53**	**335**	*e*P		**P**		**17 00 11.8**	**+0.7**
KOLN	**Koldanda**	**34.78**	**333**	*e*P		**P**		**17 00 14.2**	**+1.0**
	comp=Z,65nm,0.8s,mb5.6								
DANN	**Dangsing**	**35.21**	**334**	*e*P		**P**		**17 00 17.8**	**+0.8**
WHN	**Wuhan**	**36.16**	**21**	⇓P		**P**		**17 00 25.3**	**+0.2**
WHN					AMB	AMB			
	comp=Z,21nm,0.7s,mb5.2								
WRA	**Warramunga Arr**	**37.10**	**119**	P		**P**		**17 00 32.7**	**-0.6**
	comp=Z,11nm,0.5s,mb5.0,baz=301,slow=9.1,SNR=100								
WRA					PcP	PcP		17 02 53.4	-0.3
	comp=Z,1.6nm,0.7s,baz=296,slow=3.0,SNR=3.5								
WRA					S	**S**		**17 06 17.0**	**-1.5**
	comp=Z,1.3nm,1.0s,baz=278,slow=14,SNR=5.1								
WRA	**Warramunga Arr**	**37.10**	**119**	P		**P**		**17 00 32.7**	**-0.6**
WRA								17 02 53.4	
WRA					S	**S**		**17 06 17.0**	**-1.5**
WRA					pmax	pmax			
	comp=Z,11nm,0.5s								
WRA					pmax	pmax			
	comp=Z,2.0nm,0.7s								
WRA					smax				
	comp=N,1.0nm,1.0s								
WRAB	**Tennant Creek**	**37.11**	**119**	*e*P		**P**		**17 00 32.6**	**-0.7**
WRAB					pmax	pmax			
	comp=Z,18nm,0.5s,mb5.2								
WRAB	**Tennant Creek**	**37.11**	**119**	*e*P		**P**		**17 00 32.6**	**-0.7**
	comp=Z,18nm,0.5s,mb5.2								
WB2	**Warramunga Arr**	**37.11**	**119**	*e*P		**P**		**17 00 32.7**	**-0.7**
XAN	**Xi'an**	**37.95**	**12**	P		**P**		**17 00 38.9**	**-1.3**
XAN					AP	pP		17 00 49.0	+1.9
XAN					XP	sP		17 00 54.1	+4.2
XAN					AMB	AMB			
	comp=Z,111nm,0.6s,mb5.8								
ASAR	**Alice Springs**	**38.28**	**125**	P		**P**		**17 00 43.4**	**+0.2**
	comp=Z,18nm,0.7s,mb4.9,baz=300,slow=8.1,SNR=142								
ASAR					PcP	PcP		17 02 57.5	+0.4
	comp=Z,2.9nm,0.9s,baz=314,slow=4.2,SNR=4.2								
ASAR					S	**S**		**17 06 38.0**	**+1.8**
	comp=Z,1.6nm,0.7s,baz=297,slow=14,SNR=8.2								
ASAR	**Alice Springs**	**38.28**	**125**	P		**P**		**17 00 43.4**	**+0.2**
ASAR								17 02 57.6	
ASAR					S	**S**		**17 06 38.1**	**+1.9**
ASAR					pmax	pmax			
	comp=Z,18nm,0.7s								
ASAR					pmax	pmax			
	comp=Z,3.0nm,0.9s								
ASAR					smax				
	comp=N,2.0nm,0.7s								
LZH	**Lanzhou**	**39.26**	**5**	*e*P		**P**		**17 00 51.3**	**+0.2**
LZH					AP	pP		17 00 55.3	-2.7
LZH					PCP	PcP		17 03 01.2	+1.3
LZH					AMB	AMB			
	comp=Z,40nm,1.1s,mb5.1								
LZH					AMB	AMB			
	comp=Z,168nm,4.2s								
LZH					LR	LR			
	comp=E,1µm,14.7s								
LZH					LR	LR			
	comp=Z,2µm,15.8s,MS4.9								
SMLA	**Simla**	**40.68**	**329**	*i* P		**P**		**17 01 02.6**	**-0.5**
SMLA				*ex*		x		17 04 09.5	
	comp=E,147nm,0.3s								
SMLA				*ex*		x		17 04 12.9	
	comp=N,268nm,0.2s								
GTA	**Gaotai**	**42.44**	**359**	⇑P		**P**		**17 01 17.5**	**+0.2**
GTA					AP	pP		17 01 22.1	-2.2
GTA					XP	sP		17 01 24.6	-2.4
GTA					AMB	AMB			
	comp=Z,17nm,1.1s,mb4.6								
HHC	**Hu-ho-hao-te**	**45.06**	**12**	*e*P		**P**		**17 01 39.3**	**+0.9**
HHC					AMB	AMB			
	comp=Z,49nm,0.6s,mb5.5								
HHC					AMB	AMB			
	comp=Z,2µm,6.4s								
BJT	**Baijiatuan**	**45.44**	**17**	*e*P		**P**		**17 01 41.5**	**+0.1**
BJT					pmax	pmax			
	comp=Z,21nm,0.6s								
BJT	**Baijiatuau**	**45.44**	**17**	*e*P		**P**		**17 01 41.5**	**+0.1**
	comp=Z,21nm,0.6s,mb5.1								
DL2	**Dalian**	**46.31**	**23**	P		**P**		**17 01 47.7**	**-0.7**
DL2					AMB	AMB			
	comp=Z,10.0nm,0.7s,mb4.8								
CTA	**Charters Tower**	**47.79**	**114**	*e*P		**P**		**17 02 00.0**	**-0.3**
	comp=Z,8.1nm,0.7s,mb4.9								
CTA	**Charters Tower**	**47.79**	**114**	P		**P**		**17 02 00.1**	**-0.2**
	comp=Z,11nm,0.7s,mb5.0,baz=286,slow=10,SNR=17								
CTA	**Charters Tower**	**47.79**	**114**	P		**P**		**17 02 00.1**	**-0.2**
CTA					pmax	pmax			
	comp=Z,11nm,0.7s								
CTAO	**Charters Tower**	**47.79**	**114**	*e*P		**P**		**17 02 00.0**	**-0.3**
CTAO					pmax	pmax			
	comp=Z,22nm,1.1s,mb5.1								
CTAO	**Charters Tower**	**47.79**	**114**	*e*P		**P**		**17 02 00.0**	**-0.3**
	comp=Z,22nm,1.1s,mb5.1								
KSRS	**Korea Array**	**47.92**	**30**	P		**P**		**17 02 00.3**	**-0.6**
	comp=Z,9.9nm,0.7s,mb5.0,baz=222,slow=8.4,SNR=56								
KSRS	**Korea Array**	**47.92**	**30**	P		**P**		**17 02 00.3**	**-0.6**
KSRS					pmax	pmax			
	comp=Z,10.0nm,0.7s,mb5.0								
STKA	**Stephens Creek**	**48.10**	**131**	*e*P		**P**		**17 02 02.8**	**+0.3**
	comp=Z,14nm,0.6s,mb5.2								
STKA	**Stephens Creek**	**48.10**	**131**	P		**P**		**17 02 03.4**	**+1.0**
	comp=Z,8.5nm,0.7s,mb4.9,baz=304,slow=7.3,SNR=28								
STKA	**Stephens Creek**	**48.10**	**131**	*e*P		**P**		**17 02 02.9**	**+0.5**
WMQ	**Urumqi**	**48.20**	**348**	P		**P**		**17 02 03.6**	**+0.6**
WMQ					AP	pP		17 02 09.0	-1.0
WMQ					AMB	AMB			
	comp=Z,33nm,1.0s,mb5.3								
ULHL	**Ulahol**	**50.26**	**337**	P		**P**		**17 02 19.5**	**+0.7**
	SNR=13								
UCH	**Uchtor**	**50.95**	**335**	*e*P		**P**		**17 02 24.7**	**+0.8**
	comp=Z,7.3nm,0.9s,mb4.6								
TKM2	**Tokmak 2**	**51.09**	**337**	P		**P**		**17 02 25.8**	**+0.8**
	SNR=20								
KBK	**Karagaybulak**	**51.12**	**336**	P		**P**		**17 02 26.5**	**+1.2**
	SNR=13								
SONM	**Songino Array**	**51.13**	**5**	P		**P**		**17 02 26.1**	**+0.8**
	comp=Z,36nm,0.7s,mb5.4,baz=189,slow=9.4,SNR=202								
SONM					PcP	PcP		17 03 40.9	+0.2
	comp=Z,8.0nm,0.7s,baz=190,slow=4.3,SNR=6.7								
SONM	**Songino Array**	**51.13**	**5**	P		**P**		**17 02 26.1**	**+0.8**
SONM								17 03 40.9	
SONM					pmax	pmax			
	comp=Z,36nm,0.7s								
SONM					pmax	pmax			
	comp=Z,8.0nm,0.7s								
AML	**Almayashu**	**51.21**	**335**	P		**P**		**17 02 27.1**	**+1.1**
	SNR=8.8								
ULN	**Ulaanbaatar**	**51.23**	**6**	*e*P		**P**		**17 02 26.6**	**+0.6**
ULN					pmax	pmax			
	comp=Z,44nm,0.9s,mb5.4								
ULN	**Ulaanbaatar**	**51.23**	**6**	*e*P		**P**		**17 02 26.6**	**+0.6**
	comp=Z,44nm,0.9s,mb5.4								
FRU	**Bishkek**	**51.41**	**336**	*e*P		**P**		**17 02 27.0**	**-0.4**
CHMS	**Chumysh**	**51.49**	**336**	P		**P**		**17 02 28.2**	**+0.2**
	SNR=8.0								
EKS2	**Erkin-Say**	**51.61**	**335**	P		**P**		**17 02 29.7**	**+0.7**
	SNR=12								
USP	**Ospenovka**	**51.81**	**336**	P		**P**		**17 02 30.8**	**+0.4**
	SNR=20								
CN2	**Changchun**	**51.99**	**23**	*e*P		**P**		**17 02 30.5**	**-1.2**
CN2					AMB	AMB			
	comp=Z,70nm,1.0s,mb5.5								
MK31	**Makanchi Array**	**52.30**	**344**	*i* P		**P**		**17 02 34.1**	**+0.1**
MK31					pmax	pmax			
	comp=Z,31nm,0.5s,mb5.5								
MKAR	**Makanchi Array**	**52.30**	**344**	P		**P**		**17 02 34.2**	**+0.2**
	comp=Z,46nm,0.7s,mb5.5,baz=147,slow=8.0,SNR=335								
MKAR	**Makanchi Array**	**52.30**	**344**	P		**P**		**17 02 34.2**	**+0.2**
MKAR					pmax	pmax			
	comp=Z,46nm,0.7s								
MKAR	**Makanchi Array**	**52.30**	**344**	P		**P**		**17 02 34.2**	**+0.2**
MAJO	**Matsushiro**	**53.03**	**38**	*e*P		**P**		**17 02 38.4**	**-1.2**
MAJO					pmax	pmax			
	comp=Z,31nm,1.4s,mb5.0								
MAJO	**Matsushiro**	**53.03**	**38**	*e*P		**P**		**17 02 38.4**	**-1.2**
	comp=Z,30nm,1.4s,mb5.0								
MJAR	**Matsushiro Arr**	**53.03**	**38**	P		**P**		**17 02 38.4**	**-1.2**
	comp=Z,9.2nm,0.9s,mb4.7,baz=218,slow=7.8,SNR=20								
MJAR					PcP	PcP		17 03 48.6	+0.6
	comp=Z,2.4nm,0.9s,baz=221,slow=3.0,SNR=3.4								
MJAR	**Matsushiro Arr**	**53.03**	**38**	P		**P**		**17 02 38.4**	**-1.2**
MJAR								17 03 48.6	
MJAR					pmax	pmax			
	comp=Z,9.0nm,1.0s								
MJAR					pmax	pmax			
	comp=Z,2.0nm,0.9s								
MJAR	**Matsushiro Arr**	**53.03**	**38**	P		**P**		**17 02 38.4**	**-1.2**
MJAR					PcP	PcP		17 03 48.6	+0.6
ZAK	**Zakamensk**	**53.47**	**2**	*e*P		**P**		**17 02 41.1**	**-1.4**
ZAK				*e*				17 03 49.4	
ZAK				pmax		pmax			
	comp=Z,5.0nm,1.1s,mb4.4								
ZAK				pmax		pmax			
	comp=Z,6.0nm,1.0s,mb4.5								
VLA	**Vladivostok**	**54.22**	**28**	*e*P		**P**		**17 02 46.8**	**-1.4**
VLA				pmax		pmax			
	comp=Z,29nm,1.4s,mb5.0								
MDJ	**Mudanjiang**	**54.35**	**25**	P		**P**		**17 02 48.4**	**-0.8**
MDJ					AMB	AMB			
	comp=Z,19nm,0.8s,mb5.1								
MDJ					AMB	AMB			
	comp=Z,557nm,10.6s								
MDJ	**Mudanjiang**	**54.35**	**25**	*e*P		**P**		**17 02 47.8**	**-1.3**
	comp=Z,20nm,1.0s,mb5.0								
MOY	**Mondy**	**54.70**	**1**	*e*P		**P**		**17 02 51.8**	**+0.3**
TLY	**Talaya**	**54.78**	**3**	*e*P		**P**		**17 02 52.6**	**+0.5**
TLY				*e*				17 03 01.4	
TLY				*e*				17 03 07.0	
TLY				pmax		pmax			
	comp=Z,16nm,1.3s,mb4.9								
HIA	**Hailar**	**54.94**	**15**	*e*P		**P**		**17 02 52.1**	**-1.2**
CAN	**Canberra**	**55.15**	**132**	*e*P		**P**		**17 02 55.8**	**+0.6**
CIT	**Chita**	**56.18**	**10**	*e*P		**P**		**17 03 01.1**	**-1.1**
KURK	**Kurchatov**	**56.88**	**344**	*c i*P		**P**		**17 03 06.9**	**-0.2**
KURK				pmax		pmax			
	comp=Z,55nm,1.0s,mb5.5								
KURK	**Kurchatov**	**56.88**	**344**	*e*P		**P**		**17 03 06.9**	**-0.2**
	comp=Z,52nm,1.0s,mb5.5								
ZAA0	**Zalesovo Array**	**58.43**	**349**	*e*P		**P**		**17 03 17.5**	**-0.6**
ZALV	**Zalesovo Beam**	**58.43**	**349**	P		**P**		**17 03 17.7**	**-0.3**
	comp=Z,42nm,0.8s,mb5.5,baz=172,slow=5.4,SNR=139								
ZALV	**Zalesovo Beam**	**58.43**	**349**	P		**P**		**17 03 17.7**	**-0.3**
ZALV				pmax		pmax			
	comp=Z,42nm,0.8s,mb5.5								
KLR	**Kul'dur**	**58.92**	**24**	*e*P		**P**		**17 03 17.0**	**-4.6**
KLR				pmax		pmax			
	comp=E,38nm,1.4s								
KLR				pmax		pmax			
	comp=Z,90nm,1.4s,mb5.6								
KRAR	**Krasnoyarsk**	**59.36**	**355**	*c i*P		**P**		**17 03 23.7**	**-0.8**
KRAR				pmax		pmax			
	comp=Z,31nm,1.2s,mb5.2								
HNR	**Honiara**	**59.52**	**99**	P		**P**		**17 03 26.0**	**-0.3**
	comp=Z,70nm,0.8s,mb5.7,baz=215,slow=1.9,SNR=6.3								
HNR	**Honiara**	**59.52**	**99**	P		**P**		**17 03 26.0**	**-0.4**
HNR				pmax		pmax			
	comp=Z,70nm,0.8s,mb5.7								
NVS	**Novosibirsk**	**59.58**	**349**	*i* P		**P**		**17 03 25.1**	**-0.9**
NVS				pmax		pmax			
	comp=Z,17nm,1.0s,mb5.0								
NVS				pmax		pmax			
	comp=N,11nm,1.0s								
NVS				pmax		pmax			
	comp=E,11nm,1.0s								
UMR	**Umm Al-Rimmam**	**59.95**	**307**	*e*P		**P**		**17 03 28.7**	**-0.3**
	baz=307								
UMR					AMb	AMB		17 03 29.9	
	comp=Z,23nm,1.1s,mb5.1,baz=307								
NAY	**Al-Naaiem**	**60.21**	**306**	AMb		AMB		17 03 31.4	

comp=Z,6.0nm,1.0s,mb4.7
APA Apatity 84.35 339⇑ *e*P **P** **17 05 53.4 -0.8**
APA pmax pmax
comp=Z,22nm,1.2s,mb5.2
BZS Buzias 84.42 316⇑ *i*P **P** **17 05 54.9 -0.1**
KOLS Kolonicke sedl 84.59 320 *e*P **P** **17 05 56.7 +0.8**
CRVS Cervenica-Dubn 85.11 319 *e*P **P** **17 05 58.6 +0.1**
STHS Stebnicka Huta 85.35 320 *e*P **P** **17 06 00.3 +0.6**
STHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
STHS Stebnicka Huta 85.35 320 *e*P **P** **17 06 00.3 +0.6**
comp=Z,5.8nm,1.1s,mb4.6
KECS Kecovo 85.68 319 *e*P **P** **17 06 00.3 -1.0**
KECS pmax pmax
comp=Z,2.0nm,1.1s,mb4.3
KECS Kecovo 85.68 319 *e*P **P** **17 06 00.3 -1.0**
comp=Z,2.2nm,1.1s,mb4.3
ARCES ARCESS Array B 87.74 340 P **P** **17 06 11.3 +0.4**
comp=Z,10nm,0.8s,mb5.1,baz=90,slow=4.9,SNR=16
ARCES ARCESS Array B 87.74 340 P **P** **17 06 11.3 +0.4**
ARCES pmax pmax
comp=Z,10.0nm,0.8s
MODS Modra-Piesok 87.78 319 *e*P **P** **17 06 10.8 -0.8**
MORC Moravsky Berou 87.78 320⇑ *i*P **P** **17 06 12.3 +0.7**
MORC Moravsky Berou 87.78 320 ⇑P **P** **17 06 12.2 +0.7**
ZST Bratislava 87.87 318 *e*P **P** **17 06 19.4 +7.4**
ZST Bratislava 87.87 318 *e*P **P** **17 06 19.4 +7.4**
comp=Z,5.2nm,0.8s,mb4.8
ZST LR LR
comp=Z,900nm,25.0s,MS5.1
GERES GERESS Array B 90.18 319 P **P** **17 06 23.0 +0.1**
comp=Z,1.8nm,0.7s,mb4.5,baz=98,slow=5.5,SNR=14
GERES GERESS Array B 90.18 319 P **P** **17 06 23.0 +0.1**
GERES pmax pmax
comp=Z,2.0nm,0.7s
BRG Berggiesshubel 90.20 321 *e*P **P** **17 06 23.6 +0.7**
BRG *e* pP 17 06 31.4 +1.1
BRG pmax pmax
comp=Z,4.0nm,1.1s,mb4.7
BRG Berggiesshubel 90.20 321 *e*P **P** **17 06 23.6 +0.7**
comp=Z,6.5nm,1.1s,mb4.9
BRG *e* pP 17 06 31.4 +1.0
comp=Z,11nm,1.6s
CLL Collm 90.82 321 *e* **P** **17 06 26.0 +0.2**
CLL Collm 90.82 321 *e*P **P** **17 06 26.0 +0.2**
comp=Z,12nm,1.5s,mb5.0
NOA NORSAR Array B 92.37 331 P **P** **17 06 32.7 -0.1**
comp=Z,2.6nm,1.0s,mb4.5,baz=91,slow=4.8,SNR=3.7
NOA NORSAR Array B 92.37 331 P **P** **17 06 32.7 -0.1**
NOA pmax pmax
comp=Z,3.0nm,1.0s
KEST Kesra 92.66 305 P **P** **17 06 36.5 +1.8**
comp=Z,2.1nm,1.0s,mb4.5,baz=303,slow=11,SNR=3.9
DAWY Dawson 105.77 23 *e*PKiKP PKiKP 17 11 47.4 +1.8
HUMO Hull Mountain 125.06 38 *e*PKPdf PKPdf 17 12 24.0 +0.9
NVAR Mina Array Bea 130.34 40 PKP PKPdf 17 12 34.7 +1.4
comp=Z,1.4nm,0.7s,baz=264,slow=2.7,SNR=10
NVAR SKPbc SKPbc 17 15 55.4 +0.2
comp=Z,0.9nm,0.8s,baz=260,slow=5.4,SNR=5.2
NVAR Mina Array Bea 130.34 40 PKP PKPdf 17 12 34.7 +1.4
NVAR SKPbc SKPbc 17 15 55.4 +0.2
ULM Lac du Bonnet 131.19 14 PKP PKPdf 17 12 34.5 0.0
comp=Z,2.9nm,0.8s,baz=316,slow=4.0,SNR=4.1
PDAR Pinedale Array 132.49 30 PKP PKPdf 17 12 38.2 +1.0
comp=Z,0.5nm,0.5s,baz=135,slow=2.5,SNR=4.1
CPUP Villa Florida 143.51 215 PKP PKPdf 17 12 59.9 +2.0
comp=Z,2.8nm,0.7s,baz=126,slow=3.7,SNR=8.2
CPUP Villa Florida 143.51 215 PKIKP PKPdf 17 12 59.9 +1.9
CPUP pmax pmax
comp=Z,3.0nm,0.7s
CPUP Villa Florida 143.51 215 PKP PKPdf 17 12 59.9 +2.0
WCI Wyandotte Cave 144.65 9 *e*PKIKP PKPdf 17 12 57.8 -1.8
TXAR Lajitas Array 145.47 39 PKPbc PKPbc 17 13 01.9 +0.7
comp=Z,34nm,0.6s,baz=294,slow=0.9,SNR=389
TXAR SKPbc SKPbc 17 16 40.4 +0.6
comp=Z,0.7nm,0.8s,baz=235,slow=3.0,SNR=3.8
TXAR Lajitas Array 145.47 39 PKIKP PKPdf 17 13 02.0 +0.7
TXAR pmax pmax
comp=Z,34nm,0.6s
TXAR pmax pmax
comp=N,1.0nm,0.8s
GLAT Glass 145.95 14 *e*PKPdf PKPdf 17 13 01.4 -0.5
GNAR Gosnell 146.06 15 *e*PKPdf PKPdf 17 13 02.4 +0.3
ELN Prospectdale 146.16 2 *e*PKP PKPdf 17 13 01.9 -0.3
MIAR Mount Ida 146.27 21 *e*PKP2 PKPbc 17 13 02.9 -0.7
WVT Waverly 146.41 12 *e*PKP2 PKPbc 17 13 03.2 -0.7
UALR University of 146.48 19 *e*PKPbc PKPbc 17 13 03.5 -0.7
TZTN Tazewell 146.66 6 *e*PKPbc PKPbc 17 13 03.9 -0.8
JCT Junction City 146.89 33 *e*PKPdf PKPdf 17 13 03.8 +0.1
JCT *e*PKPbc PKPbc 17 13 05.5 0.0
TKL Tuckaleechee C 147.52 6 *e*PKP2 PKPbc 17 13 06.2 -0.9
CPCT Cooper Cave 147.63 7 *e*PKPbc PKPbc 17 13 06.9 -0.5
SWET Sewanee 147.66 10 *e*PKPbc PKPbc 17 13 06.2 -1.3
LRAL Lakeview Retre 149.57 12 *e*PKPbc PKPbc 17 13 11.5 -1.0
GOGA Godfrey 149.77 6 *e*PKP2 PKPbc 17 13 12.5 -0.5
LPAZ La Paz 157.49 210 PKP PKPdf 17 13 21.1 +1.4
LPAZ PKPab PKPab 17 13 56.0 +4.9
comp=N,0.8nm,0.8s,baz=135,slow=1.4,SNR=2.8
comp=N,1.3nm,0.6s,baz=260,slow=3.5,SNR=4.5
LPAZ La Paz 157.49 210 PKIKP PKPdf 17 13 21.1 +1.4
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
LPAZ pmax pmax
comp=Z,1.0nm,0.6s

BJI **12** *17:04:32.6, 784S× 126 03E, h322km, mB5.4, mb5.3*
MOS **12** *17:04:38.9± 0.9, 746S× 125 77E, h361km, mb5.4/28, Error ellipse: s-maj=6.1km s-min=5.1km az=82.0*
ISCJB **12** *17:04:42.4± 0.3, 755S± 002× 125 84E± 003, h405km± 3km, mb5.4/123, Error ellipse: s-maj=4.2km s-min=3.3km az=148.0*
DJA **12** *17:04:42, 768S× 125 87E, h413km, Mw5.6/37*
NEIC **12** *17:04:42.8± 0.5, 748S× 125 87E, h392km± 5km, mb5.3/30, Error ellipse: s-maj=5.3km s-min=3.5km az=67.0*
IDC **12** *17:04:43.4± 0.4, 751S× 125 84E, h399km± 3km, mb4.9/24, mb1 5.0/29, mb1mx5.0/29, mbtmp5.0/29, Error ellipse: s-maj=8.7km s-min=5.6km az=67.0*
ISC 12 17:04:43.8± 0.3, **756S**± 002× **12583E**± 003, **h404**km± 3km, **h332**km± 8.3 km; **pP-P, n515, σ 1**07/358, **mb5.4**/121, **59C-28D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.39**	**219**	P			**Pn**	**17 05 51.0**	**+0.4**
	0.0nm,0.0s								
BATI	**Baumata**	**3.39**	**219**	P			**Pn**	**17 05 51.1**	**+0.5**
	5μm,0.3s,baz=72,slow=0.7,SNR=6198								
BATI				S			**S**	**17 06 39.9**	**-4.7**
	2μm,0.3s,baz=35,slow=3.5,SNR=2.4								
AAI	**Ambon**	**4.51**	**32**	P			**Pn**	**17 06 01.1**	**0.0**
	0.0nm,0.0s								
AAI	**Ambon**	**4.51**	**32**	P			**Pn**	**17 06 01.1**	**0.0**
	0.0nm,0.0s								
KDI	**Kendari**	**4.80**	**318**	P			**Pn**	**17 06 04.4**	**+0.4**
	0.0nm,0.0s								
MSAI	**Masohi**	**5.20**	**37**	P			**Pn**	**17 06 08.3**	**+0.1**
	0.0nm,0.0s								
KAPI	**Kappang**	**6.55**	**292**	Pn			**Pn**	**17 06 23.8**	**+1.2**
	4μm,0.7s								
KAPI	**Kappang**	**6.55**	**292**	P			**Pn**	**17 06 23.0**	**+0.3**
	50nm,0.3s,baz=119,slow=7.4,SNR=291								
KAPI				S			**S**	**17 07 41.5**	**-1.8**
	baz=206,slow=20,SNR=2.1								
KAPI	**Kappang**	**6.55**	**292**	P			**Pn**	**17 06 23.0**	**+0.3**
KAPI				S			**S**	**17 07 41.5**	**-1.8**
LBMI	**Labuha**	**7.08**	**14**	P			**Pn**	**17 06 29.1**	**+0.6**
	0.0nm,0.0s								
TLE	**Tual**	**7.12**	**75**	P			**Pn**	**17 06 28.5**	**-0.5**
	0.0nm,0.0s								
SWI	**Sorong**	**8.58**	**39**	P			**P**	**17 06 42.9**	**-2.7**
	0.0nm,0.0s								
MTNI	**Mataram**	**9.62**	**263**	P			**P**	**17 06 54.6**	**-2.5**
	0.0nm,0.0s								
KHKI	**Kahang-Kahang**	**10.15**	**265**	P			**P**	**17 07 00.7**	**-2.4**
	0.0nm,0.0s								
FITZ	**Fitzroy Crossi**	**10.48**	**181**	⇑*i*P			**P**	**17 07 06.7**	**+0.2**
	2μm,0.6s								
FITZ				*e*S			**S**	**17 09 01.1**	**-3.1**
FITZ				*e*SCS			ScS	17 18 58.2	-2.4
FITZ	**Fitzroy Crossi**	**10.48**	**181**	P			**P**	**17 07 06.5**	**0.0**
	95nm,0.3s,baz=14,slow=12,SNR=1979								
FITZ				S			**S**	**17 09 02.3**	**-1.9**
	12nm,0.3s,baz=89,slow=17,SNR=13								
DNP	**Denpasar**	**10.57**	**263**	P			**P**	**17 07 06.4**	**-1.3**
	0.0nm,0.0s								
IGBI	**Denpasar**	**10.65**	**263**	P			**P**	**17 07 06.2**	**-2.3**
	0.0nm,0.0s								
NBBI	**Negara**	**11.13**	**265**	P			**P**	**17 07 13.7**	**-0.2**
	0.0nm,0.0s								
KMMI	**Kalianget**	**11.78**	**272**	P			**P**	**17 07 23.4**	**+2.4**
	0.0nm,0.0s								
PLKI	**Palangkaraya**	**12.97**	**294**	P			**P**	**17 07 35.6**	**+1.5**
	0.0nm,0.0s								
KRKI	**Karangkates**	**13.27**	**267**	P			**P**	**17 07 36.7**	**-0.7**
	0.0nm,0.0s								
SJI	**Sawahan**	**13.94**	**268**	P			**P**	**17 07 44.6**	**-0.1**
	0.0nm,0.0s								
TSM	**Tawau**	**14.20**	**326**	⇑P			**P**	**17 07 48.8**	**+1.2**
MATI	**Mati**	**14.42**	**2**	*e*P			**P**	**17 07 50.0**	**0.0**
MMPI	**Merauke**	**14.44**	**95**	P			**P**	**17 07 50.0**	**-0.2**
	0.0nm,0.0s								
KCP	**Kidapawan**	**14.49**	**357**	*i*eP			**P**	**17 07 51.2**	**+0.5**
DAV	**Davao City (W)**	**14.54**	**359**	P			**P**	**17 07 50.3**	**-0.9**
	145nm,0.3s,baz=42,slow=1.0,SNR=26								
DAV	**Davao City (W)**	**14.54**	**359**	P			**P**	**17 07 50.3**	**-0.9**
MYLDM	**Lahad Datu**	**14.62**	**330**	⇑P			**P**	**17 07 55.1**	**+3.0**
WRAB	**Tennant Creek**	**14.81**	**147**	P			**P**	**17 07 53.0**	**-1.1**
	3μm,0.5s								
WRAB	**Tennant Creek**	**14.81**	**147**	*c i*P			**P**	**17 07 53.2**	**-0.9**
WRA	**Warramunga Arr**	**14.82**	**147**	P			**P**	**17 07 52.9**	**-1.3**
	25nm,0.3s,baz=323,slow=11,SNR=465								
WRA				S			**S**	**17 10 30.8**	**-0.9**
	1.5nm,0.3s,baz=325,slow=21,SNR=6.0								
WRA				P3KPbc				17 43 09.9	
	baz=69,slow=2.8,SNR=4.9								
WRA	**Warramunga Arr**	**14.82**	**147**	P			**P**	**17 07 52.9**	**-1.3**
WRA				S			**S**	**17 10 30.8**	**-0.9**
WB2	**Warramunga Arr**	**14.82**	**147**	⇑*i*P			**P**	**17 07 53.3**	**-0.9**
WB2				*e*S			**S**	**17 10 26.5**	**-5.3**
WB2				*e*SCS			ScS	17 19 05.4	-4.9
PBKI	**Pangkalan Bun**	**14.90**	**288**	P			**P**	**17 07 57.3**	**+2.1**
	0.0nm,0.0s								
BUKP	**Musuan**	**15.36**	**357**	*e*P			**P**	**17 08 00.3**	**+0.2**
PAGZ	**Pagadian**	**15.50**	**351**	*e*P			**P**	**17 08 02.5**	**+0.9**
IPIL	**Ipil**	**15.59**	**348**	*e*P			**P**	**17 08 03.6**	**+1.0**
JAY	**Jayapura**	**15.64**	**72**	P			**P**	**17 08 02.1**	**-1.1**
	900nm,1.1s								
BIPH	**Bislig**	**15.65**	**2**	⇑*i*P			**P**	**17 08 02.8**	**-0.5**
SDKM	**Sandakan**	**15.69**	**326**	⇓P			**P**	**17 08 05.0**	**+1.3**
BJII	**Banjamegara**	**15.99**	**270**	P			**P**	**17 08 05.7**	**-1.2**
	0.0nm,0.0s								
STKI	**Sintang**	**16.19**	**297**	P			**P**	**17 08 09.9**	**+0.8**
	183nm,1.0s								
DCPH	**Dipolog City**	**16.23**	**351**	⇓*e*P			**P**	**17 08 11.1**	**+1.7**
BUTP	**Butuan**	**16.42**	**359**	*e*P			**P**	**17 08 13.7**	**+2.1**
KKM	**Kota Kinabalu**	**16.57**	**324**	⇓P			**P**	**17 08 14.5**	**+1.4**
BTM	**Bintulu**	**16.61**	**310**	⇑P			**P**	**17 08 15.3**	**+1.7**
CLJI	**Cilicap**	**16.67**	**268**	P			**P**	**17 08 12.8**	**-1.4**
	0.0nm,0.0s								
SBUM	**Sibu**	**16.83**	**306**	⇑P			**P**	**17 08 17.1**	**+1.2**
KDM	**Kudat**	**16.95**	**328**	⇓P			**P**	**17 08 17.8**	**+0.6**
SCPH	**Surigao**	**17.23**	**359**	⇑*e*P			**P**	**17 08 20.2**	**0.0**
TBP	**Tagbilaran**	**17.25**	**353**	*e*P			**P**	**17 08 20.6**	**+0.2**
JCJI	**Jatiwangi**	**17.46**	**272**	P			**P**	**17 08 21.8**	**-0.8**
	984nm,1.3s								
MSLP	**Maasin**	**17.61**	**357**	*e*P			**P**	**17 08 25.2**	**+1.1**
ASAR	**Alice Springs**	**17.79**	**155**	P			**P**	**17 08 25.5**	**-0.4**
	154nm,0.3s,baz=328,slow=8.0,SNR=928								
ASAR				S			**S**	**17 11 30.2**	**+0.6**
	12nm,0.3s,baz=341,slow=24,SNR=17								
ASAR				ScP			ScP	17 15 38.0	+0.2
	baz=13,slow=2.2,SNR=4.6								
ASAR				ScS			ScS	17 19 15.1	-3.6
	baz=311,slow=3.3,SNR=6.0								
ASAR				P3KPbc				17 42 58.5	
	0.1nm,0.3s,baz=144,slow=3.9,SNR=15								
ASAR	**Alice Springs**	**17.79**	**155**	P			**P**	**17 08 25.5**	**-0.4**
ASAR				S			**S**	**17 11 30.2**	**+0.5**
ASAR	**Alice Springs**	**17.79**	**155**	P			**P**	**17 08 25.5**	**-0.4**
ASAR				S			**S**	**17 11 30.2**	**+0.6**
ASAR				ScP			ScP	17 15 38.0	+0.2
ASAR				ScS			ScS	17 19 15.1	-3.6
LLP	**Lapu-Lapu**	**17.86**	**354**	⇓*i*P			**P**	**17 08 26.2**	**-0.6**
LLP				*i* S			**S**	**17 11 32.7**	**+1.5**
KSM	**Kuching**	**17.90**	**299**	⇓P			**P**	**17 08 27.5**	**+0.3**
LEM	**Lembang**	**18.08**	**271**	P			**P**	**17 08 27.9**	**-1.3**
	706nm,1.3s								
GUIM	**Jordan**	**18.35**	**350**	*e*P			**P**	**17 08 30.6**	**-1.3**
OCLP	**Ormoc**	**18.53**	**356**	*e*P			**P**	**17 08 34.8**	**+1.0**
PPR	**Puerto Princes**	**18.62**	**338**	⇑*e*P			**P**	**17 08 37.0**	**+2.2**
PLP	**Palo**	**18.62**	**357**	⇓*e*P			**P**	**17 08 34.4**	**-0.4**
TPI	**Tanjungpandan**	**18.72**	**284**	P			**P**	**17 08 36.5**	**+0.7**
	1μm,1.4s								
CBJI	**Citeko**	**18.87**	**272**	P			**P**	**17 08 33.7**	**-3.7**
	0.0nm,0.0s								
DBJI	**Dramaga**	**18.96**	**272**	P			**P**	**17 08 36.0**	**-2.4**
	0.0nm,0.0s								
SKJI	**Sukabumi**	**19.13**	**270**	P			**P**	**17 08 37.3**	**-2.8**
	0.0nm,0.0s								
SBJI	**Serang**	**19.61**	**273**	P			**P**	**17 08 42.4**	**-2.2**
	0.0nm,0.0s								
XMIS	**Christmas Isla**	**20.14**	**260**	*e*P			**P**	**17 08 47.4**	**-2.0**
PPBI	**Pangkal Pinang**	**20.34**	**284**	P			**P**	**17 08 52.3**	**+1.1**
	760nm,1.3s								
KLI	**Kotabumi**	**21.02**	**276**	P			**P**	**17 08 55.2**	**-2.3**
	0.0nm,0.0s								
PMG	**Port Moresby**	**21.18**	**96**	⇑*e*P			**P**	**17 08 58.3**	**-0.6**
JMBI	**JAMBI**	**22.88**	**284**	P			**P**	**17 09 15.4**	**+1.1**
	0.0nm,0.0s								
FORT	**Forrest**	**23.19**	**175**	⇑*i*P			**P**	**17 09 16.7**	**-0.2**
	1μm,0.7s,mb6.4								
CTA	**Charters Tower**	**23.38**	**124**	*e*P			**P**	**17 09 18.7**	**-0.1**
	22nm,0.9s,mb4.6								
CTA				*e*				17 10 20.8	
CTA				*e*SCP			ScP	17 15 51.3	-0.2
CTA				*e*SCS			ScS	17 19 38.5	-0.1
CTA	**Charters Tower**	**23.38**	**124**	P			**P**	**17 09 17.6**	**-1.1**
	29nm,0.9s,mb4.7,baz=302,slow=10.0,SNR=36								
CTA				pP				17 10 20.8	
	74nm,1.0s,baz=305,slow=13,SNR=6.3								
CTA				ScP			ScP	17 15 51.9	+0.4
	98nm,1.0s,baz=330,slow=5.1,SNR=6.5								
CTA	**Charters Tower**	**23.38**	**124**	*e*P			**P**	**17 09 18.7**	**-0.1**
CTA				*e*				17 19 38.5	
CTA				pmax			pmax		
	comp=Z,23nm,0.9s								
MYKOM	**Kota Tinggi**	**23.81**	**292**	⇓P			**P**	**17 09 23.8**	**+1.0**
KGM	**Kluang**	**24.39**	**292**	⇓P			**P**	**17 09 29.1**	**+1.2**
RGRI	**Rengat**	**24.50**	**286**	P			**P**	**17 09 29.3**	**+0.4**
	comp=Z,0.0nm,0.0s								
KLBR	**Kellerberrin**	**25.07**	**196**	⇑*i*P			**P**	**17 09 33.4**	**-0.3**
	comp=Z,379nm,0.8s,mb5.9								
MUN	**Mundaring**	**25.89**	**199**	⇑*i*P			**P**	**17 09 40.9**	**-0.2**
KTGM	**Kuala Trenggan**	**26.01**	**299**	⇑P			**P**	**17 09 43.6**	**+1.2**
PPI	**Padang Panjang**	**26.32**	**284**	P			**P**	**17 09 43.6**	**-1.5**
	comp=Z,0.0nm,0.0s								
FRIM	**Kepong**	**26.43**	**293**	⇑P			**P**	**17 09 46.4**	**+0.3**
NWAO	**Narrogin (SRO)**	**26.47**	**196**	P			**P**	**17 09 45.6**	**-0.5**
	comp=Z,263nm,0.7s,mb5.8,baz=21,slow=8.9,SNR=164								
NWAO				pP				17 10 54.8	
	comp=Z,103nm,0.9s,baz=10,slow=9.4,SNR=3.6								
NWAO				ScP			ScP	17 16 00.2	+0.2
	comp=Z,108nm,1.0s,baz=21,slow=7.2,SNR=4.2								
NWAO	**Narrogin (SRO)**	**26.47**	**196**	P			**P**	**17 09 45.6**	**-0.5**
NWAO				*PP				17 10 54.8	
IPM	**Ipoh**	**27.49**	**295**	⇑P			**P**	**17 09 55.9**	**+0.5**
GUMO	**Guam**	**28.27**	**42**	P			**P**	**17 10 00.3**	**-1.9**
	comp=Z,343nm,0.8s,mb5.7,baz=193,slow=6.7,SNR=22								
STKA	**Stephens Creek**	**28.30**	**151**	*e*P			**P**	**17 10 02.5**	**+0.1**
	comp=Z,138nm,0.4s,mb5.6								
STKA				*e*				17 11 14.5	
STKA				*e*S			**S**	**17 14 16.4**	**-2.4**
STKA	**Stephens Creek**	**28.30**	**151**	P			**P**	**17 10 02.7**	**+0.4**
	comp=Z,278nm,0.8s,mb5.6,baz=321,slow=9.0,SNR=419								
STKA				pP				17 11 14.7	
	comp=Z,88nm,0.6s,baz=318,slow=10,SNR=4.3								
STKA				S			**S**	**17 14 18.7**	**-0.1**
	comp=Z,35nm,0.7s,baz=161,slow=18,SNR=3.5								
STKA				ScP			ScP	17 16 04.5	-1.2
	comp=Z,36nm,1.0s,baz=22,slow=10.0,SNR=3.8								
TRSI	**Tarutung**	**28.45**	**289**	P			**P**	**17 10 04.4**	**+0.5**
	comp=Z,0.0nm,0.0s								
QIZ	**Qiongzhong**	**30.77**	**329**	P			**P**	**17 10 22.6**	**-1.5**
QZH	**Quanzhou**	**33.07**	**348**	⇓*i*P			**P**	**17 10 43.3**	**-0.5**
QZH				PP			PP	17 12 05.9	-3.6
QZH				S			**S**	**17 15 30.3**	**-2.4**
QZH				AMB			AMB		
	comp=Z,420nm,1.4s,mb5.6								
BSI	**Banda Aceh**	**33.11**	**292**	P			**P**	**17 10 42.1**	**-2.3**
	comp=Z,0.0nm,0.0s								
ARMA	**Armidale**	**33.18**	**137**	*e*P			**P**	**17 10 46.0**	**+1.2**
ARMA				*e*				17 12 10.3	
ARMA				*e*S			**S**	**17 15 35.4**	**+1.0**
ARMA				*e*SCP			ScP	17 16 22.6	+0.5
HNR	**Honiara**	**33.79**	**96**	P			**P**	**17 10 49.1**	**-1.0**
	comp=Z,676nm,1.0s,mb5.9,baz=214,slow=3.3,SNR=28								
NST	**Nakhon Sawan**	**34.36**	**312**	P			**P**	**17 10 55.5**	**+0.5**
TOO	**Toolangi**	**34.79**	**152**	⇑*i*P			**P**	**17 11 00.2**	**+1.9**
TOO				*e*				17 12 27.7	
TOO				*e*SCP			ScP	17 16 28.0	+0.4
TOO	**Toolangi**	**34.79**	**152**	⇑*i*P			**P**	**17 11 00.2**	**+1.9**
TOO				*e*				17 12 27.7	
CNB	**Canberra Magne**	**35.05**	**145**	*e*P			**P**	**17 11 01.8**	**+1.2**
CNB				*e*S			**S**	**17 16 05.5**	**+2.7**
CNB				*e*				17 16 27.0	
RIV	**Riverview**	**35.08**	**142**	*e*P			**P**	**17 11 02.7**	**+1.9**
RIV				*e*S			**S**	**17 16 08.2**	**+5.1**
RIV				*e*				17 16 27.9	
RIV	**Riverview**	**35.08**	**142**	*e*P			**P**	**17 11 02.7**	**+1.9**
RIV				*e*S			**S**	**17 16 08.2**	**+5.1**
BDT	**Bhumibol Dam**	**36.20**	**313**	P			**P**	**17 11 11.0**	**+0.5**
	comp=Z,38nm,0.8s,mb4.8								
CMAR	**Chiang Mai Arr**	**37.04**	**315**	P			**P**	**17 11 17.9**	**+0.5**
	comp=Z,25nm,0.7s,mb4.7,baz=144,slow=6.7,SNR=178								
CMAR				PcP			PcP	17 13 29.4	+1.1
	comp=Z,18nm,1.0s,baz=168,slow=3.9,SNR=6.1								
CMAR				ScP			ScP	17 16 37.0	+0.8
	comp=Z,40nm,1.0s,baz=164,slow=3.1,SNR=26								
CMAR				P3KPbc				17 41 35.6	
	comp=Z,0.3nm,0.8s,baz=318,slow=3.8,SNR=4.1								
CMAR	**Chiang Mai Arr**	**37.04**	**315**	P			**P**	**17 11 17.9**	**+0.5**
CMAR								17 13 29.4	
CMAR								17 16 37.1	
CMAR	**Chiang Mai Arr**	**37.04**	**315**	P			**P**	**17 11 17.9**	**+0.5**
CMAR				PcP			PcP	17 13 29.4	+1.1
CMAR				ScP			ScP	17 16 37.0	+0.8
CMAR				*e*				17 41 35.6	
CHG	**Chiang Mai**	**37.28**	**315**	⇑P			**P**	**17 11 19.6**	**+0.2**
	comp=Z,45nm,0.7s,mb4.9								
GYA	**Guiyang**	**38.60**	**332**	⇑*i*P			**P**	**17 11 31.2**	**+1.1**
GYA				AP			pP	17 12 33.6	-13
GYA				XP			sP	17 13 07.8	-25
GYA				PP			PP	17 13 10.2	+0.9
GYA				PCP			PcP	17 13 35.9	+2.9
GYA				SCP			ScP	17 16 53.0	+11
GYA				S			**S**	**17 17 06.8**	**+11**
GYA				PCS			PcS	17 17 24.4	+1.3
GYA				XS			sS	17 18 56.2	-19
GYA				SS			SS	17 20 06.0	-0.5
GYA				SCS			ScS	17 21 03.6	+10
GYA				AMB			AMB		
	comp=Z,40nm,0.8s,mb4.8								
GYA				AMB			AMB		
	comp=Z,910nm,5.2s								
GYA				LR			LR		
	comp=N,510nm,17.5s								
GYA				LR			LR		
	comp=E,520nm,16.6s								
GYA				LR			LR		
	comp=Z,690nm,17.7s								
SSE	**Sheshan**	**38.69**	**354**	⇓P			**P**	**17 11 30.8**	**-0.1**
SSE				AMB			AMB		
	comp=Z,202nm,1.0s,mb5.4								
SSE				AMB			AMB		
	comp=Z,704nm,9.0s								
WHN	**Wuhan**	**39.46**	**344**	⇓P			**P**	**17 11 37.7**	**+0.6**
WHN				PCP			PcP	17 13 36.2	+0.5
WHN				S			**S**	**17 17 06.7**	**-1.9**
WHN				AMB			AMB		
	comp=Z,500nm,1.0s,mb5.8								
KMI	**Kunming**	**39.51**	**326**	P			**P**	**17 11 38.8**	**+1.2**
KMI				PP			PP	17 13 20.1	+1.0
KMI				S			**S**	**17 17 10.2**	**+0.6**
KMI				SCS			ScS	17 21 02.1	+2.6
KMI				AMB			AMB		
	comp=Z,41nm,1.2s,mb4.6								
KMI				AMB			AMB		
	comp=Z,1μm,9.1s								
KMI				LR			LR		
	comp=N,663nm,23.4s								
KMI				LR			LR		
	comp=E,817nm,21.6s								
KMI				LR			LR		
	comp=Z,2μm,27.0s								
NJ2	**Nanjing**	**39.95**	**351**	*e*P			**P**	**17 11 41.0**	**-0.1**
NJ2				AMB			AMB		
	comp=Z,430nm,0.9s,mb5.8								
TAU	**Tasmania Unive**	**39.96**	**155**	P			**P**	**17 11 42.9**	**+1.8**
	comp=Z,644nm,1.0s,mb5.9,SNR=7.8								
DZM	**Mont Dzumac**	**41.67**	**115**	*e*P			**P**	**17 11 55.1**	**-0.1**
CD2	**Chengdu**	**43.71**	**332**	P			**P**	**17 12 10.7**	**-0.4**
CD2				AP			pP	17 13 15.8

comp=Z,78nm,0.8s,mb5.1
LSA *e*PcP PcP 17 13 30.0 -42
BOK Bokaro 49.92 310 *e*P **P** **17 12 58.6 -0.1**
HHC Hu-ho-hao-te 49.93 346⇑ *i*P **P** **17 12 58.3 -0.1**
HHC AP pP 17 14 02.3 -17
HHC PCP PcP 17 14 12.7 +0.9
HHC XP sP 17 14 36.6 -28
HHC PP PP 17 14 59.0 +0.7
HHC SCP ScP 17 17 36.4 +8.2
HHC PCS PcS 17 18 08.5 -0.9
HHC S **S** **17 19 44.7 +7.4**
HHC XS sS 17 21 40.3 -23
HHC SCS ScS 17 22 13.0 +7.0
HHC SS SS 17 23 21.9 +5.3
HHC AMB AMB
comp=Z,112nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,2μm,7.3s
HHC LR LR
comp=N,853nm,16.1s
HHC LR LR
comp=E,518nm,15.8s
HHC LR LR
comp=Z,1μm,15.1s
BTO Baotou 50.09 344 *e*P **P** **17 12 57.7 -2.0**
ODAN Odare 50.58 314 *e*P **P** **17 13 04.0 +0.4**
comp=Z,136nm,0.8s,mb5.2
TAPN Taplejung 50.65 315 *e*P **P** **17 13 04.8 +0.7**
VLA Vladivostok 50.74 6⇑ *i*P **P** **17 13 03.2 -1.2**
VLA pmax pmax
comp=Z,301nm,1.0s,mb5.5
CN2 Changchun 51.12 360 *e*P **P** **17 13 06.0 -1.2**
CN2 *e*AP pP 17 14 13.1 -16
CN2 *e*XP sP 17 14 47.9 -26
CN2 *e*S **S** **17 19 58.6 +5.2**
CN2 AMB AMB
comp=Z,60nm,1.0s,mb4.8
CN2 AMB AMB
comp=Z,500nm,10.0s
CN2 LR LR
comp=N,600nm,17.0s
CN2 LR LR
comp=E,500nm,17.0s
CN2 LR LR
comp=Z,700nm,21.0s
RAMN Ramite 51.20 314 *e*P **P** **17 13 08.9 +0.8**
comp=Z,301nm,0.7s,mb5.7
TRD Trivandrum 51.26 287 *e*P **P** **17 13 08.6 -0.2**
TRD AMb AMB 17 13 10.1
comp=Z,97nm,1.0s,mb5.0
KOD Kodaikanal 51.30 289 *e*P **P** **17 13 09.1 +0.1**
KOD AMb AMB 17 13 10.3
comp=Z,98nm,1.1s,mb4.9
ERM Erimo 51.82 16 P **P** **17 13 12.1 -0.2**
comp=Z,1μm,0.9s,mb6.1,SNR=11
ERM Erimo 51.82 16*c* *i*P **P** **17 13 12.6 +0.3**
JIRN Jiri 51.92 314 *e*P **P** **17 13 13.9 +0.6**
comp=Z,122nm,0.8s,mb5.2
MDJ Mudanjiang 52.05 3 P **P** **17 13 14.2 +0.3**
MDJ AP pP 17 14 17.7 -18
MDJ S **S** **17 20 10.7 +4.8**
MDJ AMB AMB
comp=Z,571nm,0.9s,mb5.8
MDJ AMB AMB
comp=Z,3μm,13.7s
MDJ Mudanjiang 52.05 3 *e*P **P** **17 13 13.9 0.0**
comp=Z,554nm,1.0s,mb5.7
GUN Gumba 52.29 314 *e*P **P** **17 13 16.7 +0.7**
comp=Z,175nm,0.7s,mb5.4
PKI Pulchoki 52.42 313 *e*P **P** **17 13 17.2 +0.2**
comp=Z,109nm,0.5s,mb5.3
PKIN Phulchoki 52.44 313 *e*P **P** **17 13 17.3 +0.2**
comp=Z,72nm,0.5s,mb5.1
GTA Gaotai 52.59 335⇓ *i*P **P** **17 13 18.8 +0.9**
GTA AP pP 17 14 23.1 -17
GTA XP sP 17 14 59.5 -25
GTA PP PP 17 15 25.6 +3.4
GTA S **S** **17 20 23.5 +10**
GTA XS sS 17 22 22.4 -19
GTA AMB AMB
comp=Z,143nm,1.2s,mb5.1
GTA AMB AMB
comp=Z,1μm,6.9s
GTA LR LR
comp=N,557nm,22.8s
GTA LR LR
comp=E,643nm,22.2s
GTA LR LR
comp=Z,4μm,21.6s
KKN Kakani 52.64 314 *e*P **P** **17 13 18.9 +0.3**
comp=Z,117nm,0.8s,mb5.2
DMN Daman 52.66 313 *e*P **P** **17 13 19.2 +0.5**
HYB Hyderabad 52.89 298 *e*P **P** **17 13 19.5 -1.1**
HYB pmax pmax
comp=Z,71nm,0.8s,mb5.0
HYB Hyderabad 52.89 298 *i*P **P** **17 13 19.5 -1.1**
comp=Z,71nm,0.8s,mb5.0
HYB Hyderabad 52.89 298 *e*P **P** **17 13 19.5 -1.1**
comp=Z,71nm,0.8s,mb5.0
GKN Gorkha 53.23 313 *e*P **P** **17 13 23.1 +0.3**
comp=Z,178nm,0.6s,mb5.5
THZ Tophouse 53.71 137 P **P** **17 13 26.6 +0.6**
MCQ Macquarie Isla 53.81 157 *e*P **P** **17 13 28.2 +1.7**
KOLN Koldanda 53.85 312 *e*P **P** **17 13 27.8 +0.5**
comp=Z,95nm,0.6s,mb5.2
DANN Dangsing 54.06 313 *e*P **P** **17 13 29.1 +0.3**
comp=Z,123nm,0.6s,mb5.3
NGP Nagpur 54.07 303 *e*P **P** **17 13 26.4 -2.5**
NGP AMb AMB 17 13 27.9
comp=Z,62nm,0.6s,mb5.0
KHZ Kahutara 54.42 138 P **P** **17 13 31.1 0.0**
MNCY Minicoy 54.93 286 *i*P **P** **17 13 34.0 -1.2**
LATR Latur 55.03 299 *e*P **P** **17 13 34.5 -1.3**
BKZ Black Stump Fm 55.20 133 P **P** **17 13 36.3 -0.3**
AKL Akola 55.58 301 *e*P **P** **17 13 39.3 -0.3**
PUZ Puketiti 56.12 131 P **P** **17 13 42.3 -0.9**
YSS Yuzh-Sakhalins 56.32 14⇑ *e*P **P** **17 13 43.7 -0.6**
YSS *e* 17 14 36.0
YSS pmax pmax
comp=N,70nm,1.1s
YSS pmax pmax
comp=Z,150nm,1.1s,mb5.2
YSS Yuzh-Sakhalins 56.32 14 *i*P **P** **17 13 44.3 0.0**
GOA Goa 56.38 294 *e*P **P** **17 13 45.4 +0.1**
KAD Karad 56.70 296 *e*P **P** **17 13 46.7 -0.8**
KLR Kul'dur 56.79 5⇑ *i*P **P** **17 13 42.9 -4.6**
KLR pmax pmax
comp=E,56nm,1.8s
KLR pmax pmax
comp=Z,280nm,1.8s,mb5.3
HIA Hailar 56.84 355 *e*P **P** **17 13 48.2 +0.4**
HIA *e* 17 14 38.1
HIA pmax pmax
comp=Z,226nm,1.2s
HIA Hailar 56.84 355 *e*P **P** **17 13 48.2 +0.4**
comp=Z,226nm,1.2s,mb5.4
HIA *e*PcP PcP 17 14 38.1 0.0
POO Poona 57.45 298 *e*P **P** **17 13 51.9 -0.8**
ULN Ulaanbaatar 57.63 345 *i*P **P** **17 13 53.8 +0.5**
ULN Ulaanbaatar 57.63 345 *i*P **P** **17 13 53.8 +0.5**
SONM Songino Array 57.77 345 P **P** **17 13 54.8 +0.5**
comp=Z,73nm,0.9s,mb5.0,baz=163,slow=7.0,SNR=232
SONM PcP PcP 17 14 42.2 +0.4
comp=Z,24nm,0.8s,baz=155,slow=4.1,SNR=7.6
SONM ScP ScP 17 18 01.9 -0.5
comp=Z,5.2nm,0.8s,baz=159,slow=4.6,SNR=3.6
SONM S **S** **17 21 19.8 -1.3**
comp=Z,1.1nm,1.0s,baz=331,slow=12,SNR=5.0
SONM PKPPKP 17 43 28.5
comp=Z,1.5nm,1.1s,baz=316,slow=2.6,SNR=4.8
SONM P4KPbc 17 51 01.3
comp=Z,1.6nm,0.9s,baz=168,slow=5.8,SNR=5.5
SONM Songino Array 57.77 345 P **P** **17 13 54.8 +0.5**
SONM 17 14 42.2
SONM S **S** **17 21 19.8 -1.3**
SONM Songino Array 57.77 345 P **P** **17 13 54.8 +0.5**
SONM PcP PcP 17 14 42.2 +0.4
SONM ScP ScP 17 18 01.9 -0.5
SONM S **S** **17 21 19.8 -1.3**
SONM P'P' 17 43 28.5
NDI New Delhi 59.10 310 *ex* **P** **17 14 00.0 -3.8**
NDI *ex* x 17 21 29.0
DDI Dehra Dun 59.31 312 *e*P **P** **17 14 02.8 -2.3**
DDI *ex* x 17 21 33.7
CASY Casey 59.57 187⇑ *i*P **P** **17 14 06.9 +0.6**
CASY *e* pP 17 15 33.2 +2.1
CASY *e*SCP ScP 17 18 10.4 +0.3
CASY *e*S **S** **17 21 45.1 +1.5**
AJM Ajmer 60.07 306 *e*P **P** **17 14 09.9 -0.4**
CIT Chita 60.27 351 *e*P **P** **17 14 11.4 +0.2**
CIT *e* 17 14 52.3
CIT *e* 17 21 54.7
CIT *e* 17 23 19.0
CIT pmax pmax
comp=Z,357nm,1.7s,mb5.5
SMLA Simla 60.38 312 *i*P **P** **17 14 12.7 +0.3**
SMLA *ex* x 17 14 13.2
comp=Z,328nm,0.4s
SMLA *i*x x 17 21 51.4
SDNR Sundarnagar 60.71 312 *ex* x 17 13 48.4
ZAK Zakamensk 60.94 344⇑ *i*P **P** **17 14 15.5 -0.1**
ZAK *e* 17 14 53.5
ZAK *e* 17 22 01.6
ZAK *e* 17 23 20.8
ZAK pmax pmax
comp=Z,43nm,1.8s,mb4.6
ZAK pmax pmax
comp=Z,26nm,1.0s,mb4.6
WMQ Urumqi 61.69 329 P **P** **17 14 21.2 +0.4**
WMQ PCP PcP 17 15 01.0 +3.3
WMQ AP pP 17 15 38.0 -8.3
WMQ PCS PcS 17 19 03.0 +1.9
WMQ S **S** **17 22 10.0 -0.8**
WMQ AMB AMB
comp=Z,114nm,1.4s,mb5.2
WMQ AMB AMB
comp=Z,540nm,3.7s
TLY Talaya 62.01 345 *e*P **P** **17 14 23.5 +0.8**
TLY *e* 17 14 56.7
TLY pmax pmax
comp=Z,100nm,1.2s,mb5.2
TLY Talaya 62.01 345⇓ *i*P **P** **17 14 22.5 -0.2**
THN Thein Dam 62.10 313 *e*P **P** **17 14 22.4 -1.3**
IRK Irkutsk 62.36 345⇓ *i*P **P** **17 14 25.0 0.0**
IRK *e*S **S** **17 22 19.4 +0.6**
IRK pmax pmax
comp=Z,274nm,1.7s,mb5.5
MOY Mondy 62.74 343 *e*P **P** **17 14 28.1 +0.7**
MOY *e* 17 22 25.4
MOY pmax pmax
comp=Z,252nm,3.4s
MIR Mirnyy 63.05 194⇑ *i*P **P** **17 14 31.0 +1.7**
MIR *i* 17 15 00.0
MIR pmax pmax
comp=Z,400nm,1.2s,mb5.8
SKR Severo-Kuril's 63.66 21 *e*P **P** **17 14 33.0 -0.4**
SKR pmax pmax
comp=Z,90nm,0.7s,mb5.4
CLNS Chul'man 64.18 359 *e*P **P** **17 14 36.5 -0.1**
CLNS *e* 17 15 07.5
CLNS *e*S **S** **17 22 44.0 +3.2**
CLNS *e* 17 23 49.2
CLNS pmax pmax
comp=Z,119nm,0.9s,mb5.4
CLNS pmax pmax
comp=N,75nm,1.0s
CLNS pmax pmax
comp=E,35nm,1.0s
CLNS smax
comp=N,11nm,1.3s
CLNS smax
comp=E,37nm,1.5s
KSH Kashi 65.70 320 P **P** **17 14 48.1 +1.4**
KSH *e*PCP PcP 17 15 15.1 +0.7
KSH *e*AP pP 17 15 59.2 -14
KSH *e*XP sP 17 16 33.2 -24
KSH *e*PP PP 17 17 20.2 +2.5
KSH *e*SCP 17 18 46.2
KSH *e*PCS 17 19 19.2
KSH *e*S S 17 23 03.5 +3.6
KSH *e*SCS ScS 17 24 09.3 +6.9
KSH *e*XS sS 17 25 14.1 -21
KSH *e*SS SS 17 27 34.2 +11
KSH AMB AMB
comp=Z,3μm,12.8s
KSH LR LR
comp=N,2μm,11.9s
KSH LR LR
comp=E,1μm,7.2s
KSH LR LR
comp=Z,2μm,16.6s
BOD Bodaibo 65.87 353 *e*P **P** **17 14 47.4 0.0**
BOD *e* 17 23 00.7
BOD pmax pmax
comp=Z,227nm,1.0s,mb5.8
PEA0B Petropavlovsk- 66.22 20 *e*P **P** **17 14 50.2 +0.6**
PETK Petropavlovsk- 66.22 20 P **P** **17 14 50.3 +0.6**
comp=Z,197nm,0.8s,mb5.8,baz=186,slow=4.9,SNR=360
PETK PcP PcP 17 15 15.6 -0.7
comp=Z,22nm,0.6s,baz=169,slow=2.8,SNR=5.8
PET Petropavlovsk 66.48 21 *e*P **P** **17 14 51.8 +0.5**
PET pmax pmax
comp=Z,329nm,0.9s,mb6.0
PET Petropavlovsk 66.48 21 *i*P **P** **17 14 51.6 +0.3**
MK31 Makanchi Array 66.50 329 *i*P **P** **17 14 51.4 -0.2**
MK31 pmax pmax
comp=Z,26nm,0.5s,mb5.1
MK31 Makanchi Array 66.50 329 *i*P **P** **17 14 51.5 -0.1**
MKAR Makanchi Array 66.50 329 P **P** **17 14 51.9 +0.4**
comp=Z,17nm,0.3s,mb5.1,baz=127,slow=7.7,SNR=189
MKAR PcP PcP 17 15 17.6 0.0
comp=Z,31nm,0.7s,baz=130,slow=6.5,SNR=7.4
MKAR S S 17 23 07.0 -2.1
comp=Z,12nm,1.1s,baz=139,slow=11,SNR=18
MKAR P4KPbc 17 51 40.1
comp=Z,0.6nm,0.6s,baz=111,slow=6.6,SNR=4.7
MKAR Makanchi Array 66.50 329 P **P** **17 14 51.9 +0.3**
MKAR PcP PcP 17 15 17.6 0.0
MKAR S S 17 23 07.0 -2.1
ULHL Ulahol 67.07 322 P **P** **17 14 54.0 -1.2**
SNR=8.2
KZA Kyzart 67.58 322 P **P** **17 14 59.4 +1.0**
SNR=28
TKM2 Tokmak 2 67.84 322 *e*P **P** **17 15 00.6 +0.6**
TKM2 pmax pmax
comp=Z,34nm,0.9s,mb5.0
TKM2 Tokmak 2 67.84 322 P **P** **17 15 00.9 +0.9**
SNR=27
TKM2 Tokmak 2 67.84 322 *e*P **P** **17 15 00.6 +0.6**
comp=Z,34nm,0.9s,mb5.0
KBL Kabul 68.01 312 *e*P **P** **17 15 01.3 +0.1**
KBL pmax pmax
comp=Z,47nm,0.7s,mb5.2
KBL Kabul 68.01 312 *e*P **P** **17 15 01.3 +0.1**
comp=Z,47nm,0.7s,mb5.2
KBK Karagaybulak 68.09 322 P **P** **17 15 02.5 +1.0**
SNR=19
UCH Uchtor 68.12 321 *e*P **P** **17 15 02.9 +1.2**
comp=Z,14nm,0.8s,mb4.6
UCH *e*PcP PcP 17 15 24.9 +0.5
AAK Ala-Archa 68.35 322 P **P** **17 15 04.3 +1.2**
SNR=15
FRU Bishkek 68.39 322 *e*P **P** **17 15 03.0 -0.4**
CHMS Chumysh 68.40 322 P **P** **17 15 03.6 +0.2**
SNR=7.0
AML Almayashu 68.58 321 P **P** **17 15 05.8 +1.3**
SNR=11
AML Almayashu 68.58 321 *e*P **P** **17 15 05.3 +0.8**
comp=Z,46nm,0.9s,mb5.1
USP Ospenovka 68.70 322 P **P** **17 15 05.7 +0.4**
SNR=35
EKS2 Erkin-Say 68.81 321 P **P** **17 15 07.2 +1.2**
SNR=24
EKS2 Erkin-Say 68.81 321 *e*P **P** **17 15 06.7 +0.7**
comp=Z,38nm,1.0s,mb5.0
YAK Yakutsk 69.45 2*d* *i*P **P** **17 15 09.3 -0.1**
YAK *e* 17 15 27.9
YAK *e* 17 17 47.5
YAK *i*S S 17 23 41.3 -1.8
YAK *e* 17 24 25.9
YAK pmax pmax
comp=Z,715nm,0.9s,mb6.3
YAK pmax pmax
comp=N,225nm,1.1s
YAK pmax pmax
comp=E,17nm,1.0s
YAK pmax pmax
comp=Z,30nm,1.4s,mb4.7
YAK pmax pmax
comp=E,22nm,1.1s
YAK pmax pmax
comp=N,15nm,1.0s
YAK smax
comp=E,691μm,1.6s
YAK smax
comp=N,677μm,2.0s
YAK Yakutsk 69.45 2⇓ *i*P **P** **17 15 08.3 -1.1**
ZAA0 Zalesovo Array 70.32 336 *e*P **P** **17 15 14.1 -0.7**
ZALV Zalesovo Beam 70.32 336 P **P** **17 15 14.2 -0.6**
comp=N,126nm,0.6s,mb5.6,baz=129,slow=4.4,SNR=353
ZALV S S 17 23 49.0 -4.5
comp=N,3.9nm,0.7s,baz=125,slow=7.8,SNR=4.3
KURK Kurchatov 70.90 330 P **P** **17 15 18.8 +0.5**
comp=N,1μm,1.1s,mb6.3
KURK Kurchatov 70.90 330 P **P** **17 15 18.1 -0.3**
comp=N,85nm,0.9s,mb5.3,baz=132,slow=4.7,SNR=9.8
KURK S S 17 23 59.2 -1.0
comp=N,1.8nm,0.3s,baz=115,slow=9.6,SNR=9.1
KURK Kurchatov 70.90 330 P **P** **17 15 18.1 -0.2**
KURK S S 17 23 59.2 -1.0
KK31 Karatay Array 71.08 320 *i*P **P** **17 15 19.4 -0.2**
KK31 pmax pmax
comp=Z,41nm,1.4s,mb4.8
KK31 Karatay Array 71.08 320 *i*P **P** **17 15 19.5 -0.1**
NVS Novosibirsk 71.61 336 *i*P **P** **17 15 21.7 -0.7**
NVS *i* *PP pP 17 16 43.7 -7.3
NVS *i*S S 17 24 04.2 -3.9
NVS *i* 17 24 52.5
NVS pmax pmax
comp=Z,185nm,0.8s,mb5.7
NVS pmax pmax
comp=N,144nm,1.3s
NVS pmax pmax
comp=E,152nm,1.3s
NVS smax
comp=N,239nm,1.9s
NVS smax
comp=E,404nm,1.9s
SMY Shemya 72.69 28 *e*P **P** **17 15 29.3 +0.5**
SMY pmax pmax
comp=Z,552nm,1.0s,mb6.0
SMY Shemya 72.69 28 *e*P **P** **17 15 29.3 +0.5**
comp=Z,552nm,1.0s,mb6.0
MAW Mawson 72.93 201⇑ *i*P **P** **17 15 31.1 +1.1**
comp=Z,60nm,1.1s,mb5.0
MAW *e* pP 17 17 01.6 +2.6
MAW Mawson 72.93 201 P **P** **17 15 31.1 +1.1**
comp=Z,63nm,0.8s,mb5.2,baz=69,slow=7.0,SNR=121
MAW Mawson 72.93 201 *i*P **P** **17 15 31.1 +1.1**
MAW pmax pmax
comp=Z,60nm,1.1s
AMKA Amchitka 74.46 32 *e*P **P** **17 15 39.3 +0.3**
comp=Z,142nm,1.2s,mb5.5
BVA0 Borovoye Array 76.38 329 *i*P **P** **17 15 49.5 -0.3**
BVA0 pmax pmax
comp=Z,53nm,1.1s,mb5.1
BVAR Borovoye Array 76.38 329 P **P** **17 15 50.0 +0.2**
comp=Z,141nm,1.0s,mb5.6,baz=134,slow=6.4,SNR=370
BVAR S S 17 25 00.0 -0.8
comp=Z,2.4nm,0.8s,baz=108,slow=14,SNR=5.0
BVAR PKKPbc PKKPbc 17 35 11.1 +9.2
comp=Z,0.1nm,0.4s,baz=96,slow=3.0,SNR=3.9
BVAR Borovoye Array 76.38 329 P **P** **17 15 50.0 +0.2**
BVAR S S 17 25 00.0 -0.8
BRVK Borovoye 76.45 329 P **P** **17 15 50.6 +0.5**
comp=Z,1μm,1.0s,mb6.4,SNR=83
BRVK Borovoye 76.45 329 *i*P **P** **17 15 50.5 +0.3**
OPO Ambohidratompo 76.90 253 P **P** **17 15 54.4 +1.0**
comp=Z,25nm,0.9s,mb4.8,baz=90,slow=3.5,SNR=26
ABKT Ailbek 77.45 311 P **P** **17 15 57.5 +1.5**
comp=Z,357nm,1.0s,mb6.0,SNR=26
TIXI Tiksi 79.07 1*d* *i*P **P** **17 16 03.1 -1.0**
TIXI *e*S S 17 25 23.5 -5.2
TIXI pmax pmax
comp=E,41nm,0.9s
TIXI pmax pmax
comp=N,55nm,0.8s
TIXI pmax pmax
comp=Z,148nm,0.5s,mb5.9
TIXI smax
comp=E,64μm,4.2s
TIXI smax
comp=N,348μm,4.3s
TIXI Tiksi 79.07 1 *i*P **P** **17 16 02.9 -1.2**
AB31 Akbulak array 80.41 323 *i*P **P** **17 16 11.1 -0.5**
AB31 pmax pmax
comp=Z,14nm,0.5s,mb4.8
AB31 Akbulak array 80.41 323⇑ *e*P **P** **17 16 11.2 -0.4**
BILL Bilibino 80.64 14⇓ *i*P **P** **17 16 11.9 -0.5**
BILL *e**PP pP 17 17 32.3 -11
BILL pmax pmax
comp=Z,26nm,0.9s,mb5.0
BILL Bilibino 80.64 14 *e*P **P** **17 16 11.8 -0.7**
comp=Z,13nm,0.5s,mb4.9
KKH Kailua Kona 81.48 69 *e*P **P** **17 16 11.4 -6.5**
SYO Syowa Base 81.64 201⇓ *i*P **P** **17 16 16.6 -1.1**
SYO Syowa Base 81.64 201⇓ *e*PcP PcP 17 16 20.6 -1.7
AKTK Aktyubinsk 82.02 323 P **P** **17 16 20.1 +0.2**
AKTK PKKPbc PKKPbc 17 34 47.4 -1.7
AKTO Aktyubinsk 82.02 323 P **P** **17 16 20.1 +0.2**
comp=Z,39nm,0.5s,mb5.4,baz=108,slow=7.2,SNR=189
AKTO PKKPbc PKKPbc 17 34 47.4 -1.7
comp=Z,2.7nm,0.8s,baz=312,slow=3.5,SNR=13
AKTO Aktyubinsk 82.02 323 *i*P **P** **17 16 19.5 -0.5**
AKTO pmax pmax
comp=Z,21nm,1.2s,mb4.7
PAE Paea 82.61 107 *e*P **P** **17 16 26.1 +2.3**
comp=Z,685nm,1.1s,mb6.3
PPT Papeete 82.63 107 *e*P **P** **17 16 25.9 +2.1**
comp=Z,60nm,1.1s,mb5.2
PPT Papeete 82.63 107 P **P** **17 16 25.2 +1.4**
comp=Z,23nm,0.3s,mb5.4,baz=262,slow=9.1,SNR=4.2
TIAR Tiarei 82.85 107 *e*P **P** **17 16 27.1 +2.1**
comp=Z,623nm,1.0s,mb6.3
TVO Taravao 82.92 107 *e*P **P** **17 16 27.1 +1.8**
comp=Z,654nm,1.0s,mb6.3
SVE Sverdlovsk 83.14 330⇑ *e*P **P** **17 16 25.6 +0.1**
SVE pmax pmax
comp=Z,224nm,1.1s,mb5.8
UNV Unalaska Valle 83.23 34 *e*P **P** **17 16 25.0 -1.0**
comp=Z,107nm,0.9s,mb5.6
UMR Umm Al-Rimmam 83.47 301 *e*P **P** **17 16 27.4 -0.5**
baz=301
UMR AMb AMB 17 16 28.9
comp=Z,55nm,0.7s,mb5.4,baz=301
RDF Al-Radifah 83.47 300 *e*P **P** **17 16 27.4 -0.5**
baz=300
RDF AMb AMB 17 16 29.4
comp=Z,60nm,0.9s,mb5.3,baz=300
AKUT Akutan 83.74 33 *e*P **P** **17 16 27.8 -0.8**
comp=Z,426nm,1.0s,mb6.1
NAY Al-Naaiem 83.81 300 *e*P **P** **17 16 29.2 -0.3**
baz=300
NAY AMb AMB 17 16 30.9
comp=Z,70nm,0.7s,mb5.5,baz=300
MIB Mutribah 83.84 301 *e*P **P** **17 16 29.5 -0.2**
baz=301
MIB AMb AMB 17 16 31.2
comp=Z,91nm,0.9s,mb5.5,baz=301
ARU Arti 84.02 329*d* *i*P **P** **17 16 29.4 -0.6**
ARU *e* 17 19 47.3
ARU *e*S S 17 26 13.8 -5.6
ARU *e*SS SS 17 32 02.8 +3.9
ARU pmax pmax
comp=Z,217nm,1.2s,mb5.8
ARU Arti 84.02 329 *i*P **P** **17 16 29.5 -0.5**
MEH Mehetia 84.03 107 *e*P **P** **17 16 32.6 +1.7**
comp=Z,3μm,1.1s
RST Umm Al-Ruwaisa 84.07 301 *e*P **P** **17 16 30.4 -0.5**
baz=301
RST AMb AMB 17 16 32.0
comp=Z,129nm,0.8s,mb5.7,baz=301
PMOR Pomariorio Ree 84.50 104 *e*P **P** **17 16 34.9 +1.6**
comp=Z,92nm,1.0s,mb5.5
BHD Baghdad 87.01 304 *ex* x 17 16 47.0
BHD *ex* x 17 26 45.0
SDPT Sand Point 87.04 33 *e*P **P** **17 16 44.1 -0.5**
comp=Z,202nm,0.6s,mb6.0
DGRG David-gareji 87.86 312 P **P** **17 16 50.6 +1.8**
DGRG S S 17 27 00.2 +3.3
MTA Mtatsminda 88.34 312 P **P** **17 16 52.1 +1.0**
MTA S S 17 27 02.4 +1.1
TBLG Delisi 88.38 312 P **P** **17 16 52.4 +1.1**
TBLG S S 17 27 03.0 +1.3
CHGN Chignik 88.43 33 *e*P **P** **17 16 50.2 -0.9**
KMBO Kilima Mbogo 88.44 269 P **P** **17 16 53.5 +1.2**

comp=Z,8.8nm,1.0s,mb4.5,baz=77,slow=6.0,SNR=15
KMBO Kilima Mbogo 88.44 269⇑ *e*P **P** **17 16 53.5 +1.3**
MSL Mosul 88.62 307 *ex* x 17 16 56.0
MSL *ex* x 17 18 28.0
MSL *ex* x 17 26 44.0
MSL *ex* x 17 27 03.0
GOR Gori 88.89 312 P **P** **17 16 55.0 +1.3**
ONI Oni 89.49 313 P **P** **17 16 57.3 +0.9**
ONI S S 17 27 18.2 +6.3
KIV Kislovodsk 90.28 314 *e*P **P** **17 17 00.4 +0.3**
KIV *i* 17 27 20.7
KIV pmax pmax
comp=Z,13nm,1.1s,mb4.7
MAIT Maitri 90.61 198 *e*P **P** **17 17 01.3 +0.2**
SVW2 Sparrevohn 91.09 28 *e*P **P** **17 17 03.1 -0.3**
OHAK Old Harbor 91.39 32 *e*P **P** **17 17 04.1 -0.8**
comp=Z,65nm,0.9s,mb5.5
KDAK Kodiak Island 91.87 32 P **P** **17 17 06.0 -1.1**
comp=Z,328nm,0.8s,mb6.3,SNR=5.9
KDAK Kodiak Island 91.87 32 *e*P **P** **17 17 06.1 -1.0**
comp=Z,44nm,1.0s,mb5.3
IMA2 Indian Mountai 93.01 24 *e*P **P** **17 17 11.5 -0.6**
ASF Jabal al Asfar 93.07 302 P **P** **17 17 14.7 +1.5**
comp=Z,3.8nm,0.8s,mb4.4,baz=338,slow=6.0,SNR=6.0
CHUM Lake Minchumin 93.16 26 *e*P **P** **17 17 12.3 -0.6**
SLKM Skilak Lake 93.55 30 *e*P **P** **17 17 13.1 -1.6**
KTH Kantishna Hill 93.71 26 *e*P **P** **17 17 14.1 -1.3**
comp=Z,20nm,0.9s,mb5.1
VSR Storozhevoye 93.75 321 *e*P **P** **17 17 15.0 -0.9**
VSR pmax pmax
comp=N,8.0nm,1.0s
VSR pmax pmax
comp=E,20nm,1.0s
VSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BPAW Bear Paw Mtn. 93.77 26 *e*P **P** **17 17 14.6 -1.1**
comp=Z,20nm,0.8s,mb5.2
RC01 Rabbit Creek A 93.87 29 *e*P **P** **17 17 14.9 -1.3**
comp=Z,2µm,0.6s
SNAA Sanae 94.13 194 *e*P **P** **17 17 18.2 +0.9**
SNAA *e* 17 17 19.9
SNAA *e* 17 17 23.4
ANN Anapa 94.13 314 *e*P **P** **17 17 15.5 -2.3**
ANN pmax pmax
comp=Z,24nm,1.2s,mb5.1
PMR Palmer 94.23 29 *e*P **P** **17 17 16.3 -1.5**
PMR pmax pmax
comp=Z,24nm,0.7s,mb5.3
PMR Palmer 94.23 29 *e*P **P** **17 17 16.3 -1.5**
comp=Z,24nm,0.7s,mb5.3
MMAI Mount Meron Ar 94.42 303 P **P** **17 17 19.9 +0.5**
comp=Z,3.3nm,0.7s,mb4.5,baz=77,slow=7.2,SNR=4.4
MMAI pP pP 17 18 51.6 -1.2
comp=Z,5.4nm,0.9s,baz=100,slow=12,SNR=2.5
COLD Coldfoot 94.58 23 *e*P **P** **17 17 18.8 -0.5**
comp=Z,40nm,1.0s,mb5.4
MCK McKinley 94.61 26 *e*P **P** **17 17 17.7 -1.8**
MCK pmax pmax
comp=Z,31nm,0.9s,mb5.3
MCK McKinley 94.61 26 *e*P **P** **17 17 17.7 -1.8**
comp=Z,31nm,0.9s,mb5.3
MOS Moscow 95.18 325 *e*P **P** **17 17 20.0 -2.3**
MOS *e* 17 27 52.8
LSZ Lusaka 95.34 254 P **P** **17 17 24.4 +0.5**
comp=Z,7.0nm,0.8s,mb4.7,baz=104,slow=4.3,SNR=12
LSZ PP PP 17 21 20.8 +0.2
comp=Z,2.6nm,0.8s,baz=128,slow=10.0,SNR=3.0
LSZ PKKP PKKPbc 17 34 16.7 +2.0
comp=Z,2.9nm,0.6s,baz=167,slow=1.1,SNR=10.0
LSZ Lusaka 95.34 254 *e*P **P** **17 17 24.1 +0.2**
LSZ pmax pmax
comp=Z,24nm,1.4s,mb5.0
LSZ Lusaka 95.34 254 *e*P **P** **17 17 24.1 +0.2**
comp=Z,24nm,1.4s,mb5.0
BOSA Boshof 95.61 240 P **P** **17 17 25.4 +0.5**
comp=Z,20nm,0.9s,mb5.2,baz=99,slow=4.7,SNR=19
BOSA PKKPbc PKKPbc 17 34 15.4 +1.0
comp=Z,2.8nm,1.0s,baz=296,slow=11,SNR=3.9
OBN Obninsk 95.72 325‖ *i*P **P** **17 17 23.8 -0.9**
OBN *i* S SKSac 17 27 21.4 +0.3
OBN pmax pmax
comp=Z,56nm,1.0s,mb5.7
OBN Obninsk 95.72 325 *e*P **P** **17 17 23.8 -0.9**
VNA2 Neumayer--Watz 95.72 194 *e*P **P** **17 17 25.8 +1.3**
VNA2 *e* 17 17 27.5
VNA2 *e* 17 17 30.9
DIV Divide 95.79 29 *e*P **P** **17 17 24.1 -0.8**
comp=Z,13µm,0.6s
VNA1 Neumayer--Stat 96.12 194 *e*P **P** **17 17 27.4 +1.1**
VNA1 *e* 17 17 29.3
VNA1 *e* 17 17 33.4
LVZ Lovozero 97.40 338 *e*P **P** **17 17 30.3 -1.7**
LVZ pmax pmax
comp=Z,30nm,1.1s,mb5.3
APA Apatity 97.86 337⇑ *e*P **P** **17 17 30.6 -3.5**
APA pmax pmax
comp=Z,26nm,1.3s,mb5.3
JOF Joensuu 98.74 333 *e*p Pdif 17 17 35.4 -3.0
comp=Z,16nm,0.6s
JOF Joensuu 98.74 333 *e*P Pdif 17 17 35.4 -3.0
JOF pmax pmax
comp=Z,16nm,0.6s,mb5.5
PNL Peninsula 98.89 31 *e*P Pdif 17 17 37.8 -1.2
comp=Z,16nm,0.9s
HYT Haines Junctio 99.81 30 *e*P Pdif 17 17 40.6 -2.5
AKASG Malin Array Be 99.99 320 P Pdif 17 17 42.9 -1.1
comp=Z,3.3nm,0.6s,baz=75,slow=3.9,SNR=18
AKASG pP pP 17 19 17.6 -0.2
comp=Z,4.0nm,0.9s,baz=71,slow=4.5,SNR=4.1
AKASG PP PP 17 21 57.6 +2.5
comp=Z,0.6nm,0.5s,baz=78,slow=5.7,SNR=4.6
AKASG PKKPbc PKKPbc 17 33 55.9 -7.5
comp=Z,0.9nm,0.6s,baz=208,slow=15,SNR=4.1
AKASG Malin Array Be 99.99 320 P Pdif 17 17 42.9 -1.1
AKASG 17 21 57.7
AKASG Malin Array Be 99.99 320 P Pdif 17 17 42.9 -1.1
AKASG pP pP 17 19 17.6 -0.2
AKASG PP PP 17 21 57.6 +2.5
AKASG PKKPbc PKKPbc 17 33 55.9 -7.5
ARCES ARCESS Array B 100.65 339 P Pdif 17 17 45.1 -1.8
comp=Z,8.7nm,0.7s,baz=82,slow=4.6,SNR=30
ARCES PKKPbc PKKPbc 17 33 56.6 -5.6
comp=Z,1.9nm,0.7s,baz=336,slow=2.7,SNR=5.5
SKAG Skagway 100.97 31 *e*P Pdif 17 17 47.9 -0.4
comp=Z,10nm,1.0s
KAF Kangasniemi 101.10 332 *e*p Pdif 17 17 46.4 -2.5
comp=Z,5.7nm,0.6s
KAF Kangasniemi 101.10 332 *e*P Pdif 17 17 46.4 -2.5
KAF pmax pmax
comp=Z,6.0nm,0.6s
KOLS Kolonicke sedl 104.57 319 *e*PP PP 17 22 26.3 -2.8
CRVS Cervenica-Dubn 105.10 319 *e*PP PP 17 22 28.3 -4.8
KECS *e* 17 25 23.1
KECS Kecovo 105.79 318 *e*PP PP 17 22 32.2 -5.9
VYHS Vyhne 106.88 318 *e*PP PP 17 22 48.9 +2.9
HFS Hagfors 107.47 331 Pdiff Pdif 17 18 15.8 -1.4
comp=Z,2.5nm,0.5s,baz=97,slow=5.1,SNR=14
MODS *e*SKP 17 25 20.0
MODS Modra-Piesok 107.92 318 *e*PP PP 17 22 52.4 -1.2
NOA NORSAR Array B 108.37 332 Pdiff Pdif 17 18 19.5 -1.7
comp=Z,4.0nm,0.8s,baz=74,slow=4.6,SNR=9.0
NOA PKiKP PKiKP 17 22 24.1 -0.5
comp=Z,2.9nm,1.0s,baz=261,slow=3.1,SNR=3.7
NOA SKP 17 25 20.3
comp=Z,2.6nm,1.0s,baz=269,slow=4.0,SNR=3.9
NOA NORSAR Array B 108.37 332 Pdif Pdif 17 18 19.5 -1.7
NOA PKPdf PKiKP 17 22 24.1 -0.5
NOA SKP 17 25 20.3
BRG Berggiesshubel 109.59 321 *e*SKPdf 17 25 22.8
BRG Berggiesshubel 109.59 321 *e*P PP 17 23 09.8 +4.3
comp=Z,16nm,1.5s
BRG Berggiesshubel 109.59 321 *e*P 17 25 22.9
comp=Z,8.5nm,1.1s
YKA Yellowknife Ar 110.06 25 Pdiff Pdif 17 18 27.8 -0.9
comp=Z,1.9nm,0.8s,baz=293,slow=4.5,SNR=7.4
YKA PKiKP PKiKP 17 22 27.0 -0.7
comp=Z,3.4nm,0.7s,baz=303,slow=1.7,SNR=19
YKA PP PP 17 23 05.5 -2.8
comp=Z,1.5nm,0.9s,baz=289,slow=6.0,SNR=3.9
YKA SKP 17 25 22.7
comp=Z,3.9nm,0.9s,baz=291,slow=2.0,SNR=6.7
YKA PKKPbc PKKPbc 17 33 30.7 -2.8
comp=Z,2.3nm,0.7s,baz=108,slow=3.0,SNR=9.5
YKA Yellowknife Ar 110.06 25 P Pdif 17 18 27.8 -0.9
YKA 17 23 05.5
YKA Yellowknife Ar 110.06 25 Pdif Pdif 17 18 27.8 -0.9
YKA PKPdf PKiKP 17 22 27.0 -0.7
YKA PP PP 17 23 05.5 -2.8
YKA SKP 17 25 22.7
YKA PKKPbc PKKPbc 17 33 30.7 -2.8
YKA PKKPbc PKKPbc 17 33 30.7 -2.8
CLL Collm 110.07 322 *e*SKPdf SKPdf 17 25 23.7 -0.8
CLL Collm 110.07 322‖ *i*SKPdf SKPdf 17 25 24.0 -0.5
comp=Z,9.0nm,1.1s
GERES GERESS Array B 110.17 319 PKiKP PKiKP 17 22 28.4 0.0
comp=Z,1.1nm,0.6s,baz=48,slow=2.0,SNR=7.3
GERES PP PP 17 23 06.0 -3.7
comp=Z,0.8nm,0.8s,baz=126,slow=1.8,SNR=3.8
GERES SKP 17 25 23.9
comp=Z,2.9nm,0.9s,baz=90,slow=1.3,SNR=8.6
GERES SKKPbc 17 36 35.1
comp=Z,1.4nm,0.9s,baz=243,slow=5.3,SNR=4.9
JMIC Jan Mayen 110.53 346 Pdiff Pdif 17 18 30.9 +0.1
comp=Z,182nm,0.4s,baz=170,slow=2.7,SNR=14
TANN Tannenbergstha 110.61 321 *e*SKPdf SKPdf 17 25 24.8 -0.8
WET Wettzell 110.64 320 *e*SKPdf SKPdf 17 25 24.9 -0.8
GUNZ Gunzen 110.71 321 *e*SKPdf SKPdf 17 25 25.4 -0.4
MANZ Manzenberg 110.94 321 *e*SKPdf SKPdf 17 25 25.6 -0.6
YBH Yreka Blue Hor 110.99 48 PKiKP PKiKP 17 22 30.4 +0.3
comp=Z,1.9nm,0.9s,baz=342,slow=6.8,SNR=4.0
YBH Yreka Blue Hor 110.99 48 *e*PKiKP PKiKP 17 22 30.2 +0.1
RJOB Jochberg 111.00 318 *e*SKPdf SKPdf 17 25 25.4 -1.0
MOX Moxa 111.08 322 *e*SKPdf SKPdf 17 25 25.8 -0.7
CLZ Clausthal 111.53 323 *e*SKPdf SKPdf 17 25 26.8 -0.5
GRF Grafenberg Arr 111.56 321 *e*SKPdf SKPdf 17 25 26.4 -1.0
MOD Modoc 112.73 48 *e*PKiKP PKiKP 17 22 33.8 +0.3
MOD *e*PP PP 17 23 22.4 -5.7
LNOR Lincton Mounta 113.33 43 *e*PKiKP PKiKP 17 22 34.1 -0.4
LNOR *e*PP PP 17 23 27.4 -4.7
WVOR Wild Horse Val 113.84 47 *e*PKiKP PKiKP 17 22 35.4 -0.2
WVOR *e*PP PP 17 23 31.2 -4.6
EDM Edmonton 114.20 34 *e*PKiKP PKiKP 17 22 35.9 0.0
EDM *e*PP PP 17 23 29.7 -8.1
BMO Blue Mountains 114.24 44 *e*PKiKP PKiKP 17 22 35.5 -0.7
PGF Pioggiola 114.76 313 *e*PKiKP PKPdf 17 22 37.3 0.0
comp=Z,16nm,0.8s
HINF Hinteralfeld 114.85 319⇑ *i*PKiKP PKPdf 17 22 37.0 -0.3
comp=Z,9.3nm,0.8s
MTUM Tungsten Hills 114.86 52 *e*PKiKP PKiKP 17 22 38.1 +0.5
NVAR Mina Array Bea 114.88 51 PKP PKPdf 17 22 38.6 +0.9
comp=Z,4.0nm,0.8s,baz=261,slow=2.9,SNR=20
NVAR PP PP 17 23 38.6 -4.6
comp=Z,7.9nm,1.0s,baz=276,slow=7.9,SNR=9.5
NVAR SKP 17 25 35.6
comp=Z,2.9nm,0.9s,baz=254,slow=2.0,SNR=4.6
NVAR PKKPab PKKPab 17 33 24.3 +1.7
comp=Z,2.6nm,0.9s,baz=130,slow=4.7,SNR=12
HAU Haudompre 115.12 320⇑ *i*PKiKP PKPdf 17 22 38.0 +0.2
ISA Isabella 115.21 54 *e*PKiKP PKPdf 17 22 38.7 +0.3
SBF Sospel 115.55 315⇑ *i*PKiKP PKPdf 17 22 38.8 0.0
LPG La Plagne 115.58 317⇑ *i*PKiKP PKPdf 17 22 39.4 +0.6
LPL La Plagne 115.59 317⇑ *i*PKiKP PKPdf 17 22 39.3 +0.5
comp=Z,8.8nm,0.7s
CABF La Chapelle 115.71 318⇑ *i*PKiKP PKPdf 17 22 39.5 +0.5
comp=Z,7.7nm,0.5s
MBDF Montbardon 115.78 316⇑ *i*PKiKP PKPdf 17 22 39.7 +0.5
comp=Z,5.7nm,0.7s
BAIF Baives 115.78 322⇑ *i*PKiKP PKPdf 17 22 39.4 +0.3
KEST Kesra 115.83 306 PP PP 17 23 47.9 -2.0
comp=Z,5.7nm,1.1s,baz=275,slow=2.6,SNR=7.4
KEST PKKPbc PKKPbc 17 33 13.9 +0.6
comp=Z,1.4nm,0.7s,baz=261,slow=7.2,SNR=5.2
MSO Missoula 115.96 41 *e*PKiKP PKiKP 17 22 39.3 -0.2
FRF La Foret Royal 116.18 315 *e*PKiKP PKPdf 17 22 40.3 +0.3
ORIF Oris-en-Rattie 116.34 317⇑ *i*PKiKP PKPdf 17 22 40.4 +0.1
comp=Z,4.8nm,0.6s
HLID Hailey 116.58 45 *e*PKPdf PKPdf 17 22 41.4 +0.6
GSC Goldstone 116.61 54 *e*PKiKP PKPdf 17 22 42.3 +1.2
ELK Elko 116.71 48 PKP PKPdf 17 22 41.7 +0.6
comp=Z,7.1nm,0.9s,baz=266,slow=4.3,SNR=23
ELK PP PP 17 23 44.6 -11
comp=Z,3.3nm,1.0s,baz=295,slow=3.7,SNR=4.2
ELK SKP 17 25 37.6
comp=Z,4.9nm,0.9s,baz=18,slow=1.9,SNR=4.7
ELK PKKPbc PKKPbc 17 33 10.2 -0.3
comp=Z,1.2nm,0.8s,baz=157,slow=11,SNR=4.1
ELK Elko 116.71 48 *e*P PKPdf 17 22 41.5 +0.4
TPNV Topopah Spring 116.75 52 *e*PKiKP PKPdf 17 22 41.5 +0.2
SMRF Simiane la Rot 116.81 316⇑ *i*PKiKP PKPdf 17 22 41.7 +0.5
SMF Signal de Mont 117.17 319 *e*PKiKP PKPdf 17 22 42.1 +0.3
VIVF Saint-Julien-l 117.18 317⇑ *i*PKiKP PKPdf 17 22 42.0 +0.1
comp=Z,3.1nm,0.7s
PFO Pinyon Flat Ob 117.18 56 PKP PKPdf 17 22 43.4 +1.1
comp=Z,15nm,0.9s,baz=5.9,slow=0.6,SNR=8.6
PFO Pinyon Flat Ob 117.18 56 *e*PKPdf PKPdf 17 22 43.2 +0.9
SSF Saint Saulge 117.25 319⇑ *i*PKiKP PKPdf 17 22 42.2 +0.2
comp=Z,12nm,0.7s
DLMT Dillon 117.30 43 *e*PKPdf PKPdf 17 22 42.7 +0.5
AVF Avril sur Loir 117.44 319⇑ *i*PKiKP PKPdf 17 22 42.1 -0.2
EKA Eskdalemuir Ar 117.63 330 PKP PKPdf 17 22 42.3 -0.1
comp=Z,2.2nm,0.8s,baz=46,slow=4.8,SNR=5.9
EKA SKP 17 25 38.1
comp=Z,8.6nm,1.0s,baz=53,slow=3.2,SNR=12
BGF Bois d'Agland 117.84 319⇑ *i*PKiKP PKPdf 17 22 43.5 +0.4
comp=Z,24nm,0.7s
LDFC Landfair 118.02 54 *e*PKPdf PKPdf 17 22 45.0 +1.1
EGMT Eagleton 118.23 39 *e*PKPdf PKPdf 17 22 43.9 +0.1
HVU Hansel Valley 118.23 46 *e*PKiKP PKPdf 17 22 44.6 +0.6
BGU Big Grassy Mou 118.28 47 *e*PKPdf PKPdf 17 22 44.2 0.0
TCF Toulx Ste Croi 118.35 319⇑ *i*PKiKP PKPdf 17 22 44.5 +0.4
GLA Glamis 118.62 57 *e*PKiKP PKPdf 17 22 46.2 +1.1
YMR Madison River 118.62 43 PKPdf PKPdf 17 22 46.6 +1.9
DUG Dugway 118.64 48 *e*PKiKP PKPdf 17 22 45.3 +0.4
RRI2 Red Ridge 118.80 44 *e*PKPdf PKPdf 17 22 45.5 +0.5
IMW Indian Meadow 118.89 44 *e*PKPdf PKPdf 17 22 45.5 +0.3
CAF Calviac 118.91 318⇑ *i*PKiKP PKPdf 17 22 45.9 +0.7
comp=Z,10nm,0.8s
LDF La Druitiere 118.96 322⇑ *i*PKiKP PKPdf 17 22 45.2 0.0
TPAW Teton Pass 119.01 44 *e*PKPdf PKPdf 17 22 46.4 +1.0
MOOW Moose Ponds 119.07 44 *e*PKPdf PKPdf 17 22 46.5 +0.9
FLN La Foliniere 119.11 322 *e*PKiKP PKPdf 17 22 45.5 0.0
REDW Red Top Meadow 119.12 44 *e*PKPdf PKPdf 17 22 46.2 +0.5
RJF Les Rejaudoux 119.15 318 *e*PKiKP PKPdf 17 22 45.5 -0.2
HWUT Hardware Ranch 119.15 46 *e*PKPdf PKPdf 17 22 45.8 -0.1
SNOW Snowking Moun 119.15 44 *e*PKPdf PKPdf 17 22 47.1 +1.3
LOHW Long Hollow 119.21 44 *e*PKPdf PKPdf 17 22 46.4 +0.6
MTLF Montolieu 119.33 316⇑ *i*PKiKP PKPdf 17 22 46.2 +0.1
comp=Z,6.5nm,0.8s
JLU Jordanelle 119.53 47 PKPdf PKPdf 17 22 46.7 +0.1
MSU Marysvale 119.55 50 *e*PKiKP PKPdf 17 22 47.9 +1.2
RLMT Red Lodge 119.60 42 *e*PKPdf PKPdf 17 22 46.7 +0.2
MFF Saint Martin d 119.75 320⇑ *i*PKiKP PKPdf 17 22 46.9 +0.1
comp=Z,12nm,0.7s
LFF La Frestale 119.79 318 *e*PKiKP PKPdf 17 22 47.1 +0.2
TMUT Trail Mountain 120.07 49 *e*PKPdf PKPdf 17 22 48.9 +1.3
PDAR Pinedale Array 120.21 45 PKP PKPdf 17 22 47.8 0.0
comp=Z,7.4nm,0.8s,baz=236,slow=0.7,SNR=36
PDAR pPKP pPKPdf 17 24 22.8 -3.7
comp=Z,3.5nm,1.0s,baz=325,slow=2.3,SNR=4.1
PDAR SKP 17 25 44.2
comp=Z,4.1nm,1.1s,baz=204,slow=3.3,SNR=5.1
PDAR PKKPbc PKKPbc 17 32 59.5 +1.4
comp=Z,3.6nm,0.8s,baz=114,slow=5.7,SNR=11
FCC Fort Churchill 120.52 23 *e*PKiKP PKPdf 17 22 47.0 -0.9
SFJD Kangerlussuaq 120.61 358 PKP PKPdf 17 22 47.3 -0.5
comp=Z,1.1nm,0.7s,baz=127,slow=2.8,SNR=3.9
SRU San Rafael 120.63 49 *e*P Pdif 17 19 17.6 +1.9
EPF Esparros 120.73 316⇑ *i*PKiKP PKPdf 17 22 49.7 +0.9
WUAZ Wupatki 120.91 53 *e*PKPdf PKPdf 17 22 50.5 +1.1
ROSF Rostrenen 120.97 323 *e*PKiKP PKPdf 17 22 49.0 -0.1
comp=Z,12nm,0.8s
ETSF Etsaut 121.39 316⇑ *i*PKiKP PKPdf 17 22 51.0 +0.9
comp=Z,7.7nm,0.8s
SJPF Ste Jean 121.77 317⇑ *i*PKiKP PKPdf 17 22 51.7 +0.9
PV10 Paradox Valley 121.95 49 *e*PKPdf PKPdf 17 22 52.3 +1.0
TUC Tucson 122.11 57 *e*PKiKP PKPdf 17 22 52.2 +0.4
RWWY Rawlins 122.22 45 *e*PKPdf PKPdf 17 22 52.0 +0.3
PV01 Paradox Valley 122.38 49 *e*PKPdf PKPdf 17 22 53.2 +1.1
MVCO Mesa Verde 122.70 50 *e*PKPdf PKPdf 17 22 53.8 +1.0
MVCO *e*PP PP 17 24 32.2 -4.5
MVCO *e*SKP 17 25 49.6
RSSD Black Hills 123.43 41 *e*PKiKP PKPdf 17 22 53.5 -0.5
ISCO Idaho Springs 124.02 47 *e*PKiKP PKPdf 17 22 56.1 +0.9
LAZ Ladron 124.56 53 *e*PKPdf PKPdf 17 22 57.8 +1.4
LENM Lemitar 124.75 54 *e*PKPdf PKPdf 17 22 57.9 +1.1
LENM *e*PP PP 17 24 55.1 +4.7
SDCO Great Sand Dun 124.80 49 *e*PKPdf PKPdf 17 22 57.4 +0.6
SDCO *e*SKP 17 25 54.9
TORD Torodi Ar. Bea 124.85 281 PKP PKPdf 17 22 57.6 +0.1
comp=Z,6.4nm,0.6s,baz=22,slow=2.6,SNR=38
TORD PP PP 17 24 49.1 -2.7
comp=Z,2.2nm,0.7s,baz=28,slow=1.8,SNR=4.1
TORD SKPbc 17 25 31.2
comp=Z,5.0nm,1.0s,baz=104,slow=3.1,SNR=6.7
TORD SKP 17 25 54.0
comp=Z,13nm,1.0s,baz=42,slow=1.8,SNR=11
TORD PKKPbc PKKPbc 17 32 38.6 -1.0
comp=Z,3.6nm,0.9s,baz=298,slow=3.0,SNR=11
TORD Torodi Ar. Bea 124.85 281 PKP PKPdf 17 22 57.6 +0.1
TORD PP PP 17 24 49.1 -2.7
TORD SKPbc 17 25 31.2
TORD SKP 17 25 54.0
TORD PKKPbc PKKPbc 17 32 38.6 -1.0
ANMO Albuquerque 124.94 52 PKP PKPdf 17 22 57.5 +0.3
comp=Z,14nm,1.0s,baz=192,slow=2.5,SNR=21
ANMO PP PP 17 24 49.6 -2.0
comp=Z,3.7nm,0.9s,baz=290,slow=13,SNR=7.5
ANMO SKPbc 17 25 32.7
comp=Z,2.4nm,0.8s,baz=266,slow=8.1,SNR=2.8
ANMO SKP 17 25 55.0
comp=Z,5.8nm,1.0s,baz=208,slow=3.7,SNR=5.1
ANMO Albuquerque 124.94 52 *e*PKPdf PKPdf 17 22 58.3 +1.2
ESDC Sonseca Array 124.95 314 PKP PKPdf 17 22 56.1 -0.9
comp=Z,1.5nm,0.5s,baz=12,slow=3.7,SNR=7.4
ESDC PKKPbc PKKPbc 17 32 35.1 -4.9
comp=Z,0.3nm,0.3s,baz=204,slow=30,SNR=4.3
LPM Los Pinos Moun 124.99 53 *e*PKPdf PKPdf 17 22 58.3 +1.0
BNM Barren Site 125.03 53 *e*PKPdf PKPdf 17 22 58.5 +1.2
ULM Lac du Bonnet 125.13 31 PKP PKPdf 17 22 56.3 -0.7
comp=Z,16nm,0.9s,baz=329,slow=3.8,SNR=8.5
ULM SKPbc 17 25 34.9
comp=Z,7.8nm,0.9s,baz=331,slow=3.8,SNR=4.0
AGMN Agassiz Refuge 126.28 33 *e*PKPdf PKPdf 17 22 58.5 -0.8
MVO Moncorvo 126.50 316 *e*PP PP 17 25 39.0 +37
MTE Manteigas 127.18 316 *e*PKPdf PKPdf 17 23 03.0 +1.7
PVIS Viseu 127.29 316 *e*PP PP 17 25 41.5 +35
PMRV Marv??o 127.48 315 *e*PP PP 17 25 41.8 +34
PBAR Barrancos 127.74 313 *e*PKPdf PKPdf 17 23 03.7 +1.3
PBAR Barrancos 127.74 313 *e*PP PP 17 25 41.9 +32
EVO Evora 128.29 314⇑ *i*PKiKP PKPdf 17 23 04.5 +1.1
comp=Z,18nm,1.3s
EVO Evora 128.29 314 *e*PP PP 17 25 44.4 +31
ECSD EROS,Sioux Fal 128.34 39 *e*PKPdf PKPdf 17 23 02.9 -0.5
PBEJ Beja 128.40 313 *e*PP PP 17 25 44.6 +31
PVAQ Vaqueiros 128.54 312 *e*PP PP 17 25 45.4 +30
TXAR Lajitas Array 128.75 58 PKhKP 17 22 46.5
comp=Z,0.5nm,0.9s,baz=209,slow=3.3,SNR=4.2
TXAR PKP PKPdf 17 23 04.7 +0.1
comp=Z,7.5nm,0.9s,baz=250,slow=1.4,SNR=35
TXAR SKPbc 17 25 47.3
comp=Z,37nm,1.0s,baz=270,slow=2.5,SNR=42
TXAR PKKPbc 17 32 23.4
comp=Z,0.3nm,0.5s,baz=107,slow=5.4,SNR=6.0
TXAR Lajitas Array 128.75 58 PP PKPdf 17 23 04.7 +0.1
TXAR SKPbc 17 25 47.3
TXAR PKKPbc 17 32 23.4
PBDV Barranco-do-Ve 128.76 312 *e*PKPdf PKPdf 17 23 06.5 +2.1
PBDV Barranco-do-Ve 128.76 312 *e*PP PP 17 25 46.4 +30
PTEO Sao Teotonio 129.21 313 *e*PP PP 17 25 48.2 +29
MORF Marmelete 129.26 313 *e*PKPdf PKPdf 17 23 07.8 +2.5
MORF Marmelete 129.26 313 *e*PP PP 17 25 48.2 +29
PFVI Vila Bisbo 129.46 313 *e*PP PP 17 25 48.6 +28
PLCA Paso Flores 129.63 164 PKP PKPdf 17 23 07.7 +1.7
comp=Z,5.8nm,0.9s,baz=181,slow=3.7,SNR=10
PLCA SKPbc SKPbc 17 25 50.0 +0.6
comp=Z,36nm,1.0s,baz=206,slow=4.1,SNR=25
PLCA SKKPbc 17 35 39.6
comp=Z,1.7nm,1.0s,baz=232,slow=11,SNR=2.9
KIC Kosan Boka 130.94 272 *e*PKP1 PKPdf 17 23 09.8 +0.6
comp=Z,30nm,0.8s
WMOK Wichita Mounta 130.95 50 *e*PKiKP PKPdf 17 23 08.3 -0.3
DBIC Dimbokro 131.08 272 PKP PKPdf 17 23 10.3 +0.9
comp=Z,3.6nm,0.4s,baz=19,slow=0.2,SNR=11
DBIC SKPbc SKPbc 17 25 55.7 0.0
comp=Z,78nm,0.9s,baz=84,slow=4.2,SNR=46
DBIC Dimbokro 131.08 272 PKP PKPdf 17 23 10.3 +0.9
DBIC SKPbc SKPbc 17 25 55.7 0.0
LIC Lamto 131.21 272⇑ *i*PKiKP PKPdf 17 23 10.4 +0.7
comp=Z,12nm,0.6s
LIC Lamto 131.21 272 *e*PKP1 PKPdf 17 23 10.2 +0.5
comp=Z,21nm,0.6s
TIC Toumodi 131.24 272 *e*PKP1 PKPdf 17 23 10.7 +1.0
comp=Z,12nm,0.2s
JCT Junction City 131.64 56 *e*PKiKP PKPdf 17 23 11.1 +1.1
SCHQ Schefferville 131.78 10 PKP PKPdf 17 23 10.5 +0.9
comp=Z,9.3nm,0.6s,baz=0.8,slow=2.5,SNR=9.8
SCHQ SKPbc SKPbc 17 25 56.4 -0.5
comp=Z,78nm,0.8s,baz=0.5,slow=3.8,SNR=27
JFWS Jewell Farm 132.64 36 *e*PKiKP PKPdf 17 23 10.7 -0.8
CCM Cathedral Cave 134.81 42 *e*PKiKP PKPdf 17 23 16.3 +0.6
MIAR Mount Ida 134.92 48 *e*PKiKP PKPdf 17 23 16.0 -0.1
FVM French Village 135.39 42 *e*PKiKP PKPdf 17 23 16.3 -0.5
OLIL Olney 136.46 39 *e*PKPdf PKPdf 17 23 20.1 +1.3
SADO Sadowa 137.05 26 SKPbc SKPbc 17 26 12.8 -1.3
baz=330,slow=6.0
BLO Bloomington 137.16 38 *e*PKiKP PKPdf 17 23 21.6 +1.5
WCI Wyandotte Cave 137.89 39 *e*PKHKP 17 23 10.6
OXF Oxford 137.94 45 *e*PKHKP 17 23 12.2
OXF *e* 17 26 16.0
WVT Waverly 138.14 42 *e*PKHKP 17 23 08.9
ACSO Alum Creek Sta 138.52 34 *e*PKPpre 17 23 14.4
CMIG Matias Romero 139.19 73 PKKPbc 17 34 59.8
comp=Z,3.8nm,0.8s,baz=77,slow=4.0,SNR=4.5
SWET Sewanee 139.93 42 *e*PKPpre 17 23 10.0
LRAL Lakeview Retre 140.42 46 *e*PKPpre 17 23 18.3
TKL Tuckaleechee C 141.06 40 SKPbc SKPbc 17 26 24.1 -1.3
comp=Z,107nm,1.1s,baz=218,slow=1.4,SNR=26
TEIG Tepich 144.67 66 SKPbc SKPbc 17 26 34.1 -0.4
comp=Z,52nm,1.0s,baz=324,slow=8.3,SNR=7.9
TEIG SKPbc 17 34 35.9
comp=Z,46nm,1.3s,baz=64,slow=11,SNR=4.3
CPUP Villa Florida 146.17 175 PKPbc PKPbc 17 23 38.4 +0.1
comp=Z,7.6nm,0.3s,baz=166,slow=1.9,SNR=31
CPUP pPKPbc pPKPbc 17 25 14.1 -1.1
comp=Z,4.2nm,0.6s,baz=206,slow=3.1,SNR=2.2
CPUP SKPbc SKPbc 17 26 37.0 -0.8
comp=Z,9.1nm,0.8s,baz=189,slow=1.1,SNR=4.0
CPUP SKKPbc 17 34 31.2
comp=Z,0.3nm,0.3s,baz=54,slow=9.8,SNR=3.1
LVC Limon Verde 146.72 155 *e*PKPdf PKPdf 17 23 39.4 +1.9
LVC *e*PKPbc PKPbc 17 23 41.7 +1.8
TGUH Tegucigalpa,Un 146.88 76 *e*P PKPbc 17 23 40.5 0.0
CRIN San Cristobal 147.25 78 *e*P PKPbc 17 23 41.3 -0.3
CRIN AMb AMB 17 23 43.5
comp=Z,398nm,0.9s
LEON Leon 147.43 79 *e*P PKPbc 17 23 41.6 -0.4
TEL3 Telica 3 147.46 79 *e*P PKPbc 17 23 42.0 -0.1
CNGN Cerro Negro 147.61 79 *e*P PKPbc 17 23 42.2 -0.2
CNGN AML AML 17 23 43.2
comp=Z,24nm,0.7s
COPN Copaltepe 147.75 79 *e*P PKPbc 17 23 42.6 -0.3
MOMN Momotombo 147.78 79 *e*P PKPbc 17 23 42.6 -0.2
WILN Americas 2 148.14 79 *e*P PKPbc 17 23 43.8 0.0
SSN San Juan del S 148.54 81 *e*P PKPbc 17 23 44.5 -0.3
CAM3 Guarapari 148.85 205‖ *i*P PKPbc 17 23 45.8 +0.3
CAM3 *i* PKPab 17 23 51.6 +0.9
CAM3 *i* 17 24 00.6
NNA Nana 150.24 131 *e*PKPdf PKPdf 17 23 44.5 +1.1
NNA *e*PKPbc PKPbc 17 23 49.5 +0.5
LPAZ La Paz 152.57 150 PKP PKPdf 17 23 48.5 +1.6
comp=Z,4.5nm,0.9s,baz=87,slow=2.2,SNR=14
LPAZ PKPbc PKPbc 17 23 55.9 +1.7
comp=Z,7.2nm,0.7s,baz=161,slow=0.2,SNR=20
LPAZ pPKPbc pPKPbc 17 25 34.5 +2.1
comp=Z,6.0nm,0.9s,baz=126,slow=6.8,SNR=3.4
BBSR BB Station 153.44 20 *e*PKPbc PKPbc 17 23 55.7 0.0
BBSR *e*PKPab PKPab 17 24 09.1 -0.6
BDFB Brasilia 156.15 195 PKPab PKPab 17 24 22.3 +0.7
comp=Z,4.1nm,0.7s,baz=25,slow=2.2,SNR=3.4
BDFB PP PP 17 27 59.2 +0.1
comp=Z,11

MADN				*e*S		Sg	17 16 51.8	+1.9
CONN	**Concepcion**	**0.45**	**4**‖	*e*P		Pg	17 16 48.5	+0.3
2RIO	**Dos Rios de Up**	**0.71**	**144**	*i* P		Pg	17 16 47.6	-5.6
2RIO				*i* S		Sg	17 16 54.8	-7.6
APON	**Apoyo**	**0.90**	**333**	*e*P		Pg	17 16 55.1	-1.6
VCR	**Vista de Mar**	**0.98**	**179**	*e*P		Pg	17 16 57.5	-0.7
MASN	**Masaya**	**1.00**	**331**	*e*P		Pg	17 16 57.6	-1.1
MASN				*e*S		Sg	17 17 09.1	-2.6
CRUN	**El Crucero**	**1.07**	**324**‖	*e*P		Pg	17 16 59.2	-0.9
CRUN				*e*S		Sg	17 17 18.3	+4.2
TICN	**Ticuantepe**	**1.08**	**328**	*e*P		Pg	17 16 58.2	-2.0
TICN				*e*S		Sg	17 17 13.8	-0.4
WILN	**Americas 2**	**1.17**	**333**	*e*P		Pg	17 17 14.9	+13
MGAN	**Managua**	**1.18**	**331**	*e*P		Pg	17 16 59.7	-2.6
MGAN				‖*e*P			17 17 15.6	
MGAN				*e*P			17 17 15.8	
MGAN				*e*S		Sg	17 17 16.3	-1.3
MGAN				AML		AML	17 17 18.5	
	comp=Z,3μm,0.5s							
XAVN	**Gruta Xavier**	**1.23**	**328**	*e*P		Pg	17 17 00.4	-2.7
CSAN		**1.31**	**325**‖	*e*P		Pg	17 17 01.4	-3.1
APYN	**Apoyeque**	**1.31**	**329**	*e*P		Pg	17 17 01.6	-3.1
APYN				*e*S		Sg	17 17 21.7	+0.1
HUEN		**1.32**	**337**	*e*P		Pg	17 17 02.0	-2.9
HUEN				*e*S		Sg	17 17 19.3	-2.7
JCR	**Jicaral**	**1.36**	**157**	*e*P		Pg	17 17 04.9	-0.7
COPN	**Copaltepe**	**1.41**	**319**‖	*e*P		Pn	17 17 03.3	-3.1
COPN				*e*S		Sg	17 17 35.9	+11
MOMN	**Momotombo**	**1.56**	**326**	*e*P		Pn	17 17 05.5	-2.9
CNGN	**Cerro Negro**	**1.72**	**324**	*e*P		Pn	17 17 08.1	-2.6
PRS1	**Puriscal**	**1.73**	**130**	*e*P		Pn	17 17 11.8	+0.9
LEON	**Leon**	**1.78**	**317**‖	*e*P		Pn	17 17 08.0	-3.5
TEL3	**Telica 3**	**1.86**	**321**	*e*P		Pn	17 17 09.8	-2.9
LCR2	**La Lucha 2**	**2.12**	**130**	*e*P		Pn	17 17 16.8	+0.6
LCR2				*e*S		Sn	17 17 46.3	+3.1
BUS	**Buena Vista**	**2.42**	**129**	*e*P		Pn	17 17 20.5	+0.2
LAPE	**La Pedrera**	**14.33**	**103**	*i* P			17 16 48.2	
LAPE				*i* S			17 16 55.6	

*IDC **12** 17:17:57.8±1.8,389S×10054E,h0km,mb3.7/9,mb1 3.8/9, mb1mx3.7/20,mbtmp3.7/9, Error ellipse: s-maj=72.9km s-min=16.7km az=57.0*
*ISCJB **12** 17:18:00.4±1.7,39S±02×1005E±04,h33km,mb3.8/10, Error ellipse: s-maj=61.7km s-min=13.4km az=147.7*
*NEIC **12** 17:18:02.5±1.5,398S×10045E,h35km,mb4.4/1, Error ellipse: s-maj=65.6km s-min=10.7km az=57.0*

ISC 12 17:18:03.0±1.6,39S±02×1006E±04,h35km,n11,σ0§65/10, mb3.8/10,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.25**	**356**	P	**P**	**17 22 58.0**	**+1.0**
	0.4nm,0.6s,mb3.1,baz=178,slow=7.9,SNR=4.4						
WRA	**Warramunga Arr**	**36.55**	**119**	P	**P**	**17 25 06.3**	**+0.6**
	1.0nm,0.5s,mb4.0,baz=301,slow=8.8,SNR=8.7						
WRAB	**Tennant Creek**	**36.55**	**119**	*e*P	**P**	**17 25 05.5**	**-0.1**
	4.5nm,0.9s,mb4.3						
ASAR	**Alice Springs**	**37.68**	**125**	P	**P**	**17 25 15.7**	**+0.5**
	0.9nm,0.4s,mb3.8,baz=297,slow=7.9,SNR=12						
STKA	**Stephens Creek**	**47.47**	**131**	P	**P**	**17 26 34.0**	**-0.6**
	2.2nm,1.0s,mb4.1,baz=331,slow=10,SNR=2.9						
KSRS	**Korea Array**	**48.33**	**29**	P	**P**	**17 26 40.4**	**-0.8**
	0.5nm,0.5s,mb3.8,baz=224,slow=8.5,SNR=4.4						
SONM	**Songino Array**	**51.74**	**5**	P	**P**	**17 27 06.7**	**-0.1**
	0.7nm,0.7s,mb3.7,baz=186,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**52.98**	**344**	P	**P**	**17 27 16.7**	**+0.6**
	0.2nm,0.2s,mb3.6,baz=152,slow=9.5,SNR=2.5						
ZALV	**Zalesovo Beam**	**59.11**	**349**	P	**P**	**17 27 58.6**	**-1.1**
	0.3nm,0.3s,mb3.8,baz=194,slow=10,SNR=3.7						
BVAR	**Borovoye Array**	**62.14**	**340**	P	**P**	**17 28 20.4**	**0.0**
	0.6nm,0.4s,mb4.0,baz=152,slow=6.5,SNR=2.6						
TXAR	**Lajitas Array**	**145.78**	**40**	PKPbc	PKPbc	17 37 40.4	+1.3
	1.0nm,0.5s,baz=249,slow=0.7,SNR=18						

*BJI **12** 17:27:40.7,1813N×14821E,h43km,mB5.3,mb4.6*
*ISCJB **12** 17:27:41.1±3.8,1838N±004×1477E±01,h17km±26km, mb4.5/34, Error ellipse: s-maj=19.3km s-min=7.2km az=3.3*
*IDC **12** 17:27:43.1±4.4,1837N×14767E,h16km±27km,mb4.3/17, mb1 4.3/20,mb1mx4.2/28,mbtmp4.3/20,ML4.2/3, Error ellipse: s-maj=21.4km s-min=11.3km az=86.0*
*MOS **12** 17:27:44.3±0.7,1834N×14762E,h39km,mb4.6/20, Error ellipse: s-maj=14.9km s-min=7.7km az=113.0*
*NEIC **12** 17:27:46.1±1.6,1832N×14766E,h40km±13km,mb4.6/8, Error ellipse: s-maj=12.4km s-min=6.0km az=82.0*

ISC 12 17:27:43.0±4.0,1839N±004×1477E±01,h17km±24km,n71, σ0§86/71,mb4.5/34,5D,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.51**	**210**	Pn	**Pn**	**17 29 04.6**	**+0.3**
	47nm,0.3s,baz=110,slow=3.6,SNR=28						
GUMO				Sn	**Sn**	**17 30 09.0**	**+1.7**
	32nm,0.3s,baz=5.1,slow=22,SNR=4.5						
CBIJ	**Chichi jima**	**10.05**	**330**	Pn	**Pn**	**17 30 05.8**	**-0.9**
	4.4nm,0.3s,baz=304,slow=20,SNR=4.8						
CBIJ				Sn	**Sn**	**17 31 56.5**	**-2.6**
	4.5nm,0.3s,baz=304,slow=15,SNR=3.6						
MJAR	**Matsushiro Arr**	**19.93**	**337**	P	**Pn**	**17 32 14.8**	**-1.0**
	0.4nm,0.3s,baz=160,slow=8.6,SNR=5.1						
MAJO	**Matsushiro**	**19.93**	**337**	P	**Pn**	**17 32 15.9**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAJO	**Matsushiro**	**19.93**	**337**	P	**Pn**	**17 32 15.9**	**+0.2**
	comp=Z,10nm,0.7s						
MAT	**Matsushiro**	**19.93**	**337**	P	**Pn**	**17 32 18.5**	**+2.8**
KSRS	**Korea Array**	**25.72**	**322**	P	**P**	**17 33 12.8**	**+0.2**
	comp=Z,8.4nm,0.8s,mb4.3,baz=146,slow=9.0,SNR=45						
KSRS	**Korea Array**	**25.72**	**322**	P	**P**	**17 33 12.8**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
ASAJ	**Asahikawa**	**26.00**	**352**	P	**P**	**17 33 16.4**	**+1.4**
	comp=Z,6.2nm,1.0s,mb4.1,baz=193,slow=19,SNR=4.6						
ASAJ	**Asahikawa**	**26.00**	**352**	P	**P**	**17 33 16.4**	**+1.4**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HIA	**Hailar**	**38.16**	**330**	*e*P	**P**	**17 35 01.4**	**0.0**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HIA	**Hailar**	**38.16**	**330**	*e*P	**P**	**17 35 01.4**	**0.0**
	comp=Z,6.7nm,0.9s,mb4.4						
CTA	**Charters Tower**	**38.27**	**182**	P	**P**	**17 35 02.5**	**-0.1**
	comp=Z,1.1nm,0.4s,mb4.0,baz=3.7,slow=8.0,SNR=5.0						
CTA	**Charters Tower**	**38.27**	**182**	P	**P**	**17 35 02.5**	**-0.1**
CTA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRAB	**Tennant Creek**	**40.28**	**200**	*e*P	**P**	**17 35 18.3**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.2						
WRAB	**Tennant Creek**	**40.28**	**200**	*e*P	**P**	**17 35 18.3**	**-1.1**
	comp=Z,54nm,1.1s,mb5.2						
WB2	**Warramunga Arr**	**40.29**	**200**	‖*i*P	**P**	**17 35 18.8**	**-0.7**
WRA	**Warramunga Arr**	**40.30**	**200**	P	**P**	**17 35 18.9**	**-0.7**
	comp=Z,32nm,1.0s,mb5.0,baz=20,slow=9.3,SNR=65						
WRA				PcP	PcP	17 37 23.1	0.0
	comp=Z,0.8nm,0.5s,baz=19,slow=3.6,SNR=5.9						
WRA	**Warramunga Arr**	**40.30**	**200**	P	**P**	**17 35 18.9**	**-0.6**
WRA						17 37 23.1	
WRA				pmax	pmax		
	comp=Z,32nm,1.0s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**42.27**	**212**	‖*i*P	**P**	**17 35 35.5**	**-0.2**
	comp=Z,2.3nm,0.3s,mb4.3						
FITZ	**Fitzroy Crossi**	**42.27**	**212**	P	**P**	**17 35 35.5**	**-0.3**
	comp=Z,2.4nm,0.7s,mb4.0,baz=25,slow=14,SNR=29						
FITZ				PcP	PcP	17 37 29.8	+0.2
	comp=Z,2.1nm,0.6s,baz=170,slow=6.4,SNR=3.5						
ASAR	**Alice Springs**	**43.92**	**198**	P	**P**	**17 35 48.7**	**-0.4**
	comp=Z,3.0nm,0.7s,mb4.1,baz=19,slow=9.1,SNR=51						
ASAR				PcP	PcP	17 37 35.3	+0.3
	comp=Z,1.2nm,0.6s,baz=29,slow=2.8,SNR=5.4						
ASAR	**Alice Springs**	**43.92**	**198**	P	**P**	**17 35 48.7**	**-0.4**
ASAR						17 37 35.3	
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ULN	**Ulaanbaatar**	**44.20**	**321**	*e*P	**P**	**17 35 51.6**	**+0.5**
SONM	**Songino Array**	**44.58**	**321**	P	**P**	**17 35 54.9**	**+0.7**
	comp=Z,1.9nm,0.8s,mb4.0,baz=126,slow=8.5,SNR=11						
SONM	**Songino Array**	**44.58**	**321**	P	**P**	**17 35 54.9**	**+0.7**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YAK	**Yakutsk**	**45.39**	**348**	*d* iP	**P**	**17 36 00.2**	**-0.2**
YAK				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.2						
CMAR	**Chiang Mai Arr**	**46.16**	**278**	P	**P**	**17 36 07.3**	**+0.2**
	comp=Z,3.4nm,0.9s,mb4.3,baz=72,slow=6.4,SNR=16						
CMAR	**Chiang Mai Arr**	**46.16**	**278**	P	**P**	**17 36 07.3**	**+0.2**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZAK	**Zakamensk**	**47.55**	**323**	*e*P	**P**	**17 36 17.3**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb4.0						
TLY	**Talaya**	**47.92**	**324**	*e*P	**P**	**17 36 21.4**	**+1.1**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
MBWA	**Marble Bar**	**47.92**	**216**	*e*P	**P**	**17 36 19.2**	**-1.6**
	comp=Z,16nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**50.33**	**187**	P	**P**	**17 36 38.0**	**-1.0**
	comp=Z,1.6nm,0.5s,mb4.3,baz=321,slow=12,SNR=5.1						
LSA	**Lhasa**	**52.43**	**294**	P	**P**	**17 36 55.3**	**+0.4**
LSA	**Lhasa**	**52.43**	**294**	*e*P	**P**	**17 36 56.3**	**+1.4**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
LSA	**Lhasa**	**52.43**	**294**	*e*P	**P**	**17 36 56.3**	**+1.4**
	comp=Z,4.4nm,0.8s,mb4.4						
WMQ	**Urumqi**	**55.96**	**311**	*e*P	**P**	**17 37 21.2**	**+0.8**
WMQ				AP	pP	17 37 28.0	+2.3
WMQ				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
ZAA0	**Zalesovo Array**	**59.42**	**322**	*e*P	**P**	**17 37 44.0**	**-0.7**
ZALV	**Zalesovo Beam**	**59.42**	**322**	P	**P**	**17 37 44.3**	**-0.3**
	comp=Z,7.9nm,0.9s,mb4.8,baz=103,slow=6.4,SNR=24						
ZALV				ScP	ScP	17 42 32.3	-0.2
	comp=Z,0.2nm,0.3s,baz=307,slow=5.4,SNR=3.9						
MK31	**Makanchi Array**	**60.05**	**314**	*i* P	**P**	**17 37 49.5**	**+0.4**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
MKAR	**Makanchi Array**	**60.05**	**314**	P	**P**	**17 37 49.7**	**+0.6**
	comp=Z,4.5nm,0.7s,mb4.6,baz=90,slow=8.9,SNR=45						
MKAR	**Makanchi Array**	**60.05**	**314**	P	**P**	**17 37 49.7**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR	**Makanchi Array**	**60.05**	**314**	P	**P**	**17 37 49.7**	**+0.6**
NVS	**Novosibirsk**	**60.50**	**323**	*i* P	**P**	**17 37 51.9**	**-0.1**
KURK	**Kurchatov**	**62.78**	**318**	P	**P**	**17 38 07.0**	**-0.4**
	comp=Z,20nm,0.9s,mb5.2,baz=97,slow=6.9,SNR=23						
KURK	**Kurchatov**	**62.78**	**318**	‖*i*P	**P**	**17 38 07.6**	**+0.2**
KURK				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.2						
TKM2	**Tokmak 2**	**64.73**	**309**	*e*P	**P**	**17 38 21.4**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
TKM2	**Tokmak 2**	**64.73**	**309**	*e*P	**P**	**17 38 21.4**	**+1.0**
	comp=Z,4.7nm,0.8s,mb4.6						
VOSK	**Vostochnaya**	**67.58**	**320**	P	**P**	**17 38 38.0**	**-0.6**
VOSK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
BVA0	**Borovoye Array**	**67.93**	**321**	*i* P	**P**	**17 38 40.8**	**0.0**
BVA0				pmax	pmax		
	comp=Z,19nm,2.9s,mb4.6						
BVAR	**Borovoye Array**	**67.93**	**321**	P	**P**	**17 38 41.0**	**+0.2**
	comp=Z,8.4nm,0.8s,mb4.8,baz=91,slow=7.4,SNR=32						
BVAR	**Borovoye Array**	**67.93**	**321**	P	**P**	**17 38 41.0**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRVK	**Borovoye**	**67.99**	**321**	*e*P	**P**	**17 38 41.1**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
BRVK	**Borovoye**	**67.99**	**321**	*e*P	**P**	**17 38 41.1**	**-0.1**
	comp=Z,7.0nm,0.8s,mb4.7						
KK31	**Karatay Array**	**68.44**	**310**	*i* P	**P**	**17 38 44.5**	**+0.3**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
ARU	**Arti**	**74.42**	**325**	*d* iP	**P**	**17 39 18.6**	**-1.4**
ARU				*e*		17 39 31.3	
ARU				*e*		17 42 02.6	
ARU				*e*S	S	17 48 50.4	-3.5
ARU				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
AB31	**Akbulak array**	**74.86**	**317**	*i* P	**P**	**17 39 22.4**	**-0.3**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
AKTK	**Aktyubinsk**	**75.86**	**319**	P	**P**	**17 39 27.7**	**-0.7**
AKTO	**Aktyubinsk**	**75.86**	**319**	P	**P**	**17 39 27.7**	**-0.7**
	comp=Z,2.3nm,0.7s,mb4.2,baz=109,slow=10,SNR=7.7						
AKTO	**Aktyubinsk**	**75.86**	**319**	*i* P	**P**	**17 39 27.8**	**-0.6**
AKTO				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.8						
YKA	**Yellowknife Ar**	**77.36**	**28**	P	**P**	**17 39 36.5**	**-0.1**
	comp=Z,0.9nm,0.7s,mb3.8,baz=283,slow=5.0,SNR=4.0						
YKA	**Yellowknife Ar**	**77.36**	**28**	P	**P**	**17 39 36.5**	**-0.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**77.36**	**28**	P	**P**	**17 39 36.5**	**-0.1**
YBH	**Yreka Blue Hor**	**77.68**	**50**	P	**P**	**17 39 38.9**	**0.0**
	comp=Z,1.6nm,0.8s,mb4.0,baz=243,slow=4.4,SNR=5.3						
YBH	**Yreka Blue Hor**	**77.68**	**50**	P	**P**	**17 39 38.9**	**0.0**
YBH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**83.36**	**343**	P	**P**	**17 40 09.2**	**+0.4**
	comp=Z,8.2nm,0.9s,mb4.7,baz=47,slow=15,SNR=6.5						
ARCES	**ARCESS Array B**	**83.36**	**343**	P	**P**	**17 40 09.3**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ELK	**Elko**	**83.37**	**49**	P	**P**	**17 40 11.4**	**+1.9**
	comp=Z,1.4nm,0.8s,mb4.0,baz=259,slow=6.6,SNR=4.4						
ELK	**Elko**	**83.37**	**49**	P	**P**	**17 40 11.4**	**+1.9**
ELK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPAZ	**La Paz**	**145.75**	**92**	PKPbc	PKPbc	17 47 23.0	+1.0
	comp=Z,1.3nm,0.7s,baz=304,slow=5.3,SNR=6.2						
LPAZ	**La Paz**	**145.75**	**92**	PKP2	PKPab	17 47 23.0	+0.6
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*IDC **12** 17:33:02.8±1.3,285S×10039E,h0km,mb4.0/12, mb1 4.1/12,mb1mx4.0/21,mbtmp4.0/12, Error ellipse: s-maj=50.6km s-min=15.0km az=58.0*
*ISCJB **12** 17:33:06.0±1.1,27S±02×1005E±02,h33km,mb4.1/16, Error ellipse: s-maj=39.7km s-min=10.1km az=145.0*
*NEIC **12** 17:33:07.8±0.9,287S×10033E,h35km,mb4.4/4, Error ellipse: s-maj=39.1km s-min=8.5km az=55.0*

ISC 12 17:33:08.2±1.1,28S±02×1005E±02,h35km,n18,σ0§86/17, mb4.1/16,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.15**	**356**	P	**P**	**17 37 50.0**	**-0.4**
	1.8nm,0.9s,mb3.4,baz=187,slow=10.0,SNR=7.0						
FITZ	**Fitzroy Crossi**	**29.00**	**123**	P	**P**	**17 39 04.8**	**-0.2**
	0.9nm,0.8s,mb3.6,baz=329,slow=5.9,SNR=2.6						
LSA	**Lhasa**	**33.50**	**345**	*e*P	**P**	**17 39 43.1**	**-1.3**
	3.6nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**37.20**	**120**	P	**P**	**17 40 15.8**	**-0.6**
	1.4nm,0.6s,mb4.0,baz=307,slow=9.1,SNR=23						
WRAB	**Tennant Creek**	**37.21**	**120**	*e*P	**P**	**17 40 16.4**	**-0.1**
	2.7nm,0.7s,mb4.2						
WB2	**Warramunga Arr**	**37.22**	**120**	*e*P	**P**	**17 40 17.1**	**+0.5**
ASAR	**Alice Springs**	**38.42**	**126**	P	**P**	**17 40 26.6**	**-0.2**
	0.8nm,0.5s,mb3.7,baz=299,slow=6.9,SNR=13						
ASAR				PcP	PcP	17 42 39.5	-0.2
	1.0nm,1.1s,baz=298,slow=1.5,SNR=2.9						
KSRS	**Korea Array**	**47.45**	**30**	P	**P**	**17 41 38.0**	**-1.6**
	1.6nm,1.0s,mb3.9,baz=224,slow=8.8,SNR=5.4						
STKA	**Stephens Creek**	**48.29**	**131**	P	**P**	**17 41 46.5**	**+0.3**
	2.1nm,0.8s,mb4.2,baz=317,slow=13,SNR=3.5						
SONM	**Songino Array**	**50.66**	**5**	P	**P**	**17 42 06.1**	**+2.1**
	4.1nm,0.6s,mb4.5,baz=190,slow=9.4,SNR=24						
SONM				PcP	PcP	17 43 21.4	+0.4
	1.0nm,0.7s,baz=175,slow=4.8,SNR=2.9						
EKS2	**Erkin-Say**	**51.26**	**335**	*e*P	**P**	**17 42 09.5**	**+0.9**
	2.1nm,0.6s,mb4.2						
MKAR	**Makanchi Array**	**51.89**	**344**	P	**P**	**17 42 13.9**	**+0.7**
	4.2nm,0.6s,mb4.5,baz=150,slow=8.3,SNR=42						
MJAR	**Matsushiro Arr**	**52.58**	**38**	P	**P**	**17 42 19.8**	**+1.2**
	1.0nm,0.9s,mb3.7,baz=204,slow=8.5,SNR=4.4						
KURK	**Kurchatov**	**56.47**	**344**	*e*P	**P**	**17 42 46.2**	**-0.3**
	5.6nm,1.1s,mb4.5						
ZALV	**Zalesovo Beam**	**58.01**	**349**	P	**P**	**17 42 57.4**	**+0.1**
	3.8nm,0.8s,mb4.5,baz=163,slow=5.7,SNR=17						
BVAR	**Borovoye Array**	**61.06**	**340**	P	**P**	**17 43 17.5**	**-0.9**
	0.4nm,0.5s,mb3.8,baz=133,slow=10.0,SNR=4.0						
ARCES	**ARCESS Array B**	**87.35**	**340**	P	**P**	**17 45 51.3**	**+0.1**
	6.0nm,1.1s,mb4.8,baz=99,slow=5.6,SNR=3.8						
TXAR	**Lajitas Array**	**145.02**	**39**	PKPbc	PKPbc	17 52 43.3	+1.4
	2.1nm,0.6s,baz=235,slow=0.6,SNR=4.3						

*BJI **12** 17:39:33.6,362S×10144E,h24km,mB5.2,mb4.8*
*IDC **12** 17:39:35.0±1.1,319S×10142E,h0km,mb4.2/13, mb1 4.4/14,mb1mx4.2/20,mbtmp4.3/14,ML4.2/1, Error ellipse: s-maj=38.3km s-min=14.4km az=57.0*
*MOS **12** 17:39:38.1±0.8,307S×10156E,h30km,mb4.6/17, Error ellipse: s-maj=18.5km s-min=11.1km az=109.1*
*NEIC **12** 17:39:40.2±0.5,318S×10145E,h35km,mb4.6/10, Error ellipse: s-maj=19.7km s-min=5.2km az=50.0*
*ISCJB **12** 17:39:42.2±1.8,32S±0.1×1014E±0.1,h74km±13km, mb4.4/22, Error ellipse: s-maj=26.9km s-min=8.1km az=138.0*
*DJA **12** 17:39:51,227S×10092E,h194km,MLv4.3/4*

ISC 12 17:39:43.1±1.7,33S±01×1014E±01,h64km±12km, h49km±1.9km:pP-P,n58,σ0§98/56,mb4.4/22,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**2.94**	**341**	P	**Pn**	**17 40 27.0**	**-0.5**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.04**	**19**	P	**Pn**	**17 40 28.2**	**-0.7**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**4.89**	**77**	P	**Pn**	**17 40 55.6**	**+1.5**
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**6.30**	**86**	P	**Pn**	**17 41 14.8**	**+1.4**
	0.0nm,0.0s						
SJI	**Sawahan**	**11.27**	**114**	P	**Pn**	**17 42 21.2**	**-0.2**
	0.0nm,0.0s						
KAPI	**Kappang**	**18.42**	**96**	P	**Pn**	**17 43 52.3**	**-1.8**
	0.8nm,0.3s,baz=72,slow=20,SNR=2.8						
KAPI	**Kappang**	**18.42**	**96**	P	**Pn**	**17 43 52.3**	**-1.8**
CMAR	**Chiang Mai Arr**	**21.71**	**354**	P	**P**	**17 44 26.4**	**-2.5**
	2.4nm,0.8s,mb3.7,baz=185,slow=8.4,SNR=15						
CMAR	**Chiang Mai Arr**	**21.71**	**354**	P	**P**	**17 44 26.4**	**-2.5**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MSAI	**Masohi**	**27.52**	**91**	P	**P**	**17 45 26.2**	**+2.3**
	comp=Z,0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**27.98**	**124**	*e*P	**P**	**17 45 27.5**	**-0.5**
	comp=Z,7.6nm,1.1s,mb4.2						
FITZ	**Fitzroy Crossi**	**27.98**	**124**	P	**P**	**17 45 27.2**	**-0.8**
	comp=Z,3.9nm,1.0s,mb4.0,baz=284,slow=12,SNR=8.2						
LSA	**Lhasa**	**34.20**	**344**	P	**P**	**17 46 21.1**	**-1.4**
LSA	**Lhasa**	**34.20**	**344**	*e*P	**P**	**17 46 22.9**	**+0.4**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
LSA	**Lhasa**	**34.20**	**344**	*e*P	**P**	**17 46 22.9**	**+0.4**
	comp=Z,6.6nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**36.19**	**120**	P	**P**	**17 46 39.4**	**-0.4**
	comp=Z,2.4nm,0.4s,mb4.5,baz=303,slow=8.9,SNR=54						
WRA	**Warramunga Arr**	**36.19**	**120**	P	**P**	**17 46 39.4**	**-0.4**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
WRAB	**Tennant Creek**	**36.19**	**120**	*e*P	**P**	**17 46 39.0**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.7						
WRAB	**Tennant Creek**	**36.19**	**120**	*e*P	**P**	**17 46 39.0**	**-0.8**
	comp=Z,3.4nm,0.3s,mb4.8						
WB2	**Warramunga Arr**	**36.20**	**120**	*e*P	**P**	**17 46 39.1**	**-0.8**
ASAR	**Alice Springs**	**37.41**	**126**	P	**P**	**17 46 50.0**	**-0.2**
	comp=Z,1.5nm,0.4s,mb4.2,baz=299,slow=7.5,SNR=45						
ASAR				PcP	PcP	17 49 08.6	+0.7
	comp=Z,0.8nm,0.7s,baz=328,slow=3.8,SNR=5.4						
ASAR	**Alice Springs**	**37.41**	**126**	P	**P**	**17 46 50.1**	**-0.1**
ASAR						17 49 08.6	
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CTA	**Charters Tower**	**46.83**	**115**	*e*P	**P**	**17 48 07.1**	**+0.1**
	comp=Z,6.4nm,0.8s,mb4.6						
CTA	**Char

GERES **GERESS Array B 90.89 319** P **P** **17 52 41.2 +1.5**
comp=Z,0.5nm,0.7s,mb3.9,baz=100,slow=7.3,SNR=5.0
GERES **GERESS Array B 90.89 319** P **P** **17 52 41.2 +1.5**
GERES pmax pmax
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 144.82 40 PKP PKPdf 17 59 13.7 +0.2
comp=Z,1.5nm,0.6s,baz=292,slow=0.6,SNR=18
TXAR Lajitas Array 144.82 40 PKIKP PKPdf 17 59 13.7 +0.2
TXAR pmax pmax
comp=Z,2.0nm,0.6s

BJI ***12*** *17:44:07.6, 434S×10138E, h17km, mB5.0, mb4.7*
ISCJB ***12*** *17:44:08.7±1.6, 433S±02×1010E±03, h21km, mb4.3/12, Error ellipse: s-maj=56.7km s-min=11.4km az=146.2*
IDC ***12*** *17:44:12.0±1.8, 422S×10102E, h25km±4km, mb4.0/8, mb1 4.1/8, mb1mx3.9/18, mbtmp4.0/8, Error ellipse: s-maj=70.3km s-min=13.6km az=57.0*
NEIC ***12*** *17:44:14.1±1.9, 403S×10131E, h35km, mb4.4/1, Error ellipse: s-maj=79.7km s-min=10.2km az=55.0*
ISC 12 17:44:11.6±1.6, 42S±02×1011E±03, h22km, h22km±2.3km:pP-P,n16,σ0s71/14,mb4.3/12,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.61**	**355**	P		**P**	**17 49 09.4**	**-1.5**
	4.9nm,0.9s,mb4.0,baz=184,slow=8.6,SNR=25							
FITZ	**Fitzroy Crossi**	**27.71**	**122**	P		**P**	**17 49 58.6**	**+0.2**
	1.5nm,0.8s,mb3.6,baz=320,slow=7.7,SNR=3.1							
CD2	**Chengdu**	**35.01**	**4**	*eP*		**P**	**17 51 02.3**	**-0.2**
CD2				AMB	AMB			
	comp=Z,10.0nm,0.7s,mb4.8							
WRA	**Warramunga Arr**	**35.97**	**119**	P		**P**	**17 51 10.2**	**-0.7**
	comp=Z,1.1nm,0.6s,mb4.0,baz=306,slow=8.6,SNR=96							
WB2	**Warramunga Arr**	**35.98**	**119**	*eP*		**P**	**17 51 10.7**	**-0.4**
ASAR	**Alice Springs**	**37.10**	**125**	P		**P**	**17 51 21.2**	**+0.6**
	comp=Z,1.1nm,0.5s,mb4.0,baz=296,slow=7.7,SNR=16							
ASAR				pP		pP	17 51 28.4	+1.0
	comp=Z,2.9nm,0.6s,baz=296,slow=8.1,SNR=14							
ASAR				pPcP			17 53 47.4	
	comp=Z,0.7nm,0.6s,baz=304,slow=2.5,SNR=6.2							
LZH	**Lanzhou**	**40.16**	**3**	*eP*		**P**	**17 51 46.5**	**+0.4**
LZH				AP	pP		17 51 50.3	-2.6
LZH				XP	sP		17 51 52.8	-2.9
LZH				AMB	AMB			
	comp=Z,18nm,1.5s,mb4.6							
LZH				AMB	AMB			
	comp=Z,102nm,5.2s							
STKA	**Stephens Creek**	**46.89**	**131**	pP		pP	17 52 47.4	0.0
	comp=Z,7.9nm,0.8s,baz=293,slow=8.9,SNR=8.5							
KSRS	**Korea Array**	**48.38**	**29**	P		**P**	**17 52 52.4**	**+0.5**
	comp=Z,2.8nm,0.9s,mb4.3,baz=220,slow=8.3,SNR=11							
WMQ	**Urumqi**	**49.30**	**347**	P		**P**	**17 53 00.1**	**+1.2**
WMQ				AP	pP		17 53 04.6	-1.2
WMQ				AMB	AMB			
	comp=Z,11nm,0.6s,mb5.1							
SONM	**Songino Array**	**52.02**	**5**	P		**P**	**17 53 20.3**	**+1.0**
	comp=Z,4.7nm,0.9s,mb4.4,baz=186,slow=9.3,SNR=27							
SONM				pP		pP	17 53 27.7	+1.3
	comp=Z,1.7nm,0.8s,baz=185,slow=8.9,SNR=5.7							
MKAR	**Makanchi Array**	**53.43**	**344**	P		**P**	**17 53 30.1**	**+0.3**
	comp=Z,5.0nm,0.7s,mb4.5,baz=147,slow=8.2,SNR=40							
MKAR				pP		pP	17 53 37.5	+0.8
	comp=Z,2.8nm,0.7s,baz=148,slow=8.4,SNR=9.0							
KURK	**Kurchatov**	**58.01**	**343**	*eP*		**P**	**17 54 02.3**	**-0.3**
	comp=Z,3.8nm,0.9s,mb4.4							
ZAA0	**Zalesovo Array**	**59.52**	**349**	*eP*		**P**	**17 54 12.6**	**-0.4**
ZALV	**Zalesovo Beam**	**59.52**	**349**	P		**P**	**17 54 12.2**	**-0.8**
	comp=Z,3.8nm,0.7s,mb4.5,baz=176,slow=4.5,SNR=17							
ZALV				pP		pP	17 54 20.0	-0.1
	comp=Z,3.7nm,0.8s,baz=160,slow=4.7,SNR=8.7							
TXAR	**Lajitas Array**	**145.72**	**40**	PKPbc	PKPbc		18 03 50.5	+1.0
	comp=Z,1.8nm,0.7s,baz=229,slow=1.4,SNR=16							
TXAR				pPKPbc	pPKPbc		18 03 58.2	+1.2
	comp=Z,2.5nm,0.8s,baz=285,slow=1.7,SNR=17							

IDC ***12*** *17:47:29.1±3.6, 330S×10079E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.6/6, Error ellipse: s-maj=146.2km s-min=20.7km az=58.0*
ISCJB ***12*** *17:47:32.1±3.2, 32S±05×1008E±07, h33km, mb3.7/7, Error ellipse: s-maj=125.1km s-min=15.4km az=146.9*
NEIC ***12*** *17:47:35.0±2.6, 3.14S×10096E, h35km, mb4.1/1, Error ellipse: s-maj=106.0km s-min=13.8km az=57.0*
ISC 12 17:47:35.1±3.0, 31S±05×1010E±07, h35km, n9, σ0s96/8, mb3.7/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.55**	**355**	P		**P**	**17 52 20.2**	**-1.3**
	0.4nm,0.5s,mb3.1,baz=181,slow=8.8,SNR=4.7							
WRA	**Warramunga Arr**	**36.60**	**120**	P		**P**	**17 54 37.5**	**-0.7**
	0.5nm,0.4s,mb3.7,baz=305,slow=9.0,SNR=5.9							
WRAB	**Tennant Creek**	**36.60**	**120**	P		**P**	**17 54 39.1**	**+0.9**
	1.4nm,0.6s,mb4.0							
ASAR	**Alice Springs**	**37.81**	**126**	P		**P**	**17 54 48.0**	**-0.5**
	0.5nm,0.5s,mb3.5,baz=300,slow=7.7,SNR=7.6							
SONM	**Songino Array**	**50.98**	**5**	P		**P**	**17 56 35.0**	**+1.8**
	1.5nm,0.6s,mb4.1,baz=189,slow=8.7,SNR=12							
MKAR	**Makanchi Array**	**52.37**	**344**	P		**P**	**17 56 44.1**	**+0.4**
	0.3nm,0.3s,mb3.7,baz=150,slow=7.7,SNR=3.8							
ZALV	**Zalesovo Beam**	**58.45**	**349**	P		**P**	**17 57 26.9**	**-0.4**
	1.8nm,0.9s,mb4.1,baz=165,slow=6.2,SNR=4.2							
ZALV	**Zalesovo Beam**	**58.45**	**349**	P		**P**	**17 57 26.9**	**-0.4**
TXAR	**Lajitas Array**	**144.99**	**39**	PKPbc	PKPdf		18 07 08.7	-0.8
	0.3nm,0.6s,baz=283,slow=0.5,SNR=5.8							

CASC ***12*** *17:47:35.8±2.2, 1639N×9153W, h0km±48km, MD5.0, mb4.7(NEIC)*
BJI ***12*** *17:47:38.6, 1530N×9190W, h161km, mB5.0*
ISCJB ***12*** *17:47:38.3±0.3, 1532N±004×9187W±002, h164km, mb4.4/56, Error ellipse: s-maj=5.2km s-min=3.1km az=12.7*
NEIC ***12*** *17:47:38.6±0.3, 1526N×9194W, mb4.7/50, MD5.0(MEX), Error ellipse: s-maj=6.7km s-min=4.4km az=201.0*
IDC ***12*** *17:47:40.0±0.6, 1545N×9172W, h166km±4km, mb4.0/19, mb1 4.2/22, mb1mx4.1/27, mbtmp4.1/22, Error ellipse: s-maj=14.7km s-min=8.3km az=54.0*
MEX ***12*** *17:47:42.0±1.5, 1548N×9227W, h161km±14km, MD5.0*
ISC 12 17:47:40.4±0.2, 1539N±003×9182W±002, h166km, h166km±2.2km:pP-P,n306,σ1s00/276,mb4.4/55,60C-63D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THIG		**0.64**	**222**	⇑*iP*		**Pn**	**17 48 02.7**	**-1.6**
THIG				*i*	S	**Sn**	**17 48 20.9**	**-1.7**
CCIG	**Comitan**	**0.94**	**341**	*i*	P	**Pn**	**17 48 06.0**	**-0.3**
CCIG				*i*	S	**Sn**	**17 48 23.0**	**-3.2**
JAT	**Jato**	**1.08**	**171**	*eP*		**Pn**	**17 48 10.2**	**+2.8**
FG6		**1.22**	**132**	⇓*iP*		**Pn**	**17 48 11.4**	**+2.8**
FG6				*eS*		**Sn**	**17 48 37.9**	**+7.6**
FUG	**Fuego 3**	**1.33**	**135**	⇓*iP*		**Pn**	**17 48 11.8**	**+2.2**
PCG	**Pacaya**	**1.53**	**130**	⇓*eP*		**Pn**	**17 48 14.4**	**+2.8**
PCG				*eS*		**Sn**	**17 48 42.8**	**+7.3**
SCX	**San Cristobal**	**1.55**	**330**	*iP*		**Pn**	**17 48 08.4**	**-3.3**
SCX				*i*	S	**Sn**	**17 48 30.4**	**-5.6**
NBG	**Las Nubes**	**1.63**	**119**	*eS*		**Sn**	**17 48 43.7**	**+6.4**
TGIG		**1.87**	**318**	*iP*		**Pn**	**17 48 12.4**	**-2.6**
TGIG				*i*	S	**Sn**	**17 48 34.1**	**-7.8**
RBDL	**Robledal**	**2.42**	**121**	⇑*eP*		x	17 48 23.9	
RBDL				*eS*		x	17 49 00.5	
RTR	**El Retiro**	**2.57**	**125**	*eP*		x	17 48 25.2	
RTR				*eS*		x	17 49 04.2	
SNJE	**San Jose**	**2.62**	**125**	⇓*eP*		x	17 48 26.1	
SNJE				*eS*		x	17 49 05.3	
BOQS	**Boqueron**	**2.96**	**123**	*eP*		x	17 48 29.8	
LFRS	**El Faro**	**3.19**	**123**	⇓*eP*		x	17 48 33.2	
SNVI	**San Vicente**	**3.38**	**121**	*eP*		x	17 48 36.0	
CMIG	**Matias Romero**	**3.40**	**300**	P		**Pn**	**17 48 29.1**	**-4.4**
	226nm,0.3s,baz=124,slow=10.0,SNR=987							
CMIG				S		**Sn**	**17 49 03.0**	**-12**
	477nm,0.3s,baz=360,slow=13,SNR=26							
CMIG	**Matias Romero**	**3.40**	**300**	P		**Pn**	**17 48 29.1**	**-4.4**
CMIG				S		**Sn**	**17 49 03.0**	**-12**
SCIG	**Sabancuy**	**3.61**	**10**	*iP*		**Pn**	**17 48 35.2**	**-0.9**
SCIG				*i*	S	**Sn**	**17 49 18.9**	**-0.7**
TUIG	**Tuzandepetl**	**3.63**	**317**	*iP*		**Pn**	**17 48 32.6**	**-3.8**
TUIG				*i*	S	**Sn**	**17 49 10.5**	**-9.4**
CAHU	**Cacacuatique**	**3.84**	**114**	*eP*		x	17 48 42.1	
VSM	**San Miguel**	**3.95**	**119**	*eP*		x	17 48 43.6	
HUIG	**Huatulco**	**4.15**	**276**	⇑*iP*		**Pn**	**17 48 37.2**	**-5.9**
HUIG				*i*	S	**Sn**	**17 49 20.4**	**-12**
HUIG	**Huatulco**	**4.15**	**276**	⇑*iP*		**Pn**	**17 48 37.2**	**-5.9**
HUIG				*i*	S	**Sn**	**17 49 19.0**	**-13**
TGUH	**Tegucigalpa,Un**	**4.59**	**106**	*eP*		**Pn**	**17 48 52.0**	**+3.2**
OXX	**Oaxaca**	**5.00**	**290**	*iP*		**Pn**	**17 48 49.3**	**-4.9**
OXX				*i*	S	**Sn**	**17 49 41.4**	**-10**
VHO	**Vista Hermosa**	**5.01**	**290**	*iP*		**Pn**	**17 48 51.2**	**-3.0**
VHO				*i*	S	**Sn**	**17 49 41.7**	**-10**
TEIG	**Tepich**	**5.88**	**35**	P		**Pn**	**17 49 04.8**	**-0.8**
	121nm,0.3s,baz=297,slow=0.3,SNR=146							
TEIG				S		**Sn**	**17 50 04.3**	**-8.3**
	49nm,0.3s,baz=346,slow=9.1,SNR=3.8							
TEIG	**Tepich**	**5.88**	**35**	*eP*		**Pn**	**17 49 05.3**	**-0.3**
	849nm,0.6s							
TPIG	**Tehuac#an**	**6.10**	**300**	*iP*		**Pn**	**17 49 04.8**	**-3.8**
TPIG				*i*	S	**Sn**	**17 50 06.4**	**-11**
LVIG	**Laguna Verde**	**6.15**	**315**	*iP*		**Pn**	**17 49 05.4**	**-3.8**
LVIG				*i*	S	**Sn**	**17 50 08.3**	**-11**
PNIG	**Pinotepa**	**6.15**	**280**	⇑*iP*		**Pn**	**17 49 04.8**	**-4.5**
PNIG				*i*	S	**Sn**	**17 50 07.2**	**-12**
PPM	**Popocatepetl**	**7.46**	**300**	*iP*		**Pn**	**17 49 23.3**	**-3.3**
PPM				*iP*			17 49 25.6	
IIO	**Organos**	**7.80**	**303**	*iP*		**Pn**	**17 49 30.0**	**-1.1**
ACX	**Acapulco**	**7.92**	**282**	*iP*		**Pn**	**17 49 25.1**	**-7.6**
ACX				*i*	S	**Sn**	**17 50 50.8**	**-11**
PLIG	**Platanillo**	**7.94**	**293**	*iP*		**Pn**	**17 49 31.1**	**-1.9**
PBVM	**Pinon**	**8.02**	**301**	*eP*		**Pn**	**17 49 31.2**	**-2.8**
MZVM		**8.03**	**299**	*iP*		**Pn**	**17 49 33.5**	**-0.6**
PTVM	**Pico Tres Padr**	**8.12**	**302**	*eP*		**Pn**	**17 49 32.2**	**-3.2**
SZVM	**Salazar**	**8.21**	**300**	*iP*		**Pn**	**17 49 34.7**	**-1.9**
CAIG	**El Cayaco**	**8.28**	**283**	*iP*		**Pn**	**17 49 33.8**	**-3.7**
CAIG				*i*	S	**Sn**	**17 50 57.8**	**-12**
JTS	**JuntasAbangare**	**8.39**	**126**	P		**Pn**	**17 49 39.9**	**+0.9**
	29nm,0.3s,baz=326,slow=16,SNR=42							
JTS				S		**Sn**	**17 51 07.1**	**-5.6**
	6.7nm,0.3s,baz=285,slow=19,SNR=2.6							
JTS	**JuntasAbangare**	**8.39**	**126**	*eP*		**Pn**	**17 49 39.8**	**+0.8**
	47nm,0.4s							
DEIG	**Demacu**	**8.43**	**306**	*iP*		**Pn**	**17 49 38.2**	**-1.3**
ZIIG	**Zihuatanejo**	**9.51**	**285**	*iP*		**Pn**	**17 49 51.4**	**-2.4**
ZIIG				*i*	S	**Sn**	**17 51 33.9**	**-5.6**
MOIG	**Morelia**	**9.90**	**297**	*iP*		**Pn**	**17 49 58.5**	**-0.4**
MOIG				*i*	S	**Sn**	**17 51 39.2**	**-10**
SOR	**Soroa**	**11.12**	**47**	*eP*		**Pn**	**17 50 16.5**	**+1.8**
SFJM	**Santa Fe**	**11.82**	**297**	*eP*		**Pn**	**17 50 20.6**	**-3.3**
LNIG	**Linares**	**11.87**	**324**	*eP*		**Pn**	**17 50 24.4**	**-0.2**
R15V		**12.21**	**290**	*iP*		**Pn**	**17 50 27.4**	**-1.6**
MGV	**Manicaragua**	**13.05**	**57**	*eP*		**Pn**	**17 50 41.3**	**+1.5**
MGV				*eS*		**Sn**	**17 53 04.3**	**-0.2**
	comp=N,29nm,0.9s							
MGV				*e*				
	comp=E,31nm,1.1s							
ANIG	**Ahuacatlan**	**13.32**	**297**	*iP*		**Pn**	**17 50 42.1**	**-1.0**
LMGC	**Las Mercedes**	**14.86**	**70**	*eP*		**Pn**	**17 51 06.2**	**+3.8**
HKT	**Hockley**	**14.96**	**346**	*eP*		**Pn**	**17 51 04.4**	**+0.8**
	comp=E,29nm,1.0s							
DWPF	**Disney**	**15.90**	**36**	*eP*		**Pn**	**17 51 15.9**	**+0.7**
	comp=E,57nm,0.6s							
NATX	**Nacogdoches**	**16.50**	**351**	*eP*		**Pn**	**17 51 23.0**	**+0.6**
	comp=E,87nm,0.8s							
JCT	**Junction City**	**16.71**	**335**	*eP*		**Pn**	**17 51 25.1**	**+0.1**
	comp=E,38nm,0.7s							
HPIG		**17.27**	**314**	*iP*		**Pn**	**17 51 28.1**	**-3.5**
TXAR	**Lajitas Array**	**17.66**	**324**	P		**Pn**	**17 51 35.8**	**-0.6**
	comp=E,1.1nm,0.3s,baz=153,slow=12,SNR=258							
TXAR				PcP		PcP	17 56 05.2	-0.1
	comp=E,0.2nm,0.3s,baz=188,slow=1.8,SNR=5.0							
LRAL	**Lakeview Retre**	**18.11**	**13**	*eP*		**P**	**17 51 41.3**	**+1.7**
	comp=E,17nm,0.4s							
MIAR	**Mount Ida**	**19.14**	**356**	*eP*		**P**	**17 51 50.9**	**0.0**
	comp=E,44nm,0.8s							
OXF	**Oxford**	**19.17**	**6**	*eP*		**P**	**17 51 51.3**	**+0.1**
	comp=E,69nm,0.5s							
UALR	**University of**	**19.31**	**359**	*eP*		**P**	**17 51 53.3**	**+0.6**
	comp=E,49nm,0.9s							
GOGA	**Godfrey**	**19.47**	**21**	*eP*		**P**	**17 51 55.6**	**+1.1**
	comp=E,35nm,0.9s							
OTAV	**Otavalo**	**20.02**	**138**	*eP*		**P**	**17 52 02.7**	**+2.1**
	comp=E,12nm,0.6s							
ROSC	**El Rosal**	**20.12**	**120**	P		**P**	**17 52 02.7**	**+1.0**
	comp=E,20nm,0.4s,baz=100,slow=19,SNR=8.1							
WMOK	**Wichita Mounta**	**20.26**	**343**	*eP*		**P**	**17 52 01.4**	**-1.6**
	comp=E,6µm,0.6s							
SWET	**Sewanee**	**20.44**	**14**	*eP*		**P**	**17 52 05.2**	**+0.4**
GNAR	**Gosnell**	**20.56**	**4**	P		**P**	**17 52 06.3**	**+0.3**
	comp=E,756nm,0.9s							
GNAR				pP			17 52 33.4	
WVT	**Waverly**	**20.96**	**9**	*eP*		**P**	**17 52 09.7**	**-0.7**
	comp=E,20nm,0.6s							
CPCT	**Cooper Cave**	**21.02**	**17**	*eP*		**P**	**17 52 11.5**	**+0.5**
CGIG		**21.03**	**318**	*eP*		**P**	**17 52 12.1**	**+0.9**
JSC	**Jenkinsville**	**21.09**	**25**	*eP*		**P**	**17 52 12.9**	**+1.2**
AMTX	**Amarillo**	**21.34**	**337**	*eP*		**P**	**17 52 13.1**	**-1.3**
	comp=E,61nm,0.5s,mb5.2							
TKL	**Tuckaleechee C**	**21.43**	**18**	P		**P**	**17 52 15.8**	**+0.5**
	comp=E,29nm,0.9s,mb4.6,baz=200,slow=12,SNR=18							
TKL	**Tuckaleechee C**	**21.43**	**18**	*eP*		**P**	**17 52 16.0**	**+0.6**
SDV	**Santo Domingo**	**21.68**	**105**	P		**P**	**17 52 17.8**	**-0.5**
	comp=E,18nm,0.4s,mb4.8,baz=336,slow=4.6,SNR=7.4							
SDV	**Santo Domingo**	**21.68**	**105**	*eP*		**P**	**17 52 17.3**	**-0.9**
	comp=E,29nm,0.6s,mb4.9							
TZTN	**Tazewell**	**22.32**	**18**	*eP*		**P**	**17 52 24.5**	**+0.1**
	comp=E,28nm,0.7s,mb4.8							
SIUC	**Southern Illin**	**22.36**	**5**	*eP*		**P**	**17 52 24.5**	**-0.3**
	comp=E,100nm,0.8s,mb5.3							
SIUC				*epP*			17 52 54.9	
319A	**Douglas**	**22.54**	**318**	⇑P		**P**	**17 52 26.9**	**+0.5**
	baz=23							
FVM	**French Village**	**22.54**	**3**	*eP*		**P**	**17 52 25.0**	**-1.4**
	comp=E,22nm,1.0s,mb4.5							
FVM				*epP*			17 52 47.4	
CCM	**Cathedral Cave**	**22.59**	**1**	*eP*		**P**	**17 52 25.8**	**-1.0**
	comp=E,29nm,0.9s,mb4.7							
CCM				*epP*			17 52 54.8	
219A	**White Tail Can**	**22.93**	**319**	⇓P		**P**	**17 52 31.3**	**+1.2**
	baz=23,SNR=23							
BNM	**Barren Site**	**22.97**	**327**	*eP*		**P**	**17 52 30.9**	**+0.5**
BNM				*epP*			17 53 00.6	
318A	**Bisbee**	**23.04**	**317**	⇓P		**P**	**17 52 31.5**	**+0.4**
	baz=23,SNR=6.2							
LPM	**Los Pinos Moun**	**23.09**	**327**	*eP*		**P**	**17 52 31.9**	**+0.4**
LPM				*epP*			17 53 03.0	
LENM	**Lemitar**	**23.16**	**327**	*eP*		**P**	**17 52 32.8**	**+0.6**
LENM				*epP*			17 53 03.3	
WCI	**Wyandotte Cave**	**23.27**	**11**	*eP*		**P**	**17 52 33.0**	**-0.1**
	comp=E,126nm,0.8s,mb5.4							
WCI				*epP*			17 53 02.7	
218A	**Dragoon**	**23.42**	**318**	⇓P		**P**	**17 52 35.1**	**+0.6**
	baz=24							
LAZ	**Ladron**	**23.43**	**327**	*eP*		**P**	**17 52 35.3**	**+0.7**
LAZ				*epP*			17 53 04.4	
119A	**Ashpeak Ranch,**	**23.48**	**321**	⇑P		**P**	**17 52 35.8**	**+0.8**
	baz=24,SNR=5.4							
OLIL	**Olney**	**23.49**	**7**	*eP*		**P**	**17 52 34.9**	**-0.2**
	comp=E,122nm,0.8s,mb5.4							
OLIL				*epP*			17 53 06.5	
ANMO	**Albuquerque**	**23.51**	**329**	P		**P**	**17 52 36.5**	**+1.3**
	comp=E,2.4nm,0.7s,mb3.8,baz=144,slow=12,SNR=5.8							
ANMO				PP			17 53 13.6	
	comp=E,15nm,0.8s,baz=153,slow=11,SNR=14							
ANMO	**Albuquerque**	**23.51**	**329**	*eP*		**P**	**17 52 36.4**	**+1.1**
	comp=E,2.3nm,0.8s,mb3.8							
ANMO				*epP*			17 53 04.0	
217A	**Green Valley**	**23.80**	**317**	⇑P		**P**	**17 52 38.4**	**+0.4**
	baz=24,SNR=7.9							
118A	**Homack Ranch,**	**23.81**	**319**	⇓P		**P**	**17 52 38.8**	**+0.7**
	baz=24,SNR=5.8							
ELN	**Prospectdale**	**23.87**	**22**	*eP*		**P**	**17 52 39.3**	**+0.7**
ELN				*epP*			17 53 12.0	
BLA	**Blacksburg**	**23.98**	**23**	*eP*		**P**	**17 52 40.0**	**+0.4**
	comp=E,15nm,0.7s,mb4.6							
BLA				*epP*			17 53 13.4	
TUC	**Tucson**	**24.11**	**318**	*eP*		**P**	**17 52 41.1**	**+0.2**
	comp=E,5.8nm,0.8s,mb4.2							
TUC				*epP*			17 53 14.6	
AOPR	**Arecibo Observ**	**24.16**	**79**	P		**P**	**17 52 40.7**	**-0.7**
	comp=E,18nm,0.5s,mb4.8							
117A	**Oracle**	**24.25**	**318**	⇓P		**P**	**17 52 42.6**	**+0.5**
	baz=24							
Y19A	**Nutrioso**	**24.28**	**323**	⇓P		**P**	**17 52 43.2**	**+0.8**
	baz=24,SNR=6.8							
216A	**Three Points,**	**24.36**	**316**	⇓P		**P**	**17 52 43.4**	**+0.3**
	baz=24							
Z17A	**San Carlos Hig**	**24.56**	**320**	⇓P		**P**	**17 52 45.6**	**+0.8**
	baz=25							
X19A	**St. Johns**	**24.64**	**323**	⇑P		**P**	**17 52 47.2**	**+1.6**
	baz=25							
SJG	**San Juan**	**24.72**	**80**	P		**P**	**17 52 46.4**	**-0.2**
	comp=E,11nm,0.3s,mb4.8,baz=341,slow=20,SNR=5.7							
CPD	**Cerro la Pandu**	**24.94**	**80**	*eP*		**P**	**17 52 47.9**	**-0.6**
	comp=E,40nm,0.8s,mb5.0							
W19A	**Sanders**	**25.19**	**324**	⇓P		**P**	**17 52 51.2**	**+0.6**
	baz=25							
214A	**Organ Pipe Nat**	**25.25**	**314**	⇓P		**P**	**17 52 51.5**	**+0.3**
	baz=25							
MTP	**Monte Pirata**	**25.29**	**80**	*eP*		**P**	**17 52 51.2**	**-0.5**
115A	**Sonoran Desert**	**25.31**	**317**	⇓P		**P**	**17 52 52.1**	**+0.4**
	baz=25							
SDCO	**Great Sand Dun**	**25.35**	**334**	*eP*		**P**	**17 52 51.9**	**-0.1**
	comp=E,8.1nm,1.0s,mb4.2							
SDCO				*epP*		pP	17 53 23.7	-2.5
X16A	**Lo Mia Camp, P**	**25.91**	**321**	⇓P		**P**	**17 52 57.6**	**+0.5**
	baz=26							
ATAH	**Atahualpa**	**25.92**	**148**	P		**P**	**17 53 00.6**	**+3.3**
	comp=E,5.9nm,0.8s,mb4.3,baz=46,slow=2.9,SNR=4.5							
Y15A	**Casa Rosa Ranc**	**26.16**	**319**	⇓P		**P**	**17 52 59.7**	**+0.4**
	baz=26							
MVCO	**Mesa Verde**	**26.30**	**329**	P		**P**	**17 53 00.7**	**+0.2**
	comp=E,43nm,1.3s,mb4.9							
MVCO				*epP*		pP	17 53 32.7	-2.1
113A	**Mohawk Valley,**	**26.39**	**315**	⇑P		**P**	**17 53 01.8**	**+0.4**
	baz=26							
X15A	**Humboldt**	**26.45**	**320**	⇑P		**P**	**17 53 02.6**	**+0.8**
	baz=26							
Y14A	**Wickenburg**	**26.58**	**318**	⇑P		**P**	**17 53 03.2**	**+0.1**
	baz=27							
WUAZ	**Wupatki**	**26.62**	**322**	*eP*		**P**	**17 53 03.3**	**-0.1**
	comp=E,1.9nm,0.6s,mb3.9							
WUAZ				*epP*		pP	17 53 37.4	-0.4
X14A	**Yava**	**26.85**	**319**	⇑P		**P**	**17 53 05.7**	**+0.2**
	baz=27							
W15A	**Williams**	**26.92**	**321**	⇓P		**P**	**17 53 07.2**	**+1.0**
	baz=27							
PV01	**Paradox Valley**	**27.06**	**330**	P		**P**	**17 53 07.4**	**0.0**
PV01				*epP*		pP	17 53 44.9	+3.2
ISCO	**Idaho Springs**	**27.15**	**336**	*epP*		pP	17 53 41.5	-1.0
	comp=E,6.0nm,0.9s							
GLA	**Glamis**	**27.28**	**314**	⇓P		**P**	**17 53 09.6**	**+0.3**
	baz=27							
GLA	**Glamis**	**27.28**	**314**	*epP*		pP	17 53 44.6	+0.8
	comp=E,37nm,1.0s							
V15A	**Kaibab Nationa**	**27.30**	**322**	⇓P		**P**	**17 53 10.0**	**+0.6**
	baz=27,SNR=5.3							
SDMD	**Soldier's Deli**	**27.30**	**26**	*eP*		**P**	**17 53 09.1**	**-0.3**
	comp=E,40nm,0.9s,mb5.0							
W14A	**Seligman**	**27.45**	**320**	⇓P		**P**	**17 53 11.6**	**+0.8**
	baz=28							
JFWS	**Jewell Farm**	**27.47**	**3**	*epP*		pP	17 53 45.5	+0.2
	comp=E,47nm,0.8s							
X13A	**Yucca**	**27.53**	**318**	⇑P		**P**	**17 53 11.8**	**+0.2**
	baz=28							
PDMCI	**Parker Dam,Lak**	**27.55**	**317**	⇓P		**P**	**17 53 12.3**	**+0.6**
	baz=28							
V14A	**Boquillas Ranc**	**27.74**	**321**	⇑P		**P**	**17 53 14.0**	**+0.7**
	baz=28,SNR=7.3							
U15A	**North Rim**	**27.78**	**323**	⇓P		**P**	**17 53 14.6**	**+0.8**
	baz=28							
W13A	**Hualapai Mount**	**27.88**	**319**	⇑P		**P**	**17 53 15.1**	**+0.5**
	baz=28							
DVTC	**Desert V Tower**

ELK pP pP 17 54 29.5 -0.2
comp=E,2.3nm,0.9s,baz=144,slow=7.9,SNR=6.2
ELK Elko 32.44 326 P **P** **17 53 55.6 +0.9**
ELK *e*pP pP 17 54 28.5 -1.2
ELK pP pP 17 54 29.5 -0.2
RRI2 Red Ridge 32.47 333 *e*P **P** **17 53 53.7 -1.3**
comp=E,15nm,1.4s,mb4.5
RRI2 *e*pP pP 17 54 29.4 -0.5
J16A Bone 32.54 333 ⇑P **P** **17 53 56.4 +0.8**
baz=33
MOOW Moose Ponds 32.55 334 *e*pP pP 17 54 29.6 -1.0
comp=E,3.6nm,0.8s
K14A Jones Ranch, D 32.70 330 ⇓P **P** **17 53 57.4 +0.5**
baz=33
NVAR Mina Array Bea 32.72 320 P **P** **17 53 58.5 +1.3**
comp=E,6.6nm,0.6s,mb4.5,baz=136,slow=8.4,SNR=69
NVAR pP pP 17 54 30.8 -1.4
NVAR comp=E,8.3nm,0.8s,baz=137,slow=8.6,SNR=8.9
PcP PcP 17 56 39.0 +0.2
NVAR comp=E,2.0nm,0.7s,baz=168,slow=3.6,SNR=5.7
ScP ScP 18 00 07.7 +0.3
baz=123,slow=3.3
KCC Kaiser Creek 32.73 317 ⇑P **P** **17 53 57.9 +0.6**
baz=33
U04C Hernandez Rese 33.19 314 ⇓P **P** **17 54 01.6 +0.3**
baz=33
M11A Holland Ranch, 33.22 326 ⇓P **P** **17 54 02.1 +0.6**
baz=33
M10A I.L. Ranch, Tu 33.69 326 ⇑P **P** **17 54 06.3 +0.7**
baz=34
L11A Cat Creek Ranc 33.72 327 ⇑P **P** **17 54 05.7 -0.1**
baz=34,SNR=7.3
L10A Juniper Basin 34.03 326 ⇑P **P** **17 54 09.3 +0.7**
baz=34
HLID Hailey 34.06 330 ⇓P **P** **17 54 09.7 +0.9**
baz=34,SNR=7.3
HLID Hailey 34.06 330 *e*pP pP 17 54 43.6 -0.3
comp=E,8.9nm,1.1s
I13A Wildhorse Cree 34.18 331 ⇓P **P** **17 54 10.1 +0.3**
baz=34,SNR=8.1
H14A Leadore 34.38 332 ⇑P **P** **17 54 11.7 +0.2**
baz=34,SNR=6.7
DLMT Dillon 34.63 334 *e*pP pP 17 54 46.0 -2.9
comp=E,4.3nm,0.8s
H13A Challis 34.74 331 ⇓P **P** **17 54 15.3 +0.7**
baz=35,SNR=5.5
ULM Lac du Bonnet 34.93 355 pP pP 17 54 50.4 -0.9
comp=E,3.5nm,0.6s,baz=172,slow=10,SNR=2.7
F15A Butte 34.97 334 ⇑P **P** **17 54 17.3 +0.8**
baz=35
H12A Diamond D Ranc 35.01 331 ⇓P **P** **17 54 17.4 +0.5**
baz=35,SNR=12
N06A Buffalo Meadow 35.07 322 ⇓P **P** **17 54 18.6 +1.1**
baz=35
I11A Placerville 35.07 329 ⇑P **P** **17 54 18.0 +0.5**
baz=35,SNR=8.8
L08A Fields 35.13 325 ⇑P **P** **17 54 18.3 +0.3**
baz=35,SNR=6.6
K09A Rome 35.13 326 ⇓P **P** **17 54 18.5 +0.5**
baz=35,SNR=12
G13A Cobalt 35.14 332 ⇑P **P** **17 54 18.5 +0.5**
baz=35
WVOR Wild Horse Val 35.46 325 *e*P **P** **17 54 21.1 +0.3**
comp=E,2.6nm,0.8s,mb3.9
WVOR *e*pP pP 17 54 55.5 -0.6
K08A Mann Creek Ran 35.57 325 ⇑P **P** **17 54 21.5 -0.2**
baz=36,SNR=9.6
L07A Adell 35.58 324 ⇓P **P** **17 54 22.1 +0.3**
baz=36,SNR=6.9
F13A Darby 35.72 333 ⇑P **P** **17 54 22.5 -0.4**
baz=36
K07A Rock Creek Ran 35.96 325 ⇑P **P** **17 54 25.5 +0.4**
baz=36,SNR=13
J08A Circle Bar Ran 35.98 326 ⇑P **P** **17 54 25.3 +0.1**
baz=36
I09A Lost Marbles R 36.02 328 ⇓P **P** **17 54 25.5 0.0**
baz=36
MOD Modoc 36.06 323 ⇓P **P** **17 54 26.2 +0.2**
baz=36
F12A Elk City 36.11 332 ⇑P **P** **17 54 26.2 0.0**
baz=36,SNR=6.8
M05C Lookout 36.23 321 ⇓P **P** **17 54 27.9 +0.6**
baz=36
GASB Alder Springs 36.23 318 ⇑P **P** **17 54 28.4 +1.0**
baz=36
G11A Walters Elk Ra 36.31 330 ⇓P **P** **17 54 27.9 -0.1**
baz=36
BMO Blue Mountains 36.42 329 *e*pP pP 17 55 04.4 0.0
comp=E,5.6nm,1.1s
O02C Red Bluff 36.57 319 ⇑P **P** **17 54 29.9 -0.4**
baz=37
K06A Valley Falls 36.60 324 ⇓P **P** **17 54 30.5 0.0**
baz=37
E12A Beaver Dam Sad 36.75 332 ⇓P **P** **17 54 31.0 -0.7**
baz=37
D13A Huson 36.79 334 ⇓P **P** **17 54 31.6 -0.4**
baz=37
J06A Christmas Vall 36.83 325 ⇓P **P** **17 54 32.0 -0.5**
baz=37
M04C Macdoel 36.90 321 ⇑P **P** **17 54 33.3 +0.3**
baz=37
G09A Cove 36.96 329 ⇑P **P** **17 54 33.5 0.0**
baz=37
F10A Beach Ranch, E 37.19 330 ⇓P **P** **17 54 34.5 -0.9**
baz=37,SNR=5.5
I06A Prineville 37.31 325 ⇑P **P** **17 54 36.2 -0.3**
baz=37
H07A Lands Inn, Kim 37.40 327 ⇑P **P** **17 54 37.1 0.0**
baz=37
YBH Yreka Blue Hor 37.40 321 pP pP 17 55 12.1 -0.7
comp=E,1.6nm,0.6s,baz=99,slow=9.5,SNR=4.5
J05A Fort Rock 37.47 324 ⇓P **P** **17 54 37.6 -0.1**
baz=38
C11A Tepee Creek (N 38.14 333 ⇑P **P** **17 54 43.0 -0.4**
baz=38
KBO Bosley Butte 38.60 320 *e*P **P** **17 54 47.6 +0.4**
KBO *e*pP pP 17 55 24.0 +0.9
J02A Umpqua 38.87 322 ⇓P **P** **17 54 49.3 -0.2**
baz=39
H04A Detroit Lake 38.88 325 ⇑P **P** **17 54 49.1 -0.5**
baz=39,SNR=6.6
I03A Eugene 39.06 323 ⇑P **P** **17 54 51.1 +0.1**
baz=39
LPAZ La Paz 39.21 142 P **P** **17 54 53.8 +1.2**
comp=E,6.6nm,0.6s,mb4.4,baz=325,slow=7.7,SNR=35
LPAZ PcP PcP 17 56 59.0 +0.4
comp=E,1.3nm,0.4s,baz=300,slow=9.6,SNR=6.7
LPAZ ScP ScP 18 00 32.2 +0.7
comp=E,0.7nm,0.5s,baz=29,slow=17,SNR=3.6
SCHQ Schefferville 43.87 21 P **P** **17 55 28.7 -1.3**
comp=E,15nm,0.8s,mb4.7,baz=218,slow=5.9,SNR=7.1
SCHQ PcP PcP 17 57 10.8 -2.4
comp=E,3.8nm,0.6s,baz=246,slow=8.8,SNR=2.8
SCHQ Schefferville 43.87 21 P **P** **17 55 28.7 -1.3**
SCHQ PcP PcP 17 57 10.8 -2.4
YKA Yellowknife Ar 49.73 346 P **P** **17 56 14.1 -1.2**
comp=E,2.6nm,0.6s,mb4.1,baz=149,slow=7.3,SNR=17
YKA pP pP 17 56 52.2 -0.6
comp=E,17nm,0.8s,baz=146,slow=7.7,SNR=21
YKA sP sP 17 57 08.9 -2.4
comp=E,1.8nm,0.3s,baz=146,slow=7.4,SNR=3.2
YKA ScP ScP 18 01 11.8 -2.0
comp=E,0.8nm,0.6s,baz=151,slow=5.7,SNR=4.9
BDFB Brasilia 53.12 124 P **P** **17 56 40.0 -1.3**
comp=E,10.0nm,0.7s,mb4.7,baz=283,slow=10.0,SNR=11
CPUP Villa Florida 53.33 141 P **P** **17 56 41.3 -1.3**
comp=E,18nm,0.8s,mb4.8,baz=315,slow=8.4,SNR=37
PLCA Paso Flores 59.22 161 P **P** **17 57 23.6 -0.4**
comp=E,3.2nm,0.8s,mb4.2,baz=327,slow=8.1,SNR=6.8
PLCA PcP PcP 17 58 10.9 +0.3
comp=E,1.5nm,0.6s,baz=2.7,slow=5.3,SNR=4.3
PFVI Vila Bisbo 75.37 55 *e*P **P** **17 59 04.6 -1.3**
comp=E,24nm,1.8s,mb4.5
MORF Marmelete 75.48 55 *e*P **P** **17 59 05.4 -1.1**
comp=E,20nm,1.8s,mb4.5
PVIS Viseu 75.58 51 *e*P **P** **17 59 05.2 -1.8**
comp=E,21nm,2.1s,mb4.4
EVO Evora 75.81 54⇑*i*P **P** **17 59 06.0 -2.3**
comp=E,7.5nm,0.6s,mb4.2
MTE Manteigas 75.89 52 *e*P **P** **17 59 07.7 -1.1**
comp=E,20nm,1.6s,mb4.5
PBDV Barranco-do-Ve 76.06 55 *e*P **P** **17 59 09.0 -0.8**
comp=E,23nm,1.7s,mb4.5
MVO Moncorvo 76.17 51 *e*P **P** **17 59 08.7 -1.6**
comp=E,16nm,1.2s,mb4.5
PBRG Braganca 76.29 50 *e*P **P** **17 59 10.3 -0.7**
comp=E,20nm,3.9s
PBAR Barrancos 76.62 54 *e*P **P** **17 59 11.5 -1.4**
comp=E,12nm,1.6s,mb4.3
QUIF Quistinic 77.86 43 *e*P **P** **17 59 18.5 -1.1**
ESDC Sonseca Array 78.72 52 P **P** **17 59 22.8 -1.7**
comp=E,3.2nm,0.7s,mb4.1,baz=286,slow=6.2,SNR=13
GRR Gorron 79.29 43 *e*P **P** **17 59 25.5 -1.9**
comp=E,8.6nm,0.7s,mb4.2
GRR Gorron 79.29 43 *e*P **P** **17 59 25.5 -1.9**
comp=E,4.3nm,0.7s,mb4.2
MDT Midelt 79.52 59 P **P** **17 59 27.8 -1.2**
comp=E,3.6nm,0.8s,mb4.0,baz=307,slow=7.2,SNR=4.5
ETSF Etsaut 80.60 48 *e*P **P** **17 59 32.4 -2.2**
comp=E,3.7nm,0.6s,mb3.9
ETSF Etsaut 80.60 48 *e*P **P** **17 59 32.4 -2.2**
comp=E,1.9nm,0.6s,mb3.9
BGF Bois d'Agland 82.14 44 *e*P **P** **17 59 41.3 -1.3**
BGF *e*pP pP 18 00 22.9 -0.8
AVF Avril sur Loir 82.42 44 *e*P **P** **17 59 42.3 -1.8**
comp=E,8.3nm,0.8s,mb4.1
AVF Avril sur Loir 82.42 44 *e*P **P** **17 59 42.3 -1.8**
comp=E,4.2nm,0.8s,mb4.1
SSF Saint Saulge 82.46 43 *e*P **P** **17 59 44.2 0.0**
comp=E,5.0nm,0.7s,mb3.9
SSF *e*pP pP 18 00 24.3 -1.1
SSF Saint Saulge 82.46 43 *e*P **P** **17 59 44.2 0.0**
comp=E,2.5nm,0.7s,mb4.0
SSF *e*pP pP 18 00 24.3 -1.1
MTLF Montolieu 82.48 47 *e*P **P** **17 59 41.9 -2.6**
SMF Signal de Mont 82.79 44 *e*P **P** **17 59 45.0 -0.9**
NOA NORAR Array B 82.85 29 P **P** **17 59 45.1 -0.9**
comp=E,1.2nm,0.9s,mb3.6,baz=130,slow=13,SNR=2.9
CDF Champ du Feu 84.55 41 *e*P **P** **17 59 54.2 -0.7**
ORIF Oris-en-Rattie 84.62 45 *e*P **P** **17 59 54.7 -0.6**
ARCES ARCESS Array B 84.77 18 P **P** **17 59 54.0 -1.6**
comp=E,1.9nm,0.6s,mb4.0,baz=279,slow=5.3,SNR=14
ARCES ARCESS Array B 84.77 18 P **P** **17 59 54.0 -1.6**
RETA Reutte 87.06 42⇑*i*P pP 18 00 49.3 +0.5
comp=E,5.3nm,0.9s
RETA Reutte 87.06 42⇑*i*pP pP 18 00 49.3 +0.5
comp=E,5.3nm,0.9s
FETA Feichten 87.20 42⇑*i*P pP 18 00 50.2 +0.8
comp=E,3.9nm,0.7s
FETA Feichten 87.20 42⇑*i*pP pP 18 00 50.2 +0.8
comp=E,3.9nm,0.7s
ABTA Abfaltersbach 88.44 42⇓*i*P pP 18 00 56.3 +0.8
comp=E,5.2nm,0.9s
ABTA Abfaltersbach 88.44 42⇓*i*pP pP 18 00 56.3 +0.8
comp=E,5.2nm,0.9s
PETK Petropavlovsk- 89.61 326 P **P** **18 00 18.6 -0.6**
comp=E,2.5nm,0.9s,mb4.1,baz=72,slow=9.5,SNR=4.1
TORD Torodi Ar. Bea 89.88 76 P **P** **18 00 17.9 -3.3**
comp=E,0.4nm,0.7s,mb3.5,baz=302,slow=4.3,SNR=3.1
CN2 Changchun 111.96 332 *e*PKP PKiKP 18 05 54.5 -1.5
CN2 PP PP 18 06 43.6 +2.6
CN2 PP PP
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,17.0s
CN2 LR LR
comp=E,200nm,17.0s
CN2 LR LR
comp=Z,200nm,17.0s
SONM Songino Array 114.99 347 PKKPbc PKKPbc 18 16 36.6 -3.2
comp=Z,0.3nm,0.5s,baz=191,slow=4.5,SNR=3.6
KSRS Korea Array 115.51 326 PKP PKPdf 18 06 00.4 -2.6
comp=Z,1.2nm,0.6s,baz=355,slow=2.0,SNR=6.8
MKAR Makanchi Array 117.88 5 PKP PKPdf 18 06 04.2 -3.1
comp=Z,0.3nm,0.6s,baz=266,slow=2.3,SNR=3.3
HHC Hu-ho-hao-te 119.99 340 *e*PKP PKPdf 18 06 04.6 -6.9
BOSA Boshof 120.77 114 PKP PKPdf 18 06 11.9 -1.3
comp=Z,5.2nm,0.8s,baz=96,slow=18,SNR=6.3
LBTB Lobatse 120.92 110 PKP PKPdf 18 06 12.5 -1.2
comp=Z,0.8nm,0.4s,baz=90,slow=17,SNR=5.5
WMQ Urumqi 121.08 0 *e*PKP PKPdf 18 06 13.0 -0.5
NJ2 Nanjing 124.42 328 *e*PKP PKPdf 18 06 19.4 -0.9
MAW Mawson 125.29 168 PKP PKPdf 18 06 20.4 -0.3
comp=Z,4.3nm,0.5s,baz=213,slow=3.0,SNR=29
LZH Lanzhou 126.71 344 *e*PKP PKPdf 18 06 23.7 -0.8
LZH XPKP 18 07 21.2
STKA Stephens Creek 128.88 241 PKP PKPdf 18 06 28.3 -0.4
comp=Z,2.5nm,0.7s,baz=170,slow=4.2,SNR=4.4
CD2 Chengdu 131.59 342 *e*PKP PKPdf 18 06 32.2 -1.8
CD2 APKP 18 07 30.0
CD2 PP PP 18 08 57.1 +3.3
CD2 PKS 18 10 07.2
CD2 SKS SKSdf 18 13 25.8 -4.3
CD2 SKKS SKKSac 18 15 30.4 -4.7
CD2 SS SS 18 26 13.8 -0.1
CD2 PP PP
comp=Z,90nm,10.8s
GYA Guiyang 134.69 336 *e*PDIF Pdif 18 03 39.4 -1.3
GYA PKP PKPdf 18 06 39.5 -0.4
GYA XPKP 18 07 35.9
GYA PP PP 18 09 17.6 +3.9
GYA PP PP
comp=E,110nm,7.6s
WB2 Warramunga Arr 135.88 257 *e*P PKPdf 18 06 41.3 -0.9
WRA Warramunga Arr 135.89 257 PKhKP 18 06 29.1
comp=Z,0.5nm,0.7s,baz=90,slow=3.7,SNR=7.7
WRA PKP PKPdf 18 06 41.0 -1.2
comp=Z,1.3nm,0.4s,baz=84,slow=2.6,SNR=24
WRA SKPbc SKPbc 18 09 58.0 -0.5
comp=Z,0.8nm,0.6s,baz=84,slow=3.5,SNR=5.8
WRA Warramunga Arr 135.89 257 PKP PKPdf 18 06 41.0 -1.2
WRA SKPbc SKPbc 18 09 58.0 -0.5
ASAR Alice Springs 136.28 252 PKP PKPdf 18 06 43.5 +0.6
comp=Z,1.4nm,0.6s,baz=94,slow=1.9,SNR=23
ASAR SKPbc SKPbc 18 09 58.8 -0.9
comp=Z,1.3nm,1.0s,baz=103,slow=1.5,SNR=6.7
DAV Davao City (W) 136.75 298 SKPbc SKPbc 18 09 59.8 -1.6
comp=Z,187nm,0.4s,baz=30,slow=4.1,SNR=3.6
KMI Kunming 137.31 340 PKP PKPdf 18 06 41.8 -3.0
FITZ Fitzroy Crossi 144.07 260 *e*P PKPdf 18 06 54.1 -3.0
comp=Z,4.8nm,0.6s
FITZ Fitzroy Crossi 144.07 260 PKP PKPdf 18 06 55.1 -2.0
comp=Z,2.0nm,0.5s,baz=165,slow=1.8,SNR=8.9
CMAR Chiang Mai Arr 144.74 342 PKP PKPdf 18 06 55.6 -2.6
comp=Z,1.5nm,0.9s,baz=343,slow=3.4,SNR=9.3
CMAR pPKP pPKPdf 18 07 41.5 -0.6
comp=Z,1.1nm,0.7s,baz=345,slow=3.3,SNR=3.3
CMAR SKPbc SKPbc 18 10 21.6 -0.5
comp=Z,0.8nm,0.8s,baz=321,slow=2.4,SNR=4.1
BATI Baumata 145.05 274 PKPbc PKPbc 18 06 59.4 +0.8
comp=Z,11nm,0.5s,baz=151,slow=4.0,SNR=6.5

IDC 12 17:50:43.8±7.7, 315S×10096E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/19, mbtmp3.3/3, Error ellipse: s-maj=283.8km s-min=28.8km az=61.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.59**	**120**	P		P	P	17 57 51.8	0.0
	0.1nm,0.5s,baz=301,slow=8.3,SNR=2.6								
ASAR	**Alice Springs**	**37.80**	**126**	P		P	P	17 58 02.0	-0.2
	0.7nm,1.1s,baz=302,slow=7.5,SNR=3.3								
SONM	**Songino Array**	**50.99**	**5**	P		P	P	17 59 47.3	0.0
	0.3nm,0.5s,baz=192,slow=6.5,SNR=3.0								
TXAR	**Lajitas Array**	**145.00**	**39**	PKPbc		PKPbc	PKPbc	18 10 22.9	-0.2
	0.4nm,0.8s,baz=353,slow=2.1,SNR=3.6								

IDC 12 17:55:33.3±6.0, 359S×10262E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/18, mbtmp3.5/3, Error ellipse: s-maj=289.2km s-min=31.8km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.94**	**120**	P		P	P	18 02 27.4	+0.2
	0.6nm,0.8s,baz=300,slow=8.8,SNR=3.1								
ASAR	**Alice Springs**	**36.21**	**126**	P		P	P	18 02 37.9	-0.2
	0.6nm,0.7s,baz=295,slow=7.8,SNR=9.5								
ZALV	**Zalesovo Beam**	**59.23**	**348**	P		P	P	18 05 36.2	0.0
	0.4nm,0.4s,baz=153,slow=4.4,SNR=2.6								

*IDC **12** 17:59:49.7±1.9, 426S×10122E, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.0/19, mbtmp4.1/9, Error ellipse: s-maj=72.9km s-min=15.4km az=58.0*
*ISCJB **12** 17:59:51.9±1.6, 43S×02×101.1E±04, h33km, mb4.1/12, Error ellipse: s-maj=59.0km s-min=11.7km az=148.1*
*NEIC **12** 17:59:55.4±1.4, 4.415S×10139E, h35km, mb4.1/3, Error ellipse: s-maj=60.5km s-min=9.2km az=58.0*
ISC 12 17:59:54.8±1.6, **43S**×02×**1012E**±03, **h35km, n17**, σ0⇕**77**/15, **mb4.1**/12, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.69**	**354**	P		P	P	**18 04 51.3**	**-2.1**
	4.2nm,0.8s,mb3.9,baz=183,slow=8.5,SNR=24								
CHTO	**Chiang Mai**	**23.04**	**354**	*e*P		P	P	**18 04 57.3**	**+0.2**
	3.3nm,0.9s,mb3.8								
FITZ	**Fitzroy Crossi**	**27.57**	**122**	P		P	P	**18 05 37.9**	**-0.9**
	2.4nm,0.8s,mb3.9,baz=310,slow=7.7,SNR=10.0								
WRA	**Warramunga Arr**	**35.82**	**119**	P		P	P	**18 06 50.9**	**-0.3**
	1.3nm,0.8s,mb3.9,baz=294,slow=8.7,SNR=9.0								
WRA	**Warramunga Arr**	**35.82**	**119**	P		P	P	**18 06 50.9**	**-0.3**
ASAR	**Alice Springs**	**36.96**	**125**	P		P	P	**18 07 00.8**	**-0.1**
	1.0nm,0.7s,mb3.8,baz=294,slow=8.0,SNR=14								
STKA	**Stephens Creek**	**46.75**	**131**	P		P	P	**18 08 21.7**	**+0.9**
	1.6nm,0.9s,mb4.0,baz=322,slow=18,SNR=3.9								
KSRS	**Korea Array**	**48.37**	**29**	P		P	P	**18 08 33.8**	**+0.5**
	2.6nm,0.9s,mb4.3,baz=211,slow=8.1,SNR=11								
SONM	**Songino Array**	**52.08**	**4**	P		P	P	**18 09 01.7**	**+0.6**
	4.2nm,0.8s,mb4.4,baz=184,slow=9.6,SNR=22								
SONM				PcP		PcP	PcP	18 10 13.0	+0.2
	0.6nm,0.6s,baz=194,slow=2.2,SNR=2.5								
ULN	**Ulaanbaatar**	**52.16**	**5**	*e*P		P	P	**18 09 02.9**	**+1.2**
	2.3nm,1.0s,mb4.1								
MKAR	**Makanchi Array**	**53.52**	**344**	P		P	P	**18 09 12.2**	**+0.3**
	3.1nm,0.7s,mb4.3,baz=147,slow=8.6,SNR=28								
KURK	**Kurchatov**	**58.11**	**343**	*e*P		P	P	**18 09 44.4**	**-0.2**
	4.5nm,1.0s,mb4.5								
ZAA0	**Zalesovo Array**	**59.61**	**349**	*e*P		P	P	**18 09 54.7**	**-0.3**
ZALV	**Zalesovo Beam**	**59.61**	**349**	P		P	P	**18 09 54.9**	**0.0**
	2.6nm,0.4s,mb4.6,baz=214,slow=8.9,SNR=18								
ZALV	**Zalesovo Beam**	**59.61**	**349**	P		P	P	**18 09 54.9**	**0.0**
TXAR	**Lajitas Array**	**145.68**	**41**	PKPbc		PKPbc	PKPbc	18 19 31.5	+0.9
	1.6nm,0.7s,baz=261,slow=1.9,SNR=18								
JCT	**Junction City**	**147.24**	**35**	*e*PKPbc		PKPbc	PKPbc	18 19 35.4	+0.3

IDC 12 18:04:49.4±5.0, 496S×10029E, h0km, mb3.2/3, mb1 3.2/3, mb1mx3.1/19, mbtmp3.2/3, Error ellipse: s-maj=211.2km s-min=29.2km az=56.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**37.35**	**123**	P		P	P	18 12 03.8	0.0
	0.1nm,0.6s,baz=303,slow=6.9,SNR=2.6								
SONM	**Songino Array**	**52.84**	**5**	P		P	P	18 14 06.9	+0.3
	0.3nm,0.5s,baz=191,slow=5.9,SNR=3.7								
MKAR	**Makanchi Array**	**53.94**	**345**	P		P	P	18 14 14.6	-0.1
	0.1nm,0.4s,baz=156,slow=7.4,SNR=3.1								

IDC 12 18:12:48.4±4.3, 342S×10029E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.5/5, Error ellipse: s-maj=182.7km s-min=22.2km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.04**	**119**	P		P	P	18 19 59.3	-1.0
	0.3nm,0.3s,baz=304,slow=8.6,SNR=4.3								
ASAR	**Alice Springs**	**38.20**	**125**	P		P	P	18 20 10.7	+0.6
	0.4nm,0.4s,baz=299,slow=7.8,SNR=19								
SONM	**Songino Array**	**51.32**	**5**	P		P	P	18 21 54.7	+0.4
	0.8nm,0.7s,baz=182,slow=8.9,SNR=6.1								
MKAR	**Makanchi Array**	**52.46**	**344**	P		P	P	18 22 02.6	-0.2
	0.2nm,0.6s,baz=160,slow=8.7,SNR=4.2								
ZALV	**Zalesovo Beam**	**58.60**	**349**	P		P	P	18 22 46.7	-0.2
	0.2nm,0.3s,baz=164,slow=6.0,SNR=4.0								
TXAR	**Lajitas Array**	**145.63**	**39**	PKPbc		PKPbc	PKPbc	18 32 29.2	-0.5
	0.3nm,0.7s,baz=299,slow=0.7,SNR=5.4								

*IDC **12** 18:20:09.7±1.9, 453S×101.1E, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.8/21, mbtmp3.8/10, Error ellipse: s-maj=70.3km s-min=16.1km az=54.0*
*ISCJB **12** 18:20:11.9±1.7, 46S±03×101E±04, h33km, mb3.9/11, Error ellipse: s-maj=61.7km s-min=12.6km az=144.3*
*NEIC **12** 18:20:15.2±1.7, 443S×10126E, h35km, mb4.3/1, Error ellipse: s-maj=71.5km s-min=10.4km az=54.0*
ISC 12 18:20:14.8±1.7, **45S**±03×**1012E**±03, **h35km, n12**, σ0⇕**67**/11, **mb3.9**/11, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.91**	**355**	P		P	P	**18 25 14.5**	**-1.3**
	3.3nm,0.9s,mb3.8,baz=183,slow=8.5,SNR=20								
FITZ	**Fitzroy Crossi**	**27.48**	**121**	P		P	P	**18 25 57.7**	**-0.3**
	0.8nm,0.8s,mb3.3,baz=166,slow=22,SNR=2.4								
WRA	**Warramunga Arr**	**35.75**	**118**	P		P	P	**18 27 10.7**	**0.0**
	0.4nm,0.5s,mb3.6,baz=305,slow=9.0,SNR=6.5								
WRAB	**Tennant Creek**	**35.76**	**118**	*e*P		P	P	**18 27 10.6**	**-0.2**
	3.6nm,1.0s,mb4.3								
ASAR	**Alice Springs**	**36.86**	**124**	P		P	P	**18 27 20.3**	**+0.2**
	0.2nm,0.5s,mb3.2,baz=298,slow=7.7,SNR=9.0								
KSRS	**Korea Array**	**48.59**	**29**	P		P	P	**18 28 55.2**	**+0.2**
	1.7nm,0.9s,mb4.1,baz=234,slow=7.5,SNR=6.1								
SONM	**Songino Array**	**52.31**	**4**	P		P	P	**18 29 24.4**	**+1.6**
	3.0nm,0.7s,mb4.3,baz=182,slow=9.4,SNR=25								
MKAR	**Makanchi Array**	**53.73**	**344**	P		P	P	**18 29 34.1**	**+0.7**
	1.5nm,0.8s,mb4.0,baz=146,slow=8.3,SNR=18								
KURK	**Kurchatov**	**58.31**	**343**	P		P	P	**18 30 05.9**	**-0.2**
	1.2nm,0.8s,mb4.0,baz=160,slow=6.3,SNR=7.1								
ZALV	**Zalesovo Beam**	**59.82**	**349**	P		P	P	**18 30 15.9**	**-0.6**
	1.5nm,0.7s,mb4.1,baz=188,slow=5.2,SNR=7.2								
BVAR	**Borovoye Array**	**62.91**	**340**	P		P	P	**18 30 37.4**	**0.0**
	0.6nm,0.4s,mb4.0,baz=134,slow=11,SNR=6.4								
TXAR	**Lajitas Array**	**145.88**	**41**	PKPbc		PKPbc	PKPbc	18 39 52.6	+1.3
	1.0nm,0.9s,baz=267,slow=1.0,SNR=9.4								

IDC 12 18:27:05.3±4.3, 406S×10202E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/18, mbtmp3.3/4, Error ellipse: s-maj=177.9km s-min=27.0km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.22**	**119**	P		P	P	18 34 01.6	-0.1
	0.1nm,0.6s,baz=305,slow=9.6,SNR=3.0								
ASAR	**Alice Springs**	**36.42**	**125**	P		P	P	18 34 11.4	-0.5
	0.5nm,1.0s,baz=300,slow=7.7,SNR=2.5								
SONM	**Songino Array**	**51.81**	**4**	P		P	P	18 36 16.2	+1.2
	0.5nm,0.5s,baz=180,slow=9.2,SNR=5.8								
MKAR	**Makanchi Array**	**53.55**	**343**	P		P	P	18 36 26.3	-1.6
	0.4nm,0.9s,baz=136,slow=8.9,SNR=3.3								
TXAR	**Lajitas Array**	**145.00**	**41**	PKPbc		PKPbc	PKPbc	18 46 44.8	+0.2
	0.4nm,0.7s,baz=270,slow=2.5,SNR=4.6								

*BJI **12** 18:29:24.9, 500S×10135E, h28km, mB5.2, mb5.0, Ms4.6, Msz4.6*
*DJA **12** 18:29:25, 500S×10038E, h30km, Mw5.4/11*
*IDC **12** 18:29:27.0±0.5, 441S×10127E, h0km, mb4.5/22, mb1 4.6/23, mb1mx4.5/27, mbtmp4.5/23, Error ellipse: s-maj=17.3km s-min=11.3km az=54.0*
*ISCJB **12** 18:29:28.7±0.3, 449S±004×101.18E±004, h25km, mb4.8/65, MS4.6/2, Error ellipse: s-maj=7.6km s-min=4.4km az=39.9*
*NEIC **12** 18:29:29.0±5.1, 442S×10131E, h13km±31km, mb4.8/20, Error ellipse: s-maj=10.1km s-min=5.3km az=56.0*
*MOS **12** 18:29:30.4±0.9, 442S×10126E, h39km, mb5.1/30, Error ellipse: s-maj=14.2km s-min=7.2km az=104.1*
ISC 12 18:29:31.0±0.3, **450S**±004×**10119E**±004, **h26km, h26km**±2.1**km**:**pP-P, n150**, σ1⇕**03**/139, **mb4.8**/65, **MS4.6**/2, **10C-8D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KLI	**Kotabumi**	**3.67**	**96**	P		P	Pn	**18 30 33.3**	**+7.1**
	0.0nm,0.0s								
PPI	**Padang Panjang**	**4.09**	**349**	P		P	Pn	**18 30 31.9**	**0.0**
	0.0nm,0.0s								
PPBI	**Pangkal Pinang**	**5.46**	**65**	P		P	Pn	**18 30 52.7**	**+2.0**
	0.0nm,0.0s								
DBJI	**Dramaga**	**5.90**	**111**	P		P	Pn	**18 30 57.5**	**+0.7**
	276nm,1.1s								
CBJI	**Citeko**	**5.95**	**109**	P		P	Pn	**18 31 00.4**	**+2.9**
	0.0nm,0.0s								
MYKOM	**Kota T

BJII Banjamegara 8.93 109 P Pn 18 31 39.0 +0.6
0.0nm,0.0s
KTGM Kuala Trenggan 9.95 11 ⇓P Pn 18 31 51.4 -1.0
SJI Sawahan 11.00 108 P Pn 18 32 07.0 +0.2
44nm,1.2s
BSI Banda Aceh 11.54 329 P Pn 18 32 13.3 -0.9
114nm,0.9s
SBUM Sibu 13.00 58 ⇑P Pn 18 32 39.2 +5.0
KKM Kota Kinabalu 18.30 55 ⇓P Pn 18 33 44.8 +1.6
KAPI Kappang 18.51 92 P Pn 18 33 42.4 -3.3
baz=102,slow=16,SNR=2.5
TSM Tawau 18.82 63 ⇑P Pn 18 33 50.7 +1.2
SDKM Sandakan 18.89 58 ⇓P Pn 18 33 50.8 +0.3
PCI Palu 18.96 80 P Pn 18 33 51.1 -0.2
0.0nm,0.0s
KDM Kudat 19.30 54 ⇑P Pn 18 33 54.1 -1.2
MYLDM Lahad Datu 19.78 61 ⇓P Pn 18 34 01.1 0.0
KDI Kendari 21.38 89 P P 18 34 16.6 -0.2
0.0nm,0.0s
CMAR Chiang Mai Arr 22.92 355 P P 18 34 31.2 -1.9
21nm,0.8s,mb4.6,baz=185,slow=8.8,SNR=47
CMAR PcP PcP 18 38 24.4 +1.1
0.9nm,0.8s,baz=202,slow=4.3,SNR=4.2
CMAR Chiang Mai Arr 22.92 355 P P 18 34 31.2 -1.9
CMAR 18 38 24.5
CMAR pmax pmax
comp=Z,21nm,0.8s
CMAR pmax pmax
comp=Z,1.0nm,0.8s
BATI Baumata 22.99 106 P P 18 34 32.7 -1.3
comp=Z,26nm,0.8s,mb4.7,baz=266,slow=2.5,SNR=5.4
CHTO Chiang Mai 23.27 355 eP P 18 34 36.2 -0.6
FITZ Fitzroy Crossi 27.47 121 eP P 18 35 14.6 -0.7
comp=Z,9.8nm,0.9s,mb4.3
FITZ epP pP 18 35 22.9 -0.1
FITZ Fitzroy Crossi 27.47 121 P P 18 35 14.9 -0.4
comp=Z,5.6nm,0.8s,mb4.1,baz=293,slow=8.7,SNR=12
KMI Kunming 29.48 3 P P 18 35 34.2 +1.1
KMI AMB AMB
comp=Z,20nm,0.9s,mb4.8
NWAO Narrogin (SRO) 32.01 154 P P 18 35 55.5 +0.2
comp=Z,17nm,0.9s,mb4.9,baz=107,slow=13,SNR=3.4
NWAO Narrogin (SRO) 32.01 154 P P 18 35 55.5 +0.2
NWAO pmax pmax
comp=Z,17nm,0.9s
ODAN Odare 33.91 338 eP P 18 36 13.2 +1.2
comp=Z,71nm,0.8s,mb5.7
TAPN Taplejung 34.23 338 eP P 18 36 16.5 +1.7
comp=Z,87nm,0.8s,mb5.7
RAMN Ramite 34.30 336 eP P 18 36 17.1 +1.7
comp=Z,41nm,0.8s,mb5.4
JIRN Jiri 35.09 336 eP P 18 36 23.9 +1.7
comp=Z,93nm,0.8s,mb5.8
CD2 Chengdu 35.29 4 P P 18 36 22.7 -1.2
CD2 AMB AMB
comp=Z,30nm,1.0s,mb5.2
PKI Pulchoki 35.33 335 eP P 18 36 25.2 +0.9
LSA Lhasa 35.34 345 P P 18 36 25.0 +0.7
LSA Lhasa 35.34 345 eP P 18 36 25.3 +1.0
LSA pmax pmax
comp=Z,14nm,1.1s,mb4.8
LSA Lhasa 35.34 345 eP P 18 36 25.3 +1.0
comp=Z,14nm,1.1s,mb4.8
GUN Gumba 35.44 336 eP P 18 36 26.6 +1.4
DMN Daman 35.49 335 eP P 18 36 26.6 +0.9
comp=Z,16nm,0.8s,mb5.0
KKN Kakani 35.58 335 eP P 18 36 27.4 +1.0
comp=Z,36nm,1.0s,mb5.3
WRA Warramunga Arr 35.74 118 P P 18 36 27.3 -0.7
comp=Z,6.6nm,0.8s,mb4.6,baz=292,slow=9.7,SNR=31
WRA Warramunga Arr 35.74 118 P P 18 36 27.3 -0.7
WRA pmax pmax
comp=Z,7.0nm,0.8s
WRAB Tennant Creek 35.75 118 eP P 18 36 27.0 -1.0
WRAB pmax pmax
comp=Z,20nm,0.8s,mb5.1
WRAB Tennant Creek 35.75 118 eP P 18 36 27.0 -1.0
comp=Z,20nm,0.8s,mb5.1
WB2 Warramunga Arr 35.75 118 eP P 18 36 27.3 -0.7
WB2 epP pP 18 36 35.1 -0.8
GKN Gorkha 36.04 335 eP P 18 36 31.4 +1.1
comp=Z,45nm,1.1s,mb5.3
KOLN Koldanda 36.29 333 eP P 18 36 33.7 +1.2
comp=Z,18nm,0.8s,mb5.1
DANN Dangsing 36.72 334 eP P 18 36 37.2 +1.1
ASAR Alice Springs 36.85 124 P P 18 36 37.6 +0.2
comp=Z,1.2nm,0.5s,mb4.0,baz=299,slow=7.3,SNR=16
ASAR PcP PcP 18 38 59.4 +0.3
comp=Z,1.5nm,0.8s,baz=306,slow=3.4,SNR=5.9
ASAR Alice Springs 36.85 124 P P 18 36 37.6 +0.2
ASAR 18 38 59.4
ASAR pmax pmax
comp=Z,1.0nm,0.5s
ASAR pmax pmax
comp=Z,2.0nm,0.8s
WHN Wuhan 37.05 19 ⇓P P 18 36 38.9 0.0
XAN Xi'an 39.02 10 P P 18 36 53.8 -1.7
XAN AP pP 18 37 02.2 -1.2
XAN XP sP 18 37 06.4 -0.1
XAN AMB AMB
comp=Z,22nm,1.1s,mb4.8
JAY Jayapura 39.49 89 P P 18 36 59.5 -0.3
comp=Z,70nm,2.0s,mb5.0
LZH Lanzhou 40.45 3 eP P 18 37 08.0 +0.7
LZH AP pP 18 37 12.2 -3.0
LZH PP PP 18 38 43.0 +2.2
LZH eS S 18 43 08.0 -6.4
LZH AMB AMB
comp=Z,27nm,1.2s,mb4.8
LZH AMB AMB
comp=Z,77nm,4.0s
LZH LR LR
comp=N,451nm,15.0s
LZH LR LR
comp=Z,598nm,16.6s,MS4.5
DDI Dehra Dun 41.10 329 ex x 18 37 18.2
GTA Gaotai 43.71 358 ⇑P P 18 37 34.4 +0.5
GTA AP pP 18 37 38.9 -2.9
GTA XP sP 18 37 41.5 -3.5
GTA AMB AMB
comp=Z,12nm,0.9s,mb4.6
HHC Hu-ho-hao-te 46.12 11 eP P 18 37 53.6 +0.5
HHC AMB AMB
comp=Z,25nm,0.9s,mb5.1
HHC AMB AMB
comp=Z,235nm,4.4s
BJT Baijiatuau 46.39 16 eP P 18 37 55.3 +0.1
BJT pmax pmax
comp=Z,9.0nm,0.6s
BJT Baijiatuau 46.39 16 eP P 18 37 55.3 +0.1
comp=Z,8.6nm,0.6s,mb4.9
CTA Charters Tower 46.49 113 eP P 18 37 55.7 -0.7
comp=Z,7.9nm,1.0s,mb4.6
CTA epP pP 18 38 04.7 +0.3
CTA Charters Tower 46.49 113 P P 18 37 56.4 0.0
comp=Z,5.6nm,0.7s,mb4.6,baz=291,slow=8.5,SNR=7.4
CTA Charters Tower 46.49 113 eP P 18 37 55.7 -0.7
CTA e*PP pP 18 38 04.7 +0.3
CTA pmax pmax
comp=Z,8.0nm,1.0s
CTAO Charters Tower 46.49 113 eP P 18 37 56.3 -0.1
CTAO e pP 18 38 04.4 0.0
CTAO pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CTAO Charters Tower 46.49 113 eP P 18 37 56.3 -0.1
comp=Z,3.5nm,0.6s,mb4.5
CTAO e pP 18 38 04.4 0.0
STKA Stephens Creek 46.62 131 eP P 18 37 57.8 +0.5
comp=Z,1.8nm,0.6s,mb4.2
STKA epP pP 18 38 05.2 -0.1
STKA Stephens Creek 46.62 131 P P 18 37 57.6 +0.4
comp=Z,3.1nm,0.8s,mb4.3,baz=304,slow=6.6,SNR=7.4
KSRS Korea Array 48.59 29 P P 18 38 12.1 -0.4
comp=Z,13nm,0.8s,mb5.0,baz=218,slow=7.9,SNR=53
KSRS Korea Array 48.59 29 P P 18 38 12.1 -0.3
KSRS pmax pmax
comp=Z,13nm,0.9s,mb5.0
KBL Kabul 49.24 325 P P 18 38 17.2 -0.3
WMQ Urumqi 49.61 347 ⇑iP P 18 38 21.0 +0.9
WMQ XP sP 18 38 29.5 -1.8
WMQ AMB AMB
comp=Z,41nm,0.9s,mb5.5
WMQ AMB AMB
comp=Z,227nm,5.2s
WMQ LR LR
comp=Z,594nm,19.4s,MS4.6

SONM Songino Array 52.31 4 P P 18 38 41.2 +0.8
comp=Z,26nm,0.8s,mb5.2,baz=184,slow=9.2,SNR=181
SONM PcP PcP 18 39 51.8 +0.5
comp=Z,2.7nm,0.7s,baz=183,slow=4.3,SNR=4.1
SONM Songino Array 52.31 4 P P 18 38 41.2 +0.9
SONM 18 39 51.8
SONM pmax pmax
comp=Z,26nm,0.8s
SONM pmax pmax
comp=Z,3.0nm,0.7s
ULN Ulaanbaatar 52.39 5 eP P 18 38 41.5 +0.6
ULN pmax pmax
comp=Z,18nm,0.9s,mb5.0
ULN Ulaanbaatar 52.39 5 eP P 18 38 41.5 +0.5
comp=Z,18nm,0.9s,mb5.0
TKM2 Tokmak 2 52.58 336 eP P 18 38 42.7 +0.3
TKM2 pmax pmax
comp=Z,27nm,0.7s,mb5.3
TKM2 Tokmak 2 52.58 336 eP P 18 38 42.7 +0.3
comp=Z,27nm,0.7s,mb5.3
AML Almayashu 52.72 334 eP P 18 38 44.3 +0.8
comp=Z,5.5nm,0.7s,mb4.6
CN2 Changchun 52.81 22 eP P 18 38 42.6 -1.5
CN2 AMB AMB
comp=Z,40nm,1.0s,mb5.3
EKS2 Erkin-Say 53.11 335 eP P 18 38 47.0 +0.6
comp=Z,60nm,0.6s,mb5.7
MAJO Matsushiro 53.49 37 eP P 18 38 47.5 -1.8
MAJO pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MAJO Matsushiro 53.49 37 eP P 18 38 47.5 -1.8
comp=Z,10nm,0.9s,mb4.8
MAT Matsushiro 53.49 37 P P 18 38 48.3 -1.0
MJAR Matsushiro Arr 53.49 37 P P 18 38 47.9 -1.5
comp=Z,9.8nm,0.9s,mb4.7,baz=214,slow=7.3,SNR=26
MJAR Matsushiro Arr 53.49 37 P P 18 38 47.9 -1.4
MJAR pmax pmax
comp=Z,10.0nm,0.9s
MK31 Makanchi Array 53.74 344 iP P 18 38 50.3 -0.6
MK31 pmax pmax
comp=Z,17nm,0.8s,mb5.0
MKAR Makanchi Array 53.74 344 P P 18 38 50.9 0.0
comp=Z,13nm,0.8s,mb4.9,baz=149,slow=8.0,SNR=116
MKAR Makanchi Array 53.74 344 P P 18 38 50.9 0.0
MKAR pmax pmax
comp=Z,13nm,0.8s
OPO Ambohidratompo 54.51 250 P P 18 38 58.6 +1.5
comp=Z,2.3nm,0.7s,mb4.3,baz=87,slow=10,SNR=3.3
ZAK Zakamensk 54.69 2 eP P 18 38 57.6 -0.1
ZAK e 18 39 58.4
ZAK pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
KK31 Karatay Array 54.90 333 iP P 18 38 57.9 -1.5
KK31 pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
MDJ Mudanjiang 55.12 24 P P 18 39 00.5 -0.5
MDJ AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
MDJ Mudanjiang 55.12 24 eP P 18 39 00.4 -0.6
comp=Z,6.3nm,0.9s,mb4.7
TLY Talaya 56.00 2 eP P 18 39 07.9 +0.8
TLY e 18 39 18.5
TLY pmax pmax
comp=Z,12nm,0.9s,mb4.9
TLY Talaya 56.00 2 eP P 18 39 07.7 +0.6
comp=Z,10nm,0.9s,mb4.9
KURK Kurchatov 58.32 343 eP P 18 39 23.3 -0.3
KURK pmax pmax
comp=Z,19nm,0.9s,mb5.1
KURK Kurchatov 58.32 343 eP P 18 39 23.3 -0.3
comp=Z,19nm,0.9s,mb5.1
KLR Kul'dur 59.74 23 eP P 18 39 28.8 -4.7
ZAA0 Zalesovo Array 59.83 349 eP P 18 39 33.4 -0.6
ZALV Zalesovo Beam 59.83 349 P P 18 39 33.6 -0.3
comp=Z,14nm,0.8s,mb5.1,baz=182,slow=4.9,SNR=66
ZALV Zalesovo Beam 59.83 349 P P 18 39 33.6 -0.4
ZALV pmax pmax
comp=Z,14nm,0.8s,mb5.0
KRAR Krasnoyarsk 60.69 355 eP P 18 39 38.6 -1.2
KRAR pmax pmax
comp=Z,16nm,0.9s,mb5.2
NVS Novosibirsk 60.98 348 iP P 18 39 37.6 -4.2
VOSK Vostochnaya 62.47 340 P P 18 39 49.9 -2.0
VOSK pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
BVA0 Borovoye Array 62.92 340 iP P 18 39 53.2 -1.7
BVA0 pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
BVAR Borovoye Array 62.92 340 P P 18 39 54.4 -0.5
comp=Z,6.8nm,0.7s,mb4.9,baz=145,slow=8.2,SNR=35
BVAR Borovoye Array 62.92 340 P P 18 39 54.4 -0.5
BVAR pmax pmax
comp=Z,7.0nm,0.7s
BOD Bodaibo 62.97 8 ⇑iP P 18 39 55.0 -0.1
BOD pmax pmax
comp=Z,12nm,1.0s,mb5.0
YSS Yuzh-Sakhalins 62.98 31 eiP P 18 39 54.8 -0.7
YSS pmax pmax
comp=Z,27nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 62.98 31 eP P 18 39 54.6 -0.8
comp=Z,33nm,1.0s,mb5.4
YSS e pP 18 40 02.8 -0.9
BRVK Borovoye 62.98 340 eP P 18 39 54.6 -0.7
BRVK pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
BRVK Borovoye 62.98 340 eP P 18 39 54.6 -0.8
comp=Z,6.9nm,0.9s,mb4.8
KMBO Kilima Mbogo 63.93 271 ⇑eP pP 18 40 13.8 +3.1
AB31 Akbulak array 64.39 331 iP P 18 40 03.8 -0.9
AB31 pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
AKTK Aktyubinsk 66.10 331 P P 18 40 14.7 -1.1
AKTO Aktyubinsk 66.10 331 P P 18 40 14.7 -1.1
comp=Z,2.2nm,0.9s,mb4.2,baz=138,slow=3.0,SNR=8.5
AKTO Aktyubinsk 66.10 331 P P 18 40 14.7 -1.1
AKTO pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
MAW Mawson 68.18 195 P P 18 40 29.0 +0.3
comp=Z,1.7nm,0.8s,mb4.2,baz=24,slow=8.3,SNR=6.8
MAW Mawson 68.18 195 P P 18 40 29.0 +0.3
MAW pmax pmax
comp=Z,2.0nm,0.8s
SVE Sverdlovsk 69.43 338 eP P 18 40 36.7 +0.1
SVE pmax pmax
comp=Z,24nm,1.0s,mb5.1
YAK Yakutsk 69.85 14 eP P 18 40 37.2 -1.9
YAK pmax pmax
comp=Z,25nm,0.9s,mb5.1
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK Yakutsk 69.85 14 eP P 18 40 37.5 -1.6
comp=E,27nm,0.9s,mb5.2
ARU Arti 69.95 336 eiP P 18 40 39.2 -0.7
ARU eS S 18 49 39.3 -9.0
ARU pmax pmax
comp=Z,12nm,1.2s,mb4.7
ARU Arti 69.95 336 eP P 18 40 38.7 -1.2
comp=Z,10nm,1.0s,mb4.7
LSZ Lusaka 72.44 255 P P 18 40 56.7 +0.9
comp=Z,1.0nm,0.7s,mb3.8,baz=70,slow=5.0,SNR=2.5
LSZ Lusaka 72.44 255 P P 18 40 56.7 +0.9
LSZ pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
PETK Petropavlovsk- 74.36 31 P P 18 41 05.5 -0.8
comp=Z,4.3nm,0.9s,mb4.4,baz=209,slow=2.7,SNR=5.5
PETK Petropavlovsk- 74.36 31 P P 18 41 05.5 -0.8
PETK pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BR131 Keskin Array S 75.88 313 P P 18 41 14.7 -0.6
comp=Z,2.8nm,0.9s,mb4.2
OBN Obninsk 79.53 328 ⇓eP P 18 41 43.7 +8.3
OBN pmax pmax
comp=Z,13nm,1.0s,mb4.8
AKASG Malin Array Be 82.17 322 P P 18 41 48.6 -1.0
comp=Z,0.5nm,0.5s,mb3.7,baz=88,slow=5.1,SNR=4.4
AKASG Malin Array Be 82.17 322 P P 18 41 48.6 -1.0
AKASG pmax pmax
comp=Z,1.0nm,0.5s
BUR08 Bucovina Ar. S 83.92 319 eP P 18 41 59.0 +0.3
ARCES ARCESS Array B 89.21 340 P P 18 42 23.8 -0.3
comp=Z,4.7nm,0.8s,mb4.8,baz=131,slow=2.7,SNR=7.6
ARCES ARCESS Array B 89.21 340 P P 18 42 23.8 -0.3
ARCES pmax pmax
comp=Z,5.0nm,0.8s
SNAA Sanae 90.15 198 eP P 18 42 38.1 +10
SNAA e 18 42 42.5
GERES GERESS Array B 91.70 319 P P 18 42 37.3 +1.1
comp=Z,0.2nm,0.5s,mb3.7,baz=46,slow=2.8,SNR=4.4
VNA2 Neumayer--Watz 91.77 198 eP P 18 42 45.9 +10
VNA2 e 18 42 50.8
PDAR Pinedale Array 133.13 31 PKP PKPdf 18 48 42.8 -1.9
comp=Z,0.3nm,0.4s,baz=31,slow=4.4,SNR=3.5
WMOK Wichita Mounta 144.67 29 ePKIKP PKPdf 18 49 03.9 -2.1
TXAR Lajitas Array 145.88 41 PKPbc PKPbc 18 49 09.4 +0.7
comp=Z,8.5nm,0.8s,baz=279,slow=1.3,SNR=74
TXAR Lajitas Array 145.88 41 PKP2 PKPab 18 49 09.5 +0.3
TXAR pmax pmax
comp=Z,9.0nm,0.8s
MIAR Mount Ida 147.11 23 ePKP2 PKPab 18 49 11.9 -1.9
WVT Waverly 147.44 14 ePKP2 PKPbc 18 49 12.3 -0.8
JCT Junction City 147.44 35 ePKP2 PKPab 18 49 13.3 -1.9
TZTN Tazewell 147.81 7 ePKPbc PKPbc 18 49 12.9 -1.1
TKL Tuckaleechee C 148.65 8 ePKP2 PKPbc 18 49 14.5 -1.8
CPCT Cooper Cave 148.75 9 ePKPbc PKPbc 18 49 16.4 -0.2

NEIC ***12*** *18:59:32.1±0.6, 4.34N×12697E, h35km, mb4.5/1, Error ellipse: s-maj=51.8km s-min=8.2km az=74.0*
ISCJB ***12*** *18:59:36.1±1.5, 4.3N±0.1×126.8E±0.3, h93km±15km, mb3.7/8, Error ellipse: s-maj=49.5km s-min=13.2km az=162.5*
IDC ***12*** *18:59:38.4±19.0, 4.26N×126.90E, h97km±187km, mb3.4/8, mb1 3.5/8, mb1mx3.3/20, mbtmp3.4/8, Error ellipse: s-maj=95.9km s-min=26.1km az=65.0*
ISC 12 18:59:37.1±1.4, 4.3N±0.1×126.9E±0.3, h83km±15km, n13, σ0.6s67/13, mb3.7/8, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**2.73**	**347**	*eP*	**Pn**	**19 00 17.9**	**-0.9**
BUTP	**Butuan**	**4.83**	**345**	*eP*	**Pn**	**19 00 49.1**	**+1.7**
PAGZ	**Pagadian**	**4.96**	**316**	*eP*	**Pn**	**19 00 48.7**	**-0.4**
YHNB	**Yeheng**	**20.96**	**346**	*eP*	**P**	**19 04 12.2**	**-1.2**
FITZ	**Fitzroy Crossi**	**22.26**	**183**	P	**P**	**19 04 27.5**	**+0.2**
	1.2nm,0.8s,mb3.3,baz=353,slow=8.1,SNR=3.8						
WRA	**Warramunga Arr**	**25.16**	**163**	P	**P**	**19 04 54.5**	**-0.2**
	0.5nm,0.6s,mb3.1,baz=345,slow=9.4,SNR=3.5						
ASAR	**Alice Springs**	**28.60**	**166**	P	**P**	**19 05 25.4**	**-0.1**
	0.3nm,0.5s,mb3.2,baz=351,slow=7.4,SNR=7.0						
STKA	**Stephens Creek**	**38.59**	**160**	P	**P**	**19 06 52.0**	**0.0**
	2.5nm,0.8s,mb4.1,baz=343,slow=11,SNR=4.1						
SONM	**Songino Array**	**46.83**	**341**	P	**P**	**19 07 58.9**	**+0.4**
	0.7nm,0.6s,mb3.6,baz=157,slow=9.1,SNR=8.6						
MKAR	**Makanchi Array**	**57.19**	**325**	P	**P**	**19 09 15.4**	**+0.1**
	0.9nm,0.4s,mb4.2,baz=121,slow=7.6,SNR=26						
KURK	**Kurchatov**	**61.35**	**327**	P	**P**	**19 09 44.0**	**-0.1**
	1.0nm,0.5s,mb4.1,baz=129,slow=6.7,SNR=6.5						
KURK	**Kurchatov**	**61.35**	**327**	*eP*	**P**	**19 09 44.2**	**+0.1**
	2.0nm,0.6s,mb4.3						
BVAR	**Borovoye Array**	**66.94**	**327**	P	**P**	**19 10 20.9**	**+0.3**
	0.8nm,0.7s,mb3.7,baz=134,slow=8.3,SNR=5.7						

ISCJB ***12*** *19:04:31.5±0.5, 2.466N±0.003×122.54E±0.02, h110km±5km, Error ellipse: s-maj=5.0km s-min=2.9km az=164.2*
TAP ***12*** *19:04:31.4, 2.473N×122.46E, h117km, ML3.5, C*
JMA ***12*** *19:04:31.8±0.2, 2.478N×122.56E, h110km±2km, M2.6*
ISC 12 19:04:32.1±0.5, 2.467N±0.003×122.54E±0.02, h109km±5km, n53, σ0.6s66/101, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.48**	**116**	P	**Pn**	**19 04 48.8**	**+0.2**
YOJ				*eS*	**Sn**	**19 05 01.9**	**+0.8**
EGS		**0.58**	**287**	*eP*	**Pn**	**19 04 48.9**	**-0.4**
	baz=278						
TWB1	**Santiao Chiao**	**0.60**	**304**	*i* P	**Pn**	**19 04 49.4**	**-0.1**
	baz=296						
TWB1				*i* S	**Sn**	**19 05 02.4**	**-0.2**
	baz=296						
TWC	**Suao**	**0.63**	**264**	*i* P	**Pn**	**19 04 49.5**	**-0.2**
	baz=255						
TWC				*i* S	**Sn**	**19 05 02.6**	**-0.4**
	baz=255						
ILA	**Ilan**	**0.72**	**277**	P	**Pn**	**19 04 50.4**	**-0.1**
	baz=273						
ILA				*eS*	**Sn**	**19 05 04.9**	**+0.5**
	baz=273						
ENA	**Nanau**	**0.77**	**252**	⇓*iP*	**Pn**	**19 04 51.1**	**+0.2**
	baz=243						
ENA				*i* S	**Sn**	**19 05 04.4**	**-0.6**
	baz=243						
NWF	**Wu-fen Shan**	**0.79**	**300**	P	**Pn**	**19 04 51.1**	**0.0**
	baz=292						
NWF				*eS*	**Sn**	**19 05 05.5**	**0.0**
	baz=292						
TWE	**Neicheng**	**0.79**	**274**	*i* P	**Pn**	**19 04 51.1**	**0.0**
	baz=276						
TWE				*eS*	**Sn**	**19 05 05.4**	**0.0**
	baz=276						
ENTT	**Nioudou**	**0.88**	**268**	*i* P	**Pn**	**19 04 52.3**	**+0.3**
	baz=269						
ENTT				S	**Sn**	**19 05 07.4**	**+0.4**
	baz=269						
TWA	**Mucha**	**0.92**	**290**	*eP*	**Pn**	**19 04 51.9**	**-0.5**
	baz=281						
TWA				S	**Sn**	**19 05 06.6**	**-1.0**
	baz=281						
TAP1	**Taipei**	**0.99**	**292**	*eP*	**Pn**	**19 04 52.7**	**-0.4**
	baz=290						
TAP1				*eS*	**Sn**	**19 05 08.2**	**-0.7**
	baz=290						
TWY	**Chenhua**	**1.04**	**305**	*eP*	**Pn**	**19 04 53.1**	**-0.4**
	baz=298						
TWD	**Chiawan**	**1.04**	**236**	P	**Pn**	**19 04 53.4**	**-0.2**
	baz=229						
TWD				S	**Sn**	**19 05 09.7**	**-0.1**
	baz=229						
NNS	**Nan Shan**	**1.08**	**258**	⇓*iP*	**Pn**	**19 04 54.4**	**+0.4**
	baz=251						
NNS				*eS*	**Sn**	**19 05 11.1**	**+0.4**
	baz=251						
HWA	**Hwalien**	**1.10**	**231**	*eP*	**Pn**	**19 04 54.1**	**0.0**
	baz=219						
HWA				*eS*	**Sn**	**19 05 10.5**	**-0.4**
	baz=219						
TWS1	**Kuangyinshan**	**1.10**	**293**	*eP*	**Pn**	**19 04 53.8**	**-0.4**
	baz=286						
TWS1				*eS*	**Sn**	**19 05 10.1**	**-0.8**
	baz=286						
IRIF	**Iriomote-Funau**	**1.14**	**107**	P	**Pn**	**19 04 54.6**	**0.0**
IRIF				*eS*	**Sn**	**19 05 12.1**	**+0.4**
WHF	**Hehuan Shan**	**1.27**	**246**	P	**Pn**	**19 04 56.6**	**+0.4**
	baz=242						
WHF				S	**Sn**	**19 05 14.8**	**+0.4**
	baz=242						
HATJ	**Hateruma jima**	**1.31**	**118**	P	**Pn**	**19 04 57.1**	**+0.6**
HATJ				*eS*	**Sn**	**19 05 15.9**	**+0.8**
ESL	**Shilin**	**1.32**	**230**	*eP*	**Pn**	**19 04 56.3**	**-0.4**
	baz=234						
ESL				*eS*	**Sn**	**19 05 14.9**	**-0.5**
	baz=234						
NSTT	**Nanjuang**	**1.40**	**269**	*eP*	**Pn**	**19 04 57.2**	**-0.4**
	baz=266						
NSTT				*eS*	**Sn**	**19 05 16.5**	**-0.4**
	baz=266						
JKRS	**Kuro-shima**	**1.41**	**108**	P	**Pn**	**19 04 58.1**	**+0.4**
JKRS				*eS*	**Sn**	**19 05 18.0**	**+0.8**
JIJ	**Ishigaki jima**	**1.50**	**102**	P	**Pn**	**19 04 58.6**	**-0.1**
JIJ				S	**Sn**	**19 05 18.4**	**-0.6**
EHY	**Hungye**	**1.61**	**224**	*eP*	**Pn**	**19 05 00.0**	**-0.1**
	baz=221						
EHY				*eS*	**Sn**	**19 05 20.1**	**-1.3**
	baz=221						
NSY	**Sanyi**	**1.64**	**261**	*eP*	**Pn**	**19 05 00.7**	**+0.3**
	baz=259						
TWQ1	**Liyutan**	**1.64**	**259**	*eP*	**Pn**	**19 05 00.6**	**+0.2**
	baz=257						
TWQ1				*eS*	**Sn**	**19 05 22.2**	**+0.1**
	baz=257						
SMLT	**Sun Moon Lake**	**1.69**	**243**	*eP*	**Pn**	**19 05 02.0**	**+0.9**
	baz=238						
SMLT				*eS*	**Sn**	**19 05 23.9**	**+0.7**
	baz=238						
TYC	**Yuchr**	**1.71**	**244**	*eP*	**Pn**	**19 05 02.4**	**+1.0**
	baz=240						
TYC				*eS*	**Sn**	**19 05 24.5**	**+0.8**

	baz=240									
TWF1	**Yuli**	**1.74**	**221**	*e*P		**Pn**	**19 05 01.1**	**-0.6**		
	baz=225									
TWF1				*e*S		**Sn**	**19 05 23.6**	**-0.6**		
	baz=225									
TCU	**Taichung**	**1.78**	**253**	*e*P		**Pn**	**19 05 02.7**	**+0.5**		
	baz=251									
TCU				*e*S		**Sn**	**19 05 25.3**	**+0.2**		
	baz=251									
WNT	**Mingjian**	**1.87**	**245**	*e*P		**Pn**	**19 05 03.1**	**-0.2**		
	baz=243									
WNT				*e*S		**Sn**	**19 05 27.4**	**+0.2**		
	baz=243									
YUS	**Yu-Shan**	**1.87**	**231**	*e*P		**Pn**	**19 05 04.5**	**+1.2**		
	baz=223									
YUS				*e*S		**Sn**	**19 05 27.5**	**+0.4**		
	baz=223									
CHKT	**Chengkung**	**1.90**	**215**	*e*P		**Pn**	**19 05 03.3**	**-0.4**		
	baz=206									
CHKT				*e*S		**Sn**	**19 05 26.8**	**-1.1**		
	baz=206									
ALS	**Alishan**	**1.96**	**234**	*e*P		**Pn**	**19 05 05.7**	**+1.2**		
	baz=227									
ALS				*e*S		**Sn**	**19 05 30.1**	**+0.9**		
	baz=227									
JTJ	**Tarama**	**1.97**	**90**	P		**Pn**	**19 05 04.7**	**+0.1**		
JTJ				*e*S		**Sn**	**19 05 29.3**	**-0.2**		
CHN5	**Tsauling**	**2.01**	**238**	*e*P		**Pn**	**19 05 05.8**	**+0.7**		
	baz=245									
CHN5				*e*S		**Sn**	**19 05 31.3**	**+1.0**		
	baz=245									
ELDTW	**Lidau**	**2.03**	**224**	*e*P		**Pn**	**19 05 05.5**	**+0.1**		
	baz=221									
ELDTW				*e*S		**Sn**	**19 05 31.1**	**+0.3**		
	baz=221									
WGK	**Gukeng**	**2.05**	**242**	*e*P		**Pn**	**19 05 06.3**	**+0.7**		
	baz=249									
WGK				*e*S		**Sn**	**19 05 32.1**	**+0.7**		
	baz=249									
CHN4	**Tsaushan**	**2.21**	**234**	*e*P		**Pn**	**19 05 08.2**	**+0.5**		
	baz=232									
CHN4				*e*S		**Sn**	**19 05 36.0**	**+1.0**		
	baz=232									
STYT	**Tauyuan**	**2.22**	**228**	*e*P		**Pn**	**19 05 07.7**	**-0.1**		
	baz=226									
STYT				*e*S		**Sn**	**19 05 35.8**	**+0.7**		
	baz=226									
WTP	**Ta-pu**	**2.26**	**231**	*e*P		**Pn**	**19 05 08.6**	**+0.3**		
	baz=240									
WTP				*e*S		**Sn**	**19 05 36.6**	**+0.5**		
	baz=240									
TWG	**Pinlang**	**2.28**	**216**	*e*P		**Pn**	**19 05 07.9**	**-0.7**		
	baz=214									
TWG				*e*S		**Sn**	**19 05 35.7**	**-0.9**		
	baz=214									
TTN	**Taitung**	**2.30**	**214**	*e*P		**Pn**	**19 05 09.0**	**+0.1**		
	baz=219									
TTN				*e*S		**Sn**	**19 05 36.1**	**-0.9**		
	baz=219									
TWK	**Hsinying**	**2.34**	**234**	*e*P		**Pn**	**19 05 09.4**	**+0.1**		
	baz=232									
TWK				*e*S		**Sn**	**19 05 38.3**	**+0.4**		
	baz=232									
CHN1	**Nanshi**	**2.36**	**232**	*e*P		**Pn**	**19 05 09.8**	**+0.1**		
	baz=239									
CHN1				*e*S		**Sn**	**19 05 38.4**	**-0.1**		
	baz=239									
SGST	**Jiashian**	**2.39**	**229**	*e*P		**Pn**	**19 05 10.6**	**+0.6**		
	baz=227									
SGST				*e*S		**Sn**	**19 05 39.2**	**+0.1**		
	baz=227									
ECL	**Taimali**	**2.53**	**215**	*e*P		**Pn**	**19 05 10.2**	**-1.6**		
	baz=207									
ECL				*e*S		**Sn**	**19 05 40.8**	**-1.5**		
	baz=207									
SSD	**Sandimen**	**2.59**	**223**	*e*P		**Pn**	**19 05 13.1**	**+0.4**		
	baz=227									
JOGS	**Gusukube**	**2.61**	**88**	P		**Pn**	**19 05 14.0**	**+1.1**		
JOGS				*e*S		**Sn**	**19 05 44.6**	**+0.3**		
EAST	**Anshuo**	**2.76**	**215**	*e*P		**Pn**	**19 05 14.2**	**-0.6**		
	baz=209									
EAST				*e*S		**Sn**	**19 05 47.2**	**-0.5**		
	baz=209									
LAY	**Lan-yu**	**2.77**	**199**	*e*P		**Pn**	**19 05 14.6**	**-0.5**		
	baz=199									
LAY				*e*S		**Sn**	**19 05 46.2**	**-1.9**		
	baz=199									
JKE	**Kume jima 2**	**4.18**	**66**	P		**Pn**	**19 05 33.3**	**-0.5**		
JOW	**Kunigami**	**5.60**	**66**	P		**Pn**	**19 05 50.3**	**-2.7**		
JOW				*e*S		**Sn**	**19 06 52.5**	**-3.6**		

IDC 12 19:05:24.1±4.3, 278S×10032E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/19, mbtmp3.4/4, Error ellipse: s-maj=182.4km s-min=25.3km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.33**	**120**	P	P	19 12 38.3	-0.1
	0.3nm,0.9s,baz=310,slow=9.0,SNR=2.9						
ASAR	**Alice Springs**	**38.54**	**126**	P	P	19 12 48.5	-0.2
	0.2nm,0.7s,baz=302,slow=7.9,SNR=4.9						
SONM	**Songino Array**	**50.68**	**5**	P	P	19 14 25.9	+0.6
	0.3nm,0.5s,baz=192,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**51.86**	**344**	P	P	19 14 33.6	-0.5
	0.6nm,0.5s,baz=154,slow=9.1,SNR=9.6						
TXAR	**Lajitas Array**	**145.11**	**38**	PKPbc	PKPbc	19 25 03.6	-0.2
	0.3nm,0.6s,baz=225,slow=1.2,SNR=3.8						

ISC 12 19:14:29.5±2.6, 368N±01×716E±04, h35km, n7, σ0§50/9, 1C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.56**	**17**	P	**Pn**	**19 15 49.9**	**+0.3**
	SNR=42						
THN	**Thein Dam**	**5.56**	**141**	*e*P	**Pn**	**19 15 50.6**	**+0.9**
THN				*e*S	**Sn**	**19 16 51.8**	**-0.6**
EKS2	**Erkin-Say**	**6.08**	**16**	P	**Pn**	**19 15 56.7**	**-0.1**
	SNR=8.9						
AAK	**Ala-Archa**	**6.23**	**20**	P	**Pn**	**19 15 59.3**	**+0.4**
	SNR=6.6						
KK31	**Karatay Array**	**6.33**	**353**	Pn	**Pn**	**19 15 59.6**	**-0.5**
	5.3nm,0.6s,baz=174,slow=12,SNR=128						
KK31				⇑Sn	**Sn**	**19 17 06.1**	**-5.0**
	0.8nm,0.3s,baz=174,slow=21,SNR=8.6						
USP	**Ospenovka**	**6.83**	**18**	P	**Pn**	**19 16 06.5**	**-0.5**
	SNR=6.4						
TKM2	**Tokmak 2**	**6.84**	**26**	P	**Pn**	**19 16 07.4**	**+0.2**
	SNR=5.4						

*IDC **12** 19:20:17.0±1.6, 3975N×2034E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.3/25, mbtmp3.3/4, ML3.2/1, Error ellipse: s-maj=34.1km s-min=19.7km az=70.0*
*NEIC **12** 19:20:18.5, 3971N×2023E, h9km, ML3.1(ATH), ML3.4(ROM), ML3.9(THE), After ATH.*
*ROM **12** 19:20:18.1±0.6, 3962N×2021E, h10km, Md2.9/2, Ml3.4/4, Error ellipse: s-maj=11.7km s-min=4.5km az=175.0*
*ATH **12** 19:20:18.4, 3971N×2023E, h8km±2km, MD3.7/10*
*ISCJB **12** 19:20:19.3±0.2, 3972N±002×2016E±002, h10km, mb3.4/3, Error ellipse: s-maj=2.5km s-min=1.9km az=43.7*
*CSEM **12** 19:20:19.3±0.1, 3973N×2013E, h2km, ML3.9, Error ellipse: s-maj=1.9km s-min=1.4km az=10.0*
*SKO **12** 19:20:19.5, 3970N×2029E, h3km*
*TIR **12** 19:20:19.1±4.8, 4007N×1995E, h6km±37km*
*THE **12** 19:20:19.1, 3977N×2018E, h0km, ML3.9*
*PDG **12** 19:20:20.1±0.6, 3968N×2006E, h15km±2km, ML3.3/9, Error ellipse: s-maj=2.3km s-min=2.3km az=0.0*

ISC 12 19:20:20.2±0.2, 3972N±002×2018E±002, h10km, n96, σ1§35/148, mb3.4/3, 8C-4D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRN	**Sarande**	**0.21**	**319**	*e*PG	**Pg**	**19 20 22.1**	**-2.5**
IGT	**Igoumenitsa**	**0.22**	**148**	*e*Pg	**Pg**	**19 20 23.1**	**-1.7**
IGT				*e*Sg	**Sg**	**19 20 27.7**	**-0.1**
KEK	**Kerkira**	**0.30**	**269**	⇑*i*PG	**Pg**	**19 20 24.5**	**-1.6**
KEK				*e*SB	**Sg**	**19 20 30.4**	**+0.3**
KEK	**Kerkira**	**0.30**	**269**	Pg	**Pg**	**19 20 24.7**	**-1.4**
KEK				Sg	**Sg**	**19 20 30.4**	**+0.3**
JAN	**Janina**	**0.52**	**97**	*e*PB	**Pg**	**19 20 27.5**	**-2.8**
MEV	**Metsovon**	**0.81**	**85**	*e*Pg	**Pg**	**19 20 33.4**	**-2.4**
LKD	**Levkas**	**1.07**	**160**	*e*Pg	**Pg**	**19 20 39.3**	**-1.6**
LKD				*e*Sg	**Sg**	**19 20 57.2**	**+2.4**
KZN	**Kozani**	**1.35**	**64**	*e*PB	**Pb**	**19 20 43.3**	**-2.3**
KZN				*e*SB	**Sb**	**19 21 02.3**	**-0.7**
SCTE	**Santa Cesarea**	**1.37**	**285**	Pg	**Pg**	**19 20 44.3**	**-2.1**
SCTE				Sg	**Sg**	**19 21 03.2**	**-1.0**
	811nm,0.9s						
FNA	**Florina**	**1.40**	**40**	*e*Pg	**Pg**	**19 20 43.8**	**-3.3**
THL	**Klokotos Trika**	**1.42**	**96**	*e*Pg	**Pn**	**19 20 44.4**	**-1.6**
THL				*e*Sg	**Sn**	**19 21 05.4**	**+0.6**
THL	**Klokotos Trika**	**1.42**	**96**	*e*Pg	**Pn**	**19 20 44.0**	**-2.1**
THL				*e*Sg	**Sn**	**19 21 05.4**	**+0.6**
OHR	**Ohrid**	**1.47**	**18**	*e*Pg	**Pg**	**19 20 44.8**	**-3.6**
OHR				*e*Sg	**Sg**	**19 21 06.0**	**-1.4**
OHR	**Ohrid**	**1.47**	**18**	*e*Pg	**Pg**	**19 20 44.9**	**-3.4**
OHR				*e*Sg	**Sg**	**19 21 05.7**	**-1.7**
OHR	**Ohrid**	**1.47**	**18**	*e*Pg	**Pg**	**19 20 44.9**	**-3.5**
OHR				*e*Sg	**Sg**	**19 21 05.6**	**-1.8**
EVR	**Evrytania**	**1.50**	**122**	*e*Pb	**Pb**	**19 20 47.1**	**-0.9**
BIA	**Bitola**	**1.56**	**34**	*e*Pg	**Pg**	**19 20 46.6**	**-3.6**
BIA				*e*Sg	**Sg**	**19 21 08.1**	**-2.4**
BIA	**Bitola**	**1.56**	**34**	*e*Pn	**Pn**	**19 20 46.3**	**-1.7**
BIA				*e*Sg	**Sg**	**19 21 09.4**	**-1.1**
BIA	**Bitola**	**1.56**	**34**	*e*Pn	**Pn**	**19 20 46.3**	**-1.7**
BIA				*e*Sg	**Sg**	**19 21 09.3**	**-1.2**
VLS	**Valsamata**	**1.57**	**168**	*e*Pg	**Pn**	**19 20 47.5**	**-0.6**
VLS				*e*Sg	**Sn**	**19 21 10.3**	**+1.7**
VLS	**Valsamata**	**1.57**	**168**	*e*PG	**Pn**	**19 20 47.6**	**-0.5**
VLS				*e*SB	**Sn**	**19 21 09.7**	**+1.2**
VLS	**Valsamata**	**1.57**	**168**	*e*Pg	**Pn**	**19 20 47.6**	**-0.5**
VLS				*e*Sb	**Sn**	**19 21 09.7**	**+1.2**
VLS				*e*Sg	**Sg**	**19 21 10.3**	**-0.5**
TIR	**Tirane**	**1.64**	**352**	*e*Pg	**Pg**	**19 20 48.6**	**-3.1**
TIR	**Tirane**	**1.64**	**352**	*e*PN	**Pn**	**19 20 49.1**	**0.0**
TIR	**Tirane**	**1.64**	**352**	Pg	**Pg**	**19 20 49.2**	**-2.5**
	779nm,1.0s						
KFL	**Anninata**	**1.68**	**163**	*e*Pb	**Pb**	**19 20 49.8**	**-1.3**
KFL				*e*Sb	**Sb**	**19 21 14.0**	**+1.8**
AGG	**Agios Georgios**	**1.80**	**112**	*e*Pb	**Pb**	**19 20 51.6**	**-1.7**
AGG				*e*Sb	**Sb**	**19 21 16.7**	**+0.7**
LIT	**Litokhoron**	**1.81**	**77**	*e*Pb	**Pb**	**19 20 51.6**	**-1.9**
LIT				*e*Sb	**Sb**	**19 21 16.4**	**+0.1**
KRUS	**Krusevo**	**1.84**	**26**	*e*Pn	**Pn**	**19 20 51.7**	**-0.1**
KRUS				*e*Sg	**Sg**	**19 21 16.0**	**-3.3**
KRUS	**Krusevo**	**1.84**	**26**	*e*Pn	**Pn**	**19 20 51.6**	**-0.2**
KRUS				*e*Sg	**Sg**	**19 21 15.9**	**-3.3**
RLS	**Riolos of Patr**	**1.94**	**148**	*e*PG	**Pn**	**19 20 53.8**	**+0.6**
PHP	**Peshkopia**	**1.97**	**6**	*e*PN	**Pn**	**19 20 54.1**	**+0.5**
GRG	**Griva**	**2.10**	**53**	*e*Pn	**Pn**	**19 20 55.3**	**0.0**
GRG				*e*Sn	**Sn**	**19 21 22.9**	**+1.4**
PUK	**Puka**	**2.33**	**355**	*e*PN	**Pn**	**19 20 59.1**	**+0.5**
ULC	**Ulcinj**	**2.35**	**343**	⇑*i*Pn	**Pn**	**19 20 59.5**	**+0.7**
ULC				*e*Sn	**Sn**	**19 21 30.3**	**+2.6**
XOR	**Xorichti**	**2.35**	**98**	*e*Pn	**Pn**	**19 20 59.3**	**+0.5**
PE1	**Pezze di Greco**	**2.37**	**298**	*e*Pn	**Pn**	**19 20 58.7**	**-0.5**
HORT	**Hortiatis**	**2.40**	**68**	*e*Pn	**Pn**	**19 20 59.3**	**-0.2**
HORT				*e*Sn	**Sn**	**19 21 29.4**	**+0.4**
VAY	**Valandovo**	**2.42**	**48**	*e*Pn	**Pn**	**19 20 59.3**	**-0.5**
VAY	**Valandovo**	**2.42**	**48**	*e*Pn	**Pn**	**19 20 59.0**	**-0.8**
LKR	**Lokris**	**2.44**	**115**	*e*PN	**Pn**	**19 21 00.6**	**+0.6**
SKO	**Skopje**	**2.44**	**23**	*e*Pn	**Pn**	**19 21 01.0**	**+0.9**
SKO	**Skopje**	**2.44**	**23**	*e*Pn	**Pn**	**19 21 00.9**	**+0.8**
KNT	**Kendrikon**	**2.52**	**54**	*e*Pn	**Pn**	**19 21 01.7**	**-0.1**
PLG	**Polygyros**	**2.59**	**74**	*e*Pn	**Pn**	**19 21 01.9**	**-0.2**
PLG				*e*Sn	**Sn**	**19 21 34.0**	**+0.4**
PLG	**Polygyros**	**2.59**	**74**	*e*PB	**Pn**	**19 21 01.7**	**-0.4**
PLG				*e*SN	**Sn**	**19 21 34.1**	**+0.5**
PLG	**Polygyros**	**2.59**	**74**	*e*Pn	**Pn**	**19 21 01.9**	**-0.2**
PLG				*e*Sn	**Sn**	**19 21 34.1**	**+0.5**
NOCI	**Noci**	**2.61**	**295**	Pn	**Pn**	**19 21 01.6**	**-0.9**
SOH	**Sokhos**	**2.66**	**65**	*e*Pn	**Pn**	**19 21 03.1**	**-0.1**
SOH				*e*Sn	**Sn**	**19 21 35.7**	**+0.3**
PAIG	**Paliouri**	**2.70**	**84**	*e*Pn	**Pn**	**19 21 03.1**	**-0.5**
PAIG				*e*Sn	**Sn**	**19 21 37.0**	**+0.7**
TIP	**Timpagrande**	**2.71**	**260**	Pn	**Pn**	**19 21 03.1**	**-0.6**
	33nm,1.1s						
TIP	**Timpagrande**	**2.71**	**260**	P	**Pn**	**19 21 04.1**	**+0.4**
TIP	**Timpagrande**	**2.71**	**260**	Pn	**Pn**	**19 21 03.1**	**-0.6**
TIP				P		19 21 04.1	
BUM	**Brajici-Budva**	**2.75**	**340**	⇑*i*Pn	**Pn**	**19 21 05.1**	**+0.7**
BUM				*e*Sn	**Sn**	**19 21 39.9**	**+2.2**
BUM	**Brajici-Budva**	**2.75**	**340**	*i* PG	**Pn**	**19 21 05.1**	**+0.7**
BUM				*i* SG	**Sn**	**19 21 39.9**	**+2.2**
PDG	**Podgorica**	**2.79**	**346**	*i* PG	**Pn**	**19 21 05.8**	**+0.8**
PDG				*i* SG	**Sn**	**19 21 41.2**	**+2.5**
PDG	**Podgorica**	**2.79**	**346**	⇑*i*Pn	**Pn**	**19 21 05.8**	**+0.8**
PDG				*e*Sn	**Sn**	**19 21 41.2**	**+2.5**
TTG	**Podgorica**	**2.79**	**346**	⇑*i*Pn	**Pn**	**19 21 05.8**	**+0.8**
TTG				*e*Sn	**Sn**	**19 21 41.2**	**+2.5**
PVY	**Plav**	**2.88**	**357**	⇑*i*Pn	**Pn**	**19 21 07.9**	**+1.8**
PVY				*e*Sn	**Sn**	**19 21 43.1**	**+2.4**
PVY	**Plav**	**2.88**	**357**	*i* PG	**Pn**	**19 21 07.9**	**+1.8**
PVY				*i* SG	**Sn**	**19 21 43.1**	**+2.4**
ITM	**Ithomi**	**2.88**	**151**	*e*PN	**Pn**	**19 21 07.1**	**+0.9**
SG1	**Sgolgore (BA)**	**2.91**	**294**	*e*Pn	**Pn**	**19 21 07.2**	**+0.7**
VLX	**Vlachokerasia**	**2.91**	**143**	*e*Pn	**Pn**	**19 21 07.3**	**+0.7**
VLX				*e*Sn	**Sn**	**19 21 40.9**	**+3.3**
AOS	**Alonnisos**	**2.91**	**100**	*e*Pn	**Pn**	**19 21 06.9**	**+0.3**
AMUR	**Altamura**	**2.98**	**295**	Pn	**Pn**	**19 21 06.4**	**-1.1**
HCY	**Herceg Novi**	**3.01**	**335**	⇓*i*Pn	**Pn**	**19 21 08.7**	**+0.8**
HCY				*e*Sn	**Sn**	**19 21 45.6**	**+1.7**
HCY	**Herceg Novi**	**3.01**	**335**	*i* PG	**Pn**	**19 21 08.7**	**+0.8**
HCY				*i* SG	**Sn**	**19 21 45.6**	**+1.7**
BEY	**Berane**	**3.16**	**356**	*i* PG	**Pn**	**19 21 11.2**	**+1.3**
BEY				*i* SG	**Sn**	**19 21 50.2**	**+2.6**
BEY	**Berane**	**3.16**	**356**	⇑*i*Pn	**Pn**	**19 21 11.2**	**+1.3**
BEY				*e*Sn	**Sn**	**19 21 50.2**	**+2.6**
IVA	**Berane**	**3.16**	**356**	⇑*i*Pn	**Pn**	**19 21 11.2**	**+1.3**
IVA				*e*Sn	**Sn**	**19 21 50.2**	**+2.6**
NKY	**Niksic**	**3.22**	**344**	⇓*i*Pn	**Pn**	**19 21 12.1**	**+1.4**
NKY				*e*Sn	**Sn**	**19 21 51.0**	**+1.9**
NVR	**Nevrokopi**	**3.24**	**59**	*e*PN	**Pn**	**19 21 11.8**	**+0.7**
NVR				*e*SN	**Sn**	**19 21 50.1**	**+0.4**
DID	**Didima**	**3.26**	**132**	*e*Pn	**Pn**	**19 21 11.6**	**+0.2**
DID				*e*Sn	**Sn**	**19 21 52.6**	**+2.5**
BRY	**Bratogost**	**3.41**	**339**	⇓*i*Pn	**Pn**	**19 21 14.4**	**+1.0**
UPM	**Unac-Piva**	**3.61**	**345**	⇑*i*Pn	**Pn**	**19 21 16.9**	**+0.8**
UPM				*e*Sn	**Sn**	**19 22 00.4**	**+1.6**
PLE	**Pljevlja**	**3.66**	**351**	⇓*i*Pn	**Pn**	**19 21 18.1**	**+1.3**
PLE				*e*Sn	**Sn**	**19 22 01.3**	**+1.4**
STON	**Ston**	**3.66**	**330**	*e*Pn	**Pn**	**19 21 13.9**	**-3.0**
STON				Sn	**Sn**	**19 21 56.6**	**-3.5**
VLI	**Veliai**	**3.70**	**143**	*e*Pb	**Pn**	**19 21 20.0**	**+2.6**
LOS	**Limnos**	**3.78**	**85**	*e*Pn	**Pn**	**19 21 18.9**	**+0.4**
CDRU	**Civita di Ruta**	**3.82**	**283**	Pn	**Pn**	**19 21 20.4**	**+1.4**
SGO	**Sicignano**	**3.83**	**284**	Pn	**Pn**	**19 21 20.3**	**+1.1**
	11nm,0.4s						
MCRV	**Calabrutti - M**	**3.98**	**287**	Pn	**Pn**	**19 21 19.0**	**-2.3**
	312nm,0.9s						
RGNG	**Rignano Grg**	**4.00**	**301**	Pn	**Pn**	**19 21 20.8**	**-0.7**
FG5	**Orsara di Pugl**	**4.06**	**294**	Pn	**Pn**	**19 21 23.2**	**+0.9**
	17nm,0.3s						
FG2	**Serracapriola**	**4.34**	**300**	Pn	**Pn**	**19 21 25.9**	**-0.4**
	42nm,0.2s						
DIVS	**Divibare**	**4.38**	**358**	*e*Pn	**Pn**	**19 21 25.8**	**-0.9**
APE	**Apeiranthos**	**4.96**	**121**	*e*Pn	**Pn**	**19 21 35.2**	**+0.4**
KARN	**Karanos**	**5.23**	**144**	*e*Pn	**Pn**	**19 21 38.9**	**+0.4**
SDI	**San Donato**	**5.23**	**294**	Pn	**Pn**	**19 21 40.5**	**+2.0**
	3.0nm,0.4s						
NRCA	**Norcia**	**6.17**	**303**	Pn	**Pn**	**19 21 50.6**	**-0.7**
	10.0nm,0.5s						
CING	**Cingoli**	**6.39**	**307**	Pn	**Pn**	**19 21 52.5**	**-1.8**
	47nm,2.0s						
CRES	**Cresnjev**	**7.02**	**332**	*i* Pn	**Pn**	**19 22 01.0**	**-2.0**
CRES				*e*Sn	**Sn**	**19 23 14.2**	**-8.7**
GERES	**GERESS Array B**	**10.23**	**335**	Pn	**Pn**	**19 22 46.2**	**-0.8**
	0.1nm,0.3s,baz=164,slow=14,SNR=3.2						
GERES				Sn	**Sn**	**19 24 40.5**	**-1.2**
	0.2nm,0.3s,baz=150,slow=22,SNR=4.8						
EKA	**Eskdalemuir Ar**	**22.03**	**323**	P	**P**	**19 25 12.9**	**-1.6**
	0.9nm,0.8s,mb3.3,baz=126,slow=9.4,SNR=4.3						
TORD	**Torodi Ar. Bea**	**31.09**	**217**	P	**P**	**19 26 38.1**	**-0.5**
	0.4nm,0.8s,mb3.3,baz=24,slow=8.8,SNR=4.4						
MKAR	**Makanchi Array**	**44.73**	**60**	P	**P**	**19 28 30.8**	**-2.7**
	0.4nm,0.5s,mb3.5,baz=286,slow=6.2,SNR=4.1						

JMA 12 19:21:09.4±0.4, 2198N×12495E, h24km, M3.6, Southeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**2.32**	**333**	P	Pn	19 21 46.9	+0.8
HATJ				*e*S	Sn	19 22 14.9	+1.0
JKRS	**Kuro-shima**	**2.41**	**339**	P	Pn	19 21 48.8	+1.5
JKRS				*e*S	Sn	19 22 17.6	+1.6
JIJ	**Ishigaki jima**	**2.49**	**343**	P	Pn	19 21 49.3	+0.9
JIJ				*e*S	Sn	19 22 18.7	+0.7
IRIF	**Iriomote-Funau**	**2.60**	**335**	P	Pn	19 21 51.4	+1.5
IRIF				*e*S	Sn	19 22 22.1	+1.3
JTJ	**Tarama**	**2.66**	**355**	P	Pn	19 21 52.3	+1.5
JTJ				*e*S	Sn	19 22 24.2	+2.0
JOGS	**Gusukube**	**2.80**	**9**	P	Pn	19 21 53.9	+1.2
JOGS				*e*S	Sn	19 22 27.3	+1.6
YOJ	**Yonaguni jima**	**3.05**	**325**	P	Pn	19 21 57.7	+1.6
YOJ				*e*S	Sn	19 22 33.0	+1.2

IDC 12 19:36:06.3±2.0, 1082S×16670E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/16, mbtmp3.5/4, Error ellipse: s-maj=119.5km s-min=31.1km az=149.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.44**	**250**	P	P	19 42 38.2	-0.3
	1.1nm,0.8s,baz=83,slow=8.9,SNR=5.5						
ASAR	**Alice Springs**	**33.73**	**243**	P	P	19 42 50.2	+0.6
	0.3nm,0.9s,baz=66,slow=10,SNR=3.3						
NVAR	**Mina Array Bea**	**85.16**	**50**	P	P	19 48 45.1	+0.4
	0.4nm,0.6s,baz=243,slow=7.9,SNR=3.7						
MKAR	**Makanchi Array**	**94.00**	**317**	P	P	19 49 26.0	-0.4
	0.4nm,0.9s,baz=107,slow=5.0,SNR=2.5						

IDC 12 19:52:24.4±13.0, 357S×10022E, h57km±100km, mb3.3/6, mb1 3.4/6, mb1mx3.3/19, mbtmp3.3/6, Error ellipse: s-maj=154.0km s-min=18.6km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.92**	**357**	P	P	19 57 13.8	+0.7
	0.5nm,0.7s,baz=185,slow=7.2,SNR=3.5						
WRA	**Warramunga Arr**	**37.03**	**119**	P	P	19 59 27.6	-1.3
	0.4nm,0.4s,baz=309,slow=8.9,SNR=8.0						
ASAR	**Alice Springs**	**38.17**	**125**	P	P	19 59 39.6	+1.0
	0.5nm,0.4s,baz=300,slow=7.7,SNR=15						
SONM	**Songino Array**	**51.47**	**5**	P	P	20 01 23.9	0.0
	0.9nm,0.6s,baz=189,slow=9.5,SNR=12						
MKAR	**Makanchi Array**	**52.59**	**345**	P	P	20 01 32.3	+0.1
	0.3nm,0.3s,baz=156,slow=9.2,SNR=3.9						
ZALV	**Zalesovo Beam**	**58.74**	**349**	P	P	20 02 15.6	-0.6
	0.6nm,0.6s,baz=193,slow=5.9,SNR=3.3						
TXAR	**Lajitas Array**	**145.79**	**39**	PKPbc	PKPbc	20 11 57.8	0.0
	0.6nm,0.7s,baz=266,slow=1.5,SNR=7.3						
TKL	**Tuckaleechee C**	**147.86**	**6**	PKPbc	PKPbc	20 12 02.5	-1.0
	2.7nm,0.5s,baz=315,slow=4.3,SNR=4.4						

*IDC **12** 19:58:48.4±1.6, 306S×10012E, h0km, mb4.0/11, mb1 4.1/12, mb1mx3.9/23, mbtmp4.0/12, ML4.2/1, Error ellipse: s-maj=58.5km s-min=14.8km az=55.0*
*ISCJB **12** 19:58:51.9±1.1, 305S±02×1003E±02, h33km, mb4.0/12, Error ellipse: s-maj=39.4km s-min=10.4km az=142.5*
*NEIC **12** 19:58:54.1±0.9, 299S×10026E, h35km, mb4.3/1, Error ellipse: s-maj=36.0km s-min=8.3km az=52.0*

ISC 12 19:58:54.6±1.1, 29S±02×1004E±02, h35km, n17, σ0§80/16, mb4.0/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**19.44**	**97**	P	**Pn**	**20 03 18.7**	**-0.9**
	0.7nm,0.3s,baz=298,slow=11,SNR=4.2						
CMAR	**Chiang Mai Arr**	**21.30**	**356**	P	**P**	**20 03 39.0**	**+0.6**
	1.0nm,0.8s,mb3.2,baz=189,slow=9.1,SNR=5.8						
FITZ	**Fitzroy Crossi**	**28.99**	**

h19km±5.5km**:pP-P,n112,**σ**0§91**/103**,mb4.8**/47**,MS3.8**/3,
5C-1D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMBI	**JAMBI**	**3.59**	**42**	P	**Pn**	**20 19 46.4**	**+0.7**
	0.0nm,0.0s						
KLI	**Kotabumi**	**3.67**	**99**	P	**Pn**	**20 19 46.9**	**+0.2**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.91**	**348**	P	**Pn**	**20 19 48.2**	**-1.9**
	0.0nm,0.0s						
RGRI	**Rengat**	**4.08**	**16**	P	**Pn**	**20 19 52.3**	**-0.2**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.35**	**67**	P	**Pn**	**20 20 10.3**	**+0.5**
	0.0nm,0.0s						
TNG	**Tangerang**	**5.71**	**109**	P	**Pn**	**20 20 14.5**	**-0.3**
	0.0nm,0.0s						
DBJI	**Dramaga**	**5.94**	**112**	P	**Pn**	**20 20 17.9**	**0.0**
	0.0nm,0.0s						
SKJI	**Sukabumi**	**5.95**	**117**	P	**Pn**	**20 20 17.3**	**-0.7**
	0.0nm,0.0s						
CBJI	**Citeko**	**5.99**	**111**	P	**Pn**	**20 20 21.8**	**+3.3**
	0.0nm,0.0s						
LEM	**Lembang**	**6.84**	**112**	P	**Pn**	**20 20 31.5**	**+1.2**
	0.0nm,0.0s						
BJII	**Banjamegara**	**8.96**	**110**	P	**Pn**	**20 20 58.8**	**-0.6**
	0.0nm,0.0s						
SJI	**Sawahan**	**11.03**	**108**	P	**Pn**	**20 21 27.3**	**-0.3**
	0.0nm,0.0s						
STKI	**Sintang**	**11.13**	**67**	P	**Pn**	**20 21 30.0**	**+1.0**
	0.0nm,0.0s						
BSI	**Banda Aceh**	**11.39**	**329**	P	**Pn**	**20 21 29.1**	**-3.6**
	0.0nm,0.0s						
KAPI	**Kappang**	**18.48**	**93**	P	**Pn**	**20 23 03.1**	**-2.0**
	0.5nm,0.3s,baz=329,slow=12,SNR=3.2						
PCI	**Palu**	**18.90**	**80**	P	**Pn**	**20 23 10.8**	**+0.7**
	0.0nm,0.0s						
KDI	**Kendari**	**21.34**	**90**	P	**P**	**20 23 38.9**	**+3.2**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**22.73**	**354**	P	**P**	**20 23 48.6**	**-1.7**
	19nm,0.9s,mb4.5,baz=183,slow=8.7,SNR=58						
CMAR				LR	LR	20 34 01.2	
	comp=Z,251nm,18.5s,MS3.7,baz=180,slow=40						
CMAR	**Chiang Mai Arr**	**22.73**	**354**	P	**P**	**20 23 48.6**	**-1.7**
CMAR				pmax	pmax		
	comp=Z,19nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,251nm,18.5s						
BATI	**Baumata**	**23.01**	**106**	P	**P**	**20 23 51.5**	**-1.9**
	comp=Z,8.1nm,0.4s,mb4.5,baz=284,slow=4.2,SNR=3.3						
BATI				S	**S**	**20 28 05.0**	**+4.5**
	comp=Z,8.0nm,0.5s,baz=320,slow=18,SNR=3.2						
CHTO	**Chiang Mai**	**23.08**	**354**	*e*P	**P**	**20 23 53.3**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.5						
CHTO	**Chiang Mai**	**23.08**	**354**	*e*P	**P**	**20 23 53.3**	**-0.7**
	comp=Z,18nm,1.1s,mb4.5						
FITZ	**Fitzroy Crossi**	**27.54**	**122**	*e*P	**P**	**20 24 34.7**	**-0.1**
	comp=Z,5.8nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**27.54**	**122**	P	**P**	**20 24 34.8**	**0.0**
	comp=Z,3.3nm,0.7s,mb4.1,baz=271,slow=4.8,SNR=10						
ODAN	**Odare**	**33.75**	**337**	*e*P	**P**	**20 25 30.2**	**+0.8**
	comp=Z,57nm,0.8s,mb5.5						
TAPN	**Taplejung**	**34.07**	**338**	*e*P	**P**	**20 25 33.6**	**+1.4**
	comp=Z,90nm,0.9s,mb5.7						
RAMN	**Ramite**	**34.14**	**336**	*e*P	**P**	**20 25 34.3**	**+1.5**
	comp=Z,39nm,0.8s,mb5.4						
JIRN	**Jiri**	**34.93**	**336**	*e*P	**P**	**20 25 41.0**	**+1.3**
	comp=Z,83nm,0.9s,mb5.7						
CD2	**Chengdu**	**35.10**	**4**	P	**P**	**20 25 40.8**	**-0.3**
CD2				AP	pP	20 25 49.8	-4.3
CD2				XP	sP	20 25 53.8	-6.3
CD2				PP	PP	20 26 58.8	-2.7
CD2				S	**S**	**20 31 10.2**	**-0.1**
CD2				XS	sS	20 31 25.3	-7.1
CD2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
CD2				LR	LR		
	comp=E,1μm,18.0s						
CD2				LR	LR		
	comp=Z,270nm,20.4s,MS4.0						
LSA	**Lhasa**	**35.16**	**345**	P	**P**	**20 25 42.2**	**+0.6**
LSA	**Lhasa**	**35.16**	**345**	*e*P	**P**	**20 25 42.5**	**+0.9**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
LSA	**Lhasa**	**35.16**	**345**	*e*P	**P**	**20 25 42.5**	**+0.9**
	comp=Z,10nm,1.1s,mb4.7						
PKI	**Pulchoki**	**35.17**	**335**	*e*P	**P**	**20 25 42.4**	**+0.7**
PKIN	**Phulchoki**	**35.18**	**335**	*e*P	**P**	**20 25 42.4**	**+0.6**
GUN	**Gumba**	**35.28**	**336**	*e*P	**P**	**20 25 43.9**	**+1.2**
	comp=Z,56nm,0.9s,mb5.5						
DMN	**Daman**	**35.33**	**335**	*e*P	**P**	**20 25 43.7**	**+0.6**
	comp=Z,16nm,1.0s,mb4.9						
KKN	**Kakani**	**35.42**	**335**	*e*P	**P**	**20 25 44.6**	**+0.7**
	comp=Z,31nm,1.0s,mb5.2						
WRA	**Warramunga Arr**	**35.80**	**119**	P	**P**	**20 25 47.2**	**-0.1**
	comp=Z,3.7nm,0.8s,mb4.3,baz=292,slow=9.8,SNR=18						
WRA	**Warramunga Arr**	**35.80**	**119**	P	**P**	**20 25 47.2**	**-0.1**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRAB	**Tennant Creek**	**35.81**	**119**	*e*P	**P**	**20 25 47.5**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**35.81**	**119**	*e*P	**P**	**20 25 47.5**	**+0.1**
	comp=Z,6.0nm,0.8s,mb4.6						
WB2	**Warramunga Arr**	**35.81**	**119**	*e*P	**P**	**20 25 47.4**	**0.0**
GKN	**Gorkha**	**35.88**	**334**	*e*P	**P**	**20 25 48.5**	**+0.7**
KOLN	**Koldanda**	**36.13**	**333**	*e*P	**P**	**20 25 50.7**	**+0.7**
	comp=Z,19nm,0.8s,mb5.1						
DANN	**Dangsing**	**36.56**	**334**	*e*P	**P**	**20 25 54.1**	**+0.5**
	comp=Z,40nm,1.0s,mb5.2						
ASAR	**Alice Springs**	**36.93**	**125**	P	**P**	**20 25 57.3**	**+0.4**
	comp=Z,1.7nm,0.7s,mb4.0,baz=295,slow=7.8,SNR=12						
ASAR	**Alice Springs**	**36.93**	**125**	P	**P**	**20 25 57.3**	**+0.4**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
XAN	**Xi'an**	**38.82**	**10**	P	**P**	**20 26 11.8**	**-0.9**
XAN				AP	pP	20 26 19.3	-6.6
XAN				XP	sP	20 26 23.0	-8.8
XAN				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.7						
LZH	**Lanzhou**	**40.25**	**3**	*e*P	**P**	**20 26 25.5**	**+1.0**
LZH				AP	pP	20 26 30.9	-6.9
LZH				XP	sP	20 26 33.2	-10
LZH				AMB	AMB		
	comp=Z,44nm,1.4s,mb5.0						
LZH				AMB	AMB		
	comp=Z,154nm,4.1s						
GTA	**Gaotai**	**43.52**	**358**	⇑P	**P**	**20 26 51.7**	**+0.6**
GTA				AP	pP	20 26 56.3	-8.2
GTA				XP	sP	20 26 58.8	-12
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.5						
HHC	**Hu-ho-hao-te**	**45.92**	**11**	*e*P	**P**	**20 27 11.4**	**+1.1**
HHC				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,71nm,6.7s						
STKA	**Stephens Creek**	**46.72**	**131**	*e*P	**P**	**20 27 17.7**	**+0.9**
	comp=Z,2.9nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**46.72**	**131**	P	**P**	**20 27 17.7**	**+0.9**
	comp=Z,2.8nm,0.7s,mb4.3,baz=305,slow=7.5,SNR=5.8						
KSRS	**Korea Array**	**48.41**	**29**	P	**P**	**20 27 29.4**	**-0.3**
	comp=Z,9.9nm,0.9s,mb4.8,baz=217,slow=8.3,SNR=32						
KSRS	**Korea Array**	**48.41**	**29**	P	**P**	**20 27 29.4**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
WMQ	**Urumqi**	**49.43**	**347**	P	**P**	**20 27 38.0**	**+0.6**
WMQ				XP	sP	20 27 46.8	-10
WMQ				AMB	AMB		
	comp=Z,25nm,0.9s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,105nm,5.2s						
SONM	**Songino Array**	**52.12**	**4**	P	**P**	**20 27 58.5**	**+0.9**
	comp=Z,16nm,0.8s,mb5.0,baz=183,slow=9.0,SNR=83						
SONM				PcP	PcP	20 29 09.6	+0.7
	comp=Z,2.7nm,0.8s,baz=170,slow=2.5,SNR=3.5						
SONM	**Songino Array**	**52.12**	**4**	P	**P**	**20 27 58.5**	**+0.9**
SONM						20 29 09.6	
SONM				pmax	pmax		
	comp=Z,16nm,0.8s						
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	**Ulaanbaatar**	**52.20**	**5**	⇑*i*P	**P**	**20 27 58.9**	**+0.7**
TKM2	**Tokmak 2**	**52.42**	**336**	*e*P	**P**	**20 28 00.0**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
TKM2	**Tokmak 2**	**52.42**	**336**	*e*P	**P**	**20 28 00.0**	**+0.1**
	comp=Z,8.8nm,0.6s,mb4.9						
AML	**Almayashu**	**52.56**	**334**	*e*P	**P**	**20 27 59.9**	**-1.1**
	comp=Z,6.0nm,0.8s,mb4.6						
CN2	**Changchun**	**52.62**	**22**	*e*P	**P**	**20 28 01.0**	**-0.4**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
EKS2	**Erkin-Say**	**52.95**	**335**	*e*P	**P**	**20 28 04.3**	**+0.4**
	comp=Z,14nm,0.8s,mb4.9						
MJAR	**Matsushiro Arr**	**53.32**	**37**	P	**P**	**20 28 05.5**	**-1.2**
	comp=Z,6.0nm,0.9s,mb4.5,baz=217,slow=7.6,SNR=15						
MJAR	**Matsushiro Arr**	**53.32**	**37**	P	**P**	**20 28 05.5**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	**Makanchi Array**	**53.56**	**344**	P	**P**	**20 28 08.6**	**+0.3**
	comp=Z,11nm,0.7s,mb4.9,baz=146,slow=8.8,SNR=69						
MKAR	**Makanchi Array**	**53.56**	**344**	P	**P**	**20 28 08.6**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,11nm,0.7s						
ZAK	**Zakamensk**	**54.50**	**2**	*e*P	**P**	**20 28 14.6**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
KURK	**Kurchatov**	**58.15**	**343**	P	**P**	**20 28 39.8**	**-1.2**
	baz=167,slow=7.2						
KURK				LR	LR	20 58 07.9	
	comp=Z,49nm,18.4s,MS3.6,baz=145,slow=41						
KURK	**Kurchatov**	**58.15**	**343**	*e*P	**P**	**20 28 39.5**	**-1.5**
KURK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
KURK	**Kurchatov**	**58.15**	**343**	*e*P	**P**	**20 28 40.6**	**-0.4**
KURK				LR	LR	20 58 07.9	
KLR	**Kul'dur**	**59.55**	**23**	*e*P	**P**	**20 28 46.8**	**-4.0**
ZAA0	**Zalesovo Array**	**59.65**	**349**	*e*P	**P**	**20 28 50.7**	**-0.6**
ZALV	**Zalesovo Beam**	**59.65**	**349**	P	**P**	**20 28 51.0**	**-0.3**
	comp=Z,14nm,0.9s,mb5.0,baz=178,slow=4.5,SNR=43						
ZALV	**Zalesovo Beam**	**59.65**	**349**	P	**P**	**20 28 51.0**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
KRAR	**Krasnoyarsk**	**60.50**	**355**	*e*P	**P**	**20 28 56.6**	**-0.5**
KRAR				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.0						
NVS	**Novosibirsk**	**60.80**	**348**	*i*P	**P**	**20 28 57.8**	**-1.4**
BVAR	**Borovoye Array**	**62.75**	**340**	P	**P**	**20 29 11.6**	**-0.8**
	comp=Z,4.3nm,0.6s,mb4.8,baz=144,slow=9.0,SNR=26						
BVAR	**Borovoye Array**	**62.75**	**340**	P	**P**	**20 29 11.6**	**-0.8**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BOD	**Bodaibo**	**62.78**	**8**	⇑*i*P	**P**	**20 29 12.6**	**+0.2**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
YSS	**Yuzh-Sakhalins**	**62.80**	**31**	⇑*e*P	**P**	**20 29 12.9**	**+0.1**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.4						
YSS	**Yuzh-Sakhalins**	**62.80**	**31**	*e*P	**P**	**20 29 12.5**	**-0.3**
	comp=Z,7.3nm,0.5s,mb5.1						
AKTK	**Aktyubinsk**	**65.95**	**331**	P	**P**	**20 29 32.4**	**-1.0**
AKTO	**Aktyubinsk**	**65.95**	**331**	P	**P**	**20 29 32.4**	**-1.0**
	comp=Z,0.5nm,0.3s,mb4.0,baz=101,slow=18,SNR=3.9						
AKTO	**Aktyubinsk**	**65.95**	**331**	P	**P**	**20 29 32.4**	**-1.0**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
SVE	**Sverdlovsk**	**69.26**	**338**	*e*P	**P**	**20 29 54.5**	**+0.4**
SVE				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
YAK	**Yakutsk**	**69.66**	**14**	*c*/*e*P	**P**	**20 29 55.5**	**-1.0**
YAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
YAK	**Yakutsk**	**69.66**	**14**	*e*P	**P**	**20 29 55.4**	**-1.0**
	comp=Z,18nm,0.8s,mb5.0						
ARU	**Arti**	**69.79**	**336**	*d*/*e*P	**P**	**20 29 56.8**	**-0.6**
ARU				*e*S	S	20 39 07.7	+4.9
ARU				*e*SS	SS	20 43 31.9	-0.5
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
ARU	**Arti**	**69.79**	**336**	*e*P	**P**	**20 29 56.6**	**-0.8**
	comp=Z,9.0nm,1.0s,mb4.7						
MALT	**Malatya**	**71.78**	**313**	*e*P	**P**	**20 30 08.5**	**-1.4**
MALT				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
MALT	**Malatya**	**71.78**	**313**	*e*P	**P**	**20 30 08.5**	**-1.4**
	comp=Z,2.1nm,0.9s,mb4.1						
EIL	**Elat**	**71.79**	**303**	P	**P**	**20 30 10.1**	**0.0**
	comp=Z,1.6nm,0.7s,mb4.0,baz=15,slow=7.3,SNR=4.0						
EIL	**Elat**	**71.79**	**303**	P	**P**	**20 30 10.1**	**0.0**
PETK	**Petropavlovsk-**	**74.18**	**31**	P	**P**	**20 30 22.7**	**-1.1**
	comp=Z,3.4nm,0.8s,mb4.3,baz=190,slow=4.8,SNR=6.5						
PETK	**Petropavlovsk-**	**74.18**	**31**	P	**P**	**20 30 22.7**	**-1.1**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
PETK	**Petropavlovsk-**	**74.18**	**31**	P	**P**	**20 30 22.7**	**-1.1**
BUR08	**Bucovina Ar. S**	**83.80**	**319**	*e*P	**P**	**20 31 17.1**	**+0.6**
GERES	**GERESS Array B**	**91.57**	**319**	P	**P**	**20 31 53.9**	**0.0**
	comp=Z,1.0nm,0.9s,mb4.2,baz=90,slow=5.3,SNR=7.7						
GERES	**GERESS Array B**	**91.57**	**319**	P	**P**	**20 31 53.9**	**-0.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NVAR	**Mina Array Bea**	**130.56**	**41**	PKP	PKPdf	20 37 59.9	+1.7
	comp=Z,0.2nm,0.4s,baz=63,slow=0.4,SNR=3.8						
NVAR	**Mina Array Bea**	**130.56**	**41**	PKP	PKPdf	20 37 59.9	+1.7
WMOK	**Wichita Mounta**	**144.49**	**29**	*e*PKIKP	PKPdf	20 38 22.3	-1.6
TXAR	**Lajitas Array**	**145.71**	**41**	PKPbc	PKPbc	20 38 27.9	+1.3
	comp=Z,11nm,1.0s,baz=284,slow=1.7,SNR=57						
TXAR	**Lajitas Array**	**145.71**	**41**	PKP2	PKPab	20 38 27.9	+1.0
TXAR				pmax	pmax		
	comp=Z,11nm,1.0s						
MIAR	**Mount Ida**	**146.93**	**23**	*e*PKP2	PKPab	20 38 30.2	-1.2
WVT	**Waverly**	**147.25**	**14**	*e*PKIKP	PKPdf	20 38 27.6	-0.9
JCT	**Junction City**	**147.27**	**35**	*e*PKP2	PKPab	20 38 31.9	-1.0
TKL	**Tuckaleechee C**	**148.46**	**8**	PKPbc	PKPbc	20 38 33.5	-0.7
	comp=Z,8.1nm,0.6s,baz=154,slow=2.6,SNR=4.6						
TKL	**Tuckaleechee C**	**148.46**	**8**	PKP2	PKPbc	20 38 33.5	-0.6
TKL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CPCT	**Cooper Cave**	**148.56**	**9**	*e*PKPbc	PKPbc	20 38 34.7	+0.3

NEIC **12** *20:20:50.4±2.3,365S×100.49E, h35*km*, mb4.0/1, Error ellipse: s-maj=102.0km s-min=13.1km az=53.0*

IDC 12 20:20:45.0±3.4,368S×10041E, h0km**, mb3.8/6, mb1 3.9/6, mb1mx3.7/20, mbtmp3.8/6, Error ellipse: s-maj=156.3km s-min=22.0km az=53.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.81**	**119**	P	P	20 27 53.7	-1.3
	0.3nm,0.3s,baz=301,slow=9.1,SNR=3.6						
WRAB	**Tennant Creek**	**36.82**	**119**	P	P	20 27 55.2	+0.1
	1.3nm,0.5s						
ASAR	**Alice Springs**	**37.96**	**125**	P	P	20 28 05.6	+0.9
	0.3nm,0.3s,baz=300,slow=8.2,SNR=5.3						
SONM	**Songino Array**	**51.56**	**5**	P	P	20 29 53.1	+0.3
	1.4nm,0.7s,baz=190,slow=8.9,SNR=2.9						
MKAR	**Makanchi Array**	**52.74**	**344**	P	P	20 30 02.4	+0.8
	1.6nm,0.8s,baz=160,slow=8.2,SNR=3.3						
ZALV	**Zalesovo Beam**	**58.88**	**349**	P	P	20 30 45.3	-0.3
	1.8nm,0.7s,baz=160,slow=5.4,SNR=2.6						
BVAR	**Borovoye Array**	**61.89**	**340**	P	P	20 31 05.6	-0.5
	0.9nm,0.6s,baz=152,slow=6.5,SNR=2.7						
TXAR	**Lajitas Array**	**145.76**	**39**	PKPbc	PKPbc	20 40 26.4	-0.3
	1.0nm,0.4s,baz=274,slow=0.7,SNR=11						
TXAR	**Lajitas Array**	**145.76**	**39**	PKPbc	PKPbc	20 40 26.4	-0.3

IDC **12** *20:29:53.9±1.4, 360S×10069E, h0*km*, mb4.0/12, mb1 4.1/12, mb1mx4.0/22, mbtmp4.0/12, Error ellipse: s-maj=52.5km s-min=14.4km az=56.0*

ISCJB **12** *20:29:56.9±1.1, 36S×102×1008E±0.2, h33*km*, mb4.1/14, Error ellipse: s-maj=40.2km s-min=9.7km az=144.1*

NEIC **12** *20:29:59.5±0.9, 353S×10082E, h35*km*, mb4.3/3, Error ellipse: s-maj=39.5km s-min=8.1km az=54.0*

ISC 12 20:29:59.5±1.1,35S±0.2×1008E±0.2, h35km**, n23,** σ**0§84/21, mb4.1/14, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.94**	**355**	P	**P**	**20 34 48.2**	**-1.9**
	2.2nm,0.7s,mb3.7,baz=187,slow=8.4,SNR=15						
FITZ	**Fitzroy Crossi**	**28.30**	**123**	P	**P**	**20 35 50.0**	**0.0**
	1.1nm,0.8s,mb3.5,baz=332,slow=15,SNR=2.5						
LSA	**Lhasa**	**34.33**	**345**	P	**P**	**20 36 44.1**	**+1.3**
WRA	**Warramunga Arr**	**36.53**	**119**	P	**P**	**20 37 01.4**	**-0.5**
	1.1nm,0.4s,mb4.0,baz=308,slow=9.3,SNR=28						
WRAB	**Tennant Creek**	**36.54**	**119**	*e*P	**P**	**20 37 01.4**	**-0.7**
WB2	**Warramunga Arr**	**36.54**	**119**	*e*P	**P**	**20 37 02.9**	**+0.8**
ASAR	**Alice Springs**	**37.70**	**125**	P	**P**	**20 37 11.9**	**0.0**
	0.7nm,1.0s,mb3.3,baz=299,slow=8.1,SNR=5.5						
STKA	**Stephens Creek**	**47.53**	**131**	P	**P**	**20 38 31.9**	**+0.3**
	2.3nm,1.0s,mb4.2,baz=310,slow=18,SNR=2.7						
STKA	**Stephens Creek**	**47.53**	**131**	*e*P	**P**	**20 38 31.3**	**-0.3**
KSRS	**Korea Array**	**47.95**	**29**	P	**P**	**20 38 34.9**	**+0.2**
	1.5nm,0.6s,mb4.2,baz=228,slow=7.7,SNR=7.6						
SONM	**Songino Array**	**51.40**	**5**	P	**P**	**20 39 02.1**	**+1.4**
	2.9nm,0.7s,mb4.3,baz=188,slow=9.5,SNR=26						
TKM2	**Tokmak 2**	**51.56**	**336**	*e*P	**P**	**20 39 02.9**	**+0.8**
	1.7nm,0.3s,mb4.5						
EKS2	**Erkin-Say**	**52.09**	**335**	*e*P	**P**	**20 39 06.8**	**+0.7**
	2.1nm,0.7s,mb4.2						
MKAR	**Makanchi Array**	**52.72**	**344**	P	**P**	**20 39 10.8**	**+0.2**
	2.2nm,0.7s,mb4.2,baz=146,slow=8.8,SNR=17						
MKAR	**Makanchi Array**	**52.72**	**344**	P	**P**	**20 39 10.8**	**+0.2**
MJAR	**Matsushiro Arr**	**52.98**	**38**	P	**P**	**20 39 13.2**	**+0.5**
	1.0nm,0.7s,mb3.9,baz=204,slow=7.4,SNR=4.0						
KURK	**Kurchatov**	**57.31**	**343**	P	**P**	**20 39 42.7**	**-1.0**
	1.8nm,0.8s,mb4.1,baz=165,slow=6.9,SNR=11						
KURK	**Kurchatov**	**57.31**	**343**	*e*P	**P**	**20 39 43.4**	**-0.3**
	2.2nm,0.9s,mb4.2						
ZAA0	**Zalesovo Array**	**58.83**	**349**	*e*P	**P**	**20 39 52.8**	**-1.5**
ZALV	**Zalesovo Beam**	**58.83**	**349**	P	**P**	**20 39 54.3**	**0.0**
	3.5nm,0.8s,mb4.4,baz=170,slow=4.3,SNR=12						
BVAR	**Borovoye Array**	**61.90**	**340**	P	**P**	**20 40 14.4**	**-0.9**
	1.0nm,0.7s,mb3.9,baz=147,slow=8.9,SNR=11						
TXAR	**Lajitas Array**	**145.40**	**40**	PKPbc	PKPbc	20 49 35.7	+1.3
	2.4nm,0.6s,baz=252,slow=0.7,SNR=22						
TXAR	**Lajitas Array**	**145.40**	**40**	PKPbc	PKPbc	20 49 35.7	+1.3

IDC 12 20:35:18.6±4.3,350S×10078E, h0km**, mb3.3/4, mb1 3.4/4, mb1mx3.3/19, mbtmp3.3/4, Error ellipse: s-maj=176.7km s-min=24.1km az=56.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.58**	**119**	P	P	20 42 26.2	-0.4
	0.2nm,0.7s,baz=291,slow=8.0,SNR=3.9						
ASAR	**Alice Springs**	**37.75**	**125**	P	P	20 42 36.7	+0.1
	0.5nm,1.0s,baz=300,slow=7.9,SNR=4.1						
SONM	**Songino Array**	**51.36**	**5**	P	P	20 44 25.1	+0.2
	0.3nm,0.6s,baz=183,slow=8.7,SNR=3.1						
MKAR	**Makanchi Array**	**52.67**	**344**	P	P	20 44 34.3	-0.4
	0.2nm,0.3s,baz=147,slow=8.1,SNR=2.3						
TXAR	**Lajitas Array**	**145.39**	**40**	PKPbc	PKPbc	20 54 59.3	+0.1
	0.2nm,0.5s,baz=198,slow=1.4,SNR=3.4						

ISCJB **12** *20:37:55.4±2.2, 4.1S×04×1010E×05, h10*km*, mb3.9/9, Error ellipse: s-maj=89.8km s-min=14.1km az=144.1*

IDC **12** *20:37:56.9±2.6, 401S×10121E, h0*km*, mb3.8/8, mb1 3.8/8, mb1mx3.7/20, mbtmp3.8/8, Error ellipse: s-maj=113.9km s-min=18.9km az=54.0*

NEIC **12** *20:38:02.3±1.6, 395S×10130E, h35*km*, mb4.1/1, Error ellipse: s-maj=70.4km s-min=11.2km az=54.0*

ISC 12 20:38:02.1±2.1,40S±04×1013E±05, h35km**, n12,** σ**0§62/10, mb3.9/9, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.41**	**354**	P	**P**	**20 42 57.0**	**-0.7**
	0.7nm,0.6s,mb3.2,baz=186,slow=9.2,SNR=7.4						
WRA	**Warramunga Arr**	**35.91**	**119**	P	**P**	**20 44 59.1**	**-0.2**
	0.5nm,0.5s,mb3.7,baz=302,slow=9.0,SNR=7.3						
WRAB	**Tennant Creek**	**35.92**	**119**	P	**P**	**20 44 59.5**	**+0.1**
	1.6nm,0.6s,mb4.1						
ASAR	**Alice Springs**	**37.08**	**125**	P	**P**	**20 45 09.2**	**0.0**
	0.6nm,1.0s,mb3.4,baz=307,slow=8.4,SNR=3.6						
SONM	**Songino Array**	**51.79**	**4**	P	**P**	**20 47 07.4**	**+1.1**
	0.5nm,0.7s,mb3.6,baz=191,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**53.27**	**344**	P	**P**	**20 47 18.3**	**+1.0**
	1.6nm,0.5s,mb4.2,baz=147,slow=8.9,SNR=14						
MKAR	**Makanchi Array**	**53.27**	**344**	P	**P**	**20 47 18.3**	**+1.0**
KURK	**Kurchatov**	**57.85**	**343**	P	**P**	**20 47 50.1**	**-0.1**
	0.6nm,0.2s,m

YKA					ScP	ScP	20 52 33.5	-0.6
ETW	**Entiat**	**22.64**	**113**	*e*P	**P**	**20 45 33.2**	**+1.7**
YBH	**Yreka Blue Hor**	**26.34**	**124**	P	**P**	**20 46 08.5**	**+3.5**
	2.5nm,0.7s,mb3.7,baz=358,slow=3.6,SNR=10						
YBH					pP	pP	20 46 34.4	+4.7
	3.8nm,0.8s,baz=332,slow=3.7,SNR=5.3						
PETK	**Petropavlovsk-**	**27.80**	**276**	P	**P**	**20 46 17.6**	**-0.4**
	1.4nm,0.7s,mb3.6,baz=72,slow=13,SNR=2.9						
ELK	**Elko**	**30.29**	**116**	P	**P**	**20 46 43.4**	**+3.1**
	1.9nm,0.8s,mb3.8,baz=318,slow=7.9,SNR=7.0						
ELK					pP	pP	20 47 09.4	+4.3
	3.5nm,0.8s,baz=314,slow=10,SNR=7.6						
NVAR	**Mina Array Bea**	**30.92**	**122**	P	**P**	**20 46 48.0**	**+2.2**
	2.7nm,0.7s,mb4.1,baz=315,slow=9.5,SNR=13						
NVAR					pP	pP	20 47 15.9	+5.2
	3.1nm,0.7s,baz=307,slow=8.9,SNR=8.0						
PDAR	**Pinedale Array**	**31.24**	**107**	P	**P**	**20 46 50.8**	**+2.3**
	0.5nm,0.5s,mb3.5,baz=320,slow=4.9,SNR=4.2						
PDAR					pP	pP	20 47 18.9	+5.4
	1.2nm,0.7s,baz=328,slow=5.3,SNR=5.8						
TXAR	**Lajitas Array**	**44.98**	**113**	P	**P**	**20 48 46.0**	**+2.2**
	1.3nm,0.7s,mb3.8,baz=325,slow=6.5,SNR=13						
TXAR					pP	pP	20 49 14.8	+4.9
	1.4nm,0.8s,baz=329,slow=6.8,SNR=6.6						
JCT	**Junction City**	**45.76**	**108**	*e*P	**P**	**20 48 50.7**	**+0.8**
	6.1nm,0.6s,mb4.5						
ARCES	**ARCESS Array B**	**49.53**	**1**	P	**P**	**20 49 17.3**	**-1.1**
	3.4nm,0.8s,mb4.3,baz=346,slow=6.9,SNR=11						
ARCES					PcP	PcP	20 50 37.8	-0.6
	1.3nm,0.6s,baz=355,slow=4.5,SNR=4.5						
ARCES	**ARCESS Array B**	**49.53**	**1**	P	**P**	**20 49 17.3**	**-1.1**
ARCES					PcP	PcP	20 50 37.8	-0.6
KSRS	**Korea Array**	**53.39**	**282**	P	**P**	**20 49 47.6**	**0.0**
	1.7nm,0.7s,mb4.2,baz=35,slow=6.8,SNR=7.5						
SONM	**Songino Array**	**54.47**	**306**	P	**P**	**20 49 56.1**	**+0.8**
	2.7nm,0.7s,mb4.4,baz=34,slow=6.4,SNR=22						
ZALV	**Zalesovo Beam**	**56.68**	**324**	P	**P**	**20 50 10.7**	**-0.3**
	2.9nm,0.5s,mb4.6,baz=25,slow=7.7,SNR=15						
BVAR	**Borovoye Array**	**61.22**	**332**	P	**P**	**20 50 41.4**	**-0.9**
	2.0nm,0.6s,mb4.3,baz=23,slow=6.8,SNR=13						
EKA	**Eskdalemuir Ar**	**61.22**	**20**	P	**P**	**20 50 41.8**	**-0.6**
	0.9nm,0.6s,mb4.0,baz=328,slow=4.6,SNR=5.6						
KURK	**Kurchatov**	**61.29**	**326**	P	**P**	**20 50 42.7**	**-0.2**
	1.3nm,0.4s,mb4.3,baz=24,slow=6.8,SNR=6.3						
MKAR	**Makanchi Array**	**63.78**	**322**	P	**P**	**20 50 58.4**	**-1.1**
	0.4nm,0.3s,mb3.6,baz=39,slow=8.4,SNR=6.0						
GTA	**Gaotai**	**64.12**	**305**	P	**P**	**20 51 02.2**	**+0.4**
GTA					AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7							
LZH	**Lanzhou**	**65.33**	**300**	*e*P	**P**	**20 51 10.1**	**+0.4**
LZH					AP	pP	20 51 37.9	+0.3
LZH					XP	sP	20 51 51.4	+1.4
LZH					AMB	AMB		
	comp=Z,26nm,1.0s,mb5.0							
LZH					AMB	AMB		
	comp=Z,145nm,5.1s							
AKTK	**Aktyubinsk**	**66.12**	**340**	P	**P**	**20 51 13.0**	**-1.5**
AKTO	**Aktyubinsk**	**66.12**	**340**	P	**P**	**20 51 13.0**	**-1.5**
	comp=Z,0.9nm,0.4s,mb4.0,baz=6.1,slow=8.1,SNR=4.3							
AKASG	**Malin Array Be**	**68.43**	**359**	P	**P**	**20 51 28.1**	**-1.0**
	comp=Z,2.6nm,0.4s,mb4.4,baz=6.4,slow=5.8,SNR=13							
GERES	**GERESS Array B**	**69.69**	**10**	P	**P**	**20 51 36.4**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.5,baz=330,slow=5.1,SNR=5.4							
BUR08	**Bucovina Ar. S**	**71.47**	**2**	*e*P	**P**	**20 51 47.6**	**-0.1**
GYA	**Guiyang**	**72.38**	**293**	P	**P**	**20 51 55.8**	**+2.3**
GYA					AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7							
MLR	**Muntele Rosu**	**73.64**	**1**	P	**P**	**20 52 00.8**	**+0.2**
	comp=Z,1.2nm,0.5s,mb3.9,baz=287,slow=13,SNR=3.6							
LSA	**Lhasa**	**76.04**	**307**	P	**P**	**20 52 15.7**	**+1.0**
LSA	**Lhasa**	**76.04**	**307**	*e*P	**P**	**20 52 16.1**	**+1.4**
	comp=Z,3.3nm,0.5s,mb4.3							
KEST	**Kesra**	**82.20**	**15**	P	**P**	**20 52 47.8**	**-0.3**
	comp=Z,0.8nm,0.9s,mb3.6,baz=311,slow=9.3,SNR=4.1							
CMAR	**Chiang Mai Arr**	**82.79**	**295**	P	**P**	**20 52 50.1**	**-1.3**
	comp=Z,2.3nm,0.9s,mb4.0,baz=9.4,slow=5.4,SNR=13							
BOSA	**Boshof**	**147.35**	**4**	PKPbc	PKPbc	21 00 08.8	-1.0
	comp=Z,3.9nm,0.9s,baz=53,slow=20,SNR=6.0							
BOSA	**Boshof**	**147.35**	**4**	PKPbc	PKPbc	21 00 08.8	-1.0

IDC 12 20:41:45.0±2.6, 433S×10084E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/19, mbtmp3.6/7, MS3.5/1, Ms1 3.5/1, ms1mx3.1/20, Error ellipse: s-maj=90.2km s-min=20.5km az=58.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**18.86**	**93**	LR	LR	20 52 58.3	
	comp=Z,173nm,21.4s,baz=218,slow=36						
CMAR	**Chiang Mai Arr**	**22.71**	**355**	P	P	20 46 49.2	+0.6
	0.9nm,0.6s,baz=187,slow=9.5,SNR=6.5						
WRA	**Warramunga Arr**	**36.13**	**118**	P	P	20 48 49.2	0.0
	0.3nm,0.6s,baz=302,slow=9.1,SNR=5.7						
ASAR	**Alice Springs**	**37.24**	**124**	P	P	20 48 58.9	+0.3
	0.2nm,0.6s,baz=302,slow=7.1,SNR=3.0						
KSRS	**Korea Array**	**48.61**	**29**	P	P	20 50 29.8	-0.7
	1.1nm,0.7s,baz=218,slow=7.4,SNR=4.9						
SONM	**Songino Array**	**52.17**	**5**	P	P	20 50 57.8	+0.5
	0.9nm,0.6s,baz=182,slow=6.4,SNR=5.7						
MKAR	**Makanchi Array**	**53.48**	**344**	P	P	20 51 07.2	+0.2
	0.8nm,0.6s,baz=138,slow=7.7,SNR=6.8						
ZALV	**Zalesovo Beam**	**59.59**	**349**	P	P	20 51 49.9	-0.5
	1.3nm,0.8s,baz=183,slow=5.6,SNR=4.1						
TXAR	**Lajitas Array**	**145.98**	**40**	PKPbc	PKPbc	21 01 26.1	-1.3
	0.4nm,0.8s,baz=300,slow=2.7,SNR=4.8						

*IDC **12** 20:52:53.2±2.0, 329S×10096E, h0km, mb4.0/8, mb1 4.2/8, mb1mx3.9/20, mbtmp4.1/8, MS3.8/2, Ms1 3.7/2, ms1mx3.3/20, Error ellipse: s-maj=92.3km s-min=15.7km az=58.0*

*ISCJB **12** 20:52:56.1±1.6, 32S±03×1010E±04, h33km, mb4.1/10, MS3.8/2, Error ellipse: s-maj=70.9km s-min=10.7km az=145.5*

*NEIC **12** 20:52:58.8±1.3, 3.19S×101.11E, h35km, mb4.3/2, Error ellipse: s-maj=56.9km s-min=9.0km az=56.0*

ISC 12 20:52:58.8±1.6, 32S±03×1011E±04, h35km, n16, σ0s85/14, mb4.1/10, MS3.8/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.62**	**354**	P	**P**	**20 57 44.2**	**-1.8**
	1.0nm,0.6s,mb3.4,baz=182,slow=10.0,SNR=5.6						
FITZ	**Fitzroy Crossi**	**28.23**	**123**	P	**P**	**20 58 47.7**	**-1.0**
	0.4nm,0.5s,mb3.3,baz=315,slow=5.7,SNR=3.6						
WRA	**Warramunga Arr**	**36.44**	**120**	P	**P**	**21 00 00.7**	**+0.2**
	1.3nm,0.4s,mb4.2,baz=306,slow=9.0,SNR=30						
WRA				PcP	PcP	21 02 24.2	-0.2
	0.3nm,0.5s,baz=315,slow=2.4,SNR=4.2						
WRAB	**Tennant Creek**	**36.44**	**120**	*e*P	**P**	**21 00 00.2**	**-0.4**
ASAR	**Alice Springs**	**37.66**	**126**	P	**P**	**21 00 11.1**	**+0.2**
	2.5nm,0.5s,mb4.2,baz=299,slow=7.7,SNR=26						
ASAR				PcP	PcP	21 02 28.0	0.0
	0.4nm,0.5s,baz=305,slow=2.2,SNR=4.5						
STKA	**Stephens Creek**	**47.53**	**132**	P	**P**	**21 01 31.6**	**+0.6**
	1.5nm,0.5s,mb4.2,baz=275,slow=12,SNR=4.7						
STKA				LR	LR	21 22 30.5	
	comp=Z,86nm,20.8s,MS3.7,baz=36,slow=37						
SONM	**Songino Array**	**51.03**	**5**	P	**P**	**21 01 59.0**	**+1.6**
	5.1nm,0.7s,mb4.5,baz=186,slow=9.5,SNR=51						
SONM				PcP	PcP	21 03 13.1	+0.1
	0.6nm,0.5s,baz=183,slow=4.0,SNR=5.5						
ULN	**Ulaanbaatar**	**51.12**	**5**	*e*P	**P**	**21 01 59.4**	**+1.4**
	2.8nm,1.0s,mb4.2						
TKM2	**Tokmak 2**	**51.37**	**336**	*e*P	**P**	**21 02 00.3**	**+0.3**
	3.9nm,0.8s,mb4.4						
MK31	**Makanchi Array**	**52.48**	**344**	*e*P	**P**	**21 02 08.3**	**+0.2**
MKAR	**Makanchi Array**	**52.48**	**344**	P	**P**	**21 02 08.4**	**+0.2**
	1.6nm,0.6s,mb4.1,baz=150,slow=8.8,SNR=16						
KURK	**Kurchatov**	**57.06**	**343**	*e*P	**P**	**21 02 40.8**	**-0.5**
ZAA0	**Zalesovo Array**	**58.55**	**349**	*e*P	**P**	**21 02 51.0**	**-0.7**
ZALV	**Zalesovo Beam**	**58.55**	**349**	P	**P**	**21 02 51.4**	**-0.3**
	3.1nm,0.7s,mb4.4,baz=190,slow=6.1,SNR=14						
VRAC	**Vranov**	**88.82**	**319**	LR	LR	21 45 25.4	
	comp=Z,56nm,21.7s,MS3.9,baz=164,slow=36						
TXAR	**Lajitas Array**	**144.95**	**40**	PKPbc	PKPdf	21 12 33.1	+0.1
	2.1nm,0.5s,baz=294,slow=0.8,SNR=41						

IDC 12 20:59:01.0±4.2, 336S×10129E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/18, mbtmp3.6/3, Error ellipse: s-maj=158.0km s-min=28.3km az=60.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.20**	**120**	P	P	21 06 04.6	-1.2
	0.6nm,0.4s,baz=295,slow=8.4,SNR=14						
ASAR	**Alice Springs**	**37.42**	**126**	P	P	21 06 17.2	+1.2
	0.6nm,0.4s,baz=298,slow=7.7,SNR=13						
SONM	**Songino Array**	**51.17**	**4**	P	P	21 08 06.2	+0.4
	0.3nm,0.7s,baz=184,slow=5.9,SNR=2.8						
TXAR	**Lajitas Array**	**144.95**	**40**	PKP	PKPdf	21 18 40.0	-1.0
	0.9nm,0.6s,baz=310,slow=1.0,SNR=13						

IDC 12 21:07:37.6±2.2, 460S×10095E, h0km, mb3.6/8, mb1 3.7/8, mb1mx3.6/19, mbtmp3.6/8, Error ellipse: s-maj=77.5km s-min=19.8km az=56.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.99**	**355**	P	P	21 12 44.7	+0.6
	1.0nm,0.5s,baz=184,slow=9.0,SNR=11						
WRA	**Warramunga Arr**	**35.91**	**118**	P	P	21 14 38.2	-1.6
	0.2nm,0.5s,baz=305,slow=9.3,SNR=4.9						
ASAR	**Alice Springs**	**37.00**	**124**	P	P	21 14 50.4	+1.2
	0.2nm,0.6s,baz=289,slow=8.4,SNR=2.9						
KSRS	**Korea Array**	**48.79**	**29**	P	P	21 16 24.1	-0.4
	0.9nm,0.7s,baz=224,slow=6.8,SNR=4.4						
SONM	**Songino Array**	**52.43**	**5**	P	P	21 16 52.3	+0.5
	1.6nm,0.8s,baz=186,slow=8.6,SNR=13						
MKAR	**Makanchi Array**	**53.77**	**344**	P	P	21 17 01.8	+0.1
	0.6nm,0.6s,baz=158,slow=10.0,SNR=6.4						
KURK	**Kurchatov**	**58.35**	**344**	P	P	21 17 34.2	-0.2
	0.3nm,0.6s,baz=160,slow=5.6,SNR=3.4						
ZALV	**Zalesovo Beam**	**59.88**	**349**	P	P	21 17 43.5	-1.4
	0.6nm,0.4s,baz=169,slow=3.0,SNR=4.1						
TXAR	**Lajitas Array**	**146.11**	**41**	PKPbc	PKPbc	21 27 20.2	-0.2
	0.3nm,0.5s,baz=270,slow=0.9,SNR=5.8						

IDC 12 21:14:41.7±6.9, 355S×10142E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/18, mbtmp3.3/3, Error ellipse: s-maj=260.7km s-min=31.4km az=60.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.00**	**120**	P	P	21 21 44.7	0.0
	0.2nm,0.4s,baz=303,slow=8.9,SNR=6.2						
ASAR	**Alice Springs**	**37.21**	**125**	P	P	21 21 54.7	-0.3
	0.2nm,0.4s,baz=300,slow=7.8,SNR=4.7						
SONM	**Songino Array**	**51.35**	**4**	P	P	21 23 47.9	+0.1
	0.5nm,0.8s,baz=186,slow=9.7,SNR=3.7						
TXAR	**Lajitas Array**	**145.01**	**40**	PKPbc	PKPbc	21 34 20.6	-0.4
	0.1nm,0.5s,baz=242,slow=3.9,SNR=3.6						

*ISCJB **12** 21:15:44.9±0.8, 3992N±005×7766E±006, h10km, mb3.1/2, Error ellipse: s-maj=8.3km s-min=5.9km az=141.0*

*IDC **12** 21:15:46.4±1.9, 40.14N×7704E, h0km, mb3.1/2, mb1 3.2/4, mb1mx3.1/24, mbtmp3.2/4, ML3.1/2, Error ellipse: s-maj=41.7km s-min=19.7km az=129.0*

*BJI **12** 21:15:48.5, 40.13N×7743E, h8km, ML3.3*

*MOS **12** 21:15:48.3±3.0, 3992N×7739E, h33km, mb3.7/1, Error ellipse: s-maj=25.9km s-min=12.2km az=90.2*

*NEIC **12** 21:15:48.3±3.0, 3995N×7758E, h25km±26km, mb3.2/1, Error ellipse: s-maj=12.3km s-min=10.8km az=64.0*

ISC 12 21:15:50.5±0.8, 3993N±005×7751E±007, h51km±18km, n27, σ1s02/38, mb3.1/2, 2C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.26**	**251**	*e*PG	**Pn**	**21 16 11.8**	**+0.2**
KSH				SG	**Sn**	**21 16 30.9**	**+3.5**
KSH				Smax			
	comp=N,3μm,0.4s						
KSH				Smax			
	comp=E,3μm,0.3s						
UCH	**Uchtor**	**3.23**	**316**	P	**Pn**	**21 16 38.7**	**+0.1**
	SNR=8.3						
UCH	**Uchtor**	**3.23**	**316**	*e*Pn	**Pn**	**21 16 38.2**	**-0.4**
UCH				*e*Sn	**Sn**	**21 17 17.3**	**+1.6**
TKM2	**Tokmak 2**	**3.32**	**335**	↑Pn	**Pn**	**21 16 41.6**	**+1.8**
	comp=E,18nm,0.7s						
TKM2				↑Sn	**Sn**	**21 17 23.8**	**+5.8**
	comp=E,88nm,0.8s						
TKM2	**Tokmak 2**	**3.32**	**335**	P	**Pn**	**21 16 40.1**	**+0.2**
	SNR=9.5						
TKM2	**Tokmak 2**	**3.32**	**335**	*e*Pn	**Pn**	**21 16 39.1**	**-0.7**
TKM2				*e*Sn	**Sn**	**21 17 14.0**	**-3.9**
KBK	**Karagaybulak**	**3.34**	**326**	P	**Pn**	**21 16 40.6**	**+0.4**
	SNR=41						
AAA	**Alma-Ata**	**3.37**	**353**	*i* PN	**Pn**	**21 16 43.1**	**+2.6**
AAA				*i* S	**Sn**	**21 17 23.7**	**+4.5**
AAA				pmax	pmax		
	comp=Z,157nm,0.5s						
AAA				smax			
	comp=E,530nm,0.6s						
AAK	**Ala-Archa**	**3.53**	**321**	P	**Pn**	**21 16 42.7**	**0.0**
	SNR=17						
AML	**Almayashu**	**3.63**	**309**	P	**Pn**	**21 16 44.7**	**+0.6**
	SNR=26						
AML	**Almayashu**	**3.63**	**309**	*e*Pn	**Pn**	**21 16 44.1**	**0.0**
AML				*e*Sn	**Sn**	**21 17 24.6**	**-1.0**
CHMS	**Chumysh**	**3.70**	**327**	P	**Pn**	**21 16 44.8**	**-0.3**
	SNR=15						
EKS2	**Erkin-Say**	**3.92**	**315**	P	**Pn**	**21 16 48.8**	**+0.7**
	SNR=5.6						
EKS2	**Erkin-Say**	**3.92**	**315**	*e*Pn	**Pn**	**21 16 48.0**	**-0.1**
EKS2				*e*Sn	**Sn**	**21 17 30.7**	**-2.0**
USP	**Ospenovka**	**4.03**	**327**	P	**Pn**	**21 16 49.9**	**+0.4**
	SNR=5.3						
KK31	**Karatay Array**	**6.13**	**303**	Pn	**Pn**	**21 17 18.5**	**0.0**
	comp=E,0.3nm,0.4s,baz=138,slow=13,SNR=7.1						
KK31				↓Lg		21 18 47.5	
	comp=E,4.9nm,0.5s,baz=137,slow=32						
MKAR	**Makanchi Array**	**7.69**	**25**	Pn	**Pn**	**21 17 39.5**	**-0.2**
	comp=E,0.3nm,0.3s,baz=199,slow=15,SNR=4.2						
MKAR				Sn	**Sn**	**21 19 05.6**	**+0.2**
	comp=E,0.4nm,0.3s,baz=211,slow=24,SNR=3.6						
MKAR				Lg		21 19 43.9	
	comp=E,0.5nm,0.3s,baz=213,slow=28,SNR=4.6						
MKAR	**Makanchi Array**	**7.69**	**25**	P	**Pn**	**21 17 39.6**	**-0.2**
MKAR						21 19 05.6	
MKAR	**Makanchi Array**	**7.69**	**25**	Pn	**Pn**	**21 17 39.5**	**-0.2**
MKAR				Sn	**Sn**	**21 19 05.6**	**+0.2**
MKAR				Lg		21 19 43.9	
KBL	**Kabul**	**8.63**	**234**	*e*Pn	**Pn**	**21 17 52.4**	**-0.3**
KBL				*e*Sn	**Sn**	**21 19 28.3**	**-0.3**
KURK	**Kurchatov**	**10.81**	**4**	Pn	**Pn**	**21 18 18.2**	**-4.2**
	comp=E,0.1nm,0.3s,baz=191,slow=12,SNR=6.3						
KURK				Lg		21 21 20.5	
	comp=E,0.1nm,0.3s,baz=188,slow=29,SNR=5.6						
KURK	**Kurchatov**	**10.81**	**4**	*e*Pn	**Pn**	**21 18 19.1**	**-3.3**
KURK				*e*Sn	**Sn**	**21 20 12.8**	**-9.1**
KURK				Lg		21 21 20.5	
BRVK	**Borovoye**	**14.03**	**342**	*e*P	**Pn**	**21 19 04.7**	**-1.6**
LSA	**Lhasa**	**15.14**	**128**	*e*P	**Pn**	**21 19 20.3**	**-0.7**
LSA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LSA	**Lhasa**	**15.14**	**128**	*e*Pn	**Pn**	**21 19 20.3**	**-0.7**
	comp=Z,0.7nm,0.5s						
SONM	**Songino Array**	**22.17**	**60**	P	**P**	**21 20 46.6**	**+4.6**
	comp=Z,0.1nm,0.4s,mb2.6,baz=251,slow=9.0,SNR=2.8						
TORD	**Torodi Ar. Bea**	**70.85**	**271**	P	**P**	**21 27 03.0**	**+0.8**
	comp=Z,0.3nm,0.5s,mb3.5,baz=54,slow=5.4,SNR=9.3						

*IDC **12** 21:21:01.1±2.3, 395S×10161E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/20, mbtmp3.9/8, Error ellipse: s-maj=102.4km s-min=16.4km az=54.0*

*ISCJB **12** 21:21:03.7±0.7, 391S±009×1016E±01, h33km, mb4.0/11, Error ellipse: s-maj=19.0km s-min=8.9km az=142.5*

*NEIC **12** 21:21:05.3±0.6, 393S×10160E, h30km, mb4.1/4, Error ellipse: s-maj=15.2km s-min=7.2km az=53.0*

ISC 12 21:21:06.0±0.7, 392S±009×1016E±01, h35km, n26, σ0s79/24, mb4.0/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSM	**Kuching**	**10.21**	**58**	Pn	**Pn**	**21 23 29.5**	**-0.7**
KKM	**Kota Kinabalu**	**17.62**	**56**	Pn	**Pn**	**21 25 09.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**22.39**	**353**	P	**P**	**21 26 00.7**	**-0.8**
	1.6nm,0.8s,mb3.5,baz=190,slow=8.5,SNR=12						
QIZ	**Qiongzhong**	**24.20**	**19**	P	**P**	**21 26 21.0**	**+1.5**
MBWA	**Marble Bar**	**24.57**	**136**	P	**P**	**21 26 22.0**	**-0.8**
FITZ	**Fitzroy Crossi**	**27.41**	**123**	*e*P	**P**	**21 26 49.3**	**+0.7**
	3.8nm,1.2s,mb3.8						
FITZ	**Fitzroy Crossi**	**27.41**	**123**	P	**P**	**21 26 47.8**	**-0.9**
	1.2nm,0.8s,mb3.5,baz=343,slow=11,SNR=2.8						
FITZ	**Fitzroy Crossi**	**27.41**	**123**	*e*P	**P**	**21 26 48.6**	**0.0**
	20nm,1.5s,mb4.4						
ENH	**Enshi**	**34.83**	**12**	P	**P**	**21 27 53.5**	**-0.2**
LSA	**Lhasa**	**34.90**	**344**	*e*P	**P**	**21 27 53.0**	**-1.5**
	1.0nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	**35.64**	**119**	P	**P**	**21 28 00.9**	**0.0**
	0.6nm,0.4s,mb3.9,baz=302,slow=9.0,SNR=16						
WRAB	**Tennant Creek**	**35.65**	**119**	*e*P	**P**	**21 28 01.1**	**+0.1**
WB2	**Warramunga Arr**	**35.65**	**119**	*e*P	**P**	**21 28 01.9**	**+0.9**
ASAR	**Alice Springs**	**36.83**	**125**	P	**P**	**21 28 11.1**	**+0.1**
	0.4nm,0.3s,mb3.7,baz=300,slow=8.1,SNR=9.2						
CTAO	**Charters Tower**	**46.33**	**114**	*e*P	**P**	**21 29 28.9**	**-0.1**
SONM	**Songino Array**	**51.71**	**4**	P	**P**	**21 30 10.9**	**+1.2**
	1.7nm,0.5s,mb4.2,baz=186,slow=10.0,SNR=18						
TKM2	**Tokmak 2**	**52.23**	**336**	*e*P	**P**	**21 30 13.5**	**-0.1**
	1.6nm,0.5s,mb4.2						
EKS2	**Erkin-Say**	**52.78**	**334**	*e*P	**P**	**21 30 19.3**	**+1.6**
	1.4nm,0.7s,mb4.0						
MKAR	**Makanchi Array**	**53.31**	**344**	P	**P**	**21 30 21.9**	**+0.4**
	1.5nm,0.5s,mb4.2,baz=152,slow=9.4,SNR=12						
KURK	**Kurchatov**	**57.90**	**343**	P	**P**	**21 30 54.1**	**-0.4**
	0.4nm,0.3s,mb3.9,baz=188,slow=6.0,SNR=11						
KURK				PcP	PcP	21 31 47.3	+0.8
	0.1nm,0.4s,baz=137,slow=2.5,SNR=3.6						
KURK	**Kurchatov**	**57.90**	**343**	*e*P	**P**	**21 30 54.6**	**+0.2**
KURK				PcP	PcP	21 31 47.3	+0.8
ZAA0	**Zalesovo Array**	**59.35**	**349**	*e*P	**P**	**21 31 03.2**	**-1.3**
ZALV	**Zalesovo Beam**	**59.35**	**349**	P	**P**	**21 31 04.7**	**+0.2**
	2.9nm,0.5s,mb4.5,baz=166,slow=4.7,SNR=20						
BRVK	**Borovoye**	**62.60**	**339**	*e*P	**P**	**21 31 26.2**	**-0.3**
TXAR	**Lajitas Array**	**145.17**	**41**	PKPbc	PKPbc	21 40 41.2	+1.0
	1.3nm,0.8s,baz=278,slow=0.8,SNR=15						
TXAR	**Lajitas Array**	**145.17**	**41**	PKPbc	PKPbc	21 40 41.2	+0.9

*IDC **12** 21:27:42.6±0.8, 3928S×17499E, h217km±18km, mb3.3/3, mb1 3.5/4, mb1mx3.3/15, mbtmp3.4/4, Error ellipse: s-maj=47.1km s-min=12.1km az=130.0*

*ISCJB **12** 21:27:43.3±0.5, 3914S±006×17488E±009, h240km±5km, mb3.4/3, Error ellipse: s-maj=12.9km s-min=6.8km az=32.7*

*NEIC **12** 21:27:45.7, 3902S×17491E, h225km, MG4.5(WEL), After WEL.*

ISC 12 21:27:44.2±0.5, 3914S±006×17489E±009, h234km±5km, n62, σ0s76/64, mb3.4/3, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.10**	**280**	P	**Pn**	**21 28 14.2**	**-0.3**
RAEZ	**Rainy Point**	**0.41**	**249**	P	**Pn**	**21 28 15.3**	**+0.3**
TWVZ	**Taurewa**	**0.43**	**81**	P	**Pn**	**21 28 15.2**	**+0.1**
TWVZ				S	**S**	**21 28 37.2**	**-1.9**
WPVZ	**Whakapapa**	**0.52**	**97**	P	**Pn**	**21 28 15.8**	**+0.5**
FWVZ	**Far West T-bar**	**0.53**	**103**	P	**Pn**	**21 28 14.2**	**-1.1**
DRZ	**Dome Shelter**	**0.54**	**104**	P	**Pn**	**21 28 16.2**	**+0.8**
WTVZ	**West Tongariro**	**0.55**	**87**	P	**Pn**	**21 28 15.7**	**+0.3**
NGZ	**Ngauruhoe**	**0.56**	**94**	P	**Pn**	**21 28 15.6**	**+0.2**
WNVZ	**Wahianoa**	**0.58**	**109**	P	**Pn**	**21 28 16.2**	**+0.7**
TUVZ	**Tukino**	**0.61**	**102**	P	**Pn**	**21 28 16.3**	**+0.7**
WAZ	**Wanganui**	**0.62**	**173**	P	**Pn**	**21 28 16.6**	**+1.0**
HIZ	**Hauiti**	**0.63**	**358**	P	**Pn**	**21 28 15.2**	**-0.6**
NEZ	**North Egmont**	**0.63**	**258**	P	**Pn**	**21 28 16.3**	**+0.8**
DFE	**Dawson Falls**	**0.64**	**253**	P	**Pn**	**21 28 16.5**	**+0.8**
KATZ	**Kakaramea**	**0.65**	**75**	P	**Pn**	**21 28 15.9**	**+0.1**
PKE	**Pukeiti**	**0.70**	**265**	P	**Pn**	**21 28 16.2**	**+0.2**
MOVZ	**Moawhango**	**0.72**	**112**	P	**Pn**	**21 28 16.3**	**+0.2**
RATZ	**Rangitukua**	**0.74**

FITZ	**Fitzroy Crossi**	**28.23**	**123**	*e*P		**P**		**21 35 03.9**	**-0.8**
	4.9nm,0.8s,mb4.2								
ODAN	**Odare**	**32.77**	**337**	*e*P		**P**		**21 35 45.5**	**+0.9**
	14nm,0.5s,mb5.1								
TAPN	**Taplejung**	**33.08**	**338**	*e*P		**P**		**21 35 48.1**	**+0.7**
	46nm,0.9s,mb5.4								
RAMN	**Ramite**	**33.16**	**336**	*e*P		**P**		**21 35 49.4**	**+1.3**
	8.5nm,0.4s,mb5.0								
JIRN	**Jiri**	**33.95**	**336**	*e*P		**P**		**21 35 56.2**	**+1.2**
	41nm,0.7s,mb5.5								
LSA	**Lhasa**	**34.16**	**345**	P		**P**		**21 35 57.6**	**+0.8**
LSA	**Lhasa**	**34.16**	**345**	*e*P		**P**		**21 35 57.7**	**+0.9**
	6.4nm,0.8s,mb4.6								
GUN	**Gumba**	**34.30**	**336**	*e*P		**P**		**21 35 59.1**	**+1.1**
	35nm,0.4s,mb5.6								
DMN	**Daman**	**34.36**	**334**	*e*P		**P**		**21 35 59.1**	**+0.6**
KKN	**Kakani**	**34.45**	**335**	*e*P		**P**		**21 35 59.8**	**+0.5**
	14nm,0.5s,mb5.2								
GKN	**Gorkha**	**34.91**	**334**	*e*P		**P**		**21 36 03.7**	**+0.4**
	9.5nm,0.4s,mb5.0								
KOLN	**Koldanda**	**35.17**	**333**	*e*P		**P**		**21 36 06.4**	**+0.9**
	9.0nm,0.5s,mb4.9								
DANN	**Dangsing**	**35.60**	**333**	*e*P		**P**		**21 36 09.8**	**+0.6**
	35nm,0.5s,mb5.6								
WRA	**Warramunga Arr**	**36.44**	**120**	P		**P**		**21 36 16.6**	**0.0**
	1.4nm,0.4s,mb4.3,baz=305,slow=9.0,SNR=30								
WRA				PcP		PcP		21 38 40.6	+0.3
	0.2nm,0.5s,baz=315,slow=2.1,SNR=4.8								
WRAB	**Tennant Creek**	**36.45**	**120**	*e*P		**P**		**21 36 15.8**	**-0.8**
	12nm,1.4s,mb4.6								
WB2	**Warramunga Arr**	**36.45**	**120**	*e*P		**P**		**21 36 16.8**	**+0.1**
ASAR	**Alice Springs**	**37.65**	**125**	P		**P**		**21 36 27.4**	**+0.6**
	3.0nm,0.5s,mb4.3,baz=298,slow=7.8,SNR=27								
ASAR				PcP		PcP		21 38 44.3	+0.4
	0.8nm,0.7s,baz=323,slow=2.6,SNR=4.9								
GTA	**Gaotai**	**42.53**	**359**	*e*P		**P**		**21 37 07.4**	**+0.5**
GTA				AP		pP		21 37 11.4	-5.9
GTA				XP		sP		21 37 12.5	-8.9
GTA				AMB		AMB			
	comp=Z,2.0nm,1.4s,mb3.6								
CTA	**Charters Tower**	**47.11**	**114**	P		**P**		**21 37 42.7**	**-1.1**
	comp=Z,1.2nm,0.3s,mb4.3,baz=344,slow=7.4,SNR=3.1								
CTA	**Charters Tower**	**47.11**	**114**	P		**P**		**21 37 42.7**	**-1.1**
STKA	**Stephens Creek**	**47.51**	**131**	*e*P		**P**		**21 37 48.0**	**+1.2**
	comp=Z,1.9nm,0.5s,mb4.4								
STKA	**Stephens Creek**	**47.51**	**131**	P		**P**		**21 37 47.6**	**+0.9**
	comp=Z,2.1nm,0.5s,mb4.5,baz=315,slow=6.0,SNR=7.2								
STKA	**Stephens Creek**	**47.51**	**131**	*e*P		**P**		**21 37 47.9**	**+1.1**
	comp=Z,2.5nm,0.6s,mb4.4								
KSRS	**Korea Array**	**47.63**	**29**	P		**P**		**21 37 47.6**	**+0.1**
	comp=Z,2.4nm,0.8s,mb4.3,baz=221,slow=9.0,SNR=12								
SONM	**Songino Array**	**51.15**	**5**	P		**P**		**21 38 15.4**	**+1.2**
	comp=Z,1.1nm,0.8s,mb4.9,baz=185,slow=9.4,SNR=100								
SONM				PcP		PcP		21 39 29.6	+0.2
	comp=Z,1.1nm,0.5s,baz=186,slow=5.0,SNR=5.2								
ULN	**Ulaanbaatar**	**51.23**	**5**	*e*P		**P**		**21 38 16.1**	**+1.2**
	comp=Z,3.9nm,0.7s,mb4.5								
UCH	**Uchtor**	**51.31**	**335**	P		**P**		**21 38 14.1**	**-1.5**
TKM2	**Tokmak 2**	**51.44**	**336**	*e*P		**P**		**21 38 16.8**	**+0.3**
	comp=Z,1.1nm,0.6s,mb5.0								
EKS2	**Erkin-Say**	**51.98**	**335**	*e*P		**P**		**21 38 20.2**	**-0.4**
	comp=Z,1.1nm,0.8s,mb4.8								
EKS2				*e*pP		pP		21 38 30.1	-1.0
EKS2				*e*sP		sP		21 38 34.0	-1.3
MKAR	**Makanchi Array**	**52.56**	**344**	P		**P**		**21 38 24.6**	**-0.2**
	comp=Z,4.1nm,0.7s,mb4.5,baz=147,slow=9.0,SNR=32								
MJAR	**Matsushiro Arr**	**52.65**	**38**	P		**P**		**21 38 25.3**	**-0.4**
	comp=Z,1.8nm,0.7s,mb4.1,baz=211,slow=8.2,SNR=7.2								
TLY	**Talaya**	**54.83**	**2**	*e*P		**P**		**21 38 40.7**	**-0.6**
	comp=Z,3.9nm,0.8s,mb4.5								
KURK	**Kurchatov**	**57.15**	**343**	*e*P		**P**		**21 38 55.2**	**-2.7**
	comp=Z,4.7nm,0.8s,mb4.6								
ZAA0	**Zalesovo Array**	**58.64**	**349**	*e*P		**P**		**21 39 07.3**	**-1.0**
ZALV	**Zalesovo Beam**	**58.64**	**349**	P		**P**		**21 39 07.6**	**-0.8**
	comp=Z,5.8nm,0.7s,mb4.7,baz=183,slow=5.7,SNR=28								
ZALV	**Zalesovo Beam**	**58.64**	**349**	P		**P**		**21 39 07.6**	**-0.8**
BRVK	**Borovoye**	**61.83**	**340**	P		**P**		**21 39 29.2**	**-0.9**
MALT	**Malatya**	**70.98**	**312**	*e*P		**P**		**21 40 27.3**	**-1.8**
PETK	**Petropavlovsk-**	**73.44**	**32**	P		**P**		**21 40 43.3**	**-0.2**
	comp=Z,1.0nm,0.7s,mb3.9,baz=222,slow=1.9,SNR=3.5								
LBTB	**Lobatse**	**75.41**	**245**	P		**P**		**21 40 55.5**	**0.0**
GERES	**GERESS Array B**	**90.71**	**319**	P		**P**		**21 42 14.1**	**0.0**
	comp=Z,0.2nm,0.4s,mb3.8,baz=45,slow=3.2,SNR=4.4								
TXAR	**Lajitas Array**	**145.08**	**40**	PKPbc		PKPbc		21 48 49.6	+0.9
	comp=Z,3.9nm,0.5s,baz=287,slow=0.8,SNR=65								
MIAR	**Mount Ida**	**146.08**	**22**	*e*PKPdf		PKPdf		21 48 50.7	-0.1

ISCJB **12** *21:40:42.1±0.6,3785N±002×2084E±002,h6km±3km, mb3.6/8,Error ellipse: s-maj=4.1km s-min=2.8km az=34.6*
ATH **12** *21:40:43.3,3789N×2091E,h15km,MD3.9/17*
NEIC **12** *21:40:43.3,3787N×2090E,h14km,MD3.9(ATH), ML4.3(THE),After ATH.*
CSEM **12** *21:40:43.7±0.1,3781N×2079E,h8km,Ms3.5,Error ellipse: s-maj=3.3km s-min=1.5km az=40.0*
THE **12** *21:40:44.4,3789N×2086E,h5km,ML4.3*
IDC **12** *21:40:46.3±4.9,3801N×2090E,h29km±39km,mb3.5/8, mb1 3.6/15,mb1mx3.5/32,mbtmp3.5/15,ML3.5/6,MS2.8/1, Ms1 2.8/1,ms1mx2.2/24,Error ellipse: s-maj=16.2km s-min=14.1km az=159.0*
SKO **12** *21:40:47.6,3821N×2076E,h0km*
VIE **12** *21:40:54.0±1.2,3876N×2067E,h10km,mb3.3/1,Ms3.5/1, Error ellipse: s-maj=69.8km s-min=8.0km az=67.0*
ISC 12 21:40:43.3±0.5,3788N±002×2087E±002,h5km±3km,n82,
σ1§27/113,mb3.6/8,2C-5D,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.24**	**344**	*e*Pg	**Pg**	**21 40 48.6**	**+0.7**
VLS	**Valsamata**	**0.37**	**323**	*e*Pg	**Pg**	**21 40 51.0**	**+0.6**
VLS				*e*Sg	**Sg**	**21 40 57.1**	**+1.9**
VLS	**Valsamata**	**0.37**	**323**	↑*i*PB	**Pg**	**21 40 50.9**	**+0.5**
VLS				*e*SB	**Sg**	**21 40 57.7**	**+2.5**
VLS	**Valsamata**	**0.37**	**323**	P	**Pg**	**21 40 51.0**	**+0.6**
VLS				S	**Sg**	**21 40 57.1**	**+1.9**
VLS				*e*Sb	**Sg**	**21 40 57.7**	**+2.5**
RLS	**Riolos of Patr**	**0.50**	**69**	↓*i*PB	**Pg**	**21 40 52.1**	**-0.9**
RLS				*e*SB	**Sg**	**21 40 59.4**	**-0.2**
LKD	**Levkas**	**0.84**	**348**	*e*Pg	**Pg**	**21 40 58.9**	**-0.6**
LKD				*e*Sg	**Sg**	**21 41 12.3**	**+1.9**
ITM	**Ithomi**	**1.09**	**129**	↑*i*PN	**Pn**	**21 41 03.9**	**-1.3**
ITM				*e*SN	**Sn**	**21 41 18.7**	**-2.0**
EVR	**Evrytania**	**1.27**	**35**	*e*Pg	**Pg**	**21 41 06.8**	**-0.8**
EVR				*e*Sb	**Sb**	**21 41 25.6**	**+1.3**
VLX	**Vlachokerasia**	**1.30**	**113**	*e*Pg	**Pg**	**21 41 08.3**	**0.0**
VLX				*e*Sg	**Sg**	**21 41 27.2**	**+2.0**
AGG	**Agios Georgios**	**1.62**	**45**	*e*Pg	**Pg**	**21 41 12.1**	**-2.2**
AGG				*e*Sg	**Sg**	**21 41 35.7**	**+0.5**
LTK	**Loutraki**	**1.66**	**84**	*e*Pb	**Pb**	**21 41 12.8**	**-1.6**
LTK				*e*Sb	**Sb**	**21 41 36.6**	**+1.0**
IGT	**Igoumenitsa**	**1.70**	**346**	*e*Pb	**Pb**	**21 41 14.0**	**-1.0**
IGT				*e*Sb	**Sb**	**21 41 36.3**	**-0.4**
JAN	**Janina**	**1.77**	**360**	*e*PN	**Pn**	**21 41 15.5**	**+0.9**
JAN	**Janina**	**1.77**	**360**	*e*Pg	**Pg**	**21 41 16.5**	**-0.8**
LKR	**Lokris**	**1.84**	**65**	*e*Pb	**Pb**	**21 41 15.6**	**-1.9**
LKR				*e*Sb	**Sb**	**21 41 41.2**	**+0.4**
LKR	**Lokris**	**1.84**	**65**	*e*Pb	**Pb**	**21 41 15.6**	**-1.9**
LKR				*e*Sb	**Sb**	**21 41 41.2**	**+0.4**
THL	**Klokotos Trika**	**1.90**	**28**	*e*Pb	**Pb**	**21 41 17.3**	**-1.2**
THL				*e*Sb	**Sb**	**21 41 41.1**	**-1.5**
THL	**Klokotos Trika**	**1.90**	**28**	*e*Pn	**Pn**	**21 41 18.0**	**+1.6**
THL				*e*Sb	**Sb**	**21 41 41.1**	**-1.5**
DID	**Didima**	**1.92**	**101**	*e*Pb	**Pb**	**21 41 17.8**	**-0.9**
DID				*e*Sb	**Sb**	**21 41 42.4**	**-0.4**
MEV	**Metsovon**	**1.92**	**8**	*e*Pb	**Pb**	**21 41 16.9**	**-1.9**
KEK	**Kerkira**	**2.01**	**336**	*e*PN	**Pn**	**21 41 18.6**	**+0.8**
VLI	**Veliai**	**2.02**	**125**	*e*PN	**Pn**	**21 41 18.5**	**+0.6**
VLI	**Veliai**	**2.02**	**125**	*e*Pg	**Pg**	**21 41 20.0**	**-1.9**
NAIG	**Nisos Aigina**	**2.08**	**93**	*e*PN	**Pn**	**21 41 19.5**	**+0.7**
NAIG	**Nisos Aigina**	**2.08**	**93**	*e*Pn	**Pn**	**21 41 20.0**	**+1.2**
ATH	**Athens Observa**	**2.25**	**87**	*e*PN	**Pn**	**21 41 21.5**	**+0.3**
KVR	**Kavouri**	**2.30**	**90**	*e*PN	**Pn**	**21 41 22.5**	**+0.7**
KVR	**Kavouri**	**2.30**	**90**	*e*Pb	**Pb**	**21 41 22.0**	**-3.2**
KYTH	**Kithira**	**2.36**	**132**	*e*Pg	**Pg**	**21 41 26.0**	**-2.5**
KZN	**Kozani**	**2.52**	**16**	*e*PN	**Pn**	**21 41 26.2**	**+1.3**
KZN	**Kozani**	**2.52**	**16**	*e*Pn	**Pn**	**21 41 26.8**	**+1.9**
LIT	**Litokhoron**	**2.55**	**29**	*e*Pn	**Pn**	**21 41 26.6**	**+1.4**
LIT				*e*Sn	**Sn**	**21 41 57.7**	**+1.0**
LIT	**Litokhoron**	**2.55**	**29**	*e*Pn	**Pn**	**21 41 26.6**	**+1.3**
FNA	**Florina**	**2.92**	**8**	*e*Pn	**Pn**	**21 41 31.4**	**+1.0**
FNA				*e*Sn	**Sn**	**21 42 07.3**	**+1.4**
BIA	**Bitola**	**3.15**	**6**	*e*Pn	**Pn**	**21 41 34.4**	**+0.8**
BIA	**Bitola**	**3.15**	**6**	*e*Pn	**Pn**	**21 41 34.2**	**+0.7**
PLG	**Polygyros**	**3.19**	**38**	*e*PN	**Pn**	**21 41 35.1**	**+1.0**
GRG	**Griva**	**3.29**	**21**	*e*Pn	**Pn**	**21 41 36.6**	**+1.1**
TIP	**Timpagrande**	**3.47**	**293**	P	**Pn**	**21 41 38.9**	**+0.9**
KRUS	**Krusevo**	**3.50**	**5**	*e*Pn	**Pn**	**21 41 39.1**	**+0.9**
TIR	**Tirane**	**3.55**	**348**	P	**Pn**	**21 41 41.0**	**+2.0**
KNT	**Kendrikon**	**3.63**	**25**	*e*Pn	**Pn**	**21 41 41.1**	**+1.0**
VAM	**Vamos**	**3.64**	**132**	*e*PN	**Pn**	**21 41 41.5**	**+1.2**
APE	**Apeiranthos**	**3.80**	**101**	*e*PN	**Pn**	**21 41 43.7**	**+1.3**
APE	**Apeiranthos**	**3.80**	**101**	*e*Pn	**Pn**	**21 41 43.2**	**+0.8**
STIP	**Stip**	**3.94**	**15**	*e*Pn	**Pn**	**21 41 44.6**	**+0.3**
PE1	**Pezze di Greco**	**3.96**	**319**	*e*Pn	**Pn**	**21 41 45.0**	**+0.4**
IDI	**Anoyia**	**4.14**	**127**	Pn	**Pn**	**21 41 48.1**	**+1.0**
	0.9nm,0.3s,baz=341,slow=11,SNR=9.5						
IDI				Sn	**Sn**	**21 42 36.6**	**+0.6**
	3.3nm,0.3s,baz=38,slow=19,SNR=5.3						
IDI	**Anoyia**	**4.14**	**127**	Pn	**Pn**	**21 41 48.1**	**+0.9**
IDI				Sn	**Sn**	**21 42 36.5**	**+0.5**
NVR	**Nevrokopi**	**4.16**	**33**	*e*PN	**Pn**	**21 41 48.6**	**+1.2**
SG1	**Sgolgore (BA)**	**4.39**	**314**	*e*Pn	**Pn**	**21 41 51.3**	**+0.8**
CUC	**Castrocucco**	**4.47**	**300**	P	**Pn**	**21 41 54.3**	**+2.7**
NPS	**Neapolis**	**4.63**	**123**	*e*PN	**Pn**	**21 41 54.5**	**+0.7**
VAE	**Valguarnera**	**5.14**	**267**	Pn	**Pn**	**21 42 01.6**	**+0.8**
	0.7nm,0.3s,baz=59,slow=5.9,SNR=3.1						
VAE				Sn	**Sn**	**21 43 03.1**	**+2.7**
	3.7nm,0.3s,baz=196,slow=18,SNR=3.0						
VAE				LR	LR	21 44 02.8	
	comp=Z,115nm,21.6s,baz=312,slow=38						
STON	**Ston**	**5.54**	**335**	*e*Pn	**Pn**	**21 42 04.8**	**-1.5**
STON				Sn	**Sn**	**21 43 07.0**	**-3.4**
STON	**Ston**	**5.54**	**335**	*e*Pn	**Pn**	**21 42 04.8**	**-1.5**
STON				Sn	**Sn**	**21 43 06.9**	**-3.5**
KARP	**Karpathos**	**5.56**	**113**	*e*PN	**Pn**	**21 42 08.3**	**+1.6**
DIVS	**Divibare**	**6.25**	**354**	*e*Pn	**Pn**	**21 42 14.4**	**-1.6**
BLY	**Banja Luka**	**7.40**	**339**	*e*Pn	**Pn**	**21 42 30.8**	**-1.1**
BLY				*e*Sn	**Sn**	**21 43 50.9**	**-5.2**
MLR	**Muntele Rosu**	**8.50**	**25**	Pn	**Pn**	**21 42 47.7**	**+0.8**
CRES	**Cresnjev**	**8.90**	**335**	*e*Pn	**Pn**	**21 42 51.5**	**-1.0**
CEY	**Cerknica**	**9.20**	**331**	*e*Pn	**Pn**	**21 42 55.4**	**-1.2**
KEST	**Kesra**	**9.49**	**260**	Pn	**Pn**	**21 43 01.1**	**+0.6**
	0.1nm,0.3s,baz=29,slow=6.8,SNR=5.3						
KEST				Sn	**Sn**	**21 44 46.0**	**-1.5**
	0.1nm,0.3s,baz=221,slow=20,SNR=3.1						
VOY	**Vojsko**	**9.65**	**330**	*e*Pn	**Pn**	**21 43 02.7**	**-0.1**
VOY				*e*Sn	**Sn**	**21 44 47.2**	**-4.4**
SOKA	**Soboth**	**9.79**	**336**	↑*i*Pn	**Pn**	**21 43 02.2**	**-2.5**
SOKA				↓*i*Sn	**Sn**	**21 44 45.6**	**-9.3**
SOKA	**Soboth**	**9.79**	**336**	↑*i*Pn	**Pn**	**21 43 03.4**	**-1.2**
SOKA				↓*i*Sn	**Sn**	**21 44 47.9**	**-7.0**
OBKA	**Obir**	**9.81**	**333**	↓*i*Pn	**Pn**	**21 43 03.6**	**-1.3**
OBKA				↓*i*Sn	**Sn**	**21 44 52.7**	**-2.7**
DAVOX	**Davos/Dischmat**	**12.04**	**321**	Pn	**Pn**	**21 43 35.8**	**+0.4**
	0.1nm,0.3s,baz=209,slow=11,SNR=2.6						
DAVOX				Sn	**Sn**	**21 45 48.6**	**-1.4**
	0.3nm,0.3s,baz=197,slow=20,SNR=3.4						
GERES	**GERESS Array B**	**12.13**	**337**	Pn	**Pn**	**21 43 35.4**	**-1.2**
	0.2nm,0.3s,baz=156,slow=14,SNR=5.3						
GERES				Sn	**Sn**	**21 45 44.9**	**-7.2**
	0.1nm,0.3s,baz=156,slow=25,SNR=3.7						
ESDC	**Sonseca Array**	**19.43**	**283**	P	**Pn**	**21 45 11.2**	**-0.3**
	0.1nm,0.3s,baz=70,slow=10,SNR=5.1						
MDT	**Mideli**	**21.36**	**264**	P	**P**	**21 45 32.3**	**+0.8**
	2.2nm,0.9s,mb3.5,baz=90,slow=9.1,SNR=4.7						
HFS	**Hagfors**	**22.74**	**351**	P	**P**	**21 45 45.0**	**-0.8**
	2.2nm,0.6s,mb3.8,baz=166,slow=8.7,SNR=6.8						
EKA	**Eskdalemuir Ar**	**23.83**	**325**	P	**P**	**21 45 56.5**	**-0.5**
	3.0nm,0.9s,mb3.7,baz=132,slow=9.7,SNR=8.0						
EKA	**Eskdalemuir Ar**	**23.83**	**325**	P	**P**	**21 45 56.5**	**-0.5**
NB2	**NORSAR Subarra**	**23.96**	**348**	P	**P**	**21 46 01.6**	**+3.4**
	comp=Z,1.8nm,0.7s,mb3.6,baz=155,slow=9.3						
NOA	**NORSAR Array B**	**23.96**	**348**	P	**P**	**21 45 56.5**	**-1.7**
	comp=Z,1.2nm,0.8s,mb3.4,baz=168,slow=11,SNR=3.8						
TORD	**Torodi Ar. Bea**	**29.98**	**220**	P	**P**	**21 46 53.1**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.4,baz=30,slow=9.5,SNR=3.7						
ARCES	**ARCESS Array B**	**31.81**	**3**	pP	pP	21 47 12.2	+2.3
	comp=Z,0.9nm,0.5s,baz=192,slow=9.7,SNR=7.6						
MKAR	**Makanchi Array**	**45.22**	**58**	P	**P**	**21 48 59.2**	**-2.0**
	comp=Z,0.6nm,0.5s,mb3.6,baz=279,slow=6.6,SNR=3.3						
ZALV	**Zalesovo Beam**	**45.69**	**48**	P	**P**	**21 49 04.2**	**-0.6**
	comp=Z,1.6nm,0.4s,mb4.3,baz=274,slow=9.4,SNR=8.6						
SONM	**Songino Array**	**60.43**	**51**	P	**P**	**21 50 51.5**	**-2.1**
	comp=Z,0.2nm,0.5s,mb3.5,baz=293,slow=9.2,SNR=2.4						

BJI **12** *21:43:00.1,4295×10089E,h27km,mB5.0,mb4.9,Ms4.3, Msz4.3*
ISCJB **12** *21:43:04.5±1.9,369S±005×10063E±006,h25km±13km, mb4.5/42,Error ellipse: s-maj=11.2km s-min=6.1km az=139.7*
MOS **12** *21:43:06.9±1.0,355S×10076E,h39km,mb4.7/26,Error ellipse: s-maj=14.6km s-min=7.8km az=105.8*
NEIC **12** *21:43:07.1±0.2,366S×10069E,mb4.6/14,Error ellipse: s-maj=7.4km s-min=4.9km az=56.0*
IDC **12** *21:43:07.0±3.6,359S×10075E,h24km±22km,mb4.2/16, mb1 4.3/17,mb1mx4.2/24,mbtmp4.2/17,ML4.3/1,Error ellipse: s-maj=32.1km s-min=12.1km az=48.0*
DJA **12** *21:43:43,262S×10250E,h87km,Mw5.1/4*
ISC 12 21:43:07.5±1.8,367S±005×10065E±006,h31km±13km,
h29km±1.0km:pP-P,n106,σ0§89/104,mb4.5/42,1C,
Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPI	**Padang Panjang**	**3.20**	**355**	P	**Pn**	**21 43 55.9**	**+0.2**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.68**	**75**	P	**Pn**	**21 44 38.9**	**+9.0**
	0.0nm,0.0s						
DBJI	**Dramaga**	**6.72**	**115**	P	**Pn**	**21 44 44.8**	**+0.7**
	0.0nm,0.0s						
SKJI	**Sukabumi**	**6.75**	**120**	P	**Pn**	**21 44 43.1**	**-1.5**
	0.0nm,0.0s						
LEM	**Lembang**	**7.62**	**115**	P	**Pn**	**21 44 58.0**	**+1.6**
	0.0nm,0.0s						
COCO	**West Island**	**9.27**	**204**	Pn	**Pn**	**21 45 18.4**	**-0.7**
BJII	**Banjamegara**	**9.73**	**112**	P	**Pn**	**21 45 26.0**	**+0.6**
	0.0nm,0.0s						
SJI	**Sawahan**	**11.78**	**111**	P	**Pn**	**21 45 52.8**	**-0.7**
	0.0nm,0.0s						
BBKI	**Baar Baru**	**14.17**	**90**	P	**Pn**	**21 46 33.3**	**+7.1**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**18.30**	**58**	*e*Pn	**Pn**	**21 47 19.7**	**+0.5**
KAPI	**Kappang**	**19.09**	**95**	P	**Pn**	**21 47 26.5**	**-2.4**
	1.0nm,0.3s,baz=276,slow=14,SNR=8.5						
PCI	**Palu**	**19.37**	**82**	P	**Pn**	**21 47 32.9**	**+0.7**
	0.0nm,0.0s						
KDI	**Kendari**	**21.92**	**91**	P	**P**	**21 48 00.6**	**+2.0**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**22.05**	**356**	P	**P**	**21 47 57.9**	**-1.9**
	5.6nm,0.6s,mb4.1,baz=185,slow=10,SNR=29						
CMAR	**Chiang Mai Arr**	**22.05**	**356**	P	**P**	**21 47 57.9**	**-1.9**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHTO	**Chiang Mai**	**22.40**	**356**	*e*P	**P**	**21 48 04.2**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
CHTO	**Chiang Mai**	**22.40**	**356**	*e*P	**P**	**21 48 04.2**	**+0.6**
	comp=Z,7.4nm,0.9s,mb4.1						
PALK	**Pallekele**	**22.68**	**299**	P	**P**	**21 48 07.5**	**+0.9**
BATI	**Baumata**	**23.74**	**107**	P	**P**	**21 48 17.6**	**+0.3**
	comp=Z,10nm,0.3s,mb4.7,baz=286,slow=5.7,SNR=3.0						
QIZ	**Qiongzhong**	**24.30**	**22**	*e*P	**P**	**21 48 21.9**	**-0.5**
	comp=Z,17nm,1.1s,mb4.4						
MBWA	**Marble Bar**	**25.43**	**135**	P	**P**	**21 48 32.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**28.36**	**122**	*e*P	**P**	**21 48 59.6**	**+0.5**
	comp=Z,6.7nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**28.36**	**122**	P	**P**	**21 48 58.7**	**-0.4**
	comp=Z,2.2nm,0.7s,mb3.9,baz=313,slow=8.8,SNR=6.1						
FITZ	**Fitzroy Crossi**	**28.36**	**122**	*e*P	**P**	**21 48 58.9**	**-0.2**
	comp=Z,6.4nm,0.7s,mb4.4						
LSA	**Lhasa**	**34.40**	**345**	P	**P**	**21 49 54.0**	**+1.9**
LSA	**Lhasa**	**34.40**	**345**	*e*P	**P**	**21 49 52.8**	**+0.7**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**34.40**	**345**	*e*P	**P**	**21 49 52.8**	**+0.6**
	comp=Z,4.7nm,0.8s,mb4.5						
YHNB	**Yeheng**	**34.63**	**35**	P	**P**	**21 49 53.9**	**-0.3**
ENH	**Enshi**	**34.79**	**13**	*e*P	**P**	**21 49 54.7**	**-0.7**
WRA	**Warramunga Arr**	**36.61**	**119**	P	**P**	**21 50 10.8**	**-0.5**
	comp=Z,2.3nm,0.5s,mb4.3,baz=308,slow=9.3,SNR=27						
WRA				S	**S**	**21 55 51.6**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=291,slow=16,SNR=4.9						
WRA	**Warramunga Arr**	**36.61**	**119**	P	**P**	**21 50 10.8**	**-0.4**
WRA				S	**S**	**21 55 51.6**	**-0.8**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA				smax			
	comp=N,1.0nm,0.8s						
WRAB	**Tennant Creek**	**36.62**	**119**	*e*P	**P**	**21 50 11.0**	**-0.3**
WRAB				*e*	pP	21 50 19.8	-0.6
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**36.62**	**119**	*e*P	**P**	**21 50 11.0**	**-0.3**
	comp=Z,3.9nm,0.6s,mb4.4						
WRAB				*e*	pP	21 50 19.8	-0.6
WB2	**Warramunga Arr**	**36.62**	**119**	*e*P	**P**	**21 50 10.8**	**-0.5**
WB2				*e*	pP	21 50 20.0	-0.4
ASAR	**Alice Springs**	**37.76**	**125**	P	**P**	**21 50 20.9**	**-0.1**
	comp=Z,1.7nm,0.3s,mb4.2,baz=299,slow=7.6,SNR=22						
ASAR				S	**S**	**21 56 12.5**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=308,slow=15,SNR=2.8						
ASAR	**Alice Springs**	**37.76**	**125**	P	**P**	**21 50 20.9**	**-0.1**
ASAR				S	**S**	**21 56 12.5**	**+2.6**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
XAN	**Xi'an**	**38.31**	**11**	P	**P**	**21 50 24.8**	**-0.6**
XAN				AP	pP	21 50 32.6	-1.9
XAN				XP	sP	21 50 36.5	-1.7
XAN				AMB	AMB		
	comp=Z,28nm,0.9s,mb5.0						
XAN				AMB	AMB		
	comp=Z,39nm,4.6s						
LZH	**Lanzhou**	**39.66**	**4**	*e*P	**P**	**21 50 37.4**	**+0.7**
LZH				AP	pP	21 50 44.5	-1.3
LZH				XP	sP	21 50 47.7	-1.8
LZH				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,80nm,4.0s						
GTA	**Gaotai**	**42.87**	**359**	P	**P**	**21 51 03.7**	**+0.7**
GTA				AP	pP	21 51 08.3	-3.9
GTA				XP	sP	21 51 10.9	-5.0
GTA				AMB	AMB		
	comp=Z,8.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**45.41**	**12**	*e*P	**P**	**21 51 25.0**	**+1.6**
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb4.9						
HHC				AMB	A

BRVK					*e*PcP	PcP	21 54 05.1	+0.1	
BOD	**Bodaibo**	**62.23**	**8**	*e*P	**P**		**21 53 25.8**	**-0.2**	
BOD				pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.5								
YSS	**Yuzh-Sakhalins**	**62.55**	**31**	*e*P	**P**		**21 53 28.0**	**-0.4**	
YSS				pmax	pmax				
	comp=Z,30nm,1.0s,mb5.4								
YSS	**Yuzh-Sakhalins**	**62.55**	**31**	*e*P	**P**		**21 53 28.5**	**0.0**	
CASY	**Casey**	**62.88**	**176**	*e*P	**P**		**21 53 31.1**	**+0.8**	
AB31	**Akbulak array**	**63.41**	**331**	*i* P	**P**		**21 53 33.3**	**-0.8**	
AB31				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.9								
AKTK	**Aktyubinsk**	**65.12**	**331**	P	**P**		**21 53 43.9**	**-1.4**	
AKTO	**Aktyubinsk**	**65.12**	**331**	P	**P**		**21 53 43.9**	**-1.4**	
	comp=Z,0.9nm,0.6s,mb4.0,baz=106,slow=7.8,SNR=3.8								
AKTO	**Aktyubinsk**	**65.12**	**331**	P	**P**		**21 53 43.9**	**-1.4**	
AKTO				pmax	pmax				
	comp=Z,1.0nm,0.6s,mb4.0								
ARU	**Arti**	**68.98**	**336***c*	*i* P	**P**		**21 54 09.1**	**-0.6**	
ARU				*e*S	S		22 03 11.5	-0.8	
ARU				*e*SS	SS		22 07 32.4	-6.1	
ARU				pmax	pmax				
	comp=Z,11nm,1.7s,mb4.5								
ARU	**Arti**	**68.98**	**336**	*e*P	**P**		**21 54 09.3**	**-0.4**	
	comp=Z,6.5nm,1.1s,mb4.5								
ASF	**Jabal al Asfar**	**70.08**	**306**	P	**P**		**21 54 17.2**	**+0.2**	
	comp=Z,0.9nm,0.6s,mb3.9,baz=108,slow=6.4,SNR=2.5								
ASF	**Jabal al Asfar**	**70.08**	**306**	P	**P**		**21 54 17.2**	**+0.2**	
ASF				pmax	pmax				
	comp=Z,1.0nm,0.6s								
MALT	**Malatya**	**70.93**	**313**	P	**P**		**21 54 22.5**	**+0.4**	
PETK	**Petropavlovsk-**	**73.95**	**32**	P	**P**		**21 54 39.1**	**-0.6**	
	comp=Z,1.7nm,0.8s,mb4.0,baz=255,slow=4.3,SNR=3.5								
PETK	**Petropavlovsk-**	**73.95**	**32**	P	**P**		**21 54 39.1**	**-0.6**	
PETK				pmax	pmax				
	comp=Z,2.0nm,0.8s,mb4.1								
OBN	**Obninsk**	**78.54**	**328**	*e*P	**P**		**21 55 05.9**	**+0.1**	
OBN				pmax	pmax				
	comp=Z,5.0nm,1.0s,mb4.4								
OBN	**Obninsk**	**78.54**	**328**	*e*P	**P**		**21 55 06.2**	**+0.4**	
	comp=Z,14nm,0.8s,mb4.9								
ARCES	**ARCESS Array B**	**88.25**	**340**	P	**P**		**21 55 56.5**	**+1.1**	
	comp=Z,2.1nm,0.8s,mb4.4,baz=88,slow=6.3,SNR=4.6								
ARCES	**ARCESS Array B**	**88.25**	**340**	P	**P**		**21 55 56.6**	**+1.2**	
ARCES				pmax	pmax				
	comp=Z,2.0nm,0.8s								
GERES	**GERESS Array B**	**90.72**	**319**	P	**P**		**21 56 07.9**	**+0.4**	
	comp=Z,0.6nm,0.7s,mb4.0,baz=57,slow=4.9,SNR=6.1								
GERES	**GERESS Array B**	**90.72**	**319**	P	**P**		**21 56 07.9**	**+0.5**	
GERES				pmax	pmax				
	comp=Z,1.0nm,0.7s								
DBIC	**Dimbokro**	**105.80**	**276**	PKiKP	PKiKP		22 01 29.4	+0.2	
WMOK	**Wichita Mounta**	**144.21**	**28**	*e*PKiKP	PKPdf		22 02 38.7	-2.2	
TXAR	**Lajitas Array**	**145.60**	**40**	PKPbc	PKPbc		22 02 45.0	+1.3	
	comp=Z,6.1nm,0.5s,baz=270,slow=0.6,SNR=135								
TXAR	**Lajitas Array**	**145.60**	**40**	PKiKP	PKPdf		22 02 45.0	+1.5	
TXAR				pmax	pmax				
	comp=Z,6.0nm,0.5s								
MIAR	**Mount Ida**	**146.56**	**22**	*e*PKP2	PKPab		22 02 45.3	-2.1	
JCT	**Junction City**	**147.07**	**34**	*e*PKP2	PKPab		22 02 46.0	-3.5	

ISCJB **12** *21:43:27.0±0.4, 42.92N±0.03°×45.72E±0.02, h10km, Error ellipse: s-maj=4.4km s-min=2.3km az=19.0*
TIF **12** *21:43:27.3, 42.88N×45.71E, h13km±2km*
CSEM **12** *21:43:27.0, 42.85N×45.71E, h10km, mb3.9, After OBN*
MOS **12** *21:43:27.0±1.5, 42.85N×45.71E, h10km, mb3.9/1, Error ellipse: s-maj=14.3km s-min=7.0km az=23.9*

ISC 12 21:43:27.4±0.4, 42.90N±0.03°×45.74E±0.03°, h10km, n26, σ1 8 33/50, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.43**	**124**	*i* PG		**Pg**	**21 43 34.0**	**-1.8**
BTLR				*e*S		**Sg**	**21 43 44.0**	**+2.6**
BTLR				pmax	pmax			
	comp=Z,98nm,0.3s							
BTLR	**Botlikh**	**0.43**	**124**	*i* Pg		**Pg**	**21 43 34.0**	**-1.8**
	comp=Z,98nm,0.3s							
BTLR				*e*Sg		**Sg**	**21 43 44.0**	**+2.6**
SNJR	**Sundja**	**0.70**	**284**	*i* Pg		**Pg**	**21 43 40.0**	**-1.0**
SNJR				*i* Sg		**Sg**	**21 43 50.6**	**+0.4**
VLKR	**Vladikavkaz**	**0.80**	**281**	*e*Pg		**Pg**	**21 43 42.5**	**-0.2**
VLKR				*i* Sg		**Sg**	**21 43 54.1**	**+1.0**
DBC	**Dubki**	**0.81**	**81**	*i* PG		**Pg**	**21 43 41.2**	**-1.7**
DBC				*i* S		**Sg**	**21 43 53.2**	**-0.2**
DBC				pmax	pmax			
	comp=Z,69nm,0.1s							
DBC	**Dubki**	**0.81**	**81**	*i* Pg		**Pg**	**21 43 41.2**	**-1.7**
	comp=Z,69nm,0.1s							
DBC				*i* Sg		**Sg**	**21 43 53.2**	**-0.2**
BTKR	**Batakoyurt**	**1.00**	**298**	*i* Pg		**Pg**	**21 43 46.4**	**-0.2**
BTKR				*i* Sg		**Sg**	**21 44 01.6**	**+2.1**
BUJR	**Buynaksk**	**1.01**	**94**	*e*Pg		**Pg**	**21 43 48.2**	**+1.4**
BUJR				*e*Sg		**Sg**	**21 44 04.5**	**+4.7**
LACR	**Lac**	**1.07**	**266**	*i* Pg		**Pg**	**21 43 46.2**	**-1.7**
LACR				*i* Sg		**Sg**	**21 44 01.7**	**-1.1**
TRKR	**Terskaya**	**1.10**	**318**	*e*Pg		**Pg**	**21 43 48.2**	**-0.4**
TRKR				*i* Sg		**Sg**	**21 44 05.3**	**+2.4**
ARNR	**Ardon**	**1.11**	**285**	*i* Pg		**Pg**	**21 43 48.1**	**-0.7**
ARNR				*e*Sg		**Sg**	**21 44 04.0**	**+0.8**
KMSR	**Komsomolskaya**	**1.16**	**294**	*i* Pg		**Pg**	**21 43 49.8**	**+0.1**
KMSR				*i* Sg		**Sg**	**21 44 06.1**	**+1.3**
KORR	**Kora**	**1.24**	**279**	*e*Pg		**Pg**	**21 43 50.2**	**-1.1**
KORR				*e*Sg		**Sg**	**21 44 07.4**	**0.0**
KMKR	**Kumukh**	**1.27**	**127**	*i* PG		**Pg**	**21 43 50.0**	**-1.7**
KMKR				*i* S		**Sb**	**21 44 07.0**	**-0.6**
KMKR				pmax	pmax			
	comp=Z,56nm,0.2s							
KMKR	**Kumukh**	**1.27**	**127**	*i* Pg		**Pg**	**21 43 50.0**	**-1.7**
	comp=Z,56nm,0.2s							
KMKR				*i* Sg		**Sb**	**21 44 07.0**	**-0.6**
MAK	**Makhachkala**	**1.29**	**87**	PG		**Pg**	**21 43 54.8**	**+2.5**
MAK				*e*			21 44 14.4	
MAK				pmax	pmax			
	comp=Z,606nm,1.8s							
MAK				smax				
	comp=N,501nm,0.4s							
MAK				smax				
	comp=E,1μm,0.7s							
MAK	**Makhachkala**	**1.29**	**87**	Pg		**Pg**	**21 43 54.8**	**+2.5**
	comp=E,606nm,1.8s							
MAK				*e*Sg		**Sg**	**21 44 14.4**	**+5.3**
	comp=E,501nm,0.4s							
PRTR	**Priterechnaya**	**1.36**	**309**	*i* Pg		**Pg**	**21 43 52.2**	**-1.4**
PRTR				*i* Sg		**Sg**	**21 44 11.8**	**+0.6**
ZEI	**Tsey**	**1.36**	**265**	*e*Pg		**Pg**	**21 43 51.1**	**-2.5**
ZEI				*e*Sg		**Sg**	**21 44 08.4**	**-2.9**
TBLG	**Delisi**	**1.39**	**213**	Pg		**Pg**	**21 43 53.1**	**-1.0**
TBLG				Sg		**Sg**	**21 44 12.5**	**+0.4**
MTA	**Mtatsminda**	**1.40**	**211**	P		**Pn**	**21 43 53.3**	**+0.3**
MTA				S		**Sn**	**21 44 13.3**	**+1.9**
LSNR	**Lesken**	**1.46**	**285**	*i* Pg		**Pg**	**21 43 53.4**	**-2.0**
LSNR				*i* Sg		**Sg**	**21 44 13.5**	**-0.9**
DGRG	**David-gareji**	**1.48**	**191**	P		**Pn**	**21 43 56.3**	**+2.2**
DGRG				S		**Sn**	**21 44 18.7**	**+5.3**
GOR	**Gori**	**1.52**	**233**	P		**Pn**	**21 43 54.8**	**+0.2**
GOR				S		**Sn**	**21 44 15.4**	**+1.0**
ONI	**Oni**	**1.72**	**260**	S		**Sn**	**21 44 21.0**	**+1.6**
ONI	**Oni**	**1.72**	**260**	P		**Pn**	**21 43 57.6**	**+0.2**
ONI				S		**Sn**	**21 44 21.0**	**+1.6**

IDC **12** *21:46:11.9±0.8, 306S×101.22E, h0km, mb4.4/15, mb1 4.5/16, mb1mx4.3/23, mbtmp4.4/16, ML4.3/1, Error ellipse: s-maj=30.6km s-min=13.0km az=48.0*
BJI **12** *21:46:13.1, 301S×101.17E, h17km, mB5.1, mb4.8, Ms4.3, Msz4.3*
NEIC **12** *21:46:14.8±2.8, 308S×101.21E, h21km±20km, mb4.6/11, Error ellipse: s-maj=8.2km s-min=5.6km az=54.0*
ISCJB **12** *21:46:16.0±1.5, 3.16S±0.04×101.25E±0.05, h46km±14km, mb4.7/33, Error ellipse: s-maj=9.6km s-min=6.5km az=147.5*

ISC 12 21:46:18.5±1.3, 314S±0.05°×10130E±0.05, h49km±13km, h40km±4.5km:pP-P, n66, σ0.9 97/65, mb4.7/33, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
COCO	**West Island**	**10.02**	**206**	*e*Pn		**Pn**	**21 48 37.5**	**-2.4**
COCO				Sn		**Sn**	**21 50 30.8**	**-0.2**
KKM	**Kota Kinabalu**	**17.47**	**59**	Pn		**Pn**	**21 50 18.3**	**-0.5**
KAPI	**Kappang**	**18.50**	**96**	P		**Pn**	**21 50 32.1**	**+0.7**
	0.9nm,0.3s,baz=288,slow=9.7,SNR=7.1							
CMAR	**Chiang Mai Arr**	**21.59**	**354**	P		**P**	**21 51 01.8**	**-2.5**
	4.6nm,0.8s,mb4.0,baz=184,slow=8.9,SNR=13							
CMAR				PcP		PcP	21 55 05.2	+0.1
	0.5nm,0.5s,baz=206,slow=1.4,SNR=4.5							
BATI	**Baumata**	**23.28**	**109**	P		**P**	**21 51 22.9**	**+0.6**
	11nm,0.7s,mb4.4,baz=270,slow=19,SNR=2.3							
BATI				S		**S**	**21 55 26.1**	**-5.0**
	5.9nm,0.3s,baz=125,slow=19,SNR=2.8							
FITZ	**Fitzroy Crossi**	**28.10**	**124**	*e*P		**P**	**21 52 06.6**	**+0.7**
	6.9nm,1.0s,mb4.2							
FITZ	**Fitzroy Crossi**	**28.10**	**124**	P		**P**	**21 52 06.1**	**+0.2**
	3.1nm,0.7s,mb4.0,baz=224,slow=3.6,SNR=7.7							
FITZ	**Fitzroy Crossi**	**28.10**	**124**	*e*P		**P**	**21 52 06.0**	**+0.1**
	7.1nm,0.9s,mb4.3							
ODAN	**Odare**	**32.71**	**337**	*e*P		**P**	**21 52 47.5**	**+1.0**
	41nm,0.8s,mb5.4							
TAPN	**Taplejung**	**33.03**	**337**	*e*P		**P**	**21 52 50.4**	**+1.1**
	87nm,0.9s,mb5.7							
RAMN	**Ramite**	**33.11**	**336**	*e*P		**P**	**21 52 51.5**	**+1.5**
	21nm,0.7s,mb5.2							
NACB	**Ninganchiao**	**33.57**	**35**	P		**P**	**21 52 53.6**	**-0.5**
YHNB	**Yeheng**	**33.83**	**34**	P		**P**	**21 52 56.6**	**+0.3**
JIRN	**Jiri**	**33.91**	**336**	*e*P		**P**	**21 52 58.1**	**+1.2**
	78nm,0.9s,mb5.6							
LSA	**Lhasa**	**34.07**	**344**	*e*P		**P**	**21 52 56.3**	**-2.0**
	1.7nm,0.5s,mb4.2							
GUN	**Gumba**	**34.26**	**335**	*e*P		**P**	**21 53 01.1**	**+1.1**
	78nm,0.8s,mb5.7							
DMN	**Daman**	**34.33**	**334**	*e*P		**P**	**21 53 01.5**	**+0.9**
KKN	**Kakani**	**34.41**	**334**	*e*P		**P**	**21 53 01.8**	**+0.5**
	45nm,0.9s,mb5.4							
GKN	**Gorkha**	**34.87**	**334**	*e*P		**P**	**21 53 06.1**	**+0.8**
KOLN	**Koldanda**	**35.15**	**332**	*e*P		**P**	**21 53 08.7**	**+1.1**
	43nm,0.7s,mb5.5							
DANN	**Dangsing**	**35.56**	**333**	*e*P		**P**	**21 53 12.1**	**+0.9**
	34nm,0.5s,mb5.5							
WRA	**Warramunga Arr**	**36.30**	**120**	P		**P**	**21 53 18.0**	**+0.3**
	6.4nm,0.5s,mb4.8,baz=304,slow=8.9,SNR=42							
WRA				S		**S**	**21 58 53.0**	**-2.3**
	0.9nm,0.8s,baz=289,slow=16,SNR=4.3							
WRAB	**Tennant Creek**	**36.30**	**120**	*e*P		**P**	**21 53 17.8**	**0.0**
	7.6nm,0.6s,mb4.8							
WB2	**Warramunga Arr**	**36.31**	**120**	*e*P		**P**	**21 53 18.2**	**+0.4**
ASAR	**Alice Springs**	**37.53**	**126**	P		**P**	**21 53 28.9**	**+0.8**
	3.8nm,0.5s,mb4.4,baz=300,slow=8.3,SNR=21							
ASAR				S		**S**	**21 59 13.8**	**-0.3**
	0.9nm,0.8s,baz=298,slow=16,SNR=6.9							
XAN	**Xi'an**	**37.67**	**10**	P		**P**	**21 53 28.2**	**-0.9**
XAN					AP	pP	21 53 36.8	-5.3
XAN					XP	sP	21 53 41.1	-6.7
XAN					AMB	AMB		
	comp=Z,15nm,0.9s,mb4.7							
CTA	**Charters Tower**	**46.94**	**115**	*e*P		**P**	**21 54 45.6**	**+0.8**
	comp=Z,6.8nm,0.8s,mb4.6							
CTAO	**Charters Tower**	**46.94**	**115**	*e*P		**P**	**21 54 45.3**	**+0.5**
	comp=Z,7.9nm,0.7s,mb4.8							
KSRS	**Koro Array**	**47.36**	**29**	P		**P**	**21 54 47.6**	**-0.1**
	comp=Z,1.4nm,0.8s,mb3.9,baz=223,slow=9.2,SNR=6.2							
STKA	**Stephens Creek**	**47.42**	**132**	*e*P		**P**	**21 54 50.0**	**+1.6**
	comp=Z,11nm,1.8s,mb4.5							
STKA	**Stephens Creek**	**47.42**	**132**	P		**P**	**21 54 49.9**	**+1.5**
	comp=Z,2.4nm,0.5s,mb4.3,baz=313,slow=7.7,SNR=6.9							
STKA	**Stephens Creek**	**47.42**	**132**	*e*P		**P**	**21 54 49.8**	**+1.4**
	comp=Z,5.3nm,0.6s,mb4.7							
KBL	**Kabul**	**48.22**	**324**	*e*P		**P**	**21 54 54.2**	**-0.2**
	comp=Z,2.0nm,0.8s,mb4.2							
KBL				*e*PcP		PcP	21 56 20.4	-0.6
WMQ	**Urumqi**	**48.32**	**347**	P		**P**	**21 54 56.2**	**+1.1**
WMQ					XP	sP	21 55 01.1	-13
WMQ					AMB	AMB		
	comp=Z,38nm,0.9s,mb5.4							
SONM	**Songino Array**	**50.96**	**4**	P		**P**	**21 55 15.6**	**+0.6**
	comp=Z,4.2nm,0.6s,mb4.5,baz=187,slow=9.3,SNR=22							
SONM				PcP		PcP	21 56 30.8	0.0
	comp=Z,1.1nm,0.5s,baz=182,slow=4.0,SNR=5.2							
ULN	**Ulaanbaatar**	**51.04**	**5**	*e*P		**P**	**21 55 15.9**	**+0.2**
	comp=Z,3.0nm,0.8s,mb4.3							
UCH	**Uchtor**	**51.27**	**335**	*e*P		**P**	**21 55 18.8**	**+1.2**
	comp=Z,2.5nm,0.5s,mb4.4							
TKM2	**Tokmak 2**	**51.39**	**336**	*e*P		**P**	**21 55 18.6**	**+0.2**
TKM2				*e*		pP	21 55 31.6	-0.2
AML	**Almayashu**	**51.55**	**334**	*e*P		**P**	**21 55 19.9**	**+0.3**
	comp=Z,415nm,1.4s							
AML				*e*PcP		PcP	21 56 32.3	-0.8
EKS2	**Erkin-Say**	**51.94**	**334**	*e*P		**P**	**21 55 23.2**	**+0.7**
	comp=Z,14nm,0.8s,mb4.9							
EKS2				*e*		pP	21 55 36.2	+0.2
MAJO	**Matsushiro**	**52.36**	**38**	P		**P**	**21 55 23.9**	**-1.8**
MJAR	**Matsushiro Arr**	**52.36**	**38**	P		**P**	**21 55 25.8**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=206,slow=10,SNR=4.3							
MKAR	**Makanchi Array**	**52.48**	**344**	P		**P**	**21 55 26.2**	**-0.1**
	comp=Z,8.6nm,0.7s,mb4.8,baz=150,slow=8.2,SNR=27							
TLY	**Talaya**	**54.65**	**2**	*e*P		**P**	**21 55 41.5**	**-0.7**
KURK	**Kurchatov**	**57.06**	**343**	*e*P		**P**	**21 55 59.1**	**-0.5**
KURK				*e*pP		pP	21 56 10.9	-2.2
ZAA0	**Zalesovo Array**	**58.53**	**349**	*e*P		**P**	**21 56 08.8**	**-0.9**
ZALV	**Zalesovo Beam**	**58.53**	**349**	P		**P**	**21 56 09.2**	**-0.5**
	comp=Z,37nm,0.9s,mb5.4,baz=166,slow=5.1,SNR=64							
BRVK	**Borovoye**	**61.76**	**339**	P		**P**	**21 56 30.4**	**-1.5**
YSS	**Yuzh-Sakhalins**	**61.77**	**31**	P		**P**	**21 56 31.6**	**-0.5**
CASY	**Casey**	**63.35**	**176**	*e*P		**P**	**21 56 42.6**	**+0.3**
CASY				*e*		pP	21 56 51.1	-5.0
AKTK	**Aktyubinsk**	**64.97**	**331**	P		**P**	**21 56 52.0**	**-1.2**
AKTO	**Aktyubinsk**	**64.97**	**331**	P		**P**	**21 56 52.0**	**-1.2**
	comp=Z,2.3nm,0.8s,mb4.3,baz=142,slow=8.3,SNR=5.6							
GNI	**Garni**	**67.24**	**316**	*e*P		**P**	**21 57 08.2**	**+0.2**
	comp=Z,3.6nm,0.7s,mb4.5							
YAK	**Yakutsk**	**68.52**	**14**	P		**P**	**21 57 14.5**	**-1.0**
ARU	**Arti**	**68.77**	**336**	*e*P		**P**	**21 57 15.1**	**-2.1**
KIV	**Kislovodsk**	**70.25**	**319**	P		**P**	**21 57 26.6**	**0.0**
MALT	**Malatya**	**71.06**	**312**	*e*P		**P**	**21 57 30.8**	**-0.9**
MMAI	**Mont Meron Ar**	**71.75**	**306**	P		**P**	**21 57 37.3**	**+1.3**
	baz=79,slow=7.5							
PETK	**Petropavlovsk-**	**73.16**	**32**	P		**P**	**21 57 43.9**	**0.0**
	comp=Z,3.0nm,0.7s,mb4.3,baz=204,slow=3.3,SNR=8.2							
AKASG	**Malin Array Be**	**81.17**	**322**	P		**P**	**21 58 27.6**	**-1.3**
	comp=Z,0.3nm,0.3s,mb3.7,baz=86,slow=4.6,SNR=5.1							
GERES	**GERESS Array B**	**90.76**	**319**	P		**P**	**21 59 16.8**	**+0.5**
	comp=Z,1.0nm,0.7s,mb4.3,baz=84,slow=5.5,SNR=11							
NVAR	**Mina Array Bea**	**129.64**	**41**	PKP		PKPdf	22 05 24.2	+1.6
	comp=Z,0.6nm,0.5s,baz=262,slow=4.3,SNR=3.5							
ELK	**Elko**	**130.16**	**36**	*e*PKPdf		PKPdf	22 05 24.3	+0.8
TXAR	**Lajitas Array**	**144.78**	**40**	PKP		PKPdf	22 05 50.2	-0.5
	comp=Z,4.3nm,0.6s,baz=294,slow=1.1,SNR=32							
TXAR	**Lajitas Array**	**144.78**	**40**	PKP		PKPdf	22 05 50.2	-0.5
GLAT	**Glass**	**145.62**	**15**	*e*P		PKPdf	22 05 45.4	-6.6

BJI **12** *21:54:09.1, 47.45S×100.92E, h26km, mB5.0, mb4.7*
IDC **12** *21:54:11.3±1.4, 42.15S×101.10E, h0km, mb4.3/13, mb1 4.4/14, mb1mx4.2/23, mbtmp4.3/14, ML4.2/1, Error ellipse: s-maj=45.9km s-min=13.5km az=53.0*
ISCJB **12** *21:54:14.1±0.5, 42.05S×107.10-111.1E±0.08, h33km, mb4.4/20, Error ellipse: s-maj=13.8km s-min=6.8km az=144.4*
NEIC **12** *21:54:15.2±0.3, 42.22S×101.11E, mb4.4/8, Error ellipse: s-maj=9.0km s-min=4.5km az=55.0*

ISC 12 21:54:16.2±7.5, 420S±0.08°×1011E±0.1, h33km±53km, h30km±.9km:pP-P, n44, σ0.953/42, mb4.4/20, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**18.17**	**56**	Pn		**Pn**	**21 58 25.7**	**-0.4**
KAPI	**Kappang**	**18.57**	**93**	P		**Pn**	**21 58 31.3**	**+0.4**
	0.7nm,0.3s,baz=211,slow=14,SNR=4.0							
CMAR	**Chiang Mai Arr**	**22.62**	**355**	P		**P**	**21 59 13.2**	**-1.0**
	7.7nm,1.0s,mb4.1,baz=186,slow=8.6,SNR=36							
CHTO	**Chiang Mai**	**22.97**	**355**	*e*P		**P**	**21 59 18.0**	**0.0**
	7.9nm,1.1s,mb4.1							
BATI	**Baumata**	**23.12**	**106**	P		**P**	**21 59 20.2**	**+0.5**
	11nm,0.4s,mb4.7,baz=76,slow=8.3,SNR=2.6							
QIZ	**Qiongzhong**	**24.62**	**20**	*e*P		**P**	**21 59 33.2**	**-0.5**
MBWA	**Marble Bar**	**24.71**	**135**	P		**P**	**21 59 34.4**	**-0.1**
FITZ	**Fitzroy Crossi**	**27.67**	**122**	P		**P**	**22 00 01.0**	**-0.2**
	3.1nm,0.9s,mb4.0,baz=246,slow=1.7,SNR=7.9							
FITZ	**Fitzroy Crossi**	**27.67**	**122**	*e*P		**P**	**22 00 01.4**	**+0.1**
FITZ				*e*		pP	22 00 08.9	-2.0
CD2	**Chengdu**	**35.00**	**4**	P		**P**	**22 01 06.0**	**+0.4**
CD2					AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3							
LSA	**Lhasa**	**35.04**	**345**	*e*P		**P**	**22 01 05.9**	**-0.1**
WRA	**Warramunga Arr**	**35.92**	**119**	P		**P**	**22 01 13.5**	**-0.2**
	comp=Z,2.5nm,1.0s,mb4.1,baz=294,slow=9.8,SNR=28							
WRAB	**Tennant Creek**	**35.93**	**119**	*e*P		**P**	**22 01 13.8**	**0.0**
WRAB				*e*pP		pP	22 01 22.3	-1.2
WB2	**Warramunga Arr**	**35.94**	**119**	*e*P		**P**	**22 01 13.9**	**+0.1**
WB2				*e*pP		pP	22 01 22.2	-1.4
ASAR	**Alice Springs**	**37.06**	**125**	P		**P**	**22 01 23.6**	**+0.3**
	comp=Z,1.7nm,0.6s,mb4.1,baz=296,slow=8.0,SNR=14							
PMG	**Port Moresby**	**45.96**	**99**	P		**P**	**22 02 35.5**	**-1.0**
CTAO	**Charters Tower**	**46.66**	**114**	*e*P		**P**	**22 02 41.9**	**0.0**
STKA	**Stephens Creek**	**46.85**	**131**	*e*P		**P**	**22 02 42.8**	**-0.5**
	comp=Z,5.2nm,1.8s,mb4.2							
STKA	**Stephens Creek**	**46.85**	**131**	P		**P**	**22 02 43.9**	**+0.6**
	comp=Z,2.5nm,0.7s,mb4.2,baz=282,slow=12,SNR=4.2							
KSRS	**Korea Array**	**48.36**	**29**	P		**P**	**22 02 55.0**	**+0.2**
	comp=Z,4.7nm,1.0s,mb4.5,baz=216,slow=8.5,SNR=14							
SONM	**Songino Array**	**52.02**	**4**	P		**P**	**22 03 23.8**	**+1.4**
	comp=Z,5.8nm,0.8s,mb4.5,baz=184,slow=8.9,SNR=40							
SONM				PcP		PcP	22 04 35.4	+1.1
	comp=Z,0.7nm,0.6s,baz=183,slow=2.9,SNR=3.1							
ULN	**Ulaanbaatar**	**52.11**	**5**	*e*P		**P**	**22 03 23.3**	**+0.3**
	comp=Z,5.8nm,1.0s,mb4.5							
TKM2	**Tokmak 2**	**52.29**	**336**	*e*P		**P**	**22 03 25.4**	**+0.9**
	comp=Z,4.0nm,0.7s,mb4.5							
TKM2				*e*pP		pP	22 03 33.6	-0.9
EKS2	**Erkin-Say**	**52.83**	**335**	*e*P		**P**	**22 03 29.6**	**+1.2**
	comp=Z,3.4nm,0.7s,mb4.4							
EKS2				*e*pP		pP	22 03 38.0	-0.5
EKS2				*e*sP		sP	22 03 41.5	-0.9
EKS2				*e*PcP		PcP	22 04 37.9	+0.4
MJAR	**Matsushiro Arr**	**53.29**	**37**	P		**P**	**22 03 31.5**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.8,baz=219,slow=8.4,SNR=6.3							
MJAR	**Matsushiro Arr**	**53.29**	**37**	P		**P**	**22 03 31.5**	**-0.5**
MKAR	**Makanchi Array**	**53.44**	**344**	P		**P**	**22 03 33.4**	**+0.5**
	comp=Z,5.4nm,0.7s,mb4.6,baz=146,slow=8.8,SNR=41							
MDJ	**Mudanjiang**	**54.88**	**25**	*e*P		**P**	**22 03 43.8**	**+0.4**
TLY	**Talaya**	**55.71**	**2**	*e*P		**P**	**22 03 48.5**	**-0.7**
TLY				PcP		PcP	22 04 46.6	-1.7
TAU	**Tasmania Unive**	**56.17**	**140**	P		**P**	**22 03 53.4**	**+0.6**
TAU				PcP		PcP	22 04 50.1	-0.2
KURK	**Kurchatov**	**58.03**	**343**	P		**P**	**22 04 05.4**	**-0.3**
	comp=Z,3.4nm,0.9s,mb4.4,baz=154,slow=6.6,SNR=10							
KURK	**Kurchatov**	**58.03**	**343**	*e*P		**P**	**22 04 05.6**	**-0.1**
	comp=Z,4.5nm,0.8s,mb4.5							
KURK				*e*pP		pP	22 04 13.9	-2.0
ZAA0	**Zalesovo Array**	**59.53**	**349**	*e*P		**P**	**22 04 16.4**	**+0.3**
ZAA0				*e*pP		pP	22 04 23.6	-2.7
ZAA0				*e*PcP		PcP	22 05 03.5	+0.2
ZALV	**Zalesovo Beam**	**59.53**	**349**	P		**P**	**22 04 16.0**	**-0.1**
	comp=Z,4.3nm,0.6s,mb4.6,baz=175,slow=5.4,

46nm,1.2s
KAPI S **Sn** **22 10 06.4 +1.6**
TSM Tawau **18.72 62** ⇓P **Pn** **22 06 45.2 +1.4**
SDKM Sandakan **18.80 58** ⇑P **Pn** **22 06 45.0 +0.2**
PCI Palu **18.86 80** P **Pn** **22 06 45.7 +0.2**
311nm,1.4s
KDM Kudat **19.21 54** ⇓P **Pn** **22 06 49.8 +0.1**
MYLDM Lahad Datu **19.69 61** ⇑P **Pn** **22 06 55.5 0.0**
KDI Kendari **21.27 89** P **P** **22 07 10.3 -0.8**
123nm,1.2s,mb5.1
BATI Baumata **22.89 106** P **P** **22 07 26.9 -1.4**
54nm,0.7s,mb5.1
BATI Baumata **22.89 106** P **P** **22 07 25.8 -2.5**
64nm,0.7s,mb5.2,baz=232,slow=2.0,SNR=15
BATI S **S** **22 11 25.9 -11**
19nm,0.5s,baz=293,slow=21,SNR=4.3
CMAR Chiang Mai Arr **22.93 354** P **P** **22 07 26.8 -1.9**
34nm,0.8s,mb4.8,baz=187,slow=8.6,SNR=72
CMAR PcP PcP 22 11 19.9 +1.2
1.6nm,0.8s,baz=201,slow=3.9,SNR=5.7
CMAR LR LR 22 18 13.9
comp=Z,676nm,18.7s,MS4.1,baz=186,slow=42
CMAR Chiang Mai Arr **22.93 354** P **P** **22 07 26.8 -1.9**
CMAR 22 11 19.9
CHG Chiang Mai **23.28 354** ⇑P **P** **22 07 31.7 -0.7**
33nm,0.9s,mb4.8
CHTO Chiang Mai **23.28 354** *e*P **P** **22 07 31.8 -0.6**
CHTO pmax pmax
comp=Z,28nm,0.9s,mb4.7
CHTO Chiang Mai **23.28 354** *e*P **P** **22 07 31.8 -0.5**
comp=Z,26nm,0.9s,mb4.7
MBWA Marble Bar **24.39 134** *e*P **P** **22 07 42.3 -0.3**
comp=Z,14nm,1.1s,mb4.3
QIZ Qiongzhong **24.85 20** P **P** **22 07 47.0 +0.1**
QIZ S **S** **22 12 14.7 +6.5**
QIZ LR LR
comp=E,636nm,15.2s
QIZ LR LR
comp=Z,536nm,22.9s
QIZ Qiongzhong **24.85 20** *e*P **P** **22 07 47.3 +0.4**
QIZ *e* 22 07 56.6
QIZ *e*PcP PcP 22 11 23.9 +1.1
FITZ Fitzroy Crossi **27.38 122** *e*P **P** **22 08 08.8 -1.0**
comp=Z,24nm,0.9s,mb4.7
FITZ Fitzroy Crossi **27.38 122** P **P** **22 08 09.0 -0.8**
comp=Z,14nm,0.8s,mb4.5,baz=296,slow=6.9,SNR=27
KMI Kunming **29.48 3** P **P** **22 08 29.5 +1.1**
KMI AP pP 22 08 37.4 +0.7
KMI XP sP 22 08 40.4 +0.2
KMI PP PP 22 09 24.9 -10
KMI S **S** **22 13 21.2 0.0**
KMI XS sS 22 13 34.3 -0.6
KMI AMB AMB
comp=Z,29nm,1.0s,mb5.0
KMI LR LR
comp=N,496nm,18.0s,MS4.4
KMI LR LR
comp=E,739nm,17.5s,MS4.4
KMI LR LR
comp=Z,600nm,20.1s,MS4.2
GYA Guiyang **31.21 9** P **P** **22 08 48.6 +4.9**
GYA PP PP 22 09 52.5 -2.1
GYA S **S** **22 13 55.8 +7.4**
GYA SS SS 22 15 43.5 -19
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.0
GYA AMB AMB
comp=Z,130nm,4.9s
GYA LR LR
comp=N,780nm,17.9s,MS4.5
GYA LR LR
comp=E,540nm,16.8s,MS4.5
GYA LR LR
comp=Z,660nm,15.4s,MS4.4
SHL Shillong **31.25 343** *e*P **P** **22 08 45.5 +1.4**
NWAO Narrogin (SRO) **31.96 154** LR LR 22 21 29.1
comp=Z,502nm,19.9s,MS4.2,baz=340,slow=36
ODAN Odare **33.95 337** *e*P **P** **22 09 08.9 +1.1**
comp=Z,66nm,0.8s,mb5.6
TAPN Taplejung **34.28 338** *e*P **P** **22 09 12.0 +1.5**
comp=Z,124nm,0.9s,mb5.8
RAMN Ramite **34.34 336** *e*P **P** **22 09 12.6 +1.5**
comp=Z,36nm,0.7s,mb5.4
NACB Ninganchiao **34.69 34** P **P** **22 09 12.6 -1.5**
YHNB Yeheng **34.96 33** P **P** **22 09 14.5 -2.0**
YHNB *e* pP 22 09 22.5 -2.3
JIRN Jiri **35.14 336** *e*P **P** **22 09 19.7 +1.7**
comp=Z,204nm,1.1s,mb6.0
CD2 Chengdu **35.29 4** P **P** **22 09 18.6 -0.6**
CD2 AP pP 22 09 26.7 -0.9
CD2 XP sP 22 09 29.3 -1.7
CD2 PP PP 22 10 42.7 +3.0
CD2 PCP PcP 22 11 51.2 +1.7
CD2 S **S** **22 14 57.1 +5.5**
CD2 XS sS 22 15 04.5 -0.8
CD2 PCS PcS 22 15 37.2 +0.6
CD2 SS SS 22 17 16.4 -9.4
CD2 AMB AMB
comp=Z,40nm,1.0s,mb5.3
CD2 AMB AMB
comp=Z,110nm,5.8s
CD2 LR LR
comp=N,210nm,14.8s
CD2 LR LR
comp=Z,160nm,13.6s,MS3.9
LSA Lhasa **35.37 345** P **P** **22 09 21.0 +1.0**
LSA Lhasa **35.37 345** *e*P **P** **22 09 21.0 +1.0**
LSA *e**PP pP 22 09 29.4 +1.1
LSA *e* 22 11 50.9
LSA pmax pmax
comp=Z,37nm,1.4s,mb5.1
LSA Lhasa **35.37 345** *e*P **P** **22 09 21.0 +1.0**
comp=Z,37nm,1.4s,mb5.1
LSA *e*pP pP 22 09 29.4 +1.1
LSA *e*PcP PcP 22 11 50.9 +1.1
PKI Pulchoki **35.38 335** *e*P **P** **22 09 21.1 +1.0**
GUN Gumba **35.49 336** *e*P **P** **22 09 22.3 +1.3**
DMN Daman **35.54 335** *e*P **P** **22 09 22.4 +0.9**
comp=Z,36nm,1.1s,mb5.2
KKN Kakani **35.63 335** *e*P **P** **22 09 23.2 +1.0**
comp=Z,48nm,0.9s,mb5.4
WRA Warramunga Arr **35.64 118** P **P** **22 09 21.5 -1.0**
comp=Z,10nm,0.7s,mb4.9,baz=303,slow=8.9,SNR=63
WRA PcP PcP 22 11 51.2 +0.3
comp=Z,1.3nm,0.6s,baz=293,slow=2.1,SNR=3.8
WRA S **S** **22 14 57.5 +0.1**
comp=Z,1.2nm,0.9s,baz=292,slow=14,SNR=4.1
WRAB Tennant Creek **35.65 118** P **P** **22 09 21.0 -1.5**
comp=Z,183nm,0.9s,mb6.0,SNR=16
WRAB Tennant Creek **35.65 118** *e*P **P** **22 09 21.6 -1.0**
comp=Z,22nm,0.8s,mb5.1
WRAB *e*PP PP 22 10 47.4 +3.6
WRAB S **S** **22 14 57.6 +0.1**
WB2 Warramunga Arr **35.66 118** *e*P **P** **22 09 21.5 -1.1**
GKN Gorkha **36.09 335** *e*P **P** **22 09 27.0 +0.9**
comp=Z,98nm,1.2s,mb5.6
KOLN Koldanda **36.34 333** *e*P **P** **22 09 29.4 +1.1**
comp=Z,24nm,0.8s,mb5.2
ASAR Alice Springs **36.76 124** P **P** **22 09 31.5 -0.5**
comp=Z,6.0nm,0.9s,mb4.4,baz=302,slow=8.0,SNR=21
ASAR PcP PcP 22 11 53.9 -0.3
comp=Z,2.3nm,0.8s,baz=312,slow=2.9,SNR=4.8
ASAR S **S** **22 15 11.9 -2.5**
comp=Z,2.1nm,1.0s,baz=291,slow=16,SNR=7.4
DANN Dangsing **36.77 334** *e*P **P** **22 09 33.0 +1.0**
comp=Z,117nm,1.0s,mb5.7
WHN Wuhan **37.02 19** ⇓P **P** **22 09 34.1 +0.1**
WHN AP pP 22 09 42.5 +0.1
XAN Xi'an **39.00 10** P **P** **22 09 49.8 -0.9**
XAN AP pP 22 09 57.2 -2.0
XAN XP sP 22 10 00.9 -1.7
XAN AMB AMB
comp=Z,37nm,1.3s,mb5.0
XAN AMB AMB
comp=Z,152nm,12.4s
PTH Pithoragarh **39.44 330** *ex* x 22 09 56.1
NJ2 Nanjing **40.01 23** *e*P **P** **22 10 00.6 +1.5**
NJ2 AP pP 22 10 05.7 -1.9
NJ2 XP sP 22 10 08.6 -2.4
NJ2 PP PP 22 11 35.9 +4.4
NJ2 S **S** **22 16 05.5 +2.4**
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
NJ2 AMB AMB
comp=Z,60nm,4.2s
NJ2 LR LR
comp=N,410nm,25.1s
NJ2 LR LR
comp=E,390nm,19.0s
NJ2 LR LR
comp=Z,6μm,19.1s
LZH Lanzhou **40.45 3** ⇑P **P** **22 10 03.3 +0.6**
LZH AP pP 22 10 07.2 -3.9
LZH XP sP 22 10 09.0 -5.6
LZH PP PP 22 11 41.0 +4.8
LZH S **S** **22 16 09.0 -0.6**
LZH AMB AMB
comp=Z,33nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,140nm,4.0s
LZH LR LR
comp=E,768nm,11.5s
LZH LR LR
comp=Z,1μm,14.2s,MS4.9
GTA Gaotai **43.71 358** ⇑P **P** **22 10 29.9 +0.6**
GTA AP pP 22 10 34.2 -3.6
GTA XP sP 22 10 36.9 -4.3
GTA AMB AMB
comp=Z,20nm,0.9s,mb4.8
GTA AMB AMB
comp=Z,154nm,6.0s
GTA LR LR
comp=N,979nm,16.2s,MS5.0
GTA LR LR
comp=E,1μm,16.2s,MS5.0
GTA LR LR
comp=Z,784nm,18.3s,MS4.7
THN Thein Dam **44.04 328** *ex* x 22 10 30.6
PMG Port Moresby **45.76 99** *e*P **P** **22 10 45.1 -1.0**
PMG *e**PP pP 22 10 53.8 -0.8
PMG *e* 22 12 24.4
HHC Hu-ho-hao-te **46.10 11** ⇑*i*P **P** **22 10 48.8 +0.5**
HHC AP pP 22 10 52.0 -4.9
HHC XP sP 22 10 54.5 -5.8
HHC PCP PcP 22 12 24.2 0.0
HHC PP PP 22 12 37.9 +1.1
HHC SCP ScP 22 16 15.5 -0.2
HHC PCS PcS 22 16 17.2 -1.4
HHC S **S** **22 17 35.0 +2.7**
HHC SCS ScS 22 20 41.1 -0.9
HHC SS SS 22 20 53.4 -4.5
HHC AMB AMB
comp=Z,32nm,1.1s,mb5.2
HHC AMB AMB
comp=Z,162nm,6.5s
HHC LR LR
comp=N,638nm,17.6s,MS4.7
HHC LR LR
comp=E,484nm,16.9s,MS4.7
HHC LR LR
comp=Z,690nm,15.9s,MS4.7
BJT Baijiatuau **46.37 16** *e*P **P** **22 10 50.2 -0.2**
BJT *e**PP pP 22 10 58.0 -1.0
BJT pmax pmax
comp=Z,23nm,0.4s
BJT Baijiatuau **46.37 16** *e*P **P** **22 10 50.2 -0.2**
comp=Z,23nm,0.4s,mb5.5
BJT *e*pP pP 22 10 58.0 -1.0
BJI Beijing **46.39 16** P **P** **22 10 50.4 -0.2**
BJI S **S** **22 17 33.2 -3.2**
BJI AMB AMB
comp=Z,53nm,0.7s,mb5.6
BJI AMB AMB
comp=Z,113nm,3.5s
BJI LR LR
comp=N,706nm,19.1s,MS4.7
BJI LR LR
comp=E,356nm,16.6s,MS4.7
BJI LR LR
comp=Z,553nm,19.1s,MS4.5
CTA Charters Tower **46.39 113** *e*P **P** **22 10 50.7 -0.3**
comp=Z,17nm,1.0s,mb4.9
CTA Charters Tower **46.39 113** *e*P **P** **22 10 50.7 -0.3**
CTA pmax pmax
comp=Z,17nm,1.0s
CTAO Charters Tower **46.39 113** *e*P **P** **22 10 50.7 -0.3**
CTAO *e**PP pP 22 10 59.1 -0.5
CTAO *e* 22 12 25.6
CTAO pmax pmax
comp=Z,34nm,1.1s,mb5.2
CTAO Charters Tower **46.39 113** *e*P **P** **22 10 50.7 -0.3**
comp=Z,34nm,1.1s,mb5.2
CTAO *e*pP pP 22 10 59.1 -0.5
CTAO *e*PcP PcP 22 12 25.6 -0.2
STKA Stephens Creek **46.54 131** *e*P **P** **22 10 51.8 -0.2**
comp=Z,8.2nm,0.6s,mb4.8
STKA Stephens Creek **46.54 131** P **P** **22 10 51.9 -0.1**
comp=Z,7.9nm,0.8s,mb4.7,baz=307,slow=6.7,SNR=13
STKA Stephens Creek **46.54 131** *e*P **P** **22 10 52.0 +0.1**
STKA *e*pP pP 22 10 59.8 -0.7
STKA *e*sP sP 22 11 04.1 +0.2
STKA *e*PcP PcP 22 12 25.7 -0.4
STKA *e*PP PP 22 12 41.8 +0.2
GUMO Guam **46.83 67** P **P** **22 10 55.1 +0.6**
DL2 Dalian **47.11 22** P **P** **22 10 55.4 -0.8**
DL2 *e*S **S** **22 17 47.1 +0.3**
DL2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
DL2 LR LR
comp=N,170nm,18.8s,MS4.2
DL2 LR LR
comp=E,150nm,17.0s,MS4.2
DL2 LR LR
comp=Z,400nm,17.9s,MS4.4
KSRS Korea Array **48.54 28** P **P** **22 11 06.7 -0.8**
comp=Z,20nm,0.9s,mb5.1,baz=214,slow=8.1,SNR=70
KBL Kabul **49.31 324** *e*P **P** **22 11 12.8 -0.5**
KBL *e**PP pP 22 11 21.9 0.0
KBL pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
KBL Kabul **49.31 324** *e*P **P** **22 11 12.8 -0.5**
comp=Z,8.9nm,1.1s,mb4.7
KBL *e*pP pP 22 11 21.9 0.0
KSH Kashi **49.63 334** *e*P **P** **22 11 15.1 -0.6**
KSH *e*AP pP 22 11 19.2 -5.1
KSH *e*XP sP 22 11 21.7 -6.0
KSH *e*PCP PcP 22 12 32.1 -4.8
KSH *e*PP PP 22 13 11.1 +0.7
KSH *e*SCP ScP 22 16 24.0 -6.7
KSH *e*PCS PcS 22 16 26.0 -7.6
KSH *e*S **S** **22 18 19.7 -2.8**
KSH *e*XS sS 22 18 35.1 -1.5
KSH *e*SCS ScS 22 21 02.0 -3.6
KSH *e*SS SS 22 21 59.1 +3.9
KSH AMB AMB
comp=Z,474nm,3.2s
KSH LR LR
comp=N,1μm,7.7s
KSH LR LR
comp=E,2μm,7.4s
KSH LR LR
comp=Z,882nm,7.3s
WMQ Urumqi **49.64 347** P **P** **22 11 16.1 +0.4**
WMQ AP pP 22 11 21.0 -3.3
WMQ XP sP 22 11 23.5 -4.2
WMQ PCP PcP 22 12 39.0 +2.2
WMQ *e*S **S** **22 18 23.0 +0.6**
WMQ XS sS 22 18 35.0 -1.6
WMQ AMB AMB
comp=Z,41nm,0.8s,mb5.5
WMQ AMB AMB
comp=Z,187nm,5.2s
WMQ LR LR
comp=N,761nm,24.2s,MS4.7
WMQ LR LR
comp=E,538nm,21.0s,MS4.7
WMQ LR LR
comp=Z,438nm,24.3s,MS4.4
KZA Kyzart **52.06 336** P **P** **22 11 31.0 -3.0**
SNR=5.4
SONM Songino Array **52.31 4** P **P** **22 11 36.4 +0.8**
comp=Z,42nm,0.8s,mb5.4,baz=184,slow=8.7,SNR=312
ULN Ulaanbaatar **52.39 5** *e*P **P** **22 11 36.5 +0.2**
ULN *e**PP pP 22 11 44.8 -0.1
ULN pmax pmax
comp=Z,33nm,0.9s,mb5.3
ULN Ulaanbaatar **52.39 5** *e*P **P** **22 11 36.5 +0.2**
comp=Z,33nm,0.9s,mb5.3
ULN *e*pP pP 22 11 44.8 -0.1
UCH Uchtor **52.49 335** *e*P **P** **22 11 37.3 +0.1**
UCH *e*pP pP 22 11 46.6 +0.8
UCH PcP PcP 22 12 49.0 +1.5
TKM2 Tokmak 2 **52.63 336** *e*P **P** **22 11 38.4 +0.3**
TKM2 *e**PP pP 22 11 47.0 +0.2
TKM2 *e**SP sP 22 11 51.4 +1.2
TKM2 pmax pmax
comp=Z,22nm,0.9s,mb5.1
TKM2 Tokmak 2 **52.63 336** P **P** **22 11 38.7 +0.6**
SNR=24
TKM2 Tokmak 2 **52.63 336** *e*P **P** **22 11 38.4 +0.3**
comp=Z,22nm,0.9s,mb5.1
TKM2 *e*pP pP 22 11 47.0 +0.2
TKM2 *e*sP sP 22 11 51.4 +1.2
KBK Karagaybulak **52.67 336** P **P** **22 11 39.6 +1.1**
SNR=8.6
AML Almayashu **52.77 334** P **P** **22 11 39.8 +0.7**
SNR=7.8
AML Almayashu **52.77 334** *e*P **P** **22 11 39.7 +0.5**
comp=Z,11nm,0.8s,mb4.8
AML *e*pP pP 22 11 48.6 +0.8
AML *e*sP sP 22 11 52.5 +1.3
CN2 Changchun **52.78 22** *e*P **P** **22 11 37.9 -1.3**
CN2 AMB AMB
comp=Z,50nm,1.1s,mb5.4
FRU Bishkek **52.95 336** *e*P **P** **22 11 40.0 -0.5**
CHMS Chumysh **53.03 336** P **P** **22 11 41.2 0.0**
SNR=5.7
EKS2 Erkin-Say **53.16 335** P **P** **22 11 42.8 +0.7**
SNR=42
EKS2 Erkin-Say **53.16 335** *e*P **P** **22 11 42.9 +0.8**
comp=Z,18nm,0.8s,mb5.1
EKS2 *e*PcP PcP 22 12 51.0 +1.0
USP Ospenovka **53.36 336** P **P** **22 11 43.6 +0.1**
SNR=10
MAJO Matsushiro **53.43 37** *e*P **P** **22 11 42.5 -1.7**
MAJO *e* 22 12 51.1
MAJO pmax pmax
comp=Z,19nm,0.9s,mb5.0
MAJO Matsushiro **53.43 37** *e*P **P** **22 11 42.5 -1.7**
comp=Z,19nm,0.9s,mb5.0
MAJO *e*PcP PcP 22 12 51.1 -0.1
MAT Matsushiro **53.43 37** P **P** **22 11 43.2 -1.0**
MJAR Matsushiro Arr **53.44 37** P **P** **22 11 42.7 -1.5**
comp=Z,16nm,0.7s,mb5.0,baz=215,slow=7.6,SNR=47
MJAR Matsushiro Arr **53.44 37** P **P** **22 11 42.7 -1.5**
MK31 Makanchi Array **53.77 344** P **P** **22 11 45.9 -0.6**
MK31 pmax pmax
comp=Z,14nm,0.7s,mb5.0
MKAR Makanchi Array **53.77 344** P **P** **22 11 46.4 -0.1**
comp=Z,12nm,0.7s,mb4.9,baz=145,slow=8.8,SNR=88
MKAR Makanchi Array **53.77 344** ⇑*e*P **P** **22 11 46.4 -0.1**
OPO Ambohidratompo **54.61 250** P **P** **22 11 54.3 +1.1**
comp=Z,2.2nm,0.7s,mb4.3,baz=96,slow=10,SNR=4.5
ZAK Zakamensk **54.69 2** ⇓*i*P **P** **22 11 52.8 -0.3**
ZAK *e* 22 12 48.8
ZAK pmax pmax
comp=Z,11nm,1.0s,mb4.8
ZAK pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
ZAK pmax pmax
comp=Z,2.0nm,1.9s,mb3.8
MDJ Mudanjiang **55.08 24** P **P** **22 11 55.5 -0.6**
MDJ AMB AMB
comp=Z,13nm,0.8s,mb5.0
MDJ AMB AMB
comp=Z,113nm,5.9s
MDJ Mudanjiang **55.08 24** *e*P **P** **22 11 54.6 -1.4**
comp=Z,13nm,1.1s,mb4.9
MDJ *e*pP pP 22 12 03.2 -1.5
TAU Tasmania Unive **55.84 140** P **P** **22 12 00.9 -0.7**
MOY Mondy **55.95 360** *e*P **P** **22 12 02.9 +0.7**
MOY pmax pmax
comp=Z,34nm,2.2s,mb5.0
TLY Talaya **56.00 2** *e*P **P** **22 12 01.8 -0.7**
TLY *e* pP 22 12 11.1 -0.1
TLY pmax pmax
comp=Z,26nm,1.1s,mb5.2
TLY MLR MLR
comp=Z,429nm,17.0s,MS4.6
TLY Talaya **56.00 2** *e*P **P** **22 12 03.8 +1.3**
comp=Z,36nm,1.1s,mb5.3
TLY *e*pP pP 22 12 11.4 +0.2
TLY *e*PcP PcP 22 12 59.7 -0.9
IRK Irkutsk **56.58 2** *e*P **P** **22 12 06.6 -0.1**
IRK pmax pmax
comp=Z,51nm,2.2s,mb5.2
KURK Kurchatov **58.36 343** P **P** **22 12 18.4 -0.9**
comp=Z,8.0nm,0.8s,mb4.8,baz=162,slow=6.5,SNR=38
KURK Kurchatov **58.36 343** *e*P **P** **22 12 19.0 -0.2**
KURK *e**PP pP 22 12 26.8 -1.2
KURK pmax pmax
comp=Z,19nm,0.9s,mb5.1
KURK Kurchatov **58.36 343** *e*P **P** **22 12 19.0 -0.2**
comp=Z,19nm,0.9s,mb5.1
KURK *e*pP pP 22 12 26.8 -1.1
KLR Kul'dur **59.70 23** *e*P **P** **22 12 24.0 -4.6**
KLR pmax pmax
comp=E,26nm,1.4s
KLR pmax pmax
comp=Z,52nm,1.4s,mb5.4
ZAA0 Zalesovo Array **59.85 349** *e*P **P** **22 12 28.8 -0.7**
ZAA0 *e*pP pP 22 12 37.5 -0.8
ZAA0 *e*PcP PcP 22 13 15.5 -0.3
ZALV Zalesovo Beam **59.85 349** P **P** **22 12 29.0 -0.5**
comp=Z,16nm,0.8s,mb5.1,baz=175,slow=5.5,SNR=75
ERM Erimo **59.91 35** *e*P **P** **22 12 29.1 -1.1**
KRAR Krasnoyarsk **60.70 355** *e*P **P** **22 12 34.2 -1.1**
KRAR pmax pmax
comp=Z,42nm,1.0s,mb5.5
NVS Novosibirsk **61.01 348** *i*P **P** **22 12 36.1 -1.3**
NVS pmax pmax
comp=Z,12nm,1.4s,mb4.8
NVS pmax pmax
comp=N,21nm,2.0s
NVS pmax pmax
comp=E,9.0nm,1.6s
CASY Casey **62.01 176** *e*P **P** **22 12 43.7 -0.3**
CASY *e* pP 22 12 53.3 +0.6
VOSK Vostochnaya **62.51 340** P **P** **22 12 45.8 -1.7**
VOSK pmax pmax
comp=Z,17nm,1.2s,mb5.0
YSS Yuzh-Sakhalins **62.93 31** ⇑*e*P **P** **22 12 49.9 -0.6**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.7
YSS Yuzh-Sakhalins **62.93 31** P **P** **22 12 50.2 -0.3**
comp=Z,68nm,1.0s,mb5.7
BOD Bodaibo **62.96 8** *e*P **P** **22 12 49.3 -1.1**
BOD pmax pmax
comp=Z,22nm,1.0s,mb5.2
BVA0 Borovoye Array **62.96 340** *i*P **P** **22 12 49.5 -1.1**
BVA0 pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
BVAR Borovoye Array **62.96 340** P **P** **22 12 49.7 -0.8**
comp=Z,9.4nm,0.7s,mb5.0,baz=145,slow=8.6,SNR=41
BRVK Borovoye **63.03 340** P **P** **22 12 49.6 -1.4**
BRVK pmax pmax
comp=Z,12nm,0.8s,mb5.1
BRVK Borovoye **63.03 340** *e*P **P** **22 12 50.2 -0.8**
BRVK *e*pP pP 22 12 58.6 -1.2
BRVK *e*PcP PcP 22 13 28.3 -0.4
CLNS Chul'man **64.09 14** *e*P **P** **22 12 58.0 +0.1**
CLNS pmax pmax
comp=Z,12nm,0.9s,mb4.9
CLNS pmax pmax
comp=N,9.0nm,0.9s
CLNS pmax pmax
comp=E,6.0nm,1.0s
AB31 Akbulak array **64.44 331** ⇑*e*P **P** **22 12 59.2 -1.2**
AKTK Aktyubinsk **66.16 331** P **P** **22 13 10.9 -0.6**
AKTO Aktyubinsk **66.16 331** P **P** **22 13 10.9 -0.6**
comp=E,2.7nm,0.8s,mb4.3,baz=108,slow=15,SNR=8.9
AKTO Aktyubinsk **66.16 331** P **P** **22 13 09.5 -2.0**
MAW Mawson **68.20 195** P **P** **22 13 24.9 +0.7**
comp=E,2.2nm,0.7s,mb4.3,baz=288,slow=9.7,SNR=7.3
GNI Garni **68.22 316** *e*P **P** **22 13 23.5 -1.3**
GNI *e**PP pP 22 13 33.4 -0.3
SVE Sverdlovsk **69.47 338** *e*P **P** **22 13 32.7 +0.5**
SVE pmax pmax
comp=Z,48nm,1.1s,mb5.3
YAK Yakutsk **69.83 14** *c i*P **P** **22 13 33.0 -1.3**
YAK pmax pmax
comp=Z,49nm,1.1s,mb5.3
YAK Yakutsk **69.83 14** *e*P **P** **22 13 33.0 -1.4**

YAK					*e*pP		pP	22 13 41.0	-2.2
ARU	**Arti**	**70.00**	**336**		P		**P**	**22 13 35.4**	**-0.1**
comp=Z,108nm,0.8s,mb5.8,SNR=6.3									
ARU	**Arti**	**70.00**	**336**	*c*	*i*P		**P**	**22 13 34.9**	**-0.6**
ARU					*e*			22 13 52.2	
ARU					*e*S		S	22 22 42.4	-1.6
ARU					*e*SS		SS	22 27 13.7	-0.2
ARU					pmax		pmax		
comp=Z,34nm,1.7s,mb5.0									
ARU	**Arti**	**70.00**	**336**		*e*P		**P**	**22 13 34.9**	**-0.6**
comp=Z,28nm,1.1s,mb5.1									
ARU					*e*pP		pP	22 13 43.2	-1.2
ARU					*e*PP		PP	22 16 11.7	+1.0
ASF	**Jabal al Asfar**	**71.09**	**306**		P		**P**	**22 13 42.9**	**+0.2**
comp=Z,1.0nm,0.4s,mb4.1,baz=341,slow=7.9,SNR=3.3									
ASF					LR		LR	22 45 55.9	
comp=Z,246nm,18.7s,MS4.5,baz=323,slow=37									
KIV	**Kislovodsk**	**71.27**	**319**		*e*P		**P**	**22 13 43.1**	**-0.4**
KIV					pmax		pmax		
comp=Z,9.0nm,0.9s,mb4.7									
KIV	**Kislovodsk**	**71.27**	**319**		*e*P		**P**	**22 13 43.5**	**0.0**
KIV					*e*pP		pP	22 13 52.6	+0.2
KIV					*e*PP		PP	22 16 19.9	-2.0
EIL	**Elat**	**71.96**	**303**		LR		LR	22 46 35.1	
comp=Z,228nm,18.3s,MS4.5,baz=279,slow=37									
MALT	**Malatya**	**71.97**	**313**		*e*P		**P**	**22 13 44.6**	**-3.3**
MALT					*e**PP		pP	22 13 54.8	-2.0
MALT					pmax		pmax		
comp=Z,16nm,1.4s,mb4.8									
MALT	**Malatya**	**71.97**	**313**		*e*P		**P**	**22 13 44.6**	**-3.3**
comp=Z,16nm,1.4s,mb4.8									
MALT					*e*pP		pP	22 13 54.8	-2.1
LSZ	**Lusaka**	**72.54**	**255**		P		**P**	**22 13 54.3**	**+2.6**
comp=Z,1.5nm,0.7s,mb4.0,baz=99,slow=13,SNR=2.2									
LSZ	**Lusaka**	**72.54**	**255**		P		**P**	**22 13 53.2**	**+1.4**
LSZ					*e*pP		pP	22 14 02.5	+1.8
MMAI	**Mount Meron Ar**	**72.55**	**306**		LR		LR	22 46 55.0	
comp=Z,304nm,18.6s,MS4.6,baz=95,slow=37									
PETK	**Petropavlovsk-**	**74.31**	**31**		P		**P**	**22 14 00.1**	**-1.3**
comp=Z,6.6nm,0.9s,mb4.6,baz=222,slow=2.7,SNR=12									
PET	**Petropavlovsk**	**74.77**	**32**		*e*P		**P**	**22 14 02.6**	**-1.4**
PET					pmax		pmax		
comp=Z,35nm,0.9s,mb5.3									
PET	**Petropavlovsk**	**74.77**	**32**		*e*P		**P**	**22 14 02.3**	**-1.7**
ANN	**Anapa**	**75.05**	**319**		*e*P		**P**	**22 14 03.2**	**-2.7**
ANN					pmax		pmax		
comp=Z,21nm,1.8s,mb4.8									
LBTB	**Lobatse**	**75.16**	**245**		*e*P		**P**	**22 14 06.8**	**-0.1**
LBTB					*e*			22 16 55.9	
SYO	**Syowa Base**	**75.94**	**199**⇑		*e*P		**P**	**22 14 11.0**	**+0.5**
TIXI	**Tiksi**	**78.11**	**9**		*e*P		**P**	**22 14 20.6**	**-2.0**
TIXI					pmax		pmax		
comp=Z,37nm,1.4s,mb5.1									
OBN	**Obninsk**	**79.59**	**328**		*e*P		**P**	**22 14 30.0**	**-1.0**
OBN					*i*		pP	22 14 39.4	-0.7
OBN					pmax		pmax		
comp=Z,14nm,1.2s,mb4.8									
OBN	**Obninsk**	**79.59**	**328**		*e*P		**P**	**22 14 30.7**	**-0.3**
OBN					*e*		pP	22 14 39.0	-1.1
AKASG	**Malin Array Be**	**82.24**	**322**		P		**P**	**22 14 44.8**	**-0.5**
comp=Z,0.4nm,0.4s,baz=90,slow=4.1,SNR=6.1									
AKASG					LR		LR	22 55 54.3	
comp=Z,114nm,21.8s,MS4.2,baz=105,slow=39									
TSUM	**Tsumeb**	**82.61**	**251**		*e*P		**P**	**22 14 49.3**	**+1.3**
BUR08	**Bucovina Ar. S**	**84.00**	**319**		*e*P		**P**	**22 14 55.4**	**+0.9**
BUR08					*e*pP		pP	22 15 04.4	+0.9
KOLS	**Kolonicke sedl**	**86.18**	**320**		*e*P		**P**	**22 15 06.3**	**+0.9**
SUW	**Suwalki**	**86.66**	**325**		*e*P		**P**	**22 15 07.5**	**-0.1**
SUW					*e**PP		pP	22 15 16.3	-0.4
SUW					pmax		pmax		
comp=Z,37nm,1.0s,mb5.6									
SUW	**Suwalki**	**86.66**	**325**		*e*P		**P**	**22 15 07.5**	**-0.1**
comp=Z,37nm,1.0s,mb5.6									
SUW					*e*pP		pP	22 15 16.3	-0.5
STHS	**Stebnicka Huta**	**86.94**	**320**		*e*P		**P**	**22 15 07.5**	**-1.6**
STHS					pmax		pmax		
comp=Z,6.0nm,1.1s,mb4.7									
STHS	**Stebnicka Huta**	**86.94**	**320**		*e*P		**P**	**22 15 07.5**	**-1.6**
comp=Z,5.5nm,1.1s,mb4.7									
VYHS	**Vyhne**	**88.35**	**319**		*e*P		**P**	**22 15 16.0**	**+0.1**
VYHS	**Vyhne**	**88.35**	**319**		*e*P		**P**	**22 15 16.1**	**+0.2**
ARCES	**ARCESS Array B**	**89.25**	**340**		P		**P**	**22 15 20.5**	**+0.8**
comp=Z,5.9nm,0.8s,mb5.0,baz=21,slow=4.1,SNR=7.2									
MODS	**Modra-Piesok**	**89.36**	**318**		*e*P		**P**	**22 15 20.6**	**0.0**
MORC	**Moravsky Berou**	**89.37**	**320**		*e*P		**P**	**22 15 21.2**	**+0.6**
MORC					*e**PP		pP	22 15 30.1	+0.3
MORC					pmax		pmax		
comp=Z,15nm,1.3s,mb5.2									
MORC	**Moravsky Berou**	**89.37**	**320**		*e*P		**P**	**22 15 21.2**	**+0.6**
comp=Z,15nm,1.3s,mb5.2									
MORC					*e*pP		pP	22 15 30.1	+0.3
ZST	**Bratislava**	**89.45**	**318**		*e*P		**P**	**22 15 29.2**	**+8.1**
ZST	**Bratislava**	**89.45**	**318**		*e*pP		pP	22 15 29.2	-1.0
SNAA	**Sanae**	**90.18**	**198**		*e*P		**P**	**22 15 25.8**	**+1.8**
SNAA					*e*		pP	22 15 33.9	+0.7
SNAA	**Sanae**	**90.18**	**198**		*e*P		**P**	**22 15 25.0**	**+1.0**
SNAA					*e**PP		pP	22 15 33.7	+0.5
SNAA					*e*			22 18 58.7	
SNAA					pmax		pmax		
comp=Z,9.0nm,1.0s									
SNAA	**Sanae**	**90.18**	**198**		*e*P		**P**	**22 15 25.0**	**+1.0**
comp=Z,9.2nm,1.0s,mb5.1									
SNAA					*e*pP		pP	22 15 33.7	+0.6
SNAA					*e*PP		PP	22 18 58.6	+1.2
DPC	**Dobruska-Polom**	**90.22**	**320**		*e*P		**P**	**22 15 25.6**	**+1.0**
DPC					*e*pP		pP	22 15 34.0	+0.2
ARSA	**Arzberg**	**90.40**	**317**⇑		*i*P		**P**	**22 15 25.6**	**+0.1**
comp=Z,5.1nm,1.0s,mb4.8									
UPC	**Upice**	**90.44**	**320**		*e*pP		pP	22 15 34.1	-0.7
TREC	**Trest**	**90.64**	**319**		*e*P		**P**	**22 15 26.6**	**0.0**
TREC					*e*pP		pP	22 15 35.7	0.0
SOKA	**Soboth**	**90.68**	**317**⇑		*i*P		**P**	**22 15 27.5**	**+0.7**
comp=Z,6.4nm,1.3s,mb4.8									
SOKA	**Soboth**	**90.68**	**317**⇑		*i*PcP		PcP	22 15 27.5	-0.4
comp=Z,6.4nm,1.3s									
PRU	**Pruhonice**	**91.33**	**320**		*e*P		**P**	**22 15 28.7**	**-1.0**
PRU					*e*pP		pP	22 15 39.2	+0.3
PVCC	**Panska Ves**	**91.36**	**320**		*e*P		**P**	**22 15 21.1**	**-8.8**
GEC2	**GERESS Array S**	**91.77**	**319**		*e*P		pP	22 15 40.5	-0.5
GEC2					pmax		pmax		
comp=Z,15nm,1.5s,mb5.1									
GEC2	**GERESS Array S**	**91.77**	**319**		*e*P		pP	22 15 40.5	-0.5
comp=Z,15nm,1.5s									
GERES	**GERESS Array B**	**91.77**	**319**		P		**P**	**22 15 32.3**	**+0.5**
comp=Z,1.4nm,0.8s,mb4.3,baz=94,slow=4.3,SNR=11									
BRG	**Berggiesshubel**	**91.79**	**321**		*e*P		pP	22 15 41.1	+0.1
BRG					pmax		pmax		
comp=Z,5.0nm,1.2s,mb4.7									
BRG	**Berggiesshubel**	**91.79**	**321**		*e*P		pP	22 15 41.2	+0.2
comp=Z,8.0nm,1.2s									
BRG	**Berggiesshubel**	**91.79**	**321**		*e*P		pP	22 15 41.1	+0.1
comp=Z,7.5nm,1.2s									
BRG					S		SP	22 27 30.0	-10
VNA2	**Neumayer--Watz**	**91.80**	**198**		*e*P		**P**	**22 15 33.2**	**+1.6**
VNA2					*e*		pP	22 15 40.8	+0.1
KHC	**Kasperske Hory**	**91.88**	**319**		*e*P		**P**	**22 15 33.1**	**+0.8**
VNA1	**Neumayer--Stat**	**92.16**	**198**		*e*P		pP	22 15 44.8	+2.4
WET	**Wettzell**	**92.33**	**319**		*e*P		pP	22 15 43.5	-0.1
WET					pmax		pmax		
comp=Z,8.0nm,1.3s,mb4.9									
WET	**Wettzell**	**92.33**	**319**		*e*P		pP	22 15 43.5	-0.1
comp=Z,8.0nm,1.3s									
CLL	**Collm**	**92.41**	**321**		*e*P		pP	22 15 43.0	-0.9
CLL	**Collm**	**92.41**	**321**		*e*P		pP	22 15 43.5	-0.4
comp=Z,5.0nm,0.9s									
GUNZ	**Gunzen**	**92.77**	**320**		*e*P		pP	22 15 45.2	-0.4
comp=Z,28nm,2.0s									
WERD	**Werda**	**92.79**	**320**		*e*P		pP	22 15 45.3	-0.4
comp=Z,16nm,1.9s									
ROTZ	**Rotzenmuhle**	**92.81**	**320**		*e*P		pP	22 15 45.7	-0.1
comp=Z,5.0nm,1.2s									
MANZ	**Manzenberg**	**92.89**	**320**		*e*P		pP	22 15 46.4	+0.3
comp=Z,16nm,1.5s									
GRA1	**Grafenberg Arr**	**93.45**	**319**		*e*P		pP	22 15 48.4	-0.3
comp=Z,27nm,1.6s									
GRF	**Grafenberg Arr**	**93.45**	**319**		*e*P		pP	22 15 48.4	-0.3
GRF					pmax		pmax		
comp=Z,27nm,1.6s,mb5.4									
GRF	**Grafenberg Arr**	**93.45**	**319**		*e*P		pP	22 15 48.4	-0.3
GRF					pmax		pmax		
comp=Z,27nm,1.6s,mb5.4									
GRF	**Grafenberg Arr**	**93.45**	**319**		*e*P		pP	22 15 48.4	-0.3
comp=Z,27nm,1.6s									
PMR	**Palmer**	**103.19**	**28**		P		Pdif	22 16 22.2	-1.1
MOD	**Modoc**	**127.47**	**39**		*e*PKPdf		PKPdf	22 21 30.2	+0.9
HLID	**Hailey**	**129.94**	**34**		PKPdf		PKPdf	22 21 35.4	+1.5
NVAR	**Mina Array Bea**	**130.66**	**41**		PKP		PKPdf	22 21 37.4	+1.9
comp=Z,1.4nm,0.7s,baz=260,slow=2.3,SNR=5.1									
NVAR					SKPbc		SKPbc	22 24 58.8	+1.4
comp=Z,0.9nm,0.7s,baz=287,slow=3.7,SNR=4.4									
BGU	**Big Grassy Mou**	**132.43**	**35**		*e*PKPdf		PKPdf	22 21 40.1	+1.4
BGU					*e*pPKPdf		pPKPdf	22 21 49.2	+1.1
HWUT	**Hardware Ranch**	**132.81**	**34**		*e*PKPdf		PKPdf	22 21 39.9	+0.4
HWUT					*e*pPKPdf		pPKPdf	22 21 48.8	0.0
DUG	**Dugway**	**133.03**	**36**		*e*PKIKP		PKPdf	22 21 40.5	+0.6
PDAR	**Pinedale Array**	**133.08**	**31**		PKP		PKPdf	22 21 39.9	0.0
comp=Z,0.5nm,0.5s,baz=197,slow=1.5,SNR=4.3									
GSC	**Goldstone**	**133.36**	**44**		*e*PKIKP		PKPdf	22 21 41.0	+0.3
MSU	**Marysvale**	**134.49**	**37**		*e*PKIKP		PKPdf	22 21 44.2	+1.5
RWWY	**Rawlins**	**135.06**	**30**		PKPdf		PKPdf	22 21 43.0	-0.7
SRU	**San Rafael**	**135.08**	**36**		*e*PKIKP		PKPdf	22 21 44.1	+0.3
PV01	**Paradox Valley**	**136.86**	**35**		*e*PKPdf		PKPdf	22 21 46.9	-0.2
ANMO	**Albuquerque**	**140.28**	**37**		*e*PKIKP		PKPdf	22 21 54.6	+1.1
GDL2	**Guadalupe Moun**	**143.44**	**38**		*e*P		PKPdf	22 21 57.7	-1.5
WMOK	**Wichita Mounta**	**144.62**	**29**		*e*PKIKP		PKPdf	22 21 59.2	-2.0
CCM	**Cathedral Cave**	**144.70**	**17**		*e*PKIKP		PKPdf	22 21 59.3	-1.9
OLIL	**Olney**	**144.87**	**13**		*e*PKP		PKPdf	22 22 00.2	-1.3
MCWV	**Mont Chateau**	**144.99**	**2**		*e*PKPdf		PKPdf	22 22 00.8	-0.8
MCWV					*e*pPKPdf		pPKPdf	22 22 09.1	-1.9
FVM	**French Village**	**145.00**	**16**		*e*PKIKP		PKPdf	22 21 59.9	-1.9
SDMD	**Soldier's Deli**	**145.21**	**357**		*e*PKP		PKPdf	22 22 01.2	-0.9
SDMD					*e*			22 22 09.2	
SIUC	**Southern Illin**	**145.57**	**15**		*e*PKPdf		PKPdf	22 22 02.2	-0.6
WCI	**Wyandotte Cave**	**145.72**	**11**		*e*PKPdf		PKPdf	22 22 02.8	-0.2
WCI					*e*pPKPdf		pPKPdf	22 22 11.1	-1.3
TXAR	**Lajitas Array**	**145.81**	**41**		PKPbc		PKPbc	22 22 04.4	+0.5
comp=Z,20nm,0.8s,baz=307,slow=1.2,SNR=209									
MIAR	**Mount Ida**	**147.08**	**23**		*e*PKPdf		PKPdf	22 22 07.2	+1.8
MIAR					*e*pPKPdf		pPKPdf	22 22 15.2	+0.4
UALR	**University of**	**147.33**	**21**		*e*PKPdf		PKPdf	22 22 06.1	+0.3
UALR					*e*pPKPdf		pPKPdf	22 22 15.2	0.0
ELN	**Prospectdale**	**147.38**	**3**		*e*PKP		PKPdf	22 22 05.6	-0.2
JCT	**Junction City**	**147.39**	**35**		*e*PKPdf		PKPdf	22 22 06.6	+0.6
JCT					*e*PKPbc		PKPbc	22 22 08.5	0.0
WVT	**Waverly**	**147.42**	**14**		*e*PKPdf		PKPdf	22 22 07.5	+1.5
WVT					*e*pPKPdf		pPKPdf	22 22 16.6	+1.2
TZTN	**Tazewell**	**147.80**	**7**		*e*PKPdf		PKPdf	22 22 06.3	-0.2
TZTN					*e*pPKPdf		pPKPdf	22 22 16.1	+0.1
OXF	**Oxford**	**148.53**	**17**		*e*PKIKP		PKPdf	22 22 07.8	0.0
SWET	**Sewanee**	**148.71**	**11**		*e*PKP		PKPdf	22 22 10.0	+1.9
SWET					*e*			22 22 19.3	
CPCT	**Cooper Cave**	**148.74**	**9**		*e*PKPdf		PKPdf	22 22 09.5	+1.4
CPCT					*e*pPKPdf		pPKPdf	22 22 20.3	+2.8
JSC	**Jenkinsville**	**150.27**	**4**		*e*PKPdf		PKPdf	22 22 11.4	+0.8
JSC					*e*PKPbc		PKPbc	22 22 15.6	-0.2

IDC 12 22:06:48.4±4.0, 427S×10087E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/20, mbtmp3.6/4, Error ellipse: s-maj=163.5km s-min=27.1km az=51.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.13**	**118**	P	P	22 13 52.5	-0.1
0.4nm,0.5s,baz=289,slow=8.4,SNR=5.9							
SONM	**Songino Array**	**52.11**	**5**	P	P	22 16 00.3	+0.1
0.8nm,0.8s,baz=186,slow=8.7,SNR=4.5							
MKAR	**Makanchi Array**	**53.43**	**344**	P	P	22 16 09.8	-0.2
0.9nm,0.7s,baz=157,slow=7.8,SNR=6.2							
KURK	**Kurchatov**	**58.01**	**344**	P	P	22 16 42.6	-0.3
0.5nm,0.7s,baz=166,slow=6.4,SNR=2.4							
TXAR	**Lajitas Array**	**145.91**	**40**	PKPbc	PKPbc	22 26 30.0	-0.6
0.3nm,0.4s,baz=356,slow=0.4,SNR=3.8							

ISCJB ***12*** *22:07:41.0±0.3, 3851N±002×3660E±004, h10km, Error ellipse: s-maj=4.1km s-min=3.1km az=156.1*
CSEM ***12*** *22:07:40.8±0.1, 3846N×3659E, h2km, MD3.4, Error ellipse: s-maj=1.7km s-min=1.5km az=82.0*
ISK ***12*** *22:07:41.6, 3845N×3659E, h7km, MD3.4*
DDA ***12*** *22:07:41.8, 3855N×3665E, h22km×3km, Md3.5*

ISC 12 22:07:41.4±0.3, 3853N±002×3664E±004, h10km, n30, σ1§19/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARI	**SarD1z-Kayseri**	**0.16**	**18**	*e*PG	**Pg**	**22 07 44.8**	**-0.1**
SARI				*e*SG	**Sg**	**22 07 47.4**	**+0.2**
BNN	**Bunyan**	**0.70**	**298**	*e*PG	**Pg**	**22 07 55.7**	**+0.9**
ANDN	**Andirin**	**0.98**	**194**	*i* P	**Pg**	**22 07 58.4**	**-1.7**
ANDN				*i* S	**Sg**	**22 08 11.7**	**-1.1**
DARE	**Darende-Malaty**	**1.01**	**65**	*e*PG	**Pg**	**22 07 55.2**	**-5.6**
DARE				*e*SG	**Sg**	**22 08 06.3**	**-7.5**
AKCD	**Akcadag**	**1.04**	**103**	*i* P	**Pg**	**22 08 00.8**	**-0.5**
AKCD				*i* S	**Sg**	**22 08 18.4**	**+3.6**
KMRS	**Kahramanmaras**	**1.04**	**168**	*e*PG	**Pg**	**22 08 00.7**	**-0.8**
KOZT	**Kozan**	**1.23**	**212**	*e*PN	**Pn**	**22 08 04.1**	**-0.5**
GZT	**Gaziantep**	**1.38**	**148**	*i* P	**Pg**	**22 08 07.9**	**0.0**
GZT				*i* S	**Sg**	**22 08 27.0**	**+1.1**
SVSK	**Karacayir**	**1.41**	**11**	*e*PN	**Pg**	**22 08 09.5**	**+1.0**
MYA	**Malataya**	**1.42**	**98**	*e*PN	**Pg**	**22 08 08.6**	**0.0**
MALT	**Malatya**	**1.42**	**98**	*e*PN	**Pn**	**22 08 07.8**	**+0.5**
GAZ	**Gaziantep**	**1.43**	**161**	*e*PN	**Pn**	**22 08 08.1**	**+0.7**
YOZ	**Yozgat**	**1.51**	**318**	*e*PN	**Pn**	**22 08 10.5**	**+0.2**
NIG	**Nigde**	**1.65**	**256**	*e*PN	**Pn**	**22 08 10.9**	**+0.5**
CEYT	**Ceyhan**	**1.67**	**205**	*e*PN	**Pn**	**22 08 10.7**	**0.0**
KARA	**Karaisali**	**1.78**	**225**	*e*PN	**Pn**	**22 08 11.9**	**-0.3**
RSDY	**Resadiye-TOKAT**	**1.94**	**16**	*e*PN	**Pg**	**22 08 16.9**	**-1.6**
COBT	**Iskenderun**	**2.03**	**189**	*i* P	**Pn**	**22 08 15.5**	**-0.1**
COBT				*i* S	**Sn**	**22 08 41.0**	**0.0**
URFA	**Urfa**	**2.04**	**122**	*e*PN	**Pn**	**22 08 17.2**	**+1.4**
CDAG	**Cicekdag**	**2.07**	**302**	*i* P	**Pg**	**22 08 19.4**	**-1.7**
CDAG				*i* S	**Sg**	**22 08 49.4**	**+1.4**
SVRC	**Sivrice-ELAZID**	**2.10**	**93**	*e*PN	**Pn**	**22 08 18.0**	**+1.4**
PTK	**Pertek**	**2.19**	**80**	*e*PN	**Pg**	**22 08 20.6**	**-2.6**
CORM	**Corum**	**2.27**	**317**	*e*PN	**Pg**	**22 08 22.0**	**-2.8**
MERS	**Mersin**	**2.36**	**226**	*e*PN	**Pn**	**22 08 21.1**	**+0.9**
KAMT	**Kaman**	**2.43**	**291**	*e*PN	**Pn**	**22 08 22.8**	**+1.7**
CTKT	**Corum**	**2.53**	**326**	*i* P	**Pg**	**22 08 29.1**	**-0.8**
CTKT				*i* S	**Sg**	**22 09 06.7**	**+4.0**
GRSN	**GIRESUNGRSN**	**2.70**	**27**	*i* P	**Pg**	**22 08 31.1**	**-2.0**
ESPY	**Espiye-Giresun**	**2.88**	**33**	*e*PN	**Pn**	**22 08 30.2**	**+2.9**
GUMT	**Gumushane**	**2.92**	**48**	*e*PN	**Pn**	**22 08 31.7**	**+3.8**
ERZM	**Erzurum**	**3.92**	**68**	*i* P	**Pg**	**22 08 56.0**	**-0.5**

ISCJB ***12*** *22:08:59.9±0.5, 327S±008×10108E±009, h25km, mb4.3/23, Error ellipse: s-maj=15.8km s-min=7.1km az=140.5*
IDC ***12*** *22:09:00.4±1.2, 361S×10075E, h28km±4km, mb4.0/13, mb1 4.1/14, mb1mx4.0/23, mbtmp4.0/14, ML4.4/1, Error ellipse: s-maj=39.9km s-min=14.2km az=52.0*
BJI ***12*** *22:09:01.1, 320S×101.10E, h26km, mB5.1, mb4.5*
NEIC ***12*** *22:09:02.1±0.4, 324S×101.12E, mb4.4/9, Error ellipse: s-maj=15.1km s-min=7.0km az=49.0*

ISC 12 22:09:02.1±0.5, 330S±008×10108E±009, h27km, h27km±1.4km:pP-P, n42, σ1§22/39, mb4.3/23, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**18.70**	**96**	P	**Pn**	**22 13 19.7**	**+0.5**
1.0nm,0.3s,baz=270,slow=12,SNR=3.0							
CMAR	**Chiang Mai Arr**	**21.72**	**355**	P	**P**	**22 13 51.1**	**-0.2**
3.9nm,0.7s,mb3.9,baz=186,slow=8.6,SNR=19							
CHTO	**Chiang Mai**	**22.07**	**355**	*e*P	**P**	**22 13 54.8**	**-0.3**
6.1nm,1.1s,mb3.9							
PALK	**Pallekele**	**22.89**	**297**	P	**P**	**22 14 05.1**	**+1.2**
MBWA	**Marble Bar**	**25.39**	**136**	P	**P**	**22 14 29.5**	**+2.0**
FITZ	**Fitzroy Crossi**	**28.20**	**123**	*e*P	**P**	**22 14 54.9**	**+2.0**
6.3nm,0.9s,mb4.2							
NWAO	**Narrogin (SRO)**	**33.13**	**155**	P	**P**	**22 15 37.8**	**+1.6**
LSA	**Lhasa**	**34.16**	**345**	*e*P	**P**	**22 15 46.7**	**+1.6**
WRA	**Warramunga Arr**	**36.41**	**120**	P	**P**	**22 16 02.9**	**-1.8**
0.9nm,0.3s,mb4.2,baz=308,slow=8.7,SNR=12							
WRAB	**Tennant Creek**	**36.42**	**120**	*e*P	**P**	**22 16 02.9**	**-1.9**
3.7nm,0.8s,mb4.4							
WRAB				*e*	pP	22 16 10.6	-2.2
WRAB				*e*PP	PP	22 17 28.7	+0.8
ASAR	**Alice Springs**	**37.62**	**125**	P	**P**	**22 16 12.8**	**-2.2**
0.6nm,0.3s,mb3.8,baz=294,slow=7.5,SNR=5.5							
LZH	**Lanzhou**	**39.27**	**4**	*e*P	**P**	**22 16 30.5**	**+2.0**
LZH				AP	pP	22 16 33.6	-3.0
LZH				AMB	AMB		
comp=Z,33nm,1.2s,mb4.9							
LZH				AMB	AMB		
comp=Z,126nm,4.2s							
GTA	**Gaotai**	**42.51**	**359**	*e*P	**P**	**22 16 56.8**	**+1.5**
GTA				AP	pP	22 17 00.8	-2.6
GTA				AMB	AMB		
comp=Z,5.0nm,1.1s,mb4.2							
PMG	**Port Moresby**	**46.16**	**100**	P	**P**	**22 17 23.9**	**-1.1**
GUMO	**Guam**	**46.57**	**68**	P	**P**	**22 17 27.2**	**-1.0**
CTAO	**Charters Tower**	**47.08**	**114**	*e*P	**P**	**22 17 32.9**	**+0.8**
CTAO				*e*	pP	22 17 38.8	-1.4
STKA	**Stephens Creek**	**47.49**	**131**	P	**P**	**22 17 34.8**	**-0.2**
comp=Z,1.6nm,0.4s,mb4.3,baz=290,slow=15,SNR=3.6							
STKA	**Stephens Creek**	**47.49**	**131**	*e*P	**P**	**22 17 35.2**	**+0.2**
STKA				*e*	pP	22 17 43.3	+0.1
KSRS	**Korea Array**	**47.60**	**29**	P	**P**	**22 17 37.4**	**+1.6**
comp=Z,5.6nm,1.0s,mb4.6,baz=219,slow=8.7,SNR=19							
KBL	**Kabul**	**48.21**	**324**	*e*P	**P**	**22 17 40.6**	**0.0**
KBL				*e*	pP	22 17 48.7	-0.1
SONM	**Songino Array**	**51.13**	**5**	P	**P**	**22 18 04.5**	**+2.0**
comp=Z,5.0nm,0.8s,mb4.5,baz=185,slow=9.2,SNR=26							
SONM				pP	pP	22 18 12.6	+1.8
comp=Z,6.8nm,0.8s,baz=184,slow=9.1,SNR=20							
ULN	**Ulaanbaatar**	**51.22**	**5**	*e*P	**P**	**22 18 04.6**	**+1.4**
comp=Z,4.8nm,0.9s,mb4.4							
ULN				*e*pP	pP	22 18 12.2	+0.8
ULN				*e*PcP	PcP	22 19 17.3	-0.9
TKM2	**Tokmak 2**	**51.45**	**336**	*e*P	**P**	**22 18 04.9**	**-0.1**
comp=Z,6.7nm,0.8s,mb4.6							
TKM2				*e*pP	pP	22 18 13.5	+0.2
EKS2	**Erkin-Say**	**51.99**	**335**	*e*P	**P**	**22 18 09.0**	**-0.1**
comp=Z,6.0nm,0.8s,mb4.6							
EKS2				*e*pP	pP	22 18 17.5	+0.1
MKAR	**Makanchi Array**	**52.56**	**344**	P	**P**	**22 18 13.4**	**+0.1**
comp=Z,3.9nm,0.8s,mb4.4,baz=144,slow=8.5,SNR=20							
MKAR				pP	pP	22 18 21.6	0.0
comp=Z,2.6nm,0.7s,baz=147,slow=9.0,SNR=9.3							
MAJO	**Matsushiro**	**52.62**	**38**	*e*P	**P**	**22 18 13.0**	**-0.9**
MAJO				*e*pP	pP	22 18 22.0	-0.1
MJAR	**Matsushiro Arr**	**52.62**	**38**	P	**P**	**22 18 14.1**	**+0.2**
comp=Z,2.0nm,0.9s,mb4.1,baz=221,slow=7.8,SNR=5.6							
KURK	**Kurchatov**	**57.15**	**343**	P	**P**	**22 18 45.5**	**-0.9**
comp=Z,3.5nm,0.8s,mb4.4,baz=166,slow=6.8,SNR=14							

PPI Padang Panjang 2.42 349 P Pn 22 18 00.4 -0.1
0.0nm,0.0s
RGRI Rengat 2.89 31 P Pn 22 18 08.6 +1.6
0.0nm,0.0s
JMBI JAMBI 3.04 67 P Pn 22 18 12.3 +3.2
0.0nm,0.0s
KLI Kotabumi 4.47 117 P Pn 22 18 31.4 +2.7
0.0nm,0.0s
TRSI Tarutung 5.20 339 P Pn 22 18 46.5 +7.8
1µm,0.7s
PPBI Pangkal Pinang 5.33 83 P Pn 22 18 43.1 +2.6
122nm,0.7s
KGM Kluang 5.43 27 ⇑P Pn 22 18 44.5 +2.7
MYKOM **Kota Tinggi 5.50 33** ⇑P Pn 22 18 44.9 +2.1
FRIM Kepong 6.09 7 ⇓P Pn 22 18 53.6 +2.6
DBJI Dramaga 6.94 122 P Pn 22 19 08.7 +6.1
308nm,0.8s
CBJI Citeko 6.96 121 P Pn 22 19 08.7 +5.9
835nm,0.9s
IPM Ipoh 7.28 1 ⇑P Pn 22 19 10.2 +2.9
LEM Lembang 7.82 121 P Pn 22 19 21.4 +6.8
228nm,1.0s
KTGM Kuala Trenggan 8.44 16 ⇑P Pn 22 19 27.4 +4.2
BJII Banjamegara 9.89 117 P Pn 22 19 45.8 +2.8
60nm,0.8s
BSI Banda Aceh 9.97 326 P Pn 22 19 47.0 +2.8
78nm,0.9s
COCO West Island 10.10 203 Pn Pn 22 19 42.6 -3.3
3µm,0.8s,SNR=6.8
COCO West Island 10.10 203 *e*P Pn 22 19 43.0 -2.9
KSM Kuching 10.39 66 ⇑P Pn 22 19 53.5 +3.7
KSM Kuching 10.39 66 *e*Pn Pn 22 19 48.8 -1.1
KSM *e*Sn **Sn** 22 21 43.7 -1.3
STKI Sintang 11.01 75 P Pn 22 20 04.2 +5.8
76nm,0.8s
SJI Sawahan 11.90 114 P Pn 22 20 11.0 +0.4
158nm,0.7s
SBUM Sibu 12.53 65 ⇑P Pn 22 20 23.6 +4.5
BTM Bintulu 13.63 64 ⇓P Pn 22 20 38.1 +4.0
BBKI Banjar Baru 13.99 93 P Pn 22 20 45.8 +6.8
183nm,0.9s
KHKI Kahang-Kahang 15.67 111 P Pn 22 21 03.0 +1.8
67nm,0.8s
KKM Kota Kinabalu 17.71 60 ⇑P Pn 22 21 29.9 +3.3
KKM Kota Kinabalu 17.71 60 *e*Pn Pn 22 21 28.4 +1.7
KKM *e*Sn **Sn** 22 24 42.0 -1.2
SDKM Sandakan 18.38 63 ⇑P Pn 22 21 36.2 +1.4
TSM Tawau 18.43 67 ⇑P Pn 22 21 37.1 +1.6
UBT Ubonrachathani 18.45 13 ⇓P Pn 22 21 35.0 -0.6
KDM Kudat 18.67 59 ⇓P Pn 22 21 41.0 +2.6
KAPI Kappang 18.98 97 Pn Pn 22 21 41.1 -1.0
642nm,0.8s,SNR=14
KAPI Kappang 18.98 97 P Pn 22 21 39.7 -2.4
8.6nm,0.3s,baz=293,slow=11,SNR=23
KAPI LR LR 22 29 19.1
comp=Z,460nm,21.5s,baz=279,slow=38
KAPI Kappang 18.98 97 *e*Pn Pn 22 21 40.8 -1.4
PCI Palu 19.08 85 P Pn 22 21 44.3 +1.0
160nm,1.4s
MYLDM **Lahad Datu 19.35 66** ⇑P Pn 22 21 48.1 +1.6
BDT Bhumibol Dam 20.05 355 P P 22 21 49.0 -3.6
18nm,0.8s
CM31 Chiang Mai Arr 21.25 355 *e*P P 22 22 02.0 -3.6
CMAR Chiang Mai Arr 21.25 355 P P 22 22 02.6 -3.0
39nm,0.9s,mb4.7,baz=185,slow=10.0,SNR=71
CMAR PcP PcP 22 26 10.4 +1.1
2.5nm,0.6s,baz=203,slow=3.0,SNR=5.4
CMAR LR LR 22 30 49.3
comp=Z,579nm,19.6s,MS4.0,baz=185,slow=38
CMAR Chiang Mai Arr 21.25 355⇑ *e*P P 22 22 02.7 -2.9
CHG Chiang Mai 21.61 355 ⇑P P 22 22 09.3 -0.1
31nm,0.9s,mb4.7
CHTO Chiang Mai 21.61 355 *e*P P 22 22 05.0 -4.4
KDI Kendari 21.76 94 P P 22 22 13.2 +2.0
63nm,1.2s,mb4.9
QIZ Qiongzhong 23.47 22 P P 22 22 29.2 +0.3
QIZ S **S** 22 26 44.9 +6.0
QIZ LR LR
comp=N,450nm,19.5s
QIZ LR LR
comp=Z,811nm,18.6s,MS4.2
QIZ Qiongzhong 23.47 22 *e*P P 22 22 27.1 -1.8
comp=Z,28nm,1.1s,mb4.6
BATI Baumata 23.80 109 P P 22 22 32.0 0.0
comp=Z,46nm,0.8s,mb5.0
BATI Baumata 23.80 109 P P 22 22 29.7 -2.3
comp=Z,57nm,0.9s,mb5.0,baz=154,slow=1.8,SNR=7.6
BATI S **S** 22 26 39.0 -5.5
comp=Z,30nm,0.7s,baz=157,slow=22,SNR=6.3
LBMI Labuha 26.73 86 P P 22 22 58.7 +0.1
comp=Z,163nm,1.0s,mb5.5
KMI Kunming 27.86 4 P P 22 23 08.1 -0.5
KMI AP pP 22 23 17.3 -4.0
KMI PP PP 22 24 00.1 -12
KMI S **S** **22 27 51.7 +3.1**
KMI SS 22 29 17.3
KMI AMB AMB
comp=Z,13nm,0.7s,mb4.7
KMI LR LR
comp=N,705nm,20.7s
KMI LR LR
comp=E,478nm,14.9s
KMI LR LR
comp=Z,964nm,19.9s,MS4.4
FITZ Fitzroy Crossi 28.64 124 *e*P P 22 23 14.9 -0.7
comp=Z,22nm,0.6s,mb5.1
FITZ Fitzroy Crossi 28.64 124 P P 22 23 14.8 -0.8
comp=Z,13nm,0.6s,mb4.8,baz=288,slow=7.2,SNR=29
FITZ LR LR 22 33 47.8
comp=Z,278nm,21.5s,MS3.8,baz=134,slow=34
SHL Shillong 29.55 343 *e*P P 22 23 24.0 +0.4
SHL *ex* x 22 26 11.0
GYA Guiyang 29.67 11⇑ *i*P P 22 23 28.0 +3.4
GYA PP PP 22 24 25.6 -6.8
GYA S **S** **22 28 24.0 +7.0**
GYA SS SS 22 29 59.2 -26
GYA SCP ScP 22 30 11.4 +5.2
GYA SCS ScS 22 34 05.9 +4.6
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.2
GYA LR LR
comp=N,3µm,17.8s,MS5.1
GYA LR LR
comp=E,2µm,16.9s,MS5.1
GYA LR LR
comp=Z,2µm,17.4s,MS4.9
SWI Sorong 30.46 87 P P 22 23 31.0 -0.8
comp=Z,60nm,1.0s,mb5.3
ODAN Odare 32.27 337 *e*P P 22 23 48.2 +0.7
comp=Z,212nm,0.8s,mb6.0
TAPN Taplejung 32.59 338 *e*P P 22 23 51.5 +1.2
comp=Z,504nm,0.9s
RAMN Ramite 32.66 336 *e*P P 22 23 52.0 +1.0
comp=Z,69nm,0.6s,mb5.8
JIRN Jiri 33.46 336 *e*P P 22 23 59.0 +1.1
comp=Z,124nm,0.6s,mb6.0
NWAO Narrogin (SRO) 33.63 155 LR LR 22 36 16.8
comp=Z,539nm,19.6s,MS4.3,baz=325,slow=34
LSA Lhasa 33.67 345 *e*P P 22 23 58.3 -1.4
LSA pmax pmax
comp=Z,341nm,0.8s,mb6.3
LSA Lhasa 33.67 345 *e*P P 22 23 58.3 -1.4
comp=Z,342nm,0.8s,mb6.3
CD2 Chengdu 33.68 5 P P 22 23 58.6 -1.2
CD2 AP pP 22 24 03.5 -9.2
CD2 XP sP 22 24 05.8 -13
CD2 PP PP 22 25 13.8 -3.1
CD2 S **S** **22 29 23.1 +3.5**
CD2 AMB AMB
comp=Z,30nm,0.5s,mb5.5
CD2 LR LR
comp=N,320nm,14.8s
CD2 LR LR
comp=Z,250nm,16.2s,MS4.0
PKI Pulchoki 33.70 335 *e*P P 22 24 00.5 +0.4
comp=Z,65nm,0.7s,mb5.7
PKIN Phulchoki 33.71 335 *e*P P 22 24 00.6 +0.5
comp=Z,57nm,0.6s,mb5.7
GUN Gumba 33.80 336 *e*P P 22 24 02.0 +1.1
comp=Z,380nm,0.6s
YHNB Yeheng 33.85 35 *e*P P 22 24 00.9 -0.5
comp=Z,20nm,0.7s,mb5.2
YHNB *e*PP PP 22 25 17.2 -1.6
DMN Daman 33.87 334 *e*P P 22 24 02.0 +0.5
KKN Kakani 33.95 335 *e*P P 22 24 02.7 +0.5
comp=Z,207nm,0.6s,mb6.2

GKN Gorkha 34.41 334 *e*P P 22 24 06.7 +0.5
comp=Z,65nm,0.3s,mb6.0
KOLN Koldanda 34.68 332 *e*P P 22 24 09.3 +0.8
comp=Z,95nm,0.6s,mb5.9
DANN Dangsing 35.10 333 *e*P P 22 24 12.8 +0.7
comp=Z,323nm,0.6s,mb6.4
WHN Wuhan 35.62 20 ⇓P P 22 24 16.3 -0.3
WHN AMB AMB
comp=Z,22nm,0.7s,mb5.2
WRA Warramunga Arr 36.84 120 P P 22 24 26.3 -0.9
comp=Z,26nm,0.5s,mb5.3,baz=302,slow=8.8,SNR=386
WRA PcP PcP 22 26 48.6 +0.2
comp=Z,4.0nm,0.7s,baz=295,slow=2.4,SNR=6.2
WRA S **S** **22 30 05.3 -3.1**
comp=Z,1.4nm,0.7s,baz=294,slow=17,SNR=5.5
WRAB Tennant Creek 36.84 120 P P 22 24 26.0 -1.2
comp=Z,364nm,0.6s,mb6.4,SNR=59
WRAB Tennant Creek 36.84 120 *e*P P 22 24 26.4 -0.8
WRAB *e* 22 26 48.5
WRAB *e*S **S** **22 30 04.9 -3.6**
WRAB pmax pmax
comp=Z,38nm,0.6s,mb5.4
WRAB Tennant Creek 36.84 120 *e*P P 22 24 26.4 -0.8
comp=Z,38nm,0.6s,mb5.4
WRAB *e*PcP PcP 22 26 48.5 0.0
WRAB *e*S **S** **22 30 04.9 -3.5**
WB2 Warramunga Arr 36.85 120 *e*P P 22 24 26.3 -0.9
WB2 *e*S **S** **22 30 02.6 -5.9**
XAN Xi'an 37.47 11 P P 22 24 30.5 -1.8
XAN AMB AMB
comp=Z,87nm,0.8s,mb5.6
PTH Pithoragarh 37.79 330 *e*P P 22 24 36.2 +1.1
ASAR Alice Springs 38.07 126 P P 22 24 37.5 -0.1
comp=Z,18nm,0.7s,mb4.9,baz=301,slow=7.7,SNR=82
ASAR PcP PcP 22 26 52.5 +0.3
comp=Z,6.7nm,0.8s,baz=308,slow=3.4,SNR=7.3
ASAR S **S** **22 30 24.4 -2.7**
comp=Z,4.1nm,0.8s,baz=296,slow=17,SNR=12
NJ2 Nanjing 38.69 25 *e*P P 22 24 42.0 -0.6
NJ2 AP pP 22 24 46.7 -9.0
NJ2 XP sP 22 24 49.6 -12
NJ2 PP PP 22 26 15.1 +3.1
NJ2 S **S** **22 30 33.5 -2.6**
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.0
NJ2 AMB AMB
comp=Z,1µm,5.2s
NJ2 LR LR
comp=N,210nm,14.8s,MS4.4
NJ2 LR LR
comp=E,330nm,11.1s,MS4.4
NJ2 LR LR
comp=Z,400nm,19.0s
NDI New Delhi 38.70 326 *e*P P 22 24 44.0 +1.3
LZH Lanzhou 38.83 4 *e*P P 22 24 43.2 -0.5
LZH AP pP 22 24 47.4 -9.4
LZH XP sP 22 24 50.4 -12
LZH AMB AMB
comp=Z,23nm,1.1s,mb4.8
LZH AMB AMB
comp=Z,105nm,5.1s
DDI Dehra Dun 39.52 328⇑ *i*P P 22 24 47.5 -2.1
DDI *e*P 22 24 47.5
DDI *ex* x 22 26 11.0
JOW Kunigami 39.65 40 P P 22 24 50.5 -0.2
comp=Z,6.1nm,0.4s,mb4.7,baz=202,slow=9.5,SNR=5.7
JOW LR LR 22 40 49.2
comp=Z,148nm,21.7s,MS3.8,baz=157,slow=36
SMLA Simla 40.62 328 *i*P P 22 24 58.8 +0.1
comp=Z,43nm,0.8s,mb5.1
SDNR Sundarnagar 41.02 328 *e*P P 22 25 02.4 +0.4
GTA Gaotai 42.06 359 *e*P P 22 25 09.3 -1.1
GTA AP pP 22 25 12.8 -11
GTA XP sP 22 25 14.3 -15
GTA S **S** **22 31 22.5 -3.7**
GTA AMB AMB
comp=Z,5.0nm,0.7s,mb4.2
GTA AMB AMB
comp=Z,49nm,4.8s
GTA LR LR
comp=N,320nm,17.4s,MS4.4
GTA LR LR
comp=E,295nm,18.6s,MS4.4
GTA LR LR
comp=Z,572nm,19.5s,MS4.5
DLH Dalhousie 42.36 328 *e*P P 22 25 13.0 +0.1
THN Thein Dam 42.41 328 *e*P P 22 25 12.3 -1.0
HHC Hu-ho-hao-te 44.58 12 ⇑P P 22 25 30.7 +0.1
HHC AP pP 22 25 34.0 -10
HHC XP sP 22 25 35.8 -14
HHC PCP PcP 22 27 13.1 +0.1
HHC PP PP 22 27 16.3 +0.8
HHC SCP ScP 22 31 03.4 +2.1
HHC PCS PcS 22 31 05.4 -0.9
HHC S **S** **22 32 07.0 +4.0**
HHC SS SS 22 35 19.4 -4.9
HHC SCS ScS 22 35 25.4 +1.2
HHC AMB AMB
comp=Z,24nm,0.7s,mb5.1
HHC AMB AMB
comp=Z,117nm,6.7s
HHC LR LR
comp=N,290nm,15.0s,MS4.5
HHC LR LR
comp=E,311nm,15.1s,MS4.5
HHC LR LR
comp=Z,423nm,15.1s,MS4.5
BJT Baijiatuau 44.91 17 *e*P P 22 25 32.9 -0.4
BJT pmax pmax
comp=Z,9.0nm,0.6s
BJT Baijiatuau 44.91 17 *e*P P 22 25 32.9 -0.5
comp=Z,8.9nm,0.6s,mb4.8
BJI Beijing 44.94 17 P P 22 25 32.9 -0.6
BJI AMB AMB
comp=Z,18nm,0.6s,mb5.1
BJI AMB AMB
comp=Z,122nm,4.1s
BJI LR LR
comp=N,687nm,17.6s,MS4.7
BJI LR LR
comp=E,371nm,19.8s,MS4.7
BJI LR LR
comp=Z,716nm,21.5s,MS4.6
DL2 Dalian 45.76 23 P P 22 25 39.8 -0.2
DL2 *e*S **S** **22 32 24.0 +3.9**
DL2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
DL2 LR LR
comp=N,140nm,16.8s,MS4.2
DL2 LR LR
comp=E,190nm,17.0s,MS4.2
DL2 LR LR
comp=Z,250nm,18.2s,MS4.2
GUMO Guam 46.62 68 P P 22 25 43.9 -3.3
comp=Z,52nm,0.5s,mb5.8,baz=174,slow=4.6,SNR=8.6
KSRS Korea Array 47.32 30 P P 22 25 51.4 -1.0
comp=Z,6.4nm,0.6s,mb4.7,baz=226,slow=8.1,SNR=27
KSRS pP pP 22 26 03.1 -2.6
comp=Z,13nm,0.9s,baz=225,slow=8.4,SNR=10
KSRS PcP PcP 22 27 21.7 -1.0
comp=Z,1.3nm,0.6s,baz=227,slow=4.9,SNR=4.1
KSRS LR LR 22 47 37.1
comp=Z,181nm,18.4s,MS4.1,baz=249,slow=38
CTA Charters Tower 47.47 115 *e*P P 22 25 53.1 -0.7
comp=Z,34nm,0.7s,mb5.4
CTA Charters Tower 47.47 115 *e*P P 22 25 53.1 -0.7
CTA pmax pmax
comp=Z,34nm,0.7s
CTAO Charters Tower 47.47 115 *e*P P 22 25 53.3 -0.5
CTAO pmax pmax
comp=Z,45nm,0.7s,mb5.5
CTAO Charters Tower 47.47 115 *e*P P 22 25 53.3 -0.5
comp=Z,45nm,0.7s,mb5.5
WMQ Urumqi 47.94 347⇑ *i*P P 22 25 57.2 +0.2
WMQ AP pP 22 26 02.3 -8.1
WMQ XP sP 22 26 05.0 -11
WMQ PCP PcP 22 27 25.5 +0.8
WMQ *e*S **S** **22 32 54.0 +2.9**
WMQ XS sS 22 33 02.0 -11
WMQ AMB AMB
comp=Z,203nm,0.8s,mb6.2
WMQ AMB AMB
comp=Z,205nm,3.6s
WMQ LR LR
comp=N,692nm,20.2s,MS4.8
WMQ LR LR
comp=E,710nm,20.5s,MS4.8
WMQ LR LR
comp=Z,623nm,21.7s,MS4.5
STKA Stephens Creek 47.96 132 *e*P P 22 25 57.4 0.0
comp=Z,17nm,0.6s,mb5.3
STKA Stephens Creek 47.96 132 P P 22 25 58.0 +0.7
comp=Z,21nm,0.7s,mb5.3,baz=299,slow=8.1,SNR=28
STKA LR LR 22 46 01.9
comp=Z,438nm,21.1s,MS4.4,baz=115,slow=36
KSH Kashi 47.96 334⇑ *i*P P 22 25 58.0 +0.8
KSH AP pP 22 26 02.1 -8.5
KSH XP sP 22 26 06.1 -10
KSH PCP PcP 22 27 26.0 +1.1
KSH PP PP 22 27 49.2 -0.5
KSH SCP ScP 22 31 18.1 +2.6
KSH PCS PcS 22 31 20.4 -0.1
KSH S **S** **22 32 53.6 +2.1**
KSH XS sS 22 33 02.0 -12
KSH SCS ScS 22 35 48.2 +1.9
KSH SS SS 22 36 18.0 -3.0
KSH AMB AMB
comp=Z,405nm,2.2s,mb6.1
KSH LR LR
comp=N,652nm,5.0s
KSH LR LR
comp=E,715nm,4.4s
KSH LR LR
comp=Z,566nm,4.8s
ULHL Ulahol 50.12 336 P P 22 26 14.2 +0.5
SNR=20
SONM Songino Array 50.70 5 P P 22 26 18.2 +0.2
comp=Z,50nm,0.7s,mb5.6,baz=186,slow=8.9,SNR=336
SONM PcP PcP 22 27 34.4 -0.3
comp=Z,6.9nm,0.6s,baz=188,slow=4.3,SNR=6.9
SONM ScP ScP 22 31 26.0 -1.0
comp=Z,1.7nm,1.0s,baz=202,slow=3.2,SNR=4.1
SONM Songino Array 50.70 5 P P 22 26 18.2 +0.2
SONM 22 27 34.4
ULN Ulaanbaatar 50.79 5 *e*P P 22 26 18.8 +0.1
ULN pmax pmax
comp=Z,31nm,0.8s,mb5.3
ULN Ulaanbaatar 50.79 5 *e*P P 22 26 18.8 +0.1
comp=Z,31nm,0.8s,mb5.3
UCH Uchtor 50.82 335 P P 22 26 19.9 +0.9
SNR=20
UCH Uchtor 50.82 335 *e*P P 22 26 19.8 +0.8
comp=Z,12nm,0.5s,mb5.1
UCH *e*pP pP 22 26 28.4 -4.1
TKM2 Tokmak 2 50.94 336 *e*P P 22 26 20.2 +0.3
TKM2 *e**PP pP 22 26 28.8 -4.6
TKM2 *e**SP sP 22 26 32.9 -6.2
TKM2 pmax pmax
comp=Z,470nm,0.3s
TKM2 Tokmak 2 50.94 336 P P 22 26 20.3 +0.3
SNR=146
TKM2 Tokmak 2 50.94 336 *e*P P 22 26 20.2 +0.3
comp=Z,470nm,0.3s
TKM2 *e*pP pP 22 26 28.8 -4.6
TKM2 *e*sP sP 22 26 32.9 -6.2
KBK Karagaybulak 50.99 336 P P 22 26 21.4 +1.1
SNR=43
AML Almayashu 51.09 334 P P 22 26 22.1 +1.0
SNR=9.1
AAK Ala-Archa 51.16 335 P P 22 26 19.0 -2.5
SNR=14
FRU Bishkek 51.27 335 *e*P P 22 26 22.5 +0.1
CHMS Chumysh 51.35 336 P P 22 26 23.1 +0.1
SNR=21
CN2 Changchun 51.43 23 *e*P P 22 26 22.1 -1.4
CN2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
EKS2 Erkin-Say 51.48 335 P P 22 26 24.9 +0.9
SNR=217
EKS2 Erkin-Say 51.48 335 *e*P P 22 26 24.8 +0.8
comp=Z,106nm,2.1s,mb5.4
USP Ospenovka 51.68 336 P P 22 26 25.6 +0.2
SNR=105
MK31 Makanchi Array 52.07 344 *i*P P 22 26 27.3 -1.0
MK31 pmax pmax
comp=Z,25nm,0.5s,mb5.4
MK31 Makanchi Array 52.07 344⇑ *i*P P 22 26 27.4 -0.9
MKAR Makanchi Array 52.07 344 P P 22 26 27.8 -0.4
comp=Z,35nm,0.6s,mb5.5,baz=154,slow=8.5,SNR=419
MKAR pP pP 22 26 40.1 -1.7
comp=Z,37nm,0.9s,baz=139,slow=8.1,SNR=11
MAJO Matsushiro 52.41 38 *e*P P 22 26 29.7 -1.3
MAT Matsushiro 52.41 38 P P 22 26 30.1 -0.9
MJAR Matsushiro Arr 52.41 38 P P 22 26 29.6 -1.4
comp=Z,3.7nm,0.7s,mb4.5,baz=213,slow=7.6,SNR=12
MJAR PcP PcP 22 27 41.0 -0.3
comp=Z,2.3nm,0.8s,baz=212,slow=4.4,SNR=3.2
MJAR LR LR 22 48 16.2
comp=Z,94nm,18.9s,MS3.9,baz=245,slow=36
MJAR Matsushiro Arr 52.41 38 P P 22 26 29.6 -1.4
MJAR 22 27 41.0
ZAK Zakamensk 53.06 2 *e*P P 22 26 33.9 -1.6
ZAK pmax pmax
comp=Z,11nm,1.0s,mb4.7
ZAK pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
EIDS Eidsvold 53.20 120 *e*P P 22 26 43.3 +6.2
comp=Z,38nm,0.8s,mb5.4
KK31 Karatay Array 53.29 333 *i*P P 22 26 36.3 -1.1
KK31 pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
MDJ Mudanjiang 53.78 25 P P 22 26 42.4 +1.5
MDJ AMB AMB
comp=Z,6.0nm,0.7s,mb4.6
MDJ AMB AMB
comp=Z,52nm,5.0s
MOY Mondy 54.31 0 *e*P P 22 26 44.8 +0.2
MOY pmax pmax
comp=Z,31nm,1.9s,mb4.9
TLY Talaya 54.37 2 P P 22 26 45.7 +0.6
comp=Z,240nm,0.9s,mb6.1,SNR=20
TLY Talaya 54.37 2 *e*P P 22 26 45.5 +0.4
TLY pmax pmax
comp=Z,45nm,1.0s,mb5.3
TLY Talaya 54.37 2 *e*P P 22 26 45.5 +0.4
comp=Z,38nm,0.9s,mb5.3
CAN Canberra 55.02 132 *e*P P 22 26 51.1 +1.0
ABKT Ailbek 56.64 320 P P 22 27 01.4 -0.3
comp=Z,92nm,0.9s,mb5.8,SNR=5.8
KURK Kurchatov 56.66 343 P P 22 27 00.6 -0.9
comp=Z,378nm,0.7s,SNR=61
KURK Kurchatov 56.66 343 P P 22 27 00.4 -1.1
comp=Z,32nm,0.8s,mb5.4,baz=161,slow=6.8,SNR=108
KURK pP pP 22 27 13.1 -2.1
comp=Z,37nm,0.8s,baz=160,slow=6.7,SNR=19
KURK Kurchatov 56.66 343 P P 22 27 00.1 -1.4
KURK pmax pmax
comp=Z,69nm,0.9s,mb5.7
KURK Kurchatov 56.66 343 *e*P P 22 27 00.9 -0.6
ZAA0 Zalesovo Array 58.15 349 *e*P P 22 27 10.8 -1.2
ZAA0 *e*pP pP 22 27 20.1 -5.6
ZAA0 *e*sP sP 22 27 24.3 -7.1
ZAA0 PcP PcP 22 28 01.7 -1.4
ZALV Zalesovo Beam 58.15 349 P P 22 27 11.2 -0.8
comp=Z,75nm,0.8s,mb5.8,baz=163,slow=5.7,SNR=235
ZALV S **S** **22 35 06.1 -3.6**
comp=Z,1.3nm,0.8s,baz=158,slow=16,SNR=4.8
KLR Kul'dur 58.36 23 *e*P P 22 27 09.0 -4.6
KLR pmax pmax
comp=E,20nm,0.9s
KLR pmax pmax
comp=Z,48nm,0.9s,mb5.5
KRAR Krasnoyarsk 59.02 355 P P 22 27 16.8 -1.2
NVS Novosibirsk 59.31 348 *i*P P 22 27 18.7 -1.3
NVS *i*S **S** **22 35 22.4 -2.3**
NVS pmax pmax
comp=Z,41nm,1.2s,mb5.3
NVS pmax pmax
comp=N,33nm,1.5s
NVS pmax pmax
comp=E,24nm,1.5s
NVS smax
comp=N,12nm,1.5s
NVS smax
comp=E,17nm,1.5s
RDF Al-Radifah 60.03 306 *e*P P 22 27 25.4 -0.1
baz=306
RDF AMb AMB 22 27 26.2
comp=Z,94nm,0.8s,mb5.9,baz=306
UMR Umm Al-Rimmam 60.14 307 *e*P P 22 27 26.2 0.0
baz=307

UMR AMb AMB 22 27 27.5
comp=Z,105nm,0.7s,mb6.0,baz=307
NAY Al-Naaiem 60.40 306 *e*P **P 22 27 27.7 -0.3**
baz=306
NAY AMb AMB 22 27 28.9
comp=Z,33nm,0.9s,mb5.4,baz=306
MIB Mutribah 60.54 307 *e*P **P 22 27 29.0 0.0**
baz=307
MIB AMb AMB 22 27 30.2
comp=Z,85nm,0.9s,mb5.9,baz=307
RST Umm Al-Ruwaisa 60.70 306 *e*P **P 22 27 29.4 -0.6**
baz=306
RST AMb AMB 22 27 30.4
comp=Z,47nm,0.7s,mb5.7,baz=306
VOSK Vostochnaya 60.81 340 P **P 22 27 28.9 -1.5**
VOSK pmax pmax
comp=Z,17nm,0.6s,mb5.3
BVA0 Borovoye Array 61.27 340 *i* P **P 22 27 32.0 -1.4**
BVA0 pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
BVAR Borovoye Array 61.27 340 P **P 22 27 32.4 -1.1**
comp=Z,32nm,0.7s,mb5.5,baz=143,slow=9.2,SNR=168
BRVK Borovoye 61.33 340 P **P 22 27 32.9 -1.0**
comp=Z,205nm,0.5s,SNR=14
BRVK Borovoye 61.33 340 P **P 22 27 32.2 -1.7**
BRVK pmax pmax
comp=Z,15nm,0.5s,mb5.4
BRVK Borovoye 61.33 340 *e*P **P 22 27 32.7 -1.1**
BOD Bodaibo 61.39 8⇓ *i* P **P 22 27 33.5 -0.7**
BOD pmax pmax
comp=Z,35nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 61.76 31⇑ *e*P **P 22 27 36.1 -0.8**
YSS pmax pmax
comp=Z,50nm,0.9s,mb5.6
YSS Yuzh-Sakhalins 61.76 31 *e*P **P 22 27 36.7 -0.1**
CLNS Chul'man 62.61 15 *e*P **P 22 27 41.6 -0.8**
CLNS *e**PP pP 22 27 51.7 -4.5
CLNS *e* 22 28 21.4
CLNS *e* 22 29 57.7
CLNS *e*PPP 22 31 25.6
CLNS *e*S **S 22 36 06.3 -0.4**
CLNS *e* 22 37 31.1
CLNS pmax pmax
comp=N,14nm,0.9s
CLNS pmax pmax
comp=Z,22nm,0.9s,mb5.3
CLNS pmax pmax
comp=E,11nm,1.0s
CLNS smax
comp=E,228μm,14.8s
CLNS smax
comp=N,31μm,16.2s
CLNS MLR MLR
comp=Z,523nm,18.0s,MS4.8
CLNS MLR MLR
comp=N,3μm,24.0s
CLNS MLR MLR
comp=E,2μm,23.0s
AB31 Akbulak array 62.78 331 *i* P **P 22 27 42.8 -0.9**
AB31 pmax pmax
comp=Z,81nm,0.8s,mb5.9
AB31 Akbulak array 62.78 331⇑ *e*P **P 22 27 42.9 -0.8**
AKTK Aktyubinsk 64.50 331 P **P 22 27 54.0 -1.0**
AKTO Aktyubinsk 64.50 331 P **P 22 27 54.0 -1.0**
comp=Z,12nm,0.7s,mb5.0,baz=122,slow=7.3,SNR=31
AKTO Aktyubinsk 64.50 331 *i* P **P 22 27 53.7 -1.3**
AKTO pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
GNI Garni 66.72 316 P **P 22 28 10.3 +0.8**
comp=Z,8.4nm,0.8s,mb4.8,baz=321,slow=7.8,SNR=6.5
GNI Garni 66.72 316 *e*P **P 22 28 09.1 -0.5**
GNI pmax pmax
comp=Z,10.0nm,0.9s
GNI Garni 66.72 316 *e*P **P 22 28 10.6 +1.0**
SVE Sverdlovsk 67.78 337⇓ *e*P **P 22 28 15.5 -0.4**
SVE pmax pmax
comp=Z,55nm,1.0s,mb5.5
ARU Arti 68.32 336 P **P 22 28 18.7 -0.6**
comp=Z,160nm,1.1s,mb6.0,SNR=12
ARU Arti 68.32 336*c i*P **P 22 28 18.1 -1.2**
ARU *e* 22 28 40.5
ARU *e* 22 30 47.7
ARU *e*S S 22 37 16.4 -0.1
ARU *e*SS SS 22 41 39.2 -1.5
ARU pmax pmax
comp=Z,30nm,1.0s,mb5.3
ARU Arti 68.32 336 *e*P **P 22 28 18.4 -0.8**
comp=Z,28nm,1.0s,mb5.2
YAK Yakutsk 68.35 14 *e*P **P 22 28 17.5 -1.9**
YAK pmax pmax
comp=Z,105nm,0.9s,mb5.9
YAK pmax pmax
comp=N,30nm,1.3s
YAK pmax pmax
comp=E,15nm,1.2s
YAK Yakutsk 68.35 14 *e*P **P 22 28 18.2 -1.2**
MAW Mawson 69.68 195 P **P 22 28 27.1 -0.4**
comp=E,1.8nm,0.6s,mb4.2,baz=0.1,slow=5.6,SNR=7.5
MAW LR LR 22 52 31.2
comp=E,277nm,19.0s,MS4.5,baz=80,slow=30
KIV Kislovodsk 69.73 319⇑ *e*P **P 22 28 28.5 +0.2**
KIV *i* pP 22 28 42.8 +0.4
KIV pmax pmax
comp=Z,20nm,0.9s,mb5.0
KIV Kislovodsk 69.73 319⇓ *i*P **P 22 28 28.7 +0.4**
KIV Kislovodsk 69.73 319 *e*P **P 22 28 28.7 +0.3**
KIV *e*pP pP 22 28 38.0 -4.4
KIV *e*sP sP 22 28 41.6 -6.4
ASF Jabal al Asfar 69.77 306 P **P 22 28 29.9 +1.1**
comp=Z,8.9nm,0.8s,mb4.7,baz=306,slow=4.5,SNR=15
MALT Malatya 70.53 312 *e*P **P 22 28 31.7 -1.7**
MALT *e* pP 22 28 46.9 -0.5
MALT pmax pmax
comp=Z,11nm,1.0s,mb4.7
MALT Malatya 70.53 312⇓ *i*P **P 22 28 32.6 -0.8**
MALT Malatya 70.53 312 *e*P **P 22 28 31.7 -1.7**
comp=Z,10nm,1.0s,mb4.7
MALT *e* pP 22 28 46.9 -0.5
EIL Elat 70.69 303 P **P 22 28 35.1 +0.6**
comp=Z,14nm,0.9s,mb4.9,baz=99,slow=4.3,SNR=11
MMAI Mount Meron Ar 71.22 306 P **P 22 28 38.7 +1.1**
comp=Z,14nm,0.8s,mb4.9,baz=92,slow=8.5,SNR=21
SOC Sochi 71.55 318 *e*P **P 22 28 38.7 -0.7**
SOC *e* pP 22 28 52.0 -1.5
SOC *e* 22 31 20.8
SOC *e*PPP 22 33 06.0
SOC pmax pmax
comp=Z,29nm,0.7s,mb5.3
SOC Sochi 71.55 318 *i* P **P 22 28 39.3 -0.1**
LSZ Lusaka 72.53 255 P **P 22 28 47.1 +1.3**
comp=Z,0.8nm,0.5s,baz=102,slow=10,SNR=3.1
LSZ pP pP 22 29 01.3 +1.4
comp=Z,7.2nm,1.1s,baz=94,slow=6.9,SNR=7.6
LSZ Lusaka 72.53 255 *e*P **P 22 28 45.0 -0.8**
LSZ *e**PP pP 22 28 55.2 -4.7
LSZ *PP pP 22 29 01.4 +1.5
LSZ pmax pmax
comp=Z,21nm,1.5s,mb4.8
LSZ Lusaka 72.53 255 *e*P **P 22 28 45.0 -0.8**
comp=Z,21nm,1.5s,mb4.8
LSZ *e*pP pP 22 28 55.2 -4.7
LSZ pP pP 22 29 01.4 +1.4
PETK Petropavlovsk- 73.15 32 P **P 22 28 47.7 -1.0**
comp=Z,9.9nm,0.7s,mb4.9,baz=310,slow=0.6,SNR=32
CSS Prodhromos 73.41 308 *e*P **P 22 28 50.5 -0.1**
comp=Z,12nm,1.0s,mb4.8
PET Petropavlovsk 73.61 32 *e*P **P 22 28 50.3 -1.2**
PET pmax pmax
comp=Z,58nm,0.7s,mb5.6
PET Petropavlovsk 73.61 32⇑ *i*P **P 22 28 50.6 -0.9**
BR131 Keskin Array S 74.52 312 *e*P **P 22 28 56.1 -0.9**
comp=Z,9.3nm,0.8s,mb4.8
BR131 *e*pP pP 22 29 06.1 -5.1
BR131 *e*sP sP 22 29 10.7 -6.0
VSR Storozhevoye 74.95 325 *e*P **P 22 28 58.2 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,7.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.6s
SIM Simferopol' **75.79 318** *e*P **P 22 29 04.5 +0.2**
SIM pmax pmax
comp=Z,17nm,0.8s,mb5.0
BOSA Boshof 75.99 241 P **P 22 29 07.1 +1.3**
comp=Z,1.6nm,0.7s,mb4.1,baz=107,slow=11,SNR=4.1
BOSA LR LR 23 00 03.0
comp=Z,156nm,18.3s,MS4.3,baz=175,slow=34
BOSA Boshof 75.99 241 P **P 22 29 07.1 +1.3**
BOSA LR LR 23 00 03.0
TIXI Tiksi 76.56 9 *e*P **P 22 29 05.9 -2.2**
TIXI pmax pmax
comp=Z,54nm,1.0s,mb5.4
TIXI MLR MLR
comp=Z,450nm,19.0s,MS4.8
TIXI Tiksi 76.56 9⇑ *i*P **P 22 29 06.4 -1.7**
SYO Syowa Base 77.34 199⇑ *e*PcP PcP 22 29 25.2 +2.3
MOS Moscow 77.66 329 *e*P **P 22 29 13.4 -1.1**
MOS *e* pP 22 29 27.6 -1.2
MOS *e*S S 22 38 57.8 -4.8
MOS pmax pmax
comp=Z,51nm,0.8s,mb5.5
OBN Obninsk 77.96 328*c i*P **P 22 29 16.1 -0.1**
OBN *i* pP 22 29 30.1 -0.4
OBN pmax pmax
comp=Z,23nm,0.8s,mb5.2
OBN Obninsk 77.96 328 *e*P **P 22 29 16.2 0.0**
TLCR 79.45 317⇑ *i*P **P 22 29 25.3 +0.6**
TLCR 79.45 317⇑ P **P 22 29 25.3 +0.6**
TIRR Tirgusor 79.55 316⇑ *i*P **P 22 29 24.8 -0.4**
TIRR Tirgusor 79.55 316⇑ P **P 22 29 24.8 -0.4**
HARR Harsova 79.94 316⇑ *i*P **P 22 29 26.5 -0.8**
HARR Harsova 79.94 316⇑ P **P 22 29 26.5 -0.8**
AKASG Malin Array Be 80.67 322 P **P 22 29 30.1 -1.0**
comp=Z,5.6nm,0.7s,mb4.6,baz=92,slow=3.8,SNR=14
AKASG pP pP 22 29 44.8 -0.6
comp=Z,9.2nm,0.8s,baz=82,slow=4.0,SNR=7.0
AKASG Malin Array Be 80.67 322 *i* P **P 22 29 30.2 -0.9**
AKASG pmax pmax
comp=Z,6.0nm,0.7s
KIEV Kiev 80.68 322 *e*P **P 22 29 28.3 -2.9**
KIEV *e* pP 22 29 43.5 -2.0
KIEV pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KIEV Kiev 80.68 322 *e*P **P 22 29 28.3 -2.8**
comp=Z,4.1nm,0.8s,mb4.4
KIEV *e* pP 22 29 43.5 -2.0
VRI Vrincioaia 81.05 317⇑ *i*P **P 22 29 34.1 +0.9**
VRI Vrincioaia 81.05 317⇑ P **P 22 29 34.1 +0.9**
PLOR Plostina 81.09 317⇑ *i*P **P 22 29 34.4 +0.9**
MLR Muntele Rosu 81.49 317⇑ *i*P **P 22 29 36.2 +0.6**
MLR Muntele Rosu 81.49 317⇑ P **P 22 29 36.2 +0.6**
VOIR 82.10 316⇑ *i*P **P 22 29 38.5 -0.3**
VOIR 82.10 316⇑ P **P 22 29 38.5 -0.3**
BURAR Bucovina Array 82.45 319⇓ *i*P **P 22 29 42.0 +1.4**
BURAR Bucovina Array 82.45 319⇓ P **P 22 29 42.0 +1.4**
BUR08 Bucovina Ar. S 82.47 319 *e*P **P 22 29 41.5 +0.8**
MNK Minsk 82.52 326 *e*P **P 22 29 38.0 -2.8**
JOF Joensuu 83.34 334 *e*p **P 22 29 43.7 -1.2**
comp=Z,14nm,0.7s,mb5.1
JOF Joensuu 83.34 334 *e*P **P 22 29 43.7 -1.2**
JOF pmax pmax
comp=Z,14nm,0.7s,mb5.1
BILL Bilibino 83.66 20 *e*P **P 22 29 45.8 -0.6**
BILL pmax pmax
comp=Z,11nm,0.9s,mb5.0
LVV L'vov 83.69 321 *e*P pP 22 30 01.0 -0.3
DRGR 83.96 317⇑ *i*P **P 22 29 49.2 +0.8**
DRGR 83.96 317⇑ P **P 22 29 49.2 +0.8**
VSU Vasula 84.16 329 *e*P **P 22 29 48.9 -0.3**
APA Apatity 84.18 339⇑ *i*P **P 22 29 48.7 -0.4**
APA pmax pmax
comp=Z,26nm,1.0s,mb5.3
KWP Kalwaria 84.49 320 *e*P **P 22 29 51.6 +0.6**
KWP Kalwaria 84.49 320 *e*P **P 22 29 51.6 +0.6**
BZS Buzias 84.50 316⇓ *i*P **P 22 29 51.6 +0.4**
BZS Buzias 84.50 316⇓ P **P 22 29 51.6 +0.4**
UZH Uzhgorod 84.57 319 *e*P **P 22 29 50.6 -0.9**
UZH *e* 22 29 58.4
KOLS Kolonicke sedl 84.64 320 *e*P **P 22 29 52.6 +0.8**
KOLS *e*pP pP 22 29 57.5 -8.7
KOLS Kolonicke sedl 84.64 320 *i* P **P 22 29 52.6 +0.8**
SUW Suwalki 85.06 325 *e*P **P 22 29 53.7 -0.1**
SUW Suwalki 85.06 325 *e*P **P 22 29 53.7 -0.1**
CRVS Cervenica-Dubn 85.16 319 *e*P **P 22 29 54.8 +0.4**
STHS Stebnicka Huta 85.39 320 *i* P **P 22 29 56.4 +0.8**
STHS *e* pP 22 30 10.2 +0.2
STHS pmax pmax
comp=Z,12nm,0.8s,mb5.1
STHS Stebnicka Huta 85.39 320 *i* P **P 22 29 56.2 +0.6**
STHS *e*pP pP 22 30 10.2 +0.2
STHS Stebnicka Huta 85.39 320 *i* P **P 22 29 56.4 +0.8**
comp=Z,12nm,0.8s,mb5.1
STHS *e* pP 22 30 10.2 +0.2
KECS Kecovo 85.73 319 *e*P **P 22 29 57.2 -0.1**
KECS *e* pP 22 30 12.0 +0.3
KECS pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
KECS Kecovo 85.73 319 *e*P **P 22 29 57.2 -0.1**
KECS *e*pP pP 22 30 12.1 +0.4
KECS Kecovo 85.73 319 *e*P **P 22 29 57.2 -0.1**
comp=Z,4.6nm,0.8s,mb4.8
KECS *e* pP 22 30 12.0 +0.3
PSZ Piszkesteto 86.04 318⇑ *i*P **P 22 29 59.0 +0.2**
PSZ Piszkesteto 86.04 318⇑ P **P 22 29 59.0 +0.2**
PKSM Moragy 86.64 316⇓ *i*P **P 22 30 02.1 +0.3**
PKSM Moragy 86.64 316⇓ P **P 22 30 02.1 +0.2**
VYHS Vyhne 86.82 319 *e*P **P 22 30 02.3 -0.3**
VYHS *e*pP pP 22 30 16.9 -0.2
VYHS Vyhne 86.82 319 *e*P **P 22 30 02.3 -0.3**
VYHS *e* pP 22 30 15.2 -1.9
KOLL Kolacno 87.12 319 *e*P **P 22 30 04.0 -0.1**
KOLL *e*pP pP 22 30 19.1 +0.6
KOLL Kolacno 87.12 319 *e*P **P 22 30 03.8 -0.3**
KOLL *e* pP 22 30 19.1 +0.6
OKC Ostrava-Krasne 87.45 320⇑ *e*P **P 22 30 05.1 -0.5**
OKC *e*pP pP 22 30 20.4 +0.3
ARCES ARCESS Array B 87.55 340 P **P 22 30 05.8 0.0**
comp=Z,12nm,0.7s,mb5.2,baz=99,slow=6.5,SNR=45
ARE0 ARCESS Array S 87.55 340 *e*P **P 22 30 05.8 +0.1**
MORC Moravsky Berou 87.83 320⇓ *i*P **P 22 30 08.3 +0.8**
MODS Modra-Piesok 87.83 318 *e*P **P 22 30 07.1 -0.4**
MODS *e* pP 22 30 22.1 +0.1
MODS Modra-Piesok 87.83 318 *e*pP pP 22 30 21.8 -0.2
ZST Bratislava 87.93 318 *e*P **P 22 30 07.6 -0.4**
ZST *e* pP 22 30 22.8 +0.3
ZST pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ZST Bratislava 87.93 318 *e*P **P 22 30 08.3 +0.3**
ZST Bratislava 87.93 318 *e*P **P 22 30 07.6 -0.4**
comp=Z,8.6nm,0.8s,mb5.0
ZST *e* pP 22 30 22.8 +0.3
DPC Dobruska-Polom 88.67 320⇑ *i*P **P 22 30 12.3 +0.8**
DPC *e* pP 22 30 26.7 +0.8
DPC Dobruska-Polom 88.67 320⇑ *i*P **P 22 30 12.3 +0.8**
DPC *e*pP pP 22 30 26.7 +0.8
DPC *ex* x 22 30 40.9
CONA Conrad Observa 88.73 318⇑ *i*P **P 22 30 11.9 +0.1**
comp=Z,5.2nm,0.9s,mb4.9
CSNA Conrad Observa 88.73 318⇑ *i*P **P 22 30 11.9 +0.1**
comp=Z,4.5nm,0.9s,mb4.8
KSP Ksiaz 88.74 321 *e*P pP 22 30 27.5 +1.3
KSP Ksiaz 88.74 321 *e*P **P 22 30 12.7 +0.9**
KSP *e**PP pP 22 30 27.2 +0.9
UPC Upice 88.89 321⇑ *e*P **P 22 30 13.2 +0.7**
UPC *e*pP pP 22 30 26.7 -0.2
ARSA Arzberg 88.89 317⇑ *i*P **P 22 30 13.0 +0.5**
comp=Z,7.3nm,0.9s,mb5.0
ARSA Arzberg 88.89 317⇑ *i*PcP PcP 22 30 13.0 -1.0
comp=Z,7.3nm,0.9s
BOJS Bojanci 88.92 315 *i* P **P 22 30 13.2 +0.5**
BOJS *e* pP 22 30 28.0 +0.8
TREC Trest 89.11 319⇑ *i*P **P 22 30 14.0 +0.5**
TREC *e*pP pP 22 30 28.6 +0.6
PERS Pernice 89.11 317 *i* P **P 22 30 14.2 +0.6**
SOKA Soboth 89.17 317⇑ *i*P **P 22 30 14.6 +0.7**
comp=Z,10nm,0.8s,mb5.2
SOKA Soboth 89.17 317⇑ *i*PcP PcP 22 30 14.6 -0.7
comp=Z,10nm,0.8s
VNDS Vrh nad Dolski 89.35 316 *i* P **P 22 30 15.4 +0.7**
LJU Ljubljana 89.47 316 *i* P **P 22 30 16.1 +0.8**
PRU Pruhonice 89.78 320⇑ *e*P **P 22 30 17.5 +0.7**
PRU *e*pP pP 22 30 31.6 +0.5
JAVS Javornik 89.78 316 *i* P **P 22 30 16.7 -0.1**
PVCC Panska Ves 89.81 320 *e*P **P 22 30 17.4 +0.6**
PVCC *e* pP 22 30 32.0 +0.7
PVCC Panska Ves 89.81 320⇑ *e*P **P 22 30 17.4 +0.6**
PVCC *ex* x 22 30 32.0
PVCC *e*pP sP 22 30 46.7 +10
BRG Berggiesshubel 90.23 321 *i* P **P 22 30 19.5 +0.8**
BRG *i* pP 22 30 34.1 +0.9
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
BRG Berggiesshubel 90.23 321 *e*P **P 22 30 19.4 +0.7**
BRG *e*pP pP 22 30 33.8 +0.6
comp=Z,16nm,1.1s
BRG Berggiesshubel 90.23 321 *i* P **P 22 30 19.5 +0.7**
comp=Z,9.0nm,0.8s,mb5.2
BRG *i* pP 22 30 34.1 +0.9
comp=Z,16nm,1.1s
GEC2 GERESS Array S 90.24 319 *e*P **P 22 30 19.4 +0.6**
GEC2 *e**PP pP 22 30 34.2 +0.9
GEC2 pmax pmax
comp=Z,32nm,1.7s,mb5.4
GEC2 GERESS Array S 90.24 319 *e*P **P 22 30 19.4 +0.6**
GEC2 *e*pP pP 22 30 34.2 +0.9
comp=Z,32nm,1.7s
GEC2 GERESS Array S 90.24 319 *e*P **P 22 30 19.4 +0.6**
comp=Z,32nm,1.7s,mb5.4
GEC2 *e*pP pP 22 30 34.2 +0.9
GERES GERESS Array B 90.24 319 P **P 22 30 19.3 +0.5**
comp=Z,4.8nm,0.7s,mb4.9,baz=83,slow=5.5,SNR=48
GERES pP pP 22 30 34.0 +0.7
comp=Z,4.2nm,0.9s,baz=101,slow=4.2,SNR=7.6
KHC Kasperske Hory 90.34 319⇑ *e*P **P 22 30 19.5 +0.2**
KHC *ex* x 22 30 34.2
RUE Ruedersdorf 90.45 322 *e*P **P 22 30 20.0 +0.3**
FBE Freiberg 90.61 321 *e*P **P 22 30 21.2 +0.7**
RJOB Jochberg 90.77 318 *e*P **P 22 30 21.4 +0.1**
WET Wettzell 90.80 319 *e*P **P 22 30 22.0 +0.6**
WET *e**PP pP 22 30 36.8 +0.9
WET pmax pmax
comp=Z,13nm,1.1s,mb5.2
WET Wettzell 90.80 319 *e*P **P 22 30 22.0 +0.6**
WET *e*pP pP 22 30 36.8 +0.9
comp=Z,13nm,1.1s
WET Wettzell 90.80 319 *e*P **P 22 30 22.0 +0.6**
comp=Z,13nm,1.1s,mb5.2
WET *e*pP pP 22 30 36.8 +0.9
CLL Collm 90.85 321 *i* P **P 22 30 21.7 +0.1**
CLL *i* pP 22 30 36.0 -0.1
CLL pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
CLL Collm 90.85 321 *e*P **P 22 30 21.5 -0.1**
CLL *e*pP pP 22 30 36.1 0.0
comp=Z,18nm,1.5s
CLL Collm 90.85 321 *i* P **P 22 30 21.7 +0.1**
comp=Z,8.0nm,1.1s,mb5.0
CLL *i* sP sP 22 30 36.0 -5.6
CLL Collm 90.85 321 *i* P **P 22 30 21.7 +0.1**
comp=Z,8.0nm,1.1s,mb5.0
CLL *i* pP 22 30 36.0 -0.1
CLL *e* 22 30 43.0
NKC Novy Kostel 91.14 320⇑ *e*P **P 22 30 23.2 +0.2**
NKC *ex* x 22 30 38.2
WERN Wernitzgruen 91.19 320 *e*P **P 22 30 23.7 +0.5**
comp=Z,7.0nm,1.0s,mb5.0
GUNZ Gunzen 91.22 320 *e*P **P 22 30 23.9 +0.5**
GUNZ *e*pP pP 22 30 38.6 +0.7
comp=Z,13nm,1.2s
WERD Werda 91.24 320 *e*P **P 22 30 23.8 +0.3**
comp=Z,5.0nm,1.0s,mb4.8
ROTZ Rotzenmuhle 91.27 320 *e*P **P 22 30 24.6 +1.0**
comp=Z,10.0nm,1.1s,mb5.1
MANZ Manzenberg 91.35 320 *e*P **P 22 30 24.6 +0.7**
comp=Z,16nm,1.2s,mb5.2
WTTA Wattenberg 91.53 317⇑ *i*P **P 22 30 24.8 -0.1**
comp=Z,11nm,0.7s,mb5.3
WATA Walderalm 91.58 317⇑ *i*P **P 22 30 24.8 -0.3**
comp=Z,5.5nm,1.0s,mb4.8
NEUB Neuenburg 91.61 321 *e*P **P 22 30 25.7 +0.5**
comp=Z,16nm,0.9s,mb5.3
MOX Moxa 91.69 320 *e*P **P 22 30 25.9 +0.4**
MOX pmax pmax
comp=Z,7.0nm,1.2s,mb4.9
MOX Moxa 91.69 320 *e*P **P 22 30 25.9 +0.4**
comp=Z,8.0nm,1.2s,mb4.9
MOX *e*pP pP 22 30 40.4 +0.4
MOTA Moosalm 91.90 317⇑ *i*P **P 22 30 26.4 -0.1**
comp=Z,7.6nm,0.9s,mb5.0
GRA1 Grafenberg Arr 91.91 319 *e*P **P 22 30 26.8 +0.2**
comp=Z,21nm,1.3s,mb5.3
GRA1 *e*pP pP 22 30 42.0 +0.9
GRF Grafenberg Arr 91.91 319 *e*P **P 22 30 26.8 +0.2**
GRF *e**PP pP 22 30 42.0 +0.9
GRF pmax pmax
comp=Z,21nm,1.3s,mb5.3
GRF Grafenberg Arr 91.91 319 *e*P **P 22 30 26.8 +0.2**
GRF *e**PP pP 22 30 42.0 +0.9
GRF pmax pmax
comp=Z,21nm,1.3s,mb5.3
GRF Grafenberg Arr 91.91 319 *e*P **P 22 30 26.8 +0.2**
comp=Z,21nm,1.3s,mb5.3
GRF *e*pP pP 22 30 42.0 +0.9
RETA Reutte 92.14 317⇑ *i*P **P 22 30 27.8 +0.2**
comp=Z,11nm,0.7s,mb5.3
RETA Reutte 92.14 317⇑ *i*PcP PcP 22 30 27.8 -0.6
comp=Z,11nm,0.7s
FETA Feichten 92.14 317⇑ *i*P **P 22 30 28.2 +0.5**
comp=Z,6.6nm,0.9s,mb5.0
FETA Feichten 92.14 317⇑ *i*PcP PcP 22 30 28.2 -0.2
comp=Z,6.6nm,0.9s
NB2 NORSAR Subarra 92.29 331 P **P 22 30 27.7 -0.4**
comp=Z,8.4nm,0.8s,mb5.1,baz=93,slow=4.8
NOA NORSAR Array B 92.29 331 P **P 22 30 27.4 -0.7**
comp=Z,6.0nm,0.7s,mb5.0,baz=94,slow=4.6,SNR=17
NOA pP pP 22 30 42.0 -0.6
comp=Z,6.9nm,0.8s,baz=94,slow=4.7,SNR=9.5
NOA PP PP 22 34 11.9 +2.9
comp=Z,1.4nm,0.8s,baz=90,slow=8.1,SNR=3.5
CLZ Clausthal 92.51 322 *e*P **P 22 30 30.5 +1.2**
DAVA Damuels 92.73 317⇑ *i*P **P 22 30 30.9 +0.5**
comp=Z,13nm,0.8s,mb5.4
DAVA Damuels 92.73 317⇑ *i*PcP PcP 22 30 30.9 -0.1
comp=Z,13nm,0.8s
KEST Kesra 92.86 305 P **P 22 30 33.0 +1.7**
comp=Z,3.3nm,0.9s,mb4.8,baz=273,slow=6.7,SNR=8.8
KEST pP pP 22 30 46.9 +1.1
comp=Z,4.6nm,1.0s,baz=258,slow=4.2,SNR=5.8
STU Stuttgart 93.21 319 *e*P **P 22 30 33.0 +0.4**
BFO Black Forest 93.79 318 *e*P **P 22 30 35.0 -0.3**
CDF Champ du Feu 94.49 318 *e*P **P 22 30 38.0 -0.5**
comp=Z,5.5nm,0.8s,mb4.8
CDF Champ du Feu 94.49 318 *e*P **P 22 30 38.0 -0.5**
CDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
CDF Champ du Feu 94.49 318 *e*P **P 22 30 38.0 -0.5**
comp=Z,2.8nm,0.8s,mb4.7
HINF Hinteralfeld 94.78 318 *e*P **P 22 30 38.9 -0.9**
comp=Z,4.4nm,0.8s,mb4.7
HINF Hinteralfeld 94.78 318 *e*P **P 22 30 38.9 -0.9**
HINF pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
HINF Hinteralfeld 94.78 318 *e*P **P 22 30 38.9 -0.9**
comp=Z,2.2nm,0.8s,mb4.6
LPG La Plagne 94.89 315 *e*P **P 22 30 40.4 0.0**
comp=Z,9.2nm,0.7s,mb5.0
LPG La Plagne 94.89 315 *e*P **P 22 30 40.4 0.0**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
LPG La Plagne 94.89 315 *e*P **P 22 30 40.4 0.0**
comp=Z,4.6nm,0.7s,mb5.0
LPL La Plagne 94.90 315 *e*P **P 22 30 40.4 -0.1**
comp=Z,7.9nm,0.7s,mb5.0
LPL La Plagne 94.90 315 *e*P **P 22 30 40.4 -0.1**
LPL pmax pmax
comp=Z,4.0nm,0.7s,mb5.0
LPL La Plagne 94.90 315 *e*P **P 22 30 40.4 -0.1**
comp=Z,4.0nm,0.7s,mb5.0
HAU Haudompre 95.12 318 *e*P **P 22 30 40.9 -0.5**
comp=Z,10nm,0.9s,mb5.0
HAU Haudompre 95.12 318 *e*P **P 22 30 40.9 -0.5**
HAU pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
HAU Haudompre 95.12 318 *e*P **P 22 30 40.9 -0.5**
comp=Z,5.2nm,0.9s,mb5.0
MEZF Maizieres J'vi 95.97 318 *e*P **P 22 30 44.9 -0.3**
comp=Z,6.0nm,0.6s,mb4.9
MEZF Maizieres J'vi 95.97 318 *e*P **P 22 30 44.9 -0.3**
comp=Z,6.0nm,0.6s,mb5.2
BAIF Baives 96.44 320 *e*P **P 22 30 47.3 0.0**
comp=Z,9.8nm,0.9s,mb4.9
BAIF Baives 96.44 320 *e*P **P 22 30 47.3 0.0**

BAIF					pmax	pmax				
	comp=Z,5.0nm,0.9s,mb4.9									
BAIF	**Baives**	**96.44**	**320**	*e*P	**P**		**22**	**30**	**47.3**	**0.0**
	comp=Z,4.9nm,0.9s,mb4.9									
LOR	**Lormes**	**96.83**	**317**	*e*P	**P**		**22**	**30**	**48.8**	**-0.4**
	comp=Z,5.3nm,0.8s,mb4.7									
LOR	**Lormes**	**96.83**	**317**	*e*P	**P**		**22**	**30**	**48.8**	**-0.4**
LOR					pmax	pmax				
	comp=Z,3.0nm,0.8s,mb4.8									
LOR	**Lormes**	**96.83**	**317**	*e*P	**P**		**22**	**30**	**48.8**	**-0.4**
	comp=Z,2.7nm,0.8s,mb4.7									
SMF	**Signal de Mont**	**96.88**	**316**	*e*P	**P**		**22**	**30**	**48.9**	**-0.5**
AVF	**Avril sur Loir**	**97.20**	**317**	*e*P	**P**		**22**	**30**	**49.0**	**-1.9**
	comp=Z,3.9nm,0.9s,mb4.5									
AVF	**Avril sur Loir**	**97.20**	**317**	*e*P	**P**		**22**	**30**	**49.0**	**-1.9**
AVF					pmax	pmax				
	comp=Z,2.0nm,0.9s,mb4.5									
AVF	**Avril sur Loir**	**97.20**	**317**	*e*P	**P**		**22**	**30**	**49.0**	**-1.9**
	comp=Z,2.0nm,0.9s,mb4.5									
TORD	**Torodi Ar. Bea**	**99.55**	**283**	P	Pdif		**22**	**31**	**02.2**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=92,slow=5.0,SNR=3.6									
TORD					pP	pP				
	comp=Z,1.3nm,0.9s,baz=86,slow=5.7,SNR=7.3									
TORD					PKiKP	PKiKP				
	comp=Z,1.2nm,0.7s,baz=58,slow=4.3,SNR=8.2									
TORD					PKKPbc	PKKPbc				
	comp=Z,0.3nm,0.4s,baz=303,slow=3.6,SNR=12									
TORD	**Torodi Ar. Bea**	**99.55**	**283**	P	Pdif		**22**	**31**	**02.2**	**+1.0**
TORD					pP	pP				
YKA	**Yellowknife Ar**	**114.93**	**17**	PKP	PKiKP		**22**	**35**	**57.5**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=304,slow=2.8,SNR=3.4									
KRMB	**Red Mountain**	**124.42**	**40**	*e*PKPdf	PKPdf		**22**	**36**	**18.0**	**+0.6**
KRMB				*e*PP	PP		**22**	**37**	**59.8**	**-3.4**
HUMO	**Hull Mountain**	**124.44**	**38**	*e*PKPdf	PKPdf		**22**	**36**	**17.9**	**+0.4**
HUMO				*ep*PKPdf	pPKPdf		**22**	**36**	**27.7**	**-4.7**
MOD	**Modoc**	**126.46**	**38**	*e*PKPdf	PKPdf		**22**	**36**	**21.4**	**0.0**
MOD				*ep*PKPdf	pPKPdf		**22**	**36**	**31.4**	**-4.9**
SCHQ	**Schefferville**	**127.22**	**351**	PKP	PKPdf		**22**	**36**	**22.6**	**+0.2**
	comp=Z,5.6nm,1.1s,baz=315,slow=4.3,SNR=3.0									
NVAR	**Mina Array Bea**	**129.71**	**40**	PKP	PKPdf		**22**	**36**	**28.1**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=263,slow=2.5,SNR=14									
NVAR					SKPbc		**22**	**39**	**46.2**	
	comp=Z,0.4nm,0.4s,baz=273,slow=5.6,SNR=3.6									
NVAR	**Mina Array Bea**	**129.71**	**40**	PKP	PKPdf		**22**	**36**	**28.1**	**+0.5**
NVAR					SKPbc		**22**	**39**	**46.2**	
MTUM	**Tungsten Hills**	**130.15**	**41**	*e*PKPdf	PKPdf		**22**	**36**	**29.2**	**+0.8**
ULM	**Lac du Bonnet**	**130.69**	**14**	PKP	PKPdf		**22**	**36**	**28.5**	**-0.6**
	comp=Z,5.0nm,0.7s,baz=11,slow=1.8,SNR=6.7									
ULM	**Lac du Bonnet**	**130.69**	**14**	PKP	PKPdf		**22**	**36**	**28.5**	**-0.6**
BGU	**Big Grassy Mou**	**131.34**	**34**	*e*PKPdf	PKPdf		**22**	**36**	**29.9**	**-0.8**
PDAR	**Pinedale Array**	**131.89**	**30**	PKP	PKPdf		**22**	**36**	**31.6**	**0.0**
	comp=Z,1.0nm,0.7s,baz=157,slow=2.0,SNR=8.6									
PDAR					SKPbc	SKPbc	**22**	**39**	**53.0**	**-0.6**
	comp=Z,2.0nm,0.9s,baz=349,slow=1.5,SNR=7.8									
DUG	**Dugway**	**131.95**	**35**	*e*PKIKP	PKPdf		**22**	**36**	**32.2**	**+0.4**
RSSD	**Black Hills**	**133.38**	**25**	*e*PKIKP	PKPdf		**22**	**36**	**33.6**	**-0.8**
MSU	**Marysvale**	**133.44**	**36**	*e*PKIKP	PKPdf		**22**	**36**	**34.7**	**0.0**
PLCA	**Paso Flores**	**135.92**	**189**	SKPbc	SKPbc		**22**	**40**	**09.3**	**+2.2**
	comp=Z,2.3nm,0.9s,baz=296,slow=2.3,SNR=3.4									
ANMO	**Albuquerque**	**139.22**	**35**	PKIKP	PKPdf		**22**	**36**	**40.2**	**-5.3**
CPUP	**Villa Florida**	**144.13**	**215**	PKP	PKPdf		**22**	**36**	**53.9**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=124,slow=4.5,SNR=7.6									
BDFB	**Brasilia**	**144.13**	**238**	PKP	PKPdf		**22**	**36**	**53.9**	**-0.9**
	comp=Z,2.2nm,0.3s,baz=126,slow=4.7,SNR=4.2									
WCI	**Wyandotte Cave**	**144.19**	**10**	*e*PKIKP	PKPdf		**22**	**36**	**51.4**	**-2.9**
TXAR	**Lajitas Array**	**144.84**	**39**	PKP	PKPdf		**22**	**36**	**55.0**	**-0.7**
	comp=Z,17nm,0.5s,baz=233,slow=0.7,SNR=557									
TXAR					SKPbc	SKPbc	**22**	**40**	**29.9**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=332,slow=0.6,SNR=3.5									
URVA	**University of**	**145.41**	**358**	*e*PKPdf	PKPdf		**22**	**36**	**55.7**	**-0.7**
GNAR	**Gosnell**	**145.55**	**16**	*e*PKPdf	PKPdf		**22**	**36**	**56.1**	**-0.6**
MIAR	**Mount Ida**	**145.72**	**21**	*e*PKIKP	PKPdf		**22**	**36**	**56.9**	**-0.2**
ELN	**Prospectdale**	**145.75**	**2**	*e*PKPdf	PKPdf		**22**	**36**	**55.7**	**-1.4**
HALT	**Halls**	**145.78**	**15**	*e*PKPdf	PKPdf		**22**	**36**	**56.4**	**-0.7**
BLA	**Blacksburg**	**145.78**	**2**	*e*PKIKP	PKPdf		**22**	**36**	**56.3**	**-0.8**
WVT	**Waverly**	**145.92**	**13**	*e*PKP2	PKPab		**22**	**36**	**56.9**	**-1.6**
UALR	**University of**	**145.95**	**20**	*e*PKPdf	PKPdf		**22**	**36**	**57.4**	**-0.1**
JCT	**Junction City**	**146.28**	**33**	*e*PKP2	PKPab		**22**	**36**	**58.4**	**-1.7**
OXF	**Oxford**	**147.08**	**16**	*e*PKP2	PKPbc		**22**	**36**	**59.9**	**-1.6**
CPCT	**Cooper Cave**	**147.18**	**8**	*e*PKPdf	PKPdf		**22**	**36**	**59.4**	**-0.1**
SWET	**Sewanee**	**147.19**	**10**	*e*PKPdf	PKPdf		**22**	**36**	**59.6**	**0.0**
JSC	**Jenkinsville**	**148.66**	**3**	*e*PKP2	PKPbc		**22**	**37**	**03.8**	**-1.9**
HKT	**Hockley**	**148.75**	**29**	*e*PKIKP	PKPdf		**22**	**37**	**02.0**	**-0.3**
HKT				*e*			**22**	**37**	**06.2**	
LRAL	**Lakeview Retre**	**149.08**	**13**	*e*PKPdf	PKPdf		**22**	**37**	**03.1**	**+0.4**
LRAL				*e*PKPbc	PKPbc		**22**	**37**	**05.5**	**-1.3**
SFJM	**Santa Fe**	**150.85**	**51**	*i* P	PKPbc		**22**	**37**	**11.6**	**+0.1**
ACX	**Acapulco**	**155.29**	**54**	*i* P	PKPab		**22**	**37**	**33.0**	**-4.5**
LPAZ	**La Paz**	**158.09**	**209**	PKP	PKPdf		**22**	**37**	**18.2**	**+2.2**
	comp=Z,1.1nm,0.8s,baz=44,slow=6.6,SNR=6.1									

IDC 12 22:19:45.7±2.1, 381S×10133E, h0km, mb4.3/10, mb1 4.3/10, mb1mx4.1/23, mbtmp4.3/10, Error ellipse: s-maj=49.3km s-min=34.4km az=166.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.25**	**354**	P		P	22 24 46.4	+2.0
	1.2nm,0.4s,baz=184,slow=8.6,SNR=2.6							
SONM	**Songino Array**	**51.62**	**4**	P		P	22 28 54.9	+1.0
	3.2nm,0.7s,baz=189,slow=9.6,SNR=4.8							
SONM				PcP		PcP	22 30 07.6	-0.2
	0.7nm,0.7s,baz=187,slow=4.4,SNR=3.0							
MJAR	**Matsushiro Arr**	**52.87**	**37**	P		P	22 29 02.8	-0.7
	0.8nm,0.7s,baz=226,slow=12,SNR=3.9							
MKAR	**Makanchi Array**	**53.12**	**344**	P		P	22 29 04.8	-0.3
	3.1nm,0.6s,baz=145,slow=7.6,SNR=5.6							
KURK	**Kurchatov**	**57.71**	**343**	P		P	22 29 38.0	-0.1
	3.1nm,0.8s,baz=156,slow=6.4,SNR=2.5							
ZALV	**Zalesovo Beam**	**59.19**	**349**	P		P	22 29 47.5	-0.8
	4.2nm,0.5s,baz=158,slow=5.8,SNR=5.5							
BVAR	**Borovoye Array**	**62.34**	**339**	P		P	22 30 08.6	-1.2
	1.6nm,0.4s,baz=142,slow=9.2,SNR=4.6							
AKTO	**Aktyubinsk**	**65.58**	**331**	P		P	22 30 30.4	-0.8
	1.6nm,0.6s,baz=108,slow=13,SNR=3.5							
EIL	**Elat**	**71.62**	**303**	P		P	22 31 09.3	-0.2
	4.8nm,0.8s,baz=90,slow=3.0,SNR=3.4							
MMAI	**Mount Meron Ar**	**72.18**	**306**	P		P	22 31 14.0	+1.3
	2.3nm,0.8s,baz=99,slow=6.4,SNR=3.5							
TXAR	**Lajitas Array**	**145.27**	**40**	PKPbc	PKPbc		22 39 26.4	+0.5
	1.9nm,0.4s,baz=259,slow=0.9,SNR=7.4							

IDC 12 22:20:49.4±0.8, 1072N×9421E, h0km, mb4.2/12, mb1 4.3/12, mb1mx4.1/22, mbtmp4.2/12, Error ellipse: s-maj=25.4km s-min=20.7km az=50.0
ISCJB 12 22:20:52.9±4.1, 107N×0.1×943E±0.2, h35km±37km, mb4.2/14, Error ellipse: s-maj=30.3km s-min=20.4km az=143.7

ISC 12 22:20:55.3±3.6, 108N±01×943E±02, h40km±33km, n17, σ0§74/15, mb4.2/14, 2C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NNT	**Nongplab**	**5.61**	**71**	P		**Pn**	**22 22 16.0**	**-0.3**
SONM	**Songino Array**	**38.33**	**13**	P		**P**	**22 28 13.9**	**+1.8**
	2.2nm,0.7s,mb4.0,baz=195,slow=8.8,SNR=1.7							
KSRS	**Korea Array**	**40.22**	**43**	P		**P**	**22 28 26.9**	**-1.1**
	1.1nm,0.6s,mb3.8,baz=228,slow=9.0,SNR=4.5							
KURK	**Kurchatov**	**41.88**	**345**	P		**P**	**22 28 41.7**	**+0.2**
	3.4nm,0.8s,mb4.0,baz=162,slow=7.3,SNR=2.5							
MJAR	**Matsushiro Arr**	**47.14**	**50**	PcP		PcP	22 30 56.4	+1.3
	2.2nm,0.9s,baz=242,slow=3.9,SNR=4.2							
WRA	**Warramunga Arr**	**49.83**	**128**	P		**P**	**22 29 45.2**	**+0.5**
	4.4nm,0.8s,mb4.5,baz=303,slow=9.0,SNR=5.3							
ASAR	**Alice Springs**	**51.66**	**132**	P		**P**	**22 29 58.9**	**+0.4**
	5.9nm,1.0s,mb4.5,baz=307,slow=7.1,SNR=5.1							
GNI	**Garni**	**52.59**	**313**	P		**P**	**22 30 06.2**	**+1.0**
	4.0nm,0.6s,mb4.6,baz=23,slow=7.7,SNR=3.0							
LSZ	**Lusaka**	**70.41**	**250**	P		**P**	**22 32 05.6**	**-0.3**
	2.1nm,0.6s,mb4.3,baz=49,slow=10,SNR=8.1							
ARCES	**ARCESS Array B**	**72.63**	**340**	P		**P**	**22 32 16.9**	**-1.4**
	3.5nm,0.9s,mb4.3,baz=101,slow=9.3,SNR=3.6							
GERES	**GERESS Array B**	**75.81**	**318**	P		**P**	**22 32 37.0**	**-0.2**
	1.4nm,0.8s,mb4.0,baz=76,slow=5.6,SNR=5.7							
KEST	**Kesra**	**79.75**	**305**	P		**P**	**22 32 59.2**	**-0.3**
	1.9nm,0.9s,mb4.0,baz=188,slow=4.7,SNR=4.6							
LPG	**La Plagne**	**80.72**	**315**	⇑*i*P		**P**	**22 33 04.8**	**+0.3**
	9.1nm,0.8s,mb4.4							
LPL	**La Plagne**	**80.73**	**315**	⇑*i*P		**P**	**22 33 04.8**	**+0.2**
	8.0nm,0.7s,mb4.4							
ESDC	**Sonseca Array**	**89.50**	**310**	P		**P**	**22 33 48.4**	**-0.2**
	0.2nm,0.4s,mb3.8,baz=58,slow=5.8,SNR=3.8							
TORD	**Torodi Ar. Bea**	**90.10**	**283**	P		**P**	**22 33 51.4**	**-0.5**
	0.8nm,0.7s,mb4.2,baz=94,slow=3.3,SNR=6.8							
PLCA	**Paso Flores**	**147.29**	**202**	PKPbc	PKPbc		22 40 34.9	+0.1
	4.2nm,1.0s,baz=186,slow=5.2,SNR=5.4							

IDC 12 22:23:29.7±5.1, 316S×10094E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/19, mbtmp3.8/3, Error ellipse: s-maj=201.9km s-min=34.2km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.60**	**120**	P		P	22 30 37.4	-0.5
	1.4nm,0.7s,baz=306,slow=8.3,SNR=2.5							
SONM	**Songino Array**	**51.01**	**5**	P		P	22 32 34.1	+0.9
	1.2nm,0.7s,baz=194,slow=8.3,SNR=4.5							
MKAR	**Makanchi Array**	**52.39**	**344**	P		P	22 32 42.7	-0.9
	0.4nm,0.6s,baz=165,slow=7.1,SNR=2.6							
TXAR	**Lajitas Array**	**145.02**	**39**	PKPbc	PKPbc		22 43 08.8	-0.3
	0.4nm,0.5s,baz=195,slow=1.6,SNR=5.8							

IDC 12 22:26:17.0±1.7, 439S×10108E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/20, mbtmp3.9/10, Error ellipse: s-maj=76.9km s-min=19.4km az=53.0
ISCJB 12 22:26:20.1±0.7, 43S±0.1×1012E±0.1, h33km, mb3.9/11, Error ellipse: s-maj=21.3km s-min=12.8km az=144.8
NEIC 12 22:26:22.2±0.5, 436S×101.18E, h35km, mb4.1/1, Error ellipse: s-maj=14.4km s-min=8.6km az=55.0

ISC 12 22:26:22.3±0.7, 44S±01×1012E±01, h35km, n15, σ0§50/14, mb3.9/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSM	**Kuching**	**10.80**	**58**	Pn		**Pn**	**22 28 54.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**22.78**	**355**	P		**P**	**22 31 22.1**	**+0.2**
	1.3nm,0.4s,mb3.8,baz=184,slow=9.0,SNR=4.6							
WRA	**Warramunga Arr**	**35.81**	**118**	P		**P**	**22 33 19.0**	**+0.4**
	0.4nm,0.7s,mb3.5,baz=308,slow=8.9,SNR=4.5							
WRAB	**Tennant Creek**	**35.81**	**118**	*e*P		**P**	**22 33 18.4**	**-0.2**
	2.4nm,0.9s,mb4.1							
ASAR	**Alice Springs**	**36.93**	**124**	P		**P**	**22 33 28.4**	**+0.2**
	0.4nm,0.5s,mb3.5,baz=291,slow=7.8,SNR=3.0							
SONM	**Songino Array**	**52.18**	**4**	P		**P**	**22 35 30.0**	**+0.6**
	1.0nm,0.8s,mb3.8,baz=190,slow=8.4,SNR=5.8							
MKAR	**Makanchi Array**	**53.61**	**344**	P		**P**	**22 35 40.2**	**+0.2**
	1.7nm,0.7s,mb4.1,baz=143,slow=8.9,SNR=10							
MKAR	**Makanchi Array**	**53.61**	**344**	P		**P**	**22 35 40.2**	**+0.2**
KURK	**Kurchatov**	**58.19**	**343**	P		**P**	**22 36 12.2**	**-0.5**
	0.7nm,0.7s,mb3.8,baz=159,slow=6.6,SNR=3.4							
ZALV	**Zalesovo Beam**	**59.70**	**349**	P		**P**	**22 36 22.5**	**-0.6**
	0.9nm,0.4s,mb4.2,baz=160,slow=4.7,SNR=5.2							
CASY	**Casey**	**62.15**	**176**	P		**P**	**22 36 39.1**	**-0.5**
BVAR	**Borovoye Array**	**62.80**	**340**	P		**P**	**22 36 43.4**	**-0.7**
	1.1nm,0.7s,mb4.1,baz=125,slow=7.5,SNR=5.5							
ARCES	**ARCESS Array B**	**89.08**	**340**	P		**P**	**22 39 13.6**	**+0.1**
	1.8nm,0.8s,mb4.4,baz=101,slow=9.3,SNR=4.5							
GERES	**GERESS Array B**	**91.59**	**319**	P		**P**	**22 39 26.7**	**+1.1**
	0.2nm,0.3s,mb3.9,baz=150,slow=5.6,SNR=3.6							
TXAR	**Lajitas Array**	**145.78**	**41**	PKPbc	PKPbc		22 45 59.2	+0.9
	0.2nm,0.6s,baz=28,slow=2.1,SNR=3.0							

BJI 12 23:08:20.9, 4667N×153.43E, h64km, mB4.5, mb4.2, Ms4.2, Msz4.0
MOS 12 23:08:21.9±1.5, 4643N×153.00E, h46km, mb4.4/12, Error ellipse: s-maj=12.6km s-min=9.9km az=142.3
ISCJB 12 23:08:21.8±1.2, 465N±0.1×1530E±0.1, h41km±9km, mb4.2/16, Error ellipse: s-maj=22.0km s-min=6.3km az=139.8
SZGRF 12 23:08:21.5, 4566N×152.79E, h33km, mb4.5, East of Kuril Islands, Russia
NEIC 12 23:08:22.4±1.6, 4637N×153.06E, h37km±12km, mb4.5/8, Error ellipse: s-maj=22.8km s-min=10.7km az=143.0
IDC 12 23:08:24.7±3.2, 4661N×152.98E, h50km±27km, mb3.7/9, mb1 3.9/11, mb1mx3.7/23, mbtmp3.7/11, ML3.6/2, Error ellipse: s-maj=42.4km s-min=20.2km az=149.0

ISC 12 23:08:24.8±1.1, 4654N±009×1529E±01, h48km±8km, n51, σ1§11/55, mb4.2/16, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.73**	**251**	⇓*i*PN		**Pn**	**23 09 17.5**	**-2.4**
KUR				*e*S		**Sn**	**23 10 02.2**	**-0.3**
KUR				pmax	pmax			
	comp=Z,170nm,0.7s							
KUR				smax				
	comp=N,2μm,1.6s							
KUR				smax				
	comp=E,2μm,1.6s							
KUR				smax				
	comp=N,380nm,0.6s							
KUR				smax				
	comp=E,230nm,0.6s							
SKR	**Severo-Kuril's**	**4.67**	**26**	*e*PN		**Pn**	**23 09 30.6**	**-2.1**
SKR				*e*S		**Sn**	**23 10 27.5**	**+2.0**
SKR				pmax	pmax			
	comp=Z,130nm,1.0s							
SKR				smax				
	comp=N,220nm,1.0s							
SKR				smax				
	comp=E,270nm,1.0s							
YUK	**Yuzn-Kuril'sk**	**5.54**	**246**	PN		**Pn**	**23 09 45.1**	**+0.4**
YUK				*e*S		**Sn**	**23 10 51.5**	**+4.4**
YUK				smax				
	comp=N,420nm,0.5s							
YUK				smax				
	comp=E,360nm,0.5s							
YUK				smax				
	comp=N,2μm,1.0s							
YUK				smax				
	comp=E,2μm,1.0s							
YSS	**Yuzh-Sakhalins**	**6.96**	**277**	*e*Pn		**Pn**	**23 10 08.5**	**+4.3**
YSS				pmax	pmax			
	comp=Z,40nm,1.0s							
YSS				MLR	MLR			
	comp=E,500nm,16.0s							
YSS				MLR	MLR			
	comp=Z,500nm,16.0s							
YSS	**Yuzh-Sakhalins**	**6.96**	**277**	*e*Pn		**Pn**	**23 10 05.5**	**+1.3**
YSS				Sn		**Sn**	**23 11 20.4**	**-1.6**
PETK	**Petropavlovsk-**	**7.28**	**24**	P		**Pn**	**23 10 07.2**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=176,slow=11,SNR=17							
ASAJ	**Asahikawa**	**7.64**	**255**	P		**Pn**	**23 10 15.2**	**+1.8**
	comp=Z,1.3nm,0.3s,baz=86,slow=9.6,SNR=9.0							
ASAJ	**Asahikawa**	**7.64**	**255**	PN		**Pn**	**23 10 15.2**	**+1.8**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ERM	**Erimo**	**8.31**	**240**	*e*PN		**Pn**	**23 10 23.8**	**+1.2**
MJAR	**Matsushiro Arr**	**14.82**	**233**	P		**Pn**	**23 11 48.1**	**-3.1**
	baz=37,slow=12,SNR=3.7							
VLA	**Vladivostok**	**15.27**	**265**	*e*P		**Pn**	**23 11 56.9**	**-0.1**
MDJ	**Mudanjiang**	**16.40**	**272**	P		**Pn**	**23 12 13.3**	**+1.8**
MDJ				AMB	AMB			
	comp=Z,11nm,1.0s							
KSRS	**Korea Array**	**20.57**	**253**	P		**P**	**23 13 00.3**	**+0.8**
	comp=Z,2.9nm,0.8s,baz=59,slow=11,SNR=9.2							
KSRS	**Korea Array**	**20.57**	**253**	P		**P**	**23 13 00.3**	**+0.8**
KSRS				pmax	pmax			
	comp=Z,3.0nm,0.8s							
BILL	**Bilibino**	**22.63**	**13**	*e*P		**P**	**23 13 22.4**	**+1.2**
BILL				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb3.9							
SONM	**Songino Array**	**31.25**	**290**	P		**P**	**23 14 39.3**	**-0.3**
	comp=Z,0.6nm,0.9s,mb3.4,baz=60,slow=8.5,SNR=3.5							
SONM	**Songino Array**	**31.25**	**290**	P		**P**	**23 14 39.3**	**-0.3**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.9s							
COLA	**College**	**36.40**	**38**	⇑*i*P		**P**	**23 15 24.6**	**+0.4**
ZALV	**Zalesovo Beam**	**42.60**	**306**	P		**P**	**23 16 14.3**	**-1.5**
	comp=Z,0.6nm,0.5s,mb3.6,baz=67,slow=8.0,SNR=3.4							
ZALV	**Zalesovo Beam**	**42.60**	**306**	P		**P**	**23 16 14.4**	**-1.4**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.8							
MKAR	**Makanchi Array**	**46.89**	**297**	P		**P**	**23 16 49.8**	**-0.3**
	comp=Z,3.6nm,1.0s,mb4.3,baz=70,slow=8.2,SNR=18							
MKAR	**Makanchi Array**	**46.89**	**297**	P		**P**	**23 16 49.8**	**-0.3**
MKAR				pmax	pmax			
	comp=Z,4.0nm,1.0s							
KURK	**Kurchatov**	**47.34**	**304**	*d*i*P*		**P**	**23 16 52.8**	**-0.7**
KURK				pmax	pmax			
	comp=Z,8.0nm,1.3s,mb4.5							
KURK	**Kurchatov**	**47.34**	**304**	*e*P		**P**	**23 16 52.6**	**-0.9**
	comp=Z,4.5nm,0.9s,mb4.4							
CHTO	**Chiang Mai**	**51.91**	**257**	*e*P		**P**	**23 17 28.9**	**+0.2**
CHTO				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.2							
CHTO	**Chiang Mai**	**51.91**	**257**	*e*P		**P**	**23 17 28.9**	**+0.2**
	comp=Z,3.3nm,0.9s,mb4.3							
CMAR	**Chiang Mai Arr**	**52.16**	**256**	P		**P**	**23 17 31.2**	**+0.7**
	comp=Z,0.5nm,0.3s,mb3.9,baz=94,slow=8.5,SNR=9.1							
CMAR	**Chiang Mai Arr**	**52.16**	**256**	P		**P**	**23 17 31.2**	**+0.7**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
TKM2	**Tokmak 2**	**52.94**	**296**	P		**P**	**23 17 36.1**	**+0.1**
EKS2	**Erkin-Say**	**54.20**	**297**	*e*P		**P**	**23 17 45.5**	**+0.2**
	comp=Z,3.4nm,0.9s,mb4.3							
ARU	**Arti**	**55.05**	**317**	P		**P**	**23 17 50.4**	**-0.8**
KBL	**Kabul**	**61.99**	**292**	*e*P		**P**	**23 18 39.7**	**-0.2**
KBL				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.8							
KBL	**Kabul**	**61.99**	**292**	*e*P		**P**	**23 18 39.7**	**-0.2**
	comp=Z,6.7nm,1.0s,mb4.7							
NB2	**NORSAR Subarra**	**68.37**	**341**	P		**P**	**23 19 21.1**	**+0.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=27,slow=6.5							
NOA	**NORSAR Array B**	**68.37**	**341**	P		**P**	**23 19 20.6**	**-0.2**
	comp=Z,3.8nm,0.9s,mb4.4,baz=27,slow=6.3,SNR=6.4							
NOA	**NORSAR Array B**	**68.37**	**341**	P		**P**	**23 19 20.6**	**-0.2**
NOA				pmax	pmax			
	comp=Z,4.0nm,0.9s							
AKASG	**Malin Array Be**	**71.63**	**326**	P		**P**	**23 19 40.5**	**-0.4**
	comp=Z,1.3nm,0.4s,mb4.2,baz=30,slow=5.6,SNR=9.4							
AKASG	**Malin Array Be**	**71.63**	**326**	P		**P**	**23 19 40.5**	**-0.4**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KWP	**Kalwaria**	**74.92**	**329**	*e*P		**P**	**23 20 00.9**	**+0.6**
KWP				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.6							
KWP	**Kalwaria**	**74.92**	**329**	*e*P		**P**	**23 20 00.9**	**+0.6**
	comp=Z,5.3nm,0.6s,mb4.7							
BUR08	**Bucovina Ar. S**	**75.65**	**326**	*e*P		**P**	**23 20 04.8**	**+0.2**
CLL	**Collm**	**76.59**	**335**	*e*P		**P**	**23 20 10.0**	**+0.2**
TXAR	**Lajitas Array**	**77.74**	**60**	P		**P**	**23 20 15.3**	**-1.4**
	comp=Z,0.3nm,0.5s,mb3.5,baz=305,slow=3.3,SNR=5.2							
TXAR	**Lajitas Array**	**77.74**	**60**	P		**P**	**23 20 15.3**	**-1.4**
GRA1	**Grafenberg Arr**	**78.54**	**336**	*e*P		**P**	**23 20 22.4**	**+1.6**
	comp=Z,4.0nm,0.9s,mb4.3							
GRF	**Grafenberg Arr**	**78.54**	**336**	*e*P		**P**	**23 20 22.4**	**+1.6**
GRF				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.3							
GRF	**Grafenberg Arr**	**78.54**	**336**	*e*P		**P**	**23 20 22.4**	**+1.6**
GRF				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.3							
GRF	**Grafenberg Arr**	**78.54**	**336**	*e*P		**P**	**23 20 22.4**	**+1.6**
	comp=Z,4.0nm,0.9s,mb4.3							
GERES	**GERESS Array B**	**78.57**	**334**	P		**P**	**23 20 21.8**	**+0.9**
	comp=Z,0.6nm,0.7s

QIZ LR LR
comp=Z,1µm,19.5s
QIZ Qiongzhong 24.66 21 *e*P **P 23 25 05.5 -0.2**
comp=Z,124nm,1.4s,mb5.2
LBMI Labuha 26.87 83 P pP 23 25 37.4 +4.5
comp=Z,82nm,1.7s
FITZ Fitzroy Crossi 27.97 122 *e*P **P 23 25 35.7 0.0**
comp=Z,18nm,0.6s,mb4.9
FITZ Fitzroy Crossi 27.97 122 P **P 23 25 35.8 +0.1**
comp=Z,5.8nm,0.8s,mb4.3,baz=308,slow=16,SNR=12
FITZ LR LR 23 36 56.0
comp=Z,415nm,20.9s,MS4.0,baz=136,slow=37
KMI Kunming 29.13 4 P **P 23 25 46.3 +0.4**
KMI AP pP 23 25 54.5 +1.5
KMI XP sP 23 25 57.9 +2.0
KMI PP PP 23 26 42.6 -9.4
KMI S **S 23 30 37.7 +1.0**
KMI XS sS 23 30 51.9 +3.5
KMI SS SS 23 32 11.1 -30
KMI AMB AMB
comp=Z,16nm,1.8s,mb4.5
KMI AMB AMB
comp=Z,171nm,4.1s
KMI LR LR
comp=N,2µm,16.9s,MS5.0
KMI LR LR
comp=E,2µm,13.9s,MS5.0
KMI LR LR
comp=Z,2µm,14.3s,MS5.0
GYA Guiyang 30.92 10 P **P 23 26 04.1 +2.3**
GYA PP PP 23 27 06.9 -5.0
GYA PCP PcP 23 28 59.2 +1.1
GYA S **S 23 31 08.7 +3.9**
GYA SCP ScP 23 32 41.0 +1.3
GYA SS SS 23 32 52.3 -25
GYA SCS ScS 23 36 37.4 +0.8
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.0
GYA AMB AMB
comp=Z,130nm,4.8s
GYA LR LR
comp=N,760nm,17.8s,MS4.5
GYA LR LR
comp=E,580nm,16.6s,MS4.5
GYA LR LR
comp=Z,620nm,15.5s,MS4.4
NWAO Narrogin (SRO) 32.50 154 LR LR 23 38 58.5
comp=Z,1µm,21.0s,MS4.5,baz=330,slow=35
ODAN Odare 33.43 338 *e*P **P 23 26 24.6 +0.8**
comp=Z,143nm,1.0s,mb5.8
TAPN Taplejung 33.76 339 *e*P **P 23 26 28.0 +1.4**
comp=Z,198nm,0.9s,mb6.0
RAMN Ramite 33.82 337 *e*P **P 23 26 28.5 +1.3**
comp=Z,56nm,0.7s,mb5.6
JIRN Jiri 34.61 337 *e*P **P 23 26 35.3 +1.2**
comp=Z,118nm,0.7s,mb5.9
PKI Pulchoki 34.85 336 *e*P **P 23 26 36.1 0.0**
LSA Lhasa 34.89 345 P **P 23 26 37.1 +0.7**
LSA S **S 23 32 02.6 -3.8**
LSA LR LR
comp=E,650nm,32.9s
LSA LR LR
comp=Z,600nm,27.8s
LSA Lhasa 34.89 345 *e*P **P 23 26 37.8 +1.4**
LSA pmax pmax
comp=Z,71nm,1.6s,mb5.3
LSA Lhasa 34.89 345 *e*P **P 23 26 37.8 +1.4**
comp=Z,71nm,1.6s,mb5.3
CD2 Chengdu 34.95 4 P **P 23 26 35.2 -1.7**
CD2 AP pP 23 26 39.6 -4.4
CD2 XP sP 23 26 42.5 -4.4
CD2 PP PP 23 27 53.5 -3.0
CD2 PCP PcP 23 29 07.5 -1.7
CD2 S **S 23 32 05.8 -1.5**
CD2 PCS PcS 23 32 53.1 -2.9
CD2 SCS ScS 23 36 53.5 -3.6
CD2 AMB AMB
comp=Z,70nm,1.2s,mb5.5
CD2 AMB AMB
comp=Z,120nm,4.8s
CD2 LR LR
comp=N,3µm,15.6s,MS5.3
CD2 LR LR
comp=E,4µm,19.8s,MS5.3
CD2 LR LR
comp=Z,3µm,17.4s,MS5.1
GUN Gumba 34.96 337 *e*P **P 23 26 38.1 +1.1**
comp=Z,68nm,0.5s,mb5.9
DMN Daman 35.01 335 *e*P **P 23 26 37.3 -0.2**
comp=Z,30nm,0.8s,mb5.2
KKN Kakani 35.09 336 *e*P **P 23 26 38.8 +0.6**
comp=Z,42nm,0.7s,mb5.5
GKN Gorkha 35.55 335 *e*P **P 23 26 42.8 +0.7**
KOLN Koldanda 35.80 333 *e*P **P 23 26 44.9 +0.6**
comp=Z,36nm,0.7s,mb5.4
DANN Dangsing 36.23 334 *e*P **P 23 26 48.7 +0.7**
comp=Z,55nm,0.5s,mb5.8
WRA Warramunga Arr 36.23 119 P **P 23 26 47.4 -0.7**
comp=Z,1.4nm,0.2s,mb4.5,baz=299,slow=10,SNR=27
WRA S **S 23 32 27.2 -0.2**
comp=Z,2.8nm,1.0s,baz=294,slow=15,SNR=5.8
WRA LR LR 23 43 19.4
comp=Z,1µm,21.0s,MS4.6,baz=300,slow=39
WRA Warramunga Arr 36.23 119 *i* P **P 23 26 47.4 -0.7**
WRA pmax pmax
comp=Z,1.0nm,0.2s
WRA Warramunga Arr 36.23 119 P **P 23 26 47.4 -0.7**
WRA S **S 23 32 27.2 -0.2**
WRA LR LR 23 43 19.4
WRAB Tennant Creek 36.24 118 P **P 23 26 47.2 -1.0**
comp=Z,114nm,0.7s,mb5.9,SNR=11
WRAB Tennant Creek 36.24 118 *e*P **P 23 26 47.5 -0.7**
WRAB *e*pP pP 23 26 55.6 +0.3
WRAB *e*sP sP 23 26 59.2 +1.0
WRAB *e*PcP PcP 23 29 14.4 +1.1
WRAB *e*S **S 23 32 26.1 -1.4**
WB2 Warramunga Arr 36.24 119 *e*P **P 23 26 47.4 -0.8**
WHN Wuhan 36.81 20 ⇑P **P 23 26 53.2 +0.3**
WHN AP pP 23 26 59.9 -0.2
ASAR Alice Springs 37.36 124 P **P 23 26 57.9 +0.2**
comp=Z,3.4nm,0.7s,mb4.3,baz=294,slow=8.0,SNR=29
ASAR S **S 23 32 45.1 +0.6**
comp=Z,0.9nm,0.8s,baz=297,slow=15,SNR=4.3
XAN Xi'an 38.72 11 P **P 23 27 07.5 -1.5**
XAN AP pP 23 27 14.9 -1.2
XAN XP sP 23 27 18.6 -0.4
XAN AMB AMB
comp=Z,83nm,1.2s,mb5.3
XAN AMB AMB
comp=Z,188nm,5.5s
NJ2 Nanjing 39.85 24 *e*P **P 23 27 18.5 0.0**
NJ2 AP pP 23 27 22.3 -3.3
NJ2 XP sP 23 27 26.1 -2.4
NJ2 AMB AMB
comp=Z,20nm,1.0s,mb4.8
NJ2 AMB AMB
comp=Z,1µm,5.3s
NJ2 LR LR
comp=N,620nm,19.9s
NJ2 LR LR
comp=Z,770nm,19.4s,MS4.6
LZH Lanzhou 40.10 4 ⇑P **P 23 27 20.5 +0.1**
LZH AP pP 23 27 23.6 -4.0
LZH XP sP 23 27 25.1 -5.4
LZH PCP PcP 23 29 24.2 -0.7
LZH S **S 23 33 27.0 +1.6**
LZH AMB AMB
comp=Z,177nm,1.2s,mb5.7
LZH AMB AMB
comp=Z,490nm,4.0s
LZH LR LR
comp=E,3µm,13.0s
LZH LR LR
comp=Z,3µm,15.8s,MS5.2
JOW Kunigami 40.63 39 P **P 23 27 23.9 -1.1**
comp=Z,18nm,1.0s,mb4.7,baz=210,slow=8.1,SNR=4.4
GTA Gaotai 43.33 359 ⇑P **P 23 27 46.7 -0.1**
GTA AP pP 23 27 51.3 -2.8
GTA XP sP 23 27 53.8 -3.1
GTA S **S 23 34 15.5 +2.4**
GTA XS sS 23 34 22.7 -2.3
GTA AMB AMB
comp=Z,30nm,1.4s,mb4.8
GTA AMB AMB
comp=Z,264nm,4.8s
GTA LR LR
comp=N,1µm,15.3s,MS5.1
GTA LR LR
comp=E,1µm,15.0s,MS5.1
GTA LR LR
comp=Z,2µm,15.9s,MS5.1
BTO Baotou 45.30 10 *e*P **P 23 28 01.7 -0.9**
HHC Hu-ho-hao-te 45.82 11 ⇑P **P 23 28 06.7 0.0**
HHC AP pP 23 28 10.0 -4.0
HHC XP sP 23 28 11.7 -5.2
HHC PCP PcP 23 29 44.1 +0.1
HHC PP PP 23 29 54.7 +0.3
HHC SCP ScP 23 33 35.6 -0.1
HHC PCS PcS 23 33 37.2 -0.9
HHC S **S 23 34 50.6 +1.3**
HHC SCS ScS 23 37 59.5 -1.9
HHC SS SS 23 38 07.3 -7.0
HHC AMB AMB
comp=Z,39nm,0.8s,mb5.4
HHC AMB AMB
comp=Z,345nm,6.2s
HHC LR LR
comp=N,2µm,14.8s,MS5.2
HHC LR LR
comp=E,881nm,13.8s,MS5.2
HHC LR LR
comp=Z,2µm,13.7s,MS5.2
BJT Baijiatuao 46.13 16 *e*P **P 23 28 07.6 -1.6**
BJT pmax pmax
comp=Z,52nm,1.2s
BJT Baijiatuao 46.13 16 *e*P **P 23 28 07.6 -1.6**
comp=Z,52nm,1.2s,mb5.3
BJI Beijing 46.16 16 P **P 23 28 09.0 -0.4**
BJI S **S 23 34 57.8 +3.6**
BJI AMB AMB
comp=Z,31nm,1.3s,mb5.1
BJI AMB AMB
comp=Z,242nm,3.1s
BJI LR LR
comp=E,2µm,20.8s,MS5.1
BJI LR LR
comp=N,1µm,17.7s,MS5.1
BJI LR LR
comp=Z,844nm,24.0s
PMG Port Moresby 46.27 99 *e*P **P 23 28 09.7 -1.1**
DL2 Dalian 46.93 22 ⇑P **P 23 28 13.9 -1.6**
DL2 S **S 23 35 04.6 -0.7**
DL2 AMB AMB
comp=Z,10.0nm,1.2s,mb4.6
DL2 AMB AMB
comp=Z,160nm,4.2s
DL2 LR LR
comp=N,420nm,15.7s,MS4.6
DL2 LR LR
comp=E,330nm,19.0s,MS4.6
DL2 LR LR
comp=Z,570nm,17.7s,MS4.6
CTA Charters Tower 46.97 114 *e*P **P 23 28 14.6 -1.6**
comp=Z,12nm,1.2s,mb4.7
CTA Charters Tower 46.97 114 LR LR 23 50 07.9
comp=Z,449nm,20.3s,MS4.4,baz=51,slow=39
CTA Charters Tower 46.97 114 *e*P **P 23 28 14.6 -1.6**
CTA pmax pmax
comp=Z,12nm,1.2s
CTAO Charters Tower 46.97 114 *e*P **P 23 28 14.7 -1.5**
CTAO *e**PP pP 23 28 23.5 +0.1
CTAO pmax pmax
comp=Z,29nm,1.2s,mb5.1
CTAO Charters Tower 46.97 114 *e*P **P 23 28 14.7 -1.4**
comp=Z,29nm,1.2s,mb5.1
CTAO *e*pP pP 23 28 23.5 +0.1
STKA Stephens Creek 47.13 131 *e*P **P 23 28 17.8 +0.5**
comp=Z,7.2nm,0.8s,mb4.7
STKA Stephens Creek 47.13 131 P **P 23 28 18.2 +0.9**
comp=Z,3.4nm,0.8s,mb4.3,baz=300,slow=14,SNR=8.1
KSRS Korea Array 48.44 29 P **P 23 28 25.6 -1.6**
comp=Z,16nm,1.1s,mb5.0,baz=216,slow=8.1,SNR=46
KSH Kashi 49.09 335 *e*P **P 23 28 33.1 +0.9**
KSH *e*AP pP 23 28 37.2 -2.4
KSH *e*XP sP 23 28 40.2 -2.2
KSH *e*PCP PcP 23 29 57.2 +1.5
KSH *e*PP PP 23 30 26.1 0.0
KSH *e*SCP ScP 23 33 50.3 +0.7
KSH *e*PCS PcS 23 33 52.1 +0.1
KSH *e*S **S 23 35 36.3 +0.3**
KSH *e*SCS ScS 23 38 21.3 -1.8
KSH *e*SS SS 23 39 02.0 -5.5
KSH AMB AMB
comp=Z,343nm,3.7s
KSH LR LR
comp=N,514nm,4.8s
KSH LR LR
comp=E,602nm,4.8s
KSH LR LR
comp=Z,642nm,5.7s
WMQ Urumqi 49.17 347 P **P 23 28 33.0 +0.3**
WMQ AP pP 23 28 37.5 -2.5
WMQ XP sP 23 28 41.6 -1.3
WMQ PCP PcP 23 29 57.0 +1.2
WMQ S **S 23 35 37.0 +0.1**
WMQ XS sS 23 35 46.0 -2.9
WMQ SCS ScS 23 38 22.0 -1.4
WMQ AMB AMB
comp=Z,51nm,1.1s,mb5.5
WMQ AMB AMB
comp=Z,191nm,4.8s
WMQ LR LR
comp=N,1µm,17.8s,MS5.1
WMQ LR LR
comp=E,1µm,16.0s,MS5.1
WMQ LR LR
comp=Z,914nm,23.2s
KZA Kyzart 51.53 336 P **P 23 28 51.9 +1.2**
SNR=6.5
UCH Uchtor 51.96 335 *e*P **P 23 28 54.8 +1.0**
comp=Z,6.8nm,0.6s,mb4.8
UCH *e*pP pP 23 29 03.2 +2.0
SONM Songino Array 51.97 5 P **P 23 28 54.1 +0.3**
comp=Z,19nm,0.6s,mb5.2,baz=186,slow=8.7,SNR=137
ULN Ulaanbaatar 52.06 5 *e*P **P 23 28 54.5 +0.1**
ULN *e**PP pP 23 29 02.7 +0.9
ULN pmax pmax
comp=Z,42nm,1.2s,mb5.2
ULN Ulaanbaatar 52.06 5 *e*P **P 23 28 54.5 +0.1**
comp=Z,42nm,1.2s,mb5.2
ULN *e*pP pP 23 29 02.6 +0.9
TKM2 Tokmak 2 52.10 337 P **P 23 28 55.1 +0.2**
SNR=31
KBK Karagaybulak 52.14 336 P **P 23 28 56.7 +1.6**
SNR=13
AML Almayashu 52.23 335 P **P 23 28 57.2 +1.4**
SNR=6.4
FRU Bishkek 52.42 336 *e*P **P 23 28 57.0 -0.2**
CHMS Chumysh 52.50 336 P **P 23 28 58.4 +0.5**
SNR=7.1
EIDS Eidsvold 52.59 119 *e*P **P 23 28 51.0 -7.9**
CN2 Changchun 52.60 22 *e*P **P 23 28 57.4 -1.2**
CN2 AMB AMB
comp=Z,30nm,1.3s,mb5.1
EKS2 Erkin-Say 52.62 335 P **P 23 28 59.4 +0.6**
SNR=14
USP Ospenovka 52.83 336 P **P 23 29 00.2 0.0**
SNR=12
MK31 Makanchi Array 53.28 344 *i* P **P 23 29 03.0 -0.5**
MK31 pmax pmax
comp=Z,66nm,1.2s,mb5.4
MKAR Makanchi Array 53.28 344 P **P 23 29 03.2 -0.4**
comp=Z,24nm,0.8s,mb5.2,baz=153,slow=8.0,SNR=126
MKAR Makanchi Array 53.28 344 ⇑*e*P **P 23 29 03.2 -0.3**
MKAR Makanchi Array 53.28 344 P **P 23 29 03.2 -0.4**
MAJO Matsushiro 53.42 38 *e*P **P 23 29 03.1 -1.6**
MAJO pmax pmax
comp=Z,29nm,1.2s,mb5.1
MAJO Matsushiro 53.42 38 *e*P **P 23 29 03.0 -1.7**
comp=Z,29nm,1.2s,mb5.1
MAJO *e*pP pP 23 29 09.6 -2.6
MAT Matsushiro 53.42 38 P **P 23 29 03.0 -1.7**
MAT *e*S **S 23 36 45.0 +9.2**
MJAR Matsushiro Arr 53.42 38 P **P 23 29 02.9 -1.8**
comp=Z,7.3nm,0.9s,mb4.6,baz=220,slow=7.6,SNR=21
ZAK Zakamensk 54.33 2 *e*P **P 23 29 10.7 -0.4**
ZAK pmax pmax
comp=Z,9.0nm,1.6s,mb4.5
KK31 Karatay Array 54.41 333 *i* P **P 23 29 11.3 -0.6**
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
MDJ Mudanjiang 54.94 25 P **P 23 29 14.9 -0.8**
MDJ AP pP 23 29 17.9 -5.1
MDJ XP sP 23 29 19.4 -6.5
MDJ PCP PcP 23 30 16.2 -1.2
MDJ S **S 23 37 05.8 +10**
MDJ AMB AMB
comp=Z,15nm,1.1s,mb4.9
MDJ AMB AMB
comp=Z,39nm,2.6s,mb5.0
MDJ LR LR
comp=N,858nm,16.5s,MS5.0
MDJ LR LR
comp=E,855nm,18.4s,MS5.0
MDJ LR LR
comp=Z,895nm,19.9s,MS4.8
MDJ Mudanjiang 54.94 25 *e*P **P 23 29 14.0 -1.6**
comp=Z,21nm,1.3s,mb5.0
MDJ *e*pP pP 23 29 21.8 -1.3
MDJ *e*PcP PcP 23 30 15.1 -2.3
MOY Mondy 55.57 0 *e*P **P 23 29 20.6 +0.5**
MOY pmax pmax
comp=Z,42nm,2.6s,mb5.0
TLY Talaya 55.64 2 P **P 23 29 21.6 +1.0**
comp=Z,86nm,1.2s,mb5.7,SNR=5.4
TLY Talaya 55.64 2 *e*P **P 23 29 21.1 +0.5**
TLY *e* pP 23 29 28.9 +0.9
TLY *e*S **S 23 37 04.6 -0.6**
TLY *e* 23 38 59.8
TLY pmax pmax
comp=Z,22nm,1.2s,mb5.1
TLY MLR MLR
comp=Z,2µm,16.0s,MS5.2
IRK Irkutsk 56.23 3 ⇓*i*P **P 23 29 25.2 +0.4**
IRK pmax pmax
comp=Z,60nm,2.3s,mb5.2
KURK Kurchatov 57.86 344 P **P 23 29 35.6 -0.8**
comp=Z,207nm,0.9s,mb6.2,SNR=36
KURK Kurchatov 57.86 344 P **P 23 29 35.3 -1.1**
comp=Z,19nm,1.0s,mb5.1,baz=162,slow=6.5,SNR=78
KURK LR LR 23 57 25.5
comp=Z,330nm,20.7s,MS4.4,baz=190,slow=39
KURK Kurchatov 57.86 344 *e*P **P 23 29 35.9 -0.5**
KURK *e**PP pP 23 29 43.9 +0.1
KURK *e* 23 30 28.9
KURK pmax pmax
comp=Z,38nm,1.0s,mb5.4
KURK Kurchatov 57.86 344 *e*P **P 23 29 35.9 -0.6**
comp=Z,38nm,1.0s,mb5.4
KURK *e*pP pP 23 29 43.9 0.0
KURK *e*PcP PcP 23 30 28.9 +0.3
ZAA0 Zalesovo Array 59.40 349 *e*P **P 23 29 46.0 -0.9**
ZAA0 *e*pP pP 23 29 54.9 +0.5
ZALV Zalesovo Beam 59.40 349 P **P 23 29 46.2 -0.7**
comp=Z,26nm,0.7s,mb5.4,baz=160,slow=4.7,SNR=130
KLR Kul'dur 59.53 23 *e*P **P 23 29 43.0 -5.1**
KLR pmax pmax
comp=E,28nm,1.6s
KLR pmax pmax
comp=Z,62nm,1.6s,mb5.4
KRAR Krasnoyarsk 60.28 355 *e*P **P 23 29 52.2 -0.9**
KRAR pmax pmax
comp=Z,32nm,1.1s,mb5.3
NVS Novosibirsk 60.55 348 *i* P **P 23 29 53.1 -1.8**
NVS *i* S **S 23 38 00.7 -8.5**
NVS pmax pmax
comp=N,29nm,1.5s
NVS pmax pmax
comp=Z,30nm,1.5s,mb5.2
NVS pmax pmax
comp=E,10.0nm,1.2s
NVS smax
comp=N,26nm,2.1s
NVS smax
comp=E,15nm,1.6s
NAY Al-Naaiem 61.14 307 *e*P **P 23 30 00.5 +1.0**
baz=307
NAY AMb AMB 23 30 04.3
comp=Z,14nm,1.3s,mb4.9,baz=307
MIB Mutribah 61.28 307 *e*P **P 23 30 01.1 +0.7**
baz=307
MIB AMb AMB 23 30 25.4
comp=Z,38nm,1.2s,mb5.4,baz=307
RST Umm Al-Ruwaisa 61.44 307 *e*P **P 23 30 01.9 +0.4**
baz=307
RST AMb AMB 23 30 16.3
comp=Z,24nm,1.2s,mb5.2,baz=307
VOSK Vostochnaya 62.00 340 P **P 23 30 03.0 -1.8**
VOSK pmax pmax
comp=Z,26nm,1.4s,mb5.2
BVA0 Borovoye Array 62.45 340 P **P 23 30 05.6 -2.2**
BVA0 pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
BVAR Borovoye Array 62.45 340 P **P 23 30 06.6 -1.2**
comp=Z,3.8nm,0.5s,mb4.8,baz=142,slow=9.3,SNR=35
BRVK Borovoye 62.51 340 P **P 23 30 07.0 -1.2**
comp=Z,101nm,0.8s,mb6.0,SNR=6.3
BRVK Borovoye 62.51 340 P **P 23 30 06.9 -1.3**
BRVK pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
BRVK Borovoye 62.51 340 *e*P **P 23 30 07.4 -0.8**
BRVK *e*pP pP 23 30 15.8 0.0
BOD Bodaibo 62.65 8 *e*P **P 23 30 07.9 -1.1**
BOD pmax pmax
comp=Z,23nm,1.1s,mb5.2
YSS Yuzh-Sakhalins 62.85 31 *e*P **P 23 30 09.0 -1.6**
YSS *e* pP 23 30 17.0 -1.1
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.5
YSS Yuzh-Sakhalins 62.85 31 *e*P **P 23 30 10.1 -0.5**
AB31 Akbulak array 63.89 331 *i* P **P 23 30 16.5 -0.9**
AB31 pmax pmax
comp=Z,17nm,0.7s,mb5.2
AKTK Aktyubinsk 65.61 331 P **P 23 30 28.2 -0.4**
AKTO Aktyubinsk 65.61 331 P **P 23 30 28.2 -0.4**
comp=Z,2.9nm,0.9s,mb4.3,baz=126,slow=7.1,SNR=9.1
SVE Sverdlovsk 68.95 338 *e*P **P 23 30 49.8 +0.1**
SVE pmax pmax
comp=Z,41nm,1.3s,mb5.2
ARU Arti 69.47 336 *c i*P **P 23 30 52.0 -0.9**
ARU *e* 23 31 10.9
ARU *e* 23 33 21.4
ARU *e*S S 23 39 57.7 -1.2
ARU *e*SS SS 23 44 16.7 -10
ARU pmax pmax
comp=Z,23nm,1.7s,mb4.8
ARU Arti 69.47 336 *e*P **P 23 30 52.8 -0.1**
comp=Z,15nm,1.1s,mb4.8
YAK Yakutsk 69.58 14 *e*P **P 23 30 51.9 -1.6**
YAK pmax pmax
comp=Z,67nm,1.2s,mb5.5
ASF Jabal al Asfar 70.50 306 P **P 23 31 02.3 +2.6**
comp=Z,2.2nm,0.9s,mb4.1,baz=65,slow=9.0,SNR=4.1
KIV Kislovodsk 70.68 319 *e*P **P 23 31 01.4 +0.8**
KIV *i* pP 23 31 09.6 +1.4
KIV pmax pmax
comp=Z,12nm,1.2s,mb4.7
MALT Malatya 71.38 313 *e*P **P 23 31 04.5 -0.5**
PETK Petropavlovsk- 74.23 32 P **P 23 31 20.1 -1.4**
comp=Z,1.8nm,0.6s,mb4.2,baz=288,slow=1.0,SNR=12
BOSA Boshof 75.38 242 P **P 23 31 35.0 +6.2**
comp=Z,4.8nm,0.9s,mb4.5,baz=99,slow=7.0,SNR=7.6
TIXI Tiksi 77.81 9 *e*P **P 23 31 39.4 -2.2**
TIXI pmax pmax
comp=Z,22nm,1.2s,mb5.0
MOS Moscow 78.73 329 *e*P **P 23 31 46.3 -0.7**
MOS *e*S S 23 41 36.7 -6.3
MOS pmax pmax
comp=Z,52nm,1.5s,mb5.2
OBN Obninsk 79.02 328 ⇑*i*P **P 23 31 48.7 +0.1**
OBN *i* pP 23 31 56.6 +0.3
OBN pmax pmax
comp=Z,16nm,1.2s,mb4.8
OBN Obninsk 79.02 328 *e*P **P 23 31 48.6 0.0**
AKASG Malin Array Be 81.66 322 P **P 23 32 03.2 +0.3**
comp=Z,0.2nm,0.2s,baz=118,slow=2.8,SNR=4.6
AKASG Malin Array Be 81.66 322 *i* P **P 23 32 03.7 +0.8**
AKASG Malin Array Be 81.66 322 P **P 23 32 03.2 +0.3**
MLR Muntele Rosu 82.41 317 ⇑*i*P **P 23 32 09.4 +2.4**
BURAR Bucovina Array 83.39 319 ⇓*i*P **P 23 32 14.6 +2.6**
LVV L'vov 84.66 321 *e*P **P 23 32 25.0 +6.6**
BILL Bilibino 84.85 20 *e*P **P 23 32 18.4 -0.6**
BILL pmax pmax
comp=Z,9.0nm,1.0s,mb4.8

APA	Apatity	85.35	339	⇑	eP		P	23 32 21.0	-0.5
APA					i			23 32 37.0		
APA						pmax	pmax			
	comp=Z,62nm,1.6s,mb5.5									
BZS	Buzias	85.40	316	⇓	iP		P	23 32 23.8	+1.5
ARCES	ARCESS Array B	88.74	340		P		P	23 32 37.6	-0.4
	comp=Z,3.9nm,0.8s,mb4.8,baz=94,slow=1.6,SNR=7.3									
SOKA	Soboth	90.08	317	⇑	iP		P	23 32 46.5	+1.8
	comp=Z,5.6nm,1.2s,mb4.8									
SOKA	Soboth	90.08	317	⇑	iPcP		PcP	23 32 46.5	+0.6
	comp=Z,5.6nm,1.2s									
GERES	GERESS Array B	91.18	319		P		P	23 32 50.2	+0.4
	comp=Z,0.7nm,0.7s,mb4.1,baz=102,slow=3.3,SNR=7.9									
CLL	Collm	91.83	321		eP		pP	23 33 01.0	+0.5
CLL	Collm	91.83	321		e(pP)		pP	23 33 01.0	+0.5
	comp=Z,6.0nm,1.2s									
HUMO	Hull Mountain	125.44	39		ePKPdf		PKPdf	23 38 47.8	+1.7
HLID	Hailey	129.88	33		ePKPdf		PKPdf	23 38 56.5	+2.0
NVAR	Mina Array Bea	130.68	41		PKP		PKPdf	23 38 54.2	-2.0
	comp=Z,0.4nm,0.6s,baz=216,slow=4.5,SNR=3.7									
NVAR						SKPbc	SKPbc	23 42 17.6	-1.1
	comp=Z,0.4nm,0.3s,baz=272,slow=3.7,SNR=5.2									
NVAR	Mina Array Bea	130.68	41		PKP		PKPdf	23 38 54.2	-2.0
NVAR						SKPbc	SKPbc	23 42 17.6	-1.1
RRI2	Red Ridge	131.68	31		ePKPdf		PKPdf	23 38 59.0	+1.1
CCM	Cathedral Cave	144.47	17		ePKIKP		PKPdf	23 39 19.2	-2.3
WMOK	Wichita Mounta	144.52	28		ePKIKP		PKPdf	23 39 19.4	-2.3
SIUC	Southern Illin	145.33	14		ePKPab		PKPab	23 39 22.4	-0.5
WCI	Wyandotte Cave	145.44	10		ePKIKP		PKPdf	23 39 21.4	-1.8
TXAR	Lajitas Array	145.83	40		PKPbc		PKPbc	23 39 25.1	+0.4
	comp=Z,18nm,1.0s,baz=282,slow=2.4,SNR=91									
MIAR	Mount Ida	146.91	22		ePKP2		PKPbc	23 39 26.9	-2.1
WVT	Waverly	147.16	13		ePKP2		PKPbc	23 39 27.1	-1.3
JCT	Junction City	147.34	34		ePKP2		PKPbc	23 39 27.3	-1.7
TZTN	Tazewell	147.49	7		ePKPab		PKPab	23 39 38.2	+7.0
SWET	Sewanee	148.43	11		ePKPab		PKPbc	23 39 31.6	-0.2
CPCT	Cooper Cave	148.44	8		ePKPbc		PKPbc	23 39 31.1	-0.7
LRAL	Lakeview Retre	150.32	13		ePKPab		PKPbc	23 39 36.8	+0.2
GOGA	Godfrey	150.59	7		ePKIKP		PKPbc	23 39 37.3	+0.1

NEIC ***12*** *23:45:52.2, 1829N×6813W, h93km, MD3.5(RSPR), After RSPR.*

RSPR 12 23:45:52.2, 1829N×6813W, h93km±1km, MD3.5/15, MD3.5/15, 10C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IMO	Isla Mona	0.27	131	⇑	iP	Pn	23 46 05.3	-0.5
IMO					eS	Sn	23 46 15.2	-0.8
AGPR	Aguadilla, PR	0.98	79	⇑	eP	Pn	23 46 12.3	+0.4
AGPR					eS	Sn	23 46 26.9	+0.3
LSP	Las Mesas	0.99	96	⇑	eP	Pn	23 46 11.4	-0.6
LSP					eS	Sn	23 46 26.8	-0.2
CRPR	Cabo Rojo, PR	1.01	106	⇑	iP	Pn	23 46 11.7	-0.4
LRS	Lares	1.22	90	⇑	eP	Pn	23 46 14.1	-0.5
LRS					eS	Sn	23 46 31.1	-0.5
GBPR	Guanica, Bosqu	1.23	105	⇑	eP	Pn	23 46 14.4	-0.3
GBPR	Guanica, Bosqu	1.23	105		eS	Sn	23 46 31.3	-0.4
AOPR	Arecibo Observ	1.30	87	⇑	eP	Pn	23 46 15.2	-0.4
AOPR					eS	Sn	23 46 33.3	-0.1
OBIP	Obispado Ponce	1.47	99	⇓	iP	Pn	23 46 17.3	-0.3
CELP	Cerrillos	1.49	98	⇑	iP	Pn	23 46 17.4	-0.5
ICM	Isla Caja Muer	1.58	104	⇑	iP	Pn	23 46 18.1	-0.9
SJG	San Juan	1.89	95	⇓	iP	Pn	23 46 22.6	-0.5
SJG	San Juan	1.89	95	⇑	eP	Pn	23 46 22.4	-0.6
SJG					eS	Sn	23 46 45.7	-0.8
CPD	Cerro la Pandu	2.12	96	⇑	eP	Pn	23 46 25.1	-0.9
CPD					eS	Sn	23 46 51.3	-0.5
HUMP	Col San Antoni	2.17	94	⇑	eP	Pn	23 46 26.1	-0.6
HUMP					eS	Sn	23 46 52.7	-0.4
MTP	Monte Pirata	2.45	94	⇑	eP	Pn	23 46 30.6	+0.2
MTP					eS	Sn	23 46 59.5	-0.3

BJI ***12*** *23:48:56.9, 285S×10067E, h15km, mB7.8, mb6.4, Ms8.2, Msz8.1*

IDC ***12*** *23:48:58.3±0.3, 261S×10086E, h0km, mb6.0/28, mb1 6.1/28, mb1mx6.1/28, mbtmp6.0/28, MS7.8/40, Ms1 7.8/40, ms1mx7.7/50, Error ellipse: s-maj=14.3km s-min=11.4km az=47.0*

SZGRF ***12*** *23:49:01.6, 2.11S×101.99E, h33km, mb7.0, MS8.0, Southern Sumatera, Indonesia*

ISCJB ***12*** *23:49:02.3±0.1, 262S±002×10075E±002, h34km, mb6.6/192, MS8.0/252, Error ellipse: s-maj=3.3km s-min=2.1km az=34.8*

MOS ***12*** *23:49:02.1±0.8, 254S×10089E, h33km, mb6.8/74, MS8.0/81, Error ellipse: s-maj=7.9km s-min=3.7km az=122.7 Broadband fault plane solution: P waves. $M_0$7.20000×10^{20} NP1:ϕ_s261.00000°, δ8.00000°, λ54.00000°. NP2:ϕ_s117.00000°, δ84.00000°, λ95.00000°. Principal axes: T Plg51.0000°, Azm32.0000°; N Plg5.0000°, Azm297.0000°; P Plg38.0000°, Azm203.0000°;*

BGS ***12*** *23:49:03.5±1.8, 263S×10084E, h35km, MS7.6*

NEIC ***12*** *23:49:03.7±0.1, 263S×10084E, h35km, mb6.6/81, ME7.8, MS8.1/183, Error ellipse: s-maj=5.7km s-min=3.2km az=220.0 Broadband fault plane solution: P waves. NP1:ϕ_s315.00000°, δ15.00000°, λ90.00000°. NP2: ϕ_s135.00000°, δ75.00000°, λ90.00000°. Principal axes: T Plg60.0000°, Azm45.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm225.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Casualties and damage are included with the event at 11:10 UTC. Felt [VI] at Padang and Painan; [IV] at Pekanbaru, Sibolga and Singkil; [III] at Duri, Sumatra. Felt at Curup and Dumai. Felt [III] at Jakarta, Java. Felt at Pondokaren. Felt [III] at Kuala Lumpur and Petaling Jaya; [II] at Kuala Selangor, Malaysia. Felt at Banting, Georgetown, Johor Bahru, Kampong Salak Tinggi, Klang, Melaka, Shah Alam, Subang Jaya and Sungai Ara, Malaysia. Also felt [III] in Singapore.

IGIL ***12*** *23:49:03.3, 251S×10096E, h30km, MS7.8*

GCMT ***12*** *23:49:03.7±0.1, 246S×100.13E, h43km, MW7.9/118, Moment Tensor Solution. s29,c41; s118,c405; Duration: 21s1 Moment tensor: Scale 10^{20}Nm; M_{rr}4.93±.03; $M_{\theta\theta}$-2.80±.02; $M_{\phi\phi}$-2.12±.02; $M_{r\theta}$5.41±.10; $M_{\theta\phi}$2.47±.01; $M_{\phi r}$-3.53±.10; Best double couple: M_o8.13300×10^{20} NP1:ϕ_s317.00000°, δ19.00000°, λ102.00000°. NP2:ϕ_s125.00000°, δ71.00000°, λ86.00000°. Principal axes: T 8.1520, Plg63.0000°, Azm28.0000°; N -0.0270, Plg4.0000°, Azm126.0000°; P -8.1150, Plg26.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s.*

DJA ***12*** *23:49:06, 281S×10062E, h47km, Mw7.8/64*

ISC 12 23:49:04.4±0.1, 262S±002×10073E±002, h36km, h36km±1.7km:pP-P, n1941, σ0s99/1070, mb6.6/191, MS8.0/252, 463C-242D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PPI	Padang Panjang	2.17	351		P	Pn	23 49 40.1	+2.1
	0.0nm,0.0s							
RGRI	Rengat	2.77	36		P	Pn	23 49 49.8	+3.6
	0.0nm,0.0s							
JMBI	JAMBI	3.07	72		P	Pn	23 49 54.1	+3.7
	0.0nm,0.0s							
KLI	Kotabumi	4.69	119		P	Pn	23 50 14.9	+2.2
	0.0nm,0.0s							
TRSI	Tarutung	4.94	339		P	Pn	23 50 20.2	+4.1
	0.0nm,0.0s							
BLSI	Bandar Lampung	5.27	121		P	Pn	23 50 22.7	+2.0
	20µm,1.0s							
KGM	Kluang	5.28	29	⇑	P	Pn	23 50 27.1	+6.3
MYKOM	Kota Tinggi	5.38	36	⇓	P	Pn	23 50 27.5	+5.3
PPBI	Pangkal Pinang	5.42	85		P	Pn	23 50 25.9	+3.1
	7µm,1.0s							
FRIM	Kepong	5.88	9	⇑	P	Pn	23 50 35.0	+5.9
SBJI	Serang	6.41	123		P	Pn	23 50 37.7	+1.3
	15µm,1.2s							
TNG	Tangerang	6.88	121		P	Pn	23 50 45.2	+2.4
	23µm,0.9s							
TPI	Tanjungpandan	6.92	91		P	Pn	23 50 47.7	+4.3
	3µm,1.3s							
IPM	Ipoh	7.05	2	⇑	P	Pn	23 50 51.9	+6.7
DBJI	Dramaga	7.17	123		P	Pn	23 50 47.5	+0.8
	13µm,1.5s							
CBJI	Citeko	7.18	122		P	Pn	23 50 50.8	+3.9
	26µm,1.1s							
SKJI	Sukabumi	7.26	127		P	Pn	23 50 47.9	-0.2
	14µm,1.4s							
LEM	Lembang	8.04	122		P	Pn	23 51 00.7	+2.0
	9µm,1.1s							
KTGM	Kuala Trenggan	8.25	17	⇓	P	Pn	23 51 06.3	+4.7
JCJI	Jatiwangi	8.45	117		P	Pn	23 51 07.3	+3.0
	8µm,1.3s							
XMIS	Christmas Isla	9.22	148	⇓	ePn	Pn	23 51 07.2	-7.7
XMIS						Sn	23 52 58.4	+1.0
TGJI	Tegal	9.37	117		P	Pn	23 51 25.4	+8.4
	7µm,1.1s							
CLJI	Cilicap	9.69	122		P	Pn	23 51 22.2	+0.9
	12µm,1.1s							
BSI	Banda Aceh	9.71	326		P	Pn	23 51 22.1	+0.4
	5µm,0.9s							
BJII	Banjamegara	10.10	118		P	Pn	23 51 28.6	+1.6
	3µm,1.2s							
COCO	West Island	10.26	202	⇓	iPn	Pn	23 51 22.2	-7.0
COCO					eSn	Sn	23 53 25.1	+2.0
KSM	Kuching	10.40	67	⇑	P	Pn	23 51 35.7	+4.5
KSM	Kuching	10.40	67		ePn	Pn	23 51 34.1	+2.9
PBKI	Pangkalan Bun	10.93	91		P	Pn	23 51 44.3	+5.9
	12µm,1.1s							
STKI	Sintang	11.07	76		P	Pn	23 51 45.1	+4.8
	4µm,1.8s							
SJI	Sawahan	12.11	115		P	Pn	23 51 54.4	-0.1
	5µm,1.3s							
SBUM	Sibu	12.54	66	⇑	P	Pn	23 52 05.8	+5.3
KRKI	Karangkates	12.90	116		P	Pn	23 52 04.8	-0.6
	6µm,1.1s							
PLKI	Palangkaraya	13.21	89		P	Pn	23 52 15.2	+5.6
	9µm,1.1s							
BTM	Bintulu	13.64	65	⇓	P	Pn	23 52 21.0	+5.6
KMMI	Kalianget	13.91	109		P	Pn	23 52 20.9	+1.8
	6µm,1.7s							
BBKI	Banjar Baru	14.12	94		P	Pn	23 52 25.4	+3.4
	10µm,1.6s							
NBBI	Negara	14.96	113		P	Pn	23 52 35.4	+2.1
	5µm,1.9s							
IGBI	Denpasar	15.61	114		P	Pn	23 52 39.9	-1.9
	4µm,1.4s							
DNP	Denpasar	15.62	113		P	Pn	23 52 41.1	-0.8
	6µm,0.9s							
KHKI	Kahang-Kahang	15.87	112		P	Pn	23 52 44.8	-0.4
	4µm,1.1s							
MTNI	Mataram	16.49	112		P	Pn	23 52 48.7	-4.4
	3µm,1.1s							
KBR	Kanchanaburi	16.57	356		P	Pn	23 52 55.5	+1.4
SMKI	Samarinda	16.62	83		P	Pn	23 52 59.7	+5.0
	12µm,1.7s							
KKM	Kota Kinabalu	17.70	61	⇑	P	Pn	23 53 10.9	+2.7
KKM	Kota Kinabalu	17.70	61		ePn	Pn	23 53 09.9	+1.7
NST	Nakhon Sawan	18.18	358		P	Pn	23 53 12.0	-2.1
UBT	Ubonrachathani	18.25	13		PG	Pn	23 53 14.5	-0.4
SDKM	Sandakan	18.38	63	⇑	P	Pn	23 53 19.1	+2.5
TSM	Tawau	18.46	68	⇑	P	Pn	23 53 19.3	+1.8
KDM	Kudat	18.66	59	⇓	P	Pn	23 53 21.9	+2.0
KKTK	Khon Kaen	18.95	6	⇑	P	Pn	23 53 21.9	-1.4
KAPI	Kappang	19.13	98		P	Pn	23 53 22.0	-3.7
	baz=277,slow=15							
KAPI						LR	LR	00 01 10.3	
	comp=Z,467µm,20.0s,baz=278,slow=38								
KAPI	Kappang	19.13	98	⇑	iP	Pn	23 53 23.1	-2.6
KAPI					eSn	Sn	23 56 47.2	-12
PCI	Palu	19.18	85		P	Pn	23 53 27.1	+0.9
	14µm,1.8s							
MYLDM	Lahad Datu	19.37	66	⇓	P	Pn	23 53 31.4	+2.8
BDT	Bhumibol Dam	19.81	355	⇓	P	Pn	23 53 30.5	-3.1
	258nm,0.8s							
CMAR	Chiang Mai Arr	21.01	355		P	P	23 53 43.3	-1.7
	482nm,0.8s,mb5.9,baz=184,slow=9.3,SNR=421								
CMAR						LR	LR	00 02 38.1	
	comp=Z,7716µm,19.1s,MS8.1,baz=178,slow=39								
CMAR						P3KPbc		00 27 47.9	
	3.0nm,0.3s,baz=323,slow=4.5,SNR=12								
CMAR						PKP2bc		00 29 50.2	
	3.5nm,0.3s,baz=290,slow=5.8,SNR=6.3								
CHG	Chiang Mai	21.37	355	⇑	P	P	23 53 48.1	-0.7
	1µm,1.1s,mb6.2								
CHG						SG	S	23 57 43.8	-0.3
CHTO	Chiang Mai	21.37	355	⇑	iP	P	23 53 46.8	-2.0
CHTO					eS	S	23 57 42.1	-2.0
CHTO						MLR	MLR		
	comp=Z,7036µm,20.0s,MS8.1								
KDI	Kendari	21.90	94		P	P	23 53 55.2	+0.6
	comp=Z,4µm,1.5s,mb6.6								
BBSI	Bau Bau	21.97	98		P	P	23 53 56.3	+0.9
	comp=Z,6µm,1.0s,mb6.9								
PALK	Pallekele	22.27	296	⇑	iP	P	23 53 59.2	+0.7
	comp=Z,15µm,2.1s,mb7.0								
PALK					eS	S	23 57 54.7	-7.2
PALK						LR	LR		
	comp=Z,4434µm,21.0s,MS7.9								
QIZ	Qiongzhong	23.30	22		P	P	23 54 08.4	-1.0
QIZ					XP	sP	23 54 20.8	-2.7
QIZ					S	S	23 58 18.0	-1.3
QIZ					SS		23 58 59.5	
QIZ					LR	LR		
	comp=N,2327µm,26.8s								
QIZ					LR	LR		
	comp=Z,4343µm,28.4s,MS7.8								
QIZ	Qiongzhong	23.30	22	⇑	iP	P	23 54 07.9	-1.5
	comp=Z,55nm,0.9s								
QIZ						PcP	PcP	23 57 47.5	-8.4
QIZ					eS	S	23 58 18.7	-0.6
QIZ					LR	LR			
	comp=Z,2470µm,21.0s,MS7.6								
ZMPH	Zamboanga City	23.32	66	⇑	eP	P	23 54 10.4	+0.7
BATI	Baumata	23.99	109		P	P	23 54 12.5	-3.4
	comp=Z,2µm,1.2s,mb6.3								
BATI	Baumata	23.99	109		P	P	23 54 10.3	-5.5
	comp=Z,589nm,0.9s,mb6.0,baz=247,slow=0.7,SNR=60								
DCPH	Dipolog City	25.15	64	⇑	eP	P	23 54 28.1	+1.6
CTBH	Cotabato--PC H	25.43	67	⇑	eP	P	23 54 29.6	+0.7
MDRS	Chennai	25.61	308		eP	P	23 54 29.4	-1.3
MDRS						AMb	AMB	23 55 02.3	
	comp=Z,5µm,1.8s,mb6.7								
MDRS					eS	S	23 58 56.9	+0.4
GSPH	General Santos	25.69	70	⇑	eP	P	23 54 39.5	+8.2
KALP	Kalibo	25.76	56	⇓	eP	P	23 54 36.8	+4.8
RCP	Roxas	26.03	57	⇑	iP	P	23 54 35.7	+1.2
NBP	Mount Natib	26.03	48	⇓	eP	P	23 54 34.8	+0.3
TBP	Tagbilaran	26.09	62		eP	P	23 54 35.7	+0.8
MBWA	Marble Bar	26.12	136	⇓	eP	P	23 54 32.5	-2.6
MBWA					ePcP	PcP	23 58 00.6	-1.5
MBWA					eS	S	23 58 59.2	-5.2
KCP	Kidapawan	26.13	68	⇓	eP	P	23 54 43.0	+7.6
TRD	Trivandrum	26.15	295		eP	P	23 54 33.8	-1.8
TRD						AMb	AMB	23 56 01.0	
	comp=Z,3µm,1.6s,mb6.6								
TRD					eS	S	23 59 06.8	+1.7
LBPH	Los Banos	26.24	50	⇑	eP	P	23 54 36.7	+0.4
KOD	Kodaikanal	26.44	299		eP	P	23 54 40.4	+2.2
KOD						AMb	AMB	23 54 48.8	
	comp=Z,956nm,1.5s,mb6.1								
LLP	Lapu-Lapu	26.47	61	⇑	iP	P	23 54 38.5	+0.1
LLP					eS	S	23 59 16.4	+6.3
VIS	Vishakhapatnam	26.51	320		iP	P	23 54 40.8	+2.1
VIS					ex	x	23 55 11.9	
	comp=Z,5µm,1.3s								
VIS					iS	S	23 59 12.8	+2.2
DAV	Davao City (W)	26.61	69		P	P	23 54 41.0	+1.3
	comp=Z,642nm,0.8s,mb6.2,baz=7.7,slow=1.9,SNR=29								
DAV						LR	LR	00 06 17.5	
	comp=Z,2218µm,21.1s,MS7.7,baz=255,slow=39								
DAV	Davao City (W)	26.61	69	⇑	eP	P	23 54 38.6	-1.0
DAV	Davao City (W)	26.61	69	⇑	iP	P	23 54 40.3	+0.7
DAV					PcP	PcP	23 58 04.9	+1.4
DAV					eS	S	23 59 10.7	-1.7
DAV					LR	LR		
	comp=Z,2441µm,22.0s,MS7.7								
LBMI	Labuha	26.84	86		P	P	23 54 41.7	0.0
	comp=Z,7µm,1.4s,mb7.0								
PCPH	Palayan	27.06	48	⇓	eP	P	23 54 42.6	-1.1
BWNR	Bhubaneshwar	27.07	328		eP	P	23 54 44.0	+0.3
BWNR					eS	S	23 59 20.0	+0.6
AAI	Ambon	27.45	93		P	P	23 54 49.6	+2.4
	comp=Z,2µm,1.1s,mb6.4								
AAI	Ambon	27.45	93		P	P	23 54 49.6	+2.4
	comp=Z,2µm,1.1s,mb6.6								
SCPH	Surigao	27.57	63	⇑	eP	P	23 54 47.7	-0.6
KMI	Kunming	27.64	4		P	P	23 54 49.2	+0.4
KMI					AP	pP	23 54 54.9	-4.1
KMI					XP	sP	23 54 57.6	-5.8
KMI					PP		23 55 38.5	
KMI					S	S	23 59 29.8	+1.4
KMI					XS	sS	23 59 39.7	-5.6
KMI					AMB	AMB		
	comp=Z,999nm,1.0s,mb6.4								
KMI					LR	LR			
	comp=N,8480µm,19.3s,MS8.4								
KMI					LR	LR			
	comp=E,4020µm,20.0s,MS8.4								
KMI					LR	LR			
	comp=Z,9580µm,20.0s,MS8.4								
BIPH	Bislig	27.73	67	⇑	iP	P	23 54 48.9	-0.8
PLP	Palo	27.74	60	⇑	eP	P	23 54 49.2	-0.6
CAL	Calcutta	27.78	335		eP	P	23 54 51.2	+1.2
CAL					eS	S	23 59 32.7	+2.2
IMP	Imphal	28.02	347		iP	P	23 54 51.0	-1.2
IMP					iS	S	23 59 18.0	-16
HKC	Hong Kong Obse	28.03	27	⇑	iP	P	23 54 54.0	+1.7
FITZ	Fitzroy Crossi	28.87	124		eP	P	23 54 57.9	-1.9
	comp=Z,1µm,0.7s,mb6.7								
FITZ					eS	S	23 59 42.8	-5.1
FITZ	Fitzroy Crossi	28.87	124		P	P	23 54 58.0	-1.8
	comp=Z,370nm,1.0s,mb6.0,baz=297,slow=6.9,SNR=133								
SHL	Shillong	29.30	344		eP	P	23 55 05.5	+2.0
SHL					ex	x	23 59 52.0		
GYA	Guiyang	29.47	11	⇑	iP	P	23 55 03.6	-1.4
GYA					PP	PP	23 56 03.5	-8.5
GYA					PCP	PcP	23 58 13.2	+3.0
GYA					S	S	23 59 48.9	-8.2
GYA					LR	LR			
	comp=N,5261µm,20.0s,MS8.3								
GYA					LR	LR			
	comp=E,4984µm,20.0s,MS8.3								
GYA					LR	LR			
	comp=Z,5983µm,20.0s,MS8.2								
HYB	Hyderabad	29.57	313		eP	P	23 55 07.5	+1.4
HYB					eS	S	23 59 53.0	-5.9
HYB					pmax	pmax			
	comp=Z,321nm,0.8s,mb6.1								
HYB	Hyderabad	29.57	313		iP	P	23 55 07.5	+1.4
	comp=Z,321nm,0.8s,mb6.1								
HYB					eS	S	23 59 53.0	-5.9
HYB					LR	LR	00 08 00.0		
	comp=Z,265nm,20.0s								
HYB	Hyderabad	29.57	313		eP	P	23 55 07.5	+1.4
	comp=Z,321nm,0.8s,mb6.1								
HYB					eS	S	23 59 53.0	-5.9
HYB					e		00 08 00.0		
BOK	Bokaro	29.96	332		eP	P	23 55 10.8	+1.4
BOK					AMb	AMB	23 55 29.9		
	comp=Z,8µm,2.0s,mb7.1								
SHBG	Sahibganj	30.43	336		ex	x	23 54 41.2		
SWI	Sorong	30.57	87		P	P	23 55 13.9	-1.1
	comp=Z,3µm,1.4s,mb7.0								
SLGI	Shiliguri	31.48	339		eP	P	23 55 25.3	+2.5
LATR	Latur	31.67	312		eP	P	23 55 25.4	+0.8
LATR					AMb	AMB	23 55 38.5		
	comp=Z,1µm,1.2s,mb6.5								
NGP	Nagpur	31.76	319		eP	P	23 55 24.2	-1.1
NGP					AMb	AMB	23 55 38.3		
	comp=Z,1µm,0.9s,mb6.7								
NGP					ix	x	00 00 31.1		
GTK	Gangtok	31.98	339		ex	x	23 55 22.0		
ODAN	Odare	32.01	337		eP	P	23 55 26.8	-0.6
GOA	Goa	32.13	305	⇑	iP	P	23 55 29.9	+1.3
GOA					AMb	AMB	23 55 43.6		
	comp=Z,1µm,1.9s,mb6.4								
GOA					iS	S	00 00 39.9	+0.9
TAPN	Taplejung	32.33	338		eP	P	23 55 29.8	-0.4
RAMN	Ramite	32.40	336		eP	P	23 55 31.0	+0.1
QZH	Quanzhou	32.42	31	⇑	iP	P	23 55 31.6	+0.5
QZH					AMB	AMB			
	comp=Z,1µm,1.1s,mb6.7								
QZH					AMB	AMB			
	comp=Z,143µm,8.2s								
QZH					LR	LR			
	comp=N,2360µm,14.2s,MS8.1								
QZH					LR	LR			
	comp=E,1626µm,14.4s,MS8.1								
QZH					LR	LR			
	comp=Z,8273µm,32.6s								
JBP	Jabalpur	32.64	323		eP	P	23 55 34.4	+1.3
JBP					eS	S	00 00 47.2	+0.4
AKL	Akola	32.82	316		eP	P	23 55 34.7	0.0
AKL					AMb	AMB	23 55 50.2		
	comp=Z,1µm,2.2s,mb6.5								
KAD	Karad	32.83	308		eP	P	23 55 35.1	+0.4
KAD					AMb	AMB	23 55 57.2		
	comp=Z,3µm,2.2s,mb6.8								
KAD					eS	S	00 00 50.2	+0.4
KLBR	Kellerberrin	32.99	153		eP	P	23 55 36.6	+0.6
	comp=Z,688nm,1.3s,mb6.4								
JIRN	Jiri	33.20	336		eP	P	23 55 37.7	-0.2
ALBI	Allahabad	33.27	328		eP	P	23 55 38.5	0.0
ALBI					ex	x	23 56 32.5		
LSA	Lhasa	33.41	345		P	P	23 55 41.1	+1.4
LSA					AMB	AMB			
	comp=Z,275µm,10.9s								
LSA					LR	LR			
	comp=N,1470µm,31.6s								
LSA					LR	LR			
	comp=E,2340µm,49.6s								
LSA					LR	LR			
	comp=Z,3220µm,28.1s,MS7.9								
LSA	Lhasa	33.41	345	⇑	iP	P	23 55 41.0	+1.3
LSA					e*PP	pP	23 55 50.6	+0.6
LSA							23 58 22.5		
LSA				

NWAO ep P pP 23 55 54.3 +0.1
NWAO es P sP 23 55 59.7 +1.2
NWAO LR LR
comp=Z,852µm,20.0s,MS7.5
TATO Taipei 34.03 35⇑ *i* P **P 23 55 45.3 +0.2**
comp=Z,1µm,0.9s,mb6.9
TATO ep P pP 23 55 54.6 -0.9
TATO es P sP 23 55 59.1 -0.7
TATO LR LR
comp=Z,1323µm,21.0s,MS7.6
GKN Gorkha 34.15 334 *e* P **P 23 55 47.4 +1.2**
comp=Z,8µm,1.1s,mb7.6
KOLN Koldanda 34.42 333 *e* P **P 23 55 49.5 +1.0**
BOM Bombay 34.80 309 *i* P **P 23 55 51.3 -0.6**
BOM *ex* x 23 56 38.9
comp=Z,3µm,1.6s
BOM *e* S **S 00 01 20.7 +0.3**
DANN Dangsing 34.84 333 *e* P **P 23 55 53.5 +1.4**
comp=Z,6µm,0.6s,mb7.8
JHNI Jhansi 35.24 324 *i* P **P 23 55 57.0 +1.4**
JHNI *ex* x 23 57 16.0
WHN Wuhan 35.45 21⇑ *i* P **P 23 55 56.5 -0.8**
WHN AP pP 23 56 05.2 -2.5
WHN PP PP 23 57 22.4 +4.1
WHN LR LR
comp=N,1843µm,17.0s,MS8.1
WHN LR LR
comp=E,2312µm,21.4s,MS8.1
WHN LR LR
comp=Z,3080µm,15.1s
WRA Warramunga Arr 37.06 120 P **P 23 56 09.2 -2.0**
comp=Z,527nm,0.9s,mb6.4,baz=293,slow=9.5,SNR=380
WRA S **S 00 01 46.1 -8.9**
comp=Z,32nm,0.8s,baz=292,slow=13,SNR=2.6
WRA P3KPbc 00 26 39.5
comp=Z,3.9nm,0.8s,baz=110,slow=4.2,SNR=6.3
WRA Warramunga Arr 37.06 120 P **P 23 56 09.2 -2.1**
WRA S **S 00 01 46.1 -8.9**
WRA pmax pmax
comp=Z,527nm,0.9s
WRA smax
comp=N,33nm,0.8s
WRA Warramunga Arr 37.06 120 P **P 23 56 09.2 -2.0**
WRA S **S 00 01 46.1 -8.9**
WRA *e* 00 26 39.5
WRAB Tennant Creek 37.06 120 *e* P **P 23 56 09.4 -1.9**
WRAB pmax pmax
comp=Z,2µm,0.9s,mb6.8
WRAB Tennant Creek 37.06 120⇑ *i* P **P 23 56 09.4 -1.9**
comp=Z,2µm,0.9s,mb6.8
WRAB *ep* P pP 23 56 20.4 -1.3
WRAB *e* PcP PcP 23 58 35.5 +3.8
WRAB *es* S **S 00 01 50.8 -4.3**
WRAB LR LR
comp=Z,499µm,19.0s,MS7.3
WB2 Warramunga Arr 37.07 120 *e* P **P 23 56 09.2 -2.1**
WB2 *e* PCP PcP 23 58 57.0 +25
WB2 *es* S **S 00 01 48.8 -6.4**
XAN Xi'an 37.27 11 P **P 23 56 11.7 -1.1**
XAN AP pP 23 56 17.1 -6.1
XAN XP sP 23 56 20.0 -7.5
XAN PP PP 23 57 41.5 +3.2
XAN AMB AMB
comp=Z,811nm,0.8s,mb6.6
XAN LR LR
comp=N,901µm,24.8s,MS8.1
XAN LR LR
comp=E,3053µm,21.6s,MS8.1
XAN LR LR
comp=Z,7297µm,22.4s,MS8.4
PTH Pithoragarh 37.53 330 *e* P **P 23 56 16.0 +0.9**
FORT Forrest 38.11 140 *e* P **P 23 56 19.8 -0.2**
comp=Z,864nm,0.6s,mb6.7
FORT *es* S **S 00 02 08.9 -1.8**
ASAR Alice Springs 38.30 126 P **P 23 56 20.3 -1.5**
comp=Z,458nm,0.8s,mb6.2,baz=301,slow=8.0,SNR=319
ASAR S **S 00 02 08.4 -5.4**
comp=Z,156nm,1.0s,baz=300,slow=15,SNR=6.1
ASAR PKPPKP 00 28 58.0
comp=Z,13nm,0.9s,baz=80,slow=2.2,SNR=4.2
ASAR Alice Springs 38.30 126 P **P 23 56 20.3 -1.5**
ASAR S **S 00 02 08.5 -5.4**
ASAR pmax pmax
comp=Z,458nm,0.8s
ASAR smax
comp=N,157nm,1.0s
AJM Ajmer 38.37 321 *e* P **P 23 56 22.4 +0.2**
AJM AMb AMB 23 56 58.5
comp=Z,2µm,1.5s,mb6.7
NJ2 Nanjing 38.53 25 *e* P **P 23 56 24.2 +0.7**
NJ2 AP pP 23 56 34.7 +0.7
NJ2 XP sP 23 56 38.2 -0.1
NJ2 PP PP 23 57 52.7 +0.5
NJ2 AMB AMB
comp=Z,100nm,1.1s
NJ2 AMB AMB
comp=Z,100µm,8.8s
NJ2 LR LR
comp=N,1242µm,25.4s,MS7.9
NJ2 LR LR
comp=E,2120µm,26.2s,MS7.9
NJ2 LR LR
comp=Z,1668µm,26.2s,MS7.7
LZH Lanzhou 38.61 4⇑ P **P 23 56 24.0 -0.1**
LZH AP pP 23 56 27.3 -7.2
LZH XP sP 23 56 29.2 -10
LZH PP PP 23 57 56.1 +3.1
LZH PCP PcP 23 58 35.2 -0.8
LZH AMB AMB
comp=Z,91µm,8.2s
LZH LR LR
comp=N,8386µm,18.7s
LZH LR LR
comp=Z,9999µm,19.1s,MS8.7
SSE Sheshan 38.78 29⇑ P **P 23 56 26.3 +0.7**
SSE AP pP 23 56 29.4 -6.6
SSE PP PP 23 57 56.2 +1.3
SSE AMB AMB
comp=Z,154µm,12.0s
SSE LR LR
comp=N,493µm,19.3s,MS8.0
SSE LR LR
comp=E,2018µm,19.4s,MS8.0
SSE LR LR
comp=Z,2101µm,20.5s,MS8.0
DDI Dehra Dun 39.26 328 *e* P **P 23 56 28.0 -1.7**
BHJ Bhuj 39.72 312 *e* P **P 23 56 33.5 -0.1**
BHJ AMb AMB 23 56 55.2
comp=Z,2µm,2.0s,mb6.6
MMPI Merauke 39.88 100 P **P 23 56 37.7 +2.6**
comp=Z,2µm,0.9s,mb6.9
JAY Jayapura 39.94 91 P **P 23 56 33.9 -1.7**
comp=Z,1µm,1.2s,mb6.4
SMLA Simla 40.37 328 *i* P **P 23 56 39.1 +0.2**
SMLA *ex* x 23 56 41.9
comp=Z,474nm,0.6s
SMLA *i* S **S 00 02 43.4 -1.2**
SDNR Sundarnagar 40.76 328 *e* P **P 23 56 42.4 +0.3**
BHK Bhakra 40.99 328 *ex* x 23 56 53.2
BHK *ex* x 00 02 47.4
TIA Tai'an 41.55 20 P **P 23 56 47.3 -1.2**
TIA AMB AMB
comp=Z,310nm,1.0s,mb5.9
TIA LR LR
comp=N,1161µm,18.0s,MS8.1
TIA LR LR
comp=E,2213µm,19.0s,MS8.1
TIY Taiyuan 41.57 14 P **P 23 56 49.0 +0.4**
TIY PP PP 23 58 26.6 +1.4
TIY LR LR
comp=N,2055µm,15.9s,MS8.2
TIY LR LR
comp=E,1344µm,15.5s,MS8.2
TIY LR LR
comp=Z,3400µm,22.2s
GTA Gaotai 41.83 359 P **P 23 56 50.2 -0.5**
GTA AP pP 23 56 53.8 -7.4
GTA XP sP 23 56 55.2 -10
GTA AMB AMB
comp=Z,491nm,2.5s,mb5.7
GTA AMB AMB
comp=Z,175µm,9.9s
GTA LR LR
comp=N,3658µm,21.3s,MS8.4
GTA LR LR
comp=E,3744µm,17.4s,MS8.4
GTA LR LR
comp=Z,5188µm,22.2s,MS8.4
THN Thein Dam 42.15 328 *e* P **P 23 56 51.5 -2.0**
THN *ex* x 00 03 16.1
JMU Jammu 42.81 327 *e* P **P 23 56 58.5 -0.3**
COEN Coen 43.41 108⇑ *i* P **P 23 57 00.5 -3.5**
comp=Z,1µm,1.1s,mb6.5
BTO Baotou 43.85 10 *e* P **P 23 57 06.9 -0.2**
HHC Hu-ho-hao-te 44.38 12⇑ *i* P **P 23 57 11.7 +0.4**
HHC AP pP 23 57 14.9 -7.0
HHC XP sP 23 57 17.1 -9.1
HHC PP PP 23 58 56.0 +0.7
HHC AMB AMB
comp=Z,1µm,1.1s,mb6.6
HHC AMB AMB
comp=Z,163µm,7.0s
HHC LR LR
comp=N,4222µm,15.7s,MS8.5
HHC LR LR
comp=E,1745µm,16.8s,MS8.5
HHC LR LR
comp=Z,3875µm,15.4s,MS8.4
BJT Baijiatuau 44.73 17⇑ *i* P **P 23 57 14.0 -0.1**
BJT pmax pmax
comp=Z,169nm,1.0s
BJT MLR MLR
comp=Z,4302µm,20.0s
BJT Baijiatuau 44.73 17⇑ *i* P **P 23 57 14.0 -0.2**
comp=Z,169nm,1.0s,mb5.8
BJT LR LR
comp=Z,4302µm,20.0s,MS8.4
BJI Beijing 44.75 17 P **P 23 57 14.7 +0.4**
BJI AMB AMB
comp=Z,199µm,8.5s
BJI LR LR
comp=N,3575µm,20.8s,MS8.3
BJI LR LR
comp=E,1651µm,20.8s,MS8.3
BJI LR LR
comp=Z,3417µm,23.9s,MS8.2
MSEY Mahe Island 45.20 266⇓ *i* P **P 23 57 17.7 -0.6**
MSEY LR LR
comp=Z,1430µm,21.0s,MS7.9
DL2 Dalian 45.59 23⇑ *i* P **P 23 57 20.5 -0.5**
DL2 PP PP 23 59 10.5 +2.2
DL2 AMB AMB
comp=Z,1µm,1.5s,mb6.7
DL2 AMB AMB
comp=Z,101µm,7.8s
DL2 LR LR
comp=N,856µm,17.1s,MS7.8
DL2 LR LR
comp=E,415µm,16.5s,MS7.8
DL2 LR LR
comp=Z,1138µm,17.1s,MS7.9
INCN Inchon 46.58 29⇑ *i* P **P 23 57 27.4 -1.4**
comp=Z,721nm,1.0s,mb6.6
INCN *ep* P pP 23 57 38.8 -0.6
INCN LR LR
comp=Z,1627µm,22.0s,MS7.9
PMG Port Moresby 46.63 100⇑ *i* P **P 23 57 25.3 -4.3**
PMG *e** PP pP 23 57 39.7 -0.5
PMG MLR MLR
comp=Z,529µm,21.0s
GUMO Guam 46.65 69 LR LR 00 16 33.9
comp=Z,408µm,21.8s,MS7.3,baz=248,slow=36
GUMO Guam 46.65 69⇑ *i* P **P 23 57 26.2 -3.5**
GUMO pmax pmax
comp=Z,3µm,1.6s,mb7.0
GUMO MLR MLR
comp=Z,350µm,22.0s,MS7.3
GUMO Guam 46.65 69⇑ *i* P **P 23 57 26.2 -3.5**
comp=Z,3µm,1.6s,mb7.0
GUMO LR LR
comp=Z,350µm,22.0s,MS7.3
KSRS Korea Array 47.18 30 P **P 23 57 33.0 -0.5**
comp=Z,384nm,1.1s,mb6.2,baz=221,slow=7.3,SNR=314
KSRS LR LR 00 18 08.2
comp=Z,936µm,20.2s,MS7.7,baz=231,slow=37
KSRS PKPPKP 00 28 54.3
comp=Z,2.4nm,0.9s,baz=8.9,slow=2.2,SNR=5.4
KBL Kabul 47.45 324⇑ *i* P **P 23 57 35.7 0.0**
KBL pmax pmax
comp=Z,845nm,0.8s,mb6.7
KBL Kabul 47.45 324⇑ *i* P **P 23 57 35.7 0.0**
comp=Z,845nm,0.8s,mb6.7
RER Riviere de l'E 47.48 244⇓ *i* P **P 23 57 36.2 0.0**
RER *ep* P pP 23 57 47.1 +0.3
RER *es* P sP 23 57 52.1 +1.0
CTA Charters Tower 47.68 115 *e* P **P 23 57 36.2 -1.5**
comp=Z,646nm,0.9s,mb6.7
CTA *es* PcS 00 03 04.0 +1.4
CTA Charters Tower 47.68 115 PKPPKP 00 28 47.6
comp=Z,8.5nm,1.0s,baz=360,slow=2.7,SNR=3.8
CTA Charters Tower 47.68 115 *e* P **P 23 57 36.2 -1.5**
CTA pmax pmax
comp=Z,646nm,0.9s
CTAO Charters Tower 47.68 115⇑ *i* P **P 23 57 36.4 -1.3**
CTAO *e** PP pP 23 57 47.2 -1.2
CTAO pmax pmax
comp=Z,1µm,1.0s,mb6.9
CTAO MLR MLR
comp=Z,685µm,22.0s,MS7.6
CTAO Charters Tower 47.68 115⇑ *i* P **P 23 57 36.4 -1.3**
comp=Z,1µm,1.0s,mb6.9
CTAO *ep* P pP 23 57 47.2 -1.1
CTAO LR LR
comp=Z,685µm,22.0s,MS7.6
WMQ Urumqi 47.69 347⇑ *i* P **P 23 57 38.4 +1.1**
WMQ AP pP 23 57 48.0 0.0
WMQ XP sP 23 57 52.5 +0.3
WMQ AMB AMB
comp=Z,110µm,6.2s
WMQ LR LR
comp=N,1021µm,18.6s,MS8.0
WMQ LR LR
comp=E,1251µm,20.5s,MS8.0
WMQ LR LR
comp=Z,1228µm,26.6s
KSH Kashi 47.70 334⇑ *i* P **P 23 57 38.0 +0.5**
KSH *ea* P pP 23 57 42.1 -6.1
KSH *ex* P sP 23 57 45.5 -6.9
KSH *ep* CP PcP 23 59 08.1 +1.6
KSH *ep* P PP 23 59 28.0 -1.5
KSH AMB AMB
comp=Z,339µm,6.4s
KSH LR LR
comp=N,1226µm,16.3s,MS8.3
KSH LR LR
comp=E,2663µm,17.2s,MS8.3
KSH LR LR
comp=Z,2132µm,18.4s,MS8.2
STKA Stephens Creek 48.20 132 *e* P **P 23 57 40.7 -0.9**
comp=Z,992nm,0.8s,mb6.9
STKA *es* **S 00 04 37.0 -1.6**
STKA Stephens Creek 48.20 132 P **P 23 57 40.7 -0.9**
comp=Z,312nm,0.6s,mb6.5,baz=305,slow=7.8,SNR=106
STKA S **S 00 04 35.1 -3.5**
comp=Z,47nm,0.9s,baz=187,slow=22,SNR=1.4
SNY Shenyang 48.86 23 ⇑P **P 23 57 45.1 -1.3**
SNY XP sP 23 57 59.3 -2.1
SNY PP PP 23 59 42.4 +2.3
SNY AMB AMB
comp=Z,148µm,8.6s
SNY LR LR
comp=N,697µm,15.1s,MS8.2
SNY LR LR
comp=E,1988µm,16.3s,MS8.2
SNY LR LR
comp=Z,1532µm,17.2s,MS8.1
ULHL Ulahol 49.86 336 P **P 23 57 51.0 -3.0**
SNR=156
AAA Alma-Ata 50.45 338 *i* P **P 23 57 59.0 +0.5**
AAA *i* S **S 00 05 10.4 +0.7**
AAA pmax pmax
comp=Z,240µm,5.3s
AAA smax
comp=N,381µm,6.7s
AAA MLR MLR
comp=Z,1168µm,24.0s,MS7.8
SONM Songino Array 50.49 5 P **P 23 57 59.2 +0.5**
comp=Z,1µm,0.7s,mb7.0,baz=189,slow=7.3,SNR=1027
SONM LR LR 00 22 06.8
comp=Z,1523µm,20.3s,MS8.0,baz=183,slow=39
SONM PKPPKP 00 28 45.2
comp=Z,6.9nm,1.0s,baz=290,slow=1.9,SNR=5.2
UCH Uchtor 50.56 335 P **P 23 58 00.6 +1.3**
SNR=142
UCH Uchtor 50.56 335 *e* P **P 23 58 00.7 +1.3**
UCH LR LR
comp=Z,1036µm,21.0s,MS7.8
ULN Ulaanbaatar 50.58 6⇑ *i* P **P 23 57 59.9 +0.5**
ULN *e** PP pP 23 58 09.9 -0.2
ULN pmax pmax
comp=Z,1µm,0.9s,mb6.8
ULN MLR MLR
comp=Z,3069µm,20.0s,MS8.3
ULN Ulaanbaatar 50.58 6⇑ *i* P **P 23 57 59.9 +0.5**
comp=Z,1µm,0.9s,mb6.8
ULN *ep* P pP 23 58 09.9 -0.2
ULN LR LR
comp=Z,3069µm,20.0s,MS8.3
TKM2 Tokmak 2 50.68 336⇑ *i* P **P 23 58 01.0 +0.7**
TKM2 *e* 23 59 18.3
TKM2 *es* **S 00 05 15.5 +2.5**
TKM2 MLR MLR
comp=Z,766µm,21.0s,MS7.7
TKM2 Tokmak 2 50.68 336 P **P 23 58 01.1 +0.8**
SNR=725
TKM2 Tokmak 2 50.68 336⇑ *i* P **P 23 58 01.0 +0.7**
comp=Z,7.4nm,0.8s
TKM2 *e* PcP PcP 23 59 18.3 +1.0
TKM2 *e* PP PP 00 00 06.1 +9.5
TKM2 *es* **S 00 05 15.5 +2.5**
TKM2 LR LR
comp=Z,766µm,21.0s,MS7.7
KBK Karagaybulak 50.73 336 P **P 23 58 01.9 +1.3**
SNR=480
AML Almayashu 50.83 334 P **P 23 58 02.5 +1.1**
SNR=43
AML Almayashu 50.83 334⇑ *e* P **P 23 58 02.3 +0.9**
comp=Z,10µm,1.0s,mb7.7
AML *e* PP PP 00 00 12.4 +14
AML *es* S S 00 05 37.1 +22
AML LR LR
comp=Z,903µm,20.0s,MS7.8
AAK Ala-Archa 50.90 335 P **P 23 58 03.0 +1.0**
SNR=157
FRU Bishkek 51.01 335⇑ *i* P **P 23 58 03.0 +0.2**
FRU *i* S **S 00 05 20.0 +2.5**
FRU pmax pmax
comp=Z,3µm,2.0s,mb6.9
FRU MLR MLR
comp=E,2100µm,20.0s
FRU MLR MLR
comp=Z,1976µm,20.0s,MS8.1
CHMS Chumysh 51.09 336 P **P 23 58 03.6 +0.2**
SNR=235
EKS2 Erkin-Say 51.23 335 P **P 23 58 05.4 +1.0**
SNR=1026
EKS2 Erkin-Say 51.23 335⇑ *i* P **P 23 58 05.2 +0.9**
comp=Z,4µm,0.9s,mb7.3
EKS2 *e* 23 58 20.8
EKS2 *e* PP PP 00 00 15.6 +14
EKS2 *es* **S 00 05 27.2 +6.7**
EKS2 LR LR
comp=Z,772µm,22.0s,MS7.7
CN2 Changchun 51.26 23 *e* P **P 23 58 04.0 -0.6**
CN2 *e* XP sP 23 58 11.0 -8.6
USP Ospenovka 51.42 336 P **P 23 58 06.1 +0.3**
SNR=24
MK31 Makanchi Array 51.81 344 *i* P **P 23 58 08.0 -0.7**
MK31 pmax pmax
comp=Z,2µm,0.8s,mb7.1
MK31 Makanchi Array 51.81 344 *i* P **P 23 58 08.1 -0.6**
MKAR Makanchi Array 51.81 344 P **P 23 58 08.5 -0.2**
comp=Z,437nm,0.6s,mb6.6,baz=147,slow=8.4,SNR=467
MKAR S **S 00 05 28.5 +0.1**
comp=Z,53nm,0.9s,baz=146,slow=11,SNR=3.8
MKAR LR LR 00 25 02.1
comp=Z,1267µm,21.9s,MS7.9,baz=158,slow=42
MKAR PKPPKP 00 28 42.8
comp=Z,3.8nm,0.8s,baz=60,slow=1.4,SNR=4.6
MKAR Makanchi Array 51.81 344 P **P 23 58 08.5 -0.2**
MKAR S **S 00 05 28.5 +0.1**
MKAR pmax pmax
comp=Z,437nm,0.6s
MKAR smax
comp=N,53nm,0.9s
MKAR MLR MLR
comp=Z,267µm,22.0s
MAJO Matsushiro 52.30 38 *e* P **P 23 58 10.9 -1.6**
comp=Z,3µm,1.7s,mb6.9
MAJO *ep* P pP 23 58 23.0 -0.2
MAJO LR LR
comp=Z,667µm,21.0s,MS7.7
MAT Matsushiro 52.30 38 P **P 23 58 11.9 -0.6**
MJAR Matsushiro Ar 52.30 38 P **P 23 58 11.2 -1.3**
comp=Z,41nm,0.5s,mb5.6,baz=217,slow=7.5,SNR=108
MJAR LR LR 00 21 40.4
comp=Z,393µm,20.7s,MS7.4,baz=235,slow=38
MJAR PKPPKP 00 28 46.1
comp=Z,2.9nm,1.0s,baz=328,slow=4.3,SNR=4.0
ZAK Zakamensk 52.84 2 *e* P **P 23 58 16.2 0.0**
ZAK pmax pmax
comp=Z,636nm,2.1s,mb6.2
KK31 Karatay Array 53.03 333 *i* P **P 23 58 16.8 -1.0**
KK31 pmax pmax
comp=Z,2µm,1.1s,mb6.9
KK31 Karatay Array 53.03 333 *i* P **P 23 58 16.9 -0.9**
PAF Port-aux-Franc 53.34 204⇓ *e* P **P 23 58 19.8 -0.1**
VLA Vladivostok 53.49 28 *d* P **P 23 58 21.0 -0.1**
VLA pmax pmax
comp=Z,2µm,1.5s,mb6.7
VLA MLR MLR
comp=Z,726µm,19.0s,MS7.8
VLA Vladivostok 53.49 28 *i* P **P 23 58 21.1 0.0**
MDJ Mudanjiang 53.62 25 P **P 23 58 22.1 0.0**
MDJ AP pP 23 58 31.2 -1.7
MDJ XP sP 23 58 35.1 -2.0
MDJ PCP PcP 23 59 25.2 -3.1
MDJ AMB AMB
comp=Z,168µm,11.6s
MDJ LR LR
comp=N,873µm,16.9s,MS8.1
MDJ LR LR
comp=E,1459µm,19.9s,MS8.1
MDJ LR LR
comp=Z,1953µm,18.1s,MS8.2
MDJ Mudanjiang 53.62 25⇑ *i* P **P 23 58 21.7 -0.4**
comp=Z,21nm,0.6s
MDJ *ep* P pP 23 58 30.4 -2.5
MDJ LR LR
comp=Z,2038µm,20.0s,MS8.2
TOO Toolangi 53.77 136 *e* P **P 23 58 24.2 +0.9**
TOO *es* **S 00 06 00.3 +4.8**
MUKL Al Mukalla 53.94 290 *e* P **P 23 58 26.2 +1.2**
MOY Mondy 54.08 0⇑ *i* P **P 23 58 25.5 +0.2**
MOY pmax pmax
comp=Z,7µm,2.7s,mb7.1
TLY Talaya 54.15 2*c* *i* P **P 23 58 26.3 +0.5**
TLY *e* 00 00 33.4
TLY *e* PPP 00 01 33.3
TLY *es* **S 00 06 00.6 +0.5**
TLY pmax pmax
comp=Z,969nm,0.9s,mb6.7
TLY MLR MLR
comp=Z,3993µm,17.0s,MS8.6
TLY Talaya 54.15 2⇑ *i* P **P 23 58 26.8 +1.0**
TLY LR LR
comp=Z,3542µm,21.0s,MS8.4
IRK Irkutsk 54.74 3⇑ *i* P **P 23 58 30.6 +0.5**
IRK *es* **S 00 06 10.4 +2.4**
IRK pmax pmax
comp=Z,9µm,3.2s
CAN Canberra 55.26 132⇑ *i* P **P 23 58 33.0 -1.2**
CAN *e** PP pP 23 58 45.0 -0.1
ARMA Armidale 55.46 126 *e* P **P 23 58 36.6 +0.9**
ARMA *es* **S 00 06 21.8 +3.3**
CIT Chita 55.51 10 *e* P **P 23 58 36.7 +1.0**
CIT *e* 23 58 55.0
CIT *e* 00 01 56.7
CIT *e* 00 06 17.3
CIT pmax pmax
comp=Z,10µm,3.1s
CNB Canberra Magne 55.53 132 *e* P **P 23 58 36.2 0.0**
CNB *es* **S 00 06 20.8 +1.5**
RIV Riverview 56.30 130 *e* P **P 23 58 42.0 +0.3**
ABKT Ailbek 56.38 320 P **P 23 58 41.3 -0.9**

comp=Z,6µm,0.9s,mb7.7
VAN Vannovskaya 56.40 320 *e*P **P 23 58 42.0 -0.3**
VAN *e*S **S 00 06 30.0 -0.7**
KURK Kurchatov 56.40 343 LR LR 00 26 25.9
comp=Z,1191µm,18.4s,MS8.0,baz=165,slow=40
KURK PKPPKP 00 28 35.2
comp=E,5.2nm,0.9s,baz=356,slow=2.6,SNR=5.8
KURK Kurchatov 56.40 343*c i*P **P 23 58 41.2 -0.8**
KURK pmax pmax
comp=Z,3µm,1.5s,mb7.2
KURK MLR MLR
comp=Z,1672µm,20.0s,MS8.1
KURK Kurchatov 56.40 343⇑ *i*P **P 23 58 41.6 -0.4**
KURK *e*PP PP 00 00 44.9 -3.1
KURK *e*S **S 00 06 40.7 +11**
KURK LR LR
comp=Z,1516µm,19.0s,MS8.1
BDHA Al Bayda' 57.10 288⇑ *e*P **P 23 58 49.2 +1.5**
LBOS 57.38 288⇑ *e*P **P 23 58 51.2 +1.5**
LBOS AMb AMB 23 58 54.0
comp=Z,1µm,2.0s,mb6.6
TAU Tasmania Unive 57.65 141 *e*P **P 23 58 51.4 +0.3**
TAU pmax pmax
comp=Z,1µm,1.3s,mb6.8
TAU Tasmania Unive 57.65 141 *e*P **P 23 58 47.2 -3.9**
comp=Z,1µm,1.3s,mb6.8
TAU LR LR
comp=Z,513µm,20.0s,MS7.6
ZAA0 Zalesovo Array 57.91 349⇑ *i*P **P 23 58 51.8 -0.8**
ZAA0 *e*pP pP 23 59 03.1 -0.4
ZAA0 *e*sP sP 23 59 08.6 +0.9
ZALV Zalesovo Beam 57.91 349 P **P 23 58 52.0 -0.7**
comp=Z,2µm,1.0s,mb7.1,baz=187,slow=6.3,SNR=272
ZALV S **S 00 06 47.5 -2.4**
comp=Z,189nm,0.9s,baz=163,slow=10,SNR=8.0
ZALV LR LR 00 27 21.5
comp=Z,738µm,20.9s,MS7.8,baz=160,slow=40
ZALV PKP2bc 00 28 47.9
comp=Z,18nm,1.0s,baz=280,slow=4.4,SNR=5.1
ZALV Zalesovo Beam 57.91 349 P **P 23 58 52.0 -0.7**
ZALV S **S 00 06 47.5 -2.4**
ZALV LR LR 00 27 21.5
ZALV ⇑*e* 00 28 47.9
KLR Kul'dur 58.20 23‖ *i*P **P 23 58 49.8 -5.0**
TRBA At Turbah 58.33 287‖ *e*P **P 23 58 57.8 +1.5**
ERM Erimo 58.72 36 *i*P **P 23 58 58.5 -0.1**
ERM Erimo 58.72 36 *i*P **P 23 58 58.5 -0.1**
KRAR Krasnoyarsk 58.78 355*c i*P **P 23 58 58.2 -0.5**
KRAR pmax pmax
comp=Z,4µm,1.2s,mb7.3
NVS Novosibirsk 59.06 348 *i*P **P 23 59 00.0 -0.7**
NVS *i*S **S 00 06 57.8 -7.1**
NVS pmax pmax
comp=Z,3µm,1.0s,mb7.2
NVS pmax pmax
comp=N,3µm,1.5s
NVS pmax pmax
comp=E,2µm,1.5s
NVS smax
comp=N,5µm,2.2s
NVS smax
comp=E,7µm,2.2s
HNR Honiara 59.22 99 LR LR 00 26 42.5
comp=E,75µm,22.0s,MS6.8,baz=104,slow=38
HNR Honiara 59.22 99⇑ *i*P **P 23 58 59.8 -2.8**
HNR *e* 23 59 14.5
HNR MLR MLR
comp=Z,196µm,22.0s,MS7.2
ASAJ Asahikawa 59.71 34 P **P 23 59 05.0 -0.3**
comp=Z,242nm,0.7s,mb6.4,baz=247,slow=12,SNR=62
ASAJ LR LR 00 27 13.1
comp=Z,427µm,20.2s,MS7.6,baz=275,slow=38
ASAJ PKPPKP 00 28 44.5
comp=Z,4.2nm,0.3s,baz=223,slow=23,SNR=4.3
RDF Al-Radifah 59.80 306 *e*P **P 23 59 06.3 0.0**
baz=306
RDF AMb AMB 23 59 21.8
comp=Z,4µm,2.0s,mb7.1,baz=306
UMR Umm Al-Rimmam 59.90 306 *e*P **P 23 59 06.5 -0.6**
baz=306
UMR AMb AMB 23 59 21.9
comp=Z,4µm,1.1s,mb7.3,baz=306
NAY Al-Naaiem 60.17 306 *e*P **P 23 59 08.7 -0.2**
baz=306
NAY AMb AMB 23 59 23.6
comp=Z,1µm,1.0s,mb6.9,baz=306
MIB Mutribah 60.30 307 *e*P **P 23 59 10.0 +0.3**
baz=306
MIB AMb AMB 23 59 25.3
comp=Z,3µm,1.6s,mb7.1,baz=306
RST Umm Al-Ruwaisa 60.46 306 *e*P **P 23 59 10.2 -0.6**
baz=306
RST AMb AMB 23 59 25.4
comp=Z,2µm,1.2s,mb7.1,baz=306
VOSK Vostochnaya 60.56 340 P **P 23 59 09.7 -1.3**
VOSK pmax pmax
comp=Z,3µm,1.4s,mb7.2
BVA0 Borovoye Array 61.01 340 P **P 23 59 11.8 -2.3**
BVA0 pmax pmax
comp=Z,116nm,1.0s,mb6.0
BVAR Borovoye Array 61.01 340 S **S 00 07 25.0 -5.0**
comp=Z,13nm,0.8s,baz=196,slow=22,SNR=2.1
BVAR PKPPKP 00 28 43.0
comp=Z,8.0nm,0.9s,baz=232,slow=1.7,SNR=6.5
BVAR LR LR 00 30 48.4
comp=Z,1341µm,19.8s,MS8.1,baz=144,slow=41
BRVK Borovoye 61.07 340 P **P 23 59 12.7 -1.8**
BRVK pmax pmax
comp=Z,3µm,1.5s,mb7.2
BRVK Borovoye 61.07 340 *e*pP pP 23 59 25.4 -0.1
BOD Bodaibo 61.18 8 *e*P **P 23 59 14.7 -0.4**
BOD *e* 23 59 30.2
BOD pmax pmax
comp=Z,2µm,1.5s,mb6.9
YUK Yuzh-Kuril'sk 61.52 36⇑ *i*P **P 23 59 17.0 -0.7**
YUK *e*PS 00 09 08.0
YUK pmax pmax
comp=E,52µm,10.0s
YUK pmax pmax
comp=Z,146µm,10.0s
YUK pmax pmax
comp=N,57µm,9.0s
YUK pmax pmax
comp=E,380nm,0.6s
YUK pmax pmax
comp=Z,470nm,0.6s,mb6.8
YUK pmax pmax
comp=N,830nm,0.8s
YUK MLR MLR
comp=Z,700µm,18.0s,MS7.9
YUK MLR MLR
comp=N,521µm,19.0s,MS7.8
YUK MLR MLR
comp=E,416µm,16.0s,MS7.8
YSS Yuzh-Sakhalins 61.62 31*α i*P **P 23 59 18.0 -0.3**
YSS *e* 00 00 04.0
YSS *e* 00 01 38.0
YSS *e*PPP 00 03 00.0
YSS *i*S **S 00 07 38.0 -0.1**
YSS *e*PS 00 07 52.0
YSS *e*SS SS 00 11 42.0 +2.0
YSS pmax pmax
comp=N,290nm,1.0s
YSS pmax pmax
comp=Z,960nm,1.0s,mb6.9
YSS MLR MLR
comp=Z,773µm,16.0s,MS8.0
CLNS Chul'man 62.42 15*c i*P **P 23 59 24.0 +0.5**
CLNS *e* 00 00 05.9
CLNS *e* 00 01 39.1
CLNS *e*S **S 00 07 42.4 -5.3**
CLNS *e*SS SS 00 11 44.4 -7.7
CLNS pmax pmax
comp=Z,638nm,1.4s,mb6.6
CLNS pmax pmax
comp=E,237nm,1.2s
CLNS pmax pmax
comp=N,361nm,1.3s
CLNS pmax pmax
comp=E,1.0nm,1.5s
CLNS pmax pmax
comp=Z,1.0nm,1.5s
CLNS pmax pmax
comp=N,1.0nm,2.1s
CLNS MLR MLR
comp=N,326µm,22.0s
CLNS MLR MLR
comp=E,148µm,15.0s
CLNS MLR MLR
comp=Z,341µm,23.0s,MS7.5
AB31 Akbulak array 62.52 331 *i*P **P 23 59 23.1 -1.3**
AB31 pmax pmax
comp=Z,2µm,0.9s,mb7.3
AB31 Akbulak array 62.52 331 *i*P **P 23 59 23.2 -1.2**
FURI Furi 62.89 281 *e*P **P 23 59 27.8 +0.3**
FURI S **S 00 08 01.0 +5.8**
KMBO Kilima Mbogo 63.45 270 P **P 23 59 33.1 +1.9**
comp=Z,34nm,0.7s,mb5.6,baz=45,slow=13,SNR=6.0
KMBO S **S 00 07 60.0 -2.3**
comp=Z,4.0nm,0.6s,baz=31,slow=17,SNR=2.2
KMBO LR LR 00 24 57.6
comp=Z,973µm,19.0s,MS8.0,baz=79,slow=34
KMBO PKPPKP 00 28 32.8
comp=Z,6.3nm,1.2s,baz=143,slow=4.3,SNR=3.8
KMBO Kilima Mbogo 63.45 270 P **P 23 59 33.1 +1.8**
KMBO S **S 00 08 00.0 -2.3**
KMBO Kilima Mbogo 63.45 270 P **P 23 59 33.1 +1.9**
KMBO S **S 00 07 60.0 -2.3**
KMBO LR LR 00 24 57.6
KMBO P'P' 00 28 32.8
CASY Casey 63.92 176 *e*P **P 23 59 32.7 -0.6**
CASY *e*S **S 00 08 05.7 -0.5**
CASY Casey 63.92 176‖ *i*P **P 23 59 33.2 -0.1**
CASY *e*S **S 00 08 05.7 -0.5**
MIR Mirnyy 64.04 183*κ i*P **P 23 59 34.0 -0.1**
MIR *i* PPP 00 03 24.0
MIR *i*S **S 00 08 07.0 -0.8**
MIR *i* PS 00 08 28.0
MIR *i* SSS 00 15 10.0
MIR pmax pmax
comp=Z,400nm,3.0s
MIR pmax pmax
comp=Z,13µm,8.0s
AKTO Aktyubinsk 64.24 331 S **S 00 08 07.3 -3.5**
comp=Z,55nm,1.1s,baz=351,slow=23,SNR=4.8
AKTO LR LR 00 33 21.4
comp=Z,673µm,21.1s,MS7.8,baz=330,slow=41
MAK Makhachkala 65.90 320*c i*P **P 23 59 47.0 +0.3**
MAK *e* 00 00 18.2
MAK *i* PPP 00 03 56.7
MAK *i*S S 00 08 30.6 -0.9
MAK *e* 00 09 40.2
MAK pmax pmax
comp=E,269nm,1.0s
MAK pmax pmax
comp=N,177nm,0.7s
MAK pmax pmax
comp=Z,6µm,1.5s,mb7.4
MAK MLR MLR
comp=Z,442µm,26.0s,MS7.5
MAK MLR MLR
comp=E,308µm,21.0s
HKR Hakkari 66.11 313 *e*P **P 23 59 50.9 +2.8**
GNI Garni 66.47 316 *e*P **P 23 59 51.6 +1.2**
GNI Garni 66.47 316 P **P 23 59 51.4 +1.0**
comp=E,48nm,0.9s,mb5.5,baz=325,slow=5.8,SNR=18
GNI S S 00 08 40.0 +1.5
comp=E,23nm,1.0s,baz=294,slow=16,SNR=1.9
GNI PKPPKP 00 28 30.6
comp=E,7.2nm,0.7s,baz=127,slow=10,SNR=5.0
GNI LR LR 00 29 56.7
comp=E,248µm,20.3s,MS7.4,baz=103,slow=37
GNI Garni 66.47 316 P **P 23 59 51.4 +1.0**
GNI S S 00 08 40.0 +1.5
GNI pmax pmax
comp=Z,48nm,0.9s
GNI smax
comp=N,23nm,1.0s
GNI MLR MLR
comp=Z,248µm,20.3s
DZM Mont Dzumac 66.55 113 *e*P **P 23 59 50.7 -0.5**
DGRG David-gareji 66.61 318 P **P 23 59 52.7 +1.5**
DGRG S S 00 08 43.8 +3.7
CLDR Caldiran 66.62 315 *e*P **P 23 59 51.6 +0.3**
VANT Van 66.72 314 *e*P **P 23 59 59.2 +7.3**
VANB Van 66.78 314 *e*P **P 23 59 52.1 -0.3**
MTA Mtatsminda 67.11 318 P **P 23 59 55.1 +0.8**
MTA S S 00 08 46.9 +0.8
TBLG Delisi 67.16 318 P **P 23 59 54.7 0.0**
TBLG S S 00 08 46.9 +0.2
TBLG Delisi 67.16 318 P **P 23 59 54.7 0.0**
TBLG S S 00 08 46.9 +0.2
AGRB Hanur-Agry 67.45 315 *e*P **P 23 59 57.1 +0.5**
SVE Sverdlovsk 67.53 337‖ *e*P **P 23 59 56.3 -0.4**
SVE *e*PPP 00 04 05.9
SVE *e*S S 00 08 51.8 +1.3
SVE *e*SS SS 00 13 16.4 +4.8
SVE pmax pmax
comp=Z,4µm,1.1s,mb7.3
SVE pmax pmax
comp=Z,216µm,23.5s
SVE MLR MLR
comp=Z,402µm,21.0s,MS7.6
GOR Gori 67.69 318 P **P 23 59 58.3 +0.3**
GOR S S 00 08 54.3 +1.1
KARS Kars 67.81 316 *e*P **P 23 59 59.8 +0.9**
ARU Arti 68.06 336*d i*P **P 23 59 58.8 -1.3**
ARU *e* 00 00 28.1
ARU *e*PPP 00 04 09.9
ARU *e*S S 00 08 56.6 -0.3
ARU *e* 00 09 53.3
ARU *e*SS SS 00 13 13.5 -6.4
ARU pmax pmax
comp=Z,1µm,1.7s,mb6.6
ARU pmax pmax
comp=Z,167µm,19.6s
ARU MLR MLR
comp=Z,1377µm,22.0s,MS8.1
ARU Arti 68.06 336⇑ *i*P **P 23 59 59.6 -0.5**
ARU *e*PP PP 00 02 31.9 +1.4
YAK Yakutsk 68.15 14*c i*P **P 23 59 59.7 -0.8**
YAK *e* 00 00 17.8
YAK *e**PP pP 00 00 24.9 +13
YAK *e* 00 02 30.9
YAK *e*S S 00 08 54.0 -3.9
YAK pmax pmax
comp=Z,3µm,1.1s,mb7.3
YAK pmax pmax
comp=N,995nm,1.1s
YAK pmax pmax
comp=E,812nm,1.1s
YAK pmax pmax
comp=Z,10µm,4.1s
YAK pmax pmax
comp=N,1µm,1.4s
YAK MLR MLR
comp=Z,1713µm,16.0s,MS8.4
YAK MLR MLR
comp=E,735µm,15.0s,MS8.3
YAK MLR MLR
comp=N,1285µm,18.0s,MS8.3
YAK Yakutsk 68.15 14⇑ *i*P **P 23 59 58.6 -1.9**
YAK LR LR
comp=Z,1576µm,22.0s,MS8.2
MARD Mardin 68.19 312 *i*P **P 00 00 02.2 +0.9**
ONI Oni 68.39 318 P **P 00 00 03.2 +0.7**
ONI S S 00 09 03.1 +1.7
ERZM Erzurum 68.74 315 *i*P **P 00 00 05.7 +1.0**
ARTV Artvin 68.85 316 *i*P **P 00 00 05.3 0.0**
BCA Borcka 69.16 316 *e*P **P 00 00 07.1 -0.2**
KOPT Kop Dagi 69.40 315 *i*P **P 00 00 10.2 +1.5**
KIV Kislovodsk 69.48 319*α i*P **P 00 00 09.2 0.0**
KIV *i**PP pP 00 00 19.5 -0.8
KIV *i**SP sP 00 00 24.2 -0.2
KIV *i* 00 00 37.1
KIV *i*S S 00 09 15.3 +1.0
KIV *i* PS 00 09 36.1
KIV *i* PPS 00 10 04.0
KIV *i* SS SS 00 13 46.8 +4.4
KIV pmax pmax
comp=Z,913nm,3.9s
KIV pmax pmax
comp=Z,62µm,7.0s
KIV MLR MLR
comp=Z,256µm,19.0s,MS7.5
KIV Kislovodsk 69.48 319⇑ *i*P **P 00 00 10.7 +1.5**
KIV LR LR
comp=Z,293µm,20.0s,MS7.5
ASF Jabal al Asfar 69.53 306 P **P 00 00 10.3 +0.5**
comp=Z,107nm,0.7s,mb5.9,baz=345,slow=2.1,SNR=64
ASF S S 00 09 13.3 -2.1
comp=Z,7.2nm,1.0s,baz=19,slow=22,SNR=1.8
ASF PKPPKP 00 28 20.8
comp=Z,15nm,1.1s,baz=84,slow=1.6,SNR=7.5
ASF LR LR 00 32 07.4
comp=Z,869µm,18.8s,MS8.0,baz=334,slow=37
ASF Jabal al Asfar 69.53 306 P **P 00 00 10.3 +0.5**
ASF S S 00 09 13.3 -2.1
ASF pmax pmax
comp=Z,107nm,0.7s
ASF smax
comp=N,7.0nm,1.0s
ASF MLR MLR
comp=Z,869µm,18.8s
DRV Dumont d'Urvil 69.54 164 P pP 00 00 25.0 +4.8
DRV S S 00 09 23.0 +8.8
DRV SS SS 00 13 56.0 +14
DRV L 00 17 00.0
DRV R 00 22 00.0
PZAR Pazar-Rize 69.56 316 *e*P **P 00 00 02.9 -6.9**
SVRC Sivrice-ELAZID 69.66 313 *e*P **P 00 00 10.5 +0.1**
URFA Urfa 69.69 312 *e*P **P 00 00 11.2 +0.5**
PTK Pertek 69.78 313 *e*P **P 00 00 11.2 +0.1**
JAWL J.Aulia 69.78 287 *i*P **P 00 00 04.7 -7.0**
JAWL *i*S S 00 09 12.7 -6.1
JAWL AMS AMS 00 09 50.7
comp=N,102µm,19.1s
EZC Erzincan 69.78 314 *e*P **P 00 00 14.0 +2.9**
MAW Mawson 69.87 195 *e*P **P 00 00 11.5 +0.3**
MAW *e*S S 00 09 07.8 -10
MAW Mawson 69.87 195 P **P 00 00 11.3 +0.2**
comp=N,40nm,0.8s,mb5.4,baz=42,slow=7.4,SNR=73
MAW S S 00 09 14.2 -3.8
comp=N,12nm,1.0s,baz=268,slow=13,SNR=1.1
MAW LR LR 00 25 47.1
comp=N,763µm,21.5s,MS7.9,baz=32,slow=32
MAW PKP2ab 00 28 14.1
comp=N,35nm,0.9s,baz=239,slow=6.7,SNR=17
MCQ Macquarie Isla 69.90 148 *e*P **P 00 00 16.6 +5.0**
MCQ *e*S S 00 09 24.0 +5.1
ATAB Bozova 70.10 311 *i*P **P 00 00 14.1 +0.9**
MACK Trabzon 70.26 315 *i*P **P 00 00 13.7 -0.4**
KTUT Trabzon 70.28 315 *e*P **P 00 00 14.9 +0.7**
GUMT Gumushane 70.28 315 *e*P **P 00 00 15.3 +1.1**
MALT Malatya 70.29 312 *e*P **P 00 00 12.5 -1.8**
MALT Malatya 70.29 312 *e*P **P 00 00 18.2 +4.0**
MALT LR LR
comp=Z,805µm,22.0s,MS7.9
MYA Malataya 70.29 312 *e*P **P 00 00 15.3 +1.0**
EIL Elat 70.46 303 PKPPKP 00 28 25.3
comp=Z,35nm,1.2s,baz=35,slow=1.5,SNR=7.3
EIL LR LR 00 31 03.5
comp=Z,1330µm,19.0s,MS8.2,baz=103,slow=36
FKH Fakeheh 70.54 308⇑ *e*P **P 00 00 15.8 -0.1**
GZT Gaziantep 70.61 311 *i*P **P 00 00 16.0 -0.3**
AKCD Akcadag 70.65 312 *i*P **P 00 00 16.4 -0.2**
RCY Rachaya 70.78 307‖ *e*P **P 00 00 18.2 +0.8**
GAZ Gaziantep 70.82 311 *e*P **P 00 00 17.9 +0.3**
DARE Darende-Malaty 70.96 313 *e*P **P 00 00 19.9 +1.5**
SKR Severo-Kuril's 70.97 34 *i*P **P 00 00 18.0 -0.2**
SKR *e* 00 00 32.0
SKR *i*S S 00 09 30.0 -1.5
SKR *e* 00 09 56.0
SKR pmax pmax
comp=N,250nm,1.0s
SKR pmax pmax
comp=E,810nm,1.0s
SKR pmax pmax
comp=Z,2µm,1.0s,mb7.0
SKR pmax pmax
comp=N,56µm,20.0s
SKR pmax pmax
comp=E,80µm,20.0s
SKR pmax pmax
comp=Z,158µm,20.0s
SKR smax
comp=N,134µm,20.0s
SKR smax
comp=E,215µm,20.0s
ESPY Espiye-Giresun 70.98 315 *e*P **P 00 00 18.2 -0.3**
BHL Bhannes 71.03 307‖ *e*P **P 00 00 19.0 0.0**
KMRS Kahramanmaras 71.16 311 *e*P **P 00 00 19.7 0.0**
SOC Sochi 71.30 318*c i*P **P 00 00 19.7 -0.6**
SOC *e**PP pP 00 00 28.6 -2.8
SOC *e**SP sP 00 00 33.1 -2.5
SOC *e* 00 00 38.0
SOC *e* 00 02 58.6
SOC *e*PPP 00 04 40.7
SOC *i*S S 00 09 32.6 -2.9
SOC *e* 00 10 18.9
SOC *e*SS SS 00 14 08.7 -1.6
SOC pmax pmax
comp=Z,372nm,0.6s,mb6.5
SOC pmax pmax
comp=Z,12µm,6.4s
SOC MLR MLR
comp=Z,38µm,16.0s,MS6.8
HTY Hatay 71.31 309 *e*P **P 00 00 21.1 +0.6**
GRSN GIRESUNGRSN 71.31 315 *i*P **P 00 00 20.9 +0.5**
COBT Iskenderun 71.34 310 *i*P **P 00 00 21.7 +1.0**
ANDN Andirin 71.60 311 *i*P **P 00 00 21.7 -0.6**
SARI SarD1z-Kayseri 71.69 312 *e*P **P 00 00 23.5 +0.7**
RSDY Resadiye-TOKAT 71.80 314 *e*P **P 00 00 23.6 +0.2**
SVSK Karacayir 71.87 313 *e*P **P 00 00 24.8 +0.9**
CEYT Ceyhan 71.88 310 *e*P **P 00 00 24.1 +0.2**
YURE YUREGIR 71.91 310 *i*P **P 00 00 24.0 -0.2**
KOZT Kozan 71.96 311 *e*P **P 00 00 27.4 +2.9**
KRTS Karatas 72.03 310 *e*P **P 00 00 24.0 -0.9**
MSZ Milford Sound 72.06 136 P **P 00 00 26.5 +1.6**
TOKT Tokat 72.34 314 *e*P **P 00 00 26.5 -0.1**
BNN Bunyan 72.37 312 *e*P **P 00 00 26.5 -0.4**
LSZ Lusaka 72.47 255 S S 00 09 45.2 -4.8
comp=Z,12nm,1.0s,baz=293,slow=4.9,SNR=1.5
LSZ LR LR 00 27 18.1
comp=Z,1198µm,21.3s,MS8.1,baz=88,slow=32
LSZ Lusaka 72.47 255 PFAKE 00 00 40.0 +12
LSZ LR LR
comp=Z,1183µm,22.0s,MS8.1
KARA Karaisali 72.48 310 *e*P **P 00 00 27.4 -0.1**
PHNC Paralimni 72.63 308 P **P 00 00 28.4 -0.1**
comp=Z,32nm,1.7s
EREN Erenkoy 72.67 308 *e*P **P 00 00 29.1 +0.4**
MERS Mersin 72.77 310 *e*P **P 00 00 28.8 -0.5**
KVT Kavak 72.94 314 *e*P **P 00 00 30.6 +0.4**
MEST Erdemli 72.98 309 *i*P **P 00 00 30.5 -0.1**
YOZ Yozgat 73.01 313 *e*P **P 00 00 34.1 +3.4**
PETK Petropavlovsk- 73.02 32 P **P 00 00 29.4 -1.0**
comp=Z,110nm,0.6s,mb6.0,baz=205,slow=1.6,SNR=109
PETK PKPPKP 00 28 10.9
comp=Z,7.8nm,1.1s,baz=131,slow=4.4,SNR=4.2
PETK LR LR 00 37 30.0
comp=Z,305µm,18.9s,MS7.6,baz=249,slow=40
NIG Nigde 73.07 311 *e*P **P 00 00 32.5 +1.4**
LFK Lefkose 73.10 308 *e*P **P 00 00 31.6 +0.3**
CSS Prodhromos 73.17 308 P **P 00 00 32.1 +0.4**
comp=Z,40nm,1.4s
CSS Prodhromos 73.17 308 *e*P **P 00 00 31.4 -0.4**
CSS Prodhromos 73.17 308 *e*P **P 00 00 29.7 -2.0**
CSS *e*S S 00 09 58.0 +0.6
CSS LR LR
comp=Z,875µm,22.0s,MS8.0
IKL Isikli 73.24 309 *e*P **P 00 00 31.4 -0.7**
VRHR Novokhopersk 73.24 326*d i*P **P 00 00 30.9 -0.9**
VRHR *i**SP sP 00 00 42.4 -4.7
VRHR *e* 00 03 15.4
VRHR *i* PPP 00 04 57.1
VRHR *e*S S 00 09 52.9 -4.6
VRHR *e*PS 00 10 27.8
VRHR *e*SPP 00 10 46.0
VRHR pmax pmax
comp=Z,55µm,11.4s
VRHR pmax pmax
comp=N,18µm,11.1s
VRHR pmax pmax
comp=E,26µm,13.5s
VRHR pmax pmax
comp=Z,52µm,11.7s
VRHR pmax pmax
comp=N,33µm,11.5s
VRHR smax
comp=N,64µm,8.8s
VRHR smax
comp=E,36µm,6.7s
VRHR smax

comp=Z,710μm,6.7s
ANN Anapa 73.27 318*c* *i*P **P** **00 00 30.3 -1.8**
ANN *e* 00 03 14.5
ANN *i*S S 00 09 55.9 -2.2
ANN pmax pmax
comp=Z,435nm,3.1s
ANN pmax pmax
comp=Z,44μm,6.3s
MAMC Mammari 73.32 308 P **P** **00 00 32.7 +0.1**
SZAC Souni-Zanaja 73.47 307 P **P** **00 00 35.3 +1.8**
PET Petropavlovsk 73.48 32α *i*P **P** **00 00 32.2 -0.9**
PET *e* 00 03 18.7
PET *e*PPP 00 04 56.3
PET *e*S S 00 09 56.9 -3.3
PET *e*SS SS 00 14 42.3 -1.1
PET pmax pmax
comp=Z,115μm,11.9s
PET pmax pmax
comp=Z,1μm,0.8s,mb7.0
PET pmax pmax
comp=Z,209μm,27.6s
PET pmax pmax
comp=Z,66μm,14.4s
PET smax
comp=N,51μm,8.3s
PET smax
comp=E,40μm,9.4s
PET MLR MLR
comp=Z,367μm,20.0s,MS7.7
PET MLR MLR
comp=Z,490μm,20.0s
PET Petropavlovsk 73.48 32 *e*P **P** **00 00 33.5 +0.3**
PET LR LR
comp=Z,488μm,21.0s,MS7.8
TUZ Tuapeka 73.54 137 P **P** **00 00 32.8 -0.9**
LEF Lefka 73.56 308 *e*P **P** **00 00 33.9 -0.1**
LBZ Lake Benmore 73.56 136 P **P** **00 00 32.5 -1.3**
WVZ Waitaha Valley 73.67 134 P **P** **00 00 32.7 -1.8**
CORM Corum 73.68 313 *e*P **P** **00 00 35.0 +0.4**
DIKM Dikmen 73.69 315 *e*P **P** **00 00 34.7 +0.1**
CDAG Cicekdag 73.70 313 *i*P **P** **00 00 35.0 +0.3**
CTKT Corum 73.70 314 *i*P **P** **00 00 35.4 +0.7**
ALFC Alevga 73.80 308 P **P** **00 00 35.1 -0.3**
comp=Z,19nm,0.8s
PPCY Paphos 73.93 307 P **P** **00 00 35.7 -0.5**
AKMC Akamas 73.98 307 P **P** **00 00 37.4 +0.9**
BYBT Boyabat 73.98 314 *e*P **P** **00 00 36.0 -0.3**
RPZ Rata Peaks 74.03 135 LR LR 00 34 05.1
comp=Z,380μm,21.3s,MS7.7,baz=202,slow=37
KAMT Kaman 74.11 312 *e*P **P** **00 00 36.1 -1.0**
HDMB Hadim 74.37 309 *e*P **P** **00 00 38.2 -0.5**
TOS Tosya 74.38 314 *e*P **P** **00 00 38.7 0.0**
CANT Cankiri 74.55 313 *e*P **P** **00 00 39.3 -0.4**
QRZ Quartz Range 74.56 132 P **P** **00 00 39.3 -0.4**
ILGA Ilgaz 74.61 314 *i*P **P** **00 00 38.1 -1.9**
ELDT Eldivan 74.65 313 *i*P **P** **00 00 43.0 +2.8**
BZK Bozkurt 74.68 315 *e*P **P** **00 00 35.4 -5.0**
VSR Storozhevoye 74.69 325*d* *i*P **P** **00 00 39.3 -0.9**
VSR *i* *SP sP 00 00 52.4 -3.2
VSR *e* 00 03 28.3
VSR *i* PPP 00 05 11.8
VSR *e*S S 00 10 08.6 -5.2
VSR *e*PS 00 10 43.3
VSR *e*SPP 00 10 51.8
VSR *e*SSS 00 18 11.1
VSR pmax pmax
comp=Z,22μm,11.5s
VSR pmax pmax
comp=N,5μm,10.5s
VSR pmax pmax
comp=E,20μm,13.8s
VSR pmax pmax
comp=Z,8μm,6.0s
VSR pmax pmax
comp=N,12μm,9.0s
VSR pmax pmax
comp=E,16μm,8.8s
VSR smax
comp=N,6μm,11.0s
VSR smax
comp=Z,13μm,13.3s
VSR smax
comp=E,6μm,15.0s
VSR MLR MLR
comp=N,132μm,22.0s,MS7.3
VSR MLR MLR
comp=E,131μm,24.0s,MS7.3
VSR MLR MLR
comp=Z,104μm,24.0s,MS7.0
KONT Konya–Tatoy 74.73 310 *e*P **P** **00 00 40.9 +0.1**
LADK Ladik-KONYA 74.79 311 *e*P **P** **00 00 40.3 -0.8**
VOR Voronezh 74.89 326⇑ *i*P **P** **00 00 39.0 -2.4**
VOR *e*S S 00 10 13.0 -3.0
VOR pmax pmax
comp=Z,7μm,2.0s,mb7.2
ANTO Ankara 74.94 312⇑ *i*P **P** **00 00 41.2 -0.7**
ANTO Ankara 74.94 312⇑ *i*P **P** **00 00 41.6 -0.3**
ANTO *e*pP pP 00 00 53.2 +0.1
ANTO *e*PcP PcP 00 00 56.0 +0.3
LOD Lodumlu 74.96 312 *e*P **P** **00 00 40.8 -1.2**
BALT Daday 74.99 314 *i*P **P** **00 00 41.5 -0.7**
THZ Tophouse 75.00 132 P **P** **00 00 40.8 -1.5**
KDHN Kadinhani 75.07 311 *i*P **P** **00 00 39.6 -3.1**
MQZ McQueen's Vall 75.17 135 P **P** **00 00 44.0 +0.8**
KIZT Kizilcal 75.34 311 *e*P **P** **00 00 43.7 -0.6**
LBTB Lobatse 75.42 245 PKPPKP 00 28 06.5
comp=Z,4.5nm,0.9s,baz=341,slow=2.7,SNR=3.7
LBTB LR LR 00 30 20.6
comp=Z,1607μm,19.2s,MS8.3,baz=98,slow=33
SIM Simferopol' **75.54 318***c* *i*P **P** **00 00 44.9 -0.4**
SIM *e* 00 03 35.0
SIM *i*S S 00 10 16.6 -6.9
SIM *e*PS 00 10 51.0
SIM pmax pmax
comp=Z,67μm,13.4s
SIM MLR MLR
comp=Z,472μm,22.6s,MS7.7
KHZ Kahutara 75.58 133 P **P** **00 00 44.3 -1.3**
SGKT Sivrigoynuk 75.67 313 *i*P **P** **00 00 46.1 -0.1**
ANTB Antalya 75.77 309 *e*P **P** **00 00 46.2 -0.5**
BCK Bucak 75.96 310 *e*P **P** **00 00 46.5 -1.3**
HIZ Hauiti 75.97 129 P **P** **00 00 48.1 +0.2**
BOSA Boshof 76.00 241 P **P** **00 00 48.7 +0.4**
comp=Z,48nm,0.9s,mb5.5,baz=91,slow=6.1,SNR=40
BOSA S S 00 10 22.4 -6.9
comp=Z,10nm,1.0s,baz=106,slow=12,SNR=1.8
BOSA PKKPbc PKKPbc 00 20 06.4 +1.7
comp=Z,8.7nm,0.8s,baz=275,slow=1.5,SNR=5.7
BOSA PKP2bc 00 28 13.6
comp=Z,7.6nm,1.1s,baz=26,slow=3.4,SNR=3.9
BOSA LR LR 00 30 24.6
comp=Z,1415μm,19.1s,MS8.3,baz=84,slow=33
BOSA Boshof 76.00 241 P **P** **00 00 48.7 +0.4**
BOSA S S 00 10 22.4 -6.8
BOSA pmax pmax
comp=Z,48nm,0.9s,mb5.4
BOSA smax
comp=N,10.0nm,1.0s
BOSA Boshof 76.00 241 P **P** **00 00 48.7 +0.4**
BOSA S S 00 10 22.4 -6.9
BOSA PKKPbc PKKPbc 00 20 06.4 +1.8
BOSA ⇑*e* 00 28 13.6
BOSA LR LR 00 30 24.6
MKAZ Moumakai 76.03 127 P **P** **00 00 49.7 +1.4**
ISP Isparta 76.11 310 *e*P **P** **00 00 47.4 -1.3**
ISP Isparta 76.11 310⇑ *i*P **P** **00 00 47.3 -1.4**
ISP Isparta 76.11 310 *e*P **P** **00 00 50.9 +2.2**
ISP LR LR
comp=Z,507μm,20.0s,MS7.8
WAZ Wanganui 76.24 130 P **P** **00 00 49.4 0.0**
SNZO South Karori 76.26 132 PFAKE 00 01 00.0 +11
SNZO LR LR
comp=Z,839μm,19.0s,MS8.1
SHUT Suhut-Afyon 76.26 311 *e*P **P** **00 00 48.9 -0.7**
MDU Mudurnu 76.26 313 *e*P **P** **00 00 49.6 +0.1**
ESKT Eskisehir 76.28 312 *i*P **P** **00 00 51.8 +2.2**
ELL Elmali 76.31 309 *e*P **P** **00 00 49.5 -0.3**
KDZE Karadeniz Ereo 76.33 314 *e*P **P** **00 00 49.4 -0.5**
TIXI Tiksi 76.35 9*c* *i*P **P** **00 00 47.6 -1.7**
TIXI *e*S S 00 10 25.9 -5.5
TIXI pmax pmax
comp=E,543nm,1.9s
TIXI pmax pmax
comp=N,1μm,2.2s
TIXI pmax pmax
comp=Z,5μm,2.0s,mb7.1
TIXI MLR MLR
comp=E,917μm,20.0s,MS8.5
TIXI MLR MLR
comp=N,2038μm,16.0s,MS8.5
TIXI MLR MLR
comp=Z,5284μm,19.0s,MS8.9
TIXI Tiksi 76.35 9 *e*P **P** **00 00 51.4 +2.1**
TIXI LR LR
comp=Z,5470μm,20.0s,MS8.9
HENT Hendek 76.59 313 *i*P **P** **00 00 49.9 -1.4**
WTVZ West Tongariro 76.62 129 *e*P **P** **00 00 51.1 -0.5**
WNVZ Wahianoa 76.65 130 *e*P **P** **00 00 51.1 -0.7**
GOLH Golhisar 76.70 309 *i*P **P** **00 00 49.9 -2.1**
ALT Altintas 76.72 311 *e*P **P** **00 00 51.5 -0.6**
ALT Altintas 76.72 311 *i*P **P** **00 01 00.2 +8.1**
GPA Golpazari 76.88 312 *e*P **P** **00 00 53.5 +0.4**
KHAL Karahalli 77.02 310 *i*P **P** **00 00 53.7 -0.1**
GDZ Gediz 77.20 311 *i*P **P** **00 00 55.2 +0.4**
DENT Denizli 77.23 310 *e*P **P** **00 00 58.5 +3.4**
ADVT Abdulvahap 77.34 312 *e*P **P** **00 00 55.5 -0.1**
TURN Turunc 77.36 309 *i*P **P** **00 00 57.1 +1.4**
MOS Moscow 77.40 329*c* *i*P **P** **00 00 54.5 -1.0**
MOS *i* 00 03 46.7
MOS *e*PPP 00 05 33.2
MOS *i*S S 00 10 40.5 -2.9
MOS *i* 00 11 04.9
MOS pmax pmax
comp=Z,2μm,1.5s,mb6.8
HRT Hereke 77.49 313 *e*P **P** **00 00 55.8 -0.7**
SYO Syowa Base 77.52 199⇑ *i*P **P** **00 00 55.2 -0.8**
ARG Arkhangelos 77.59 308⇑ *i*P **P** **00 00 56.2 -0.9**
SILT Sile 77.59 313 *e*P **P** **00 00 56.6 -0.4**
YLV Yalova 77.65 312 *e*P **P** **00 00 56.4 -0.9**
YER Yerkesik 77.67 309 *e*P **P** **00 00 56.9 -0.6**
KULA Kula-Manisa 77.69 310 *e*P **P** **00 00 57.2 -0.4**
URZ Urewera 77.70 128 PKPPKP 00 27 55.6
comp=Z,3.3nm,0.4s,baz=301,slow=5.9,SNR=6.4
URZ LR LR 00 38 26.0
comp=Z,378μm,18.7s,MS7.7,baz=292,slow=38
URZ Urewera 77.70 128 *e*P **P** **00 00 55.7 -1.9**
OBN Obninsk 77.70 328α *i*P **P** **00 00 56.5 -0.7**
OBN *e* 00 01 10.7
OBN *i* 00 03 51.2
OBN *i* PPP 00 05 47.0
OBN *i*S S 00 10 43.7 -3.0
OBN *e* 00 11 06.5
OBN *e*SS SS 00 15 51.5 +4.3
OBN pmax pmax
comp=Z,705nm,2.1s,mb6.2
OBN pmax pmax
comp=Z,74μm,7.0s
OBN MLR MLR
comp=Z,922μm,23.0s,MS8.0
OBN Obninsk 77.70 328 *e*P **P** **00 00 58.5 +1.3**
OBN LR LR
comp=Z,803μm,21.0s,MS8.0
ULDT Uludag 77.72 312 *i*P **P** **00 00 58.7 +1.0**
GEMT Gemlik 77.75 312 *e*P **P** **00 00 57.9 0.0**
DEMI Demirci 77.77 311 *i*P **P** **00 00 55.2 -2.8**
DST Dursunbey 77.97 311 *e*P **P** **00 00 58.0 -1.1**
ISK Istanbul-Kandi 78.00 313 *e*P **P** **00 00 58.4 -0.8**
MWZ Matawai 78.03 128 P **P** **00 00 58.2 -1.3**
KLYT Kilyos 78.06 313 *e*P **P** **00 00 59.4 -0.2**
AYDN Tasoluk 78.10 309 *i*P **P** **00 00 59.8 -0.1**
MLSB Milas 78.10 309 *e*P **P** **00 00 59.5 -0.4**
KARP Karpathos 78.22 307⇑ *i*P **P** **00 01 00.7 +0.1**
FUNA Funafuti 78.22 98 PFAKE 00 01 10.0 +9.0
FUNA LR LR
comp=Z,105μm,22.0s,MS7.1
BGKT Bogazkoy 78.24 313 *e*P **P** **00 01 00.3 -0.3**
BDRM Kayabasi 78.31 309 *i*P **P** **00 01 00.6 -0.5**
BODT Bodrum 78.41 308 *e*P **P** **00 01 01.4 -0.2**
AKHS Akhisar 78.42 310 *i*P **P** **00 01 01.4 -0.3**
AKS Akhisar 78.42 310 *e*P **P** **00 01 01.7 +0.1**
ELBA Catalca 78.48 313 *i*P **P** **00 00 59.8 -2.1**
BALB Balikesir 78.54 311 *e*P **P** **00 01 01.8 -0.4**
PUZ Puketiti 78.58 128 P **P** **00 01 01.1 -1.4**
GCAM G?zelcaml? 78.61 309 *i*P **P** **00 01 04.4 +1.7**
SLVT Silivri 78.66 313 *e*P **P** **00 01 03.1 +0.2**
BNT Bandirma 78.67 312 *e*P **P** **00 01 03.5 +0.5**
KDAG Bornova 78.73 310 *i*P **P** **00 01 03.6 +0.3**
IZM Izmir 78.73 310 *e*P **P** **00 01 02.8 -0.6**
BALY Balya 78.76 311 *i*P **P** **00 00 59.8 -3.6**
ZKR Zakros 78.89 306 *e*P **P** **00 01 04.3 +0.1**
BLCB Balcova 78.90 310 *e*P **P** **00 01 04.3 0.0**
SMG Samos 78.92 309⇑ *i*P **P** **00 01 04.1 -0.3**
MRMT Marmara Adasi 78.97 312 *e*P **P** **00 01 04.0 -0.6**
TKR Tekirdag 79.10 312 *e*P **P** **00 01 05.7 +0.3**
TLCR 79.20 317⇑ *i*P **P** **00 01 05.4 -0.4**
MFT Murefte 79.24 312 *e*P **P** **00 01 04.7 -1.4**
PSN Preselentsi 79.27 315 *i*P **P** **00 01 07.2 +1.0**
PSN Preselentsi 79.27 315 *i*P **P** **00 01 07.2 +1.0**
SART Tekirdag 79.30 312 *i*P **P** **00 01 05.5 -0.9**
RKY Sarkoy-Tekirda 79.30 312 *e*P **P** **00 01 00.7 -5.7**
TIRR Tirgusor 79.30 316⇑ *i*P **P** **00 01 05.7 -0.8**
TIRR Tirgusor 79.30 316⇑ *i*P **P** **00 01 05.7 -0.7**
AYVA Ayvalik 79.36 311 *i*P **P** **00 01 06.3 -0.5**
NPS Neapolis 79.40 306⇑ *i*P **P** **00 01 07.0 -0.1**
LAST Lasithi 79.49 306 *e*P **P** **00 01 08.1 +0.5**
CVD Cernavoda 79.53 316⇑ *i*P **P** **00 01 08.9 +1.3**
CVD Cernavoda 79.53 316⇑ *i*P **P** **00 01 08.9 +1.4**
LPK Lapseki 79.54 312 *e*P **P** **00 01 07.7 0.0**
CHOS Chios island 79.66 310 *e*P **P** **00 01 08.9 +0.5**
PRK Paraskevi 79.67 310 *e*P **P** **00 01 08.4 -0.1**
PRK Paraskevi 79.67 310⇑ *i*P **P** **00 01 08.7 +0.2**
KIS Kishinev 79.67 319 *i*P **P** **00 01 07.0 -1.3**
KIS *i*S S 00 11 03.0 -5.1
KIS *e* 00 11 24.0
KIS pmax pmax
comp=Z,32μm,6.0s
KIS pmax pmax
comp=Z,103μm,12.0s
KIS pmax pmax
comp=Z,148μm,22.0s
KIS smax
comp=N,40μm,7.5s
KIS smax
comp=N,156μm,14.0s
KIS Kishinev 79.67 319⇓ *i*P **P** **00 01 09.1 +0.8**
KIS Kishinev 79.67 319⇑ *i*P **P** **00 01 07.0 -1.3**
comp=N,32μm,6.0s
KIS Kishinev 79.67 319 *e*PP PP 00 03 57.0 -13
comp=N,80μm,12.0s
KIS Kishinev 79.67 319 ⇓*i*P **P** **00 01 09.1 +0.8**
HARR Harsova 79.69 316⇓ *i*P **P** **00 01 07.9 -0.5**
HARR Harsova 79.69 316 ⇓*i*P **P** **00 01 07.9 -0.5**
PRD Provadia 79.71 315 *i*P **P** **00 01 08.6 0.0**
PRD Provadia 79.71 315 *i*P **P** **00 01 08.6 0.0**
THR1 Thera Island 79.73 308 *e*P **P** **00 01 12.4 +3.5**
SANT Santorini 79.73 308 *e*P **P** **00 01 08.2 -0.7**
SANT Santorini 79.73 308 *e*P **P** **00 01 10.5 +1.6**
SANT LR LR
comp=Z,571μm,22.0s,MS7.9
EZN Ezine 79.75 311 *e*P **P** **00 01 08.9 0.0**
THR6 Thira Island, 79.78 307 *e*P **P** **00 01 13.8 +4.7**
THR3 Thira Island, 79.78 308 *e*P **P** **00 01 09.3 +0.1**
THR4 Thira Island, 79.80 308 *e*P **P** **00 01 10.5 +1.3**
APE Apeiranthos 79.81 308 *e*P **P** **00 01 07.8 -1.5**
APE Apeiranthos 79.81 308⇑ *i*P **P** **00 01 08.2 -1.0**
APE Apeiranthos 79.81 308*c* *i*P **P** **00 01 08.4 -0.9**
APE Apeiranthos 79.81 308⇑ *i*P **P** **00 01 07.9 -1.4**
THR5 Thira Island, 79.83 308 *e*P **P** **00 01 12.4 +3.0**
BOZC Bozcaada 79.96 311 *i*P **P** **00 01 07.5 -2.6**
IDI Anoyia 79.98 306 P **P** **00 01 10.1 -0.2**
comp=Z,124nm,0.7s,mb6.0,baz=97,slow=6.8,SNR=52
IDI S S 00 11 02.9 -9.1
comp=Z,10.0nm,0.9s,baz=158,slow=14,SNR=1.5
IDI PKKPbc PKKPbc 00 19 58.6 +2.3
comp=Z,13nm,0.8s,baz=18,slow=10,SNR=5.2
IDI LR LR 00 39 48.5
comp=Z,385μm,21.9s,MS7.7,baz=82,slow=38
SIVA Sivas 80.00 306 *e*P **P** **00 01 10.8 +0.4**
ENEZ Enez 80.07 312 *e*P **P** **00 01 11.0 +0.4**
SUR Sutherland 80.08 238 PKKPbc PKKPbc 00 19 58.4 +2.6
comp=Z,15nm,0.8s,baz=205,slow=1.4,SNR=6.9
SUR LR LR 00 30 55.5
comp=Z,424μm,21.0s,MS7.8,baz=84,slow=31
SUR Sutherland 80.08 238 PFAKE 00 01 20.0 +9.1
SUR LR LR
comp=Z,2051μm,20.0s,MS8.5
JMB Yambol 80.13 314 *i*P **P** **00 01 11.8 +0.9**
JMB Yambol 80.13 314 *i*P **P** **00 01 11.8 +0.9**
ALN Alexandroupoli 80.18 312 *e*P **P** **00 01 11.4 +0.2**
AKASG Malin Array Be 80.41 322 P **P** **00 01 10.8 -1.4**
comp=Z,30nm,0.6s,mb5.4,baz=84,slow=3.9,SNR=47
AKASG S S 00 11 07.0 -8.8
comp=Z,4.7nm,0.8s,baz=97,slow=9.2,SNR=2.8
AKASG ScS ScS 00 11 41.7 +6.2
comp=Z,24nm,1.0s,baz=104,slow=9.9,SNR=4.7
AKASG PKPPKP 00 28 00.7
comp=Z,0.6nm,0.4s,baz=359,slow=0.9,SNR=5.0
AKASG LR LR 00 42 18.4
comp=Z,429μm,20.5s,MS7.8,baz=105,slow=40
AKASG Malin Array Be 80.41 322 P **P** **00 01 10.8 -1.4**
AKASG S S 00 11 07.0 -8.8
AKASG pmax pmax
comp=Z,30nm,0.6s
AKASG smax
comp=N,5.0nm,0.8s
AKASG Malin Array Be 80.41 322 P **P** **00 01 10.8 -1.4**
AKASG S S 00 11 07.0 -8.8
AKASG ScS ScS 00 11 41.7 +6.2
AKASG P'P' 00 28 00.7
AKASG LR LR 00 42 18.4
KIEV Kiev 80.42 322 PFAKE 00 01 20.0 +7.8
KIEV LR LR
comp=Z,645μm,21.0s,MS8.0
IAS Iasi 80.55 319⇓ *i*P **P** **00 01 12.7 -0.3**
IAS Iasi 80.55 319 ⇓*i*P **P** **00 01 12.7 -0.4**
VAM Vamos 80.56 306⇑ *i*P **P** **00 01 13.5 +0.1**
RDO Rodhopi 80.61 312⇑ *i*P **P** **00 01 13.3 -0.2**
LIA Limnos Island 80.62 311 *e*P **P** **00 01 12.9 -0.7**
LIA Limnos Island 80.62 311⇑ *i*P **P** **00 01 13.3 -0.3**
LOS Limnos 80.71 311 *e*P **P** **00 01 14.8 +0.8**
ISR Istrita 80.75 316⇑ *i*P **P** **00 01 15.6 +1.5**
ISR Istrita 80.75 316⇑ *i*P **P** **00 01 15.6 +1.5**
KARN Karanos 80.79 306 *e*P **P** **00 01 15.2 +0.6**
VRI Vrincioaia 80.79 317⇑ *i*P **P** **00 01 15.0 +0.6**
VRI Vrincioaia 80.79 317⇑ *i*P **P** **00 01 15.0 +0.6**
KDZ Kurdzhali 80.80 313 *i*P **P** **00 01 15.1 +0.6**
KDZ Kurdzhali 80.80 313 *i*P **P** **00 01 15.1 +0.6**
PLOR Plostina 80.84 317⇑ *i*P **P** **00 01 14.6 0.0**
BUC1 Bucharest 80.93 316⇑ *i*P **P** **00 01 15.3 +0.1**
BUC1 Bucharest 80.93 316⇑ *i*P **P** **00 01 15.3 +0.2**
RAO Raoul Island 81.19 119 LR LR 00 40 04.9
comp=Z,287μm,20.4s,MS7.6,baz=97,slow=38
RAO Raoul Island 81.19 119 PFAKE 00 01 30.0 +13
RAO LR LR
comp=Z,301μm,21.0s,MS7.6
MLR Muntele Rosu 81.24 317 P **P** **00 01 16.8 0.0**
comp=Z,144nm,0.8s,mb6.0,baz=192,slow=2.1,SNR=42
MLR S S 00 11 11.8 -13
comp=Z,15nm,1.0s,baz=118,slow=9.9,SNR=2.0
MLR LR LR 00 41 19.1
comp=Z,294μm,21.9s,MS7.6,baz=257,slow=39
MLR Muntele Rosu 81.24 317⇓ *i*P **P** **00 01 16.8 0.0**
ZIMR 81.25 315⇑ *i*P **P** **00 01 17.2 +0.3**
ZIMR 81.25 315⇑ *i*P **P** **00 01 17.2 +0.4**
ATH Athens Observa 81.39 309⇑ *i*P **P** **00 01 16.6 -1.1**
AOS Alonnisos 81.48 310 *e*P **P** **00 01 20.7 +2.5**
OUR Ouranopolis 81.61 311 *e*P **P** **00 01 19.4 -0.3**
DID Didima 81.69 308 *e*P **P** **00 01 18.5 -0.8**
PAIG Paliouri 81.77 311 *e*P **P** **00 01 19.2 -0.5**
VLI Veliai 81.79 307 *e*P **P** **00 01 18.0 -1.9**
VOIR 81.85 316⇓ *i*P **P** **00 01 19.1 -0.9**
VOIR 81.85 316 ⇓*i*P **P** **00 01 19.1 -0.8**
NVR Nevrokopi 81.89 312⇑ *i*P **P** **00 01 19.7 -0.6**
LTK Loutraki 81.98 309 *e*P **P** **00 01 19.4 -1.5**
NEO Neokhori 82.00 310⇑ *i*P **P** **00 01 20.2 -0.7**
PLG Polygyros 82.02 311 *e*P **P** **00 01 19.9 -1.1**
PLG Polygyros 82.02 311⇑ *i*P **P** **00 01 20.1 -0.9**
MMB Musomiste 82.03 312 *i*P **P** **00 01 20.4 -0.6**
MMB Musomiste 82.03 312 *i*P **P** **00 01 20.4 -0.6**
XOR Xorichti 82.04 310 *e*P **P** **00 01 21.8 +0.7**
LKR Lokris 82.06 309 *e*P **P** **00 01 19.6 -1.6**
LKR Lokris 82.06 309⇑ *i*P **P** **00 01 19.5 -1.8**
SMY Shemya 82.08 36 PFAKE 00 01 30.0 +9.0
SMY LR LR
comp=Z,187μm,19.0s,MS7.5
SOH Sokhos 82.17 312 *e*P **P** **00 01 21.6 -0.2**
BURAR Bucovina Array 82.20 319⇑ *i*P **P** **00 01 22.4 +0.6**
BURAR Bucovina Array 82.20 319⇑ *i*P **P** **00 01 22.4 +0.6**
MNK Minsk 82.27 326*c* *i*P **P** **00 01 18.0 -3.9**
MNK *e* 00 01 25.0
MNK *e* 00 04 28.0
MNK *e*PPP 00 06 20.0
MNK *e*S S 00 11 28.0 -6.8
MNK *e*PS 00 12 30.0
MNK *e*SS SS 00 16 50.0 -5.5
MNK pmax pmax
comp=Z,2μm,1.0s,mb7.0
MNK pmax pmax
comp=Z,202μm,8.0s
MNK pmax pmax
comp=E,1μm,1.5s
MNK pmax pmax
comp=N,630nm,1.5s
MNK pmax pmax
comp=Z,138μm,18.0s
MNK smax
comp=N,214μm,16.0s
MNK smax
comp=E,142μm,12.0s
HORT Hortiatis 82.32 311 *e*P **P** **00 01 21.4 -1.1**
VLX Vlachokerasia 82.34 308 *e*P **P** **00 01 22.8 +0.1**
THE Thessaloniki 82.43 311 *e*P **P** **00 01 21.8 -1.3**
CRAR CRAIOVA 82.50 315⇑ *i*P **P** **00 01 23.7 +0.3**
PUL Pulkovo 82.51 331⇑ *i*P **P** **00 01 23.5 +0.4**
SBA Scott Base 82.51 169 PFAKE 00 01 30.0 +7.1
SBA LR LR
comp=Z,245μm,19.0s,MS7.6
KNT Kendrikon 82.57 312 *e*P **P** **00 01 25.2 +1.4**
VTS Vitosha 82.59 313 *i*P **P** **00 01 25.0 +1.1**
VTS Vitosha 82.59 313 *i*P **P** **00 01 25.0 +1.1**
AGG Agios Georgios 82.64 310 *e*P **P** **00 01 23.9 -0.9**
ITM Ithomi 82.66 308⇑ *i*P **P** **00 01 23.6 -0.8**
TSUM Tsumeb 82.67 251 P **P** **00 01 25.7 +0.8**
comp=Z,30nm,0.9s,baz=70,slow=5.3,SNR=24
TSUM S S 00 11 30.5 -10
comp=Z,12nm,1.2s,baz=271,slow=6.0,SNR=1.9
TSUM LR LR 00 33 52.1
comp=Z,1426μm,21.4s,MS8.3,baz=67,slow=32
TSUM Tsumeb 82.67 251 *e*P **P** **00 01 25.6 +0.7**
TSUM *e*PcP PcP 00 01 31.7 +2.0
TSUM *e* 00 01 39.7
TSUM S S 00 11 30.5 -10
TSUM LR LR 00 33 52.1
LIT Litokhoron 82.70 311 *e*P **P** **00 01 24.2 -0.3**
VAY Valandovo 82.84 312⇑ *i*P **P** **00 01 23.2 -2.0**
comp=Z,9μm,4.4s
GRG Griva 82.91 312 *e*P **P** **00 01 25.2 -0.4**
THL Klokotos Trika 82.97 310 *e*P **P** **00 01 24.4 -1.5**
THL Klokotos Trika 82.97 310⇑ *i*P **P** **00 01 24.5 -1.5**
EVR Evrytania 83.03 310⇑ *i*P **P** **00 01 25.8 -0.5**
JOF Joensuu 83.08 334 *ep* **P** **00 01 26.3 +0.3**
comp=Z,616nm,0.9s,mb6.6
JOF Joensuu 83.08 334 *e*P **P** **00 01 26.3 +0.3**
JOF pmax pmax
comp=Z,616nm,0.9s,mb6.6
RLS Riolos of Patr 83.16 309⇑ *i*P **P** **00 01 27.1 +0.1**
STIP Stip 83.19 312⇑ *i*P **P** **00 01 25.6 -1.5**
KZN Kozani 83.27 311⇑ *i*P **P** **00 01 26.2 -1.3**
GZR Gura Zlata 83.41 316⇑ *i*P **P** **00 01 28.5 +0.4**
GZR Gura Zlata 83.41 316 ⇑*i*P **P** **00 01 28.5 +0.4**
LVV L'vov 83.43 321 *e*P **P** **00 01 28.0 -0.1**
LVV *e*S S 00 11 42.0 -4.9
BILL Bilibino 83.48 20*c* *i*P **P** **00 01 27.1 -0.9**
BILL pmax pmax
comp=Z,1μm,2.3s,mb6.5
BILL MLR MLR
comp=Z,1619μm,20.0s,MS8.4
BILL Bilibino 83.48 20 *e*P **P** **00 01 26.6 -1.4**
BILL *e*pP pP 00 01 40.3 +1.1
MEV Metsovon 83.60 310 *e*P **P** **00 01 30.3 +1.1**
LVZ Lovozero 83.61 340*c* *i*P **P** **00 01 28.1 -0.5**
LVZ pmax pmax
comp=Z,784nm,1.2s,mb6.7
LVZ Lovozero 83.61 340 *e*P **P** **00 01 26.7 -2.0**
LVZ LR LR
comp=Z,1953μm,21.0s,MS8.5
FNA Florina 83.64 311 *e*P **P** **00 01 28.8 -0.6**
KFL Anninata 83.69 309 *e*P **P** **00 01 31.6 +1.9**
DRGR 83.71 317⇑ *i*P **P** **00 01 29.6 0.0**

DRGR			83.71 317	⇑P		P	00 01 29.6	0.0	
BIA	Bitola		83.72 312	⇑*i*P		P	00 01 27.7	-2.1	
SKO	Skopje		83.78 313	⇑*i*P		P	00 01 29.2	-0.9	
	comp=Z,6μm,4.4s								
KRUS	Krusevo		83.83 312	*e*P		P	00 01 29.0	-1.4	
VLS	Valsamata		83.86 309	*e*P		P	00 01 30.4	-0.1	
VLS	Valsamata		83.86 309	⇑*i*P		P	00 01 30.0	-0.6	
JAN	Janina		83.87 310	⇑*i*P		P	00 01 30.9	+0.2	
LKD	Levkas		83.89 309	*e*P		P	00 01 30.6	-0.1	
VSU	Vasula		83.90 329	*α i*P		P	00 01 29.7	-0.6	
APA	Apatity		83.92 339	*α i*P		P	00 01 27.0	-3.2	
APA				*i*			00 04 46.0		
APA				*i* S		S	00 11 43.0	-8.1	
APA				*i* SS		SS	00 17 15.0	-4.5	
APA				pmax		pmax			
	comp=Z,450nm,1.3s,mb6.4								
MIDW	Midway		84.10 61	PFAKE			00 01 40.0	+8.0	
MIDW				LR		LR			
	comp=Z,156μm,22.0s,MS7.3								
OHR	Ohrid		84.13 312	⇑*i*P		P	00 01 29.2	-2.6	
KWP	Kalwaria		84.24 320	*e*P		P	00 01 33.0	+0.7	
	comp=Z,81μm,7.2s								
KWP				*e*PP		PP	00 04 47.7	+0.6	
KWP				*e*SKS			00 11 55.0		
KWP				*e*sS		sS	00 12 17.8	+4.0	
KWP				*e*sS		sS	00 12 22.7	+8.9	
KWP				*e*SS		SS	00 17 27.6	+2.7	
KWP				LMZ			00 47 22.6		
	comp=Z,581μm,24.2s								
KWP	Kalwaria		84.24 320	⇑*e*P		P	00 01 33.0	+0.8	
KWP				*e*			00 04 47.7		
KWP				*e*			00 11 55.0		
KWP				*e*SS		SS	00 17 27.6	+2.6	
KWP	Kalwaria		84.24 320	⇑*i*P		P	00 01 32.6	+0.4	
KWP	Kalwaria		84.24 320	*e*P		P	00 01 36.0	+3.8	
KWP				*e*PP		PP	00 04 47.7	+0.6	
KWP				*e*SKS			00 11 55.0		
KWP				*e*sS		sS	00 12 17.8	+4.0	
KWP				*e*sS		sS	00 12 22.7	+8.9	
KWP				*e*SS		SS	00 17 27.6	+2.6	
KWP				LR		LR			
	comp=Z,573μm,21.0s,MS7.9								
IGT	Igoumenitsa		84.25 310	*e*P		P	00 01 32.5	0.0	
BZS	Buzias		84.25 316	⇑*i*P		P	00 01 32.3	-0.1	
BZS	Buzias		84.25 316	⇑P		P	00 01 32.3	-0.1	
UZH	Uzhgorod		84.32 319	*e*P		P	00 01 32.8	+0.1	
UZH				*e*		pP	00 01 42.8	-1.2	
UZH				*i*			00 01 51.8		
UZH				*i*			00 04 56.0		
UZH				*i* S		S	00 12 00.0	+4.1	
UZH				*e*PS			00 12 53.0		
UZH				*e*SS		SS	00 17 24.0	-2.3	
UZH	Uzhgorod		84.32 319	*e*P		P	00 01 33.0	+0.3	
KOLS	Kolonicke sedl		84.39 320	*e*P		P	00 01 33.7	+0.7	
KOLS				*e*			00 02 02.2		
KOLS				*e*PP		PP	00 04 46.4	-1.9	
KOLS				*e*S		S	00 11 58.0	+1.4	
KOLS				*e*SS		SS	00 17 23.7	-3.5	
TIM	Timisoara		84.54 316	⇓*i*P		P	00 01 34.0	+0.1	
TIM	Timisoara		84.54 316	⇓P		P	00 01 34.0	+0.1	
SRN	Sarande		84.55 310	*e*PN		P	00 01 35.7	+1.6	
KEK	Kerkira		84.68 310	⇑*i*P		P	00 01 34.1	-0.6	
SUW	Suwalki		84.80 325	*e*P		P	00 01 34.4	-0.6	
	comp=Z,67μm,7.0s								
SUW				*e*SKS			00 11 58.3		
SUW				*e*S		S	00 12 04.2	+3.7	
SUW				*e*sS		sS	00 12 26.7	+7.4	
SUW				*e*SS		SS	00 17 33.1	0.0	
SUW				LMZ			00 45 44.8		
	comp=Z,742μm,21.6s								
SUW	Suwalki		84.80 325	⇑*e*P		P	00 01 34.4	-0.6	
SUW				*e*			00 11 58.3		
SUW				*e*S		S	00 12 04.2	+3.7	
SUW				*e*SS		SS	00 17 33.1	0.0	
SUW	Suwalki		84.80 325	⇑*e*P		P	00 01 34.4	-0.6	
SUW				*e*SKS			00 11 58.3		
SUW				*e*S		S	00 12 04.2	+3.7	
SUW				*e*sS		sS	00 12 26.7	+7.5	
SUW				*e*SS		SS	00 17 33.1	0.0	
BCI	Bajram Curri		84.85 313	*e*PN		P	00 01 38.6	+3.1	
TIR	Tirane		84.86 312	*e*PN		P	00 01 37.7	+2.1	
TIR	Tirane		84.86 312	PFAKE			00 01 50.0	+14	
TIR				LR		LR			
	comp=Z,473μm,22.0s,MS7.8								
CRVS	Cervenica-Dubn		84.91 319	*e*P		P	00 01 36.0	+0.4	
CRVS				*e*			00 04 50.6		
CRVS				*e*S		S	00 12 00.9	-0.8	
PUK	Puka		84.93 312	*e*PN		P	00 01 37.8	+1.9	
PVY	Plav		84.95 313	⇑*i*P		P	00 01 35.6	-0.4	
IVA	Berane		85.05 313	*e*P		P	00 01 35.7	-0.8	
KAF	Kangasniemi		85.06 333	*ep*		P	00 01 36.5	+0.4	
	comp=Z,647nm,0.8s,mb6.8,baz=100,slow=4.8								
KAF	Kangasniemi		85.06 333	*e*P		P	00 01 36.5	+0.4	
KAF				pmax		pmax			
	comp=Z,647nm,0.8s,mb6.8								
ULC	Ulcinj		85.40 312	⇑*i*P		P	00 01 38.3	0.0	
TTG	Podgorica		85.45 313	⇑*i*P		P	00 01 38.5	0.0	
PLE	Pljevlja		85.48 314	⇑*i*P		P	00 01 39.0	+0.4	
NKY	Niksic		85.69 313	⇑*i*P		P	00 01 39.6	-0.1	
BUM	Brajici-Budva		85.70 313	⇑*i*P		P	00 01 40.2	+0.4	
NIE	Niedzica		85.74 320	*e*P		P	00 01 40.0	+0.2	
WAR	Warsaw		85.75 323	*e*P		P	00 01 40.6	+0.9	
	comp=Z,92μm,7.9s								
WAR				*e*PP		PP	00 05 02.7	+3.4	
WAR				*e*SKS			00 12 07.8		
WAR				*e*S		S	00 12 14.4	+4.5	
WAR				*e*sS		sS	00 13 18.1	+49	
WAR				*e*SS		SS	00 17 57.1	+10	
WAR				LMZ			00 44 41.1		
	comp=Z,897μm,23.2s								
WAR	Warsaw		85.75 323	⇑*e*P		P	00 01 40.6	+0.8	
WAR				*e*			00 05 02.7		
WAR				*e*S		S	00 12 14.5	+4.6	
WAR				*e**SS		sS	00 13 18.1	+49	
WAR	Warsaw		85.75 323	⇑*e*P		P	00 01 40.6	+0.8	
	comp=Z,92nm,7.9s								
WAR				*e*PP		PP	00 05 02.7	+3.4	
WAR				*e*SKS			00 12 07.8		
WAR				*e*S		S	00 12 14.5	+4.6	
WAR				*e*sS		sS	00 13 18.1	+49	
WAR				*e*SS		SS	00 17 57.1	+10	
WAR				LR		LR			
	comp=Z,897μm,23.2s,MS8.1								
PSZ	Piszkesteto		85.78 318	⇑*e*P		P	00 01 40.7	+0.7	
PSZ	Piszkesteto		85.78 318	⇑*i*P		P	00 01 40.2	+0.2	
PSZ	Piszkesteto		85.78 318	*e*P		P	00 01 41.7	+1.7	
PSZ				LR		LR			
	comp=Z,269μm,21.0s,MS7.6								
UPM	Unac-Piva		85.81 313	⇑*i*P		P	00 01 41.6	+1.3	
HCY	Herceg Novi		86.01 313	⇑*i*P		P	00 01 40.9	-0.4	
BRY	Bratogost		86.04 313	⇑*i*P		P	00 01 40.8	-0.6	
OJC	Ojcow		86.19 321	*e*P		P	00 01 42.5	+0.5	
OJC				*e*			00 05 03.6		
OJC				*e*S		S	00 12 17.2	+2.9	
OJC				*e*SS		SS	00 17 58.3	+4.6	
OJC	Ojcow		86.19 321	*e*P		P	00 01 42.5	+0.5	
OJC				*e*PP		PP	00 05 03.6	+0.7	
OJC				*e*S		S	00 12 17.2	+2.9	
OJC				*e*ScS		ScS	00 12 25.6	+2.6	
OJC				*e*SS		SS	00 17 58.3	+4.6	
OJC				*e*SKKS			00 26 46.7		
OJC				LR		LR			
	comp=Z,711μm,21.1s,MS8.0								
BUD	Budapest		86.30 318	⇑*e*P		P	00 01 43.0	+0.4	
PKSM	Moragy		86.39 316	⇑*i*P		P	00 01 42.9	-0.2	
PKSM	Moragy		86.39 316	⇑P		P	00 01 42.9	-0.2	
LIKS	Likavka		86.47 319	*e*P		P	00 01 45.9	+2.5	
STON	Ston		86.65 313	P		P	00 01 43.7	-0.8	
KEV	Kevo		86.85 340	*ep*		P	00 01 44.7	-0.1	
	comp=Z,449nm,1.1s,mb6.6								
KEV	Kevo		86.85 340	*e*P		P	00 01 44.7	-0.1	
KEV				pmax		pmax			
	comp=Z,449nm,1.1s,mb6.6								
KEV	Kevo		86.85 340	*e*P		P	00 01 46.4	+1.6	
KEV				LR		LR			
	comp=Z,780nm,22.0s,MS8.1								
KOLL	Kolacno		86.86 319	*e*P		P	00 01 44.9	-0.4	
KOLL				*e*			00 02 02.7		
KOLL				*e*S		S	00 12 20.4	-0.5	
AFI	Afiamalu		86.95 104	LR		LR	00 39 20.8		
	comp=Z,86μm,21.4s,MS7.1,baz=122,slow=35								
AFI	Afiamalu		86.95 104	⇑*i*P		P	00 01 47.4	+0.9	
AFI				*e*		pP	00 02 00.8	+3.0	
AFI				pmax		pmax			
	comp=Z,2μm,1.3s,mb7.2								
AFI				MLR		MLR			
	comp=Z,101μm,21.0s,MS7.2								
AFI	Afiamalu		86.95 104	⇑*i*P		P	00 01 47.4	+0.9	
	comp=Z,2μm,1.3s,mb7.2								
AFI				*e*		pP	00 02 00.8	+2.9	
AFI				LR		LR			
	comp=Z,101μm,21.0s,MS7.2								
TIP	Timpagrande		86.96 309	PFAKE			00 02 00.0	+14	
TIP				LR		LR			
	comp=Z,307μm,20.0s,MS7.7								
OKC	Ostrava-Krasne		87.19 320	*e*P		P	00 01 46.2	-0.7	
OKC				*e*PP		PP	00 05 12.6	+1.6	
OKC				*e*SKS			00 12 25.5		
OKC				AMS		AMS	00 50 20.0		
	comp=Z,472μm,20.0s								
OKC	Ostrava-Krasne		87.19 320	*e*P		P	00 01 46.2	-0.7	
OKC				*e*PP		PP	00 05 12.6	+1.6	
OKC				*e*SKS			00 12 25.5		
RAC	Raciborz		87.19 320	*e*P		P	00 01 47.2	+0.3	
RAC				*e*			00 05 11.5		
RAC				*e*S		S	00 12 24.2	+0.2	
RAC	Raciborz		87.19 320	*e*P		P	00 01 47.2	+0.3	
RAC				*e*PP		PP	00 05 11.5	+0.5	
RAC				*e*S		S	00 12 24.2	+0.2	
RAC				LR		LR			
	comp=Z,700μm,20.0s,MS8.1								
MAIT	Maitri		87.21 199	*e*P		P	00 01 48.2	+1.6	
MAIT				*e*PP		PP	00 04 14.1	-56	
MAIT				*e*S		S	00 11 56.7	-27	
MAIT				*e*SS		SS	00 18 07.5	0.0	
ARCES	ARCESS Array B		87.30 340	P		P	00 01 46.7	-0.3	
	comp=Z,174nm,0.9s,mb6.3,baz=90,slow=2.7,SNR=62								
ARCES				PKKPbc		PKKPbc	00 20 01.3	+21	
	comp=Z,5.1nm,0.7s,baz=252,slow=2.4,SNR=3.6								
ARCES				LR		LR	00 46 52.6		
	comp=Z,847μm,20.1s,MS8.2,baz=110,slow=40								
QSPA	South Pole Qui		87.35 180	PKPPKP			00 27 49.9		
	comp=Z,12nm,0.8s,baz=90,slow=2.9,SNR=7.3								
QSPA				LR		LR	00 38 19.8		
	comp=Z,387μm,21.8s,MS7.8,baz=313,slow=34								
ADK	Adak		87.46 38	⇑*i*P		P	00 01 45.6	-2.6	
ADK				*e*			00 02 02.1		
ADK				pmax		pmax			
	comp=Z,3μm,1.3s,mb7.3								
ADK				MLR		MLR			
	comp=Z,206μm,20.0s,MS7.5								
ADK	Adak		87.46 38	⇑*i*P		P	00 01 45.6	-2.5	
	comp=Z,3μm,1.3s,mb7.3								
ADK				*e*			00 02 02.0		
ADK				LR		LR			
	comp=Z,206μm,20.0s,MS7.5								
CEL	Celeste		87.54 308	⇑*i*P		P	00 01 49.2	+0.3	
	comp=Z,885nm,0.9s,mb7.0								
CEL				LR		LR			
	comp=Z,161μm,21.0s,MS7.4								
MORC	Moravsky Berou		87.57 320	⇑*i*P		P	00 01 49.2	+0.5	
MORC	Moravsky Berou		87.57 320	⇑P		P	00 01 49.2	+0.4	
MODS	Modra-Piesok		87.58 318	*e*P		P	00 01 49.7	+0.9	
MODS				*e*			00 05 12.5		
MODS				*e*S		S	00 12 29.3	+1.5	
CUC	Castrocucco		87.76 310	⇑*i*P		P	00 01 49.7	-0.2	
	comp=Z,941nm,1.1s,mb6.9								
CUC				LR		LR			
	comp=Z,587μm,21.0s,MS8.0								
SISC	Sisak		87.88 316	P		P	00 01 50.9	+0.5	
KTK1	Kautokeino		87.96 339	*e*P		P	00 01 50.3	+0.2	
SOP	Sopron		87.98 318	⇑*e*P		P	00 01 50.9	+0.2	
VRAC	Vranov		88.13 319	P		P	00 01 51.9	+0.5	
	comp=Z,19nm,0.8s,mb5.4,baz=130,slow=5.6,SNR=26								
VRAC	Vranov		88.13 319	⇑*i*P		P	00 01 51.8	+0.4	
VRAC	Vranov		88.13 319	⇑P		P	00 01 51.8	+0.3	
GKP	Gorka Klasztor		88.18 323	*e*P		P	00 01 51.2	-0.3	
	comp=Z,66μm,7.8s								
GKP				*e*S		S	00 12 32.8	-0.5	
GKP				*e*sS		sS	00 13 45.3	+53	
GKP				*e*SS		SS	00 18 25.1	+2.5	
GKP				LMZ			00 47 59.2		
	comp=Z,824μm,21.0s								
GKP	Gorka Klasztor		88.18 323	⇑*e*P		P	00 01 51.3	-0.2	
GKP				*e*S		S	00 12 32.8	-0.5	
GKP				*e**SS		sS	00 13 45.3	+53	
GKP				*e*SS		SS	00 18 25.1	+2.5	
GKP	Gorka Klasztor		88.18 323	⇑*e*P		P	00 01 51.3	-0.2	
	comp=Z,66nm,7.8s								
GKP				*e*S		S	00 12 32.8	-0.5	
GKP				*e*sS		sS	00 13 45.3	+53	
GKP				*e*SS		SS	00 18 25.1	+2.5	
GKP				LR		LR			
	comp=Z,824μm,21.0s,MS8.1								
DPC	Dobruska-Polom		88.42 320	*e*P		P	00 01 53.1	+0.4	
DPC				*e*PP		PP	00 05 21.6	+0.8	
DPC				*e*SKS			00 12 37.6		
DPC				AMS		AMS	00 51 10.0		
	comp=Z,504μm,21.4s								
CONA	Conrad Observa		88.48 318	⇑*i*P		P	00 01 52.5	-0.6	
	comp=Z,79μm,12.6s,SNR=36								
CSNA	Conrad Observa		88.48 318	⇑*i*P		P	00 01 53.4	+0.3	
	comp=Z,78μm,12.6s								
KSP	Ksiaz		88.49 321	*e*P		P	00 01 53.5	+0.4	
	comp=Z,101μm,8.6s								
KSP				*e*PP		PP	00 05 20.7	-0.7	
KSP				*e*S		S	00 12 36.7	+0.4	
KSP				*e*sS		sS	00 12 58.1	+2.8	
KSP				LMZ			00 48 23.3		
	comp=Z,1219μm,22.4s								
KSP	Ksiaz		88.49 321	⇑*e*P		P	00 01 53.1	0.0	
KSP				*e**PP		pP	00 02 01.9	-2.5	
KSP				*e*			00 05 20.2		
KSP				*e*PPP			00 07 17.0		
KSP				*e*S		S	00 12 34.5	-1.9	
KSP	Ksiaz		88.49 321	⇑*e*P		P	00 01 53.1	0.0	
KSP				*e*pP		pP	00 02 01.9	-2.5	
KSP				*e*PP		PP	00 05 20.2	-1.2	
KSP				*e*PPP			00 07 17.0		
KSP				*e*S		S	00 12 34.5	-1.9	
KSP				LR		LR			
	comp=Z,1406μm,22.4s,MS8.3								
UPC	Upice		88.63 321	*e*P		P	00 01 53.9	+0.2	
ARSA	Arzberg		88.64 317	*i* P		P	00 01 53.9	0.0	
	comp=Z,60μm,9.3s,SNR=88								
VAE	Valguarnera		88.65 307	P		P	00 01 56.0	+1.9	
	comp=Z,74nm,0.8s,mb6.0,baz=260,slow=1.0,SNR=21								
VAE				S		S	00 12 41.5	+3.1	
	comp=Z,16nm,1.1s,baz=269,slow=9.5,SNR=1.9								
BOJS	Bojanci		88.67 315	*i* P		P	00 01 54.5	+0.4	
BOJS				*e*PP		PP	00 05 21.1	-1.9	
BOJS				*e*S		S	00 12 36.9	-1.4	
BOJS				*e*			00 25 35.7		
TREC	Trest		88.85 319	*e*P		P	00 01 54.7	-0.1	
TREC				*e*PP		PP	00 05 28.6	+4.2	
TREC				*e*SKS			00 12 41.5		
TREC				AMS		AMS	00 51 30.0		
	comp=Z,627μm,19.7s								
NVLJ	Novalja		88.86 315	P		P	00 01 54.6	-0.3	
PERS	Pernice		88.86 317	*i* P		P	00 01 55.0	0.0	
PERS				*e*PP		PP	00 05 23.1	-1.5	
PERS				*e*S		S	00 12 40.5	+0.4	
SOKA	Soboth		88.92 317	⇑*i*P		P	00 01 55.5	+0.3	
LJU	Ljubljana		89.22 316	*i* P		P	00 01 56.9	+0.3	
LJU				*e*			00 05 25.5		
LJU				*e*S		S	00 12 42.0	-0.5	
LJU	Ljubljana		89.22 316	*i* P		P	00 01 56.9	+0.3	
LJU				*e*PP		PP	00 05 25.5	-1.9	
LJU				*e*S		S	00 12 43.0	-0.5	
LJU				*e*			00 25 44.7		
OBKA	Obir		89.24 316	*i* P		P	00 01 57.5	+0.8	
	comp=Z,56μm,8.8s,SNR=44								
OBKA	Obir		89.24 316	*i* PcP		PcP	00 01 57.5	-0.6	
	comp=Z,56μm,8.8s,SNR=44								
PRU	Pruhonice		89.53 320	*e*P		P	00 01 57.9	0.0	
PRU				*e*PP		PP	00 05 32.3	+2.6	
PRU				*e*SKS			00 12 47.3		
PRU				AMS		AMS	00 50 30.0		
	comp=Z,543μm,20.2s								
JAVS	Javornik		89.53 316	*i* P		P	00 01 57.7	-0.3	
JAVS				*e*PP		PP	00 05 25.6	-4.2	
JAVS				*i* S		S	00 12 45.6	-0.7	
MOA	Molln		89.54 318	⇑*i*P		P	00 01 57.9	-0.2	
	comp=Z,79μm,12.8s,SNR=34								
PVCC	Panska Ves		89.55 320	*e*P		P	00 01 58.3	+0.2	
PVCC				*e*SKS			00 12 48.4		
PVCC				AMS		AMS	00 48 40.0		
	comp=Z,753μm,21.2s								
TRO	Tromso		89.57 340	⇑*i*P		P	00 01 56.8	-1.0	
TRO				AMb		AMB	00 02 24.9		
	comp=Z,2μm,1.9s,mb7.0								
TRO				*e*PP		PP	00 05 29.9	+0.3	
TRO				*e*			00 12 43.2		
TRO				*e*SS		SS	00 18 42.2	+0.1	
TRO				AMS		AMS	00 45 56.7		
	comp=Z,656μm,16.9s,MS8.1								
TRO	Tromso		89.57 340	⇑*i*P		P	00 01 56.8	-1.0	
TRO				pmax		pmax			
	comp=Z,2μm,1.9s,mb7.0								
TRO				MLR		MLR			
	comp=Z,656μm,16.9s,MS8.1								
TRO	Tromso		89.57 340	⇑*i*P		P	00 01 56.8	-1.0	
	comp=Z,2μm,1.9s,mb7.0								
TRO				LR		LR			
	comp=Z,656μm,16.9s,MS8.1								
VOY	Vojsko		89.66 316	*e*P		P	00 01 58.0	-0.7	
VOY				*e*		pP	00 02 08.1	-2.0	
MYKA	Terra Mystica		89.88 317	⇑*i*P		P	00 01 59.8	+0.1	
	comp=Z,3520μm,8.7s								
BRG	Berggiesshubel		89.97 321	⇑*i*P		P	00 02 00.1	+0.1	
BRG				*i*		pP	00 02 09.4	-2.0	
BRG							00 05 35.0		
BRG				S		S	00 12 54.0	+3.7	
BRG				SS		SS	00 18 48.0	-0.8	
BRG				pmax		pmax			
	comp=Z,182nm,1.9s,mb6.1								
BRG				MLR		MLR			
	comp=N,254μm,24.4s,MS7.8								
BRG				MLR		MLR			
	comp=E,327μm,21.8s,MS7.8								
BRG				MLR		MLR			
	comp=Z,421μm,22.3s,MS7.8								
BRG	Berggiesshubel		89.97 321	*e*P		P	00 02 00.0	0.0	
	comp=Z,3μm,2.1s,mb7.3								
BRG				*e*PP		PP	00 05 36.0	+2.8	
BRG				*e*S		S	00 12 52.4	+2.1	
BRG	Berggiesshubel		89.97 321	⇑*i*P		P	00 02 00.1	+0.1	
	comp=Z,304nm,1.9s,mb6.3								
BRG				*i*			00 02 02.9		
	comp=Z,274nm,1.0s								
BRG				*i*		pP	00 02 09.3	-2.1	
	comp=Z,409nm,1.2s								
BRG				*i*			00 02 28.4		
	comp=Z,3μm,1.8s								
BRG				*i*			00 02 44.3		
	comp=Z,2μm,1.6s								
BRG				PP		PP	00 05 35.0	+1.8	
BRG				S		S	00 12 54.0	+3.7	
BRG				SS		SS	00 18 48.0	-0.8	
BRG				*e*			00 22 45.8		
	comp=Z,52nm,1.7s								
BRG				PKPPKP			00 27 47.7		
	comp=Z,65nm,2.0s								
BRG									
	comp=N,424μm,24.4s								
BRG									
	comp=E,546μm,21.8s								
BRG									
	comp=Z,703μm,22.3s								
BRG	Berggiesshubel		89.97 321	⇑*i*P		P	00 02 00.1	+0.1	
	comp=Z,182nm,1.9s,mb6.1								
BRG				*i*			00 02 02.9		
BRG				*i*		pP	00 02 09.3	-2.1	
BRG				*i*			00 02 28.4		
BRG				*i*			00 02 44.3		
BRG				PP		PP	00 05 35.0	+1.8	
BRG				S		S	00 12 54.0	+3.7	
BRG				SS		SS	00 18 48.0	-0.8	
BRG				P'P'			00 22 45.8		
BRG				P'P'			00 27 47.7		
BRG				LR		LR			
	comp=Z,421μm,22.3s,MS7.8								
GEC2	GERESS Array S		89.99 319	*e*P		P	00 02 00.1	0.0	
GEC2				*e*			00 05 36.4		
GEC2				*e*S		S	00 12 52.2	+1.7	
GEC2				pmax		pmax			
	comp=Z,3μm,1.7s,mb7.3								
GEC2	GERESS Array S		89.99 319	*e*P		P	00 02 00.1	0.0	
	comp=Z,3μm,1.7s,mb7.3								
GEC2				*e*PP		PP	00 05 36.4	+3.0	
GEC2				*e*S		S	00 12 52.2	+1.7	
GEC2	GERESS Array S		89.99 319	*e*P		P	00 02 00.1	0.0	
	comp=Z,3μm,1.7s,mb7.3								
GEC2				*e*PP		PP	00 05 36.4	+3.0	
GEC2				*e*S		S	00 12 52.2	+1.7	
GERES	GERESS Array B		89.99 319	P		P	00 02 00.1	0.0	
	comp=Z,56nm,0.8s,mb6.0,baz=94,slow=4.3,SNR=69								
GERES				S		S	00 12 45.0	-5.5	
	comp=Z,4.7nm,0.9s,baz=58,slow=13,SNR=3.3								
GERES				PKKPbc		PKKPbc	00 19 31.6	-1.7	
	comp=Z,2.3nm,0.9s,baz=245,slow=2.1,SNR=3.2								
GERES	GERESS Array B		89.99 319	P		P	00 02 00.1	0.0	
GERES				S		S	00 12 45.0	-5.5	
GERES				pmax		pmax			
	comp=Z,56nm,0.8s								
GERES				smax					
	comp=N,5.0nm,1.0s								
KHC	Kasperske Hory		90.09 319	*e*P		P	00 02 00.1	-0.5	
KHC				*e*PP		PP	00 05 35.7	+1.5	
KHC				*e*SKS			00 12 53.6		
KHC				AMS		AMS	00 51 50.0		
	comp=N,696μm,21.0s								
KBA	Koelnbreinsper		90.11 317	*i* P		P	00 02 00.9	+0.2	
	comp=N,62μm,12.8s,SNR=27								
BJO	Bjornoya		90.24 345	⇑*i*P		P	00 01 59.2	-1.5	
BJO				AMS		AMS	00 48 52.7		
	comp=Z,1462μm,22.3s,MS8.4								
BJO1	Bjornoya		90.29 345	⇑*i*P		P	00 01 59.2	-1.8	
BJO1				LR		LR			
	comp=Z,1462μm,22.3s,MS8.4								

CLL eSS SS 00 18 30.0 -28
CLL ex x 00 19 48.0
CLL eSSS 00 23 00.0
CLL ex x 00 24 34.0
CLL eSSSS 00 25 50.0
CLL ePKPPKP 00 27 45.0
CLL Collm 90.59 321 eP **P** **00 02 03.0 +0.1**
CLL i pP 00 02 12.1 -2.2
CLL i pP 00 02 16.2 +1.9
CLL i 00 02 22.3
ABTA Abfaltersbach 90.66 317 i P **P** **00 02 02.8 -0.5**
comp=Z,49µm,12.6s,SNR=50
STEI Steigen 90.70 338 eP **P** **00 02 03.0 0.0**
MOR8 Moi Rana 90.87 336 eP **P** **00 02 03.9 0.0**
NKC Novy Kostel 90.89 320 eP **P** **00 02 04.4 +0.1**
NKC eSKS 00 13 01.7
NKC AMS AMS 00 49 30.0
comp=Z,790µm,21.4s
NKC Novy Kostel 90.89 320 eP **P** **00 02 04.4 +0.1**
NKC eSKS 00 13 01.7
TANN Tannenbergstha 90.89 320 eP **P** **00 02 04.2 -0.1**
comp=Z,1µm,1.9s,mb6.9
TANN ePP PP 00 05 43.5 +3.0
TANN eS S 00 13 00.6 +1.9
ROTZ Rotzenmuhle 91.02 320 eP **P** **00 02 05.4 +0.5**
comp=Z,3µm,2.3s,mb7.2
ROTZ eS S 00 13 02.5 +2.6
MANZ Manzenberg 91.09 320 eP **P** **00 02 05.6 +0.3**
comp=Z,4µm,2.2s,mb7.3
MANZ eS S 00 13 03.0 +2.4
COP Copenhagen 91.18 326⇑ iP **P** **00 02 06.5 +1.0**
COP e 00 05 50.6
COP i S S 00 13 03.7 +2.6
COP pmax pmax
comp=Z,290nm,1.0s,mb6.6
COP MLR MLR
comp=Z,290µm,19.0s,MS7.7
COP Copenhagen 91.18 326⇑ iP **P** **00 02 06.5 +1.0**
comp=Z,291nm,1.0s,mb6.6
COP i 00 02 50.3
COP e 00 05 50.6
COP i S S 00 13 03.7 +2.6
COP
comp=Z,289µm,19.0s
WTTA Wattenberg 91.28 317 i P **P** **00 02 05.6 -0.6**
comp=Z,61µm,12.9s,SNR=76
FLOS Flostrand 91.31 336 eP **P** **00 02 07.8 +1.9**
WATA Walderalm 91.33 317⇓ iP **P** **00 02 05.7 -0.7**
comp=Z,932nm,1.5s,mb6.9,SNR=20
LOF Lofoten 91.36 338 eP **P** **00 02 10.4 +4.3**
SPITS Spitsbergen Ar 91.38 348 LR LR 00 51 16.2
comp=Z,1140µm,18.1s,MS8.3,baz=350,slow=41
KONS Konsvik 91.42 336 eP **P** **00 02 08.8 +2.4**
MOX Moxa 91.44 320ce P **P** **00 02 06.5 -0.3**
comp=Z,2µm,2.1s,mb7.0
MOX Moxa 91.44 320ce P **P** **00 02 06.5 -0.3**
MOX pmax pmax
comp=Z,2µm,2.1s,mb7.0
MOX Moxa 91.44 320 eP **P** **00 02 06.7 -0.1**
comp=Z,2µm,2.0s,mb7.0
MOX ePP PP 00 05 48.5 +3.7
MOX eS S 00 13 05.5 +1.8
HSP Hornsund 91.44 347 eP **P** **00 02 06.1 -0.3**
STOK Stokkvaagen 91.45 336 eP **P** **00 02 07.4 +0.8**
FUR Furstenfeldbru 91.56 318 eP **P** **00 02 06.8 -0.7**
FUR eS S 00 13 05.5 +0.6
FUR pmax pmax
comp=Z,1µm,1.8s,mb7.0
FUR Furstenfeldbru 91.56 318 eP **P** **00 02 06.8 -0.7**
comp=Z,1µm,1.8s,mb7.0
FUR eS S 00 13 05.5 +0.6
FUR Furstenfeldbru 91.56 318 eP **P** **00 02 06.8 -0.7**
comp=Z,1µm,1.8s,mb7.0
FUR eS S 00 13 05.5 +0.6
MOTA Moosalm 91.65 317⇑ iP **P** **00 02 07.1 -0.8**
comp=Z,962nm,1.3s,mb7.0,SNR=111
GRA1 Grafenberg Arr 91.65 319 eP **P** **00 02 08.1 +0.2**
comp=Z,4µm,2.2s,mb7.3
GRA1 ePP PP 00 05 49.7 +3.1
GRA1 eS S 00 13 07.7 +2.0
GRA1 eP'P' 00 27 43.5
GRA1 LR LR
comp=Z,534µm,20.9s,MS8.0
GRF Grafenberg Arr 91.65 319 eP **P** **00 02 08.1 +0.2**
GRF e 00 05 49.7
GRF eS S 00 13 07.7 +2.0
GRF pmax pmax
comp=Z,4µm,2.2s,mb7.3
GRF Grafenberg Arr 91.65 319 eP **P** **00 02 08.1 +0.2**
GRF e 00 05 49.7
GRF eS S 00 13 07.7 +2.0
GRF pmax pmax
comp=Z,4µm,2.2s,mb7.3
GRF Grafenberg Arr 91.65 319 eP **P** **00 02 08.1 +0.2**
comp=Z,4µm,2.2s,mb7.3
GRF ePP PP 00 05 49.7 +3.1
GRF eS S 00 13 07.7 +2.0
GRF ePKPPKPdf 00 27 43.5
GRF eL 00 52 10.5
comp=Z,534µm,20.9s
GRF Grafenberg Arr 91.65 319 eP **P** **00 02 08.1 +0.2**
comp=Z,4µm,2.2s,mb7.3
GRF ePP PP 00 05 49.7 +3.1
GRF eS S 00 13 07.7 +2.0
SNAA Sanae 91.78 198 e **P** **00 02 08.6 +0.6**
SNAA e 00 02 11.9
SNAA e 00 02 15.9
SNAA e 00 02 25.2
SNAA Sanae 91.78 198c iP **P** **00 02 07.7 -0.3**
NSS Namsos 91.81 334⇑ iP **P** **00 02 07.1 -1.1**
NSS AMb AMB 00 02 38.4
comp=Z,2µm,1.9s,mb7.0
NSS ePP PP 00 05 46.9 -0.5
NSS e 00 13 05.9
NSS eSS SS 00 19 15.5 +1.0
NSS AMS AMS 00 51 05.0
comp=Z,862µm,23.4s,MS8.1
NSS Namsos 91.81 334⇑ iP **P** **00 02 07.1 -1.1**
comp=Z,2µm,1.9s,mb7.0
NSS LR LR
comp=Z,862µm,23.4s,MS8.1
RETA Reutte 91.89 317 i P **P** **00 02 08.5 -0.5**
comp=Z,39µm,9.4s,SNR=54
FETA Feichten 91.89 317 i P **P** **00 02 08.8 -0.2**
comp=Z,37µm,9.2s,SNR=82
NB2 NORSAR Subarra 92.03 331 P **P** **00 02 08.9 -0.5**
comp=Z,299nm,1.0s,mb6.6,baz=93,slow=4.8
NOA NORSAR Array B 92.03 331 P **P** **00 02 08.4 -1.0**
comp=Z,76nm,0.9s,mb6.0,baz=93,slow=4.7,SNR=74
NOA PKPPKP 00 27 43.1
comp=Z,1.4nm,0.9s,baz=300,slow=1.8,SNR=3.1
NOA LR LR 00 48 22.6
comp=Z,546µm,21.8s,MS8.0,baz=85,slow=39
VLC Villacollemand 92.05 314 eP **P** **00 02 02.6 -7.2**
VLC LR LR
comp=Z,364µm,22.0s,MS7.8
CLZ Clausthal 92.26 322 eP **P** **00 02 10.5 -0.1**
CLZ eS S 00 13 11.6 +0.6
CLZ pmax pmax
comp=Z,2µm,2.2s,mb7.1
CLZ Clausthal 92.26 322 eP **P** **00 02 10.5 -0.1**
comp=Z,2µm,2.2s,mb7.1
CLZ eS S 00 13 11.6 +0.6
CLZ Clausthal 92.26 322 eP **P** **00 02 10.5 -0.1**
comp=Z,2µm,2.2s,mb7.1
CLZ eS S 00 13 11.6 +0.6
KBS Kingsbay 92.31 349⇑ iP **P** **00 02 08.8 -1.6**
KBS ePP PP 00 05 51.2 +0.1
KBS e 00 13 09.6
KBS eSS SS 00 19 32.6 +11
KBS AMS AMS 00 52 07.0
comp=Z,1591µm,17.0s,MS8.5
KBS Kingsbay 92.31 349c iP **P** **00 02 09.1 -1.3**
BSEG Bad Segeberg 92.34 324 eP **P** **00 02 10.7 -0.2**
BSEG eS S 00 13 12.8 +1.2
BSEG pmax pmax
comp=Z,452nm,1.2s,mb6.7
BSEG Bad Segeberg 92.34 324 eP **P** **00 02 10.7 -0.2**
comp=Z,452nm,1.2s,mb6.7
BSEG eS S 00 13 12.8 +1.2
BSEG Bad Segeberg 92.34 324 eP **P** **00 02 10.7 -0.2**
BSEG eS S 00 13 12.8 +1.2
NRDL Niedersach Rie 92.43 322 eP **P** **00 02 11.5 +0.1**
comp=Z,3µm,2.4s,mb7.1
NRDL eS S 00 13 13.5 +0.9
UBBA Unterbreizbach 92.47 321 eP **P** **00 02 11.3 -0.3**
comp=Z,1µm,1.9s,mb6.8
UBBA ePP PP 00 05 55.0 +2.0
UBBA eS S 00 13 13.4 +0.5
DAVOX Davos/Dischmat 92.47 317 P **P** **00 02 11.8 +0.1**
comp=Z,56nm,0.9s,mb5.9,baz=93,slow=5.2,SNR=34
DAVOX PKKPbc PKKPbc 00 19 28.7 +1.9
comp=Z,6.1nm,0.7s,baz=0.5,slow=15,SNR=3.7
DAVOX LR LR 00 53 02.7
comp=Z,253µm,18.9s,MS7.7,baz=161,slow=42
DAVA Damuels 92.48 317 i P **P** **00 02 11.4 -0.3**
comp=Z,43µm,8.7s,SNR=73
DAVOS Davos 92.53 317 P **P** **00 02 11.8 -0.2**
DAVOS 00 19 28.7
KEST Kesra 92.63 305 P **P** **00 02 13.6 +0.8**
comp=Z,40nm,0.8s,mb5.9,baz=38,slow=0.8,SNR=41
KEST PKKPbc PKKPbc 00 19 27.3 +1.2
comp=Z,2.5nm,0.8s,baz=252,slow=5.8,SNR=5.3
KEST LR LR 00 44 41.1
comp=Z,186µm,20.3s,MS7.5,baz=53,slow=36
VSL Villasalto 92.69 309⇑ iP **P** **00 02 12.8 -0.1**
comp=Z,379nm,0.9s,mb6.8
VSL epP pP 00 02 24.1 -0.2
VSL LR LR
comp=Z,160µm,22.0s,MS7.4
KONO Kongsberg 92.81 329⇑ iP **P** **00 02 12.7 -0.3**
KONO ePP PP 00 05 54.9 -0.5
KONO e 00 13 15.0
KONO AMS AMS 00 51 16.4
comp=Z,672µm,21.7s,MS8.1
TUE Stuetta 92.83 316⇑ iP **P** **00 02 12.6 -0.8**
comp=Z,2µm,1.9s,mb7.2
TUE LR LR
comp=Z,577µm,20.0s,MS8.0
OSPF L'Ospedale 92.87 311 eP **P** **00 02 13.3 -0.4**
OSPF L'Ospedale 92.87 311 eP **P** **00 02 13.3 -0.4**
CORF Corte 92.91 312 eP **P** **00 02 14.4 +0.5**
STU Stuttgart 92.96 319 eP **P** **00 02 13.5 -0.4**
comp=Z,831nm,1.6s,mb6.9
STU ePP PP 00 05 59.9 +3.0
STU eS S 00 13 16.7 -0.7
MUD Monsted U'grnd 93.02 326⇑ iP **P** **00 02 14.8 +0.8**
MUD e 00 06 00.2
MUD i 00 13 18.7
MUD pmax pmax
comp=Z,340nm,1.3s,mb6.6
MUD MLR MLR
comp=Z,620µm,20.0s,MS8.1
MUD Monsted U'grnd 93.02 326 iP **P** **00 02 14.8 +0.8**
comp=Z,336nm,1.3s,mb6.6
MUD i 00 02 59.1
MUD e 00 06 00.2
MUD eS S 00 12 56.8 -21
MUD i 00 13 18.7
MUD
comp=Z,625µm,20.0s
PGF Pioggiola 93.03 312 eP **P** **00 02 14.1 -0.3**
comp=Z,925nm,1.4s,mb6.7
PGF Pioggiola 93.03 312 eP **P** **00 02 14.1 -0.3**
PGF pmax pmax
comp=Z,463nm,1.4s,mb6.7
PGF Pioggiola 93.03 312 eP **P** **00 02 14.1 -0.3**
comp=Z,462nm,1.4s,mb6.7
DOMB Dombas 93.08 332 eP **P** **00 02 16.7 +2.5**
TOD Tromm 93.22 319 eP **P** **00 02 14.8 -0.3**
SPAK Spaichingen-Ko 93.23 318 eP **P** **00 02 15.7 +0.5**
VNA2 Neumayer--Watz 93.40 198 e **P** **00 02 16.1 +0.6**
VNA2 e 00 02 20.0
VNA2 e pP 00 02 25.1 -1.8
VNA2 e 00 02 32.8
BFO Black Forest 93.53 318 eP **P** **00 02 15.8 -0.8**
BFO e 00 06 03.4
BFO eS S 00 13 22.4 -0.1
BFO pmax pmax
comp=Z,222nm,1.3s,mb6.4
BFO Black Forest 93.53 318 eP **P** **00 02 15.8 -0.8**
comp=Z,222nm,1.3s,mb6.4
BFO ePP PP 00 06 03.4 +2.0
BFO eS S 00 13 22.4 -0.1
BFO Black Forest 93.53 318⇑ iP **P** **00 02 16.6 0.0**
BFO ePP PP 00 06 03.4 +2.0
BFO eS S 00 13 22.4 -0.1
KTD Kalmit 93.69 319 eP **P** **00 02 17.6 +0.3**
UNV Unalaska Valle 93.73 36⇑ iP **P** **00 02 15.3 -2.1**
comp=Z,122nm,0.7s,mb6.4
UNV epP pP 00 02 29.4 +0.6
FELD Feldberg im Sc 93.75 318 eP **P** **00 02 17.4 -0.2**
VNA1 Neumayer--Stat 93.76 198 e **P** **00 02 18.4 +1.2**
VNA1 e 00 02 22.4
VNA1 e pP 00 02 27.1 -1.5
VNA1 e 00 02 35.7
MOL Molde 93.78 332⇑ iP **P** **00 02 17.9 +0.5**
MOL ePP PP 00 06 02.4 -0.5
MOL e 00 13 23.9
MOL eSS SS 00 19 43.4 +0.7
MOL AMS AMS 00 50 22.6
comp=Z,1049µm,24.2s,MS8.2
IBBN Ibbenburen 93.87 322 eP **P** **00 02 17.7 -0.4**
comp=Z,515nm,1.3s,mb6.8
IBBN eS S 00 13 26.1 +0.8
LANF Langenberg 93.88 319 eP **P** **00 02 18.6 +0.4**
LANF Langenberg 93.88 319 eP **P** **00 02 18.6 +0.4**
STR Strasbourg 93.91 318 eP **P** **00 02 18.6 +0.3**
STR Strasbourg 93.91 318 eP **P** **00 02 18.6 +0.3**
VNA3 Neumayer Olymp 94.00 198 e **P** **00 02 17.8 -0.5**
VNA3 e 00 02 22.6
VNA3 e pP 00 02 27.6 -2.1
VNA3 e 00 02 35.3
LIBD Limburg 94.02 318 eP **P** **00 02 19.2 +0.4**
ABH Alteburg 94.04 320 eP **P** **00 02 19.0 +0.1**
SNART Snartemo 94.06 328 eP **P** **00 02 20.0 +1.3**
SNART AMb AMB 00 02 50.3
comp=Z,354nm,1.2s,mb6.7
SAOF Saorge 94.09 314 eP **P** **00 02 19.3 +0.1**
SAOF Saorge 94.09 314 eP **P** **00 02 19.3 +0.1**
BBS Basel-Blauen 94.09 317 eP **P** **00 02 19.7 +0.5**
SBF Sospel 94.17 314 eP **P** **00 02 19.2 -0.4**
comp=Z,607nm,1.0s,mb6.7
SBF Sospel 94.17 314 eP **P** **00 02 19.2 -0.4**
SBF pmax pmax
comp=Z,304nm,1.0s,mb6.7
SBF Sospel 94.17 314 eP **P** **00 02 19.2 -0.4**
comp=Z,304nm,1.0s,mb6.7
AUTN L'Aution 94.18 314 eP **P** **00 02 19.8 +0.1**
AUTN L'Aution 94.18 314 eP **P** **00 02 19.8 +0.1**
BUG Bochum--Univer 94.19 321 eP **P** **00 02 19.1 -0.4**
comp=Z,314nm,1.4s,mb6.5
BUG ePP PP 00 06 10.6 +4.2
BUG eS S 00 13 28.5 +0.4
REVF Revere 94.22 313 eP **P** **00 02 19.7 -0.2**
REVF Revere 94.22 313 eP **P** **00 02 19.7 -0.2**
CDF Champ du Feu 94.24 318 eP **P** **00 02 19.1 -0.7**
comp=Z,240nm,1.0s,mb6.3
CDF Champ du Feu 94.24 318 eP **P** **00 02 19.1 -0.7**
CDF pmax pmax
comp=Z,120nm,1.0s,mb6.3
CDF Champ du Feu 94.24 318 eP **P** **00 02 19.1 -0.7**
comp=Z,120nm,1.0s,mb6.3
LUCF Luceram 94.24 314 eP **P** **00 02 20.7 +0.8**
TOUF Mont Tournerai 94.31 314 eP **P** **00 02 20.9 +0.6**
TOUF Mont Tournerai 94.31 314 eP **P** **00 02 20.9 +0.6**
ODD1 Odda 94.31 330 eP **P** **00 02 20.3 +0.4**
ECH Echery 94.32 318 eP **P** **00 02 20.0 -0.2**
ECH Echery 94.32 318 eP **P** **00 02 20.0 -0.2**
MOF Molkenrain 94.34 318 eP **P** **00 02 20.7 +0.4**
MOF Molkenrain 94.34 318 eP **P** **00 02 20.7 +0.4**
RUP Ruppelstein 94.36 319 eP **P** **00 02 20.9 +0.6**
MVIF Mont Vial 94.38 314 eP **P** **00 02 20.7 +0.1**
MVIF Mont Vial 94.38 314 eP **P** **00 02 20.7 +0.1**
BLS5 Blasjo 94.42 329 eP **P** **00 02 23.4 +3.1**
WTSB Winterswijk 94.47 322⇑ eP **P** **00 02 20.7 -0.1**
comp=Z,620nm,5.2s
WTSB Winterswijk 94.47 322 eSS SS 00 19 48.0 -5.2
HYA Hoyanger 94.47 331 eP **P** **00 02 24.3 +3.7**
HINF Hinteralfeld 94.53 318 eP **P** **00 02 20.1 -1.1**
LOMF Lomont 94.56 317 eP **P** **00 02 21.4 +0.1**
LOMF Lomont 94.56 317 eP **P** **00 02 21.4 +0.1**
CALN Calern 94.57 314 eP **P** **00 02 20.7 -0.8**
CALN Calern 94.57 314 eP **P** **00 02 20.7 -0.8**
SURF Saint Ours 94.61 314 eP **P** **00 02 22.6 +0.9**
SURF Saint Ours 94.61 314 eP **P** **00 02 22.6 +0.9**
MBDF Montbardon 94.64 314 eP **P** **00 02 20.7 -1.1**
comp=Z,165nm,1.0s,mb6.1
MBDF Montbardon 94.64 314 eP **P** **00 02 20.7 -1.1**
MBDF pmax pmax
comp=Z,82nm,1.0s,mb6.1
MBDF Montbardon 94.64 314 eP **P** **00 02 20.7 -1.1**
comp=Z,82nm,1.0s,mb6.1
LPG La Plagne 94.64 315 eP **P** **00 02 21.5 -0.2**
comp=Z,355nm,1.0s,mb6.5
LPG La Plagne 94.64 315 eP **P** **00 02 21.5 -0.2**
LPG pmax pmax
comp=Z,177nm,1.0s,mb6.5
LPG La Plagne 94.64 315 eP **P** **00 02 21.5 -0.2**
comp=Z,177nm,1.0s,mb6.5
LPL La Plagne 94.66 315 eP **P** **00 02 21.5 -0.3**
comp=Z,369nm,1.0s,mb6.5
LPL La Plagne 94.66 315 eP **P** **00 02 21.5 -0.3**
LPL pmax pmax
comp=Z,185nm,1.0s,mb6.5
LPL La Plagne 94.66 315 eP **P** **00 02 21.5 -0.3**
comp=Z,184nm,1.0s,mb6.5
BNI Bardonecchia 94.70 315⇑ iP **P** **00 02 21.5 -0.5**
BNI pmax pmax
comp=Z,176nm,1.0s,mb6.5
BNI MLR MLR
comp=Z,465µm,22.0s,MS7.9
BNI Bardonecchia 94.70 315⇑ iP **P** **00 02 21.5 -0.6**
comp=Z,176nm,1.0s,mb6.5
BNI e 00 02 42.4
BNI LR LR
comp=Z,465µm,22.0s,MS7.9
FRF La Foret Royal 94.75 313 eP **P** **00 02 21.8 -0.5**
comp=Z,308nm,1.1s,mb6.4
FRF La Foret Royal 94.75 313 eP **P** **00 02 21.8 -0.5**
FRF pmax pmax
comp=Z,154nm,1.1s,mb6.3
FRF La Foret Royal 94.75 313 eP **P** **00 02 21.8 -0.5**
comp=Z,154nm,1.1s,mb6.3
STAV Stavanger 94.83 329 eP **P** **00 02 22.4 +0.1**
STAV ePP PP 00 06 09.6 -1.5
LMR La Mourre 94.85 313 eP **P** **00 02 22.2 -0.6**
comp=Z,331nm,1.4s,mb6.3
LMR La Mourre 94.85 313 eP **P** **00 02 22.2 -0.6**
LMR pmax pmax
comp=Z,165nm,1.4s,mb6.3
LMR La Mourre 94.85 313 eP **P** **00 02 22.2 -0.6**
comp=Z,165nm,1.4s,mb6.3
HAU Haudompre 94.86 318 eP **P** **00 02 21.9 -0.8**
comp=Z,527nm,1.2s,mb6.6
HAU eMLR MLR
comp=Z,808µm,22.0s,MS7.8
HAU Haudompre 94.86 318 eP **P** **00 02 21.9 -0.8**
HAU pmax pmax
comp=Z,264nm,1.2s,mb6.5
HAU MLR MLR
comp=Z,808µm,22.0s,MS8.2
HAU Haudompre 94.86 318 eP **P** **00 02 21.9 -0.8**
comp=Z,264nm,1.2s,mb6.5
HAU LR LR
comp=Z,808µm,22.0s,MS8.2
BER Bergen 94.93 330⇑ iP **P** **00 02 22.8 +0.1**
BER AMb AMB 00 02 54.3
comp=Z,526nm,1.2s,mb6.8
BER e 00 13 33.2
BER eSS SS 00 20 03.6 +4.2
BER AMS AMS 00 51 15.7
comp=Z,503µm,18.9s,MS8.0
BER Bergen 94.93 330⇑ iP **P** **00 02 22.8 +0.1**
BER pmax pmax
comp=Z,527nm,1.2s,mb6.8
BER MLR MLR
comp=Z,503µm,18.9s,MS8.0
BER Bergen 94.93 330⇑ iP **P** **00 02 22.8 +0.1**
comp=Z,526nm,1.2s,mb6.8
BER LR LR
comp=Z,503µm,18.9s,MS8.0
WLF Walferdange 94.95 319 P **P** **00 02 23.9 +0.9**
comp=Z,305nm,1.8s,mb6.4
WLF Walferdange 94.95 319⇑ iP **P** **00 02 24.4 +1.4**
WLF e pP 00 02 38.2 +3.8
WLF pmax pmax
comp=Z,673nm,1.5s,mb6.8
WLF MLR MLR
comp=Z,428µm,22.0s,MS7.9
WLF Walferdange 94.95 319 eP **P** **00 02 22.9 -0.1**
comp=Z,2µm,2.4s,mb7.0
WLF ePP PP 00 06 15.9 +3.5
WLF eS S 00 13 33.1 -1.7
WLF Walferdange 94.95 319⇑ iP **P** **00 02 24.4 +1.4**
comp=Z,673nm,1.5s,mb6.8
WLF e pP 00 02 38.2 +3.8
WLF LR LR
comp=Z,428µm,22.0s,MS7.9
EGD Espegrend 94.99 330 eP **P** **00 02 24.5 +1.5**
ASK Askoy 95.00 330 eP **P** **00 02 24.8 +1.8**
MEM Membach 95.01 320 P **P** **00 02 24.3 +1.0**
comp=Z,168nm,2.2s,mb6.1
KMY Karmoy 95.05 329 eP **P** **00 02 25.2 +1.9**
KMY Karmoy 95.05 329 eP **P** **00 02 26.5 +3.2**
HGN Heimansgroeve 95.05 321⇑ eP **P** **00 02 22.8 -0.6**
comp=Z,459nm,7.9s
HGN Heimansgroeve 95.05 321 eSS SS 00 20 04.5 +2.9
CABF La Chapelle 95.08 316 eP **P** **00 02 23.5 -0.2**
comp=Z,736nm,1.4s,mb6.6
CABF La Chapelle 95.08 316 eP **P** **00 02 23.5 -0.2**
CABF pmax pmax
comp=Z,368nm,1.4s,mb6.6
CABF La Chapelle 95.08 316 eP **P** **00 02 23.5 -0.2**
comp=Z,368nm,1.4s,mb6.6
GDM Grand'Maison 95.10 315 eP **P** **00 02 23.9 +0.1**
GDM Grand'Maison 95.10 315 eP **P** **00 02 23.9 +0.1**
THEF They Montfort 95.10 318 eP **P** **00 02 23.8 0.0**
THEF They Montfort 95.10 318 eP **P** **00 02 23.8 0.0**
BEBN Eben Emael 95.21 321 P **P** **00 02 24.5 +0.3**
ORIF Oris-en-Rattie 95.27 315 eP **P** **00 02 24.3 -0.3**
ORIF eMLR MLR
comp=Z,922µm,21.8s,MS7.9
GRN Grenoble 95.36 315 eP **P** **00 02 24.7 -0.3**
GRN Grenoble 95.36 315 eP **P** **00 02 24.7 -0.3**
BCLA Clavier 95.47 320 P **P** **00 02 26.2 +0.8**
comp=Z,140nm,1.9s,mb6.1
SMRF Simiane la Rot 95.52 314 eP **P** **00 02 25.8 0.0**
comp=Z,390nm,1.4s,mb6.3
SMRF Simiane la Rot 95.52 314 eP **P** **00 02 25.8 0.0**
comp=Z,390nm,1.4s,mb6.6
MEZF Maizieres J'vi 95.71 318 eP **P** **00 02 25.9 -0.7**
baz=97
GIVF Givet 95.79 320 eP **P** **00 02 26.1 -0.8**
comp=Z,256nm,1.2s,mb6.2
GIVF Givet 95.79 320 eP **P** **00 02 26.1 -0.8**
GIVF pmax pmax
comp=Z,128nm,1.2s,mb6.2
GIVF Givet 95.79 320 eP **P** **00 02 26.1 -0.8**
comp=Z,128nm,1.2s,mb6.2
DOU Dourbes 95.94 320 P **P** **00 02 28.2 +0.7**
comp=Z,153nm,1.9s,mb6.1
UCC Uccle 96.05 321 P **P** **00 02 28.3 +0.2**
VIVF Saint-Julien-l 96.13 315 eP **P** **00 02 28.0 -0.6**
comp=Z,165nm,1.1s,mb6.0
VIVF Saint-Julien-l 96.13 315 eP **P** **00 02 28.0 -0.6**
VIVF pmax pmax
comp=Z,82nm,1.1s,mb6.1
VIVF Saint-Julien-l 96.13 315 eP **P** **00 02 28.0 -0.6**
comp=Z,82nm,1.1s,mb6.1
BAIF Baives 96.19 320 eP **P** **00 02 28.3 -0.4**
comp=Z,522nm,1.2s,mb6.5
BAIF Baives 96.19 320 eP **P** **00 02 28.3 -0.4**
BAIF pmax pmax
comp=Z,261nm,1.2s,mb6.5
BAIF Baives 96.19 320 eP **P** **00 02 28.3 -0.4**
comp=Z,261nm,1.2s,mb6.5
SSB Saint Sauveur 96.20 315 eP **P** **00 02 28.5 -0.4**
SSB Saint Sauveur 96.20 315 eP **P** **00 02 28.5 -0.4**
LOR Lormes 96.58 317 eP **P** **00 02 29.8 -0.7**
comp=Z,316nm,1.1s,mb6.4,baz=92
LOR eMLR MLR
comp=Z,560µm,20.5s,MS7.7
LOR Lormes 96.58 317 eP **P** **00 02 29.8 -0.7**
LOR pmax pmax
comp=Z,158nm,1.1s,mb6.4
LOR MLR MLR
comp=Z,560µm,20.5s,MS8.0
LOR Lormes 96.58 317 eP **P** **00 02 29.8 -0.7**
comp=Z,158nm,1.1s,mb6.4
LOR LR LR
comp=Z,560µm,20.5s,MS8.0
SMF Signal de Mont 96.62 316 eP **P** **00 02 30.0 -0.8**

comp=Z,407nm,1.3s,mb6.4
SMF Signal de Mont 96.62 316 *e*P **P 00 02 30.0 -0.8**
SMF pmax pmax
comp=Z,204nm,1.3s,mb6.4
SMF Signal de Mont 96.62 316 *e*P **P 00 02 30.0 -0.8**
comp=Z,204nm,1.3s,mb6.4
LASF Ste Croix 96.75 314 *e*P **P 00 02 31.1 -0.3**
comp=Z,212nm,1.2s,mb6.1
PLDF La Plantade 96.81 316 *e*P **P 00 02 32.0 +0.4**
PLDF La Plantade 96.81 316 *e*P **P 00 02 32.0 +0.4**
SSF Saint Saulge 96.83 317 *e*P **P 00 02 31.0 -0.7**
AVF Avril sur Loir 96.95 317 *e*P **P 00 02 31.5 -0.7**
comp=Z,292nm,1.2s,mb6.3
AVF Avril sur Loir 96.95 317 *e*P **P 00 02 31.5 -0.7**
AVF pmax pmax
comp=Z,146nm,1.2s,mb6.3
AVF Avril sur Loir 96.95 317 *e*P **P 00 02 31.5 -0.7**
comp=Z,146nm,1.2s,mb6.3
LBL Lubilhac 97.12 315 *e*P **P 00 02 33.6 +0.6**
LBL Lubilhac 97.12 315 *e*P **P 00 02 33.6 +0.6**
AGO Saint Agoulin 97.15 316 *e*P **P 00 02 32.9 -0.3**
AGO Saint Agoulin 97.15 316 *e*P **P 00 02 32.9 -0.3**
PYM Petit Puy Mans 97.26 316 *e*P **P 00 02 32.7 -0.9**
PYM Petit Puy Mans 97.26 316 *e*P **P 00 02 32.7 -0.9**
BGF Bois d'Agland 97.31 316 *e*P **P 00 02 33.4 -0.5**
HYF Humbligny 97.41 317 *e*P **P 00 02 34.1 -0.2**
MENF Mencas 97.46 320 *e*P **P 00 02 34.1 -0.3**
MENF Mencas 97.46 320 *e*P **P 00 02 34.1 -0.3**
EJON La Jonquera 97.55 312 ⇑P **P 00 02 34.5 -0.5**
ETOS Mallorca 97.75 310 P **P 00 02 36.5 +0.5**
TCF Toulx Ste Croi 97.77 316 *e*P **P 00 02 35.6 -0.4**
comp=Z,476nm,1.8s,mb6.4
TCF Toulx Ste Croi 97.77 316 *e*P **P 00 02 35.6 -0.4**
TCF pmax pmax
comp=Z,238nm,1.8s,mb6.4
TCF Toulx Ste Croi 97.77 316 *e*P **P 00 02 35.6 -0.4**
comp=Z,238nm,1.8s,mb6.4
AEU East Anglia Un 97.84 323 *e*P **P 00 02 38.1 +2.0**
ABA1 Baconsthorpe 97.86 323 *e*P **P 00 02 38.2 +2.0**
CAF Calviac 97.98 315 *e*P **P 00 02 36.6 -0.3**
comp=Z,292nm,1.6s,mb6.3
CAF Calviac 97.98 315 *e*P **P 00 02 36.6 -0.3**
CAF pmax pmax
comp=Z,146nm,1.6s,mb6.3
CAF Calviac 97.98 315 *e*P **P 00 02 36.6 -0.3**
comp=Z,146nm,1.6s,mb6.3
MTLF Montolieu 97.98 313 *e*P **P 00 02 36.6 -0.4**
comp=Z,177nm,1.3s,mb6.2
MTLF Montolieu 97.98 313 *e*P **P 00 02 36.6 -0.4**
MTLF pmax pmax
comp=Z,88nm,1.3s,mb6.1
MTLF Montolieu 97.98 313 *e*P **P 00 02 36.6 -0.4**
comp=Z,88nm,1.3s,mb6.1
TFO1 Folkestone 98.05 321⇑ *e*P **P 00 02 36.5 -0.5**
CARF Carcanieres 98.11 313 *e*P **P 00 02 37.5 0.0**
CARF Carcanieres 98.11 313 *e*P **P 00 02 37.5 0.0**
LRW Lerwick 98.19 330⇑ *e*P **P 00 02 37.7 +0.2**
VALF Valcebollere 98.19 312 *e*P **P 00 02 38.1 +0.2**
VALF Valcebollere 98.19 312 *e*P **P 00 02 38.1 +0.2**
RJF Les Rejaudoux 98.33 315 *e*P **P 00 02 38.3 -0.2**
comp=Z,721nm,1.9s,mb6.6
RJF *e*MLR MLR
comp=Z,482µm,20.2s,MS7.7
RJF Les Rejaudoux 98.33 315 *e*P **P 00 02 38.3 -0.2**
RJF pmax pmax
comp=Z,361nm,1.9s,mb6.6
RJF MLR MLR
comp=Z,482µm,20.3s,MS8.0
RJF Les Rejaudoux 98.33 315 *e*P **P 00 02 38.3 -0.2**
comp=Z,361nm,1.9s,mb6.6
RJF LR LR
comp=Z,482µm,20.3s,MS8.0
TTA Tatalina 98.35 27 *e*P **P 00 02 37.5 -0.6**
TTA pmax pmax
comp=Z,467nm,1.5s,mb6.8
TTA Tatalina 98.35 27 *e*P **P 00 02 37.5 -0.7**
comp=Z,467nm,1.5s,mb6.8
WAL1 Walls 98.38 331 *e*P **P 00 02 34.5 -3.9**
JMIC Jan Mayen 98.67 342 PP PP 00 06 43.4 +3.0
comp=Z,76nm,0.8s,baz=162,slow=13,SNR=2.9
JMIC LR LR 00 54 11.7
comp=Z,960µm,21.7s,MS8.3,baz=74,slow=40
JMIC Jan Mayen 98.67 342⇑ *i*P **P 00 02 40.3 +0.8**
JMIC *e*PP PP 00 06 40.1 -0.3
JMIC *e*SS SS 00 20 56.3 +4.8
JMIC AMS AMS 00 54 36.8
comp=Z,841µm,20.3s,MS8.2
IMA2 Indian Mountai 98.68 23 *e*P **P 00 02 38.6 -1.0**
SALF Salau 98.78 313 *e*P **P 00 02 40.7 +0.2**
SALF Salau 98.78 313 *e*P **P 00 02 40.7 +0.2**
MLS Moulis 98.83 313 *e*P **P 00 02 40.1 -0.7**
MLS Moulis 98.83 313 *e*P **P 00 02 40.1 -0.7**
SVW2 Sparrevohn 98.89 29 *e*P **P 00 02 40.0 -0.6**
LFF La Frestale 98.91 315 *e*P **P 00 02 41.0 -0.1**
comp=Z,361nm,1.6s,mb6.3
LFF La Frestale 98.91 315 *e*P **P 00 02 41.0 -0.1**
LFF pmax pmax
comp=Z,180nm,1.6s,mb6.3
LFF La Frestale 98.91 315 *e*P **P 00 02 41.0 -0.1**
comp=Z,180nm,1.6s,mb6.3
EPOB Poblet 98.97 311 ⇑P **P 00 02 41.9 +0.4**
DAG Danmarks Havn 99.03 348*j* *i*P **P 00 02 40.0 -1.0**
DAG pmax pmax
comp=Z,37nm,0.9s,mb5.9
DAG Danmarks Havn 99.03 348*j* *i*P **P 00 02 40.0 -1.0**
comp=Z,37nm,0.9s,mb5.9
MELF Melles 99.08 313 *e*P **P 00 02 41.5 -0.4**
MELF Melles 99.08 313 *e*P **P 00 02 41.5 -0.4**
LDF La Druitiere 99.13 319 *e*P **P 00 02 41.2 -0.8**
comp=Z,139nm,1.1s,mb6.1
LDF La Druitiere 99.13 319 *e*P **P 00 02 41.2 -0.8**
LDF pmax pmax
comp=Z,70nm,1.0s,mb6.2
LDF La Druitiere 99.13 319 *e*P **P 00 02 41.2 -0.8**
comp=Z,70nm,1.0s,mb6.1
SKP1 Kophill 99.19 322 *e*P **P 00 02 41.6 -0.5**
FLN La Foliniere 99.35 319 *e*P **P 00 02 42.1 -0.9**
comp=Z,207nm,1.3s,mb6.2,baz=77
FLN *e*MLR MLR
comp=Z,763µm,23.0s,MS7.8
FLN La Foliniere 99.35 319 *e*P **P 00 02 42.1 -0.9**
FLN pmax pmax
comp=Z,103nm,1.3s,mb6.2
FLN MLR MLR
comp=Z,763µm,23.0s,MS8.1
FLN La Foliniere 99.35 319 *e*P **P 00 02 42.1 -0.9**
comp=Z,103nm,1.3s,mb6.2
FLN LR LR
comp=Z,763µm,23.0s,MS8.1
LDU Leeds Universi 99.36 324 *e*P **P 00 02 51.4 +8.5**
CWF Charnwood Fore 99.36 323⇑ *e*P **P 00 02 42.2 -0.7**
MFF Saint Martin d 99.37 317 *e*P **P 00 02 42.4 -0.7**
comp=Z,76nm,0.9s,mb5.9
MFF Saint Martin d 99.37 317 *e*P **P 00 02 42.4 -0.7**
MFF pmax pmax
comp=Z,38nm,0.9s,mb5.9
MFF Saint Martin d 99.37 317 *e*P **P 00 02 42.4 -0.7**
comp=Z,38nm,0.9s,mb5.9
HPK Haverah Park 99.37 324 P **P 00 02 43.1 +0.2**
HPK Haverah Park 99.37 324⇑ *e*P **P 00 02 43.1 +0.2**
HPK ⇑ *e*P 00 02 43.1
EPF Esparros 99.37 313 *e*P **P 00 02 42.4 -0.8**
comp=Z,72nm,1.2s,mb5.8
EPF Esparros 99.37 313 *e*P **P 00 02 42.4 -0.8**
EPF pmax pmax
comp=Z,36nm,1.2s,mb5.8
EPF Esparros 99.37 313 *e*P **P 00 02 42.4 -0.8**
comp=Z,36nm,1.2s,mb5.8
TORD Torodi Ar. Bea 99.38 283 P **P 00 02 43.6 -0.2**
comp=Z,10nm,0.9s,mb5.4,baz=80,slow=4.1,SNR=41
TORD PP PP 00 06 51.5 +4.0
comp=Z,10nm,1.1s,baz=120,slow=8.5,SNR=2.3
TORD PKKPbc PKKPbc 00 19 09.9 +2.8
comp=Z,11nm,1.0s,baz=289,slow=2.4,SNR=6.6
TORD LR LR 00 47 49.9
comp=Z,350µm,20.5s,MS7.8,baz=80,slow=36
RESF Ens 99.40 313 *e*P **P 00 02 44.3 +1.0**
RESF Ens 99.40 313 *e*P **P 00 02 44.3 +1.0**
KBI1 Birley Grange 99.42 323 *e*P **P 00 02 41.7 -1.5**
XSO Sourhope Farm 99.49 326 *e*P **P 00 02 42.5 -0.9**
WOL Wolverton 99.50 321⇑ *e*P **P 00 02 43.4 -0.2**
EBIE Bielsa 99.55 313 ⇑P **P 00 02 44.9 +0.9**
ERTA Horta de San J 99.56 311 ⇑P Pdif 00 02 44.3 +0.6
LABF Labassere 99.57 313 *e*P Pdif 00 02 43.1 -0.7
LABF Labassere 99.57 313 *e*P Pdif 00 02 43.1 -0.7
LHO Holmfirth 99.57 324 *e*P Pdif 00 02 41.5 -2.3
XAL Allendale 99.58 325 *e*P Pdif 00 02 42.5 -1.3
MME1 Meikle Cairn 99.58 328 *e*P Pdif 00 02 42.5 -1.4
MLA1 Latheron 99.61 329 *e*P Pdif 00 02 43.6 -0.4
VIEF Viey 99.62 313 *e*P Pdif 00 02 42.8 -1.2
VIEF Viey 99.62 313 *e*P Pdif 00 02 42.8 -1.2
KWE Weaver Farm 99.64 323 *e*P Pdif 00 02 43.7 -0.4
GRR Gorron 99.64 319 *e*P Pdif 00 02 43.5 -0.6
comp=Z,108nm,1.1s
GRR Gorron 99.64 319 *e*P Pdif 00 02 43.5 -0.6
GRR pmax pmax
comp=Z,54nm,1.1s,mb5.9
GRR Gorron 99.64 319 *e*P Pdif 00 02 43.5 -0.6
comp=Z,54nm,1.1s
MCD Coleburn Disti 99.68 328 *e*P Pdif 00 02 43.9 -0.4
CHUM Lake Minchumin 99.77 25 *e*Pdif Pdif 00 02 44.3 -0.3
comp=Z,609nm,1.5s
SSW Stow on the Wo 99.80 322 *e*P Pdif 00 02 43.3 -1.5
SWN1 Swindon 99.83 322⇑ *e*P Pdif 00 02 44.2 -0.8
STNC Stoke 99.85 323⇑ *e*P Pdif 00 02 43.7 -1.4
REYF Montagne du Re 99.91 313 *e*P Pdif 00 02 45.4 +0.1
REYF Montagne du Re 99.91 313 *e*P Pdif 00 02 45.4 +0.1
EDI Edinburgh 99.94 326⇑ *e*P Pdif 00 02 45.6 +0.1
EKA Eskdalemuir Ar 100.03 326 P Pdif 00 02 45.5 -0.4
comp=Z,11nm,1.0s,baz=94,slow=5.2,SNR=21
EKA PP PP 00 06 51.0 -0.3
comp=Z,43nm,0.9s,baz=83,slow=7.9,SNR=4.1
EKA PKKPbc PKKPbc 00 19 14.2 +7.5
comp=Z,3.8nm,0.7s,baz=252,slow=3.6,SNR=5.6
EKA Eskdalemuir Ar 100.03 326 P Pdif 00 02 45.5 -0.3
EKA 00 06 51.0
EKA pmax pmax
comp=Z,11nm,1.0s
EKA pmax pmax
comp=Z,43nm,0.9s
ECK Cauldkaine Hil 100.04 326 *e*P Pdif 00 02 45.5 -0.4
ETSF Etsaut 100.04 313 *e*P Pdif 00 02 46.3 +0.4
comp=Z,112nm,1.2s
ETSF Etsaut 100.04 313 *e*P Pdif 00 02 46.3 +0.4
ETSF pmax pmax
comp=Z,56nm,1.3s
ETSF Etsaut 100.04 313 *e*P Pdif 00 02 46.3 +0.4
comp=Z,56nm,1.3s
ESK Eskdalemuir 100.06 326⇑ *e*P Pdif 00 02 45.2 -0.8
ESK Eskdalemuir 100.06 326 *e*Pdif Pdif 00 02 38.2 -7.7
ESK LR LR
comp=Z,364µm,22.0s,MS7.8
PPLA Purkeypile 100.06 26 *e*Pdif Pdif 00 02 46.1 +0.1
comp=Z,715nm,1.8s
ESAC San Caprasio 100.09 312 ⇑P Pdif 00 02 46.2 +0.1
MVH1 Achvaich 100.11 328 *e*P Pdif 00 02 43.2 -3.0
ATE Arette 100.13 313 *e*P Pdif 00 02 46.4 +0.1
ATE Arette 100.13 313 *e*P Pdif 00 02 46.4 +0.1
EBEN Beniarda 100.18 309 ⇑P Pdif 00 02 48.0 +1.5
EMOS Mosqueruela 100.22 310 ⇑P Pdif 00 02 48.3 +1.6
MDO Dochfour 100.30 328 *e*P Pdif 00 02 44.3 -2.7
JQE Queens East 100.31 319 *e*P Pdif 00 02 46.7 -0.3
HLM1 Long Mynd 100.34 323 *e*P Pdif 00 02 44.6 -2.6
JRS Jersey 100.35 319 *e*P Pdif 00 02 47.1 -0.2
JLP Les Platons 100.35 319 *e*P Pdif 00 02 47.3 0.0
JSA Saint Aubin 100.40 319⇑ *e*P Pdif 00 02 46.9 -0.5
JVM Valle D.L. Mar 100.42 319 *e*P Pdif 00 02 44.6 -3.0
HGH Gray Hill 100.44 322 *e*P Pdif 00 02 47.0 -0.7
MCH1 Michaelchurch 100.50 322⇑ *e*P Pdif 00 02 47.2 -0.7
SBD1 Bryn Du 100.50 323 *e*P Pdif 00 02 47.4 -0.5
SJPF Ste Jean 100.51 313 *e*P Pdif 00 02 48.2 +0.2
comp=Z,132nm,1.4s
SJPF Ste Jean 100.51 313 *e*P Pdif 00 02 48.2 +0.2
SJPF pmax pmax
comp=Z,66nm,1.4s
SJPF Ste Jean 100.51 313 *e*P Pdif 00 02 48.2 +0.2
comp=Z,66nm,1.4s
OSSF Osses 100.52 313 *e*P Pdif 00 02 47.8 -0.2
OSSF Osses 100.52 313 *e*P Pdif 00 02 47.8 -0.2
RSC Scourie 100.53 329 *e*P Pdif 00 02 47.7 -0.4
GCD Castle Douglas 100.56 325 *e*P Pdif 00 02 46.9 -1.3
REB Eisgbbrachaidh 100.64 329 *e*P Pdif 00 02 48.5 -0.1
HTR Trewern Hill 100.65 322 *e*P Pdif 00 02 47.9 -0.7
PGBU Glenifferbraes 100.68 326⇑ *e*P Pdif 00 02 48.2 -0.5
EALK Alkurruntz 100.70 313 ⇑P Pdif 00 02 48.8 0.0
ELIZ Elizondo 100.72 313 P Pdif 00 02 49.9 +1.0
comp=Z,402nm,4.2s
TRF Thorofare Moun 100.75 26 *e*Pdif Pdif 00 02 47.9 -1.1
KAC Achnashellach 100.78 328 *e*P Pdif 00 02 48.4 -0.7
SGMF Saint Gilles 100.78 319 *e*P Pdif 00 02 48.5 -0.7
WPM1 Penmaenmawr 100.83 324 *e*P Pdif 00 02 49.5 +0.1
RRR Rubha Reidh 100.97 329 *e*P Pdif 00 02 49.4 -0.6
GAL1 Galloway 100.99 325⇑ *e*P Pdif 00 02 50.2 +0.1
KPL Plockton 101.00 328⇑ *e*P Pdif 00 02 48.3 -1.9
YLL Llanberis 101.00 324 *e*P Pdif 00 02 49.7 -0.5
WME Myndd Eilian 101.04 324 *e*P Pdif 00 02 50.5 +0.2
EMUR La Murta 101.05 308 ⇑P Pdif 00 02 50.7 +0.3
RTO Tolsta 101.06 329 *e*P Pdif 00 02 47.0 -3.4
KDAK Kodiak Island 101.07 32 P Pdif 00 02 50.7 +0.2
comp=Z,29nm,0.9s,baz=228,slow=2.2,SNR=9.5
KDAK Kodiak Island 101.07 32 *e*Pdif Pdif 00 02 53.6 +3.1
KDAK LR LR
comp=Z,169µm,20.0s,MS7.5
WIM Isle of Man 101.11 325 *e*P Pdif 00 02 50.0 -0.7
WLF1 Llynfaes 101.11 324⇑ *e*P Pdif 00 02 50.4 -0.2
YRF1 Yr Eifi 101.19 323 *e*P Pdif 00 02 50.1 -0.9
KAR1 Arisaig 101.19 328 *e*P Pdif 00 02 50.3 -0.7
YRC Rhoscolyn 101.22 324 *e*P Pdif 00 02 51.1 -0.1
QUIF Quistinic 101.24 318 *e*P Pdif 00 02 50.4 -0.8
comp=Z,143nm,1.4s
QUIF Quistinic 101.24 318 *e*P Pdif 00 02 50.4 -0.8
QUIF pmax pmax
comp=Z,72nm,1.4s
QUIF Quistinic 101.24 318 *e*P Pdif 00 02 50.4 -0.8
comp=Z,72nm,1.4s
ROSF Rostrenen 101.25 319 *e*P Pdif 00 02 50.6 -0.6
DYA Yadsworthy 101.33 321⇑ *e*P Pdif 00 02 51.1 -0.5
COLA College 101.35 24 *e*P Pdif 00 02 50.9 -0.8
COLA pmax pmax
comp=Z,56nm,0.9s
COLA MLR MLR
comp=Z,520µm,20.0s,MS8.0
COLA College 101.35 24 *e*Pdif Pdif 00 02 50.9 -0.8
comp=Z,56nm,0.9s
COLA LR LR
comp=Z,520µm,20.0s,MS8.0
ETOR Torete 101.38 311 P Pdif 00 02 53.2 +1.4
ETOR pmax pmax
comp=Z,7.0nm,1.0s
ETOR Torete 101.38 311 P Pdif 00 02 53.2 +1.4
comp=Z,7.2nm,1.0s
RRH Rhenigidale 101.41 329 *e*P Pdif 00 02 51.5 -0.5
KIP Kipapa 101.43 69 PFAKE 00 03 00.0 +7.9
KIP LR LR
comp=Z,134µm,22.0s,MS7.4
HTL Hartland 101.58 322⇑ *e*P Pdif 00 02 51.8 -1.0
SLKM Skilak Lake 101.58 29 *e*P Pdif 00 02 52.3 -0.4
PMR Palmer 101.79 27 PFAKE 00 03 00.0 +6.3
PMR LR LR
comp=Z,519µm,22.0s,MS8.0
GMM Mts of Mourne 101.83 325 *e*P Pdif 00 02 53.4 -0.4
XMAS Kiritimati 101.90 88 *e*Pdif Pdif 00 02 53.3 -0.9
XMAS LR LR
comp=Z,104µm,20.0s,MS7.3
CSA1 St Austell 101.95 321 *e*P Pdif 00 02 53.9 -0.5
EVIA Vianos 101.96 309 P Pdif 00 02 53.7 -0.7
EVIA pmax pmax
comp=Z,6.0nm,0.6s
EVIA Vianos 101.96 309 P Pdif 00 02 53.7 -0.7
comp=Z,6.0nm,0.6s
ELAN Lanestosa 102.10 314 ⇑P Pdif 00 02 56.4 +1.4
CMA1 Manaccan 102.15 321 *e*P Pdif 00 02 54.9 -0.3
CCA1 Carnmenellis 102.19 321 *e*P Pdif 00 02 53.7 -1.8
DLF Lyons Farm 102.37 324 *e*P Pdif 00 02 59.5 +3.3
EBER Berja 102.45 307 P Pdif 00 02 56.2 -0.4
DMUB Kingscourt 102.45 325 *e*P Pdif 00 02 59.8 +3.2
EQES Quesada 102.50 308 ⇑P Pdif 00 02 57.5 +0.7
EALB Alboran 102.67 306 P Pdif 00 02 57.0 -0.6
DCN Croghan 102.79 324 *e*P Pdif 00 03 01.2 +3.1
ECOG Cogollos-Vega 102.95 308 P Pdif 00 02 59.9 +1.1
ECOG pmax pmax
comp=Z,4.0nm,0.8s
ECOG Cogollos-Vega 102.95 308 P Pdif 00 02 59.9 +1.1
comp=Z,4.0nm,0.8s
ESDC Sonseca Array 102.96 310 Pdiff Pdif 00 02 59.7 +0.9
comp=Z,2.2nm,0.8s,baz=57,slow=4.5,SNR=7.4
ESDC PP PP 00 07 15.8 +1.9
comp=Z,20nm,1.1s,baz=36,slow=6.1,SNR=5.2
ESDC PKKPbc PKKPbc 00 19 00.4 +2.8
comp=Z,6.6nm,0.9s,baz=286,slow=2.7,SNR=7.0
ESDC Sonseca Array 102.96 310 ⇑P Pdif 00 02 58.4 -0.5
comp=Z,432nm,8.9s
ESLA Sonseca Array 102.96 310 *e*Pdif Pdif 00 03 01.4 +2.5
comp=Z,558nm,1.3s
GUD Guadarrama 102.98 311 P Pdif 00 02 59.5 +0.5
GUD pmax pmax
comp=Z,7.0nm,0.8s
GUD Guadarrama 102.98 311 P Pdif 00 02 59.5 +0.6
comp=Z,6.7nm,0.8s
EBAN Banos Encina 103.02 308 P Pdif 00 02 57.9 -1.2
EBAN pmax pmax
comp=Z,12nm,1.0s
EBAN Banos Encina 103.02 308 P Pdif 00 02 57.9 -1.2
comp=Z,12nm,1.0s
PAB San Pablo 103.28 310 PFAKE 00 03 10.0 +10
PAB LR LR
comp=Z,227µm,20.0s,MS7.7
EARI Arriondas 103.37 314 ⇑P Pdif 00 03 01.6 +0.9
ELOJ Sierra Loja 103.43 307 P Pdif 00 03 00.7 -0.2
ELOJ pmax pmax
comp=Z,3.0nm,0.7s
ELOJ Sierra Loja 103.43 307 P Pdif 00 03 00.7 -0.2
comp=Z,2.9nm,0.7s
EADA Adamuz 103.63 309 ⇑P Pdif 00 03 02.1 +0.3
POHA Pohakuloa 103.81 70 PFAKE 00 03 10.0 +7.3
POHA LR LR
comp=Z,136µm,22.0s,MS7.4
EMIJ Mijas 103.99 307 ⇑P Pdif 00 03 02.1 -1.3
MDT Midelt 104.30 303 Pdiff Pdif 00 03 06.2 +1.4
comp=Z,2.2nm,0.9s,baz=236,slow=13,SNR=3.9
MDT PP PP 00 07 26.7 +2.7
comp=Z,16nm,0.9s,baz=79,slow=13,SNR=4.8
MDT PKKPbc PKKPbc 00 18 54.8 +1.5
comp=Z,5.3nm,0.9s,baz=256,slow=2.7,SNR=3.9
ECAB El Cabril 104.30 309 P Pdif 00 03 04.9 +0.1
comp=Z,12nm,0.9s
EJIF Jimena Fronter 104.56 307 P Pdif 00 03 10.7 +4.7
ECAL Calabor 104.70 313 P Pdif 00 03 05.6 -1.0
PBRG Braganca 104.73 312 *e*P Pdif 00 03 08.8 +2.1
EPON Pontenova 104.76 314 P Pdif 00 03 04.9 -2.0
ESPR Espera 104.82 307 P Pdif 00 03 07.4 +0.3
DAWY Dawson 105.05 23 *e*Pdif Pdif 00 03 07.3 -0.8
MVO Moncorvo 105.05 312 *e*P Pdif 00 03 08.5 +0.3
MVO Moncorvo 105.05 312 *e*PP PP 00 07 31.5 +2.2
MVO Moncorvo 105.05 312 *e*LR LR 00 39 54.4
comp=Z,229µm,18.0s
SHEL Horse Pasture 105.08 253 PFAKE 00 07 40.0 +16
SHEL LR LR
comp=Z,906µm,22.0s,MS8.3
SFS San Fernando 105.15 307 PFAKE 00 07 30.0 +6.5
SFS LR LR
comp=Z,461µm,21.0s,MS8.0
EMIN Mina Concepcio 105.33 308 P Pdif 00 03 09.2 -0.2
EBAD Badajoz 105.44 309 ⇑P Pdif 00 03 10.4 +0.5
PVRL Vila Real 105.55 312 *e*P Pdif 00 03 11.9 +1.5
PVRL Vila Real 105.55 312 *e*PP PP 00 07 35.2 +2.2
PBAR Barrancos 105.55 309 *e*P Pdif 00 03 10.3 -0.1
PBAR Barrancos 105.55 309 *e*PP PP 00 07 32.2 -0.9
PBAR Barrancos 105.55 309 *e*LR LR 00 40 43.2
comp=Z,268µm,20.0s
BORG Borgarnes 105.57 338 *e*P Pdif 00 03 18.4 +8.0
BORG *e*PP PP 00 07 44.2 +12
BORG LR LR
comp=Z,630µm,22.0s,MS8.1
MTE Manteigas 105.57 311 *e*P Pdif 00 03 11.5 +1.0
MTE Manteigas 105.57 311 *e*LR LR 00 39 41.8
comp=Z,253µm,18.0s
MTE Manteigas 105.57 311 PFAKE 00 07 40.0 +16
MTE LR LR
comp=Z,224µm,21.0s,MS7.7
PCBR Castelo Branco 105.62 311 *e*P Pdif 00 03 11.5 +0.8
PCBR Castelo Branco 105.62 311 *e*PP PP 00 07 34.1 +0.5
PMRV Marv??o 105.62 310 *e*P Pdif 00 03 11.3 +0.6
PMRV Marv??o 105.62 310 *e*PP PP 00 07 33.0 -0.6
PMRV Marv??o 105.62 310 *e*LR LR 00 40 21.9
comp=Z,250µm,20.0s
KIC Kosan Boka 105.65 276 *e*PKP2 Pdif 00 03 19.1 +8.3
comp=Z,536nm,1.7s
ELOB Lobios 105.69 313 P Pdif 00 03 11.5 +0.5
PCAB Cabril 105.69 313 *e*P Pdif 00 03 12.5 +1.5
PCAB Cabril 105.69 313 *i* PP PP 00 07 32.3 -1.8
DBIC Dimbokro 105.77 276 Pdiff Pdif 00 03 12.4 +1.1
comp=Z,2.6nm,1.0s,baz=54,slow=8.7,SNR=2.0
DBIC PP PP 00 07 39.8 +4.2
comp=Z,21nm,0.9s,baz=77,slow=8.3,SNR=4.3
DBIC PKKPbc PKKPbc 00 18 59.1 +11
comp=Z,6.4nm,0.7s,baz=256,slow=7.5,SNR=4.1
DBIC Dimbokro 105.77 276 P Pdif 00 03 12.4 +1.0
DBIC 00 07 39.8
DBIC pmax pmax
comp=Z,3.0nm,1.0s
DBIC pmax pmax
comp=Z,21nm,0.9s
DBIC Dimbokro 105.77 276 *e*Pdif Pdif 00 03 07.2 -4.2
comp=Z,2µm,1.3s
DBIC PP PP 00 07 39.8 +4.2
DBIC PKKPbc PKKPbc 00 18 59.1 +11
PVIS Viseu 105.78 312 *e*P Pdif 00 03 12.9 +1.5
PVIS Viseu 105.78 312 *e*PP PP 00 07 36.4 +1.7
PESTR Estremoz 105.87 310 *e*P Pdif 00 03 12.1 +0.3
PESTR Estremoz 105.87 310 *e*PP PP 00 07 36.7 +1.3
PESTR Estremoz 105.87 310 *e*LR LR 00 40 42.2
comp=Z,221µm,20.0s
TIC Toumodi 105.93 276 *e*PKP2 Pdif 00 03 19.1 +7.0
comp=Z,611nm,1.9s
LIC Lamto 105.93 276⇑ *i*P Pdif 00 03 12.6 +0.5
comp=Z,141nm,1.6s
LIC *e*MLR MLR
comp=Z,904µm,21.2s,MS8.0
LIC Lamto 105.93 276 *e*PKP2 Pdif 00 03 20.3 +8.2
comp=Z,291nm,2.4s
LIC Lamto 105.93 276⇑ *i*P Pdif 00 03 12.6 +0.5
comp=Z,70nm,1.6s
LIC *e*PKPab Pdif 00 03 20.3 +8.2
LIC LR LR
comp=Z,452µm,21.3s,MS8.0
EGRO El Granado 106.00 308 ⇑P Pdif 00 03 13.0 +0.6
RTC Rabat Centre 106.02 305 PFAKE 00 07 40.0 +15
RTC LR LR
comp=Z,290µm,20.0s,MS7.8
EMAZ Mazaricos 106.14 314 P Pdif 00 03 13.7 +0.7
PVAQ Vaqueiros 106.21 308 *e*P Pdif 00 03 13.3 0.0
PVAQ Vaqueiros 106.21 308 *e*PP PP 00 07 36.7 -1.3
PVAQ Vaqueiros 106.21 308 *e*LR LR 00 40 25.8
comp=Z,264µm,20.0s
PBEJ Beja 106.22 309 *e*P Pdif 00 03 13.3 -0.1
EVO Evora 106.25 309 *e*P Pdif 00 03 14.7 +1.2
EVO *e*MLR MLR
comp=Z,317µm,20.8s,MS7.5
EVO Evora 106.25 309 *e*P Pdif 00 03 14.3 +0.8
EVO Evora 106.25 309 *e*PP PP 00 07 39.0 +0.7
PTOM Tomar 106.36 310 *e*P Pdif 00 03 14.0 0.0
PBDV Barranco-do-Ve 106.40 308 *e*P Pdif 00 03 14.7 +0.5
PBDV Barranco-do-Ve 106.40 308 *e*PP PP 00 07 39.2 -0.2
PBDV Barranco-do-Ve 106.40 308 *e*LR LR 00 40 32.3
comp=Z,226µm,20.0s
TRIS Tristan da Cun 106.59 230 *e*PDif Pdif 00 03 18.7 +3.7
TRIS *e*PP PP 00 07 34.9 -5.8
TRIS LR LR
comp=Z,504µm,19.0s,MS8.1
MORF Marmelete 106.96 308 *e*P Pdif 00 03 17.5 +0.9
MORF Marmelete 106.96 308 *e*PP PP 00 07 43.9 +0.4
MORF Marmelete 106.96 308 *e*LR LR 00 35 48.4
comp=Z,286µm,20.0s
PNL Peninsula 106.96 27 *e*Pdif Pdif 00 03 18.5 +1.9
comp=Z,477nm,0.8s
PTEO Sao Teotonio 106.97 308 *e*P Pdif 00 03 18.4 +1.7
LIS Lisbon 107.09 310 *e*P Pdif 00 03 16.9 -0.3
LIS *e*PP PP 00 07 45.4 +1.0
LIS *e*S SKSac 00 13 54.2 -1.1
LIS *e*S SKSac 00 13 54.3 -1.0
PFVI Vila Bisbo 107.12 308 *e*P Pdif 00 03 18.3 +0.9
PFVI Vila Bisbo 107.12 308 *e*PP PP 00 07 43.6 -1.1
PFVI Vila Bisbo 107.12 308 *e*LR LR 00 41 01.6
comp=Z,338µm,20.0s
PMAFR Mafra 107.15 310 *e*P Pdif 00 03 18.0 +0.5
PMAFR Mafra 107.15 310 *e*PP PP 00 07 47.0 +2.1
PMAFR Mafra 107.15 310 *e*LR LR 00 41 14.6
comp=Z,219µm,18.0s
PPT Papeete 107.92 109 *e*PP PP 00 07 46.8 -4.3
comp=Z,73µm,29.8s
PPT *e*SP SP 00 17 02.6 -7.8

comp=Z,161µm,27.5s
PPT Papeete 107.92 109 *e*LQ 00 34 34.0
comp=Z,1123µm,40.8s
PPT *e*LR LR 00 39 12.5
comp=Z,251µm,25.0s
SIT Sitka 110.05 29 PFAKE 00 07 40.0 +8.1
SIT LR LR
comp=Z,1080µm,22.0s,MS8.4
DLBC Dease Lake 111.78 26 Pdiff Pdiff 00 03 38.0 0.0
baz=342,slow=7.9
DLBC Dease Lake 111.78 26 *e*Pdif Pdif 00 03 38.0 -0.1
WRAK Wrangell Islan 111.79 29 *e*Pdif Pdif 00 03 40.6 +2.5
WRAK *e*PP PP 00 08 08.9 -8.8
WRAK *e*PKKP PKKPbc 00 17 44.8 -46
WRAK LR LR
comp=Z,758µm,20.0s,MS8.3
PMSA Palmer Station 111.85 187 PKKPbc PKKPbc 00 18 40.4 +10
comp=Z,14nm,0.7s,baz=91,slow=3.0,SNR=5.2
PMSA Palmer Station 111.85 187 *e*Pdif Pdif 00 03 46.5 +8.1
PMSA PKiKP PKiKP 00 07 28.6 -6.6
PMSA *e*PKKP PKKPbc 00 17 33.6 -57
PMSA LR LR
comp=Z,222µm,22.0s,MS7.7
EFAM Famara 112.40 300 P Pdif 00 03 41.6 +0.8
SFJD Kangerlussuaq 112.72 348 Pdiff Pdif 00 03 42.8 +0.6
comp=Z,5.3nm,0.8s,baz=91,slow=5.4,SNR=2.1
SFJD PKiKP PKiKP 00 07 36.2 -0.6
comp=Z,34nm,1.0s,baz=9.0,slow=6.1,SNR=4.3
SFJD PP PP 00 08 20.7 -3.2
comp=Z,77nm,1.1s,baz=43,slow=8.5,SNR=4.6
SFJD Kangerlussuaq 112.72 348 ⇑*i*P Pdif 00 03 43.4 +1.1
SFJD *e* 00 14 21.8
SFJD *i* 00 17 58.2
SFJD MLR MLR
comp=Z,630µm,20.0s,MS8.2
SFJD Kangerlussuaq 112.72 348 ⇑*i*P Pdif 00 03 43.4 +1.1
SFJD *i* 00 08 15.0
SFJD *e* 00 14 21.8
SFJD *i* 00 17 58.2
SFJD *e* 00 18 10.9
SFJD
comp=Z,629µm,20.0s
SFJD Kangerlussuaq 112.72 348 *e*Pdif Pdif 00 03 34.4 -7.9
SFJD PKPdf PKiKP 00 07 36.2 -0.6
SFJD PP PP 00 08 20.7 -3.2
SFJD LR LR
comp=Z,1053µm,22.0s,MS8.4
ASCN Ascension 114.41 260 PFAKE 00 07 50.0 +8.5
ASCN LR LR
comp=Z,602µm,19.0s,MS8.2
YKA Yellowknife Ar 114.74 17 Pdiff Pdif 00 03 49.6 -1.6
comp=Z,0.6nm,0.7s,baz=334,slow=4.1,SNR=3.0
YKA PKP PKiKP 00 07 41.1 +0.4
comp=Z,15nm,0.8s,baz=333,slow=2.0,SNR=13
YKA PP PP 00 08 37.2 -1.2
comp=Z,16nm,0.7s,baz=342,slow=2.4,SNR=5.2
YKA PKKPbc PKKPbc 00 18 27.0 +6.3
comp=Z,9.3nm,1.1s,baz=138,slow=2.9,SNR=5.8
YKA Yellowknife Ar 114.74 17 P Pdif 00 03 49.6 -1.6
YKA 00 07 41.1
YKA 00 08 37.2
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA pmax pmax
comp=Z,15nm,0.8s
YKA pmax pmax
comp=Z,16nm,0.7s
YKA Yellowknife Ar 114.74 17 Pdif Pdif 00 03 49.6 -1.6
YKA PKP PKiKP 00 07 41.1 +0.4
YKA PP PP 00 08 37.2 -1.2
YKA PKKPbc PKKPbc 00 18 27.1 +6.3
BBB Bella Bella 116.14 31 Pdiff Pdif 00 03 55.4 -2.1
comp=Z,4.0nm,0.9s,baz=84,slow=12,SNR=2.4
BBB PKP PKPdf 00 07 42.4 -1.3
comp=Z,23nm,0.7s,baz=288,slow=1.8,SNR=9.9
BBB PP PP 00 08 46.1 -2.4
comp=Z,47nm,0.9s,baz=11,slow=1.0,SNR=3.7
BBB Bella Bella 116.14 31 Pdif Pdif 00 03 55.4 -2.1
BBB PKP PKPdf 00 07 42.4 -1.3
BBB PP PP 00 08 46.1 -2.4
BBTS Babate 117.02 285 Pdiff Pdif 00 04 00.3 -1.1
comp=Z,13nm,0.9s,baz=307,slow=20,SNR=2.0
BBTS PKP PKPdf 00 07 46.9 +0.4
comp=Z,41nm,0.9s,baz=142,slow=1.9,SNR=5.4
BBTS PP PP 00 08 54.9 -1.4
comp=Z,66nm,0.9s,baz=178,slow=5.7,SNR=2.7
TAOE Nuku Hiva Isla 118.27 101 *e*PP PP 00 08 59.8 -5.2
comp=Z,239µm,28.8s
TAOE Nuku Hiva Isla 118.27 101 *e*SS SS 00 25 17.8 -1.4
comp=Z,750µm,33.0s
TAOE Nuku Hiva Isla 118.27 101 *e*LR LR 00 43 37.7
comp=Z,832µm,23.5s
CMLA Cha da Macela 119.72 313 *e*PKPdf PKPdf 00 07 48.7 -2.4
CMLA *e*PP PP 00 09 12.0 -2.1
CMLA *e*PKKP PKKPbc 00 17 55.2 -7.1
CMLA LR LR
comp=Z,214µm,20.0s,MS7.8
RKT Rikitea 120.04 119 *e*PP PP 00 09 16.9 +0.1
comp=Z,42µm,30.2s
RKT Rikitea 120.04 119 *e*PS PS 00 19 03.4 -4.0
RKT comp=Z,155µm,30.8s *e*SS SS 00 25 38.9 -2.4
comp=Z,229µm,32.5s
RKT Rikitea 120.04 119 *e*LQ 00 39 27.7
comp=Z,283µm,40.2s
RKT *e*LR LR 00 44 50.3
comp=Z,264µm,28.0s
C03A Quillayute Air 120.40 34 ⇓Pdiff Pdif 00 04 17.7 +1.3
baz=120
PGC Sidney 120.60 32 *e*PKPdf PKPdf 00 07 51.8 -0.7
B04A Port Angeles 120.92 33 ⇓Pdiff Pdif 00 04 20.0 +1.3
baz=121
OSD Olympics--Snow 120.95 33 P PKPdf 00 07 55.1 +2.0
A04A Legoe Bay, Lum 120.96 32 ⇑Pdiff Pdif 00 04 20.3 +1.5
baz=121
NLWA Neilton Lookou 121.10 34 ⇑Pdiff Pdif 00 04 20.6 +1.1
baz=121
NLWA Neilton Lookou 121.10 34 PFAKE 00 08 00.0 +6.6
NLWA LR LR
comp=Z,431µm,21.0s,MS8.1
A05A Maple Falls 121.12 32 ⇑Pdiff Pdif 00 04 20.1 +0.5
baz=121
D03A Wishkah Elem. 121.32 34 ⇑Pdiff Pdif 00 04 21.5 +1.1
baz=121
MBW Mount Baker 121.34 32 P PKPdf 00 07 52.8 -1.0
A06A Chilliwack 121.37 31 ⇓Pdiff Pdif 00 04 21.1 +0.4
baz=121
C04A Brinnon 121.41 33 ⇑Pdiff Pdif 00 04 22.2 +1.3
baz=121
B05A Bryant 121.56 32 ⇓Pdiff Pdif 00 04 22.6 +1.1
baz=122
JCW Jim Creek 121.69 32 *e*PKPdf PKPdf 00 07 55.1 +0.5
B06A Marblemount 121.72 32 ⇑Pdiff Pdif 00 04 22.6 +0.3
baz=122
RPW Rockport 121.75 32 *e*PKPdf PKPdf 00 07 55.5 +0.8
E03A Lebam 121.76 35 ⇓Pdiff Pdif 00 04 23.7 +1.2
baz=122
D04A Dobbs Creek Ra 121.86 34 ⇑Pdiff Pdif 00 04 24.1 +1.2
baz=122
A07A Ashnola River, 121.96 31 ⇓Pdiff Pdif 00 04 23.8 +0.5
baz=122
BMW Boistfort Moun 121.99 34 *e*PKIKP PKPdf 00 07 56.3 +1.1
USHA Ushuaia 122.05 187 PKP PKPdf 00 07 56.1 +1.1
comp=Z,26nm,1.0s,baz=302,slow=2.5,SNR=5.0
F03A Seaside 122.11 35 ⇓Pdiff Pdif 00 04 24.6 +0.6
baz=122
C05A Tolt Reservoir 122.12 33 ⇑Pdiff Pdif 00 04 24.9 +0.8
baz=122
RMW Rattlesnake Mo 122.20 33 PKIKP PKPdf 00 07 56.6 +1.1
E04A Onalaska 122.21 34 ⇓Pdiff Pdif 00 04 24.3 -0.2
baz=122
D05A Enumclaw 122.26 33 ⇑Pdiff Pdif 00 04 26.4 +1.8
baz=122
C06A Tall Timber Ra 122.40 32 ⇓Pdiff Pdif 00 04 25.9 +0.6
baz=122
HEBO Mount Hebo 122.40 36 *e*PKPdf PKPdf 00 07 54.8 -1.3
B07A Winthrop 122.47 31 ⇓Pdiff Pdif 00 04 26.3 +0.7
baz=122
H02A Toledo 122.56 37 ⇓Pdiff Pdif 00 04 27.3 +1.3
baz=122
A08A Turner Farm, O 122.58 30 ⇓Pdiff Pdif 00 04 26.5 +0.4
baz=122
FMW Mount Fremont 122.59 33 P PKPdf 00 07 55.9 -0.4
LON Longmire 122.62 34 *e*P Pdif 00 04 29.6 +3.3
LON *e* 00 07 52.3
G03A Yamhill 122.62 36 ⇑Pdiff Pdif 00 04 27.9 +1.6
baz=122
F04A Amboy 122.76 35 ⇑Pdiff Pdif 00 04 27.9 +1.0
baz=123
FCC Fort Churchill 122.82 9 *e*PKIKP PKPdf 00 07 56.6 +0.2
D06A Cle Elum 122.88 33 ⇓Pdiff Pdif 00 04 28.4 +1.0
baz=123
ETW Entiat 122.90 32 *e*PKPdf PKPdf 00 07 55.8 -1.1
A09A Danville 122.91 30 ⇑Pdiff Pdif 00 04 29.0 +1.4
baz=123
B08A Colville Reser 122.94 31 ⇓Pdiff Pdif 00 04 29.0 +1.3
baz=123
H03A Soap Creek Ran 122.98 36 ⇑Pdiff Pdif 00 04 28.3 +0.4
baz=123
C07A Waterville 122.99 32 ⇑Pdiff Pdif 00 04 28.9 +1.0
baz=123
EFI East Falkland 122.99 196 *e*P Pdif 00 04 29.2 +1.3
EFI *e* 00 09 33.2
EFI MLR MLR
comp=Z,193µm,21.0s,MS7.7
EFI East Falkland 122.99 196 *e*Pdif Pdif 00 04 29.2 +1.3
EFI *e*PKPdf PKPdf 00 07 51.8 -5.2
EFI *e*PP PP 00 09 33.1 -2.0
EFI *e*PKKP PKKPbc 00 18 14.7 +24
EFI LR LR
comp=Z,193µm,21.0s,MS7.7
COR Corvallis 123.02 36 *e*P Pdif 00 04 22.2 -5.8
COR *e* 00 09 37.8
COR MLR MLR
comp=Z,259µm,20.0s,MS7.9
COR Corvallis 123.02 36 *e*Pdif Pdif 00 04 22.1 -5.9
COR *e*PKPdf PKPdf 00 07 57.9 +0.6
COR *e*PP PP 00 09 37.8 +1.7
COR *e*PKKP PKKPbc 00 18 16.2 +26
COR LR LR
comp=Z,259µm,20.0s,MS7.9
I02A Mapleton 123.03 37 ⇑Pdiff Pdif 00 04 28.9 +0.9
baz=123
WTV Waterville 123.04 32 P PKPdf 00 07 56.7 -0.5
ASR Mount Adams--S 123.10 34 P PKPdf 00 07 57.2 -0.1
G04A Mulino 123.15 35 ⇓Pdiff Pdif 00 04 29.2 +0.6
baz=123
E06A Yakima 123.20 33 ⇑Pdiff Pdif 00 04 28.8 -0.1
baz=123
K01A Sixes 123.28 39 ⇑Pdiff Pdif 00 04 29.9 +0.7
baz=123
KEBM Edson Butte 123.33 39 *e*Pdif Pdif 00 04 23.6 -5.8
KEBM *e*PKPdf PKPdf 00 07 55.5 -2.3
F05A White Salmon 123.33 34 ⇑Pdiff Pdif 00 04 30.0 +0.6
baz=123
D07A Quincy 123.34 32 ⇑Pdiff Pdif 00 04 30.1 +0.6
baz=123
I03A Eugene 123.38 37 ⇓Pdiff Pdif 00 04 30.4 +0.8
baz=123
A10A Northport 123.42 29 ⇓Pdiff Pdif 00 04 30.2 +0.4
baz=123
C08A Higginbotham F 123.45 31 ⇑Pdiff Pdif 00 04 30.5 +0.5
baz=123
B09A Rice 123.50 30 ⇓Pdiff Pdif 00 04 31.1 +1.0
baz=123
J02A Umpqua 123.53 38 ⇓Pdiff Pdif 00 04 31.5 +1.1
baz=123
PTCN Pitcairn Islan 123.59 122 PFAKE 00 08 10.0 +11
PTCN LR LR
comp=Z,182µm,22.0s,MS7.7
H04A Detroit Lake 123.62 36 ⇓Pdiff Pdif 00 04 31.4 +0.7
baz=124
KBO Bosley Butte 123.75 39 *e*PKPdf PKPdf 00 07 59.0 +0.3
F06A Goldendale 123.78 34 ⇑Pdiff Pdif 00 04 32.7 +1.3
baz=124
G05A Wamic 123.80 35 ⇓Pdiff Pdif 00 04 33.0 +1.5
baz=124
E07A Sunnyside 123.81 33 ⇓Pdiff Pdif 00 04 33.3 +1.7
baz=124
C09A Chrisman Ranch 123.84 31 ⇓Pdiff Pdif 00 04 33.1 +1.4
baz=124
OD2 Odessa Site #2 123.88 31 *e*PKPdf PKPdf 00 07 58.6 -0.2
D08A Wollman Farm, 123.99 32 ⇑Pdiff Pdif 00 04 32.6 +0.2
baz=124
I04A Tendick Farm, 124.00 37 ⇑Pdiff Pdif 00 04 33.6 +1.2
baz=124
M01C Crescent City 124.01 39 ⇑Pdiff Pdif 00 04 34.2 +1.7
baz=124
A11A Hall Mountain, 124.01 29 ⇑Pdiff Pdif 00 04 33.9 +1.5
baz=124
B10A Chitwood Farm, 124.04 30 ⇓Pdiff Pdif 00 04 33.4 +0.9
baz=124
RSW Rattlesnake Hi 124.05 33 *e*PKPdf PKPdf 00 07 59.1 -0.1
HAWA Hanford 124.08 33 *e*PKPdf PKPdf 00 07 59.5 +0.3
HAWA *e*PKKP PKKPbc 00 17 36.8 -9.0
HAWA LR LR
comp=Z,565µm,21.0s,MS8.2
NEW Newport 124.11 30 PFAKE 00 08 10.0 +11
NEW LR LR
comp=Z,451µm,20.0s,MS8.1
L02A Cave Junction 124.17 39 ⇓Pdiff Pdif 00 04 34.5 +1.3
baz=124
F07A Phinny Hill Vi 124.18 33 ⇓Pdiff Pdif 00 04 34.7 +1.6
baz=124
G06A Carlson Farm, 124.19 34 ⇓Pdiff Pdif 00 04 34.2 +1.0
baz=124
H05A Madras 124.20 35 ⇓Pdiff Pdif 00 04 34.0 +0.7
baz=124
E08A Dider Farm, El 124.27 32 ⇓Pdiff Pdif 00 04 34.9 +1.3
baz=124
D09A Jones Farm, Ri 124.30 31 ⇑Pdiff Pdif 00 04 34.7 +1.0
baz=124
KRMB Red Mountain 124.31 40 *e*PKPdf PKPdf 00 08 01.0 +1.2
C10A Spilker Farm, 124.32 30 ⇓Pdiff Pdif 00 04 34.2 +0.4
baz=124
HUMO Hull Mountain 124.33 38 ⇑Pdiff Pdif 00 04 36.1 +2.2
baz=124
HUMO Hull Mountain 124.33 38 PFAKE 00 08 10.0 +10
HUMO LR LR
comp=Z,226µm,20.0s,MS7.8
A12A Yaak River Ran 124.36 28 ⇑Pdiff Pdif 00 04 35.1 +1.1
baz=124
B11A Sandpoint 124.37 29 ⇓Pdiff Pdif 00 04 34.6 +0.6
baz=124
I05A Bend 124.46 36 ⇑Pdiff Pdif 00 04 36.1 +1.6
baz=124
J04A Umpqua Nationa 124.49 37 ⇑Pdiff Pdif 00 04 35.6 +1.0
baz=124
JCC Jacoby Creek 124.61 40 ⇑Pdiff Pdif 00 04 35.8 +0.7
baz=124
H06A Lindquist Farm 124.66 35 ⇓Pdiff Pdif 00 04 36.7 +1.4
baz=125
G07A Ruggs Ranch, H 124.71 34 ⇑Pdiff Pdif 00 04 36.8 +1.2
baz=125
B12A Libby 124.72 29 ⇑Pdiff Pdif 00 04 37.1 +1.5
baz=125
E09A Wood Farm, Sta 124.75 32 ⇑Pdiff Pdif 00 04 36.6 +0.9
baz=125
C11A Tepee Creek (N 124.83 30 ⇑Pdiff Pdif 00 04 37.0 +0.9
baz=125
D10A Wagner Farm, O 124.84 31 ⇑Pdiff Pdif 00 04 37.6 +1.4
baz=125
FFC Flin Flon 124.86 16 PFAKE 00 08 10.0 +10
FFC LR LR
comp=Z,1024µm,20.0s,MS8.5
A13A Flathead Natio 124.95 28 ⇑Pdiff Pdif 00 04 37.5 +0.9
baz=125
YBH Yreka Blue Hor 124.96 39 Pdiff Pdif 00 04 37.6 +0.9
comp=Z,0.3nm,0.4s,baz=157,slow=3.9,SNR=3.1
YBH PKP PKPdf 00 07 59.8 -1.2
comp=Z,33nm,0.8s,baz=31,slow=3.8,SNR=22
YBH PP PP 00 09 39.9 -9.3
comp=Z,71nm,1.0s,baz=7.1,slow=8.1,SNR=2.2
YBH Yreka Blue Hor 124.96 39 ⇑Pdiff Pdif 00 04 38.6 +1.9
baz=125
YBH Yreka Blue Hor 124.96 39 Pdif Pdif 00 04 37.5 +0.9
YBH *e*PKPdf PKPdf 00 08 01.2 +0.2
J05A Fort Rock 124.99 37 ⇓Pdiff Pdif 00 04 38.6 +1.8
baz=125
M02C Callahan 125.06 39 ⇓Pdiff Pdif 00 04 38.8 +1.7
baz=125
N02C Big Bar 125.07 40 ⇓Pdiff Pdif 00 04 38.5 +1.4
baz=125
K04A Chilquin 125.08 38 ⇑Pdiff Pdif 00 04 38.8 +1.6
baz=125
LNOR Lincton Mounta 125.08 33 *e*PKIKP PKPdf 00 08 00.2 -0.9
G08A Pilot Rock 125.08 33 ⇑Pdiff Pdif 00 04 38.8 +1.6
baz=125
O01C Eel River Cons 125.09 41 ⇑Pdiff Pdif 00 04 39.1 +1.8
baz=125
H07A Lands Inn, Kim 125.18 34 ⇓Pdiff Pdif 00 04 39.2 +1.5
baz=125
I06A Prineville 125.20 35 ⇑Pdiff Pdif 00 04 39.5 +1.8
baz=125
L04A Klamath Falls 125.22 38 ⇑Pdiff Pdif 00 04 38.0 +0.2
baz=125
C12B Naegeli Ranch, 125.30 29 ⇑Pdiff Pdif 00 04 38.9 +0.8
baz=125
E10A Myers Farm, Un 125.31 31 ⇓Pdiff Pdif 00 04 39.0 +0.8
baz=125
B13A Whitefish 125.32 28 ⇓Pdiff Pdif 00 04 39.0 +0.7
baz=125
D11A Klaveano Farm, 125.33 30 ⇓Pdiff Pdif 00 04 38.2 -0.1
baz=125
F09A S2 Ranch, Elgi 125.39 32 ⇓Pdiff Pdif 00 04 39.1 +0.5
baz=125
M04C Macdoel 125.48 38 ⇑Pdiff Pdif 00 04 39.6 +0.6
baz=125
KCPM Cahto Peak 125.48 41 *e*Pdif Pdif 00 04 42.5 +3.5
KCPM *e*PKPdf PKPdf 00 07 56.1 -6.0
KIPM Iron Peak 125.49 41 *e*PKPdf PKPdf 00 08 02.5 +0.4
K05A Summer Lake 125.52 37 ⇑Pdiff Pdif 00 04 40.7 +1.5
baz=125
I07A Izee 125.53 35 ⇑Pdiff Pdif 00 04 39.9 +0.7
baz=125
F10A Beach Ranch, E 125.58 32 ⇓Pdiff Pdif 00 04 40.5 +1.1
baz=126
M03C McCloud 125.58 39 ⇓Pdiff Pdif 00 04 40.6 +1.1
baz=126
J06A Christmas Vall 125.65 36 ⇑Pdiff Pdif 00 04 40.7 +0.9
baz=126
WDC Whiskeytown Da 125.69 40 ⇓Pdiff Pdif 00 04 41.0 +1.1
baz=126
WDC Whiskeytown Da 125.69 40 PFAKE 00 08 10.0 +7.5
WDC LR LR
comp=Z,122µm,20.0s,MS7.6
H08A Prairie City 125.73 34 ⇓Pdiff Pdif 00 04 41.6 +1.5
baz=126
G09A Cove 125.74 33 ⇓Pdiff Pdif 00 04 41.8 +1.7
baz=126
O02C Red Bluff 125.75 41 ⇓Pdiff Pdif 00 04 42.4 +2.2
baz=126
C13A Hot Springs 125.76 29 ⇓Pdiff Pdif 00 04 41.4 +1.1
baz=126
D12A Red Ives Fores 125.81 30 ⇓Pdiff Pdif 00 04 40.9 +0.4
baz=126
E11A Bogner Ranch, 125.86 31 ⇓Pdiff Pdif 00 04 41.6 +0.9
baz=126
K06A Valley Falls 125.86 37 ⇓Pdiff Pdif 00 04 41.8 +1.2
baz=126
L05A Lakeview 125.94 38 ⇓Pdiff Pdif 00 04 41.5 +0.4
baz=126
J07A Hines 126.07 35 ⇓Pdiff Pdif 00 04 43.0 +1.4
baz=126
GASB Alder Springs 126.07 41 ⇑Pdiff Pdif 00 04 43.5 +1.9
baz=126
G10A Bishop Farm, J 126.08 32 ⇓Pdiff Pdif 00 04 42.6 +1.0
baz=126
C14A Swan Lake 126.09 28 ⇓Pdiff Pdif 00 04 42.5 +0.8
baz=126
E12A Beaver Dam Sad 126.14 30 ⇓Pdiff Pdif 00 04 42.9 +1.0
baz=126
M05C Lookout 126.14 38 ⇓Pdiff Pdif 00 04 42.6 +0.7
baz=126
I08A Drewsey 126.16 35 ⇑Pdiff Pdif 00 04 42.7 +0.6
baz=126
HOPS Hopland 126.18 42 ⇓Pdiff Pdif 00 04 43.2 +1.1
baz=126
HOPS Hopland 126.18 42 *e*PKPdf PKPdf 00 07 58.2 -5.3
HOPS LR LR
comp=Z,249µm,19.0s,MS7.9
H09A Durkee 126.19 33 ⇓Pdiff Pdif 00 04 42.7 +0.6
baz=126
F11A Grangeville 126.20 31 ⇑Pdiff Pdif 00 04 43.2 +1.1
baz=126
D13A Huson 126.22 29 ⇑Pdiff Pdif 00 04 43.0 +0.7
baz=126
BMO Blue Mountains 126.27 33 *e*Pdif Pdif 00 04 38.8 -3.7
BMO *e*PKP PKPdf 00 08 03.0 -0.4
BMO *e*PP PP 00 09 55.9 -1.8
BMO *e*PKKP 00 18 35.0
BMO LR LR
comp=Z,414µm,21.0s,MS8.1
MOD Modoc 126.35 37 ⇓Pdiff Pdif 00 04 44.3 +1.5
baz=126
MOD Modoc 126.35 37 *e*PKPdf PKPdf 00 08 03.5 -0.2
G11A Walters Elk Ra 126.46 32 ⇓Pdiff Pdif 00 04 44.5 +1.2
baz=126
K07A Rock Creek Ran 126.52 36 ⇓Pdiff Pdif 00 04 45.1 +1.6
baz=126
J08A Circle Bar Ran 126.56 35 ⇓Pdiff Pdif 00 04 45.7 +2.0
baz=126
I09A Lost Marbles R 126.59 34 ⇓Pdiff Pdif 00 04 46.3 +2.4
baz=126
M06C Likely Place G 126.65 38 ⇓Pdiff Pdif 00 04 45.7 +1.5
baz=126
MNRC McLaughlin Nat 126.66 42 ⇓Pdiff Pdif 00 04 45.7 +1.5
baz=127
MSO Missoula 126.66 29 PFAKE 00 08 20.0 +16
MSO LR LR
comp=Z,545µm,20.0s,MS8.2
D14A Greenough 126.69 29 ⇓Pdiff Pdif 00 04 44.8 +0.4
baz=127
H10A Noah's Angus R 126.74 33 ⇑Pdiff Pdif 00 04 45.1 +0.5
baz=127
MCCM Marconi Confer 126.74 43 ⇑Pdiff Pdif 00 04 45.3 +0.7
baz=127
MCCM Marconi Confer 126.74 43 *e*PKPdf PKPdf 00 07 58.2 -6.4
MCCM LR LR
comp=Z,218µm,22.0s,MS7.8
F12A Elk City 126.75 31 ⇓Pdiff Pdif 00 04 45.3 +0.7
baz=127
O04C Chester 126.76 40 ⇑Pdiff Pdif 00 04 45.4 +0.7
baz=127
E13A Victor 126.81 30 ⇓Pdiff Pdif 00 04 44.7 -0.3
baz=127
ELFS Eagle Lake Fie 126.82 39 ⇑Pdiff Pdif 00 04 46.5 +1.6
baz=127
L07A Adell 126.86 37 ⇑Pdiff Pdif 00 04 46.1 +1.0
baz=127
FARB Farallon Islan 126.89 43 ⇑Pdiff Pdif 00 04 45.6 +0.4
baz=127
ORV Oroville 126.92 41 ⇑Pdiff Pdif 00 04 46.4 +1.1
baz=127
CVS Carmenet Viney 126.92 42 ⇑Pdiff Pdif 00 04 46.7 +1.3
baz=127
CHMT Chamberlain Mo 126.94 29 *e*PKPdf PKPdf 00 08 03.2 -1.5
K08A Mann Creek Ran 126.94 36 ⇑Pdiff Pdif 00 04 47.2 +1.8
baz=127
SCHQ Schefferville 126.97 351 PKP PKPdf 00 08 02.0 -2.4
comp=Z,68nm,0.8s,baz=18,slow=0.6,SNR=16
SCHQ PP PP 00 09 57.6 -4.1
comp=Z,114nm,1.0s,baz=34,slow=9.7,SNR=1.9
J09A Fry Pan Ranch, 126.98 35 ⇑Pdiff Pdif 00 04 47.1 +1.4
baz=127
WVOR Wild Horse Val 127.03 36 *e*Pdif Pdif 00 04 39.1 -6.8
WVOR *e*PKPdf PKPdf 00 08 06.0 +1.0
WVOR LR LR
comp=Z,403µm,22.0s,MS8.1
I10A Payette 127.04 33 ⇑Pdiff Pdif 00 04 47.1 +1.2
baz=127
H11A Donnelly 127.06 32 ⇑Pdiff Pdif 00 04 47.2 +1.2
baz=127
O05C Quincy 127.07 40 ⇓Pdiff Pdif 00 04 47.0 +0.9
baz=127
Q03C Winters 127.07 42 ⇓Pdiff Pdif 00 04 47.8 +1.7
baz=127
E14A Clinton 127.17 29 ⇑Pdiff Pdif 00 04 47.7 +1.2
baz=127
D15A Lincoln 127.19 28 ⇑Pdiff Pdif 00 04 46.9 +0.3
baz=127
F13A Darby 127.20 30 ⇑Pdiff Pdif 00 04 46.9 +0.3
baz=127
N06A Buffalo Meadow 127.31 38 ⇑Pdiff Pdif 00 04 48.2 +1.1
baz=127
M07A Soldier Meadow 127.34 37 ⇓Pdiff Pdif 00 04 48.3 +1.0
baz=127
L08A Fields 127.35 36 ⇓Pdiff Pdif 00 04 48.5 +1.2
baz=127
Q04C Lincoln 127.38 41 ⇓Pdiff Pdif 00 04 48.2 +0.8
baz=127
K09A Rome 127.40 35 ⇑Pdiff Pdif 00 04 49.4 +1.9
baz=127
BEKR Beckwourth 127.48 40 ⇑Pdiff Pdif 00 04 49.6 +1.7
baz=127
J10A Berg Farm, Mel 127.48 34 ⇑Pdiff Pdif 00 04 49.6 +1.7
baz=127
BDM Black Diamond 127.53 42 ⇑Pdiff Pdif 00 04 48.9 +0.8
baz=127
JRSC Jasper Ridge 127.56 43 ⇑Pdiff Pdif 00 04 49.7 +1.5
baz=128

E15A	**Deer Lodge**	**127.58**	**29**	⇑Pdiff	Pdif	00 04 50.2	+1.9
	baz=128						
I11A	**Placerville**	**127.61**	**33**	⇓Pdiff	Pdif	00 04 49.3	+0.8
	baz=128						
P05C	**Yuba Gap, Truc**	**127.63**	**40**	⇑Pdiff	Pdif	00 04 49.6	+1.0
	baz=128						
O06A	**Flanigan**	**127.65**	**39**	⇓Pdiff	Pdif	00 04 50.0	+1.3
	baz=128						
F14A	**Wisdom**	**127.66**	**30**	⇓Pdiff	Pdif	00 04 49.9	+1.2
	baz=128						
EGMT	**Eagleton**	**127.70**	**25**	*e*Pdif	Pdif	00 04 47.0	-1.8
EGMT				*e*PKP	PKPdf	00 08 06.9	+0.8
EGMT				LR	LR		
	comp=Z,438µm,20.0s,MS8.1						
G13A	**Cobalt**	**127.73**	**31**	⇑Pdiff	Pdif	00 04 49.8	+0.8
	baz=128						
HRY	**Holter Researc**	**127.75**	**28**	*e*PKPdf	PKPdf	00 08 04.8	-1.4
HRY				*e*PP	PP	00 10 07.2	-0.2
WENL	**Wente Vineyard**	**127.77**	**43**	⇑Pdiff	Pdif	00 04 50.6	+1.5
	baz=128						
H12A	**Diamond D Ranc**	**127.78**	**32**	⇑Pdiff	Pdif	00 04 50.4	+1.2
	baz=128						
N07B	**Gerlach**	**127.82**	**38**	⇓Pdiff	Pdif	00 04 51.2	+1.9
	baz=128						
K10A	**MacKenzie Ranc**	**127.84**	**35**	⇑Pdiff	Pdif	00 04 51.3	+1.8
	baz=128						
LAVA	**Lava Cap Winer**	**127.85**	**41**	⇓Pdiff	Pdif	00 04 50.5	+1.0
	baz=128						
L09A	**Wilkinson Ranc**	**127.86**	**36**	⇑Pdiff	Pdif	00 04 51.3	+1.8
	baz=128						
P06A	**Stead Airport,**	**127.88**	**40**	⇑Pdiff	Pdif	00 04 51.1	+1.5
	baz=128						
R04C	**Big Horse Ranc**	**127.99**	**42**	⇓Pdiff	Pdif	00 04 50.8	+0.7
	baz=128						
MFID	**Camas Ranch**	**128.01**	**33**	⇑Pdiff	Pdif	00 04 51.3	+1.1
	baz=128						
G14A	**Jackson**	**128.02**	**30**	⇓Pdiff	Pdif	00 04 51.3	+1.1
	baz=128						
F15A	**Butte**	**128.07**	**29**	⇓Pdiff	Pdif	00 04 50.9	+0.4
	baz=128						
WCN	**Washoe City**	**128.18**	**40**	⇓Pdiff	Pdif	00 04 52.7	+1.7
	baz=128						
PAHR	**Pah Rah Range**	**128.19**	**39**	*e*Pdif	Pdif	00 04 49.2	-1.8
PAHR				*e*PKPdf	PKPdf	00 08 03.5	-3.8
O07A	**Toulon**	**128.24**	**38**	⇑Pdiff	Pdif	00 04 52.8	+1.6
	baz=128						
R05C	**Kirkwood Meado**	**128.31**	**41**	⇑Pdiff	Pdif	00 04 53.5	+1.9
	baz=128						
K11A	**Parker Ranch,**	**128.32**	**34**	⇓Pdiff	Pdif	00 04 52.9	+1.4
	baz=128						
N08A	**GE Springer Mi**	**128.33**	**37**	⇑Pdiff	Pdif	00 04 53.0	+1.3
	baz=128						
M09A	**Marrel Ranch,**	**128.35**	**36**	⇓Pdiff	Pdif	00 04 53.0	+1.3
	baz=128						
DLMT	**Dillon**	**128.36**	**30**	*e*Pdif	Pdif	00 04 48.8	-3.0
DLMT				*e*PKPdf	PKPdf	00 08 02.3	-5.1
DLMT				*e*PP	PP	00 09 59.4	-12
PACP	**Pacheco Peak**	**128.41**	**43**	⇓Pdiff	Pdif	00 04 53.7	+1.7
	baz=128						
SAO	**San Andreas Ge**	**128.43**	**43**	*e*Pdif	Pdif	00 04 49.9	-2.2
SAO				*e*PKPdf	PKPdf	00 08 02.5	-5.4
SAO				LR	LR		
	comp=Z,116µm,20.0s,MS7.6						
CMB	**Columbia Colle**	**128.47**	**42**	⇓Pdiff	Pdif	00 04 54.0	+1.8
	baz=128						
CMB	**Columbia Colle**	**128.47**	**42**	*e*Pdif	Pdif	00 04 49.0	-3.3
CMB				*e*PKPdf	PKPdf	00 08 06.2	-1.6
CMB				LR	LR		
	comp=Z,313µm,22.0s,MS8.0						
H14A	**Leadore**	**128.50**	**31**	⇑Pdiff	Pdif	00 04 54.3	+1.9
	baz=128						
L10A	**Juniper Basin**	**128.51**	**35**	⇑Pdiff	Pdif	00 04 54.6	+2.2
	baz=128						
J12A	**Stokes Ranch,**	**128.52**	**33**	⇑Pdiff	Pdif	00 04 54.1	+1.6
	baz=128						
G15A	**Dillon**	**128.56**	**30**	⇓Pdiff	Pdif	00 04 53.8	+1.1
	baz=128						
P07A	**Fallon**	**128.60**	**39**	⇑Pdiff	Pdif	00 04 54.8	+1.9
	baz=128						
I13A	**Wildhorse Cree**	**128.60**	**32**	⇑Pdiff	Pdif	00 04 54.0	+1.1
	baz=128						
O08A	**Rochester Mine**	**128.61**	**38**	⇓Pdiff	Pdif	00 04 55.1	+2.2
	baz=128						
MCMT	**McKenzie Canyo**	**128.62**	**30**	*e*PKPdf	PKPdf	00 08 08.5	+0.5
MCMT				*e*PP	PP	00 10 12.4	-0.7
BOZ	**Bozeman (W)**	**128.63**	**29**	*e*Pdif	Pdif	00 05 01.2	+8.2
BOZ				*e*PKPdf	PKPdf	00 08 08.9	+1.0
BOZ				LR	LR		
	comp=Z,437µm,19.0s,MS8.2						
N09A	**Rock Creek Ran**	**128.66**	**37**	⇓Pdiff	Pdif	00 04 54.6	+1.5
	baz=129						
HLID	**Hailey**	**128.68**	**32**	⇑Pdiff	Pdif	00 04 54.9	+1.7
	baz=129						
HLID	**Hailey**	**128.68**	**32**	PFAKE		00 08 20.0	+12
HLID				LR	LR		
	comp=Z,746µm,22.0s,MS8.3						
R06C	**Coleville**	**128.82**	**41**	⇓Pdiff	Pdif	00 04 55.7	+1.9
	baz=129						
M10A	**I.L. Ranch, Tu**	**128.82**	**36**	⇑Pdiff	Pdif	00 04 55.7	+1.9
	baz=129						
L11A	**Cat Creek Ranc**	**128.87**	**35**	⇑Pdiff	Pdif	00 04 56.3	+2.3
	baz=129						
H15A	**Lima**	**128.87**	**30**	⇑Pdiff	Pdif	00 04 55.8	+1.7
	baz=129						
S05C	**Merced**	**128.88**	**42**	⇑Pdiff	Pdif	00 04 55.6	+1.5
	baz=129						
S06C	**San Francisco**	**128.91**	**41**	⇓Pdiff	Pdif	00 04 55.6	+1.4
	baz=129						
J13A	**Cove Ranch, Pi**	**128.92**	**32**	⇓Pdiff	Pdif	00 04 56.4	+2.1
	baz=129						
I14A	**Mackay**	**128.94**	**31**	⇑Pdiff	Pdif	00 04 56.2	+1.8
	baz=129						
V03C	**Hunter Liggett**	**128.96**	**44**	⇑Pdiff	Pdif	00 04 55.7	+1.3
	baz=129						
Q07A	**Schurz**	**129.00**	**40**	⇓Pdiff	Pdif	00 04 56.8	+2.2
	baz=129						
P08A	**Dixie Valley**	**129.01**	**38**	⇓Pdiff	Pdif	00 04 56.6	+1.9
	baz=129						
K12A	**Draper Farm, C**	**129.03**	**34**	⇑Pdiff	Pdif	00 04 55.9	+1.1
	baz=129						
BMN	**Battle Mountai**	**129.09**	**37**	*e*Pdif	Pdif	00 04 56.0	+1.0
BMN				*e*PKPdf	PKPdf	00 08 03.1	-5.9
BMN				LR	LR		
	comp=Z,409µm,22.0s,MS8.1						
U04C	**Hernandez Rese**	**129.09**	**44**	⇑Pdiff	Pdif	00 04 56.7	+1.6
	baz=129						
L12A	**House Creek Ra**	**129.29**	**34**	⇓Pdiff	Pdif	00 04 58.0	+2.1
	baz=129						
M11A	**Holland Ranch,**	**129.32**	**35**	⇓Pdiff	Pdif	00 04 58.5	+2.4
	baz=129						
QLMT	**Earthquake Lak**	**129.32**	**29**	*e*PKPdf	PKPdf	00 08 09.4	+0.2
QLMT				*e*PP	PP	00 10 14.0	-3.7
J14A	**Carey**	**129.32**	**32**	⇓Pdiff	Pdif	00 04 58.2	+2.1
	baz=129						
R07C	**Lee Vining**	**129.32**	**41**	⇓Pdiff	Pdif	00 04 57.7	+1.6
	baz=129						
N10A	**Dunphy**	**129.35**	**36**	⇓Pdiff	Pdif	00 04 58.5	+2.4
	baz=129						
I15A	**Monteview**	**129.39**	**31**	⇑Pdiff	Pdif	00 04 58.8	+2.5
	baz=129						
GCMT	**Greycliff**	**129.44**	**27**	*e*PKPdf	PKPdf	00 08 07.7	-1.7
GCMT				*e*PP	PP	00 10 17.7	-0.7
K13A	**Stover Farm, H**	**129.47**	**33**	⇑Pdiff	Pdif	00 04 58.0	+1.2
	baz=129						
PKD	**Parkfield**	**129.48**	**44**	⇑Pdiff	Pdif	00 04 58.3	+1.5
	baz=129						
T06C	**Millerton Lake**	**129.48**	**42**	⇓Pdiff	Pdif	00 04 57.0	+0.2
	baz=129						
H16A	**Russell Place,**	**129.50**	**29**	⇓Pdiff	Pdif	00 04 59.3	+2.5
	baz=129						
DGMT	**Dagmar**	**129.55**	**21**	*e*PKPdf	PKPdf	00 08 08.7	-0.9
DGMT				LR	LR		
	comp=Z,718µm,20.0s,MS8.4						
U05C	**Westside ANR,**	**129.56**	**43**	⇓Pdiff	Pdif	00 04 58.2	+1.0
	baz=130						
Q08A	**Gabbs**	**129.60**	**39**	⇑Pdiff	Pdif	00 05 00.6	+3.3
	baz=130						
NVAR	**Mina Array Bea**	**129.61**	**40**	Pdiff	Pdif	00 05 01.5	+4.2
	comp=Z,0.2nm,0.3s,baz=270,slow=6.3,SNR=2.4						
NVAR				PKP	PKPdf	00 08 09.3	-0.7
	comp=Z,57nm,0.8s,baz=286,slow=2.2,SNR=34						
NVAR				SKKPbc		00 21 17.8	
	comp=Z,22nm,1.2s,baz=141,slow=5.8,SNR=4.1						
NVAR	**Mina Array Bea**	**129.61**	**40**	Pdif	Pdif	00 05 01.5	+4.2
NVAR				PKP	PKPdf	00 08 09.3	-0.7
NVAR				SKKPbc		00 21 17.8	
O10A	**Cortez Mining,**	**129.62**	**37**	⇑Pdiff	Pdif	00 04 59.8	+2.4
	baz=130						
YMR	**Madison River**	**129.66**	**29**	*e*Pdif	Pdif	00 04 55.4	-2.2
YMR				*e*PKPdf	PKPdf	00 08 10.4	+0.5
YMR				*e*PP	PP	00 10 19.4	-0.5
YMR				LR	LR		
	comp=Z,539µm,19.0s,MS8.3						
P09A	**Austin**	**129.68**	**38**	⇓Pdiff	Pdif	00 04 59.7	+2.0
	baz=130						
MLAC	**Mammoth Lakes**	**129.72**	**41**	⇓Pdiff	Pdif	00 05 00.3	+2.4
	baz=130						
N11A	**Elko Archery C**	**129.74**	**36**	⇑Pdiff	Pdif	00 05 00.6	+2.6
	baz=130						
YNR	**Norris Junctio**	**129.77**	**29**	*e*PKPdf	PKPdf	00 08 10.8	+0.7
YNR				*e*PP	PP	00 10 20.0	-0.6
R08A	**Mina**	**129.78**	**40**	⇑Pdiff	Pdif	00 05 00.6	+2.5
	baz=130						
M12A	**Wells**	**129.83**	**35**	⇓Pdiff	Pdif	00 05 01.8	+3.4
	baz=130						
J15A	**Blackfoot**	**129.84**	**31**	⇑Pdiff	Pdif	00 05 01.5	+3.2
	baz=130						
YFT	**Old Faithful**	**129.89**	**29**	*e*PKPdf	PKPdf	00 08 10.1	-0.2
L13A	**Double Diamond**	**129.93**	**34**	⇓Pdiff	Pdif	00 05 01.3	+2.6
	baz=130						
V05C	**Boulder Hill,**	**129.96**	**44**	⇓Pdiff	Pdif	00 05 00.2	+1.3
	baz=130						
I16A	**Newdale**	**129.98**	**30**	⇓Pdiff	Pdif	00 05 01.1	+2.1
	baz=130						
LKWY	**Lake**	**130.01**	**29**	*e*PKIKP	PKPdf	00 08 11.9	+1.3
LKWY				MLR	MLR		
	comp=Z,1399µm,22.0s,MS8.6						
K14A	**Jones Ranch, D**	**130.04**	**33**	⇑Pdiff	Pdif	00 05 01.6	+2.4
	baz=130						
P10A	**Eureka**	**130.05**	**38**	⇓Pdiff	Pdif	00 05 01.1	+1.8
	baz=130						
MTUM	**Tungsten Hills**	**130.05**	**41**	*e*PKPdf	PKPdf	00 08 09.1	-1.8
ELK	**Elko**	**130.08**	**36**	Pdiff	Pdif	00 05 02.4	+3.0
	comp=Z,0.3nm,0.3s,baz=267,slow=1.0,SNR=2.6						
ELK				PKP	PKPdf	00 08 10.1	-0.8
	comp=Z,44nm,0.8s,baz=284,slow=6.0,SNR=32						
ELK	**Elko**	**130.08**	**36**	P	Pdif	00 05 02.4	+3.0
ELK						00 08 10.1	
ELK				pmax	pmax		
	comp=Z,44nm,0.8s						
ELK	**Elko**	**130.08**	**36**	Pdif	Pdif	00 05 02.4	+3.0
ELK				*e*PKPdf	PKPdf	00 08 11.5	+0.7
Q09A	**Carvers**	**130.08**	**39**	⇓Pdiff	Pdif	00 05 01.2	+1.8
	baz=130						
HELL	**Mitchell Peak**	**130.12**	**42**	⇑Pdiff	Pdif	00 05 01.2	+1.6
	baz=130						
N12A	**Clover Valley,**	**130.12**	**35**	⇓Pdiff	Pdif	00 05 02.3	+2.7
	baz=130						
RLMT	**Red Lodge**	**130.13**	**28**	PFAKE		00 08 20.0	+9.2
RLMT				LR	LR		
	comp=Z,784µm,20.0s,MS8.4						
RCTC	**Rector, Farmer**	**130.18**	**43**	⇑Pdiff	Pdif	00 05 01.4	+1.5
	baz=130						
SMMC	**Simmler**	**130.19**	**44**	⇓Pdiff	Pdif	00 05 01.7	+1.8
	baz=130						
O11A	**Cowboy Ranch,**	**130.22**	**37**	⇓Pdiff	Pdif	00 05 02.2	+2.2
	baz=130						
FLWY	**Flagg Ranch**	**130.22**	**29**	*e*PKPdf	PKPdf	00 08 06.4	-4.6
FLWY				*e*PP	PP	00 10 20.0	-3.5
S08C	**White Mtn Res**	**130.23**	**41**	⇑Pdiff	Pdif	00 05 01.0	+0.9
	baz=130						
LAO	**LASA Array**	**130.23**	**24**	*e*PKPdf	PKPdf	00 08 08.5	-2.5
LAO				LR	LR		
	comp=Z,531µm,20.0s,MS8.2						
IMW	**Indian Meadow**	**130.24**	**30**	*e*Pdif	Pdif	00 05 00.4	+0.2
IMW				*e*PKPdf	PKPdf	00 08 02.8	-8.2
IMW				*e*PP	PP	00 10 18.3	-5.4
K15A	**Arbon**	**130.28**	**32**	⇑Pdiff	Pdif	00 05 01.1	+0.7
	baz=130						
M13A	**Montello**	**130.29**	**34**	⇓Pdiff	Pdif	00 05 01.6	+1.2
	baz=130						
DCID1	**Drake Creek**	**130.34**	**30**	*e*Pdif	Pdif	00 04 59.6	-1.0
DCID1				*e*PKPdf	PKPdf	00 08 08.5	-2.7
DCID1				*e*PP	PP	00 10 14.8	-10
J16A	**Bone**	**130.35**	**31**	⇓Pdiff	Pdif	00 05 02.2	+1.6
	baz=130						
L14A	**Malta**	**130.35**	**33**	⇑Pdiff	Pdif	00 05 02.5	+1.8
	baz=130						
TIN	**Tinemaha**	**130.44**	**41**	⇑Pdiff	Pdif	00 05 02.9	+1.9
	baz=130						
RRI2	**Red Ridge**	**130.44**	**31**	*e*PKPdf	PKPdf	00 08 11.9	+0.5
ULM	**Lac du Bonnet**	**130.49**	**14**	Pdiff	Pdif	00 05 00.6	-0.7
	comp=Z,2.5nm,0.8s,baz=7.6,slow=15,SNR=1.6						
ULM				PKhKP		00 08 07.7	
	comp=Z,110nm,0.8s,baz=341,slow=3.4,SNR=32						
R09A	**Tonopah**	**130.51**	**39**	⇑Pdiff	Pdif	00 05 03.3	+2.0
	baz=130						
TPH	**Tonopah**	**130.51**	**40**	*e*P	Pdif	00 05 02.6	+1.3
TPH				*e*		00 08 10.2	
TPH				MLR	MLR		
	comp=Z,377µm,22.0s,MS8.1						
P11A	**Circle Ranch,**	**130.52**	**37**	⇓Pdiff	Pdif	00 05 03.8	+2.4
	baz=130						
PKM	**Peak Mountain**	**130.53**	**45**	⇓Pdiff	Pdif	00 05 03.4	+1.9
	baz=130						
TPAW	**Teton Pass**	**130.53**	**30**	*e*Pdif	Pdif	00 04 58.6	-2.8
TPAW				*e*PKPdf	PKPdf	00 08 10.3	-1.3
VES	**Vestal, Richgr**	**130.54**	**43**	⇓Pdiff	Pdif	00 05 02.6	+1.1
	baz=130						
Q10A	**Clear Creek Ra**	**130.58**	**38**	⇑Pdiff	Pdif	00 05 02.4	+0.8
	baz=130						
N13A	**Wendover, West**	**130.60**	**35**	⇓Pdiff	Pdif	00 05 04.0	+2.2
	baz=130						
LOHW	**Long Hollow**	**130.61**	**30**	*e*Pdif	Pdif	00 05 00.3	-1.5
LOHW				*e*PKPdf	PKPdf	00 08 07.4	-4.4
LOHW				*e*PP	PP	00 10 19.1	-7.0
SNOW	**Snow King Moun**	**130.65**	**30**	*e*Pdif	Pdif	00 05 05.2	+3.2
SNOW				*e*PKPdf	PKPdf	00 08 05.8	-6.0
M14A	**Sheep Mountain**	**130.65**	**34**	⇑Pdiff	Pdif	00 05 03.7	+1.7
	baz=130						
O12A	**Currie**	**130.67**	**36**	⇓Pdiff	Pdif	00 05 04.4	+2.3
	baz=131						
REDW	**Red Top Meadow**	**130.67**	**30**	*e*Pdif	Pdif	00 05 03.4	+1.4
REDW				*e*PKPdf	PKPdf	00 08 12.4	+0.5
REDW				*e*PP	PP	00 10 16.8	-10
K16A	**Soda Springs**	**130.68**	**31**	⇑Pdiff	Pdif	00 05 04.1	+2.0
	baz=131						
S09A	**Goldfield**	**130.71**	**40**	⇑Pdiff	Pdif	00 05 05.0	+2.7
	baz=131						
HVU	**Hansel Valley**	**130.78**	**33**	*e*P	Pdif	00 05 06.6	+4.1
HVU				*e*		00 08 10.1	
HVU				*e*		00 10 23.7	
L15A	**Malad City**	**130.84**	**33**	⇑Pdiff	Pdif	00 05 04.9	+2.1
	baz=131						
CWC	**Cottonwood Cre**	**130.89**	**42**	⇓Pdiff	Pdif	00 05 04.5	+1.5
	baz=131						
R10A	**Warm Springs**	**130.96**	**39**	⇓Pdiff	Pdif	00 05 04.9	+1.6
	baz=131						
AHID	**Auburn Hatcher**	**130.97**	**31**	*e*PKPdf	PKPdf	00 08 11.8	-0.6
AHID				LR	LR		
	comp=Z,584µm,21.0s,MS8.3						
S10A	**Tonopah Range,**	**131.00**	**39**	⇑Pdiff	Pdif	00 05 05.5	+2.0
	baz=131						
Q11A	**Duckwater**	**131.02**	**38**	⇑Pdiff	Pdif	00 05 06.1	+2.5
	baz=131						
GRAC	**Grapevine Rang**	**131.04**	**41**	⇓Pdiff	Pdif	00 05 06.1	+2.4
	baz=131						
ISA	**Isabella**	**131.05**	**43**	⇓Pdiff	Pdif	00 05 05.9	+2.1
	baz=131						
ISA	**Isabella**	**131.05**	**43**	*e*Pdif	Pdif	00 05 04.3	+0.5
ISA				*e*PKPdf	PKPdf	00 08 06.7	-6.1
ISA				LR	LR		
	comp=Z,329µm,22.0s,MS8.0						
P12A	**McGill**	**131.08**	**37**	⇑Pdiff	Pdif	00 05 05.7	+1.8
	baz=131						
ARVC	**Arvin**	**131.10**	**44**	⇓Pdiff	Pdif	00 05 05.2	+1.2
	baz=131						
BSC	**Santa Cruz Isl**	**131.12**	**46**	⇑Pdiff	Pdif	00 05 05.8	+1.7
	baz=131						
M15A	**Larsen Ranch,**	**131.17**	**33**	⇑Pdiff	Pdif	00 05 05.8	+1.5
	baz=131						
N14A	**Grayback Hills**	**131.18**	**34**	⇑Pdiff	Pdif	00 05 05.3	+1.0
	baz=131						
BGU	**Big Grassy Mou**	**131.22**	**34**	*e*Pdif	Pdif	00 05 06.2	+1.7
BGU				*e*PKPdf	PKPdf	00 08 11.3	-1.7
SPUT	**South Promonto**	**131.28**	**33**	*e*Pdif	Pdif	00 05 06.6	+1.8
SPUT				*e*PKPdf	PKPdf	00 08 09.7	-3.4
SPUT				*e*PP	PP	00 10 24.8	-5.7
DAC	**Darwin (Calif)**	**131.30**	**42**	PFAKE		00 08 20.0	+6.7
DAC				LR	LR		
	comp=Z,224µm,21.0s,MS7.8						
L16A	**Fish Haven**	**131.34**	**32**	⇑Pdiff	Pdif	00 05 06.1	+1.1
	baz=131						
R11A	**Troy Canyon, C**	**131.37**	**38**	⇑Pdiff	Pdif	00 05 06.0	+0.8
	baz=131						
Q12A	**Willow Creek R**	**131.40**	**37**	⇑Pdiff	Pdif	00 05 06.8	+1.5
	baz=131						
OSI	**Osito Adit**	**131.44**	**44**	⇑Pdiff	Pdif	00 05 06.6	+1.1
	baz=131						
BLG	**Laguna Peak**	**131.47**	**45**	⇑Pdiff	Pdif	00 05 07.2	+1.6
	baz=131						
MPMC	**Manual Prospec**	**131.49**	**42**	⇑Pdiff	Pdif	00 05 07.5	+1.8
	baz=131						
N15A	**Stansbury Isla**	**131.53**	**34**	⇓Pdiff	Pdif	00 05 07.8	+1.9
	baz=131						
HWUT	**Hardware Ranch**	**131.55**	**32**	*e*Pdif	Pdif	00 05 03.2	-2.7
HWUT				*e*PKPdf	PKPdf	00 08 10.3	-3.3
HWUT				LR	LR		
	comp=Z,633µm,21.0s,MS8.3						
SNCC	**San Nicolas Is**	**131.58**	**46**	⇓Pdiff	Pdif	00 05 07.4	+1.3
	baz=132						
SNCC	**San Nicolas Is**	**131.58**	**46**	PFAKE		00 08 20.0	+6.1
SNCC				LR	LR		
	comp=Z,228µm,20.0s,MS7.9						
FURC	**Furnace Creek,**	**131.68**	**41**	⇑Pdiff	Pdif	00 05 08.1	+1.6
	baz=132						
LRMC	**Laurel Mountai**	**131.69**	**43**	⇓Pdiff	Pdif	00 05 08.1	+1.5
	baz=132						
S11A	**Rachel**	**131.70**	**39**	⇓Pdiff	Pdif	00 05 08.1	+1.5
	baz=132						
M16A	**Huntsville**	**131.72**	**33**	⇑Pdiff	Pdif	00 05 08.9	+2.2
	baz=132						
BW06	**Boulder Array**	**131.75**	**30**	*e*PKPdf	PKPdf	00 08 12.1	-1.9
BW06				*e*PP	PP	00 10 19.2	-14
BW06				LR	LR		
	comp=Z,560µm,20.0s,MS8.3						
PDAR	**Pinedale Array**	**131.75**	**30**	Pdiff	Pdif	00 05 12.4	+5.5
	comp=Z,0.2nm,0.7s,baz=8.5,slow=1.8,SNR=2.0						
PDAR				PKhKP		00 08 08.7	
	comp=Z,2.5nm,0.6s,baz=112,slow=1.0,SNR=4.9						
PDAR				SKPbc	SKPbc	00 11 35.6	-1.4
	comp=Z,66nm,1.0s,baz=308,slow=4.4,SNR=4.3						
PDAR				SKKPbc		00 21 15.0	
	comp=Z,13nm,1.0s,baz=144,slow=6.6,SNR=5.0						
TPNV	**Topopah Spring**	**131.80**	**40**	PFAKE		00 08 30.0	+16
TPNV				LR	LR		
	comp=Z,460µm,22.0s,MS8.1						
EDW2	**Edwards Air Fo**	**131.81**	**44**	⇑Pdiff	Pdif	00 05 08.6	+1.5
	baz=132						
DUG	**Dugway**	**131.83**	**35**	*e*Pdif	Pdif	00 05 10.7	+3.5
DUG				*e*PKPdf	PKPdf	00 08 15.0	+0.8
DUG				*e*PP	PP	00 10 37.8	+3.7
DUG				LR	LR		
	comp=Z,563µm,21.0s,MS8.2						
DECC	**Green Verdugo**	**131.91**	**45**	⇑Pdiff	Pdif	00 05 08.8	+1.2
	baz=132						
NOQ	**North Oquirrh**	**131.91**	**34**	*e*Pdif	Pdif	00 05 08.5	+0.9
NOQ				*e*PKPdf	PKPdf	00 08 14.4	+0.1
NOQ				*e*PP	PP	00 10 23.4	-11
NOQ				*e*SKP		00 11 17.1	
Q13A	**Wheeler Ranch,**	**131.94**	**37**	⇓Pdiff	Pdif	00 05 09.6	+1.9
	baz=132						
O15A	**The Old Anders**	**131.97**	**34**	⇑Pdiff	Pdif	00 05 10.2	+2.3
	baz=132						
R12A	**Pony Springs,**	**131.99**	**38**	⇑Pdiff	Pdif	00 05 09.7	+1.8
	baz=132						
U10A	**Ash Meadows, A**	**132.06**	**41**	⇓Pdiff	Pdif	00 05 09.3	+1.1
	baz=132						
CTU	**Camp Tracy**	**132.09**	**33**	*e*PKPdf	PKPdf	00 08 07.4	-7.2
CTU				*e*PP	PP	00 10 23.8	-12
CTU				*e*SKP		00 11 34.5	
P14A	**Drum Mountains**	**132.09**	**35**	⇑Pdiff	Pdif	00 05 09.6	+1.3
	baz=132						
MWC	**Mount Wilson**	**132.12**	**44**	*e*Pdif	Pdif	00 05 17.8	+9.3
MWC				*e*PKPdf	PKPdf	00 08 16.4	+1.6
MWC				*e*PP	PP	00 10 31.0	-5.4
MWC				LR	LR		
	comp=Z,316µm,22.0s,MS8.0						
N16A	**Rees Ranch, Co**	**132.12**	**33**	⇑Pdiff	Pdif	00 05 10.5	+1.9
	baz=132						
FMP	**Fort Macarthur**	**132.22**	**45**	⇓Pdiff	Pdif	00 05 10.2	+1.2
	baz=132						
T11A	**Corn Creek, Al**	**132.28**	**39**	⇓Pdiff	Pdif	00 05 10.8	+1.6
	baz=132						
S12A	**Delamar Landin**	**132.29**	**39**	⇑Pdiff	Pdif	00 05 10.8	+1.5
	baz=132						
AGMN	**Agassiz Refuge**	**132.30**	**15**	*e*PKPdf	PKPdf	00 08 06.8	-8.0
AGMN				*e*PP	PP	00 10 36.1	-0.4
AGMN				LR	LR		
	comp=Z,860µm,20.0s,MS8.5						
CIS	**Catalina Islan**	**

CCUT ePKPdf PKPdf 00 08 15.7 -1.2
MVU Marysvale 133.31 36 PFAKE 00 08 30.0 +13
MVU LR LR
comp=Z,535µm,21.0s,MS8.2
N19A John Jarvie Ra 133.32 31 ⇓Pdiff Pdif 00 05 15.0 +1.2
baz=133
MSU Marysvale 133.32 36 ePKIKP PKPdf 00 08 12.8 -4.2
O18A Roosevelt 133.33 33 ⇓Pdiff Pdif 00 05 15.3 +1.4
baz=133
TMUT Trail Mountain 133.35 34 ePKPdf PKPdf 00 08 14.8 -2.3
TMUT ePP PP 00 10 43.8 -0.1
V12A Nelson 133.43 41 ⇑Pdiff Pdif 00 05 16.0 +1.7
baz=133
GMRC Granite Mounta 133.45 42 ⇓Pdiff Pdif 00 05 17.1 +2.7
baz=133
R15A Junction 133.46 36 ⇓Pdiff Pdif 00 05 16.9 +2.4
baz=133
P17A Butcher Ranch, 133.49 34 ⇑Pdiff Pdif 00 05 16.6 +2.0
baz=133
109C Camp Elliot, M 133.50 45 ⇑Pdiff Pdif 00 05 16.4 +1.8
baz=133
PFO Pinyon Flat Ob 133.57 44 PKhKP 00 08 11.8
comp=Z,18nm,1.0s,baz=286,slow=2.1,SNR=5.1
PFO PP PP 00 10 42.0 -3.7
comp=Z,29nm,1.0s,baz=339,slow=6.1,SNR=1.3
PFO Pinyon Flat Ob 133.57 44 PKIKP PKPdf 00 08 11.8 -5.8
PFO 00 10 42.0
PFO pmax pmax
comp=Z,29nm,1.0s
PFO Pinyon Flat Ob 133.57 44 ⇓Pdiff Pdif 00 05 16.0 +1.1
baz=134
PFO Pinyon Flat Ob 133.57 44 ePdif Pdif 00 05 23.4 +8.4
PFO ePKP 00 08 01.9
PFO PKP PKPdf 00 08 11.8 -5.9
PFO ePP PP 00 10 23.8 -22
PFO PP PP 00 10 42.0 -3.7
PFO LR LR
comp=Z,285µm,19.0s,MS8.0
U13A Pakoon Wash 133.58 39 ⇑Pdiff Pdif 00 05 16.8 +1.8
baz=134
EYMN Ely 133.63 11 ePdif Pdif 00 05 19.3 +4.1
EYMN ePKPdf PKPdf 00 07 57.0 -20
EYMN ePP PP 00 10 31.8 -13
EYMN LR LR
comp=Z,1233µm,22.0s,MS8.6
Q16A Castle Valley 133.63 35 ⇓Pdiff Pdif 00 05 16.9 +1.7
baz=134
LDFC Landfair 133.64 42 ePdif Pdif 00 05 13.6 -1.6
LDFC ePKPdf PKPdf 00 08 16.1 -1.6
LDFC ePP PP 00 10 45.4 -0.7
P18A Preston Nutter 133.66 33 ⇑Pdiff Pdif 00 05 16.0 +0.7
baz=134
BELC Belle Mtn. 133.66 43 ⇑Pdiff Pdif 00 05 16.5 +1.1
baz=134
W12A Cal Nev Ari 133.67 41 ⇓Pdiff Pdif 00 05 16.5 +1.1
baz=134
RWWY Rawlins 133.72 29 ePKPdf PKPdf 00 08 18.3 +0.7
RWWY ePP PP 00 10 47.0 +1.0
T14A Hurricane 133.72 38 ⇑Pdiff Pdif 00 05 17.6 +2.0
baz=134
S15A Panguitch 133.76 37 ⇑Pdiff Pdif 00 05 17.9 +2.1
baz=134
O19A Miners Draw (B 133.78 32 ⇓Pdiff Pdif 00 05 17.4 +1.5
baz=134
SRU San Rafael 133.86 34 ePKIKP PKPdf 00 08 18.6 +0.6
SRU San Rafael 133.86 34 ⇓Pdiff Pdif 00 05 18.6 +2.4
baz=134
R16A Teasdale 133.88 36 ⇓Pdiff Pdif 00 05 19.2 +2.9
baz=134
V13A Grand Canyon W 133.91 40 ⇓Pdiff Pdif 00 05 19.0 +2.5
baz=134
BAR Barrett 133.92 45 ePKPdf PKPdf 00 08 19.6 +1.2
BAR ePP PP 00 10 46.9 -1.1
BAR LR LR
comp=Z,215µm,21.0s,MS7.8
MONP Monument Peak 133.99 45 ⇓Pdiff Pdif 00 05 19.4 +2.6
baz=134
U14A Mt Trumbull 134.07 39 ⇑Pdiff Pdif 00 05 19.3 +2.1
baz=134
Q18A Rafter H Ranch 134.09 34 ⇑Pdiff Pdif 00 05 19.3 +2.1
baz=134
IRM Iron Mountain 134.15 43 ⇑Pdiff Pdif 00 05 19.7 +2.2
baz=134
NEE2 Needles Airpor 134.15 42 ⇓Pdiff Pdif 00 05 20.0 +2.4
baz=134
T15A Red Dirt Ranch 134.18 38 ⇓Pdiff Pdif 00 05 20.0 +2.3
baz=134
S16A Weppner Ranch, 134.19 36 ⇑Pdiff Pdif 00 05 20.5 +2.8
baz=134
BC3 Big Chuckw Mtn 134.23 43 ⇑Pdiff Pdif 00 05 19.9 +2.0
baz=134
R17A Hanksville Air 134.23 35 ⇑Pdiff Pdif 00 05 20.1 +2.2
baz=134
P19A Cripple Cowboy 134.34 32 ⇓Pdiff Pdif 00 05 20.0 +1.7
baz=134
DVTC Desert V Tower 134.34 45 ⇑Pdiff Pdif 00 05 20.8 +2.5
baz=134
SWSC Sam W. Stewart 134.40 44 ⇑Pdiff Pdif 00 05 21.2 +2.6
baz=134
W13A Hualapai Mount 134.44 41 ⇑Pdiff Pdif 00 05 22.0 +3.2
baz=134
V14A Boquillas Ranc 134.61 40 ⇑Pdiff Pdif 00 05 22.4 +2.8
baz=134
U15A North Rim 134.62 38 ⇑Pdiff Pdif 00 05 22.9 +3.3
baz=134
Q19A Hogan Spring (134.67 33 ⇓Pdiff Pdif 00 05 22.3 +2.4
baz=135
S17A Black Ridge (B 134.72 36 ⇓Pdiff Pdif 00 05 22.5 +2.5
baz=135
R18A Canyonlands Na 134.72 34 ⇑Pdiff Pdif 00 05 22.3 +2.2
baz=135
T16A Glen Canyon Da 134.73 37 ⇑Pdiff Pdif 00 05 22.8 +2.7
baz=135
PDMCI Parker Dam,Lak 134.75 42 ⇓Pdiff Pdif 00 05 22.9 +2.7
baz=135
X13A Yucca 134.78 41 ⇓Pdiff Pdif 00 05 22.7 +2.4
baz=135
Y12C Blythe 134.81 43 ⇑Pdiff Pdif 00 05 22.5 +2.0
baz=135
PHWY Pilot Hill 134.85 28 ePKPdf PKPdf 00 08 00.3 -19
W14A Seligman 134.89 40 ⇑Pdiff Pdif 00 05 23.4 +2.6
baz=135
GLA Glamis 135.01 44 eP Pdif 00 05 19.2 -2.1
GLA e 00 08 16.2
GLA e 00 10 56.4
GLA MLR MLR
comp=Z,251µm,21.0s,MS7.9
GLA Glamis 135.01 44 ⇑Pdiff Pdif 00 05 23.9 +2.5
baz=135
GLA Glamis 135.01 44 ePdif Pdif 00 05 19.2 -2.1
GLA ePKPdf PKPdf 00 08 16.2 -4.2
GLA ePP PP 00 10 48.2 -6.6
GLA ePP PP 00 10 56.4 +1.6
GLA LR LR
comp=Z,251µm,21.0s,MS7.9
V15A Kaibab Nationa 135.08 39 ⇑Pdiff Pdif 00 05 24.3 +2.6
baz=135
R19A Curley Farm, L 135.14 34 ⇑Pdiff Pdif 00 05 24.6 +2.7
baz=135
T17A Navajo Res., N 135.14 36 ⇓Pdiff Pdif 00 05 24.5 +2.6
baz=135
S18A Hurst Farm, Bl 135.15 35 ⇓Pdiff Pdif 00 05 24.1 +2.2
baz=135
PV10 Paradox Valley 135.20 34 ePKPdf PKPdf 00 08 19.1 -1.5
Y13A Salome 135.24 42 ⇑Pdiff Pdif 00 05 24.8 +2.4
baz=135
W15A Williams 135.43 39 ⇓Pdiff Pdif 00 05 25.7 +2.5
baz=135
X14A Yava 135.47 41 ⇑Pdiff Pdif 00 05 25.6 +2.2
baz=135
112A Yuma 135.47 44 ⇓Pdiff Pdif 00 05 26.1 +2.7
baz=135
U17A Shonto 135.49 37 ⇓Pdiff Pdif 00 05 25.8 +2.3
baz=135
CAM3 Guarapari 135.50 237 ⇓*i*P PKPdf 00 08 27.0 +5.4
CAM3 *i* 00 08 31.4
CAM3 *i* 00 08 37.3
CAM3 *i* 00 08 42.8
CAM3 *i* 00 09 00.1
U16A Tuba City 135.51 38 ⇑Pdiff Pdif 00 05 26.6 +3.0
baz=135
S19A Harvey Farm, M 135.59 34 ⇓Pdiff Pdif 00 05 26.5 +2.5
baz=135
T18A Mexican Hat 135.59 36 ⇑Pdiff Pdif 00 05 25.2 +1.3
baz=136
PV01 Paradox Valley 135.63 33 ePKPdf PKPdf 00 08 15.3 -6.0

Y14A Wickenburg 135.72 41 ⇓Pdiff Pdif 00 05 26.2 +1.7
baz=136
WUAZ Wupatki 135.77 38 ePKPdf PKPdf 00 08 17.4 -4.4
WUAZ LR LR
comp=Z,260µm,21.0s,MS7.9
COWI Conover 135.84 10 ePdif Pdif 00 05 22.5 -2.5
COWI ePKPdf PKPdf 00 08 19.5 -2.0
COWI ePP PP 00 10 48.8 -10
COWI LR LR
comp=Z,895µm,20.0s,MS8.5
X15A Humboldt 135.88 40 ⇓Pdiff Pdif 00 05 26.8 +1.6
baz=136
113A Mohawk Valley, 135.90 43 ⇑Pdiff Pdif 00 05 27.3 +2.0
baz=136
ISCO Idaho Springs 135.94 29 PFAKE 00 08 30.0 +8.1
ISCO LR LR
comp=Z,440µm,20.0s,MS8.2
W16A Flagstaff 135.95 39 ⇓Pdiff Pdif 00 05 27.4 +1.9
baz=136
U18A Rough Rock, Ch 136.09 36 ⇓Pdiff Pdif 00 05 27.4 +1.3
baz=136
Z14A Wintersburg 136.10 42 ⇓Pdiff Pdif 00 05 27.7 +1.4
baz=136
PLCA Paso Flores 136.13 190 PKhKP 00 08 15.2
comp=Z,4.1nm,0.8s,baz=204,slow=3.3,SNR=9.1
PLCA SKKPbc 00 20 47.9
comp=Z,55nm,1.1s,baz=346,slow=5.9,SNR=4.6
PLCA Paso Flores 136.13 190 ePKHKP 00 08 12.3
PLCA *e* 00 11 06.5
PLCA Paso Flores 136.13 190 ePKPdf 00 08 12.3
PLCA PKP PKPdf 00 08 15.2 -7.0
PLCA ePP PP 00 11 06.5 +5.8
PLCA eSKP 00 11 44.3
PLCA SKKPbc 00 20 47.9
Y15A Casa Rosa Ranc 136.15 41 ⇑Pdiff Pdif 00 05 28.3 +1.9
baz=136
ECSD EROS,Sioux Fal 136.26 18 ePdif Pdif 00 05 24.3 -2.6
ECSD ePKPdf PKPdf 00 08 15.7 -6.6
ECSD ePP PP 00 10 58.8 -2.9
ECSD LR LR
comp=Z,1066µm,21.0s,MS8.6
T19A Beclabito 136.30 35 ⇓Pdiff Pdif 00 05 29.3 +2.3
baz=136
MVCO Mesa Verde 136.33 34 ePKPdf PKPdf 00 08 24.1 +1.4
MVCO LR LR
comp=Z,593µm,21.0s,MS8.3
X16A Lo Mia Camp, P 136.44 40 ⇓Pdiff Pdif 00 05 30.4 +2.7
baz=136
W17A Winslow 136.47 38 ⇑Pdiff Pdif 00 05 30.4 +2.6
baz=136
TRQA Tornquist 136.48 200 ePKPdf PKPdf 00 08 18.4 -4.6
TRQA ePP PP 00 11 01.4 -1.7
TRQA LR LR
comp=Z,415µm,20.0s,MS8.2
V18A Ganado 136.53 37 ⇓Pdiff Pdif 00 05 30.5 +2.5
baz=136
OGNE Ogallala 136.67 25 ePKP PKPdf 00 08 17.9 -5.3
OGNE ePP PP 00 11 03.5 -1.0
OGNE LR LR
comp=Z,780µm,22.0s,MS8.4
Z15A Gila River Ind 136.67 42 ⇓Pdiff Pdif 00 05 31.3 +2.6
baz=137
Y16A Circle Bar Ran 136.75 40 ⇑Pdiff Pdif 00 05 31.5 +2.4
baz=137
X17A Forest Lakes 136.89 39 ⇓Pdiff Pdif 00 05 32.0 +2.3
baz=137
115A Sonoran Desert 136.98 42 ⇑Pdiff Pdif 00 05 32.4 +2.3
baz=137
214A Organ Pipe Nat 137.03 44 ⇓Pdiff Pdif 00 05 32.5 +2.2
baz=137
W18A Petrified Fore 137.04 38 ⇓Pdiff Pdif 00 05 32.8 +2.4
baz=137
V19A Window Rock 137.06 36 ⇓Pdiff Pdif 00 05 32.0 +1.6
baz=137
Z16A Peralta Trail, 137.12 41 ⇑Pdiff Pdif 00 05 32.9 +2.2
baz=137
W19A Sanders 137.26 37 ⇑Pdiff Pdif 00 05 34.0 +2.6
baz=137
Y17A Roosevelt 137.28 40 ⇓Pdiff Pdif 00 05 33.7 +2.3
baz=137
X18A Snowflake 137.30 38 ⇓Pdiff Pdif 00 05 34.0 +2.5
baz=137
116A Eloy 137.42 42 ⇓Pdiff Pdif 00 05 34.3 +2.2
baz=137
SDCO Great Sand Dun 137.56 31 ePdif Pdif 00 05 36.0 +3.3
SDCO ePKPdf PKPdf 00 08 20.0 -4.9
SDCO ePP PP 00 11 00.4 -10
SDCO LR LR
comp=Z,490µm,22.0s,MS8.2
FRNY Flat Rock 137.66 354 ePKPdf PKPdf 00 08 21.2 -3.7
FRNY ePP PP 00 11 07.9 -2.3
GLMI Grayling 137.70 6 ePKP PKPdf 00 08 20.4 -4.6
GLMI ePP PP 00 11 07.0 -3.6
GLMI LR LR
comp=Z,1331µm,22.0s,MS8.6
Y18A Canyon Day Jun 137.74 39 ⇓Pdiff Pdif 00 05 35.9 +2.4
baz=138
Z17A San Carlos Hig 137.77 40 ⇑Pdiff Pdif 00 05 35.9 +2.3
baz=138
X19A St. Johns 137.78 38 ⇑Pdiff Pdif 00 05 37.0 +3.3
baz=138
216A Three Points, 137.92 42 ⇑Pdiff Pdif 00 05 37.0 +2.7
baz=138
LONY Lake Ozonia 137.97 355 ePKPdf PKPdf 00 08 18.2 -7.3
LONY ePP PP 00 11 13.0 +0.8
LONY LR LR
comp=Z,777µm,21.0s,MS8.4
SADO Sadowa 138.02 360 PP PP 00 11 10.3 -2.2
baz=359,slow=7.2
LBNH Lisbon 138.04 352 ePKP PKPdf 00 08 23.2 -2.4
LBNH ePP PP 00 11 12.9 +0.2
LBNH LR LR
comp=Z,772µm,22.0s,MS8.4
117A Oracle 138.05 41 ⇓Pdiff Pdif 00 05 38.0 +3.1
baz=138
Y19A Nutrioso 138.11 38 ⇑Pdiff Pdif 00 05 38.2 +3.0
baz=138
TUC Tucson 138.19 42 ePKHKP 00 08 18.1
TUC MLR MLR
comp=Z,393µm,20.0s,MS8.2
Z18A Geronimo 138.19 40 ⇑Pdiff Pdif 00 05 37.9 +2.5
baz=138
MDV Middlebury 138.44 353 ePKPdf PKPdf 00 08 20.8 -5.6
MDV ePP PP 00 11 14.0 -1.1
217A Green Valley 138.49 42 ⇑Pdiff Pdif 00 05 39.1 +2.2
baz=138
118A Homack Ranch, 138.51 41 ⇓Pdiff Pdif 00 05 39.1 +2.2
baz=138
Z19A T-Link Ranch, 138.54 39 ⇓Pdiff Pdif 00 05 39.9 +2.9
baz=138
NCB Newcomb 138.58 354 ePKP PKPdf 00 08 19.0 -7.6
NCB LR LR
comp=Z,708µm,22.0s,MS8.4
HNH Hanover 138.62 352 ePKPdf PKPdf 00 08 28.1 +1.3
HNH ePP PP 00 11 16.0 -0.3
JFWS Jewell Farm 138.70 12 ePKHKP 00 08 19.7
JFWS MLR MLR
comp=Z,723µm,20.0s,MS8.4
FFD Franklin Falls 138.76 352 ePKPdf PKPdf 00 08 25.5 -1.5
119A Ashpeak Ranch, 138.86 40 ⇓Pdiff Pdif 00 05 40.8 +2.3
baz=139
218A Dragoon 138.88 41 ⇓Pdiff Pdif 00 05 40.6 +2.0
baz=139
LAZ Ladron 139.09 36 ePKPdf PKPdf 00 08 24.1 -3.8
LAZ ePP PP 00 11 15.7 -4.3
ANMO Albuquerque 139.10 35 ePKIKP PKPdf 00 08 22.0 -5.9
ANMO MLR MLR
comp=Z,621µm,21.0s
ACCN Adirondack Com 139.10 354 ePKP PKPdf 00 08 19.8 -7.8
318A Bisbee 139.25 42 ⇑Pdiff Pdif 00 05 42.0 +1.8
baz=139
LENM Lemitar 139.35 36 ePKPdf PKPdf 00 08 25.7 -2.7
LENM ePP PP 00 11 17.8 -3.9
219A White Tail Can 139.38 41 ⇑Pdiff Pdif 00 05 43.5 +2.7
baz=139
CBKS Cedar Bluff 139.42 25 ePKIKP PKPdf 00 08 21.5 -6.8
CBKS *e* 00 11 21.2
CBKS MLR MLR
comp=Z,853µm,21.0s,MS8.5
Y22C IRIS PASSCAL I 139.45 36 ⇑Pdiff Pdif 00 05 43.9 +2.8
baz=139
LPM Los Pinos Moun 139.45 36 ePKP PKPdf 00 08 21.2 -7.4
VAO Valinhos 139.50 229 eP PKPdf 00 08 31.9 +3.0
VAO *i* 00 08 54.5
VAO *i* 00 09 20.2

BNM Barren Site 139.57 36 ePKPdf PKPdf 00 08 21.5 -7.2
BNM ePP PP 00 11 19.6 -3.3
HRV Adam Dziewonsk 139.69 351 ePKPdf PKPdf 00 08 27.5 -1.2
HRV ePP PP 00 11 22.8 -0.1
HRV LR LR
comp=Z,549µm,22.0s,MS8.3
319A Douglas 139.77 41 ⇑Pdiff Pdif 00 05 44.7 +2.2
baz=140
WES Weston 139.77 351 ePKPdf PKPdf 00 08 30.8 +2.0
WES LR LR
comp=Z,353µm,19.0s,MS8.1
BRYW Bryant College 140.26 351 ePKPdf PKPdf 00 08 28.2 -1.5
KSU1 Kansas State U 140.40 21 ePKPdf PKPdf 00 08 10.7 -19
KSU1 ePP PP 00 11 22.4 -5.1
KSU1 LR LR
comp=Z,975µm,21.0s,MS8.5
CCHI Chillan 140.41 189 eP PKPdf 00 08 24.3 -5.9
BINY Binghamton 140.48 356 ePKPdf PKPdf 00 08 27.0 -3.1
BINY ePP PP 00 11 27.3 -0.4
BINY LR LR
comp=Z,595µm,20.0s,MS8.3
ALLY Alegheny Colle 141.13 1 ePKPdf PKPdf 00 08 26.8 -4.6
PAL Palisades 141.48 353 ePKPdf PKPdf 00 08 26.4 -5.6
PAL ePP PP 00 11 36.8 +3.0
CPNY Central Park 141.70 353 ePKPdf PKPdf 00 08 30.2 -2.2
CPNY ePP PP 00 11 33.3 -1.8
AMTX Amarillo 141.73 30 ePKPdf PKPdf 00 08 28.9 -3.8
AMTX ePP PP 00 11 35.9 0.0
AMTX LR LR
comp=Z,403µm,19.0s,MS8.2
BRNJ Basking Ridge 141.87 354 ePKPdf PKPdf 00 08 32.4 -0.3
ACSO Alum Creek Sta 142.41 5 ePKPdf PKPdf 00 08 29.8 -3.9
ACSO LR LR
comp=Z,354µm,22.0s,MS8.1
MVL Millersville 142.69 356 ePKPdf PKPdf 00 08 22.5 -12
MVL ePP PP 00 11 39.9 -1.3
LMEL Las Melosas 142.74 193 ⇑*i*P PKPdf 00 08 29.1 -5.4
SLM Saint Louis 142.78 14 ePKPdf PKPdf 00 08 30.5 -3.8
SLM ePP PP 00 11 37.6 -4.2
BLO Bloomington 143.02 9 ePKPdf PKPdf 00 08 30.8 -4.0
BLO ePP PP 00 11 41.2 -2.0
CCM Cathedral Cave 143.06 16 ePKPdf PKPdf 00 08 30.2 -4.7
CCM ePP PP 00 11 42.2 -1.4
CCM LR LR
comp=Z,598µm,20.0s,MS8.3
MCWV Mont Chateau 143.13 1 ePKPdf PKPdf 00 08 30.8 -4.1
MCWV ePP PP 00 11 42.5 -1.2
MCWV LR LR
comp=Z,1024µm,21.0s,MS8.6
OLIL Olney 143.16 12 ePKPdf PKPdf 00 08 32.9 -2.2
OLIL ePP PP 00 11 41.1 -2.9
LPIG La Paz 143.19 52 PKhKP 00 08 29.7
comp=Z,14nm,0.4s,baz=126,slow=3.4,SNR=8.1
LPIG PP PP 00 11 42.6 -3.1
comp=Z,19nm,0.3s,baz=285,slow=20,SNR=2.0
LPIG La Paz 143.19 52 *i* P 00 08 19.0
LPIG PKP PKPdf 00 08 29.7 -5.8
LPIG PP PP 00 11 42.6 -3.1
CLCH Cerro Calan 143.24 192 ⇑*i*P PKPdf 00 08 31.3 -4.1
WMOK Wichita Mounta 143.25 27 ePKP PKPdf 00 08 30.5 -4.8
WMOK ePP PP 00 11 44.5 -0.5
WMOK LR LR
comp=Z,822µm,21.0s,MS8.5
FCH Farellones 143.26 193 ⇑*i*P PKPdf 00 08 31.7 -3.7
SDMD Soldier's Deli 143.31 357 ePKPdf PKPdf 00 08 32.7 -2.6
SDMD ePP PP 00 11 44.4 -0.5
FVM French Village 143.35 15 ePKPdf PKPdf 00 08 31.8 -3.6
FVM ePP PP 00 11 41.0 -4.2
PEL Peldehue 143.52 192 ⇓*i*P PKPdf 00 08 32.1 -3.8
SIUC Southern Illin 143.90 13 ePKPdf PKPdf 00 08 34.2 -2.2
WCI Wyandotte Cave 143.98 9 ePKPdf PKPdf 00 08 33.3 -3.2
WCI ePP PP 00 11 42.0 -7.0
WCI LR LR
comp=Z,778µm,20.0s,MS8.5
USIN University of 143.99 11 ePKPdf PKPdf 00 08 33.4 -3.1
BDFB Brasilia 144.15 239 PKP PKPdf 00 08 35.6 -1.8
comp=Z,43nm,0.7s,baz=141,slow=3.0,SNR=27
CPUP Villa Florida 144.25 215 PKP PKPdf 00 08 35.1 -2.2
comp=Z,48nm,0.6s,baz=122,slow=2.7,SNR=57
CFAA Coronel Fontan 144.39 196 PKP PKPdf 00 08 34.5 -2.9
comp=Z,7.5nm,0.7s,baz=195,slow=2.0,SNR=27
TXAR Lajitas Array 144.74 39 PKP PKPdf 00 08 36.8 -1.3
comp=Z,481nm,0.6s,baz=273,slow=1.3,SNR=136
PARMO Parma 144.77 15 ePKPdf PKPdf 00 08 36.5 -1.5
PARMO ePP PP 00 11 53.5 -0.3
PVMO Portageville 145.02 15 ePKPab PKPab 00 08 36.5 -1.2
URVA University of 145.18 358 ePKP PKPdf 00 08 37.1 -1.5
GLAT Glass 145.26 14 ePKP PKPdf 00 08 37.5 -1.2
UTMT University of 145.29 14 ePKP PKPdf 00 08 37.8 -1.0
GNAR Gunnell 145.36 15 ePKPbc PKPbc 00 08 37.8 -1.0
ELN Prospectdale 145.53 2 ePKPdf PKPdf 00 08 37.5 -1.8
MIAR Mount Ida 145.55 21 ePKP PKPdf 00 08 38.6 -0.8
MIAR LR LR
comp=Z,724µm,20.0s,MS8.4
BLA Blacksburg 145.56 2 ePKP PKPdf 00 08 37.6 -1.7
BLA LR LR
comp=Z,1091µm,22.0s,MS8.6
HBAR Harrisburg 145.57 17 ePKPdf PKPdf 00 08 39.0 -0.3
HALT Halls 145.59 15 ePKP PKPdf 00 08 38.5 -0.9
WVT Waverly 145.73 12 ePKP PKPdf 00 08 38.5 -1.1
WVT LR LR
comp=Z,968µm,22.0s,MS8.5
UALR University of 145.77 19 ePKP PKPdf 00 08 38.9 -0.8
TZTN Tazewell 146.01 6 ePKPdf PKPdf 00 08 40.1 +0.1
TZTN LR LR
comp=Z,1041µm,21.0s,MS8.6
JCT Junction City 146.15 33 ePKPdf PKPdf 00 08 40.6 +0.1
JCT LR LR
comp=Z,363µm,21.0s,MS8.1
MET Memphis--Engin 146.18 16 ePKPdf PKPdf 00 08 40.4 0.0
TLL Tololo Astrono 146.41 193 ⇑*i*P PKPdf 00 08 40.5 -0.5
MAIG Mazatlaan 146.69 50 *i* P PKPdf 00 08 42.0 +0.4
TKL Tuckaleechee C 146.86 7 PKPbc PKPbc 00 08 41.4 -2.0
TKL Tuckaleechee C 146.86 7 ePKPdf PKPdf 00 08 41.6 0.0
TKL ePP PP 00 12 13.4 +7.3
OXF Oxford 146.89 15 ePKP PKPdf 00 08 42.1 +0.5
OXF LR LR
comp=Z,894µm,22.0s,MS8.5
CPCT Cooper Cave 146.97 8 ePKP PKPdf 00 08 42.3 +0.6
SWET Sewanee 146.98 10 ePKP PKPdf 00 08 41.5 -0.3
BBSR BB Station 147.38 337 ePKPdf PKPdf 00 08 42.9 +0.4
BBSR LR LR
comp=Z,574µm,20.0s,MS8.4
LCO Las Campanas 147.50 194 ⇑*i*P PKPdf 00 08 42.5 -0.3
CNNC Cliffs of the 147.52 358 ePKP PKPdf 00 08 43.7 +1.1
CNNC LR LR
comp=Z,621µm,21.0s,MS8.4
NATX Nacogdoches 147.59 25 ePKP PKPdf 00 08 44.1 +1.3
NATX LR LR
comp=Z,931µm,22.0s,MS8.5
JSC Jenkinsville 148.44 3 ePKPdf PKPdf 00 08 45.1 +0.9
HKT Hockley 148.60 28 ePKPdf PKPdf 00 08 44.1 -0.5
HKT ePKPbc PKPbc 00 08 48.2 -0.1
HKT ePKPab PKPab 00 08 51.5 -0.2
HKT LR LR
comp=Z,1377µm,22.0s,MS8.7
VBMS Vicksburg 148.71 19 ePKP PKPdf 00 08 47.0 +2.3
VBMS LR LR
comp=Z,655µm,20.0s,MS8.4
LRAL Lakeview Retre 148.88 13 ePKPdf PKPdf 00 08 44.7 -0.2
LRAL ePKPbc PKPbc 00 08 48.3 -0.6
LRAL LR LR
comp=Z,821µm,19.0s,MS8.5
GOGA Godfrey 149.11 7 ePKPdf PKPdf 00 08 45.1 -0.3
GOGA ePKPbc PKPbc 00 08 49.2 -0.3
GOGA LR LR
comp=Z,1294µm,22.0s,MS8.7
COW Cow Castle Cre 149.37 2 ePKP PKPdf 00 08 49.5 +3.8
KVTX Kingsville 149.48 34 ePKP PKPdf 00 08 48.8 +2.7
KVTX LR LR
comp=Z,914µm,20.0s,MS8.6
NHSC New Hope 149.66 2 ePKPdf PKPdf 00 08 47.9 +1.7
NHSC LR LR
comp=Z,822µm,20.0s,MS8.5
SFJM Santa Fe 150.80 51 eP PKPdf 00 08 47.4 -0.9
BRAL Brewton 150.81 14 ePKPdf PKPdf 00 08 48.8 +0.8
BRAL ePKPbc PKPbc 00 08 53.8 +0.1
BRAL LR LR
comp=Z,1017µm,20.0s,MS8.6
COLM Colima 150.99 54 *i* P PKPdf 00 08 46.9 -1.7
CEN1 Los Morros 152.68 198 eP PKPdf 00 08 53.2 +2.1
MOIG Morelia 152.69 50 *i* P PKPdf 00 08 49.9 -1.3
LVC Limon Verde 152.96 201 PKP PKPdf 00 08 51.7 +0.1

comp=Z,17nm,0.9s,baz=253,slow=1.2,SNR=5.6
ZIIG Zihuatanejo 153.61 54 *i* P PKPdf 00 08 51.6 -1.0
SIV San Ignacio 154.20 224 PKP PKPdf 00 08 53.1 -0.3
comp=Z,7.0nm,0.9s,baz=104,slow=2.2,SNR=19
PTVM Pico Tres Padr 154.30 48 *i* P PKPdf 00 08 53.7 +0.2
PBVM Pinon 154.41 48 *e*P PKPdf 00 08 51.9 -1.8
UNM Universidad Na 154.41 48 *i* P PKPdf 00 08 53.8 +0.2
DWPF Disney 154.56 4 *e*PKPdf PKPdf 00 08 54.9 +1.2
DWPF LR LR
comp=Z,871µm,22.0s,MS8.5
IIO Organos 154.58 47 *i* P PKPdf 00 08 53.7 -0.2
PLIG Platanillo 154.73 50 *i* P PKPdf 00 08 54.1 0.0
CAIG El Cayaco 154.88 54 *i* P PKPdf 00 08 52.2 -2.1
PPM Popocatepetl 154.98 48 *i* P PKPbc 00 09 06.5 +3.3
PPM *i* P 00 09 11.2
ACX Acapulco 155.26 54 *i* P PKPdf 00 08 52.5 -2.3
LVIG Laguna Verde 156.13 43 *i* P PKPdf 00 08 55.8 -0.2
PNIG Pinotepa 156.95 52 *i* P PKPdf 00 08 56.6 -0.5
VHO Vista Hermosa 157.62 49 *i* P PKPdf 00 08 58.5 +0.5
OXX Oaxaca 157.63 49 *e*P PKPdf 00 09 00.5 +2.5
BPA Boggy Peak 157.67 311 *e* PKPdf 00 08 57.8 -0.3
BBGH Gun Hill 157.87 299 PFAKE 00 09 10.0 +12
BBGH LR LR
comp=Z,706µm,22.0s,MS8.5
MGG Marie-Galante 157.92 308 *e*P PKPdf 00 08 59.5 +1.2
STMA St. Maarten, A 157.95 315 *e* PKPdf 00 08 58.8 +0.5
DWS Wesley 158.12 307 *e* PKPdf 00 08 57.5 -1.1
LZG Guadaloupe-1 158.15 309 *e*P PKPdf 00 08 56.7 -1.9
TBG Guadaloupe-3 158.22 308 *e*P PKPdf 00 08 58.3 -0.4
LPAZ La Paz 158.23 210 PKP PKPdf 00 08 58.9 +0.2
comp=Z,12nm,0.9s,baz=53,slow=0.6,SNR=30
DBCT Belle View Cho 158.31 306 *e* PKPdf 00 08 53.0 -5.8
MDN Morne-Daniel 158.32 307 *e* PKPdf 00 08 59.7 +0.9
DFBT Forest Bistro 158.34 306 *e* PKPdf 00 08 59.0 +0.1
DSHT Scott's Head 158.36 306 *e* PKPdf 00 08 58.0 -0.9
FDF Fort de France 158.44 305 *e*P PKPdf 00 08 59.5 +0.5
TUIG Tuzandepetl 158.66 43 *i* P PKPdf 00 08 59.2 0.0
HUIG Huatulco 158.89 51 *i* P PKPdf 00 08 58.7 -0.8
CMIG Matias Romero 158.97 46 PP PP 00 13 07.5 -8.5
comp=Z,55nm,1.3s,baz=14,slow=8.3,SNR=1.5
CMIG Matias Romero 158.97 46 *i* P PKPdf 00 08 57.7 -1.8
MTP Monte Pirata 159.56 320 *e*PKPdf PKPdf 00 09 01.1 +0.8
HUMP Col San Antoni 159.72 320 *e*PKPdf PKPdf 00 09 00.1 -0.3
BOT Bacolet 159.73 296 *e*P PKPdf 00 09 06.1 +5.6
TPR Prospect 159.78 296 *e*P PKPdf 00 09 06.1 +5.5
CPD Cerro la Pandu 159.84 320 *e*PKP PKPdf 00 09 00.4 -0.2
SJG San Juan 159.93 321 PKP PKPdf 00 08 59.4 -1.3
comp=Z,26nm,0.8s,baz=14,slow=2.1,SNR=6.5
SJG PP PP 00 13 13.3 -7.6
comp=Z,24nm,0.8s,baz=299,slow=13,SNR=1.7
AOPR Arecibo Observ 160.13 323 *e*PKPdf PKPdf 00 09 01.6 +0.8
GRGR Grenville 160.15 299 *e*PKP PKPdf 00 09 02.2 +1.2
GRGR LR LR
comp=Z,257µm,20.0s
AGPR Aguadilla, PR 160.25 324 *e*PKPdf PKPdf 00 09 01.7 +0.7
TEIG Tepich 160.41 26 PP PP 00 13 12.8 -10
comp=Z,33nm,0.9s,baz=0.0,slow=18,SNR=1.4
TEIG Tepich 160.41 26 *e*PKPdf PKPdf 00 09 00.5 -0.7
TEIG LR LR
comp=Z,517µm,22.0s
SCX San Cristobal 160.78 42 *i* P PKPdf 00 08 52.1 -10
CCIG Comitan 161.44 42 *i* P PKPdf 00 09 01.5 -0.8
PCRV Puerto La Cruz 163.64 298 PKP PKPdf 00 09 02.7 -1.9
comp=Z,17nm,1.0s,baz=14,slow=3.2,SNR=1.9
PCRV PP PP 00 13 37.3 -4.4
comp=Z,15nm,0.8s,baz=27,slow=9.0,SNR=1.9
CVJ Coleyville 164.39 354‖ *e*P PKPdf 00 09 06.2 +1.0
GWJ Greenwich 164.44 351‖ *e*P PKPdf 00 09 07.1 +1.9
STH Stony Hill 164.45 351‖ *e*P PKPdf 00 09 06.8 +1.6
MCJ Malvern 164.71 354‖ *e*P PKPdf 00 09 08.1 +2.7
NNA Nana 165.29 189 PKP PKPdf 00 09 03.9 -2.1
comp=Z,37nm,0.9s,baz=207,slow=1.9,SNR=3.0
NNA PP PP 00 13 42.5 -5.9
comp=Z,6.7nm,0.4s,baz=217,slow=5.1,SNR=2.5
NNA Nana 165.29 189 PKP PKPdf 00 09 03.9 -2.1
NNA *e*PKPdf PKPdf 00 09 05.7 -0.3
NNA PP PP 00 13 42.5 -5.9
NNA LR LR
comp=Z,289µm,21.0s
TGUH Tegucigalpa,Un 166.16 34 *e*PKPdf PKPdf 00 09 06.5 -0.3
TGUH LR LR
comp=Z,473µm,22.0s
PAYG Puerto Ayora 168.52 106 *e*PKPdf PKPdf 00 09 07.0 -1.6
PAYG LR LR
comp=Z,432µm,22.0s
SDV Santo Domingo 169.39 306 PKP PKPdf 00 09 07.5 -1.6
comp=Z,27nm,0.7s,baz=3.7,slow=1.4,SNR=11
SDV PP PP 00 14 07.8 -3.2
comp=Z,9.2nm,0.4s,baz=337,slow=13,SNR=2.0
ATAH Atahualpa 170.41 185 PKP PKPdf 00 09 10.2 +0.6
comp=Z,24nm,1.2s,baz=352,slow=2.4
ATAH PP PP 00 14 07.5 -6.9
comp=Z,33nm,1.1s,baz=302,slow=19,SNR=1.4
JTS JuntasAbangare 170.52 36 PP PP 00 14 05.3 -11
comp=Z,22nm,0.9s,baz=344,slow=20,SNR=2.3
JTS JuntasAbangare 170.52 36 *e*PKPdf PKPdf 00 09 09.8 +0.1
JTS LR LR
comp=Z,387µm,22.0s
BCIP Isla Barro Col 173.47 5 *e*PKPdf PKPdf 00 09 11.0 -0.1
BCIP LR LR
comp=Z,382µm,19.0s
ROSC El Rosal 174.59 294 PKP PKPdf 00 09 11.3 -0.2
comp=Z,22nm,0.7s,baz=279,slow=4.2,SNR=18
ROSC PP PP 00 14 35.4 -1.9
comp=Z,35nm,1.0s,baz=90,slow=14,SNR=2.5
OTAV Otavalo 177.50 199 *e*PKPdf PKPdf 00 09 13.1 +0.9
OTAV LR LR
comp=Z,712µm,22.0s

*ISCJB **13** 00:02:41.9±4.1, 19S×01×998E±01, h48km±35km, mb4.8/12, Error ellipse: s-maj=28.8km s-min=14.3km az=142.8*
*NEIC **13** 00:02:41.8±0.6, 201S×9965E, h35km, Error ellipse: s-maj=22.5km s-min=11.2km az=55.0*
*IDC **13** 00:02:45.6±3.9, 198S×9977E, h66km±33km, mb4.5/13, mb1 4.6/13, mb1mx4.4/21, mbtmp4.5/13, Error ellipse: s-maj=23.0km s-min=14.0km az=50.0*
ISC 13 00:02:44.7±3.9, 19S±01×998E±01, h55km±34km, n20, σ0§61/16, mb4.8/12, 1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBUM	**Sibu**	**13.15**	**71**	‖P	PKiKP	00 19 09.0	-5.3
CMAR	**Chiang Mai Arr**	**20.27**	**358**	P	**P**	**00 07 15.9**	**+0.1**
	14nm,0.9s,baz=189,slow=9.7,SNR=4.6						
WRA	**Warramunga Arr**	**38.20**	**120**	P	**P**	**00 09 58.9**	**-0.5**
	7.0nm,0.7s,mb4.5,baz=306,slow=9.1,SNR=11						
WB2	**Warramunga Arr**	**38.20**	**120**	*e*P	**P**	**00 09 59.3**	**-0.1**
ASAR	**Alice Springs**	**39.45**	**126**	P	**P**	**00 10 09.7**	**-0.2**
	9.8nm,0.9s,mb4.5,baz=300,slow=7.9,SNR=7.4						
ASAR				S	**S**	**00 16 07.8**	**-0.2**
	5.8nm,0.9s,baz=301,slow=15,SNR=9.3						
KBL	**Kabul**	**46.36**	**324**	P	**P**	**00 11 02.2**	**-3.4**
KSRS	**Korea Array**	**47.06**	**31**	P	**P**	**00 11 10.2**	**-0.7**
	12nm,0.8s,mb4.9,baz=224,slow=8.2,SNR=24						
STKA	**Stephens Creek**	**49.34**	**132**	P	**P**	**00 11 29.6**	**+0.9**
	7.0nm,0.2s,mb5.3,baz=308,slow=14,SNR=4.6						
SONM	**Songino Array**	**49.89**	**6**	P	**P**	**00 11 33.7**	**+1.2**
	18nm,0.8s,mb5.1,baz=187,slow=10.0,SNR=12						
MKAR	**Makanchi Array**	**50.91**	**345**	P	**P**	**00 11 40.5**	**+0.2**
	16nm,0.8s,mb5.0,baz=150,slow=8.0,SNR=12						
MJAR	**Matsushiro Arr**	**52.34**	**39**	P	**P**	**00 11 51.0**	**-0.2**
	10.0nm,0.9s,mb4.8,baz=220,slow=7.4,SNR=9.8						
ZALV	**Zalesovo Beam**	**57.06**	**350**	P	**P**	**00 12 25.0**	**0.0**
	27nm,0.7s,mb5.4,baz=164,slow=6.2,SNR=15						
BVAR	**Borovoye Array**	**60.05**	**340**	P	**P**	**00 12 45.5**	**-0.3**
	3.3nm,0.4s,mb4.7,baz=142,slow=8.3,SNR=8.5						
KMBO	**Kilima Mbogo**	**62.53**	**270**	P	**P**	**00 13 03.4**	**0.0**
	1.9nm,0.6s,mb4.4,baz=106,slow=15,SNR=3.5						
PETK	**Petropavlovsk-**	**72.93**	**32**	P	**P**	**00 14 08.2**	**+0.1**
	5.1nm,0.9s,mb4.4,baz=11,slow=3.0,SNR=4.4						
SPITS	**Spitsbergen Ar**	**90.52**	**348**	P	**P**	**00 15 40.5**	**+0.3**
	6.0nm,0.7s,mb5.0,baz=80,slow=4.5,SNR=4.7						
TXAR	**Lajitas Array**	**144.76**	**37**	PKP	PKPdf	00 22 15.9	-0.2
	5.4nm,0.5s,baz=264,slow=0.5,SNR=47						
CFAA	**Coronel Fontan**	**144.77**	**198**	PKP	PKPdf	00 22 14.3	-1.7
	3.0nm,0.9s,baz=183,slow=2.5,SNR=6.4						
LVC	**Limon Verde**	**153.24**	**204**	PKPbc	PKPbc	00 22 35.0	-2.4
	38nm,1.1s,baz=331,slow=3.4,SNR=4.5						
LVC	**Limon Verde**	**153.24**	**204**	PKPbc	PKPbc	00 22 35.0	-2.4

IDC 13 00:03:16.0±3.2, 206S×9967E, h0km, mb4.9/7, mb1 5.0/7, mb1mx4.7/19, mbtmp5.0/7, Error ellipse: s-maj=71.5km s-min=46.2km az=29.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.40**	**358**	P	P	00 07 54.3	-0.3
	14nm,0.7s,baz=185,slow=10.0,SNR=5.0						
KSRS	**Korea Array**	**47.24**	**31**	P	P	00 11 50.2	-0.6
	15nm,0.9s,baz=224,slow=8.9,SNR=8.7						
SONM	**Songino Array**	**50.03**	**6**	P	P	00 12 13.2	+1.0
	19nm,0.8s,baz=183,slow=8.1,SNR=6.4						
MKAR	**Makanchi Array**	**51.00**	**345**	P	P	00 12 19.3	-0.2
	20nm,0.8s,baz=156,slow=8.3,SNR=4.2						
MJAR	**Matsushiro Arr**	**52.53**	**39**	P	P	00 12 31.2	+0.1
	8.9nm,0.6s,baz=223,slow=8.0,SNR=9.6						
ZALV	**Zalesovo Beam**	**57.16**	**350**	P	P	00 13 04.3	-0.1
	52nm,0.8s,baz=148,slow=5.1,SNR=10						
PETK	**Petropavlovsk-**	**73.11**	**32**	P	P	00 14 48.3	+0.2
	5.4nm,0.6s,baz=336,slow=0.2,SNR=8.2						
TXAR	**Lajitas Array**	**144.95**	**37**	PKP	PKPdf	00 22 55.4	-0.5
	16nm,0.6s,baz=218,slow=1.0,SNR=13						

*IDC **13** 00:08:58.9±0.7, 171S×9975E, h0km, mb4.7/17, mb1 4.8/17, mb1mx4.7/24, mbtmp4.7/17, Error ellipse: s-maj=22.3km s-min=14.8km az=56.0*
*MOS **13** 00:09:01.6±0.9, 174S×9958E, h33km, mb5.2/4, Error ellipse: s-maj=24.9km s-min=12.4km az=111.5*
*NEIC **13** 00:09:03.0±0.3, 189S×9957E, h35km, mb5.0/6, Error ellipse: s-maj=13.7km s-min=6.4km az=55.0*
*ISCJB **13** 00:09:03.5±2.2, 187S±0.10×9955E±009, h56km±18km, mb4.9/26, Error ellipse: s-maj=20.6km s-min=9.3km az=41.0*
ISC 13 00:09:05.7±2.0, 19S±01×9960E±009, h57km±16km, n52, σ0§78/47, mb4.9/26, 4C-6D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGM	**Kluang**	**5.37**	**44**	‖P	**Pn**	**00 10 23.8**	**+0.5**
FRIM	**Kepong**	**5.48**	**22**	⇑P	**Pn**	**00 10 24.3**	**-0.4**
MYKOM	**Kota Tinggi**	**5.60**	**49**	‖P	**Pn**	**00 10 26.8**	**+0.3**
IPM	**Ipoh**	**6.48**	**13**	‖P	**Pn**	**00 10 38.2**	**-0.3**
KTGM	**Kuala Trenggan**	**7.99**	**26**	⇑P	**Pn**	**00 10 59.3**	**+0.1**
KKM	**Kota Kinabalu**	**18.36**	**64**	⇑P	**Pn**	**00 13 17.6**	**+1.1**
SDKM	**Sandakan**	**19.10**	**67**	⇑P	**Pn**	**00 13 25.0**	**-0.2**
TSM	**Tawau**	**19.26**	**71**	‖P	**Pn**	**00 13 26.9**	**-0.4**
KDM	**Kudat**	**19.29**	**63**	‖P	**Pn**	**00 13 26.4**	**-1.2**
MYLDM	**Lahad Datu**	**20.14**	**70**	‖P	**P**	**00 13 37.8**	**+2.4**
CMAR	**Chiang Mai Arr**	**20.23**	**358**	P	**P**	**00 13 34.8**	**-1.4**
	15nm,0.9s,baz=187,slow=10,SNR=20						
MBWA	**Marble Bar**	**27.42**	**136**	*e*P	**P**	**00 14 44.7**	**-1.5**
	56nm,1.6s,mb4.8						
JIRN	**Jiri**	**32.09**	**337**	*e*P	**P**	**00 15 27.9**	**+0.5**
GUN	**Gumba**	**32.43**	**337**	*e*P	**P**	**00 15 30.4**	**-0.1**
	34nm,0.4s,mb5.5						
DMN	**Daman**	**32.48**	**336**	*e*P	**P**	**00 15 31.2**	**+0.4**
KKN	**Kakani**	**32.56**	**336**	*e*P	**P**	**00 15 32.0**	**+0.4**
	42nm,1.0s,mb5.3						
GKN	**Gorkha**	**33.02**	**335**	*e*P	**P**	**00 15 35.7**	**+0.1**
	14nm,0.5s,mb5.2						
KOLN	**Koldanda**	**33.26**	**334**	*e*P	**P**	**00 15 38.2**	**+0.5**
	20nm,0.6s,mb5.2						
WRA	**Warramunga Arr**	**38.39**	**120**	P	**P**	**00 16 21.8**	**0.0**
	17nm,0.9s,mb4.8,baz=300,slow=9.1,SNR=14						
WB2	**Warramunga Arr**	**38.40**	**120**	*e*P	**P**	**00 16 21.2**	**-0.7**
ASAR	**Alice Springs**	**39.64**	**126**	P	**P**	**00 16 32.9**	**+0.7**
	5.3nm,0.7s,mb4.4,baz=299,slow=7.8,SNR=12						
KSRS	**Korea Array**	**47.13**	**31**	P	**P**	**00 17 32.1**	**-0.2**
	10nm,0.9s,mb4.8,baz=223,slow=8.8,SNR=26						
UCH	**Uchtor**	**49.43**	**336**	P	**P**	**00 17 50.4**	**+0.5**
	11nm,1.1s,mb4.8						
STKA	**Stephens Creek**	**49.52**	**132**	P	**P**	**00 17 51.5**	**+0.6**
	14nm,0.9s,mb5.0,baz=310,slow=8.3,SNR=7.3						
TKM2	**Tokmak 2**	**49.57**	**337**	*e*P	**P**	**00 17 51.7**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb5.0						
TKM2	**Tokmak 2**	**49.57**	**337**	*e*P	**P**	**00 17 51.7**	**+0.7**
	comp=Z,6.3nm,0.4s,mb5.0						
SONM	**Songino Array**	**49.87**	**6**	P	**P**	**00 17 53.3**	**+0.2**
	comp=Z,13nm,0.8s,mb5.0,baz=184,slow=8.7,SNR=17						
MKAR	**Makanchi Array**	**50.81**	**345**	P	**P**	**00 18 00.5**	**+0.2**
	comp=Z,9.8nm,0.7s,mb4.9,baz=151,slow=8.4,SNR=20						
MKAR	**Makanchi Array**	**50.81**	**345**	P	**P**	**00 18 00.5**	**+0.2**
MJAR	**Matsushiro Arr**	**52.44**	**39**	P	**P**	**00 18 11.9**	**-0.8**
	comp=Z,5.9nm,0.5s,mb4.8,baz=221,slow=7.4,SNR=15						
OPO	**Ambohidratompo**	**53.94**	**248**	P	**P**	**00 18 28.4**	**+4.4**
	comp=Z,2.3nm,0.9s,mb4.1,baz=317,slow=2.2,SNR=1.9						
KURK	**Kurchatov**	**55.39**	**344**	P	**P**	**00 18 33.4**	**-0.5**
	comp=Z,7.1nm,0.8s,mb4.8,baz=164,slow=7.4,SNR=11						
ZALV	**Zalesovo Beam**	**56.98**	**350**	P	**P**	**00 18 45.2**	**0.0**
	comp=Z,40nm,0.8s,mb5.5,baz=180,slow=5.7,SNR=43						
ZALV	**Zalesovo Beam**	**56.98**	**350**	P	**P**	**00 18 45.2**	**0.0**
BVAR	**Borovoye Array**	**59.94**	**340**	P	**P**	**00 19 04.9**	**-0.9**
	comp=Z,3.1nm,0.4s,mb4.7,baz=143,slow=8.1,SNR=9.6						
AKTK	**Aktyubinsk**	**63.07**	**332**	P	**P**	**00 19 26.1**	**-0.9**
AKTO	**Aktyubinsk**	**63.07**	**332**	P	**P**	**00 19 26.1**	**-0.9**
	comp=Z,2.6nm,0.7s,mb4.5,baz=180,slow=3.0,SNR=3.8						
GNI	**Garni**	**65.17**	**316**	P	**P**	**00 19 40.1**	**-0.9**
GNI				pmax	pmax		
	comp=Z,31nm,1.3s						
GNI	**Garni**	**65.17**	**316**	P	**P**	**00 19 40.1**	**-0.9**
	comp=Z,31nm,1.3s,mb5.2						
KIV	**Kislovodsk**	**68.20**	**319**	*e*P	**P**	**00 20 00.3**	**+0.1**
KIV				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
KIV	**Kislovodsk**	**68.20**	**319**	*e*P	**P**	**00 20 00.3**	**+0.1**
	comp=Z,12nm,0.9s,mb4.9						
LSZ	**Lusaka**	**71.58**	**255**	*e*P	**P**	**00 20 21.3**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,30nm,1.8s,mb4.9						
LSZ	**Lusaka**	**71.58**	**255**	*e*P	**P**	**00 20 21.3**	**-0.2**
	comp=Z,30nm,1.8s,mb4.9						
PETK	**Petropavlovsk-**	**73.00**	**32**	P	**P**	**00 20 29.3**	**+0.1**
	comp=Z,7.2nm,0.7s,mb4.7,baz=124,slow=0.6,SNR=18						
IDI	**Anoyia**	**78.65**	**306**	P	**P**	**00 21 04.7**	**+2.8**
	comp=Z,20nm,1.0s,mb5.0,baz=279,slow=3.9,SNR=3.1						
AKASG	**Malin Array Be**	**79.15**	**322**	P	**P**	**00 21 04.7**	**+0.4**
	comp=Z,19nm,0.7s,mb4.1,baz=66,slow=2.4,SNR=3.6						
ARCES	**ARCESS Array B**	**86.23**	**340**	P	**P**	**00 21 41.3**	**+0.6**
	comp=Z,12nm,0.9s,mb5.1,baz=116,slow=6.1,SNR=3.5						
CPUP	**Villa Florida**	**144.17**	**217**	PKP	PKPdf	00 28 35.2	-0.7
	comp=Z,4.5nm,1.0s,baz=167,slow=3.6,SNR=5.4						
CFAA	**Coronel Fontan**	**144.75**	**198**	PKP	PKPdf	00 28 36.9	+0.1
	comp=Z,0.8nm,0.6s,baz=148,slow=1.8,SNR=8.2						
CFAA	**Coronel Fontan**	**144.75**	**198**	PKP	PKPdf	00 28 36.9	+0.1
TXAR	**Lajitas Array**	**144.85**	**37**	PKP	PKPdf	00 28 37.5	+0.5
	comp=Z,18nm,0.7s,baz=197,slow=1.0,SNR=124						
TKL	**Tuckaleechee C**	**146.25**	**5**	PKPbc	PKPbc	00 28 39.8	-0.5
	comp=Z,6.3nm,0.8s,baz=211,slow=3.4,SNR=8.9						

IDC 13 00:12:10.6±2.1, 195S×9975E, h0km, mb4.1/8, mb1 4.3/8, mb1mx4.1/19, mbtmp4.1/8, Error ellipse: s-maj=65.8km s-min=20.7km az=60.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.29**	**358**	P	P	00 16 49.6	+1.5
	2.3nm,0.3s,baz=190,slow=9.0,SNR=4.3						
WRA	**Warramunga Arr**	**38.24**	**120**	P	P	00 19 31.6	-1.0
	1.2nm,0.6s,baz=306,slow=8.9,SNR=3.5						
ASAR	**Alice Springs**	**39.49**	**126**	P	P	00 19 44.7	+1.6
	1.0nm,0.5s,baz=302,slow=7.8,SNR=5.3						
KSRS	**Korea Array**	**47.11**	**31**	P	P	00 20 44.1	-0.3
	1.9nm,0.9s,baz=220,slow=5.7,SNR=4.4						
SONM	**Songino Array**	**49.90**	**6**	P	P	00 21 06.2	+0.3
	3.2nm,0.8s,baz=189,slow=9.1,SNR=4.7						
MKAR	**Makanchi Array**	**50.91**	**345**	P	P	00 21 13.6	+0.1
	1.9nm,0.4s,baz=159,slow=8.4,SNR=5.7						
MJAR	**Matsushiro Arr**	**52.40**	**39**	P	P	00 21 24.4	-0.4
	0.6nm,0.4s,baz=251,slow=3.7,SNR=2.7						
ZALV	**Zalesovo Beam**	**57.07**	**350**	P	P	00 21 57.8	-0.5
	3.6nm,0.5s,baz=150,slow=5.9,SNR=5.4						
TXAR	**Lajitas Array**	**144.82**	**37**	PKP	PKPdf	00 31 49.0	-1.2
	1.2nm,0.6s,baz=197,slow=1.4,SNR=6.9						

*BJI **13** 00:15:45.3, 291S×9945E, h23km, mB5.3, mb5.5*
*IDC **13** 00:15:48.2±0.5, 229S×9943E, h0km, mb4.9/29, mb1 5.0/29, mb1mx4.9/34, mbtmp4.9/29, Error ellipse: s-maj=19.1km s-min=10.9km az=52.0*
*NEIC **13** 00:15:50.3±3.6, 230S×9943E, h14km±21km, mb5.2/12, Error ellipse: s-maj=9.1km s-min=4.6km az=53.0*

*ISCJB **13** 00:15:52.0±1.3, 229S±005×9949E±006, h37km±10km, mb5.0/45, Error ellipse: s-maj=11.5km s-min=5.8km az=142.7*
*MOS **13** 00:15:52.5±1.2, 219S×9954E, h38km, mb5.3/7, Error ellipse: s-maj=18.0km s-min=8.3km az=114.9*
*DJA **13** 00:16:02, 213S×9982E, h72km, MLv6.1/6*
ISC 13 00:15:54.5±1.1, 229S±005×9951E±006, h43km±9km, h30km±3.4km: pP-P, n137, σ0§84/113, mb5.0/45, 5C-17D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RGRI	**Rengat**	**3.42**	**56**	P	**Pn**	**00 16 46.1**	**+0.7**
	0.0nm,0.0s						
TRSI	**Tarutung**	**4.32**	**353**	P	**Pn**	**00 17 04.8**	**+7.0**
	0.0nm,0.0s						
KGM	**Kluang**	**5.73**	**42**	⇑P	**Pn**	**00 17 17.4**	**+0.2**
FRIM	**Kepong**	**5.88**	**21**	⇑P	**Pn**	**00 17 18.8**	**-0.5**
KLI	**Kotabumi**	**5.92**	**116**	P	**Pn**	**00 17 20.4**	**+0.7**
	0.0nm,0.0s						
MYKOM	**Kota Tinggi**	**5.94**	**47**	‖P	**Pn**	**00 17 20.4**	**+0.4**
IPM	**Ipoh**	**6.89**	**13**	‖P	**Pn**	**00 17 32.5**	**-0.6**
CBJI	**Citeko**	**8.39**	**119**	P	**Pn**	**00 17 56.3**	**+2.7**
	0.0nm,0.0s						
KTGM	**Kuala Trenggan**	**8.39**	**26**	‖P	**Pn**	**00 17 53.5**	**-0.2**
SKJI	**Sukabumi**	**8.44**	**124**	P	**Pn**	**00 17 52.6**	**-1.7**
	0.0nm,0.0s						
JCJI	**Jatiwangi**	**9.68**	**116**	P	**Pn**	**00 18 11.7**	**+0.4**
	0.0nm,0.0s						
KSM	**Kuching**	**11.43**	**71**	‖P	**Pn**	**00 18 41.0**	**+5.7**
KSM	**Kuching**	**11.43**	**71**	Pn	**Pn**	**00 18 33.3**	**-1.9**
BTM	**Bintulu**	**14.62**	**68**	‖P	**Pn**	**00 19 24.7**	**+5.9**
KKM	**Kota Kinabalu**	**18.62**	**64**	‖P	**Pn**	**00 20 09.0**	**-0.3**
KKM	**Kota Kinabalu**	**18.62**	**64**	*e*P	**Pn**	**00 20 08.8**	**-0.5**
SDKM	**Sandakan**	**19.34**	**66**	‖P	**Pn**	**00 20 17.0**	**-0.9**
TSM	**Tawau**	**19.48**	**70**	⇑P	**Pn**	**00 20 18.8**	**-0.8**
KDM	**Kudat**	**19.56**	**62**	‖P	**Pn**	**00 20 20.2**	**-0.3**
PCI	**Palu**	**20.36**	**86**	P	**P**	**00 20 28.3**	**+0.6**
	0.0nm,0.0s						
MYLDM	**Lahad Datu**	**20.37**	**69**	‖P	**P**	**00 20 29.5**	**+1.7**
KAPI	**Kappang**	**20.38**	**98**	P	**P**	**00 20 26.6**	**-1.3**
	105nm,0.9s,baz=310,slow=3.6						
KAPI	**Kappang**	**20.38**	**98**	*e*P	**P**	**00 20 27.9**	**0.0**
	124nm,1.0s						
CMAR	**Chiang Mai Arr**	**20.63**	**358**	P	**P**	**00 20 29.3**	**-1.1**
	10nm,0.5s,baz=187,slow=10,SNR=31						
CHTO	**Chiang Mai**	**20.98**	**359**	*e*P	**P**	**00 20 33.2**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,23nm,0.8s						
CHTO	**Chiang Mai**	**20.98**	**359**	*e*P	**P**	**00 20 33.2**	**-1.0**
	comp=Z,23nm,0.8s						
BBSI	**Bau Bau**	**23.22**	**99**	P	**P**	**00 20 58.0**	**-0.3**
	comp=Z,0.0nm,0.0s						
QIZ	**Qiongzhong**	**23.50**	**25**	*e*P	**P**	**00 21 00.1**	**-0.7**
	comp=Z,99nm,1.0s,mb5.2						
BATI	**Baumata**	**25.25**	**109**	P	**P**	**00 21 15.4**	**-1.5**
	comp=Z,20nm,0.6s,mb4.9,baz=28,slow=5.1,SNR=3.4						
LBMI	**Labuha**	**28.03**	**87**	P	**P**	**00 21 41.2**	**-0.8**
	comp=Z,0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**30.06**	**123**	*e*P	**P**	**00 22 00.2**	**+0.3**
	comp=Z,26nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**30.06**	**123**	P	**P**	**00 21 59.9**	**0.0**
	comp=Z,20nm,0.9s,mb4.8,baz=288,slow=5.7,SNR=4.8						
FITZ	**Fitzroy Crossi**	**30.06**	**123**	*e*P	**P**	**00 22 00.1**	**+0.2**
FITZ				*e*	pP	00 22 10.0	-1.5
ODAN	**Odare**	**31.25**	**339**	*e*P	**P**	**00 22 11.3**	**+1.0**
	comp=Z,53nm,0.8s,mb5.4						
TAPN	**Taplejung**	**31.59**	**340**	*e*P	**P**	**00 22 14.4**	**+1.1**
	comp=Z,106nm,0.9s,mb5.7						
RAMN	**Ramite**	**31.63**	**338**	*e*P	**P**	**00 22 14.8**	**+1.2**
JIRN	**Jiri**	**32.42**	**338**	*e*P	**P**	**00 22 21.5**	**+0.9**
	comp=Z,69nm,0.8s,mb5.5						
GUN	**Gumba**	**32.77**	**337**	*e*P	**P**	**00 22 24.3**	**+0.7**
	comp=Z,47nm,0.5s,mb5.7						
LSA	**Lhasa**	**32.80**	**346**	*e*P	**P**	**00 22 25.2**	**+1.3**
LSA				*e*		00 22 32.1	
LSA				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.2						
LSA	**Lhasa**	**32.80**	**346**	*e*P	**P**	**00 22 25.2**	**+1.3**
	comp=Z,16nm,0.5s,mb5.2						
LSA				*e*		00 22 32.1	
KKN

comp=Z,33nm,0.5s,mb5.6,baz=176,slow=5.7,SNR=70
TAU Tasmania Unive 58.67 140 P **P** **00 25 47.1 -0.6**
ASAJ Asahikawa 60.13 35 P **P** **00 25 57.2 -0.5**
comp=Z,5.9nm,0.4s,mb5.0,baz=267,slow=18,SNR=3.7
BVAR Borovoye Array 60.29 340 P **P** **00 25 57.9 -0.7**
comp=Z,9.9nm,0.7s,mb4.9,baz=139,slow=9.5,SNR=19
BRVK Borovoye 60.35 340 *eP* **P** **00 25 58.3 -0.7**
BRVK pmax pmax
comp=Z,19nm,1.0s,mb5.1
BRVK Borovoye 60.35 340 *eP* **P** **00 25 58.3 -0.7**
comp=Z,19nm,1.0s,mb5.1
KMBO Kilima Mbogo 62.24 270 P **P** **00 26 12.2 -0.4**
GNI Garni 65.40 316 P **P** **00 26 31.9 -1.0**
ARU Arti 67.28 337 *eP* **P** **00 26 43.8 -0.8**
ARU pmax pmax
comp=Z,46nm,1.5s,mb5.3
ARU Arti 67.28 337 *eP* **P** **00 26 43.8 -0.7**
comp=Z,46nm,1.5s,mb5.3
KIV Kislovodsk 68.44 319⇓ *eP* **P** **00 26 52.3 +0.1**
KIV *e**PP pP 00 27 01.0 -3.8
KIV *e**SP sP 00 27 09.1 -0.6
KIV pmax pmax
comp=Z,11nm,0.9s,mb4.9
KIV Kislovodsk 68.44 319 *eP* **P** **00 26 51.4 -0.8**
comp=Z,16nm,1.1s,mb5.0
MALT Malatya 69.17 313 P **P** **00 26 55.8 -1.0**
BR131 Keskin Array S 73.16 313 P **P** **00 27 20.9 0.0**
comp=Z,4.6nm,0.8s,mb4.5
PETK Petropavlovsk- 73.39 32 P **P** **00 27 21.8 -0.2**
comp=Z,4.6nm,0.7s,mb4.5,baz=225,slow=1.4,SNR=9.8
PETK Petropavlovsk- 73.39 32 P **P** **00 27 21.8 -0.2**
RPZ Rata Peaks 75.12 135 P **P** **00 27 32.7 +0.4**
comp=Z,8.9nm,0.8s,mb4.8,baz=36,slow=19,SNR=2.2
OBN Obninsk 76.78 328⇑ *eP* **P** **00 27 42.0 +0.5**
OBN *e**PP pP 00 27 50.5 -3.8
OBN pmax pmax
comp=Z,46nm,1.6s,mb5.2
TIRR Tirgusor 78.22 316⇓ *iP* **P** **00 27 46.6 -3.2**
TIRR Tirgusor 78.22 316 ⇓P **P** **00 27 46.6 -3.2**
IDI Anoyia 78.82 306 P **P** **00 27 52.4 -0.9**
comp=Z,8.8nm,0.9s,mb4.7,baz=312,slow=8.5,SNR=3.2
SUR Sutherland 79.23 238 P **P** **00 27 54.1 -1.5**
VRI Vrincioaia 79.73 317⇓ *iP* **P** **00 28 07.1 +9.1**
VRI Vrincioaia 79.73 317 ⇓P **P** **00 28 07.1 +9.0**
MLR Muntele Rosu 80.18 317 *iP* **P** **00 28 00.8 +0.4**
comp=Z,7.8nm,0.9s,mb4.7,baz=88,slow=23,SNR=5.4
MLR Muntele Rosu 80.18 317⇓ *iP* pP 00 28 12.5 -0.8
BURAR Bucovina Array 81.15 319⇓ *iP* **P** **00 28 06.9 +1.3**
BUR08 Bucovina Ar. S 81.17 319 *eP* **P** **00 28 06.9 +1.1**
TSUM Tsumeb 81.63 251 P **P** **00 28 08.5 -0.2**
comp=Z,5.7nm,1.0s,mb4.5,baz=316,slow=2.5,SNR=6.1
JOF Joensuu 82.27 335 *ep* **P** **00 28 11.1 -0.1**
KAF Kangasniemi 84.22 333 *ep* **P** **00 28 20.7 -0.5**
ARCES ARCESS Array B 86.58 340 P **P** **00 28 33.5 +0.7**
comp=Z,13nm,0.9s,mb5.2,baz=114,slow=5.4,SNR=11
GERES GERESS Array B 88.94 319 P **P** **00 28 45.2 +0.6**
comp=Z,1.8nm,0.9s,mb4.4,baz=106,slow=2.9,SNR=4.1
SPITS Spitsbergen Ar 90.82 348 P **P** **00 28 51.9 -0.9**
comp=Z,5.1nm,0.5s,mb5.1,baz=354,slow=7.8,SNR=13
NOA NORSAR Array B 91.16 331 P **P** **00 28 54.2 -0.4**
comp=Z,1.9nm,1.0s,mb4.4,baz=237,slow=0.8,SNR=2.9
DAVOX Davos/Dischmat 91.40 317 P **P** **00 28 56.0 -0.1**
comp=Z,6.0nm,0.9s,mb4.9,baz=206,slow=5.6,SNR=3.8
KEST Kesra 91.46 306 P **P** **00 28 57.3 +0.7**
comp=Z,2.0nm,1.0s,mb4.4,baz=243,slow=4.5,SNR=3.1
DAVOS Davos 91.46 317 P **P** **00 28 56.0 -0.4**
SCHQ Schefferville 126.45 350 PKP PKPdf 00 34 52.7 -0.1
comp=Z,3.5nm,0.8s,baz=56,slow=15,SNR=2.1
SCHQ Schefferville 126.45 350 PKP PKPdf 00 34 52.7 -0.1
NVAR Mina Array Bea 130.13 39 PKP PKPdf 00 35 01.9 +1.5
comp=Z,0.9nm,0.6s,baz=332,slow=1.9,SNR=4.3
ULM Lac du Bonnet 130.46 13 PKP PKPdf 00 35 00.1 -0.5
comp=Z,3.3nm,0.8s,baz=135,slow=11,SNR=2.7
PDAR Pinedale Array 132.07 29 PKP PKPdf 00 35 04.7 +0.8
comp=Z,0.6nm,0.6s,baz=117,slow=1.0,SNR=3.4
RSSD Black Hills 133.42 23 PKIKP PKPdf 00 35 07.2 +0.8
GLMI Grayling 137.49 4 PKPdf PKPdf 00 35 13.8 -0.1
ACSO Alum Creek Sta 142.17 3 PKPdf PKPdf 00 35 21.3 -1.3
WMOK Wichita Mounta 143.50 26 *e*PKIKP PKPdf 00 35 21.9 -3.2
CPUP Villa Florida 143.80 217 PKP PKPdf 00 35 26.8 +0.9
comp=Z,1.4nm,0.7s,baz=120,slow=6.3,SNR=3.0
WCI Wyandotte Cave 143.84 8 *e*PKIKP PKPdf 00 35 23.1 -2.5
TXAR Lajitas Array 145.23 37 PKPbc PKPbc 00 35 28.9 +0.9
comp=Z,22nm,0.6s,baz=278,slow=1.2,SNR=182
ELN Prospectdale 145.23 0 *e*PKPbc PKPbc 00 35 27.0 -0.7
BLA Blacksburg 145.25 360 *e*PKIKP PKPdf 00 35 27.3 -0.8
WVT Waverly 145.65 11 *e*PKIKP PKPdf 00 35 28.7 -0.1
MIAR Mount Ida 145.67 19 *e*PKP2 PKPab 00 35 29.4 -0.1
TZTN Tazewell 145.80 4 *e*PKPdf PKPdf 00 35 29.1 +0.1
UALR University of 145.85 18 PKPdf PKPdf 00 35 28.3 -0.9
TKL Tuckaleechee C 146.66 5 PKPbc PKPbc 00 35 31.4 -0.7
baz=132,slow=5.7
CPCT Cooper Cave 146.80 6 *e*PKPdf PKPdf 00 35 32.3 +1.5
SWET Sewanee 146.85 8 *e*PKPdf PKPdf 00 35 31.1 +0.3
GOGA Godfrey 148.92 5 *e*PKIKP PKPdf 00 35 34.3 0.0
GOGA *e* 00 35 38.5
SIV San Ignacio 153.57 226 PKPbc PKPbc 00 35 48.3 -1.3
comp=Z,0.4nm,0.5s,baz=111,slow=11,SNR=2.1

IDC 13 00:18:32.2±3.9, 208S×9953E, h0km, mb4.4/5, mb1 4.4/5, mb1mx4.1/19, mbtmp4.4/5, Error ellipse: s-maj=90.3km s-min=62.5km az=47.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.41**	**358**	P	P	00 23 11.7	+0.7
	1.7nm,0.4s,baz=191,slow=10,SNR=4.3						
KSRS	**Korea Array**	**47.33**	**31**	P	P	00 27 07.0	-0.7
	3.4nm,0.8s,baz=225,slow=8.3,SNR=5.1						
SONM	**Songino Array**	**50.07**	**6**	P	P	00 27 29.0	+0.3
	7.0nm,0.8s,baz=188,slow=7.2,SNR=6.3						
MKAR	**Makanchi Array**	**50.98**	**345**	P	P	00 27 35.4	-0.2
	3.8nm,0.7s,baz=156,slow=7.8,SNR=5.7						
ZALV	**Zalesovo Beam**	**57.16**	**350**	P	P	00 28 20.2	-0.4
	8.5nm,0.8s,baz=168,slow=4.6,SNR=4.0						
TXAR	**Lajitas Array**	**145.05**	**37**	PKPbc	PKPbc	00 38 11.3	-0.3
	2.6nm,0.7s,baz=272,slow=0.9,SNR=5.0						

IDC 13 00:28:58.5±0.8, 2.11S×9965E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.1/22, mbtmp4.2/10, Error ellipse: s-maj=31.8km s-min=17.1km az=58.0
ISCJB 13 00:29:00.9±0.5, 2.10S±007×99.75E±007, h33km, mb4.5/14, Error ellipse: s-maj=11.3km s-min=8.9km az=144.0
NEIC 13 00:29:03.2±0.3, 2.11S×9974E, h35km, mb4.8/6, Error ellipse: s-maj=8.2km s-min=6.8km az=70.0
ISC 13 00:29:00.3±5.4, 211S±006×9972E±008, h14km±35km, n38, σ0§65/31, mb4.5/14, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCO	**West Island**	**10.42**	**196**	Pn	**Pn**	**00 31 29.0**	**-0.4**
KSM	**Kuching**	**11.17**	**72**	Pn	**Pn**	**00 31 39.8**	**+0.1**
KKM	**Kota Kinabalu**	**18.35**	**64**	Pn	**Pn**	**00 33 13.6**	**-1.1**
KAPI	**Kappang**	**20.20**	**99**	P	**P**	**00 33 36.3**	**+1.4**
	9.0nm,0.8s,baz=262,slow=16,SNR=2.6						
CMAR	**Chiang Mai Arr**	**20.45**	**358**	P	**P**	**00 33 38.0**	**+0.5**
	2.7nm,0.3s,baz=186,slow=10,SNR=9.3						
CHTO	**Chiang Mai**	**20.80**	**358**	*eP*	**P**	**00 33 41.4**	**0.0**
QIZ	**Qiongzhong**	**23.24**	**25**	*eP*	**P**	**00 34 07.7**	**+0.2**
	8.5nm,0.6s,mb4.3						
LSA	**Lhasa**	**32.67**	**346**	*eP*	**P**	**00 35 32.8**	**+0.6**
	4.4nm,0.5s,mb4.6						
YHNB	**Yeheng**	**33.92**	**37**	P	**P**	**00 35 42.5**	**-0.6**
WRA	**Warramunga Arr**	**38.18**	**120**	P	**P**	**00 36 20.4**	**+0.7**
	1.1nm,0.6s,mb3.8,baz=302,slow=9.0,SNR=5.5						
WRA	**Warramunga Arr**	**38.18**	**120**	P	**P**	**00 36 20.4**	**+0.7**
WRAB	**Tennant Creek**	**38.19**	**120**	*eP*	**P**	**00 36 20.0**	**+0.2**
	32nm,1.4s,mb4.9						
ASAR	**Alice Springs**	**39.42**	**126**	P	**P**	**00 36 30.5**	**+0.4**
	2.1nm,0.8s,mb4.0,baz=305,slow=7.9,SNR=9.0						
RER	**Riviere de l'E**	**46.81**	**243**	*eP*	**P**	**00 37 30.1**	**+0.1**
CTAO	**Charters Tower**	**48.80**	**115**	P	**P**	**00 37 43.2**	**-2.2**
SONM	**Songino Array**	**50.08**	**6**	P	**P**	**00 37 55.3**	**+0.7**
	4.3nm,0.8s,mb4.5,baz=186,slow=8.7,SNR=9.4						
ULN	**Ulaanbaatar**	**50.18**	**6**	*eP*	**P**	**00 37 54.8**	**-0.6**
	45nm,2.1s,mb5.1						
MKAR	**Makanchi Array**	**51.06**	**345**	P	**P**	**00 38 02.8**	**+0.7**
	6.0nm,0.8s,mb4.6,baz=157,slow=8.0,SNR=11						
MJAR	**Matsushiro Arr**	**52.53**	**39**	P	**P**	**00 38 13.0**	**-0.4**
	2.5nm,0.8s,mb4.2,baz=219,slow=7.0,SNR=4.1						
MJAR	**Matsushiro Arr**	**52.53**	**39**	P	**P**	**00 38 12.9**	**-0.4**
TLY	**Talaya**	**53.69**	**3**	P	**P**	**00 38 21.6**	**+0.1**
KURK	**Kurchatov**	**55.63**	**344**	P	**P**	**00 38 35.6**	**-0.1**
	2.0nm,0.8s,mb4.2,baz=164,slow=7.4,SNR=3.8						
KURK	**Kurchatov**	**55.63**	**344**	*eP*	**P**	**00 38 34.5**	**-1.1**
ZALV	**Zalesovo Beam**	**57.22**	**350**	P	**P**	**00 38 46.9**	**0.0**
	9.4nm,0.8s,mb4.9,baz=182,slow=5.0,SNR=12						
ZALV	**Zalesovo Beam**	**57.22**	**350**	P	**P**	**00 38 46.9**	**0.0**
TAU	**Tasmania Unive**	**58.68**	**141**	P	**P**	**00 38 57.8**	**+0.4**
BVAR	**Borovoye Array**	**60.19**	**340**	P	**P**	**00 39 07.3**	**-0.4**
	1.4nm,0.6s,mb4.1,baz=135,slow=8.5,SNR=5.3						
BRVK	**Borovoye**	**60.25**	**340**	*eP*	**P**	**00 39 08.2**	**+0.1**
KIV	**Kislovodsk**	**68.44**	**319**	*eP*	**P**	**00 40 01.6**	**-0.4**
	79nm,2.4s,mb5.3						
MALT	**Malatya**	**69.20**	**312**	*eP*	**P**	**00 40 06.8**	**0.0**
	8.3nm,1.6s,mb4.4						
TUE	**Stuetta**	**91.77**	**316**	P	**P**	**00 42 08.0**	**+0.2**
	518nm,0.6s						
CPUP	**Villa Florida**	**144.07**	**217**	PKP	PKPdf	00 48 35.7	-0.7
	0.3nm,0.4s,baz=114,slow=2.6,SNR=3.5						
CPUP	**Villa Florida**	**144.07**	**217**	PKP	PKPdf	00 48 35.7	-0.7
CFAA	**Coronel Fontan**	**144.57**	**198**	PKP	PKPdf	00 48 37.2	0.0
	0.6nm,0.7s,baz=156,slow=3.8,SNR=12						
TXAR	**Lajitas Array**	**144.96**	**37**	PKPbc	PKPdf	00 48 38.6	+0.7
	4.2nm,0.8s,baz=231,slow=0.5,SNR=26						
SIV	**San Ignacio**	**153.85**	**226**	PKPbc	PKPbc	00 48 58.8	-1.4
	1.3nm,0.5s,baz=135,slow=21,SNR=3.1						
SIV				PKPab	PKPab	00 49 14.8	+1.6
	1.8nm,0.5s,baz=199,slow=23,SNR=3.3						
SJG	**San Juan**	**158.90**	**320**	PKP	PKPdf	00 48 59.8	+0.9
	7.3nm,0.3s,baz=311,slow=20,SNR=4.5						
CMIG	**Matias Romero**	**159.32**	**43**	PKP	PKPdf	00 49 00.4	+1.0
	1.0nm,0.4s,baz=348,slow=14,SNR=3.3						

SKO 13 00:30:58.5, 40.11N×2133E, h4km, M2.5, ML2.8
ISCJB 13 00:30:59.9±0.4, 4026N±002×2133E±004, h3km±5km, Error ellipse: s-maj=4.6km s-min=3.0km az=1.8
TIR 13 00:30:59.7±1.5, 4028N×2120E, h6km±194km
CSEM 13 00:31:00.5±0.1, 4030N×2129E, h10km, MD3.1, Error ellipse: s-maj=3.0km s-min=2.0km az=95.0
THE 13 00:31:01.1, 4028N×2127E, h7km, ML3.2
NEIC 13 00:31:01.1, 4028N×2127E, h8km, MD3.1(ATH), ML3.2(THE), After THE.
ATH 13 00:31:01.1, 4020N×2131E, h24km±4km, MD3.1/5
ISC 13 00:31:00.9±0.4, 4026N±002×2131E±003, h17km±4km, n38, σ1§31/63, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.35**	**82**	*e*PB	**Pg**	**00 31 08.8**	**+0.5**
KZN				*e*SB	**Sg**	**00 31 15.9**	**+2.7**
KZN	**Kozani**	**0.35**	**82**	*e*Pb	**Pg**	**00 31 08.8**	**+0.5**
KZN				*e*Sb	**Sg**	**00 31 16.5**	**+3.3**
MEV	**Metsovon**	**0.48**	**188**	*e*Pg	**Pg**	**00 31 10.1**	**-0.3**
MEV				*e*Sg	**Sg**	**00 31 18.4**	**+1.5**
MEV	**Metsovon**	**0.48**	**188**	*i* PG	**Pg**	**00 31 10.1**	**-0.4**
MEV				*i* SG	**Sg**	**00 31 18.4**	**+1.5**
FNA	**Florina**	**0.53**	**5**	*e*Pg	**Pg**	**00 31 10.9**	**-0.5**
FNA				*e*Sg	**Sg**	**00 31 19.0**	**+0.5**
FNA	**Florina**	**0.53**	**5**	*i* PG	**Pg**	**00 31 10.9**	**-0.5**
FNA				*i* SG	**Sg**	**00 31 19.0**	**+0.5**
JAN	**Janina**	**0.70**	**211**	*e*PN	**Pn**	**00 31 13.6**	**-2.4**
BIA	**Bitola**	**0.76**	**1**	*e*Pg	**Pg**	**00 31 14.4**	**-1.4**
BIA				*e*Sg	**Sg**	**00 31 27.4**	**+1.5**
BIA				*e*Lg		00 31 27.8	
	comp=N,173nm,0.5s						
BIA				*e*Lg		00 31 27.8	
	comp=E,175nm,0.6s						
BIA	**Bitola**	**0.76**	**1**	*e*Pg	**Pg**	**00 31 14.3**	**-1.5**
BIA				*e*Sg	**Sg**	**00 31 26.8**	**+1.0**
THL	**Klokotos Trika**	**0.88**	**142**	*e*Pg	**Pg**	**00 31 17.3**	**-0.7**
THL				*e*Sg	**Sg**	**00 31 31.5**	**+2.0**
THL	**Klokotos Trika**	**0.88**	**142**	*e*Pn	**Pn**	**00 31 17.6**	**-0.9**
THL				*e*Sg	**Sg**	**00 31 31.5**	**+2.0**
LIT	**Litokhoron**	**0.92**	**100**	*e*Pg	**Pg**	**00 31 18.4**	**-0.3**
LIT				*e*Sg	**Sg**	**00 31 33.7**	**+3.0**
OHR	**Ohrid**	**0.94**	**336**	*i* PG	**Pg**	**00 31 17.6**	**-1.5**
OHR				*i* SG	**Sg**	**00 31 31.7**	**+0.3**
OHR	**Ohrid**	**0.94**	**336**	*e*Pg	**Pg**	**00 31 17.9**	**-1.3**
OHR				*e*Sg	**Sg**	**00 31 31.3**	**-0.1**
OHR				*e*Lg		00 31 31.5	
	comp=N,195nm,0.8s						
OHR				*e*Lg		00 31 31.7	
	comp=E,215nm,0.4s						
OHR	**Ohrid**	**0.94**	**336**	*e*Pg	**Pg**	**00 31 17.6**	**-1.5**
OHR				*e*Sg	**Sg**	**00 31 31.7**	**+0.3**
IGT	**Igoumenitsa**	**1.05**	**226**	*e*Pg	**Pg**	**00 31 20.0**	**-1.2**
IGT				*e*Sg	**Sg**	**00 31 36.0**	**+1.2**
IGT	**Igoumenitsa**	**1.05**	**226**	*i* PG	**Pg**	**00 31 20.0**	**-1.1**
IGT				*i* SG	**Sg**	**00 31 36.0**	**+1.2**
GRG	**Griva**	**1.08**	**50**	*e*Pg	**Pg**	**00 31 21.0**	**-0.9**
KRUS	**Krusevo**	**1.11**	**358**	*e*Pg	**Pg**	**00 31 21.2**	**-1.2**
KRUS				*e*Sg	**Sg**	**00 31 38.3**	**+1.3**
KRUS				*e*Lg		00 31 38.9	
	comp=E,52nm,0.4s						
KRUS				*e*Lg		00 31 39.9	
	comp=N,42nm,0.4s						
KRUS	**Krusevo**	**1.11**	**358**	*e*Pg	**Pg**	**00 31 21.1**	**-1.3**
KRUS				*e*Sg	**Sg**	**00 31 38.2**	**+1.3**
KEK	**Kerkira**	**1.28**	**245**	*e*PN	**Pn**	**00 31 25.3**	**+1.2**
EVR	**Evrytania**	**1.39**	**164**	*e*PN	**Pn**	**00 31 26.1**	**+0.5**
HORT	**Hortiatis**	**1.41**	**75**	*e*Pg	**Pg**	**00 31 26.4**	**-1.6**
VAY	**Valandovo**	**1.43**	**42**	*e*Pn	**Pn**	**00 31 26.1**	**+0.1**
VAY				*e*Sg	**Sg**	**00 31 47.4**	**+0.4**
VAY	**Valandovo**	**1.43**	**42**	*e*Pg	**Pg**	**00 31 25.9**	**-2.5**
VAY	**Valandovo**	**1.43**	**42**	*e*Pn	**Pn**	**00 31 26.1**	**0.0**
VAY				*e*Sg	**Sg**	**00 31 47.3**	**+0.3**
AGG	**Agios Georgios**	**1.46**	**147**	*e*Pg	**Pg**	**00 31 27.4**	**-1.7**
AGG				*e*Sg	**Sg**	**00 31 48.2**	**+0.1**
KNT	**Kendrikon**	**1.51**	**53**	*e*Pg	**Pg**	**00 31 27.6**	**-2.2**
TIR	**Tirane**	**1.55**	**315**	*i* PG	**Pg**	**00 31 31.7**	**+1.0**
STIP	**Stip**	**1.58**	**24**	*e*Pg	**Pg**	**00 31 28.9**	**-2.4**
STIP	**Stip**	**1.58**	**24**	*e*Pn	**Pn**	**00 31 28.8**	**+0.7**
STIP				*e*Sg	**Sg**	**00 31 52.7**	**+0.9**
STIP	**Stip**	**1.58**	**24**	*e*Pg	**Pg**	**00 31 28.9**	**-2.4**
STIP				*e*Sg	**Sg**	**00 31 52.7**	**+0.8**
PLG	**Polygyros**	**1.64**	**85**	*e*Pb	**Pb**	**00 31 29.7**	**-0.9**
SOH	**Sokhos**	**1.65**	**69**	*e*Pb	**Pb**	**00 31 30.0**	**-0.9**
SOH				*e*Sb	**Sb**	**00 31 53.2**	**+1.7**
XOR	**Xorichti**	**1.70**	**121**	*e*Pb	**Pb**	**00 31 31.2**	**-0.5**
XOR	**Xorichti**	**1.70**	**121**	*e*Pb	**Pb**	**00 31 31.2**	**-0.5**
SKO	**Skopje**	**1.71**	**3**	*e*Pn	**Pn**	**00 31 31.2**	**+1.2**
SKO				*e*Sg	**Sg**	**00 31 58.0**	**+1.9**
LKR	**Lokris**	**2.07**	**140**	P	**Pn**	**00 31 36.8**	**+1.9**

BJI 13 00:31:36.8, 279S×10036E, h13km, mB4.9, mb5.4
IDC 13 00:31:37.8±0.4, 259S×10035E, h0km, mb4.9/32, mb1 5.0/33, mb1mx4.9/35, mbtmp4.9/33, ML4.3/1, Error ellipse: s-maj=16.2km s-min=7.9km az=43.0
ISCJB 13 00:31:41.1±0.2, 268S±004×10016E±003, h33km, mb5.2/81, MS6.9/2, Error ellipse: s-maj=6.0km s-min=4.3km az=34.4
MOS 13 00:31:43.4±1.0, 244S×10040E, h49km, mb5.5/22, Error ellipse: s-maj=12.8km s-min=6.1km az=114.1
NEIC 13 00:31:43.1±0.2, 256S×10032E, h35km, mb5.2/15, Error ellipse: s-maj=7.3km s-min=4.7km az=224.0
DJA 13 00:31:54, 298S×10038E, h97km, MLv5.8/6
ISC 13 00:31:43.1±0.2, 271S±004×10016E±003, h35km, (h28km±3.5km:pP-P), n223, σ1§06/208, mb5.2/80, MS6.9/2, 28C-20D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSRI	**Dabo**	**4.94**	**63**	P	**Pn**	**00 32 58.2**	**+3.3**
	0.0nm,0.0s						
KGM	**Kluang**	**5.65**	**34**	⇑P	**Pn**	**00 33 06.2**	**+1.4**
BLSI	**Bandar Lampung**	**5.72**	**118**	P	**Pn**	**00 33 10.0**	**+4.4**
	343nm,0.8s						
MYKOM	**Kota Tinggi**	**5.79**	**40**	⇑P	**Pn**	**00 33 07.6**	**+0.9**
FRIM	**Kepong**	**6.08**	**14**	⇑P	**Pn**	**00 33 11.9**	**+1.3**
SBJI	**Serang**	**6.85**	**120**	P	**Pn**	**00 33 30.5**	**+9.4**
	392nm,1.0s						
IPM	**Ipoh**	**7.19**	**7**	⇑P	**Pn**	**00 33 27.6**	**+1.7**
DBJI	**Dramaga**	**7.60**	**120**	P	**Pn**	**00 33 34.5**	**+3.1**
	280nm,1.2s						
CBJI	**Citeko**	**7.62**	**119**	P	**Pn**	**00 33 37.6**	**+5.9**
	981nm,0.8s						
KTGM	**Kuala Trenggan**	**8.51**	**20**	⇑P	**Pn**	**00 33 46.5**	**+2.5**
COCO	**West Island**	**9.98**	**199**	Pn	**Pn**	**00 34 03.0**	**-1.2**
KSM	**Kuching**	**10.96**	**68**	⇓P	**Pn**	**00 34 21.2**	**+3.7**
KSM	**Kuching**	**10.96**	**68**	Pn	**Pn**	**00 34 14.6**	**-3.0**
SJI	**Sawahan**	**12.59**	**114**	P	**Pn**	**00 34 39.9**	**+0.1**
	135nm,1.0s						
SBUM	**Sibu**	**13.10**	**67**	⇑P	**Pn**	**00 34 50.1**	**+3.3**
MTNI	**Mataram**	**16.98**	**111**	P	**Pn**	**00 35 44.1**	**+6.0**
	76nm,0.9s						
KKM	**Kota Kinabalu**	**18.23**	**62**	⇓P	**Pn**	**00 35 54.4**	**+0.8**
KKM	**Kota Kinabalu**	**18.23**	**62**	*e*Pn	**Pn**	**00 35 51.0**	**-2.6**
SDKM	**Sandakan**	**18.92**	**64**	⇓P	**Pn**	**00 36 02.1**	**+0.1**
TSM	**Tawau**	**19.01**	**69**	⇑P	**Pn**	**00 36 03.3**	**+0.2**
KDM	**Kudat**	**19.19**	**60**	⇓P	**Pn**	**00 36 05.3**	**+0.1**
KAPI	**Kappang**	**19.68**	**97**	P	**Pn**	**00 36 06.8**	**-4.3**
	0.8nm,0.3s,baz=295,slow=12,SNR=22						
PCI	**Palu**	**19.74**	**85**	P	**Pn**	**00 36 12.1**	**+0.3**
	172nm,2.5s						
MYLDM	**Lahad Datu**	**19.92**	**67**	⇓P	**Pn**	**00 36 14.6**	**+0.6**
CM31	**Chiang Mai Arr**	**21.06**	**357**	*eP*	**P**	**00 36 20.3**	**-4.1**
CMAR	**Chiang Mai Arr**	**21.06**	**357**	P	**P**	**00 36 22.0**	**-2.4**
	24nm,0.6s,mb4.7,baz=187,slow=10,SNR=40						
CMAR				PcP	PcP	00 40 31.9	+1.5
	3.7nm,0.7s,baz=220,slow=3.3,SNR=5.6						
CHTO	**Chiang Mai**	**21.42**	**357**	*eP*	**P**	**00 36 25.4**	**-2.8**
CHTO				pmax	pmax		
	comp=Z,56nm,1.2s,mb4.8						
CHTO	**Chiang Mai**	**21.42**	**357**	*eP*	**P**	**00 36 25.4**	**-2.8**
	comp=Z,56nm,1.2s,mb4.8						
KDI	**Kendari**	**22.45**	**94**	P	**P**	**00 36 41.0**	**+1.6**
	comp=Z,67nm,1.1s,mb5.0						
BBSI	**Bau Bau**	**22.52**	**98**	P	**P**	**00 36 45.0**	**+4.9**
	comp=Z,87nm,1.2s,mb5.1						
QIZ	**Qiongzhong**	**23.60**	**23**	*eP*	**P**	**00 36 49.5**	**-1.6**
QIZ				*e*		00 36 59.1	
BATI	**Baumata**	**24.50**	**109**	P	**P**	**00 36 57.7**	**-1.6**
	comp=Z,58nm,0.8s,mb5.1,baz=212,slow=1.8,SNR=8.9						
BATI				S	**S**	**00 41 20.3**	**+2.5**
	comp=Z,14nm,0.4s,baz=355,slow=7.1,SNR=3.8						
MBWA	**Marble Bar**	**26.45**	**135**	*eP*	**P**	**00 37 15.2**	**-1.8**
	comp=Z,4.3nm,0.6s,mb4.2						
LBMI	**Labuha**	**27.40**	**86**	P	**P**	**00 37 29.5**	**+3.8**
	comp=Z,96nm,1.1s,mb5.2						
FITZ	**Fitzroy Crossi**	**29.29**	**123**	P	**P**	**00 37 42.2**	**-0.3**
	comp=Z,11nm,0.8s,mb4.6,baz=302,slow=5.1,SNR=5.5						
SWI	**Sorong**	**31.13**	**87**	P	**P**	**00 37 58.5**	**-0.4**
	comp=Z,49nm,1.0s,mb5.3						
ODAN	**Odare**	**31.88**	**338**	*eP*	**P**	**00 38 05.7**	**+0.5**
	comp=Z,150nm,0.9s,mb5.8						
TAPN	**Taplejung**	**32.20**	**339**	*eP*	**P**	**00 38 08.9**	**+0.9**
	comp=Z,162nm,0.9s,mb5.9						
RAMN	**Ramite**	**32.26**	**337**	*eP*	**P**	**00 38 09.6**	**+1.1**
	comp=Z,75nm,0.7s,mb5.6						
JIRN	**Jiri**	**33.05**	**337**	*eP*	**P**	**00 38 16.4**	**+0.9**
	comp=Z,119nm,0.6s,mb6.0						
PKI	**Pulchoki**	**33.29**	**336**	*eP*	**P**	**00 38 17.7**	**+0.2**
LSA	**Lhasa**	**33.36**	**346**	P	**P**	**00 38 18.7**	**+0.6**
LSA	**Lhasa**	**33.36**	**346**	*eP*	**P**	**00 38 18.7**	**+0.6**
LSA				pmax	pmax		
	comp=Z,68nm,0.8s,mb5.6						
LSA	**Lhasa**	**33.36**	**346**	*eP*	**P**	**00 38 18.6**	**+0.6**
	comp=Z,68nm,0.8s,mb5.6						
GUN	**Gumba**	**33.40**	**337**	*eP*	**P**	**00 38 19.1**	**+0.6**
	comp=Z,232nm,0.8s,mb6.1						
KKN	**Kakani**	**33.53**	**336**	*eP*	**P**	**00 38 20.2**	**+0.5**
	comp=Z,221nm,1.2s,mb6.0						
GKN	**Gorkha**	**33.99**	**335**	*eP*	**P**	**00 38 23.4**	**-0.2**
	comp=Z,41nm,0.4s,mb5.7						
KOLN	**Koldanda**	**34.24**	**333**	*eP*	**P**	**00 38 26.4**	**+0.6**
	comp=Z,78nm,0.7s,mb5.8						
DANN	**Dangsing**	**34.67**	**334**	*eP*	**P**	**00 38 30.0**	**+0.5**
	comp=Z,109nm,0.5s,mb6.1						
WHN	**Wuhan**	**35.73**	**21**	⇓P	**P**	**00 38 38.6**	**0.0**
PTH	**Pithoragarh**	**37.33**	**331**	*eP*	**P**	**00 38 53.2**	**+0.9**
WRA	**Warramunga Arr**	**37.50**	**120**	P	**P**	**00 38 53.7**	**-0.2**
	comp=Z,12nm,0.

MK31	**Makanchi Array**	**51.75**	**344**	*i* P		**P**	**00 40 46.8**	**-0.3**
MK31				pmax	pmax			
	comp=Z,52nm,0.8s,mb5.5							
MK31	**Makanchi Array**	**51.75**	**344**	*i* P		**P**	**00 40 46.9**	**-0.2**
MKAR	**Makanchi Array**	**51.75**	**344**	P	P	**P**	**00 40 47.1**	**0.0**
	comp=Z,34nm,0.7s,mb5.4,baz=148,slow=7.9,SNR=76							
MAT	**Matsushiro**	**52.72**	**39**	P		**P**	**00 40 53.5**	**-1.0**
MJAR	**Matsushiro Arr**	**52.72**	**39**	P		**P**	**00 40 52.9**	**-1.6**
	comp=Z,15nm,0.9s,mb4.9,baz=218,slow=7.5,SNR=22							
MJAR	**Matsushiro Arr**	**52.72**	**39**	P		**P**	**00 40 52.9**	**-1.6**
KK31	**Karatay Array**	**52.85**	**333**	*i* P		**P**	**00 40 54.4**	**-0.9**
KK31				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.7							
MDJ	**Mudanjiang**	**53.95**	**26**	P		**P**	**00 41 03.0**	**-0.4**
MDJ				AMB	AMB			
	comp=Z,26nm,0.9s,mb5.2							
TLY	**Talaya**	**54.26**	**3**	*e*P		**P**	**00 41 06.0**	**+0.5**
TLY				pmax	pmax			
	comp=Z,40nm,1.4s,mb5.2							
TLY	**Talaya**	**54.26**	**3**	⇓*i*P		**P**	**00 41 05.7**	**+0.2**
ABKT	**Ailbek**	**56.09**	**320**	P	P	**P**	**00 41 18.4**	**-0.6**
	comp=Z,123nm,1.1s,mb5.8,SNR=5.0							
KURK	**Kurchatov**	**56.33**	**344**	P		**P**	**00 41 19.8**	**-0.6**
	comp=Z,48nm,0.8s,mb5.6,baz=164,slow=7.0,SNR=66							
KURK	**Kurchatov**	**56.33**	**344**	⇑*i*P		**P**	**00 41 20.0**	**-0.4**
KURK				pmax	pmax			
	comp=Z,102nm,0.9s,mb5.8							
KURK	**Kurchatov**	**56.33**	**344**	P		**P**	**00 41 19.8**	**-0.6**
ZAA0	**Zalesovo Array**	**57.89**	**349**	*e*P		**P**	**00 41 30.6**	**-0.8**
ZAA0				*e*			00 41 45.9	
ZALV	**Zalesovo Beam**	**57.89**	**349**	P		**P**	**00 41 30.8**	**-0.6**
	comp=Z,34nm,0.7s,mb5.5,baz=177,slow=6.1,SNR=38							
TAU	**Tasmania Unive**	**57.94**	**141**	P	P	**P**	**00 41 27.7**	**-4.3**
TAU				pmax	pmax			
	comp=Z,971nm,1.3s							
TAU	**Tasmania Unive**	**57.94**	**141**	P		**P**	**00 41 27.7**	**-4.3**
	comp=Z,971nm,1.3s							
KRAR	**Krasnoyarsk**	**58.82**	**355**	*e*P		**P**	**00 41 36.4**	**-1.5**
KRAR				pmax	pmax			
	comp=Z,41nm,1.0s,mb5.4							
HNR	**Honiara**	**59.76**	**99**	P	P	**P**	**00 41 35.2**	**-10**
HNR				pmax	pmax			
	comp=Z,234nm,0.4s							
HNR	**Honiara**	**59.76**	**99**	P		**P**	**00 41 35.2**	**-10**
	comp=Z,234nm,0.4s							
VOSK	**Vostochnaya**	**60.45**	**340**	P	P	**P**	**00 41 47.0**	**-2.1**
VOSK				pmax	pmax			
	comp=Z,56nm,1.6s,mb5.3							
BVA0	**Borovoye Array**	**60.90**	**340**	*i* P		**P**	**00 41 51.1**	**-1.1**
BVA0				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.6							
BVAR	**Borovoye Array**	**60.90**	**340**	P	P	**P**	**00 41 51.3**	**-0.9**
	comp=Z,21nm,0.8s,mb5.3,baz=145,slow=8.7,SNR=42							
BRVK	**Borovoye**	**60.96**	**340**	*e*P		**P**	**00 41 51.5**	**-1.1**
BRVK				pmax	pmax			
	comp=Z,13nm,0.4s,mb5.4							
BRVK	**Borovoye**	**60.96**	**340**	*e*P		**P**	**00 41 51.5**	**-1.2**
	comp=Z,13nm,0.4s,mb5.4							
BOD	**Bodaibo**	**61.35**	**8**	⇑*i*P		**P**	**00 41 55.2**	**0.0**
BOD				pmax	pmax			
	comp=Z,55nm,0.9s,mb5.7							
YSS	**Yuzh-Sakhalins**	**61.99**	**32**	*e*P		**P**	**00 41 59.2**	**-0.5**
AB31	**Akbulak array**	**62.33**	**331**	⇑*e*P		**P**	**00 42 01.1**	**-0.9**
KMBO	**Kilima Mbogo**	**62.89**	**270**	P		**P**	**00 42 04.8**	**-1.6**
CASY	**Casey**	**63.87**	**175**	*e*P		**P**	**00 42 13.6**	**+1.7**
AKTK	**Aktyubinsk**	**64.05**	**331**	P		**P**	**00 42 12.1**	**-1.2**
AKTO	**Aktyubinsk**	**64.05**	**331**	P		**P**	**00 42 12.1**	**-1.2**
	comp=Z,6.5nm,0.7s,mb4.8,baz=110,slow=18,SNR=16							
GNI	**Garni**	**66.14**	**316**	P		**P**	**00 42 27.4**	**+0.3**
	comp=Z,2.0nm,0.4s,mb4.5,baz=320,slow=13,SNR=4.0							
GNI	**Garni**	**66.14**	**316**	*e*P		**P**	**00 42 28.0**	**+0.8**
GNI				pmax	pmax			
	comp=Z,18nm,0.9s							
GNI	**Garni**	**66.14**	**316**	*e*P		**P**	**00 42 28.0**	**+0.8**
	comp=Z,18nm,0.9s,mb5.1							
SVE	**Sverdlovsk**	**67.39**	**338**	*e*P	P	**P**	**00 42 34.9**	**+0.1**
SVE				pmax	pmax			
	comp=Z,51nm,1.3s,mb5.4							
ARU	**Arti**	**67.92**	**337**	*c*iP		**P**	**00 42 37.3**	**-0.8**
ARU				*e*			00 45 05.2	
ARU				*e*S		S	00 51 34.6	+0.4
ARU				pmax	pmax			
	comp=Z,44nm,1.7s,mb5.2							
ARU	**Arti**	**67.92**	**337**	*e*P		**P**	**00 42 35.8**	**-2.3**
	comp=Z,10.0nm,0.5s,mb5.1							
ASF	**Jabal al Asfar**	**69.13**	**306**	P		**P**	**00 42 46.2**	**0.0**
	comp=Z,6.7nm,0.9s,mb4.6,baz=295,slow=1.0,SNR=12							
KIV	**Kislovodsk**	**69.18**	**319**	⇑*e*P		**P**	**00 42 46.3**	**+0.1**
KIV				*e*		pP	00 42 56.7	-0.4
KIV							00 43 09.0	
KIV				pmax	pmax			
	comp=Z,25nm,1.0s,mb5.1							
KIV				MLR	MLR			
	comp=Z,64μm,18.0s,MS6.9							
KIV	**Kislovodsk**	**69.18**	**319**	⇑*i*P		**P**	**00 42 47.1**	**+0.9**
KIV	**Kislovodsk**	**69.18**	**319**	*e*P		**P**	**00 42 42.8**	**-3.5**
MAW	**Mawson**	**69.64**	**194**	P	P	**P**	**00 42 50.2**	**+1.6**
	comp=Z,2.1nm,0.8s,mb4.1,baz=40,slow=6.3,SNR=6.8							
MALT	**Malatya**	**69.93**	**312**	⇑*i*P		**P**	**00 42 50.0**	**-1.0**
MALT	**Malatya**	**69.93**	**312**	*e*P		**P**	**00 42 48.9**	**-2.1**
	comp=Z,546nm,0.6s							
SOC	**Sochi**	**70.98**	**318**	*e*P		**P**	**00 42 55.5**	**-1.8**
SOC				pmax	pmax			
	comp=Z,25nm,0.8s,mb5.2							
SOC	**Sochi**	**70.98**	**318**	*i* P		**P**	**00 42 57.1**	**-0.2**
SKR	**Severo-Kuril's**	**71.36**	**34**	*e*P		**P**	**00 42 58.3**	**-1.1**
PETK	**Petropavlovsk-**	**73.39**	**32**	P		**P**	**00 43 10.9**	**-0.6**
	comp=Z,13nm,0.6s,mb5.0,baz=208,slow=1.3,SNR=22							
PET	**Petropavlovsk**	**73.86**	**32**	⇑*i*P		**P**	**00 43 13.5**	**-0.7**
PET				pmax	pmax			
	comp=Z,77nm,0.7s,mb5.7							
RPZ	**Rata Peaks**	**74.37**	**135**	P	P	**P**	**00 43 18.5**	**+1.0**
	comp=Z,11nm,0.5s,mb5.0,baz=238,slow=9.5,SNR=4.8							
ANTO	**Ankara**	**74.58**	**313**	⇓*i*P		**P**	**00 43 18.8**	**0.0**
ANTO	**Ankara**	**74.58**	**313**	⇓P		**P**	**00 43 18.8**	**0.0**
SIM	**Simferopol'**	**75.23**	**318**	*e*P		**P**	**00 43 22.6**	**+0.2**
SIM				pmax	pmax			
	comp=Z,14nm,0.8s,mb4.9							
BOSA	**Boshof**	**75.46**	**241**	P		**P**	**00 43 24.9**	**+0.8**
	comp=Z,4.7nm,1.0s,mb4.4,baz=225,slow=14,SNR=3.6							
BOSA	**Boshof**	**75.46**	**241**	P		**P**	**00 43 24.9**	**+0.8**
TIXI	**Tiksi**	**76.52**	**9**	*e*P		**P**	**00 43 27.8**	**-1.4**
TIXI				pmax	pmax			
	comp=Z,33nm,1.3s,mb5.1							
TIXI	**Tiksi**	**76.52**	**9**	*e*P		**P**	**00 43 27.9**	**-1.3**
OBN	**Obninsk**	**77.47**	**328**	⇑*e*P		**P**	**00 43 34.7**	**-0.2**
OBN				*e*		pP	00 43 44.2	-1.7
OBN				PPP			00 48 15.0	
OBN				pmax	pmax			
	comp=Z,34nm,1.3s,mb5.1							
OBN				MLR	MLR			
	comp=Z,51μm,19.0s,MS6.9							
OBN	**Obninsk**	**77.47**	**328**	*e*P		**P**	**00 43 34.4**	**-0.5**
TIRR	**Tirgusor**	**78.97**	**316**	⇓*i*P		**P**	**00 43 43.3**	**-0.1**
TIRR	**Tirgusor**	**78.97**	**316**	⇓P		**P**	**00 43 43.3**	**-0.1**
IDI	**Anoyia**	**79.58**	**306**	P		**P**	**00 43 47.1**	**+0.1**
	comp=Z,11nm,0.7s,mb4.9,baz=39,slow=2.9,SNR=6.3							
AKASG	**Malin Array Be**	**80.14**	**322**	P		**P**	**00 43 48.7**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=91,slow=4.5,SNR=7.4							
AKASG	**Malin Array Be**	**80.14**	**322**	*i* P		**P**	**00 43 49.7**	**+0.1**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
VRI	**Vrincioaia**	**80.48**	**317**	⇓*i*P		**P**	**00 43 52.3**	**+0.7**
MLR	**Muntele Rosu**	**80.92**	**317**	P		**P**	**00 43 54.4**	**+0.5**
	comp=Z,9.4nm,0.8s,mb4.7,baz=136,slow=2.1,SNR=10							
MLR	**Muntele Rosu**	**80.92**	**317**	⇓*i*P		**P**	**00 43 54.8**	**+0.8**
MLR	**Muntele Rosu**	**80.92**	**317**	⇓P		**P**	**00 43 54.8**	**+0.9**
BURAR	**Bucovina Array**	**81.89**	**319**	⇓*i*P		**P**	**00 44 00.4**	**+1.3**
BURAR	**Bucovina Array**	**81.89**	**319**	⇓P		**P**	**00 44 00.4**	**+1.3**
TSUM	**Tsumeb**	**82.11**	**251**	*e*P		**P**	**00 43 58.7**	**-2.2**
JOF	**Joensuu**	**82.92**	**335**	*e*p		**P**	**00 44 03.5**	**-0.6**
DRGR		**83.39**	**318**	⇓*i*P		**P**	**00 44 07.6**	**+0.7**
DRGR		**83.39**	**318**	⇓P		**P**	**00 44 07.6**	**+0.7**
BILL	**Bilibino**	**83.76**	**20**	P		**P**	**00 44 04.7**	**-3.6**
BILL	**Bilibino**	**83.76**	**20**	P		**P**	**00 44 04.7**	**-3.6**
BZS	**Buzias**	**83.93**	**316**	⇑*i*P		**P**	**00 44 09.8**	**+0.2**
BZS	**Buzias**	**83.93**	**316**	⇑P		**P**	**00 44 09.8**	**+0.2**
KWP	**Kalwaria**	**83.95**	**320**	*e*P		**P**	**00 44 10.3**	**+0.7**
KWP	**Kalwaria**	**83.95**	**320**	⇑*i*P		**P**	**00 44 10.1**	**+0.5**
KWP	**Kalwaria**	**83.95**	**320**	*e*P		**P**	**00 44 10.3**	**+0.7**
KOLS	**Kolonicke sedl**	**84.09**	**320**	*e*P		**P**	**00 44 11.1**	**+0.7**
KOLS	**Kolonicke sedl**	**84.09**	**320**	*e*P		**P**	**00 44 11.1**	**+0.7**
KOLS	**Kolonicke sedl**	**84.09**	**320**	*e*P		**P**	**00 44 11.1**	**+0.7**
SUW	**Suwalki**	**84.55**	**325**	*e*P		**P**	**00 44 12.3**	**-0.3**
SUW	**Suwalki**	**84.55**	**325**	*e*P		**P**	**00 44 12.3**	**-0.3**
STHS	**Stebnicka Huta**	**84.84**	**320**	*e*P		**P**	**00 44 15.3**	**+1.1**
STHS				pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.9							
STHS	**Stebnicka Huta**	**84.84**	**320**	*e*P		**P**	**00 44 15.3**	**+1.1**
	comp=Z,8.9nm,0.9s,mb4.9							
STHS				*e*			00 48 27.9	
STHS				*e*			00 49 02.9	
KAF	**Kangasniemi**	**84.88**	**333**	*e*p		**P**	**00 44 12.2**	**-1.9**
KECS	**Kecovo**	**85.18**	**319**	*e*P		**P**	**00 44 13.8**	**-2.1**
KECS				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.5							
KECS	**Kecovo**	**85.18**	**319**	*e*P		**P**	**00 44 13.8**	**-2.1**
	comp=Z,3.7nm,1.1s,mb4.4							
PSZ	**Piszkesteto**	**85.48**	**318**	⇓*i*P		**P**	**00 44 18.0**	**+0.6**
PSZ	**Piszkesteto**	**85.48**	**318**	⇓P		**P**	**00 44 18.0**	**+0.6**
PKSM	**Moragy**	**86.07**	**316**	⇑*i*P		**P**	**00 44 20.4**	**0.0**
PKSM	**Moragy**	**86.07**	**316**	⇑P		**P**	**00 44 20.4**	**0.0**
KOLL	**Kolacno**	**86.56**	**319**	*e*P		**P**	**00 44 17.0**	**-5.7**
ARCES	**ARCESS Array B**	**87.19**	**340**	P		**P**	**00 44 25.7**	**+0.3**
	comp=Z,12nm,0.7s,mb5.2,baz=104,slow=5.1,SNR=26							
ARCES	**ARCESS Array B**	**87.19**	**340**	P		**P**	**00 44 25.7**	**+0.3**
QSPA	**South Pole Qui**	**87.26**	**180**	P		**P**	**00 44 27.6**	**+2.0**
	comp=Z,13nm,0.6s,mb4.3,baz=72,slow=0.8,SNR=5.9							
MORC	**Moravsky Berou**	**87.28**	**320**	⇑*i*P		**P**	**00 44 26.9**	**+0.7**
ZST	**Bratislava**	**87.37**	**318**	*e*P		**P**	**00 44 27.3**	**+0.6**
ZST				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.7							
ZST	**Bratislava**	**87.37**	**318**	*e*P		**P**	**00 44 27.2**	**+0.5**
ZST	**Bratislava**	**87.37**	**318**	*e*P		**P**	**00 44 27.3**	**+0.6**
	comp=Z,4.4nm,0.8s,mb4.7							
BOJS	**Bojanci**	**88.34**	**316**	*i* P		**P**	**00 44 31.9**	**+0.5**
PERS	**Pernice**	**88.54**	**317**	*i* P		**P**	**00 44 32.9**	**+0.6**
SOKA	**Soboth**	**88.60**	**317**	⇑*i*P		**P**	**00 44 33.0**	**+0.4**
VISS	**Visnje**	**88.60**	**316**	*i* P		**P**	**00 44 33.4**	**+0.6**
JAVS	**Javornik**	**89.20**	**316**	*i* P		**P**	**00 44 36.0**	**+0.6**
GERES	**GERESS Array B**	**89.68**	**319**	P		**P**	**00 44 38.4**	**+0.8**
	comp=Z,2.4nm,0.8s,mb4.6,baz=99,slow=4.2,SNR=18							
BRG	**Berggiesshubel**	**89.69**	**321**	*e*P		**P**	**00 44 38.2**	**+0.6**
BRG				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.8							
BRG	**Berggiesshubel**	**89.69**	**321**	*e*P		**P**	**00 44 38.2**	**+0.6**
	comp=Z,6.5nm,0.9s,mb5.0							
CLL	**Collm**	**90.31**	**321**	*e*P		**P**	**00 44 41.0**	**+0.5**
HFS	**Hagfors**	**90.56**	**330**	P		**P**	**00 44 42.0**	**+0.5**
	comp=Z,6.1nm,0.9s,mb4.8,baz=90,slow=2.9,SNR=3.0							
WTTA	**Wattenberg**	**90.97**	**317**	⇑*i*P		**P**	**00 44 43.6**	**0.0**
	comp=Z,8.8nm,1.0s,mb5.0							
MOTA	**Moosalm**	**91.33**	**317**	⇑*i*P		**P**	**00 44 44.8**	**-0.5**
	comp=Z,4.6nm,1.0s,mb4.8							
NOA	**NORSAR Array B**	**91.84**	**331**	P	P	**P**	**00 44 47.3**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.7,baz=93,slow=4.8,SNR=8.1							
DAVA	**Damuels**	**92.16**	**317**	⇑*i*P		**P**	**00 44 49.7**	**+0.5**
	comp=Z,11nm,1.0s,mb5.2							
DAVA	**Damuels**	**92.16**	**317**	⇑*i*PcP		PcP	00 44 49.7	-0.3
	comp=Z,11nm,1.0s							
KEST	**Kesra**	**92.23**	**305**	P	P	**P**	**00 44 50.8**	**+1.0**
	comp=Z,5.1nm,1.0s,mb4.8,baz=325,slow=6.6,SNR=11							
EKA	**Eskdalemuir Ar**	**99.79**	**326**	P		Pdif	00 45 23.0	-0.7
	comp=Z,0.2nm,0.6s,baz=304,slow=6.5,SNR=2.9							
NVAR	**Mina Array Bea**	**130.04**	**40**	PKP		PKPdf	00 50 50.0	+0.3
	comp=Z,1.7nm,0.7s,baz=271,slow=2.4,SNR=8.9							
ULM	**Lac du Bonnet**	**130.71**	**14**	PKP		PKPdf	00 50 49.9	-0.8
	comp=Z,2.8nm,0.5s,baz=300,slow=5.1,SNR=6.6							
PDAR	**Pinedale Array**	**132.11**	**29**	PKP	P	PKPdf	00 50 53.0	-0.6
	comp=Z,1.0nm,0.7s,baz=94,slow=4.5,SNR=4.9							
ECSD	**EROS,Sioux Fal**	**136.52**	**18**	*e*PKPdf		PKPdf	00 50 58.2	-3.5
SADO	**Sadowa**	**138.11**	**359**	PKP		PKPdf	00 51 05.3	+0.7
	baz=260,slow=6.1							
WMOK	**Wichita Mounta**	**143.58**	**27**	*e*PKIKP		PKPdf	00 51 11.1	-3.7
CPUP	**Villa Florida**	**143.85**	**216**	PKP		PKPdf	00 51 14.7	-0.9
	comp=Z,3.3nm,0.8s,baz=133,slow=2.8,SNR=9.8							
CFAA	**Coronel Fontan**	**144.14**	**197**	PKP		PKPdf	00 51 16.3	+0.4
	comp=Z,3.2nm,0.3s,baz=355,slow=4.7,SNR=103							
TXAR	**Lajitas Array**	**145.16**	**38**	PKP		PKPdf	00 51 17.9	+0.2
	comp=Z,31nm,0.7s,baz=288,slow=1.0,SNR=192							
BLA	**Blacksburg**	**145.66**	**1**	*e*PKIKP		PKPdf	00 51 17.7	-0.7
MIAR	**Mount Ida**	**145.84**	**20**	*e*PKIKP		PKPdf	00 51 18.1	-0.6
UALR	**University of**	**146.04**	**19**	*e*PKPdf		PKPdf	00 51 17.6	-1.5
JCT	**Junction City**	**146.53**	**32**	*e*PKP2		PKPab	00 51 20.5	-2.0
TKL	**Tuckaleechee C**	**147.01**	**6**	PKPbc		PKPbc	00 51 22.1	-0.6
	comp=Z,17nm,0.5s,baz=132,slow=3.4,SNR=36							
CNNC	**Cliffs of the**	**147.58**	**357**	*e*PKP		PKPdf	00 51 19.6	-2.1
GOGA	**Godfrey**	**149.26**	**6**	*e*PKHKP		PKPdf	00 51 22.1	-2.4
GOGA				*e*			00 51 28.6	

IDC 13 00:42:32.2±5.6, 216S×9945E, h0km, mb3.5/2, mb1 3.5/2, mb1mx3.3/19, mbtmp3.5/2, Error ellipse: s-maj=202.0km s-min=82.6km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**50.16**	**6**	P	P	00 51 29.5	+0.1
	0.5nm,0.6s,baz=185,slow=9.3,SNR=4.4						
MKAR	**Makanchi Array**	**51.04**	**345**	P	P	00 51 36.0	0.0
	0.3nm,0.5s,baz=158,slow=5.2,SNR=5.2						
TXAR	**Lajitas Array**	**145.17**	**37**	PKPbc	PKPbc	01 02 11.3	-0.7
	0.4nm,0.7s,baz=241,slow=1.5,SNR=5.1						

IDC 13 00:44:35.2±2.0, 206S×9928E, h0km, mb4.1/9, mb1 4.2/9, mb1mx3.9/21, mbtmp4.1/9, Error ellipse: s-maj=90.2km s-min=16.6km az=57.0

ISCJB 13 00:44:36.9±0.5, 2.12S×008×992E×0.1, h33km, mb4.2/9, Error ellipse: s-maj=17.5km s-min=8.8km az=153.4

NEIC 13 00:44:39.6±0.4, 209S×9926E, h35km, mb4.2/3, Error ellipse: s-maj=14.6km s-min=7.8km az=64.0

ISC 13 00:44:39.5±0.5, 211S×007×992E×01, h35km, n22, σ0°99/19, mb4.2/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCO	**West Island**	**10.29**	**193**	Pn	**Pn**	**00 47 04.1**	**-0.6**
XMIS	**Christmas Isla**	**10.48**	**143**	Pn	**Pn**	**00 47 05.9**	**-1.5**
CM31	**Chiang Mai Arr**	**20.44**	**359**	*e*P	**P**	**00 49 13.2**	**-0.7**
	3.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**20.44**	**359**	P	**P**	**00 49 12.3**	**-1.6**
	2.8nm,0.3s,baz=170,slow=11,SNR=6.7						
PALK	**Pallekele**	**20.70**	**297**	*e*P	**P**	**00 49 16.9**	**0.0**
	9.9nm,0.9s						
WRA	**Warramunga Arr**	**38.61**	**120**	P	**P**	**00 51 59.1**	**-0.4**
	2.3nm,0.8s,mb4.0,baz=299,slow=10,SNR=9.9						
WRAB	**Tennant Creek**	**38.61**	**120**	P	**P**	**00 52 00.7**	**+1.1**
WB2	**Warramunga Arr**	**38.62**	**120**	*e*P	**P**	**00 52 00.2**	**+0.6**
ASAR	**Alice Springs**	**39.82**	**125**	P	**P**	**00 52 10.8**	**+1.1**
	0.5nm,0.4s,mb3.6,baz=300,slow=7.3,SNR=8.2						
GUMO	**Guam**	**47.87**	**70**	*e*P	**P**	**00 53 12.3**	**-2.1**
	116nm,1.1s						
STKA	**Stephens Creek**	**49.66**	**131**	P	**P**	**00 53 28.8**	**+0.9**
	2.1nm,0.8s,mb4.2,baz=212,slow=2.1,SNR=3.2						
SONM	**Songino Array**	**50.13**	**6**	P	**P**	**00 53 32.5**	**+1.3**
	2.1nm,0.8s,mb4.2,baz=186,slow=8.8,SNR=14						
EKS2	**Erkin-Say**	**50.14**	**336**	*e*P	**P**	**00 53 30.0**	**-1.3**
	11nm,2.1s,mb4.5						
MKAR	**Makanchi Array**	**50.93**	**345**	P	**P**	**00 53 37.9**	**+0.7**
	1.1nm,0.4s,mb4.2,baz=155,slow=8.7,SNR=16						
KURK	**Kurchatov**	**55.50**	**344**	P	**P**	**00 54 11.4**	**+0.6**
	1.1nm,0.4s,mb4.3,baz=38,slow=49,SNR=3.9						
ZAA0	**Zalesovo Array**	**57.13**	**350**	*e*P	**P**	**00 54 23.1**	**+0.7**
ZALV	**Zalesovo Beam**	**57.13**	**350**	P	**P**	**00 54 23.4**	**+1.0**
	4.5nm,0.7s,mb4.6,baz=177,slow=5.9,SNR=18						
BVAR	**Borovoye Array**	**60.02**	**340**	P	**P**	**00 54 42.4**	**-0.1**
	0.6nm,0.6s,mb3.6,baz=175,slow=8.7,SNR=3.2						
YAK	**Yakutsk**	**68.04**	**15**	P	**P**	**00 55 34.9**	**-0.1**
RPW	**Rockport**	**122.10**	**31**	PKPdf	PKPdf	01 03 30.1	-0.4
TXAR	**Lajitas Array**	**145.25**	**37**	PKPbc	PKPbc	01 04 15.8	+1.9
	2.4nm,0.6s,baz=196,slow=1.2,SNR=42						
TKL	**Tuckaleechee C**	**146.50**	**4**	PKPbc	PKPbc	01 04 17.9	+0.3
	1.5nm,0.6s,baz=194,slow=3.5,SNR=2.9						

IDC 13 00:49:13.9±0.6, 4381S×1622W, h0km, mb4.4/17, mb1 4.4/17, mb1mx4.3/20, mbtmp4.4/17, Error ellipse: s-maj=18.7km s-min=13.6km az=169.0

ISCJB 13 00:49:14.6±0.4, 4398S×008×1624W×009, h10km, mb5.0/47, Error ellipse: s-maj=12.5km s-min=9.0km az=153.0

MOS 13 00:49:14.6±0.8, 4401S×1628W, h10km, mb5.5/23, Error ellipse: s-maj=22.2km s-min=11.7km az=79.7

NEIC 13 00:49:16.1±0.3, 4392S×1628W, h10km, mb5.3/30, Error ellipse: s-maj=10.9km s-min=7.8km az=150.0

ISC 13 00:49:16.3±0.4, 4394S×008×1622W×009, h10km, n119, σ0°90/106, mb5.0/47, 2C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRQA	**Tornquist**	**34.68**	**264**	*e*P	**P**	**00 56 06.3**	**+0.4**
	40nm,2.0s,mb5.0						
USHA	**Ushuaia**	**34.91**	**233**	P	**P**	**00 56 08.1**	**+0.4**
	8.9nm,0.8s,mb4.7,baz=172,slow=14,SNR=2.9						
BOSA	**Boshof**	**36.36**	**79**	P	**P**	**00 56 18.9**	**-1.5**
	8.5nm,1.1s,mb4.6,baz=217,slow=6.6,SNR=4.5						
CPUP	**Villa Florida**	**37.48**	**284**	P	**P**	**00 56 29.6**	**-0.5**
	2.1nm,0.6s,mb4.2,baz=95,slow=9.2,SNR=9.0						
TSUM	**Tsumeb**	**37.50**	**60**	P	**P**	**00 56 28.3**	**-1.9**
	2.7nm,0.9s,mb4.1,baz=255,slow=12,SNR=2.5						
LBTB	**Lobatse**	**38.81**	**75**	P	**P**	**00 56 40.0**	**-1.2**
	11nm,1.2s,mb4.5,baz=279,slow=9.0,SNR=6.8						
BDFB	**Brasilia**	**39.03**	**306**	P	**P**	**00 56 39.9**	**-3.1**
	8.4nm,0.5s,mb4.7,baz=133,slow=1.7,SNR=8.4						
PLCA	**Paso Flores**	**39.68**	**255**	P	**P**	**00 56 47.2**	**-1.2**
	1.4nm,0.7s,baz=113,slow=9.1,SNR=4.8						
CFAA	**Coronel Fontan**	**42.27**	**269**	P	**P**	**00 57 09.3**	**-0.5**
	0.2nm,0.6s,baz=111,slow=8.6,SNR=3.8						
CFAA	**Coronel Fontan**	**42.27**	**269**	P	**P**	**00 57 09.3**	**-0.5**
MAW	**Mawson**	**46.29**	**149**	P	**P**	**00 57 41.3**	**-0.1**
	1.3nm,0.7s,mb4.0,baz=256,slow=12,SNR=2.7						
QSPA	**South Pole Qui**	**46.33**	**180**	P	**P**	**00 57 42.4**	**+0.8**
	15nm,1.0s,mb4.9,baz=215,slow=4.9,SNR=31						
SIV	**San Ignacio**	**47.01**	**292**	P	**P**	**00 57 47.5**	**-0.3**
	1.9nm,0.6s,mb4.2,baz=151,slow=8.0,SNR=13						
LSZ	**Lusaka**	**47.23**	**67**	P	**P**	**00 57 48.7**	**-0.7**
	2.4nm,0.9s,mb4.1,baz=219,slow=11,SNR=3.9						
LIC	**Lamto**	**50.94**	**14**	⇑*i*P	**P**	**00 58 16.5**	**-1.3**
	53nm,1.2s,mb5.0						
LIC	**Lamto**	**50.94**	**14**	*e*P	**P**	**00 58 13.3**	**-4.5**
	56nm,1.2s,mb5.4						
LIC				⇑*i*P	pP	00 58 16.5	-4.5
KIC	**Kosan Boka**	**51.13**	**15**	*e*P	**P**	**00 58 17.0**	**-2.2**
	97nm,1.3s,mb5.6						
TIC	**Toumodi**	**51.35**	**14**	*e*P	**P**	**00 58 13.6**	**-7.3**
	126nm,1.4s,mb5.7						
**T

LPG	**La Plagne**	**91.36**	**16**	*e*P		**P**	**01 02 22.5**	**+0.9**
	comp=Z,23nm,1.2s,mb5.1							
LPG	**La Plagne**	**91.36**	**16**	*e*P		**P**	**01 02 22.5**	**+0.9**
LPG				pmax	pmax			
	comp=Z,12nm,1.2s,mb5.1							
LPG	**La Plagne**	**91.36**	**16**	*e*P		**P**	**01 02 22.5**	**+0.9**
	comp=Z,12nm,1.2s,mb5.1							
LPL	**La Plagne**	**91.37**	**16**	*e*P		**P**	**01 02 22.3**	**+0.6**
	comp=Z,44nm,1.4s,mb5.3							
LPL	**La Plagne**	**91.37**	**16**	*e*P		**P**	**01 02 22.3**	**+0.6**
LPL				pmax	pmax			
	comp=Z,22nm,1.4s,mb5.3							
LPL	**La Plagne**	**91.37**	**16**	*e*P		**P**	**01 02 22.3**	**+0.6**
	comp=Z,22nm,1.4s,mb5.3							
TEIG	**Tepich**	**91.64**	**297**	P		**P**	**01 02 21.9**	**-1.7**
BGF	**Bois d'Agland**	**91.68**	**13**	*e*P		**P**	**01 02 23.6**	**+0.5**
	comp=Z,15nm,1.2s,mb4.9							
BGF	**Bois d'Agland**	**91.68**	**13**	*e*P		**P**	**01 02 23.6**	**+0.5**
BGF				pmax	pmax			
	comp=Z,7.0nm,1.2s,mb4.9							
BGF	**Bois d'Agland**	**91.68**	**13**	*e*P		**P**	**01 02 23.6**	**+0.5**
	comp=Z,7.3nm,1.2s,mb4.9							
SMF	**Signal de Mont**	**91.93**	**14**	*e*P		**P**	**01 02 24.7**	**+0.4**
	comp=Z,26nm,1.2s,mb5.1							
SMF	**Signal de Mont**	**91.93**	**14**	*e*P		**P**	**01 02 24.7**	**+0.4**
SMF				pmax	pmax			
	comp=Z,13nm,1.2s,mb5.1							
SMF	**Signal de Mont**	**91.93**	**14**	*e*P		**P**	**01 02 24.7**	**+0.4**
	comp=Z,13nm,1.2s,mb5.1							
AVF	**Avril sur Loir**	**91.99**	**13**	*e*P		**P**	**01 02 25.1**	**+0.6**
	comp=Z,38nm,1.3s,mb5.3							
AVF	**Avril sur Loir**	**91.99**	**13**	*e*P		**P**	**01 02 25.1**	**+0.6**
AVF				pmax	pmax			
	comp=Z,19nm,1.3s,mb5.3							
AVF	**Avril sur Loir**	**91.99**	**13**	*e*P		**P**	**01 02 25.1**	**+0.6**
	comp=Z,19nm,1.3s,mb5.3							
SSF	**Saint Saulge**	**92.27**	**13**	*e*P		**P**	**01 02 26.0**	**+0.1**
	comp=Z,30nm,1.5s,mb5.1							
SSF	**Saint Saulge**	**92.27**	**13**	*e*P		**P**	**01 02 26.0**	**+0.1**
SSF				pmax	pmax			
	comp=Z,15nm,1.5s,mb5.1							
SSF	**Saint Saulge**	**92.27**	**13**	*e*P		**P**	**01 02 26.0**	**+0.1**
	comp=Z,15nm,1.5s,mb5.1							
CABF	**La Chapelle**	**92.30**	**15**	*e*P		**P**	**01 02 25.9**	**-0.1**
	comp=Z,11nm,1.0s,mb4.8							
CABF	**La Chapelle**	**92.30**	**15**	*e*P		**P**	**01 02 25.9**	**-0.1**
CABF				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.9							
CABF	**La Chapelle**	**92.30**	**15**	*e*P		**P**	**01 02 25.9**	**-0.1**
	comp=Z,5.6nm,1.0s,mb4.8							
LOR	**Lormes**	**92.53**	**14**	*e*P		**P**	**01 02 27.3**	**+0.3**
	comp=Z,30nm,1.4s,mb5.2							
LOR	**Lormes**	**92.53**	**14**	*e*P		**P**	**01 02 27.3**	**+0.3**
LOR				pmax	pmax			
	comp=Z,15nm,1.4s,mb5.2							
LOR	**Lormes**	**92.53**	**14**	*e*P		**P**	**01 02 27.3**	**+0.3**
	comp=Z,15nm,1.4s,mb5.2							
LDF	**La Druitiere**	**93.22**	**11**	*e*P		**P**	**01 02 30.7**	**+0.5**
	comp=Z,23nm,1.2s,mb5.2							
LDF	**La Druitiere**	**93.22**	**11**	*e*P		**P**	**01 02 30.7**	**+0.5**
LDF				pmax	pmax			
	comp=Z,12nm,1.2s,mb5.2							
LDF	**La Druitiere**	**93.22**	**11**	*e*P		**P**	**01 02 30.7**	**+0.5**
	comp=Z,12nm,1.2s,mb5.2							
MEZF	**Maizieres J'vi**	**93.93**	**14**	*e*P		**P**	**01 02 34.0**	**+0.5**
CDF	**Champ du Feu**	**94.25**	**15**	*e*P		**P**	**01 02 34.8**	**-0.1**
MIAR	**Mount Ida**	**105.05**	**303**	P		Pdif	01 03 21.8	-2.3
PDAR	**Pinedale Array**	**119.92**	**302**	PKP		PKPdf	01 08 03.6	-2.7
	comp=Z,6.3nm,0.5s,baz=90,slow=4.4,SNR=9.2							
RRI2	**Red Ridge**	**121.32**	**302**	*e*PKPdf		PKPdf	01 08 05.1	-3.9
ELK	**Elko**	**122.38**	**297**	PKP		PKPdf	01 08 11.1	0.0
	comp=Z,0.5nm,0.6s,baz=217,slow=5.1,SNR=3.3							
ELK	**Elko**	**122.38**	**297**	PKPdf		PKPdf	01 08 09.3	-1.8
ELK				PKP		PKPdf	01 08 11.1	0.0
CMB	**Columbia Colle**	**124.32**	**292**	*e*PKIKP		PKPdf	01 08 14.4	-0.5
WVOR	**Wild Horse Val**	**125.44**	**297**	*e*PKIKP		PKPdf	01 08 17.0	+0.1
BMO	**Blue Mountains**	**125.79**	**301**	*e*PKIKP		PKPdf	01 08 17.2	-0.3
BJT	**Baijiatuan**	**144.78**	**80**	*e*PKIKP		PKPdf	01 08 52.6	-0.3
BOD	**Bodaibo**	**146.49**	**48**	*e*PKIKP		PKPdf	01 08 54.5	-0.7
BOD				pmax	pmax			
	comp=Z,15nm,1.2s							
KTH	**Kantishna Hill**	**147.76**	**323**	*e*PKP		PKPdf	01 08 58.9	+1.7
KSRS	**Korea Array**	**152.21**	**91**	PKPab		PKPab	01 09 20.6	-0.9
	comp=Z,0.6nm,0.4s,baz=262,slow=3.8,SNR=4.3							
MJAR	**Matsushiro Arr**	**159.18**	**102**	PKPab		PKPab	01 09 51.5	0.0
	comp=Z,0.8nm,0.5s,baz=197,slow=3.7,SNR=4.6							

IDC 13 00:51:22.8±1.8, 219S×9891E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.7/20, mbtmp3.7/7, Error ellipse: s-maj=57.8km s-min=20.2km az=55.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**20.98**	**98**	P	P	00 56 09.7	+1.7
	4.9nm,0.7s,baz=281,slow=16,SNR=3.8						
WRA	**Warramunga Arr**	**38.84**	**120**	P	P	00 58 48.8	-1.2
	0.4nm,0.5s,baz=294,slow=12,SNR=5.6						
WRA				ScP	ScP	01 04 51.5	+0.4
	0.3nm,0.8s,baz=263,slow=4.1,SNR=4.2						
ASAR	**Alice Springs**	**40.02**	**125**	P	P	00 58 59.6	-0.2
	0.5nm,0.5s,baz=302,slow=8.0,SNR=7.9						
KSRS	**Korea Array**	**47.74**	**31**	P	P	01 00 01.3	-0.4
	0.6nm,0.4s,baz=223,slow=7.9,SNR=3.0						
SONM	**Songino Array**	**50.25**	**7**	P	P	01 00 19.9	-0.8
	0.6nm,0.3s,baz=180,slow=1.2,SNR=5.5						
MKAR	**Makanchi Array**	**50.93**	**345**	P	P	01 00 25.5	-0.4
	0.4nm,0.4s,baz=150,slow=8.2,SNR=5.0						
ZALV	**Zalesovo Beam**	**57.16**	**350**	P	P	01 01 12.0	+0.8
	0.7nm,0.3s,baz=114,slow=7.2,SNR=4.5						
CPUP	**Villa Florida**	**143.51**	**217**	PKP	PKPdf	01 11 01.1	+0.8
	1.1nm,0.6s,baz=52,slow=2.4,SNR=6.3						
TXAR	**Lajitas Array**	**145.51**	**36**	PKPbc	PKPbc	01 11 03.4	-0.3
	0.3nm,0.5s,baz=245,slow=0.5,SNR=11						

ISCJB 13 00:51:42.2±0.3, 3622N×001×12028W±002, h29km±2km, Error ellipse: s-maj=2.6km s-min=2.0km az=145.7
NEIC 13 00:51:42.3, 3624N×120.31W, h12km, mb4.4/1, ML3.9(NCEDC), After NCEDC.
NEIC Felt [III] at Coalinga and [II] at Hanford and Visalia. Also felt at Bakersfield, Earlimart, Fresno, Lemoore, Madera, Mariposa, Morro Bay, Sanger, Stratford, Three Rivers, Tulare and in Yosemite National Park.

ISC 13 00:51:42.4±0.3, 3623N±001×12028W±002, h18km±2km, n95, σ0§98/151, 45C-42D, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U05C	**Westside ANR,**	**0.17**	**50**	⇓P	**Pg**	**00 51 47.5**	**+0.6**
	baz=0.1,SNR=1000						
U05C				⇓S	**Sg**	**00 51 51.8**	**+1.9**
	baz=0.1						
PKD	**Parkfield**	**0.35**	**217**	⇓P	**Pg**	**00 51 50.3**	**+0.4**
	baz=0.4						
PKD				⇑S	**Sg**	**00 51 56.4**	**+1.5**
	baz=0.4						
U04C	**Hernandez Rese**	**0.43**	**288**	P	**Pg**	**00 51 50.8**	**-0.4**
	baz=0.5,SNR=1000						
U04C				⇓S	**Sg**	**00 51 57.4**	**+0.3**
	baz=0.5						
V05C	**Boulder Hill,**	**0.47**	**140**	⇓P	**Pg**	**00 51 52.9**	**+0.9**
	baz=0.5,SNR=479						
PTRM	**Twissleman Ran**	**0.58**	**174**	*e*P	**Pg**	**00 51 54.2**	**+0.3**
V03C	**Hunter Liggett**	**0.80**	**255**	P	**Pb**	**00 51 57.4**	**-0.4**
	baz=0.8,SNR=1000						
V03C				⇑S	**Sb**	**00 52 09.7**	**+1.4**
	baz=0.8						
RCTC	**Rector, Farmer**	**0.84**	**84**	P	**Pb**	**00 51 57.5**	**-1.1**
	baz=0.8,SNR=85						
RCTC				⇑S	**Sb**	**00 52 08.5**	**-1.0**
	baz=0.8						
T06C	**Millerton Lake**	**0.90**	**30**	P	**Pb**	**00 51 58.1**	**-1.4**
	baz=0.9,SNR=308						
T06C				⇓S	**Sb**	**00 52 10.0**	**-1.2**
	baz=0.9						
SMMC	**Simmler**	**0.94**	**166**	P	**Pb**	**00 51 59.4**	**-0.8**
	baz=1.0,SNR=44						
SMMC				⇓S	**Sb**	**00 52 13.0**	**+0.5**
	baz=1.0						
VES	**Vestal, Richgr**	**1.05**	**111**	P	**Pb**	**00 52 00.8**	**-1.2**
	baz=1.0,SNR=260						
VES				⇑S	**Sb**	**00 52 14.1**	**-1.3**
	baz=1.0						
SAO	**San Andreas Ge**	**1.08**	**300**	*e*P	**Pb**	**00 52 01.8**	**-0.8**
SAO				*e*S	**Sb**	**00 52 17.9**	**+1.5**

HELL	**Mitchell Peak**	**1.11**	**66**	P		**Pn**	**00 52 01.5**	**-1.5**
	baz=1.1,SNR=636							
HELL				⇑S		**Sb**	**00 52 16.1**	**-1.1**
	baz=1.1							
S05C	**Merced**	**1.11**	**358**	⇑P		**Pn**	**00 52 01.7**	**-1.5**
	baz=1.1,SNR=185							
S05C				⇑S		**Sb**	**00 52 16.6**	**-0.8**
	baz=1.1							
PACP	**Pacheco Peak**	**1.12**	**314**	⇑P		**Pn**	**00 52 02.5**	**-0.7**
	baz=1.1,SNR=65							
PACP				⇓S		**Sb**	**00 52 18.0**	**+0.5**
	baz=1.1							
KCC	**Kaiser Creek**	**1.34**	**35**	⇓Pb		**Pb**	**00 52 05.7**	**-1.2**
	baz=1.3,SNR=92							
KCC				⇓S		**Sn**	**00 52 22.8**	**-0.7**
	baz=1.3							
PKM	**Peak Mountain**	**1.38**	**164**	⇑P		**Pn**	**00 52 06.6**	**-0.2**
	baz=1.4,SNR=69							
ISA	**Isabella**	**1.57**	**111**	P		**Pn**	**00 52 09.1**	**-0.3**
	baz=1.5,SNR=1000							
ISA				⇑Sb		**Sb**	**00 52 29.9**	**-0.6**
	baz=1.5							
ARVC	**Arvin**	**1.61**	**133**	P		**Pn**	**00 52 09.0**	**-0.9**
	baz=1.6,SNR=130							
ARVC				⇓S		**Sn**	**00 52 29.3**	**-1.1**
	baz=1.6							
S06C	**San Francisco**	**1.69**	**12**	Pb		**Pb**	**00 52 11.3**	**-1.6**
	baz=1.7,SNR=609							
S06C				⇓Sb		**Sb**	**00 52 32.9**	**-0.8**
	baz=1.7							
CWC	**Cottonwood Cre**	**1.79**	**83**	Pb		**Pb**	**00 52 13.5**	**-1.2**
	baz=1.7,SNR=430							
CWC				⇑Sb		**Sb**	**00 52 36.4**	**-0.3**
	baz=1.7							
CMB	**Columbia Colle**	**1.80**	**357**	⇑P		**Pn**	**00 52 12.6**	**0.0**
	baz=1.8,SNR=104							
MLAC	**Mammoth Lakes**	**1.81**	**39**	⇑Pb		**Pb**	**00 52 14.1**	**-1.0**
	baz=1.8,SNR=126							
MLAC				⇑Sb		**Sb**	**00 52 37.9**	**+0.4**
	baz=1.8							
WENL	**Wente Vineyard**	**1.83**	**320**	⇓P		**Pn**	**00 52 12.7**	**-0.2**
	baz=1.8,SNR=7.0							
TIN	**Tinemaha**	**1.84**	**63**	⇓Pb		**Pb**	**00 52 14.7**	**-0.9**
	baz=1.8							
TIN				⇑Sb		**Sb**	**00 52 38.5**	**+0.2**
	baz=1.8							
JRSC	**Jasper Ridge**	**1.96**	**307**	⇑P		**Pn**	**00 52 14.1**	**-0.7**
	baz=2.0							
OSI	**Osito Adit**	**2.05**	**141**	⇓P		**Pn**	**00 52 15.7**	**-0.3**
	baz=2.1							
R04C	**Big Horse Ranc**	**2.09**	**346**	P		**Pn**	**00 52 16.3**	**-0.3**
	baz=2.1,SNR=74							
R04C				⇑S		**Sn**	**00 52 40.8**	**-1.3**
	baz=2.1							
R07C	**Lee Vining**	**2.10**	**28**	⇑Pb		**Pb**	**00 52 18.8**	**-1.1**
	baz=2.1							
R07C				⇑Sb		**Sb**	**00 52 45.9**	**+0.2**
	baz=2.1							
S08C	**White Mtn Res**	**2.11**	**53**	⇑Pb		**Pb**	**00 52 19.0**	**-1.2**
	baz=2.1							
S08C				⇓Sb		**Sb**	**00 52 46.1**	**0.0**
	baz=2.1							
LRMC	**Laurel Mountai**	**2.23**	**109**	⇓P		**Pn**	**00 52 18.8**	**+0.3**
	baz=2.2,SNR=21							
LRMC				⇓Sb		**Sb**	**00 52 49.4**	**-0.1**
	baz=2.2							
MPMC	**Manual Prospec**	**2.26**	**93**	⇓P		**Pn**	**00 52 19.4**	**+0.5**
	baz=2.2,SNR=163							
MPMC				⇓Sb		**Sb**	**00 52 50.4**	**0.0**
	baz=2.2							
BSC	**Santa Cruz Isl**	**2.29**	**166**	⇑P		**Pn**	**00 52 18.5**	**-0.9**
	baz=2.3							
EDW2	**Edwards Air Fo**	**2.30**	**125**	P		**Pn**	**00 52 19.5**	**0.0**
	baz=2.3,SNR=54							
EDW2				⇓Sb		**Sb**	**00 52 51.7**	**+0.2**
	baz=2.3							
BLG	**Laguna Peak**	**2.34**	**154**	P		**Pn**	**00 52 19.6**	**-0.4**
	baz=2.4,SNR=14							
R06C	**Coleville**	**2.38**	**16**	⇑Pb		**Pb**	**00 52 23.6**	**-1.1**
	baz=2.3							
R06C				⇑Sb		**Sb**	**00 52 54.0**	**+0.2**
	baz=2.3							
R05C	**Kirkwood Meado**	**2.47**	**4**	⇓P		**Pn**	**00 52 22.9**	**+1.0**
	baz=2.4,SNR=97							
R05C				⇑Sb		**Sb**	**00 52 55.5**	**-1.0**
	baz=2.4							
LAVA	**Lava Cap Winer**	**2.55**	**352**	⇓P		**Pn**	**00 52 23.3**	**+0.4**
	baz=2.5,SNR=22							
FARB	**Farallon Islan**	**2.63**	**305**	⇓P		**Pn**	**00 52 24.5**	**+0.6**
	baz=2.6							
FARB				⇓S		**Sn**	**00 52 53.8**	**-1.6**
	baz=2.6							
MWC	**Mount Wilson**	**2.70**	**137**	*e*Pn		**Pn**	**00 52 24.7**	**-0.3**
MWC				*e*Sn		**Sn**	**00 52 59.2**	**+1.9**
CVS	**Carmenet Viney**	**2.73**	**321**	⇑P		**Pn**	**00 52 24.7**	**-0.7**
	baz=2.7							
CVS				⇑S		**Sn**	**00 52 57.7**	**-0.3**
	baz=2.7							
Q04C	**Lincoln**	**2.75**	**342**	⇓P		**Pn**	**00 52 25.9**	**+0.3**
	baz=2.7,SNR=6.9							
FURC	**Furnace Creek,**	**2.77**	**84**	⇑Sb		**Sb**	**00 53 06.3**	**+1.2**
	baz=2.7							
MCCM	**Marconi Confer**	**2.82**	**313**	P		**Pn**	**00 52 27.0**	**+0.4**
	baz=2.8,SNR=6.2							
S09A	**Goldfield**	**2.87**	**58**	⇓P		**Pn**	**00 52 28.0**	**+0.8**
	baz=2.8,SNR=28							
BFSC	**Mount Baldy St**	**2.92**	**132**	⇑P		**Pn**	**00 52 27.7**	**-0.3**
	baz=2.9,SNR=28							
Q07A	**Schurz**	**2.95**	**23**	⇓Sb		**Sb**	**00 53 11.7**	**+1.6**
	baz=2.9							
GSC	**Goldstone**	**2.97**	**107**	⇑P		**Pn**	**00 52 28.7**	**0.0**
	baz=2.9,SNR=17							
GSC				⇓Sb		**Sb**	**00 53 11.9**	**+1.1**
	baz=2.9							
GSC	**Goldstone**	**2.97**	**107**	*e*Pn		**Pn**	**00 52 28.9**	**+0.2**
GSC				*e*Sn		**Sn**	**00 53 05.5**	**+1.6**
RRX	**Edison Barstow**	**2.99**	**116**	⇑P		**Pn**	**00 52 29.0**	**0.0**
	baz=3.0							
SNCC	**San Nicolas Is**	**3.04**	**168**	⇑S		**Sn**	**00 53 04.7**	**-0.8**
	baz=3.1							
SNCC	**San Nicolas Is**	**3.04**	**168**	*e*Pn		**Pn**	**00 52 30.4**	**+0.8**
SNCC				*e*Sn		**Sn**	**00 53 06.0**	**+0.5**
TPH	**Tonopah**	**3.06**	**52**	*e*Pn		**Pn**	**00 52 31.1**	**+1.3**
TPH				*e*Pg		**Pg**	**00 52 40.9**	**-0.2**
TPH				*e*Sg		**Sg**	**00 53 19.8**	**-0.9**
P05C	**Yuba Gap, Truc**	**3.08**	**355**	⇑P		**Pn**	**00 52 31.2**	**+1.0**
	baz=3.1							
WCN	**Washoe City**	**3.10**	**8**	⇓P		**Pn**	**00 52 32.1**	**+1.7**
	baz=3.1							
WCN				⇑Sb		**Sb**	**00 53 16.0**	**+1.7**
	baz=3.1							
U10A	**Ash Meadows, A**	**3.19**	**85**	⇓P		**Pn**	**00 52 32.6**	**+0.9**
	baz=3.1							
CIS	**Catalina Islan**	**3.21**	**151**	⇓P		**Pn**	**00 52 31.1**	**-0.8**
	baz=3.2,SNR=9.3							
CIS				⇑S		**Sn**	**00 53 08.3**	**-1.5**
	baz=3.2							
R09A	**Tonopah**	**3.25**	**51**	⇓P		**Pn**	**00 52 33.7**	**+1.2**
	baz=3.2,SNR=28							
TPNV	**Topopah Spring**	**3.32**	**76**	*e*Pn		**Pn**	**00 52 35.0**	**+1.5**
TPNV				*e*Pg		**Pg**	**00 52 46.2**	**+0.2**
TPNV				*e*Sn		**Sn**	**00 53 12.5**	**0.0**
TPNV				*e*Sg		**Sg**	**00 53 29.5**	**+0.3**
S10A	**Tonopah Range,**	**3.40**	**59**	⇑P		**Pn**	**00 52 35.6**	**+1.1**
	baz=3.3							
ORV	**Oroville**	**3.46**	**344**	⇓P		**Pn**	**00 52 36.5**	**+1.2**
	baz=3.4,SNR=5.2							
HEC	**Hector,Ludlow**	**3.51**	**112**	⇓P		**Pn**	**00 52 36.0**	**-0.1**
	baz=3.5,SNR=56							
PAHR	**Pah Rah Range**	**3.54**	**11**	*e*Pn		**Pn**	**00 52 38.0**	**+1.5**
PAHR				*e*Pg		**Pg**	**00 52 46.5**	**-3.8**
PAHR				*e*Sn		**Sn**	**00 53 19.5**	**+1.6**
PAHR				*e*Sg		**Sg**	**00 53 33.3**	**-2.9**
TUQ	**Turquoise Moun**	**3.63**	**101**	⇑P		**Pn**	**00 52 37.7**	**+0.1**
	baz=3.6,SNR=6.8							
MURC	**Murrieta**	**3.65**	**135**	⇓P		**Pn**	**00 52 37.3**	**-0.6**
	baz=3.6,SNR=15							
MURC				⇑S		**Sn**	**00 53 19.9**	**-0.6**
	baz=3.6							
GMRC	**Granite Mounta**	**4.04**	**110**	⇓P		**Pn**	**00 52 43.0**	**-0.3**
	baz=4.0,SNR=74							
PFO	**Pinyon Flat Ob**	**4.09**	**129**	⇑P		**Pn**	**00 52 43.8**	**-0.2**
	baz=4.1,SNR=30							
PFO	**Pinyon Flat Ob**	**4.09**	**129**	*e*Pn		**Pn**	**00 52 44.2**	**+0.2**
BELC	**Belle Mtn.**	**4.15**	**121**	P		**Pn**	**00 52 45.1**	**+0.2**
	baz=4.1,SNR=5.5							
LDFC	**Landfair**	**4.36**	**104**	*e*Pn		**Pn**	**00 52 47.2**	**-0.6**
LDFC				*e*Pg		**Pg**	**00 53 03.6**	**-2.4**
LDFC				Sn		**Sn**	**00 53 43.0**	**+4.8**
LDFC				*e*Sg		**Sg**	**00 54 04.0**	**+1.5**
KIPM	**Iron Peak**	**4.38**	**326**	*e*Pn		**Pn**	**00 52 47.7**	**-0.2**
KIPM				Sn		**Sn**	**00 53 37.8**	**-0.7**
MONP	**Monument Peak**	**4.61**	**135**	⇑P		**Pn**	**00 52 50.8**	**-0.3**
	baz=4.6							
BAR	**Barrett**	**4.63**	**139**	*e*Pn		**Pn**	**00 52 51.2**	**-0.2**
BAR				*e*Sn		**Sn**	**00 53 46.4**	**+1.7**
IRM	**Iron Mountain**	**4.68**	**115**	⇓P		**Pn**	**00 52 51.6**	**-0.5**
	baz=4.7,SNR=17							
BC3	**Big Chuckw Mtn**	**4.72**	**122**	⇓P		**Pn**	**00 52 52.0**	**-0.8**
	baz=4.7,SNR=8.0							
BMN	**Battle Mountai**	**4.83**	**29**	*e*Pn		**Pn**	**00 52 53.6**	**-0.7**
BMN				*e*Sn		**Sn**	**00 53 53.2**	**+3.5**
NEE2	**Needles Airpor**	**4.84**	**106**	⇓P		**Pn**	**00 52 53.8**	**-0.6**
	baz=4.8,SNR=8.1							
SWSC	**Sam W. Stewart**	**4.94**	**130**	P		**Pn**	**00 52 54.9**	**-0.8**
	baz=4.9,SNR=9.0							
W13A	**Hualapai Mount**	**5.33**	**100**	⇑P		**Pn**	**00 53 01.6**	**+0.6**
	baz=5.3,SNR=27							
GLA	**Glamis**	**5.50**	**124**	⇑P		**Pn**	**00 53 02.7**	**-0.7**
	baz=5.5,SNR=9.4							
GLA	**Glamis**	**5.50**	**124**	*e*Pn		**Pn**	**00 53 02.6**	**-0.8**
	26nm,0.7s							
GLA				*e*Sn		**Sn**	**00 54 05.8**	**-0.4**
X13A	**Yucca**	**5.51**	**105**	⇓P		**Pn**	**00 53 03.8**	**+0.2**
	baz=5.5,SNR=48							
Y13A	**Salome**	**5.81**	**113**	P		**Pn**	**00 53 07.5**	**-0.3**
	baz=5.8,SNR=48							
ELK	**Elko**	**6.00**	**40**	*e*Pn		**Pn**	**00 53 11.6**	**+1.4**
	12nm,0.8s							
ELK				*e*Pg		**Pg**	**00 53 27.8**	**-9.4**
ELK				*e*Sn		**Sn**	**00 54 10.5**	**-7.9**
X14A	**Yava**	**6.29**	**104**	⇑P		**Pn**	**00 53 14.7**	**+0.4**
	baz=6.2,SNR=12							
WVOR	**Wild Horse Val**	**6.33**	**11**	*e*Pn		**Pn**	**00 53 15.6**	**+0.9**
	20nm,1.3s							
WVOR				*e*Sn		**Sn**	**00 54 28.4**	**+1.9**
Y14A	**Wickenburg**	**6.39**	**109**	⇑P		**Pn**	**00 53 15.4**	**-0.2**
	baz=6.3,SNR=9.8							
Z14A	**Wintersburg**	**6.68**	**113**	⇑P		**Pn**	**00 53 19.7**	**+0.2**
	baz=6.6							
MSU	**Marysvale**	**6.84**	**68**	*e*P		**Pb**	**00 53 47.8**	**+7.1**
Y15A	**Casa Rosa Ranc**	**6.90**	**107**	⇑P		**Pn**	**00 53 23.0**	**+0.4**
	baz=6.9,SNR=15							
DUG	**Dugway**	**7.09**	**54**	*e*Pn		**Pn**	**00 53 29.4**	**+4.2**
	14nm,0.9s							
DUG				*e*Sg		Sn	00 55 21.2	+36
WUAZ	**Wupatki**	**7.26**	**93**	*e*Pn		**Pn**	**00 53 29.6**	**+2.0**
	21nm,0.9s							
115A	**Sonoran Desert**	**7.52**	**116**	⇓P		**Pn**	**00 53 31.0**	**-0.2**
	baz=7.5,SNR=8.7							
DAU	**Daniels Canyon**	**8.23**	**57**	*e*Pn		**Pn**	**00 53 46.9**	**+6.0**
DAU				*e*Sn		**Sn**	**00 55 16.0**	**+2.6**
PV01	**Paradox Valley**	**9.54**	**75**	*e*Pn		**Pn**	**00 53 51.9**	**-7.0**
PV01				*e*Sn		**Sn**	**00 55 47.6**	**+2.1**
MIAR	**Mount Ida**	**21.82**	**87**	*e*P		**P**	**00 56 35.0**	**+1.3**
	12nm,0.8s							

IDC 13 00:54:14.4±6.8, 013S×10136E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.4/18, mbtmp3.6/2, Error ellipse: s-maj=291.7km s-min=102.3km az=49.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.82**	**123**	P	P	01 01 33.5	+0.6
	0.7nm,0.4s,baz=302,slow=9.2,SNR=6.2						
ASAR	**Alice Springs**	**39.30**	**129**	P	P	01 01 44.6	-0.8
	0.4nm,0.4s,baz=303,slow=7.5,SNR=4.2						
TXAR	**Lajitas Array**	**142.40**	**37**	PKP	PKPdf	01 13 49.9	0.0
	0.2nm,0.4s,baz=250,slow=1.8,SNR=5.4						

IDC 13 00:54:44.1±1.2, 141S×9967E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.1/22, mbtmp4.2/13, Error ellipse: s-maj=48.9km s-min=15.0km az=57.0
ISCJB 13 00:54:53.1±3.5, 064S±009×1009E±01, h46km±35km, mb4.3/14, Error ellipse: s-maj=21.4km s-min=10.2km az=142.6
*NEIC 13 00:54:54.0±0.4, 061S×10093E, h35km, mb4.6/5,

STKA	**Stephens Creek**	**28.38 231**	P	**P**	**01 14 46.9**	**+0.3**
	2.0nm,0.7s,mb3.8,baz=53,slow=5.1,SNR=3.1						
WRA	**Warramunga Arr**	**31.55 257**	P	**P**	**01 15 14.4**	**-0.2**
	0.3nm,0.5s,mb3.2,baz=85,slow=8.6,SNR=5.1						
ASAR	**Alice Springs**	**32.30 250**	P	**P**	**01 15 21.3**	**0.0**
	1.2nm,0.4s,mb4.0,baz=79,slow=9.1,SNR=18						
SONM	**Songino Array**	**83.13 324**	P	**P**	**01 21 16.3**	**0.0**
	0.9nm,0.4s,mb4.0,baz=122,slow=5.3,SNR=8.9						
MKAR	**Makanchi Array**	**97.76 316**	P	**P**	**01 22 25.3**	**-0.1**
	0.4nm,0.5s,mb4.2,baz=102,slow=3.7,SNR=3.7						
ARCES	**ARCESS Array B**	**121.05 345**	PKP	PKPdf	01 27 38.4	-3.5
	3.6nm,1.0s,baz=49,slow=1.7,SNR=5.7						
DAVOX	**Davos/Dischmat**	**143.61 333**	PKP	PKPdf	01 28 21.1	-3.6
	1.8nm,0.4s,baz=45,slow=1.7						

IDC ***13*** *01:16:03.0±1.2, 4.17S×101.17E, h0km, mb4.2/12, mb1 4.3/12, mb1mx4.2/20, mbtmp4.2/12, Error ellipse: s-maj=45.8km s-min=15.5km az=55.0*
ISCJB ***13*** *01:16:06.1±0.9, 4.1S±02×1013E±02, h33km, mb4.3/15, Error ellipse: s-maj=36.1km s-min=10.7km az=142.4*
NEIC ***13*** *01:16:06.9±0.7, 4.14S×101.23E, mb4.6/4, Error ellipse: s-maj=30.4km s-min=7.9km az=52.0*

ISC 13 01:16:08.4±0.9, 41S±02×1013E±02, h35km, n21, σ0s62/19, mb4.3/15, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.55**	**354**	P		**P**	**P**	**01 21 05.2**	**-0.5**
	6.9nm,0.8s,mb4.1,baz=184,slow=8.5,SNR=30								
WRA	**Warramunga Arr**	**35.86**	**119**	P		**P**	**P**	**01 23 04.7**	**-0.5**
	0.8nm,0.6s,mb3.8,baz=302,slow=9.0,SNR=10								
WB2	**Warramunga Arr**	**35.87**	**119**	*eP*		**P**	**P**	**01 23 05.0**	**-0.3**
ASAR	**Alice Springs**	**37.01**	**125**	P		**P**	**P**	**01 23 14.8**	**-0.1**
	1.4nm,0.6s,mb4.0,baz=292,slow=7.9,SNR=11								
CTAO	**Charters Tower**	**46.58**	**114**	*eP*		**P**	**P**	**01 24 33.8**	**+0.5**
	7.8nm,1.1s,mb4.5								
STKA	**Stephens Creek**	**46.81**	**131**	P		**P**	**P**	**01 24 35.8**	**+0.8**
	1.8nm,0.7s,mb4.1,baz=207,slow=11,SNR=2.7								
KSRS	**Korea Array**	**48.23**	**29**	P		**P**	**P**	**01 24 45.9**	**0.0**
	2.8nm,0.8s,mb4.4,baz=216,slow=8.4,SNR=14								
SONM	**Songino Array**	**51.94**	**4**	P		**P**	**P**	**01 25 15.3**	**+1.6**
	6.0nm,0.8s,mb4.6,baz=186,slow=8.7,SNR=33								
TKM2	**Tokmak 2**	**52.27**	**336**	*eP*		**P**	**P**	**01 25 16.5**	**+0.2**
	4.6nm,0.6s,mb4.6								
EKS2	**Erkin-Say**	**52.81**	**335**	*eP*		**P**	**P**	**01 25 21.1**	**+0.8**
	5.3nm,0.8s,mb4.5								
MJAR	**Matsushiro Arr**	**53.16**	**37**	P		**P**	**P**	**01 25 22.3**	**-0.8**
	0.7nm,0.3s,mb4.1,baz=220,slow=7.5,SNR=5.7								
MKAR	**Makanchi Array**	**53.40**	**344**	P		**P**	**P**	**01 25 24.9**	**+0.3**
	5.3nm,0.7s,mb4.6,baz=148,slow=8.2,SNR=35								
KURK	**Kurchatov**	**57.99**	**343**	P		**P**	**P**	**01 25 57.0**	**-0.4**
	3.2nm,0.9s,mb4.4,baz=160,slow=6.7,SNR=17								
KURK	**Kurchatov**	**57.99**	**343**	*eP*		**P**	**P**	**01 25 57.7**	**+0.2**
	6.6nm,0.9s,mb4.7								
ZAA0	**Zalesovo Array**	**59.48**	**349**	*eP*		**P**	**P**	**01 26 07.7**	**-0.1**
ZALV	**Zalesovo Beam**	**59.48**	**349**	P		**P**	**P**	**01 26 07.7**	**0.0**
	3.3nm,0.5s,mb4.6,baz=178,slow=4.5,SNR=18								
ZALV	**Zalesovo Beam**	**59.48**	**349**	P		**P**	**P**	**01 26 07.7**	**0.0**
BVAR	**Borovoye Array**	**62.60**	**340**	P		**P**	**P**	**01 26 28.3**	**-0.6**
	1.8nm,0.5s,mb4.4,baz=142,slow=8.9,SNR=9.5								
GERES	**GERESS Array B**	**91.46**	**319**	P		**P**	**P**	**01 29 10.2**	**-1.0**
	0.5nm,0.8s,mb3.9,baz=72,slow=6.0,SNR=4.5								
TXAR	**Lajitas Array**	**145.56**	**41**	PKPbc		PKPbc	PKPbc	01 35 44.9	+1.1
	5.0nm,1.0s,baz=281,slow=2.2,SNR=26								
TXAR	**Lajitas Array**	**145.56**	**41**	PKPbc		PKPbc	PKPbc	01 35 44.9	+1.1

IDC 13 01:16:10.6±1.4, 433S×10099E, h0km, mb4.2/13, mb1 4.3/13, mb1mx4.1/22, mbtmp4.2/13, Error ellipse: s-maj=59.4km s-min=14.5km az=54.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.73**	**355**	P			P	01 21 15.2	+0.8
	1.4nm,0.4s,baz=178,slow=7.8,SNR=3.6								
FITZ	**Fitzroy Crossi**	**27.73**	**121**	P			P	01 21 59.9	-1.1
	1.5nm,0.8s,baz=304,slow=7.3,SNR=3.5								
WRA	**Warramunga Arr**	**36.00**	**118**	P			P	01 23 13.7	+0.1
	0.8nm,0.5s,baz=304,slow=9.1,SNR=6.2								
ASAR	**Alice Springs**	**37.11**	**124**	P			P	01 23 22.2	-0.8
	0.9nm,0.5s,baz=293,slow=8.4,SNR=4.8								
CTA	**Charters Tower**	**46.75**	**114**	P			P	01 24 42.5	+0.5
	12nm,1.2s,baz=309,slow=3.7,SNR=3.1								
STKA	**Stephens Creek**	**46.88**	**131**	P			P	01 24 43.9	+1.0
	2.0nm,0.6s,baz=310,slow=8.5,SNR=3.8								
KSRS	**Korea Array**	**48.54**	**29**	P			P	01 24 54.5	-1.1
	2.2nm,0.8s,baz=216,slow=8.4,SNR=3.8								
SONM	**Songino Array**	**52.16**	**5**	P			P	01 25 23.3	+0.5
	2.5nm,0.8s,baz=186,slow=9.7,SNR=6.1								
MKAR	**Makanchi Array**	**53.52**	**344**	P			P	01 25 33.0	+0.1
	3.7nm,0.7s,baz=150,slow=8.1,SNR=11								
KURK	**Kurchatov**	**58.10**	**343**	P			P	01 26 04.8	-0.8
	1.9nm,0.7s,baz=158,slow=6.8,SNR=9.8								
ZAA0	**Zalesovo Array**	**59.63**	**349**	*ep*	P		P	01 26 15.2	-1.0
ZALV	**Zalesovo Beam**	**59.63**	**349**	P			P	01 26 15.9	-0.3
	5.4nm,0.7s,baz=179,slow=4.6,SNR=8.3								
BVAR	**Borovoye Array**	**62.70**	**340**	P			P	01 26 36.6	-0.4
	2.3nm,0.5s,baz=150,slow=9.2,SNR=7.0								
GERES	**GERESS Array B**	**91.44**	**319**	P			P	01 29 18.8	0.0
	0.4nm,0.7s,baz=57,slow=3.6,SNR=2.7								
TXAR	**Lajitas Array**	**145.89**	**40**	PKPbc			PKPbc	01 35 53.4	+0.7
	1.9nm,0.7s,baz=312,slow=1.5,SNR=10								

IDC ***13*** *01:18:28.4±3.0, 6.77S×100.52E, h0km, mb4.0/6, mb1 4.0/6, mb1mx3.7/20, mbtmp4.0/6, Error ellipse: s-maj=126.9km s-min=28.8km az=50.0*
ISCJB ***13*** *01:18:29.9±1.0, 6.9S±02×1004E±03, h33km, mb4.1/9, Error ellipse: s-maj=44.1km s-min=16.8km az=158.3*
NEIC ***13*** *01:18:31.5±0.9, 6.90S×100.44E, mb4.4/4, Error ellipse: s-maj=43.0km s-min=16.2km az=68.0*

ISC 13 01:18:32.6±1.0, 69S±02×1005E±03, h35km, n13, σ0s92/11, mb4.1/9, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHTO	**Chiang Mai**	**25.60**	**357**	*eP*			**P**	**01 23 57.3**	**-1.5**
	1.4nm,0.5s,mb3.8								
WRA	**Warramunga Arr**	**35.32**	**115**	P			**P**	**01 25 24.9**	**+0.2**
	0.2nm,0.4s,mb3.4,baz=285,slow=8.6,SNR=3.3								
SONM	**Songino Array**	**54.76**	**5**	P			**P**	**01 27 58.7**	**+0.1**
	2.0nm,0.7s,mb4.3,baz=189,slow=9.0,SNR=8.4								
ULN	**Ulaanbaatar**	**54.85**	**5**	*eP*			**P**	**01 27 59.5**	**+0.2**
	2.3nm,0.6s,mb4.4								
MKAR	**Makanchi Array**	**55.85**	**345**	P			**P**	**01 28 04.9**	**-1.6**
	0.9nm,0.3s,mb4.2,baz=153,slow=8.8,SNR=8.3								
CASY	**Casey**	**59.68**	**175**	*eP*			**P**	**01 28 32.7**	**-0.4**
	3.8nm,1.1s,mb4.3								
KURK	**Kurchatov**	**60.42**	**344**	P			**P**	**01 28 38.0**	**-0.5**
	1.2nm,1.0s,mb3.9,baz=162,slow=6.2,SNR=3.8								
KURK	**Kurchatov**	**60.42**	**344**	*eP*			**P**	**01 28 38.9**	**+0.4**
	2.8nm,1.0s,mb4.2								
KURK					*ep*	P	pP	01 28 46.5	-2.6
ZAA0	**Zalesovo Array**	**62.05**	**350**	*eP*			**P**	**01 28 49.8**	**+0.4**
ZAA0					*ep*	P	pP	01 28 58.0	-2.0
ZALV	**Zalesovo Beam**	**62.05**	**350**	P			**P**	**01 28 50.5**	**+1.1**
	3.4nm,0.7s,mb4.6,baz=177,slow=5.6,SNR=9.1								
BVAR	**Borovoye Array**	**64.93**	**340**	P			**P**	**01 29 09.8**	**+1.4**
	0.7nm,0.6s,mb3.9,baz=146,slow=6.9,SNR=3.6								
YKA	**Yellowknife Ar**	**118.89**	**18**	PKP			PKPdf	01 37 17.0	-0.1
	1.0nm,0.8s,baz=326,slow=2.2,SNR=3.1								
TXAR	**Lajitas Array**	**148.15**	**43**	PKPbc			PKPbc	01 38 17.8	+2.4
	0.4nm,0.6s,baz=235,slow=1.7,SNR=6.1								

IDC 13 01:19:18.2±6.5, 275S×10158E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, Error ellipse: s-maj=237.3km s-min=32.7km az=64.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.26**	**121**	P			P	01 26 24.6	+1.1
	0.2nm,0.4s,baz=302,slow=9.1,SNR=5.3								
ASAR	**Alice Springs**	**37.54**	**126**	P			P	01 26 34.4	0.0
	0.7nm,0.6s,baz=302,slow=8.0,SNR=4.7								
STKA	**Stephens Creek**	**47.48**	**132**	P			P	01 27 53.6	-1.6
	1.2nm,0.5s,baz=300,slow=7.4,SNR=2.6								
SONM	**Songino Array**	**50.55**	**4**	P			P	01 28 18.7	+0.3
	0.3nm,0.4s,baz=190,slow=8.0,SNR=3.0								

ISCJB ***13*** *01:19:27.7±0.5, 1168N±005×65.10W±003, h33km, Error ellipse: s-maj=7.4km s-min=4.1km az=167.6*
FUNV ***13*** *01:19:28.9, 1161N×6506W, h23km, MW3.5*

ISC 13 01:19:28.7±0.8, 1164N±005×6507W±003, h30km±9km, n20, σ0s73/26, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IBAV	**Isla La Blanqu**	**0.52**	**69**	*eP*			**Pb**	**01 19 39.0**	**-0.4**
IBAV						*eS*	**Sb**	**01 19 47.1**	**+0.4**
ORCV	**Isla La Orchil**	**1.11**	**279**	*eP*			**Pn**	**01 19 49.0**	**+0.7**
ORCV						*eS*	**Sn**	**01 20 04.0**	**+1.4**
PCRV	**Puerto La Cruz**	**1.51**	**163**	*eP*			**Pn**	**01 19 53.9**	**+0.1**
BIRV	**Birongo**	**1.65**	**226**	*eP*			**Pn**	**01 19 55.1**	**-0.5**
CUPV	**Cœpira**	**1.72**	**204**	*eP*			**Pn**	**01 19 56.5**	**-0.2**
CUPV						*eS*	**Sn**	**01 20 18.0**	**+0.4**
ITEV	**Isla Los Testi**	**1.92**	**98**	*eP*			**Pn**	**01 19 59.7**	**+0.3**
CRUV	**Carupano**	**2.04**	**118**	*eP*			**Pn**	**01 20 01.9**	**+0.8**
CRUV						*eS*	**Sn**	**01 20 26.9**	**+1.4**
FUNV	**FUNVISIS**	**2.06**	**236**	*eP*			**Pn**	**01 20 01.1**	**-0.2**
GUNV	**Guanoco**	**2.56**	**125**	*eP*			**Pn**	**01 20 08.5**	**+0.3**
GUNV						*eS*	**Sn**	**01 20 37.0**	**-1.3**
MERV	**Las Mercedes**	**2.66**	**207**	*eP*			**Pn**	**01 20 09.6**	**0.0**
PRGV	**PARIAGUAN**	**2.89**	**172**	*eP*			**Pn**	**01 20 12.6**	**-0.2**
TURV	**Turiamo**	**2.96**	**247**	*eP*			**Pn**	**01 20 13.1**	**-0.6**
GUIV	**Guiria**	**2.96**	**109**	*eP*			**Pn**	**01 20 13.7**	**-0.1**
JACV	**Jacura**	**3.72**	**262**	*eP*			**Pn**	**01 20 24.0**	**-0.2**
BAUV	**El Baul**	**3.96**	**228**	*eP*			**Pn**	**01 20 27.2**	**-0.3**
TEPV	**Terepaima**	**4.37**	**248**	*eP*			**Pn**	**01 20 33.3**	**+0.1**
SIQV	**Siquisique**	**4.75**	**259**	*eP*			**Pn**	**01 20 38.6**	**+0.2**
FDF	**Fort de France**	**4.91**	**51**	*eP*			**Pn**	**01 20 41.6**	**+1.1**
FDF						*eS*	**Sn**	**01 21 34.6**	**-1.6**
SOCV	**Socops**	**6.60**	**240**	*eP*			**Pn**	**01 21 03.3**	**-0.5**
VIRV	**Villa del Rosa**	**7.29**	**262**	*eP*			**Pn**	**01 21 11.9**	**-1.3**

BJI ***13*** *01:26:27.5, 2.44S×9962E, h10km, mB6.6, mb5.9, Ms6.4, Msz6.3*
NEIC ***13*** *01:26:34.4±2.6, 190S×9982E, h17km±15km, mb5.7/102, Error ellipse: s-maj=5.5km s-min=3.4km az=222.0*
NEIC Felt [V] at Padang and Painan and [IV] at Padangpanjang, Sumatra. Also felt in Singapore and at Georgetown and Kuala Lumpur, Malaysia.
ISCJB ***13*** *01:26:34.0±0.1, 196S±002×9973E±002, h24km, mb5.7/225, MS6.3/20, Error ellipse: s-maj=3.7km s-min=2.4km az=30.2*
MOS ***13*** *01:26:35.8±1.1, 179S×9986E, h33km, mb5.9/93, MS6.4/5, Error ellipse: s-maj=8.2km s-min=4.0km az=119.2*
SZGRF ***13*** *01:26:36.3, 169S×10029E, h33km, mb5.7, Southern Sumatera, Indonesia*
IDC ***13*** *01:26:36.1±1.5, 200S×9987E, h30km±9km, mb5.3/42, mb1 5.3/42, mb1mx5.3/42, mbtmp5.3/42, MS6.1/5, Ms1 6.2/5, ms1mx5.8/40, Error ellipse: s-maj=10.9km s-min=6.3km az=41.0*
DJA ***13*** *01:26:37, 198S×9958E, h46km, Mw6.7/6*

ISC 13 01:26:36.0±0.1, 197S±002×9970E±002, h25km, h25km±1.5km: pP-P, n1063, σ1s08/669, mb5.7/225, MS6.3/20, 186C-179D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.66**	**25**	P			**Pn**	**01 27 03.8**	**+0.2**
	0.0nm,0.0s								
RGRI	**Rengat**	**3.09**	**59**	P			**Pn**	**01 27 25.5**	**+2.2**
	0.0nm,0.0s								
JMBI	**JAMBI**	**3.96**	**85**	P			**Pn**	**01 27 38.7**	**+3.5**
	0.0nm,0.0s								
TRSI	**Tarutung**	**4.04**	**349**	P			**Pn**	**01 27 38.4**	**+2.1**
	0.0nm,0.0s								
DSRI	**Dabo**	**5.10**	**73**	P			**Pn**	**01 27 51.6**	**+0.7**
	2µm,1.2s								
KGM	**Kluang**	**5.37**	**42**	⇓P			**Pn**	**01 27 59.5**	**+4.9**
FRIM	**Kepong**	**5.52**	**20**	⇑P			**Pn**	**01 28 01.1**	**+4.4**
MYKOM	**Kota Tinggi**	**5.59**	**48**	⇓P			**Pn**	**01 28 02.6**	**+5.0**
KLI	**Kotabumi**	**5.90**	**119**	P			**Pn**	**01 28 02.8**	**+0.9**
	3µm,1.2s								
PPBI	**Pangkal Pinang**	**6.44**	**92**	P			**Pn**	**01 28 12.7**	**+3.4**
	438nm,1.1s								
BLSI	**Bandar Lampung**	**6.48**	**121**	P			**Pn**	**01 28 11.9**	**+2.0**
	1µm,1.1s								
IPM	**Ipoh**	**6.55**	**12**	⇑P			**Pn**	**01 28 16.1**	**+5.3**
SBJI	**Serang**	**7.62**	**123**	P			**Pn**	**01 28 26.5**	**+0.9**
	2µm,1.0s								
TPI	**Tanjungpandan**	**7.99**	**96**	P			**Pn**	**01 28 34.0**	**+3.4**
	337nm,1.3s								
KTGM	**Kuala Trenggan**	**8.02**	**25**	⇑P			**Pn**	**01 28 35.7**	**+4.6**
TNG	**Tangerang**	**8.09**	**121**	P			**Pn**	**01 28 35.6**	**+3.6**
	3µm,0.8s								
DBJI	**Dramaga**	**8.38**	**123**	P			**Pn**	**01 28 35.5**	**-0.4**
	2µm,1.1s								
CBJI	**Citeko**	**8.39**	**122**	P			**Pn**	**01 28 38.6**	**+2.5**
	5µm,1.0s								
SKJI	**Sukabumi**	**8.47**	**126**	P			**Pn**	**01 28 37.2**	**0.0**
	2µm,0.8s								
BSI	**Banda Aceh**	**8.62**	**329**	P			**Pn**	**01 28 38.0**	**-1.3**
	810nm,0.8s								
SNG	**Songkhla**	**9.14**	**6**	P			**Pn**	**01 28 46.0**	**-0.3**
	2µm,1.0s								
LEM	**Lembang**	**9.25**	**122**	P			**Pn**	**01 28 49.0**	**+1.1**
	1µm,1.1s								
JCJI	**Jatiwangi**	**9.65**	**118**	P			**Pn**	**01 28 55.5**	**+2.0**
	557nm,1.0s								
XMIS	**Christmas Isla**	**10.32**	**145**	*eP*			**Pn**	**01 28 54.4**	**-8.1**
XMIS						*eS*	**Sn**	**01 30 38.8**	**-19**
COCO	**West Island**	**10.54**	**195**	Pn			**Pn**	**01 29 01.6**	**-4.0**
	4µm,0.8s,SNR=5.8								
COCO	**West Island**	**10.54**	**195**	*e*Pn			**Pn**	**01 29 01.3**	**-4.2**
	245nm,0.8s								
KSM	**Kuching**	**11.15**	**72**	⇑P			**Pn**	**01 29 17.5**	**+3.6**
KSM	**Kuching**	**11.15**	**72**	*e*Pn			**Pn**	**01 29 15.2**	**+1.2**
BJII	**Banjamegara**	**11.31**	**118**	P			**Pn**	**01 29 15.8**	**-0.3**
	327nm,1.7s								
STKI	**Sintang**	**11.95**	**80**	P			**Pn**	**01 29 29.8**	**+4.9**
	542nm,1.6s								
PBKI	**Pangkalan Bun**	**11.98**	**94**	P			**Pn**	**01 29 31.8**	**+6.4**
	892nm,1.7s								
SBUM	**Sibu**	**13.27**	**71**	⇑P			**Pn**	**01 29 48.8**	**+5.8**
SJI	**Sawahan**	**13.31**	**116**	P			**Pn**	**01 29 41.7**	**-1.9**
	540nm,1.2s								
KRKI	**Karangkates**	**14.11**	**116**	P			**Pn**	**01 29 54.2**	**-0.2**
	647nm,1.8s								
PLKI	**Palangkaraya**	**14.24**	**91**	P			**Pn**	**01 30 02.6**	**+6.4**
	864nm,1.1s								
BTM	**Bintulu**	**14.33**	**69**	⇑P			**Pn**	**01 29 48.8**	**-8.7**
NNT	**Nongplab**	**14.47**	**0**	P			**Pn**	**01 29 57.5**	**-1.8**
KMMI	**Kalianget**	**15.09**	**110**	P			**Pn**	**01 30 07.6**	**-0.1**
	574nm,1.6s								
BBKI	**Banjar Baru**	**15.20**	**96**	P			**Pn**	**01 30 10.8**	**+1.6**
	651nm,1.3s								
IGBI	**Denpasar**	**16.81**	**114**	P			**Pn**	**01 30 29.4**	**-0.5**
	444nm,1.1s								
DNP	**Denpasar**	**16.81**	**114**	P			**Pn**	**01 30 36.3**	**+6.4**
	506nm,0.9s								
KHKI	**Kahang-Kahang**	**17.06**	**112**	P			**Pn**	**01 30 34.3**	**+1.2**
	289nm,1.0s								
NST	**Nakhon Sawan**	**17.54**	**1**	P			**Pn**	**01 30 34.5**	**-4.4**
	122nm,1.2s								
SMKI	**Samarinda**	**17.57**	**85**	P			**Pn**	**01 30 41.9**	**+2.5**
	912nm,1.4s								
MTNI	**Mataram**	**17.68**	**113**	P			**Pn**	**01 30 38.9**	**-1.9**
	216nm,1.2s								
UBT	**Ubonrachathani**	**17.90**	**17**	⇑P			**Pn**	**01 30 42.5**	**-0.9**
	618nm,1.0s								
KKM	**Kota Kinabalu**	**18.32**	**64**	*e*P			**Pn**	**01 30 47.4**	**-1.2**
KKTK	**Khon Kaen**	**18.45**	**10**	P			**Pn**	**01 30 50.0**	**-0.2**
	2µm,0.6s								
SDKM	**Sandakan**	**19.04**	**67**	⇓P			**Pn**	**01 30 58.1**	**+0.7**
TSM	**Tawau**	**19.20**	**71**	⇑P			**Pn**	**01 30 59.2**	**-0.1**
KDM	**Kudat**	**19.25**	**63**	⇑P			**Pn**	**01 31 02.4**	**+2.5**
MYLDM	**Lahad Datu**	**20.08**	**69**	⇓P			**P**	**01 31 09.9**	**+2.0**
PCI	**Palu**	**20.16**	**87**	P			**P**	**01 31 08.7**	**-0.1**
	2µm,1.4s								
KAPI	**Kappang**	**20.24**	**99**	P			**P**	**01 31 07.6**	**-2.0**
	4µm,1.2s,SNR=70								
KAPI	**Kappang**	**20.24**	**99**	P			**P**	**01 31 08.0**	**-1.7**
	1µm,1.1s,baz=277,slow=11,SNR=33								
KAPI						S	**S**	**01 34 51.6**	**-4.2**
	12nm,0.8s,baz=3.2,slow=16,SNR=2.2								
KAPI	**Kappang**	**20.24**	**99**	*eP*			**P**	**01 31 07.1**	**-2.6**
	827nm,1.1s								
CMAR	**Chiang Mai Arr**	**20.32**	**358**	P			**P**	**01 31 10.2**	**-0.2**
	305nm,1.0s,baz=186,slow=9.6,SNR=129								
CMAR						LR	LR	01 39 57.0	
	comp=Z,87µm,18.1s,MS6.2,baz=350,slow=39								
CMAR	**Chiang Mai Arr**	**20.32**	**358**	P			**P**	**01 31 10.2**	**-0.1**
CMAR						pmax	pmax		
	comp=Z,305nm,1.0s								
CMAR						MLR	MLR		
	comp=Z,87µm,18.1s								
NANT	**Nan**	**20.67**	**3**	⇑P			**P**	**01 31 13.0**	**-1.1**
CHG	**Chiang Mai**	**20.67**	**358**	⇓P			**P**	**01 31 13.5**	**-0.7**
	comp=Z,150nm,0.7s								
CHTO	**Chiang Mai**	**20.67**	**358**	*eP*			**P**	**01 31 12.3**	**-1.9**
CHTO						pmax	pmax		
	comp=Z,220nm,1.0s								
CHTO	**Chiang Mai**	**20.67**	**358**	*eP*			**P**	**01 31 12.3**	**-1.9**
	comp=Z,219nm,1.0s								
BATP	**Bataraza**	**20.98**	**59**	*eP*			**P**	**01 31 17.1**	**-0.5**
PALK	**Pallekele**	**21.06**	**296**	Pn			**P**	**01 31 21.6**	**+3.1**
	comp=Z,1µm,1.0s,mb6.2,SNR=5.8								
PALK	**Pallekele**	**21.06**	**296**	*eP*			**P**	**01 31 19.9**	**+1.4**
	comp=Z,241nm,1.1s,mb5.4								
PPR	**Puerto Princes**	**22.26**	**58**	⇓*e*P			**P**	**01 31 34.0**	**+2.6**
KDI	**Kendari**	**22.98**	**95**	P			**P**	**01 31 38.3**	**-0.7**
	comp=Z,535nm,1.3s,mb5.8								
BBSI	**Bau Bau**	**23.09**	**99**	P			**P**	**01 31 39.5**	**-0.7**
	comp=Z,416nm,0.9s,mb5.9								
QIZ	**Qiongzhong**	**23.13**	**25**	P			**P**	**01 31 39.6**	**-0.9**
QIZ						S	**S**	**01 35 47.8**	**-2.7**
QIZ						AMB	AMB		
	comp=Z,1µm,1.0s,mb6.3								
QIZ						LR	LR		
	comp=N,57µm,16.7s,MS6.2								
QIZ						LR	LR		
	comp=E,60µm,18.3s,MS6.2								
QIZ						LR	LR		
	comp=Z,96µm,19.1s,MS6.3								
QIZ	**Qiongzhong**	**23.13**	**25**	*eP*			**P**	**01 31 39.5**	**-1.0**
	comp=Z,1µm,1.0s,mb6.3								
ENPP	**El Nido**	**23.59**	**56**	*eP*			**P**	**01 31 44.0**	**-1.2**
BUSP	**Coron**	**24.65**	**55**	*eP*			**P**	**01 31 55.4**	**+0.5**
CUYO	**Cuyo Island**	**24.74**	**59**	*eP*			**P**	**01 31 55.9**	**+0.2**
BATI	**Baumata**	**25.18**	**110**	P			**P**	**01 31 56.2**	**-3.5**
	comp=Z,142nm,1.1s,mb5.4								
BATI	**Baumata**	**25.18**	**110**	P			**P**	**01 31 55.0**	**-4.7**
	comp=Z,74nm,0.5s,mb5.5,baz=251,slow=1.0,SNR=13								
BATI						S	**S**		
	comp=Z,43nm,0.5s,baz=216,slow=23,SNR=5.6								
KOD	**Kodaikanal**	**25.23**	**299**	*eP*			**P**	**01 32 03.5**	**+3.3**
KOD						AMb	AMB	01 32 19.1	
	comp=Z,156nm,2.4s,mb5.1								
VIS	**Vishakhapatnam**	**25.36**	**321**	*eP*			**P**	**01 32 03.2**	**+1.9**
VIS						AMb	AMB	01 32 19.5	
	comp=Z,448nm,2.5s,mb5.5								
PAGZ	**Pagadian**	**25.56**	**67**	*eP*			**P**	**01 32 02.8**	**-0.4**
SJMP	**San Jose**	**25.66**	**55**	*eP*			**P**	**01 32 05.7**	**+1.7**
LUBP	**Lubang**	**25.66**	**52**	*eP*			**P**	**01 32 03.3**	**-0.8**
DCPH	**Dipolog City**	**25.81**	**66**	⇓*e*P			**P**	**01 32 07.4**	**+1.9**
DCPH						*eS*	pP	01 32 14.4	+1.6
BWNR	**Bhubaneshwar**	**25.99**	**329**	*eP*			**P**	**01 32 08.0**	**+1.0**
BWNR						*eS*	**S**	**01 36 38.0**	**+1.7**
GUIM	**Jordan**	**25.99**	**61**	*eP*			**P**	**01 32 09.2**	**+2.0**
**OTRP

POO AMb AMB 01 33 18.0
comp=Z,136nm,1.8s,mb5.6
DMN Daman 32.59 335 *e*P **P** **01 33 06.3 +0.7**
comp=Z,282nm,1.0s,mb6.1
KKN Kakani 32.68 336 *e*P **P** **01 33 06.7 +0.3**
comp=Z,453nm,1.0s,mb6.3
CD2 Chengdu 32.93 6 *e*P **P** **01 33 07.1 -1.4**
CD2 AP pP 01 33 12.0 -4.0
CD2 XP sP 01 33 14.5 -4.6
CD2 PP PP 01 34 18.8 -4.5
CD2 PCP PcP 01 35 50.3 -2.3
CD2 S **S** **01 38 25.9 +0.8**
CD2 PCS PcS 01 39 34.5 -3.5
CD2 SS SS 01 40 27.1 -20
CD2 SCS ScS 01 43 31.7 -3.8
CD2 AMB AMB
comp=Z,110nm,1.2s,mb5.7
CD2 AMB AMB
comp=Z,35µm,10.8s
CD2 LR LR
comp=N,71µm,16.8s,MS6.6
CD2 LR LR
comp=E,55µm,15.6s,MS6.6
CD2 LR LR
comp=Z,71µm,18.0s,MS6.4
GKN Gorkha 33.13 335 *e*P **P** **01 33 10.6 +0.2**
comp=Z,606nm,1.1s,mb6.5
KOLN Koldanda 33.38 333 *e*P **P** **01 33 13.0 +0.5**
comp=Z,216nm,0.8s,mb6.2
NACB Ninganchiao 33.59 38 *e*P **P** **01 33 14.3 -0.1**
comp=Z,2µm,1.0s,mb6.9
MUN Mundaring 33.66 154 *e*P **P** **01 33 16.2 +1.3**
DANN Dangsing 33.81 334 *e*P **P** **01 33 17.2 +0.9**
YHNB Yeheng 33.82 37 *e*P **P** **01 33 14.6 -1.8**
comp=Z,406nm,1.2s,mb6.2
KLBR Kellerberrin 34.03 152 *e*P **P** **01 33 18.7 +0.5**
comp=Z,50nm,0.9s,mb5.4
TATO Taipei 34.12 37 *e*P **P** **01 33 18.7 -0.3**
comp=Z,284nm,1.0s,mb6.2
NWAO Narrogin (SRO) 34.92 154 P **P** **01 33 25.1 -0.7**
comp=Z,29nm,0.7s,mb5.3,baz=332,slow=8.9,SNR=15
NWAO LR LR 01 45 04.5
comp=Z,61µm,20.3s,MS6.3,baz=312,slow=32
NWAO Narrogin (SRO) 34.92 154 *e*P **P** **01 33 25.8 -0.1**
comp=Z,92nm,1.0s,mb5.7
WHN Wuhan 35.23 22 ⇑P **P** **01 33 28.2 -0.3**
WHN LR LR
comp=N,46µm,14.5s,MS6.5
WHN LR LR
comp=E,49µm,14.6s,MS6.5
WHN LR LR
comp=Z,88µm,16.8s,MS6.6
PTH Pithoragarh 36.47 331 *e*P **P** **01 33 40.2 +1.1**
PTH *e*S **S** **01 39 20.9 +1.2**
XAN Xi'an 36.86 13 P **P** **01 33 40.2 -2.2**
XAN AP pP 01 33 49.0 -0.9
XAN XP sP 01 33 53.4 +0.4
XAN AMB AMB
comp=Z,122nm,0.8s,mb5.8
AJM Ajmer 37.22 321 *e*P **P** **01 33 46.2 +0.6**
LZH Lanzhou 38.06 5 ⇑P **P** **01 33 53.1 +0.5**
LZH AP pP 01 33 57.0 -3.1
LZH XP sP 01 34 00.2 -3.0
LZH PP PP 01 35 24.3 +4.4
LZH S **S** **01 39 46.2 +2.4**
LZH XS sS 01 39 54.1 -2.1
LZH SS SS 01 42 25.6 -6.2
LZH AMB AMB
comp=Z,265nm,1.2s,mb5.8
LZH AMB AMB
comp=Z,753nm,5.0s
LZH LR LR
comp=N,21µm,13.8s
LZH LR LR
comp=Z,39µm,15.9s,MS6.3
DDI Dehra Dun 38.18 329 *e*P **P** **01 33 53.0 -0.7**
DDI *ex* x 01 40 09.0
WRA Warramunga Arr 38.27 120 P **P** **01 33 52.8 -1.8**
comp=Z,168nm,0.8s,mb5.8,baz=302,slow=9.2,SNR=271
WRA PcP PcP 01 36 09.0 +0.4
comp=Z,13nm,0.6s,baz=313,slow=2.5,SNR=4.9
WRA S **S** **01 39 41.3 -6.1**
comp=Z,13nm,0.8s,baz=291,slow=17,SNR=14
WRA Warramunga Arr 38.27 120 P **P** **01 33 52.8 -1.8**
WRA 01 36 09.0
WRA S **S** **01 39 41.3 -6.1**
WRA pmax pmax
comp=Z,168nm,0.8s
WRA pmax pmax
comp=Z,13nm,0.6s
WRA smax
comp=N,13nm,0.9s
WRAB Tennant Creek 38.27 120 P **P** **01 33 53.0 -1.6**
comp=N,2µm,0.6s,mb7.0
WRAB Tennant Creek 38.27 120 *e*P **P** **01 33 52.8 -1.8**
WRAB pmax pmax
comp=Z,155nm,0.6s,mb5.9
WRAB Tennant Creek 38.27 120 *e*P **P** **01 33 52.8 -1.9**
comp=Z,155nm,0.6s,mb5.9
WB2 Warramunga Arr 38.28 120 *e*P **P** **01 33 51.9 -2.8**
WB2 *e*S **S** **01 39 36.7 -11**
NJ2 Nanjing 38.41 27 *e*P **P** **01 33 56.3 +0.7**
NJ2 AP pP 01 34 00.7 -2.4
NJ2 XP sP 01 34 02.6 -3.6
NJ2 PP PP 01 35 28.6 +4.8
NJ2 S **S** **01 39 48.5 -0.7**
NJ2 XS sS 01 40 04.0 +2.4
NJ2 AMB AMB
comp=Z,90nm,1.1s,mb5.4
NJ2 AMB AMB
comp=Z,1µm,5.2s
NJ2 LR LR
comp=N,13nm,13.0s
NJ2 LR LR
comp=E,38µm,18.4s
BHJ Bhuj 38.53 312 *e*P **P** **01 33 59.2 +2.5**
SSE Sheshan 38.73 30 ⇓P **P** **01 33 59.7 +1.4**
SSE AMB AMB
comp=Z,287nm,1.2s,mb5.9
SSE AMB AMB
comp=Z,15µm,12.0s
FORT Forrest 39.26 140 *e*P **P** **01 34 03.0 +0.3**
comp=Z,66nm,0.6s,mb5.5
SMLA Simla 39.28 329 *i* P **P** **01 34 03.1 +0.2**
SMLA AMb AMB 01 34 07.8
comp=Z,297nm,1.0s,mb6.0
ASAR Alice Springs 39.51 126 P **P** **01 34 03.1 -1.8**
comp=Z,68nm,0.8s,mb5.4,baz=301,slow=7.7,SNR=195
ASAR PcP PcP 01 36 12.1 -0.4
comp=Z,20nm,0.8s,baz=298,slow=2.7,SNR=4.9
ASAR S **S** **01 40 01.8 -4.3**
comp=Z,12nm,0.9s,baz=300,slow=15,SNR=11
ASAR Alice Springs 39.51 126 P **P** **01 34 03.2 -1.8**
ASAR 01 36 12.1
ASAR S **S** **01 40 01.8 -4.3**
ASAR pmax pmax
comp=Z,68nm,0.8s
ASAR pmax pmax
comp=Z,21nm,0.8s
ASAR smax
comp=N,12nm,0.9s
SDNR Sundarnagar 39.68 329 *e*P **P** **01 34 07.0 +0.8**
JAY Jayapura 40.98 92 P **P** **01 34 17.4 +0.1**
comp=N,169nm,0.8s,mb5.7
DLH Dalhousie 41.02 329 *e*P **P** **01 34 17.0 -0.3**
THN Thein Dam 41.07 328 *e*P **P** **01 34 16.8 -0.9**
THN *ex* x 01 40 33.9
GTA Gaotai 41.18 0 ⇑P **P** **01 34 17.8 -0.7**
GTA AP pP 01 34 22.3 -3.8
GTA XP sP 01 34 24.8 -4.3
GTA S **S** **01 40 31.3 +0.8**
GTA XS sS 01 40 39.7 -3.3
GTA AMB AMB
comp=Z,15µm,4.8s
GTA LR LR
comp=N,50µm,17.1s,MS6.5
GTA LR LR
comp=E,39µm,17.4s,MS6.5
GTA LR LR
comp=Z,39µm,16.2s,MS6.4
TIA Tai'an 41.32 22 ⇑P **P** **01 34 18.7 -1.0**
TIA AMB AMB
comp=Z,60nm,1.0s,mb5.2
BTO Baotou 43.41 11 *e*P **P** **01 34 37.5 +0.8**
HHC Hu-ho-hao-te 43.97 13 ⇑P **P** **01 34 41.6 +0.4**

HHC S **S** **01 41 14.0 +2.4**
HHC AMB AMB
comp=Z,89nm,0.9s,mb5.5
HHC AMB AMB
comp=Z,20µm,6.8s
BJT Baijiatuau 44.43 18 *e*P **P** **01 34 44.3 -0.6**
BJT pmax pmax
comp=Z,195nm,1.0s
BJT Baijiatuau 44.43 18 *e*P **P** **01 34 44.2 -0.6**
comp=Z,195nm,1.0s,mb5.8
BJI Beijing 44.45 18 P **P** **01 34 44.0 -1.0**
BJI AMB AMB
comp=Z,187nm,1.0s,mb5.8
COEN Coen 44.58 108 *e*P **P** **01 34 44.2 -2.3**
comp=Z,19nm,1.1s,mb4.8
DL2 Dalian 45.42 24 ⇓*i*P **P** **01 34 53.8 +1.1**
DL2 S **S** **01 41 36.5 +3.9**
DL2 AMB AMB
comp=Z,140nm,1.0s,mb5.8
DL2 LR LR
comp=N,15µm,18.1s,MS6.1
DL2 LR LR
comp=E,15µm,16.5s,MS6.1
DL2 LR LR
comp=Z,23µm,19.4s,MS6.1
KBL Kabul 46.34 324 *e*P **P** **01 34 58.3 -1.8**
KBL pmax pmax
comp=Z,128nm,1.1s,mb5.8
KBL Kabul 46.34 324 *e*P **P** **01 34 58.3 -1.8**
comp=Z,128nm,1.1s,mb5.8
INCN Inchon 46.52 30 *e*P **P** **01 35 01.6 0.0**
comp=Z,101nm,0.8s,mb5.8
KSH Kashi 46.68 335 P **P** **01 35 03.0 +0.3**
KSH *e*AP pP 01 35 07.1 -3.3
KSH *e*XP sP 01 35 10.1 -3.3
KSH *e*PCP PcP 01 36 36.0 -0.2
KSH *e*PP PP 01 36 52.2 -0.5
KSH *e*SCP ScP 01 40 28.0 -0.4
KSH *e*PCS PcS 01 40 30.3 -0.6
KSH *e*S **S** **01 41 50.9 +0.1**
KSH *e*XS sS 01 41 59.3 -4.1
KSH *e*SS SS 01 45 11.0 -6.4
KSH AMB AMB
comp=Z,22µm,8.8s
KSH LR LR
comp=N,47µm,16.4s,MS6.7
KSH LR LR
comp=E,60µm,17.0s,MS6.7
KSH LR LR
comp=Z,80µm,24.0s
WMQ Urumqi 46.84 348 ⇑*i*P **P** **01 35 04.6 +0.7**
WMQ AP pP 01 35 10.7 -0.9
WMQ XP sP 01 35 13.5 -1.1
WMQ PCP PcP 01 36 36.0 -0.6
WMQ PP PP 01 36 56.0 +1.7
WMQ S **S** **01 41 55.0 +2.1**
WMQ XS sS 01 42 09.0 +3.4
WMQ SCS ScS 01 44 56.0 -1.0
WMQ AMB AMB
comp=Z,677nm,0.9s,mb6.6
WMQ LR LR
comp=N,23µm,16.3s,MS6.3
WMQ LR LR
comp=E,18µm,18.8s,MS6.3
WMQ LR LR
comp=Z,26µm,22.8s,MS6.1
KSRS Korea Array 47.15 31 P **P** **01 35 06.7 +0.3**
comp=Z,170nm,0.8s,mb6.0,baz=223,slow=8.2,SNR=156
KSRS S **S** **01 42 13.4 +16**
comp=Z,0.6nm,0.2s,baz=226,slow=15,SNR=4.7
KSRS Korea Array 47.15 31 P **P** **01 35 06.7 +0.3**
KSRS S **S** **01 42 13.5 +16**
KSRS pmax pmax
comp=Z,170nm,0.8s,mb6.0
KSRS smax
comp=N,1.0nm,0.3s
GUMO Guam 47.38 70 P **P** **01 35 04.4 -4.2**
comp=N,45nm,0.5s,mb5.7,baz=333,slow=6.2,SNR=5.1
GUMO LR LR 01 53 14.4
comp=N,9µm,21.2s,MS5.7,baz=152,slow=34
PMG Port Moresby 47.76 101 *e*P **P** **01 35 10.4 -1.2**
PMG pmax pmax
comp=Z,48nm,1.0s
PMG Port Moresby 47.76 101 *e*P **P** **01 35 10.4 -1.2**
comp=Z,48nm,1.0s,mb5.5
SNY Shenyang 48.68 24 ⇓P **P** **01 35 18.6 +0.4**
SNY AMB AMB
comp=Z,126nm,1.1s,mb5.9
CTA Charters Tower 48.88 115 *e*P **P** **01 35 18.1 -2.0**
comp=Z,71nm,1.1s,mb5.6
CTA Charters Tower 48.88 115 P **P** **01 35 18.6 -1.5**
comp=Z,122nm,1.1s,mb5.8,baz=287,slow=10,SNR=50
CTA Charters Tower 48.88 115 P **P** **01 35 18.7 -1.4**
CTA pmax pmax
comp=Z,122nm,1.1s
CTAO Charters Tower 48.88 115 *e*P **P** **01 35 18.1 -2.0**
CTAO pmax pmax
comp=Z,160nm,1.1s,mb6.0
CTAO Charters Tower 48.88 115 *e*P **P** **01 35 18.1 -2.1**
comp=Z,162nm,1.1s,mb6.0
STKA Stephens Creek 49.39 132 *e*P **P** **01 35 22.9 -1.0**
comp=Z,57nm,0.6s,mb5.8
STKA *e*S **S** **01 42 28.7 -0.8**
STKA Stephens Creek 49.39 132 P **P** **01 35 23.2 -0.6**
comp=Z,43nm,0.6s,mb5.7,baz=306,slow=7.3,SNR=37
UCH Uchtor 49.55 335 P **P** **01 35 25.6 +0.8**
SNR=44
UCH Uchtor 49.55 335 *e*P **P** **01 35 25.1 +0.3**
comp=Z,129nm,1.1s,mb5.9
TKM2 Tokmak 2 49.69 337 *e*P **P** **01 35 26.0 +0.1**
TKM2 pmax pmax
comp=Z,228nm,0.8s,mb6.2
TKM2 Tokmak 2 49.69 337 P **P** **01 35 26.2 +0.4**
SNR=240
TKM2 Tokmak 2 49.69 337 *e*P **P** **01 35 26.0 +0.1**
comp=Z,228nm,0.8s,mb6.3
KBK Karagaybulak 49.72 336 P **P** **01 35 27.1 +0.9**
SNR=70
AML Almayashu 49.81 335 P **P** **01 35 27.3 +0.5**
SNR=145
AML Almayashu 49.81 335 *e*P **P** **01 35 27.0 +0.2**
comp=Z,9.7nm,1.1s,mb4.8
AAK Ala-Archa 49.89 336 P **P** **01 35 28.7 +1.3**
SNR=33
SONM Songino Array 49.95 6 P **P** **01 35 27.5 -0.2**
comp=Z,373nm,0.9s,mb6.4,baz=187,slow=8.0,SNR=204
SONM PcP PcP 01 36 47.6 -0.1
comp=Z,51nm,0.9s,baz=189,slow=4.1,SNR=4.1
SONM Songino Array 49.95 6 P **P** **01 35 27.5 -0.2**
SONM 01 36 47.6
SONM pmax pmax
comp=Z,373nm,0.9s
SONM pmax pmax
comp=Z,51nm,0.9s
FRU Bishkek 50.01 336 *e*P **P** **01 35 27.5 -0.8**
FRU *e* 01 36 49.0
FRU *e*S **S** **01 42 52.0 +14**
FRU pmax pmax
comp=Z,450nm,2.0s,mb6.2
FRU smax
comp=E,670nm,3.0s
ULN Ulaanbaatar 50.05 6 *e*P **P** **01 35 27.9 -0.6**
ULN pmax pmax
comp=Z,300nm,1.0s,mb6.3
ULN Ulaanbaatar 50.05 6 *e*P **P** **01 35 27.9 -0.6**
comp=Z,305nm,1.0s,mb6.3
CHMS Chumysh 50.09 336 P **P** **01 35 28.9 -0.1**
SNR=54
EKS2 Erkin-Say 50.21 335 P **P** **01 35 30.4 +0.6**
SNR=233
EKS2 Erkin-Say 50.21 335 *e*P **P** **01 35 30.1 +0.2**
comp=Z,268nm,1.0s,mb6.2
USP Ospenovka 50.41 336 P **P** **01 35 31.3 -0.1**
SNR=257
MK31 Makanchi Array 50.92 345 *i* P **P** **01 35 34.7 -0.4**
MK31 pmax pmax
comp=Z,380nm,0.8s,mb6.4
MK31 Makanchi Array 50.92 345 *i* P **P** **01 35 34.8 -0.3**
MKAR Makanchi Array 50.92 345 P **P** **01 35 34.9 -0.3**
comp=Z,294nm,0.8s,mb6.3,baz=148,slow=7.5,SNR=358
MKAR S **S** **01 42 54.9 +4.7**
comp=Z,37nm,1.3s,baz=167,slow=13,SNR=8.1
MKAR Makanchi Array 50.92 345 P **P** **01 35 34.9 -0.2**
MKAR S **S** **01 42 54.9 +4.6**
MKAR pmax pmax
comp=Z,294nm,0.8s

MKAR smax
comp=N,37nm,1.3s
MKAR Makanchi Array 50.92 345 P **P** **01 35 34.9 -0.3**
MKAR S **S** **01 42 54.9 +4.7**
CN2 Changchun 51.08 24 *e*P **P** **01 35 34.2 -2.2**
CN2 PCP PcP 01 36 53.5 +1.5
CN2 *e*S **S** **01 42 51.2 -1.4**
CN2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
CN2 AMB AMB
comp=Z,22µm,15.0s
CN2 LR LR
comp=N,12µm,17.0s,MS6.1
CN2 LR LR
comp=E,12µm,17.0s,MS6.1
CN2 LR LR
comp=Z,13µm,18.0s,MS6.0
KK31 Karatay Array 51.99 333 *i* P **P** **01 35 42.1 -1.1**
KK31 pmax pmax
comp=Z,280nm,1.6s,mb5.9
KK31 Karatay Array 51.99 333 *i* P **P** **01 35 42.2 -1.0**
MAJO Matsushiro 52.45 39 *e*P **P** **01 35 44.8 -1.9**
MAJO pmax pmax
comp=Z,190nm,1.0s,mb6.0
MAJO Matsushiro 52.45 39 *e*P **P** **01 35 44.8 -1.9**
comp=Z,194nm,0.9s,mb6.0
MAT Matsushiro 52.45 39 P **P** **01 35 45.5 -1.2**
MJAR Matsushiro Arr 52.45 39 P **P** **01 35 45.0 -1.7**
comp=Z,174nm,1.0s,mb5.9,baz=222,slow=6.6,SNR=79
MJAR Matsushiro Arr 52.45 39 P **P** **01 35 45.0 -1.7**
MJAR pmax pmax
comp=Z,174nm,1.0s
VLA Vladivostok 53.42 29 *e*P **P** **01 35 52.5 -1.3**
VLA pmax pmax
comp=Z,197nm,1.2s,mb5.9
MOY Mondy 53.45 1 *e*P **P** **01 35 53.9 +0.1**
MOY pmax pmax
comp=Z,283nm,3.1s
MDJ Mudanjiang 53.50 26 P **P** **01 35 54.2 -0.1**
MDJ SCP ScP 01 40 58.0 +0.5
MDJ PCS PcS 01 40 59.6 -0.3
MDJ S **S** **01 43 29.8 +4.1**
MDJ XS sS 01 43 34.2 -4.2
MDJ SCS ScS 01 45 44.9 +2.6
MDJ AMB AMB
comp=Z,236nm,1.0s,mb6.1
MDJ LR LR
comp=N,41µm,32.2s
MDJ LR LR
comp=Z,36µm,22.9s
MDJ Mudanjiang 53.50 26 *e*P **P** **01 35 54.0 -0.4**
comp=Z,235nm,1.0s,mb6.1
TLY Talaya 53.56 3 P **P** **01 35 54.6 0.0**
comp=Z,1µm,1.0s,mb6.8,SNR=59
TLY Talaya 53.56 3 *e*P **P** **01 35 53.5 -1.1**
TLY pmax pmax
comp=Z,191nm,1.1s,mb5.9
TLY Talaya 53.56 3 *e*P **P** **01 35 53.6 -1.0**
OPO Ambohidratompo 54.00 248 P **P** **01 35 59.9 +1.4**
comp=Z,22nm,0.9s,mb5.1,baz=68,slow=7.5,SNR=15
IRK Irkutsk 54.15 3 *e*P **P** **01 35 58.3 -0.7**
IRK pmax pmax
comp=Z,443nm,2.3s,mb6.0
TOO Toolangi 54.94 136 *e*P **P** **01 36 06.1 +1.1**
CIT Chita 55.06 10 *e*P **P** **01 36 05.8 +0.2**
CIT *e* 01 36 20.7
CIT *e* 01 37 02.1
CIT *e* 01 44 04.9
CIT pmax pmax
comp=Z,492nm,2.8s,mb6.0
ABKT Ailbek 55.23 320 P **P** **01 36 06.2 -0.9**
comp=Z,402nm,0.8s,mb6.5,SNR=20
KURK Kurchatov 55.50 344 P **P** **01 36 08.6 -0.1**
comp=Z,2µm,0.9s,mb7.2
KURK Kurchatov 55.50 344 P **P** **01 36 07.4 -1.3**
comp=Z,156nm,0.9s,mb6.0,baz=166,slow=6.6,SNR=150
KURK PcP PcP 01 37 10.1 +1.5
comp=Z,33nm,1.0s,baz=163,slow=6.1,SNR=3.6
KURK S **S** **01 43 54.3 +1.9**
comp=Z,0.8nm,0.4s,baz=134,slow=13,SNR=5.4
KURK Kurchatov 55.50 344 *e*P **P** **01 36 07.4 -1.3**
KURK pmax pmax
comp=Z,360nm,1.0s,mb6.4
KURK Kurchatov 55.50 344 *e*P **P** **01 36 07.4 -1.3**
comp=Z,365nm,0.9s,mb6.4
CAN Canberra 56.45 132 *e*P **P** **01 36 15.3 -0.6**
ARMA Armidale 56.66 126 ⇑*i*P **P** **01 36 18.3 +0.8**
CNB Canberra Magne 56.72 132 *e*P **P** **01 36 17.7 -0.2**
ZAA0 Zalesovo Array 57.09 350 *e*P **P** **01 36 19.2 -0.8**
ZALV Zalesovo Beam 57.09 350 P **P** **01 36 19.2 -0.8**
comp=Z,612nm,0.9s,mb6.7,baz=180,slow=6.0,SNR=382
ZALV S **S** **01 44 14.1 +0.8**
comp=Z,21nm,1.1s,baz=156,slow=15,SNR=11
ZALV Zalesovo Beam 57.09 350 P **P** **01 36 19.3 -0.7**
ZALV S **S** **01 44 14.1 +0.8**
ZALV pmax pmax
comp=Z,612nm,0.9s,mb6.6
ZALV smax
comp=N,21nm,1.1s
RIV Riverview 57.50 129 *e*P **P** **01 36 24.0 +0.6**
KLR Kul'dur 58.03 24 *e*P **P** **01 36 22.2 -4.6**
KRAR Krasnoyarsk 58.06 355 *e*P **P** **01 36 25.6 -1.2**
KRAR pmax pmax
comp=Z,292nm,1.4s,mb6.1
NVS Novosibirsk 58.23 349 *i* P **P** **01 36 26.8 -1.2**
NVS *e*S **S** **01 44 20.5 -7.8**
NVS pmax pmax
comp=Z,559nm,1.2s,mb6.5
NVS pmax pmax
comp=N,199nm,1.5s
NVS pmax pmax
comp=E,143nm,1.2s
NVS smax
comp=N,129nm,1.8s
NVS smax
comp=E,76nm,1.6s
RDF Al-Radifah 58.59 306 *e*P **P** **01 36 29.5 -1.6**
baz=306
RDF AMb AMB 01 36 46.5
comp=Z,188nm,1.1s,mb6.0,baz=306
UMR Umm Al-Rimmam 58.70 307 *e*P **P** **01 36 30.7 -1.2**
baz=306
UMR AMb AMB 01 36 54.6
comp=Z,140nm,0.9s,mb6.0,baz=306
ERM Erimo 58.82 37 P **P** **01 36 32.5 +0.1**
comp=Z,815nm,0.9s,mb6.8,SNR=7.8
ERM Erimo 58.82 37 *e*P **P** **01 36 32.1 -0.3**
ERM pmax pmax
comp=Z,127nm,0.9s,mb6.0
ERM Erimo 58.82 37 *e*P **P** **01 36 32.1 -0.4**
comp=Z,127nm,0.9s,mb6.0
NAY Al-Naaiem 58.96 306 *e*P **P** **01 36 31.9 -1.8**
baz=306
NAY AMb AMB 01 36 35.0
comp=Z,50nm,1.0s,mb5.5,baz=306
MIB Mutribah 59.09 307 *e*P **P** **01 36 33.7 -0.9**
baz=307
MIB AMb AMB 01 36 54.3
comp=Z,348nm,0.9s,mb6.4,baz=307
RST Umm Al-Ruwaisa 59.25 306 *e*P **P** **01 36 34.1 -1.6**
baz=306
RST AMb AMB 01 36 50.7
comp=Z,110nm,1.6s,mb5.6,baz=306
VOSK Vostochnaya 59.60 340 P **P** **01 36 35.7 -1.9**
VOSK pmax pmax
comp=Z,178nm,1.3s,mb5.9
BVA0 Borovoye Array 60.05 340 *i* P **P** **01 36 39.2 -1.5**
BVA0 pmax pmax
comp=Z,23nm,0.9s,mb5.2
BVAR Borovoye Array 60.05 340 P **P** **01 36 39.1 -1.6**
comp=Z,57nm,0.7s,mb5.7,baz=145,slow=8.6,SNR=91
BVAR S **S** **01 45 04.9 +13**
comp=Z,6.9nm,1.0s,baz=137,slow=9.3,SNR=6.2
BVAR Borovoye Array 60.05 340 P **P** **01 36 39.1 -1.6**
BVAR S **S** **01 45 04.9 +13**
BVAR pmax pmax
comp=Z,57nm,0.7s
BVAR smax
comp=N,7.0nm,1.0s
BRVK Borovoye 60.12 340 P **P** **01 36 39.3 -1.9**
comp=N,622nm,0.5s,mb6.9,SNR=10
BRVK Borovoye 60.12 340 *e*P **P** **01 36 39.4 -1.8**
BRVK pmax pmax
comp=Z,165nm,1.1s,mb6.0
BRVK Borovoye 60.12 340 *e*P **P** **01 36 39.4 -1.8**
comp=Z,165nm,1.1s,mb6.0

BOD	**Bodaibo**	**60.70**	**9**	*eP*	**P**	**01 36 44.0**	**-1.1**
BOD				pmax	pmax		
	comp=Z,381nm,1.1s,mb6.4						
AB31	**Akbulak array**	**61.47**	**332**	*i* P	**P**	**01 36 48.8**	**-1.7**
YUK	**Yuzh-Kuril'sk**	**61.60**	**36**	*eP*	**P**	**01 36 52.0**	**+0.5**
YUK				pmax	pmax		
	comp=Z,2µm,1.2s,mb7.2						
YUK				pmax	pmax		
	comp=Z,490nm,1.0s,mb6.6						
YSS	**Yuzh-Sakhalins**	**61.62**	**32**⇑	*eP*	**P**	**01 36 50.0**	**-1.5**
YSS				pmax	pmax		
	comp=Z,120nm,1.0s,mb6.0						
YSS				pmax	pmax		
	comp=Z,930nm,1.0s,mb6.9						
YSS				MLR	MLR		
	comp=Z,24µm,18.0s,MS6.4						
YSS	**Yuzh-Sakhalins**	**61.62**	**32**	*eP*	**P**	**01 36 50.9**	**-0.7**
	comp=Z,958nm,1.1s,mb6.8						
CLNS	**Chul'man**	**62.07**	**15**	*eP*	**P**	**01 36 54.5**	**+0.2**
CLNS				pmax	pmax		
	comp=Z,288nm,1.0s,mb6.4						
CLNS				pmax	pmax		
	comp=E,107nm,0.8s						
CLNS				pmax	pmax		
	comp=N,126nm,0.9s						
CLNS				MLR	MLR		
	comp=N,15µm,16.0s,MS6.3						
CLNS				MLR	MLR		
	comp=Z,22µm,17.0s,MS6.4						
CLNS				MLR	MLR		
	comp=E,5µm,14.0s,MS6.3						
KMBO	**Kilima Mbogo**	**62.42**	**270**	P	**P**	**01 36 58.8**	**+1.1**
	comp=E,24nm,1.0s,mb5.3,baz=49,slow=8.9,SNR=27						
KMBO	**Kilima Mbogo**	**62.42**	**270**	P	**P**	**01 36 58.8**	**+1.2**
KMBO				pmax	pmax		
	comp=Z,24nm,1.0s						
KMBO	**Kilima Mbogo**	**62.42**	**270**	*eP*	**P**	**01 36 59.0**	**+1.4**
	comp=Z,25nm,0.9s,mb5.3						
AKTK	**Aktyubinsk**	**63.19**	**332**	P	**P**	**01 37 00.2**	**-1.7**
AKTO	**Aktyubinsk**	**63.19**	**332**	P	**P**	**01 37 00.2**	**-1.7**
	comp=Z,72nm,1.0s,mb5.8,baz=136,slow=6.0,SNR=76						
AKTO	**Aktyubinsk**	**63.19**	**332**	P	**P**	**01 37 00.3**	**-1.6**
AKTO				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.8						
MIR	**Mirnyy**	**64.62**	**183**	*eP*	pP	01 37 22.0	+3.0
MIR				*i*	sP	01 37 33.0	+11
MIR				*i*	PcP	01 37 48.0	+3.2
MIR				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.1						
CASY	**Casey**	**64.64**	**175**	*eP*	**P**	**01 37 11.9**	**+0.7**
MAK	**Makhachkala**	**64.75**	**320**	*eP*	**P**	**01 37 13.1**	**+0.7**
MAK				*i*		01 37 44.4	
MAK				*i*		01 39 36.4	
MAK				*e*PPP		01 41 10.1	
MAK				*i* S	**S**	**01 45 50.6**	**-1.0**
MAK				*i*		01 46 54.4	
MAK				*e*SS	SS	01 50 03.8	+0.7
MAK				pmax	pmax		
	comp=Z,305nm,0.9s,mb6.3						
GNI	**Garni**	**65.30**	**316**	P	**P**	**01 37 15.2**	**-0.8**
	comp=Z,14nm,0.7s,mb5.1,baz=265,slow=2.0,SNR=15						
GNI	**Garni**	**65.30**	**316**	P	**P**	**01 37 15.2**	**-0.8**
GNI				pmax	pmax		
	comp=Z,14nm,0.7s						
GNI	**Garni**	**65.30**	**316**	*eP*	**P**	**01 37 17.0**	**+1.0**
	comp=Z,126nm,1.1s,mb5.9						
SVE	**Sverdlovsk**	**66.54**	**338**⇑	*eP*	**P**	**01 37 23.0**	**-0.7**
SVE				pmax	pmax		
	comp=Z,371nm,1.2s,mb6.3						
ARU	**Arti**	**67.06**	**337**	P	**P**	**01 37 25.0**	**-2.0**
	comp=Z,952nm,1.1s,mb6.7,SNR=9.9						
ARU	**Arti**	**67.06**	**337**	*c iP*	**P**	**01 37 25.6**	**-1.4**
ARU				*e*SS	S	01 46 16.2	-3.0
ARU				*e*SS	SS	01 50 32.1	-6.4
ARU				pmax	pmax		
	comp=Z,126nm,1.2s,mb5.8						
ARU	**Arti**	**67.06**	**337**	*eP*	**P**	**01 37 25.5**	**-1.4**
	comp=Z,209nm,1.1s,mb6.1						
YAK	**Yakutsk**	**67.79**	**15**	*eP*	**P**	**01 37 29.3**	**-2.2**
YAK				*e*		01 46 22.5	
YAK				pmax	pmax		
	comp=Z,883nm,0.9s,mb6.8						
YAK				pmax	pmax		
	comp=N,355nm,1.1s						
YAK				pmax	pmax		
	comp=E,376nm,1.5s						
YAK	**Yakutsk**	**67.79**	**15**⇑	*iP*	**P**	**01 37 30.5**	**-1.0**
KIV	**Kislovodsk**	**68.32**	**319**	P	**P**	**01 37 35.0**	**-0.2**
	comp=E,592nm,1.0s,mb6.6,SNR=15						
KIV	**Kislovodsk**	**68.32**	**319**⇓	*eP*	**P**	**01 37 35.1**	**-0.1**
KIV				*i*	pP	01 37 44.0	+0.8
KIV				*e*		01 37 52.1	
KIV				*e*		01 46 37.3	
KIV				pmax	pmax		
	comp=Z,114nm,1.1s,mb5.8						
KIV	**Kislovodsk**	**68.32**	**319**⇑	*iP*	**P**	**01 37 34.9**	**-0.3**
KIV	**Kislovodsk**	**68.32**	**319**	*eP*	**P**	**01 37 35.0**	**-0.2**
	comp=Z,132nm,1.0s,mb5.9						
ASF	**Jabal al Asfar**	**68.33**	**306**	P	**P**	**01 37 34.9**	**-0.6**
	comp=Z,17nm,1.0s,mb5.0,baz=107,slow=6.8,SNR=24						
ASF	**Jabal al Asfar**	**68.33**	**306**	P	**P**	**01 37 34.9**	**-0.6**
ASF				pmax	pmax		
	comp=Z,17nm,1.0s						
MALT	**Malatya**	**69.10**	**312**	P	**P**	**01 37 38.0**	**-2.1**
MALT				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.5						
MALT	**Malatya**	**69.10**	**312**⇑	*iP*	**P**	**01 37 38.4**	**-1.8**
MALT	**Malatya**	**69.10**	**312**	*eP*	**P**	**01 37 38.6**	**-1.6**
	comp=Z,64nm,1.0s,mb5.5						
EIL	**Elat**	**69.25**	**303**	P	**P**	**01 37 41.5**	**+0.2**
	comp=Z,18nm,0.7s,mb5.1,baz=83,slow=3.6,SNR=14						
EIL	**Elat**	**69.25**	**303**	P	**P**	**01 37 41.5**	**+0.2**
MMAI	**Mount Meron Ar**	**69.78**	**306**	P	**P**	**01 37 45.3**	**+0.8**
	comp=Z,14nm,0.7s,mb5.0,baz=95,slow=7.8,SNR=22						
SOC	**Sochi**	**70.13**	**318**	*eP*	**P**	**01 37 45.9**	**-0.5**
SOC				*e**PP	pP	01 37 54.8	+0.4
SOC				*e**SP	sP	01 37 59.3	+1.9
SOC				*e*		01 38 06.0	
SOC				*e*		01 40 18.7	
SOC				*e*S	S	01 46 54.5	-1.7
SOC				pmax	pmax		
	comp=Z,51nm,0.8s,mb5.5						
SOC	**Sochi**	**70.13**	**318**	*i* P	**P**	**01 37 46.4**	**0.0**
MAW	**Mawson**	**70.24**	**194**	*eP*	**P**	**01 37 47.4**	**+0.8**
	comp=Z,22nm,0.9s,mb5.1						
MAW	**Mawson**	**70.24**	**194**	P	**P**	**01 37 47.4**	**+0.8**
	comp=Z,10nm,0.9s,mb4.8,baz=45,slow=12,SNR=11						
MAW				PKP2bc		02 05 45.3	
	comp=Z,13nm,1.2s,baz=205,slow=4.5,SNR=12						
SKR	**Severo-Kuril's**	**71.02**	**34**	*eP*	**P**	**01 37 51.5**	**-0.2**
SKR				pmax	pmax		
	comp=E,110nm,1.0s						
SKR				pmax	pmax		
	comp=Z,340nm,1.0s,mb6.2						
LSZ	**Lusaka**	**71.65**	**255**	P	**P**	**01 37 57.1**	**+0.9**
	comp=Z,27nm,1.1s,mb5.1,baz=83,slow=5.4,SNR=25						
LSZ	**Lusaka**	**71.65**	**255**	*eP*	**P**	**01 37 56.5**	**+0.3**
LSZ				pmax	pmax		
	comp=Z,97nm,1.4s,mb5.5						
LSZ	**Lusaka**	**71.65**	**255**	*eP*	**P**	**01 37 56.5**	**+0.3**
	comp=Z,97nm,1.4s,mb5.5						
CSS	**Prodhromos**	**71.97**	**308**	*eP*	**P**	**01 37 57.4**	**-0.4**
	comp=Z,120nm,1.3s,mb5.7						
PEA0B	**Petropavlovsk-**	**73.02**	**32**	*eP*	**P**	**01 38 02.2**	**-1.5**
PETK	**Petropavlovsk-**	**73.02**	**32**	P	**P**	**01 38 02.1**	**-1.5**
	comp=Z,47nm,0.8s,mb5.5,baz=208,slow=1.6,SNR=54						
BR131	**Keskin Array S**	**73.08**	**313**	*eP*	**P**	**01 38 03.0**	**-1.3**
	comp=Z,38nm,0.9s,mb5.3						
PET	**Petropavlovsk**	**73.50**	**33**	*eP*	**P**	**01 38 05.6**	**-0.8**
PET				pmax	pmax		
	comp=Z,256nm,1.1s,mb6.1						
PET	**Petropavlovsk**	**73.50**	**33**	*eP*	**P**	**01 38 05.3**	**-1.1**
	comp=Z,186nm,0.9s,mb6.0						
VSR	**Storozhevoye**	**73.58**	**325**	*eP*	**P**	**01 38 05.2**	**-1.8**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
VSR				pmax	pmax		
	comp=E,20nm,0.9s						
VSR				pmax	pmax		
	comp=N,9.0nm,0.8s						
ANTO	**Ankara**	**73.75**	**312**	*eP*	**P**	**01 38 07.3**	**-0.9**
ANTO				pmax	pmax		
	comp=Z,63nm,1.1s,mb5.5						
ANTO	**Ankara**	**73.75**	**312**⇓	*iP*	**P**	**01 38 07.2**	**-1.0**
ANTO	**Ankara**	**73.75**	**312**	*eP*	**P**	**01 38 07.3**	**-0.9**
	comp=Z,63nm,1.1s,mb5.5						
VOR	**Voronezh**	**73.78**	**326**	*eP*	**P**	**01 38 08.0**	**-0.1**
VOR				pmax	pmax		
	comp=Z,300nm,1.6s,mb6.0						
SIM	**Simferopol'**	**74.38**	**318**⇑	*iP*	**P**	**01 38 13.4**	**+1.6**
SIM				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.6						
LBTB	**Lobatse**	**74.76**	**245**	P	**P**	**01 38 14.2**	**-0.2**
	comp=Z,14nm,1.0s,mb4.8,baz=103,slow=8.8,SNR=8.1						
LBTB	**Lobatse**	**74.76**	**245**	P	**P**	**01 38 14.2**	**-0.3**
LBTB				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
LBTB	**Lobatse**	**74.76**	**245**	*eP*	**P**	**01 38 15.0**	**+0.5**
	comp=Z,75nm,1.3s,mb5.5						
ISP	**Isparta**	**74.92**	**310**	*eP*	**P**	**01 38 14.7**	**-0.4**
ISP				pmax	pmax		
	comp=Z,68nm,1.4s,mb5.4						
ISP	**Isparta**	**74.92**	**310**	*eP*	**P**	**01 38 14.7**	**-0.4**
	comp=Z,68nm,1.4s,mb5.4						
RPZ	**Rata Peaks**	**75.21**	**135**	P	**P**	**01 38 17.0**	**+0.3**
	comp=Z,55nm,0.9s,mb5.5,baz=264,slow=7.4,SNR=9.1						
BOSA	**Boshof**	**75.40**	**241**	P	**P**	**01 38 17.6**	**-0.5**
	comp=Z,11nm,1.0s,mb4.8,baz=108,slow=3.4,SNR=8.8						
BOSA	**Boshof**	**75.40**	**241**	P	**P**	**01 38 17.6**	**-0.5**
BOSA				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
TIXI	**Tiksi**	**75.88**	**9**	*eP*	**P**	**01 38 19.2**	**-0.7**
TIXI				pmax	pmax		
	comp=N,77nm,1.3s						
TIXI				pmax	pmax		
	comp=Z,269nm,1.4s,mb6.0						
TIXI				pmax	pmax		
	comp=E,75nm,1.9s						
TIXI				MLR	MLR		
	comp=N,20µm,17.0s,MS6.5						
TIXI				MLR	MLR		
	comp=Z,38µm,19.0s,MS6.7						
TIXI				MLR	MLR		
	comp=E,8µm,17.0s,MS6.5						
TIXI	**Tiksi**	**75.88**	**9**	*eP*	**P**	**01 38 18.5**	**-1.4**
	comp=E,169nm,1.0s,mb5.9						
MOS	**Moscow**	**76.32**	**329**	*eP*	**P**	**01 38 23.3**	**+0.6**
MOS				*e*	pP	01 38 30.4	-0.3
MOS				*e*		01 48 28.4	
MOS				pmax	pmax		
	comp=Z,156nm,0.8s,mb6.0						
OBN	**Obninsk**	**76.61**	**328**	P	**P**	**01 38 23.4**	**-1.0**
	comp=Z,626nm,1.2s,mb6.4,SNR=6.9						
OBN	**Obninsk**	**76.61**	**328**⇓	*eP*	**P**	**01 38 23.8**	**-0.6**
OBN				*e*	pP	01 38 32.0	-0.4
OBN				*e*S	S	01 48 08.4	-0.7
OBN				*e*		01 48 32.5	
OBN				pmax	pmax		
	comp=Z,123nm,1.2s,mb5.7						
OBN	**Obninsk**	**76.61**	**328**	*eP*	**P**	**01 38 23.8**	**-0.6**
	comp=Z,279nm,1.3s,mb6.0						
SYO	**Syowa Base**	**77.80**	**199**⇓	*eP*	**P**	**01 38 29.4**	**-1.4**
SYO	**Syowa Base**	**77.80**	**199**⇓	*i*pP	pP	01 38 38.6	-0.2
SYO	**Syowa Base**	**77.80**	**199**⇓	*i*PcP	PcP	01 38 40.8	+0.1
TLCR		**78.03**	**317**⇓	*i*P	**P**	**01 38 32.1**	**-0.5**
TLCR		**78.03**	**317**	⇓P	**P**	**01 38 32.1**	**-0.4**
TIRR	**Tirgusor**	**78.12**	**316**	*eP*	**P**	**01 38 31.9**	**-1.2**
TIRR				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.5						
TIRR	**Tirgusor**	**78.12**	**316**⇑	*iP*	**P**	**01 38 32.2**	**-0.9**
TIRR	**Tirgusor**	**78.12**	**316**	*eP*	**P**	**01 38 31.9**	**-1.2**
	comp=Z,51nm,0.9s,mb5.5						
KIS	**Kishinev**	**78.51**	**319**	*eP*	**P**	**01 38 35.0**	**-0.2**
KIS				*e*		01 38 45.0	
KIS				*e*		01 41 36.0	
KIS	**Kishinev**	**78.51**	**319**	*e*PP	PP	01 41 36.0	+3.0
HARR	**Harsova**	**78.52**	**316**⇑	*iP*	**P**	**01 38 34.6**	**-0.6**
HARR	**Harsova**	**78.52**	**316**	P	**P**	**01 38 36.9**	**+1.6**
SANT	**Santorini**	**78.53**	**308**	*eP*	**P**	**01 38 35.8**	**+0.3**
	comp=Z,243nm,1.3s,mb6.0						
IDI	**Anoyia**	**78.78**	**306**	P	**P**	**01 38 36.8**	**-0.1**
	comp=Z,31nm,0.9s,mb5.2,baz=77,slow=6.2,SNR=14						
AKASG	**Malin Array Be**	**79.28**	**322**	P	**P**	**01 38 38.0**	**-1.3**
	comp=Z,9.4nm,0.8s,mb4.8,baz=87,slow=3.8,SNR=30						
AKASG				S	S	01 48 36.0	-2.0
	comp=Z,3.5nm,0.9s,baz=99,slow=10,SNR=7.8						
AKASG	**Malin Array Be**	**79.28**	**322**	P	**P**	**01 38 38.0**	**-1.3**
AKASG				S	S	01 48 36.1	-2.0
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AKASG				smax			
	comp=N,4.0nm,0.9s						
KIEV	**Kiev**	**79.29**	**322**	*eP*	**P**	**01 38 38.2**	**-1.1**
KIEV				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.3						
KIEV	**Kiev**	**79.29**	**322**	*eP*	**P**	**01 38 38.2**	**-1.1**
	comp=Z,50nm,1.2s,mb5.3						
IAS	**Iasi**	**79.39**	**319**	P	**P**	**01 38 41.4**	**+1.4**
SUR	**Sutherland**	**79.56**	**238**	*eP*	**P**	**01 38 41.3**	**+0.1**
	comp=Z,96nm,1.1s,mb5.6						
VRI	**Vrincioaia**	**79.63**	**317**⇓	*iP*	**P**	**01 38 41.7**	**+0.4**
VRI	**Vrincioaia**	**79.63**	**317**	P	**P**	**01 38 41.8**	**+0.5**
PLOR	**Plostina**	**79.67**	**317**⇑	*iP*	**P**	**01 38 43.1**	**+1.5**
MLR	**Muntele Rosu**	**80.07**	**317**	P	**P**	**01 38 43.3**	**-0.4**
	comp=Z,58nm,1.0s,mb5.5,baz=130,slow=4.2,SNR=32						
MLR	**Muntele Rosu**	**80.07**	**317**	P	**P**	**01 38 43.3**	**-0.4**
MLR				pmax	pmax		
	comp=Z,58nm,1.0s						
MLR	**Muntele Rosu**	**80.07**	**317**⇓	*iP*	**P**	**01 38 44.0**	**+0.3**
MLR	**Muntele Rosu**	**80.07**	**317**	P	**P**	**01 38 43.5**	**-0.3**
ZIMR		**80.07**	**315**	P	**P**	**01 38 45.5**	**+1.7**
SNX	**Sinaia**	**80.34**	**317**⇑	*iP*	**P**	**01 38 36.8**	**-8.4**
SNX	**Sinaia**	**80.34**	**317**⇑	P	**P**	**01 38 36.8**	**-8.4**
VOIR		**80.68**	**317**⇑	*iP*	**P**	**01 38 46.2**	**-0.8**
VOIR		**80.68**	**317**	P	**P**	**01 38 51.1**	**+4.1**
BURAR	**Bucovina Array**	**81.04**	**319**⇑	*iP*	**P**	**01 38 48.9**	**0.0**
BURAR	**Bucovina Array**	**81.04**	**319**⇑	P	**P**	**01 38 48.9**	**0.0**
BUR08	**Bucovina Ar. S**	**81.06**	**319**	*eP*	**P**	**01 38 48.8**	**-0.1**
MNK	**Minsk**	**81.16**	**326**	*eP*	**P**	**01 38 46.0**	**-3.3**
VTS	**Vitosha**	**81.41**	**313**	P	**P**	**01 38 50.4**	**-0.6**
PUL	**Pulkovo**	**81.45**	**331**	*eP*	**P**	**01 38 50.5**	**-0.3**
TSUM	**Tsumeb**	**81.91**	**251**	*eP*	**P**	**01 38 54.5**	**+0.4**
	comp=Z,36nm,1.0s,mb5.3						
TSUM				*e*pP	pP	01 39 04.4	+2.2
JOF	**Joensuu**	**82.06**	**335**	*ep*	**P**	**01 38 53.1**	**-0.8**
	comp=Z,47nm,0.7s,mb5.5						
JOF	**Joensuu**	**82.06**	**335**	*eP*	**P**	**01 38 53.1**	**-0.8**
JOF				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.5						
GZR	**Gura Zlata**	**82.23**	**316**⇑	*iP*	**P**	**01 38 56.5**	**+1.3**
GZR	**Gura Zlata**	**82.23**	**316**	P	**P**	**01 38 56.9**	**+1.6**
LVV	**L'vov**	**82.29**	**321**	*eP*	**P**	**01 38 56.8**	**+1.4**
RAO	**Raoul Island**	**82.39**	**119**	LR	LR	02 16 55.7	
	comp=Z,18µm,19.6s,MS6.5,baz=285,slow=37						
DRGR		**82.54**	**318**⇑	*iP*	**P**	**01 38 57.2**	**+0.4**
DRGR		**82.54**	**318**	P	**P**	**01 38 57.0**	**+0.2**
LVZ	**Lovozero**	**82.65**	**340**⇓	*iP*	**P**	**01 38 57.0**	**+0.1**
LVZ				pmax	pmax		
	comp=Z,68nm,1.4s,mb5.5						
VSU	**Vasula**	**82.83**	**330**	*eP*	**P**	**01 38 57.5**	**-0.5**
APA	**Apatity**	**82.96**	**339**⇑	*iP*	**P**	**01 38 59.8**	**+1.3**
APA				pmax	pmax		
	comp=Z,130nm,1.2s,mb5.8						
APA				MLR	MLR		
	comp=Z,26µm,22.0s,MS6.6						
BZS	**Buzias**	**83.08**	**316**⇑	*iP*	**P**	**01 38 59.4**	**-0.2**
BZS	**Buzias**	**83.08**	**316**	P	**P**	**01 38 59.3**	**-0.3**
KWP	**Kalwaria**	**83.09**	**320**	*eP*	**P**	**01 39 01.3**	**+1.7**
KWP	**Kalwaria**	**83.09**	**320**	*eP*	**P**	**01 38 59.1**	**-0.5**
KWP				pmax	pmax		
	comp=Z,120nm,1.2s,mb5.8						
KWP	**Kalwaria**	**83.09**	**320**⇑	*iP*	**P**	**01 39 01.0**	**+1.4**
KWP	**Kalwaria**	**83.09**	**320**	*eP*	**P**	**01 39 01.3**	**+1.7**
UZH	**Uzhgorod**	**83.17**	**319**	*eP*	**P**	**01 39 02.0**	**+2.0**
UZH				*e*	pP	01 39 07.8	-0.3
UZH				*e*		01 44 03.0	
UZH				*e*S	S	01 49 21.0	+2.4
KOLS	**Kolonicke sedl**	**83.23**	**320**	*eP*	**P**	**01 39 00.2**	**-0.2**
BILL	**Bilibino**	**83.24**	**20**	*eP*	**P**	**01 38 59.8**	**-0.2**
BILL				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.3						
BILL	**Bilibino**	**83.24**	**20**	*eP*	**P**	**01 38 59.8**	**-0.2**
	comp=Z,53nm,1.1s,mb5.5						
SUW	**Suwalki**	**83.69**	**325**	*eP*	**P**	**01 39 02.5**	**0.0**
SUW	**Suwalki**	**83.69**	**325**	P	**P**	**01 39 02.3**	**-0.3**
SUW				pmax	pmax		
	comp=Z,410nm,1.0s,mb6.5						
SUW	**Suwalki**	**83.69**	**325**	*eP*	**P**	**01 39 02.5**	**-0.1**
CRVS	**Cervenica-Dubn**	**83.76**	**319**	*eP*	**P**	**01 39 03.4**	**+0.4**
STHS	**Stebnicka Huta**	**83.99**	**320**	*eP*	**P**	**01 39 04.3**	**+0.1**
	comp=Z,44nm,1.0s,mb5.5						
KAF	**Kangasniemi**	**84.02**	**333**	*ep*	**P**	**01 39 02.5**	**-1.6**
	comp=Z,85nm,0.7s,mb6.0,baz=100,slow=4.6						
KAF	**Kangasniemi**	**84.02**	**333**	*eP*	**P**	**01 39 02.5**	**-1.6**
KAF				pmax	pmax		
	comp=Z,85nm,0.7s,mb6.0						
KECS	**Kecovo**	**84.32**	**319**	*eP*	**P**	**01 39 05.5**	**-0.4**
KECS				*e*		01 39 19.4	
KECS				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.2						
KECS	**Kecovo**	**84.32**	**319**	*eP*	**P**	**01 39 05.5**	**-0.4**
	comp=Z,22nm,1.2s,mb5.2						
KECS				*e*		01 39 19.4	
NIE	**Niedzica**	**84.59**	**320**	*eP*	**P**	**01 39 08.1**	**+0.9**
PSZ	**Piszkesteto**	**84.62**	**318**	*eP*	**P**	**01 39 07.2**	**-0.3**
PSZ				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.6						
PSZ	**Piszkesteto**	**84.62**	**318**⇓	*e*PcP	PcP	01 39 09.0	-2.0
PSZ	**Piszkesteto**	**84.62**	**318**⇑	*iP*	**P**	**01 39 07.5**	**0.0**
PSZ	**Piszkesteto**	**84.62**	**318**	*eP*	**P**	**01 39 07.2**	**-0.3**
	comp=Z,47nm,0.9s,mb5.6						
WAR	**Warsaw**	**84.62**	**323**	*eP*	**P**	**01 39 09.2**	**+1.9**
WAR	**Warsaw**	**84.62**	**323**	*eP*	**P**	**01 39 09.2**	**+1.8**
MIDW	**Midway**	**84.70**	**62**	*eP*	**P**	**01 39 06.3**	**-2.0**
	comp=Z,87nm,0.9s,mb5.9						
OJC	**Ojcow**	**85.04**	**321**	*eP*	**P**	**01 39 09.1**	**-0.4**
AMKA	**Amchitka**	**85.05**	**38**	*eP*	**P**	**01 39 08.8**	**-0.7**
	comp=Z,141nm,2.0s,mb5.8						
BUD	**Budapest**	**85.14**	**318**⇓	*e*PcP	PcP	01 39 11.5	-1.7
PKSM	**Moragy**	**85.22**	**316**⇑	*iP*	**P**	**01 39 09.9**	**-0.6**
PKSM	**Moragy**	**85.22**	**316**	P	**P**	**01 39 10.2**	**-0.3**
VYHS	**Vyhne**	**85.41**	**319**	*eP*	**P**	**01 39 12.8**	**+1.4**
VYHS				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.9						
VYHS	**Vyhne**	**85.41**	**319**	*eP*	**P**	**01 39 12.8**	**+1.4**
	comp=Z,11nm,1.2s,mb4.9						
KOLL	**Kolacno**	**85.70**	**319**	*eP*	**P**	**01 39 13.1**	**+0.2**
KOLL				*e*		01 39 24.6	
KOLL	**Kolacno**	**85.70**	**319**	*eP*	**P**	**01 39 13.1**	**+0.2**
KOLL				*e*pP	pP	01 39 24.6	+3.6
KOLL				*e*		01 39 37.0	
TIP	**Timpagrande**	**85.76**	**309**	*eP*	**P**	**01 39 13.9**	**+0.6**
	comp=Z,38nm,1.0s,mb5.6						
KEV	**Kevo**	**85.90**	**341**	*ep*	**P**	**01 39 12.3**	**-1.1**
	comp=Z,59nm,0.9s,mb5.8						
KEV	**Kevo**	**85.90**	**341**	*eP*	**P**	**01 39 12.3**	**-1.1**
KEV				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.8						
OKC	**Ostrava-Krasne**	**86.04**	**320**	*eP*	**P**	**01 39 14.3**	**-0.2**
OKC				*ex*	x	01 39 26.5	
RAC	**Raciborz**	**86.04**	**320**	*eP*	**P**	**01 39 14.4**	**-0.1**
ARCES	**ARCESS Array B**	**86.34**	**340**	P	**P**	**01 39 15.2**	**-0.4**
	comp=Z,61nm,0.9s,mb5.8,baz=96,slow=3.7,SNR=47						
ARCES	**ARCESS Array B**	**86.34**	**340**	P	**P**	**01 39 15.2**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,61nm,0.9s						
MODS	**Modra-Piesok**	**86.42**	**319**	*eP*	**P**	**01 39 16.9**	**+0.5**
MODS				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.4						
MODS	**Modra-Piesok**	**86.42**	**319**	*eP*	**P**	**01 39 16.9**	**+0.5**
	comp=Z,30nm,1.3s,mb5.4						
MORC	**Moravsky Berou**	**86.42**	**320**	*eP*	**P**	**01 39 15.3**	**-1.1**
MORC				pmax	pmax		
	comp=Z,814nm,0.8s,mb7.0						
MORC	**Moravsky Berou**	**86.42**	**320**⇑	*iP*	**P**	**01 39 16.7**	**+0.3**
MORC	**Moravsky Berou**	**86.42**	**320**	*eP*	**P**	**01 39 15.3**	**-1.1**
	comp=Z,814nm,0.8s,mb7.0						
ZST	**Bratislava**	**86.52**	**318**	*eP*	**P**	**01 39 18.2**	**+1.3**
ZST				*e*		01 39 29.1	
ZST				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.7						
ZST	**Bratislava**	**86.52**	**318**	*eP*	**P**	**01 39 18.2**	**+1.3**
	comp=Z,49nm,1.0s,mb5.7						
ZST				*e*		01 39 29.1	
SOP	**Sopron**	**86.82**	**318**⇓	*e*PcP	PcP	01 39 18.8	-1.8
VRAC	**Vranov**	**86.98**	**319**	P	**P**	**01 39 20.8**	**+1.6**
	comp=Z,5.6nm,0.9s,mb4.8,baz=68,slow=3.2,SNR=6.8						
VRAC	**Vranov**	**86.98**	**319**	P	**P**	**01 39 20.8**	**+1.7**
VRAC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VRAC	**Vranov**	**86.98**	**319**⇓	*iP*	**P**	**01 39 18.2**	**-0.9**
VRAC	**V

comp=Z,66nm,1.0s,mb5.9
WET Wettzell 89.39 319 *e*P P **01 39 30.9 +0.3**
WET pmax pmax
comp=Z,71nm,1.1s,mb5.9
WET Wettzell 89.39 319 *e*P P **01 39 30.9 +0.3**
comp=Z,71nm,1.1s,mb5.9
CLL Collm 89.45 321 *e*P P **01 39 31.0 +0.2**
CLL *i* 01 39 40.8
CLL *i* 01 39 48.6
CLL pmax pmax
comp=Z,26nm,1.0s,mb5.5
CLL Collm 89.45 321 *e*P P **01 39 31.0 +0.2**
comp=Z,26nm,1.0s,mb5.5
CLL *i* (sP) sP 01 39 40.8 -1.1
comp=Z,40nm,1.0s
CLL *i* x x 01 39 48.6
CLL *e*PP PP 01 43 04.0 +1.8
CLL *e*SKKSac SKKSac 01 50 19.0 +7.1
CLL Collm 89.45 321 *e*P P **01 39 31.0 +0.2**
comp=Z,26nm,1.0s,mb5.5
CLL *i* 01 39 40.8
CLL *i* 01 39 48.6
HFS Hagfors 89.70 330 P P **01 39 31.9 +0.1**
comp=Z,29nm,0.9s,mb5.6,baz=132,slow=2.2,SNR=16
HFS Hagfors 89.70 330 P P **01 39 31.9 +0.1**
HFS pmax pmax
comp=Z,29nm,1.0s
NKC Novy Kostel 89.74 320 *e*P P **01 39 31.2 -1.0**
TANN Tannenbergstha 89.74 320 *e*P P **01 39 32.0 -0.2**
comp=Z,22nm,1.0s,mb5.4
WERN Wernitzgruen 89.79 320 *e*P P **01 39 32.9 +0.5**
comp=Z,34nm,1.1s,mb5.6
GUNZ Gunzen 89.82 320 *e*P P **01 39 33.0 +0.4**
ROTZ Rotzenmuhle 89.86 320 *e*P P **01 39 33.8 +1.0**
comp=Z,45nm,1.0s,mb5.8
MOR8 Moi Rana 89.87 336 *e*P P **01 39 33.3 +0.8**
MOR8 AMb AMB 01 39 52.5
comp=Z,112nm,1.7s,mb5.9
MOR8 Moi Rana 89.87 336 *e*P P **01 39 33.3 +0.8**
comp=Z,112nm,1.7s,mb5.9
MANZ Manzenberg 89.94 320 *e*P P **01 39 33.3 +0.1**
comp=Z,80nm,1.1s,mb6.0
WTTA Wattenberg 90.11 317 *i* P P **01 39 33.7 -0.3**
comp=Z,56nm,1.1s,mb5.8,SNR=14
MOX Moxa 90.29 320 *e*P P **01 39 34.2 -0.6**
comp=Z,67nm,1.8s,mb5.7
MOX *e* 01 39 48.6
MOX Moxa 90.29 320 *e*P P **01 39 34.2 -0.6**
MOX *e* 01 39 48.6
MOX pmax pmax
comp=Z,67nm,1.8s,mb5.7
MOX Moxa 90.29 320 *e*P P **01 39 35.4 +0.6**
comp=Z,92nm,1.7s,mb5.8
FUR Furstenfeldbru 90.40 318 *e*P P **01 39 34.3 -1.0**
FUR pmax pmax
comp=Z,57nm,1.1s,mb5.8
FUR Furstenfeldbru 90.40 318 *e*P P **01 39 34.3 -1.0**
comp=Z,57nm,1.1s,mb5.8
STOK Stokkvaagen 90.45 336 *e*P P **01 39 36.9 +1.7**
MOTA Moosalm 90.48 317 ⇓ *i*P P **01 39 34.5 -1.2**
comp=Z,35nm,1.0s,mb5.6,SNR=28
GRA1 Grafenberg Arr 90.50 320 *e*P P **01 39 36.0 +0.2**
comp=Z,61nm,1.1s,mb5.8
GRF Grafenberg Arr 90.50 320 *e*P P **01 39 36.0 +0.2**
GRF pmax pmax
comp=Z,61nm,1.1s,mb5.8
GRF Grafenberg Arr 90.50 320 *e*P P **01 39 36.0 +0.2**
GRF pmax pmax
comp=Z,61nm,1.1s,mb5.8
GRF Grafenberg Arr 90.50 320 *e*P P **01 39 36.0 +0.2**
comp=Z,61nm,1.1s,mb5.8
SPITS Spitsbergen Ar 90.55 348 P P **01 39 34.0 -1.4**
comp=Z,32nm,0.7s,mb5.8,baz=103,slow=4.6,SNR=14
SPITS Spitsbergen Ar 90.55 348 P P **01 39 34.0 -1.4**
SPITS pmax pmax
comp=Z,32nm,0.7s
SPITS Spitsbergen Ar 90.55 348 P P **01 39 34.0 -1.4**
SPB4 Spitsbergen Ar 90.55 348 *e*P P **01 39 33.8 -1.7**
RETA Reutte 90.72 317 ⇑ *i*P P **01 39 35.9 -0.9**
comp=Z,34nm,0.9s,mb5.7,SNR=13
NB2 NORSAR Subarra 90.97 331 P P **01 39 37.2 -0.5**
comp=Z,12nm,0.8s,mb5.3,baz=93,slow=4.8
NOA NORSAR Array B 90.97 331 P P **01 39 37.2 -0.5**
comp=Z,9.0nm,0.8s,mb5.2,baz=92,slow=4.8,SNR=20
NOA NORSAR Array B 90.97 331 P P **01 39 37.2 -0.5**
NOA pmax pmax
comp=Z,9.0nm,0.8s
NOA NORSAR Array B 90.97 331 P P **01 39 37.2 -0.5**
CLZ Clausthal 91.12 322 *e*P P **01 39 39.0 +0.4**
CLZ pmax pmax
comp=Z,90nm,1.6s,mb5.8
CLZ Clausthal 91.12 322 *e*P P **01 39 39.0 +0.4**
comp=Z,90nm,1.6s,mb5.8
NAO01 NORSAR Array S 91.13 331 *e*P P **01 39 39.6 +1.2**
comp=Z,35nm,1.3s,mb5.5
BSEG Bad Segeberg 91.21 324 *e*P P **01 39 41.2 +2.2**
BSEG pmax pmax
comp=Z,58nm,1.1s,mb5.8
BSEG Bad Segeberg 91.21 324 *e*P P **01 39 41.2 +2.2**
comp=Z,58nm,1.1s,mb5.8
DAVOX Davos/Dischmat 91.30 317 P P **01 39 40.0 +0.5**
comp=Z,38nm,0.8s,mb5.8,baz=132,slow=4.5,SNR=30
NRDL Niedersach Rie 91.30 322 *e*P P **01 39 41.0 +1.6**
DAVA Damuels 91.31 317 ⇑ *i*P P **01 39 37.8 -1.8**
comp=Z,54nm,0.9s,mb5.8,SNR=24
UBBA Unterbreizbach 91.32 321 *e*P P **01 39 41.1 +1.5**
comp=Z,100nm,2.1s,mb5.8
DAVOS Davos 91.36 317 P P **01 39 40.1 +0.3**
KEST Kesra 91.42 306 P P **01 39 41.6 +1.2**
comp=Z,17nm,1.0s,mb5.3,baz=26,slow=3.3,SNR=34
VSL Villasalto 91.49 309 *e*P P **01 39 39.9 -0.7**
comp=Z,58nm,1.1s,mb5.8
TUE Stuetta 91.66 316 *e*P P **01 39 42.6 +1.3**
comp=Z,56nm,1.3s,mb5.7
KONO Kongsberg 91.74 329 ⇑ *e*P P **01 39 41.1 -0.2**
STU Stuttgart 91.80 319 *e*P P **01 39 41.9 +0.1**
STU *e* 01 39 52.7
STU pmax pmax
comp=Z,50nm,1.1s,mb5.8
STU Stuttgart 91.80 319 *e*P P **01 39 43.0 +1.2**
comp=Z,69nm,1.5s,mb5.8
STU Stuttgart 91.80 319 *e*P P **01 39 41.9 +0.1**
comp=Z,25nm,1.0s,mb5.5
STU *e* 01 39 52.7
PGF Pioggiola 91.83 312 *e*P P **01 39 41.6 -0.5**
comp=Z,63nm,1.2s,mb5.5
PGF Pioggiola 91.83 312 *e*P P **01 39 41.6 -0.5**
PGF pmax pmax
comp=Z,32nm,1.2s,mb5.5
PGF Pioggiola 91.83 312 *e*P P **01 39 41.6 -0.5**
comp=Z,32nm,1.2s,mb5.5
MUD Monsted U'grnd 91.92 326 *i*P P **01 39 49.5 +7.3**
MUD pmax pmax
comp=Z,38nm,1.3s,mb5.6
MUD Monsted U'grnd 91.92 326 *i*P P **01 39 49.5 +7.3**
comp=Z,38nm,1.3s,mb5.6
SPAK Spaichingen-Ko 92.06 318 *e*P P **01 39 42.4 -0.7**
TOD Tromm 92.07 319 *e*P P **01 39 42.5 -0.6**
SNAA Sanae 92.07 198 *e*P P **01 39 43.8 +1.2**
SNAA *e* pP 01 39 52.8 +2.0
SNAA Sanae 92.07 198 *e*P P **01 39 44.0 +1.4**
SNAA pmax pmax
comp=Z,12nm,0.9s
SNAA Sanae 92.07 198 *e*P P **01 39 44.0 +1.3**
comp=Z,12nm,0.9s,mb5.2
BFO Black Forest 92.37 318 *e*P P **01 39 44.5 0.0**
BFO pmax pmax
comp=Z,28nm,1.1s,mb5.5
BFO Black Forest 92.37 318 *e*P P **01 39 44.5 0.0**
comp=Z,28nm,1.1s,mb5.5
FELD Feldberg im Sc 92.59 318 *e*P P **01 39 46.6 +1.1**
LANF Langenberg 92.72 319 *e*P P **01 39 46.2 +0.1**
LANF Langenberg 92.72 319 *e*P P **01 39 45.7 -0.4**
IBBN Ibbenburen 92.74 322 *e*P P **01 39 48.0 +1.9**
comp=Z,38nm,0.9s,mb5.8
LIBD Limburg 92.86 318 *e*P P **01 39 45.7 -1.0**
ABH Alteburg 92.89 320 *e*P P **01 39 46.9 +0.1**
SAOF Saorge 92.90 314 *e*P P **01 39 48.2 +1.2**
BBS Basel-Blauen 92.92 317 *e*P P **01 39 47.6 +0.5**
SBF Sospel 92.99 314 *e*P P **01 39 47.0 -0.4**
comp=Z,116nm,1.1s,mb5.9
SBF Sospel 92.99 314 *e*P P **01 39 47.0 -0.4**
SBF pmax pmax
comp=Z,58nm,1.1s,mb5.9
SBF Sospel 92.99 314 *e*P P **01 39 47.0 -0.4**
comp=Z,58nm,1.1s,mb5.9
AUTN L'Aution 92.99 314 *e*P P **01 39 49.7 +2.2**
REVF Revere 93.04 314 *e*P P **01 39 47.8 +0.1**
LUCF Luceram 93.05 314 *e*P P **01 39 49.2 +1.5**
CDF Champ du Feu 93.07 318 *e*P P **01 39 47.0 -0.7**
comp=Z,35nm,1.1s,mb5.4
CDF Champ du Feu 93.07 318 *e*P P **01 39 47.0 -0.7**
CDF pmax pmax
comp=Z,18nm,1.1s,mb5.4
CDF Champ du Feu 93.07 318 *e*P P **01 39 47.0 -0.7**
comp=Z,18nm,1.1s,mb5.4
TOUF Mont Tournerai 93.12 314 *e*P P **01 39 49.3 +1.2**
TOUF Mont Tournerai 93.12 314 *e*P P **01 39 49.4 +1.3**
ECH Echery 93.15 318 *e*P P **01 39 49.5 +1.4**
ECH Echery 93.15 318 *e*P P **01 39 48.4 +0.3**
MOF Molkenrain 93.17 318 *e*P P **01 39 48.6 +0.4**
MOF Molkenrain 93.17 318 *e*P P **01 39 47.3 -0.9**
MVIF Mont Vial 93.19 314 *e*P P **01 39 49.5 +1.1**
RUP Ruppelstein 93.20 319 *e*P P **01 39 47.1 -1.2**
BLS5 Blasjo 93.34 329 *e*P P **01 39 49.7 +1.0**
CALN Calern 93.38 314 *e*P P **01 39 49.2 -0.1**
LOMF Lomont 93.39 317 *e*P P **01 39 48.7 -0.5**
HYA Hoyanger 93.42 331 *e*P P **01 39 52.1 +3.1**
HYA AMb AMB 01 40 12.4
comp=Z,106nm,1.6s,mb6.0
HYA Hoyanger 93.42 331 *e*P P **01 39 52.1 +3.1**
comp=Z,106nm,1.6s,mb6.0
MBDF Montbardon 93.46 315 *e*P P **01 39 50.3 +0.7**
comp=Z,14nm,0.9s,mb5.1
MBDF Montbardon 93.46 315 *e*P P **01 39 50.3 +0.7**
MBDF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
MBDF Montbardon 93.46 315 *e*P P **01 39 50.3 +0.7**
comp=Z,7.2nm,0.9s,mb5.1
LPG La Plagne 93.46 315 *e*P P **01 39 49.3 -0.3**
comp=Z,10nm,0.7s,mb5.1
LPG La Plagne 93.46 315 *e*P P **01 39 49.3 -0.3**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
LPG La Plagne 93.46 315 *e*P P **01 39 49.3 -0.3**
comp=Z,5.1nm,0.7s,mb5.1
LPL La Plagne 93.48 315 *e*P P **01 39 49.4 -0.3**
comp=Z,73nm,1.2s,mb5.7
LPL La Plagne 93.48 315 *e*P P **01 39 49.4 -0.3**
LPL pmax pmax
comp=Z,37nm,1.2s,mb5.7
LPL La Plagne 93.48 315 *e*P P **01 39 49.4 -0.3**
comp=Z,36nm,1.2s,mb5.7
BNI Bardonecchia 93.52 315 *e*P P **01 39 50.6 +0.8**
comp=Z,18nm,1.1s,mb5.4
FRF La Foret Royal 93.56 313 *e*P P **01 39 49.6 -0.5**
comp=Z,21nm,0.8s,mb5.3
FRF La Foret Royal 93.56 313 *e*P P **01 39 49.6 -0.5**
FRF pmax pmax
comp=Z,11nm,0.8s,mb5.3
FRF La Foret Royal 93.56 313 *e*P P **01 39 49.6 -0.5**
comp=Z,11nm,0.8s,mb5.3
VNA2 Neumayer--Watz 93.68 198 *e*P P **01 39 48.4 -1.7**
VNA2 *e* pP 01 39 57.0 -1.3
HAU Haudompre 93.70 318 *e*P P **01 39 49.9 -0.7**
comp=Z,82nm,1.1s,mb5.8
HAU Haudompre 93.70 318 *e*P P **01 39 49.9 -0.7**
HAU pmax pmax
comp=Z,41nm,1.1s,mb5.8
HAU Haudompre 93.70 318 *e*P P **01 39 49.9 -0.7**
comp=Z,41nm,1.1s,mb5.8
WLF Walferdange 93.79 319 P P **01 39 51.9 +0.9**
comp=Z,23nm,2.9s,mb5.1
WLF Walferdange 93.79 319 *e*P P **01 39 52.0 +1.0**
WLF *e* 01 40 02.3
WLF pmax pmax
comp=Z,19nm,1.0s,mb5.5
WLF Walferdange 93.79 319 *e*P P **01 39 52.3 +1.3**
comp=Z,47nm,1.4s,mb5.7
WLF Walferdange 93.79 319 *e*P P **01 39 52.0 +1.0**
comp=Z,4.9nm,0.8s,mb5.0
WLF *e* 01 40 02.3
MEM Membach 93.86 320 P P **01 39 51.4 +0.1**
comp=Z,7.8nm,1.2s,mb5.0
CABF La Chapelle 93.91 316 *e*P P **01 39 51.4 -0.2**
comp=Z,41nm,1.2s,mb5.4
CABF La Chapelle 93.91 316 *e*P P **01 39 51.4 -0.2**
CABF pmax pmax
comp=Z,21nm,1.2s,mb5.4
CABF La Chapelle 93.91 316 *e*P P **01 39 51.4 -0.2**
comp=Z,21nm,1.2s,mb5.4
THEF They Montfort 93.94 318 *e*P P **01 39 52.7 +1.0**
THEF They Montfort 93.94 318 *e*P P **01 39 49.5 -2.2**
VNA1 Neumayer--Stat 94.04 199 *e*P P **01 39 53.7 +2.0**
VNA1 *e* pP 01 40 02.0 +2.1
ORIF Oris-en-Rattie 94.09 315 *e*P P **01 39 52.1 -0.4**
comp=Z,29nm,1.0s,mb5.4
ORIF Oris-en-Rattie 94.09 315 *e*P P **01 39 52.1 -0.4**
ORIF pmax pmax
comp=Z,15nm,1.0s,mb5.4
ORIF Oris-en-Rattie 94.09 315 *e*P P **01 39 52.1 -0.4**
comp=Z,15nm,1.0s,mb5.4
VNA3 Neumayer Olymp 94.29 198 *e*P P **01 39 53.8 +0.9**
VNA3 *e* pP 01 40 02.9 +1.8
BCLA Clavier 94.32 320 P P **01 39 53.4 0.0**
MEZF Maizieres J'vi 94.55 318 *e*P P **01 39 54.0 -0.5**
DOU Dourbes 94.78 320 P P **01 39 55.1 -0.4**
comp=Z,7.5nm,1.5s,mb4.9
VIVF Saint-Julien-l 94.95 315 *e*P P **01 39 55.8 -0.6**
comp=Z,14nm,1.0s,mb5.1
VIVF Saint-Julien-l 94.95 315 *e*P P **01 39 55.8 -0.6**
VIVF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
VIVF Saint-Julien-l 94.95 315 *e*P P **01 39 55.8 -0.6**
comp=Z,7.1nm,1.0s,mb5.0
SSB Saint Sauveur 95.03 315 *e*P P **01 39 56.7 -0.1**
BAIF Baives 95.03 320 *e*P P **01 39 56.3 -0.4**
comp=Z,35nm,1.0s,mb5.4
BAIF Baives 95.03 320 *e*P P **01 39 56.3 -0.4**
BAIF pmax pmax
comp=Z,18nm,1.0s,mb5.5
BAIF Baives 95.03 320 *e*P P **01 39 56.3 -0.4**
comp=Z,18nm,1.0s,mb5.5
LOR Lormes 95.41 317 *e*P P **01 39 57.8 -0.7**
comp=Z,24nm,1.0s,mb5.4
LOR Lormes 95.41 317 *e*P P **01 39 57.8 -0.7**
LOR pmax pmax
comp=Z,17nm,1.0s,mb5.4
LOR Lormes 95.41 317 *e*P P **01 39 57.8 -0.7**
comp=Z,17nm,1.0s,mb5.4
SMF Signal de Mont 95.45 316 *e*P P **01 39 57.8 -0.9**
comp=Z,25nm,1.0s,mb5.3
SMF Signal de Mont 95.45 316 *e*P P **01 39 57.8 -0.9**
SMF pmax pmax
comp=Z,13nm,1.0s,mb5.3
SMF Signal de Mont 95.45 316 *e*P P **01 39 57.8 -0.9**
comp=Z,13nm,1.0s,mb5.3
LASF Ste Croix 95.57 314 *e*P P **01 39 58.8 -0.5**
comp=Z,24nm,1.2s,mb5.2
SSF Saint Saulge 95.66 317 *e*P P **01 39 59.0 -0.6**
AVF Avril sur Loir 95.78 317 *e*P P **01 39 59.3 -0.9**
comp=Z,28nm,1.2s,mb5.2
AVF Avril sur Loir 95.78 317 *e*P P **01 39 59.3 -0.9**
AVF pmax pmax
comp=Z,14nm,1.2s,mb5.3
AVF Avril sur Loir 95.78 317 *e*P P **01 39 59.3 -0.9**
comp=Z,14nm,1.2s,mb5.3
BGF Bois d'Agland 96.14 316 *e*P P **01 40 01.5 -0.3**
TCF Toulx Ste Croi 96.60 316 *e*P P **01 40 01.7 -2.2**
comp=Z,22nm,1.2s,mb5.2
TCF Toulx Ste Croi 96.60 316 *e*P P **01 40 01.7 -2.2**
TCF pmax pmax
comp=Z,11nm,1.2s,mb5.2
TCF Toulx Ste Croi 96.60 316 *e*P P **01 40 01.7 -2.2**
comp=Z,11nm,1.2s,mb5.2
MTLF Montolieu 96.79 313 *e*P P **01 40 04.2 -0.7**
comp=Z,16nm,1.1s,mb5.1
MTLF Montolieu 96.79 313 *e*P P **01 40 04.2 -0.7**
MTLF pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
MTLF Montolieu 96.79 313 *e*P P **01 40 04.2 -0.7**
comp=Z,8.2nm,1.1s,mb5.1
RJF Les Rejaudoux 97.16 315 *e*P P **01 40 06.1 -0.4**
DAG Danmarks Havn 98.20 348 ⇑ *i*P P **01 40 10.9 +0.4**
DAG pmax pmax
comp=Z,11nm,0.8s,mb5.4
DAG Danmarks Havn 98.20 348 ⇑ *i*P P **01 40 10.9 +0.4**
comp=Z,11nm,0.8s,mb5.4
TOA0 Torodi Ar. Sit 98.24 283 *e*P P **01 40 11.6 -0.4**
TORD Torodi Ar. Bea 98.24 283 P P **01 40 10.9 -1.0**
comp=Z,1.9nm,1.0s,mb4.6,baz=73,slow=3.2,SNR=7.7
TORD PKKP PKKPbc 01 56 45.5 +1.8
comp=Z,1.2nm,0.8s,baz=299,slow=2.9,SNR=6.5
TTA Tatalina 98.24 27 *e*P P **01 40 10.9 0.0**
IMA2 Indian Mountai 98.50 23 *e*P P **01 40 11.7 -0.3**
EKA Eskdalemuir Ar 98.92 326 P P **01 40 13.8 -0.3**
comp=Z,2.4nm,0.7s,mb4.8,baz=103,slow=4.5,SNR=10.0
EKA PP PP 01 44 16.8 +0.8
comp=Z,5.1nm,1.0s,baz=95,slow=6.1,SNR=4.6
EKA Eskdalemuir Ar 98.92 326 P P **01 40 13.9 -0.3**
EKA 01 44 16.8
EKA pmax pmax
comp=Z,2.0nm,0.7s
EKA pmax pmax
comp=Z,5.0nm,1.0s
ESK Eskdalemuir 98.95 326 *e*P P **01 40 14.4 +0.1**
MCK McKinley 101.11 25 *e*P Pdif 01 40 23.9 0.0
MCK pmax pmax
comp=Z,46nm,1.0s
MCK McKinley 101.11 25 *e*Pdif Pdif 01 40 23.9 0.0
comp=Z,46nm,1.0s
HYT Haines Junctio 107.16 26 *e*Pdif Pdif 01 40 50.6 -0.2
DLBC Dease Lake 111.65 26 *e*PKP PKiKP 01 45 09.3 +1.0
DLBC *e*PP PP 01 45 46.3 -3.5
PMSA Palmer Station 112.35 187 *e*PKP PKiKP 01 45 08.8 -0.6
YKA Yellowknife Ar 114.43 17 PKP PKiKP 01 45 11.8 -1.7
comp=Z,2.4nm,0.7s,baz=332,slow=1.9,SNR=8.9
YKA PP PP 01 46 08.0 -1.3
comp=Z,5.8nm,0.8s,baz=327,slow=7.1,SNR=6.9
YKA Yellowknife Ar 114.43 17 PKIKP PKiKP 01 45 11.8 -1.7
YKA 01 46 08.0
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA pmax pmax
comp=Z,6.0nm,0.8s
A05A Maple Falls 121.10 31 ⇑P PKPdf 01 45 26.3 -0.4
baz=121
NLWA Neilton Lookou 121.14 33 *e*PKPdf PKPdf 01 45 25.9 -0.9
A06A Chilliwack 121.35 30 ⇓P PKPdf 01 45 26.5 -0.7
baz=121
B05A Bryant 121.56 32 ⇓P PKPdf 01 45 26.6 -0.9
baz=121
JCW Jim Creek 121.69 31 *e*PKPdf PKPdf 01 45 27.7 -0.2
RPW Rockport 121.74 31 *e*PKPdf PKPdf 01 45 27.3 -0.6
E03A Lebam 121.81 34 ⇑P PKPdf 01 45 28.3 +0.1
baz=122
A07A Ashnola River, 121.93 30 ⇓P PKPdf 01 45 28.0 -0.3
baz=122
C05A Tolt Reservoir 122.13 32 ⇑P PKPdf 01 45 28.0 -0.7
baz=122
F03A Seaside 122.18 34 ⇑P PKPdf 01 45 28.5 -0.4
baz=122
D05A Enumclaw 122.28 32 ⇑P PKPdf 01 45 29.0 0.0
baz=122
C06A Tall Timber Ra 122.40 31 ⇓P PKPdf 01 45 29.1 -0.1
baz=122
B07A Winthrop 122.45 30 ⇑P PKPdf 01 45 28.7 -0.6
baz=122
A08A Turner Farm, O 122.54 29 ⇓P PKPdf 01 45 29.4 -0.1
baz=122
ERK Elk Rock 122.63 33 P PKPdf 01 45 30.0 +0.3
TDL Tradedollar La 122.67 33 P PKPdf 01 45 29.9 +0.1
G03A Yamhill 122.69 35 ⇑P PKPdf 01 45 29.7 -0.2
baz=122
E05A Randle 122.79 33 ⇑P PKPdf 01 45 29.6 -0.4
baz=123
F04A Amboy 122.81 34 ⇓P PKPdf 01 45 29.4 -0.7
baz=123
A09A Danville 122.86 29 ⇑P PKPdf 01 45 29.6 -0.5
baz=123
D06A Cle Elum 122.89 32 ⇓P PKPdf 01 45 29.7 -0.5
baz=123
ETW Entiat 122.89 31 P PKPdf 01 45 29.8 -0.4
B08A Colville Reser 122.91 30 ⇑P PKPdf 01 45 29.6 -0.6
baz=123
C07A Waterville 122.98 31 ⇑P PKPdf 01 45 30.1 -0.2
baz=123
TBM Table Mountain 123.03 32 P PKPdf 01 45 30.7 +0.2
H03A Soap Creek Ran 123.06 35 ⇓P PKPdf 01 45 30.4 -0.2
baz=123
I02A Mapleton 123.13 36 ⇑P PKPdf 01 45 30.8 0.0
baz=123
G04A Mulino 123.22 35 ⇑P PKPdf 01 45 30.7 -0.2
baz=123
E06A Yakima 123.22 33 ⇓P PKPdf 01 45 30.4 -0.4
baz=123
D07A Quincy 123.34 31 ⇑P PKPdf 01 45 31.0 0.0
baz=123
A10A Northport 123.35 29 ⇑P PKPdf 01 45 30.7 -0.3
baz=123
C08A Higginbotham F 123.43 30 ⇓P PKPdf 01 45 31.0 -0.3
baz=123
B09A Rice 123.45 29 ⇓P PKPdf 01 45 31.0 -0.2
baz=123
I03A Eugene 123.48 36 ⇓P PKPdf 01 45 31.6 +0.1
baz=123
J02A Umpqua 123.65 37 ⇑P PKPdf 01 45 31.3 -0.5
baz=124
H04A Detroit Lake 123.69 35 ⇑P PKPdf 01 45 31.3 -0.5
baz=124
BROR Big Rock Looko 123.79 35 P PKPdf 01 45 31.8 -0.2
C09A Chrisman Ranch 123.81 30 ⇓P PKPdf 01 45 31.4 -0.5
baz=124
E07A Sunnyside 123.81 32 ⇓P PKPdf 01 45 31.8 -0.2
baz=124
F06A Goldendale 123.82 33 ⇑P PKPdf 01 45 31.3 -0.7
baz=124
G05A Wamic 123.85 34 ⇑P PKPdf 01 45 31.4 -0.7
baz=124
OD2 Odessa Site #2 123.86 31 *e*PKPdf PKPdf 01 45 31.4 -0.7
A11A Hall Mountain, 123.94 28 ⇓P PKPdf 01 45 32.2 0.0
baz=124
D08A Wollman Farm, 123.98 31 ⇓P PKPdf 01 45 32.0 -0.3
baz=124
K02A Glendale 124.04 37 ⇑P PKPdf 01 45 31.9 -0.7
baz=124
NEW Newport 124.06 29 *e*PKIKP PKPdf 01 45 32.9 +0.5
NEW *e* 01 47 16.9
RSW Rattlesnake Hi 124.06 32 *e*PKPdf PKPdf 01 45 32.4 -0.1
I04A Tendick Farm, 124.09 36 ⇑P PKPdf 01 45 32.1 -0.5
baz=124
HAWA Hanford 124.09 32 *e*PKPdf PKPdf 01 45 32.2 -0.3
M01C Crescent City 124.16 39 ⇑P PKPdf 01 45 32.6 -0.2
baz=124
F07A Phinny Hill Vi 124.20 33 ⇓P PKPdf 01 45 32.7 -0.1
baz=124
G06A Carlson Farm, 124.23 34 ⇓P PKPdf 01 45 32.4 -0.5
baz=124
H05A Madras 124.26 34 ⇓P PKPdf 01 45 32.7 -0.2
baz=124
E08A Dider Farm, El 124.28 32 ⇓P PKPdf 01 45 32.4 -0.4
baz=124
A12A Yaak River Ran 124.28 28 ⇓P PKPdf 01 45 32.8 0.0
baz=124
D09A Jones Farm, Ri 124.29 31 ⇑P PKPdf 01 45 32.5 -0.4
baz=124
B11A Sandpoint 124.30 28 ⇑P PKPdf 01 45 32.7 -0.1
baz=124
L02A Cave Junction 124.31 38 ⇓P PKPdf 01 45 32.7 -0.4
baz=124
HUMO Hull Mountain 124.45 37 ⇓P PKPdf 01 45 33.3 0.0
baz=124
HUMO Hull Mountain 124.45 37 *e*PKPdf PKPdf 01 45 33.5 +0.1
FFC Flin Flon 124.52 15 *e*PKIKP PKPdf 01 45 32.2 -0.9
I05A Bend 124.53 35 ⇓P PKPdf 01 45 33.3 -0.1
baz=124
J04A Umpqua Nationa 124.59 36 ⇓P PKPdf 01 45 33.6 0.0
baz=124
B12A Libby 124.64 28 ⇓P PKPdf 01 45 33.4 -0.1
baz=124
VIPM Ingram Point 124.69 34 PKIKP PKPdf 01 45 34.3 +0.6
H06A Lindquist Farm 124.71 34 ⇓P PKPdf 01 45 33.6 -0.1
baz=124
E09A Wood Farm, Sta 124.74 31 ⇓P PKPdf 01 45 33.2 -0.6
baz=124
G07A Ruggs Ranch, H 124.74 33 ⇑P PKPdf 01 45 33.5 -0.3
baz=125
C11A Tepee Creek (N 124.77 29 ⇑P PKPdf 01 45 33.5 -0.3
baz=125
JCC Jacoby Creek 124.78 40 ⇓P PKPdf 01 45 33.8 -0.2
baz=125
D10A Wagner Farm, O 124.81 30 ⇓P PKPdf 01 45 33.5 -0.4
baz=125
A13A Flathead Natio 124.85 27 ⇑P PKPdf 01 45 33.6 -0.3
baz=125
F08A Pendleton 124.88 32 ⇑P PKPdf 01 45 34.0 -0.1
baz=125
WALA Waterton Lakes 124.98 26 *e*PKPdf PKPdf 01 45 33.4 -0.8
J05A Fort Rock 125.08 36 ⇓P PKPdf 01 45 34.4 -0.2

baz=125
LNOR **Lincton Mounta** 125.09 32 *e*PKIKP PKPdf 01 45 33.6 -0.9
LNOR *e* 01 47 24.2
YBH **Yreka Blue Hor** 125.10 38 ⇓P PKPdf 01 45 34.5 -0.1
baz=125
YBH **Yreka Blue Hor** 125.10 38 *e*PKPdf PKPdf 01 45 34.4 -0.3
YBH *e*PP PP 01 47 24.3 +0.9
G08A **Pilot Rock** 125.11 33 ⇑P PKPdf 01 45 34.3 -0.2
baz=125
M02C **Callahan** 125.20 39 ⇑P PKPdf 01 45 34.8 0.0
baz=125
H07A **Lands Inn, Kim** 125.23 34 ⇓P PKPdf 01 45 34.8 0.0
baz=125
B13A **Whitefish** 125.23 27 ⇑P PKPdf 01 45 34.2 -0.4
baz=125
N02C **Big Bar** 125.24 39 ⇑P PKPdf 01 45 34.8 -0.1
baz=125
I06A **Prineville** 125.27 35 ⇓P PKPdf 01 45 34.8 0.0
baz=125
E10A **Myers Farm, Un** 125.28 30 ⇓P PKPdf 01 45 34.4 -0.5
baz=125
D11A **Klaveano Farm,** 125.29 30 ⇓P PKPdf 01 45 34.1 -0.7
baz=125
L04A **Klamath Falls** 125.35 37 ⇓P PKPdf 01 45 34.6 -0.4
baz=125
F09A **S2 Ranch, Elgi** 125.39 32 ⇑P PKPdf 01 45 34.7 -0.3
baz=125
F10A **Beach Ranch, E** 125.57 31 ⇓P PKPdf 01 45 35.0 -0.3
baz=125
I07A **Izee** 125.58 34 ⇓P PKPdf 01 45 35.5 +0.1
baz=125
M04C **Macdoel** 125.61 38 ⇑P PKPdf 01 45 35.2 -0.3
baz=125
K05A **Summer Lake** 125.62 36 ⇓P PKPdf 01 45 35.7 +0.2
baz=125
KIPM **Iron Peak** 125.68 40 *e*PKPdf PKPdf 01 45 35.9 +0.2
KIPM *e*PP PP 01 47 25.7 -1.5
C13A **Hot Springs** 125.69 28 ⇑P PKPdf 01 45 35.4 -0.2
baz=126
M03C **McCloud** 125.72 38 ⇓P PKPdf 01 45 35.3 -0.5
baz=126
J06A **Christmas Vall** 125.73 35 ⇓P PKPdf 01 45 35.7 -0.1
baz=126
G09A **Cove** 125.75 32 ⇑P PKPdf 01 45 35.9 +0.1
baz=126
D12A **Red Ives Fores** 125.76 29 ⇓P PKPdf 01 45 34.8 -0.9
baz=126
H08A **Prairie City** 125.77 33 ⇑P PKPdf 01 45 35.4 -0.4
baz=126
E11A **Bogner Ranch,** 125.83 30 ⇓P PKPdf 01 45 35.0 -0.8
baz=126
WDC **Whiskeytown Da** 125.86 39 ⇓P PKPdf 01 45 35.7 -0.4
baz=126
O02C **Red Bluff** 125.92 40 ⇓P PKPdf 01 45 36.1 -0.1
baz=126
K06A **Valley Falls** 125.95 36 ⇑P PKPdf 01 45 36.4 +0.2
baz=126
C14A **Swan Lake** 126.00 27 ⇑P PKPdf 01 45 35.7 -0.4
baz=126
L05A **Lakeview** 126.06 37 ⇑P PKPdf 01 45 36.8 +0.4
baz=126
J07A **Hines** 126.14 35 ⇓P PKPdf 01 45 36.5 -0.1
baz=126
D13A **Huson** 126.16 28 ⇓P PKPdf 01 45 35.5 -1.0
baz=126
LTIM **Timbered Crate** 126.17 38 P PKPdf 01 45 37.0 +0.3
SCHQ **Schefferville** 126.17 350 PKP PKPdf 01 45 35.2 -1.0
comp=Z,9.6nm,0.8s,baz=1,4,slow=4.6,SNR=6.1
SCHQ **Schefferville** 126.17 350 PKP PKPdf 01 45 35.2 -1.0
F11A **Grangeville** 126.18 30 ⇓P PKPdf 01 45 36.0 -0.5
baz=126
I08A **Drewsey** 126.21 34 ⇑P PKPdf 01 45 36.7 +0.1
baz=126
H09A **Durkee** 126.22 32 ⇑P PKPdf 01 45 36.1 -0.5
baz=126
GASB **Alder Springs** 126.26 40 ⇓P PKPdf 01 45 37.0 +0.1
baz=126
M05C **Lookout** 126.28 38 ⇓P PKPdf 01 45 36.3 -0.6
baz=126
BMO **Blue Mountains** 126.28 32 *e*PKIKP PKPdf 01 45 37.6 +0.8
HOPS **Hopland** 126.38 41 ⇑P PKPdf 01 45 37.7 +0.6
baz=126
MOD **Modoc** 126.46 37 ⇓P PKPdf 01 45 37.2 0.0
baz=126
K07A **Rock Creek Ran** 126.60 35 ⇑P PKPdf 01 45 37.9 +0.4
baz=126
D14A **Greenough** 126.62 28 ⇓P PKPdf 01 45 36.7 -0.6
baz=126
J08A **Circle Bar Ran** 126.62 34 ⇓P PKPdf 01 45 37.6 +0.2
baz=126
I09A **Lost Marbles R** 126.63 33 ⇑P PKPdf 01 45 37.8 +0.3
baz=126
H10A **Noah's Angus R** 126.75 32 ⇑P PKPdf 01 45 36.9 -0.8
baz=127
E13A **Victor** 126.76 29 ⇓P PKPdf 01 45 37.4 -0.2
baz=127
MNRC **McLaughlin Nat** 126.86 41 ⇓P PKPdf 01 45 37.6 -0.4
baz=127
CHMT **Chamberlain Mo** 126.86 28 *e*PKPdf PKPdf 01 45 36.9 -1.0
L07A **Adell** 126.96 36 ⇑P PKPdf 01 45 38.4 +0.3
baz=127
K08A **Mann Creek Ran** 127.01 35 ⇑P PKPdf 01 45 38.3 0.0
baz=127
J09A **Fry Pan Ranch,** 127.03 34 ⇑P PKPdf 01 45 38.0 -0.2
baz=127
I10A **Payette** 127.06 32 ⇑P PKPdf 01 45 37.7 -0.6
baz=127
H11A **Donnelly** 127.06 31 ⇓P PKPdf 01 45 37.7 -0.5
baz=127
ORV **Oroville** 127.09 40 ⇓P PKPdf 01 45 38.3 -0.2
baz=127
D15A **Lincoln** 127.10 27 ⇑P PKPdf 01 45 37.7 -0.6
baz=127
E14A **Clinton** 127.11 28 ⇑P PKPdf 01 45 38.1 -0.2
baz=127
WVOR **Wild Horse Val** 127.11 35 *e*PKIKP PKPdf 01 45 37.8 -0.6
WVOR *e* 01 47 39.6
FARB **Farallon Islan** 127.12 42 ⇓P PKPdf 01 45 38.4 -0.2
baz=127
CVS **Carmenet Viney** 127.14 41 ⇓P PKPdf 01 45 38.5 -0.1
baz=127
F13A **Darby** 127.16 29 ⇑P PKPdf 01 45 38.3 -0.1
baz=127
O05C **Quincy** 127.23 39 ⇓P PKPdf 01 45 38.6 -0.2
baz=127
L08A **Fields** 127.43 35 ⇑P PKPdf 01 45 39.3 +0.3
baz=127
N06A **Buffalo Meadow** 127.44 38 ⇓P PKPdf 01 45 39.1 0.0
baz=127
M07A **Soldier Meadow** 127.45 36 ⇓P PKPdf 01 45 39.0 -0.1
baz=127
K09A **Rome** 127.46 34 ⇑P PKPdf 01 45 39.4 +0.3
baz=127
E15A **Deer Lodge** 127.50 28 ⇑P PKPdf 01 45 39.2 +0.1
baz=127
J10A **Berg Farm, Mel** 127.52 33 ⇑P PKPdf 01 45 39.6 +0.4
baz=127
EGMT **Eagleton** 127.56 25 *e*PKPdf PKPdf 01 45 39.1 0.0
EGMT *e*PP PP 01 47 39.4 +0.2
BEKR **Beckwourth** 127.63 39 ⇓P PKPdf 01 45 39.2 -0.3
baz=128
HRY **Holter Researc** 127.66 27 *e*PKPdf PKPdf 01 45 39.2 -0.2
G13A **Cobalt** 127.70 30 ⇑P PKPdf 01 45 39.3 -0.2
baz=128
H12A **Diamond D Ranc** 127.77 31 ⇑P PKPdf 01 45 39.6 -0.1
baz=128
O06A **Flanigan** 127.79 38 ⇑P PKPdf 01 45 39.0 -0.8
baz=128
P05C **Yuba Gap, Truc** 127.80 39 ⇓P PKPdf 01 45 39.9 0.0
baz=128
K10A **MacKenzie Ranc** 127.89 34 ⇑P PKPdf 01 45 40.4 +0.5
baz=128
N07B **Gerlach** 127.94 37 ⇓P PKPdf 01 45 40.0 0.0
baz=128
G14A **Jackson** 127.97 29 ⇑P PKPdf 01 45 40.1 +0.1
baz=128
F15A **Butte** 128.00 28 ⇓P PKPdf 01 45 39.7 -0.3
baz=128
LAVA **Lava Cap Winer** 128.03 40 ⇑P PKPdf 01 45 40.1 -0.2
baz=128
MFID **Camas Ranch** 128.03 33 ⇑P PKPdf 01 45 39.9 -0.2
baz=128
H13A **Challis** 128.06 30 ⇓P PKPdf 01 45 39.9 -0.3
baz=128
WCN **Washoe City** 128.34 39 ⇑P PKPdf 01 45 40.7 -0.2
baz=128
K11A **Parker Ranch,** 128.36 33 ⇓P PKPdf 01 45 40.7 -0.1
baz=128
O07A **Toulon** 128.37 38 ⇑P PKPdf 01 45 40.7 -0.2
baz=128
M09A **Marrel Ranch,** 128.44 35 ⇑P PKPdf 01 45 40.8 -0.2
baz=128
N08A **GE Springer Mi** 128.44 36 ⇓P PKPdf 01 45 41.1 +0.1
baz=128
H14A **Leadore** 128.47 30 ⇓P PKPdf 01 45 41.3 +0.3
baz=128
R05C **Kirkwood Meado** 128.49 40 ⇑P PKPdf 01 45 41.3 +0.1
baz=128
G15A **Dillon** 128.50 29 ⇑P PKPdf 01 45 41.2 +0.2
baz=128
J12A **Stokes Ranch,** 128.54 32 ⇑P PKPdf 01 45 41.0 -0.1
baz=128
BOZ **Bozeman (W)** 128.55 28 *e*PKIKP PKPdf 01 45 40.9 -0.2
BOZ *e* 01 47 45.9
L10A **Juniper Basin** 128.57 34 ⇓P PKPdf 01 45 41.3 +0.1
baz=128
MCMT **McKenzie Canyo** 128.57 29 *e*PKPdf PKPdf 01 45 41.2 0.0
PACP **Pacheco Peak** 128.64 42 ⇓P PKPdf 01 45 41.5 0.0
baz=128
CMB **Columbia Colle** 128.67 41 ⇓P PKPdf 01 45 40.2 -1.4
baz=128
HLID **Hailey** 128.68 31 ⇓P PKPdf 01 45 41.9 +0.5
baz=128
HLID **Hailey** 128.68 31 *e*PKPdf PKPdf 01 45 41.7 +0.3
O08A **Rochester Mine** 128.73 37 ⇓P PKPdf 01 45 42.3 +0.7
baz=128
N09A **Rock Creek Ran** 128.75 36 ⇓P PKPdf 01 45 42.3 +0.7
baz=129
H15A **Lima** 128.83 29 ⇑P PKPdf 01 45 42.3 +0.7
baz=129
L11A **Cat Creek Ranc** 128.91 34 ⇓P PKPdf 01 45 42.2 +0.3
baz=129
I14A **Mackay** 128.92 31 ⇑P PKPdf 01 45 42.6 +0.8
baz=129
J13A **Cove Ranch, Pi** 128.92 31 ⇑P PKPdf 01 45 42.0 +0.1
baz=129
R06C **Coleville** 128.99 40 ⇑P PKPdf 01 45 42.1 0.0
baz=129
K12A **Draper Farm, C** 129.06 33 ⇑P PKPdf 01 45 42.8 +0.6
baz=129
S05C **Merced** 129.09 41 ⇓P PKPdf 01 45 43.2 +0.8
baz=129
S06C **San Francisco** 129.10 40 ⇑P PKPdf 01 45 42.9 +0.5
baz=129
BMN **Battle Mountai** 129.20 36 *e*PKIKP PKPdf 01 45 44.0 +1.5
BMN *e* 01 47 54.7
V03C **Hunter Liggett** 129.21 43 ⇓P PKPdf 01 45 43.9 +1.3
baz=129
QLMT **Earthquake Lak** 129.26 28 *e*PKPdf PKPdf 01 45 42.9 +0.4
QLMT *e*PP PP 01 47 51.9 +1.5
J14A **Carey** 129.32 31 ⇓P PKPdf 01 45 43.3 +0.7
baz=129
DGMT **Dagmar** 129.32 20 *e*PKPdf PKPdf 01 45 44.2 +1.7
DGMT *e*PP PP 01 47 49.5 -1.1
U04C **Hernandez Rese** 129.33 43 ⇑P PKPdf 01 45 43.7 +0.8
baz=129
L12A **House Creek Ra** 129.33 33 ⇑P PKPdf 01 45 43.0 +0.3
baz=129
GCMT **Greycliff** 129.34 26 *e*PKPdf PKPdf 01 45 42.8 +0.2
I15A **Monteview** 129.35 30 ⇑P PKPdf 01 45 43.5 +0.9
baz=129
M11A **Holland Ranch,** 129.38 34 ⇑P PKPdf 01 45 43.7 +0.9
baz=129
N10A **Dunphy** 129.44 36 ⇑P PKPdf 01 45 43.6 +0.7
baz=129
H16A **Russell Place,** 129.44 28 ⇑P PKPdf 01 45 43.8 +1.0
baz=129
K13A **Stover Farm, H** 129.49 32 ⇑P PKPdf 01 45 43.8 +0.8
baz=129
T06C **Millerton Lake** 129.69 41 ⇓P PKPdf 01 45 43.7 +0.2
baz=130
PKD **Parkfield** 129.72 43 ⇑P PKPdf 01 45 44.0 +0.4
baz=130
Q08A **Gabbs** 129.74 38 ⇓P PKPdf 01 45 43.8 +0.2
baz=130
NVAR **Mina Array Bea** 129.77 39 PKhKP 01 45 39.5
comp=Z,1.4nm,0.8s,baz=246,slow=1.8,SNR=2.5
NVAR PKP PKPdf 01 45 44.4 +0.7
comp=Z,6.7nm,0.8s,baz=266,slow=1.8,SNR=15
J15A **Blackfoot** 129.81 30 ⇓P PKPdf 01 45 44.0 +0.5
baz=130
N11A **Elko Archery C** 129.82 35 ⇓P PKPdf 01 45 44.4 +0.8
baz=130
M12A **Wells** 129.88 34 ⇓P PKPdf 01 45 44.2 +0.4
baz=130
L13A **Double Diamond** 129.95 33 ⇑P PKPdf 01 45 44.3 +0.4
baz=130
RLMT **Red Lodge** 130.03 27 *e*PKPdf PKPdf 01 45 43.2 -0.7
K14A **Jones Ranch, D** 130.04 32 ⇑P PKPdf 01 45 44.8 +0.8
baz=130
ULM **Lac du Bonnet** 130.11 13 PKhKP 01 45 37.1
comp=Z,8.9nm,1.0s,baz=173,slow=4.2,SNR=3.6
ULM PKP PKPdf 01 45 42.6 -1.2
comp=Z,16nm,0.7s,baz=345,slow=2.3,SNR=18
ELK **Elko** 130.15 35 *e*PKIKP PKPdf 01 45 45.4 +1.1
FLWY **Flagg Ranch** 130.16 28 *e*PKPdf PKPdf 01 45 43.5 -0.7
P10A **Eureka** 130.16 37 ⇓P PKPdf 01 45 45.1 +0.8
baz=130
IMW **Indian Meadow** 130.19 29 *e*PKPdf PKPdf 01 45 45.6 +1.3
N12A **Clover Valley,** 130.19 34 ⇑P PKPdf 01 45 45.5 +1.2
baz=130
MTUM **Tungsten Hills** 130.24 40 *e*PKPdf PKPdf 01 45 45.7 +1.1
K15A **Arbon** 130.28 31 ⇑P PKPdf 01 45 45.5 +1.1
baz=130
O11A **Cowboy Ranch,** 130.31 36 ⇓P PKPdf 01 45 45.0 +0.4
baz=130
J16A **Bone** 130.32 30 ⇓P PKPdf 01 45 45.2 +0.7
baz=130
HELL **Mitchell Peak** 130.33 41 ⇓P PKPdf 01 45 44.7 -0.1
baz=130
M13A **Montello** 130.33 33 ⇑P PKPdf 01 45 44.8 +0.2
baz=130
L14A **Malta** 130.37 32 ⇑P PKPdf 01 45 44.8 +0.2
baz=130
MOOW **Moose Ponds** 130.39 29 *e*PKPdf PKPdf 01 45 46.5 +1.8
MOOW *e*SKPab 01 49 07.2
S08C **White Mtn Res** 130.41 40 ⇓P PKPdf 01 45 45.8 +0.9
baz=130
TPAW **Teton Pass** 130.48 29 *e*PKPdf PKPdf 01 45 47.0 +2.2
LOHW **Long Hollow** 130.56 29 *e*PKPdf PKPdf 01 45 45.2 +0.2
LOHW *e*PP PP 01 47 57.1 -1.8
SNOW **Snow King Moun** 130.60 29 *e*PKPdf PKPdf 01 45 45.6 +0.6
P11A **Circle Ranch,** 130.63 36 ⇓P PKPdf 01 45 45.8 +0.6
baz=130
K16A **Soda Springs** 130.65 30 ⇑P PKPdf 01 45 46.0 +0.8
baz=130
N13A **Wendover, West** 130.66 34 ⇓P PKPdf 01 45 46.0 +0.8
baz=130
R09A **Tonopah** 130.66 38 ⇑P PKPdf 01 45 45.8 +0.5
baz=130
M14A **Sheep Mountain** 130.68 33 ⇑P PKPdf 01 45 45.7 +0.4
baz=130
O12A **Currie** 130.75 35 ⇑P PKPdf 01 45 46.4 +1.0
baz=131
VES **Vestal, Richgr** 130.77 42 ⇑P PKPdf 01 45 46.5 +0.9
baz=131
PKM **Peak Mountain** 130.79 44 ⇑P PKPdf 01 45 46.3 +0.6
baz=131
L15A **Malad City** 130.84 32 ⇑P PKPdf 01 45 46.2 +0.7
baz=131
S09A **Goldfield** 130.88 39 ⇓P PKPdf 01 45 45.3 -0.4
baz=131
R10A **Warm Springs** 131.10 38 ⇓P PKPdf 01 45 47.2 +1.1
baz=131
Q11A **Duckwater** 131.14 37 ⇓P PKPdf 01 45 46.7 +0.5
baz=131
S10A **Tonopah Range,** 131.15 38 ⇓P PKPdf 01 45 47.1 +0.8
baz=131
P12A **McGill** 131.18 36 ⇓P PKPdf 01 45 46.9 +0.6
baz=131
M15A **Larsen Ranch,** 131.19 32 ⇓P PKPdf 01 45 46.9 +0.7
baz=131
GRAC **Grapevine Rang** 131.22 40 ⇓P PKPdf 01 45 46.2 -0.2
baz=131
N14A **Grayback Hills** 131.22 33 ⇑P PKPdf 01 45 46.6 +0.3
baz=131
ISA **Isabella** 131.28 42 ⇑P PKPdf 01 45 46.5 -0.1
baz=131
ISA **Isabella** 131.28 42 *e*PKPdf PKPdf 01 45 45.9 -0.7
ISA *e*PP PP 01 48 03.6 -0.5
L16A **Fish Haven** 131.33 31 ⇑P PKPdf 01 45 46.9 +0.4
baz=131
R11A **Troy Canyon, C** 131.50 37 ⇑P PKPdf 01 45 47.7 +0.8
baz=131
Q12A **Willow Creek R** 131.50 36 ⇓P PKPdf 01 45 47.6 +0.7
baz=131
HWUT **Hardware Ranch** 131.55 31 *e*PKPdf PKPdf 01 45 46.2 -0.7
MPMC **Manual Prospec** 131.70 41 ⇓P PKPdf 01 45 48.2 +0.9
baz=132
BW06 **Boulder Array** 131.70 29 *e*PKPdf PKPdf 01 45 48.0 +0.9
PDAR **Pinedale Array** 131.70 29 PKhKP 01 45 39.3
comp=Z,1.2nm,0.7s,baz=66,slow=1.8,SNR=7.4
PDAR PKP PKPdf 01 45 47.3 +0.1
comp=Z,3.6nm,0.7s,baz=174,slow=1.1,SNR=19
P13A **Bates Ranch, G** 131.71 35 ⇑P PKPdf 01 45 47.9 +0.6
baz=132
M16A **Huntsville** 131.73 32 ⇓P PKPdf 01 45 48.1 +0.9
baz=132
S11A **Rachel** 131.84 38 ⇑P PKPdf 01 45 47.6 0.0
baz=132
FURC **Furnace Creek,** 131.86 40 ⇓P PKPdf 01 45 48.2 +0.5
baz=132
DUG **Dugway** 131.88 34 *e*PKIKP PKPdf 01 45 48.1 +0.5
DUG *e* 01 48 08.4
DUG **Dugway** 131.88 34 *e*PKPdf PKPdf 01 45 48.1 +0.6
DUG *e*PP PP 01 48 08.4 +0.8
DUG *e*SKPbc SKPbc 01 49 12.6 +0.5
AGMN **Agassiz Refuge** 131.94 14 *e*PKPdf PKPdf 01 45 47.0 -0.4
AGMN *e*PP PP 01 48 06.6 -0.8
AGMN *e*SKPbc SKPbc 01 49 11.5 -0.5
Q13A **Wheeler Ranch,** 132.03 36 ⇓P PKPdf 01 45 48.6 +0.7
baz=132
EDW2 **Edwards Air Fo** 132.04 43 ⇑P PKPdf 01 45 49.1 +1.1
baz=132
R12A **Pony Springs,** 132.10 37 ⇓P PKPdf 01 45 48.7 +0.7
baz=132
P14A **Drum Mountains** 132.15 34 ⇑P PKPdf 01 45 48.9 +0.8
baz=132
U10A **Ash Meadows, A** 132.24 40 ⇑P PKPdf 01 45 49.2 +0.9
baz=132
N17A **Moffit Pass** 132.41 31 ⇓P PKPdf 01 45 49.2 +0.6
baz=132
S12A **Delamar Landin** 132.42 38 ⇓P PKPdf 01 45 48.9 +0.3
baz=132
T11A **Corn Creek, Al** 132.43 38 ⇓P PKPdf 01 45 48.6 -0.1
baz=132
Q14A **Sevier Lake (B** 132.44 35 ⇑P PKPdf 01 45 49.5 +0.8
baz=132
DAU **Daniels Canyon** 132.57 32 *e*PKIKP PKPdf 01 45 49.6 +0.7
SHOC **Shoshone** 132.58 40 ⇓P PKPdf 01 45 49.4 +0.4
baz=132
GSC **Goldstone** 132.59 41 ⇓P PKPdf 01 45 50.0 +1.0
baz=132
P15A **Leamington** 132.61 34 ⇑P PKPdf 01 45 49.8 +0.8
baz=132
BFSC **Mount Baldy St** 132.63 43 ⇓P PKPdf 01 45 50.0 +0.8
baz=132
Q15A **Fillmore** 132.95 34 ⇑P PKPdf 01 45 50.3 +0.7
baz=133
O17A **Robinson Place** 133.00 32 ⇓P PKPdf 01 45 50.4 +0.7
baz=133
S13A **Holt Ranch, En** 133.03 37 ⇓P PKPdf 01 45 50.6 +0.8
baz=133
RSSD **Black Hills** 133.05 23 *e*PKIKP PKPdf 01 45 50.0 +0.3
EYMN **Ely** 133.19 10 *e*PKPdf PKPdf 01 45 49.6 -0.2
N19A **John Jarvie Ra** 133.30 30 ⇓P PKPdf 01 45 50.2 0.0
baz=133
S14A **Cedar City** 133.33 36 ⇑P PKPdf 01 45 51.0 +0.6
baz=133
O18A **Roosevelt** 133.34 31 ⇓P PKPdf 01 45 50.8 +0.4
baz=133
CCUT **Cedar City** 133.35 37 *e*PKPdf PKPdf 01 45 49.7 -0.7
U12A **Valley of Fire** 133.36 39 ⇑P PKPdf 01 45 50.8 +0.4
baz=133
MSU **Marysvale** 133.40 35 *e*PKPdf PKPdf 01 45 52.1 +1.7
MSU *e*SKPbc SKPbc 01 49 18.3 +0.9
P17A **Butcher Ranch,** 133.52 33 ⇓P PKPdf 01 45 50.9 +0.2
baz=133
V12A **Nelson** 133.60 40 ⇓P PKPdf 01 45 51.3 +0.3
baz=133
GMRC **Granite Mounta** 133.66 41 ⇓P PKPdf 01 45 50.9 -0.2
baz=134
Q16A **Castle Valley** 133.68 34 ⇑P PKPdf 01 45 51.4 +0.4
baz=134
O19A **Miners Draw (B** 133.77 31 ⇓P PKPdf 01 45 51.3 +0.2
baz=134
PFO **Pinyon Flat Ob** 133.81 43 *e*PKIKP PKPdf 01 45 42.9 -8.5
PFO *e* 01 45 51.2
PFO **Pinyon Flat Ob** 133.81 43 *e*PKPpre 01 45 42.9
PFO *e*PKPdf PKPdf 01 45 51.2 -0.2
PFO *e*SKPbc SKPbc 01 49 18.9 0.0
R16A **Teasdale** 133.95 34 ⇑P PKPdf 01 45 51.9 +0.4
baz=134
V13A **Grand Canyon W** 134.07 39 ⇓P PKPdf 01 45 52.3 +0.4
baz=134
Q18A **Rafter H Ranch** 134.12 33 ⇓P PKPdf 01 45 52.6 +0.8
baz=134
MONP **Monument Peak** 134.25 44 ⇓P PKPdf 01 45 52.4 +0.1
baz=134
S16A **Weppner Ranch,** 134.27 35 ⇓P PKPdf 01 45 52.6 +0.5
baz=134
R17A **Hanksville Air** 134.29 34 ⇓P PKPdf 01 45 52.5 +0.4
baz=134
T15A **Red Dirt Ranch** 134.29 36 ⇑P PKPdf 01 45 52.8 +0.6
baz=134
IRM **Iron Mountain** 134.37 42 ⇓P PKPdf 01 45 52.7 +0.3
baz=134
BC3 **Big Chuckw Mtn** 134.47 42 ⇑P PKPdf 01 45 53.0 +0.4
baz=134
SWSC **Sam W. Stewart** 134.65 43 ⇑P PKPdf 01 45 53.0 0.0
baz=134
Q19A **Hogan Spring (** 134.69 32 ⇓P PKPdf 01 45 53.3 +0.4
baz=134
U15A **North Rim** 134.74 37 ⇓P PKPdf 01 45 53.1 +0.1
baz=134
R18A **Canyonlands Na** 134.76 33 ⇓P PKPdf 01 45 53.2 +0.1
baz=135
T16A **Glen Canyon Da** 134.83 36 ⇑P PKPdf 01 45 53.7 +0.5
baz=135
X13A **Yucca** 134.96 40 ⇑P PKPdf 01 45 53.8 +0.3
baz=135
W14A **Seligman** 135.05 39 ⇓P PKPdf 01 45 53.8 +0.2
baz=135
R19A **Curley Farm, L** 135.17 33 ⇓P PKPdf 01 45 54.2 +0.4
baz=135
S18A **Hurst Farm, Bl** 135.20 34 ⇓P PKPdf 01 45 54.0 +0.1
baz=135
V15A **Kaibab Nationa** 135.21 38 ⇑P PKPdf 01 45 54.4 +0.4
baz=135
T17A **Navajo Res., N** 135.23 35 ⇓P PKPdf 01 45 54.2 +0.2
baz=135
PV10 **Paradox Valley** 135.23 32 *e*PKPdf PKPdf 01 45 54.6 +0.7
GLA **Glamis** 135.24 43 ⇑P PKPdf 01 45 54.0 -0.1
baz=135
COWI **Conover** 135.38 9 *e*PKPdf PKPdf 01 45 51.4 -2.6
COWI *e*PP PP 01 48 27.5 -1.7
Y13A **Salome** 135.45 41 ⇑P PKPdf 01 45 54.8 +0.4
baz=135
W15A **Williams** 135.58 38 ⇓P PKPdf 01 45 55.4 +0.8
baz=135
U17A **Shonto** 135.59 36 ⇓P PKPdf 01 45 55.2 +0.6
baz=135
U16A **Tuba City** 135.62 36 ⇓P PKPdf 01 45 55.4 +0.7
baz=135
S19A **Harvey Farm, M** 135.63 33 ⇑P PKPdf 01 45 55.5 +0.8
baz=135
X14A **Yava** 135.64 40 ⇓P PKPdf 01 45 55.4 +0.6
baz=136
PV01 **Paradox Valley** 135.66 32 *e*PKPdf PKPdf 01 45 54.7 0.0
PV01 *e*PP PP 01 48 33.9 +2.3
T18A **Mexican Hat** 135.66 34 ⇑P PKPdf 01 45 55.5 +0.7
baz=136
ISCO **Idaho Springs** 135.88 28 *e*PKIKP PKPdf 01 45 54.3 -0.8
WUAZ **Wupatki** 135.90 37 *e*PKPpre 01 45 49.7
WUAZ *e*PKPdf PKPdf 01 45 56.1 +0.8
WUAZ *e*SKPbc SKPbc 01 49 27.1 +1.6
Y14A **Wickenburg** 135.91 40 ⇑P PKPdf 01 45 55.9 +0.6
baz=136
ECSD **EROS,Sioux Fal** 135.96 17 *e*PKPdf PKPdf 01 45 52.9 -2.2
X15A **Humboldt** 136.05 39 ⇑P PKPdf 01 45 56.2 +0.6
baz=136
W16A **Flagstaff** 136.09 38 ⇑P PKPdf 01 45 56.4 +0.8
baz=136
U18A **Rough Rock, Ch** 136.17 35 ⇓P PKPdf 01 45 56.6 +0.9
baz=136
Z14A **Wintersburg** 136.31 41 ⇓P PKPdf 01 45 57.0 +1.0
baz=136
Y15A **Casa Rosa Ranc** 136.33 40 ⇓P PKPdf 01 45 57.0 +0.8
baz=136
MVCO **Mesa Verde** 136.37 33 *e*PKPdf PKPdf 01 45 55.0 -1.1
PLCA **Paso Flores** 136.58 191 PKP PKPdf 01 45 56.5 +0.1
comp=Z,4.1nm,1.0s,baz=156,slow=6.8,SNR=3.7

PLCA	**Paso Flores**	**136.58**	**191**		PKIKP	PKPdf	01 45 56.5	+0.1
PLCA					pmax	pmax		
	comp=Z,4.0nm,1.0s							
PLCA	**Paso Flores**	**136.58**	**191**	*e*	PKPdf	PKPdf	01 45 56.9	+0.5
X16A	**Lo Mia Camp, P**	**136.59**	**38**	⇓	P	PKPdf	01 45 57.4	+0.9
	baz=136							
W17A	**Winslow**	**136.59**	**37**	⇑	P	PKPdf	01 45 57.9	+1.4
	baz=136							
V18A	**Ganado**	**136.62**	**36**	⇑	P	PKPdf	01 45 57.6	+1.0
	baz=136							
Y16A	**Circle Bar Ran**	**136.92**	**39**	⇑	P	PKPdf	01 45 58.8	+1.6
	baz=137							
X17A	**Forest Lakes**	**137.03**	**38**	⇓	P	PKPdf	01 45 59.4	+2.0
	baz=137							
V19A	**Window Rock**	**137.14**	**35**	⇓	P	PKPdf	01 45 59.0	+1.5
	baz=137							
W18A	**Petrified Fore**	**137.15**	**36**	⇑	P	PKPdf	01 45 59.6	+2.0
	baz=137							
214A	**Organ Pipe Nat**	**137.26**	**42**	⇑	P	PKPdf	01 45 59.3	+1.4
	baz=137							
W19A	**Sanders**	**137.36**	**36**	⇑	P	PKPdf	01 46 00.1	+2.1
	baz=137							
X18A	**Snowflake**	**137.43**	**37**	⇓	P	PKPdf	01 46 00.3	+2.2
	baz=137							
Y17A	**Roosevelt**	**137.44**	**39**	⇓	P	PKPdf	01 46 00.5	+2.3
	baz=137							
SDCO	**Great Sand Dun**	**137.54**	**30**	*e*	PKPpre		01 45 52.6	
SDCO				*e*	PKPdf	PKPdf	01 45 58.0	-0.2
116A	**Eloy**	**137.62**	**41**	⇑	P	PKPdf	01 46 00.4	+1.9
	baz=137							
MDV	**Middlebury**	**137.68**	**352**	*e*	PKPdf	PKPdf	01 45 59.2	+0.9
Y18A	**Canyon Day Jun**	**137.88**	**38**	⇓	P	PKPdf	01 46 00.9	+1.9
	baz=138							
X19A	**St. Johns**	**137.89**	**37**	⇓	P	PKPdf	01 46 01.3	+2.3
	baz=138							
Y19A	**Nutrioso**	**138.24**	**37**	⇓	P	PKPdf	01 46 01.3	+1.7
	baz=138							
JFWS	**Jewell Farm**	**138.28**	**11**	*e*	PKHKP		01 45 48.6	
JFWS				*e*			01 45 59.3	
JFWS				*e*			01 48 46.0	
TUC	**Tucson**	**138.38**	**40**	*e*	PKIKP	PKPdf	01 45 59.2	-0.7
217A	**Green Valley**	**138.70**	**41**	⇓	P	PKPdf	01 46 00.9	+0.4
	baz=138							
218A	**Dragoon**	**139.07**	**40**	⇓	P	PKPdf	01 46 02.6	+1.4
	baz=139							
ANMO	**Albuquerque**	**139.15**	**34**	*e*	PKHKP		01 45 53.7	
LAZ	**Ladron**	**139.17**	**35**	*e*	PKPdf	PKPdf	01 45 58.6	-2.7
LAZ				*e*	PP	PP	01 48 51.8	-1.8
CBKS	**Cedar Bluff**	**139.26**	**23**	*e*	PKIKP	PKPdf	01 45 54.9	-6.5
LENM	**Lemitar**	**139.43**	**35**	*e*	PKPdf	PKPdf	01 45 59.1	-2.7
LENM				*e*	PP	PP	01 48 55.4	+0.1
LPM	**Los Pinos Moun**	**139.52**	**34**	*e*	PKPpre		01 45 56.8	
LPM				*e*	PKPdf	PKPdf	01 46 00.3	-1.6
219A	**White Tail Can**	**139.56**	**39**	⇑	P	PKPdf	01 46 03.7	+1.6
	baz=139							
BNM	**Barren Site**	**139.64**	**35**	*e*	PKPpre		01 45 55.5	
BNM				*e*	PKPdf	PKPdf	01 46 02.5	+0.3
319A	**Douglas**	**139.95**	**40**	⇓	P	PKPdf	01 46 04.3	+1.4
	baz=140							
KSU1	**Kansas State U**	**140.16**	**20**	*e*	PKPdf	PKPdf	01 46 02.9	-0.1
AMTX	**Amarillo**	**141.68**	**29**	*e*	PKPpre		01 46 00.8	
AMTX				*e*	PKPdf	PKPdf	01 46 04.8	-1.0
MVL	**Millersville**	**141.98**	**355**	*e*	PKPpre		01 45 54.6	
MVL				*e*	PKPdf	PKPdf	01 46 04.9	-1.4
CCM	**Cathedral Cave**	**142.71**	**14**	*e*	PKHKP		01 46 02.0	
FVM	**French Village**	**142.98**	**13**	*e*	PKHKP		01 46 02.8	
WMOK	**Wichita Mounta**	**143.13**	**26**	*e*	PKHKP		01 46 03.1	
WMOK				*e*			01 46 08.4	
WMOK				*e*			01 49 14.8	
WCI	**Wyandotte Cave**	**143.50**	**8**	*e*	PKIKP	PKPdf	01 46 04.5	-4.5
BDFB	**Brasilia**	**143.59**	**240**		PKP	PKPdf	01 46 09.5	-0.2
	comp=Z,15nm,1.0s,baz=130,slow=1.7,SNR=5.3							
BDFB	**Brasilia**	**143.59**	**240**		PKIKP	PKPdf	01 46 09.5	-0.2
BDFB					pmax	pmax		
	comp=Z,15nm,1.0s							
CPUP	**Villa Florida**	**144.16**	**217**		PKP	PKPdf	01 46 08.2	-2.3
	comp=Z,42nm,1.0s,baz=104,slow=4.0,SNR=40							
CPUP					SKKPbc		01 57 50.1	
	comp=Z,34nm,0.9s,baz=113,slow=2.6,SNR=32							
CPUP	**Villa Florida**	**144.16**	**217**		PKIKP	PKPdf	01 46 08.2	-2.3
CPUP					pmax	pmax		
	comp=Z,42nm,1.0s							
CPUP					pmax	pmax		
	comp=N,34nm,0.9s							
CPUP	**Villa Florida**	**144.16**	**217**	*e*	PKPdf	PKPdf	01 46 07.9	-2.6
TXAR	**Lajitas Array**	**144.86**	**37**		PKP	PKPdf	01 46 10.3	-1.3
	comp=N,165nm,0.7s,baz=282,slow=1.2,SNR=561							
TXAR					SKPbc	SKPbc	01 49 49.4	-0.2
	comp=N,5.0nm,0.9s,baz=309,slow=2.5,SNR=3.8							
TXAR	**Lajitas Array**	**144.86**	**37**		PKIKP	PKPdf	01 46 10.3	-1.3
TXAR					pmax	pmax		
	comp=Z,165nm,0.7s							
TXAR					pmax	pmax		
	comp=N,5.0nm,0.9s							
TXAR	**Lajitas Array**	**144.86**	**37**		PKP	PKPdf	01 46 10.3	-1.3
TXAR					SKPbc	SKPbc	01 49 49.4	-0.2
UTMT	**University of**	**144.90**	**12**	*e*	PKPdf	PKPdf	01 46 10.2	-1.3
ELN	**Prospectdale**	**144.91**	**1**	*e*	PKPdf	PKPdf	01 46 09.1	-2.4
BLA	**Blacksburg**	**144.93**	**0**	*e*	PKIKP	PKPdf	01 46 09.3	-2.2
HALT	**Halls**	**145.21**	**13**	*e*	PKPbc	PKPbc	01 46 10.6	-1.0
WVT	**Waverly**	**145.31**	**11**	*e*	PKPbc	PKPab	01 46 09.9	-2.1
MIAR	**Mount Ida**	**145.31**	**19**	*e*	PKIKP	PKPdf	01 46 10.7	-1.6
TZTN	**Tazewell**	**145.47**	**5**	*e*	PKPbc	PKPbc	01 46 10.8	-1.6
UALR	**University of**	**145.49**	**18**	*e*	PKPbc	PKPbc	01 46 11.6	-1.0
MET	**Memphis--Engin**	**145.82**	**14**	*e*	PKPdf	PKPdf	01 46 13.0	-0.1
MET				*e*	PKPbc	PKPbc	01 46 14.6	+1.0
JCT	**Junction City**	**146.16**	**31**	*e*	PKP2	PKPab	01 46 13.6	-1.8
BBSR	**BB Station**	**146.38**	**336**	*e*	PKPbc	PKPbc	01 46 13.3	-2.1
TLL	**Tololo Astrono**	**146.78**	**195**	*i*	P	PKPdf	01 46 16.6	+1.7
CNNC	**Cliffs of the**	**146.83**	**356**	*e*	PKPbc	PKPbc	01 46 16.2	-0.3
MAIG	**Mazatlaan**	**147.04**	**48**	*i*	P	PKPab	01 46 18.2	-0.8
NATX	**Nacogdoches**	**147.42**	**23**	*e*	PKPbc	PKPbc	01 46 17.7	-0.7
JSC	**Jenkinsville**	**147.85**	**1**	*e*	PKP2	PKPbc	01 46 18.2	-1.2
LCO	**Las Campanas**	**147.85**	**196**	*e*	PKPbc	PKPbc	01 46 19.5	-0.1
HKT	**Hockley**	**148.51**	**26**	*e*	PKIKP	PKPdf	01 46 18.4	+0.6
HKT				*e*			01 46 23.5	
GOGA	**Godfrey**	**148.59**	**5**	*e*	PKPdf	PKPdf	01 46 19.5	+1.7
GOGA				*e*	PKPbc	PKPbc	01 46 20.9	-0.5
COW	**Cow Castle Cre**	**148.75**	**1**	*e*	PKPbc	PKPbc	01 46 21.1	-0.7
KVTX	**Kingsville**	**149.50**	**32**	*e*	PKPbc	PKPbc	01 46 25.0	+1.1
BRAL	**Brewton**	**150.42**	**12**	*e*	PKPdf	PKPdf	01 46 21.0	+0.2
BRAL				*e*	PKPbc	PKPbc	01 46 25.9	-0.1
SFJM	**Santa Fe**	**151.17**	**49**	*i*	P	PKPbc	01 46 28.6	+0.5
COLM	**Colima**	**151.42**	**52**	*i*	P	PKPbc	01 46 29.5	+0.8
MOIG	**Morelia**	**153.04**	**48**	*i*	P	PKPbc	01 46 35.0	+2.6
LVC	**Limon Verde**	**153.16**	**204**	*e*	PKPbc	PKPbc	01 46 33.5	+1.0
DWPF	**Disney**	**153.99**	**2**	*e*	PKPdf	PKPdf	01 46 26.1	-0.1
PTVM	**Pico Tres Padr**	**154.60**	**45**	*e*	P	PKPab	01 46 51.9	+1.6
PLIG	**Platanillo**	**155.09**	**48**	*i*	P	PKPab	01 46 45.9	-6.4
VHO	**Vista Hermosa**	**157.95**	**46**	*i*	P	PKPdf	01 46 32.6	+0.9
LPAZ	**La Paz**	**158.23**	**213**		PKP	PKPdf	01 46 32.8	+0.7
	comp=N,4.3nm,1.1s,baz=207,slow=4.5,SNR=8.5							
LPAZ	**La Paz**	**158.23**	**213**		PKIKP	PKPdf	01 46 32.8	+0.8
LPAZ					pmax	pmax		
	comp=Z,4.0nm,1.1s							
CMIG	**Matias Romero**	**159.24**	**43**	*e*	P	PKPdf	01 46 34.9	+1.7
TEIG	**Tepich**	**160.26**	**23**	*e*	PKPdf	PKPdf	01 46 34.7	+0.4
TEIG				*e*	PKPab	PKPab	01 47 14.2	-0.3
NNA	**Nana**	**165.71**	**194**	*e*	PKPdf	PKPdf	01 46 40.1	+0.4
OTAV	**Otavalo**	**177.47**	**227**	*e*	PKPdf	PKPdf	01 46 45.8	+0.3

IDC 13 01:36:10.8±2.6, 092N×10013E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.8/18, mbtmp4.0/5, Error ellipse: s-maj=89.0km s-min=22.7km az=62.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**39.42**	**124**	P	P	01 43 42.7	-0.2
	0.7nm,0.4s,baz=307,slow=9.0,SNR=5.9						
ASAR	**Alice Springs**	**40.92**	**129**	P	P	01 43 55.2	0.0
	0.8nm,0.6s,baz=296,slow=7.3,SNR=3.9						
KSRS	**Korea Array**	**44.47**	**32**	P	P	01 44 22.7	-1.1
	0.6nm,0.3s,baz=226,slow=8.6,SNR=4.1						
SONM	**Songino Array**	**47.04**	**6**	P	P	01 44 46.0	+2.0
	3.9nm,0.7s,baz=188,slow=8.9,SNR=8.7						
MKAR	**Makanchi Array**	**48.27**	**344**	P	P	01 44 52.3	-1.3
	2.0nm,0.6s,baz=158,slow=8.7,SNR=8.5						

*BJI **13** 01:38:00.1, 234S×9974E, h10km, mB5.3, mb5.2, Ms5.0, Msz4.9*
*ISCJB **13** 01:38:06.3±0.2, 193S×003×9964E×003, h27km, mb5.2/136, MS4.4/1, Error ellipse: s-maj=4.9km s-min=3.7km az=29.1*
*MOS **13** 01:38:07.8±1.0, 172S×9977E, h33km, mb5.3/53, Error ellipse: s-maj=9.9km s-min=5.1km az=117.3*
*NEIC **13** 01:38:08.4±0.1, 188S×9972E, mb5.1/57, Error ellipse: s-maj=5.1km s-min=3.6km az=221.0*
*DJA **13** 01:38:10, 163S×9960E, h15km, MLv5.6/9*
*IDC **13** 01:38:11.1±1.9, 195S×9973E, h53km±16km, mb4.6/34, mb1 4.6/34, mb1mx4.6/35, mbtmp4.6/34, Error ellipse: s-maj=13.2km s-min=7.7km az=46.0*
*SZGRF **13** 01:38:14.1, 169S×9833E, h33km, mb5.2, Southern Sumatera, Indonesia*

ISC 13 01:38:08.4±0.2, 195S±003×9961E±003, h28km, h28km±1.6km: pP-P, n361, σ099/327, mb5.2/136, MS4.4/1, 49C-12D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RGRI	**Rengat**	**3.15**	**60**	P	**Pn**	**01 38 58.3**	**+2.2**
	0.0nm,0.0s						
TRSI	**Tarutung**	**4.00**	**351**	P	**Pn**	**01 39 09.3**	**+1.4**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.17**	**74**	P	**Pn**	**01 39 25.6**	**+1.6**
	432nm,0.9s						
KGM	**Kluang**	**5.41**	**43**	⇑P	**Pn**	**01 39 29.4**	**+2.2**
MYKOM	**Kota Tinggi**	**5.63**	**49**	⇑P	**Pn**	**01 39 32.5**	**+2.2**
KLI	**Kotabumi**	**5.98**	**119**	P	**Pn**	**01 39 38.0**	**+3.0**
	660nm,1.2s						
IPM	**Ipoh**	**6.54**	**12**	⇓P	**Pn**	**01 39 45.4**	**+2.6**
KTGM	**Kuala Trenggan**	**8.04**	**26**	⇑P	**Pn**	**01 40 05.7**	**+2.3**
TPI	**Tanjungpandan**	**8.07**	**96**	P	**Pn**	**01 40 08.4**	**+4.6**
	77nm,1.3s						
DBJI	**Dramaga**	**8.46**	**123**	P	**Pn**	**01 40 11.1**	**+2.0**
	537nm,0.6s						
SKJI	**Sukabumi**	**8.55**	**126**	P	**Pn**	**01 40 15.4**	**+5.1**
	633nm,0.9s						
SNG	**Songkhla**	**9.12**	**6**	P	**Pn**	**01 40 16.0**	**-2.2**
	400nm,0.9s						
LEM	**Lembang**	**9.33**	**122**	P	**Pn**	**01 40 25.8**	**+4.7**
	429nm,1.0s						
KSM	**Kuching**	**11.22**	**72**	*e*Pn	**Pn**	**01 40 49.1**	**+2.1**
BJII	**Banjamegara**	**11.39**	**118**	P	**Pn**	**01 40 52.2**	**+2.9**
	118nm,1.1s						
SBUM	**Sibu**	**13.34**	**71**	⇑P	**Pn**	**01 41 19.0**	**+3.1**
SJI	**Sawahan**	**13.40**	**116**	P	**Pn**	**01 41 16.0**	**-0.8**
	105nm,0.6s						
KKM	**Kota Kinabalu**	**18.38**	**64**	*e*Pn	**Pn**	**01 42 21.3**	**0.0**
SDKM	**Sandakan**	**19.11**	**67**	⇓P	**Pn**	**01 42 31.2**	**+1.0**
TSM	**Tawau**	**19.27**	**71**	⇓P	**Pn**	**01 42 32.4**	**+0.3**
MYLDM	**Lahad Datu**	**20.15**	**69**	⇑P	**P**	**01 42 42.4**	**+1.8**
PCI	**Palu**	**20.24**	**87**	P	**P**	**01 42 42.0**	**+0.4**
	298nm,1.4s						
CMAR	**Chiang Mai Arr**	**20.29**	**358**	P	**P**	**01 42 39.1**	**-2.9**
	23nm,0.7s,baz=186,slow=10,SNR=44						
CMAR				PcP	PcP	01 46 55.0	-0.2
	2.6nm,0.5s,baz=219,slow=3.3,SNR=4.9						
KAPI	**Kappang**	**20.33**	**99**	P	**P**	**01 42 41.1**	**-1.4**
	780nm,0.8s,SNR=16						
KAPI	**Kappang**	**20.33**	**99**	P	**P**	**01 42 37.8**	**-4.8**
	120nm,0.9s,baz=280,slow=8.2,SNR=15						
KAPI	**Kappang**	**20.33**	**99**	*e*P	**P**	**01 42 41.1**	**-1.4**
	134nm,1.0s						
CHTO	**Chiang Mai**	**20.64**	**358**	*e*P	**P**	**01 42 45.2**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,27nm,0.8s						
CHTO	**Chiang Mai**	**20.64**	**358**	*e*P	**P**	**01 42 45.1**	**-0.7**
	comp=Z,27nm,0.8s						
NANT	**Nan**	**20.65**	**3**	⇑P	**P**	**01 42 45.0**	**-0.9**
	comp=Z,488nm,1.0s						
PALK	**Pallekele**	**20.98**	**296**	*e*P	**P**	**01 42 51.8**	**+2.2**
KDI	**Kendari**	**23.06**	**95**	P	**P**	**01 43 11.8**	**0.0**
	comp=Z,129nm,1.2s,mb5.2						
QIZ	**Qiongzhong**	**23.15**	**25**	P	**P**	**01 43 12.0**	**-0.6**
QIZ	**Qiongzhong**	**23.15**	**25**	*e*P	**P**	**01 43 11.3**	**-1.3**
	comp=Z,166nm,1.0s,mb5.4						
BBSI	**Bau Bau**	**23.17**	**99**	P	**P**	**01 43 13.3**	**+0.3**
	comp=Z,91nm,1.0s,mb5.2						
BATI	**Baumata**	**25.26**	**110**	P	**P**	**01 43 28.6**	**-3.8**
	comp=Z,24nm,0.5s,mb5.0,baz=102,slow=6.9,SNR=3.9						
KMI	**Kunming**	**27.08**	**6**	P	**P**	**01 43 48.8**	**+0.1**
KMI				AP	pP	01 43 53.3	-3.7
KMI				XP	sP	01 43 55.0	-5.5
KMI				PP		01 44 36.7	
KMI				S	**S**	**01 48 28.0**	**+2.8**
KMI				AMB	AMB		
	comp=Z,22nm,1.4s,mb4.5						
MBWA	**Marble Bar**	**27.37**	**136**	*e*P	**P**	**01 43 51.0**	**-0.4**
	comp=Z,21nm,1.1s,mb4.6						
LBMI	**Labuha**	**27.91**	**88**	P	**P**	**01 43 55.9**	**-0.5**
	comp=Z,197nm,0.8s,mb5.8						
GYA	**Guiyang**	**29.05**	**13**	P	**P**	**01 44 08.5**	**+2.2**
GYA				PP	PP	01 45 02.5	-10
GYA				PCP	PcP	01 47 16.3	+2.0
GYA				S	**S**	**01 48 59.0**	**+2.8**
GYA				SS	SS	01 50 28.6	-32
GYA				SCP	ScP	01 50 56.8	+2.7
GYA				SCS	ScS	01 54 49.7	+1.5
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,130nm,4.6s						
GYA				LR	LR		
	comp=N,560nm,17.4s,MS4.4						
GYA				LR	LR		
	comp=E,570nm,16.9s,MS4.4						
GYA				LR	LR		
	comp=Z,630nm,15.2s,MS4.3						
FITZ	**Fitzroy Crossi**	**30.16**	**124**	*e*P	**P**	**01 44 14.9**	**-1.4**
	comp=Z,27nm,0.9s,mb5.0						
FITZ	**Fitzroy Crossi**	**30.16**	**124**	P	**P**	**01 44 15.3**	**-1.0**
	comp=Z,8.1nm,0.8s,mb4.5,baz=310,slow=10,SNR=7.9						
ODAN	**Odare**	**30.98**	**338**	*e*P	**P**	**01 44 24.2**	**+0.9**
	comp=Z,122nm,0.7s,mb5.8						
TAPN	**Taplejung**	**31.31**	**339**	*e*P	**P**	**01 44 27.5**	**+1.2**
	comp=Z,223nm,0.9s,mb6.0						
RAMN	**Ramite**	**31.35**	**337**	*e*P	**P**	**01 44 27.9**	**+1.2**
	comp=Z,103nm,0.7s,mb5.8						
SWI	**Sorong**	**31.65**	**88**	P	**P**	**01 44 28.2**	**-1.4**
	comp=Z,166nm,1.0s,mb5.8						
JIRN	**Jiri**	**32.15**	**337**	*e*P	**P**	**01 44 34.8**	**+1.1**
	comp=Z,218nm,0.8s,mb6.1						
PKI	**Pulchoki**	**32.38**	**336**	*e*P	**P**	**01 44 36.3**	**+0.6**
	comp=Z,55nm,0.9s,mb5.4						
GUN	**Gumba**	**32.49**	**337**	*e*P	**P**	**01 44 37.9**	**+1.2**
	comp=Z,156nm,0.6s,mb6.0						
LSA	**Lhasa**	**32.49**	**346**	P	**P**	**01 44 37.7**	**+1.0**
LSA	**Lhasa**	**32.49**	**346**	*e*P	**P**	**01 44 37.4**	**+0.7**
KKN	**Kakani**	**32.63**	**336**	*e*P	**P**	**01 44 38.5**	**+0.7**
	comp=Z,108nm,0.8s,mb5.8						
CD2	**Chengdu**	**32.91**	**7**	*e*P	**P**	**01 44 38.9**	**-1.4**
CD2				AP	pP	01 44 43.4	-5.3
CD2				XP	sP	01 44 46.3	-5.8
CD2				PP	PP	01 45 49.2	-5.9
CD2				S	**S**	**01 49 55.8**	**-0.7**
CD2				SS	SS	01 51 55.5	-24
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GKN	**Gorkha**	**33.08**	**335**	*e*P	**P**	**01 44 42.4**	**+0.6**
	comp=Z,57nm,0.8s,mb5.6						
KOLN	**Koldanda**	**33.32**	**334**	*e*P	**P**	**01 44 44.8**	**+0.8**
	comp=Z,94nm,0.8s,mb5.8						
NACB	**Ninganchiao**	**33.62**	**38**	*e*P	**P**	**01 44 46.1**	**-0.5**
	comp=Z,158nm,1.0s,mb5.9						
DANN	**Dangsing**	**33.76**	**334**	*e*P	**P**	**01 44 48.6**	**+0.9**
	comp=Z,136nm,1.1s,mb5.8						
YHNB	**Yeheng**	**33.86**	**37**	*e*P	**P**	**01 44 48.4**	**-0.3**
	comp=Z,49nm,1.1s,mb5.3						
NWAO	**Narrogin (SRO)**	**34.98**	**154**	P	**P**	**01 44 57.3**	**-1.0**
	comp=Z,13nm,0.8s,mb4.9,baz=332,slow=13,SNR=3.5						
WHN	**Wuhan**	**35.23**	**22**	P	**P**	**01 45 00.0**	**-0.5**
XAN	**Xi'an**	**36.85**	**13**	P	**P**	**01 45 12.5**	**-1.8**
XAN				AP	pP	01 45 20.5	-2.2
XAN				XP	sP	01 45 24.5	-1.6
XAN				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.5						
LZH	**Lanzhou**	**38.05**	**6**	*e*P	**P**	**01 45 24.2**	**-0.2**
LZH				AP	pP	01 45 29.0	-3.8
LZH				XP	sP	01 45 31.3	-4.9
LZH				PP	PP	01 46 55.1	+3.4
LZH				*e*S	**S**	**01 51 17.0**	**+1.8**
LZH				XS	sS	01 51 24.5	-4.5
LZH				SS	SS	01 53 55.4	-7.8
LZH				AMB	AMB		
	comp=Z,57nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,285nm,5.4s						
WRA	**Warramunga Arr**	**38.35**	**120**	P	**P**	**01 45 26.0**	**-1.2**
	comp=Z,32nm,0.8s,mb5.1,baz=302,slow=9.0,SNR=59						
WRA				PcP	PcP	01 47 40.3	-0.5
	comp=Z,4.8nm,0.6s,baz=318,slow=2.6,SNR=7.7						
WRA				S	**S**	**01 51 14.5**	**-5.8**
	comp=Z,3.7nm,0.8s,baz=296,slow=16,SNR=9.5						
WRA	**Warramunga Arr**	**38.35**	**120**	*i* P	**P**	**01 45 26.0**	**-1.2**
WRA				pmax	pmax		
	comp=Z,32nm,0.8s						
WRAB	**Tennant Creek**	**38.36**	**120**	P	**P**	**01 45 26.7**	**-0.5**
	comp=Z,300nm,0.9s,mb6.0,SNR=9.0						
WRAB	**Tennant Creek**	**38.36**	**120**	*e*P	**P**	**01 45 25.9**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.2						
WRAB	**Tennant Creek**	**38.36**	**120**	*e*P	**P**	**01 45 25.9**	**-1.4**
	comp=Z,32nm,0.7s,mb5.2						
WB2	**Warramunga Arr**	**38.36**	**120**	*e*P	**P**	**01 45 26.0**	**-1.3**
WB2				*e*S	**S**	**01 51 14.7**	**-5.8**
NJ2	**Nanjing**	**38.42**	**27**	*e*P	**P**	**01 45 28.3**	**+0.7**
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
FORT	**Forrest**	**39.33**	**140**	*e*P	**P**	**01 45 42.1**	**+6.9**
	comp=Z,50nm,0.6s,mb5.4						
FORT	**Forrest**	**39.33**	**140**	*e*P	**P**	**01 45 35.8**	**+0.6**
	comp=Z,10nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**39.59**	**126**	P	**P**	**01 45 37.1**	**-0.4**
	comp=Z,18nm,0.7s,mb4.9,baz=301,slow=7.5,SNR=44						
ASAR				PcP	PcP	01 47 45.3	+0.7
	comp=Z,10nm,0.9s,baz=302,slow=3.5,SNR=7.2						
ASAR				S	**S**	**01 51 36.2**	**-2.7**
	comp=Z,3.1nm,0.8s,baz=298,slow=14,SNR=13						
THN	**Thein Dam**	**41.00**	**329**	*e*P	**P**	**01 45 47.4**	**-1.7**
GTA	**Gaotai**	**41.16**	**0**	*e*P	**P**	**01 45 50.1**	**-0.1**
GTA				AP	pP	01 45 53.7	-5.0
GTA				XP	sP	01 45 55.2	-6.9
GTA				AMB	AMB		
	comp=Z,23nm,1.5s,mb4.6						
HHC	**Hu-ho-hao-te**	**43.97**	**13**	*e*P	**P**	**01 46 13.1**	**0.0**
HHC				S	**S**	**01 52 44.6**	**+1.5**
HHC				AMB	AMB		
	comp=Z,22nm,0.7s,mb5.0						
BJT	**Baijiatuau**	**44.43**	**18**	*e*P	**P**	**01 46 16.0**	**-0.8**
BJT				pmax	pmax		
	comp=Z,23nm,0.8s						
BJT	**Baijiatuau**	**44.43**	**18**	*e*P	**P**	**01 46 16.0**	**-0.8**
	comp=Z,23nm,0.8s,mb5.0						
BJI	**Beijing**	**44.45**	**18**	P	**P**	**01 46 16.2**	**-0.8**
BJI				AMB	AMB		
	comp=Z,29nm,1.0s,mb5.0						
DL2	**Dalian**	**45.43**	**24**	P	**P**	**01 46 23.7**	**-1.0**
DL2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
KBL	**Kabul**	**46.27**	**324**	*e*P	**P**	**01 46 31.1**	**-0.4**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
KBL	**Kabul**	**46.27**	**324**	*e*P	**P**	**01 46 31.1**	**-0.4**
	comp=Z,8.9nm,0.7s,mb4.8						
KSH	**Kashi**	**46.62**	**335**	*e*P	**P**	**01 46 35.0**	**+0.8**
KSH				*e*AP	pP	01 46 37.6	-5.1
KSH				*e*XP	sP	01 46 45.6	-0.5
KSH				*e*PCP	PcP	01 48 09.1	+1.3
KSH				*e*PP	PP	01 48 24.1	0.0
KSH				*e*SCP	ScP	01 52 01.1	+1.4
KSH				*e*PCS	PcS	01 52 02.1	-0.4
KSH				*e*S	**S**	**01 53 22.4**	**+0.8**
KSH				*e*XS	sS	01 53 31.1	-4.6
KSH				*e*SCS	ScS	01 56 26.1	-1.1
KSH				*e*SS	SS	01 56 43.0	-5.1
WMQ	**Urumqi**	**46.80**	**348**	⇑*i* P	**P**	**01 46 36.0**	**+0.5**
WMQ				XP	sP	01 46 44.3	-3.1
WMQ				AMB	AMB		
	comp=Z,89nm,1.0s,mb5.7						
KSRS	**Korea Array**	**47.17**	**31**	P	**P**	**01 46 37.8**	**-0.8**
	comp=Z,28nm

TLY Talaya 53.54 3 *e*P P **01 47 25.2 -1.2**
TLY pmax pmax
comp=Z,34nm,0.9s,mb5.3
OPO Ambohidratompo 53.93 248 P P **01 47 30.9 +1.0**
comp=Z,4.2nm,0.9s,mb4.4,baz=73,slow=7.8,SNR=4.2
KURK Kurchatov 55.45 344 P P **01 47 40.0 -0.3**
comp=Z,537nm,0.9s,mb6.6,SNR=17
KURK Kurchatov 55.45 344 P P **01 47 39.9 -0.4**
comp=Z,39nm,0.8s,mb5.5,baz=167,slow=7.2,SNR=36
KURK S **S** **01 55 30.2 +6.9**
comp=Z,1.1nm,0.8s,baz=153,slow=13,SNR=8.2
KURK Kurchatov 55.45 344 *e*P P **01 47 39.6 -0.7**
KURK pmax pmax
comp=Z,105nm,1.0s,mb5.8
KURK Kurchatov 55.45 344 *e*P P **01 47 40.0 -0.4**
comp=Z,85nm,0.9s,mb5.8
ZAA0 Zalesovo Array 57.05 350 *e*P P **01 47 51.2 -0.4**
ZALV Zalesovo Beam 57.05 350 P P **01 47 51.6 -0.1**
comp=Z,136nm,0.8s,mb6.0,baz=178,slow=5.8,SNR=112
ZALV S **S** **01 55 43.9 -0.5**
comp=Z,3.1nm,1.0s,baz=148,slow=8.7,SNR=5.4
KRAR Krasnoyarsk 58.03 356 *e*P P **01 47 57.5 -1.0**
KRAR pmax pmax
comp=Z,61nm,1.3s,mb5.5
KLR Kul'dur 58.04 24⇓ *i*P P **01 47 54.2 -4.6**
KLR pmax pmax
comp=E,76nm,1.4s
KLR pmax pmax
comp=Z,190nm,1.4s,mb5.9
NVS Novosibirsk 58.19 349 *i* P P **01 47 58.8 -0.9**
NVS *e*S **S** **01 55 57.6 -1.8**
NVS pmax pmax
comp=N,43nm,1.1s
NVS pmax pmax
comp=E,32nm,1.1s
NVS pmax pmax
comp=Z,68nm,1.1s,mb5.6
NVS smax
comp=N,10.0nm,1.5s
NVS smax
comp=E,27nm,1.8s
RDF Al-Radifah 58.51 306 *e*P P **01 48 01.8 -0.6**
baz=306
RDF AMb AMB 01 48 12.9
comp=Z,106nm,1.2s,mb5.8,baz=306
UMR Umm Al-Rimmam 58.62 307 *e*P P **01 48 02.6 -0.5**
baz=306
UMR AMb AMB 01 48 13.7
comp=Z,71nm,1.3s,mb5.5,baz=306
ERM Erimo 58.85 37 *e*P P **01 48 02.9 -1.6**
NAY Al-Naaiem 58.88 306 *e*P P **01 48 04.3 -0.7**
baz=306
NAY AMb AMB 01 48 05.2
comp=Z,28nm,0.8s,mb5.3,baz=306
MIB Mutribah 59.02 307 *e*P P **01 48 05.6 -0.4**
baz=306
MIB AMb AMB 01 48 06.4
comp=Z,72nm,0.9s,mb5.7,baz=306
RST Umm Al-Ruwaisa 59.17 306 *e*P P **01 48 06.0 -1.1**
baz=306
RST AMb AMB 01 48 07.1
comp=Z,33nm,0.8s,mb5.4,baz=306
VOSK Vostochnaya 59.55 340 P P **01 48 07.9 -1.3**
VOSK pmax pmax
comp=Z,22nm,0.7s,mb5.3
ASAJ Asahikawa 59.79 35 P P **01 48 10.9 0.0**
comp=Z,15nm,0.6s,mb5.2,baz=245,slow=14,SNR=8.7
BVA0 Borovoye Array 60.01 340 *i* P P **01 48 10.9 -1.4**
BVA0 pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BVAR Borovoye Array 60.01 340 P P **01 48 11.4 -0.9**
comp=Z,22nm,0.7s,mb5.3,baz=141,slow=9.0,SNR=51
BRVK Borovoye 60.07 340 P P **01 48 11.7 -1.0**
comp=Z,176nm,0.8s,mb6.1,SNR=5.5
BRVK Borovoye 60.07 340 *e*P P **01 48 11.6 -1.1**
BRVK pmax pmax
comp=Z,17nm,0.8s,mb5.1
BRVK Borovoye 60.07 340 *e*P P **01 48 11.6 -1.2**
comp=Z,18nm,0.8s,mb5.1
BOD Bodaibo 60.69 9 *e*P P **01 48 16.4 -0.5**
BOD pmax pmax
comp=Z,70nm,0.9s,mb5.8
AB31 Akbulak array 61.41 332 *i* P P **01 48 20.9 -1.1**
AB31 pmax pmax
comp=Z,41nm,0.7s,mb5.7
AB31 Akbulak array 61.41 332⇑ *e*P P **01 48 20.0 -2.0**
YSS Yuzh-Sakhalins 61.64 32 *e*P P **01 48 22.0 -1.6**
YSS *e* pP 01 48 29.0 -3.4
YSS pmax pmax
comp=Z,150nm,1.0s,mb6.1
YSS Yuzh-Sakhalins 61.64 32 *e*P P **01 48 23.4 -0.2**
comp=Z,152nm,1.1s,mb6.0
KMBO Kilima Mbogo 62.34 270 P P **01 48 30.2 +1.2**
comp=Z,4.0nm,1.0s,mb4.5,baz=60,slow=6.6,SNR=7.6
KMBO Kilima Mbogo 62.34 270 *e*P P **01 48 30.7 +1.8**
KMBO pmax pmax
comp=Z,17nm,1.0s
KMBO Kilima Mbogo 62.34 270 *e*P P **01 48 30.7 +1.7**
comp=Z,17nm,1.0s,mb5.1
AKTK Aktyubinsk 63.13 332 P P **01 48 32.5 -1.0**
AKTO Aktyubinsk 63.13 332 P P **01 48 32.5 -1.0**
comp=Z,15nm,0.8s,mb5.2,baz=122,slow=7.2,SNR=19
AKTO Aktyubinsk 63.13 332 *i* P P **01 48 32.2 -1.2**
AKTO pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
CASY Casey 64.67 175 *e*P P **01 48 44.1 +0.9**
comp=Z,4.3nm,1.1s,mb4.4
GNI Garni 65.22 316 P P **01 48 47.6 +0.2**
comp=Z,5.8nm,0.8s,mb4.6,baz=355,slow=21,SNR=3.8
GNI Garni 65.22 316 *e*P P **01 48 47.3 -0.1**
GNI pmax pmax
comp=Z,11nm,1.2s
GNI Garni 65.22 316 *e*P P **01 48 47.3 -0.1**
comp=Z,15nm,1.0s,mb5.0
SVE Sverdlovsk 66.49 338⇓ *e*P P **01 48 55.0 -0.2**
SVE pmax pmax
comp=Z,67nm,1.0s,mb5.6
ARU Arti 67.01 337 P P **01 48 57.0 -1.5**
comp=Z,186nm,1.0s,mb6.1,SNR=6.1
ARU Arti 67.01 337 *d* *i*P P **01 48 57.6 -0.9**
ARU *e*S S 01 57 48.6 -1.5
ARU pmax pmax
comp=Z,43nm,1.2s,mb5.3
ARU Arti 67.01 337 *e*P P **01 48 57.4 -1.2**
ARU *e*pP pP 01 49 06.8 -0.6
YAK Yakutsk 67.79 15*c* *i*P P **01 49 02.2 -1.2**
YAK pmax pmax
comp=Z,230nm,1.0s,mb6.2
YAK Yakutsk 67.79 15 *e*P P **01 49 02.2 -1.1**
comp=Z,229nm,0.8s,mb6.3
ASF Jabal al Asfar 68.25 306 P P **01 49 07.7 +0.8**
comp=Z,4.7nm,0.8s,mb4.5,baz=13,slow=3.4,SNR=9.9
KIV Kislovodsk 68.25 319 P P **01 49 06.4 -0.2**
comp=Z,180nm,0.8s,mb6.2,SNR=5.2
KIV Kislovodsk 68.25 319⇑ *e*P P **01 49 06.5 -0.1**
KIV *e**PP pP 01 49 16.3 +0.8
KIV *e**SP sP 01 49 21.7 +2.8
KIV 01 49 32.0
KIV pmax pmax
comp=Z,28nm,0.9s,mb5.3
KIV Kislovodsk 68.25 319⇓ *i*P P **01 49 07.0 +0.4**
KIV Kislovodsk 68.25 319 *e*P P **01 49 06.3 -0.4**
comp=Z,33nm,0.9s,mb5.4
MALT Malatya 69.02 312 *e*P P **01 49 10.0 -1.6**
MALT pmax pmax
comp=Z,15nm,1.2s,mb4.8
MALT Malatya 69.02 312⇑ *i*P P **01 49 10.4 -1.2**
MALT Malatya 69.02 312 *e*P P **01 49 10.0 -1.5**
comp=Z,15nm,1.2s,mb4.8
EIL Elat 69.17 303 P P **01 49 12.3 -0.4**
comp=Z,9.1nm,0.8s,mb4.7,baz=128,slow=1.7,SNR=7.7
EIL Elat 69.17 303 P P **01 49 12.3 -0.4**
MMAI Mount Meron Ar 69.70 306 P P **01 49 17.1 +1.2**
comp=Z,8.2nm,0.7s,mb4.8,baz=101,slow=8.6,SNR=13
MMAI PcP PcP 01 49 39.2 +0.6
comp=Z,4.1nm,0.7s,baz=110,slow=7.2,SNR=3.7
SOC Sochi 70.06 318 *e*P P **01 49 16.2 -1.7**
SOC pmax pmax
comp=Z,34nm,0.9s,mb5.3
SOC Sochi 70.06 318 *i* P P **01 49 17.5 -0.4**
MAW Mawson 70.24 194 *e*P P **01 49 19.4 +0.9**
comp=Z,7.4nm,1.1s,mb4.5
MAW Mawson 70.24 194 P P **01 49 18.5 0.0**
comp=Z,3.2nm,0.7s,mb4.3,baz=5.6,slow=6.0,SNR=9.4
MAW Mawson 70.24 194 *e*P P **01 49 19.4 +0.9**
MAW pmax pmax
comp=Z,7.0nm,1.1s
SKR Severo-Kuril's 71.05 34 *e*P P **01 49 23.0 -0.7**
LSZ Lusaka 71.57 255 P P **01 49 28.1 +0.5**
comp=Z,3.7nm,1.0s,mb4.3,baz=116,slow=5.3,SNR=5.0
LSZ Lusaka 71.57 255 *e*P P **01 49 28.7 +1.1**
LSZ pmax pmax
comp=Z,14nm,1.1s,mb4.8
LSZ Lusaka 71.57 255 *e*P P **01 49 28.6 +1.0**
comp=Z,14nm,1.1s,mb4.8
CSS Prodhromos 71.89 308 *e*P P **01 49 28.7 -0.5**
comp=Z,15nm,0.9s,mb4.9
CSS *e*pP pP 01 49 38.4 +0.3
PETK Petropavlovsk- 73.05 32 P P **01 49 34.9 -0.8**
comp=Z,9.1nm,0.6s,mb4.9,baz=204,slow=2.1,SNR=27
VSR Storozhevoye 73.52 325 *e*P P **01 49 37.1 -1.4**
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.2
VSR pmax pmax
comp=N,7.0nm,0.9s
VSR pmax pmax
comp=E,30nm,0.9s
PET Petropavlovsk 73.52 33*c* *i*P P **01 49 37.8 -0.7**
PET pmax pmax
comp=Z,36nm,1.1s,mb5.2
PET Petropavlovsk 73.52 33 *e*P P **01 49 37.7 -0.7**
comp=Z,28nm,0.8s,mb5.2
ANTO Ankara 73.67 313 *e*P P **01 49 38.6 -1.0**
ANTO *e**PP pP 01 49 48.9 +0.3
ANTO pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ANTO Ankara 73.67 313⇑ *i*P P **01 49 38.8 -0.8**
ANTO Ankara 73.67 313 *e*P P **01 49 38.6 -1.0**
comp=Z,9.9nm,0.8s,mb4.8
ANTO *e*pP pP 01 49 48.9 +0.3
SIM Simferopol' 74.30 318 *e*P P **01 49 43.2 0.0**
SIM pmax pmax
comp=Z,20nm,0.8s,mb5.1
LBTB Lobatse 74.70 245 *e*P P **01 49 46.9 +0.9**
LBTB *e**PP pP 01 49 55.9 +1.0
LBTB pmax pmax
comp=Z,27nm,1.1s,mb5.1
LBTB Lobatse 74.70 245 *e*P P **01 49 46.9 +0.9**
comp=Z,27nm,1.1s,mb5.1
LBTB *e*pP pP 01 49 55.9 +1.0
BOSA Boshof 75.34 241 P P **01 49 50.4 +0.8**
comp=Z,2.8nm,0.8s,mb4.2,baz=112,slow=11,SNR=3.6
TIXI Tiksi 75.87 9 *e*P P **01 49 50.0 -1.7**
OBN Obninsk 76.55 328⇑ *e*P P **01 49 55.4 -0.5**
OBN *e* pP 01 50 04.9 0.0
OBN *e**SP sP 01 50 09.3 +1.1
OBN pmax pmax
comp=Z,43nm,1.3s,mb5.2
OBN Obninsk 76.55 328 *e*P P **01 49 55.4 -0.5**
comp=Z,100nm,1.5s,mb5.5
SYO Syowa Base 77.79 199⇑ *e*P P **01 50 02.2 -0.4**
SYO Syowa Base 77.79 199⇑ *e*PcP PcP 01 50 11.2 -1.3
TIRR Tirgusor 78.05 316⇑ *i*P P **01 50 04.0 -0.6**
TIRR Tirgusor 78.05 316 ⇑P P **01 50 04.0 -0.6**
KIS Kishinev 78.44 319 *e*P P **01 50 06.0 -0.7**
KIS *e* pP 01 50 15.0 -0.7
IDI Anoyia 78.70 306 P P **01 50 07.2 -1.2**
comp=Z,6.6nm,0.6s,mb4.8,baz=83,slow=5.6,SNR=8.0
AKASG Malin Array Be 79.21 322 P P **01 50 09.3 -1.5**
comp=Z,4.2nm,0.8s,mb4.4,baz=85,slow=4.5,SNR=9.7
AKASG PP PP 01 53 10.9 +0.3
comp=Z,0.7nm,0.5s,baz=87,slow=7.6,SNR=4.2
AKASG Malin Array Be 79.21 322 *i* P P **01 50 09.6 -1.2**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
VRI Vrincioaia 79.55 317⇑ *i*P P **01 50 13.3 +0.5**
VRI Vrincioaia 79.55 317 ⇑P P **01 50 13.3 +0.6**
MLR Muntele Rosu 80.00 317 P P **01 50 14.7 -0.5**
comp=Z,18nm,0.9s,mb5.0,baz=123,slow=3.3,SNR=16
MLR Muntele Rosu 80.00 317⇑ *i*P P **01 50 15.6 +0.4**
MLR Muntele Rosu 80.00 317 ⇑P P **01 50 15.6 +0.4**
BURAR Bucovina Array 80.97 319⇑ *i*P P **01 50 21.3 +0.9**
BURAR Bucovina Array 80.97 319 ⇑P P **01 50 21.3 +0.9**
BUR08 Bucovina Ar. S 80.98 319 *e*P P **01 50 21.1 +0.6**
TSUM Tsumeb 81.84 251 *e*P P **01 50 26.4 +0.9**
comp=Z,12nm,1.0s,mb4.8
TSUM *e*pP pP 01 50 34.8 +0.1
JOF Joensuu 82.01 335 *e*p P **01 50 24.3 -1.2**
comp=Z,13nm,0.7s,mb5.0
JOF Joensuu 82.01 335 *e*P P **01 50 24.3 -1.2**
JOF pmax pmax
comp=Z,13nm,0.7s,mb5.0
DRGR 82.47 318⇑ *i*P P **01 50 29.1 +0.8**
DRGR 82.47 318 ⇑P P **01 50 29.1 +0.8**
APA Apatity 82.91 339⇑ *i*P P **01 50 25.4 -4.7**
APA pmax pmax
comp=Z,18nm,1.0s,mb5.1
BZS Buzias 83.00 316⇓ *i*P P **01 50 31.1 0.0**
BZS Buzias 83.00 316 ⇓P P **01 50 31.1 0.0**
KWP Kalwaria 83.02 320⇑ *i*P P **01 50 31.3 +0.2**
KWP Kalwaria 83.02 320 ⇑P P **01 50 31.3 +0.2**
KOLS Kolonicke sedl 83.16 320 *e*P P **01 50 32.0 +0.1**
SUW Suwalki 83.62 325 *e*P P **01 50 34.0 -0.1**
CRVS Cervenica-Dubn 83.69 319 *e*P P **01 50 34.6 +0.1**
STHS Stebnicka Huta 83.92 320 *i* P P **01 50 36.3 +0.6**
STHS *e* pP 01 50 45.9 +1.1
STHS pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
STHS Stebnicka Huta 83.92 320 *i* P P **01 50 36.3 +0.6**
comp=Z,8.2nm,0.9s,mb4.9
STHS *e* pP 01 50 45.9 +1.1
KAF Kangasniemi 83.96 333 *e*p P **01 50 34.6 -1.1**
comp=Z,30nm,0.6s,mb5.6,baz=101,slow=4.7
KAF Kangasniemi 83.96 333 *e*P P **01 50 34.6 -1.1**
KAF pmax pmax
comp=Z,30nm,0.6s,mb5.6
KECS Kecovo 84.25 319 *e*P P **01 50 36.9 -0.5**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KECS Kecovo 84.25 319 *e*P P **01 50 36.9 -0.5**
comp=Z,2.7nm,0.8s,mb4.4
PSZ Piszkesteto 84.55 318 *e*P P **01 50 38.8 -0.2**
PSZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
PSZ Piszkesteto 84.55 318⇑ *i*P P **01 50 39.2 +0.2**
PSZ Piszkesteto 84.55 318 *e*P P **01 50 38.8 -0.2**
comp=Z,5.8nm,0.8s,mb4.8
PKSM Moragy 85.15 317⇑ *i*P P **01 50 42.0 0.0**
VYHS Vyhne 85.34 319 *e*P P **01 50 42.4 -0.5**
KEV Kevo 85.85 341 *e*p P **01 50 42.9 -2.1**
comp=Z,22nm,0.9s,mb5.4
KEV Kevo 85.85 341 *e*P P **01 50 42.9 -2.1**
KEV pmax pmax
comp=Z,22nm,0.9s,mb5.4
OKC Ostrava-Krasne 85.97 320 *e*P P **01 50 46.2 +0.2**
ARCES ARCESS Array B 86.30 340 P P **01 50 46.3 -0.9**
comp=Z,16nm,0.8s,mb5.3,baz=101,slow=6.3,SNR=22
MODS Modra-Piesok 86.35 319 *e*P P **01 50 48.0 +0.1**
MORC Moravsky Berou 86.35 320 *e*P P **01 50 47.6 -0.3**
MORC pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
MORC Moravsky Berou 86.35 320 *e*P P **01 50 47.6 -0.3**
comp=Z,6.1nm,0.9s,mb4.8
ZST Bratislava 86.44 318 *i* P P **01 50 48.8 +0.4**
comp=Z,7.2nm,0.8s,mb5.0
GKP Gorka Klasztor 86.98 323 *e*P P **01 50 51.0 0.0**
GKP Gorka Klasztor 86.98 323 *e*P P **01 50 51.0 +0.1**
DPC Dobruska-Polom 87.20 320 *e*P P **01 50 52.8 +0.8**
DPC *e*pP pP 01 51 02.4 +1.2
BOJS Bojanci 87.42 316 *i* P P **01 50 53.5 +0.3**
PERS Pernice 87.62 317 *i* P P **01 50 54.9 +0.8**
TREC Trest 87.63 319 *e*P P **01 50 54.2 +0.1**
SOKA Soboth 87.68 317⇓ *i*P P **01 50 54.8 +0.3**
VISS Visnje 87.73 316 *i* P P **01 50 54.5 -0.2**
JAVS Javornik 88.28 316 *i* P P **01 50 55.8 -1.5**
PRU Pruhonice 88.30 320 *e*P P **01 50 57.5 +0.2**
PRU *e*pP pP 01 51 07.8 +1.3
PVCC Panska Ves 88.33 320 *e*P P **01 50 58.3 +0.8**
PVCC *e*pP pP 01 51 07.4 +0.8
GEC2 GERESS Array S 88.76 319 *e*P P **01 50 59.8 +0.3**
GEC2 pmax pmax
comp=Z,24nm,1.6s,mb5.3
GEC2 GERESS Array S 88.76 319 *e*P P **01 50 59.8 +0.3**
comp=Z,24nm,1.6s,mb5.3
GERES GERESS Array B 88.76 319 P P **01 50 59.6 +0.1**
comp=Z,2.9nm,0.8s,mb4.7,baz=72,slow=4.3,SNR=21
BRG Berggiesshubel 88.76 321 *e*P P **01 51 00.0 +0.5**
BRG *e* pP 01 51 09.9 +1.3
BRG 01 54 33.0
BRG pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
BRG pmax pmax
comp=Z,9.0nm,1.9s,mb4.8
BRG Berggiesshubel 88.76 321 *e*P P **01 51 00.0 +0.6**
comp=Z,9.5nm,1.0s,mb5.1
BRG *e* pP 01 51 09.8 +1.3
BRG PP PP 01 54 33.0 +4.4
comp=Z,6.5nm,1.0s
comp=Z,15nm,1.9s
KHC Kasperske Hory 88.86 319 *e*P P **01 50 59.8 -0.2**
WET Wettzell 89.32 319 *e*P P **01 51 02.5 +0.4**
WET pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
WET Wettzell 89.32 319 *e*P P **01 51 02.5 +0.4**
comp=Z,9.0nm,1.0s,mb5.0
CLL Collm 89.38 321⇑ *i*P P **01 51 02.4 0.0**
CLL *i* pP 01 51 12.2 +0.7
CLL pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
CLL Collm 89.38 321 *e*P P **01 51 02.3 -0.1**
comp=Z,8.0nm,0.9s,mb5.0
CLL Collm 89.38 321⇑ *i*P P **01 51 02.4 0.0**
comp=Z,8.0nm,0.9s,mb5.0
CLL *i* pP pP 01 51 12.2 +0.7
CLL *ex* x 01 51 27.0
CLL Collm 89.38 321⇑ *i*P P **01 51 02.4 0.0**
comp=Z,8.0nm,0.9s,mb5.0
CLL *i* pP 01 51 12.2 +0.7
HFS Hagfors 89.64 330 P P **01 51 03.5 +0.1**
comp=Z,4.8nm,0.8s,mb4.9,baz=160,slow=4.6,SNR=11
TANN Tannenbergstha 89.67 320 *e*P P **01 51 04.2 +0.5**
comp=Z,12nm,1.5s,mb5.0
ROTZ Rotzenmuhle 89.79 320 *e*P P **01 51 05.0 +0.7**
comp=Z,9.0nm,1.1s,mb5.0
MANZ Manzenberg 89.87 320 *e*P P **01 51 05.5 +0.8**
comp=Z,16nm,1.0s,mb5.3
MOX Moxa 90.22 320 *e*P P **01 51 06.5 +0.2**
comp=Z,20nm,1.6s,mb5.2
MOX Moxa 90.22 320 *e*P P **01 51 06.5 +0.2**
MOX pmax pmax
comp=Z,20nm,1.6s,mb5.2
MOX Moxa 90.22 320 *e*P P **01 51 06.4 +0.1**
comp=Z,13nm,1.3s,mb5.1
MOTA Moosalm 90.41 317⇑ *i*P P **01 51 06.8 -0.5**
comp=Z,6.9nm,1.0s,mb4.9
GRA1 Grafenberg Arr 90.43 320 *e*P P **01 51 07.9 +0.6**
comp=Z,14nm,1.0s,mb5.2
GRF Grafenberg Arr 90.43 320 *e*P P **01 51 07.9 +0.6**
GRF pmax pmax
comp=Z,14nm,1.0s,mb5.2
GRF Grafenberg Arr 90.43 320 *e*P P **01 51 07.9 +0.6**
GRF pmax pmax
comp=Z,14nm,1.0s,mb5.2
GRF Grafenberg Arr 90.43 320 *e*P P **01 51 07.9 +0.6**
comp=Z,14nm,1.0s,mb5.2
NB2 NORSAR Subarra 90.91 331 P P **01 51 08.8 -0.5**
comp=Z,4.7nm,0.8s,mb4.9,baz=93,slow=4.8
NOA NORSAR Array B 90.91 331 P P **01 51 09.1 -0.2**
comp=Z,3.0nm,0.8s,mb4.7,baz=94,slow=4.7,SNR=8.0
DAVOX Davos/Dischmat 91.22 317 P P **01 51 12.0 +0.9**
comp=Z,9.6nm,0.7s,mb5.2,baz=144,slow=7.5,SNR=11
DAVA Damuels 91.24 317⇑ *i*P P **01 51 11.6 +0.5**
comp=Z,16nm,0.9s,mb5.3
DAVA Damuels 91.24 317⇑ *i*PcP PcP 01 51 11.6 -0.5
comp=Z,16nm,0.9s
DAVOS Davos 91.28 317 P P **01 51 12.0 +0.6**
KEST Kesra 91.34 306 P P **01 51 13.4 +1.5**
comp=Z,3.7nm,0.8s,mb4.8,baz=87,slow=1.1,SNR=13
SNAA Sanae 92.07 198 *e*P P **01 51 15.6 +1.1**
SNAA pmax pmax
comp=Z,3.0nm,0.9s
SNAA Sanae 92.07 198 *e*P P **01 51 15.6 +1.1**
comp=Z,3.3nm,0.9s,mb4.7
BFO Black Forest 92.30 318 *e*P P **01 51 15.8 -0.2**
BFO pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
BFO Black Forest 92.30 318 *e*P P **01 51 15.8 -0.2**
comp=Z,7.0nm,1.1s,mb4.9
MBDF Montbardon 93.39 315 *e*P P **01 51 22.8 +1.7**
LPG La Plagne 93.39 315⇑ *i*P P **01 51 21.4 +0.3**
comp=Z,6.9nm,0.7s,mb4.9
LPG La Plagne 93.39 315⇑ *i*P P **01 51 21.4 +0.3**
LPG pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
LPG La Plagne 93.39 315⇑ *i*P P **01 51 21.4 +0.3**
comp=Z,3.5nm,0.7s,mb4.9
LPL La Plagne 93.40 315⇑ *i*P P **01 51 21.5 +0.3**
comp=Z,5.6nm,0.6s,mb4.8
LPL La Plagne 93.40 315⇑ *i*P P **01 51 21.5 +0.3**
LPL pmax pmax
comp=Z,3.0nm,0.6s,mb4.9
LPL La Plagne 93.40 315⇑ *i*P P **01 51 21.5 +0.3**
comp=Z,2.8nm,0.6s,mb4.9
ORIF Oris-en-Rattie 94.02 315⇑ *i*P P **01 51 24.4 +0.4**
comp=Z,8.5nm,1.0s,mb4.8
ORIF Oris-en-Rattie 94.02 315⇑ *i*P P **01 51 24.4 +0.4**
ORIF pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
ORIF Oris-en-Rattie 94.02 315⇑ *i*P P **01 51 24.4 +0.4**
comp=Z,4.3nm,1.0s,mb4.8
MEZF Maizieres J'vi 94.48 318 *e*P P **01 51 26.3 +0.2**
BAIF Baives 94.96 320 *e*P P **01 51 28.4 +0.2**
LOR Lormes 95.34 317 *e*P P **01 51 30.4 +0.4**
comp=Z,6.8nm,0.9s,mb4.8
LOR Lormes 95.34 317 *e*P P **01 51 30.4 +0.4**
LOR pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
LOR Lormes 95.34 317 *e*P P **01 51 30.4 +0.4**
comp=Z,3.4nm,0.9s,mb4.8
SMF Signal de Mont 95.38 316 *e*P P **01 51 30.1 -0.1**
LASF Ste Croix 95.49 314 *e*P P **01 51 31.2 +0.4**
comp=Z,5.7nm,0.9s,mb4.7
AVF Avril sur Loir 95.71 317 *e*P P **01 51 32.2 +0.5**
TCF Toulx Ste Croi 96.53 316⇑ *i*P P **01 51 35.3 -0.1**
comp=Z,9.7nm,1.0s,mb4.9
TCF Toulx Ste Croi 96.53 316⇑ *i*P P **01 51 35.3 -0.1**
TCF pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
TCF Toulx Ste Croi 96.53 316⇑ *i*P P **01 51 35.3 -0.1**
comp=Z,4.8nm,1.0s,mb4.9
EKA Eskdalemuir Ar 98.86 326 P P **01 51 44.9 -0.8**
comp=Z,0.7nm,0.7s,mb4.3,baz=88,slow=4.8,SNR=3.6
MCK McKinley 101.12 25 *e*P Pdif 01 51 56.3 +0.5
FCC Fort Churchill 122.34 8 *e*P Pdif 01 53 30.7 +0.6
NEW Newport 124.08 29 *e*PKIKP PKPdf 01 57 04.4 +0.1
HUMO Hull Mountain 124.48 37 *e*PKPdf PKPdf 01 57 05.4 +0.2
LNOR Lincton Mounta 125.11 32 *e*PKIKP PKPdf 01 57 06.0 -0.3
CHMT Chamberlain Mo 126.88 28 *e*PKPdf PKPdf 01 57 08.9 -0.7
WWOR Wild Horse Val 127.14 35 *e*PKIKP PKPdf 01 57 11.1 +0.8
BOZ Bozeman (W) 128.57 28 *e*PKIKP PKPdf 01 57 13.4 +0.4
HLID Hailey 128.71 31 *e*PKPdf PKPdf 01 57 14.5 +1.2
HLID *e* 01 57 24.4
NVAR Mina Array Bea 129.81 39 PKP PKPdf 01 57 17.3 +1.8
comp=Z,2.0nm,0.7s,baz=260,slow=2.2,SNR=9.2
ULM Lac du Bonnet 130.11 13 PKP PKPdf 01 57 14.7 -1.0
comp=Z,8.7nm,0.8s,baz=356,slow=2.7,SNR=9.5
ELK Elko 130.18 35 *e*PKIKP PKPdf 01 57 17.1 +0.9
TPAW Teton Pass 130.50 29 *e*PKPdf PKPdf 01 57 16.6 -0.1
LOHW Long Hollow 130.58 29 *e*PKPdf PKPdf 01 57 17.5 +0.6
SNOW Snow King Moun 130.62 29 *e*PKPdf PKPdf 01 57 17.4 +0.5
HWUT Hardware Ranch 131.57 31 *e*PKPdf PKPdf 01 57 18.5 -0.3
BW06 Boulder Array 131.72 29 *e*PKPdf PKPdf 01 57 19.3 +0.3
PDAR Pinedale Array 131.72 29 PKP PKPdf 01 57 18.3 -0.7
comp=Z,1.1nm,0.6s,baz=318,slow=2.0,SNR=7.1
DUG Dugway 131.91 33 *e*PKIKP PKPdf 01 57 20.4 +0.9
RSSD Black Hills 133.06 23 *e*PKIKP PKPdf 01 57 21.0 -0.5
MSU Marysvale 133.42 35 *e*PKIKP PKPdf 01 57 24.2 +1.8
PV10 Paradox Valley 135.25 32 *e*PKPdf PKPdf 01 57 26.5 +0.7
WUAZ Wupatki 135.93 37 *e*PKPdf PKPdf 01 57 27.3 +0.2
ECSD ERDS,Sioux Fal 135.96 17 *e*PKPdf PKPdf 01 57 26.6 -0.4
SDCO Great Sand Dun 137.56 30 *e*PKPdf PKPdf 01 57 30.3 +0.1
ANMO Albuquerque 139.18 34 *e*PKHKP 01 57 26.1
ANMO *e* 01 57 33.5
WMOK Wichita Mounta 143.15 26 *e*PKIKP PKPdf 01 57 35.7 -4.6
WCI Wyandotte Cave 143.49 8 *e*PKHKP 01 57 34.6
CPUP Villa Florida 144.13 217 PKP PKPdf 01 57 41.5 -0.8
comp=Z,2.5nm,0.6s,baz=154,slow=4.8,SNR=8.6
CPUP Villa Florida 144.13 217 *e*PKPdf PKPdf 01 57 41.2 -1.1
ELN Prospectdale 144.89 1 *e*PKPdf PKPdf 01 57 41.0 -2.3
TXAR Lajitas Array 144.90 37 PKP PKPdf 01 57 43.2 -0.4
comp=Z,40nm,0.7s,baz=283,slow=1.2,SNR=233
TXAR Lajitas Array 144.90 37 PKP PKPdf 01 57 43.2 -0.4
BLA Blacksburg 144.91 0 *e*PKIKP PKPdf 01 57 41.1 -2.2

WVT	**Waverly**	**145.30**	**11**	*e*PKIKP	PKPdf	01 57 42.9	-1.1
MIAR	**Mount Ida**	**145.32**	**19**	*e*PKIKP	PKPdf	01 57 43.5	-0.6
UALR	**University of**	**145.49**	**18**	*e*PKPbc	PKPbc	01 57 43.4	-1.0
JCT	**Junction City**	**146.18**	**31**	*e*PKP2	PKPab	01 57 45.9	-1.4
BBSR	**BB Station**	**146.33**	**336**	*e*PKPbc	PKPbc	01 57 46.4	-0.6
SWET	**Sewanee**	**146.50**	**8**	*e*PKPbc	PKPbc	01 57 45.9	-1.5
NATX	**Nacogdoches**	**147.43**	**23**	*e*PKPbc	PKPbc	01 57 50.1	-0.1
JSC	**Jenkinsville**	**147.82**	**1**	*e*PKP2	PKPbc	01 57 50.1	-1.1
HKT	**Hockley**	**148.53**	**26**	*e*PKP2	PKPbc	01 57 53.3	+0.1
GOGA	**Godfrey**	**148.57**	**5**	*e*PKP2	PKPbc	01 57 52.6	-0.6
BRAL	**Brewton**	**150.41**	**12**	*e*PKPbc	PKPbc	01 57 57.5	-0.3
LVC	**Limon Verde**	**153.14**	**204**	*e*PKPab	PKPab	01 58 15.3	-0.5

CSEM ***13*** *01:46:14.9±0.1, 4044N×2768E, h10km, MD2.7, Error ellipse: s-maj=1.5km s-min=1.2km az=72.0*
DDA ***13*** *01:46:14.5, 4041N×2764E, h7km±2km, Md2.9*
ISCJB ***13*** *01:46:15.1±0.5, 4043N±002×2764E±004, h7km±4km, Error ellipse: s-maj=5.6km s-min=4.1km az=178.2*
ISK ***13*** *01:46:15.2, 4045N×2769E, h8km, MD2.7*
ISC 13 01:46:15.3±0.5**, 4043N**±002×**2764E**±004**, h9**km±4km**, n21, σ0°72/29, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRMT	**Marmara Adasi**	**0.18**	**348**	*e*P	**Pg**	**01 46 19.7**	**+0.6**
MRMT				*e*S	**Sg**	**01 46 22.7**	**+1.0**
EDC	**Edincik**	**0.19**	**116**	PG	**Pg**	**01 46 19.2**	**0.0**
EDC				*e*S	**Sg**	**01 46 22.0**	**+0.1**
BNT	**Bandirma**	**0.22**	**109**	*e*PG	**Pg**	**01 46 19.3**	**-0.6**
MFT	**Murefte**	**0.45**	**322**	*e*PG	**Pg**	**01 46 23.8**	**-0.4**
BALY	**Balya**	**0.69**	**181**	*i* P	**Pg**	**01 46 27.4**	**-1.2**
BALY				*i* S	**Sg**	**01 46 38.5**	**+0.9**
BALB	**Balikesir**	**0.81**	**167**	*e*PG	**Pg**	**01 46 31.1**	**+0.1**
SLVT	**Silivri**	**0.91**	**28**	*e*PG	**Pg**	**01 46 32.4**	**-0.5**
ELBA	**Catalca**	**0.93**	**40**	*i* P	**Pg**	**01 46 33.3**	**0.0**
ELBA				*i* S	**Sg**	**01 46 46.2**	**+0.8**
DURS	**Dursunbey**	**1.04**	**142**	*i* P	**Pg**	**01 46 34.4**	**-1.0**
DURS				*i* S	**Sg**	**01 46 49.0**	**0.0**
DST	**Dursunbey**	**1.12**	**137**	*e*PN	**Pn**	**01 46 36.7**	**-0.4**
BGKT	**Bogazkoy**	**1.14**	**48**	*e*PN	**Pn**	**01 46 36.0**	**-1.4**
ENEZ	**Enez**	**1.18**	**286**	*e*PN	**Pn**	**01 46 38.3**	**+0.4**
ULDT	**Uludag**	**1.18**	**104**	*i* P	**Pb**	**01 46 37.2**	**-0.6**
ULDT				*i* S	**Sb**	**01 46 54.0**	**+0.8**
GEMT	**Gemlik**	**1.18**	**89**	*e*PN	**Pn**	**01 46 37.5**	**-0.5**
ISK	**Istanbul-Kandi**	**1.25**	**59**	*e*PN	**Pn**	**01 46 38.6**	**-0.3**
YLV	**Yalova**	**1.33**	**84**	*e*PN	**Pn**	**01 46 39.9**	**-0.1**
AYVA	**Ayvalik**	**1.34**	**214**	*i* P	**Pn**	**01 46 39.3**	**-0.9**
AYVA				*i* S	**Sb**	**01 46 58.1**	**+0.3**
KLYT	**Kilyos**	**1.34**	**52**	*e*PN	**Pn**	**01 46 39.7**	**-0.5**
HRT	**Hereke**	**1.59**	**75**	*e*PN	**Pn**	**01 46 43.8**	**+0.1**
ADVT	**Abdulvahap**	**1.60**	**89**	*e*PN	**Pn**	**01 46 44.9**	**+1.1**
DEMI	**Demirci**	**1.61**	**149**	*i* P	**Pn**	**01 46 44.9**	**+0.9**
DEMI				*i* S	**Sn**	**01 47 06.4**	**+1.5**

BJI ***13*** *01:46:18.2, 292S×9956E, h10km, mB5.8, mb4.9*
IDC ***13*** *01:46:24.0±1.0, 219S×9947E, h0km, mb4.5/17, mb1 4.6/17, mb1mx4.4/24, mbtmp4.5/17, Error ellipse: s-maj=37.1km s-min=12.9km az=54.0*
ISCJB ***13*** *01:46:25.4±0.6, 218S±009×995E±0.1, h25km, mb4.7/27, Error ellipse: s-maj=18.1km s-min=7.9km az=139.2*
NEIC ***13*** *01:46:28.0±0.5, 215S×9949E, mb4.7/14, Error ellipse: s-maj=16.1km s-min=6.4km az=50.0*
ISC 13 01:46:27.8±0.6**, 218S**±009×**9948E**±010**, h26**km**, h26**km±3.1**km:pP-P, n46**, σ0°99/42**, mb4.7**/27**, 1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**18.61**	**64**	*e*P	**Pn**	**01 50 43.2**	**-0.5**
KAPI	**Kappang**	**20.43**	**98**	P	**P**	**01 51 03.7**	**+0.4**
	25nm,1.1s,baz=275,slow=14,SNR=6.6						
KAPI	**Kappang**	**20.43**	**98**	*e*P	**P**	**01 51 02.0**	**-1.3**
	29nm,1.0s						
CMAR	**Chiang Mai Arr**	**20.52**	**359**	P	**P**	**01 51 02.5**	**-1.6**
	6.2nm,0.9s,baz=187,slow=10,SNR=12						
CHTO	**Chiang Mai**	**20.87**	**359**	*e*P	**P**	**01 51 08.3**	**+0.3**
	9.3nm,0.9s						
QIZ	**Qiongzhong**	**23.41**	**25**	*e*P	**P**	**01 51 33.9**	**-1.2**
	20nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**30.15**	**123**	P	**P**	**01 52 34.0**	**-1.9**
	4.5nm,0.9s,mb4.2,baz=270,slow=6.9,SNR=5.1						
FITZ	**Fitzroy Crossi**	**30.15**	**123**	*e*P	**P**	**01 52 35.9**	**+0.1**
	10nm,0.9s,mb4.5						
LSA	**Lhasa**	**32.69**	**347**	P	**P**	**01 52 59.3**	**+1.3**
LSA	**Lhasa**	**32.69**	**347**	*e*P	**P**	**01 52 59.0**	**+1.0**
	7.2nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**38.35**	**120**	P	**P**	**01 53 46.4**	**-0.6**
	9.8nm,1.0s,mb4.5,baz=302,slow=9.1,SNR=22						
WRAB	**Tennant Creek**	**38.36**	**120**	*e*P	**P**	**01 53 47.8**	**+0.8**
	547nm,3.0s						
WRAB				*ep*P	pP	01 53 56.9	+2.1
WB2	**Warramunga Arr**	**38.37**	**120**	*e*P	**P**	**01 53 47.0**	**0.0**
ASAR	**Alice Springs**	**39.57**	**126**	P	**P**	**01 53 57.8**	**+0.7**
	3.6nm,0.8s,mb4.1,baz=302,slow=7.1,SNR=11						
ASAR				PcP	PcP	01 56 05.5	+1.2
	1.4nm,0.8s,baz=317,slow=3.3,SNR=5.5						
GTA	**Gaotai**	**41.39**	**0**	*e*P	**P**	**01 54 12.8**	**+1.0**
GTA				AP	pP	01 54 17.4	-2.3
GTA				XP	sP	01 54 19.8	-3.1
GTA				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.6						
WMQ	**Urumqi**	**47.00**	**348**	⇓*i*P	**P**	**01 54 58.6**	**+1.9**
WMQ				XP	sP	01 55 06.5	-1.4
WMQ				AMB	AMB		
	comp=Z,26nm,0.9s,mb5.2						
KSRS	**Korea Array**	**47.44**	**31**	P	**P**	**01 55 00.5**	**+0.2**
	comp=Z,7.7nm,1.0s,mb4.6,baz=222,slow=8.8,SNR=27						
CTA	**Charters Tower**	**49.00**	**115**	P	**P**	**01 55 12.4**	**-0.2**
	comp=Z,8.5nm,1.1s,mb4.7,baz=286,slow=9.1,SNR=8.5						
CTAO	**Charters Tower**	**49.00**	**115**	*e*P	**P**	**01 55 12.3**	**-0.3**
	comp=Z,14nm,1.1s,mb4.9						
STKA	**Stephens Creek**	**49.42**	**131**	*e*P	**P**	**01 55 17.0**	**+1.3**
	comp=Z,6.0nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**49.42**	**131**	P	**P**	**01 55 16.3**	**+0.6**
	comp=Z,3.3nm,0.7s,mb4.5,baz=313,slow=4.8,SNR=7.5						
TKM2	**Tokmak 2**	**49.79**	**337**	*e*P	**P**	**01 55 19.2**	**+0.9**
	comp=Z,9.9nm,0.8s,mb4.9						
SONM	**Songino Array**	**50.18**	**6**	P	**P**	**01 55 22.6**	**+1.5**
	comp=Z,16nm,0.8s,mb5.1,baz=187,slow=9.1,SNR=72						
ULN	**Ulaanbaatar**	**50.28**	**7**	*e*P	**P**	**01 55 22.6**	**+0.8**
	comp=Z,14nm,0.9s,mb5.0						
EKS2	**Erkin-Say**	**54.31**	**335**	*e*P	**P**	**01 55 23.2**	**+1.0**
	comp=Z,9.0nm,0.8s,mb4.8						
MKAR	**Makanchi Array**	**51.06**	**345**	P	**P**	**01 55 28.4**	**+0.6**
	comp=Z,12nm,0.7s,mb5.0,baz=149,slow=8.3,SNR=59						
CN2	**Changchun**	**51.36**	**24**	*e*P	**P**	**01 55 30.0**	**-0.1**
CN2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
MJAR	**Matsushiro Arr**	**52.74**	**39**	P	**P**	**01 55 40.7**	**+0.1**
	comp=Z,1.8nm,0.5s,mb4.2,baz=225,slow=7.6,SNR=7.2						
KURK	**Kurchatov**	**55.63**	**344**	P	**P**	**01 56 01.2**	**-0.1**
	comp=Z,6.0nm,0.8s,mb4.7,baz=166,slow=7.3,SNR=18						
KURK	**Kurchatov**	**55.63**	**344**	*e*P	**P**	**01 56 01.5**	**+0.1**
	comp=Z,10nm,0.4s,mb5.2						
ZAA0	**Zalesovo Array**	**57.25**	**350**	*e*P	**P**	**01 56 12.9**	**+0.1**
ZAA0				*ep*P	pP	01 56 21.4	+0.4
ZALV	**Zalesovo Beam**	**57.25**	**350**	P	**P**	**01 56 13.2**	**+0.4**
	comp=Z,26nm,0.8s,mb5.3,baz=177,slow=5.4,SNR=44						
BVAR	**Borovoye Array**	**60.17**	**340**	P	**P**	**01 56 32.7**	**-0.4**
	comp=Z,4.5nm,0.7s,mb4.6,baz=139,slow=9.2,SNR=21						
BRVK	**Borovoye**	**60.24**	**340**	*e*P	**P**	**01 56 33.0**	**-0.6**
	comp=Z,6.4nm,1.0s,mb4.6						
BRVK				*ep*P	pP	01 56 40.5	-1.2
AKTK	**Aktyubinsk**	**63.27**	**332**	P	**P**	**01 56 51.6**	**-2.4**
AKTO	**Aktyubinsk**	**63.27**	**332**	P	**P**	**01 56 51.6**	**-2.4**
	comp=Z,1.5nm,0.5s,mb4.4,baz=115,slow=9.5,SNR=3.6						
ARU	**Arti**	**67.16**	**337**	*e*P	**P**	**01 57 18.3**	**-0.9**
	comp=Z,2.8nm,0.8s,mb4.3						
KIV	**Kislovodsk**	**68.34**	**319**	*e*P	**P**	**01 57 25.1**	**-1.8**
	comp=Z,3.6nm,0.5s,mb4.7						
PETK	**Petropavlovsk-**	**73.31**	**32**	P	**P**	**01 57 57.0**	**0.0**
	comp=Z,1.6nm,0.7s,mb4.1,baz=242,slow=3.2,SNR=4.6						
ARCES	**ARCESS Array B**	**86.46**	**340**	P	**P**	**01 59 07.3**	**-0.4**
	comp=Z,4.5nm,0.8s,mb4.7,baz=20,slow=4.0,SNR=4.9						
ARCES	**ARCESS Array B**	**86.46**	**340**	P	**P**	**01 59 07.3**	**-0.4**
GERES	**GERESS Array B**	**88.84**	**319**	P	**P**	**01 59 20.3**	**+0.7**
	comp=Z,0.7nm,0.8s,mb4.0,baz=128,slow=3.9,SNR=4.9						
TXAR	**Lajitas Array**	**145.16**	**37**	PKPbc	PKPbc	02 06 04.5	+1.2
	comp=Z,9.2nm,0.7s,baz=287,slow=1.1,SNR=102						
TXAR	**Lajitas Array**	**145.16**	**37**	PKPbc	PKPbc	02 06 04.5	+1.2
MIAR	**Mount Ida**	**145.58**	**19**	*e*PKPbc	PKPbc	02 06 04.2	-0.2
JCT	**Junction City**	**146.45**	**31**	*e*PKPbc	PKPbc	02 06 07.6	+0.4

BJI ***13*** *01:48:58.0, 293S×9946E, h14km, mB5.4, mb5.1, Ms4.8, Msz4.7*
IDC ***13*** *01:49:03.6±0.4, 222S×9947E, h0km, mb4.7/28, mb1 4.8/28, mb1mx4.7/31, mbtmp4.7/28, Error ellipse: s-maj=15.5km s-min=9.3km az=44.0*
ISCJB ***13*** *01:49:05.2±0.2, 224S±004×9941E±003, h22km, mb5.0/89, Error ellipse: s-maj=5.9km s-min=4.1km az=30.2*
NEIC ***13*** *01:49:07.4±2.9, 220S×9947E, h24km±20km, mb5.1/35, Error ellipse: s-maj=8.0km s-min=4.7km az=45.0*
MOS ***13*** *01:49:07.4±1.1, 2.10S×9954E, h33km, mb5.2/32, Error ellipse: s-maj=11.0km s-min=6.2km az=112.4*
SZGRF ***13*** *01:49:20.8, 238S×95.14E, h28km, mb4.7, Southwest of Sumatera, Indonesia*
DJA ***13*** *01:49:46, 424S×10121E, h266km, MLv5.1/5*
ISC 13 01:49:07.3±0.2**, 227S**±004×**9939E**±003**, h23**km**, h23**km±2.1**km:pP-P, n239**, σ0°98/215**, mb5.0/89, 17C-27D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGM	**Kluang**	**5.79**	**43**	⇓P	**Pn**	**01 50 32.9**	**+1.0**
FRIM	**Kepong**	**5.91**	**22**	⇑P	**Pn**	**01 50 33.7**	**+0.2**
MYKOM	**Kota Tinggi**	**6.01**	**48**	⇓P	**Pn**	**01 50 36.4**	**+1.5**
IPM	**Ipoh**	**6.90**	**14**	⇓P	**Pn**	**01 50 47.7**	**+0.5**
KTGM	**Kuala Trenggan**	**8.43**	**26**	⇑P	**Pn**	**01 51 08.6**	**+0.5**
DBJI	**Dramaga**	**8.48**	**120**	P	**Pn**	**01 51 10.8**	**+2.0**
	203nm,1.3s						
SKJI	**Sukabumi**	**8.55**	**124**	P	**Pn**	**01 51 11.9**	**+2.1**
	238nm,0.9s						
LEM	**Lembang**	**9.36**	**119**	P	**Pn**	**01 51 24.7**	**+3.8**
	218nm,1.4s						
BJII	**Banjamegara**	**11.44**	**116**	P	**Pn**	**01 51 50.6**	**+1.2**
	74nm,1.3s						
KSM	**Kuching**	**11.53**	**71**	⇓P	**Pn**	**01 51 52.9**	**+2.2**
SJI	**Sawahan**	**13.47**	**114**	P	**Pn**	**01 52 16.0**	**-1.1**
	64nm,1.1s						
SBUM	**Sibu**	**13.66**	**70**	⇑P	**Pn**	**01 52 22.3**	**+2.5**
KKM	**Kota Kinabalu**	**18.72**	**64**	*e*P	**Pn**	**01 53 24.5**	**-0.5**
SDKM	**Sandakan**	**19.44**	**66**	⇓P	**Pn**	**01 53 33.0**	**-0.7**
TSM	**Tawau**	**19.59**	**71**	⇑P	**Pn**	**01 53 34.1**	**-1.4**
KDM	**Kudat**	**19.66**	**62**	⇓P	**Pn**	**01 53 35.8**	**-0.4**
MYLDM	**Lahad Datu**	**20.48**	**69**	⇑P	**P**	**01 53 44.6**	**+0.9**
KAPI	**Kappang**	**20.50**	**98**	P	**P**	**01 53 42.1**	**-1.9**
	73nm,0.9s,baz=282,slow=11,SNR=9.2						
KAPI	**Kappang**	**20.50**	**98**	*e*P	**P**	**01 53 42.1**	**-1.8**
	106nm,1.1s						
CMAR	**Chiang Mai Arr**	**20.60**	**359**	P	**P**	**01 53 43.6**	**-1.4**
	23nm,0.8s,baz=188,slow=10,SNR=18						
CMAR	**Chiang Mai Arr**	**20.60**	**359**	*i* P	**P**	**01 53 45.0**	**0.0**
CMAR				pmax	pmax		
	comp=Z,23nm,0.8s						
CHG	**Chiang Mai**	**20.96**	**359**	⇓P	**P**	**01 53 51.3**	**+2.5**
	comp=Z,40nm,0.8s						
CHTO	**Chiang Mai**	**20.96**	**359**	*e*P	**P**	**01 53 49.2**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,47nm,1.1s						
CHTO	**Chiang Mai**	**20.96**	**359**	*e*P	**P**	**01 53 49.1**	**+0.3**
	comp=Z,47nm,1.1s						
NANT	**Nan**	**20.98**	**3**	⇑P	**P**	**01 53 48.8**	**-0.3**
	comp=Z,225nm,1.0s						
KDI	**Kendari**	**23.25**	**95**	P	**P**	**01 54 13.5**	**+0.1**
	comp=Z,59nm,1.2s,mb4.9						
QIZ	**Qiongzhong**	**23.53**	**25**	P	**P**	**01 54 14.5**	**-1.7**
QIZ	**Qiongzhong**	**23.53**	**25**	*e*P	**P**	**01 54 14.2**	**-2.0**
	comp=Z,87nm,1.0s,mb5.1						
KMI	**Kunming**	**27.43**	**7**	P	**P**	**01 54 52.2**	**+0.8**
KMI				AP	pP	01 54 58.2	-0.2
KMI				PP		01 55 42.9	
KMI				S	**S**	**01 59 38.0**	**+7.3**
KMI				SS		02 00 53.7	
KMI				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.4						
SHL	**Shillong**	**28.61**	**346**	*e*P	**P**	**01 55 04.0**	**+1.9**
GYA	**Guiyang**	**29.41**	**13**	P	**P**	**01 55 11.4**	**+2.2**
GYA				PP	PP	01 56 09.7	-6.2
GYA				S	**S**	**02 00 07.2**	**+5.3**
GYA				SS	SS	02 01 40.5	-27
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,140nm,4.8s						
GYA				LR	LR		
	comp=N,580nm,17.6s						
GYA				LR	LR		
	comp=E,540nm,16.8s						
GYA				LR	LR		
	comp=Z,660nm,15.4s						
FITZ	**Fitzroy Crossi**	**30.17**	**123**	⇓*i*P	**P**	**01 55 15.1**	**-0.9**
	comp=Z,17nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**30.17**	**123**	P	**P**	**01 55 15.7**	**-0.3**
	comp=Z,12nm,0.9s,mb4.6,baz=310,slow=5.6,SNR=15						
ODAN	**Odare**	**31.19**	**339**	*e*P	**P**	**01 55 25.4**	**+0.5**
	comp=Z,88nm,1.0s,mb5.6						
TAPN	**Taplejung**	**31.53**	**340**	*e*P	**P**	**01 55 28.7**	**+0.9**
	comp=Z,144nm,1.0s,mb5.8						
RAMN	**Ramite**	**31.57**	**338**	*e*P	**P**	**01 55 29.0**	**+0.8**
	comp=Z,62nm,0.9s,mb5.4						
JIRN	**Jiri**	**32.36**	**338**	*e*P	**P**	**01 55 36.1**	**+1.0**
	comp=Z,116nm,1.0s,mb5.7						
PKI	**Pulchoki**	**32.58**	**337**	*e*P	**P**	**01 55 37.4**	**+0.3**
GUN	**Gumba**	**32.70**	**337**	*e*P	**P**	**01 55 38.8**	**+0.6**
	comp=Z,199nm,1.4s,mb5.8						
DMN	**Daman**	**32.74**	**336**	*e*P	**P**	**01 55 39.3**	**+0.8**
	comp=Z,66nm,1.1s,mb5.5						
LSA	**Lhasa**	**32.76**	**347**	*e*P	**P**	**01 55 39.4**	**+0.8**
LSA				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
LSA	**Lhasa**	**32.76**	**347**	*e*P	**P**	**01 55 39.4**	**+0.8**
	comp=Z,24nm,0.9s,mb5.1						
KKN	**Kakani**	**32.83**	**337**	*e*P	**P**	**01 55 39.6**	**+0.3**
	comp=Z,73nm,1.1s,mb5.5						
CD2	**Chengdu**	**33.26**	**7**	*e*P	**P**	**01 55 44.2**	**+1.2**
CD2				AP	pP	01 55 48.6	-1.3
CD2				XP	sP	01 55 52.1	-0.7
CD2				PP	PP	01 56 56.7	-1.8
CD2				S	**S**	**02 01 05.2**	**+3.2**
CD2				XS	sS	02 01 12.5	-0.9
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GKN	**Gorkha**	**33.28**	**336**	*e*P	**P**	**01 55 43.3**	**+0.1**
	comp=Z,107nm,1.3s,mb5.6						
KOLN	**Koldanda**	**33.51**	**334**	*e*P	**P**	**01 55 45.9**	**+0.7**
	comp=Z,46nm,1.0s,mb5.3						
DANN	**Dangsing**	**33.95**	**335**	*e*P	**P**	**01 55 49.3**	**+0.3**
	comp=Z,86nm,1.2s,mb5.5						
NACB	**Ninganchiao**	**34.01**	**38**	*e*P	**P**	**01 55 49.5**	**-0.1**
	comp=Z,97nm,0.8s,mb5.8						
YHNB	**Yeheng**	**34.25**	**37**	*e*P	**P**	**01 55 51.4**	**-0.2**
	comp=Z,19nm,0.7s,mb5.1						
DDI	**Dehra Dun**	**38.28**	**329**	*ex*	x	01 56 31.0	
WRA	**Warramunga Arr**	**38.38**	**120**	P	**P**	**01 56 26.7**	**-0.4**
	comp=Z,30nm,1.0s,mb5.0,baz=298,slow=9.3,SNR=35						
WRA				S	**S**	**02 02 24.9**	**+4.0**
	comp=Z,0.6nm,1.0s,baz=230,slow=21,SNR=2.8						
WRA	**Warramunga Arr**	**38.38**	**120**	P	**P**	**01 56 26.7**	**-0.4**
WRA				S	**S**	**02 02 24.9**	**+4.0**
LZH	**Lanzhou**	**38.39**	**6**	⇑P	**P**	**01 56 26.5**	**-0.4**
LZH				AP	pP	01 56 31.3	-2.6
LZH				XP	sP	01 56 33.6	-3.1
LZH				PP	PP	01 57 58.7	+3.7
LZH				*e*S	**S**	**02 02 21.5**	**+1.1**
LZH				AMB	AMB		
	comp=Z,90nm,1.2s,mb5.4						
LZH				AMB	AMB		
	comp=Z,353nm,5.3s						
WRAB	**Tennant Creek**	**38.39**	**120**	P	**P**	**01 56 27.4**	**+0.2**
	comp=Z,227nm,0.7s,mb6.0,SNR=5.5						
WRAB	**Tennant Creek**	**38.39**	**120**	*e*P	**P**	**01 56 26.7**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.1						
WRAB	**Tennant Creek**	**38.39**	**120**	*e*P	**P**	**01 56 26.6**	**-0.5**
	comp=Z,44nm,1.0s,mb5.1						
WB2	**Warramunga Arr**	**38.39**	**120**	*e*P	**P**	**01 56 26.5**	**-0.7**
NJ2	**Nanjing**	**38.81**	**27**	*e*P	**P**	**01 56 31.4**	**+0.9**
NJ2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.2						
ASAR	**Alice Springs**	**39.59**	**125**	P	**P**	**01 56 37.0**	**-0.1**
	comp=Z,11nm,0.9s,mb4.6,baz=296,slow=7.6,SNR=17						
ASAR				PcP	PcP	01 58 45.2	+0.9
	comp=Z,4.2nm,0.8s,baz=306,slow=2.9,SNR=7.1						
ASAR				S	**S**	**02 02 37.2**	**-1.7**
	comp=Z,1.9nm,1.0s,baz=290,slow=15,SNR=6.6						
GTA	**Gaotai**	**41.48**	**0**	*e*P	**P**	**01 56 52.3**	**-0.2**
GTA				AP	pP	01 56 56.8	-2.8
GTA				XP	sP	01 56 59.3	-3.1
GTA				AMB	AMB		
	comp=Z,41nm,1.3s,mb4.9						
HHC	**Hu-ho-hao-te**	**44.33**	**13**	*e*P	**P**	**01 57 15.5**	**-0.1**
HHC				S	**S**	**02 03 50.7**	**+2.2**
HHC				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.2						
BJT	**Baijiatuau**	**44.81**	**18**	*e*P	**P**	**01 57 18.9**	**-0.5**
BJT				pmax	pmax		
	comp=Z,22nm,1.1s						
BJT	**Baijiatuau**	**44.81**	**18**	*e*P	**P**	**01 57 18.9**	**-0.5**
	comp=Z,22nm,1.1s,mb4.9						
DL2	**Dalian**	**45.81**	**24**	P	**P**	**01 57 27.0**	**-0.4**
DL2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
KSH	**Kashi**	**46.82**	**335**	*e*P	**P**	**01 57 35.1**	**-0.2**
KSH				*e*AP	pP	01 57 39.2	-3.3
KSH				*e*XP	sP	01 57 42.2	-3.1
KSH				*e*PCP	PcP	01 59 09.0	+0.8
KSH				*e*PP	PP	01 59 24.0	-1.7
KSH				*e*SCP	ScP	02 03 01.1	+0.4
KSH				*e*PCS	PcS	02 03 02.1	-1.0
KSH				*e*S	**S**	**02 04 23.0**	**-1.5**
WMQ	**Urumqi**	**47.07**	**348**	⇑*i*P	**P**	**01 57 38.2**	**+1.0**
WMQ				XP	sP	01 57 46.6	-0.6
WMQ				AMB	AMB		
	comp=Z,102nm,1.0s,mb5.7						
KSRS	**Korea Array**	**47.56**	**31**	P	**P**	**01 57 40.1**	**-1.1**
	comp=Z,32nm,1.1s,mb5.3,baz=224,slow=8.7,SNR=55						
KSRS				PcP	PcP	01 59 11.1	+0.2
	comp=Z,2.2nm,0.8s,baz=209,slow=2.2,SNR=4.3						
GUMO	**Guam**	**47.77**	**69**	*e*P	**P**	**01 57 40.3**	**-2.9**
CTA	**Charters Tower**	**49.03**	**115**	*e*P	**P**	**01 57 52.8**	**-0.1**
	comp=Z,17nm,0.9s,mb5.1						
CTA	**Charters Tower**	**49.03**	**115**	*e*P	**P**	**01 57 52.8**	**-0.1**
CTA				pmax	pmax		
	comp=Z,17nm,0.9s						
CTAO	**Charters Tower**	**49.03**	**115**	*e*P	**P**	**01 57 52.5**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.3						
CTAO	**Charters Tower**	**49.03**	**115**	*e*P	**P**	**01 57 52.5**	**-0.4**
	comp=Z,35nm,1.0s,mb5.3						
SNY	**Shenyang**	**49.08**	**24**	⇓P	**P**	**01 57 51.5**	**-1.3**
SNY				AMB	AMB		
	comp=Z,79nm,1.1s,mb5.7						
STKA	**Stephens Creek**	**49.43**	**131**	⇓*i*P	**P**	**01 57 56.7**	**+1.0**
	comp=Z,17nm,0.8s,mb5.1						
STKA	**Stephens Creek**	**49.43**	**131**	P	**P**	**01 57 56.9**	**+1.2**
	comp=Z,21nm,0.8s,mb5.2,baz=306,slow=8.2,SNR=20						
UCH	**Uchtor**	**49.69**	**336**	P	**P**	**01 57 57.9**	**+0.4**
	SNR=5.8						
UCH	**Uchtor**	**49.69**	**336**	*e*P	**P**	**01 57 58.3**	**+0.9**
	comp=Z,9.3nm,1.0s,mb4.8						
TKM2	**Tokmak 2**	**49.84**	**337**	*e*P	**P**	**01 57 59.1**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.4						
TKM2	**Tokmak 2**	**49.84**	**337**	P	**P**	**01 57 59.1**	**+0.5**
	SNR=28						
TKM2	**Tokmak 2**	**49.84**	**337**	*e*P	**P**	**01 57 59.1**	**+0.5**
	comp=Z,34nm,0.9s,mb5.4						
KBK	**Karagaybulak**	**49.87**	**336**	P	**P**	**01 58 00.1**	**+1.2**
	SNR=12						
AML	**Almayashu**	**49.95**	**335**	P	**P**	**01 58 00.2**	**+0.7**
	SNR=12						
FRU	**Bishkek**	**50.16**	**336**	*e*P	**P**	**01 58 02.0**	**+1.0**

YSS pmax pmax
comp=Z,50nm,1.0s,mb5.6
YSS Yuzh-Sakhalins 62.03 32 *e*P **P 01 59 25.3 -0.6**
comp=Z,11nm,0.6s,mb5.2
AKTK Aktyubinsk 63.30 332 P **P 01 59 33.3 -1.0**
AKTO Aktyubinsk 63.30 332 P **P 01 59 33.3 -1.0**
comp=Z,10nm,1.0s,mb4.9,baz=133,slow=7.2,SNR=14
GNI Garni 65.30 317 P **P 01 59 47.5 -0.1**
comp=Z,2.3nm,0.6s,mb4.4,baz=219,slow=21,SNR=4.5
GNI Garni 65.30 317 *e*P **P 01 59 48.0 +0.4**
GNI pmax pmax
comp=Z,13nm,1.4s
GNI Garni 65.30 317 *e*P **P 01 59 48.1 +0.5**
comp=Z,16nm,1.2s,mb4.9
SVE Sverdlovsk 66.70 338⇓ *e*P **P 01 59 56.0 -0.2**
SVE pmax pmax
comp=Z,37nm,1.0s,mb5.4
ARU Arti 67.21 337 *c i*P **P 01 59 58.2 -1.3**
ARU *e*S S 02 08 52.2 -0.6
ARU *e*SS SS 02 13 08.5 -4.1
ARU pmax pmax
comp=Z,26nm,1.2s,mb5.1
ARU Arti 67.21 337 *e*P **P 01 59 58.1 -1.4**
comp=Z,50nm,1.4s,mb5.3
ARU *e*pP pP 02 00 07.0 +0.1
YAK Yakutsk 68.16 15 *e*P **P 02 00 03.5 -1.8**
YAK pmax pmax
comp=Z,32nm,1.2s,mb5.2
ASF Jabal al Asfar 68.25 306 P **P 02 00 07.2 +0.6**
comp=Z,3.7nm,0.8s,mb4.4,baz=36,slow=4.7,SNR=6.3
KIV Kislovodsk 68.35 319⇓ *e*P **P 02 00 07.1 +0.1**
KIV *e**PP pP 02 00 17.5 +3.1
KIV *e**SP sP 02 00 20.3 +3.2
KIV 02 00 33.0
KIV pmax pmax
comp=Z,17nm,1.0s,mb5.0
KIV Kislovodsk 68.35 319⇓ *i*P **P 02 00 07.5 +0.6**
KIV Kislovodsk 68.35 319 *e*P **P 02 00 06.8 -0.1**
comp=Z,7.1nm,0.7s,mb4.8
KIV *e*pP pP 02 00 17.1 +2.8
MALT Malatya 69.07 313 *e*P **P 02 00 10.0 -1.6**
MALT *e* pP 02 00 16.6 -2.4
MALT pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MALT Malatya 69.07 313⇓ *i*P **P 02 00 10.6 -1.0**
MALT Malatya 69.07 313 *e*P **P 02 00 10.0 -1.6**
comp=Z,4.7nm,0.9s,mb4.4
MALT *e* pP 02 00 16.6 -2.3
EIL Elat 69.16 303 P **P 02 00 12.3 0.0**
comp=Z,7.5nm,0.9s,mb4.6,baz=72,slow=2.6,SNR=4.4
EIL Elat 69.16 303 P **P 02 00 12.3 0.0**
MMAI Mount Meron Ar 69.71 306 P **P 02 00 15.5 -0.1**
comp=Z,2.9nm,0.9s,mb4.2,baz=87,slow=6.2,SNR=3.7
MAW Mawson 89.87 194 P **P 02 00 16.8 +0.9**
comp=Z,2.0nm,0.8s,mb4.1,baz=44,slow=3.7,SNR=3.3
SOC Sochi 70.15 318 *e*P **P 02 00 23.0 +4.9**
SOC pmax pmax
comp=Z,18nm,0.9s,mb5.0
LSZ Lusaka 71.27 255 P **P 02 00 26.9 +1.4**
comp=Z,2.0nm,0.9s,mb4.0,baz=79,slow=10,SNR=3.4
LSZ Lusaka 71.27 255 *e*P **P 02 00 26.4 +0.9**
LSZ pmax pmax
comp=Z,155nm,2.7s,mb5.5
LSZ Lusaka 71.27 255 *e*P **P 02 00 26.4 +0.9**
comp=Z,155nm,2.7s,mb5.5
BR131 Keskin Array S 73.06 313 *e*P **P 02 00 34.8 -0.9**
comp=Z,2.5nm,0.7s,mb4.2
PETK Petropavlovsk- 73.44 32 P **P 02 00 36.9 -0.7**
comp=Z,4.6nm,0.9s,mb4.4,baz=186,slow=3.0,SNR=7.2
PETK Petropavlovsk- 73.44 32 P **P 02 00 36.9 -0.7**
VSR Storozhevoye 73.65 325 *e*P **P 02 00 37.7 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,8.0nm,1.0s
VSR pmax pmax
comp=E,20nm,0.9s
PET Petropavlovsk 73.91 33⇓ *i*P **P 02 00 39.7 -0.7**
PET pmax pmax
comp=Z,29nm,1.2s,mb5.1
PET Petropavlovsk 73.91 33 *e*P **P 02 00 39.6 -0.8**
LBTB Lobatse 74.36 245 P **P 02 00 42.7 -1.0**
comp=Z,4.2nm,1.0s,mb4.3,baz=53,slow=5.1,SNR=3.4
SIM Simferopol' 74.39 318 *e*P **P 02 00 43.6 +0.2**
SIM pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BOSA Boshof 74.99 241 P **P 02 00 48.4 +1.0**
comp=Z,3.8nm,0.8s,mb4.4,baz=236,slow=15,SNR=3.6
TIXI Tiksi 76.22 9 *e*P **P 02 00 51.5 -1.9**
TIXI pmax pmax
comp=Z,23nm,1.5s,mb4.9
OBN Obninsk 76.70 328⇓ *e*P **P 02 00 56.0 -0.5**
OBN *e* 02 01 05.2
OBN pmax pmax
comp=Z,24nm,1.2s,mb5.0
TIRR Tirgusor 78.13 316⇓ *i*P **P 02 01 04.4 -0.3**
TIRR Tirgusor 78.13 316⇓ P **P 02 01 04.4 -0.2**
AKASG Malin Array Be 79.33 323 P **P 02 01 10.1 -1.1**
comp=Z,1.6nm,0.7s,mb4.1,baz=77,slow=5.7,SNR=7.2
AKASG Malin Array Be 79.33 323 *i*P **P 02 01 10.1 -1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 79.33 323 P **P 02 01 10.1 -1.1**
VRI Vrincioaia 79.64 317⇓ *i*P **P 02 01 13.6 +0.7**
VRI Vrincioaia 79.64 317⇓ P **P 02 01 13.6 +0.7**
PLOR Plostina 79.69 317⇑ *i*P **P 02 01 14.1 +0.9**
MLR Muntele Rosu 80.08 317⇓ *i*P **P 02 01 15.8 +0.5**
MLR Muntele Rosu 80.08 317⇓ P **P 02 01 15.8 +0.4**
BURAR Bucovina Array 81.06 319⇓ *i*P **P 02 01 21.7 +1.1**
BURAR Bucovina Array 81.06 319⇓ P **P 02 01 21.7 +1.2**
BUR08 Bucovina Ar. S 81.08 319 *e*P **P 02 01 21.2 +0.5**
DRGR 82.56 318⇑ *i*P **P 02 01 29.0 +0.5**
DRGR 82.56 318⇑ P **P 02 01 29.0 +0.6**
BZS Buzias 83.08 316⇓ *i*P **P 02 01 31.2 0.0**
BZS Buzias 83.08 316⇓ P **P 02 01 31.2 0.0**
KWP Kalwaria 83.12 320 *e*P **P 02 01 31.3 0.0**
KWP Kalwaria 83.12 320⇑ *i*P **P 02 01 32.5 +1.2**
KOLS Kolonicke sedl 83.26 320 *e*P **P 02 01 33.2 +1.1**
SUW Suwalki 83.75 325 *e*P **P 02 01 34.1 -0.4**
SUW Suwalki 83.75 325 *e*P **P 02 01 34.1 -0.4**
CRVS Cervenica-Dubn 83.78 320 *e*P **P 02 01 36.8 +2.0**
STHS Stebnicka Huta 84.02 320 *i*P **P 02 01 36.2 +0.3**
STHS pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
STHS Stebnicka Huta 84.02 320 *i*P **P 02 01 36.2 +0.3**
comp=Z,5.6nm,1.0s,mb4.7
KAF Kangasniemi 84.15 333 *e*p **P 02 01 34.3 -2.0**
KECS Kecovo 84.35 319 *i*P **P 02 01 38.0 +0.4**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
KECS Kecovo 84.35 319 *i*P **P 02 01 38.0 +0.4**
comp=Z,2.8nm,1.1s,mb4.3
PSZ Piszkesteto 84.64 318 *e*P **P 02 01 38.0 -1.1**
PSZ pmax pmax
comp=Z,13nm,1.4s,mb4.9
PSZ Piszkesteto 84.64 318 *e*P **P 02 01 38.0 -1.1**
comp=Z,13nm,1.4s,mb4.9
PKSM Moragy 85.23 317⇑ *i*P **P 02 01 42.0 -0.1**
PKSM Moragy 85.23 317⇑ P **P 02 01 42.0 -0.2**
VYHS Vyhne 85.43 319 *e*P **P 02 01 42.2 -0.9**
KOLL Kolacno 85.73 319 *e*P **P 02 01 45.0 +0.4**
MODS Modra-Piesok 86.44 319 *e*P **P 02 01 47.7 -0.4**
MORC Moravsky Berou 86.45 320 *e*P **P 02 01 47.9 -0.2**
MORC pmax pmax
comp=Z,7.0nm,1.4s,mb4.7
MORC Moravsky Berou 86.45 320⇓ *i*P **P 02 01 48.5 +0.4**
MORC Moravsky Berou 86.45 320 *e*P **P 02 01 47.9 -0.2**
comp=Z,7.4nm,1.4s,mb4.7
ARCES ARCESS Array B 86.52 340 P **P 02 01 48.7 +0.7**
comp=Z,12nm,0.9s,mb5.1,baz=110,slow=5.3,SNR=16
ARCES ARCESS Array B 86.52 340 P **P 02 01 48.7 +0.7**
GERES GERESS Array B 88.85 319 P **P 02 02 00.2 +0.6**
comp=Z,2.0nm,0.8s,mb4.5,baz=103,slow=4.2,SNR=14
BRG Berggiesshubel 88.87 321 *e*P **P 02 02 00.3 +0.6**
BRG *i* pP 02 02 07.1 -0.2
BRG 02 05 35.5
BRG pmax pmax
comp=Z,6.0nm,1.4s,mb4.7
BRG pmax pmax
comp=Z,8.0nm,1.6s,mb4.8
BRG Berggiesshubel 88.87 321 *e*P **P 02 02 00.3 +0.6**
comp=Z,10nm,1.4s,mb5.0
BRG *i* pP 02 02 07.1 -0.2
comp=Z,14nm,1.6s
BRG PP PP 02 05 35.5 +6.5
comp=Z,6.5nm,1.5s
CLL Collm 89.49 321 *e*P **P 02 02 03.0 +0.4**
GRA1 Grafenberg Arr 90.53 320 *e*P **P 02 02 08.2 +0.7**
comp=Z,7.0nm,1.1s,mb4.9
GRA1 *e*pP pP 02 02 16.3 +1.2
GRF Grafenberg Arr 90.53 320 *e*P **P 02 02 08.2 +0.7**
GRF *e**PP pP 02 02 16.3 +1.2
GRF pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
GRF Grafenberg Arr 90.53 320 *e*P **P 02 02 08.2 +0.7**
comp=Z,7.0nm,1.1s,mb4.9
GRF *e*pP pP 02 02 16.3 +1.2
DAVOX Davos/Dischmat 91.30 317 P **P 02 02 10.6 -0.6**
comp=Z,8.7nm,1.0s,mb5.0,baz=126,slow=8.0,SNR=5.8
KEST Kesra 91.35 306 P **P 02 02 13.0 +1.4**
comp=Z,3.4nm,1.0s,mb4.6,baz=339,slow=1.3,SNR=8.0
DAVOS Davos 91.36 317 P **P 02 02 10.6 -0.8**
FFC Flin Flon 124.88 15 *e*PKIKP PKPdf 02 08 05.0 -0.4
MOD Modoc 126.88 37 *e*PKPdf PKPdf 02 08 10.3 +0.7
WVOR Wild Horse Val 127.53 35 *e*PKIKP PKPdf 02 08 11.7 +0.9
BOZ Bozeman (W) 128.96 28 *e*PKIKP PKPdf 02 08 13.4 0.0
HLID Hailey 129.10 31 *e*PKPdf PKPdf 02 08 14.4 +0.6
NVAR Mina Array Bea 130.19 39 PKP PKPdf 02 08 16.6 +0.5
comp=Z,1.4nm,0.8s,baz=273,slow=1.6,SNR=6.8
ELK Elko 130.56 35 *e*PKIKP PKPdf 02 08 16.6 -0.1
TPAW Teton Pass 130.89 29 *e*PKPdf PKPdf 02 08 16.5 -0.7
PDAR Pinedale Array 132.11 29 PKP PKPdf 02 08 19.4 -0.1
comp=Z,0.3nm,0.6s,baz=2.9,slow=3.0,SNR=3.8
PDAR PKKP 02 18 25.8
comp=Z,0.7nm,0.7s,baz=96,slow=3.0,SNR=4.1
DUG Dugway 132.30 33 *e*PKIKP PKPdf 02 08 20.2 +0.3
MSU Marysvale 133.81 35 *e*PKIKP PKPdf 02 08 24.6 +1.7
PV10 Paradox Valley 135.64 32 *e*PKPdf PKPdf 02 08 27.6 +1.3
ECSD EROS,Sioux Fal 136.33 17 *e*PKPdf PKPdf 02 08 27.3 -0.1
ANMO Albuquerque 139.56 34 *e*PKIKP PKPdf 02 08 27.5 -6.1
ANMO *e* 02 08 34.0
BDFB Brasilia 143.18 240 PKhKP 02 08 34.7
comp=Z,1.7nm,0.4s,baz=142,slow=1.3,SNR=3.3
WMOK Wichita Mounta 143.53 26 *e*PKIKP PKPdf 02 08 37.0 -3.8
CPUP Villa Florida 143.74 217 PKP PKPdf 02 08 43.1 +1.8
comp=Z,1.7nm,0.7s,baz=142,slow=2.0,SNR=3.1
CPUP Villa Florida 143.74 217 *e*PKPdf PKPdf 02 08 40.6 -0.8
WCI Wyandotte Cave 143.84 8 *e*PKIKP PKPdf 02 08 37.6 -3.6
ELN Prospectdale 145.22 0 *e*PKPbc PKPbc 02 08 41.7 -1.5
BLA Blacksburg 145.23 360 *e*PKIKP PKPdf 02 08 42.2 -1.4
TXAR Lajitas Array 145.28 37 PKPbc PKPbc 02 08 44.1 +0.5
comp=Z,28nm,0.8s,baz=279,slow=1.5,SNR=110
WVT Waverly 145.65 10 *e*PKIKP PKPdf 02 08 43.3 -1.1
MIAR Mount Ida 145.69 19 *e*PKIKP PKPdf 02 08 44.2 -0.3
BBSR BB Station 146.53 335 *e*PKPbc PKPbc 02 08 46.0 -1.4
JCT Junction City 146.57 31 *e*PKP2 PKPab 02 08 46.7 -1.9
TKL Tuckaleechee C 146.65 5 PKPbc PKPbc 02 08 46.7 -0.9
baz=356,slow=3.1
NATX Nacogdoches 147.82 23 *e*PKPbc PKPbc 02 08 50.6 -0.5
GOGA Godfrey 148.91 5 *e*PKP2 PKPbc 02 08 53.2 -0.6
HKT Hockley 148.91 26 *e*PKP2 PKPbc 02 08 53.8 -0.1
LPAZ La Paz 157.82 213 PKP PKPdf 02 09 03.8 +0.7
comp=Z,1.3nm,1.0s,baz=150,slow=1.5,SNR=3.4
OTAV Otavalo 177.04 227 *e*PKPdf PKPdf 02 09 17.7 +0.7

BJI **13** *01:55:37.2, 454S×10170E, h10km, mB5.2, mb5.0, Ms5.0, Msz4.8*
NEIC **13** *01:55:47.9±2.3, 382S×10175E, h31km±16km, mb5.0/38, Error ellipse: s-maj=7.0km s-min=4.9km az=51.0*
NEIC Felt [V] at Bengkulu.
ISCJB **13** *01:55:48.9±0.2, 388S±004×10164E±003, h52km, mb5.0/90, MS4.6/2, Error ellipse: s-maj=5.6km s-min=4.0km az=35.7*
MOS **13** *01:55:48.5±1.1, 365S×10186E, h43km, mb5.2/34, Error ellipse: s-maj=12.1km s-min=6.1km az=116.8*
IDC **13** *01:55:50.4±0.5, 375S×10185E, h52km±3km, mb4.5/28, mb1 4.5/29, mb1mx4.5/31, mbtmp4.5/29, Error ellipse: s-maj=12.8km s-min=7.9km az=47.0*
SZGRF **13** *01:55:51.5, 398S×10053E, h33km, mb5.0, Southern Sumatera, Indonesia*
DJA **13** *01:55:52, 362S×10173E, h20km, MLv5.2/10*
ISC 13 01:55:50.7±0.2, 391S±003×10163E±003, h54km, h54km±2.2km:pP-P, n268, σ1§17/239, mb5.0/90, MS4.6/2, 32C-14D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLI	**Kotabumi**	**3.36**	**107**	P	**Pn**	**01 56 42.8**	**+2.1**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.61**	**11**	P	**Pn**	**01 56 44.4**	**+0.2**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.64**	**340**	P	**Pn**	**01 56 46.3**	**+1.6**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.50**	**41**	P	**Pn**	**01 56 56.1**	**-0.4**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**4.83**	**69**	P	**Pn**	**01 57 02.2**	**+1.3**
	0.0nm,0.0s						
SBJI	**Serang**	**4.99**	**116**	P	**Pn**	**01 57 07.0**	**+3.8**
	611nm,1.2s						
MYKOM	**Kota Tinggi**	**6.08**	**21**	⇓P	**Pn**	**01 57 18.9**	**+0.8**
KGM	**Kluang**	**6.12**	**16**	⇓P	**Pn**	**01 57 19.4**	**+0.7**
LEM	**Lembang**	**6.63**	**116**	P	**Pn**	**01 57 28.5**	**+2.9**
	425nm,1.2s						
FRIM	**Kepong**	**7.10**	**360**	⇑P	**Pn**	**01 57 34.3**	**+2.2**
IPM	**Ipoh**	**8.35**	**356**	⇑P	**Pn**	**01 57 53.4**	**+4.1**
KTGM	**Kuala Trenggan**	**9.30**	**9**	⇓P	**Pn**	**01 58 05.0**	**+2.8**
COCO	**West Island**	**9.50**	**210**	Pn	**Pn**	**01 58 03.0**	**-1.9**
	3μm,0.7s,SNR=5.5						
COCO	**West Island**	**9.50**	**210**	*e*Pn	**Pn**	**01 58 02.5**	**-2.4**
	183nm,0.7s						
KSM	**Kuching**	**10.19**	**59**	⇓P	**Pn**	**01 58 22.2**	**+7.8**
SJI	**Sawahan**	**10.78**	**111**	P	**Pn**	**01 58 22.4**	**-0.1**
	147nm,0.6s						
BSI	**Banda Aceh**	**11.28**	**326**	P	**Pn**	**01 58 27.8**	**-1.5**
	114nm,1.1s						
SBUM	**Sibu**	**12.33**	**59**	⇑P	**Pn**	**01 58 48.0**	**+4.4**
BTM	**Bintulu**	**13.45**	**58**	⇑P	**Pn**	**01 59 02.2**	**+3.2**
KKM	**Kota Kinabalu**	**17.61**	**56**	⇑P	**Pn**	**01 59 54.8**	**+2.3**
KKM	**Kota Kinabalu**	**17.61**	**56**	*e*Pn	**Pn**	**01 59 54.0**	**+1.6**
KAPI	**Kappang**	**18.10**	**94**	P	**Pn**	**01 59 55.9**	**-2.6**
	2.0nm,0.3s,baz=89,slow=19,SNR=7.8						
KAPI	**Kappang**	**18.10**	**94**	*e*P	**Pn**	**01 59 56.8**	**-1.7**
	41nm,0.8s						
TSM	**Tawau**	**18.16**	**64**	⇓P	**Pn**	**02 00 01.2**	**+2.0**
SDKM	**Sandakan**	**18.21**	**59**	⇓P	**Pn**	**02 00 01.3**	**+1.4**
PCI	**Palu**	**18.43**	**81**	P	**Pn**	**02 00 05.2**	**+2.6**
	228nm,1.2s						
KDM	**Kudat**	**18.60**	**55**	⇓P	**Pn**	**02 00 05.3**	**+0.7**
MYLDM	**Lahad Datu**	**19.12**	**62**	⇓P	**Pn**	**02 00 12.3**	**+1.5**
KKTK	**Khon Kaen**	**20.15**	**3**	P	**P**	**02 00 19.0**	**-1.6**
	309nm,0.7s						
BBSI	**Bau Bau**	**20.93**	**95**	P	**P**	**02 00 32.4**	**+3.2**
	100nm,1.3s						
KDI	**Kendari**	**20.94**	**91**	P	**P**	**02 00 29.8**	**+0.5**
	126nm,1.1s						
CMAR	**Chiang Mai Arr**	**22.38**	**353**	P	**P**	**02 00 42.6**	**-2.0**
	13nm,0.8s,mb4.4,baz=185,slow=8.5,SNR=38						
CHG	**Chiang Mai**	**22.73**	**353**	⇓P	**P**	**02 00 47.2**	**-1.1**
	16nm,0.9s,mb4.5						
CHTO	**Chiang Mai**	**22.73**	**353**	*e*P	**P**	**02 00 47.0**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.3						
CHTO	**Chiang Mai**	**22.73**	**353**	*e*P	**P**	**02 00 47.0**	**-1.3**
	comp=Z,14nm,1.0s,mb4.3						
BATI	**Baumata**	**22.74**	**107**	P	**P**	**02 00 50.2**	**+1.8**
	comp=Z,57nm,1.1s,mb4.9						
BATI	**Baumata**	**22.74**	**107**	P	**P**	**02 00 44.8**	**-3.6**
	comp=Z,24nm,0.4s,mb5.0,baz=298,slow=1.6,SNR=3.5						
QIZ	**Qiongzhong**	**24.19**	**19**	P	**P**	**02 01 01.4**	**-0.8**
QIZ	**Qiongzhong**	**24.19**	**19**	*e*P	**P**	**02 01 02.0**	**-0.3**
	comp=Z,71nm,1.3s,mb4.9						
QIZ				*e*		02 01 17.1	
MBWA	**Marble Bar**	**24.57**	**136**	*e*P	**P**	**02 01 04.7**	**-1.1**
	comp=Z,11nm,0.8s,mb4.4						
RCP	**Roxas**	**26.03**	**54**	⇑ *i*P	**P**	**02 01 19.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**27.41**	**123**	*e*P	**P**	**02 01 29.8**	**-1.7**
	comp=Z,17nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**27.41**	**123**	P	**P**	**02 01 29.0**	**-2.5**
	comp=Z,12nm,1.0s,mb4.4,baz=309,slow=6.6,SNR=12						
KMI	**Kunming**	**28.88**	**2**	P	**P**	**02 01 44.7**	**+0.2**
KMI				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.6						
GYA	**Guiyang**	**30.58**	**9**	P	**P**	**02 02 01.9**	**+2.4**
GYA				PP	PP	02 03 03.8	-5.6
GYA				S	**S**	**02 07 04.9**	**+7.1**
GYA				SCS	ScS	02 12 36.5	+4.6
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
GYA				AMB	AMB		
	comp=Z,130nm,4.7s						
GYA				LR	LR		
	comp=N,590nm,17.7s,MS4.4						
GYA				LR	LR		
	comp=E,570nm,16.9s,MS4.4						
GYA				LR	LR		
	comp=Z,620nm,15.8s,MS4.4						
SHL	**Shillong**	**30.79**	**343**	*e*P	**P**	**02 02 01.0**	**-0.4**
ODAN	**Odare**	**33.54**	**337**	*e*P	**P**	**02 02 25.4**	**-0.1**
TAPN	**Taplejung**	**33.86**	**337**	*e*P	**P**	**02 02 28.9**	**+0.7**
	comp=Z,165nm,1.0s,mb5.9						
RAMN	**Ramite**	**33.94**	**336**	*e*P	**P**	**02 02 29.4**	**+0.4**
CD2	**Chengdu**	**34.68**	**3**	*e*P	**P**	**02 02 33.6**	**-1.7**
CD2				AP	pP	02 02 37.9	-11
CD2				XP	sP	02 02 40.9	-15
CD2				PP	PP	02 03 50.9	-4.0
CD2				S	**S**	**02 08 02.8**	**+1.3**
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
JIRN	**Jiri**	**34.74**	**336**	*e*P	**P**	**02 02 36.5**	**+0.6**
LSA	**Lhasa**	**34.89**	**344**	*e*P	**P**	**02 02 37.5**	**+0.3**
LSA				pmax	pmax		
	comp=Z,66nm,1.4s,mb5.4						
LSA	**Lhasa**	**34.89**	**344**	*e*P	**P**	**02 02 37.5**	**+0.3**
	comp=Z,66nm,1.4s,mb5.4						
PKI	**Pulchoki**	**34.99**	**334**	*e*P	**P**	**02 02 38.4**	**+0.4**
GUN	**Gumba**	**35.09**	**335**	*e*P	**P**	**02 02 39.3**	**+0.4**
	comp=Z,76nm,0.6s,mb5.8						
DMN	**Daman**	**35.15**	**334**	*e*P	**P**	**02 02 39.9**	**+0.4**
KKN	**Kakani**	**35.24**	**334**	*e*P	**P**	**02 02 40.3**	**+0.1**
	comp=Z,64nm,0.9s,mb5.5						
WRA	**Warramunga Arr**	**35.64**	**119**	P	**P**	**02 02 42.7**	**-1.1**
	comp=Z,3.2nm,0.4s,mb4.7,baz=284,slow=7.8,SNR=55						
WRA				S	**S**	**02 08 15.0**	**-1.5**
	comp=Z,2.9nm,1.1s,baz=289,slow=17,SNR=5.8						
WRAB	**Tennant Creek**	**35.65**	**119**	P	**P**	**02 02 42.1**	**-1.7**
	comp=Z,107nm,1.0s,mb5.7,SNR=10						
WRAB	**Tennant Creek**	**35.65**	**119**	*e*P	**P**	**02 02 43.1**	**-0.7**
WRAB	**Tennant Creek**	**35.65**	**119**	*e*P	**P**	**02 02 42.6**	**-1.2**
WB2	**Warramunga Arr**	**35.65**	**119**⇑	*i*P	**P**	**02 02 42.6**	**-1.3**
WB2				*e*S	**S**	**02 08 13.4**	**-3.3**
GKN	**Gorkha**	**35.70**	**334**	*e*P	**P**	**02 02 44.4**	**+0.3**
KOLN	**Koldanda**	**35.97**	**332**	*e*P	**P**	**02 02 46.9**	**+0.4**
	comp=Z,25nm,0.6s,mb5.3						
DANN	**Dangsing**	**36.39**	**333**	*e*P	**P**	**02 02 50.6**	**+0.5**
	comp=Z,92nm,0.4s,mb6.0						
ASAR	**Alice Springs**	**36.83**	**125**	P	**P**	**02 02 53.6**	**-0.3**
	comp=Z,11nm,0.6s,mb4.8,baz=297,slow=8.0,SNR=64						
ASAR				S	**S**	**02 08 32.6**	**-2.0**
	comp=Z,2.8nm,0.9s,baz=294,slow=14,SNR=10						
XAN	**Xi'an**	**38.37**	**10**	P	**P**	**02 03 05.2**	**-1.5**
XAN				AP	pP	02 03 16.8	-3.9
XAN				AMB	AMB		
	comp=Z,26nm,1.1s,mb4.9						
NJ2	**Nanjing**	**39.34**	**23**	*e*P	**P**	**02 03 15.4**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.4						
LZH	**Lanzhou**	**39.84**	**3**	*e*P	**P**	**02 03 17.8**	**-1.2**
LZH				AP	pP	02 03 28.1	-4.9
LZH				XP	sP	02 03 31.3	-8.0
LZH				PP	PP	02 04 51.0	-0.5
LZH				*e*S	**S**	**02 09 21.0**	**+1.3**
LZH				XS	sS	02 09 37.2	-6.2
LZH				AMB	AMB		
	comp=Z,56nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,154nm,5.2s						
LZH				LR	LR		
	comp=N,897nm,13.7s						
LZH				LR	LR		
	comp=Z,1μm,18.0s,MS4.8						
JOW	**Kunigami**	**39.97**	**39**	P	**P**	**02 03 18.2**	**-1.9**
	comp=Z,8.7nm,0.6s,mb4.7,baz=198,slow=29,SNR=6.0						
DDI	**Dehra Dun**	**40.83**	**328**	*ex*	**P**	**02 03 25.2**	**-2.0**
COEN	**Coen**	**42.17**	**106**	*e*P	**P**	**02 03 37.4**	**-1.1**
	comp=Z,6.4nm,1.1s,mb4.2						
GTA	**Gaotai**	**43.14**	**358**	⇑P	**P**	**02 03 45.5**	**-0.4**
GTA				AP	pP	02 03 50.1	-10
GTA				XP	sP	02 03 52.5	-14
GTA				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.6						
THN	**Thein Dam**	**43.72**	**328**	*ex*	x	02 03 49.6	
HHC	**Hu-ho-hao-te**	**45.46**	**11**	⇑P	**P**	**02 04 04.4**	**-0.1**
HHC				S	**S**	**02 10 46.7**	**+4.5**
HHC				AMB	AMB		
	comp=Z,41nm,0.7s,mb5.4						
BJT	**Baijiatuao**	**45.71**	**16**	*e*P	**P**	**02 04 05.5**	**-0.9**
BJT				pmax	pmax		
	comp=Z,13nm,0.8s						
BJT	**Baijiatuao**	**45.71**	**16**	*e*P	**P**	**02 04 05.5**	**-0.9**
	comp=Z,13nm,0.8s,mb4.9						
BJI	**Beijing**	**45.73**	**16**	P	**P**	**02 04 05.6**	**-1.0**
BJI				AMB	AMB		
	comp=Z,16nm,1.2s,mb4.8						
CTA	**Charters Tower**	**46.33**	**114**	*e*P	**P**	**02 04 11.5**	**-0.2**
	comp=Z,28nm,1.1s,mb5.1						
CTA	**Charters Tower**	**46.33**	**114**	P	**P**	**02 04 11.3**	**-0.4**
	comp=Z,44nm,1.1s,mb5.3,baz=305,slow=9.6,SNR=6.8						
CTA	**Charters Tower**	**46.33**	**114**	*e*P	**P**	**02 04 11.5**	**-0.2**
CTA				pmax	pmax		
	comp=Z,28nm,1.1s						
CTAO	**Charters Tower**	**46.33**	**114**	*e*P	**P**	**02 04 11.3**	**-0.4**
STKA	**Stephens Creek**	**46.68**	**131**	*e*P	**P**	**02 04 14.7**	**+0.5**
	comp=Z,16nm,0.9s,mb4.9						
STKA				*e*	pP	02 04 28.8	+0.2
STKA	**Stephens Creek**	**46.68**	**131**	P	**P**	**02 04 14.8**	**+0.5**
	comp=Z,51nm,1.2s,mb5.3,baz=303,slow=8.6,SNR=18						
STKA				pP	pP	02 04 28.7	+0.1
	comp=Z,20nm,0.6s,baz=307,slow=8.0,SNR=8.9						
KSRS	**Korea Array**	**47.87**	**28**	P	**P**	**02 04 21.6**	**-1.8**
	comp=Z,8.3nm,0.9s,mb4.8,baz=215,slow=7.8,SNR=24						
KSRS				pP	pP	02 04 35.4	-2.4
	comp=Z,4.6nm,0.9s,baz=215,slow=7.3,SNR=4.9						
WMQ	**Urumqi**	**49.14**	**347**⇑	*i*P	**P**	**02 04 33.2**	**+0.2**
WMQ				XP	sP	02 04 41.0	-13
WMQ				AMB	AMB		
	comp=Z,34nm,1.2s,mb5.2						
KSH	**Kashi**	**49.25**	**334**	*e*P	**P**	**02 04 34.1**	**+0.1**
KSH				*e*AP	pP	02 04 38.3	-10
KSH				*e*XP	sP	02 04 41.3	-13
KSH				*e*PCP	PcP	02 05 58.2	+1.9
KSH				*e*PP	PP	02 06 27.1	-1.2
KSH				*e*SCP	ScP	02 09 51.1	+3.9
KSH				*e*PCS	PcS	02 09 53.3	+0.6
KSH				*e*S	**S**	**02 11 36.9**	**+0.8**
KSH				*e*SCS	ScS	02 14 22.1	+0.9
SNY	**Shenyang**	**49.71**	**21**

FRU e 02 06 56.0
MAJO Matsushiro 52.77 37 *e*P **P** **02 04 58.8 -1.6**
MJAR Matsushiro Arr 52.77 37 P **P** **02 04 58.1 -2.3**
comp=Z,6.4nm,0.9s,mb4.5,baz=220,slow=7.8,SNR=12
EKS2 Erkin-Say 52.77 334 P **P** **02 05 00.9 +0.5**
SNR=20
EKS2 Erkin-Say 52.77 334 *e*P **P** **02 05 00.7 +0.3**
comp=Z,13nm,0.6s,mb5.0
USP Ospenovka 52.96 335 P **P** **02 05 01.4 -0.3**
SNR=11
MKAR Makanchi Array 53.30 344 P **P** **02 05 03.6 -0.6**
comp=Z,14nm,0.6s,mb5.0,baz=155,slow=8.3,SNR=62
MKAR pP pP 02 05 16.5 -2.2
comp=Z,15nm,0.7s,baz=144,slow=8.0,SNR=11
ARMA Armidale 53.98 125 *e*P **P** **02 05 11.2 +1.7**
MDJ Mudanjiang 54.41 24 P **P** **02 05 11.4 -0.9**
MDJ AMB AMB
comp=Z,16nm,1.4s,mb4.8
MDJ AMB AMB
comp=Z,7µm,13.7s
MDJ Mudanjiang 54.41 24 *e*P **P** **02 05 11.1 -1.2**
comp=Z,14nm,0.9s,mb4.9
TLY Talaya 55.40 2 *e*P **P** **02 05 19.5 +0.2**
TLY *e* pP 02 05 36.8 +2.8
TLY pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
TLY Talaya 55.40 2 *e*P **P** **02 05 19.3 0.0**
KURK Kurchatov 57.89 343 P **P** **02 05 36.0 -1.0**
comp=Z,178nm,1.1s,mb6.0,SNR=10
KURK Kurchatov 57.89 343 P **P** **02 05 35.9 -1.2**
comp=Z,3.6nm,0.4s,mb4.7,baz=187,slow=6.4,SNR=32
KURK pP pP 02 05 49.0 -2.7
comp=Z,16nm,1.0s,baz=159,slow=6.3,SNR=16
KURK Kurchatov 57.89 343 *e*P **P** **02 05 36.1 -0.9**
KURK *e* pP 02 05 49.2 -2.5
KURK pmax pmax
comp=Z,59nm,1.3s,mb5.5
KURK Kurchatov 57.89 343 *e*P **P** **02 05 36.0 -1.0**
comp=Z,59nm,1.3s,mb5.5
KURK *e* pP 02 05 49.2 -2.6
KLR Kul'dur 59.03 23 *e*P **P** **02 05 40.6 -4.4**
KLR pmax pmax
comp=E,28nm,1.6s
KLR pmax pmax
comp=Z,57nm,1.6s,mb5.3
ZAA0 Zalesovo Array 59.34 349 *e*P **P** **02 05 45.8 -1.2**
ZALV Zalesovo Beam 59.34 349 P **P** **02 05 46.0 -1.0**
comp=Z,39nm,0.7s,mb5.6,baz=160,slow=4.7,SNR=101
KRAR Krasnoyarsk 60.15 354 *e*P **P** **02 05 51.2 -1.3**
KRAR pmax pmax
comp=Z,43nm,1.2s,mb5.3
NVS Novosibirsk 60.50 348 *i* P **P** **02 05 52.9 -2.1**
NVS pmax pmax
comp=N,18nm,1.4s
NVS pmax pmax
comp=Z,28nm,1.4s,mb5.2
NVS pmax pmax
comp=E,14nm,1.2s
YSS Yuzh-Sakhalins 62.26 31 *e*P **P** **02 06 05.7 -1.3**
YSS *e* pP 02 06 24.0 +2.1
YSS pmax pmax
comp=Z,50nm,1.0s,mb5.6
YSS Yuzh-Sakhalins 62.26 31 *e*P **P** **02 06 06.1 -0.9**
comp=Z,45nm,1.0s,mb5.6
BOD Bodaibo 62.33 7 *e*P **P** **02 06 05.9 -1.4**
BOD *e* pP 02 06 22.8 +0.6
BOD pmax pmax
comp=Z,11nm,1.3s,mb4.8
BOD pmax pmax
comp=Z,17nm,1.1s,mb5.1
BVAR Borovoye Array 62.53 339 P **P** **02 06 07.4 -1.3**
comp=Z,6.9nm,0.5s,mb5.1,baz=144,slow=9.3,SNR=38
CASY Casey 62.57 176 *e*P **P** **02 06 00.2 -8.6**
BRVK Borovoye 62.59 339 P **P** **02 06 07.7 -1.4**
comp=Z,90nm,0.5s,mb6.2,SNR=6.1
BRVK Borovoye 62.59 339 *e*P **P** **02 06 07.7 -1.4**
BRVK pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
BRVK Borovoye 62.59 339 *e*P **P** **02 06 07.7 -1.4**
comp=Z,6.6nm,0.6s,mb4.9
AKTK Aktyubinsk 65.80 331 P **P** **02 06 29.1 -1.1**
AKTO Aktyubinsk 65.80 331 P **P** **02 06 29.1 -1.1**
comp=Z,5.7nm,0.8s,mb4.6,baz=131,slow=8.2,SNR=8.1
GNI Garni 68.02 316 P **P** **02 06 44.2 -0.3**
comp=Z,1.7nm,0.4s,mb4.5,baz=183,slow=18,SNR=2.4
MAW Mawson 68.86 195 *e*P pP 02 07 05.9 +1.6
comp=Z,4.9nm,0.9s
SVE Sverdlovsk 69.06 337⇑ *e*P **P** **02 06 50.6 0.0**
SVE pmax pmax
comp=Z,29nm,1.1s,mb5.1
YAK Yakutsk 69.18 14 *e*P **P** **02 06 48.9 -2.4**
YAK pmax pmax
comp=Z,70nm,1.4s,mb5.4
YAK Yakutsk 69.18 14 *e*P **P** **02 06 49.6 -1.7**
comp=Z,34nm,0.5s,mb5.5
ARU Arti 69.60 336 *c i*P **P** **02 06 53.0 -1.0**
ARU *e*S S 02 15 59.0 +1.0
ARU pmax pmax
comp=Z,24nm,1.2s,mb5.0
ARU Arti 69.60 336 *e*P **P** **02 06 52.9 -1.1**
comp=Z,37nm,1.4s,mb5.1
ARU *e* pP 02 07 06.5 -2.6
ASF Jabal al Asfar 71.02 306 P **P** **02 07 05.4 +2.2**
comp=Z,11nm,1.0s,mb4.7,baz=326,slow=2.4,SNR=11
KIV Kislovodsk 71.04 319 *ce*P **P** **02 07 03.4 +0.3**
KIV *e**SP sP 02 07 17.8 -6.5
KIV *e* pP 02 07 22.3 +4.1
KIV pmax pmax
comp=Z,24nm,1.1s,mb5.0
KIV Kislovodsk 71.04 319⇑ *i*P **P** **02 07 04.6 +1.5**
KIV Kislovodsk 71.04 319 *e*P **P** **02 07 03.6 +0.5**
comp=Z,24nm,1.1s,mb5.0
KIV *e* pP 02 07 19.5 +1.3
MALT Malatya 71.82 312 *e*P **P** **02 07 07.3 -0.6**
MALT pmax pmax
comp=Z,15nm,1.3s,mb4.8
MALT Malatya 71.82 312⇑ *i*P **P** **02 07 07.4 -0.5**
MALT Malatya 71.82 312 *e*P **P** **02 07 07.3 -0.6**
comp=Z,15nm,1.3s,mb4.8
GZT Gaziantep 72.13 311 *i* P **P** **02 07 08.7 -1.1**
LSZ Lusaka 73.01 255 P **P** **02 07 16.4 +0.9**
comp=Z,1.3nm,0.5s,mb4.1,baz=108,slow=5.6,SNR=3.3
LSZ Lusaka 73.01 255 *e*P **P** **02 07 17.3 +1.8**
LSZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
LSZ Lusaka 73.01 255 *e*P **P** **02 07 17.2 +1.8**
comp=Z,4.5nm,0.9s,mb4.4
ANDN Andirin 73.12 311 *i* P **P** **02 07 16.9 +1.1**
PETK Petropavlovsk- 73.64 31 P **P** **02 07 16.7 -1.7**
comp=Z,3.8nm,0.6s,mb4.5,baz=350,slow=0.1,SNR=21
PETK pP pP 02 07 32.7 -0.9
comp=Z,3.4nm,0.6s,baz=285,slow=2.9,SNR=4.6
PETK Petropavlovsk- 73.64 31 P **P** **02 07 16.7 -1.6**
PETK pP pP 02 07 32.7 -0.9
PET Petropavlovsk 74.09 32 *e*P **P** **02 07 20.0 -1.1**
PET pmax pmax
comp=Z,22nm,1.2s,mb5.0
PET Petropavlovsk 74.09 32 *e*P **P** **02 07 19.6 -1.5**
comp=Z,18nm,0.5s,mb5.3
CSS Prodhromos 74.67 308 *e*P **P** **02 07 24.7 -0.1**
comp=Z,40nm,1.1s,mb5.3
LBTB Lobatse 75.70 245 P **P** **02 07 33.0 +2.0**
comp=Z,2.3nm,0.8s,mb4.2,baz=352,slow=15,SNR=2.9
LBTB Lobatse 75.70 245 P **P** **02 07 33.0 +2.0**
BR131 Keskin Array S 75.80 312 *e*P **P** **02 07 30.6 -0.6**
comp=Z,8.6nm,0.9s,mb4.7
BOSA Boshof 76.17 242 P **P** **02 07 36.2 +2.6**
comp=Z,1.2nm,0.5s,mb4.1,baz=74,slow=10,SNR=6.5
BOSA pP pP 02 07 50.6 +1.7
comp=Z,6.7nm,0.8s,baz=68,slow=6.5,SNR=5.3
BOSA Boshof 76.17 242 P **P** **02 07 36.2 +2.6**
BOSA pP pP 02 07 50.6 +1.7
VSR Storozhevoye 76.26 325 *e*P **P** **02 07 32.4 -1.2**
VSR pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
VSR pmax pmax
comp=N,20nm,2.9s
VSR pmax pmax
comp=E,20nm,1.2s
ANTO Ankara 76.47 312 *e*P **P** **02 07 34.2 -0.8**
ANTO *e* pP 02 07 49.0 -1.3
ANTO pmax pmax
comp=Z,14nm,1.2s,mb4.8
ANTO Ankara 76.47 312 *e*P **P** **02 07 34.2 -0.8**
comp=Z,14nm,1.2s,mb4.8
ANTO *e* pP 02 07 49.0 -1.2

SYO Syowa Base 76.60 199⇑ *e*pP pP 02 07 49.6 -0.9
SIM Simferopol' 77.10 318 *e*P **P** **02 07 39.1 +0.7**
SIM pmax pmax
comp=Z,14nm,0.9s,mb4.9
TIXI Tiksi 77.48 9 *e*P pP 02 07 53.7 -1.6
TIXI pmax pmax
comp=Z,28nm,1.2s,mb5.1
OBN Obninsk 79.26 328 *ce*P **P** **02 07 49.9 -0.3**
OBN *e* 02 07 59.6
OBN *e**SP sP 02 08 05.4 -6.1
OBN *e* pP 02 08 09.0 +3.5
OBN 02 10 50.0
OBN pmax pmax
comp=Z,31nm,1.4s,mb5.0
AKASG Malin Array Be 81.98 322 P **P** **02 08 04.2 -0.7**
comp=Z,3.7nm,0.7s,mb4.4,baz=86,slow=3.9,SNR=13
AKASG pP pP 02 08 19.2 -1.0
comp=Z,2.0nm,0.6s,baz=82,slow=4.6,SNR=3.2
KIEV Kiev 81.99 322 *e*P **P** **02 08 03.9 -1.0**
KIEV pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
KIEV Kiev 81.99 322 *e*P **P** **02 08 03.9 -1.0**
comp=Z,8.7nm,1.2s,mb4.6
VRI Vrincioaia 82.35 317⇓ *i*P **P** **02 08 08.0 +1.1**
VRI Vrincioaia 82.35 317⇓ P **P** **02 08 08.0 +1.1**
MLR Muntele Rosu 82.80 317⇑ *i*P **P** **02 08 10.2 +1.0**
MLR Muntele Rosu 82.80 317⇑ P **P** **02 08 10.2 +1.0**
BURAR Bucovina Array 83.76 319⇑ *i*P **P** **02 08 15.5 +1.4**
BURAR Bucovina Array 83.76 319⇑ P **P** **02 08 15.5 +1.4**
BUR08 Bucovina Ar. S 83.77 319 *e*P **P** **02 08 15.0 +0.8**
JOF Joensuu 84.63 334 *ep* **P** **02 08 17.5 -0.7**
comp=Z,9.3nm,0.9s,mb4.9
JOF Joensuu 84.63 334 *e*P **P** **02 08 17.5 -0.7**
JOF pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
BZS Buzias 85.80 316⇑ *i*P **P** **02 08 25.1 +0.7**
BZS Buzias 85.80 316 ⇑P **P** **02 08 25.1 +0.7**
KWP Kalwaria 85.80 320 *e*P **P** **02 08 25.1 +0.8**
KWP Kalwaria 85.80 320⇓ *i*P **P** **02 08 25.4 +1.1**
KOLS Kolonicke sedl 85.95 319 *e*P **P** **02 08 26.1 +1.0**
QSPA South Pole Qui 86.06 180 P **P** **02 08 26.4 +1.3**
comp=Z,4.5nm,1.0s,mb4.7,baz=271,slow=3.1,SNR=5.3
QSPA pP pP 02 08 40.0 -0.6
comp=Z,8.9nm,1.0s,baz=323,slow=2.5,SNR=10
QSPA South Pole Qui 86.06 180 P **P** **02 08 26.4 +1.3**
QSPA pP pP 02 08 40.0 -0.6
SUW Suwalki 86.37 325 *e*P **P** **02 08 27.2 +0.2**
SUW Suwalki 86.37 325 *e*P **P** **02 08 27.2 +0.1**
CRVS Cervenica-Dubn 86.47 319 *e*P **P** **02 08 29.1 +1.4**
KAF Kangasniemi 86.61 333 *ep* **P** **02 08 26.0 -2.0**
comp=Z,7.8nm,0.5s,mb5.2,baz=100,slow=4.4
KAF Kangasniemi 86.61 333 *e*P **P** **02 08 26.0 -2.0**
KAF pmax pmax
comp=Z,8.0nm,0.5s,mb5.2
STHS Stebnicka Huta 86.70 320 *e*P **P** **02 08 29.9 +1.1**
STHS *e* pP 02 08 48.6 +4.3
STHS pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
STHS Stebnicka Huta 86.70 320 *e*P **P** **02 08 29.9 +1.1**
comp=Z,7.5nm,1.1s,mb4.8
STHS *e* pP 02 08 48.6 +4.3
KECS Kecovo 87.04 319 *e*P **P** **02 08 30.8 +0.4**
KECS *e* pP 02 08 45.8 -0.2
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
KECS Kecovo 87.04 319 *e*P **P** **02 08 30.8 +0.4**
comp=Z,3.9nm,1.0s,mb4.6
KECS *e* pP 02 08 45.8 -0.2
PSZ Piszkesteto 87.34 318 *e*P **P** **02 08 31.6 -0.3**
PSZ pmax pmax
comp=Z,17nm,1.4s,mb5.1
PSZ Piszkesteto 87.34 318 *e*P **P** **02 08 31.6 -0.3**
DPC comp=Z,17nm,1.4s,mb5.1
PKSM Moragy 87.94 316⇑ *i*P **P** **02 08 35.6 +0.8**
PKSM Moragy 87.94 316⇑ P **P** **02 08 35.6 +0.7**
VYHS Vyhne 88.12 319 *e*P **P** **02 08 35.9 +0.3**
KEV Kevo 88.36 340 *ep* **P** **02 08 34.9 -1.4**
comp=Z,9.7nm,0.7s,mb5.1
KEV Kevo 88.36 340 *e*P **P** **02 08 34.9 -1.4**
KEV pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
KOLL Kolacno 88.42 319 *e*P **P** **02 08 37.6 +0.5**
OKC Ostrava-Krasne 88.75 320 *e*P **P** **02 08 39.4 +0.8**
OKC *ep*P pP 02 08 50.2 -4.0
ARCES ARCESS Array B 88.81 340 P **P** **02 08 38.3 -0.1**
comp=Z,7.4nm,0.7s,mb5.1,baz=90,slow=4.9,SNR=22
ARCES pP pP 02 08 53.4 -0.7
comp=Z,14nm,1.0s,baz=93,slow=2.7,SNR=4.8
MORC Moravsky Berou 89.14 320 *e*P **P** **02 08 39.5 -0.9**
MORC pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
MORC Moravsky Berou 89.14 320⇓ *i*P **P** **02 08 39.4 -1.0**
MORC Moravsky Berou 89.14 320 *e*P **P** **02 08 39.5 -0.9**
comp=Z,7.9nm,1.0s,mb5.0
MODS Modra-Piesok 89.14 318 *e*P **P** **02 08 40.9 +0.5**
MODS *ep*P pP 02 08 55.8 -0.2
ZST Bratislava 89.23 318 *e*P **P** **02 08 41.1 +0.2**
ZST pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
ZST Bratislava 89.23 318 *e*P **P** **02 08 41.1 +0.2**
comp=Z,7.0nm,0.7s,mb5.1
DPC Dobruska-Polom 89.98 320 *e*P **P** **02 08 45.7 +1.4**
DPC *es*P sP 02 08 59.5 -6.4
ARSA Arzberg 90.19 317⇑ *i*P **P** **02 08 46.2 +0.8**
comp=Z,12nm,1.4s,mb5.0
ARSA Arzberg 90.19 317⇑ *i*PcP PcP 02 08 46.2 -0.4
comp=Z,12nm,1.4s
UPC Upice 90.19 320 *e*P **P** **02 08 46.5 +1.2**
UPC *ex* x 02 09 00.4
TREC Trest 90.41 319 *e*P **P** **02 08 46.9 +0.5**
TREC *es*P sP 02 09 01.5 -6.4
SOKA Soboth 90.48 317⇑ *i*P **P** **02 08 47.6 +0.9**
SOKA Soboth 90.48 317⇑ *i*PcP PcP 02 08 47.6 -0.2
SNAA Sanae 90.84 198 *e*P **P** **02 08 48.3 +0.4**
SNAA pmax pmax
comp=Z,36nm,1.2s
SNAA Sanae 90.84 198 *e*P **P** **02 08 48.3 +0.4**
comp=Z,36nm,1.2s,mb5.6
PRU Pruhonice 91.09 320 *e*P **P** **02 08 50.7 +1.2**
PRU *es*P sP 02 09 04.3 -6.8
PVCC Panska Ves 91.11 320 *e*P **P** **02 08 50.9 +1.3**
PVCC *ep*P pP 02 08 58.4 -6.8
BRG Berggiesshubel 91.54 321 *e*P **P** **02 08 52.4 +0.8**
BRG *e* pP 02 09 05.9 -1.3
BRG *e* 02 12 38.0
BRG pmax pmax
comp=Z,4.0nm,1.2s,mb4.6
BRG pmax pmax
comp=Z,1.0nm,0.6s,mb4.3
BRG pmax pmax
comp=Z,2.0nm,1.2s,mb4.3
BRG pmax pmax
comp=Z,2.0nm,1.2s,mb4.3
BRG Berggiesshubel 91.54 321 *e*P **P** **02 08 52.4 +0.8**
comp=Z,7.0nm,1.2s,mb4.8
BRG *e* pP 02 09 05.9 -1.2
comp=Z,2.2nm,0.6s
BRG *e* 02 11 52.3
comp=Z,3.2nm,1.2s
BRG *e* 02 12 38.0
comp=Z,2.8nm,1.1s
BRG Berggiesshubel 91.54 321 *e*P **P** **02 08 52.4 +0.8**
comp=Z,4.2nm,1.2s,mb4.6
BRG *e* pP 02 09 05.9 -1.2
BRG *e* 02 11 52.3
BRG *e* 02 12 38.0
BRG *i* 02 24 11.2
GERES GERESS Array B 91.55 319 P **P** **02 08 52.4 +0.8**
comp=Z,2.6nm,0.9s,mb4.6,baz=108,slow=4.3,SNR=17
KHC Kasperske Hory 91.65 319 *e*P **P** **02 08 53.2 +1.1**
KHC Kasperske Hory 91.65 319 *e*P **P** **02 08 53.6 +1.5**
KHC *es*P sP 02 09 07.3 -6.4
CLL Collm 92.16 321 *e*P **P** **02 08 55.0 +0.6**
CLL *e*PP PP 02 12 31.0 -4.1
ABTA Abfaltersbach 92.21 317⇑ *i*P **P** **02 08 54.5 -0.3**
comp=Z,7.6nm,1.3s,mb4.9
NKC Novy Kostel 92.45 320 *e*P **P** **02 08 56.8 +1.0**
NKC *es*P sP 02 09 10.2 -7.2
GRA1 Grafenberg Arr 93.22 319 *e*P **P** **02 09 00.0 +0.7**
comp=Z,7.0nm,1.1s,mb5.0
GRF Grafenberg Arr 93.22 319 *e*P **P** **02 09 00.0 +0.7**
GRF pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
GRF Grafenberg Arr 93.22 319 *e*P **P** **02 09 00.0 +0.7**

GRF pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
GRF Grafenberg Arr 93.22 319 *e*P **P** **02 09 00.0 +0.7**
comp=Z,7.0nm,1.1s,mb5.0
NB2 NORSAR Subarra 93.59 331 P **P** **02 09 00.6 -0.2**
comp=Z,0.5nm,0.5s,mb4.2,baz=92,slow=5.3
NOA NORSAR Array B 93.59 331 P **P** **02 08 59.9 -0.9**
comp=Z,1.2nm,0.6s,mb4.5,baz=93,slow=4.6,SNR=4.4
KEST Kesra 94.11 305 P **P** **02 09 03.4 -0.4**
comp=Z,2.4nm,1.0s,mb4.6,baz=326,slow=2.9,SNR=4.0
NEW Newport 124.77 31 *e*PKIKP PKPdf 02 14 44.4 -0.2
FFC Flin Flon 125.84 17 *e*PKIKP PKPdf 02 14 46.8 +0.4
HLID Hailey 129.27 34 *e*PKPdf PKPdf 02 14 54.3 +1.0
BOZ Bozeman (W) 129.31 30 *e*PKIKP PKPdf 02 14 53.7 +0.4
NVAR Mina Array Bea 130.00 41 PKP PKPdf 02 14 55.6 +0.7
comp=Z,0.8nm,0.6s,baz=286,slow=2.4,SNR=5.4
ELK Elko 130.58 37 *e*PKIKP PKPdf 02 14 56.6 +0.7
HWUT Hardware Ranch 132.14 34 *e*PKPdf PKPdf 02 14 59.5 +0.6
DUG Dugway 132.36 36 *e*PKIKP PKPdf 02 15 00.1 +0.8
BW06 Boulder Array 132.40 31 *e*PKPdf PKPdf 02 14 59.5 +0.2
PDAR Pinedale Array 132.40 31 PKP PKPdf 02 14 58.4 -0.9
comp=Z,0.4nm,0.5s,baz=126,slow=2.0,SNR=3.7
MSU Marysvale 133.82 37 *e*PKIKP PKPdf 02 15 03.1 +1.0
CFAA Coronel Fontan 143.39 195 PKP PKPdf 02 15 17.9 -2.0
comp=Z,0.2nm,0.4s,baz=169,slow=1.8,SNR=2.0
CPUP Villa Florida 143.69 213 PKP PKPdf 02 15 19.6 -0.9
comp=Z,5.2nm,1.0s,baz=90,slow=5.5,SNR=6.1
CPUP Villa Florida 143.69 213 *e*PKPdf PKPdf 02 15 19.2 -1.3
CPUP *e* 02 15 32.6
WMOK Wichita Mounta 143.95 29 *e*PKIKP PKPdf 02 15 17.3 -3.4
BDFB Brasilia 144.22 236 PKP PKPdf 02 15 20.3 -1.4
comp=Z,3.3nm,0.8s,baz=131,slow=1.0,SNR=2.8
WCI Wyandotte Cave 145.08 11 *e*PKIKP PKPdf 02 15 20.9 -1.7
TXAR Lajitas Array 145.15 41 PKP PKPdf 02 15 22.6 -0.3
comp=Z,16nm,0.6s,baz=253,slow=0.8,SNR=265
GLAT Glass 146.26 16 *e*PKPbc PKPbc 02 15 25.5 -0.3
MIAR Mount Ida 146.41 23 *e*PKP2 PKPab 02 15 25.1 -2.0
JCT Junction City 146.72 35 *e*PKP2 PKPab 02 15 26.1 -2.4
ELN Prospectdale 146.77 3 *e*PKPbc PKPbc 02 15 24.9 -2.3
WVT Waverly 146.77 14 *e*PKP2 PKPbc 02 15 26.3 -1.0
TKL Tuckaleechee C 148.01 8 PKPbc PKPbc 02 15 27.4 -3.3
comp=Z,8.3nm,0.6s,baz=144,slow=4.8,SNR=22
TKL Tuckaleechee C 148.01 8 PKPbc PKPbc 02 15 27.4 -3.3
NATX Nacogdoches 148.35 27 *e*PKPbc PKPbc 02 15 31.0 -0.7
CNNC Cliffs of the 148.82 359 *e*PKPdf PKPdf 02 15 29.2 +0.3
CNNC *e*PKPbc PKPbc 02 15 32.8 -0.1
HKT Hockley 149.28 31 *e*PKP2 PKPbc 02 15 34.2 +0.1
GOGA Godfrey 150.27 9 *e*PKP2 PKPbc 02 15 35.5 -1.0
SIV San Ignacio 153.85 220 PKP PKPdf 02 15 37.9 +0.9
comp=Z,1.0nm,0.9s,baz=207,slow=2.3,SNR=2.7
OTAV Otavalo 176.35 179 *e*PKPdf PKPdf 02 15 56.3 +0.2

IDC ***13*** *01:59:20.0*±*3.6, 358*×*10061E, h0*km*, mb4.0/6, mb1 4.2/6, mb1mx3.8/20, mbtmp4.0/6, Error ellipse: s-maj=159.2km s-min=20.1km az=53.0*
ISCJB ***13*** *01:59:22.1*±*0.7, 367*×*009*×*1005E*±*0.1, h33*km*, mb4.2/9, Error ellipse: s-maj=18.2km s-min=10.6km az=155.1*
NEIC ***13*** *01:59:24.8*±*1.7, 366*×*10055E, h36*km*±*20*km*, mb4.4/4, Error ellipse: s-maj=19.0km s-min=9.7km az=216.0*
ISC 13 01:59:24.2±7.4,**36S**±02×**1006E**±01,**h30**km±58km,**n14,**
σ0**s42**/13,**mb4.2**/9,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
XMIS	**Christmas Isla**	**8.45**	**144**	*e*Pn	**Pn**	**02 01 25.1**	**+0.5**
COCO	**West Island**	**9.27**	**203**	*e*Pn	**Pn**	**02 01 35.5**	**-0.3**
	167nm,0.5s						
KAPI	**Kappang**	**19.16**	**95**	*e*P	**Pn**	**02 03 46.1**	**-0.3**
	4.3nm,0.5s						
WRA	**Warramunga Arr**	**36.67**	**119**	P	**P**	**02 06 28.3**	**-0.2**
	0.8nm,0.5s,mb3.9,baz=299,slow=9.4,SNR=4.1						
WRAB	**Tennant Creek**	**36.68**	**119**	*e*P	**P**	**02 06 28.1**	**-0.5**
	6.0nm,0.9s,mb4.4						
ASAR	**Alice Springs**	**37.83**	**125**	P	**P**	**02 06 38.9**	**+0.6**
	1.3nm,0.5s,mb3.9,baz=303,slow=8.6,SNR=4.1						
SONM	**Songino Array**	**51.51**	**5**	P	**P**	**02 08 27.2**	**+0.2**
	4.6nm,0.8s,mb4.4,baz=184,slow=9.6,SNR=6.3						
ULN	**Ulaanbaatar**	**51.60**	**6**	*e*P	**P**	**02 08 27.3**	**-0.3**
	3.0nm,0.8s,mb4.3						
EKS2	**Erkin-Say**	**52.09**	**335**	*e*P	**P**	**02 08 32.2**	**+0.9**
	4.9nm,0.8s,mb4.5						
MKAR	**Makanchi Array**	**52.76**	**344**	P	**P**	**02 08 35.9**	**-0.3**
	1.4nm,0.6s,mb4.0,baz=148,slow=8.1,SNR=5.0						
KURK	**Kurchatov**	**57.34**	**344**	P	**P**	**02 09 09.1**	**-0.1**
	1.0nm,0.8s,mb3.9,baz=162,slow=7.4,SNR=2.2						
ZALV	**Zalesovo Beam**	**58.88**	**349**	P	**P**	**02 09 19.8**	**-0.2**
	0.8nm,0.3s,mb4.2,baz=163,slow=5.2,SNR=3.5						
ZALV	**Zalesovo Beam**	**58.88**	**349**	P	**P**	**02 09 19.8**	**-0.2**
TXAR	**Lajitas Array**	**145.62**	**39**	PKPbc	PKPbc	02 19 01.2	+0.8
	1.4nm,0.5s,baz=241,slow=0.5,SNR=11						

ISCJB ***13*** *02:05:05.8*±*0.5, 5446S*±*006*×*1.1W*±*02, h10*km*, mb4.2/15, Error ellipse: s-maj=13.1km s-min=9.2km az=2.1*
IDC ***13*** *02:05:06.5*±*0.6, 5441S*×*1.11W, h0*km*, mb4.2/14, mb1 4.3/14, mb1mx4.1/22, mbtmp4.2/14, Error ellipse: s-maj=18.8km s-min=15.8km az=156.0*
NEIC ***13*** *02:05:07.9*±*0.4, 5442S*×*104W, h10*km*, mb4.7/3, Error ellipse: s-maj=12.1km s-min=10.7km az=94.0*
ISC 13 02:05:07.8±0.5,**5449S**±006×**10W**±02,**h10**km,**n31,**
σ0**s91**/26,**mb4.2**/15,**1C-1D, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.54**	**189**	*e*P	**Pn**	**02 09 00.1**	**+0.7**
VNA1				*e*		02 09 02.4	
VNA2	**Neumayer--Watz**	**16.74**	**187**	*e*P	**Pn**	**02 09 00.3**	**-1.7**
VNA2				*e*		02 09 04.8	
VNA3	**Neumayer Olymp**	**17.24**	**189**	*e*P	**Pn**	**02 09 07.2**	**-1.1**
VNA3				*e*		02 09 10.6	
SNAA	**Sanae**	**17.27**	**182**	*e*P	**Pn**	**02 09 04.7**	**-3.9**
SNAA				*e*		02 09 11.8	
SNAA	**Sanae**	**17.27**	**182**	*e*Pn	**Pn**	**02 09 09.5**	**+0.9**
SYO	**Syowa Base**	**23.48**	**144**⇓	*e*P	**P**	**02 10 15.6**	**-1.7**
SYO	**Syowa Base**	**23.48**	**144**⇓	*i*P	**P**	**02 10 20.7**	**+3.4**
MAW	**Mawson**	**31.94**	**139**	P	**P**	**02 11 33.9**	**+0.7**
	7.8nm,0.9s,mb4.6,baz=266,slow=9.1,SNR=6.8						
LBTB	**Lobatse**	**35.43**	**45**	P	**P**	**02 12 02.9**	**-0.9**
	3.1nm,0.9s,mb4.2,baz=29,slow=22,SNR=2.4						
LBTB	**Lobatse**	**35.43**	**45**	P	**P**	**02 12 02.9**	**-1.0**
QSPA	**South Pole Qui**	**35.76**	**180**	P	**P**	**02 12 07.1**	**+0.9**
	8.4nm,0.9s,mb4.7,baz=222,slow=4.1,SNR=17						
TSUM	**Tsumeb**	**37.99**	**29**	P	**P**	**02 12 25.0**	**-0.7**
	3.3nm,0.9s,mb4.1,baz=232,slow=12,SNR=3.7						
LSZ	**Lusaka**	**45.23**	**42**	P	**P**	**02 13 25.1**	**0.0**
	1.0nm,0.7s,mb3.8,baz=153,slow=4.5,SNR=3.3						
PLCA	**Paso Flores**	**46.93**	**257**	P	**P**	**02 13 38.1**	**-0.2**
	1.6nm,0.7s,mb4.0,baz=112,slow=9.0,SNR=5.2						
CASY	**Casey**	**49.00**	**150**	*e*P	**P**	**02 13 54.2**	**+0.2**
	7.0nm,1.1s,mb4.6						
CPUP	**Villa Florida**	**49.56**	**281**	P	**P**	**02 13 58.3**	**-0.4**
	1.3nm,0.6s,mb4.2,baz=121,slow=9.1,SNR=6.5						
CFAA	**Coronel Fontan**	**51.96**	**267**	P	**P**	**02 14 16.1**	**-0.7**
	0.8nm,0.8s,mb3.7,baz=143,slow=5.2,SNR=12						
LVC	**Limon Verde**	**59.12**	**274**	P	**P**	**02 15 09.0**	**+0.7**
	4.9nm,0.8s,mb4.6,baz=141,slow=2.1,SNR=6.6						
LVC	**Limon Verde**	**59.12**	**274**	*e*P	**P**	**02 15 10.7**	**+2.4**
	5.3nm,0.8s,mb4.6						
SIV	**San Ignacio**	**59.84**	**285**	P	**P**	**02 15 12.7**	**-0.7**
	0.3nm,0.5s,mb3.6,baz=156,slow=22,SNR=2.6						
DBIC	**Dimbokro**	**61.02**	**356**	P	**P**	**02 15 22.2**	**+0.9**
	2.9nm,0.5s,mb4.7,baz=233,slow=6.5,SNR=8.9						
DBIC	**Dimbokro**	**61.02**	**356**	*e*P	**P**	**02 15 22.1**	**+0.8**
	11nm,1.1s,mb4.9						
LPAZ	**La Paz**	**63.63**	**279**	P	**P**	**02 15 39.5**	**+0.7**
	3.6nm,0.7s,mb4.5,baz=123,slow=6.2,SNR=22						
TORD	**Torodi Ar. Bea**	**67.41**	**3**	P	**P**	**02 16 03.1**	**0.0**
	0.8nm,0.8s,mb3.8,baz=156,slow=2.5,SNR=5.3						
STKA	**Stephens Creek**	**88.14**	**149**	P	**P**	**02 17 59.4**	**+0.8**
	2.7nm,0.7s,mb4.6,baz=156,slow=9.8,SNR=3.4						
STKA	**Stephens Creek**	**88.14**	**149**	P	**P**	**02 17 59.4**	**+0.8**
BVAR	**Borovoye Array**	**122.33**	**43**	PKP	PKPdf	02 24 03.1	+1.3
	0.5nm,0.5s,baz=303,slow=44,SNR=2.6						
KURK	**Kurchatov**	**124.06**	**49**	PKP	PKPdf	02 24 03.7	-1.5
	0.2nm,0.4s,baz=246,slow=3.1,SNR=3.1						
YKA	**Yellowknife Ar**	**145.87**	**311**	PKPbc	PKPbc	02 24 44.5	-1.3
	2.8nm,0.8s,baz=97,slow=2.3,SNR=7.8	

IDC 13 02:11:58.0±6.6, 065S×10082E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.8/4, Error ellipse: s-maj=338.3km s-min=28.5km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.99**	**122**	P	P	02 19 18.2	+0.1
	0.6nm,0.5s,baz=302,slow=9.1,SNR=5.3						
MKAR	**Makanchi Array**	**49.97**	**343**	P	P	02 20 54.1	+0.3
	0.7nm,0.5s,baz=148,slow=8.5,SNR=4.1						
KURK	**Kurchatov**	**54.56**	**343**	P	P	02 21 27.1	-0.8
	0.2nm,0.3s,baz=167,slow=7.1,SNR=3.1						
ZALV	**Zalesovo Beam**	**56.01**	**349**	P	P	02 21 38.7	+0.4
	1.6nm,0.3s,baz=151,slow=7.1,SNR=3.1						
TXAR	**Lajitas Array**	**143.14**	**37**	PKP	PKPdf	02 31 32.3	-2.6
	0.4nm,0.4s,baz=194,slow=0.9,SNR=12						

IDC 13 02:14:14.6±3.6, 231S×9944E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.7/20, mbtmp3.7/6, Error ellipse: s-maj=156.8km s-min=20.6km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.33**	**120**	P	P	02 21 37.7	+0.2
	0.7nm,0.7s,baz=306,slow=8.9,SNR=3.8						
ASAR	**Alice Springs**	**39.53**	**125**	P	P	02 21 47.0	-0.6
	0.2nm,0.3s,baz=302,slow=7.8,SNR=3.7						
SONM	**Songino Array**	**50.30**	**6**	P	P	02 23 12.9	0.0
	1.1nm,0.6s,baz=191,slow=7.1,SNR=6.7						
MKAR	**Makanchi Array**	**51.17**	**345**	P	P	02 23 19.6	+0.1
	0.7nm,0.4s,baz=148,slow=8.0,SNR=4.8						
KURK	**Kurchatov**	**55.74**	**344**	P	P	02 23 52.6	-0.4
	0.2nm,0.4s,baz=174,slow=6.5,SNR=2.6						
ZALV	**Zalesovo Beam**	**57.37**	**350**	P	P	02 24 03.7	-0.8
	0.9nm,0.3s,baz=180,slow=4.3,SNR=4.4						
TXAR	**Lajitas Array**	**145.28**	**37**	PKPbc	PKPbc	02 33 55.1	+0.2
	0.7nm,0.7s,baz=284,slow=1.9,SNR=8.5						

IDC 13 02:17:52.9±2.9, 254S×9896E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/21, mbtmp3.9/7, Error ellipse: s-maj=132.2km s-min=19.4km az=53.0
ISCJB 13 02:17:55.2±2.0, 26S±04×988E±05, h33km, mb4.0/9, Error ellipse: s-maj=83.9km s-min=14.2km az=143.4
NEIC 13 02:17:58.2±1.4, 251S×9901E, h35km, mb4.3/2, Error ellipse: s-maj=61.2km s-min=10.4km az=53.0
ISC 13 02:17:57.7±2.0, 26S±04×989E±05, h35km, n12, σ0§37/10, mb4.0/9, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.65**	**119**	P	**P**	**02 25 18.3**	**+0.1**
	0.5nm,0.4s,mb3.6,baz=303,slow=9.1,SNR=8.0						
WB2	**Warramunga Arr**	**38.66**	**119**	*e*P	**P**	**02 25 18.4**	**+0.2**
ASAR	**Alice Springs**	**39.80**	**125**	P	**P**	**02 25 27.5**	**-0.2**
	0.7nm,0.5s,mb3.6,baz=302,slow=7.7,SNR=3.5						
SONM	**Songino Array**	**50.64**	**7**	P	**P**	**02 26 53.1**	**-0.2**
	1.8nm,0.7s,mb4.1,baz=189,slow=6.7,SNR=11						
ULN	**Ulaanbaatar**	**50.75**	**7**	*e*P	**P**	**02 26 54.0**	**-0.1**
	1.7nm,0.7s,mb4.1						
MKAR	**Makanchi Array**	**51.31**	**345**	P	**P**	**02 26 59.3**	**+0.9**
	1.5nm,0.6s,mb4.1,baz=150,slow=8.2,SNR=8.0						
KURK	**Kurchatov**	**55.87**	**345**	P	**P**	**02 27 31.8**	**+0.1**
	0.5nm,0.7s,mb3.7,baz=158,slow=8.0,SNR=3.3						
ZALV	**Zalesovo Beam**	**57.55**	**350**	P	**P**	**02 27 43.6**	**0.0**
	1.5nm,0.5s,mb4.3,baz=188,slow=5.4,SNR=7.2						
BVAR	**Borovoye Array**	**60.36**	**341**	P	**P**	**02 28 02.6**	**-0.5**
	0.4nm,0.5s,mb3.7,baz=131,slow=4.0,SNR=2.3						
BRVK	**Borovoye**	**60.43**	**341**	*e*P	**P**	**02 28 03.3**	**-0.3**
	1.4nm,0.4s,mb4.3						
TXAR	**Lajitas Array**	**145.83**	**37**	PKPbc	PKPbc	02 37 35.4	+1.4
	1.1nm,0.7s,baz=263,slow=1.0,SNR=14						
JCT	**Junction City**	**147.09**	**31**	*e*PKPbc	PKPbc	02 37 38.6	+1.0

IDC 13 02:18:37.5±12.0, 257N×12882E, h301km±122km, mb2.9/4, mb1 3.0/4, mb1mx2.9/18, mbtmp2.9/4, Error ellipse: s-maj=87.3km s-min=34.0km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.77**	**189**	P	P	02 22 56.7	+0.4
	0.9nm,0.6s,baz=8.7,slow=13,SNR=3.9						
WRA	**Warramunga Arr**	**23.02**	**167**	P	P	02 23 16.6	-0.2
	0.4nm,0.3s,baz=345,slow=10,SNR=7.4						
ASAR	**Alice Springs**	**26.54**	**170**	P	P	02 23 48.1	-0.3
	0.3nm,0.4s,baz=358,slow=8.0,SNR=7.3						
KURK	**Kurchatov**	**63.84**	**327**	P	P	02 28 38.1	-0.1
	0.9nm,0.7s,baz=123,slow=6.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**125.26**	**288**	PKP	PKPdf	02 37 03.6	+0.1
	0.3nm,0.8s,baz=100,slow=1.6,SNR=2.5						

IDC 13 02:19:20.4±4.2, 221S×9937E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, Error ellipse: s-maj=180.0km s-min=21.6km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.43**	**120**	P	P	02 26 44.1	0.0
	0.5nm,0.5s,baz=304,slow=9.4,SNR=3.7						
ASAR	**Alice Springs**	**39.64**	**125**	P	P	02 26 54.0	-0.2
	0.4nm,0.5s,baz=307,slow=8.0,SNR=3.6						
SONM	**Songino Array**	**50.22**	**6**	P	P	02 28 18.2	+0.2
	0.9nm,0.6s,baz=184,slow=8.9,SNR=4.8						
MKAR	**Makanchi Array**	**51.06**	**345**	P	P	02 28 25.0	+0.5
	0.9nm,0.6s,baz=140,slow=7.6,SNR=4.0						
ZALV	**Zalesovo Beam**	**57.26**	**350**	P	P	02 29 08.7	-0.9
	1.1nm,0.4s,baz=151,slow=3.3,SNR=2.9						
TXAR	**Lajitas Array**	**145.25**	**37**	PKPbc	PKPbc	02 39 00.6	0.0
	0.8nm,0.7s,baz=282,slow=1.1,SNR=5.3						

IDC 13 02:20:33.6±4.7, 295S×10072E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.6/3, Error ellipse: s-maj=181.9km s-min=29.8km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.90**	**120**	P	P	02 27 44.0	-0.3
	0.3nm,0.4s,baz=304,slow=9.3,SNR=3.6						
SONM	**Songino Array**	**50.82**	**5**	P	P	02 29 36.1	+0.4
	0.7nm,0.7s,baz=185,slow=8.5,SNR=3.6						
MKAR	**Makanchi Array**	**52.13**	**344**	P	P	02 29 45.2	-0.5
	0.6nm,0.6s,baz=144,slow=8.4,SNR=3.8						
TXAR	**Lajitas Array**	**145.00**	**39**	PKPbc	PKPbc	02 40 12.7	-0.2
	0.2nm,0.4s,baz=296,slow=0.4,SNR=5.3						

IDC 13 02:21:17.0±1.4, 436S×10128E, h0km, mb4.1/13, mb1 4.2/13, mb1mx4.1/21, mbtmp4.1/13, Error ellipse: s-maj=45.1km s-min=17.9km az=50.0
ISCJB 13 02:21:19.5±0.8, 44S±01×1012E±02, h33km, mb4.2/17, Error ellipse: s-maj=27.5km s-min=13.3km az=150.6
NEIC 13 02:21:22.2±4.6, 437S×10128E, h37km±41km, mb4.4/4, Error ellipse: s-maj=24.0km s-min=9.6km az=61.0
ISC 13 02:21:22.0±0.8, 44S±01×1013E±02, h35km, n21, σ0§52/20, mb4.2/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.81**	**354**	P	**P**	**02 26 22.0**	**+0.1**
	4.5nm,0.5s,mb4.1,baz=185,slow=8.7,SNR=16						
FITZ	**Fitzroy Crossi**	**27.47**	**122**	*e*P	**P**	**02 27 12.6**	**+7.5**
	4.0nm,0.6s,mb4.1						
FITZ	**Fitzroy Crossi**	**27.47**	**122**	*e*P	**P**	**02 27 12.1**	**+7.1**
	4.4nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**35.73**	**118**	P	**P**	**02 28 17.5**	**-0.2**
	0.4nm,0.3s,mb3.8,baz=302,slow=8.7,SNR=8.6						
ASAR	**Alice Springs**	**36.86**	**124**	P	**P**	**02 28 27.7**	**+0.5**
	0.2nm,0.3s,mb3.4,baz=295,slow=7.2,SNR=2.8						
KSRS	**Korea Array**	**48.46**	**28**	P	**P**	**02 30 01.4**	**+0.2**
	1.2nm,0.4s,mb4.3,baz=217,slow=8.6,SNR=8.5						
SONM	**Songino Array**	**52.20**	**4**	P	**P**	**02 30 30.5**	**+1.3**
	5.6nm,0.8s,mb4.5,baz=185,slow=9.2,SNR=23						
SONM				PcP	PcP	02 31 41.6	+1.1
	0.8nm,0.7s,baz=186,slow=2.4,SNR=2.2						
ULN	**Ulaanbaatar**	**52.28**	**5**	*e*P	**P**	**02 30 30.3**	**+0.5**
	3.3nm,0.8s,mb4.3						
MJAR	**Matsushiro Arr**	**53.37**	**37**	P	**P**	**02 30 37.1**	**-0.9**
	1.0nm,0.4s,mb4.1,baz=11,slow=10,SNR=4.0						
MKAR	**Makanchi Array**	**53.65**	**344**	P	**P**	**02 30 40.6**	**+0.6**
	2.8nm,0.7s,mb4.3,baz=148,slow=8.7,SNR=15						
KURK	**Kurchatov**	**58.24**	**343**	P	**P**	**02 31 12.5**	**-0.2**
	1.7nm,0.8s,mb4.1,baz=161,slow=6.6,SNR=5.5						
ZALV	**Zalesovo Beam**	**59.73**	**349**	P	**P**	**02 31 23.2**	**+0.2**
	3.1nm,0.4s,mb4.7,baz=172,slow=4.5,SNR=9.7						
CASY	**Casey**	**62.12**	**176**	*e*P	**P**	**02 31 39.2**	**+0.1**
	3.0nm,0.9s,mb4.4						
BVAR	**Borovoye Array**	**62.84**	**340**	P	**P**	**02 31 43.9**	**-0.1**
	1.8nm,0.7s,mb4.3,baz=139,slow=7.9,SNR=9.1						
BRVK	**Borovoye**	**62.91**	**340**	*e*P	**P**	**02 31 43.9**	**-0.6**
	1.7nm,0.5s,mb4.4						
AKTK	**Aktyubinsk**	**66.04**	**331**	P	**P**	**02 32 04.8**	**-0.2**
AKTO	**Aktyubinsk**	**66.04**	**331**	P	**P**	**02 32 04.8**	**-0.2**
	0.6nm,0.4s,mb4.0,baz=68,slow=2.4,SNR=3.5						
PETK	**Petropavlovsk-**	**74.23**	**31**	P	**P**	**02 32 54.6**	**-0.6**
	2.2nm,0.9s,mb4.1,baz=190,slow=4.4,SNR=3.3						
PETK	**Petropavlovsk-**	**74.23**	**31**	P	**P**	**02 32 54.6**	**-0.7**
ARCES	**ARCESS Array B**	**89.13**	**340**	P	**P**	**02 34 13.1**	**-0.3**
	2.0nm,0.8s,mb4.5,baz=102,slow=8.4,SNR=4.1						
TXAR	**Lajitas Array**	**145.75**	**41**	PKPbc	PKPbc	02 40 59.2	+1.2
	1.9nm,0.7s,baz=293,slow=0.9,SNR=17						

ISCJB 13 02:24:24.7±0.6, 3065N±006×1383E±01, h497km±7km, mb3.4/7, Error ellipse: s-maj=18.8km s-min=8.3km az=168.4
NEIC 13 02:24:25.5±1.1, 3055N×13803E, h484km±13km, MG3.8(JMA), Error ellipse: s-maj=31.8km s-min=17.4km az=68.0
IDC 13 02:24:25.4±1.0, 3056N×13802E, h479km±12km, mb3.1/7, mb1 3.1/11, mb1mx3.0/28, mbtmp3.1/11, Error ellipse: s-maj=30.2km s-min=15.5km az=67.0
JMA 13 02:24:26.3±0.3, 3085N×13829E, h502km, M3.8
ISC 13 02:24:25.8±0.6, 3071N±006×1384E±01, h494km±7km, n25, σ1§26/29, mb3.4/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.66**	**25**	P	**P**	**02 25 35.9**	**+1.9**
	24nm,0.3s,baz=254,slow=23,SNR=13						
JHJ				S	**S**	**02 26 30.9**	**+1.4**
	20nm,0.3s,baz=73,slow=21,SNR=4.1						
JHJ2	**Mitsune**	**2.67**	**26**	P	**P**	**02 25 35.9**	**+1.9**
JWZ	**Kozaga**	**3.64**	**321**	P	**P**	**02 25 40.4**	**-0.4**
JIE	**Ise**	**3.95**	**339**	P	**P**	**02 25 44.3**	**+1.0**
JNY	**Yasuok**	**4.66**	**354**	*e*S	**S**	**02 26 58.0**	**+0.5**
CBIJ	**Chichi jima**	**4.88**	**137**	P	**P**	**02 25 51.0**	**-0.5**
	3.6nm,0.3s,baz=144,slow=23,SNR=3.8						
CBIJ				S	**S**	**02 26 58.8**	**-2.4**
	23nm,0.3s,baz=258,slow=23,SNR=12						
JHU	**Hanno**	**5.18**	**8**	P	**P**	**02 25 54.3**	**+0.4**
JHU				*e*S	**S**	**02 27 04.2**	**-1.8**
JRY	**Ryogami san**	**5.31**	**4**	*e*S	**S**	**02 27 06.9**	**-1.3**
JYT	**Yasato**	**5.70**	**15**	*e*S	**S**	**02 27 12.8**	**-2.1**
JAG	**Ashikaga**	**5.76**	**8**	P	**P**	**02 26 00.6**	**+1.2**
JAG				*e*S	**S**	**02 27 12.0**	**-4.1**
MJAR	**Matsushiro Arr**	**5.82**	**358**	P	**P**	**02 26 00.6**	**+0.7**
	0.8nm,0.3s,baz=186,slow=10,SNR=8.5						
MJAR				S	**S**	**02 27 16.1**	**-1.0**
	0.7nm,0.3s,baz=201,slow=13,SNR=4.4						
MAJO	**Matsushiro**	**5.82**	**358**	*e*Pn	**P**	**02 26 01.0**	**+1.0**
JFK	**Kawauchi**	**6.94**	**16**	P	**P**	**02 26 13.4**	**+2.4**
JFK				*e*S	**S**	**02 27 37.2**	**-0.1**
JMK	**Ichinoseki**	**8.54**	**15**	*e*S	**S**	**02 28 06.5**	**-0.9**
KSRS	**Korea Array**	**11.00**	**310**	P	**P**	**02 26 51.8**	**-1.9**
	0.5nm,0.3s,baz=123,slow=11,SNR=12						
MKAR	**Makanchi Array**	**45.66**	**307**	P	**P**	**02 32 00.4**	**-0.9**
	0.3nm,0.3s,mb3.2,baz=96,slow=6.5,SNR=5.6						
KURK	**Kurchatov**	**48.12**	**312**	P	**P**	**02 32 19.6**	**-0.3**
	0.7nm,0.6s,mb3.2,baz=94,slow=7.8,SNR=3.4						
WRA	**Warramunga Arr**	**50.51**	**185**	P	**P**	**02 32 37.0**	**-0.9**
	0.4nm,0.3s,mb3.2,baz=1.3,slow=7.8,SNR=4.8						
BVAR	**Borovoye Array**	**53.17**	**316**	PcP	PcP	02 33 57.7	+0.9
	0.5nm,0.4s,baz=97,slow=4.9,SNR=2.9						
AKTK	**Aktyubinsk**	**61.16**	**314**	P	**P**	**02 33 50.8**	**-0.7**
AKTO	**Aktyubinsk**	**61.16**	**314**	P	**P**	**02 33 50.8**	**-0.7**
	1.1nm,0.6s,mb3.5,baz=76,slow=11,SNR=4.6						
ARCES	**ARCESS Array B**	**69.04**	**340**	P	**P**	**02 34 42.8**	**+1.9**
	3.2nm,0.9s,mb3.9,baz=63,slow=8.1,SNR=8.2						
HFS	**Hagfors**	**78.80**	**335**	P	**P**	**02 35 37.1**	**+0.7**
	1.6nm,0.6s,mb3.8,baz=69,slow=4.4,SNR=12						
NOA	**NORSAR Array B**	**79.03**	**337**	P	**P**	**02 35 38.6**	**+0.9**
	0.8nm,0.9s,mb3.3,baz=82,slow=6.8,SNR=3.3						
LPAZ	**La Paz**	**151.82**	**65**	PKPbc	PKPbc	02 43 27.2	+2.4
	14nm,0.3s,baz=258,slow=6.5,SNR=173						

IDC 13 02:26:51.5±7.6, 175S×9992E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/19, mbtmp3.7/3, Error ellipse: s-maj=374.8km s-min=28.7km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.19**	**121**	P	P	02 34 13.3	0.0
	0.4nm,0.7s,baz=306,slow=9.2,SNR=2.4						
MKAR	**Makanchi Array**	**50.76**	**344**	P	P	02 35 53.8	+0.4
	0.3nm,0.5s,baz=141,slow=7.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**56.91**	**349**	P	P	02 36 37.9	-0.3
	0.7nm,0.3s,baz=158,slow=4.2,SNR=2.1						
TXAR	**Lajitas Array**	**144.55**	**37**	PKP	PKPdf	02 46 30.0	-0.8
	0.3nm,0.6s,baz=276,slow=1.0,SNR=5.3						

IDC 13 02:28:23.9±4.5, 212S×9940E, h0km, mb3.5/2, mb1 3.5/2, mb1mx3.3/19, mbtmp3.5/2, Error ellipse: s-maj=202.9km s-min=90.1km az=73.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**50.12**	**6**	P	P	02 37 20.9	+0.1
	0.3nm,0.5s,baz=179,slow=6.9,SNR=2.7						
MKAR	**Makanchi Array**	**50.98**	**345**	P	P	02 37 27.4	0.0
	0.3nm,0.5s,baz=149,slow=8.3,SNR=3.3						
TXAR	**Lajitas Array**	**145.16**	**37**	PKP	PKPdf	02 48 03.7	-0.5
	0.2nm,0.6s,baz=240,slow=0.7,SNR=3.3						

BJI 13 02:29:57.4, 193S×9975E, h13km, mB6.6, mb5.7, Ms6.6, Msz6.5
SZGRF 13 02:30:00.2, 330S×9952E, h33km, mb6.4, Southwest of Sumatera, Indonesia
ISCJB 13 02:30:01.4±0.1, 166S±002×9961E±002, h24km, mb5.9/254, MS6.4/39, Error ellipse: s-maj=3.3km s-min=2.3km az=20.7
MOS 13 02:30:02.3±0.9, 159S×9964E, h29km, mb6.1/99, MS6.2/10, Error ellipse: s-maj=8.1km s-min=3.7km az=122.4
NEIC 13 02:30:03.3±1.7, 169S×9967E, h29km±11km, mb5.9/122, Error ellipse: s-maj=5.2km s-min=3.5km az=217.0
NEIC Felt [VI] at Padang and [V] at Bengkulu and Padangpanjang, Sumatra.
GCMT 13 02:30:03.3±0.5, 194S×9954E, h35km±1km, MW6.5/62, Moment Tensor Solution. s33,c41; s62,c85; Duration: 4§5 Moment tensor: Scale 10^19Nm; Mrr0.84±.06; Mθθ-0.59±.03; Mφφ-0.25±.04; Mrθ0.22±.04; Mrφ0.15±.02; Mθφ-0.23±.05; Best double couple: M=0.81100×10^19 NP1:φ1=286.00000°, δ1=35.00000°, λ1=79.00000°. NP2: φ2=119.00000°, δ2=56.00000°, λ2=97.00000°. Principal axes: T 0.9150, Plg77.0000°, Azm55.0000°; N -0.2080, Plg6.0000°, Azm295.0000°; P -0.7070, Plg11.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
DJA 13 02:30:03.169S×99.50E, h20km, Mw6.3/11
IDC 13 02:30:07.3±0.8, 167S×9980E, h61km±6km, mb5.2/44, mb1 5.2/44, mb1mx5.2/44, mbtmp5.2/44, MS6.2/11, Ms1 6.2/11, ms1mx5.7/48, Error ellipse: s-maj=6.9km s-min=5.3km az=36.0
ISC 13 02:30:03.2±0.1, 167S±002×9959E±002, h25km, h25km±1.4km:pP-P, n1416, σ1§02/882, mb5.9/254, MS6.4/39, 281C-239D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.45**	**34**	P	**Pn**	**02 30 28.7**	**+0.8**
	0.0nm,0.0s						
KRJI	**Kerinci**	**1.92**	**103**	P	**Pn**	**02 30 35.6**	**+1.2**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.04**	**64**	P	**Pn**	**02 30 51.7**	**+1.9**
	0.0nm,0.0s						
TRSI	**Tarutung**	**3.73**	**350**	P	**Pn**	**02 31 01.7**	**+2.5**
	0.0nm,0.0s						
JMBI	**JAMBI**	**4.05**	**90**	P	**Pn**	**02 31 06.9**	**+3.2**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.13**	**77**	P	**Pn**	**02 31 19.6**	**+1.1**
	1µm,0.9s						
KGM	**Kluang**	**5.23**	**46**	⇓P	**Pn**	**02 31 22.7**	**+2.8**
FRIM	**Kepong**	**5.28**	**23**	⇓P	**Pn**	**02 31 23.8**	**+3.2**
MYKOM	**Kota Tinggi**	**5.47**	**51**	⇓P	**Pn**	**02 31 26.3**	**+3.0**
KLI	**Kotabumi**	**6.14**	**121**	P	**Pn**	**02 31 33.8**	**+1.3**
	3µm,1.1s						
IPM	**Ipoh**	**6.28**	**13**	⇓P	**Pn**	**02 31 38.3**	**+4.0**
PPBI	**Pangkal Pinang**	**6.56**	**94**	P	**Pn**	**02 31 41.1**	**+2.8**
	302nm,1.2s						
BLSI	**Bandar Lampung**	**6.74**	**123**	P	**Pn**	**02 31 42.9**	**+2.3**
	1µm,1.1s						
KTGM	**Kuala Trenggan**	**7.80**	**27**	⇑P	**Pn**	**02 31 58.9**	**+3.6**
SBJI	**Serang**	**7.88**	**124**	P	**Pn**	**02 31 59.3**	**+2.9**
	1µm,1.1s						
TPI	**Tanjungpandan**	**8.13**	**98**	P	**Pn**	**02 32 03.5**	**+3.7**
	430nm,1.4s						
BSI	**Banda Aceh**	**8.31**	**329**	P	**Pn**	**02 32 01.7**	**-0.6**
	1µm,1.1s						
TNG	**Tangerang**	**8.34**	**123**	P	**Pn**	**02 32 08.2**	**+5.5**
	3µm,1.4s						
DBJI	**Dramaga**	**8.63**	**124**	P	**Pn**	**02 32 06.4**	**-0.3**
	984nm,1.2s						
SKJI	**Sukabumi**	**8.74**	**128**	P	**Pn**	**02 32 07.9**	**-0.2**
	1µm,0.9s						
SNG	**Songkhla**	**8.85**	**7**	P	**Pn**	**02 32 10.0**	**+0.4**
	2µm,1.0s						
LEM	**Lembang**	**9.50**	**123**	P	**Pn**	**02 32 20.3**	**+1.7**
	1µm,1.0s						
JCJI	**Jatiwangi**	**9.89**	**119**	P	**Pn**	**02 32 28.4**	**+4.4**
	981nm,1.1s						
KSM	**Kuching**	**11.16**	**74**	⇑P	**Pn**	**02 32 43.8**	**+2.4**
KSM	**Kuching**	**11.16**	**74**	*e*Pn	**Pn**	**02 32 41.1**	**-0.3**
BJII	**Banjamegara**	**11.55**	**119**	P	**Pn**	**02 32 46.5**	**-0.2**
	694nm,1.4s						
SBUM	**Sibu**	**13.28**	**72**	⇑P	**Pn**	**02 33 14.2**	**+3.9**
SJI	**Sawahan**	**13.55**	**117**	P	**Pn**	**02 33 12.4**	**-1.6**
	370nm,1.0s						
NNT	**Nongplab**	**14.17**	**1**	P	**Pn**	**02 33 27.0**	**+4.5**
BTM	**Bintulu**	**14.33**	**70**	⇓P	**Pn**	**02 33 28.3**	**+3.6**
KRKI	**Karangkates**	**14.34**	**117**	P	**Pn**	**02 33 27.3**	**+2.5**
	624nm,0.9s						
PLKI	**Palangkaraya**	**14.36**	**92**	P	**Pn**	**02 33 29.7**	**+4.6**
	1µm,1.0s						
KMMI	**Kalianget**	**15.30**	**111**	P	**Pn**	**02 33 39.3**	**+1.6**
	867nm,1.3s						
BBKI	**Banjar Baru**	**15.34**	**97**	P	**Pn**	**02 33 40.0**	**+1.7**
	794nm,1.4s						
IGBI	**Denpasar**	**17.03**	**115**	P	**Pn**	**02 34 01.6**	**+1.7**
	476nm,1.3s						
DNP	**Denpasar**	**17.04**	**115**	P	**Pn**	**02 34 04.0**	**+4.0**
	560nm,1.1s						
NST	**Nakhon Sawan**	**17.24**	**2**	P	**Pn**	**02 33 58.7**	**-3.8**
	158nm,1.2s						
KHKI	**Kahang-Kahang**	**17.28**	**113**	P	**Pn**	**02 34 03.2**	**+0.2**
	310nm,0.9s						
UBT	**Ubonrachathani**	**17.64**	**18**	⇓P	**Pn**	**02 34 07.8**	**+0.3**
	278nm,0.9s						
SMKI	**Samarinda**	**17.66**	**86**	P	**Pn**	**02 34 10.4**	**+2.7**
	882nm,1.5s						
MTNI	**Mataram**	**17.90**	**113**	P	**Pn**	**02 34 10.3**	**-0.4**
	281nm,1.1s						
KKM	**Kota Kinabalu**	**18.29**	**65**	⇓P	**Pn**	**02 34 16.7**	**+1.3**
KKM	**Kota Kinabalu**	**18.29**	**65**	*e*P	**Pn**	**02 34 15.4**	**-0.1**
BDT	**Bhumibol Dam**	**18.80**	**358**	P	**Pn**	**02 34 22.0**	**+0.3**
	76nm,1.0s						
SDKM	**Sandakan**	**19.03**	**67**	⇓P	**Pn**	**02 34 25.0**	**+0.5**
TSM	**Tawau**	**19.21**	**72**	⇓P	**Pn**	**02 34 27.1**	**+0.4**
KDM	**Kudat**	**19.21**	**63**	⇓P	**Pn**	**02 34 27.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**20.01**	**358**	P	**P**	**02 34 30.9**	**-3.4**
	51nm,0.8s,baz=186,slow=10,SNR=49						
CMAR				S	**S**	**02 38 18.1**	**-0.1**
	1.4nm,0.3s,baz=187,slow=11,SNR=2.1						
CMAR				LR	LR	02 42 34.0	
	comp=Z,102µm,19.4s,MS6.2,baz=195,slow=37						
CMAR	**Chiang Mai Arr**	**20.01**	**358**	P	**P**	**02 34 30.9**	**-3.4**
CMAR				S	**S**	**02 38 18.1**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,51nm,0.8s						
CMAR				smax			
	comp=N,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,102µm,19.4s						
PCI	**Palu**	**20.26**	**88**	P	**P**	**02 34 37.4**	**+0.3**
	comp=Z,2µm,1.8s						
CHG	**Chiang Mai**	**20.37**	**358**	⇓P	**P**	**02 34 38.1**	**0.0**
	comp=Z,150nm,0.5s						
CHTO	**Chiang Mai**	**20.37**	**358**	*e*P	**P**	**02 34 37.0**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,230nm,1.0s						
CHTO	**Chiang Mai**	**20.37**	**358**	*e*P	**P**	**02 34 37.0**	**-1.1**
	comp=Z,233nm,1.0s						
KAPI	**Kappang**	**20.40**	**100**	P	**P**	**02 34 36.7**	**-1.9**
	comp=Z,1µm,1.3s,SNR=22						
KAPI	**Kappang**	**20.40**	**100**	P	**P**	**02 34 36.3**	**-2.3**
	comp=Z,34nm,0.5s,baz=272,slow=10,SNR=22						
KAPI				S	**S**

KMI LR LR
comp=N,63µm,15.1s,MS6.4
KMI LR LR
comp=E,60µm,18.1s,MS6.4
KMI LR LR
comp=Z,99µm,17.1s,MS6.4
IMP Imphal 26.86 349 *i* P **P 02 35 42.0 -0.1**
IMP *eS* **S 02 40 18.0 +0.7**
BOLP Bolinao 26.92 47 *eP* **P 02 35 42.6 -0.1**
BUKP Musuan 27.12 69 *eP* **P 02 35 44.7 +0.1**
DAV Davao City (W) 27.35 71 P **P 02 35 47.0 +0.4**
comp=Z,172nm,0.3s,mb6.0,baz=269,slow=23,SNR=13
DAV Davao City (W) 27.35 71⇑ *iP* **P 02 35 44.8 -1.9**
POLP Polilio Island 27.48 53 *eP* **P 02 35 46.3 -1.4**
MBWA Marble Bar 27.58 136 *eP* **P 02 35 47.8 -0.9**
comp=Z,148nm,1.3s,mb5.5
BALP Baler 27.78 51 *eP* **P 02 35 51.3 +0.9**
OCLP Ormoc 27.91 63 *eP* **P 02 35 47.1 -4.6**
LBMI Labuha 27.93 88 P **P 02 35 51.8 0.0**
comp=Z,767nm,1.8s,mb6.0
HYB Hyderabad 28.10 313 *eP* **P 02 35 54.5 +1.2**
HYB pmax pmax
comp=Z,212nm,1.2s,mb5.7
HYB Hyderabad 28.10 313 *i* P **P 02 35 54.5 +1.2**
HYB Hyderabad 28.10 313 *eP* **P 02 35 54.5 +1.2**
comp=Z,212nm,1.2s,mb5.7
MNCY Minicoy 28.26 291 *i* P **P 02 35 53.0 -1.8**
MNCY *i* x x 02 40 51.0
ABRA Dolores 28.32 46 *eP* **P 02 35 55.5 +0.3**
BOK Bokaro 28.61 333 *eP* **P 02 35 59.5 +1.8**
BOK AMb AMB 02 36 02.3
comp=Z,1µm,2.0s,mb6.2
CAUP Cauayan 28.69 49 *eP* **P 02 35 57.1 -1.5**
PVCP Virac 28.70 57 *eP* **P 02 35 58.6 0.0**
GYA Guiyang 28.79 13⇑ *iP* **P 02 35 58.6 -0.7**
GYA PP PP 02 36 55.0 -10
GYA PCP PcP 02 39 11.2 +2.2
GYA S **S 02 40 43.9 -3.7**
GYA SS SS 02 42 12.8 -37
GYA SCP ScP 02 42 51.2 +2.1
GYA AMB AMB
comp=Z,130nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,6µm,12.9s
GYA LR LR
comp=N,112µm,14.0s,MS6.6
GYA LR LR
comp=E,33µm,14.2s,MS6.6
GYA LR LR
comp=Z,128µm,14.8s,MS6.7
APYP Conner 28.84 47 *eP* **P 02 35 58.6 -1.2**
SHBG Sahibganj 29.12 337 *ex* x 02 35 30.0
PALP Palanan 29.22 50 *eP* **P 02 36 05.7 +2.4**
LATR Latur 30.20 312 *eP* **P 02 36 13.6 +1.7**
LATR AMb AMB 02 36 16.3
comp=Z,210nm,1.3s,mb5.7
NGP Nagpur 30.30 320⇑ *iP* **P 02 36 12.4 -0.4**
NGP *ex* x 02 36 15.9
comp=Z,368nm,1.5s
FITZ Fitzroy Crossi 30.34 124⇑ *iP* **P 02 36 11.1 -2.1**
comp=Z,103nm,0.9s,mb5.6
FITZ Fitzroy Crossi 30.34 124 P **P 02 36 11.4 -1.7**
comp=Z,60nm,0.9s,mb5.3,baz=309,slow=8.4,SNR=54
FITZ S **S 02 41 03.7 -8.5**
comp=Z,8.3nm,1.0s,baz=14,slow=18,SNR=3.6
GOA Goa 30.66 305 *eP* **P 02 36 18.2 +2.2**
GOA AMb AMB 02 36 21.5
comp=Z,219nm,1.3s,mb5.8
ODAN Odare 30.71 338 *eP* **P 02 36 18.0 +1.7**
comp=Z,989nm,1.1s,mb6.6
TAPN Taplejung 31.04 339 *eP* **P 02 36 21.4 +2.2**
comp=Z,997nm,0.9s,mb6.7
RAMN Ramite 31.09 337 *eP* **P 02 36 20.7 +1.0**
JBP Jabalpur 31.21 323 *eP* **P 02 36 22.4 +1.6**
JBP *ex* x 02 41 42.5
KAD Karad 31.35 308 *eP* **P 02 36 23.5 +1.4**
KAD AMb AMB 02 36 26.3
comp=Z,397nm,1.6s,mb6.0
AKL Akola 31.36 316 *eP* **P 02 36 23.2 +1.1**
AKL AMb AMB 02 36 26.9
comp=Z,189nm,1.2s,mb5.8
SWI Sorong 31.67 89 P **P 02 36 23.5 -1.6**
comp=Z,623nm,1.0s,mb6.4
JIRN Jiri 31.88 337 *eP* **P 02 36 28.7 +2.0**
PKI Pulchoki 32.12 336 *eP* **P 02 36 30.1 +1.4**
comp=Z,512nm,1.2s,mb6.2
PKIN Phulchoki 32.13 336 *eP* **P 02 36 30.2 +1.4**
LSA Lhasa 32.22 346 P **P 02 36 32.1 +2.5**
LSA S **S 02 41 42.0 +0.6**
LSA AMB AMB
comp=Z,320nm,1.6s,mb5.9
LSA LR LR
comp=Z,38µm,25.9s,MS6.0
LSA Lhasa 32.22 346 *eP* **P 02 36 31.6 +2.0**
LSA pmax pmax
comp=Z,273nm,1.1s,mb6.0
LSA Lhasa 32.22 346 *eP* **P 02 36 31.6 +2.0**
comp=Z,273nm,1.1s,mb6.0
GUN Gumba 32.23 337 *eP* **P 02 36 31.6 +1.9**
comp=Z,768nm,0.6s,mb6.7
QZH Quanzhou 32.24 34⇑ *iP* **P 02 36 26.4 -3.4**
QZH S **S 02 41 39.4 -2.4**
QZH AMB AMB
comp=Z,3µm,2.5s,mb6.7
QZH LR LR
comp=N,87µm,14.3s,MS6.8
QZH LR LR
comp=E,101µm,14.3s,MS6.8
QZH LR LR
comp=Z,187µm,16.2s,MS6.9
DMN Daman 32.27 335 *eP* **P 02 36 31.5 +1.4**
comp=Z,497nm,0.9s,mb6.3
POO Poona 32.31 310 *eP* **P 02 36 31.7 +1.1**
POO AMb AMB 02 36 34.5
comp=Z,431nm,1.3s,mb6.1
KKN Kakani 32.36 336 *eP* **P 02 36 32.4 +1.5**
comp=Z,683nm,0.9s,mb6.5
CD2 Chengdu 32.64 7 P **P 02 36 32.2 -1.1**
CD2 AP pP 02 36 36.8 -3.9
CD2 XP sP 02 36 40.2 -3.5
CD2 PP PP 02 37 41.9 -5.5
CD2 PCP PcP 02 39 17.4 -1.7
CD2 S **S 02 41 47.7 -0.2**
CD2 PCS PcS 02 43 01.4 -2.9
CD2 SS SS 02 43 45.2 -24
CD2 SCS ScS 02 46 58.0 -3.3
CD2 AMB AMB
comp=Z,80nm,1.6s,mb5.4
CD2 LR LR
comp=N,94µm,19.2s,MS6.7
CD2 LR LR
comp=E,97µm,14.4s,MS6.7
CD2 LR LR
comp=Z,91µm,10.8s,MS6.7
GKN Gorkha 32.82 335 *eP* **P 02 36 36.1 +1.3**
comp=Z,1µm,1.2s,mb6.8
KOLN Koldanda 33.06 333 *eP* **P 02 36 38.5 +1.5**
comp=Z,455nm,0.8s,mb6.5
NACB Ninganchiao 33.42 38 *eP* **P 02 36 40.6 +0.4**
comp=Z,425nm,0.9s,mb6.4
DANN Dangsing 33.49 334 *eP* **P 02 36 42.1 +1.3**
YHNB Yeheng 33.65 38 *eP* **P 02 36 41.9 -0.3**
comp=Z,183nm,1.0s,mb6.0
TATO Taipei 33.95 37 *eP* **P 02 36 44.4 -0.4**
comp=Z,280nm,1.0s,mb6.2
MUN Mundaring 33.98 154 *eP* **P 02 36 45.8 +0.9**
KLBR Kellerberrin 34.35 152 *eP* **P 02 36 50.3 +2.1**
comp=Z,79nm,1.1s,mb5.6
WHN Wuhan 34.99 23⇑ *iP* **P 02 36 53.4 -0.3**
WHN AP pP 02 37 01.0 -0.1
WHN *eS* **S 02 42 24.2 -0.1**
WHN LR LR
comp=N,70µm,15.0s
WHN LR LR
comp=E,19µm,9.6s
WHN LR LR
comp=Z,93µm,14.7s,MS6.7
NWAO Narrogin (SRO) 35.23 154 P **P 02 36 55.6 -0.2**
comp=Z,25nm,0.7s,mb5.3,baz=330,slow=10.0,SNR=10
NWAO LR LR 02 49 28.4
comp=Z,59µm,20.8s,MS6.3,baz=165,slow=33
NWAO Narrogin (SRO) 35.23 154 *eP* **P 02 36 56.7 +0.9**
comp=Z,82nm,1.1s,mb5.6
PTH Pithoragarh 36.15 331 *eP* **P 02 37 05.2 +1.5**
PTH *ex* x 02 42 40.1

XAN Xi'an 36.59 13 P **P 02 37 06.3 -1.1**
XAN AP pP 02 37 13.7 -1.1
XAN XP sP 02 37 17.4 -0.5
XAN AMB AMB
comp=Z,205nm,0.9s,mb6.0
AJM Ajmer 36.92 321 *eP* **P 02 37 10.8 +0.5**
AJM AMb AMB 02 37 14.7
comp=Z,440nm,1.3s,mb6.1
NDI New Delhi 37.03 326⇑ *iP* **P 02 37 10.0 -1.2**
NDI *ex* x 02 44 11.0
LZH Lanzhou 37.77 6⇑ P **P 02 37 17.6 +0.2**
LZH AP pP 02 37 22.4 -2.5
LZH XP sP 02 37 24.8 -3.1
LZH PP PP 02 38 47.5 +3.5
LZH S **S 02 43 09.0 +2.3**
LZH XS sS 02 43 16.4 -2.6
LZH SS SS 02 45 44.8 -8.4
LZH AMB AMB
comp=Z,1µm,1.2s,mb6.4
LZH AMB AMB
comp=Z,8µm,8.0s
LZH LR LR
comp=N,49µm,12.5s
LZH LR LR
comp=Z,75µm,17.0s,MS6.6
DDI Dehra Dun 37.87 329 *eP* **P 02 37 17.6 -0.7**
DDI *ex* x 02 43 25.0
NJ2 Nanjing 38.19 27 *eP* **P 02 37 20.9 -0.1**
NJ2 AP pP 02 37 31.8 +3.3
NJ2 PP PP 02 38 49.1 +0.5
NJ2 S **S 02 43 11.0 -2.1**
NJ2 XS sS 02 43 27.0 +1.5
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
NJ2 AMB AMB
comp=Z,2µm,5.2s
NJ2 LR LR
comp=N,29µm,17.0s,MS6.4
NJ2 LR LR
comp=E,39µm,18.4s,MS6.4
NJ2 LR LR
comp=Z,325µm,17.8s,MS7.2
BHJ Bhuj 38.25 312 *eP* **P 02 37 21.6 0.0**
BHJ AMb AMB 02 37 27.3
comp=Z,478nm,1.2s,mb6.1
WRA Warramunga Arr 38.51 121 P **P 02 37 21.8 -2.1**
comp=Z,126nm,0.8s,mb5.7,baz=296,slow=9.3,SNR=168
WRA PcP PcP 02 39 36.8 +0.2
comp=Z,8.8nm,0.7s,baz=314,slow=2.6,SNR=6.4
WRA S **S 02 43 09.4 -9.0**
comp=Z,8.2nm,0.9s,baz=294,slow=16,SNR=5.5
WRA ScS ScS 02 47 27.4 -6.3
comp=Z,1.4nm,0.8s,baz=327,slow=1.1,SNR=3.8
WRA Warramunga Arr 38.51 121 P **P 02 37 21.8 -2.1**
WRA 02 39 36.8
WRA S **S 02 43 09.4 -9.0**
WRA 02 47 27.4
WRA pmax pmax
comp=Z,126nm,0.8s
WRA pmax pmax
comp=Z,9.0nm,0.7s
WRA smax
comp=N,8.0nm,0.9s
WRA pmax pmax
comp=N,1.0nm,0.8s
WRAB Tennant Creek 38.52 121 P **P 02 37 22.0 -2.0**
comp=N,1µm,0.9s,mb6.7
WRAB Tennant Creek 38.52 121 *eP* **P 02 37 21.8 -2.2**
WRAB pmax pmax
comp=Z,210nm,0.9s,mb5.9
WRAB Tennant Creek 38.52 121 *eP* **P 02 37 21.8 -2.2**
comp=Z,212nm,0.9s,mb5.9
SSE Sheshan 38.52 30⇑ P **P 02 37 24.1 +0.3**
SSE AMB AMB
comp=Z,143nm,2.0s,mb5.3
SSE AMB AMB
comp=Z,5µm,12.0s
WB2 Warramunga Arr 38.52 121⇑ *iP* **P 02 37 21.8 -2.2**
SMLA Simla 38.97 329 *i* P **P 02 37 28.1 +0.5**
SMLA AMb AMB 02 37 31.8
comp=Z,886nm,2.0s,mb6.2
SDNR Sundarnagar 39.37 329 *eP* **P 02 37 31.0 +0.1**
SDNR *ex* x 02 43 13.6
FORT Forrest 39.56 140 *eP* **P 02 37 32.7 +0.2**
comp=Z,100nm,0.5s,mb5.8
BHK Bhakra 39.59 328 *eP* **P 02 37 34.8 +2.1**
JOW Kunigami 39.60 42 P **P 02 37 32.8 -0.1**
comp=Z,40nm,0.5s,mb5.4,baz=219,slow=8.1,SNR=16
JOW S **S 02 43 28.9 -5.6**
comp=Z,8.0nm,0.8s,baz=102,slow=27,SNR=1.6
ASAR Alice Springs 39.78 126 P **P 02 37 33.2 -1.2**
comp=Z,68nm,1.0s,mb5.3,baz=299,slow=7.2,SNR=208
ASAR PcP PcP 02 39 40.8 +0.2
comp=Z,33nm,0.8s,baz=308,slow=2.7,SNR=7.5
ASAR S **S 02 43 31.4 -6.0**
comp=Z,12nm,1.0s,baz=300,slow=18,SNR=7.6
ASAR Alice Springs 39.78 126 P **P 02 37 33.3 -1.1**
ASAR 02 39 40.8
ASAR S **S 02 43 31.4 -5.9**
ASAR pmax pmax
comp=Z,68nm,1.0s
ASAR pmax pmax
comp=Z,33nm,0.8s
ASAR smax
comp=N,13nm,1.0s
DLH Dalhousie 40.71 329 *eP* **P 02 37 42.0 0.0**
DLH *ex* x 02 37 55.0
THN Thein Dam 40.75 328 *eP* **P 02 37 41.4 -1.0**
THN *ex* x 02 44 07.2
GTA Gaotai 40.88 0⇑ P **P 02 37 43.8 +0.5**
GTA AP pP 02 37 48.5 -2.3
GTA XP sP 02 37 50.9 -3.0
GTA S **S 02 43 55.6 +2.3**
GTA XS sS 02 44 02.8 -2.9
GTA AMB AMB
comp=Z,166nm,2.2s,mb5.3
GTA AMB AMB
comp=Z,23µm,9.3s
GTA LR LR
comp=N,44µm,16.2s,MS6.5
GTA LR LR
comp=E,36µm,16.8s,MS6.5
GTA LR LR
comp=Z,66µm,16.8s,MS6.6
TIY Taiyuan 40.95 16 P **P 02 37 44.5 +0.6**
TIY LR LR
comp=N,32µm,15.1s,MS6.5
TIY LR LR
comp=E,40µm,15.6s,MS6.5
TIY LR LR
comp=Z,42µm,17.9s,MS6.3
TIA Tai'an 41.08 22⇑ P **P 02 37 43.8 -1.2**
JAY Jayapura 41.10 92 P **P 02 37 47.5 +2.0**
comp=Z,122nm,1.4s,mb5.3
BTO Baotou 43.14 12 *eP* **P 02 38 01.4 -0.3**
HHC Hu-ho-hao-te 43.70 13⇑ *iP* **P 02 38 06.9 +0.6**
HHC AP pP 02 38 10.5 -3.4
HHC XP sP 02 38 12.4 -4.5
HHC PP PP 02 39 50.4 +2.1
HHC PCP PcP 02 39 54.1 +1.0
HHC SCP ScP 02 43 43.8 +0.5
HHC PCS PcS 02 43 45.6 -0.2
HHC S **S 02 44 36.9 +2.0**
HHC SS SS 02 47 45.2 -5.9
HHC SCS ScS 02 48 03.6 -0.6
HHC AMB AMB
comp=Z,130nm,1.1s,mb5.6
HHC AMB AMB
comp=Z,21µm,7.4s
HHC LR LR
comp=N,111µm,16.1s,MS6.9
HHC LR LR
comp=E,28µm,16.2s,MS6.9
HHC LR LR
comp=Z,90µm,16.9s,MS6.8
MSEY Mahe Island 44.13 265 *eP* **P 02 38 11.3 +1.1**
comp=Z,151nm,1.5s,mb5.5
BJT Baijiatuan 44.18 18 *eP* **P 02 38 09.6 -0.5**
BJT pmax pmax
comp=Z,205nm,1.1s
BJT Baijiatuan 44.18 18 *eP* **P 02 38 09.6 -0.5**
comp=Z,205nm,1.1s,mb5.8
BJI Beijing 44.20 18 P **P 02 38 10.0 -0.3**
BJI PP PP 02 39 57.5 +3.9
BJI AMB AMB
comp=Z,148nm,1.9s,mb5.4
BJI LR LR
comp=N,35µm,22.5s
BJI LR LR
comp=E,22µm,16.1s
BJI LR LR
comp=Z,38µm,21.9s,MS6.3
COEN Coen 44.78 108 *eP* **P 02 38 13.7 -1.6**
comp=Z,24nm,1.3s,mb4.9
DL2 Dalian 45.19 24⇑ *iP* **P 02 38 18.1 -0.1**
DL2 S **S 02 44 57.2 +0.6**
DL2 AMB AMB
comp=Z,100nm,1.3s,mb5.5
DL2 LR LR
comp=N,27µm,18.2s,MS6.3
DL2 LR LR
comp=E,13µm,15.1s,MS6.3
DL2 LR LR
comp=Z,39µm,15.9s,MS6.4
KBL Kabul 46.03 324 *eP* **P 02 38 24.5 -0.4**
KBL pmax pmax
comp=Z,103nm,1.1s,mb5.7
KBL Kabul 46.03 324 *eP* **P 02 38 24.5 -0.4**
comp=Z,103nm,1.1s,mb5.7
INCN Inchon 46.32 30 *eP* **P 02 38 26.1 -1.1**
comp=Z,56nm,0.8s,mb5.5
KSH Kashi 46.36 335⇑ *iP* **P 02 38 28.1 +0.7**
KSH *e*AP pP 02 38 32.4 -2.7
KSH *e*XP sP 02 38 35.0 -3.1
KSH *e*PCP PcP 02 40 03.0 +0.7
KSH *e*PP PP 02 40 17.2 +0.6
KSH *e*SCP ScP 02 43 54.0 -0.3
KSH *e*PCS PcS 02 43 56.2 -0.6
KSH *e*S **S 02 45 13.7 +0.2**
KSH *e*SCS ScS 02 48 20.0 -1.3
KSH *e*SS SS 02 48 32.0 -7.5
KSH AMB AMB
comp=Z,13µm,3.9s
KSH LR LR
comp=N,41µm,16.0s,MS6.7
KSH LR LR
comp=E,54µm,18.1s,MS6.7
KSH LR LR
comp=Z,50µm,19.2s,MS6.5
WMQ Urumqi 46.53 348⇑ *iP* **P 02 38 30.3 +1.6**
WMQ AP pP 02 38 36.4 +0.1
WMQ XP sP 02 38 39.2 -0.1
WMQ PCP PcP 02 40 05.0 +2.2
WMQ S **S 02 45 18.3 +2.6**
WMQ AMB AMB
comp=Z,599nm,1.0s,mb6.5
WMQ LR LR
comp=N,19µm,15.8s,MS6.3
WMQ LR LR
comp=E,19µm,15.0s,MS6.3
WMQ LR LR
comp=Z,18µm,22.9s
RER Riviere de l'E 46.90 242 *eP* **P 02 38 33.6 +1.6**
KSRS Korea Array 46.95 31 P **P 02 38 31.8 -0.3**
comp=Z,74nm,0.8s,mb5.7,baz=223,slow=8.4,SNR=155
KSRS S **S 02 45 21.8 -0.2**
comp=Z,0.7nm,0.3s,baz=24,slow=36,SNR=2.9
KSRS Korea Array 46.95 31 P **P 02 38 31.8 -0.3**
KSRS S **S 02 45 21.8 -0.2**
KSRS pmax pmax
comp=Z,74nm,0.8s,mb5.7
KSRS smax
comp=N,1.0nm,0.3s
GUMO Guam 47.38 70 P **P 02 38 32.3 -3.5**
comp=N,70nm,0.6s,mb5.8,baz=193,slow=5.7,SNR=9.3
GUMO Guam 47.38 70 P **P 02 38 32.6 -3.2**
GUMO pmax pmax
comp=Z,86nm,0.8s,mb5.7
GUMO Guam 47.38 70 *eP* **P 02 38 32.5 -3.3**
comp=Z,86nm,0.8s,mb5.7
PMG Port Moresby 47.92 101 P **P 02 38 39.5 -0.6**
PMG pmax pmax
comp=Z,76nm,1.1s
PMG Port Moresby 47.92 101 *eP* **P 02 38 38.9 -1.1**
comp=Z,76nm,1.1s,mb5.6
SNY Shenyang 48.45 24⇑ P **P 02 38 42.6 -1.1**
SNY S **S 02 45 37.7 -5.4**
SNY AMB AMB
comp=Z,9µm,19.8s
SNY LR LR
comp=N,28µm,20.1s,MS6.3
SNY LR LR
comp=E,16µm,17.1s,MS6.3
SNY LR LR
comp=Z,36µm,20.4s,MS6.3
CTA Charters Tower 49.11 115⇑ *iP* **P 02 38 47.3 -1.8**
comp=Z,51nm,1.0s,mb5.5
CTA *i* 02 39 01.0
CTA Charters Tower 49.11 115 P **P 02 38 47.5 -1.6**
comp=Z,68nm,0.9s,mb5.7,baz=287,slow=9.2,SNR=61
CTA S **S 02 45 48.4 -4.7**
comp=Z,3.7nm,0.8s,baz=24,slow=18,SNR=2.4
CTA Charters Tower 49.11 115 P **P 02 38 47.6 -1.5**
CTA S **S 02 45 48.4 -4.7**
CTA pmax pmax
comp=Z,68nm,1.0s
CTA smax
comp=N,4.0nm,0.8s
CTAO Charters Tower 49.11 115 P **P 02 38 49.0 -0.1**
CTAO pmax pmax
comp=Z,160nm,1.0s,mb6.0
CTAO Charters Tower 49.11 115 *eP* **P 02 38 47.3 -1.8**
comp=Z,161nm,1.0s,mb6.0
UCH Uchtor 49.23 335 P **P 02 38 51.2 +1.5**
SNR=41
UCH Uchtor 49.23 335 *eP* **P 02 38 51.3 +1.6**
comp=Z,121nm,1.1s,mb5.8
TKM2 Tokmak 2 49.37 337 *eP* **P 02 38 51.9 +1.2**
TKM2 pmax pmax
comp=Z,657nm,1.4s,mb6.5
TKM2 Tokmak 2 49.37 337 P **P 02 38 52.2 +1.5**
SNR=256
TKM2 Tokmak 2 49.37 337 *eP* **P 02 38 51.9 +1.2**
comp=Z,657nm,1.4s,mb6.5
KBK Karagaybulak 49.41 336 P **P 02 38 53.0 +2.0**
SNR=99
AML Almayashu 49.49 335 P **P 02 38 53.3 +1.7**
SNR=10
AML Almayashu 49.49 335 *eP* **P 02 38 53.0 +1.3**
comp=Z,292nm,1.1s,mb6.2
AAK Ala-Archa 49.57 336 P **P 02 38 53.9 +1.7**
SNR=74
SONM Songino Array 49.66 6 P **P 02 38 53.6 +0.8**
comp=Z,76nm,0.7s,mb5.8,baz=186,slow=8.8,SNR=304
SONM PcP PcP 02 40 14.3 +0.3
comp=Z,41nm,0.7s,baz=192,slow=4.2,SNR=7.9
SONM S **S 02 46 02.5 +2.6**
comp=Z,0.8nm,0.7s,baz=327,slow=46,SNR=3.2
SONM Songino Array 49.66 6 P **P 02 38 53.6 +0.8**
SONM 02 40 14.3
SONM S **S 02 46 02.5 +2.6**
SONM pmax pmax
comp=Z,76nm,0.7s
SONM pmax pmax
comp=Z,41nm,0.7s
SONM smax
comp=N,1.0nm,0.7s
STKA Stephens Creek 49.67 132⇑ *iP* **P 02 38 52.7 -0.6**
comp=N,65nm,0.7s,mb5.8
STKA Stephens Creek 49.67 132 P **P 02 38 52.8 -0.4**
comp=N,100nm,0.9s,mb5.8,baz=304,slow=7.5,SNR=29
STKA S **S 02 45 57.6 -3.1**
comp=N,6.9nm,1.1s,baz=338,slow=22,SNR=4.0
STKA ScS ScS 02 48 39.1 -4.6
comp=N,7.3nm,1.1s,baz=261,slow=20,SNR=2.0
FRU Bishkek 49.69 336 *i* P **P 02 38 53.5 +0.4**
FRU *i* 02 40 21.5
FRU *eS* **S 02 46 03.0 +2.5**
FRU pmax pmax
comp=Z,1µm,2.0s,mb6.7
FRU smax
comp=E,860nm,3.0s
ULN Ulaanbaatar 49.76 7 P **P 02 38 54.1 +0.5**
ULN pmax pmax
comp=Z,510nm,1.7s,mb6.3
ULN Ulaanbaatar 49.76 7 *eP* **P 02 38 54.0 +0.4**
comp=Z,510nm,1.8s,mb6.2
CHMS Chumysh 49.77 336 P **P 02 38 54.8 +1.1**
SNR=43
EKS2 Erkin-Say 49.89 335 P **P 02 38 56.4 +1.7**
SNR=236

EKS2 Erkin-Say 49.89 335 *e*P P **02 38 56.2 +1.5**
comp=Z,199nm,0.8s,mb6.2
CBIJ Chichi jima 49.99 52 P P **02 38 53.6 -2.2**
comp=Z,121nm,0.5s,mb6.2,baz=214,slow=15,SNR=11
USP Ospenovka 50.10 336 P P **02 38 57.6 +1.4**
SNR=8.3
MK31 Makanchi Array 50.60 345 *i* P P **02 39 00.6 +0.6**
MK31 pmax pmax
comp=Z,179nm,0.7s,mb6.1
MK31 Makanchi Array 50.60 345 *i* P P **02 39 00.7 +0.7**
MKAR Makanchi Array 50.60 345 P P **02 39 00.7 +0.7**
comp=Z,114nm,0.6s,mb6.0,baz=148,slow=8.1,SNR=942
MKAR S **S** **02 46 12.5 -0.6**
comp=Z,0.6nm,0.7s,baz=119,slow=42,SNR=2.0
MKAR Makanchi Array 50.60 345 P P **02 39 00.7 +0.7**
MKAR S **S** **02 46 12.5 -0.6**
MKAR pmax pmax
comp=Z,114nm,0.6s
MKAR smax
comp=N,1.0nm,0.7s
CN2 Changchun 50.85 24 *e*P P **02 39 00.7 -1.2**
CN2 *e*XP sP 02 39 07.0 -5.6
CN2 PCP PcP 02 40 17.6 -0.8
CN2 *e*S **S** **02 46 15.3 -1.4**
CN2 AMB AMB
comp=Z,20nm,0.7s,mb5.2
CN2 AMB AMB
comp=Z,11µm,12.0s
CN2 LR LR
comp=N,78µm,16.0s,MS6.9
CN2 LR LR
comp=E,40µm,16.0s,MS6.9
CN2 LR LR
comp=Z,45µm,17.0s,MS6.5
KK31 Karatay Array 51.67 333 *i* P P **02 39 08.0 -0.1**
KK31 pmax pmax
comp=Z,1µm,2.3s,mb6.4
KK31 Karatay Array 51.67 333 *i* P P **02 39 08.1 0.0**
ZAK Zakamensk 51.95 3⇓*i*P P **02 39 10.1 +0.1**
ZAK pmax pmax
comp=Z,110nm,1.8s,mb5.5
MAJO Matsushiro 52.28 39 P P **02 39 11.7 -1.1**
MAJO pmax pmax
comp=Z,52nm,0.7s,mb5.6
MAJO Matsushiro 52.28 39 *e*P P **02 39 11.2 -1.6**
comp=Z,52nm,0.7s,mb5.6
MAT Matsushiro 52.28 39 P P **02 39 12.5 -0.3**
MJAR Matsushiro Arr 52.28 39 P P **02 39 11.7 -1.0**
comp=Z,30nm,0.7s,mb5.3,baz=200,slow=7.3,SNR=62
MJAR S **S** **02 46 33.4 -3.3**
comp=Z,0.4nm,0.3s,baz=257,slow=3.3,SNR=2.2
MJAR Matsushiro Arr 52.28 39 P P **02 39 11.7 -1.1**
MJAR S **S** **02 46 33.4 -3.3**
MJAR pmax pmax
comp=Z,30nm,0.7s
MOY Mondy 53.15 1 *e*P P **02 39 19.9 +1.0**
MOY pmax pmax
comp=Z,751nm,2.3s,mb6.2
VLA Vladivostok 53.21 29*d i*P P **02 39 19.5 0.0**
VLA pmax pmax
comp=Z,555nm,2.2s,mb6.1
VLA Vladivostok 53.21 29 *i* P P **02 39 19.5 0.0**
TLY Talaya 53.26 3 P P **02 39 20.6 +0.9**
comp=Z,708nm,0.8s,mb6.7,SNR=60
TLY Talaya 53.26 3*c i*P P **02 39 20.8 +1.1**
TLY pmax pmax
comp=Z,2µm,2.9s,mb6.5
TLY pmax pmax
comp=Z,262nm,1.4s,mb6.0
TLY MLR MLR
comp=Z,18µm,13.0s,MS6.3
TLY Talaya 53.26 3 *e*P P **02 39 20.5 +0.8**
comp=Z,116nm,0.9s,mb5.8
MDJ Mudanjiang 53.28 26 P P **02 39 19.8 -0.2**
MDJ AP pP 02 39 28.9 +1.2
MDJ XP sP 02 39 32.7 +2.0
MDJ PP PP 02 41 17.5 -2.9
MDJ SCP ScP 02 44 20.3 -3.5
MDJ PCS PcS 02 44 23.7 -2.5
MDJ S **S** **02 46 51.4 +1.5**
MDJ AMB AMB
comp=Z,70nm,1.3s,mb5.4
MDJ LR LR
comp=N,32µm,19.7s
MDJ LR LR
comp=Z,39µm,19.1s,MS6.5
MDJ Mudanjiang 53.28 26 *e*P P **02 39 19.1 -0.9**
comp=Z,67nm,0.9s,mb5.6
IRK Irkutsk 53.86 4⇑*i*P P **02 39 21.4 -2.7**
IRK *e* 02 47 18.3
IRK pmax pmax
comp=Z,1µm,2.6s,mb6.3
OPO Ambohidratompo 54.01 248 P P **02 39 27.9 +2.1**
comp=Z,22nm,1.1s,mb5.0,baz=81,slow=7.9,SNR=9.8
CIT Chita 54.78 11 *e*P P **02 39 31.6 +0.8**
CIT *e* 02 39 47.2
CIT *e* 02 47 12.9
CIT pmax pmax
comp=Z,1µm,2.4s,mb6.4
ABKT Ailbek 54.93 320 P P **02 39 32.4 +0.2**
comp=Z,711nm,1.2s,mb6.6,SNR=50
ABKT Ailbek 54.93 320 P P **02 39 32.3 +0.1**
comp=Z,711nm,1.2s,mb6.6,SNR=50
KURK Kurchatov 55.18 344 P P **02 39 34.6 +0.9**
comp=Z,2µm,0.8s,mb7.2
KURK Kurchatov 55.18 344 P P **02 39 33.9 +0.2**
comp=Z,123nm,0.7s,mb6.0,baz=164,slow=6.9,SNR=147
KURK S **S** **02 47 09.3 -6.1**
comp=Z,1.2nm,0.9s,baz=176,slow=13,SNR=2.6
KURK Kurchatov 55.18 344 P P **02 39 33.9 +0.2**
KURK S **S** **02 47 09.3 -6.1**
KURK pmax pmax
comp=Z,123nm,0.7s,mb6.0
KURK smax
comp=N,1.0nm,0.9s
KURK Kurchatov 55.18 344 *e*P P **02 39 34.2 +0.5**
comp=N,463nm,1.0s,mb6.5
TOO Toolangi 55.23 136 *e*P P **02 39 35.1 +0.7**
CAN Canberra 56.74 132 *e*P P **02 39 45.1 -0.1**
ZAA0 Zalesovo Array 56.77 350⇑*i*P P **02 39 45.5 +0.5**
ZALV Zalesovo Beam 56.77 350 P P **02 39 45.6 +0.6**
comp=N,322nm,0.7s,mb6.5,baz=172,slow=5.9,SNR=623
ZALV S **S** **02 47 35.4 -1.1**
comp=N,2.1nm,0.4s,baz=142,slow=7.5,SNR=4.5
ZALV Zalesovo Beam 56.77 350 P P **02 39 45.6 +0.6**
ZALV S **S** **02 47 35.4 -1.1**
ZALV pmax pmax
comp=Z,322nm,0.7s,mb6.5
ZALV smax
comp=N,2.0nm,0.4s
ARMA Armidale 56.93 126⇑*i*P P **02 39 47.3 +0.6**
ARMA *e* 02 39 58.6
KRAR Krasnoyarsk 57.75 356*c i*P P **02 39 51.9 0.0**
KRAR pmax pmax
comp=Z,893nm,1.8s,mb6.5
NVS Novosibirsk 57.91 349 *i* P P **02 39 53.0 -0.1**
NVS *i* S **S** **02 47 49.5 -2.0**
NVS pmax pmax
comp=N,1µm,2.0s
NVS pmax pmax
comp=Z,998nm,2.0s,mb6.5
NVS pmax pmax
comp=E,331nm,1.7s
NVS smax
comp=N,314nm,1.7s
NVS smax
comp=E,248nm,1.7s
RDF Al-Radifah 58.33 306 *e*P P **02 39 56.3 -0.2**
baz=306
RDF AMb AMB 02 40 11.9
comp=Z,705nm,1.1s,mb6.6,baz=306
UMR Umm Al-Rimmam 58.43 306 *e*P P **02 39 56.9 -0.3**
baz=306
UMR AMb AMB 02 40 12.2
comp=Z,378nm,1.2s,mb6.3,baz=306
ERM Erimo 58.64 37 P P **02 39 58.1 -0.4**
comp=Z,414nm,0.7s,mb6.6,SNR=8.6
ERM Erimo 58.64 37 P P **02 39 58.7 +0.2**
ERM pmax pmax
comp=Z,49nm,0.8s,mb5.6
ERM Erimo 58.64 37 *e*P P **02 39 58.1 -0.4**
comp=Z,49nm,0.8s,mb5.6
NAY Al-Naaiem 58.70 306 *e*P P **02 39 58.7 -0.4**
baz=306
NAY AMb AMB 02 40 14.3
comp=Z,271nm,1.0s,mb6.2,baz=306

MIB Mutribah 58.83 307 *e*P P **02 39 59.5 -0.5**
baz=306
MIB AMb AMB 02 40 15.6
comp=Z,729nm,1.0s,mb6.7,baz=306
RST Umm Al-Ruwaisa 58.99 306 *e*P P **02 40 00.1 -1.0**
baz=306
RST AMb AMB 02 40 14.8
comp=Z,313nm,1.7s,mb6.1,baz=306
TAU Tasmania Unive 59.10 141 *e*P P **02 40 02.4 +0.8**
TAU pmax pmax
comp=Z,95nm,1.2s,mb5.7
TAU Tasmania Unive 59.10 141 *e*P P **02 40 02.4 +0.8**
comp=Z,95nm,1.3s,mb5.7
VOSK Vostochnaya 59.28 340 P P **02 40 01.7 -1.0**
VOSK pmax pmax
comp=Z,328nm,1.5s,mb6.1
ASAJ Asahikawa 59.58 35 P P **02 40 04.9 0.0**
comp=Z,64nm,0.6s,mb5.8,baz=256,slow=11,SNR=26
ASAJ Asahikawa 59.58 35 P P **02 40 04.9 0.0**
ASAJ pmax pmax
comp=Z,65nm,0.6s
BVA0 Borovoye Array 59.73 340 *i* P P **02 40 05.4 -0.4**
BVA0 pmax pmax
comp=Z,36nm,1.1s,mb5.3
BVAR Borovoye Array 59.73 340 P P **02 40 05.5 -0.3**
comp=Z,86nm,0.7s,mb5.9,baz=144,slow=8.3,SNR=262
BVAR S **S** **02 48 13.2 -2.0**
comp=Z,0.6nm,0.5s,baz=240,slow=36,SNR=3.1
BVAR PKP2bc 03 09 42.8
comp=Z,0.8nm,0.6s,baz=259,slow=1.5,SNR=4.8
BVAR Borovoye Array 59.73 340 P P **02 40 05.5 -0.3**
BVAR S **S** **02 48 13.2 -2.0**
BVAR pmax pmax
comp=Z,86nm,0.7s
BVAR smax
comp=N,1.0nm,0.5s
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 59.73 340 P P **02 40 05.5 -0.3**
BVAR S **S** **02 48 13.2 -2.0**
BVAR ⇑*e* 03 09 42.8
BRVK Borovoye 59.80 340 P P **02 40 06.3 +0.1**
comp=Z,777nm,0.8s,mb6.8,SNR=60
BRVK Borovoye 59.80 340 *e*P P **02 40 05.8 -0.4**
BRVK pmax pmax
comp=Z,130nm,0.9s,mb6.0
BRVK Borovoye 59.80 340 *e*P P **02 40 05.8 -0.4**
comp=Z,130nm,0.9s,mb6.0
BOD Bodaibo 60.42 9 *e*P P **02 40 10.3 -0.1**
BOD pmax pmax
comp=Z,253nm,1.7s,mb6.0
AB31 Akbulak array 61.16 331 *i* P P **02 40 14.9 -0.7**
YSS Yuzh-Sakhalins 61.42 32⇑*i*P P **02 40 17.4 0.0**
YSS *e* pP 02 40 24.2 -1.1
YSS pmax pmax
comp=Z,440nm,1.2s,mb6.5
YSS Yuzh-Sakhalins 61.42 32 *e*P P **02 40 17.1 -0.3**
comp=Z,181nm,0.7s,mb6.3
YSS *e*pP pP 02 40 24.4 -0.9
FURI Furi 61.59 281 *e*P P **02 40 21.9 +2.7**
CLNS Chul'man 61.80 15 *e*P P **02 40 19.8 0.0**
CLNS pmax pmax
comp=Z,44nm,0.9s,mb5.6
CLNS pmax pmax
comp=E,23nm,0.8s
CLNS pmax pmax
comp=N,38nm,0.8s
KMBO Kilima Mbogo 62.32 270 P P **02 40 25.6 +1.5**
comp=N,23nm,0.9s,mb5.3,baz=66,slow=8.2,SNR=34
KMBO S **S** **02 48 51.5 +1.9**
comp=N,0.3nm,0.3s,baz=164,slow=24,SNR=6.9
KMBO LR LR 03 03 03.8
comp=N,27µm,20.7s,MS6.4,baz=60,slow=32
KMBO PKPPKP 03 09 28.9
comp=N,0.6nm,0.5s,baz=34,slow=24,SNR=1.9
KMBO Kilima Mbogo 62.32 270 *e*P P **02 40 25.3 +1.1**
comp=N,763nm,2.3s,mb6.4
AKTK Aktyubinsk 62.87 332 P P **02 40 26.5 -0.6**
AKTK S **S** **02 48 51.4 -3.8**
AKTK P'P' 03 09 27.4
AKTO Aktyubinsk 62.87 332 P P **02 40 26.5 -0.6**
comp=N,48nm,0.8s,mb5.7,baz=131,slow=7.4,SNR=124
AKTO S **S** **02 48 51.4 -3.8**
comp=N,1.4nm,0.8s,baz=308,slow=19,SNR=4.6
AKTO PKPPKP 03 09 27.4
comp=N,0.6nm,0.6s,baz=65,slow=10,SNR=2.0
AKTO Aktyubinsk 62.87 332 P P **02 40 26.5 -0.6**
AKTO S **S** **02 48 51.4 -3.8**
AKTO pmax pmax
comp=Z,48nm,0.8s,mb5.7
AKTO smax
comp=N,1.0nm,0.8s
AKTO pmax pmax
comp=Z,1.0nm,0.6s
MAK Makhachkala 64.45 320 *e*P P **02 40 36.0 -1.7**
MAK *e* 02 43 08.0
MAK *e*PPP 02 44 37.9
MAK *i* S **S** **02 49 11.3 -3.8**
MAK *e* 02 50 30.4
MAK pmax pmax
comp=Z,632nm,1.6s,mb6.4
HAKT HAKKARI 64.66 313 *i* P P **02 40 39.1 -0.1**
MIR Mirnyy 64.92 183⇑*i*P P **02 40 43.0 +2.7**
MIR *i* pP 02 40 50.0 +1.9
MIR *i* 02 41 00.0
MIR pmax pmax
comp=Z,200nm,1.8s,mb5.8
CASY Casey 64.94 175 *e*P P **02 40 41.1 +0.7**
GNI Garni 65.00 316 P P **02 40 41.7 +0.4**
comp=Z,6.1nm,0.3s,mb5.1,baz=174,slow=15,SNR=30
GNI PKPPKP 03 09 19.5
comp=Z,2.6nm,0.3s,baz=152,slow=12,SNR=2.3
GNI Garni 65.00 316*c i*P P **02 40 41.8 +0.4**
GNI pmax pmax
comp=Z,342nm,1.9s
GNI Garni 65.00 316 *e*P P **02 40 41.9 +0.5**
comp=Z,146nm,1.0s,mb6.0
DYDN Diyadin 65.48 315 *i* P P **02 40 45.8 +1.4**
MTA Mtatsminda 65.64 318 P P **02 40 46.0 +0.6**
TBLG Delisi 65.70 318 P P **02 40 46.5 +0.6**
SVE Sverdlovsk 66.22 338⇓*e*P P **02 40 49.3 +0.4**
SVE pmax pmax
comp=Z,583nm,1.7s,mb6.3
GOR Gori 66.23 318 P P **02 40 50.4 +1.2**
MARD Mardin 66.72 312 *i* P P **02 40 53.0 +0.6**
ARU Arti 66.74 337 P P **02 40 51.3 -0.9**
comp=Z,931nm,0.9s,mb6.8,SNR=41
ARU Arti 66.74 337*d i*P P **02 40 51.4 -0.8**
ARU *e*S S 02 49 43.0 +0.4
ARU pmax pmax
comp=Z,417nm,1.7s,mb6.2
ARU Arti 66.74 337 *e*P P **02 40 51.6 -0.6**
comp=Z,968nm,1.8s,mb6.5
ONI Oni 66.93 318 P P **02 40 54.7 +1.0**
HOMI Horasan 66.94 315 *i* P P **02 40 54.7 +0.9**
BNGL BINGOL 67.06 314 *i* P P **02 40 55.7 +1.1**
ERZM Erzurum 67.27 315 *i* P P **02 40 57.1 +1.2**
ARTV Artvin 67.38 316 *i* P P **02 40 56.9 +0.3**
YAK Yakutsk 67.53 15*c i*P P **02 40 56.2 -0.9**
YAK *e* 02 49 45.9
YAK pmax pmax
comp=Z,365nm,0.9s,mb6.4
YAK pmax pmax
comp=E,69nm,0.9s
YAK pmax pmax
comp=N,83nm,1.1s
YAK MLR MLR
comp=Z,49µm,20.0s,MS6.7
YAK MLR MLR
comp=E,14µm,15.0s,MS6.7
YAK MLR MLR
comp=N,32µm,18.0s,MS6.7
YAK Yakutsk 67.53 15⇑*i*P P **02 40 56.2 -0.9**
KOPT Kop Dagi 67.93 315 *i* P P **02 41 01.4 +1.4**
DZM Mont Dzumac 67.96 113 *e*P P **02 41 00.1 -0.6**
DZM Mont Dzumac 67.96 113 *e*P P **02 41 00.1 -0.5**
KIV Kislovodsk 68.03 319 P P **02 41 01.5 +0.9**
comp=N,921nm,1.0s,mb6.8,SNR=38
KIV Kislovodsk 68.03 319*c i*P P **02 41 00.8 +0.2**
KIV *e* pP 02 41 09.9 +1.4
KIV 02 41 26.0
KIV *i* S S 02 49 56.5 -2.0
KIV *i* PS 02 50 16.2
KIV pmax pmax
comp=Z,437nm,1.7s,mb6.2

KIV MLR MLR
comp=Z,5µm,19.0s,MS5.8
KIV Kislovodsk 68.03 319⇑*i*P P **02 41 00.9 +0.3**
KIV Kislovodsk 68.03 319⇑*i*P P **02 41 00.8 +0.2**
comp=Z,1µm,1.9s,mb6.6
ASF Jabal al Asfar 68.06 306 P P **02 41 02.2 +1.1**
comp=Z,28nm,0.8s,mb5.3,baz=350,slow=3.5,SNR=56
ASF S S 02 50 00.8 +1.4
comp=Z,0.4nm,0.3s,baz=258,slow=18,SNR=2.8
ASF PKPPKP 03 09 18.8
comp=Z,0.8nm,0.5s,baz=207,slow=4.5,SNR=2.5
ASF LR LR 03 12 13.6
comp=Z,15µm,19.0s,MS6.2,baz=99,slow=37
ASF Jabal al Asfar 68.06 306 P P **02 41 02.2 +1.1**
ASF S S 02 50 00.8 +1.3
ASF pmax pmax
comp=Z,29nm,0.9s
ASF pmax pmax
comp=Z,1.0nm,0.5s
ASF MLR MLR
comp=Z,15µm,19.0s
MACK Trabzon 68.79 315 *i* P P **02 41 05.8 +0.4**
MALT Malatya 68.81 312 P P **02 41 04.6 -1.0**
MALT pmax pmax
comp=Z,140nm,1.2s,mb5.8
MALT Malatya 68.81 312⇑*i*P P **02 41 04.7 -0.9**
MALT Malatya 68.81 312⇑*i*P P **02 41 04.6 -1.1**
comp=Z,136nm,1.3s,mb5.7
EIL Elat 69.00 303 P P **02 41 07.4 +0.4**
comp=Z,45nm,0.8s,mb5.4,baz=103,slow=2.8,SNR=39
EIL S S 02 50 11.2 +0.6
comp=Z,1.4nm,0.7s,baz=48,slow=20,SNR=2.5
EIL PKPPKP 03 09 17.3
comp=Z,2.3nm,0.8s,baz=38,slow=20,SNR=2.0
FKH Fakeheh 69.06 308 *e*P P **02 41 08.2 +0.9**
GZT Gaziantep 69.14 311 *i* P P **02 41 08.4 +0.7**
AKCD Akcadag 69.18 312 *i* P P **02 41 08.6 +0.7**
MMAI Mount Meron Ar 69.51 306 P P **02 41 11.2 +1.1**
comp=Z,23nm,0.7s,mb5.2,baz=96,slow=8.5,SNR=32
MMAI S S 02 50 17.8 +1.2
comp=Z,4.6nm,0.9s,baz=244,slow=44,SNR=2.8
BHL Bhannes 69.56 307 *e*P P **02 41 11.3 +0.9**
SOC Sochi 69.84 318 *e*P P **02 41 09.5 -2.4**
SOC *e**PP pP 02 41 20.0 +0.2
SOC *e**SP sP 02 41 24.4 +1.7
SOC *e* 02 41 31.7
SOC *e* 02 43 41.4
SOC *e*S S 02 50 16.9 -3.1
SOC *e* 02 51 10.6
SOC *e*SS SS 02 54 50.8 +1.6
SOC *e*SSS 02 57 58.3
SOC pmax pmax
comp=Z,196nm,1.0s,mb6.0
SOC Sochi 69.84 318 *i* P P **02 41 11.3 -0.6**
GRSN GIRESUNGRSN 69.84 315 *i* P P **02 41 11.4 -0.5**
COBT Iskenderun 69.86 310 *i* P P **02 41 13.0 +0.8**
ANDN Andirin 70.13 311 *i* P P **02 41 14.3 +0.5**
YURE YUREGIR 70.44 310 *i* P P **02 41 16.3 +0.6**
MAW Mawson 70.50 194 *e*P P **02 41 16.0 +0.5**
comp=Z,37nm,1.2s,mb5.2
MAW Mawson 70.50 194 P P **02 41 16.0 +0.6**
comp=Z,12nm,0.7s,mb5.0,baz=35,slow=7.5,SNR=42
MAW S S 02 50 27.5 +0.6
comp=Z,0.6nm,0.7s,baz=180,slow=14,SNR=1.6
MAW LR LR 03 05 45.5
comp=Z,26µm,20.9s,MS6.5,baz=112,slow=30
MAW PKPPKP 03 09 10.8
comp=Z,2.6nm,0.8s,baz=168,slow=3.3,SNR=5.2
MAW Mawson 70.50 194 P P **02 41 16.0 +0.5**
MAW S S 02 50 27.5 +0.6
MAW pmax pmax
comp=Z,12nm,0.7s
MAW smax
comp=N,1.0nm,0.7s
MAW pmax pmax
comp=Z,3.0nm,0.8s
SKR Severo-Kuril's 70.83 34 *e*P P **02 41 17.5 -0.3**
SKR *e* pP 02 41 25.5 -0.2
SKR pmax pmax
comp=Z,340nm,1.0s,mb6.2
SKR pmax pmax
comp=Z,5µm,4.0s
MEST Erdemli 71.51 309 *i* P P **02 41 21.8 -0.4**
LSZ Lusaka 71.62 255 P P **02 41 23.7 +0.5**
comp=Z,21nm,0.7s,mb5.2,baz=88,slow=5.8,SNR=35
LSZ S S 02 50 41.7 0.0
comp=Z,1.2nm,0.8s,baz=89,slow=23,SNR=3.2
LSZ Lusaka 71.62 255 P P **02 41 23.7 +0.4**
LSZ pmax pmax
comp=Z,85nm,1.3s,mb5.5
LSZ Lusaka 71.62 255 *e*P P **02 41 23.7 +0.4**
comp=Z,84nm,1.3s,mb5.5
CSS Prodhromos 71.70 308 P P **02 41 23.6 +0.2**
comp=Z,2.5nm,1.0s
CSS Prodhromos 71.70 308⇑*i*P P **02 41 23.4 0.0**
ANN Anapa 71.82 319 *e*P P **02 41 20.9 -3.0**
ANN *e*S S 02 50 37.9 -5.1
ANN pmax pmax
comp=Z,110nm,1.6s,mb5.5
MAMC Mammari 71.84 308 P P **02 41 25.2 +0.9**
CDAG Cicekdag 72.23 313 *i* P P **02 41 26.1 -0.3**
CTKT Corum 72.23 314 *i* P P **02 41 25.7 -0.8**
ALFC Alevga 72.33 308 P P **02 41 26.9 -0.3**
BR131 Keskin Array S 72.80 313 *e*P P **02 41 28.9 -1.0**
comp=Z,54nm,1.0s,mb5.4
PEA0B Petropavlovsk- 72.83 32⇑*i*P P **02 41 29.4 -0.3**
PETK Petropavlovsk- 72.83 32 P P **02 41 29.4 -0.3**
comp=Z,70nm,0.7s,mb5.7,baz=204,slow=3.1,SNR=119
PETK S S 02 50 56.0 +1.7
comp=Z,0.3nm,0.3s,baz=73,slow=11,SNR=2.9
ILGA Ilgaz 73.14 314 *i* P P **02 41 31.7 -0.1**
VSR Storozhevoye 73.27 325 *e*P P **02 41 31.5 -0.9**
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=Z,60nm,0.8s,mb5.6
VSR pmax pmax
comp=E,90nm,0.9s
PET Petropavlovsk 73.30 33⇑*i*P P **02 41 32.3 -0.2**
PET pmax pmax
comp=Z,432nm,0.8s,mb6.4
PET MLR MLR
comp=Z,7µm,20.0s,MS6.0
PET Petropavlovsk 73.30 33 *e*P P **02 41 32.1 -0.5**
comp=Z,283nm,0.8s,mb6.2
ANTO Ankara 73.46 312 P P **02 41 33.4 -0.4**
ANTO pmax pmax
comp=Z,87nm,1.0s,mb5.6
ANTO Ankara 73.46 312⇑*i*P P **02 41 32.1 -1.7**
ANTO Ankara 73.46 312 *e*P P **02 41 33.2 -0.6**
comp=Z,87nm,1.0s,mb5.6
VOR Voronezh 73.47 326⇑*i*P P **02 41 32.0 -1.6**
VOR pmax pmax
comp=Z,1µm,2.0s,mb6.4
BALT Daday 73.52 314 *i* P P **02 41 34.4 +0.3**
KDHN Kadinhani 73.59 311 *i* P P **02 41 33.5 -1.1**
SIM Simferopol' 74.08 318*c i*P P **02 41 37.1 -0.2**
SIM pmax pmax
comp=Z,84nm,1.0s,mb5.6
SGKT Sivrigoynuk 74.20 313 *i* P P **02 41 38.0 -0.1**
ISP Isparta 74.64 310 P P **02 41 40.5 -0.2**
ISP *e* 02 41 55.8
ISP pmax pmax
comp=Z,70nm,1.0s,mb5.5
ISP Isparta 74.64 310 *e*P P **02 41 40.1 -0.6**
comp=Z,70nm,1.0s,mb5.5
LBTB Lobatse 74.79 245 P P **02 41 42.0 +0.1**
comp=Z,19nm,0.8s,mb5.1,baz=114,slow=6.1,SNR=19
LBTB Lobatse 74.79 245 P P **02 41 42.0 +0.1**
LBTB pmax pmax
comp=Z,19nm,0.8s,mb5.1
LBTB Lobatse 74.79 245 P P **02 41 42.0 +0.1**
ESKT Eskisehir 74.81 312 *i* P P **02 41 41.1 -0.6**
TKTP Tekketepe 74.83 310 *i* P P **02 41 41.0 -0.8**
HENT Hendek 75.12 313 *i* P P **02 41 41.1 -2.3**
GOLH Golhisar 75.22 309 *i* P P **02 41 43.3 -0.8**
BOSA Boshof 75.45 241 P P **02 41 45.3 -0.3**
comp=Z,19nm,0.8s,mb5.1,baz=92,slow=4.7,SNR=22
BOSA S S 02 51 24.0 -0.8
comp=Z,1.8nm,0.9s,baz=110,slow=15,SNR=1.8
BOSA LR LR 03 10 29.9
comp=Z,22µm,20.4s,MS6.5,baz=94,slow=32
BOSA Boshof 75.45 241 P P **02 41 45.3 -0.3**
BOSA S S 02 51 24.0 -0.8
BOSA pmax pmax

comp=Z,19nm,0.8s,mb5.1
BOSA smax
comp=N,2.0nm,1.0s
KHAL Karahalli 75.55 310 *i* P **P 02 41 44.7 -1.3**
TIXI Tiksi 75.60 9*c i* P **P 02 41 44.5 -1.0**
TIXI *e* 02 41 55.8
TIXI *e*S S 02 51 21.6 -3.1
TIXI pmax pmax
comp=Z,576nm,2.1s,mb6.1
TIXI pmax pmax
comp=N,108nm,1.8s
TIXI pmax pmax
comp=E,74nm,1.8s
TIXI MLR MLR
comp=N,21μm,18.0s,MS6.5
TIXI MLR MLR
comp=E,11μm,18.0s,MS6.5
TIXI MLR MLR
comp=Z,36μm,19.0s,MS6.7
TIXI Tiksi 75.60 9 *e*P **P 02 41 44.3 -1.3**
comp=Z,621nm,1.6s,mb6.3
GDZ Gediz 75.73 311 *i* P **P 02 41 46.7 -0.2**
TURN Turunc 75.89 309 *i* P **P 02 41 49.6 +1.7**
MOS Moscow 76.00 329 *e*P **P 02 41 45.6 -2.6**
MOS *e* 02 41 58.2
MOS *e*S S 02 51 24.2 -5.5
MOS *e* 02 51 48.5
MOS pmax pmax
comp=Z,930nm,1.6s,mb6.5
MOS pmax pmax
comp=Z,3100μm,2.6s
ARG Arkhangelos 76.11 308 *e*P **P 02 41 48.8 -0.5**
ULDT Uludag 76.24 312 *i* P **P 02 41 49.7 -0.2**
DEMI Demirci 76.30 311 *i* P **P 02 41 49.6 -0.6**
OBN Obninsk 76.30 328 P **P 02 41 49.3 -0.5**
comp=Z,2μm,1.7s,mb6.7,SNR=20
OBN Obninsk 76.30 328*c i* P **P 02 41 49.7 -0.1**
OBN *i* *SP sP 02 41 58.5 -2.3
OBN *e**SP sP 02 42 04.1 +3.3
OBN *i* S S 02 51 28.5 -4.5
OBN *i* 02 51 46.9
OBN pmax pmax
comp=Z,780nm,1.6s,mb6.4
OBN MLR MLR
comp=Z,9μm,20.0s,MS6.1
OBN Obninsk 76.30 328 *e*P **P 02 41 49.6 -0.3**
comp=Z,1μm,1.7s,mb6.6
DURS Dursunbey 76.61 311 *i* P **P 02 41 51.6 -0.4**
AYDN Tasoluk 76.62 309 *i* P **P 02 41 52.1 0.0**
KARP Karpathos 76.74 307 *e*P **P 02 41 53.0 +0.2**
BDRM Kayabasi 76.83 309 *i* P **P 02 41 52.7 -0.6**
AKHS Akhisar 76.94 310 *i* P **P 02 41 53.5 -0.4**
ELBA Catalca 77.01 313 *i* P **P 02 41 53.5 -0.7**
GCAM G?zelcaml? 77.13 309 *i* P **P 02 41 54.7 -0.3**
KDAG Bornova 77.26 310 *i* P **P 02 41 55.6 0.0**
BALY Balya 77.28 311 *i* P **P 02 41 55.4 -0.3**
ZKR Zakros 77.41 306 *e*P **P 02 41 55.6 -1.4**
SMG Samos 77.44 309 *e*P **P 02 41 56.2 -0.4**
TLCR 77.74 317⇑ *i*P **P 02 41 58.4 +0.2**
TLCR 77.74 317 P **P 02 41 57.8 -0.4**
PSN Preselentsi 77.80 315 *i* P **P 02 41 58.6 0.0**
SART Tekirdag 77.82 312 *i* P **P 02 41 58.1 -0.6**
TIRR Tirgusor 77.83 316 P **P 02 41 58.4 -0.3**
TIRR pmax pmax
comp=Z,99nm,1.0s,mb5.7
TIRR Tirgusor 77.83 316 *e*P **P 02 41 58.3 -0.4**
comp=Z,99nm,1.0s,mb5.7
AYVA Ayvalik 77.89 311 *i* P **P 02 41 58.9 -0.2**
NPS Neapolis 77.93 306 *e*P **P 02 41 58.0 -1.5**
LAST Lasithi 78.02 306 *e*P **P 02 42 00.2 +0.3**
SYO Syowa Base 78.05 199⇓ *e*P **P 02 41 58.4 -1.0**
SYO Syowa Base 78.05 199⇓ *i*PcP PcP 02 42 08.0 -1.0
SYO Syowa Base 78.05 199⇓ *i*pP pP 02 42 10.6 +3.2
CVD Cernavoda 78.06 316⇑ *i*P **P 02 42 00.7 +0.7**
CVD Cernavoda 78.06 316⇑ *e*P **P 02 42 00.7 +0.7**
CHOS Chios island 78.18 310 *e*P **P 02 42 01.1 +0.3**
PRK Paraskevi 78.19 311 *e*P **P 02 42 00.9 0.0**
PRK Paraskevi 78.19 311 *e*P **P 02 42 00.6 -0.3**
KIS Kishinev 78.22 319 *e*P **P 02 42 00.0 -0.8**
KIS *e* 02 42 11.0
KIS *e*S S 02 51 55.0 +0.8
KIS Kishinev 78.22 319 *e*PP PP 02 45 14.0 +16
PRD Provadia 78.24 315 *i* P **P 02 42 00.5 -0.5**
SANT Santorini 78.26 308 *e*P **P 02 42 00.7 -0.6**
comp=Z,238nm,1.3s,mb6.0
APE Apeiranthos 78.33 308⇑ *i*P **P 02 41 52.8 -8.9**
APE Apeiranthos 78.33 308⇑ P **P 02 41 52.8 -8.9**
IDI Anoyia 78.51 306 P **P 02 42 02.7 0.0**
comp=Z,24nm,0.6s,mb5.3,baz=88,slow=7.1,SNR=23
IDI S S 02 51 53.7 -4.1
comp=Z,3.8nm,0.9s,baz=340,slow=20,SNR=2.2
IDI LR LR 03 18 09.3
comp=Z,7μm,21.9s,MS6.0,baz=320,slow=37
SIVA Sivas 78.53 306 *e*P **P 02 42 03.2 +0.4**
JMB Yambol 78.66 314 *i* P **P 02 42 03.6 +0.3**
ALN Alexandroupoli 78.71 312 *e*P **P 02 42 03.4 -0.3**
AKASG Malin Array Be 78.97 322 P **P 02 42 04.1 -0.8**
comp=Z,16nm,0.7s,mb5.0,baz=87,slow=4.0,SNR=60
AKASG PP PP 02 44 56.7 -7.3
comp=Z,3.4nm,0.8s,baz=107,slow=5.8,SNR=4.1
AKASG S S 02 51 57.2 -4.9
comp=Z,0.2nm,0.3s,baz=101,slow=10.0,SNR=9.5
AKASG Malin Array Be 78.97 322 P **P 02 42 04.1 -0.8**
AKASG S S 02 51 57.2 -4.9
AKASG pmax pmax
comp=Z,16nm,0.7s
AKASG pmax pmax
comp=Z,3.0nm,0.8s
KIEV Kiev 78.98 322 *e*P **P 02 42 04.0 -0.9**
KIEV pmax pmax
comp=Z,205nm,1.6s,mb5.8
KIEV Kiev 78.98 322 *e*P **P 02 42 04.0 -0.9**
comp=Z,205nm,1.6s,mb5.8
ODB Odobesti 79.09 317⇑ *i*P **P 02 42 07.1 +1.5**
ODB Odobesti 79.09 317⇑ P **P 02 42 07.1 +1.5**
VAM Vamos 79.09 306 *e*P **P 02 42 05.8 -0.1**
IAS Iasi 79.09 319 P **P 02 42 05.8 +0.2**
RDO Rodhopi 79.14 312 *e*P **P 02 42 05.2 -0.8**
LIA Limnos Island 79.15 311 *e*P **P 02 42 05.4 -0.7**
LIA Limnos Island 79.15 311 *e*P **P 02 42 05.2 -0.9**
KARN Karanos 79.31 306 *e*P **P 02 42 07.8 +0.6**
KDZ Kurdzhali 79.33 313 *i* P **P 02 42 06.7 -0.3**
VRI Vrincioaia 79.33 317⇓ *i*P **P 02 42 07.7 +0.7**
VRI Vrincioaia 79.33 317 P **P 02 42 07.5 +0.5**
PLOR Plostina 79.38 317⇑ *i*P **P 02 42 07.5 +0.3**
SUR Sutherland 79.63 238 P **P 02 42 11.2 +2.3**
comp=Z,583nm,1.3s,mb6.3,SNR=7.0
SUR Sutherland 79.63 238 *e*P **P 02 42 11.3 +2.4**
comp=Z,123nm,1.1s,mb5.8
SUR *e*pP pP 02 42 20.1 +3.2
MLR Muntele Rosu 79.78 317 P **P 02 42 09.9 +0.5**
comp=Z,102nm,0.9s,mb5.7,baz=107,slow=2.1,SNR=76
MLR PP PP 02 45 08.7 -2.1
comp=Z,32nm,1.3s,baz=0.6,slow=5.4,SNR=2.0
MLR S S 02 52 07.3 -3.6
comp=Z,0.8nm,0.4s,baz=218,slow=21,SNR=3.3
MLR Muntele Rosu 79.78 317 P **P 02 42 09.9 +0.5**
MLR 02 45 08.7
MLR S S 02 52 07.3 -3.6
MLR pmax pmax
comp=Z,102nm,0.9s
MLR pmax pmax
comp=Z,32nm,1.3s
MLR smax
comp=N,1.0nm,0.4s
MLR Muntele Rosu 79.78 317⇑ *i*P **P 02 42 09.8 +0.4**
MLR Muntele Rosu 79.78 317 P **P 02 42 10.0 +0.6**
ZIMR 79.78 315⇓ *i*P **P 02 42 09.9 +0.4**
ZIMR 79.78 315 P **P 02 42 09.9 +0.4**
ATH Athens Observa 79.92 309 *e*P **P 02 42 09.4 -0.9**
DID Didima 80.21 308 *e*P **P 02 42 10.7 -1.2**
PAIG Paliouri 80.29 311 *e*P **P 02 42 11.7 -0.6**
VLI Veliai 80.32 308 *e*P **P 02 42 10.5 -2.0**
VOIR 80.38 317⇓ *i*P **P 02 42 12.4 -0.3**
VOIR 80.38 317 P **P 02 42 12.3 -0.3**
NVR Nevrokopi 80.42 312 *e*P **P 02 42 12.4 -0.5**
PLG Polygyros 80.55 311 *e*P **P 02 42 13.1 -0.5**
PLG Polygyros 80.55 311 *e*P **P 02 42 13.3 -0.4**
MMB Musomiste 80.56 312 *i* P **P 02 42 13.1 -0.6**
LKR Lokris 80.59 309 *e*P **P 02 42 12.2 -1.7**
BURAR Bucovina Array 80.74 319⇑ *i*P **P 02 42 15.7 +1.2**
BURAR Bucovina Array 80.74 319 P **P 02 42 15.8 +1.3**
BUR08 Bucovina Ar. S 80.76 319⇑ *i*P **P 02 42 15.7 +1.1**

MNK Minsk 80.85 326*c e*P **P 02 42 12.0 -3.0**
MNK *e* pP 02 42 18.0 -5.0
MNK *e* 02 45 18.0
MNK *e*S S 02 52 14.0 -7.8
MNK pmax pmax
comp=Z,630nm,1.5s,mb6.3
MNK pmax pmax
comp=E,790nm,1.2s
MNK MLR MLR
comp=Z,16μm,20.0s,MS6.4
VLX Vlachokerasia 80.86 308 *e*P **P 02 42 14.9 -0.5**
CRAR CRAIOVA 81.03 315 P **P 02 42 16.5 +0.4**
KNT Kendrikon 81.10 312 *e*P **P 02 42 15.8 -0.8**
VTS Vitosha 81.12 313 *i* P **P 02 42 17.0 +0.3**
VTS Vitosha 81.12 313 P **P 02 42 16.6 -0.1**
PUL Pulkovo 81.14 331 *e*P **P 02 42 16.9 +0.5**
AGG Agios Georgios 81.17 310 *e*P **P 02 42 15.8 -1.2**
ITM Ithomi 81.19 308 *e*P **P 02 42 16.5 -0.7**
LIT Litokhoron 81.22 311 *e*P **P 02 42 16.4 -0.9**
VAY Valandovo 81.37 312 *i* P **P 02 42 16.5 -1.5**
GRG Griva 81.43 312 *e*P **P 02 42 17.8 -0.6**
THL Klokotos Trika 81.50 310 *e*P **P 02 42 17.1 -1.7**
THL Klokotos Trika 81.50 310 *e*P **P 02 42 17.2 -1.5**
EVR Evrytania 81.55 310 *e*P **P 02 42 17.9 -1.1**
RLS Riolos of Patr 81.68 309 *e*P **P 02 42 19.8 +0.1**
STIP Stip 81.72 312 *i* P **P 02 42 18.2 -1.6**
JOF Joensuu 81.74 335 *e*p **P 02 42 18.8 -0.7**
comp=Z,61nm,0.9s,mb5.5
JOF Joensuu 81.74 335 *e*P **P 02 42 18.8 -0.7**
JOF pmax pmax
comp=Z,61nm,0.9s,mb5.5
TSUM Tsumeb 81.90 251 *e*P **P 02 42 22.4 +1.1**
comp=Z,47nm,1.1s,mb5.3
GZR Gura Zlata 81.94 316⇑ *i*P **P 02 42 21.4 +0.4**
GZR Gura Zlata 81.94 316 P **P 02 42 21.3 +0.3**
LVV L'vov 81.98 321 *e*P **P 02 42 19.8 -1.3**
LVV *e* 02 52 30.8
FNA Florina 82.17 311 *e*P **P 02 42 21.1 -1.2**
KFL Anninata 82.22 309 *e*P **P 02 42 25.4 +2.8**
BIA Bitola 82.25 312 *i* P **P 02 42 20.5 -2.2**
DRGR 82.25 318⇓ *i*P **P 02 42 23.0 +0.5**
DRGR 82.25 318 P **P 02 42 23.1 +0.5**
SKO Skopje 82.31 313 *i* P **P 02 42 22.5 -0.5**
LVZ Lovozero 82.33 340 P **P 02 42 22.5 0.0**
comp=Z,596nm,1.2s,mb6.4,SNR=12
LVZ Lovozero 82.33 340⇑ *i*P **P 02 42 22.2 -0.3**
LVZ pmax pmax
comp=Z,263nm,1.6s,mb5.9
KRUS Krusevo 82.36 312 *i* P **P 02 42 22.3 -0.9**
VLS Valsamata 82.39 309 *e*P **P 02 42 23.1 -0.3**
VLS Valsamata 82.39 309 *e*P **P 02 42 22.8 -0.6**
JAN Janina 82.40 310 *e*P **P 02 42 23.4 -0.1**
LKD Levkas 82.41 309 *e*P **P 02 42 23.8 +0.2**
VSU Vasula 82.52 330*c i*P **P 02 42 24.1 +0.4**
APA Apatity 82.64 339⇓ *i*P **P 02 42 24.0 -0.1**
APA *i* 02 42 38.6
APA pmax pmax
comp=Z,540nm,1.8s,mb6.3
APA MLR MLR
comp=Z,16μm,19.0s,MS6.4
OHR Ohrid 82.65 312 *i* P **P 02 42 22.9 -1.9**
IGT Igoumenitsa 82.78 310 *e*P **P 02 42 25.0 -0.5**
BZS Buzias 82.79 316⇑ *i*P **P 02 42 25.5 +0.1**
BZS Buzias 82.79 316 P **P 02 42 25.6 +0.3**
KWP Kalwaria 82.79 320 *e*P **P 02 42 25.6 +0.3**
KWP Kalwaria 82.79 320 *e*P **P 02 42 24.9 -0.4**
KWP pmax pmax
comp=Z,690nm,1.8s,mb6.4
KWP Kalwaria 82.79 320⇑ *i*P **P 02 42 21.4 -3.9**
KWP Kalwaria 82.79 320 *e*P **P 02 42 24.9 -0.4**
comp=Z,690nm,1.8s,mb6.4
UZH Uzhgorod 82.87 319⇑ *i*P **P 02 42 24.8 -0.9**
UZH *e* pP 02 42 33.8 0.0
KOLS Kolonicke sedl 82.94 320 *e*P **P 02 42 26.8 +0.7**
KOLS *e*S S 02 52 43.8 +0.3
BILL Bilibino 82.99 20 *i* P **P 02 42 25.3 -0.7**
BILL pmax pmax
comp=Z,209nm,2.5s,mb5.7
BILL Bilibino 82.99 20 *e*P **P 02 42 25.9 -0.1**
comp=Z,107nm,1.4s,mb5.7
KEK Kerkira 83.21 310 *e*P **P 02 42 27.3 -0.4**
SUW Suwalki 83.38 325 *e*P **P 02 42 27.0 -1.3**
SUW Suwalki 83.38 325 *e*P **P 02 42 27.0 -1.2**
TIR Tirane 83.38 312 *e*P **P 02 42 25.9 -2.7**
TIR pmax pmax
comp=Z,102nm,1.1s,mb5.8
TIR Tirane 83.38 312 *e*P **P 02 42 25.9 -2.7**
comp=Z,102nm,1.1s,mb5.8
CRVS Cervenica-Dubn 83.46 319 *e*P **P 02 42 29.0 +0.2**
CRVS *e*S S 02 52 48.0 -0.8
PVY Plav 83.48 313⇓ *i*P **P 02 42 29.1 +0.1**
IVA Berane 83.58 313⇓ *i*P **P 02 42 29.6 +0.1**
SBA Scott Base 83.66 169 *e*P **P 02 42 30.5 +1.2**
SBA pmax pmax
comp=Z,30nm,0.8s,mb5.5
SBA Scott Base 83.66 169 *e*P **P 02 42 30.5 +1.3**
comp=Z,30nm,0.8s,mb5.5
STHS Stebnicka Huta 83.69 320 *i* P **P 02 42 30.4 +0.5**
STHS pmax pmax
comp=Z,57nm,1.0s,mb5.7
STHS Stebnicka Huta 83.69 320 *i* P **P 02 42 30.4 +0.5**
comp=Z,57nm,1.0s,mb5.7
STHS *e*S S 02 52 48.4 -2.7
KAF Kangasniemi 83.70 333 *e*p **P 02 42 29.6 -0.1**
comp=Z,76nm,0.7s,mb5.9,baz=100,slow=4.7
KAF Kangasniemi 83.70 333 *e*P **P 02 42 29.6 -0.1**
KAF pmax pmax
comp=Z,76nm,0.7s,mb5.9
ULC Ulcinj 83.92 312⇓ *i*P **P 02 42 31.2 -0.1**
TTG Podgorica 83.98 313⇓ *i*P **P 02 42 30.6 -1.0**
PLE Pljevlja 84.01 314⇓ *i*P **P 02 42 32.4 +0.7**
KECS Kecovo 84.02 319 *i* P **P 02 42 31.7 0.0**
KECS pmax pmax
comp=Z,31nm,1.3s,mb5.3
KECS Kecovo 84.02 319 *i* P **P 02 42 31.7 0.0**
comp=Z,31nm,1.3s,mb5.3
KECS *e*PP PP 02 45 46.6 +0.9
KECS *e*S S 02 52 52.8 -1.7
NKY Niksic 84.22 313⇓ *i*P **P 02 42 32.9 +0.1**
BUM Brajici-Budva 84.23 313⇓ *i*P **P 02 42 32.1 -0.8**
NIE Niedzica 84.29 320 *e*P **P 02 42 33.7 +0.7**
WAR Warsaw 84.32 323 *e*P **P 02 42 33.4 +0.3**
WAR Warsaw 84.32 323 *e*P **P 02 42 33.4 +0.3**
PSZ Piszkesteto 84.33 318 *e*P **P 02 42 33.4 +0.2**
PSZ pmax pmax
comp=Z,147nm,1.3s,mb6.0
PSZ Piszkesteto 84.33 318⇑ *e*P **P 02 42 33.7 +0.5**
PSZ Piszkesteto 84.33 318⇑ *i*P **P 02 42 32.5 -0.7**
PSZ Piszkesteto 84.33 318 *e*P **P 02 42 33.4 +0.1**
comp=Z,146nm,1.3s,mb6.0
UPM Unac-Piva 84.34 314⇓ *i*P **P 02 42 33.1 -0.3**
HCY Herceg Novi 84.54 313⇓ *i*P **P 02 42 34.5 +0.1**
BRY Bratogost 84.57 313⇓ *i*P **P 02 42 34.0 -0.6**
OJC Ojcow 84.74 321 *e*P **P 02 42 35.4 +0.1**
OJC *e*S S 02 52 57.2 -4.4
OJC *e*SS SS 02 58 37.4 +3.7
OJC Ojcow 84.74 321 *e*P **P 02 42 35.4 +0.1**
OJC *es*P sP 02 42 38.9 -7.4
OJC *e*S S 02 52 57.2 -4.4
OJC *e*SS SS 02 58 37.4 +3.7
OJC LR LR
comp=Z,7μm,24.4s,MS6.0
BUD Budapest 84.84 318⇑ *e*P **P 02 42 36.0 +0.2**
AMKA Amchitka 84.88 38 *e*P **P 02 42 37.0 +1.1**
comp=Z,132nm,1.7s,mb5.8
PKSM Moragy 84.93 316⇑ *i*P **P 02 42 36.3 0.0**
PKSM Moragy 84.93 316 P **P 02 42 36.5 +0.2**
VYHS Vyhne 85.11 319 *e*P **P 02 42 37.1 -0.1**
VYHS *e* 02 45 55.7
VYHS pmax pmax
comp=Z,38nm,1.7s,mb5.2
VYHS Vyhne 85.11 319 *e*P **P 02 42 37.1 -0.1**
comp=Z,38nm,1.7s,mb5.2
VYHS *e* 02 42 55.1
VYHS *e*PP PP 02 45 55.7 +1.1
KOLL Kolacno 85.41 319 *i* P **P 02 42 38.8 +0.2**
TIP Timpagrande 85.48 309 *e*P **P 02 42 39.7 +0.5**
comp=Z,218nm,1.5s,mb6.1
KEV Kevo 85.58 341 *e*P **P 02 42 38.8 -0.3**
KEV pmax pmax
comp=Z,181nm,1.3s,mb6.1
KEV Kevo 85.58 341 *e*P **P 02 42 38.8 -0.3**
comp=Z,181nm,1.3s,mb6.1

OKC Ostrava-Krasne 85.74 320⇑ *i*P **P 02 42 40.7 +0.4**
RAC Raciborz 85.74 320 *e*P **P 02 42 39.3 -1.0**
ARCES ARCESS Array B 86.03 340 P **P 02 42 41.8 +0.5**
comp=Z,81nm,0.9s,mb6.0,baz=96,slow=4.3,SNR=71
ARCES S S 02 52 58.0 -16
comp=Z,2.2nm,0.8s,baz=44,slow=22,SNR=2.7
ARCES ARCESS Array B 86.03 340 P **P 02 42 41.8 +0.5**
ARCES S S 02 52 58.0 -16
ARCES pmax pmax
comp=Z,81nm,0.9s
ARCES smax
comp=N,2.0nm,0.8s
ARCES ARCESS Array B 86.03 340 P **P 02 42 41.8 +0.5**
ARCES S S 02 52 58.0 -16
MORC Moravsky Berou 86.12 320 *e*P **P 02 42 41.5 -0.7**
MORC pmax pmax
comp=Z,218nm,1.6s,mb6.1
MORC Moravsky Berou 86.12 320⇑ *i*P **P 02 42 42.5 +0.3**
MORC Moravsky Berou 86.12 320 *e*P **P 02 42 41.5 -0.6**
comp=Z,218nm,1.6s,mb6.1
MODS Modra-Piesok 86.12 319 *i* P **P 02 42 42.5 +0.3**
MODS *e*PP PP 02 46 03.6 +0.8
MODS *e*S S 02 53 16.1 +0.8
ZST Bratislava 86.22 318 *i* P **P 02 42 42.9 +0.2**
ZST *e* 02 42 52.6
ZST *e* 02 46 01.9
ZST *e*S S 02 53 14.6 -1.7
ZST pmax pmax
comp=Z,48nm,0.9s,mb5.7
ZST Bratislava 86.22 318 *i* P **P 02 42 42.9 +0.2**
comp=Z,48nm,0.9s,mb5.7
ZST *e* 02 42 52.6
ZST *e*PP PP 02 46 01.9 -1.7
ZST *e*S S 02 53 14.6 -1.7
ZST *e*S S 02 53 25.4 +9.1
CUC Castrocucco 86.29 310 *e*P **P 02 42 42.1 -1.1**
comp=Z,101nm,1.2s,mb5.9
SOP Sopron 86.53 318⇑ *e*P **P 02 42 44.2 0.0**
KTK1 Kautokeino 86.68 339⇑ *i*P **P 02 42 44.7 +0.2**
KTK1 AMb AMB 02 42 47.5
comp=Z,382nm,1.9s,mb6.3
KTK1 Kautokeino 86.68 339⇑ *i*P **P 02 42 44.7 +0.2**
comp=Z,382nm,1.9s,mb6.3
VRAC Vranov 86.68 319 P **P 02 42 45.1 +0.2**
comp=Z,3.4nm,0.3s,mb5.0,baz=152,slow=11,SNR=28
VRAC Vranov 86.68 319 P **P 02 42 45.1 +0.2**
VRAC pmax pmax
comp=Z,3.0nm,0.3s
VRAC Vranov 86.68 319 P **P 02 42 45.6 +0.7**
GKP Gorka Klasztor 86.75 323 *e*P **P 02 42 45.6 +0.4**
GKP Gorka Klasztor 86.75 323 *e*P **P 02 42 45.6 +0.5**
DPC Dobruska-Polom 86.97 320⇑ *i*P **P 02 42 47.3 +1.0**
CONA Conrad Observa 87.02 318⇑ *i*P **P 02 42 46.5 -0.1**
comp=Z,54nm,1.6s,mb5.5,SNR=31
CSNA Conrad Observa 87.02 318⇑ *i*P **P 02 42 46.6 0.0**
comp=Z,52nm,1.5s,mb5.5
KSP Ksiaz 87.04 321 *e*P **P 02 42 45.8 -0.9**
KSP Ksiaz 87.04 321⇑ *e*P **P 02 42 47.3 +0.7**
VAE Valguarnera 87.17 307 P **P 02 42 49.7 +2.1**
comp=Z,25nm,0.9s,mb5.4,baz=68,slow=7.5,SNR=9.3
ARSA Arzberg 87.18 317 *i* P **P 02 42 47.9 +0.5**
comp=Z,107nm,1.4s,mb5.9,SNR=17
UPC Upice 87.18 321⇑ *i*P **P 02 42 48.0 +0.7**
UPC *e*pP pP 02 42 52.9 -2.5
BOJS Bojanci 87.20 316 *i* P **P 02 42 48.0 +0.4**
PERS Pernice 87.40 317 *i* P **P 02 42 48.9 +0.4**
TREC Trest 87.40 319⇑ *i*P **P 02 42 48.7 +0.3**
ADK Adak 87.42 38 *e*P **P 02 42 47.5 -1.0**
ADK pmax pmax
comp=Z,233nm,1.4s,mb6.2
ADK Adak 87.42 38 *e*P **P 02 42 47.5 -1.0**
comp=Z,233nm,1.4s,mb6.2
SOKA Soboth 87.46 317⇑ *i*P **P 02 42 49.5 +0.7**
SOKA Soboth 87.46 317⇑ *i*PcP **P 02 42 49.5 +0.7**
VISS Visnje 87.52 316 *i* P **P 02 42 49.5 +0.4**
NVL N'lazarevskaya 87.69 199 *e*P **P 02 42 52.3 +2.9**
NVL *e* pP 02 43 01.8 +4.3
NVL pmax pmax
comp=Z,97nm,1.9s,mb5.7
MAIT Maitri 87.72 199 *e*P **P 02 42 51.6 +2.1**
LJU Ljubljana 87.75 316 *e*P **P 02 42 50.0 -0.2**
OBKA Obir 87.78 316 *i* P **P 02 42 50.8 +0.5**
comp=Z,128nm,1.7s,mb5.9,SNR=12
JAVS Javornik 88.06 316 *i* P **P 02 42 51.6 -0.1**
PRU Pruhonice 88.08 320⇑ *i*P **P 02 42 52.1 +0.5**
PRU *e*pP pP 02 42 57.2 -2.5
MOA Molln 88.08 318 *i* P **P 02 42 51.8 +0.1**
comp=Z,77nm,1.8s,mb5.6,SNR=23
PVCC Panska Ves 88.10 320⇑ *i*P **P 02 42 52.5 +0.7**
VOY Vojsko 88.19 316⇑ *e*P **P 02 42 52.3 0.0**
TRO Tromso 88.30 340⇑ *i*P **P 02 42 52.0 -0.3**
TRO AMb AMB 02 42 55.0
comp=Z,255nm,1.8s,mb6.2
TRO Tromso 88.30 340⇑ *i*P **P 02 42 52.0 -0.3**
comp=Z,255nm,1.8s,mb6.2
MYKA Terra Mystica 88.41 317⇑ *i*P **P 02 42 53.6 +0.3**
comp=Z,417nm,1.7s,mb6.4
BRG Berggiesshubel 88.53 321⇑ *i*P **P 02 42 54.6 +0.8**
BRG 02 46 20.4
BRG S S 02 53 38.0 -0.3
BRG pmax pmax
comp=Z,389nm,2.2s,mb6.3
BRG pmax pmax
comp=Z,31nm,1.1s,mb5.5
BRG pmax pmax
comp=Z,46nm,1.9s,mb5.5
BRG Berggiesshubel 88.53 321 *e*P **P 02 42 54.3 +0.5**
comp=Z,650nm,2.2s,mb6.6
BRG Berggiesshubel 88.53 321⇑ *i*P **P 02 42 54.6 +0.8**
comp=Z,650nm,2.1s,mb6.6
BRG PP PP 02 46 20.4 -1.7
comp=Z,76nm,1.9s
BRG S S 02 53 38.0 -0.3
GEC2 GERESS Array S 88.53 319 *e*P **P 02 42 54.3 +0.5**
GEC2 pmax pmax
comp=Z,559nm,1.9s,mb6.6
GEC2 GERESS Array S 88.53 319 *e*P **P 02 42 54.3 +0.5**
comp=Z,559nm,1.9s,mb6.6
GERES GERESS Array B 88.53 319 P **P 02 42 54.3 +0.5**
comp=Z,12nm,0.7s,mb5.3,baz=85,slow=2.8,SNR=102
GERES PP PP 02 46 18.3 -3.8
comp=Z,4.8nm,1.0s,baz=67,slow=4.5,SNR=4.3
GERES S S 02 53 19.3 -19
comp=Z,0.1nm,0.3s,baz=302,slow=28,SNR=2.3
GERES GERESS Array B 88.53 319 P **P 02 42 54.3 +0.5**
GERES 02 46 18.3
GERES S S 02 53 19.3 -19
GERES pmax pmax
comp=Z,12nm,0.7s
GERES pmax pmax
comp=Z,5.0nm,1.0s
KHC Kasperske Hory 88.63 319*c i*P **P 02 42 54.5 +0.2**
KHC Kasperske Hory 88.63 319⇑ *i*P **P 02 42 54.6 +0.3**
KBA Koelnbreinsper 88.65 317 *i* P **P 02 42 54.3 -0.1**
comp=Z,64nm,1.7s,mb5.7,SNR=16
RUE Ruedersdorf 88.75 322⇑ *i*P **P 02 42 55.4 +0.6**
comp=Z,485nm,1.4s,mb6.6
WET Wettzell 89.09 319 *e*P **P 02 42 56.9 +0.4**
WET pmax pmax
comp=Z,586nm,2.2s,mb6.5
WET Wettzell 89.09 319 *e*P **P 02 42 56.9 +0.4**
comp=Z,586nm,2.2s,mb6.5
CLL Collm 89.15 321⇑ *i*P **P 02 42 56.9 +0.2**
CLL *i* 02 43 07.1
CLL *e* 02 53 21.0
CLL *e*S S 02 53 41.0 -3.2
CLL pmax pmax
comp=Z,489nm,2.2s,mb6.5
CLL Collm 89.15 321 *e*P **P 02 42 56.8 +0.1**
comp=Z,495nm,2.2s,mb6.5
CLL Collm 89.15 321⇑ *i*P **P 02 42 56.9 +0.2**
comp=Z,489nm,2.2s,mb6.5
CLL *i* (pP) pP 02 43 07.1 +2.3
CLL *e*x x 02 43 16.0
CLL *e*PP PP 02 46 32.0 +5.0
CLL *e*SKSac SKSac 02 53 21.0 -4.0
CLL *e*S S 02 53 41.0 -3.2
CLL *e*x x 02 54 21.0
CLL Collm 89.15 321⇑ *i*P **P 02 42 56.9 +0.2**
comp=Z,489nm,2.2s,mb6.5
CLL *i* 02 43 01.7
CLL *i* 02 43 07.1
CLL *e*SKS 02 53 21.0
CLL *e*S S 02 53 41.0 -3.2

ABTA Abfaltersbach 89.19 317 *i* P P 02 42 56.8 -0.2
comp=Z,64nm,2.2s,mb5.6,SNR=23
HFS Hagfors 89.38 330 P P 02 42 57.8 +0.2
comp=Z,19nm,0.7s,mb5.5,baz=116,slow=3.4,SNR=29
HFS S S 02 53 22.0 -24
comp=Z,1.3nm,0.6s,baz=176,slow=40,SNR=2.0
HFS Hagfors 89.38 330 P P 02 42 57.8 +0.2
HFS S S 02 53 22.0 -24
HFS pmax pmax
comp=Z,19nm,0.7s
HFS smax
comp=N,1.0nm,0.6s
STEI Steigen 89.40 338 *e*P P 02 42 58.0 +0.5
NKC Novy Kostel 89.44 320⇑ *i*P P 02 42 58.6 +0.6
TANN Tannenbergstha 89.44 320 *e*P P 02 42 58.5 +0.5
comp=Z,385nm,2.2s,mb6.3
MOR8 Moi Rana 89.55 336⇑ *i*P P
MOR8 AMb AMB 02 43 00.8
comp=Z,170nm,1.8s,mb6.1
MOR8 Moi Rana 89.55 336⇑ *i*P P 02 42 58.1 -0.1
comp=Z,170nm,1.8s,mb6.1
ROTZ Rotzenmuhle 89.57 320 *e*P P 02 42 59.6 +0.9
comp=Z,621nm,2.3s,mb6.5
MANZ Manzenberg 89.64 320 *e*P P 02 43 00.0 +1.0
comp=Z,314nm,1.5s,mb6.4
WTTA Wattenberg 89.82 317 *i* P P 02 42 59.9 -0.1
comp=Z,98nm,1.1s,mb6.1,SNR=18
WATA Walderalm 89.86 317⇑ *i*P P 02 42 59.8 -0.3
comp=Z,105nm,1.4s,mb6.0,SNR=14
MOX Moxa 89.99 320 *e*P P 02 43 01.1 +0.5
comp=Z,325nm,2.0s,mb6.3
MOX Moxa 89.99 320 *e*P P 02 43 01.1 +0.5
MOX pmax pmax
comp=Z,325nm,2.0s,mb6.3
LOF Lofoten 90.06 338 *e*P P 02 42 55.8 -4.8
FUR Furstenfeldbru 90.10 318 *e*P P 02 43 01.1 -0.1
FUR pmax pmax
comp=Z,152nm,1.4s,mb6.1
FUR Furstenfeldbru 90.10 318 *e*P P 02 43 01.1 -0.1
comp=Z,152nm,1.4s,mb6.1
KONS Konsvik 90.11 336 *e*P P 02 43 01.3 +0.5
KONS AMb AMB 02 43 05.9
comp=Z,230nm,2.2s,mb6.1
STOK Stokkvaagen 90.14 336 *e*P P 02 43 01.7 +0.7
STOK AMb AMB 02 43 04.0
comp=Z,141nm,1.9s,mb6.0
STOK Stokkvaagen 90.14 336 *e*P P 02 43 01.7 +0.7
comp=Z,141nm,1.9s,mb6.0
MOTA Moosalm 90.19 317⇑ *i*P P 02 43 01.5 -0.2
comp=Z,104nm,1.3s,mb6.0,SNR=36
GRA1 Grafenberg Arr 90.20 320 *e*P P 02 43 02.5 +0.9
comp=Z,275nm,1.5s,mb6.4
GRF Grafenberg Arr 90.20 320 *e*P P 02 43 02.5 +0.9
GRF pmax pmax
comp=Z,275nm,1.5s,mb6.4
GRF Grafenberg Arr 90.20 320 *e*P P 02 43 02.5 +0.9
GRF pmax pmax
comp=Z,275nm,1.5s,mb6.4
GRF Grafenberg Arr 90.20 320 *e*P P 02 43 02.5 +0.9
comp=Z,275nm,1.5s,mb6.4
SPITS Spitsbergen Ar 90.23 348 LR LR 03 33 01.5
comp=Z,20µm,18.4s,MS6.6,baz=0.0,slow=42
RETA Reutte 90.42 317 *i* P P 02 43 02.9 +0.2
comp=Z,105nm,1.3s,mb6.0,SNR=36
RETA Reutte 90.42 317 *i* PcP P 02 43 02.9 +0.2
comp=Z,105nm,1.3s,mb6.0,SNR=36
FETA Feichten 90.43 317 *i* P P 02 43 03.2 +0.4
comp=Z,67nm,1.1s,mb5.9,SNR=24
FETA Feichten 90.43 317 *i* PcP P 02 43 03.2 +0.4
comp=Z,67nm,1.1s,mb5.9,SNR=24
NSS Namsos 90.47 334 *e*P P 02 43 02.6 0.0
NB2 NORSAR Subarra 90.66 331 P P 02 43 03.1 -0.4
comp=Z,347nm,2.0s,mb6.3,baz=94,slow=4.6
NOA NORSAR Array B 90.66 331 P P 02 43 03.6 +0.1
comp=Z,5.8nm,0.7s,mb5.0,baz=95,slow=5.0,SNR=28
NOA LR LR 03 29 15.2
comp=Z,7µm,20.8s,MS6.0,baz=120,slow=39
CLZ Clausthal 90.81 322 *e*P P 02 43 05.1 +0.7
CLZ pmax pmax
comp=Z,474nm,2.1s,mb6.5
CLZ Clausthal 90.81 322 *e*P P 02 43 05.1 +0.7
comp=Z,474nm,2.1s,mb6.5
BSEG Bad Segeberg 90.91 324 *e*P P 02 43 05.6 +0.8
BSEG pmax pmax
comp=Z,466nm,2.2s,mb6.4
BSEG Bad Segeberg 90.91 324 *e*P P 02 43 05.6 +0.8
comp=Z,466nm,2.2s,mb6.4
NRDL Niedersach Rie 91.00 322 *e*P P 02 43 06.1 +0.8
comp=Z,405nm,1.8s,mb6.5
DAVOX Davos/Dischmat 91.00 317 P P 02 43 06.3 +0.9
comp=Z,66nm,0.8s,mb6.0,baz=119,slow=4.6,SNR=63
DAVA Damuels 91.02 317 *i* P P 02 43 06.0 +0.5
comp=Z,130nm,1.0s,mb6.2,SNR=40
DAVA Damuels 91.02 317 *i* PcP P 02 43 06.0 +0.5
comp=Z,130nm,1.0s,mb6.2,SNR=40
UBBA Unterbreizbach 91.02 321 *e*P P 02 43 05.8 +0.4
comp=Z,224nm,1.9s,mb6.2
DAVOS Davos 91.06 317 P P 02 43 06.3 +0.6
KEST Kesra 91.16 306 P P 02 43 07.9 +1.5
comp=Z,22nm,0.8s,mb5.5,baz=85,slow=0.5,SNR=43
KEST S S 02 53 35.4 -28
comp=Z,1.1nm,1.1s,baz=61,slow=20,SNR=2.1
KEST LR LR 03 22 41.9
comp=Z,5µm,21.6s,MS5.9,baz=91,slow=34
KBS Kingsbay 91.17 349*c i*P P 02 43 05.3 -0.3
VSL Villasalto 91.21 309 *e*P P 02 43 05.4 -1.2
comp=Z,349nm,1.8s,mb6.4
TUE Stuetta 91.37 316 *e*P P 02 43 07.0 -0.1
comp=Z,136nm,1.5s,mb6.1
KONO Kongsberg 91.42 329⇑ *i*P P 02 43 07.1 0.0
CORF Corte 91.44 312 *e*P P 02 43 07.4 -0.2
STU Stuttgart 91.50 319 *e*P P 02 43 08.1 +0.4
STU pmax pmax
comp=Z,240nm,1.8s,mb6.2
STU Stuttgart 91.50 319 *e*P P 02 43 07.9 +0.2
comp=Z,413nm,2.1s,mb6.4
STU Stuttgart 91.50 319 *e*P P 02 43 08.1 +0.4
comp=Z,240nm,1.8s,mb6.2
PGF Pioggiola 91.55 312 *e*P P 02 43 07.0 -1.1
comp=Z,250nm,1.6s,mb6.0
PGF Pioggiola 91.55 312 *e*P P 02 43 07.0 -1.1
PGF pmax pmax
comp=Z,125nm,1.5s,mb6.0
PGF Pioggiola 91.55 312 *e*P P 02 43 07.0 -1.1
comp=Z,125nm,1.5s,mb6.0
SPAK Spaichingen-Ko 91.77 318 *e*P P 02 43 09.3 +0.3
TOD Tromm 91.77 319 *e*P P 02 43 09.1 +0.2
BFO Black Forest 92.08 318 P P 02 43 10.7 +0.3
comp=Z,163nm,1.0s,mb6.3,SNR=10
BFO Black Forest 92.08 318 *e*P P 02 43 10.3 -0.1
BFO pmax pmax
comp=Z,278nm,2.2s,mb6.2
BFO Black Forest 92.08 318 *e*P P 02 43 10.3 -0.1
comp=Z,278nm,2.2s,mb6.2
KTD Kalmit 92.24 319 *e*P P 02 43 11.4 +0.3
FELD Feldberg im Sc 92.29 318 *e*P P 02 43 11.2 -0.2
SNAA Sanae 92.33 198 *e*P P 02 43 12.1 +1.0
SNAA *e* pP 02 43 17.7 -1.5
SNAA *e* 02 43 22.2
SNAA Sanae 92.33 198 *e*P P 02 43 12.5 +1.4
SNAA pmax pmax
comp=Z,223nm,2.3s
SNAA Sanae 92.33 198 *e*P P 02 43 12.5 +1.5
comp=Z,222nm,2.3s,mb6.1
MOL Molde 92.42 332 *e*P P 02 43 12.5 +0.9
LANF Langenberg 92.42 319 *e*P P 02 43 12.3 +0.3
IBBN Ibbenburen 92.43 322 *e*P P 02 43 12.5 +0.6
comp=Z,461nm,2.3s,mb6.4
STR Strasbourg 92.45 318 *e*P P 02 43 12.3 +0.2
LIBD Limburg 92.56 318 *e*P P 02 43 12.7 +0.1
ABH Alteburg 92.58 320 *e*P P 02 43 13.2 +0.5
SAOF Saorge 92.62 314 *e*P P 02 43 12.7 -0.3
BBS Basel-Blauen 92.63 317 *e*P P 02 43 12.6 -0.3
SBF Sospel 92.70 314 *e*P P 02 43 12.0 -1.4
comp=Z,163nm,1.3s,mb6.0
SBF Sospel 92.70 314 *e*P P 02 43 12.0 -1.4
SBF pmax pmax
comp=Z,82nm,1.3s,mb6.0
SBF Sospel 92.70 314 *e*P P 02 43 12.0 -1.4
comp=Z,82nm,1.3s,mb6.0
AUTN L'Aution 92.71 314 *e*P P 02 43 13.7 +0.3
BUG Bochum--Univer 92.75 321 *e*P P 02 43 13.8 +0.4
comp=Z,287nm,2.2s,mb6.3
REVF Revere 92.75 314 *e*P P 02 43 13.5 -0.1
LUCF Luceram 92.77 314 *e*P P 02 43 13.9 +0.2
CDF Champ du Feu 92.78 318 *e*P P 02 43 12.2 -1.4
comp=Z,96nm,1.3s,mb5.8
CDF Champ du Feu 92.78 318 *e*P P 02 43 12.2 -1.4
CDF pmax pmax
comp=Z,48nm,1.3s,mb5.8
CDF Champ du Feu 92.78 318 *e*P P 02 43 12.2 -1.4
comp=Z,48nm,1.3s,mb5.8
TOUF Mont Tournerai 92.84 314 *e*P P 02 43 14.4 +0.4
ECH Echery 92.86 318 *e*P P 02 43 13.7 -0.3
ECH Echery 92.86 318 *e*P P 02 43 13.3 -0.7
MOF Molkenrain 92.88 318 *e*P P 02 43 13.7 -0.4
RUP Ruppelstein 92.90 319 *e*P P 02 43 14.5 +0.3
MVIF Mont Vial 92.91 314 *e*P P 02 43 14.7 +0.4
BLS5 Blasjo 93.03 329 *e*P P 02 43 16.2 +1.7
WTSB Winterswijk 93.03 322‖ *e*P P 02 43 14.9 +0.2
comp=Z,129nm,3.0s
HINF Hinteralfeld 93.07 318 *e*P P 02 43 13.2 -1.8
LOMF Lomont 93.09 317 *e*P P 02 43 14.7 -0.4
CALN Calern 93.10 314 *e*P P 02 43 15.5 +0.3
SURF Saint Ours 93.14 314 *e*P P 02 43 16.1 +0.7
MBDF Montbardon 93.17 315 *e*P P 02 43 15.3 -0.2
comp=Z,160nm,1.9s,mb5.8
MBDF Montbardon 93.17 315 *e*P P 02 43 15.3 -0.2
MBDF pmax pmax
comp=Z,80nm,1.9s,mb5.8
MBDF Montbardon 93.17 315 *e*P P 02 43 15.3 -0.2
comp=Z,80nm,1.9s,mb5.8
LPG La Plagne 93.17 315 *e*P P 02 43 14.5 -1.0
comp=Z,59nm,1.1s,mb5.6
LPG La Plagne 93.17 315 *e*P P 02 43 14.5 -1.0
LPG pmax pmax
comp=Z,29nm,1.1s,mb5.6
LPG La Plagne 93.17 315 *e*P P 02 43 14.5 -1.0
comp=Z,29nm,1.1s,mb5.6
LPL La Plagne 93.19 315 *e*P P 02 43 14.6 -1.0
BNI Bardonecchia 93.23 315 *e*P P 02 43 14.9 -0.9
BNI pmax pmax
comp=Z,26nm,1.1s,mb5.6
BNI Bardonecchia 93.23 315 *e*P P 02 43 14.9 -0.9
comp=Z,26nm,1.1s,mb5.6
FRF La Foret Royal 93.28 313 *e*P P 02 43 14.8 -1.2
comp=Z,123nm,1.2s,mb5.9
FRF La Foret Royal 93.28 313 *e*P P 02 43 14.8 -1.2
FRF pmax pmax
comp=Z,62nm,1.2s,mb5.9
FRF La Foret Royal 93.28 313 *e*P P 02 43 14.8 -1.2
comp=Z,62nm,1.2s,mb5.9
LMR La Mourre 93.38 313 *e*P P 02 43 15.2 -1.3
comp=Z,199nm,1.8s,mb5.9
LMR La Mourre 93.38 313 *e*P P 02 43 15.2 -1.3
LMR pmax pmax
comp=Z,99nm,1.8s,mb5.9
LMR La Mourre 93.38 313 *e*P P 02 43 15.2 -1.3
comp=Z,99nm,1.8s,mb5.9
HAU Haudompre 93.41 318 *e*P P 02 43 14.9 -1.6
comp=Z,278nm,1.6s,mb6.1
HAU Haudompre 93.41 318 *e*P P 02 43 14.9 -1.6
HAU pmax pmax
comp=Z,139nm,1.6s,mb6.1
HAU Haudompre 93.41 318 *e*P P 02 43 14.9 -1.6
comp=Z,139nm,1.6s,mb6.1
WLF Walferdange 93.49 319 P P 02 43 17.6 +0.7
comp=Z,68nm,2.7s,mb5.6
WLF Walferdange 93.49 319 *e*P P 02 43 17.4 +0.5
WLF pmax pmax
comp=Z,305nm,2.1s,mb6.4
WLF Walferdange 93.49 319 *e*P P 02 43 17.5 +0.6
comp=Z,309nm,2.2s,mb6.3
WLF Walferdange 93.49 319 *e*P P 02 43 17.4 +0.5
comp=Z,305nm,2.1s,mb6.4
MEM Membach 93.56 320 P P 02 43 17.1 0.0
comp=Z,23nm,2.3s,mb5.2
HGN Heimansgroeve 93.60 321⇑ *e*P P 02 43 17.4 0.0
comp=Z,67nm,2.2s,mb5.7
CABF La Chapelle 93.61 316 *e*P P 02 43 16.5 -1.0
GDM Grand'Maison 93.63 315 *e*P P 02 43 17.2 -0.4
THEF They Montfort 93.64 318 *e*P P 02 43 17.3 -0.3
TAVF Tavernes 93.70 313 *e*P P 02 43 18.7 +0.7
BEBN Eben Emael 93.76 321 P P 02 43 18.3 +0.2
ORIF Oris-en-Rattie 93.80 315 *e*P P 02 43 17.3 -1.1
comp=Z,127nm,1.4s,mb5.9
ORIF Oris-en-Rattie 93.80 315 *e*P P 02 43 17.3 -1.1
ORIF pmax pmax
comp=Z,64nm,1.4s,mb5.9
ORIF Oris-en-Rattie 93.80 315 *e*P P 02 43 17.3 -1.1
comp=Z,64nm,1.4s,mb5.9
GRN Grenoble 93.89 315 *e*P P 02 43 18.4 -0.4
VNA2 Neumayer--Watz 93.94 198 *e*P P 02 43 19.5 +1.0
VNA2 *e* 02 43 25.0
VNA2 *e* pP 02 43 28.7 +2.1
VILF Villemus 93.95 314 *e*P P 02 43 19.1 0.0
BERF Bertagne 93.98 313 *e*P P 02 43 19.0 -0.3
BCLA Clavier 94.02 320 P P 02 43 19.3 +0.1
comp=Z,15nm,2.6s,mb5.0
SMRF Simiane la Rot 94.05 314 *e*P P 02 43 18.8 -0.8
comp=Z,245nm,1.9s,mb6.0
SMRF Simiane la Rot 94.05 314 *e*P P 02 43 18.8 -0.8
comp=Z,245nm,1.9s,mb6.0
GELF Grande-Etoile 94.17 313 *e*P P 02 43 18.7 -1.4
TREF Trevaresse 94.19 313 *e*P P 02 43 18.9 -1.4
MEZF Maizieres J'vi 94.26 318 *e*P P 02 43 19.1 -1.3
VNA1 Neumayer--Stat 94.29 199 *e*P P 02 43 22.5 +2.4
VNA1 *e* pP 02 43 31.3 +3.0
GIVF Givet 94.34 320 *e*P P 02 43 19.6 -1.1
PRAF Pradon 94.34 314 *e*P P 02 43 19.1 -1.8
DOU Dourbes 94.48 320 P P 02 43 21.2 -0.2
comp=Z,24nm,2.4s,mb5.2
VNA3 Neumayer Olymp 94.55 198 *e*P P 02 43 22.8 +1.5
VNA3 *e* 02 43 28.0
VNA3 *e* pP 02 43 31.7 +2.3
UCC Uccle 94.60 321 P P 02 43 21.5 -0.5
VIVF Saint-Julien-l 94.66 315 *e*P P 02 43 21.1 -1.3
comp=Z,25nm,1.0s,mb5.3
VIVF Saint-Julien-l 94.66 315 *e*P P 02 43 21.1 -1.3
VIVF pmax pmax
comp=Z,13nm,1.0s,mb5.3
VIVF Saint-Julien-l 94.66 315 *e*P P 02 43 21.1 -1.3
comp=Z,13nm,1.0s,mb5.3
SNF Seneffe 94.66 320 P P 02 43 22.6 +0.3
comp=Z,24nm,2.6s,mb5.2
BAIF Baives 94.73 320 *e*P P 02 43 21.4 -1.2
comp=Z,94nm,1.4s,mb5.7
BAIF Baives 94.73 320 *e*P P 02 43 21.4 -1.2
BAIF pmax pmax
comp=Z,47nm,1.4s,mb5.7
BAIF Baives 94.73 320 *e*P P 02 43 21.4 -1.2
comp=Z,47nm,1.4s,mb5.7
SSB Saint Sauveur 94.74 315 *e*P P 02 43 21.8 -0.9
SSB Saint Sauveur 94.74 315 *e*P P 02 43 22.5 -0.2
LOR Lormes 95.11 317 *e*P P 02 43 22.9 -1.5
comp=Z,86nm,1.3s,mb5.7
LOR Lormes 95.11 317 *e*P P 02 43 22.9 -1.5
LOR pmax pmax
comp=Z,43nm,1.3s,mb5.7
LOR Lormes 95.11 317 *e*P P 02 43 22.9 -1.5
comp=Z,43nm,1.3s,mb5.7
SMF Signal de Mont 95.16 317 *e*P P 02 43 23.0 -1.6
comp=Z,77nm,1.2s,mb5.7
SMF Signal de Mont 95.16 317 *e*P P 02 43 23.0 -1.6
SMF pmax pmax
comp=Z,38nm,1.3s,mb5.7
SMF Signal de Mont 95.16 317 *e*P P 02 43 23.0 -1.6
comp=Z,38nm,1.3s,mb5.7
LASF Ste Croix 95.28 314 *e*P P 02 43 24.0 -1.2
comp=Z,22nm,1.1s,mb5.2
PLDF La Plantade 95.35 316 *e*P P 02 43 24.9 -0.6
SSF Saint Saulge 95.37 317 *e*P P 02 43 24.3 -1.2
comp=Z,167nm,1.9s,mb5.8
SSF Saint Saulge 95.37 317 *e*P P 02 43 24.3 -1.2
SSF pmax pmax
comp=Z,84nm,1.9s,mb5.8
SSF Saint Saulge 95.37 317 *e*P P 02 43 24.3 -1.2
comp=Z,84nm,1.9s,mb5.8
AVF Avril sur Loir 95.49 317 *e*P P 02 43 24.4 -1.7
comp=Z,187nm,1.9s,mb5.9
AVF Avril sur Loir 95.49 317 *e*P P 02 43 24.4 -1.7
AVF pmax pmax
comp=Z,93nm,1.9s,mb5.9
AVF Avril sur Loir 95.49 317 *e*P P 02 43 24.4 -1.7
comp=Z,93nm,1.9s,mb5.9
LBL Lubilhac 95.65 315 *e*P P 02 43 27.0 +0.1
AGO Saint Agoulin 95.69 316 *e*P P 02 43 27.0 0.0
PYM Petit Puy Mans 95.79 316 *e*P P 02 43 27.0 -0.5
BGF Bois d'Agland 95.85 316 *e*P P 02 43 26.6 -1.2
comp=Z,69nm,1.4s,mb5.6
BGF Bois d'Agland 95.85 316 *e*P P 02 43 26.6 -1.2
BGF pmax pmax
comp=Z,35nm,1.4s,mb5.6
BGF Bois d'Agland 95.85 316 *e*P P 02 43 26.6 -1.2
comp=Z,35nm,1.4s,mb5.6
HYF Humbligny 95.94 317 *e*P P 02 43 27.1 -1.1
MENF Mencas 96.02 321 *e*P P 02 43 27.5 -0.9
TCF Toulx Ste Croi 96.31 316 *e*P P 02 43 28.6 -1.2
comp=Z,112nm,1.9s,mb5.7
TCF Toulx Ste Croi 96.31 316 *e*P P 02 43 28.6 -1.2
TCF pmax pmax
comp=Z,56nm,1.8s,mb5.7
TCF Toulx Ste Croi 96.31 316 *e*P P 02 43 28.6 -1.2
comp=Z,56nm,1.8s,mb5.7
CAF Calviac 96.51 315 *e*P P 02 43 29.8 -1.0
comp=Z,22nm,1.2s,mb5.2
CAF Calviac 96.51 315 *e*P P 02 43 29.8 -1.0
CAF pmax pmax
comp=Z,11nm,1.2s,mb5.2
CAF Calviac 96.51 315 *e*P P 02 43 29.8 -1.0
comp=Z,11nm,1.2s,mb5.2
MTLF Montolieu 96.51 313 *e*P P 02 43 29.5 -1.3
comp=Z,38nm,1.3s,mb5.4
MTLF Montolieu 96.51 313 *e*P P 02 43 29.5 -1.3
MTLF pmax pmax
comp=Z,19nm,1.3s,mb5.4
MTLF Montolieu 96.51 313 *e*P P 02 43 29.5 -1.3
comp=Z,19nm,1.3s,mb5.4
RJF Les Rejaudoux 96.87 315 *e*P P 02 43 31.4 -1.0
comp=Z,148nm,1.9s,mb5.8
RJF Les Rejaudoux 96.87 315 *e*P P 02 43 31.4 -1.0
RJF pmax pmax
comp=Z,74nm,1.9s,mb5.8
RJF Les Rejaudoux 96.87 315 *e*P P 02 43 31.4 -1.0
comp=Z,74nm,1.9s,mb5.8
JMIC Jan Mayen 97.42 342 LR LR 03 35 11.7
comp=Z,7µm,20.0s,MS6.1,baz=244,slow=40
LFF La Frestale 97.44 315 *e*P P 02 43 33.9 -1.1
comp=Z,50nm,1.3s,mb5.5
LFF La Frestale 97.44 315 *e*P P 02 43 33.9 -1.1
LFF pmax pmax
comp=Z,25nm,1.3s,mb5.5
LFF La Frestale 97.44 315 *e*P P 02 43 33.9 -1.1
comp=Z,25nm,1.3s,mb5.5
LDF La Druitiere 97.68 319 *e*P P 02 43 34.3 -1.7
comp=Z,25nm,1.1s,mb5.4
LDF La Druitiere 97.68 319 *e*P P 02 43 34.3 -1.7
LDF pmax pmax
comp=Z,13nm,1.1s,mb5.4
LDF La Druitiere 97.68 319 *e*P P 02 43 34.3 -1.7
comp=Z,13nm,1.1s,mb5.4
DAG Danmarks Havn 97.88 348‖ *i*P P 02 43 35.7 -0.6
DAG pmax pmax
comp=Z,52nm,1.3s,mb5.9
DAG Danmarks Havn 97.88 348‖ *i*P P 02 43 35.7 -0.6
comp=Z,52nm,1.3s,mb5.9
FLN La Foliniere 97.89 319 *e*P P 02 43 36.0 -1.0
EPF Esparros 97.90 313 *e*P P 02 43 34.9 -2.2
MFF Saint Martin d 97.90 317 *e*P P 02 43 35.5 -1.6
comp=Z,19nm,1.0s,mb5.3
MFF Saint Martin d 97.90 317 *e*P P 02 43 35.5 -1.6
MFF pmax pmax
comp=Z,10.0nm,1.0s,mb5.3
MFF Saint Martin d 97.90 317 *e*P P 02 43 35.5 -1.6
comp=Z,9.7nm,1.0s,mb5.3
TOA0 Torodi Ar. Sit 98.06 283 *e*P P 02 43 38.0 -0.5
TORD Torodi Ar. Bea 98.06 283 P P 02 43 38.2 -0.2
comp=Z,3.1nm,0.9s,mb4.8,baz=92,slow=4.1,SNR=23
TORD PP PP 02 47 34.6 -3.2
comp=Z,2.7nm,1.2s,baz=330,slow=2.1,SNR=5.1
TORD PKiKP PKiKP 02 48 11.0 -0.8
comp=Z,2.8nm,1.0s,baz=99,slow=1.0,SNR=6.0
TORD S SKSac 02 54 13.2 -2.1
comp=Z,0.4nm,0.9s,baz=0.0,slow=3.6,SNR=2.5
TORD PKKPbc PKKPbc 03 00 09.6 -1.9
comp=Z,1.0nm,0.8s,baz=303,slow=3.1,SNR=8.6
TORD Torodi Ar. Bea 98.06 283 P P 02 43 38.2 -0.2
TORD PP PP 02 47 34.6 -3.2
GRR Gorron 98.19 319 *e*P P 02 43 37.0 -1.3
comp=Z,36nm,1.2s,mb5.5
GRR Gorron 98.19 319 *e*P P 02 43 37.0 -1.3
GRR pmax pmax
comp=Z,18nm,1.2s,mb5.5
GRR Gorron 98.19 319 *e*P P 02 43 37.0 -1.3
comp=Z,18nm,1.2s,mb5.5
IMA2 Indian Mountai 98.27 23 *e*P P 02 43 38.1 -0.1
ETSF Etsaut 98.57 313 *e*P P 02 43 37.8 -2.3
EKA Eskdalemuir Ar 98.61 326 P P 02 43 39.5 -0.6
comp=Z,4.5nm,1.0s,mb5.0,baz=98,slow=4.9,SNR=14
EKA Eskdalemuir Ar 98.61 326 P P 02 43 39.5 -0.5
EKA pmax pmax
comp=Z,5.0nm,1.0s
ESK Eskdalemuir 98.64 326 *e*P P 02 43 40.8 +0.6
ESK pmax pmax
comp=Z,27nm,1.4s,mb5.6
ESK Eskdalemuir 98.64 326 *e*P P 02 43 40.8 +0.6
comp=Z,27nm,1.4s,mb5.6
SJPF Ste Jean 99.03 313 *e*P P 02 43 39.6 -2.6
comp=Z,43nm,1.4s,mb5.5
SJPF Ste Jean 99.03 313 *e*P P 02 43 39.6 -2.6
SJPF pmax pmax
comp=Z,21nm,1.4s,mb5.5
SJPF Ste Jean 99.03 313 *e*P P 02 43 39.6 -2.6
comp=Z,22nm,1.4s,mb5.5
SGMF Saint Gilles 99.33 319 *e*P P 02 43 41.3 -2.1
QUIF Quistinic 99.78 318 *e*P Pdif 02 43 43.6 -1.6
comp=Z,44nm,1.3s
QUIF Quistinic 99.78 318 *e*P Pdif 02 43 43.6 -1.6
QUIF pmax pmax
comp=Z,22nm,1.3s,mb5.4
QUIF Quistinic 99.78 318 *e*P Pdif 02 43 43.6 -1.6
comp=Z,22nm,1.3s
ROSF Rostrenen 99.79 319 *e*P Pdif 02 43 43.8 -1.5
KDAK Kodiak Island 100.86 31 P Pdif 02 43 48.4 -1.6
comp=Z,9.3nm,1.0s,baz=152,slow=11,SNR=2.8
MCK McKinley 100.88 25 *e*P Pdif 02 43 49.1 -1.0
MCK pmax pmax
comp=Z,32nm,1.2s
MCK McKinley 100.88 25 *e*Pdif Pdif 02 43 49.1 -1.1
comp=Z,32nm,1.2s
DLF Lyons Farm 100.94 324 *e*P PP 02 47 51.0 -7.5
DCN Croghan 101.36 324 *e*P PP 02 47 51.0 -11
ESDC Sonseca Array 101.49 310 P Pdif 02 43 54.1 +1.3
comp=Z,0.9nm,0.8s,baz=46,slow=3.7,SNR=4.1
MDT Midelt 102.83 303 Pdiff Pdif 02 44 01.0 +2.2
comp=Z,0.3nm,0.4s,baz=255,slow=5.3,SNR=3.5
MDT PKKPbc PKKPbc 02 59 53.7 -4.6
comp=Z,1.2nm,0.8s,baz=241,slow=12,SNR=4.2
PBRG Braganca 103.26 313 *e*PP PP 02 48 19.2 +2.9
MVO Moncorvo 103.58 312 *e*PP PP 02 48 20.5 +1.7
PVRL Vila Real 104.07 312 *e*PP PP 02 48 22.2 -0.2
PBAR Barrancos 104.08 309 *e*PP PP 02 48 23.2 +0.6
MTE Manteigas 104.10 311 *e*PP PP 02 48 23.6 +1.0
PCBR Castelo Branco 104.14 311 *e*PP PP 02 48 23.2 +0.2
PMRV Marv??o 104.15 310 *e*PP PP 02 48 23.4 +0.3
PVIS Viseu 104.30 312 *e*PP PP 02 48 25.6 +1.4
PESTR Estremoz 104.39 310 *e*PP PP 02 48 23.6 -1.3
DBIC Dimbokro 104.54 276 Pdiff Pdif 02 44 10.5 +4.1
comp=Z,3.4nm,0.9s,baz=272,slow=6.2,SNR=3.9
DBIC PKiKP PKiKP 02 48 22.8 -0.8
comp=Z,1.8nm,0.7s,baz=137,slow=9.8,SNR=2.4
DBIC Dimbokro 104.54 276 P Pdif 02 44 10.5 +4.1
DBIC *i* 02 48 22.8
DBIC pmax pmax
comp=Z,3.0nm,0.9s
DBIC pmax pmax
comp=Z,2.0nm,0.7s
DBIC Dimbokro 104.54 276 Pdif Pdif 02 44 10.5 +4.1
PVAQ Vaqueiros 104.73 308 *e*PP PP 02 48 27.7 +0.2
PBEJ Beja 104.75 309 *e*PP PP 02 48 29.4 +1.8
EVO Evora 104.78 309 *e*PP PP 02 48 28.9 +1.1
PTOM Tomar 104.89 311 *e*PP PP 02 48 29.3 +0.7
PBDV Barranco-do-Ve 104.93 308 *e*PP PP 02 48 29.5 +0.6
MORF Marmelete 105.48 308 *e*PP PP 02 48 33.5 +0.5
PTEO Sao Teotonio 105.50 308 *e*PP PP 02 48 32.4 -0.7
PFVI Vila Bisbo 105.65 308 *e*PP PP 02 48 34.7 +0.4
PMAFR Mafra 105.68 310 *e*PP PP 02 48 35.4 +1.0
SKAG Skagway 108.56 26 *e*PKP PKiKP 02 48 28.7 -1.0
SFJD Kangerlussuaq 111.57 348 PP PP 02 49 14.2 -1.9
comp=Z,23nm,0.9s,baz=26,slow=8.2,SNR=9.1
SFJD Kangerlussuaq 111.57 348 *i* P PP 02 49 15.3 -0.8
comp=Z,82nm,1.3s
PMAR Madeira 113.05 305 *e*PP PP 02 49 29.5 +1.4
YKA Yellowknife Ar 114.18 17 PKP PKiKP 02 48 38.4 -1.8
comp=Z,2.3nm,0.6s,baz=348,slow=2.3,SNR=12
YKA Yellowknife Ar 114.18 17 PKIKP PKiKP 02 48 38.4 -1.8

YKA					pmax	pmax			
	comp=Z,2.0nm,0.6s								
A05A	Maple Falls	120.90	31	⇓P		PKPdf	02 48 52.9	-0.7	
	baz=121								
A06A	Chilliwack	121.14	30	⇑P		PKPdf	02 48 52.9	-1.2	
	baz=121								
C04A	Brinnon	121.23	32	⇓P		PKPdf	02 48 53.9	-0.3	
	baz=121								
B05A	Bryant	121.36	31	⇓P		PKPdf	02 48 54.1	-0.3	
	baz=121								
JCW	Jim Creek	121.49	31	*e*PKPdf		PKPdf	02 48 54.2	-0.5	
JCW				*e*PP		PP	02 50 25.1	-0.9	
B06A	Marblemount	121.51	31	⇓P		PKPdf	02 48 53.7	-1.1	
	baz=121								
RPW	Rockport	121.54	31	*e*PKPdf		PKPdf	02 48 54.1	-0.7	
RPW				*e*PP		PP	02 50 26.3	0.0	
E03A	Lebam	121.62	34	⇑P		PKPdf	02 48 54.1	-0.9	
	baz=122								
A07A	Ashnola River,	121.72	30	⇑P		PKPdf	02 48 54.8	-0.3	
	baz=122								
C05A	Tolt Reservoir	121.93	32	⇓P		PKPdf	02 48 55.0	-0.6	
	baz=122								
F03A	Seaside	121.99	34	⇑P		PKPdf	02 48 55.5	-0.3	
	baz=122								
FCC	Fort Churchill	122.07	8	*e*PKIKP		PKPdf	02 48 54.1	-1.4	
D05A	Enumclaw	122.09	32	⇓P		PKPdf	02 48 55.6	-0.3	
	baz=122								
C06A	Tall Timber Ra	122.20	31	⇓P		PKPdf	02 48 55.4	-0.7	
	baz=122								
B07A	Winthrop	122.24	30	⇓P		PKPdf	02 48 55.7	-0.5	
	baz=122								
A08A	Turner Farm, O	122.33	29	⇓P		PKPdf	02 48 56.1	-0.2	
	baz=122								
TDL	Tradedollar La	122.48	33	P		PKPdf	02 48 56.9	+0.2	
G03A	Yamhill	122.51	35	⇑P		PKPdf	02 48 56.8	+0.1	
	baz=122								
E05A	Randle	122.60	33	⇓P		PKPdf	02 48 56.6	-0.3	
	baz=122								
F04A	Amboy	122.62	34	⇓P		PKPdf	02 48 56.5	-0.4	
	baz=122								
A09A	Danville	122.65	29	⇓P		PKPdf	02 48 56.6	-0.3	
	baz=122								
D06A	Cle Elum	122.69	32	⇓P		PKPdf	02 48 56.4	-0.6	
	baz=122								
ETW	Entiat	122.69	31	*e*PKPdf		PKPdf	02 48 56.4	-0.7	
ETW				*e*PP		PP	02 50 34.0	-0.1	
B08A	Colville Reser	122.70	30	⇑P		PKPdf	02 48 56.3	-0.7	
	baz=122								
C07A	Waterville	122.78	31	⇑P		PKPdf	02 48 56.7	-0.5	
	baz=123								
WTV	Waterville	122.82	31	P		PKPdf	02 48 57.0	-0.3	
TBM	Table Mountain	122.83	32	P		PKPdf	02 48 57.1	-0.2	
H03A	Soap Creek Ran	122.88	35	⇓P		PKPdf	02 48 57.7	+0.1	
	baz=123								
I02A	Mapleton	122.96	36	⇓P		PKPdf	02 48 57.7	0.0	
	baz=123								
EBG	Ellensburg	123.02	32	P		PKPdf	02 48 57.6	0.0	
E06A	Yakima	123.03	32	⇓P		PKPdf	02 48 57.6	-0.2	
	baz=123								
A10A	Northport	123.14	28	⇓P		PKPdf	02 48 57.8	-0.1	
	baz=123								
D07A	Quincy	123.14	31	⇑P		PKPdf	02 48 57.8	-0.1	
	baz=123								
F05A	White Salmon	123.18	33	⇑P		PKPdf	02 48 57.9	-0.2	
	baz=123								
C08A	Higginbotham F	123.23	30	⇓P		PKPdf	02 48 57.7	-0.4	
	baz=123								
EPH	Ephrata	123.23	31	P		PKPdf	02 48 57.8	-0.3	
B09A	Rice	123.24	29	⇓P		PKPdf	02 48 57.8	-0.2	
	baz=123								
I03A	Eugene	123.30	36	⇑P		PKPdf	02 48 58.5	+0.1	
	baz=123								
J02A	Umpqua	123.47	37	⇑P		PKPdf	02 48 58.8	+0.1	
	baz=123								
H04A	Detroit Lake	123.51	35	⇓P		PKPdf	02 48 58.5	-0.2	
	baz=123								
VFP	Flag Point	123.53	34	P		PKPdf	02 48 58.9	+0.2	
C09A	Chrisman Ranch	123.60	30	⇓P		PKPdf	02 48 58.5	-0.3	
	baz=123								
E07A	Sunnyside	123.62	32	⇑P		PKPdf	02 48 58.8	-0.1	
	baz=123								
F06A	Goldendale	123.63	33	⇓P		PKPdf	02 48 58.8	-0.1	
	baz=124								
G05A	Wamic	123.66	34	⇓P		PKPdf	02 48 58.8	-0.2	
	baz=124								
OD2	Odessa Site #2	123.66	30	*e*PKPdf		PKPdf	02 48 57.9	-1.0	
OD2				*e*			02 49 09.7		
OD2				*e*PP		PP	02 50 42.4	+1.8	
A11A	Hall Mountain,	123.72	28	⇓P		PKPdf	02 48 59.3	+0.3	
	baz=124								
D08A	Wollman Farm,	123.78	31	⇓P		PKPdf	02 48 59.2	+0.1	
	baz=124								
NEW	Newport	123.85	29	*e*PKIKP		PKPdf	02 48 58.6	-0.7	
RSW	Rattlesnake Hi	123.86	32	*e*PKPdf		PKPdf	02 48 59.3	0.0	
K02A	Glendale	123.87	37	⇓P		PKPdf	02 48 59.7	+0.2	
	baz=124								
IRO	Indian Ridge	123.88	35	P		PKPdf	02 48 59.3	-0.1	
HAWA	Hanford	123.89	32	*e*PKPdf		PKPdf	02 48 59.4	0.0	
I04A	Tendick Farm,	123.91	36	⇓P		PKPdf	02 48 59.6	+0.1	
	baz=124								
M01C	Crescent City	123.99	39	⇑P		PKPdf	02 48 59.4	-0.3	
	baz=124								
REDWA	Red Mountain	124.00	32	P		PKPdf	02 49 00.3	+0.7	
F07A	Phinny Hill Vi	124.01	32	⇓P		PKPdf	02 48 59.7	0.0	
	baz=124								
G06A	Carlson Farm,	124.04	33	⇓P		PKPdf	02 48 59.9	+0.1	
	baz=124								
A12A	Yaak River Ran	124.06	27	⇓P		PKPdf	02 48 59.8	+0.1	
	baz=124								
C10A	Spiker Farm,	124.07	29	⇓P		PKPdf	02 48 58.9	-0.8	
	baz=124								
H05A	Madras	124.08	34	⇓P		PKPdf	02 48 59.9	+0.1	
	baz=124								
E08A	Dider Farm, El	124.08	31	⇑P		PKPdf	02 48 59.7	-0.1	
	baz=124								
D09A	Jones Farm, Ri	124.08	30	⇓P		PKPdf	02 48 59.6	-0.2	
	baz=124								
B11A	Sandpoint	124.09	28	⇓P		PKPdf	02 48 59.8	+0.1	
	baz=124								
L02A	Cave Junction	124.14	38	⇓P		PKPdf	02 49 00.4	+0.4	
	baz=124								
FFC	Flin Flon	124.25	15	*e*PKIKP		PKPdf	02 48 58.6	-1.2	
HUMO	Hull Mountain	124.28	37	⇑P		PKPdf	02 49 00.6	+0.3	
	baz=124								
I05A	Bend	124.35	35	⇑P		PKPdf	02 49 00.8	+0.5	
	baz=124								
J04A	Umpqua Nationa	124.42	36	⇑P		PKPdf	02 49 01.1	+0.6	
	baz=124								
B12A	Libby	124.43	28	⇓P		PKPdf	02 49 00.6	+0.2	
	baz=124								
VIPM	Ingram Point	124.50	34	PKIKP		PKPdf	02 49 01.0	+0.4	
H06A	Lindquist Farm	124.52	34	⇑P		PKPdf	02 49 00.9	+0.2	
	baz=124								
E09A	Wood Farm, Sta	124.53	31	⇓P		PKPdf	02 49 00.9	+0.3	
	baz=124								
G07A	Ruggs Ranch, H	124.55	33	⇑P		PKPdf	02 49 00.8	+0.1	
	baz=124								
C11A	Tepee Creek (N	124.56	29	⇑P		PKPdf	02 49 00.2	-0.4	
	baz=124								
D10A	Wagner Farm, O	124.61	30	⇓P		PKPdf	02 49 00.6	-0.2	
	baz=124								
JCC	Jacoby Creek	124.62	40	⇑P		PKPdf	02 49 01.5	+0.5	
	baz=124								
A13A	Flathead Natio	124.63	27	⇑P		PKPdf	02 49 01.0	+0.3	
	baz=124								
F08A	Pendleton	124.68	32	⇑P		PKPdf	02 49 01.0	0.0	
	baz=124								
LNOR	Lincton Mounta	124.89	32	*e*PKIKP		PKPdf	02 49 00.4	-0.9	
J05A	Fort Rock	124.90	36	⇓P		PKPdf	02 49 02.0	+0.6	
	baz=125								
G08A	Pilot Rock	124.92	32	⇑P		PKPdf	02 49 01.6	+0.3	
	baz=125								
YBH	Yreka Blue Hor	124.93	38	⇓P		PKPdf	02 49 01.3	-0.2	
	baz=125								
K04A	Chilquin	125.01	37	⇓P		PKPdf	02 49 01.5	-0.2	
	baz=125								
B13A	Whitefish	125.01	27	⇑P		PKPdf	02 49 01.3	-0.1	
	baz=125								
M02C	Callahan	125.04	38	⇑P		PKPdf	02 49 02.3	+0.5	
	baz=125								
H07A	Lands Inn, Kim	125.04	33	⇑P		PKPdf	02 49 01.6	0.0	
	baz=125								
N02C	Big Bar	125.07	39	⇓P		PKPdf	02 49 02.3	+0.5	
	baz=125								
D11A	Klaveano Farm,	125.08	29	⇓P		PKPdf	02 49 01.1	-0.6	
	baz=125								
E10A	Myers Farm, Un	125.08	30	⇓P		PKPdf	02 49 01.6	-0.1	
	baz=125								
I06A	Prineville	125.08	34	⇑P		PKPdf	02 49 02.0	+0.2	
	baz=125								
O01C	Eel River Cons	125.12	40	⇓P		PKPdf	02 49 02.3	+0.3	
	baz=125								
L04A	Klamath Falls	125.17	37	⇓P		PKPdf	02 49 01.5	-0.5	
	baz=125								
F09A	S2 Ranch, Elgi	125.19	31	⇓P		PKPdf	02 49 02.3	+0.4	
	baz=125								
F10A	Beach Ranch, E	125.37	31	⇑P		PKPdf	02 49 01.6	-0.6	
	baz=125								
I07A	Izee	125.39	34	⇑P		PKPdf	02 49 02.4	+0.1	
	baz=125								
M04C	Macdoel	125.43	37	⇑P		PKPdf	02 49 02.4	-0.1	
	baz=125								
K05A	Summer Lake	125.44	36	⇑P		PKPdf	02 49 02.6	+0.2	
	baz=125								
C13A	Hot Springs	125.47	28	⇑P		PKPdf	02 49 02.0	-0.4	
	baz=125								
KIPM	Iron Peak	125.52	40	*e*PKPdf		PKPdf	02 49 03.0	+0.3	
J06A	Christmas Vall	125.55	35	⇓P		PKPdf	02 49 02.7	+0.1	
	baz=125								
G09A	Cove	125.55	32	⇑P		PKPdf	02 49 02.4	-0.3	
	baz=125								
D12A	Red Ives Fores	125.55	29	⇓P		PKPdf	02 49 02.1	-0.4	
	baz=125								
M03C	McCloud	125.56	38	⇓P		PKPdf	02 49 02.7	0.0	
	baz=125								
H08A	Prairie City	125.57	33	⇑P		PKPdf	02 49 02.9	+0.2	
	baz=125								
E11A	Bogner Ranch,	125.62	30	⇓P		PKPdf	02 49 02.2	-0.5	
	baz=125								
WDC	Whiskeytown Da	125.69	39	⇑P		PKPdf	02 49 02.9	-0.1	
	baz=126								
O02C	Red Bluff	125.76	40	⇓P		PKPdf	02 49 03.5	+0.3	
	baz=126								
K06A	Valley Falls	125.77	36	⇓P		PKPdf	02 49 03.6	+0.5	
	baz=126								
C14A	Swan Lake	125.79	27	⇑P		PKPdf	02 49 02.3	-0.7	
	baz=126								
SCHQ	Schefferville	125.86	350	PKP		PKPdf	02 49 02.5	-0.4	
	comp=Z,12nm,0.7s,baz=52,slow=5.6,SNR=13								
L05A	Lakeview	125.88	37	⇑P		PKPdf	02 49 03.6	+0.3	
	baz=126								
G10A	Bishop Farm, J	125.89	31	⇓P		PKPdf	02 49 02.4	-0.9	
	baz=126								
E12A	Beaver Dam Sad	125.90	29	⇑P		PKPdf	02 49 02.8	-0.5	
	baz=126								
D13A	Huson	125.95	28	⇑P		PKPdf	02 49 02.9	-0.5	
	baz=126								
J07A	Hines	125.95	34	⇓P		PKPdf	02 49 03.9	+0.4	
	baz=126								
F11A	Grangeville	125.97	30	⇑P		PKPdf	02 49 02.9	-0.5	
	baz=126								
LTIM	Timbered Crate	126.00	38	P		PKPdf	02 49 03.7	+0.1	
H09A	Durkee	126.02	32	⇓P		PKPdf	02 49 03.2	-0.3	
	baz=126								
I08A	Drewsey	126.02	34	⇓P		PKPdf	02 49 04.2	+0.7	
	baz=126								
GASB	Alder Springs	126.10	40	⇑P		PKPdf	02 49 04.5	+0.7	
	baz=126								
M05C	Lookout	126.10	37	⇑P		PKPdf	02 49 04.0	+0.2	
	baz=126								
HOPS	Hayland	126.23	41	⇓P		PKPdf	02 49 04.6	+0.5	
	baz=126								
G11A	Walters Elk Ra	126.25	31	⇓P		PKPdf	02 49 03.9	0.0	
	baz=126								
MOD	Modoc	126.28	36	⇑P		PKPdf	02 49 05.0	+0.9	
	baz=126								
D14A	Greenough	126.40	28	⇑P		PKPdf	02 49 03.7	-0.5	
	baz=126								
K07A	Rock Creek Ran	126.42	35	⇑P		PKPdf	02 49 04.9	+0.5	
	baz=126								
J08A	Circle Bar Ran	126.43	34	⇓P		PKPdf	02 49 05.0	+0.7	
	baz=126								
I09A	Lost Marbles R	126.44	33	⇓P		PKPdf	02 49 04.5	+0.2	
	baz=126								
F12A	Elk City	126.52	30	⇓P		PKPdf	02 49 03.7	-0.8	
	baz=126								
E13A	Victor	126.55	29	⇓P		PKPdf	02 49 04.2	-0.2	
	baz=126								
H10A	Noah's Angus R	126.56	32	⇓P		PKPdf	02 49 04.3	-0.3	
	baz=126								
M06C	Likely Place G	126.60	37	⇓P		PKPdf	02 49 05.2	+0.5	
	baz=126								
CHMT	Chamberlain Mo	126.64	28	*e*PKPdf		PKPdf	02 49 03.8	-0.9	
MNRC	McLaughlin Nat	126.70	41	⇑P		PKPdf	02 49 05.7	+0.7	
	baz=126								
O04C	Chester	126.75	38	⇑P		PKPdf	02 49 05.3	+0.2	
	baz=127								
L07A	Adell	126.78	36	⇑P		PKPdf	02 49 05.8	+0.7	
	baz=127								
ELFS	Eagle Lake Fie	126.80	38	⇑P		PKPdf	02 49 05.2	+0.1	
	baz=127								
MCCM	Marconi Confer	126.81	42	⇓P		PKPdf	02 49 05.3	0.0	
	baz=127								
K08A	Mann Creek Ran	126.83	35	⇑P		PKPdf	02 49 05.9	+0.8	
	baz=127								
J09A	Fry Pan Ranch,	126.84	34	⇓P		PKPdf	02 49 05.9	+0.8	
	baz=127								
H11A	Donnelly	126.86	31	⇑P		PKPdf	02 49 05.6	+0.5	
	baz=127								
I10A	Payette	126.87	32	⇓P		PKPdf	02 49 05.8	+0.7	
	baz=127								
D15A	Lincoln	126.88	27	⇑P		PKPdf	02 49 05.5	+0.4	
	baz=127								
E14A	Clinton	126.90	28	⇑P		PKPdf	02 49 05.2	0.0	
	baz=127								
WVOR	Wild Horse Val	126.93	35	*e*PKIKP		PKPdf	02 49 05.4	+0.1	
ORV	Oroville	126.93	39	⇑P		PKPdf	02 49 05.5	0.0	
	baz=127								
F13A	Darby	126.95	29	⇑P		PKPdf	02 49 04.8	-0.5	
	baz=127								
FARB	Farallon Islan	126.97	42	⇑P		PKPdf	02 49 05.6	0.0	
	baz=127								
CVS	Carmenet Viney	126.98	41	⇑P		PKPdf	02 49 05.7	+0.1	
	baz=127								
O05C	Quincy	127.06	39	⇑P		PKPdf	02 49 06.0	+0.3	
	baz=127								
Q03C	Winters	127.11	41	⇑P		PKPdf	02 49 06.7	+0.9	
	baz=127								
L08A	Fields	127.25	35	⇑P		PKPdf	02 49 07.1	+1.1	
	baz=127								
N06A	Buffalo Meadow	127.26	37	⇑P		PKPdf	02 49 06.9	+0.8	
	baz=127								
M07A	Soldier Meadow	127.27	36	⇓P		PKPdf	02 49 07.0	+1.0	
	baz=127								
K09A	Rome	127.28	34	⇓P		PKPdf	02 49 07.0	+1.0	
	baz=127								
E15A	Deer Lodge	127.29	28	⇓P		PKPdf	02 49 05.9	0.0	
	baz=127								
J10A	Berg Farm, Mel	127.33	33	⇑P		PKPdf	02 49 06.6	+0.5	
	baz=127								
EGMT	Eagleton	127.33	24	*e*PKPdf		PKPdf	02 49 05.6	-0.3	
EGMT				*e*			02 49 17.6		
F14A	Wisdom	127.40	29	⇑P		PKPdf	02 49 06.7	+0.6	
	baz=127								
Q04C	Lincoln	127.41	40	⇓P		PKPdf	02 49 07.3	+0.9	
	baz=127								
I11A	Placerville	127.43	32	⇑P		PKPdf	02 49 06.7	+0.4	
	baz=127								
HRY	Holter Researc	127.44	27	*e*PKPdf		PKPdf	02 49 05.4	-0.8	
BEKR	Beckwourth	127.47	39	⇑P		PKPdf	02 49 06.7	+0.3	
	baz=127								
G13A	Cobalt	127.49	30	⇑P		PKPdf	02 49 05.9	-0.4	
	baz=127								
H12A	Diamond D Ranc	127.56	31	⇓P		PKPdf	02 49 06.7	+0.2	
	baz=127								
BDM	Black Diamond	127.59	41	⇑P		PKPdf	02 49 06.7	0.0	
	baz=127								
O06A	Flanigan	127.62	38	⇑P		PKPdf	02 49 07.3	+0.5	
	baz=127								
JRSC	Jasper Ridge	127.64	42	⇓P		PKPdf	02 49 06.7	-0.2	
	baz=128								
P05C	Yuba Gap, Truc	127.64	39	⇓P		PKPdf	02 49 06.6	-0.2	
	baz=128								
K10A	MacKenzie Ranc	127.70	34	⇓P		PKPdf	02 49 07.1	+0.3	
	baz=128								
L09A	Wilkinson Ranc	127.75	35	⇑P		PKPdf	02 49 07.4	+0.5	
	baz=128								
N07B	Gerlach	127.77	37	⇑P		PKPdf	02 49 07.3	+0.3	
	baz=128								
F15A	Butte	127.79	28	⇑P		PKPdf	02 49 06.6	-0.3	
	baz=128								
MFID	Camas Ranch	127.84	32	⇓P		PKPdf	02 49 07.2	+0.1	
	baz=128								
WENL	Wente Vineyard	127.84	42	⇓P		PKPdf	02 49 07.3	+0.1	
	baz=128								
H13A	Challis	127.86	30	⇓P		PKPdf	02 49 07.4	+0.3	
	baz=128								
P06A	Stead Airport,	127.86	38	⇓P		PKPdf	02 49 07.7	+0.5	
	baz=128								
LAVA	Lava Cap Winer	127.87	40	⇑P		PKPdf	02 49 07.5	+0.3	
	baz=128								
R04C	Big Horse Ranc	128.03	40	⇓P		PKPdf	02 49 07.4	-0.1	
	baz=128								
DLMT	Dillon	128.09	28	*e*PKPdf		PKPdf	02 49 07.9	+0.4	
DLMT				*e*PP		PP	02 51 09.8	-0.3	
K11A	Parker Ranch,	128.16	33	⇓P		PKPdf	02 49 08.2	+0.5	
	baz=128								
WCN	Washoe City	128.18	39	⇑P		PKPdf	02 49 08.2	+0.4	
	baz=128								
O07A	Toulon	128.20	37	⇓P		PKPdf	02 49 08.4	+0.5	
	baz=128								
M09A	Marrel Ranch,	128.25	35	⇓P		PKPdf	02 49 08.3	+0.4	
	baz=128								
N08A	GE Springer Mi	128.26	36	⇑P		PKPdf	02 49 08.2	+0.3	
	baz=128								
H14A	Leadore	128.26	30	⇑P		PKPdf	02 49 08.1	+0.3	
	baz=128								
G15A	Dillon	128.29	29	⇓P		PKPdf	02 49 08.3	+0.4	
	baz=128								
R05C	Kirkwood Meado	128.32	40	⇑P		PKPdf	02 49 08.5	+0.4	
	baz=128								
BOZ	Bozeman (W)	128.34	28	*e*PKIKP		PKPdf	02 49 07.5	-0.4	
BOZ				*e*			02 51 11.5		
J12A	Stokes Ranch,	128.34	32	⇑P		PKPdf	02 49 08.4	+0.4	
	baz=128								
MCMT	McKenzie Canyo	128.37	29	*e*PKPdf		PKPdf	02 49 08.1	+0.1	
MCMT				*e*PP		PP	02 51 14.8	+2.9	
L10A	Juniper Basin	128.38	34	⇑P		PKPdf	02 49 08.8	+0.7	
	baz=128								
I13A	Wildhorse Cree	128.39	31	⇓P		PKPdf	02 49 08.6	+0.5	
	baz=128								
HLID	Hailey	128.48	31	⇑P		PKPdf	02 49 08.7	+0.4	
	baz=128								
HLID	Hailey	128.48	31	*e*PKPdf		PKPdf	02 49 08.2	0.0	
PACP	Pacheco Peak	128.49	42	⇓P		PKPdf	02 49 09.1	+0.6	
	baz=128								
CMB	Columbia Colle	128.51	40	⇑P		PKPdf	02 49 08.6	+0.1	
	baz=128								
O08A	Rochester Mine	128.56	37	⇓P		PKPdf	02 49 09.2	+0.7	
	baz=128								
P07A	Fallon	128.57	38	⇓P		PKPdf	02 49 08.7	+0.1	
	baz=128								
N09A	Rock Creek Ran	128.58	36	⇓P		PKPdf	02 49 09.3	+0.8	
	baz=128								
H15A	Lima	128.62	29	⇓P		PKPdf	02 49 09.0	+0.5	
	baz=128								
M10A	I.L. Ranch, Tu	128.71	35	⇑P		PKPdf	02 49 09.5	+0.7	
	baz=128								
I14A	Mackay	128.72	30	⇑P		PKPdf	02 49 09.0	+0.3	
	baz=128								
J13A	Cove Ranch, Pi	128.72	31	⇓P		PKPdf	02 49 09.5	+0.7	
	baz=128								
L11A	Cat Creek Ranc	128.72	33	⇑P		PKPdf	02 49 09.6	+0.8	
	baz=128								
R06C	Coleville	128.83	39	⇑P		PKPdf	02 49 09.8	+0.7	
	baz=129								
K12A	Draper Farm, C	128.87	32	⇓P		PKPdf	02 49 09.5	+0.5	
	baz=129								
S05C	Merced	128.94	41	⇓P		PKPdf	02 49 09.4	+0.1	
	baz=129								
S06C	San Francisco	128.94	40	⇓P		PKPdf	02 49 09.5	+0.2	
	baz=129								
P08A	Dixie Valley	128.97	37	⇓P		PKPdf	02 49 09.8	+0.5	
	baz=129								
Q07A	Schurz	128.98	39	⇑P		PKPdf	02 49 09.7	+0.4	
	baz=129								
QLMT	Earthquake Lak	129.04	28	*e*PKPdf		PKPdf	02 49 10.1	+0.8	
V03C	Hunter Liggett	129.06	43	⇑P		PKPdf	02 49 10.5	+0.9	
	baz=129								
J14A	Carey	129.11	31	⇑P		PKPdf	02 49 10.3	+0.9	
	baz=129								
GCMT	Greycliff	129.12	26	*e*PKPdf		PKPdf	02 49 09.2	-0.2	
GCMT				*e*PP		PP	02 51 16.6	-0.1	
L12A	House Creek Ra	129.14	33	⇓P		PKPdf	02 49 10.3	+0.7	
	baz=129								
I15A	Monteview	129.15	30	⇑P		PKPdf	02 49 10.2	+0.6	
	baz=129								
U04C	Hernandez Rese	129.18	42	⇓P		PKPdf	02 49 10.2	+0.4	
	baz=129								
M11A	Holland Ranch,	129.19	34	⇓P		PKPdf	02 49 10.6	+0.9	
	baz=129								
H16A	Russell Place,	129.22	28	⇑P		PKPdf	02 49 10.7	+1.0	
	baz=129								
N10A	Dunphy	129.25	35	⇓P		PKPdf	02 49 10.6	+0.8	
	baz=129								
K13A	Stover Farm, H	129.29	32	⇑P		PKPdf	02 49 10.8	+1.0	
	baz=129								
R07C	Lee Vining	129.34	40	⇑P		PKPdf	02 49 10.9	+0.8	
	baz=129								
YMR	Madison River	129.38	28	*e*PKPdf		PKPdf	02 49 11.6	+1.6	
O10A	Cortez Mining,	129.53	36	⇑P		PKPdf	02 49 11.1	+0.8	
	baz=129								
T06C	Millerton Lake	129.54	41	⇓P		PKPdf	02 49 10.8	+0.3	
	baz=129								
Q08A	Gabbs	129.57	38	⇑P	

TPAW ePP PP 02 51 25.5 +1.2
SMMC Simmler 130.29 43 ⇓P PKPdf 02 49 12.8 +0.9
baz=130
LOHW Long Hollow 130.35 29 ePKPdf PKPdf 02 49 12.3 +0.5
LOHW ePP PP 02 51 25.2 +0.4
SNOW Snow King Moun 130.39 29 ePKPdf PKPdf 02 49 12.3 +0.4
SNOW ePP PP 02 51 27.1 +2.0
K16A Soda Springs 130.45 30 ⇓P PKPdf 02 49 13.1 +1.1
baz=130
P11A Circle Ranch, 130.45 36 ⇓P PKPdf 02 49 13.1 +1.0
baz=130
N13A Wendover, West 130.47 34 ⇓P PKPdf 02 49 12.5 +0.4
baz=130
M14A Sheep Mountain 130.49 32 ⇑P PKPdf 02 49 12.9 +0.8
baz=130
R09A Tonopah 130.49 38 ⇑P PKPdf 02 49 12.7 +0.4
baz=130
Q10A Clear Creek Ra 130.53 37 ⇓P PKPdf 02 49 13.6 +1.3
baz=130
O12A Currie 130.56 35 ⇑P PKPdf 02 49 13.2 +0.9
baz=130
HVU Hansel Valley 130.60 32 ePKIKP PKPdf 02 49 12.3 0.0
VES Vestal, Richgr 130.62 42 ⇑P PKPdf 02 49 12.6 0.0
baz=130
L15A Malad City 130.64 31 ⇓P PKPdf 02 49 13.0 +0.5
baz=130
PKM Peak Mountain 130.64 43 ⇑P PKPdf 02 49 13.3 +0.6
baz=130
S09A Goldfield 130.71 39 ⇓P PKPdf 02 49 13.4 +0.7
baz=130
R10A Warm Springs 130.93 38 ⇓P PKPdf 02 49 13.8 +0.7
baz=131
Q11A Duckwater 130.97 37 ⇓P PKPdf 02 49 13.2 +0.1
baz=131
S10A Tonopah Range, 130.98 38 ⇑P PKPdf 02 49 13.9 +0.7
baz=131
M15A Larsen Ranch, 130.99 32 ⇓P PKPdf 02 49 13.1 0.0
baz=131
P12A McGill 131.00 36 ⇓P PKPdf 02 49 13.6 +0.5
baz=131
N14A Grayback Hills 131.03 33 ⇑P PKPdf 02 49 13.7 +0.5
baz=131
GRAC Grapevine Rang 131.06 40 ⇓P PKPdf 02 49 13.4 0.0
baz=131
BGU Big Grassy Mou 131.06 33 ePKPdf PKPdf 02 49 13.3 0.0
L16A Fish Haven 131.12 31 ⇓P PKPdf 02 49 13.3 -0.1
baz=131
ISA Isabella 131.12 42 ⇑P PKPdf 02 49 13.4 -0.1
baz=131
ARVC Arvin 131.19 43 ⇑P PKPdf 02 49 13.8 +0.1
baz=131
Q12A Willow Creek R 131.33 36 ⇑P PKPdf 02 49 14.0 +0.2
baz=131
R11A Troy Canyon, C 131.33 37 ⇑P PKPdf 02 49 14.4 +0.5
baz=131
HWUT Hardware Ranch 131.35 31 ePKPdf PKPdf 02 49 13.6 -0.1
HWUT ePP PP 02 51 29.6 -1.7
N15A Stansbury Isla 131.36 32 ⇓P PKPdf 02 49 14.3 +0.5
baz=131
BW06 Boulder Array 131.49 29 ePKPdf PKPdf 02 49 13.8 -0.2
BW06 ePP PP 02 51 30.6 -1.6
PDAR Pinedale Array 131.49 29 PKhKP 02 48 57.3
comp=Z,0.3nm,0.6s,baz=309,slow=0.6,SNR=3.5
PDAR PKP PKPdf 02 49 14.3 +0.3
comp=Z,4.6nm,0.6s,baz=62,slow=1.4,SNR=11
PDAR PP PP 02 51 30.5 -1.7
comp=Z,3.3nm,0.8s,baz=5.2,slow=1.2,SNR=3.6
P13A Bates Ranch, G 131.52 35 ⇑P PKPdf 02 49 14.6 +0.5
baz=131
M16A Huntsville 131.53 31 ⇑P PKPdf 02 49 14.4 +0.3
baz=131
MPMC Manual Prospec 131.54 41 ⇑P PKPdf 02 49 14.9 +0.6
baz=131
OSI Osito Adit 131.55 43 ⇑P PKPdf 02 49 14.8 +0.4
baz=131
BLG Laguna Peak 131.59 44 ⇓P PKPdf 02 49 14.7 +0.2
baz=131
S11A Rachel 131.68 38 ⇑P PKPdf 02 49 15.3 +0.8
baz=132
DUG Dugway 131.69 33 ePKPdf PKPdf 02 49 14.7 +0.3
DUG eSKPbc SKPbc 02 52 37.9 -0.7
DUG eSKPdf SKPdf 02 52 48.6 +0.3
FURC Furnace Creek, 131.70 40 ⇑P PKPdf 02 49 15.3 +0.7
baz=132
NOQ North Oquirrh 131.74 32 ePKPdf PKPdf 02 49 15.1 +0.6
NOQ e 02 49 29.7
LRMC Laurel Mountai 131.75 42 ⇓P PKPdf 02 49 14.8 +0.1
baz=132
O15A The Old Anders 131.82 33 ⇓P PKPdf 02 49 15.6 +0.8
baz=132
Q13A Wheeler Ranch, 131.85 35 ⇑P PKPdf 02 49 15.6 +0.8
baz=132
EDW2 Edwards Air Fo 131.90 42 ⇓P PKPdf 02 49 15.5 +0.4
baz=132
R12A Pony Springs, 131.92 36 ⇑P PKPdf 02 49 15.5 +0.5
baz=132
N16A Rees Ranch, Co 131.94 32 ⇓P PKPdf 02 49 14.9 0.0
baz=132
P14A Drum Mountains 131.97 34 ⇑P PKPdf 02 49 15.5 +0.4
baz=132
DECC Green Verdugo 132.02 43 ⇓P PKPdf 02 49 15.2 -0.1
baz=132
U10A Ash Meadows, A 132.07 40 ⇑P PKPdf 02 49 15.8 +0.5
baz=132
JLU Jordanelle 132.14 32 ePKPdf PKPdf 02 49 15.3 0.0
JLU e 02 49 25.3
N17A Moffit Pass 132.21 31 ⇑P PKPdf 02 49 15.9 +0.5
baz=132
S12A Delamar Landin 132.25 37 ⇓P PKPdf 02 49 16.5 +0.9
baz=132
T11A Corn Creek, Al 132.26 38 ⇓P PKPdf 02 49 16.3 +0.6
baz=132
Q14A Sevier Lake (B 132.26 35 ⇓P PKPdf 02 49 15.8 +0.2
baz=132
FMP Fort Macarthur 132.35 44 ⇓P PKPdf 02 49 16.2 +0.3
baz=132
DAU Daniels Canyon 132.38 32 ePKIKP PKPdf 02 49 16.1 +0.3
O16A Springville 132.39 32 ⇓P PKPdf 02 49 15.9 +0.1
baz=132
R13A O'Grain Ranch, 132.40 36 ⇑P PKPdf 02 49 16.4 +0.5
baz=132
P15A Leamington 132.42 34 ⇓P PKPdf 02 49 16.6 +0.7
baz=132
SHOC Shoshone 132.42 40 ⇑P PKPdf 02 49 16.6 +0.6
baz=132
GSC Goldstone 132.44 41 ⇓P PKPdf 02 49 16.8 +0.8
baz=132
CIS Catalina Islan 132.44 44 ⇓P PKPdf 02 49 15.7 -0.4
baz=132
BFSC Mount Baldy St 132.49 43 ⇑P PKPdf 02 49 16.6 +0.4
baz=132
U11A Corn Creek 132.67 39 ⇑P PKPdf 02 49 16.7 +0.2
baz=132
P16A Fountain Green 132.73 33 ⇓P PKPdf 02 49 16.8 +0.3
baz=132
Q15A Fillmore 132.76 34 ⇓P PKPdf 02 49 16.9 +0.4
baz=133
N18A Larsen Ranch, 132.78 30 ⇑P PKPdf 02 49 16.9 +0.4
baz=133
O17A Robinson Place 132.81 32 ⇑P PKPdf 02 49 17.3 +0.7
baz=133
RSSD Black Hills 132.82 23 ePKIKP PKPdf 02 49 15.7 -0.8
RSSD e 02 51 40.8
S13A Holt Ranch, En 132.86 37 ⇑P PKPdf 02 49 17.3 +0.5
baz=133
R14A James Farms, M 132.87 35 ⇓P PKPdf 02 49 16.9 +0.1
baz=133
T12A Moapa 132.90 38 ⇑P PKPdf 02 49 17.2 +0.3
baz=133
TUQ Turquoise Moun 132.93 40 ⇓P PKPdf 02 49 17.3 +0.3
baz=133
BBRC Big Bear Sol-O 132.97 42 ⇑P PKPdf 02 49 17.1 0.0
baz=133
HEC Hector,Ludlow 133.03 41 ⇓P PKPdf 02 49 17.5 +0.3
baz=133
N19A John Jarvie Ra 133.09 30 ⇑P PKPdf 02 49 17.4 +0.3
baz=133
O18A Roosevelt 133.14 31 ⇑P PKPdf 02 49 17.6 +0.4
baz=133
S14A Cedar City 133.15 36 ⇑P PKPdf 02 49 18.3 +1.0
baz=133
MURC Murrieta 133.16 43 ⇓P PKPdf 02 49 18.3 +0.9
baz=133
U12A Valley of Fire 133.19 38 ⇓P PKPdf 02 49 17.8 +0.3
baz=133
T13A Saint George 133.20 37 ⇓P PKPdf 02 49 18.1 +0.7
baz=133
MSU Marysvale 133.21 35 ePKIKP PKPdf 02 49 18.4 +1.0
P17A Butcher Ranch, 133.33 32 ⇓P PKPdf 02 49 18.0 +0.4
baz=133
R15A Junction 133.36 35 ⇑P PKPdf 02 49 18.6 +0.9
baz=133
RWWY Rawlins 133.43 28 ePKPdf PKPdf 02 49 17.4 -0.3
V12A Nelson 133.44 39 ⇓P PKPdf 02 49 18.2 +0.3
baz=133
P18A Preston Nutter 133.48 32 ⇓P PKPdf 02 49 18.3 +0.4
baz=133
Q16A Castle Valley 133.49 33 ⇑P PKPdf 02 49 18.4 +0.5
baz=133
GMRC Granite Mounta 133.50 41 ⇓P PKPdf 02 49 18.8 +0.8
baz=133
U13A Pakoon Wash 133.56 38 ⇑P PKPdf 02 49 18.9 +0.8
baz=133
O19A Miners Draw (B 133.56 30 ⇓P PKPdf 02 49 18.3 +0.3
baz=133
PFO Pinyon Flat Ob 133.67 43 ⇓P PKPdf 02 49 18.9 +0.5
baz=134
PFO Pinyon Flat Ob 133.67 43 ePKPdf PKPdf 02 49 18.6 +0.2
T14A Hurricane 133.67 37 ⇑P PKPdf 02 49 19.4 +1.1
baz=134
S15A Panguitch 133.68 35 ⇓P PKPdf 02 49 19.4 +1.1
baz=134
W12A Cal Nev Ari 133.69 40 ⇑P PKPdf 02 49 18.7 +0.3
baz=134
SRU San Rafael 133.70 33 ⇑P PKPdf 02 49 19.2 +0.9
baz=134
SRU San Rafael 133.70 33 ePKPdf PKPdf 02 49 18.3 0.0
BELC Belle Mtn. 133.75 42 ⇓P PKPdf 02 49 19.0 +0.5
baz=134
R16A Teasdale 133.76 34 ⇓P PKPdf 02 49 19.2 +0.7
baz=134
V13A Grand Canyon W 133.91 39 ⇑P PKPdf 02 49 19.1 +0.3
baz=134
Q18A Rafter H Ranch 133.92 32 ⇓P PKPdf 02 49 18.9 +0.1
baz=134
U14A Mt Trumbull 134.03 37 ⇑P PKPdf 02 49 20.1 +1.1
baz=134
S16A Weppner Ranch, 134.09 35 ⇑P PKPdf 02 49 19.7 +0.6
baz=134
R17A Hanksville Air 134.10 33 ⇓P PKPdf 02 49 19.3 +0.2
baz=134
MONP Monument Peak 134.11 44 ⇓P PKPdf 02 49 19.8 +0.6
baz=134
T15A Red Dirt Ranch 134.11 36 ⇓P PKPdf 02 49 19.5 +0.3
baz=134
P19A Cripple Cowboy 134.13 31 ⇑P PKPdf 02 49 19.3 +0.2
baz=134
NEE2 Needles Airpor 134.19 40 ⇓P PKPdf 02 49 19.7 +0.4
baz=134
IRM Iron Mountain 134.21 41 ⇓P PKPdf 02 49 19.9 +0.5
baz=134
BC3 Big Chuckw Mtn 134.31 42 ⇑P PKPdf 02 49 20.1 +0.5
baz=134
W13A Hualapai Mount 134.45 39 ⇑P PKPdf 02 49 20.7 +0.9
baz=134
DVTC Desert V Tower 134.46 44 ⇓P PKPdf 02 49 20.5 +0.6
baz=134
Q19A Hogan Spring (134.49 32 ⇑P PKPdf 02 49 20.4 +0.6
baz=134
SWSC Sam W. Stewart 134.50 43 ⇑P PKPdf 02 49 20.2 +0.2
baz=134
U15A North Rim 134.56 37 ⇓P PKPdf 02 49 21.0 +1.1
baz=134
R18A Canyonlands Na 134.57 33 ⇑P PKPdf 02 49 20.3 +0.4
baz=134
V14A Boquillas Ranc 134.59 38 ⇓P PKPdf 02 49 20.5 +0.4
baz=134
S17A Black Ridge (B 134.60 34 ⇓P PKPdf 02 49 20.4 +0.3
baz=134
T16A Glen Canyon Da 134.65 36 ⇑P PKPdf 02 49 20.6 +0.4
baz=134
PDMCI Parker Dam,Lak 134.79 40 ⇓P PKPdf 02 49 21.1 +0.6
baz=135
X13A Yucca 134.80 40 ⇑P PKPdf 02 49 21.0 +0.5
baz=135
Y12C Blythe 134.88 41 ⇑P PKPdf 02 49 21.4 +0.7
baz=135
W14A Seligman 134.88 39 ⇓P PKPdf 02 49 21.3 +0.6
baz=135
R19A Curley Farm, L 134.98 32 ⇑P PKPdf 02 49 21.1 +0.4
baz=135
S18A Hurst Farm, Bl 135.01 34 ⇑P PKPdf 02 49 21.1 +0.3
baz=135
PV10 Paradox Valley 135.03 32 ePKPdf PKPdf 02 49 21.7 +0.9
V15A Kaibab Nationa 135.04 37 ⇓P PKPdf 02 49 21.6 +0.7
baz=135
T17A Navajo Res., N 135.04 35 ⇓P PKPdf 02 49 21.6 +0.7
baz=135
GLA Glamis 135.09 42 ⇑P PKPdf 02 49 21.9 +0.8
baz=135
Y13A Salome 135.29 41 ⇓P PKPdf 02 49 22.2 +0.7
baz=135
U17A Shonto 135.40 35 ⇑P PKPdf 02 49 22.7 +1.2
baz=135
W15A Williams 135.41 38 ⇓P PKPdf 02 49 22.6 +1.0
baz=135
S19A Harvey Farm, M 135.44 33 ⇑P PKPdf 02 49 22.4 +0.8
baz=135
U16A Tuba City 135.45 36 ⇑P PKPdf 02 49 22.7 +1.0
baz=135
PV01 Paradox Valley 135.46 32 ePKPdf PKPdf 02 49 21.6 0.0
PV01 ePP PP 02 51 59.3 +1.7
T18A Mexican Hat 135.47 34 ⇓P PKPdf 02 49 22.5 +0.8
baz=135
X14A Yava 135.48 39 ⇑P PKPdf 02 49 23.0 +1.2
baz=135
ISCO Idaho Springs 135.66 28 ePKIKP PKPdf 02 49 17.7 -4.2
ISCO e 02 49 22.5
ISCO e 02 51 57.4
ECSD EROS,Sioux Fal 135.71 17 ePKPpre 02 49 14.1
ECSD ePKPdf PKPdf 02 49 21.3 -0.6
ECSD ePP PP 02 51 57.5 -1.2
Y14A Wickenburg 135.75 40 ⇓P PKPdf 02 49 23.1 +0.8
baz=136
X15A Humboldt 135.88 39 ⇓P PKPdf 02 49 23.6 +1.1
baz=136
W16A Flagstaff 135.91 38 ⇑P PKPdf 02 49 22.9 +0.4
baz=136
113A Mohawk Valley, 135.98 42 ⇑P PKPdf 02 49 23.8 +1.1
baz=136
U18A Rough Rock, Ch 135.98 35 ⇑P PKPdf 02 49 23.5 +0.9
baz=136
Z14A Wintersburg 136.15 41 ⇓P PKPdf 02 49 23.9 +0.8
baz=136
Y15A Casa Rosa Ranc 136.16 39 ⇓P PKPdf 02 49 23.8 +0.7
baz=136
T19A Beclabito 136.17 34 ⇑P PKPdf 02 49 23.6 +0.7
baz=136
MVCO Mesa Verde 136.18 33 ePKPdf PKPdf 02 49 23.5 +0.5
W17A Winslow 136.42 37 ⇓P PKPdf 02 49 24.4 +0.9
baz=136
X16A Lo Mia Camp, P 136.42 38 ⇓P PKPdf 02 49 24.0 +0.5
baz=136
V18A Ganado 136.44 36 ⇓P PKPdf 02 49 24.5 +1.0
baz=136
Y16A Circle Bar Ran 136.75 39 ⇑P PKPdf 02 49 25.3 +1.2
baz=137
PLCA Paso Flores 136.85 191 PKhKP 02 49 15.4
comp=Z,1.4nm,0.7s,baz=246,slow=5.1,SNR=5.2
PLCA PKP PKPdf 02 49 24.7 +0.6
comp=Z,3.7nm,0.7s,baz=171,slow=5.4,SNR=8.6
PLCA Paso Flores 136.85 191 PKHKP 02 49 15.5
PLCA 02 49 24.7
PLCA pmax pmax
comp=Z,1.0nm,0.7s
PLCA pmax pmax
comp=Z,4.0nm,0.7s
X17A Forest Lakes 136.86 38 ⇓P PKPdf 02 49 25.4 +1.1
baz=137
GLMI Grayling 136.87 4 ePKPdf PKPdf 02 49 23.7 -0.3
V19A Window Rock 136.95 35 ⇓P PKPdf 02 49 25.2 +0.7
baz=137
TRQA Tornquist 136.96 201 ePKPdf PKPdf 02 49 23.9 -0.5
W18A Petrified Fore 136.97 36 ⇑P PKPdf 02 49 25.4 +0.8
baz=137
115A Sonoran Desert 137.03 41 ⇓P PKPdf 02 49 25.2 +0.5
baz=137
214A Organ Pipe Nat 137.11 42 ⇓P PKPdf 02 49 25.1 +0.3
baz=137
Z16A Peralta Trail, 137.14 39 ⇓P PKPdf 02 49 25.4 +0.5
baz=137
W19A Sanders 137.18 36 ⇑P PKPdf 02 49 25.6 +0.7
baz=137
X18A Snowflake 137.25 37 ⇓P PKPdf 02 49 26.1 +1.1
baz=137
Y17A Roosevelt 137.27 38 ⇑P PKPdf 02 49 26.4 +1.3
baz=137
SDCO Great Sand Dun 137.33 30 ePKPdf PKPdf 02 49 24.6 -0.6
SDCO ePP PP 02 52 09.4 +0.1
MDV Middlebury 137.37 352 ePKPdf PKPdf 02 49 24.2 -0.7
116A Eloy 137.46 40 ⇑P PKPdf 02 49 26.0 +0.5
baz=137
Y18A Canyon Day Jun 137.71 38 ⇑P PKPdf 02 49 27.0 +1.0
baz=138
X19A St. Johns 137.72 36 ⇓P PKPdf 02 49 27.1 +1.2
baz=138
Z17A San Carlos Hig 137.77 39 ⇓P PKPdf 02 49 27.1 +1.0
baz=138
216A Three Points, 137.98 41 ⇑P PKPdf 02 49 27.6 +1.1
baz=138
JFWS Jewell Farm 138.00 11 ePKHKP 02 49 15.9
JFWS e 02 49 25.3
JFWS e 02 52 08.9
Y19A Nutrioso 138.06 37 ⇓P PKPdf 02 49 27.7 +1.2
baz=138
117A Oracle 138.08 40 ⇓P PKPdf 02 49 27.1 +0.5
baz=138
Z18A Geronimo 138.18 38 ⇑P PKPdf 02 49 27.3 +0.5
baz=138
TUC Tucson 138.22 40 ePKIKP PKPdf 02 49 22.4 -4.5
Z19A T-Link Ranch, 138.51 38 ⇓P PKPdf 02 49 28.7 +1.3
baz=138
118A Homack Ranch, 138.52 39 ⇓P PKPdf 02 49 28.7 +1.2
baz=138
217A Green Valley 138.54 41 ⇓P PKPdf 02 49 28.5 +1.0
baz=138
119A Ashpeak Ranch, 138.85 38 ⇑P PKPdf 02 49 29.2 +1.1
baz=139
218A Dragoon 138.91 40 ⇓P PKPdf 02 49 29.2 +1.0
baz=139
ANMO Albuquerque 138.96 33 ePKHKP 02 49 20.7
ANMO e 02 52 19.3
ANMO Albuquerque 138.96 33 ePKPpre 02 49 20.7
ANMO ePP PP 02 52 19.3 -0.2
ANMO eSKPbc SKPbc 02 53 01.6 -0.1
LAZ Ladron 138.98 35 ePKPpre 02 49 20.9
LAZ ePKPdf PKPdf 02 49 28.7 +0.5
LAZ ePP PP 02 52 24.7 +5.0
CBKS Cedar Bluff 139.03 23 ePKHKP 02 49 19.7
CBKS e 02 49 27.2
CBKS e 02 52 17.0
VAO Valinhos 139.22 231 (P) PKPdf 02 49 28.8 -0.2
LENM Lemitar 139.25 35 ePKPdf PKPdf 02 49 28.5 -0.2
318A Bisbee 139.30 40 ⇓P PKPdf 02 49 29.7 +0.8
baz=139
LPM Los Pinos Moun 139.33 34 ePKPpre 02 49 22.4
LPM ePKPdf PKPdf 02 49 29.1 +0.2
Y22C IRIS PASSCAL I 139.34 35 ⇑P PKPdf 02 49 29.8 +0.9
baz=139
219A White Tail Can 139.39 39 ⇓P PKPdf 02 49 30.0 +1.0
baz=139
BNM Barren Site 139.45 34 ePKPpre 02 49 22.7
BNM ePKPdf PKPdf 02 49 30.5 +1.4
BNM ePP PP 02 52 25.5 +2.8
BINY Binghamton 139.46 355 ePKPpre 02 49 21.6
BINY ePKPdf PKPdf 02 49 28.5 -0.4
319A Douglas 139.79 40 ⇑P PKPdf 02 49 30.9 +1.1
baz=140
KSU1 Kansas State U 139.92 20 ePKPdf PKPdf 02 49 30.1 +0.3
AMTX Amarillo 141.47 29 ePKPdf PKPdf 02 49 30.2 -2.5
MVL Millersville 141.67 355 ePKPpre 02 49 14.1
MCWV Mont Chateau 142.19 359 ePKPpre 02 49 28.5
BLO Bloomington 142.26 8 ePKHKP 02 49 27.8
BLO e 02 49 34.8
CCM Cathedral Cave 142.45 14 ePKHKP 02 49 27.8
CCM e 02 49 34.0
OLIL Olney 142.45 10 ePKPpre 02 49 28.9
FVM French Village 142.71 13 ePKHKP 02 49 28.9
WMOK Wichita Mounta 142.91 25 ePKIKP PKPdf 02 49 30.4 -4.9
WCI Wyandotte Cave 143.22 8 ePKHKP 02 49 30.6
SIUC Southern Illin 143.23 12 ePKPdf PKPdf 02 49 32.4 -3.3
USIN University of 143.27 10 ePKPdf PKPdf 02 49 32.6 -3.2
LMEL Las Melosas 143.39 194 ⇓*i* P PKPdf 02 49 29.4 -6.7
BDFB Brasilia 143.65 241 PKhKP 02 49 33.2
comp=Z,5.1nm,0.6s,baz=115,slow=2.8,SNR=5.6
BDFB PP PP 02 52 50.2 +0.9
comp=Z,5.8nm,0.8s,baz=321,slow=19.SNR=1.7
BDFB Brasilia 143.65 241 PKIKP PKPdf 02 49 33.2 -3.9
BDFB 02 52 50.2
BDFB pmax pmax
comp=Z,5.0nm,0.6s
BDFB pmax pmax
comp=Z,6.0nm,0.8s
CLCH Cerro Calan 143.90 194 *eP* PKPdf 02 49 34.6 -2.5
FCH Farellones 143.90 194 ⇑*i* P PKPdf 02 49 34.1 -3.0
PARMO Parma 144.13 13 ePKPdf PKPdf 02 49 34.7 -2.7
URVA University of 144.18 356 ePKPdf PKPdf 02 49 34.5 -2.9
CPUP Villa Florida 144.34 217 PKP PKPdf 02 49 36.6 -1.4
comp=Z,38nm,0.6s,baz=119,slow=2.0,SNR=82
CPUP Villa Florida 144.34 217 PKIKP PKPdf 02 49 36.7 -1.4
CPUP pmax pmax
comp=Z,38nm,0.6s
GLAT Glass 144.61 12 ePKPdf PKPdf 02 49 36.2 -2.0
ELN Prospectdale 144.62 0 ePKPdf PKPdf 02 49 35.5 -2.7
UTMT University of 144.62 12 ePKPdf PKPdf 02 49 36.5 -1.7
UTMT e 02 49 47.3
BLA Blacksburg 144.63 0 ePKIKP PKPdf 02 49 35.6 -2.7
TXAR Lajitas Array 144.69 37 PKP PKPdf 02 49 38.4 -0.2
comp=Z,146nm,0.6s,baz=281,slow=1.2,SNR=843
TXAR Lajitas Array 144.69 37 PKIKP PKPdf 02 49 38.4 -0.2
TXAR pmax pmax
comp=Z,146nm,0.6s
TXAR Lajitas Array 144.69 37 PKP PKPdf 02 49 38.4 -0.2
GNAR Gosnell 144.73 14 ePKPdf PKPdf 02 49 36.8 -1.7
HALT Halls 144.94 13 ePKPdf PKPdf 02 49 37.0 -1.9
CFAA Coronel Fontan 144.95 198 PP PP 02 53 01.0 +5.6
comp=Z,0.6nm,1.0s,baz=210,slow=12,SNR=1.4
HBAR Harrisburg 144.97 15 ePKPdf PKPdf 02 49 37.3 -1.6
WVT Waverly 145.03 11 ePKIKP PKPdf 02 49 37.5 -1.5
MIAR Mount Ida 145.06 19 ePKIKP PKPdf 02 49 37.9 -1.2
TZTN Tazewell 145.18 4 ePKPbc PKPbc 02 49 38.1 -0.7
UALR University of 145.24 17 ePKPbc PKPbc 02 49 38.2 -0.8
MET Memphis--Engin 145.56 14 ePKPdf PKPdf 02 49 38.9 -1.0
MET ePKPbc PKPbc 02 49 40.3 +0.2
JCT Junction City 145.96 31 ePKP2 PKPab 02 49 41.1 -0.8
TKL Tuckaleechee C 146.04 5 ePKP2 PKPab 02 49 40.3 -1.7
BBSR BB Station 146.07 336 ePKPbc PKPbc 02 49 41.3 -0.4
CPCT Cooper Cave 146.18 6 ePKPbc PKPbc 02 49 41.4 -0.5
SWET Sewanee 146.23 8 ePKPbc PKPbc 02 49 40.6 -1.5
OXF Oxford 146.26 13 ePKP2 PKPab 02 49 40.5 -2.4
CNNC Cliffs of the 146.52 356 ePKPbc PKPbc 02 49 42.0 -1.0
MAIG Mazatlaan 146.92 48 *eP* PKPdf 02 49 42.9 +0.4
TLL Tololo Astrono 147.04 195 *eP* PKPbc 02 49 44.6 0.0
NATX Nacogdoches 147.19 23 ePKPbc PKPbc 02 49 44.2 -0.7
JSC Jenkinsville 147.55 1 ePKIKP PKPdf 02 49 43.1 -0.2
JSC e 02 49 45.4
LCO Las Campanas 148.10 196 ePKPbc PKPbc 02 49 48.6 +1.0
VBMS Vicksburg 148.16 16 ePKPdf PKPdf 02 49 44.8 +0.4
VBMS ePKPbc PKPbc 02 49 47.5 -0.1
LRAL Lakeview Retre 148.19 11 ePKPdf PKPdf 02 49 43.9 -0.6
LRAL ePKPbc PKPbc 02 49 46.5 -1.2
HKT Hockley 148.29 26 ePKIKP PKPdf 02 49 44.4 -0.2
HKT e 02 49 48.2
GOGA Godfrey 148.30 5 ePKIKP PKPdf 02 49 44.2 -0.4
GOGA e 02 49 47.2
COW Cow Castle Cre 148.45 0 ePKPbc PKPbc 02 49 47.9 -0.4
NHSC New Hope 148.73 360 ePKPdf PKPdf 02 49 45.8 +0.5
NHSC ePKPbc PKPbc 02 49 49.0 0.0
KVTX Kingsville 149.30 31 ePKPbc PKPbc 02 49 51.7 +1.0
BRAL Brewton 150.15 12 ePKPbc PKPbc 02 49 52.5 -0.1
SFJM Santa Fe 151.05 48 *i* P PKPbc 02 49 55.5 +0.4
MOIG Morelia 152.92 47 *i* P PKPdf 02 49 52.6 +0.5
LVC Limon Verde 153.38 204 ePKPdf PKPdf 02 49 54.1 +1.4
LVC ePKPbc PKPbc 02 50 01.1 +0.9
LVC ePKPab PKPab 02 50 12.2 0.0
DWPF Disney 153.69 2 ePKPdf PKPdf 02 49 53.5 +0.5
DWPF ePKPbc PKPbc 02 50 00.9 +0.1
DWPF ePKPab PKPab 02 50 13.4 +0.1
ZIIG Zihuatanejo 153.95 51 *i* P PKPbc 02 49 59.2 -2.4
SIV San Ignacio 154.05 227 PKP PKPdf 02 49 53.9 +0.1
comp=Z,3.2nm,0.7s
SIV PKPbc PKPbc 02 50 01.4 -0.4
PTVM Pico Tres Padr 154.46 45 *eP* PKPdf 02 49 52.3 -2.0
IIO Organos 154.74 44 *eP* PKPdf 02 49 51.9 -2.8
PPM Popocatepetl 155.16 45 *i* PKIKP PKPdf 02 50 04.6 +9.3
CAIG El Cayaco 155.20 51 *i* P PKPdf 02 49 55.4 0.0

ACX	**Acapulco**	**155.58**	**51**	*i* P		PKPab	02 50 23.4	+1.7
PNIG	**Pinotepa**	**157.23**	**49**	*i* P		PKPdf	02 50 00.9	+2.9
HUMP	**Col San Antoni**	**158.27**	**320**	*e*PKPdf		PKPdf	02 49 59.7	+0.4
HUMP				*e*PKPab		PKPab	02 50 33.2	0.0
LPAZ	**La Paz**	**158.42**	**214**	PKP		PKPdf	02 50 00.3	+0.8
	comp=Z,7.3nm,1.1s,baz=134,slow=4.3,SNR=3.5							
LPAZ				PKPab		PKPab	02 50 33.8	-0.1
	comp=Z,13nm,1.0s,baz=62,slow=5.2,SNR=5.0							
LPAZ				PP		PP	02 54 12.4	-0.5
	comp=Z,0.9nm,0.7s,baz=78,slow=0.6,SNR=1.7							
LPAZ	**La Paz**	**158.42**	**214**	PKIKP		PKPdf	02 50 00.3	+0.8
LPAZ							02 50 33.8	
LPAZ							02 54 12.4	
LPAZ				pmax	pmax			
	comp=Z,7.0nm,1.1s							
LPAZ				pmax	pmax			
	comp=Z,13nm,1.0s							
LPAZ				pmax	pmax			
	comp=Z,1.0nm,0.7s							
LPAZ	**La Paz**	**158.42**	**214**	*e*PKPdf		PKPdf	02 50 00.2	+0.7
LPAZ				*e*PKPab		PKPab	02 50 34.4	+0.5
SJG	**San Juan**	**158.48**	**320**	PKP		PKPdf	02 49 59.5	0.0
	comp=Z,2.9nm,0.4s,baz=343,slow=22,SNR=2.6							
SJG				PP		PP	02 54 11.5	-2.1
	comp=Z,2.4nm,0.3s,baz=344,slow=18,SNR=2.3							
SJG	**San Juan**	**158.48**	**320**	PKIKP		PKPdf	02 49 59.5	-0.1
SJG							02 54 11.5	
SJG				pmax	pmax			
	comp=Z,3.0nm,0.4s							
SJG				pmax	pmax			
	comp=Z,2.0nm,0.3s							
CMIG	**Matias Romero**	**159.09**	**42**	*i* P		PKPdf	02 49 59.9	-0.4
CCIG	**Comitan**	**161.45**	**38**	*i* P		PKPdf	02 50 03.5	+0.6
PCRV	**Puerto La Cruz**	**162.19**	**299**	PKP		PKPdf	02 50 02.0	-1.8
	comp=Z,15nm,1.0s,baz=221,slow=5.1,SNR=2.1							
TGUH	**Tegucigalpa,Un**	**165.95**	**29**	*e*PKPdf		PKPdf	02 50 05.8	-1.4
TGUH				*e*PKPab		PKPab	02 51 06.3	-0.5
SDV	**Santo Domingo**	**167.91**	**307**	PKP		PKPdf	02 50 07.1	-1.5
	comp=Z,2.2nm,0.3s,baz=207,slow=20,SNR=6.0							
SDV				PKPab		PKPab	02 51 16.6	+0.8
	comp=Z,3.1nm,0.3s,baz=19,slow=24,SNR=4.7							
SDV				PP		PP	02 55 02.4	-1.6
	comp=Z,5.1nm,0.7s,baz=199,slow=19,SNR=3.2							
SDV	**Santo Domingo**	**167.91**	**307**	*e*PKPdf		PKPdf	02 50 07.8	-0.8
SDV				*e*PKPab		PKPab	02 51 15.6	-0.1
ATAH	**Atahualpa**	**171.15**	**193**	PKPab		PKPab	02 51 27.8	-2.0
	comp=Z,6.6nm,0.7s,baz=51,slow=19,SNR=2.9							
ATAH				PP		PP	02 55 18.9	+0.1
	comp=Z,2.3nm,0.4s,baz=151,slow=21,SNR=4.3							
BCIP	**Isla Barro Col**	**172.53**	**356**	*e*PKPdf		PKPdf	02 50 10.6	-0.6
ROSC	**El Rosal**	**173.15**	**298**	PKP		PKPdf	02 50 10.0	-1.5
	comp=Z,6.6nm,0.4s,baz=101,slow=21,SNR=15							
ROSC	**El Rosal**	**173.15**	**298**	*e*PKPdf		PKPdf	02 50 11.1	-0.5
OTAV	**Otavalo**	**177.58**	**234**	*e*PKPdf		PKPdf	02 50 12.6	-0.2

CASC 13 02:35:27.8±2.2, 1103N×8673W, h6km±11km, MD4.0, ML2.8, 8C-3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**1.04**	**24**	*e*P		Pg	02 35 45.5	-2.2
APON	**Apoyo**	**1.09**	**36**↑	*e*P		Pg	02 35 48.5	-0.4
APON				AML		AML	02 36 28.1	
	comp=Z,207nm,0.5s							
MASN	**Masaya**	**1.11**	**31**	*e*P		Pg	02 35 48.7	-0.4
TICN	**Ticuantepe**	**1.11**	**26**	*e*P		Pg	02 35 49.1	0.0
TICN				*e*S		Sg	02 36 04.0	+0.5
COPN	**Copaltepe**	**1.15**	**7**↓	*e*P		Pg	02 35 49.4	-0.5
XAVN	**Gruta Xavier**	**1.18**	**20**↑	*e*P		Pg	02 35 49.6	-0.8
CSAN		**1.18**	**15**↓	*e*P		Pg	02 35 49.4	-1.1
CSAN				*e*S		Sg	02 36 05.8	-0.1
TISN	**Laguna Tiscapa**	**1.19**	**22**↓	*e*P		Pg	02 35 49.8	-0.9
MGAN	**Managua**	**1.21**	**23**↑	*e*P		Pg	02 35 49.9	-1.0
CONN	**Concepcion**	**1.21**	**64**↑	*e*P		Pg	02 35 49.4	-1.6
WILN	**Americas 2**	**1.24**	**25**	*e*P		Pg	02 35 50.0	-1.7
APYN	**Apoyeque**	**1.25**	**17**	*e*P		Pg	02 35 50.9	-1.0
APYN				*e*S		Sg	02 36 08.8	+0.7
MOMN	**Momotombo**	**1.38**	**8**	*e*P		Pn	02 35 52.8	-0.9
LEON	**Leon**	**1.39**	**353**↑	*e*P		Pn	02 35 52.9	-0.9
VCR	**Vista de Mar**	**1.41**	**130**	*e*P		Pn	02 35 54.8	+0.8
HUEN		**1.41**	**23**↑	*e*P		Pn	02 35 52.6	-1.5
CNGN	**Cerro Negro**	**1.46**	**1**↑	*e*P		Pn	02 35 53.6	-1.2
TEL3	**Telica 3**	**1.54**	**356**↑	*e*P		Pn	02 35 55.0	-0.9
2RIO	**Dos Rios de Up**	**1.55**	**109**	*i* P		Pn	02 35 50.3	-5.7
TELN	**Telica**	**1.57**	**356**	*e*P		Pn	02 35 55.5	-0.7
JCR	**Jicaral**	**1.98**	**126**	*e*P		Pn	02 35 59.8	-2.1
CGA2	**Cerro Gallo 2**	**2.45**	**114**	*e*P		Pn	02 36 08.4	0.0
PRS1	**Puriscal**	**2.60**	**113**	*e*P		Pn	02 36 11.4	+0.9
LCR2	**La Lucha 2**	**2.97**	**115**	*e*P		Pn	02 36 17.2	+1.6
CHI2		**14.34**	**115**	*e*P			02 35 56.3	
CHI2				*e*S			02 36 18.5	

*ISCJB **13** 02:35:33.0±0.2, 3185N±002×3171E±002, h10km, Error ellipse: s-maj=2.8km s-min=2.2km az=170.9*
*CSEM **13** 02:35:33.4±0.1, 3182N×3158E, h10km, Mw3.1, Error ellipse: s-maj=3.0km s-min=1.6km az=95.0*
*HLW **13** 02:35:37.0, 3182N×3165E, h22km, Mb4.0*
*GII **13** 02:35:39.5±0.8, 3181N×3180E, h32km±1km, ML3.1/8*
*NIC **13** 02:35:39.2±0.3, 3208N×3126E, h55km, mb4.2, ML3.8, MW3.1*

ISC 13 02:35:34.5±0.2, 3181N±002×3173E±002, h10km, n97, σ1§11/121, 14C-12D, Egypt

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
MANS	**Anshas**	**0.87**	**192**	P		**Sg**	**02 36 01.6**	**-1.0**
AANS		**1.54**	**191**↑	*i*P		**Pn**	**02 36 01.6**	**-0.4**
AANS				S		**Sn**	**02 36 20.2**	**-1.9**
AMAG	**Maghara**	**1.72**	**132**↓	*i*P		**Pn**	**02 36 05.2**	**+0.7**
AMAG				S		**Sn**	**02 36 25.5**	**-1.0**
RSH		**1.91**	**116**	P		**Pn**	**02 36 08.1**	**+1.1**
SQR		**1.98**	**194**↑	*e*P		**Pn**	**02 36 08.2**	**+0.2**
AYT	**Al 'Ayyat**	**2.16**	**193**↓	*i*P		**Pn**	**02 36 10.9**	**+0.4**
HMYD	**Mayadein**	**2.16**	**202**	↑P		**Pn**	**02 36 10.7**	**+0.1**
HMYD	**Mayadein**	**2.16**	**202**	P		**Pn**	**02 36 10.6**	**+0.1**
SUZ		**2.18**	**154**↑	*e*P		**Pn**	**02 36 12.1**	**+1.3**
SUZ		**2.18**	**154**	P		**Pn**	**02 36 12.1**	**+1.3**
	16µm,0.1s							
HSAF	**As Saff**	**2.19**	**184**↑	*e*P		**Pn**	**02 36 11.3**	**+0.4**
FYM	**Al Fayyum**	**2.19**	**196**↑	*e*P		**Pn**	**02 36 10.8**	**-0.1**
GLL	**Jalalah**	**2.23**	**180**↓	*e*P		**Pn**	**02 36 11.6**	**+0.2**
HNAT	**Natroun**	**2.37**	**204**↓	*i*P		**Pn**	**02 36 13.5**	**0.0**
KZIT	**Kziot**	**2.46**	**111**	Pn		**Pn**	**02 36 15.6**	**+1.1**
KZIT				Sn		**Sn**	**02 36 43.2**	**-1.4**
ZAF		**2.62**	**164**	↓P		**Pn**	**02 36 17.4**	**+0.6**
ZNM		**2.62**	**158**	↓P		**Pn**	**02 36 18.3**	**+1.4**
RTMI	**Retamim**	**2.64**	**106**	Pn		**Pn**	**02 36 17.9**	**+0.7**
RTMI				Sn		**Sn**	**02 36 47.5**	**-1.7**
HNKL	**Nakhl**	**2.70**	**134**↓	*i*P		**Pn**	**02 36 18.8**	**+0.9**
SLTI	**Sal'it**	**2.84**	**81**	Pn		**Pn**	**02 36 20.2**	**+0.3**
SLTI				Sn		**Sn**	**02 36 52.4**	**-1.8**
RMNI	**Mount Ramon**	**2.87**	**114**	Pn		**Pn**	**02 36 20.8**	**+0.6**
OFRI	**'Ofer**	**2.88**	**73**	Pn		**Pn**	**02 36 20.1**	**-0.3**
HBNS	**Bani Suwayf**	**2.89**	**189**↓	*i*P		**Pn**	**02 36 20.6**	**+0.1**
YTIR	**Yattir**	**2.92**	**98**	Pn		**Pn**	**02 36 21.9**	**+0.9**
KRMI	**Paran Flat**	**3.08**	**123**	Pn		**Pn**	**02 36 23.6**	**+0.5**
KRMI				Sn		**Sn**	**02 36 58.3**	**-1.7**
SZAC	**Souni-Zanaja**	**3.09**	**18**	P		**Pn**	**02 36 25.1**	**+1.8**
PPCY	**Paphos**	**3.11**	**9**↑	*i*P		**Pn**	**02 36 23.7**	**+0.2**
DSI	**Dead Sea**	**3.12**	**93**	Pn		**Pn**	**02 36 24.6**	**+0.8**
DSI				Sn		**Sn**	**02 37 00.2**	**-0.8**
MZDA	**Masada**	**3.14**	**98**	Pn		**Pn**	**02 36 24.7**	**+0.7**
MZDA				Sn		**Sn**	**02 37 01.0**	**-0.6**
PRNI	**Paran**	**3.17**	**117**	Pn		**Pn**	**02 36 24.9**	**+0.6**
PRNI				Sn		**Sn**	**02 37 00.2**	**-2.0**
HNTI	**Hanita**	**3.18**	**66**	Pn		**Pn**	**02 36 25.0**	**+0.5**
HNTI				Sn		**Sn**	**02 37 00.2**	**-2.2**
MMLI	**Mount Malkishu**	**3.19**	**78**	Pn		**Pn**	**02 36 25.2**	**+0.5**
MMLI				Sn		**Sn**	**02 37 01.5**	**-1.3**
ZFRI	**Zfri**	**3.21**	**112**	Pn		**Pn**	**02 36 25.3**	**+0.4**
ZFRI				Sn		**Sn**	**02 37 00.9**	**-2.4**
AKMC	**Akamas**	**3.25**	**9**	P		**Pn**	**02 36 25.9**	**+0.5**
HMDT	**Nahal Hemdat**	**3.25**	**81**	Pn		**Pn**	**02 36 26.4**	**+0.8**
HMDT				Sn		**Sn**	**02 37 02.9**	**-1.4**
MMA0	**Mount Meron ar**	**3.33**	**68**	Pn		**Pn**	**02 36 27.0**	**+0.4**
MMA0				Sn		**Sn**	**02 37 04.2**	**-2.1**
HRFI	**Mount Harif**	**3.35**	**121**	Pn		**Pn**	**02 36 27.5**	**+0.7**
HRFI				Sn		**Sn**	**02 37 05.3**	**-1.4**
HRDS	**Abu Rudays**	**3.38**	**156**↑	*e*P		**Pn**	**02 36 27.9**	**+0.7**
MBRI	**Mt Berech**	**3.40**	**125**	Pn		**Pn**	**02 36 27.9**	**+0.4**
MBRI				Sn		**Sn**	**02 37 06.1**	**-1.8**
ALFC	**Alevga**	**3.41**	**12**	↓P		**Pn**	**02 36 28.5**	**+0.8**
	5.5nm,0.2s							
ALFC				S		**Sn**	**02 37 07.3**	**-1.0**
CSS	**Prodhromos**	**3.42**	**23**	P		**Pn**	**02 36 29.3**	**+1.6**
	2.0nm,0.3s							
CSS				S		**Sn**	**02 37 09.4**	**+1.1**
LEF	**Lefka**	**3.44**	**16**	*e*PN		**Pn**	**02 36 29.0**	**+0.9**
EIL	**Elat**	**3.50**	**127**	Pn		**Pn**	**02 36 29.4**	**+0.4**
AQBJ	**Aqaba**	**3.53**	**125**	Pn		**Pn**	**02 36 30.5**	**+1.1**
MAMC	**Mammari**	**3.57**	**20**	P		**Pn**	**02 36 32.0**	**+2.1**
KSDI	**Kefar Szold**	**3.59**	**66**	Pn		**Pn**	**02 36 31.1**	**+0.9**
KSDI				Sn		**Sn**	**02 37 11.4**	**-1.4**
KSHT	**Keshet**	**3.65**	**70**	Pn		**Pn**	**02 36 32.3**	**+1.4**
GRB	**Gharib**	**3.65**	**165**↑	*i*P		**Pn**	**02 36 31.6**	**+0.6**
HBST	**Basata**	**3.66**	**134**	↓P		**Pn**	**02 36 32.1**	**+1.0**
HRI	**Mount Hermon**	**3.68**	**66**	Pn		**Pn**	**02 36 32.7**	**+1.3**
PHNC	**Paralimni**	**3.72**	**31**	P		**Pn**	**02 36 33.3**	**+1.4**
PHNC				S		**Sn**	**02 37 14.5**	**-1.3**
LFK	**Lefkose**	**3.77**	**23**	*e*PN		**Pn**	**02 36 34.1**	**+1.4**
HQLS		**3.81**	**130**	P		**Pn**	**02 36 34.1**	**+0.9**
HKAT	**Jabal Katrina**	**3.82**	**149**↑	*i*P		**Pn**	**02 36 34.3**	**+1.0**
HMAT	**Matruh**	**4.02**	**261**↓	*i*P		**Pn**	**02 36 34.5**	**-1.6**
AWBH		**4.25**	**216**↑	*e*P		**Pn**	**02 36 39.0**	**-0.3**
JLOS		**4.47**	**132**	P		**Pn**	**02 36 43.0**	**+0.7**
JLOS		**4.47**	**132**	P		**Pn**	**02 36 43.0**	**+0.7**
JLOS				S		**Sn**	**02 37 30.4**	**-4.0**
IKL	**Isikli**	**4.70**	**20**	*e*PN		**Pn**	**02 36 46.7**	**+1.3**
ELL	**Elmali**	**5.15**	**343**	*e*PN		**Pn**	**02 36 51.3**	**-0.2**
ANTB	**Antalya**	**5.15**	**350**	*e*PN		**Pn**	**02 36 51.6**	**0.0**
MEST	**Erdemli**	**5.17**	**22**	*i* P		**Pn**	**02 36 53.8**	**+2.0**
MEST	**Erdemli**	**5.17**	**22**	*i* P		**Pn**	**02 36 53.8**	**+2.0**
MEST				*i* S		**Sn**	**02 37 50.2**	**-1.3**
HDMB	**Hadim**	**5.18**	**7**	*e*PN		**Pn**	**02 36 52.9**	**+0.9**
TBKS	**Tabuk**	**5.50**	**129**	P		**Pn**	**02 36 57.4**	**+1.0**
HFRF	**Wahat Farafira**	**5.52**	**214**↓	*e*P		**Pn**	**02 36 56.1**	**-0.6**
MERS	**Mersin**	**5.55**	**24**	*e*PN		**Pn**	**02 36 57.9**	**+0.9**
SLUM		**5.57**	**268**	↑P		**Pn**	**02 36 55.2**	**-2.1**
HSFG		**5.57**	**159**↑	*e*P		**Pn**	**02 36 58.3**	**+0.9**
HTY	**Hatay**	**5.65**	**39**	*e*PN		**Pn**	**02 36 59.4**	**+1.0**
TURN	**Turunc**	**5.67**	**334**	*i* P		**Pn**	**02 36 58.4**	**-0.4**
TURN	**Turunc**	**5.67**	**334**	*i* P		**Pn**	**02 36 58.3**	**-0.4**
GOLH	**Golhisar**	**5.70**	**342**	*i* P		**Pn**	**02 37 00.1**	**+1.0**
GOLH	**Golhisar**	**5.70**	**342**	*i* P		**Pn**	**02 37 00.1**	**+1.0**
GOLH				*i* S		**Sn**	**02 38 00.6**	**-4.0**
BCK	**Bucak**	**5.71**	**351**	*e*PN		**Pn**	**02 36 59.4**	**+0.1**
DBAS	**Duba**	**5.89**	**140**	S		**Sn**	**02 38 03.8**	**-5.6**
DBAS	**Duba**	**5.89**	**140**	P		**Pn**	**02 37 02.1**	**+0.4**
SWA2		**5.99**	**246**↑	*e*P		**Pn**	**02 37 01.6**	**-1.5**
YER	**Yerkesik**	**6.02**	**333**	*e*PN		**Pn**	**02 37 02.5**	**-1.1**
KARA	**Karaisali**	**6.09**	**26**	*e*PN		**Pn**	**02 37 05.5**	**+1.0**
KONT	**Konya--Tatoy**	**6.14**	**5**	*e*PN		**Pn**	**02 37 04.5**	**-0.7**
TKTP	**Tekketepe**	**6.32**	**350**	*i* P		**Pn**	**02 37 08.3**	**+0.7**
BDRM	**Kayabasi**	**6.32**	**327**	*i* P		**Pn**	**02 37 05.8**	**-1.9**
BODT	**Bodrum**	**6.38**	**326**	*e*PN		**Pn**	**02 37 05.8**	**-2.7**
KOZT	**Kozan**	**6.58**	**30**	*e*PN		**Pn**	**02 37 11.8**	**+0.5**
AYDN	**Tasoluk**	**6.64**	**333**	*i* P		**Pn**	**02 37 10.9**	**-1.1**
KDHN	**Kadinhani**	**6.70**	**3**	*i* P		**Pn**	**02 37 13.6**	**+0.7**
KDHN	**Kadinhani**	**6.70**	**3**	*i* P		**Pn**	**02 37 13.6**	**+0.7**
KDHN				*i* S		**Sn**	**02 38 25.9**	**-3.4**
NIG	**Nigde**	**6.71**	**20**	*e*PN		**Pn**	**02 37 13.3**	**+0.3**
SHUT	**Suhut-Afyon**	**6.79**	**352**	*e*PN		**Pn**	**02 37 13.3**	**-0.8**
GCAM	**G?zelcaml?**	**6.94**	**329**	*i* P		**Pn**	**02 37 15.2**	**-1.0**
GCAM	**G?zelcaml?**	**6.94**	**329**	*i* P		**Pn**	**02 37 15.1**	**-1.1**
KULA	**Kula-Manisa**	**7.14**	**340**	*e*PN		**Pn**	**02 37 17.2**	**-1.7**
ALT	**Altintas**	**7.35**	**350**	*e*PN		**Pn**	**02 37 21.0**	**-0.8**
IZM	**Izmir**	**7.52**	**332**	*e*P		**Pn**	**02 37 22.0**	**-2.1**
DEMI	**Demirci**	**7.62**	**342**	*i* P		**Pn**	**02 37 24.7**	**-0.8**
DURS	**Dursunbey**	**8.21**	**342**	*i* P		**Pn**	**02 37 32.9**	**-0.7**

*IDC **13** 02:43:37.6±2.3, 197Sx9946E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.8/21, mbtmp4.0/7, Error ellipse: s-maj=96.2km s-min=23.2km az=54.0*
*ISCJB **13** 02:43:40.1±2.3, 20S±04×994E±05, h33km, mb4.0/8, Error ellipse: s-maj=89.8km s-min=17.3km az=142.2*
*NEIC **13** 02:43:42.9±1.3, 192Sx9955E, h35km, mb4.1/1, Error ellipse: s-maj=55.7km s-min=12.0km az=53.0*

ISC 13 02:43:42.7±2.3, 20S±04×995E±05, h35km, n9, σ0§32/8, mb4.0/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.45**	**120**	P		**P**	**02 51 01.4**	**-0.1**
	1.1nm,0.5s,mb3.9,baz=303,slow=9.2,SNR=10							
WRA				PcP		PcP	02 53 15.6	+1.2
	0.4nm,0.6s,baz=309,slow=2.4,SNR=4.9							
WRAB	**Tennant Creek**	**38.45**	**120**	*e*P		**P**	**02 51 01.7**	**+0.2**
	1.9nm,0.6s,mb4.0							
SONM	**Songino Array**	**49.96**	**6**	P		**P**	**02 52 33.4**	**+0.2**
	0.7nm,0.6s,mb3.9,baz=180,slow=12,SNR=3.4							
MKAR	**Makanchi Array**	**50.86**	**345**	P		**P**	**02 52 40.6**	**+0.6**
	1.7nm,0.6s,mb4.2,baz=151,slow=8.1,SNR=8.5							
KURK	**Kurchatov**	**55.43**	**344**	P		**P**	**02 53 13.3**	**-0.3**
	0.6nm,0.5s,mb3.9,baz=168,slow=7.1,SNR=3.4							
ZALV	**Zalesovo Beam**	**57.04**	**350**	P		**P**	**02 53 25.1**	**+0.1**
	3.1nm,0.5s,mb4.6,baz=176,slow=4.8,SNR=6.9							
BVAR	**Borovoye Array**	**59.98**	**340**	P		**P**	**02 53 45.1**	**-0.4**
	0.8nm,0.5s,mb4.0,baz=140,slow=7.5,SNR=3.6							
PETK	**Petropavlovsk-**	**73.12**	**32**	P		**P**	**02 55 09.1**	**-0.3**
	0.6nm,0.5s,mb3.8,baz=212,slow=1.4,SNR=2.7							
TXAR	**Lajitas Array**	**144.98**	**37**	PKPbc		PKPdf	03 03 17.4	+0.5
	1.1nm,0.5s,baz=190,slow=0.9,SNR=26							

*BJI **13** 02:48:16.3, 298Sx9953E, h11km, mB5.1, mb4.9*
*IDC **13** 02:48:22.3±0.8, 2.19Sx9941E, h0km, mb4.5/15, mb1 4.6/15, mb1mx4.4/24, mbtmp4.5/15, Error ellipse: s-maj=29.8km s-min=13.5km az=55.0*
*ISCJB **13** 02:48:24.8±1.8, 226S±008×993E±01, h36km±13km, mb4.7/18, Error ellipse: s-maj=22.6km s-min=8.2km az=148.0*
*NEIC **13** 02:48:25.5±6.4, 226Sx9942E, h22km±43km, mb4.8/9, Error ellipse: s-maj=24.3km s-min=7.2km az=56.0*
*DJA **13** 02:48:38, 199Sx100.12E, h59km, mb4.9/5*

ISC 13 02:48:27.2±1.4, 222S±008×994E±01, h35km±11km, n47, σ0§95/42, mb4.7/18, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**2.02**	**30**	P		**Pn**	**02 48 58.6**	**-0.3**
	0.0nm,0.0s							
KRJI	**Kerinci**	**2.08**	**86**	P		**Pn**	**02 49 00.0**	**+0.4**
	0.0nm,0.0s							
RGRI	**Rengat**	**3.49**	**58**	P		**Pn**	**02 49 19.2**	**+0.2**
	0.0nm,0.0s							
DSRI	**Dabo**	**5.47**	**72**	P		**Pn**	**02 49 46.6**	**+0.3**
	0.0nm,0.0s							
KLI	**Kotabumi**	**6.06**	**116**	P		**Pn**	**02 49 55.3**	**+0.9**
	0.0nm,0.0s							
DBJI	**Dramaga**	**8.51**	**121**	P		**Pn**	**02 50 28.7**	**+0.7**
	0.0nm,0.0s							
CBJI	**Citeko**	**8.53**	**119**	P		**Pn**	**02 50 31.4**	**+3.1**
	0.0nm,0.0s							
BSI	**Banda Aceh**	**8.69**	**332**	P		**Pn**	**02 50 28.1**	**-2.3**
	0.0nm,0.0s							
LEM	**Lembang**	**9.39**	**119**	P		**Pn**	**02 50 40.4**	**+0.2**
	0.0nm,0.0s							
SJI	**Sawahan**	**13.49**	**114**	P		**Pn**	**02 51 34.5**	**-1.8**
	0.0nm,0.0s							
KKM	**Kota Kinabalu**	**18.71**	**64**	*e*P		**Pn**	**02 52 42.5**	**-0.9**
KAPI	**Kappang**	**20.52**	**98**	P		**P**	**02 53 00.7**	**-1.9**
	20nm,0.7s,baz=203,slow=15,SNR=7.8							
KAPI	**Kappang**	**20.52**	**98**	*e*P		**P**	**02 53 00.9**	**-1.7**
	41nm,1.1s							
CMAR	**Chiang Mai Arr**	**20.55**	**359**	P		**P**	**02 53 02.4**	**-0.5**
	3.0nm,0.4s,baz=189,slow=10,SNR=12							
CHTO	**Chiang Mai**	**20.91**	**359**	*e*P		**P**	**02 53 09.2**	**+2.5**
	12nm,1.0s							
KDI	**Kendari**	**23.27**	**95**	P		**P**	**02 53 31.3**	**-0.7**
	0.0nm,0.0s							
FITZ	**Fitzroy Crossi**	**30.20**	**123**	P		**P**	**02 54 34.6**	**0.0**
	7.2nm,0.9s,mb4.4,baz=239,slow=3.7,SNR=9.3							
FITZ	**Fitzroy Crossi**	**30.20**	**123**	*e*P		**P**	**02 54 34.5**	**-0.1**
	15nm,1.0s,mb4.7							
YHNB	**Yeheng**	**34.21**	**37**	*e*P		**P**	**02 55 09.6**	**0.0**
	19nm,0.9s,mb5.0							
WRA	**Warramunga Arr**	**38.41**	**120**	P		**P**	**02 55 45.1**	**-0.5**
	6.5nm,0.6s,mb4.6,baz=303,slow=9.1,SNR=43							
WRAB	**Tennant Creek**	**38.42**	**120**	*e*P		**P**	**02 55 45.7**	**0.0**
	7.4nm,0.6s,mb4.6							
WRAB				*e*pP		pP	02 55 55.8	-0.2
WB2	**Warramunga Arr**	**38.42**	**120**	*e*P		**P**	**02 55 44.7**	**-1.0**
GTA	**Gaotai**	**41.43**	**1**	P		**P**	**02 56 11.2**	**+0.8**
GTA				AP		pP	02 56 14.7	-6.0
GTA				XP		sP	02 56 16.3	-8.6
GTA				AMB		AMB		
	comp=Z,15nm,0.9s,mb4.6							
KSRS	**Korea Array**	**47.52**	**31**	P		**P**	**02 56 59.1**	**0.0**
	comp=Z,8.7nm,1.0s,mb4.7,baz=223,slow=8.7,SNR=20							
KSRS				PcP		PcP	02 58 28.7	-0.1
	comp=Z,0.4nm,0.3s,baz=35,slow=27,SNR=3.1							
CTA	**Charters Tower**	**49.06**	**115**	P		**P**	**02 57 11.6**	**+0.2**
	comp=Z,7.4nm,0.8s,mb4.8,baz=281,slow=10,SNR=10							
CTAO	**Charters Tower**	**49.06**	**115**	*e*P		**P**	**02 57 11.2**	**-0.1**
	comp=Z,11nm,1.3s,mb4.7							
STKA	**Stephens Creek**	**49.47**	**131**	*e*P		**P**	**02 57 15.2**	**+1.0**
	comp=Z,5.7nm,0.7s,mb4.7							
STKA	**Stephens Creek**	**49.47**	**131**	P		**P**	**02 57 15.8**	**+1.6**
	comp=Z,7.0nm,0.7s,mb4.8,baz=301,slow=9.7,SNR=10							
SONM	**Songino Array**	**50.23**	**6**	P		**P**	**02 57 20.8**	**+1.1**
	comp=Z,14nm,0.7s,mb5.1,baz=187,slow=9.1,SNR=76							
SONM				PcP		PcP	02 58 39.3	+0.9
	comp=Z,1.9nm,0.7s,baz=192,slow=4.0,SNR=3.2							
ULN	**Ulaanbaatar**	**50.33**	**7**	*e*P		**P**	**02 57 21.0**	**+0.6**
	comp=Z,13nm,0.8s,mb5.0							
MK31	**Makanchi Array**	**51.08**	**345**	*e*P		**P**	**02 57 26.9**	**+0.8**
MKAR	**Makanchi Array**	**51.08**	**345**	P		**P**	**02 57 27.0**	**+0.9**
	comp=Z,9.7nm,0.7s,mb4.9,baz=149,slow=8.2,SNR=52							
CN2	**Changchun**	**51.44**	**24**	*e*P		**P**	**02 57 28.6**	**-0.2**
CN2				*e*XP		sP	02 57 34.3	-9.3
CN2				AMB		AMB		
	comp=Z,20nm,0.8s,mb5.1							
MJAR	**Matsushiro Arr**	**52.84**	**39**	P		**P**	**02 57 39.2**	**-0.2**
	comp=Z,3.2nm,0.8s,mb4.3,baz=220,slow=7.4,SNR=8.4							
KURK	**Kurchatov**	**55.65**	**344**	P		**P**	**02 57 59.6**	**+0.1**
	comp=Z,4.6nm,0.8s,mb4.5,baz=166,slow=7.5,SNR=9.2							
KURK	**Kurchatov**	**55.65**	**344**	*e*P		**P**	**02 57 59.8**	**+0.2**
	comp=Z,10nm,0.9s,mb4.8							
ZALV	**Zalesovo Beam**	**57.27**	**350**	P		**P**	**02 58 11.8**	**+0.7**
	comp=Z,0.0nm,0.8s,mb5.2,baz=

BATI Baumata 25.13 110 P **P** **02 56 52.7 -4.3**
comp=Z,23nm,0.4s,mb5.0,baz=283,slow=18,SNR=6.5
BATI S **S** **03 01 09.5 -11**
comp=Z,11nm,0.3s,baz=114,slow=23,SNR=3.4
KOD Kodaikanal 25.29 299 *eP* **P** **02 56 58.9 +0.5**
KOD AMb AMB 02 57 11.2
comp=Z,57nm,0.7s,mb5.2
VIS Vishakhapatnam 25.45 321 *eP* **P** **02 57 00.8 +1.0**
VIS AMb AMB 02 57 18.3
comp=Z,97nm,1.2s,mb5.2
KMI Kunming 27.20 6 P **P** **02 57 15.8 +0.3**
KMI AP pP 02 57 19.9 -3.5
KMI XP sP 02 57 21.2 -5.5
KMI PP 02 58 05.3
KMI S **S** **03 01 56.3 +3.5**
KMI XS sS 03 02 01.2 -4.7
KMI SS 03 03 12.0
KMI AMB AMB
comp=Z,27nm,1.0s,mb4.7
KMI LR LR
comp=N,9μm,19.9s,MS5.5
KMI LR LR
comp=E,10μm,19.9s,MS5.5
KMI LR LR
comp=Z,23μm,20.4s,MS5.7
MBWA Marble Bar 27.21 136 *eP* **P** **02 57 16.6 +0.9**
comp=Z,9.3nm,0.8s,mb4.4
IMP Imphal 27.28 348 *eP* **P** **02 57 16.0 -0.3**
IMP *ex* x 03 01 03.0
DAV Davao City (W) 27.38 70 P **P** **02 57 16.9 -0.4**
comp=Z,157nm,0.3s,mb6.0,baz=225,slow=11,SNR=4.3
LBMI Labuha 27.82 87 P **P** **02 57 21.4 +0.1**
comp=Z,308nm,1.3s,mb5.8
HYB Hyderabad 28.46 314 *i* P **P** **02 57 28.0 +1.1**
HYB Hyderabad 28.46 314 *eP* **P** **02 57 28.0 +1.1**
BOK Bokaro 29.02 333 *eP* **P** **02 57 32.9 +1.1**
BOK AMb AMB 02 57 35.3
comp=Z,133nm,1.1s,mb5.6
GYA Guiyang 29.15 13⇑ *i*P **P** **02 57 33.8 +0.9**
GYA PP PP 02 58 30.2 -8.9
GYA PCP PcP 03 00 41.6 +1.3
GYA S **S** **03 02 27.9 +4.3**
GYA SS SS 03 03 57.4 -31
GYA SCP ScP 03 04 18.3 -2.0
GYA SCS ScS 03 08 15.0 +0.5
GYA AMB AMB
comp=Z,140nm,0.9s,mb5.7
GYA LR LR
comp=N,16μm,18.2s,MS5.8
GYA LR LR
comp=E,14μm,17.6s,MS5.8
GYA LR LR
comp=Z,19μm,18.0s,MS5.8
FITZ Fitzroy Crossi 30.01 124⇑ *i*P **P** **02 57 39.6 -1.1**
comp=Z,32nm,1.1s,mb5.0
FITZ Fitzroy Crossi 30.01 124 P **P** **02 57 39.7 -1.0**
comp=Z,23nm,1.1s,mb4.8,baz=304,slow=8.3,SNR=14
FITZ S **S** **03 02 27.9 -9.5**
comp=Z,1.4nm,0.8s,baz=162,slow=22,SNR=1.6
LATR Latur 30.56 313 *eP* **P** **02 57 43.8 -1.6**
NGP Nagpur 30.69 320 *eP* **P** **02 57 45.6 -1.0**
GOA Goa 30.98 305 *ex* x 02 56 32.1
ODAN Odare 31.13 338 *eP* **P** **02 57 51.2 +0.8**
comp=Z,248nm,1.1s,mb6.0
TAPN Taplejung 31.46 339 *eP* **P** **02 57 54.6 +1.3**
comp=Z,363nm,1.0s,mb6.2
RAMN Ramite 31.50 337 *eP* **P** **02 57 54.6 +0.9**
comp=Z,170nm,1.0s,mb5.8
SWI Sorong 31.57 88 P **P** **02 57 53.4 -1.1**
comp=Z,174nm,1.2s,mb5.8
KAD Karad 31.69 308 *eP* **P** **02 57 56.9 +1.3**
JIRN Jiri 32.30 337 *eP* **P** **02 58 02.0 +1.3**
comp=Z,374nm,1.1s,mb6.1
PKI Pulchoki 32.53 336 *eP* **P** **02 58 03.2 +0.4**
PKIN Phulchoki 32.54 336 *eP* **P** **02 58 03.2 +0.4**
LSA Lhasa 32.64 346 P **P** **02 58 04.9 +1.2**
LSA S **S** **03 03 18.3 +0.2**
LSA AMB AMB
comp=Z,80nm,1.0s,mb5.6
LSA Lhasa 32.64 346 *eP* **P** **02 58 05.0 +1.3**
LSA pmax pmax
comp=Z,69nm,0.9s,mb5.6
LSA Lhasa 32.64 346 *eP* **P** **02 58 05.0 +1.4**
comp=Z,69nm,0.9s,mb5.6
GUN Gumba 32.65 337 *eP* **P** **02 58 05.0 +1.3**
comp=Z,217nm,0.8s,mb6.1
POO Poona 32.66 310 *eP* **P** **02 58 05.5 +1.6**
POO AMb AMB 02 58 06.7
comp=Z,48nm,0.9s,mb5.4
DMN Daman 32.69 336 *eP* **P** **02 58 04.6 +0.5**
comp=Z,102nm,1.1s,mb5.7
KKN Kakani 32.78 336 *eP* **P** **02 58 05.6 +0.7**
comp=Z,229nm,1.1s,mb6.0
CD2 Chengdu 33.03 6⇓ *i*P **P** **02 58 05.6 -1.5**
CD2 AP pP 02 58 10.2 -4.8
CD2 XP sP 02 58 12.8 -5.5
CD2 PP PP 02 59 16.8 -5.3
CD2 PCP PcP 03 00 48.3 -2.2
CD2 S **S** **03 03 23.9 -0.3**
CD2 XS sS 03 03 31.2 -6.1
CD2 PCS PcS 03 04 32.7 -3.3
CD2 SS SS 03 05 25.1 -22
CD2 SCS ScS 03 08 30.0 -3.4
CD2 AMB AMB
comp=Z,30nm,1.2s,mb5.1
GKN Gorkha 33.23 335 *eP* **P** **02 58 09.6 +0.7**
comp=Z,295nm,1.2s,mb6.1
KOLN Koldanda 33.48 334 *eP* **P** **02 58 12.0 +1.0**
comp=Z,125nm,1.1s,mb5.7
NACB Ninganchiao 33.67 38 *eP* **P** **02 58 13.4 +0.6**
comp=Z,314nm,1.0s,mb6.2
YHNB Yeheng 33.90 37 *eP* **P** **02 58 14.7 -0.1**
comp=Z,71nm,1.2s,mb5.5
DANN Dangsing 33.91 334 *eP* **P** **02 58 15.5 +0.7**
comp=Z,303nm,1.3s,mb6.1
NWAO Narrogin (SRO) 34.82 154 P **P** **02 58 22.2 -0.5**
comp=Z,25nm,1.1s,mb5.1,baz=308,slow=4.3,SNR=4.2
NWAO Narrogin (SRO) 34.82 154 P **P** **02 58 22.2 -0.5**
WHN Wuhan 35.32 22⇓P **P** **02 58 26.5 -0.4**
PTH Pithoragarh 36.56 331 *eP* **P** **02 58 39.1 +1.5**
XAN Xi'an 36.96 13 P **P** **02 58 38.9 -2.0**
XAN AP pP 02 58 50.5 +1.6
XAN AMB AMB
comp=Z,106nm,1.0s,mb5.6
AJM Ajmer 37.30 321 *eP* **P** **02 58 44.3 +0.3**
AJM AMb AMB 02 58 46.4
comp=Z,46nm,0.7s,mb5.4
LZH Lanzhou 38.16 5⇑P **P** **02 58 50.7 -0.4**
LZH AP pP 02 58 55.6 -3.5
LZH XP sP 02 58 57.9 -4.5
LZH PP PP 03 00 22.0 +3.3
LZH S **S** **03 04 44.1 +1.3**
LZH XS sS 03 04 51.6 -4.5
LZH SS SS 03 07 23.0 -7.4
LZH AMB AMB
comp=Z,139nm,1.4s,mb5.5
LZH AMB AMB
comp=Z,547nm,5.2s
LZH LR LR
comp=N,4μm,14.0s
LZH LR LR
comp=Z,6μm,18.2s,MS5.4
WRA Warramunga Arr 38.21 120 P **P** **02 58 50.5 -1.2**
comp=Z,34nm,0.5s,mb5.3,baz=303,slow=9.0,SNR=135
WRA S **S** **03 04 37.5 -6.5**
comp=Z,4.4nm,0.9s,baz=295,slow=16,SNR=7.1
WRA Warramunga Arr 38.21 120 *i* P **P** **02 58 50.5 -1.2**
WRA pmax pmax
comp=Z,34nm,0.5s
WRAB Tennant Creek 38.22 120 P **P** **02 58 50.0 -1.8**
comp=Z,468nm,0.5s,mb6.5,SNR=43
WRAB Tennant Creek 38.22 120 *eP* **P** **02 58 50.4 -1.4**
WRAB pmax pmax
comp=Z,37nm,0.6s,mb5.3
WRAB Tennant Creek 38.22 120 *eP* **P** **02 58 50.4 -1.4**
comp=Z,37nm,0.6s,mb5.3
WB2 Warramunga Arr 38.22 120⇑ *i*P **P** **02 58 50.5 -1.3**
DDI Dehra Dun 38.27 329 *ex* x 02 58 49.0
DDI *ex* x 03 04 50.0
NJ2 Nanjing 38.50 27 *eP* **P** **02 58 55.1 +1.1**
NJ2 AMB AMB
comp=Z,80nm,1.0s,mb5.4
SSE Sheshan 38.81 30⇓P **P** **02 58 57.2 +0.6**
SSE AMB AMB
comp=Z,91nm,1.4s,mb5.3

SMLA Simla 39.37 329 *eP* **P** **02 59 00.0 -1.3**
SMLA AMb AMB 02 59 16.1
comp=Z,94nm,1.3s,mb5.4
JOW Kunigami 39.82 42 P **P** **02 59 05.8 +0.7**
comp=Z,18nm,0.4s,mb5.1,baz=212,slow=8.3,SNR=23
THN Thein Dam 41.16 329 *ex* x 02 59 29.7
GTA Gaotai 41.28 0⇑P **P** **02 59 16.8 -0.2**
GTA AP pP 02 59 21.5 -3.6
GTA XP sP 02 59 23.9 -4.5
GTA S **S** **03 05 31.5 +2.0**
GTA XS sS 03 05 38.5 -4.4
GTA AMB AMB
comp=Z,41nm,1.7s,mb4.8
GTA LR LR
comp=N,7μm,20.4s,MS5.6
GTA LR LR
comp=E,5μm,20.4s,MS5.6
GTA LR LR
comp=Z,11μm,21.6s,MS5.7
HHC Hu-ho-hao-te 44.07 13⇑P **P** **02 59 39.6 0.0**
HHC S **S** **03 06 12.0 +1.5**
HHC AMB AMB
comp=Z,55nm,0.9s,mb5.3
BJT Baijiatuau 44.52 18 *eP* **P** **02 59 42.8 -0.5**
BJT pmax pmax
comp=Z,78nm,1.3s
BJT Baijiatuau 44.52 18 *eP* **P** **02 59 42.8 -0.5**
comp=Z,78nm,1.3s,mb5.4
BJI Beijing 44.55 18 P **P** **02 59 43.0 -0.4**
BJI AMB AMB
comp=Z,41nm,2.0s,mb4.9
DL2 Dalian 45.51 24⇑ *i*P **P** **02 59 50.4 -0.7**
DL2 AMB AMB
comp=Z,50nm,1.4s,mb5.2
KSH Kashi 46.78 335 *eP* **P** **03 00 01.0 -0.1**
KSH *e*AP pP 03 00 05.1 -4.2
KSH *e*XP sP 03 00 08.0 -4.5
KSH *e*PCP PcP 03 01 34.1 0.0
KSH *e*PP PP 03 01 50.0 -1.4
KSH *e*SCP ScP 03 05 26.0 -0.2
KSH *e*PCS PcS 03 05 28.2 -0.7
KSH *e*S **S** **03 06 48.5 -1.1**
KSH *e*XS sS 03 06 57.0 -6.1
KSH *e*SCS ScS 03 09 52.1 -2.0
KSH *e*SS SS 03 10 09.1 -7.3
KSH LR LR
comp=N,16μm,15.5s,MS6.2
KSH LR LR
comp=E,15μm,14.3s,MS6.2
KSH LR LR
comp=Z,38μm,24.6s
WMQ Urumqi 46.95 348⇑ *i*P **P** **03 00 03.4 +1.1**
WMQ AP pP 03 00 09.8 -0.7
WMQ XP sP 03 00 12.2 -1.6
WMQ PCP PcP 03 01 36.0 +1.4
WMQ PP PP 03 01 54.0 +0.9
WMQ S **S** **03 06 56.0 +4.1**
WMQ SCS ScS 03 09 55.0 0.0
WMQ AMB AMB
comp=Z,299nm,1.1s,mb6.1
WMQ LR LR
comp=N,10μm,20.8s,MS5.9
WMQ LR LR
comp=E,8μm,16.3s,MS5.9
WMQ LR LR
comp=Z,15μm,26.2s
KSRS Korea Array 47.24 31 P **P** **03 00 04.1 -0.6**
comp=Z,39nm,0.9s,mb5.3,baz=224,slow=8.6,SNR=102
KSRS PcP PcP 03 01 36.2 +0.5
comp=Z,6.5nm,1.0s,baz=224,slow=3.3,SNR=4.2
SNY Shenyang 48.77 24⇑P **P** **03 00 15.3 -1.2**
SNY AMB AMB
comp=Z,87nm,1.1s,mb5.7
CTA Charters Tower 48.83 115 *eP* **P** **03 00 15.8 -1.6**
comp=Z,26nm,1.2s,mb5.1
CTA Charters Tower 48.83 115 P **P** **03 00 16.5 -0.9**
comp=Z,27nm,1.0s,mb5.2,baz=287,slow=8.8,SNR=20
CTA Charters Tower 48.83 115 *eP* **P** **03 00 15.8 -1.6**
CTA pmax pmax
comp=Z,26nm,1.2s
CTAO Charters Tower 48.83 115 *eP* **P** **03 00 16.0 -1.4**
CTAO pmax pmax
comp=Z,120nm,1.8s,mb5.6
CTAO Charters Tower 48.83 115 *eP* **P** **03 00 15.9 -1.4**
comp=Z,117nm,1.8s,mb5.6
STKA Stephens Creek 49.32 131 *eP* **P** **03 00 21.1 +0.2**
comp=Z,12nm,0.6s,mb5.1
STKA Stephens Creek 49.32 131 P **P** **03 00 21.3 +0.4**
comp=Z,17nm,0.5s,mb5.3,baz=304,slow=5.7,SNR=36
UCH Uchtor 49.64 335 P **P** **03 00 24.6 +1.5**
SNR=14
UCH Uchtor 49.64 335 *eP* **P** **03 00 24.3 +1.1**
comp=Z,41nm,1.1s,mb5.4
TKM2 Tokmak 2 49.79 337 *eP* **P** **03 00 24.9 +0.6**
TKM2 pmax pmax
comp=Z,130nm,1.0s,mb5.9
TKM2 Tokmak 2 49.79 337 P **P** **03 00 25.2 +0.9**
SNR=68
TKM2 Tokmak 2 49.79 337 *eP* **P** **03 00 24.9 +0.7**
comp=Z,129nm,1.1s,mb5.9
KBK Karagaybulak 49.82 336 P **P** **03 00 26.1 +1.6**
SNR=17
AML Almayashu 49.91 335 P **P** **03 00 26.0 +0.8**
SNR=42
AAK Ala-Archa 49.99 336 P **P** **03 00 26.9 +1.1**
SNR=11
SONM Songino Array 50.05 6 P **P** **03 00 26.5 +0.3**
comp=Z,72nm,0.8s,mb5.7,baz=188,slow=8.5,SNR=190
SONM PcP PcP 03 01 46.4 +0.7
comp=Z,12nm,0.8s,baz=185,slow=4.1,SNR=5.2
SONM S **S** **03 07 35.8 +0.3**
comp=Z,0.2nm,0.4s,baz=123,slow=5.5,SNR=3.1
FRU Bishkek 50.10 336 *eP* **P** **03 00 27.0 +0.3**
FRU pmax pmax
comp=Z,190nm,2.0s,mb5.8
ULN Ulaanbaatar 50.15 6 *eP* **P** **03 00 26.9 0.0**
CHMS Chumysh 50.19 336 P **P** **03 00 27.7 +0.4**
SNR=20
EKS2 Erkin-Say 50.31 335 P **P** **03 00 29.4 +1.2**
SNR=68
EKS2 Erkin-Say 50.31 335 *eP* **P** **03 00 29.2 +0.9**
comp=Z,159nm,0.8s,mb6.1
USP Ospenovka 50.51 336 P **P** **03 00 30.3 +0.5**
SNR=103
MK31 Makanchi Array 51.02 345 *i* P **P** **03 00 33.8 +0.3**
MK31 pmax pmax
comp=Z,146nm,0.8s,mb6.0
MK31 Makanchi Array 51.02 345 *eP* **P** **03 00 33.8 +0.3**
MKAR Makanchi Array 51.02 345 P **P** **03 00 33.9 +0.3**
comp=Z,67nm,0.6s,mb5.7,baz=150,slow=7.7,SNR=190
MKAR S **S** **03 07 47.9 -1.2**
comp=Z,6.5nm,1.2s,baz=169,slow=16,SNR=6.7
MKAR Makanchi Array 51.02 345⇑ *eP* **P** **03 00 33.9 +0.4**
MKAR Makanchi Array 51.02 345 P **P** **03 00 33.9 +0.3**
MKAR S **S** **03 07 47.9 -1.2**
CN2 Changchun 51.17 24 *eP* **P** **03 00 33.7 -1.0**
CN2 *e*XP sP 03 00 39.6 -6.6
CN2 PCP PcP 03 01 49.0 -1.0
CN2 *e*S **S** **03 07 50.7 -0.6**
CN2 AMB AMB
comp=Z,20nm,1.0s,mb5.0
CN2 LR LR
comp=N,6μm,18.0s,MS5.9
CN2 LR LR
comp=E,8μm,18.0s,MS5.9
CN2 LR LR
comp=Z,12μm,19.0s,MS5.9
KK31 Karatay Array 52.09 333 *i* P **P** **03 00 40.9 -0.7**
KK31 pmax pmax
comp=Z,44nm,1.3s,mb5.2
KK31 Karatay Array 52.09 333 *i* P **P** **03 00 40.0 -1.6**
ZAK Zakamensk 52.35 3 *eP* **P** **03 00 42.9 -0.4**
ZAK *e* 03 01 54.4
ZAK pmax pmax
comp=Z,39nm,1.0s,mb5.3
MAJO Matsushiro 52.52 39 *eP* **P** **03 00 43.4 -1.5**
MAJO pmax pmax
comp=Z,70nm,1.2s,mb5.5
MAJO Matsushiro 52.52 39 *eP* **P** **03 00 43.4 -1.6**
comp=Z,70nm,1.3s,mb5.4
MAT Matsushiro 52.52 39 P **P** **03 00 44.2 -0.7**
MJAR Matsushiro Arr 52.52 39 P **P** **03 00 43.8 -1.2**
comp=Z,42nm,1.0s,mb5.3,baz=223,slow=7.6,SNR=63
VLA Vladivostok 53.51 29 *eP* **P** **03 00 50.1 -2.0**
VLA pmax pmax
comp=Z,58nm,1.4s,mb5.3
VLA Vladivostok 53.51 29 *eP* **P** **03 00 50.2 -1.9**
MOY Mondy 53.55 1 *eP* **P** **03 00 52.2 0.0**
MOY pmax pmax
comp=Z,82nm,2.1s,mb5.3
MDJ Mudanjiang 53.59 26 P **P** **03 00 52.1 -0.5**
MDJ AMB AMB
comp=Z,43nm,1.1s,mb5.3
TLY Talaya 53.66 3 P **P** **03 00 53.0 0.0**
comp=Z,403nm,0.7s,mb6.5,SNR=10
TLY Talaya 53.66 3 *eP* **P** **03 00 53.3 +0.3**
TLY pmax pmax
comp=Z,73nm,0.9s,mb5.6
TLY Talaya 53.66 3 *eP* **P** **03 00 53.6 +0.6**
comp=Z,55nm,0.8s,mb5.5
OPO Ambohidratompo 53.97 249 P **P** **03 00 57.2 +1.3**
comp=Z,4.7nm,0.9s,mb4.4,baz=78,slow=2.5,SNR=3.2
IRK Irkutsk 54.26 3⇑ *i*P **P** **03 00 57.2 -0.2**
IRK *e* 03 03 05.1
IRK pmax pmax
comp=Z,191nm,2.1s,mb5.7
CIT Chita 55.16 10 *eP* **P** **03 01 01.3 -2.6**
CIT *e* 03 01 20.5
CIT *e* 03 02 05.0
CIT pmax pmax
comp=Z,226nm,1.7s,mb5.9
ABKT Ailbek 55.32 320 P **P** **03 01 04.8 -0.5**
comp=Z,141nm,0.9s,mb6.0,SNR=5.3
KURK Kurchatov 55.60 344 P **P** **03 01 07.9 +0.8**
comp=Z,695nm,1.0s,mb6.6,SNR=56
KURK Kurchatov 55.60 344 P **P** **03 01 06.7 -0.4**
comp=Z,60nm,1.0s,mb5.6,baz=161,slow=6.6,SNR=51
KURK S **S** **03 08 48.8 -2.4**
comp=Z,0.3nm,0.2s,baz=56,slow=16,SNR=1.9
KURK Kurchatov 55.60 344 P **P** **03 01 07.2 +0.1**
KURK pmax pmax
comp=Z,130nm,1.0s,mb5.9
KURK Kurchatov 55.60 344 *eP* **P** **03 01 07.0 -0.1**
comp=Z,132nm,1.0s,mb5.9
ARMA Armidale 56.60 125 *eP* **P** **03 01 13.7 -1.0**
comp=Z,0.4nm,1.0s
ZAA0 Zalesovo Array 57.19 350 *eP* **P** **03 01 18.1 -0.3**
ZALV Zalesovo Beam 57.19 350 P **P** **03 01 18.3 -0.1**
comp=Z,187nm,0.9s,mb6.1,baz=163,slow=5.7,SNR=124
ZALV S **S** **03 09 10.6 -1.6**
comp=Z,1.0nm,0.5s,baz=77,slow=6.5,SNR=6.6
ZALV Zalesovo Beam 57.19 350 P **P** **03 01 18.3 -0.1**
ZALV S **S** **03 09 10.6 -1.6**
KLR Kul'dur 58.12 24⇓ *i*P **P** **03 01 20.8 -4.2**
KLR pmax pmax
comp=E,150nm,1.4s
KLR pmax pmax
comp=Z,350nm,1.4s,mb6.2
KRAR Krasnoyarsk 58.16 355 *eP* **P** **03 01 24.6 -0.6**
KRAR pmax pmax
comp=Z,96nm,1.4s,mb5.6
NVS Novosibirsk 58.33 349 *i* P **P** **03 01 25.5 -0.9**
NVS *e*S **S** **03 09 19.7 -7.4**
NVS pmax pmax
comp=N,108nm,1.4s
NVS pmax pmax
comp=E,55nm,1.4s
NVS pmax pmax
comp=Z,111nm,1.4s,mb5.7
NVS smax
comp=N,66nm,2.0s
NVS smax
comp=E,21nm,1.6s
UMR Umm Al-Rimmam 58.76 307 *eP* **P** **03 01 28.1 -1.8**
baz=306
UMR AMb AMB 03 01 42.6
comp=Z,58nm,1.2s,mb5.5,baz=306
ERM Erimo 58.89 37 *eP* **P** **03 01 29.5 -1.1**
ERM pmax pmax
comp=Z,28nm,0.8s,mb5.3
ERM Erimo 58.89 37 *eP* **P** **03 01 29.5 -1.1**
comp=Z,28nm,0.8s,mb5.3
NAY Al-Naaiem 59.03 306 *eP* **P** **03 01 30.8 -1.0**
baz=306
NAY AMb AMB 03 01 55.7
comp=Z,29nm,1.1s,mb5.2,baz=306
MIB Mutribah 59.16 307 *eP* **P** **03 01 30.6 -2.1**
baz=306
MIB AMb AMB 03 01 50.7
comp=Z,94nm,1.2s,mb5.7,baz=306
RST Umm Al-Ruwaisa 59.32 306 *eP* **P** **03 01 32.6 -1.2**
baz=306
RST AMb AMB 03 01 51.5
comp=Z,47nm,1.2s,mb5.4,baz=306
VOSK Vostochnaya 59.70 340 P **P** **03 01 34.9 -1.1**
VOSK pmax pmax
comp=Z,30nm,1.3s,mb5.2
BVA0 Borovoye Array 60.16 340 *i* P **P** **03 01 38.0 -1.0**
BVA0 pmax pmax
comp=Z,13nm,1.9s,mb4.6
BVAR Borovoye Array 60.16 340 P **P** **03 01 38.1 -0.9**
comp=Z,11nm,0.7s,mb5.0,baz=145,slow=8.7,SNR=39
BRVK Borovoye 60.22 340 P **P** **03 01 38.7 -0.8**
comp=Z,166nm,0.8s,mb6.1,SNR=9.6
BRVK Borovoye 60.22 340 *eP* **P** **03 01 38.7 -0.8**
BRVK pmax pmax
comp=Z,50nm,1.2s,mb5.4
BRVK Borovoye 60.22 340 *eP* **P** **03 01 38.4 -1.1**
comp=Z,50nm,1.3s,mb5.4
BOD Bodaibo 60.80 9 *eP* **P** **03 01 42.8 -0.6**
BOD pmax pmax
comp=Z,138nm,1.2s,mb6.0
AB31 Akbulak array 61.57 332 *i* P **P** **03 01 47.7 -1.0**
AB31 pmax pmax
comp=Z,137nm,1.3s,mb5.9
AB31 Akbulak array 61.57 332⇑ *eP* **P** **03 01 47.8 -0.9**
YSS Yuzh-Sakhalins 61.70 32*c* *iP* **P** **03 01 49.3 -0.4**
YSS pmax pmax
comp=Z,266nm,1.2s,mb6.2
YSS Yuzh-Sakhalins 61.70 32 *eP* **P** **03 01 48.8 -0.9**
comp=Z,291nm,1.2s,mb6.3
CLNS Chul'man 62.16 15 *eP* **P** **03 01 52.4 -0.2**
CLNS pmax pmax
comp=N,68nm,1.0s
CLNS pmax pmax
comp=E,48nm,0.9s
CLNS pmax pmax
comp=Z,79nm,0.8s,mb5.9
KMBO Kilima Mbogo 62.43 270 P pP 03 02 05.0 +1.3
KMBO pmax pmax
comp=Z,4.0nm,1.0s
AKTK Aktyubinsk 63.28 332 P **P** **03 01 59.2 -1.0**
AKTO Aktyubinsk 63.28 332 P **P** **03 01 59.2 -1.0**
comp=Z,32nm,1.1s,mb5.4,baz=130,slow=6.2,SNR=38
AKTO Aktyubinsk 63.28 332 *i* P **P** **03 01 58.8 -1.4**
AKTO pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
CASY Casey 64.53 175 *eP* **P** **03 02 09.4 +1.3**
comp=Z,47nm,1.3s,mb5.4
HAKT HAKKARI 65.02 313 *i* P **P** **03 02 11.9 0.0**
GNI Garni 65.38 316 P **P** **03 02 14.1 -0.1**
comp=Z,1.8nm,0.3s,mb4.6,baz=8.5,slow=19,SNR=6.9
GNI Garni 65.38 316 *eP* **P** **03 02 14.7 +0.6**
GNI pmax pmax
comp=Z,20nm,0.9s
GNI Garni 65.38 316 *eP* **P** **03 02 14.7 +0.5**
comp=Z,20nm,0.9s,mb5.1
SVE Sverdlovsk 66.64 338⇓ *eP* **P** **03 02 21.5 -0.4**
SVE pmax pmax
comp=Z,89nm,1.4s,mb5.6
ARU Arti 67.16 337*d* *iP* **P** **03 02 24.3 -0.9**
ARU *e*S S 03 11 17.8 0.0
ARU *e*SS SS 03 15 41.0 +3.5
ARU pmax pmax
comp=Z,28nm,1.2s,mb5.2
ARU Arti 67.16 337 *eP* **P** **03 02 24.2 -1.0**
comp=Z,44nm,1.1s,mb5.4
YAK Yakutsk 67.89 15*c* *iP* **P** **03 02 28.4 -1.3**
YAK pmax pmax
comp=Z,511nm,1.5s,mb6.3
YAK Yakutsk 67.89 15 *eP* **P** **03 02 28.5 -1.2**
comp=Z,258nm,1.0s,mb6.2
YAK *e*pP pP 03 02 37.2 -1.1
ASF Jabal al Asfar 68.39 306 P **P** **03 02 34.0 +0.4**
comp=Z,2.0nm,0.5s,mb4.4,baz=14,slow=1.8,SNR=8.7
KIV Kislovodsk 68.41 319 P **P** **03 02 33.6 +0.2**
comp=Z,200nm,1.0s,mb6.1,SNR=6.2
KIV Kislovodsk 68.41 319*e* *eP* **P** **03 02 33.0 -0.4**
KIV *e**PP pP 03 02 42.9 +1.0
KIV *e**SP sP 03 02 47.4 +2.4
KIV *e* 03 03 04.4

KIV pmax pmax
comp=Z,77nm,1.6s,mb5.5
KIV MLR MLR
comp=Z,8µm,20.0s,MS5.9
KIV Kislovodsk 68.41 319 *i*P **P 03 02 33.2 -0.2**
KIV Kislovodsk 68.41 319 *e*P **P 03 02 33.2 -0.2**
comp=Z,47nm,1.1s,mb5.4
MALT Malatya 69.17 312 *e*P **P 03 02 37.2 -1.0**
MALT pmax pmax
comp=Z,17nm,1.0s,mb4.9
MALT Malatya 69.17 312⇑*i*P **P 03 02 37.0 -1.2**
MALT Malatya 69.17 312 *e*P **P 03 02 37.2 -1.0**
comp=Z,17nm,1.0s,mb4.9
EIL Elat 69.31 303 P **P 03 02 39.3 0.0**
comp=Z,6.7nm,1.0s,mb4.5,baz=114,slow=14,SNR=6.9
GZT Gaziantep 69.49 311 *i*P **P 03 02 41.4 +1.2**
MMAI Mount Meron Ar 69.84 306 P **P 03 02 43.1 +0.6**
comp=Z,3.1nm,0.7s,mb4.3,baz=92,slow=13,SNR=7.9
MAW Mawson 70.14 194 P **P 03 02 44.9 +1.3**
comp=Z,2.6nm,0.9s,mb4.2,baz=36,slow=11,SNR=3.3
SOC Sochi 70.21 318 *e*P **P 03 02 43.8 -0.7**
SOC pmax pmax
comp=Z,36nm,1.1s,mb5.2
SOC Sochi 70.21 318 *i*P **P 03 02 44.9 +0.4**
LSZ Lusaka 71.63 255 P **P 03 02 54.8 +1.1**
comp=Z,0.6nm,0.3s,mb4.0,baz=25,slow=3.0,SNR=2.1
LSZ Lusaka 71.63 255 *e*P pP 03 03 03.1 +0.9
LSZ pmax pmax
comp=Z,46nm,1.4s,mb5.2
LSZ Lusaka 71.63 255 *e*P pP 03 03 03.1 +0.9
comp=Z,46nm,1.4s
CSS Prodhromos 72.04 308 *e*P **P 03 02 55.6 -0.2**
comp=Z,28nm,1.0s,mb5.1
PETK Petropavlovsk- 73.11 32 P **P 03 03 00.9 -0.8**
comp=Z,9.2nm,0.7s,mb4.8,baz=201,slow=2.1,SNR=18
PET Petropavlovsk 73.58 33⇑*i*P **P 03 03 03.8 -0.7**
PET pmax pmax
comp=Z,70nm,0.9s,mb5.6
PET MLR MLR
comp=Z,5µm,19.0s,MS5.8
PET Petropavlovsk 73.58 33 *e*P **P 03 03 03.6 -1.0**
comp=Z,33nm,0.8s,mb5.3
VSR Storozhevoye 73.67 325 *e*P **P 03 03 03.6 -1.5**
VSR pmax pmax
comp=Z,20nm,0.9s,mb5.0
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,10.0nm,0.6s
ANTO Ankara 73.82 313 *e*P **P 03 03 05.4 -0.9**
ANTO pmax pmax
comp=Z,18nm,1.2s,mb4.9
ANTO Ankara 73.82 313⇑*i*P **P 03 03 01.9 -4.4**
ANTO Ankara 73.82 313 *e*P **P 03 03 05.4 -0.9**
comp=Z,17nm,1.3s,mb4.8
SIM Simferopol' 74.46 318⇑*e*P **P 03 03 10.4 +0.5**
SIM pmax pmax
comp=Z,19nm,1.1s,mb4.9
SGKT Sivrigoynuk 74.56 313 *i*P **P 03 03 08.7 -1.9**
ESKT Eskisehir 75.17 312 *i*P **P 03 03 11.9 -2.2**
BOSA Boshof 75.36 241 P **P 03 03 15.5 0.0**
comp=Z,1.7nm,0.8s,baz=96,slow=16,SNR=2.4
TIXI Tiksi 75.98 9 *e*P **P 03 03 16.5 -1.6**
TIXI pmax pmax
comp=Z,74nm,1.5s,mb5.4
TIXI Tiksi 75.98 9 *e*P **P 03 03 16.4 -1.7**
comp=Z,138nm,1.5s,mb5.7
MOS Moscow 76.41 329 *e*P **P 03 03 18.6 -2.2**
MOS pmax pmax
comp=Z,200nm,1.6s,mb5.8
MOS pmax pmax
comp=Z,120µm,1.3s
ULDT Uludag 76.60 312 *i*P **P 03 03 22.1 -0.2**
OBN Obninsk 76.70 328α*i*P **P 03 03 22.3 -0.2**
OBN *e* pP 03 03 29.5 -1.6
OBN *e* 03 03 33.9
OBN *e**SP sP 03 03 36.3 +2.0
OBN 03 06 24.0
OBN pmax pmax
comp=Z,148nm,2.0s,mb5.6
OBN MLR MLR
comp=Z,6µm,20.0s,MS5.9
OBN Obninsk 76.70 328 *e*P **P 03 03 21.7 -0.8**
comp=Z,82nm,1.3s,mb5.5
KDAG Bornova 77.61 310 *i*P **P 03 03 28.6 +0.6**
SYO Syowa Base 77.70 199‖*e*X 03 03 34.0
SYO Syowa Base 77.70 199‖*e*X 03 03 37.2
TIRR Tirgusor 78.20 316‖*i*P **P 03 03 30.4 -0.7**
TIRR Tirgusor 78.20 316 ‖P **P 03 03 30.4 -0.7**
KIS Kishinev 78.59 319 *e*P **P 03 03 23.5 -10**
KIS *e* 03 03 42.0
KIS pmax pmax
comp=Z,105nm,1.5s,mb5.5
KIS Kishinev 78.59 319 *e*P **P 03 03 32.5 -0.7**
comp=Z,100nm,1.5s,mb5.5
AKASG Malin Array Be 79.36 322 P **P 03 03 36.8 -0.6**
comp=Z,1.1nm,0.4s,mb4.1,baz=83,slow=4.1,SNR=16
AKASG Malin Array Be 79.36 322 *i*P **P 03 03 36.7 -0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KIEV Kiev 79.37 322 P **P 03 03 36.3 -1.1**
KIEV *e* pP 03 03 43.8 -2.3
KIEV pmax pmax
comp=Z,41nm,1.8s,mb5.1
KIEV Kiev 79.37 322 *e*P **P 03 03 35.9 -1.6**
comp=Z,41nm,1.8s,mb5.1
KIEV *e*pP pP 03 03 43.4 -2.7
VRI Vrincioaia 79.71 317⇑*i*P **P 03 03 39.6 +0.2**
VRI Vrincioaia 79.71 317 P **P 03 03 40.3 +0.9**
PLOR Plostina 79.76 317 P **P 03 03 40.7 +1.1**
PLOR Plostina 79.76 317⇑*i*P **P 03 03 40.5 +0.9**
MLR Muntele Rosu 80.15 317‖*i*P **P 03 03 42.1 +0.3**
MLR Muntele Rosu 80.15 317 ‖P **P 03 03 42.7 +0.9**
VOIR 80.76 317⇑*i*P pP 03 03 58.7 +5.0
BURAR Bucovina Array 81.12 319⇑*i*P **P 03 03 47.9 +1.0**
BURAR Bucovina Array 81.12 319 ⇑P **P 03 03 47.9 +1.0**
BUR08 Bucovina Ar. S 81.14 319 *e*P **P 03 03 47.5 +0.5**
TSUM Tsumeb 81.88 251 *e*P **P 03 03 52.7 +1.1**
comp=Z,22nm,1.2s,mb5.0
JOF Joensuu 82.16 335 *e*p **P 03 03 49.5 -2.6**
comp=Z,18nm,0.9s,mb5.0
JOF Joensuu 82.16 335 *e*P **P 03 03 49.5 -2.6**
JOF pmax pmax
comp=Z,18nm,0.9s,mb5.0
GZR Gura Zlata 82.31 316 P **P 03 03 54.5 +1.2**
LVV L'vov 82.37 321 *e*P **P 03 03 52.4 -1.1**
DRGR 82.62 318⇑*i*P **P 03 03 55.0 +0.1**
DRGR 82.62 318 P **P 03 03 55.8 +1.0**
BZS Buzias 83.16 316⇑*i*P **P 03 03 57.6 0.0**
BZS Buzias 83.16 316 P **P 03 03 58.4 +0.8**
KWP Kalwaria 83.17 320 *e*P **P 03 03 58.5 +0.8**
KWP Kalwaria 83.17 320 P **P 03 03 57.9 +0.3**
KWP pmax pmax
comp=Z,30nm,1.1s,mb5.2
KWP Kalwaria 83.17 320‖*i*P **P 03 03 55.6 -2.0**
KWP Kalwaria 83.17 320 *e*P **P 03 03 58.5 +0.9**
SBA Scott Base 83.24 169 *e*P **P 03 03 59.8 +2.3**
SBA pmax pmax
comp=Z,59nm,1.8s,mb5.3
SBA Scott Base 83.24 169 *e*P **P 03 03 59.8 +2.3**
comp=Z,59nm,1.8s,mb5.3
KOLS Kolonicke sedl 83.32 320 *e*P **P 03 03 55.8 -2.6**
BILL Bilibino 83.33 20 *e*P **P 03 03 56.6 -1.5**
BILL pmax pmax
comp=Z,11nm,1.7s,mb4.6
BILL Bilibino 83.33 20 *e*P **P 03 03 56.7 -1.4**
SUW Suwalki 83.78 325 *e*P **P 03 04 00.4 -0.3**
SUW Suwalki 83.78 325 P **P 03 04 00.6 0.0**
SUW pmax pmax
comp=Z,110nm,1.2s,mb5.9
SUW Suwalki 83.78 325 *e*P **P 03 04 00.4 -0.2**
CRVS Cervenica-Dubn 83.84 319 *e*P **P 03 04 00.9 -0.2**
STHS Stebnicka Huta 84.07 320 *e*P **P 03 04 03.0 +0.8**
STHS pmax pmax
comp=Z,11nm,1.0s,mb4.9
STHS Stebnicka Huta 84.07 320 *e*P **P 03 04 03.0 +0.8**
comp=Z,11nm,1.0s,mb4.9
KAF Kangasniemi 84.12 333 *e*p **P 03 04 00.9 -1.3**
comp=Z,28nm,0.8s,mb5.5,baz=101,slow=4.7
KAF Kangasniemi 84.12 333 *e*P **P 03 04 00.9 -1.3**
KAF pmax pmax
comp=Z,28nm,0.8s,mb5.4
KECS Kecovo 84.41 319 *e*P **P 03 04 04.2 +0.2**
KECS pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
KECS Kecovo 84.41 319 *e*P **P 03 04 04.2 +0.2**
comp=Z,5.3nm,1.1s,mb4.6
NIE Niedzica 84.67 320 *e*P **P 03 04 05.9 +0.6**
PSZ Piszkesteto 84.70 318 *e*P **P 03 04 05.0 -0.5**
PSZ pmax pmax
comp=Z,18nm,1.1s,mb5.1
PSZ Piszkesteto 84.70 318⇑*i*P **P 03 04 05.4 -0.1**
PSZ Piszkesteto 84.70 318 *e*P **P 03 04 05.0 -0.5**
comp=Z,18nm,1.1s,mb5.1
OJC Ojcow 85.13 321 *e*P **P 03 04 07.4 -0.2**
VYHS Vyhne 85.49 319 *e*P **P 03 04 09.2 -0.2**
VYHS pmax pmax
comp=Z,7.0nm,1.6s,mb4.5
VYHS Vyhne 85.49 319 *e*P **P 03 04 09.2 -0.2**
comp=Z,6.7nm,1.6s,mb4.5
KOLL Kolacno 85.79 319 *e*P **P 03 04 10.5 -0.4**
OKC Ostrava-Krasne 86.13 320 *e*P **P 03 04 13.2 +0.7**
OKC *e*pP pP 03 04 22.0 +0.7
ARCES ARCESS Array B 86.44 340 P **P 03 04 14.3 +0.6**
comp=Z,20nm,0.9s,mb5.3,baz=108,slow=4.0,SNR=22
MODS Modra-Piesok 86.50 319 *e*P **P 03 04 14.9 +0.5**
MORC Moravsky Berou 86.51 320 *e*P **P 03 04 15.3 +0.9**
MORC Moravsky Berou 86.51 320⇑*i*P **P 03 04 14.7 +0.3**
ZST Bratislava 86.60 318 *e*P **P 03 04 15.0 +0.1**
ZST pmax pmax
comp=Z,13nm,1.0s,mb5.1
ZST Bratislava 86.60 318 *e*P **P 03 04 15.0 +0.1**
comp=Z,13nm,1.0s,mb5.1
GKP Gorka Klasztor 87.14 323 *e*P **P 03 04 14.4 -3.0**
GKP Gorka Klasztor 87.14 323 *e*P **P 03 04 14.4 -3.0**
DPC Dobruska-Polom 87.36 320 *e*P **P 03 04 19.3 +0.8**
KSP Ksiaz 87.43 321 *e*P **P 03 04 19.3 +0.4**
UPC Upice 87.57 321 *e*P **P 03 04 20.5 +0.9**
UPC *e*pP pP 03 04 28.4 +0.1
BOJS Bojanci 87.57 316 *i*P **P 03 04 19.0 -0.7**
TREC Trest 87.78 319 *e*P **P 03 04 20.9 +0.3**
TREC *e*pP pP 03 04 30.1 +0.8
SOKA Soboth 87.83 317⇑*i*P **P 03 04 21.4 +0.5**
VISS Visnje 87.89 316 *i*P **P 03 04 21.4 +0.2**
JAVS Javornik 88.44 316 *i*P **P 03 04 23.2 -0.6**
PRU Pruhonice 88.46 320 *e*P **P 03 04 24.4 +0.6**
PRU *e*pP pP 03 04 33.0 +0.5
PVCC Panska Ves 88.49 320 *e*P **P 03 04 24.5 +0.6**
PVCC *e*pP pP 03 04 34.9 +2.2
MYKA Terra Mystica 88.78 317⇑*i*P **P 03 04 25.8 +0.4**
comp=Z,60nm,1.6s,mb5.7
GEC2 GERESS Array S 88.91 319 *e*P **P 03 04 26.3 +0.3**
GEC2 pmax pmax
comp=Z,66nm,1.6s,mb5.7
GEC2 GERESS Array S 88.91 319 *e*P **P 03 04 26.3 +0.3**
comp=Z,66nm,1.6s,mb5.7
GERES GERESS Array B 88.91 319 P **P 03 04 26.4 +0.4**
comp=Z,5.2nm,1.0s,mb4.8,baz=98,slow=4.0,SNR=37
BRG Berggiesshubel 88.92 321 *e*P **P 03 04 26.6 +0.7**
comp=Z,40nm,1.5s,mb5.5
KHC Kasperske Hory 89.01 319 *e*P **P 03 04 26.3 -0.1**
KHC *e*pP pP 03 04 36.0 +0.8
KBA Koelnbreinsper 89.02 317⇑*i*P **P 03 04 26.2 -0.3**
comp=Z,9.2nm,1.0s,mb5.0
RUE Ruedersdorf 89.14 322 *e*P **P 03 04 28.0 +1.0**
comp=Z,37nm,1.0s,mb5.7
RUE *e*pP pP 03 04 36.0 +0.3
WET Wettzell 89.47 319 *e*P **P 03 04 29.1 +0.5**
WET pmax pmax
comp=Z,32nm,1.4s,mb5.5
WET Wettzell 89.47 319 *e*P **P 03 04 29.1 +0.5**
comp=Z,32nm,1.4s,mb5.5
CLL Collm 89.54 321 *i*P **P 03 04 29.0 +0.2**
CLL *i* 03 04 39.2
CLL pmax pmax
comp=Z,23nm,1.3s,mb5.3
CLL Collm 89.54 321 *e*P **P 03 04 29.1 +0.3**
comp=Z,23nm,1.3s,mb5.3
CLL Collm 89.54 321 *i*P **P 03 04 29.0 +0.2**
comp=Z,23nm,1.3s,mb5.3
CLL *i* (pP) pP 03 04 39.2 +1.6
HFS Hagfors 89.79 330 P **P 03 04 30.8 +1.0**
comp=Z,6.5nm,0.8s,mb5.0,baz=122,slow=7.9,SNR=11
NKC Novy Kostel 89.82 320 *e*P **P 03 04 30.7 +0.5**
NKC *e*pP pP 03 04 39.6 +0.7
TANN Tannenbergstha 89.82 320 *e*P **P 03 04 30.7 +0.5**
comp=Z,20nm,1.4s,mb5.2
ROTZ Rotzenmuhle 89.95 320 *e*P **P 03 04 31.9 +1.1**
comp=Z,98nm,2.3s,mb5.7
MANZ Manzenberg 90.03 320 *e*P **P 03 04 32.2 +1.0**
comp=Z,36nm,1.3s,mb5.5
WTTA Wattenberg 90.20 317⇑*i*P **P 03 04 32.1 0.0**
comp=Z,20nm,1.1s,mb5.4
MOX Moxa 90.38 320 *e*P **P 03 04 33.0 +0.2**
comp=Z,27nm,1.5s,mb5.4
MOX *e* pP 03 04 42.6 +1.1
MOX Moxa 90.38 320 *e*P **P 03 04 33.0 +0.2**
MOX *e* pP 03 04 42.6 +1.1
MOX pmax pmax
comp=Z,27nm,1.5s,mb5.4
MOX Moxa 90.38 320 *e*P **P 03 04 33.2 +0.4**
comp=Z,27nm,1.4s,mb5.4
FUR Furstenfeldbru 90.48 318 *e*P **P 03 04 33.6 +0.3**
FUR pmax pmax
comp=Z,22nm,1.1s,mb5.4
FUR Furstenfeldbru 90.48 318 *e*P **P 03 04 33.6 +0.3**
comp=Z,22nm,1.1s,mb5.4
MOTA Moosalm 90.56 317⇑*i*P **P 03 04 33.5 -0.2**
comp=Z,15nm,1.1s,mb5.2,SNR=7.8
GRA1 Grafenberg Arr 90.58 320 *e*P **P 03 04 35.0 +1.2**
comp=Z,31nm,1.2s,mb5.5
GRF Grafenberg Arr 90.58 320 *e*P **P 03 04 35.0 +1.2**
GRF pmax pmax
comp=Z,31nm,1.2s,mb5.5
GRF Grafenberg Arr 90.58 320 *e*P **P 03 04 35.0 +1.2**
GRF pmax pmax
comp=Z,31nm,1.2s,mb5.5
GRF Grafenberg Arr 90.58 320 *e*P **P 03 04 35.0 +1.2**
comp=Z,31nm,1.2s,mb5.5
RETA Reutte 90.80 317⇑*i*P **P 03 04 35.0 +0.2**
comp=Z,16nm,1.0s,mb5.3,SNR=9.4
RETA Reutte 90.80 317⇑*i*PcP **P 03 04 35.0 +0.2**
comp=Z,16nm,1.0s,mb5.3,SNR=9.4
FETA Feichten 90.80 317⇑*i*P **P 03 04 35.1 +0.3**
comp=Z,16nm,1.2s,mb5.2
FETA Feichten 90.80 317⇑*i*PcP **P 03 04 35.1 +0.3**
comp=Z,16nm,1.2s,mb5.2
NOA NORSAR Array B 91.07 331 P **P 03 04 35.8 0.0**
comp=Z,4.3nm,1.0s,mb4.7,baz=92,slow=4.8,SNR=5.3
CLZ Clausthal 91.20 322 *e*P **P 03 04 37.6 +1.0**
CLZ pmax pmax
comp=Z,34nm,1.3s,mb5.5
CLZ Clausthal 91.20 322 *e*P **P 03 04 37.6 +1.0**
comp=Z,34nm,1.3s,mb5.5
NAO01 NORSAR Array S 91.22 331 *e*P **P 03 04 36.9 +0.4**
comp=Z,28nm,1.3s,mb5.4
NRDL Niedersach Rie 91.39 322 *e*P **P 03 04 38.4 +1.0**
comp=Z,47nm,1.6s,mb5.6
DAVA Damuels 91.39 317⇑*i*P **P 03 04 37.9 +0.4**
comp=Z,31nm,1.1s,mb5.5
DAVA Damuels 91.39 317⇑*i*PcP **P 03 04 37.9 +0.4**
comp=Z,31nm,1.1s,mb5.5
UBBA Unterbreizbach 91.41 321 *e*P **P 03 04 38.2 +0.6**
comp=Z,25nm,1.6s,mb5.3
KEST Kesra 91.49 306 P **P 03 04 39.8 +1.5**
comp=Z,6.3nm,1.1s,mb4.9,baz=339,slow=1.2,SNR=10.0
TUE Stuetta 91.74 316 *e*P **P 03 04 39.0 -0.2**
comp=Z,37nm,1.8s,mb5.4
STU Stuttgart 91.88 319 *e*P **P 03 04 40.2 +0.4**
comp=Z,19nm,1.0s,mb5.4
PGF Pioggiola 91.91 312⇑*i*P **P 03 04 40.2 +0.1**
comp=Z,45nm,1.3s,mb5.3
PGF Pioggiola 91.91 312⇑*i*P **P 03 04 40.2 +0.1**
PGF pmax pmax
comp=Z,23nm,1.3s,mb5.3
PGF Pioggiola 91.91 312⇑*i*P **P 03 04 40.2 +0.1**
comp=Z,22nm,1.3s,mb5.3
SNAA Sanae 91.98 198 *e*P pP 03 04 49.7 +1.1
SNAA pmax pmax
comp=Z,35nm,1.9s
SNAA Sanae 91.98 198 *e*P pP 03 04 49.7 +1.1
comp=Z,36nm,1.9s
BFO Black Forest 92.45 318 *e*P **P 03 04 41.5 -1.0**
BFO pmax pmax
comp=Z,14nm,1.3s,mb5.1
BFO Black Forest 92.45 318 *e*P **P 03 04 41.5 -1.0**
comp=Z,14nm,1.3s,mb5.1
SBF Sospel 93.07 314 *e*P **P 03 04 45.4 0.0**
comp=Z,53nm,1.1s,mb5.6
SBF Sospel 93.07 314 *e*P **P 03 04 45.4 0.0**
SBF pmax pmax
comp=Z,26nm,1.1s,mb5.6
SBF Sospel 93.07 314 *e*P **P 03 04 45.4 0.0**
comp=Z,26nm,1.1s,mb5.6
CDF Champ du Feu 93.16 318 *e*P **P 03 04 45.4 -0.3**
MBDF Montbardon 93.54 314 *e*P **P 03 04 46.6 -1.0**
LPG La Plagne 93.54 315⇑*i*P **P 03 04 47.6 0.0**
comp=Z,17nm,1.1s,mb5.1
LPG La Plagne 93.54 315⇑*i*P **P 03 04 47.6 0.0**
LPG pmax pmax
comp=Z,9.0nm,1.1s,mb5.1
LPG La Plagne 93.54 315⇑*i*P **P 03 04 47.6 0.0**
comp=Z,8.6nm,1.1s,mb5.1
LPL La Plagne 93.56 315⇑*i*P **P 03 04 47.9 +0.3**
comp=Z,6.0nm,0.8s,mb4.8
LPL La Plagne 93.56 315⇑*i*P **P 03 04 47.9 +0.3**
LPL pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
LPL La Plagne 93.56 315⇑*i*P **P 03 04 47.9 +0.3**
comp=Z,3.0nm,0.8s,mb4.8
BNI Bardonecchia 93.60 315 *e*P **P 03 04 48.1 +0.3**
BNI pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
BNI Bardonecchia 93.60 315 *e*P **P 03 04 48.1 +0.3**
comp=Z,4.2nm,0.9s,mb4.9
FRF La Foret Royal 93.64 313⇑*i*P **P 03 04 48.0 -0.1**
comp=Z,64nm,1.6s,mb5.5
FRF La Foret Royal 93.64 313⇑*i*P **P 03 04 48.0 -0.1**
FRF pmax pmax
comp=Z,32nm,1.6s,mb5.5
FRF La Foret Royal 93.64 313⇑*i*P **P 03 04 48.0 -0.1**
comp=Z,32nm,1.6s,mb5.5
LMR La Mourre 93.74 313 *e*P **P 03 04 48.5 0.0**
HAU Haudompre 93.78 318⇑*i*P **P 03 04 48.2 -0.4**
comp=Z,37nm,1.3s,mb5.3
HAU Haudompre 93.78 318⇑*i*P **P 03 04 48.2 -0.4**
HAU pmax pmax
comp=Z,19nm,1.3s,mb5.4
HAU Haudompre 93.78 318⇑*i*P **P 03 04 48.2 -0.4**
comp=Z,19nm,1.3s,mb5.4
WLF Walferdange 93.88 319 P **P 03 04 50.0 +1.0**
comp=Z,6.0nm,1.8s,mb4.7
WLF Walferdange 93.88 319 *e*P **P 03 04 48.6 -0.4**
WLF pmax pmax
comp=Z,13nm,1.1s,mb5.3
WLF Walferdange 93.88 319 *e*P **P 03 04 49.6 +0.6**
comp=Z,19nm,1.3s,mb5.4
WLF Walferdange 93.88 319 *e*P **P 03 04 48.5 -0.4**
comp=Z,13nm,1.1s,mb5.3
MEM Membach 93.95 320 P **P 03 04 48.5 -0.8**
comp=Z,5.0nm,1.8s,mb4.6
CABF La Chapelle 93.99 316⇑*i*P **P 03 04 49.5 -0.1**
ORIF Oris-en-Rattie 94.17 315 *e*P **P 03 04 50.7 +0.2**
comp=Z,22nm,1.2s,mb5.2
ORIF Oris-en-Rattie 94.17 315 *e*P **P 03 04 50.7 +0.2**
ORIF pmax pmax
comp=Z,11nm,1.2s,mb5.2
ORIF Oris-en-Rattie 94.17 315 *e*P **P 03 04 50.7 +0.2**
comp=Z,11nm,1.2s,mb5.2
BCLA Clavier 94.40 320 P **P 03 04 52.4 +1.0**
comp=Z,7.1nm,1.9s,mb4.8
MEZF Maizieres J'vi 94.63 318 *e*P **P 03 04 52.2 -0.3**
GIVF Givet 94.72 320 *e*P **P 03 04 52.9 0.0**
VIVF Saint-Julien-l 95.03 315⇑*i*P **P 03 04 54.2 -0.2**
BAIF Baives 95.12 320 *e*P **P 03 04 54.8 +0.1**
LOR Lormes 95.49 317⇑*i*P **P 03 04 56.1 -0.4**
comp=Z,22nm,1.3s,mb5.1
LOR Lormes 95.49 317⇑*i*P **P 03 04 56.1 -0.4**
LOR pmax pmax
comp=Z,11nm,1.3s,mb5.1
LOR Lormes 95.49 317⇑*i*P **P 03 04 56.1 -0.4**
comp=Z,11nm,1.3s,mb5.1
SMF Signal de Mont 95.53 316 *e*P **P 03 04 56.0 -0.7**
LASF Ste Croix 95.64 314⇑*i*P **P 03 04 57.3 +0.1**
SSF Saint Saulge 95.74 317 *e*P **P 03 04 57.4 -0.2**
AVF Avril sur Loir 95.86 317 *e*P **P 03 04 57.6 -0.6**
comp=Z,17nm,1.4s,mb5.0
AVF Avril sur Loir 95.86 317 *e*P **P 03 04 57.6 -0.6**
AVF pmax pmax
comp=Z,9.0nm,1.4s,mb5.0
AVF Avril sur Loir 95.86 317 *e*P **P 03 04 57.6 -0.6**
comp=Z,8.7nm,1.4s,mb5.0
BGF Bois d'Agland 96.22 316⇑*i*P **P 03 04 59.7 -0.1**
comp=Z,19nm,1.2s,mb5.1
BGF Bois d'Agland 96.22 316⇑*i*P **P 03 04 59.7 -0.1**
BGF pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
BGF Bois d'Agland 96.22 316⇑*i*P **P 03 04 59.7 -0.1**
comp=Z,9.6nm,1.2s,mb5.1
TCF Toulx Ste Croi 96.68 316 *e*P **P 03 05 01.9 0.0**
MTLF Montolieu 96.87 313 *e*P **P 03 05 02.7 -0.1**
CAF Calviac 96.88 315 *e*P **P 03 05 02.8 0.0**
comp=Z,21nm,1.4s,mb5.1
CAF Calviac 96.88 315 *e*P **P 03 05 02.8 0.0**
CAF pmax pmax
comp=Z,11nm,1.4s,mb5.1
CAF Calviac 96.88 315 *e*P **P 03 05 02.8 0.0**
comp=Z,11nm,1.4s,mb5.1
RJF Les Rejaudoux 97.24 315 *e*P **P 03 05 03.6 -0.8**
LFF La Frestale 97.81 315 *e*P **P 03 05 06.9 -0.1**
LDF La Druitiere 98.06 319 *e*P **P 03 05 07.5 -0.5**
TORD Torodi Ar. Bea 98.27 283 P **P 03 05 09.5 -0.2**
comp=Z,0.4nm,1.0s,baz=90,slow=5.5,SNR=3.3
FLN La Foliere 98.28 319 *e*P **P 03 05 08.8 -0.2**
MFF Saint Martin d 98.28 317⇑*i*P **P 03 05 08.5 -0.6**
comp=Z,20nm,1.2s,mb5.2
MFF Saint Martin d 98.28 317⇑*i*P **P 03 05 08.5 -0.6**
MFF pmax pmax
comp=Z,10.0nm,1.2s,mb5.2
MFF Saint Martin d 98.28 317⇑*i*P **P 03 05 08.5 -0.6**
comp=Z,10nm,1.2s,mb5.2
GRR Gorron 98.57 318 *e*P **P 03 05 09.9 -0.4**
IMA2 Indian Mountai 98.59 23 *e*P **P 03 05 09.4 -0.6**
ETSF Etsaut 98.93 313 *e*P **P 03 05 10.6 -1.5**
SGMF Saint Gilles 99.71 319⇑*i*P Pdif 03 05 15.0 -0.3
comp=Z,91nm,1.6s
SGMF Saint Gilles 99.71 319⇑*i*P Pdif 03 05 15.0 -0.3
SGMF pmax pmax
comp=Z,46nm,1.6s,mb5.7
SGMF Saint Gilles 99.71 319⇑*i*P Pdif 03 05 15.0 -0.3
comp=Z,46nm,1.6s
QUIF Quistinic 100.16 318 *e*P Pdif 03 05 16.8 -0.5
ROSF Rostrenen 100.17 319⇑*i*P Pdif 03 05 17.2 -0.1
comp=Z,39nm,1.2s
ROSF Rostrenen 100.17 319⇑*i*P Pdif 03 05 17.2 -0.1
ROSF pmax pmax
comp=Z,19nm,1.2s
ROSF Rostrenen 100.17 319⇑*i*P Pdif 03 05 17.2 -0.1
comp=Z,19nm,1.2s
MCK McKinley 101.20 25 *e*P Pdif 03 05 21.3 -0.6
C04A Brinnon 121.51 32 ⇑P PKPdf 03 10 25.0 -0.1
baz=121
B05A Bryant 121.64 32 ⇑P PKPdf 03 10 25.8 +0.4
baz=122
A07A Ashnola River, 122.02 30 ⇓P PKPdf 03 10 25.6 -0.4
baz=122
C05A Tolt Reservoir 122.21 32 ⇓P PKPdf 03 10 26.0 -0.5
baz=122
F03A Seaside 122.26 34 ⇑P PKPdf 03 10 26.6 0.0
baz=122
D05A Enumclaw 122.36 32 ⇑P PKPdf 03 10 27.0 +0.2
baz=122
B07A Winthrop 122.53 30 ⇓P PKPdf 03 10 27.1 0.0
baz=122
A08A Turner Farm, O 122.63 29 ⇓P PKPdf 03 10 27.0 -0.2
baz=122
E05A Randle 122.88 33 ⇓P PKPdf 03 10 27.6 -0.2
baz=123
F04A Amboy 122.89 34 ⇓P PKPdf 03 10 27.5 -0.3
baz=123
A09A Danville 122.95 29 ⇑P PKPdf 03 10 27.9 0.0
baz=123
ETW Entiat 122.98 31 *e*PKPdf PKPdf 03 10 27.1 -0.8
B08A Colville Reser 122.99 30 ⇓P PKPdf 03 10 27.6 -0.4
baz=123
C07A Waterville 123.06 31 ⇑P PKPdf 03 10 28.1 0.0
baz=123
H03A Soap Creek Ran 123.14 36 ⇓P PKPdf 03 10 28.8 +0.4
baz=123
G04A Mulino 123.30 35 ⇑P PKPdf 03 10 29.3 +0.7
baz=123
E06A Yakima 123.31 33 ⇑P PKPdf 03 10 29.1 +0.5
baz=123
D07A Quincy 123.43 31 ⇑P PKPdf 03 10 29.0 +0.2
baz=123
B09A Rice 123.54 29 ⇓P PKPdf 03 10 29.0 0.0
baz=123

I03A	Eugene baz=123	123.56	36	⇑P		PKPdf	03 10 29.6	+0.4
J02A	Umpqua baz=124	123.73	37	⇑P		PKPdf	03 10 29.8	+0.2
H04A	Detroit Lake baz=124	123.78	35	⇓P		PKPdf	03 10 29.3	-0.2
E07A	Sunnyside baz=124	123.90	32	⇑P		PKPdf	03 10 29.6	-0.2
F06A	Goldendale baz=124	123.90	33	⇓P		PKPdf	03 10 30.2	+0.4
A11A	Hall Mountain, baz=124	124.02	28	⇓P		PKPdf	03 10 30.3	+0.4
D08A	Wollman Farm, baz=124	124.06	31	⇓P		PKPdf	03 10 30.3	+0.2
K02A	Glendale baz=124	124.12	38	⇑P		PKPdf	03 10 30.5	+0.2
RSW	Rattlesnake Hi	124.14	32	ePKPdf		PKPdf	03 10 29.6	-0.7
NEW	Newport	124.15	29	ePKIKP		PKPdf	03 10 30.5	+0.3
I04A	Tendick Farm, baz=124	124.17	36	⇑P		PKPdf	03 10 30.1	-0.3
M01C	Crescent City baz=124	124.24	39	⇑P		PKPdf	03 10 30.5	-0.1
G06A	Carlson Farm, baz=124	124.31	34	⇓P		PKPdf	03 10 30.7	+0.2
A12A	Yaak River Ran baz=124	124.37	28	⇑P		PKPdf	03 10 30.7	+0.1
D09A	Jones Farm, Ri baz=124	124.37	31	⇓P		PKPdf	03 10 30.7	+0.1
B11A	Sandpoint baz=124	124.39	28	⇑P		PKPdf	03 10 30.9	+0.2
L02A	Cave Junction baz=124	124.39	38	⇓P		PKPdf	03 10 30.9	+0.1
HUMO	Hull Mountain baz=124	124.53	37	⇑P		PKPdf	03 10 31.4	+0.3
I05A	Bend baz=124	124.61	35	⇓P		PKPdf	03 10 31.8	+0.6
J04A	Umpqua Nationa baz=124	124.67	36	⇓P		PKPdf	03 10 31.8	+0.5
H06A	Lindquist Farm baz=125	124.79	34	⇑P		PKPdf	03 10 31.6	+0.1
E09A	Wood Farm, Sta baz=125	124.82	31	⇑P		PKPdf	03 10 31.7	+0.2
G07A	Ruggs Ranch, H baz=125	124.82	33	⇑P		PKPdf	03 10 31.6	0.0
C11A	Tepee Creek (N baz=125	124.86	29	⇑P		PKPdf	03 10 31.6	+0.1
D10A	Wagner Farm, O baz=125	124.90	30	⇓P		PKPdf	03 10 32.1	+0.4
A13A	Flathead Natio baz=125	124.94	27	⇓P		PKPdf	03 10 31.9	+0.2
F08A	Pendleton baz=125	124.96	32	⇓P		PKPdf	03 10 32.1	+0.3
J05A	Fort Rock baz=125	125.16	36	⇑P		PKPdf	03 10 32.5	+0.2
LNOR	Linton Mounta	125.17	32	ePKIKP		PKPdf	03 10 32.1	-0.1
YBH	Yreka Blue Hor baz=125	125.18	38	⇑P		PKPdf	03 10 32.6	+0.3
G08A	Pilot Rock baz=125	125.19	33	⇓P		PKPdf	03 10 32.5	+0.3
M02C	Callahan baz=125	125.28	39	⇑P		PKPdf	03 10 33.1	+0.5
H07A	Lands Inn, Kim baz=125	125.31	34	⇑P		PKPdf	03 10 33.1	+0.6
N02C	Big Bar baz=125	125.31	39	⇓P		PKPdf	03 10 33.3	+0.6
B13A	Whitefish baz=125	125.32	27	⇓P		PKPdf	03 10 32.6	+0.2
I06A	Prineville baz=125	125.35	35	⇓P		PKPdf	03 10 33.1	+0.5
O01C	Eel River Cons baz=125	125.35	40	⇑P		PKPdf	03 10 33.2	+0.5
E10A	Myers Farm, Un baz=125	125.37	31	⇑P		PKPdf	03 10 32.7	+0.2
D11A	Klaveano Farm, baz=125	125.37	30	⇑P		PKPdf	03 10 32.4	-0.2
L04A	Klamath Falls baz=125	125.42	37	⇓P		PKPdf	03 10 33.1	+0.3
F10A	Beach Ranch, E baz=126	125.66	31	⇓P		PKPdf	03 10 33.8	+0.6
I07A	Izee baz=126	125.66	34	⇓P		PKPdf	03 10 33.7	+0.5
M04C	Macdoel baz=126	125.68	38	⇑P		PKPdf	03 10 33.5	+0.2
K05A	Summer Lake baz=126	125.70	36	⇑P		PKPdf	03 10 34.0	+0.7
KIPM	Iron Peak	125.75	41	ePKPdf		PKPdf	03 10 33.8	+0.3
C13A	Hot Springs baz=126	125.77	28	⇑P		PKPdf	03 10 33.4	+0.1
M03C	McCloud baz=126	125.80	38	⇑P		PKPdf	03 10 33.8	+0.3
J06A	Christmas Vall baz=126	125.81	35	⇓P		PKPdf	03 10 33.8	+0.3
H08A	Prairie City baz=126	125.85	33	⇓P		PKPdf	03 10 34.3	+0.7
D12A	Red Ives Fores baz=126	125.85	29	⇑P		PKPdf	03 10 32.9	-0.6
WDC	Whiskeytown Da baz=126	125.93	39	⇓P		PKPdf	03 10 34.1	+0.2
O02C	Red Bluff baz=126	126.00	40	⇑P		PKPdf	03 10 34.6	+0.6
K06A	Valley Falls baz=126	126.03	36	⇓P		PKPdf	03 10 34.5	+0.5
C14A	Swan Lake baz=126	126.09	27	⇑P		PKPdf	03 10 33.8	-0.1
L05A	Lakeview baz=126	126.14	37	⇓P		PKPdf	03 10 35.0	+0.8
J07A	Hines baz=126	126.22	35	⇓P		PKPdf	03 10 35.2	+0.9
D13A	Huson baz=126	126.25	28	⇑P		PKPdf	03 10 34.1	-0.1
F11A	Grangeville baz=126	126.26	30	⇑P		PKPdf	03 10 34.3	0.0
SCHQ	Schefferville comp=Z,5.2nm,0.8s,baz=88,slow=17,SNR=4.6	126.28	350	PKP		PKPdf	03 10 34.1	+0.1
I08A	Drewsey baz=126	126.29	34	⇓P		PKPdf	03 10 35.2	+0.8
H09A	Durkee baz=126	126.30	33	⇓P		PKPdf	03 10 34.9	+0.5
GASB	Alder Springs baz=126	126.33	40	⇓P		PKPdf	03 10 35.6	+1.0
M05C	Lookout baz=126	126.35	38	⇑P		PKPdf	03 10 35.4	+0.8
BMO	Blue Mountains	126.37	32	ePKIKP		PKPdf	03 10 34.0	-0.5
HOPS	Hopland baz=126	126.45	41	⇑P		PKPdf	03 10 36.0	+1.1
G11A	Walters Elk Ra baz=126	126.54	31	⇓P		PKPdf	03 10 35.3	+0.5
MOD	Modoc baz=126	126.54	37	⇑P		PKPdf	03 10 35.6	+0.6
K07A	Rock Creek Ran baz=126	126.68	35	⇑P		PKPdf	03 10 35.4	+0.2
J08A	Circle Bar Ran baz=126	126.70	34	⇑P		PKPdf	03 10 36.1	+0.9
D14A	Greenough baz=126	126.71	28	⇓P		PKPdf	03 10 34.8	-0.3
F12A	Elk City baz=127	126.81	30	⇑P		PKPdf	03 10 35.3	0.0
H10A	Noah's Angus R baz=127	126.84	32	⇑P		PKPdf	03 10 35.1	-0.3
E13A	Victor baz=127	126.85	29	⇓P		PKPdf	03 10 35.4	0.0
M06C	Likely Place G baz=127	126.85	37	⇑P		PKPdf	03 10 36.3	+0.7
MNRC	McLaughlin Nat baz=127	126.93	41	⇑P		PKPdf	03 10 36.9	+1.1
CHMT	Chamberlain Mo	126.95	28	ePKPdf		PKPdf	03 10 35.3	-0.3
CHMT				ePP		PP	03 12 34.2	+1.4
O04C	Chester baz=127	126.99	39	⇓P		PKPdf	03 10 36.5	+0.6
L07A	Adell baz=127	127.04	36	⇓P		PKPdf	03 10 36.8	+0.9
K08A	Mann Creek Ran baz=127	127.09	35	⇑P		PKPdf	03 10 36.6	+0.6
J09A	Fry Pan Ranch, baz=127	127.11	34	⇓P		PKPdf	03 10 36.8	+0.8
H11A	Donnelly baz=127	127.15	31	⇑P		PKPdf	03 10 36.2	+0.2
ORV	Oroville baz=127	127.17	40	⇓P		PKPdf	03 10 36.0	-0.2
D15A	Lincoln baz=127	127.19	27	⇓P		PKPdf	03 10 36.2	+0.1
WVOR	Wild Horse Val	127.19	35	ePKIKP		PKPdf	03 10 36.3	+0.1
E14A	Clinton baz=127	127.20	28	⇑P		PKPdf	03 10 35.9	-0.1
CVS	Carmenet Viney baz=127	127.21	42	⇑P		PKPdf	03 10 36.9	+0.5
O05C	Quincy baz=127	127.30	39	⇓P		PKPdf	03 10 36.8	+0.3
L08A	Fields baz=127	127.51	35	⇑P		PKPdf	03 10 38.1	+1.2
N06A	Buffalo Meadow baz=127	127.51	38	⇑P		PKPdf	03 10 37.6	+0.7
M07A	Soldier Meadow baz=127	127.53	37	⇓P		PKPdf	03 10 37.7	+0.9
K09A	Rome baz=127	127.54	34	⇓P		PKPdf	03 10 37.7	+0.9
F14A	Wisdom baz=128	127.69	29	⇓P		PKPdf	03 10 37.9	+0.8
BEKR	Beckwourth baz=128	127.71	39	⇓P		PKPdf	03 10 37.7	+0.4
H12A	Diamond D Ranc baz=128	127.85	31	⇓P		PKPdf	03 10 37.7	+0.3
P05C	Yuba Gap, Truc baz=128	127.88	39	⇑P		PKPdf	03 10 37.9	+0.3
K10A	Mackenzie Ranc baz=128	127.97	34	⇑P		PKPdf	03 10 38.7	+1.0
N07B	Gerlach baz=128	128.02	37	⇓P		PKPdf	03 10 38.5	+0.7
G14A	Jackson baz=128	128.06	29	⇑P		PKPdf	03 10 38.7	+0.9
F15A	Butte baz=128	128.09	28	⇑P		PKPdf	03 10 38.3	+0.5
LAVA	Lava Cap Winer baz=128	128.10	40	⇓P		PKPdf	03 10 38.6	+0.5
MFID	Camas Ranch baz=128	128.12	33	⇑P		PKPdf	03 10 38.7	+0.8
H13A	Challis baz=128	128.15	31	⇓P		PKPdf	03 10 38.6	+0.7
WCN	Washoe City baz=128	128.42	39	⇓P		PKPdf	03 10 39.2	+0.5
K11A	Parker Ranch, baz=128	128.44	33	⇓P		PKPdf	03 10 39.4	+0.9
O07A	Toulon baz=128	128.45	38	⇓P		PKPdf	03 10 39.3	+0.7
M09A	Marrel Ranch, baz=128	128.52	35	⇓P		PKPdf	03 10 39.8	+1.1
N08A	GE Springer Mi baz=128	128.52	37	⇓P		PKPdf	03 10 39.6	+0.8
H14A	Leadore baz=128	128.56	30	⇑P		PKPdf	03 10 39.6	+0.9
R05C	Kirkwood Meado baz=128	128.56	40	⇓P		PKPdf	03 10 39.7	+0.8
G15A	Dillon baz=128	128.59	29	⇓P		PKPdf	03 10 39.7	+0.9
J12A	Stokes Ranch, baz=128	128.62	32	⇓P		PKPdf	03 10 39.6	+0.8
BOZ	Bozeman (W)	128.64	28	ePKIKP		PKPdf	03 10 39.5	+0.7
BOZ				e			03 12 43.9	
L10A	Juniper Basin baz=128	128.65	34	⇑P		PKPdf	03 10 40.2	+1.2
I13A	Wildhorse Cree baz=128	128.68	31	⇓P		PKPdf	03 10 40.1	+1.1
PACP	Pacheco Peak baz=128	128.71	42	⇑P		PKPdf	03 10 40.4	+1.1
CMB	Columbia Colle baz=129	128.74	41	⇓P		PKPdf	03 10 40.3	+1.0
HLID	Hailey baz=129	128.77	32	⇑P		PKPdf	03 10 40.2	+1.0
HLID	Hailey	128.77	32	ePKPdf		PKPdf	03 10 40.0	+0.8
O08A	Rochester Mine baz=129	128.81	37	⇓P		PKPdf	03 10 40.8	+1.4
N09A	Rock Creek Ran baz=129	128.84	36	⇓P		PKPdf	03 10 40.7	+1.3
H15A	Lima baz=129	128.91	29	⇑P		PKPdf	03 10 40.8	+1.4
L11A	Cat Creek Ranc baz=129	129.00	34	⇓P		PKPdf	03 10 41.1	+1.5
I14A	Mackay baz=129	129.01	31	⇑P		PKPdf	03 10 40.5	+0.9
J13A	Cove Ranch, Pi baz=129	129.01	32	⇓P		PKPdf	03 10 40.9	+1.2
R06C	Coleville baz=129	129.06	40	⇑P		PKPdf	03 10 41.1	+1.2
K12A	Draper Farm, C baz=129	129.15	33	⇑P		PKPdf	03 10 40.8	+0.8
S05C	Merced baz=129	129.16	41	⇓P		PKPdf	03 10 40.8	+0.7
S06C	San Francisco baz=129	129.18	41	⇑P		PKPdf	03 10 40.6	+0.5
QLMT	Earthquake Lak	129.34	28	ePKPdf		PKPdf	03 10 41.9	+1.6
J14A	Carey baz=129	129.40	31	⇑P		PKPdf	03 10 41.7	+1.4
L12A	House Creek Ra baz=129	129.42	33	⇑P		PKPdf	03 10 41.8	+1.3
I15A	Monteview baz=129	129.44	30	⇑P		PKPdf	03 10 41.8	+1.4
M11A	Holland Ranch, baz=129	129.46	34	⇑P		PKPdf	03 10 42.4	+1.8
H16A	Russell Place, baz=129	129.53	28	⇑P		PKPdf	03 10 42.2	+1.6
K13A	Steer Farm, H baz=129	129.57	32	⇑P		PKPdf	03 10 42.1	+1.3
T06C	Millerton Lake baz=130	129.76	41	⇑P		PKPdf	03 10 42.0	+0.7
O10A	Cortez Mining, baz=130	129.79	36	⇑P		PKPdf	03 10 42.2	+1.0
PKD	Parkfield baz=130	129.79	43	⇓P		PKPdf	03 10 42.1	+0.8
Q08A	Gabbs baz=130	129.82	38	⇑P		PKPdf	03 10 42.2	+0.9
NVAR	Mina Array Bea comp=Z,1.9nm,0.8s,baz=280,slow=1.6,SNR=14	129.85	39	PKP		PKPdf	03 10 42.9	+1.5
NVAR				PP		PP	03 12 40.7	-12
N11A	comp=Z,0.7nm,0.8s,baz=264,slow=1.5,SNR=3.5 Elko Archery C baz=130	129.90	35	⇓P		PKPdf	03 10 42.6	+1.2
J15A	Blackfoot baz=130	129.90	30	⇓P		PKPdf	03 10 42.7	+1.4
M12A	Wells baz=130	129.96	34	⇑P		PKPdf	03 10 43.0	+1.5
I16A	Newdale baz=130	130.02	29	⇓P		PKPdf	03 10 42.8	+1.2
K14A	Jones Ranch, D baz=130	130.13	32	⇑P		PKPdf	03 10 43.0	+1.2
ULM	Lac du Bonnet comp=Z,5.4nm,0.8s,baz=353,slow=5.0,SNR=5.4	130.21	13	PKP		PKPdf	03 10 41.3	-0.4
ELK	Elko	130.23	35	ePKIKP		PKPdf	03 10 42.5	+0.5
ELK				e			03 12 56.3	
N12A	Clover Valley, baz=130	130.27	35	⇓P		PKPdf	03 10 43.4	+1.3
IMW	Indian Meadow	130.27	29	ePKPdf		PKPdf	03 10 42.3	+0.3
MTUM	Tungsten Hills	130.31	40	ePKPdf		PKPdf	03 10 42.0	-0.3
K15A	Arbon baz=130	130.36	31	⇓P		PKPdf	03 10 43.7	+1.4
O11A	Cowboy Ranch, baz=130	130.39	36	⇑P		PKPdf	03 10 43.7	+1.4
HELL	Mitchell Peak baz=130	130.40	41	⇓P		PKPdf	03 10 43.3	+0.8
M13A	Montello baz=130	130.42	33	⇑P		PKPdf	03 10 44.0	+1.7
L14A	Malta baz=130	130.45	32	⇑P		PKPdf	03 10 43.5	+1.1
MOOW	Moose Ponds	130.48	29	ePKPdf		PKPdf	03 10 43.3	+0.9
S08C	White Mtn Res baz=130	130.48	40	⇑P		PKPdf	03 10 43.9	+1.3
TPAW	Teton Pass	130.57	29	ePKPdf		PKPdf	03 10 43.5	+1.0
TPAW				ePP		PP	03 12 57.0	+0.4
LOHW	Long Hollow	130.65	29	ePKPdf		PKPdf	03 10 43.8	+1.1
LOHW				ePP		PP	03 12 54.9	-2.2
SNOW	Snow King Moun	130.69	29	ePKPdf		PKPdf	03 10 44.0	+1.2
P11A	Circle Ranch,	130.71	36	⇑P		PKPdf	03 10 44.5	+1.5
R09A	Tonopah baz=130	130.73	38	⇑P		PKPdf	03 10 44.0	+1.0
K16A	Soda Springs baz=130	130.74	30	⇑P		PKPdf	03 10 43.9	+0.9
M14A	Sheep Mountain baz=131	130.76	33	⇑P		PKPdf	03 10 43.9	+0.9
L15A	Malad City baz=131	130.92	32	⇓P		PKPdf	03 10 44.2	+0.9
S09A	Goldfield baz=131	130.95	39	⇑P		PKPdf	03 10 44.4	+0.9
R10A	Warm Springs baz=131	131.18	38	⇓P		PKPdf	03 10 45.5	+1.6
Q11A	Duckwater baz=131	131.22	37	⇓P		PKPdf	03 10 45.5	+1.6
S10A	Tonopah Range, baz=131	131.22	38	⇑P		PKPdf	03 10 45.2	+1.2
P12A	McGill baz=131	131.26	36	⇑P		PKPdf	03 10 45.0	+1.0
M15A	Larsen Ranch, baz=131	131.28	32	⇓P		PKPdf	03 10 44.9	+0.9
N14A	Grayback Hills baz=131	131.30	33	⇑P		PKPdf	03 10 44.8	+0.8
ISA	Isabella baz=131	131.35	42	⇑P		PKPdf	03 10 44.9	+0.6
L16A	Fish Haven baz=131	131.41	31	⇓P		PKPdf	03 10 45.0	+0.8
R11A	Troy Canyon, C baz=131	131.58	37	⇓P		PKPdf	03 10 46.1	+1.4
Q12A	Willow Creek R baz=131	131.58	36	⇓P		PKPdf	03 10 45.6	+1.0
HWUT	Hardware Ranch	131.64	31	ePKPdf		PKPdf	03 10 45.1	+0.5
HWUT				ePP		PP	03 13 03.0	-0.6
N15A	Stansbury Isla baz=131	131.64	33	⇓P		PKPdf	03 10 45.8	+1.1
MPMC	Manual Prospec baz=132	131.77	41	⇑P		PKPdf	03 10 46.4	+1.3
P13A	Bates Ranch, G baz=132	131.78	35	⇓P		PKPdf	03 10 46.5	+1.5
BW06	Boulder Array	131.79	29	ePKPdf		PKPdf	03 10 44.0	-1.0
PDAR	Pinedale Array comp=Z,0.6nm,0.9s,baz=92,slow=4.5,SNR=4.9	131.79	29	PKhKP			03 10 39.6	
PDAR				PKP		PKPdf	03 10 46.0	+1.1
PDAR	comp=Z,1.4nm,0.9s,baz=153,slow=0.3,SNR=11			PP		PP	03 13 02.9	-1.6
S11A	comp=Z,1.2nm,1.0s,baz=356,slow=4.5,SNR=3.7 Rachel baz=132	131.92	38	⇓P		PKPdf	03 10 47.1	+1.8
DUG	Dugway	131.96	34	ePKIKP		PKPdf	03 10 46.3	+1.0
DUG				e			03 13 06.3	
Q13A	Wheeler Ranch, baz=132	132.12	36	⇑P		PKPdf	03 10 47.2	+1.6
EDW2	Edwards Air Fo baz=132	132.12	43	⇑P		PKPdf	03 10 47.2	+1.5
R12A	Pony Springs, baz=132	132.18	37	⇓P		PKPdf	03 10 46.8	+1.0
P14A	Drum Mountains baz=132	132.23	34	⇓P		PKPdf	03 10 47.3	+1.4
U10A	Ash Meadows, A baz=132	132.31	40	⇑P		PKPdf	03 10 48.5	+2.4
S12A	Delamar Landin baz=132	132.50	38	⇑P		PKPdf	03 10 48.3	+1.9
T11A	Corn Creek, Al baz=132	132.50	38	⇑P		PKPdf	03 10 48.3	+1.9
Q14A	Sevier Lake (B baz=132	132.52	35	⇑P		PKPdf	03 10 47.6	+1.2
DAU	Daniels Canyon	132.66	32	ePKIKP		PKPdf	03 10 47.0	+0.4
GSC	Goldstone baz=132	132.67	41	⇑P		PKPdf	03 10 48.6	+1.8
BFSC	Mount Baldy St baz=132	132.70	43	⇓P		PKPdf	03 10 48.5	+1.6
O17A	Robinson Place baz=133	133.09	32	⇓P		PKPdf	03 10 49.3	+1.8
S13A	Holt Ranch, En baz=133	133.11	37	⇑P		PKPdf	03 10 49.2	+1.6
RSSD	Black Hills	133.14	23	ePKIKP		PKPdf	03 10 47.4	0.0
RSSD				e			03 13 12.5	
O18A	Roosevelt baz=133	133.42	31	⇓P		PKPdf	03 10 48.9	+0.8
MSU	Marysvale	133.48	35	ePKIKP		PKPdf	03 10 49.2	+1.0
MSU				e			03 13 14.8	
MSU	Marysvale	133.48	35	ePKPdf		PKPdf	03 10 49.2	+1.0
MSU				ePP		PP	03 13 14.8	-0.7
MSU				eSKPbc		SKPbc	03 14 15.6	+0.6
V12A	Nelson baz=134	133.68	40	⇓P		PKPdf	03 10 50.0	+1.3
GMRC	Granite Mounta baz=134	133.73	41	⇓P		PKPdf	03 10 50.3	+1.4
P18A	Preston Nutter baz=134	133.76	32	⇑P		PKPdf	03 10 49.9	+1.2
PFO	Pinyon Flat Ob baz=134	133.88	43	⇓P		PKPdf	03 10 49.8	+0.6
SRU	San Rafael	133.98	33	ePKPdf		PKPdf	03 10 48.5	-0.7
SRU				eSKPbc		SKPbc	03 14 18.8	+2.1
V13A	Grand Canyon W baz=134	134.15	39	⇓P		PKPdf	03 10 51.1	+1.6
MONP	Monument Peak baz=134	134.32	44	⇓P		PKPdf	03 10 50.9	+0.9
S16A	Weppner Ranch, baz=134	134.35	35	⇓P		PKPdf	03 10 50.8	+0.9
R17A	Hanksville Air baz=134	134.37	34	⇓P		PKPdf	03 10 50.5	+0.6
IRM	Iron Mountain baz=134	134.44	42	⇓P		PKPdf	03 10 51.7	+1.5
BC3	Big Chuckw Mtn baz=134	134.54	42	⇑P		PKPdf	03 10 51.5	+1.1
SWSC	Sam W. Stewart baz=134	134.72	43	⇓P		PKPdf	03 10 51.5	+0.7
Q19A	Hogan Spring (baz=135	134.77	32	⇓P		PKPdf	03 10 51.8	+1.1
U15A	North Rim baz=135	134.82	37	⇓P		PKPdf	03 10 51.8	+0.9
V14A	Boquillas Ranc baz=135	134.84	38	⇓P		PKPdf	03 10 52.2	+1.3
R18A	Canyonlands Na baz=135	134.84	33	⇑P		PKPdf	03 10 51.7	+0.9
W14A	Seligman baz=135	135.12	39	⇓P		PKPdf	03 10 52.3	+0.9
R19A	Curley Farm, L baz=135	135.25	33	⇑P		PKPdf	03 10 52.7	+1.1
V15A	Kaibab Nationa baz=135	135.29	38	⇑P		PKPdf	03 10 52.9	+1.2
T17A	Navajo Res., N baz=135	135.31	35	⇑P		PKPdf	03 10 52.9	+1.2
PV10	Paradox Valley	135.31	33	ePKPdf		PKPdf	03 10 52.6	+0.9
PV10				eSKPbc		SKPbc	03 14 25.2	+4.2
U16A	Tuba City baz=136	135.70	36	⇑P		PKPdf	03 10 53.8	+1.3
S19A	Harvey Farm, M baz=136	135.72	33	⇑P		PKPdf	03 10 53.2	+0.7
PV01	Paradox Valley	135.74	32	ePKPdf		PKPdf	03 10 52.7	+0.2
PV01				ePP		PP	03 13 33.3	+3.5
PV01				eSKPbc		SKPbc	03 14 21.6	-0.7
T18A	Mexican Hat baz=136	135.74	34	⇑P		PKPdf	03 10 53.2	+0.7
113A	Mohawk Valley, baz=136	136.20	42	⇓P		PKPdf	03 10 54.5	+1.0
U18A	Rough Rock, Ch baz=136	136.25	35	⇑P		PKPdf	03 10 54.3	+0.8
Y15A	Casa Rosa Ranc baz=136	136.40	40	⇑P		PKPdf	03 10 55.1	+1.2
PLCA	Paso Flores comp=Z,2.3nm,1.1s,baz=167,slow=11,SNR=3.1	136.47	191	PKP		PKPdf	03 10 52.5	-1.3
X16A	Lo Mia Camp, P baz=136	136.66	39	⇓P		PKPdf	03 10 55.8	+1.5
X17A	Forest Lakes baz=137	137.11	38	⇑P		PKPdf	03 10 56.9	+1.7
W18A	Petrified Fore baz=137	137.23	36	⇓P		PKPdf	03 10 57.1	+1.7
115A	Sonoran Desert baz=137	137.26	41	⇓P		PKPdf	03 10 56.4	+0.9
214A	Organ Pipe Nat baz=137	137.33	42	⇑P		PKPdf	03 10 56.7	+1.0
X18A	Snowflake baz=137	137.50	37	⇑P		PKPdf	03 10 56.6	+0.7
Y17A	Roosevelt baz=137	137.51	39	⇑P		PKPdf	03 10 57.6	+1.7
SDCO	Great Sand Dun	137.62	30	ePKPdf		PKPdf	03 10 56.5	+0.5
116A	Eloy baz=138	137.69	41	⇑P		PKPdf	03 10 57.8	+1.5
Y18A	Canyon Day Jun baz=138	137.96	38	⇑P		PKPdf	03 10 57.9	+1.2
X19A	St. Johns baz=138	137.97	37	⇑P		PKPdf	03 10 58.1	+1.3
117A	Oracle baz=138	138.31	40	⇓P		PKPdf	03 10 58.4	+1.0
Y19A	Nutrioso baz=138	138.32	37	⇑P		PKPdf	03 10 58.9	+1.6
TUC	Tucson	138.45	40	ePKIKP		PKPdf	03 10 57.8	+0.1
118A	Homack Ranch, baz=139	138.76	39	⇑P		PKPdf	03 10 58.6	+0.4
217A	Green Valley baz=139	138.77	41	⇑P		PKPdf	03 10 59.2	+0.9
119A	Ashpeak Ranch, baz=139	139.09	39	⇓P		PKPdf	03 11 00.2	+1.4
ANMO	Albuquerque	139.23	34	ePKHKP			03 10 52.3	
318A	Bisbee baz=139	139.53	41	⇑P		PKPdf	03 11 01.1	+1.5
219A	White Tail Can baz=139	139.63	39	⇓P		PKPdf	03 11 01.7	+1.9
BNM	Barren Site	139.72	35	ePKPdf		PKPdf	03 10 59.4	-0.5
319A	Douglas baz=140	140.03	40	⇑P		PKPdf	03 11 02.3	+1.7
AMTX	Amarillo	141.77	29	ePKPdf		PKPdf	03 11 01.8	-1.8
WMOK	Wichita Mounta	143.22	26	ePKHKP			03 11 01.2	
BDFB	Brasilia comp=Z,1.5nm,0.5s,baz=133,slow=26,SNR=2.6	143.55	240	PKP		PKPdf	03 11 06.0	-1.3
WCI	Wyandotte Cave	143.60	8	ePKIKP		PKPdf	03 11 03.0	-3.8
CPUP	Villa Florida comp=Z,8.7nm,1.0s,baz=96,slow=2.8,SNR=12	144.08	217	PKP		PKPdf	03 11 06.2	-1.8
TXAR	Lajitas Array comp=Z,41nm,0.6s,baz=203,slow=1.2,SNR=395	144.94	37	PKP		PKPdf	03 11 09.1	-0.3

TXAR	**Lajitas Array**	**144.94**	**37**	PKP	PKPdf	03 11 09.1	-0.3
GLAT	**Glass**	**144.97**	**13**	*e*PKPdf	PKPdf	03 11 08.3	-0.9
UTMT	**University of**	**145.00**	**12**	*e*PKPdf	PKPdf	03 11 08.3	-0.9
ELN	**Prospectdale**	**145.02**	**1**	*e*PKPdf	PKPdf	03 11 07.3	-2.0
BLA	**Blacksburg**	**145.04**	**0**	*e*PKIKP	PKPdf	03 11 07.0	-2.3
GNAR	**Gosnell**	**145.10**	**14**	*e*PKPdf	PKPdf	03 11 08.8	-0.7
HBAR	**Harrisburg**	**145.33**	**15**	*e*PKPbc	PKPbc	03 11 09.5	-0.1
MIAR	**Mount Ida**	**145.41**	**20**	*e*PKIKP	PKPdf	03 11 09.6	-0.4
WVT	**Waverly**	**145.41**	**11**	*e*PKIKP	PKPdf	03 11 09.2	-0.8
TZTN	**Tazewell**	**145.57**	**5**	*e*PKPbc	PKPbc	03 11 09.4	-1.0
UALR	**University of**	**145.59**	**18**	*e*PKPbc	PKPbc	03 11 08.8	-0.7
JCT	**Junction City**	**146.24**	**31**	*e*PKP2	PKPab	03 11 11.9	-1.4
TKL	**Tuckaleechee C**	**146.43**	**5**	*e*PKP2	PKPbc	03 11 11.9	-1.1
BBSR	**BB Station**	**146.48**	**336**	*e*PKPbc	PKPbc	03 11 12.9	-0.4
CPCT	**Cooper Cave**	**146.56**	**6**	*e*PKPbc	PKPbc	03 11 12.9	-0.5
SWET	**Sewanee**	**146.62**	**8**	*e*PKPbc	PKPbc	03 11 11.9	-1.7
OXF	**Oxford**	**146.63**	**14**	*e*PKP2	PKPbc	03 11 12.4	-1.2
NATX	**Nacogdoches**	**147.52**	**23**	*e*PKPbc	PKPbc	03 11 16.1	-0.1
JSC	**Jenkinsville**	**147.95**	**2**	*e*PKP2	PKPbc	03 11 16.9	-0.4
VBMS	**Vicksburg**	**148.51**	**17**	*e*PKPbc	PKPbc	03 11 18.5	-0.3
LRAL	**Lakeview Retre**	**148.57**	**11**	*e*PKPbc	PKPbc	03 11 17.9	-1.1
HKT	**Hockley**	**148.60**	**26**	*e*PKP2	PKPbc	03 11 19.2	0.0
GOGA	**Godfrey**	**148.69**	**5**	*e*PKP2	PKPbc	03 11 18.4	-0.9
NHSC	**New Hope**	**149.13**	**360**	*e*PKPbc	PKPbc	03 11 19.8	-0.7
KVTX	**Kingsville**	**149.59**	**32**	*e*PKPbc	PKPbc	03 11 23.5	+1.8
SIV	**San Ignacio**	**153.86**	**226**	PKP	PKPdf	03 11 23.9	+0.1
	comp=Z,0.3nm,0.4s,baz=186,slow=1.8,SNR=3.0						
LPAZ	**La Paz**	**158.15**	**213**	PKP	PKPdf	03 11 30.9	+1.4
	comp=Z,1.4nm,0.9s,baz=214,slow=2.7,SNR=5.3						
LPAZ	**La Paz**	**158.15**	**213**	*e*PKPdf	PKPdf	03 11 28.2	-1.3
SDV	**Santo Domingo**	**168.25**	**305**	PKP	PKPdf	03 11 38.1	-1.2
	comp=Z,2.7nm,0.3s,baz=200,slow=21,SNR=3.2						
ROSC	**El Rosal**	**173.44**	**295**	PKP	PKPdf	03 11 41.6	-0.4
	comp=Z,1.7nm,0.3s,baz=261,slow=22,SNR=3.6						
OTAV	**Otavalo**	**177.40**	**225**	*e*PKPdf	PKPdf	03 11 43.6	+0.6

BJI ***13*** *03:03:09.6,277S×9972E,h25km,mB5.2,mb4.9,Ms4.6, Ms4.5*

ISCJB ***13*** *03:03:14.5±0.5,205S±007×9945E±006,h22km,mb4.8/44, Error ellipse: s-maj=11.6km s-min=6.4km az=39.1*

IDC ***13*** *03:03:14.0±0.8,189S×9970E,h0km,mb4.5/17, mb1 4.6/17,mb1mx4.4/24,mbtmp4.6/17,Error ellipse: s-maj=29.2km s-min=14.1km az=51.0*

NEIC ***13*** *03:03:15.1±5.9,195S×9967E,h10km±35km,mb4.7/12, Error ellipse: s-maj=17.0km s-min=6.3km az=54.0*

NEIC Felt [III] at Padang and Painan, Sumatra.

DJA ***13*** *03:03:17, 1995×9948E, h20km, MLv5.0/6*

MOS ***13*** *03:03:17.5±0.9,186S×9969E,h38km,mb4.9/24, Error ellipse: s-maj=16.2km s-min=7.9km az=97.5*

ISC 13 03:03:17.0±0.5,203S±007×9951E±006,h23km, h23km±3.7km:pP-P,n99,σ1§01/89,mb4.8/44,3C-1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.95**	**92**	P		**Pn**	**03 03 49.6**	**+1.0**
	0.0nm,0.0s							
RGRI	**Rengat**	**3.28**	**59**	P		**Pn**	**03 04 09.6**	**+2.6**
	0.0nm,0.0s							
DSRI	**Dabo**	**5.29**	**73**	P		**Pn**	**03 04 36.8**	**+2.1**
	121nm,1.1s							
DBJI	**Dramaga**	**8.50**	**122**	P		**Pn**	**03 05 22.5**	**+3.8**
	93nm,1.1s							
KKM	**Kota Kinabalu**	**18.51**	**64**	*e*Pn		**Pn**	**03 07 32.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**20.37**	**358**	P		**P**	**03 07 49.9**	**-2.2**
	5.0nm,0.7s,baz=187,slow=11,SNR=12							
CMAR	**Chiang Mai Arr**	**20.37**	**358**	P		**P**	**03 07 49.9**	**-2.2**
CMAR				pmax	pmax			
	comp=Z,5.0nm,0.7s							
KAPI	**Kappang**	**20.41**	**99**	P		**P**	**03 07 51.6**	**-1.1**
	comp=Z,26nm,1.0s,baz=255,slow=9.9,SNR=8.0							
KAPI	**Kappang**	**20.41**	**99**	*e*P		**P**	**03 07 53.3**	**+0.6**
	comp=Z,46nm,1.0s							
CHTO	**Chiang Mai**	**20.72**	**358**	*e*P		**P**	**03 07 56.0**	**+0.1**
CHTO				pmax	pmax			
	comp=Z,8.0nm,0.8s							
CHTO	**Chiang Mai**	**20.72**	**358**	*e*P		**P**	**03 07 56.0**	**+0.1**
	comp=Z,8.1nm,0.8s							
KDI	**Kendari**	**23.15**	**95**	P		**P**	**03 08 22.8**	**+0.8**
	comp=Z,32nm,1.1s,mb4.7							
QIZ	**Qiongzhong**	**23.27**	**25**	P		**P**	**03 08 22.3**	**-0.8**
QIZ				S		**S**	**03 12 33.3**	**-0.7**
QIZ				AMB	AMB			
	comp=Z,48nm,1.2s,mb4.8							
QIZ	**Qiongzhong**	**23.27**	**25**	*e*P		**P**	**03 08 22.2**	**-0.9**
	comp=Z,43nm,1.0s,mb4.8							
KMI	**Kunming**	**27.18**	**6**	P		**P**	**03 09 02.5**	**+3.7**
KMI				AP	pP		03 09 11.2	+5.4
KMI				XP	sP		03 09 15.0	+6.3
KMI				PP			03 09 47.9	
KMI				S		**S**	**03 13 36.5**	**+0.2**
KMI				AMB	AMB			
	comp=Z,7.0nm,0.9s,mb4.2							
FITZ	**Fitzroy Crossi**	**30.20**	**124**	P		**P**	**03 09 24.8**	**-1.0**
	comp=Z,2.0nm,0.8s,mb3.9,baz=309,slow=6.5,SNR=4.7							
LSA	**Lhasa**	**32.55**	**346**	P		**P**	**03 09 46.5**	**+0.1**
LSA	**Lhasa**	**32.55**	**346**	*e*P		**P**	**03 09 46.8**	**+0.4**
LSA				pmax	pmax			
	comp=Z,20nm,1.0s,mb5.0							
LSA	**Lhasa**	**32.55**	**346**	*e*P		**P**	**03 09 46.8**	**+0.3**
	comp=Z,20nm,1.0s,mb5.0							
LZH	**Lanzhou**	**38.14**	**6**	*e*P		**P**	**03 10 37.5**	**+3.1**
LZH				*e*PP	PP		03 12 09.5	+7.6
LZH				AMB	AMB			
	comp=Z,23nm,1.2s,mb4.8							
LZH				AMB	AMB			
	comp=Z,86nm,5.3s							
LZH				LR	LR			
	comp=E,507nm,13.8s							
LZH				LR	LR			
	comp=Z,698nm,17.5s							
WRA	**Warramunga Arr**	**38.40**	**120**	P		**P**	**03 10 36.1**	**-0.8**
	comp=Z,7.6nm,0.8s,mb4.5,baz=301,slow=9.0,SNR=33							
WRA				PcP	PcP		03 12 51.1	+0.8
	comp=Z,1.2nm,0.7s,baz=314,slow=2.5,SNR=5.6							
WRA	**Warramunga Arr**	**38.40**	**120**	P		**P**	**03 10 36.1**	**-0.8**
WRA							03 12 51.1	
WRA				pmax	pmax			
	comp=Z,8.0nm,0.8s							
WRA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
WRAB	**Tennant Creek**	**38.40**	**120**	*e*P		**P**	**03 10 36.1**	**-0.8**
WRAB				pmax	pmax			
	comp=Z,8.0nm,0.7s,mb4.6							
WRAB	**Tennant Creek**	**38.40**	**120**	*e*P		**P**	**03 10 36.1**	**-0.8**
	comp=Z,7.8nm,0.7s,mb4.5							
WB2	**Warramunga Arr**	**38.41**	**120**	*e*P		**P**	**03 10 36.4**	**-0.6**
NJ2	**Nanjing**	**38.54**	**27**	*e*P		**P**	**03 10 37.7**	**-0.2**
NJ2				AMB	AMB			
	comp=Z,120nm,0.6s,mb5.8							
GTA	**Gaotai**	**41.24**	**0**	*e*P		**P**	**03 11 00.9**	**+0.7**
GTA				AP	pP		03 11 05.2	-2.1
GTA				XP	sP		03 11 08.0	-2.2
GTA				AMB	AMB			
	comp=Z,6.0nm,1.4s,mb4.0							
HHC	**Hu-ho-hao-te**	**44.07**	**13**	*e*P		**P**	**03 11 24.5**	**+1.3**
HHC				S		**S**	**03 17 54.3**	**-0.1**
HHC				AMB	AMB			
	comp=Z,22nm,0.5s,mb5.1							
WMQ	**Urumqi**	**46.86**	**348**	*i*P		**P**	**03 11 47.1**	**+1.9**
WMQ				AP	pP		03 11 52.2	-0.3
WMQ				XP	sP		03 11 55.5	+0.2
WMQ				AMB	AMB			
	comp=Z,26nm,1.1s,mb5.1							
KSRS	**Korea Array**	**47.30**	**31**	P		**P**	**03 11 48.0**	**-0.8**
	comp=Z,7.1nm,0.8s,mb4.7,baz=225,slow=8.6,SNR=38							
KSRS	**Korea Array**	**47.30**	**31**	P		**P**	**03 11 48.0**	**-0.8**
KSRS				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.6							
CTAO	**Charters Tower**	**49.02**	**115**	*e*P		**P**	**03 12 01.9**	**-0.5**
CTAO				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.6							
CTAO	**Charters Tower**	**49.02**	**115**	*e*P		**P**	**03 12 01.9**	**-0.5**
	comp=Z,5.1nm,0.8s,mb4.6							
STKA	**Stephens Creek**	**49.49**	**131**	*e*P		**P**	**03 12 06.9**	**+1.1**
	comp=Z,5.8nm,0.9s,mb4.6							
STKA	**Stephens Creek**	**49.49**	**131**	P		**P**	**03 12 07.0**	**+1.1**
	comp=Z,4.0nm,0.7s,mb4.6,baz=294,slow=6.1,SNR=6.2							
TKM2	**Tokmak 2**	**49.67**	**337**	*e*P		**P**	**03 12 08.0**	**+1.1**
TKM2				pmax	pmax			
	comp=Z,13nm,0.8s,mb5.0							
TKM2	**Tokmak 2**	**49.67**	**337**	*e*P		**P**	**03 12 08.0**	**+1.0**
	comp=Z,13nm,0.8s,mb5.0							
SONM	**Songino Array**	**50.03**	**6**	P		**P**	**03 12 10.0**	**+0.5**
	comp=Z,11nm,0.8s,mb4.9,baz=187,slow=8.7,SNR=47							
SONM				PcP	PcP		03 13 29.8	+0.6
	comp=Z,2.0nm,0.8s,baz=193,slow=3.7,SNR=4.1							
SONM	**Songino Array**	**50.03**	**6**	P		**P**	**03 12 10.0**	**+0.5**
SONM							03 13 29.8	
SONM				pmax	pmax			
	comp=Z,11nm,0.8s							
SONM				pmax	pmax			
	comp=Z,2.0nm,0.8s							
ULN	**Ulaanbaatar**	**50.13**	**7**	*e*P		**P**	**03 12 10.5**	**+0.2**
ULN				pmax	pmax			
	comp=Z,13nm,1.0s,mb4.9							
ULN	**Ulaanbaatar**	**50.13**	**7**	*e*P		**P**	**03 12 10.5**	**+0.1**
	comp=Z,12nm,1.0s,mb4.9							
EKS2	**Erkin-Say**	**50.19**	**335**	*e*P		**P**	**03 12 12.1**	**+1.3**
	comp=Z,11nm,0.8s,mb4.9							
MK31	**Makanchi Array**	**50.93**	**345**	*e*P		**P**	**03 12 16.8**	**+0.4**
MKAR	**Makanchi Array**	**50.93**	**345**	P		**P**	**03 12 17.0**	**+0.6**
	comp=Z,16nm,0.7s,mb5.1,baz=151,slow=8.1,SNR=73							
MKAR	**Makanchi Array**	**50.93**	**345**	P		**P**	**03 12 17.0**	**+0.6**
MKAR				pmax	pmax			
	comp=Z,16nm,0.7s							
CN2	**Changchun**	**51.21**	**24**	*e*P		**P**	**03 12 17.4**	**-1.2**
CN2				AMB	AMB			
	comp=Z,20nm,0.8s,mb5.1							
ZAK	**Zakamensk**	**52.31**	**3**	*e*P		**P**	**03 12 26.4**	**-0.3**
ZAK				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.3							
MAJO	**Matsushiro**	**52.61**	**39**	*e*P		**P**	**03 12 27.3**	**-1.8**
MAJO				pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.7							
MAJO	**Matsushiro**	**52.61**	**39**	*e*P		**P**	**03 12 27.3**	**-1.9**
	comp=Z,8.9nm,0.9s,mb4.7							
MAT	**Matsushiro**	**52.61**	**39**	P		**P**	**03 12 28.5**	**-0.6**
MJAR	**Matsushiro Arr**	**52.61**	**39**	P		**P**	**03 12 27.5**	**-1.7**
	comp=Z,5.7nm,0.8s,mb4.6,baz=216,slow=7.4,SNR=16							
MJAR	**Matsushiro Arr**	**52.61**	**39**	P		**P**	**03 12 27.5**	**-1.6**
MJAR				pmax	pmax			
	comp=Z,6.0nm,0.8s							
TLY	**Talaya**	**53.63**	**3**	*e*P		**P**	**03 12 36.9**	**+0.6**
TLY				*e*			03 12 46.7	
TLY				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.8							
MDJ	**Mudanjiang**	**53.63**	**26**	P		**P**	**03 12 36.6**	**+0.1**
MDJ				AP	pP		03 12 44.9	+1.1
MDJ				XP	sP		03 12 50.3	+3.7
MDJ				AMB	AMB			
	comp=Z,7.0nm,1.0s,mb4.5							
KURK	**Kurchatov**	**55.50**	**344**	P		**P**	**03 12 49.8**	**-0.2**
	comp=Z,9.1nm,0.8s,mb4.9,baz=165,slow=7.2,SNR=20							
KURK	**Kurchatov**	**55.50**	**344**	*i*P		**P**	**03 12 50.2**	**+0.2**
KURK				pmax	pmax			
	comp=Z,19nm,0.8s,mb5.2							
KURK	**Kurchatov**	**55.50**	**344**	*e*P		**P**	**03 12 49.9**	**-0.1**
ZALV	**Zalesovo Beam**	**57.11**	**350**	P		**P**	**03 13 01.7**	**+0.3**
	comp=Z,37nm,0.8s,mb5.5,baz=178,slow=5.5,SNR=59							
ZALV	**Zalesovo Beam**	**57.11**	**350**	P		**P**	**03 13 01.7**	**+0.3**
ZALV				pmax	pmax			
	comp=Z,37nm,0.8s,mb5.5							
ZALV	**Zalesovo Beam**	**57.11**	**350**	P		**P**	**03 13 01.7**	**+0.3**
NVS	**Novosibirsk**	**58.25**	**349**	*i*P		**P**	**03 13 08.2**	**-1.2**
BVAR	**Borovoye Array**	**60.05**	**340**	P		**P**	**03 13 21.4**	**-0.5**
	comp=Z,5.4nm,0.7s,mb4.7,baz=140,slow=8.6,SNR=19							
BVAR	**Borovoye Array**	**60.05**	**340**	P		**P**	**03 13 21.4**	**-0.5**
BVAR				pmax	pmax			
	comp=Z,5.0nm,0.7s							
BRVK	**Borovoye**	**60.11**	**340**	*e*P		**P**	**03 13 21.5**	**-0.8**
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.3							
BRVK	**Borovoye**	**60.11**	**340**	*e*P		**P**	**03 13 21.5**	**-0.8**
	comp=Z,2.2nm,0.6s,mb4.4							
BOD	**Bodaibo**	**60.79**	**9**	*i*P		**P**	**03 13 26.9**	**+0.1**
BOD				pmax	pmax			
	comp=Z,16nm,0.9s,mb5.2							
YSS	**Yuzh-Sakhalins**	**61.77**	**32**	*e*P		**P**	**03 13 33.5**	**-0.2**
YSS				pmax	pmax			
	comp=Z,44nm,1.2s,mb5.5							
YSS	**Yuzh-Sakhalins**	**61.77**	**32**	*e*P		**P**	**03 13 33.4**	**-0.3**
AKTK	**Aktyubinsk**	**63.15**	**332**	P		**P**	**03 13 42.3**	**-0.6**
AKTO	**Aktyubinsk**	**63.15**	**332**	P		**P**	**03 13 42.3**	**-0.6**
	comp=Z,3.4nm,0.8s,mb4.5,baz=125,slow=7.9,SNR=8.5							
AKTO	**Aktyubinsk**	**63.15**	**332**	P		**P**	**03 13 42.3**	**-0.6**
AKTO				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.5							
SVE	**Sverdlovsk**	**66.53**	**338**	*e*P		**P**	**03 14 04.0**	**-0.8**
SVE				pmax	pmax			
	comp=Z,18nm,1.0s,mb5.1							
ARU	**Arti**	**67.04**	**337**	*c i*P		**P**	**03 14 07.7**	**-0.4**
ARU				*e*			03 16 31.6	
ARU				*e*S	S		03 22 59.0	-1.4
ARU				*e*SS	SS		03 27 21.8	+2.2
ARU				pmax	pmax			
	comp=Z,24nm,2.5s,mb4.8							
YAK	**Yakutsk**	**67.90**	**15**	*e*P		**P**	**03 14 11.8**	**-1.5**
YAK				pmax	pmax			
	comp=Z,58nm,0.9s,mb5.6							
YAK	**Yakutsk**	**67.90**	**15**	*e*P		**P**	**03 14 11.7**	**-1.6**
KIV	**Kislovodsk**	**68.25**	**319**	P		**P**	**03 14 16.0**	**0.0**
KIV				*e*SP	sP		03 14 28.6	+2.4
KIV							03 14 39.0	
KIV				pmax	pmax			
	comp=Z,9.0nm,1.3s,mb4.6							
PETK	**Petropavlovsk-**	**73.17**	**32**	P		**P**	**03 14 45.2**	**-0.5**
	comp=Z,2.5nm,0.6s,mb4.3,baz=215,slow=2.6,SNR=8.0							
PETK	**Petropavlovsk-**	**73.17**	**32**	P		**P**	**03 14 45.2**	**-0.5**
PETK				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4							
VSR	**Storozhevoye**	**73.53**	**325**	*e*P		**P**	**03 14 47.2**	**-0.7**
VSR				pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.5							
VSR				pmax	pmax			
	comp=N,6.0nm,2.2s							
VSR				pmax	pmax			
	comp=E,10.0nm,0.8s							
PET	**Petropavlovsk**	**73.65**	**33**	*e*P		**P**	**03 14 47.9**	**-0.6**
PET				pmax	pmax			
	comp=Z,11nm,1.3s,mb4.6							
OBN	**Obninsk**	**76.57**	**328**	P		**P**	**03 15 05.0**	**-0.3**
OBN				*e*			03 15 14.6	
OBN				*e*			03 15 20.7	
OBN				pmax	pmax			
	comp=Z,12nm,1.4s,mb4.6							
BUR08	**Bucovina Ar. S**	**80.98**	**319**	*e*P		**P**	**03 15 30.8**	**+1.0**
GERES	**GERESS Array B**	**88.75**	**319**	P		**P**	**03 16 09.6**	**+0.8**
	comp=Z,0.5nm,0.7s,mb4.0,baz=76,slow=5.6,SNR=5.3							
GERES	**GERESS Array B**	**88.75**	**319**	P		**P**	**03 16 09.6**	**+0.8**
GERES				pmax	pmax			
	comp=Z,1.0nm,0.7s							
DAVOX	**Davos/Dischmat**	**91.22**	**317**	P		**P**	**03 16 21.8**	**+1.4**
	comp=Z,2.3nm,0.7s,mb4.6,baz=84,slow=8.0,SNR=3.0							
KEST	**Kesra**	**91.31**	**306**	P		**P**	**03 16 22.9**	**+1.8**
	comp=Z,1.3nm,0.8s,mb4.3,baz=314,slow=9.1,SNR=4.0							
MCK	**McKinley**	**101.24**	**25**	*e*P		Pdif	03 17 05.1	-0.6
NVAR	**Mina Array Bea**	**129.93**	**39**	PKP		PKPdf	03 22 27.0	+1.8
	comp=Z,0.6nm,0.7s,baz=285,slow=2.9,SNR=4.1							
BW06	**Boulder Array**	**131.84**	**29**	*e*PKPdf		PKPdf	03 22 29.2	+0.6
PDAR	**Pinedale Array**	**131.84**	**29**	PKP		PKPdf	03 22 29.4	+0.8
	comp=Z,0.2nm,0.5s,baz=72,slow=9.5,SNR=4.1							
DUG	**Dugway**	**132.03**	**33**	*e*PKIKP		PKPdf	03 22 30.4	+1.3
WMOK	**Wichita Mounta**	**143.27**	**26**	*e*PKIKP		PKPdf	03 22 46.6	-3.3
CPUP	**Villa Florida**	**144.00**	**217**	*e*PKIKP		PKPdf	03 22 50.6	-0.9
CFAA	**Coronel Fontan**	**144.58**	**198**	PKP		PKPdf	03 22 52.6	+0.3
	comp=Z,0.4nm,0.8s,baz=114,slow=2.4,SNR=5.4							
TXAR	**Lajitas Array**	**145.02**	**37**	PKP		PKPdf	03 22 53.3	+0.1
	comp=Z,10nm,0.7s,baz=287,slow=1.2,SNR=139							
TXAR	**Lajitas Array**	**145.02**	**37**	PKIKP		PKPdf	03 22 53.3	+0.2
TXAR				pmax	pmax			
	comp=Z,10.0nm,0.7s							
WVT	**Waverly**	**145.40**	**10**	*e*PKIKP		PKPdf	03 22 52.8	-0.8
MIAR	**Mount Ida**	**145.43**	**19**	*e*PKIKP		PKPdf	03 22 53.5	-0.2
JCT	**Junction City**	**146.30**	**31**	*e*PKP2		PKPab	03 22 56.7	-0.5

IDC 13 03:12:28.0±4.2,224S×9941E,h0km,mb3.9/3,mb1 4.0/3, mb1mx3.6/18,mbtmp3.9/3,Error ellipse: s-maj=165.4km s-min=28.7km az=56.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.38**	**120**	P		P	03 19 51.1	-0.2
	0.4nm,0.5s,baz=294,slow=8.1,SNR=8.8							
SONM	**Songino Array**	**50.24**	**6**	P		P	03 21 25.7	-0.2
	2.0nm,0.7s,baz=188,slow=9.1,SNR=10							
MKAR	**Makanchi Array**	**51.10**	**345**	P		P	03 21 32.5	+0.1
	1.1nm,0.6s,baz=152,slow=7.7,SNR=7.7							
TXAR	**Lajitas Array**	**145.25**	**37**	PKPbc		PKPbc	03 32 07.9	-0.3
	1.1nm,0.7s,baz=274,slow=1.3,SNR=15							

ISCJB ***13*** *03:16:15.5±0.6,5454S±007×12W±02,h10km,mb4.3/10, Error ellipse: s-maj=16.8km s-min=10.2km az=178.2*

IDC ***13*** *03:16:15.9±0.7,5456S×135W,h0km,mb4.2/9,mb1 4.2/9, mb1mx4.1/18,mbtmp4.2/9,Error ellipse: s-maj=21.8km s-min=20.2km az=93.0*

NEIC ***13*** *03:16:17.4±0.6,5453S×133W,h10km,mb4.6/4,Error ellipse: s-maj=18.7km s-min=13.4km az=85.0*

ISC 13 03:16:17.6±0.6,5456S±007×12W±02,h10km,n24, σ1§08/21,mb4.3/10,2C,Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.45**	**188**	*e*		**Pn**		**03 20 09.0**	**+0.9**
VNA1				*e*				03 20 15.4	
VNA2	**Neumayer--Watz**	**16.65**	**187**	*e*		**Pn**		**03 20 07.3**	**-3.3**
VNA2				*e*				03 20 13.2	
VNA3	**Neumayer Olymp**	**17.15**	**189**	*e*		**Pn**		**03 20 17.2**	**+0.3**
VNA3				*e*				03 20 23.0	
SNAA	**Sanae**	**17.19**	**182**	*e*		**Pn**		**03 20 17.9**	**+0.5**
SNAA				*e*				03 20 24.2	
SNAA	**Sanae**	**17.19**	**182**	*e*P		**Pn**		**03 20 19.5**	**+2.1**
	7.6nm,0.6s								
SYO	**Syowa Base**	**23.49**	**144**	*e*P		**P**		**03 21 22.6**	**-4.6**
SYO	**Syowa Base**	**23.49**	**144**	*i*P		**P**		**03 21 25.0**	**-2.2**
MAW	**Mawson**	**31.96**	**139**	*e*P		**P**		**03 22 42.8**	**-0.3**
	4.0nm,0.8s,mb4.3								
MAW	**Mawson**	**31.96**	**139**	P		**P**		**03 22 42.7**	**-0.4**
	2.8nm,0.6s,mb4.3,baz=282,slow=16,SNR=16								
QSPA	**South Pole Qui**	**35.68**	**180**	P		**P**		**03 23 15.2**	**-0.1**
	4.7nm,1.0s,mb4.4,baz=233,slow=8.7,SNR=7.7								
TSUM	**Tsumeb**	**38.11**	**30**	P		**P**		**03 23 38.4**	**+1.9**
	6.2nm,1.0s,mb4.3,baz=156,slow=9.3,SNR=3.6								
LSZ	**Lusaka**	**45.37**	**42**	P		**P**		**03 24 36.9**	**+1.0**
	3.9nm,1.0s,mb4.2,baz=170,slow=5.8,SNR=5.2								
CASY	**Casey**	**49.00**	**150**	*e*P		**P**		**03 25 03.3**	**-0.4**
CASY	**Casey**	**49.00**	**150**	*e*P		**P**		**03 25 02.5**	**-1.2**
	22nm,1.4s,mb5.0								
CPUP	**Villa Florida**	**49.46**	**281**	P		**P**		**03 25 07.3**	**-0.4**
	2.3nm,0.8s,mb4.3,baz=119,slow=8.2,SNR=3.6								
CPUP	**Villa Florida**	**49.46**	**281**	*e*P		**P**		**03 25 07.2**	**-0.6**
	3.4nm,0.4s,mb4.7								
CFAA	**Coronel Fontan**	**51.84**	**268**	P		**P**		**03 25 25.9**	**+0.2**
	0.8nm,0.8s,mb3.7,baz=127,slow=6.7,SNR=7.7								
DBIC	**Dimbokro**	**61.08**	**356**	P		**P**		**03 26 30.0**	**-1.5**
	3.3nm,0.9s,mb4.5,baz=166,slow=17,SNR=2.8								
DBIC	**Dimbokro**	**61.08**	**356**	P		**P**		**03 26 30.0**	**-1.5**
LPAZ	**La Paz**	**63.52**	**279**	P		**P**		**03 26 48.3**	**+0.3**
	2.7nm,0.8s,mb4.3,baz=149,slow=5.9,SNR=13								
TORD	**Torodi Ar. Bea**	**67.49**	**3**	P		**P**		**03 27 12.8**	**-0.7**
	0.7nm,0.8s,mb3.7,baz=184,slow=5.8,SNR=3.8								
YKA	**Yellowknife Ar**	**145.83**	**311**	PKPbc		PKPbc		03 35 53.5	-1.9
	3.3nm,0.7s,baz=110,slow=3.2,SNR=6.3								
YKA	**Yellowknife Ar**	**145.83**	**311**	PKPbc		PKPbc		03 35 53.5	-2.0
MJAR	**Matsushiro Arr**	**146.94**	**106**	PKPbc		PKPbc		03 36 01.1	+1.5
	2.1nm,0.8s,baz=231,slow=4.9,SNR=5.7								

IDC ***13*** *03:19:01.9±0.9,1098S×16683E,h0km,mb4.0/11, mb1 4.2/11,mb1mx4.1/18,mbtmp4.0/11,Error ellipse: s-maj

STKA	**Stephens Creek**	47.71	132	P		**P**	03 34 32.6	+0.6
	1.6nm,0.6s,mb4.2,baz=311,slow=17,SNR=8.7							
SONM	**Songino Array**	50.78	5	P		**P**	03 34 55.7	+0.5
	8.0nm,0.8s,mb4.7,baz=185,slow=9.0,SNR=33							
ULN	**Ulaanbaatar**	50.86	5	*e*P		**P**	03 34 55.6	-0.2
	3.4nm,0.8s,mb4.3							
TKM2	**Tokmak 2**	51.13	336	*e*P		**P**	03 34 58.0	+0.2
	6.0nm,0.5s,mb4.8							
MKAR	**Makanchi Array**	52.23	344	P		**P**	03 35 05.5	-0.5
	4.0nm,0.4s,mb4.7,baz=158,slow=8.5,SNR=41							
MKAR	**Makanchi Array**	52.23	344	P		**P**	03 35 05.5	-0.5
KURK	**Kurchatov**	56.82	343	*e*P		**P**	03 35 38.3	-0.9
	2.5nm,0.6s,mb4.4							
ZALV	**Zalesovo Beam**	58.29	349	P		**P**	03 35 48.5	-1.0
	13nm,0.7s,mb5.0,baz=157,slow=6.3,SNR=5.9							
BRVK	**Borovoye**	61.51	339	*e*P		**P**	03 36 10.4	-1.3
	3.0nm,0.6s,mb4.6							
AKTK	**Aktyubinsk**	64.70	331	P		**P**	03 36 31.4	-1.5
AKTO	**Aktyubinsk**	64.70	331	P		**P**	03 36 31.4	-1.5
	1.0nm,0.4s,mb4.2,baz=109,slow=3.7,SNR=4.0							
PETK	**Petropavlovsk**	73.10	32	P		**P**	03 37 24.4	-0.7
	1.5nm,0.7s,mb4.0,baz=201,slow=2.4,SNR=3.9							
PETK	**Petropavlovsk**	73.10	32	P		**P**	03 37 24.4	-0.7
ARCES	**ARCESS Array B**	87.72	340	P		**P**	03 38 42.4	-0.9
	2.4nm,0.9s,mb4.4,baz=99,slow=6.3,SNR=5.1							
GERES	**GERESS Array B**	90.47	319	P		**P**	03 38 56.9	+0.2
	0.1nm,0.3s,mb3.7,baz=90,slow=5.3,SNR=3.9							
TXAR	**Lajitas Array**	144.76	39	PKP		PKPdf	03 45 31.4	-1.0
	2.2nm,0.6s,baz=260,slow=0.8,SNR=41							

ISCJB ***13*** *03:28:17.5±0.8, 1056N±008×6257W±004, h87km±8km, Error ellipse: s-maj=13.3km s-min=5.7km az=173.6*
FUNV ***13*** *03:28:18.8, 1065N×6251W, h79km, MW2.5*
NEIC ***13*** *03:28:22.1, 1091N×6232W, h79km, MD2.9(TRN), After TRN.*
TRN ***13*** *03:28:22.4, 1086N×6228W, h83km, MD2.8*

ISC 13 03:28:18.4±0.8, 1057N±008×6257W±003, h81km±8km, n14, σ1§10/23, 2C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUIV	**Guiria**	0.35	78	⇑*i*	P	**Pn**	03 28 30.9	-0.2
GUIV				*e*	S	**Sn**	03 28 39.0	-1.5
GUNV	**Guanoco**	0.55	222	*e*	P	**Pn**	03 28 34.4	+1.7
GUNV				*e*	S	**Sn**	03 28 44.1	+0.8
CRUV	**Carupano**	0.67	279	*e*	P	**Pn**	03 28 34.1	+0.3
CRUV				*e*	S	**Sn**	03 28 45.9	+0.6
TCE	**Chacachacare**	0.81	81	*e*	P	**Pn**	03 28 37.4	+2.1
TCE				*e*	S	**Sn**	03 28 47.3	-0.7
ITEV	**Isla Los Testi**	0.95	325	⇓*i*	P	**Pn**	03 28 36.8	-0.2
TRN	**Trinidad (W)**	1.15	86	*e*	P	**Pn**	03 28 40.1	+0.9
TRN				*e*	S	**Sn**	03 28 54.5	-0.5
TBH	**Brigand Hill**	1.48	93	*e*	P	**Pn**	03 28 45.0	+1.6
TBH				*e*	S	**Sn**	03 29 01.0	-1.4
TBH	**Brigand Hill**	1.48	93	*e*	P	**Pn**	03 28 45.0	+1.6
TBH				*e*	S	**Sn**	03 29 00.2	-2.2
TPR	**Prospect**	1.86	71	*e*	P	**Pn**	03 28 48.2	-0.3
PCRV	**Puerto La Cruz**	2.07	259	*e*	P	**Pn**	03 28 51.2	-0.1
RIOV	**Rio Grande**	2.60	163	*e*	P	**Pn**	03 28 58.8	+0.4
CUPV	**Cœpira**	3.21	261	⇑*e*	P	**Pn**	03 29 06.8	+0.2
CUPV				*e*	S	**Sn**	03 29 41.9	-2.0
LUEV	**Luepa**	4.83	167	*e*	P	**Pn**	03 29 28.4	-0.2
CAOV	**Caicara del Or**	4.92	229	*e*	P	**Pn**	03 29 30.5	+0.6
CAOV				*e*	S	**Sn**	03 30 23.0	-2.4

BJI ***13*** *03:35:21.1, 257S×9949E, h10km, mB7.2, mb6.2, Ms7.7, Msz7.6*
IDC ***13*** *03:35:24.6±0.3, 2.16S×9965E, h0km, mb5.7/34, mb1 5.7/34, mb1mx5.7/34, mbtmp5.7/34, MS7.0/26, Ms1 7.0/26, ms1mx6.8/40, Error ellipse: s-maj=11.9km s-min=8.4km az=23.0*
ISCJB ***13*** *03:35:26.6±0.1, 2.16S±002×9960E±001, h19km, mb6.2/259, MS7.2/263, Error ellipse: s-maj=3.0km s-min=2.0km az=20.8*
GCMT ***13*** *03:35:28.7±0.1, 2.31S×9939E, h17km, MW7.1/114, Moment Tensor Solution. s114,c244; s105,c232; Duration: 82 Moment tensor: Scale 10^19 Nm; Mrr 1.50±.03; Mθθ-0.85±.02; Mϕϕ-0.65±.03; Mrθ 3.32±.06; Mθϕ 0.90±.02; Mϕr-2.96±.07; Best double couple: Mo 4.72000×10^19 NP1:ϕs 312.00000°, δ 10.00000°, λ 90.00000°. NP2:ϕs 132.00000°, δ 80.00000°, λ 90.00000°. Principal axes: T 4.6420, Plg55.0000°, Azm42.0000°; N 0.1510, Plg0.0000°, Azm132.0000°; P -4.7980, Plg35.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
NEIC ***13*** *03:35:28.7±0.1, 2.13S×9963E, h22km, mb6.3/147, ME7.0, MS7.2/211 Error ellipse: s-maj=4.8km s-min=2.9km az=214.0 Broadband fault plane solution: P waves. NP1:ϕs 310.00000°, δ 10.00000°, λ 90.00000°. NP2: ϕs 130.00000°, δ 80.00000°, λ 90.00000°. Principal axes: T Plg55.0000°, Azm40.0000°; N Plg0.0000°, Azm0.0000°; P Plg35.0000°, Azm220.0000°; Complex earthquake observed on broadband displacement seismograms. A small event is followed by a larger event about 2 seconds later. Depth from synthetics of broadband displacement seismograms based on first event. Energy computed from BB mechanism.*
NEIC Casualties and damage are included with the event of September 12 at 11:10 UTC. Felt [III] at Bengkulu and Padang; [II] at Kapahiang and Padangpanjang, Sumatra. Also felt at Duri, Palembang and Pekanbaru. Felt [II] at Kuala Lumpur, Malaysia. Also felt at Johor Bahru. Felt [III] in Singapore.
DJA ***13*** *03:35:28, 222S×99.41E, h30km, Mw7.1/25*
MOS ***13*** *03:35:28.1±1.0, 207S×9970E, h27km, mb6.4/117, MS7.2/102, Error ellipse: s-maj=7.3km s-min=3.6km az=124.7*
SZGRF ***13*** *03:35:30.0, 2.17S×9979E, h33km, mb6.3, MS7.1, Southern Sumatera, Indonesia*
ORF ***13*** *03:36:17.0, 687S×8037E, h30km, mb6.2*

ISC 13 03:35:28.6±0.1, 216S±002×9957E±001, h20km, h20km±1.0km:pP-P, n1826, σ1§06/1094, mb6.2/257, MS7.2/263, 370C-212D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	1.88	26	P			**Pn**	03 35 59.7	+0.1
	0.0nm,0.0s								
KRJI	**Kerinci**	1.89	88	P			**Pn**	03 36 00.6	+0.9
	0.0nm,0.0s								
RGRI	**Rengat**	3.29	57	P			**Pn**	03 36 21.1	+2.0
	0.0nm,0.0s								
GSI	**Gunungsitoli**	3.98	330	P			**Pn**	03 36 27.3	-1.2
JMBI	**JAMBI**	4.10	83	P			**Pn**	03 36 32.6	+2.5
	0.0nm,0.0s								
TRSI	**Tarutung**	4.20	352	P			**Pn**	03 36 32.6	+1.1
	0.0nm,0.0s								
DSRI	**Dabo**	5.27	72	P			**Pn**	03 36 47.2	+0.9
	7µm,1.1s								
KGM	**Kluang**	5.59	42	⇓P			**Pn**	03 36 53.6	+3.0
FRIM	**Kepong**	5.74	21	⇓P			**Pn**	03 36 55.3	+2.6
MYKOM	**Kota Tinggi**	5.80	48	⇑⇑P			**Pn**	03 36 57.1	+3.6
KLI	**Kotabumi**	5.92	117	P			**Pn**	03 36 55.9	+0.7
	11µm,1.4s								
BLSI	**Bandar Lampung**	6.50	120	P			**Pn**	03 37 03.6	+0.5
	7µm,1.0s								
PPBI	**Pangkal Pinang**	6.56	90	P			**Pn**	03 37 05.1	+1.1
	1µm,1.1s								
IPM	**Ipoh**	6.75	12	⇓P			**Pn**	03 37 10.4	+3.8
SBJI	**Serang**	7.63	121	P			**Pn**	03 37 18.9	+0.2
	7µm,1.1s								
TPI	**Tanjungpandan**	8.10	94	P			**Pn**	03 37 26.6	+1.5
	2µm,1.3s								
TNG	**Tangerang**	8.10	120	P			**Pn**	03 37 26.2	+1.0
	18µm,1.2s								
KTGM	**Kuala Trenggan**	8.24	26	⇑P			**Pn**	03 37 29.9	+2.8
DBJI	**Dramaga**	8.38	122	P			**Pn**	03 37 28.4	-0.6
	6µm,1.2s								
SKJI	**Sukabumi**	8.46	125	P			**Pn**	03 37 29.2	-0.9
	8µm,1.1s								
BSI	**Banda Aceh**	8.72	331	P			**Pn**	03 37 32.0	-1.7
	2µm,1.1s								
LEM	**Lembang**	9.26	120	P			**Pn**	03 37 41.2	+0.1
	8µm,1.0s								
SNG	**Songkhla**	9.33	6	P			**Pn**	03 37 41.0	-1.0
	2µm,1.1s								
JCJI	**Jatiwangi**	9.68	117	P			**Pn**	03 37 48.0	+1.2
	6µm,1.7s								
XMIS	**Christmas Isla**	10.24	144	*e*Pn			**Pn**	03 37 49.3	-5.2
XMIS				*e*Sn			**Sn**	03 39 30.9	-18
COCO	**West Island**	10.33	195	Pn			**Pn**	03 37 56.1	+0.4
	9µm,0.6s,SNR=5.5								
COCO	**West Island**	10.33	195	*e*Pn			**Pn**	03 37 51.4	-4.3
	611nm,0.8s								
CLJI	**Cilicap**	10.91	121	P			**Pn**	03 38 03.5	-0.1
	5µm,1.2s								
KSM	**Kuching**	11.32	72	⇓P			**Pn**	03 38 13.4	+4.0
KSM	**Kuching**	11.32	72	*e*Pn			**Pn**	03 38 10.8	+1.5
BJII	**Banjamegara**	11.33	117	P			**Pn**	03 38 08.7	-0.8
	2µm,2.0s								
PBKI	**Pangkalan Bun**	12.10	93	P			**Pn**	03 38 24.0	+4.0
	3µm,2.4s								
STKI	**Sintang**	12.10	80	P			**Pn**	03 38 24.4	+4.3
	1µm,1.3s								
SJI	**Sawahan**	13.35	115	P			**Pn**	03 38 34.8	-2.3
	2µm,0.8s								
SBUM	**Sibu**	13.45	70	⇑P			**Pn**	03 38 42.6	+4.2
KRKI	**Karangkates**	14.14	115	P			**Pn**	03 38 47.2	-0.7
	3µm,1.3s								
PLKI	**Palangkaraya**	14.36	91	P			**Pn**	03 38 53.0	+2.1
	4µm,1.0s								
KMMI	**Kalianget**	15.14	109	P			**Pn**	03 39 01.0	-0.5
	3µm,1.4s								
BBKI	**Banjar Baru**	15.30	95	P			**Pn**	03 39 04.4	+0.8
	4µm,1.2s								
IGBI	**Denpasar**	16.85	114	P			**Pn**	03 39 21.3	-2.1
	2µm,1.4s								
DNP	**Denpasar**	16.85	113	P			**Pn**	03 39 25.0	+1.5
	2µm,1.4s								
KHKI	**Kahang-Kahang**	17.11	112	P			**Pn**	03 39 25.8	-0.9
	1µm,0.8s								
SMKI	**Samarinda**	17.71	85	P			**Pn**	03 39 36.5	+2.2
	3µm,1.6s								
NST	**Nakhon Sawan**	17.72	2	P			**Pn**	03 39 27.5	-6.8
MTNI	**Mataram**	17.73	112	P			**Pn**	03 39 30.5	-3.9
	1µm,0.8s								
UBT	**Ubonrachathani**	18.11	17	PN			**Pn**	03 39 38.0	-1.1
UBT				PG			pP	03 39 44.0	-1.0
	2µm,1.0s								
UBT				SG			pP	03 39 53.5	+8.5
KKM	**Kota Kinabalu**	18.51	64	⇓P			**Pn**	03 39 45.2	+1.2
KKM	**Kota Kinabalu**	18.51	64	*e*P			**Pn**	03 39 43.8	-0.2
KKTK	**Khon Kaen**	18.65	10	P			**Pn**	03 39 44.0	-1.7
	6µm,0.5s								
SDKM	**Sandakan**	19.23	66	⇓P			**Pn**	03 39 53.2	+0.4
BDT	**Bhumibol Dam**	19.29	358	P			**Pn**	03 39 52.0	-1.4
	253nm,1.0s								
TSM	**Tawau**	19.38	71	⇑P			**Pn**	03 39 54.4	-0.1
KDM	**Kudat**	19.44	62	⇓P			**Pn**	03 39 55.9	+0.6
MYLDM	**Lahad Datu**	20.26	69	⇑P			**P**	03 40 05.3	+2.3
PCI	**Palu**	20.29	87	P			**P**	03 40 03.7	+0.3
	8µm,1.5s								
KAPI	**Kappang**	20.34	99	P			**P**	03 40 01.9	-1.9
	13µm,1.1s								
KAPI	**Kappang**	20.34	99	P			**P**	03 40 01.6	-2.2
	182nm,0.6s,baz=282,slow=9.0,SNR=65								
KAPI				S			**S**	03 43 51.0	-0.1
	34nm,1.0s,baz=52,slow=19,SNR=2.7								
KAPI	**Kappang**	20.34	99	*e*P			**P**	03 40 01.4	-2.4
	3µm,1.0s								
KAPI				LR			LR		
	comp=Z,836µm,19.0s,MS7.1								
CM31	**Chiang Mai Arr**	20.49	358	*e*P			**P**	03 40 06.0	+0.6
	comp=Z,680nm,0.9s								
CM31				LR			LR		
	comp=Z,1252µm,20.0s,MS7.3								
CMAR	**Chiang Mai Arr**	20.49	358	P			**P**	03 40 03.2	-2.2
	comp=Z,74nm,0.5s,baz=185,slow=9.9,SNR=80								
CMAR				LR			LR	03 48 50.2	
	comp=Z,1286µm,19.5s,MS7.3,baz=185,slow=39								
CMAR	**Chiang Mai Arr**	20.49	358	P			**P**	03 40 03.2	-2.2
CMAR				pmax			pmax		
	comp=Z,74nm,0.5s								
CMAR				MLR			MLR		
	comp=Z,286µm,19.5s								
CHG	**Chiang Mai**	20.85	358	⇑P			**P**	03 40 07.8	-1.5
	comp=Z,150nm,0.9s								
CHTO	**Chiang Mai**	20.85	358	*e*P			**P**	03 40 09.4	+0.1
	comp=Z,36nm,0.8s								
CHTO				LR			LR		
	comp=Z,1296µm,19.0s,MS7.3								
PALK	**Pallekele**	21.03	297	P			**P**	03 40 14.4	+3.0
	comp=Z,4µm,1.2s,mb6.7,SNR=11								
PALK	**Pallekele**	21.03	297	*e*P			**P**	03 40 13.8	+2.5
	comp=Z,2µm,1.4s,mb6.2								
PALK				LR			LR		
	comp=Z,474µm,20.0s,MS6.9								
BATP	**Bataraza**	21.18	59	*e*P			**P**	03 40 12.3	-0.6
PPR	**Puerto Princes**	22.46	58	⇓*e*P			**P**	03 40 28.0	+1.3
KDI	**Kendari**	23.08	95	P			**P**	03 40 32.3	-1.0
	comp=Z,2µm,1.3s,mb6.4								
BBSI	**Bau Bau**	23.18	99	P			**P**	03 40 34.2	-0.1
	comp=Z,3µm,2.0s,mb6.3								
QIZ	**Qiongzhong**	23.35	25	P			**P**	03 40 35.4	-0.6
QIZ				AP				03 40 41.3	
QIZ				PP				03 41 07.3	
QIZ				S			**S**	03 44 48.5	+0.8
QIZ				AMB			AMB		
	comp=Z,3µm,0.9s,mb6.8								
QIZ				LR			LR		
	comp=E,839µm,14.8s								
QIZ				LR			LR		
	comp=Z,1128µm,17.1s,MS7.4								
QIZ	**Qiongzhong**	23.35	25	*e*P			**P**	03 40 34.8	-1.2
	comp=Z,3µm,0.9s,mb6.7								
QIZ				LR			LR		
	comp=Z,1150µm,19.0s,MS7.3								
ENPP	**El Nido**	23.79	56	*e*P			**P**	03 40 39.5	-0.8
ZMPH	**Zamboanga City**	24.20	68	⇑*e*P			**P**	03 40 43.9	-0.2
MDRS	**Chennai**	24.43	309	*e*P			**P**	03 40 46.2	+0.1
MDRS				AMb			AMB	03 41 07.0	
	comp=Z,950nm,1.0s,mb6.2								
BUSP	**Coron**	24.86	55	*e*P			**P**	03 40 49.3	-0.7
TRD	**Trivandrum**	24.91	295	*e*P			**P**	03 40 52.5	+2.0
TRD				AMb			AMB	03 41 13.7	
	comp=Z,1µm,2.0s,mb6.1								
CUYO	**Cuyo Island**	24.95	58	*e*P			**P**	03 40 51.1	+0.3
IPIL	**Ipil**	24.98	66	*e*P			**P**	03 40 50.8	-0.4
KOD	**Kodaikanal**	25.22	300	*e*P			**P**	03 40 55.2	+1.9
KOD				AMb			AMB	03 41 15.0	
	comp=Z,695nm,0.8s,mb6.2								
BATI	**Baumata**	25.23	110	P			**P**	03 40 50.4	-3.0
	comp=Z,628nm,1.2s,mb6.0								
BATI	**Baumata**	25.23	110	P			**P**	03 40 50.0	-3.4
	comp=Z,167nm,0.5s,mb5.8,baz=119,slow=1.7,SNR=15								
VIS	**Vishakhapatnam**	25.43	322	*i* P			**P**	03 40 57.0	+1.8
VIS				*ex*			x	03 41 14.9	
	comp=Z,1µm,1.7s								
VIS				*i* S			**S**	03 45 22.4	+1.3
PAGZ	**Pagadian**	25.75	67	*e*P			**P**	03 40 58.5	+0.4
SJMP	**San Jose**	25.86	55	*e*P			**P**	03 40 59.4	+0.2
LUBP	**Lubang**	25.88	52	*e*P			**P**	03 40 59.4	+0.1
DCPH	**Dipolog City**	26.00	65	⇑*e*P			**P**	03 41 04.1	+3.7
BWNR	**Bhubaneshwar**	26.08	329	*e*P			**P**	03 41 01.0	-0.1
BWNR				*e*S			**S**	03 45 31.0	-0.5
GUIM	**Jordan**	26.19	61	*e*P			**P**	03 41 02.5	+0.4
CTBH	**Cotabato--PC H**	26.32	69	⇓*e*P			**P**	03 41 03.7	+0.4
KALP	**Kalibo**	26.48	58	⇓*e*P			**P**	03 41 14.3	+10
OTRP	**Odiongan**	26.56	57	*e*P			**P**	03 41 04.8	-0.6
GSPH	**General Santos**	26.63	72	⇓*e*P			**P**	03 41 09.5	+3.3
RCP	**Roxas**	26.77	59	⇑*e*P			**P**	03 41 07.9	+0.5
SCZP	**Santa Cruz**	26.87	48	*e*P			**P**	03 41 08.2	0.0
CAL	**Calcutta**	26.89	337	*e*P			**P**	03 41 10.1	+1.8
CAL				*ex*			x	03 45 54.3	
KCP	**Kidapawan**	27.05	70	⇓*e*P			**P**	03 41 14.1	+4.2
MBWA	**Marble Bar**	27.25	135	*e*P			**P**	03 41 11.6	0.0
	comp=Z,20nm,0.6s								
MBWA				LR			LR		
	comp=Z,362µm,21.0s								
BOLP	**Bolinao**	27.26	47	*e*P			**P**	03 41 11.7	0.0
LLP	**Lapu-Lapu**	27.26	63	⇑*e*P			**P**	03 41 11.4	-0.4
LLP				*e*S			**S**	03 45 52.2	+1.9
KMI	**Kunming**	27.29	6	P			**P**	03 41 13.3	+1.4
KMI				AP			pP	03 41 18.9	+0.9
KMI				XP			sP	03 41 21.1	+0.6
KMI				PP				03 42 01.6	
KMI				S			**S**	03 45 53.1	+2.6
KMI				XS			sS	03 46 02.9	+2.4
KMI				SS				03 47 12.6	
KMI				AMB			AMB		
	comp=Z,127nm,1.2s,mb5.3								
KMI				AMB			AMB		
	comp=Z,34µm,7.0s								
KMI				LR			LR		
	comp=N,777µm,19.0s,MS7.6								
KMI				LR			LR		
	comp=E,1020µm,14.6s,MS7.6								
KMI				LR			LR		
	comp=Z,844µm,21.0s								
BUKP	**Musuan**	27.31	68	*e*P			**P**	03 41 12.2	0.0
IMP	**Imphal**	27.33	349	*e*P			**P**	03 41 13.0	+0.7
IMP				*ex*			x	03 45 54.0	
DGAR	**Diego Garcia**	27.52	258	PFAKE				03 41 30.0	+16
DGAR				LR			LR		
	comp=Z,179µm,21.0s,MS6.6								
DAV	**Davao City (W)**	27.52	70	P			**P**	03 41 13.3	-0.9
	comp=Z,256nm,0.4s,mb6.2,baz=67,slow=5.9,SNR=24								
DAV				LR			LR	03 53 42.5	
	comp=Z,687µm,20.4s,MS7.2,baz=360,slow=40								
DAV	**Davao City (W)**	27.52	70	⇑*e*P			**P**	03 41 13.1	-1.1
DAV	**Davao City (W)**	27.52	70	*e*P			**P**	03 41 15.1	+0.9
	comp=Z,4µm,1.3s,mb6.9								
DAV				LR			LR		
	comp=Z,695µm,20.0s,MS7.2								
AUQP	**San Andres**	27.60	56	*e*P			**P**	03 41 17.2	+2.3
GQP	**Guinayangan**	27.73	54	⇓*e*P			**P**	03 41 20.4	+4.4
BCPH	**Baguio City Da**	27.75	48	⇓*e*P			**P**	03 41 16.0	-0.1
POLP	**Polillio Island**	27.79	52	*e*P			**P**	03 41 16.6	+0.2
LBMI	**Labuha**	27.96	87	P			**P**	03 41 18.1	0.0
	comp=Z,5µm,1.3s,mb7.0								
MSLP	**Maasin**	27.98	64	*e*P			**P**	03 41 18.0	-0.2
BALP	**Baler**	28.10	50	*e*P			**P**	03 41 18.3	-1.0
MATI	**Mati**	28.13	71	*e*P			**P**	03 41 17.2	-2.4
OCLP	**Ormoc**	28.15	62	*e*P			**P**	03 41 21.6	+1.9
HKC	**Hong Kong Obse**	28.18	30	*i* P			**P**	03 41 18.0	-1.9
BUTP	**Butuan**	28.22	67	*e*P			**P**	03 41 21.5	+1.2
SCPH	**Surigao**	28.41	65	⇓*e*P			**P**	03 41 22.1	+0.1
MNCY	**Minicoy**	28.42	292	*i* x			x	03 41 31.0	
MNCY				*i* x			x	03 45 59.0	
HYB	**Hyderabad**	28.42	314	*e*P			**P**	03 41 22.5	+0.4
HYB				*e*S			**S**	03 46 09.0	+0.5
HYB				pmax			pmax		
	comp=Z,375nm,1.4s,mb5.8								
HYB	**Hyderabad**	28.42	314	*i* P			**P**	03 41 22.0	-0.1
	comp=Z,375nm,1.4s,mb5.8								
HYB				*e*S			**S**	03 46 09.0	+0.5
HYB				LR			LR	03 55 40.0	
	comp=Z,254nm,20.0s								
HYB	**Hyderabad**	28.42	314	*e*P			**P**	03 41 22.5	+0.4
	comp=Z,375nm,1.4s,mb5.8								
HYB				*e*S			**S**	03 46 09.0	+0.5
HYB				*e*				03 55 40.0	
PLP	**Palo**	28.52	62	⇓*e*P			**P**	03 41 22.5	-0.6
BIPH	**Bislig**	28.62	69	⇑*i* P			**P**	03 41 22.6	-1.4
ABRA	**Dolores**	28.66	46	*e*P			**P**	03 41 24.0	-0.2
SIPP	**Brgy, Tapao**	28.66	45	⇑*e*P			**P**	03 41 25.1	+0.8
CNP	**Catarman**	28.87	59	*e*P			**P**	03 41 26.4	+0.3
PVCP	**Virac**	28.97	57	*e*P			**P**	03 41 26.2	-0.8
CAUP	**Cauayan**	29.02	48	*e*P			**P**	03 41 27.5	0.0
BOK	**Bokaro**	29.03	333	*e*P			**P**	03 41 27.6	+0.2
BOK				AMb			AMB	03 41 37.3	
	comp=Z,2µm,0.9s,mb6.8								
BESP	**Borongan**	29.12	61	*e*P			**P**	03 41 30.9	+2.5
APYP	**Conner**	29.18	46	*e*P			**P**	03 41 28.2	-0.7
GYA	**Guiyang**	29.26	13	⇑*i* P			**P**	03 41 28.4	-1.1
GYA				PP			PP	03 42 27.6	-8.2
GYA				S			**S**	03 46 17.3	-4.2
GYA				SS			SS	03 47 54.8	-31
GYA				AMB			AMB		
	comp=Z,350nm,1.0s,mb6.0								
GYA				LR			LR		
	comp=N,768µm,16.0s,MS7.8								
GYA				LR			LR		
	comp=E,1495µm,16.0s,MS7.8								
GYA				LR			LR		
	comp=Z,1731µm,16.0s,MS7.8								
PALP	**Palanan**	29.55	49	*e*P			**P**	03 41 29.6	-2.6
SHBG	**Sahibganj**	29.56	338	*ex*			x	03 41 01.0	
FITZ	**Fitzroy Crossi**	30.08	124	*e*P			**P**	03 41 34.3	-2.6
	comp=Z,491nm,1.1s,mb6.2								
FITZ				*e*S			**S**	03 46 30.8	-3.8
FITZ	**Fitzroy Crossi**	30.08	124	P			**P**	03 41 36.0	-0.9
	comp=Z,104nm,0.8s,mb5.6,baz=299,slow=7.1,SNR=154								
LATR	**Latur**	30.51	313	*e*P			**P**	03 41 40.4	-0.3
LATR				*e*P				03 41 40.6	
LATR				AMb			AMB	03 42 00.5	
	comp=Z,500nm,1.8s,mb6.0								
SLGI	**Shiliguri**	30.64	340	*ex*			**P**	03 41 46.3	+4.6
NGP	**Nagpur**	30.66	320	⇑*i* P			**P**	03 41 41.0	-0.9

CD2 AMB AMB
comp=Z,36µm,7.2s
CD2 LR LR
comp=N,1040µm,15.6s,MS7.7
CD2 LR LR
comp=E,859µm,19.2s,MS7.7
CD2 LR LR
comp=Z,1133µm,18.0s,MS7.6
GKN Gorkha 33.25 335 *e*P **P 03 42 06.1 +1.5**
comp=Z,3µm,1.2s,mb7.1
KOLN Koldanda 33.49 334 *e*P **P 03 42 07.8 +1.1**
comp=Z,501nm,0.8s,mb6.5
MUN Mundaring 33.55 154 *e*P **P 03 42 08.7 +1.5**
MUN *e*S **S 03 47 33.9 +5.5**
NACB Ninganchiao 33.81 38 *e*P **P 03 42 09.9 +0.4**
comp=Z,4µm,1.0s,mb7.3
DANN Dangsing 33.92 335 *e*P **P 03 42 11.9 +1.4**
comp=Z,2µm,1.0s,mb7.1
KLBR Kellerberrin 33.93 152 *e*P **P 03 42 11.0 +0.5**
comp=Z,192nm,0.8s,mb6.1
YHNB Yeheng 34.04 37 *e*P **P 03 42 11.3 -0.3**
comp=Z,270nm,3.0s
YHNB LR LR
comp=Z,665µm,20.0s,MS7.4
TATO Taipei 34.34 37 *e*P **P 03 42 13.4 -0.8**
comp=Z,1µm,1.0s,mb6.7
TATO LR LR
comp=Z,486µm,20.0s,MS7.2
NWAO Narrogin (SRO) 34.81 153 P **P 03 42 17.0 -1.1**
comp=Z,81nm,0.7s,mb5.8,baz=318,slow=10,SNR=20
NWAO LR LR 03 55 31.6
comp=Z,349µm,21.9s,MS7.1,baz=329,slow=35
NWAO Narrogin (SRO) 34.81 153 P **P 03 42 17.0 -1.1**
NWAO pmax pmax
comp=Z,81nm,0.7s
NWAO MLR MLR
comp=Z,349µm,21.9s
NWAO Narrogin (SRO) 34.81 153 *e*P **P 03 42 16.9 -1.2**
comp=Z,282nm,0.9s,mb6.2
NWAO LR LR
comp=Z,310µm,22.0s,MS7.0
WHN Wuhan 35.44 22 ⇑P **P 03 42 22.8 -0.8**
WHN AP pP 03 42 31.1 +1.4
WHN S **S 03 47 58.9 +1.2**
WHN LR LR
comp=N,852µm,15.2s,MS7.7
WHN LR LR
comp=E,444µm,14.2s,MS7.7
WHN LR LR
comp=Z,1126µm,17.7s,MS7.7
PTH Pithoragarh 36.57 331 *e*P **P 03 42 33.9 +0.7**
PTH *ex* x 03 48 27.5
XAN Xi'an 37.06 13 P **P 03 42 35.5 -1.9**
XAN AP pP 03 42 40.8 -2.8
XAN XP sP 03 42 43.5 -2.6
XAN PP PP 03 44 08.0 +5.9
XAN S **S 03 48 20.6 -1.8**
XAN SS SS 03 50 58.5 -6.7
XAN AMB AMB
comp=Z,305nm,1.3s,mb6.0
XAN LR LR
comp=N,150µm,17.5s,MS7.6
XAN LR LR
comp=E,838µm,17.5s,MS7.6
XAN LR LR
comp=Z,1872µm,15.3s,MS8.0
AJM Ajmer 37.28 321 *e*P **P 03 42 40.9 +1.4**
AJM AMb AMB 03 42 59.5
comp=Z,1µm,1.6s,mb6.5
NDI New Delhi 37.42 327 *e*P **P 03 42 39.0 -1.5**
NDI *ex* x 03 48 43.0
LZH Lanzhou 38.25 6 ⇑P **P 03 42 47.9 +0.5**
LZH AP pP 03 42 52.8 -0.8
LZH XP sP 03 42 55.0 -1.1
LZH PP PP 03 44 19.3 +4.1
LZH PCP PcP 03 45 03.5 +2.0
LZH S **S 03 48 40.0 -0.4**
LZH SS SS 03 51 19.6 -8.7
LZH SCS ScS 03 52 57.0 -1.2
LZH AMB AMB
comp=Z,4µm,1.4s,mb7.0
LZH AMB AMB
comp=Z,26µm,8.9s
LZH LR LR
comp=N,604µm,13.8s
LZH LR LR
comp=Z,852µm,14.5s,MS7.7
DDI Dehra Dun 38.27 329 *e*P **P 03 42 46.0 -1.7**
WRA Warramunga Arr 38.28 120 P **P 03 42 46.3 -1.6**
comp=Z,346nm,1.0s,mb6.0,baz=301,slow=9.0,SNR=184
WRA S **S 03 48 37.5 -3.8**
comp=Z,50nm,0.9s,baz=292,slow=16,SNR=7.3
WRA LR LR 04 00 19.7
comp=Z,73µm,20.6s,MS6.5,baz=315,slow=39
WRA Warramunga Arr 38.28 120 P **P 03 42 46.3 -1.6**
WRA S **S 03 48 37.5 -3.8**
WRA pmax pmax
comp=Z,346nm,1.0s
WRA smax
comp=N,50nm,0.9s
WRA MLR MLR
comp=Z,73µm,20.6s
WRAB Tennant Creek 38.29 120 P **P 03 42 47.0 -1.0**
comp=Z,5µm,0.7s,mb7.3
WRAB Tennant Creek 38.29 120 *e*P **P 03 42 46.0 -2.0**
comp=Z,156nm,1.4s,mb5.5
WRAB LR LR
comp=Z,175µm,19.0s,MS6.9
WB2 Warramunga Arr 38.29 120 *e*P **P 03 42 45.3 -2.7**
WB2 *e*S **S 03 48 36.9 -4.6**
BHJ Bhuj 38.56 313 *e*P **P 03 42 51.0 +0.7**
BHJ AMb AMB 03 43 00.4
comp=Z,494nm,1.1s,mb6.2
NJ2 Nanjing 38.63 27 *e*P **P 03 42 51.3 +0.7**
NJ2 AP pP 03 42 57.3 +0.5
NJ2 XP sP 03 43 01.8 +2.5
NJ2 PP PP 03 44 24.3 +5.0
NJ2 S **S 03 48 48.0 +1.9**
NJ2 XS sS 03 49 04.0 +7.7
NJ2 AMB AMB
comp=Z,100nm,1.1s,mb5.5
NJ2 AMB AMB
comp=Z,9µm,10.3s
NJ2 LR LR
comp=N,230µm,17.0s,MS7.2
NJ2 LR LR
comp=E,291µm,20.3s,MS7.2
NJ2 LR LR
comp=Z,1236µm,20.4s,MS7.7
SSE Sheshan 38.95 30 ⇑P **P 03 42 53.8 +0.5**
SSE AP pP 03 43 03.1 +3.6
SSE XP sP 03 43 07.1 +5.1
SSE PCP PcP 03 45 05.4 +1.6
SSE S **S 03 48 49.8 -1.2**
SSE XS sS 03 49 05.3 +4.1
SSE AMB AMB
comp=Z,400nm,1.3s,mb6.0
SSE AMB AMB
comp=Z,29µm,11.7s
SSE LR LR
comp=N,320µm,17.8s,MS7.6
SSE LR LR
comp=E,748µm,17.8s,MS7.6
SSE LR LR
comp=Z,876µm,18.6s,MS7.6
FORT Forrest 39.20 139 *e*P **P 03 42 55.8 +0.3**
comp=Z,246nm,0.5s,mb6.2
FORT *e*S **S 03 48 54.7 -0.2**
SMLA Simla 39.37 329 *i*P **P 03 42 56.4 -0.6**
SMLA *ex* x 03 43 01.1
comp=Z,591nm,0.9s
SMLA *i*S **S 03 48 58.5 +1.1**
SDNR Sundarnagar 39.77 329 *ex* x 03 42 53.4
SDNR *e*S **S 03 49 02.5 -0.9**
JOW Kunigami 39.97 42 P **P 03 43 01.5 -0.4**
comp=Z,340nm,0.7s,mb6.2,baz=258,slow=7.4,SNR=48
JOW LR LR 03 59 52.5
comp=Z,169µm,18.9s,MS6.9,baz=238,slow=37
BHK Bhakra 39.99 328 *ex* **P 03 43 04.2 +2.1**
JAY Jayapura 41.10 91 P **P 03 43 11.7 +0.2**
comp=Z,344nm,1.1s,mb5.9
DLH Dalhousie 41.11 329 *e*P **P 03 43 10.0 -1.3**
DLH *ex* x 03 49 43.0
THN Thein Dam 41.16 329 *e*P **P 03 43 09.7 -2.0**
THN *ex* x 03 50 02.4

GTA Gaotai 41.37 0 P **P 03 43 12.8 -0.5**
GTA AP pP 03 43 17.5 -2.0
GTA XP sP 03 43 19.8 -2.2
GTA S **S 03 49 28.4 +1.5**
GTA XS sS 03 49 35.9 -1.3
GTA SS SS 03 52 28.4 -2.9
GTA AMB AMB
comp=Z,44µm,8.1s
GTA LR LR
comp=N,569µm,16.2s,MS7.7
GTA LR LR
comp=E,519µm,17.1s,MS7.7
GTA LR LR
comp=Z,703µm,16.5s,MS7.6
TIY Taiyuan 41.42 15⇑*e*P **P 03 43 14.5 +0.7**
TIY AP pP 03 43 19.3 -0.7
TIY PP PP 03 44 54.1 +4.4
TIY PCS PcS 03 48 59.6 -3.2
TIY S **S 03 49 28.6 +0.8**
TIY LR LR
comp=N,421µm,15.2s,MS7.5
TIY LR LR
comp=E,188µm,15.2s,MS7.5
TIY LR LR
comp=Z,476µm,15.9s,MS7.5
TIA Tai'an 41.53 22 *e*P **P 03 43 14.3 -0.4**
TIA XS sS 03 49 43.0 +3.2
TIA LR LR
comp=N,327µm,15.0s
BTO Baotou 43.62 12 *e*P **P 03 43 31.8 +0.2**
BTO S **S 03 50 00.0 -0.1**
MSEY Mahe Island 44.08 266 *e*P **P 03 43 36.7 +0.9**
comp=N,422nm,1.4s,mb6.0
MSEY LR LR
comp=Z,97µm,21.0s,MS6.7
HHC Hu-ho-hao-te 44.18 13⇑*i*P **P 03 43 36.5 +0.4**
HHC AP pP 03 43 40.4 -1.9
HHC XP sP 03 43 41.9 -2.9
HHC PCP PcP 03 45 20.1 -0.7
HHC PP PP 03 45 21.9 +2.6
HHC SCP ScP 03 49 10.5 -1.3
HHC PCS PcS 03 49 12.1 -1.7
HHC S **S 03 50 11.3 +3.0**
HHC SS SS 03 53 22.3 -4.3
HHC SCS ScS 03 53 31.8 -2.0
HHC AMB AMB
comp=Z,164nm,0.8s,mb5.8
HHC AMB AMB
comp=Z,40µm,7.6s
HHC LR LR
comp=N,1266µm,16.3s,MS7.9
HHC LR LR
comp=E,326µm,17.6s,MS7.9
HHC LR LR
comp=Z,1151µm,15.7s,MS7.9
BJT Baijiatuau 44.64 18 *e*P **P 03 43 39.5 -0.3**
BJT pmax pmax
comp=Z,577nm,1.1s
BJT MLR MLR
comp=Z,401µm,20.0s
BJT Baijiatuau 44.64 18 *e*P **P 03 43 39.5 -0.3**
comp=Z,577nm,1.1s,mb6.3
BJT LR LR
comp=Z,401µm,20.0s,MS7.3
BJI Beijing 44.66 18 P **P 03 43 40.3 +0.3**
BJI XP sP 03 43 45.6 -3.1
BJI S **S 03 50 11.8 -3.6**
BJI AMB AMB
comp=Z,411nm,1.1s,mb6.2
BJI LR LR
comp=N,554µm,16.6s,MS7.6
BJI LR LR
comp=E,274µm,16.1s,MS7.6
BJI LR LR
comp=Z,350µm,15.5s,MS7.4
DL2 Dalian 45.63 24⇑*i*P **P 03 43 48.4 +0.7**
DL2 PP PP 03 45 36.1 +1.3
DL2 S **S 03 50 33.0 +3.6**
DL2 SS SS 03 53 45.8 -8.2
DL2 AMB AMB
comp=Z,530nm,1.1s,mb6.4
DL2 AMB AMB
comp=Z,17µm,5.9s
DL2 LR LR
comp=N,233µm,18.2s,MS7.3
DL2 LR LR
comp=E,244µm,16.5s,MS7.3
DL2 LR LR
comp=Z,265µm,19.1s,MS7.2
KBL Kabul 46.41 325 *e*P **P 03 43 53.1 -0.8**
KBL pmax pmax
comp=Z,531nm,1.2s,mb6.3
KBL Kabul 46.41 325 *e*P **P 03 43 53.1 -0.9**
comp=Z,531nm,1.2s,mb6.3
RER Riviere de l'E 46.66 243 *e*P **P 03 43 58.1 +1.9**
INCN Inchon 46.74 30 *e*P **P 03 43 55.3 -1.2**
comp=Z,483nm,0.9s,mb6.4
INCN *e*PcP PcP 03 45 30.6 +0.8
INCN LR LR
comp=Z,288µm,21.0s,MS7.2
KSH Kashi 46.79 335⇑*i*P **P 03 43 58.0 +1.2**
KSH *e*AP pP 03 44 02.0 -1.1
KSH *e*XP sP 03 44 05.5 -0.1
KSH *e*PCP PcP 03 45 30.0 +0.1
KSH *e*PP PP 03 45 48.1 +1.0
KSH *e*SCP ScP 03 49 22.1 -0.6
KSH *e*PCS PcS 03 49 24.0 -0.7
KSH *e*S **S 03 50 47.4 +1.3**
KSH *e*XS sS 03 50 55.1 -1.3
KSH *e*SCS ScS 03 53 49.3 -1.4
KSH *e*SS SS 03 54 07.1 -5.8
KSH AMB AMB
comp=Z,27µm,4.9s
KSH LR LR
comp=N,312µm,14.8s,MS7.5
KSH LR LR
comp=E,302µm,15.3s,MS7.5
KSH LR LR
comp=Z,194µm,14.6s,MS7.2
KSRS Korea Array 47.37 31 P **P 03 44 00.6 -0.8**
comp=Z,324nm,0.8s,mb6.3,baz=224,slow=8.2,SNR=326
KSRS LR LR 04 04 42.3
comp=Z,273µm,19.1s,MS7.2,baz=224,slow=37
KSRS Korea Array 47.37 31 P **P 03 44 00.6 -0.8**
KSRS pmax pmax
comp=Z,324nm,0.8s,mb6.3
KSRS MLR MLR
comp=Z,273µm,19.1s,MS7.2
GUMO Guam 47.56 69 LR LR 04 03 56.8
comp=Z,86µm,21.9s,MS6.7,baz=56,slow=36
GUMO Guam 47.56 69 *e*P **P 03 44 01.9 -1.3**
comp=Z,327nm,0.8s,mb6.4
GUMO LR LR
comp=Z,66µm,20.0s,MS6.6
PMG Port Moresby 47.84 101 *e*P **P 03 44 03.2 -2.3**
PMG pmax pmax
comp=Z,187nm,0.9s
PMG MLR MLR
comp=Z,160µm,22.0s
PMG Port Moresby 47.84 101 *e*P **P 03 44 03.2 -2.3**
comp=Z,187nm,0.9s,mb6.1
PMG LR LR
comp=Z,160µm,22.0s,MS7.0
SNY Shenyang 48.90 24 ⇑P **P 03 44 12.3 -0.8**
SNY AMB AMB
comp=Z,323nm,1.3s,mb6.2
SNY LR LR
comp=N,419µm,15.7s,MS7.8
SNY LR LR
comp=E,544µm,14.7s,MS7.8
SNY LR LR
comp=Z,436µm,19.6s,MS7.5
CTA Charters Tower 48.92 115 *e*P **P 03 44 11.7 -2.0**
comp=Z,442nm,1.2s,mb6.4
CTA *e*S **S 03 51 14.8 -2.1**
CTA Charters Tower 48.92 115 P **P 03 44 12.1 -1.6**
comp=Z,268nm,1.0s,mb6.2,baz=288,slow=9.0,SNR=48
CTA Charters Tower 48.92 115 *e*P **P 03 44 11.7 -2.0**
CTA *e*S **S 03 51 14.8 -2.1**
CTA pmax pmax
comp=Z,442nm,1.2s
CTAO Charters Tower 48.92 115 *e*P **P 03 44 12.2 -1.5**
CTAO pmax pmax
comp=Z,804nm,1.2s,mb6.6
CTAO MLR MLR
comp=Z,187µm,21.0s,MS7.0
CTAO Charters Tower 48.92 115 *e*P **P 03 44 12.2 -1.4**
comp=Z,804nm,1.2s,mb6.6
CTAO LR LR
comp=Z,187µm,21.0s,MS7.0
ULHL Ulahol 48.98 337 P **P 03 44 13.4 -0.3**
SNR=88
STKA Stephens Creek 49.37 131 *e*P **P 03 44 15.9 -1.0**
comp=Z,399nm,0.9s,mb6.5
STKA *e*S **S 03 51 21.6 -1.2**
STKA Stephens Creek 49.37 131 P **P 03 44 16.1 -0.8**
comp=Z,235nm,0.8s,mb6.2,baz=308,slow=7.6,SNR=167
STKA S **S 03 51 29.0 +6.2**
comp=Z,16nm,0.9s,baz=38,slow=19,SNR=2.8
STKA LR LR 04 05 43.7
comp=Z,143µm,21.1s,MS6.9,baz=296,slow=37
AAA Alma-Ata 49.59 338 *e*P **P 03 44 18.7 +0.3**
AAA *e*S **S 03 51 29.4 +3.8**
AAA pmax pmax
comp=Z,37µm,15.4s
AAA smax
comp=E,143µm,11.1s
AAA MLR MLR
comp=Z,154µm,19.0s,MS7.0
UCH Uchtor 49.66 336 P **P 03 44 20.8 +1.8**
SNR=47
UCH Uchtor 49.66 336 *e*P **P 03 44 20.1 +1.2**
comp=Z,2µm,1.8s,mb6.8
UCH LR LR
comp=Z,150µm,22.0s,MS7.0
TKM2 Tokmak 2 49.81 337 *e*P **P 03 44 20.1 +0.1**
TKM2 pmax pmax
comp=Z,556nm,0.9s,mb6.6
TKM2 MLR MLR
comp=Z,241µm,20.0s,MS7.2
TKM2 Tokmak 2 49.81 337 P **P 03 44 20.3 +0.3**
SNR=282
TKM2 Tokmak 2 49.81 337 *e*P **P 03 44 20.1 +0.1**
comp=Z,556nm,0.9s,mb6.6
TKM2 LR LR
comp=Z,241µm,20.0s,MS7.2
KBK Karagaybulak 49.84 336 P **P 03 44 22.3 +2.0**
SNR=54
AML Almayashu 49.92 335 P **P 03 44 21.3 +0.4**
SNR=136
AML Almayashu 49.92 335 PFAKE 03 44 30.0 +9.1
AML LR LR
comp=Z,203µm,21.0s,MS7.1
AAK Ala-Archa 50.01 336 P **P 03 44 21.9 +0.4**
SNR=39
FRU Bishkek 50.12 336⇑*i*P **P 03 44 22.5 +0.1**
FRU *e*S **S 03 51 35.0 +2.0**
FRU pmax pmax
comp=Z,2µm,2.5s,mb6.8
FRU pmax pmax
comp=Z,31µm,16.0s
FRU smax
comp=N,4µm,3.0s
FRU MLR MLR
comp=Z,345µm,20.0s,MS7.4
SONM Songino Array 50.14 6 P **P 03 44 22.6 +0.1**
comp=Z,472nm,0.7s,mb6.6,baz=188,slow=8.6,SNR=437
SONM Songino Array 50.14 6 P **P 03 44 22.6 +0.1**
SONM pmax pmax
comp=Z,472nm,0.7s
CHMS Chumysh 50.21 336 P **P 03 44 22.8 -0.3**
SNR=77
ULN Ulaanbaatar 50.24 7 *e*P **P 03 44 23.5 +0.3**
comp=Z,1µm,0.9s,mb6.9
ULN LR LR
comp=Z,664µm,20.0s,MS7.6
EKS2 Erkin-Say 50.33 335 P **P 03 44 24.4 +0.4**
SNR=195
EKS2 Erkin-Say 50.33 335 *e*P **P 03 44 24.3 +0.3**
comp=Z,644nm,0.9s,mb6.7
EKS2 LR LR
comp=Z,183µm,22.0s,MS7.0
USP Ospenovka 50.53 336 P **P 03 44 25.3 -0.2**
SNR=225
MK31 Makanchi Array 51.07 345 *i*P **P 03 44 29.2 -0.3**
MK31 pmax pmax
comp=Z,3µm,1.4s,mb7.0
MKAR Makanchi Array 51.07 345 P **P 03 44 28.9 -0.6**
comp=Z,295nm,0.8s,mb6.3,baz=156,slow=6.2,SNR=259
MKAR S **S 03 51 57.2 +11**
comp=Z,142nm,1.4s,baz=150,slow=9.8,SNR=6.2
MKAR LR LR 04 10 15.6
comp=Z,180µm,19.7s,MS7.1,baz=159,slow=41
MKAR Makanchi Array 51.07 345 P **P 03 44 28.9 -0.6**
MKAR S **S 03 51 57.2 +11**
MKAR pmax pmax
comp=Z,295nm,0.8s
MKAR MLR MLR
comp=Z,180µm,19.7s
CN2 Changchun 51.30 24 *e*P **P 03 44 29.3 -2.0**
CN2 *e*XP sP 03 44 35.6 -4.5
CN2 *e*PP PP 03 46 27.1 -1.4
CN2 *e*S **S 03 51 47.6 -1.7**
CN2 *e*SS SS 03 55 21.4 -3.9
CN2 AMB AMB
comp=Z,730nm,1.2s,mb6.5
JHJ Hachijo jima 2 51.68 44 LR LR 04 05 44.1
comp=Z,115µm,20.3s,MS6.9,baz=266,slow=35
KK31 Karatay Array 52.10 333 *i*P **P 03 44 36.0 -1.3**
KK31 pmax pmax
comp=Z,427nm,1.3s,mb6.2
ZAK Zakamensk 52.43 3 *e*P **P 03 44 40.5 +0.9**
ZAK *e* 03 45 51.2
ZAK *e* 03 52 07.8
ZAK pmax pmax
comp=Z,284nm,1.1s,mb6.1
MAJO Matsushiro 52.66 39 *e*P **P 03 44 40.5 -1.1**
MAJO pmax pmax
comp=Z,608nm,1.0s,mb6.5
MAJO MLR MLR
comp=Z,278µm,19.0s,MS7.3
MAJO Matsushiro 52.66 39 *e*P **P 03 44 40.5 -1.1**
comp=Z,608nm,1.0s,mb6.5
MAJO *e*ScP ScP 03 49 49.0 +1.1
MAJO LR LR
comp=Z,278µm,19.0s,MS7.3
MAT Matsushiro 52.66 39 P **P 03 44 41.4 -0.2**
MAT S **S 03 52 17.0 +8.7**
MJAR Matsushiro Arr 52.66 39 P **P 03 44 40.6 -1.0**
comp=Z,231nm,1.0s,mb6.1,baz=222,slow=7.1,SNR=180
MJAR Matsushiro Arr 52.66 39 P **P 03 44 40.6 -1.0**
MJAR pmax pmax
comp=Z,231nm,1.0s
MUKL Al Mukalla 52.70 290⇑*e*P **P 03 44 43.7 +1.5**
MUKL AMb AMB 03 44 45.3
comp=Z,388nm,1.2s,mb6.2
MOY Mondy 53.63 1 *e*P **P 03 44 49.8 +1.3**
VLA Vladivostok 53.64 29*d*P **P 03 44 48.5 -0.2**
VLA pmax pmax
comp=Z,686nm,1.1s,mb6.5
VLA MLR MLR
comp=Z,242µm,17.0s,MS7.3
VLA Vladivostok 53.64 29 *i*P **P 03 44 48.5 -0.2**
MDJ Mudanjiang 53.72 26 P **P 03 44 49.9 +0.7**
MDJ AP pP 03 44 55.5 -0.1
MDJ XP sP 03 44 58.1 +0.1
MDJ PCP PcP 03 45 55.0 -0.2
MDJ PCS PcS 03 49 53.0 -1.2
MDJ S **S 03 52 27.8 +5.5**
MDJ SS SS 03 56 08.8 +5.4
MDJ AMB AMB
comp=Z,716nm,1.0s,mb6.5
MDJ AMB AMB
comp=Z,27µm,10.1s
MDJ LR LR
comp=N,384µm,19.7s,MS7.5
MDJ LR LR
comp=E,245µm,19.7s,MS7.5
MDJ LR LR
comp=Z,453µm,19.7s,MS7.5
MDJ Mudanjiang 53.72 26 *e*P **P 03 44 49.5 +0.3**
comp=Z,817nm,1.0s,mb6.6
MDJ LR LR
comp=Z,660µm,20.0s,MS7.7
TLY Talaya 53.75 3 P **P 03 44 50.7 +1.4**
comp=Z,3µm,0.8s,mb7.2
TLY Talaya 53.75 3 *e*P **P 03 44 50.8 +1.5**
TLY *e* 03 46 54.6
TLY *e*S **S 03 52 22.4 -0.1**
TLY *e* 03 54 35.2
TLY pmax pmax

TLY MLR MLR
comp=Z,463nm,0.9s,mb6.4
TLY MLR MLR
comp=Z,379µm,15.0s,MS7.6
TLY Talaya 53.75 3 *e*P **P 03 44 50.4 +1.1**
comp=Z,6.0nm,1.4s
TLY LR LR
comp=Z,250µm,20.0s
OPO Ambohidratompo 53.81 249 P **P 03 44 51.6 +1.2**
comp=Z,40nm,0.8s,mb5.4,baz=61,slow=6.2,SNR=34
IRK Irkutsk 54.34 4⇑*i*P **P 03 44 54.4 +0.8**
IRK *e*S **S 03 52 36.1 +5.5**
IRK pmax pmax
comp=Z,2µm,3.0s
TOO Toolangi 54.89 136 *e*P **P 03 44 59.4 +1.4**
TOO *e*S **S 03 52 43.2 +4.7**
CIT Chita 55.26 10 *e*P **P 03 45 02.0 +1.7**
CIT *e* 03 52 40.0
CIT pmax pmax
comp=Z,3µm,3.2s
ABKT Ailbek 55.29 320 P **P 03 45 00.1 -0.7**
comp=Z,1µm,1.0s,mb6.8,SNR=60
KURK Kurchatov 55.64 344 P **P 03 45 03.6 +0.6**
comp=Z,7µm,0.8s,mb7.7
KURK Kurchatov 55.64 344 S **S 03 52 58.4 +10**
comp=Z,33nm,1.0s,baz=160,slow=15,SNR=6.2
KURK LR LR 04 14 15.7
comp=Z,166µm,19.0s,MS7.1,baz=160,slow=42
KURK Kurchatov 55.64 344 *e*P **P 03 45 02.4 -0.6**
KURK Kurchatov 55.64 344 *e*P **P 03 45 02.2 -0.8**
comp=Z,25nm,4.5s
KURK LR LR
comp=Z,205µm,19.0s,MS7.2
LBOS 56.14 288⇑*e*P **P 03 45 09.1 +1.8**
LBOS AMb AMB 03 45 11.1
comp=Z,631nm,1.4s,mb6.4
CAN Canberra 56.42 132 *e*P **P 03 45 09.7 +0.7**
ARMA Armidale 56.66 125 *e*P **P 03 45 11.2 +0.4**
ARMA *e*S **S 03 53 06.8 +4.5**
CNB Canberra Magne 56.69 132 *e*P **P 03 45 11.5 +0.6**
CNB *e*S **S 03 53 03.8 +1.2**
TRBA At Turbah 57.09 287⇓*e*P **P 03 45 15.8 +1.7**
ZAA0 Zalesovo Array 57.24 350 *e*P **P 03 45 13.4 -1.0**
ZALV Zalesovo Beam 57.24 350 P **P 03 45 13.5 -0.9**
comp=Z,583nm,1.0s,mb6.6,baz=165,slow=4.9,SNR=263
ZALV S **S 03 53 13.3 +4.2**
comp=Z,25nm,0.9s,baz=156,slow=12,SNR=4.9
ZALV LR LR 04 12 36.0
comp=Z,74µm,18.3s,MS6.8,baz=356,slow=39
ZALV Zalesovo Beam 57.24 350 P **P 03 45 13.5 -0.9**
ZALV S **S 03 53 13.3 +4.2**
ZALV pmax pmax
comp=Z,583nm,1.0s,mb6.6
ZALV smax
comp=N,25nm,0.9s
ZALV MLR MLR
comp=Z,74µm,18.3s,MS6.8
RIV Riverview 57.48 129 *e*P **P 03 45 17.6 +1.1**
KRAR Krasnoyarsk 58.23 356*c i*P **P 03 45 21.3 0.0**
KRAR pmax pmax
comp=Z,635nm,1.1s,mb6.6
KRAR MLR MLR
comp=Z,221µm,17.0s,MS7.3
KLR Kul'dur 58.25 24 *e*P **P 03 45 16.7 -4.9**
NVS Novosibirsk 58.38 349 *i*P **P 03 45 22.3 -0.1**
NVS *e*S **S 03 53 22.8 -1.3**
NVS pmax pmax
comp=Z,1µm,1.2s,mb6.8
NVS pmax pmax
comp=N,1µm,1.6s
NVS pmax pmax
comp=E,348nm,0.9s
RDF Al-Radifah 58.60 306 *e*P **P 03 45 22.8 -1.6**
baz=306
RDF AMb AMB 03 45 47.2
comp=Z,1µm,1.0s,mb6.8,baz=306
UMR Umm Al-Rimmam 58.71 307 *e*P **P 03 45 24.0 -1.2**
baz=307
UMR AMb AMB 03 45 48.1
comp=Z,873nm,1.0s,mb6.7,baz=307
TAU Tasmania Unive 58.73 140 *e*P **P 03 45 24.2 -0.9**
TAU pmax pmax
comp=Z,448nm,1.3s,mb6.3
TAU MLR MLR
comp=Z,124µm,22.0s,MS7.0
TAU Tasmania Unive 58.73 140 *e*P **P 03 45 24.1 -1.0**
comp=Z,448nm,1.3s,mb6.3
TAU LR LR
comp=Z,124µm,22.0s,MS7.0
NAY Al-Naaiem 58.97 306 *e*P **P 03 45 25.4 -1.7**
baz=306
NAY AMb AMB 03 46 01.0
comp=Z,340nm,1.1s,mb6.3,baz=306
ERM Erimo 59.04 37 P **P 03 45 27.8 +0.6**
comp=Z,2µm,0.9s,mb7.1,SNR=13
ERM Erimo 59.04 37 P **P 03 45 27.6 +0.4**
ERM pmax pmax
comp=Z,360nm,1.0s,mb6.4
ERM Erimo 59.04 37 *e*P **P 03 45 27.5 +0.3**
comp=Z,356nm,0.9s,mb6.4
ERM LR LR
comp=Z,143µm,19.0s,MS7.1
MIB Mutribah 59.11 307 *e*P **P 03 45 27.1 -0.8**
baz=307
MIB AMb AMB 03 46 02.0
comp=Z,1µm,1.1s,mb6.9,baz=307
RST Umm Al-Ruwaisa 59.26 306 *e*P **P 03 45 27.8 -1.2**
baz=306
RST AMb AMB 03 46 02.8
comp=Z,653nm,1.3s,mb6.5,baz=306
VOSK Vostochnaya 59.73 340 P **P 03 45 30.5 -1.3**
VOSK pmax pmax
comp=Z,2µm,1.8s,mb6.8
BVA0 Borovoye Array 60.19 340 *i*P **P 03 45 33.3 -1.6**
BVA0 pmax pmax
comp=Z,119nm,1.2s,mb5.8
BRVK Borovoye 60.25 340 P **P 03 45 35.5 +0.2**
comp=Z,2µm,0.8s,mb7.3,SNR=60
BRVK Borovoye 60.25 340 *e*P **P 03 45 34.4 -0.9**
BRVK pmax pmax
comp=Z,287nm,0.8s,mb6.3
BRVK MLR MLR
comp=Z,190µm,19.0s,MS7.2
BRVK Borovoye 60.25 340 *e*P **P 03 45 34.4 -0.9**
comp=Z,287nm,0.8s,mb6.3
BRVK LR LR
comp=Z,190µm,19.0s,MS7.2
HNR Honiara 60.43 100 *e*P **P 03 45 36.3 -1.0**
HNR pmax pmax
comp=Z,978nm,1.0s,mb6.8
HNR MLR MLR
comp=Z,84µm,22.0s,MS6.8
HNR Honiara 60.43 100 *e*P **P 03 45 36.3 -1.0**
comp=Z,978nm,1.0s,mb6.8
HNR LR LR
comp=Z,84µm,22.0s,MS6.8
BOD Bodaibo 60.90 9 *e*P **P 03 45 38.8 -0.9**
BOD pmax pmax
comp=Z,778nm,1.2s,mb6.7
AB31 Akbulak array 61.57 332 *i*P **P 03 45 42.8 -1.6**
AB31 pmax pmax
comp=Z,500nm,0.8s,mb6.7
AB31 Akbulak array 61.57 332⇑*e*P **P 03 45 42.9 -1.5**
FURI Furi 61.67 281 *e*P **P 03 45 46.2 +0.4**
FURI S **S 03 54 03.7 -4.1**
YUK Yuzh-Kuril'sk 61.83 36⇑*i*P **P 03 45 46.0 -0.2**
YUK *e* 03 46 25.0
YUK *e* 03 48 05.0
YUK *i*S **S 03 54 11.0 +2.3**
YUK *e*PS 03 54 23.0
YUK *e* 03 55 38.0
YUK pmax pmax
comp=Z,35µm,5.0s
YUK pmax pmax
comp=N,15µm,3.0s
YUK pmax pmax
comp=E,10µm,4.0s
YUK pmax pmax
comp=Z,330nm,0.5s,mb6.7
YUK pmax pmax
comp=N,410nm,0.7s
YUK pmax pmax
comp=E,560nm,0.9s
YUK pmax pmax
comp=E,4µm,3.0s
YUK pmax pmax
comp=E,10µm,4.0s

YUK smax
comp=N,13µm,4.0s
YUK smax
comp=E,14µm,4.0s
YSS Yuzh-Sakhalins 61.84 32α*i*P **P 03 45 46.0 -0.3**
YSS *e* 03 48 04.0
YSS *e*S **S 03 54 08.0 -0.8**
YSS *e*PPS 03 54 38.0
YSS pmax pmax
comp=Z,280nm,1.0s,mb6.3
YSS pmax pmax
comp=Z,21µm,10.0s
YSS pmax pmax
comp=N,9µm,6.0s
YSS pmax pmax
comp=E,8µm,8.0s
YSS MLR MLR
comp=N,141µm,16.0s
YSS MLR MLR
comp=Z,152µm,16.0s,MS7.2
YSS Yuzh-Sakhalins 61.84 32 *e*P **P 03 45 46.5 +0.2**
comp=Z,2µm,1.1s,mb7.2
YSS LR LR
comp=Z,43µm,20.0s,MS6.6
CLNS Chul'man 62.27 15 *e*P **P 03 45 49.1 +0.1**
CLNS *e* 03 46 27.2
CLNS *e* 03 48 06.3
CLNS *e*PPP 03 49 35.5
CLNS *e*S **S 03 54 16.5 +2.6**
CLNS *e*SS SS 03 58 23.1 +5.6
CLNS pmax pmax
comp=Z,733nm,1.3s,mb6.7
CLNS pmax pmax
comp=N,370nm,1.2s
CLNS pmax pmax
comp=E,419nm,1.2s
CLNS smax
comp=E,8879µm,14.2s
CLNS MLR MLR
comp=E,166µm,18.0s,MS7.5
CLNS MLR MLR
comp=N,239µm,18.0s,MS7.5
CLNS MLR MLR
comp=Z,285µm,20.0s,MS7.4
KMBO Kilima Mbogo 62.30 270 P **P 03 45 50.4 +0.4**
comp=Z,17nm,0.9s,mb5.2,baz=58,slow=9.0,SNR=23
KMBO LR LR 04 09 28.9
comp=Z,108µm,19.6s,MS7.0,baz=82,slow=33
KMBO PKP2bc 04 15 04.5
comp=Z,0.7nm,0.4s,baz=214,slow=15,SNR=4.1
KMBO Kilima Mbogo 62.30 270 *e*P **P 03 45 50.6 +0.5**
comp=Z,106nm,0.8s,mb6.0
KMBO LR LR
comp=Z,101µm,20.0s,MS7.0
AKTK Aktyubinsk 63.29 332 P **P 03 45 55.3 -0.6**
AKTK ⇑*e* 04 15 01.4
AKTK LR LR 04 19 48.7
AKTO Aktyubinsk 63.29 332 P **P 03 45 55.3 -0.6**
comp=Z,148nm,1.2s,mb6.0,baz=129,slow=7.0,SNR=84
AKTO PKP2bc 04 15 01.4
comp=Z,1.5nm,0.4s,baz=338,slow=4.1,SNR=12
AKTO LR LR 04 19 48.7
comp=Z,33µm,18.2s,MS6.5,baz=137,slow=42
MIR Mirnyy 64.43 183⇑*i*P **P 03 46 05.0 +1.9**
MIR *i* 03 46 18.0
MIR *i* 03 46 46.0
MIR *i*S **S 03 54 50.0 +9.4**
MIR pmax pmax
comp=Z,300nm,1.5s,mb6.1
CASY Casey 64.46 175 *e*P **P 03 46 03.0 -0.3**
CASY *e*S **S 03 54 41.6 +0.7**
CASY *e* 04 02 11.8
CASY Casey 64.46 175 *e*P **P 03 46 03.0 -0.3**
CASY *e*S **S 03 54 41.6 +0.7**
CASY *e* 04 02 11.8
CASY LR LR
comp=Z,98µm,20.0s,MS7.0
MAK Makhachkala 64.81 320 *e*P **P 03 46 04.2 -1.9**
MAK *i* 03 46 33.9
MAK *e*S **S 03 54 41.9 -4.2**
MAK *e* 03 55 54.8
MAK *e*SS SS 03 59 02.7 +4.9
MAK pmax pmax
comp=N,660nm,1.4s
MAK pmax pmax
comp=E,555nm,1.2s
MAK pmax pmax
comp=Z,980nm,1.6s,mb6.6
HKR Hakkari 64.96 313 *e*P **P 03 46 08.2 +1.1**
HAKT HAKKARI 64.98 313 *i*P **P 03 46 07.0 -0.2**
GNI Garni 65.34 316 P **P 03 46 09.2 -0.4**
comp=Z,7.9nm,0.5s,mb5.0,baz=164,slow=8.9,SNR=13
GNI PKP2bc 04 14 55.5
comp=Z,1.6nm,0.3s,baz=162,slow=22,SNR=4.1
GNI Garni 65.34 316*c i*P **P 03 46 09.3 -0.3**
GNI pmax pmax
comp=Z,157nm,1.3s
GNI Garni 65.34 316 *e*P **P 03 46 09.5 0.0**
comp=Z,577nm,1.1s,mb6.5
GNI LR LR
comp=Z,56µm,19.0s,MS6.8
CLDR Caldiran 65.49 315 *e*P **P 03 46 11.4 +0.9**
DGRG David-gareji 65.50 318 P **P 03 46 11.7 +1.2**
VANB Van 65.63 314 *e*P **P 03 46 11.2 -0.3**
DYDN Diyadin 65.82 315 *i*P **P 03 46 13.6 +0.9**
SIRT Sirnak 65.88 313 *e*P **P 03 46 18.3 +5.2**
MTA Mtatsminda 65.99 318 P **P 03 46 14.2 +0.4**
MTA S S 03 54 59.7 -0.9
TBLG Delisi 66.05 318 P **P 03 46 13.9 -0.2**
TBLG S S 03 55 05.9 +4.7
AGRB Hanur-Agry 66.32 315 *e*P **P 03 46 14.9 -1.0**
SVE Sverdlovsk 66.67 338⇓*e*P **P 03 46 17.8 +0.1**
SVE *e*PPP 03 50 28.9
SVE *e*S S 03 55 08.7 +0.6
SVE *e*SS SS 03 59 29.4 +3.4
SVE pmax pmax
comp=Z,950nm,0.9s,mb6.8
SVE pmax pmax
comp=Z,19µm,16.1s
SVE MLR MLR
comp=Z,160µm,22.0s,MS7.2
KARS Kars 66.68 316 *e*P **P 03 46 18.4 +0.2**
MARD Mardin 67.03 312 *i*P **P 03 46 20.6 +0.1**
ARU Arti 67.18 337 P **P 03 46 20.5 -0.5**
comp=Z,2µm,1.7s,mb6.8,SNR=36
ARU Arti 67.18 337*d i*P **P 03 46 19.5 -1.5**
ARU *e* 03 46 43.2
ARU *e*PPP 03 50 28.8
ARU *e*S S 03 55 12.4 -2.0
ARU *e*SS SS 03 59 33.7 -0.3
ARU pmax pmax
comp=Z,261nm,1.2s,mb6.1
ARU pmax pmax
comp=Z,16µm,17.8s
ARU smax
comp=N,34µm,25.7s
ARU MLR MLR
comp=Z,180µm,22.0s,MS7.2
ARU Arti 67.18 337 *e*P **P 03 46 20.2 -0.8**
comp=Z,275nm,0.8s,mb6.3
ARU LR LR
comp=Z,161µm,20.0s,MS7.2
HOMI Horasan 67.27 315 *i*P **P 03 46 24.8 +2.8**
ONI Oni 67.28 318 P **P 03 46 22.5 +0.5**
ONI S S 03 55 17.5 +1.3
BNGL BINGOL 67.38 314 *i*P **P 03 46 22.6 -0.1**
ERZM Erzurum 67.60 315 *i*P **P 03 46 22.9 -1.1**
ARTV Artvin 67.72 316 *i*P **P 03 46 24.7 0.0**
DZM Mont Dzumac 67.78 113 *e*P **P 03 46 25.8 +0.2**
DZM Mont Dzumac 67.78 113 *e*P **P 03 46 25.1 -0.4**
YAK Yakutsk 68.00 15 *e*P **P 03 46 24.4 -1.7**
YAK *e**PP pP 03 46 31.5 -1.1
YAK *e* 03 46 51.0
YAK *e* 03 48 54.6
YAK *e*S S 03 55 18.8 -5.2
YAK *e* 03 56 24.8
YAK *e*SS SS 03 59 50.6 +4.1
YAK pmax pmax
comp=Z,869nm,1.0s,mb6.7
YAK pmax pmax
comp=N,316nm,1.1s
YAK pmax pmax
comp=E,309nm,1.2s
YAK pmax pmax
comp=Z,2µm,3.2s

YAK pmax pmax
comp=N,322nm,1.8s
YAK pmax pmax
comp=E,276nm,1.4s
YAK smax
comp=E,4035µm,4.3s
YAK MLR MLR
comp=Z,576µm,19.0s,MS7.8
YAK MLR MLR
comp=N,369µm,17.0s,MS7.7
YAK MLR MLR
comp=E,207µm,17.0s,MS7.7
YAK Yakutsk 68.00 15 *e*P **P 03 46 25.1 -1.0**
comp=E,3µm,0.9s,mb7.2
YAK LR LR
comp=Z,547µm,19.0s,MS7.8
BCA Borcka 68.04 317 *e*P **P 03 46 26.9 +0.1**
KOPT Kop Dagi 68.26 315 *i*P **P 03 46 27.3 -0.9**
ASF Jabal al Asfar 68.33 306 P **P 03 46 28.3 -0.5**
comp=Z,36nm,1.0s,mb5.3,baz=189,slow=0.5,SNR=26
ASF PKP2bc 04 14 48.2
comp=Z,1.1nm,0.6s,baz=61,slow=1.9,SNR=7.1
ASF LR LR 04 17 14.5
comp=Z,119µm,19.7s,MS7.1,baz=113,slow=37
ASF Jabal al Asfar 68.33 306 P **P 03 46 28.3 -0.5**
ASF ⇑*e* 04 14 48.2
ASF LR LR 04 17 14.5
KIV Kislovodsk 68.38 319 P **P 03 46 28.7 -0.2**
comp=Z,1µm,1.1s,mb6.9,SNR=63
KIV Kislovodsk 68.38 319α*i*P **P 03 46 28.9 0.0**
KIV *i* 03 46 36.9
KIV *e* 03 46 43.6
KIV 03 46 53.0
KIV *i*S S 03 55 26.7 -2.6
KIV *i* 03 56 10.4
KIV pmax pmax
comp=Z,191nm,1.4s,mb5.9
KIV Kislovodsk 68.38 319⇓*i*P **P 03 46 30.9 +2.0**
KIV Kislovodsk 68.38 319 *e*P **P 03 46 28.8 -0.1**
comp=Z,716nm,1.1s,mb6.6
KIV LR LR
comp=Z,76µm,21.0s,MS6.9
PZAR Pazar-Rize 68.43 316 *e*P **P 03 46 32.6 +3.4**
SVRC Sivrice-ELAZID 68.50 313 *e*P **P 03 46 28.7 -1.1**
URFA Urfa 68.53 312 *e*P **P 03 46 30.9 +0.9**
JAWL J.Aulia 68.55 287 *i*P **P 03 46 28.8 -1.6**
JAWL *i*S S 03 55 30.0 -2.2
JAWL AMS AMS 03 56 22.9
comp=N,23µm,20.6s
PTK Pertek 68.63 313 *e*P **P 03 46 33.5 +3.0**
MRKH Merkhyat 68.73 288 *e* **P 03 46 28.1 -3.4**
baz=98,slow=7.4
MRKH *i*P 03 46 29.9
MRKH *i*S S 03 55 32.6 -1.7
MRKH AMS AMS 03 56 33.0
comp=N,25µm,20.0s
MACK Trabzon 69.12 316 *i*P **P 03 46 33.8 +0.2**
MALT Malatya 69.13 312 *e*P **P 03 46 32.0 -1.6**
MALT pmax pmax
comp=Z,321nm,1.1s,mb6.2
MALT MLR MLR
comp=Z,100µm,21.0s,MS7.0
MALT Malatya 69.13 312⇑*i*P **P 03 46 31.8 -1.8**
MALT Malatya 69.13 312 *e*P **P 03 46 31.9 -1.7**
comp=Z,321nm,1.1s,mb6.2
MALT LR LR
comp=Z,100µm,21.0s,MS7.0
MYA Malataya 69.13 313 *e*P **P 03 46 33.5 -0.1**
KTUT Trabzon 69.14 316 *e*P **P 03 46 31.0 -2.7**
EIL Elat 69.25 303 P **P 03 46 34.0 -0.6**
comp=Z,70nm,1.0s,mb5.5,baz=111,slow=2.5,SNR=20
GZT Gaziantep 69.44 311 *i*P **P 03 46 35.9 +0.2**
AKCD Akcadag 69.50 312 *i*P **P 03 46 32.2 -3.7**
RCY Rachaya 69.59 307 *e*P **P 03 46 37.1 +0.6**
GAZ Gaziantep 69.65 311 *e*P **P 03 46 36.9 0.0**
BHL Bhannes 69.84 307⇑*e*P **P 03 46 33.6 -4.5**
ESPY Espiye-Giresun 69.85 315 *e*P **P 03 46 38.2 +0.2**
KMRS Kahramanmaras 69.99 311 *e*P **P 03 46 39.5 +0.6**
MAW Mawson 70.03 194 P **P 03 46 37.9 -0.7**
comp=Z,25nm,0.8s,mb5.2,baz=24,slow=7.4,SNR=24
MAW LR LR 04 12 39.7
comp=Z,63µm,20.4s,MS6.8,baz=44,slow=32
MAW PKP2bc 04 14 39.4
comp=Z,35nm,1.2s,baz=186,slow=2.9,SNR=17
MAW Mawson 70.03 194 *e*P **P 03 46 39.0 +0.4**
comp=Z,74nm,1.0s,mb5.6
MAW LR LR
comp=Z,73µm,19.0s,MS7.0
KZIT Kziot 70.03 304 P **P 03 46 38.2 -1.2**
HTY Hatay 70.13 310 *e*P **P 03 46 39.0 -0.8**
COBT Iskenderun 70.16 310 *i*P **P 03 46 42.5 +2.5**
GRSN GIRESUNGRSN 70.17 315 *i*P **P 03 46 37.9 -2.1**
SOC Sochi 70.19 318 *e*P **P 03 46 37.9 -2.1**
SOC *e**PP pP 03 46 47.5 +0.9
SOC *e**SP sP 03 46 52.0 +3.0
SOC *e* 03 46 59.8
SOC *e* 03 49 14.9
SOC *e*PPP 03 50 53.6
SOC *i*S S 03 55 46.9 -3.7
SOC *e* 03 56 36.5
SOC *e*SS SS 04 00 24.9 +3.9
SOC pmax pmax
comp=Z,251nm,1.0s,mb6.1
SOC Sochi 70.19 318 *i*P **P 03 46 39.6 -0.4**
ANDN Andirin 70.43 311 *i*P **P 03 46 41.3 -0.4**
SARI SarD1z-Kayseri 70.53 312 *e*P **P 03 46 43.6 +1.3**
RSDY Resadiye-TOKAT 70.65 314 *e*P **P 03 46 43.7 +0.7**
CEYT Ceyhan 70.70 310 *e*P **P 03 46 44.1 +0.7**
YURE YUREGIR 70.73 310 *i*P **P 03 46 44.0 +0.5**
KOZT Kozan 70.79 311 *e*P **P 03 46 47.3 +3.5**
MCQ Macquarie Isla 70.90 148 *e*P **P 03 46 50.8 +6.6**
TOKT Tokat 71.19 314 *e*P **P 03 46 43.9 -2.3**
BNN Bunyan 71.21 312 *e*P **P 03 46 46.6 +0.2**
SKR Severo-Kuril's 71.24 34 *e*P **P 03 46 46.5 +0.2**
SKR *e* 03 49 26.0
SKR *e*PPP 03 51 02.0
SKR *e* 03 56 47.0
SKR *e*SS SS 04 00 36.0 -0.8
SKR pmax pmax
comp=E,540nm,1.0s
SKR pmax pmax
comp=Z,2µm,1.0s,mb6.9
SKR MLR MLR
comp=N,44µm,20.0s,MS7.1
SKR MLR MLR
comp=E,85µm,20.0s,MS7.1
SKR MLR MLR
comp=Z,105µm,20.0s,MS7.1
KARA Karaisali 71.31 311 *e*P **P 03 46 47.3 +0.3**
LSZ Lusaka 71.48 255 P **P 03 46 47.7 -0.7**
comp=Z,21nm,0.9s,mb5.1,baz=87,slow=5.6,SNR=11
LSZ LR LR 04 17 05.3
comp=Z,59µm,18.9s,MS6.9,baz=82,slow=35
LSZ Lusaka 71.48 255 P **P 03 46 47.7 -0.8**
LSZ pmax pmax
comp=Z,21nm,0.9s,mb5.1
LSZ Lusaka 71.48 255 *e*P **P 03 46 47.0 -1.5**
comp=Z,84nm,2.3s,mb5.3
LSZ LR LR
comp=Z,55µm,19.0s,MS6.8
EREN Erenkoy 71.48 309 *e*P **P 03 46 48.7 +0.6**
MERS Mersin 71.60 310 *e*P **P 03 46 48.8 0.0**
KVT Kavak 71.80 315 *e*P **P 03 46 50.4 +0.5**
MEST Erdemli 71.80 310 *i*P **P 03 46 49.4 -0.6**
YOZ Yozgat 71.85 313 *e*P **P 03 46 53.8 +3.5**
NIG Nigde 71.90 311 *e*P **P 03 46 50.4 -0.2**
LFK Lefkose 71.91 308 *e*P **P 03 46 50.4 -0.3**
CSS Prodhromos 71.98 308 *e*P **P 03 46 50.2 -1.0**
comp=Z,381nm,1.2s,mb6.2
CSS LR LR
comp=Z,102µm,20.0s,MS7.1
IKL Isikli 72.06 309 *e*P **P 03 46 47.8 -3.8**
ANN Anapa 72.17 319*c i*P **P 03 46 49.9 -2.1**
ANN *i*S S 03 56 09.8 -3.7
ANN *i* 03 57 02.1
ANN pmax pmax
comp=Z,114nm,1.3s,mb5.6
ANN pmax pmax
comp=Z,15µm,17.3s
VRHR Novokhopersk 72.22 326 *e*P **P 03 46 50.1 -2.1**
VRHR *e*S S 03 56 07.0 -6.8
VRHR pmax pmax
comp=Z,340nm,1.7s,mb6.0
VRHR pmax pmax

comp=N,210nm,1.5s
VRHR pmax pmax
comp=E,90nm,0.8s
VRHR smax
comp=N,16µm,6.7s
VRHR smax
comp=Z,2µm,5.3s
VRHR smax
comp=E,14µm,8.8s
VRHR MLR MLR
comp=E,77µm,21.0s,MS7.2
VRHR MLR MLR
comp=Z,97µm,21.0s,MS7.0
VRHR MLR MLR
comp=N,78µm,17.0s,MS7.2
LEF Lefka 72.37 308 *e*P **P 03 46 53.7 +0.2**
CORM Corum 72.53 313 *e*P **P 03 46 55.5 +1.2**
CDAG Cicekdag 72.54 313 *i* P **P 03 46 53.9 -0.5**
DIKM Dikmen 72.55 315 *e*P **P 03 46 53.8 -0.6**
CTKT Corum 72.55 314 *i* P **P 03 46 53.9 -0.5**
BYBT Boyabat 72.84 315 *e*P **P 03 46 50.7 -5.4**
KAMT Kaman 72.95 312 *e*P **P 03 46 55.7 -1.1**
BR131 Keskin Array S 73.11 313 *e*P **P 03 46 56.1 -1.7**
comp=N,135nm,0.8s,mb5.9
BR131 LR LR
comp=Z,45µm,21.0s,MS6.7
HDMB Hadim 73.19 310 *e*P **P 03 46 58.3 0.0**
TOS Tosya 73.24 314 *e*P **P 03 46 55.5 -3.0**
PEA0B Petropavlovsk- 73.24 32 *e*P **P 03 46 57.4 -0.9**
PETK Petropavlovsk- 73.24 32 P **P 03 46 56.9 -1.4**
comp=Z,85nm,0.8s,mb5.7,baz=207,slow=2.1,SNR=48
PETK PKPPKP 04 14 35.2
comp=Z,1.7nm,0.7s,baz=99,slow=9.6,SNR=4.1
PETK Petropavlovsk- 73.24 32 P **P 03 46 56.9 -1.4**
PETK P'P' 04 14 35.2
CANT Cankiri 73.39 313 *e*P **P 03 46 59.6 +0.2**
ILGA Ilgaz 73.46 314 *i* P **P 03 46 59.3 -0.5**
ELDT Eldivan 73.50 313 *i* P **P 03 46 59.4 -0.6**
BZK Bozkurt 73.54 315 *e*P **P 03 46 59.5 -0.8**
KONT Konya--Tatoy 73.56 311 *e*P **P 03 47 01.2 +0.8**
LADK Ladik-KONYA 73.62 311 *e*P **P 03 47 03.9 +3.1**
VSR Storozhevoye 73.66 325 *e*P **P 03 46 58.2 -2.5**
VSR *e*S S 03 56 23.9 -6.4
VSR pmax pmax
comp=Z,80nm,1.6s,mb5.4
VSR pmax pmax
comp=N,40nm,1.5s
VSR pmax pmax
comp=E,80nm,1.0s
VSR smax
comp=N,9µm,9.5s
VSR smax
comp=Z,580nm,12.9s
VSR smax
comp=E,4µm,8.1s
PET Petropavlovsk 73.72 33α *i*P **P 03 47 00.4 -0.6**
PET *e* 03 49 47.1
PET *e*S S 03 56 30.3 -0.5
PET pmax pmax
comp=Z,22µm,7.7s
PET pmax pmax
comp=Z,677nm,0.8s,mb6.6
PET pmax pmax
comp=Z,27µm,17.4s
PET pmax pmax
comp=Z,13µm,9.7s
PET pmax pmax
comp=Z,18µm,18.5s
PET smax
comp=N,11µm,7.6s
PET smax
comp=N,32µm,25.7s
PET MLR MLR
comp=Z,150µm,20.0s,MS7.3
PET MLR MLR
comp=Z,107µm,18.0s
PET Petropavlovsk 73.72 33 *e*P **P 03 47 00.1 -0.9**
comp=Z,547nm,0.9s,mb6.5
PET LR LR
comp=Z,123µm,20.0s,MS7.2
ANTO Ankara 73.78 313 *e*P **P 03 47 01.5 -0.2**
ANTO Ankara 73.78 313⇑ *i*P **P 03 47 03.7 +2.0**
ANTO Ankara 73.78 313 *e*P **P 03 47 00.1 -1.5**
comp=Z,326nm,1.1s,mb6.2
ANTO LR LR
comp=Z,57µm,22.0s,MS6.8
LOD Lodumlu 73.81 313 *e*P **P 03 47 01.0 -0.9**
BALT Daday 73.85 314 *i* P **P 03 47 01.7 -0.4**
VOR Voronezh 73.86 326 *e*P **P 03 47 02.0 +0.1**
VOR *e*S S 03 56 28.0 -4.5
VOR pmax pmax
comp=Z,2µm,1.8s,mb6.8
KDHN Kadinhani 73.90 311 *i* P **P 03 47 01.7 -0.7**
KIZT Kizilcal 74.18 311 *e*P **P 03 47 00.5 -3.5**
SIM Simferopol' 74.43 318*c* *i*P **P 03 47 05.0 -0.4**
SIM *e* 03 49 52.0
SIM *i*S S 03 56 35.2 -4.0
SIM pmax pmax
comp=Z,143nm,0.8s,mb6.0
SGKT Sivrigoynuk 74.52 313 *i* P **P 03 47 04.8 -1.2**
LBTB Lobatse 74.57 245 *e*P **P 03 47 07.0 +0.3**
LBTB pmax pmax
comp=Z,509nm,1.7s,mb6.2
LBTB MLR MLR
comp=Z,116µm,20.0s,MS7.2
LBTB Lobatse 74.57 245 *e*P **P 03 47 07.0 +0.3**
comp=Z,509nm,1.7s,mb6.2
LBTB LR LR
comp=Z,116µm,20.0s,MS7.2
ANTB Antalya 74.59 309 *e*P **P 03 47 11.2 +4.8**
ISP Isparta 74.94 310 *e*P **P 03 47 04.2 -4.3**
ISP Isparta 74.94 310‖ *i*P **P 03 47 08.0 -0.5**
ISP Isparta 74.94 310 *e*P **P 03 47 08.5 0.0**
comp=Z,272nm,1.2s,mb6.1
ISP LR LR
comp=Z,84µm,19.0s,MS7.1
SHUT Suhut-Afyon 75.09 311 *e*P **P 03 47 05.6 -3.7**
MDU Mudurnu 75.11 313 *e*P **P 03 47 08.8 -0.6**
ESKT Eskisehir 75.12 312 *i* P **P 03 47 08.5 -1.0**
ELL Elmali 75.13 309 *e*P **P 03 47 00.5 -9.1**
TKTP Tekketepe 75.13 310 *i* P **P 03 47 08.5 -1.1**
KDZE Karadeniz Ereo 75.18 314 *e*P **P 03 47 09.0 -0.8**
BOSA Boshof 75.21 241 P **P 03 47 09.6 -0.7**
comp=Z,30nm,0.9s,mb5.2,baz=94,slow=5.7,SNR=21
BOSA LR LR 04 15 16.2
comp=Z,64µm,19.4s,MS6.9,baz=84,slow=32
HENT Hendek 75.44 313 *i* P **P 03 47 10.8 -0.5**
GOLH Golhisar 75.52 309 *i* P **P 03 47 11.2 -0.6**
ALT Altintas 75.55 311 *e*P **P 03 47 05.6 -6.4**
KHAL Karahalli 75.85 310 *i* P **P 03 47 12.9 -0.8**
DNZL Cakiroluk 76.02 310 *i* P **P 03 47 07.1 -7.6**
GDZ Gediz 76.03 311 *i*P **P 03 47 13.5 -1.3**
TIXI Tiksi 76.08 9*c* *i*P **P 03 47 12.7 -1.6**
TIXI *e*S S 03 56 52.7 -3.8
TIXI pmax pmax
comp=Z,897nm,1.1s,mb6.6
TIXI pmax pmax
comp=N,225nm,1.1s
TIXI pmax pmax
comp=E,147nm,0.9s
TIXI smax
comp=E,2807µm,6.9s
TIXI MLR MLR
comp=Z,378µm,19.0s,MS7.7
TIXI MLR MLR
comp=N,320µm,20.0s,MS7.7
TIXI MLR MLR
comp=E,100µm,15.0s,MS7.7
TIXI Tiksi 76.08 9 *e*P **P 03 47 13.4 -1.0**
comp=E,891nm,1.0s,mb6.7
TIXI LR LR
comp=Z,486µm,21.0s,MS7.8
THZ Tophouse 76.16 132 P pP 03 47 24.7 +2.7
TURN Turunc 76.18 309 *i* P **P 03 47 17.1 +1.5**
ADVT Abdulvahap 76.18 312 *e*P **P 03 47 15.7 +0.1**
HRT Hereke 76.34 313 *e*P **P 03 47 14.1 -2.3**
ARG Arkhangelos 76.40 308 *e*P **P 03 47 18.4 +1.5**
WCZ Waipu Caves 76.42 126 P **P 03 47 18.5 +1.5**
SILT Sile 76.44 313 *e*P **P 03 47 15.7 -1.3**
YLV Yalova 76.49 313 *e*P **P 03 47 16.8 -0.5**
KULA Kula-Manisa 76.52 310 *e*P **P 03 47 17.4 -0.1**
ULDT Uludag 76.56 312 *i* P **P 03 47 17.2 -0.5**
GEMT Gemlik 76.59 312 *e*P **P 03 47 17.4 -0.5**
DEMI Demirci 76.60 311 *i* P **P 03 47 16.9 -1.0**
OBN Obninsk 76.70 328 P **P 03 47 18.7 +0.5**
comp=Z,3µm,1.2s,mb7.1,SNR=27
OBN Obninsk 76.70 328*a* *i*P **P 03 47 17.9 -0.3**
OBN *i* pP 03 47 23.9 -0.9
OBN *i* 03 47 31.7
OBN *i*S S 03 57 00.9 -3.0
OBN *i* 03 57 16.9
OBN PS 03 57 48.0
OBN *e*SS SS 04 02 01.9 +2.0
OBN pmax pmax
comp=Z,644nm,1.2s,mb6.4
OBN MLR MLR
comp=Z,82µm,21.0s,MS7.0
OBN Obninsk 76.70 328 *e*P **P 03 47 18.0 -0.1**
comp=Z,1µm,1.4s,mb6.7
OBN LR LR
comp=Z,98µm,20.0s,MS7.1
DST Dursunbey 76.80 311 *e*P **P 03 47 18.1 -1.0**
ISK Istanbul-Kandi 76.84 313 *e*P **P 03 47 12.3 -7.0**
KLYT Kilyos 76.91 313 *e*P **P 03 47 19.5 -0.2**
MLSB Milas 76.92 309 *e*P **P 03 47 17.4 -2.4**
DURS Dursunbey 76.92 311 *i* P **P 03 47 18.8 -1.0**
AYDN Tasoluk 76.92 309 *i* P **P 03 47 20.1 +0.3**
KARP Karpathos 77.02 307 *e*P **P 03 47 19.9 -0.5**
BGKT Bogazkoy 77.08 313 *e*P **P 03 47 17.4 -3.2**
BDRM Kayabasi 77.12 309 *i* P **P 03 47 22.7 +1.7**
AKHS Akhisar 77.25 311 *i* P **P 03 47 20.7 -0.9**
ELBA Catalca 77.33 313 *i* P **P 03 47 14.4 -7.6**
BALB Balikesir 77.37 311 *e*P **P 03 47 21.3 -1.0**
WAZ Wanganui 77.42 130 P **P 03 47 23.9 +1.3**
SNZO South Karori 77.42 132 *e*P **P 03 47 23.6 +1.0**
comp=Z,316nm,0.9s,mb6.2
SNZO LR LR
comp=Z,207µm,19.0s,MS7.5
GCAM G?zelcami? 77.43 309 *i* P **P 03 47 21.8 -0.8**
SLVT Silivri 77.51 313 *e*P **P 03 47 21.2 -1.9**
BNT Bandirma 77.51 312 *e*P **P 03 47 17.4 -5.6**
KDAG Bornova 77.56 310 *i* P **P 03 47 23.5 +0.1**
IZM Izmir 77.56 310 *e*P **P 03 47 24.0 +0.6**
SYO Syowa Base 77.58 199⇑ *e*P **P 03 47 21.2 -1.7**
BALY Balya 77.59 311 *i* P **P 03 47 23.0 -0.5**
ZKR Zakros 77.69 306 *e*P **P 03 47 27.0 +2.8**
BLCB Balcova 77.72 310 *e*P **P 03 47 22.5 -1.8**
SMG Samos 77.73 309 *e*P **P 03 47 24.2 -0.1**
WNVZ Wahianoa 77.83 130 P **P 03 47 25.3 +0.4**
TKR Tekirdag 77.94 313 *e*P **P 03 47 25.9 +0.4**
MRZ Mangatainoka R 77.99 131 *e*P **P 03 47 26.1 +0.4**
MFT Murefte 78.08 312 *e*P **P 03 47 23.4 -2.9**
TLCR 78.08 317⇑ *i*P **P 03 47 25.8 -0.3**
PSN Preselentsi 78.13 315 P **P 03 47 26.3 -0.1**
SART Tekirdag 78.14 312 *i* P **P 03 47 25.1 -1.4**
RKY Sarkoy-Tekirda 78.14 312 *e*P **P 03 47 24.2 -2.4**
TIRR Tirgusor 78.17 316 *e*P **P 03 47 25.7 -0.9**
TIRR pmax pmax
comp=Z,604nm,1.4s,mb6.3
TIRR Tirgusor 78.17 316⇑ *i*P **P 03 47 26.3 -0.3**
TIRR Tirgusor 78.17 316 *e*P **P 03 47 25.7 -0.9**
comp=Z,604nm,1.4s,mb6.3
AYVA Ayvalik 78.19 311 *i* P **P 03 47 25.0 -1.9**
NPS Neapolis 78.20 307 *e*P **P 03 47 26.9 -0.1**
LAST Lasithi 78.29 306 *e*P **P 03 47 32.4 +4.9**
LPK Lapseki 78.38 312 *e*P **P 03 47 27.5 -0.4**
CHOS Chios island 78.48 310 *e*P **P 03 47 32.1 +3.6**
PRK Paraskevi 78.50 311 *e*P **P 03 47 31.4 +2.9**
PRK Paraskevi 78.50 311 *e*P **P 03 47 27.6 -1.0**
SANT Santorini 78.54 308 *e*P **P 03 47 29.5 +0.7**
SANT Santorini 78.54 308 P **P 03 47 29.5 +0.7**
SANT LR LR
comp=Z,62µm,20.0s,MS6.9
HARR Harsova 78.56 316⇑ *i*P **P 03 47 32.5 +3.7**
HARR Harsova 78.56 316 P **P 03 47 28.4 -0.4**
PRD Provadia 78.57 315 P **P 03 47 28.8 -0.1**
KIS Kishinev 78.57 319⇑ *i*P **P 03 47 28.0 -0.8**
KIS *e* 03 50 28.0
KIS *i*S S 03 57 18.0 -6.4
KIS *i*S S 03 57 20.0 -4.4
KIS *e* 03 57 31.0
KIS *e*PS 03 58 05.0
KIS pmax pmax
comp=Z,2µm,3.0s
KIS pmax pmax
comp=Z,14µm,10.0s
KIS Kishinev 78.57 319⇑ *i*P **P 03 47 28.0 -0.8**
comp=Z,2µm,3.0s
KIS Kishinev 78.57 319 *e*PP PP 03 50 28.0 +1.3
KIS *i*S S 03 57 18.0 -6.4
KIS *e*ScS ScS 03 57 31.0 -18
APE Apeiranthos 78.62 308 *e*P **P 03 47 32.4 +3.1**
APE Apeiranthos 78.62 308 *e*P **P 03 47 32.4 +3.1**
APE Apeiranthos 78.62 308 *e*P **P 03 47 29.8 +0.5**
APE Apeiranthos 78.62 308⇑ *i*P pP 03 47 41.7 +5.8
IDI Anoyia 78.79 306 P **P 03 47 29.3 -1.0**
comp=Z,51nm,1.0s,mb5.4,baz=69,slow=7.4,SNR=11
SIVA Sivas 78.80 306 *e*P **P 03 47 33.7 +3.4**
URZ Urewera 78.88 128 P **P 03 47 29.3 -1.5**
comp=Z,36nm,0.5s,mb5.5,baz=248,slow=6.2,SNR=37
ENEZ Enez 78.91 312 *e*P **P 03 47 22.5 -8.3**
JMB Yambol 78.98 314 P **P 03 47 30.9 -0.2**
JMB Yambol 78.98 314 P **P 03 47 32.0 +0.9**
ALN Alexandroupoli 79.02 312 *e*P **P 03 47 31.6 +0.2**
MWZ Matawai 79.22 128 P **P 03 47 31.7 -0.9**
AKASG Malin Array Be 79.35 322 P **P 03 47 31.8 -1.2**
comp=Z,15nm,0.8s,mb5.0,baz=85,slow=4.0,SNR=40
AKASG Malin Array Be 79.35 322 *i* P **P 03 47 32.0 -1.0**
AKASG pmax pmax
comp=Z,15nm,0.8s
KIEV Kiev 79.36 322 *e*P **P 03 47 30.8 -2.2**
KIEV *e*S S 03 57 29.6 -3.1
KIEV pmax pmax
comp=Z,100nm,0.8s,mb5.8
KIEV MLR MLR
comp=Z,85µm,20.0s,MS7.1
KIEV Kiev 79.36 322 *e*P **P 03 47 30.8 -2.2**
comp=Z,100nm,0.8s,mb5.8
KIEV *e*S S 03 57 29.6 -3.1
KIEV LR LR
comp=Z,85µm,20.0s,MS7.1
SUR Sutherland 79.36 238 P **P 03 47 34.6 +1.1**
comp=Z,1µm,1.2s,mb6.7,SNR=5.1
SUR Sutherland 79.36 238 LR LR 04 16 15.3
comp=Z,94µm,20.2s,MS7.1,baz=74,slow=31
SUR Sutherland 79.36 238 *e*P **P 03 47 34.6 +1.1**
comp=Z,942nm,1.8s,mb6.4
SUR LR LR
comp=Z,95µm,20.0s,MS7.1
VAM Vamos 79.36 306 *e*P **P 03 47 33.8 +0.4**
FUNA Funafuti 79.42 98 *e*P **P 03 47 35.6 +1.4**
comp=Z,2µm,2.1s,mb6.6
FUNA LR LR
comp=Z,54µm,22.0s,MS6.8
ODB Odobesti 79.43 317‖ *i*P **P 03 47 39.6 +6.1**
RDO Rodhopi 79.45 312 *e*P **P 03 47 33.0 -0.7**
LIA Limnos Island 79.46 311 *e*P **P 03 47 37.9 +4.1**
LIA Limnos Island 79.46 311 *e*P **P 03 47 33.4 -0.5**
KARN Karanos 79.59 306 *e*P **P 03 47 35.4 +0.8**
SZH Strazhica 79.63 315 P **P 03 47 34.2 -0.5**
DIM Dimitrovgrad 79.65 313 P **P 03 47 34.2 -0.6**
KDZ Kurdzhali 79.65 313 P **P 03 47 34.5 -0.3**
VRI Vrincioaia 79.68 317‖ *i*P **P 03 47 35.2 +0.3**
VRI Vrincioaia 79.68 317 P **P 03 47 35.7 +0.9**
PLOR Plostina 79.73 317 P **P 03 47 35.9 +0.8**
PLOR Plostina 79.73 317‖ *i*P **P 03 47 35.4 +0.9**
PUZ Puketiti 79.76 128 P **P 03 47 34.6 -0.9**
PVL Pavlikeni 80.04 314 P **P 03 47 38.0 +1.1**
ZIMR 80.11 315 P **P 03 47 37.6 +0.3**
MLR Muntele Rosu 80.12 317⇑ *i*P **P 03 47 37.5 +0.2**
MLR Muntele Rosu 80.12 317 P **P 03 47 37.8 +0.5**
RZN Rozhen 80.17 313 P **P 03 47 37.4 -0.2**
ATH Athens Observa 80.21 309 *e*P **P 03 47 36.8 -1.1**
PLD Plovdiv 80.26 313 P **P 03 47 37.4 -0.7**
PLD Plovdiv 80.26 313 P **P 03 47 38.0 -0.1**
NAIG Nisos Aigina 80.35 309 *e*P **P 03 47 35.7 -3.0**
OUR Ouranopolis 80.45 311 *e*P **P 03 47 40.4 +1.3**
DID Didima 80.50 308 *e*P **P 03 47 40.8 +1.3**
PAIG Paliouri 80.60 311 *e*P **P 03 47 42.7 +2.7**
VLI Veliai 80.60 308 *e*P **P 03 47 34.6 -5.5**
VLI Veliai 80.60 308 *e*P **P 03 47 38.8 -1.3**
VOIR 80.72 317⇑ *i*P **P 03 47 39.8 -0.7**
VOIR 80.72 317 P **P 03 47 40.4 -0.2**
NVR Nevrokopi 80.73 312 *e*P **P 03 47 39.7 -0.9**
PGB Panagyurishte 80.74 314 P **P 03 47 40.3 -0.4**
LTK Loutraki 80.80 309 *e*P **P 03 47 42.7 +1.6**
PLG Polygyros 80.86 311 *e*P **P 03 47 40.6 -0.8**
MMB Musomiste 80.88 313 P **P 03 47 40.4 -1.0**
LKR Lokris 80.88 310 *e*P **P 03 47 44.6 +3.0**
LKR Lokris 80.88 310 *e*P **P 03 47 40.0 -1.5**
SOH Sokhos 81.01 312 *e*P **P 03 47 44.6 +2.4**
BURAR Bucovina Array 81.10 319⇑ *i*P **P 03 47 42.1 -0.4**
BURAR Bucovina Array 81.10 319 P **P 03 47 43.0 +0.6**
BUR08 Bucovina Ar. S 81.11 319 *e*P **P 03 47 42.5 -0.1**
VLX Vlachokerasia 81.15 308 *e*P **P 03 47 46.5 +3.5**
HORT Hortiatis 81.16 311 *e*P **P 03 47 44.9 +1.9**
MNK Minsk 81.24 326*ce*P **P 03 47 39.0 -4.1**
MNK *e*S S 03 57 42.0 -10
MNK pmax pmax
comp=Z,230nm,1.4s,mb5.9
MNK smax
comp=N,33µm,12.0s
THE Thessaloniki 81.26 311 *e*P **P 03 47 45.2 +1.7**
MDB Medias 81.33 317⇑ *i*P pP 03 47 54.5 +4.1
KKB Krupnik 81.40 313 P **P 03 47 43.8 -0.4**
KNT Kendrikon 81.41 312 *e*P **P 03 47 44.0 -0.3**
VTS Vitosha 81.44 313⇑ *i*P **P 03 47 43.9 -0.5**
VTS Vitosha 81.44 313 P **P 03 47 44.2 -0.2**
VTS Vitosha 81.44 313 P **P 03 47 44.3 -0.1**
AGG Agios Georgios 81.46 310 *e*P **P 03 47 47.6 +3.0**
ITM Ithomi 81.47 308 *e*P **P 03 47 43.6 -1.2**
LIT Litokhoron 81.53 311 *e*P **P 03 47 46.8 +1.9**
PUL Pulkovo 81.56 331 *e*P **P 03 47 45.3 +0.7**
VAY Valandovo 81.68 312 *e*P **P 03 47 43.6 -2.1**
VAY Valandovo 81.68 312 P **P 03 47 45.0 -0.7**
TSUM Tsumeb 81.73 251 *e*P **P 03 47 47.1 +0.7**
comp=N,121nm,1.2s,mb5.7
TSUM LR LR
comp=Z,82µm,19.0s,MS7.1
GRG Griva 81.74 312 *e*P **P 03 47 48.0 +1.9**
THL Klokotos Trika 81.80 310 *e*P **P 03 47 47.5 +1.1**
THL Klokotos Trika 81.80 310 *e*P **P 03 47 46.8 +0.4**
EVR Evrytania 81.85 310 *e*P **P 03 47 45.9 -0.7**
RLS Riolos of Patr 81.97 309 *e*P **P 03 47 47.4 0.0**
STIP Stip 82.03 312 *e*P **P 03 47 44.4 -3.2**
KZN Kozani 82.10 311 *e*P **P 03 47 46.5 -1.5**
JOF Joensuu 82.17 335 *e*p **P 03 47 46.2 -1.6**
comp=Z,157nm,0.8s,mb6.0
JOF Joensuu 82.17 335 *e*P **P 03 47 46.2 -1.6**
JOF pmax pmax
comp=Z,157nm,0.8s,mb6.0
GZR Gura Zlata 82.28 316‖ *i*P **P 03 47 56.6 +7.8**
GZR Gura Zlata 82.28 316 P **P 03 47 49.1 +0.3**
LVV L'vov 82.35 321 *e*P **P 03 47 49.4 +0.4**
LVV *e*S S 03 57 59.4 -4.6
LVV *i* 03 58 05.6
LVV *i* PS 03 59 17.6
SMY Shemya 82.39 36 *e*P **P 03 47 49.2 0.0**
SMY pmax pmax
comp=Z,2µm,1.5s,mb6.7
SMY MLR MLR
comp=Z,78µm,21.0s,MS7.0
SMY Shemya 82.39 36 *e*P **P 03 47 49.1 0.0**
comp=Z,2µm,1.5s,mb6.7
SMY LR LR
comp=Z,78µm,21.0s,MS7.0
RAO Raoul Island 82.41 119 *e*P **P 03 47 47.2 -2.7**
RAO MLR MLR
comp=Z,61µm,19.0s,MS7.0
FNA Florina 82.48 311 *e*P **P 03 47 51.9 +1.9**
KFL Anninata 82.51 309 *e*P **P 03 47 51.1 +1.0**
BIA Bitola 82.56 312 *e*P **P 03 47 47.4 -2.9**
DRGR 82.59 318⇑ *i*P **P 03 47 50.8 +0.4**
DRGR 82.59 318 P **P 03 47 50.9 +0.5**
SKO Skopje 82.63 313 *e*P **P 03 47 48.3 -2.4**
KRUS Krusevo 82.67 312 *e*P **P 03 47 49.0 -1.9**
VLS Valsamata 82.68 309 *e*P **P 03 47 53.9 +2.9**
VLS Valsamata 82.68 309 *e*P **P 03 47 52.4 +1.4**
JAN Janina 82.70 310 *e*P **P 03 47 50.4 -0.7**
LKD Levkas 82.71 309 *e*P **P 03 47 53.9 +2.7**
LVZ Lovozero 82.78 340 P **P 03 47 51.4 +0.5**
comp=Z,1µm,0.8s,mb6.9,SNR=9.4
LVZ Lovozero 82.78 340⇑ *i*P **P 03 47 50.3 -0.6**
LVZ pmax pmax
comp=Z,164nm,1.5s,mb5.8
LVZ MLR MLR
comp=Z,188µm,20.0s,MS7.5
LVZ Lovozero 82.78 340⇑ *i*P **P 03 47 50.4 -0.5**
LVZ LR LR
comp=Z,211µm,21.0s,MS7.5
VSU Vasula 82.92 330*c* *i*P **P 03 47 51.8 0.0**
OHR Ohrid 82.96 312 *e*P **P 03 47 48.2 -4.2**
IGT Igoumenitsa 83.08 310 *e*P **P 03 47 52.3 -0.8**
APA Apatity 83.08 339‖ *i*P **P 03 47 52.4 -0.1**
APA *i* 03 51 10.0
APA *i* PPP 03 53 03.0
APA *i*S S 03 58 07.0 -3.8
APA *i*SS SS 04 03 35.0 +0.2
APA pmax pmax
comp=Z,210nm,1.2s,mb6.0
APA pmax pmax
comp=Z,30µm,16.0s
APA pmax pmax
comp=N,6µm,18.0s
APA pmax pmax
comp=E,12µm,18.0s
APA MLR MLR
comp=Z,180µm,20.0s,MS7.4
BZS Buzias 83.12 316‖ *i*P **P 03 47 53.0 -0.2**
BZS Buzias 83.12 316 P **P 03 47 53.1 -0.1**
KWP Kalwaria 83.15 320 *e*P **P 03 47 53.7 +0.5**
KWP *e*pP pP 03 47 60.0 +0.1
KWP *e*S S 03 58 12.8 +0.6
KWP *e*sS sS 03 58 25.0 +1.9
KWP *e*SS SS 04 03 38.0 +1.4
KWP LMZ 04 33 10.8
comp=Z,71µm,20.8s
KWP Kalwaria 83.15 320 *e*P **P 03 47 53.7 +0.5**
KWP *e**PP pP 03 48 00.0 +0.2
KWP *e*S S 03 58 12.8 +0.6
KWP *e*SS SS 04 03 38.0 +1.3
KWP LR LR
comp=Z,72µm,20.0s,MS7.0
SBA Scott Base 83.19 169 *e*P **P 03 47 54.2 +1.3**
comp=Z,1µm,2.0s,mb6.6
SBA LR LR
comp=Z,58µm,21.0s,MS6.9
UZH Uzhgorod 83.22 319 *e*P **P 03 47 53.4 -0.2**
UZH *e* 03 48 02.4
UZH *e* 03 51 12.0
UZH *e*PPP 03 53 00.0
UZH *e*S S 03 58 13.0 +0.1
UZH *e*PS 03 59 12.0
UZH *e*SS SS 04 03 40.0 +2.2
KOLS Kolonicke sedl 83.29 320 *e*P **P 03 47 54.0 0.0**
KOLS *e* 03 48 14.4
KOLS *e*S S 03 58 12.9 -0.7
BILL Bilibino 83.45 20*c* *i*P **P 03 47 53.9 -0.5**
BILL pmax pmax
comp=Z,63nm,1.0s,mb5.6
BILL Bilibino 83.45 20 *e*P **P 03 47 53.5 -0.9**
comp=Z,760nm,1.8s,mb6.4
BILL LR LR
comp=Z,413µm,19.0s,MS7.8
KEK Kerkira 83.51 310 *e*P **P 03 47 56.7 +1.5**
TIR Tirane 83.69 312 *e*P **P 03 47 55.0 -1.2**
TIR pmax pmax
comp=Z,327nm,1.1s,mb6.4
TIR MLR MLR
comp=Z,59µm,20.0s,MS7.0
TIR Tirane 83.69 312 *e*P **P 03 47 55.0 -1.2**
comp=Z,327nm,1.1s,mb6.4
TIR LR LR
comp=Z,59µm,20.0s,MS7.0
SUW Suwalki 83.77 325 *e*P **P 03 47 56.0 -0.3**
SUW *e*pP pP 03 48 01.8 -1.1
SUW *e*S S 03 58 15.0 -3.2
SUW *e*SS SS 04 03 45.0 -0.5
SUW LMZ 04 31 52.4
comp=Z,64µm,23.6s
SUW Suwalki 83.77 325 *e*P **P 03 47 56.0 -0.3**
SUW *e*pP pP 03 48 01.8 -1.1
SUW *e*S S 03 58 15.0 -3.2

SUW eSS SS 04 03 45.0 -0.5
BEO Beograd 83.79 315 P **P** **03 48 01.3 +4.7**
PVY Plav 83.80 313⇑*i*P **P** **03 47 55.6 -1.1**
CRVS Cervenica-Dubn 83.81 319 *e*P **P** **03 47 56.7 +0.1**
CRVS *e* 03 48 23.4
CRVS *e* 03 51 33.8
CRVS eS S 03 58 17.1 -1.8
IVA Berane 83.90 313⇑*i*P **P** **03 47 56.8 -0.4**
STHS Stebnicka Huta 84.05 320 *e*P **P** **03 47 58.0 +0.2**
STHS eS S 03 58 19.9 -1.3
STHS pmax pmax
comp=Z,202nm,1.0s,mb6.2
STHS Stebnicka Huta 84.05 320 *e*P **P** **03 47 58.0 +0.2**
comp=Z,202nm,1.0s,mb6.2
STHS *e* 03 48 34.0
STHS eS S 03 58 19.9 -1.3
FINES FINESS Array B 84.05 332 P **P** **03 47 56.0 -1.6**
KAF Kangasniemi 84.13 333 *e*p **P** **03 47 56.4 -1.5**
comp=Z,258nm,0.7s,mb6.5,baz=100,slow=4.7
KAF Kangasniemi 84.13 333 *e*P **P** **03 47 56.4 -1.5**
KAF pmax pmax
comp=Z,258nm,0.7s,mb6.5
ULC Ulcinj 84.24 312⇑*i*P **P** **03 47 59.0 0.0**
TTG Podgorica 84.30 313⇑*i*P **P** **03 47 59.0 -0.3**
PLE Pljevlja 84.33 314⇑*i*P **P** **03 47 59.8 +0.4**
KECS Kecovo 84.38 319 *e*P **P** **03 47 59.7 +0.2**
KECS pmax pmax
comp=Z,80nm,1.0s,mb5.8
KECS Kecovo 84.38 319 *e*P **P** **03 47 59.7 +0.2**
comp=Z,80nm,1.0s,mb5.8
KECS eS S 03 58 21.8 -2.8
NKY Niksic 84.54 313⇑*i*P **P** **03 48 00.1 -0.4**
BUM Brajici-Budva 84.55 313⇑*i*P **P** **03 48 00.2 -0.3**
NIE Niedzica 84.65 320 *e*P **P** **03 48 01.4 +0.5**
UPM Unac-Piva 84.66 314⇑*i*P **P** **03 48 01.0 -0.1**
PSZ Piszkesteto 84.68 318 *e*P **P** **03 48 00.8 -0.2**
PSZ pmax pmax
comp=Z,475nm,1.4s,mb6.4
PSZ MLR MLR
comp=Z,55μm,20.0s,MS6.9
PSZ Piszkesteto 84.68 318⇑*e*P **P** **03 48 01.4 +0.4**
PSZ Piszkesteto 84.68 318⇑*i*P **P** **03 48 01.2 +0.2**
PSZ Piszkesteto 84.68 318 *e*P **P** **03 48 00.8 -0.3**
comp=Z,475nm,1.4s,mb6.4
PSZ LR LR
comp=Z,55μm,20.0s,MS6.9
WAR Warsaw 84.69 323 *e*P **P** **03 48 01.0 -0.1**
WAR *e*pP pP 03 48 07.2 -0.5
WAR *e*SKS 03 58 25.5
WAR eS S 03 58 30.4 +2.9
WAR eSS SS 04 03 58.5 -0.8
WAR LMZ 04 29 43.3
comp=Z,100μm,24.1s
WAR Warsaw 84.69 323 *e*P **P** **03 48 01.0 0.0**
WAR *e*pP pP 03 48 07.2 -0.5
WAR *e*SKS 03 58 25.5
WAR eS S 03 58 30.4 +2.9
WAR eSS SS 04 03 58.5 -0.8
WAR LR LR
comp=Z,100μm,24.1s,MS7.1
HCY Herceg Novi 84.86 313⇑*i*P **P** **03 48 01.0 -1.1**
BRY Bratogost 84.89 313⇑*i*P **P** **03 48 01.5 -0.7**
MIDW Midway 84.89 62 *e*P **P** **03 48 00.8 -1.7**
comp=Z,346nm,1.3s,mb6.3
MIDW LR LR
comp=Z,47μm,22.0s,MS6.8
OJC Ojcow 85.11 321 *e*P **P** **03 48 03.1 0.0**
OJC *e**SP sP 03 48 08.0 -4.2
OJC *e*S S 03 58 29.7 -2.0
OJC *e*SS SS 04 04 11.5 +6.0
OJC Ojcow 85.11 321 *e*P **P** **03 48 03.1 0.0**
OJC *e*sP sP 03 48 08.0 -4.2
OJC *e*S S 03 58 29.7 -2.0
OJC *e*SS SS 04 04 11.5 +6.0
OJC LR LR
comp=Z,70μm,22.2s,MS7.0
BUD Budapest 85.19 318⇑*e*P **P** **03 48 04.0 +0.4**
AMKA Amchitka 85.27 38 *e*P **P** **03 48 03.8 -0.1**
PKSM Moragy 85.27 317⇑*i*P **P** **03 48 03.2 -0.9**
PKSM Moragy 85.27 317 P **P** **03 48 04.3 +0.3**
VYHS Vyhne 85.46 319 *e*P **P** **03 48 05.1 +0.1**
VYHS *e* 03 48 40.4
VYHS eS S 03 58 33.0 -2.4
VYHS Vyhne 85.46 319 *e*P **P** **03 48 05.1 +0.1**
comp=Z,74nm,1.3s,mb5.7
VYHS *e* 03 48 40.4
VYHS eS S 03 58 33.0 -2.4
VYHS LR LR
comp=Z,30μm,23.0s,MS6.6
STON Ston 85.50 313 P **P** **03 48 03.2 -2.1**
KOLL Kolacno 85.76 319 *e*P **P** **03 48 06.6 +0.1**
TIP Timpagrande 85.78 309 *e*P **P** **03 48 05.2 -1.5**
comp=Z,312nm,1.4s,mb6.3
TIP LR LR
comp=Z,54μm,21.0s,MS6.9
KEV Kevo 86.03 341 *e*p **P** **03 48 05.8 -1.6**
comp=Z,174nm,1.0s,mb6.2
KEV Kevo 86.03 341 *e*P **P** **03 48 05.8 -1.6**
KEV pmax pmax
comp=Z,175nm,1.0s,mb6.2
OKC Ostrava-Krasne 86.10 320⇑*i*P **P** **03 48 08.4 +0.3**
OKC eS S 03 58 41.0 -0.6
OKC AMS AMS 04 37 00.0
comp=Z,45μm,18.3s
OKC Ostrava-Krasne 86.10 320⇑*i*P **P** **03 48 08.4 +0.3**
OKC *e*SKS 03 58 41.0
RAC Raciborz 86.11 320 *e*P **P** **03 48 09.0 +0.9**
RAC *e*S S 03 58 42.7 +1.1
RAC Raciborz 86.11 320 *e*P **P** **03 48 09.0 +0.9**
RAC eS S 03 58 42.7 +1.1
RAC LR LR
comp=Z,70μm,18.0s,MS7.1
CEL Celeste 86.36 308 PFAKE 03 48 20.0 +10
CEL LR LR
comp=Z,77μm,20.0s,MS7.1
ARCES ARCESS Array B 86.47 340 P **P** **03 48 08.9 -0.6**
comp=Z,119nm,1.0s,mb6.1,baz=104,slow=4.1,SNR=58
ARCES LR LR 04 30 47.2
comp=Z,128μm,21.1s,MS7.3,baz=112,slow=38
ARCES ARCESS Array B 86.47 340 P **P** **03 48 09.0 -0.5**
ARCES pmax pmax
comp=Z,119nm,1.0s
ARCES MLR MLR
comp=Z,128μm,21.1s
MODS Modra-Piesok 86.48 319 *e*P **P** **03 48 10.4 +0.4**
MODS *e*PP PP 03 51 41.6 +10
MODS *e*S S 03 58 45.2 -0.1
MODS Modra-Piesok 86.48 319 *e*P **P** **03 48 10.5 +0.5**
MODS *e*PP PP 03 51 41.6 +10
MODS *e*S S 03 58 45.2 -0.1
MORC Moravsky Berou 86.48 320 *e*P **P** **03 48 10.3 +0.3**
MORC pmax pmax
comp=Z,136nm,1.0s,mb6.1
MORC Moravsky Berou 86.48 320⇑*i*P **P** **03 48 10.5 +0.5**
MORC Moravsky Berou 86.48 320 *e*P **P** **03 48 10.2 +0.3**
comp=Z,136nm,1.0s,mb6.1
ZST Bratislava 86.57 318 *e*P **P** **03 48 10.5 0.0**
ZST pmax pmax
comp=Z,181nm,0.9s,mb6.3
ZST Bratislava 86.57 318 *e*P **P** **03 48 10.5 0.0**
comp=Z,181nm,0.9s,mb6.3
ZST eS S 03 58 44.7 -1.5
CUC Castrocucco 86.59 310 *e*P **P** **03 48 08.7 -2.0**
comp=Z,161nm,1.0s,mb6.2
CUC LR LR
comp=Z,72μm,20.0s,MS7.1
SISC Sisak 86.75 316 P **P** **03 48 11.5 +0.1**
SOP Sopron 86.87 318⇑*e*PcP PcP 03 48 13.4 -0.8
VRAC Vranov 87.04 319⇑*i*P **P** **03 48 13.0 +0.3**
VRAC Vranov 87.04 319 P **P** **03 48 13.2 +0.5**
KTK1 Kautokeino 87.12 339 *e*P **P** **03 48 12.6 -0.1**
GKP Gorka Klasztor 87.12 323 *e*P **P** **03 48 13.3 +0.3**
GKP *e*pP pP 03 48 19.2 -0.6
GKP *e*SKS 03 58 50.5
GKP eS S 03 58 56.3 +4.9
GKP LMZ 04 33 00.3
comp=Z,55μm,24.3s
GKP Gorka Klasztor 87.12 323 *e*P **P** **03 48 13.3 +0.3**
GKP *e**PP pP 03 48 19.2 -0.5
GKP *e*S S 03 58 56.3 +4.9
GKP Gorka Klasztor 87.12 323 *e*P **P** **03 48 13.3 +0.3**
GKP *e*pP pP 03 48 19.2 -0.5
GKP *e*SKS 03 58 50.5
GKP *e*S S 03 58 56.3 +4.9
GKP LR LR
comp=Z,55μm,24.3s,MS6.9
NVL N'lazarevskaya 87.23 199 *i*P **P** **03 48 14.0 +0.8**
NVL *e**PP pP 03 48 26.6 +6.7
NVL *e*S S 03 58 39.1 -13
NVL pmax pmax
comp=Z,253nm,2.1s,mb6.1
MAIT Maitri 87.26 199 *e*P **P** **03 48 16.3 +2.9**
DPC Dobruska-Polom 87.33 320 *e*P **P** **03 48 14.4 +0.3**
DPC *e*S S 03 58 53.5 0.0
DPC AMS AMS 04 40 10.0
comp=Z,52μm,18.6s
CONA Conrad Observa 87.37 318 *i*P **P** **03 48 14.4 0.0**
comp=Z,94nm,1.1s,mb5.9,SNR=15
CSNA Conrad Observa 87.37 318⇑*i*P **P** **03 48 14.4 0.0**
comp=Z,94nm,1.0s,mb6.0
KSP Ksiaz 87.41 321 *e*P **P** **03 48 15.6 +1.1**
KSP *e*pP pP 03 48 21.4 +0.3
KSP *e*S S 03 58 53.5 -0.6
KSP LMZ 04 33 45.2
comp=Z,163μm,21.0s
KSP Ksiaz 87.41 321⇑*e*P **P** **03 48 15.0 +0.5**
KSP *e* 03 51 40.0
KSP *e*S S 03 58 52.3 -1.9
KSP Ksiaz 87.41 321⇑*e*P **P** **03 48 15.0 +0.5**
KSP *e*PP PP 03 51 40.0 +0.9
KSP *e*S S 03 58 52.3 -1.9
KSP LR LR
comp=Z,188μm,21.0s,MS7.5
VAE Valguarnera 87.45 307 P **P** **03 48 16.0 +1.0**
comp=Z,19nm,0.9s,mb5.3,baz=207,slow=1.3,SNR=3.4
RAFF Raffo Rosso 87.47 307 P **P** **03 48 15.0 -0.1**
ARSA Arzberg 87.52 317 *i*P **P** **03 48 15.4 +0.3**
comp=Z,170nm,1.2s,mb6.2,SNR=16
BOJS Bojanci 87.54 316 *i*P **P** **03 48 15.2 0.0**
BOJS *e* 03 48 41.5
BOJS *e*PP PP 03 51 38.4 -1.9
BOJS *e*S S 03 58 53.1 -2.5
UPC Upice 87.55 321⇑*i*P **P** **03 48 16.0 +0.8**
NVLJ Novalja 87.72 315 P **P** **03 48 15.4 -0.7**
PERS Pernice 87.74 317 *i*P **P** **03 48 16.6 +0.4**
PERS *e*S S 03 58 56.4 -1.1
TREC Trest 87.76 319⇑*i*P **P** **03 48 16.4 +0.2**
TREC *e*S S 03 58 58.1 +0.5
TREC AMS AMS 04 36 00.0
comp=Z,57μm,18.4s
SOKA Soboth 87.80 317⇑*i*P **P** **03 48 16.9 +0.4**
ADK Adak 87.81 38 *e*P **P** **03 48 16.3 -0.1**
ADK pmax pmax
comp=Z,895nm,1.3s,mb6.8
ADK MLR MLR
comp=Z,76μm,22.0s,MS7.1
ADK Adak 87.81 38 *e*P **P** **03 48 16.3 -0.1**
comp=Z,895nm,1.3s,mb6.8
ADK LR LR
comp=Z,76μm,22.0s,MS7.1
LJU Ljubljana 88.09 316 *i*P **P** **03 48 18.5 +0.6**
LJU *e*PP PP 03 51 39.0 -5.7
LJU *e*S S 03 58 59.7 -1.2
OBKA Obir 88.12 316 *i*P **P** **03 48 18.4 +0.4**
comp=Z,173nm,1.7s,mb6.0,SNR=16
OBKA Obir 88.12 316 P **P** **03 48 18.3 +0.3**
AFI Afiamalu 88.18 104 *e*P **P** **03 48 20.5 +1.6**
AFI pmax pmax
comp=Z,658nm,1.1s,mb6.8
AFI MLR MLR
comp=Z,32μm,22.0s,MS6.7
AFI Afiamalu 88.18 104 *e*P **P** **03 48 20.5 +1.6**
comp=Z,658nm,1.1s,mb6.8
AFI LR LR
comp=Z,32μm,22.0s,MS6.7
INTR Introdacqua 88.20 312 P **P** **03 48 18.1 -0.4**
JAVS Javornik 88.40 316 *i*P **P** **03 48 19.2 -0.1**
JAVS *e*S S 03 59 02.5 -1.4
MOA Molln 88.43 318⇓*i*P **P** **03 48 18.2 -1.2**
comp=Z,100nm,1.3s,mb5.9,SNR=21
MOA Molln 88.43 318⇑*i*P **P** **03 48 19.3 -0.1**
comp=Z,100nm,1.3s,mb5.9,SNR=21
MOA Molln 88.43 318 P **P** **03 48 19.9 +0.5**
PRU Pruhonice 88.44 320⇑*i*P **P** **03 48 19.9 +0.5**
PRU *e*S S 03 59 02.9 -1.1
PRU AMS AMS 04 39 20.0
comp=Z,64μm,16.9s
PVCC Panska Ves 88.47 321⇑*i*P **P** **03 48 20.2 +0.7**
PVCC *e*S S 03 59 05.2 +0.9
PVCC AMS AMS 04 34 10.0
comp=Z,75μm,21.4s
VENT Ventotene 88.48 311 P **P** **03 48 21.8 +2.0**
VOY Vojsko 88.53 316⇑*e*P **P** **03 48 19.8 -0.1**
AOI Ancona 88.55 313 P **P** **03 48 20.7 +0.6**
TRO Tromso 88.75 340 *e*P **P** **03 48 21.5 +1.0**
TRO *e*PP PP 03 51 52.4 +3.1
TRO *e* 03 59 03.0
TRO *e*SS SS 04 05 02.7 +4.8
TRO AMS AMS 04 32 20.6
comp=Z,130μm,22.3s,MS7.3
TRO Tromso 88.75 340 *e*P **P** **03 48 21.5 +1.0**
TRO *i* 03 59 02.2
TRO LR LR
comp=Z,130μm,22.3s,MS7.3
MYKA Terra Mystica 88.75 317⇑*i*P **P** **03 48 21.2 +0.2**
comp=Z,456nm,1.5s,mb6.6
GEC2 GERESS Array S 88.89 319 *e*P **P** **03 48 22.0 +0.5**
GEC2 *e*S S 03 59 06.3 -2.0
GEC2 pmax pmax
comp=Z,522nm,1.6s,mb6.6
GEC2 GERESS Array S 88.89 319 *e*P **P** **03 48 22.0 +0.5**
comp=Z,522nm,1.6s,mb6.6
GEC2 *e*S S 03 59 06.3 -2.0
GERES GERESS Array B 88.89 319 P **P** **03 48 21.2 -0.3**
comp=Z,13nm,0.9s,mb5.2,baz=67,slow=10,SNR=52
GERES GERESS Array B 88.89 319 P **P** **03 48 21.2 -0.3**
GERES pmax pmax
comp=Z,13nm,0.9s
CERT Cerreto 88.89 312 P **P** **03 48 21.1 -0.6**
BRG Berggiesshubel 88.89 321⇑*i*P **P** **03 48 22.3 +0.8**
BRG 03 51 51.0
BRG S S 03 59 12.0 +3.7
BRG pmax pmax
comp=Z,213nm,1.4s,mb6.3
BRG MLR MLR
comp=Z,45μm,20.5s,MS6.9
BRG Berggiesshubel 88.89 321 *e*P **P** **03 48 22.0 +0.5**
comp=Z,356nm,1.5s,mb6.5
BRG *e*PP PP 03 51 55.8 +4.8
BRG *e*S S 03 59 07.8 -0.5
BRG Berggiesshubel 88.89 321⇑*i*P **P** **03 48 22.2 +0.7**
comp=Z,356nm,1.4s,mb6.5
BRG *i* 03 48 39.6
comp=Z,180nm,1.0s
BRG *i* 03 48 56.3
comp=Z,356nm,1.4s
BRG PP PP 03 51 51.0 0.0
BRG S S 03 59 12.0 +3.7
BRG *e* 04 14 22.4
comp=Z,84nm,2.2s
BRG
comp=N,46μm,19.7s
BRG
comp=E,60μm,22.2s
BRG
comp=Z,75μm,20.5s
BRG Berggiesshubel 88.89 321⇑*i*P **P** **03 48 22.2 +0.7**
comp=Z,213nm,1.4s,mb6.3
BRG *i* 03 48 39.6
BRG *i* 03 48 56.3
BRG PP PP 03 51 51.0 0.0
BRG S S 03 59 12.0 +3.7
BRG *e* 04 14 22.4
BRG LR LR
comp=Z,45μm,20.5s,MS6.9
KHC Kasperske Hory 88.99 319⇑*i*P **P** **03 48 22.2 +0.2**
KHC *e*S S 03 59 09.0 -0.3
KHC AMS AMS 04 37 00.0
comp=Z,64μm,18.5s
KBA Koelnbreinsper 88.99 317 *i*P **P** **03 48 22.1 0.0**
comp=Z,168nm,1.1s,mb6.3,SNR=26
RUE Ruedersdorf 89.13 322 *e*P **P** **03 48 23.0 +0.5**
comp=Z,572nm,1.0s,mb6.9
WET Wettzell 89.45 319 *e*P **P** **03 48 24.6 +0.4**
WET *e* 03 51 58.7
WET *e*S S 03 59 13.2 -0.4
WET pmax pmax
comp=Z,311nm,1.5s,mb6.4
WET Wettzell 89.45 319 *e*P **P** **03 48 24.6 +0.4**
comp=Z,311nm,1.5s,mb6.4
WET *e*PP PP 03 51 58.7 +3.2
WET *e*S S 03 59 13.2 -0.4
BJO Bjornoya 89.49 345 *e*P **P** **03 48 22.8 -1.1**
BJO *e* 03 59 08.5
BJO *e*SS SS 04 05 16.6 +8.1
BJO AMS AMS 04 36 59.9
comp=Z,141μm,19.2s,MS7.4
CLL Collm 89.52 321⇑*i*P **P** **03 48 24.6 +0.2**
CLL *i* pP 03 48 31.3 +0.2
CLL *e*S S 03 59 14.0 -0.1
CLL pmax pmax
comp=Z,67nm,1.4s,mb5.8
CLL MLR MLR
comp=Z,71μm,25.4s,MS7.0
CLL Collm 89.52 321 *e*P **P** **03 48 24.4 0.0**
comp=Z,227nm,1.4s,mb6.3
CLL *e*S S 03 59 12.4 -1.7
CLL Collm 89.52 321⇑*i*P **P** **03 48 24.6 +0.2**
comp=Z,67nm,1.4s,mb5.8
CLL *i* Pmax 03 48 27.1
CLL *i* pP pP 03 48 31.3 +0.2
CLL *i* x x 03 48 40.6
CLL *i* x x 03 49 02.1
CLL *e*PP PP 03 51 52.0 -4.0
CLL *e*S S 03 59 14.0 -0.1
CLL *e*x x 04 00 00.0
CLL *e*PPS 04 00 41.0
CLL *e*SS SS 04 05 00.0 -10
CLL *e*x x 04 10 12.0
CLL *e*SSSS 04 12 24.0
CLL Collm 89.52 321⇑*i*P **P** **03 48 24.6 +0.2**
comp=Z,67nm,1.4s,mb5.8
CLL *i* 03 48 27.1
CLL *i* pP 03 48 31.3 +0.2
CLL *i* 03 48 56.3
CLL *e*S S 03 59 14.0 -0.1
CLL *e*P'P' 04 14 23.0
CLL LR LR
comp=Z,71μm,25.4s,MS7.0
ABTA Abfaltersbach 89.54 317⇑*i*P **P** **03 48 24.7 0.0**
comp=Z,148nm,1.3s,mb6.2,SNR=16
BJO1 Bjornoya 89.54 345 *e*P **P** **03 48 22.8 -1.3**
BJO1 LR LR
comp=Z,141μm,19.2s,MS7.4
RGN Rugen 89.56 324 *e*P **P** **03 48 23.3 -1.3**
comp=Z,471nm,1.3s,mb6.7
TOLF Tolfa 89.62 312 P **P** **03 48 24.4 -0.8**
SEST Monte Rota 89.74 317 P **P** **03 48 25.1 -0.5**
HFS Hagfors 89.80 330 LR LR 04 38 50.1
comp=Z,79μm,18.2s,MS7.2,baz=88,slow=42
NKC Novy Kostel 89.80 320⇑*i*P **P** **03 48 26.5 +0.7**
NKC *e*S S 03 59 15.6 -1.2
NKC AMS AMS 04 40 00.0
comp=Z,64μm,16.7s
NKC Novy Kostel 89.80 320⇑*i*P **P** **03 48 26.5 +0.7**
NKC *e*SKS 03 59 15.6
HFA0 Hagfors New Ar 89.80 330 P **P** **03 48 25.0 -0.6**
TANN Tannenbergstha 89.80 320 *e*P **P** **03 48 26.2 +0.4**
comp=Z,207nm,1.5s,mb6.2
TANN *e*S S 03 59 17.0 +0.2
STEI Steigen 89.85 338 *e*P **P** **03 48 25.5 -0.1**
ROTZ Rotzenmuhle 89.92 320 *e*P **P** **03 48 27.3 +0.9**
comp=Z,217nm,1.4s,mb6.3
ROTZ *e*PP PP 03 52 03.9 +4.7
ROTZ *e*S S 03 59 18.4 +0.4
MOR8 Moi Rana 89.98 336 *e*P **P** **03 48 25.9 -0.4**
MOR8 AMb AMB 03 48 59.5
comp=Z,589nm,1.9s,mb6.6
MOR8 Moi Rana 89.98 336 *e*P **P** **03 48 25.9 -0.4**
comp=Z,589nm,1.9s,mb6.6
MANZ Manzenberg 90.00 320 *e*P **P** **03 48 27.6 +0.9**
comp=Z,361nm,1.4s,mb6.5
MANZ *e*PP PP 03 52 03.7 +3.9
MANZ *e*S S 03 59 19.1 +0.4
CTI Castel Tesino 90.09 316 P **P** **03 48 27.9 +0.6**
COP Copenhagen 90.15 326⇑*i*P **P** **03 48 30.7 +3.4**
COP *i* 03 52 03.6
COP *i* S S 03 59 16.5 -3.3
COP pmax pmax
comp=Z,89nm,1.0s,mb6.0
COP MLR MLR
comp=Z,36μm,20.0s,MS6.8
COP Copenhagen 90.15 326⇑*i*P **P** **03 48 30.7 +3.4**
comp=Z,89nm,1.0s,mb6.0
COP *i* 03 52 03.6
COP *i* S S 03 59 16.5 -3.3
COP
comp=Z,36μm,20.0s
WTTA Wattenberg 90.17 317⇑*i*P **P** **03 48 26.6 -1.0**
comp=Z,208nm,1.1s,mb6.4,SNR=18
WATA Walderalm 90.21 317⇓*i*P **P** **03 48 27.6 -0.2**
comp=Z,201nm,1.5s,mb6.2,SNR=15
WATA Walderalm 90.21 317 P **P** **03 48 27.8 0.0**
MAON Monte Argentar 90.29 312 P **P** **03 48 28.0 -0.3**
MOX Moxa 90.35 320 *e*P **P** **03 48 28.7 +0.3**
comp=Z,594nm,2.1s,mb6.5
MOX *e* 03 49 02.2
MOX
comp=Z,43μm,23.0s
MOX Moxa 90.35 320 *e*P **P** **03 48 28.7 +0.3**
MOX pmax pmax
comp=Z,594nm,2.1s,mb6.5
MOX MLR MLR
comp=Z,43μm,23.0s,MS6.8
MOX Moxa 90.35 320 *e*P **P** **03 48 28.8 +0.4**
comp=Z,340nm,1.6s,mb6.4
MOX *e*S S 03 59 21.4 -0.5
APPI Appiano 90.41 316 P **P** **03 48 28.1 -0.6**
FUR Furstenfeldbru 90.45 318 *e*P **P** **03 48 28.8 -0.1**
FUR *e* 03 52 08.0
FUR *e*S S 03 59 20.2 -2.7
FUR pmax pmax
comp=Z,246nm,1.4s,mb6.3
FUR Furstenfeldbru 90.45 318 *e*P **P** **03 48 28.8 -0.1**
comp=Z,246nm,1.4s,mb6.3
FUR *e*PP PP 03 52 08.0 +4.5
FUR *e*S S 03 59 20.2 -2.7
LOF Lofoten 90.50 338 *e*P **P** **03 48 31.2 +2.5**
LOF AMb AMB 03 48 42.0
comp=Z,319nm,1.3s,mb6.5
LOF Lofoten 90.50 338 *e*P **P** **03 48 31.2 +2.5**
comp=Z,319nm,1.3s,mb6.5
MOTA Moosalm 90.53 317⇓*i*P **P** **03 48 28.9 -0.4**
comp=Z,546nm,1.8s,mb6.6,SNR=26
MOTA Moosalm 90.53 317 P **P** **03 48 29.5 +0.2**
GRA1 Grafenberg Arr 90.56 320 *e*P **P** **03 48 30.1 +0.8**
comp=Z,361nm,1.4s,mb6.5
GRA1 *e*PP PP 03 52 09.1 +4.8
GRA1 *e*S S 03 59 23.7 -0.1
GRA1 LR LR
comp=Z,76μm,20.8s,MS7.1
GRF Grafenberg Arr 90.56 320 *e*P **P** **03 48 30.1 +0.8**
GRF *e* 03 52 09.1
GRF *e*S S 03 59 23.7 -0.1
GRF pmax pmax
comp=Z,361nm,1.4s,mb6.5
GRF MLR MLR
comp=Z,76μm,20.8s,MS7.1
GRF Grafenberg Arr 90.56 320 *e*P **P** **03 48 30.1 +0.8**
comp=Z,361nm,1.4s,mb6.5
GRF *e*PP PP 03 52 09.1 +4.8
GRF *e*S S 03 59 23.7 -0.1
GRF *e*L 04 37 13.1
comp=Z,76μm,20.8s
STOK Stokkvaagen 90.57 336 *e*P **P** **03 48 29.8 +0.7**
SPITS Spitsbergen Ar 90.70 348 LR LR 04 38 46.5
comp=Z,149μm,18.4s,MS7.5,baz=15,slow=42
SPB4 Spitsbergen Ar 90.70 348 *e*P **P** **03 48 28.7 -0.7**
BDI Bagni Di Lucca 90.75 314 P **P** **03 48 29.9 -0.5**
RETA Reutte 90.77 317⇑*i*P **P** **03 48 29.7 -0.7**
comp=Z,190nm,1.0s,mb6.4,SNR=26
FETA Feichten 90.77 317⇑*i*P **P** **03 48 30.7 +0.3**
comp=Z,201nm,1.2s,mb6.3,SNR=53
FETA Feichten 90.77 317⇑*i*PcP PcP 03 48 30.7 -0.8
comp=Z,201nm,1.2s,SNR=53
MABI Malga Bissina 90.88 316 P **P** **03 48 31.2 +0.3**
ERBM Eremo 90.89 314 P **P** **03 48 28.3 -2.7**
NSS Namsos 90.90 334 *e*P **P** **03 48 31.0 +0.4**
NSS *e* 03 59 24.3
NSS eSS SS 04 05 30.5 +1.3
NSS AMS AMS 04 35 22.6

comp=Z,110µm,19.5s,MS7.3
NSS Namsos 90.90 334 *e*P P **03 48 31.0 +0.4**
NSS *i* 03 59 22.9
NSS LR LR
comp=Z,110µm,19.5s,MS7.3
VLC Villacollemand 90.90 314 *e*P P **03 48 33.5 +2.4**
comp=Z,225nm,1.2s,mb6.4
VLC LR LR
comp=Z,44µm,20.0s,MS6.9
NB2 NORSAR Subarra 91.07 331 P P **03 48 31.1 -0.4**
comp=Z,89nm,1.0s,mb6.0,baz=93,slow=4.6
NB2 NORSAR Subarra 91.07 331 P P **03 48 31.4 -0.1**
NOA NORSAR Array B 91.07 331 P P **03 48 30.6 -0.9**
comp=Z,15nm,1.0s,mb5.3,baz=92,slow=4.6,SNR=17
NOA LR LR 04 35 02.4
comp=Z,77µm,21.0s,MS7.1,baz=105,slow=39
HDH Heidenheim-Cha 91.18 318 P P **03 48 32.6 +0.3**
CLZ Clausthal 91.19 322 *e*P P **03 48 32.6 +0.4**
CLZ *e*S S 03 59 26.9 -2.6
CLZ pmax pmax
comp=Z,282nm,1.4s,mb6.4
CLZ Clausthal 91.19 322 *e*P P **03 48 32.6 +0.4**
comp=Z,282nm,1.4s,mb6.4
CLZ *e*S S 03 59 26.9 -2.6
UBR Ueberruh 91.22 317 P P **03 48 32.7 +0.2**
BSEG Bad Segeberg 91.29 324 *e*P P **03 48 33.1 +0.5**
BSEG *e* 03 52 16.3
BSEG *e*S S 03 59 28.2 -2.1
BSEG pmax pmax
comp=Z,242nm,1.6s,mb6.3
BSEG Bad Segeberg 91.29 324 *e*P P **03 48 33.1 +0.5**
comp=Z,242nm,1.6s,mb6.3
BSEG *e*PP PP 03 52 16.3 +6.4
BSEG *e*S S 03 59 28.2 -2.1
DAVA Damuels 91.36 317⇓*i*P P **03 48 32.3 -0.8**
comp=Z,306nm,0.9s,mb6.6,SNR=70
DAVA Damuels 91.36 317 P P **03 48 33.7 +0.6**
NRDL Niedersach Rie 91.37 322 *e*P P **03 48 33.7 +0.7**
comp=Z,304nm,1.5s,mb6.4
NRDL *e*PP PP 03 52 15.8 +5.2
NRDL *e*S S 03 59 28.4 -2.7
UBBA Unterbreizbach 91.39 321 *e*P P **03 48 33.4 +0.2**
comp=Z,334nm,1.9s,mb6.3
UBBA *e*S S 03 59 29.8 -1.5
KEST Kesra 91.43 306 P P **03 48 34.3 +0.6**
comp=Z,34nm,1.0s,mb5.6,baz=342,slow=1.3,SNR=22
KEST LR LR 04 34 39.1
comp=Z,24µm,19.3s,MS6.7,baz=265,slow=39
VSL Villasalto 91.51 309 *e*P P **03 48 31.8 -2.2**
comp=Z,261nm,1.0s,mb6.5
VSL LR LR
comp=Z,28µm,19.0s,MS6.7
SIND Sindeldorf 91.60 319 P P **03 48 35.0 +0.8**
KBS Kingsbay 91.64 349 *e*P P **03 48 35.9 +2.1**
KBS *e* 03 59 32.6
KBS *e*SS SS 04 05 48.1 +8.6
KBS AMS AMS 04 36 03.6
comp=Z,158µm,20.4s,MS7.5
KBS Kingsbay 91.64 349 *e*P P **03 48 33.1 -0.7**
KBS pmax pmax
comp=Z,117nm,1.0s,mb6.2
KBS MLR MLR
comp=Z,165µm,21.0s,MS7.5
KBS Kingsbay 91.64 349 *e*P P **03 48 33.1 -0.8**
comp=Z,117nm,1.0s,mb6.2
KBS LR LR
comp=Z,165µm,21.0s,MS7.5
TUE Stuetta 91.70 316 *e*P P **03 48 34.4 -0.3**
comp=Z,186nm,1.3s,mb6.2
TUE LR LR
comp=Z,63µm,20.0s,MS7.1
BUCH Bad Urach 91.75 318 P P **03 48 35.5 +0.6**
CORF Corte 91.75 312 *e*P P **03 48 35.1 0.0**
KONO Kongsberg 91.83 329 *e* P **03 48 37.5 +2.5**
KONO *e* 03 59 33.1
KONO *e*SS SS 04 05 45.5 +2.6
KONO AMS AMS 04 34 49.3
comp=Z,78µm,22.5s,MS7.1
KONO Kongsberg 91.83 329 *e*P P **03 48 34.8 -0.2**
KONO Kongsberg 91.83 329 *e*P P **03 48 34.9 -0.1**
STU Stuttgart 91.86 319 *e*P P **03 48 36.0 +0.6**
STU pmax pmax
comp=Z,641nm,1.8s,mb6.7
STU Stuttgart 91.86 319 *e*P P **03 48 35.6 +0.2**
comp=Z,231nm,1.4s,mb6.3
STU *e*PP PP 03 52 18.5 +3.9
STU *e*S S 03 59 34.2 -1.5
STU Stuttgart 91.86 319 *e*P P **03 48 36.0 +0.6**
comp=Z,641nm,1.8s,mb6.7
SNAA Sanae 91.86 198 *e*P P **03 48 35.8 +0.8**
SNAA *e* pP 03 48 41.8 +0.1
SNAA *e* 03 48 48.5
SNAA *e* 03 48 53.2
SNAA Sanae 91.86 198 *e*P P **03 48 35.8 +0.8**
SNAA pmax pmax
comp=Z,212nm,1.7s
SNAA Sanae 91.86 198 *e*P P **03 48 35.8 +0.8**
comp=Z,212nm,1.7s,mb6.2
PGF Pioggiola 91.87 312⇑*i*P P **03 48 36.0 +0.4**
comp=Z,480nm,1.4s,mb6.3
PGF Pioggiola 91.87 312⇑*i*P P **03 48 36.0 +0.4**
PGF pmax pmax
comp=Z,240nm,1.4s,mb6.3
PGF Pioggiola 91.87 312⇑*i*P P **03 48 36.0 +0.4**
comp=Z,240nm,1.4s,mb6.3
SISB Singen-Schiene 91.99 317 P P **03 48 36.6 +0.6**
MUD Monsted U'grnd 92.00 326⇑*i*P P **03 48 35.0 -0.9**
MUD *i* 03 52 18.2
MUD *e*S S 03 59 14.5 -22
MUD *i* 03 59 36.4
MUD pmax pmax
comp=Z,130nm,1.2s,mb6.1
MUD MLR MLR
comp=Z,62µm,18.0s,MS7.1
MUD Monsted U'grnd 92.00 326⇑*i*P P **03 48 35.0 -0.9**
comp=Z,130nm,1.2s,mb6.1
MUD *i* 03 52 18.2
MUD *e*S S 03 59 14.5 -22
MUD *i* 03 59 36.4
MUD
comp=Z,62µm,18.0s
SPAK Spaichingen-Ko 92.12 318 *e*P P **03 48 36.7 +0.1**
LBG Lerchenberg 92.12 318 P P **03 48 38.3 +1.7**
TOD Tromm 92.13 319 *e*P P **03 48 36.7 +0.1**
DOMB Dombas 92.13 332 *e*P P **03 48 41.2 +4.8**
DOMB AMb AMB 03 48 59.1
comp=Z,123nm,1.6s,mb6.0
DOMB Dombas 92.13 332 *e*P P **03 48 41.2 +4.8**
comp=Z,123nm,1.6s,mb6.0
PCP Piancastagn 92.23 314 P P **03 48 36.9 -0.3**
BFO Black Forest 92.42 318 P P **03 48 37.5 -0.5**
comp=Z,288nm,1.0s,mb6.6,SNR=12
BFO Black Forest 92.42 318 *e*P P **03 48 37.9 -0.1**
comp=Z,121nm,1.4s,mb6.0
BFO *e*S S 03 59 38.9 -1.9
BFO Black Forest 92.42 318 *e*P P **03 48 37.9 -0.1**
comp=Z,121nm,1.4s,mb6.0
BFO *e*S S 03 59 38.9 -1.9
BFO LR LR
comp=Z,52µm,20.0s,MS7.0
KTD Kalmit 92.59 319 *e*P P **03 48 39.4 +0.6**
FELD Feldberg im Sc 92.64 318 *e*P P **03 48 38.9 -0.1**
NIKO Nikolski 92.66 37 *e*P P **03 48 38.5 -0.5**
comp=Z,359nm,0.9s,mb6.8
KIZ Kirchzarten 92.70 318 P P **03 48 40.2 +0.9**
LANF Langenberg 92.78 319 *e*P P **03 48 40.0 +0.4**
IBBN Ibbenburen 92.81 322 *e*P P **03 48 40.1 +0.4**
comp=Z,225nm,1.7s,mb6.3
IBBN *e*S S 03 59 41.7 -2.3
MOL Molde 92.84 332 *e*P P **03 48 43.5 +3.9**
MOL *e* 03 59 44.0
MOL Molde 92.84 332 *e*P P **03 48 43.5 +3.9**
MOL *i* 03 59 42.1
LIBD Limburg 92.91 318 *e*P P **03 48 40.3 0.0**
SAOF Saorge 92.94 314 *e*P P **03 48 40.8 +0.3**
ABH Alteburg 92.94 320 *e*P P **03 48 41.0 +0.6**
BBS Basel-Blauen 92.97 317 *e*P P **03 48 40.5 -0.1**
CMAH Djebel Manchou 93.00 306 P P **03 48 42.0 +1.0**
SBF Sospel 93.03 314⇑*i*P P **03 48 41.0 +0.1**
comp=Z,164nm,0.8s,mb6.2
SBF Sospel 93.03 314⇑*i*P P **03 48 41.0 +0.1**
SBF pmax pmax
comp=Z,82nm,0.8s,mb6.2
SBF Sospel 93.03 314⇑*i*P P **03 48 41.0 +0.1**
comp=Z,82nm,0.8s,mb6.2
AUTN L'Aution 93.03 314 *e*P P **03 48 41.5 +0.6**
REVF Revere 93.08 314 *e*P P **03 48 41.2 +0.1**
LUCF Luceram 93.09 314 *e*P P **03 48 41.7 +0.5**
BUG Bochum--Univer 93.11 321 *e*P P **03 48 41.4 +0.3**
comp=Z,122nm,1.5s,mb6.1
BUG *e*S S 03 59 45.2 -1.6
CDF Champ du Feu 93.13 318⇑*i*P P **03 48 41.3 0.0**
comp=Z,270nm,1.5s,mb6.2
CDF Champ du Feu 93.13 318⇑*i*P P **03 48 41.3 0.0**
CDF pmax pmax
comp=Z,135nm,1.5s,mb6.2
CDF Champ du Feu 93.13 318⇑*i*P P **03 48 41.3 0.0**
comp=Z,135nm,1.5s,mb6.2
TOUF Mont Tournerai 93.16 314 *e*P P **03 48 41.7 +0.2**
ECH Echery 93.21 318 *e*P P **03 48 41.4 -0.2**
ECH Echery 93.21 318 *e*P P **03 48 41.0 -0.7**
MOF Molkenrain 93.23 318 *e*P P **03 48 41.5 -0.2**
MVIF Mont Vial 93.23 314 *e*P P **03 48 41.7 -0.2**
RUP Ruppelstein 93.26 319 *e*P P **03 48 42.2 +0.3**
WTSB Winterswijk 93.40 322‖*e*P P **03 48 41.8 -0.6**
WTSB Winterswijk 93.40 322 *e*PP PP 03 52 15.2 -11
HINF Hinteralfeld 93.42 318 *e*P P **03 48 42.4 -0.2**
CALN Calern 93.42 314 *e*P P **03 48 43.1 +0.4**
BLS5 Blasjo 93.44 329 *e*P P **03 48 44.0 +1.5**
BLS5 *e*PP PP 03 48 48.5 -0.6
BLS5 AMb AMB 03 49 02.2
comp=Z,124nm,0.9s,mb6.3
BLS5 Blasjo 93.44 329 *e*P P **03 48 44.0 +1.5**
comp=Z,124nm,0.9s,mb6.3
LOMF Lomont 93.44 317 *e*P P **03 48 43.2 +0.5**
CAEH 'Ain El Ouahch 93.46 307 P P **03 48 45.0 +1.9**
SURF Saint Ours 93.47 314 *e*P P **03 48 43.7 +0.7**
VNA2 Neumayer--Watz 93.47 198 *e*P P **03 48 44.3 +1.9**
VNA2 *e* pP 03 48 49.5 +0.4
VNA2 *e* 03 48 55.9
VNA2 *e* 03 49 00.8
MBDF Montbardon 93.50 314 *e*P P **03 48 44.2 +1.1**
comp=Z,102nm,1.2s,mb5.8
MBDF Montbardon 93.50 314 *e*P P **03 48 44.2 +1.1**
MBDF pmax pmax
comp=Z,51nm,1.3s,mb5.8
MBDF Montbardon 93.50 314 *e*P P **03 48 44.2 +1.1**
comp=Z,51nm,1.3s,mb5.8
LPG La Plagne 93.51 315⇑*i*P P **03 48 43.5 +0.4**
comp=Z,211nm,1.2s,mb6.2
LPG La Plagne 93.51 315⇑*i*P P **03 48 43.5 +0.4**
LPG pmax pmax
comp=Z,105nm,1.2s,mb6.1
LPG La Plagne 93.51 315⇑*i*P P **03 48 43.5 +0.4**
comp=Z,105nm,1.2s,mb6.1
LPL La Plagne 93.52 315⇑*i*P P **03 48 43.5 +0.3**
comp=Z,250nm,1.2s,mb6.2
LPL La Plagne 93.52 315⇑*i*P P **03 48 43.5 +0.3**
LPL pmax pmax
comp=Z,125nm,1.2s,mb6.2
LPL La Plagne 93.52 315⇑*i*P P **03 48 43.5 +0.3**
comp=Z,125nm,1.2s,mb6.2
BNI Bardonecchia 93.56 315 *e*P P **03 48 42.7 -0.7**
BNI pmax pmax
comp=Z,76nm,1.1s,mb6.0
BNI MLR MLR
comp=Z,61µm,20.0s,MS7.1
BNI Bardonecchia 93.56 315 *e*P P **03 48 42.7 -0.7**
comp=Z,76nm,1.1s,mb6.0
BNI LR LR
comp=Z,61µm,20.0s,MS7.1
FRF La Foret Royal 93.60 313⇑*i*P P **03 48 43.9 +0.3**
comp=Z,407nm,1.5s,mb6.3
FRF La Foret Royal 93.60 313⇑*i*P P **03 48 43.9 +0.3**
FRF pmax pmax
comp=Z,204nm,1.5s,mb6.3
FRF La Foret Royal 93.60 313⇑*i*P P **03 48 43.9 +0.3**
comp=Z,204nm,1.5s,mb6.3
LMR La Mourre 93.70 313 *e*P P **03 48 44.3 +0.3**
comp=Z,202nm,1.5s,mb6.0
LMR La Mourre 93.70 313 *e*P P **03 48 44.3 +0.3**
LMR pmax pmax
comp=Z,101nm,1.5s,mb6.0
LMR La Mourre 93.70 313 *e*P P **03 48 44.3 +0.3**
comp=Z,101nm,1.5s,mb6.0
CASM Ain Smara 93.75 306 P P **03 48 47.0 +2.5**
HAU Haudompre 93.75 318⇑*i*P P **03 48 44.1 -0.1**
comp=Z,314nm,1.4s,mb6.2
HAU *e*MLR MLR
comp=Z,86µm,22.2s,MS6.9
HAU Haudompre 93.75 318⇑*i*P P **03 48 44.1 -0.1**
HAU pmax pmax
comp=Z,157nm,1.4s,mb6.2
HAU MLR MLR
comp=Z,86µm,22.3s,MS7.2
HAU Haudompre 93.75 318⇑*i*P P **03 48 44.1 -0.1**
comp=Z,157nm,1.4s,mb6.2
HAU LR LR
comp=Z,86µm,22.3s,MS7.2
CTEI Djebel Teioual 93.82 306 P P **03 48 49.0 +4.2**
VNA1 Neumayer--Stat 93.83 199 *e*P P **03 48 46.1 +2.0**
VNA1 *e* pP 03 48 52.0 +1.2
VNA1 *e* 03 48 56.9
VNA1 *e* 03 49 02.2
STAV Stavanger 93.84 329 *e*P P **03 48 46.5 +2.2**
WLF Walferdange 93.85 319 P P **03 48 45.2 +0.6**
comp=Z,143nm,2.7s,mb5.9
WLF Walferdange 93.85 319 *e*P P **03 48 44.9 +0.3**
WLF pmax pmax
comp=Z,128nm,1.4s,mb6.2
WLF MLR MLR
comp=Z,61µm,21.0s,MS7.0
WLF Walferdange 93.85 319 *e*P P **03 48 45.1 +0.5**
comp=Z,108nm,1.5s,mb6.1
WLF *e*S S 03 59 52.6 -0.8
WLF Walferdange 93.85 319 *e*P P **03 48 44.9 +0.4**
comp=Z,128nm,1.4s,mb6.2
WLF LR LR
comp=Z,61µm,21.0s,MS7.0
MEM Membach 93.92 320 P P **03 48 44.6 -0.2**
RUND Rundenannen 93.95 330 *e*P P **03 48 50.5 +5.7**
CABF La Chapelle 93.95 316⇑*i*P P **03 48 45.6 +0.5**
comp=Z,316nm,1.3s,mb6.3
CABF La Chapelle 93.95 316⇑*i*P P **03 48 45.6 +0.5**
CABF pmax pmax
comp=Z,158nm,1.3s,mb6.3
CABF La Chapelle 93.95 316⇑*i*P P **03 48 45.6 +0.5**
comp=Z,158nm,1.3s,mb6.3
GDM Grand'Maison 93.96 315 *e*P P **03 48 45.8 +0.6**
BER Bergen 93.97 330 *e* S 03 59 52.3 -1.6
BER AMS AMS 04 39 48.7
comp=Z,72µm,17.1s,MS7.2
HGN Heimansgroeve 93.97 321 *e*P P **03 48 44.1 -0.9**
HGN Heimansgroeve 93.97 321‖*e*P P **03 48 47.4 +2.3**
HGN Heimansgroeve 93.97 321 *e*PP PP 03 52 34.8 +3.7
HGN Heimansgroeve 93.97 321 *e*SS SS 04 07 07.0 +53
THEF They Montfort 93.99 318 *e*P P **03 48 44.5 -0.8**
UNV Unalaska Valle 94.05 36 *e*P P **03 48 45.4 0.0**
comp=Z,89nm,0.9s,mb6.2
VNA3 Neumayer Olymp 94.08 198 *e*P P **03 48 46.6 +1.4**
VNA3 *e* pP 03 48 52.8 +0.9
VNA3 *e* 03 48 57.0
VNA3 *e* 03 49 01.2
BEBN Eben Emael 94.13 321 P P **03 48 48.3 +2.4**
ORIF Oris-en-Rattie 94.13 315 *e*P P **03 48 46.4 +0.4**
comp=Z,84nm,0.9s,mb5.9
ORIF *e*MLR MLR
comp=Z,69µm,23.0s,MS6.8
ORIF Oris-en-Rattie 94.13 315 *e*P P **03 48 46.4 +0.4**
ORIF pmax pmax
comp=Z,42nm,0.9s,mb5.9
ORIF Oris-en-Rattie 94.13 315 *e*P P **03 48 46.4 +0.4**
comp=Z,42nm,0.9s,mb5.9
SUE Sulen 94.21 331 *e* pP 03 48 57.6 +4.9
SUE Sulen 94.21 331 *e*P pP 03 48 57.7 +5.0
GRN Grenoble 94.22 315 *e*P P **03 48 46.5 +0.1**
DFRA Djebel Bou Aff 94.25 306 P P **03 48 51.0 +4.3**
SMRF Simiane la Rot 94.37 314 *e*P P **03 48 47.8 +0.7**
comp=Z,241nm,1.5s,mb6.1
SMRF Simiane la Rot 94.37 314 *e*P P **03 48 47.8 +0.7**
comp=Z,241nm,1.5s,mb6.4
BCLA Clavier 94.38 320 P P **03 48 46.2 -0.7**
comp=Z,43nm,1.6s,mb5.6
TAM Tamanrasset 94.56 293 *e*P P **03 48 48.1 -0.4**
SET Setif 94.64 306 P P **03 48 52.0 +3.5**
GIVF Givet 94.70 320 *e*P P **03 48 48.5 0.0**
comp=Z,245nm,1.7s,mb6.1
GIVF Givet 94.70 320 *e*P P **03 48 48.5 0.0**
GIVF pmax pmax
comp=Z,123nm,1.7s,mb6.1
GIVF Givet 94.70 320 *e*P P **03 48 48.5 0.0**
comp=Z,123nm,1.7s,mb6.1
DOU Dourbes 94.84 320 P P **03 48 48.9 -0.2**
comp=Z,44nm,2.4s,mb5.5
UCC Uccle 94.96 321 P P **03 48 49.4 -0.2**
VIVF Saint-Julien-l 94.99 315 *e*P P **03 48 50.0 +0.1**
comp=Z,115nm,1.3s,mb5.8
VIVF Saint-Julien-l 94.99 315 *e*P P **03 48 50.0 +0.1**
VIVF pmax pmax
comp=Z,58nm,1.3s,mb5.8
VIVF Saint-Julien-l 94.99 315 *e*P P **03 48 50.0 +0.1**
comp=Z,58nm,1.3s,mb5.8
SSB Saint Sauveur 95.07 315 *e*P P **03 48 50.6 +0.3**
BAIF Baives 95.09 320⇑*i*P P **03 48 50.5 +0.2**
comp=Z,138nm,1.2s,mb6.0
BAIF Baives 95.09 320⇑*i*P P **03 48 50.5 +0.2**
BAIF pmax pmax
comp=Z,69nm,1.2s,mb6.0
BAIF Baives 95.09 320⇑*i*P P **03 48 50.5 +0.2**
comp=Z,69nm,1.2s,mb6.0
LOR Lormes 95.46 317⇑*i*P P **03 48 51.9 -0.1**
comp=Z,203nm,1.2s,mb6.1
LOR *e*MLR MLR
comp=Z,46µm,23.0s,MS6.6
LOR Lormes 95.46 317⇑*i*P P **03 48 51.9 -0.1**
LOR pmax pmax
comp=Z,101nm,1.2s,mb6.1
LOR MLR MLR
comp=Z,46µm,23.0s,MS6.9
LOR Lormes 95.46 317⇑*i*P P **03 48 51.9 -0.1**
comp=Z,101nm,1.2s,mb6.1
LOR LR LR
comp=Z,46µm,23.0s,MS6.9
SMF Signal de Mont 95.50 316⇑*i*P P **03 48 52.0 -0.2**
comp=Z,146nm,1.1s,mb6.0
SMF Signal de Mont 95.50 316⇑*i*P P **03 48 52.0 -0.2**
SMF pmax pmax
comp=Z,73nm,1.1s,mb6.0
SMF Signal de Mont 95.50 316⇑*i*P P **03 48 52.0 -0.2**
comp=Z,73nm,1.1s,mb6.0
LASF Ste Croix 95.60 314 *e*P P **03 48 53.0 +0.2**
comp=Z,106nm,1.3s,mb5.8
SSF Saint Saulge 95.71 317⇑*i*P P **03 48 53.2 0.0**
comp=Z,146nm,1.4s,mb5.9
SSF Saint Saulge 95.71 317⇑*i*P P **03 48 53.2 0.0**
SSF pmax pmax
comp=Z,73nm,1.4s,mb5.9
SSF Saint Saulge 95.71 317⇑*i*P P **03 48 53.2 0.0**
comp=Z,73nm,1.4s,mb5.9
AVF Avril sur Loir 95.83 317⇑*i*P P **03 48 53.6 -0.1**
comp=Z,72nm,1.0s,mb5.8
AVF Avril sur Loir 95.83 317⇑*i*P P **03 48 53.6 -0.1**
AVF pmax pmax
comp=Z,36nm,1.0s,mb5.8
AVF Avril sur Loir 95.83 317⇑*i*P P **03 48 53.6 -0.1**
comp=Z,36nm,1.0s,mb5.8
LBL Lubilhac 95.98 315 *e*P P **03 48 54.6 +0.1**
AGO Saint Agoulin 96.02 316 *e*P P **03 48 54.5 -0.1**
PYM Petit Puy Mans 96.12 316 *e*P P **03 48 55.3 +0.2**
BGF Bois d'Agland 96.19 316⇑*i*P P **03 48 55.6 +0.2**
comp=Z,241nm,1.5s,mb6.1
BGF Bois d'Agland 96.19 316⇑*i*P P **03 48 55.6 +0.2**
BGF pmax pmax
comp=Z,120nm,1.5s,mb6.1
BGF Bois d'Agland 96.19 316⇑*i*P P **03 48 55.6 +0.2**
comp=Z,120nm,1.5s,mb6.1
HYF Humbligny 96.29 317 *e*P P **03 48 56.2 +0.4**
MENF Mencas 96.38 320 *e*P P **03 48 55.3 -0.8**
ABA Alger-Bouzarea 96.53 307 P P **03 48 59.0 +1.9**
EMHD Djebel Mahouad 96.61 306 P pP 03 49 06.5 +2.3
FILF Fillols 96.62 312 *e*P P **03 48 58.0 +0.6**
TCF Toulx Ste Croi 96.65 316 *e*P P **03 48 57.6 +0.2**
comp=Z,52nm,1.2s,mb5.5
TCF Toulx Ste Croi 96.65 316 *e*P P **03 48 57.6 +0.2**
TCF pmax pmax
comp=Z,26nm,1.2s,mb5.5
TCF Toulx Ste Croi 96.65 316 *e*P P **03 48 57.6 +0.2**
comp=Z,26nm,1.2s,mb5.5
MTLF Montolieu 96.83 313⇑*i*P P **03 48 58.4 +0.1**
comp=Z,67nm,1.3s,mb5.6
MTLF Montolieu 96.83 313⇑*i*P P **03 48 58.4 +0.1**
MTLF pmax pmax
comp=Z,34nm,1.3s,mb5.6
MTLF Montolieu 96.83 313⇑*i*P P **03 48 58.4 +0.1**
comp=Z,34nm,1.3s,mb5.6
CAF Calviac 96.84 315 *e*P P **03 48 58.7 +0.4**
comp=Z,73nm,1.2s,mb5.7
CAF Calviac 96.84 315 *e*P P **03 48 58.7 +0.4**
CAF pmax pmax
comp=Z,37nm,1.2s,mb5.7
CAF Calviac 96.84 315 *e*P P **03 48 58.7 +0.4**
comp=Z,37nm,1.2s,mb5.7
TFO1 Folkestone 96.97 321⇑*e*P P **03 48 56.1 -2.7**
RJF Les Rejaudoux 97.20 315 *e*P P **03 49 00.4 +0.4**
comp=Z,62nm,1.2s,mb5.6
RJF *e*MLR MLR
comp=Z,65µm,19.8s,MS6.8
RJF Les Rejaudoux 97.20 315 *e*P P **03 49 00.4 +0.4**
RJF pmax pmax
comp=Z,31nm,1.2s,mb5.6
RJF MLR MLR
comp=Z,65µm,19.8s,MS7.1
RJF Les Rejaudoux 97.20 315 *e*P P **03 49 00.4 +0.4**
comp=Z,31nm,1.2s,mb5.6
RJF LR LR
comp=Z,65µm,19.8s,MS7.1
SDPT Sand Point 97.43 35 *e*P P **03 49 00.5 -0.3**
comp=Z,101nm,0.8s,mb6.3
LFF La Frestale 97.78 315 *e*P P **03 49 03.0 +0.4**
comp=Z,129nm,1.5s,mb6.0
LFF La Frestale 97.78 315 *e*P P **03 49 03.0 +0.4**
LFF pmax pmax
comp=Z,65nm,1.5s,mb5.9
LFF La Frestale 97.78 315 *e*P P **03 49 03.0 +0.4**
comp=Z,65nm,1.5s,mb5.9
JMIC Jan Mayen 97.88 342 LR LR 04 41 28.5
comp=Z,67µm,20.2s,MS7.1,baz=67,slow=40
JMIC Jan Mayen 97.88 342 *e*P P **03 49 10.9 +8.4**
JMIC *e*PP PP 03 53 00.2 -0.5
JMIC *e* 04 00 29.9
JMIC *e*SS SS 04 07 12.2 +4.0
JMIC AMS AMS 04 40 07.5
comp=Z,58µm,21.7s,MS7.0
ETRT Tiaret 97.99 305 P P **03 49 04.0 +0.2**
LDF La Druitiere 98.03 319 *e*P P **03 49 03.3 -0.3**
comp=Z,62nm,1.0s,mb5.8
LDF La Druitiere 98.03 319 *e*P P **03 49 03.3 -0.3**
LDF pmax pmax
comp=Z,31nm,1.0s,mb5.8
LDF La Druitiere 98.03 319 *e*P P **03 49 03.3 -0.3**
comp=Z,31nm,1.0s,mb5.8
SKP1 Kophill 98.12 322 *e*P P **03 49 02.5 -1.4**
EANR 'Ain N'Sour 98.12 306 P P **03 49 05.0 +0.6**
TOA0 Torodi Ar. Sit 98.16 283 *e*P P **03 49 04.7 -0.3**
TORD Torodi Ar. Bea 98.16 283 P P **03 49 04.6 -0.4**
comp=Z,5.7nm,1.1s,mb5.0,baz=83,slow=3.2,SNR=16
TORD PKKPbc PKKPbc 04 05 39.1 +1.9
comp=Z,3.4nm,0.9s,baz=307,slow=2.0,SNR=5.3
TORD LR LR 04 31 37.1
comp=Z,59µm,19.5s,MS7.1,baz=75,slow=34
TORD Torodi Ar. Bea 98.16 283 P P **03 49 04.6 -0.4**
TORD PKKPbc PKKPbc 04 05 39.1 +1.9
TORD LR LR 04 31 37.1
EPF Esparros 98.22 313 *e*P P **03 49 04.2 -0.4**
comp=Z,72nm,1.7s,mb5.6
EPF Esparros 98.22 313 *e*P P **03 49 04.2 -0.4**
EPF pmax pmax
comp=Z,36nm,1.7s,mb5.6
EPF Esparros 98.22 313 *e*P P **03 49 04.2 -0.4**
comp=Z,36nm,1.7s,mb5.6
MFF Saint Martin d 98.25 317 *e*P P **03 49 04.5 -0.1**
comp=Z,102nm,1.4s,mb5.8
MFF Saint Martin d 98.25 317 *e*P P **03 49 04.5 -0.1**
MFF pmax pmax
comp=Z,51nm,1.4s,mb5.9
MFF Saint Martin d 98.25 317 *e*P P **03 49 04.5 -0.1**
comp=Z,51nm,1.4s,mb5.9
FLN La Foliniere 98.25 319 *e*P P **03 49 04.4 -0.2**
comp=Z,80nm,1.0s,mb5.9
FLN *e*MLR MLR
comp=Z,86µm,22.2s,MS6.9
FLN La Foliniere 98.25 319 *e*P P **03 49 04.4 -0.2**
FLN pmax pmax
comp=Z,40nm,1.0s,mb5.9
FLN MLR MLR
comp=Z,86µm,22.3s,MS7.2

FLN La Foliniere 98.25 319 *e*P **P** 03 49 04.4 -0.2
comp=Z,40nm,1.0s,mb5.9
FLN LR LR
comp=Z,86µm,22.3s,MS7.2
CWF Charnwood Fore 98.30 323 *e*P **P** 03 49 04.1 -0.7
HPK Haverah Park 98.33 324 *e*P **P** 03 49 03.6 -1.2
DAG Danmarks Havn 98.35 348 ⇓*i*P **P** 03 49 03.9 -0.6
DAG pmax pmax
comp=Z,84nm,1.2s,mb6.2
DAG Danmarks Havn 98.35 348 ⇓*i*P **P** 03 49 03.9 -0.6
comp=Z,84nm,1.2s,mb6.2
KBI1 Birley Grange 98.37 323 *e*P **P** 03 49 04.4 -0.6
LHO Holmfirth 98.52 324 *e*P **P** 03 49 04.5 -1.1
GRR Gorron 98.54 318 *e*P **P** 03 49 05.8 -0.1
comp=Z,103nm,1.3s,mb5.9
GRR Gorron 98.54 318 *e*P **P** 03 49 05.8 -0.1
GRR pmax pmax
comp=Z,52nm,1.3s,mb5.9
GRR Gorron 98.54 318 *e*P **P** 03 49 05.8 -0.1
comp=Z,52nm,1.3s,mb5.9
KWE Weaver Farm 98.59 323 *e*P **P** 03 49 05.8 -0.2
IMA2 Indian Mountai 98.72 23 *e*P **P** 03 49 06.7 +0.4
SSW Stow on the Wo 98.73 322 *e*P **P** 03 49 09.2 +2.6
SWN1 Swindon 98.76 322 *e*P **P** 03 49 10.4 +3.6
ETSF Etsaut 98.89 313 *e*P **P** 03 49 06.8 -0.8
comp=Z,44nm,1.3s,mb5.5
ETSF Etsaut 98.89 313 *e*P **P** 03 49 06.8 -0.8
ETSF pmax pmax
comp=Z,22nm,1.3s,mb5.5
ETSF Etsaut 98.89 313 *e*P **P** 03 49 06.8 -0.8
comp=Z,22nm,1.3s,mb5.5
EKA Eskdalemuir Ar 99.01 326 PKKP PKKPbc 04 05 40.6 +4.4
comp=Z,2.5nm,1.1s,baz=298,slow=1.8,SNR=3.6
ESK Eskdalemuir 99.03 326 *e*P **P** 03 49 07.6 -0.4
ESK AMS AMS 04 39 57.9
comp=Z,41µm,22.0s,MS6.9
ESK Eskdalemuir 99.03 326 *e*P **P** 03 49 08.5 +0.5
ESK pmax pmax
comp=Z,35nm,1.1s,mb5.8
ESK MLR MLR
comp=Z,76µm,22.0s,MS7.2
ESK Eskdalemuir 99.03 326 *e*Pdif **P** 03 49 08.5 +0.6
comp=Z,35nm,1.1s,mb5.8
ESK LR LR
comp=Z,76µm,22.0s,MS7.2
SVW2 Sparrevohn 99.04 28 *e*P **P** 03 49 11.8 +4.0
HLM1 Long Mynd 99.28 323 *e*P **P** 03 49 10.8 +1.7
SJPF Ste Jean 99.36 313 *e*P **P** 03 49 08.9 -0.8
comp=Z,77nm,1.5s,mb5.7
SJPF Ste Jean 99.36 313 *e*P **P** 03 49 08.9 -0.8
SJPF pmax pmax
comp=Z,39nm,1.5s,mb5.7
SJPF Ste Jean 99.36 313 *e*P **P** 03 49 08.9 -0.8
comp=Z,38nm,1.5s,mb5.7
HGH Gray Hill 99.37 322 *e*P **P** 03 49 07.6 -1.9
HTR Trewern Hill 99.58 322 *e*P **P** 03 49 06.0 -4.4
SGMF Saint Gilles 99.68 318 ⇑*i*P Pdif 03 49 10.7 -0.1
comp=Z,153nm,1.7s
SGMF Saint Gilles 99.68 318 ⇑*i*P Pdif 03 49 10.7 -0.1
SGMF pmax pmax
comp=Z,77nm,1.7s,mb5.9
SGMF Saint Gilles 99.68 318 ⇑*i*P Pdif 03 49 10.7 -0.1
comp=Z,77nm,1.7s
COLD Coldfoot 99.73 22 *e*Pdif Pdif 03 49 11.6 +0.6
comp=Z,165nm,1.4s
CHUM Lake Minchumin 99.85 25 *e*Pdif Pdif 03 49 12.4 +0.8
comp=Z,128nm,1.2s
YLL Llanberis 99.95 324 *e*P Pdif 03 49 13.4 +1.3
GAL1 Galloway 99.97 325 *e*P Pdif 03 49 10.7 -1.4
WME Myndd Eilian 99.99 324 *e*P Pdif 03 49 14.1 +1.9
WLF1 Llynfaes 100.06 324 *e*P Pdif 03 49 11.9 -0.6
WIM Isle of Man 100.07 325 *e*P Pdif 03 49 14.8 +2.2
QUIF Quistinic 100.13 318 *e*P Pdif 03 49 12.4 -0.5
comp=Z,87nm,1.5s
QUIF Quistinic 100.13 318 *e*P Pdif 03 49 12.4 -0.5
QUIF pmax pmax
comp=Z,43nm,1.5s
QUIF Quistinic 100.13 318 *e*P Pdif 03 49 12.4 -0.5
comp=Z,43nm,1.5s
YRE Yr Eifl 100.13 323 *e*P Pdif 03 49 09.4 -3.5
ROSF Rostrenen 100.14 319 *e*P Pdif 03 49 12.8 -0.1
comp=Z,38nm,1.0s
ROSF Rostrenen 100.14 319 *e*P Pdif 03 49 12.8 -0.1
ROSF pmax pmax
comp=Z,19nm,1.0s
ROSF Rostrenen 100.14 319 *e*P Pdif 03 49 12.8 -0.1
comp=Z,19nm,1.0s
PPLA Purkeypile 100.17 26 *e*Pdif Pdif 03 49 12.6 -0.4
YRC Rhoscolyn 100.17 324 *e*P Pdif 03 49 10.3 -2.8
BPAW Bear Paw Mtn. 100.35 25 *e*Pdif Pdif 03 49 12.9 -0.9
comp=Z,94nm,0.9s
KTH Kantishna Hill 100.53 25 *e*Pdif Pdif 03 49 15.8 +1.2
comp=Z,50nm,1.0s
TRF Thorofare Moun 100.84 25 *e*Pdif Pdif 03 49 16.6 +0.6
KDAK Kodiak Island 101.28 31 *e*Pdif Pdif 03 49 19.1 +1.1
comp=Z,48nm,1.0s
KDAK LR LR
comp=Z,43µm,20.0s,MS7.0
DLF Lyons Farm 101.32 324 *e*P PP 03 53 00.6 -27
MCK McKinley 101.33 25 *e*P Pdif 03 49 17.6 -0.6
COLA College 101.40 24 *e*P Pdif 03 49 18.5 0.0
COLA pmax pmax
comp=Z,27nm,1.0s
COLA MLR MLR
comp=Z,107µm,19.0s,MS7.4
COLA College 101.40 24 *e*Pdif Pdif 03 49 18.5 0.0
comp=Z,28nm,1.0s
COLA LR LR
comp=Z,107µm,19.0s,MS7.4
SLKM Skilak Lake 101.73 28 *e*P Pdif 03 49 19.5 -0.5
DCN Croghan 101.75 324 *e*P PP 03 53 01.9 -29
ESDC Sonseca Array 101.79 310 P Pdif 03 49 20.8 +0.6
comp=Z,0.6nm,0.8s,baz=64,slow=4.2,SNR=2.6
ESDC PKKPbc PKKPbc 04 05 26.0 -1.7
comp=Z,1.4nm,0.7s,baz=306,slow=1.9,SNR=4.1
PMR Palmer 101.91 27 *e*P Pdif 03 49 19.6 -1.2
PMR pmax pmax
comp=Z,19nm,0.8s
PMR MLR MLR
comp=Z,110µm,20.0s,MS7.4
PMR Palmer 101.91 27 *e*Pdif Pdif 03 49 19.6 -1.2
comp=Z,19nm,0.8s
PMR LR LR
comp=Z,110µm,20.0s,MS7.4
PAB San Pablo 102.10 310 PFAKE 03 49 30.0 +8.4
PAB LR LR
comp=Z,40µm,20.0s,MS6.9
SEW Seward 102.22 29 *e*Pdif Pdif 03 49 22.3 +0.2
KIP Kipapa 102.34 69 PFAKE 03 49 30.0 +7.3
KIP LR LR
comp=Z,51µm,21.0s,MS7.0
XMAS Kiritimati 103.04 88 PFAKE 03 49 40.0 +14
XMAS LR LR
comp=Z,30µm,21.0s,MS6.8
MDT Midelt 103.08 303 PKKPbc PKKPbc 04 05 24.6 +1.0
comp=Z,2.3nm,0.8s,baz=323,slow=2.7,SNR=5.1
PBRG Braganca 103.57 312 *e*Pdif Pdif 03 49 32.6 +4.4
PBRG Braganca 103.57 312 *i*PP PP 03 53 23.5 -21
MVO Moncorvo 103.89 312 *e*Pdif Pdif 03 49 29.4 -0.2
MVO Moncorvo 103.89 312 *e*PP PP 03 53 39.1 -8.0
MVO Moncorvo 103.89 312 *i*LQ 04 20 05.0
MVO *e*LR LR 04 27 37.8
comp=Z,30µm,20.0s
SFS San Fernando 103.96 307 PFAKE 03 49 40.0 +10
SFS LR LR
comp=Z,61µm,22.0s,MS7.1
SHEL Horse Pasture 104.11 253 PFAKE 03 49 40.0 +9.5
SHEL LR LR
comp=Z,69µm,21.0s,MS7.2
BMRM Bremner River 104.18 27 *e*Pdif Pdif 03 49 30.7 -0.2
PBAR Barrancos 104.37 309 *e*Pdif 03 49 43.9
PBAR Barrancos 104.37 309 *e*PP PP 03 53 35.1 -16
PBAR Barrancos 104.37 309 *i*LQ 04 22 43.7
PBAR Barrancos 104.37 309 *e*LR LR 04 33 44.6
comp=Z,34µm,20.0s
PVRL Vila Real 104.38 312 *e*Pdif Pdif 03 49 41.2 +9.4
PVRL Vila Real 104.38 312 *i*PP PP 03 52 59.1 -52
MTE Manteigas 104.40 311 *e*Pdif Pdif 03 49 43.2 +11
MTE Manteigas 104.40 311 *i*PP PP 03 53 23.3 -28
MTE Manteigas 104.40 311 *i*LQ 04 21 04.9
MTE *e*LR LR 04 26 52.7
comp=Z,32µm,20.0s
MTE Manteigas 104.40 311 PFAKE 03 49 40.0 +8.2
MTE LR LR
comp=Z,38µm,21.0s,MS6.9

PCBR Castelo Branco 104.45 311 *e*Pdif Pdif 03 49 41.6 +10
PCBR Castelo Branco 104.45 311 *i*PP PP 03 52 59.0 -52
PMRV Marv??o 104.45 310 *e*Pdif Pdif 03 49 35.0 +3.0
PMRV Marv??o 104.45 310 *i*PP PP 03 53 19.1 -32
PMRV Marv??o 104.45 310 *e*LR LR 04 29 38.1
comp=Z,29µm,18.0s
KIC Kosan Boka 104.46 276 *e*P Pdif 03 49 29.5 -2.6
comp=Z,678nm,2.4s
PCAB Cabril 104.54 312 *e*Pdif Pdif 03 49 44.4 +12
PCAB Cabril 104.54 312 *e*PP PP 03 53 29.4 -22
DBIC Dimbokro 104.58 276 Pdiff Pdif 03 49 36.1 +3.5
comp=Z,2.9nm,1.0s,baz=8.1,slow=12,SNR=2.6
DBIC Dimbokro 104.58 276 Pdif Pdif 03 49 36.1 +3.5
DBIC LR LR
comp=Z,72µm,21.0s,MS7.2
PVIS Viseu 104.61 311 *i*PP PP 03 53 06.3 -46
PESTR Estremoz 104.69 310 *e*Pdif Pdif 03 49 40.9 +7.8
PESTR Estremoz 104.69 310 *i*LQ 04 22 48.8
PESTR Estremoz 104.69 310 *e*LR LR 04 33 45.3
comp=Z,30µm,18.0s
BORG Borgarnes 104.71 338 PFAKE 03 49 40.0 +6.8
BORG LR LR
comp=Z,87µm,20.0s,MS7.3
TIC Toumodi 104.74 276 *e*P Pdif 03 49 30.6 -2.7
comp=Z,597nm,2.1s
TIC Toumodi 104.74 276 *e*P Pdif 03 49 30.6 -2.7
TIC pmax pmax
comp=Z,597nm,2.1s
LIC Lamto 104.74 276 *e*P Pdif 03 49 34.8 +1.4
comp=Z,52nm,1.2s
LIC *e*MLR MLR
comp=Z,73µm,20.0s,MS6.9
LIC Lamto 104.74 276 *e*P Pdif 03 49 31.9 -1.5
comp=Z,191nm,2.4s
LIC Lamto 104.74 276 *e*P Pdif 03 49 34.8 +1.4
comp=Z,26nm,1.2s
LIC LR LR
comp=Z,36µm,20.0s,MS6.9
POHA Pohakuloa 104.74 70 PFAKE 03 49 50.0 +17
POHA LR LR
comp=Z,33µm,20.0s,MS6.9
RTC Rabat Centre 104.81 304 PFAKE 03 49 50.0 +16
RTC LR LR
comp=Z,33µm,19.0s,MS6.9
PVAQ Vaqueiros 105.02 308 *e*Pdif Pdif 03 49 42.6 +8.0
PVAQ Vaqueiros 105.02 308 *i*PP PP 03 53 18.0 -38
PVAQ Vaqueiros 105.02 308 *i*PP PP 03 53 47.5 -8.1
PVAQ *i*SKSac Sdif 04 01 23.2 -4.5
PVAQ Vaqueiros 105.02 308 *e*LQ 04 23 30.9
PVAQ *e*LR LR 04 28 42.8
PVAQ A 04 42 47.8
comp=Z,34µm,18.0s
PBEJ Beja 105.04 309 *e*Pdif Pdif 03 49 37.5 +2.8
PBEJ Beja 105.04 309 *i*PP PP 03 53 29.4 -26
SUMG Summit 105.04 348 *e*Pdif Pdif 03 49 36.6 +1.9
comp=Z,21nm,1.1s
EVO Evora 105.07 309 *e*PKIKP PKiKP 03 53 49.6 -0.3
comp=Z,242nm,1.9s
EVO *e*MLR MLR
comp=Z,51µm,22.8s,MS6.7
EVO Evora 105.07 309 *e*Pdif Pdif 03 49 40.8 +6.0
EVO Evora 105.07 309 *e*PP PP 03 53 41.6 -14
PTOM Tomar 105.19 310 *e*Pdif Pdif 03 49 36.2 +0.8
PTOM Tomar 105.19 310 *i*PP PP 03 53 25.6 -31
PBDV Barranco-do-Ve 105.21 308 *e*Pdif Pdif 03 49 41.5 +6.1
PBDV Barranco-do-Ve 105.21 308 *e*PP PP 03 53 25.6 -31
PBDV Barranco-do-Ve 105.21 308 *i*LQ 04 21 53.1
PBDV *e*LR LR 04 26 55.5
comp=Z,30µm,20.0s
MORF Marmelete 105.77 308 *e*Pdif Pdif 03 49 41.0 +3.1
MORF Marmelete 105.77 308 *e*PP PP 03 53 29.1 -32
MORF Marmelete 105.77 308 *e*LR LR 04 35 04.6
comp=Z,32µm,20.0s
PTEO Sao Teotonio 105.79 308 *e*Pdif Pdif 03 49 41.6 +3.6
PTEO Sao Teotonio 105.79 308 *i*PP PP 03 53 26.1 -35
PFVI Vila Bisbo 105.94 308 *e*Pdif Pdif 03 49 44.7 +6.0
PFVI Vila Bisbo 105.94 308 *i*PP PP 03 53 44.1 -18
PFVI Vila Bisbo 105.94 308 *i*LQ 04 20 56.4
PFVI Vila Bisbo 105.94 308 *e*LR LR 04 34 58.2
comp=Z,38µm,20.0s
PMAFR Mafra 105.97 310 *e*Pdif Pdif 03 49 45.0 +6.2
PMAFR Mafra 105.97 310 *e*PP PP 03 54 06.1 +3.5
PMAFR Mafra 105.97 310 *i*LQ 04 23 55.8
PMAFR *e*LR LR 04 33 22.3
comp=Z,30µm,20.0s
TRIS Tristan da Cun 105.99 231 PFAKE 03 54 00.0 +8.3
TRIS LR LR
comp=Z,26µm,20.0s,MS6.8
PNL Peninsula 107.08 27 *e*Pdif Pdif 03 49 45.0 +1.2
comp=Z,44nm,1.1s
HYT Haines Junctio 107.38 26 *e*Pdif Pdif 03 49 45.7 +0.6
SKAG Skagway 109.00 26 *e*PKP PKiKP 03 53 55.9 -0.7
PPT Papeete 109.15 109 *e*PP PP 03 54 25.3 -1.2
comp=Z,10µm,28.0s
PPT Papeete 109.15 109 *e*PS PS 04 03 51.5 -2.2
comp=Z,24µm,27.0s
PPT *e*SS SS 04 09 32.3 -14
comp=Z,44µm,26.0s
PPT Papeete 109.15 109 *e*LR LR 04 26 00.8
comp=Z,140µm,26.0s
SIT Sitka 110.20 28 PFAKE 03 54 10.0 +11
SIT LR LR
comp=Z,111µm,21.0s,MS7.4
WRAK Wrangell Islan 111.94 28 PFAKE 03 54 10.0 +7.8
WRAK LR LR
comp=Z,107µm,19.0s,MS7.5
SFJD Kangerlussuaq 112.04 348 *i*P PP 03 54 40.5 -5.0
comp=Z,122nm,1.1s
SFJD *e* 04 02 18.5
SFJD *i* 04 04 27.7
SFJD *i* 04 10 22.6
SFJD
comp=Z,129µm,20.0s
SFJD Kangerlussuaq 112.04 348 PFAKE 03 54 10.0 +7.9
SFJD LR LR
comp=Z,153µm,20.0s,MS7.6
PMSA Palmer Station 112.15 187 PFAKE 03 54 10.0 +7.6
PMSA LR LR
comp=Z,49µm,19.0s,MS7.1
ASCN Ascension 113.36 260 PFAKE 03 54 20.0 +14
ASCN LR LR
comp=Z,35µm,20.0s,MS7.0
YKA Yellowknife Ar 114.64 17 PKP PKiKP 03 54 06.0 -1.1
comp=Z,6.6nm,0.8s,baz=346,slow=2.1,SNR=9.9
YKA PKKPab PKKPab 04 04 51.5 -0.5
comp=Z,2.2nm,0.8s,baz=143,slow=3.8,SNR=4.7
YKA Yellowknife Ar 114.64 17 PKIKP PKiKP 03 54 06.0 -1.2
YKA pmax pmax
comp=Z,7.0nm,0.8s
YKA Yellowknife Ar 114.64 17 PKP PKiKP 03 54 06.0 -1.1
YKA PKKPab PKKPab 04 04 51.5 -0.5
CMLA Cha da Macela 118.57 312 PFAKE 03 54 30.0 +14
CMLA LR LR
comp=Z,33µm,21.0s,MS6.9
TAOE Nuku Hiva Isla 119.49 101 *e*PP PP 03 55 30.9 -9.0
comp=Z,33µm,29.0s
TAOE Nuku Hiva Isla 119.49 101 *e*PS PS 04 05 32.6 +3.4
comp=Z,70µm,23.6s
TAOE *e*SS SS 04 12 01.1 -1.8
comp=Z,197µm,28.2s
TAOE Nuku Hiva Isla 119.49 101 *e*LR LR 04 30 58.6
comp=Z,311µm,24.9s
C03A Quillayute Air 120.65 33 ⇑P PKPdf 03 54 20.3 +1.1
baz=120
PGC Sidney 120.83 32 *e*PKPdf PKPdf 03 54 19.9 +0.4
OBC Olympics--Boni 120.86 33 P PKPdf 03 54 20.6 +1.0
B04A Port Angeles 121.16 32 ⇑P PKPdf 03 54 21.0 +0.8
baz=121
A04A Legoe Bay, Lum 121.17 31 ⇓P PKPdf 03 54 20.9 +0.7
baz=121
RKT Rikitea 121.27 119 *e*PS PS 04 05 42.3 -2.4
comp=Z,21µm,28.8s
RKT *e*SS SS 04 12 22.7 -2.3
comp=Z,56µm,30.5s
RKT Rikitea 121.27 119 *e*LR LR 04 31 45.0
comp=Z,104µm,27.0s
A05A Maple Falls 121.32 31 ⇓P PKPdf 03 54 19.8 -0.6
baz=121
NLWA Neilton Lookou 121.36 33 ⇑P PKPdf 03 54 21.1 +0.6
baz=121
NLWA Neilton Lookou 121.36 33 PFAKE 03 54 30.0 +9.4
NLWA LR LR
comp=Z,93µm,19.0s,MS7.5
A06A Chilliwack 121.57 30 ⇑P PKPdf 03 54 20.9 0.0
baz=122

D03A Wishkah Elem. 121.58 33 ⇓P PKPdf 03 54 21.5 +0.5
baz=122
C04A Brinnon 121.65 32 ⇑P PKPdf 03 54 21.4 +0.3
baz=122
B05A Bryant 121.78 32 ⇓P PKPdf 03 54 21.0 -0.3
baz=122
JCW Jim Creek 121.91 31 *e*PKPdf PKPdf 03 54 21.5 -0.1
B06A Marblemount 121.93 31 ⇓P PKPdf 03 54 21.3 -0.3
baz=122
RPW Rockport 121.96 31 P PKPdf 03 54 21.7 0.0
E03A Lebam 122.03 34 ⇑P PKPdf 03 54 21.9 0.0
baz=122
A07A Ashnola River, 122.15 30 ⇓P PKPdf 03 54 22.0 0.0
baz=122
BMW Boistfort Moun 122.26 34 *e*PKIKP PKPdf 03 54 23.3 +1.0
C05A Tolt Reservoir 122.35 32 ⇓P PKPdf 03 54 22.5 0.0
baz=122
F03A Seaside 122.40 34 ⇓P PKPdf 03 54 22.7 +0.1
baz=122
E04A Onalaska 122.47 33 ⇓P PKPdf 03 54 23.2 +0.5
baz=122
D05A Enumclaw 122.50 32 ⇓P PKPdf 03 54 23.4 +0.6
baz=122
FCC Fort Churchill 122.55 8 *e*PKIKP PKPdf 03 54 20.3 -2.2
C06A Tall Timber Ra 122.62 31 ⇓P PKPdf 03 54 22.8 -0.2
baz=122
B07A Winthrop 122.67 30 ⇓P PKPdf 03 54 23.0 -0.1
baz=122
HEBO Mount Hebo 122.70 35 *e*PKPdf PKPdf 03 54 22.4 -0.9
A08A Turner Farm, O 122.76 29 ⇑P PKPdf 03 54 23.2 0.0
baz=123
LON Longmire 122.87 33 *e*PKIKP PKPdf 03 54 21.6 -1.9
H02A Toledo 122.87 36 ⇑P PKPdf 03 54 23.5 -0.1
baz=123
G03A Yamhill 122.92 35 ⇑P PKPdf 03 54 24.0 +0.3
baz=123
E05A Randle 123.01 33 ⇑P PKPdf 03 54 23.5 -0.2
baz=123
F04A Amboy 123.03 34 ⇓P PKPdf 03 54 23.7 -0.1
baz=123
A09A Danville 123.08 29 ⇑P PKPdf 03 54 24.0 +0.2
baz=123
D06A Cle Elum 123.11 32 ⇑P PKPdf 03 54 24.2 +0.3
baz=123
EFI East Falkland 123.11 196 PFAKE 03 54 40.0 +16
EFI LR LR
comp=Z,25µm,20.0s,MS6.9
ETW Entiat 123.11 31 *e*PKPdf PKPdf 03 54 23.4 -0.6
ETW *e*PP PP 03 56 05.2 +2.3
B08A Colville Reser 123.13 30 ⇑P PKPdf 03 54 24.2 +0.3
baz=123
C07A Waterville 123.20 31 ⇑P PKPdf 03 54 24.0 -0.1
baz=123
TBM Table Mountain 123.25 32 P PKPdf 03 54 23.4 -0.9
H03A Soap Creek Ran 123.28 35 ⇓P PKPdf 03 54 24.7 +0.3
baz=123
COR Corvallis 123.33 36 *e*PKIKP PKPdf 03 54 25.0 +0.6
COR MLR MLR
comp=Z,64µm,19.0s,MS7.3
I02A Mapleton 123.35 36 ⇓P PKPdf 03 54 24.8 +0.3
baz=123
EBG Ellensburg 123.43 32 P PKPdf 03 54 25.2 +0.6
G04A Mulino 123.44 35 ⇓P PKPdf 03 54 25.2 +0.6
baz=123
E06A Yakima 123.45 33 ⇓P PKPdf 03 54 25.3 +0.7
baz=123
D07A Quincy 123.56 31 ⇑P PKPdf 03 54 25.2 +0.4
baz=123
A10A Northport 123.57 29 ⇓P PKPdf 03 54 25.0 +0.2
baz=123
F05A White Salmon 123.59 33 ⇑P PKPdf 03 54 25.4 +0.5
baz=124
K01A Sixes 123.64 38 ⇑P PKPdf 03 54 25.8 +0.7
baz=124
C08A Higginbotham F 123.65 30 ⇓P PKPdf 03 54 25.2 +0.3
baz=124
B09A Rice 123.67 29 ⇓P PKPdf 03 54 25.1 +0.2
baz=124
KEBM Edson Butte 123.69 38 *e*PKPdf PKPdf 03 54 25.7 +0.5
KEBM *e*PP PP 03 56 10.0 +2.9
I03A Eugene 123.70 36 ⇓P PKPdf 03 54 25.3 +0.2
baz=124
J02A Umpqua 123.87 37 ⇑P PKPdf 03 54 25.9 +0.4
baz=124
H04A Detroit Lake 123.92 35 ⇓P PKPdf 03 54 26.1 +0.5
baz=124
C09A Chrisman Ranch 124.03 30 ⇓P PKPdf 03 54 25.8 +0.1
baz=124
E07A Sunnyside 124.03 32 ⇓P PKPdf 03 54 26.2 +0.5
baz=124
F06A Goldendale 124.04 33 ⇓P PKPdf 03 54 26.0 +0.2
baz=124
G05A Wamic 124.07 34 ⇓P PKPdf 03 54 26.3 +0.4
baz=124
OD2 Odessa Site #2 124.08 31 P PKPdf 03 54 25.9 +0.1
KBO Bosley Butte 124.12 38 *e*PKPdf PKPdf 03 54 26.7 +0.7
KBO *e*PP PP 03 56 12.9 +2.9
A11A Hall Mountain, 124.15 28 ⇓P PKPdf 03 54 26.6 +0.7
baz=124
D08A Wollman Farm, 124.20 31 ⇑P PKPdf 03 54 26.4 +0.4
baz=124
B10A Chitwood Farm, 124.20 29 ⇓P PKPdf 03 54 26.5 +0.5
baz=124
WRD Warden 124.25 31 P PKPdf 03 54 26.6 +0.5
K02A Glendale 124.26 37 ⇑P PKPdf 03 54 26.6 +0.4
baz=124
NEW Newport 124.28 29 *e*PKIKP PKPdf 03 54 26.0 -0.1
NEW *e* 03 56 13.2
NEW MLR MLR
comp=Z,76µm,22.0s
RSW Rattlesnake Hi 124.28 32 *e*PKPdf PKPdf 03 54 26.2 0.0
I04A Tendick Farm, 124.31 36 ⇑P PKPdf 03 54 26.4 0.0
baz=124
HAWA Hanford 124.31 32 *e*PKPdf PKPdf 03 54 25.8 -0.5
HAWA LR LR
comp=Z,93µm,21.0s,MS7.4
M01C Crescent City 124.38 39 ⇓P PKPdf 03 54 27.0 +0.5
baz=124
F07A Phinny Hill Vi 124.42 33 ⇓P PKPdf 03 54 27.1 +0.6
baz=124
G06A Carlson Farm, 124.45 34 ⇓P PKPdf 03 54 27.1 +0.6
baz=124
H05A Madras 124.48 34 ⇓P PKPdf 03 54 26.8 +0.2
baz=124
C10A Spilker Farm, 124.50 29 ⇑P PKPdf 03 54 26.8 +0.3
baz=124
E08A Dider Farm, El 124.50 32 ⇓P PKPdf 03 54 26.8 +0.2
baz=124
A12A Yaak River Ran 124.50 27 ⇓P PKPdf 03 54 27.2 +0.7
baz=124
D09A Jones Farm, Ri 124.51 31 ⇑P PKPdf 03 54 26.7 +0.1
baz=124
B11A Sandpoint 124.52 28 ⇑P PKPdf 03 54 26.9 +0.3
baz=124
L02A Cave Junction 124.53 38 ⇓P PKPdf 03 54 27.4 +0.6
baz=124
HUMO Hull Mountain 124.67 37 ⇑P PKPdf 03 54 27.7 +0.6
baz=125
HUMO Hull Mountain 124.67 37 *e*PKPdf PKPdf 03 54 26.9 -0.1
HUMO LR LR
comp=Z,53µm,19.0s,MS7.2
BBOR Butler Butte 124.68 37 P PKPdf 03 54 27.4 +0.3
KRMB Red Mountain 124.69 39 *e*PKPdf PKPdf 03 54 27.9 +0.7
FFC Flin Flon 124.72 15 *e*PKIKP PKPdf 03 54 26.3 -0.5
FFC *e* 03 56 14.8
FFC MLR MLR
comp=Z,90µm,19.0s,MS7.5
PTCN Pitcairn Islan 124.80 123 PFAKE 03 54 40.0 +12
PTCN LR LR
comp=Z,52µm,22.0s,MS7.2
J04A Umpqua Nationa 124.81 36 ⇑P PKPdf 03 54 28.2 +0.9
baz=125
B12A Libby 124.86 28 ⇓P PKPdf 03 54 28.2 +0.9
baz=125
VIPM Ingram Point 124.91 34 PKIKP PKPdf 03 54 28.4 +0.9
H06A Lindquist Farm 124.93 34 ⇓P PKPdf 03 54 28.2 +0.7
baz=125
E09A Wood Farm, Sta 124.96 31 ⇓P PKPdf 03 54 28.1 +0.6
baz=125
G07A Ruggs Ranch, H 124.96 33 ⇑P PKPdf 03 54 28.0 +0.4
baz=125
C11A Tepee Creek (N 124.99 29 ⇑P PKPdf 03 54 27.7 +0.1
baz=125
JCC Jacoby Creek 125.00 40 ⇑P PKPdf 03 54 27.9 +0.2
baz=125
D10A Wagner Farm, O 125.03 30 ⇓P PKPdf 03 54 27.9 +0.2
baz=125

A13A Flathead Natio 125.07 27 ⇑P PKPdf 03 54 28.2 +0.5
baz=125
F08A Pendleton 125.10 32 ⇑P PKPdf 03 54 28.0 +0.2
baz=125
WALA Waterton Lakes 125.20 26 ePKPdf PKPdf 03 54 28.0 +0.1
WALA ePP PP 03 56 18.4 +1.6
J05A Fort Rock 125.30 36 ⇓P PKPdf 03 54 29.1 +0.9
baz=125
LNOR Lincton Mounta 125.31 32 ePKIKP PKPdf 03 54 27.9 -0.3
LNOR e 03 56 18.3
YBH Yreka Blue Hor 125.32 38 PKP PKPdf 03 54 28.5 +0.1
comp=Z,12nm,0.9s,baz=345,slow=5.3,SNR=12
YBH Yreka Blue Hor 125.32 38 ⇓P PKPdf 03 54 28.9 +0.6
baz=125
YBH Yreka Blue Hor 125.32 38 ePKPdf PKPdf 03 54 28.7 +0.4
YBH ePP PP 03 56 19.2 +1.1
YBH LR LR
comp=Z,55µm,20.0s,MS7.2
G08A Pilot Rock 125.33 33 ⇑P PKPdf 03 54 28.9 +0.7
baz=125
K04A Chilquin 125.41 37 ⇓P PKPdf 03 54 29.2 +0.7
baz=125
M02C Callahan 125.42 39 ⇓P PKPdf 03 54 28.9 +0.3
baz=125
H07A Lands Inn, Kim 125.45 34 ⇓P PKPdf 03 54 29.4 +0.9
baz=125
B13A Whitefish 125.45 27 ⇓P PKPdf 03 54 28.9 +0.5
baz=125
C12B Naegeli Ranch, 125.46 28 ⇑P PKPdf 03 54 28.9 +0.5
baz=125
N02C Big Bar 125.46 39 ⇑P PKPdf 03 54 29.1 +0.4
baz=125
I06A Prineville 125.49 35 ⇓P PKPdf 03 54 29.2 +0.6
baz=125
O01C Eel River Cons 125.50 40 ⇑P PKPdf 03 54 28.9 +0.1
baz=125
D11A Klaveano Farm, 125.50 30 ⇓P PKPdf 03 54 28.9 +0.3
baz=125
E10A Myers Farm, Un 125.50 30 ⇓P PKPdf 03 54 28.6 +0.1
baz=125
L04A Klamath Falls 125.57 37 ⇓P PKPdf 03 54 29.0 +0.2
baz=126
F09A S2 Ranch, Elgi 125.61 32 ⇓P PKPdf 03 54 28.7 -0.1
baz=126
LHEM Herd Peak 125.68 38 P PKPdf 03 54 29.9 +0.8
F10A Beach Ranch, E 125.79 31 ⇑P PKPdf 03 54 29.5 +0.4
baz=126
I07A Izee 125.80 34 ⇓P PKPdf 03 54 29.6 +0.4
baz=126
M04C Macdoel 125.83 38 ⇓P PKPdf 03 54 29.5 +0.2
baz=126
K05A Summer Lake 125.84 36 ⇓P PKPdf 03 54 30.0 +0.7
baz=126
KCPM Cahto Peak 125.90 41 ePKPdf PKPdf 03 54 29.8 +0.3
KCPM ePP PP 03 56 21.2 -0.8
KIPM Iron Peak 125.90 40 ePKPdf PKPdf 03 54 30.0 +0.5
KIPM ePP PP 03 56 27.4 +5.4
C13A Hot Springs 125.90 28 ⇓P PKPdf 03 54 29.9 +0.6
baz=126
M03C McCloud 125.94 38 ⇓P PKPdf 03 54 30.1 +0.5
baz=126
J06A Christmas Vall 125.95 35 ⇑P PKPdf 03 54 30.1 +0.6
baz=126
G09A Cove 125.97 32 ⇑P PKPdf 03 54 29.6 +0.2
baz=126
D12A Red Ives Fores 125.98 29 ⇑P PKPdf 03 54 29.7 +0.2
baz=126
H08A Prairie City 125.99 33 ⇓P PKPdf 03 54 30.0 +0.5
baz=126
E11A Bogner Ranch, 126.05 30 ⇑P PKPdf 03 54 29.8 +0.2
baz=126
WDC Whiskeytown Da 126.08 39 ⇑P PKPdf 03 54 30.0 +0.1
baz=126
WDC Whiskeytown Da 126.08 39 ePKPdf PKPdf 03 54 29.9 +0.1
WDC LR LR
comp=Z,75µm,19.0s,MS7.4
O02C Red Bluff 126.14 40 ⇑P PKPdf 03 54 29.7 -0.2
baz=126
K06A Valley Falls 126.17 36 ⇑P PKPdf 03 54 30.3 +0.3
baz=126
C14A Swan Lake 126.22 27 ⇓P PKPdf 03 54 30.2 +0.3
baz=126
L05A Lakeview 126.28 37 ⇓P PKPdf 03 54 30.7 +0.5
baz=126
G10A Bishop Farm, J 126.31 32 ⇑P PKPdf 03 54 30.4 +0.3
baz=126
E12A Beaver Dam Sad 126.32 30 ⇑P PKPdf 03 54 30.3 +0.2
baz=126
SCHQ Schefferville 126.33 350 PKP PKPdf 03 54 28.9 -1.0
comp=Z,30nm,0.8s,baz=21,slow=2.2,SNR=12
J07A Hines 126.36 35 ⇓P PKPdf 03 54 30.5 +0.2
baz=126
D13A Huson 126.38 28 ⇑P PKPdf 03 54 30.7 +0.4
baz=126
F11A Grangeville 126.40 30 ⇑P PKPdf 03 54 30.2 -0.1
baz=126
I08A Drewsey 126.43 34 ⇑P PKPdf 03 54 30.8 +0.3
baz=126
GASB Alder Springs 126.47 40 ⇑P PKPdf 03 54 31.9 +1.2
baz=126
M05C Lookout 126.50 38 ⇓P PKPdf 03 54 31.8 +1.1
baz=126
BMO Blue Mountains 126.50 32 PFAKE 03 54 40.0 +9.5
BMO LR LR
comp=Z,72µm,20.0s,MS7.3
HOPS Hopland 126.60 41 ⇓P PKPdf 03 54 31.8 +0.9
baz=126
HOPS Hopland 126.60 41 ePKPdf PKPdf 03 54 31.1 +0.2
HOPS LR LR
comp=Z,66µm,19.0s,MS7.3
G11A Walters Elk Ra 126.67 31 ⇑P PKPdf 03 54 31.1 +0.3
baz=126
MOD Modoc 126.68 37 ⇑P PKPdf 03 54 31.7 +0.8
baz=127
MOD Modoc 126.68 37 ePKPdf PKPdf 03 54 30.8 -0.1
MOD LR LR
comp=Z,59µm,20.0s,MS7.3
MSO Missoula 126.82 28 ePKPdf PKPdf 03 54 30.5 -0.6
MSO ePP PP 03 56 30.5 +2.8
MSO LR LR
comp=Z,98µm,19.0s,MS7.5
K07A Rock Creek Ran 126.82 35 ⇑P PKPdf 03 54 31.8 +0.6
baz=127
D14A Greenough 126.84 28 ⇑P PKPdf 03 54 31.3 +0.2
baz=127
J08A Circle Bar Ran 126.84 34 ⇑P PKPdf 03 54 31.9 +0.7
baz=127
I09A Lost Marbles R 126.85 33 ⇑P PKPdf 03 54 31.6 +0.3
baz=127
F12A Elk City 126.94 30 ⇓P PKPdf 03 54 31.6 +0.3
baz=127
H10A Noah's Angus R 126.97 32 ⇑P PKPdf 03 54 31.8 +0.4
baz=127
E13A Victor 126.98 29 ⇑P PKPdf 03 54 31.7 +0.3
baz=127
M06C Likely Place G 126.99 37 ⇑P PKPdf 03 54 32.2 +0.6
baz=127
MNRC McLaughlin Nat 127.08 41 ⇓P PKPdf 03 54 32.9 +1.1
baz=127
CHMT Chamberlain Mo 127.08 28 ePKPdf PKPdf 03 54 31.7 +0.1
CHMT ePP PP 03 56 32.0 +2.6
O04C Chester 127.14 39 ⇓P PKPdf 03 54 32.6 +0.7
baz=127
L07A Adell 127.18 36 ⇑P PKPdf 03 54 33.1 +1.1
baz=127
MCCM Marconi Confer 127.18 42 ⇑P PKPdf 03 54 33.1 +1.0
baz=127
MCCM Marconi Confer 127.18 42 ePKPdf PKPdf 03 54 32.6 +0.6
MCCM ePP PP 03 56 32.1 +1.5
MCCM LR LR
comp=Z,58µm,19.0s,MS7.3
ELFS Eagle Lake Fie 127.19 38 ⇑P PKPdf 03 54 32.7 +0.7
baz=127
K08A Mann Creek Ran 127.23 35 ⇑P PKPdf 03 54 33.1 +1.2
baz=127
J09A Fry Pan Ranch, 127.25 34 ⇑P PKPdf 03 54 32.9 +0.9
baz=127
I10A Payette 127.28 32 ⇑P PKPdf 03 54 32.9 +0.8
baz=127
H11A Donnelly 127.28 31 ⇑P PKPdf 03 54 32.4 +0.4
baz=127
ORV Oroville 127.31 40 ⇓P PKPdf 03 54 32.6 +0.3
baz=127
D15A Lincoln 127.32 27 ⇓P PKPdf 03 54 32.2 +0.2
baz=127
E14A Clinton 127.33 28 ⇓P PKPdf 03 54 32.5 +0.4
baz=127

WVOR Wild Horse Val 127.33 35 ePKIKP PKPdf 03 54 32.5 +0.3
WVOR MLR MLR
comp=Z,51µm,21.0s,MS7.2
FARB Farallon Islan 127.34 42 ⇓P PKPdf 03 54 32.1 -0.2
baz=127
CVS Carmenet Viney 127.36 41 ⇑P PKPdf 03 54 33.3 +0.9
baz=127
F13A Darby 127.38 29 ⇓P PKPdf 03 54 32.9 +0.8
baz=127
O05C Quincy 127.45 39 ⇓P PKPdf 03 54 32.8 +0.3
baz=127
Q03C Winters 127.49 41 ⇓P PKPdf 03 54 33.7 +1.0
baz=127
L08A Fields 127.65 35 ⇑P PKPdf 03 54 33.5 +0.6
baz=128
N06A Buffalo Meadow 127.66 38 ⇓P PKPdf 03 54 33.5 +0.6
baz=128
M07A Soldier Meadow 127.67 37 ⇓P PKPdf 03 54 33.5 +0.6
baz=128
K09A Rome 127.68 34 ⇓P PKPdf 03 54 33.5 +0.7
baz=128
E15A Deer Lodge 127.72 28 ⇑P PKPdf 03 54 33.6 +0.8
baz=128
J10A Berg Farm, Mel 127.74 33 ⇑P PKPdf 03 54 33.9 +0.9
baz=128
EGMT Eagleton 127.78 25 PFAKE 03 54 40.0 +7.1
EGMT LR LR
comp=Z,102µm,19.0s,MS7.5
Q04C Lincoln 127.79 40 ⇑P PKPdf 03 54 33.8 +0.7
baz=128
F14A Wisdom 127.83 29 ⇓P PKPdf 03 54 34.1 +1.1
baz=128
I11A Placerville 127.85 32 ⇓P PKPdf 03 54 34.1 +0.9
baz=128
BEKR Beckwourth 127.85 39 ⇑P PKPdf 03 54 34.1 +0.8
baz=128
HRY Holter Researc 127.88 27 ePKPdf PKPdf 03 54 32.9 -0.2
HRY ePP PP 03 56 36.4 +1.8
G13A Cobalt 127.92 30 ⇓P PKPdf 03 54 33.7 +0.5
baz=128
BDM Black Diamond 127.96 42 ⇑P PKPdf 03 54 34.5 +1.0
baz=128
H12A Diamond D Ranc 127.99 31 ⇓P PKPdf 03 54 34.1 +0.7
baz=128
JRSC Jasper Ridge 128.01 42 ⇓P PKPdf 03 54 34.4 +0.8
baz=128
O06A Flanigan 128.01 38 ⇓P PKPdf 03 54 34.5 +1.0
baz=128
P05C Yuba Gap, Truc 128.02 39 ⇑P PKPdf 03 54 34.4 +0.8
baz=128
K10A MacKenzie Ranc 128.11 34 ⇓P PKPdf 03 54 34.8 +1.2
baz=128
L09A Wilkinson Ranc 128.15 35 ⇑P PKPdf 03 54 35.1 +1.4
baz=128
N07B Gerlach 128.16 37 ⇑P PKPdf 03 54 35.2 +1.3
baz=128
G14A Jackson 128.19 29 ⇓P PKPdf 03 54 34.7 +1.0
baz=128
WENL Wente Vineyard 128.21 42 ⇑P PKPdf 03 54 34.5 +0.5
baz=128
F15A Butte 128.22 28 ⇓P PKPdf 03 54 34.1 +0.4
baz=128
LAVA Lava Cap Winer 128.25 40 ⇑P PKPdf 03 54 34.5 +0.4
baz=128
P06A Stead Airport, 128.25 39 ⇓P PKPdf 03 54 34.5 +0.4
baz=128
MFID Camas Ranch 128.26 33 ⇓P PKPdf 03 54 34.5 +0.5
baz=128
H13A Challis 128.28 30 ⇑P PKPdf 03 54 34.5 +0.6
baz=128
R04C Big Horse Ranc 128.40 41 ⇑P PKPdf 03 54 34.6 +0.3
baz=128
DLMT Dillon 128.53 29 ePKPdf PKPdf 03 54 35.2 +0.9
DLMT ePP PP 03 56 42.6 +3.7
PAHR Pah Rah Range 128.55 38 ePKPdf PKPdf 03 54 34.8 +0.2
PAHR ePP PP 03 56 38.5 -1.0
WCN Washoe City 128.56 39 ⇑P PKPdf 03 54 35.4 +0.8
baz=128
O07A Toulon 128.59 38 ⇓P PKPdf 03 54 34.7 +0.1
baz=128
M09A Marrel Ranch, 128.66 35 ⇓P PKPdf 03 54 35.7 +1.0
baz=128
N08A GE Springer Mi 128.66 36 ⇑P PKPdf 03 54 35.5 +0.7
baz=128
H14A Leadore 128.69 30 ⇑P PKPdf 03 54 35.7 +0.9
baz=129
R05C Kirkwood Meado 128.71 40 ⇓P PKPdf 03 54 35.1 +0.2
baz=129
G15A Dillon 128.72 29 ⇑P PKPdf 03 54 35.3 +0.6
baz=129
J12A Stokes Ranch, 128.76 32 ⇓P PKPdf 03 54 35.5 +0.7
baz=129
BOZ Bozeman (W) 128.77 28 ePKIKP PKPdf 03 54 35.3 +0.5
BOZ e 03 56 38.2
BOZ MLR MLR
comp=Z,87µm,19.0s,MS7.5
L10A Juniper Basin 128.79 34 ⇑P PKPdf 03 54 35.6 +0.6
baz=129
MCMT McKenzie Canyo 128.79 29 ePKPdf PKPdf 03 54 34.1 -0.8
I13A Wildhorse Cree 128.81 31 ⇑P PKPdf 03 54 35.6 +0.7
baz=129
PACP Pacheco Peak 128.86 42 ⇓P PKPdf 03 54 35.9 +0.6
baz=129
SAO San Andreas Ge 128.88 43 ePKIKP PKPdf 03 54 34.7 -0.6
SAO e 03 56 41.4
SAO MLR MLR
comp=Z,33µm,19.0s,MS7.0
CMB Columbia Colle 128.89 41 ⇓P PKPdf 03 54 35.9 +0.6
baz=129
CMB Columbia Colle 128.89 41 ePKPdf PKPdf 03 54 35.6 +0.3
CMB ePP PP 03 56 37.5 -4.3
CMB LR LR
comp=Z,61µm,22.0s,MS7.2
HLID Hailey 128.90 31 ⇑P PKPdf 03 54 36.1 +0.9
baz=129
HLID Hailey 128.90 31 ePKPdf PKPdf 03 54 35.8 +0.7
HLID ePP PP 03 56 43.8 +2.3
HLID LR LR
comp=Z,101µm,20.0s,MS7.5
O08A Rochester Mine 128.95 37 ⇓P PKPdf 03 54 36.3 +0.9
baz=129
N09A Rock Creek Ran 128.98 36 ⇓P PKPdf 03 54 36.4 +1.1
baz=129
H15A Lima 129.05 29 ⇑P PKPdf 03 54 36.4 +1.1
baz=129
M10A L.L. Ranch, Tu 129.12 35 ⇑P PKPdf 03 54 36.6 +1.0
baz=129
L11A Cat Creek Ranc 129.13 34 ⇑P PKPdf 03 54 36.7 +1.1
baz=129
I14A Mackay 129.14 31 ⇓P PKPdf 03 54 36.9 +1.3
baz=129
J13A Cove Ranch, Pi 129.14 31 ⇑P PKPdf 03 54 36.8 +1.1
baz=129
R06C Coleville 129.21 40 ⇑P PKPdf 03 54 36.8 +0.9
baz=129
K12A Draper Farm, C 129.28 33 ⇓P PKPdf 03 54 36.9 +1.0
baz=129
S05C Merced 129.31 41 ⇑P PKPdf 03 54 37.1 +1.0
baz=129
S06C San Francisco 129.32 41 ⇑P PKPdf 03 54 37.4 +1.2
baz=129
P08A Dixie Valley 129.36 38 ⇓P PKPdf 03 54 37.4 +1.3
baz=129
Q07A Schurz 129.37 39 ⇑P PKPdf 03 54 36.5 +0.3
baz=129
BMN Battle Mountai 129.42 36 ePKIKP PKPdf 03 54 36.5 +0.3
BMN e 03 56 49.2
BMN MLR MLR
comp=Z,53µm,20.0s,MS7.2
V03C Hunter Liggett 129.43 43 ⇑P PKPdf 03 54 36.9 +0.6
baz=129
QLMT Earthquake Lak 129.48 28 ePKPdf PKPdf 03 54 37.2 +1.0
QLMT ePP PP 03 56 49.7 +4.6
DGMT Dagmar 129.53 20 ePKPdf PKPdf 03 54 35.6 -0.6
DGMT ePP PP 03 56 47.2 +2.0
DGMT LR LR
comp=Z,195µm,19.0s,MS7.8
J14A Carey 129.54 31 ⇑P PKPdf 03 54 37.4 +1.0
baz=129
U04C Hernandez Rese 129.55 43 ⇓P PKPdf 03 54 37.8 +1.2
baz=130
L12A House Creek Ra 129.55 33 ⇑P PKPdf 03 54 37.4 +1.0
baz=129
GCMT Greycliff 129.56 26 ePKPdf PKPdf 03 54 37.4 +1.1
GCMT ePP PP 03 56 46.7 +1.1
I15A Monteview 129.57 30 ⇑P PKPdf 03 54 37.6 +1.2
baz=129

M11A Holland Ranch, 129.60 34 ⇓P PKPdf 03 54 37.6 +1.1
baz=130
N10A Dunphy 129.66 36 ⇑P PKPdf 03 54 36.6 -0.1
baz=130
H16A Russell Place, 129.66 28 ⇓P PKPdf 03 54 37.8 +1.3
baz=130
K13A Stover Farm, H 129.71 32 ⇑P PKPdf 03 54 38.3 +1.6
baz=130
YMR Madison River 129.82 28 ePKPdf PKPdf 03 54 37.9 +1.0
YMR LR LR
comp=Z,129µm,19.0s,MS7.6
T06C Millerton Lake 129.91 41 ⇓P PKPdf 03 54 38.3 +1.1
baz=130
YNR Norris Junctio 129.92 28 ePKPdf PKPdf 03 54 39.1 +2.1
O10A Cortez Mining, 129.93 36 ⇑P PKPdf 03 54 38.3 +1.0
baz=130
PKD Parkfield 129.94 43 ⇑P PKPdf 03 54 38.8 +1.4
baz=130
Q08A Gabbs 129.96 38 ⇓P PKPdf 03 54 38.1 +0.8
baz=130
U05C Westside ANR, 130.01 42 ⇓P PKPdf 03 54 38.4 +0.9
baz=130
P09A Austin 130.02 37 ⇑P PKPdf 03 54 38.4 +1.0
baz=130
J15A Blackfoot 130.03 30 ⇑P PKPdf 03 54 38.6 +1.3
baz=130
N11A Elko Archery C 130.04 35 ⇓P PKPdf 03 54 38.8 +1.4
baz=130
YFT Old Faithful 130.04 28 ePKPdf PKPdf 03 54 39.9 +2.6
M12A Wells 130.10 34 ⇓P PKPdf 03 54 39.3 +1.8
baz=130
I16A Newdale 130.16 29 ⇓P PKPdf 03 54 39.3 +1.8
baz=130
LKWY Lake 130.16 28 PFAKE 03 54 50.0 +12
LKWY LR LR
comp=Z,165µm,19.0s,MS7.8
R08A Mina 130.16 39 ⇓P PKPdf 03 54 39.3 +1.6
baz=130
L13A Double Diamond 130.17 33 ⇑P PKPdf 03 54 39.3 +1.7
baz=130
RLMT Red Lodge 130.25 27 ePKPdf PKPdf 03 54 37.1 -0.6
RLMT ePP PP 03 56 47.3 -2.8
RLMT LR LR
comp=Z,110µm,21.0s,MS7.5
K14A Jones Ranch, D 130.26 32 ⇓P PKPdf 03 54 39.5 +1.7
baz=130
LAO LASA Array 130.28 23 PFAKE 03 54 50.0 +12
LAO LR LR
comp=Z,64µm,19.0s,MS7.3
ULM Lac du Bonnet 130.32 13 PKP PKPdf 03 54 37.2 -0.4
comp=Z,21nm,0.7s,baz=350,slow=2.1,SNR=8.0
ELK Elko 130.37 35 ePKIKP PKPdf 03 54 37.9 -0.1
ELK MLR MLR
comp=Z,65µm,21.0s
FLWY Flagg Ranch 130.38 28 ePKPdf PKPdf 03 54 37.3 -0.6
FLWY ePP PP 03 56 56.7 +5.7
P10A Eureka 130.38 37 ⇓P PKPdf 03 54 39.6 +1.5
baz=130
IMW Indian Meadow 130.41 29 ePKPdf PKPdf 03 54 39.3 +1.3
N12A Clover Valley, 130.41 34 ⇑P PKPdf 03 54 39.6 +1.5
baz=130
Q09A Carvers 130.44 38 ⇑P PKPdf 03 54 39.3 +1.1
baz=130
MTUM Tungsten Hills 130.46 40 ePKPdf PKPdf 03 54 38.5 +0.2
K15A Arbon 130.50 31 ⇑P PKPdf 03 54 39.8 +1.6
baz=130
DCID1 Drake Creek 130.51 29 ePKPdf PKPdf 03 54 36.1 -2.1
O11A Cowboy Ranch, 130.53 36 ⇓P PKPdf 03 54 39.5 +1.2
baz=130
J16A Bone 130.54 30 ⇓P PKPdf 03 54 39.5 +1.2
baz=130
HELL Mitchell Peak 130.55 41 ⇑P PKPdf 03 54 39.7 +1.2
baz=130
M13A Montello 130.55 33 ⇓P PKPdf 03 54 39.5 +1.2
baz=130
L14A Malta 130.59 32 ⇑P PKPdf 03 54 40.0 +1.6
baz=130
MOOW Moose Ponds 130.61 29 ePKPdf PKPdf 03 54 39.0 +0.6
MOOW ePP PP 03 56 52.2 -0.3
RRI2 Red Ridge 130.63 30 ePKPdf PKPdf 03 54 38.5 +0.1
RRI2 ePP PP 03 56 54.1 +1.5
S08C White Mtn Res 130.63 40 ⇓P PKPdf 03 54 40.1 +1.4
baz=130
SMMC Simmler 130.66 43 ⇑P PKPdf 03 54 40.4 +1.6
baz=131
TPAW Teton Pass 130.70 29 ePKPpre 03 54 34.4
TPAW ePKPdf PKPdf 03 54 38.2 -0.4
TPAW ePP PP 03 56 56.8 +3.6
LOHW Long Hollow 130.78 29 ePKPdf PKPdf 03 54 40.0 +1.3
LOHW ePP PP 03 56 55.0 +1.4
SNOW Snow King Moun 130.82 29 ePKPdf PKPdf 03 54 38.4 -0.4
SNOW ePP PP 03 56 55.8 +1.9
REDW Red Top Meadow 130.85 29 ePKPdf PKPdf 03 54 39.0 +0.2
REDW ePP PP 03 56 53.3 -0.8
P11A Circle Ranch, 130.85 36 ⇑P PKPdf 03 54 40.6 +1.6
baz=131
TIN Tinemaha 130.85 40 ⇑P PKPdf 03 54 38.7 -0.3
baz=131
K16A Soda Springs 130.87 30 ⇓P PKPdf 03 54 39.8 +0.8
baz=131
R09A Tonopah 130.88 38 ⇓P PKPdf 03 54 40.4 +1.3
baz=131
N13A Wendover, West 130.88 34 ⇑P PKPdf 03 54 40.0 +1.0
baz=131
TPH Tonopah 130.88 39 ePKIKP PKPdf 03 54 37.8 -1.3
TPH e 03 56 55.9
TPH MLR MLR
comp=Z,50µm,20.0s,MS7.2
M14A Sheep Mountain 130.90 33 ⇑P PKPdf 03 54 40.3 +1.3
baz=131
Q10A Clear Creek Ra 130.93 37 ⇑P PKPdf 03 54 40.4 +1.2
baz=131
O12A Currie 130.97 35 ⇑P PKPdf 03 54 40.4 +1.3
baz=131
VES Vestal, Richgr 130.99 42 ⇓P PKPdf 03 54 39.0 -0.4
baz=131
PKM Peak Mountain 131.00 44 ⇓P PKPdf 03 54 40.4 +1.0
baz=131
HVU Hansel Valley 131.01 32 ePKIKP PKPdf 03 54 39.1 -0.1
L15A Malad City 131.06 32 ⇑P PKPdf 03 54 41.0 +1.7
baz=131
S09A Goldfield 131.09 39 ⇓P PKPdf 03 54 40.7 +1.2
baz=131
AHID Auburn Hatcher 131.17 30 PFAKE 03 54 50.0 +11
AHID LR LR
comp=Z,130µm,19.0s,MS7.7
CWC Cottonwood Cre 131.31 41 ⇑P PKPdf 03 54 40.1 +0.2
baz=131
R10A Warm Springs 131.32 38 ⇑P PKPdf 03 54 41.1 +1.2
baz=131
Q11A Duckwater 131.36 37 ⇑P PKPdf 03 54 41.6 +1.6
baz=131
S10A Tonopah Range, 131.37 38 ⇑P PKPdf 03 54 41.2 +1.2
baz=131
P12A McGill 131.40 36 ⇑P PKPdf 03 54 41.4 +1.4
baz=131
M15A Larsen Ranch, 131.41 32 ⇑P PKPdf 03 54 41.6 +1.7
baz=131
GRAC Grapevine Rang 131.44 40 ⇑P PKPdf 03 54 41.3 +1.2
baz=131
N14A Grayback Hills 131.44 33 ⇑P PKPdf 03 54 41.3 +1.3
baz=131
BGU Big Grassy Mou 131.47 33 ePKPdf PKPdf 03 54 40.5 +0.4
ISA Isabella 131.49 42 ⇑P PKPdf 03 54 40.4 +0.1
baz=131
ISA Isabella 131.49 42 PFAKE 03 54 50.0 +10
ISA LR LR
comp=Z,59µm,21.0s,MS7.3
SPUT South Promonto 131.52 32 ePKPdf PKPdf 03 54 39.8 -0.4
SPUT ePP PP 03 56 56.4 -2.1
L16A Fish Haven 131.55 31 ⇑P PKPdf 03 54 41.0 +0.8
baz=131
R11A Troy Canyon, C 131.72 37 ⇑P PKPdf 03 54 42.6 +1.9
baz=132
DAC Darwin (Calif) 131.72 41 PFAKE 03 54 50.0 +9.3
DAC LR LR
comp=Z,48µm,20.0s,MS7.2
Q12A Willow Creek R 131.73 36 ⇓P PKPdf 03 54 42.2 +1.6
baz=132
HWUT Hardware Ranch 131.77 31 ePKPdf PKPdf 03 54 39.0 -1.6
HWUT ePP PP 03 56 58.9 -1.2
HWUT LR LR
comp=Z,128µm,19.0s,MS7.7
N15A Stansbury Isla 131.78 33 ⇓P PKPdf 03 54 42.1 +1.4
baz=132
OSI Osito Adit 131.91 43 ⇑P PKPdf 03 54 41.6 +0.5

baz=132
MPMC Manual Prospec 131.92 41 ⇓P PKPdf 03 54 42.1 +1.0
baz=132
BW06 Boulder Array 131.92 29 *e*PKPdf PKPdf 03 54 40.7 -0.2
BW06 *e*PP PP 03 57 01.1 +0.1
BW06 LR LR
comp=Z,100µm,19.0s,MS7.5
PDAR Pinedale Array 131.92 29 PKhKP 03 54 29.5
comp=Z,2.5nm,0.9s,baz=211,slow=1.7,SNR=4.3
PDAR PKP PKPdf 03 54 41.1 +0.3
comp=Z,4.5nm,0.5s,baz=93,slow=1.9,SNR=7.6
P13A Bates Ranch, G 131.93 35 ⇑P PKPdf 03 54 41.7 +0.7
baz=132
M16A Huntsville 131.95 32 ⇓P PKPdf 03 54 42.3 +1.3
baz=132
BLG Laguna Peak 131.95 44 ⇑P PKPdf 03 54 41.4 +0.2
baz=132
S11A Rachel 132.06 38 ⇑P PKPdf 03 54 42.0 +0.7
baz=132
FURC Furnace Creek, 132.08 40 ⇑P PKPdf 03 54 42.4 +1.0
baz=132
SNCC San Nicolas Is 132.09 45 ⇓P PKPdf 03 54 41.8 +0.3
baz=132
SNCC San Nicolas Is 132.09 45 PFAKE 03 54 50.0 +8.5
SNCC LR LR
comp=Z,39µm,21.0s,MS7.1
DUG Dugway 132.10 34 *e*PKIKP PKPdf 03 54 42.5 +1.2
DUG MLR MLR
comp=Z,70µm,19.0s,MS7.4
LRMC Laurel Mountai 132.12 42 ⇓P PKPdf 03 54 42.3 +0.7
baz=132
AGMN Agassiz Refuge 132.15 14 *e*PKPdf PKPdf 03 54 41.1 0.0
AGMN *e*PP PP 03 57 02.1 +0.1
AGMN LR LR
comp=Z,112µm,22.0s,MS7.5
NOQ North Oquirrh 132.16 33 *e*PKPdf PKPdf 03 54 42.3 +0.9
TPNV Topopah Spring 132.18 39 *e*PKIKP PKPdf 03 54 41.9 +0.3
TPNV *e* 03 57 02.1
TPNV MLR MLR
comp=Z,52µm,19.0s,MS7.3
O15A The Old Anders 132.23 33 ⇓P PKPdf 03 54 42.8 +1.2
baz=132
Q13A Wheeler Ranch, 132.26 36 ⇑P PKPdf 03 54 42.7 +1.1
baz=132
EDW2 Edwards Air Fo 132.26 43 ⇓P PKPdf 03 54 41.9 +0.1
baz=132
R12A Pony Springs, 132.32 37 ⇑P PKPdf 03 54 43.4 +1.6
baz=132
CTU Camp Tracy 132.33 32 *e*PKPdf PKPdf 03 54 43.2 +1.4
CTU *e*PP PP 03 57 03.3 -0.4
N16A Rees Ranch, Co 132.36 32 ⇓P PKPdf 03 54 42.5 +0.8
baz=132
P14A Drum Mountains 132.37 34 ⇓P PKPdf 03 54 42.5 +0.6
baz=132
DECC Green Verdugo 132.38 44 ⇑P PKPdf 03 54 42.1 +0.1
baz=132
U10A Ash Meadows, A 132.45 40 ⇑P PKPdf 03 54 42.5 +0.4
baz=132
JLU Jordanelle 132.55 32 *e*PKPdf PKPdf 03 54 42.3 +0.1
JLU *e*PP PP 03 57 08.1 +2.9
MWC Mount Wilson 132.59 43 *e*PKIKP PKPdf 03 54 37.2 -5.2
MWC MLR MLR
comp=Z,62µm,21.0s,MS7.3
N17A Moffit Pass 132.63 31 ⇓P PKPdf 03 54 43.1 +0.8
baz=132
S12A Delamar Landin 132.64 38 ⇑P PKPdf 03 54 42.8 +0.4
baz=132
T11A Corn Creek, Al 132.65 38 ⇓P PKPdf 03 54 43.1 +0.7
baz=132
Q14A Sevier Lake (B 132.66 35 ⇓P PKPdf 03 54 43.4 +0.9
baz=132
NLU North Lily Min 132.67 33 *e*PKPpre 03 54 35.7
NLU *e*PKPdf PKPdf 03 54 42.8 +0.4
NLU *e*PP PP 03 57 03.5 -2.5
FMP Fort Macarthur 132.71 44 ⇓P PKPdf 03 54 43.0 +0.3
baz=133
DAU Daniels Canyon 132.79 32 *e*PKIKP PKPdf 03 54 43.1 +0.5
DAU *e* 03 57 07.6
CIS Catalina Islan 132.80 45 ⇑P PKPdf 03 54 43.3 +0.4
baz=133
R13A O'Grain Ranch, 132.80 36 ⇓P PKPdf 03 54 43.5 +0.8
baz=133
SHOC Shoshone 132.80 40 ⇓P PKPdf 03 54 43.6 +0.9
baz=133
O16A Springville 132.81 33 ⇓P PKPdf 03 54 44.0 +1.4
baz=133
GSC Goldstone 132.81 41 ⇓P PKPdf 03 54 43.3 +0.5
baz=133
GSC Goldstone 132.81 41 *e*PKPdf PKPdf 03 54 41.5 -1.3
GSC *e*PP PP 03 57 07.5 +0.3
GSC LR LR
comp=Z,58µm,21.0s,MS7.3
P15A Leamington 132.83 34 ⇓P PKPdf 03 54 43.3 +0.6
baz=133
BFSC Mount Baldy St 132.85 43 ⇑P PKPdf 03 54 43.4 +0.4
baz=133
MPU Maple Canyon 132.87 33 *e*PKPdf PKPdf 03 54 43.5 +0.8
MPU LR LR
comp=Z,85µm,19.0s,MS7.5
P16A Fountain Green 133.14 33 ⇑P PKPdf 03 54 43.9 +0.6
baz=133
Q15A Fillmore 133.17 34 ⇓P PKPdf 03 54 44.3 +0.9
baz=133
N18A Larsen Ranch, 133.21 30 ⇑P PKPdf 03 54 44.2 +0.9
baz=133
O17A Robinson Place 133.22 32 ⇓P PKPdf 03 54 44.3 +0.8
baz=133
S13A Holt Ranch, En 133.26 37 ⇑P PKPdf 03 54 44.4 +0.8
baz=133
RSSD Black Hills 133.27 23 *e* PKPdf 03 54 41.8 -1.6
RSSD *e* 03 57 08.6
RSSD MLR MLR
comp=Z,81µm,20.0s,MS7.4
R14A James Farms, M 133.28 36 ⇓P PKPdf 03 54 44.5 +0.9
baz=133
T12A Moapa 133.28 38 ⇑P PKPdf 03 54 45.2 +1.5
baz=133
TUQ Turquoise Moun 133.31 41 ⇑P PKPdf 03 54 44.6 +0.8
baz=133
BBRC Big Bear Sol-O 133.34 43 ⇑P PKPdf 03 54 44.0 +0.2
baz=133
ARUT Antelope Range 133.37 36 *e*PKIKP PKPdf 03 54 44.3 +0.5
V11A Goodsprings 133.38 40 ⇓P PKPdf 03 54 44.7 +0.8
baz=133
EYMN Ely 133.40 10 *e*PKPdf PKPdf 03 54 43.0 -0.5
EYMN *e*PP PP 03 57 12.4 +2.4
EYMN LR LR
comp=Z,126µm,21.0s,MS7.6
HEC Hector,Ludlow 133.41 42 ⇓P PKPdf 03 54 44.9 +0.9
baz=133
N19A John Jarvie Ra 133.52 30 ⇑P PKPdf 03 54 45.1 +1.1
baz=133
MURC Murrieta 133.53 44 ⇑P PKPdf 03 54 45.2 +1.0
baz=133
S14A Cedar City 133.55 36 ⇑P PKPdf 03 54 45.5 +1.4
baz=133
O18A Roosevelt 133.56 31 ⇑P PKPdf 03 54 45.3 +1.2
baz=133
CCUT Cedar City 133.57 37 *e*PKPdf PKPdf 03 54 44.2 +0.1
U12A Valley of Fire 133.58 39 ⇑P PKPdf 03 54 45.3 +1.1
baz=134
T13A Saint George 133.59 38 ⇓P PKPdf 03 54 45.5 +1.2
baz=134
MVU Marysvale 133.60 35 PFAKE 03 55 00.0 +16
MVU LR LR
comp=Z,73µm,21.0s,MS7.4
TMUT Trail Mountain 133.61 33 *e*PKPdf PKPdf 03 54 43.0 -1.2
MSU Marysvale 133.62 35 *e*PKIKP PKPdf 03 54 44.1 -0.1
P17A Butcher Ranch, 133.74 33 ⇓P PKPdf 03 54 45.9 +1.4
baz=134
R15A Junction 133.77 35 ⇑P PKPdf 03 54 45.4 +0.9
baz=134
V12A Nelson 133.82 40 ⇑P PKPdf 03 54 45.9 +1.2
baz=134
RWWY Rawlins 133.86 28 *e*PKPdf PKPdf 03 54 44.1 -0.5
GMRC Granite Mounta 133.88 41 ⇑P PKPdf 03 54 45.3 +0.4
baz=134
P18A Preston Nutter 133.90 32 ⇓P PKPdf 03 54 45.4 +0.7
baz=134
Q16A Castle Valley 133.90 34 ⇓P PKPdf 03 54 45.8 +1.0
baz=134
U13A Pakoon Wash 133.95 38 ⇑P PKPdf 03 54 45.9 +1.0
baz=134
O19A Miners Draw (B 133.99 31 ⇑P PKPdf 03 54 46.0 +1.1
baz=134
109C Camp Elliot, M 133.99 44 ⇓P PKPdf 03 54 45.9 +0.8
baz=134

PFO Pinyon Flat Ob 134.03 43 ⇓P PKPdf 03 54 45.9 +0.8
baz=134
PFO Pinyon Flat Ob 134.03 43 *e*PKPpre 03 54 39.8
PFO *e*PP PP 03 57 17.9 +2.9
PFO LR LR
comp=Z,59µm,22.0s,MS7.3
LDFC Landfair 134.06 40 *e*PKPdf PKPdf 03 54 40.8 -4.4
T14A Hurricane 134.06 37 ⇓P PKPdf 03 54 46.0 +0.9
baz=134
W12A Cal Nev Ari 134.07 40 ⇑P PKPdf 03 54 46.5 +1.3
baz=134
S15A Panguitch 134.08 36 ⇑P PKPdf 03 54 46.4 +1.3
baz=134
BELC Belle Mtn. 134.11 42 ⇑P PKPdf 03 54 46.3 +1.0
baz=134
SRU San Rafael 134.12 33 ⇑P PKPdf 03 54 45.1 -0.1
baz=134
SRU San Rafael 134.12 33 *e*PKPdf PKPdf 03 54 45.6 +0.4
R16A Teasdale 134.17 34 ⇑P PKPdf 03 54 46.0 +0.8
baz=134
V13A Grand Canyon W 134.29 39 ⇓P PKPdf 03 54 46.4 +0.8
baz=134
Q18A Rafter H Ranch 134.34 33 ⇓P PKPdf 03 54 45.6 0.0
baz=134
BAR Barrett 134.41 44 *e*PKPdf PKPdf 03 54 44.2 -1.7
BAR *e*PP PP 03 57 16.9 -0.6
BAR LR LR
comp=Z,45µm,22.0s,MS7.1
U14A Mt Trumbull 134.43 38 ⇓P PKPdf 03 54 46.7 +0.8
baz=134
MONP Monument Peak 134.47 44 ⇑P PKPdf 03 54 46.2 +0.2
baz=134
S16A Weppner Ranch, 134.49 35 ⇑P PKPdf 03 54 45.4 -0.5
baz=134
R17A Hanksville Air 134.51 34 ⇓P PKPdf 03 54 45.9 0.0
baz=134
T15A Red Dirt Ranch 134.51 36 ⇑P PKPdf 03 54 46.7 +0.7
baz=134
P19A Cripple Cowboy 134.56 31 ⇓P PKPdf 03 54 46.6 +0.7
baz=134
NEE2 Needles Airpor 134.56 40 ⇑P PKPdf 03 54 47.0 +0.9
baz=134
IRM Iron Mountain 134.59 42 ⇓P PKPdf 03 54 47.2 +1.0
baz=134
BC3 Big Chuckw Mtn 134.68 42 ⇑P PKPdf 03 54 47.3 +0.9
baz=135
CAM3 Guarapari 134.78 238 ⇓*i*P PKPdf 03 54 50.5 +3.6
CAM3 *i* 03 54 54.8
CAM3 *i* 03 55 04.0
CAM3 *i* 03 55 08.4
CAM3 *i* 03 55 29.0
CAM3 *i* 03 55 39.3
CAM3 *i* 03 55 46.2
CAM3 *i* 03 56 04.5
DVTC Desert V Tower 134.82 44 ⇓P PKPdf 03 54 47.0 +0.4
baz=135
W13A Hualapai Mount 134.83 40 ⇓P PKPdf 03 54 47.2 +0.5
baz=135
SWSC Sam W. Stewart 134.87 43 ⇑P PKPdf 03 54 47.1 +0.4
baz=135
Q19A Hogan Spring (134.91 32 ⇑P PKPdf 03 54 47.5 +0.9
baz=135
U15A North Rim 134.96 37 ⇑P PKPdf 03 54 48.0 +1.2
baz=135
PHWY Pilot Hill 134.97 27 *e*PKPdf PKPdf 03 54 46.9 +0.2
R18A Canyonlands Na 134.98 33 ⇓P PKPdf 03 54 47.2 +0.4
baz=135
V14A Boquillas Ranc 134.98 38 ⇑P PKPdf 03 54 47.8 +0.9
baz=135
S17A Black Ridge (B 135.01 35 ⇑P PKPdf 03 54 47.3 +0.5
baz=135
T16A Glen Canyon Da 135.05 36 ⇑P PKPdf 03 54 47.6 +0.6
baz=135
PDMCI Parker Dam,Lak 135.16 41 ⇓P PKPdf 03 54 48.3 +1.0
baz=135
X13A Yucca 135.18 40 ⇑P PKPdf 03 54 48.2 +0.9
baz=135
Y12C Blythe 135.25 42 ⇑P PKPdf 03 54 48.6 +1.1
baz=135
W14A Seligman 135.27 39 ⇓P PKPdf 03 54 49.1 +1.7
baz=135
R19A Curley Farm, L 135.39 33 ⇓P PKPdf 03 54 48.8 +1.2
baz=135
S18A Hurst Farm, BI 135.42 34 ⇑P PKPdf 03 54 48.7 +1.1
baz=135
V15A Kaibab Nationa 135.43 38 ⇓P PKPdf 03 54 48.4 +0.7
baz=135
T17A Navajo Res., N 135.45 35 ⇑P PKPdf 03 54 48.4 +0.7
baz=135
PV10 Paradox Valley 135.45 32 *e*PKPpre 03 54 39.5
PV10 *e*PKPdf PKPdf 03 54 47.9 +0.3
GLA Glamis 135.46 43 ⇓P PKPdf 03 54 48.8 +1.0
baz=135
GLA Glamis 135.46 43 *e*PKPpre 03 54 41.8
GLA *e*PKPdf PKPdf 03 54 47.4 -0.5
GLA *e*PP PP 03 57 27.6 +3.4
GLA LR LR
comp=Z,41µm,20.0s,MS7.2
COWI Conover 135.57 9 *e*PKPdf PKPdf 03 54 45.0 -2.7
COWI *e*PP PP 03 57 23.1 -0.6
COWI LR LR
comp=Z,111µm,19.0s,MS7.6
Y13A Salome 135.67 41 ⇓P PKPdf 03 54 49.3 +1.1
baz=136
W15A Williams 135.80 38 ⇓P PKPdf 03 54 49.1 +0.7
baz=136
U17A Shonto 135.81 36 ⇓P PKPdf 03 54 49.1 +0.7
baz=136
U16A Tuba City 135.84 36 ⇑P PKPdf 03 54 49.5 +1.1
baz=136
S19A Harvey Farm, M 135.85 33 ⇑P PKPdf 03 54 48.3 -0.1
baz=136
X14A Yava 135.86 40 ⇑P PKPdf 03 54 49.6 +1.0
baz=136
PV01 Paradox Valley 135.88 32 *e*PKPpre 03 54 36.0
PV01 *e*PKPdf PKPdf 03 54 47.6 -0.8
PV01 *e*PP PP 03 57 21.1 -5.2
T18A Mexican Hat 135.88 34 ⇑P PKPdf 03 54 49.1 +0.6
baz=136
112A Yuma 135.93 43 ⇓P PKPdf 03 54 48.7 0.0
baz=136
PKME Peaks-Kenny Pk 135.97 349 *e*PKPdf PKPdf 03 54 45.6 -2.8
PKME LR LR
comp=Z,112µm,19.0s,MS7.6
ISCO Idaho Springs 136.10 28 *e*PKIKP PKPdf 03 54 44.4 -4.4
ISCO *e* 03 54 49.4
ISCO *e* 03 57 31.4
ISCO MLR MLR
comp=Z,93µm,20.0s,MS7.5
WUAZ Wupatki 136.12 37 *e*PKPdf PKPdf 03 54 48.0 -1.0
WUAZ LR LR
comp=Z,37µm,20.0s,MS7.1
Y14A Wickenburg 136.12 40 ⇑P PKPdf 03 54 49.7 +0.6
baz=136
ECSD EROS,Sioux Fal 136.17 17 *e*PKPpre 03 54 41.1
ECSD *e*PKPdf PKPdf 03 54 49.3 +0.5
ECSD *e*PP PP 03 57 27.2 -0.5
ECSD LR LR
comp=Z,88µm,20.0s,MS7.5
X15A Humboldt 136.26 39 ⇓P PKPdf 03 54 50.2 +0.9
baz=136
W16A Flagstaff 136.31 38 ⇑P PKPdf 03 54 50.4 +1.0
baz=136
113A Mohawk Valley, 136.34 42 ⇑P PKPdf 03 54 50.3 +0.8
baz=136
PLCA Paso Flores 136.37 191 PKP PKPdf 03 54 49.4 0.0
comp=Z,5.0nm,0.9s,baz=153,slow=3.6,SNR=6.0
PLCA Paso Flores 136.37 191 *e*PKPdf PKPdf 03 54 49.1 -0.3
PLCA LR LR
comp=Z,43µm,21.0s,MS7.2
U18A Rough Rock, Ch 136.39 35 ⇓P PKPdf 03 54 50.3 +0.8
baz=136
TRQA Tornquist 136.50 201 *e*PKPdf PKPdf 03 54 48.4 -1.3
TRQA LR LR
comp=Z,34µm,20.0s,MS7.1
Z14A Wintersburg 136.52 41 ⇑P PKPdf 03 54 50.0 +0.2
baz=136
Y15A Casa Rosa Ranc 136.55 40 ⇑P PKPdf 03 54 50.8 +1.0
baz=136
T19A Beclabito 136.58 34 ⇑P PKPdf 03 54 50.2 +0.4
baz=136
MVCO Mesa Verde 136.59 33 *e*PKPdf PKPdf 03 54 49.6 -0.2
MVCO LR LR
comp=Z,102µm,20.0s,MS7.5
OGNE Ogallala 136.74 24 *e*PKPdf PKPdf 03 54 49.2 -0.8
OGNE *e*PP PP 03 57 35.7 +4.3

OGNE LR LR
comp=Z,88µm,20.0s,MS7.5
X16A Lo Mia Camp, P 136.81 38 ⇑P PKPdf 03 54 51.5 +1.2
baz=137
W17A Winslow 136.81 37 ⇓P PKPdf 03 54 50.9 +0.6
baz=137
V18A Ganado 136.85 36 ⇓P PKPdf 03 54 50.9 +0.5
baz=137
Z15A Gila River Ind 137.08 40 ⇑P PKPdf 03 54 51.3 +0.5
baz=137
Y16A Circle Bar Ran 137.14 39 ⇓P PKPdf 03 54 51.7 +0.7
baz=137
X17A Forest Lakes 137.25 38 ⇑P PKPdf 03 54 52.4 +1.2
baz=137
GLMI Grayling 137.35 4 *e*PKPdf PKPdf 03 54 48.0 -3.0
GLMI *e*PP PP 03 57 33.9 -0.9
GLMI LR LR
comp=Z,130µm,21.0s,MS7.6
V19A Window Rock 137.36 35 ⇑P PKPdf 03 54 51.9 +0.6
baz=137
W18A Petrified Fore 137.37 36 ⇑P PKPdf 03 54 52.2 +0.9
baz=137
LONY Lake Ozonia 137.40 354 *e*PKPpre 03 54 42.9
LONY *e*PKPdf PKPdf 03 54 50.5 -0.5
LONY *e*PP PP 03 57 33.6 -1.6
LONY LR LR
comp=Z,81µm,19.0s,MS7.5
115A Sonoran Desert 137.41 41 ⇑P PKPdf 03 54 52.2 +0.7
baz=137
LBNH Lisbon 137.42 351 PFAKE 03 55 00.0 +8.9
LBNH LR LR
comp=Z,148µm,19.0s,MS7.7
214A Organ Pipe Nat 137.48 42 ⇑P PKPdf 03 54 52.3 +0.7
baz=137
Z16A Peralta Trail, 137.52 40 ⇓P PKPdf 03 54 51.9 +0.2
baz=137
W19A Sanders 137.58 36 ⇑P PKPdf 03 54 52.2 +0.5
baz=138
X18A Snowflake 137.65 37 ⇑P PKPdf 03 54 53.2 +1.3
baz=138
Y17A Roosevelt 137.66 39 ⇓P PKPdf 03 54 52.7 +0.8
baz=138
SDCO Great Sand Dun 137.76 30 *e*PKPpre 03 54 44.4
SDCO *e*PKPdf PKPdf 03 54 51.9 -0.1
SDCO *e*PP PP 03 57 39.5 +1.6
SDCO LR LR
comp=Z,99µm,21.0s,MS7.5
116A Eloy 137.84 41 ⇑P PKPdf 03 54 53.1 +0.8
baz=138
MDV Middlebury 137.84 352 *e*PKPdf PKPdf 03 54 52.1 +0.2
HNH Hanover 138.00 351 *e*PKPdf PKPdf 03 54 56.9 +4.7
NCB Newcomb 138.00 353 *e*PKPdf PKPdf 03 54 52.9 +0.7
NCB LR LR
comp=Z,67µm,20.0s,MS7.4
Y18A Canyon Day Jun 138.10 38 ⇑P PKPdf 03 54 53.9 +1.2
baz=138
X19A St. Johns 138.11 37 ⇑P PKPdf 03 54 54.2 +1.5
baz=138
FFD Franklin Falls 138.13 350 *e*P PKPdf 03 54 51.5 -1.0
Z17A San Carlos Hig 138.15 39 ⇓P PKPdf 03 54 53.9 +1.0
baz=138
216A Three Points, 138.35 41 ⇑P PKPdf 03 54 54.4 +1.1
baz=138
117A Oracle 138.46 40 ⇑P PKPdf 03 54 54.1 +0.6
baz=138
Y19A Nutrioso 138.46 37 ⇓P PKPdf 03 54 54.3 +0.9
baz=138
JFWS Jewell Farm 138.48 11 *e*PKHKP 03 54 43.8
JFWS *e* 03 57 44.4
JFWS MLR MLR
comp=Z,127µm,21.0s,MS7.6
Z18A Geronimo 138.56 39 ⇓P PKPdf 03 54 54.5 +0.9
baz=138
TUC Tucson 138.60 40 *e*PKIKP PKPdf 03 54 46.9 -6.8
TUC *e* 03 54 52.3
TUC MLR MLR
comp=Z,60µm,20.0s,MS7.3
118A Homack Ranch, 138.90 39 ⇑P PKPdf 03 54 54.7 +0.5
baz=139
Z19A T-Link Ranch, 138.90 38 ⇑P PKPdf 03 54 55.1 +0.9
baz=139
VAO Valinhos 138.91 231 (P) PKPdf 03 54 58.1 +3.6
VAO *i* 03 55 10.4
VAO *i* 03 55 36.7
SPB Sao Paulo 138.94 230 *e*PKPdf PKPdf 03 54 53.0 -1.5
HRV Adam Dziewonsk 139.05 350 *e*PKIKP PKPdf 03 54 53.1 -1.1
HRV MLR MLR
comp=Z,92µm,20.0s,MS7.5
WES Weston 139.13 350 PFAKE 03 55 10.0 +16
WES LR LR
comp=Z,93µm,20.0s,MS7.5
ANMO Albuquerque 139.37 34 PKhKP 03 54 48.8
comp=Z,34nm,0.9s,baz=289,slow=2.9,SNR=39
ANMO Albuquerque 139.37 34 *e*PKPpre 03 54 47.9
ANMO LR LR
comp=Z,107µm,20.0s,MS7.6
LAZ Ladron 139.39 35 *e*PKPdf PKPdf 03 54 53.2 -1.9
QUA2 Belchertown 139.41 351 *e*PKPdf PKPdf 03 54 53.6 -1.2
CBKS Cedar Bluff 139.47 23 *e*PKHKP 03 54 45.8
CBKS *e* 03 57 49.8
CBKS MLR MLR
comp=Z,144µm,22.0s,MS7.7
BRYW Bryant College 139.62 350 *e*PKPdf PKPdf 03 54 54.2 -1.1
LENM Lemitar 139.65 35 *e*PKPdf PKPdf 03 54 56.0 +0.4
318A Bisbee 139.67 41 ⇑P PKPdf 03 54 56.4 +0.7
baz=140
LPM Los Pinos Moun 139.74 34 *e*PKPdf PKPdf 03 54 53.4 -2.3
Y22C IRIS PASSCAL I 139.75 35 ⇓P PKPdf 03 54 56.5 +0.8
baz=140
BNM Barren Site 139.86 35 *e*PKPdf PKPdf 03 54 54.0 -1.9
BINY Binghamton 139.94 355 *e*PKPdf PKPdf 03 54 54.4 -1.5
BINY *e*PP PP 03 57 52.0 +1.1
BINY LR LR
comp=Z,117µm,19.0s,MS7.7
319A Douglas 140.17 40 ⇑P PKPdf 03 54 57.8 +1.2
baz=140
KSU1 Kansas State U 140.38 20 *e*PKPdf PKPdf 03 54 53.6 -3.1
KSU1 *e*PP PP 03 57 55.4 +1.6
KSU1 LR LR
comp=Z,94µm,20.0s,MS7.5
ALLY Alegheny Colle 140.69 360 *e*PKPdf PKPdf 03 54 53.9 -3.3
CPNY Central Park 141.10 352 *e*PKPdf PKPdf 03 54 56.8 -1.2
AMTX Amarillo 141.90 29 *e*PKPdf PKPdf 03 54 59.2 -0.4
AMTX *e*PP PP 03 58 05.3 +1.9
AMTX LR LR
comp=Z,99µm,20.0s,MS7.6
ACSO Alum Creek Sta 142.03 3 *e*PKPdf PKPdf 03 54 57.0 -2.7
ACSO LR LR
comp=Z,52µm,21.0s,MS7.3
MVL Millersville 142.15 355 *e*PKPpre 03 54 47.0
SLM Saint Louis 142.60 13 *e*PKIKP PKPdf 03 54 57.4 -3.3
MCWV Mont Chateau 142.67 359 *e*PKPdf PKPdf 03 54 56.5 -4.4
MCWV LR LR
comp=Z,200µm,21.0s,MS7.9
BLO Bloomington 142.74 8 *e*PKIKP PKPdf 03 54 56.3 -4.7
BLO *e* 03 55 01.1
SDMD Soldier's Deli 142.78 355 *e*PKPdf PKPdf 03 54 58.6 -2.4
LMEL Las Melosas 142.91 194 *e*P PKPdf 03 55 05.0 +3.6
CCM Cathedral Cave 142.92 14 *e*PKIKP PKPdf 03 54 56.3 -5.0
CCM MLR MLR
comp=Z,94µm,19.0s,MS7.6
OLIL Olney 142.93 10 *e*PKPpre 03 54 57.2
OLIL *e*PKPdf PKPdf 03 55 00.7 -0.6
FVM French Village 143.18 13 *e*PKIKP PKPdf 03 54 57.6 -4.2
WMOK Wichita Mounta 143.35 26 *e*PKIKP PKPdf 03 54 58.0 -4.2
WMOK *e* 03 58 15.6
WMOK MLR MLR
comp=Z,153µm,22.0s,MS7.7
BDFB Brasilia 143.39 240 PKP PKPdf 03 55 03.1 +0.4
comp=Z,56nm,1.2s,baz=64,slow=1.3,SNR=16
BDFB Brasilia 143.39 240 PKP PKPdf 03 55 03.1 +0.4
BDFB LR LR
comp=Z,54µm,20.0s,MS7.3
CLCH Cerro Calan 143.43 194 ⇓*i*P PKPdf 03 55 09.6 +7.2
WCI Wyandotte Cave 143.70 8 *e*PKIKP PKPdf 03 54 58.6 -4.1
WCI MLR MLR
comp=Z,155µm,22.0s,MS7.7
SIUC Southern Illin 143.70 12 *e*PKPdf PKPdf 03 54 59.8 -2.9
USIN University of 143.75 10 *e*PKPdf PKPdf 03 54 59.8 -3.0
LPIG La Paz 143.80 50 PKP PKPdf 03 55 01.5 -1.7
comp=Z,95nm,0.7s,baz=353,slow=1.1,SNR=15
LPIG La Paz 143.80 50 PKP PKPdf 03 55 01.6 -1.7
CPUP Villa Florida 143.94 217 PKP PKPdf 03 55 02.5 -0.9
comp=Z,20nm,0.9s,baz=104,slow=2.3,SNR=32
CPUP Villa Florida 143.94 217 *e*PKPdf PKPdf 03 55 00.7 -2.7

CPUP				LR	LR				
	comp=Z,6µm,19.0s,MS6.4								
CFAA	**Coronel Fontan**	**144.48**	**198**	PKP	PKPdf	03 55 03.6	-0.7		
	comp=Z,2.2nm,0.5s,baz=164,slow=3.7,SNR=42								
PARMO	**Parma**	**144.60**	**13**	*e*PKPdf	PKPdf	03 55 02.3	-2.0		
PARMO				*e*PP	PP	03 58 22.1	+2.8		
URVA	**University of**	**144.66**	**356**	*e*P	PKPdf	03 55 01.6	-2.8		
PVMO	**Portageville**	**144.85**	**13**	*e*PKPdf	PKPdf	03 55 03.9	-0.8		
GLAT	**Glass**	**145.08**	**13**	*e*PKPbc	PKPbc	03 55 04.2	-0.4		
TXAR	**Lajitas Array**	**145.09**	**37**	PKPbc	PKPbc	03 55 04.5	-0.2		
	comp=Z,708nm,1.1s,baz=270,slow=1.8,SNR=281								
TXAR	**Lajitas Array**	**145.09**	**37**	PKIKP	PKPdf	03 55 04.5	-0.8		
TXAR				pmax	pmax				
	comp=Z,708nm,1.1s								
ELN	**Prospectdale**	**145.10**	**0**	*e*PKPbc	PKPbc	03 55 02.4	-2.1		
UTMT	**University of**	**145.10**	**12**	*e*PKPbc	PKPbc	03 55 03.4	-1.2		
BLA	**Blacksburg**	**145.12**	**360**	*e*PKIKP	PKPdf	03 55 03.1	-2.1		
BLA				MLR	MLR				
	comp=Z,99µm,19.0s,MS7.6								
GNAR	**Gosnell**	**145.21**	**14**	*e*PKPdf	PKPdf	03 55 03.0	-2.4		
GNAR				*e*PKPbc	PKPbc	03 55 05.0	0.0		
HALT	**Halls**	**145.41**	**13**	*e*PKPbc	PKPbc	03 55 05.5	-0.1		
HBAR	**Harrisburg**	**145.44**	**15**	*e*PKPbc	PKPbc	03 55 05.4	-0.3		
WVT	**Waverly**	**145.51**	**11**	*e*PKIKP	PKPdf	03 55 04.3	-1.6		
WVT				MLR	MLR				
	comp=Z,111µm,19.0s,MS7.7								
MIAR	**Mount Ida**	**145.52**	**19**	*e*PKIKP	PKPdf	03 55 05.1	-0.9		
MIAR				MLR	MLR				
	comp=Z,72µm,19.0s,MS7.5								
TZTN	**Tazewell**	**145.66**	**4**	*e*PKPbc	PKPbc	03 55 04.9	-1.4		
TZTN				LR	LR				
	comp=Z,177µm,20.0s,MS7.8								
UALR	**University of**	**145.70**	**18**	*e*PKPbc	PKPbc	03 55 06.0	-0.6		
MET	**Memphis--Engin**	**146.03**	**14**	*e*PKPbc	PKPbc	03 55 06.9	-0.6		
JCT	**Junction City**	**146.38**	**31**	*e*PKPdf	PKPbc	03 55 06.6	-0.9		
JCT				*e*PKPbc	PKPbc	03 55 08.9	+0.2		
JCT				LR	LR				
	comp=Z,86µm,21.0s,MS7.5								
BBSR	**BB Station**	**146.50**	**335**	*e*PKPbc	PKPbc	03 55 08.7	-0.4		
BBSR				LR	LR				
	comp=Z,60µm,20.0s,MS7.4								
TKL	**Tuckaleechee C**	**146.52**	**5**	*e*PKP2	PKPab	03 55 07.5	-2.4		
TLL	**Tololo Astrono**	**146.57**	**195**	*e*P	PKPab	03 55 09.8	-0.4		
CPCT	**Cooper Cave**	**146.66**	**6**	*e*PKPbc	PKPbc	03 55 08.4	-1.0		
SWET	**Sewanee**	**146.71**	**8**	*e*PKPbc	PKPbc	03 55 08.3	-1.3		
OXF	**Oxford**	**146.74**	**14**	*e*PKP2	PKPbc	03 55 08.2	-1.5		
OXF				MLR	MLR				
	comp=Z,92µm,22.0s,MS7.5								
CNNC	**Cliffs of the**	**147.00**	**356**	*e*PKPbc	PKPbc	03 55 09.2	-1.2		
CNNC				LR	LR				
	comp=Z,99µm,21.0s,MS7.6								
MAIG	**Mazatlaan**	**147.26**	**48**	*e*P	PKPdf	03 55 09.6	+0.4		
LCO	**Las Campanas**	**147.64**	**196**	*e*P	PKPbc	03 55 12.6	+0.2		
LCO	**Las Campanas**	**147.64**	**196**	*e*PKPbc	PKPbc	03 55 12.8	+0.4		
LCO				LR	LR				
	comp=Z,32µm,20.0s,MS7.1								
NATX	**Nacogdoches**	**147.64**	**23**	*e*PKPdf	PKPdf	03 55 10.3	+0.7		
NATX				*e*PKPbc	PKPbc	03 55 12.8	+0.5		
NATX				LR	LR				
	comp=Z,115µm,20.0s,MS7.7								
JSC	**Jenkinsville**	**148.03**	**1**	*e*PKIKP	PKPdf	03 55 10.3	+0.1		
JSC				*e*		03 55 12.9			
JSC				*e*		03 55 16.0			
VBMS	**Vicksburg**	**148.62**	**17**	*e*PKPbc	PKPbc	03 55 14.6	-0.3		
VBMS				LR	LR				
	comp=Z,108µm,19.0s,MS7.7								
LRAL	**Lakeview Retre**	**148.67**	**11**	*e*PKPdf	PKPdf	03 55 11.1	-0.1		
LRAL				*e*PKPbc	PKPbc	03 55 14.3	-0.7		
LRAL				*e*PKPab	PKPab	03 55 18.1	-0.4		
LRAL				LR	LR				
	comp=Z,112µm,20.0s,MS7.7								
HKT	**Hockley**	**148.73**	**26**	*e*PKIKP	PKPdf	03 55 12.2	+0.8		
HKT				*e*		03 55 15.5			
HKT				*e*		03 55 18.9			
HKT				MLR	MLR				
	comp=Z,141µm,21.0s,MS7.7								
GOGA	**Godfrey**	**148.78**	**5**	*e*PKIKP	PKPdf	03 55 11.1	-0.3		
GOGA				*e*		03 55 14.9			
GOGA				*e*		03 55 18.2			
GOGA				MLR	MLR				
	comp=Z,127µm,19.0s,MS7.7								
COW	**Cow Castle Cre**	**148.94**	**0**	*e*PKPdf	PKPdf	03 55 11.8	+0.1		
COW				*e*PKPbc	PKPbc	03 55 15.4	-0.2		
NHSC	**New Hope**	**149.21**	**360**	*e*PKPbc	PKPbc	03 55 16.0	-0.3		
NHSC				LR	LR				
	comp=Z,110µm,22.0s,MS7.6								
KVTX	**Kingsville**	**149.72**	**32**	*e*PKPbc	PKPbc	03 55 19.0	+1.2		
KVTX				LR	LR				
	comp=Z,95µm,19.0s,MS7.6								
BRAL	**Brewton**	**150.62**	**12**	*e*PKPdf	PKPdf	03 55 15.0	+0.6		
BRAL				*e*PKPbc	PKPbc	03 55 19.3	-0.6		
BRAL				*e*PKPab	PKPab	03 55 24.1	-2.4		
BRAL				LR	LR				
	comp=Z,90µm,20.0s,MS7.6								
SFJM	**Santa Fe**	**151.38**	**49**	*i* P	PKPdf	03 55 17.9	+2.0		
LVC	**Limon Verde**	**152.94**	**204**	PKPbc	PKPbc	03 55 23.5	-1.9		
	comp=Z,7.8nm,0.9s,baz=281,slow=3.9,SNR=3.1								
LVC	**Limon Verde**	**152.94**	**204**	*e*PKPbc	PKPbc	03 55 24.3	-1.1		
LVC				*e*PKPab	PKPab	03 55 35.1	-1.3		
LVC				LR	LR				
	comp=Z,27µm,21.0s,MS7.0								
MOIG	**Morelia**	**153.26**	**48**	*i* P	PKPdf	03 55 18.2	-0.5		
SIV	**San Ignacio**	**153.71**	**226**	PKP	PKPdf	03 55 18.7	-0.7		
	comp=Z,14nm,1.0s,baz=118,slow=0.6,SNR=10								
SIV				PKPbc	PKPbc	03 55 26.3	-0.9		
	comp=Z,21nm,0.8s,baz=104,slow=3.6,SNR=19								
DWPF	**Disney**	**154.18**	**2**	*e*PKPbc	PKPdf	03 55 22.2	+2.5		
DWPF				LR	LR				
	comp=Z,117µm,21.0s,MS7.7								
ZIIG	**Zihuatanejo**	**154.26**	**52**	*i* P	PKPdf	03 55 22.8	+2.7		
PTVM	**Pico Tres Padr**	**154.82**	**45**	*i* P	PKPdf	03 55 22.8	+1.9		
PBVM	**Pinon**	**154.94**	**45**	*i* P	PKPdf	03 55 25.1	+4.1		
IIO	**Organos**	**155.09**	**45**	*e*P	PKPdf	03 55 23.3	+2.0		
PLIG	**Platanillo**	**155.30**	**48**	*e*P	PKPdf	03 55 22.1	+0.6		
PPM	**Popocatepetl**	**155.51**	**45**	*i* PKIKP	PKPdf	03 55 24.5	+2.7		
CAIG	**El Cayaco**	**155.52**	**52**	*i* P	PKPdf	03 55 24.8	+3.0		
ACX	**Acapulco**	**155.90**	**51**	*i* P	PKPab	03 55 40.3	-8.8		
BPA	**Boggy Peak**	**156.50**	**310**	*e*	PKPdf	03 55 20.2	-3.0		
LVIG	**Laguna Verde**	**156.56**	**41**	*e*P	PKPdf	03 55 22.3	-0.9		
BBGH	**Gun Hill**	**156.64**	**299**	PFAKE		03 55 30.0	+6.6		
BBGH				LR	LR				
	comp=Z,61µm,21.0s,MS7.4								
DWS	**Wesley**	**156.92**	**306**	*e*	PKPdf	03 55 29.4	+5.7		
FDF	**Fort de France**	**157.24**	**304**	*e*PKIKP	PKPdf	03 55 24.5	+0.3		
PNIG	**Pinotepa**	**157.56**	**50**	*i* P	PKPdf	03 55 22.8	-1.7		
LPAZ	**La Paz**	**158.01**	**213**	PKP	PKPdf	03 55 25.7	+0.6		
	comp=Z,21nm,1.1s,baz=64,slow=4.1,SNR=15								
LPAZ	**La Paz**	**158.01**	**213**	*e*PKPdf	PKPdf	03 55 25.8	+0.7		
LPAZ				LR	LR				
	comp=Z,44µm,20.0s,MS7.3								
VHO	**Vista Hermosa**	**158.17**	**46**	*i* P	PKPdf	03 55 24.8	-0.5		
MTP	**Monte Pirata**	**158.46**	**318**	*e*PKPdf	PKPdf	03 55 26.1	+0.5		
HUMP	**Col San Antoni**	**158.63**	**319**	*e*PKPdf	PKPdf	03 55 25.6	-0.2		
CPD	**Cerro la Pandu**	**158.75**	**319**	*e*PKIKP	PKPdf	03 55 26.1	+0.2		
SJG	**San Juan**	**158.84**	**319**	PKP	PKPdf	03 55 26.0	-0.1		
	comp=Z,25nm,1.0s,baz=36,slow=6.8,SNR=5.4								
SJG	**San Juan**	**158.84**	**319**	*e*PKPdf	PKPdf	03 55 27.5	+1.4		
SJG				LR	LR				
	comp=Z,63µm,20.0s,MS7.5								
GRGR	**Grenville**	**158.92**	**299**	PFAKE		03 55 40.0	+14		
GRGR				LR	LR				
	comp=Z,49µm,21.0s,MS7.3								
CMIG	**Matias Romero**	**159.45**	**43**	PKP	PKPdf	03 55 26.4	-0.4		
	comp=Z,14nm,0.9s,baz=317,slow=1.8,SNR=8.6								
CMIG				PKPab	PKPab	03 56 04.1	-0.4		
	comp=Z,68nm,0.8s,baz=297,slow=5.9,SNR=9.9								
CMIG	**Matias Romero**	**159.45**	**43**	PKP	PKPdf	03 55 26.4	-0.4		
CMIG				PKPab	PKPab	03 56 04.1	-0.4		
HUIG	**Huatulco**	**159.47**	**48**	*i* P	PKPdf	03 55 26.7	-0.2		
ARE	**Arequipa**	**159.50**	**205**	*e*PKIKP	PKPdf	03 55 32.0	+5.1		
TEIG	**Tepich**	**160.47**	**23**	PKP	PKPdf	03 55 27.5	-0.3		
	comp=Z,32nm,1.1s,baz=272,slow=7.9								
TEIG				PKPab	PKPab	03 56 06.3	-2.5		
	comp=Z,25nm,0.9s,baz=41,slow=3.4,SNR=2.9								
TEIG	**Tepich**	**160.47**	**23**	*e*PKPdf	PKPdf	03 55 27.6	-0.2		
TEIG				LR	LR				
	comp=Z,81µm,20.0s								
SCX	**San Cristobal**	**161.18**	**39**	*i* P	PKPdf	03 55 32.9	+4.1		
CCIG	**Comitan**	**161.84**	**39**	*i* P	PKPdf	03 55 28.8	-0.6		
NNA	**Nana**	**165.50**	**194**	PKP	PKPdf	03 55 36.5	+3.7		
	comp=Z,24nm,1.0s,baz=306,slow=2.3,SNR=5.3								
NNA	**Nana**	**165.50**	**194**	*e*PKPdf	PKPdf	03 55 36.1	+3.3		
NNA				LR	LR				
	comp=Z,34µm,21.0s								
TGUH	**Tegucigalpa,Un**	**166.38**	**29**	*e*PKPdf	PKPdf	03 55 33.1	-0.5		
TGUH				*e*PKPab	PKPab	03 56 35.0	+0.2		
TGUH				LR	LR				
	comp=Z,39µm,21.0s								
SDV	**Santo Domingo**	**168.18**	**305**	PKP	PKPdf	03 55 34.4	-0.5		
	comp=Z,17nm,0.7s,baz=328,slow=5.1,SNR=13								
SDV	**Santo Domingo**	**168.18**	**305**	*e*PKPdf	PKPdf	03 55 36.9	+2.0		
SDV				LR	LR				
	comp=Z,18µm,20.0s								
PAYG	**Puerto Ayora**	**169.75**	**106**	PFAKE		03 55 50.0	+14		
PAYG				LR	LR				
	comp=Z,31µm,20.0s								
ATAH	**Atahualpa**	**170.68**	**193**	PKP	PKPdf	03 55 37.2	+0.8		
	comp=Z,34nm,1.2s,baz=159,slow=1.0,SNR=13								
JTS	**JuntasAbangare**	**170.75**	**29**	PKP	PKPdf	03 55 36.9	+0.4		
	comp=Z,13nm,1.0s,baz=300,slow=20,SNR=2.4								
JTS	**JuntasAbangare**	**170.75**	**29**	*e*PKPdf	PKPdf	03 55 36.5	0.0		
JTS				LR	LR				
	comp=Z,24µm,19.0s								
BCIP	**Isla Barro Col**	**173.01**	**355**	*e*PKPdf	PKPdf	03 55 35.8	-1.7		
BCIP				LR	LR				
	comp=Z,42µm,20.0s								
ROSC	**El Rosal**	**173.35**	**294**	PKP	PKPdf	03 55 37.9	+0.2		
	comp=Z,18nm,0.9s,baz=127,slow=1.2,SNR=20								
OTAV	**Otavalo**	**177.25**	**226**	*e*PKPdf	PKPdf	03 55 39.0	+0.2		
OTAV				LR	LR				
	comp=Z,51µm,20.0s								

ATH ***13*** *03:40:34.2, 4031N×2109E, h5km, MD2.8/3*
ISCJB ***13*** *03:40:35.1±0.8, 4024N±003×2115E±007, h10km, Error ellipse: s-maj=8.5km s-min=4.2km az=162.9*
CSEM ***13*** *03:40:35.0±0.2, 4027N×2111E, h10km, MD2.8, Error ellipse: s-maj=3.9km s-min=2.1km az=85.0*
SKO ***13*** *03:40:36.2, 4021N×2114E, h0km*

ISC 13 03:40:35.4±0.8, 4021N±003×2112E±007, h10km, n9, σ0§87/16, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	**0.51**	**79**	*e*PB	**Pg**	**03 40 44.5**	**-0.7**
KZN				*e*SB	**Sg**	**03 40 51.6**	**-0.3**
JAN	**Janina**	**0.59**	**201**	*e*PB	**Pb**	**03 40 46.8**	**-1.0**
BIA	**Bitola**	**0.82**	**11**	*e*Pg	**Pg**	**03 40 49.7**	**-1.4**
BIA				*e*Sg	**Sg**	**03 41 02.0**	**+0.1**
OHR	**Ohrid**	**0.93**	**345**	*e*Pg	**Pg**	**03 40 53.4**	**+0.1**
OHR				*e*Sg	**Sg**	**03 41 06.8**	**+1.4**
OHR	**Ohrid**	**0.93**	**345**	*e*Pg	**Pg**	**03 40 53.3**	**0.0**
OHR				*e*Sg	**Sg**	**03 41 06.7**	**+1.3**
THL	**Klokotos Trika**	**0.94**	**133**	*e*PG	**Pg**	**03 40 53.3**	**-0.2**
THL				*e*SB	**Sb**	**03 41 07.7**	**+1.4**
KRUS	**Krusevo**	**1.16**	**5**	*e*Pg	**Pg**	**03 40 56.9**	**-0.7**
KRUS				*e*Sg	**Sg**	**03 41 13.4**	**+0.7**
KRUS	**Krusevo**	**1.16**	**5**	*e*Pg	**Pg**	**03 40 56.9**	**-0.7**
KRUS				*e*Sg	**Sg**	**03 41 13.3**	**+0.6**
EVR	**Evrytania**	**1.40**	**157**	*e*PB	**Pb**	**03 41 02.5**	**+0.9**

IDC ***13*** *03:42:13.7±2.4, 206S×9958E, h0km, mb4.7/7, mb1 4.9/7, mb1mx4.5/18, mbtmp4.8/7, Error ellipse: s-maj=70.1km s-min=25.8km az=57.0*
ISCJB ***13*** *03:42:16.9±1.2, 20S±02×996E±01, h33km, mb5.0/9, Error ellipse: s-maj=26.1km s-min=14.0km az=37.6*
MOS ***13*** *03:42:18.5±1.0, 174S×9983E, h33km, mb6.0/2, Error ellipse: s-maj=33.2km s-min=15.5km az=92.4*
NEIC ***13*** *03:42:19.1±0.5, 198S×9964E, h35km, mb5.1/4, Error ellipse: s-maj=13.0km s-min=8.9km az=225.0*

ISC 13 03:42:19.2±1.2, 20S±02×996E±01, h35km, n23, σ0§49/17, mb5.0/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**18.36**	**64**	*e*Pn	**Pn**	**03 46 31.1**	**-0.2**
KAPI	**Kappang**	**20.29**	**99**	*e*P	**P**	**03 46 52.4**	**+0.1**
	106nm,1.1s						
CMAR	**Chiang Mai Arr**	**20.32**	**358**	P	**P**	**03 46 52.4**	**+0.1**
	8.6nm,0.8s,baz=186,slow=11,SNR=4.3						
CHTO	**Chiang Mai**	**20.67**	**358**	*e*P	**P**	**03 46 54.8**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,4µm,2.1s						
CHTO	**Chiang Mai**	**20.67**	**358**	*e*P	**P**	**03 46 54.8**	**-1.5**
	comp=Z,4µm,2.1s						
QIZ	**Qiongzhong**	**23.16**	**25**	*e*P	**P**	**03 47 23.1**	**+0.3**
	comp=Z,63nm,0.9s,mb5.0						
WRA	**Warramunga Arr**	**38.31**	**120**	P	**P**	**03 49 36.3**	**-0.5**
	comp=Z,8.2nm,0.9s,mb4.4,baz=297,slow=8.8,SNR=2.5						
WRA	**Warramunga Arr**	**38.31**	**120**	P	**P**	**03 49 36.3**	**-0.5**
KSRS	**Korea Array**	**47.18**	**31**	P	**P**	**03 50 48.9**	**+0.4**
	comp=Z,8.2nm,0.8s,mb4.7,baz=224,slow=8.6,SNR=5.7						
SONM	**Songino Array**	**49.95**	**6**	P	**P**	**03 51 10.4**	**+0.8**
	comp=Z,10nm,0.6s,mb5.0,baz=188,slow=8.3,SNR=5.5						
EKS2	**Erkin-Say**	**50.19**	**335**	*e*P	**P**	**03 51 11.5**	**0.0**
	comp=Z,22nm,1.0s,mb5.2						
MKAR	**Makanchi Array**	**50.91**	**345**	P	**P**	**03 51 17.0**	**+0.1**
	comp=Z,15nm,0.8s,mb5.0,baz=161,slow=8.7,SNR=5.9						
MJAR	**Matsushiro Arr**	**52.48**	**39**	P	**P**	**03 51 29.1**	**+0.3**
	comp=Z,9.5nm,0.9s,mb4.7,baz=214,slow=7.5,SNR=6.1						
ZALV	**Zalesovo Beam**	**57.08**	**350**	P	**P**	**03 52 01.6**	**-0.2**
	comp=Z,40nm,1.0s,mb5.4,baz=173,slow=5.9,SNR=5.2						
YSS	**Yuzh-Sakhalins**	**61.65**	**32**	*e*P	**P**	**03 52 33.4**	**-0.1**
PSZ	**Piszkesteto**	**84.59**	**318**	*e*P	**P**	**03 54 49.3**	**+0.3**
PSZ				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.2						
PSZ	**Piszkesteto**	**84.59**	**318**	*e*P	**P**	**03 54 49.3**	**+0.3**
	comp=Z,27nm,1.3s,mb5.2						
HGN	**Heimansgroeve**	**93.87**	**321**	*e*PPP		03 54 57.6	
CPUP	**Villa Florida**	**144.13**	**217**	*e*PKIKP	PKPdf	04 01 51.8	-0.3
TXAR	**Lajitas Array**	**144.90**	**37**	PKPbc	PKPdf	04 01 53.1	-0.2
	comp=Z,5.0nm,0.5s,baz=281,slow=0.7,SNR=18						
WVT	**Waverly**	**145.32**	**11**	*e*PKIKP	PKPdf	04 01 54.5	+0.6
MIAR	**Mount Ida**	**145.33**	**19**	*e*PKIKP	PKPdf	04 01 53.6	-0.4
JCT	**Junction City**	**146.19**	**31**	*e*PKP2	PKPab	04 01 56.4	-0.8

IDC 13 03:52:26.2±4.1, 248S×9906E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.8/18, mbtmp4.0/4, Error ellipse: s-maj=165.1km s-min=28.9km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.57**	**119**	P	P	03 59 50.6	-0.5
	0.8nm,0.5s,baz=294,slow=8.1,SNR=5.8						
SONM	**Songino Array**	**50.52**	**6**	P	P	04 01 25.9	-0.2
	1.5nm,0.6s,baz=186,slow=8.3,SNR=5.6						
MKAR	**Makanchi Array**	**51.24**	**345**	P	P	04 01 31.6	-0.1
	1.1nm,0.6s,baz=159,slow=8.2,SNR=5.2						
ZALV	**Zalesovo Beam**	**57.47**	**350**	P	P	04 02 16.6	-0.3
	1.7nm,0.4s,baz=145,slow=7.6,SNR=4.2						
TXAR	**Lajitas Array**	**145.65**	**37**	PKPbc	PKPbc	04 12 08.0	+0.4
	1.1nm,0.7s,baz=212,slow=1.6,SNR=9.4						

IDC 13 03:55:20.6±3.5, 197S×9986E, h0km, mb4.0/4, mb1 4.0/4, mb1mx3.7/18, mbtmp4.0/4, Error ellipse: s-maj=147.3km s-min=27.4km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.13**	**120**	P	P	04 02 41.8	0.0
	0.7nm,0.8s,baz=301,slow=9.7,SNR=4.2						
SONM	**Songino Array**	**49.93**	**6**	P	P	04 04 16.9	+0.8
	1.2nm,0.5s,baz=190,slow=7.8,SNR=5.6						
MKAR	**Makanchi Array**	**50.96**	**345**	P	P	04 04 24.1	+0.1
	0.8nm,0.6s,baz=141,slow=7.8,SNR=4.8						
ZALV	**Zalesovo Beam**	**57.12**	**349**	P	P	04 05 08.2	-0.6
	1.6nm,0.3s,baz=149,slow=3.4,SNR=5.1						
TXAR	**Lajitas Array**	**144.77**	**37**	PKP	PKPdf	04 14 59.5	-0.8
	0.7nm,0.6s,baz=192,slow=1.5,SNR=12						

IDC ***13*** *04:06:08.1±0.4, 151S×9981E, h0km, mb4.8/32, mb1 4.9/33, mb1mx4.9/33, mbtmp4.8/33, ML4.8/1, Error ellipse: s-maj=14.9km s-min=9.7km az=41.0*
BJI ***13*** *04:06:11.3, 162S×9965E, h21km, mB5.5, mb5.2, Ms5.1, Msz4.8*
ISCJB ***13*** *04:06:12.0±0.2, 173S±003×9947E±003, h27km, mb5.1/106, MS4.8/2, Error ellipse: s-maj=4.9km s-min=3.5km az=29.3*
SZGRF ***13*** *04:06:12.3, 226S×9965E, h33km, mb5.2, Southern Sumatera, Indonesia*
NEIC ***13*** *04:06:13.7±2.9, 161S×9964E, h29km±19km, mb5.1/47, Error ellipse: s-maj=7.9km s-min=5.1km az=52.0*
NEIC Felt [III] at Padang, Sumatra.
MOS ***13*** *04:06:13.3±1.2, 156S×9968E, h36km, mb5.3/36, Error ellipse: s-maj=11.2km s-min=6.0km az=117.4*
DJA ***13*** *04:06:16, 162S×9947E, h25km, MLv5.6/11*

ISC 13 04:06:14.0±0.2, 175S±003×9945E±003, h29km, h29km±1.8km:pP-P, n486, σ1§18/275, mb5.1/106, MS4.8/2, 113C-110D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPI	**Padang Panjang**	**1.59**	**36**	P	**Pn**	**04 06 36.7**	**-3.6**
	0.0nm,0.0s						
KRJI	**Kerinci**	**2.04**	**100**	P	**Pn**	**04 06 45.5**	**-0.9**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.20**	**64**	P	**Pn**	**04 07 04.0**	**+1.6**
	0.0nm,0.0s						
TRSI	**Tarutung**	**3.78**	**352**	P	**Pn**	**04 07 14.0**	**+3.6**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.28**	**76**	P	**Pn**	**04 07 31.4**	**+0.4**
	425nm,1.1s						
KGM	**Kluang**	**5.38**	**46**	⇓P	**Pn**	**04 07 33.9**	**+1.5**
FRIM	**Kepong**	**5.41**	**24**	⇑P	**Pn**	**04 07 34.5**	**+1.7**
MYKOM	**Kota Tinggi**	**5.63**	**51**	⇓P	**Pn**	**04 07 37.2**	**+1.4**
KLI	**Kotabumi**	**6.22**	**120**	P	**Pn**	**04 07 45.4**	**+1.5**
	441nm,1.2s						
IPM	**Ipoh**	**6.38**	**14**	⇓P	**Pn**	**04 07 48.3**	**+2.1**
PPBI	**Pangkal Pinang**	**6.69**	**94**	P	**Pn**	**04 07 53.2**	**+2.7**
	108nm,1.0s						
TPI	**Tanjungpandan**	**8.26**	**97**	P	**Pn**	**04 08 14.8**	**+2.9**
	98nm,1.0s						
BSI	**Banda Aceh**	**8.31**	**330**	P	**Pn**	**04 08 11.8**	**-0.9**
	147nm,1.2s						
DBJI	**Dramaga**	**8.70**	**123**	P	**Pn**	**04 08 19.5**	**+1.4**
	271nm,1.3s						
SNG	**Songkhla**	**8.94**	**7**	P	**Pn**	**04 08 23.0**	**+1.6**
	340nm,1.0s						
LEM	**Lembang**	**9.57**	**122**	P	**Pn**	**04 08 32.4**	**+2.3**
	392nm,1.0s						
XMIS	**Christmas Isla**	**10.64**	**145**	*e*Pn	**Pn**	**04 08 39.6**	**-5.0**
XMIS				*e*Sn	**Sn**	**04 10 30.0**	**-13**
KSM	**Kuching**	**11.32**	**74**	⇑P	**Pn**	**04 08 56.8**	**+2.9**
KSM	**Kuching**	**11.32**	**74**	*e*Pn	**Pn**	**04 08 52.4**	**-1.5**
BJII	**Banjamegara**	**11.63**	**119**	P	**Pn**	**04 08 58.9**	**+0.7**
	113nm,0.8s						
SBUM	**Sibu**	**13.43**	**72**	⇑P	**Pn**	**04 09 25.8**	**+2.9**
SJI	**Sawahan**	**13.63**	**116**	P	**Pn**	**04 09 23.8**	**-1.8**
	116nm,1.0s						
KRKI	**Karangkates**	**14.43**	**117**	P	**Pn**	**04 09 45.5**	**+9.1**
	212nm,0.4s						
BTM	**Bintulu**	**14.48**	**70**	⇑P	**Pn**	**04 09 42.3**	**+5.1**
PLKI	**Palangkaraya**	**14.49**	**92**	P	**Pn**	**04 09 44.3**	**+7.0**
	290nm,1.0s						
KMMI	**Kalianget**	**15.39**	**110**	P	**Pn**	**04 09 55.3**	**+5.9**
	245nm,1.4s						
BBKI	**Banjar Baru**	**15.47**	**97**	P	**Pn**	**04 09 53.4**	**+3.1**
	150nm,1.1s						
KHKI	**Kahang-Kahang**	**17.37**	**113**	P	**Pn**	**04 10 16.8**	**+2.2**
	64nm,0.9s						
SMKI	**Samarinda**	**17.80**	**86**	P	**Pn**	**04 10 21.7**	**+1.8**
	269nm,0.9s						
KKM	**Kota Kinabalu**	**18.44**	**65**	⇓P	**Pn**	**04 10 28.3**	**+0.6**
KKM	**Kota Kinabalu**	**18.44**	**65**	*e*P	**Pn**	**04 10 27.1**	**-0.6**
SDKM	**Sandakan**	**19.18**	**67**	⇑P	**Pn**	**04 10 36.9**	**+0.3**
TSM	**Tawau**	**19.36

WHN **Wuhan** 35.11 23 P P 04 13 03.4 -1.6
NWAO **Narrogin (SRO)** 35.23 154 P P 04 13 05.9 -0.1
comp=Z,16nm,0.7s,mb5.0,baz=314,slow=8.9,SNR=8.7
DDI **Dehra Dun** 37.86 329 *ex* x 04 13 22.0
LZH **Lanzhou** 37.86 6 ⇑P P 04 13 27.6 -0.8
LZH AP pP 04 13 32.5 -4.4
LZH XP sP 04 13 34.8 -5.6
LZH PP PP 04 14 57.5 +2.2
LZH S S 04 19 19.3 +1.3
LZH XS sS 04 19 26.6 -5.4
LZH SS SS 04 21 55.8 -9.3
LZH AMB AMB
comp=Z,55nm,1.2s,mb5.2
LZH AMB AMB
comp=Z,237nm,5.0s
LZH LR LR
comp=N,2μm,14.1s
LZH LR LR
comp=Z,3μm,17.8s,MS5.1
NJ2 **Nanjing** 38.32 27 *e*P P 04 13 33.5 +1.2
NJ2 AMB AMB
comp=Z,200nm,0.9s,mb5.8
WRA **Warramunga Arr** 38.59 120 P P 04 13 32.2 -2.6
comp=Z,37nm,0.7s,mb5.2,baz=304,slow=8.8,SNR=11
WRA PcP PcP 04 15 46.6 -0.5
comp=Z,2.0nm,0.7s,baz=299,slow=1.9,SNR=4.7
WRA S S 04 19 22.8 -6.7
comp=Z,1.1nm,0.8s,baz=289,slow=16,SNR=5.1
WRAB **Tennant Creek** 38.60 120 P P 04 13 33.0 -1.9
comp=Z,442nm,0.7s,mb6.3,SNR=12
WRAB **Tennant Creek** 38.60 120 *e*P P 04 13 32.9 -2.0
WRAB pmax pmax
comp=Z,61nm,0.8s,mb5.4
WRAB **Tennant Creek** 38.60 120 *e*P P 04 13 32.9 -2.0
comp=Z,61nm,0.8s,mb5.4
WB2 **Warramunga Arr** 38.60 120 *e*P P 04 13 27.5 -7.4
WB2 *e* 04 13 33.0
WB2 *e*S S 04 19 22.7 -7.0
WB2 **Warramunga Arr** 38.60 120 *e*P P 04 13 32.8 -2.1
WB2 *e* 04 13 33.0
WB2 *e*S S 04 19 22.7 -7.0
FORT **Forrest** 39.58 140 *e*P P 04 13 43.3 +0.3
comp=Z,32nm,0.9s,mb5.1
GTA **Gaotai** 40.96 0 ⇑P P 04 13 53.9 -0.3
GTA AP pP 04 13 58.6 -4.2
GTA XP sP 04 14 01.0 -5.2
GTA AMB AMB
comp=Z,30nm,1.4s,mb4.7
HHC **Hu-ho-hao-te** 43.81 13 *e*P P 04 14 17.4 0.0
HHC S S 04 20 48.1 +1.7
HHC AMB AMB
comp=Z,54nm,0.7s,mb5.4
BJT **Baijiatuan** 44.29 18 *e*P P 04 14 20.6 -0.7
BJT pmax pmax
comp=Z,45nm,1.0s
BJT **Baijiatuan** 44.29 18 *e*P P 04 14 20.6 -0.7
comp=Z,45nm,1.0s,mb5.2
BJI **Beijing** 44.32 18 P P 04 14 20.3 -1.2
BJI AMB AMB
comp=Z,27nm,1.2s,mb4.8
KSH **Kashi** 46.37 335 *e*P P 04 14 40.0 +2.2
KSH *e*AP pP 04 14 44.1 -2.4
KSH *e*XP sP 04 14 47.1 -2.8
KSH *e*PCP PcP 04 16 14.1 +1.5
KSH *e*PP PP 04 16 29.0 +2.0
KSH *e*PCS PcS 04 20 07.0 -0.1
KSH *e*S S 04 21 27.5 +3.9
KSH *e*XS sS 04 21 35.1 -2.7
KSH *e*SCS ScS 04 24 31.1 -0.1
KSH *e*SS SS 04 24 46.1 -3.5
KSH AMB AMB
comp=Z,66μm,12.2s
WMQ **Urumqi** 46.58 348 ⇓*i*P P 04 14 40.6 +1.3
WMQ AP pP 04 14 47.3 -0.7
WMQ AMB AMB
comp=Z,59nm,0.9s,mb5.5
KSRS **Korea Array** 47.09 31 P P 04 14 39.0 -4.4
comp=Z,30nm,0.9s,mb5.2,baz=224,slow=8.7,SNR=51
KSRS PcP PcP 04 16 14.2 -0.9
comp=Z,3.9nm,0.8s,baz=235,slow=3.2,SNR=3.8
ULHL **Ulaho** 48.56 337 P P 04 14 55.8 +1.0
SNR=7.2
CTA **Charters Tower** 49.20 115 *e*P P 04 14 58.6 -1.5
comp=Z,20nm,0.8s,mb5.2
CTA *e*pP pP 04 15 08.4 -0.4
CTA **Charters Tower** 49.20 115 P P 04 14 58.0 -2.1
comp=Z,31nm,0.9s,mb5.3,baz=289,slow=9.5,SNR=34
CTA **Charters Tower** 49.20 115 *e*P P 04 14 58.6 -1.5
CTA *e**PP pP 04 15 08.4 -0.4
CTA pmax pmax
comp=Z,20nm,0.8s
CTAO **Charters Tower** 49.20 115 *e*P P 04 14 58.6 -1.5
CTAO pmax pmax
comp=Z,18nm,1.1s,mb5.0
CTAO **Charters Tower** 49.20 115 *e*P P 04 14 58.6 -1.5
comp=Z,18nm,1.1s,mb5.0
UCH **Uchtor** 49.24 336 P P 04 15 01.5 +1.5
SNR=5.4
UCH **Uchtor** 49.24 336 *e*P P 04 15 00.9 +0.9
comp=Z,16nm,1.0s,mb5.0
TKM2 **Tokmak 2** 49.39 337 *e*P P 04 15 01.6 +0.5
TKM2 pmax pmax
comp=Z,32nm,0.9s,mb5.3
TKM2 **Tokmak 2** 49.39 337 P P 04 15 02.3 +1.2
SNR=16
TKM2 **Tokmak 2** 49.39 337 *e*P P 04 15 01.6 +0.5
comp=Z,32nm,0.9s,mb5.3
KBK **Karagaybulak** 49.42 336 P P 04 15 02.7 +1.4
SNR=5.3
AML **Almayashu** 49.51 335 P P 04 15 03.1 +1.0
SNR=10.0
AML **Almayashu** 49.51 335 *e*P P 04 15 02.5 +0.4
comp=Z,18nm,0.7s,mb5.2
STKA **Stephens Creek** 49.72 132 *e*P P 04 15 04.1 +0.2
comp=Z,22nm,0.7s,mb5.3
STKA *e*pP pP 04 15 13.8 +1.2
STKA **Stephens Creek** 49.72 132 P P 04 15 02.4 -1.5
comp=Z,26nm,0.7s,mb5.4,baz=310,slow=9.4,SNR=28
SONM **Songino Array** 49.75 6 P P 04 15 00.8 -3.0
comp=Z,23nm,0.8s,mb5.3,baz=189,slow=8.3,SNR=43
SONM PcP PcP 04 16 23.7 -0.8
comp=Z,10.0nm,0.9s,baz=188,slow=2.9,SNR=4.3
CHMS **Chumysh** 49.79 336 P P 04 15 04.4 +0.3
SNR=5.6
ULN **Ulaanbaatar** 49.85 7 *e*P P 04 15 04.2 -0.4
ULN pmax pmax
comp=Z,21nm,0.9s,mb5.2
ULN **Ulaanbaatar** 49.85 7 *e*P P 04 15 04.2 -0.3
comp=Z,21nm,0.9s,mb5.2
EKS2 **Erkin-Say** 49.91 335 P P 04 15 06.0 +1.0
SNR=16
EKS2 **Erkin-Say** 49.91 335 *e*P P 04 15 05.7 +0.6
comp=Z,29nm,0.8s,mb5.4
USP **Ospenovka** 50.11 336 P P 04 15 07.4 +0.8
SNR=15
MKAR **Makanchi Array** 50.64 345 P P 04 15 07.0 -3.5
comp=Z,26nm,0.8s,mb5.2,baz=156,slow=6.1,SNR=48
CN2 **Changchun** 50.98 24 *e*P P 04 15 11.1 -2.0
CN2 *e*S S 04 22 27.0 -1.3
CN2 AMB AMB
comp=Z,90nm,1.1s,mb5.6
CN2 AMB AMB
comp=Z,900nm,6.0s
MAJO **Matsushiro** 52.43 39 *e*P P 04 15 21.9 -2.2
MAJO pmax pmax
comp=Z,19nm,0.9s,mb5.0
MAJO **Matsushiro** 52.43 39 *e*P P 04 15 21.9 -2.2
comp=Z,19nm,0.9s,mb5.0
MAT **Matsushiro** 52.43 39 P P 04 15 22.4 -1.7
MJAR **Matsushiro Arr** 52.43 40 P P 04 15 20.3 -3.8
comp=Z,5.2nm,0.9s,mb4.5,baz=312,slow=1.5,SNR=4.7
MJAR **Matsushiro Arr** 52.43 40 P P 04 15 20.3 -3.8
MOY **Mondy** 53.23 1 *e*P P 04 15 20.8 -8.9
TLY **Talaya** 53.35 3 P P 04 15 31.2 +0.6
comp=Z,168nm,0.9s,mb6.0,SNR=5.0
TLY **Talaya** 53.35 3 *e*P P 04 15 29.8 -0.8
TLY pmax pmax
comp=Z,26nm,1.0s,mb5.1
TLY **Talaya** 53.35 3 *e*P P 04 15 30.5 -0.1
comp=Z,6.2nm,0.7s,mb4.7
MDJ **Mudanjiang** 53.41 27 P P 04 15 30.9 -0.3
MDJ AMB AMB
comp=Z,26nm,1.2s,mb5.0
MDJ **Mudanjiang** 53.41 27 *e*P P 04 15 30.6 -0.5
OPO **Ambohidratompo** 53.85 248 P P 04 15 37.3 +2.4
comp=Z,3.9nm,1.0s,mb4.3,baz=256,slow=4.1,SNR=2.8
KURK **Kurchatov** 55.22 344 P P 04 15 44.0 -0.2
comp=Z,310nm,0.9s,mb6.3,SNR=5.4
KURK **Kurchatov** 55.22 344 *e*P P 04 15 44.0 -0.2
KURK pmax pmax
comp=Z,48nm,0.9s,mb5.5
KURK **Kurchatov** 55.22 344 *e*P P 04 15 43.7 -0.5
comp=Z,50nm,0.9s,mb5.5
CAN **Canberra** 56.78 132 *e*P P 04 15 56.1 +0.3
ZALV **Zalesovo Beam** 56.82 350 P P 04 15 51.9 -3.8
comp=Z,84nm,0.9s,mb5.8,baz=186,slow=5.7,SNR=13
KRAR **Krasnoyarsk** 57.82 356 *e*P P 04 16 01.5 -1.2
KRAR pmax pmax
comp=Z,86nm,1.2s,mb5.7
ERM **Erimo** 58.78 37 *e*P P 04 16 07.8 -1.9
BRVK **Borovoye** 59.83 340 *e*P P 04 16 15.5 -1.2
BRVK pmax pmax
comp=Z,17nm,0.8s,mb5.1
BRVK **Borovoye** 59.83 340 *e*P P 04 16 15.5 -1.1
comp=Z,17nm,0.8s,mb5.1
YSS **Yuzh-Sakhalins** 61.56 32 *e*P P 04 16 27.8 -0.8
YSS pmax pmax
comp=Z,117nm,1.2s,mb5.9
YSS **Yuzh-Sakhalins** 61.56 32 *e*P P 04 16 27.4 -1.2
comp=Z,104nm,1.1s,mb5.9
KMBO **Kilima Mbogo** 62.18 270 P P 04 16 33.6 +0.1
comp=Z,1.5nm,0.5s,mb4.4,baz=20,slow=2.1,SNR=2.6
KMBO **Kilima Mbogo** 62.18 270 *e*P P 04 16 33.8 +0.3
KMBO pmax pmax
comp=Z,8.0nm,1.1s
KMBO **Kilima Mbogo** 62.18 270 *e*P P 04 16 33.8 +0.3
comp=Z,8.0nm,1.1s,mb4.8
AKTK **Aktyubinsk** 62.88 332 P P 04 16 36.1 -1.3
AKTO **Aktyubinsk** 62.88 332 P P 04 16 36.1 -1.3
comp=Z,13nm,0.9s,mb5.0,baz=136,slow=6.4,SNR=9.0
CASY **Casey** 64.88 175 *e*P P 04 16 51.9 +1.6
comp=Z,56nm,1.6s,mb5.3
GNI **Garni** 64.97 316 P P 04 16 50.6 -0.8
comp=Z,5.4nm,0.4s,mb4.9,baz=340,slow=17,SNR=2.5
GNI **Garni** 64.97 316 *e*P P 04 16 51.8 +0.4
GNI pmax pmax
comp=Z,34nm,1.2s
GNI **Garni** 64.97 316 *e*P P 04 16 51.8 +0.5
comp=Z,34nm,1.2s,mb5.3
SVE **Sverdlovsk** 66.25 338⇑ *e*P P 04 16 59.1 -0.1
SVE pmax pmax
comp=Z,66nm,1.0s,mb5.6
ARU **Arti** 66.76 337 *d i*P P 04 17 01.6 -0.9
ARU 04 19 25.8
ARU *e*S S 04 25 53.0 +0.3
ARU *e*SS SS 04 30 02.5 -8.5
ARU pmax pmax
comp=Z,70nm,1.7s,mb5.4
ARU **Arti** 66.76 337 *e*P P 04 17 01.6 -0.9
comp=Z,12nm,0.8s,mb5.0
YAK **Yakutsk** 67.64 15 *e*P P 04 17 06.6 -1.4
YAK pmax pmax
comp=Z,125nm,0.8s,mb6.0
YAK **Yakutsk** 67.64 15 *e*P P 04 17 06.6 -1.4
comp=Z,63nm,0.8s,mb5.7
KIV **Kislovodsk** 68.00 319⇑ *e*P P 04 17 10.5 -0.1
KIV *e**PP pP 04 17 20.8 +1.2
KIV *e**SP sP 04 17 24.8 +1.8
KIV pmax pmax
comp=Z,28nm,1.1s,mb5.2
KIV **Kislovodsk** 68.00 319⇓ *i*P P 04 17 11.4 +0.8
KIV **Kislovodsk** 68.00 319 *e*P P 04 17 10.3 -0.4
comp=Z,29nm,0.9s,mb5.3
ASF **Jabal al Asfar** 68.00 306 P P 04 17 10.8 -0.1
comp=Z,1.6nm,0.8s,mb4.1,baz=314,slow=3.0,SNR=3.9
MALT **Malatya** 68.77 312 *e*P P 04 17 14.3 -1.3
MALT pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
MALT **Malatya** 68.77 312 ⇓*i*P P 04 17 14.4 -1.2
MALT **Malatya** 68.77 312 *e*P P 04 17 14.3 -1.3
comp=Z,7.1nm,1.0s,mb4.5
MAW **Mawson** 70.39 194 P P 04 17 25.8 +0.7
comp=Z,6.0nm,0.9s,mb4.5,baz=32,slow=8.2,SNR=6.0
SKR **Severo-Kuril's** 70.97 34 *e*P P 04 17 27.5 -1.4
SKR *e* 04 17 41.5
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.0
LSZ **Lusaka** 71.47 255 P P 04 17 33.9 +1.3
comp=Z,0.7nm,0.3s,mb4.0,baz=60,slow=8.1,SNR=1.9
CSS **Prodhromos** 71.64 308 *e*P P 04 17 32.6 -0.6
comp=Z,14nm,0.8s,mb5.0
PETK **Petropavlovsk-** 72.97 32 P P 04 17 36.0 -4.8
comp=Z,20nm,0.8s,mb5.1,baz=248,slow=1.6,SNR=6.3
VSR **Storozhevoye** 73.26 325 *e*P P 04 17 41.0 -1.6
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,20nm,1.0s
PET **Petropavlovsk** 73.44 33⇑ *i*P P 04 17 42.4 -1.2
PET pmax pmax
comp=Z,106nm,0.8s,mb5.8
PET **Petropavlovsk** 73.44 33 *e*P P 04 17 42.2 -1.3
comp=Z,71nm,0.8s,mb5.7
SIM **Simferopol'** 74.05 318 *e*P P 04 17 47.3 0.0
SIM pmax pmax
comp=Z,16nm,0.8s,mb5.0
BOSA **Boshof** 75.30 241 P P 04 17 55.6 +0.6
comp=Z,5.4nm,1.0s,mb4.4,baz=259,slow=21,SNR=3.9
TIXI **Tiksi** 75.70 9 *e*P P 04 17 54.7 -1.6
TIXI pmax pmax
comp=Z,28nm,1.1s,mb5.1
TIXI **Tiksi** 75.70 9 *e*P P 04 17 54.8 -1.5
OBN **Obninsk** 76.29 328⇓ *i*P P 04 17 59.8 -0.2
OBN *e* 04 18 10.5
OBN *e**SP sP 04 18 13.6 +1.1
OBN 04 20 51.0
OBN pmax pmax
comp=Z,65nm,1.5s,mb5.3
OBN **Obninsk** 76.29 328⇑ *i*P P 04 17 59.5 -0.5
TIRR **Tirgusor** 77.80 316⇑ *i*P P 04 18 07.9 -0.8
TIRR **Tirgusor** 77.80 316 ⇑P P 04 18 07.9 -0.9
SYO **Syowa Base** 77.93 199⇓ *e*P P 04 18 08.8 -0.2
SYO **Syowa Base** 77.93 199⇓ *e*pP pP 04 18 22.2 +4.1
SYO **Syowa Base** 77.93 199⇓ *es*P sP 04 18 28.2 +6.8
KIS **Kishinev** 78.19 319 *e*P P 04 18 09.0 -1.8
KIS *e* 04 18 23.0
KIS **Kishinev** 78.19 319 *e*UNK P 04 18 09.0 -1.8
IDI **Anoyia** 78.45 306 P P 04 18 11.6 -0.9
comp=Z,15nm,1.0s,mb4.9,baz=101,slow=5.7,SNR=3.8
AKASG **Malin Array Be** 78.95 322 P P 04 18 12.2 -2.7
comp=Z,0.8nm,0.4s,mb4.0,baz=83,slow=4.3,SNR=11
VRI **Vrincioaia** 79.30 317 ⇓*i*P P 04 18 17.6 +0.6
VRI **Vrincioaia** 79.30 317 ⇓P P 04 18 17.6 +0.6
PLOR **Plostina** 79.35 317 ⇓*i*P P 04 18 18.3 +1.0
MLR **Muntele Rosu** 79.74 317 P P 04 18 19.0 -0.4
comp=Z,20nm,1.0s,mb5.0,baz=54,slow=3.1,SNR=12
MLR **Muntele Rosu** 79.74 317 ⇓*i*P P 04 18 19.7 +0.3
BURAR **Bucovina Array** 80.71 319 ⇓*i*P P 04 18 25.6 +1.0
BURAR **Bucovina Array** 80.71 319 ⇓P P 04 18 25.6 +1.0
BUR08 **Bucovina Ar. S** 80.73 319 *e*P P 04 18 25.1 +0.4
JOF **Joensuu** 81.76 335 *ep* P 04 18 28.4 -1.4
comp=Z,13nm,1.0s,mb4.8
JOF **Joensuu** 81.76 335 *e*P P 04 18 28.4 -1.4
JOF pmax pmax
comp=Z,13nm,1.0s,mb4.8
DRGR 82.21 318 ⇓*i*P P 04 18 33.1 +0.5
APA **Apatity** 82.66 339⇓ *e*P P 04 18 36.4 +1.9
APA *i* pP 04 18 45.6 +2.0
APA pmax pmax
comp=Z,18nm,1.1s,mb5.0
BZS **Buzias** 82.75 316⇓ *i*P P 04 18 35.5 +0.1
BZS **Buzias** 82.75 316 ⇓P P 04 18 35.5 +0.1
KWP **Kalwaria** 82.76 320 ⇓*i*P P 04 18 35.8 +0.4
KWP **Kalwaria** 82.76 320 ⇓P P 04 18 35.8 +0.4
KOLS **Kolonicke sedl** 82.91 320 *e*P P 04 18 36.6 +0.5
SUW **Suwalki** 83.37 325 *e*P P 04 18 38.1 -0.3
SUW **Suwalki** 83.37 325 *e*P P 04 18 38.1 -0.3
SBA **Scott Base** 83.61 169 *e*P P 04 18 41.3 +2.1
SBA pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SBA **Scott Base** 83.61 169 *e*P P 04 18 41.3 +2.0
comp=Z,7.6nm,0.9s,mb4.8
STHS **Stebnicka Huta** 83.66 320 *e*P P 04 18 40.6 +0.6
STHS *e* pP 04 18 50.3 +1.1
STHS pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
STHS **Stebnicka Huta** 83.66 320 *e*P P 04 18 40.6 +0.6
comp=Z,6.9nm,1.0s,mb4.7
STHS *e* pP 04 18 50.3 +1.1
KAF **Kangasniemi** 83.71 333 *ep* P 04 18 38.1 -1.9
comp=Z,22nm,0.8s,mb5.3,baz=100,slow=4.7
KAF **Kangasniemi** 83.71 333 *e*P P 04 18 38.1 -1.9
KAF pmax pmax
comp=Z,22nm,0.8s,mb5.3
KECS **Kecovo** 83.99 319 *e*P P 04 18 42.1 +0.4
KECS *e* pP 04 18 51.4 +0.5
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KECS **Kecovo** 83.99 319 *e*P P 04 18 42.1 +0.4
comp=Z,2.9nm,0.8s,mb4.5
KECS *e* pP 04 18 51.4 +0.5
PSZ **Piszkesteto** 84.29 318 *e*P P 04 18 42.9 -0.4
PSZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
PSZ **Piszkesteto** 84.29 318⇑ *i*P P 04 18 43.3 0.0
PSZ **Piszkesteto** 84.29 318 *e*P P 04 18 42.9 -0.4
comp=Z,7.9nm,0.9s,mb4.8
OJC **Ojcow** 84.72 321 *e*P P 04 18 45.7 +0.3
PKSM **Moragy** 84.89 317⇑ *i*P P 04 18 45.1 -1.2
PKSM **Moragy** 84.89 317 ⇑P P 04 18 45.1 -1.3
VYHS **Vyhne** 85.08 319 *e*P P 04 18 47.0 -0.2
OKC **Ostrava-Krasne** 85.72 320 *e*P P 04 18 49.9 -0.5
OKC *e*pP pP 04 18 59.9 +0.3
ARCES **ARCESS Array B** 86.05 340 P P 04 18 48.7 -3.0
comp=Z,12nm,0.8s,mb5.1,baz=120,slow=4.8,SNR=16
ARCES **ARCESS Array B** 86.05 340 P P 04 18 48.7 -3.0
MODS **Modra-Piesok** 86.09 319 *e*P P 04 18 51.9 -0.4
MORC **Moravsky Berou** 86.09 320 *e*P P 04 18 51.6 -0.6
MORC pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
MORC **Moravsky Berou** 86.09 320 *e*P P 04 18 51.5 -0.7
comp=Z,5.9nm,0.9s,mb4.8
DPC **Dobruska-Polom** 86.94 320 *e*P P 04 18 56.9 +0.5
DPC *e*pP pP 04 19 06.9 +1.3
UPC **Upice** 87.16 321 *e*P P 04 18 58.1 +0.7
TREC **Trest** 87.37 319 *e*P P 04 18 58.3 -0.2
SOKA **Soboth** 87.42 317⇑ *i*P P 04 18 59.2 +0.3
PRU **Pruhonice** 88.05 320 *e*P P 04 19 01.8 +0.1
PRU *e*pP pP 04 19 12.2 +1.2
GEC2 **GERESS Array S** 88.50 319 *e*P P 04 19 04.1 +0.2
GEC2 pmax pmax
comp=Z,25nm,1.5s,mb5.3
GEC2 **GERESS Array S** 88.50 319 *e*P P 04 19 04.1 +0.2
comp=Z,25nm,1.5s,mb5.3
GERES **GERESS Array B** 88.50 319 P P 04 19 03.0 -0.9
comp=Z,1.9nm,0.8s,mb4.5,baz=104,slow=4.3,SNR=18
BRG **Berggiesshubel** 88.50 321 *e*P P 04 19 03.9 0.0
BRG *e* pP 04 19 12.8 -0.3
BRG pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
BRG **Berggiesshubel** 88.50 321 *e*P P 04 19 04.1 +0.2
comp=Z,24nm,1.8s,mb5.2
BRG **Berggiesshubel** 88.50 321 *e*P P 04 19 03.9 +0.1
comp=Z,9.2nm,1.1s,mb5.0
BRG *e* pP 04 19 12.8 -0.3
KHC **Kasperske Hory** 88.60 319 *e*P P 04 19 04.2 -0.2
KHC *ex* x 04 19 18.0
WET **Wettzell** 89.06 319 *e*P P 04 19 07.2 +0.7
WET pmax pmax
comp=Z,17nm,1.4s,mb5.2
WET **Wettzell** 89.06 319 *e*P P 04 19 07.2 +0.7
comp=Z,17nm,1.4s,mb5.2
CLL **Collm** 89.13 321 *i* P P 04 19 06.5 -0.3
CLL *e* pP 04 19 16.0 0.0
CLL *e* 04 19 21.0
CLL pmax pmax
comp=Z,17nm,1.5s,mb5.2
CLL **Collm** 89.13 321 *e*P P 04 19 06.6 -0.2
comp=Z,17nm,1.5s,mb5.2
CLL **Collm** 89.13 321 *i* P P 04 19 06.5 -0.3
comp=Z,17nm,1.5s,mb5.2
CLL *e*pP pP 04 19 16.0 0.0
CLL *ex* x 04 19 21.0
HFS **Hagfors** 89.38 330 P P 04 19 06.2 -1.6
comp=Z,2.8nm,0.7s,mb4.7,baz=90,slow=3.0,SNR=6.0
ROTZ **Rotzenmuhle** 89.54 320 *e*P P 04 19 09.3 +0.6
comp=Z,14nm,1.4s,mb5.1
MANZ **Manzenberg** 89.61 320 *e*P P 04 19 09.7 +0.6
comp=Z,45nm,1.9s,mb5.5
MOX **Moxa** 89.96 320 *e*P P 04 19 11.4 +0.7
MOX *e* pP 04 19 21.3 +1.3
MOX **Moxa** 89.96 320 *e*P P 04 19 11.3 +0.6
comp=Z,24nm,1.6s,mb5.3
GRA1 **Grafenberg Arr** 90.17 320 *e*P P 04 19 12.1 +0.4
comp=Z,16nm,1.1s,mb5.3
GRF **Grafenberg Arr** 90.17 320 *e*P P 04 19 12.1 +0.4
GRF pmax pmax
comp=Z,16nm,1.1s,mb5.3
GRF **Grafenberg Arr** 90.17 320 *e*P P 04 19 12.1 +0.4
GRF pmax pmax
comp=Z,16nm,1.1s,mb5.3
GRF **Grafenberg Arr** 90.17 320 *e*P P 04 19 12.1 +0.4
comp=Z,16nm,1.1s,mb5.3
SPITS **Spitsbergen Ar** 90.28 348 P P 04 19 10.3 -1.4
comp=Z,11nm,0.8s,mb5.3,baz=350,slow=9.9,SNR=7.1
FETA **Feichten** 90.39 317⇑ *i*P P 04 19 12.8 0.0
comp=Z,5.9nm,1.0s,mb4.9
NOA **NORSAR Array B** 90.66 331 P P 04 19 12.1 -1.6
comp=Z,1.5nm,0.9s,mb4.3,baz=89,slow=5.0,SNR=3.8
CLZ **Clausthal** 90.79 322 *e*P P 04 19 14.7 +0.2
CLZ pmax pmax
comp=Z,26nm,1.7s,mb5.3
CLZ **Clausthal** 90.79 322 *e*P P 04 19 14.7 +0.2
comp=Z,26nm,1.7s,mb5.3
DAVOX **Davos/Dischmat** 90.97 317 P P 04 19 15.0 -0.5
comp=Z,6.7nm,0.7s,mb5.1,baz=57,slow=3.7,SNR=8.0
NRDL **Niedersach Rie** 90.97 322 *e*P P 04 19 15.4 0.0
comp=Z,39nm,1.8s,mb5.4
DAVA **Damuels** 90.98 317⇑ *i*P P 04 19 16.0 +0.4
comp=Z,15nm,0.9s,mb5.3
DAVA **Damuels** 90.98 317⇑ *i*PcP PcP 04 19 16.0 -0.6
comp=Z,15nm,0.9s
DAVOS **Davos** 91.03 317 P P 04 19 15.0 -0.8
KEST **Kesra** 91.10 306 P P 04 19 16.1 -0.3
comp=Z,3.7nm,0.9s,mb4.7,baz=6.4,slow=0.7,SNR=12
STU **Stuttgart** 91.47 319 *e*P P 04 19 18.2 +0.4
comp=Z,17nm,1.0s,mb5.3
SNAA **Sanae** 92.21 198 *e*P P 04 19 20.9 +0.2
SNAA pmax pmax
comp=Z,3.0nm,1.0s
SNAA **Sanae** 92.21 198 *e*P P 04 19 20.9 +0.1
comp=Z,3.5nm,1.0s,mb4.6
BNI **Bardonecchia** 93.19 315 *e*P P 04 19 25.6 -0.2
BNI pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
BNI **Bardonecchia** 93.19 315 *e*P P 04 19 25.6 -0.3
comp=Z,4.4nm,1.0s,mb4.8
TORD **Torodi Ar. Bea** 97.95 283 P P 04 19 48.0 -0.2
comp=Z,1.0nm,1.1s,mb4.2,baz=77,slow=3.1,SNR=2.9
B05A **Bryant** 121.49 31 ⇑P PKPdf 04 25 04.8 -0.1
baz=121
A07A **Ashnola River,** 121.86 30 ⇑P PKPdf 04 25 05.5 -0.1
baz=122
A08A **Turner Farm, O** 122.47 29 ⇓P PKPdf 04 25 06.8 0.0
baz=122
F04A **Amboy** 122.76 34 ⇑P PKPdf 04 25 07.3 -0.2
baz=122
H03A **Soap Creek Ran** 123.02 35 ⇓P PKPdf 04 25 08.3 +0.3
baz=123
B09A **Rice** 123.38 29 ⇓P PKPdf 04 25 08.4 -0.1
baz=123
I03A **Eugene** 123.44 36 ⇓P PKPdf 04 25 09.1 +0.2
baz=123
E07A **Sunnyside** 123.75 32 ⇑P PKPdf 04 25 09.6 +0.3
baz=124
F06A **Goldendale** 123.77 33 ⇑P PKPdf 04 25 09.4 0.0
baz=124
A11A **Hall Mountain,** 123.85 28 ⇓P PKPdf 04 25 09.8 +0.4
baz=124
D08A **Wollman Farm,** 123.91 31 ⇑P PKPdf 04 25 09.6 0.0
baz=124
K02A **Glendale** 124.01 37 ⇓P PKPdf 04 25 09.8 -0.2
baz=124
I04A **Tendick Farm,** 124.05 36 ⇓P PKPdf 04 25 09.8 -0.1
baz=124
G06A **Carlson Farm,** 124.18 33 ⇓P PKPdf 04 25 10.3 +0.1
baz=124
E08A **Dider Farm, El** 124.21 31 ⇓P PKPdf 04 25 10.1 -0.1
baz=124
H05A **Madras** 124.22 34 ⇓P PKPdf 04 25 10.4 +0.1
baz=124
D09A **Jones Farm, Ri** 124.22 30 ⇑P PKPdf 04 25 10.0 -0.2
baz=124
L02A **Cave Junction** 124.29 38 ⇓P PKPdf 04 25 10.3 -0.2

	baz=124						
HUMO	Hull Mountain	124.42	37	⇑P	PKPdf	04 25 10.9	+0.2
	baz=124						
J04A	Umpqua Nationa	124.56	36	⇓P	PKPdf	04 25 11.2	+0.2
	baz=124						
H06A	Lindquist Farm	124.66	34	⇑P	PKPdf	04 25 11.0	-0.1
	baz=124						
D10A	Wagner Farm, O	124.74	30	⇑P	PKPdf	04 25 11.3	+0.1
	baz=124						
A13A	Flathead Natio	124.76	27	⇑P	PKPdf	04 25 11.3	+0.1
	baz=124						
J05A	Fort Rock	125.04	36	⇓P	PKPdf	04 25 12.2	+0.3
	baz=125						
YBH	Yreka Blue Hor	125.08	38	⇓P	PKPdf	04 25 11.5	-0.5
	baz=125						
B13A	Whitefish	125.14	27	⇓P	PKPdf	04 25 11.7	-0.3
	baz=125						
H07A	Lands Inn, Kim	125.18	33	⇑P	PKPdf	04 25 12.5	+0.4
	baz=125						
M02C	Callahan	125.18	38	⇓P	PKPdf	04 25 12.5	+0.3
	baz=125						
N02C	Big Bar	125.22	39	⇑P	PKPdf	04 25 12.6	+0.3
	baz=125						
I06A	Prineville	125.22	34	⇑P	PKPdf	04 25 12.4	+0.2
	baz=125						
F10A	Beach Ranch, E	125.50	31	⇑P	PKPdf	04 25 13.1	+0.4
	baz=125						
I07A	Izee	125.53	34	⇑P	PKPdf	04 25 13.0	+0.2
	baz=125						
M04C	Macdoel	125.58	37	⇑P	PKPdf	04 25 13.0	0.0
	baz=125						
K05A	Summer Lake	125.58	36	⇑P	PKPdf	04 25 13.6	+0.7
	baz=125						
J06A	Christmas Vall	125.69	35	⇓P	PKPdf	04 25 13.4	+0.3
	baz=125						
WDC	Whiskeytown Da	125.84	39	⇓P	PKPdf	04 25 13.2	-0.3
	baz=126						
O02C	Red Bluff	125.91	39	⇓P	PKPdf	04 25 13.6	0.0
	baz=126						
K06A	Valley Falls	125.91	35	⇓P	PKPdf	04 25 13.6	0.0
	baz=126						
C14A	Swan Lake	125.92	27	⇑P	PKPdf	04 25 13.7	+0.3
	baz=126						
L05A	Lakeview	126.03	37	⇓P	PKPdf	04 25 14.2	+0.4
	baz=126						
J07A	Hines	126.09	34	⇑P	PKPdf	04 25 14.5	+0.6
	baz=126						
F11A	Grangeville	126.11	30	⇓P	PKPdf	04 25 13.7	-0.1
	baz=126						
I08A	Drewsey	126.16	33	⇑P	PKPdf	04 25 14.5	+0.4
	baz=126						
GASB	Alder Springs	126.24	40	⇓P	PKPdf	04 25 14.5	+0.2
	baz=126						
M05C	Lookout	126.25	37	⇓P	PKPdf	04 25 14.6	+0.4
	baz=126						
MOD	Modoc	126.43	36	⇓P	PKPdf	04 25 15.3	+0.8
	baz=126						
K07A	Rock Creek Ran	126.56	35	⇓P	PKPdf	04 25 15.2	+0.4
	baz=126						
J08A	Circle Bar Ran	126.57	34	⇑P	PKPdf	04 25 14.7	-0.1
	baz=126						
E13A	Victor	126.68	29	⇑P	PKPdf	04 25 14.3	-0.6
	baz=126						
H10A	Noah's Angus R	126.69	32	⇑P	PKPdf	04 25 14.1	-0.9
	baz=126						
CHMT	Chamberlain Mo	126.77	28	ℯPKPdf	PKPdf	04 25 14.6	-0.5
MNRC	McLaughlin Nat	126.85	41	⇓P	PKPdf	04 25 15.9	+0.4
	baz=127						
L07A	Adell	126.92	36	⇑P	PKPdf	04 25 16.0	+0.5
	baz=127						
NSHM	Saint Helena R	126.94	41	ℯPKPdf	PKPdf	04 25 15.7	0.0
K08A	Mann Creek Ran	126.97	35	⇓P	PKPdf	04 25 15.7	+0.1
	baz=127						
H11A	Donnelly	127.00	31	⇓P	PKPdf	04 25 15.7	+0.1
	baz=127						
WVOR	Wild Horse Val	127.07	35	ℯPKIKP	PKPdf	04 25 16.2	+0.4
ORV	Oroville	127.08	39	⇓P	PKPdf	04 25 15.3	-0.6
	baz=127						
CVS	Carmenet Viney	127.13	41	⇑P	PKPdf	04 25 15.9	-0.1
	baz=127						
O05C	Quincy	127.21	39	⇓P	PKPdf	04 25 15.8	-0.3
	baz=127						
L08A	Fields	127.39	35	⇑P	PKPdf	04 25 17.2	+0.7
	baz=127						
N06A	Buffalo Meadow	127.41	37	⇓P	PKPdf	04 25 17.0	+0.5
	baz=127						
M07A	Soldier Meadow	127.41	36	⇑P	PKPdf	04 25 17.0	+0.5
	baz=127						
K09A	Rome	127.42	34	⇑P	PKPdf	04 25 16.8	+0.4
	baz=127						
E15A	Deer Lodge	127.42	28	⇑P	PKPdf	04 25 16.5	+0.1
	baz=127						
J10A	Berg Farm, Mel	127.46	33	⇓P	PKPdf	04 25 16.7	+0.2
	baz=127						
F14A	Wisdom	127.53	29	⇑P	PKPdf	04 25 17.4	+0.8
	baz=127						
BEKR	Beckwourth	127.61	38	⇓P	PKPdf	04 25 17.1	+0.2
	baz=127						
BDM	Black Diamond	127.73	41	⇑P	PKPdf	04 25 18.0	+0.7
	baz=128						
O06A	Flanigan	127.76	38	⇓P	PKPdf	04 25 17.6	+0.4
	baz=128						
P05C	Yuba Gap, Truc	127.78	39	⇓P	PKPdf	04 25 17.8	+0.5
	baz=128						
K10A	MacKenzie Ranc	127.84	34	⇑P	PKPdf	04 25 17.5	+0.3
	baz=128						
G14A	Jackson	127.90	29	⇑P	PKPdf	04 25 17.9	+0.6
	baz=128						
F15A	Butte	127.92	28	⇑P	PKPdf	04 25 17.3	0.0
	baz=128						
MFID	Camas Ranch	127.98	32	⇑P	PKPdf	04 25 17.9	+0.4
	baz=128						
H13A	Challis	127.99	30	⇑P	PKPdf	04 25 17.6	+0.1
	baz=128						
LAVA	Lava Cap Winer	128.02	40	⇓P	PKPdf	04 25 17.7	0.0
	baz=128						
K11A	Parker Ranch,	128.30	33	⇓P	PKPdf	04 25 18.9	+0.7
	baz=128						
O07A	Toulon	128.34	37	⇓P	PKPdf	04 25 18.7	+0.4
	baz=128						
H14A	Leadore	128.40	30	⇓P	PKPdf	04 25 18.8	+0.5
	baz=128						
N08A	GE Springer Mi	128.40	36	⇑P	PKPdf	04 25 18.7	+0.3
	baz=128						
G15A	Dillon	128.42	29	⇑P	PKPdf	04 25 18.9	+0.6
	baz=128						
BOZ	Bozeman (W)	128.47	28	ℯPKIKP	PKPdf	04 25 18.6	+0.2
R05C	Kirkwood Meado	128.47	40	⇓P	PKPdf	04 25 19.2	+0.6
	baz=128						
J12A	Stokes Ranch,	128.48	32	⇓P	PKPdf	04 25 19.1	+0.6
	baz=128						
I13A	Wildhorse Cree	128.52	31	⇓P	PKPdf	04 25 19.4	+0.9
	baz=128						
L10A	Juniper Basin	128.52	34	⇑P	PKPdf	04 25 19.3	+0.7
	baz=128						
HLID	Hailey	128.62	31	⇑P	PKPdf	04 25 19.7	+1.0
	baz=128						
HLID	Hailey	128.62	31	ℯPKPdf	PKPdf	04 25 19.2	+0.5
CMB	Columbia Colle	128.66	40	⇑P	PKPdf	04 25 19.0	0.0
	baz=128						
O08A	Rochester Mine	128.70	37	⇑P	PKPdf	04 25 20.0	+1.0
	baz=128						
I14A	Mackay	128.85	30	⇓P	PKPdf	04 25 19.5	+0.4
	baz=129						
J13A	Cove Ranch, Pi	128.86	31	⇑P	PKPdf	04 25 20.1	+0.9
	baz=129						
L11A	Cat Creek Ranc	128.86	33	⇑P	PKPdf	04 25 19.9	+0.7
	baz=129						
R06C	Coleville	128.97	39	⇑P	PKPdf	04 25 20.4	+0.9
	baz=129						
K12A	Draper Farm, C	129.00	32	⇓P	PKPdf	04 25 20.5	+1.0
	baz=129						
S05C	Merced	129.09	41	⇓P	PKPdf	04 25 20.5	+0.7
	baz=129						
S06C	San Francisco	129.09	40	⇑P	PKPdf	04 25 20.6	+0.8
	baz=129						
J14A	Carey	129.25	31	⇑P	PKPdf	04 25 20.7	+0.7
	baz=129						
L12A	House Creek Ra	129.28	33	⇓P	PKPdf	04 25 21.0	+1.0
	baz=129						
I15A	Monteview	129.28	30	⇓P	PKPdf	04 25 20.6	+0.6
	baz=129						
M11A	Holland Ranch,	129.33	34	⇓P	PKPdf	04 25 21.1	+0.9
	baz=129						
H16A	Russell Place,	129.36	28	⇑P	PKPdf	04 25 21.1	+1.0
	baz=129						
K13A	Stover Farm, H	129.43	32	⇑P	PKPdf	04 25 21.3	+1.0
	baz=129						
O10A	Cortez Mining,	129.68	36	⇓P	PKPdf	04 25 22.4	+1.5
	baz=129						
T06C	Millerton Lake	129.69	41	⇑P	PKPdf	04 25 21.5	+0.6
	baz=129						
Q08A	Gabbs	129.72	38	⇓P	PKPdf	04 25 21.7	+0.7
	baz=130						
J15A	Blackfoot	129.75	30	⇓P	PKPdf	04 25 21.5	+0.6
	baz=130						
M12A	Wells	129.83	34	⇓P	PKPdf	04 25 21.9	+0.8
	baz=130						
I16A	Newdale	129.86	29	⇑P	PKPdf	04 25 21.9	+0.9
	baz=130						
L13A	Double Diamond	129.90	32	⇓P	PKPdf	04 25 21.8	+0.6
	baz=130						
K14A	Jones Ranch, D	129.98	31	⇑P	PKPdf	04 25 22.3	+0.9
	baz=130						
ELK	Elko	130.10	34	ℯPKIKP	PKPdf	04 25 22.1	+0.5
P10A	Eureka	130.13	36	⇓P	PKPdf	04 25 22.5	+0.7
	baz=130						
N12A	Clover Valley,	130.14	34	⇓P	PKPdf	04 25 22.7	+1.0
	baz=130						
K15A	Arbon	130.21	31	⇓P	PKPdf	04 25 22.6	+0.8
	baz=130						
J16A	Bone	130.25	30	⇓P	PKPdf	04 25 22.5	+0.7
	baz=130						
O11A	Cowboy Ranch,	130.27	35	⇓P	PKPdf	04 25 22.6	+0.6
	baz=130						
M13A	Montello	130.28	33	⇓P	PKPdf	04 25 22.7	+0.8
	baz=130						
L14A	Malta	130.31	32	⇓P	PKPdf	04 25 22.5	+0.6
	baz=130						
MOOW	Moose Ponds	130.31	29	ℯPKPdf	PKPdf	04 25 22.6	+0.6
HELL	Mitchell Peak	130.32	41	⇑P	PKPdf	04 25 22.2	0.0
	baz=130						
S08C	White Mtn Res	130.39	40	⇑P	PKPdf	04 25 22.4	+0.1
	baz=130						
LOHW	Long Hollow	130.48	29	ℯPKPdf	PKPdf	04 25 21.8	-0.5
SNOW	Snow King Moun	130.52	29	ℯPKPdf	PKPdf	04 25 22.8	+0.4
K16A	Soda Springs	130.58	30	⇓P	PKPdf	04 25 23.2	+0.7
	baz=130						
M14A	Sheep Mountain	130.62	32	⇓P	PKPdf	04 25 23.3	+0.7
	baz=130						
R09A	Tonopah	130.63	38	⇑P	PKPdf	04 25 23.4	+0.7
	baz=130						
Q10A	Clear Creek Ra	130.67	37	⇑P	PKPdf	04 25 23.9	+1.1
	baz=130						
O12A	Currie	130.70	35	⇑P	PKPdf	04 25 23.5	+0.7
	baz=130						
L15A	Malad City	130.78	31	⇑P	PKPdf	04 25 23.4	+0.5
	baz=130						
S09A	Goldfield	130.85	39	⇑P	PKPdf	04 25 24.2	+1.1
	baz=131						
Q11A	Duckwater	131.11	37	⇑P	PKPdf	04 25 24.2	+0.6
	baz=131						
S10A	Tonopah Range,	131.12	38	⇑P	PKPdf	04 25 24.2	+0.6
	baz=131						
M15A	Larsen Ranch,	131.13	32	⇑P	PKPdf	04 25 23.8	+0.3
	baz=131						
P12A	McGill	131.14	35	⇓P	PKPdf	04 25 24.2	+0.6
	baz=131						
N14A	Grayback Hills	131.17	33	⇑P	PKPdf	04 25 23.7	0.0
	baz=131						
R11A	Troy Canyon, C	131.47	37	⇑P	PKPdf	04 25 24.5	+0.2
	baz=131						
HWUT	Hardware Ranch	131.49	31	ℯPKPdf	PKPdf	04 25 24.6	+0.4
N15A	Stansbury Isla	131.50	32	⇑P	PKPdf	04 25 24.9	+0.6
	baz=131						
BW06	Boulder Array	131.62	29	ℯPKPdf	PKPdf	04 25 24.7	+0.2
PDAR	Pinedale Array	131.62	29	PKP	PKPdf	04 25 22.5	-2.0
	comp=Z,1.4nm,1.0s,baz=11,slow=1.5,SNR=7.9						
P13A	Bates Ranch, G	131.66	35	⇓P	PKPdf	04 25 25.0	+0.3
	baz=131						
MPMC	Manual Prospec	131.69	41	⇑P	PKPdf	04 25 25.0	+0.2
	baz=131						
S11A	Rachel	131.82	38	⇑P	PKPdf	04 25 25.9	+0.9
	baz=132						
DUG	Dugway	131.83	33	ℯPKIKP	PKPdf	04 25 25.0	+0.1
Q13A	Wheeler Ranch,	132.00	35	⇓P	PKPdf	04 25 25.7	+0.4
	baz=132						
EDW2	Edwards Air Fo	132.04	42	⇑P	PKPdf	04 25 25.8	+0.3
	baz=132						
P14A	Drum Mountains	132.10	34	⇑P	PKPdf	04 25 26.2	+0.7
	baz=132						
S12A	Delamar Landin	132.39	37	⇓P	PKPdf	04 25 27.0	+0.9
	baz=132						
Q14A	Sevier Lake (B	132.40	35	⇓P	PKPdf	04 25 27.0	+0.9
	baz=132						
T11A	Corn Creek, Al	132.40	38	⇓P	PKPdf	04 25 27.5	+1.4
	baz=132						
DAU	Daniels Canyon	132.51	32	ℯPKIKP	PKPdf	04 25 27.1	+0.9
GSC	Goldstone	132.59	41	⇑P	PKPdf	04 25 27.0	+0.5
	baz=132						
O17A	Robinson Place	132.94	32	⇓P	PKPdf	04 25 28.0	+0.9
	baz=133						
RSSD	Black Hills	132.94	23	ℯPKIKP	PKPdf	04 25 26.9	0.0
S13A	Holt Ranch, En	133.00	37	⇑P	PKPdf	04 25 27.7	+0.5
	baz=133						
S14A	Cedar City	133.29	36	⇓P	PKPdf	04 25 28.5	+0.8
	baz=133						
TMUT	Trail Mountain	133.34	33	ℯPKPdf	PKPdf	04 25 26.9	-0.9
MSU	Marysvale	133.35	34	ℯPKIKP	PKPdf	04 25 27.9	0.0
V12A	Nelson	133.59	39	⇓P	PKPdf	04 25 29.3	+0.9
	baz=133						
P18A	Preston Nutter	133.62	32	⇓P	PKPdf	04 25 28.4	0.0
	baz=133						
GMRC	Granite Mounta	133.65	41	⇑P	PKPdf	04 25 29.2	+0.7
	baz=133						
V13A	Grand Canyon W	134.05	39	⇓P	PKPdf	04 25 29.9	+0.7
	baz=134						
Q19A	Hogan Spring (	134.63	32	⇓P	PKPdf	04 25 30.4	+0.1
	baz=134						
R18A	Canyonlands Na	134.71	33	⇓P	PKPdf	04 25 30.9	+0.5
	baz=134						
U15A	North Rim	134.71	37	⇓P	PKPdf	04 25 31.0	+0.6
	baz=134						
V14A	Boquillas Ranc	134.74	38	⇓P	PKPdf	04 25 31.1	+0.5
	baz=134						
W14A	Seligman	135.03	39	⇑P	PKPdf	04 25 31.9	+0.8
	baz=135						
S18A	Hurst Farm, Bl	135.15	34	⇑P	PKPdf	04 25 31.5	+0.2
	baz=135						
PV10	Paradox Valley	135.17	32	ℯPKPdf	PKPdf	04 25 31.7	+0.4
PV10				ℯ		04 25 43.0	
V15A	Kaibab Nationa	135.18	37	⇓P	PKPdf	04 25 32.3	+0.9
	baz=135						
T17A	Navajo Res., N	135.19	35	⇑P	PKPdf	04 25 32.3	+0.9
	baz=135						
U16A	Tuba City	135.59	36	⇑P	PKPdf	04 25 32.9	+0.8
	baz=135						
PV01	Paradox Valley	135.60	32	ℯPKPdf	PKPdf	04 25 31.8	-0.3
T18A	Mexican Hat	135.61	34	⇑P	PKPdf	04 25 32.4	+0.3
	baz=135						
X15A	Humboldt	136.03	39	⇑P	PKPdf	04 25 33.7	+0.7
	baz=136						
U18A	Rough Rock, Ch	136.12	35	⇓P	PKPdf	04 25 34.1	+1.0
	baz=136						
Y15A	Casa Rosa Ranc	136.31	39	⇑P	PKPdf	04 25 34.4	+0.8
	baz=136						
X16A	Lo Mia Camp, P	136.56	38	⇓P	PKPdf	04 25 34.7	+0.7
	baz=136						
V18A	Ganado	136.59	36	⇑P	PKPdf	04 25 34.6	+0.6
	baz=136						
X17A	Forest Lakes	137.01	38	⇓P	PKPdf	04 25 36.4	+1.6
V19A	Window Rock	137.09	35	⇓P	PKPdf	04 25 35.5	+0.6
	baz=137						
W18A	Petrified Fore	137.12	36	⇓P	PKPdf	04 25 36.0	+1.0
	baz=137						
214A	Organ Pipe Nat	137.26	42	⇑P	PKPdf	04 25 36.9	+1.5
	baz=137						
X18A	Snowflake	137.40	37	⇓P	PKPdf	04 25 36.4	+0.8
	baz=137						
Y17A	Roosevelt	137.41	38	⇑P	PKPdf	04 25 36.4	+0.8
	baz=137						
SDCO	Great Sand Dun	137.47	30	ℯPKPdf	PKPdf	04 25 35.8	+0.3
116A	Eloy	137.61	40	⇑P	PKPdf	04 25 36.9	+0.9
	baz=137						
Y18A	Canyon Day Jun	137.86	38	⇑P	PKPdf	04 25 37.3	+0.9
	baz=138						
X19A	St. Johns	137.86	36	⇑P	PKPdf	04 25 37.3	+0.9
	baz=138						
Y19A	Nutrioso	138.21	37	⇑P	PKPdf	04 25 38.2	+1.2
	baz=138						
TUC	Tucson	138.36	40	ℯPKIKP	PKPdf	04 25 37.2	-0.2
217A	Green Valley	138.69	41	⇓P	PKPdf	04 25 39.3	+1.4
	baz=138						
ANMO	Albuquerque	139.10	33	ℯPKHKP		04 25 31.4	
ANMO				ℯ	PKPdf	04 25 38.8	+0.2
219A	White Tail Can	139.54	39	⇑P	PKPdf	04 25 40.8	+1.2
	baz=139						
BNM	Barren Site	139.59	34	ℯPKPdf	PKPdf	04 25 37.6	-1.9
319A	Douglas	139.94	40	⇑P	PKPdf	04 25 42.0	+1.7
	baz=140						
WMOK	Wichita Mounta	143.04	25	ℯPKIKP	PKPdf	04 25 40.7	-5.0
WCI	Wyandotte Cave	143.31	8	ℯPKIKP	PKPdf	04 25 41.6	-4.5
CPUP	Villa Florida	144.19	217	PKP	PKPdf	04 25 45.8	-2.3
	comp=Z,5.9nm,0.7s,baz=101,slow=3.1,SNR=19						
CPUP	Villa Florida	144.19	217	ℯPKPdf	PKPdf	04 25 46.2	-1.8
URVA	University of	144.25	356	ℯPKPbc	PKPdf	04 25 45.0	-2.7
URVA				ℯ		04 25 56.9	
ELN	Prospectdale	144.69	0	ℯPKPdf	PKPdf	04 25 45.4	-3.1
ELN				ℯ		04 25 58.8	
TXAR	Lajitas Array	144.83	37	PKP	PKPdf	04 25 45.0	-4.0
	comp=Z,38nm,0.8s,baz=284,slow=1.3,SNR=94						
WVT	Waverly	145.13	10	ℯPKIKP	PKPdf	04 25 47.2	-2.2
MIAR	Mount Ida	145.18	19	ℯPKIKP	PKPdf	04 25 48.4	-1.1
MIAR				ℯ		04 26 01.6	
TZTN	Tazewell	145.27	4	ℯPKPbc	PKPbc	04 25 48.1	-1.2
UALR	University of	145.35	17	ℯPKPbc	PKPbc	04 25 48.5	-1.1
UALR				ℯ		04 26 01.5	
JCT	Junction City	146.09	31	ℯPKIKP	PKPdf	04 25 48.5	-2.7
JCT				ℯ		04 25 51.5	
TKL	Tuckaleechee C	146.13	5	PKPbc	PKPbc	04 25 50.2	-1.8
	comp=Z,18nm,1.0s,baz=41,slow=1.1,SNR=15						
TKL	Tuckaleechee C	146.13	5	PKPbc	PKPbc	04 25 50.2	-1.8
OXF	Oxford	146.37	13	ℯPKP2	PKPab	04 25 51.6	-1.9
NATX	Nacogdoches	147.31	23	ℯPKPbc	PKPbc	04 25 54.7	-0.8
JSC	Jenkinsville	147.63	1	ℯPKP2	PKPab	04 25 55.7	-2.7
VBMS	Vicksburg	148.27	16	ℯPKPbc	PKPbc	04 25 57.8	-0.3
HKT	Hockley	148.42	26	ℯPKP2	PKPbc	04 25 57.8	-0.7
OTAV	Otavalo	177.42	234	ℯPKPdf	PKPdf	04 26 22.5	-0.5

*ISCJB **13** 04:21:34.6±0.3, 48.44N±002×122.86W±002, h64km±4km, Error ellipse: s-maj=2.6km s-min=2.5km az=37.3*
*PGC **13** 04:21:34.8, 48.41N×122.86W, h62km, ML2.7*
PGC 37km east of Victoria, Bc Washington Felt (I) at Victoria.
*NEIC **13** 04:21:35.4, 48.45N×122.84W, h57km, MD3.0(SEA), After SEA.*
NEIC Felt at Coupeville and Friday Harbor. Also felt at Victoria, British Columbia.
*PNSN **13** 04:21:35.4, 48.45N×122.84W, h57km, MD3.0, Fault plane solution: NP1:ϕ355.0000°, δ70.00000°, NP2: ϕ116.00000°, δ36.00000°, Principal axes: T Plg19.0000°, Azm63.0000°; P Plg55.0000°, Azm303.0000°;*

ISC 13 04:21:35.6±0.3, 48.44N±001×122.86W±002, h56km±4km, n112, σ0°48/153, 51C-50D, Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
ERW	Mount Erie	0.16	86	⇓P	Pn	04 21 44.0	-0.3
MCW	Mount Constitu	0.24	5	⇓P	Pn	04 21 44.6	-0.2
MCW				S	Sn	04 21 51.6	+0.2
A04A	Legoe Bay, Lum	0.29	20	P	Pn	04 21 45.0	-0.2
	baz=0.3,SNR=661						
A04A				⇓S	Sn	04 21 52.2	0.0
	baz=0.3						
VGZ	Gonzales	0.31	265	⇑P	Pn	04 21 45.0	-0.4
VGZ				⇑S	Sn	04 21 52.5	+0.1
SNB	Saturna Island	0.39	328	⇑P	Pn	04 21 46.2	+0.2
SNB				⇑S	Sn	04 21 54.4	+0.8
SQM	Sequim	0.39	199	⇑P	Pn	04 21 46.0	-0.1
BLN	Blyn Mountain	0.44	190	⇑P	Pn	04 21 46.2	-0.3
PGC	Sidney	0.44	298	⇓P	Pn	04 21 46.3	-0.3
PGC				⇑S	Sn	04 21 54.5	0.0
PGC	Sidney	0.44	298	ePn	Pn	04 21 46.1	-0.5
PGC				eSn	Sn	04 21 54.2	-0.4
CMW	Cultus Mountai	0.49	92	⇓P	Pn	04 21 46.6	-0.5
B05A	Bryant	0.54	109	⇑P	Pn	04 21 47.0	-0.7
	baz=0.5,SNR=626						
B05A				⇓S	Sn	04 21 56.1	-0.3
	baz=0.5						
ATES	Arlington Traf	0.57	111	⇓P	Pn	04 21 47.7	-0.3
B04A	Port Angeles	0.58	228	⇓P	Pn	04 21 47.6	-0.4
	baz=0.6,SNR=495						
B04A				⇓S	Sn	04 21 57.3	+0.2
	baz=0.6						
STW	Striped Peak	0.61	242	⇑P	Pn	04 21 48.3	-0.2
GOBB	Galiano Island	0.66	320	⇑P	Pn	04 21 49.3	+0.2
GOBB				⇓S	Sn	04 21 59.9	+0.9
JCW	Jim Creek	0.67	112	⇓P	Pn	04 21 48.8	-0.4
MBW	Mount Baker	0.72	62	⇑P	Pn	04 21 49.9	+0.1
C04A	Brinnon	0.73	186	⇑P	Pn	04 21 49.7	-0.2
	baz=0.7,SNR=242						
C04A				⇓S	Sn	04 22 00.6	+0.1
	baz=0.7						
A05A	Maple Falls	0.76	43	⇑P	Pn	04 21 50.2	-0.1
	baz=0.7,SNR=991						
A05A				⇓S	Sn	04 22 01.1	+0.1
	baz=0.7						
VDB	Vedder Mountai	0.77	40	⇑P	Pn	04 21 50.3	-0.1
VDB				⇑S	Sn	04 22 01.1	-0.3
VDB	Vedder Mountai	0.77	40	⇑P	Pn	04 21 50.3	-0.1
HDW	Hoodsport	0.81	189	⇑P	Pn	04 21 50.8	-0.1
BLH	Bald Hill	0.82	137	⇓P	Pn	04 21 50.7	-0.4
OSD	Olympics--Snow	0.84	222	⇑P	Pn	04 21 51.8	+0.5
LEOT	Leota Junior H	0.84	143	P	Pn	04 21 51.7	+0.3
HNB	Haney	0.85	13	⇑P	Pn	04 21 51.4	-0.1
HNB				⇑S	Sn	04 22 03.1	-0.1
GMW	Gold Mountain	0.90	177	P	Pn	04 21 52.3	+0.2
RPW	Rockport	0.90	89	P	Pn	04 21 51.8	-0.3
OBC	Olympics--Boni	0.91	244	⇑P	Pn	04 21 52.5	+0.3
B06A	Marblemount	0.92	85	⇑P	Pn	04 21 52.0	-0.4
	baz=0.9,SNR=543						
B06A				⇑S	Sn	04 22 04.4	-0.3
	baz=0.9						
HTW	Haystack Looko	0.97	131	P	Pn	04 21 52.7	-0.4
BIB	Bowen Island	1.01	343	⇓P	Pn	04 21 53.5

WRW	Wenatchee Ridg	1.45	113	P	Pn	04 21 59.9	+0.5
GHW	Garrison Hill	1.46	164	P	Pn	04 21 59.5	-0.1
D03A	Wishkah Elem. baz=1.5,SNR=52	1.46	205	⇓P	Pn	04 21 59.5	-0.1
D03A	baz=1.5			⇑S	Sn	04 22 17.4	-0.3
ALB	Alberni	1.54	303	⇑P	Pn	04 22 00.8	+0.1
BMSB	Bamfield Mari	1.56	285	⇑S	Sn	04 22 19.8	-0.2
RVC	Mount Rainier-	1.62	158	P	Pn	04 22 01.8	+0.1
ON2	Olympics--Nort	1.68	202	P	Pn	04 22 02.3	-0.3
FMW	Mount Fremont	1.71	152	P	Pn	04 22 03.3	+0.3
NLW	Nelson Butte	1.73	101	⇑P	Pn	04 22 03.0	-0.2
A07A	Ashnola River, baz=1.7,SNR=86	1.75	69	⇓P	Pn	04 22 03.5	0.0
A07A	baz=1.7			⇑S	Sn	04 22 24.6	0.0
REMR	Mount Rainier-	1.77	157	P	Pn	04 22 04.3	+0.6
RCM	Mount Rainier-	1.78	154	⇓P	Pn	04 22 04.5	+0.5
LMW	Ladd Mountain	1.82	168	P	Pn	04 22 04.6	+0.2
B07A	Winthrop baz=1.8,SNR=93	1.83	88	⇓P	Pn	04 22 04.5	-0.1
B07A	baz=1.8			⇓S	Sn	04 22 26.7	+0.2
LON	Longmire	1.84	157	*e*Pn	Pn	04 22 04.5	-0.2
D06A	Cle Elum baz=1.8,SNR=36	1.85	132	⇑P	Pn	04 22 05.3	+0.5
D06A	baz=1.8			⇓S	Sn	04 22 27.6	+0.6
E04A	Onalaska baz=1.9	1.85	177	⇓P	Pn	04 22 05.4	+0.5
E04A	baz=1.9			⇑S	Sn	04 22 27.9	+0.7
TWW	Teanaway	1.87	133	⇓P	Pn	04 22 06.2	+1.0
ETW	Entiat	1.90	115	*e*Pn	Pn	04 22 05.4	-0.1
E03A	Lebam baz=2.0,SNR=69	1.96	194	P	Pn	04 22 06.0	-0.3
E03A	baz=2.0			⇑S	Sn	04 22 28.6	-1.1
WPW	White Pass	1.96	152	P	Pn	04 22 07.1	+0.7
BMW	Boistfort Moun	1.98	187	P	Pn	04 22 06.6	-0.1
TBM	Table Mountain	1.99	129	⇓P	Pn	04 22 07.4	+0.6
C07A	Waterville baz=2.0	2.02	111	⇓S	Sn	04 22 31.2	-0.1
E05A	Randle baz=2.0	2.03	158	⇓P	Pn	04 22 07.5	+0.2
E05A	baz=2.0			⇑S	Sn	04 22 31.6	+0.2
TDL	Tradedollar La	2.14	168	P	Pn	04 22 09.1	+0.2
SOSW	Source of Smit	2.25	167	P	Pn	04 22 10.9	+0.5
FL2	Flat Top 2	2.27	171	P	Pn	04 22 11.2	+0.6
E06A	Yakima baz=2.3,SNR=21	2.29	145	⇑P	Pn	04 22 10.9	+0.1
E06A	baz=2.3			⇓S	Sn	04 22 39.4	+1.5
D07A	Quincy baz=2.3	2.31	122	⇓S	Sn	04 22 38.1	-0.3
B08A	Colville Reser baz=2.3	2.35	91	⇑P	Pn	04 22 11.2	-0.5
A08A	Turner Farm, O baz=2.4,SNR=11	2.43	77	⇑P	Pn	04 22 12.5	-0.3
F04A	Amboy baz=2.5,SNR=22	2.53	173	⇓P	Pn	04 22 14.4	+0.2
F04A	baz=2.5			⇑S	Sn	04 22 43.2	-0.6
F03A	Seaside baz=2.6,SNR=24	2.56	191	⇓P	Pn	04 22 14.2	-0.4
F03A	baz=2.6			⇑S	Sn	04 22 43.5	-0.9
F05A	White Salmon baz=2.7,SNR=6.7	2.73	159	⇑P	Pn	04 22 17.4	+0.5
F05A	baz=2.7			⇓S	Sn	04 22 49.7	+0.9
E07A	Sunnyside baz=2.8	2.78	132	⇓S	Sn	04 22 49.7	-0.1
OD2	Odessa Site #2	2.98	109	*e*Pn	Pn	04 22 19.5	-0.9
D08A	Wollman Farm, baz=3.0	3.00	116	⇑P	Pn	04 22 20.5	-0.1
RSW	Rattlesnake Hi	3.02	131	*e*Pn	Pn	04 22 21.0	+0.2
F06A	Goldendale baz=3.0	3.03	151	⇑P	Pn	04 22 21.8	+0.8
B09A	Rice baz=3.1,SNR=12	3.14	89	⇑P	Pn	04 22 22.0	-0.5
C09A	Chrisman Ranch baz=3.1	3.14	100	⇑P	Pn	04 22 22.1	-0.4
G03A	Yamhill baz=3.1	3.14	185	⇑S	Sn	04 22 58.5	-0.3
G04A	Mulino baz=3.3,SNR=6.0	3.25	175	⇑P	Pn	04 22 24.7	+0.7
G04A	baz=3.3			⇓S	Sn	04 23 01.2	-0.2
A10A	Northport baz=3.5	3.55	79	⇑P	Pn	04 22 27.6	-0.5
G06A	Carlson Farm, baz=3.5,SNR=5.9	3.55	154	⇑P	Pn	04 22 28.6	+0.4
C10A	Spilker Farm, baz=3.7	3.77	97	⇑P	Pn	04 22 30.8	-0.4
H03A	Soap Creek Ran baz=3.8	3.78	185	⇓S	Sn	04 23 13.2	-1.2
H04A	Detroit Lake baz=3.8,SNR=21	3.79	173	⇑P	Pn	04 22 31.9	+0.5
H04A	baz=3.8			⇑S	Sn	04 23 14.3	-0.3
H02A	Toledo baz=3.9	3.85	192	⇑S	Sn	04 23 15.3	-0.8
I03A	Eugene baz=4.5	4.48	184	⇑S	Sn	04 23 30.0	-1.7
F10A	Beach Ranch, E baz=4.5	4.57	121	⇑S	Sn	04 23 32.2	-1.5
D11A	Klaveano Farm, baz=4.6	4.62	105	⇑S	Sn	04 23 34.3	-0.7
J02A	Umpqua baz=5.1,SNR=6.6	5.10	186	P	Pn	04 22 49.6	+0.2
E12A	Beaver Dam Sad baz=5.3	5.35	110	⇓P	Pn	04 22 53.1	+0.4
A13A	Flathead Natio baz=5.6	5.62	82	⇓P	Pn	04 22 56.9	+0.5
F13A	Darby baz=6.4,SNR=10.0	6.40	111	⇓P	Pn	04 23 07.5	+0.4

IDC 13 04:25:32.4±6.1,251S×9887E,h0km,mb3.6/2,mb1 3.8/2, mb1mx3.8/18,mbtmp3.6/2,Error ellipse: s-maj=307.8km s-min=34.2km az=50.0,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	38.72	119	P	P	04 32 58.8	+0.2
	0.6nm,0.7s,baz=299,slow=9.2,SNR=4.4						
MKAR	Makanchi Array	51.23	345	P	P	04 34 38.2	+0.5
	0.5nm,0.5s,baz=145,slow=8.9,SNR=4.0						
TXAR	Lajitas Array	145.79	37	PKP	PKPdf	04 45 12.1	-1.7
	0.2nm,0.5s,baz=291,slow=2.2,SNR=6.2						

IDC 13 04:26:58.8±2.9,163S×10006E,h0km,mb3.9/4,mb1 4.0/5, mb1mx3.8/18,mbtmp4.0/5,ML4.3/1,Error ellipse: s-maj=100.4km s-min=24.9km az=49.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	19.95	100	P	Pn	04 31 32.5	-1.8
	0.9nm,0.3s,baz=234,slow=18,SNR=5.5						
WRA	Warramunga Arr	38.13	121	P	P	04 34 20.0	0.0
	0.7nm,0.4s,baz=302,slow=9.4,SNR=5.8						
SONM	Songino Array	49.58	6	P	P	04 35 52.6	+1.0
	0.5nm,0.6s,baz=187,slow=10,SNR=2.6						
MKAR	Makanchi Array	50.69	344	P	P	04 35 59.9	-0.2
	0.7nm,0.5s,baz=148,slow=9.4,SNR=4.5						
ZALV	Zalesovo Beam	56.82	349	P	P	04 36 44.3	-0.5
	2.0nm,0.4s,baz=162,slow=5.9,SNR=4.0						
TXAR	Lajitas Array	144.38	37	PKP	PKPdf	04 46 36.6	-1.2
	0.5nm,0.4s,baz=303,slow=0.5,SNR=9.6						

IDC 13 04:43:28.1±6.8,074S×10127E,h0km,mb3.4/2,mb1 3.6/2, mb1mx3.4/17,mbtmp3.4/2,Error ellipse: s-maj=362.1km s-min=34.6km az=52.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	37.57	123	P	P	04 50 44.7	+0.1
	0.3nm,0.6s,baz=301,slow=8.9,SNR=4.8						
MKAR	Makanchi Array	50.18	343	P	P	04 52 25.9	+0.3
	0.4nm,0.7s,baz=146,slow=8.4,SNR=4.2						
TXAR	Lajitas Array	142.94	38	PKP	PKPdf	05 03 02.2	-2.3
	0.4nm,0.7s,baz=234,slow=0.9,SNR=6.1						

IDC 13 04:44:33.1±3.4,347S×10033E,h0km,mb3.9/5,mb1 4.0/5, mb1mx3.7/19,mbtmp3.9/5,Error ellipse: s-maj=120.1km s-min=56.7km az=62.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	21.83	356	P	P	04 49 27.9	+0.7
	1.4nm,0.5s,baz=186,slow=8.5,SNR=8.3						
SONM	Songino Array	51.37	5	P	P	04 53 39.3	-0.1
	1.7nm,0.8s,baz=188,slow=8.3,SNR=8.0						
MKAR	Makanchi Array	52.52	344	P	P	04 53 48.5	+0.4
	1.4nm,0.7s,baz=146,slow=8.7,SNR=11						
KURK	Kurchatov	57.10	344	P	P	04 54 20.0	-1.1
	0.8nm,0.9s,baz=154,slow=6.6,SNR=3.4						
ZALV	Zalesovo Beam	58.66	349	P	P	04 54 31.9	-0.2
	0.8nm,0.3s,baz=194,slow=5.5,SNR=3.8						
TXAR	Lajitas Array	145.65	39	PKPbc	PKPbc	05 04 14.0	-0.5
	1.8nm,0.8s,baz=300,slow=1.0,SNR=18						

IDC 13 04:50:31.3±2.2,4.11S×10176E,h0km,mb4.0/8,mb1 4.1/8, mb1mx3.9/19,mbtmp4.0/8,Error ellipse: s-maj=77.7km s-min=19.3km az=55.0
ISCJB 13 04:50:33.1±2.0,43S×03×1016E±04,h33km,mb4.0/10, Error ellipse: s-maj=67.2km s-min=15.1km az=145.4
NEIC 13 04:50:35.3±1.7,418S×10166E,h35km,mb4.1/2,Error ellipse: s-maj=75.9km s-min=14.5km az=57.0

ISC 13 04:50:36.2±2.0,41S±03×1017E±04,h35km,n14,σ1s05/10, mb4.0/10,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	22.62	353	P	P	04 55 31.6	-2.5
	0.9nm,0.3s,mb3.6,baz=244,slow=15,SNR=2.9						
CHTO	Chiang Mai	22.98	353	*e*P	P	04 55 37.4	-0.5
	2.3nm,0.5s,mb3.9						
FITZ	Fitzroy Crossi	27.20	123	P	P	04 56 16.9	0.0
	1.1nm,0.5s,mb3.6,baz=291,slow=8.6,SNR=2.5						
WRA	Warramunga Arr	35.43	119	P	P	04 57 28.7	-0.6
	0.8nm,0.7s,mb3.8,baz=304,slow=9.2,SNR=7.5						
KSRS	Korea Array	48.02	28	P	P	04 59 12.1	+0.1
	1.4nm,0.9s,mb4.0,baz=205,slow=5.4,SNR=3.8						
SONM	Songino Array	51.92	4	P	P	04 59 42.1	+0.8
	4.2nm,0.8s,mb4.4,baz=182,slow=8.1,SNR=16						
ULN	Ulaanbaatar	52.00	5	*e*P	P	04 59 44.5	+2.6
	3.1nm,0.9s,mb4.2						
MKAR	Makanchi Array	53.55	343	P	P	04 59 53.0	-0.5
	1.5nm,0.7s,mb4.0,baz=150,slow=8.0,SNR=8.4						
KURK	Kurchatov	58.14	343	P	P	05 00 26.3	0.0
	1.3nm,0.7s,mb4.1,baz=152,slow=7.5,SNR=6.6						
ZALV	Zalesovo Beam	59.59	348	P	P	05 00 36.9	+0.6
	3.0nm,0.8s,mb4.4,baz=178,slow=4.5,SNR=8.0						
WMOK	Wichita Mounta	144.10	29	*e*PKPdf	PKPdf	05 10 06.7	-2.1
TXAR	Lajitas Array	145.25	41	PKPbc	PKPbc	05 10 11.6	+0.9
	0.9nm,0.6s,baz=290,slow=0.5,SNR=10						
MIAR	Mount Ida	146.57	23	*e*PKPbc	PKPbc	05 10 13.0	-1.5
JCT	Junction City	146.84	35	*e*PKPbc	PKPbc	05 10 14.0	-1.4

IDC 13 04:54:49.6±2.5,224S×9953E,h0km,mb4.0/6,mb1 4.0/6, mb1mx3.8/19,mbtmp4.0/6,Error ellipse: s-maj=83.8km s-min=25.7km az=53.0
ISCJB 13 04:54:51.5±2.2,23S±03×994E±04,h33km,mb4.1/7,Error ellipse: s-maj=68.5km s-min=22.9km az=143.0
NEIC 13 04:54:54.1±2.3,234S×9942E,h35km,mb4.3/1,Error ellipse: s-maj=91.0km s-min=18.6km az=54.0

ISC 13 04:54:54.0±2.3,23S±03×995E±04,h35km,n10,σ0s39/9, mb4.1/7,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	38.28	120	P	P	05 02 11.4	+0.1
	1.4nm,0.8s,mb3.8,baz=309,slow=9.1,SNR=8.3						
KSRS	Korea Array	47.56	31	P	P	05 03 25.8	-0.5
	0.8nm,0.4s,mb4.1,baz=226,slow=6.5,SNR=5.2						
SONM	Songino Array	50.32	6	P	P	05 03 47.7	+0.5
	2.8nm,0.8s,mb4.4,baz=187,slow=10,SNR=12						
ULN	Ulaanbaatar	50.42	7	*e*P	P	05 03 48.4	+0.4
	1.7nm,0.5s,mb4.3						
MKAR	Makanchi Array	51.20	345	P	P	05 03 54.0	+0.1
	1.3nm,0.6s,mb4.0,baz=147,slow=8.5,SNR=7.0						
MKAR	Makanchi Array	51.20	345	P	P	05 03 54.0	+0.1
KURK	Kurchatov	55.77	344	P	P	05 04 27.3	-0.1
	0.5nm,0.7s,mb3.6,baz=158,slow=7.8,SNR=3.1						
ZALV	Zalesovo Beam	57.39	350	P	P	05 04 38.2	-0.6
	1.4nm,0.5s,mb4.3,baz=184,slow=4.5,SNR=5.6						
ZALV	Zalesovo Beam	57.39	350	P	P	05 04 38.2	-0.6
TXAR	Lajitas Array	145.28	37	PKPbc	PKPbc	05 14 30.1	+1.6
	1.4nm,0.6s,baz=281,slow=1.3,SNR=21						

ISCJB 13 04:59:17.7±2.0,144S±01×765W±02,h33km±16km, mb4.0/15,Error ellipse: s-maj=32.2km s-min=8.6km az=145.1
NEIC 13 04:59:20.1±2.9,143.4S×76.45W,h35km±20km,mb4.1/10, ML4.4(LIM),Error ellipse: s-maj=25.4km s-min=7.6km az=49.0
NEIC Felt [II] at Pisco.
IDC 13 04:59:23.0±4.8,144.5S×76.40W,h60km±42km,mb3.6/5, mb1 3.9/6,mb1mx3.7/17,mbtmp3.7/6,ML3.9/1,Error ellipse: s-maj=94.9km s-min=24.1km az=33.0

ISC 13 04:59:20.8±1.7,145S±01×766W±02,h43km±14km,n24, σ0s94/25,mb4.0/15,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.48	353	*e*Pn	Pn	04 59 56.2	-2.6
NNA				*e*Sn	Sn	05 00 22.4	-5.4
ARE	Arequipa	5.26	113	*e*P	Pn	05 00 37.0	0.0
ARE				*e*S	Sn	05 01 46.0	+10
LPAZ	La Paz	8.32	104	P	Pn	05 01 20.3	+1.3
	0.7nm,0.3s,baz=296,slow=6.7,SNR=25						
LVC	Limon Verde	10.86	139	*e*Pn	Pn	05 01 53.5	-0.2
	14nm,0.9s						
OTAV	Otavalo	14.73	353	*e*Pn	Pn	05 02 48.5	+1.9
CPUP	Villa Florida	21.50	126	P	P	05 04 05.5	-0.6
	0.5nm,0.5s,mb3.2,baz=298,slow=10,SNR=5.4						
TXAR	Lajitas Array	50.81	329	P	P	05 08 17.6	+0.4
	0.5nm,0.7s,mb3.6,baz=147,slow=8.0,SNR=8.1						
MIAR	Mount Ida	51.36	342	*e*P	P	05 08 20.8	-0.4
	2.0nm,0.5s,mb4.3						
ANMO	Albuquerque	56.76	331	*e*P	P	05 08 59.6	-0.9
	0.4nm,0.9s,mb3.8						
TUC	Tucson	56.90	325	*e*P	P	05 09 02.1	+0.5
	0.6nm,0.5s,mb3.9						
SDCO	Great Sand Dun	58.63	333	*e*P	P	05 09 14.0	+0.4
	0.8nm,0.8s,mb3.8						
ECSD	EROS,Sioux Fal	60.76	343	*e*P	P	05 09 27.8	-0.3
	2.5nm,1.0s,mb4.3						
TPNV	Topopah Spring	63.35	325	*e*P	P	05 09 46.3	+0.7
	1.0nm,0.8s,mb4.0						
ISA	Isabella	63.72	323	*e*P	P	05 09 47.9	-0.3
	1.5nm,0.7s,mb4.1						
DUG	Dugway	63.98	330	*e*P	P	05 09 50.9	+1.2
	1.5nm,0.7s,mb4.1						
HWUT	Hardware Ranch	64.49	332	*e*P	P	05 09 52.5	-0.5
	2.5nm,0.9s,mb4.2						
BGU	Big Grassy Mou	64.65	330	*e*P	P	05 09 52.1	-2.0
NVAR	Mina Array Bea	65.55	325	P	P	05 10 01.3	+1.3
	0.5nm,0.7s,mb3.7,baz=132,slow=5.4,SNR=5.6						
HLID	Hailey	67.33	331	*e*P	P	05 10 11.6	+0.3
	0.6nm,0.6s,mb3.8						
DBIC	Dimbokro	74.12	79	P	P	05 10 52.3	-1.0
	2.8nm,1.0s,mb4.2,baz=232,slow=5.3,SNR=3.9						
TORD	Torodi Ar. Bea	82.18	74	P	P	05 11 37.6	-0.3
	5.0nm,0.6s,mb4.6,baz=261,slow=3.3,SNR=60						
DLBC	Dease Lake	84.72	335	*e*P	P	05 11 50.0	0.0
TAM	Tamanrasset	88.42	66	*e*P	P	05 12 09.2	+0.3
SONM	Songino Array	146.64	356	PKPbc	PKPbc	05 18 57.9	+0.1
	2.1nm,0.7s,baz=334,slow=1.7,SNR=6.3						

IDC 13 05:06:44.6±7.2,195S×9948E,h0km,mb3.6/2,mb1 3.8/2, mb1mx3.4/18,mbtmp3.6/2,Error ellipse: s-maj=379.7km s-min=35.8km az=51.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	38.47	120	P	P	05 14 08.6	0.0
	0.3nm,0.5s,baz=303,slow=9.4,SNR=4.7						
MKAR	Makanchi Array	50.84	345	P	P	05 15 47.0	0.0
	0.5nm,0.6s,baz=158,slow=8.3,SNR=3.7						
TXAR	Lajitas Array	144.98	37	PKP	PKPdf	05 26 24.2	-0.4
	0.3nm,0.5s,baz=199,slow=1.6,SNR=8.9						

IDC 13 05:08:39.2±1.3,207S×9987E,h0km,mb4.4/12, mb1 4.5/12,mb1mx4.2/21,mbtmp4.4/12,Error ellipse: s-maj=42.3km s-min=15.3km az=57.0
BJI 13 05:08:42.1,210S×9990E,h35km,mB5.1,mb4.8
NEIC 13 05:08:44.2±0.9,208S×9986E,h35km,mb4.5/4,Error ellipse: s-maj=29.6km s-min=7.5km az=54.0
ISCJB 13 05:08:46.2±2.2,2.1S±0.1×999E±02,h75km±15km, mb4.5/13,Error ellipse: s-maj=33.3km s-min=9.5km az=151.2
DJA 13 05:08:46,2.11S×9988E,h20km,MLv4.5/6

ISC 13 05:08:47.7±2.0,21S±01×999E±02,h67km±14km,n30, σ0s88/28,mb4.5/13,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	Kerinci	1.61	90	P	Pn	05 09 14.3	+0.3
	0.0nm,0.0s						
PPI	Padang Panjang	1.70	19	P	Pn	05 09 13.8	-1.5
	0.0nm,0.0s						
RGRI	Rengat	3.02	55	P	Pn	05 09 34.2	+1.1
	0.0nm,0.0s						
DSRI	Dabo	4.98	71	P	Pn	05 10 00.3	+0.3
	0.0nm,0.0s						
DBJI	Dramaga	8.19	123	P	Pn	05 10 43.4	-0.4
	0.0nm,0.0s						
CBJI	Citeko	8.20	122	P	Pn	05 10 45.0	+1.0
	0.0nm,0.0s						
LEM	Lembang	9.06	122	P	Pn	05 10 57.1	+1.3
	0.0nm,0.0s						
SJI	Sawahan	13.13	116	P	Pn	05 11 48.3	-3.0
	0.0nm,0.0s						
KAPI	Kappang	20.07	99	P	P	05 13 15.1	-0.6
	28nm,1.0s,baz=279,slow=9.8,SNR=9.5						
CMAR	Chiang Mai Arr	20.43	358	P	P	05 13 17.3	-2.2
	3.0nm,0.8s,baz=187,slow=10,SNR=14						
FITZ	Fitzroy Crossi	29.89	124	*e*P	P	05 14 48.6	-0.6
	4.2nm,0.7s,mb4.2						
FITZ	Fitzroy Crossi	29.89	124	P	P	05 14 48.7	-0.5
	3.2nm,1.0s,mb3.9,baz=271,slow=9.0,SNR=7.8						
WRA	Warramunga Arr	38.08	120	P	P	05 15 59.0	-1.1
	9.9nm,1.0s,mb4.6,baz=297,slow=9.6,SNR=27						
WB2	Warramunga Arr	38.09	120	*e*P	P	05 15 59.7	-0.5
KSRS	Korea Array	47.16	31	P	P	05 17 13.8	+0.3
	4.4nm,0.8s,mb4.2,baz=223,slow=8.6,SNR=18						
CTA	Charters Tower	48.70	115	P	P	05 17 25.2	-0.4
	3.5nm,0.6s,mb4.5,baz=306,slow=8.6,SNR=6.8						
STKA	Stephens Creek	49.21	132	*e*P	P	05 17 29.8	+0.4
	4.0nm,0.8s,mb4.4						
STKA	Stephens Creek	49.21	132	P	P	05 17 29.9	+0.6
	5.7nm,1.0s,mb4.5,baz=345,slow=6.7,SNR=5.9						
SONM	Songino Array	50.04	6	P	P	05 17 36.0	+0.7
	7.4nm,0.7s,mb4.7,baz=186,slow=9.1,SNR=50						
ULN	Ulaanbaatar	50.13	6	*e*P	P	05 17 37.1	+1.0
	6.0nm,0.9s,mb4.5						
MK31	Makanchi Array	51.06	345	*e*P	P	05 17 43.4	+0.3
MKAR	Makanchi Array	51.06	345	P	P	05 17 43.3	+0.2
	2.4nm,0.4s,mb4.5,baz=149,slow=8.2,SNR=19						
CN2	Changchun	51.12	24	*e*P	P	05 17 43.6	+0.1
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
MJAR	Matsushiro Arr	52.43	39	P	P	05 17 53.5	0.0
	comp=Z,1.3nm,0.5s,mb4.2,baz=224,slow=7.4,SNR=5.8						
KURK	Kurchatov	55.64	344	*e*P	P	05 18 16.7	+0.1
	comp=Z,5.1nm,1.0s,mb4.5						
ZAA0	Zalesovo Array	57.22	349	*e*P	P	05 18 27.8	+0.1
ZALV	Zalesovo Beam	57.22	349	P	P	05 18 27.3	-0.4
	comp=Z,4.3nm,0.6s,mb4.7,baz=176,slow=5.9,SNR=10.0						
ARCES	ARCESS Array B	86.50	340	P	P	05 21 23.9	+1.2
	comp=Z,1.7nm,0.8s,mb4.0,baz=66,slow=27,SNR=2.6						
CFAA	Coronel Fontan	144.54	198	PKP	PKPdf	05 28 19.3	+2.0
	comp=Z,0.1nm,0.6s,baz=27,slow=2.3,SNR=2.8						
TXAR	Lajitas Array	144.85	37	PKP	PKPdf	05 28 18.5	+0.8
	comp=Z,5.5nm,0.7s,baz=266,slow=1.1,SNR=58						

IDC 13 05:19:48.4±2.7,178S×12816E,h0km,mb4.1/2,mb1 4.2/4, mb1mx3.8/15,mbtmp4.0/4,ML3.9/2,Error ellipse: s-maj=98.0km s-min=27.0km az=57.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	16.41	189	*e*P	Pn	05 23 40.3	0.0
	1.2nm,0.3s						
FITZ	Fitzroy Crossi	16.41	189	Pn	Pn	05 23 40.3	0.0
	0.2nm,0.3s,baz=4.8,slow=12,SNR=8.3						
WRA	Warramunga Arr	19.04	162	P	Pn	05 24 13.1	+0.2
	0.6nm,0.3s,baz=339,slow=11,SNR=52						
WB2	Warramunga Arr	19.04	162	*e*P	Pn	05 24 13.1	+0.1
WB2				eS	Sn	05 26 55.4	-52
STKA	Stephens Creek	32.51	158	P	P	05 26 20.1	-0.9
	1.1nm,0.5s,baz=310,slow=3.6,SNR=3.2						
CMAR	Chiang Mai Arr	35.08	306	P	P	05 26 43.9	+0.3
	1.7nm,0.3s,baz=108,slow=6.4,SNR=4.5						

IDC 13 05:23:18.2±0.3,169S×9970E,h0km,mb5.1/42, mb1 5.1/42,mb1mx5.1/42,mbtmp5.1/42,MS5.4/4, Ms1 5.5/4,ms1mx4.7/41,Error ellipse: s-maj=11.3km s-min=8.9km az=55.0
DJA 13 05:23:21,179S×99.37E,h10km,Mw6.0/16
ISCJB 13 05:23:21.7±0.1,175S±002×99.57E±002,h32km, mb5.5/178,MS5.5/21,Error ellipse: s-maj=3.9km s-min=2.6km az=33.3
MOS 13 05:23:21.7±1.0,165S×9972E,h32km,mb5.7/80,MS5.5/6, Error ellipse: s-maj=8.6km s-min=4.4km az=118.7
BJI 13 05:23:21.3,194S×9974E,h43km,mB5.9,mb5.3,Ms5.6, Msz5.5
NEIC 13 05:23:23.2±0.1,172S×9964E,mb5.5/76,Error ellipse: s-maj=5.4km s-min=4.0km az=222.0
NEIC Felt [IV] at Padang and Painan; [II] at Padangpanjang, Sumatra.
SZGRF 13 05:23:24.0,164S×9953E,h36km,mb5.5,Southern Sumatera, Indonesia

ISC 13 05:23:23.7±0.1,176S±002×9954E±002,h33km, h33km±8km:pP-P,n821,σ1s11/519,mb5.5/178,MS5.5/21, 209C-178D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	Padang Panjang	1.55	34	P	Pn	05 23 48.7	-0.3
	0.0nm,0.0s						
KRJI	Kerinci	1.95	100	P	Pn	05 23 54.3	-0.2
	0.0nm,0.0s						
RGRI	Rengat	3.13	63	P	Pn	05 24 12.2	+1.5
	0.0nm,0.0s						
TRSI	Tarutung	3.80	351	P	Pn	05 24 22.0	+2.0
	0.0nm,0.0s						
JMBI	JAMBI	4.10	88	P	Pn	05 24 27.2	+3.1
	0.0nm,0.0s						
DSRI	Dabo	5.20	76	P	Pn	05 24 39.4	+0.2
	610nm,1.2s						
KG

968nm,0.9s
SNG Songkhla 8.94 7 P **Pn** 05 25 30.0 -0.6
700nm,0.9s
LEM Lembang 9.50 122 P **Pn** 05 25 39.9 +1.7
950nm,1.1s
JCJI Jatiwangi 9.89 119 P **Pn** 05 25 46.2 +2.5
704nm,1.2s
COCO West Island 10.70 194 *e*Pn **Pn** 05 25 51.2 -3.6
KSM Kuching 11.24 73 ⇑P **Pn** 05 26 05.0 +2.9
KSM Kuching 11.24 73⇑*e*Pn **Pn** 05 26 04.0 +1.9
BJII Banjamegara 11.55 119 P **Pn** 05 26 06.4 0.0
264nm,1.6s
STKI Sintang 12.07 81 P **Pn** 05 26 17.5 +3.9
167nm,1.4s
SBUM Sibu 13.35 72 ⇓P **Pn** 05 26 33.7 +2.7
SJI Sawahan 13.55 116 P **Pn** 05 26 32.0 -1.7
277nm,1.1s
BTM Bintulu 14.41 70 ⇓P **Pn** 05 26 47.5 +2.1
KMMI Kalianget 15.31 111 P **Pn** 05 26 58.8 +1.3
326nm,1.3s
BBKI Banjar Baru 15.38 97 P **Pn** 05 26 59.7 +1.3
281nm,2.1s
KHKI Kahang-Kahang 17.29 113 P **Pn** 05 27 24.3 +1.5
173nm,1.2s
NST Nakhon Sawan 17.33 2 P **Pn** 05 27 14.2 -9.0
SMKI Samarinda 17.71 86 P **Pn** 05 27 29.9 +1.9
396nm,1.3s
UBT Ubonrachathani 17.75 18 P **Pn** 05 27 27.5 -0.8
KKM Kota Kinabalu 18.37 65 ⇓P **Pn** 05 27 36.6 +0.6
KKM Kota Kinabalu 18.37 65⇑*e*Pn **Pn** 05 27 35.3 -0.7
BDT Bhumibol Dam 18.89 358 ⇑P **Pn** 05 27 40.0 -2.3
22nm,1.0s
SDKM Sandakan 19.11 67 ⇓P **Pn** 05 27 44.8 -0.1
TSM Tawau 19.28 72 ⇓P **Pn** 05 27 46.9 -0.2
KDM Kudat 19.29 63 ⇑P **Pn** 05 27 47.9 +0.7
CMAR Chiang Mai Arr 20.10 358 P **P** 05 27 51.2 -3.5
23nm,0.6s,baz=189,slow=11,SNR=18
CMAR S **S** 05 31 48.4 +10
1.9nm,0.3s,baz=184,slow=13,SNR=5.2
CMAR LR LR 05 36 05.6
comp=Z,12µm,19.5s,MS5.2,baz=214,slow=38
MYLDM Lahad Datu 20.16 70 ⇑P **P** 05 27 57.0 +1.6
PCI Palu 20.31 88 P **P** 05 27 57.0 -0.1
703nm,1.4s
KAPI Kappang 20.43 100 P **P** 05 27 56.8 -1.6
1µm,1.2s,SNR=15
KAPI Kappang 20.43 100 P **P** 05 27 55.3 -3.1
86nm,0.9s,baz=277,slow=9.4,SNR=16
KAPI Kappang 20.43 100⇑*e*P **P** 05 27 55.2 -3.2
CHG Chiang Mai 20.45 358 ⇓P **P** 05 27 57.5 -1.0
82nm,0.5s
CHTO Chiang Mai 20.45 358 *e*P **P** 05 27 57.4 -1.1
CHTO Chiang Mai 20.45 358 *e*P **P** 05 27 57.1 -1.5
NANT Nan 20.46 3 ⇓P **P** 05 27 58.0 -0.6
556nm,1.0s
PALK Pallekele 20.83 296 *e*P **P** 05 28 05.8 +3.1
70nm,1.0s
QIZ Qiongzhong 23.01 26 P **P** 05 28 25.3 -0.6
QIZ S **S** 05 32 33.1 -1.3
QIZ AMB AMB
comp=Z,192nm,1.1s,mb5.4
QIZ LR LR
comp=N,8µm,16.2s
QIZ LR LR
comp=Z,11µm,19.2s,MS5.3
QIZ Qiongzhong 23.01 26⇑*e*P **P** 05 28 24.4 -1.5
comp=Z,332nm,1.3s,mb5.6
KDI Kendari 23.16 96 P **P** 05 28 27.0 -0.6
comp=Z,241nm,1.2s,mb5.5
TRD Trivandrum 24.71 295 *e*P **P** 05 28 43.3 +1.2
TRD AMb AMB 05 29 13.8
comp=Z,105nm,1.9s,mb5.0
KOD Kodaikanal 24.99 299 *e*P **P** 05 28 47.3 +2.6
VIS Vishakhapatnam 25.10 321 *e*P **P** 05 28 46.2 +0.7
VIS AMb AMB 05 29 01.0
comp=Z,159nm,1.0s,mb5.5
BATI Baumata 25.40 110 P **P** 05 28 46.0 -2.3
comp=Z,173nm,0.9s,mb5.6,baz=66,slow=10.0,SNR=3.0
BATI S **S** 05 33 05.5 -7.6
comp=Z,293nm,1.0s,baz=33,slow=18,SNR=3.0
BWNR Bhubaneshwar 25.72 329 *e*P **P** 05 28 49.0 -2.2
BWNR *ex* x 05 33 14.0
KMI Kunming 26.90 6 P **P** 05 29 02.0 +0.2
KMI AP pP 05 29 13.5 +2.2
KMI XP sP 05 29 18.8 +3.5
KMI PP 05 29 51.5
KMI S **S** **05 33 37.6 +1.0**
KMI XS sS 05 33 55.4 +3.0
KMI SS 05 34 52.0
KMI AMB AMB
comp=Z,32nm,1.2s,mb4.7
KMI AMB AMB
comp=Z,4µm,8.4s
KMI LR LR
comp=N,5µm,21.2s
KMI LR LR
comp=E,6µm,16.0s
KMI LR LR
comp=Z,8µm,25.4s,MS5.2
IMP Imphal 26.94 349 *e*P **P** 05 29 02.0 -0.1
IMP *e*S **S** **05 33 39.0 +1.8**
DAV Davao City (W) 27.43 71 P **P** 05 29 04.8 -1.9
comp=Z,159nm,0.3s,mb6.0,baz=45,slow=1.3,SNR=9.0
DAV Davao City (W) 27.43 71⇑*i*P **P** 05 29 04.2 -2.5
DAV Davao City (W) 27.43 71 *e*P **P** 05 29 05.8 -0.9
MBWA Marble Bar 27.56 136 *e*P **P** 05 29 08.0 +0.2
comp=Z,52nm,1.0s,mb5.1
LBMI Labuha 27.98 88 P **P** 05 29 11.7 0.0
comp=Z,342nm,1.9s,mb5.7
HYB Hyderabad 28.13 314 *i* P **P** 05 29 13.5 +0.6
HYB Hyderabad 28.13 314 *e*P **P** 05 29 13.5 +0.6
BOK Bokaro 28.66 333 *e*P **P** 05 29 19.0 +1.4
BOK AMb AMB 05 29 35.5
comp=Z,215nm,1.3s,mb5.7
GYA Guiyang 28.89 13⇑*i*P **P** 05 29 20.4 +0.9
GYA PP PP 05 30 13.4 -12
GYA PCP PcP 05 32 30.8 +2.3
GYA S **S** **05 34 11.3 +3.5**
GYA SS SS 05 35 39.0 -32
GYA AMB AMB
comp=Z,140nm,0.9s,mb5.7
GYA AMB AMB
comp=Z,2µm,5.2s
GYA LR LR
comp=N,16µm,18.6s,MS5.8
GYA LR LR
comp=E,14µm,17.4s,MS5.8
GYA LR LR
comp=Z,18µm,18.7s,MS5.7
LATR Latur 30.22 313 *e*P **P** 05 29 32.7 +1.2
FITZ Fitzroy Crossi 30.33 124 *e*P **P** 05 29 31.1 -1.3
comp=Z,57nm,1.1s,mb5.2
FITZ *ep*P pP 05 29 42.3 +0.3
FITZ *e*S **S** **05 34 25.0 -5.7**
FITZ Fitzroy Crossi 30.33 124 P **P** 05 29 30.4 -2.0
comp=Z,23nm,0.9s,mb4.9,baz=311,slow=8.2,SNR=40
FITZ S **S** **05 34 23.9 -6.8**
comp=Z,16nm,1.1s,baz=208,slow=22,SNR=6.2
NGP Nagpur 30.34 320 *e*P **P** 05 29 32.3 -0.2
NGP AMb AMB 05 29 46.0
comp=Z,65nm,1.3s,mb5.2
GOA Goa 30.66 305 *ex* x 05 31 20.5
ODAN Odare 30.77 338 *e*P **P** 05 29 37.4 +1.2
TAPN Taplejung 31.10 339 *e*P **P** 05 29 40.7 +1.6
comp=Z,204nm,0.8s,mb6.0
RAMN Ramite 31.15 337 *e*P **P** 05 29 41.1 +1.5
KAD Karad 31.37 308 *e*P **P** 05 29 41.9 +0.3
KAD AMb AMB 05 29 54.7
comp=Z,63nm,0.9s,mb5.4
SWI Sorong 31.73 89 P **P** 05 29 43.1 -1.8
comp=Z,392nm,1.1s,mb6.2
JIRN Jiri 31.95 337 *e*P **P** 05 29 48.1 +1.5
comp=Z,220nm,0.7s,mb6.1
PKI Pulchoki 32.18 336 *e*P **P** 05 29 49.4 +0.8
PKIN Phulchoki 32.19 336 *e*P **P** 05 29 49.3 +0.6
GUN Gumba 32.29 337 *e*P **P** 05 29 51.0 +1.4
comp=Z,210nm,0.4s,mb6.3
LSA Lhasa 32.29 346 P **P** 05 29 51.0 +1.4
LSA S **S** **05 35 03.1 +1.9**
LSA Lhasa 32.29 346⇑*i*P **P** 05 29 50.9 +1.3
LSA pmax pmax
comp=Z,152nm,1.0s,mb5.8
LSA Lhasa 32.29 346⇑*i*P **P** 05 29 50.9 +1.3
comp=Z,152nm,1.0s,mb5.8
POO Poona 32.33 310 *e*P **P** 05 29 51.8 +1.8
POO AMb AMB 05 30 03.7
comp=Z,95nm,1.1s,mb5.5
DMN Daman 32.33 336 *e*P **P** 05 29 51.0 +1.0
QZH Quanzhou 32.34 34⇑*i*P **P** 05 29 49.3 -0.8
QZH AMB AMB
comp=Z,250nm,1.5s,mb5.8
KKN Kakani 32.42 336 *e*P **P** 05 29 51.7 +1.0
CD2 Chengdu 32.74 7 P **P** 05 29 51.5 -1.9
CD2 PP PP 05 31 01.8 -6.1
CD2 PCP PcP 05 32 36.8 -1.8
CD2 S **S** **05 35 06.8 -1.2**
CD2 PCS PcS 05 36 20.4 -3.4
CD2 SS SS 05 37 04.9 -25
CD2 SCS ScS 05 40 18.0 -2.1
CD2 AMB AMB
comp=Z,30nm,1.3s,mb5.1
CD2 LR LR
comp=N,10µm,15.6s,MS5.8
CD2 LR LR
comp=E,10µm,14.4s,MS5.8
CD2 LR LR
comp=Z,9µm,14.4s,MS5.6
GKN Gorkha 32.88 335 *e*P **P** 05 29 55.8 +1.1
comp=Z,106nm,0.7s,mb5.9
KOLN Koldanda 33.12 334 *e*P **P** 05 29 57.9 +1.0
comp=Z,98nm,0.6s,mb5.9
NACB Ninganchiao 33.52 38 *e*P **P** 05 29 59.9 -0.5
comp=Z,455nm,1.2s,mb6.3
DANN Dangsing 33.55 334 *e*P **P** 05 30 01.5 +0.9
YHNB Yeheng 33.75 38 *e*P **P** 05 30 02.5 +0.1
comp=Z,239nm,1.4s,mb5.9
MUN Mundaring 33.92 154 *e*P **P** 05 30 04.6 +0.8
KLBR Kellerberrin 34.30 152 *e*P **P** 05 30 07.2 +0.1
comp=Z,69nm,1.1s,mb5.5
WHN Wuhan 35.09 23 ⇓P **P** 05 30 13.3 -0.6
WHN LR LR
comp=N,6µm,14.4s,MS5.7
WHN LR LR
comp=E,6µm,13.2s,MS5.7
WHN LR LR
comp=Z,9µm,17.2s,MS5.6
NWAO Narrogin (SRO) 35.18 154 P **P** 05 30 14.0 -0.7
comp=Z,33nm,1.0s,mb5.2,baz=320,slow=12,SNR=7.0
NWAO Narrogin (SRO) 35.18 154 *e*P **P** 05 30 14.5 -0.2
NWAO pmax pmax
comp=Z,82nm,1.3s
NWAO Narrogin (SRO) 35.18 154 *e*P **P** 05 30 14.5 -0.2
comp=Z,82nm,1.3s,mb5.5
PTH Pithoragarh 36.20 331 *e*P **P** 05 30 24.9 +1.4
XAN Xi'an 36.69 13 P **P** 05 30 25.3 -2.3
XAN AMB AMB
comp=Z,100nm,1.1s,mb5.6
AJM Ajmer 36.95 321 *i* P **P** 05 30 29.0 -1.0
AJM *e*P 05 30 30.4
AJM AMb AMB 05 30 33.6
comp=Z,62nm,1.2s,mb5.3
NDI New Delhi 37.07 326 *e*P **P** 05 30 29.5 -1.4
NDI *ex* x 05 36 35.0
LZH Lanzhou 37.87 6 ⇓P **P** 05 30 37.0 -0.5
LZH PP PP 05 32 08.0 +3.5
LZH PCP PcP 05 32 51.5 -2.0
LZH S **S** **05 36 30.4 +3.7**
LZH SS SS 05 39 08.8 -5.2
LZH SCS ScS 05 40 46.1 -1.6
LZH AMB AMB
comp=Z,179nm,1.5s,mb5.6
LZH AMB AMB
comp=Z,557nm,5.3s
LZH LR LR
comp=N,4µm,14.7s
LZH LR LR
comp=Z,6µm,17.8s,MS5.5
DDI Dehra Dun 37.92 329 *e*P **P** 05 30 38.0 0.0
DDI *ex* x 05 36 35.0
NJ2 Nanjing 38.29 27 *e*P **P** 05 30 41.8 +0.6
NJ2 AP pP 05 30 50.1 -0.8
NJ2 XP sP 05 30 53.6 -1.2
NJ2 PP PP 05 32 12.4 +3.2
NJ2 S **S** **05 36 33.0 -0.3**
NJ2 XS sS 05 36 48.0 -1.3
NJ2 AMB AMB
comp=Z,20nm,1.0s,mb4.8
NJ2 LR LR
comp=N,2µm,13.0s,MS5.3
NJ2 LR LR
comp=E,3µm,16.9s,MS5.3
NJ2 LR LR
comp=Z,13µm,22.6s
WRA Warramunga Arr 38.51 120 P **P** 05 30 41.1 -2.2
comp=Z,81nm,1.0s,mb5.4,baz=296,slow=9.5,SNR=158
WRA PcP PcP 05 32 55.5 -0.3
comp=Z,5.7nm,0.5s,baz=316,slow=2.5,SNR=6.8
WRA S **S** **05 36 29.3 -7.7**
comp=Z,21nm,1.2s,baz=292,slow=16,SNR=17
WRA Warramunga Arr 38.51 120 P **P** 05 30 41.1 -2.1
WRA 05 32 55.5
WRA S **S** **05 36 29.3 -7.7**
WRA pmax pmax
comp=Z,81nm,1.0s
WRA pmax pmax
comp=Z,6.0nm,0.5s
WRA smax
comp=N,21nm,1.2s
WRAB Tennant Creek 38.52 120 P **P** 05 30 41.6 -1.7
comp=N,610nm,0.9s,mb6.3,SNR=43
WRAB Tennant Creek 38.52 120⇑*e*P **P** 05 30 41.1 -2.2
WRAB pmax pmax
comp=Z,106nm,1.0s,mb5.5
WRAB Tennant Creek 38.52 120⇑*e*P **P** 05 30 41.1 -2.2
comp=Z,106nm,1.0s,mb5.5
WB2 Warramunga Arr 38.52 120 *e*P **P** 05 30 41.0 -2.3
WB2 *e*PCP PcP 05 32 56.6 +0.7
WB2 *e*S **S** **05 36 29.7 -7.4**
SMLA Simla 39.02 329 *i* P **P** 05 30 47.8 +0.5
SMLA AMb AMB 05 30 50.4
comp=Z,145nm,2.0s,mb5.4
FORT Forrest 39.52 140 *e*P **P** 05 30 51.9 +0.4
comp=Z,54nm,0.8s,mb5.3
JOW Kunigami 39.70 42 P **P** 05 30 51.5 -1.5
comp=Z,21nm,0.5s,mb5.1,baz=224,slow=5.8,SNR=17
JOW LR LR 05 44 52.3
comp=Z,7µm,21.5s,MS5.5,baz=215,slow=33
THN Thein Dam 40.80 328 *e*P **P** 05 31 00.9 -1.2
GTA Gaotai 40.97 0 ⇑P **P** 05 31 03.3 -0.1
GTA PCP PcP 05 33 03.8 +0.6
GTA SCP ScP 05 36 51.4 +0.7
GTA S **S** **05 37 14.5 +1.2**
GTA SS SS 05 40 12.5 -3.6
GTA SCS ScS 05 41 03.6 -2.2
GTA AMB AMB
comp=Z,69nm,1.5s,mb5.1
GTA LR LR
comp=N,4µm,18.0s,MS5.5
GTA LR LR
comp=E,3µm,17.4s,MS5.5
GTA LR LR
comp=Z,7µm,18.6s,MS5.6
BTO Baotou 43.24 12 *e*P **P** 05 31 20.6 -1.2
HHC Hu-ho-hao-te 43.80 13 ⇑P **P** 05 31 26.3 -0.1
HHC PP PP 05 33 10.4 +1.6
HHC PCP PcP 05 33 13.0 +0.4
HHC SCP ScP 05 37 02.9 +0.9
HHC PCS PcS 05 37 04.1 -1.3
HHC S **S** **05 37 56.9 +1.9**
HHC SS SS 05 41 04.5 -7.3
HHC SCS ScS 05 41 22.6 -0.6
HHC AMB AMB
comp=Z,38nm,0.8s,mb5.2
HHC LR LR
comp=N,11µm,17.3s,MS5.8
HHC LR LR
comp=E,2µm,17.5s,MS5.8
HHC LR LR
comp=Z,11µm,17.7s,MS5.8
MSEY Mahe Island 44.08 265 *ep*P pP 05 31 41.4 +2.5
BJT Baijiatuao 44.28 18⇑*e*P **P** **05 31 29.6 -0.6**
BJT pmax pmax
comp=Z,130nm,1.3s
BJT Baijiatuao 44.28 18⇑*e*P **P** **05 31 29.6 -0.7**
comp=Z,130nm,1.3s,mb5.5
BJI Beijing 44.30 18 P **P** **05 31 29.6 -0.8**
BJI AMB AMB
comp=Z,48nm,1.4s,mb5.0
DL2 Dalian 45.29 24 P **P** **05 31 37.4 -0.9**
DL2 *e*S **S** **05 38 17.5 +0.9**
DL2 AMB AMB
comp=Z,40nm,1.0s,mb5.2
DL2 LR LR
comp=N,2µm,18.8s,MS5.2
DL2 LR LR
comp=E,2µm,14.4s,MS5.2
DL2 LR LR
comp=Z,4µm,17.2s,MS5.4
KBL Kabul 46.07 324⇑*e*P **P** **05 31 43.8 -0.8**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KBL Kabul 46.07 324⇑*e*P **P** **05 31 43.8 -0.8**
comp=Z,4.3nm,0.6s,mb4.6
INCN Inchon 46.42 30⇑*e*P **P** **05 31 45.0 -2.3**
KSH Kashi 46.42 335 *e*P **P** **05 31 48.1 +0.9**
KSH *ep*CP PcP 05 33 20.1 -1.6
KSH *ep*P PP 05 33 38.1 +1.4
KSH *e*SCP ScP 05 37 12.1 -0.8
KSH *e*PCS PcS 05 37 14.1 -2.2
KSH *e*S **S** **05 38 34.0 +1.1**
KSH *e*SCS ScS 05 41 39.0 -1.0
KSH *e*SS SS 05 41 57.1 -2.0
KSH AMB AMB
comp=Z,962nm,3.0s
KSH LR LR
comp=N,6µm,14.5s,MS5.8
KSH LR LR
comp=E,5µm,13.0s,MS5.8
KSH LR LR
comp=Z,11µm,18.4s
WMQ Urumqi 46.60 348⇑*i*P **P** **05 31 49.8 +1.2**
WMQ AP pP 05 31 56.3 -2.1
WMQ PCP PcP 05 33 24.0 +1.8
WMQ S **S** **05 38 37.5 +2.1**
WMQ SCS ScS 05 41 41.0 0.0
WMQ AMB AMB
comp=Z,209nm,1.2s,mb5.9
WMQ LR LR
comp=N,3µm,20.2s,MS5.4
WMQ LR LR
comp=E,3µm,19.4s,MS5.4
WMQ LR LR
comp=Z,2µm,26.8s
KSRS Korea Array 47.05 31 P **P** **05 31 51.1 -1.1**
comp=Z,22nm,0.8s,mb5.2,baz=224,slow=8.6,SNR=64
KSRS LR LR 05 54 31.9
comp=Z,3µm,18.5s,MS5.3,baz=10.0,slow=40
KSRS Korea Array 47.05 31 P **P** **05 31 51.2 -1.0**
KSRS pmax pmax
comp=Z,22nm,0.8s,mb5.1
KSRS MLR MLR
comp=Z,3µm,18.5s,MS5.3
GUMO Guam 47.46 70 P **P** **05 31 51.9 -3.8**
comp=Z,42nm,0.6s,mb5.6,baz=54,slow=19,SNR=5.9
GUMO Guam 47.46 70 *e*P **P** **05 31 52.0 -3.7**
GUMO pmax pmax
comp=Z,45nm,0.6s,mb5.6
GUMO Guam 47.46 70 *e*P **P** **05 31 52.0 -3.7**
comp=Z,45nm,0.6s,mb5.6
PMG Port Moresby 47.95 101 *e*P **P** **05 31 56.4 -3.2**
PMG pmax pmax
comp=Z,28nm,0.9s
PMG Port Moresby 47.95 101 *e*P **P** **05 31 56.4 -3.2**
comp=Z,28nm,0.9s,mb5.3
SNY Shenyang 48.55 24 ⇑P **P** **05 32 02.1 -1.6**
SNY AMB AMB
comp=Z,24nm,1.0s,mb5.2
CTA Charters Tower 49.12 115 *e*P **P** **05 32 06.9 -1.6**
comp=Z,34nm,0.9s,mb5.4
CTA *ep*P pP 05 32 20.6 +2.2
CTA Charters Tower 49.12 115 P **P** **05 32 06.5 -2.0**
comp=Z,50nm,1.0s,mb5.5,baz=291,slow=9.3,SNR=40
CTA S **S** **05 39 05.0 -6.7**
comp=Z,1.3nm,0.3s,baz=8.6,slow=21,SNR=3.4
CTA Charters Tower 49.12 115 *e*P **P** **05 32 06.9 -1.6**
CTA *e**PP pP 05 32 20.6 +2.2
CTA pmax pmax
comp=Z,34nm,0.9s
CTAO Charters Tower 49.12 115 *e*P **P** **05 32 06.8 -1.7**
CTAO pmax pmax
comp=Z,98nm,1.2s,mb5.7
CTAO Charters Tower 49.12 115⇑*e*P **P** **05 32 06.5 -2.0**
comp=Z,98nm,1.2s,mb5.7
UCH Uchtor 49.29 336 P **P** **05 32 11.4 +2.0**
SNR=8.8
UCH Uchtor 49.29 336⇑*e*P **P** **05 32 10.4 +1.0**
comp=Z,39nm,1.1s,mb5.3
TKM2 Tokmak 2 49.43 337⇑*e*P **P** **05 32 11.1 +0.6**
TKM2 pmax pmax
comp=Z,235nm,1.5s,mb6.0
TKM2 Tokmak 2 49.43 337 P **P** **05 32 11.3 +0.8**
SNR=45
TKM2 Tokmak 2 49.43 337⇑*e*P **P** **05 32 11.1 +0.6**
comp=Z,235nm,1.5s,mb6.0
KBK Karagaybulak 49.47 336 P **P** **05 32 12.9 +2.2**
SNR=9.8
AML Almayashu 49.55 335 P **P** **05 32 12.7 +1.3**
SNR=13
AML Almayashu 49.55 335⇑*i*P **P** **05 32 12.2 +0.8**
comp=Z,35nm,0.7s,mb5.5
AAK Ala-Archa 49.63 336 P **P** **05 32 13.3 +1.3**
SNR=22
STKA Stephens Creek 49.65 132 *e*P **P** **05 32 12.0 -0.4**
comp=Z,37nm,1.1s,mb5.3
STKA *ep*P pP 05 32 25.3 +3.0
STKA Stephens Creek 49.65 132 P **P** **05 32 11.7 -0.8**
comp=Z,37nm,0.9s,mb5.4,baz=309,slow=7.5,SNR=30
STKA S **S** **05 39 15.5 -3.5**
comp=Z,4.7nm,1.0s,baz=78,slow=21,SNR=4.2
FRU Bishkek 49.75 336 *e*P **P** **05 32 13.5 +0.6**
FRU *e*S **S** **05 39 22.0 +2.1**
FRU pmax pmax
comp=Z,210nm,2.0s,mb5.8
FRU smax
comp=E,400nm,3.5s
SONM Songino Array 49.75 6 P **P** **05 32 13.0 +0.1**
comp=E,17nm,0.7s,mb5.2,baz=189,slow=7.4,SNR=134
SONM PcP PcP 05 33 33.5 0.0
comp=E,8.2nm,0.6s,baz=188,slow=3.8,SNR=7.3
SONM Songino Array 49.75 6 P **P** **05 32 13.0 +0.2**
SONM 05 33 33.5
SONM pmax pmax
comp=Z,17nm,0.7s
SONM pmax pmax
comp=Z,8.0nm,0.6s
CHMS Chumysh 49.83 336 P **P** **05 32 14.2 +0.6**
SNR=12
ULN Ulaanbaatar 49.86 7 *e*P **P** **05 32 13.8 +0.2**
ULN pmax pmax
comp=Z,130nm,1.5s,mb5.7
ULN Ulaanbaatar 49.86 7⇑*i*P **P** **05 32 13.6 0.0**
comp=Z,126nm,1.5s,mb5.7
EKS2 Erkin-Say 49.95 335 P **P** **05 32 15.6 +1.2**
SNR=44
EKS2 Erkin-Say 49.95 335⇑*i*P **P** **05 32 15.4 +0.9**
comp=Z,68nm,0.8s,mb5.7
CBIJ Chichi jima 50.09 52 P **P** **05 32 14.2 -1.5**
comp=Z,64nm,0.4s,mb6.0,baz=120,slow=20,SNR=6.3
USP Ospenovka 50.16 336 P **P** **05 32 16.6 +0.6**
SNR=60
MK31 Makanchi Array 50.67 345 *i* P **P** **05 32 19.8 0.0**
MK31 pmax pmax
comp=Z,47nm,0.6s,mb5.6
MKAR Makanchi Array 50.67 345 P **P** **05 32 20.2 +0.3**
comp=Z,34nm,0.5s,mb5.5,baz=148,slow=7.8,SNR=260
MKAR S **S** **05 39 34.2 +1.5**
comp=Z,2.8nm,1.0s,baz=162,slow=15,SNR=3.2
MKAR Makanchi Array 50.67 345 P **P** **05 32 20.2 +0.4**
MKAR S **S** **05 39 34.2 +1.5**
MKAR pmax pmax
comp=Z,34nm,0.5s
MKAR smax
comp=N,3.0nm,1.0s
MKAR Makanchi Array 50.67 345 P **P** **05 32 20.2 +0.3**
MKAR S **S** **05 39 34.2 +1.5**
CN2 Changchun 50.95 24 *e*P **P** **05 32 20.5 -1.5**
CN2 AMB AMB
comp=Z,60nm,0.9s,mb5.5
ZAK Zakamensk 52.04 3⇓*i*P **P** **05 32 29.4 -0.6**
ZAK pmax pmax
comp=Z,26nm,1.5s,mb4.9
MAJO Matsushiro 52.38 39 *e*P **P** **05 32 30.7 -2.1**
MAJO pmax pmax
comp=Z,48nm,1.1s,mb5.3
MAJO Matsushiro 52.38 39⇑*i*P **P** **05 32 30.7 -2.1**
comp=Z,48nm,1.1s,mb5.3

MAT Matsushiro 52.38 39 P **P** **05 32 31.7 -1.1**
MJAR Matsushiro Arr 52.38 39 P **P** **05 32 31.2 -1.6**
comp=Z,21nm,0.7s,mb5.2,baz=226,slow=8.7,SNR=52
MJAR Matsushiro Arr 52.38 39 P **P** **05 32 31.2 -1.6**
MJAR pmax pmax
comp=Z,21nm,0.7s
MOY Mondy 53.24 1 *eP* **P** **05 32 39.2 +0.3**
MOY pmax pmax
comp=Z,128nm,2.4s,mb5.4
VLA Vladivostok 53.31 29 *eP* **P** **05 32 39.0 -0.5**
VLA pmax pmax
comp=Z,228nm,2.2s,mb5.7
TLY Talaya 53.35 3 P **P** **05 32 40.5 +0.8**
comp=Z,239nm,1.4s,mb5.9,SNR=17
TLY Talaya 53.35 3 *eP* **P** **05 32 40.1 +0.4**
TLY *e* pP 05 32 47.5 -2.2
TLY pmax pmax
comp=Z,81nm,1.5s,mb5.4
TLY Talaya 53.35 3⇑ *iP* **P** **05 32 40.0 +0.3**
comp=Z,97nm,1.4s,mb5.5
MDJ Mudanjiang 53.38 26 P **P** **05 32 39.3 -0.7**
MDJ AP pP 05 32 47.6 -2.4
MDJ XP sP 05 32 51.9 -2.0
MDJ PCP PcP 05 33 47.3 +0.2
MDJ PP PP 05 34 37.3 -3.4
MDJ S **S** **05 40 11.5 +1.6**
MDJ AMB AMB
comp=Z,36nm,1.4s,mb5.1
MDJ LR LR
comp=N,4μm,22.2s
MDJ LR LR
comp=Z,4μm,20.8s,MS5.5
MDJ Mudanjiang 53.38 26⇑ *eP* **P** **05 32 38.9 -1.1**
comp=Z,51nm,1.2s,mb5.3
IRK Irkutsk 53.95 4 *eP* **P** **05 32 44.0 -0.1**
IRK pmax pmax
comp=Z,206nm,2.0s,mb5.7
CIT Chita 54.88 11 *eP* **P** **05 32 51.0 +0.2**
CIT *e* 05 33 51.0
CIT pmax pmax
comp=Z,253nm,2.1s,mb5.9
TOO Toolangi 55.20 136 *eP* **P** **05 32 55.3 +1.8**
KURK Kurchatov 55.25 344 P **P** **05 32 53.2 -0.3**
comp=Z,460nm,1.1s,mb6.4,SNR=60
KURK Kurchatov 55.25 344 P **P** **05 32 53.4 -0.1**
comp=Z,20nm,0.6s,mb5.3,baz=167,slow=7.0,SNR=120
KURK S **S** **05 40 36.2 +1.4**
comp=Z,0.4nm,0.6s,baz=151,slow=6.1,SNR=4.8
KURK Kurchatov 55.25 344 P **P** **05 32 53.4 -0.1**
KURK S **S** **05 40 36.2 +1.3**
KURK pmax pmax
comp=Z,20nm,0.6s,mb5.3
KURK Kurchatov 55.25 344⇑ *iP* **P** **05 32 53.4 -0.1**
CAN Canberra 56.71 132⇑ *iP* **P** **05 33 04.3 0.0**
CAN *e* 05 33 17.8
ZAA0 Zalesovo Array 56.85 350⇑ *iP* **P** **05 33 04.6 -0.3**
ZALV Zalesovo Beam 56.85 350 P **P** **05 33 04.8 0.0**
comp=Z,346nm,1.1s,mb6.3,baz=171,slow=6.3,SNR=248
ZALV S **S** **05 40 54.9 -1.2**
comp=Z,0.8nm,0.3s,baz=146,slow=14,SNR=5.9
ZALV Zalesovo Beam 56.85 350 P **P** **05 33 04.9 0.0**
ZALV S **S** **05 40 54.9 -1.1**
ZALV pmax pmax
comp=Z,346nm,1.1s,mb6.3
ZALV smax
comp=N,1,0nm,0.3s
ARMA Armidale 56.92 126 *eP* **P** **05 33 07.0 +1.1**
ARMA *ep*P pP 05 33 19.8 +3.9
CNB Canberra Magne 56.98 132 *eP* **P** **05 33 06.3 +0.1**
KRAR Krasnoyarsk 57.84 356 *eP* **P** **05 33 11.3 -0.5**
KRAR pmax pmax
comp=Z,137nm,1.2s,mb5.9
KLR Kul'dur 57.90 24⇓ *iP* **P** **05 33 07.8 -4.6**
KLR pmax pmax
comp=E,160nm,2.0s
KLR pmax pmax
comp=Z,370nm,2.0s,mb6.1
NVS Novosibirsk 57.99 349 *i* P **P** **05 33 11.9 -1.0**
NVS *e*S **S** **05 41 01.3 -10**
NVS pmax pmax
comp=Z,159nm,1.4s,mb5.9
NVS pmax pmax
comp=N,108nm,1.7s
NVS pmax pmax
comp=E,67nm,1.3s
NVS smax
comp=N,54nm,2.4s
NVS smax
comp=E,45nm,2.4s
RDF Al-Radifah 58.34 306 *eP* **P** **05 33 16.2 +0.3**
baz=306
RDF AMb AMB 05 33 27.1
comp=Z,168nm,1.2s,mb6.0,baz=306
NAY Al-Naaiem 58.71 306 *eP* **P** **05 33 18.2 -0.2**
baz=306
NAY AMb AMB 05 33 35.6
comp=Z,59nm,1.3s,mb5.5,baz=306
ERM Erimo 58.74 37 *eP* **P** **05 33 17.9 -0.5**
MIB Mutribah 58.84 307 *eP* **P** **05 33 18.9 -0.4**
baz=306
MIB AMb AMB 05 33 30.7
comp=Z,176nm,1.1s,mb6.0,baz=306
RST Umm Al-Ruwaisa 59.00 306 *eP* **P** **05 33 20.3 -0.2**
baz=306
RST AMb AMB 05 33 34.9
comp=Z,81nm,0.9s,mb5.8,baz=306
TAU Tasmania Unive 59.06 141 P **P** **05 33 25.3 +4.7**
TAU *e**PP pP 05 33 34.7 +3.9
TAU pmax pmax
comp=Z,112nm,1.3s,mb5.7
TAU Tasmania Unive 59.06 141 P **P** **05 33 25.3 +4.6**
comp=Z,112nm,1.3s,mb5.7
TAU *ep*P pP 05 33 34.7 +4.0
VOSK Vostochnaya 59.35 340 P **P** **05 33 21.1 -1.3**
VOSK pmax pmax
comp=Z,63nm,1.2s,mb5.5
BVA0 Borovoye Array 59.80 340 P **P** **05 33 24.7 -0.8**
BVA0 pmax pmax
comp=Z,23nm,1.3s,mb5.0
BRVK Borovoye 59.87 340 P **P** **05 33 25.3 -0.7**
comp=Z,360nm,0.8s,mb6.5,SNR=9.0
BRVK Borovoye 59.87 340 *eP* **P** **05 33 25.3 -0.7**
BOD Bodaibo 60.52 9⇓ *iP* **P** **05 33 29.8 -0.5**
BOD pmax pmax
comp=Z,100nm,1.5s,mb5.7
AB31 Akbulak array 61.21 332 *i* P **P** **05 33 34.1 -1.1**
AB31 pmax pmax
comp=Z,211nm,1.4s,mb6.1
AB31 Akbulak array 61.21 332 *i* P **P** **05 33 34.2 -1.0**
YSS Yuzh-Sakhalins 61.52 32*c iP* **P** **05 33 36.8 -0.6**
YSS pmax pmax
comp=Z,271nm,1.3s,mb6.2
YSS Yuzh-Sakhalins 61.52 32⇑ *iP* **P** **05 33 36.6 -0.8**
CLNS Chul'man 61.90 15 *eP* **P** **05 33 39.4 -0.3**
CLNS pmax pmax
comp=Z,47nm,1.1s,mb5.5
CLNS pmax pmax
comp=E,19nm,0.9s
CLNS pmax pmax
comp=N,23nm,0.9s
KMBO Kilima Mbogo 62.27 270 P **P** **05 33 44.3 +1.2**
comp=N,6.0nm,0.8s,mb4.8,baz=56,slow=10,SNR=15
KMBO Kilima Mbogo 62.27 270 P **P** **05 33 44.3 +1.2**
KMBO pmax pmax
comp=Z,6.0nm,0.8s
KMBO Kilima Mbogo 62.27 270 *eP* **P** **05 33 45.3 +2.2**
KMBO *e* pP 05 33 53.7 +0.5
BHD Baghdad 62.50 309 *ex* x 05 33 54.5
BHD *ex* x 05 42 07.0
AKTK Aktyubinsk 62.93 332 P **P** **05 33 45.8 -0.9**
AKTK PcP PcP 05 34 23.9 -0.7
AKTO Aktyubinsk 62.93 332 P **P** **05 33 45.8 -0.9**
comp=Z,7.5nm,0.4s,mb5.1,baz=124,slow=7.3,SNR=41
AKTO PcP PcP 05 34 23.9 -0.7
comp=Z,16nm,1.0s,baz=134,slow=12,SNR=4.2
AKTO Aktyubinsk 62.93 332 P **P** **05 33 45.8 -0.9**
AKTO 05 34 23.9
AKTO pmax pmax
comp=Z,8.0nm,0.4s,mb5.2
AKTO pmax pmax
comp=Z,16nm,1.0s,mb5.1
MAK Makhachkala 64.49 320 *eP* **P** **05 33 55.4 -1.8**
MAK *i* 05 34 31.7
MAK *e*S **S** **05 42 33.3 -0.8**
MAK *e*SS SS 05 46 46.8 +1.9
MAK pmax pmax
comp=Z,398nm,1.4s,mb6.2
CASY Casey 64.86 175 *eP* **P** **05 33 59.3 +0.1**
GNI Garni 65.03 316 P **P** **05 34 01.5 +0.7**
comp=Z,3.2nm,0.3s,mb4.8,baz=170,slow=13,SNR=5.6
GNI Garni 65.03 316 *eP* **P** **05 34 02.0 +1.2**
GNI *e* pP 05 34 11.2 +0.2
GNI pmax pmax
comp=Z,67nm,1.1s
GNI Garni 65.03 316⇑ *eP* **P** **05 34 01.0 +0.2**
comp=Z,59nm,1.1s,mb5.5
GNI *e* pP 05 34 10.9 -0.1
SVE Sverdlovsk 66.29 338⇓ *eP* **P** **05 34 08.7 +0.2**
SVE pmax pmax
comp=Z,108nm,1.2s,mb5.8
ARU Arti 66.80 337*d iP* **P** **05 34 11.0 -0.8**
ARU *e* 05 34 38.1
ARU *e* 05 36 35.6
ARU *e*S S 05 43 01.6 -0.3
ARU *e*SS SS 05 47 15.2 -5.2
ARU pmax pmax
comp=Z,100nm,1.7s,mb5.6
ARU Arti 66.80 337⇑ *iP* **P** **05 34 11.1 -0.7**
ARU *e* pP 05 34 21.9 -0.2
YAK Yakutsk 67.63 15*c iP* **P** **05 34 15.5 -1.5**
YAK pmax pmax
comp=Z,539nm,1.7s,mb6.3
YAK Yakutsk 67.63 15⇑ *iP* **P** **05 34 15.3 -1.6**
YAK *e* pP 05 34 22.5 -4.7
KIV Kislovodsk 68.06 319 P **P** **05 34 20.4 +0.3**
comp=Z,319nm,1.1s,mb6.3,SNR=6.1
KIV Kislovodsk 68.06 319*a iP* **P** **05 34 20.2 +0.1**
KIV *i* *PP pP 05 34 30.1 -0.2
KIV *i* *SP sP 05 34 32.9 -1.3
KIV *i* S S 05 43 17.1 -0.3
KIV pmax pmax
comp=Z,41nm,1.3s,mb5.3
KIV MLR MLR
comp=Z,2μm,22.0s,MS5.4
KIV Kislovodsk 68.06 319⇓ *iP* **P** **05 34 20.3 +0.2**
KIV Kislovodsk 68.06 319⇑ *eP* **P** **05 34 20.1 0.0**
ASF Jabal al Asfar 68.07 306 P **P** **05 34 21.0 +0.6**
comp=Z,6.6nm,1.0s,mb4.6,baz=350,slow=6.1
ASF Jabal al Asfar 68.07 306 P **P** **05 34 21.0 +0.6**
ASF pmax pmax
comp=Z,7.0nm,1.0s
MALT Malatya 68.84 312 P **P** **05 34 24.4 -0.6**
MALT pmax pmax
comp=Z,33nm,1.2s,mb5.1
MALT Malatya 68.84 312⇑ *iP* **P** **05 34 23.9 -1.1**
MALT Malatya 68.84 312 *eP* **P** **05 34 23.5 -1.5**
comp=Z,33nm,1.2s,mb5.1
EIL Elat 69.00 303 LR LR 06 02 53.8
comp=Z,3μm,21.7s,MS5.5,baz=269,slow=34
MMAI Mount Meron Ar 69.52 306 P **P** **05 34 30.7 +1.3**
comp=Z,6.7nm,0.6s,mb4.7,baz=86,slow=10,SNR=2.8
SOC Sochi 69.87 316*c iP* **P** **05 34 30.1 -1.2**
SOC *e**SP sP 05 34 43.9 -1.6
SOC *e*PPP 05 38 41.2
SOC *e*S S 05 43 36.7 -2.2
SOC *e**SS sS 05 43 57.4 +1.6
SOC *e* 05 44 30.1
SOC *e*SSS 05 51 06.9
SOC pmax pmax
comp=Z,32nm,1.0s,mb5.2
SOC Sochi 69.87 318 *i* P **P** **05 34 32.9 +1.6**
MAW Mawson 70.40 194 *eP* **P** **05 34 35.1 +1.0**
comp=Z,18nm,1.0s,mb5.0
MAW Mawson 70.40 194 P **P** **05 34 34.5 +0.4**
comp=Z,22nm,1.0s,mb5.0,baz=39,slow=7.6,SNR=28
MAW Mawson 70.40 194 *eP* **P** **05 34 35.1 +1.0**
MAW pmax pmax
comp=Z,18nm,1.0s
SKR Severo-Kuril's 70.93 34 *eP* **P** **05 34 35.5 -2.2**
SKR *e* pP 05 34 46.0 -2.0
SKR pmax pmax
comp=Z,270nm,1.1s,mb6.1
LSZ Lusaka 71.55 255 *eP* **P** **05 34 43.0 +0.9**
LSZ *e* pP 05 34 51.9 -0.5
LSZ pmax pmax
comp=Z,70nm,1.5s,mb5.4
LSZ Lusaka 71.55 255 *eP* **P** **05 34 43.0 +0.9**
comp=Z,70nm,1.5s,mb5.4
LSZ *e* pP 05 34 51.9 -0.5
CSS Prodhromos 71.71 308 *eP* **P** **05 34 42.8 +0.1**
comp=Z,61nm,1.1s,mb5.4
CSS *e* pP 05 34 50.9 -2.2
PEA0B Petropavlovsk- 72.93 32⇑ *eP* **P** **05 34 48.5 -1.1**
PETK Petropavlovsk- 72.93 32 P **P** **05 34 49.1 -0.5**
comp=Z,17nm,0.6s,mb5.2,baz=216,slow=0.2,SNR=57
VSR Storozhevoye 73.32 325 *eP* **P** **05 34 50.3 -1.6**
VSR *e* 05 37 36.8
VSR pmax pmax
comp=Z,50nm,1.7s,mb5.2
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,40nm,1.2s
VSR pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
VSR pmax pmax
comp=N,9.0nm,0.8s
VSR pmax pmax
comp=E,3.0nm,0.4s
PET Petropavlovsk 73.40 33*c iP* **P** **05 34 51.6 -0.8**
PET pmax pmax
comp=Z,298nm,1.9s,mb5.9
PET Petropavlovsk 73.40 33⇑ *iP* **P** **05 34 51.5 -0.8**
SIM Simferopol' 74.11 318⇓ *iP* **P** **05 34 57.2 +0.5**
SIM pmax pmax
comp=Z,31nm,0.8s,mb5.3
ISP Isparta 74.66 310 *eP* **P** **05 34 59.8 -0.3**
LBTB Lobatse 74.71 245 P **P** **05 35 00.9 +0.2**
comp=Z,5.7nm,0.8s,mb4.5,baz=123,slow=5.7,SNR=6.5
LBTB Lobatse 74.71 245 P **P** **05 35 00.9 +0.2**
LBTB pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BOSA Boshof 75.37 241 P **P** **05 35 03.5 -0.9**
comp=Z,8.5nm,1.0s,mb4.6,baz=94,slow=8.6,SNR=4.8
BOSA Boshof 75.37 241 P **P** **05 35 03.5 -0.9**
BOSA pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TIXI Tiksi 75.69 9*c iP* **P** **05 35 03.9 -1.4**
TIXI pmax pmax
comp=Z,77nm,1.6s,mb5.4
TIXI Tiksi 75.69 9⇑ *iP* **P** **05 35 03.7 -1.6**
OBN Obninsk 76.35 328*ae* P **P** **05 35 09.2 -0.2**
OBN *i* pP 05 35 20.8 +1.0
OBN S S 05 44 52.0 0.0
OBN *e* 05 45 15.3
OBN pmax pmax
comp=Z,157nm,1.5s,mb5.7
OBN MLR MLR
comp=Z,4μm,19.0s,MS5.7
OBN Obninsk 76.35 328⇑ *eP* **P** **05 35 08.9 -0.5**
OBN *e* pP 05 35 21.0 +1.2
TIRR Tirgusor 77.86 316⇓ *iP* **P** **05 35 17.8 -0.3**
SYO Syowa Base 77.95 199⇑ *eP* **P** **05 35 17.4 -0.7**
SYO Syowa Base 77.95 199⇑ *e*PcP PcP 05 35 26.6 -1.2
SYO Syowa Base 77.95 199⇓ *ep*P pP 05 35 30.4 +1.9
KIS Kishinev 78.25 319 *eP* **P** **05 35 20.0 -0.2**
KIS *e* pP 05 35 29.0 -1.6
KIS Kishinev 78.25 319 *e*UNK 05 35 20.0
IDI Anoyia 78.52 306 P **P** **05 35 21.5 -0.5**
comp=Z,14nm,0.7s,mb5.0,baz=104,slow=7.9,SNR=7.1
AKASG Malin Array Be 79.01 322 P **P** **05 35 23.6 -0.7**
comp=Z,1.8nm,0.5s,mb4.3,baz=83,slow=4.4,SNR=25
AKASG Malin Array Be 79.01 322 P **P** **05 35 23.7 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
KIEV Kiev 79.02 322 P **P** **05 35 23.6 -0.8**
KIEV *e* pP 05 35 34.0 -0.8
KIEV pmax pmax
comp=Z,29nm,1.2s,mb5.1
KIEV Kiev 79.02 322 *eP* **P** **05 35 23.3 -1.1**
comp=Z,11nm,1.0s,mb4.8
KIEV *e* pP 05 35 33.1 -1.7
VRI Vrincioaia 79.36 317⇑ *iP* **P** **05 35 27.0 +0.6**
VRI Vrincioaia 79.36 317 P **P** **05 35 26.9 +0.6**
PLOR Plostina 79.41 317 P **P** **05 35 27.8 +1.2**
SUR Sutherland 79.54 238 P **P** **05 35 29.3 +1.7**
comp=Z,16nm,1.1s,mb4.9,baz=139,slow=9.3,SNR=3.4
SUR Sutherland 79.54 238 *eP* **P** **05 35 29.4 +1.7**
comp=Z,82nm,1.4s,mb5.5
MLR Muntele Rosu 79.81 317 P **P** **05 35 29.3 +0.5**
comp=Z,38nm,1.0s,mb5.3,baz=48,slow=2.6,SNR=23
MLR Muntele Rosu 79.81 317 P **P** **05 35 29.3 +0.5**
MLR pmax pmax
comp=Z,38nm,1.0s
MLR Muntele Rosu 79.81 317⇑ *iP* **P** **05 35 29.2 +0.4**
MLR Muntele Rosu 79.81 317 P **P** **05 35 29.8 +1.0**
VOIR 80.41 317⇓ *iP* **P** **05 35 31.4 -0.7**
VOIR 80.41 317 ⇓P **P** **05 35 31.4 -0.6**
BURAR Bucovina Array 80.78 319⇑ *iP* **P** **05 35 35.1 +1.2**
BURAR Bucovina Array 80.78 319⇑ *iP* **P** **05 35 35.1 +1.1**
BUR08 Bucovina Ar. S 80.79 319⇑ *iP* **P** **05 35 34.6 +0.6**
MNK Minsk 80.89 326 *eP* **P** **05 35 32.0 -2.4**
VTS Vitosha 81.15 313 P **P** **05 35 36.5 +0.4**
VAY Valandovo 81.39 312 *eP* **P** **05 35 33.9 -3.4**
JOF Joensuu 81.80 335 *ep* **P** **05 35 38.0 -1.1**
TSUM Tsumeb 81.83 251 P **P** **05 35 41.6 +1.4**
comp=Z,3.8nm,1.1s,mb4.2,baz=121,slow=7.7,SNR=4.6
TSUM Tsumeb 81.83 251 *eP* **P** **05 35 41.3 +1.1**
comp=Z,15nm,1.1s,mb4.8
TSUM *e* pP 05 35 50.5 -0.1
GZR Gura Zlata 81.97 316⇓ *iP* **P** **05 35 41.6 +1.3**
GZR Gura Zlata 81.97 316 P **P** **05 35 41.1 +0.8**
LVV L'vov 82.02 321 *eP* **P** **05 35 40.2 -0.3**
DRGR 82.28 318⇓ *iP* **P** **05 35 42.3 +0.4**
DRGR 82.28 318 P **P** **05 35 42.8 +0.9**
KRUS Krusevo 82.38 312 *eP* **P** **05 35 39.1 -3.5**
APA Apatity 82.70 339⇓ *eP* **P** **05 35 42.7 -1.0**
APA *i* 05 35 56.3
APA pmax pmax
comp=Z,76nm,1.4s,mb5.5
APA MLR MLR
comp=Z,4μm,20.0s,MS5.8
BZS Buzias 82.81 316⇓ *iP* **P** **05 35 44.9 +0.2**
BZS Buzias 82.81 316 P **P** **05 35 45.2 +0.4**
KWP Kalwaria 82.83 320 *eP* **P** **05 35 45.1 +0.4**
KWP Kalwaria 82.83 320 *eP* **P** **05 35 44.7 0.0**
KWP *e* pP 05 35 55.5 +0.3
KWP pmax pmax
comp=Z,140nm,1.4s,mb5.8
KWP Kalwaria 82.83 320⇑ *iP* **P** **05 35 45.0 +0.3**
KWP Kalwaria 82.83 320 *eP* **P** **05 35 45.1 +0.4**
UZH Uzhgorod 82.90 319⇓ *iP* **P** **05 35 45.0 -0.1**
UZH *e* pP 05 35 53.0 -2.6
KOLS Kolonicke sedl 82.97 320 *eP* **P** **05 35 46.1 +0.6**
KOLS *ep*P pP 05 35 56.9 +0.9
BILL Bilibino 83.09 20 P **P** **05 35 44.5 -1.2**
BILL Bilibino 83.09 20 P **P** **05 35 44.5 -1.2**
SUW Suwalki 83.42 325 *eP* **P** **05 35 47.6 0.0**
SUW Suwalki 83.42 325 P **P** **05 35 47.9 +0.2**
SUW *e* pP 05 35 57.5 -0.7
SUW pmax pmax
comp=Z,260nm,1.3s,mb6.1
SUW Suwalki 83.42 325 *eP* **P** **05 35 47.7 0.0**
CRVS Cervenica-Dubn 83.49 319 *eP* **P** **05 35 49.4 +1.2**
CRVS *ep*P pP 05 36 00.7 +2.1
CRVS Cervenica-Dubn 83.49 319 *eP* **P** **05 35 49.5 +1.3**
CRVS *e* pP 05 36 00.7 +2.1
SBA Scott Base 83.58 169 P **P** **05 35 49.6 +1.5**
SBA pmax pmax
comp=Z,11nm,0.8s,mb5.0
SBA Scott Base 83.58 169⇓ *eP* **P** **05 35 48.8 +0.7**
comp=Z,11nm,0.8s,mb5.0
STHS Stebnicka Huta 83.72 320 *eP* **P** **05 35 50.4 +1.1**
STHS *e* pP 05 36 00.1 +0.3
STHS pmax pmax
comp=Z,25nm,1.1s,mb5.3
STHS Stebnicka Huta 83.72 320 *eP* **P** **05 35 50.4 +1.1**
comp=Z,25nm,1.1s,mb5.2
STHS *e* pP 05 36 00.1 +0.3
KAF Kangasniemi 83.76 333 *ep* **P** **05 35 48.9 -0.3**
comp=Z,19nm,0.5s,mb5.5
KAF Kangasniemi 83.76 333 *eP* **P** **05 35 48.9 -0.3**
KAF pmax pmax
comp=Z,19nm,0.5s,mb5.5
KECS Kecovo 84.06 319 *eP* **P** **05 35 51.5 +0.4**
KECS *e* pP 05 35 59.4 -2.2
KECS pmax pmax
comp=Z,13nm,1.2s,mb4.9
KECS Kecovo 84.06 319 *eP* **P** **05 35 51.5 +0.4**
comp=Z,13nm,1.2s,mb4.9
KECS *e* pP 05 35 59.4 -2.2
NIE Niedzica 84.32 320 *eP* **P** **05 35 53.5 +1.1**
NIE *ep*P pP 05 36 03.6 +0.7
PSZ Piszkesteto 84.36 318 *eP* **P** **05 35 52.8 +0.2**
PSZ pmax pmax
comp=Z,93nm,1.7s,mb5.6
PSZ Piszkesteto 84.36 318⇑ *eP* **P** **05 35 53.0 +0.4**
PSZ Piszkesteto 84.36 318⇑ *iP* **P** **05 35 52.9 +0.3**
PSZ Piszkesteto 84.36 318 *eP* **P** **05 35 52.8 +0.1**
comp=Z,93nm,1.7s,mb5.6
OJC Ojcow 84.78 321 *eP* **P** **05 35 54.8 +0.1**
OJC *e**PP pP 05 36 03.5 -1.7
OJC *e* 05 46 12.9
OJC MLR MLR
comp=Z,4μm,20.4s,MS5.8
PKSM Moragy 84.96 317⇑ *iP* **P** **05 35 55.6 -0.1**
PKSM Moragy 84.96 317 P **P** **05 35 56.0 +0.3**
VYHS Vyhne 85.14 319 *eP* **P** **05 35 56.4 -0.2**
VYHS pmax pmax
comp=Z,15nm,1.7s,mb4.8
VYHS Vyhne 85.14 319 *eP* **P** **05 35 56.4 -0.2**
comp=Z,14nm,1.7s,mb4.8
KOLL Kolacno 85.44 319 *eP* **P** **05 35 58.9 +0.9**
KOLL *ep*P pP 05 36 05.9 -2.7
OKC Ostrava-Krasne 85.78 320 *eP* **P** **05 36 00.4 +0.7**
OKC *ep*P pP 05 36 10.4 +0.2
ARCES ARCESS Array B 86.09 340 P **P** **05 36 00.8 -0.1**
comp=Z,31nm,1.1s,mb5.5,baz=90,slow=8.0,SNR=26
ARCES ARCESS Array B 86.09 340 P **P** **05 36 00.8 0.0**
ARCES pmax pmax
comp=Z,31nm,1.1s
ARE0 ARCESS Array S 86.09 340 *eP* **P** **05 36 01.0 +0.2**
ARE0 *e* pP 05 36 13.4 +2.0
MODS Modra-Piesok 86.16 319 *eP* **P** **05 36 01.0 -0.6**
MODS *e* pP 05 36 11.5 -0.6
MODS pmax pmax
comp=Z,52nm,1.9s,mb5.4
MODS Modra-Piesok 86.16 319 *eP* **P** **05 36 01.0 -0.6**
comp=Z,52nm,1.9s,mb5.4
MODS *e* pP 05 36 11.5 -0.6
MORC Moravsky Berou 86.16 320 *eP* **P** **05 36 01.6 0.0**
MORC *e* pP 05 36 11.8 -0.3
MORC pmax pmax
comp=Z,35nm,1.3s,mb5.4
MORC Moravsky Berou 86.16 320⇓ *iP* **P** **05 35 54.3 -7.3**
MORC Moravsky Berou 86.16 320 *eP* **P** **05 36 01.6 +0.1**
comp=Z,35nm,1.3s,mb5.4
MORC *e* pP 05 36 11.8 -0.3
PTRP Pietrapertosa 86.17 311 P **P** **05 35 58.3 -3.5**
comp=Z,116nm,1.2s,mb6.0
SOP Sopron 86.56 318⇑ *eP* **P** **05 36 03.9 +0.3**
VRAC Vranov 86.72 319 P **P** **05 36 04.0 -0.3**
comp=Z,3.5nm,0.3s,mb5.0,baz=254,slow=19,SNR=5.4
VRAC Vranov 86.72 319 P **P** **05 36 04.0 -0.3**
VRAC pmax pmax
comp=Z,4.0nm,0.4s
KTK1 Kautokeino 86.74 339⇓ *iP* **P** **05 36 05.3 +1.3**
KTK1 AMb AMB 05 36 07.3
comp=Z,97nm,1.7s,mb5.8
KTK1 *es*P sP 05 36 17.2 -1.1
KTK1 Kautokeino 86.74 339⇓ *iP* **P** **05 36 05.3 +1.3**
comp=Z,97nm,1.7s,mb5.8
DPC Dobruska-Polom 87.01 320 *eP* **P** **05 36 06.6 +0.9**
DPC *ep*P pP 05 36 14.2 -2.0
KSP Ksiaz 87.08 321 *eP* **P** **05 36 08.8 +0.7**
KSP *e**PP pP 05 36 16.8 +0.2
ARSA Arzberg 87.21 317⇓ *iP* **P** **05 36 06.7 -0.1**
comp=Z,37nm,1.4s,mb5.4
UPC Upice 87.22 321 *eP* **P** **05 36 07.1 +0.4**
UPC *ep*P pP 05 36 17.5 +0.2
SOKA Soboth 87.49 317⇑ *iP* **P** **05 36 08.9 +0.8**
SOKA Soboth 87.49 317⇑ *i*PcP PcP 05 36 08.9 -1.2
NVL N'lazarevskaya 87.59 199 P **P** **05 36 08.5 +0.4**
NVL *e* pP 05 36 19.2 +0.5
NVL pmax pmax
comp=Z,61nm,1.9s,mb5.5
RFI Roccamonfina 87.80 311 P **P** **05 36 08.0 -1.8**
comp=Z,58nm,2.6s,mb5.3
SDI San Donato 87.96 312 P **P** **05 36 10.3 -0.2**
SDI pmax pmax
comp=Z,19nm,1.2s,mb5.2
SDI San Donato 87.96 312 P **P** **05 36 10.3 -0.2**

comp=Z,19nm,1.2s,mb5.2
PRU Pruhonice 88.11 320 *e*P **P 05 36 11.7 +0.7**
PRU *ep*P pP 05 36 21.4 -0.2
PVCC Panska Ves 88.14 320 *e*P **P 05 36 11.6 +0.5**
PVCC *ep*P pP 05 36 22.1 +0.4
QSPA South Pole Qui 88.20 180 P **P 05 36 11.6 +0.7**
comp=Z,14nm,1.1s,mb5.1,baz=283,slow=2.4,SNR=29
PTQR Pietraquaria 88.29 312 P **P 05 36 12.6 +0.5**
comp=Z,13nm,0.6s,mb5.3
TRO Tromso 88.36 340 *e*P **P 05 36 12.0 +0.2**
TRO *ep*P pP 05 36 23.4 +1.0
MYKA Terra Mystica 88.44 317⇑ *i*P **P 05 36 12.9 +0.3**
comp=Z,192nm,1.7s,mb6.0
NRCA Norcia 88.56 313 P **P 05 36 13.5 +0.2**
comp=Z,22nm,1.3s,mb5.3
BRG Berggiesshubel 88.56 321 *i* P **P 05 36 13.8 +0.7**
BRG *i* pP 05 36 23.9 +0.2
BRG pmax pmax
comp=Z,28nm,1.6s,mb5.3
BRG pmax pmax
comp=Z,82nm,1.9s,mb5.7
BRG pmax pmax
comp=Z,24nm,1.6s,mb5.3
BRG pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
BRG pmax pmax
comp=Z,9.0nm,1.7s,mb4.8
BRG Berggiesshubel 88.56 321 *i* P **P 05 36 13.8 +0.7**
comp=Z,46nm,1.6s,mb5.6
BRG *i* pP 05 36 23.9 +0.1
comp=Z,137nm,1.9s
BRG *i* 05 36 46.9
comp=Z,40nm,1.6s
BRG *i* 05 37 15.4
comp=Z,15nm,1.2s
BRG PP PP 05 39 33.7 -8.0
comp=Z,15nm,1.7s
GEC2 GERESS Array S 88.56 319⇑ *e*P **P 05 36 13.5 +0.3**
GEC2 *e* pP 05 36 21.6 -2.2
GERES GERESS Array B 88.56 319 P **P 05 36 13.4 +0.2**
comp=Z,8.0nm,1.0s,mb5.0,baz=101,slow=4.2,SNR=24
GERES GERESS Array B 88.56 319 P **P 05 36 13.4 +0.2**
GERES pmax pmax
comp=Z,8.0nm,1.0s
PTCC Patocco-Chiusa 88.62 316 P **P 05 36 13.3 -0.2**
comp=Z,17nm,1.1s,mb5.3
KHC Kasperske Hory 88.67 319 *e*P **P 05 36 14.1 +0.4**
KHC *ep*P pP 05 36 24.2 0.0
GMNA Gemona 88.70 316 P **P 05 36 13.6 -0.3**
comp=Z,33nm,0.6s,mb5.8
PESA Pesaro 88.83 314 P **P 05 36 15.2 +0.7**
comp=Z,78nm,0.8s,mb6.1
FVI Forni Avoltri 89.03 316 P **P 05 36 13.8 -1.6**
CLL Collm 89.19 321⇑ *i*P **P 05 36 16.4 +0.3**
CLL *i* *PP pP 05 36 26.3 -0.3
CLL pmax pmax
comp=Z,28nm,1.3s,mb5.4
CLL Collm 89.19 321⇑ *i*P **P 05 36 16.4 +0.3**
comp=Z,28nm,1.3s,mb5.4
CLL *i* pP pP 05 36 26.3 -0.3
CLL *es*P sP 05 36 30.0 -0.4
CLL *ex* x 05 36 56.0
CLL Collm 89.19 321⇑ *i*P **P 05 36 16.4 +0.3**
comp=Z,28nm,1.3s,mb5.4
CLL *i* pP pP 05 36 26.3 -0.3
ABTA Abfaltersbach 89.22 317⇓ *i*P **P 05 36 16.7 +0.4**
comp=Z,20nm,1.3s,mb5.3
ABTA Abfaltersbach 89.22 317⇓ *i*PcP **P 05 36 16.7 +0.4**
comp=Z,20nm,1.3s,mb5.3
HFS Hagfors 89.44 330 P **P 05 36 17.4 +0.4**
comp=Z,3.4nm,0.4s,mb5.0,baz=130,slow=4.6,SNR=24
HFS Hagfors 89.44 330 P **P 05 36 17.4 +0.4**
HFS pmax pmax
comp=Z,3.0nm,0.4s
SFI Santa Sofia 89.54 314 P **P 05 36 19.1 +1.2**
MOR8 Moi Rana 89.61 336⇓ *i*P **P 05 36 17.8 +0.1**
MOR8 AMb AMB 05 36 19.7
comp=Z,73nm,1.6s,mb5.8
MOR8 Moi Rana 89.61 336⇓ *i*P **P 05 36 17.8 +0.1**
comp=Z,73nm,1.6s,mb5.8
CTI Castel Tesino 89.78 316 P **P 05 36 19.1 +0.1**
WTTA Wattenberg 89.85 317⇑ *i*P **P 05 36 19.4 +0.2**
comp=Z,42nm,1.6s,mb5.5
MOX Moxa 90.03 320 *e*P **P 05 36 21.0 +1.0**
comp=Z,92nm,1.9s,mb5.8
MOX *e* pP 05 36 30.7 +0.1
MOX Moxa 90.03 320 *e*P **P 05 36 21.0 +1.0**
MOX *e* pP 05 36 30.7 +0.1
MOX pmax pmax
comp=Z,92nm,1.9s,mb5.8
FNVD Fontana Vidola 90.07 314 P **P 05 36 20.8 +0.4**
comp=Z,87nm,1.4s,mb5.9
ZCCA Zocca 90.19 314 P **P 05 36 24.7 +3.8**
comp=Z,1µm,4.6s
GRA1 Grafenberg Arr 90.24 320 *e*P **P 05 36 21.3 +0.3**
comp=Z,42nm,1.5s,mb5.5
GRA1 *ep*P pP 05 36 31.9 +0.3
GRF Grafenberg Arr 90.24 320 *e*P **P 05 36 21.3 +0.3**
GRF *e**PP pP 05 36 31.9 +0.3
GRF pmax pmax
comp=Z,42nm,1.5s,mb5.5
GRF Grafenberg Arr 90.24 320 *e*P **P 05 36 21.3 +0.3**
GRF *e**PP pP 05 36 31.9 +0.3
GRF pmax pmax
comp=Z,42nm,1.5s,mb5.5
GRF Grafenberg Arr 90.24 320 *e*P **P 05 36 21.3 +0.3**
comp=Z,42nm,1.5s,mb5.5
GRF *ep*P pP 05 36 31.9 +0.3
SPITS Spitsbergen Ar 90.31 348 P **P 05 36 20.4 -0.4**
comp=Z,4.6nm,0.4s,mb5.1,baz=344,slow=4.2,SNR=24
SPITS Spitsbergen Ar 90.31 348 P **P 05 36 20.4 -0.4**
SPITS pmax pmax
comp=Z,5.0nm,0.4s
RETA Reutte 90.45 317⇑ *i*P **P 05 36 22.6 +0.5**
comp=Z,40nm,1.2s,mb5.6
RETA Reutte 90.45 317⇑ *i*PcP **P 05 36 22.6 +0.5**
comp=Z,40nm,1.2s,mb5.6
FETA Feichten 90.46 317⇑ *i*P **P 05 36 22.4 +0.3**
comp=Z,36nm,1.2s,mb5.6
FETA Feichten 90.46 317⇑ *i*PcP **P 05 36 22.4 +0.3**
comp=Z,36nm,1.2s,mb5.6
GSCL Gusciola 90.47 314 P **P 05 36 22.8 +0.6**
ERBM Eremo 90.59 314 P **P 05 36 23.2 +0.4**
NB2 NORSAR Subarra 90.71 331 P **P 05 36 22.7 -0.3**
comp=Z,25nm,1.4s,mb5.4,baz=92,slow=5.1
NOA NORSAR Array B 90.71 331 P **P 05 36 22.5 -0.5**
comp=Z,2.7nm,0.9s,mb4.6,baz=93,slow=4.6,SNR=5.8
NOA NORSAR Array B 90.71 331 P **P 05 36 22.5 -0.5**
NOA pmax pmax
comp=Z,3.0nm,0.9s
DAVOX Davos/Dischmat 91.03 317 P **P 05 36 25.7 +0.9**
comp=Z,8.3nm,0.6s,mb5.2,baz=104,slow=2.9,SNR=20
DAVA Damuels 91.05 317⇑ *i*P **P 05 36 25.8 +0.9**
comp=Z,69nm,1.4s,mb5.8
DAVA Damuels 91.05 317⇑ *i*PcP **P 05 36 25.8 +0.9**
comp=Z,69nm,1.4s,mb5.8
DAVOS Davos 91.09 317 P **P 05 36 25.7 +0.6**
KEST Kesra 91.17 306 P **P 05 36 26.9 +1.1**
comp=Z,6.2nm,1.0s,mb4.9,baz=110,slow=3.0,SNR=11
KONO Kongsberg 91.47 329 *e*P **P 05 36 27.1 +0.6**
PGF Pioggiola 91.58 312 *e*P **P 05 36 26.5 -0.9**
comp=Z,78nm,1.3s,mb5.6
PGF Pioggiola 91.58 312 *e*P **P 05 36 26.5 -0.9**
PGF pmax pmax
comp=Z,39nm,1.3s,mb5.6
PGF Pioggiola 91.58 312 *e*P **P 05 36 26.5 -0.9**
comp=Z,39nm,1.3s,mb5.6
BFO Black Forest 92.11 318 *e*P **P 05 36 29.1 -0.6**
BFO *e* pP 05 36 40.5 +0.2
BFO pmax pmax
comp=Z,14nm,1.2s,mb5.2
BFO Black Forest 92.11 318 *e*P **P 05 36 29.1 -0.7**
comp=Z,14nm,1.2s,mb5.2
BFO *e* pP 05 36 40.5 +0.2
FIN Finale Ligure 92.17 314 P **P 05 36 30.4 +0.3**
SNAA Sanae 92.23 198 *e*P **P 05 36 30.0 +0.2**
SNAA *e* 05 36 33.8
SNAA *e* pP 05 36 40.6 +0.2
SNAA *e* 05 36 46.6
SNAA Sanae 92.23 198 *e*P **P 05 36 30.3 +0.5**
SNAA pmax pmax
comp=Z,40nm,1.8s
SNAA Sanae 92.23 198 *e*P **P 05 36 30.3 +0.5**
comp=Z,40nm,1.8s,mb5.5
SBF Sospel 92.73 314 *e*P **P 05 36 31.7 -1.0**
comp=Z,132nm,1.4s,mb5.9
SBF Sospel 92.73 314 *e*P **P 05 36 31.7 -1.0**
SBF pmax pmax
comp=Z,66nm,1.4s,mb5.9
SBF Sospel 92.73 314 *e*P **P 05 36 31.7 -1.0**
comp=Z,66nm,1.4s,mb5.9
CDF Champ du Feu 92.81 318 *e*P **P 05 36 31.9 -1.1**
comp=Z,71nm,1.7s,mb5.5
CDF Champ du Feu 92.81 318 *e*P **P 05 36 31.9 -1.1**
CDF pmax pmax
comp=Z,36nm,1.7s,mb5.5
CDF Champ du Feu 92.81 318 *e*P **P 05 36 31.9 -1.1**
comp=Z,36nm,1.7s,mb5.5
HINF Hinteralfeld 93.10 318 *e*P **P 05 36 32.9 -1.4**
MBDF Montbardon 93.20 315 *e*P **P 05 36 33.3 -1.6**
comp=Z,56nm,1.6s,mb5.4
MBDF Montbardon 93.20 315 *e*P **P 05 36 33.3 -1.6**
MBDF pmax pmax
comp=Z,28nm,1.6s,mb5.4
MBDF Montbardon 93.20 315 *e*P **P 05 36 33.3 -1.6**
comp=Z,28nm,1.6s,mb5.4
LPG La Plagne 93.20 315 *e*P **P 05 36 34.2 -0.7**
comp=Z,28nm,1.1s,mb5.3
LPG La Plagne 93.20 315 *e*P **P 05 36 34.2 -0.7**
LPG pmax pmax
comp=Z,14nm,1.1s,mb5.3
LPG La Plagne 93.20 315 *e*P **P 05 36 34.2 -0.7**
comp=Z,14nm,1.1s,mb5.3
LPL La Plagne 93.22 315 *e*P **P 05 36 34.2 -0.7**
FRF La Foret Royal 93.30 313 *e*P **P 05 36 34.3 -1.1**
comp=Z,74nm,1.4s,mb5.6
FRF La Foret Royal 93.30 313 *e*P **P 05 36 34.3 -1.1**
FRF pmax pmax
comp=Z,37nm,1.4s,mb5.6
FRF La Foret Royal 93.30 313 *e*P **P 05 36 34.3 -1.1**
comp=Z,37nm,1.4s,mb5.6
LMR La Mourre 93.41 313 *e*P **P 05 36 35.0 -0.8**
comp=Z,50nm,1.4s,mb5.5
LMR La Mourre 93.41 313 *e*P **P 05 36 35.0 -0.8**
LMR pmax pmax
comp=Z,25nm,1.4s,mb5.5
LMR La Mourre 93.41 313 *e*P **P 05 36 35.0 -0.8**
comp=Z,25nm,1.4s,mb5.5
HAU Haudompre 93.44 318 *e*P **P 05 36 34.6 -1.3**
comp=Z,101nm,1.6s,mb5.7
HAU Haudompre 93.44 318 *e*P **P 05 36 34.6 -1.3**
HAU pmax pmax
comp=Z,51nm,1.6s,mb5.7
HAU Haudompre 93.44 318 *e*P **P 05 36 34.6 -1.3**
comp=Z,51nm,1.6s,mb5.7
CABF La Chapelle 93.64 316 *e*P **P 05 36 36.1 -0.8**
comp=Z,65nm,1.4s,mb5.6
CABF La Chapelle 93.64 316 *e*P **P 05 36 36.1 -0.8**
CABF pmax pmax
comp=Z,32nm,1.4s,mb5.6
CABF La Chapelle 93.64 316 *e*P **P 05 36 36.1 -0.8**
comp=Z,32nm,1.4s,mb5.6
ORIF Oris-en-Rattie 93.83 315 *e*P **P 05 36 36.9 -0.9**
VNA2 Neumayer--Watz 93.83 198 *e*P **P 05 36 38.4 +1.2**
VNA2 *e* 05 36 42.8
VNA2 *e* pP 05 36 48.8 +1.0
VNA2 *e* 05 36 52.7
SMRF Simiane la Rot 94.07 314 *e*P **P 05 36 38.5 -0.4**
comp=Z,43nm,1.4s,mb5.4
SMRF Simiane la Rot 94.07 314 *e*P **P 05 36 38.5 -0.4**
comp=Z,43nm,1.4s,mb5.7
GIVF Givet 94.37 320 *e*P **P 05 36 39.4 -0.7**
VIVF Saint-Julien-l 94.69 315 *e*P **P 05 36 40.8 -0.9**
BAIF Baives 94.77 320 *e*P **P 05 36 41.2 -0.8**
LOR Lormes 95.15 317 *e*P **P 05 36 42.5 -1.2**
comp=Z,13nm,0.8s,mb5.1
LOR Lormes 95.15 317 *e*P **P 05 36 42.5 -1.2**
LOR pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
LOR Lormes 95.15 317 *e*P **P 05 36 42.5 -1.2**
comp=Z,6.6nm,0.8s,mb5.1
SMF Signal de Mont 95.19 316 *e*P **P 05 36 42.5 -1.5**
comp=Z,32nm,1.3s,mb5.3
SMF Signal de Mont 95.19 316 *e*P **P 05 36 42.5 -1.5**
SMF pmax pmax
comp=Z,16nm,1.3s,mb5.3
SMF Signal de Mont 95.19 316 *e*P **P 05 36 42.5 -1.5**
comp=Z,16nm,1.3s,mb5.3
LASF Ste Croix 95.31 314 *e*P **P 05 36 42.2 -2.3**
SSF Saint Saulge 95.40 317 *e*P **P 05 36 43.8 -1.1**
comp=Z,46nm,1.4s,mb5.4
SSF Saint Saulge 95.40 317 *e*P **P 05 36 43.8 -1.1**
SSF pmax pmax
comp=Z,23nm,1.4s,mb5.4
SSF Saint Saulge 95.40 317 *e*P **P 05 36 43.8 -1.1**
comp=Z,23nm,1.4s,mb5.4
AVF Avril sur Loir 95.52 317 *e*P **P 05 36 44.1 -1.4**
comp=Z,23nm,1.3s,mb5.2
AVF Avril sur Loir 95.52 317 *e*P **P 05 36 44.1 -1.4**
AVF pmax pmax
comp=Z,11nm,1.3s,mb5.1
AVF Avril sur Loir 95.52 317 *e*P **P 05 36 44.1 -1.4**
comp=Z,11nm,1.3s,mb5.1
TCF Toulx Ste Croi 96.34 316 *e*P **P 05 36 47.1 -2.1**
MTLF Montolieu 96.53 313 *e*P **P 05 36 49.1 -1.1**
CAF Calviac 96.54 315 *e*P **P 05 36 49.4 -0.7**
comp=Z,16nm,1.2s,mb5.0
CAF Calviac 96.54 315 *e*P **P 05 36 49.4 -0.7**
CAF pmax pmax
comp=Z,8.0nm,1.2s,mb5.0
CAF Calviac 96.54 315 *e*P **P 05 36 49.4 -0.7**
comp=Z,7.8nm,1.2s,mb5.0
RJF Les Rejaudoux 96.89 315 *e*P **P 05 36 49.6 -2.1**
LDF La Druitiere 97.71 319 *e*P **P 05 36 54.0 -1.3**
EPF Esparros 97.93 313 *e*P **P 05 36 54.6 -1.9**
FLN La Foliniere 97.93 319 *e*P **P 05 36 53.5 -2.8**
TOA0 Torodi Ar. Sit 98.03 283 P **P 05 36 58.8 +1.2**
TORD Torodi Ar. Bea 98.03 283 P **P 05 36 58.0 +0.5**
comp=Z,0.4nm,1.0s,baz=83,slow=5.1,SNR=3.8
TORD PKKPbc PKKPbc 05 53 29.6 -1.1
comp=Z,0.4nm,0.7s,baz=206,slow=1.8,SNR=4.7
IMA2 Indian Mountai 98.37 23 *e*P **P 05 36 57.0 -0.9**
EKA Eskdalemuir Ar 98.66 326 P **P 05 36 59.0 -0.4**
comp=Z,0.8nm,0.7s,mb4.4,baz=95,slow=5.3,SNR=3.2
EKA Eskdalemuir Ar 98.66 326 P **P 05 36 59.1 -0.3**
EKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 114.28 17 PKP PKiKP 05 41 58.8 -0.8
comp=Z,0.4nm,0.5s,baz=13,slow=1.3,SNR=4.7
C04A Brinnon 121.34 32 ⇓P PKPdf 05 42 14.0 +0.4
baz=121
B05A Bryant 121.46 31 ⇑P PKPdf 05 42 13.9 0.0
baz=121
JCW Jim Creek 121.59 31 *e*PKPdf PKPdf 05 42 14.0 -0.1
B06A Marblemount 121.61 31 ⇓P PKPdf 05 42 14.0 -0.1
baz=121
E03A Lebam 121.72 34 ⇓P PKPdf 05 42 14.7 +0.3
baz=122
A07A Ashnola River, 121.83 30 ⇑P PKPdf 05 42 14.6 0.0
baz=122
C05A Tolt Reservoir 122.03 32 ⇓P PKPdf 05 42 14.9 0.0
baz=122
F03A Seaside 122.09 34 ⇓P PKPdf 05 42 15.3 +0.2
baz=122
D05A Enumclaw 122.19 32 ⇓P PKPdf 05 42 15.1 -0.1
baz=122
B07A Winthrop 122.34 30 ⇑P PKPdf 05 42 15.5 0.0
baz=122
A08A Turner Farm, O 122.44 29 ⇓P PKPdf 05 42 15.8 +0.1
baz=122
E05A Randle 122.70 33 ⇓P PKPdf 05 42 16.2 -0.1
baz=122
F04A Amboy 122.73 34 ⇓P PKPdf 05 42 16.5 +0.2
baz=122
A09A Danville 122.76 29 ⇑P PKPdf 05 42 16.6 +0.3
baz=122
D06A Cle Elum 122.79 32 ⇑P PKPdf 05 42 16.6 +0.2
baz=122
ETW Entiat 122.79 31 *e*PKPdf PKPdf 05 42 16.1 -0.3
B08A Colville Reser 122.80 30 ⇓P PKPdf 05 42 16.3 -0.1
baz=122
C07A Waterville 122.88 31 ⇑P PKPdf 05 42 16.3 -0.3
baz=123
H03A Soap Creek Ran 122.98 35 ⇓P PKPdf 05 42 16.9 0.0
baz=123
I02A Mapleton 123.06 36 ⇑P PKPdf 05 42 16.9 -0.1
baz=123
E06A Yakima 123.13 32 ⇓P PKPdf 05 42 17.2 +0.1
baz=123
A10A Northport 123.24 28 ⇑P PKPdf 05 42 17.0 -0.2
baz=123
D07A Quincy 123.25 31 ⇓P PKPdf 05 42 16.9 -0.4
baz=123
F05A White Salmon 123.28 33 ⇓P PKPdf 05 42 17.1 -0.3
baz=123
C08A Higginbotham F 123.33 30 ⇑P PKPdf 05 42 17.3 -0.2
baz=123
B09A Rice 123.34 29 ⇓P PKPdf 05 42 17.9 +0.5
baz=123
I03A Eugene 123.40 36 ⇑P PKPdf 05 42 17.9 +0.2
baz=123
J02A Umpqua 123.58 37 ⇑P PKPdf 05 42 18.2 +0.1
baz=123
H04A Detroit Lake 123.61 35 ⇓P PKPdf 05 42 18.2 +0.1
baz=123
C09A Chrisman Ranch 123.70 30 ⇓P PKPdf 05 42 18.5 +0.3
baz=123
E07A Sunnyside 123.72 32 ⇑P PKPdf 05 42 18.3 +0.1
baz=123
F06A Goldendale 123.73 33 ⇓P PKPdf 05 42 18.7 +0.4
baz=124
G05A Wamic 123.76 34 ⇓P PKPdf 05 42 18.9 +0.5
baz=124
A11A Hall Mountain, 123.82 28 ⇓P PKPdf 05 42 18.8 +0.5
baz=124
D08A Wollman Farm, 123.88 31 ⇓P PKPdf 05 42 18.8 +0.3
baz=124
RSW Rattlesake Hi 123.96 32 *e*PKPdf PKPdf 05 42 19.1 +0.3
K02A Glendale 123.97 37 ⇑P PKPdf 05 42 18.9 +0.1
baz=124
I04A Tendick Farm, 124.01 36 ⇓P PKPdf 05 42 18.9 0.0
baz=124
G06A Carlson Farm, 124.14 33 ⇑P PKPdf 05 42 19.3 +0.3
baz=124
A12A Yaak River Ran 124.17 27 ⇓P PKPdf 05 42 19.3 +0.2
baz=124
H05A Madras 124.18 34 ⇓P PKPdf 05 42 19.3 +0.1
baz=124
E08A Dider Farm, El 124.18 31 ⇑P PKPdf 05 42 19.4 +0.3
baz=124
D09A Jones Farm, Ri 124.19 30 ⇑P PKPdf 05 42 19.0 -0.1
baz=124
B11A Sandpoint 124.19 28 ⇓P PKPdf 05 42 19.2 +0.1
baz=124
L02A Cave Junction 124.24 38 ⇑P PKPdf 05 42 19.6 +0.2
baz=124
HUMO Hull Mountain 124.38 37 ⇑P PKPdf 05 42 19.9 +0.3
baz=124
J04A Umpqua Nationa 124.52 36 ⇑P PKPdf 05 42 20.6 +0.7
baz=124
B12A Libby 124.53 28 ⇓P PKPdf 05 42 19.7 0.0
baz=124
H06A Lindquist Farm 124.62 34 ⇑P PKPdf 05 42 20.1 +0.1
baz=124
E09A Wood Farm, Sta 124.64 31 ⇑P PKPdf 05 42 20.0 0.0
baz=124
G07A Ruggs Ranch, H 124.65 33 ⇑P PKPdf 05 42 19.8 -0.2
baz=124
C11A Tepee Creek (N 124.66 29 ⇑P PKPdf 05 42 19.7 -0.3
baz=124
D10A Wagner Farm, O 124.71 30 ⇑P PKPdf 05 42 20.2 0.0
baz=124
JCC Jacoby Creek 124.72 40 ⇓P PKPdf 05 42 20.6 +0.3
baz=124
A13A Flathead Natio 124.73 27 ⇑P PKPdf 05 42 20.3 +0.2
baz=124
F08A Pendleton 124.78 32 ⇓P PKPdf 05 42 20.2 -0.1
baz=124
LNOR Lincton Mounta 124.99 32 PKIKP PKPdf 05 42 21.1 +0.4
LNOR Lincton Mounta 124.99 32 *e*PKPdf PKPdf 05 42 20.5 -0.2
J05A Fort Rock 125.00 36 ⇓P PKPdf 05 42 21.1 +0.3
baz=125
G08A Pilot Rock 125.02 32 ⇑P PKPdf 05 42 20.8 0.0
baz=125
YBH Yreka Blue Hor 125.03 38 ⇓P PKPdf 05 42 20.7 -0.2
baz=125
B13A Whitefish 125.11 27 ⇑P PKPdf 05 42 21.2 +0.3
baz=125
M02C Callahan 125.14 38 ⇑P PKPdf 05 42 21.8 +0.6
baz=125
H07A Lands Inn, Kim 125.14 33 ⇑P PKPdf 05 42 21.5 +0.5
baz=125
N02C Big Bar 125.17 39 ⇓P PKPdf 05 42 21.6 +0.4
baz=125
D11A Klaveano Farm, 125.18 29 ⇑P PKPdf 05 42 20.9 -0.1
baz=125
E10A Myers Farm, Un 125.18 30 ⇑P PKPdf 05 42 21.4 +0.4
baz=125
I06A Prineville 125.19 34 ⇓P PKPdf 05 42 21.5 +0.3
baz=125
O01C Eel River Cons 125.22 40 ⇓P PKPdf 05 42 21.7 +0.3
baz=125
F09A S2 Ranch, Elgi 125.30 31 ⇑P PKPdf 05 42 21.2 -0.1
baz=125
F10A Beach Ranch, E 125.47 31 ⇑P PKPdf 05 42 21.9 +0.2
baz=125
I07A Izee 125.50 34 ⇓P PKPdf 05 42 21.9 +0.2
baz=125
M04C Macdoel 125.53 37 ⇓P PKPdf 05 42 22.0 +0.1
baz=125
K05A Summer Lake 125.54 36 ⇑P PKPdf 05 42 22.1 +0.3
baz=125
C13A Hot Springs 125.57 28 ⇑P PKPdf 05 42 21.3 -0.4
baz=125
KIPM Iron Peak 125.62 40 *e*PKPdf PKPdf 05 42 22.0 -0.1
J06A Christmas Vall 125.65 35 ⇓P PKPdf 05 42 22.2 +0.2
baz=125
G09A Cove 125.65 32 ⇓P PKPdf 05 42 21.8 -0.1
baz=125
D12A Red Ives Fores 125.65 29 ⇓P PKPdf 05 42 22.3 +0.4
baz=125
M03C McCloud 125.66 38 ⇓P PKPdf 05 42 22.4 +0.2
baz=125
H08A Prairie City 125.67 33 ⇑P PKPdf 05 42 22.5 +0.5
baz=125
E11A Bogner Ranch, 125.72 30 ⇑P PKPdf 05 42 22.0 -0.1
baz=125
WDC Whiskeytown Da 125.79 39 ⇓P PKPdf 05 42 22.5 +0.1
baz=126
O02C Red Bluff 125.86 40 ⇑P PKPdf 05 42 23.1 +0.6
baz=126
K06A Valley Falls 125.87 36 ⇑P PKPdf 05 42 22.9 +0.4
baz=126
SCHQ Schefferville 125.94 350 PKP PKPdf 05 42 22.0 -0.3
comp=Z,6.1nm,1.1s,baz=41,slow=17,SNR=5.0
L05A Lakeview 125.98 37 ⇓P PKPdf 05 42 23.1 +0.4
baz=126
G10A Bishop Farm, J 125.99 31 ⇑P PKPdf 05 42 23.1 +0.5
baz=126
D13A Huson 126.05 28 ⇑P PKPdf 05 42 22.7 0.0
baz=126
J07A Hines 126.05 34 ⇓P PKPdf 05 42 23.5 +0.7
baz=126
F11A Grangeville 126.08 30 ⇓P PKPdf 05 42 23.0 +0.2
baz=126
H09A Durkee 126.12 32 ⇓P PKPdf 05 42 22.5 -0.4
baz=126
I08A Drewsey 126.12 34 ⇓P PKPdf 05 42 23.4 +0.4
baz=126
GASB Alder Springs 126.20 40 ⇓P PKPdf 05 42 24.0 +0.8
baz=126
M05C Lookout 126.20 37 ⇓P PKPdf 05 42 23.4 +0.2
baz=126
HOPS Hopland 126.33 41 ⇑P PKPdf 05 42 23.9 +0.4
baz=126
HOPS Hopland 126.33 41 *e*PKPdf PKPdf 05 42 24.5 +1.0
G11A Walters Elk Ra 126.36 31 ⇑P PKPdf 05 42 23.7 +0.3
baz=126
MOD Modoc 126.39 36 ⇑P PKPdf 05 42 24.1 +0.6
baz=126
D14A Greenough 126.50 28 ⇑P PKPdf 05 42 23.3 -0.2
baz=126
K07A Rock Creek Ran 126.52 35 ⇓P PKPdf 05 42 23.9 +0.1
baz=126
J08A Circle Bar Ran 126.53 34 ⇓P PKPdf 05 42 24.3 +0.5
baz=126
I09A Lost Marbles R 126.54 33 ⇓P PKPdf 05 42 23.9 +0.2
baz=126
F12A Elk City 126.62 30 ⇓P PKPdf 05 42 23.7 -0.2
baz=126
E13A Victor 126.65 29 ⇓P PKPdf 05 42 23.7 -0.1
baz=126
H10A Noah's Angus R 126.66 32 ⇓P PKPdf 05 42 23.9 -0.1
baz=126
M06C Likely Place G 126.70 37 ⇑P PKPdf 05 42 24.5 +0.3
baz=126
CHMT Chamberlain Mo 126.75 28 *e*PKPdf PKPdf 05 42 24.1 0.0
MNRC McLaughlin Nat 126.80 41 ⇑P PKPdf 05 42 24.9 +0.5
baz=126
O04C Chester 126.85 38 ⇓P PKPdf 05 42 25.0 +0.6

	baz=127							
L07A	Adell	126.88	36	⇓P		PKPdf	05 42 25.2	+0.7
	baz=127							
NSHM	Saint Helena R	126.89	41	*e*PKPdf		PKPdf	05 42 24.8	+0.2
K08A	Mann Creek Ran	126.93	35	⇑P		PKPdf	05 42 25.0	+0.5
	baz=127							
J09A	Fry Pan Ranch,	126.94	34	⇑P		PKPdf	05 42 25.0	+0.5
	baz=127							
H11A	Donnelly	126.96	31	⇓P		PKPdf	05 42 24.9	+0.4
	baz=127							
I10A	Payette	126.97	32	⇓P		PKPdf	05 42 25.0	+0.4
	baz=127							
D15A	Lincoln	126.99	27	⇓P		PKPdf	05 42 24.7	+0.2
	baz=127							
E14A	Clinton	127.00	28	⇓P		PKPdf	05 42 24.8	+0.2
	baz=127							
ORV	Oroville	127.03	39	⇑P		PKPdf	05 42 24.6	-0.2
	baz=127							
F13A	Darby	127.05	29	⇓P		PKPdf	05 42 24.5	-0.2
	baz=127							
CVS	Carmenet Viney	127.08	41	⇓P		PKPdf	05 42 24.7	-0.2
	baz=127							
O05C	Quincy	127.16	39	⇓P		PKPdf	05 42 25.1	+0.1
	baz=127							
L08A	Fields	127.35	35	⇑P		PKPdf	05 42 25.8	+0.5
	baz=127							
N06A	Buffalo Meadow	127.36	37	⇑P		PKPdf	05 42 25.6	+0.2
	baz=127							
M07A	Soldier Meadow	127.37	36	⇑P		PKPdf	05 42 25.6	+0.2
	baz=127							
K09A	Rome	127.38	34	⇑P		PKPdf	05 42 25.7	+0.4
	baz=127							
F14A	Wisdom	127.50	29	⇓P		PKPdf	05 42 25.3	-0.2
	baz=127							
I11A	Placerville	127.53	32	⇑P		PKPdf	05 42 25.8	+0.2
	baz=127							
BEKR	Beckwourth	127.57	39	⇓P		PKPdf	05 42 25.6	-0.2
	baz=127							
G13A	Cobalt	127.59	30	⇓P		PKPdf	05 42 25.4	-0.3
	baz=127							
H12A	Diamond D Ranc	127.67	31	⇓P		PKPdf	05 42 25.8	-0.1
	baz=127							
O06A	Flanigan	127.72	38	⇓P		PKPdf	05 42 25.9	-0.2
	baz=127							
P05C	Yuba Gap, Truc	127.74	39	⇓P		PKPdf	05 42 25.8	-0.3
	baz=128							
K10A	MacKenzie Ranc	127.80	34	⇑P		PKPdf	05 42 26.9	+0.7
	baz=128							
N07B	Gerlach	127.87	37	⇑P		PKPdf	05 42 26.9	+0.6
	baz=128							
G14A	Jackson	127.87	29	⇓P		PKPdf	05 42 26.9	+0.7
	baz=128							
F15A	Butte	127.89	28	⇓P		PKPdf	05 42 26.6	+0.3
	baz=128							
MFID	Camas Ranch	127.94	32	⇓P		PKPdf	05 42 26.8	+0.4
	baz=128							
H13A	Challis	127.96	30	⇓P		PKPdf	05 42 26.8	+0.4
	baz=128							
LAVA	Lava Cap Winer	127.97	40	⇓P		PKPdf	05 42 27.0	+0.4
	baz=128							
K11A	Parker Ranch,	128.27	33	⇑P		PKPdf	05 42 27.3	+0.2
	baz=128							
WCN	Washoe City	128.28	39	⇑P		PKPdf	05 42 27.7	+0.5
	baz=128							
O07A	Toulon	128.30	37	⇑P		PKPdf	05 42 27.2	0.0
	baz=128							
M09A	Marrel Ranch,	128.36	35	⇑P		PKPdf	05 42 27.6	+0.3
	baz=128							
N08A	GE Springer Mi	128.36	36	⇑P		PKPdf	05 42 28.0	+0.7
	baz=128							
H14A	Leadore	128.37	30	⇑P		PKPdf	05 42 27.6	+0.4
	baz=128							
G15A	Dillon	128.39	29	⇓P		PKPdf	05 42 27.9	+0.7
	baz=128							
R05C	Kirkwood Meado	128.43	40	⇓P		PKPdf	05 42 27.7	+0.2
	baz=128							
J12A	Stokes Ranch,	128.44	32	⇓P		PKPdf	05 42 28.0	+0.6
	baz=128							
L10A	Juniper Basin	128.49	34	⇑P		PKPdf	05 42 28.3	+0.8
	baz=128							
I13A	Wildhorse Cree	128.49	31	⇓P		PKPdf	05 42 27.8	+0.4
	baz=128							
HLID	Hailey	128.59	31	⇓P		PKPdf	05 42 28.6	+1.0
	baz=128							
CMB	Columbia Colle	128.61	40	⇓P		PKPdf	05 42 28.1	+0.2
	baz=128							
O08A	Rochester Mine	128.66	37	⇓P		PKPdf	05 42 28.7	+0.8
	baz=128							
N09A	Rock Creek Ran	128.68	36	⇓P		PKPdf	05 42 28.3	+0.4
	baz=128							
H15A	Lima	128.72	29	⇓P		PKPdf	05 42 28.5	+0.6
	baz=128							
M10A	I.L. Ranch, Tu	128.81	35	⇑P		PKPdf	05 42 28.4	+0.3
	baz=128							
I14A	Mackay	128.82	30	⇑P		PKPdf	05 42 28.9	+0.9
	baz=128							
L11A	Cat Creek Ranc	128.82	33	⇓P		PKPdf	05 42 28.8	+0.7
	baz=128							
J13A	Cove Ranch, Pi	128.82	31	⇑P		PKPdf	05 42 28.5	+0.4
	baz=128							
R06C	Coleville	128.93	39	⇓P		PKPdf	05 42 29.2	+0.7
	baz=129							
K12A	Draper Farm, C	128.97	32	⇓P		PKPdf	05 42 28.7	+0.3
	baz=129							
S06C	San Francisco	129.05	40	⇑P		PKPdf	05 42 29.4	+0.7
	baz=129							
QLMT	Earthquake Lak	129.15	28	*e*PKPdf		PKPdf	05 42 30.1	+1.4
QLMT				*e*			05 42 41.0	
J14A	Carey	129.22	31	⇓P		PKPdf	05 42 29.4	+0.6
	baz=129							
GCMT	Greycliff	129.22	26	*e*PKPdf		PKPdf	05 42 29.5	+0.7
L12A	House Creek Ra	129.24	33	⇑P		PKPdf	05 42 29.8	+0.8
	baz=129							
I15A	Monteview	129.25	30	⇓P		PKPdf	05 42 29.4	+0.5
	baz=129							
U04C	Hernandez Rese	129.28	42	⇓P		PKPdf	05 42 30.1	+0.9
	baz=129							
M11A	Holland Ranch,	129.29	34	⇓P		PKPdf	05 42 30.5	+1.4
	baz=129							
H16A	Russell Place,	129.33	28	⇓P		PKPdf	05 42 29.8	+0.8
	baz=129							
K13A	Stover Farm, H	129.40	32	⇑P		PKPdf	05 42 29.8	+0.6
	baz=129							
O10A	Cortez Mining,	129.63	36	⇑P		PKPdf	05 42 30.5	+0.8
	baz=129							
T06C	Millerton Lake	129.64	41	⇓P		PKPdf	05 42 29.9	+0.1
	baz=129							
PKD	Parkfield	129.68	43	⇓P		PKPdf	05 42 30.6	+0.7
	baz=129							
Q08A	Gabbs	129.68	38	⇓P		PKPdf	05 42 30.2	+0.3
	baz=129							
NVAR	Mina Array Bea	129.71	39	PKP		PKPdf	05 42 29.9	-0.1
	comp=Z,1.9nm,0.6s,baz=286,slow=2.3,SNR=19							
NVAR				PP		PP	05 44 37.1	-3.1
	comp=Z,0.8nm,0.9s,baz=228,slow=3.5,SNR=2.3							
J15A	Blackfoot	129.71	30	⇓P		PKPdf	05 42 30.1	+0.3
	baz=129							
N11A	Elko Archery C	129.73	35	⇑P		PKPdf	05 42 30.7	+0.8
	baz=130							
M12A	Wells	129.79	34	⇓P		PKPdf	05 42 30.7	+0.7
	baz=130							
I16A	Newdale	129.83	29	⇓P		PKPdf	05 42 30.8	+0.8
	baz=130							
L13A	Double Diamond	129.86	32	⇓P		PKPdf	05 42 30.8	+0.7
	baz=130							
RLMT	Red Lodge	129.91	26	*e*PKPdf		PKPdf	05 42 30.1	0.0
RLMT				*e*			05 42 42.1	
ULM	Lac du Bonnet	129.94	13	PKP		PKPdf	05 42 29.9	-0.1
	comp=Z,5.4nm,0.5s,baz=276,slow=1.3,SNR=9.6							
K14A	Jones Ranch, D	129.94	31	⇓P		PKPdf	05 42 31.4	+1.2
	baz=130							
FLWY	Flagg Ranch	130.05	28	*e*PKPdf		PKPdf	05 42 32.0	+1.5
FLWY				*e*			05 42 41.4	
N12A	Clover Valley,	130.10	34	⇑P		PKPdf	05 42 31.3	+0.6
	baz=130							
K15A	Arbon	130.18	31	⇓P		PKPdf	05 42 31.3	+0.6
	baz=130							
MTUM	Tungsten Hills	130.18	40	*e*PKPdf		PKPdf	05 42 32.2	+1.3
J16A	Bone	130.21	30	⇓P		PKPdf	05 42 31.4	+0.7
	baz=130							
O11A	Cowboy Ranch,	130.23	35	⇑P		PKPdf	05 42 31.4	+0.5
	baz=130							
M13A	Montello	130.24	33	⇑P		PKPdf	05 42 31.8	+0.9
	baz=130							
L14A	Malta	130.27	32	⇑P		PKPdf	05 42 31.7	+0.8
	baz=130							
HELL	Mitchell Peak	130.28	41	⇑P		PKPdf	05 42 31.7	+0.7
	baz=130							
S08C	White Mtn Res	130.35	40	⇑P		PKPdf	05 42 32.1	+0.9
	baz=130							
N13A	Wendover, West	130.57	34	⇑P		PKPdf	05 42 32.3	+0.8
	baz=130							
M14A	Sheep Mountain	130.59	32	⇑P		PKPdf	05 42 32.0	+0.5
	baz=130							
R09A	Tonopah	130.59	38	⇓P		PKPdf	05 42 32.3	+0.7
	baz=130							
Q10A	Clear Creek Ra	130.63	37	⇓P		PKPdf	05 42 32.4	+0.7
	baz=130							
O12A	Currie	130.66	35	⇓P		PKPdf	05 42 32.6	+0.9
	baz=130							
L15A	Malad City	130.74	31	⇑P		PKPdf	05 42 32.4	+0.7
	baz=130							
S09A	Goldfield	130.81	39	⇓P		PKPdf	05 42 33.1	+1.0
	baz=130							
Q11A	Duckwater	131.07	37	⇑P		PKPdf	05 42 33.6	+1.1
	baz=131							
S10A	Tonopah Range,	131.08	38	⇑P		PKPdf	05 42 33.7	+1.2
	baz=131							
M15A	Larsen Ranch,	131.09	32	⇑P		PKPdf	05 42 33.4	+0.9
	baz=131							
P12A	McGill	131.10	36	⇓P		PKPdf	05 42 33.5	+1.0
	baz=131							
N14A	Grayback Hills	131.13	33	⇑P		PKPdf	05 42 33.2	+0.6
	baz=131							
GRAC	Grapevine Rang	131.16	40	⇑P		PKPdf	05 42 33.4	+0.7
	baz=131							
Q12A	Willow Creek R	131.43	36	⇓P		PKPdf	05 42 34.0	+0.8
	baz=131							
R11A	Troy Canyon, C	131.43	37	⇓P		PKPdf	05 42 33.8	+0.5
	baz=131							
PDAR	Pinedale Array	131.59	29	PKP		PKPdf	05 42 33.5	+0.1
	comp=Z,1.5nm,0.6s,baz=238,slow=1.4,SNR=15							
PDAR				PP		PP	05 44 50.1	-2.0
	comp=Z,0.8nm,0.9s,baz=299,slow=6.1,SNR=3.8							
P13A	Bates Ranch, G	131.62	35	⇓P		PKPdf	05 42 34.5	+0.9
	baz=131							
M16A	Huntsville	131.63	31	⇑P		PKPdf	05 42 33.9	+0.4
	baz=131							
MPMC	Manual Prospec	131.64	41	⇓P		PKPdf	05 42 34.7	+1.0
	baz=131							
S11A	Rachel	131.78	38	⇑P		PKPdf	05 42 34.5	+0.6
	baz=132							
O15A	The Old Anders	131.92	33	⇓P		PKPdf	05 42 35.0	+1.0
	baz=132							
Q13A	Wheeler Ranch,	131.96	35	⇑P		PKPdf	05 42 35.4	+1.2
	baz=132							
EDW2	Edwards Air Fo	132.00	42	⇑P		PKPdf	05 42 35.2	+0.8
	baz=132							
R12A	Pony Springs,	132.03	36	⇓P		PKPdf	05 42 35.0	+0.7
	baz=132							
P14A	Drum Mountains	132.07	34	⇓P		PKPdf	05 42 35.6	+1.2
	baz=132							
N17A	Moffit Pass	132.31	31	⇓P		PKPdf	05 42 36.4	+1.6
	baz=132							
S12A	Delamar Landin	132.35	37	⇑P		PKPdf	05 42 36.1	+1.1
	baz=132							
T11A	Corn Creek, Al	132.36	38	⇓P		PKPdf	05 42 36.5	+1.5
	baz=132							
Q14A	Sevier Lake (B	132.36	35	⇑P		PKPdf	05 42 36.7	+1.8
	baz=132							
DAU	Daniels Canyon	132.48	32	PKIKP		PKPdf	05 42 38.0	+2.9
DAU	Daniels Canyon	132.48	32	*e*PKPdf		PKPdf	05 42 36.1	+1.0
O16A	Springville	132.49	32	⇑P		PKPdf	05 42 36.7	+1.6
	baz=132							
O17A	Robinson Place	132.91	32	⇑P		PKPdf	05 42 37.0	+1.1
	baz=133							
S13A	Holt Ranch, En	132.96	37	⇓P		PKPdf	05 42 37.5	+1.4
	baz=133							
N19A	John Jarvie Ra	133.19	30	⇑P		PKPdf	05 42 37.5	+1.1
	baz=133							
O18A	Roosevelt	133.24	31	⇑P		PKPdf	05 42 37.7	+1.2
	baz=133							
S14A	Cedar City	133.25	36	⇑P		PKPdf	05 42 37.9	+1.2
	baz=133							
MSU	Marysvale	133.31	35	*e*PKIKP		PKPdf	05 42 38.4	+1.6
V12A	Nelson	133.54	39	⇓P		PKPdf	05 42 38.7	+1.4
	baz=133							
P18A	Preston Nutter	133.58	32	⇑P		PKPdf	05 42 38.5	+1.3
	baz=133							
Q16A	Castle Valley	133.59	33	⇑P		PKPdf	05 42 38.4	+1.1
	baz=133							
GMRC	Granite Mounta	133.60	41	⇓P		PKPdf	05 42 39.1	+1.7
	baz=133							
U13A	Pakoon Wash	133.66	38	⇓P		PKPdf	05 42 39.2	+1.7
	baz=133							
O19A	Miners Draw (B	133.67	30	⇑P		PKPdf	05 42 38.4	+1.0
	baz=133							
PFO	Pinyon Flat Ob	133.77	43	⇑P		PKPdf	05 42 39.0	+1.2
	baz=134							
V13A	Grand Canyon W	134.01	39	⇓P		PKPdf	05 42 39.6	+1.4
	baz=134							
Q18A	Rafter H Ranch	134.02	32	⇑P		PKPdf	05 42 39.5	+1.4
	baz=134							
S16A	Weppner Ranch,	134.19	35	⇑P		PKPdf	05 42 39.6	+1.2
	baz=134							
R17A	Hanksville Air	134.20	34	⇓P		PKPdf	05 42 39.8	+1.4
	baz=134							
IRM	Iron Mountain	134.31	41	⇑P		PKPdf	05 42 40.2	+1.4
	baz=134							
W13A	Hualapai Mount	134.55	39	⇑P		PKPdf	05 42 40.7	+1.5
	baz=134							
Q19A	Hogan Spring (	134.59	32	⇓P		PKPdf	05 42 40.1	+1.0
	baz=134							
U15A	North Rim	134.66	37	⇓P		PKPdf	05 42 40.9	+1.5
	baz=134							
R18A	Canyonlands Na	134.67	33	⇓P		PKPdf	05 42 40.3	+1.0
	baz=134							
V14A	Boquillas Ranc	134.69	38	⇑P		PKPdf	05 42 40.7	+1.3
	baz=134							
T16A	Glen Canyon Da	134.75	36	⇓P		PKPdf	05 42 40.6	+1.1
	baz=134							
PDMCI	Parker Dam,Lak	134.89	40	⇓P		PKPdf	05 42 40.8	+1.0
	baz=135							
X13A	Yucca	134.90	40	⇓P		PKPdf	05 42 40.6	+0.8
	baz=135							
Y12C	Blythe	134.97	41	⇓P		PKPdf	05 42 41.1	+1.1
	baz=135							
W14A	Seligman	134.98	39	⇓P		PKPdf	05 42 41.4	+1.4
	baz=135							
R19A	Curley Farm, L	135.08	32	⇓P		PKPdf	05 42 41.4	+1.3
	baz=135							
S18A	Hurst Farm, Bl	135.11	34	⇑P		PKPdf	05 42 40.7	+0.6
	baz=135							
V15A	Kaibab Nationa	135.14	37	⇑P		PKPdf	05 42 41.1	+0.8
	baz=135							
T17A	Navajo Res., N	135.15	35	⇑P		PKPdf	05 42 41.2	+0.9
	baz=135							
U17A	Shonto	135.50	35	⇓P		PKPdf	05 42 41.8	+0.9
	baz=135							
W15A	Williams	135.51	38	⇑P		PKPdf	05 42 41.7	+0.8
	baz=135							
S19A	Harvey Farm, M	135.54	33	⇑P		PKPdf	05 42 41.8	+0.8
	baz=135							
U16A	Tuba City	135.55	36	⇑P		PKPdf	05 42 42.4	+1.4
	baz=135							
PV01	Paradise Valley	135.56	32	*e*PKPdf		PKPdf	05 42 40.6	-0.3
T18A	Mexican Hat	135.57	34	⇓P		PKPdf	05 42 42.2	+1.2
	baz=135							
X15A	Humboldt	135.98	39	⇓P		PKPdf	05 42 42.7	+0.9
	baz=136							
113A	Mohawk Valley,	136.08	42	⇑P		PKPdf	05 42 43.2	+1.1
	baz=136							
Y15A	Casa Rosa Ranc	136.26	39	⇑P		PKPdf	05 42 43.4	+1.0
	baz=136							
T19A	Beclabito	136.27	34	⇓P		PKPdf	05 42 43.4	+1.0
	baz=136							
X16A	Lo Mia Camp, P	136.52	38	⇓P		PKPdf	05 42 44.1	+1.2
	baz=136							
V18A	Ganado	136.55	36	⇑P		PKPdf	05 42 44.6	+1.7
	baz=136							
X17A	Forest Lakes	136.97	38	⇓P		PKPdf	05 42 45.4	+1.7
	baz=137							
W18A	Petrified Fore	137.07	36	⇑P		PKPdf	05 42 45.6	+1.7
	baz=137							
214A	Organ Pipe Nat	137.21	42	⇑P		PKPdf	05 42 45.9	+1.6
	baz=137							
X18A	Snowflake	137.35	37	⇑P		PKPdf	05 42 46.0	+1.6
	baz=137							
Y17A	Roosevelt	137.37	39	⇑P		PKPdf	05 42 45.9	+1.4
	baz=137							
116A	Eloy	137.56	40	⇑P		PKPdf	05 42 46.3	+1.4
	baz=137							
Y18A	Canyon Day Jun	137.81	38	⇓P		PKPdf	05 42 47.1	+1.8
	baz=138							
X19A	St. Johns	137.82	36	⇓P		PKPdf	05 42 46.6	+1.3
	baz=138							
Y19A	Nutrioso	138.16	37	⇓P		PKPdf	05 42 47.6	+1.7
	baz=138							
117A	Oracle	138.18	40	⇑P		PKPdf	05 42 47.5	+1.5
	baz=138							
TUC	Tucson	138.32	40	*e*PKIKP		PKPdf	05 42 45.8	-0.5
Z19A	T-Link Ranch,	138.61	38	⇑P		PKPdf	05 42 48.4	+1.6
	baz=138							
118A	Homack Ranch,	138.62	39	⇓P		PKPdf	05 42 48.6	+1.8
	baz=138							
217A	Green Valley	138.64	41	⇑P		PKPdf	05 42 48.9	+2.0
	baz=138							
119A	Ashpeak Ranch,	138.95	38	⇓P		PKPdf	05 42 49.3	+1.9
	baz=139							
LAZ	Ladron	139.08	35	*e*PKPdf		PKPdf	05 42 48.4	+0.8
318A	Bisbee	139.40	40	⇓P		PKPdf	05 42 49.8	+1.6
	baz=139							
LPM	Los Pinos Moun	139.44	34	*e*PKPdf		PKPdf	05 42 48.8	+0.5
219A	White Tail Can	139.49	39	⇓P		PKPdf	05 42 50.3	+1.8
	baz=139							
BNM	Barren Site	139.56	34	*e*PKPdf		PKPdf	05 42 51.5	+3.0
319A	Douglas	139.89	40	⇑P		PKPdf	05 42 51.0	+1.8
	baz=140							
BDFB	Brasilia	143.56	240	PKP		PKPdf	05 42 55.7	-0.4
	comp=Z,2.4nm,0.6s,baz=50,slow=11,SNR=5.2							
BDFB	Brasilia	143.56	240	PKIKP		PKPdf	05 42 55.7	-0.4
BDFB				pmax		pmax		
	comp=Z,2.0nm,0.6s							
CPUP	Villa Florida	144.24	217	PKP		PKPdf	05 42 55.6	-1.4
	comp=Z,1.5nm,0.8s,baz=110,slow=2.6,SNR=37							
CPUP	Villa Florida	144.24	217	PKIKP		PKPdf	05 42 55.7	-1.4
CPUP				pmax		pmax		
	comp=Z,1.5nm,0.8s							
GLAT	Glass	144.70	12	*e*PKPdf		PKPdf	05 42 56.1	-1.5
ELN	Prospectdale	144.71	0	*e*PKPdf		PKPdf	05 42 54.5	-3.0
UTMT	University of	144.72	12	*e*PKPdf		PKPdf	05 42 56.2	-1.4
TXAR	Lajitas Array	144.79	37	PKP		PKPdf	05 42 57.1	-0.8
	comp=Z,26nm,0.5s,baz=207,slow=0.9,SNR=636							
TXAR	Lajitas Array	144.79	37	PKIKP		PKPdf	05 42 57.1	-0.8
TXAR				pmax		pmax		
	comp=Z,27nm,0.5s							
GNAR	Gosnell	144.83	14	*e*PKPdf		PKPdf	05 42 56.3	-1.5
CFAA	Coronel Fontan	144.85	198	PKP		PKPdf	05 42 57.6	-0.4
	comp=Z,2.8nm,0.7s,baz=173,slow=3.1,SNR=48							
HALT	Halls	145.04	13	*e*PKPdf		PKPdf	05 42 56.4	-1.8
HBAR	Harrisburg	145.07	15	*e*PKPdf		PKPdf	05 42 57.4	-0.8
WVT	Waverly	145.13	10	*e*PKIKP		PKPdf	05 42 56.5	-1.8
MIAR	Mount Ida	145.16	19	*e*PKIKP		PKPdf	05 42 57.4	-1.0
TZTN	Tazewell	145.27	4	*e*PKPdf		PKPdf	05 42 57.2	-1.3
UALR	University of	145.34	17	*e*PKPdf		PKPdf	05 42 57.2	-1.5
MET	Memphis--Engin	145.66	14	*e*PKPdf		PKPdf	05 42 58.7	-0.6
JCT	Junction City	146.06	31	*e*PKP2		PKPab	05 43 00.2	-1.3
BBSR	BB Station	146.13	336	*e*PKPbc		PKPbc	05 43 01.1	0.0
TKL	Tuckaleechee C	146.13	5	*e*PKP2		PKPab	05 42 59.9	-1.7
CPCT	Cooper Cave	146.27	6	*e*PKPdf		PKPdf	05 43 00.4	+0.1
SWET	Sewanee	146.33	8	*e*PKPdf		PKPdf	05 42 58.9	-1.5
OXF	Oxford	146.36	13	*e*PKP2		PKPab	05 43 00.3	-2.2
CNNC	Cliffs of the	146.60	356	*e*PKPbc		PKPbc	05 43 01.6	-0.8
NATX	Nacogdoches	147.29	23	*e*PKPbc		PKPbc	05 43 04.3	-0.2
JSC	Jenkinsville	147.64	1	*e*PKP2		PKPbc	05 43 05.1	-0.2
GOGA	Godfrey	148.39	5	*e*PKP2		PKPbc	05 43 06.9	-0.4
BRAL	Brewton	150.25	11	*e*PKPbc		PKPbc	05 43 12.1	0.0
LVC	Limon Verde	153.28	204	PKPbc		PKPbc	05 43 21.0	+1.7
	comp=Z,4.0nm,0.9s,baz=66,slow=2.0,SNR=3.7							
LVC				PKPab		PKPab	05 43 31.8	+0.9
	comp=Z,15nm,1.0s,baz=81,slow=1.8,SNR=6.8							
SIV	San Ignacio	153.96	227	PKP		PKPdf	05 43 13.2	+0.4
	comp=Z,0.7nm,0.8s,baz=26,slow=2.2,SNR=3.9							
SIV				PKPbc		PKPbc	05 43 20.8	0.0
	comp=Z,6.5nm,1.1s,baz=22,slow=0.8,SNR=12							
CAIG	El Cayaco	155.30	51	*i* P		PKPdf	05 43 15.4	+0.7
LPAZ	La Paz	158.32	214	PKP		PKPdf	05 43 20.1	+1.5
	comp=Z,1.8nm,1.0s,baz=88,slow=7.3,SNR=5.6							
LPAZ	La Paz	158.32	214	PKIKP		PKPdf	05 43 20.1	+1.5
LPAZ				pmax		pmax		
	comp=Z,2.0nm,1.0s							

NEIC ***13*** *05:32:09.6, 1680N×9852W, h5km, MD4.0(MEX), After MEX.*

MEX 13 05:32:09.6±1.1, 1680N×9852W, h5km±21km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.55	137	*i* P		Pg	05 32 19.8	-0.4
PNIG				*i* S		Sg	05 32 28.1	+0.7
ACX	Acapulco	1.34	273	*i* P		Pn	05 32 30.9	-4.1
ACX				*i* S		Sb	05 32 48.1	-4.6
CAIG	El Cayaco	1.69	279	*i* P		Pn	05 32 37.8	-2.1
CAIG				*i* S		Sn	05 32 59.3	-2.6
VHO	Vista Hermosa	1.73	81	*i* P		Pn	05 32 36.0	-4.3
VHO				*i* S		Sn	05 32 56.9	-5.9
TPIG	Tehuac#an	1.95	34	*i* P		Pn	05 32 39.9	-3.5
TPIG				*i* S		Sn	05 33 03.9	-4.3
PPM	Popocatepetl	2.26	357	*i* P		Pn	05 32 46.8	-0.8
PPM				*i* S		Sn	05 33 19.2	+3.4
MZVM		2.47	344	*i* P		Pn	05 32 50.7	+0.2
IIO	Organos

IPM Ipoh 8.15 3 ⇑P Pn 05 46 17.9 +2.1
XMIS Christmas Isla 8.38 144 *e*Pn Pn 05 46 13.6 -5.3
XMIS *e*Sn Sn 05 47 41.5 -11
COCO West Island 9.22 204 *e*Pn Pn 05 46 29.2 -1.3
COCO *e*Sn Sn 05 48 04.5 -8.9
KTGM Kuala Trenggan 9.32 16 ⇓P Pn 05 46 32.6 +0.7
BJII Banjamegara 9.74 112 P Pn 05 46 40.2 +2.6
106nm,1.8s
BSI Banda Aceh 10.58 330 P Pn 05 46 48.5 -0.7
109nm,1.0s
KSM Kuching 10.97 62 ⇓P Pn 05 47 02.4 +7.9
KSM Kuching 10.97 62 *e*Pn Pn 05 46 57.6 +3.1
STKI Sintang 11.48 71 P Pn 05 47 09.8 +8.3
97nm,0.9s
SJI Sawahan 11.79 110 P Pn 05 47 05.2 -0.5
166nm,0.8s
SBUM Sibu 13.11 62 ⇑P Pn 05 47 27.1 +3.2
BBKI Banjar Baru 14.20 89 P Pn 05 47 41.9 +3.2
929nm,0.8s
BTM Bintulu 14.22 61 ⇑P Pn 05 47 43.3 +4.3
MTNI Mataram 16.21 108 P Pn 05 48 09.2 +3.9
66nm,1.0s
KKM Kota Kinabalu 18.34 58 ⇑P Pn 05 48 32.2 +0.3
KKM Kota Kinabalu 18.34 58 *e*Pn Pn 05 48 31.0 -0.9
SDKM Sandakan 18.98 61 ⇓P Pn 05 48 39.5 -0.2
TSM Tawau 18.98 65 ⇓P Pn 05 48 40.9 +1.2
KAPI Kappang 19.12 95 P Pn 05 48 39.4 -1.9
567nm,1.3s,SNR=11
KAPI Kappang 19.12 95 Pn Pn 05 48 38.0 -3.4
4.1nm,0.3s,baz=285,slow=7.9,SNR=20
KAPI Kappang 19.12 95 *e*Pn Pn 05 48 39.0 -2.3
KDM Kudat 19.32 57 ⇓P Pn 05 48 45.4 +1.6
UBT Ubonrachathani 19.33 13 P Pn 05 48 41.9 -1.9
PCI Palu 19.40 82 P Pn 05 48 45.4 +0.7
166nm,1.6s
MYLDM Lahad Datu 19.93 64 ⇓P Pn 05 48 53.7 +2.7
KDI Kendari 21.95 91 P P 05 49 12.6 +1.5
124nm,1.1s,mb5.2
CMAR Chiang Mai Arr 22.09 356 P P 05 49 09.7 -2.8
25nm,0.6s,mb4.8,baz=185,slow=8.3,SNR=44
CMAR Chiang Mai Arr 22.09 356 P P 05 49 09.7 -2.8
CMAR pmax pmax
comp=Z,25nm,0.6s
NANT Nan 22.37 0 P P 05 49 11.3 -4.1
comp=Z,150nm,1.0s,mb5.4
CHTO Chiang Mai 22.44 356⇑*e*P P 05 49 16.0 -0.2
CHTO pmax pmax
comp=Z,36nm,0.9s,mb4.8
CHTO Chiang Mai 22.44 356⇑*e*P P 05 49 16.0 -0.3
comp=Z,36nm,0.9s,mb4.8
QIZ Qiongzhong 24.35 22 P P 05 49 34.9 -0.2
QIZ Qiongzhong 24.35 22 *e*Pn P 05 49 33.8 -1.3
comp=Z,69nm,1.2s,mb5.0
MBWA Marble Bar 25.42 135 *e*P P 05 49 44.3 -0.5
comp=Z,42nm,1.4s,mb4.8
FITZ Fitzroy Crossi 28.36 122 *e*P P 05 50 10.7 -0.7
comp=Z,19nm,0.7s,mb4.8
FITZ Fitzroy Crossi 28.36 122 P P 05 50 10.5 -0.8
comp=Z,5.3nm,0.7s,mb4.3,baz=293,slow=9.4,SNR=16
FITZ PcP PcP 05 53 24.0 +0.1
comp=Z,4.9nm,1.0s,baz=146,slow=11,SNR=3.4
KMI Kunming 28.74 4 P P 05 50 14.9 +0.3
KMI AP pP 05 50 18.3 -4.1
KMI PP PP 05 51 11.0 -8.8
KMI AMB AMB
comp=Z,15nm,0.9s,mb4.7
KMI LR LR
comp=N,2μm,19.5s,MS4.9
KMI LR LR
comp=E,2μm,15.9s,MS4.9
KMI LR LR
comp=Z,2μm,26.6s
HYB Hyderabad 30.25 315 *i* P P 05 50 29.0 +0.9
HYB Hyderabad 30.25 315 *e*P P 05 50 28.0 -0.1
GYA Guiyang 30.56 11 P P 05 50 33.3 +2.6
GYA PP PP 05 51 35.6 -4.4
GYA PCP PcP 05 53 30.0 +0.7
GYA S S 05 55 35.4 +4.4
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.0
GYA AMB AMB
comp=Z,130nm,4.7s
GYA LR LR
comp=N,580nm,17.8s,MS4.4
GYA LR LR
comp=E,560nm,16.5s,MS4.4
GYA LR LR
comp=Z,610nm,15.4s,MS4.4
NWAO Narrogin (SRO) 32.96 154 P P 05 50 53.0 +1.2
comp=Z,4.6nm,0.7s,mb4.5,baz=325,slow=16,SNR=3.4
NWAO Narrogin (SRO) 32.96 154 P P 05 50 53.0 +1.2
NWAO pmax pmax
comp=Z,5.0nm,0.7s
NWAO Narrogin (SRO) 32.96 154 P P 05 50 53.0 +1.2
ODAN Odare 32.97 338 *e*P P 05 50 52.9 +1.0
comp=Z,176nm,0.9s,mb6.0
TAPN Taplejung 33.30 339 *e*P P 05 50 56.4 +1.6
comp=Z,368nm,0.9s,mb6.3
RAMN Ramite 33.36 337 *e*P P 05 50 56.8 +1.5
JIRN Jiri 34.15 337 *e*P P 05 51 03.7 +1.5
comp=Z,187nm,0.7s,mb6.1
PKI Pulchoki 34.39 336 *e*P P 05 51 05.0 +0.7
NACB Ninganchiao 34.43 35 *e*P P 05 51 03.9 -0.8
comp=Z,138nm,0.8s,mb5.9
LSA Lhasa 34.44 345 P P 05 51 05.9 +1.2
LSA Lhasa 34.44 345 *e*P P 05 51 05.2 +0.5
LSA pmax pmax
comp=Z,107nm,1.5s,mb5.5
LSA Lhasa 34.44 345 *e*P P 05 51 05.2 +0.5
comp=Z,107nm,1.5s,mb5.5
GUN Gumba 34.50 337 *e*P P 05 51 06.5 +1.3
comp=Z,83nm,0.4s,mb6.1
DMN Daman 34.55 335 *e*P P 05 51 06.4 +0.8
CD2 Chengdu 34.56 5 *e*P P 05 51 04.1 -1.6
CD2 AP pP 05 51 10.0 -3.6
CD2 PP PP 05 52 22.0 -2.4
CD2 PCP PcP 05 53 38.0 -2.2
CD2 AMB AMB
comp=Z,40nm,0.8s,mb5.4
KKN Kakani 34.63 336 *e*P P 05 51 07.2 +0.8
GKN Gorkha 35.09 335 *e*P P 05 51 11.1 +0.8
KOLN Koldanda 35.34 333 *e*P P 05 51 13.5 +1.0
comp=Z,77nm,0.7s,mb5.7
DANN Dangsing 35.77 334 *e*P P 05 51 17.0 +0.8
WHN Wuhan 36.50 20 ⇓P P 05 51 22.3 -0.1
WRA Warramunga Arr 36.61 119 P P 05 51 22.4 -1.2
comp=Z,9.1nm,0.4s,mb5.0,baz=283,slow=7.8,SNR=53
WRA PcP PcP 05 53 45.7 -0.8
comp=Z,2.1nm,0.6s,baz=306,slow=2.4,SNR=3.9
WRA Warramunga Arr 36.61 119 P P 05 51 22.4 -1.1
WRA 05 53 45.7
WRA pmax pmax
comp=Z,9.0nm,0.4s
WRA pmax pmax
comp=Z,2.0nm,0.6s
WRAB Tennant Creek 36.62 119 P P 05 51 22.3 -1.3
comp=Z,161nm,0.8s,mb5.9,SNR=18
WRAB Tennant Creek 36.62 119 *e*P P 05 51 22.2 -1.4
WRAB pmax pmax
comp=Z,17nm,0.7s,mb5.0
WRAB Tennant Creek 36.62 119 *e*P P 05 51 22.2 -1.3
comp=Z,17nm,0.7s,mb5.0
WB2 Warramunga Arr 36.62 119 *e*P P 05 51 22.3 -1.3
XAN Xi'an 38.36 11 P P 05 51 36.8 -1.3
XAN AP pP 05 51 44.5 -1.5
XAN XP sP 05 51 48.3 -1.0
XAN AMB AMB
comp=Z,115nm,0.9s,mb5.6
PTH Pithoragarh 38.42 331 *e*P P 05 51 40.2 +1.5
PTH *ex* x 05 56 10.9
NDI New Delhi 39.29 327 *e*P P 05 51 45.5 -0.5
NJ2 Nanjing 39.56 25 *e*P P 05 51 50.1 +1.9
NJ2 AMB AMB
comp=Z,20nm,1.0s,mb4.8
LZH Lanzhou 39.70 4 ⇓P P 05 51 49.1 -0.2
LZH AP pP 05 51 53.8 -3.5
LZH XP sP 05 51 56.3 -4.3
LZH PP PP 05 53 20.3 -0.6
LZH AMB AMB
comp=Z,134nm,1.2s,mb5.5
LZH AMB AMB
comp=Z,532nm,5.6s
LZH LR LR
comp=N,3μm,13.7s
LZH LR LR
comp=Z,5μm,17.9s,MS5.4
DDI Dehra Dun 40.13 329 *ex* x 05 51 49.8
DDI *ex* x 05 56 16.0
JOW Kunigami 40.45 40 P P 05 51 54.2 -1.5
comp=Z,21nm,0.7s,mb5.0,baz=212,slow=5.1,SNR=11
SMLA Simla 41.24 329 *i* P P 05 52 02.2 +0.2
SMLA *ex* x 05 52 04.2
comp=Z,28nm,0.6s
SMLA *i* x 05 56 47.9
GTA Gaotai 42.91 359 ⇑P P 05 52 15.6 0.0
GTA AP pP 05 52 19.3 -4.4
GTA AMB AMB
comp=Z,34nm,1.0s,mb5.0
GTA AMB AMB
comp=Z,2μm,6.0s
GTA LR LR
comp=N,2μm,18.6s,MS5.2
GTA LR LR
comp=E,2μm,20.4s,MS5.2
GTA LR LR
comp=Z,4μm,19.8s,MS5.3
THN Thein Dam 43.02 329 *e*P P 05 52 15.5 -1.1
HHC Hu-ho-hao-te 45.46 12 ⇑P P 05 52 36.6 +0.6
HHC AMB AMB
comp=Z,51nm,0.9s,mb5.3
HHC AMB AMB
comp=Z,3μm,7.4s
HHC LR LR
comp=N,3μm,17.3s,MS5.3
HHC LR LR
comp=E,2μm,16.4s,MS5.3
HHC LR LR
comp=Z,4μm,17.7s,MS5.4
BJT Baijiatuao 45.80 17 *e*P P 05 52 38.0 -0.7
BJT *e**PP pP 05 52 46.1 -0.7
BJT pmax pmax
comp=Z,46nm,1.1s
BJT Baijiatuao 45.80 17 *e*P P 05 52 38.0 -0.8
comp=Z,46nm,1.1s,mb5.3
BJT *e*pP pP 05 52 46.1 -0.7
BJI Beijing 45.82 17 P P 05 52 38.5 -0.4
BJI AMB AMB
comp=Z,39nm,1.1s,mb5.2
PMG Port Moresby 46.55 99 P P 05 52 43.1 -2.0
DL2 Dalian 46.63 23 P P 05 52 45.0 -0.3
DL2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CTA Charters Tower 47.33 114 *e*P P 05 52 50.7 -0.4
comp=Z,12nm,0.9s,mb4.8
CTA Charters Tower 47.33 114 P P 05 52 50.0 -1.0
comp=Z,11nm,0.6s,mb5.0,baz=274,slow=10,SNR=15
CTA Charters Tower 47.33 114 P P 05 52 50.0 -1.1
CTA pmax pmax
comp=Z,11nm,0.6s
CTAO Charters Tower 47.33 114 *e*P P 05 52 50.4 -0.7
CTAO pmax pmax
comp=Z,16nm,0.8s,mb5.0
CTAO Charters Tower 47.33 114 *e*P P 05 52 50.4 -0.7
comp=Z,16nm,0.8s,mb5.0
STKA Stephens Creek 47.56 131 *e*P P 05 52 53.1 +0.4
comp=Z,12nm,0.8s,mb5.0
STKA Stephens Creek 47.56 131 P P 05 52 52.8 +0.1
comp=Z,6.9nm,0.7s,mb4.8,baz=315,slow=10,SNR=8.9
KSRS Korea Array 48.18 29 P P 05 52 56.1 -1.3
comp=Z,38nm,1.0s,mb5.4,baz=219,slow=8.2,SNR=98
KSRS Korea Array 48.18 29 P P 05 52 56.1 -1.3
KSRS pmax pmax
comp=Z,38nm,1.0s,mb5.4
WMQ Urumqi 48.73 348⇑*i*P P 05 53 02.3 +0.9
WMQ AP pP 05 53 10.8 +1.2
WMQ AMB AMB
comp=Z,83nm,0.9s,mb5.8
SNY Shenyang 49.91 22 ⇓P P 05 53 09.0 -1.5
SNY AMB AMB
comp=Z,21nm,0.9s,mb5.2
UCH Uchtor 51.50 335 *e*P P 05 53 23.5 +1.0
comp=Z,6.6nm,0.7s,mb4.7
UCH *e*pP pP 05 53 32.8 +2.1
SONM Songino Array 51.58 5 P P 05 53 23.5 +0.5
comp=Z,32nm,0.7s,mb5.4,baz=188,slow=9.5,SNR=197
SONM PcP PcP 05 54 35.4 -1.3
comp=Z,6.6nm,0.9s,baz=176,slow=5.2,SNR=2.8
SONM Songino Array 51.58 5 P P 05 53 23.5 +0.5
SONM 05 54 35.4
SONM pmax pmax
comp=Z,32nm,0.7s
SONM pmax pmax
comp=Z,7.0nm,0.9s
TKM2 Tokmak 2 51.64 337 *e*P P 05 53 23.8 +0.3
TKM2 pmax pmax
comp=Z,34nm,0.6s,mb5.5
TKM2 Tokmak 2 51.64 337 P P 05 53 24.2 +0.6
SNR=25
TKM2 Tokmak 2 51.64 337 *e*P P 05 53 23.8 +0.2
comp=Z,34nm,0.6s,mb5.5
ULN Ulaanbaatar 51.67 6 *e*P P 05 53 24.0 +0.3
ULN *e**PP pP 05 53 32.8 +0.9
KBK Karagaybulak 51.68 336 P P 05 53 25.0 +1.2
SNR=6.5
AML Almayashu 51.77 335 P P 05 53 25.4 +0.9
SNR=5.4
AML Almayashu 51.77 335 *e*P P 05 53 24.6 +0.1
comp=Z,11nm,0.6s,mb5.0
AAK Ala-Archa 51.84 336 P P 05 53 25.9 +0.9
SNR=5.6
FRU Bishkek 51.96 336 *e*P P 05 53 25.5 -0.4
FRU pmax pmax
comp=Z,170nm,2.5s,mb5.5
CHMS Chumysh 52.04 336 P P 05 53 26.8 +0.3
SNR=5.2
EKS2 Erkin-Say 52.17 335 P P 05 53 28.2 +0.7
SNR=42
EKS2 Erkin-Say 52.17 335 *e*P P 05 53 27.8 +0.3
comp=Z,34nm,0.8s,mb5.3
CN2 Changchun 52.31 23 *e*P P 05 53 27.1 -1.4
CN2 AMB AMB
comp=Z,40nm,1.0s,mb5.3
USP Ospenovka 52.37 336 P P 05 53 29.2 +0.3
SNR=21
MKAR Makanchi Array 52.83 344 P P 05 53 32.2 -0.1
comp=Z,30nm,0.8s,mb5.3,baz=148,slow=8.2,SNR=178
MKAR Makanchi Array 52.83 344 P P 05 53 32.2 -0.1
MKAR pmax pmax
comp=Z,30nm,0.8s
MAJO Matsushiro 53.22 38 *e*P P 05 53 33.2 -2.2
MAJO pmax pmax
comp=Z,32nm,1.2s,mb5.1
MAJO Matsushiro 53.22 38 *e*P P 05 53 33.2 -2.3
comp=Z,32nm,1.2s,mb5.1
MAT Matsushiro 53.22 38 P P 05 53 34.3 -1.1
MJAR Matsushiro Arr 53.22 38 P P 05 53 33.9 -1.6
comp=Z,17nm,1.0s,mb4.9,baz=219,slow=7.8,SNR=30
MJAR Matsushiro Arr 53.22 38 P P 05 53 33.9 -1.5
MJAR pmax pmax
comp=Z,17nm,1.0s
ZAK Zakamensk 53.93 2 *e*P P 05 53 39.7 -0.6
ZAK *e* 05 54 49.9
ZAK pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
MDJ Mudanjiang 54.66 25 P P 05 53 44.4 -1.3
MDJ XP sP 05 53 53.1 -4.1
MDJ AMB AMB
comp=Z,18nm,1.1s,mb5.0
MDJ LR LR
comp=N,2μm,30.1s
MDJ LR LR
comp=Z,3μm,24.1s
MDJ Mudanjiang 54.66 25 *e*P P 05 53 44.9 -0.9
comp=Z,5.3nm,0.5s,mb4.8
ARMA Armidale 54.91 125 *e*P P 05 53 49.6 +1.6
TLY Talaya 55.24 2 *e*P P 05 53 50.3 +0.5
TLY *e* pP 05 53 57.7 -0.4
TLY pmax pmax
comp=Z,16nm,0.9s,mb5.0
TLY Talaya 55.24 2 *e*P P 05 53 50.0 +0.2
comp=Z,13nm,0.9s,mb5.0
TLY *e*pP pP 05 53 59.7 +1.6
CIT Chita 56.60 10 *e*P P 05 53 58.5 -1.1
KURK Kurchatov 57.41 344 P P 05 54 05.6 +0.3
comp=Z,313nm,0.8s,mb6.4,SNR=34
KURK Kurchatov 57.41 344 P P 05 54 03.7 -1.6
comp=Z,26nm,0.9s,mb5.3,baz=156,slow=7.1,SNR=98
KURK Kurchatov 57.41 344⇑*e*P P 05 54 04.9 -0.4
KURK pmax pmax
comp=Z,56nm,1.0s,mb5.5
KURK Kurchatov 57.41 344⇑*e*P P 05 54 04.7 -0.6
comp=Z,42nm,0.8s,mb5.5
ZAA0 Zalesovo Array 58.95 349⇑*i*P P 05 54 15.2 -0.8
ZALV Zalesovo Beam 58.95 349 P P 05 54 15.5 -0.5
comp=Z,52nm,0.9s,mb5.6,baz=160,slow=4.7,SNR=75
ZALV Zalesovo Beam 58.95 349 P P 05 54 15.5 -0.6
ZALV pmax pmax
comp=Z,52nm,0.9s,mb5.6
ZALV Zalesovo Beam 58.95 349 P P 05 54 15.5 -0.5
KLR Kul'dur 59.24 23 *e*P P 05 54 13.0 -5.2
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,100nm,2.0s,mb5.5
NVS Novosibirsk 60.10 348 *i* P P 05 54 22.9 -1.1
NVS pmax pmax
comp=N,24nm,1.2s
NVS pmax pmax
comp=E,14nm,1.2s
NVS pmax pmax
comp=Z,25nm,1.2s,mb5.1
NAY Al-Naaiem 60.73 306 *e*P P 05 54 28.4 -0.4
baz=306
NAY AMb AMB 05 54 52.6
comp=Z,27nm,1.1s,mb5.3,baz=306
MIB Mutribah 60.87 307 *e*P P 05 54 29.5 -0.3
baz=307
MIB AMb AMB 05 54 40.2
comp=Z,51nm,1.2s,mb5.5,baz=307
RST Umm Al-Ruwaisa 61.02 307 *e*P P 05 54 30.5 -0.3
baz=307
RST AMb AMB 05 54 43.8
comp=Z,35nm,1.6s,mb5.2,baz=307
BVAR Borovoye Array 61.99 340 P P 05 54 35.9 -1.0
comp=Z,18nm,0.6s,mb5.4,baz=145,slow=8.9,SNR=95
BVAR Borovoye Array 61.99 340 P P 05 54 35.9 -0.9
BVAR pmax pmax
comp=Z,19nm,0.6s
BRVK Borovoye 62.06 340 P P 05 54 36.7 -0.6
comp=Z,168nm,0.7s,mb6.3,SNR=6.8
BRVK Borovoye 62.06 340 *e*P P 05 54 36.1 -1.2
BOD Bodaibo 62.27 8⇑*i*P P 05 54 38.2 -0.4
BOD pmax pmax
comp=Z,22nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 62.61 31⇑*i*P P 05 54 40.0 -1.1
YSS *e* pP 05 54 48.0 -1.4
YSS pmax pmax
comp=Z,80nm,1.0s,mb5.8
YSS MLR MLR
comp=Z,2μm,18.0s,MS5.4
YSS Yuzh-Sakhalins 62.61 31 *e*P P 05 54 40.5 -0.6
CASY Casey 62.84 176 *e*P P 05 54 40.1 -2.2
comp=Z,7.5nm,1.0s,mb4.8
KMBO Kilima Mbogo 63.35 271 *e*P P 05 54 54.0 +7.3
KMBO pmax pmax
comp=Z,7.0nm,1.1s
KMBO Kilima Mbogo 63.35 271 *e*P P 05 54 54.0 +7.3
comp=Z,6.5nm,1.1s,mb4.7
AKTK Aktyubinsk 65.15 332 P P 05 54 56.7 -1.1
AKTO Aktyubinsk 65.15 332 P P 05 54 56.7 -1.1
comp=Z,5.2nm,0.8s,mb4.6,baz=134,slow=5.5,SNR=12
AKTO Aktyubinsk 65.15 332 P P 05 54 56.7 -1.0
AKTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
GNI Garni 67.18 316 P P 05 55 11.5 +0.5
SVE Sverdlovsk 68.49 338 *e*P P 05 55 19.0 +0.1
SVE pmax pmax
comp=Z,49nm,1.2s,mb5.4
MAW Mawson 68.79 195 P P 05 55 23.8 +3.2
comp=Z,4.8nm,1.1s,mb4.3,baz=25,slow=8.0,SNR=4.1
MAW Mawson 68.79 195 *e*P P 05 55 23.6 +3.0
MAW pmax pmax
comp=Z,9.0nm,1.1s
MAW Mawson 68.79 195 *e*P P 05 55 23.6 +3.0
comp=Z,8.6nm,1.1s,mb4.6
ARU Arti 69.01 337 *e*P P 05 55 21.1 -1.1
comp=Z,26nm,1.0s,mb5.1
YAK Yakutsk 69.23 14*c i*P P 05 55 21.6 -1.8
YAK pmax pmax
comp=Z,81nm,1.2s,mb5.5
YAK Yakutsk 69.23 14 P P 05 55 21.3 -2.2
comp=Z,99nm,1.2s,mb5.6
ASF Jabal al Asfar 70.09 306 P P 05 55 30.0 +0.7
comp=Z,4.4nm,0.9s,mb4.4,baz=344,slow=1.5,SNR=6.7
ASF Jabal al Asfar 70.09 306 P P 05 55 30.0 +0.7
ASF pmax pmax
comp=Z,4.0nm,0.9s
KIV Kislovodsk 70.23 319 ⇓P P 05 55 30.0 0.0
KIV *i* *PP pP 05 55 39.2 +0.8
KIV *e**SP sP 05 55 45.9 +4.3
KIV 05 55 53.0
KIV pmax pmax
comp=Z,21nm,1.6s,mb4.8
KIV Kislovodsk 70.23 319 *e*P P 05 55 29.5 -0.5
comp=Z,32nm,1.2s,mb5.1
MALT Malatya 70.94 313 *e*P P 05 55 33.3 -1.1
MALT pmax pmax
comp=Z,16nm,1.1s,mb4.9
MALT Malatya 70.94 313⇑*i*P P 05 55 33.6 -0.8
MALT Malatya 70.94 313 *e*P P 05 55 33.3 -1.2
comp=Z,16nm,1.1s,mb4.8
EIL Elat 70.96 303 P P 05 55 35.6 +0.8
comp=Z,7.8nm,0.8s,mb4.7,baz=108,slow=9.5,SNR=5.0
MMAI Mount Meron Ar 71.54 306 P P 05 55 38.5 +0.4
comp=Z,3.5nm,0.6s,mb4.5,baz=96,slow=8.5,SNR=5.0
LSZ Lusaka 72.09 255 *e*P P 05 55 42.6 +0.8
LSZ pmax pmax
comp=Z,11nm,1.1s,mb4.7
LSZ Lusaka 72.09 255 *e*P P 05 55 42.6 +0.8
comp=Z,11nm,1.1s,mb4.7
PETK Petropavlovsk- 74.00 32 P P 05 55 51.1 -1.2
comp=Z,4.1nm,0.7s,mb4.5,baz=218,slow=3.6,SNR=13
PET Petropavlovsk 74.46 32⇓*e*P P 05 55 53.8 -1.2
PET pmax pmax
comp=Z,40nm,1.3s,mb5.2
BOSA Boshof 75.38 242 P P 05 56 02.2 +1.3
comp=Z,3.7nm,0.7s,mb4.4,baz=123,slow=4.7,SNR=7.1
BOSA Boshof 75.38 242 P P 05 56 02.2 +1.3
BOSA pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BOSA Boshof 75.38 242 P P 05 56 02.2 +1.3
VSR Storozhevoye 75.53 325 *e*P P 05 56 00.2 -1.0
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,9.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
TIXI Tiksi 77.44 9*d i*P P 05 56 09.1 -2.5
TIXI pmax pmax
comp=Z,33nm,1.6s,mb5.0
OBN Obninsk 78.56 328*oe*P P 05 56 18.0 -0.2
OBN *e* pP 05 56 26.7 -0.1
OBN *e* 05 56 34.7
OBN pmax pmax
comp=Z,32nm,0.7s,mb5.4
OBN Obninsk 78.56 328 P P 05 56 17.7 -0.5
AKASG Malin Array Be 81.21 322 P P 05 56 30.4 -2.2
comp=Z,1.5nm,0.4s,mb4.2,baz=79,slow=2.2,SNR=9.1
AKASG Malin Array Be 81.21 322 P P 05 56 30.5 -2.1
AKASG pmax pmax
comp=Z,2.0nm,0.4s
SBA Scott Base 81.47 169 P P 05 56 32.5 -1.1
SBA pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
SBA Scott Base 81.47 169 P P 05 56 32.5 -1.1
comp=Z,5.4nm,0.9s,mb4.5
VRI Vrincioaia 81.52 317⇓*i*P P 05 56 35.3 +0.9
VRI Vrincioaia 81.52 317 ⇓P P 05 56 35.3 +0.9
MLR Muntele Rosu 81.96 317⇑*i*P P 05 56 37.5 +0.8
MLR Muntele Rosu 81.96 317 ⇑P P 05 56 37.5 +0.7
TSUM Tsumeb 82.22 251 P P 05 56 38.2 -0.4
comp=Z,8.5nm,1.1s,mb4.6
BURAR Bucovina Array 82.95 319⇑*i*P P 05 56 42.9 +1.1
BURAR Bucovina Array 82.95 319 ⇑P P 05 56 42.9 +1.1
BUR08 Bucovina Ar. S 82.96 319 *e*P P 05 56 42.7 +0.8
DRGR 84.44 318⇓*i*P P 05 56 50.1 +0.6
DRGR 84.44 318 ⇓P P 05 56 50.1 +0.6
BZS Buzias 84.96 316⇓*i*P P 05 56 52.6 +0.4
BZS Buzias 84.96 316 ⇓P P 05 56 52.6 +0.4
KOLS Kolonicke sedl 85.15 320 *e*P P 05 56 53.8 +0.8
SUW Suwalki 85.63 325 *e*P P 05 56 55.1 -0.2
SUW Suwalki 85.63 325 *e*P P 05 56 55.1 -0.2
CRVS Cervenica-Dubn 85.67 319 *e*P P 05 56 54.1 -1.5
STHS Stebnicka Huta 85.90 320 *e*P P 05 56 57.5 +0.7
STHS pmax pmax

comp=Z,7.0nm,1.1s,mb4.8
STHS Stebnicka Huta 85.90 320 *e*P **P** 05 56 57.5 **+0.7**
comp=Z,6.8nm,1.1s,mb4.8
KECS Kecovo 86.23 319 *e*P **P** 05 56 57.1 **-1.3**
KECS pmax pmax
comp=Z,4.0nm,1.5s,mb4.4
KECS Kecovo 86.23 319 *e*P **P** 05 56 57.1 **-1.3**
comp=Z,4.3nm,1.5s,mb4.5
PKSM Moragy 87.11 316 *i*P **P** 05 57 03.1 **+0.3**
PKSM Moragy 87.11 316 ⇑P **P** 05 57 03.1 **+0.4**
ARCES ARCESS Array B 88.28 340 P **P** 05 57 06.5 **-1.3**
comp=Z,7.1nm,0.8s,mb5.0,baz=119,slow=4.6,SNR=13
ARCES ARCESS Array B 88.28 340 P **P** 05 57 06.6 **-1.3**
ARCES pmax pmax
comp=Z,7.0nm,0.8s
MODS Modra-Piesok 88.33 319 *e*P **P** 05 57 04.0 **-4.5**
MORC Moravsky Berou 88.34 320 ⇑*i*P **P** 05 57 09.1 **+0.5**
MORC Moravsky Berou 88.34 320 ⇑P **P** 05 57 09.1 **+0.5**
DPC Dobruska-Polom 89.19 320 *e*P **P** 05 57 13.9 **+1.3**
DPC *e*pP pP 05 57 21.2 0.0
ARSA Arzberg 89.37 317 ⇓*i*P **P** 05 57 14.5 **+1.0**
comp=Z,5.4nm,0.8s,mb5.0
ARSA Arzberg 89.37 317 ⇓*i*PcP PcP 05 57 14.5 -0.4
comp=Z,5.4nm,0.8s
SOKA Soboth 89.64 317 ⇑*i*P **P** 05 57 15.3 **+0.6**
SOKA Soboth 89.64 317 *i*PcP PcP 05 57 15.3 -0.7
SNAA Sanae 90.72 198 P **P** 05 57 20.1 **+0.8**
SNAA pmax pmax
comp=Z,6.0nm,1.2s
SNAA Sanae 90.72 198 P **P** 05 57 20.1 **+0.8**
comp=Z,6.3nm,1.2s,mb4.8
GERES GERESS Array B 90.73 319 P **P** 05 57 19.4 **-0.4**
comp=Z,2.9nm,0.6s,mb4.8,baz=101,slow=4.2,SNR=13
GERES GERESS Array B 90.73 319 P **P** 05 57 19.4 **-0.4**
GERES pmax pmax
comp=Z,3.0nm,0.6s
BRG Berggiesshubel 90.75 321 *e*P **P** 05 57 20.4 **+0.6**
BRG *e* pP 05 57 29.2 +0.7
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
BRG pmax pmax
comp=Z,8.0nm,1.3s,mb4.9
BRG Berggiesshubel 90.75 321 *e*P **P** 05 57 20.4 **+0.6**
comp=Z,7.3nm,1.0s,mb5.0
BRG *e* pP 05 57 29.2 +0.7
comp=Z,14nm,1.3s
BRG PKPPKP 06 02 08.0
comp=Z,3.0nm,0.6s
KHC Kasperske Hory 90.84 319 *e*P **P** 05 57 20.7 **+0.4**
KHC *e*pP pP 05 57 30.1 +1.1
CLL Collm 91.38 321 *e*P **P** 05 57 23.0 **+0.3**
CLL *i* pP pP 05 57 31.3 -0.1
SPITS Spitsbergen Ar 92.42 348 P **P** 05 57 26.0 **-1.1**
comp=Z,9.5nm,0.8s,mb5.2,baz=148,slow=16,SNR=6.3
SPITS Spitsbergen Ar 92.42 348 P **P** 05 57 26.0 **-1.1**
SPITS pmax pmax
comp=Z,10.0nm,0.8s
NB2 NORSAR Subarra 92.93 331 P **P** 05 57 29.0 **-0.7**
comp=Z,1.0nm,0.7s,mb4.3,baz=93,slow=4.8
NOA NORSAR Array B 92.93 331 P **P** 05 57 29.1 **-0.5**
comp=Z,3.0nm,0.9s,mb4.7,baz=93,slow=4.7,SNR=5.1
NOA NORSAR Array B 92.93 331 P **P** 05 57 29.2 **-0.5**
NOA pmax pmax
comp=Z,3.0nm,0.9s
KEST Kesra 93.18 305 P **P** 05 57 33.2 **+1.8**
comp=Z,1.2nm,0.6s,mb4.5,baz=296,slow=1.6,SNR=3.7
D03A Wishkah Elem. 122.28 34 ⇑P PKPdf 06 03 10.8 -1.1
baz=122
B05A Bryant 122.53 33 ⇑P PKPdf 06 03 12.1 -0.2
baz=122
A07A Ashnola River, 122.95 31 ⇑P PKPdf 06 03 13.1 -0.1
baz=123
C05A Tolt Reservoir 123.09 33 ⇓P PKPdf 06 03 13.2 -0.3
baz=123
D05A Enumclaw 123.23 34 ⇓P PKPdf 06 03 13.6 -0.2
baz=123
B07A Winthrop 123.46 31 ⇓P PKPdf 06 03 13.8 -0.4
baz=123
A08A Turner Farm, O 123.58 30 ⇓P PKPdf 06 03 14.4 0.0
baz=124
F04A Amboy 123.72 35 ⇑P PKPdf 06 03 14.8 0.0
baz=124
E05A Randle 123.72 34 ⇓P PKPdf 06 03 15.0 +0.3
baz=124
A09A Danville 123.91 30 ⇑P PKPdf 06 03 15.6 +0.6
baz=124
H03A Soap Creek Ran 123.92 37 ⇑P PKPdf 06 03 15.9 +0.7
baz=124
B08A Colville Reser 123.93 31 ⇓P PKPdf 06 03 14.7 -0.4
baz=124
C07A Waterville 123.97 32 ⇑P PKPdf 06 03 15.0 -0.2
baz=124
G04A Mulino 124.10 36 ⇑P PKPdf 06 03 15.6 +0.1
baz=124
E06A Yakima 124.17 34 ⇑P PKPdf 06 03 15.8 +0.2
baz=124
F05A White Salmon 124.29 35 ⇓P PKPdf 06 03 15.7 -0.1
baz=124
I03A Eugene 124.31 37 ⇓P PKPdf 06 03 16.4 +0.5
baz=124
D07A Quincy 124.32 32 ⇓P PKPdf 06 03 15.8 -0.1
baz=124
A10A Northport 124.42 30 ⇓P PKPdf 06 03 15.8 -0.1
baz=124
C08A Higginbotham F 124.44 31 ⇑P PKPdf 06 03 15.8 -0.3
baz=124
J02A Umpqua 124.46 38 ⇑P PKPdf 06 03 16.6 +0.3
baz=124
B09A Rice 124.49 30 ⇓P PKPdf 06 03 16.4 +0.2
baz=124
H04A Detroit Lake 124.57 36 ⇑P PKPdf 06 03 16.6 +0.2
baz=124
F06A Goldendale 124.74 34 ⇑P PKPdf 06 03 16.7 0.0
baz=125
C09A Chrisman Ranch 124.83 31 ⇑P PKPdf 06 03 16.9 +0.1
baz=125
K02A Glendale 124.83 39 ⇑P PKPdf 06 03 17.3 +0.3
baz=125,SNR=5.1
M01C Crescent City 124.91 40 ⇓P PKPdf 06 03 17.0 -0.2
baz=125
I04A Tendick Farm, 124.93 37 ⇑P PKPdf 06 03 17.0 -0.2
baz=125
D08A Wollman Farm, 124.97 32 ⇑P PKPdf 06 03 17.4 +0.3
baz=125
A11A Hall Mountain, 125.02 29 ⇓P PKPdf 06 03 18.0 +0.8
baz=125
L02A Cave Junction 125.08 39 ⇑P PKPdf 06 03 17.5 0.0
baz=125
G06A Carlson Farm, 125.14 35 ⇓P PKPdf 06 03 17.6 +0.1
baz=125
F07A Phinny Hill Vi 125.14 34 ⇑P PKPdf 06 03 18.2 +0.8
baz=125
HUMO Hull Mountain 125.25 39 ⇑P PKPdf 06 03 18.0 +0.2
baz=125,SNR=7.6
HUMO Hull Mountain 125.25 39 *e*PKPdf PKPdf 06 03 18.2 +0.4
D09A Jones Farm, Ri 125.29 32 ⇑P PKPdf 06 03 17.6 -0.1
baz=125
J04A Umpqua Nationa 125.42 37 ⇓P PKPdf 06 03 18.4 +0.3
baz=125,SNR=9.6
JCC Jacoby Creek 125.50 41 ⇑P PKPdf 06 03 18.8 +0.5
baz=125
H06A Lindquist Farm 125.61 35 ⇑P PKPdf 06 03 18.8 +0.3
baz=126
KHMM Horse Mountain 125.67 41 *e*PKPdf PKPdf 06 03 19.8 +1.2
G07A Ruggs Ranch, H 125.67 34 ⇑P PKPdf 06 03 18.7 +0.2
baz=126
C11A Tepee Creek (N 125.83 30 ⇓P PKPdf 06 03 18.8 0.0
baz=126
D10A Wagner Farm, O 125.83 31 ⇓P PKPdf 06 03 18.9 +0.1
baz=126
F08A Pendleton 125.84 33 ⇑P PKPdf 06 03 19.2 +0.4
baz=126
YBH Yreka Blue Hor 125.87 39 ⇑P PKPdf 06 03 19.4 +0.4
baz=126
J05A Fort Rock 125.93 37 ⇑P PKPdf 06 03 19.7 +0.7
baz=126,SNR=5.7
A13A Flathead Natio 125.96 28 ⇓P PKPdf 06 03 19.3 +0.3
baz=126
M02C Callahan 125.96 40 ⇑P PKPdf 06 03 19.3 +0.1
baz=126
N02C Big Bar 125.97 41 ⇓P PKPdf 06 03 20.0 +0.7
baz=126
G08A Pilot Rock 126.05 34 ⇓P PKPdf 06 03 19.6 +0.3
baz=126
H07A Lands Inn, Kim 126.14 35 ⇑P PKPdf 06 03 20.0 +0.6
baz=126
L04A Klamath Falls 126.15 38 ⇓P PKPdf 06 03 19.8 +0.3
baz=126
I06A Prineville 126.15 36 ⇓P PKPdf 06 03 20.3 +0.8
baz=126
E10A Myers Farm, Un 126.29 32 ⇑P PKPdf 06 03 20.0 +0.4
baz=126
D11A Klaveano Farm, 126.32 31 ⇓P PKPdf 06 03 19.3 -0.4
baz=126
B13A Whitefish 126.33 28 ⇓P PKPdf 06 03 19.8 +0.2
baz=126
F09A S2 Ranch, Elgi 126.36 33 ⇑P PKPdf 06 03 20.2 +0.3
baz=126
M04C Macdoel 126.39 39 ⇓P PKPdf 06 03 20.5 +0.5
baz=126
K05A Summer Lake 126.45 37 ⇓P PKPdf 06 03 20.8 +0.8
baz=126,SNR=6.4
I07A Izee 126.48 35 ⇓P PKPdf 06 03 20.6 +0.5
baz=126
M03C McCloud 126.49 40 ⇓P PKPdf 06 03 20.6 +0.4
baz=126
F10A Beach Ranch, E 126.56 32 ⇓P PKPdf 06 03 20.4 +0.2
baz=126
J06A Christmas Vall 126.59 36 ⇓P PKPdf 06 03 20.7 +0.4
baz=126,SNR=7.5
WDC Whiskeytown Da 126.59 40 ⇑P PKPdf 06 03 20.4 0.0
baz=126
O02C Red Bluff 126.64 41 ⇓P PKPdf 06 03 21.2 +0.7
baz=126
H08A Prairie City 126.69 34 ⇓P PKPdf 06 03 21.2 +0.7
baz=127
K06A Valley Falls 126.80 37 ⇑P PKPdf 06 03 21.0 +0.3
baz=127,SNR=7.3
E11A Bogner Ranch, 126.84 31 ⇑P PKPdf 06 03 20.4 -0.3
baz=127
L05A Lakeview 126.87 38 ⇓P PKPdf 06 03 21.4 +0.5
baz=127
GASB Alder Springs 126.96 42 ⇓P PKPdf 06 03 22.1 +0.9
baz=127
J07A Hines 127.02 36 ⇑P PKPdf 06 03 21.7 +0.5
baz=127
I08A Drewsey 127.12 35 ⇓P PKPdf 06 03 22.1 +0.8
baz=127
E12A Beaver Dam Sad 127.13 31 ⇓P PKPdf 06 03 22.1 +0.8
baz=127
F11A Grangeville 127.18 32 ⇑P PKPdf 06 03 21.2 -0.2
baz=127
D13A Huson 127.23 30 ⇓P PKPdf 06 03 20.9 -0.5
baz=127
BMO Blue Mountains 127.24 33 *e*PKIKP PKPdf 06 03 20.1 -1.4
MOD Modoc 127.28 38 ⇑P PKPdf 06 03 22.4 +0.7
baz=127
MOD Modoc 127.28 38 *e*PKPdf PKPdf 06 03 22.6 +0.9
K07A Rock Creek Ran 127.46 37 ⇑P PKPdf 06 03 22.4 +0.4
baz=127,SNR=8.6
J08A Circle Bar Ran 127.51 35 ⇓P PKPdf 06 03 22.7 +0.6
baz=127,SNR=7.9
MNRC McLaughlin Nat 127.54 42 ⇓P PKPdf 06 03 23.4 +1.1
baz=127
I09A Lost Marbles R 127.55 34 ⇓P PKPdf 06 03 22.9 +0.8
baz=127
NSHM Saint Helena R 127.61 43 *e*PKPdf PKPdf 06 03 23.0 +0.6
O04C Chester 127.67 40 ⇑P PKPdf 06 03 23.3 +0.8
baz=128
H10A Noah's Angus R 127.71 33 ⇑P PKPdf 06 03 22.4 -0.1
baz=128
L07A Adell 127.80 37 ⇓P PKPdf 06 03 23.6 +1.0
baz=128
CVS Carmenet Viney 127.80 43 ⇑P PKPdf 06 03 23.8 +1.0
baz=128
ORV Oroville 127.81 41 ⇓P PKPdf 06 03 22.9 +0.2
baz=128
E13A Victor 127.81 30 ⇓P PKPdf 06 03 22.3 -0.3
baz=128
K08A Mann Creek Ran 127.88 36 ⇓P PKPdf 06 03 23.4 +0.6
baz=128,SNR=5.6
J09A Fry Pan Ranch, 127.93 35 ⇓P PKPdf 06 03 23.5 +0.6
baz=128
O05C Quincy 127.97 40 ⇓P PKPdf 06 03 23.7 +0.7
baz=128
H11A Donnelly 128.04 33 ⇓P PKPdf 06 03 23.2 +0.2
baz=128
E14A Clinton 128.18 30 ⇑P PKPdf 06 03 23.5 +0.2
baz=128
F13A Darby 128.19 31 ⇓P PKPdf 06 03 23.6 +0.3
baz=128
D15A Lincoln 128.20 28 ⇓P PKPdf 06 03 23.9 +0.6
baz=128
N06A Buffalo Meadow 128.22 39 ⇑P PKPdf 06 03 24.3 +0.8
baz=128
M07A Soldier Meadow 128.27 38 ⇓P PKPdf 06 03 24.5 +0.9
baz=128
L08A Fields 128.29 37 ⇑P PKPdf 06 03 24.7 +1.1
baz=128,SNR=10.0
K09A Rome 128.35 36 ⇑P PKPdf 06 03 24.2 +0.5
baz=128,SNR=9.1
BEKR Beckwourth 128.38 40 ⇑P PKPdf 06 03 24.1 +0.3
baz=128
P05C Yuba Gap, Truc 128.53 41 ⇑P PKPdf 06 03 24.5 +0.4
baz=128
O06A Flanigan 128.56 39 ⇓P PKPdf 06 03 25.1 +0.9
baz=128
I11A Placerville 128.58 33 ⇑P PKPdf 06 03 24.6 +0.5
baz=128
LAVA Lava Cap Winer 128.74 41 ⇓P PKPdf 06 03 25.3 +0.7
baz=129
N07B Gerlach 128.74 38 ⇓P PKPdf 06 03 24.8 +0.3
baz=129
H12A Diamond D Ranc 128.76 32 ⇓P PKPdf 06 03 24.4 0.0
baz=129
K10A MacKenzie Ranc 128.79 35 ⇑P PKPdf 06 03 25.3 +0.7
baz=129
MFID Camas Ranch 128.98 34 ⇓P PKPdf 06 03 25.4 +0.5
baz=129
H13A Challis 129.07 32 ⇑P PKPdf 06 03 25.6 +0.6
baz=129
F15A Butte 129.07 29 ⇓P PKPdf 06 03 25.3 +0.3
baz=129
WCN Washoe City 129.08 40 ⇑P PKPdf 06 03 25.8 +0.6
baz=129
O07A Toulon 129.16 39 ⇓P PKPdf 06 03 26.2 +0.9
baz=129
R05C Kirkwood Meado 129.20 41 ⇑P PKPdf 06 03 25.9 +0.5
baz=129
N08A GE Springer Mi 129.26 38 ⇓P PKPdf 06 03 26.5 +1.0
baz=129
K11A Parker Ranch, 129.28 35 ⇑P PKPdf 06 03 26.2 +0.7
baz=129
CMB Columbia Colle 129.35 42 ⇑P PKPdf 06 03 26.6 +0.8
baz=129
DLMT Dillon 129.36 30 *e*PKPdf PKPdf 06 03 26.9 +1.3
L10A Juniper Basin 129.46 36 ⇑P PKPdf 06 03 27.3 +1.4
baz=129
J12A Stokes Ranch, 129.49 34 ⇑P PKPdf 06 03 27.1 +1.2
baz=129
H14A Leadore 129.49 31 ⇓P PKPdf 06 03 26.8 +1.0
baz=129
O08A Rochester Mine 129.53 38 ⇑P PKPdf 06 03 27.4 +1.4
baz=129
G15A Dillon 129.55 30 ⇓P PKPdf 06 03 26.8 +0.9
baz=129
I13A Wildhorse Cree 129.58 32 ⇓P PKPdf 06 03 26.7 +0.7
baz=129
N09A Rock Creek Ran 129.59 37 ⇑P PKPdf 06 03 27.4 +1.3
baz=130
HLID Hailey 129.66 33 ⇓P PKPdf 06 03 27.4 +1.2
baz=130
HLID Hailey 129.66 33 *e*PKPdf PKPdf 06 03 27.9 +1.7
R06C Coleville 129.71 41 ⇑P PKPdf 06 03 27.6 +1.2
baz=130
S06C San Francisco 129.80 42 ⇑P PKPdf 06 03 27.7 +1.1
baz=130
V03C Hunter Liggett 129.81 45 ⇓P PKPdf 06 03 27.8 +1.1
baz=130
L11A Cat Creek Ranc 129.82 35 ⇓P PKPdf 06 03 27.2 +0.7
baz=130,SNR=9.4
H15A Lima 129.86 31 ⇑P PKPdf 06 03 27.6 +1.1
baz=130
J13A Cove Ranch, Pi 129.90 33 ⇑P PKPdf 06 03 27.6 +1.0
baz=130
L12A House Creek Ra 130.25 35 ⇑P PKPdf 06 03 29.1 +1.8
baz=130
M11A Holland Ranch, 130.26 36 ⇑P PKPdf 06 03 29.0 +1.6
baz=130
PKD Parkfield 130.33 44 ⇑P PKPdf 06 03 28.6 +0.9
baz=130
T06C Millerton Lake 130.36 43 ⇓P PKPdf 06 03 28.4 +0.7
baz=130
H16A Russell Place, 130.50 30 ⇓P PKPdf 06 03 29.2 +1.5
baz=130
NVAR Mina Array Bea 130.51 40 PKP PKPdf 06 03 27.6 -0.4
comp=Z,2.2nm,0.7s,baz=277,slow=1.9,SNR=16
O10A Cortez Mining, 130.55 37 ⇑P PKPdf 06 03 29.7 +1.7
baz=130
YMR Madison River 130.67 30 *e*PKPdf PKPdf 06 03 28.4 +0.3
N11A Elko Archery C 130.68 36 ⇑P PKPdf 06 03 29.8 +1.6
baz=130
M12A Wells 130.78 35 ⇑P PKPdf 06 03 29.9 +1.5
baz=131,SNR=6.1
J15A Blackfoot 130.82 32 ⇓P PKPdf 06 03 29.9 +1.6
baz=131
HELL Mitchell Peak 131.00 43 ⇑P PKPdf 06 03 29.7 +0.8
baz=131
K14A Jones Ranch, D 131.01 33 ⇑P PKPdf 06 03 29.8 +1.0
baz=131
N12A Clover Valley, 131.07 36 ⇑P PKPdf 06 03 30.2 +1.2
baz=131
S08C White Mtn Res 131.12 41 ⇑P PKPdf 06 03 30.4 +1.3
baz=131
O11A Cowboy Ranch, 131.16 37 ⇓P PKPdf 06 03 30.5 +1.3
baz=131
M13A Montello 131.25 35 ⇓P PKPdf 06 03 30.6 +1.4
baz=131,SNR=6.8
L14A Malta 131.32 34 ⇑P PKPdf 06 03 30.8 +1.4
baz=131
S09A Goldfield 131.61 41 ⇑P PKPdf 06 03 31.2 +1.1
baz=132
O12A Currie 131.61 36 ⇑P PKPdf 06 03 31.1 +1.1
baz=132
M14A Sheep Mountain 131.62 34 ⇓P PKPdf 06 03 30.7 +0.7
baz=132,SNR=8.1
L15A Malad City 131.81 33 ⇑P PKPdf 06 03 31.4 +1.1
baz=132
S10A Tonopah Range, 131.90 40 ⇓P PKPdf 06 03 32.0 +1.4
baz=132
ISA Isabella 131.91 44 ⇑P PKPdf 06 03 31.6 +0.8
baz=132
GRAC Grapevine Rang 131.93 41 ⇓P PKPdf 06 03 32.2 +1.5
baz=132
Q11A Duckwater 131.95 38 ⇓P PKPdf 06 03 32.0 +1.3
baz=132
P12A McGill 132.02 37 ⇑P PKPdf 06 03 32.0 +1.2
baz=132
N14A Grayback Hills 132.14 35 ⇑P PKPdf 06 03 31.9 +1.0
baz=132,SNR=6.7
M15A Larsen Ranch, 132.14 34 ⇓P PKPdf 06 03 31.7 +0.7
baz=132
R11A Troy Canyon, C 132.29 39 ⇑P PKPdf 06 03 32.6 +1.3
baz=132
MPMC Manual Prospec 132.37 43 ⇑P PKPdf 06 03 32.5 +1.0
baz=132
N15A Stansbury Isla 132.49 34 ⇑P PKPdf 06 03 32.1 +0.5
baz=132,SNR=7.8
EDW2 Edwards Air Fo 132.67 44 ⇓P PKPdf 06 03 33.1 +0.9
baz=132
PDAR Pinedale Array 132.75 30 PKP PKPdf 06 03 30.8 -1.3
comp=Z,0.8nm,0.7s,baz=213,slow=1.5,SNR=7.1
PDAR PP PP 06 05 56.8 +0.8
comp=Z,0.3nm,0.6s,baz=327,slow=7.1,SNR=3.6
Q13A Wheeler Ranch, 132.88 37 ⇑P PKPdf 06 03 33.6 +1.1
baz=133
P14A Drum Mountains 133.03 36 ⇑P PKPdf 06 03 34.1 +1.4
baz=133
T11A Corn Creek, Al 133.19 40 ⇓P PKPdf 06 03 34.5 +1.5
baz=133
S12A Delamar Landin 133.20 39 ⇑P PKPdf 06 03 34.8 +1.7
baz=133
GSC Goldstone 133.25 43 ⇓P PKPdf 06 03 34.7 +1.4
baz=133
GSC Goldstone 133.25 43 *e*PKPdf PKPdf 06 03 34.1 +0.9
S13A Holt Ranch, En 133.84 39 ⇓P PKPdf 06 03 35.2 +1.0
baz=134
MURC Murrieta 133.90 45 ⇓P PKPdf 06 03 34.9 +0.4
baz=134
O17A Robinson Place 133.96 34 ⇑P PKPdf 06 03 35.2 +0.8
baz=134
S14A Cedar City 134.15 38 ⇑P PKPdf 06 03 36.2 +1.3
baz=134
T13A Saint George 134.15 39 ⇓P PKPdf 06 03 35.7 +0.8
baz=134
MSU Marysvale 134.26 36 *e*PKIKP PKPdf 06 03 37.7 +2.7
N19A John Jarvie Ra 134.30 32 ⇑P PKPdf 06 03 35.5 +0.4
baz=134
V12A Nelson 134.32 41 ⇓P PKPdf 06 03 36.3 +1.0
baz=134
GMRC Granite Mounta 134.32 43 ⇑P PKPdf 06 03 36.4 +1.1
baz=134
P17A Butcher Ranch, 134.45 34 ⇑P PKPdf 06 03 36.7 +1.4
baz=134
BELC Belle Mtn. 134.53 44 ⇓P PKPdf 06 03 36.5 +0.9
baz=134
P18A Preston Nutter 134.62 34 ⇓P PKPdf 06 03 36.9 +1.2
baz=134,SNR=5.6
O19A Miners Draw (B 134.76 32 ⇓P PKPdf 06 03 36.9 +1.0
baz=135
V13A Grand Canyon W 134.81 41 ⇓P PKPdf 06 03 37.3 +1.2
baz=135
SRU San Rafael 134.82 35 ⇓P PKPdf 06 03 36.9 +0.9
baz=135
R16A Teasdale 134.82 36 ⇓P PKPdf 06 03 37.6 +1.5
baz=135
MONP Monument Peak 134.83 46 ⇓P PKPdf 06 03 37.7 +1.5
baz=135
U14A Mt Trumbull 134.98 39 ⇓P PKPdf 06 03 37.9 +1.4
baz=135
IRM Iron Mountain 135.02 43 ⇑P PKPdf 06 03 37.8 +1.2
baz=135
Q18A Rafter H Ranch 135.05 34 ⇓P PKPdf 06 03 37.8 +1.3
baz=135
BC3 Big Chuckw Mtn 135.09 44 ⇑P PKPdf 06 03 38.0 +1.2
baz=135
T15A Red Dirt Ranch 135.11 38 ⇓P PKPdf 06 03 38.1 +1.4
baz=135
S16A Weppner Ranch, 135.13 37 ⇑P PKPdf 06 03 38.1 +1.4
baz=135
R17A Hanksville Air 135.19 35 ⇑P PKPdf 06 03 38.0 +1.2
baz=135
P19A Cripple Cowboy 135.31 33 ⇑P PKPdf 06 03 37.9 +1.0
baz=135
W13A Nalaipai Mount 135.33 41 ⇓P PKPdf 06 03 38.1 +1.0
baz=135
V14A Boquillas Ranc 135.51 40 ⇑P PKPdf 06 03 38.9 +1.4
baz=135
U15A North Rim 135.54 39 ⇑P PKPdf 06 03 38.8 +1.3
baz=135
Q19A Hogan Spring (135.64 34 ⇓P PKPdf 06 03 38.4 +0.8
baz=136,SNR=14
X13A Yucca 135.66 42 ⇓P PKPdf 06 03 38.5 +0.7
baz=136
T16A Glen Canyon Da 135.66 38 ⇑P PKPdf 06 03 39.0 +1.3
baz=136
R18A Canyonlands Na 135.68 35 ⇑P PKPdf 06 03 38.5 +0.8
baz=136,SNR=6.6
W14A Seligman 135.78 41 ⇑P PKPdf 06 03 39.4 +1.4
baz=136
V15A Kaibab Nationa 135.99 39 ⇑P PKPdf 06 03 39.7 +1.4
baz=136
T17A Navajo Res., N 136.08 37 ⇑P PKPdf 06 03 40.4 +1.9
baz=136
S18A Hurst Farm, Bl 136.09 36 ⇑P PKPdf 06 03 40.3 +1.8
baz=136
R19A Curley Farm, L 136.10 34 ⇑P PKPdf 06 03 40.2 +1.7
baz=136
Y13A Salome 136.12 43 ⇑P PKPdf 06 03 40.2 +1.6
baz=136
W15A Williams 136.33 40 ⇓P PKPdf 06 03 40.7 +1.7
baz=136
X14A Yava 136.36 41 ⇓P PKPdf 06 03 40.9 +1.8
baz=136
U16A Tuba City 136.44 38 ⇓P PKPdf 06 03 41.3 +2.1
baz=136
T18A Mexican Hat 136.54 36 ⇓P PKPdf 06 03 40.8 +1.5
baz=136
Y14A Wickenburg 136.60 42 ⇓P PKPdf 06 03 41.4 +1.8
baz=136
X15A Humboldt 136.78 41 ⇑P PKPdf 06 03 41.7 +1.8
baz=137
W16A Flagstaff 136.86 40 ⇑P PKPdf 06 03 41.8 +1.8
baz=137
U18A Rough Rock, Ch 137.02 37 ⇑P PKPdf 06 03 41.7 +1.5
baz=137
Y15A Casa Rosa Ranc 137.04 42 ⇑P PKPdf 06 03 41.9 +1.6
baz=137
T19A Beclabito 137.25 36 ⇑P PKPdf 06 03 42.8 +2.1
baz=137
X16A Lo Mia Camp, P 137.34 40 ⇓P PKPdf 06 03 42.8 +1.9
baz=137
V18A Ganado 137.46 38 ⇓P PKPdf 06 03 43.0 +2.0

baz=137
Y16A Circle Bar Ran 137.65 41 ⇑P PKPdf 06 03 43.6 +2.2
baz=138
X17A Forest Lakes 137.80 40 ⇓P PKPdf 06 03 43.9 +2.2
baz=138
W18A Petrified Fore 137.97 38 ⇓P PKPdf 06 03 44.3 +2.3
baz=138
V19A Window Rock 137.99 37 ⇑P PKPdf 06 03 44.0 +1.9
baz=138
Y17A Roosevelt 138.17 41 ⇓P PKPdf 06 03 44.2 +1.8
baz=138
W19A Sanders 138.19 38 ⇓P PKPdf 06 03 44.2 +1.8
baz=138
116A Eloy 138.29 43 ⇑P PKPdf 06 03 44.1 +1.4
baz=138
Y18A Canyon Day Jun 138.65 40 ⇑P PKPdf 06 03 45.2 +1.9
baz=138
X19A St. Johns 138.70 39 ⇑P PKPdf 06 03 45.0 +1.6
baz=139
117A Oracle 138.94 42 ⇓P PKPdf 06 03 45.4 +1.5
baz=139
Y19A Nutrioso 139.03 39 ⇓P PKPdf 06 03 45.8 +1.8
baz=139
118A Homack Ranch, 139.41 41 ⇑P PKPdf 06 03 46.1 +1.3
baz=139
219A White Tail Can 140.27 41 ⇓P PKPdf 06 03 47.9 +1.6
baz=140
GDL2 Guadalupe Moun 143.22 37 *e*PKPdf PKPdf 06 03 49.5 -2.1
CPUP Villa Florida 143.29 214 PKP PKPdf 06 03 49.7 -2.2
comp=Z,0.7nm,0.6s,baz=140,slow=7.9,SNR=2.7
CPUP Villa Florida 143.29 214 PKIKP PKPdf 06 03 49.7 -2.2
CPUP pmax pmax
comp=Z,1.0nm,0.6s
CPUP Villa Florida 143.29 214 PKP PKPdf 06 03 49.7 -2.2
BLO Bloomington 144.11 9 *e*PKIKP PKPdf 06 03 50.5 -2.5
CCM Cathedral Cave 144.14 16 *e*PKIKP PKPdf 06 03 49.7 -3.3
OLIL Olney 144.25 12 *e*PKPdf PKPdf 06 03 50.0 -3.2
WMOK Wichita Mounta 144.26 28 *e*PKIKP PKPdf 06 03 50.6 -2.9
FVM French Village 144.43 15 *e*PKIKP PKPdf 06 03 50.3 -3.2
SIUC Southern Illin 144.98 14 *e*PKPdf PKPdf 06 03 53.0 -1.5
WCI Wyandotte Cave 145.07 10 *e*PKIKP PKPdf 06 03 53.2 -1.5
USIN University of 145.08 11 *e*PKPdf PKPdf 06 03 53.9 -0.8
TXAR Lajitas Array 145.65 40 PKPbc PKPbc 06 03 56.6 +0.4
comp=Z,35nm,0.7s,baz=277,slow=0.7,SNR=390
TXAR Lajitas Array 145.65 40 PKIKP PKPdf 06 03 56.6 +0.7
TXAR pmax pmax
comp=Z,35nm,0.7s
PARMO Parma 145.85 15 *e*PKPdf PKPdf 06 03 55.8 -0.2
URVA University of 146.26 357 *e*PKPdf PKPdf 06 03 57.0 +0.2
GLAT Glass 146.34 15 *e*PKPdf PKPdf 06 03 57.7 +0.8
GNAR Gosnell 146.44 16 *e*PKPdf PKPdf 06 03 57.6 +0.6
MIAR Mount Ida 146.61 22 *e*PKP2 PKPab 06 03 58.0 -1.9
ELN Prospectdale 146.62 2 *e*PKPdf PKPdf 06 03 57.1 -0.3
WVT Waverly 146.81 13 *e*PKP2 PKPab 06 03 58.8 -1.9
UALR University of 146.83 20 *e*PKPdf PKPdf 06 03 57.3 -0.4
UALR *e*PKPbc PKPbc 06 03 58.9 -0.6
TZTN Tazewell 147.10 6 *e*PKPdf PKPdf 06 03 57.5 -0.6
TZTN *e*PKPbc PKPbc 06 03 59.4 -0.9
JCT Junction City 147.12 34 *e*PKPdf PKPdf 06 03 58.2 -0.1
JCT *e*PKPbc PKPbc 06 04 00.3 -0.2
TKL Tuckaleechee C 147.95 7 *e*PKP2 PKPbc 06 04 01.1 -1.5
OXF Oxford 147.97 16 *e*PKP2 PKPbc 06 04 01.4 -1.3
CPCT Cooper Cave 148.06 8 *e*PKPdf PKPdf 06 03 59.6 -0.2
CPCT *e*PKPbc PKPbc 06 04 02.3 -0.6
SWET Sewanee 148.07 10 *e*PKPbc PKPbc 06 04 01.4 -1.5
BBSR BB Station 148.34 336 *e*PKPbc PKPbc 06 04 02.1 -1.6
NATX Nacogdoches 148.62 26 *e*PKPdf PKPbc 06 04 02.4 -2.1
JSC Jenkinsville 149.53 3 *e*PKP2 PKPbc 06 04 06.6 -0.1
VBMS Vicksburg 149.78 19 *e*PKPbc PKPbc 06 04 07.3 -0.1
LRAL Lakeview Retre 149.97 13 *e*PKPdf PKPbc 06 04 06.9 -1.0
GOGA Godfrey 150.21 7 *e*PKIKP PKPbc 06 04 07.4 -1.0
LVC Limon Verde 151.91 201 *e*PKPab PKPab 06 04 23.5 +1.9
LPAZ La Paz 157.23 209 PKP PKPdf 06 04 12.7 -1.1
comp=Z,0.8nm,0.8s,baz=270,slow=1.0,SNR=3.0
LPAZ La Paz 157.23 209 PKIKP PKPdf 06 04 12.7 -1.0
LPAZ pmax pmax
comp=Z,1.0nm,0.8s

BJI ***13*** *05:48:39.6, 454S×100.46E, h29km, mB5.5, mb5.0, Ms5.3, Msz5.2*
IDC ***13*** *05:48:41.1±0.6, 393S×10057E, h0km, mb4.6/20, mb1 4.6/21, mb1mx4.5/27, mbtmp4.6/21, ML4.4/1, Error ellipse: s-maj=21.7km s-min=12.3km az=57.0*
ISCJB ***13*** *05:48:42.7±0.3, 403S±004×10053E±005, h23km, mb4.9/67, MS5.3/2, Error ellipse: s-maj=8.1km s-min=5.0km az=142.0*
DJA ***13*** *05:48:43, 4.18S×100.14E, h20km, Mw5.5/4*
NEIC ***13*** *05:48:45.1±0.2, 397S×10052E, mb4.9/27, Error ellipse: s-maj=8.1km s-min=4.9km az=59.0*
NEIC Felt [IV] at Pulau, [III] at Bengkulu and [II] at Kapahiang, Sumatra.
MOS ***13*** *05:48:45.6±0.8, 395S×10056E, h46km, mb5.1/35, Error ellipse: s-maj=13.5km s-min=7.5km az=103.2*

ISC 13 05:48:45.0±0.3, 402S±004×10053E±005, h25km, h25km±2.1km; pP-P, n146, σ0°99/135, mb4.9/67, MS5.3/2, 3C-7D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
RGRI	**Rengat**	**4.07**	**26**	P		**Pn**	**05 49 47.3**	**+1.5**
	0.0nm,0.0s							
BLSI	**Bandar Lampung**	**4.89**	**106**	P		**Pn**	**05 49 59.5**	**+2.5**
	0.0nm,0.0s							
SBJI	**Serang**	**5.96**	**111**	P		**Pn**	**05 50 21.3**	**+10**
	420nm,0.8s							
TNG	**Tangerang**	**6.46**	**110**	P		**Pn**	**05 50 22.5**	**+3.9**
	2μm,1.0s							
JCJI	**Jatiwangi**	**8.09**	**108**	P		**Pn**	**05 50 50.8**	**+10**
	386nm,0.8s							
XMIS	**Christmas Isla**	**8.18**	**142**	*e*Pn		**Pn**	**05 50 42.3**	**0.0**
SJI	**Sawahan**	**11.77**	**109**	P		**Pn**	**05 51 31.4**	**-0.1**
	99nm,1.1s							
BBKI	**Banjar Baru**	**14.29**	**88**	P		**Pn**	**05 52 13.2**	**+7.2**
	302nm,1.0s							
KKM	**Kota Kinabalu**	**18.58**	**58**	*e*P		**Pn**	**05 53 00.0**	**-0.9**
KAPI	**Kappang**	**19.19**	**94**	P		**Pn**	**05 53 06.1**	**-2.1**
	1.1nm,0.3s,baz=280,slow=8.7,SNR=12							
KAPI	**Kappang**	**19.19**	**94**	*e*P		**Pn**	**05 53 06.7**	**-1.5**
	41nm,0.8s							
PCI	**Palu**	**19.53**	**81**	P		**Pn**	**05 53 12.8**	**+0.4**
	194nm,1.4s							
KDI	**Kendari**	**22.04**	**91**	P		**P**	**05 53 41.4**	**+3.3**
	94nm,1.2s,mb5.1							
CMAR	**Chiang Mai Arr**	**22.39**	**356**	P		**P**	**05 53 40.5**	**-1.3**
	38nm,1.1s,mb4.8,baz=186,slow=9.5,SNR=18							
CMAR	**Chiang Mai Arr**	**22.39**	**356**	P		**P**	**05 53 40.5**	**-1.3**
CMAR				pmax		pmax		
	comp=Z,39nm,1.1s							
NANT	**Nan**	**22.68**	**0**	⇓P		**P**	**05 53 43.2**	**-1.6**
	comp=Z,188nm,1.0s,mb5.5							
CHTO	**Chiang Mai**	**22.75**	**356**	*e*P		**P**	**05 53 44.2**	**-1.3**
CHTO				pmax		pmax		
	comp=Z,37nm,1.0s,mb4.8							
CHTO	**Chiang Mai**	**22.75**	**356**	*e*P		**P**	**05 53 44.2**	**-1.3**
	comp=Z,37nm,1.0s,mb4.8							
PALK	**Pallekele**	**22.75**	**300**	*e*P		**P**	**05 53 45.7**	**+0.1**
PALK				pmax		pmax		
	comp=Z,57nm,1.6s,mb4.8							
PALK	**Pallekele**	**22.75**	**300**	*e*P		**P**	**05 53 45.7**	**+0.1**
	comp=Z,57nm,1.6s,mb4.8							
QIZ	**Qiongzhong**	**24.67**	**22**	P		**P**	**05 54 05.1**	**+1.0**
QIZ	**Qiongzhong**	**24.67**	**22**	*e*P		**P**	**05 54 03.8**	**-0.3**
	comp=Z,30nm,1.0s,mb4.8							
MBWA	**Marble Bar**	**25.27**	**134**	*e*P		**P**	**05 54 09.8**	**+0.2**
	comp=Z,3.4nm,0.7s,mb4.0							
MBWA				*e*pP		pP	05 54 17.3	+0.5
FITZ	**Fitzroy Crossi**	**28.28**	**122**	*e*P		**P**	**05 54 36.4**	**-0.3**
	comp=Z,17nm,0.9s,mb4.7							
FITZ				*e*		pP	05 54 44.8	+0.8
FITZ	**Fitzroy Crossi**	**28.28**	**122**	P		**P**	**05 54 36.5**	**-0.2**
	comp=Z,10nm,0.9s,mb4.5,baz=294,slow=6.2,SNR=9.2							
KMI	**Kunming**	**29.05**	**4**	P		**P**	**05 54 45.5**	**+2.0**
KMI				AP		pP	05 54 53.3	+2.5
KMI				XP		sP	05 54 56.3	+2.4
KMI				PP		PP	05 55 42.6	-6.8
KMI				AMB		AMB		
	comp=Z,17nm,1.3s,mb4.6							
KMI				LR		LR		
	comp=N,1μm,15.2s							
KMI				LR		LR		
	comp=E,2μm,24.9s							
KMI				LR		LR		
	comp=Z,3μm,30.4s							
NWAO Narrogin (SRO)		**32.72**	**153**	P		**P**	**05 55 16.5**	**+0.7**
	comp=Z,7.3nm,1.0s,mb4.6,baz=144,slow=18,SNR=1.9							
NWAO Narrogin (SRO)		**32.72**	**153**	P		**P**	**05 55 17.0**	**+1.2**
NWAO				pmax		pmax		
	comp=Z,72nm,1.5s							
NWAO Narrogin (SRO)		**32.72**	**153**	P		**P**	**05 55 17.0**	**+1.2**
	comp=Z,72nm,1.5s,mb5.4							
ODAN Odare		**33.23**	**338**	*e*P		**P**	**05 55 21.1**	**+0.8**
	comp=Z,38nm,0.6s,mb5.5							
TAPN Taplejung		**33.56**	**339**	*e*P		**P**	**05 55 24.3**	**+1.2**
	comp=Z,117nm,1.0s,mb5.8							
RAMN Ramite		**33.61**	**337**	*e*P		**P**	**05 55 24.6**	**+1.0**
JIRN Jiri		**34.40**	**337**	*e*P		**P**	**05 55 31.7**	**+1.2**
PKI Pulchoki		**34.63**	**336**	*e*P		**P**	**05 55 32.9**	**+0.4**
LSA Lhasa		**34.72**	**346**	P		**P**	**05 55 34.8**	**+1.6**
LSA Lhasa		**34.72**	**346**	*e*P		**P**	**05 55 34.6**	**+1.4**
LSA				pmax		pmax		
	comp=Z,30nm,1.0s,mb5.2							
LSA Lhasa		**34.72**	**346**	*e*P		**P**	**05 55 34.6**	**+1.4**
	comp=Z,30nm,1.0s,mb5.2							
GUN Gumba		**34.75**	**337**	*e*P		**P**	**05 55 34.0**	**+0.5**
DMN Daman		**34.79**	**336**	*e*P		**P**	**05 55 34.1**	**+0.3**
	comp=Z,39nm,0.9s,mb5.3							
CD2 Chengdu		**34.87**	**5**	⇓*i*P		**P**	**05 55 34.6**	**+0.1**
CD2				AP		pP	05 55 40.1	-1.8
CD2				XP		sP	05 55 43.3	-1.6
CD2				PP		PP	05 56 51.4	-2.5
CD2				AMB		AMB		
	comp=Z,40nm,0.8s,mb5.4							
KKN Kakani		**34.88**	**336**	*e*P		**P**	**05 55 35.6**	**+1.0**
	comp=Z,103nm,1.1s,mb5.7							
GKN Gorkha		**35.33**	**335**	*e*P		**P**	**05 55 39.2**	**+0.7**
	comp=Z,118nm,1.1s,mb5.7							
KOLN Koldanda		**35.58**	**334**	*e*P		**P**	**05 55 41.4**	**+0.8**
	comp=Z,45nm,0.7s,mb5.5							
DANN Dangsing		**36.01**	**334**	*e*P		**P**	**05 55 45.1**	**+0.8**
	comp=Z,121nm,1.0s,mb5.8							
WRA Warramunga Arr		**36.54**	**118**	P		**P**	**05 55 48.6**	**-0.4**
	comp=Z,6.8nm,0.9s,mb4.5,baz=290,slow=9.6,SNR=9.8							
WRA Warramunga Arr		**36.54**	**118**	P		**P**	**05 55 48.6**	**-0.4**
WRA				pmax		pmax		
	comp=Z,7.0nm,0.9s							
WRAB Tennant Creek		**36.55**	**118**	*e*P		**P**	**05 55 49.1**	**0.0**
WRAB				*e**PP		pP	05 55 57.5	+1.0
WRAB				pmax		pmax		
	comp=Z,18nm,1.0s,mb4.9							
WRAB Tennant Creek		**36.55**	**118**	*e*P		**P**	**05 55 49.1**	**0.0**
	comp=Z,18nm,1.0s,mb4.8							
WRAB				*e*pP		pP	05 55 57.5	+0.9
WB2 Warramunga Arr		**36.55**	**118**	*e*P		**P**	**05 55 48.7**	**-0.4**
WHN Wuhan		**36.82**	**20**	P		**P**	**05 55 48.8**	**-2.4**
XAN Xi'an		**38.68**	**11**	P		**P**	**05 56 06.1**	**-0.8**
XAN				AP		pP	05 56 14.8	+0.5
XAN				XP		sP	05 56 18.1	+0.8
XAN				AMB		AMB		
	comp=Z,54nm,1.2s,mb5.2							
NJ2 Nanjing		**39.88**	**25**	*e*P		**P**	**05 56 18.6**	**+1.6**
NJ2				AMB		AMB		
	comp=Z,110nm,1.0s,mb5.5							
LZH Lanzhou		**40.02**	**4**	⇓P		**P**	**05 56 19.4**	**+1.4**
LZH				AP		pP	05 56 24.3	-1.2
LZH				XP		sP	05 56 26.5	-2.0
LZH				PP		PP	05 57 50.6	+0.2
LZH				AMB		AMB		
	comp=Z,62nm,1.0s,mb5.3							
LZH				AMB		AMB		
	comp=Z,421nm,5.2s							
LZH				LR		LR		
	comp=E,2μm,13.2s							
LZH				LR		LR		
	comp=Z,3μm,17.7s,MS5.2							
JOW Kunigami		**40.75**	**40**	P		**P**	**05 56 22.9**	**-1.3**
	comp=Z,10nm,0.9s,mb4.4,baz=229,slow=9.3,SNR=2.6							
GTA Gaotai		**43.22**	**359**	P		**P**	**05 56 44.8**	**+0.6**
GTA				AP		pP	05 56 49.5	-2.3
GTA				AMB		AMB		
	comp=Z,10.0nm,1.4s,mb4.3							
HHC Hu-ho-hao-te		**45.78**	**12**	⇑P		**P**	**05 57 05.8**	**+1.1**
HHC				AP		pP	05 57 09.1	-3.2
HHC				PCP		PcP	05 58 42.9	+0.9
HHC				PP		PP	05 58 54.1	+1.8
HHC				AMB		AMB		
	comp=Z,21nm,0.8s,mb5.1							
HHC				AMB		AMB		
	comp=Z,652nm,7.3s							
HHC				LR		LR		
	comp=N,2μm,18.5s,MS5.3							
HHC				LR		LR		
	comp=E,2μm,17.7s,MS5.3							
HHC				LR		LR		
	comp=Z,5μm,18.1s,MS5.5							
BJT Baijiatuau		**46.12**	**17**	*e*P		**P**	**05 57 08.0**	**+0.6**
BJT				pmax		pmax		
	comp=Z,12nm,0.6s							
BJT Baijiatuau		**46.12**	**17**	*e*P		**P**	**05 57 08.0**	**+0.7**
	comp=Z,12nm,0.6s,mb5.0							
BJI Beijing		**46.15**	**17**	P		**P**	**05 57 07.9**	**+0.4**
BJI				AMB		AMB		
	comp=Z,24nm,1.1s,mb5.0							
CTA Charters Tower		**47.28**	**114**	*e*P		**P**	**05 57 17.3**	**+0.4**
	comp=Z,11nm,0.9s,mb4.8							
CTA Charters Tower		**47.28**	**114**	P		**P**	**05 57 16.5**	**-0.4**
	comp=Z,13nm,0.9s,mb4.8,baz=285,slow=6.8,SNR=8.7							
CTA Charters Tower		**47.28**	**114**	*e*P		**P**	**05 57 17.3**	**+0.4**
CTA				pmax		pmax		
	comp=Z,11nm,0.9s							
CTAO Charters Tower		**47.28**	**114**	*e*P		**P**	**05 57 16.7**	**-0.2**
CTAO				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.8							
CTAO Charters Tower		**47.28**	**114**	*e*P		**P**	**05 57 16.7**	**-0.2**
	comp=Z,10nm,0.8s,mb4.8							
STKA Stephens Creek		**47.43**	**131**	*e*P		**P**	**05 57 18.0**	**+0.2**
	comp=Z,11nm,0.8s,mb4.8							
STKA Stephens Creek		**47.43**	**131**	P		**P**	**05 57 17.9**	**+0.1**
	comp=Z,8.2nm,0.9s,mb4.7,baz=269,slow=7.0,SNR=4.6							
KSRS Korea Array		**48.50**	**29**	P		**P**	**05 57 25.0**	**-0.9**
	comp=Z,16nm,1.0s,mb5.0,baz=219,slow=8.3,SNR=30							
KSRS Korea Array		**48.50**	**29**	P		**P**	**05 57 25.0**	**-0.9**
KSRS				pmax		pmax		
	comp=Z,16nm,1.0s,mb5.0							
WMQ Urumqi		**49.01**	**348**	⇓*i*P		**P**	**05 57 31.4**	**+1.7**
WMQ				AP		pP	05 57 39.3	+2.0
WMQ				AMB		AMB		
	comp=Z,51nm,1.0s,mb5.5							
TKM2 Tokmak 2		**51.89**	**337**	*e*P		**P**	**05 57 51.8**	**+0.3**
TKM2				pmax		pmax		
	comp=Z,16nm,1.0s,mb4.9							
TKM2 Tokmak 2		**51.89**	**337**	*e*P		**P**	**05 57 51.8**	**+0.3**
	comp=Z,16nm,1.0s,mb4.9							
SONM Songino Array		**51.90**	**5**	P		**P**	**05 57 51.7**	**+0.3**
	comp=Z,15nm,0.6s,mb5.1,baz=189,slow=8.6,SNR=40							
SONM Songino Array		**51.90**	**5**	P		**P**	**05 57 51.7**	**+0.2**
SONM				pmax		pmax		
	comp=Z,15nm,0.6s							
ULN Ulaanbaatar		**51.99**	**6**	*e*P		**P**	**05 57 52.8**	**+0.7**
ULN				pmax		pmax		
	comp=Z,18nm,0.9s,mb5.0							
ULN Ulaanbaatar		**51.99**	**6**	*e*P		**P**	**05 57 52.8**	**+0.7**
	comp=Z,18nm,0.9s,mb5.0							
EKS2 Erkin-Say		**52.41**	**335**	*e*P		**P**	**05 57 55.8**	**+0.4**
	comp=Z,3.8nm,0.6s,mb4.5							
CN2 Changchun		**52.63**	**23**	*e*P		**P**	**05 57 56.4**	**-0.6**
CN2				AMB		AMB		
	comp=Z,30nm,0.8s,mb5.3							
MKAR Makanchi Array		**53.11**	**344**	P		**P**	**05 58 00.5**	**0.0**
	comp=Z,12nm,0.8s,mb4.9,baz=150,slow=8.7,SNR=28							
MKAR Makanchi Array		**53.11**	**344**	P		**P**	**05 58 00.5**	**0.0**
MKAR				pmax		pmax		
	comp=Z,12nm,0.8s							
MAJO Matsushiro		**53.52**	**38**	P		**P**	**05 58 03.2**	**-0.5**
MAJO				pmax		pmax		
	comp=Z,15nm,1.1s,mb4.8							
MAJO Matsushiro		**53.52**	**38**	P		**P**	**05 58 03.2**	**-0.6**
	comp=Z,15nm,1.1s,mb4.8							
MAT Matsushiro		**53.52**	**38**	P		**P**	**05 58 03.5**	**-0.2**
MJAR Matsushiro Arr		**53.52**	**38**	P		**P**	**05 58 02.2**	**-1.5**
	comp=Z,7.9nm,0.9s,mb4.6,baz=218,slow=7.4,SNR=15							
MJAR Matsushiro Arr		**53.52**	**38**	P		**P**	**05 58 02.2**	**-1.5**
MJAR				pmax		pmax		
	comp=Z,8.0nm,1.0s							
ZAK Zakamensk		**54.24**	**2**	⇑*e*P		**P**	**05 58 09.2**	**+0.5**
ZAK				pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.5							
MDJ Mudanjiang		**54.97**	**25**	P		**P**	**05 58 14.9**	**+0.7**
MDJ				XP		sP	05 58 23.8	-1.0
MDJ				AMB		AMB		
	comp=Z,15nm,1.1s,mb4.9							
MDJ Mudanjiang		**54.97**	**25**	*e*P		**P**	**05 58 12.9**	**-1.3**
	comp=Z,14nm,0.8s,mb5.0							
TLY Talaya		**55.55**	**2**	*e*P		**P**	**05 58 19.4**	**+1.2**
TLY				*e*		pP	05 58 27.6	+1.7
TLY				pmax		pmax		
	comp=Z,17nm,1.3s,mb4.9							
TLY Talaya		**55.55**	**2**	*e*P		**P**	**05 58 18.9**	**+0.7**
KURK Kurchatov		**57.68**	**344**	P		**P**	**05 58 32.1**	**-1.2**
	comp=Z,9.5nm,1.0s,mb4.8,baz=158,slow=7.3,SNR=11							
KURK Kurchatov		**57.68**	**344**	*i* P		**P**	**05 58 32.9**	**-0.5**
KURK				pmax		pmax		
	comp=Z,15nm,0.9s,mb5.0							
KURK Kurchatov		**57.68**	**344**	*e*P		**P**	**05 58 32.6**	**-0.7**
	comp=Z,13nm,0.9s,mb5.0							
ZAA0 Zalesovo Array		**59.24**	**349**	⇑*i*P		**P**	**05 58 43.8**	**-0.4**
ZALV Zalesovo Beam		**59.24**	**349**	P		**P**	**05 58 43.3**	**-0.9**
	comp=Z,32nm,1.0s,mb5.3,baz=160,slow=4.7,SNR=24							
ZALV Zalesovo Beam		**59.24**	**349**	P		**P**	**05 58 43.3**	**-0.9**
ZALV				pmax		pmax		
	comp=Z,32nm,1.0s,mb5.3							
KLR Kul'dur		**59.56**	**23**	*e*P		**P**	**05 58 42.3**	**-4.2**
KLR				pmax		pmax		
	comp=Z,64nm,1.8s,mb5.3							
NVS Novosibirsk		**60.39**	**349**	*i* P		**P**	**05 58 51.1**	**-0.9**
NVS				pmax		pmax		
	comp=N,16nm,1.2s							
NVS				pmax		pmax		
	comp=Z,22nm,1.2s,mb5.1							
NVS				pmax		pmax		
	comp=E,6.0nm,0.6s							
BVAR Borovoye Array		**62.25**	**340**	P		**P**	**05 59 02.9**	**-1.8**
	comp=E,2.9nm,0.7s,mb4.5,baz=148,slow=8.7,SNR=8.1							
BVAR Borovoye Array		**62.25**	**340**	P		**P**	**05 59 02.9**	**-1.8**
BVAR				pmax		pmax		
	comp=Z,3.0nm,0.7s							
BRVK Borovoye		**62.32**	**340**	*e*P		**P**	**05 59 03.4**	**-1.7**
BRVK				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.8							
BRVK Borovoye		**62.32**	**340**	*e*P		**P**	**05 59 03.4**	**-1.7**
	comp=Z,6.2nm,0.8s,mb4.8							
CASY Casey		**62.54**	**175**	*e*P		**P**	**05 59 07.6**	**+1.2**
BOD Bodaibo		**62.59**	**8**	*e*P		**P**	**05 59 07.1**	**+0.2**
BOD				pmax		pmax		
	comp=Z,17nm,1.3s,mb5.0							
YSS Yuzh-Sakhalins		**62.92**	**31**	*e*P		**P**	**05 59 09.0**	**-0.3**
YSS				pmax		pmax		
	comp=Z,23nm,0.8s,mb5.4							
YSS Yuzh-Sakhalins		**62.92**	**31**	*e*P		**P**	**05 59 09.0**	**-0.2**
	comp=Z,23nm,0.8s,mb5.4							
KMBO Kilima Mbogo		**63.27**	**271**	P		**P**	**05 59 11.5**	**-0.8**
AKTK Aktyubinsk		**65.38**	**332**	P		**P**	**05 59 24.0**	**-1.4**
AKTO Aktyubinsk		**65.38**	**332**	P		**P**	**05 59 24.0**	**-1.4**
	comp=Z,2.8nm,0.9s,mb4.3,baz=116,slow=9.5,SNR=4.5							
AKTO Aktyubinsk		**65.38**	**332**	P		**P**	**05 59 24.0**	**-1.3**
AKTO				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.3							
MAW Mawson		**68.47**	**195**	P		**P**	**05 59 44.6**	**-0.1**
	comp=Z,2.5nm,0.9s,mb4.3,baz=1.2,slow=7.8,SNR=5.5							
MAW Mawson		**68.47**	**195**	*e*P		**P**	**05 59 44.7**	**0.0**
MAW				pmax		pmax		
	comp=Z,10.0nm,1.3s							
MAW Mawson		**68.47**	**195**	*e*P		**P**	**05 59 44.7**	**-0.1**
	comp=Z,10nm,1.3s,mb4.7							
SVE Sverdlovsk		**68.74**	**338**	*e*P		**P**	**05 59 46.6**	**0.0**
SVE				pmax		pmax		
	comp=Z,24nm,1.1s,mb5.0							
ARU Arti		**69.26**	**337**	*d i*P		**P**	**05 59 49.1**	**-0.7**
ARU				*e*S		S	06 08 54.8	+0.3
ARU				*e*SS		SS	06 13 19.3	-2.3
ARU				pmax		pmax		
	comp=Z,15nm,1.2s,mb4.8							
ARU Arti		**69.26**	**337**	*e*P		**P**	**05 59 48.7**	**-1.1**
	comp=Z,3.5nm,0.6s,mb4.5							
YAK Yakutsk		**69.56**	**14**	⇓*i*P		**P**	**05 59 51.0**	**-0.5**
YAK				pmax		pmax		
	comp=Z,53nm,1.3s,mb5.3							
YAK Yakutsk		**69.56**	**14**	P		**P**	**05 59 50.2**	**-1.4**
KIV Kislovodsk		**70.41**	**320**	P		**P**	**05 59 57.0**	**-0.2**
KIV				pmax		pmax		
	comp=Z,5.0nm,0.5s,mb4.7							
GOF Gofitskoye		**70.68**	**321**	*e*P		**P**	**05 59 50.8**	**-8.0**
MALT Malatya		**71.09**	**313**	*e*P		**P**	**06 00 00.4**	**-1.0**
MALT				pmax		pmax		
	comp=Z,5.0nm,1.1s,mb4.4							
MALT Malatya		**71.09**	**313**	*e*P		**P**	**06 00 00.4**	**-1.0**
	comp=Z,4.8nm,1.1s,mb4.3							
MMAI Mount Meron Ar		**71.65**	**307**	P		**P**	**06 00 06.4**	**+1.4**
	comp=Z,0.6nm,0.2s,mb4.1,baz=102,slow=13,SNR=2.7							
PETK Petropavlovsk-		**74.31**	**32**	P		**P**	**06 00 19.6**	**-0.7**
	comp=Z,3.4nm,0.8s,mb4.3,baz=207,slow=4.9,SNR=5.9							
PETK Petropavlovsk-		**74.31**	**32**	P		**P**	**06 00 19.6**	**-0.6**
PETK				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
TIXI Tiksi		**77.76**	**9**	*i* P		**P**	**06 00 38.8**	**-0.8**
TIXI				pmax		pmax		
	comp=Z,22nm,1.8s,mb4.8							
OBN Obninsk		**78.78**	**328**	⇓*i*P		**P**	**06 00 45.2**	**-0.3**
OBN				*e*			06 00 56.4	
OBN				pmax		pmax		
	comp=Z,30nm,1.7s,mb5.0							
SUR Sutherland		**79.17**	**238**	P		**P**	**06 00 46.5**	**-1.8**
	comp=Z,79nm,1.5s,mb5.4							
SBA Scott Base		**81.18**	**169**	*e*P		**P**	**06

6.6nm,0.4s,mb4.9
STKA Stephens Creek 46.78 132 P **P** 05 59 41.0 **+0.8**
9.8nm,0.7s,mb4.9,baz=314,slow=6.2,SNR=8.3
SONM Songino Array 51.34 4 P **P** **06 00 15.7 +0.9**
3.9nm,0.7s,mb4.5,baz=184,slow=9.4,SNR=3.9
SONM PcP PcP 06 01 28.5 -0.8
0.6nm,0.6s,baz=173,slow=4.4,SNR=1.8
MJAR Matsushiro Arr 52.40 37 P **P** **06 00 22.3 -0.6**
1.0nm,0.3s,mb4.2,baz=229,slow=51,SNR=3.4
MKAR Makanchi Array 53.02 343 P **P** **06 00 28.0 +0.7**
4.5nm,0.7s,mb4.5,baz=152,slow=8.9,SNR=12
KURK Kurchatov 57.61 343 P **P** **06 01 00.2 0.0**
1.8nm,0.8s,mb4.2,baz=252,slow=11,SNR=3.9
ZAA0 Zalesovo Array 59.04 348 *eP* **P** **06 01 09.9 -0.2**
ZALV Zalesovo Beam 59.04 348 P **P** **06 01 09.8 -0.3**
6.6nm,0.4s,mb5.0,baz=160,slow=5.6,SNR=11
BVAR Borovoye Array 62.27 339 P **P** **06 01 31.8 -0.3**
1.0nm,0.3s,mb4.4,baz=129,slow=7.3,SNR=4.5
PETK Petropavlovsk- 73.27 31 P **P** **06 02 41.0 -0.5**
1.8nm,0.7s,mb4.1,baz=186,slow=2.5,SNR=4.1
PETK Petropavlovsk- 73.27 31 P **P** **06 02 41.0 -0.5**
ARCES ARCESS Array B 88.54 340 P **P** **06 04 02.6 +0.1**
4.2nm,1.1s,mb4.7,baz=99,slow=5.5,SNR=5.8
CPUP Villa Florida 144.06 213 PKP PKPdf 06 10 45.8 -0.9
3.9nm,0.8s,baz=147,slow=2.8,SNR=7.9
CPUP Villa Florida 144.06 213 PKP PKPdf 06 10 45.8 -0.9
TXAR Lajitas Array 144.79 41 PKP PKPdf 06 10 46.8 -1.0
3.8nm,0.6s,baz=318,slow=0.8,SNR=12
TXAR Lajitas Array 144.79 41 PKP PKPdf 06 10 46.8 -1.0

IDC 13 05:51:24.1±1.8, 356S×10136E, h0km, mb4.2/6, mb1 4.3/6, mb1mx3.9/19, mbtmp4.2/6, Error ellipse: s-maj=58.6km s-min=24.7km az=45.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**26.38**	**66**	P		P 05 57 02.5	+0.1
	512nm,0.4s,baz=49,slow=12,SNR=4.4						
WRA	**Warramunga Arr**	**36.04**	**119**	P		P 05 58 27.5	+0.1
	1.7nm,0.6s,baz=304,slow=8.9,SNR=4.8						
SONM	**Songino Array**	**51.37**	**4**	P		P 06 00 30.1	-0.3
	0.8nm,0.5s,baz=186,slow=9.3,SNR=3.8						
MKAR	**Makanchi Array**	**52.90**	**344**	P		P 06 00 42.3	+0.5
	2.5nm,0.6s,baz=154,slow=8.2,SNR=5.5						
KURK	**Kurchatov**	**57.48**	**343**	P		P 06 01 14.6	-0.3
	1.3nm,0.6s,baz=165,slow=6.9,SNR=5.1						
ZALV	**Zalesovo Beam**	**58.95**	**349**	P		P 06 01 25.4	+0.3
	2.7nm,0.4s,baz=170,slow=5.7,SNR=4.7						
BVAR	**Borovoye Array**	**62.11**	**339**	P		P 06 01 46.1	-0.6
	2.5nm,0.7s,baz=128,slow=9.3,SNR=3.6						
CPUP	**Villa Florida**	**143.83**	**214**	PKP	PKPdf	06 11 01.7	-0.5
	1.0nm,0.6s,baz=159,slow=2.3,SNR=3.2						
CPUP	**Villa Florida**	**143.83**	**214**	PKP	PKPdf	06 11 01.7	-0.4
TXAR	**Lajitas Array**	**145.06**	**40**	PKP	PKPdf	06 11 03.5	-0.8
	0.6nm,0.6s,baz=273,slow=0.7,SNR=3.0						
TXAR	**Lajitas Array**	**145.06**	**40**	PKP	PKPdf	06 11 03.5	-0.8

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*BJI **13** 05:53:21.6, 407S×10074E, h19km, mB5.5, mb5.0, Ms5.4, Msz5.3*
*ISCJB **13** 05:53:21.9±2.0, 371S±005×10082E±005, h1km±12km, mb5.1/73, MS5.4/7, Error ellipse: s-maj=9.1km s-min=7.4km az=141.1*
*IDC **13** 05:53:23.4±0.5, 365S×10081E, h0km, mb4.7/23, mb1 4.7/24, mb1mx4.7/27, mbtmp4.7/24, ML4.6/1, Error ellipse: s-maj=16.8km s-min=12.9km az=50.0*
*MOS **13** 05:53:27.7±0.9, 366S×10093E, h42km, mb5.2/24, Error ellipse: s-maj=13.3km s-min=7.1km az=108.8*
*NEIC **13** 05:53:28.5±0.2, 370S×10084E, h35km, mb5.0/26, Error ellipse: s-maj=7.2km s-min=5.7km az=53.0*
NEIC Felt in Singapore.
*DJA **13** 05:53:29, 351S×10057E, h20km, MLv5.0/4*
ISC 13 05:53:26.9±2.0, 372S±005×10084E±005, h21km±14km, h27km±2.0km: pP-P, n164, σ0992/146, mb5.0/73, MS5.4/7, 7C-5D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COCO	**West Island**	**9.30**	**205**	Pn		**Pn** 05 55 39.8	**-0.1**
	435nm,0.6s						
BSI	**Banda Aceh**	**10.69**	**329**	P		**Pn** 05 55 58.0	**-1.0**
	90nm,1.1s						
SJI	**Sawahan**	**11.59**	**111**	P		**Pn** 05 56 14.2	**+3.0**
	84nm,1.1s						
KKM	**Kota Kinabalu**	**18.16**	**58**	Pn		**Pn** 05 57 36.1	**-1.9**
KAPI	**Kappang**	**18.91**	**95**	Pn		**Pn** 05 57 47.3	**+0.2**
	390nm,1.1s,SNR=6.9						
KAPI	**Kappang**	**18.91**	**95**	P		**Pn** 05 57 46.1	**-1.0**
	2.0nm,0.3s,baz=276,slow=9.6,SNR=9.0						
KAPI	**Kappang**	**18.91**	**95**	*eP*		**Pn** 05 57 47.1	**0.0**
PCI	**Palu**	**19.19**	**82**	P		**Pn** 05 57 54.4	**+3.9**
	161nm,1.4s						
KDI	**Kendari**	**21.74**	**91**	P		P 05 58 24.3	+7.1
	80nm,1.4s,mb5.0						
CMAR	**Chiang Mai Arr**	**22.11**	**355**	P		P 05 58 19.1	**-2.0**
	23nm,0.9s,mb4.6,baz=186,slow=9.2,SNR=23						
CMAR	**Chiang Mai Arr**	**22.11**	**355**	*i* P		P 05 58 21.7	+0.6
CMAR				pmax		pmax	
	comp=Z,23nm,0.9s						
CHTO	**Chiang Mai**	**22.46**	**355**	*eP*		P 05 58 23.9	**-1.0**
CHTO				pmax		pmax	
	comp=Z,48nm,1.2s,mb4.8						
CHTO	**Chiang Mai**	**22.46**	**355**	*eP*		P 05 58 23.9	**-0.9**
	comp=Z,48nm,1.2s,mb4.8						
QIZ	**Qiongzhong**	**24.28**	**21**	P		P 05 58 43.3	+0.4
QIZ	**Qiongzhong**	**24.28**	**21**	*eP*		P 05 58 43.7	+0.8
	comp=Z,294nm,1.4s,mb5.5						
FITZ	**Fitzroy Crossi**	**28.18**	**122**	*eP*		P 05 59 18.6	+0.4
	comp=Z,12nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**28.18**	**122**	P		P 05 59 19.0	+0.8
	comp=Z,3.4nm,0.8s,mb4.0,baz=288,slow=9.3,SNR=4.8						
KMI	**Kunming**	**28.73**	**4**	P		P 05 59 23.6	+0.6
KMI				AP	pP	05 59 27.8	-1.5
KMI				XP	sP	05 59 29.3	-2.5
KMI				PP	PP	06 00 22.5	-5.6
KMI				S	**S**	**06 04 19.3**	**+8.1**
KMI				AMB	AMB		
	comp=Z,12nm,1.3s,mb4.5						
KMI				LR	LR		
	comp=N,988nm,18.5s,MS4.9						
KMI				LR	LR		
	comp=E,2μm,16.0s,MS4.9						
KMI				LR	LR		
	comp=Z,2μm,14.8s,MS4.8						
HYB	**Hyderabad**	**30.41**	**314**	*i* P		P 05 59 39.5	+1.5
HYB	**Hyderabad**	**30.41**	**314**	*eP*		P 05 59 38.0	0.0
ODAN	**Odare**	**33.06**	**338**	*eP*		P 06 00 02.1	+0.9
	comp=Z,229nm,1.1s,mb6.0						
TAPN	**Taplejung**	**33.38**	**338**	*eP*		P 06 00 05.3	+1.3
	comp=Z,319nm,0.9s,mb6.2						
RAMN	**Ramite**	**33.45**	**337**	*eP*		P 06 00 05.7	+1.1
	comp=Z,198nm,1.5s,mb5.8						
JIRN	**Jiri**	**34.24**	**337**	*eP*		P 06 00 12.6	+1.1
	comp=Z,225nm,1.2s,mb6.0						
PKI	**Pulchoki**	**34.48**	**335**	*eP*		P 06 00 14.2	+0.6
LSA	**Lhasa**	**34.50**	**345**	P		P 06 00 14.8	+1.1
LSA	**Lhasa**	**34.50**	**345**	*eP*		P 06 00 14.8	+1.1
LSA				*e**PP		pP 06 00 23.6	+3.6
LSA				pmax		pmax	
	comp=Z,27nm,1.1s,mb5.1						
LSA	**Lhasa**	**34.50**	**345**	*eP*		P 06 00 14.8	+1.1
	comp=Z,28nm,1.1s,mb5.1						
LSA				*ep*P		pP 06 00 23.6	+3.6
CD2	**Chengdu**	**34.54**	**4**	*eP*		P 06 00 13.3	**-0.8**
CD2				AP		pP 06 00 17.8	-2.6
CD2				XP		sP 06 00 21.5	-1.5
CD2				PP		PP 06 01 31.5	-1.1
CD2				PCP		PcP 06 02 45.5	-3.3
CD2				S		**S**	**06 05 44.0**	**+2.0**
CD2				XS		sS 06 05 51.3	-1.1
CD2				PCS		PcS 06 06 31.5	-3.8
CD2				SS		SS 06 07 58.3	-14
CD2				SCS		ScS 06 10 31.3	-4.7
CD2				AMB		AMB	
	comp=Z,30nm,1.0s,mb5.2						
CD2				AMB		AMB	
	comp=Z,40nm,5.2s						
GUN	**Gumba**	**34.59**	**336**	*eP*		P 06 00 15.6	+1.1
DMN	**Daman**	**34.64**	**335**	*eP*		P 06 00 15.3	+0.4
	comp=Z,73nm,1.1s,mb5.5						
KKN	**Kakani**	**34.73**	**335**	*eP*		P 06 00 16.1	+0.4
	comp=Z,82nm,0.9s,mb5.7						
GKN	**Gorkha**	**35.18**	**335**	*eP*		P 06 00 20.2	+0.6
	comp=Z,146nm,1.1s,mb5.8						
KOLN	**Koldanda**	**35.44**	**333**	*eP*		P 06 00 22.5	+0.7
	comp=Z,73nm,1.0s,mb5.6						
DANN	**Dangsing**	**35.87**	**334**	*eP*		P 06 00 26.0	+0.5
	comp=Z,166nm,1.0s,mb5.9						
WRA	**Warramunga Arr**	**36.42**	**119**	P		P 06 00 30.2	**-0.2**
	comp=Z,5.5nm,0.7s,mb4.6,baz=308,slow=8.9,SNR=12						
WRAB	**Tennant Creek**	**36.43**	**119**	P		P 06 00 33.0	+2.5
	comp=Z,68nm,0.6s,mb5.8,SNR=5.9						
WRAB	**Tennant Creek**	**36.43**	**119**	*eP*		P 06 00 30.1	**-0.4**
WRAB				*e**PP		pP 06 00 40.0	+3.2
WRAB				pmax		pmax	
	comp=Z,6.0nm,0.6s,mb4.7						
WRAB	**Tennant Creek**	**36.43**	**119**	*eP*		P 06 00 30.1	**-0.4**
	comp=Z,6.5nm,0.6s,mb4.7						
WRAB				*ep*P		pP 06 00 40.0	+3.2
WHN	**Wuhan**	**36.43**	**20**	P		P 06 00 31.1	**+0.8**
XAN	**Xi'an**	**38.32**	**11**	P		P 06 00 45.5	**-0.8**
XAN				AP		pP 06 00 53.3	+0.7
XAN				XP		sP 06 00 56.9	+1.7
XAN				AMB		AMB	
	comp=Z,81nm,1.0s,mb5.4						
PTH	**Pithoragarh**	**38.53**	**330**	*ex*		P 06 00 49.1	+1.0
NDI	**New Delhi**	**39.41**	**326**	*eP*		P 06 01 01.5	**+6.0**
NJ2	**Nanjing**	**39.48**	**24**	*eP*		P 06 00 58.3	**+2.3**
NJ2				AMB		AMB	
	comp=Z,60nm,1.0s,mb5.3						
LZH	**Lanzhou**	**39.69**	**4**	⇓P		P 06 00 58.3	**+0.6**
LZH				AP		pP 06 01 03.1	-1.0
LZH				XP		sP 06 01 05.3	-1.4
LZH				PP		PP 06 02 29.8	+0.6
LZH				AMB		AMB	
	comp=Z,92nm,1.2s,mb5.4						
LZH				AMB		AMB	
	comp=Z,431nm,5.3s						
LZH				LR		LR	
	comp=N,3μm,14.8s						
LZH				LR		LR	
	comp=Z,4μm,17.5s,MS5.3						
DDI	**Dehra Dun**	**40.25**	**329**	*ex*		P 06 01 00.0	**-2.5**
JOW	**Kunigami**	**40.32**	**40**	P		P 06 01 03.2	**+0.2**
	comp=Z,8.3nm,0.5s,mb4.8,baz=173,slow=18,SNR=6.0						
GTA	**Gaotai**	**42.92**	**359**	⇑P		P 06 01 24.5	**+0.3**
GTA				AP		pP 06 01 28.8	-1.8
GTA				XP		sP 06 01 31.3	-1.9
GTA				S		**S**	**06 07 52.0**	**+3.9**
GTA				XS		sS 06 07 59.3	+0.6
GTA				SS		SS 06 10 58.3	-1.9
GTA				AMB		AMB	
	comp=Z,33nm,1.2s,mb4.9						
GTA				AMB		AMB	
	comp=Z,3μm,4.8s						
GTA				LR		LR	
	comp=N,2μm,20.4s,MS5.2						
GTA				LR		LR	
	comp=E,2μm,22.2s,MS5.2						
GTA				LR		LR	
	comp=Z,6μm,22.2s,MS5.5						
THN	**Thein Dam**	**43.14**	**328**	*ex*		P 06 01 24.6	**-1.5**
HHC	**Hu-ho-hao-te**	**45.42**	**11**	⇑P		P 06 01 45.3	**+1.1**
HHC				AMB		AMB	
	comp=Z,36nm,1.0s,mb5.2						
HHC				AMB		AMB	
	comp=Z,2μm,7.3s						
BJT	**Baijiatuan**	**45.74**	**16**	*eP*		P 06 01 47.1	**+0.3**
BJT				*e**PP		pP 06 01 55.2	+1.9
BJT				pmax		pmax	
	comp=Z,38nm,1.1s						
BJT	**Baijiatuan**	**45.74**	**16**	*eP*		P 06 01 47.1	**+0.3**
	comp=Z,38nm,1.1s,mb5.2						
BJT				*ep*P		pP 06 01 55.1	+1.9
BJI	**Beijing**	**45.77**	**16**	P		P 06 01 47.3	**+0.3**
BJI				AMB		AMB	
	comp=Z,31nm,1.2s,mb5.1						
BJI				LR		LR	
	comp=Z,4μm,24.7s,MS5.2						
CTA	**Charters Tower**	**47.13**	**114**	P		P 06 01 57.0	**-1.0**
	comp=Z,5.2nm,0.7s,mb4.6,baz=269,slow=9.2,SNR=5.8						
CTAO	**Charters Tower**	**47.13**	**114**	*eP*		P 06 01 56.7	**-1.4**
CTAO				pmax		pmax	
	comp=Z,32nm,1.7s,mb5.0						
CTAO	**Charters Tower**	**47.13**	**114**	*eP*		P 06 01 56.7	**-1.4**
	comp=Z,32nm,1.7s,mb5.0						
STKA	**Stephens Creek**	**47.40**	**131**	P		P 06 02 00.8	+0.9
	comp=Z,3.0nm,0.7s,mb4.3,baz=297,slow=17,SNR=3.1						
KSRS	**Korea Array**	**48.08**	**29**	P		P 06 02 04.5	**-0.7**
	comp=Z,32nm,1.0s,mb5.3,baz=218,slow=8.2,SNR=66						
KSH	**Kashi**	**48.73**	**334**	*eP*		P 06 02 10.1	**0.0**
KSH				*eAP		pP 06 02 14.3	-2.3
KSH				*eXP		sP 06 02 17.3	-1.8
KSH				*ePCP		PcP 06 03 34.1	-0.9
KSH				*ePP		PP 06 04 03.1	-0.3
KSH				*eSCP		ScP 06 07 27.1	-1.9
KSH				*ePCS		PcS 06 07 29.1	-2.0
KSH				*eS		**S**	**06 09 11.6**	**-0.2**
KSH				*eSCS		ScS 06 11 58.1	-3.6
KSH				*eSS		SS 06 12 39.3	-3.2
KSH				AMB		AMB	
	comp=Z,987nm,5.2s						
KSH				LR		LR	
	comp=N,4μm,14.7s,MS5.8						
KSH				LR		LR	
	comp=E,6μm,18.1s,MS5.8						
KSH				LR		LR	
	comp=Z,4μm,18.5s,MS5.5						
WMQ	**Urumqi**	**48.78**	**347**	P		P 06 02 11.3	+0.9
WMQ				AMB		AMB	
	comp=Z,63nm,1.1s,mb5.6						
SNY	**Shenyang**	**49.83**	**22**	⇑P		P 06 02 17.6	**-0.9**
SNY				AMB		AMB	
	comp=Z,15nm,0.9s,mb5.0						
ULHL	**Ulahol**	**50.90**	**337**	P		P 06 02 26.8	+0.2
	SNR=8.1						
SONM	**Songino Array**	**51.56**	**5**	P		P 06 02 31.5	**+0.1**
	comp=Z,22nm,0.9s,mb5.1,baz=186,slow=8.9,SNR=44						
SONM				PcP		PcP 06 03 44.8	-0.4
	comp=Z,7.4nm,0.9s,baz=186,slow=5.4,SNR=3.5						
UCH	**Uchtor**	**51.59**	**335**	*eP*		P 06 02 32.5	+0.7
	comp=Z,8.9nm,1.1s,mb4.6						
ULN	**Ulaanbaatar**	**51.65**	**5**	*eP*		P 06 02 32.8	**+0.7**
ULN				*e**PP		pP 06 02 41.7	+3.1
ULN				pmax		pmax	
	comp=Z,33nm,1.1s,mb5.2						
ULN	**Ulaanbaatar**	**51.65**	**5**	*eP*		P 06 02 32.8	**+0.7**
	comp=Z,33nm,1.1s,mb5.2						
ULN				*ep*P		pP 06 02 41.7	+3.0
TKM2	**Tokmak 2**	**51.73**	**336**	*eP*		P 06 02 32.8	**+0.1**
TKM2				*e**PP		pP 06 02 43.4	+4.1
TKM2				pmax		pmax	
	comp=Z,58nm,1.1s,mb5.4						
TKM2	**Tokmak 2**	**51.73**	**336**	P		P 06 02 33.1	**+0.3**
	SNR=29						
TKM2	**Tokmak 2**	**51.73**	**336**	*eP*		P 06 02 32.8	**0.0**
	comp=Z,58nm,1.1s,mb5.4						
TKM2				*ep*P		pP 06 02 43.4	+4.1
FRU	**Bishkek**	**52.05**	**336**	*eP*		P 06 02 34.0	**-1.2**
FRU				*e		06 04 38.0	
CHMS	**Chumysh**	**52.13**	**336**	P		P 06 02 36.1	**+0.3**
	SNR=5.6						
CN2	**Changchun**	**52.23**	**22**	*eP*		P 06 02 35.8	**-0.7**
CN2				*eS		**S**	**06 09 52.8**	**-7.4**
CN2				AMB		AMB	
	comp=Z,30nm,1.1s,mb5.1						
CN2				AMB		AMB	
	comp=Z,400nm,8.0s						
CN2				LR		LR	
	comp=N,11μm,18.0s,MS6.1						
CN2				LR		LR	
	comp=E,13μm,18.0s,MS6.1						
CN2				LR		LR	
	comp=Z,16μm,19.0s,MS6.1						
EKS2	**Erkin-Say**	**52.26**	**335**	P		P 06 02 37.1	+0.4
	SNR=27						
EKS2	**Erkin-Say**	**52.26**	**335**	*eP*		P 06 02 36.8	**+0.1**
	comp=Z,27nm,0.9s,mb5.2						
EKS2				*ep*P		pP 06 02 47.4	+4.2
USP	**Ospenovka**	**52.46**	**336**	P		P 06 02 38.7	**+0.5**
	SNR=12						
MKAR	**Makanchi Array**	**52.90**	**344**	P		P 06 02 41.2	**-0.1**
	comp=Z,28nm,0.9s,mb5.2,baz=149,slow=7.9,SNR=46						
MAJO	**Matsushiro**	**53.09**	**38**	*eP*		P 06 02 42.7	**-0.3**
MAJO				pmax		pmax	
	comp=Z,13nm,0.9s,mb4.9						
MAJO	**Matsushiro**	**53.09**	**38**	*eP*		P 06 02 42.6	**-0.4**
	comp=Z,13nm,0.9s,mb4.9						
MAT	**Matsushiro**	**53.09**	**38**	P		P 06 02 43.4	**+0.4**
MJAR	**Matsushiro Arr**	**53.09**	**38**	P		P 06 02 42.3	**-0.7**
	comp=Z,9.0nm,0.8s,mb4.8,baz=217,slow=7.9,SNR=22						
ZAK	**Zakamensk**	**53.92**	**2**	*eP*		P 06 02 49.1	**+0.3**
ZAK				*e		06 04 50.2	
ZAK				pmax		pmax	
	comp=Z,7.0nm,1.4s,mb4.4						
MDJ	**Mudanjiang**	**54.57**	**25**	P		P 06 02 53.8	+0.2
MDJ				AMB		AMB	
	comp=Z,10.0nm,1.2s,mb4.7						
MDJ				LR		LR	
	comp=N,3μm,20.9s						
MDJ				LR		LR	
	comp=Z,4μm,22.9s,MS5.5						
MDJ	**Mudanjiang**	**54.57**	**25**	*eP*		P 06 02 54.0	**+0.4**
	comp=Z,24nm,1.4s,mb5.0						
TLY	**Talaya**	**55.23**	**2**	*eP*		P 06 02 59.0	**+0.7**
TLY				*e		pP 06 03 06.9	+2.0
TLY				pmax		pmax	
	comp=Z,11nm,0.9s,mb4.9						
TLY	**Talaya**	**55.23**	**2**	*eP*		P 06 02 59.0	**+0.6**
	comp=Z,12nm,1.0s,mb4.9						
KURK	**Kurchatov**	**57.48**	**343**	P		P 06 03 14.6	+0.3
	comp=Z,217nm,0.9s,mb6.2,SNR=15						
KURK	**Kurchatov**	**57.48**	**343**	P		P 06 03 13.5	**-0.8**
	comp=Z,20nm,0.9s,mb5.1,baz=156,slow=7.4,SNR=32						
KURK	**Kurchatov**	**57.48**	**343**	‖*eP*		P 06 03 14.0	**-0.3**
KURK				pmax		pmax	
	comp=Z,47nm,1.0s,mb5.5						
KURK	**Kurchatov**	**57.48**	**343**	⇑*iP*		P 06 03 13.7	**-0.6**
	comp=Z,42nm,1.0s,mb5.4						
ZAA0	**Zalesovo Array**	**59.00**	**349**	*eP*		P 06 03 24.1	**-0.8**
ZALV	**Zalesovo Beam**	**59.00**	**349**	P		P 06 03 24.8	**-0.1**
	comp=Z,41nm,0.9s,mb5.4,baz=160,slow=4.7,SNR=37						
ZALV	**Zalesovo Beam**	**59.00**	**349**	P		P 06 03 24.8	**-0.1**
KLR	**Kul'dur**	**59.16**	**23**	*eP*		P 06 03 21.0	**-5.1**
KLR				pmax		pmax	
	comp=Z,70nm,1.8s,mb5.4						
NVS	**Novosibirsk**	**60.15**	**348**	*i* P		P 06 03 31.6	**-1.2**
NVS				pmax		pmax	
	comp=Z,21nm,1.1s,mb5.1						
NVS				pmax		pmax	
	comp=N,20nm,1.4s						
NVS				pmax		pmax	
	comp=E,19nm,1.4s						
BVAR	**Borovoye Array**	**62.07**	**340**	P		P 06 03 44.7	**-1.2**
	comp=E,11nm,0.8s,mb5.0,baz=142,slow=7.5,SNR=27						
BRVK	**Borovoye**	**62.13**	**340**	*eP*		P 06 03 45.5	**-0.8**
BRVK				pmax		pmax	
	comp=Z,10.0nm,0.8s,mb5.0						
BRVK	**Borovoye**	**62.13**	**340**	*eP*		P 06 03 45.5	**-0.8**
	comp=Z,10nm,0.8s,mb5.0						
BOD	**Bodaibo**	**62.25**	**8**	*eP*		P 06 03 47.0	**0.0**
BOD				pmax		pmax	
	comp=Z,16nm,1.2s,mb5.0						
YSS	**Yuzh-Sakhalins**	**62.50**	**31**	⇓*iP*		P 06 03 49.3	**+0.4**
YSS				pmax		pmax	
	comp=Z,41nm,0.9s,mb5.6						
YSS	**Yuzh-Sakhalins**	**62.50**	**31**	*eP*		P 06 03 49.2	**+0.3**
	comp=Z,40nm,0.8s,mb5.6						
CASY	**Casey**	**62.82**	**176**	*eP*		P 06 03 45.4	**-5.3**
	comp=Z,24nm,1.6s,mb5.1						
KMBO	**Kilima Mbogo**	**63.57**	**271**	P		P 06 03 57.0	+0.3
	comp=Z,5.0nm,0.2s,mb5.2,baz=86,slow=23,SNR=8.7						
KMBO	**Kilima Mbogo**	**63.57**	**271**	*i* P		P 06 03 58.5	**+1.8**
KMBO				pmax		pmax	
	comp=Z,5.0nm,0.2s						
KMBO	**Kilima Mbogo**	**63.57**	**271**	P		P 06 03 55.8	**-0.9**
	comp=Z,5.9nm,0.2s,mb5.3						
AKTK	**Aktyubinsk**	**65.25**	**331**	P		P 06 04 05.7	**-1.3**
AKTO	**Aktyubinsk**	**65.25**	**331**	P		P 06 04 05.7	**-1.3**
	comp=Z,7.4nm,1.1s,mb4.6,baz=148,slow=6.3,SNR=10.0						
SVE	**Sverdlovsk**	**68.58**	**338**	*eP*		P 06 04 28.0	**0.0**
SVE				pmax		pmax	
	comp=Z,41nm,1.1s,mb5.3						
MAW	**Mawson**	**68.84**	**195**	P		P 06 04 29.8	+0.3
	comp=Z,2.0nm,0.8s,mb4.1,baz=328,slow=9.7,SNR=3.6						
MAW	**Mawson**	**68.84**	**195**	*eP*		P 06 04 29.5	**0.0**
MAW				pmax		pmax	
	comp=Z,4.0nm,0.9s						
MAW	**Mawson**	**68.84**	**195**	*eP*		P 06 04 29.5	**0.0**
	comp=Z,4.1nm,0.9s,mb4.4						
ARU	**Arti**	**69.10**	**336**	*d iP*		P 06 04 30.8	**-0.5**
ARU				*eS		S 06 13 34.6	-0.9
ARU				pmax		pmax	
	comp=Z,21nm,1.0s,mb5.0						
ARU	**Arti**	**69.10**	**336**	*eP*		P 06 04 30.5	**-0.8**
	comp=Z,16nm,0.9s,mb4.9						
YAK	**Yakutsk**	**69.19**	**14**	P		P 06 04 30.2	**-1.5**
YAK				*ePP		pP 06 04 39.0	+0.6
YAK				*eSP		sP 06 04 46.1	+5.2
YAK				pmax		pmax	
	comp=Z,54nm,0.8s,mb5.5						
YAK	**Yakutsk**	**69.19**	**14**	P		P 06 04 30.2	**-1.5**
	comp=Z,54nm,0.8s,mb5.5						
YAK				*ep*P		pP 06 04 39.0	+0.5
YAK				*esP		sP 06 04 46.1	+5.2
ASF	**Jabal al Asfar**	**70.26**	**306**	P		P 06 04 38.5	**-0.5**
	comp=Z,4.4nm,0.8s,mb4.4,baz=352,slow=0.6,SNR=5.6						
KIV	**Kislovodsk**	**70.38**	**319**	⇑P		P 06 04 39.3	**-0.1**
KIV				*e		06 04 48.0	
KIV				*e		06 04 56.8	
KIV				pmax		pmax	
	comp=Z,17nm,1.1s,mb4.9						
KIV	**Kislovodsk**	**70.38**	**319**	*eP*		P 06 04 38.9	**-0.5**
	comp=Z,22nm,1.2s,mb5.0						
MALT	**Malatya**	**71.10**	**313**	*eP*		P 06 04 42.7	**-1.3**
PETK	**Petropavlovsk-**	**73.89**	**32**	P		P 06 04 58.9	**-1.4**
	comp=Z,4.3nm,0.9s,mb4.4,baz=222,slow=2.0,SNR=7.1						
PET	**Petropavlovsk**	**74.35**	**32**	*eP*		P 06 05 02.7	**-0.2**
PET				pmax		pmax	
	comp=Z,32nm,0.9s,mb5.2						
BOSA	**Boshof**	**75.57**	**242**	P		P 06 05 10.9	+0.4
	comp=Z,1.5nm,0.7s,mb4.0,baz=168,slow=17,SNR=2.7						
SYO

ULM	**Lac du Bonnet**	**131.53**	**14**	PKP	PKPdf	06 12 37.4	-0.7
PDAR	**Pinedale Array**	**132.64**	**30**	PKP	PKPdf	06 12 41.0	+0.6
	comp=Z,0.5nm,1.0s,baz=175,slow=3.3,SNR=3.2						
MSU	**Marysvale**	**134.14**	**37**	*e*PKIKP	PKPdf	06 12 45.2	+1.8
WMOK	**Wichita Mounta**	**144.16**	**28**	*e*PKIKP	PKPdf	06 12 59.2	-2.6
SIUC	**Southern Illin**	**144.93**	**14**	*e*PKPdf	PKPdf	06 13 02.1	-1.0
USIN	**University of**	**145.04**	**12**	*e*PKPdf	PKPdf	06 13 01.7	-1.5
WCI	**Wyandotte Cave**	**145.04**	**10**	*e*PKIKP	PKPdf	06 13 01.9	-1.3
WCI				*e*		06 13 10.5	
TXAR	**Lajitas Array**	**145.51**	**40**	PKPbc	PKPbc	06 13 05.5	+1.1
	comp=Z,19nm,0.8s,baz=271,slow=0.6,SNR=88						
MIAR	**Mount Ida**	**146.53**	**22**	*e*PKPbc	PKPbc	06 13 07.1	-0.2
MIAR				*ep*PKPdf	pPKPdf	06 13 16.8	+3.8
MIAR				*es*PKPdf		06 13 19.9	
ELN	**Prospectdale**	**146.62**	**2**	*e*PKPdf	PKPdf	06 13 05.3	-0.6
ELN				*e*PKPbc	PKPbc	06 13 06.6	-0.9
UALR	**University of**	**146.76**	**20**	*e*PKPbc	PKPbc	06 13 07.9	-0.1
WVT	**Waverly**	**146.77**	**13**	*e*PKP2	PKPab	06 13 07.4	-1.7
JCT	**Junction City**	**147.00**	**34**	*e*PKP2	PKPab	06 13 07.8	-2.4
TZTN	**Tazewell**	**147.08**	**7**	*e*PKPbc	PKPbc	06 13 08.4	-0.4
SWET	**Sewanee**	**148.03**	**11**	*e*PKPbc	PKPbc	06 13 10.2	-1.3
CPCT	**Cooper Cave**	**148.04**	**8**	*e*PKPbc	PKPbc	06 13 10.8	-0.6
GOGA	**Godfrey**	**150.19**	**7**	*e*PKIKP	PKPbc	06 13 15.8	-1.2

NEIC ***13*** *05:59:25.9, 1364N×9194W, h18km, MD4.4(MEX), After MEX.*

MEX 13 05:59:25.1±0.5, 1358N×9203W, h20km±75km, MD4.4, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.34**	**350**	*i* P	Pn	05 59 45.7	-3.1
THIG				*i* S	Sn	06 00 01.2	-4.8
CCIG	**Comitan**	**2.69**	**358**	*i* P	Pn	06 00 05.0	-2.3
CCIG				*i* S	Sn	06 00 36.7	-2.6
CCIG	**Comitan**	**2.69**	**358**	*i* P	Pn	06 00 05.2	-2.0
CCIG				*i* S	Sn	06 00 36.7	-2.6
SCX	**San Cristobal**	**3.19**	**350**	*i* P	Pn	06 00 18.3	+4.1
SCX				*i* S	Sn	06 00 55.6	+3.9
TGIG		**3.35**	**342**	*i* P	Pn	06 00 14.2	-2.2
TGIG				*i* S	Sn	06 00 52.8	-2.8
CMIG	**Matias Romero**	**4.45**	**322**	*i* P	Pn	06 00 31.1	-0.4
CMIG				*i* S	Sn	06 01 19.6	-3.1
CMIG	**Matias Romero**	**4.45**	**322**	*i* P	Pn	06 00 31.2	-0.2
CMIG				*i* S	Sn	06 01 15.8	-6.8
VHO	**Vista Hermosa**	**5.71**	**308**	*i* P	Pn	06 00 48.7	-0.1
VHO				*i* S	Sn	06 01 51.6	-2.3
TEIG	**Tepich**	**7.53**	**28**	*e*P	Pn	06 01 06.5	-7.2
TEIG				*i* S	Sn	06 02 35.9	-2.7
TEIG	**Tepich**	**7.53**	**28**	*i* P	Pn	06 01 07.1	-6.6
TEIG				*i* S	Sn	06 02 11.9	-27

IDC ***13*** *06:02:17.3±1.3, 150S×9997E, h0km, mb4.3/11, mb1 4.3/12, mb1mx4.2/20, mbtmp4.3/12, ML4.5/1, Error ellipse: s-maj=45.7km s-min=18.1km az=57.0*

ISCJB ***13*** *06:02:19.6±0.6, 158S±008×998E±02, h33km, mb4.3/11, Error ellipse: s-maj=23.1km s-min=11.9km az=173.0*

NEIC ***13*** *06:02:22.1±0.5, 156S×9988E, h35km, Error ellipse: s-maj=21.0km s-min=10.4km az=82.0*

DJA ***13*** *06:02:22, 179S×9962E, h23km, MLv4.5/5*

ISC 13 06:02:22.1±0.6, 154S±008×999E±02, h35km, n20, σ0§94/16, mb4.3/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCO	**West Island**	**11.00**	**196**	*e*Pn	**Pn**	**06 04 56.2**	**-0.8**
	235nm,0.6s						
CMAR	**Chiang Mai Arr**	**19.89**	**357**	P	**Pn**	**06 06 51.0**	**-1.5**
	0.6nm,0.3s,baz=181,slow=11,SNR=12						
WRA	**Warramunga Arr**	**38.33**	**121**	P	**P**	**06 09 39.3**	**-0.6**
	2.1nm,0.4s,mb4.2,baz=303,slow=9.3,SNR=25						
WRA				PcP	PcP	06 11 53.1	-0.3
	0.4nm,0.4s,baz=315,slow=2.3,SNR=5.7						
KSRS	**Korea Array**	**46.69**	**31**	P	**P**	**06 10 47.5**	**-0.1**
	0.8nm,0.3s,mb4.1,baz=217,slow=8.8,SNR=5.6						
SONM	**Songino Array**	**49.50**	**6**	P	**P**	**06 11 10.3**	**+1.2**
	0.7nm,0.3s,mb4.1,baz=186,slow=9.2,SNR=10						
STKA	**Stephens Creek**	**49.55**	**132**	P	**P**	**06 11 11.6**	**+1.8**
	2.6nm,0.9s,mb4.3,baz=149,slow=21,SNR=3.2						
MKAR	**Makanchi Array**	**50.56**	**344**	P	**P**	**06 11 18.1**	**+1.0**
	4.1nm,0.6s,mb4.5,baz=147,slow=8.0,SNR=41						
MJAR	**Matsushiro Arr**	**52.00**	**39**	P	**P**	**06 11 26.4**	**-1.7**
	0.8nm,0.3s,mb4.1,baz=236,slow=8.3,SNR=4.1						
KURK	**Kurchatov**	**55.14**	**344**	P	**P**	**06 11 50.3**	**-0.6**
	3.6nm,0.8s,mb4.4,baz=167,slow=7.0,SNR=11						
ZAA0	**Zalesovo Array**	**56.70**	**349**	*e*P	**P**	**06 12 02.6**	**+0.6**
ZALV	**Zalesovo Beam**	**56.70**	**349**	P	**P**	**06 12 02.5**	**+0.5**
	21nm,0.9s,mb5.1,baz=174,slow=5.7,SNR=26						
ZALV	**Zalesovo Beam**	**56.70**	**349**	P	**P**	**06 12 02.5**	**+0.5**
BVAR	**Borovoye Array**	**59.71**	**340**	P	**P**	**06 12 23.1**	**0.0**
	2.3nm,0.7s,mb4.3,baz=145,slow=8.3,SNR=9.3						
PETK	**Petropavlovsk-**	**72.57**	**32**	P	**P**	**06 13 45.9**	**+0.3**
	1.3nm,0.6s,mb4.0,baz=137,slow=5.7,SNR=6.0						
PETK	**Petropavlovsk-**	**72.57**	**32**	P	**P**	**06 13 45.9**	**+0.3**
ARCES	**ARCESS Array B**	**86.00**	**340**	P	**P**	**06 14 58.5**	**0.0**
	1.9nm,0.8s,mb4.3,baz=94,slow=7.7,SNR=3.7						
BDFB	**Brasilia**	**143.96**	**241**	PKP	PKPdf	06 21 59.2	+4.3
	3.6nm,0.8s,baz=229,slow=3.8,SNR=3.9						
TXAR	**Lajitas Array**	**144.41**	**37**	PKP	PKPdf	06 21 55.2	-0.2
	2.4nm,0.5s,baz=199,slow=0.7,SNR=64						
CPUP	**Villa Florida**	**144.61**	**217**	PKP	PKPdf	06 22 01.8	+5.9
	0.9nm,0.6s,baz=24,slow=6.4,SNR=4.3						
CPUP	**Villa Florida**	**144.61**	**217**	PKP	PKPdf	06 22 01.8	+5.9

IDC 13 06:06:59.6±4.5, 294S×10070E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.5/18, mbtmp3.5/3, Error ellipse: s-maj=178.1km s-min=29.9km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.92**	**120**	P	P	06 14 10.4	-0.2
	0.2nm,0.4s,baz=300,slow=8.7,SNR=6.2						
SONM	**Songino Array**	**50.80**	**5**	P	P	06 16 02.1	+0.4
	0.4nm,0.5s,baz=187,slow=11,SNR=3.8						
MKAR	**Makanchi Array**	**52.12**	**344**	P	P	06 16 11.3	-0.3
	0.6nm,0.6s,baz=150,slow=7.8,SNR=5.9						
TXAR	**Lajitas Array**	**145.00**	**39**	PKPbc	PKPbc	06 26 38.3	-0.6
	0.2nm,0.4s,baz=270,slow=1.0,SNR=7.6						

BJI ***13*** *06:28:43.1, 281S×9958E, h10km, mB5.3, mb4.9, Ms5.1, Msz4.9*

IDC ***13*** *06:28:50.1±0.6, 193S×9950E, h0km, mb4.8/19, mb1 4.9/19, mb1mx4.8/21, mbtmp4.8/19, Error ellipse: s-maj=19.9km s-min=13.4km az=45.0*

ISCJB ***13*** *06:28:50.9±0.2, 202S±004×9937E±003, h17km, mb5.1/91, MS5.0/7, Error ellipse: s-maj=5.7km s-min=4.0km az=29.0*

DJA ***13*** *06:28:53, 198S×9932E, h10km, Mw5.3/5*

NEIC ***13*** *06:28:54.1±0.2, 198S×9952E, mb5.0/34, Error ellipse: s-maj=8.1km s-min=5.9km az=219.0*

NEIC Felt [II] at Padang and Padangpanjang, Sumatra.

MOS ***13*** *06:28:54.0±1.0, 185S×9958E, h38km, mb5.2/34, Error ellipse: s-maj=12.3km s-min=6.6km az=112.7*

ISC 13 06:28:53.0±0.2, 203S±004×9937E±003, h18km, h18km±2.3km; pP-P, n226, σ1§13/215, mb5.1/91, MS5.0/7, 30C-23D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.86**	**33**	P	**Pn**	**06 29 23.5**	**-0.6**
	0.0nm,0.0s						
KRJI	**Kerinci**	**2.09**	**92**	P	**Pn**	**06 29 28.2**	**+1.0**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.40**	**61**	P	**Pn**	**06 29 46.4**	**+1.2**
	0.0nm,0.0s						
TRSI	**Tarutung**	**4.05**	**354**	P	**Pn**	**06 29 55.7**	**+1.6**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.43**	**74**	P	**Pn**	**06 30 14.3**	**+1.2**
	132nm,1.1s						
KGM	**Kluang**	**5.63**	**45**	⇓P	**Pn**	**06 30 17.3**	**+1.4**
FRIM	**Kepong**	**5.69**	**23**	⇓P	**Pn**	**06 30 17.4**	**+0.6**
MYKOM	**Kota Tinggi**	**5.87**	**50**	⇓P	**Pn**	**06 30 20.6**	**+1.5**
KLI	**Kotabumi**	**6.16**	**117**	P	**Pn**	**06 30 24.8**	**+1.6**
	376nm,0.8s						
IPM	**Ipoh**	**6.67**	**14**	⇑P	**Pn**	**06 30 31.7**	**+1.5**
PPBI	**Pangkal Pinang**	**6.76**	**91**	P	**Pn**	**06 30 35.8**	**+4.3**
	31nm,1.0s						
KTGM	**Kuala Trenggan**	**8.21**	**27**	⇓P	**Pn**	**06 30 52.5**	**+1.1**
BSI	**Banda Aceh**	**8.51**	**331**	P	**Pn**	**06 30 55.2**	**-0.3**
	86nm,0.7s						
DBJI	**Dramaga**	**8.62**	**122**	P	**Pn**	**06 30 58.2**	**+1.2**
	168nm,1.1s						
SNG	**Songkhla**	**9.23**	**8**	P	**Pn**	**06 31 03.0**	**-2.3**
	200nm,1.0s						
LEM	**Lembang**	**9.50**	**120**	P	**Pn**	**06 31 12.1**	**+3.0**
	198nm,0.9s						
COCO	**West Island**	**10.41**	**194**	*e*Pn	**Pn**	**06 31 21.3**	**-0.2**
KSM	**Kuching**	**11.47**	**72**	⇑P	**Pn**	**06 31 39.0**	**+2.9**
KSM	**Kuching**	**11.47**	**72**	Pn	**Pn**	**06 31 32.5**	**-3.6**
BJII	**Banjamegara**	**11.57**	**117**	P	**Pn**	**06 31 39.4**	**+1.9**
	42nm,1.6s						
SJI	**Sawahan**	**13.59**	**115**	P	**Pn**	**06 32 04.3**	**-0.7**
	69nm,0.8s						
SBUM	**Sibu**	**13.59**	**71**	⇑P	**Pn**	**06 32 08.1**	**+3.0**
BTM	**Bintulu**	**14.65**	**69**	⇓P	**Pn**	**06 32 27.2**	**+7.5**
KKM	**Kota Kinabalu**	**18.63**	**64**	⇑P	**Pn**	**06 33 10.5**	**+0.2**
KKM	**Kota Kinabalu**	**18.63**	**64**	*e*P	**Pn**	**06 33 09.7**	**-0.5**
SDKM	**Sandakan**	**19.36**	**67**	⇑P	**Pn**	**06 33 18.7**	**-0.4**
TSM	**Tawau**	**19.52**	**71**	⇓P	**Pn**	**06 33 20.1**	**-1.0**
CMAR	**Chiang Mai Arr**	**20.36**	**359**	P	**P**	**06 33 28.0**	**-0.7**
	8.0nm,0.6s,baz=186,slow=10,SNR=25						
CMAR	**Chiang Mai Arr**	**20.36**	**359**	⇑*e*P	**P**	**06 33 28.0**	**-0.7**
MYLDM	**Lahad Datu**	**20.40**	**69**	⇓P	**P**	**06 33 30.5**	**+1.2**
PCI	**Palu**	**20.49**	**87**	P	**P**	**06 33 35.2**	**+5.0**
	135nm,1.4s						
KAPI	**Kappang**	**20.55**	**99**	P	**P**	**06 33 29.9**	**-1.1**
	424nm,0.8s,SNR=7.9						
KAPI	**Kappang**	**20.55**	**99**	P	**P**	**06 33 28.8**	**-2.2**
	50nm,1.0s,baz=280,slow=12,SNR=14						
KAPI	**Kappang**	**20.55**	**99**	*e*P	**P**	**06 33 29.0**	**-2.0**
	91nm,1.1s						
CHG	**Chiang Mai**	**20.71**	**359**	⇑P	**P**	**06 33 33.9**	**+1.3**
	28nm,1.0s						
CHTO	**Chiang Mai**	**20.71**	**359**	*e*P	**P**	**06 33 30.4**	**-2.2**
CHTO					pmax	pmax	
	comp=Z,20nm,0.8s						
CHTO	**Chiang Mai**	**20.71**	**359**	*e*P	**P**	**06 33 30.4**	**-2.2**
	comp=Z,20nm,0.8s						
NANT	**Nan**	**20.74**	**4**	⇑P	**P**	**06 33 31.0**	**-1.8**
	comp=Z,150nm,1.0s						
PALK	**Pallekele**	**20.80**	**297**	*e*P	**P**	**06 33 33.1**	**-0.5**
	comp=Z,23nm,1.0s						
KDI	**Kendari**	**23.29**	**95**	P	**P**	**06 34 00.4**	**+0.1**
	comp=Z,64nm,1.2s,mb4.9						
QIZ	**Qiongzhong**	**23.32**	**26**	*e*P	**P**	**06 33 57.2**	**-3.3**
	comp=Z,66nm,1.0s,mb5.0						
IMP	**Imphal**	**27.17**	**349**	*e*P	**P**	**06 34 37.0**	**+1.4**
KMI	**Kunming**	**27.18**	**7**	P	**P**	**06 34 38.3**	**+2.6**
KMI				AP	pP	06 34 40.9	-0.3
KMI				XP	sP	06 34 42.3	-1.1
KMI				PP		06 35 25.1	
KMI				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.4						
KMI				AMB	AMB		
	comp=Z,577nm,10.6s						
KMI				LR	LR		
	comp=N,2μm,16.7s,MS4.9						
KMI				LR	LR		
	comp=E,2μm,18.4s,MS4.9						
KMI				LR	LR		
	comp=Z,3μm,21.7s,MS4.8						
MBWA	**Marble Bar**	**27.48**	**135**	*e*P	**P**	**06 34 38.2**	**-0.3**
	comp=Z,4.7nm,0.7s,mb4.1						
FITZ	**Fitzroy Crossi**	**30.32**	**124**	*e*P	**P**	**06 35 02.8**	**-1.0**
	comp=Z,9.8nm,0.9s,mb4.5						
FITZ	**Fitzroy Crossi**	**30.32**	**124**	P	**P**	**06 35 03.2**	**-0.6**
	comp=Z,3.0nm,0.7s,mb4.1,baz=186,slow=1.9,SNR=10						
ODAN	**Odare**	**30.96**	**339**	*e*P	**P**	**06 35 10.6**	**+1.3**
	comp=Z,108nm,0.9s,mb5.7						
TAPN	**Taplejung**	**31.29**	**340**	*e*P	**P**	**06 35 13.7**	**+1.5**
	comp=Z,131nm,0.9s,mb5.8						
RAMN	**Ramite**	**31.33**	**338**	*e*P	**P**	**06 35 13.8**	**+1.2**
	comp=Z,67nm,0.8s,mb5.5						
JIRN	**Jiri**	**32.13**	**338**	*e*P	**P**	**06 35 20.6**	**+1.0**
	comp=Z,131nm,0.8s,mb5.8						
PKI	**Pulchoki**	**32.35**	**336**	*e*P	**P**	**06 35 22.0**	**+0.5**
	comp=Z,42nm,1.0s,mb5.2						
GUN	**Gumba**	**32.47**	**337**	*e*P	**P**	**06 35 23.7**	**+1.1**
	comp=Z,88nm,0.6s,mb5.8						
DMN	**Daman**	**32.51**	**336**	*e*P	**P**	**06 35 23.4**	**+0.5**
	comp=Z,35nm,1.0s,mb5.2						
LSA	**Lhasa**	**32.51**	**347**	P	**P**	**06 35 25.0**	**+2.1**
LSA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
LSA	**Lhasa**	**32.51**	**347**	*e*P	**P**	**06 35 23.9**	**+1.0**
LSA				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
LSA	**Lhasa**	**32.51**	**347**	*e*P	**P**	**06 35 23.9**	**+1.0**
	comp=Z,11nm,0.6s,mb5.0						
KKN	**Kakani**	**32.60**	**336**	*e*P	**P**	**06 35 24.4**	**+0.7**
	comp=Z,69nm,0.9s,mb5.6						
CD2	**Chengdu**	**33.02**	**7**	P	**P**	**06 35 25.6**	**-1.7**
CD2				AP	pP	06 35 30.0	-2.8
CD2				XP	sP	06 35 33.4	-1.6
CD2				PP	PP	06 36 36.8	-5.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,4.8s						
GKN	**Gorkha**	**33.05**	**336**	*e*P	**P**	**06 35 28.4**	**+0.8**
	comp=Z,76nm,1.1s,mb5.6						
KOLN	**Koldanda**	**33.28**	**334**	*e*P	**P**	**06 35 30.6**	**+0.9**
	comp=Z,69nm,0.8s,mb5.7						
ENH	**Enshi**	**33.54**	**16**	P	**P**	**06 35 32.4**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.7						
DANN	**Dangsing**	**33.72**	**335**	*e*P	**P**	**06 35 34.3**	**+0.8**
	comp=Z,88nm,1.1s,mb5.6						
XAN	**Xi'an**	**36.98**	**13**	P	**P**	**06 35 59.3**	**-2.2**
XAN				AP	pP	06 36 05.0	-2.0
XAN				XP	sP	06 36 07.9	-1.3
XAN				AMB	AMB		
	comp=Z,19nm,1.2s,mb4.8						
DDI	**Dehra Dun**	**38.06**	**329**	*ex*	**P**	**06 36 08.0**	**-2.7**
LZH	**Lanzhou**	**38.15**	**6**	*e*P	**P**	**06 36 09.6**	**-1.7**
LZH				AP	pP	06 36 14.5	-2.3
LZH				XP	sP	06 36 16.8	-2.2
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,106nm,5.2s						
WRA	**Warramunga Arr**	**38.52**	**120**	P	**P**	**06 36 13.2**	**-1.6**
	comp=Z,24nm,0.9s,mb4.9,baz=301,slow=8.9,SNR=98						
WRA				PcP	PcP	06 38 27.6	0.0
	comp=Z,2.1nm,0.7s,baz=306,slow=2.6,SNR=4.7						
WRAB	**Tennant Creek**	**38.53**	**120**	P	**P**	**06 36 14.0**	**-0.8**
	comp=Z,214nm,0.7s,mb6.0,SNR=12						
WRAB	**Tennant Creek**	**38.53**	**120**	*e*P	**P**	**06 36 13.6**	**-1.2**
WRAB				*e*PP	pP	06 36 21.9	+1.6
WRAB				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**38.53**	**120**	*e*P	**P**	**06 36 13.6**	**-1.2**
	comp=Z,29nm,0.9s,mb5.0						
WRAB				*ep*P	pP	06 36 21.9	+1.6
WB2	**Warramunga Arr**	**38.53**	**120**	*e*P	**P**	**06 36 13.6**	**-1.2**
WB2				*e*		06 36 21.7	
NJ2	**Nanjing**	**38.60**	**27**	*e*P	**P**	**06 36 16.0**	**+0.8**
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
GTA	**Gaotai**	**41.24**	**1**	⇑P	**P**	**06 36 36.9**	**-0.1**
GTA				AP	pP	06 36 40.6	-1.9
GTA				XP	sP	06 36 42.0	-2.7
GTA				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.8						
GTA				AMB	AMB		
	comp=Z,2μm,4.8s						
GTA				LR	LR		
	comp=N,2μm,19.2s,MS5.0						
GTA				LR	LR		
	comp=E,1μm,20.4s,MS5.0						
GTA				LR	LR		
	comp=Z,2μm,21.0s,MS5.0						
HHC	**Hu-ho-hao-te**	**44.10**	**13**	*e*P	**P**	**06 37 00.1**	**-0.1**
HHC				AP	pP	06 37 03.3	-2.5
HHC				XP	sP	06 37 05.3	-2.7
HHC				PP	PP	06 38 44.9	+1.7
HHC				AMB	AMB		
	comp=Z,11nm,0.6s,mb4.8						
HHC				AMB	AMB		
	comp=Z,967nm,6.1s						
HHC				LR	LR		
	comp=N,1μm,18.0s,MS5.0						
HHC				LR	LR		
	comp=E,1μm,18.6s,MS5.0						
HHC				LR	LR		
	comp=Z,2μm,17.9s,MS5.0						
BJT	**Baijiatuau**	**44.58**	**18**	P	**P**	**06 37 00.7**	**-3.4**
BJT				pmax	pmax		
	comp=Z,11nm,0.8s						
BJT	**Baijiatuau**	**44.58**	**18**	P	**P**	**06 37 00.7**	**-3.4**
	comp=Z,11nm,0.8s,mb4.7						
BJI	**Beijing**	**44.60**	**18**	P	**P**	**06 37 03.5**	**-0.8**
BJI				AMB	AMB		
	comp=Z,14nm,0.9s,mb4.8						
KSH	**Kashi**	**46.59**	**335**	*e*P	**P**	**06 37 23.0**	**+3.0**
KSH				*e*AP	pP	06 37 27.0	+1.4
KSH				*e*XP	sP	06 37 30.1	+2.3
KSH				*e*PCP	PcP	06 38 55.1	+1.1
KSH				*e*PP	PP	06 39 13.3	+3.6
KSH				*e*SCP	ScP	06 42 47.1	+0.2
KSH				*e*PCS	PcS	06 42 49.5	+0.8
KSH				*e*S	**S**	**06 44 12.4**	**+4.2**
KSH				*e*XS	sS	06 44 20.3	+2.9
KSH				*e*SCS	ScS	06 47 14.1	-0.3
KSH				*e*SS	SS	06 47 32.1	-2.5
KSH				AMB	AMB		
	comp=Z,3μm,15.0s						
KSH				LR	LR		
	comp=N,4μm,19.6s						
KSH				LR	LR		
	comp=E,4μm,14.3s						
KSH				LR	LR		
	comp=Z,3μm,18.2s,MS5.3						
WMQ	**Urumqi**	**46.83**	**348**	⇑*i*P	**P**	**06 37 23.0**	**+1.2**
WMQ				AP	pP	06 37 29.0	+1.6
WMQ				AMB	AMB		
	comp=Z,76nm,1.0s,mb5.6						
KSRS	**Korea Array**	**47.36**	**31**	P	**P**	**06 37 24.9**	**-1.3**
	comp=Z,15nm,0.9s,mb4.9,baz=223,slow=8.8,SNR=53						
KSRS				PcP	PcP	06 38 55.5	-1.2
	comp=Z,2.9nm,0.8s,baz=244,slow=3.3,SNR=4.8						
PMG	**Port Moresby**	**48.07**	**101**	*e*P	**P**	**06 37 32.3**	**+0.3**
PMG				pmax	pmax		
	comp=Z,13nm,0.8s						
PMG	**Port Moresby**	**48.07**	**101**	*e*P	**P**	**06 37 32.3**	**+0.3**
	comp=Z,13nm,0.8s,mb5.0						
SNY	**Shenyang**	**48.86**	**24**	⇓P	**P**	**06 37 35.3**	**-2.3**
SNY				AMB	AMB		
	comp=Z,11nm,0.5s,mb5.1						
CTA	**Charters Tower**	**49.15**	**115**	*e*P	**P**	**06 37 39.3**	**-1.0**
	comp=Z,13nm,0.9s,mb5.0						
CTA	**Charters Tower**	**49.15**	**115**	P	**P**	**06 37 39.5**	**-0.8**
	comp=Z,17nm,0.9s,mb5.1,baz=291,slow=9.1,SNR=20						
CTA	**Charters Tower**	**49.15**	**115**	*e*P	**P**	**06 37 39.3**	**-1.0**
CTA				pmax	pmax		
	comp=Z,13nm,0.9s						
CTAO	**Charters Tower**	**49.15**	**115**	*e*P	**P**	**06 37 39.4**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
CTAO	**Charters Tower**	**49.15**	**115**	*e*P	**P**	**06 37 39.4**	**-0.9**
	comp=Z,20nm,0.9s,mb5.2						
UCH	**Uchtor**	**49.46**	**336**	P	**P**	**06 37 43.5**	**+1.3**
	SNR=7.0						
UCH	**Uchtor**	**49.46**	**336**	*e*P	**P**	**06 37 43.2**	**+1.0**
	comp=Z,9.8nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**49.60**	**131**	*e*P	**P**	**06 37 44.1**	**+0.6**
	comp=Z,20nm,0.8s,mb5.2						
STKA				*e*		06 37 52.2	
STKA	**Stephens Creek**	**49.60**	**131**	P	**P**	**06 37 44.5**	**+1.0**
	comp=Z,25nm,0.7s,mb5.3,baz=308,slow=7.9,SNR=30						
TKM2	**Tokmak 2**	**49.61**	**337**	*e*P	**P**	**06 37 44.0**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.4						
TKM2	**Tokmak 2**	**49.61**	**337**	P	**P**	**06 37 44.2**	**+0.9**
	SNR=26						
TKM2	**Tokmak 2**	**49.61**	**337**	*e*P	**P**	**06 37 44.0**	**+0.7**
	comp=Z,32nm,0.8s,mb5.4						
KBK	**Karagaybulak**	**49.64**	**336**	P	**P**	**06 37 44.9**	**+1.3**
	SNR=9.3						
AML	**Almayashu**	**49.72**	**335**	P	**P**	**06 37 45.2**	**+1.0**
	SNR=9.0						
AAK	**Ala-Archa**	**49.81**	**336**	P	**P**	**06 37 46.0**	**+1.1**
	SNR=5.4						
FRU	**Bishkek**	**49.92**	**336**	*e*P	**P**	**06 37 45.0**	**-0.7**
CHMS	**Chumysh**	**50.01**	**336**	P	**P**	**06 37 46.8**	**+0.4**
	SNR=8.1						
SONM	**Songino Array**	**50.03**	**6**	P	**P**	**06 37 46.6**	**+0.1**
	comp=Z,33nm,0.8s,mb5.4,baz=188,slow=8.5,SNR=157						
SONM				PcP	PcP	06 39 05.9	-0.3
	comp=Z,5.1nm,0.7s,baz=186,slow=4.5,SNR=4.4						
EKS2	**Erkin-Say**	**50.12**	**335**	P	**P**	**06 37 48.0**	**+0.7**
	SNR=26						
EKS2	**Erkin-Say**	**50.12**	**335**	*e*P	**P**	**06 37 48.2**	**+0.9**
	comp=Z,32nm,0.8s,mb5.4						
ULN	**Ulaanbaatar**	**50.14**	**7**	*e*P	**P**	**06 37 47.5**	**+0.2**
ULN				*e**PP	pP	06 37 56.2	+3.3
ULN				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.3						
ULN	**Ulaanbaatar**	**50.14**	**7**	*e*P	**P**	**06 37 47.5**	**+0.2**
	comp

RST	**Umm Al-Ruwaisa**	**59.02**	**306**	*e*P		**P**	**06 38 51.0**	**-1.2**
	baz=306							
RST				AMb		AMB	06 38 52.4	
	comp=Z,32nm,0.8s,mb5.4,baz=306							
BRVK	**Borovoye**	**60.06**	**340**⇓	*e*P		**P**	**06 38 57.6**	**-1.2**
BOD	**Bodaibo**	**60.80**	**9**	*e*P		**P**	**06 39 02.8**	**-1.0**
BOD				pmax	pmax			
	comp=Z,29nm,1.0s,mb5.4							
YSS	**Yuzh-Sakhalins**	**61.84**	**32**	*i* P		**P**	**06 39 10.0**	**-1.1**
YSS				*e*			06 39 21.0	
YSS				pmax	pmax			
	comp=Z,80nm,0.9s,mb5.8							
YSS				MLR	MLR			
	comp=Z,2μm,18.0s,MS5.2							
YSS	**Yuzh-Sakhalins**	**61.84**	**32**	*e*P		**P**	**06 39 10.7**	**-0.4**
	comp=Z,46nm,0.8s,mb5.7							
KMBO	**Kilima Mbogo**	**62.10**	**270**	P		**P**	**06 39 15.1**	**+1.5**
	comp=Z,4.3nm,0.8s,mb4.6,baz=60,slow=9.9,SNR=7.9							
KMBO	**Kilima Mbogo**	**62.10**	**270**	*e*P		**P**	**06 39 13.6**	**+0.1**
KMBO				*e*			06 39 24.3	
KMBO				pmax	pmax			
	comp=Z,1.0nm,0.7s							
KMBO	**Kilima Mbogo**	**62.10**	**270**	*e*P		**P**	**06 39 13.6**	**+0.1**
	comp=Z,1.3nm,0.7s,mb4.2							
KMBO				*e*			06 39 24.3	
GNI	**Garni**	**65.11**	**316**⇑	*e*P		**P**	**06 39 33.3**	**+0.4**
GNI				pmax	pmax			
	comp=Z,13nm,1.1s							
GNI	**Garni**	**65.11**	**316**⇑	*e*P		**P**	**06 39 33.4**	**+0.5**
SVE	**Sverdlovsk**	**66.47**	**338**	*e*P		**P**	**06 39 41.3**	**0.0**
SVE				pmax	pmax			
	comp=Z,38nm,0.9s,mb5.4							
ARU	**Arti**	**66.98**	**337**	*c i*P		**P**	**06 39 43.5**	**-1.1**
ARU				*e*S		S	06 48 33.9	-3.1
ARU				pmax	pmax			
	comp=Z,30nm,1.2s,mb5.2							
ARU	**Arti**	**66.98**	**337**⇓	*i*P		**P**	**06 39 43.4**	**-1.2**
YAK	**Yakutsk**	**67.93**	**15**⇑	*e*P		**P**	**06 39 48.9**	**-1.5**
YAK				pmax	pmax			
	comp=Z,92nm,1.0s,mb5.8							
YAK	**Yakutsk**	**67.93**	**15**⇑	*e*P		**P**	**06 39 48.0**	**-2.4**
KIV	**Kislovodsk**	**68.15**	**319**⇓	*e*P		**P**	**06 39 52.2**	**0.0**
KIV				*e*			06 40 12.8	
KIV				pmax	pmax			
	comp=Z,32nm,1.4s,mb5.2							
KIV				MLR	MLR			
	comp=Z,700nm,16.0s,MS5.0							
KIV	**Kislovodsk**	**68.15**	**319**⇓	*e*P		**P**	**06 39 52.4**	**+0.2**
MALT	**Malatya**	**68.89**	**313**	*e*P		**P**	**06 39 55.6**	**-1.4**
MALT				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.5							
MALT	**Malatya**	**68.89**	**313**⇑	*i*P		**P**	**06 39 55.9**	**-1.1**
MALT	**Malatya**	**68.89**	**313**	*e*P		**P**	**06 39 55.6**	**-1.4**
	comp=Z,6.4nm,0.9s,mb4.5							
SOC	**Sochi**	**69.95**	**318**	*e*P		**P**	**06 40 01.7**	**-1.7**
SOC				pmax	pmax			
	comp=Z,17nm,0.6s,mb5.2							
PETK	**Petropavlovsk-**	**73.24**	**32**	P		**P**	**06 40 22.1**	**-0.9**
	comp=Z,6.0nm,0.7s,mb4.6,baz=198,slow=3.8,SNR=9.5							
VSR	**Storozhevoye**	**73.44**	**325**	*e*P		**P**	**06 40 23.2**	**-1.0**
VSR				pmax	pmax			
	comp=N,7.0nm,0.7s							
VSR				pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.8							
VSR				pmax	pmax			
	comp=E,20nm,0.8s							
PET	**Petropavlovsk**	**73.72**	**33**⇓	*e*P		**P**	**06 40 25.1**	**-0.7**
PET				pmax	pmax			
	comp=Z,45nm,1.7s,mb5.1							
BOSA	**Boshof**	**75.10**	**241**	P		**P**	**06 40 35.4**	**+1.0**
	comp=Z,1.8nm,0.6s,mb4.2,baz=316,slow=14,SNR=4.8							
TIXI	**Tiksi**	**75.98**	**9**	*i* P		**P**	**06 40 36.3**	**-2.3**
TIXI				pmax	pmax			
	comp=Z,16nm,1.1s,mb4.9							
TIXI	**Tiksi**	**75.98**	**9**	*i* P		**P**	**06 40 36.4**	**-2.2**
OBN	**Obninsk**	**76.49**	**328**⇓	*e*P		**P**	**06 40 41.5**	**-0.3**
OBN				*e*			06 40 52.4	
OBN				pmax	pmax			
	comp=Z,49nm,1.4s,mb5.2							
OBN	**Obninsk**	**76.49**	**328**⇓	*e*P		**P**	**06 40 41.6**	**-0.2**
AKSAG	**Malin Array Be**	**79.12**	**322**	P		**P**	**06 40 55.3**	**-1.2**
	comp=Z,3.3nm,0.6s,mb4.4,baz=87,slow=4.2,SNR=10							
AKSAG	**Malin Array Be**	**79.12**	**322**	*i* P		**P**	**06 40 54.2**	**-2.4**
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.6s							
VRI	**Vrincioaia**	**79.44**	**317**⇓	*i*P		**P**	**06 40 59.0**	**+0.6**
VRI	**Vrincioaia**	**79.44**	**317**⇓	P		**P**	**06 40 59.0**	**+0.6**
MLR	**Muntele Rosu**	**79.89**	**317**⇑	*i*P		**P**	**06 41 01.9**	**+1.0**
MLR	**Muntele Rosu**	**79.89**	**317**	⇑P		**P**	**06 41 01.9**	**+1.0**
BURAR	**Bucovina Array**	**80.87**	**319**⇓	*i*P		**P**	**06 41 06.9**	**+0.8**
BURAR	**Bucovina Array**	**80.87**	**319**	⇓P		**P**	**06 41 06.9**	**+0.9**
BUR08	**Bucovina Ar. S**	**80.88**	**319**	*e*P		**P**	**06 41 06.9**	**+0.8**
JOF	**Joensuu**	**81.97**	**335**	*e*p		**P**	**06 41 10.4**	**-1.2**
	comp=Z,12nm,0.8s,mb4.9							
JOF	**Joensuu**	**81.97**	**335**	*e*P		**P**	**06 41 10.4**	**-1.2**
JOF				pmax	pmax			
	comp=Z,12nm,0.8s,mb4.9							
DRGR		**82.36**	**318**⇓	*i*P		**P**	**06 41 14.6**	**+0.6**
DRGR		**82.36**	**318**	⇓P		**P**	**06 41 14.6**	**+0.6**
BZS	**Buzias**	**82.89**	**316**⇑	*i*P		**P**	**06 41 16.7**	**-0.1**
BZS	**Buzias**	**82.89**	**316**	⇑P		**P**	**06 41 16.7**	**0.0**
KOLS	**Kolonicke sedl**	**83.06**	**320**	*e*P		**P**	**06 41 18.6**	**+1.0**
CRVS	**Cervenica-Dubn**	**83.59**	**320**	*e*P		**P**	**06 41 20.1**	**-0.2**
STHS	**Stebnicka Huta**	**83.82**	**320**	*e*P		**P**	**06 41 21.8**	**+0.3**
STHS				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.8							
STHS	**Stebnicka Huta**	**83.82**	**320**	*e*P		**P**	**06 41 21.8**	**+0.3**
	comp=Z,6.9nm,0.8s,mb4.8							
STHS				*e*		pP	06 41 25.8	-1.6
KAF	**Kangasniemi**	**83.92**	**333**	*e*p		**P**	**06 41 20.7**	**-1.0**
	comp=Z,22nm,0.8s,mb5.3							
KAF	**Kangasniemi**	**83.92**	**333**	*e*P		**P**	**06 41 20.7**	**-1.0**
KAF				pmax	pmax			
	comp=Z,22nm,0.8s,mb5.3							
KECS	**Kecovo**	**84.15**	**319**	*e*P		**P**	**06 41 22.9**	**-0.3**
KECS				*e*			06 41 31.8	
KECS				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.5							
KECS	**Kecovo**	**84.15**	**319**	*e*P		**P**	**06 41 22.9**	**-0.3**
	comp=Z,2.7nm,0.7s,mb4.5							
KECS				*e*			06 41 31.8	
PSZ	**Piszkesteto**	**84.45**	**318**⇓	*i*P		**P**	**06 41 25.1**	**+0.4**
PKSM	**Moragy**	**85.04**	**317**⇑	*i*P		**P**	**06 41 27.6**	**-0.1**
PKSM	**Moragy**	**85.04**	**317**	⇑P		**P**	**06 41 27.6**	**-0.1**
VYHS	**Vyhne**	**85.23**	**319**	*e*P		**P**	**06 41 28.3**	**-0.3**
MODS	**Modra-Piesok**	**86.25**	**319**	*e*P		**P**	**06 41 31.7**	**-2.0**
MODS				pmax	pmax			
	comp=Z,7.0nm,1.4s,mb4.7							
MODS	**Modra-Piesok**	**86.25**	**319**	*e*P		**P**	**06 41 31.7**	**-2.0**
	comp=Z,7.0nm,1.4s,mb4.7							
ARCES	**ARCESS Array B**	**86.28**	**340**	P		**P**	**06 41 31.7**	**-1.7**
	comp=Z,12nm,0.8s,mb5.2,baz=104,slow=5.1,SNR=18							
SOKA	**Soboth**	**87.57**	**317**⇑	*i*P		**P**	**06 41 40.7**	**+0.6**
GEC2	**GERESS Array S**	**88.66**	**319**	*e*P		**P**	**06 41 45.6**	**+0.3**
GEC2				pmax	pmax			
	comp=Z,18nm,1.5s,mb5.2							
GEC2	**GERESS Array S**	**88.66**	**319**	*e*P		**P**	**06 41 45.6**	**+0.3**
	comp=Z,18nm,1.5s,mb5.2							
GERES	**GERESS Array B**	**88.66**	**319**	P		**P**	**06 41 45.9**	**+0.6**
	comp=Z,2.2nm,0.7s,mb4.6,baz=95,slow=4.4,SNR=8.7							
BRG	**Berggiesshubel**	**88.67**	**321**	*e*P		**P**	**06 41 45.7**	**+0.4**
BRG				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.8							
BRG	**Berggiesshubel**	**88.67**	**321**	*e*P		**P**	**06 41 45.8**	**+0.5**
	comp=Z,8.0nm,0.9s,mb5.0							
BRG	**Berggiesshubel**	**88.67**	**321**	*e*P		**P**	**06 41 45.7**	**+0.4**
	comp=Z,8.3nm,0.9s,mb5.0							
WET	**Wettzell**	**89.22**	**319**	*e*P		**P**	**06 41 48.6**	**+0.7**
WET				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb5.0							
WET	**Wettzell**	**89.22**	**319**	*e*P		**P**	**06 41 48.6**	**+0.7**
	comp=Z,7.0nm,1.0s,mb5.0							
CLL	**Collm**	**89.29**	**321**	*e*P		**P**	**06 41 48.0**	**-0.2**
CLL				*e*PP		PP	06 45 20.0	+1.1
TANN	**Tannenbergstha**	**89.57**	**320**	*e*P		**P**	**06 41 50.0**	**+0.5**
	comp=Z,6.0nm,1.0s,mb4.9							
ROTZ	**Rotzenmuhle**	**89.70**	**320**	*e*P		**P**	**06 41 50.8**	**+0.7**
	comp=Z,4.0nm,0.9s,mb4.8							
MANZ	**Manzenberg**	**89.77**	**320**	*e*P		**P**	**06 41 51.3**	**+0.8**
	comp=Z,13nm,1.1s,mb5.2							
WTTA	**Wattenberg**	**89.93**	**317**⇑	*i*P		**P**	**06 41 51.1**	**-0.2**
	comp=Z,12nm,1.1s,mb5.2							
MOX	**Moxa**	**90.12**	**320**	*e*P		**P**	**06 41 52.6**	**+0.5**
	comp=Z,10.0nm,1.4s,mb5.0							
GRA1	**Grafenberg Arr**	**90.33**	**320**	*e*P		**P**	**06 41 55.7**	**+2.6**
	comp=Z,7.0nm,0.7s,mb5.1							
GRF	**Grafenberg Arr**	**90.33**	**320**	*e*P		**P**	**06 41 55.7**	**+2.6**
GRF				pmax	pmax			
	comp=Z,7.0nm,0.7s,mb5.1							
GRF				pmax	pmax			
	comp=Z,20nm,1.1s,mb5.4							
GRF	**Grafenberg Arr**	**90.33**	**320**	*e*P		**P**	**06 41 55.7**	**+2.6**
GRF				pmax	pmax			
	comp=Z,7.0nm,0.7s,mb5.1							
GRF	**Grafenberg Arr**	**90.33**	**320**	*e*P		**P**	**06 41 55.7**	**+2.6**
	comp=Z,7.0nm,0.7s,mb5.1							
FETA	**Feichten**	**90.54**	**317**⇑	*i*P		**P**	**06 41 54.4**	**+0.3**
	comp=Z,5.6nm,1.0s,mb4.8							
FETA	**Feichten**	**90.54**	**317**⇑	*i*PcP		**P**	**06 41 54.4**	**+0.3**
	comp=Z,5.6nm,1.0s,mb4.8							
NOA	**NORSAR Array B**	**90.86**	**331**	P		**P**	**06 41 55.1**	**-0.2**
	comp=Z,1.4nm,0.8s,mb4.3,baz=94,slow=4.7,SNR=3.4							
CLZ	**Clausthal**	**90.96**	**322**	*e*P		**P**	**06 41 56.6**	**+0.6**
CLZ				pmax	pmax			
	comp=Z,30nm,1.9s,mb5.3							
CLZ	**Clausthal**	**90.96**	**322**	*e*P		**P**	**06 41 56.6**	**+0.6**
	comp=Z,30nm,1.9s,mb5.3							
DAVA	**Damuels**	**91.13**	**317**⇑	*i*P		**P**	**06 41 57.6**	**+0.7**
	comp=Z,12nm,0.7s,mb5.3							
DAVA	**Damuels**	**91.13**	**317**⇑	*i*PcP		**P**	**06 41 57.6**	**+0.7**
	comp=Z,12nm,0.7s,mb5.3							
KEST	**Kesra**	**91.19**	**306**	P		**P**	**06 41 59.0**	**+1.6**
	comp=Z,4.4nm,0.8s,mb4.8,baz=328,slow=2.9,SNR=14							
BFO	**Black Forest**	**92.19**	**318**	*e*P		**P**	**06 42 01.0**	**-0.8**
BFO				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.8							
BFO	**Black Forest**	**92.19**	**318**	*e*P		**P**	**06 42 01.0**	**-0.8**
	comp=Z,4.0nm,0.8s,mb4.8							
FFC	**Flin Flon**	**124.65**	**15**	*e*PKIKP	PKPdf		06 47 52.3	+0.8
CPUP	**Villa Florida**	**143.93**	**217**	PKP	PKPdf		06 48 26.6	-1.6
	comp=Z,5.1nm,0.7s,baz=124,slow=4.4,SNR=5.1							
URVA	**University of**	**144.51**	**356**	*e*PKPdf	PKPdf		06 48 26.3	-2.6
ELN	**Prospectdale**	**144.97**	**0**	*e*PKPdf	PKPdf		06 48 27.1	-2.7
GLAT	**Glass**	**145.00**	**12**	*e*PKPab	PKPdf		06 48 28.5	-1.3
TXAR	**Lajitas Array**	**145.10**	**37**	PKP	PKPdf		06 48 29.9	-0.3
	comp=Z,24nm,0.7s,baz=282,slow=1.2,SNR=58							
TZTN	**Tazewell**	**145.55**	**4**	*e*PKPbc	PKPbc		06 48 29.9	-0.9
UALR	**University of**	**145.64**	**17**	*e*PKPbc	PKPbc		06 48 30.3	-0.9
JCT	**Junction City**	**146.37**	**31**	*e*PKP2	PKPab		06 48 33.2	-1.1
TKL	**Tuckaleechee C**	**146.41**	**5**	PKPbc	PKPbc		06 48 32.6	-0.9
	comp=Z,8.6nm,0.7s,baz=154,slow=4.1,SNR=9.4							
OXF	**Oxford**	**146.66**	**13**	*e*PKP2	PKPab		06 48 33.1	-2.2
GOGA	**Godfrey**	**148.67**	**5**	*e*PKPbc	PKPbc		06 48 39.1	-0.7
GOGA				*e*PKPab	PKPab		06 48 42.5	-0.8

KRSC 13 06:32:17.9±0.1, 5330N×16061E, h41km±41km, ML3.6,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.41**	**240**	*e*P		Pn	06 32 28.2	+0.8
SPN				*i* S		Sn	06 32 35.4	+1.3
NLC	**Nalytchevo**	**0.77**	**261**	*e*P		Pn	06 32 33.0	+0.7
NLC				*i* S		Sn	06 32 43.5	+0.8
KII	**Karymskiy**	**1.01**	**317**	*e*P		Pn	06 32 35.7	+0.1
KII				*i* S		Sn	06 32 48.8	+0.3
AVH	**Avacha**	**1.12**	**269**	*e*P		Pn	06 32 38.7	+1.6
AVH				*i* S		Sn	06 32 53.6	+2.3
PET	**Petropavlovsk**	**1.21**	**258**	*e*P		Pn	06 32 39.4	+1.1
PET				*i* S		Sn	06 32 54.3	+0.9
MKZ	**Mys Kozlova**	**1.42**	**27**	*e*P		Pn	06 32 41.2	0.0
MKZ				*i* S		Sn	06 32 58.4	-0.3
RUS	**Russkaya**	**1.54**	**236**	*e*P		Pn	06 32 43.8	+1.0
RUS				*i* S		Sn	06 33 02.1	+0.6
GNL	**Ganaly**	**1.64**	**285**	*e*P		Pn	06 32 46.0	+1.8
GNL				*i* S		Sn	06 33 07.2	+3.1
TUMR	**Tumrok**	**2.01**	**352**	*e*P		Pn	06 32 50.9	+1.7
TUMR				*i* S		Sn	06 33 15.8	+2.8
KMNR	**Kamenistaya**	**2.47**	**355**	*e*P		Pn	06 32 57.9	+2.3
KMNR				*i* S		Sn	06 33 26.9	+2.4
BZMR	**Bezymyannaya**	**2.64**	**359**	*e*P		Pn	06 33 00.7	+2.8
BZMR				*i* S		Sn	06 33 30.7	+2.0
KPT	**Kopyto**	**2.68**	**355**	*e*P		Pn	06 33 01.0	+2.5
KPT				*i* S		Sn	06 33 33.1	+3.4
ZLN	**Zelenaya**	**2.73**	**2**	*e*P		Pn	06 33 01.7	+2.6
ZLN				*i* S		Sn	06 33 33.7	+3.0
KOZ	**Kozyrevsk**	**2.80**	**351**	*e*P		Pn	06 33 00.9	+0.8
KRSR	**Krestovskiy**	**2.92**	**360**	*e*P		Pn	06 33 04.4	+2.6
KRSR				*i* S		Sn	06 33 38.3	+2.7
SRDR	**Sredinnyy**	**3.07**	**351**	*e*P		Pn	06 33 06.8	+3.0
SRDR				*i* S		Sn	06 33 41.9	+2.7
KBTR	**Krutoberegovo**	**3.18**	**23**	*e*P		Pn	06 33 06.9	+1.5
KBTR				*i* S		Sn	06 33 43.9	+1.9

BJI ***13*** *06:32:42.9, 248S×9945E, h10km, mB5.4, mb4.9, Ms5.1, Msz4.9*
IDC ***13*** *06:32:47.4±0.6, 192S×9950E, h0km, mb4.8/19, mb1 4.9/19, mb1mx4.8/21, mbtmp4.8/19, Error ellipse: s-maj=18.3km s-min=14.5km az=59.0*
ISCJB ***13*** *06:32:49.2±0.3, 202S±005×9943E±004, h25km, mb5.1/65, MS5.0/6, Error ellipse: s-maj=6.8km s-min=5.8km az=26.1*
DJA ***13*** *06:32:50, 199S×99.29E, h20km, MLv5.4/7*
MOS ***13*** *06:32:51.6±1.0, 184S×9959E, h40km, mb5.3/19, Error ellipse: s-maj=13.7km s-min=6.9km az=109.3*
NEIC ***13*** *06:32:52.5±0.2, 194S×9951E, mb5.2/20, Error ellipse: s-maj=8.1km s-min=5.3km az=224.0*

ISC 13 06:32:51.4±0.3, 204S±005×9943E±004, h26km,
h26km±2.5km: pP-P, n151, σ1º04/148, mb5.1/65, MS5.0/6,
17C-20D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KGM	**Kluang**	**5.60**	**44**	⇓P		**Pn**	**06 34 15.4**	**+2.4**
FRIM	**Kepong**	**5.69**	**23**	⇑P		**Pn**	**06 34 15.1**	**+0.9**
MYKOM	**Kota Tinggi**	**5.83**	**49**	⇑P		**Pn**	**06 34 17.7**	**+1.5**
IPM	**Ipoh**	**6.67**	**14**	⇑P		**Pn**	**06 34 29.2**	**+1.5**
KTGM	**Kuala Trenggan**	**8.21**	**27**	⇑P		**Pn**	**06 34 50.7**	**+1.9**
SBUM	**Sibu**	**13.55**	**71**	⇓P		**Pn**	**06 36 05.6**	**+3.6**
BTM	**Bintulu**	**14.61**	**69**	⇓P		**Pn**	**06 36 24.2**	**+7.7**
KKM	**Kota Kinabalu**	**18.59**	**64**	⇑P		**Pn**	**06 37 07.4**	**+0.4**
KKM	**Kota Kinabalu**	**18.59**	**64**	*e*P		**Pn**	**06 37 07.0**	**-0.1**
SDKM	**Sandakan**	**19.32**	**67**	⇑P		**Pn**	**06 37 11.4**	**-4.5**
TSM	**Tawau**	**19.48**	**71**	⇓P		**Pn**	**06 37 17.5**	**-0.3**
KDM	**Kudat**	**19.52**	**63**	⇓P		**Pn**	**06 37 18.8**	**+0.5**
MYLDM	**Lahad Datu**	**20.36**	**69**	⇑P		**P**	**06 37 27.7**	**+1.6**
CMAR	**Chiang Mai Arr**	**20.38**	**359**	P		**P**	**06 37 25.3**	**-0.9**
	12nm,0.6s,baz=186,slow=10,SNR=22							
KAPI	**Kappang**	**20.50**	**99**	P		**P**	**06 37 26.6**	**-1.0**
	385nm,0.9s,SNR=7.6							
KAPI	**Kappang**	**20.50**	**99**	P		**P**	**06 37 27.5**	**-0.1**
	67nm,1.0s,baz=277,slow=11,SNR=12							
KAPI	**Kappang**	**20.50**	**99**	*e*P		**P**	**06 37 26.0**	**-1.6**
	50nm,0.8s							
CHTO	**Chiang Mai**	**20.73**	**359**	*e*P		**P**	**06 37 28.9**	**-1.1**
CHTO				pmax	pmax			
	comp=Z,23nm,0.8s							
CHTO	**Chiang Mai**	**20.73**	**359**	*e*P		**P**	**06 37 28.9**	**-1.1**
	comp=Z,23nm,0.8s							
QIZ	**Qiongzhong**	**23.31**	**26**	P		**P**	**06 37 56.1**	**-1.5**
QIZ	**Qiongzhong**	**23.31**	**26**	*e*P		**P**	**06 37 55.9**	**-1.6**
	comp=Z,88nm,1.2s,mb5.1							
KMI	**Kunming**	**27.20**	**7**	P		**P**	**06 38 33.8**	**+0.8**
KMI				AP	pP		06 38 38.5	-2.3
KMI				XP	sP		06 38 40.3	-3.7
KMI				PP			06 39 23.5	
KMI				S		**S**	**06 43 15.3**	**+5.0**
KMI				AMB	AMB			
	comp=Z,14nm,0.6s,mb4.7							
KMI				LR	LR			
	comp=N,2μm,17.6s,MS4.8							
KMI				LR	LR			
	comp=E,2μm,20.8s,MS4.8							
KMI				LR	LR			
	comp=Z,3μm,20.8s,MS4.8							
FITZ	**Fitzroy Crossi**	**30.26**	**124**	*e*P		**P**	**06 39 00.0**	**-0.4**
	comp=Z,14nm,0.9s,mb4.7							
FITZ				*e*pP		pP	06 39 10.6	+2.4
ODAN	**Odare**	**30.99**	**339**	*e*P		**P**	**06 39 07.1**	**+0.4**
	comp=Z,63nm,0.7s,mb5.5							
TAPN	**Taplejung**	**31.33**	**340**	*e*P		**P**	**06 39 10.6**	**+0.9**
	comp=Z,138nm,1.0s,mb5.8							
RAMN	**Ramite**	**31.37**	**338**	*e*P		**P**	**06 39 10.8**	**+0.8**
	comp=Z,65nm,0.8s,mb5.5							
JIRN	**Jiri**	**32.16**	**338**	*e*P		**P**	**06 39 17.6**	**+0.6**
	comp=Z,111nm,0.8s,mb5.8							
GUN	**Gumba**	**32.51**	**337**	*e*P		**P**	**06 39 20.3**	**+0.3**
	comp=Z,101nm,0.7s,mb5.9							
LSA	**Lhasa**	**32.54**	**347**	P		**P**	**06 39 21.0**	**+0.7**
LSA	**Lhasa**	**32.54**	**347**	*e*P		**P**	**06 39 21.4**	**+1.1**
LSA				pmax	pmax			
	comp=Z,18nm,0.6s,mb5.2							
LSA	**Lhasa**	**32.54**	**347**	*e*P		**P**	**06 39 21.4**	**+1.1**
	comp=Z,18nm,0.6s,mb5.2							
DMN	**Daman**	**32.55**	**336**	*e*P		**P**	**06 39 20.4**	**0.0**
	comp=Z,31nm,0.9s,mb5.2							
KKN	**Kakani**	**32.63**	**336**	*e*P		**P**	**06 39 21.5**	**+0.3**
	comp=Z,65nm,0.8s,mb5.6							
CD2	**Chengdu**	**33.03**	**7**	*e*P		**P**	**06 39 23.6**	**-0.9**
CD2				AP	pP		06 39 28.5	-3.9
CD2				XP	sP		06 39 31.5	-4.2
CD2				PP	PP		06 40 34.8	-4.8
CD2				PCP	PcP		06 42 06.3	-1.7
CD2				S	**S**		**06 44 41.9**	**+0.2**
CD2				PCS	PcS		06 45 50.8	-2.7
CD2				SS	SS		06 46 43.3	-21
CD2				SCS	ScS		06 49 47.5	-3.5
CD2				AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.9							
GKN	**Gorkha**	**33.09**	**336**	*e*P		**P**	**06 39 25.0**	**-0.1**
	comp=Z,53nm,1.0s,mb5.4							
KOLN	**Koldanda**	**33.32**	**334**	*e*P		**P**	**06 39 27.7**	**+0.5**
	comp=Z,72nm,0.7s,mb5.7							
DANN	**Dangsing**	**33.76**	**335**	*e*P		**P**	**06 39 31.0**	**0.0**
	comp=Z,56nm,0.9s,mb5.5							
WHN	**Wuhan**	**35.39**	**23**	P		**P**	**06 39 47.6**	**+2.5**
XAN	**Xi'an**	**36.99**	**13**	P		**P**	**06 39 56.5**	**-2.1**
XAN				AP	pP		06 40 02.8	-3.8
XAN				XP	sP		06 40 06.0	-3.8
XAN				AMB	AMB			
	comp=Z,21nm,1.2s,mb4.8							
LZH	**Lanzhou**	**38.16**	**6**	⇓P		**P**	**06 40 07.0**	**-1.5**
LZH				AP	pP		06 40 10.8	-5.7
LZH				XP	sP		06 40 14.3	-5.4
LZH				PP	PP		06 41 39.3	+3.2
LZH				*e*S	**S**		**06 46 01.1**	**+0.9**
LZH				SS	SS		06 48 40.6	-7.2
LZH				AMB	AMB			
	comp=Z,35nm,1.2s,mb5.0							
LZH				AMB	AMB			
	comp=Z,153nm,5.1s							
LZH				LR	LR			
	comp=N,1μm,16.0s							
LZH				LR	LR			
	comp=Z,2μm,18.2s,MS4.9							
WRA	**Warramunga Arr**	**38.47**	**120**	P		**P**	**06 40 10.7**	**-0.7**
	comp=Z,22nm,0.8s,mb5.0,baz=296,slow=9.6,SNR=38							
WRAB	**Tennant Creek**	**38.47**	**120**	P		**P**	**06 40 11.0**	**-0.4**
	comp=Z,242nm,0.9s,mb5.9,SNR=12							
WRAB	**Tennant Creek**	**38.47**	**120**	*e*P		**P**	**06 40 11.0**	**-0.5**
WRAB				*e*pP		pP	06 40 20.4	+1.0
WB2	**Warramunga Arr**	**38.48**	**120**	*e*P		**P**	**06 40 10.9**	**-0.6**
GTA	**Gaotai**	**41.25**	**0**	⇑P		**P**	**06 40 33.8**	**-0.4**
GTA				AP	pP		06 40 38.3	-3.9
GTA				XP	sP		06 40 40.8	-4.6
GTA				S	**S**		**06 46 47.4**	**+0.8**
GTA				AMB	AMB			
	comp=Z,23nm,1.5s,mb4.6							
GTA				LR	LR			
	comp=N,1μm,17.4s,MS4.9							
GTA				LR	LR			
	comp=E,920nm,18.6s,MS4.9							
GTA				LR	LR			
	comp=Z,2μm,18.3s,MS5.0							

TLY					pmax	pmax			
	comp=Z,23nm,0.9s,mb5.1								
TLY	**Talaya**	**53.64**		3⇑	*e*P	**P**	**06 42 10.5**	**+0.1**	
MDJ	**Mudanjiang**	**53.68**	**26**		P	**P**	**06 42 10.8**	**0.0**	
MDJ					XP	sP	06 42 15.0	-7.2	
MDJ					S	**S**	**06 49 48.3**	**+5.2**	
MDJ					AMB	AMB			
	comp=Z,9.0nm,1.2s,mb4.6								
MDJ					LR	LR			
	comp=E,550nm,24.7s								
MDJ					LR	LR			
	comp=Z,1μm,25.1s,MS4.9								
OPO	**Ambohidratompo**	**53.72**	**248**		P	**P**	**06 42 13.3**	**+1.7**	
	comp=Z,1.3nm,0.3s,mb4.3,baz=44,slow=5.8,SNR=3.9								
KURK	**Kurchatov**	**55.49**	**344**		P	**P**	**06 42 23.9**	**+0.1**	
	comp=Z,294nm,0.9s,mb6.3,SNR=16								
KURK	**Kurchatov**	**55.49**	**344**	⇑	*e*P	**P**	**06 42 23.4**	**-0.4**	
KURK					pmax	pmax			
	comp=Z,43nm,0.9s,mb5.5								
KURK	**Kurchatov**	**55.49**	**344**		*e*P	**P**	**06 42 23.2**	**-0.6**	
ARMA	**Armidale**	**56.84**	**125**		*e*P	**P**	**06 42 36.5**	**+2.6**	
ZAA0	**Zalesovo Array**	**57.11**	**350**		*e*P	**P**	**06 42 34.8**	**-0.5**	
ZALV	**Zalesovo Beam**	**57.11**	**350**		P	**P**	**06 42 34.8**	**-0.5**	
	comp=Z,68nm,0.7s,mb5.8,baz=184,slow=5.5,SNR=60								
KLR	**Kul'dur**	**58.20**	**24**		*e*P	**P**	**06 42 38.1**	**-5.0**	
KLR					pmax	pmax			
	comp=E,48nm,1.4s								
KLR					pmax	pmax			
	comp=Z,110nm,1.4s,mb5.7								
NVS	**Novosibirsk**	**58.25**	**349**		*i* P	**P**	**06 42 41.8**	**-1.5**	
NVS					pmax	pmax			
	comp=Z,39nm,1.0s,mb5.4								
NVS					pmax	pmax			
	comp=N,35nm,1.1s								
NVS					pmax	pmax			
	comp=E,17nm,0.9s								
BRVK	**Borovoye**	**60.09**	**340**	⇑	*e*P	**P**	**06 42 54.9**	**-1.2**	
BOD	**Bodaibo**	**60.81**	**9**		*e*P	**P**	**06 43 00.1**	**-0.8**	
BOD					pmax	pmax			
	comp=Z,30nm,1.0s,mb5.4								
YSS	**Yuzh-Sakhalins**	**61.82**	**32**	⇓	*i* P	**P**	**06 43 07.1**	**-0.9**	
YSS					pmax	pmax			
	comp=Z,108nm,1.6s,mb5.7								
YSS	**Yuzh-Sakhalins**	**61.82**	**32**		*e*P	**P**	**06 43 07.5**	**-0.5**	
	comp=Z,35nm,0.8s,mb5.5								
YSS					*e*pP	pP	06 43 17.9	+1.6	
GNI	**Garni**	**65.16**	**316**	⇓	*e*P	**P**	**06 43 31.2**	**+1.0**	
GNI					pmax	pmax			
	comp=Z,19nm,1.7s								
GNI	**Garni**	**65.16**	**316**	⇓	*e*P	**P**	**06 43 31.3**	**+1.1**	
SVE	**Sverdlovsk**	**66.51**	**338**		*e*P	**P**	**06 43 37.7**	**-0.8**	
SVE					pmax	pmax			
	comp=Z,30nm,0.9s,mb5.3								
ARU	**Arti**	**67.02**	**337**		*c i*P	**P**	**06 43 40.6**	**-1.2**	
ARU					*e*		06 46 07.5		
ARU					*e*PPP		06 47 43.1		
ARU					*e*S	S	06 52 31.9	-1.8	
ARU					pmax	pmax			
	comp=Z,28nm,1.7s,mb5.0								
YAK	**Yakutsk**	**67.93**	**15**		*d i*P	**P**	**06 43 46.6**	**-0.9**	
YAK					pmax	pmax			
	comp=Z,93nm,1.3s,mb5.7								
YAK	**Yakutsk**	**67.93**	**15**		*i* P	**P**	**06 43 46.6**	**-0.9**	
KIV	**Kislovodsk**	**68.20**	**319**		*de*P	**P**	**06 43 50.3**	**+0.7**	
KIV					*e*		06 44 03.5		
KIV					*e*		06 44 08.5		
KIV					pmax	pmax			
	comp=Z,13nm,0.8s,mb5.0								
KIV	**Kislovodsk**	**68.20**	**319**	⇓	*e*P	**P**	**06 43 50.4**	**+0.8**	
MALT	**Malatya**	**68.94**	**313**	⇑	*i*P	**P**	**06 43 53.5**	**-0.8**	
SOC	**Sochi**	**70.00**	**318**		*e*P	**P**	**06 43 59.3**	**-1.5**	
SOC					pmax	pmax			
	comp=Z,25nm,0.9s,mb5.1								
SOC	**Sochi**	**70.00**	**318**		*i* P	**P**	**06 44 01.0**	**+0.2**	
MAW	**Mawson**	**70.10**	**194**		P	**P**	**06 44 02.3**	**+1.4**	
	comp=Z,2.2nm,0.8s,mb4.2,baz=315,slow=3.9,SNR=5.5								
PETK	**Petropavlovsk-**	**73.22**	**32**		P	**P**	**06 44 18.7**	**-1.3**	
	comp=Z,5.9nm,0.6s,mb4.7,baz=205,slow=2.2,SNR=15								
PETK	**Petropavlovsk-**	**73.22**	**32**		P	**P**	**06 44 18.7**	**-1.3**	
VSR	**Storozhevoye**	**73.48**	**325**		*e*P	**P**	**06 44 19.9**	**-1.6**	
VSR					pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.8								
VSR					pmax	pmax			
	comp=N,2.0nm,0.4s								
VSR					pmax	pmax			
	comp=E,10.0nm,0.8s								
PET	**Petropavlovsk**	**73.70**	**33**	⇓	*e*P	**P**	**06 44 22.7**	**-0.1**	
PET					pmax	pmax			
	comp=Z,40nm,1.4s,mb5.2								
SIM	**Simferopol'**	**74.25**	**318**		⇓P	**P**	**06 44 26.8**	**+0.7**	
SIM					*e*		06 44 43.0		
SIM					pmax	pmax			
	comp=Z,23nm,0.6s,mb5.3								
BOSA	**Boshof**	**75.14**	**241**		P	**P**	**06 44 32.3**	**+0.6**	
	comp=Z,1.6nm,0.6s,mb4.1,baz=121,slow=5.9,SNR=4.5								
OBN	**Obninsk**	**76.53**	**328**	⇓	*e*P	**P**	**06 44 39.2**	**+0.2**	
OBN					*e*	pP	06 44 46.9	-0.6	
OBN					pmax	pmax			
	comp=Z,49nm,1.4s,mb5.2								
AKASG	**Malin Array Be**	**79.17**	**322**		P	**P**	**06 44 53.0**	**-0.8**	
	comp=Z,3.4nm,0.7s,mb4.4,baz=86,slow=4.1,SNR=9.5								
AKASG	**Malin Array Be**	**79.17**	**322**		*i* P	**P**	**06 44 53.0**	**-0.8**	
AKASG					pmax	pmax			
	comp=Z,3.0nm,0.7s								
VRI	**Vrincioaia**	**79.49**	**317**	⇓	*i*P	**P**	**06 44 56.2**	**+0.5**	
VRI	**Vrincioaia**	**79.49**	**317**	⇓	P	**P**	**06 44 56.2**	**+0.5**	
MLR	**Muntele Rosu**	**79.94**	**317**	⇑	*i*P	**P**	**06 44 56.4**	**-1.7**	
BURAR	**Bucovina Array**	**80.91**	**319**	⇑	*i*P	**P**	**06 45 03.9**	**+0.6**	
BUR08	**Bucovina Ar. S**	**80.93**	**319**		*e*P	**P**	**06 45 03.8**	**+0.3**	
JOF	**Joensuu**	**82.01**	**335**		*e*p	**P**	**06 45 08.2**	**-0.6**	
DRGR		**82.41**	**318**	⇑	*i*P	**P**	**06 45 12.5**	**+1.3**	
DRGR		**82.41**	**318**	⇑	P	**P**	**06 45 12.5**	**+1.3**	
BZS	**Buzias**	**82.94**	**316**	⇓	*i*P	**P**	**06 45 14.2**	**+0.2**	
BZS	**Buzias**	**82.94**	**316**	⇓	P	**P**	**06 45 14.2**	**+0.1**	
CRVS	**Cervenica-Dubn**	**83.63**	**320**		*e*P	**P**	**06 45 17.7**	**+0.2**	
STHS	**Stebnicka Huta**	**83.87**	**320**		*i* P	**P**	**06 45 20.2**	**+1.5**	
STHS					pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.7								
STHS	**Stebnicka Huta**	**83.87**	**320**		*i* P	**P**	**06 45 20.2**	**+1.5**	
	comp=Z,4.1nm,0.7s,mb4.7								
KAF	**Kangasniemi**	**83.96**	**333**		*e*p	**P**	**06 45 18.3**	**-0.6**	
	comp=Z,22nm,0.8s,mb5.3								
KAF	**Kangasniemi**	**83.96**	**333**		*e*P	**P**	**06 45 18.3**	**-0.6**	
KAF					pmax	pmax			
	comp=Z,22nm,0.8s,mb5.3								
KECS	**Kecovo**	**84.20**	**319**		*e*P	**P**	**06 45 17.9**	**-2.5**	
KECS	**Kecovo**	**84.20**	**319**		*e*P	**P**	**06 45 17.9**	**-2.5**	
	comp=Z,2.2nm,0.6s,mb4.5								
VYHS	**Vyhne**	**85.28**	**319**		*e*P	**P**	**06 45 25.7**	**-0.2**	
MODS	**Modra-Piesok**	**86.30**	**319**		*e*P	**P**	**06 45 29.1**	**-1.8**	
MODS	**Modra-Piesok**	**86.30**	**319**		*e*P	**P**	**06 45 29.2**	**-1.7**	
ARCES	**ARCESS Array B**	**86.32**	**340**		P	**P**	**06 45 31.3**	**+0.7**	
	comp=Z,9.8nm,0.8s,mb5.1,baz=99,slow=6.3,SNR=15								
GERES	**GERESS Array B**	**88.70**	**319**		P	**P**	**06 45 42.5**	**0.0**	
	comp=Z,1.7nm,0.7s,mb4.5,baz=84,slow=4.2,SNR=6.0								
BRG	**Berggiesshubel**	**88.71**	**321**		*e*P	**P**	**06 45 43.1**	**+0.6**	
BRG					pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.5								
BRG	**Berggiesshubel**	**88.71**	**321**		*e*P	**P**	**06 45 43.1**	**+0.6**	
	comp=Z,3.7nm,0.9s,mb4.7								
CLL	**Collm**	**89.34**	**321**		*e*P	**P**	**06 45 46.0**	**+0.6**	
CLL					*e*pP	pP	06 45 54.0	0.0	
NOA	**NORSAR Array B**	**90.90**	**331**		P	**P**	**06 45 51.4**	**-1.1**	
	comp=Z,0.4nm,0.6s,mb3.9,baz=95,slow=5.0,SNR=3.5								
KEST	**Kesra**	**91.25**	**306**		P	**P**	**06 45 56.6**	**+1.9**	
	comp=Z,2.3nm,0.8s,mb4.8,baz=194,slow=2.2,SNR=6.7								
NVAR	**Mina Array Bea**	**129.99**	**39**		PKP	PKPdf	06 51 59.4	+0.2	
	comp=Z,1.1nm,0.7s,baz=299,slow=1.8,SNR=5.9								
PDAR	**Pinedale Array**	**131.89**	**29**		PKP	PKPdf	06 52 02.4	-0.2	
	comp=Z,0.6nm,0.6s,baz=153,slow=1.8,SNR=3.8								
CPUP	**Villa Florida**	**143.94**	**217**		PKP	PKPdf	06 52 23.8	-1.5	
	comp=Z,2.0nm,0.7s,baz=95,slow=0.6,SNR=5.2								
TXAR	**Lajitas Array**	**145.08**	**37**		PKP	PKPdf	06 52 26.9	-0.2	
	comp=Z,24nm,0.6s,baz=212,slow=1.2,SNR=136								
TXAR	**Lajitas Array**	**145.08**	**37**		PKP	PKPdf	06 52 26.9	-0.2	
MIAR	**Mount Ida**	**145.47**	**19**		*e*PKIKP	PKPdf	06 52 27.3	-0.3	
TZTN	**Tazewell**	**145.56**	**4**		*e*PKPdf	PKPdf	06 52 27.0	-0.8	
JCT	**Junction City**	**146.36**	**31**		*e*PKP2	PKPab	06 52 30.4	-0.9	
TKL	**Tuckaleechee C**	**146.42**	**5**		PKPbc	PKPbc	06 52 29.8	-0.7	
	comp=Z,7.7nm,0.6s,baz=119,slow=4.3,SNR=9.9								
OXF	**Oxford**	**146.66**	**13**		*e*PKP2	PKPab	06 52 30.9	-1.4	

MOS ***13*** *06:37:19.5±0.9, 1431N×6034W, h54km, mb5.1/37, Error ellipse: s-maj=7.9km s-min=4.8km az=52.0*

ISCJB ***13*** *06:37:20.7±0.1, 1426N×001×60.38W×002, h72km, mb4.9/113, Error ellipse: s-maj=2.2km s-min=2.0km az=159.7*

BJI ***13*** *06:37:20.7, 1420N×6040W, h71km, mB5.3, Ms5.5, Msz5.2*

TRN ***13*** *06:37:20.3, 1427N×6026W, h35km, MD4.9, M5.2(FDF)*

TRN Felt widely in St. VincentIII, IV , St. Lucia IV, Martinique IV.

LDG ***13*** *06:37:20.7, 1427N×6056W, h74km*

IDC ***13*** *06:37:21.9±0.3, 1429N×6039W, h69km±3km, mb4.5/23, mb1 4.7/26, mb1mx4.7/28, mbtmp4.6/26, Error ellipse: s-maj=9.4km s-min=6.8km az=75.0*

NEIC ***13*** *06:37:22.7±0.1, 1424N×6039W, mb5.0/62, MD4.9(TRN), Error ellipse: s-maj=2.7km s-min=2.4km az=141.0*

NEIC Felt [V] at Castries and [IV] at Gros Islet, Saint Lucia. Felt at Anse La Raye, Cap Estate, Choc, Soufriere and Vieux Fort. Also felt at Baie-Mahault, Guadeloupe; Kingstown, Saint Vincent and the Grenadines; Le Francois, Le Lorrain, Saint-Esprit and Saint-Joseph, Martinique.

SZGRF ***13*** *06:37:36.1, 1404N×6049W, h72km, mb5.3, Windward Islands*

ISC 13 06:37:23.0±0.1, 1424N±001×6041W±002, h74km, h74km±.6km:pP-P, n667, σ0966/649, mb4.9/113, 181C-173D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
					Op	ISC	h	m	s	ISC
SLW	**Petit Monier**	**0.56**	**247**	⇑	*i*P	**Pn**	**06**	**37**	**34.9**	**-1.8**
BIM	**Bigot**	**0.70**	**293**	⇑	*i*P	**Pn**	**06**	**37**	**36.9**	**-1.3**
SLB	**Belfond**	**0.74**	**236**	⇓	*i*P	**Pn**	**06**	**37**	**38.3**	**-0.3**
SLB	**Belfond**	**0.74**	**236**	⇓	*i*P	**Pn**	**06**	**37**	**38.3**	**-0.3**
FDF	**Fort de France**	**0.87**	**304**	⇑	*i*P	**Pn**	**06**	**37**	**38.8**	**-1.3**
FDF	**Fort de France**	**0.87**	**304**		P	**Pn**	**06**	**37**	**38.0**	**-2.1**
SFAN	**Fancy Village**	**1.13**	**221**	⇑	*i*P	**Pn**	**06**	**37**	**43.2**	**0.0**
SFAN					*e*S	**Sn**	**06**	**37**	**58.8**	**+0.4**
BHS	**Barnard House**	**1.17**	**217**	⇓	*i*P	**Pn**	**06**	**37**	**43.6**	**-0.2**
SSV	**Crater Summit**	**1.19**	**220**	⇓	*i*P	**Pn**	**06**	**37**	**43.9**	**-0.1**
SVV	**Soufriere Volc**	**1.21**	**221**		*e*	**Pn**	**06**	**37**	**38.3**	**-5.9**
SVV	**Soufriere Volc**	**1.21**	**221**		*e*P	**Pn**	**06**	**37**	**43.9**	**-0.4**
SVV	**Soufriere Volc**	**1.21**	**221**		*e*P	**Pn**	**06**	**37**	**43.9**	**-0.4**
SVB	**Belmont**	**1.26**	**221**		*e*P	**Pn**	**06**	**37**	**44.1**	**-0.9**
SVB					*e*S	**Sn**	**06**	**38**	**01.1**	**-0.4**
DSHT	**Scott's Head**	**1.34**	**316**	⇑	*i*P	**Pn**	**06**	**37**	**46.0**	**0.0**
DSHT					*e*S	**Sn**	**06**	**38**	**03.2**	**-0.2**
BBGH	**Gun Hill**	**1.37**	**143**		P	**Pn**	**06**	**37**	**45.0**	**-1.3**
DBCT	**Belle View Cho**	**1.37**	**319**	⇓	*i*P	**Pn**	**06**	**37**	**46.3**	**0.0**
DPMT	**Pointe Michel**	**1.38**	**317**	⇑	*i*P	**Pn**	**06**	**37**	**46.3**	**-0.2**
MDN	**Morne-Daniel**	**1.43**	**319**	⇑	*i*P	**Pn**	**06**	**37**	**47.3**	**+0.1**
MDN					*e*S	**Sn**	**06**	**38**	**06.2**	**+0.8**
BBSP	**Saint Philip**	**1.46**	**141**		*e*P	**Pn**	**06**	**37**	**45.3**	**-2.2**
BBSP					*e*S	**Sn**	**06**	**38**	**01.6**	**-4.4**
DWS	**Wesley**	**1.58**	**327**	⇓	*i*P	**Pn**	**06**	**37**	**49.0**	**-0.2**
DWS					*e*S	**Sn**	**06**	**38**	**09.1**	**+0.1**
DVCT	**Vielle Casse P**	**1.67**	**325**	⇓	*e*P	**Pn**	**06**	**37**	**50.2**	**-0.1**
MGG	**Marie-Galante**	**1.89**	**332**	⇓	*e*P	**Pn**	**06**	**37**	**51.6**	**-1.6**
MGG					⇓*e*S	**Sn**	**06**	**38**	**15.0**	**-1.1**
TBG	**Guadaloupe-3**	**2.00**	**323**	⇓	*e*P	**Pn**	**06**	**37**	**54.0**	**-0.7**
DOG	**Dongo Capester**	**2.13**	**327**	⇓	*e*P	**Pn**	**06**	**37**	**55.7**	**-0.7**
DOG					⇓*e*S	**Sn**	**06**	**37**	**55.7**	**-0.3**
HMG	**Houelmont**	**2.13**	**324**	⇓	*e*P	**Pn**	**06**	**37**	**55.9**	**-0.6**
SFG	**Saint Francois**	**2.14**	**339**		*e*P	**Pn**	**06**	**37**	**54.6**	**-2.0**
SCG	**Saint Claude**	**2.16**	**326**	⇓	*e*P	**Pn**	**06**	**37**	**56.2**	**-0.7**
BCG	**Bois Riant Cap**	**2.17**	**328**	⇓	*e*P	**Pn**	**06**	**37**	**56.2**	**-0.9**
BCG					⇓*e*S	**Sn**	**06**	**38**	**22.7**	**-0.4**
LZG	**Guadaloupe-1**	**2.31**	**325**	⇓	*e*P	**Pn**	**06**	**37**	**58.1**	**-0.7**
GRHS	**Sauteurs**	**2.34**	**211**		*e*P	**Pn**	**06**	**37**	**59.0**	**-0.2**
GRHS					*e*S	**Sn**	**06**	**38**	**27.9**	**+0.9**
GRW	**Mount Saint Ca**	**2.40**	**211**		*e*P	**Pn**	**06**	**38**	**00.6**	**+0.5**
GRGR	**Grenville**	**2.42**	**210**		P	**Pn**	**06**	**38**	**00.0**	**-0.4**
TOSP	**Speyside**	**2.93**	**182**		*e*P	**Pn**	**06**	**38**	**06.4**	**-0.9**
TOSP					*e*S	**Sn**	**06**	**38**	**38.7**	**-2.6**
TPR	**Prospect**	**3.06**	**187**		*e*	**Sn**	**06**	**38**	**43.1**	**-1.4**
TPR					*e*S	**Sn**	**06**	**38**	**44.7**	**+0.2**
TPR	**Prospect**	**3.06**	**187**	⇓	*i*P	**Pn**	**06**	**38**	**08.1**	**-0.9**
TPR					*e*S	**Sn**	**06**	**38**	**44.7**	**+0.2**
BOT	**Bacolet**	**3.07**	**186**		*e*P	**Pn**	**06**	**38**	**08.4**	**-0.8**
BOT					*e*S	**Sn**	**06**	**38**	**43.6**	**-1.2**
BPA	**Boggy Peak**	**3.12**	**334**	⇑	*e*P	**Pn**	**06**	**38**	**09.5**	**-0.3**
BPA					*e*S	**Sn**	**06**	**38**	**44.6**	**-1.4**
ANWB	**Willy Bob**	**3.66**	**339**		*e*Pn	**Pn**	**06**	**38**	**14.8**	**-2.4**
ANWB					*e*Sn	**Sn**	**06**	**38**	**58.5**	**-0.7**
TRN	**Trinidad (W)**	**3.70**	**195**	⇓	*e*P	**Pn**	**06**	**38**	**17.6**	**-0.1**
TRN					*e*S	**Sn**	**06**	**39**	**00.7**	**+0.5**
TCE	**Chacachacare**	**3.76**	**201**		*e*P	**Pn**	**06**	**38**	**18.9**	**+0.3**
TCE					*e*S	**Sn**	**06**	**39**	**02.3**	**+0.7**
TBH	**Brigand Hill**	**3.79**	**190**		*e*P	**Pn**	**06**	**38**	**19.8**	**+0.8**
TBH					*e*S	**Sn**	**06**	**39**	**02.6**	**+0.2**
TPP	**Pointe-a-Pierr**	**4.03**	**195**		*e*P	**Pn**	**06**	**38**	**21.6**	**-0.7**
TPP					*e*S	**Sn**	**06**	**39**	**08.1**	**-0.2**
TPP	**Pointe-a-Pierr**	**4.03**	**195**		*e*P	**Pn**	**06**	**38**	**24.0**	**+1.7**
TPP					*e*S	**Sn**	**06**	**39**	**08.1**	**-0.2**
STMA	**St. Maarten, A**	**4.58**	**326**		*e*P	**Pn**	**06**	**38**	**30.3**	**+0.5**
STMA					*e*S	**Sn**	**06**	**39**	**21.3**	**-0.6**
STMA	**St. Maarten, A**	**4.58**	**326**		*e*P	**Pn**	**06**	**38**	**30.3**	**+0.5**
STMA					*e*S	**Sn**	**06**	**39**	**28.9**	**+7.0**
PCRV	**Puerto La Cruz**	**5.78**	**226**		P	**Pn**	**06**	**38**	**46.8**	**+0.6**
	146nm,0.3s,baz=60,slow=3.0,SNR=394									
PCRV					S	**Sn**	**06**	**39**	**47.0**	**-4.1**
	33nm,0.3s,baz=226,slow=23,SNR=3.7									
MTP	**Monte Pirata**	**6.25**	**308**		*e*Pn	**Pn**	**06**	**38**	**53.3**	**+0.6**
CPD	**Cerro la Pandu**	**6.50**	**306**		*e*P	**Pn**	**06**	**38**	**56.0**	**0.0**
HUMP	**Col San Antoni**	**6.51**	**307**		*e*Pn	**Pn**	**06**	**38**	**56.4**	**+0.3**
SJG	**San Juan**	**6.73**	**306**		P	**Pn**	**06**	**38**	**59.3**	**+0.2**
	121nm,0.3s,baz=134,slow=12,SNR=174									
SJG					S	**Sn**	**06**	**40**	**09.6**	**-4.7**
	102nm,0.3s,baz=308,slow=21,SNR=7.1									
SJG	**San Juan**	**6.73**	**306**		*e*Pn	**Pn**	**06**	**38**	**59.1**	**0.0**
AOPR	**Arecibo Observ**	**7.33**	**305**		*e*Pn	**Pn**	**06**	**39**	**07.9**	**+0.5**
AGPR	**Aguadilla, PR**	**7.68**	**304**	⇓	*i*Pn	**Pn**	**06**	**39**	**12.9**	**+0.7**
AGPR					*e*Sn	**Sn**	**06**	**40**	**36.6**	**-1.1**
SDV	**Santo Domingo**	**11.34**	**243**		P	**Pn**	**06**	**40**	**03.1**	**+1.0**
	30nm,0.3s,baz=63,slow=8.5,SNR=5.0									
SDV					S	**Sn**	**06**	**42**	**03.2**	**-4.0**
	3.6nm,0.3s,baz=342,slow=19,SNR=2.7									
MASC	**Masc**	**14.46**	**296**		*e*P	**Pn**	**06**	**40**	**46.5**	**+2.6**
	baz=72									
MASC					*e*S	**Sn**	**06**	**43**	**19.6**	**-3.4**
	comp=N,102nm,0.1s									
MASC					*e*					
	comp=E,116nm,0.1s									
RCC	**Rio Carpintero**	**15.69**	**294**		*e*P	**Pn**	**06**	**41**	**01.1**	**+1.4**
GWJ	**Greenwich**	**16.13**	**286**	⇓	*e*P	**Pn**	**06**	**41**	**09.0**	**+3.7**
HOJ	**Hope**	**16.14**	**286**	⇓	*e*P	**Pn**	**06**	**41**	**07.7**	**+2.3**
STH	**Stony Hill**	**16.21**	**286**	⇓	*e*P	**Pn**	**06**	**41**	**07.8**	**+1.5**
ROSC	**El Rosal**	**16.58**	**237**		P	**Pn**	**06**	**41**	**13.6**	**+2.7**
	comp=E,11nm,0.3s,baz=91,slow=7.8,SNR=16									
ROSC					S	**S**	**06**	**44**	**10.5**	**-11**
	comp=E,0.9nm,0.3s,baz=89,slow=13,SNR=1.5									
BBSR	**BB Station**	**18.47**	**348**		*e*P	**Pn**	**06**	**41**	**30.3**	**-3.5**
	comp=E,22nm,0.5s									
BCIP	**Isla Barro Col**	**19.68**	**257**		*e*P	**Pn**	**06**	**41**	**46.7**	**-1.6**
	comp=E,77nm,0.8s									
MGV	**Manicaragua**	**20.16**	**296**		*e*P	**P**	**06**	**41**	**53.7**	**+2.2**
JTS	**JuntasAbangare**	**24.30**	**263**		P	**P**	**06**	**42**	**34.7**	**+1.0**
	comp=E,4.0nm,0.7s,mb3.8,baz=62,slow=12,SNR=3.2									
TEIG	**Tepich**	**27.25**	**287**		P	**P**	**06**	**43**	**00.5**	**+0.1**
	comp=E,3.3nm,0.5s,mb4.1,baz=86,slow=19,SNR=6.7									
ATAH	**Atahualpa**	**27.64**	**221**		P	**P**	**06**	**43**	**04.0**	**+0.1**
	comp=E,14nm,0.7s,mb4.6,baz=338,slow=5.9,SNR=12									
URVA	**University of**	**27.78**	**330**		*e*P	**P**	**06**	**43**	**04.8**	**-0.1**
BLA	**Blacksburg**	**29.00**	**326**		*e*P	**P**	**06**	**43**	**15.7**	**-0.1**
BLA					pmax	pmax				
	comp=Z,20nm,0.8s,mb4.8									
BLA	**Blacksburg**	**29.00**	**326**		*e*P	**P**	**06**	**43**	**15.7**	**-0.1**
	comp=Z,20nm,0.8s,mb4.8									
ELN	**Prospectdale**	**29.20**	**325**		*e*P	**P**	**06**	**43**	**18.1**	**+0.6**
MVL	**Millersville**	**29.22**	**334**		*e*P	**P**	**06**	**43**	**08.7**	**-9.0**
	comp=Z,19nm,0.9s,mb4.7									
TKL	**Tuckaleechee C**	**29.91**	**320**		P	**P**	**06**	**43**	**23.8**	**-0.1**
	comp=Z,7.1nm,0.7s,mb4.4,baz=137,slow=9.5,SNR=13									
LPAZ	**La Paz**	**31.28**	**194**		P	**P**	**06**	**43**	**36.8**	**+0.8**
	comp=Z,15nm,0.7s,mb4.8,baz=12,slow=8.8,SNR=57									
BDFB	**Brasilia**	**32.12**	**157**		P	**P**	**06**	**43**	**43.6**	**+0.1**
	comp=Z,34nm,1.0s,mb5.0,baz=330,slow=9.9,SNR=25									
ARE	**Arequipa**	**32.41**	**200**		*e*P	**P**	**06**	**43**	**44.0**	**-2.0**
WVT	**Waverly**	**32.83**	**317**		P	**P**	**06**	**43**	**49.1**	**-0.4**
OXF	**Oxford**	**33.05**	**313**		*e*P	**P**	**06**	**43**	**51.3**	**-0.2**
OXF					*e**PP	pP	06	44	08.1	-0.9
OXF					pmax	pmax				
	comp=Z,63nm,0.5s,mb5.7									
OXF	**Oxford**	**33.05**	**313**		*e*P	**P**	**06**	**43**	**51.3**	**-0.2**
OXF					*e*P	pP	06	44	08.1	-1.0
PARMO	**Parma**	**34.41**	**316**		*e*P	**P**	**06**	**44**	**03.1**	**-0.2**
PARMO					*e*pP	pP	06	44	20.3	-0.7
OLIL	**Olney**	**34.53**	**320**		*e*P	**P**	**06**	**44**	**04.7**	**+0.5**
	comp=Z,101nm,0.8s,mb5.7									
OLIL					*e*pP	pP	06	44	21.3	-0.6
GLMI	**Grayling**	**36.77**	**331**		*e*P	**P**	**06**	**44**	**23.8**	**+0.5**
	comp=Z,107nm,0.8s,mb5.8									
GLMI					*e*pP	pP	06	44	39.3	-1.8
LVC	**Limon Verde**	**37.56**	**193**		*e*P	**P**	**06**	**44**	**29.4**	**-0.8**
	comp=Z,16nm,0.6s,mb5.0									
LVC					*e*pP	pP	06	44	49.3	+1.2
SPB	**Sao Paulo**	**39.68**	**161**		*e*P	**P**	**06**	**44**	**48.0**	**0.0**
CPUP	**Villa Florida**	**40.44**	**176**		P	**P**	**06**	**44**	**53.0**	**-1.3**
	comp=Z,37nm,0.7s,mb5.3,baz=342,slow=7.8,SNR=118									
CPUP					pP	pP	06	45	10.2	-2.0
	comp=Z,8.5nm,0.5s,baz=350,slow=8.4,SNR=6.0									
SCHQ	**Schefferville**	**40.81**	**354**		P	**P**	**06**	**44**	**56.4**	**-0.6**
	comp=Z,18nm,0.8s,mb4.9,baz=146,slow=8.4,SNR=16									
SCHQ					pP	pP	06	45	14.8	-0.2
	comp=Z,23nm,0.6s,baz=172,slow=7.7,SNR=6.8									
CHIE	**El Hierro**	**41.63**	**64**		P	**P**	**06**	**45**	**02.9**	**-1.3**
	comp=Z,12nm,0.6s,mb4.8									
TXAR	**Lajitas

T15A **Red Dirt Ranch** 51.34 306 ⇓P P 06 46 20.5 +0.4
baz=51,SNR=10.0
P16A **Fountain Green** 51.39 310 ⇑P P 06 46 20.9 +0.6
baz=51,SNR=6.1
O16A **Springville** 51.42 310 ⇓P P 06 46 20.7 +0.1
baz=51,SNR=9.0
S15A **Panguitch** 51.47 307 ⇑P P 06 46 21.4 +0.4
baz=51,SNR=8.0
R15A **Junction** 51.52 308 ⇓P P 06 46 22.0 +0.7
baz=51
N16A **Rees Ranch, Co** 51.55 311 ⇑P P 06 46 21.9 +0.3
baz=52,SNR=13
W14A **Seligman** 51.56 304 ⇑P P 06 46 22.8 +1.1
baz=52
V14A **Boquillas Ranc** 51.65 304 ⇓P P 06 46 23.4 +1.0
baz=52
113A **Mohawk Valley,** 51.74 301 ⇓P P 06 46 23.3 +0.3
baz=52
Q15A **Fillmore** 51.78 309 ⇓P P 06 46 23.2 -0.1
baz=52
PBDV **Barranco-do-Ve** 51.78 54 eP P 06 46 23.7 +0.4
comp=Z,21nm,1.3s,mb5.0
M16A **Huntsville** 51.81 312 ⇑P P 06 46 23.2 -0.3
baz=52,SNR=23
P15A **Leamington** 51.84 309 ⇑P P 06 46 24.0 +0.3
baz=52
U14A **Mt Trumbull** 51.85 305 ⇑P P 06 46 24.4 +0.5
baz=52,SNR=9.4
L16A **Fish Haven** 51.87 313 ⇓P P 06 46 23.3 -0.5
baz=52,SNR=11
GCMT **Greycliff** 51.87 318 eP P 06 46 24.4 +0.6
GCMT epP pP 06 46 40.1 -2.4
T14A **Hurricane** 51.90 306 ⇑P P 06 46 24.3 0.0
baz=52
Y13A **Salome** 51.94 302 ⇓P P 06 46 24.4 -0.1
baz=52
PVAQ **Vaqueiros** 51.98 54 eP P 06 46 25.1 +0.3
comp=Z,12nm,1.6s,mb4.7
EVO **Evora** 52.00 52 eP P 06 46 23.7 -1.2
comp=Z,15nm,0.8s,mb4.8
EVO **Evora** 52.00 52 eP P 06 46 24.7 -0.2
comp=Z,12nm,0.9s,mb4.9
EVO **Evora** 52.00 52 P P 06 46 26.4 +1.5
PBEJ **Beja** 52.00 53 eP P 06 46 25.1 +0.2
comp=Z,12nm,1.0s,mb4.9
X13A **Yucca** 52.06 303 ⇓P P 06 46 25.3 -0.1
baz=52
S14A **Cedar City** 52.11 307 ⇑P P 06 46 25.8 0.0
baz=52
O15A **The Old Anders** 52.16 310 ⇑P P 06 46 25.9 -0.2
baz=52
W13A **Hualapai Mount** 52.19 303 ⇓P P 06 46 26.4 0.0
baz=52
EGRO **El Granado** 52.19 53 P P 06 46 25.9 -0.5
comp=Z,11nm,0.8s,mb4.9
K16A **Soda Springs** 52.21 314 ⇓P P 06 46 26.5 +0.1
baz=52
CCUT **Cedar City** 52.22 307 eP P 06 46 27.1 +0.6
PDMCI **Parker Dam,Lak** 52.27 302 ⇑P P 06 46 27.0 0.0
baz=52
ARUT **Antelope Range** 52.33 307 eP P 06 46 27.8 +0.4
ARUT e 06 48 21.4
N15A **Stansbury Isla** 52.35 311 ⇓P P 06 46 27.3 -0.2
baz=52,SNR=8.4
YMR **Madison River** 52.35 316 eP P 06 46 28.4 +1.0
comp=Z,16nm,0.7s,mb5.2
J16A **Bone** 52.36 314 ⇓P P 06 46 28.0 +0.5
baz=52,SNR=7.6
V13A **Grand Canyon W** 52.39 304 ⇑P P 06 46 28.3 +0.4
baz=52,SNR=11
PESTR **Estremoz** 52.39 52 eP P 06 46 28.2 +0.4
comp=Z,25nm,1.6s,mb5.0
P14A **Drum Mountains** 52.44 309 ⇓P P 06 46 28.6 +0.4
baz=52,SNR=19
M15A **Larsen Ranch,** 52.44 312 ⇑P P 06 46 27.9 -0.3
baz=52,SNR=19
I16A **Newdale** 52.45 315 ⇓P P 06 46 28.3 +0.1
baz=52,SNR=18
Q14A **Sevier Lake (B** 52.46 308 ⇑P P 06 46 28.7 +0.4
baz=52,SNR=12
U13A **Pakoon Wash** 52.48 305 ⇓P P 06 46 29.1 +0.6
baz=52,SNR=8.4
Y12C **Blythe** 52.50 302 ⇑P P 06 46 28.6 -0.1
baz=52
T13A **Saint George** 52.54 306 ⇑P P 06 46 29.5 +0.5
baz=52,SNR=6.0
L15A **Malad City** 52.55 312 ⇑P P 06 46 28.8 -0.1
baz=52,SNR=26
H16A **Russell Place,** 52.55 316 ⇑P P 06 46 29.6 +0.7
baz=52,SNR=5.1
PVIS **Viseu** 52.60 49 eP P 06 46 29.1 -0.2
comp=Z,23nm,1.9s,mb4.9
S13A **Holt Ranch, En** 52.61 307 ⇑P P 06 46 30.2 +0.8
baz=52,SNR=12
GLA **Glamis** 52.66 301 ⇑P P 06 46 30.1 +0.2
baz=53
PBAR **Barrancos** 52.67 53 eP P 06 46 30.1 +0.2
comp=Z,17nm,1.0s,mb5.0
PMRV **Marv??o** 52.67 51 eP P 06 46 29.8 -0.1
comp=Z,20nm,1.7s,mb4.9
PCBR **Castelo Branco** 52.70 51 eP P 06 46 29.8 -0.3
comp=Z,19nm,1.9s,mb4.8
BGU **Big Grassy Mou** 52.73 311 eP P 06 46 30.4 +0.1
ELOB **Lobios** 52.77 48 P P 06 46 29.9 -0.7
comp=Z,20nm,1.0s,mb5.1
MTE **Manteigas** 52.78 50 eP P 06 46 30.6 -0.1
comp=Z,16nm,0.5s,mb5.3
EBAD **Badajoz** 52.81 52 P P 06 46 30.5 -0.4
comp=Z,8.4nm,1.1s,mb4.7
R13A **O'Grain Ranch,** 52.82 307 ⇑P P 06 46 31.2 +0.3
baz=53
N14A **Grayback Hills** 52.83 311 ⇑P P 06 46 30.9 -0.1
baz=53,SNR=24
K15A **Arbon** 52.84 313 ⇑P P 06 46 30.7 -0.3
baz=53,SNR=14
EMIN **Mina Concepcio** 52.87 53 P P 06 46 31.0 -0.4
comp=Z,12nm,0.8s,mb5.0
PVRL **Vila Real** 52.87 49 eP P 06 46 31.5 +0.2
comp=Z,22nm,1.2s,mb5.1
U12A **Valley of Fire** 52.93 305 ⇑P P 06 46 31.9 0.0
baz=53
J15A **Blackfoot** 52.97 314 ⇓P P 06 46 32.2 +0.2
baz=53,SNR=10
Q13A **Wheeler Ranch,** 53.02 308 ⇓P P 06 46 33.0 +0.5
baz=53,SNR=16
V12A **Nelson** 53.06 304 ⇓P P 06 46 32.7 -0.1
baz=53
IRM **Iron Mountain** 53.07 302 ⇑P P 06 46 33.4 +0.5
baz=53,SNR=11
M14A **Sheep Mountain** 53.11 311 ⇓P P 06 46 33.0 -0.1
baz=53,SNR=15
P13A **Bates Ranch, G** 53.12 309 ⇓P P 06 46 33.8 +0.7
baz=53,SNR=32
L14A **Malta** 53.17 312 ⇓P P 06 46 33.4 -0.1
baz=53,SNR=17
I15A **Monteview** 53.18 315 ⇑P P 06 46 33.9 +0.3
baz=53
K14A **Jones Ranch, D** 53.26 313 ⇑P P 06 46 34.4 +0.3
baz=53,SNR=38
BC3 **Big Chuckw Mtn** 53.26 301 ⇓P P 06 46 34.0 -0.3
baz=53
R12A **Pony Springs,** 53.34 307 ⇑P P 06 46 35.2 +0.4
baz=53,SNR=15
ESPR **Espera** 53.34 55 P P 06 46 35.3 +0.4
comp=Z,29nm,0.7s,mb5.4
MVO **Moncorvo** 53.35 49 eP P 06 46 35.2 +0.4
comp=Z,18nm,1.5s,mb4.9
IFR **Ifrane** 53.44 59 P P 06 46 35.9 +0.3
H15A **Lima** 53.47 315 ⇑P P 06 46 36.5 +0.8
baz=53
G15A **Dillon** 53.53 316 ⇑P P 06 46 35.9 -0.2
baz=54,SNR=7.9
V11A **Goodsprings** 53.55 304 ⇓P P 06 46 36.7 +0.4
baz=54
GMRC **Granite Mounta** 53.58 303 ⇑P P 06 46 37.0 +0.4
baz=54
EJIF **Jimena Fronter** 53.58 55 P P 06 46 37.0 +0.4
EJIF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
EJIF **Jimena Fronter** 53.58 55 P P 06 46 37.0 +0.4
comp=Z,7.7nm,0.6s,mb4.9
T11A **Corn Creek, Al** 53.61 306 ⇑P P 06 46 37.2 +0.4
baz=54
Q12A **Willow Creek R** 53.65 308 ⇑P P 06 46 37.2 +0.1
baz=54
M13A **Montello** 53.67 311 ⇓P P 06 46 37.2 0.0
baz=54,SNR=14
L13A **Double Diamond** 53.69 312 ⇑P P 06 46 37.1 -0.2
baz=54,SNR=19
J14A **Carey** 53.71 314 ⇓P P 06 46 37.6 +0.2
baz=54,SNR=9.6
F15A **Butte** 53.75 317 ⇑P P 06 46 37.9 +0.2
baz=54,SNR=9.1
P12A **McGill** 53.80 309 ⇑P P 06 46 38.3 +0.1
baz=54,SNR=8.0
I14A **Mackay** 53.83 314 ⇓P P 06 46 38.7 +0.4
baz=54,SNR=9.2
O12A **Currie** 53.85 310 ⇓P P 06 46 38.8 +0.3
baz=54,SNR=18
TUQ **Turquoise Moun** 53.88 304 ⇑P P 06 46 38.8 0.0
baz=54
ECAB **El Cabril** 53.90 53 P P 06 46 37.9 -1.1
comp=Z,59nm,1.3s,mb5.5
K13A **Stover Farm, H** 53.93 313 ⇓P P 06 46 39.1 0.0
baz=54,SNR=7.0
H14A **Leadore** 53.97 315 ⇓P P 06 46 39.5 +0.2
baz=54
MONP **Monument Peak** 53.97 300 ⇓P P 06 46 39.8 +0.2
baz=54
E15A **Deer Lodge** 54.03 317 ⇓P P 06 46 39.6 -0.2
baz=54
S11A **Rachel** 54.10 306 ⇑P P 06 46 40.8 +0.5
baz=54
R11A **Troy Canyon, C** 54.10 307 ⇑P P 06 46 40.8 +0.5
baz=54
HEC **Hector,Ludlow** 54.13 303 ⇓P P 06 46 41.0 +0.4
baz=54
D15A **Lincoln** 54.16 318 ⇑P P 06 46 40.7 +0.1
baz=54,SNR=12
J13A **Cove Ranch, Pi** 54.19 314 ⇓P P 06 46 41.0 +0.1
baz=54,SNR=7.4
N12A **Clover Valley,** 54.19 310 ⇓P P 06 46 41.0 0.0
baz=54,SNR=16
G14A **Jackson** 54.21 316 ⇑P P 06 46 40.8 -0.3
baz=54
M12A **Wells** 54.23 311 ⇓P P 06 46 40.9 -0.3
baz=54,SNR=12
SHOC **Shoshone** 54.24 304 ⇑P P 06 46 41.3 -0.2
baz=54
Q11A **Duckwater** 54.24 308 ⇓P P 06 46 41.3 -0.1
baz=54,SNR=8.8
I13A **Wildhorse Cree** 54.29 314 ⇑P P 06 46 41.7 +0.1
baz=54,SNR=15
F14A **Wisdom** 54.32 317 ⇓P P 06 46 42.5 +0.7
baz=54
U10A **Ash Meadows, A** 54.36 305 ⇓P P 06 46 43.0 +0.7
baz=54
HLID **Hailey** 54.40 314 ⇑P P 06 46 42.9 +0.4
baz=54,SNR=12
P11A **Circle Ranch,** 54.46 309 ⇑P P 06 46 43.1 +0.1
baz=54
L12A **House Creek Ra** 54.47 312 ⇓P P 06 46 43.2 +0.2
baz=54
O11A **Cowboy Ranch,** 54.50 309 ⇓P P 06 46 43.9 +0.6
baz=54,SNR=32
K12A **Draper Farm, C** 54.51 312 ⇓P P 06 46 43.2 -0.1
baz=54,SNR=12
H13A **Challis** 54.56 315 ⇑P P 06 46 43.1 -0.4
baz=54,SNR=6.3
EADA **Adamuz** 54.57 53 P P 06 46 43.7 -0.1
comp=Z,8.1nm,0.6s,mb4.9
GSC **Goldstone** 54.58 303 ⇑P P 06 46 43.6 -0.3
baz=54
E14A **Clinton** 54.59 317 ⇑P P 06 46 43.7 -0.1
baz=54
R10A **Warm Springs** 54.64 307 ⇓P P 06 46 44.7 +0.4
baz=55
N11A **Elko Archery C** 54.70 310 ⇓P P 06 46 44.8 +0.1
baz=55
ELOJ **Sierra Loja** 54.73 54 P P 06 46 45.6 +0.6
comp=Z,11nm,0.9s,mb4.9
J12A **Stokes Ranch,** 54.80 313 ⇑P P 06 46 45.2 -0.2
baz=55
D14A **Greenough** 54.80 318 ⇓P P 06 46 45.1 -0.2
baz=55,SNR=6.5
S10A **Tonopah Range,** 54.81 306 ⇓P P 06 46 46.1 +0.6
baz=55,SNR=17
Q10A **Clear Creek Ra** 54.81 308 ⇑P P 06 46 45.8 +0.2
baz=55,SNR=10
M11A **Holland Ranch,** 54.88 311 ⇓P P 06 46 46.3 +0.4
baz=55,SNR=8.6
TIC **Toumodi** 54.88 92 eP P 06 46 44.9 -1.5
comp=Z,88nm,1.1s,mb5.7
TIC **Toumodi** 54.88 92 eP P 06 46 44.9 -1.5
TIC pmax pmax
comp=Z,88nm,1.1s,mb5.7
F13A **Darby** 54.96 316 ⇓P P 06 46 46.5 +0.1
baz=55
H12A **Diamond D Ranc** 54.97 315 ⇑P P 06 46 46.6 0.0
baz=55
LIC **Lamto** 54.97 92 i⇑P P 06 46 45.7 -1.4
comp=Z,22nm,0.6s,mb5.1
LIC **Lamto** 54.97 92 eP P 06 46 45.6 -1.5
comp=Z,38nm,0.6s,mb5.6
LIC **Lamto** 54.97 92 i⇑P P 06 46 45.7 -1.4
comp=Z,11nm,0.6s,mb5.1
ERON **Agron** 54.99 55 P P 06 46 47.4 +0.5
comp=Z,4.8nm,0.8s,mb4.6
PAB **San Pablo** 55.00 52 P P 06 46 48.9 +2.1
P10A **Eureka** 55.01 309 ⇑P P 06 46 47.2 +0.2
baz=55
L11A **Cat Creek Ranc** 55.01 312 ⇓P P 06 46 46.7 -0.2
baz=55,SNR=11
DBIC **Dimbokro** 55.04 92 P P 06 46 46.3 -1.3
comp=Z,17nm,0.7s,mb5.2,baz=263,slow=6.8,SNR=23
DBIC **Dimbokro** 55.04 92 P P 06 46 46.3 -1.3
E13A **Victor** 55.05 317 ⇑P P 06 46 47.2 +0.1
baz=55,SNR=11
O10A **Cortez Mining,** 55.16 309 ⇑P P 06 46 48.0 0.0
baz=55
EARI **Arriondas** 55.17 47 P P 06 46 49.6 +1.5
comp=Z,30nm,1.3s,mb5.2
C14A **Swan Lake** 55.18 319 ⇑P P 06 46 48.3 +0.3
baz=55
EBAN **Banos Encina** 55.19 53 P P 06 46 48.2 0.0
comp=Z,12nm,0.8s,mb5.0
ECOG **Cogollos-Vega** 55.22 54 P P 06 46 48.8 +0.3
comp=Z,26nm,0.9s,mb5.3
KIC **Kosan Boka** 55.22 92 eP P 06 46 47.6 -1.2
comp=Z,80nm,0.8s,mb5.8
R09A **Tonopah** 55.23 307 ⇑P P 06 46 48.8 +0.2
baz=55
MPMC **Manual Prospec** 55.23 304 ⇓P P 06 46 48.9 +0.3
baz=55
S09A **Goldfield** 55.27 306 ⇓P P 06 46 48.8 0.0
baz=55
GRAC **Grapevine Rang** 55.27 305 ⇓P P 06 46 49.2 +0.3
baz=55,SNR=12
ESDC **Sonseca Array** 55.31 51 P P 06 46 49.2 +0.1
comp=Z,6.9nm,0.7s,mb4.8,baz=259,slow=7.4,SNR=31
ESDC pP pP 06 47 06.9 -1.0
comp=Z,6.3nm,0.8s,baz=259,slow=7.5,SNR=5.2
ESDC **Sonseca Array** 55.31 51 P P 06 46 49.3 +0.2
comp=Z,17nm,0.9s,mb5.1
LRMC **Laurel Mountai** 55.32 303 ⇓P P 06 46 49.0 -0.2
baz=55
K11A **Parker Ranch,** 55.35 312 ⇓P P 06 46 49.5 +0.1
baz=55
GUD **Guadarrama** 55.36 50 P P 06 46 49.7 +0.3
comp=Z,9.2nm,0.8s,mb4.9
MFID **Camas Ranch** 55.36 313 ⇑P P 06 46 49.4 0.0
baz=55
D13A **Huson** 55.43 318 ⇑P P 06 46 49.7 -0.1
baz=55,SNR=6.2
M10A **I.L. Ranch, Tu** 55.44 311 ⇓P P 06 46 49.8 -0.2
baz=55
EDW2 **Edwards Air Fo** 55.49 303 ⇑P P 06 46 50.5 0.0
baz=55
PLCA **Paso Flores** 55.49 189 P P 06 46 50.2 -0.1
comp=Z,25nm,0.9s,mb5.2,baz=4.1,slow=7.3,SNR=38
PLCA pP pP 06 47 09.2 +0.1
comp=Z,9.5nm,0.8s,baz=7.9,slow=2.1,SNR=3.3
PLCA **Paso Flores** 55.49 189 P P 06 46 50.2 -0.1
PLCA pP pP 06 47 09.2 +0.1
L10A **Juniper Basin** 55.51 311 ⇑P P 06 46 50.5 0.0
baz=55,SNR=17
F12A **Elk City** 55.57 316 ⇓P P 06 46 50.5 -0.3
baz=56,SNR=7.3
I11A **Placerville** 55.57 314 ⇓P P 06 46 50.7 -0.2
baz=56,SNR=20
CIS **Catalina Islan** 55.68 301 ⇑P P 06 46 51.7 -0.1
baz=56
C13A **Hot Springs** 55.68 318 ⇓P P 06 46 51.7 +0.1
baz=56
EQES **Quesada** 55.69 54 P P 06 46 52.3 +0.5
comp=Z,58nm,0.9s,mb5.6
EBER **Berja** 55.70 55 P P 06 46 52.6 +0.7
comp=Z,22nm,0.8s,mb5.2
H11A **Donnelly** 55.81 315 ⇓P P 06 46 52.3 -0.2
baz=56
B13A **Whitefish** 55.83 319 ⇓P P 06 46 52.3 -0.3
baz=56
K10A **MacKenzie Ranc** 55.95 312 ⇑P P 06 46 53.5 -0.1
baz=56,SNR=7.0
E12A **Beaver Dam Sad** 55.96 317 ⇓P P 06 46 53.6 -0.1
baz=56
A13A **Flathead Natio** 55.97 320 ⇑P P 06 46 53.6 -0.1
baz=56
S08C **White Mtn Res** 55.98 306 ⇑P P 06 46 54.1 +0.2
baz=56,SNR=11
Q08A **Gabbs** 56.00 307 ⇓P P 06 46 53.9 -0.2
baz=56
D12A **Red Ives Fores** 56.00 318 ⇑P P 06 46 53.3 -0.6
baz=56
J10A **Berg Farm, Mel** 56.03 313 ⇓P P 06 46 53.9 -0.2
baz=56
N09A **Rock Creek Ran** 56.04 310 ⇑P P 06 46 54.5 +0.2
baz=56,SNR=12
M09A **Marrel Ranch,** 56.09 311 ⇑P P 06 46 54.4 -0.3
baz=56
G11A **Walters Elk Ra** 56.16 315 ⇑P P 06 46 54.7 -0.3
baz=56
F11A **Grangeville** 56.21 316 ⇓P P 06 46 54.7 -0.7
baz=56,SNR=7.6
NVAR **Mina Array Bea** 56.22 307 P P 06 46 55.4 -0.3
comp=Z,4.0nm,0.7s,mb4.5,baz=100,slow=6.8,SNR=42
EVIA **Vianos** 56.26 53 P P 06 46 57.0 +1.1
EVIA pmax pmax
comp=Z,17nm,0.9s,mb5.1
EVIA **Vianos** 56.26 53 P P 06 46 57.0 +1.1
comp=Z,17nm,0.9s,mb5.1
C12B **Naegeli Ranch,** 56.27 318 ⇑P P 06 46 55.6 -0.2
baz=56
H10A **Noah's Angus R** 56.29 314 ⇓P P 06 46 54.9 -1.1
baz=56,SNR=8.2
L09A **Wilkinson Ranc** 56.37 311 ⇓P P 06 46 56.9 +0.2
baz=56
E11A **Bogner Ranch,** 56.37 317 ⇑P P 06 46 56.1 -0.5
baz=56,SNR=7.2
O08A **Rochester Mine** 56.41 309 ⇑P P 06 46 56.8 -0.1
baz=56,SNR=7.6
ELAN **Lanestosa** 56.42 47 P P 06 46 56.9 -0.1
comp=Z,39nm,1.3s,mb5.3
N08A **GE Springer Mi** 56.48 310 ⇓P P 06 46 57.5 +0.1
baz=56,SNR=13
VES **Vestal, Richgr** 56.49 304 ⇑P P 06 46 57.3 -0.3
baz=56
HELL **Mitchell Peak** 56.54 305 ⇑P P 06 46 58.0 +0.1
baz=56,SNR=9.5
K09A **Rome** 56.55 312 ⇑P P 06 46 57.9 0.0
baz=56,SNR=11
B12A **Libby** 56.57 319 ⇑P P 06 46 58.2 +0.3
baz=56
D11A **Klaveano Farm,** 56.64 317 ⇑P P 06 46 58.4 -0.1
baz=57,SNR=12
RCTC **Rector, Farmer** 56.67 304 ⇑P P 06 46 59.3 +0.5
baz=57
J09A **Fry Pan Ranch,** 56.71 313 ⇓P P 06 46 58.5 -0.5
baz=57
G10A **Bishop Farm, J** 56.71 315 ⇓P P 06 46 58.4 -0.6
baz=57
A12A **Yaak River Ran** 56.75 320 ⇑P P 06 46 59.9 +0.7
baz=57,SNR=19
C11A **Tepee Creek (N** 56.81 318 ⇑P P 06 46 59.2 -0.5
baz=57
KCC **Kaiser Creek** 56.86 305 ⇓P P 06 46 59.6 -0.6
baz=57
L08A **Fields** 56.90 311 ⇓P P 06 47 01.0 +0.6
baz=57,SNR=14
O07A **Toulon** 56.93 309 ⇑P P 06 47 01.0 +0.3
baz=57,SNR=7.5
ETOR **Torete** 56.96 50 P P 06 47 01.4 +0.6
ETOR pmax pmax
comp=Z,17nm,1.0s,mb5.0
ETOR **Torete** 56.96 50 P P 06 47 01.4 +0.6
comp=Z,17nm,1.0s,mb5.0
F10A **Beach Ranch, E** 56.96 316 ⇑P P 06 46 60.0 -0.7
baz=57
B11A **Sandpoint** 57.05 319 ⇓P P 06 47 01.2 -0.2
baz=57,SNR=9.6
N07B **Gerlach** 57.10 309 ⇑P P 06 47 02.1 +0.2
baz=57,SNR=9.4
K08A **Mann Creek Ran** 57.11 312 ⇓P P 06 47 01.5 -0.4
baz=57
R06C **Coleville** 57.12 307 ⇑P P 06 47 03.0 +0.9
baz=57,SNR=10
T06C **Millerton Lake** 57.13 305 ⇑P P 06 47 01.9 -0.2
baz=57
EMUR **La Murta** 57.13 54 P P 06 47 01.5 -0.5
comp=Z,20nm,0.7s,mb5.3
G09A **Cove** 57.16 315 ⇑P P 06 47 01.8 -0.4
baz=57,SNR=8.1
A11A **Hall Mountain,** 57.20 319 ⇑P P 06 47 02.4 0.0
baz=57,SNR=6.9
D10A **Wagner Farm, O** 57.27 317 ⇓P P 06 47 01.9 -1.0
baz=57,SNR=6.8
S06C **San Francisco** 57.34 306 ⇑P P 06 47 03.6 -0.1
baz=57
M07A **Soldier Meadow** 57.36 310 ⇑P P 06 47 03.5 -0.2
baz=57,SNR=18
I08A **Drewsey** 57.41 313 ⇑P P 06 47 03.8 -0.1
baz=57
C10A **Spilker Farm,** 57.49 318 ⇓P P 06 47 03.8 -0.6
baz=57
B10A **Chitwood Farm,** 57.56 319 ⇑P P 06 47 04.9 -0.1
baz=58
L07A **Adell** 57.59 311 ⇑P P 06 47 05.3 0.0
baz=58
H08A **Prairie City** 57.61 314 ⇓P P 06 47 05.1 -0.3
baz=58,SNR=15
R05C **Kirkwood Meado** 57.63 307 ⇑P P 06 47 06.7 +1.1
baz=58,SNR=23
O06A **Flanigan** 57.65 309 ⇓P P 06 47 05.4 -0.3
baz=58,SNR=7.9
K07A **Rock Creek Ran** 57.65 312 ⇓P P 06 47 05.6 0.0
baz=58
PKD **Parkfield** 57.68 304 ⇑P P 06 47 06.3 +0.3
baz=58
E09A **Wood Farm, Sta** 57.71 316 ⇓P P 06 47 06.6 +0.6
baz=58
QUIF **Quistinic** 57.74 42 eP P 06 47 06.2 0.0
comp=Z,24nm,0.9s,mb4.9
QUIF epP pP 06 47 25.1 0.0
QUIF **Quistinic** 57.74 42 eP P 06 47 06.2 0.0
QUIF e*PP pP 06 47 25.1 0.0
QUIF pmax pmax
comp=Z,12nm,0.9s,mb4.9
QUIF **Quistinic** 57.74 42 eP P 06 47 06.2 0.0
comp=Z,12nm,0.9s,mb4.9
QUIF epP pP 06 47 25.1 0.0
N06A **Buffalo Meadow** 57.75 309 ⇑P P 06 47 06.2 -0.2
baz=58,SNR=17
ROSF **Rostrenen** 57.78 41 eP P 06 47 06.6 +0.1
CMB **Columbia Colle** 57.79 306 ⇑P P 06 47 06.9 +0.2
baz=58
EALK **Alkurruntz** 57.80 48 P P 06 47 07.0 +0.3
comp=Z,26nm,1.8s,mb5.0
D09A **Jones Farm, Ri** 57.95 317 ⇓P P 06 47 07.1 -0.6
baz=58
F08A **Pendleton** 57.97 315 ⇓P P 06 47 06.9 -0.9
baz=58,SNR=7.2
A10A **Northport** 57.97 319 ⇑P P 06 47 07.5 -0.2
baz=58,SNR=6.0
G08A **Pilot Rock** 57.98 315 ⇑P P 06 47 07.0 -0.9
baz=58
SJPF **Ste Jean** 57.98 48 eP P 06 47 08.5 +0.5
comp=Z,40nm,0.9s,mb5.2
SJPF epP pP 06 47 27.4 +0.5
SJPF **Ste Jean** 57.98 48 eP P 06 47 08.5 +0.5
SJPF e*PP pP 06 47 27.4 +0.5
SJPF pmax pmax
comp=Z,20nm,0.9s,mb5.2
SJPF **Ste Jean** 57.98 48 eP P 06 47 08.5 +0.5
comp=Z,20nm,0.9s,mb5.1
SJPF epP pP 06 47 27.4 +0.5
BEKR **Beckwourth** 58.01 308 ⇑P P 06 47 07.8 -0.4
baz=58,SNR=7.1
EMOS **Mosqueruela** 58.07 51 P P 06 47 09.6 +0.9
comp=Z,83nm,1.9s,mb5.4
I07A **Izee** 58.10 313 ⇓P P 06 47 08.7 -0.1
baz=58,SNR=11
C09A **Chrisman Ranch** 58.11 318 ⇑P P 06 47 08.3 -0.5
baz=58
P05C **Yuba Gap, Truc** 58.12 308 ⇓P P 06 47 09.2 +0.2

baz=58
LAVA Lava Cap Winer 58.15 307 ⇑P **P** **06 47 09.4 +0.2**
baz=58
B09A Rice 58.19 318 ⇑P **P** **06 47 08.7 -0.6**
baz=58,SNR=12
SGMF Saint Gilles 58.22 42 *eP* **P** **06 47 09.8 +0.3**
SGMF *epP* pP 06 47 28.5 0.0
H07A Lands Inn, Kim 58.25 314 ⇑P **P** **06 47 09.2 -0.6**
baz=58
MOD Modoc 58.28 311 ⇓P **P** **06 47 09.3 -0.8**
baz=58
ESAC San Caprasio 58.29 50 P **P** **06 47 11.1 +1.0**
comp=Z,27nm,0.5s,mb5.5
OD2 Odessa Site #2 58.30 317 P **P** **06 47 10.0 -0.1**
M06C Likely Place G 58.30 310 ⇓P **P** **06 47 10.2 0.0**
baz=58
D08A Wollman Farm, 58.35 317 ⇑P **P** **06 47 10.5 0.0**
baz=58
K06A Valley Falls 58.40 312 ⇑P **P** **06 47 10.9 0.0**
baz=58
J06A Christmas Vall 58.41 312 ⇓P **P** **06 47 10.5 -0.4**
baz=58,SNR=12
ETSF Etsaut 58.42 48 *eP* **P** **06 47 11.8 +0.8**
comp=Z,16nm,0.8s,mb4.8
ETSF Etsaut 58.42 48 *eP* **P** **06 47 11.8 +0.8**
ETSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
ETSF Etsaut 58.42 48 *eP* **P** **06 47 11.8 +0.8**
comp=Z,7.8nm,0.8s,mb4.8
G07A Ruggs Ranch, H 58.46 315 ⇑P **P** **06 47 10.8 -0.5**
baz=58
I06A Prineville 58.58 313 ⇓P **P** **06 47 11.8 -0.3**
baz=58
C08A Higginbotham F 58.61 318 ⇓P **P** **06 47 11.7 -0.6**
baz=58
A09A Danville 58.62 319 ⇑P **P** **06 47 11.7 -0.6**
baz=58,SNR=8.2
O04C Chester 58.63 309 ⇑P **P** **06 47 12.7 +0.2**
baz=58
L05A Lakeview 58.70 311 ⇓P **P** **06 47 13.1 +0.1**
baz=59
ERTA Horta de San J 58.77 51 P **P** **06 47 14.0 +0.5**
comp=Z,19nm,0.9s,mb5.1
H06A Lindquist Farm 58.82 314 ⇓P **P** **06 47 14.1 +0.3**
baz=59
M05C Lookout 58.82 310 ⇓P **P** **06 47 13.7 -0.2**
baz=59
ORV Oroville 58.84 308 ⇓P **P** **06 47 14.1 +0.1**
baz=59,SNR=11
K05A Summer Lake 58.85 311 ⇓P **P** **06 47 14.4 +0.3**
baz=59,SNR=18
EBIE Bielsa 58.89 49 P **P** **06 47 15.3 +1.0**
comp=Z,21nm,0.8s,mb5.2
LBCM Butte Creek Ri 58.90 309 P **P** **06 47 14.7 +0.3**
B08A Colville Reser 58.94 318 ⇑P **P** **06 47 14.0 -0.5**
baz=59
A08A Turner Farm, O 59.05 319 ⇑P **P** **06 47 14.9 -0.4**
baz=59,SNR=7.2
D07A Quincy 59.09 317 ⇑P **P** **06 47 15.2 -0.4**
baz=59
EPF Esparros 59.09 48 *eP* **P** **06 47 16.4 +0.7**
comp=Z,27nm,0.7s,mb5.1
EPF *epP* pP 06 47 35.3 +0.6
EPF Esparros 59.09 48 *eP* **P** **06 47 16.4 +0.7**
EPF *e**PP pP 06 47 35.3 +0.6
EPF pmax pmax
comp=Z,14nm,0.7s,mb5.1
EPF Esparros 59.09 48 *eP* **P** **06 47 16.4 +0.7**
comp=Z,14nm,0.7s,mb5.1
EPF *epP* pP 06 47 35.3 +0.6
G06A Carlson Farm, 59.12 314 ⇑P **P** **06 47 16.1 +0.2**
baz=59
J05A Fort Rock 59.19 312 ⇑P **P** **06 47 16.8 +0.4**
baz=59,SNR=14
C07A Waterville 59.26 317 ⇑P **P** **06 47 15.5 -1.3**
baz=59
GRR Gorron 59.35 42 *eP* **P** **06 47 17.4 0.0**
GRR *epP* pP 06 47 36.2 -0.2
M04C Macdoel 59.40 310 ⇓P **P** **06 47 17.9 +0.1**
baz=59,SNR=15
EBG Ellensburg 59.42 316 P **P** **06 47 18.5 +0.6**
MFF Saint Martin d 59.42 44 *eP* **P** **06 47 18.1 +0.2**
comp=Z,9.3nm,0.6s,mb4.7
MFF Saint Martin d 59.42 44 *eP* **P** **06 47 18.1 +0.2**
MFF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
MFF Saint Martin d 59.42 44 *eP* **P** **06 47 18.1 +0.2**
comp=Z,4.7nm,0.6s,mb4.7
CVS Carmenet Viney 59.44 306 ⇑P **P** **06 47 17.6 -0.6**
baz=59
B07A Winthrop 59.47 318 ⇓P **P** **06 47 17.6 -0.6**
baz=59,SNR=20
L04A Klamath Falls 59.49 311 ⇑P **P** **06 47 18.4 -0.1**
baz=59
TBM Table Mountain 59.50 317 P **P** **06 47 18.9 +0.5**
M03C McCloud 59.54 310 ⇓P **P** **06 47 18.1 -0.7**
baz=59
LHEM Herd Peak 59.66 310 P **P** **06 47 20.1 +0.5**
D06A Cle Elum 59.66 317 ⇑P **P** **06 47 19.3 -0.3**
baz=60,SNR=5.9
FLN La Foliniere 59.68 42 *eP* **P** **06 47 19.8 +0.1**
comp=Z,27nm,0.9s,mb5.0
FLN *epP* pP 06 47 38.6 -0.1
FLN La Foliniere 59.68 42 *eP* **P** **06 47 19.8 +0.1**
FLN *e**PP pP 06 47 38.6 -0.1
FLN pmax pmax
comp=Z,13nm,0.9s,mb5.0
FLN La Foliniere 59.68 42 *eP* **P** **06 47 19.8 +0.1**
comp=Z,13nm,0.9s,mb5.0
FLN *epP* pP 06 47 38.6 -0.1
LFF La Frestale 59.71 46 *eP* **P** **06 47 20.0 +0.1**
WDC Whiskeytown Da 59.76 309 ⇑P **P** **06 47 19.0 -1.3**
baz=60
A07A Ashnola River, 59.78 319 ⇓P **P** **06 47 20.1 -0.3**
baz=60,SNR=16
GASB Alder Springs 59.78 308 ⇓P **P** **06 47 20.1 -0.5**
baz=60
J04A Umpqua Nationa 59.81 312 ⇓P **P** **06 47 20.5 -0.2**
baz=60
F05A White Salmon 59.82 315 ⇑P **P** **06 47 20.2 -0.4**
baz=60
O02C Red Bluff 59.90 308 ⇑P **P** **06 47 20.5 -0.8**
baz=60
ASR Mount Adams--S 59.96 315 P **P** **06 47 22.5 +0.9**
HOPS Hopland 59.99 307 ⇓P **P** **06 47 21.0 -1.0**
baz=60
YBH Yreka Blue Hor 60.04 310 ⇑P **P** **06 47 21.3 -0.9**
baz=60,SNR=14
M02C Callahan 60.10 310 ⇑P **P** **06 47 22.0 -0.7**
baz=60,SNR=8.8
H04A Detroit Lake 60.10 314 ⇑P **P** **06 47 22.0 -0.7**
baz=60
I04A Tendick Farm, 60.12 312 ⇑P **P** **06 47 22.2 -0.6**
baz=60
E05A Randle 60.15 316 ⇓P **P** **06 47 22.3 -0.7**
baz=60
TORD Torodi Ar. Bea 60.19 83 P **P** **06 47 22.1 -1.6**
comp=Z,24nm,0.8s,mb5.3,baz=285,slow=6.4,SNR=120
TORD pP pP 06 47 39.9 -2.8
comp=Z,3.8nm,0.7s,baz=290,slow=5.6,SNR=3.3
RJF Les Rejaudoux 60.31 46 *eP* **P** **06 47 24.0 -0.1**
comp=Z,17nm,0.8s,mb4.9
RJF Les Rejaudoux 60.31 46 *eP* **P** **06 47 24.0 -0.1**
RJF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
RJF Les Rejaudoux 60.31 46 *eP* **P** **06 47 24.0 -0.1**
comp=Z,8.7nm,0.8s,mb4.8
N02C Big Bar 60.37 309 ⇓P **P** **06 47 23.9 -0.6**
baz=60,SNR=11
RPW Rockport 60.37 318 *e*PKPdf **P** **06 47 22.8 -1.6**
KIPM Iron Peak 60.39 308 *e*PKPdf **P** **06 47 24.7 +0.1**
F04A Amboy 60.48 315 ⇑P **P** **06 47 24.9 -0.3**
baz=60
MTLF Montolieu 60.50 48 *eP* **P** **06 47 25.2 -0.1**
comp=Z,21nm,1.0s,mb4.8
MTLF *epP* pP 06 47 44.2 -0.2
MTLF Montolieu 60.50 48 *eP* **P** **06 47 25.2 -0.1**
MTLF *e**PP pP 06 47 44.2 -0.2
MTLF pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
MTLF Montolieu 60.50 48 *eP* **P** **06 47 25.2 -0.1**
comp=Z,10nm,1.0s,mb4.8
MTLF *epP* pP 06 47 44.2 -0.2
JCW Jim Creek 60.59 318 *e*PKPdf **P** **06 47 23.9 -2.0**
CAF Calviac 60.63 46 *eP* **P** **06 47 26.2 0.0**
comp=Z,16nm,0.6s,mb4.9
CAF *epP* pP 06 47 45.2 -0.1
CAF Calviac 60.63 46 *eP* **P** **06 47 26.2 0.0**
CAF *e**PP pP 06 47 45.2 -0.1
CAF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
CAF Calviac 60.63 46 *eP* **P** **06 47 26.2 0.0**
comp=Z,8.1nm,0.6s,mb4.9
CAF *epP* pP 06 47 45.2 -0.1
B05A Bryant 60.72 318 ⇓P **P** **06 47 25.7 -1.0**
baz=61
K02A Glendale 60.75 311 ⇑P **P** **06 47 25.5 -1.6**
baz=61
L02A Cave Junction 60.75 310 ⇓P **P** **06 47 25.8 -1.3**
baz=61
E04A Onalaska 60.81 316 ⇓P **P** **06 47 26.3 -1.0**
baz=61
J02A Umpqua 60.89 312 ⇓P **P** **06 47 26.8 -1.2**
baz=61
JCC Jacoby Creek 60.91 309 ⇓P **P** **06 47 27.5 -0.7**
baz=61
TCF Toulx Ste Croi 60.96 45 *eP* **P** **06 47 28.4 -0.1**
comp=Z,18nm,0.7s,mb4.9
TCF *epP* pP 06 47 47.3 -0.2
TCF Toulx Ste Croi 60.96 45 *eP* **P** **06 47 28.4 -0.1**
TCF *e**PP pP 06 47 47.3 -0.2
TCF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
TCF Toulx Ste Croi 60.96 45 *eP* **P** **06 47 28.4 -0.1**
comp=Z,8.9nm,0.7s,mb4.9
TCF *epP* pP 06 47 47.3 -0.2
G03A Yamhill 60.98 314 ⇑⇑P **P** **06 47 27.5 -1.1**
baz=61
M01C Crescent City 61.10 310 ⇑P **P** **06 47 27.9 -1.6**
baz=61
C04A Brinnon 61.18 317 ⇓P **P** **06 47 28.5 -1.4**
baz=61
HEBO Mount Hebo 61.29 314 *e*PKPdf **P** **06 47 31.9 +1.2**
YKA Yellowknife Ar 61.32 335 P **P** **06 47 29.5 -1.0**
comp=Z,18nm,0.7s,mb5.2,baz=106,slow=7.5,SNR=52
YKA pP pP 06 47 46.7 -3.0
comp=Z,12nm,0.5s,baz=108,slow=7.6,SNR=11
YKA Yellowknife Ar 61.32 335 P **P** **06 47 29.6 -1.0**
YKA pP pP 06 47 46.7 -3.0
E03A Lebam 61.37 315 ⇑P **P** **06 47 30.2 -1.1**
baz=61
PYM Petit Puy Mans 61.42 45 *eP* **P** **06 47 32.0 +0.4**
BGF Bois d'Agland 61.44 45 *eP* **P** **06 47 31.5 -0.2**
B04A Port Angeles 61.60 317 ⇓P **P** **06 47 31.7 -1.0**
baz=62
NLWA Neilton Lookou 61.72 316 ⇓P **P** **06 47 33.5 -0.1**
baz=62,SNR=6.2
LASF Ste Croix 61.78 47 *eP* **P** **06 47 34.5 +0.5**
comp=Z,16nm,1.0s,mb4.7
AVF Avril sur Loir 61.83 44 *eP* **P** **06 47 33.8 -0.5**
comp=Z,13nm,0.9s,mb4.7
AVF *epP* pP 06 47 52.9 -0.5
AVF Avril sur Loir 61.83 44 *eP* **P** **06 47 33.8 -0.5**
AVF *e**PP pP 06 47 52.9 -0.5
AVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
AVF Avril sur Loir 61.83 44 *eP* **P** **06 47 33.8 -0.5**
comp=Z,6.3nm,0.9s,mb4.7
AVF *epP* pP 06 47 52.9 -0.5
PLDF La Plantade 61.88 45 *eP* **P** **06 47 34.7 +0.1**
SSF Saint Saulge 61.97 44 *eP* **P** **06 47 34.8 -0.4**
comp=Z,20nm,0.8s,mb4.9
SSF Saint Saulge 61.97 44 *eP* **P** **06 47 34.8 -0.4**
SSF pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
SSF Saint Saulge 61.97 44 *eP* **P** **06 47 34.8 -0.4**
comp=Z,10.0nm,0.8s,mb4.9
SMF Signal de Mont 62.13 45 *eP* **P** **06 47 36.2 -0.1**
SMF *epP* pP 06 47 55.2 -0.3
LOR Lormes 62.24 44 *eP* **P** **06 47 36.6 -0.5**
comp=Z,25nm,0.8s,mb5.0
LOR *epP* pP 06 47 55.7 -0.5
LOR Lormes 62.24 44 *eP* **P** **06 47 36.6 -0.5**
LOR *e**PP pP 06 47 55.7 -0.5
LOR pmax pmax
comp=Z,13nm,0.8s,mb5.0
LOR Lormes 62.24 44 *eP* **P** **06 47 36.6 -0.5**
comp=Z,13nm,0.8s,mb5.0
LOR *epP* pP 06 47 55.7 -0.5
VIVF Saint-Julien-l 62.46 47 *eP* **P** **06 47 39.2 +0.7**
comp=Z,15nm,0.8s,mb4.8
VIVF *epP* pP 06 47 58.3 +0.6
VIVF Saint-Julien-l 62.46 47 *eP* **P** **06 47 39.2 +0.7**
VIVF *e**PP pP 06 47 58.3 +0.6
VIVF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
VIVF Saint-Julien-l 62.46 47 *eP* **P** **06 47 39.2 +0.7**
comp=Z,7.6nm,0.8s,mb4.8
VIVF *epP* pP 06 47 58.3 +0.6
BAIF Baives 62.95 41 *eP* **P** **06 47 41.7 0.0**
BAIF *epP* pP 06 48 00.5 -0.4
SMRF Simiane la Rot 63.00 48 *eP* **P** **06 47 42.8 +0.7**
SMRF *epP* pP 06 48 02.0 +0.7
MEZF Maizieres J'vi 63.23 43 *eP* **P** **06 47 43.4 -0.2**
comp=Z,31nm,0.6s,mb5.1
MEZF *epP* pP 06 48 02.4 -0.4
MEZF Maizieres J'vi 63.23 43 *eP* **P** **06 47 43.4 -0.2**
comp=Z,31nm,0.6s,mb5.4
MEZF *epP* pP 06 48 02.4 -0.4
ORIF Oris-en-Rattie 63.32 47 *eP* **P** **06 47 45.0 +0.8**
comp=Z,15nm,1.1s,mb4.6
ORIF Oris-en-Rattie 63.32 47 *eP* **P** **06 47 45.0 +0.8**
ORIF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
ORIF Oris-en-Rattie 63.32 47 *eP* **P** **06 47 45.0 +0.8**
comp=Z,7.7nm,1.1s,mb4.5
GIVF Givet 63.35 41 *eP* **P** **06 47 43.9 -0.4**
LMR La Mourre 63.61 49 *eP* **P** **06 47 45.9 -0.3**
CABF La Chapelle 63.66 45 *eP* **P** **06 47 46.5 0.0**
CABF *epP* pP 06 48 05.4 -0.3
FRF La Foret Royal 63.73 48 *eP* **P** **06 47 46.7 -0.3**
THEF They Montfort 63.81 43 *eP* **P** **06 47 46.9 -0.5**
MBDF Montbardon 63.93 47 *eP* **P** **06 47 48.9 +0.6**
comp=Z,12nm,0.8s,mb4.5
MBDF *epP* pP 06 48 08.0 +0.5
MBDF Montbardon 63.93 47 *eP* **P** **06 47 48.9 +0.6**
MBDF *e**PP pP 06 48 08.0 +0.5
MBDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
MBDF Montbardon 63.93 47 *eP* **P** **06 47 48.9 +0.6**
comp=Z,6.2nm,0.8s,mb4.5
MBDF *epP* pP 06 48 08.0 +0.5
LPL La Plagne 63.98 46 *eP* **P** **06 47 49.4 +0.8**
comp=Z,20nm,0.9s,mb4.6
LPL *epP* pP 06 48 08.5 +0.7
LPL La Plagne 63.98 46 *eP* **P** **06 47 49.4 +0.8**
LPL *e**PP pP 06 48 08.5 +0.7
LPL pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
LPL La Plagne 63.98 46 *eP* **P** **06 47 49.4 +0.8**
comp=Z,9.8nm,0.9s,mb4.6
LPL *epP* pP 06 48 08.5 +0.7
LPG La Plagne 63.99 46 *eP* **P** **06 47 49.6 +0.9**
WLF Walferdange 64.12 41 *epP* pP 06 48 08.9 +0.2
LOMF Lomont 64.26 44 *eP* **P** **06 47 52.4 +2.0**
SBF Sospel 64.32 48 *eP* **P** **06 47 51.0 +0.1**
HINF Hinteralfeld 64.33 44 *eP* **P** **06 47 50.0 -0.8**
comp=Z,17nm,1.0s,mb4.5
HINF *epP* pP 06 48 09.1 -1.0
HINF Hinteralfeld 64.33 44 *eP* **P** **06 47 50.0 -0.8**
HINF *e**PP pP 06 48 09.1 -1.0
HINF pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
HINF Hinteralfeld 64.33 44 *eP* **P** **06 47 50.0 -0.8**
comp=Z,8.4nm,1.0s,mb4.5
HINF *epP* pP 06 48 09.1 -1.0
MOF Molkenrain 64.52 44 *eP* **P** **06 47 52.3 +0.2**
ECH Echery 64.58 43 *eP* **P** **06 47 52.0 -0.5**
CDF Champ du Feu 64.69 43 *eP* **P** **06 47 52.7 -0.4**
RUP Ruppelstein 64.71 42 *eP* **P** **06 47 53.5 +0.2**
ABH Alteburg 65.05 41 *eP* **P** **06 47 55.8 +0.3**
BUG Bochum--Univer 65.09 40 *epP* pP 06 48 14.8 -0.2
LANF Langenberg 65.10 42 *eP* **P** **06 47 55.1 -0.7**
FELD Feldberg im Sc 65.11 44 *eP* **P** **06 47 55.2 -0.7**
BFO Black Forest 65.37 43 *epP* pP 06 48 16.5 -0.4
BFO Black Forest 65.37 43 *epP* pP 06 48 16.5 -0.4
PGF Pioggiola 65.37 50 *eP* **P** **06 47 57.4 -0.3**
comp=Z,19nm,0.9s,mb4.7
PGF *epP* pP 06 48 16.5 -0.5
PGF Pioggiola 65.37 50 *eP* **P** **06 47 57.4 -0.3**
PGF *e**PP pP 06 48 16.5 -0.5
PGF pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
PGF Pioggiola 65.37 50 *eP* **P** **06 47 57.4 -0.3**
comp=Z,9.7nm,0.9s,mb4.6
PGF *epP* pP 06 48 16.5 -0.5
KEST Kesra 65.47 57 P **P** **06 47 57.4 -1.1**
comp=Z,3.5nm,0.8s,mb4.2,baz=174,slow=3.5,SNR=6.3
IBBN Ibbenburen 65.52 39 *epP* pP 06 48 17.7 -0.1
STU Stuttgart 65.99 43 *eP* **P** **06 48 02.2 +0.6**
comp=Z,27nm,0.6s,mb5.2
STU *epP* pP 06 48 20.8 -0.1
DAVA Damuels 66.32 44 P pP 06 48 23.4 +0.4
comp=Z,21nm,0.8s
DAVA Damuels 66.32 44 ⇑*iP* **P** **06 48 04.2 +0.5**
comp=Z,12nm,0.8s,mb4.8
DAVA ⇓*ipP* pP 06 48 23.4 +0.4
comp=Z,21nm,0.8s
DAVA Damuels 66.32 44 P **P** **06 48 04.4 +0.7**
UBBA Unterbreizbach 66.72 41 *epP* pP 06 48 25.6 +0.1
FETA Feichten 66.87 45 P pP 06 48 27.2 +0.6
comp=Z,29nm,0.9s
FETA Feichten 66.87 45 ⇑*iP* **P** **06 48 07.4 +0.2**
comp=Z,21nm,0.9s,mb5.0
FETA ⇑*ipP* pP 06 48 27.2 +0.6
comp=Z,29nm,0.9s
NRDL Niedersach Rie 66.97 39 *epP* pP 06 48 27.2 +0.1
CLZ Clausthal 67.06 40 *eP* **P** **06 48 08.8 +0.5**
CLZ *e**PP pP 06 48 27.5 -0.2
CLZ pmax pmax
comp=Z,28nm,1.3s,mb4.9
CLZ Clausthal 67.06 40 *eP* **P** **06 48 08.8 +0.5**
comp=Z,28nm,1.3s,mb4.9
CLZ *epP* pP 06 48 27.5 -0.2
MOTA Moosalm 67.15 44 P pP 06 48 28.6 +0.2
comp=Z,19nm,1.1s
MOTA Moosalm 67.15 44 ⇑*iP* **P** **06 48 08.6 -0.3**
comp=Z,5.8nm,0.9s,mb4.4
MOTA ⇑*ipP* pP 06 48 28.6 +0.2
comp=Z,19nm,1.1s
BSEG Bad Segeberg 67.27 37 *eP* **P** **06 48 10.9 +1.3**
BSEG *e**PP pP 06 48 28.9 -0.1
BSEG pmax pmax
comp=Z,28nm,1.2s,mb5.0
BSEG Bad Segeberg 67.27 37 *eP* **P** **06 48 10.9 +1.3**
comp=Z,28nm,1.2s,mb5.0
BSEG *epP* pP 06 48 28.9 -0.1
GRA1 Grafenberg Arr 67.40 42 *epP* pP 06 48 29.8 -0.1
GRF Grafenberg Arr 67.40 42 *epP* pP 06 48 29.8 -0.1
comp=Z,20nm,1.1s
GRF Grafenberg Arr 67.40 42 *epP* pP 06 48 29.8 -0.1
MANZ Manzenberg 67.99 42 *eP* **P** **06 48 14.5 +0.3**
comp=Z,33nm,1.4s,mb5.0
MANZ *epP* pP 06 48 33.7 +0.1
ROTZ Rotzenmuhle 68.04 42 *epP* pP 06 48 34.0 0.0
ABTA Abfaltersbach 68.08 45 ⇑*iP* **P** **06 48 15.0 +0.1**
comp=Z,5.6nm,0.6s,mb4.6
TANN Tannenbergstha 68.25 41 *epP* pP 06 48 35.0 -0.3
WET Wettzell 68.44 43 *eP* **P** **06 48 16.5 -0.6**
WET *e**PP pP 06 48 35.9 -0.6
WET pmax pmax
comp=Z,32nm,1.7s,mb4.9
WET Wettzell 68.44 43 *eP* **P** **06 48 16.5 -0.6**
comp=Z,32nm,1.7s,mb4.9
WET *epP* pP 06 48 35.9 -0.6
CLL Collm 68.65 40 *epP* pP 06 48 37.7 -0.1
CLL Collm 68.65 40 *eP* **P** **06 48 19.0 +0.7**
CLL *epP* pP 06 48 38.0 +0.2
comp=Z,20nm,0.9s
KBA Koelnbreinsper 68.66 45 P **P** **06 48 19.0 +0.5**
NB2 NORSAR Subarra 68.76 30 P **P** **06 48 19.7 +0.9**
comp=Z,35nm,1.1s,mb5.1,baz=260,slow=6.5
NOA NORSAR Array B 68.76 30 P **P** **06 48 17.5 -1.3**
comp=Z,4.0nm,0.8s,mb4.3,baz=261,slow=6.0,SNR=14
NOA *pP* pP 06 48 37.0 -1.3
comp=Z,24nm,1.1s,baz=262,slow=6.3,SNR=14
NOA NORSAR Array B 68.76 30 P **P** **06 48 17.5 -1.3**
NOA *pP* pP 06 48 37.0 -1.3
MYKA Terra Mystica 68.85 45 P pP 06 48 39.1 0.0
comp=Z,24nm,1.1s
MYKA Terra Mystica 68.85 45 ⇓*iP* **P** **06 48 19.5 -0.2**
comp=Z,11nm,0.9s,mb4.7
MYKA ⇑*ipP* pP 06 48 39.1 0.0
comp=Z,24nm,1.1s
KHC Kasperske Hory 68.90 43 *eP* **P** **06 48 19.4 -0.5**
KHC *epP* pP 06 48 39.2 -0.2
GEC2 GERESS Array S 68.97 43 *eP* **P** **06 48 19.8 -0.5**
GEC2 *e**PP pP 06 48 39.5 -0.3
GEC2 pmax pmax
comp=Z,13nm,1.0s,mb4.7
GEC2 GERESS Array S 68.97 43 *eP* **P** **06 48 19.8 -0.5**
comp=Z,13nm,1.0s,mb4.7
GEC2 *epP* pP 06 48 39.5 -0.3
GERES GERESS Array B 68.97 43 P **P** **06 48 18.9 -1.4**
comp=Z,3.3nm,0.8s,mb4.2,baz=266,slow=5.4,SNR=9.6
GERES *pP* pP 06 48 38.1 -1.7
comp=Z,4.2nm,0.6s,baz=260,slow=4.5,SNR=6.6
BRG Berggiesshubel 69.22 41 *epP* pP 06 48 41.0 -0.3
BRG Berggiesshubel 69.22 41 *eP* pP 06 48 41.4 +0.1
comp=Z,20nm,1.1s
OBKA Obir 69.48 45 P pP 06 48 42.2 -0.8
comp=Z,32nm,1.5s
OBKA Obir 69.48 45 ⇑*iP* **P** **06 48 23.1 -0.4**
comp=Z,9.3nm,0.9s,mb4.6
OBKA ⇑*ipP* pP 06 48 42.2 -0.8
comp=Z,32nm,1.5s
OBKA Obir 69.48 45 P **P** **06 48 25.6 +2.1**
PRU Pruhonice 69.56 42 *eP* **P** **06 48 23.1 -0.9**
PRU *ex* x 06 48 43.5
ARSA Arzberg 70.15 45 P **P** **06 48 27.8 +0.1**
UPC Upice 70.52 41 *eP* **P** **06 48 29.9 +0.1**
UPC *epP* pP 06 48 49.0 -0.4
DPC Dobruska-Polom 70.72 41 *eP* **P** **06 48 30.9 -0.1**
DPC *epP* pP 06 48 50.5 -0.1
VRAC Vranov 70.88 42 ⇑*iP* **P** **06 48 32.8 +0.7**
VRAC Vranov 70.88 42 ⇑P **P** **06 48 32.8 +0.8**
ZST Bratislava 71.22 44 *eP* **P** **06 48 34.3 +0.2**
ZST *e* pP 06 48 53.5 -0.2
ZST pmax pmax
comp=Z,20nm,1.3s,mb4.8
ZST Bratislava 71.22 44 *eP* **P** **06 48 34.3 +0.2**
comp=Z,20nm,1.3s,mb4.8
ZST *e* pP 06 48 53.5 -0.2
MODS Modra-Piesok 71.33 43 *eP* **P** **06 48 35.2 +0.4**
MODS *epP* pP 06 48 54.4 0.0
MORC Moravsky Berou 71.50 42 ⇓*iP* **P** **06 48 36.7 +0.9**
MORC Moravsky Berou 71.50 42 ⇓P **P** **06 48 36.7 +0.9**
PKSM Moragy 72.31 46 ⇑*iP* **P** **06 48 40.8 +0.1**
PKSM Moragy 72.31 46 ⇑P **P** **06 48 40.8 0.0**
VYHS Vyhne 72.37 43 *eP* **P** **06 48 40.6 -0.4**
VYHS *e* pP 06 49 00.6 0.0
VYHS pmax pmax
comp=Z,9.0nm,1.7s,mb4.3
VYHS Vyhne 72.37 43 *eP* **P** **06 48 40.6 -0.4**
comp=Z,8.8nm,1.7s,mb4.3
VYHS *e* pP 06 49 00.6 0.0
LIKS Likavka 72.53 43 *epP* pP 06 49 03.4 +1.8
KECS Kecovo 73.47 43 *e* PcP 06 49 02.4 -0.9
KECS Kecovo 73.47 43 *e* PcP 06 49 02.4 -0.9
STHS Stebnicka Huta 73.92 42 *e* pP 06 49 11.4 +1.6
DRGR 75.08 45 ⇓*iP* **P** **06 48 57.0 0.0**
DRGR 75.08 45 ⇓P **P** **06 48 57.0 +0.1**
ARCES ARCESS Array B 75.34 21 P **P** **06 48 58.9 +1.0**
comp=Z,11nm,0.7s,mb4.7,baz=273,slow=4.7,SNR=23
ARCES *pP* pP 06 49 16.8 -0.9
comp=Z,46nm,0.8s,baz=277,slow=4.8,SNR=21
ARCES ARCESS Array B 75.34 21 P **P** **06 48 58.9 +0.9**
ARCES *pP* pP 06 49 16.8 -0.9
OUL Oulu 75.65 26 P **P** **06 49 03.0 +3.2**
KEV Kevo 75.86 21 *ep* **P** **06 49 01.3 +0.4**
KAF Kangasniemi 76.00 29 *ep* **P** **06 48 57.3 -4.6**
COLA College 76.14 334 *i* P **P** **06 49 01.4 -1.2**
BURAR Bucovina Array 76.70 44 ⇓*iP* **P** **06 49 06.5 +0.4**
MLR Muntele Rosu 77.46 46 ⇓*iP* **P** **06 49 15.0 +4.5**
JOF Joensuu 78.23 28 *ep* **P** **06 49 15.1 +0.7**
AKASG Malin Array Be 78.90 40 P **P** **06 49 17.9 -0.3**
comp=Z,0.7nm,0.4s,mb3.9,baz=276,slow=3.7,SNR=4.9
AKASG *pP* pP 06 49 36.5 -1.6
comp=Z,5.5nm,0.7s,baz=263,slow=4.8,SNR=6.6
AKASG Malin Array Be 78.90 40 *i* P **P** **06 49 18.7 +0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 78.90 40 P **P** **06 49 17.9 -0.4**
AKASG *pP* pP 06 49 36.5 -1.6
KDAK Kodiak Island 79.24 327 P **P** **06 49 20.3 +0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,13nm,0.8s,mb4.8,baz=89,slow=5.9,SNR=5.2						
KDAK				pP	pP	06 49 38.1	-1.8
	comp=Z,30nm,0.6s,baz=78,slow=3.7,SNR=9.8						
OBN	**Obninsk**	**82.39**	**35**	⇓*e*P	**P**	**06 49 37.1**	**+0.2**
OBN				*PP	pP	06 49 57.3	+0.5
OBN				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
VSR	**Storozhevoye**	**84.92**	**39**	*e*P	**P**	**06 49 49.7**	**-0.2**
VSR				*e**PP	pP	06 50 09.7	-0.2
VSR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
VSR				pmax	pmax		
	comp=N,5.0nm,1.0s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.0s						
KIV	**Kislovodsk**	**89.40**	**45**	P	**P**	**06 50 13.0**	**+1.3**
KIV				*i* *PP	pP	06 50 33.1	+1.2
KIV				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
VNA1	**Neumayer--Stat**	**91.84**	**165**	*e*P	**P**	**06 50 23.2**	**+0.9**
VNA1				*e*		06 50 28.0	
VNA1				*e*		06 50 31.4	
VNA3	**Neumayer Olymp**	**91.88**	**165**	*e*P	**P**	**06 50 22.6**	**+0.1**
VNA3				*e*		06 50 26.8	
VNA3				*e*	pP	06 50 46.5	+3.8
VNA3				*e*		06 50 51.8	
GNI	**Garni**	**92.14**	**48**	⇑*e*P	**P**	**06 50 25.9**	**+1.4**
GNI				pmax	pmax		
	comp=Z,10.0nm,1.5s						
VNA2	**Neumayer--Watz**	**92.24**	**165**	*e*P	**P**	**06 50 24.8**	**+0.7**
VNA2				*e*		06 50 28.7	
VNA2				*e*		06 50 32.2	
VNA2				*e*	pP	06 50 47.5	+3.1
VNA2				*e*		06 50 51.9	
BOSA	**Boshof**	**92.98**	**119**	P	**P**	**06 50 28.8**	**+0.3**
	comp=Z,3.6nm,0.7s,mb4.8,baz=308,slow=2.2,SNR=5.7						
SNAA	**Sanae**	**93.86**	**164**	*e*P	**P**	**06 50 31.8**	**+0.2**
SNAA				*e*		06 50 35.8	
SNAA				*e*		06 50 40.2	
SNAA				*e*	pP	06 50 53.0	+1.1
SNAA				*e*		06 50 57.5	
SNAA	**Sanae**	**93.86**	**164**	*i* P	**P**	**06 50 30.5**	**-1.1**
CIT	**Chita**	**113.81**	**4**	*e*P	Pdif	06 52 08.4	+7.1
WMQ	**Urumqi**	**115.29**	**25**	*e*PKP	PKPdf	06 55 54.0	-2.3
MDJ	**Mudanjiang**	**120.72**	**352**	PKP	PKPdf	06 56 06.1	-0.6
MDJ				LR	LR		
	comp=N,483nm,32.2s						
MDJ				LR	LR		
	comp=Z,1μm,33.8s						
GTA	**Gaotai**	**123.53**	**18**	*e*PKP	PKPdf	06 56 12.5	+0.3
GTA				PP	PP	06 57 57.5	+4.2
GTA				SS	SS	07 14 32.3	-1.8
GTA				PP	PP		
	comp=Z,1μm,7.4s						
GTA				LR	LR		
	comp=N,437nm,19.0s						
GTA				LR	LR		
	comp=E,306nm,19.3s						
GTA				LR	LR		
	comp=Z,663nm,20.8s						
HHC	**Hu-ho-hao-te**	**124.69**	**7**	*e*PKP	PKPdf	06 56 06.9	-7.5
HHC				XPKP		06 56 37.0	
HHC				PKS		06 59 42.3	
HHC				PP	PP		
	comp=Z,857nm,8.8s						
HHC				LR	LR		
	comp=N,373nm,20.3s						
HHC				LR	LR		
	comp=E,334nm,18.5s						
HHC				LR	LR		
	comp=Z,536nm,19.4s						
MAT	**Matsushiro**	**126.52**	**341**	PKP	PKPdf	06 56 18.0	-0.1
MJAR	**Matsushiro Arr**	**126.52**	**341**	PKP	PKPdf	06 56 17.9	-0.2
	comp=Z,1.0nm,0.5s,baz=209,slow=0.8,SNR=4.3						
MJAR				pPKP	pPKPdf	06 56 37.0	-2.1
	comp=Z,2.8nm,0.6s,baz=332,slow=0.5,SNR=4.8						
MJAR	**Matsushiro Arr**	**126.52**	**341**	PKP	PKPdf	06 56 17.9	-0.1
MJAR				pPKP	pPKPdf	06 56 37.0	-2.1
LZH	**Lanzhou**	**127.78**	**16**	*e*PKP	PKPdf	06 56 21.0	+0.5
LZH				XPKP		06 56 49.8	
LZH				*e*PP	PP	06 58 26.0	+4.5
LZH				SKKS	SKKSac	07 05 10.5	-3.2
LZH				*e*SS	SS	07 15 28.6	+1.3
LZH				PP	PP		
	comp=Z,127nm,8.6s						
LZH				LR	LR		
	comp=N,225nm,18.2s						
LZH				LR	LR		
	comp=Z,317nm,20.1s						
KSRS	**Korea Array**	**127.99**	**352**	PKP	PKPdf	06 56 20.0	-0.8
	comp=Z,1.0nm,0.5s,baz=64,slow=2.9,SNR=4.2						
KSRS				pPKP	pPKPdf	06 56 40.8	-1.1
	comp=Z,1.0nm,0.4s,baz=340,slow=1.9,SNR=3.4						
CD2	**Chengdu**	**132.60**	**19**	*e*PKP	PKPdf	06 56 28.9	-0.9
CD2				XPKP		06 56 55.3	
CD2				PP	PP	06 58 57.3	+4.4
CD2				PKS		07 00 03.5	
CD2				SKS	SKSdf	07 03 28.6	-6.3
CD2				SKKS	SKKSac	07 05 37.4	-6.3
CD2				SS	SS	07 16 25.5	-1.0
CD2				PP	PP		
	comp=Z,120nm,10.2s						
CD2				LR	LR		
	comp=N,160nm,21.4s						
CD2				LR	LR		
	comp=Z,130nm,18.4s						
KMI	**Kunming**	**137.56**	**23**	PKP	PKPdf	06 56 37.4	-1.8
KMI				XPKP		06 57 08.0	
KMI				PP	PP	06 59 27.9	+3.5
KMI				SS	SS	07 17 25.3	-1.1
KMI				LR	LR		
	comp=N,223nm,20.8s						
KMI				LR	LR		
	comp=E,198nm,20.0s						
KMI				LR	LR		
	comp=Z,310nm,17.8s						
GYA	**Guiyang**	**137.64**	**17**	PDIF	Pdif	06 53 42.8	-4.4
GYA				PKP	PKPdf	06 56 36.3	-3.0
GYA				XPKP		06 57 04.4	
GYA				PP	PP	06 59 24.6	-0.1
GYA				PKS		07 00 11.3	
GYA				SKS	SKSdf	07 03 36.4	-7.5
GYA				SKKS	SKKSac	07 06 08.9	-5.3
GYA				SS	SS	07 17 23.9	-3.1
GYA				PP	PP		
	comp=Z,240nm,7.6s						
CMAR	**Chiang Mai Arr**	**141.66**	**33**	PKP	PKPdf	06 56 45.7	-1.1
	comp=Z,0.9nm,0.3s,baz=318,slow=3.8,SNR=7.4						
CNB	**Canberra Magne**	**146.00**	**227**	*e*P	PKPdf	06 56 54.6	+0.7
CNB				*e*		06 57 11.6	
ARMA	**Armidale**	**146.43**	**236**	*e*P	PKPdf	06 56 56.5	+1.7
ARMA				*e*		06 57 17.4	
TOO	**Toolangi**	**147.30**	**220**	*e*P	PKPdf	06 56 58.7	+2.7
TOO				*e*		06 57 17.6	
STKA	**Stephens Creek**	**153.29**	**225**	*e*P	PKPdf	06 57 05.8	+0.3
	comp=Z,5.5nm,0.7s						
STKA	**Stephens Creek**	**153.29**	**225**	PKPbc	PKPbc	06 57 13.4	+0.3
	comp=Z,6.6nm,0.7s,baz=19,slow=3.3,SNR=8.7						
STKA				pPKP	pPKPdf	06 57 24.9	-1.8
	comp=Z,8.4nm,1.1s,baz=318,slow=4.7,SNR=3.3						
STKA				pPKPbc	pPKPbc	06 57 32.5	-1.6
	comp=Z,7.9nm,0.6s,baz=58,slow=3.8,SNR=5.6						
CTA	**Charters Tower**	**153.89**	**253**	PKiKP	PKiKP	06 57 14.2	-0.5
	comp=Z,1.4nm,0.4s,baz=126,slow=3.2,SNR=3.8						
CTA				pPKP	pPKPdf	06 57 26.7	-1.1
	comp=Z,9.0nm,0.9s,baz=116,slow=3.3,SNR=5.7						
WRA	**Warramunga Arr**	**164.81**	**246**	PKP	PKPdf	06 57 17.9	-1.4
	comp=Z,3.1nm,1.0s,baz=74,slow=0.5,SNR=12						
WRA				pPKP	pPKPdf	06 57 37.8	-2.7
	comp=Z,2.7nm,0.9s,baz=77,slow=0.3,SNR=6.0						
WRA				PKPab	PKPab	06 58 14.7	-0.8
	comp=Z,2.9nm,0.7s,baz=103,slow=4.1,SNR=19						
WRA				pPKPab	pPKPab	06 58 32.7	-3.1
	comp=Z,2.7nm,0.6s,baz=106,slow=4.0,SNR=5.9						
WRA	**Warramunga Arr**	**164.81**	**246**	PKIKP	PKPdf	06 57 17.9	-1.4
WRA						06 57 37.8	
WRA						06 58 14.7	
FITZ	**Fitzroy Crossi**	**173.04**	**236**	PKP	PKPdf	06 57 23.2	-1.4
	comp=Z,1.2nm,0.8s,baz=290,slow=11,SNR=4.1						

IDC 13 06:40:14.4±3.5**, 326S×10217E, h0**km**, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.7**/17**, mbtmp3.8**/4**, Error ellipse: s-maj=145.9km s-min=28.7km az=54.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
WRA	**Warramunga Arr**	**35.49**	**120**	P	P	06 47 12.9	-0.1
	0.4nm,0.6s,baz=304,slow=8.8,SNR=5.0						
SONM	**Songino Array**	**51.01**	**4**	P	P	06 49 19.4	+1.3
	1.8nm,0.6s,baz=184,slow=9.3,SNR=9.9						
MKAR	**Makanchi Array**	**52.84**	**343**	P	P	06 49 31.1	-0.6
	0.8nm,0.6s,baz=148,slow=7.8,SNR=6.5						
ZALV	**Zalesovo Beam**	**58.82**	**348**	P	P	06 50 14.2	-0.2
	0.8nm,0.3s,baz=177,slow=5.6,SNR=4.5						
TXAR	**Lajitas Array**	**144.30**	**41**	PKP	PKPdf	06 59 51.9	-1.4
	0.2nm,0.6s,baz=284,slow=1.4,SNR=4.8						

TRN 13 06:41:52.6, 1435N×6037W, h3km**, M4.5**(FDF)**, 4C-1D, Windward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
SLW	**Petit Monier**	**0.65**	**239**	⇑*i*P	Pg	06 42 09.3	+4.3
SLW				⇑*i*S	Sg	06 42 19.2	+5.7
BIM	**Bigot**	**0.70**	**283**	⇑*i*P	Pg	06 42 11.3	+5.2
BIM				⇑*i*S	Sg	06 42 23.3	+8.0
FDF	**Fort de France**	**0.85**	**296**	*e*P	Pg	06 42 13.2	+4.3
FDF				*e*S	Sg	06 42 26.5	+6.6
MGG	**Marie-Galante**	**1.81**	**330**	⇓*i*P	Pn	06 42 26.5	+1.8
MGG	**Marie-Galante**	**1.81**	**330**	*e*P	Sn	06 42 49.6	+1.5
TBG	**Guadaloupe-3**	**1.94**	**320**	*e*P	Pn	06 42 29.2	+2.7
TBG	**Guadaloupe-3**	**1.94**	**320**	*e*P	Sn	06 42 52.7	+1.4
SCG	**Saint Claude**	**2.10**	**323**	*e*P	Pn	06 42 30.8	+2.2
BCG	**Bois Riant Cap**	**2.10**	**325**	*e*P	Pn	06 42 30.8	+2.0

*ISCJB **13** 07:02:55.7±1.5, 45S±0.1×131.1E±02, h33km, mb3.8/2, Error ellipse: s-maj=29.7km s-min=13.8km az=150.4*
*NEIC **13** 07:02:57.6±1.5, 446S×131.16E, h35km, Error ellipse: s-maj=30.0km s-min=13.9km az=62.0*
*IDC **13** 07:03:03.2±11.0, 471S×13072E, h77km±110km, mb3.6/2, mb1 3.8/5, mb1mx3.5/15, mbtmp3.6/5, ML3.7/3, MS4.3/1, Ms1 4.3/1, ms1mx3.8/20, Error ellipse: s-maj=127.5km s-min=30.8km az=52.0*
ISC 13 07:03:02.9±3.2**, 48S**±02×**1308E**±03**, h85**km±27km**, n8, $\sigma 1^{s}59$**/8**, mb3.7**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
BATI	**Baumata**	**8.88**	**233**	LR	LR	07 08 52.1	
	comp=Z,2μm,20.6s,baz=60,slow=39						
KAPI	**Kappang**	**11.02**	**269**	P	**Pn**	**07 05 36.6**	**-1.1**
	1.2nm,0.3s,baz=154,slow=16,SNR=5.8						
FITZ	**Fitzroy Crossi**	**14.14**	**201**	*e*P	**Pn**	**07 06 22.9**	**+3.6**
	2.1nm,0.4s						
FITZ	**Fitzroy Crossi**	**14.14**	**201**	P	**Pn**	**07 06 21.2**	**+2.0**
	0.2nm,0.3s,baz=38,slow=10,SNR=14						
FITZ				S	Sx	07 09 05.0	
	0.1nm,0.3s,baz=131,slow=22,SNR=2.2						
WRA	**Warramunga Arr**	**15.42**	**167**	P	**Pn**	**07 06 36.0**	**+0.3**
	0.3nm,0.3s,baz=344,slow=13,SNR=16						
WRA				S	Sx	07 09 33.4	
	0.2nm,0.3s,baz=355,slow=22,SNR=4.1						
WB2	**Warramunga Arr**	**15.42**	**167**	*e*P	**Pn**	**07 06 35.5**	**-0.3**
WB2				*e*S	**S**	**07 09 36.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**39.01**	**307**	P	**P**	**07 10 23.1**	**+1.7**
	0.7nm,0.4s,mb3.8,baz=138,slow=6.9,SNR=4.7						
MKAR	**Makanchi Array**	**66.86**	**326**	P	**P**	**07 13 44.8**	**-1.1**
	0.4nm,0.4s,mb3.6,baz=127,slow=7.9,SNR=4.4						

*ISCJB **13** 07:10:03.8±0.5, 3127N±002×3542E±005, h9km±3km, Error ellipse: s-maj=6.7km s-min=2.5km az=11.6*
*CSEM **13** 07:10:03.0±0.1, 3133N×3530E, h2km, ML3.2, Error ellipse: s-maj=4.7km s-min=2.6km az=112.0*
*GII **13** 07:10:04.1±0.3, 3128N×3539E, h11km±1km, ML2.5/9, Mw2.1/10*
*HLW **13** 07:10:07.1, 31.15N×3522E, h10km, Mb3.0*
ISC 13 07:10:04.4±0.5**, 3127N**±002×**3542E**±005**, h10**km±3km**, n29,** $\sigma 0^{s}74$**/47, 1C-4D, Dead Sea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
MZDA	**Masada**	**0.06**	**307**	Pg	**Pg**	**07 10 06.4**	**-0.2**
MZDA				Sg	**Sg**	**07 10 08.0**	**-0.1**
YTIR	**Yattir**	**0.28**	**289**	Pg	**Pg**	**07 10 10.1**	**+0.1**
YTIR				Sg	**Sg**	**07 10 14.5**	**+0.8**
DSI	**Dead Sea**	**0.30**	**353**	Pg	**Pg**	**07 10 10.6**	**+0.1**
DSI				Sg	**Sg**	**07 10 15.5**	**+1.0**
RTMI	**Retamim**	**0.66**	**251**	Pg	**Pg**	**07 10 17.2**	**-0.1**
RTMI				Sg	**Sg**	**07 10 26.9**	**+1.0**
ZFRI	**Zfri**	**0.74**	**196**	Pg	**Pg**	**07 10 18.9**	**0.0**
ZFRI				Sg	**Sg**	**07 10 29.4**	**+0.9**
RMNI	**Mount Ramon**	**0.88**	**220**	Pg	**Pg**	**07 10 21.1**	**-0.3**
KZIT	**Kziot**	**0.95**	**248**	Pg	**Pg**	**07 10 22.2**	**-0.5**
KZIT				Sg	**Sg**	**07 10 35.6**	**+0.5**
HMDT	**Nahal Hemdat**	**0.98**	**5**	Pg	**Pg**	**07 10 22.5**	**-0.8**
HMDT				Sg	**Sg**	**07 10 37.0**	**+0.8**
PRNI	**Paran**	**0.98**	**201**	Pg	**Pg**	**07 10 23.3**	**-0.1**
PRNI				Sg	**Sg**	**07 10 37.1**	**+0.9**
SLTI	**Sal'it**	**1.02**	**342**	Pg	**Pg**	**07 10 23.1**	**-1.0**
SLTI				Sg	**Sg**	**07 10 37.5**	**+0.2**
MMLI	**Mount Malkishu**	**1.16**	**0**	Pg	**Pg**	**07 10 25.7**	**-1.1**
MMLI				Sg	**Sg**	**07 10 41.8**	**-0.2**
HRFI	**Mount Harif**	**1.27**	**195**	Pg	**Pg**	**07 10 28.1**	**-0.9**
HRFI				Sg	**Sg**	**07 10 45.6**	**+0.2**
KRMI	**Paran Flat**	**1.30**	**208**	Pg	**Pg**	**07 10 28.4**	**-1.0**
KRMI				Sg	**Sg**	**07 10 45.7**	**-0.5**
OFRI	**'Ofer**	**1.40**	**345**	Pn	**Pn**	**07 10 29.9**	**0.0**
HRSH	**Kfar Ka'horesh**	**1.43**	**355**	⇑P	**Pn**	**07 10 30.5**	**+0.1**
HRSH				S	**Sn**	**07 10 47.5**	**-1.7**
RSH		**1.49**	**258**	P	**Pn**	**07 10 30.5**	**-0.7**
RSH				S	**Sn**	**07 10 47.5**	**-3.2**
MBRI	**Mt Berech**	**1.54**	**197**	Pn	**Pn**	**07 10 31.7**	**-0.2**
MBRI				Sn	**Sn**	**07 10 52.8**	**+0.9**
AQBJ	**Aqaba**	**1.57**	**192**	Pn	**Pn**	**07 10 32.8**	**+0.4**
EIL	**Elat**	**1.65**	**194**	Pn	**Pn**	**07 10 33.4**	**0.0**
EIL				Sn	**Sn**	**07 10 56.0**	**+1.4**
MMC6	**Mount Meron ar**	**1.73**	**359**	Pn	**Pn**	**07 10 34.6**	**0.0**
KSHT	**Keshet**	**1.74**	**11**	Pn	**Pn**	**07 10 35.1**	**+0.4**
MMA0	**Mount Meron ar**	**1.74**	**360**	Pn	**Pn**	**07 10 35.1**	**+0.5**
MMA0				Sn	**Sn**	**07 10 58.4**	**+1.6**
MMC2	**Mount Meron ar**	**1.75**	**360**	Pn	**Pn**	**07 10 35.1**	**+0.2**
HNTI	**Hanita**	**1.82**	**353**	Pn	**Pn**	**07 10 35.8**	**+0.1**
HNTI				Sn	**Sn**	**07 10 59.7**	**+0.8**
HNKL	**Nakhl**	**1.83**	**223**	⇓P	**Pn**	**07 10 35.3**	**-0.5**
AMAG	**Maghara**	**2.00**	**252**	⇓P	**Pn**	**07 10 37.5**	**-0.8**
AMAG	**Maghara**	**2.00**	**252**	P	**Pn**	**07 10 37.5**	**-0.8**
	2μm,0.4s						
SUZ		**2.65**	**238**	⇓P	**Pn**	**07 10 46.5**	**-0.7**
HKAT	**Jabal Katrina**	**3.01**	**205**	⇓P	**Pn**	**07 10 51.6**	**-0.5**

IDC 13 07:27:29.5±8.1**, 180S×9980E, h0**km**, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.4**/18**, mbtmp3.5**/2**, Error ellipse: s-maj=419.6km s-min=32.6km az=51.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
WRA	**Warramunga Arr**	**38.27**	**121**	P	P	07 34 51.8	0.0
	0.4nm,0.7s,baz=303,slow=9.1,SNR=6.6						
MKAR	**Makanchi Array**	**50.78**	**345**	P	P	07 36 31.5	0.0
	0.6nm,0.6s,baz=152,slow=7.3,SNR=7.2						
TXAR	**Lajitas Array**	**144.67**	**37**	PKP	PKPdf	07 47 08.3	-0.6
	0.3nm,0.6s,baz=271,slow=2.2,SNR=6.8						

*NEIC **13** 07:55:24.5, 1680N×9968W, h3km, MD3.9(MEX), After MEX.*
MEX 13 07:55:24.5±0.6**, 1687N×9963W, h2**km±9km**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
ACX	**Acapulco**	**0.28**	**269**	*i* P	Pg	07 55 26.8	-3.0
ACX				*i* P		07 55 29.8	
ACX				*i* S	Sg	07 55 30.9	-2.5
ACX				*i* S	Sg	07 55 33.2	-0.2
ACX	**Acapulco**	**0.28**	**269**	*i* P	Pg	07 55 29.5	-0.3
ACX				*i* S	Sg	07 55 30.7	-2.6
CAIG	**El Cayaco**	**0.64**	**286**	*i* P	Pg	07 55 36.4	-0.3
CAIG				*i* S	Sg	07 55 45.7	+0.7
PNIG	**Pinotepa**	**1.52**	**108**	*i* P	Pn	07 55 50.0	-2.7
PNIG				*i* S	Sn	07 56 08.2	-4.8
PNIG	**Pinotepa**	**1.52**	**108**	*i* P	Pn	07 55 59.3	+6.6
PNIG				*i* S	Sn	07 56 08.2	-4.8
ZIIG	**Zihuatanejo**	**1.90**	**293**	*i* P	Pn	07 55 55.0	-2.9
ZIIG				*i* S	Sn	07 56 18.8	-3.7
ZIIG	**Zihuatanejo**	**1.90**	**293**	*i* P	Pn	07 56 00.3	+2.3
ZIIG				*i* S	Sn	07 56 24.0	+1.5
MZVM		**2.34**	**9**	*i* P	Pn	07 56 03.2	-0.8
PPM	**Popocatepetl**	**2.38**	**23**	*i* P	Pn	07 56 02.0	-2.6
PPM				*i* S	Sn	07 56 30.0	-4.5
PPM	**Popocatepetl**	**2.38**	**23**	*i* S	Sn	07 56 35.6	+1.2
PTVM	**Pico Tres Padr**	**2.75**	**10**	*i* P	Pn	07 56 07.5	-2.2
PTVM	**Pico Tres Padr**	**2.75**	**10**	*i* P	Pn	07 56 10.7	+1.0
VHO	**Vista Hermosa**	**2.78**	**85**	*i* P	Pn	07 56 06.6	-3.5
VHO				*i* S	Sn	07 56 39.8	-4.4
VHO	**Vista Hermosa**	**2.78**	**85**	*i* S	Sn	07 56 39.8	-4.4
IIO	**Organos**	**2.84**	**18**	*i* P	Pn	07 56 09.7	-1.2
IIO	**Organos**	**2.84**	**18**	*i* P	Pn	07 56 18.1	+7.2

*BJI **13** 08:01:50.3, 333S×10025E, h10km, mB4.9, mb4.8, Ms4.5, Msz4.2*
*IDC **13** 08:01:55.5±1.1, 259S×10035E, h0km, mb4.5/15, mb1 4.6/16, mb1mx4.4/23, mbtmp4.5/16, ML4.7/1, MS3.4/1, Ms1 3.6/1, ms1mx3.3/17, Error ellipse: s-maj=36.9km s-min=14.8km az=53.0*
*ISCJB **13** 08:01:58.9±1.1, 285S±006×10020E±007, h45km±9km, mb4.8/42, MS4.2/6, Error ellipse: s-maj=12.7km s-min=7.7km az=143.8*
*MOS **13** 08:01:59.9±1.1, 257S×10037E, h44km, mb4.9/20, Error ellipse: s-maj=18.2km s-min=9.6km az=98.6*
*NEIC **13** 08:02:00.0±0.4, 276S×10026E, h35km, mb4.8/10, Error ellipse: s-maj=13.9km s-min=9.0km az=55.0*
*DJA **13** 08:02:00, 246S×10006E, h16km, MLv4.6/4*
ISC 13 08:02:00.6±0.9**, 284S**±006×**10023E**±006**, h41**km±8km**, h6**km±4.7km**: pP-P, n85,** $\sigma 1^{s}13$**/84, mb4.8**/42**, MS4.2**/6**, 2C, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
KRJI	**Kerinci**	**1.44**	**59**	P	**Pn**	**08 02 24.9**	**+0.7**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**2.37**	**4**	P	**Pn**	**08 02 36.1**	**-0.9**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.94**	**62**	P	**Pn**	**08 03 13.1**	**+0.8**
	0.0nm,0.0s						
COCO	**West Island**	**9.88**	**200**	*e*Pn	**Pn**	**08 04 19.2**	**-0.9**
SJI	**Sawahan**	**12.47**	**113**	P	**Pn**	**08 04 57.6**	**+2.0**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**18.24**	**61**	*e*Pn	**Pn**	**08 06 07.3**	**-3.5**
KAPI	**Kappang**	**19.59**	**97**	P	**Pn**	**08 06 24.9**	**-2.2**
	2.3nm,0.3s,baz=274,slow=12,SNR=9.6						
KAPI	**Kappang**	**19.59**	**97**	*e*P	**Pn**	**08 06 25.4**	**-1.7**
	25nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.20**	**357**	P	**P**	**08 06 40.5**	**-2.3**
	4.0nm,0.6s,mb4.0,baz=186,slow=10,SNR=12						
CMAR				LR	LR	08 15 33.3	
	comp=Z,94nm,20.3s,MS3.2,baz=170,slow=39						
CMAR	**Chiang Mai Arr**	**21.20**	**357**	P	**P**	**08 06 40.5**	**-2.3**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR				MLR	MLR		
	comp=Z,95nm,20.3s						
KMI	**Kunming**	**27.90**	**5**	P	**P**	**08 07 50.3**	**+3.5**
KMI				AP	pP	08 07 53.3	-4.8
KMI				XP	sP	08 07 54.5	-8.5
KMI				PP	PP	08 08 40.0	-11
KMI				S	**S**	**08 12 34.0**	**+6.2**
KMI				XS	sS	08 12 38.1	-8.4
KMI				SS		08 13 54.1	
KMI				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.6						
KMI				AMB	AMB		
	comp=Z,43nm,3.1s						
KMI				LR	LR		
	comp=N,151nm,19.6s,MS3.8						
KMI				LR	LR		
	comp=E,192nm,16.6s,MS3.8						
KMI				LR	LR		
	comp=Z,516nm,27.1s						
FITZ	**Fitzroy Crossi**	**29.16**	**123**	*e*P	**P**	**08 07 59.2**	**+1.0**
	comp=Z,3.6nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**29.16**	**123**	P	**P**	**08 07 58.6**	**+0.4**
	comp=Z,1.1nm,0.4s,mb3.9,baz=305,slow=11,SNR=9.8						
ODAN	**Odare**	**32.02**	**338**	*e*P	**P**	**08 08 24.1**	**+0.8**
	comp=Z,16nm,0.5s,mb5.1						
TAPN	**Taplejung**	**32.35**	**339**	*e*P	**P**	**08 08 26.9**	**+0.7**
	comp=Z,33nm,0.7s,mb5.3						
RAMN	**Ramite**	**32.41**	**337**	*e*P	**P**	**08 08 27.8**	**+1.1**
	comp=Z,17nm,0.6s,mb5.0						
JIRN	**Jiri**	**33.20**	**337**	*e*P	**P**	**08 08 34.7**	**+1.1**
	comp=Z,30nm,0.7s,mb5.4						
LSA	**Lhasa**	**33.50**	**346**	P	**P**	**08 08 38.0**	**+1.8**
LSA	**Lhasa**	**33.50**	**346**	*e*P	**P**	**08 08 37.9**	**+1.7**
LSA				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
LSA	**Lhasa**	**33.50**	**346**	*e*P	**P**	**08 08 37.9**	**+1.7**
	comp=Z,12nm,0.8s,mb4.9						
GUN	**Gumba**	**33.55**	**337**	*e*P	**P**	**08 08 37.5**	**+0.9**
	comp=Z,34nm,0.4s,mb5.6						
CD2	**Chengdu**	**33.73**	**5**	*e*P	**P**	**08 08 38.8**	**+0.6**
CD2				AP	pP	08 08 43.3	-6.2
CD2				XP	sP	08 08 45.9	-8.5
CD2				PP	PP	08 09 52.0	-3.1
CD2				S	**S**	**08 14 01.3**	**+2.5**
CD2				SS	SS	08 16 06.9	-19
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,20nm,4.8s						
CD2				LR	LR		
	comp=N,510nm,14.4s						
CD2				LR	LR		
	comp=Z,360nm,14.4s,MS4.2						
DANN	**Dangsing**	**34.82**	**334**	*e*P	**P**	**08 08 51.3**	**+3.6**
	comp=Z,24nm,0.4s,mb5.5						
WRA	**Warramunga Arr**	**37.38**	**120**	P	**P**	**08 09 10.2**	**+0.5**
	comp=Z,2.7nm,0.3s,mb4.5,baz=309,slow=8.9,SNR=79						
WRA				S	**S**	**08 14 53.9**	**-1.3**
	comp=Z,2.9nm,1.1s,baz=294,slow=16,SNR=6.5						
WRA	**Warramunga Arr**	**37.38**	**120**	P	**P**	**08 09 10.2**	**+0.5**
WRA				S	**S**	**08 14 53.9**	**-1.3**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
WRA				smax			
	comp=N,3.0nm,1.1s						
WRAB	**Tennant Creek**	**37.38**	**120**	*e*P	**P**	**08 09 10.1**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**37.38**	**120**	*e*P	**P**	**08 09 10.1**	**+0.4**
	comp=Z,4.2nm,0.6s,mb4.5						
WB2	**Warramunga Arr**	**37.39**	**120**	*e*P	**P**	**08 09 09.8**	**0.0**
LZH	**Lanzhou**	**38.87**	**5**	*e*P	**P**	**08 09 21.3**	**-0.7**
LZH				AP	pP	08 09 26.0	-7.5
LZH				XP	sP	08 09 28.3	-10
LZH				*e*PP	PP	08 10 55.4	+3.7
LZH				AMB	AMB		
	comp=Z,25nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,72nm,5.7s						
LZH				LR	LR		
	comp=E,593nm,14.3s						
LZH				LR	LR		
	comp=Z,875nm,17.8s,MS4.6						
NJ2	**Nanjing**	**38.95**	**26**	*e*P	**P**	**08 09 23.8**	**+1.1**
NJ2				AMB	AMB		
	comp=Z,160nm,1.0s,mb5.7						
GTA	**Gaotai**	**42.04**	**360**	*e*P	**P**	**08 09 47.8**	**-0.4**
GTA				AP	pP	08 09 51.6	-8.1
GTA				XP	sP	08 09 52.9	-12
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.1						
HHC	**Hu-ho-hao-te**	**44.70**	**12**	*e*P	**P**	**08 10 09.4**	**-0.2**
HHC				AP	pP	08 10 12.4	-8.8
HHC				XP	sP	08 10 14.5	-12
HHC				PCP	PcP	08 11 51.6	+0.1
HHC				PP	PP	08 11 54.8	+0.2
HHC				PCS	PcS	08 15 43.6	-1.4
HHC				S	**S**	**08 16 46.1**	**+2.8**
HHC				SS	SS	08 19 57.8	-7.1
HHC				SCS	ScS	08 20 04.6	+0.7
HHC				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.7						

HHC					AMB	AMB			
	comp=Z,150nm,6.7s								
HHC					LR	LR			
	comp=N,191nm,17.2s,MS4.2								
HHC					LR	LR			
	comp=E,125nm,16.7s,MS4.2								
HHC					LR	LR			
	comp=Z,378nm,18.2s,MS4.4								
KSRS	**Korea Array**	**47.62**	**30**		P	**P**	**08 10 30.6**	**-2.1**	
	comp=Z,1.7nm,0.8s,mb4.1,baz=230,slow=7.7,SNR=6.4								
KSRS	**Korea Array**	**47.62**	**30**		P	**P**	**08 10 30.6**	**-2.1**	
KSRS					pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.2								
WMQ	**Urumqi**	**47.80**	**348**		P	**P**	**08 10 34.8**	**+0.9**	
WMQ					AP	pP	08 10 39.0	-6.6	
WMQ					AMB	AMB			
	comp=Z,12nm,0.8s,mb5.0								
CTA	**Charters Tower**	**48.04**	**115**	*eP*		**P**	**08 10 37.2**	**+1.0**	
	comp=Z,7.5nm,0.8s,mb4.8								
CTA	**Charters Tower**	**48.04**	**115**	*eP*		**P**	**08 10 37.2**	**+1.0**	
CTA					pmax	pmax			
	comp=Z,8.0nm,0.8s								
STKA	**Stephens Creek**	**48.43**	**131**	*eP*		**P**	**08 10 41.0**	**+2.0**	
	comp=Z,4.8nm,0.2s,mb5.2								
STKA	**Stephens Creek**	**48.43**	**131**	P		**P**	**08 10 41.1**	**+2.1**	
	comp=Z,6.7nm,0.3s,mb5.2,baz=311,slow=7.6,SNR=34								
TKM2	**Tokmak 2**	**50.69**	**337**	*eP*		**P**	**08 10 56.6**	**+0.6**	
TKM2					pmax	pmax			
	comp=Z,18nm,1.1s,mb4.9								
TKM2	**Tokmak 2**	**50.69**	**337**	*eP*		**P**	**08 10 56.6**	**+0.6**	
	comp=Z,18nm,1.1s,mb4.9								
SONM	**Songino Array**	**50.75**	**5**	P		**P**	**08 10 56.6**	**+0.2**	
	comp=Z,15nm,0.8s,mb5.0,baz=188,slow=9.1,SNR=68								
SONM					PcP	PcP	08 12 13.5	+0.5	
	comp=Z,2.8nm,0.6s,baz=189,slow=4.3,SNR=6.0								
SONM	**Songino Array**	**50.75**	**5**	P		**P**	**08 10 56.6**	**+0.2**	
SONM							08 12 13.5		
SONM					pmax	pmax			
	comp=Z,15nm,0.8s								
SONM					pmax	pmax			
	comp=Z,3.0nm,0.6s								
AML	**Almayashu**	**50.82**	**335**	*eP*		**P**	**08 10 57.9**	**+0.9**	
	comp=Z,281nm,1.0s,mb6.2								
ULN	**Ulaanbaatar**	**50.85**	**6**	*eP*		**P**	**08 10 57.3**	**+0.2**	
ULN					pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.8								
ULN	**Ulaanbaatar**	**50.85**	**6**	*eP*		**P**	**08 10 57.3**	**+0.2**	
	comp=Z,9.5nm,0.9s,mb4.7								
EKS2	**Erkin-Say**	**51.22**	**335**	*eP*		**P**	**08 11 00.9**	**+1.0**	
	comp=Z,11nm,0.8s,mb4.8								
CN2	**Changchun**	**51.66**	**23**	*eP*		**P**	**08 11 02.4**	**-0.9**	
CN2				*e*XP		sP	08 11 09.0	-11	
CN2				*e*S		**S**	**08 18 22.8**	**+1.1**	
CN2					AMB	AMB			
	comp=Z,20nm,0.9s,mb5.0								
CN2					AMB	AMB			
	comp=Z,200nm,4.0s								
CN2					LR	LR			
	comp=N,2μm,18.0s,MS5.3								
CN2					LR	LR			
	comp=E,2μm,18.0s,MS5.3								
MKAR	**Makanchi Array**	**51.89**	**344**	P		**P**	**08 11 04.9**	**-0.1**	
	comp=E,8.9nm,0.7s,mb4.8,baz=147,slow=8.0,SNR=68								
MKAR	**Makanchi Array**	**51.89**	**344**	P		**P**	**08 11 04.9**	**-0.1**	
MKAR					pmax	pmax			
	comp=Z,9.0nm,0.7s								
MJAR	**Matsushiro Arr**	**52.78**	**38**	P		**P**	**08 11 10.5**	**-1.2**	
	comp=Z,2.3nm,0.7s,mb4.2,baz=208,slow=7.7,SNR=6.2								
MJAR	**Matsushiro Arr**	**52.78**	**38**	P		**P**	**08 11 10.5**	**-1.3**	
MJAR					pmax	pmax			
	comp=Z,2.0nm,0.7s								
MJAR	**Matsushiro Arr**	**52.78**	**38**	P		**P**	**08 11 10.5**	**-1.3**	
ZAK	**Zakamensk**	**53.08**	**2**	*eP*		**P**	**08 11 12.8**	**-0.9**	
ZAK					pmax	pmax			
	comp=Z,2.0nm,1.0s,mb4.0								
TLY	**Talaya**	**54.39**	**3**	*eP*		**P**	**08 11 22.4**	**-0.8**	
TLY					pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4								
KURK	**Kurchatov**	**56.47**	**344**	P		**P**	**08 11 37.4**	**-0.8**	
	comp=Z,11nm,0.8s,mb4.9,baz=163,slow=6.9,SNR=7.0								
KURK	**Kurchatov**	**56.47**	**344**	*eP*		**P**	**08 11 37.9**	**-0.3**	
KURK					pmax	pmax			
	comp=Z,19nm,0.9s,mb5.1								
KURK	**Kurchatov**	**56.47**	**344**	*eP*		**P**	**08 11 37.9**	**-0.4**	
	comp=Z,18nm,0.9s,mb5.1								
ZALV	**Zalesovo Beam**	**58.03**	**349**	P		**P**	**08 11 48.4**	**-0.8**	
	comp=Z,8.2nm,0.8s,mb4.8,baz=175,slow=5.2,SNR=5.4								
ZALV	**Zalesovo Beam**	**58.03**	**349**	P		**P**	**08 11 48.4**	**-0.8**	
ZALV					pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.8								
KLR	**Kul'dur**	**58.60**	**24**	*eP*		**P**	**08 11 48.4**	**-4.9**	
ASAJ	**Asahikawa**	**60.17**	**34**	P		**P**	**08 12 02.6**	**-1.6**	
	comp=Z,3.0nm,0.4s,mb4.7,baz=98,slow=33,SNR=4.7								
ASAJ	**Asahikawa**	**60.17**	**34**	P		**P**	**08 12 02.6**	**-1.6**	
ASAJ					pmax	pmax			
	comp=Z,3.0nm,0.4s								
BVAR	**Borovoye Array**	**61.05**	**340**	P		**P**	**08 12 09.0**	**-0.9**	
	comp=Z,2.6nm,0.5s,mb4.6,baz=146,slow=8.6,SNR=4.0								
BVAR	**Borovoye Array**	**61.05**	**340**	P		**P**	**08 12 09.0**	**-1.0**	
BVAR					pmax	pmax			
	comp=Z,3.0nm,0.5s								
BOD	**Bodaibo**	**61.47**	**8**	*eP*		**P**	**08 12 12.7**	**-0.1**	
BOD					pmax	pmax			
	comp=Z,9.0nm,0.8s,mb5.0								
YSS	**Yuzh-Sakhalins**	**62.07**	**32⇑**	*eP*		**P**	**08 12 16.2**	**-0.8**	
YSS					pmax	pmax			
	comp=Z,30nm,1.2s,mb5.3								
YAK	**Yakutsk**	**68.49**	**14⇑**	*eP*		**P**	**08 12 57.0**	**-1.3**	
YAK					pmax	pmax			
	comp=Z,24nm,0.7s,mb5.3								
GOF	**Gofitskoye**	**69.58**	**321**	*eP*		**P**	**08 13 05.8**	**+0.3**	
PETK	**Petropavlovsk-**	**73.47**	**32**	P		**P**	**08 13 28.1**	**-0.6**	
	comp=Z,1.8nm,0.6s,mb4.2,baz=188,slow=1.0,SNR=5.3								
PETK	**Petropavlovsk-**	**73.47**	**32**	P		**P**	**08 13 28.1**	**-0.6**	
PETK					pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2								
ARCES	**ARCESS Array B**	**87.33**	**340**	P		**P**	**08 14 42.9**	**+0.1**	
	comp=Z,5.8nm,0.9s,mb4.8,baz=350,slow=6.6,SNR=15								
ARCES	**ARCESS Array B**	**87.33**	**340**	P		**P**	**08 14 42.9**	**+0.1**	
ARCES					pmax	pmax			
	comp=Z,6.0nm,0.9s								
GERES	**GERESS Array B**	**89.83**	**319**	P		**P**	**08 14 55.2**	**+0.2**	
	comp=Z,0.4nm,0.2s,mb4.3,baz=94,slow=5.9,SNR=3.9								
CABF	**La Chapelle**	**94.90**	**316**	*eP*		**P**	**08 15 17.4**	**-1.1**	
SMF	**Signal de Mont**	**96.44**	**316**	*eP*		**P**	**08 15 23.0**	**-2.6**	
	comp=Z,12nm,1.0s,mb5.0								
SMF	**Signal de Mont**	**96.44**	**316**	*eP*		**P**	**08 15 23.0**	**-2.6**	
SMF					pmax	pmax			
	comp=Z,6.0nm,1.0s,mb5.0								
SMF	**Signal de Mont**	**96.44**	**316**	*eP*		**P**	**08 15 23.0**	**-2.6**	
	comp=Z,5.8nm,1.0s,mb5.0								
TXAR	**Lajitas Array**	**145.22**	**38**	PKiKP		PKPdf	08 21 35.2	+0.7	
	comp=Z,7.2nm,0.6s,baz=221,slow=1.0,SNR=144								
TXAR	**Lajitas Array**	**145.22**	**38**	PKiKP		PKPdf	08 21 35.3	+0.8	
TXAR					pmax	pmax			
	comp=Z,7.0nm,0.6s								
URVA	**University of**	**145.38**	**357**	*e*PKPbc		PKPbc	08 21 34.7	+0.2	
ELN	**Prospectdale**	**145.77**	**1**	*e*PKPdf		PKPdf	08 21 34.5	-0.7	
MIAR	**Mount Ida**	**145.94**	**21**	*e*PKP2		PKPab	08 21 36.3	-0.5	
JCT	**Junction City**	**146.61**	**32**	*e*PKP2		PKPab	08 21 38.8	-0.7	
CPCT	**Cooper Cave**	**147.25**	**7**	*e*PKPdf		PKPdf	08 21 40.0	+2.2	

IDC ***13*** *08:11:17.8±3.2, 335S×100 94E, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.9/19, mbtmp4.1/6, Error ellipse: s-maj=131.2km s-min=24.7km az=54.0*

ISCJB ***13*** *08:11:20.9±2.3, 33S±04×1010E±05, h33km, mb4.2/7, Error ellipse: s-maj=89.2km s-min=21.4km az=143.1*

NEIC ***13*** *08:11:23.5±1.6, 324S×101.13E, h35km, mb4.4/1, Error ellipse: s-maj=65.0km s-min=15.8km az=54.0*

ISC 13 08:11:23.6±2.2, 32S±04×1011E±05, h35km, n9, σ0≤66/8, mb4.2/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.67**	**354**	P	**P**	**08 16 11.9**	**+0.6**
	0.8nm,0.3s,mb3.6,baz=186,slow=8.2,SNR=3.1						
WRA	**Warramunga Arr**	**36.40**	**120**	P	**P**	**08 18 25.2**	**+0.2**
	1.3nm,0.4s,mb4.2,baz=303,slow=9.0,SNR=7.9						
SONM	**Songino Array**	**51.07**	**5**	P	**P**	**08 20 22.4**	**-0.1**
	0.7nm,0.5s,mb3.9,baz=188,slow=8.3,SNR=5.6						
EKS2	**Erkin-Say**	**51.96**	**335**	*eP*	**P**	**08 20 30.4**	**+1.2**
	3.9nm,0.8s,mb4.4						
MKAR	**Makanchi Array**	**52.52**	**344**	P	**P**	**08 20 33.3**	**0.0**
	1.7nm,0.4s,mb4.3,baz=149,slow=8.0,SNR=16						
KURK	**Kurchatov**	**57.11**	**343**	P	**P**	**08 21 05.8**	**-0.7**
	0.7nm,0.4s,mb4.0,baz=202,slow=6.4,SNR=5.6						
ZAA0	**Zalesovo Array**	**58.59**	**349**	*eP*	**P**	**08 21 15.8**	**-1.0**
ZALV	**Zalesovo Beam**	**58.59**	**349**	P	**P**	**08 21 16.5**	**-0.3**
	3.2nm,0.3s,mb4.8,baz=164,slow=5.0,SNR=14						
TXAR	**Lajitas Array**	**144.97**	**40**	PKPbc	PKPdf	08 30 57.2	-0.6
	0.6nm,0.6s,baz=276,slow=0.7,SNR=7.9						

IDC ***13*** *08:17:00.6±0.6, 170S×9962E, h0km, mb4.4/19, mb1 4.6/19, mb1mx4.5/23, mbtmp4.5/19, Error ellipse: s-maj=21.3km s-min=13.3km az=58.0*

BJI ***13*** *08:17:00.0, 191S×9973E, h14km, mB5.1, mb4.8*

MOS ***13*** *08:17:05.2±0.9, 167S×9966E, h44km, mb4.8/26, Error ellipse: s-maj=15.2km s-min=8.3km az=99.3*

NEIC ***13*** *08:17:06.0±0.3, 172S×9964E, h35km, mb4.7/15, Error ellipse: s-maj=9.5km s-min=5.8km az=71.0*

ISCJB ***13*** *08:17:08.4±1.2, 175S±005×9962E±007, h76km±11km, mb4.5/37, Error ellipse: s-maj=12.6km s-min=7.7km az=164.4*

DJA ***13*** *08:17:09, 176S×9969E, h20km, MLv4.8/6*

ISC 13 08:17:09.9±1.0, 176S±005×9963E±007, h73km±9km, n91, σ0≤90/81, mb4.5/37, 3C-1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.86**	**100**	P	**Pn**	**08 17 39.0**	**-0.8**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.04**	**63**	P	**Pn**	**08 17 56.1**	**+0.3**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.10**	**76**	P	**Pn**	**08 18 25.7**	**+1.8**
	74nm,1.1s						
DBJI	**Dramaga**	**8.54**	**124**	P	**Pn**	**08 19 11.6**	**+0.6**
	93nm,1.0s						
COCO	**West Island**	**10.73**	**195**	*e*Pn	**Pn**	**08 19 39.9**	**-0.9**
KKM	**Kota Kinabalu**	**18.28**	**65**	*e*Pn	**Pn**	**08 21 19.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**20.10**	**358**	P	**P**	**08 21 36.2**	**-1.6**
	6.1nm,0.7s,baz=187,slow=10,SNR=15						
CMAR	**Chiang Mai Arr**	**20.10**	**358**	P	**P**	**08 21 36.3**	**-1.5**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KAPI	**Kappang**	**20.34**	**100**	P	**P**	**08 21 39.5**	**-1.0**
	comp=Z,5.7nm,0.4s,baz=93,slow=16,SNR=4.2						
CHTO	**Chiang Mai**	**20.45**	**358**	*eP*	**P**	**08 21 41.7**	**0.0**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHTO	**Chiang Mai**	**20.45**	**358**	*eP*	**P**	**08 21 41.7**	**0.0**
	comp=Z,7.0nm,0.9s						
QIZ	**Qiongzhong**	**22.97**	**25**	*eP*	**P**	**08 22 08.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**30.25**	**124**	P	**P**	**08 23 13.8**	**-0.4**
	comp=Z,6.2nm,0.9s,mb4.2,baz=295,slow=12,SNR=8.8						
FITZ	**Fitzroy Crossi**	**30.25**	**124**	*eP*	**P**	**08 23 13.4**	**-0.8**
FITZ				P		08 23 13.8	
LSA	**Lhasa**	**32.32**	**346**	P	**P**	**08 23 34.3**	**+2.2**
LSA	**Lhasa**	**32.32**	**346**	*eP*	**P**	**08 23 33.4**	**+1.3**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.7						
LSA	**Lhasa**	**32.32**	**346**	*eP*	**P**	**08 23 33.4**	**+1.2**
	comp=Z,5.9nm,0.4s,mb4.7						
NACB	**Ninganchiao**	**33.46**	**38**	*eP*	**P**	**08 23 32.4**	**-10**
	comp=Z,69nm,0.8s,mb5.5						
NWAO	**Narrogin (SRO)**	**35.14**	**154**	P	**P**	**08 23 57.8**	**+1.2**
NWAO				pmax	pmax		
	comp=Z,29nm,1.3s						
NWAO	**Narrogin (SRO)**	**35.14**	**154**	P	**P**	**08 23 57.8**	**+1.2**
	comp=Z,29nm,1.3s,mb5.0						
WRA	**Warramunga Arr**	**38.43**	**120**	P	**P**	**08 24 24.1**	**-0.7**
	comp=Z,9.2nm,0.8s,mb4.6,baz=296,slow=9.4,SNR=28						
WRA				PcP	PcP	08 26 37.8	+0.9
	comp=Z,1.3nm,0.6s,baz=314,slow=2.5,SNR=8.5						
WRA	**Warramunga Arr**	**38.43**	**120**	P	**P**	**08 24 24.1**	**-0.7**
WRA						08 26 37.8	
WRA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRAB	**Tennant Creek**	**38.44**	**120**	*eP*	**P**	**08 24 24.1**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**38.44**	**120**	*eP*	**P**	**08 24 24.1**	**-0.8**
	comp=Z,11nm,0.8s,mb4.8						
WB2	**Warramunga Arr**	**38.44**	**120**	*eP*	**P**	**08 24 24.0**	**-0.9**
FORT	**Forrest**	**39.46**	**140**	*eP*	**P**	**08 24 33.1**	**-0.1**
	comp=Z,5.0nm,0.8s,mb4.4						
GTA	**Gaotai**	**40.97**	**0**	*eP*	**P**	**08 24 45.8**	**+0.3**
GTA				AP	pP	08 24 50.3	-13
GTA				XP	sP	08 24 52.5	-19
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.2						
WMQ	**Urumqi**	**46.62**	**348**	P	**P**	**08 25 31.9**	**+1.1**
WMQ				AP	pP	08 25 39.0	-10
WMQ				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,197nm,4.5s						
KSRS	**Korea Array**	**47.00**	**31**	P	**P**	**08 25 33.1**	**-0.8**
	comp=Z,2.8nm,0.8s,mb4.1,baz=227,slow=8.0,SNR=11						
KSRS	**Korea Array**	**47.00**	**31**	P	**P**	**08 25 33.2**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
CTA	**Charters Tower**	**49.03**	**115**	P	**P**	**08 25 49.5**	**-0.4**
	comp=Z,6.0nm,1.0s,mb4.5,baz=296,slow=8.7,SNR=4.5						
CTA	**Charters Tower**	**49.03**	**115**	P	**P**	**08 25 49.5**	**-0.4**
CTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CTAO	**Charters Tower**	**49.03**	**115**	*eP*	**P**	**08 25 49.5**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CTAO	**Charters Tower**	**49.03**	**115**	*eP*	**P**	**08 25 49.5**	**-0.3**
	comp=Z,4.3nm,1.0s,mb4.3						
TKM2	**Tokmak 2**	**49.47**	**337**	*eP*	**P**	**08 25 53.3**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.3						
TKM2	**Tokmak 2**	**49.47**	**337**	*eP*	**P**	**08 25 53.3**	**+0.5**
	comp=Z,27nm,0.6s,mb5.3						
STKA	**Stephens Creek**	**49.58**	**132**	P	**P**	**08 25 54.6**	**+0.7**
	comp=Z,9.9nm,0.9s,mb4.8,baz=294,slow=2.0,SNR=8.8						
SONM	**Songino Array**	**49.74**	**6**	P	**P**	**08 25 55.3**	**+0.6**
	comp=Z,4.3nm,0.8s,mb4.5,baz=185,slow=8.9,SNR=19						
SONM	**Songino Array**	**49.74**	**6**	P	**P**	**08 25 55.3**	**+0.5**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	**Ulaanbaatar**	**49.84**	**7**	*eP*	**P**	**08 25 55.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**49.84**	**7**	*eP*	**P**	**08 25 55.9**	**+0.3**
	comp=Z,4.4nm,0.9s,mb4.4						
EKS2	**Erkin-Say**	**49.99**	**335**	*eP*	**P**	**08 25 57.4**	**+0.6**
	comp=Z,6.4nm,0.9s,mb4.5						
MKAR	**Makanchi Array**	**50.70**	**345**	P	**P**	**08 26 02.0**	**0.0**
	comp=Z,6.1nm,0.6s,mb4.8,baz=148,slow=7.5,SNR=29						
MKAR	**Makanchi Array**	**50.70**	**345**	P	**P**	**08 26 02.0**	**0.0**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ZAK	**Zakamensk**	**52.03**	**3**	*eP*	**P**	**08 26 11.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb4.0						
MJAR	**Matsushiro Arr**	**52.32**	**39**	P	**P**	**08 26 13.2**	**-1.1**
	comp=Z,2.0nm,0.7s,mb4.3,baz=236,slow=7.4,SNR=5.2						
MJAR	**Matsushiro Arr**	**52.32**	**39**	P	**P**	**08 26 13.2**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov**	**55.27**	**344**	P	**P**	**08 26 34.4**	**-1.2**
	comp=Z,4.0nm,0.8s,mb4.5,baz=158,slow=7.9,SNR=10						
KURK	**Kurchatov**	**55.27**	**344**	*eP*	**P**	**08 26 34.9**	**-0.7**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.5						
KURK	**Kurchatov**	**55.27**	**344**	P	**P**	**08 26 34.4**	**-1.2**
ZAA0	**Zalesovo Array**	**56.87**	**350**	*eP*	**P**	**08 26 46.3**	**-0.7**
ZALV	**Zalesovo Beam**	**56.87**	**350**	P	**P**	**08 26 46.5**	**-0.4**
	comp=Z,11nm,0.6s,mb5.1,baz=186,slow=6.1,SNR=21						
ZALV	**Zalesovo Beam**	**56.87**	**350**	P	**P**	**08 26 46.6**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.1						
KLR	**Kul'dur**	**57.86**	**24**	*eP*	**P**	**08 26 50.0**	**-4.0**
NVS	**Novosibirsk**	**58.01**	**349**	*i* P	**P**	**08 26 53.9**	**-1.0**
BVAR	**Borovoye Array**	**59.83**	**340**	P	**P**	**08 27 06.3**	**-1.3**
	comp=Z,2.2nm,0.6s,mb4.3,baz=140,slow=7.8,SNR=7.8						
BVAR	**Borovoye Array**	**59.83**	**340**	P	**P**	**08 27 06.3**	**-1.3**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BOD	**Bodaibo**	**60.50**	**9**	*eP*	**P**	**08 27 12.0**	**-0.1**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						

YSS	**Yuzh-Sakhalins**	**61.47**	**32⇑**	*eP*		**P**	**08 27 20.3**	**+1.4**	
YSS					pmax	pmax			
	comp=Z,20nm,1.1s,mb5.1								
KMBO	**Kilima Mbogo**	**62.36**	**270**	P		**P**	**08 27 26.1**	**+0.5**	
	comp=Z,3.7nm,1.0s,mb4.4,baz=53,slow=11,SNR=5.2								
KMBO	**Kilima Mbogo**	**62.36**	**270**	P		**P**	**08 27 26.1**	**+0.5**	
KMBO					pmax	pmax			
	comp=Z,4.0nm,1.0s								
CASY	**Casey**	**64.85**	**175**	*eP*		**P**	**08 27 39.4**	**-1.5**	
	comp=Z,13nm,1.4s,mb4.5								
YAK	**Yakutsk**	**67.60**	**15⇑**	*eP*		**P**	**08 27 58.4**	**-0.2**	
YAK					pmax	pmax			
	comp=Z,15nm,0.5s,mb5.1								
YAK	**Yakutsk**	**67.60**	**15**	*eP*		**P**	**08 27 58.3**	**-0.3**	
	comp=Z,27nm,0.4s,mb5.4								
KIV	**Kislovodsk**	**68.12**	**319**	P		**P**	**08 28 02.0**	**-0.2**	
KIV				*e*SP		sP	08 28 16.0	-14	
KIV						pP	08 28 26.0	+4.5	
MAW	**Mawson**	**70.43**	**194**	P		**P**	**08 28 17.1**	**+1.1**	
	comp=Z,5.3nm,0.9s,mb4.4,baz=2.5,slow=5.1,SNR=9.7								
MAW	**Mawson**	**70.43**	**194**	P		**P**	**08 28 17.1**	**+1.1**	
MAW					pmax	pmax			
	comp=Z,5.0nm,0.9s								
PETK	**Petropavlovsk-**	**72.88**	**32**	P		**P**	**08 28 31.5**	**+0.6**	
	comp=Z,2.1nm,0.7s,mb4.1,baz=216,slow=2.0,SNR=5.6								
PETK	**Petropavlovsk-**	**72.88**	**32**	P		**P**	**08 28 31.5**	**+0.5**	
PETK					pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.1								
PETK	**Petropavlovsk-**	**72.88**	**32**	P		**P**	**08 28 31.5**	**+0.6**	
PET	**Petropavlovsk**	**73.35**	**33⇑**	*eP*		**P**	**08 28 35.0**	**+1.2**	
PET					pmax	pmax			
	comp=Z,14nm,0.9s,mb4.8								
VSR	**Storozhevoye**	**73.37**	**325**	*eP*		**P**	**08 28 32.0**	**-1.9**	
VSR					pmax	pmax			
	comp=Z,5.0nm,1.3s,mb4.2								
VSR					pmax	pmax			
	comp=N,6.0nm,2.2s								
VSR					pmax	pmax			
	comp=E,6.0nm,0.6s								
OBN	**Obninsk**	**76.40**	**328**	P		**P**	**08 28 52.0**	**+0.7**	
OBN				*e*			08 28 58.3		
OBN					pmax	pmax			
	comp=Z,15nm,1.7s,mb4.5								
SBA	**Scott Base**	**83.56**	**169**	*eP*		**P**	**08 29 30.7**	**+1.1**	
SBA					pmax	pmax			
	comp=Z,3.0nm,1.1s,mb4.0								
SBA	**Scott Base**	**83.56**	**169**	*eP*		**P**	**08 29 30.7**	**+1.1**	
	comp=Z,3.0nm,1.1s,mb4.0								
ARCES	**ARCESS Array B**	**86.12**	**340**	P		**P**	**08 29 41.8**	**-0.7**	
	comp=Z,4.4nm,0.9s,mb4.4,baz=96,slow=11,SNR=4.0								
ARCES	**ARCESS Array B**	**86.12**	**340**	P		**P**	**08 29 41.8**	**-0.7**	
ARCES					pmax	pmax			
	comp=Z,4.0nm,1.0s								
GERES	**GERESS Array B**	**88.63**	**319**	P		**P**	**08 29 55.5**	**+0.5**	
	comp=Z,0.2nm,0.3s,mb3.6,baz=207,slow=0.6,SNR=4.7								
KEST	**Kesra**	**91.25**	**306**	P		**P**	**08 30 08.4**	**+0.8**	
	comp=Z,2.1nm,0.8s,mb4.3,baz=284,slow=6.1,SNR=5.1								
SNAA	**Sanae**	**92.26**	**198**	*eP*		**P**	**08 30 12.7**	**+1.2**	
SNAA					pmax	pmax			
	comp=Z,4.0nm,1.3s								
SNAA	**Sanae**	**92.26**	**198**	*eP*		**P**	**08 30 12.7**	**+1.2**	
	comp=Z,3.8nm,1.3s,mb4.5								
NVAR	**Mina Array Bea**	**129.65**	**39**	PKP	PKPdf	08 36 12.5	+1.4		
	comp=Z,0.1nm,0.4s,baz=117,slow=0.3,SNR=3.5								
CPUP	**Villa Florida**	**144.29**	**217**	PKP	PKPdf	08 36 37.6	-0.8		
	comp=Z,14nm,0.8s,baz=118,slow=2.4,SNR=31								
CPUP	**Villa Florida**	**144.29**	**217**	PKiKP	PKPdf	08 36 37.6	-0.8		
CPUP					pmax	pmax			
	comp=Z,14nm,0.9s								
TXAR	**Lajitas Array**	**144.73**	**37**	PKP	PKPdf	08 36 39.2	+0.1		
	comp=Z,4.6nm,0.6s,baz=197,slow=0.7,SNR=74								
TXAR	**

ARCES	**ARCESS Array B**	**86.16**	**340**	P		**P**		**08 50 59.7**	**+0.5**
	2.0nm,0.8s,mb4.4,baz=96,slow=6.2,SNR=4.3								
ARCES	**ARCESS Array B**	**86.16**	**340**	P		**P**		**08 50 59.7**	**+0.5**
TXAR	**Lajitas Array**	**144.47**	**37**	PKP	PKPdf			08 57 54.9	-0.6
	1.3nm,0.8s,baz=264,slow=1.6,SNR=17								
CPUP	**Villa Florida**	**144.55**	**217**	PKP	PKPdf			08 57 55.4	-0.3
	1.8nm,0.7s,baz=34,slow=5.5,SNR=5.4								
TZTN	**Tazewell**	**145.16**	**5**	*e*PKPbc	PKPbc			08 57 55.4	-0.5
JCT	**Junction City**	**145.77**	**31**	*e*PKPbc	PKPbc			08 57 58.4	+0.3
JSC	**Jenkinsville**	**147.55**	**2**	*e*PKPbc	PKPbc			08 58 03.4	+0.4

IDC 13 08:58:56.9±10.0, 085S×10054E, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.4/17, mbtmp3.6/2, Error ellipse: s-maj=567.6km s-min=31.6km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**38.13**	**122**	P	P		09 06 18.1	0.0
	0.6nm,0.4s,baz=302,slow=7.9,SNR=7.9							
MKAR	**Makanchi Array**	**50.08**	**344**	P	P		09 07 53.6	+0.1
	0.2nm,0.3s,baz=152,slow=6.5,SNR=2.6							
TXAR	**Lajitas Array**	**143.47**	**37**	PKP	PKPdf		09 18 33.2	-1.0
	0.4nm,0.5s,baz=318,slow=1.2,SNR=10							

IDC 13 08:59:57.9±4.5, 339S×10125E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.7/17, mbtmp3.8/3, Error ellipse: s-maj=180.6km s-min=28.5km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**36.22**	**120**	P	P		09 07 02.6	-0.2
	0.5nm,0.3s,baz=303,slow=9.0,SNR=18							
SONM	**Songino Array**	**51.21**	**4**	P	P		09 09 03.2	+0.2
	0.6nm,0.5s,baz=184,slow=10.0,SNR=4.8							
MKAR	**Makanchi Array**	**52.70**	**344**	P	P		09 09 13.8	-0.3
	0.6nm,0.4s,baz=158,slow=8.2,SNR=5.1							
TXAR	**Lajitas Array**	**145.00**	**40**	PKPbc	PKPbc		09 19 36.9	-0.2
	0.5nm,0.6s,baz=264,slow=0.8,SNR=7.7							

IDC 13 09:03:39.0±3.6, 340S×10179E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.5/17, mbtmp3.5/3, Error ellipse: s-maj=146.1km s-min=30.5km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**35.75**	**120**	P	P		09 10 39.8	-0.1
	0.2nm,0.4s,baz=302,slow=9.0,SNR=4.9							
SONM	**Songino Array**	**51.18**	**4**	P	P		09 12 45.2	+1.3
	0.3nm,0.5s,baz=197,slow=6.7,SNR=3.1							
MKAR	**Makanchi Array**	**52.86**	**343**	P	P		09 12 55.7	-0.7
	0.4nm,0.3s,baz=159,slow=8.6,SNR=3.1							
TXAR	**Lajitas Array**	**144.66**	**40**	PKP	PKPdf		09 23 17.1	-1.3
	0.2nm,0.5s,baz=255,slow=1.8,SNR=5.2							

IDC 13 09:08:07.3±4.8, 295S×10072E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.7/18, mbtmp3.8/3, Error ellipse: s-maj=189.0km s-min=28.6km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**36.90**	**120**	P	P		09 15 17.8	-0.3
	0.4nm,0.4s,baz=292,slow=8.9,SNR=11							
SONM	**Songino Array**	**50.82**	**5**	P	P		09 17 09.4	-0.1
	0.8nm,0.6s,baz=185,slow=9.2,SNR=7.7							
MKAR	**Makanchi Array**	**52.13**	**344**	P	P		09 17 19.3	-0.1
	0.7nm,0.4s,baz=147,slow=7.9,SNR=5.7							
TXAR	**Lajitas Array**	**145.00**	**39**	PKPbc	PKPbc		09 27 46.5	-0.1
	0.3nm,0.4s,baz=260,slow=0.7,SNR=15							

IDC 13 09:14:49.8±3.2, 186S×10021E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/19, mbtmp3.7/4, Error ellipse: s-maj=135.1km s-min=26.9km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**37.88**	**121**	P	P		09 22 08.8	0.0
	0.4nm,0.4s,baz=302,slow=9.0,SNR=7.4							
SONM	**Songino Array**	**49.79**	**5**	P	P		09 23 44.9	+0.7
	0.3nm,0.4s,baz=184,slow=7.7,SNR=3.2							
MKAR	**Makanchi Array**	**50.95**	**344**	P	P		09 23 53.0	-0.1
	1.5nm,0.6s,baz=149,slow=8.1,SNR=12							
KURK	**Kurchatov**	**55.54**	**344**	P	P		09 24 25.9	-0.7
	0.9nm,0.8s,baz=157,slow=8.0,SNR=4.9							
TXAR	**Lajitas Array**	**144.47**	**37**	PKP	PKPdf		09 34 27.7	-1.2
	0.4nm,0.5s,baz=298,slow=3.8,SNR=11							

IDC 13 09:18:05.7±1.5, 130N×12635E, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.9/15, mbtmp4.2/4, Error ellipse: s-maj=178.5km s-min=21.7km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**22.52**	**160**	P	P		09 23 07.1	-0.2
	9.5nm,0.9s,baz=339,slow=11,SNR=32							
STKA	**Stephens Creek**	**36.03**	**158**	P	P		09 25 08.9	+0.1
	3.9nm,0.9s,baz=334,slow=9.6,SNR=3.3							
MKAR	**Makanchi Array**	**59.33**	**326**	P	P		09 28 09.5	-0.1
	0.5nm,0.4s,baz=124,slow=6.8,SNR=5.2							
KURK	**Kurchatov**	**63.58**	**328**	P	P		09 28 38.3	+0.1
	2.5nm,0.6s,baz=126,slow=6.8,SNR=12							

IDC 13 09:18:30.9±2.2, 224S×9946E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/20, mbtmp3.9/8, Error ellipse: s-maj=74.1km s-min=24.1km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CMAR	**Chiang Mai Arr**	**20.57**	**359**	P	P		09 23 12.8	+1.3
	1.0nm,0.4s,baz=182,slow=8.3,SNR=5.2							
WRA	**Warramunga Arr**	**38.34**	**120**	P	P		09 25 53.6	-0.3
	1.1nm,0.6s,baz=303,slow=9.1,SNR=9.6							
KSRS	**Korea Array**	**47.50**	**31**	P	P		09 27 06.6	-1.3
	1.2nm,0.9s,baz=226,slow=8.6,SNR=4.5							
SONM	**Songino Array**	**50.24**	**6**	P	P		09 27 29.2	+0.5
	2.3nm,0.8s,baz=188,slow=8.6,SNR=9.5							
MKAR	**Makanchi Array**	**51.12**	**345**	P	P		09 27 35.1	-0.3
	1.0nm,0.5s,baz=151,slow=7.9,SNR=12							
KURK	**Kurchatov**	**55.69**	**344**	P	P		09 28 08.4	-0.5
	0.3nm,0.4s,baz=166,slow=6.8,SNR=3.8							
ZALV	**Zalesovo Beam**	**57.30**	**350**	P	P		09 28 20.2	-0.2
	1.6nm,0.3s,baz=159,slow=4.6,SNR=4.1							
BVAR	**Borovoye Array**	**60.22**	**340**	P	P		09 28 39.9	-0.9
	0.3nm,0.3s,baz=140,slow=7.6,SNR=2.9							
TXAR	**Lajitas Array**	**145.22**	**37**	PKPbc	PKPbc		09 38 11.6	+0.6
	1.4nm,0.7s,baz=203,slow=1.5,SNR=18							

BJI ***13*** *09:21:31.9, 240S×9989E, h17km, mB5.2, mb5.3, Ms4.8, Msz4.7*

IDC ***13*** *09:21:33.1±0.5, 2.11S×9985E, h0km, mb5.1/26, mb1 5.1/26, mb1mx5.1/26, mbtmp5.1/26, MS4.7/2, Ms1 4.8/2, ms1mx3.6/41, Error ellipse: s-maj=16.1km s-min=10.6km az=58.0*

ISCJB ***13*** *09:21:35.5±0.2, 2.19S×003×9977E±003, h24km, mb5.3/113, MS4.7/17, Error ellipse: s-maj=4.7km s-min=3.5km az=40.6*

SZGRF ***13*** *09:21:36.5, 309S×9951E, h33km, mb5.2, Southwest of Sumatera, Indonesia*

MOS ***13*** *09:21:37.2±1.0, 206S×9995E, h35km, mb5.6/45, Error ellipse: s-maj=10.9km s-min=5.8km az=108.3*

DJA ***13*** *09:21:38, 205S×9967E, h20km, Mw5.5/9*

NEIC ***13*** *09:21:38.9±0.2, 2.15S×9982E, h35km, mb5.3/50, Error ellipse: s-maj=6.1km s-min=4.2km az=48.0*

NEIC Felt [III] at Kapahiang, Sumatra.

ISC 13 09:21:37.6±0.2, 220S±003×9973E±003, h26km, h26km±2.1km; pP-P, n319, σ19°05/311, mb5.3/113, MS4.7/17, 29C-27D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PPI	**Padang Panjang**	**1.86**	**21**	P	**Pn**		**09 22 07.5**	**-0.3**
	0.0nm,0.0s							
RGRI	**Rengat**	**3.19**	**55**	P	**Pn**		**09 22 27.4**	**+1.3**
	0.0nm,0.0s							
TRSI	**Tarutung**	**4.27**	**350**	P	**Pn**		**09 22 43.1**	**+2.1**
	0.0nm,0.0s							
DSRI	**Dabo**	**5.14**	**71**	P	**Pn**		**09 22 53.5**	**+0.6**
	419nm,1.1s							
KGM	**Kluang**	**5.52**	**41**	⇓P	**Pn**		**09 23 00.1**	**+2.0**
MYKOM	**Kota Tinggi**	**5.72**	**46**	⇓P	**Pn**		**09 23 00.1**	**-0.8**
MYKOM	**Kota Tinggi**	**5.72**	**46**	⇓P	**Pn**		**09 23 02.7**	**+1.9**
FRIM	**Kepong**	**5.73**	**19**	⇓P	**Pn**		**09 23 02.5**	**+1.5**
KLI	**Kotabumi**	**5.76**	**117**	P	**Pn**		**09 23 02.8**	**+1.4**
	664nm,0.9s							
PPBI	**Pangkal Pinang**	**6.40**	**90**	P	**Pn**		**09 23 14.1**	**+3.8**
	87nm,1.1s							
IPM	**Ipoh**	**6.76**	**11**	⇓P	**Pn**		**09 23 17.0**	**+1.8**
TPI	**Tanjungpandan**	**7.94**	**94**	P	**Pn**		**09 23 36.4**	**+5.1**
	66nm,1.4s							
KTGM	**Kuala Trenggan**	**8.22**	**24**	⇓P	**Pn**		**09 23 36.7**	**+1.4**
DBJI	**Dramaga**	**8.22**	**122**	P	**Pn**		**09 23 36.7**	**+1.4**
	286nm,0.9s							
CBJI	**Citeko**	**8.24**	**121**	P	**Pn**		**09 23 41.4**	**+5.8**
	2μm,0.2s							
BSI	**Banda Aceh**	**8.84**	**330**	P	**Pn**		**09 23 43.5**	**-0.3**
	132nm,1.1s							
LEM	**Lembang**	**9.10**	**121**	P	**Pn**		**09 23 50.5**	**+3.1**
	366nm,1.1s							
SNG	**Songkhla**	**9.36**	**5**	P	**Pn**		**09 23 51.0**	**+0.1**
	240nm,1.1s							
BJII	**Banjarnegara**	**11.17**	**117**	P	**Pn**		**09 24 16.7**	**+1.0**
	85nm,0.5s							
KSM	**Kuching**	**11.19**	**71**	⇓P	**Pn**		**09 24 18.2**	**+2.2**
KSM	**Kuching**	**11.19**	**71**	*e*Pn	**Pn**		**09 24 18.1**	**+2.2**
BTM	**Bintulu**	**14.39**	**68**	⇓P	**Pn**		**09 25 02.3**	**+2.6**
KMMI	**Kalianget**	**14.98**	**109**	P	**Pn**		**09 25 11.3**	**+3.5**
	140nm,1.0s							
BBKI	**Banjar Baru**	**15.14**	**95**	P	**Pn**		**09 25 11.3**	**+1.4**
	183nm,1.1s							
SMKI	**Samarinda**	**17.56**	**85**	P	**Pn**		**09 25 42.9**	**+2.2**
	194nm,1.1s							
KKM	**Kota Kinabalu**	**18.39**	**63**	⇑P	**Pn**		**09 25 51.6**	**+0.7**
KKM	**Kota Kinabalu**	**18.39**	**63**	*e*P	**Pn**		**09 25 50.6**	**-0.3**
SDKM	**Sandakan**	**19.11**	**66**	⇓P	**Pn**		**09 25 59.0**	**-0.6**
TSM	**Tawau**	**19.24**	**70**	⇓P	**Pn**		**09 25 59.0**	**-2.3**
KDM	**Kudat**	**19.32**	**62**	⇓P	**Pn**		**09 26 01.9**	**-0.4**
MYLDM	**Lahad Datu**	**20.13**	**69**	⇓P	**P**		**09 26 11.1**	**+1.1**
PCI	**Palu**	**20.14**	**87**	P	**P**		**09 26 12.1**	**+2.1**
	371nm,1.4s							
KAPI	**Kappang**	**20.17**	**99**	P	**P**		**09 26 08.1**	**-2.3**
	1μm,1.0s,SNR=11							
KAPI	**Kappang**	**20.17**	**99**	P	**P**		**09 26 08.2**	**-2.1**
	214nm,1.0s,baz=286,slow=9.3,SNR=28							
KAPI	**Kappang**	**20.17**	**99**	*e*P	**P**		**09 26 08.7**	**-1.7**
	124nm,1.0s							
CMAR	**Chiang Mai Arr**	**20.55**	**358**	P	**P**		**09 26 12.4**	**-1.9**
	9.7nm,0.6s,baz=186,slow=10,SNR=4.4							
CMAR					PcP	PcP	09 30 25.1	-0.1
	2.6nm,0.4s,baz=226,slow=3.5,SNR=4.8							
CMAR					LR	LR	09 34 33.1	
	comp=Z,2μm,19.5s,MS4.5,baz=190,slow=38							
CMAR	**Chiang Mai Arr**	**20.55**	**358**	P	**P**		**09 26 12.4**	**-1.9**
CMAR							09 30 25.2	
CMAR					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CMAR					pmax	pmax		
	comp=Z,3.0nm,0.4s							
CMAR					MLR	MLR		
	comp=Z,2μm,19.5s							
CMAR	**Chiang Mai Arr**	**20.55**	**358**	P	**P**		**09 26 12.4**	**-1.9**
CMAR					PcP	PcP	09 30 25.1	-0.1
CMAR					LR	LR	09 34 33.1	
NANT	**Nan**	**20.89**	**3**	⇓P	**P**		**09 26 15.8**	**-2.3**
	comp=Z,462nm,1.0s							
CHG	**Chiang Mai**	**20.90**	**358**	⇓P	**P**		**09 26 16.3**	**-1.8**
	comp=Z,33nm,0.9s							
CHTO	**Chiang Mai**	**20.90**	**358**	*e*P	**P**		**09 26 16.9**	**-1.2**
CHTO					pmax	pmax		
	comp=Z,18nm,0.9s							
CHTO	**Chiang Mai**	**20.90**	**358**	*e*P	**P**		**09 26 16.9**	**-1.3**
	comp=Z,18nm,0.9s							
CHRT	**Chiangrai**	**21.94**	**0**	⇓P	**P**		**09 26 28.0**	**-1.3**
	comp=Z,290nm,0.9s,mb5.7							
KDI	**Kendari**	**22.92**	**95**	P	**P**		**09 26 39.8**	**-0.1**
	comp=Z,154nm,1.2s,mb5.3							
QIZ	**Qiongzhong**	**23.33**	**25**	P	**P**		**09 26 42.4**	**-1.6**
QIZ					AP		09 26 46.5	
QIZ					S	**S**	**09 30 56.8**	**+1.8**
QIZ					AMB	AMB		
	comp=Z,102nm,0.9s,mb5.2							
QIZ					LR	LR		
	comp=N,1μm,18.2s							
QIZ					LR	LR		
	comp=Z,2μm,17.9s,MS4.6							
QIZ	**Qiongzhong**	**23.33**	**25**	*e*P	**P**		**09 26 42.7**	**-1.4**
	comp=Z,99nm,0.9s,mb5.2							
BATI	**Baumata**	**25.07**	**110**	P	**P**		**09 26 57.2**	**-3.0**
	comp=Z,22nm,0.5s,mb4.9,baz=126,slow=2.8,SNR=4.6							
MBWA	**Marble Bar**	**27.11**	**136**	*e*P	**P**		**09 27 19.2**	**+0.7**
	comp=Z,16nm,0.9s,mb4.5							
MBWA				*e*pP	pP		09 27 27.0	+0.9
KMI	**Kunming**	**27.32**	**6**	P	**P**		**09 27 20.3**	**-0.1**
KMI				AP	pP		09 27 24.9	-3.1
KMI				XP	sP		09 27 27.0	-4.2
KMI				PP			09 28 10.9	
KMI				S	**S**		**09 32 01.6**	**+2.9**
KMI				XS	sS		09 32 07.1	-4.2
KMI				SS			09 33 17.6	
KMI				AMB	AMB			
	comp=Z,21nm,1.1s,mb4.6							
KMI				AMB	AMB			
	comp=Z,114nm,4.9s							
KMI				LR	LR			
	comp=N,984nm,18.5s,MS4.6							
KMI				LR	LR			
	comp=E,912nm,14.2s,MS4.6							
KMI				LR	LR			
	comp=Z,1μm,21.5s							
IMP	**Imphal**	**27.41**	**348**	*e*P	**P**		**09 27 21.0**	**-0.2**
IMP				*e*S	**S**		**09 32 02.0**	**+1.9**
GYA	**Guiyang**	**29.27**	**13**	⇑P	**P**		**09 27 39.3**	**+1.5**
GYA				PCP	PcP		09 30 43.3	-1.1
GYA				S	**S**		**09 32 31.6**	**+2.2**
GYA				SS	SS		09 34 01.9	-32
GYA				SCP	ScP		09 34 25.0	+0.3
GYA				SCS	ScS		09 38 16.3	-2.7
GYA				AMB	AMB			
	comp=Z,140nm,0.9s,mb5.7							
GYA				AMB	AMB			
	comp=Z,1μm,5.0s							
FITZ	**Fitzroy Crossi**	**29.92**	**124**	*e*P	**P**		**09 27 42.1**	**-1.6**
	comp=Z,24nm,1.0s,mb4.9							
FITZ				*e*S	**S**		**09 32 36.3**	**-3.6**
FITZ	**Fitzroy Crossi**	**29.92**	**124**	P	**P**		**09 27 42.2**	**-1.5**
	comp=Z,18nm,1.1s,mb4.7,baz=319,slow=8.4,SNR=17							
ODAN	**Odare**	**31.25**	**338**	*e*P	**P**		**09 27 56.0**	**+0.7**
	comp=Z,176nm,0.9s,mb5.9							
SWI	**Sorong**	**31.55**	**88**	P	**P**		**09 27 56.1**	**-2.0**
	comp=Z,196nm,1.0s,mb5.9							
TAPN	**Taplejung**	**31.58**	**339**	*e*P	**P**		**09 27 59.5**	**+1.3**
	comp=Z,230nm,0.9s,mb6.0							
RAMN	**Ramite**	**31.63**	**337**	*e*P	**P**		**09 27 59.7**	**+1.0**
	comp=Z,89nm,0.7s,mb5.7							
JIRN	**Jiri**	**32.43**	**337**	*e*P	**P**		**09 28 06.6**	**+1.0**
	comp=Z,203nm,0.9s,mb6.0							
PKI	**Pulchoki**	**32.66**	**336**	*e*P	**P**		**09 28 08.2**	**+0.5**
LSA	**Lhasa**	**32.77**	**346**	P	**P**		**09 28 09.8**	**+1.2**
LSA				S	**S**		**09 33 21.0**	**-3.0**
LSA				AMB	AMB			
	comp=Z,60nm,0.9s,mb5.5							
LSA				LR	LR			
	comp=N,470nm,25.8s,MS4.3							
LSA				LR	LR			
	comp=E,670nm,29.7s,MS4.3							
LSA				LR	LR			
	comp=Z,880nm,27.0s,MS4.3							
LSA	**Lhasa**	**32.77**	**346**	*e*P	**P**		**09 28 09.7**	**+1.1**
LSA				pmax	pmax			
	comp=Z,33nm,0.6s,mb5.4							
LSA	**Lhasa**	**32.77**	**346**	*e*P	**P**		**09 28 09.7**	**+1.1**
	comp=Z,33nm,0.6s,mb5.4							
GUN	**Gumba**	**32.77**	**337**	*e*P	**P**		**09 28 09.4**	**+0.7**
	comp=Z,102nm,0.6s,mb6.0							
DMN	**Daman**	**32.81**	**336**	*e*P	**P**		**09 28 09.5**	**+0.5**
	comp=Z,61nm,1.2s,mb5.4							
KKN	**Kakani**	**32.90**	**336**	*e*P	**P**		**09 28 10.1**	**+0.3**
	comp=Z,81nm,1.0s,mb5.6							
CD2	**Chengdu**	**33.15**	**6**	⇓*i*P	**P**		**09 28 10.1**	**-1.8**
CD2				AP	pP		09 28 14.5	-5.1
CD2				XP	sP		09 28 17.3	-5.5
CD2				PP	PP		09 29 22.0	-5.3
CD2				PCP	PcP		09 30 51.6	-3.1
CD2				S	**S**		**09 33 29.8**	**-0.2**
CD2				XS	sS		09 33 37.0	-5.6
CD2				PCS	PcS		09 34 36.3	-4.0
CD2				SS	SS		09 35 32.6	-21
CD2				SCS	ScS		09 38 33.8	-4.2
CD2				AMB	AMB			
	comp=Z,20nm,0.9s,mb5.0							
CD2				AMB	AMB			
	comp=Z,80nm,7.2s							
CD2				LR	LR			
	comp=N,2μm,18.0s,MS5.0							
CD2				LR	LR			
	comp=E,2μm,18.0s,MS5.0							
CD2				LR	LR			
	comp=Z,1μm,18.0s,MS4.7							
GKN	**Gorkha**	**33.36**	**335**	*e*P	**P**		**09 28 14.1**	**+0.3**
MUN	**Mundaring**	**33.44**	**154**	*e*P	**P**		**09 28 13.9**	**-0.5**
KOLN	**Koldanda**	**33.60**	**334**	*e*P	**P**		**09 28 16.6**	**+0.7**
	comp=Z,41nm,0.6s,mb5.5							
YHNB	**Yeheng**	**33.99**	**37**	*e*P	**P**		**09 28 18.9**	**-0.4**
	comp=Z,69nm,1.2s,mb5.5							
YHNB				*e*pP	pP		09 28 27.5	+0.5
DANN	**Dangsing**	**34.03**	**334**	*e*P	**P**		**09 28 20.1**	**+0.4**
NWAO	**Narrogin (SRO)**	**34.70**	**154**	P	**P**		**09 28 25.8**	**+0.4**
	comp=Z,10.0nm,0.7s,mb4.9,baz=301,slow=12,SNR=7.9							
NWAO				LR	LR		09 41 55.3	
	comp=Z,1μm,21.1s,MS4.6,baz=312,slow=35							
NWAO	**Narrogin (SRO)**	**34.70**	**154**	P	**P**		**09 28 25.8**	**+0.4**
NWAO				pmax	pmax			
	comp=Z,10.0nm,0.7s							
NWAO				MLR	MLR			
	comp=Z,1μm,21.1s							
WHN	**Wuhan**	**35.42**	**22**	⇓P	**P**		**09 28 30.9**	**-0.8**
WHN				S	**S**		**09 34 05.8**	**+0.7**
WHN				AMB	AMB			
	comp=Z,70nm,1.4s,mb5.4							
WHN				LR	LR			
	comp=N,2μm,12.9s,MS5.0							
WHN				LR	LR			
	comp=E,1μm,14.1s,MS5.0							
WHN				LR	LR			
	comp=Z,2μm,16.5s,MS5.0							
PTH	**Pithoragarh**	**36.68**	**331**	*e*P	**P**		**09 28 43.1**	**+0.7**
XAN	**Xi'an**	**37.08**	**13**	P	**P**		**09 28 43.8**	**-1.9**
XAN				AP	pP		09 28 49.9	-3.5
XAN				XP	sP		09 28 53.0	-3.6
XAN				AMB	AMB			
	comp=Z,70nm,0.9s,mb5.5							
XAN				AMB	AMB			
	comp=Z,57nm,5.9s							
WRA	**Warramunga Arr**	**38.12**	**120**	P	**P**		**09 28 53.1**	**-1.8**
	comp=Z,65nm,0.8s,mb5.4,baz=296,slow=9.6,SNR=181							
WRA				PcP	PcP		09 31 09.1	-0.5
	comp=Z,4.7nm,0.8s,baz=296,slow=2.5,SNR=4.8							
WRA				S	**S**		**09 34 40.5**	**-6.1**
	comp=Z,7.9nm,0.9s,baz=295,slow=16,SNR=14							
WRA	**Warramunga Arr**	**38.12**	**120**	P	**P**		**09 28 53.1**	**-1.7**
WRA							09 31 09.1	
WRA				S	**S**		**09 34 40.5**	**-6.1**
WRA				pmax	pmax			
	comp=Z,65nm,0.8s							
WRA				pmax	pmax			
	comp=Z,5.0nm,0.8s							
WRA				smax				
	comp=N,8.0nm,0.9s							
WRAB	**Tennant Creek**	**38.13**	**120**	P	**P**		**09 28 53.0**	**-1.9**
	comp=N,624nm,0.9s,mb6.3,SNR=33							
WRAB	**Tennant Creek**	**38.13**	**120**	*e*P	**P**		**09 28 53.2**	**-1.7**
WRAB				*e*S	**S**		**09 34 42.8**	**-3.9**
WRAB				pmax	pmax			
	comp=Z,97nm,1.0s,mb5.5							
WRAB	**Tennant Creek**	**38.13**	**120**	*e*P	**P**		**09 28 53.2**	**-1.6**
	comp=Z,97nm,1.0s,mb5.5							
WRAB				*e*S	**S**		**09 34 42.8**	**-3.9**
WB2	**Warramunga Arr**	**38.13**	**120**	⇑*i*P	**P**		**09 28 53.1**	**-1.8**
LZH	**Lanzhou**	**38.29**	**5**	*e*P	**P**		**09 28 54.5**	**-1.4**
LZH				AP	pP		09 28 59.3	-4.4
LZH				XP	sP		09 29 01.6	-5.2
LZH				PP	PP		09 30 26.0	+2.2
LZH				*e*S	**S**		**09 34 48.5**	**-0.1**
LZH				*e*SS	SS		09 37 28.3	-8.8
LZH				AMB	AMB			
	comp=Z,68nm,1.3s,mb5.2							
LZH				AMB	AMB			
	comp=Z,154nm,5.2s							
LZH				LR	LR			
	comp=N,969nm,13.3s							
LZH				LR	LR			
	comp=Z,1μm,15.2s,MS4.8							
NJ2	**Nanjing**	**38.60**	**26**	*e*P	**P**		**09 29 00.1**	**+1.5**
NJ2				AP	pP		09 29 05.4	-1.0
NJ2				XP	sP		09 29 07.3	-2.2
NJ2				PP	PP		09 30 32.5	+5.2
NJ2				S	**S**		**09 34 55.0**	**+1.6**
NJ2				XS	sS		09 35 03.5	-2.7
NJ2				AMB	AMB			
	comp=Z,20nm,0.7s,mb5.0							
NJ2				AMB	AMB			
	comp=Z,2μm,4.4s							
NJ2				LR	LR			
	comp=N,220nm,14.6s,MS4.7							
NJ2				LR	LR			
	comp=E,670nm,12.4s,MS4.7							
FORT	**Forrest**	**39.06**	**140**	*e*P	**P**		**09 29 03.5**	**+1.0**
	comp=E,31nm,0.7s,mb5.1							
JOW	**Kunigami**	**39.90**	**42**	P	**P**		**09 29 08.3**	**-1.2**
	comp=E,25nm,0.8s,mb5.0,baz=268,slow=6.4,SNR=8.1							
GTA	**Gaotai**	**41.41**	**0**	⇑P	**P**		**09 29 21.3**	**-0.6**
GTA				AP	pP		09 29 25.9	-3.8
GTA				XP	sP		09 29 28.4	-4.4
GTA				S	**S**		**09 35 36.1**	**+0.8**
GTA				SS	SS		09 38 35.1	-5.0
GTA				AMB	AMB			
	comp=Z,30nm,1.5s,mb4.7							
GTA				AMB	AMB			
	comp=Z,182nm,4.8s							
GTA				LR	LR			
	comp=N,668nm,17.1s,MS4.8							
GTA				LR	LR			
	comp=E,874nm,15.6s,MS4.8							
GTA				LR	LR			

DL2 AMB AMB
comp=Z,40nm,1.0s,mb5.3
DL2 AMB AMB
comp=Z,170nm,5.1s
DL2 LR LR
comp=N,360nm,18.3s,MS4.4
DL2 LR LR
comp=E,260nm,18.2s,MS4.4
DL2 LR LR
comp=Z,430nm,19.3s,MS4.4
KSH Kashi 46.90 335 P **P 09 30 06.6 +0.7**
KSH *e*AP pP 09 30 11.1 -2.7
KSH *e*XP sP 09 30 14.1 -2.8
KSH *e*PCP PcP 09 31 39.3 +0.9
KSH *e*PP PP 09 31 57.1 +0.6
KSH *e*SCP ScP 09 35 31.0 +0.3
KSH *e*PCS PcS 09 35 33.3 0.0
KSH *e*S **S 09 36 55.6 +0.3**
KSH *e*XS sS 09 37 04.1 -4.2
KSH *e*SCS ScS 09 39 58.0 -0.9
KSH *e*SS SS 09 40 16.0 -6.4
KSH AMB AMB
comp=Z,558nm,3.5s
KSH LR LR
comp=N,480nm,5.5s
KSH LR LR
comp=E,586nm,5.2s
KSH LR LR
comp=Z,1μm,17.6s,MS4.9
WMQ Urumqi 47.07 348⇑ *i*P **P 09 30 08.3 +1.2**
WMQ AP pP 09 30 14.3 -0.7
WMQ PCP PcP 09 31 41.0 +2.1
WMQ S **S 09 36 56.6 -1.0**
WMQ XS sS 09 37 14.0 +3.4
WMQ SCS ScS 09 39 59.5 -0.3
WMQ AMB AMB
comp=Z,198nm,1.0s,mb6.0
WMQ AMB AMB
comp=Z,678nm,3.6s
WMQ LR LR
comp=N,689nm,21.6s
WMQ LR LR
comp=E,729nm,15.9s
WMQ LR LR
comp=Z,1μm,25.8s,MS4.7
KSRS Korea Array 47.33 31 P **P 09 30 08.0 -1.3**
comp=Z,43nm,0.8s,mb5.4,baz=223,slow=8.4,SNR=97
KSRS Korea Array 47.33 31 P **P 09 30 08.0 -1.3**
KSRS pmax pmax
comp=Z,43nm,0.8s,mb5.4
CTA Charters Tower 48.76 115 *e*P **P 09 30 19.2 -1.4**
comp=Z,33nm,0.9s,mb5.4
CTA Charters Tower 48.76 115 P **P 09 30 19.3 -1.3**
comp=Z,41nm,0.8s,mb5.5,baz=286,slow=9.0,SNR=54
CTA Charters Tower 48.76 115 P **P 09 30 19.3 -1.3**
CTA pmax pmax
comp=Z,41nm,0.8s
CTAO Charters Tower 48.76 115 *e*P **P 09 30 19.4 -1.2**
CTAO *e**PP pP 09 30 29.7 +1.2
CTAO pmax pmax
comp=Z,51nm,0.9s,mb5.5
CTAO Charters Tower 48.76 115 *e*P **P 09 30 19.4 -1.2**
comp=Z,51nm,0.9s,mb5.5
CTAO *e*pP pP 09 30 29.7 +1.2
SNY Shenyang 48.88 24⇑P **P 09 30 19.5 -1.6**
SNY AMB AMB
comp=Z,28nm,0.6s,mb5.5
ULHL Ulahol 49.09 337 P **P 09 30 19.0 -3.7**
SNR=10
STKA Stephens Creek 49.22 131 *i*P **P 09 30 23.9 -0.1**
comp=Z,23nm,0.8s,mb5.3
STKA Stephens Creek 49.22 131 P **P 09 30 23.9 0.0**
comp=Z,28nm,0.8s,mb5.4,baz=301,slow=8.1,SNR=12
UCH Uchtor 49.77 336 P **P 09 30 29.2 +1.2**
SNR=9.2
UCH Uchtor 49.77 336 *e*P **P 09 30 29.3 +1.4**
comp=Z,27nm,1.1s,mb5.2
TKM2 Tokmak 2 49.91 337 *e*P **P 09 30 29.8 +0.8**
TKM2 pmax pmax
comp=Z,65nm,0.8s,mb5.7
TKM2 Tokmak 2 49.91 337 P **P 09 30 29.6 +0.6**
SNR=61
TKM2 Tokmak 2 49.91 337 *e*P **P 09 30 29.8 +0.7**
comp=Z,66nm,0.8s,mb5.7
KBK Karagaybulak 49.95 336 P **P 09 30 30.6 +1.3**
SNR=9.1
AML Almayashu 50.03 335 P **P 09 30 30.9 +0.9**
SNR=9.2
AML Almayashu 50.03 335 *e*P **P 09 30 30.8 +0.8**
comp=Z,24nm,0.7s,mb5.3
AML *e*pP pP 09 30 38.7 +0.8
AAK Ala-Archa 50.11 336 P **P 09 30 31.5 +0.9**
SNR=6.6
SONM Songino Array 50.17 6 P **P 09 30 31.0 +0.1**
comp=Z,120nm,0.8s,mb6.0,baz=187,slow=8.6,SNR=530
SONM PcP PcP 09 31 49.2 -0.7
comp=Z,16nm,0.9s,baz=189,slow=4.0,SNR=4.3
SONM Songino Array 50.17 6 P **P 09 30 31.0 +0.1**
SONM 09 31 49.2
SONM pmax pmax
comp=Z,120nm,0.8s
SONM pmax pmax
comp=Z,16nm,0.9s
FRU Bishkek 50.23 336 *e*P **P 09 30 31.0 -0.4**
FRU pmax pmax
comp=Z,110nm,2.0s,mb5.5
ULN Ulaanbaatar 50.27 6 *e*P **P 09 30 31.8 +0.1**
ULN pmax pmax
comp=Z,98nm,0.8s,mb5.9
ULN Ulaanbaatar 50.27 6 *e*P **P 09 30 31.8 +0.1**
comp=Z,98nm,0.8s,mb5.9
CHMS Chumysh 50.31 336 P **P 09 30 32.3 +0.2**
SNR=12
EKS2 Erkin-Say 50.43 335 P **P 09 30 33.9 +0.9**
SNR=56
EKS2 Erkin-Say 50.43 335 *e*P **P 09 30 33.9 +0.9**
comp=Z,48nm,0.8s,mb5.6
USP Ospenovka 50.64 336 P **P 09 30 34.8 +0.3**
SNR=34
MKAR Makanchi Array 51.15 345 P **P 09 30 38.4 +0.1**
comp=Z,84nm,0.7s,mb5.8,baz=149,slow=8.2,SNR=434
MKAR S **S 09 37 55.1 +0.3**
comp=Z,1.1nm,0.8s,baz=178,slow=14,SNR=7.0
MKAR Makanchi Array 51.15 345 P **P 09 30 38.4 +0.1**
MKAR S **S 09 37 55.1 +0.3**
MKAR pmax pmax
comp=Z,84nm,0.7s
MKAR smax
comp=N,1.0nm,0.8s
CN2 Changchun 51.28 24 *e*P **P 09 30 38.0 -1.3**
CN2 *e*XP sP 09 30 45.0 -5.4
CN2 *e*S **S 09 37 56.0 -0.7**
CN2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CN2 AMB AMB
comp=Z,200nm,3.0s
ZAK Zakamensk 52.47 3⇓ *i*P **P 09 30 47.5 -0.6**
ZAK *e* 09 31 58.4
ZAK *e* 09 33 44.8
ZAK pmax pmax
comp=Z,25nm,1.0s,mb5.1
MAJO Matsushiro 52.60 39 *e*P **P 09 30 47.5 -1.8**
MAJO pmax pmax
comp=Z,40nm,1.1s,mb5.3
MAJO Matsushiro 52.60 39 *e*P **P 09 30 47.5 -1.9**
comp=Z,40nm,1.1s,mb5.3
MAT Matsushiro 52.60 39 P **P 09 30 48.2 -1.1**
MAT *e*S **S 09 38 12.8 -2.3**
MJAR Matsushiro Arr 52.60 39 P **P 09 30 47.3 -2.0**
comp=Z,26nm,0.9s,mb5.2,baz=221,slow=7.6,SNR=57
MJAR Matsushiro Arr 52.60 39 P **P 09 30 47.3 -2.1**
MJAR pmax pmax
comp=Z,27nm,0.9s
VLA Vladivostok 53.60 29 *i*P **P 09 30 57.0 +0.4**
MOY Mondy 53.68 1 *e*P **P 09 30 57.0 0.0**
MOY pmax pmax
comp=Z,40nm,2.3s,mb4.9
MDJ Mudanjiang 53.69 26 P **P 09 30 56.4 -0.8**
MDJ AMB AMB
comp=Z,33nm,1.2s,mb5.1
MDJ AMB AMB
comp=Z,81nm,4.2s
MDJ LR LR
comp=N,568nm,20.5s
MDJ LR LR
comp=Z,719nm,21.2s,MS4.7
MDJ Mudanjiang 53.69 26 *e*P **P 09 30 56.4 -0.8**
comp=Z,36nm,1.0s,mb5.2
TLY Talaya 53.78 3 P **P 09 30 58.4 +0.7**
comp=Z,343nm,0.8s,mb6.3,SNR=14
TLY Talaya 53.78 3 *e*P **P 09 30 58.1 +0.4**
TLY *e*S **S 09 38 23.0 -7.7**
TLY pmax pmax
comp=Z,55nm,0.9s,mb5.5
TLY MLR MLR
comp=Z,2μm,13.0s,MS5.3
TLY Talaya 53.78 3 *e*P **P 09 30 58.2 +0.4**
comp=Z,52nm,0.9s,mb5.5
IRK Irkutsk 54.38 3⇑ *i*P **P 09 31 05.5 +3.4**
IRK *e* pP 09 31 12.2 +2.1
IRK pmax pmax
comp=Z,75nm,1.4s,mb5.4
TOO Toolangi 54.75 136 *e*P **P 09 31 11.5 +6.4**
CIT Chita 55.28 10 *e*P **P 09 31 07.3 -1.3**
CIT *e* 09 32 08.2
CIT pmax pmax
comp=Z,127nm,1.6s,mb5.7
KURK Kurchatov 55.73 344 P **P 09 31 11.9 +0.1**
comp=Z,433nm,0.9s,mb6.5,SNR=40
KURK Kurchatov 55.73 344 P **P 09 31 10.8 -1.1**
comp=Z,33nm,0.9s,mb5.4,baz=154,slow=7.2,SNR=86
KURK Kurchatov 55.73 344 *e*P **P 09 31 11.8 0.0**
KURK S **S 09 39 08.4 +12**
KURK pmax pmax
comp=Z,52nm,1.0s,mb5.5
KURK Kurchatov 55.73 344 *e*P **P 09 31 11.8 -0.1**
comp=Z,52nm,1.0s,mb5.5
KURK S **S 09 39 08.3 +12**
CAN Canberra 56.28 132 *e*P **P 09 31 16.6 +0.5**
ARMA Armidale 56.50 125 *e*P **P 09 31 19.1 +1.3**
ZAA0 Zalesovo Array 57.32 350 *e*P **P 09 31 22.7 -0.4**
ZALV Zalesovo Beam 57.32 350 P **P 09 31 22.7 -0.4**
comp=Z,86nm,0.8s,mb5.8,baz=163,slow=5.7,SNR=136
ZALV Zalesovo Beam 57.32 350 P **P 09 31 22.7 -0.4**
ZALV pmax pmax
comp=Z,86nm,0.8s,mb5.8
ZALV Zalesovo Beam 57.32 350 P **P 09 31 22.7 -0.4**
KLR Kul'dur 58.23 24⇓ *i*P **P 09 31 25.2 -4.4**
KLR pmax pmax
comp=E,77nm,1.2s
KLR pmax pmax
comp=Z,160nm,1.2s,mb5.9
NVS Novosibirsk 58.46 349 *i*P **P 09 31 29.7 -1.4**
NVS pmax pmax
comp=Z,41nm,1.0s,mb5.4
NVS pmax pmax
comp=N,26nm,1.0s
NVS pmax pmax
comp=E,11nm,0.6s
ASAJ Asahikawa 59.93 34 P **P 09 31 40.7 -0.8**
comp=E,33nm,0.8s,mb5.4,baz=253,slow=9.0,SNR=46
ASAJ Asahikawa 59.93 34 P **P 09 31 40.7 -0.8**
ASAJ pmax pmax
comp=Z,33nm,0.8s
BVAR Borovoye Array 60.28 340 P **P 09 31 42.6 -1.2**
comp=Z,10nm,0.5s,mb5.1,baz=146,slow=8.6,SNR=27
BVAR Borovoye Array 60.28 340 P **P 09 31 42.6 -1.1**
BVAR pmax pmax
comp=Z,10.0nm,0.5s
BRVK Borovoye 60.34 340 *e*P **P 09 31 43.2 -1.0**
BRVK pmax pmax
comp=Z,13nm,1.1s,mb4.9
BRVK Borovoye 60.34 340 *e*P **P 09 31 43.2 -1.0**
comp=Z,13nm,1.1s,mb4.9
BOD Bodaibo 60.92 9⇓ *i*P **P 09 31 47.2 -0.8**
BOD pmax pmax
comp=Z,73nm,1.1s,mb5.7
YSS Yuzh-Sakhalins 61.80 32⇓ *i*P **P 09 31 53.5 -0.7**
YSS *e* 09 32 04.0
YSS *e* 09 32 13.0
YSS pmax pmax
comp=Z,140nm,1.1s,mb6.0
YSS Yuzh-Sakhalins 61.80 32 *e*P **P 09 31 53.8 -0.3**
comp=Z,145nm,1.2s,mb6.0
CLNS Chul'man 62.28 15 *e*P **P 09 31 56.5 -0.7**
CLNS pmax pmax
comp=Z,58nm,0.9s,mb5.7
CLNS pmax pmax
comp=E,15nm,0.8s
CLNS pmax pmax
comp=N,30nm,0.9s
KMBO Kilima Mbogo 62.46 270 P **P 09 32 00.1 +0.8**
comp=N,0.5nm,0.3s,mb4.1,baz=82,slow=16,SNR=3.7
KMBO Kilima Mbogo 62.46 270 P **P 09 32 00.1 +0.8**
KMBO pmax pmax
comp=Z,1.0nm,0.3s
KMBO Kilima Mbogo 62.46 270 P **P 09 32 00.2 +0.9**
CASY Casey 64.40 175 *e*P **P 09 32 12.1 +1.0**
GNI Garni 65.49 316*c* *i*P **P 09 32 18.7 0.0**
GNI pmax pmax
comp=Z,12nm,1.1s
SVE Sverdlovsk 66.77 338⇓ *e*P **P 09 32 26.0 -0.5**
SVE pmax pmax
comp=Z,60nm,1.1s,mb5.5
ARU Arti 67.29 337*c* *i*P **P 09 32 28.8 -1.0**
ARU *e* 09 32 54.5
ARU *e* 09 34 53.5
ARU *e*S S 09 41 23.7 +0.4
ARU pmax pmax
comp=Z,26nm,1.2s,mb5.1
ARU Arti 67.29 337 *e*P **P 09 32 28.9 -1.0**
comp=Z,45nm,1.2s,mb5.4
YAK Yakutsk 68.01 15*c* *i*P **P 09 32 32.6 -1.7**
YAK pmax pmax
comp=Z,149nm,1.2s,mb5.9
YAK Yakutsk 68.01 15 *e*P **P 09 32 32.7 -1.6**
comp=Z,142nm,1.3s,mb5.8
MALT Malatya 69.28 312 *e*P **P 09 32 41.7 -1.0**
MALT pmax pmax
comp=Z,19nm,1.1s,mb4.9
MALT Malatya 69.28 312⇓ *i*P **P 09 32 41.1 -1.6**
MALT Malatya 69.28 312 *e*P **P 09 32 41.7 -1.0**
comp=Z,19nm,1.1s,mb5.0
MAW Mawson 70.02 194 *e*P **P 09 32 48.2 +1.5**
comp=Z,4.5nm,0.9s,mb4.4
MAW Mawson 70.02 194 P **P 09 32 47.7 +1.0**
comp=Z,3.1nm,0.8s,mb4.3,baz=20,slow=11,SNR=4.5
MAW Mawson 70.02 194 P **P 09 32 47.7 +1.0**
MAW pmax pmax
comp=Z,3.0nm,0.8s
SKR Severo-Kuril's 71.19 34 *e*P **P 09 32 53.0 -1.2**
SKR pmax pmax
comp=Z,220nm,0.9s,mb6.1
PETK Petropavlovsk- 73.20 32 P **P 09 33 04.2 -1.9**
comp=Z,15nm,0.7s,mb5.0,baz=203,slow=4.0,SNR=31
PET Petropavlovsk 73.67 33⇑ *e*P **P 09 33 08.0 -0.9**
PET pmax pmax
comp=Z,65nm,1.0s,mb5.5
PET Petropavlovsk 73.67 33 *e*P **P 09 33 07.8 -1.1**
comp=Z,68nm,1.0s,mb5.5
VSR Storozhevoye 73.79 325 *e*P **P 09 33 08.1 -1.5**
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,30nm,1.1s
SIM Simferopol' 74.57 318⇓ P **P 09 33 09.6 -4.7**
SIM *e* 09 33 31.5
SIM pmax pmax
comp=Z,31nm,0.9s,mb5.2
BOSA Boshof 75.32 241 P **P 09 33 19.5 +0.4**
comp=Z,3.1nm,0.7s,mb4.3,baz=283,slow=22,SNR=5.8
BOSA Boshof 75.32 241 P **P 09 33 19.5 +0.4**
BOSA pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
TIXI Tiksi 76.10 9 *e*P **P 09 33 20.6 -2.0**
TIXI pmax pmax
comp=Z,51nm,1.2s,mb5.3
TIXI Tiksi 76.10 9 *e*P **P 09 33 20.9 -1.7**
comp=Z,46nm,1.1s,mb5.3
OBN Obninsk 76.83 328α*e*P **P 09 33 26.6 -0.4**
OBN *e* 09 33 36.6
OBN *i* 09 33 42.9
OBN pmax pmax
comp=Z,56nm,1.2s,mb5.4
OBN Obninsk 76.83 328 *e*P **P 09 33 26.6 -0.4**
comp=Z,55nm,1.3s,mb5.3
OBN *e*pP pP 09 33 37.1 +1.9
SYO Syowa Base 77.59 199⇑ *e*P **P 09 33 30.4 -0.7**
SYO Syowa Base 77.59 199⇓ *e*pP pP 09 33 34.0 -5.3
TIRR Tirgusor 78.31 316⇑ *i*P **P 09 33 35.1 -0.5**
AKASG Malin Array Be 79.48 322 P **P 09 33 40.6 -1.2**
comp=Z,1.1nm,0.4s,mb4.1,baz=81,slow=4.6,SNR=11
AKASG Malin Array Be 79.48 322 P **P 09 33 40.6 -1.2**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KIEV Kiev 79.49 322 *e*P **P 09 33 41.5 -0.4**
KIEV pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KIEV Kiev 79.49 322 *e*P **P 09 33 41.5 -0.4**
comp=Z,3.4nm,0.8s,mb4.3
VRI Vrincioaia 79.82 317⇑ *i*P **P 09 33 44.3 +0.5**
MLR Muntele Rosu 80.26 317⇑ *i*P **P 09 33 46.0 -0.2**
BURAR Bucovina Array 81.23 319⇑ *i*P **P 09 33 52.0 +0.7**
DRGR 82.73 318⇑ *i*P **P 09 33 59.6 +0.3**
SBA Scott Base 83.11 169 P **P 09 34 00.8 +0.2**
SBA *e**PP pP 09 34 11.9 +2.9
SBA pmax pmax
comp=Z,10.0nm,1.8s,mb4.5
SBA Scott Base 83.11 169 P **P 09 34 00.8 +0.2**
comp=Z,10nm,1.8s,mb4.5
SBA *e*pP pP 09 34 11.9 +2.9
BZS Buzias 83.27 316⇓ *i*P **P 09 34 01.6 -0.4**
KWP Kalwaria 83.29 320 *e*P **P 09 34 02.6 +0.6**
KWP pmax pmax
comp=Z,44nm,0.5s,mb5.7
KWP Kalwaria 83.29 320 *e*P **P 09 34 02.6 +0.5**
comp=Z,44nm,0.5s,mb5.7
KOLS Kolonicke sedl 83.43 320 *e*P **P 09 34 03.9 +1.1**
CRVS Cervenica-Dubn 83.95 319 *e*P **P 09 34 05.0 -0.5**
STHS Stebnicka Huta 84.18 320 *e*P **P 09 34 06.8 +0.2**
STHS pmax pmax
comp=Z,12nm,0.9s,mb5.0
STHS Stebnicka Huta 84.18 320 *e*P **P 09 34 06.8 +0.2**
comp=Z,12nm,0.9s,mb5.0
KECS Kecovo 84.52 319 *i*P **P 09 34 08.2 -0.2**
KECS *e* 09 34 20.4
KECS pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
KECS Kecovo 84.52 319 *i*P **P 09 34 08.2 -0.2**
comp=Z,6.7nm,0.9s,mb4.8
KECS *e* 09 34 20.4
PSZ Piszkesteto 84.82 318 *e*P **P 09 34 10.4 +0.5**
PSZ pmax pmax
comp=Z,16nm,1.0s,mb5.1
PSZ Piszkesteto 84.82 318 *e*P **P 09 34 10.4 +0.5**
comp=Z,16nm,1.0s,mb5.1
OJC Ojcow 85.24 321 *e*P **P 09 34 12.0 0.0**
PKSM Moragy 85.41 317⇑ *i*P **P 09 34 12.4 -0.5**
VYHS Vyhne 85.60 319 *e*P **P 09 34 13.0 -0.8**
VYHS Vyhne 85.60 319 *e*P **P 09 34 13.1 -0.7**
KOLL Kolacno 85.90 319 *e*P **P 09 34 15.5 +0.2**
ARCES ARCESS Array B 86.57 340 P **P 09 34 18.1 -0.1**
comp=Z,22nm,0.8s,mb5.4,baz=97,slow=4.9,SNR=29
ARCES ARCESS Array B 86.57 340 P **P 09 34 18.1 0.0**
ARCES pmax pmax
comp=Z,22nm,0.8s
MODS Modra-Piesok 86.61 319 *e*P **P 09 34 19.6 +0.8**
MORC Moravsky Berou 86.62 320⇑ *i*P **P 09 34 19.1 +0.3**
ZST Bratislava 86.71 318 *e*P **P 09 34 19.8 +0.5**
ZST pmax pmax
comp=Z,14nm,0.7s,mb5.3
ZST Bratislava 86.71 318 *e*P **P 09 34 19.8 +0.5**
comp=Z,14nm,0.7s,mb5.3
DPC Dobruska-Polom 87.47 320 *e*P **P 09 34 23.5 +0.6**
DPC *e*pP pP 09 34 34.5 +3.2
KSP Ksiaz 87.54 321 *e*P **P 09 34 23.7 +0.4**
BOJS Bojanci 87.68 316 *i*P **P 09 34 24.0 0.0**
UPC Upice 87.68 321 *e*P **P 09 34 24.7 +0.8**
PERS Pernice 87.88 317 *i*P **P 09 34 25.0 0.0**
SOKA Soboth 87.94 317⇑ *i*P **P 09 34 25.4 +0.1**
VISS Visnje 88.00 316 *i*P **P 09 34 25.1 -0.5**
LJU Ljubljana 88.23 316 *e*P **P 09 34 27.0 +0.3**
JAVS Javornik 88.55 316 *i*P **P 09 34 29.5 +1.4**
PRU Pruhonice 88.57 320 *e*P **P 09 34 28.4 +0.2**
PRU *e*pP pP 09 34 41.4 +4.8
PVCC Panska Ves 88.60 320 *e*P **P 09 34 28.8 +0.5**
PVCC *e*pP pP 09 34 38.3 +1.6
GEC2 GERESS Array S 89.02 319 *e*P **P 09 34 30.5 +0.2**
GEC2 pmax pmax
comp=Z,35nm,1.6s,mb5.4
GEC2 GERESS Array S 89.02 319 *e*P **P 09 34 30.5 +0.2**
comp=Z,35nm,1.6s,mb5.4
GERES GERESS Array B 89.02 319 P **P 09 34 30.7 +0.3**
comp=Z,3.3nm,0.7s,mb4.8,baz=96,slow=4.0,SNR=25
GERES GERESS Array B 89.02 319 P **P 09 34 30.7 +0.4**
GERES pmax pmax
comp=Z,3.0nm,0.7s
BRG Berggiesshubel 89.03 321 *e*P **P 09 34 30.8 +0.5**
BRG *e* 09 34 42.1
BRG pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
BRG Berggiesshubel 89.03 321 *e*P **P 09 34 30.6 +0.3**
comp=Z,30nm,1.6s,mb5.4
BRG Berggiesshubel 89.03 321 *e*P **P 09 34 30.8 +0.5**
comp=Z,13nm,1.0s,mb5.2
BRG *e* 09 34 42.1
comp=Z,12nm,1.0s
PTCC Patocco-Chiusa 89.08 316 P **P 09 34 30.6 0.0**
comp=Z,17nm,0.9s,mb5.4
KHC Kasperske Hory 89.13 319 *e*P **P 09 34 30.7 -0.1**
KHC *e*pP pP 09 34 39.2 0.0
FVI Forni Avoltri 89.48 316 P **P 09 34 30.8 -1.7**
FVI pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
FVI Forni Avoltri 89.48 316 P **P 09 34 30.8 -1.7**
comp=Z,6.7nm,0.9s,mb5.0
WET Wettzell 89.59 319 *e*P **P 09 34 33.2 +0.2**
WET pmax pmax
comp=Z,11nm,1.0s,mb5.1
WET Wettzell 89.59 319 *e*P **P 09 34 33.2 +0.2**
comp=Z,11nm,1.0s,mb5.1
CLL Collm 89.65 321 *i*P **P 09 34 33.1 -0.1**
CLL *i* 09 34 45.3
CLL *i* 09 34 50.6
CLL *e*S S 09 45 29.0 +6.0
CLL pmax pmax
comp=Z,13nm,1.2s,mb5.1
CLL Collm 89.65 321 *e*P **P 09 34 33.4 +0.2**
comp=Z,13nm,1.2s,mb5.1
CLL Collm 89.65 321 *i*P **P 09 34 33.1 -0.1**
comp=Z,13nm,1.2s,mb5.1
CLL *i* pP pP 09 34 45.3 +3.7
CLL *i* sP sP 09 34 50.0 +6.0
CLL *i* x x 09 35 08.7
CLL *e*S S 09 45 29.0 +6.0
CLL Collm 89.65 321 *i*P **P 09 34 33.1 -0.1**
comp=Z,13nm,1.2s,mb5.1
CLL *i* 09 34 45.3
CLL *e*S S 09 45 29.0 +6.0
TANN Tannenbergstha 89.94 320 *e*P **P 09 34 34.7 +0.1**
comp=Z,16nm,1.6s,mb5.1
SFI Santa Sofia 89.98 314 P **P 09 34 35.9 +1.0**
SFI pmax pmax
comp=Z,53nm,1.2s,mb5.8
SFI Santa Sofia 89.98 314 P **P 09 34 35.9 +1.0**
comp=Z,53nm,1.2s,mb5.8
ROTZ Rotzenmuhle 90.06 320 *e*P **P 09 34 36.0 +0.8**
comp=Z,11nm,1.1s,mb5.1
MANZ Manzenberg 90.14 320 *e*P **P 09 34 36.1 +0.6**
comp=Z,21nm,1.3s,mb5.3
CTI Castel Tesino 90.23 316 P **P 09 34 36.7 +0.6**
WTTA Wattenberg 90.31 317⇑ *i*P **P 09 34 36.1 -0.3**
comp=Z,17nm,1.0s,mb5.3
MOX Moxa 90.49 320 *e*P **P 09 34 37.6 +0.5**
comp=Z,20nm,1.4s,mb5.2
MOX *e* pP 09 34 45.3 -0.2
MOX Moxa 90.49 320 *e*P **P 09 34 37.6 +0.5**
MOX *e* pP 09 34 45.3 -0.2
MOX pmax pmax
comp=Z,20nm,1.4s,mb5.2
MOX Moxa 90.49 320 *e*P **P 09 34 37.1 0.0**
comp=Z,10.0nm,1.1s,mb5.1
MOTA Moosalm 90.67 317⇑ *i*P **P 09 34 37.7 -0.4**
comp=Z,11nm,1.0s,mb5.1
GRA1 Grafenberg Arr 90.70 320 *e*P **P 09 34 38.8 +0.7**
comp=Z,30nm,1.4s,mb5.4
GRF Grafenberg Arr 90.70 320 *e*P **P 09 34 38.8 +0.7**
GRF pmax pmax
comp=Z,30nm,1.4s,mb5.4
GRF Grafenberg Arr 90.70 320 *e*P **P 09 34 38.8 +0.7**
GRF pmax pmax
comp=Z,30nm,1.4s,mb5.4

GRF	Grafenberg Arr	90.70	320	*e*P		P	09 34 38.8	+0.7
	comp=Z,30nm,1.4s,mb5.4							
RETA	Reutte	90.91	317⇑	*i*P		P	09 34 39.1	-0.1
	comp=Z,13nm,1.0s,mb5.2							
FETA	Feichten	90.91	317⇓	*i*P		P	09 34 39.2	0.0
	comp=Z,11nm,1.3s,mb5.0							
NB2	NORSAR Subarra	91.19	331	P		P	09 34 39.2	-1.0
	comp=Z,1.8nm,0.8s,mb4.5,baz=93,slow=4.8							
NOA	NORSAR Array B	91.19	331	P		P	09 34 39.0	-1.1
	comp=Z,3.2nm,0.8s,mb4.7,baz=93,slow=4.8,SNR=8.2							
NOA	NORSAR Array B	91.19	331	P		P	09 34 39.0	-1.2
NOA				pmax	pmax			
	comp=Z,3.0nm,0.8s							
CLZ	Clausthal	91.32	322	*e*P		P	09 34 41.4	+0.4
CLZ				pmax	pmax			
	comp=Z,24nm,1.5s,mb5.3							
CLZ	Clausthal	91.32	322	*e*P		P	09 34 41.4	+0.4
	comp=Z,24nm,1.5s,mb5.3							
BSEG	Bad Segeberg	91.42	324	*e*P		P	09 34 41.9	+0.5
BSEG				pmax	pmax			
	comp=Z,33nm,1.8s,mb5.4							
BSEG	Bad Segeberg	91.42	324	*e*P		P	09 34 41.9	+0.5
	comp=Z,33nm,1.8s,mb5.4							
DAVA	Damuels	91.50	317⇑	*i*P		P	09 34 42.4	+0.4
	comp=Z,25nm,1.2s,mb5.4							
DAVA	Damuels	91.50	317⇑	*i*PcP		PcP	09 34 42.4	-0.5
	comp=Z,25nm,1.2s							
KEST	Kesra	91.58	306	P		P	09 34 42.9	+0.3
	comp=Z,4.9nm,0.9s,mb4.8,baz=20,slow=1.8,SNR=9.2							
BFO	Black Forest	92.56	318	*e*P		P	09 34 46.6	-0.2
BFO				pmax	pmax			
	comp=Z,7.0nm,1.1s,mb5.0							
BFO	Black Forest	92.56	318	*e*P		P	09 34 46.6	-0.2
	comp=Z,7.0nm,1.1s,mb5.0							
WLF	Walferdange	93.99	319	*e*P		P	09 34 53.9	+0.6
	comp=Z,15nm,1.2s,mb5.3							
TORD	Torodi Ar. Bea	98.32	283	P		P	09 35 12.7	-1.1
	comp=Z,0.6nm,1.1s,mb4.1,baz=75,slow=5.7,SNR=2.7							
YKA	Yellowknife Ar	114.64	17	PP		PP	09 41 10.7	-1.5
	comp=Z,2.1nm,0.9s,baz=324,slow=7.5,SNR=5.4							
JCW	Jim Creek	121.86	32	*e*PKPdf		PKPdf	09 40 29.8	+0.2
TDL	Tradedollar La	122.84	33	P		PKPdf	09 40 31.9	+0.3
TWW	Teanaway	123.09	32	P		PKPdf	09 40 32.3	+0.3
VIPM	Ingram Point	124.86	34	PKIKP		PKPdf	09 40 36.2	+0.7
LNOR	Lincton Mounta	125.27	32	*e*PKIKP		PKPdf	09 40 35.9	-0.3
LASM	Arnica Sink	126.03	38	P		PKPdf	09 40 38.3	+0.4
SCHQ	Schefferville	126.41	350	PKP		PKPdf	09 40 37.6	-0.5
	comp=Z,9.1nm,0.9s,baz=132,slow=3.0,SNR=3.2							
NSHM	Saint Helena R	127.09	41	*e*PKPdf		PKPdf	09 40 40.6	+0.6
WVOR	Wild Horse Val	127.28	35	*e*PKIKP		PKPdf	09 40 40.8	+0.6
EGMT	Eagleton	127.75	25	*e*PKPdf		PKPdf	09 40 41.2	+0.3
NVAR	Mina Array Bea	129.93	39	PKP		PKPdf	09 40 45.2	-0.2
	comp=Z,1.7nm,0.7s,baz=280,slow=1.7,SNR=15							
ULM	Lac du Bonnet	130.33	13	PKP		PKPdf	09 40 44.7	-1.1
	comp=Z,4.9nm,0.7s,baz=354,slow=4.4,SNR=6.2							
ULM	Lac du Bonnet	130.33	13	PKP		PKPdf	09 40 44.7	-1.1
PDAR	Pinedale Array	131.89	29	PKP		PKPdf	09 40 48.5	-0.4
	comp=Z,1.0nm,0.7s,baz=236,slow=0.5,SNR=7.7							
PDAR				PP		PP	09 43 06.8	-2.2
	comp=Z,0.6nm,0.4s,baz=349,slow=1.5,SNR=3.9							
MSU	Marysvale	133.56	35	*e*PKIKP		PKPdf	09 40 53.8	+1.6
PV10	Paradox Valley	135.40	33	*e*PKPdf		PKPdf	09 40 57.9	+2.2
PV10				PP		PP	09 43 27.7	-3.8
ECSD	EROS,Sioux Fal	136.17	17	PKPdf		PKPdf	09 40 57.6	+0.6
ANMO	Albuquerque	139.32	34⇑	*i*PKIKP		PKPdf	09 41 01.3	-1.7
CPUP	Villa Florida	144.00	217	PKP		PKPdf	09 41 10.1	-1.6
	comp=Z,3.5nm,0.7s,baz=83,slow=1.7,SNR=9.8							
CPUP	Villa Florida	144.00	217	PKIKP		PKPdf	09 41 10.1	-1.6
CPUP				pmax	pmax			
	comp=Z,4.0nm,0.7s							
CPUP	Villa Florida	144.00	217	PKP		PKPdf	09 41 10.1	-1.6
TXAR	Lajitas Array	145.03	37	PKP		PKPdf	09 41 12.9	-0.5
	comp=Z,5nm,0.7s,baz=284,slow=1.3,SNR=586							
TXAR	Lajitas Array	145.03	37	PKIKP		PKPdf	09 41 12.9	-0.5
TXAR				pmax	pmax			
	comp=Z,53nm,0.7s							
GLAT	Glass	145.09	13	*e*PKPbc		PKPbc	09 41 12.4	-0.2
GNAR	Gosnell	145.21	14	*e*PKPbc		PKPbc	09 41 12.7	-0.3
HALT	Halls	145.43	13	*e*PKPbc		PKPbc	09 41 13.1	-0.6
HBAR	Harrisburg	145.44	15	*e*PKPbc		PKPbc	09 41 13.4	-0.4
NATX	Nacogdoches	147.62	23	*e*PKPbc		PKPbc	09 41 20.2	-0.1
VBMS	Vicksburg	148.62	17	*e*PKPbc		PKPbc	09 41 23.1	+0.1
BRAL	Brewton	150.64	12	*e*PKPbc		PKPbc	09 41 28.3	+0.3
LPAZ	La Paz	158.06	213	PKP		PKPdf	09 41 34.0	+0.8
	comp=Z,1.7nm,1.1s,baz=33,slow=7.4,SNR=3.6							
LPAZ	La Paz	158.06	213	PKIKP		PKPdf	09 41 34.1	+0.8
LPAZ				pmax	pmax			
	comp=Z,2.0nm,1.1s							

*ISCJB **13** 09:28:52.4±0.9, 35.30N×009.33E×009, h14km±6km, Error ellipse: s-maj=16.8km s-min=8.0km az=144.4*
*ISK **13** 09:28:52.3, 35.30N×33.49E, h11km, MD2.8*
*CSEM **13** 09:28:52.3±0.1, 35.29N×33.50E, h8km, MD2.8, Error ellipse: s-maj=5.2km s-min=2.5km az=146.0*

ISC 13 09:28:53.0±1.0,**3531N**±010×**3353E**±009,**h11**km±10km,**n8,** σ0**83**/10,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFK	Lefkose	0.03	172	*e*PG	Pg	09 28 54.1	-0.9
LFK				*e*SG	Sg	09 28 56.6	+0.2
MAMC	Mammari	0.29	241	P	Pg	09 29 00.0	+1.2
CSS	Prodhromos	0.38	205	P	Pg	09 29 00.1	-0.4
	3.8nm,0.3s						
LEF	Lefka	0.56	250	*e*PG	Pg	09 29 03.5	-0.2
LEF				*e*SG	Sg	09 29 12.2	+1.1
EREN	Erenkoy	0.57	67	*e*PG	Pg	09 29 04.9	+0.8
ALFC	Alevga	0.78	259	P	Pg	09 29 06.3	-1.7
	2.4nm,0.3s						
IKL	Isikli	0.94	8	*e*PG	Pg	09 29 11.0	0.0
HDMB	Hadim	1.85	333	*e*PN	Pn	09 29 24.6	-0.1

*IDC **13** 09:35:19.5±1.0, 354S×101.08E, h0km, mb4.2/10, mb1 4.3/11, mb1mx4.2/20, mbtmp4.3/11, ML4.2/1, Error ellipse: s-maj=33.1km s-min=16.1km az=66.0*
*BJI **13** 09:35:20.8, 350S×101.20E, h15km, mB5.0, mb4.7*
*MOS **13** 09:35:22.3±1.1, 354S×101.04E, h33km, mb4.7/5, Error ellipse: s-maj=26.5km s-min=13.5km az=98.1*
*DJA **13** 09:35:22, 375S×10.065E, h20km, MLv4.8/9*
*NEIC **13** 09:35:24.9±0.6, 352S×101.20E, h35km, mb4.5/6, Error ellipse: s-maj=22.0km s-min=9.1km az=55.0*
*ISCJB **13** 09:35:24.9±2.0, 36S±01×1011E±01, h60km±15km, mb4.4/17, Error ellipse: s-maj=24.7km s-min=10.7km az=143.2*

ISC 13 09:35:25.9±2.0,**36S**±01×**1011E**±01,**h50**km±15km,**n36,** σ0**97**/33,**mb4.4**/17,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	Padang Panjang	3.21	348	P	Pn	09 36 12.8	-1.1
	0.0nm,0.0s						
RGRI	Rengat	3.48	21	P	Pn	09 36 18.4	+0.8
	0.0nm,0.0s						
DSRI	Dabo	4.69	48	P	Pn	09 36 35.5	+1.4
	0.0nm,0.0s						
KAPI	Kappang	18.68	95	P	Pn	09 39 38.7	-2.1
	0.8nm,0.3s,baz=259,slow=10.0,SNR=4.2						
CMAR	Chiang Mai Arr	22.03	355	P	P	09 40 13.2	-3.1
	2.1nm,0.7s,mb3.7,baz=184,slow=9.8,SNR=8.5						
CMAR	Chiang Mai Arr	22.03	355	*i* P	P	09 40 14.1	-2.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FITZ	Fitzroy Crossi	28.03	123	*e*P	P	09 41 11.0	-1.6
	comp=Z,3.5nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	28.03	123	P	P	09 41 12.8	+0.2
	comp=Z,1.5nm,0.9s,mb3.6,baz=312,slow=14,SNR=3.3						
WRA	Warramunga Arr	36.26	119	P	P	09 42 24.5	-0.2
	comp=Z,1.9nm,0.4s,mb4.3,baz=303,slow=9.1,SNR=54						
WRA				PcP	PcP	09 44 49.4	+0.3
	comp=Z,0.5nm,0.6s,baz=306,slow=2.3,SNR=5.1						
WRAB	Tennant Creek	36.27	119	*e*P	P	09 42 24.9	+0.2
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
WRAB	Tennant Creek	36.27	119	*e*P	P	09 42 24.9	+0.2
	comp=Z,3.5nm,0.7s,mb4.4						
WB2	Warramunga Arr	36.27	119	*e*P	P	09 42 24.8	0.0
GTA	Gaotai	42.83	359	*e*P	P	09 43 19.3	+0.3
GTA				AP	pP	09 43 29.1	-3.2
GTA				XP	sP	09 43 33.3	-4.8
GTA				AMB	AMB		
	comp=Z,6.0nm,1.4s,mb4.1						

STKA	Stephens Creek	47.28	131	*e*P		P	09 43 55.1	+0.5
	comp=Z,4.8nm,1.0s,mb4.4								
STKA	Stephens Creek	47.28	131	P		P	09 43 55.9	+1.4
	comp=Z,5.0nm,0.8s,mb4.5,baz=330,slow=12,SNR=6.7								
KSRS	Korea Array	47.88	29	P		P	09 43 59.4	+0.3
	comp=Z,6.3nm,0.9s,mb4.6,baz=222,slow=8.2,SNR=21								
KSRS	Korea Array	47.88	29	P		P	09 43 59.4	+0.3
KSRS				pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.6								
SONM	Songino Array	51.45	5	P		P	09 44 27.0	+1.0
	comp=Z,9.2nm,0.8s,mb4.8,baz=186,slow=9.6,SNR=50								
ULN	Ulaanbaatar	51.53	5	*e*P		P	09 44 27.7	+1.1
ULN				pmax	pmax				
	comp=Z,8.0nm,1.1s,mb4.6								
ULN	Ulaanbaatar	51.53	5	*e*P		P	09 44 27.7	+1.0
	comp=Z,7.6nm,1.1s,mb4.5								
TKM2	Tokmak 2	51.73	336	*e*P		P	09 44 28.6	+0.4
TKM2				pmax	pmax				
	comp=Z,6.0nm,0.8s,mb4.6								
TKM2	Tokmak 2	51.73	336	*e*P		P	09 44 28.6	+0.3
	comp=Z,6.0nm,0.8s,mb4.6								
CN2	Changchun	52.05	22	*e*P		P	09 44 30.0	-0.6
EKS2	Erkin-Say	52.27	335	*e*P		P	09 44 32.9	+0.7
	comp=Z,5.6nm,0.7s,mb4.6								
MKAR	Makanchi Array	52.87	344	P		P	09 44 36.5	0.0
	comp=Z,1.5nm,0.4s,mb4.3,baz=148,slow=8.1,SNR=17								
MJAR	Matsushiro Arr	52.87	38	P		P	09 44 36.1	-0.7
	comp=Z,2.7nm,0.9s,mb4.2,baz=213,slow=7.4,SNR=6.9								
TLY	Talaya	55.13	2	*i* P		P	09 44 53.7	+0.7
TLY				pmax	pmax				
	comp=Z,5.0nm,1.2s,mb4.4								
KURK	Kurchatov	57.45	343	*e*P		P	09 45 09.6	+0.1
KURK				pmax	pmax				
	comp=Z,7.0nm,1.3s,mb4.5								
ZALV	Zalesovo Beam	58.95	349	P		P	09 45 19.4	-0.5
	comp=Z,2.5nm,0.3s,mb4.7,baz=178,slow=5.3,SNR=8.6								
ZALV	Zalesovo Beam	58.95	349	P		P	09 45 19.4	-0.5
KLR	Kul'dur	58.98	23	*e*P		P	09 45 15.8	-4.4
MAW	Mawson	69.00	195	P		P	09 46 26.7	+0.9
	comp=Z,1.3nm,0.7s,mb4.0,baz=58,slow=3.6,SNR=4.0								
OBN	Obninsk	78.72	328	P		P	09 47 21.0	-1.9
OBN				*e*			09 47 28.1		
TXAR	Lajitas Array	145.29	40	PKPbc		PKPbc	09 54 60.0	+1.3
	comp=Z,2.8nm,0.5s,baz=271,slow=0.6,SNR=78								
MIAR	Mount Ida	146.35	22	*e*PKP2		PKPab	09 55 03.5	+0.9
JCT	Junction City	146.79	34	*e*PKP2		PKPab	09 55 04.0	-0.4

*NEIC **13** 09:41:03.2, 372.1N×13.16W, h0km, MG3.7(MDD), After MDD.*
*INMG **13** 09:41:03.9±1.0, 369.1N×1359W, h10km, ML2.0, Error ellipse: s-maj=15.0km s-min=8.5km az=169.0*
*MDD **13** 09:41:03.1±3.0, 37.18N×13.18W, h0km, mb3.8/5, Error ellipse: s-maj=32.4km s-min=25.6km az=159.0, PRIMO*
*CSEM **13** 09:41:06.8±0.8, 37.47N×127.1W, h10km, ML2.0, Error ellipse: s-maj=14.4km s-min=12.4km az=119.0*

ISC 13 09:41:06.1±1.5,**3734N**±008×**1292W**±009,**h10**km,**n30,** σ0**81**/55,**Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.27	92	*i* Pn	Pn	09 41 56.5	-0.9
PFVI				*e*Sn	Sn	09 42 36.2	-0.2
PFVI				A		09 42 38.5	
	2.2nm,0.2s						
MORF	Marmelete	3.41	89	*e*Pn	Pn	09 41 58.6	-0.6
MORF				*e*Sn	Sn	09 42 39.5	-0.2
MORF				A		09 42 43.8	
	3.1nm,0.1s						
MORF	Marmelete	3.41	89	Pn	Pn	09 41 58.6	-0.6
MORF				Sn	Sn	09 42 39.5	-0.2
	3.1nm,0.1s						
MORF	Marmelete	3.41	89	*e*Pn	Pn	09 41 58.6	-0.6
MORF				*e*Sn	Sn	09 42 39.5	-0.2
MOE	Montemor	3.80	70	*e*Pn	Pn	09 42 05.2	+0.5
MOE				*e*Sn	Sn	09 42 50.7	+1.2
PVAQ	Vaqueiros	4.15	88	*e*Pn	Pn	09 42 09.3	-0.1
PVAQ				*e*Sn	Sn	09 42 58.4	+0.4
PVAQ				A		09 43 02.5	
	2.9nm,0.3s						
PVAQ	Vaqueiros	4.15	88	Pn	Pn	09 42 09.3	-0.1
PVAQ				Sn	Sn	09 42 58.4	+0.4
	1.4nm,0.3s						
EGRO	El Granado	4.33	86	P	Pn	09 42 12.1	+0.1
	0.9nm,0.1s,SNR=7.9						
EGRO				S	Sn	09 43 02.6	0.0
	2.7nm,0.2s,SNR=7.9						
EGRO	El Granado	4.33	86	P	Pn	09 42 12.1	+0.1
	0.9nm,0.1s,SNR=7.9						
EGRO				S	Sn	09 43 02.2	-0.4
	2.7nm,0.2s,SNR=7.9						
EGRO	El Granado	4.33	86	P	Pn	09 42 12.1	+0.1
EGRO				S	Sn	09 43 02.2	-0.4
PBAR	Barrancos	4.74	78	*e*Pn	Pn	09 42 18.5	+1.0
PBAR				*e*Sn	Sn	09 43 13.5	+1.0
PBAR				A		09 43 18.0	
	0.7nm,0.1s						
PBAR	Barrancos	4.74	78	Pn	Pn	09 42 18.5	+1.0
PBAR				Sn	Sn	09 43 13.5	+1.0
	0.3nm,0.1s						
PMRV	Marv??o	4.82	63	*e*Pn	Pn	09 42 19.3	+0.6
PMRV				*e*Sn	Sn	09 43 16.4	+1.8
PMRV				A		09 43 18.8	
	2.7nm,0.3s						
EBAD	Badajoz	4.88	71	P	Pn	09 42 20.1	+0.7
	0.6nm,0.1s,SNR=7.9						
EBAD				S	Sn	09 43 15.5	-0.4
	1.7nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.88	71	P	Pn	09 42 20.0	+0.6
	0.6nm,0.1s,SNR=7.9						
EBAD				S	Sn	09 43 15.6	-0.3
	4.1nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.88	71	P	Pn	09 42 20.0	+0.5
EBAD				S	Sn	09 43 15.6	-0.3
EMIN	Mina Concepcio	4.99	83	P	Pn	09 42 21.0	+0.1
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	09 43 19.0	+0.4
	0.3nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	4.99	83	P	Pn	09 42 20.6	-0.4
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	09 43 16.8	-1.8
	0.3nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	4.99	83	P	Pn	09 42 20.6	-0.4
EMIN				S	Sn	09 43 16.8	-1.8
ELOB	Lobios	5.88	38	S	Sn	09 43 38.8	-1.8
	1.4nm,0.1s,SNR=7.9						
ELOB	Lobios	5.88	38	S	Sn	09 43 38.8	-1.8
	1.3nm,0.1s,SNR=7.9						
ECAB	El Cabril	6.00	81	P	Pn	09 42 35.2	+0.4
	1.0nm,0.1s,SNR=7.9						
ECAB				S	Sn	09 43 43.1	-0.4
	0.1nm,0.0s,SNR=7.9						
ECAB	El Cabril	6.00	81	P	Pn	09 42 35.1	+0.3
	1.0nm,0.1s,SNR=7.9						
ECAB				S	Sn	09 43 43.2	-0.3
	SNR=7.9						
ECAB	El Cabril	6.00	81	P	Pn	09 42 35.1	+0.3
ECAB				S	Sn	09 43 43.2	-0.3
EMAZ	Mazaricos	6.37	27	S	Sn	09 43 47.6	-5.0
	3.9nm,0.2s,SNR=7.9						
ECAL	Calabor	6.63	44	S	Sn	09 43 59.3	+0.3
	2.2nm,0.2s,SNR=7.9						
ECAL	Calabor	6.63	44	S	Sn	09 43 58.6	-0.4
	4.8nm,0.4s,SNR=7.9						
EADA	Adamuz	6.67	80	P	Pn	09 42 43.8	-0.2
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	09 43 59.1	-0.9
	0.1nm,0.1s,SNR=4.0						
EADA	Adamuz	6.67	80	P	Pn	09 42 43.6	-0.4
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	09 43 59.0	-1.0
EADA	Adamuz	6.67	80	P	Pn	09 42 43.6	-0.4
EADA				S	Sn	09 43 59.0	-1.0

*BJI **13** 09:48:33.9, 301N×126.77E, h15km, mB6.2, mb5.9, Ms6.3, Msz6.2*
*IDC **13** 09:48:41.9±1.3, 377N×126.43E, h11km±6km, mb5.8/28, mb1 5.7/28, mb1mx5.7/28, mbtmp5.8/28, ML5.1/1, MS6.1/29, Ms1 6.1/29, ms1mx5.9/39, Error ellipse: s-maj=13.2km s-min=6.2km az=81.0*
*ISCJB **13** 09:48:42.5±0.1, 377N±002×126.49E±002, h24km, mb6.2/193, MS6.2/254, Error ellipse: s-maj=3.4km s-min=2.3km az=156.9*
*MAN **13** 09:48:43, 369N×126.33E, h6km, MS6.1*
MAN INTENSITY III - GENERAL SANTOS CITY; INTENSITY II - DAVAO CITY.
*IGIL **13** 09:48:44.4, 379N×126.41E, h22km, MS6.4*
*MOS **13** 09:48:45.0±1.2, 393N×126.27E, h33km, mb6.3/74, MS6.1/69, Error ellipse: s-maj=8.9km s-min=4.6km az=113.4*
*NEIC **13** 09:48:45.1±0.1, 380N×126.34E, h26km, mb6.1/109, ME6.5, MS6.2/205, Error ellipse: s-maj=5.7km s-min=4.0km az=60.0 Broadband fault plane solution: P waves. NP1: φs216.00000°, δ63.00000°, λ152.00000°. NP2: φs320.00000°, δ65.00000°, λ30.00000°. Principal axes: T Plg38.0000°, Azm179.0000°; N Plg0.0000°, Azm0.0000°; P Plg1.0000°, Azm88.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [V] on Pulau Sangihe and [III] at Manado, Sulawesi. Felt [III PIVS] at General Santos and [II PIVS] at Davao, Philippines.
*GCMT **13** 09:48:46.4±0.1, 386N×126.50E, h22km, MW6.3/114, Moment Tensor Solution. s107,c227; s114,c276; Duration: 33 Moment tensor: Scale 10^18Nm; Mrr1.03±.03; Mθθ2.21±.02; Mφφ-3.24±.03; Mrθ-1.41±.06; Mrφ0.08±.02; Mθφ0.57±.04; Best double couple: M3.24400×10^18 NP1:φs219.00000°, δ60.00000°, λ160.00000°. NP2:φs319.00000°, δ73.00000°, λ31.00000°. Principal axes: T 3.1590, Plg34.0000°, Azm183.0000°; N 0.1700, Plg55.0000°, Azm345.0000°; P -3.3290, Plg8.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*DJA **13** 09:48:48, 378N×126.62E, h30km, Mw6.6/45*

ISC 13 09:48:44.4±0.1,**379N**±002×**12646E**±002,**h24**km, **h24**km±2.3km:**pP-P,n1405,**σ1**29**/697,**mb6.2**/192, **MS6.2**/254,**224C-220D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	0.93	263	P	Pn	09 49 06.2	+4.2
	0.0nm,0.0s						
GSPH	General Santos	2.73	327⇓	*e*P	Pn	09 49 28.6	+1.9
GSPH				*e*S	Sn	09 50 00.5	+1.5
MATI	Mati	3.14	356	*e*P	Pn	09 49 35.3	+2.9
MATI				*e*S	Sn	09 50 15.1	+6.0
DAV	Davao City (W)	3.37	345	Pn	Pn	09 49 36.8	+1.2
	207nm,0.3s,baz=325,slow=1.1,SNR=16						
DAV				Sn	Sn	09 50 12.6	-2.2
	2μm,0.3s,baz=66,slow=21,SNR=8.6						
DAV				LR	LR	09 51 13.4	
	comp=Z,424μm,20.3s,baz=348,slow=45						
DAV	Davao City (W)	3.37	345	*e*P	Pn	09 49 41.4	+5.8
DAV	Davao City (W)	3.37	345	*e*Pn	Pn	09 49 35.4	-0.2
DAV				*e*Sn	Sn	09 50 12.9	-1.9
KCP	Kidapawan	3.47	337⇓	*e*P	Pn	09 49 41.8	+4.8
KCP				*i* S	Sn	09 50 28.2	+11
CTBH	Cotabato--PC H	4.05	327	*i* P	Pn	09 49 48.2	+3.4
CTBH				*i* S	Sn	09 50 38.9	+7.2
BUKP	Musuan	4.29	341	*e*P	Pn	09 49 49.4	+1.1
BUKP				*e*S	Sn	09 50 38.5	+0.9
BIPH	Bislig	4.36	359⇑	*i*P	Pn	09 49 52.5	+3.2
BIPH				*i* S	Sn	09 50 40.9	+1.5
LBMI	Labuha	4.52	167	P	Pn	09 49 53.7	+2.2
	0.0nm,0.0s						
PAGZ	Pagadian	5.06	323	*e*P	Pn	09 50 01.5	+2.7
BUTP	Butuan	5.21	351	*e*P	Pn	09 50 04.9	+4.0
BUTP				*e*S	Sn	09 51 21.3	+21
ZMPH	Zamboanga City	5.38	306⇓	*i*P	Pn	09 50 04.6	+1.4
ZMPH				*i* S	Sn	09 50 46.1	-18
IPIL	Ipil	5.54	316	*e*P	Pn	09 50 07.9	+2.5
DCPH	Dipolog City	5.67	327⇑	*e*P	Pn	09 50 10.6	+3.4
SCPH	Surigao	6.03	351⇑	*e*P	Pn	09 50 14.5	+2.4
TBP	Tagbilaran	6.40	336⇑	*e*P	Pn	09 50 20.0	+2.7
MSLP	Maasin	6.50	346	*e*P	Pn	09 50 20.9	+2.4
MSLP				*e*S	Sn	09 51 48.9	+17
SWI	Sorong	6.67	134	P	Pn	09 50 21.5	+0.6
	4μm,1.1s						
LLP	Lapu-Lapu	6.94	339⇑	*e*P	Pn	09 50 27.8	+3.2
LLP				*e*S	Sn	09 51 59.1	+16
OCLP	Ormoc	7.44	346	*e*P	Pn	09 50 33.8	+2.3
MSAI	Masohi	7.51	161	P	Pn	09 50 40.4	+7.9
	665nm,1.0s						
AAI	Ambon	7.63	167	P	Pn	09 50 35.9	+1.7
	2μm,1.1s						
AAI	Ambon	7.63	167	P	Pn	09 50 35.9	+1.7
	3μm,1.2s						
BESP	Borongan	7.82	353	*e*P	Pn	09 50 42.1	+5.3
MYLDM	Lahad Datu	8.05	280	⇑P	Pn	09 50 46.4	+6.4
PCI	Palu	8.10	235	P	Pn	09 50 46.9	+6.3
	3μm,1.0s						
RCP	Roxas	8.55	335⇑	*e*P	Pn	09 50 50.5	+3.7
TSM	Tawau	8.58	274	⇓P	Pn	09 50 51.5	+4.4
KDI	Kendari	8.60	207	P	Pn	09 50 48.4	+0.9
	2μm,1.4s						
KALP	Kalibo	8.83	333⇓	*e*P	Pn	09 50 59.5	+8.8
CNP	Catarman	8.84	349	*e*P	Pn	09 50 55.4	+4.7
CUYO	Cuyo Island	8.84	323	*e*P	Pn	09 50 54.0	+3.2
SDKM	Sandakan	9.41	282	⇓P	Pn	09 51 01.9	+3.3
OTRP	Odiongan	9.58	333	*e

TPI	**Tanjungpandan**	**19.89**	**251**	P		**Pn**	**09 53 17.7**	**+1.7**
	1µm,2.3s								
BJII	**Banjamegara**	**20.04**	**237**	P		**P**	**09 53 17.7**	**+1.8**
	1µm,1.5s								
GUMO	**Guam**	**20.62**	**61**	P		**P**	**09 53 20.3**	**-1.9**
	847nm,1.1s,baz=211,slow=9.8,SNR=20								
GUMO				LR		LR	09 59 57.0		
	comp=Z,58µm,21.8s,MS5.9,baz=232,slow=33								
GUMO	**Guam**	**20.62**	**61**	*e*P		**P**	**09 53 21.7**	**-0.5**
GUMO				pmax		pmax			
	comp=Z,531nm,1.4s								
GUMO				MLR		MLR			
	comp=Z,51µm,19.0s,MS5.9								
GUMO	**Guam**	**20.62**	**61**	*e*Pn		**P**	**09 53 21.7**	**-0.5**
	comp=Z,530nm,1.4s								
GUMO				LR		LR			
	comp=Z,51µm,19.0s,MS5.9								
NACB	**Ninganchiao**	**20.80**	**347**	*e*P		**P**	**09 53 22.6**	**-1.4**
	comp=Z,120nm,0.6s								
NACB				*e*S		**S**	**09 57 15.0**	**-0.1**
CLJI	**Cilicap**	**20.82**	**237**	P		**P**	**09 53 31.1**	**+6.7**
	comp=Z,1µm,1.2s								
JCJI	**Jatiwangi**	**20.84**	**241**	P		**P**	**09 53 28.0**	**+3.4**
	comp=Z,2µm,1.7s								
YHNB	**Yeheng**	**21.32**	**347**	*e*P		**P**	**09 53 29.3**	**-0.4**
	comp=Z,494nm,0.6s,mb6.0								
YHNB				*e*S		**S**	**09 57 28.1**	**+2.6**
YHNB				LR		LR			
	comp=Z,55µm,20.0s,MS6.0								
LEM	**Lembang**	**21.56**	**241**	P		**P**	**09 53 35.5**	**+3.1**
	comp=Z,1µm,0.9s,mb6.3								
TATO	**Taipei**	**21.60**	**348**	*e*P		**P**	**09 53 33.1**	**+0.5**
	comp=Z,332nm,0.7s,mb5.9								
TATO				LR		LR			
	comp=Z,56µm,20.0s,MS6.0								
FITZ	**Fitzroy Crossi**	**21.77**	**182**	*e*P		**P**	**09 53 31.8**	**-2.8**
	comp=Z,662nm,0.6s,mb6.2								
FITZ				*e*S		**S**	**09 57 31.8**	**-2.5**
FITZ	**Fitzroy Crossi**	**21.77**	**182**	P		**P**	**09 53 32.5**	**-2.1**
	comp=Z,263nm,0.8s,mb5.7,baz=13,slow=12,SNR=101								
FITZ				S		**S**	**09 57 33.1**	**-1.2**
	comp=Z,96nm,1.0s,baz=69,slow=23,SNR=4.7								
HKC	**Hong Kong Obse**	**21.92**	**328**	⇓*i*P		**P**	**09 53 42.0**	**+5.9**
HKC				*i* S		**S**	**09 57 40.0**	**+2.9**
CBJI	**Citeko**	**22.05**	**243**	P		**P**	**09 53 40.6**	**+3.0**
	comp=Z,5µm,0.9s,mb6.9								
TNG	**Tangerang**	**22.12**	**243**	P		**P**	**09 53 46.3**	**+7.9**
	comp=Z,1µm,1.5s,mb6.1								
DBJI	**Dramaga**	**22.20**	**242**	P		**P**	**09 53 39.9**	**+0.7**
	comp=Z,1µm,1.5s,mb6.1								
QIZ	**Qiongzhong**	**22.20**	**314**	P		**P**	**09 53 39.3**	**+0.1**
QIZ				AP			09 53 45.1		
QIZ				XP		sP	09 53 47.5	-1.6
QIZ				PP			09 54 07.8		
QIZ				S		**S**	**09 57 42.3**	**-0.4**
QIZ				XS		sS	09 57 52.6	-1.0
QIZ				SS			09 58 29.1		
QIZ				AMB		AMB			
	comp=Z,133nm,1.1s,mb5.3								
QIZ				LR		LR			
	comp=E,47µm,19.5s								
QIZ				LR		LR			
	comp=Z,66µm,19.2s,MS6.1								
QIZ	**Qiongzhong**	**22.20**	**314**	*e*P		**P**	**09 53 40.7**	**+1.5**
	comp=Z,529nm,1.2s,mb5.8								
QIZ				LR		LR			
	comp=Z,69µm,20.0s,MS6.1								
QZH	**Quanzhou**	**22.35**	**341**	P		**P**	**09 53 41.0**	**+0.3**
QZH				S		**S**	**09 57 42.0**	**-3.4**
QZH				AMB		AMB			
	comp=Z,490nm,0.8s,mb6.0								
QZH				AMB		AMB			
	comp=Z,15µm,12.0s								
QZH				LR		LR			
	comp=N,143µm,20.4s,MS6.5								
QZH				LR		LR			
	comp=E,65µm,18.6s,MS6.5								
QZH				LR		LR			
	comp=Z,216µm,25.6s								
SBJI	**Serang**	**22.56**	**244**	P		**P**	**09 53 45.9**	**+2.8**
	comp=Z,2µm,1.7s,mb6.3								
SKJI	**Sukabumi**	**22.58**	**242**	P		**P**	**09 53 49.0**	**+5.8**
	comp=Z,2µm,1.4s,mb6.3								
MYKOM	**Kota Tinggi**	**22.67**	**266**	⇑P		**P**	**09 53 47.4**	**+3.2**
JOW	**Kunigami**	**22.97**	**4**	P		**P**	**09 53 45.5**	**-1.8**
	comp=Z,287nm,0.8s,mb5.8,baz=183,slow=8.1,SNR=48								
JOW				S		**S**	**09 57 58.5**	**+2.2**
	comp=Z,28nm,0.8s,baz=186,slow=12,SNR=7.6								
GZH	**Guangzhou**	**23.00**	**328**	P		**P**	**09 53 49.3**	**+1.7**
BLSI	**Bandar Lampung**	**23.06**	**247**	P		**P**	**09 53 52.9**	**+4.5**
	comp=Z,1µm,1.1s,mb6.2								
KGM	**Kluang**	**23.18**	**266**	⇑P		**P**	**09 53 52.7**	**+3.1**
KTGM	**Kuala Trenggan**	**23.30**	**275**	⇑P		**P**	**09 53 53.5**	**+2.6**
JMBI	**JAMBI**	**23.43**	**257**	P		**P**	**09 53 57.6**	**+5.3**
	comp=Z,2µm,1.6s,mb6.4								
UBT	**Ubonrachathani**	**23.98**	**300**	P		**P**	**09 53 58.5**	**+1.2**
	comp=Z,486nm,1.0s,mb5.9								
COEN	**Coen**	**24.21**	**137**	*e*P		**P**	**09 53 57.5**	**-1.9**
	comp=Z,234nm,0.8s,mb5.7								
PMG	**Port Moresby**	**24.45**	**123**	*e*P		**P**	**09 54 01.6**	**0.0**
PMG				pmax		pmax			
	comp=Z,439nm,1.8s								
PMG				MLR		MLR			
	comp=Z,29µm,20.0s								
PMG	**Port Moresby**	**24.45**	**123**	*e*P		**P**	**09 54 01.6**	**+0.1**
	comp=Z,439nm,1.8s,mb5.6								
PMG				LR		LR			
	comp=Z,29µm,20.0s,MS5.8								
FRIM	**Kepong**	**24.79**	**270**	⇓P		**P**	**09 54 09.0**	**+4.2**
WRAB	**Tennant Creek**	**24.82**	**162**	*e*P		**P**	**09 54 04.0**	**-0.9**
	comp=Z,1µm,0.9s,mb6.5								
WRAB				*e*S		**S**	**09 58 41.0**	**+15**
WRAB				LR		LR			
	comp=Z,17µm,19.0s,MS5.6								
WRA	**Warramunga Arr**	**24.83**	**162**	P		**P**	**09 54 03.3**	**-1.6**
	comp=Z,235nm,0.9s,mb5.7,baz=343,slow=9.9,SNR=442								
WRA				S		**S**	**09 58 29.5**	**+3.1**
	comp=Z,22nm,0.9s,baz=130,slow=43,SNR=4.7								
WRA				P3KPbc			10 27 09.2		
	comp=Z,2.6nm,0.8s,baz=157,slow=3.5,SNR=12								
WRA	**Warramunga Arr**	**24.83**	**162**	P		**P**	**09 54 03.3**	**-1.6**
WRA				S		**S**	**09 58 29.5**	**+3.1**
WRA				pmax		pmax			
	comp=Z,235nm,0.9s								
WRA				smax					
	comp=N,22nm,0.9s								
WRA				pmax		pmax			
	comp=Z,3.0nm,0.8s								
WRA	**Warramunga Arr**	**24.83**	**162**	P		**P**	**09 54 03.3**	**-1.6**
WRA				S		**S**	**09 58 29.5**	**+3.1**
WB2	**Warramunga Arr**	**24.83**	**162**	⇑*i*P		**P**	**09 54 02.7**	**-2.3**
WB2				*e*S		**S**	**09 58 27.4**	**+0.9**
XMIS	**Christmas Isla**	**25.11**	**235**	*e*P		**P**	**09 54 07.8**	**+0.2**
	comp=Z,922nm,0.9s,mb6.3								
IPM	**Ipoh**	**25.38**	**272**	⇓P		**P**	**09 54 12.8**	**+2.7**
MBWA	**Marble Bar**	**25.66**	**195**	*e*P		**P**	**09 54 12.8**	**+0.3**
	comp=Z,2µm,1.2s,mb6.5								
MBWA				LR		LR			
	comp=Z,13µm,19.0s,MS5.5								
SNG	**Songkhla**	**25.94**	**279**	P		**P**	**09 54 16.0**	**+0.8**
	comp=Z,500nm,0.9s,mb6.0								
KKTK	**Khon Kaen**	**26.35**	**300**	P		**P**	**09 54 20.0**	**+1.1**
	comp=Z,6µm,0.5s,mb7.4								
SSE	**Sheshan**	**27.61**	**350**	⇑P		**P**	**09 54 31.9**	**+1.9**
SSE				AP		pP	09 54 38.0	+0.7
SSE				XP		sP	09 54 40.8	+0.5
SSE				S		**S**	**09 59 14.8**	**+4.5**
SSE				XS		sS	09 59 29.4	+7.1
SSE				AMB		AMB			
	comp=Z,131nm,1.3s,mb5.4								
SSE				AMB		AMB			
	comp=Z,936nm,4.8s								
SSE				LR		LR			
	comp=N,24µm,19.8s,MS5.8								
SSE				LR		LR			
	comp=E,11µm,19.7s,MS5.8								
SSE				LR		LR			
	comp=Z,29µm,19.8s,MS5.9								
SSE	**Sheshan**	**27.61**	**350**	⇑P		**P**	**09 54 31.9**	**+1.9**
	comp=Z,131nm,1.3s,mb5.4								
SSE				pP		pP	09 54 38.0	+0.7
SSE				sP		sP	09 54 40.7	+0.4
SSE				S		**S**	**09 59 14.8**	**+4.5**
SSE				sS		sS	09 59 29.4	+7.1
SSE				ScS		ScS	10 05 19.2	+0.7
SSE				LR		LR			
	comp=Z,29µm,19.8s,MS5.9								
CBIJ	**Chichi jima**	**27.62**	**31**	P		**P**	**09 54 27.1**	**-3.0**
	comp=Z,581nm,0.5s,mb6.5,baz=138,slow=4.2,SNR=20								
CBIJ				LR		LR	10 03 38.8		
	comp=Z,17µm,19.5s,MS5.6,baz=210,slow=32								
NNT	**Nongplab**	**27.83**	**290**	P		**P**	**09 54 35.0**	**+2.8**
NST	**Nakhon Sawan**	**28.46**	**296**	P		**P**	**09 54 37.8**	**0.0**
	comp=Z,200nm,1.0s,mb5.7								
WHN	**Wuhan**	**28.96**	**338**	⇓P		**P**	**09 54 41.9**	**-0.2**
WHN				AP		pP	09 54 52.5	+3.2
WHN				LR		LR			
	comp=N,42µm,17.5s,MS6.2								
WHN				LR		LR			
	comp=E,12µm,15.1s,MS6.2								
WHN				LR		LR			
	comp=Z,64µm,19.1s,MS6.2								
NJ2	**Nanjing**	**29.00**	**347**	*e*P		**P**	**09 54 44.4**	**+2.0**
NJ2				AP		pP	09 54 50.3	+0.6
NJ2				XP		sP	09 54 52.8	+0.1
NJ2				PP		PP	09 55 38.3	-10
NJ2				S		**S**	**09 59 31.5**	**-0.7**
NJ2				AMB		AMB			
	comp=Z,300nm,0.9s,mb6.0								
NJ2				AMB		AMB			
	comp=Z,4µm,11.7s								
NJ2				LR		LR			
	comp=N,30µm,16.2s,MS6.3								
NJ2				LR		LR			
	comp=E,49µm,15.4s,MS6.3								
NJ2				LR		LR			
	comp=Z,115µm,16.8s,MS6.6								
NANT	**Nan**	**29.26**	**303**	⇓P		**P**	**09 54 43.0**	**-1.9**
GYA	**Guiyang**	**29.45**	**322**	⇑*i*P		**P**	**09 54 47.3**	**+0.8**
GYA				AP		pP	09 54 56.9	+3.1
GYA				XP		sP	09 54 59.8	+3.0
GYA				PP		PP	09 55 45.8	-7.4
GYA				S		**S**	**09 59 40.8**	**+1.4**
GYA				XS		sS	09 59 52.8	+1.4
GYA				SCS		ScS	10 05 26.4	-0.8
GYA				AMB		AMB			
	comp=Z,110nm,1.0s,mb5.5								
GYA				AMB		AMB			
	comp=Z,2µm,10.5s								
GYA				LR		LR			
	comp=N,32µm,19.0s,MS6.2								
GYA				LR		LR			
	comp=E,46µm,20.6s,MS6.2								
GYA				LR		LR			
	comp=Z,49µm,19.5s,MS6.1								
BDT	**Bhumibol Dam**	**30.06**	**298**	P		**P**	**09 54 53.0**	**+1.0**
	comp=Z,84nm,1.0s,mb5.4								
CHRT	**Chiangrai**	**30.53**	**304**	⇓P		**P**	**09 54 56.5**	**+0.4**
	comp=Z,2µm,1.0s,mb6.9								
CM31	**Chiang Mai Arr**	**30.61**	**301**	PFAKE			09 55 10.0	+13
CM31				LR		LR			
	comp=Z,22nm,19.0s,MS5.8								
CMAR	**Chiang Mai Arr**	**30.61**	**301**	P		**P**	**09 54 56.8**	**0.0**
	comp=Z,62nm,0.8s,mb5.5,baz=117,slow=7.2,SNR=68								
CMAR				ScP		ScP	10 01 37.1	+0.7
	comp=Z,27nm,0.9s,baz=141,slow=1.7,SNR=15								
CMAR				LR		LR	10 09 09.9		
	comp=Z,22µm,20.0s,MS5.8,baz=290,slow=40								
CMAR				P3KPbc			10 26 49.5		
	comp=Z,1.6nm,0.3s,baz=290,slow=5.3,SNR=9.4								
CMAR	**Chiang Mai Arr**	**30.61**	**301**	P		**P**	**09 54 56.8**	**0.0**
CMAR							10 01 37.1		
CMAR				pmax		pmax			
	comp=Z,62nm,0.8s								
CMAR				pmax		pmax			
	comp=N,27nm,0.9s								
CMAR				MLR		MLR			
	comp=Z,22µm,20.0s								
CMAR				pmax		pmax			
	comp=Z,2.0nm,0.4s								
CMAR	**Chiang Mai Arr**	**30.61**	**301**	P		**P**	**09 54 56.8**	**0.0**
CMAR				ScP		ScP	10 01 37.1	+0.7
CMAR				LR		LR	10 09 09.9	
CMAR				*e*			10 26 49.5	
CTA	**Charters Tower**	**30.68**	**141**	*e*P		**P**	**09 54 57.2**	**-0.2**
	comp=Z,66nm,0.7s,mb5.6								
CTA	**Charters Tower**	**30.68**	**141**	P		**P**	**09 54 56.3**	**-1.1**
	comp=Z,83nm,0.9s,mb5.6,baz=322,slow=10,SNR=37								
CTA				ScP		ScP	10 01 39.0	+2.5
	comp=Z,43nm,1.1s,baz=344,slow=13,SNR=3.3								
CTA				P3KPbc			10 26 45.2		
	comp=Z,3.1nm,0.7s,baz=116,slow=4.1,SNR=4.5								
CTA	**Charters Tower**	**30.68**	**141**	P		**P**	**09 54 56.3**	**-1.1**
CTA							10 01 39.1		
CTA				pmax		pmax			
	comp=Z,83nm,0.9s								
CTA				pmax		pmax			
	comp=N,43nm,1.1s								
CTA				pmax		pmax			
	comp=Z,3.0nm,0.7s								
CTAO	**Charters Tower**	**30.68**	**141**	*e*P		**P**	**09 54 57.7**	**+0.3**
CTAO				pmax		pmax			
	comp=Z,528nm,1.9s,mb6.0								
CTAO				MLR		MLR			
	comp=Z,20µm,21.0s,MS5.7								
CTAO	**Charters Tower**	**30.68**	**141**	*e*P		**P**	**09 54 57.7**	**+0.2**
	comp=Z,528nm,1.9s,mb6.0								
CTAO				LR		LR			
	comp=Z,20µm,21.0s,MS5.7								
CHG	**Chiang Mai**	**30.76**	**301**	⇓P		**P**	**09 54 58.3**	**+0.2**
	comp=Z,150nm,0.8s,mb5.9								
CHTO	**Chiang Mai**	**30.76**	**301**	*e*P		**P**	**09 54 58.9**	**+0.8**
CHTO				*e*			10 01 38.3		
CHTO				pmax		pmax			
	comp=Z,355nm,1.2s,mb6.1								
CHTO				MLR		MLR			
	comp=Z,21µm,19.0s,MS5.8								
CHTO	**Chiang Mai**	**30.76**	**301**	*e*P		**P**	**09 54 58.9**	**+0.7**
	comp=Z,355nm,1.2s,mb6.1								
CHTO				*e*ScP		ScP	10 01 38.3	+1.4
CHTO				LR		LR			
	comp=Z,21µm,19.0s,MS5.8								
BSI	**Banda Aceh**	**31.10**	**274**	P		**P**	**09 55 04.3**	**+3.0**
	comp=Z,153nm,1.2s,mb5.7								
KMI	**Kunming**	**31.14**	**315**	P		**P**	**09 55 02.3**	**+0.8**
KMI				AP		pP	09 55 05.6	-3.2
KMI				XP		sP	09 55 07.1	-4.7
KMI				PP		PP	09 56 03.6	-8.4
KMI				S		**S**	**10 00 01.9**	**-4.1**
KMI				AMB		AMB			
	comp=Z,23nm,1.0s,mb5.0								
KMI				AMB		AMB			
	comp=Z,478nm,5.9s								
KMI				LR		LR			
	comp=N,30µm,17.9s,MS6.2								
KMI				LR		LR			
	comp=E,31µm,17.6s,MS6.2								
KMI				LR		LR			
	comp=Z,57µm,18.9s,MS6.3								
KMI	**Kunming**	**31.14**	**315**	P		**P**	**09 55 02.3**	**+0.8**
	comp=Z,23nm,1.0s,mb5.0								
KMI				pP		pP	09 55 05.6	-3.2
KMI				sP		sP	09 55 07.1	-4.7
KMI				PP		PP	09 56 03.6	-8.4
KMI				PPP			09 56 15.5	
KMI				S		**S**	**10 00 01.9**	**-4.1**
KMI				sS		sS	10 00 08.1	-10
KMI				SS		SS	10 01 41.6	-38
KMI				SSS			10 02 02.9	
KMI				LR		LR			
	comp=Z,57µm,18.9s,MS6.3								
JHJ	**Hachijo jima 2**	**31.72**	**22**	P		**P**	**09 55 06.0**	**-0.5**
	comp=Z,110nm,0.6s,mb5.8,baz=156,slow=9.1,SNR=5.9								
JHJ				LR		LR	10 07 21.9		
	comp=Z,42µm,19.6s,MS6.1,baz=217,slow=35								
TIA	**Tai'an**	**33.39**	**346**	⇑P		**P**	**09 55 19.8**	**-1.2**
TIA				AP		pP	09 55 31.0	+2.7
TIA				S		**S**	**10 00 36.5**	**-4.2**
TIA				AMB		AMB			
	comp=Z,66nm,0.9s,mb5.6								
TIA				LR		LR			
	comp=N,17µm,16.0s,MS6.1								
TIA				LR		LR			
	comp=E,27µm,17.0s,MS6.1								
COCO	**West Island**	**33.45**	**241**	PFAKE			09 55 30.0	+8.1
COCO				LR		LR			
	comp=Z,15µm,22.0s,MS5.7								
KSRS	**Korea Array**	**33.53**	**2**	P		**P**	**09 55 21.9**	**-0.3**
	comp=Z,90nm,0.6s,mb5.9,baz=180,slow=9.4,SNR=139								
KSRS				PcP		PcP	09 58 04.2	+1.4
	comp=Z,35nm,0.7s,baz=186,slow=2.2,SNR=10								
KSRS				S		**S**	**10 00 45.5**	**+2.7**
	comp=Z,3.0nm,1.1s,baz=211,slow=21,SNR=3.0								
KSRS				ScP		ScP	10 01 47.0	+1.1
	comp=Z,14nm,1.1s,baz=178,slow=3.6,SNR=6.0								
KSRS				LR		LR	10 11 03.5		
	comp=Z,32µm,18.4s,MS6.1,baz=196,slow=40								
KSRS				P3KPbc			10 26 34.5		
	comp=Z,0.9nm,0.7s,baz=355,slow=5.6,SNR=4.5								
KSRS	**Korea Array**	**33.53**	**2**	P		**P**	**09 55 21.9**	**-0.3**
KSRS							09 58 04.2		
KSRS				S		**S**	**10 00 45.5**	**+2.7**
	comp=Z,90nm,0.6s,mb5.9								
KSRS				pmax		pmax			
	comp=Z,35nm,0.7s,mb5.4								
KSRS				smax					
	comp=N,3.0nm,1.1s								
KSRS				pmax		pmax			
	comp=N,14nm,1.1s								
KSRS				MLR		MLR			
	comp=Z,32µm,18.4s,MS6.1								
KSRS				pmax		pmax			
	comp=Z,1.0nm,0.7s								
INCN	**Inchon**	**33.53**	**0**	*e*P		**P**	**09 55 22.6**	**+0.3**
	comp=Z,192nm,0.8s,mb6.1								
INCN				LR		LR			
	comp=Z,28µm,20.0s,MS6.0								
XAN	**Xi'an**	**34.24**	**334**	P		**P**	**09 55 27.3**	**-1.1**
XAN				AP		pP	09 55 33.3	-2.5
XAN				XP		sP	09 55 36.3	-2.5
XAN				PP		PP	09 56 52.3	+6.0
XAN				AMB		AMB			
	comp=Z,262nm,1.3s,mb6.0								
XAN				AMB		AMB			
	comp=Z,436nm,9.4s								
XAN				LR		LR			
	comp=N,8µm,26.9s								
XAN				LR		LR			
	comp=E,28µm,20.8s								
XAN				LR		LR			
	comp=Z,58µm,23.3s,MS6.2								
PBA	**Port Blair**	**34.28**	**285**	*e*P		**P**	**09 55 30.9**	**+1.8**
PBA				*ex*		x	09 57 04.6		
MJAR	**Matsushiro Arr**	**34.34**	**17**	P		**P**	**09 55 27.0**	**-2.3**
	comp=Z,18nm,0.8s,mb5.1,baz=190,slow=8.0,SNR=40								
MJAR				PcP		PcP	09 58 06.8	+1.8
	comp=Z,32nm,0.9s,baz=195,slow=2.8,SNR=5.5								
MJAR				S		**S**	**10 01 01.2**	**+5.8**
	comp=Z,4.0nm,1.1s,baz=191,slow=12,SNR=3.7								
MJAR				LR		LR	10 09 33.6		
	comp=Z,39µm,19.8s,MS6.1,baz=200,slow=36								
MJAR				P3KPbc			10 26 29.9		
	comp=Z,1.3nm,0.8s,baz=8.2,slow=5.7,SNR=4.8								
MJAR	**Matsushiro Arr**	**34.34**	**17**	P		**P**	**09 55 27.0**	**-2.3**
MJAR							09 58 06.8		
MJAR				S		**S**	**10 01 01.2**	**+5.8**
MJAR				pmax		pmax			
	comp=Z,18nm,0.8s								
MJAR				pmax		pmax			
	comp=Z,32nm,0.9s								
MJAR				smax					
	comp=N,4.0nm,1.1s								
MJAR				MLR		MLR			
	comp=Z,39µm,19.8s								
MJAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								
MJAR	**Matsushiro Arr**	**34.34**	**17**	P		**P**	**09 55 27.0**	**-2.3**
MJAR				PcP		PcP	09 58 06.8	+1.8
MJAR				S		**S**	**10 01 01.2**	**+5.8**
MJAR				LR		LR	10 09 33.6	
MJAR				*e*			10 26 29.9	
MAJO	**Matsushiro**	**34.34**	**17**	*e*P		**P**	**09 55 26.8**	**-2.5**
	comp=Z,146nm,0.9s,mb5.9								
MAJO				*e*PcP		PcP	09 58 09.1	+4.0
MAJO				LR		LR			
	comp=Z,42µm,20.0s,MS6.2								
MAT	**Matsushiro**	**34.34**	**17**	P		**P**	**09 55 27.5**	**-1.8**
MAT				S		**S**	**10 00 58.1**	**+2.7**
FORT	**Forrest**	**34.41**	**178**	⇓*i*P		**P**	**09 55 29.4**	**-0.5**
	comp=Z,838nm,0.7s,mb6.8								
CD2	**Chengdu**	**34.43**	**324**	⇓*i*P		**P**	**09 55 29.4**	**-0.8**
CD2				AP		pP	09 55 35.3	-2.2
CD2				XP		sP	09 55 38.5	-2.0
CD2				PP		PP	09 56 46.0	-2.5
CD2				PCP		PcP	09 58 05.0	-0.5
CD2				S		**S**	**10 00 56.8**	**-0.2**
CD2				SCS		ScS	10 05 49.1	-2.9
CD2				AMB		AMB			
	comp=Z,100nm,1.2s,mb5.6								
CD2				AMB		AMB			
	comp=Z,1µm,8.4s								
CD2				LR		LR			
	comp=N,74µm,19.2s,MS6.5								
CD2				LR		LR			
	comp=E,55µm,20.4s,MS6.5								
CD2				LR		LR			
	comp=Z,75µm,20.4s,MS6.4								
DL2	**Dalian**	**35.22**	**353**	⇑*i*P		**P**	**09 55 37.6**	**+0.7**
DL2				PP		PP	09 56 57.3	+0.2
DL2				S		**S**	**10 01 10.3**	**+1.3**
DL2				AMB		AMB			
	comp=Z,720nm,0.7s,mb6.7								
DL2				AMB		AMB			
	comp=Z,2µm,6.7s								
DL2				LR		LR			
	comp=N,10µm,19.0s,MS5.7								
DL2				LR		LR			
	comp=E,9µm,18.6s,MS5.7								
DL2				LR		LR			
	comp=Z,16µm,19.6s,MS5.8								
HNR	**Honiara**	**35.87**	**112**	P		**P**	**09 55 41.4**	**-1.3**
	comp=Z,100nm,0.9s,mb5.7,baz=248,slow=16,SNR=3.6								
HNR				LR		LR	10 09 48.3		
	comp=Z,14µm,18.8s,MS5.8,baz=289,slow=35								
HNR	**Honiara**	**35.87**	**112**	P		**P**	**09 55 41.4**	**-1.4**
HNR				pmax		pmax			
	comp=Z,100nm,0.9s,mb5.8								
HNR				MLR		MLR			
	comp=Z,14µm,18.8s,MS5.8								
HNR	**Honiara**	**35.87**	**112**	*e*P		**P**	**09 55 46.3**	**+3.5**
	comp=Z,528nm,1.1s,mb6.4								
HNR				LR		LR	10 09 48.4		
TIY	**Taiyuan**	**36.12**	**341**	P		**P**	**09 55 46.9**	**+2.3**
TIY				XP		sP	09 55 55.5	+0.6
TIY				S		**S**	**10 01 26.6**	**+3.8**
TIY				XS		sS	10 01 40.9	+6.0
TIY				PCS		PcS	10 01 56.6	-1.1
TIY				LR		LR			
	comp=N,26µm,18.0s,MS6.2								
TIY				LR		LR			
	comp=E,16µm,15.0s,MS6.2								
TIY				LR		LR			
	comp=Z,40µ

comp=Z,25µm,23.5s,MS5.9
NWAO Narrogin (SRO) 37.55 193 P **P** **09 55 56.7 -0.1**
comp=Z,454nm,0.9s,mb6.2,baz=22,slow=8.8,SNR=88
NWAO Narrogin (SRO) 37.55 193 P **P** **09 55 56.7 -0.1**
NWAO pmax pmax
comp=Z,454nm,0.9s
NWAO Narrogin (SRO) 37.55 193 *e*P **P** **09 55 56.9 +0.1**
comp=Z,515nm,1.0s,mb6.2
NWAO *e*PP PP 09 57 21.6 -1.2
NWAO LR LR
comp=Z,12µm,20.0s,MS5.7
IMP Imphal 37.61 307 *e*P **P** **09 55 56.0 -1.5**
IMP *ex* x 10 02 01.0
SNY Shenyang 37.95 356 P **P** **09 56 03.4 +3.3**
SNY S **S** **10 01 51.5 +0.9**
SNY AMB AMB
comp=Z,5µm,12.2s
SNY LR LR
comp=N,21µm,20.8s,MS6.1
SNY LR LR
comp=E,23µm,21.1s,MS6.1
SNY LR LR
comp=Z,31µm,22.2s,MS6.1
STKA Stephens Creek 38.28 159 *e*P **P** **09 56 01.8 -1.2**
comp=Z,500nm,0.9s,mb6.2
STKA Stephens Creek 38.28 159 P **P** **09 56 01.9 -1.1**
comp=Z,306nm,0.6s,mb6.2,baz=332,slow=8.9,SNR=110
STKA S **S** **10 01 55.9 +0.1**
comp=Z,37nm,1.0s,baz=175,slow=18,SNR=2.2
LZH Lanzhou 38.31 330 ⇑P **P** **09 56 03.6 +0.4**
LZH AP pP 09 56 08.3 -2.3
LZH XP sP 09 56 10.8 -2.8
LZH PP PP 09 57 35.3 +4.2
LZH PCP PcP 09 58 17.8 +0.8
LZH S **S** **10 01 57.5 +1.3**
LZH SCS ScS 10 06 13.0 -0.3
LZH AMB AMB
comp=Z,366nm,1.1s,mb6.0
LZH AMB AMB
comp=Z,3µm,8.0s
LZH LR LR
comp=N,42µm,16.9s
LZH LR LR
comp=Z,77µm,19.3s,MS6.5
LZH Lanzhou 38.31 330 ⇑P **P** **09 56 03.6 +0.4**
comp=Z,366nm,1.1s,mb6.0
LZH pP pP 09 56 08.3 -2.3
LZH sP sP 09 56 10.7 -2.9
LZH PP PP 09 57 35.2 +4.1
LZH PcP PcP 09 58 17.8 +0.8
LZH S **S** **10 01 57.5 +1.3**
LZH sS sS 10 02 05.1 -3.3
LZH SS SS 10 04 37.2 -7.6
LZH ScS ScS 10 06 13.0 -0.3
LZH LR LR
comp=Z,77µm,19.3s,MS6.5
HHC Hu-ho-hao-te 39.25 342 *e*P **P** **09 56 10.6 -0.4**
HHC AP pP 09 56 17.1 -1.3
HHC XP sP 09 56 20.3 -1.1
HHC PP PP 09 57 45.1 +3.7
HHC PCP PcP 09 58 19.3 -0.5
HHC SCP ScP 10 02 05.3 -1.7
HHC PCS PcS 10 02 07.6 -1.8
HHC S **S** **10 02 10.9 +0.6**
HHC SCS ScS 10 06 16.6 -2.0
HHC AMB AMB
comp=Z,20nm,1.0s
HHC AMB AMB
comp=Z,972nm,7.5s
HHC LR LR
comp=N,27µm,20.4s,MS6.2
HHC LR LR
comp=E,23µm,19.6s,MS6.2
HHC LR LR
comp=Z,40µm,21.3s,MS6.2
VLA Vladivostok 39.46 6*d i*P **P** **09 56 12.9 +0.2**
VLA pmax pmax
comp=Z,467nm,1.5s,mb6.0
BTO Baotou 39.53 340 *e*P **P** **09 56 13.5 +0.1**
CN2 Changchun 39.85 359 *e*P **P** **09 56 15.3 -0.7**
CN2 *e*XP sP 09 56 25.0 -1.4
CN2 *e*S **S** **10 02 19.8 +0.7**
CN2 AMB AMB
comp=Z,20nm,0.8s
CN2 AMB AMB
comp=Z,1µm,5.0s
CN2 LR LR
comp=N,15µm,18.0s
CN2 LR LR
comp=E,24µm,18.0s
CN2 LR LR
comp=Z,17µm,19.0s
MDJ Mudanjiang 40.75 3 P **P** **09 56 23.5 +0.1**
MDJ AP pP 09 56 30.5 -0.3
MDJ XP sP 09 56 33.5 -0.3
MDJ PP PP 09 57 57.6 0.0
MDJ PCP PcP 09 58 24.4 -0.1
MDJ PCS PcS 10 02 15.3 +0.2
MDJ S **S** **10 02 30.4 -2.1**
MDJ XS sS 10 02 44.8 0.0
MDJ SS SS 10 05 33.8 -0.1
MDJ AMB AMB
comp=Z,522nm,0.9s,mb6.2
MDJ AMB AMB
comp=Z,5µm,10.0s
MDJ LR LR
comp=N,22µm,24.1s,MS6.0
MDJ LR LR
comp=E,21µm,26.7s,MS6.0
MDJ LR LR
comp=Z,34µm,25.4s,MS6.1
MDJ Mudanjiang 40.75 3 *e*P **P** **09 56 23.9 +0.5**
comp=Z,459nm,0.8s,mb6.2
MDJ LR LR
comp=Z,32µm,20.0s,MS6.2
ERM Erimo 40.88 19 P **P** **09 56 26.3 +1.8**
comp=Z,1µm,0.9s,mb6.5,SNR=6.4
ERM Erimo 40.88 19 P **P** **09 56 26.7 +2.2**
ERM pmax pmax
comp=Z,150nm,0.9s,mb5.6
ERM Erimo 40.88 19 *i* P **P** **09 56 25.5 +1.0**
ERM LR LR
comp=Z,35µm,20.0s,MS6.2
CAL Calcutta 41.34 300 *e*P **P** **09 56 28.8 +0.1**
CAL *ex* x 09 56 28.8
comp=Z,16µm,18.7s
CAL *e*S **S** **10 02 34.3 -7.8**
ARMA Armidale 41.67 146 *e*P **P** **09 56 31.7 +0.5**
LSA Lhasa 42.19 312 P **P** **09 56 37.3 +1.8**
LSA S **S** **10 02 55.1 +0.7**
LSA LR LR
comp=E,19µm,42.5s
LSA LR LR
comp=Z,24µm,21.2s
LSA Lhasa 42.19 312 *e*P **P** **09 56 36.8 +1.3**
LSA pmax pmax
comp=Z,265nm,0.6s,mb6.0
LSA MLR MLR
comp=Z,24µm,20.0s,MS6.1
LSA Lhasa 42.19 312 *e*P **P** **09 56 36.8 +1.3**
comp=Z,265nm,0.6s,mb6.0
LSA LR LR
comp=Z,24µm,20.0s,MS6.1
ASAJ Asahikawa 42.61 17 P **P** **09 56 38.8 +0.1**
comp=Z,160nm,0.9s,mb5.7,baz=237,slow=15,SNR=51
ASAJ S **S** **10 03 00.7 +0.6**
comp=Z,5.5nm,0.8s,baz=168,slow=20,SNR=2.6
ASAJ LR LR 10 12 56.1
comp=Z,32µm,22.0s,MS6.2,baz=214,slow=34
ASAJ Asahikawa 42.61 17 P **P** **09 56 38.8 +0.1**
ASAJ S **S** **10 03 00.7 +0.6**
ASAJ pmax pmax
comp=Z,160nm,1.0s
ASAJ smax
comp=N,6.0nm,0.8s
BWNR Bhubaneshwar 42.84 296 *e*P **P** **09 56 36.0 -4.9**
BWNR *e*S **S** **10 03 06.0 +1.8**
GTA Gaotai 42.90 329 ⇓P **P** **09 56 40.8 -0.3**
GTA AP pP 09 56 47.0 -1.6
GTA XP sP 09 56 50.0 -1.6
GTA PP PP 09 58 23.5 +2.5
GTA S **S** **10 03 04.8 +0.2**
GTA AMB AMB
comp=Z,3µm,9.6s
GTA LR LR
comp=N,39µm,22.8s,MS6.4
GTA LR LR
comp=E,35µm,20.4s,MS6.4
GTA LR LR
comp=Z,56µm,20.4s,MS6.5
YUK Yuzh-Kuril'sk 43.59 20 *e*P **P** **09 56 46.0 -0.6**
YUK *e*PPP 09 59 03.0
YUK *e*S **S** **10 03 08.0 -6.4**
YUK *e*SS SS 10 06 39.0 +9.1
YUK *e*SSS 10 07 19.0
YUK pmax pmax
comp=Z,1.0nm,1.0s
YUK pmax pmax
comp=E,440nm,0.8s
YUK pmax pmax
comp=Z,5µm,2.0s,mb6.9
YUK pmax pmax
comp=N,4µm,1.2s
YUK pmax pmax
comp=E,3µm,1.0s
YUK smax
comp=N,8µm,9.0s
YUK smax
comp=E,5µm,6.0s
TAPN Taplejung 43.76 306 *e*P **P** **09 56 48.3 0.0**
ODAN Odare 43.81 306 *e*P **P** **09 56 48.5 -0.2**
BOK Bokaro 43.89 301 *e*P **P** **09 56 48.3 -1.1**
BOK AMb AMB 09 56 56.8
comp=Z,178nm,1.2s,mb5.7
BOK *ex* x 10 03 09.7
RIV Riverview 44.09 150 *e*P **P** **09 56 52.0 +1.2**
CAN Canberra 44.29 153 P **P** **09 56 53.1 +0.8**
CAN Canberra 44.29 153 *e*P **P** **09 56 53.4 +1.1**
comp=Z,18nm,2.5s
VIS Vishakhapatnam 44.44 291 *e*P **P** **09 56 54.5 +0.7**
VIS AMb AMB 09 57 11.7
comp=Z,163nm,1.3s,mb5.6
CNB Canberra Magne 44.45 153 ⇓*i*P **P** **09 56 54.5 +0.9**
RAMN Ramite 44.49 305 *e*P **P** **09 56 54.4 +0.3**
TOO Toolangi 44.80 158 *e*P **P** **09 56 57.6 +1.3**
JIRN Jiri 45.11 306 *e*P **P** **09 56 58.5 -0.6**
YSS Yuzh-Sakhalins 45.25 16 ⇓*e*P **P** **09 56 58.8 -1.0**
YSS *e* 09 58 41.5
YSS *e* 09 58 52.0
YSS *e*PPP 09 59 28.0
YSS *i* S **S** **10 03 38.0 -0.6**
YSS pmax pmax
comp=Z,2µm,10.0s
YSS smax
comp=N,7µm,14.0s
YSS MLR MLR
comp=N,14µm,18.0s,MS6.1
YSS MLR MLR
comp=E,13µm,18.0s,MS6.1
YSS MLR MLR
comp=Z,16µm,18.0s,MS6.0
YSS Yuzh-Sakhalins 45.25 16 *e*P **P** **09 56 59.5 -0.3**
comp=Z,367nm,1.2s,mb6.1
YSS LR LR
comp=Z,6µm,21.0s,MS5.5
GUN Gumba 45.47 306 *e*P **P** **09 57 01.8 -0.1**
comp=Z,685nm,0.7s,mb6.6
KLR Kul'dur 45.49 5 *e*P **P** **09 56 56.7 -5.0**
KLR *e*S **S** **10 03 35.5 -6.5**
KLR pmax pmax
comp=N,4µm,10.0s
KLR pmax pmax
comp=Z,7µm,10.0s
PALK Pallekele 45.66 276 *e*P **P** **09 57 03.6 0.0**
comp=Z,126nm,1.1s,mb5.8
PALK *e*PcP PcP 09 58 44.6 +2.9
PALK *e*ScP ScP 10 02 37.7 +4.4
PALK LR LR
comp=Z,13µm,19.0s,MS5.9
PKI Pulchoki 45.71 305 *e*P **P** **09 57 03.3 -0.5**
comp=Z,143nm,0.6s,mb6.1
PKIN Phulchoki 45.72 305 *e*P **P** **09 57 04.1 +0.2**
KKN Kakani 45.90 306 *e*P **P** **09 57 04.7 -0.6**
comp=Z,200nm,0.6s,mb6.2
DMN Daman 45.97 305 *e*P **P** **09 57 05.4 -0.5**
comp=Z,218nm,0.7s,mb6.2
GKN Gorkha 46.51 306 *e*P **P** **09 57 09.4 -0.7**
comp=Z,262nm,0.6s,mb6.3
MDRS Chennai 46.56 284 *e*P **P** **09 57 11.3 +0.7**
MDRS AMb AMB 09 57 14.3
comp=Z,228nm,1.2s,mb6.0
MDRS *ex* x 10 04 00.3
NOUC Port Laguerre 46.69 125 *e*P **P** **09 57 11.6 0.0**
DZM Mont Dzumac 46.79 125 *e*P **P** **09 57 12.9 +0.5**
DZM Mont Dzumac 46.79 125 *e*P **P** **09 57 13.1 +0.7**
comp=Z,2µm,1.5s,mb6.7
ULN Ulaanbaatar 46.97 342 P **P** **09 57 12.8 -0.6**
ULN pmax pmax
comp=Z,290nm,0.9s,mb6.2
ULN Ulaanbaatar 46.97 342 ⇑*e*P **P** **09 57 12.7 -0.7**
ULN LR LR
comp=Z,23µm,21.0s,MS6.1
SONM Songino Array 47.15 342 P **P** **09 57 14.4 -0.4**
comp=Z,124nm,0.9s,mb5.8,baz=157,slow=6.1,SNR=72
SONM LR LR 10 19 47.2
comp=Z,40µm,21.4s,MS6.3,baz=154,slow=40
SONM PKPPKP 10 28 34.0
comp=Z,2.1nm,1.1s,baz=236,slow=3.3,SNR=4.8
SONM Songino Array 47.15 342 P **P** **09 57 14.4 -0.4**
SONM pmax pmax
comp=Z,124nm,0.9s
SONM MLR MLR
comp=Z,40µm,21.4s
SONM pmax pmax
comp=Z,2.0nm,1.1s
KOLN Koldanda 47.26 305 *e*P **P** **09 57 15.5 -0.5**
comp=Z,808nm,0.6s,mb6.8
DANN Dangsing 47.36 306 *e*P **P** **09 57 16.0 -0.7**
comp=Z,1µm,0.6s,mb6.9
ALBI Allahabad 47.90 301 *ex* **P** **09 57 18.0 -3.0**
HYB Hyderabad 48.84 290 *e*P **P** **09 57 28.5 +0.2**
HYB *e*S **S** **10 04 28.0 -2.7**
HYB pmax pmax
comp=Z,300nm,1.0s,mb6.3
HYB Hyderabad 48.84 290 *i* P **P** **09 57 28.5 +0.2**
comp=Z,300nm,1.0s,mb6.3
HYB *e*S **S** **10 04 28.0 -2.7**
HYB LR LR 10 13 28.0
comp=Z,11nm,20.0s
HYB Hyderabad 48.84 290 *e*P **P** **09 57 28.5 +0.2**
comp=Z,300nm,1.0s,mb6.3
HYB *e*S **S** **10 04 28.0 -2.7**
HYB *e* 10 13 28.0
JBP Jabalpur 48.84 298 *ex* **P** **09 57 29.9 +1.6**
JBP *ex* **S** **10 04 30.0 -0.6**
KOD Kodaikanal 49.00 280 *e*P **P** **09 57 30.1 +0.4**
NGP Nagpur 49.16 295 *e*P **P** **09 57 28.5 -2.3**
NGP *ex* x 09 57 30.2
comp=Z,158nm,1.1s
NGP *ex* x 10 04 30.8
CIT Chita 49.25 350 *e*P **P** **09 57 31.8 +0.9**
CIT *e* 09 57 41.5
CIT pmax pmax
comp=Z,784nm,1.1s,mb6.7
TRD Trivandrum 49.41 278 *e*P **P** **09 57 32.5 -0.3**
TRD AMb AMB 09 57 35.4
comp=Z,288nm,1.3s,mb6.1
TRD *ex* x 10 04 28.8
TAU Tasmania Unive 50.17 160 *e*P **P** **09 57 39.0 +0.9**
TAU pmax pmax
comp=Z,286nm,1.1s,mb6.2
TAU MLR MLR
comp=Z,9µm,19.0s,MS5.8
TAU Tasmania Unive 50.17 160 *e*P **P** **09 57 39.0 +0.9**
comp=Z,286nm,1.1s,mb6.2
TAU LR LR
comp=Z,9µm,19.0s,MS5.8
ZAK Zakamensk 50.38 341 *e*P **P** **09 57 38.3 -1.2**
ZAK *e* 09 58 59.2
ZAK pmax pmax
comp=Z,80nm,1.9s,mb5.4
PTH Pithoragarh 50.69 306 *e*P **P** **09 57 41.6 -0.6**
LATR Latur 50.88 291 *e*P **P** **09 57 43.0 -0.9**
LATR AMb AMB 09 57 49.2
comp=Z,538nm,0.4s,mb6.8
AKL Akola 50.91 294 *e*P **P** **09 57 43.4 -0.6**
AKL AMb AMB 09 57 49.8
comp=Z,700nm,1.1s,mb6.5
TLY Talaya 51.38 342*c i*P **P** **09 57 46.8 -0.3**
TLY *e* 09 57 57.4
TLY *e*S **S** **10 04 58.9 -6.2**
TLY *e* 10 07 35.8
TLY *e*SS SS 10 08 39.7 -1.4
TLY pmax pmax
comp=Z,174nm,0.8s,mb6.0
TLY Talaya 51.38 342 ⇑*i*P **P** **09 57 46.0 -1.1**
TLY LR LR
comp=Z,24µm,22.0s,MS6.2
IRK Irkutsk 51.69 343 *e*P **P** **09 57 49.0 -0.3**
IRK *e* 10 05 16.1
IRK *e* 10 07 40.5
IRK pmax pmax
comp=Z,523nm,2.2s,mb6.1
MOY Mondy 52.23 340 *e*P **P** **09 57 53.7 +0.3**
MOY pmax pmax
comp=Z,586nm,1.9s,mb6.2
WMQ Urumqi 52.52 325 P **P** **09 57 55.4 -0.3**
WMQ AP pP 09 58 02.0 -1.3
WMQ XP sP 09 58 05.5 -0.7
WMQ PCP PcP 09 59 07.0 +1.1
WMQ PP PP 09 59 55.0 +0.2
WMQ PCS PcS 10 03 02.0 -2.3
WMQ S **S** **10 05 19.3 -1.6**
WMQ XS sS 10 05 32.5 -0.9
WMQ SCS ScS 10 07 41.0 -3.1
WMQ AMB AMB
comp=Z,285nm,1.4s,mb6.0
WMQ AMB AMB
comp=Z,4µm,4.6s
WMQ LR LR
comp=N,43µm,16.7s,MS6.6
WMQ LR LR
comp=E,23µm,17.7s,MS6.6
WMQ LR LR
comp=Z,33µm,20.0s,MS6.4
DDI Dehra Dun 52.71 306 *ex* **P** **09 57 53.8 -3.6**
DDI *ex* x 10 05 27.0
NDI New Delhi 52.86 303 *ex* x 10 05 20.5
CLNS Chul'man 52.91 359 *e*P **P** **09 57 59.3 +1.0**
CLNS *e* 09 59 08.1
CLNS *e* 09 59 58.9
CLNS *e*PPP 10 01 04.0
CLNS *e*S **S** **10 05 26.3 +0.5**
CLNS pmax pmax
comp=Z,179nm,0.7s,mb6.1
CLNS pmax pmax
comp=E,76nm,0.8s
CLNS pmax pmax
comp=N,96nm,0.8s
CLNS smax
comp=N,3622µm,13.2s
CLNS smax
comp=E,4736µm,13.9s
CLNS MLR MLR
comp=N,5µm,20.0s,MS5.7
CLNS MLR MLR
comp=E,5µm,20.0s,MS5.7
CLNS MLR MLR
comp=Z,4µm,22.0s,MS5.5
KAD Karad 52.94 289 *e*P **P** **09 57 58.2 -1.0**
KAD AMb AMB 09 58 01.9
comp=Z,206nm,1.2s,mb5.9
KAD *ex* x 10 05 10.6
SKR Severo-Kuril's 52.96 23 *e*P **P** **09 58 01.4 +2.6**
SKR *e* 09 59 16.0
SKR *e* 10 00 06.0
SKR *e*S **S** **10 05 28.0 +1.2**
SKR pmax pmax
comp=Z,1µm,2.0s,mb6.5
SKR pmax pmax
comp=N,800nm,1.5s
SKR pmax pmax
comp=E,480nm,1.5s
SKR pmax pmax
comp=N,3µm,16.0s
SKR pmax pmax
comp=E,3µm,16.0s
SKR pmax pmax
comp=Z,6µm,16.0s
SKR smax
comp=N,3µm,18.0s
SKR smax
comp=E,9µm,18.0s
SKR MLR MLR
comp=N,3µm,20.0s,MS5.9
SKR MLR MLR
comp=E,9µm,20.0s,MS5.9
SKR MLR MLR
comp=Z,9µm,20.0s,MS5.8
GOA Goa 53.03 286 ⇑*i*P **P** **09 57 59.4 -0.6**
GOA AMb AMB 09 58 05.1
comp=Z,247nm,0.3s,mb6.5
GOA *i* x x 10 05 23.1
MNCY Minicoy 53.28 277 *i* x **P** **09 57 57.0 -4.8**
MNCY *i* x x 09 59 58.0
POO Poona 53.44 290 *e*P **P** **09 58 01.6 -1.3**
POO AMb AMB 09 58 03.7
comp=Z,262nm,0.4s,mb6.5
SMLA Simla 53.71 306 *i* P **P** **09 58 03.7 -0.9**
comp=Z,2µm,0.5s,mb7.2
SMLA AMb AMB 09 58 10.2
comp=Z,874nm,0.7s,mb6.8
SMLA *i* S **S** **10 05 37.2 -0.4**
FUNA Funafuti 53.99 103 *e*P **P** **09 58 08.0 +0.9**
comp=Z,2µm,1.7s,mb6.8
FUNA LR LR
comp=Z,13µm,20.0s,MS6.0
SDNR Sundarnagar 53.99 307 *e*P **P** **09 58 05.0 -1.8**
SDNR *e*S **S** **10 05 40.0 -1.5**
AJM Ajmer 54.41 300 *e*P **P** **09 58 08.5 -1.4**
AJM AMb AMB 09 58 14.1
comp=Z,236nm,1.1s,mb6.0
BHK Bhakra 54.41 306 *ex* **P** **09 58 13.5 +3.7**
BHK *ex* x 09 58 46.5
BOM Bombay 54.47 290 *e*P **P** **09 58 17.4 +7.0**
BOM *e*S **S** **10 05 58.2 +10**
BOD Bodaibo 54.76 352 *e*P **P** **09 58 11.7 -0.1**
BOD pmax pmax
comp=Z,432nm,1.1s,mb6.4
DGAR Diego Garcia 55.03 258 PFAKE 09 58 20.0 +5.4
DGAR LR LR
comp=Z,10µm,20.0s,MS5.9
DLH Dalhousie 55.15 307 *e*P **P** **09 58 13.0 -2.2**
THN Thein Dam 55.31 307 *e*P **P** **09 58 14.2 -2.1**
PEA0B Petropavlovsk- 55.47 22 *e*P **P** **09 58 17.2 +0.1**
PETK Petropavlovsk- 55.47 22 P **P** **09 58 16.7 -0.4**
comp=Z,145nm,0.9s,mb6.0,baz=191,slow=3.9,SNR=78
PETK ScP ScP 10 03 15.7 +1.2
comp=Z,9.1nm,1.0s,baz=160,slow=4.6,SNR=3.7
PETK LR LR 10 22 17.2
comp=Z,9µm,20.3s,MS5.8,baz=218,slow=36
PETK PKPPKP 10 28 16.5
comp=Z,2.0nm,0.8s,baz=79,slow=7.7,SNR=4.1
PETK PKP2bc 10 28 30.4
comp=Z,3.6nm,1.0s,baz=96,slow=9.3,SNR=3.9
PETK Petropavlovsk- 55.47 22 P **P** **09 58 16.7 -0.4**
PETK ScP ScP 10 03 15.7 +1.2
PETK LR LR 10 22 17.2
PETK P'P' 10 28 16.5
PETK ⇑*e* 10 28 30.4
PET Petropavlovsk 55.77 23 *e*P **P** **09 58 18.7 -0.5**
PET *e* 10 00 24.1
PET *e*S **S** **10 06 01.4 -3.2**
PET *e*SS SS 10 09 42.2 -8.2
PET pmax pmax
comp=Z,359nm,1.0s,mb6.4
PET pmax pmax
comp=Z,4µm,14.8s
PET pmax pmax
comp=Z,2µm,14.8s
PET MLR MLR
comp=Z,10µm,20.0s,MS5.9
PET MLR MLR
comp=Z,7µm,17.0s
PET Petropavlovsk 55.77 23 ⇑*i*P **P** **09 58 19.2 0.0**
PET LR LR
comp=Z,10µm,20.0s,MS5.9
MKAR Makanchi Array 57.35 325 P **P** **09 58 29.7 -0.9**
comp=Z,124nm,0.6s,mb6.1,baz=122,slow=8.5,SNR=104
MKAR ScP ScP 10 03 26.5 +3.6
comp=Z,107nm,0.9s,baz=116,slow=5.5,SNR=14
MKAR S **S** **10 06 23.0 -2.7**
comp=Z,12nm,1.0s,baz=125,slow=14,SNR=5.4
MKAR LR LR 10 26 29.6
comp=Z,30µm,18.7s,MS6.4,baz=99,slow=40

MKAR PKPPKP 10 28 09.1
comp=Z,1.2nm,0.7s,baz=300,slow=2.7,SNR=5.7
MKAR PKP2bc 10 28 29.6
comp=Z,2.2nm,0.7s,baz=282,slow=2.8,SNR=4.9
MKAR P4KPbc 10 35 42.9
comp=Z,3.9nm,0.7s,baz=116,slow=4.4,SNR=21
MKAR Makanchi Array 57.35 325 P **P** **09 58 29.7 -0.9**
MKAR S **S** **10 06 23.0 -2.7**
MKAR pmax pmax
comp=Z,124nm,0.6s
MKAR pmax pmax
comp=N,107nm,1.0s
MKAR smax
comp=N,12nm,1.0s
MKAR MLR MLR
comp=Z,30μm,18.7s
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 57.35 325 P **P** **09 58 29.7 -0.9**
MKAR ScP ScP 10 03 26.5 +3.6
MKAR S **S** **10 06 23.0 -2.7**
MKAR LR LR 10 26 29.6
MKAR P'P' 10 28 09.1
MKAR ⇑*e* 10 28 29.6
KSH Kashi 57.81 315 P **P** **09 58 34.1 +0.1**
KSH *e*AP pP 09 58 40.6 -1.0
KSH *e*XP sP 09 58 42.1 -2.5
KSH *e*PCP PcP 09 59 27.1 +0.7
KSH *e*PP PP 10 00 43.1 +0.8
KSH *e*SCP ScP 10 03 24.1 -1.1
KSH *e*PCS PcS 10 03 26.1 -1.6
KSH *e*S **S** **10 06 28.1 -3.9**
KSH *e*SCS ScS 10 08 18.1 -4.1
KSH AMB AMB
comp=Z,559nm,1.7s,mb6.3
KSH LR LR
comp=N,22μm,14.2s,MS6.6
KSH LR LR
comp=E,22μm,14.2s,MS6.6
KSH LR LR
comp=Z,16μm,18.0s,MS6.2
BHJ Bhuj 58.11 295 *e*P **P** **09 58 35.8 -0.6**
BHJ AMb AMB 09 58 41.8
comp=Z,9.8nm,0.1s,mb6.0
BHJ *e*S **S** **10 06 35.5 -1.0**
YAK Yakutsk 58.15 2 *e*P **P** **09 58 35.1 -0.8**
YAK *e**PP pP 09 58 42.5 -1.1
YAK *e*S **S** **10 06 33.7 -2.0**
YAK *e* 10 08 21.9
YAK *e*SS SS 10 10 33.2 +5.7
YAK pmax pmax
comp=Z,291nm,0.8s,mb6.4
YAK pmax pmax
comp=N,124nm,1.2s
YAK pmax pmax
comp=E,19nm,1.1s
YAK pmax pmax
comp=Z,262nm,1.4s,mb6.1
YAK pmax pmax
comp=N,468nm,2.0s
YAK pmax pmax
comp=E,294nm,2.2s
YAK smax
comp=N,1426μm,4.3s
YAK smax
comp=E,1319μm,3.3s
YAK Yakutsk 58.15 2 *e*P **P** **09 58 35.8 -0.1**
YAK LR LR
comp=Z,786nm,0.9s,mb6.7
YAK LR LR
comp=Z,17μm,21.0s,MS6.1
KRAR Krasnoyarsk 58.59 339 *i* P **P** **09 58 38.5 -0.6**
KRAR pmax pmax
comp=Z,61nm,0.8s,mb5.7
MIDW Midway 58.59 59 *e*P **P** **09 58 40.6 +1.0**
comp=Z,352nm,1.4s,mb6.2
MIDW LR LR
comp=Z,9μm,20.0s,MS5.9
ULHL Ulahol 58.79 318 P **P** **09 58 40.5 -0.3**
SNR=20
AAA Alma-Ata 58.79 319 *e*P **P** **09 58 43.4 +2.6**
AAA *e*S **S** **10 06 45.5 +0.8**
AAA pmax pmax
comp=Z,4μm,9.8s
AAA smax
comp=E,4μm,11.6s
KZA Kyzart 59.38 318 P pP 09 58 58.0 +5.4
SNR=10
TKM2 Tokmak 2 59.52 319 *e*P **P** **09 58 45.2 -0.6**
TKM2 pmax pmax
comp=Z,127nm,0.9s,mb6.0
TKM2 MLR MLR
comp=Z,23μm,20.0s,MS6.3
TKM2 Tokmak 2 59.52 319 P **P** **09 58 45.4 -0.4**
SNR=97
TKM2 Tokmak 2 59.52 319 *e*P **P** **09 58 45.2 -0.6**
comp=Z,127nm,0.9s,mb6.0
TKM2 LR LR
comp=Z,23μm,20.0s,MS6.3
KBK Karagaybulak 59.83 318 P **P** **09 58 49.2 +1.2**
SNR=20
UCH Uchtor 59.94 317 P **P** **09 58 49.2 +0.4**
SNR=48
UCH Uchtor 59.94 317 *e*P **P** **09 58 49.8 +1.1**
comp=Z,167nm,0.9s,mb6.1
CHMS Chumysh 60.11 318 P **P** **09 58 50.3 +0.4**
SNR=21
AAK Ala-Archa 60.13 318 P **P** **09 58 50.4 +0.4**
SNR=22
FRU Bishkek 60.13 318 *e*P **P** **09 58 49.0 -1.0**
FRU pmax pmax
comp=Z,720nm,2.5s,mb6.3
USP Ospenovka 60.39 319 P **P** **09 58 50.6 -1.2**
SNR=90
ZAA0 Zalesovo Array 60.41 333 *e*P **P** **09 58 50.0 -1.7**
ZALV Zalesovo Beam 60.41 333 P **P** **09 58 49.9 -1.8**
comp=Z,33nm,0.4s,mb5.7,baz=129,slow=6.1,SNR=42
ZALV S **S** **10 07 00.5 -4.7**
comp=Z,15nm,0.9s,baz=125,slow=13,SNR=5.1
ZALV LR LR 10 27 21.7
comp=Z,13μm,19.3s,MS6.1,baz=340,slow=38
ZALV PKPPKP 10 28 13.5
comp=Z,2.3nm,0.3s,baz=306,slow=3.5,SNR=4.4
ZALV PKP2bc 10 28 19.6
comp=Z,2.6nm,0.4s,baz=318,slow=2.0,SNR=7.6
ZALV Zalesovo Beam 60.41 333 P **P** **09 58 49.9 -1.8**
ZALV S **S** **10 07 00.5 -4.7**
ZALV pmax pmax
comp=Z,33nm,0.4s,mb5.7
ZALV smax
comp=N,15nm,0.9s
ZALV MLR MLR
comp=Z,13μm,19.3s,MS6.1
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
ZALV Zalesovo Beam 60.41 333 P **P** **09 58 49.9 -1.8**
ZALV S **S** **10 07 00.5 -4.7**
ZALV LR LR 10 27 21.7
ZALV P'P' 10 28 13.5
ZALV ⇑*e* 10 28 19.6
AML Almayashu 60.46 317 P **P** **09 58 53.9 +1.6**
SNR=29
AML Almayashu 60.46 317 *e*P **P** **09 58 52.6 +0.4**
comp=Z,308nm,0.8s,mb6.4
AML LR LR
comp=Z,36μm,20.0s,MS6.5
EKS2 Erkin-Say 60.62 318 P **P** **09 58 53.2 -0.2**
SNR=93
EKS2 Erkin-Say 60.62 318 *e*P **P** **09 58 53.1 -0.3**
comp=Z,195nm,0.8s,mb6.3
EKS2 LR LR
comp=Z,30μm,22.0s,MS6.4
MKAZ Moumakai 60.86 137 *e*P **P** **09 58 55.6 +0.5**
QRZ Quartz Range 61.15 141 P **P** **09 58 57.6 +0.6**
HIZ Hauiti 61.38 138 *e*P **P** **09 58 59.7 +1.1**
KURK Kurchatov 61.54 328 P **P** **09 58 57.4 -2.0**
comp=Z,64nm,0.6s,mb5.9,baz=123,slow=7.2,SNR=80
KURK LR LR 10 26 59.7
comp=Z,16μm,21.3s,MS6.1,baz=110,slow=37
KURK PKPPKP 10 28 03.1
comp=Z,4.4nm,1.0s,baz=274,slow=3.5,SNR=6.5
KURK PKP2bc 10 28 18.9
comp=Z,8.0nm,1.0s,baz=279,slow=3.5,SNR=7.6
KURK P4KPbc 10 36 01.8
comp=Z,0.5nm,0.6s,baz=122,slow=3.7,SNR=4.4
KURK Kurchatov 61.54 328 *e*P **P** **09 58 57.9 -1.5**
KURK pmax pmax
comp=Z,590nm,0.8s,mb6.8
KURK Kurchatov 61.54 328 P **P** **09 58 57.4 -2.0**
KURK LR LR 10 26 59.7
KURK P'P' 10 28 03.1
KURK ⇑*e* 10 28 18.9
WHZ Wether Hill Ro 61.64 148 P **P** **09 58 59.9 -0.3**
NVS Novosibirsk 61.69 333 *i* P **P** **09 58 58.4 -2.0**
NVS *e*S **S** **10 07 15.0 -6.5**
NVS *i* 10 08 44.9
NVS pmax pmax
comp=N,133nm,0.9s
NVS pmax pmax
comp=E,65nm,0.9s
NVS pmax pmax
comp=Z,212nm,0.9s,mb6.3
NVS smax
comp=N,268nm,2.2s
NVS smax
comp=E,329nm,2.6s
LBZ Lake Benmore 61.89 146 P **P** **09 59 01.3 -0.6**
THZ Tophouse 61.92 142 P **P** **09 59 01.5 -0.6**
RPZ Rata Peaks 61.97 145 P **P** **09 59 01.5 -0.9**
comp=E,251nm,0.9s,mb6.3,baz=10.0,slow=2.2,SNR=35
RPZ LR LR 10 29 04.5
comp=E,14μm,18.5s,MS6.2,baz=305,slow=39
RPZ Rata Peaks 61.97 145 P **P** **09 59 01.7 -0.7**
SMY Shemya 62.55 30 *e*P **P** **09 59 08.3 +2.1**
SMY pmax pmax
comp=Z,615nm,1.3s,mb6.6
SMY MLR MLR
comp=Z,14μm,22.0s,MS6.1
SMY Shemya 62.55 30 *e*P **P** **09 59 08.3 +2.1**
comp=Z,615nm,1.3s,mb6.6
SMY LR LR
comp=Z,14μm,22.0s,MS6.1
ODZ Otahua Downs 62.55 146 P **P** **09 59 06.4 +0.1**
TUZ Tuapeka 62.58 147 P **P** **09 59 06.8 +0.3**
RAO Raoul Island 62.59 126 PFAKE 09 59 20.0 +13
RAO LR LR
comp=Z,6μm,22.0s,MS5.7
URZ Urewera 62.77 137 P **P** **09 59 06.8 -1.1**
comp=Z,82nm,0.9s,mb5.8,baz=346,slow=4.4,SNR=23
SNZO South Karori 62.78 141 *e*P **P** **09 59 08.1 +0.2**
comp=Z,206nm,1.0s,mb6.2
SNZO LR LR
comp=Z,16μm,19.0s,MS6.2
BKZ Black Stump Fm 62.81 138 P **P** **09 59 09.6 +1.4**
PUZ Puketiti 63.47 136 P **P** **09 59 12.5 -0.1**
AFI Afiamalu 63.72 107 P **P** **09 59 14.0 -0.7**
comp=Z,363nm,1.0s,mb6.4,baz=343,slow=4.9,SNR=17
AFI Afiamalu 63.72 107 P **P** **09 59 14.0 -0.7**
AFI pmax pmax
comp=Z,363nm,1.0s,mb6.4
AFI Afiamalu 63.72 107 *e*P **P** **09 59 16.4 +1.7**
comp=Z,951nm,1.3s,mb6.7
AFI LR LR
comp=Z,9μm,21.0s,MS5.9
MCQ Macquarie Isla 64.05 160 *e*P **P** **09 59 19.1 +3.1**
comp=Z,7μm,0.9s
AMKA Amchitka 64.60 34 *e*P **P** **09 59 20.3 +0.5**
ADK Adak 67.06 34 *e*P **P** **09 59 36.0 +0.4**
ADK pmax pmax
comp=Z,232nm,1.0s,mb6.2
ADK MLR MLR
comp=Z,15μm,22.0s,MS6.2
ADK Adak 67.06 34 *e*P **P** **09 59 36.0 +0.4**
comp=Z,232nm,1.0s,mb6.2
ADK LR LR
comp=Z,15μm,22.0s,MS6.2
BVAR Borovoye Array 67.12 327 P **P** **09 59 34.6 -1.3**
comp=Z,66nm,0.7s,mb5.8,baz=128,slow=9.6,SNR=58
BVAR S S 10 08 25.2 -3.4
comp=Z,3.0nm,0.9s,baz=127,slow=9.2,SNR=3.0
BVAR PKP2bc 10 28 03.4
comp=Z,5.4nm,1.0s,baz=255,slow=4.3,SNR=6.5
BVAR LR LR 10 31 14.9
comp=Z,14μm,22.0s,MS6.1,baz=115,slow=38
BVAR P4KPbc 10 36 26.4
comp=Z,1.0nm,0.6s,baz=145,slow=5.3,SNR=5.5
BVAR Borovoye Array 67.12 327 P **P** **09 59 34.6 -1.3**
BVAR S S 10 08 25.2 -3.4
BVAR pmax pmax
comp=Z,66nm,0.7s
BVAR smax
comp=N,3.0nm,0.9s
BVAR pmax pmax
comp=Z,5.0nm,1.0s
BVAR MLR MLR
comp=Z,14μm,22.0s
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 67.12 327 P **P** **09 59 34.6 -1.3**
BVAR S S 10 08 25.2 -3.4
BVAR ⇑*e* 10 28 03.4
BVAR LR LR 10 31 14.9
BRVK Borovoye 67.19 327 P **P** **09 59 35.9 -0.5**
comp=Z,4μm,0.8s,mb7.5,SNR=21
BRVK Borovoye 67.19 327 *e*P **P** **09 59 35.2 -1.2**
BRVK LR LR
comp=Z,12μm,22.0s,MS6.1
TIXI Tiksi 67.78 1 *e*P **P** **09 59 38.8 -1.0**
TIXI pmax pmax
comp=Z,488nm,1.4s,mb6.3
TIXI Tiksi 67.78 1 ⇑*i*P **P** **09 59 39.7 -0.1**
TIXI LR LR
comp=Z,20μm,19.0s,MS6.4
BILL Bilibino 69.56 15 *c i*P **P** **09 59 50.3 -0.7**
BILL pmax pmax
comp=Z,139nm,1.6s,mb5.6
BILL Bilibino 69.56 15 ⇑*i*P **P** **09 59 50.4 -0.6**
BILL LR LR
comp=Z,13μm,22.0s,MS6.1
ABKT Ailbek 70.64 309 P **P** **09 59 57.5 -0.7**
comp=Z,1μm,1.0s,mb6.7,SNR=27
CASY Casey 70.85 187 *e*P **P** **09 59 59.2 +0.4**
CASY LR LR
comp=Z,5μm,22.0s,MS5.7
DRV Dumont d'Urvil 70.97 174 P pP 10 00 11.0 +3.7
DRV S S 10 09 34.0 +20
DRV L 10 17 00.0
DRV R 10 23 00.0
MSEY Mahe Island 71.41 264 *e*P **P** **10 00 03.0 -0.4**
comp=Z,118nm,1.4s,mb5.6
MSEY LR LR
comp=Z,7μm,20.0s,MS5.9
NIKO Nikolski 71.92 35 *e*P **P** **10 00 05.8 +0.2**
comp=Z,525nm,1.2s,mb6.3
AKTO Aktyubinsk 73.44 322 PKPPKP 10 27 50.0
comp=Z,1.0nm,0.6s,baz=273,slow=1.5,SNR=4.6
AKTO LR LR 10 37 50.7
comp=Z,28μm,19.7s,MS6.5,baz=226,slow=40
UNV Unalaska Valle 73.53 35 *e*P **P** **10 00 15.4 +0.3**
comp=Z,418nm,1.4s,mb6.2
SVE Sverdlovsk 73.76 329 ⇑*e*P **P** **10 00 16.3 -0.2**
SVE *e* 10 00 32.5
SVE *e*S S 10 09 39.1 -7.0
SVE *e* 10 10 34.1
SVE pmax pmax
comp=Z,325nm,1.2s,mb6.1
SVE MLR MLR
comp=Z,17μm,20.0s,MS6.3
AKUT Akutan 74.02 35 *e*P **P** **10 00 19.7 +1.7**
comp=Z,2μm,1.9s,mb6.7
MIR Mirnyy 74.16 193 *j i*P **P** **10 00 20.0 +1.5**
MIR *i* 10 00 32.0
MIR *i* 10 03 07.0
MIR *i* PPP 10 04 52.0
MIR *e* 10 09 50.0
MIR pmax pmax
comp=Z,600nm,2.0s,mb6.2
MIR pmax pmax
comp=Z,3μm,4.0s
MIR MLR MLR
comp=Z,6μm,20.0s,MS5.8
ARU Arti 74.74 328 *c i*P **P** **10 00 20.2 -1.9**
ARU *e* 10 00 32.2
ARU *e* 10 03 09.1
ARU *e*S S 10 09 53.0 -4.0
ARU *e*SSS 10 17 49.1
ARU pmax pmax
comp=Z,118nm,0.6s,mb6.0
ARU MLR MLR
comp=Z,11μm,19.0s,MS6.2
ARU Arti 74.74 328 ⇓*i*P **P** **10 00 20.4 -1.8**
ARU LR LR
comp=Z,12μm,21.0s,MS6.2
KIP Kipapa 75.15 69 P **P** **10 00 27.1 +1.8**
KIP pmax pmax
comp=Z,400nm,1.1s,mb6.3
KIP Kipapa 75.15 69 *i* P **P** **10 00 25.3 0.0**
KIP LR LR
comp=Z,12μm,22.0s,MS6.2
HON Honolulu 75.16 69 P **P** **10 00 27.9 +2.6**
HON Honolulu 75.16 69 *e*P **P** **10 00 27.7 +2.3**
XMAS Kiritimati 76.00 89 *e*P **P** **10 00 33.6 +3.3**
comp=Z,543nm,1.3s,mb6.3
XMAS LR LR
comp=Z,14μm,21.0s,MS6.2
MUKL Al Mukalla 76.89 284 *e*P **P** **10 00 35.6 +0.3**
SDPT Sand Point 77.29 34 *e*P **P** **10 00 37.1 +0.4**
comp=Z,1μm,1.6s,mb6.6
KHU Kahuku 77.36 71 P **P** **10 00 40.1 +2.2**
KHU Kahuku 77.36 71 *e*P **P** **10 00 39.8 +2.0**
POHA Pohakuloa 77.45 71 *e*P **P** **10 00 40.5 +2.1**
comp=Z,676nm,1.1s,mb6.5
POHA LR LR
comp=Z,13μm,22.0s,MS6.2
STCH Steam Cracks 77.83 71 *e*P **P** **10 00 42.9 +2.4**
UMR Umm Al-Rimmam 78.35 299 *e*P **P** **10 00 42.0 -1.2**
baz=299
UMR AMb AMB 10 00 46.8
comp=Z,287nm,0.7s,mb6.3,baz=299
RDF Al-Radifah 78.47 299 *e*P **P** **10 00 42.4 -1.5**
baz=299
RDF AMb AMB 10 01 07.3
comp=Z,274nm,1.2s,mb6.1,baz=299
NAY Al-Naaiem 78.75 299 *e*P **P** **10 00 43.5 -1.9**
baz=299
NAY AMb AMB 10 00 49.2
comp=Z,219nm,0.7s,mb6.2,baz=299
RST Umm Al-Ruwaisa 78.97 299 *e*P **P** **10 00 44.6 -2.1**
baz=299
RST AMb AMB 10 00 50.2
comp=Z,521nm,0.8s,mb6.5,baz=299
MAK Makhachkala 79.34 313 *e*P **P** **10 00 46.9 -1.4**
MAK *e*PPP 10 05 39.7
MAK *e*S S 10 10 44.0 -3.7
MAK *i* 10 11 11.4
MAK pmax pmax
comp=Z,521nm,1.7s,mb6.2
MAK MLR MLR
comp=Z,15μm,22.0s,MS6.3
SVW2 Sparrevohn 80.88 29 *e*P **P** **10 00 58.2 +1.9**
TTA Tatalina 80.97 27 *e*P **P** **10 00 57.0 +0.3**
TTA pmax pmax
comp=Z,147nm,0.4s,mb6.3
TTA Tatalina 80.97 27 *e*P **P** **10 00 57.0 +0.3**
comp=Z,148nm,0.4s,mb6.3
GNI Garni 81.23 310 *e*P **P** **10 00 59.5 +0.9**
GNI Garni 81.23 310 LR LR 10 44 34.7
comp=Z,9μm,21.4s,MS6.1,baz=230,slow=41
GNI Garni 81.23 310 P **P** **10 01 00.0 +1.4**
GNI pmax pmax
comp=Z,500nm,1.6s
GNI Garni 81.23 310 ⇑*i*P **P** **10 00 59.3 +0.7**
GNI LR LR
comp=Z,11μm,22.0s,MS6.2
MTA Mtatsminda 81.26 311 P **P** **10 00 58.8 +0.1**
TBLG Delisi 81.31 311 P **P** **10 00 59.8 +0.8**
BHD Baghdad 81.31 303 *ex* x 10 00 53.0
BHD Baghdad 81.31 303 *ex* x 10 11 06.0
OHAK Old Harbor 81.55 33 *e*P **P** **10 01 01.5 +1.6**
comp=Z,527nm,1.8s,mb6.2
TRBA At Turbah 81.70 283 *e*P **P** **10 01 03.9 +2.4**
GOR Gori 81.79 312 P **P** **10 01 02.8 +1.3**
CLDR Caldiran 81.83 309 *e*P **P** **10 01 02.5 +0.7**
HKR Hakkari 81.93 307 *e*P **P** **10 01 02.1 -0.2**
HAKT HAKKARI 81.95 307 *i* P **P** **10 01 00.5 -2.0**
KDAK Kodiak Island 81.98 32 P **P** **10 01 02.5 +0.4**
comp=Z,162nm,0.7s,mb6.1,baz=230,slow=6.7,SNR=33
KDAK Kodiak Island 81.98 32 *e*P **P** **10 01 02.5 +0.3**
comp=Z,765nm,1.4s,mb6.4
KDAK LR LR
comp=Z,2μm,22.0s,MS5.5
DYDN Diyadin 82.02 309 *i* P **P** **10 01 03.0 +0.2**
VANB Van 82.23 308 *e*P **P** **10 01 08.9 +5.0**
ONI Oni 82.30 312 P **P** **10 01 04.6 +0.4**
IMA2 Indian Mountai 82.43 24 *e*P **P** **10 01 07.3 +2.9**
KARS Kars 82.51 310 *e*P **P** **10 01 05.9 +0.6**
AGRB Hanur-Agry 82.56 309 *e*P **P** **10 01 07.1 +1.5**
CHUM Lake Minchumin 82.74 26 *e*P **P** **10 01 07.0 +1.0**
comp=Z,544nm,1.3s,mb6.4
KTH Kantishna Hill 83.33 27 *e*P **P** **10 01 09.7 +0.6**
comp=Z,450nm,1.4s,mb6.3
ARTV Artvin 83.40 311 *i* P **P** **10 01 10.3 +0.4**
HOMI Horasan 83.41 310 *i* P **P** **10 01 09.5 -0.5**
SLKM Skilak Lake 83.42 30 P **P** **10 01 09.3 -0.3**
SLKM Skilak Lake 83.42 30 *e*P **P** **10 01 09.2 -0.4**
MAW Mawson 83.72 200 ⇑*i*P **P** **10 01 11.0 +0.1**
comp=Z,82nm,1.3s,mb5.7
MAW Mawson 83.72 200 P **P** **10 01 11.7 +0.7**
comp=Z,63nm,1.0s,mb5.7,baz=58,slow=7.1,SNR=36
MAW PKKPbc PKKPbc 10 19 30.0 -1.1
comp=Z,7.2nm,1.0s,baz=247,slow=6.1,SNR=10
MAW LR LR 10 35 34.1
comp=Z,5μm,21.8s,MS5.9,baz=65,slow=34
MAW Mawson 83.72 200 ⇑*i*P **P** **10 01 11.0 +0.1**
MAW pmax pmax
comp=Z,82nm,1.3s
ERZM Erzurum 83.82 310 *i* P **P** **10 01 14.0 +1.9**
VRHR Novokhopersk 83.82 321 *e*P **P** **10 01 11.2 -0.6**
VRHR *e*S S 10 11 30.0 -3.7
VRHR pmax pmax
comp=Z,310nm,1.6s,mb6.2
VRHR pmax pmax
comp=N,40nm,0.7s
VRHR pmax pmax
comp=E,60nm,0.5s
VRHR smax
comp=E,500nm,1.4s
VRHR smax
comp=Z,260nm,3.0s
VRHR smax
comp=N,430nm,2.2s
COLD Coldfoot 83.94 23 *e*P **P** **10 01 13.4 +1.3**
comp=N,510nm,1.1s,mb6.6
COLD *e*PcP PcP 10 01 16.0 0.0
BNGL BINGOL 83.98 309 *i* P **P** **10 01 13.5 +0.5**
PMR Palmer 84.02 29 *e*P **P** **10 01 12.3 -0.3**
PMR pmax pmax
comp=Z,651nm,1.6s,mb6.5
PMR MLR MLR
comp=Z,5μm,20.0s,MS5.9
PMR Palmer 84.02 29 *e*P **P** **10 01 12.3 -0.3**
comp=Z,650nm,1.6s,mb6.5
PMR LR LR
comp=Z,5μm,20.0s,MS5.9
MCK McKinley 84.23 26 *e*P **P** **10 01 13.3 -0.4**
MCK pmax pmax
comp=Z,728nm,1.4s,mb6.6
MCK McKinley 84.23 26 *e*P **P** **10 01 13.3 -0.4**
comp=Z,728nm,1.4s,mb6.6
MARD Mardin 84.28 307 *i* P **P** **10 01 14.1 -0.4**
SBA Scott Base 84.44 172 *e*P **P** **10 01 15.9 +1.5**
SBA pmax pmax
comp=Z,119nm,1.0s,mb6.0
SBA MLR MLR
comp=Z,5μm,19.0s,MS6.0
SBA Scott Base 84.44 172 *e*P **P** **10 01 15.8 +1.4**
comp=Z,119nm,1.0s,mb6.0
SBA LR LR
comp=Z,5μm,19.0s,MS6.0
KOPT Kop Dagi 84.49 310 *i* P **P** **10 01 18.9 +3.4**
COLA College 84.75 25 P **P** **10 01 15.4 -0.9**
COLA pmax pmax
comp=Z,93nm,1.0s,mb5.9
COLA College 84.75 25 *i* P **P** **10 01 15.2 -1.1**
COLA LR LR
comp=Z,4μm,20.0s,MS5.8
EZC Erzincan 85.01 309 *e*P **P** **10 01 21.6 +3.4**
MACK Trabzon 85.03 311 *i* P **P** **10 01 17.7 -0.5**
KTUT Trabzon 85.03 311 *e*P **P** **10 01 18.2 0.0**
SOC Sochi 85.05 313 *e*P **P** **10 01 17.9 -0.3**
SOC *e**SP sP 10 01 29.6 +0.5

SOC *e* 10 04 28.7
SOC *e*S S 10 11 38.3 -7.9
SOC pmax pmax
comp=Z,2µm,0.6s,mb7.3
SOC pmax pmax
comp=Z,5µm,5.9s
GUMT Gumushane 85.26 310 *e*P **P 10 01 19.8 +0.4**
VOR Voronezh 85.34 321 *e*P **P 10 01 17.0 -2.5**
VOR pmax pmax
comp=Z,300nm,2.0s,mb6.1
VSR Storozhevoye 85.37 321 *e*P **P 10 01 18.5 -1.2**
VSR *e**SP sP 10 01 33.4 +2.9
VSR *e*S S 10 11 39.7 -9.4
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.5
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,130nm,1.4s
VSR smax
comp=E,140nm,3.0s
VSR smax
comp=Z,20nm,3.8s
VSR smax
comp=N,60nm,1.6s
VSR MLR MLR
comp=Z,2µm,19.0s,MS5.6
VSR MLR MLR
comp=N,2µm,16.0s,MS5.8
VSR MLR MLR
comp=E,3µm,19.0s,MS5.8
PPT Papeete 85.39 108 *e*P **P 10 01 24.0 +3.5**
comp=E,63nm,1.2s,mb5.6
PPT Papeete 85.39 108 *e*S S 10 11 48.7 -1.9
comp=E,8µm,26.0s
PPT *e*SS SS 10 17 40.7 +15
comp=E,7µm,30.8s
PPT *e*LQ 10 25 04.0
comp=E,39µm,37.8s
PPT *e*LR LR 10 28 29.5
comp=E,7µm,24.5s
PPT Papeete 85.39 108 P **P 10 01 20.4 -0.1**
comp=E,61nm,1.1s,mb5.7,baz=177,slow=5.6,SNR=4.1
PPT LR LR 10 35 00.9
comp=E,4µm,21.6s,MS5.7,baz=271,slow=32
PAE Paea 85.40 108 *e*P **P 10 01 24.0 +3.5**
comp=E,579nm,1.2s,mb6.6
SVRC Sivrice-ELAZID 85.43 308 *e*P **P 10 01 20.4 +0.1**
TIAR Tiarei 85.61 108 *e*P **P 10 01 25.1 +3.5**
comp=E,727nm,0.9s,mb6.9
TVO Taravao 85.72 108 *e*P **P 10 01 25.8 +3.7**
comp=E,624nm,0.9s,mb6.8
ESPY Espiye-Giresun 85.82 311 *e*P **P 10 01 21.1 -1.1**
URFA Urfa 85.84 307 *e*P **P 10 01 22.5 +0.1**
MALT Malatya 86.13 308 *e*P **P 10 01 21.6 -2.1**
MALT Malatya 86.13 308 P **P 10 01 21.9 -1.8**
MALT pmax pmax
comp=Z,51nm,0.8s,mb5.8
MALT Malatya 86.13 308⇓ *i*P **P 10 01 22.7 -1.0**
MALT Malatya 86.13 308 ⇓P **P 10 01 22.7 -1.1**
MALT LR LR
comp=Z,10µm,22.0s,MS6.2
MYA Malatya 86.13 308 *e*P **P 10 01 25.1 +1.3**
RAGM Ragged Mountai 86.17 30 *e*P **P 10 01 25.3 +1.9**
GRSN GIRESUNGRSN 86.17 311 *i*P **P 10 01 21.5 -2.4**
BMRM Bremner River 86.19 29 *e*P **P 10 01 24.2 +0.6**
ATAB Bozova 86.26 307 *i*P **P 10 01 24.8 +0.4**
AKCD Akcadag 86.52 308 *i*P **P 10 01 26.2 +0.5**
DARE Darende-Malaty 86.59 309 *e*P **P 10 01 26.3 +0.2**
ANN Anapa 86.66 315 *e*P **P 10 01 24.5 -1.7**
ANN *e* 10 11 47.9
ANN pmax pmax
comp=Z,167nm,1.0s,mb6.2
PMOR Pomariorio Ree 86.77 105 *e*P **P 10 01 30.8 +3.5**
comp=Z,404nm,1.3s,mb6.5
GZT Gaziantep 86.84 307 *i*P **P 10 01 26.9 -0.4**
MEH Mehetia 86.85 108 *e*P **P 10 01 32.0 +4.3**
comp=Z,4µm,1.1s
OBN Obninsk 86.85 325*c i*P **P 10 01 25.5 -1.4**
OBN *e**SP sP 10 01 37.4 -0.4
OBN *e* 10 01 41.3
OBN *i* 10 11 49.2
OBN *i* 10 12 03.1
OBN *e*PS 10 12 55.2
OBN *e*SS SS 10 17 50.0 +4.4
OBN pmax pmax
comp=Z,507nm,1.5s,mb6.5
OBN MLR MLR
comp=Z,14µm,19.0s,MS6.4
RSDY Resadiye-TOKAT 86.91 310 *e*P **P 10 01 26.5 -1.0**
VAH Vaihoa 87.05 105 *e*P **P 10 01 32.1 +3.4**
comp=Z,203nm,1.2s,mb6.2
GAZ Gaziantep 87.13 307 *e*P **P 10 01 27.9 -0.8**
SVSK Karacayir 87.18 310 *e*P **P 10 01 28.7 -0.2**
LVZ Lovozero 87.19 338⇑ *i*P **P 10 01 27.4 -0.9**
LVZ pmax pmax
comp=Z,212nm,1.4s,mb6.2
FURI Furi 87.23 279 *e*P **P 10 01 30.8 +1.1**
FURI S S 10 12 00.5 -8.3
KMRS Kahramanmaras 87.36 307 *e*P **P 10 01 28.2 -1.6**
SARI SarD1z-Kayseri 87.47 308 *e*P **P 10 01 30.9 +0.6**
TOKT Tokat 87.51 310 *e*P **P 10 01 31.1 +0.7**
ASF Jabal al Asfar 87.63 302 LR LR 10 46 40.0
comp=Z,5µm,21.0s,MS5.9,baz=314,slow=40
APA Apatity 87.69 337⇓ *i*P **P 10 01 31.2 +0.5**
APA *i* 10 11 53.0
APA *i*S S 10 12 08.0 -3.1
APA pmax pmax
comp=Z,140nm,1.2s,mb6.1
APA pmax pmax
comp=Z,3µm,11.0s
APA smax
comp=N,9µm,13.0s
APA smax
comp=E,6µm,13.0s
APA MLR MLR
comp=Z,31µm,21.0s,MS6.7
ANDN Andirin 87.80 307 *i*P **P 10 01 30.4 -1.5**
KVT Kavak 87.84 311 *e*P **P 10 01 31.6 -0.4**
COBT Iskenderun 87.93 306 *i*P **P 10 01 33.8 +1.2**
HTY Hatay 88.05 306 *e*P **P 10 01 34.2 +1.1**
KOZT Kozan 88.22 307 *e*P **P 10 01 36.1 +2.2**
CEYT Ceyhan 88.31 307 *e*P **P 10 01 32.8 -1.5**
DIKM Dikmen 88.40 311 *e*P **P 10 01 35.1 +0.4**
YURE YUREGIR 88.41 307 *i*P **P 10 01 34.2 -0.7**
DAWY Dawson 88.44 26 *e*P **P 10 01 34.4 +0.1**
BHL Bhannes 88.58 304⇑ *e*P **P 10 01 35.8 +0.1**
BOYT Boyabat 88.68 311 *i*P **P 10 01 40.0 +4.0**
CTKT Corum 88.83 310 *i*P **P 10 01 36.5 -0.2**
KARA Karaisali 88.85 307 *e*P **P 10 01 35.1 -1.7**
PNL Peninsula 88.85 30 *e*P **P 10 01 38.6 +2.2**
comp=Z,92nm,0.9s,mb6.1
CORM Corum 88.98 310 *e*P **P 10 01 37.1 -0.3**
JOF Joensuu 89.00 333 *e*p **P 10 01 35.0 -2.0**
comp=Z,215nm,0.7s,mb6.6
JOF Joensuu 89.00 333 *e*P **P 10 01 35.0 -2.0**
JOF pmax pmax
comp=Z,215nm,0.7s,mb6.6
SIM Simferopol' 89.01 315 P **P 10 01 37.4 0.0**
SIM *e*PPP 10 07 02.0
SIM *i* 10 12 05.2
SIM *e*S S 10 12 22.0 -2.5
SIM *e*SS SS 10 18 08.0 -10
SIM pmax pmax
comp=Z,72nm,0.9s,mb6.0
SIM pmax pmax
comp=Z,700nm,10.4s
CDAG Cicekdag 89.22 309 *i*P **P 10 01 36.5 -2.1**
KMBO Kilima Mbogo 89.28 269 P **P 10 01 39.0 -0.5**
comp=Z,11nm,0.3s,mb5.6,baz=88,slow=23,SNR=39
KMBO S S 10 12 08.5 -20
comp=Z,0.3nm,0.3s,baz=257,slow=18,SNR=4.2
KMBO LR LR 10 38 17.8
comp=Z,4µm,22.0s,MS5.8,baz=78,slow=33
MERS Mersin 89.30 307 *e*P **P 10 01 37.5 -1.5**
DHAK Deception Hill 89.52 31 *e*P **P 10 01 40.3 +0.8**
comp=Z,64nm,1.3s,mb5.8
ILGA Ilgaz 89.60 311 *i*P **P 10 01 42.5 +2.2**
MEST Erdemli 89.62 306 *i*P **P 10 01 40.0 -0.5**
HYT Haines Junctio 89.66 29 *e*P **P 10 01 40.6 +0.5**
EREN Erenkoy 89.68 305 *e*P **P 10 01 41.2 +0.4**
CANT Cankiri 89.71 310 *e*P **P 10 01 39.7 -1.2**
KEV Kevo 89.74 340 *e*p **P 10 01 39.1 -1.2**
comp=Z,43nm,0.8s,mb5.8
KEV Kevo 89.74 340 *e*P **P 10 01 39.1 -1.2**
KEV pmax pmax
comp=Z,43nm,0.8s,mb5.8
KAMT Kaman 89.74 309 *e*P **P 10 01 39.4 -1.6**
BALT Daday 89.81 311 *i*P **P 10 01 41.5 +0.2**
PUL Pulkovo 89.85 330⇑ *i*P **P 10 01 41.8 +0.8**
ARCES ARCESS Array B 90.30 340 P **P 10 01 41.9 -1.1**
comp=Z,100nm,0.8s,mb6.2,baz=79,slow=3.5,SNR=85
ARCES PKKPbc PKKPbc 10 19 13.9 -0.9
comp=Z,3.2nm,0.9s,baz=235,slow=4.3,SNR=4.8
ARCES LR LR 10 47 40.7
comp=Z,13µm,19.2s,MS6.4,baz=78,slow=39
SPITS Spitsbergen Ar 90.36 349 LR LR 10 47 30.4
comp=Z,16µm,20.4s,MS6.5,baz=45,slow=39
ANTO Ankara 90.41 310 *e*P **P 10 01 41.6 -2.6**
ANTO Ankara 90.41 310⇑ *i*P **P 10 01 43.4 -0.7**
ANTO Ankara 90.41 310 ⇑P **P 10 01 43.4 -0.7**
ANTO LR LR
comp=Z,6µm,21.0s,MS6.0
CSS Prodhromos 90.41 305 *e*P **P 10 01 44.2 -0.1**
comp=Z,58nm,0.8s,mb6.0
LEF Lefka 90.76 305 *e*P **P 10 01 44.0 -1.8**
KBS Kingsbay 90.89 350 *e*P **P 10 01 47.5 +1.9**
KBS *e*SKS 10 12 15.2
KBS AMS AMS 10 43 55.6
comp=Z,9µm,20.8s,MS6.2
LADK Ladik-KONYA 90.90 308 *e*P **P 10 01 44.4 -2.0**
SGKT Sivrigoynuk 90.90 311 *i*P **P 10 01 45.6 -0.8**
KONT Konya--Tatoy 90.92 308 *e*P **P 10 01 45.5 -1.1**
SKAG Skagway 90.93 30 *e*P **P 10 01 46.7 +0.6**
comp=Z,122nm,1.7s,mb6.0
BJO Bjornoya 90.94 345 *e*SKS 10 12 13.3
BJO AMS AMS 10 50 41.5
comp=Z,9µm,20.8s,MS6.2
KDHN Kadinhani 91.06 309 *i*P **P 10 01 43.8 -3.4**
KTK1 Kautokeino 91.20 339 *e*P **P 10 01 46.5 -0.7**
KTK1 AMb AMB 10 02 01.2
comp=Z,214nm,1.5s,mb6.2
KTK1 Kautokeino 91.20 339 *e*P **P 10 01 46.5 -0.7**
comp=Z,214nm,1.5s,mb6.2
KIZT Kizilcal 91.21 309 *e*P **P 10 01 46.1 -1.8**
SIT Sitka 91.31 33 *e*P **P 10 01 49.6 +1.7**
SIT pmax pmax
comp=Z,170nm,1.7s,mb6.1
SIT MLR MLR
comp=Z,6µm,21.0s,MS6.0
SIT Sitka 91.31 33 *e*P **P 10 01 49.6 +1.7**
comp=Z,170nm,1.7s,mb6.1
SIT LR LR
comp=Z,6µm,21.0s,MS6.0
KAF Kangasniemi 91.42 332 *e*p **P 10 01 46.7 -1.6**
comp=Z,94nm,0.8s,mb6.2,baz=79,slow=4.4
KAF Kangasniemi 91.42 332 *e*P **P 10 01 46.7 -1.6**
KAF pmax pmax
comp=Z,94nm,0.8s,mb6.2
AKASG Malin Array Be 91.67 321 P **P 10 01 48.0 -1.7**
comp=Z,32nm,0.7s,mb5.8,baz=69,slow=4.0,SNR=55
AKASG S SKSac 10 12 18.3 -2.7
comp=Z,1.8nm,0.4s,baz=74,slow=6.9,SNR=7.3
AKASG LR LR 10 48 58.4
comp=Z,9µm,19.7s,MS6.2,baz=70,slow=40
AKASG Malin Array Be 91.67 321 P **P 10 01 48.0 -1.7**
AKASG S SKSac 10 12 18.3 -2.7
AKASG pmax pmax
comp=Z,32nm,0.7s
AKASG smax
comp=N,2.0nm,0.4s
KIEV Kiev 91.68 321 *e*P **P 10 01 48.2 -1.6**
KIEV pmax pmax
comp=Z,75nm,1.0s,mb6.0
KIEV MLR MLR
comp=Z,11µm,22.0s,MS6.3
KIEV Kiev 91.68 321 *e*P **P 10 01 48.2 -1.6**
comp=Z,75nm,1.0s,mb6.0
KIEV LR LR
comp=Z,11µm,22.0s,MS6.3
HENT Hendek 91.75 311 *i*P **P 10 01 49.0 -1.3**
VSU Vasula 91.87 329 *i*P **P 10 01 49.2 -1.3**
ESKT Eskisehir 91.94 310 *i*P **P 10 01 50.0 -1.2**
MNK Minsk 91.94 325 *e*P **P 10 01 47.0 -3.9**
MNK *e* 10 05 26.0
MNK *e* 10 12 18.0
MNK *e*S S 10 12 44.0 -7.0
MNK pmax pmax
comp=E,460nm,1.0s
MNK pmax pmax
comp=Z,610nm,1.0s,mb6.9
MNK MLR MLR
comp=E,29µm,18.0s
MNK MLR MLR
comp=Z,38µm,20.0s,MS6.8
SHUT Suhut-Afyon 92.28 309 *e*P **P 10 01 51.8 -1.0**
SYO Syowa Base 92.39 201⇓ *e*P **P 10 01 51.2 -1.4**
ISP Isparta 92.39 308 PFAKE 10 02 00.0 +6.6
ISP LR LR
comp=Z,10µm,22.0s,MS6.2
KIS Kishinev 92.46 317 *e*P **P 10 01 51.0 -2.5**
KIS *e* 10 02 06.0
KIS *e* 10 12 19.0
KIS *e*S S 10 12 51.0 -5.0
KIS *e*PS PS 10 14 00.0 -10
KIS *e*PPS 10 14 34.0
KIS *e*SS SS 10 19 00.0 -7.2
KIS pmax pmax
comp=Z,2µm,10.0s
KIS pmax pmax
comp=Z,2µm,10.0s
KIS Kishinev 92.46 317 *e*P **P 10 01 51.0 -2.5**
comp=Z,2µm,10.0s
KIS Kishinev 92.46 317 *e*PP PP 10 05 44.0 +9.5
KIS Kishinev 92.46 317 *e*PPP 10 07 54.0
KIS *e*SKS 10 12 19.0
KIS *e*SKKS SKKSac 10 12 32.0 -11
KIS *e*S S 10 12 51.0 -5.0
comp=Z,2µm,16.0s
KIS Kishinev 92.46 317 *e*PS PS 10 14 00.0 -10
TRO Tromso 92.50 340 *e*P **P 10 01 51.8 -1.4**
TRO *e*SKS 10 12 22.0
TRO AMS AMS 10 50 28.0
comp=Z,9µm,21.3s,MS6.2
TKTP Tekketepe 92.52 308 *i*P **P 10 01 52.3 -1.6**
ALT Altintas 92.56 309 *e*P **P 10 01 51.5 -2.6**
ADVT Abdulvahap 92.67 311 *e*P **P 10 01 51.0 -3.6**
TLCR 92.72 315 P **P 10 01 54.7 0.0**
CRAG Craig 92.79 34 *e*P **P 10 01 57.4 +2.6**
comp=Z,141nm,1.5s,mb6.2
WRAK Wrangell Islan 93.04 33 *e*P **P 10 01 56.3 +0.4**
comp=Z,183nm,0.9s,mb6.5
WRAK LR LR
comp=Z,4µm,20.0s,MS5.9
GDZ Gediz 93.04 309 *e*P **P 10 01 51.5 -4.8**
TIRR Tirgusor 93.10 315 P **P 10 01 56.0 -0.5**
TIRR pmax pmax
comp=Z,140nm,1.4s,mb6.2
TIRR Tirgusor 93.10 315⇑ *i*P **P 10 01 55.7 -0.8**
TIRR Tirgusor 93.10 315 ⇑P **P 10 01 55.7 -0.8**
ISK Istanbul-Kandi 93.10 311 *e*P **P 10 01 51.5 -5.1**
KHAL Karahalli 93.12 309 *i*P **P 10 01 54.0 -2.7**
ULDT Uludag 93.17 310 *i*P **P 10 01 51.6 -5.3**
GOLH Golhisar 93.21 307 *i*P **P 10 01 54.1 -3.1**
VIB Van Inlet 93.55 36 T 11 45 50.3
SNR=27
DNZL Cakiroluk 93.56 308 *i*P **P 10 01 58.0 -0.8**
DIB Dawson Inlet, 93.59 36 T 11 45 52.6
SNR=300
DEMI Demirci 93.64 309 *i*P **P 10 01 57.5 -1.5**
DURS Dursunbey 93.75 310 *i*P **P 10 01 55.5 -4.1**
KULA Kula-Manisa 93.75 309 *e*P **P 10 01 57.0 -2.7**
DLBC Dease Lake 93.83 31 *e*P **P 10 02 00.3 +0.8**
TURN Turunc 94.02 307 *i*P **P 10 01 53.2 -7.7**
VRI Vrincioaia 94.06 316⇓ *i*P **P 10 02 01.0 +0.1**
VRI Vrincioaia 94.06 316 ⇓P **P 10 02 01.0 +0.1**
PLOR Plostina 94.12 316⇓ *i*P **P 10 02 01.5 +0.4**
BALY Balya 94.38 310 *i*P **P 10 02 05.7 +3.2**
AYDN Tasoluk 94.48 308 *i*P **P 10 02 02.3 -0.7**
SART Tekirdag 94.57 311 *i*P **P 10 02 00.9 -2.4**
MLR Muntele Rosu 94.67 316 S SKSac 10 12 37.2 -0.5
comp=Z,8.2nm,0.9s,baz=165,slow=20,SNR=5.8
MLR Muntele Rosu 94.67 316 P **P 10 02 03.7 0.0**
MLR Muntele Rosu 94.67 316⇓ *i*P **P 10 02 03.0 -0.7**
SUW Suwalki 94.72 325 *e*P **P 10 02 02.5 -1.1**
SUW LMZ 10 47 37.6
SUW Suwalki 94.72 325 *e*P **P 10 02 02.5 -1.2**
BURAR Bucovina Array 94.77 318⇓ *i*P **P 10 02 03.8 -0.3**
BURAR Bucovina Array 94.77 318 ⇓P **P 10 02 03.8 -0.3**
BUR08 Bucovina Ar. S 94.78 318 *e*P **P 10 02 03.9 -0.3**
KDAG Bornova 94.85 309 *i*P **P 10 02 03.2 -1.5**
LOF Lofoten 94.86 340 *e*P **P 10 02 05.8 +1.8**
LOF AMb AMB 10 02 09.5
comp=Z,164nm,2.1s,mb6.1
LOF Lofoten 94.86 340 *e*P **P 10 02 05.8 +1.8**
comp=Z,164nm,2.1s,mb6.1
GCAM G?zelcaml? 94.98 308 *i*P **P 10 02 12.5 +7.2**
LVV L'vov 95.11 321 *e*P **P 10 02 04.8 -0.8**
LVV *i* 10 12 37.2
LVV *e*S S 10 13 15.0 -4.1
AYVA Ayvalik 95.16 310 *i*P **P 10 02 06.7 +0.7**
MOR8 Moi Rana 95.27 338 *e*P **P 10 02 04.4 -1.6**
MOR8 AMb AMB 10 02 14.1
comp=Z,87nm,1.3s,mb6.0
MOR8 Moi Rana 95.27 338 *e*P **P 10 02 04.4 -1.6**
comp=Z,87nm,1.3s,mb6.0
VOIR 95.30 316⇓ *i*P **P 10 02 06.0 -0.5**
FLOS Flostrand 95.61 338 *e*P **P 10 02 07.4 -0.1**
FLOS AMb AMB 10 02 16.1
comp=Z,223nm,1.5s,mb6.4
KONS Konsvik 95.64 338 *e*P **P 10 02 08.5 +0.9**
KONS AMb AMB 10 02 21.4
comp=Z,244nm,1.6s,mb6.4
KDZ Kurdzhali 95.72 312 *e*P **P 10 02 05.4 -3.2**
KWP Kalwaria 95.99 321 *e*P **P 10 02 09.3 -0.3**
KWP LMZ 10 49 16.4
KWP Kalwaria 95.99 321⇓ *i*P **P 10 02 09.2 -0.4**
KWP Kalwaria 95.99 321 *e*P **P 10 02 09.3 -0.3**
KWP LR LR
comp=Z,12µm,21.0s,MS6.3
CRAR CRAIOVA 96.38 315 P **P 10 02 15.7 +4.2**
KOLS Kolonicke sedl 96.42 320 *e*P **P 10 02 11.5 -0.1**
KOLS *e*S SKSac 10 12 44.6 -2.3
UZH Uzhgorod 96.48 320⇓ *i*P **P 10 02 11.4 -0.4**
UZH *e* 10 02 26.6
UZH *e* 10 06 11.0
UZH *e*PPP 10 08 12.0
UZH *e* 10 12 46.0
UZH *e*S S 10 13 30.6 -0.5
UZH *e*PS PS 10 14 52.0 -2.0
UZH *e*SS SS 10 20 07.0 +2.7
SANT Santorini 96.59 307 PFAKE 10 02 20.0 +7.3
SANT LR LR
comp=Z,5µm,20.0s,MS6.0
DRGR 96.61 318 P **P 10 02 12.2 -0.3**
DRGR 96.61 318⇑ *i*P **P 10 02 11.8 -0.7**
DRGR 96.61 318 ⇑P **P 10 02 11.8 -0.7**
NSS Namsos 96.87 337 *e*P **P 10 02 12.0 -1.2**
NSS *e*SKS 10 12 45.1
NSS AMS AMS 10 51 52.5
comp=Z,17µm,18.7s,MS6.5
GZR Gura Zlata 96.87 316⇓ *i*P **P 10 02 13.8 +0.1**
GZR Gura Zlata 96.87 316 ⇓P **P 10 02 13.8 +0.1**
CRVS Cervenica-Dubn 96.95 320 *e*P **P 10 02 13.8 -0.2**
CRVS *e*S SKSac 10 12 46.4 -3.2
STHS Stebnicka Huta 96.96 321 *e*P **P 10 02 14.5 +0.5**
STHS pmax pmax
comp=Z,36nm,0.8s,mb5.8
STHS Stebnicka Huta 96.96 321 *e*P **P 10 02 14.5 +0.5**
comp=Z,36nm,0.8s,mb5.8
MMB Musomiste 96.98 313 P **P 10 02 13.0 -1.3**
DAG Danmarks Havn 97.15 352*j e*P **P 10 02 13.2 -1.2**
DAG pmax pmax
comp=Z,130nm,1.2s,mb6.2
DAG MLR MLR
comp=Z,10µm,23.0s,MS6.2
DAG MLR MLR
comp=E,7µm,22.0s
DAG Danmarks Havn 97.15 352*j i*P **P 10 02 13.2 -1.2**
comp=E,131nm,1.2s,mb6.2
DAG
comp=Z,10µm,23.0s
VTS Vitosha 97.16 314 P **P 10 02 14.3 -0.8**
KKB Krupnik 97.39 313 P **P 10 02 14.8 -1.4**
NIE Niedzica 97.55 321 *e*P **P 10 02 17.9 +1.2**
BZS Buzias 97.62 317 P **P 10 02 16.4 -0.7**
BZS Buzias 97.62 317⇑ *i*P **P 10 02 16.3 -0.8**
BZS Buzias 97.62 317 ⇑P **P 10 02 16.3 -0.8**
OJC Ojcow 97.67 322 *e*P **P 10 02 20.6 +3.4**
OJC *e* 10 12 51.5
OJC MLR MLR
comp=Z,12µm,19.4s,MS6.4
KECS Kecovo 97.68 320 *e*P **P 10 02 16.4 -0.9**
KECS pmax pmax
comp=Z,31nm,0.9s,mb5.8
KECS Kecovo 97.68 320 *e*P **P 10 02 16.4 -0.9**
comp=Z,30nm,0.9s,mb5.8
VAY Valandovo 97.88 312 *e*P **P 10 02 15.8 -2.5**
STIP Stip 98.09 313 *e*P **P 10 02 17.3 -1.9**
PSZ Piszkesteto 98.20 319⇑ *e*P **P 10 02 19.5 -0.2**
PSZ Piszkesteto 98.20 319⇑ *i*P **P 10 02 19.4 -0.3**
PSZ Piszkesteto 98.20 319 ⇑P **P 10 02 19.4 -0.3**
PSZ LR LR
comp=Z,11µm,19.0s,MS6.4
GKP Gorka Klasztor 98.32 325 *e*P **P 10 02 20.0 0.0**
GKP LMZ 10 49 44.6
GKP Gorka Klasztor 98.32 325 *e*P **P 10 02 20.0 -0.1**
SKO Skopje 98.57 313 *e*P **P 10 02 19.6 -1.9**
NB2 NORSAR Subarra 98.61 334 P **P 10 02 19.3 -1.9**
comp=Z,57nm,1.0s,mb6.1,baz=68,slow=4.6
NOA NORSAR Array B 98.61 334 P **P 10 02 19.4 -1.8**
comp=Z,24nm,0.7s,mb5.9,baz=68,slow=4.5,SNR=80
NOA S SKSac 10 12 58.2 +0.6
comp=Z,8.3nm,1.3s,baz=61,slow=7.6,SNR=2.7
NOA LR LR 10 51 55.7
comp=Z,19µm,21.2s,MS6.6,baz=55,slow=38
NOA NORSAR Array B 98.61 334 P **P 10 02 19.4 -1.8**
NOA S SKSac 10 12 58.2 +0.6
NOA pmax pmax
comp=Z,24nm,0.7s
NOA smax
comp=N,8.0nm,1.3s
RAC Raciborz 98.70 322 *e*P **P 10 02 22.1 +0.3**
RAC *e* 10 12 54.6
RAC MLR MLR
comp=Z,11µm,19.0s,MS6.4
VYHS Vyhne 98.73 320 PDIF **P 10 02 21.7 -0.3**
VYHS *e*PP PP 10 06 30.7 +7.6
VYHS Vyhne 98.73 320 *e*P **P 10 02 21.7 -0.3**
comp=Z,5.9nm,0.8s,mb5.2
VYHS *e*PP PP 10 06 30.7 +7.6
VYHS *e*S SKSac 10 12 56.3 -2.4
VYHS LR LR
comp=Z,5µm,20.9s,MS6.0
OKC Ostrava-Krasne 98.80 322 *e*PDIF **P 10 02 21.7 -0.5**
OKC *ex* x 10 02 36.1
OKC *e*SKS 10 13 00.1
OKC *e*S S 10 13 51.5 +0.7
OKC AMS AMS 10 50 10.0
comp=Z,8µm,18.5s
OKC Ostrava-Krasne 98.80 322 *e*Pdif **P 10 02 21.7 -0.5**
OKC *e* 10 02 36.1
OKC *e*SKS 10 13 00.1
OKC *e* 10 13 51.5
KRUS Krusevo 98.84 313 *e*P **P 10 02 21.0 -1.7**
BUD Budapest 98.89 319⇑ *e*P **P 10 02 22.7 0.0**
LSZ Lusaka 98.96 255 LR LR 10 43 14.7
comp=Z,11µm,21.2s,MS6.3,baz=91,slow=33
LSZ Lusaka 98.96 255 *e*P **P 10 02 23.3 -0.4**
LSZ *e**PP pP 10 02 35.1 +3.4
LSZ pmax pmax
comp=Z,38nm,0.8s,mb6.0
LSZ MLR MLR
comp=Z,10µm,21.0s,MS6.3
LSZ Lusaka 98.96 255 *e*P **P 10 02 23.3 -0.4**
comp=Z,38nm,0.8s,mb6.0
LSZ *e*pP pP 10 02 35.1 +3.4
LSZ LR LR
comp=Z,10µm,21.0s,MS6.3
KOLL Kolacno 98.99 320 PDIF **P 10 02 22.8 -0.3**
KOLL Kolacno 98.99 320 *e*P **P 10 02 22.8 -0.3**
DOMB Dombas 99.11 335 *e*P **P 10 02 24.8 +1.4**
DOMB AMb AMB 10 02 27.6
comp=Z,16nm,0.8s,mb5.6
DOMB Dombas 99.11 335 *e*P **P 10 02 24.8 +1.4**
comp=Z,16nm,0.8s,mb5.6
MORC Moravsky Berou 99.19 322 P **P 10 02 24.5 +0.5**
MORC Moravsky Berou 99.19 322⇓ *i*P **P 10 02 23.5 -0.5**
MORC Moravsky Berou 99.19 322 ⇓P **P 10 02 23.5 -0.5**
OHR Ohrid 99.23 313 *e*P **P 10 02 22.5 -1.9**
RKT Rikitea 99.35 113 *e*SKSac SKSac 10 13 03.7 +0.9

comp=Z,3µm,27.8s
RKT Rikitea 99.35 113 *e*PS PS 10 15 30.7 +4.4
comp=Z,2µm,35.5s
RKT *e*SS SS 10 20 51.0 +4.5
comp=Z,3µm,27.2s
RKT *e*LQ 10 30 47.0
comp=Z,7µm,35.5s
RKT *e*LR LR 10 35 11.0
comp=Z,7µm,29.8s,baz=278
PKSM Moragy 99.48 318 P **P 10 02 24.9 -0.5**
PKSM Moragy 99.48 318 ⇓*i*P **P 10 02 24.4 -1.0**
PKSM Moragy 99.48 318 ⇓P **P 10 02 24.4 -1.0**
MOL Molde 99.51 336 *e*SKS 10 13 04.9
MOL AMS AMS 10 53 38.9
comp=Z,18µm,21.8s,MS6.5
YKA Yellowknife Ar 99.55 24 P **P 10 02 25.0 -0.3**
comp=Z,24nm,0.9s,mb5.6,baz=300,slow=4.7,SNR=58
YKA PKIKP PKiKP 10 06 55.0 +0.7
comp=Z,3.1nm,0.8s,baz=292,slow=1.7,SNR=6.5
YKA PKKPbc PKKPbc 10 18 46.9 -3.1
comp=Z,1.3nm,0.6s,baz=122,slow=3.3,SNR=9.3
YKA LR LR 10 47 49.7
comp=Z,1µm,21.6s,MS5.4,baz=145,slow=36
YKA Yellowknife Ar 99.55 24 P **P 10 02 25.0 -0.3**
YKA pmax pmax
comp=Z,24nm,0.9s
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA MLR MLR
comp=Z,1µm,21.6s
KSP Ksiaz 99.63 323 *e*P Pdif 10 02 26.0 +0.1
KSP LMZ 10 50 38.4
KSP Ksiaz 99.63 323 ⇓*e*P Pdif 10 02 25.7 -0.1
KSP *e*PP PP 10 06 15.0 -15
KSP *e*SKS 10 13 01.5
KSP *e*S S 10 13 54.0 -3.7
KSP *e*SP SP 10 15 20.0 -4.4
KSP LR LR
comp=Z,30µm,20.4s,MS6.8
JMIC Jan Mayen 99.73 346 AMS AMS 10 52 09.7
comp=Z,7µm,22.4s,MS6.1
C03A Quillayute Air 99.76 40 ⇓P Pdif 10 02 28.8 +2.4
baz=100
DPC Dobruska-Polom 99.76 322 *e*PDIF Pdif 10 02 26.4 0.0
DPC *e*SKS 10 13 00.7
DPC *ex* x 10 14 03.5
DPC AMS AMS 10 52 00.0
comp=Z,11µm,18.7s
MODS Modra-Piesok 99.77 320 PDIF Pdif 10 02 26.6 +0.2
MODS pPDIF 10 02 39.3
MODS *e*PP PP 10 06 31.7 +0.8
MODS Modra-Piesok 99.77 320 *e*P Pdif 10 02 26.6 +0.2
MODS *e* 10 02 39.3
MODS *e*PP PP 10 06 31.7 +0.8
MODS *e*S SKSac 10 13 01.4 -2.5
TIR Tirane 99.86 313 PFAKE 10 02 40.0 +13
TIR LR LR
comp=Z,7µm,20.0s,MS6.2
UPC Upice 99.90 323 *e*PDIF Pdif 10 02 26.5 -0.5
UPC *e*pP 10 02 37.5
VRAC Vranov 99.92 321 ⇓*i*P Pdif 10 02 27.5 +0.4
VRAC Vranov 99.92 321 ⇓P Pdif 10 02 27.5 +0.4
KONO Kongsberg 99.92 333 *e*P Pdif 10 02 26.1 -1.1
KONO *e*SKS 10 13 02.5
KONO Kongsberg 99.92 333 ⇑*e*P Pdif 10 02 26.8 -0.3
KONO Kongsberg 99.92 333 ⇑P Pdif 10 02 26.9 -0.2
ZST Bratislava 99.93 320 PDIF Pdif 10 02 27.8 +0.6
ZST *e*PP PP 10 06 35.7 +3.5
ZST Bratislava 99.93 320 *e*P Pdif 10 02 27.8 +0.6
comp=Z,16nm,0.8s
ZST *e*PP PP 10 06 35.7 +3.5
ZST *e*S SKSac 10 13 01.4 -3.3
ZST LR LR
comp=Z,8µm,19.5s,MS6.3
OBC Olympics--Boni 100.05 40 P Pdif 10 02 30.8 +3.2
NLWA Neilton Lookou 100.37 41 ⇓P Pdif 10 02 31.2 +2.1
baz=100
NLWA Neilton Lookou 100.37 41 PFAKE 10 02 40.0 +11
NLWA LR LR
comp=Z,7µm,22.0s,MS6.1
B04A Port Angeles 100.41 40 ⇑P Pdif 10 02 31.3 +2.0
baz=100
D03A Wishkah Elem. 100.52 41 ⇑P Pdif 10 02 31.0 +1.2
baz=100
TREC Trest 100.61 322 *e*PDIF Pdif 10 02 30.2 0.0
TREC *e*pP 10 02 40.8
TREC *e*SKS 10 13 04.7
TREC AMS AMS 10 53 50.0
comp=Z,17µm,19.7s
MCW Mount Constitu 100.64 39 P Pdif 10 02 32.8 +2.5
A04A Legoe Bay, Lum 100.71 39 ⇓P Pdif 10 02 32.3 +1.7
baz=101
HYA Hoyanger 100.74 335 *e*P Pdif 10 02 32.7 +2.0
PVCC Panska Ves 100.77 323 *e*PDIF Pdif 10 02 30.9 0.0
PVCC *e*PP PP 10 06 28.9 -10
PVCC *ex* x 10 14 19.4
PVCC AMS AMS 10 50 50.0
comp=Z,16µm,20.2s
CONA Conrad Observa 100.80 320 ⇑*i*P Pdif 10 02 31.2 +0.2
comp=Z,18nm,1.4s,SNR=6.9
E03A Lebam 100.82 41 ⇑P Pdif 10 02 32.6 +1.4
baz=101
C04A Brinnon 100.85 40 ⇓P Pdif 10 02 33.3 +2.0
baz=101
PRU Pruhonice 100.97 322 *e*PDIF Pdif 10 02 31.3 -0.5
PRU *e*PP PP 10 06 38.8 -1.1
PRU *e*SKS 10 13 07.5
PRU *e*S Sdif 10 14 11.6 +2.9
PRU AMS AMS 10 51 00.0
comp=Z,13µm,19.1s
A05A Maple Falls 101.01 39 ⇓P Pdif 10 02 33.4 +1.4
baz=101
F03A Seaside 101.01 42 ⇑P Pdif 10 02 34.0 +2.1
baz=101
BRG Berggiesshubel 101.03 323 *i* P Pdif 10 02 32.0 0.0
BRG *i* 10 15 33.0
BRG pmax pmax
comp=Z,45nm,0.9s
BRG pmax pmax
comp=Z,13nm,1.7s
BRG MLR MLR
comp=N,3µm,20.0s,MS6.2
BRG MLR MLR
comp=E,8µm,20.9s,MS6.2
BRG MLR MLR
comp=Z,8µm,19.3s,MS6.2
BRG Berggiesshubel 101.03 323 *e*Pdiff Pdif 10 02 32.2 +0.2
comp=Z,75nm,0.9s
BRG Berggiesshubel 101.03 323 *i* P Pdif 10 02 32.0 0.0
comp=Z,75nm,0.9s
BRG PP PP 10 06 33.0 -7.3
BRG S Sdif 10 14 17.0 +7.8
BRG *i* 10 15 33.0
BRG *e*PKKP PKKPbc 10 18 55.6 +10
BRG LR LR
comp=Z,21nm,1.7s
BRG
comp=N,6µm,20.0s
BRG
comp=E,13µm,20.9s
BRG
comp=Z,13µm,19.3s
BRG Berggiesshubel 101.03 323 *i* P Pdif 10 02 32.0 0.0
comp=Z,45nm,0.9s
BRG PP PP 10 06 33.0 -7.3
BRG S Sdif 10 14 17.0 +7.8
BRG *i* 10 15 33.0
BRG *e*PKKP PKKPbc 10 18 55.6 +10
BRG LR LR
comp=Z,8µm,19.3s,MS6.2
BMW Boistfort Moun 101.06 41 P Pdif 10 02 35.0 +2.8
H02A Toledo 101.07 43 ⇓P Pdif 10 02 34.3 +2.1
baz=101
ODD1 Odda 101.15 334 *e*P Pdif 10 02 33.0 +0.4
ODD1 AMb AMB 10 02 37.7
comp=Z,60nm,1.8s
ODD1 Odda 101.15 334 *e*P Pdif 10 02 33.0 +0.4
comp=Z,60nm,1.8s
D04A Dobbs Creek Ra 101.15 41 ⇑P Pdif 10 02 34.6 +2.0
baz=101
ARSA Arzberg 101.23 320 ⇑*i*P Pdif 10 02 33.2 +0.2
comp=Z,12nm,1.0s
B05A Bryant 101.24 39 ⇓P Pdif 10 02 34.6 +1.7
baz=101

A06A Chilliwack 101.35 38 ⇑P Pdif 10 02 34.9 +1.4
baz=101
E04A Onalaska 101.36 41 ⇓P Pdif 10 02 35.6 +2.0
baz=101
G03A Yamhill 101.38 42 ⇓P Pdif 10 02 35.9 +2.3
baz=101
I02A Mapleton 101.38 44 ⇑P Pdif 10 02 35.3 +1.7
baz=101
CLL Collm 101.43 324 *i* P Pdif 10 02 33.7 -0.1
CLL *e* 10 13 11.0
CLL pmax pmax
comp=Z,40nm,1.1s
CLL MLR MLR
comp=Z,18µm,22.3s,MS6.5
CLL Collm 101.43 324 *e*Pdiff Pdif 10 02 33.7 -0.1
comp=Z,40nm,1.1s
CLL Collm 101.43 324 *i* Pdif Pdif 10 02 33.7 -0.1
comp=Z,40nm,1.1s
CLL comp=Z,66nm,1.3s *i* x x 10 02 37.4
CLL *ex* x 10 04 06.0
CLL *e*PP PP 10 06 42.0 -1.4
CLL *e*PPmax 10 07 05.0
CLL *e*SKSac SKSac 10 13 11.0 -0.8
CLL *e*SKKSac SKKSac 10 13 37.0 -11
CLL *e*Sdif Sdif 10 14 18.0 +5.5
CLL *e*PS PS 10 15 38.0 -9.2
CLL *es*PS 10 16 10.0
CLL *e*PPS 10 16 37.0
CLL *ex* x 10 17 15.0
CLL *ex* x 10 19 52.0
CLL *e*SS SS 10 21 12.0 -1.4
CLL *e*SSS 10 25 18.0
CLL *ex* x 10 26 12.0
CLL Collm 101.43 324 *i* Pdif Pdif 10 02 33.7 -0.1
comp=Z,40nm,1.1s
CLL *i* 10 02 37.4
CLL *e*SKS 10 13 11.0
CLL *e*Sdif Sdif 10 14 18.0 +5.5
CLL LR LR
comp=Z,18µm,22.3s,MS6.5
MPOR Mary's Peak 101.43 43 P Pdif 10 02 36.9 +3.1
BLS5 Blasjo 101.45 333 *e*P Pdif 10 02 35.1 +1.2
BLS5 AMb AMB 10 02 44.5
comp=Z,63nm,1.0s
BLS5 Blasjo 101.45 333 *e*P Pdif 10 02 35.1 +1.2
comp=Z,63nm,1.0s
RNO Roman Nose 101.47 44 P Pdif 10 02 37.2 +3.2
BER Bergen 101.49 334 *e*SKS SKSac 10 13 12.4 +0.6
BER AMS AMS 10 53 37.7
comp=Z,29µm,20.8s,MS6.8
NVL N'lazarevskaya 101.53 198 *e*P Pdif 10 02 36.4 +2.1
NVL *i* 10 06 44.8
NVL *i* S SKSac 10 13 10.1 -1.4
NVL *e* 10 21 19.9
NVL pmax pmax
comp=Z,41nm,2.2s
NVL MLR MLR
comp=N,2µm,26.0s,MS5.8
NVL MLR MLR
comp=E,4µm,26.0s,MS5.8
NVL MLR MLR
comp=Z,6µm,26.0s,MS6.0
B06A Marblemount 101.54 39 ⇑P Pdif 10 02 35.7 +1.4
baz=102
H03A Soap Creek Ran 101.56 43 ⇑P Pdif 10 02 36.3 +1.9
baz=102
BOSA Boshof 101.64 242 P Pdif 10 02 36.1 +1.3
comp=Z,8.5nm,1.1s,baz=85,slow=7.6,SNR=4.2
BOSA Boshof 101.64 242 P Pdif 10 02 36.1 +1.3
BOSA pmax pmax
comp=Z,9.0nm,1.1s
D05A Enumclaw 101.65 40 ⇑P Pdif 10 02 36.6 +1.8
baz=102
C05A Tolt Reservoir 101.68 40 ⇑P Pdif 10 02 36.8 +1.9
baz=102
PERS Pernia 101.69 319 *i* P Pdif 10 02 35.1 +0.1
SOKA Soboth 101.73 319 ⇓*i*P Pdif 10 02 34.3 -0.9
F04A Amboy 101.77 42 ⇑P Pdif 10 02 36.9 +1.5
baz=102
I03A Eugene 101.77 44 ⇓P Pdif 10 02 36.6 +1.2
baz=102
M01C Crescent City 101.78 46 ⇓P Pdif 10 02 37.1 +1.7
baz=102
KHC Kasperske Hory 101.85 322 *e*P Pdif 10 02 35.4 -0.3
KHC *e* 10 06 50.2
KHC *e* 10 13 04.1
KHC MLR MLR
comp=Z,10µm,19.1s,MS6.4
KHC Kasperske Hory 101.85 322 *e*PDIF Pdif 10 02 35.4 -0.3
KHC *e*PP PP 10 06 50.2 +3.6
KHC *e*SKS 10 13 04.1
KHC *ex* x 10 14 22.9
KHC AMS AMS 10 51 40.0
comp=Z,10µm,19.1s
MOA Molln 101.85 320 ⇓*i*P Pdif 10 02 35.4 -0.2
comp=Z,98nm,1.7s,SNR=12
GEC2 GERESS Array S 101.87 322 *e*P Pdif 10 02 35.9 +0.1
GEC2 pmax pmax
comp=Z,36nm,1.2s
GEC2 GERESS Array S 101.87 322 *e*Pdiff Pdif 10 02 35.9 +0.1
comp=Z,36nm,1.2s
GERES GERESS Array B 101.87 322 P Pdif 10 02 35.5 -0.3
comp=Z,6.6nm,0.6s,baz=66,slow=4.5,SNR=52
GERES PKKPbc PKKPbc 10 18 39.1 -3.7
comp=Z,0.5nm,0.5s,baz=267,slow=3.9,SNR=2.7
GERES GERESS Array B 101.87 322 P Pdif 10 02 35.5 -0.3
GERES pmax pmax
comp=Z,7.0nm,0.6s
GERES pmax pmax
comp=Z,1.0nm,0.5s
BSEG Bad Segeberg 101.94 327 *e*P Pdif 10 02 36.3 +0.2
BSEG pmax pmax
comp=Z,53nm,1.0s
BSEG Bad Segeberg 101.94 327 *e*Pdiff Pdif 10 02 36.3 +0.2
comp=Z,53nm,1.0s
G04A Mulino 101.95 42 ⇓P Pdif 10 02 37.6 +1.4
baz=102
BOJS Bojanci 101.95 318 *i* P Pdif 10 02 36.7 +0.6
K02A Glendale 101.97 45 ⇓P Pdif 10 02 38.1 +1.8
baz=102
E05A Randle 102.00 41 ⇓P Pdif 10 02 37.6 +1.3
baz=102
A07A Ashnola River, 102.05 38 ⇑P Pdif 10 02 38.2 +1.6
baz=102,SNR=15
L02A Cave Junction 102.07 46 ⇑P Pdif 10 02 38.9 +2.2
baz=102
TANN Tannenbergstha 102.07 323 *e*Pdiff Pdif 10 02 36.8 +0.1
comp=Z,35nm,1.0s
C06A Tall Timber Ra 102.11 39 ⇑P Pdif 10 02 38.5 +1.6
baz=102
JCC Jacoby Creek 102.13 47 ⇑P Pdif 10 02 38.8 +1.8
baz=102
NKC Novy Kostel 102.14 323 *e*P Pdif 10 02 36.8 -0.2
NKC *e* 10 06 50.5
NKC *e* 10 13 13.6
NKC MLR MLR
comp=Z,15µm,19.5s,MS6.5
NKC Novy Kostel 102.14 323 *e*PDIF Pdif 10 02 36.8 -0.2
NKC *e*PP PP 10 06 50.5 +1.7
NKC *e*SKS 10 13 13.6
NKC *ex* x 10 14 23.6
NKC AMS AMS 10 51 50.0
comp=Z,15µm,19.5s
NKC Novy Kostel 102.14 323 *e*Pdif Pdif 10 02 36.8 -0.2
NKC *e*PP PP 10 06 50.5 +1.7
NKC *e*SKS 10 13 13.6
NKC *e* 10 14 23.6
LJU Ljubljana 102.26 319 *i* P Pdif 10 02 37.7 +0.1
WET Wettzell 102.27 322 *e*P Pdif 10 02 38.0 +0.4
WET pmax pmax
comp=Z,35nm,1.4s
WET Wettzell 102.27 322 *e*Pdiff Pdif 10 02 38.0 +0.4
comp=Z,35nm,1.4s
H04A Detroit Lake 102.31 43 ⇓P Pdif 10 02 39.3 +1.5
baz=102,SNR=12
D06A Cle Elum 102.39 40 ⇑P Pdif 10 02 40.0 +1.9
baz=102,SNR=6.7
HUMO Hull Mountain 102.40 45 ⇓P Pdif 10 02 39.6 +1.4
baz=102
HUMO Hull Mountain 102.40 45 PFAKE 10 02 50.0 +12
HUMO LR LR
comp=Z,7µm,21.0s,MS6.2
B07A Winthrop 102.41 39 ⇑P Pdif 10 02 39.9 +1.7
baz=102,SNR=8.3

F05A White Salmon 102.42 42 ⇑P Pdif 10 02 40.4 +2.1
baz=102
I04A Tendick Farm, 102.42 44 ⇓P Pdif 10 02 39.9 +1.7
baz=102,SNR=8.8
MANZ Manzenberg 102.44 323 *e*Pdiff Pdif 10 02 38.9 +0.6
comp=Z,30nm,1.3s
ROTZ Rotzenmuhle 102.46 323 *e*Pdiff Pdif 10 02 39.1 +0.7
comp=Z,46nm,1.1s
O01C Eel River Cons 102.47 48 ⇓P Pdif 10 02 41.0 +2.6
baz=102
MOX Moxa 102.49 324 *e*P Pdif 10 02 38.6 +0.1
comp=Z,63nm,1.5s
MOX *e* 10 07 13.0
MOX
comp=Z,11µm,22.0s
MOX Moxa 102.49 324 *e*P Pdif 10 02 38.6 +0.1
MOX pmax pmax
comp=Z,63nm,1.5s
MOX MLR MLR
comp=Z,11µm,22.0s,MS6.3
MOX Moxa 102.49 324 *e*Pdiff Pdif 10 02 38.8 +0.3
comp=Z,33nm,1.0s
BBOR Butler Butte 102.51 45 P Pdif 10 02 41.4 +2.7
E06A Yakima 102.52 41 ⇓P Pdif 10 02 40.7 +2.0
baz=102,SNR=13
JAVS Javornik 102.62 319 *i* P Pdif 10 02 37.4 -1.7
NRDL Niedersach Rie 102.64 326 *e*Pdiff Pdif 10 02 39.9 +0.7
comp=Z,70nm,1.1s
N02C Big Bar 102.66 47 ⇓P Pdif 10 02 41.0 +1.7
baz=103,SNR=9.9
EBG Ellensburg 102.66 40 P Pdif 10 02 41.1 +1.8
VOY Vojsko 102.69 319 *e*P Pdif 10 02 38.3 -1.1
VOY *e* 10 02 53.3
TIP Timpagrande 102.71 311 PFAKE 10 02 50.0 +10
TIP LR LR
comp=Z,8µm,21.0s,MS6.2
G05A Wamic 102.72 42 ⇑P Pdif 10 02 41.8 +2.3
baz=103
C07A Waterville 102.72 39 ⇓P Pdif 10 02 41.1 +1.5
baz=103,SNR=9.8
CLZ Clausthal 102.75 325 *e*P Pdif 10 02 40.4 +0.7
CLZ pmax pmax
comp=Z,80nm,1.1s
CLZ Clausthal 102.75 325 *e*Pdiff Pdif 10 02 40.4 +0.7
comp=Z,80nm,1.1s
A08A Turner Farm, O 102.76 38 ⇑P Pdif 10 02 41.2 +1.5
baz=103,SNR=24
WTV Waterville 102.78 39 P Pdif 10 02 39.8 -0.1
J04A Umpqua Nationa 102.80 44 ⇑P Pdif 10 02 42.0 +2.0
baz=103,SNR=6.9
M02C Callahan 102.82 46 ⇑P Pdif 10 02 42.5 +2.4
baz=103,SNR=9.5
YBH Yreka Blue Hor 102.83 46 P Pdif 10 02 40.9 +0.8
comp=Z,10nm,1.1s,baz=205,slow=2.7,SNR=17
YBH Yreka Blue Hor 102.83 46 ⇓P Pdif 10 02 42.4 +2.3
baz=103,SNR=14
YBH Yreka Blue Hor 102.83 46 P Pdif 10 02 40.9 +0.8
YBH LR LR
comp=Z,6µm,22.0s,MS6.1
F06A Goldendale 102.90 41 ⇓P Pdif 10 02 42.6 +2.3
baz=103
PTCC Patocco-Chiusa 102.92 319 P Pdif 10 02 40.1 -0.3
comp=Z,19nm,1.2s
B08A Colville Reser 102.94 39 ⇑P Pdif 10 02 42.3 +1.7
baz=103,SNR=19
D07A Quincy 102.95 40 ⇑P Pdif 10 02 42.2 +1.6
baz=103,SNR=6.5
H05A Madras 102.97 43 ⇓P Pdif 10 02 42.4 +1.8
baz=103,SNR=8.1
GRA1 Grafenberg Arr 103.08 323 *e*Pdif Pdif 10 02 41.7 +0.5
comp=Z,62nm,1.7s
GRA1 *e*PP PP 10 07 02.0 +6.2
GRA1 *e*SKSac SKSac 10 13 19.6 -0.1
GRA1 *e*Sdif Sdif 10 14 29.4 +3.1
GRA1 LR LR
comp=Z,16µm,20.4s,MS6.5
GRF Grafenberg Arr 103.08 323 *e*P Pdif 10 02 41.7 +0.5
GRF *e* 10 07 02.0
GRF *e* 10 13 19.6
GRF S Sdif 10 14 29.4 +3.1
GRF pmax pmax
comp=Z,62nm,1.7s
GRF MLR MLR
comp=Z,16µm,20.4s,MS6.5
GRF Grafenberg Arr 103.08 323 *e*Pdiff Pdif 10 02 41.7 +0.5
comp=Z,62nm,1.7s
GRF *e*PP PP 10 07 02.0 +6.2
GRF *e*SKSac SKSac 10 13 19.6 -0.1
GRF *e*Sdiff Sdif 10 14 29.4 +3.1
GRF *e*L 10 52 47.4
comp=Z,16µm,20.4s
I05A Bend 103.10 43 ⇓P Pdif 10 02 43.0 +1.8
baz=103,SNR=6.6
G06A Carlson Farm, 103.17 42 ⇓P Pdif 10 02 43.5 +1.9
baz=103
A09A Danville 103.18 38 ⇓P Pdif 10 02 43.2 +1.6
baz=103,SNR=15
CUC Castrocucco 103.19 312 PFAKE 10 02 50.0 +8.3
CUC LR LR
comp=Z,13µm,20.0s,MS6.5
O02C Red Bluff 103.22 47 ⇓P Pdif 10 02 43.6 +1.8
baz=103,SNR=10
FVI Forni Avoltri 103.22 320 P Pdif 10 02 40.0 -1.8
FVI pmax pmax
comp=Z,3.0nm,0.8s
FVI Forni Avoltri 103.22 320 P Pdif 10 02 40.0 -1.8
comp=Z,2.9nm,0.8s
E07A Sunnyside 103.24 40 ⇓P Pdif 10 02 43.8 +1.9
baz=103
L04A Klamath Falls 103.28 45 ⇑P Pdif 10 02 43.9 +1.8
baz=103,SNR=7.7
WDC Whiskeytown Da 103.28 47 ⇓P Pdif 10 02 43.9 +1.8
baz=103
WDC Whiskeytown Da 103.28 47 PFAKE 10 02 50.0 +7.9
WDC LR LR
comp=Z,16µm,22.0s,MS6.5
C08A Higginbotham F 103.33 39 ⇑P Pdif 10 02 44.1 +1.9
baz=103
HOPS Hopland 103.34 49 ⇑P Pdif 10 02 44.5 +2.2
baz=103
HOPS Hopland 103.34 49 PFAKE 10 02 50.0 +7.7
HOPS LR LR
comp=Z,11µm,22.0s,MS6.3
ABTA Abfaltersbach 103.34 320 ⇑*i*P Pdif 10 02 41.5 -0.8
comp=Z,26nm,1.3s,SNR=8.7
UBBA Unterbreizbach 103.37 324 *e*Pdiff Pdif 10 02 42.7 +0.3
comp=Z,33nm,1.4s
M03C McCloud 103.39 46 ⇓P Pdif 10 02 44.5 +1.9
baz=103,SNR=6.6
J05A Fort Rock 103.40 44 ⇑P Pdif 10 02 44.9 +2.3
baz=103,SNR=18
F07A Phinny Hill Vi 103.42 41 ⇑P Pdif 10 02 44.8 +2.1
baz=103
GASB Alder Springs 103.42 48 ⇓P Pdif 10 02 45.0 +2.3
baz=103,SNR=20
M04C Macdoel 103.44 46 ⇓P Pdif 10 02 45.3 +2.5
baz=103,SNR=16
HAWA Hanford 103.51 41 PFAKE 10 02 50.0 +6.9
HAWA LR LR
comp=Z,6µm,22.0s,MS6.1
H06A Lindquist Farm 103.54 42 ⇓P Pdif 10 02 45.1 +1.9
baz=104,SNR=15
FUR Furstenfeldbru 103.62 321 *e*P Pdif 10 02 43.7 +0.1
FUR pmax pmax
comp=Z,27nm,0.9s
FUR Furstenfeldbru 103.62 321 *e*Pdiff Pdif 10 02 43.7 +0.1
comp=Z,27nm,0.9s
B09A Rice 103.65 38 ⇓P Pdif 10 02 45.8 +2.1
baz=104,SNR=6.8
D08A Wollman Farm, 103.67 40 ⇑P Pdif 10 02 45.9 +2.1
baz=104,SNR=5.8
LASM Arnica Sink 103.68 46 P Pdif 10 02 46.7 +2.9
MCCM Marconi Confer 103.72 49 ⇑P Pdif 10 02 46.1 +2.1
baz=104
MCCM Marconi Confer 103.72 49 PFAKE 10 03 00.0 +16
MCCM LR LR
comp=Z,9µm,22.0s,MS6.3
WTTA Wattenberg 103.72 320 ⇓*i*P Pdif 10 02 43.5 -0.6
comp=Z,81nm,1.7s,SNR=14
PTCN Pitcairn Islan 103.78 115 PFAKE 10 03 00.0 +16
PTCN LR LR
comp=Z,8µm,20.0s,MS6.2
E08A Dider Farm, El 103.78 40 ⇓P Pdif 10 02 46.1 +1.9
baz=104
A10A Northport 103.80 38 ⇑P Pdif 10 02 46.2 +1.8
baz=104,SNR=14
C09A Chrisman Ranch 103.81 39 ⇓P Pdif 10 02 46.1 +1.7

baz=104,SNR=6.0
G07A Ruggs Ranch, H **103.81** **42** ⇓P Pdif 10 02 46.4 +2.0
baz=104,SNR=7.0
K05A Summer Lake **103.81** **44** ⇓P Pdif 10 02 47.2 +2.8
baz=104,SNR=16
MNRC McLaughlin Nat **103.84** **49** ⇓P Pdif 10 02 47.0 +2.5
baz=104,SNR=5.9
LTIM Timbered Crate **103.87** **46** P Pdif 10 02 47.4 +2.8
I06A Prineville **103.89** **43** ⇑P Pdif 10 02 47.3 +2.5
baz=104,SNR=21
CVS Carmenet Viney **103.98** **49** ⇑P Pdif 10 02 47.1 +2.0
baz=104
IBBN Ibbenburen **104.03** **326** *e*Pdiff Pdif 10 02 45.9 +0.5
comp=Z,73nm,1.1s
CING Cingoli **104.03** **316** P Pdif 10 02 46.0 +0.6
comp=Z,35nm,1.5s
MOTA Moosalm **104.03** **321** ⇑*i*P Pdif 10 02 44.9 -0.4
comp=Z,26nm,1.1s,SNR=10.0
D09A Jones Farm, Ri **104.06** **40** ⇓P Pdif 10 02 47.6 +2.1
baz=104
M05C Lookout **104.06** **46** ⇑P Pdif 10 02 47.3 +1.8
baz=104,SNR=5.3
L05A Lakeview **104.07** **45** ⇓P Pdif 10 02 47.8 +2.3
baz=104,SNR=9.0
H07A Lands Inn, Kim **104.11** **42** ⇓P Pdif 10 02 47.9 +2.1
baz=104,SNR=8.7
J06A Christmas Val **104.16** **44** ⇑P Pdif 10 02 48.0 +2.0
baz=104,SNR=16
F08A Pendleton **104.21** **41** ⇓P Pdif 10 02 48.5 +2.4
baz=104,SNR=6.6
K06A Valley Falls **104.23** **44** ⇑P Pdif 10 02 48.4 +2.1
baz=104,SNR=18
Q03C Winters **104.23** **49** ⇓P Pdif 10 02 49.1 +2.8
baz=104
SNTG Esanatoglia **104.24** **316** P Pdif 10 02 47.5 +1.2
comp=Z,36nm,1.0s
B10A Chitwood Farm, **104.27** **38** ⇓P Pdif 10 02 48.6 +2.2
baz=104
G08A Pilot Rock **104.27** **41** ⇓P Pdif 10 02 48.7 +2.2
baz=104
I07A Izee **104.32** **43** ⇓P Pdif 10 02 48.4 +1.8
baz=104,SNR=11
NEW Newport **104.34** **38** PFAKE 10 03 00.0 +13
NEW LR LR
comp=Z,5µm,22.0s,MS6.0
ORV Oroville **104.35** **48** ⇑P Pdif 10 02 48.5 +1.7
baz=104,SNR=8.2
E09A Wood Farm, Sta **104.36** **40** ⇓P Pdif 10 02 48.7 +1.8
baz=104
FETA Feichten **104.39** **320** ⇑*i*P Pdif 10 02 47.0 0.0
comp=Z,26nm,1.0s,SNR=11
C10A Spilker Farm, **104.40** **39** ⇓P Pdif 10 02 49.1 +2.1
baz=104
JRSC Jasper Ridge **104.41** **50** ⇓P Pdif 10 02 49.1 +2.0
baz=104
MOD Modoc **104.49** **45** ⇑P Pdif 10 02 50.2 +2.8
baz=104,SNR=18
MOD Modoc **104.49** **45** PFAKE 10 03 00.0 +13
MOD LR LR
comp=Z,4µm,20.0s,MS6.0
A11A Hall Mountain, **104.54** **37** ⇑P Pdif 10 02 50.2 +2.6
baz=104,SNR=19
BDM Black Diamond **104.54** **49** ⇓P Pdif 10 02 49.9 +2.2
baz=104
M06C Likely Place G **104.59** **46** ⇑P Pdif 10 02 50.5 +2.7
baz=104,SNR=5.5
ELFS Eagle Lake Fie **104.59** **46** ⇑P Pdif 10 02 50.2 +2.3
baz=104
BADI Badiali **104.64** **317** P Pdif 10 02 46.7 -1.4
comp=Z,123nm,2.3s
Q04C Lincoln **104.65** **48** ⇑P Pdif 10 02 50.3 +2.2
baz=105
O05C Quincy **104.65** **47** ⇑P Pdif 10 02 50.2 +2.0
baz=105
STU Stuttgart **104.66** **323** *e*Pdiff Pdif 10 02 48.5 +0.3
comp=Z,20nm,0.8s
BUG Bochum--Univer **104.67** **326** *e*Pdiff Pdif 10 02 48.6 +0.3
comp=Z,34nm,1.0s
J07A Hines **104.69** **43** ⇑P Pdif 10 02 50.5 +2.1
baz=105,SNR=14
WTSB Winterswijk **104.71** **326** ⇑*e*P Pdif 10 02 48.7 +0.3
D10A Wagner Farm, O **104.71** **39** ⇓P Pdif 10 02 50.1 +1.7
baz=105,SNR=5.4
WENL Wente Vineyard **104.72** **50** ⇓P Pdif 10 02 50.8 +2.3
baz=105
H08A Prairie City **104.73** **42** ⇑P Pdif 10 02 50.6 +2.1
baz=105
B11A Sandpoint **104.74** **38** ⇑P Pdif 10 02 50.5 +1.9
baz=105,SNR=6.2
SFI Santa Sofia **104.77** **317** P Pdif 10 02 48.2 -0.5
F09A S2 Ranch, Elgi **104.81** **41** ⇓P Pdif 10 02 50.9 +2.1
baz=105
K07A Rock Creek Ran **104.97** **44** ⇑P Pdif 10 02 51.9 +2.4
baz=105,SNR=13
A12A Yaak River Ran **104.97** **37** ⇑P Pdif 10 02 51.8 +2.2
baz=105,SNR=11
I08A Drewsey **105.01** **43** ⇓P Pdif 10 02 51.8 +2.0
baz=105,SNR=6.0
E10A Myers Farm, Un **105.03** **40** ⇑P Pdif 10 02 51.6 +1.7
baz=105
C11A Tepee Creek (N **105.05** **38** ⇓P Pdif 10 02 52.0 +2.1
baz=105
G09A Cove **105.05** **41** ⇓P Pdif 10 02 51.9 +2.0
baz=105,SNR=8.6
L07A Adell **105.13** **45** ⇓P Pdif 10 02 52.2 +1.9
baz=105,SNR=10
F10A Beach Ranch, E **105.15** **40** ⇑P Pdif 10 02 51.7 +1.3
baz=105
LAVA Lava Cap Winer **105.15** **48** ⇓P Pdif 10 02 52.3 +2.0
baz=105
FNVD Fontana Vidola **105.17** **318** P Pdif 10 02 51.9 +1.5
comp=Z,167nm,2.4s
N06A Buffalo Meadow **105.19** **46** ⇑P Pdif 10 02 52.8 +2.2
baz=105,SNR=12
B12A Libby **105.20** **38** ⇓P Pdif 10 02 52.8 +2.2
baz=105,SNR=6.6
SAO San Andreas Ge **105.20** **50** PFAKE 10 07 20.0 +15
SAO LR LR
comp=Z,5µm,19.0s,MS6.1
SNAA Sanae **105.21** **195** *e*Pdiff Pdif 10 02 51.8 +1.2
SNAA *e* 10 03 00.0
SNAA *e* 10 07 12.2
SNAA *e* 10 07 15.3
SUR Sutherland **105.23** **238** PFAKE 10 07 20.0 +14
SUR LR LR
comp=Z,5µm,20.0s,MS6.1
PACP Pacheco Peak **105.25** **50** ⇑P Pdif 10 02 53.3 +2.5
baz=105
J08A Circle Bar Ran **105.27** **43** ⇓P Pdif 10 02 52.8 +1.9
baz=105,SNR=14
D11A Klaveano Farm, **105.31** **39** ⇑P Pdif 10 02 52.6 +1.5
baz=105,SNR=7.1
H09A Durkee **105.35** **42** ⇑P Pdif 10 02 52.9 +1.7
baz=105
BFO Black Forest **105.37** **322** *e*Pdif Pdif 10 02 51.2 -0.1
comp=Z,9.0nm,1.1s
BFO LR LR
comp=Z,14µm,20.0s,MS6.5
O06A Flanigan **105.39** **47** ⇑P Pdif 10 02 53.4 +2.0
baz=105
M07A Soldier Meadow **105.46** **45** ⇑P Pdif 10 02 54.0 +2.3
baz=105,SNR=8.9
TUE Stuetta **105.47** **320** PFAKE 10 07 20.0 +14
TUE LR LR
comp=Z,12µm,22.0s,MS6.4
G10A Bishop Farm, J **105.48** **41** ⇓P Pdif 10 02 53.7 +1.8
baz=105,SNR=13
WVOR Wild Horse Val **105.48** **44** PFAKE 10 07 20.0 +14
WVOR LR LR
comp=Z,7µm,21.0s,MS6.2
K08A Mann Creek Ran **105.48** **44** ⇑P Pdif 10 02 53.4 +1.6
baz=105,SNR=14
P06A Stead Airport, **105.49** **47** ⇓P Pdif 10 02 53.5 +1.6
baz=105
BMO Blue Mountains **105.52** **41** PFAKE 10 07 20.0 +14
BMO LR LR
comp=Z,6µm,21.0s,MS6.1
I09A Lost Marbles R **105.55** **42** ⇓P Pdif 10 02 53.8 +1.6
baz=106
V03C Hunter Liggett **105.58** **51** ⇓P Pdif 10 02 54.0 +1.7
baz=106
C12B Naegeli Ranch, **105.58** **38** ⇑P Pdif 10 02 53.5 +1.2
baz=106
CMB Columbia Colle **105.64** **49** ⇓P Pdif 10 02 53.9 +1.3
baz=106
CMB Columbia Colle **105.64** **49** PFAKE 10 07 20.0 +14
CMB LR LR
comp=Z,9µm,22.0s,MS6.3
E11A Bogner Ranch, **105.66** **40** ⇓P Pdif 10 02 54.2 +1.6
baz=106
R05C Kirkwood Meado **105.66** **48** ⇓P Pdif 10 02 54.9 +2.2
baz=106
VLC Villacollemand **105.67** **318** PFAKE 10 07 20.0 +14
VLC LR LR
comp=Z,14µm,20.0s,MS6.5
WCN Washoe City **105.71** **48** ⇑P Pdif 10 02 54.1 +1.3
baz=106
A13A Flathead Natio **105.72** **37** ⇑P Pdif 10 02 54.9 +2.0
baz=106
HGN Heimansgroeve **105.73** **325** ⇑*e*P Pdif 10 02 52.3 -0.6
HGN Heimansgroeve **105.73** **325** *e*PP PP 10 07 20.1 +4.7
HGN Heimansgroeve **105.73** **325** *e*SKS SKSac 10 13 28.0 -3.8
HGN Heimansgroeve **105.73** **325** *e*Sdif Sdif 10 14 59.4 +11
MEM Membach **105.76** **325** P Pdif 10 02 54.1 +1.0
comp=Z,16nm,1.6s
J09A Fry Pan Ranch, **105.77** **43** ⇓P Pdif 10 02 55.1 +2.0
baz=106,SNR=13
L08A Fields **105.77** **44** ⇑P Pdif 10 02 55.3 +2.2
baz=106,SNR=12
N07B Gerlach **105.80** **46** ⇓P Pdif 10 02 55.3 +2.0
baz=106,SNR=15
U04C Hernandez Rese **105.83** **51** ⇑P Pdif 10 02 55.6 +2.2
baz=106
PAHR Pah Rah Range **105.86** **47** *e*PKPdf PKiKP 10 07 09.4 +2.9
F11A Grangeville **105.88** **40** ⇓P Pdif 10 02 55.0 +1.4
baz=106
S05C Merced **105.89** **50** ⇑P Pdif 10 02 55.6 +1.9
baz=106
B13A Whitefish **105.92** **37** ⇓P Pdif 10 02 55.4 +1.6
baz=106
D12A Red Ives Fores **105.92** **39** ⇓P Pdif 10 02 55.2 +1.4
baz=106
WALA Waterton Lakes **105.96** **36** *e*PKPdf PKiKP 10 07 08.8 +2.3
CDF Champ du Feu **105.97** **323** *e*P Pdif 10 02 54.8 +0.8
comp=Z,35nm,1.0s
CDF Champ du Feu **105.97** **323** *e*P Pdif 10 02 54.8 +0.8
CDF pmax pmax
comp=Z,18nm,1.0s
CDF Champ du Feu **105.97** **323** *e*P Pdif 10 02 54.8 +0.8
comp=Z,18nm,1.0s
H10A Noah's Angus R **105.99** **42** ⇑P Pdif 10 02 55.5 +1.4
baz=106
G11A Walters Elk Ra **105.99** **41** ⇓P Pdif 10 02 55.7 +1.6
baz=106,SNR=8.7
K09A Rome **106.02** **44** ⇑P Pdif 10 02 55.7 +1.4
baz=106,SNR=8.0
E12A Beaver Dam Sad **106.04** **39** ⇓P Pdif 10 02 55.9 +1.6
baz=106
O07A Toulon **106.08** **46** ⇓P Pdif 10 02 56.1 +1.7
baz=106
S06C San Francisco **106.09** **49** ⇓P Pdif 10 02 56.1 +1.5
baz=106
WLF Walferdange **106.09** **324** P Pdif 10 02 56.2 +1.6
comp=Z,24nm,2.1s
WLF Walferdange **106.09** **324** *e*Pdiff Pdif 10 02 55.6 +1.0
comp=Z,36nm,1.6s
WLF Walferdange **106.09** **324** PFAKE 10 07 20.0 +13
WLF LR LR
comp=Z,17µm,21.0s,MS6.6
I10A Payette **106.14** **42** ⇑P Pdif 10 02 56.9 +2.1
baz=106
PKD Parkfield **106.14** **51** ⇓P Pdif 10 02 57.2 +2.4
baz=106
C13A Hot Springs **106.15** **38** ⇑P Pdif 10 02 56.6 +1.8
baz=106
R06C Coleville **106.18** **48** ⇑P Pdif 10 02 57.0 +2.0
baz=106
BCLA Clavier **106.24** **325** P Pdif 10 02 56.1 +0.8
comp=Z,22nm,2.2s
L09A Wilkinson Ranc **106.30** **44** ⇑P Pdif 10 02 57.9 +2.4
baz=106
N08A GE Springer Mi **106.40** **46** ⇓P Pdif 10 02 58.2 +2.3
baz=106,SNR=12
J10A Berg Farm, Mel **106.41** **43** ⇑P Pdif 10 02 58.1 +2.1
baz=106
H11A Donnelly **106.43** **41** ⇑P Pdif 10 02 58.1 +2.1
baz=106,SNR=11
T06C Millerton Lake **106.46** **50** ⇓P Pdif 10 02 58.2 +2.0
baz=106
D13A Huson **106.46** **39** ⇑P Pdif 10 02 57.8 +1.6
baz=106
HINF Hinteralfeld **106.48** **322** *e*P Pdif 10 02 56.6 +0.3
comp=Z,33nm,1.3s
HINF Hinteralfeld **106.48** **322** *e*P Pdif 10 02 56.6 +0.3
HINF pmax pmax
comp=Z,17nm,1.3s
HINF Hinteralfeld **106.48** **322** *e*P Pdif 10 02 56.6 +0.3
comp=Z,17nm,1.3s
PTRM Twissleman Ran **106.48** **51** *e*P PP 10 07 21.4 -0.2
F12A Elk City **106.51** **40** ⇓P Pdif 10 02 58.2 +1.8
baz=106,SNR=15
O08A Rochester Mine **106.55** **46** ⇑P Pdif 10 02 58.4 +1.8
baz=106,SNR=12
K10A McKenzie Ranc **106.58** **43** ⇓P Pdif 10 02 58.9 +2.2
baz=106,SNR=9.0
UCC Uccle **106.60** **326** P Pdif 10 02 58.1 +1.3
comp=Z,24nm,1.5s
C14A Swan Lake **106.62** **38** ⇓P Pdif 10 02 58.8 +2.0
baz=106
M09A Marrel Ranch, **106.66** **45** ⇑P Pdif 10 02 59.3 +2.2
baz=107
GIVF Givet **106.66** **325** *e*P Pdif 10 02 58.4 +1.3
comp=Z,37nm,0.9s
GIVF Givet **106.66** **325** *e*P Pdif 10 02 58.4 +1.3
GIVF pmax pmax
comp=Z,19nm,0.9s
GIVF Givet **106.66** **325** *e*P Pdif 10 02 58.4 +1.3
comp=Z,18nm,0.9s
I11A Placerville **106.77** **42** ⇓P Pdif 10 02 59.3 +1.7
baz=107,SNR=6.5
DOU Dourbes **106.80** **325** P Pdif 10 02 59.0 +1.3
comp=Z,12nm,1.6s
N09A Rock Creek Ran **106.81** **45** ⇓P Pdif 10 02 60.0 +2.2
baz=107,SNR=12
VNA2 Neumayer--Watz **106.82** **194** *e*Pdiff Pdif 10 03 02.0 +4.2
VNA2 *e* 10 03 10.4
VNA2 *e* 10 07 12.9
VNA2 *e* 10 07 22.6
VNA2 *e* 10 07 27.6
VNA2 *e* 10 13 35.1
MSO Missoula **106.90** **39** *e*PKPdf PKiKP 10 07 09.9 +1.7
MSO LR LR
comp=Z,5µm,22.0s,MS6.0
E13A Victor **106.90** **39** ⇓P Pdif 10 03 00.0 +1.8
baz=107
BAIF Baives **107.03** **325** *e*P Pdif 10 03 00.0 +1.3
MFID Camas Ranch **107.05** **42** ⇑P Pdif 10 03 00.7 +1.9
baz=107,SNR=6.9
D14A Greenough **107.06** **38** ⇑P Pdif 10 03 00.5 +1.7
baz=107
NVAR Mina Array Bea **107.07** **48** Pdiff Pdif 10 03 00.1 +1.2
comp=Z,3.7nm,0.8s,baz=276,slow=4.8,SNR=28
NVAR PKiKP PKiKP 10 07 09.7 +0.9
comp=Z,2.4nm,0.7s,baz=287,slow=1.5,SNR=5.9
NVAR PKKPbc PKKPbc 10 18 27.1 +0.2
comp=Z,4.9nm,0.8s,baz=128,slow=4.0,SNR=20
F13A Darby **107.08** **40** ⇓P Pdif 10 03 00.7 +1.7
baz=107
HELL Mitchell Peak **107.09** **50** ⇑P Pdif 10 03 00.6 +1.7
baz=107
L10A Juniper Basin **107.11** **44** ⇑P Pdif 10 03 01.5 +2.4
baz=107
VNA3 Neumayer Olymp **107.15** **194** *e*Pdiff Pdif 10 03 03.3 +4.0
VNA3 *e* 10 03 11.0
VNA3 *e* 10 07 12.9
VNA3 *e* 10 07 24.0
VNA3 *e* 10 07 29.2
VNA3 *e* 10 13 36.6
K11A Parker Ranch, **107.15** **43** ⇑P Pdif 10 03 01.5 +2.2
baz=107
BMN Battle Mountai **107.17** **46** PFAKE 10 07 20.0 +11
BMN LR LR
comp=Z,9µm,22.0s,MS6.3
Q08A Gabbs **107.20** **47** ⇓P Pdif 10 03 01.6 +2.1
baz=107
PGF Pioggiola **107.20** **317** *e*P Pdif 10 02 58.9 -0.6
comp=Z,28nm,0.9s
PGF Pioggiola **107.20** **317** *e*P Pdif 10 02 58.9 -0.6
PGF pmax pmax
comp=Z,14nm,0.9s
PGF Pioggiola **107.20** **317** *e*P Pdif 10 02 58.9 -0.6
comp=Z,14nm,0.9s
VNA1 Neumayer--Stat **107.22** **194** *e*Pdiff Pdif 10 03 03.8 +4.2
VNA1 *e* 10 03 12.4
VNA1 *e* 10 07 15.0
VNA1 *e* 10 07 26.0
VNA1 *e* 10 07 32.2
H12A Diamond D Ranc **107.25** **41** ⇑P Pdif 10 03 01.5 +1.8
baz=107
MEZF Maizieres J'vi **107.26** **324** *e*P Pdif 10 03 00.8 +1.0
M10A I.L. Ranch, Tu **107.27** **44** ⇓P Pdif 10 03 02.3 +2.5
baz=107
CHMT Chamberlain Mo **107.29** **38** *e*PKPdf PKiKP 10 07 08.6 -0.3
LSD Lago del Serru **107.29** **320** P Pdif 10 03 00.3 +0.4
LSD pmax pmax
comp=Z,43nm,1.9s
LSD Lago del Serru **107.29** **320** P Pdif 10 03 00.3 +0.4
comp=Z,43nm,1.9s
VES Vestal, Richgr **107.30** **51** ⇓P Pdif 10 03 01.9 +2.0
baz=107
E14A Clinton **107.35** **39** ⇓P Pdif 10 03 01.7 +1.5
baz=107
G13A Cobalt **107.43** **40** ⇑P Pdif 10 03 02.1 +1.6
baz=107
S08C White Mtn Res **107.47** **49** ⇓P Pdif 10 03 02.7 +2.0
baz=107
LPG La Plagne **107.52** **320** *e*P Pdif 10 03 02.1 +1.2
comp=Z,37nm,1.1s
LPG La Plagne **107.52** **320** *e*P Pdif 10 03 02.1 +1.2
LPG pmax pmax
comp=Z,18nm,1.1s
LPG La Plagne **107.52** **320** *e*P Pdif 10 03 02.1 +1.2
comp=Z,18nm,1.1s
LPL La Plagne **107.53** **320** *e*P Pdif 10 03 02.0 +1.1
comp=Z,45nm,1.1s
LPL La Plagne **107.53** **320** *e*P Pdif 10 03 02.0 +1.1
LPL pmax pmax
comp=Z,22nm,1.1s
LPL La Plagne **107.53** **320** *e*P Pdif 10 03 02.0 +1.1
comp=Z,22nm,1.1s
P09A Austin **107.54** **47** ⇑P Pdif 10 03 03.3 +2.3
baz=108
L11A Cat Creek Ranc **107.57** **44** ⇑P Pdif 10 03 03.6 +2.5
baz=108
J12A Stokes Ranch, **107.60** **42** ⇓P Pdif 10 03 03.1 +1.8
baz=108
BORG Borgarnes **107.62** **346** PFAKE 10 07 20.0 +11
BORG LR LR
comp=Z,11µm,20.0s,MS6.4
H13A Challis **107.64** **41** ⇓P Pdif 10 03 03.1 +1.7
baz=108
D15A Lincoln **107.68** **38** ⇓P Pdif 10 03 03.7 +2.0
baz=108
ARVC Arvin **107.72** **51** ⇓P Pdif 10 03 03.4 +1.7
baz=108
SNCC San Nicolas Is **107.73** **53** ⇑P Pdif 10 03 04.5 +2.6
baz=108
SNCC San Nicolas Is **107.73** **53** PFAKE 10 07 20.0 +10
SNCC LR LR
comp=Z,8µm,19.0s,MS6.3
O10A Cortez Mining, **107.74** **46** ⇑P Pdif 10 03 04.6 +2.7
baz=108
SBF Sospel **107.75** **318** *e*P Pdif 10 03 02.0 +0.1
comp=Z,47nm,0.9s
SBF Sospel **107.75** **318** *e*P Pdif 10 03 02.0 +0.1
SBF pmax pmax
comp=Z,23nm,0.9s
SBF Sospel **107.75** **318** *e*P Pdif 10 03 02.0 +0.1
comp=Z,24nm,0.9s
BNI Bardonecchia **107.75** **320** PFAKE 10 07 20.0 +10
BNI LR LR
comp=Z,18µm,21.0s,MS6.6
M11A Holland Ranch, **107.82** **44** ⇑P Pdif 10 03 04.5 +2.2
baz=108
ISA Isabella **107.83** **51** ⇑P Pdif 10 03 04.3 +2.0
baz=108
ISA Isabella **107.83** **51** PFAKE 10 07 20.0 +10
ISA LR LR
comp=Z,6µm,20.0s,MS6.1
E15A Deer Lodge **107.88** **39** ⇓P Pdif 10 03 04.7 +2.2
baz=108
HLID Hailey **107.94** **42** ⇓P Pdif 10 03 05.3 +2.5
baz=108
HLID Hailey **107.94** **42** *e*PKPdf PKiKP 10 07 11.9 +1.6
HLID LR LR
comp=Z,4µm,20.0s,MS6.0
K12A Draper Farm, C **107.97** **43** ⇓P Pdif 10 03 05.0 +2.1
baz=108
TPH Tonopah **107.99** **48** PFAKE 10 07 20.0 +9.5
TPH LR LR
comp=Z,4µm,22.0s,MS6.0
I13A Wildhorse Cree **107.99** **41** ⇓P Pdif 10 03 05.4 +2.4
baz=108
P10A Eureka **108.00** **46** ⇑P Pdif 10 03 05.6 +2.5
baz=108
EKA Eskdalemuir Ar **108.04** **332** PKKPbc PKKPbc 10 18 24.6 +0.2
comp=Z,2.7nm,0.8s,baz=236,slow=2.8,SNR=5.2
R09A Tonopah **108.04** **48** ⇑P Pdif 10 03 05.5 +2.3
baz=108
VSL Villasalto **108.05** **314** PFAKE 10 07 20.0 +9.4
VSL LR LR
comp=Z,7µm,22.0s,MS6.2
ESK Eskdalemuir **108.07** **332** PFAKE 10 07 20.0 +10
ESK LR LR
comp=Z,13µm,19.0s,MS6.5
L12A House Creek Ra **108.09** **43** ⇓P Pdif 10 03 05.6 +2.2
baz=108
N11A Elko Archery C **108.09** **45** ⇓P Pdif 10 03 05.6 +2.2
baz=108
S09A Goldfield **108.10** **48** ⇑P Pdif 10 03 06.0 +2.5
baz=108
J13A Cove Ranch, Pi **108.16** **42** ⇓P Pdif 10 03 05.8 +2.1
baz=108
H14A Leadore **108.19** **41** ⇑P Pdif 10 03 06.0 +2.1
baz=108
F15A Butte **108.23** **39** ⇑P Pdif 10 03 06.6 +2.5
baz=108
DAC Darwin (Calif) **108.31** **50** PFAKE 10 07 20.0 +8.8
DAC LR LR
comp=Z,6µm,19.0s,MS6.2
ORIF Oris-en-Rattie **108.33** **320** *e*P Pdif 10 03 05.3 +0.8
comp=Z,48nm,1.4s
ORIF Oris-en-Rattie **108.33** **320** *e*P Pdif 10 03 05.3 +0.8
ORIF pmax pmax
comp=Z,24nm,1.4s
ORIF Oris-en-Rattie **108.33** **320** *e*P Pdif 10 03 05.3 +0.8
comp=Z,24nm,1.4s
Q10A Clear Creek Ra **108.33** **47** ⇓P Pdif 10 03 06.9 +2.4
baz=108
FRF La Foret Royal **108.39** **318** *e*P Pdif 10 03 05.2 +0.4
comp=Z,87nm,1.3s
FRF La Foret Royal **108.39** **318** *e*P Pdif 10 03 05.2 +0.4
FRF pmax pmax
comp=Z,44nm,1.3s
FRF La Foret Royal **108.39** **318** *e*P Pdif 10 03 05.2 +0.4
comp=Z,44nm,1.3s
O11A Cowboy Ranch, **108.40** **46** ⇓P Pdif 10 03 07.4 +2.6
baz=108
I14A Mackay **108.42** **41** ⇓P Pdif 10 03 07.6 +2.6
baz=108
M12A Wells **108.44** **44** ⇑P Pdif 10 03 07.2 +2.2
baz=108
EDW2 Edwards Air Fo **108.45** **51** ⇑P Pdif 10 03 07.8 +2.8
baz=108
MPMC Manual Prospec **108.46** **50** ⇓P Pdif 10 03 07.8 +2.7
baz=108
ELK Elko **108.47** **45** *e*PKPdf PKiKP 10 07 14.6 +3.3
ELK LR LR
comp=Z,6µm,22.0s,MS6.1
S10A Tonopah Range, **108.50** **48** ⇑P Pdif 10 03 07.6 +2.3
baz=108
G15A Dillon **108.52** **40** ⇓P Pdif 10 03 07.2 +1.9
baz=108
K13A Stover Farm, H **108.52** **43** ⇓P Pdif 10 03 07.6 +2.3
baz=108
P11A Circle Ranch, **108.54** **46** ⇓P Pdif 10 03 07.6 +2.1
baz=108
N12A Clover Valley, **108.56** **45** ⇑P Pdif 10 03 07.8 +2.3
baz=108
R10A Warm Springs **108.59** **48** ⇓P Pdif 10 03 08.2 +2.5
baz=108
MWC Mount Wilson **108.60** **52** PFAKE 10 07 20.0 +8.2
MWC LR LR
comp=Z,9µm,20.0s,MS6.3
J14A Carey **108.63** **42** ⇓P Pdif 10 03 08.6 +2.7
baz=109
H15A Lima **108.66** **40** ⇑P Pdif 10 03 08.4 +2.4
baz=109
SMF Signal de Mont **108.84** **322** *e*P Pdif 10 03 07.4 +0.6
comp=Z,39nm,1.2s
SMF Signal de Mont **108.84** **322** *e*P Pdif 10 03 07.4 +0.6
SMF pmax pmax

comp=Z,19nm,1.2s
SMF Signal de Mont 108.84 322 *e*P Pdif 10 03 07.4 +0.6
comp=Z,20nm,1.2s
L13A Double Diamond 108.84 43 ⇑P Pdif 10 03 09.2 +2.4
baz=109
SSF Saint Saulge 108.85 323 *e*P Pdif 10 03 07.5 +0.7
BOZ Bozeman (W) 108.86 39 PFAKE 10 07 20.0 +8.1
BOZ LR LR
comp=Z,6µm,22.0s,MS6.1
Q11A Duckwater 108.87 47 ⇓P Pdif 10 03 09.2 +2.3
baz=109
EGMT Eagleton 108.89 36 *e*PKPdf PKiKP 10 07 14.5 +2.6
EGMT LR LR
comp=Z,4µm,21.0s,MS5.9
M13A Montello 108.98 44 ⇑P Pdif 10 03 10.1 +2.7
baz=109
O12A Currie 108.99 45 ⇑P Pdif 10 03 09.8 +2.3
baz=109
I15A Monteview 109.03 41 ⇑P Pdif 10 03 10.2 +2.6
baz=109
TSUM Tsumeb 109.06 251 PFAKE 10 07 20.0 +7.0
TSUM LR LR
comp=Z,7µm,21.0s,MS6.2
AVF Avril sur Loir 109.07 322 *e*P Pdif 10 03 08.4 +0.6
comp=Z,35nm,1.2s
AVF Avril sur Loir 109.07 322 *e*P Pdif 10 03 08.4 +0.6
AVF pmax pmax
comp=Z,17nm,1.3s
AVF Avril sur Loir 109.07 322 *e*P Pdif 10 03 08.4 +0.6
comp=Z,18nm,1.3s
R11A Troy Canyon, C 109.10 47 ⇑P Pdif 10 03 10.4 +2.4
baz=109
TPNV Topopah Spring 109.10 49 PFAKE 10 07 20.0 +7.4
TPNV LR LR
comp=Z,6µm,19.0s,MS6.2
N13A Wendover, West 109.15 44 ⇓P Pdif 10 03 10.4 +2.3
baz=109
K14A Jones Ranch, D 109.18 42 ⇑P Pdif 10 03 10.8 +2.6
baz=109
P12A McGill 109.18 46 ⇓P Pdif 10 03 11.0 +2.7
baz=109
GSC Goldstone 109.23 51 ⇑P Pdif 10 03 10.9 +2.4
baz=109
GSC Goldstone 109.23 51 PFAKE 10 07 20.0 +7.1
GSC LR LR
comp=Z,8µm,21.0s,MS6.2
FFC Flin Flon 109.30 27 PFAKE 10 07 20.0 +7.5
FFC LR LR
comp=Z,6µm,22.0s,MS6.1
J15A Blackfoot 109.32 41 ⇓P Pdif 10 03 11.5 +2.6
baz=109
L14A Malta 109.34 43 ⇓P Pdif 10 03 11.7 +2.6
baz=109
SFJD Kangerlussuaq 109.34 359 *i* P PKiKP 10 07 21.0 +8.8
comp=Z,40nm,1.1s
SFJD *i* 10 13 54.4
SFJD *i* 10 16 59.3
SFJD
comp=Z,6µm,23.0s
SFJD Kangerlussuaq 109.34 359 PFAKE 10 07 20.0 +7.8
SFJD LR LR
comp=Z,7µm,20.0s,MS6.2
Q12A Willow Creek R 109.40 46 ⇑P Pdif 10 03 11.9 +2.7
baz=109
SHOC Shoshone 109.43 50 ⇓P Pdif 10 03 11.7 +2.3
baz=109
BBRC Big Bear Sol-O 109.48 52 ⇑P Pdif 10 03 12.3 +2.7
baz=109
M14A Sheep Mountain 109.49 44 ⇑P Pdif 10 03 12.3 +2.7
baz=109
H16A Russell Place, 109.52 40 ⇑P Pdif 10 03 12.3 +2.5
baz=109
K15A Arbon 109.55 42 ⇓P Pdif 10 03 12.7 +2.7
baz=110
YMR Madison River 109.71 40 PFAKE 10 07 20.0 +6.4
YMR LR LR
comp=Z,9µm,22.0s,MS6.3
I16A Newdale 109.73 41 ⇓P Pdif 10 03 13.0 +2.3
baz=110
HEC Hector,Ludlow 109.75 51 ⇓P Pdif 10 03 13.2 +2.4
baz=110
T11A Corn Creek, Al 109.77 48 ⇓P Pdif 10 03 13.7 +2.8
baz=110
109C Camp Elliot, M 109.77 53 ⇑P Pdif 10 03 13.1 +2.2
baz=110
R12A Pony Springs, 109.82 47 ⇓P Pdif 10 03 13.6 +2.4
baz=110
P13A Bates Ranch, G 109.82 46 ⇑P Pdif 10 03 12.9 +1.8
baz=110
N14A Grayback Hills 109.86 44 ⇓P Pdif 10 03 13.5 +2.2
baz=110
TUQ Turquoise Moun 109.86 50 ⇓P Pdif 10 03 14.2 +2.8
baz=110
YFT Old Faithful 109.89 40 *e*PKPdf PKiKP 10 07 14.7 +0.7
S12A Delamar Landin 109.91 48 ⇓P Pdif 10 03 14.0 +2.5
baz=110
J16A Bone 109.91 41 ⇑P Pdif 10 03 13.8 +2.3
baz=110
L15A Malad City 109.94 43 ⇓P Pdif 10 03 14.4 +2.7
baz=110
BGU Big Grassy Mou 109.94 44 *e*PKPdf PKiKP 10 07 15.9 +1.8
GCMT Greycliff 110.01 38 *e*PKPdf PKiKP 10 07 17.0 +3.0
Q13A Wheeler Ranch, 110.01 46 ⇑P Pdif 10 03 14.7 +2.7
baz=110
PFO Pinyon Flat Ob 110.06 52 Pdiff Pdif 10 03 17.3 +5.1
comp=Z,6.3nm,0.9s,baz=318,slow=4.7,SNR=3.6
PFO Pinyon Flat Ob 110.06 52 ⇑P Pdif 10 03 14.9 +2.7
baz=110
PFO Pinyon Flat Ob 110.06 52 Pdif Pdif 10 03 17.3 +5.1
PFO LR LR
comp=Z,7µm,20.0s,MS6.3
RRI2 Red Ridge 110.07 41 *e*PKPdf PKiKP 10 07 16.2 +1.9
IMW Indian Meadow 110.08 40 *e*PKPdf PKiKP 10 07 17.2 +2.9
V11A Goodsprings 110.10 50 ⇓P Pdif 10 03 15.2 +2.8
baz=110
K16A Soda Springs 110.12 42 ⇓P Pdif 10 03 15.3 +2.9
baz=110
M15A Larsen Ranch, 110.12 43 ⇑P Pdif 10 03 15.0 +2.5
baz=110
LKWY Lake 110.12 40 PFAKE 10 07 30.0 +16
LKWY LR LR
comp=Z,10µm,22.0s,MS6.3
BAR Barrett 110.18 53 PFAKE 10 07 30.0 +15
BAR LR LR
comp=Z,7µm,19.0s,MS6.3
LDF La Druitiere 110.22 325 *e*P Pdif 10 03 13.8 +0.9
TPAW Teton Pass 110.25 41 *e*PKPdf PKiKP 10 07 17.6 +3.0
MOOW Moose Ponds 110.27 40 *e*PKPdf PKiKP 10 07 14.9 +0.3
BELC Belle Mtn. 110.29 52 ⇓P Pdif 10 03 16.1 +2.9
baz=110
GMRC Granite Mounta 110.29 51 ⇓P Pdif 10 03 16.1 +2.9
baz=110
N15A Stansbury Isla 110.31 44 ⇑P Pdif 10 03 15.7 +2.4
baz=110
R13A O'Grain Ranch, 110.34 47 ⇑P Pdif 10 03 16.5 +3.1
baz=110
REDW Red Top Meadow 110.37 41 *e*PKPdf PKiKP 10 07 16.4 +1.5
DUG Dugway 110.38 45 *e*PKiKP PKiKP 10 07 18.1 +3.1
DUG MLR MLR
comp=Z,6µm,21.0s,MS6.1
SNOW Snow King Moun 110.39 41 *e*PKPdf PKiKP 10 07 17.8 +3.0
LOHW Long Hollow 110.42 41 *e*PKPdf PKiKP 10 07 16.8 +1.9
P14A Drum Mountains 110.44 45 ⇓P Pdif 10 03 16.3 +2.4
baz=110
AHID Auburn Hatcher 110.47 42 PFAKE 10 07 30.0 +15
AHID LR LR
comp=Z,5µm,20.0s,MS6.0
CMAH Djebel Manchou 110.52 311 P PP 10 07 53.0 +2.0
Q14A Sevier Lake (B 110.53 46 ⇑P Pdif 10 03 16.9 +2.6
baz=110
U12A Valley of Fire 110.57 49 ⇓P Pdif 10 03 17.0 +2.5
baz=110
L16A Fish Haven 110.58 42 ⇑P Pdif 10 03 16.8 +2.3
baz=110
RLMT Red Lodge 110.58 39 PFAKE 10 07 30.0 +15
RLMT LR LR
comp=Z,6µm,22.0s,MS6.1
V12A Nelson 110.58 50 ⇓P Pdif 10 03 17.4 +2.9
baz=110
ABSA Djebel Ababsia 110.61 311 P PP 10 07 50.0 -1.6
S13A Holt Ranch, En 110.65 48 ⇓P Pdif 10 03 17.5 +2.7
baz=111
HWUT Hardware Ranch 110.66 43 PFAKE 10 07 30.0 +15
HWUT LR LR
comp=Z,8µm,22.0s,MS6.2
M16A Huntsville 110.74 43 ⇓P Pdif 10 03 18.0 +2.8
baz=111
T13A Saint George 110.82 48 ⇑P Pdif 10 03 18.8 +3.2
baz=111
BC3 Big Chuckw Mtn 110.83 52 ⇓P Pdif 10 03 18.7 +3.1
baz=111
CAEH 'Ain El Ouahch 110.89 312 P PP 10 07 56.0 +2.4
IRM Iron Mountain 110.90 51 ⇓P Pdif 10 03 18.6 +2.7
baz=111
U13A Pakoon Wash 111.00 49 ⇑P Pdif 10 03 19.3 +2.9
baz=111
P15A Leamington 111.01 45 ⇑P Pdif 10 03 19.4 +3.0
baz=111
NEE2 Needles Airpor 111.10 51 ⇑P Pdif 10 03 18.9 +2.0
baz=111
Q15A Fillmore 111.17 46 ⇓P Pdif 10 03 19.6 +2.4
baz=111
V13A Grand Canyon W 111.20 49 ⇓P Pdif 10 03 19.2 +1.9
baz=111
MPU Maple Canyon 111.28 44 PFAKE 10 07 30.0 +13
MPU LR LR
comp=Z,5µm,20.0s,MS6.1
O16A Springville 111.29 44 ⇓P Pdif 10 03 20.3 +2.6
baz=111
P16A Fountain Green 111.43 45 ⇑P Pdif 10 03 20.6 +2.3
baz=111
BW06 Boulder Array 111.48 41 PFAKE 10 07 30.0 +13
BW06 LR LR
comp=Z,8µm,22.0s,MS6.3
PDAR Pinedale Array 111.48 41 Pdiff Pdif 10 03 22.4 +3.9
comp=Z,0.9nm,0.8s,baz=271,slow=1.2,SNR=6.9
PDAR PKiKP PKiKP 10 07 17.2 +0.2
comp=Z,2.2nm,0.8s,baz=316,slow=3.8,SNR=7.0
PDAR PKKPbc PKKPbc 10 18 11.3 -1.5
comp=Z,2.9nm,0.5s,baz=111,slow=4.2,SNR=21
MVU Marysvale 111.49 46 PFAKE 10 07 30.0 +13
MVU LR LR
comp=Z,13µm,22.0s,MS6.5
MSU Marysvale 111.51 46 *e*PKiKP PKiKP 10 07 20.6 +3.5
GLA Glamis 111.53 52 ⇑P Pdif 10 03 21.3 +2.6
baz=112
GLA Glamis 111.53 52 PFAKE 10 07 30.0 +13
GLA LR LR
comp=Z,4µm,19.0s,MS6.1
W13A Hualapai Mount 111.55 50 ⇓P Pdif 10 03 21.6 +2.8
baz=112
R15A Junction 111.56 46 ⇓P Pdif 10 03 22.2 +3.3
baz=112
U14A Mt Trumbull 111.59 48 ⇓P Pdif 10 03 22.0 +3.0
baz=112
PDMCI Parker Dam,Lak 111.63 51 ⇑P Pdif 10 03 21.9 +2.7
baz=112
LAO LASA Array 111.64 36 *e*PKPdf PKiKP 10 07 20.0 +2.8
LAO LR LR
comp=Z,6µm,22.0s,MS6.2
DFRA Djebel Bou Aff 111.71 312 P PP 10 07 58.0 -1.4
S15A Panguitch 111.71 47 ⇓P Pdif 10 03 22.5 +2.9
baz=112
X13A Yucca 111.77 50 ⇑P Pdif 10 03 23.0 +3.2
baz=112
O17A Robinson Place 111.83 44 ⇑P Pdif 10 03 23.2 +3.1
baz=112
DGMT Dagmar 111.84 34 PFAKE 10 07 30.0 +13
DGMT LR LR
comp=Z,4µm,22.0s,MS6.0
112A Yuma 111.90 53 ⇓P Pdif 10 03 23.7 +3.4
baz=112
V14A Boquillas Ranc 111.94 49 ⇑P Pdif 10 03 24.0 +3.5
baz=112
Y13A Saline 112.05 51 ⇓P Pdif 10 03 24.1 +3.1
baz=112
Q16A Castle Valley 112.06 45 ⇑P Pdif 10 03 24.6 +3.5
baz=112
R16A Teasdale 112.10 46 ⇑P Pdif 10 03 25.1 +3.8
baz=112
SET Setif 112.19 312 P PP 10 08 03.0 +0.1
N18A Larsen Ranch, 112.22 43 ⇑P Pdif 10 03 24.5 +2.7
baz=112
U15A North Rim 112.25 48 ⇑P Pdif 10 03 25.5 +3.6
baz=112
P18A Preston Nutter 112.41 44 ⇓P Pdif 10 03 26.3 +3.6
baz=112
SRU San Rafael 112.44 45 *e*PKiKP PKiKP 10 07 21.3 +2.4
SRU San Rafael 112.44 45 ⇑P Pdif 10 03 26.0 +3.2
baz=112
X14A Yava 112.54 50 ⇑P Pdif 10 03 26.1 +2.8
baz=112
V15A Kaibab Nationa 112.57 49 ⇓P Pdif 10 03 26.4 +3.0
baz=112
R17A Hanksville Air 112.60 46 ⇓P Pdif 10 03 26.5 +3.0
baz=112
T16A Glen Canyon Da 112.61 47 ⇑P Pdif 10 03 25.9 +2.4
baz=113
Y14A Wickenburg 112.64 51 ⇑P Pdif 10 03 26.8 +3.1
baz=113
Q18A Rafter H Ranch 112.72 45 ⇓P Pdif 10 03 26.9 +2.8
baz=113
W15A Williams 112.75 49 ⇑P Pdif 10 03 26.8 +2.7
baz=113
S17A Black Ridge (B 112.86 46 ⇓P Pdif 10 03 26.8 +2.1
baz=113
Z14A Wintersburg 112.90 51 ⇑P Pdif 10 03 26.9 +2.1
baz=113
T17A Navajo Res., N 113.12 47 ⇑P Pdif 10 03 28.7 +2.9
baz=113
Y15A Casa Rosa Ranc 113.16 51 ⇑P Pdif 10 03 29.3 +3.4
baz=113
R18A Canyonlands Na 113.19 45 ⇑P Pdif 10 03 29.8 +3.7
baz=113
WUAZ Wupatki 113.29 49 *e*PKPdf PKiKP 10 07 23.7 +3.1
WUAZ LR LR
comp=Z,6µm,20.0s,MS6.2
RWWY Rawlins 113.53 41 *e*PKPdf PKiKP 10 07 22.0 +1.1
U18A Rough Rock, Ch 114.04 47 ⇓P Pdif 10 03 32.9 +3.0
baz=114
PV01 Paradox Valley 114.24 45 *e*PKPdf PKiKP 10 07 21.2 -1.2
RSSD Black Hills 114.30 38 *e*PKiKP PKiKP 10 07 22.0 -0.3
RSSD MLR MLR
comp=Z,4µm,21.0s,MS6.0
MVCO Mesa Verde 114.70 46 *e*PKPdf PKiKP 10 07 25.6 +2.4
MVCO LR LR
comp=Z,10µm,22.0s,MS6.4
TUC Tucson 114.98 52 *e*PKiKP PKiKP 10 07 27.1 +3.1
TUC MLR MLR
comp=Z,4µm,21.0s,MS6.0
Y18A Canyon Day Jun 114.99 50 ⇑P Pdif 10 03 37.1 +3.0
baz=115
ULM Lac du Bonnet 115.03 29 PKP PKiKP 10 07 24.5 +1.0
comp=Z,8.5nm,0.7s,baz=39,slow=2.9,SNR=6.3
ULM PKKPbc PKKPbc 10 17 59.5 -1.7
comp=Z,5.6nm,0.7s,baz=116,slow=3.8,SNR=5.8
217A Green Valley 115.15 52 ⇓P Pdif 10 03 38.4 +3.6
baz=115
ISCO Idaho Springs 115.51 42 *e*PKiKP PKPdf 10 07 26.1 +1.3
ISCO MLR MLR
comp=Z,5µm,19.0s,MS6.1
AGMN Agassiz Refuge 116.34 30 PFAKE 10 07 40.0 +14
AGMN LR LR
comp=Z,6µm,20.0s,MS6.2
SDCO Great Sand Dun 116.58 44 *e*PKPdf PKPdf 10 07 28.1 +1.2
SDCO LR LR
comp=Z,9µm,22.0s,MS6.3
TAM Tamanrasset 116.62 298 *e*PKiKP PKPdf 10 07 27.2 -0.2
LAZ Ladron 116.92 48 *e*PKPdf PKPdf 10 07 30.7 +3.0
LENM Lemitar 117.14 48 *e*PKPdf PKPdf 10 07 31.7 +3.6
ANMO Albuquerque 117.18 47 *e*PKiKP PKPdf 10 07 29.6 +1.5
ANMO MLR MLR
comp=Z,6µm,20.0s
ESDC Sonseca Array 117.23 319 PKP PKPdf 10 07 28.7 +0.6
comp=Z,0.7nm,0.5s,baz=21,slow=1.7,SNR=7.2
ESDC PKKPbc PKKPbc 10 17 53.1 -0.1
comp=Z,0.7nm,0.3s,baz=254,slow=3.1,SNR=7.5
OGNE Ogallala 117.26 40 PFAKE 10 07 40.0 +12
OGNE LR LR
comp=Z,5µm,22.0s,MS6.1
LPM Los Pinos Moun 117.33 48 *e*PKPdf PKPdf 10 07 30.3 +1.9
PAB San Pablo 117.55 319 *e*PKiKP PKPdf 10 07 29.5 +0.8
PAB MLR MLR
comp=Z,5µm,20.0s,MS6.2
MVO Moncorvo 118.38 321 *e*PKPdf PKPdf 10 07 31.9 +1.6
MVO Moncorvo 118.38 321 *e*PP PP 10 08 55.0 +8.9
PMSA Palmer Station 118.67 175 PFAKE 10 07 40.0 +10
PMSA LR LR
comp=Z,5µm,19.0s,MS6.1
EYMN Ely 118.71 28 PFAKE 10 07 40.0 +9.3
EYMN LR LR
comp=Z,5µm,19.0s,MS6.2
ECSD EROS,Sioux Fal 118.89 34 *e*PKPdf PKPdf 10 07 31.4 +0.3
ECSD LR LR
comp=Z,5µm,21.0s,MS6.1
MTE Manteigas 119.14 321 *i* LQ 10 44 09.9
MTE *i* LR LR 10 53 34.9
comp=Z,10µm,22.0s
MTE Manteigas 119.14 321 PFAKE 10 07 40.0 +8.3
MTE LR LR
comp=Z,11µm,21.0s,MS6.5
PVIS Viseu 119.18 322 *e*PKPdf PKPdf 10 07 33.3 +1.5
PCBR Castelo Branco 119.42 320 *e*PKPdf PKPdf 10 07 33.6 +1.3
PMRV Marv??o 119.59 320 *e*PKPdf PKPdf 10 07 34.1 +1.5
PMRV Marv??o 119.59 320 *e*PP PP 10 09 02.6 +8.1
PMRV Marv??o 119.59 320 *e*LQ 10 39 19.0
PMRV Marv??o 119.59 320 *e*LR LR 10 54 00.5
comp=Z,8µm,20.0s
CBKS Cedar Bluff 119.91 41 *e*PKiKP PKPdf 10 07 33.9 +0.6
CBKS MLR MLR
comp=Z,9µm,22.0s,MS6.4
PESTR Estremoz 120.03 320 *e*PKPdf PKPdf 10 07 34.9 +1.4
PESTR Estremoz 120.03 320 *e*PP PP 10 08 56.6 -1.0
PESTR Estremoz 120.03 320 *i* LQ 10 45 57.9
PESTR *e*LR LR 10 54 13.8
comp=Z,9µm,20.0s
PBAR Barrancos 120.06 319 *e*PKPdf PKPdf 10 07 35.1 +1.5
PBAR Barrancos 120.06 319 *e*LQ 10 45 34.5
PBAR *e*LR LR 10 49 37.8
comp=Z,7µm,22.0s
SFS San Fernando 120.41 317 PFAKE 10 07 40.0 +5.7
SFS LR LR
comp=Z,16µm,21.0s,MS6.6
EVO Evora 120.50 319 *e*PKiKP PKPdf 10 07 34.4 0.0
comp=Z,79nm,1.3s
EVO Evora 120.50 319 *e*PKPdf PKPdf 10 07 36.2 +1.8
SCHQ Schefferville 120.55 9 PKP PKPdf 10 07 33.9 -0.1
comp=Z,25nm,0.8s,baz=60,slow=3.3,SNR=13
AMTX Amarillo 120.67 45 *e*PKPdf PKPdf 10 07 35.8 +0.9
AMTX LR LR
comp=Z,8µm,20.0s,MS6.4
PBEJ Beja 120.68 319 *e*PKPdf PKPdf 10 07 36.5 +1.7
PVAQ Vaqueiros 120.93 318 *e*PKPdf PKPdf 10 07 36.8 +1.5
PVAQ Vaqueiros 120.93 318 *e*LQ 10 43 41.2
PVAQ Vaqueiros 120.93 318 *e*LR LR 10 54 32.5
comp=Z,6µm,18.0s
PMAFR Mafra 121.07 321 *e*LQ 10 40 10.3
PMAFR Mafra 121.07 321 *e*LR LR 10 54 42.3
comp=Z,7µm,22.0s
MDT Midelt 121.10 312 PKKPbc PKKPbc 10 17 40.2 +1.3
comp=Z,4.4nm,0.8s,baz=217,slow=2.9,SNR=7.4
MDT SKKPbc 10 21 25.7
comp=Z,2.0nm,1.0s,baz=243,slow=4.9,SNR=3.6
LIS Lisbon 121.12 320 *e*P PKPdf 10 07 34.2 -1.4
LIS *e*S SKSac 10 14 32.0 -0.8
LIS AMS AMS 11 08 19.8
comp=E,7µm,13.2s
LIS Lisbon 121.12 320 *e*P PKPdf 10 07 34.2 -1.4
LIS *e*S SKSac 10 14 32.0 -0.8
COWI Conover 121.16 28 *e*PKPdf PKPdf 10 07 35.3 -0.2
COWI LR LR
comp=Z,5µm,22.0s,MS6.1
PBDV Barranco-do-Ve 121.16 318 *e*PKPdf PKPdf 10 07 39.9 +4.2
PBDV Barranco-do-Ve 121.16 318 *e*PP PP 10 09 01.3 -4.0
PBDV Barranco-do-Ve 121.16 318 *e*LQ 10 44 52.3
PBDV *i* LR LR 10 54 28.5
comp=Z,6µm,21.9s
PTEO Sao Teotonio 121.52 319 *e*PKPdf PKPdf 10 07 37.1 +0.7
MORF Marmelete 121.60 319 *e*PKPdf PKPdf 10 07 37.1 +0.5
MORF Marmelete 121.60 319 *i* LQ 10 52 45.1
MORF *i* LR LR 10 54 55.8
comp=Z,8µm,20.0s
KSU1 Kansas State U 121.73 39 *e*PKPdf PKPdf 10 07 37.0 +0.2
KSU1 LR LR
comp=Z,6µm,20.0s,MS6.2
TXAR Lajitas Array 121.77 52 PKP PKPdf 10 07 36.8 -0.3
comp=Z,10.0nm,0.8s,baz=218,slow=0.8,SNR=30
TXAR PKKPbc PKKPbc 10 17 36.9 +0.7
comp=Z,1.3nm,0.6s,baz=122,slow=4.4,SNR=10
TXAR SKKPbc 10 21 17.4
comp=Z,2.2nm,1.0s,baz=131,slow=5.8,SNR=4.7
TXAR Lajitas Array 121.77 52 PKiKP PKPdf 10 07 36.8 -0.3
TXAR pmax pmax
comp=Z,10.0nm,0.8s
TXAR pmax pmax
comp=Z,1.0nm,0.6s
TXAR pmax pmax
comp=N,2.0nm,1.0s
PFVI Vila Bisbo 121.81 319 *e*PKPdf PKPdf 10 07 38.5 +1.5
PFVI Vila Bisbo 121.81 319 *e*PP PP 10 09 15.2 +5.4
PFVI Vila Bisbo 121.81 319 *i* LQ 10 45 56.7
PFVI *e*LR LR 10 55 02.1
comp=N,8µm,20.0s
RTC Rabat Centre 122.15 314 PFAKE 10 07 50.0 +12
RTC LR LR
comp=Z,3µm,22.0s,MS5.9
TOA0 Torodi Ar. Sit 122.64 288 *e*PKPdf PKPdf 10 07 38.5 -0.6
TORD Torodi Ar. Bea 122.64 288 PKP PKPdf 10 07 38.1 -1.0
comp=Z,7.8nm,0.7s,baz=60,slow=1.2,SNR=21
TORD PKKPbc PKKPbc 10 17 33.9 +1.3
comp=Z,5.0nm,0.6s,baz=257,slow=3.1,SNR=22
TORD SKKPbc 10 21 15.6
comp=Z,4.1nm,1.1s,baz=259,slow=3.7,SNR=4.2
WMOK Wichita Mounta 122.78 44 *e*PKiKP PKPdf 10 07 37.3 -1.6
WMOK MLR MLR
comp=Z,9µm,22.0s,MS6.4
JFWS Jewell Farm 122.90 32 *e*PKiKP PKPdf 10 07 38.6 -0.3
JFWS MLR MLR
comp=Z,7µm,22.0s,MS6.3
GLMI Grayling 124.19 26 *e*PKPdf PKPdf 10 07 43.0 +1.7
GLMI LR LR
comp=Z,6µm,21.0s,MS6.2
JCT Junction City 124.22 49 *e*PKiKP PKPdf 10 07 42.4 +0.6
JCT MLR MLR
comp=Z,4µm,20.0s,MS6.1
CCM Cathedral Cave 125.65 36 *e*PKiKP PKPdf 10 07 44.4 +0.1
CCM MLR MLR
comp=Z,5µm,19.0s,MS6.2
SFJM Santa Fe 125.78 61 *i* P PKPdf 10 07 46.2 +1.2
FVM French Village 126.18 36 *e*PKiKP PKPdf 10 07 45.3 0.0
MIAR Mount Ida 126.41 41 *e*PKiKP PKPdf 10 07 47.0 +1.1
MIAR MLR MLR
comp=Z,8µm,21.0s,MS6.4
OLIL Olney 127.00 34 *e*PKPdf PKPdf 10 07 47.6 +0.8
UALR University of 127.07 40 *e*PKPdf PKPdf 10 07 49.7 +0.7
KVTX Kingsville 127.11 51 *e*PKPdf PKPdf 10 07 51.7 +4.3
KVTX LR LR
comp=Z,6µm,20.0s,MS6.3
NATX Nacogdoches 127.30 45 *e*PKPdf PKPdf 10 07 50.6 +3.0
NATX LR LR
comp=Z,7µm,22.0s,MS6.3
HKT Hockley 127.44 47 *e*PKiKP PKPdf 10 07 50.0 +2.0
HKT MLR MLR
comp=Z,5µm,20.0s,MS6.2
PARMO Parma 127.47 37 *e*PKPdf PKPdf 10 07 48.5 +0.7
BLO Bloomington 127.54 32 *e*PKiKP PKPdf 10 07 50.0 +2.1
MOIG Morelia 127.69 62 *i* P PKPdf 10 07 50.2 +1.5
USIN University of 127.78 34 *e*PKPdf PKPdf 10 07 49.9 +1.5
ZIIG Zihuatanejo 128.17 64 *i* P PKPdf 10 07 57.3 +7.7
UTMT University of 128.21 36 *e*PKPdf PKPdf 10 07 50.3 +1.1
HALT Halls 128.22 37 *e*PKPdf PKPdf 10 07 51.8 +2.5
HALT *e*PP PP 10 09 53.0 +0.6
LONY Lake Ozonia 128.25 19 *e*PKPdf PKPdf 10 07 49.9 +0.9
LONY LR LR
comp=Z,7µm,21.0s,MS6.3
WCI Wyandotte Cave 128.35 33 *e*PKiKP PKPdf 10 07 51.7 +2.2
WCI MLR MLR
comp=Z,6µm,22.0s,MS6.2
FRNY Flat Rock 128.37 18 *e*PKPdf PKPdf 10 07 48.9 -0.4
MET Memphis--Engin 128.38 38 *e*PKPdf PKPdf 10 07 51.3 +1.7
ACSO Alum Creek Sta 128.53 29 PFAKE 10 08 00.0 +10
ACSO LR LR
comp=Z,3µm,22.0s,MS5.9
NCB Newcomb 128.94 19 *e*PKPdf PKPdf 10 07 52.7 +2.3
NCB LR LR
comp=Z,7µm,20.0s,MS6.3
WVT Waverly 128.97 36 *e*PKiKP PKPdf 10 07 51.5 +0.8
WVT MLR MLR
comp=Z,6µm,21.0s,MS6.3
OXF Oxford 129.10 39 PFAKE 10 08 00.0 +9.0
OXF LR LR
comp=Z,9µm,21.0s,MS6.4
PKME Peaks-Kenny Pk 129.18 14 PFAKE 10 08 00.0 +9.2
PKME LR LR
comp=Z,5µm,20.0s,MS6.2
LBNH Lisbon 129.41 17 *e*PKiKP PKPdf 10 07 54.0 +2.7
LBNH MLR MLR
comp=Z,7µm,22.0s,MS6.3

PTVM	**Pico Tres Padr**	**129.54**	**61**	*i* P	PKPdf	10 07 52.8	+0.6
PLIG	**Platanillo**	**129.65**	**62**	*i* P	PKPdf	10 07 54.6	+2.2
TRIS	**Tristan da Cun**	**129.77**	**223**	PFAKE		10 08 00.0	+7.8
TRIS				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
HNH	**Hanover**	**129.79**	**18**	*e*PKPdf	PKPdf	10 07 53.2	+1.2
VBMS	**Vicksburg**	**129.85**	**42**	*e*PKPdf	PKPdf	10 07 54.2	+1.7
VBMS				LR	LR		
	comp=Z,11µm,22.0s,MS6.5						
BINY	**Binghamton**	**129.89**	**22**	*e*PKPdf	PKPdf	10 07 53.7	+1.5
BINY				LR	LR		
	comp=Z,7µm,21.0s,MS6.4						
PPM	**Popocatepetl**	**130.17**	**61**	*i* PKIKP	PKPdf	10 07 58.6	+5.2
FFD	**Franklin Falls**	**130.20**	**17**	*e*PKPdf	PKPdf	10 07 55.7	+2.8
KIC	**Kosan Boka**	**130.24**	**282**	*e*PKP1	PKPdf	10 07 52.7	-1.0
	comp=Z,531nm,1.4s						
DBIC	**Dimbokro**	**130.30**	**282**	PKhKP		10 07 45.8	
	comp=Z,2.5nm,0.6s,baz=341,slow=3.0,SNR=4.6						
DBIC				PKP	PKPdf	10 07 52.8	-1.1
	comp=Z,9.2nm,0.6s,baz=87,slow=1.0,SNR=11						
DBIC				SKPbc	SKPbc	10 11 14.9	-0.7
	comp=Z,66nm,1.0s,baz=85,slow=5.4,SNR=10						
DBIC	**Dimbokro**	**130.30**	**282**	PKIKP	PKPdf	10 07 45.8	-8.0
DBIC						10 07 52.8	
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
DBIC				pmax	pmax		
	comp=N,66nm,1.0s						
MCWV	**Mont Chateau**	**130.45**	**27**	*e*PKPdf	PKPdf	10 07 55.2	+1.8
MCWV				LR	LR		
	comp=Z,7µm,20.0s,MS6.3						
TIC	**Toumodi**	**130.46**	**282**	*e*PKP1	PKPdf	10 07 53.3	-0.8
	comp=Z,158nm,0.8s						
LIC	**Lamto**	**130.55**	**281**	*e*PKIKP	PKPdf	10 07 51.8	-2.5
	comp=Z,112nm,0.9s						
LIC	**Lamto**	**130.55**	**281**	*e*PKP1	PKPdf	10 07 51.9	-2.4
	comp=Z,158nm,0.9s						
SWET	**Sewanee**	**130.71**	**35**	*e*PKPdf	PKPdf	10 07 54.9	+0.9
TZTN	**Tazewell**	**131.06**	**32**	*e*PKPdf	PKPdf	10 07 57.5	+2.8
TZTN				LR	LR		
	comp=Z,7µm,22.0s,MS6.3						
HRV	**Adam Dziewonsk**	**131.10**	**18**	*e*PKIKP	PKPdf	10 07 55.9	+1.3
HRV				MLR	MLR		
	comp=Z,5µm,20.0s,MS6.2						
CMLA	**Cha da Macela**	**131.15**	**330**	*e*PKP	PKPdf	10 08 04.3	+9.5
CMLA	**Cha da Macela**	**131.15**	**330**	*e*PP	PP	10 10 12.9	+1.7
CMLA				*i* P		10 11 23.6	
CMLA	**Cha da Macela**	**131.15**	**330**	*e*LQ		10 42 47.4	
CMLA				eLR	LR	10 50 36.0	
CMLA	**Cha da Macela**	**131.15**	**330**	PFAKE		10 08 10.0	+15
CMLA				LR	LR		
	comp=Z,7µm,19.0s,MS6.4						
PDA	**Ponta Delgada**	**131.23**	**330**	*e*PP	PP	10 10 24.4	+13
WES	**Weston**	**131.29**	**18**	*e*PKIKP	PKPdf	10 07 57.4	+2.5
WES				MLR	MLR		
	comp=Z,4µm,22.0s,MS6.0						
CPCT	**Cooper Cave**	**131.34**	**34**	*e*PKPdf	PKPdf	10 07 57.6	+2.4
SHEL	**Horse Pasture**	**131.51**	**252**	PFAKE		10 08 10.0	+14
SHEL				LR	LR		
	comp=Z,6µm,21.0s,MS6.2						
LRAL	**Lakeview Retre**	**131.58**	**38**	*e*PKPdf	PKPdf	10 07 57.3	+1.6
LRAL				LR	LR		
	comp=Z,5µm,20.0s,MS6.2						
PNIG	**Pinotepa**	**131.58**	**64**	*i* P	PKPdf	10 08 07.2	+11
TKL	**Tuckaleechee C**	**131.60**	**33**	SKPbc	SKPbc	10 11 21.1	+1.3
	comp=Z,17nm,1.0s,baz=300,slow=23,SNR=13						
TKL	**Tuckaleechee C**	**131.60**	**33**	*e*PKIKP	PKPdf	10 07 55.5	-0.2
BRYW	**Bryant College**	**131.65**	**18**	*e*PKPdf	PKPdf	10 07 57.5	+1.8
PAL	**Palisades**	**131.68**	**21**	*e*PKIKP	PKPdf	10 07 58.1	+2.4
SDMD	**Soldier's Deli**	**131.95**	**24**	*e*PKPdf	PKPdf	10 08 06.2	+10
EFI	**East Falkland**	**132.13**	**176**	PFAKE		10 08 10.0	+14
EFI				LR	LR		
	comp=Z,5µm,22.0s,MS6.2						
BLA	**Blacksburg**	**132.14**	**29**	*e*PKIKP	PKPdf	10 07 59.9	+3.2
BLA				MLR	MLR		
	comp=Z,5µm,20.0s,MS6.2						
VHO	**Vista Hermosa**	**132.58**	**63**	*i* P	PKPdf	10 07 45.7	-12
BRAL	**Brewton**	**132.89**	**40**	PFAKE		10 08 10.0	+12
BRAL				LR	LR		
	comp=Z,6µm,22.0s,MS6.3						
GOGA	**Godfrey**	**133.42**	**35**	*e*PKIKP	PKPdf	10 08 01.2	+2.0
GOGA				MLR	MLR		
	comp=Z,7µm,22.0s,MS6.3						
CMIG	**Matias Romero**	**134.21**	**62**	*i* P	PKPdf	10 08 03.3	+2.2
CNNC	**Cliffs of the**	**134.94**	**28**	PFAKE		10 08 10.0	+8.0
CNNC				LR	LR		
	comp=Z,6µm,20.0s,MS6.3						
COW	**Cow Castle Cre**	**134.98**	**33**	*e*PKPdf	PKPdf	10 08 08.4	+6.3
NHSC	**New Hope**	**135.47**	**32**	PFAKE		10 08 10.0	+6.9
NHSC				LR	LR		
	comp=Z,6µm,20.0s,MS6.3						
CCIG	**Comitan**	**136.94**	**61**	*i* P	PKPdf	10 08 03.6	-2.6
TEIG	**Tepich**	**138.37**	**54**	SKPbc	SKPbc	10 11 43.9	+2.0
	comp=Z,44nm,1.1s,baz=343,slow=7.8,SNR=6.0						
TEIG	**Tepich**	**138.37**	**54**	*e*PKPdf	PKPdf	10 08 08.0	-0.8
TEIG				LR	LR		
	comp=Z,5µm,21.0s,MS6.2						
DWPF	**Disney**	**138.44**	**39**	*e*PKPdf	PKPdf	10 08 11.8	+3.1
DWPF				LR	LR		
	comp=Z,7µm,22.0s,MS6.3						
BBTS	**Babate**	**139.00**	**297**	SKPbc	SKPbc	10 11 44.5	+0.8
	comp=Z,78nm,1.0s,baz=211,slow=1.8,SNR=6.2						
PLCA	**Paso Flores**	**140.16**	**160**	PKhKP		10 08 03.6	
	comp=Z,9.0nm,0.8s,baz=212,slow=3.4,SNR=17						
PLCA				SKPbc	SKPbc	10 11 49.0	+2.8
	comp=Z,21nm,1.1s,baz=260,slow=1.5,SNR=3.2						
PLCA	**Paso Flores**	**140.16**	**160**	PKHKP		10 08 03.6	
PLCA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
PLCA				pmax	pmax		
	comp=N,21nm,1.2s						
PLCA	**Paso Flores**	**140.16**	**160**	PKP		10 08 03.6	
PLCA				*e*PKPdf	PKPdf	10 08 13.3	+1.8
PLCA				SKPbc	SKPbc	10 11 49.0	+2.8
PLCA				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
ASCN	**Ascension**	**140.82**	**262**	PFAKE		10 08 20.0	+6.6
ASCN				LR	LR		
	comp=Z,5µm,21.0s,MS6.2						
TGUH	**Tegucigalpa,Un**	**142.13**	**61**⇓	*e*P	PKPdf	10 08 13.2	-2.5
TGUH	**Tegucigalpa,Un**	**142.13**	**61**	*e*PKPdf	PKPdf	10 08 17.0	+1.3
TGUH				LR	LR		
	comp=Z,4µm,21.0s,MS6.2						
BBSR	**BB Station**	**142.51**	**16**	*e*PKPdf	PKPdf	10 08 13.2	-2.7
BBSR				LR	LR		
	comp=Z,4µm,20.0s,MS6.2						
LEON	**Leon**	**143.15**	**64**⇑	*e*P	PKPdf	10 08 14.4	-3.1
LEON				AMb	AMB	10 08 31.1	
	comp=Z,2µm,1.5s						
PAYG	**Puerto Ayora**	**143.16**	**86**	PFAKE		10 08 30.0	+12
PAYG				LR	LR		
	comp=Z,7µm,20.0s,MS6.4						
CNGN	**Cerro Negro**	**143.29**	**63**⇑	*e*P	PKPdf	10 08 15.2	-2.6
MOMN	**Momotombo**	**143.47**	**63**	*e*P	PKPdf	10 08 16.9	-1.2
MGV	**Manicaragua**	**143.51**	**44**	*e*P	PKPdf	10 08 17.3	-0.7
COPN	**Copaltepe**	**143.52**	**64**	*e*P	PKPdf	10 08 15.7	-2.5
CSAN		**143.67**	**64**	*e*P	PKPdf	10 08 17.1	-1.4
HUEN		**143.83**	**63**	*e*P	PKPdf	10 08 17.5	-1.2
MGAN	**Managua**	**143.84**	**64**⇑	*e*P	PKPdf	10 08 16.1	-2.6
WILN	**Americas 2**	**143.88**	**64**⇓	*e*P	PKPdf	10 08 17.2	-1.6
APON	**Apoyo**	**144.09**	**64**	*e*P	PKPdf	10 08 19.6	+0.5
APON				AMb	AMB	10 08 26.7	
	comp=Z,113nm,1.7s						
CONN	**Concepcion**	**144.63**	**64**⇓	*i* P	PKPdf	10 08 21.4	+1.3
CONN				AMb	AMB	10 08 28.9	
	comp=Z,294nm,1.4s						
MADN	**Villa Maderas**	**144.77**	**64**⇑	*e*P	PKPdf	10 08 20.8	+0.4
NICH	**Los Niches**	**144.88**	**154**⇓	*i* P	PKPdf	10 08 19.6	-0.5
TRQA	**Tornquist**	**145.04**	**168**	*e*PKPbc	PKPbc	10 08 20.4	+0.9
TRQA				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
VCR	**Vista de Mar**	**145.18**	**66**	*e*P	PKPbc	10 08 22.1	+1.4
JTS	**JuntasAbangare**	**145.73**	**66**	*e*PKP2	PKPab	10 08 23.8	+1.0
JTS				MLR	MLR		
	comp=Z,2µm,21.0s						
CAO	**Cobano**	**145.82**	**67**	*e*P	PKPdf	10 08 23.5	+1.3
CGA2	**Cerro Gallo 2**	**146.28**	**66**⇑	*e*P	PKPbc	10 08 26.5	+2.4
LMEL	**Las Melosas**	**146.31**	**155**⇑	*i* P	PKPdf	10 08 24.2	+1.7
CLCH	**Cerro Calan**	**146.55**	**154**⇑	*i* P	PKPdf	10 08 24.6	+1.7
PEL	**Peldehue**	**146.69**	**153**⇓	*i* P	PKPdf	10 08 24.5	+1.4
LCR2	**La Lucha 2**	**146.81**	**66**	*e*P	PKPbc	10 08 26.2	+0.6
LMGC	**Las Mercedes**	**146.93**	**43**	*e*P	PKPbc	10 08 26.6	+0.8
BUS	**Buena Vista**	**147.10**	**66**	*e*P	PKPbc	10 08 27.9	+1.4
BAR1		**147.63**	**66**	*e*P	PKPdf	10 08 27.0	+1.8
CVJ	**Coleyville**	**147.78**	**46**⇓	*e*P	PKPdf	10 08 26.8	+1.4
MCJ	**Malvern**	**147.86**	**47**	*e*P	PKPbc	10 08 28.2	-0.2
ACR	**Cerro Adams**	**147.98**	**67**	*e*P	PKPdf	10 08 27.6	+1.8
CTCR	**Cotoan**	**148.26**	**66**	*e*P	PKPdf	10 08 27.9	+1.7
CNI	**Changuinola**	**148.28**	**65**	*e*P	PKPbc	10 08 28.7	-1.0
BRU2	**Volcan**	**148.36**	**67**⇑	*e*P	PKPbc	10 08 28.5	-1.4
STH	**Stony Hill**	**148.40**	**46**⇓	*e*P	PKPdf	10 08 26.6	+0.2
GWJ	**Greenwich**	**148.46**	**46**⇓	*e*P	PKPbc	10 08 29.8	-0.2
MASC	**Masc**	**148.69**	**40**	*e*P	PKPab	10 08 32.3	-1.8
LPA	**La Plata**	**148.77**	**173**	*ce*PKP	PKPdf	10 08 29.0	+2.5
LPA				PKIKP	PKPbc	10 08 30.0	-0.4
LPA				*ep*PKP	pPKPdf	10 08 36.0	+1.2
LPA				*e*SKP		10 12 05.0	
LPA				*ep*SKS		10 12 39.0	
LPA							
	comp=Z,6µm,22.0s						
CFAA	**Coronel Fontan**	**149.07**	**155**	PKP	PKPdf	10 08 26.9	-0.2
	comp=Z,8.9nm,0.5s,baz=236,slow=2.5,SNR=29						
CFAA				PKPbc	PKPbc	10 08 30.8	-0.4
	comp=Z,11nm,0.6s,baz=169,slow=3.4,SNR=54						
CFAA	**Coronel Fontan**	**149.07**	**155**	PKP	PKPdf	10 08 26.9	-0.2
CFAA				PKPbc	PKPbc	10 08 30.8	-0.4
TLL	**Tololo Astrono**	**149.10**	**150**⇑	*i* P	PKPbc	10 08 31.6	+0.2
LCO	**Las Campanas**	**150.09**	**149**⇑	*i* P	PKPdf	10 08 31.1	+2.3
LCO				*e*PKPbc	PKPbc	10 08 35.2	+1.4
LCO				LR	LR		
	comp=Z,3µm,20.0s,MS6.1						
BCIP	**Isla Barro Col**	**150.80**	**64**	*e*P	PKPdf	10 08 30.2	-0.1
BCIP	**Isla Barro Col**	**150.80**	**64**	*e*PKPbc	PKPbc	10 08 37.6	+1.7
BCIP				LR	LR		
	comp=Z,5µm,20.0s,MS6.3						
AOPR	**Arecibo Observ**	**154.44**	**30**	*e*PKPab	PKPab	10 08 59.4	+1.4
OTAV	**Otavalo**	**154.79**	**81**	*e*P	PKPdf	10 08 38.0	+1.8
OTAV	**Otavalo**	**154.79**	**81**	*e*PKPdf	PKPdf	10 08 38.2	+2.0
OTAV				LR	LR		
	comp=Z,4µm,20.0s,MS6.3						
SJG	**San Juan**	**154.93**	**29**	PKP	PKPdf	10 08 36.9	+0.6
	comp=Z,17nm,0.6s,baz=299,slow=15,SNR=6.7						
SJG	**San Juan**	**154.93**	**29**⇑	*e*P	PKPdf	10 08 36.2	-0.1
SJG	**San Juan**	**154.93**	**29**	PKP	PKPdf	10 08 36.9	+0.6
SJG				*e*PKPbc	PKPbc	10 08 46.5	+1.6
SJG				LR	LR		
	comp=Z,4µm,21.0s,MS6.2						
HUMP	**Col San Antoni**	**155.05**	**29**	*e*PKPbc	PKPdf	10 08 46.8	+10
ATAH	**Atahualpa**	**155.06**	**98**	PKP	PKPdf	10 08 38.2	+1.6
	comp=Z,36nm,1.2s,baz=198,slow=2.8,SNR=18						
PTP	**Ponta Puerca**	**155.08**	**28**	*e*P	PKPdf	10 08 27.9	-8.6
CPD	**Cerro la Pandu**	**155.11**	**29**	*e*PKIKP	PKPdf	10 08 47.0	+11
MTP	**Monte Pirata**	**155.23**	**29**	*e*PKPbc	PKPdf	10 08 49.7	+13
NNA	**Nana**	**155.55**	**111**	PKP	PKPdf	10 08 38.4	+1.2
	comp=Z,19nm,0.8s,baz=320,slow=1.3,SNR=5.3						
NNA	**Nana**	**155.55**	**111**	*e*PKPdf	PKPdf	10 08 38.4	+1.2
NNA				LR	LR		
	comp=Z,4µm,20.0s,MS6.2						
LVC	**Limon Verde**	**156.09**	**143**	PKP	PKPdf	10 08 39.4	+1.7
	comp=Z,6.5nm,1.0s,baz=254,slow=2.8,SNR=8.6						
LVC	**Limon Verde**	**156.09**	**143**	*e*PKPdf	PKPdf	10 08 40.1	+2.4
LVC				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
CPUP	**Villa Florida**	**157.30**	**171**	PKP	PKPdf	10 08 39.8	+0.6
	comp=Z,4.3nm,0.7s,baz=252,slow=0.4,SNR=9.3						
CPUP	**Villa Florida**	**157.30**	**171**	PKIKP	PKPdf	10 08 39.8	+0.6
CPUP				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CPUP	**Villa Florida**	**157.30**	**171**	*e*PKPdf	PKPdf	10 08 40.0	+0.9
ROSC	**El Rosal**	**157.53**	**68**	PKP	PKPdf	10 08 41.6	+1.8
	comp=Z,37nm,1.2s,baz=92,slow=21,SNR=15						
ROSC	**El Rosal**	**157.53**	**68**	*e*PKPdf	PKPdf	10 08 41.6	+1.8
ARE	**Arequipa**	**158.34**	**127**	*e*PKIKP	PKPdf	10 08 43.0	+2.3
SDV	**Santo Domingo**	**158.81**	**53**	PKP	PKPdf	10 08 42.2	+0.9
	comp=Z,22nm,0.4s,baz=205,slow=18,SNR=9.8						
SDV	**Santo Domingo**	**158.81**	**53**⇑	*e*P	PKPdf	10 08 42.0	+0.6
SDV	**Santo Domingo**	**158.81**	**53**	PKP	PKPdf	10 08 42.2	+0.9
SDV				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
CAM3	**Guarapari**	**158.93**	**216**⇓	*i* P	PKPab	10 09 19.0	+1.7
CAM3				*i*		10 09 25.2	
CAM3				*i*		10 09 30.0	
CAM3				*i*		10 09 36.9	
FDF	**Fort de France**	**160.11**	**22**	*e*PKIKP	PKPdf	10 08 43.5	+0.7
FDF	**Fort de France**	**160.11**	**22**	*e*P	PKPab	10 09 23.6	+1.2
BIM	**Bigot**	**160.34**	**22**	*e*P	PKPab	10 09 24.2	+0.8
LPAZ	**La Paz**	**161.03**	**132**	PKP	PKPdf	10 08 44.6	+0.9
	comp=Z,49nm,1.2s,baz=15,slow=2.3,SNR=45						
LPAZ	**La Paz**	**161.03**	**132**	*e*PKPdf	PKPdf	10 08 45.5	+1.8
LPAZ				LR	LR		
	comp=Z,3µm,21.0s						
BBGH	**Gun Hill**	**162.14**	**19**	PFAKE		10 09 00.0	+15
BBGH				LR	LR		
	comp=Z,8µm,22.0s						
GRGR	**Grenville**	**162.24**	**27**	PFAKE		10 09 00.0	+15
GRGR				LR	LR		
	comp=Z,5µm,22.0s						
PCRV	**Puerto La Cruz**	**162.26**	**38**	PKP	PKPdf	10 08 44.1	-1.0
	comp=Z,28nm,1.2s,baz=42,slow=6.3,SNR=4.2						
TRN	**Trinidad (W)**	**163.66**	**29**	*e*	PKPdf	10 08 48.6	+2.1
TRN	**Trinidad (W)**	**163.66**	**29**	*e*	PKPab	10 09 46.5	+8.5
SIV	**San Ignacio**	**165.80**	**149**	PKP	PKPdf	10 08 47.8	-0.4
	comp=Z,23nm,1.1s,baz=212,slow=1.7,SNR=34						
BDFB	**Brasilia**	**167.03**	**204**	PKP	PKPdf	10 08 48.8	-0.4
	comp=Z,13nm,1.1s,baz=2.7,slow=2.6,SNR=6.7						
BDFB	**Brasilia**	**167.03**	**204**	PKP	PKPdf	10 08 48.8	-0.4
BDFB				LR	LR		
	comp=Z,8µm,20.0s						

*CSEM **13** 10:03:01.0, 3996N×3865E, h7km, MD2.7, After ISK*

ISK 13 10:03:01.0, 3996N×3865E, h7km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMT	**Gumushane**	**0.81**	**52**	*e*PG	Pg	10 03 17.1	+0.6
GUMT				*e*SG	Sg	10 03 28.4	+1.4
EZC	**Erzincan**	**0.92**	**103**	PG	Pg	10 03 12.0	-6.7
EZC				SG	Sg	10 03 21.7	-9.0
ESPY	**Espiye-Giresun**	**0.96**	**3**	*e*PG	Pg	10 03 20.4	+1.0
SVSK	**Karacayir**	**1.27**	**269**	*e*PN	Pn	10 03 26.1	+1.0

*CSEM **13** 10:04:53.8, 4009N×3556E, h11km, MD2.7, After ISK*

ISK 13 10:04:53.8, 4009N×3556E, h11km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOZ	**Yozgat**	**0.48**	**202**	*e*PG	Pg	10 05 03.7	+0.4
YOZ				*e*SG	Sg	10 05 11.1	+1.4
CORM	**Corum**	**0.71**	**277**	*e*PG	Pg	10 05 08.4	+0.8
SVSK	**Karacayir**	**1.12**	**98**	*e*PN	Pn	10 05 15.4	0.0
KAMT	**Kaman**	**1.59**	**244**	*e*PN	Pn	10 05 22.1	+0.2
SARI	**SarD1z-Kayseri**	**1.67**	**148**	*e*PN	Pn	10 05 26.6	+3.7

IDC 13 10:07:16.2±1.8, 1753N×14558E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.5/3, MS4.9/1, Ms1 4.9/1, ms1mx4.1/29, Error ellipse: s-maj=109.2km s-min=26.4km az=98.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.98**	**190**	LR	LR	10 09 53.2	
	comp=Z,15µm,18.0s,baz=270,slow=40						
MJAR	**Matsushiro Arr**	**20.03**	**342**	P	P	10 11 51.3	+0.6
	1.0nm,0.7s,baz=166,slow=11,SNR=4.2						
PETK	**Petropavlovsk-**	**36.75**	**12**	P	P	10 14 24.7	-0.5
	0.4nm,0.5s,baz=182,slow=10,SNR=4.1						
WRA	**Warramunga Arr**	**38.84**	**197**	P	P	10 14 43.1	0.0
	0.3nm,0.4s,baz=18,slow=9.0,SNR=7.7						

IDC 13 10:12:27.4±3.5, 2125N×9959E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.8/18, mbtmp3.9/5, Error ellipse: s-maj=136.4km s-min=26.3km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.45**	**358**	P	P	10 17 06.2	-0.4
	0.5nm,0.3s,baz=188,slow=12,SNR=3.4						
WRA	**Warramunga Arr**	**38.29**	**120**	P	P	10 19 49.5	-0.5
	0.6nm,0.5s,baz=302,slow=9.1,SNR=6.8						
SONM	**Songino Array**	**50.10**	**6**	P	P	10 21 24.6	+0.5
	1.3nm,0.6s,baz=195,slow=9.6,SNR=7.4						
MKAR	**Makanchi Array**	**51.03**	**345**	P	P	10 21 31.1	-0.1
	1.3nm,0.7s,baz=140,slow=9.6,SNR=6.5						
ZALV	**Zalesovo Beam**	**57.20**	**350**	P	P	10 22 15.5	-0.6
	1.2nm,0.3s,baz=185,slow=5.4,SNR=3.9						
TXAR	**Lajitas Array**	**145.04**	**37**	PKPbc	PKPbc	10 32 07.0	+0.2
	0.9nm,0.6s,baz=302,slow=1.2,SNR=13						

IDC 13 10:16:46.8±1.5, 377N×12649E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.8/18, mbtmp3.9/5, Error ellipse: s-maj=107.1km s-min=20.0km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.75**	**182**	*e*P	P	10 21 40.8	+0.8
	3.0nm,0.5s						
FITZ	**Fitzroy Cssi**	**21.75**	**182**	P	P	10 21 40.2	+0.2
	1.0nm,0.4s,baz=5.2,slow=9.6,SNR=6.4						
WRA	**Warramunga Arr**	**24.79**	**162**	P	P	10 22 10.1	-0.4
	4.5nm,0.6s,baz=341,slow=11,SNR=45						
WB2	**Warramunga Arr**	**24.80**	**162**	*e*P	P	10 22 10.0	-0.6
STKA	**Stephens Creek**	**38.25**	**159**	*e*P	P	10 24 09.2	+0.5
	2.6nm,0.6s						
STKA	**Stephens Creek**	**38.25**	**159**	P	P	10 24 09.1	+0.3
	2.5nm,0.5s,baz=331,slow=8.7,SNR=5.4						
MKAR	**Makanchi Array**	**57.38**	**325**	P	P	10 26 35.3	-1.7
	0.4nm,0.4s,baz=117,slow=8.7,SNR=4.6						
KURK	**Kurchatov**	**61.58**	**328**	P	P	10 27 07.1	+1.3
	0.4nm,0.5s,baz=129,slow=6.6,SNR=3.1						

*ISCJB **13** 10:17:14.6±0.7, 5454S×007×12W±0.2, h10km, mb4.3/9, Error ellipse: s-maj=18.5km s-min=10.6km az=4.7*

*IDC **13** 10:17:14.1±1.0, 5472S×098W, h0km, mb4.3/9, mb1 4.4/9, mb1mx4.2/19, mbtmp4.3/9, Error ellipse: s-maj=30.6km s-min=19.8km az=139.0*

*NEIC **13** 10:17:15.7±0.7, 5461S×100W, h10km, Error ellipse: s-maj=20.5km s-min=15.2km az=114.0*

ISC 13 10:17:16.5±0.7, 5457S±007×11W±02, h10km, n17, σ0^{s}73/15, mb4.3/9, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.45**	**188**	*e*	**Pn**	**10 21 07.3**	**+0.2**
VNA2	**Neumayer--Watz**	**16.65**	**187**	*e*	**Pn**	**10 21 10.4**	**+0.8**
VNA3	**Neumayer Olymp**	**17.15**	**189**	*e*	**Pn**	**10 21 16.1**	**+0.2**
SNAA	**Sanae**	**17.19**	**182**	*e*	**Pn**	**10 21 16.3**	**0.0**
SNAA	**Sanae**	**17.19**	**182**	*e*P	**Pn**	**10 21 16.6**	**+0.3**
QSPA	**South Pole Qui**	**35.68**	**180**	P	**P**	**10 24 12.2**	**-1.9**
	11nm,1.1s,mb4.7,baz=249,slow=3.7,SNR=11						
QSPA	**South Pole Qui**	**35.68**	**180**	P	**P**	**10 24 12.2**	**-1.9**
TSUM	**Tsumeb**	**38.08**	**29**	P	**P**	**10 24 35.9**	**+0.7**
	7.4nm,0.9s,mb4.4,baz=176,slow=16,SNR=4.6						
LSZ	**Lusaka**	**45.33**	**42**	P	**P**	**10 25 34.5**	**0.0**
	2.3nm,0.6s,mb4.2,baz=214,slow=3.6,SNR=3.7						
PLCA	**Paso Flores**	**46.86**	**257**	P	**P**	**10 25 46.4**	**0.0**
	2.3nm,0.8s,mb4.1,baz=142,slow=12,SNR=2.7						
CPUP	**Villa Florida**	**49.52**	**281**	P	**P**	**10 26 06.8**	**-0.3**
	2.8nm,0.6s,mb4.5,baz=121,slow=6.0,SNR=4.8						
CFAA	**Coronel Fontan**	**51.90**	**268**	P	**P**	**10 26 24.1**	**-1.0**
	1.8nm,0.8s,mb4.0,baz=149,slow=5.7,SNR=19						
LVC	**Limon Verde**	**59.07**	**274**	P	**P**	**10 27 17.7**	**+1.0**
	6.1nm,0.8s,mb4.7,baz=127,slow=13,SNR=2.2						
LPAZ	**La Paz**	**63.59**	**279**	P	**P**	**10 27 47.8**	**+0.5**
	5.6nm,0.8s,mb4.7,baz=166,slow=5.5,SNR=13						
TORD	**Torodi Ar. Bea**	**67.49**	**3**	P	**P**	**10 28 11.9**	**-0.5**
	1.1nm,0.8s,mb3.9,baz=185,slow=7.7,SNR=4.3						
EKS2	**Erkin-Say**	**115.90**	**52**	*e*PKPdf	PKPdf	10 35 55

STKA	**Stephens Creek**	**46.37**	**131**	P		**P**	**10 30 55.2**	**+0.1**
	1.7nm,0.3s,mb4.5,baz=332,slow=22,SNR=3.2							
STKA	**Stephens Creek**	**46.37**	**131**	P		**P**	**10 30 55.2**	**+0.1**
KSRS	**Korea Array**	**48.20**	**28**	P		**P**	**10 31 09.4**	**+0.1**
	2.2nm,0.8s,mb4.2,baz=212,slow=7.4,SNR=8.4							
SONM	**Songino Array**	**52.10**	**4**	P		**P**	**10 31 39.5**	**+1.0**
	3.8nm,0.6s,mb4.5,baz=187,slow=10,SNR=14							
MJAR	**Matsushiro Arr**	**53.06**	**37**	P		**P**	**10 31 44.6**	**-1.3**
	2.4nm,0.6s,mb4.3,baz=213,slow=7.5,SNR=8.4							
MKAR	**Makanchi Array**	**53.70**	**344**	P		**P**	**10 31 50.7**	**+0.2**
	2.6nm,0.6s,mb4.3,baz=148,slow=8.5,SNR=10							
KURK	**Kurchatov**	**58.29**	**343**	P		**P**	**10 32 22.5**	**-0.7**
	1.6nm,0.8s,mb4.1,baz=159,slow=6.9,SNR=3.6							
ZALV	**Zalesovo Beam**	**59.75**	**349**	P		**P**	**10 32 33.1**	**-0.1**
	4.4nm,0.4s,mb4.8,baz=184,slow=4.3,SNR=5.8							
ASAJ	**Asahikawa**	**60.60**	**33**	P		**P**	**10 32 39.2**	**-0.1**
	2.8nm,0.5s,mb4.7,baz=72,slow=28,SNR=7.1							
BVAR	**Borovoye Array**	**62.92**	**339**	P		**P**	**10 32 54.2**	**-0.6**
	1.4nm,0.5s,mb4.3,baz=145,slow=8.1,SNR=4.4							
TXAR	**Lajitas Array**	**145.43**	**41**	PKPbc	PKPbc		10 42 07.9	+0.8
	3.2nm,0.6s,baz=292,slow=0.8,SNR=35							

IDC ***13*** *10:26:33.8±0.8, 449S×10133E, h0km, mb4.6/17, mb1 4.6/18, mb1mx4.5/24, mbtmp4.6/18, ML4.3/1, Error ellipse: s-maj=24.0km s-min=13.4km az=48.0*
BJI ***13*** *10:26:33.8, 485S×10138E, h31km, mB5.1, mb5.0*
ISCJB ***13*** *10:26:36.7±0.6, 455S±008×10128E±008, h33km, mb4.6/27, Error ellipse: s-maj=14.5km s-min=7.4km az=139.6*
MOS ***13*** *10:26:38.8±1.6, 422S×10165E, h33km, mb4.8/8, Error ellipse: s-maj=18.5km s-min=10.2km az=95.8*
DJA ***13*** *10:26:38, 450S×101.19E, h25km, MLv4.8/8*
NEIC ***13*** *10:26:39.1±0.4, 449S×10137E, h35km, mb4.6/7, Error ellipse: s-maj=12.8km s-min=6.2km az=49.0*

ISC 13 10:26:38.9±0.6, 455S±008×10131E±009, h35km, n59, σ0s78/51, mb4.6/27, 2D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLI	**Kotabumi**	**3.55**	**95**	P	**Pn**	**10 27 35.8**	**+4.2**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**4.16**	**347**	P	**Pn**	**10 27 40.5**	**+0.5**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.20**	**39**	P	**Pn**	**10 27 55.8**	**+1.6**
	99nm,0.9s						
CBJI	**Citeko**	**5.82**	**109**	P	**Pn**	**10 28 10.0**	**+7.2**
	702nm,1.3s						
LEM	**Lembang**	**6.67**	**110**	P	**Pn**	**10 28 17.6**	**+3.1**
	145nm,1.0s						
BSI	**Banda Aceh**	**11.64**	**329**	P	**Pn**	**10 29 30.4**	**+7.7**
	74nm,0.9s						
KAPI	**Kappang**	**18.38**	**92**	P	**Pn**	**10 30 51.2**	**-0.1**
	1.0nm,0.3s,baz=119,slow=21,SNR=3.9						
KAPI	**Kappang**	**18.38**	**92**	P	**Pn**	**10 30 51.1**	**-0.1**
KDI	**Kendari**	**21.26**	**89**	P	**P**	**10 31 27.1**	**+4.7**
	49nm,1.2s,mb4.7						
BATI	**Baumata**	**22.86**	**105**	P	**P**	**10 31 38.9**	**-0.6**
	19nm,0.3s,mb5.0,baz=303,slow=4.1,SNR=4.7						
CMAR	**Chiang Mai Arr**	**22.98**	**354**	P	**P**	**10 31 40.2**	**-0.4**
	16nm,0.7s,mb4.5,baz=184,slow=8.5,SNR=23						
CHTO	**Chiang Mai**	**23.33**	**354**	*e*P	**P**	**10 31 44.1**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.3						
CHTO	**Chiang Mai**	**23.33**	**354**	*e*P	**P**	**10 31 44.1**	**-0.2**
	comp=Z,12nm,1.0s,mb4.3						
FITZ	**Fitzroy Crossi**	**27.34**	**121**	*e*P	**P**	**10 32 21.0**	**+0.1**
	comp=Z,5.3nm,0.5s,mb4.3						
FITZ	**Fitzroy Crossi**	**27.34**	**121**	P	**P**	**10 32 21.3**	**+0.4**
	comp=Z,5.7nm,0.8s,mb4.2,baz=274,slow=5.4,SNR=17						
WRA	**Warramunga Arr**	**35.61**	**118**	P	**P**	**10 33 33.5**	**-0.1**
	comp=Z,5.1nm,0.4s,mb4.5,baz=305,slow=9.0,SNR=28						
WRAB	**Tennant Creek**	**35.62**	**118**	*e*P	**P**	**10 33 33.7**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
WRAB	**Tennant Creek**	**35.62**	**118**	*e*P	**P**	**10 33 33.7**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.0						
WB2	**Warramunga Arr**	**35.62**	**118**	*e*P	**P**	**10 33 33.6**	**-0.1**
GTA	**Gaotai**	**43.76**	**358**	P	**P**	**10 34 41.8**	**+0.7**
GTA				AP	pP	10 34 45.4	-6.0
GTA				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.5						
CTA	**Charters Tower**	**46.36**	**113**	*e*P	**P**	**10 35 01.7**	**-0.4**
	comp=Z,5.2nm,0.9s,mb4.5						
CTA	**Charters Tower**	**46.36**	**113**	P	**P**	**10 35 01.7**	**-0.5**
	comp=Z,6.2nm,0.9s,mb4.5,baz=296,slow=9.2,SNR=6.9						
CTA	**Charters Tower**	**46.36**	**113**	*e*P	**P**	**10 35 01.7**	**-0.4**
CTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJI	**Beijing**	**46.43**	**16**	P	**P**	**10 35 02.4**	**+0.1**
BJI				AMB	AMB		
	comp=Z,27nm,0.6s,mb5.3						
STKA	**Stephens Creek**	**46.50**	**131**	P	**P**	**10 35 03.0**	**0.0**
	comp=Z,1.4nm,0.3s,mb4.3,baz=300,slow=6.6,SNR=4.2						
KSRS	**Korea Array**	**48.58**	**28**	P	**P**	**10 35 18.9**	**-0.1**
	comp=Z,6.6nm,0.8s,mb4.7,baz=216,slow=8.0,SNR=24						
KSRS	**Korea Array**	**48.58**	**28**	P	**P**	**10 35 18.9**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
SONM	**Songino Array**	**52.35**	**4**	P	**P**	**10 35 48.4**	**+1.1**
	comp=Z,18nm,0.8s,mb5.0,baz=184,slow=9.2,SNR=69						
ULN	**Ulaanbaatar**	**52.43**	**5**	*e*P	**P**	**10 35 49.0**	**+1.1**
ULN				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
ULN	**Ulaanbaatar**	**52.43**	**5**	*e*P	**P**	**10 35 49.0**	**+1.1**
	comp=Z,12nm,0.9s,mb4.8						
TKM2	**Tokmak 2**	**52.67**	**336**	*e*P	**P**	**10 35 50.6**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
TKM2	**Tokmak 2**	**52.67**	**336**	*e*P	**P**	**10 35 50.6**	**+0.8**
	comp=Z,11nm,0.8s,mb4.8						
CN2	**Changchun**	**52.81**	**22**	*e*P	**P**	**10 35 50.0**	**-0.9**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
MAJO	**Matsushiro**	**53.46**	**37**	*e*P	**P**	**10 35 54.6**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MAJO	**Matsushiro**	**53.46**	**37**	*e*P	**P**	**10 35 54.6**	**-1.2**
	comp=Z,9.3nm,0.8s,mb4.8						
MJAR	**Matsushiro Arr**	**53.46**	**37**	P	**P**	**10 35 54.6**	**-1.1**
	comp=Z,5.4nm,0.6s,mb4.7,baz=216,slow=7.6,SNR=18						
MK31	**Makanchi Array**	**53.82**	**344**	*e*P	**P**	**10 35 58.6**	**+0.4**
MKAR	**Makanchi Array**	**53.82**	**344**	P	**P**	**10 35 57.8**	**-0.3**
	comp=Z,11nm,0.8s,mb4.8,baz=142,slow=7.6,SNR=20						
OPO	**Ambohidratompo**	**54.61**	**251**	P	**P**	**10 36 05.4**	**+0.9**
	comp=Z,1.2nm,0.3s,mb4.4,baz=290,slow=21,SNR=6.1						
ZAK	**Zakamensk**	**54.73**	**2**	*e*P	**P**	**10 36 04.9**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
KURK	**Kurchatov**	**58.40**	**343**	P	**P**	**10 36 30.4**	**-0.4**
	comp=Z,3.9nm,0.8s,mb4.5,baz=163,slow=6.3,SNR=13						
KURK	**Kurchatov**	**58.40**	**343**	*e*P	**P**	**10 36 31.2**	**+0.3**
KURK	**Kurchatov**	**58.40**	**343**	P	**P**	**10 36 30.4**	**-0.4**
KLR	**Kul'dur**	**59.74**	**23**	*e*P	**P**	**10 36 36.7**	**-3.4**
ZALV	**Zalesovo Beam**	**59.90**	**349**	P	**P**	**10 36 40.9**	**-0.3**
	comp=Z,8.8nm,0.6s,mb5.0,baz=182,slow=5.7,SNR=14						
ASAJ	**Asahikawa**	**60.99**	**33**	P	**P**	**10 36 48.7**	**-0.1**
	baz=217,slow=20						
BVAR	**Borovoye Array**	**63.01**	**340**	P	**P**	**10 37 01.4**	**-0.8**
	comp=Z,4.7nm,0.7s,mb4.8,baz=144,slow=8.5,SNR=10.0						
ARU	**Arti**	**70.05**	**336**	*e*P	**P**	**10 37 40.9**	**-6.2**
PETK	**Petropavlovsk-**	**74.34**	**31**	P	**P**	**10 38 11.8**	**-1.1**
	comp=Z,2.0nm,0.7s,mb4.2,baz=233,slow=1.7,SNR=6.2						
ARCES	**ARCESS Array B**	**89.30**	**340**	P	**P**	**10 39 31.2**	**+0.1**
	comp=Z,3.8nm,0.9s,mb4.7,baz=87,slow=5.0,SNR=4.2						
GERES	**GERESS Array B**	**91.81**	**319**	P	**P**	**10 39 42.9**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.9,baz=71,slow=4.9,SNR=3.9						
WMOK	**Wichita Mounta**	**144.66**	**29**	*e*PKIKP	PKPdf	10 46 11.4	-1.1
SIUC	**Southern Illin**	**145.61**	**15**	*e*PKPbc	PKPbc	10 46 14.1	-0.2
TXAR	**Lajitas Array**	**145.84**	**41**	PKPbc	PKPbc	10 46 16.4	+1.2
	comp=Z,7.7nm,0.7s,baz=312,slow=1.0,SNR=91						
MIAR	**Mount Ida**	**147.11**	**23**	*e*PKP2	PKPab	10 46 19.5	-0.9
JCT	**Junction City**	**147.42**	**35**	*e*PKPdf	PKPdf	10 46 18.9	+1.6
JCT				*e*PKPbc	PKPbc	10 46 20.5	+0.7
WVT	**Waverly**	**147.46**	**14**	*e*PKP2	PKPab	10 46 19.8	-1.9
TKL	**Tuckaleechee C**	**148.69**	**8**	PKPbc	PKPbc	10 46 23.3	+0.3
	comp=Z,7.7nm,0.7s,baz=138,slow=4.3,SNR=10						
CPCT	**Cooper Cave**	**148.78**	**9**	*e*PKPbc	PKPbc	10 46 23.8	+0.6

ISCJB ***13*** *10:30:48.9±0.2, 4063N±001×11679W±001, h10km, Error ellipse: s-maj=1.5km s-min=1.5km az=3.4*
NEIC ***13*** *10:30:48.9, 4064N×11679W, h6km, ML3.6(REN), After REN.*

ISC 13 10:30:48.7±0.3, 40640N±0010×11679W±001, h4km±2km, n93, σ1s02/160, 57C-55D, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
N10A	**Dunphy**	**0.23**	**70**	P	**Pg**	**10 30 53.4**	**+0.3**
	baz=0.2,SNR=47						
N10A				⇑S	**Sg**	**10 30 56.8**	**+0.6**
	baz=0.2						
BMN	**Battle Mountai**	**0.39**	**237**	*e*Pg	**Pg**	**10 30 56.9**	**+0.8**
BMN				*e*Sg	**Sg**	**10 31 03.6**	**+2.5**
O10A	**Cortez Mining,**	**0.41**	**147**	⇑P	**Pg**	**10 30 57.0**	**+0.3**
	baz=0.4,SNR=283						
O10A				⇑S	**Sg**	**10 31 03.2**	**+1.1**
	baz=0.4						
N09A	**Rock Creek Ran**	**0.59**	**291**	P	**Pg**	**10 31 00.3**	**+0.3**
	baz=0.6,SNR=636						
N09A				⇑S	**Sg**	**10 31 08.2**	**+0.5**
	baz=0.6						
N11A	**Elko Archery C**	**0.82**	**77**	⇑P	**Pg**	**10 31 04.5**	**+0.1**
	baz=0.8,SNR=16						
N11A				⇑S	**Sg**	**10 31 15.5**	**+0.4**
	baz=0.8						
M10A	**I.L. Ranch, Tu**	**0.90**	**12**	⇓P	**Pg**	**10 31 06.1**	**+0.1**
	baz=0.9,SNR=211						
M10A				⇑S	**Sg**	**10 31 18.2**	**+0.6**
	baz=0.9						
M09A	**Marrel Ranch,**	**0.93**	**328**	⇓P	**Pg**	**10 31 06.6**	**+0.2**
	baz=0.9,SNR=368						
M09A				⇓S	**Sg**	**10 31 19.1**	**+0.6**
	baz=0.9						
O11A	**Cowboy Ranch,**	**1.01**	**120**	⇑P	**Pg**	**10 31 07.9**	**-0.1**
	baz=1.0,SNR=307						
O11A				⇑S	**Sg**	**10 31 21.5**	**+0.5**
	baz=1.0						
N08A	**GE Springer Mi**	**1.03**	**278**	P	**Pg**	**10 31 08.2**	**-0.1**
	baz=1.0,SNR=978						
N08A				⇑S	**Sg**	**10 31 21.7**	**0.0**
	baz=1.0						
P10A	**Eureka**	**1.05**	**166**	⇑P	**Pg**	**10 31 08.8**	**0.0**
	baz=1.1,SNR=251						
P10A				⇓S	**Sg**	**10 31 23.6**	**+1.2**
	baz=1.1						
M11A	**Holland Ranch,**	**1.09**	**44**	⇑P	**Pg**	**10 31 09.6**	**0.0**
	baz=1.1,SNR=19						
M11A				⇓S	**Sg**	**10 31 24.8**	**+0.9**
	baz=1.1						
O08A	**Rochester Mine**	**1.10**	**252**	⇓P	**Pg**	**10 31 09.2**	**-0.5**
	baz=1.1,SNR=176						
O08A				⇓S	**Sg**	**10 31 24.3**	**+0.5**
	baz=1.1						
P09A	**Austin**	**1.12**	**194**	⇑P	**Pg**	**10 31 09.7**	**-0.4**
	baz=1.1,SNR=23						
P09A				⇑S	**Sg**	**10 31 24.9**	**+0.3**
	baz=1.1						
ELK	**Elko**	**1.19**	**84**	*e*Pg	**Pg**	**10 31 10.6**	**-0.8**
ELK				*e*Sg	**Sg**	**10 31 26.7**	**-0.1**
P11A	**Circle Ranch,**	**1.35**	**143**	⇑P	**Pn**	**10 31 13.2**	**-1.0**
	baz=1.4,SNR=44						
P11A				⇓S	**Sg**	**10 31 32.1**	**+0.2**
	baz=1.4						
N12A	**Clover Valley,**	**1.35**	**80**	⇑P	**Pn**	**10 31 13.0**	**-1.3**
	baz=1.3,SNR=253						
N12A				⇓S	**Sg**	**10 31 31.1**	**-0.9**
	baz=1.3						
P08A	**Dixie Valley**	**1.36**	**227**	⇓P	**Pn**	**10 31 13.3**	**-1.2**
	baz=1.4,SNR=24						
P08A				⇑S	**Sg**	**10 31 32.5**	**0.0**
	baz=1.4						
L10A	**Juniper Basin**	**1.46**	**10**	⇓P	**Pn**	**10 31 14.7**	**-1.0**
	baz=1.4,SNR=102						
L10A				⇑S	**Sb**	**10 31 34.6**	**-0.6**
	baz=1.4						
L09A	**Wilkinson Ranc**	**1.53**	**335**	⇑P	**Pn**	**10 31 15.9**	**-0.8**
	baz=1.5,SNR=77						
L09A				⇑S	**Sn**	**10 31 36.0**	**-1.0**
	baz=1.5						
O12A	**Currie**	**1.61**	**103**	⇓P	**Pn**	**10 31 16.5**	**-1.3**
	baz=1.6,SNR=155						
O12A				⇑S	**Sn**	**10 31 37.2**	**-1.8**
	baz=1.6						
M12A	**Wells**	**1.62**	**61**	⇓P	**Pn**	**10 31 16.5**	**-1.5**
	baz=1.6,SNR=24						
M12A				⇑S	**Sn**	**10 31 37.9**	**-1.4**
	baz=1.6						
N07B	**Gerlach**	**1.66**	**276**	⇓P	**Pn**	**10 31 17.1**	**-1.5**
	baz=1.7,SNR=368						
N07B				⇑Sb	**Sb**	**10 31 41.6**	**+0.5**
	baz=1.7						
O07A	**Toulon**	**1.66**	**254**	⇓P	**Pn**	**10 31 16.8**	**-1.7**
	baz=1.7,SNR=49						
O07A				⇓Sb	**Sb**	**10 31 42.1**	**+1.1**
	baz=1.7						
L11A	**Cat Creek Ranc**	**1.71**	**27**	⇓P	**Pn**	**10 31 18.9**	**-0.4**
	baz=1.7,SNR=214						
L11A				⇑S	**Sn**	**10 31 41.0**	**-0.6**
	baz=1.7						
Q09A	**Carvers**	**1.83**	**190**	P	**Pn**	**10 31 20.2**	**-0.6**
	baz=1.9,SNR=53						
Q09A				⇑S	**Sn**	**10 31 43.5**	**-0.9**
	baz=1.9						
Q10A	**Clear Creek Ra**	**1.84**	**170**	P	**Pn**	**10 31 20.4**	**-0.6**
	baz=1.9,SNR=93						
Q10A				⇓Sb	**Sb**	**10 31 47.1**	**+0.9**
	baz=1.9						
P12A	**McGill**	**1.86**	**128**	⇓P	**Pn**	**10 31 19.8**	**-1.4**
	baz=1.9,SNR=31						
P12A				⇓S	**Sn**	**10 31 44.3**	**-0.9**
	baz=1.9						
L08A	**Fields**	**1.94**	**324**	⇑Pb	**Pb**	**10 31 24.1**	**-0.4**
	baz=1.9						
L08A				⇓Sb	**Sb**	**10 31 50.0**	**+0.9**
	baz=1.9						
P07A	**Fallon**	**1.95**	**236**	⇓S	**Sn**	**10 31 46.3**	**-1.1**
	baz=2.0						
M07A	**Soldier Meadow**	**1.95**	**293**	⇓P	**Pn**	**10 31 21.2**	**-1.3**
	baz=1.9,SNR=47						
M07A				⇓S	**Sn**	**10 31 46.3**	**-1.1**
	baz=1.9						
N13A	**Wendover, West**	**1.98**	**83**	⇑S	**Sn**	**10 31 46.9**	**-1.3**
	baz=2.0						
Q08A	**Gabbs**	**1.98**	**207**	⇓P	**Pn**	**10 31 21.8**	**-1.1**
	baz=2.0						
Q08A				⇑S	**Sn**	**10 31 47.5**	**-0.7**
	baz=2.0						
Q11A	**Duckwater**	**2.00**	**154**	⇑P	**Pn**	**10 31 22.4**	**-0.7**
	baz=2.0,SNR=25						
Q11A				⇓Sb	**Sb**	**10 31 52.1**	**+1.4**
	baz=2.0						
L12A	**House Creek Ra**	**2.01**	**41**	⇓P	**Pn**	**10 31 22.9**	**-0.4**
	baz=2.0,SNR=13						
L12A				⇑Sb	**Sb**	**10 31 52.3**	**+1.1**
	baz=2.0						
M13A	**Montello**	**2.12**	**69**	⇓Sb	**Sb**	**10 31 54.7**	**+0.6**
	baz=2.1						
K10A	**MacKenzie Ranc**	**2.14**	**358**	⇑P	**Pn**	**10 31 25.2**	**+0.1**
	baz=2.1,SNR=86						
K10A				⇑S	**Sn**	**10 31 51.8**	**-0.2**
	baz=2.1						
K09A	**Rome**	**2.17**	**342**	⇑P	**Pn**	**10 31 25.8**	**+0.2**
	baz=2.2,SNR=101						
K09A				⇓Sb	**Sb**	**10 31 56.0**	**+0.2**
	baz=2.2						
PAHR	**Pah Rah Range**	**2.19**	**246**	*e*Pn	**Pn**	**10 31 29.2**	**+3.4**
PAHR				*e*Sg	**Sg**	**10 31 58.6**	**-0.5**
Q12A	**Willow Creek R**	**2.20**	**136**	⇑Pb	**Pb**	**10 31 28.5**	**-0.5**
	baz=2.2						
Q12A				⇓Sb	**Sb**	**10 31 57.9**	**+1.4**
	baz=2.2						
K11A	**Parker Ranch,**	**2.20**	**15**	⇓P	**Pn**	**10 31 26.2**	**+0.2**
	baz=2.2,SNR=38						
K11A				⇓Sb	**Sb**	**10 31 57.3**	**+0.6**
	baz=2.2						
WVOR	**Wild Horse Val**	**2.26**	**323**	P	**Pn**	**10 31 28.6**	**+1.7**
Q07A	**Schurz**	**2.30**	**223**	⇓P	**Pn**	**10 31 26.4**	**-0.9**
	baz=2.3,SNR=9.1						
L07A	**Adell**	**2.36**	**307**	⇓Pb	**Pb**	**10 31 30.5**	**-1.3**
	baz=2.3						
L07A				⇑Sb	**Sb**	**10 32 02.8**	**+1.6**
	baz=2.3						
R10A	**Warm Springs**	**2.38**	**171**	⇑P	**Pn**	**10 31 28.3**	**-0.1**
	baz=2.4,SNR=29						
R10A				⇑Sb	**Sb**	**10 32 04.1**	**+2.4**
	baz=2.4						
R09A	**Tonopah**	**2.41**	**185**	⇓P	**Pn**	**10 31 28.1**	**-0.7**
	baz=2.4,SNR=45						
R09A				⇓Sb	**Sb**	**10 32 04.2**	**+1.7**
	baz=2.4						
P13A	**Bates Ranch, G**	**2.44**	**118**	⇑P	**Pn**	**10 31 28.0**	**-1.3**
	baz=2.4,SNR=18						
P13A				⇓Sb	**Sb**	**10 32 04.5**	**+1.1**
	baz=2.4						
K08A	**Mann Creek Ran**	**2.44**	**329**	⇑Pb	**Pb**	**10 31 32.0**	**-1.1**
	baz=2.4						
K08A				⇓Sb	**Sb**	**10 32 04.8**	**+1.3**
	baz=2.4						
K12A	**Draper Farm, C**	**2.45**	**35**	⇓P	**Pn**	**10 31 29.3**	**-0.1**
	baz=2.4,SNR=121						
K12A				⇑Sb	**Sb**	**10 32 04.1**	**+0.4**
	baz=2.4						
R11A	**Troy Canyon, C**	**2.47**	**157**	⇓P	**Pn**	**10 31 28.9**	**-0.8**
	baz=2.5,SNR=21						
R11A				⇑Sb	**Sb**	**10 32 05.6**	**+1.2**
	baz=2.5						
R08A	**Mina**	**2.50**	**204**	⇓P	**Pn**	**10 31 29.3**	**-0.8**
	baz=2.5,SNR=12						
R08A				⇑S	**Sn**	**10 32 01.2**	**+0.1**
	baz=2.5						
TPH	**Tonopah**	**2.58**	**188**	*e*Pn	**Pn**	**10 31 30.7**	**-0.5**
TPH				*e*Sg	**Sg**	**10 32 10.5**	**-1.1**
L13A	**Double Diamond**	**2.59**	**55**	⇑P	**Pn**	**10 31 30.3**	**-1.0**
	baz=2.6,SNR=8.5						
L13A				⇑Sb	**Sb**	**10 32 09.0**	**+1.3**
	baz=2.6						
WCN	**Washoe City**	**2.64**	**241**	⇓P	**Pn**	**10 31 30.8**	**-1.2**
	baz=2.6,SNR=9.9						
WCN				⇓Sb	**Sb**	**10 32 11.4**	**+2.2**
	baz=2.6						
S10A	**Tonopah Range,**	**2.72**	**177**	P	**Pn**	**10 31 32.7**	**-0.4**
	baz=2.7,SNR=24						
S10A				⇑Sb	**Sb**	**10 32 13.9**	**+2.4**
	baz=2.7						
Q13A	**Wheeler Ranch,**	**2.72**	**127**	⇓Sb	**Sb**	**10 32 13.3**	**+1.8**
	baz=2.7						
M14A	**Sheep Mountain**	**2.75**	**71**	⇑P	**Pn**	**10 31 32.0**	**-1.4**
	baz=2.7,SNR=6.9						
M14A				⇓Sb	**Sb**	**10 32 13.2**	**+0.9**
	baz=2.7						
N14A	**Grayback Hills**	**2.75**	**84**	⇓P	**Pn**	**10 31 33.0**	**-0.5**
	baz=2.7,SNR=37						
N14A				⇑Sb	**Sb**	**10 32 13.3**	**+0.9**
	baz=2.7						
K07A	**Rock Creek Ran**	**2.75**	**319**	⇓Sb	**Sb**	**10 32 14.0**	**+1.5**
	baz=2.7						
J10A	**Berg Farm, Mel**	**2.79**	**0**	⇓Sb	**Sb**	**10 32 14.6**	**+1.1**
	baz=2.8						
J09A	**Fry Pan Ranch,**	**2.80**	**345**	⇓Sb	**Sb**	**10 32 14.7**	**+0.9**
	baz=2.8						
BEKR	**Beckwourth**	**2.83**	**255**	⇓P	**Pn**	**10 31 33.7**	**-1.0**
	baz=2.8,SNR=11						
K13A	**Stover Farm, H**	**2.85**	**44**	⇑P	**Pn**	**10 31 34.4**	**-0.6**
	baz=2.8,SNR=12						
K13A				⇑Sb	**Sb**	**10 32 16.5**	**+1.1**
	baz=2.8						
R12A	**Pony Springs,**	**2.86**	**143**	⇑Sb	**Sb**	**10 32 17.3**	**+1.6**
	baz=2.9						
MFID	**Camas Ranch**	**2.87**	**14**	⇑Sb	**Sb**	**10 32 16.6**	**+0.9**
	baz=2.8						
BGU	**Big Grassy Mou**	**2.87**	**83**	*e*Pn	**Pn**	**10 31 37.0**	**+1.7**
BGU				*e*Sg	**Sg**	**10 32 18.0**	**-2.9**
J12A	**Stokes Ranch,**	**2.90**	**25**	⇑P	**Pn**	**10 31 35.6**	**0.0**
	baz=2.9,SNR=25						
J12A				⇑Sb	**Sb**	**10 32 17.4**	**+0.7**
	baz=2.9						
MOD	**Modoc**	**2.93**	**297**	*e*Pn	**Pn**	**10 31 38.8**	**+2.8**
MOD				*e*Sg	**Sg**	**10 32 22.0**	**-0.8**
S09A	**Goldfield**	**2.93**	**187**	⇓P	**Pn**	**10 31 35.5**	**-0.5**
	baz=3.0,SNR=8.4						
P14A	**Drum Mountains**	**3.04**	**109**	⇓P	**Pn**	**10 31 38.0**	**+0.5**
	baz=3.0,SNR=30						
DUG	**Dugway**	**3.07**	**97**	*e*Pn	**Pn**	**10 31 38.4**	**+0.5**
DUG				*e*Sn	**Sn**	**10 32 16.6**	**+1.5**
DUG				*e*Sg	**Sg**	**10 32 25.7**	**-1.6**
Q14A	**Sevier Lake (B**	**3.17**	**120**	⇑P	**Pn**	**10 31 39.7**	**+0.4**
	baz=3.2,SNR=29						
R05C	**Kirkwood Meado**	**3.19**	**234**	⇑P	**Pn**	**10 31 38.9**	**-0.7**
	baz=3.2						
HVU	**Hansel Valley**	**3.24**	**68**	*e*Pn	**Pn**	**10 31 47.6**	**+7.4**
HVU				*e*Sg	**Sg**	**10 32 31.9**	**-0.8**
SPUT	**South Promonto**	**3.36**	**77**	*e*Pn	**Pn**	**10 31 42.1**	**+0.3**
SPUT				*e*Sg	**Sg**	**10 32 35.1**	**-1.3**
J13A	**Cove Ranch, Pi**	**3.38**	**34**	⇓P	**Pn**	**10 31 41.8**	**-0.3**
	baz=3.4,SNR=18						
S12A	**Delamar Landin**	**3.38**	**153**	P	**Pn**	**10 31 42.3**	**0.0**
	baz=3.4,SNR=9.7						
HLID	**Hailey**	**3.42**	**30**	⇓P	**Pn**	**10 31 42.9**	**+0.3**
	baz=3.4,SNR=10						
HLID	**Hailey**	**3.42**	**30**	*e*Pn	**Pn**	**10 31 43.5**	**+0.8**
HLID				*e*Sg	**Sg**	**10 32 34.6**	**-3.8**
T11A	**Corn Creek, Al**	**3.61**	**160**	⇑P	**Pn**	**10 31 45.0**	**-0.3**
	baz=3.6,SNR=27						
TPNV	**Topopah Spring**	**3.71**	**173**	*e*Pn	**Pn**	**10 31 46.9**	**+

ellipse: s-maj=2.1km s-min=1.5km az=75.0
*ISCJB **13** 10:47:03.0±0.4, 4026N±002×2124E±004, h20km±5km, Error ellipse: s-maj=4.9km s-min=3.4km az=177.8*
*BEO **13** 10:47:03.3, 4050N×2170E, h15km*
*THE **13** 10:47:03.0, 4027N×2125E, h11km, ML3.2*

ISC 13 10:47:02.7±0.4**, 4025N**±002×**2130E**±003**, h16**km±3km**, n30, σ1§11/54, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.36**	**81**	*e*PB	**Pg**	**10 47 10.4**	**+0.2**
KZN				*e*SB	**Sg**	**10 47 17.8**	**+2.5**
MEV	**Metsovon**	**0.47**	**187**	*e*Pg	**Pg**	**10 47 11.9**	**-0.1**
MEV				*e*Sg	**Sg**	**10 47 19.9**	**+1.5**
FNA	**Florina**	**0.54**	**6**	*e*Pg	**Pg**	**10 47 12.7**	**-0.7**
FNA				*e*Sg	**Sg**	**10 47 21.6**	**+1.0**
FNA	**Florina**	**0.54**	**6**	*e*Pg	**Pg**	**10 47 12.7**	**-0.7**
FNA				*e*Sg	**Sg**	**10 47 21.5**	**+0.9**
JAN	**Janina**	**0.69**	**210**	*e*PN	**Pg**	**10 47 15.8**	**-0.3**
JAN				*e*SN	**Sg**	**10 47 26.5**	**+1.3**
BIA	**Bitola**	**0.77**	**1**	*e*Pg	**Pg**	**10 47 16.2**	**-1.5**
BIA				*e*Sg	**Sg**	**10 47 28.9**	**+0.9**
BIA	**Bitola**	**0.77**	**1**	*e*Pg	**Pg**	**10 47 16.1**	**-1.7**
BIA				*e*Sg	**Sg**	**10 47 28.3**	**+0.4**
THL	**Klokotos Trika**	**0.88**	**141**	*e*Pg	**Pg**	**10 47 19.3**	**-0.4**
THL				*e*Sg	**Sg**	**10 47 34.5**	**+3.3**
THL	**Klokotos Trika**	**0.88**	**141**	*e*PN	**Pg**	**10 47 19.1**	**-0.6**
THL				*e*SN	**Sn**	**10 47 33.2**	**+0.4**
THL	**Klokotos Trika**	**0.88**	**141**	*e*Pg	**Pg**	**10 47 19.3**	**-0.4**
THL				*e*Sn	**Sn**	**10 47 33.2**	**+0.4**
THL				*e*Sg	**Sg**	**10 47 34.5**	**+3.3**
LIT	**Litokhoron**	**0.92**	**99**	*e*Pg	**Pg**	**10 47 20.3**	**-0.3**
LIT				*e*Sg	**Sg**	**10 47 35.6**	**+2.9**
OHR	**Ohrid**	**0.94**	**336**	*e*Pg	**Pg**	**10 47 19.2**	**-1.8**
OHR				*e*Sg	**Sg**	**10 47 34.2**	**+0.8**
OHR	**Ohrid**	**0.94**	**336**	*e*Pg	**Pg**	**10 47 19.1**	**-1.9**
OHR				*e*Sg	**Sg**	**10 47 32.9**	**-0.4**
OHR	**Ohrid**	**0.94**	**336**	*e*Pg	**Pg**	**10 47 19.0**	**-2.0**
OHR				*e*Sg	**Sg**	**10 47 32.9**	**-0.5**
GRG	**Griva**	**1.10**	**49**	*e*Pg	**Pg**	**10 47 23.2**	**-0.7**
GRG	**Griva**	**1.10**	**49**	*e*Pg	**Pg**	**10 47 23.2**	**-0.7**
KRUS	**Krusevo**	**1.12**	**358**	*e*Pg	**Pg**	**10 47 22.9**	**-1.4**
KRUS				*e*Sg	**Sg**	**10 47 39.3**	**+0.3**
KEK	**Kerkira**	**1.27**	**246**	*e*PN	**Pn**	**10 47 23.7**	**-2.1**
EVR	**Evrytania**	**1.39**	**163**	*e*PN	**Pn**	**10 47 26.5**	**-0.9**
HORT	**Hortiatis**	**1.42**	**75**	*e*Pg	**Pg**	**10 47 28.4**	**-1.6**
HORT				*e*Sg	**Sg**	**10 47 48.1**	**-0.3**
VAY	**Valandovo**	**1.44**	**42**	*e*Pn	**Pn**	**10 47 28.7**	**+0.5**
VAY				*e*Sg	**Sg**	**10 47 48.3**	**-0.9**
VAY	**Valandovo**	**1.44**	**42**	*e*Pn	**Pn**	**10 47 28.6**	**+0.5**
VAY				*e*Sg	**Sg**	**10 47 48.2**	**-1.0**
AGG	**Agios Georgios**	**1.46**	**147**	*e*Pg	**Pg**	**10 47 29.4**	**-1.5**
AGG				*e*Sg	**Sg**	**10 47 49.6**	**-0.2**
KNT	**Kendrikon**	**1.52**	**53**	*e*Pg	**Pn**	**10 47 29.4**	**+0.2**
TIR	**Tirane**	**1.55**	**316**	*e*Pg	**Pg**	**10 47 33.1**	**+0.6**
TIR				*e*Sg	**Sg**	**10 47 54.8**	**+2.2**
PLG	**Polygyros**	**1.65**	**85**	*e*Pb	**Pb**	**10 47 32.1**	**-0.6**
PLG				*e*Sb	**Sb**	**10 47 53.8**	**+0.7**
SOH	**Sokhos**	**1.67**	**69**	*e*Pb	**Pb**	**10 47 32.3**	**-0.7**
SOH				*e*Sb	**Sb**	**10 47 53.9**	**+0.2**
XOR	**Xorichti**	**1.70**	**121**	*e*Pb	**Pb**	**10 47 33.2**	**-0.4**
BARS	**Barje**	**2.59**	**8**	*e*Pn	**Pn**	**10 47 44.7**	**+0.7**
BARS				*e*Sg	**Sn**	**10 48 16.4**	**+1.2**
VTS	**Vitosha**	**2.75**	**31**	*e*Sg	**Sn**	**10 48 19.8**	**+0.9**

*BJI **13** 10:47:46.8, 380S×10167E, h25km, mB5.6, mb5.1*
*IDC **13** 10:47:47.6±0.5, 342S×10160E, h0km, mb4.8/18, mb1 4.9/19, mb1mx4.8/21, mbtmp4.8/19, ML5.1/1, Error ellipse: s-maj=20.8km s-min=13.2km az=57.0*
*ISCJB **13** 10:47:49.2±0.3, 360S±005×10149E±004, h22km, mb5.1/59, MS5.0/1, Error ellipse: s-maj=8.4km s-min=4.6km az=38.0*
*NEIC **13** 10:47:52.9±0.2, 343S×10166E, h35km, mb5.1/19, Error ellipse: s-maj=7.3km s-min=4.7km az=53.0*
*MOS **13** 10:47:53.2±0.9, 333S×10176E, h48km, mb5.1/29, Error ellipse: s-maj=14.5km s-min=7.6km az=110.2*
*DJA **13** 10:47:59, 323S×10164E, h80km, MLv5.1/11*

ISC 13 10:47:51.0±0.3**, 367S**±006×**10152E**±005**, h24**km**, h24**km±4.4km**:pP-P, n165,** σ1§**16**/147**, mb5.1**/59**, MS5.0**/1**, 12C-14D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMBI	**JAMBI**	**2.93**	**46**	P	**Pb**	**10 48 47.6**	**+5.1**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.38**	**341**	P	**Pn**	**10 48 44.9**	**+2.6**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.40**	**14**	P	**Pn**	**10 48 45.2**	**+2.7**
	0.0nm,0.0s						
KLI	**Kotabumi**	**3.53**	**110**	P	**Pn**	**10 48 52.0**	**+7.6**
	0.0nm,0.0s						
BLSI	**Bandar Lampung**	**4.08**	**115**	P	**Pb**	**10 49 03.4**	**+1.3**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.40**	**44**	P	**Pn**	**10 48 58.2**	**+1.9**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**4.85**	**72**	P	**Pn**	**10 49 06.7**	**+4.2**
	0.0nm,0.0s						
MYKOM	**Kota Tinggi**	**5.90**	**23**	⇓P	**Pn**	**10 49 20.1**	**+3.2**
KGM	**Kluang**	**5.92**	**18**	⇑P	**Pn**	**10 49 20.1**	**+2.8**
DBJI	**Dramaga**	**5.95**	**119**	P	**Pb**	**10 49 31.6**	**-2.3**
	151nm,0.9s						
CBJI	**Citeko**	**5.97**	**117**	P	**Pb**	**10 49 32.9**	**-1.5**
	800nm,0.9s						
LEM	**Lembang**	**6.83**	**118**	P	**Pb**	**10 49 43.2**	**-5.9**
	157nm,1.1s						
IPM	**Ipoh**	**8.11**	**357**	⇑P	**Pn**	**10 49 51.4**	**+4.1**
KTGM	**Kuala Trenggan**	**9.08**	**10**	⇓P	**Pn**	**10 50 05.1**	**+4.4**
COCO	**West Island**	**9.65**	**208**	*e*Pn	**Pn**	**10 50 13.1**	**+4.6**
	120nm,0.4s						
KSM	**Kuching**	**10.16**	**60**	⇑P	**Pn**	**10 50 18.3**	**+2.8**
SJI	**Sawahan**	**10.97**	**112**	P	**Pn**	**10 50 30.8**	**+4.3**
	123nm,0.6s						
BSI	**Banda Aceh**	**11.02**	**326**	P	**Pn**	**10 50 28.6**	**+1.3**
	104nm,0.9s						
SBUM	**Sibu**	**12.30**	**61**	⇓P	**Pn**	**10 50 51.1**	**+6.3**
BBKI	**Banjar Baru**	**13.30**	**90**	P	**Pn**	**10 51 10.1**	**+12**
	562nm,0.6s						
BTM	**Bintulu**	**13.42**	**60**	⇑P	**Pn**	**10 51 07.1**	**+7.1**
SDKM	**Sandakan**	**18.18**	**60**	⇑P	**Pn**	**10 52 05.5**	**+3.5**
KAPI	**Kappang**	**18.23**	**95**	P	**Pn**	**10 52 02.8**	**+0.2**
	5.5nm,0.3s,baz=280,slow=7.5,SNR=30						
MYLDM	**Lahad Datu**	**19.10**	**63**	⇑P	**Pn**	**10 52 15.8**	**+2.6**
CMAR	**Chiang Mai Arr**	**22.13**	**353**	P	**P**	**10 52 44.0**	**-1.0**
	11nm,10.5s,mb4.6,baz=186,slow=8.3,SNR=37						
CMAR				PcP	PcP	10 56 43.0	+1.0
	2.2nm,0.7s,baz=205,slow=3.4,SNR=7.0						
CMAR	**Chiang Mai Arr**	**22.13**	**353**	P	**P**	**10 52 44.0**	**-1.0**
CMAR						10 56 43.0	
CMAR				pmax	pmax		
	comp=Z,11nm,0.5s						
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CHTO	**Chiang Mai**	**22.48**	**354**	*e*P	**P**	**10 52 48.1**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.2						
CHTO	**Chiang Mai**	**22.48**	**354**	*e*P	**P**	**10 52 48.1**	**-0.6**
	comp=Z,4.8nm,0.5s,mb4.2						
BATI	**Baumata**	**22.91**	**108**	P	**P**	**10 52 53.7**	**+0.4**
	comp=Z,17nm,0.3s,mb5.0,baz=87,slow=6.6,SNR=4.1						
FITZ	**Fitzroy Crossi**	**27.63**	**123**	*e*P	**P**	**10 53 37.8**	**+0.8**
	comp=Z,11nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**27.63**	**123**	P	**P**	**10 53 37.5**	**+0.6**
	comp=Z,5.5nm,0.4s,mb4.5,baz=280,slow=3.0,SNR=20						
ODAN	**Odare**	**33.28**	**337**	*e*P	**P**	**10 54 27.0**	**+0.2**
	comp=Z,42nm,0.5s,mb5.6						
TAPN	**Taplejung**	**33.59**	**337**	*e*P	**P**	**10 54 30.5**	**+1.0**
	comp=Z,78nm,0.7s,mb5.7						
RAMN	**Ramite**	**33.68**	**336**	*e*P	**P**	**10 54 30.9**	**+0.7**
	comp=Z,20nm,0.4s,mb5.4						
JIRN	**Jiri**	**34.48**	**336**	*e*P	**P**	**10 54 37.9**	**+0.8**
	comp=Z,91nm,0.8s,mb5.8						
LSA	**Lhasa**	**34.63**	**344**	P	**P**	**10 54 38.5**	**0.0**
PKI	**Pulchoki**	**34.73**	**334**	*e*P	**P**	**10 54 39.7**	**+0.4**
	comp=Z,29nm,0.7s,mb5.3						
PKIN	**Phulchoki**	**34.74**	**334**	*e*P	**P**	**10 54 39.6**	**+0.2**
	comp=Z,15nm,0.5s,mb5.2						
GUN	**Gumba**	**34.83**	**335**	*e*P	**P**	**10 54 41.0**	**+0.8**
	comp=Z,151nm,0.6s,mb6.1						
DMN	**Daman**	**34.89**	**334**	*e*P	**P**	**10 54 41.1**	**+0.4**
	comp=Z,30nm,0.6s,mb5.4						
KKN	**Kakani**	**34.97**	**334**	*e*P	**P**	**10 54 41.8**	**+0.4**
	comp=Z,74nm,0.6s,mb5.8						
GKN	**Gorkha**	**35.44**	**334**	*e*P	**P**	**10 54 45.9**	**+0.4**
	comp=Z,76nm,0.8s,mb5.7						
KOLN	**Koldanda**	**35.71**	**332**	*e*P	**P**	**10 54 48.6**	**+0.8**
	comp=Z,100nm,0.7s,mb5.8						
WRA	**Warramunga Arr**	**35.85**	**119**	P	**P**	**10 54 49.4**	**+0.3**
	comp=Z,8.5nm,0.3s,mb5.2,baz=298,slow=11,SNR=207						
WRA				PcP	PcP	10 57 16.6	+0.1
	comp=Z,1.0nm,0.4s,baz=301,slow=2.1,SNR=4.4						
WRA				S	**S**	**11 00 16.9**	**-8.9**
	comp=Z,0.2nm,0.4s,baz=299,slow=10.0,SNR=5.6						
WRA	**Warramunga Arr**	**35.85**	**119**	P	**P**	**10 54 49.4**	**+0.3**
WRA						10 57 16.6	
WRA				S	**S**	**11 00 16.9**	**-8.9**
WRA				pmax	pmax		
	comp=Z,9.0nm,0.3s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRAB	**Tennant Creek**	**35.86**	**119**	*e*P	**P**	**10 54 49.5**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,16nm,0.4s,mb5.3						
WRAB	**Tennant Creek**	**35.86**	**119**	*e*P	**P**	**10 54 49.5**	**+0.3**
	comp=Z,16nm,0.4s,mb5.3						
WB2	**Warramunga Arr**	**35.86**	**119**	*e*P	**P**	**10 54 49.4**	**+0.2**
DANN	**Dangsing**	**36.13**	**333**	*e*P	**P**	**10 54 52.2**	**+0.8**
	comp=Z,136nm,0.7s,mb6.0						
XAN	**Xi'an**	**38.15**	**10**	P	**P**	**10 55 06.6**	**-1.8**
XAN				AP	pP	10 55 14.9	-0.8
XAN				XP	sP	10 55 19.1	+0.5
XAN				AMB	AMB		
	comp=Z,16nm,0.6s,mb4.9						
PTH	**Pithoragarh**	**38.83**	**330**	*e*P	**P**	**10 55 14.9**	**+0.6**
NDI	**New Delhi**	**39.75**	**326**	*e*P	**P**	**10 55 21.0**	**-1.0**
GTA	**Gaotai**	**42.89**	**358**	*e*P	**P**	**10 55 46.8**	**-0.8**
GTA				AP	pP	10 55 50.5	-4.4
GTA				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.3						
BJI	**Beijing**	**45.53**	**16**	P	**P**	**10 56 07.9**	**-0.8**
BJI				AMB	AMB		
	comp=Z,21nm,0.6s,mb5.2						
CTA	**Charters Tower**	**46.52**	**114**	*e*P	**P**	**10 56 17.3**	**+0.4**
	comp=Z,7.8nm,0.6s,mb4.8						
CTA	**Charters Tower**	**46.52**	**114**	*e*P	**P**	**10 56 17.3**	**+0.4**
CTA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CTAO	**Charters Tower**	**46.52**	**114**	*e*P	**P**	**10 56 17.1**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
CTAO	**Charters Tower**	**46.52**	**114**	*e*P	**P**	**10 56 17.1**	**+0.2**
	comp=Z,17nm,1.0s,mb4.9						
STKA	**Stephens Creek**	**46.91**	**131**	*e*P	**P**	**10 56 21.7**	**+1.9**
	comp=Z,16nm,0.5s,mb5.2						
STKA	**Stephens Creek**	**46.91**	**131**	P	**P**	**10 56 21.8**	**+2.0**
	comp=Z,18nm,0.5s,mb5.2,baz=306,slow=7.6,SNR=61						
KSRS	**Korea Array**	**47.71**	**29**	P	**P**	**10 56 25.1**	**-0.8**
	comp=Z,2.3nm,0.6s,mb4.4,baz=230,slow=8.1,SNR=14						
KSRS	**Korea Array**	**47.71**	**29**	P	**P**	**10 56 25.1**	**-0.8**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
KBL	**Kabul**	**48.77**	**324**	*e*P	**P**	**10 56 34.2**	**+0.1**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
KBL	**Kabul**	**48.77**	**324**	*e*P	**P**	**10 56 34.2**	**+0.1**
	comp=Z,9.5nm,0.5s,mb5.1						
SONM	**Songino Array**	**51.46**	**4**	P	**P**	**10 56 54.1**	**-0.1**
	comp=Z,21nm,0.6s,mb5.2,baz=188,slow=9.6,SNR=173						
SONM				PcP	PcP	10 58 07.7	-0.7
	comp=Z,3.7nm,0.6s,baz=184,slow=4.1,SNR=5.4						
SONM	**Songino Array**	**51.46**	**4**	P	**P**	**10 56 54.1**	**-0.2**
SONM						10 58 07.7	
SONM				pmax	pmax		
	comp=Z,21nm,0.6s						
SONM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ULN	**Ulaanbaatar**	**51.55**	**5**	⇑*e*P	**P**	**10 56 54.7**	**-0.2**
UCH	**Uchtor**	**51.84**	**335**	*e*P	**P**	**10 56 57.9**	**+0.6**
	comp=Z,3.6nm,0.5s,mb4.6						
CN2	**Changchun**	**51.93**	**22**	*e*P	**P**	**10 56 55.8**	**-2.0**
CN2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
TKM2	**Tokmak 2**	**51.96**	**336**	*e*P	**P**	**10 56 58.2**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,20nm,0.4s,mb5.4						
TKM2	**Tokmak 2**	**51.96**	**336**	P	**P**	**10 56 58.7**	**+0.6**
	SNR=5.4						
TKM2	**Tokmak 2**	**51.96**	**336**	*e*P	**P**	**10 56 58.2**	**+0.1**
	comp=Z,20nm,0.4s,mb5.4						
KBK	**Karagaybulak**	**52.01**	**335**	P	**P**	**10 56 59.4**	**+1.0**
	SNR=11						
AML	**Almayashu**	**52.12**	**334**	P	**P**	**10 56 59.5**	**+0.3**
	SNR=7.4						
AML	**Almayashu**	**52.12**	**334**	*e*P	**P**	**10 56 59.5**	**+0.3**
	comp=Z,14nm,0.7s,mb5.0						
EKS2	**Erkin-Say**	**52.51**	**334**	P	**P**	**10 57 02.6**	**+0.5**
	SNR=25						
EKS2	**Erkin-Say**	**52.51**	**334**	*e*P	**P**	**10 57 02.5**	**+0.3**
	comp=Z,24nm,0.7s,mb5.2						
MAT	**Matsushiro**	**52.64**	**37**	P	**P**	**10 57 01.9**	**-1.4**
MJAR	**Matsushiro Arr**	**52.64**	**37**	P	**P**	**10 57 01.4**	**-1.9**
	comp=Z,3.4nm,0.5s,mb4.5,baz=202,slow=7.8,SNR=15						
MJAR	**Matsushiro Arr**	**52.64**	**37**	P	**P**	**10 57 01.4**	**-1.9**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
USP	**Ospenovka**	**52.70**	**335**	P	**P**	**10 57 03.0**	**-0.5**
	SNR=9.4						
MKAR	**Makanchi Array**	**53.04**	**344**	P	**P**	**10 57 05.2**	**-0.8**
	comp=Z,57nm,0.5s,mb5.7,baz=151,slow=8.1,SNR=202						
MKAR	**Makanchi Array**	**53.04**	**344**	P	**P**	**10 57 05.3**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,57nm,0.5s						
ZAK	**Zakamensk**	**53.86**	**1**	*e*P	**P**	**10 57 10.8**	**-1.1**
ZAK				*e*		10 58 16.8	
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TLY	**Talaya**	**55.17**	**2**	*e*P	**P**	**10 57 21.6**	**+0.2**
TLY				*e*		10 57 33.6	
TLY				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
KURK	**Kurchatov**	**57.63**	**343**	*e*P	**P**	**10 57 38.0**	**-1.0**
KURK				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.3						
KURK	**Kurchatov**	**57.63**	**343**	*e*P	**P**	**10 57 38.0**	**-1.0**
	comp=Z,21nm,0.6s,mb5.3						
KLR	**Kul'dur**	**58.85**	**23**	*e*P	**P**	**10 57 42.3**	**-5.3**
ZAA0	**Zalesovo Array**	**59.08**	**349**	*e*P	**P**	**10 57 47.9**	**-1.3**
ZALV	**Zalesovo Beam**	**59.08**	**349**	P	**P**	**10 57 47.9**	**-1.2**
	comp=Z,24nm,0.5s,mb5.5,baz=168,slow=5.1,SNR=64						
ZALV	**Zalesovo Beam**	**59.08**	**349**	P	**P**	**10 57 47.9**	**-1.2**
ZALV				pmax	pmax		
	comp=Z,24nm,0.5s,mb5.5						
NVS	**Novosibirsk**	**60.24**	**348**	*e*P	**P**	**10 57 54.9**	**-2.2**
NVS				*e*S	**S**	**11 05 59.7**	**-10**
NVS				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
NVS				pmax	pmax		
	comp=E,12nm,1.3s						
NVS				smax			
	comp=N,23nm,1.9s						
YSS	**Yuzh-Sakhalins**	**62.11**	**31**	⇑*e*P	**P**	**10 58 08.8**	**-1.1**
YSS				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.3						
YSS	**Yuzh-Sakhalins**	**62.11**	**31**	*e*P	**P**	**10 58 09.0**	**-0.9**
	comp=Z,19nm,0.8s,mb5.3						
BOD	**Bodaibo**	**62.11**	**8**	*e*P	**P**	**10 58 08.0**	**-1.7**
BOD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
BRVK	**Borovoye**	**62.33**	**339**	*e*P	**P**	**10 58 09.6**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.3s,mb5.4						
BRVK	**Borovoye**	**62.33**	**339**	*e*P	**P**	**10 58 09.6**	**-1.6**
	comp=Z,9.9nm,0.3s,mb5.4						
SVE	**Sverdlovsk**	**68.79**	**337**	*e*P	**P**	**10 58 52.1**	**-0.9**
SVE				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
YAK	**Yakutsk**	**68.97**	**14**	*d i*P	**P**	**10 58 51.9**	**-2.1**
YAK				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.4						
MAW	**Mawson**	**69.06**	**195**	P	**P**	**10 58 58.4**	**+3.9**
	comp=Z,1.2nm,0.8s,baz=53,slow=7.9,SNR=3.8						
MAW	**Mawson**	**69.06**	**195**	P	**P**	**10 58 58.4**	**+3.9**
MAW				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARU	**Arti**	**69.33**	**336**	*c i*P	**P**	**10 58 55.0**	**-1.3**
ARU				*e*S	S	11 08 00.7	-0.8
ARU				*e*SS	SS	11 12 19.6	-9.2
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
MALT	**Malatya**	**71.58**	**312**	*e*P	**P**	**10 59 10.0**	**-0.4**
MALT				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
MALT	**Malatya**	**71.58**	**312**	*e*P	**P**	**10 59 09.9**	**-0.5**
	comp=Z,1.6nm,0.5s,mb4.2						
PEA0B	**Petropavlovsk-**	**73.49**	**31**	*e*P	**P**	**10 59 20.1**	**-1.4**
PETK	**Petropavlovsk-**	**73.49**	**31**	P	**P**	**10 59 19.8**	**-1.7**
	comp=Z,5.0nm,0.5s,mb4.7,baz=227,slow=0.2,SNR=42						
PET	**Petropavlovsk**	**73.95**	**32**	⇑*i*P	**P**	**10 59 22.6**	**-1.6**
PET				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.5						
PET	**Petropavlovsk**	**73.95**	**32**	*e*P	**P**	**10 59 22.6**	**-1.6**
	comp=Z,18nm,0.5s,mb5.3						
VSR	**Storozhevoye**	**76.00**	**325**	*e*P	**P**	**10 59 34.7**	**-1.4**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
VSR				pmax	pmax		
	comp=N,6.0nm,1.0s						
VSR				pmax	pmax		
	comp=E,7.0nm,0.5s						
BOSA	**Boshof**	**76.19**	**242**	P	**P**	**10 59 39.7**	**+1.9**
	comp=E,1.9nm,0.6s,mb4.2,baz=141,slow=12,SNR=5.5						
BOSA	**Boshof**	**76.19**	**242**	P	**P**	**10 59 39.7**	**+2.0**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BOSA	**Boshof**	**76.19**	**242**	P	**P**	**10 59 39.7**	**+1.9**
URZ	**Urewera**	**76.43**	**128**	P	**P**	**10 59 39.7**	**+0.8**
	comp=Z,6.2nm,0.8s,mb4.6,baz=240,slow=5.9,SNR=3.1						
OBN	**Obninsk**	**79.00**	**328**	⇓*e*P	**P**	**10 59 52.6**	**-0.2**
OBN				*e*	pP	11 00 00.7	+0.2
OBN				*e*		11 00 06.9	
OBN						11 02 51.0	
OBN				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
OBN				MLR	MLR		
	comp=Z,600nm,16.0s,MS5.0						
RAO	**Raoul Island**	**79.98**	**119**	*e*P	**P**	**10 59 52.5**	**-6.2**
	comp=Z,3μm,0.6s						
AKASG	**Malin Array Be**	**81.72**	**322**	P	**P**	**11 00 06.7**	**-0.8**
	comp=Z,3.1nm,0.5s,mb4.5,baz=87,slow=4.3,SNR=1.7						
AKASG	**Malin Array Be**	**81.72**	**322**	P	**P**	**11 00 06.7**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VRI	**Vrincioaia**	**82.10**	**317**	⇓*i*P	**P**	**11 00 10.8**	**+1.2**
MLR	**Muntele Rosu**	**82.55**	**317**	⇓*i*P	**P**	**11 00 13.0**	**+1.0**
VOIR		**83.15**	**316**	⇓*i*P	**P**	**11 00 15.6**	**+0.5**
BURAR	**Bucovina Array**	**83.51**	**319**	⇓*i*P	**P**	**11 00 18.4**	**+1.5**
JOF	**Joensuu**	**84.37**	**334**	*e*p	**P**	**11 00 19.8**	**-1.1**
	comp=Z,7.8nm,0.7s,mb5.0						
JOF	**Joensuu**	**84.37**	**334**	*e*P	**P**	**11 00 19.8**	**-1.1**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0						
DRGR		**85.01**	**317**	⇓*i*P	**P**	**11 00 25.5**	**+0.9**
BZS	**Buzias**	**85.55**	**316**	⇓*i*P	**P**	**11 00 27.8**	**+0.5**
BZS	**Buzias**	**85.55**	**316**	⇓P	**P**	**11 00 27.8**	**+0.5**
KOLS	**Kolonicke sedl**	**85.70**	**319**	*e*P	**P**	**11 00 28.6**	**+0.7**
CRVS	**Cervenica-Dubn**	**86.22**	**319**	*e*P	**P**	**11 00 30.1**	**-0.4**
KAF	**Kangasniemi**	**86.35**	**333**	*e*p	**P**	**11 00 30.3**	**-0.5**
	comp=Z,7.5nm,0.6s,mb5.1,baz=99,slow=4.5						
KAF	**Kangasniemi**	**86.35**	**333**	*e*P	**P**	**11 00 30.3**	**-0.5**
KAF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.1						
STHS	**Stebnicka Huta**	**86.45**	**320**	*e*P	**P**	**11 00 32.5**	**+0.9**
STHS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
STHS	**Stebnicka Huta**	**86.45**	**320**	*e*P	**P**	**11 00 32.5**	**+0.9**
	comp=Z,5.8nm,0.8s,mb4.9						
KECS	**Kecovo**	**86.79**	**319**	*e*P	**P**	**11 00 33.4**	**+0.1**
KECS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.5						
KECS	**Kecovo**	**86.79**	**319**	*e*P	**P**	**11 00 33.4**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.5						
PKSM	**Moragy**	**87.70**	**316**	⇓*i*P	**P**	**11 00 38.4**	**+0.6**
PKSM	**Moragy**	**87.70**	**316**	⇓P	**P**	**11 00 38.4**	**+0.7**
ARCES	**ARCESS Array B**	**88.55**	**340**	P	**P**	**11 00 40.7**	**-0.6**

MZDA	**Masada**	**1.66**	**331**	Pn	**Pn**	**10 59 58.8**	**0.0**
MZDA				Sn	**Sn**	**11 00 20.8**	**-0.1**
BDAS	**Al Bad'**	**1.77**	**217**	P	**Pn**	**10 59 59.9**	**-0.4**
YTIR	**Yattir**	**1.82**	**326**	Pn	**Pn**	**11 00 01.2**	**+0.3**
RTMI	**Retamim**	**1.84**	**311**	Pn	**Pn**	**11 00 01.2**	**0.0**
RTMI				Sn	**Sn**	**11 00 25.2**	**0.0**
DSI	**Dead Sea**	**1.89**	**335**	Pn	**Pn**	**11 00 02.1**	**+0.3**
KZIT	**Kziot**	**1.96**	**303**	Pn	**Pn**	**11 00 03.2**	**+0.4**
KZIT				Sn	**Sn**	**11 00 28.6**	**+0.5**
HMDT	**Nahal Hemdat**	**2.48**	**344**	Sn	**Sn**	**11 00 42.7**	**+1.6**

IDC ***13*** *11:01:31.4±1.2, 287N×7820W, h0km, mb3.6/4, mb1 4.0/5, mb1mx3.8/20, mbtmp3.7/5, ML2.6/1, Error ellipse: s-maj=33.0km s-min=23.9km az=66.0*

ISC 13 11:01:36.1±8.0, 28N±01×782W±01, h30km±60km, n5, σ1♀72/6, mb3.7/4, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ROSC	**El Rosal**	**4.38**	**62**	Pn		**Pn**	**11 02 40.8**	**0.0**
	6.1nm,0.3s,baz=100,slow=11,SNR=8.0							
ROSC				Sn		**Sn**	**11 03 31.1**	**+0.2**
	6.7nm,0.3s,baz=88,slow=23,SNR=9.1							
LPAZ	**La Paz**	**21.45**	**153**	P		**P**	**11 06 21.7**	**-0.5**
	1.3nm,0.8s,mb3.3,baz=343,slow=14,SNR=4.0							
PLCA	**Paso Flores**	**43.91**	**172**	P		**P**	**11 09 40.8**	**+0.6**
	1.7nm,0.9s,mb3.8,baz=315,slow=8.6,SNR=3.5							
NVAR	**Mina Array Bea**	**50.91**	**319**	P		**P**	**11 10 36.0**	**+1.3**
	0.6nm,0.6s,mb3.7,baz=125,slow=7.1,SNR=7.5							
YKA	**Yellowknife Ar**	**65.37**	**342**	P		**P**	**11 12 13.5**	**-2.0**
	0.9nm,0.8s,mb3.9,baz=137,slow=5.8,SNR=6.0							

ISCJB ***13*** *11:04:42.2±2.6, 1538S±008×1676E±0.1, h38km±23km, mb4.2/10, MS4.1/1, Error ellipse: s-maj=21.7km s-min=9.7km az=153.9*

NEIC ***13*** *11:04:43.9±2.2, 1540S×16769E, h40km±18km, mb4.3/2, Error ellipse: s-maj=23.5km s-min=14.3km az=67.0*

IDC ***13*** *11:04:47.5±4.5, 1532S×16754E, h72km±40km, mb3.9/10, mb1 4.0/11, mb1mx3.9/19, mbtmp3.9/11, ML4.9/1, MS4.3/1, Ms1 4.3/1, ms1mx3.6/30, Error ellipse: s-maj=25.4km s-min=20.9km az=77.0*

ISC 13 11:04:46.8±2.2, 1537S±008×1676E±01, h66km±19km, n25, σ0♀83/18, mb4.1/10, 5C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**6.76**	**189**	*e*P		**Pn**	**11 06 18.8**	**-4.6**
DZM				*e*S		**Sn**	**11 07 35.4**	**-3.6**
DZM	**Mont Dzumac**	**6.76**	**189**	*e*Pn		**Pn**	**11 06 19.1**	**-4.4**
DZM				*e*Sn		**Sn**	**11 07 40.0**	**+1.0**
HNR	**Honiara**	**9.51**	**307**	P		**Pn**	**11 07 01.1**	**-0.1**
	11nm,0.3s,baz=132,slow=14,SNR=5.5							
HNR				S		**Sn**	**11 08 46.8**	**+0.3**
	2.5nm,0.3s,baz=189,slow=13,SNR=2.0							
CTA	**Charters Tower**	**20.85**	**254**	*e*P		**P**	**11 09 25.6**	**+2.2**
	3.1nm,0.9s							
CTA	**Charters Tower**	**20.85**	**254**	P		**P**	**11 09 24.8**	**+1.4**
	2.7nm,0.7s,baz=67,slow=13,SNR=4.4							
CTA				LR		LR	11 16 23.9	
	comp=Z,862nm,19.1s,baz=127,slow=33							
URZ	**Urewera**	**24.30**	**162**	P		**P**	**11 09 58.0**	**-0.1**
	12nm,0.8s,mb4.3,baz=163,slow=18,SNR=6.5							
WRA	**Warramunga Arr**	**31.98**	**257**	P		**P**	**11 11 05.9**	**-1.0**
	0.9nm,0.7s,mb3.6,baz=84,slow=8.4,SNR=9.0							
FITZ	**Fitzroy Crossi**	**40.21**	**260**	P		**P**	**11 12 16.6**	**-0.6**
	1.9nm,0.7s,mb4.0,baz=92,slow=8.8,SNR=7.2							
MJAR	**Matsushiro Arr**	**58.61**	**332**	P		**P**	**11 14 35.5**	**-1.5**
	0.5nm,0.4s,mb3.9,baz=148,slow=7.4,SNR=4.4							
MAW	**Mawson**	**81.42**	**202**	P		**P**	**11 16 57.0**	**+0.8**
	4.1nm,1.1s,mb4.2,baz=90,slow=10,SNR=5.0							
SONM	**Songino Array**	**83.19**	**324**	P		**P**	**11 17 05.7**	**0.0**
	1.6nm,0.9s,mb3.9,baz=140,slow=5.3,SNR=12							
NVAR	**Mina Array Bea**	**87.45**	**49**	P		**P**	**11 17 27.9**	**+0.7**
	1.6nm,0.7s,mb4.1,baz=231,slow=9.5,SNR=10							
BMO	**Blue Mountains**	**90.50**	**43**	*e*P		**P**	**11 17 41.5**	**+0.1**
	9.0nm,1.6s,mb4.7							
TXAR	**Lajitas Array**	**96.31**	**61**	P		**P**	**11 18 08.7**	**+0.2**
	0.3nm,0.8s,mb3.8,baz=227,slow=5.9,SNR=3.3							
MKAR	**Makanchi Array**	**97.88**	**316**	P		**P**	**11 18 15.1**	**-0.1**
	0.3nm,0.2s,mb4.4,baz=87,slow=7.8,SNR=4.0							
BAIF	**Baives**	**142.86**	**342**	*e*PKP1	PKPdf		11 24 12.9	+0.2
CABF	**La Chapelle**	**145.23**	**337**	⇑*i*PKP1	PKPbc		11 24 17.4	+0.6
	23nm,1.0s							
FLN	**La Foliniere**	**145.28**	**346**	*e*PKP1	PKPbc		11 24 16.3	-0.6
	26nm,1.1s							
LDF	**La Druitiere**	**145.36**	**346**	*e*PKP1	PKPbc		11 24 16.7	-0.4
LOR	**Lormes**	**145.44**	**340**	⇑*i*PKP1	PKPbc		11 24 17.5	+0.1
	18nm,1.0s							
GRR	**Gorron**	**145.72**	**346**	⇑*i*PKP1	PKPbc		11 24 18.1	-0.1
	26nm,1.0s							
SSF	**Saint Saulge**	**145.73**	**341**	⇑*i*PKP1	PKPbc		11 24 18.6	+0.3
	21nm,1.0s							
TCF	**Toux Ste Croi**	**146.83**	**341**	*e*PKP1	PKPbc		11 24 20.6	-1.0
MFF	**Saint Martin d**	**147.22**	**344**	⇑*i*PKP1	PKPbc		11 24 22.5	-0.2
	16nm,0.9s							
RJF	**Les Rejaudoux**	**147.93**	**341**	*e*PKP1	PKPbc		11 24 24.6	-0.1

BJI ***13*** *11:13:13.9, 2.18S×100.21E, h15km, mB5.1, mb4.7*

ISCJB ***13*** *11:13:17.5±0.4, 221S±006×10026E±006, h40km, mb4.6/27, Error ellipse: s-maj=10.8km s-min=7.0km az=137.7*

NEIC ***13*** *11:13:18.6±0.3, 2.18S×100.28E, h35km, mb4.8/8, Error ellipse: s-maj=11.0km s-min=5.9km az=51.0*

IDC ***13*** *11:13:19.6±0.6, 2.17S×100.27E, h40km±4km, mb4.2/22, mb1 4.3/23, mb1mx4.3/25, mbtmp4.2/23, ML4.5/1, Error ellipse: s-maj=17.4km s-min=9.6km az=57.0*

DJA ***13*** *11:13:20, 2.18S×100.20E, h20km, MLv4.8/5*

ISC 13 11:13:19.7±0.4, 221S±006×10026E±006, h42km, h42km±2.0km: pP-P, n55, σ0♀95/47, mb4.6/27, 2C-2D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PPI	**Padang Panjang**	**1.75**	**5**	P		**Pn**	**11 13 47.5**	**-0.1**
	0.0nm,0.0s							
RGRI	**Rengat**	**2.78**	**48**	P		**Pn**	**11 14 05.1**	**+3.4**
	0.0nm,0.0s							
TRSI	**Tarutung**	**4.40**	**343**	P		**Pn**	**11 14 27.9**	**+3.8**
	0.0nm,0.0s							
DSRI	**Dabo**	**4.65**	**68**	P		**Pn**	**11 14 29.2**	**+1.8**
	0.0nm,0.0s							
KLI	**Kotabumi**	**5.29**	**120**	P		**Pn**	**11 14 42.5**	**+6.2**
	0.0nm,0.0s							
CBJI	**Citeko**	**7.79**	**123**	P		**Pn**	**11 15 17.2**	**+6.6**
	283nm,0.8s							
SJI	**Sawahan**	**12.71**	**116**	P		**Pn**	**11 16 18.8**	**+0.9**
	0.0nm,0.0s							
SDKM	**Sandakan**	**18.63**	**65**	⇓P		**Pn**	**11 17 34.1**	**-0.4**
SDKM	**Sandakan**	**18.63**	**65**	⇓P		**Pn**	**11 17 34.1**	**-0.4**
KAPI	**Kappang**	**19.65**	**99**	P		**Pn**	**11 17 44.4**	**-2.4**
	1.3nm,0.3s,baz=290,slow=15,SNR=4.9							
CMAR	**Chiang Mai Arr**	**20.58**	**356**	P		**P**	**11 17 54.0**	**-1.2**
	4.4nm,0.5s,baz=186,slow=10,SNR=17							
FITZ	**Fitzroy Crossi**	**29.48**	**124**	⇑*i*P		**P**	**11 19 19.5**	**-0.5**
	7.6nm,0.8s,mb4.5							
FITZ	**Fitzroy Crossi**	**29.48**	**124**	P		**P**	**11 19 19.8**	**-0.2**
	3.7nm,0.7s,mb4.2,baz=278,slow=3.2,SNR=13							
FITZ				pP		pP	11 19 31.3	-0.1
	5.2nm,0.9s,baz=298,slow=5.8,SNR=7.1							
NWAO	**Narrogin (SRO)**	**34.46**	**154**	P		**P**	**11 20 04.2**	**+0.7**
	12nm,0.9s,mb4.8,baz=310,slow=5.2,SNR=4.4							
XAN	**Xi'an**	**36.97**	**12**	P		**P**	**11 20 24.6**	**-0.4**
XAN				AP		pP	11 20 31.9	-4.7
XAN				XP		sP	11 20 35.5	-6.1
WRA	**Warramunga Arr**	**37.66**	**120**	P		**P**	**11 20 30.4**	**-0.7**
	10nm,0.5s,mb4.8,baz=301,slow=9.0,SNR=118							
WRA				pP		pP	11 20 42.0	-0.8
	19nm,0.8s,baz=296,slow=9.5,SNR=22							
WRA				PcP		PcP	11 22 47.5	-0.6
	1.0nm,0.7s,baz=290,slow=2.5,SNR=3.6							
WRAB	**Tennant Creek**	**37.67**	**120**	*e*P		**P**	**11 20 30.1**	**-1.1**
	19nm,0.8s,mb4.9							
WRAB				*e*pP		pP	11 20 42.6	-0.2
WB2	**Warramunga Arr**	**37.67**	**120**	⇑*i*P		**P**	**11 20 30.5**	**-0.7**
KSRS	**Korea Array**	**47.07**	**30**	P		**P**	**11 21 48.0**	**+0.6**
	1.8nm,0.8s,mb4.0,baz=223,slow=8.3,SNR=8.8							
WMQ	**Urumqi**	**47.19**	**348**	P		**P**	**11 21 49.1**	**+0.9**
WMQ				AMB		AMB		
	comp=Z,43nm,0.8s,mb5.4							
CTA	**Charters Tower**	**48.27**	**115**	*e*P		**P**	**11 21 56.2**	**-0.8**
	comp=Z,5.0nm,0.8s,mb4.6							
CTA	**Charters Tower**	**48.27**	**115**	P		**P**	**11 21 57.4**	**+0.3**
	comp=Z,7.0nm,0.9s,mb4.7,baz=283,slow=11,SNR=9.4							
STKA	**Stephens Creek**	**48.82**	**132**	*e*P		**P**	**11 22 01.3**	**+0.3**
	comp=Z,8.0nm,0.6s,mb4.9							
STKA	**Stephens Creek**	**48.82**	**132**	P		**P**	**11 22 01.7**	**+0.7**
	comp=Z,9.9nm,0.6s,mb5.0,baz=305,slow=7.1,SNR=26							
SONM	**Songino Array**	**50.13**	**5**	P		**P**	**11 22 11.4**	**+0.8**
	comp=Z,3.1nm,0.7s,mb4.5,baz=187,slow=9.2,SNR=21							
SONM				PcP		PcP	11 23 30.0	+0.3
	comp=Z,1.3nm,0.6s,baz=162,slow=4.2,SNR=2.8							
TKM2	**Tokmak 2**	**50.13**	**336**	*e*P		**P**	**11 22 11.3**	**+0.6**
	comp=Z,27nm,0.7s,mb5.4							
AML	**Almayashu**	**50.27**	**334**	*e*P		pP	11 22 24.9	+1.1
EKS2	**Erkin-Say**	**50.66**	**335**	*e*P		**P**	**11 22 15.6**	**+0.8**
	comp=Z,64nm,0.6s,mb5.7							
MKAR	**Makanchi Array**	**51.30**	**344**	P		**P**	**11 22 19.7**	**+0.2**
	comp=Z,3.7nm,0.7s,mb4.5,baz=148,slow=8.0,SNR=28							
MKAR				pP		pP	11 22 31.5	0.0
	comp=Z,16nm,0.7s,baz=146,slow=8.2,SNR=24							
MJAR	**Matsushiro Arr**	**52.28**	**39**	P		**P**	**11 22 26.6**	**-0.5**
	comp=Z,1.0nm,0.6s,mb3.9,baz=225,slow=6.7,SNR=3.5							
KURK	**Kurchatov**	**55.88**	**344**	P		**P**	**11 22 52.2**	**-0.8**
	comp=Z,4.7nm,0.8s,mb4.6,baz=157,slow=7.7,SNR=14							
KURK				pP		pP	11 23 04.1	-1.0
	comp=Z,6.0nm,0.9s,baz=154,slow=7.7,SNR=9.9							
ZAA0	**Zalesovo Array**	**57.42**	**349**	*e*P		**P**	**11 23 04.3**	**+0.4**
ZAA0				*e*pP		pP	11 23 15.6	-0.5
ZALV	**Zalesovo Beam**	**57.42**	**349**	P		**P**	**11 23 03.6**	**-0.2**
	comp=Z,2.8nm,0.4s,mb4.7,baz=186,slow=7.2,SNR=6.3							
ZALV				pP		pP	11 23 15.5	-0.5
	comp=Z,14nm,0.8s,baz=170,slow=5.5,SNR=7.3							
ZALV	**Zalesovo Beam**	**57.42**	**349**	P		**P**	**11 23 03.6**	**-0.2**
ZALV				pP		pP	11 23 15.5	-0.5
BVAR	**Borovoye Array**	**60.47**	**340**	P		**P**	**11 23 24.0**	**-1.1**
	comp=Z,3.3nm,0.7s,mb4.5,baz=151,slow=8.8,SNR=16							
KMBO	**Kilima Mbogo**	**62.98**	**270**	P		**P**	**11 23 43.1**	**+0.3**
	comp=Z,0.6nm,0.3s,mb4.2,baz=59,slow=23,SNR=3.8							
MALT	**Malatya**	**69.67**	**312**	*e*P		**P**	**11 24 23.8**	**-1.4**
	comp=Z,6.3nm,1.2s,mb4.4							
MAW	**Mawson**	**70.14**	**194**	P		**P**	**11 24 28.9**	**+1.4**
	comp=Z,3.9nm,0.8s,mb4.4,baz=3.3,slow=3.2,SNR=9.6							
PETK	**Petropavlovsk-**	**72.92**	**32**	P		**P**	**11 24 44.2**	**-0.3**
	comp=Z,2.5nm,1.0s,mb4.1,baz=207,slow=11,SNR=3.2							
BR131	**Keskin Array S**	**73.65**	**312**	*e*P		**P**	**11 24 48.0**	**-1.0**
	comp=Z,6.9nm,1.0s,mb4.5							
RPZ	**Rata Peaks**	**74.65**	**135**	P		**P**	**11 24 55.2**	**+0.4**
	comp=Z,8.2nm,0.5s,mb4.9,baz=225,slow=1.0,SNR=5.6							
BOSA	**Boshof**	**75.78**	**241**	P		**P**	**11 25 01.3**	**-0.3**
	comp=Z,2.1nm,0.6s,mb4.2,baz=56,slow=15,SNR=4.8							
AKASG	**Malin Array Be**	**79.81**	**322**	P		**P**	**11 25 21.6**	**-1.9**
	comp=Z,1.7nm,0.6s,mb4.2,baz=92,slow=3.6,SNR=4.8							
BUR08	**Bucovina Ar. S**	**81.61**	**319**	*e*P		**P**	**11 25 34.1**	**+0.9**
ARCES	**ARCESS Array B**	**86.76**	**340**	P		**P**	**11 25 59.2**	**+0.3**
	comp=Z,6.9nm,0.8s,mb4.9,baz=110,slow=4.6,SNR=24							
ARCES				pP		pP	11 26 11.8	0.0
	comp=Z,5.0nm,0.7s,baz=69,slow=6.6,SNR=4.6							
ARCES	**ARCESS Array B**	**86.76**	**340**	P		**P**	**11 25 59.2**	**+0.3**
ARCES				pP		pP	11 26 11.8	0.0
GERES	**GERESS Array B**	**89.38**	**319**	P		**P**	**11 26 12.3**	**+0.5**
	comp=Z,0.3nm,0.3s,mb4.1,baz=94,slow=4.0,SNR=7.0							
KEST	**Kesra**	**92.02**	**306**	P		**P**	**11 26 25.8**	**+1.3**
	comp=Z,3.6nm,0.9s,mb4.7,baz=224,slow=2.7,SNR=6.9							
ULM	**Lac du Bonnet**	**130.21**	**14**	PKP	PKPdf		11 32 25.4	+0.1
	comp=Z,5.5nm,1.0s,baz=318,slow=8.7,SNR=3.2							
PDAR	**Pinedale Array**	**131.63**	**29**	PKP	PKPdf		11 32 28.2	-0.1
	comp=Z,0.2nm,0.6s,baz=211,slow=1.1,SNR=2.7							
CPUP	**Villa Florida**	**144.30**	**216**	PKP	PKPdf		11 32 50.6	-1.4
	comp=Z,8.6nm,0.7s,baz=132,slow=2.3,SNR=29							
TXAR	**Lajitas Array**	**144.71**	**38**	PKP	PKPdf		11 32 52.1	-0.5
	comp=Z,5.0nm,0.7s,baz=250,slow=1.2,SNR=73							
MIAR	**Mount Ida**	**145.34**	**20**	*e*PKPbc	PKPbc		11 32 53.0	-0.3
TZTN	**Tazewell**	**145.66**	**5**	*e*PKPbc	PKPbc		11 32 53.6	-0.7
JCT	**Junction City**	**146.06**	**32**	*e*PKPbc	PKPbc		11 32 55.8	0.0

IDC 13 11:24:06.4±4.7, 211S×9964E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=186.9km s-min=30.3km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**38.25**	**120**	P		P	11 31 28.4	-0.2
	0.3nm,0.6s,baz=302,slow=9.2,SNR=4.2							
SONM	**Songino Array**	**50.08**	**6**	P		P	11 33 03.5	+0.4
	0.7nm,0.6s,baz=180,slow=7.4,SNR=4.8							
MKAR	**Makanchi Array**	**51.03**	**345**	P		P	11 33 09.8	-0.5
	0.5nm,0.6s,baz=140,slow=7.9,SNR=3.7							
TXAR	**Lajitas Array**	**145.00**	**37**	PKPbc	PKPbc		11 43 45.5	-0.2
	0.5nm,0.7s,baz=291,slow=1.6,SNR=6.8							

BJI ***13*** *11:34:21.9, 285S×100.35E, h19km, mB5.1, mb4.7, Ms4.9, Msz4.7*

IDC ***13*** *11:34:22.5±1.1, 274S×100.46E, h0km, mb4.5/12, mb1 4.7/13, mb1mx4.4/20, mbtmp4.5/13, ML4.6/1, MS4.0/1, Ms1 4.0/1, ms1mx3.5/36, Error ellipse: s-maj=36.2km s-min=12.8km az=51.0*

MOS ***13*** *11:34:26.3±0.7, 255S×10050E, h33km, mb5.1/10, Error ellipse: s-maj=19.5km s-min=10.4km az=102.2*

NEIC ***13*** *11:34:28.6±0.5, 257S×10049E, h35km, mb5.0/10, Error ellipse: s-maj=18.6km s-min=5.5km az=50.0*

DJA ***13*** *11:34:28, 260S×10021E, h20km, MLv5.0/7*

ISCJB ***13*** *11:34:32.4±1.4, 251S±008×1005E±0.1, h87km±10km, mb4.7/32, Error ellipse: s-maj=20.4km s-min=7.4km az=144.2*

ISC 13 11:34:34.4±1.3, 250S±008×1006E±01, h87km±9km, h15km±6.2km: pP-P, n66, σ1♀10/65, mb4.7/32, 2C-1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RGRI	**Rengat**	**2.78**	**40**	P		**Pn**	**11 35 16.7**	**-0.3**
	0.0nm,0.0s							
DSRI	**Dabo**	**4.50**	**64**	P		**Pn**	**11 35 40.3**	**0.0**
	0.0nm,0.0s							
KLI	**Kotabumi**	**4.90**	**119**	P		**Pn**	**11 35 45.9**	**+0.2**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.59**	**87**	P		**Pn**	**11 35 59.6**	**+4.4**
	30nm,1.2s							
CBJI	**Citeko**	**7.39**	**122**	P		**Pn**	**11 36 22.0**	**+2.3**
	681nm,0.3s							
LEM	**Lembang**	**8.25**	**122**	P		**Pn**	**11 36 32.9**	**+1.4**
	86nm,0.9s							
SJI	**Sawahan**	**12.32**	**115**	P		**Pn**	**11 37 23.9**	**-3.0**
	34nm,0.8s							
BBKI	**Banjar Baru**	**14.31**	**94**	P		**Pn**	**11 37 59.2**	**+6.2**
	120nm,0.8s							
KAPI	**Kappang**	**19.32**	**98**	P		**Pn**	**11 38 51.8**	**-3.1**
	2.0nm,0.3s,baz=268,slow=12,SNR=15							
CMAR	**Chiang Mai Arr**	**20.88**	**356**	P		**P**	**11 39 07.5**	**-2.2**
	3.2nm,0.6s,baz=185,slow=11,SNR=21							
CMAR				PcP		PcP	11 43 16.2	+1.3
	0.4nm,0.3s,baz=194,slow=1.6,SNR=4.4							
CMAR	**Chiang Mai Arr**	**20.88**	**356**	⇑*e*P		**P**	**11 39 07.5**	**-2.2**
CHTO	**Chiang Mai**	**21.23**	**356**	*e*P		**P**	**11 39 11.3**	**-2.2**
CHTO				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb3.7							
CHTO	**Chiang Mai**	**21.23**	**356**	*e*P		**P**	**11 39 11.3**	**-2.2**
	comp=Z,3.0nm,0.7s,mb3.7							
QIZ	**Qiongzhong**	**23.26**	**23**	P		**P**	**11 39 32.8**	**-1.7**
FITZ	**Fitzroy Crossi**	**29.08**	**124**	P		**P**	**11 40 26.1**	**-0.9**
	comp=Z,3.4nm,0.8s,mb4.0,baz=225,slow=2.3,SNR=5.1							
SWI	**Sorong**	**30.74**	**88**	P		**P**	**11 40 42.9**	**+1.1**
	comp=Z,34nm,0.9s,mb5.1							
LSA	**Lhasa**	**33.25**	**345**	P		**P**	**11 41 04.4**	**+0.9**
LSA	**Lhasa**	**33.25**	**345**	*e*P		**P**	**11 41 04.3**	**+0.8**
LSA				pmax		pmax		
	comp=Z,22nm,1.0s,mb4.9							
LSA	**Lhasa**	**33.25**	**345**	*e*P		**P**	**11 41 04.3**	**+0.8**
	comp=Z,22nm,1.0s,mb5.0							
WHN	**Wuhan**	**35.40**	**21**	P		**P**	**11 41 24.5**	**+2.5**
XAN	**Xi'an**	**37.19**	**12**	P		**P**	**11 41 36.8**	**-0.4**
XAN				AP		pP	11 41 45.5	-12
XAN				XP		sP	11 41 49.8	-18
XAN				AMB		AMB		
	comp=Z,7.0nm,0.6s,mb4.8							
WRA	**Warramunga Arr**	**37.27**	**120**	P		**P**	**11 41 37.2**	**-1.0**
	comp=Z,5.0nm,0.7s,mb4.5,baz=297,slow=8.6,SNR=16							
WRA				S		**S**	**11 47 20.9**	**+1.4**
	comp=Z,2.3nm,0.8s,baz=297,slow=15,SNR=9.5							
WRAB	**Tennant Creek**	**37.28**	**120**	⇑*i*P		**P**	**11 41 37.1**	**-1.1**
WB2	**Warramunga Arr**	**37.28**	**120**	*e*P		**P**	**11 41 37.5**	**-0.8**
WB2				*e*S		**S**	**11 47 19.5**	**-0.1**
LZH	**Lanzhou**	**38.51**	**4**	*e*P		**P**	**11 41 47.5**	**-0.8**
LZH				AP		pP	11 41 52.3	-16
LZH				XP		sP	11 41 55.0	-24
LZH				AMB		AMB		
	comp=Z,18nm,1.3s,mb4.7							
LZH				AMB		AMB		
	comp=Z,79nm,4.5s							
GTA	**Gaotai**	**41.71**	**359**	*e*P		**P**	**11 42 14.9**	**+0.2**
GTA				AP		pP	11 42 19.6	-16
GTA				XP		sP	11 42 21.8	-23
GTA				AMB		AMB		
	comp=Z,6.0nm,1.0s,mb4.3							
BJI	**Beijing**	**44.69**	**17**	P		**P**	**11 42 38.3**	**-0.5**
BJI				AMB		AMB		
	comp=Z,15nm,0.9s,mb4.7							
KSRS	**Korea Array**	**47.17**	**30**	P		**P**	**11 42 59.4**	**+1.0**
	comp=Z,3.6nm,1.0s,mb4.1,baz=227,slow=9.2,SNR=11							
WMQ	**Urumqi**	**47.53**	**347**	*e*P		**P**	**11 43 01.6**	**+0.6**
WMQ				AP		pP	11 43 07.3	-15
WMQ				AMB		AMB		
	comp=Z,17nm,0.9s,mb4.9							
CTA	**Charters Tower**	**47.89**	**115**	*e*P		**P**	**11 43 03.7**	**-0.5**
	comp=Z,12nm,0.8s,mb4.8							
CTA	**Charters Tower**	**47.89**	**115**	LR		LR	12 03 01.3	
	comp=Z,164nm,20.5s,baz=230,slow=36							
CTA	**Charters Tower**	**47.89**	**115**	*e*P		**P**	**11 43 03.7**	**-0.5**
CTA				pmax		pmax		
	comp=Z,12nm,0.8s							
CTAO	**Charters Tower**	**47.89**	**115**	*e*P		**P**	**11 43 03.9**	**-0.3**
CTAO				pmax		pmax		
	comp=Z,16nm,0.8s,mb4.9							
CTAO	**Charters Tower**	**47.89**	**115**	*e*P		**P**	**11 43 03.9**	**-0.4**
	comp=Z,16nm,0.8s,mb4.9							
STKA	**Stephens Creek**	**48.41**	**132**	P		**P**	**11 43 07.7**	**-0.4**
	comp=Z,10nm,0.8s,mb4.7							
STKA	**Stephens Creek**	**48.41**	**132**	P		**P**	**11 43 07.8**	**-0.3**
	comp=Z,10nm,0.8s,mb4.7,baz=310,slow=8.4,SNR=15							
UCH	**Uchtor**	**50.37**	**335**	*e*P		**P**	**11 43 23.5**	**+0.7**
	comp=Z,3.3nm,0.8s,mb4.3							
SONM	**Songino Array**	**50.38**	**5**	P		**P**	**11 43 23.9**	**+1.1**
	comp=Z,19nm,0.8s,mb5.1,baz=187,slow=8.3,SNR=93							
SONM				PcP		PcP	11 44 40.8	+0.7
	comp=Z,2.4nm,0.7s,baz=192,slow=3.6,SNR=4.2							
ULN	**Ulaanbaatar**	**50.48**	**6**	*e*P		**P**	**11 43 24.6**	**+1.2**
ULN				pmax		pmax		
	comp=Z,12nm,0.8s,mb4.9							
ULN	**Ulaanbaatar**	**50.48**	**6**	P		**P**	**11 43 24.6**	**+1.2**
	comp=Z,12nm,0.8s,mb4.9							
TKM2	**Tokmak 2**	**50.50**	**336**	*e*P		**P**	**11 43 24.6**	**+0.9**
TKM2				pmax		pmax		
	comp=Z,13nm,0.8s,mb5.0							
TKM2	**Tokmak 2**	**50.50**	**336**	*e*P		**P**	**11 43 24.6**	**+0.9**
	comp=Z,13nm,0.8s,mb5.0							
AML	**Almayashu**	**50.65**	**334**	*e*P		**P**	**11 43 25.5**	**+0.7**
	comp=Z,9.4nm,0.8s,mb4.9							
EKS2	**Erkin-Say**	**51.04**	**335**	*e*P		**P**	**11 43 28.1**	**+0.3**
	comp=Z,17nm,0.9s,mb5.1							
CN2	**Changchun**	**51.22**	**23**	*e*P		**P**	**11 43 29.1**	**0.0**
CN2				AMB		AMB		
	comp=Z,20nm,0.9s,mb5.2							

KTGM	**Kuala Trenggan**	**8.05**	**27**	⇑P		**Pn**	**11 59 16.8**	**-0.2**
DBJI	**Dramaga**	**8.58**	**123**	P		**Pn**	**11 59 25.4**	**+1.2**
	159nm,1.0s							
CBJI	**Citeko**	**8.59**	**122**	P		**Pn**	**11 59 28.2**	**+3.8**
	628nm,0.9s							
SNG	**Songkhla**	**9.09**	**7**	P		**Pn**	**11 59 34.0**	**+2.8**
	140nm,1.1s							
LEM	**Lembang**	**9.46**	**121**	P		**Pn**	**11 59 39.0**	**+2.8**
	153nm,1.2s							
KSM	**Kuching**	**11.32**	**73**	⇑P		**Pn**	**12 00 04.7**	**+3.0**
KSM	**Kuching**	**11.32**	**73**	*e*Pn		**Pn**	**12 00 01.2**	**-0.5**
BJII	**Banjamegara**	**11.52**	**118**	P		**Pn**	**12 00 06.0**	**+1.6**
	42nm,1.1s							
STKI	**Sintang**	**12.14**	**81**	P		**Pn**	**12 00 17.1**	**+4.2**
	0.0nm,0.0s							
SBUM	**Sibu**	**13.44**	**71**	⇓P		**Pn**	**12 00 33.2**	**+2.5**
SJI	**Sawahan**	**13.52**	**116**	P		**Pn**	**12 00 30.6**	**-1.2**
	53nm,1.2s							
BTM	**Bintulu**	**14.50**	**70**	⇑P		**Pn**	**12 00 51.2**	**+6.1**
SMKI	**Samarinda**	**17.77**	**86**	P		**Pn**	**12 01 30.7**	**+3.9**
	103nm,1.2s							
KKM	**Kota Kinabalu**	**18.47**	**65**	⇑P		**Pn**	**12 01 34.9**	**-0.5**
KKM	**Kota Kinabalu**	**18.47**	**65**	*e*P		**Pn**	**12 01 34.8**	**-0.6**
SDKM	**Sandakan**	**19.20**	**67**	⇑P		**Pn**	**12 01 43.6**	**-0.5**
TSM	**Tawau**	**19.37**	**71**	⇑P		**Pn**	**12 01 45.4**	**-0.7**
KDM	**Kudat**	**19.39**	**63**	⇓P		**Pn**	**12 01 44.2**	**-2.3**
CMAR	**Chiang Mai Arr**	**20.24**	**358**	P		**P**	**12 01 52.8**	**-1.5**
	2.7nm,0.7s,baz=186,slow=9.8,SNR=17							
CMAR				LR		LR	12 09 55.3	
	comp=Z,1μm,20.4s,MS4.2,baz=189,slow=38							
MYLDM	**Lahad Datu**	**20.25**	**70**	⇓P		**P**	**12 01 55.8**	**+1.5**
PCI	**Palu**	**20.36**	**87**	P		**P**	**12 02 00.5**	**+4.9**
	140nm,1.4s							
KAPI	**Kappang**	**20.45**	**99**	P		**P**	**12 01 54.2**	**-2.4**
	33nm,1.0s,baz=285,slow=12,SNR=6.6							
KAPI	**Kappang**	**20.45**	**99**	*e*P		**P**	**12 01 54.2**	**-2.3**
	34nm,1.0s							
KAPI				*e*pP			12 02 05.2	
CHRT	**Chiangrai**	**21.64**	**1**	⇑P		**P**	**12 02 08.0**	**-1.3**
QIZ	**Qiongzhong**	**23.16**	**26**	P		**P**	**12 02 23.1**	**-2.3**
QIZ				PP			12 02 55.3	
QIZ				S		**S**	**12 06 39.5**	**+5.6**
QIZ				AMB	AMB			
	comp=Z,39nm,1.4s,mb4.6							
QIZ				LR	LR			
	comp=E,721nm,13.7s							
QIZ				LR	LR			
	comp=Z,985nm,16.7s,MS4.3							
QIZ	**Qiongzhong**	**23.16**	**26**	*e*P		**P**	**12 02 24.3**	**-1.1**
	comp=Z,96nm,1.7s,mb5.0							
KDI	**Kendari**	**23.18**	**96**	P		**P**	**12 02 26.2**	**+0.4**
	comp=Z,54nm,1.1s,mb4.9							
KMI	**Kunming**	**27.05**	**6**	P		**P**	**12 03 04.4**	**+3.4**
KMI				AP	pP		12 03 07.3	-5.2
KMI				XP	sP		12 03 08.4	-9.2
KMI				PP			12 03 51.1	
KMI				S		**S**	**12 07 42.3**	**+6.3**
KMI				SS			12 08 59.8	
KMI				AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.5							
KMI				AMB	AMB			
	comp=Z,61nm,3.1s							
KMI				LR	LR			
	comp=N,464nm,18.6s,MS4.3							
KMI				LR	LR			
	comp=E,504nm,15.5s,MS4.3							
KMI				LR	LR			
	comp=Z,581nm,22.7s							
GYA	**Guiyang**	**29.04**	**13**	P		**P**	**12 03 20.4**	**+1.8**
GYA				PP		PP	12 04 15.0	-10
GYA				S		**S**	**12 08 11.8**	**+4.6**
GYA				SCP		ScP	12 10 05.4	+0.7
GYA				SCS		ScS	12 14 00.3	+1.5
GYA				AMB	AMB			
	comp=Z,20nm,0.8s,mb4.9							
GYA				AMB	AMB			
	comp=Z,130nm,4.6s							
GYA				LR	LR			
	comp=N,620nm,17.4s,MS4.4							
GYA				LR	LR			
	comp=E,590nm,16.7s,MS4.4							
GYA				LR	LR			
	comp=Z,640nm,15.8s,MS4.3							
FITZ	**Fitzroy Crossi**	**30.28**	**124**	*e*P		**P**	**12 03 29.0**	**-0.8**
	comp=Z,12nm,0.9s,mb4.6							
FITZ				*e*		pP	12 03 38.6	-2.8
FITZ	**Fitzroy Crossi**	**30.28**	**124**	P		**P**	**12 03 28.8**	**-1.0**
	comp=Z,6.5nm,0.9s,mb4.4,baz=320,slow=8.0,SNR=13							
FITZ	**Fitzroy Crossi**	**30.28**	**124**	*e*P		**P**	**12 03 29.1**	**-0.7**
	comp=Z,18nm,1.5s,mb4.6							
FITZ				*e*		pP	12 03 38.6	-2.8
SWI	**Sorong**	**31.77**	**89**	P		**P**	**12 03 41.3**	**-1.7**
	comp=Z,84nm,1.0s,mb5.5							
LSA	**Lhasa**	**32.43**	**346**	P		**P**	**12 03 49.6**	**+1.1**
LSA	**Lhasa**	**32.43**	**346**	*e*P		**P**	**12 03 50.1**	**+1.6**
LSA				*e**PP		pP	12 04 01.4	+1.3
LSA				*e*			12 05 03.4	
LSA				pmax		pmax		
	comp=Z,6.0nm,0.4s,mb4.8							
LSA	**Lhasa**	**32.43**	**346**	*e*P		**P**	**12 03 50.1**	**+1.6**
	comp=Z,5.6nm,0.4s,mb4.8							
LSA				*e*pP		pP	12 04 01.4	+1.3
LSA				*e*PP		PP	12 05 03.4	+0.9
CD2	**Chengdu**	**32.88**	**7**	*e*P		**P**	**12 03 55.6**	**+3.1**
CD2				AP		pP	12 04 00.5	-3.6
CD2				XP		sP	12 04 03.3	-5.9
CD2				PP		PP	12 05 06.8	-0.7
CD2				S		**S**	**12 09 13.9**	**+6.5**
CD2				XS		sS	12 09 21.3	-5.5
CD2				SS		SS	12 11 15.1	-15
CD2				AMB	AMB			
	comp=Z,20nm,0.8s,mb5.1							
CD2				AMB	AMB			
	comp=Z,30nm,5.2s							
CD2				LR	LR			
	comp=N,930nm,20.4s,MS4.7							
CD2				LR	LR			
	comp=E,1μm,21.6s,MS4.7							
CD2				LR	LR			
	comp=Z,880nm,14.4s							
LZH	**Lanzhou**	**38.01**	**6**	*e*P		**P**	**12 04 35.0**	**-1.5**
LZH				AP		pP	12 04 39.8	-8.5
LZH				XP		sP	12 04 42.1	-11
LZH				PP		PP	12 06 06.5	+2.4
LZH				*e*S		**S**	**12 10 28.3**	**+2.4**
LZH				AMB	AMB			
	comp=Z,49nm,1.5s,mb5.0							
LZH				AMB	AMB			
	comp=Z,174nm,6.7s							
LZH				LR	LR			
	comp=E,1μm,16.8s							
LZH				LR	LR			
	comp=Z,2μm,19.2s,MS4.8							
DDI	**Dehra Dun**	**38.02**	**329**	*ex*		**P**	**12 04 35.0**	**-1.7**
NJ2	**Nanjing**	**38.44**	**27**	*e*P		**P**	**12 04 42.4**	**+2.2**
NJ2				AP		pP	12 04 46.8	-5.1
NJ2				XP		sP	12 04 49.3	-7.7
NJ2				S		**S**	**12 10 40.5**	**+8.0**
NJ2				XS		sS	12 10 48.5	-3.6
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.7							
NJ2				LR	LR			
	comp=N,300nm,15.0s,MS4.4							
NJ2				LR	LR			
	comp=E,340nm,13.6s,MS4.4							
WRA	**Warramunga Arr**	**38.47**	**120**	P		**P**	**12 04 39.1**	**-1.6**
	comp=E,19nm,0.8s,mb4.9,baz=296,slow=9.5,SNR=65							
WRA				PcP		PcP	12 06 54.1	+0.9
	comp=E,1.5nm,0.7s,baz=316,slow=2.2,SNR=4.4							
WRA				S		**S**	**12 10 28.6**	**-4.8**
	comp=E,2.0nm,1.0s,baz=288,slow=16,SNR=5.7							
WRA				LR		LR	12 20 25.2	
	comp=E,301nm,21.0s,MS4.1,baz=250,slow=36							
WRA	**Warramunga Arr**	**38.47**	**120**	P		**P**	**12 04 39.1**	**-1.6**
WRA							12 06 54.1	
WRA				S		**S**	**12 10 28.6**	**-4.8**
WRAB	**Tennant Creek**	**38.48**	**120**	P		**P**	**12 04 39.0**	**-1.7**
	comp=E,188nm,0.7s,mb5.9,SNR=12							
WRAB	**Tennant Creek**	**38.48**	**120**	*e*P		**P**	**12 04 39.8**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,33nm,1.0s,mb5.0							
WRAB	**Tennant Creek**	**38.48**	**120**	*e*P		**P**	**12 04 39.8**	**-0.9**
	comp=Z,32nm,1.0s,mb5.0							
WB2	**Warramunga Arr**	**38.48**	**120**	*e*P		**P**	**12 04 39.0**	**-1.7**
WB2				*e*		pP	12 04 50.7	-1.8
WB2				*e*S		**S**	**12 10 28.4**	**-5.1**
GTA	**Gaotai**	**41.12**	**0**	P		**P**	**12 05 01.9**	**-0.4**
GTA				AP		pP	12 05 06.4	-7.7
GTA				XP		sP	12 05 08.9	-10
GTA				S		**S**	**12 11 15.8**	**+3.4**
GTA				AMB	AMB			
	comp=Z,11nm,1.6s,mb4.2							
GTA				AMB	AMB			
	comp=Z,160nm,4.8s							
GTA				LR	LR			
	comp=N,481nm,15.9s,MS4.5							
GTA				LR	LR			
	comp=E,267nm,16.2s,MS4.5							
GTA				LR	LR			
	comp=Z,598nm,16.8s,MS4.5							
HHC	**Hu-ho-hao-te**	**43.95**	**13**	*e*P		**P**	**12 05 26.0**	**+0.7**
HHC				AP		pP	12 05 29.1	-8.2
HHC				XP		sP	12 05 31.0	-11
HHC				PCP		PcP	12 07 10.0	-0.7
HHC				PP		PP	12 07 11.1	+2.7
HHC				SCP		ScP	12 10 59.9	+0.7
HHC				PCS		PcS	12 11 01.9	-1.7
HHC				S		**S**	**12 11 58.9**	**+4.8**
HHC				SS		SS	12 15 09.5	-2.6
HHC				SCS		ScS	12 15 21.9	+1.2
HHC				AMB	AMB			
	comp=Z,17nm,0.6s,mb5.0							
HHC				AMB	AMB			
	comp=Z,235nm,6.9s							
HHC				LR	LR			
	comp=N,1μm,18.2s,MS4.9							
HHC				LR	LR			
	comp=E,551nm,18.7s,MS4.9							
HHC				LR	LR			
	comp=Z,685nm,17.2s,MS4.6							
KSH	**Kashi**	**46.53**	**335**	*e*P		**P**	**12 05 49.0**	**+3.2**
KSH				*e*AP		pP	12 05 53.3	-4.5
KSH				*e*XP		sP	12 05 56.3	-6.6
KSH				*e*PCP		PcP	12 07 21.3	+1.6
KSH				*e*PP		PP	12 07 39.0	+3.2
KSH				*e*SCP		ScP	12 11 13.0	+3.1
KSH				*e*PCS		PcS	12 11 15.0	+0.7
KSH				*e*S		**S**	**12 12 38.3**	**+6.8**
KSH				*e*XS		sS	12 12 46.3	-5.1
KSH				*e*SCS		ScS	12 15 40.3	+2.9
KSH				*e*SS		SS	12 15 58.0	0.0
KSH				AMB	AMB			
	comp=Z,281nm,3.5s							
KSH				LR	LR			
	comp=N,462nm,5.5s							
KSH				LR	LR			
	comp=E,690nm,4.7s							
KSH				LR	LR			
	comp=Z,465nm,4.4s							
WMQ	**Urumqi**	**46.74**	**348**	P		**P**	**12 05 48.3**	**+1.0**
WMQ				XP		sP	12 05 55.0	-9.4
WMQ				PCP		PcP	12 07 20.0	-0.3
WMQ				*e*S		**S**	**12 12 37.0**	**+2.8**
WMQ				AMB	AMB			
	comp=Z,29nm,1.3s,mb5.0							
WMQ				AMB	AMB			
	comp=Z,380nm,3.6s							
WMQ				LR	LR			
	comp=N,742nm,17.4s,MS4.8							
WMQ				LR	LR			
	comp=E,555nm,15.8s,MS4.8							
WMQ				LR	LR			
	comp=Z,547nm,26.3s							
KSRS	**Korea Array**	**47.20**	**31**	P		**P**	**12 05 49.2**	**-1.9**
	comp=Z,3.0nm,0.7s,mb4.3,baz=224,slow=8.8,SNR=16							
KSRS	**Korea Array**	**47.20**	**31**	P		**P**	**12 05 49.2**	**-1.9**
KSRS				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.3							
CTA	**Charters Tower**	**49.09**	**115**	*e*P		**P**	**12 06 05.2**	**-0.8**
	comp=Z,8.4nm,0.9s,mb4.8							
CTA				*e*			12 06 13.5	
CTA	**Charters Tower**	**49.09**	**115**	*e*P		**P**	**12 06 05.2**	**-0.8**
CTA				*e*			12 06 13.5	
CTA				pmax		pmax		
	comp=Z,8.0nm,0.9s							
CTAO	**Charters Tower**	**49.09**	**115**	*e*P		**P**	**12 06 05.4**	**-0.6**
CTAO				pmax		pmax		
	comp=Z,17nm,1.0s,mb5.0							
CTAO	**Charters Tower**	**49.09**	**115**	*e*P		**P**	**12 06 05.4**	**-0.6**
	comp=Z,17nm,1.0s,mb5.0							
UCH	**Uchtor**	**49.40**	**336**	*e*P		**P**	**12 06 09.7**	**+1.7**
	comp=Z,3.1nm,0.9s,mb4.3							
UCH				*e*pP		pP	12 06 21.7	+1.6
TKM2	**Tokmak 2**	**49.55**	**337**	*e*P		**P**	**12 06 09.8**	**+0.7**
TKM2				*e**PP		pP	12 06 22.9	+1.7
TKM2				pmax		pmax		
	comp=Z,20nm,1.1s,mb5.1							
TKM2	**Tokmak 2**	**49.55**	**337**	*e*P		**P**	**12 06 09.8**	**+0.7**
	comp=Z,20nm,1.1s,mb5.1							
TKM2				*e*pP		pP	12 06 22.9	+1.7
STKA	**Stephens Creek**	**49.59**	**131**	*e*P		**P**	**12 06 10.4**	**+0.8**
	comp=Z,9.9nm,0.8s,mb4.9							
STKA	**Stephens Creek**	**49.59**	**131**	P		**P**	**12 06 10.4**	**+0.8**
	comp=Z,17nm,1.1s,mb5.0,baz=308,slow=5.6,SNR=11							
SONM	**Songino Array**	**49.90**	**6**	P		**P**	**12 06 11.3**	**-0.3**
	comp=Z,9.2nm,1.1s,mb4.7,baz=190,slow=8.7,SNR=33							
ULN	**Ulaanbaatar**	**50.01**	**7**	*e*P		**P**	**12 06 12.2**	**-0.2**
ULN				pmax		pmax		
	comp=Z,19nm,1.4s,mb4.9							
ULN	**Ulaanbaatar**	**50.01**	**7**	*e*P		**P**	**12 06 12.2**	**-0.3**
	comp=Z,19nm,1.4s,mb4.9							
EKS2	**Erkin-Say**	**50.07**	**335**	*e*P		**P**	**12 06 14.0**	**+0.9**
	comp=Z,13nm,0.9s,mb5.0							
EKS2				*e*pP		pP	12 06 27.0	+1.9
MKAR	**Makanchi Array**	**50.81**	**345**	P		**P**	**12 06 18.6**	**+0.1**
	comp=Z,2.9nm,0.4s,mb4.6,baz=152,slow=7.9,SNR=25							
CN2	**Changchun**	**51.10**	**24**	*e*P		**P**	**12 06 19.3**	**-1.5**
CN2				*e*XP		sP	12 06 26.0	-12
CN2				*e*S		**S**	**12 13 37.0**	**+1.4**
CN2				AMB	AMB			
	comp=Z,20nm,0.8s,mb5.1							
CN2				AMB	AMB			
	comp=Z,500nm,6.0s							
CN2				LR	LR			
	comp=Z,4μm,19.0s,MS5.4							
ZAK	**Zakamensk**	**52.19**	**3**	*e*P		**P**	**12 06 27.8**	**-1.0**
ZAK				pmax		pmax		
	comp=Z,4.0nm,1.3s,mb4.2							
MJAR	**Matsushiro Arr**	**52.52**	**39**	P		**P**	**12 06 29.5**	**-2.1**
	comp=Z,5.9nm,0.9s,mb4.5,baz=222,slow=7.1,SNR=15							
TLY	**Talaya**	**53.50**	**3**	*e*P		**P**	**12 06 38.7**	**+0.2**
TLY				*e*			12 06 58.1	
TLY				pmax		pmax		
	comp=Z,12nm,1.2s,mb4.7							
TLY	**Talaya**	**53.50**	**3**	*e*P		**P**	**12 06 39.2**	**+0.7**
	comp=Z,25nm,1.8s,mb4.8							
MDJ	**Mudanjiang**	**53.53**	**26**	P		**P**	**12 06 38.4**	**-0.4**
MDJ				AMB	AMB			
	comp=Z,6.0nm,1.2s,mb4.4							
MDJ				AMB	AMB			
	comp=Z,77nm,8.1s							
MDJ				LR	LR			
	comp=N,208nm,40.9s,MS4.0							
MDJ				LR	LR			
	comp=E,230nm,40.9s,MS4.0							
MDJ				LR	LR			
	comp=Z,412nm,47.3s							
IRK	**Irkutsk**	**54.10**	**4**	*e*P		**P**	**12 06 36.0**	**-6.8**
IRK				*e*		pP	12 06 47.8	-7.2
IRK				pmax		pmax		
	comp=Z,39nm,2.4s,mb4.9							
KURK	**Kurchatov**	**55.38**	**344**	P		**P**	**12 06 52.9**	**+0.8**
	comp=Z,91nm,1.2s,mb5.7,SNR=8.2							
KURK	**Kurchatov**	**55.38**	**344**	⇑*i*P		**P**	**12 06 51.9**	**-0.2**
KURK				pmax		pmax		
	comp=Z,30nm,1.4s,mb5.1							
ZAA0	**Zalesovo Array**	**56.99**	**350**	*e*P		**P**	**12 07 03.3**	**-0.3**
ZALV	**Zalesovo Beam**	**56.99**	**350**	P		**P**	**12 07 03.3**	**-0.2**
	comp=Z,9.8nm,0.4s,mb5.2,baz=163,slow=5.4,SNR=42							
KLR	**Kul'dur**	**58.05**	**24**	*e*P		**P**	**12 07 06.4**	**-4.7**
KLR				pmax		pmax		
	comp=Z,43nm,1.2s,mb5.3							
NVS	**Novosibirsk**	**58.13**	**349**	*e*P		**P**	**12 07 10.2**	**-1.3**
NVS				*e*		pP	12 07 21.2	-2.7
NVS				pmax		pmax		
	comp=Z,46nm,1.6s,mb5.3							
NVS				pmax		pmax		
	comp=N,51nm,1.8s							
BRVK	**Borovoye**	**59.99**	**340**	*e*P		**P**	**12 07 24.2**	**-0.3**
BRVK				pmax		pmax		
	comp=Z,13nm,1.5s,mb4.7							
BRVK	**Borovoye**	**59.99**	**340**	*e*P		**P**	**12 07 24.2**	**-0.3**
	comp=Z,13nm,1.5s,mb4.7							
BOD	**Bodaibo**	**60.67**	**9**	*e*P		**P**	**12 07 27.8**	**-1.2**
BOD				pmax		pmax		
	comp=Z,18nm,1.5s,mb5.0							
YSS	**Yuzh-Sakhalins**	**61.67**	**32**	⇓*e*P		**P**	**12 07 35.5**	**-0.5**
YSS				pmax		pmax		
	comp=Z,45nm,1.2s,mb5.5							
YSS	**Yuzh-Sakhalins**	**61.67**	**32**	*e*P		**P**	**12 07 34.9**	**-1.2**
	comp=Z,18nm,0.9s,mb5.2							
SVE	**Sverdlovsk**	**66.41**	**338**	*e*P		**P**	**12 08 06.5**	**-0.4**
SVE				pmax		pmax		
	comp=Z,25nm,1.2s,mb5.1							
ARU	**Arti**	**66.92**	**337**	*d i*P		**P**	**12 08 09.6**	**-0.6**
ARU				*e*			12 10 35.0	
ARU				*e*PPP			12 12 09.5	
ARU				*e*S		S	12 17 00.6	+0.5
ARU				*e*SS		SS	12 21 14.0	-5.2
ARU				pmax		pmax		
	comp=Z,25nm,1.7s,mb5.0							
ARU	**Arti**	**66.92**	**337**	*e*P		**P**	**12 08 10.0**	**-0.2**
	comp=Z,21nm,1.3s,mb5.0							
YAK	**Yakutsk**	**67.78**	**15**	*c i*P		**P**	**12 08 13.9**	**-1.7**
YAK				pmax		pmax		
	comp=Z,84nm,1.3s,mb5.6							
YAK	**Yakutsk**	**67.78**	**15**	*e*P		**P**	**12 08 14.2**	**-1.4**
	comp=Z,62nm,1.0s,mb5.6							
MAW	**Mawson**	**70.25**	**194**	P		**P**	**12 08 33.5**	**+2.6**
	comp=Z,1.3nm,0.7s,mb4.0,baz=20,slow=9.3,SNR=4.0							
PETK	**Petropavlovsk-**	**73.07**	**32**	P		**P**	**12 08 47.0**	**-1.1**
	comp=Z,3.8nm,0.8s,mb4.4,baz=213,slow=1.6,SNR=8.4							
PET	**Petropavlovsk**	**73.55**	**33**	⇑*i*P		**P**	**12 08 49.8**	**-1.1**
PET				pmax		pmax		
	comp=Z,25nm,1.2s,mb5.0							
PET	**Petropavlovsk**	**73.55**	**33**	*e*P		**P**	**12 08 50.3**	**-0.6**
	comp=Z,43nm,1.5s,mb5.2							
TIXI	**Tiksi**	**75.84**	**9**	⇑*e*P		**P**	**12 09 02.2**	**-1.6**
TIXI				pmax		pmax		
	comp=Z,25nm,1.5s,mb4.9							
OBN	**Obninsk**	**76.45**	**328**	⇑*e*P		**P**	**12 09 08.6**	**+1.0**
OBN				*e*		pP	12 09 18.1	-2.2
OBN				*e*		pP	12 09 22.7	+2.4
OBN				pmax		pmax		
	comp=Z,30nm,1.2s,mb5.1							
SYO	**Syowa Base**	**77.79**	**199**	⇑*e*P		**P**	**12 09 16.0**	**+1.1**
SYO	**Syowa Base**	**77.79**	**199**	⇓*e*PcP		PcP	12 09 25.0	+0.3
AKASG	**Malin Array Be**	**79.10**	**322**	P		**P**	**12 09 21.1**	**-1.4**
	comp=Z,1.0nm,0.5s,mb4.0,baz=77,slow=4.3,SNR=4.6							
ARCES	**ARCESS Array B**	**86.22**	**340**	P		**P**	**12 09 59.0**	**0.0**
	comp=Z,2.2nm,0.7s,mb4.5,baz=115,slow=5.5,SNR=8.3							
QSPA	**South Pole Qui**	**88.06**	**180**	P		**P**	**12 10 10.5**	**+2.7**
	baz=233,slow=1.4							
QSPA	**South Pole Qui**	**88.06**	**180**	P		**P**	**12 10 10.5**	**+2.7**
GERES	**GERESS Array B**	**88.65**	**319**	P		**P**	**12 10 10.0**	**-1.1**
	comp=Z,0.4nm,0.5s,mb4.0,baz=197,slow=4.2,SNR=5.6							
BRG	**Berggiesshubel**	**88.65**	**321**	*e*P		**P**	**12 10 12.4**	**+1.3**
BRG				pmax		pmax		
	comp=Z,4.0nm,1.1s,mb4.7							
BRG	**Berggiesshubel**	**88.65**	**321**	*e*P		**P**	**12 10 12.4**	**+1.2**
	comp=Z,6.8nm,1.1s,mb4.9							
CLL	**Collm**	**89.28**	**321**	*e*P		**P**	**12 10 15.0**	**+0.9**
HOPS	**Hopland**	**126.46**	**41**	*e*PKPdf		PKPdf	12 16 20.6	-0.6
NVAR	**Mina Array Bea**	**129.84**	**39**	PKP		PKPdf	12 16 29.3	+1.6
	comp=Z,0.2nm,0.5s,baz=320,slow=2.0,SNR=4.3							
CPUP	**Villa Florida**	**144.09**	**217**	PKP		PKPdf	12 16 54.0	-0.3
	comp=Z,1.5nm,0.6s,baz=134,slow=3.6,SNR=4.1							
TXAR	**Lajitas Array**	**144.93**	**37**	PKP		PKPdf	12 16 55.4	-0.3
	comp=Z,3.4nm,0.4s,baz=215,slow=0.5,SNR=82							
WVT	**Waverly**	**145.28**	**10**	*e*PKIKP		PKPdf	12 16 55.5	-0.6
MIAR	**Mount Ida**	**145.31**	**19**	*e*PKIKP		PKPdf	12 16 55.9	-0.3
TZTN	**Tazewell**	**145.42**	**4**	*e*PKPbc		PKPbc	12 16 56.2	0.0
JCT	**Junction City**	**146.20**	**31**	*e*PKP2		PKPab	12 16 59.1	-0.5
TKL	**Tuckaleechee C**	**146.28**	**5**	PKPbc		PKPbc	12 16 57.9	-1.1
	comp=Z,3.5nm,0.7s,baz=109,slow=5.5,SNR=5.0							

CASC 13 12:10:05.5±2.3, 1249N×8786W, h49km±38km, MD4.0, ML3.5,5C-11D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
CNCH	**Conchagua**	**0.78**	**2**	⇓*e*P	x	12 10 20.8	
CNCH				*e*S	x	12 10 32.9	
LEON	**Leon**	**0.94**	**94**	⇓*e*P	Pn	12 10 21.7	-0.8
LEON				AML	AML	12 10 45.2	
	comp=Z,8μm,0.4s						
TEL3	**Telica 3**	**0.99**	**85**	*e*P	Pn	12 10 22.9	-0.2
TEL3				AML	AML	12 10 46.2	
	comp=Z,596nm,0.6s						
TELN	**Telica**	**1.01**	**83**	⇓*e*P	Pn	12 10 23.2	-0.1
BLLM	**Bellamira**	**1.02**	**339**	⇓*e*P	x	12 10 23.5	
BLLM				*e*S	x	12 10 37.9	
VSM	**San Miguel**	**1.02**	**337**	*e*P	x	12 10 23.9	
VSM				*e*S	x	12 10 38.8	
CNGN	**Cerro Negro**	**1.13**	**89**	⇓*e*P	Pn	12 10 24.3	-0.7
CNGN				*e*S	Sn	12 10 39.5	+0.1
COPN	**Copaltepe**	**1.27**	**104**	⇑*e*P	Pn	12 10 26.4	-0.6
COPN				*e*S	Sn	12 10 44.4	+1.5
MOMN	**Momotombo**	**1.29**	**93**	⇑*e*P	Pn	12 10 27.2	+0.1
MOMN				AML	AML	12 10 47.2	
	comp=Z,48nm,0.4s						
CAHU	**Cacacuatique**	**1.32**	**345**	⇓*e*P	x	12 10 28.5	
CAHU				*e*S	x	12 10 45.4	
CSAN		**1.44**	**102**	⇑*e*P	Pn	12 10 29.1	0.0
CSAN				*e*S	Sn	12 10 50.1	+3.3
SNVI	**San Vicente**	**1.47**	**320**	*e*P	x	12 10 30.6	
SNVI				*e*S

33C-13D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**3.24**	**356**	P	**Pn**	**12 13 44.7**	**-7.2**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.74**	**27**	P	**Pn**	**12 13 59.6**	**+0.8**
	0.0nm,0.0s						
KLI	**Kotabumi**	**4.36**	**105**	P	**Pn**	**12 14 08.7**	**+1.4**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.08**	**51**	P	**Pn**	**12 14 17.2**	**0.0**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.70**	**74**	P	**Pn**	**12 14 26.9**	**+1.2**
	145nm,1.2s						
SBJI	**Serang**	**5.97**	**114**	P	**Pn**	**12 14 38.1**	**+8.6**
	672nm,1.3s						
KGM	**Kluang**	**6.29**	**25**	⇓P	**Pn**	**12 14 34.6**	**+0.8**
MYKOM	**Kota Tinggi**	**6.33**	**30**	⇑P	**Pn**	**12 14 35.2**	**+0.7**
TNG	**Tangerang**	**6.46**	**112**	P	**Pn**	**12 14 39.8**	**+3.6**
	1μm,1.3s						
DBJI	**Dramaga**	**6.71**	**115**	P	**Pn**	**12 14 39.2**	**-0.4**
	427nm,1.1s						
CBJI	**Citeko**	**6.74**	**114**	P	**Pn**	**12 14 42.3**	**+2.2**
	1μm,0.7s						
FRIM	**Kepong**	**6.97**	**8**	⇑P	**Pn**	**12 14 44.4**	**+1.1**
LEM	**Lembang**	**7.60**	**114**	P	**Pn**	**12 14 52.7**	**+0.8**
	438nm,1.1s						
IPM	**Ipoh**	**8.14**	**3**	⇑P	**Pn**	**12 15 02.2**	**+2.9**
TGJI	**Tegal**	**9.01**	**111**	P	**Pn**	**12 15 20.3**	**+9.1**
	255nm,1.0s						
KTGM	**Kuala Trenggan**	**9.32**	**16**	⇓P	**Pn**	**12 15 16.5**	**+1.0**
BJII	**Banjamegara**	**9.71**	**112**	P	**Pn**	**12 15 21.8**	**+0.9**
	107nm,1.6s						
BSI	**Banda Aceh**	**10.59**	**330**	P	**Pn**	**12 15 32.0**	**-0.9**
	165nm,1.1s						
SNG	**Songkhla**	**10.81**	**360**	P	**Pn**	**12 15 35.0**	**-1.0**
	200nm,1.1s						
KSM	**Kuching**	**10.95**	**62**	⇑P	**Pn**	**12 15 42.6**	**+4.8**
KSM	**Kuching**	**10.95**	**62**	*e*P	**Pn**	**12 15 32.0**	**-5.8**
STKI	**Sintang**	**11.46**	**71**	P	**Pn**	**12 15 51.0**	**+6.2**
	80nm,1.4s						
SJI	**Sawahan**	**11.77**	**110**	P	**Pn**	**12 15 47.8**	**-1.2**
	151nm,1.1s						
SBUM	**Sibu**	**13.09**	**62**	⇑P	**Pn**	**12 16 10.4**	**+3.3**
KMMI	**Kalianget**	**13.67**	**105**	P	**Pn**	**12 16 22.9**	**+7.8**
	129nm,1.3s						
BBKI	**Banjar Baru**	**14.17**	**89**	P	**Pn**	**12 16 28.2**	**+6.3**
	634nm,0.9s						
BTM	**Bintulu**	**14.20**	**61**	⇑P	**Pn**	**12 16 26.8**	**+4.5**
MTNI	**Mataram**	**16.19**	**108**	P	**Pn**	**12 16 52.6**	**+4.0**
	86nm,1.0s						
SMKI	**Samarinda**	**16.87**	**79**	P	**Pn**	**12 16 59.6**	**+2.4**
	188nm,1.4s						
KKM	**Kota Kinabalu**	**18.32**	**58**	⇓P	**Pn**	**12 17 15.5**	**+0.3**
KKM	**Kota Kinabalu**	**18.32**	**58**	*e*Pn	**Pn**	**12 17 15.3**	**+0.1**
SDKM	**Sandakan**	**18.96**	**61**	⇓P	**Pn**	**12 17 22.9**	**-0.1**
TSM	**Tawau**	**18.96**	**65**	⇑P	**Pn**	**12 17 23.6**	**+0.6**
KAPI	**Kappang**	**19.10**	**95**	P	**Pn**	**12 17 21.7**	**-2.9**
	791nm,1.3s,SNR=12						
KAPI	**Kappang**	**19.10**	**95**	P	**Pn**	**12 17 21.5**	**-3.2**
	3.2nm,0.3s,baz=269,slow=9.4,SNR=19						
KAPI	**Kappang**	**19.10**	**95**	*e*P	**Pn**	**12 17 21.9**	**-2.8**
	84nm,1.3s						
NST	**Nakhon Sawan**	**19.26**	**359**	P	**Pn**	**12 17 23.0**	**-3.6**
KDM	**Kudat**	**19.30**	**57**	⇑P	**Pn**	**12 17 27.3**	**+0.2**
UBT	**Ubonrachathani**	**19.32**	**13**	⇑P	**Pn**	**12 17 25.9**	**-1.4**
PCI	**Palu**	**19.38**	**82**	P	**Pn**	**12 17 28.5**	**+0.5**
	330nm,1.4s						
MYLDM	**Lahad Datu**	**19.90**	**64**	⇑P	**Pn**	**12 17 34.5**	**+0.3**
KKTK	**Khon Kaen**	**20.03**	**6**	⇓P	**P**	**12 17 32.0**	**-1.8**
	494nm,0.6s						
BDT	**Bhumibol Dam**	**20.88**	**356**	P	**P**	**12 17 42.0**	**-1.0**
	24nm,1.0s						
BBSI	**Bau Bau**	**21.93**	**95**	P	**P**	**12 17 56.1**	**+1.7**
	174nm,1.1s,mb5.4						
KDI	**Kendari**	**21.93**	**91**	P	**P**	**12 17 56.2**	**+1.8**
	173nm,1.5s,mb5.3						
CMAR	**Chiang Mai Arr**	**22.09**	**356**	P	**P**	**12 17 53.7**	**-2.3**
	43nm,0.9s,mb4.9,baz=185,slow=9.3,SNR=51						
CMAR				PcP	PcP	12 21 53.5	+0.2
	3.4nm,0.8s,baz=212,slow=4.0,SNR=4.1						
CMAR				LR	LR	12 27 13.5	
	comp=Z,1μm,18.9s,MS4.3,baz=358,slow=39						
CMAR	**Chiang Mai Arr**	**22.09**	**356**	*e*P	**P**	**12 17 53.7**	**-2.3**
NANT	**Nan**	**22.37**	**0**	P	**P**	**12 17 58.0**	**-1.0**
	288nm,1.0s,mb5.7						
CHG	**Chiang Mai**	**22.44**	**356**	⇓P	**P**	**12 17 57.7**	**-2.1**
	64nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**22.44**	**356**	*e*P	**P**	**12 17 58.1**	**-1.7**
CHTO				*e**PP		12 18 08.7	
CHTO				pmax	pmax		
	comp=Z,84nm,1.2s,mb5.0						
CHTO	**Chiang Mai**	**22.44**	**356**	*e*P	**P**	**12 17 58.1**	**-1.7**
	comp=Z,84nm,1.2s,mb5.0						
CHTO				*ep*P		12 18 08.7	
CHRT	**Chiangrai**	**23.45**	**358**	⇑P	**P**	**12 18 04.0**	**-6.4**
	comp=Z,421nm,1.0s,mb5.8						
BATI	**Baumata**	**23.73**	**107**	P	**P**	**12 18 19.3**	**+6.2**
	comp=Z,58nm,1.2s,mb4.9						
BATI	**Baumata**	**23.73**	**107**	P	**P**	**12 18 10.4**	**-2.6**
	comp=Z,28nm,0.7s,mb4.8,baz=23,slow=2.4,SNR=3.9						
BATI				S	**S**	**12 22 26.6**	**-0.1**
	comp=Z,31nm,0.9s,baz=36,slow=23,SNR=3.8						
QIZ	**Qiongzhong**	**24.34**	**22**	P	**P**	**12 18 17.6**	**-1.0**
QIZ				XP	sP	12 18 24.6	-5.5
QIZ				S	**S**	**12 22 40.0**	**+3.6**
QIZ				XS	sS	12 22 45.3	-4.5
QIZ				AMB	AMB		
	comp=Z,79nm,1.4s,mb5.0						
QIZ				AMB	AMB		
	comp=Z,478nm,7.7s						
QIZ				LR	LR		
	comp=N,1μm,13.8s,MS4.6						
QIZ				LR	LR		
	comp=E,935nm,13.8s,MS4.6						
QIZ				LR	LR		
	comp=Z,1μm,16.2s,MS4.5						
QIZ	**Qiongzhong**	**24.34**	**22**	*e*P	**P**	**12 18 17.3**	**-1.3**
	comp=Z,185nm,1.5s,mb5.3						
QIZ				*ep*P		12 18 26.9	
MBWA	**Marble Bar**	**25.40**	**135**	*e*P	**P**	**12 18 28.4**	**+0.2**
	comp=Z,38nm,1.1s,mb4.8						
LBMI	**Labuha**	**27.01**	**84**	P	**P**	**12 18 49.6**	**+6.7**
	comp=Z,145nm,1.1s,mb5.4						
FITZ	**Fitzroy Crossi**	**28.34**	**122**	*e*P	**P**	**12 18 53.3**	**-1.5**
	comp=Z,17nm,0.9s,mb4.7						
FITZ				*e*	pP	12 18 59.0	-3.9
FITZ				*e*		12 19 05.0	
FITZ	**Fitzroy Crossi**	**28.34**	**122**	P	**P**	**12 18 53.5**	**-1.3**
	comp=Z,9.5nm,0.9s,mb4.4,baz=311,slow=7.8,SNR=19						
FITZ				LR	LR	12 31 00.6	
	comp=Z,478nm,19.3s,MS4.1,baz=289,slow=38						
KMI	**Kunming**	**28.73**	**4**	P	**P**	**12 18 58.8**	**+0.7**
KMI				AP	pP	12 19 05.1	-1.2
KMI				XP	sP	12 19 06.5	-3.2
KMI				PP	PP	12 19 54.1	-9.2
KMI				S	**S**	**12 23 50.4**	**+4.6**
KMI				XS	sS	12 23 59.1	-0.2
KMI				SS	SS	12 25 18.3	-30
KMI				AMB	AMB		
	comp=Z,28nm,1.1s,mb4.9						
KMI				AMB	AMB		
	comp=Z,318nm,7.8s						
KMI				LR	LR		
	comp=N,2μm,14.1s,MS4.9						
KMI				LR	LR		
	comp=E,1μm,12.6s,MS4.9						
KMI				LR	LR		
	comp=Z,2μm,14.1s,MS4.9						
HYB	**Hyderabad**	**30.27**	**315**	*i* P	**P**	**12 19 14.5**	**+2.7**
HYB	**Hyderabad**	**30.27**	**315**	*e*P	**P**	**12 19 12.5**	**+0.7**
GYA	**Guiyang**	**30.55**	**11**	P	**P**	**12 19 15.8**	**+1.6**
GYA				PCP	PcP	12 22 13.4	+0.6
GYA				S	**S**	**12 24 16.3**	**+2.0**
GYA				SCP	ScP	12 25 53.9	+0.3
GYA				SCS	ScS	12 29 48.3	-1.6
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.3						
GYA				AMB	AMB		
	comp=Z,160nm,4.9s						
GYA				LR	LR		
	comp=N,820nm,17.7s,MS4.6						
GYA				LR	LR		
	comp=E,690nm,16.5s,MS4.6						
GYA				LR	LR		
	comp=Z,940nm,15.3s,MS4.5						
SWI	**Sorong**	**30.72**	**85**	P	**P**	**12 19 13.7**	**-2.2**
	comp=Z,68nm,1.2s,mb5.3						
LSA	**Lhasa**	**34.44**	**345**	P	**P**	**12 19 49.3**	**+1.1**
LSA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
LSA				LR	LR		
	comp=N,370nm,27.8s,MS4.2						
LSA				LR	LR		
	comp=E,580nm,27.8s,MS4.2						
LSA				LR	LR		
	comp=Z,750nm,26.8s,MS4.3						
LSA	**Lhasa**	**34.44**	**345**	*e*P	**P**	**12 19 49.6**	**+1.4**
LSA				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.2						
LSA	**Lhasa**	**34.44**	**345**	*e*P	**P**	**12 19 49.6**	**+1.3**
	comp=Z,19nm,0.6s,mb5.2						
CD2	**Chengdu**	**34.55**	**5**	⇑*i*P	**P**	**12 19 48.0**	**-1.2**
CD2				AP	pP	12 19 52.4	-5.0
CD2				XP	sP	12 19 55.8	-5.0
CD2				PP	PP	12 21 05.4	-2.5
CD2				PCP	PcP	12 22 21.0	-2.7
CD2				S	**S**	**12 25 17.0**	**+0.5**
CD2				PCS	PcS	12 26 06.9	-3.3
CD2				SS	SS	12 27 30.5	-17
CD2				SCS	ScS	12 30 07.0	-3.2
CD2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.4						
CD2				AMB	AMB		
	comp=Z,120nm,5.8s						
CD2				LR	LR		
	comp=N,2μm,13.2s,MS5.2						
CD2				LR	LR		
	comp=E,3μm,18.0s,MS5.2						
CD2				LR	LR		
	comp=Z,2μm,13.2s,MS5.0						
WHN	**Wuhan**	**36.49**	**20**	⇑P	**P**	**12 20 05.3**	**-0.6**
WHN				AP	pP	12 20 13.3	-0.8
WHN				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.7						
WHN				LR	LR		
	comp=N,2μm,14.2s,MS5.0						
WHN				LR	LR		
	comp=E,841nm,13.6s,MS5.0						
WHN				LR	LR		
	comp=Z,2μm,16.6s,MS5.0						
WRA	**Warramunga Arr**	**36.59**	**119**	P	**P**	**12 20 04.3**	**-2.6**
	comp=Z,4.3nm,0.3s,mb4.7,baz=321,slow=11,SNR=64						
WRA				S	**S**	**12 25 47.7**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=291,slow=16,SNR=5.4						
WRAB	**Tennant Creek**	**36.60**	**119**	P	**P**	**12 20 05.6**	**-1.4**
	comp=Z,149nm,0.8s,mb5.9,SNR=14						
WRAB	**Tennant Creek**	**36.60**	**119**	*e*P	**P**	**12 20 05.5**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**36.60**	**119**	*e*P	**P**	**12 20 05.5**	**-1.5**
	comp=Z,21nm,0.8s,mb5.0						
WB2	**Warramunga Arr**	**36.60**	**119**	*e*P	**P**	**12 20 05.2**	**-1.8**
XAN	**Xi'an**	**38.35**	**11**	P	**P**	**12 20 20.5**	**-1.0**
XAN				AP	pP	12 20 28.8	-1.0
XAN				XP	sP	12 20 32.9	-0.3
XAN				AMB	AMB		
	comp=Z,139nm,1.1s,mb5.6						
NJ2	**Nanjing**	**39.55**	**25**	*e*P	**P**	**12 20 31.6**	**-0.1**
NJ2				AP	pP	12 20 36.4	-3.6
NJ2				XP	sP	12 20 38.6	-4.8
NJ2				PP	PP	12 22 08.3	+5.4
NJ2				S	**S**	**12 26 34.5**	**+1.8**
NJ2				XS	sS	12 26 40.6	-5.8
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,170nm,4.7s						
NJ2				LR	LR		
	comp=N,470nm,19.2s,MS4.7						
NJ2				LR	LR		
	comp=E,910nm,18.3s,MS4.7						
LZH	**Lanzhou**	**39.70**	**4**	⇑P	**P**	**12 20 32.9**	**+0.1**
LZH				AP	pP	12 20 37.5	-3.6
LZH				XP	sP	12 20 40.1	-4.4
LZH				PP	PP	12 22 09.0	+4.6
LZH				PCP	PcP	12 22 35.0	-4.2
LZH				S	**S**	**12 26 36.3**	**+1.5**
LZH				SCS	ScS	12 30 37.5	-1.4
LZH				AMB	AMB		
	comp=Z,103nm,1.5s,mb5.3						
LZH				AMB	AMB		
	comp=Z,325nm,5.0s						
LZH				LR	LR		
	comp=N,1μm,12.4s						
LZH				LR	LR		
	comp=Z,2μm,15.3s,MS5.0						
SMLA	**Simla**	**41.25**	**329**	*i* P	**P**	**12 20 46.2**	**+0.5**
SMLA				*ex*	x	12 20 49.1	
	comp=Z,144nm,0.7s						
GTA	**Gaotai**	**42.91**	**359**	P	**P**	**12 20 59.5**	**+0.3**
GTA				AP	pP	12 21 03.9	-3.6
GTA				XP	sP	12 21 06.5	-4.4
GTA				S	**S**	**12 27 25.3**	**+3.0**
GTA				XS	sS	12 27 32.8	-3.3
GTA				SS	SS	12 30 31.8	-2.9
GTA				AMB	AMB		
	comp=Z,51nm,1.2s,mb5.1						
GTA				AMB	AMB		
	comp=Z,325nm,7.5s						
GTA				LR	LR		
	comp=N,915nm,15.6s,MS5.0						
GTA				LR	LR		
	comp=E,1μm,18.6s,MS5.0						
GTA				LR	LR		
	comp=Z,1μm,15.6s,MS4.9						
BTO	**Baotou**	**44.93**	**10**	*e*P	**P**	**12 21 14.8**	**-0.5**
HHC	**Hu-ho-hao-te**	**45.46**	**12**	⇑*i*P	**P**	**12 21 20.0**	**+0.5**
HHC				AP	pP	12 21 22.9	-5.0
HHC				XP	sP	12 21 25.1	-6.2
HHC				PCP	PcP	12 22 58.9	+0.6
HHC				PP	PP	12 23 07.6	+1.3
HHC				SCP	ScP	12 26 49.3	-0.1
HHC				PCS	PcS	12 26 51.4	-0.8
HHC				S	**S**	**12 28 01.6**	**+2.3**
HHC				SCS	ScS	12 31 13.9	-0.3
HHC				SS	SS	12 31 16.8	-6.9
HHC				AMB	AMB		
	comp=Z,58nm,1.1s,mb5.3						
HHC				AMB	AMB		
	comp=Z,342nm,6.9s						
HHC				LR	LR		
	comp=N,1μm,17.8s,MS5.1						
HHC				LR	LR		
	comp=E,1μm,17.0s,MS5.1						
HHC				LR	LR		
	comp=Z,1μm,17.0s,MS4.9						
BJT	**Baijiatuau**	**45.79**	**17**	*e*P	**P**	**12 21 22.1**	**-0.1**
BJT				*e**PP	pP	12 21 30.1	-0.5
BJT				pmax	pmax		
	comp=Z,85nm,1.2s						
BJT	**Baijiatuau**	**45.79**	**17**	*e*P	**P**	**12 21 22.1**	**-0.1**
	comp=Z,85nm,1.2s,mb5.5						
BJT				*ep*P	pP	12 21 30.1	-0.5
BJI	**Beijing**	**45.81**	**17**	P	**P**	**12 21 22.1**	**-0.3**
BJI				XP	sP	12 21 27.6	-6.5
BJI				S	**S**	**12 28 10.3**	**+5.7**
BJI				AMB	AMB		
	comp=Z,57nm,1.2s,mb5.4						
BJI				AMB	AMB		
	comp=Z,304nm,3.7s						
BJI				LR	LR		
	comp=N,2μm,16.6s,MS5.2						
BJI				LR	LR		
	comp=E,492nm,12.2s,MS5.2						
BJI				LR	LR		
	comp=Z,1μm,16.6s,MS4.9						
DL2	**Dalian**	**46.62**	**23**	⇑P	**P**	**12 21 28.1**	**-0.7**
DL2				*eS*	**S**	**12 28 15.1**	**-1.1**
DL2				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
DL2				AMB	AMB		
	comp=Z,170nm,4.9s						
DL2				LR	LR		
	comp=N,450nm,15.7s,MS4.6						
DL2				LR	LR		
	comp=E,240nm,14.7s,MS4.6						
DL2				LR	LR		
	comp=Z,710nm,15.0s,MS4.8						
CTA	**Charters Tower**	**47.31**	**114**	*e*P	**P**	**12 21 33.3**	**-1.1**
	comp=Z,12nm,0.9s,mb4.8						
CTA	**Charters Tower**	**47.31**	**114**	P	**P**	**12 21 32.8**	**-1.6**
	comp=Z,15nm,0.8s,mb4.9,baz=287,slow=10.0,SNR=12						
CTA				LR	LR	12 43 53.3	
	comp=Z,687nm,20.1s,MS4.6,baz=80,slow=39						
CTA	**Charters Tower**	**47.31**	**114**	*e*P	**P**	**12 21 33.3**	**-1.1**
CTA				pmax	pmax		
	comp=Z,12nm,0.9s						
CTAO	**Charters Tower**	**47.31**	**114**	*e*P	**P**	**12 21 33.4**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
CTAO	**Charters Tower**	**47.31**	**114**	*e*P	**P**	**12 21 33.4**	**-1.0**
	comp=Z,27nm,1.0s,mb5.1						
STKA	**Stephens Creek**	**47.55**	**131**	*e*P	**P**	**12 21 36.0**	**-0.1**
	comp=Z,19nm,0.9s,mb5.1						
STKA	**Stephens Creek**	**47.55**	**131**	P	**P**	**12 21 35.8**	**-0.3**
	comp=Z,9.1nm,0.8s,mb4.8,baz=292,slow=7.7,SNR=6.7						
INCN	**Inchon**	**47.57**	**28**	*e*P	**P**	**12 21 35.0**	**-1.2**
	comp=Z,31nm,1.0s,mb5.3						
KSRS	**Korea Array**	**48.17**	**29**	P	**P**	**12 21 40.0**	**-0.9**
	comp=Z,62nm,1.0s,mb5.6,baz=218,slow=8.0,SNR=152						
KSH	**Kashi**	**48.64**	**335**	⇑*i*P	**P**	**12 21 45.0**	**+0.6**
KSH				*e*AP	pP	12 21 50.0	-2.9
KSH				*e*XP	sP	12 21 53.0	-3.2
KSH				*e*PCP	PcP	12 23 11.0	+1.4
KSH				*e*PP	PP	12 23 39.1	+1.4
KSH				*e*SCP	ScP	12 27 04.1	+1.3
KSH				*e*PCS	PcS	12 27 05.1	-0.5
KSH				*e*S	**S**	**12 28 44.6**	**-0.3**
KSH				*e*XS	sS	12 28 55.3	-3.5
KSH				*e*SCS	ScS	12 31 35.0	-0.2
KSH				*e*SS	SS	12 32 13.1	-2.4
KSH				AMB	AMB		
	comp=Z,695nm,3.1s						
KSH				LR	LR		
	comp=N,614nm,4.6s						
KSH				LR	LR		
	comp=E,600nm,5.8s						
KSH				LR	LR		
	comp=Z,1μm,17.6s,MS5.0						
WMQ	**Urumqi**	**48.73**	**348**	⇑*i*P	**P**	**12 21 46.1**	**+1.1**
WMQ				XP	sP	12 21 53.0	-3.8
WMQ				PCP	PcP	12 23 11.0	+1.2
WMQ				SCP	ScP	12 27 04.0	+1.0
WMQ				*e*S	**S**	**12 28 48.0**	**+2.1**
WMQ				XS	sS	12 28 58.0	-1.9
WMQ				AMB	AMB		
	comp=Z,69nm,1.0s,mb5.6						
WMQ				AMB	AMB		
	comp=Z,292nm,3.5s						
WMQ				LR	LR		
	comp=N,918nm,16.4s,MS5.1						
WMQ				LR	LR		
	comp=E,983nm,13.2s,MS5.1						
WMQ				LR	LR		
	comp=Z,915nm,24.8s						
SNY	**Shenyang**	**49.90**	**22**	⇑P	**P**	**12 21 52.3**	**-1.7**
SNY				AMB	AMB		
	comp=Z,27nm,1.4s,mb5.1						
SNY				LR	LR		
	comp=N,487nm,14.2s,MS5.0						
SNY				LR	LR		
	comp=E,960nm,15.1s,MS5.0						
SNY				LR	LR		
	comp=Z,1μm,16.1s,MS5.0						
KZA	**Kyzart**	**51.08**	**336**	P	**P**	**12 22 04.1**	**+1.2**
	SNR=10.0						
UCH	**Uchtor**	**51.51**	**335**	P	**P**	**12 22 07.0**	**+0.8**
	SNR=7.8						
UCH	**Uchtor**	**51.51**	**335**	*e*P	**P**	**12 22 07.2**	**+1.0**
	comp=Z,12nm,0.9s,mb4.8						
SONM	**Songino Array**	**51.58**	**5**	P	**P**	**12 22 07.1**	**+0.6**
	comp=Z,42nm,0.9s,mb5.4,baz=186,slow=8.8,SNR=210						
TKM2	**Tokmak 2**	**51.65**	**337**	*e*P	**P**	**12 22 07.9**	**+0.8**
TKM2				*e**PP	pP	12 22 17.1	+1.4
TKM2				pmax	pmax		
	comp=Z,71nm,0.9s,mb5.6						
TKM2	**Tokmak 2**	**51.65**	**337**	P	**P**	**12 22 07.9**	**+0.8**
	SNR=84						
TKM2	**Tokmak 2**	**51.65**	**337**	*e*P	**P**	**12 22 07.9**	**+0.8**
	comp=Z,71nm,0.9s,mb5.6						
TKM2				*ep*P	pP	12 22 17.1	+1.5
ULN	**Ulaanbaatar**	**51.67**	**5**	⇑*i*P	**P**	**12 22 07.5**	**+0.3**
KBK	**Karagaybulak**	**51.69**	**336**	P	**P**	**12 22 08.8**	**+1.4**
	SNR=8.4						
AML	**Almayashu**	**51.77**	**335**	P	**P**	**12 22 09.2**	**+1.1**
	SNR=6.2						
AML	**Almayashu**	**51.77**	**335**	*e*P	**P**	**12 22 09.0**	**+0.9**
	comp=Z,19nm,1.0s,mb5.0						
AML				*ep*P	pP	12 22 18.2	+1.6
AAK	**Ala-Archa**	**51.85**	**336**	P	**P**	**12 22 09.4**	**+0.8**
	SNR=8.2						
FRU	**Bishkek**	**51.97**	**336**	*e*P	**P**	**12 22 09.5**	**0.0**
FRU				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.4						
CHMS	**Chumysh**	**52.05**	**336**	P	**P**	**12 22 10.6**	**+0.4**
	SNR=14						
EKS2	**Erkin-Say**	**52.17**	**335**	P	**P**	**12 22 12.1**	**+1.0**
	SNR=49						
EKS2	**Erkin-Say**	**52.17**	**335**	*e*P	**P**	**12 22 12.1**	**+1.0**
	comp=Z,68nm,0.9s,mb5.6						
CN2	**Changchun**	**52.30**	**23**	*e*P	**P**	**12 22 10.6**	**-1.4**
CN2				*e*XP	sP	12 22 17.0	-6.8
CN2				*e*S	**S**	**12 29 34.5**	**-1.0**
CN2				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.4						
CN2				AMB	AMB		
	comp=Z,600nm,8.0s						
USP	**Ospenovka**	**52.38**	**336**	P	**P**	**12 22 12.9**	**+0.4**
	SNR=29						
MKAR	**Makanchi Array**	**52.84**	**344**	P	**P**	**12 22 15.9**	**0.0**
	comp=Z,49nm,0.9s,mb5.4,baz=147,slow=7.9,SNR=193						
MAJO	**Matsushiro**	**53.21**	**38**	*e*P	**P**	**12 22 16.1**	**-2.7**
MAJO				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
MAJO	**Matsushiro**	**53.21**	**38**	*e*P	**P**	**12 22 16.1**	**-2.8**
	comp=Z,38nm,1.1s,mb5.2						
MAT	**Matsushiro**	**53.21**	**38**	P	**P**	**12 22 17.5**	**-1.3**
MJAR	**Matsushiro Arr**	**53.21**	**38**	P	**P**	**12 22 17.2**	**-1.6**
	comp=Z,26nm,1.0s,mb5.1,baz=219,slow=7.7,SNR=56						
ZAK	**Zakamensk**	**53.92**	**2**	*e*P	**P**	**12 22 23.4**	**-0.4**
ZAK				*e*		12 25 40.8	
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
CAN	**Canberra**	**54.60**	**131**	*e*P	**P**	**12 22 29.6**	**+0.5**
MDJ	**Mudanjiang**	**54.64**	**25**	P	**P**	**12 22 28.8**	**-0.4**
MDJ				S	**S**	**12 30 11.3**	**+3.9**
MDJ				AMB	AMB		
	comp=Z,17nm,1.4s,mb4.9						
MDJ				LR	LR		
	comp=N,354nm,17.4s,MS4.7						
MDJ				LR	LR		
	comp=E,437nm,17.4s,MS4.7						
MDJ				LR	LR		
	comp=Z,568nm,20.5s,MS4.6						
MDJ	**Mudanjiang**	**54.64**	**25**	*e*P	**P**	**12 22 28.8**	**-0.4**
	comp=Z,34nm,1.4s,mb5.3						
ARMA	**Armidale**	**54.90**	**125**	*e*P	**P**	**12 22 31.9**	**+0.5**
MOY	**Mondy**	**55.16**	**0**	*e*P	**P**	**12 22 33.1**	**+0.3**
M

NVS	**Novosibirsk**	**60.11**	**348**	⇑*iP*		**P**		**12 23 06.3**	**-1.2**
NVS					pmax	pmax			
	comp=Z,54nm,1.3s,mb5.4								
NVS					pmax	pmax			
	comp=N,46nm,1.5s								
NVS					pmax	pmax			
	comp=E,20nm,1.2s								
BRVK	**Borovoye**	**62.06**	**340**	*eP*		**P**		**12 23 20.3**	**-0.5**
	comp=E,199nm,0.8s,mb6.3,SNR=8.2								
BRVK	**Borovoye**	**62.06**	**340**	*eP*		**P**		**12 23 19.8**	**-1.0**
BOD	**Bodaibo**	**62.27**	**8**	⇓*iP*		**P**		**12 23 21.0**	**-1.1**
BOD				*e*		pP		12 23 29.2	-1.6
BOD					pmax	pmax			
	comp=Z,30nm,1.1s,mb5.3								
BOD					pmax	pmax			
	comp=Z,26nm,1.1s,mb5.3								
YSS	**Yuzh-Sakhalins**	**62.59**	**31**	⇑*eP*		**P**		**12 23 23.5**	**-1.0**
YSS				*e*		pP		12 23 31.8	-1.4
YSS				*e*				12 24 03.0	
YSS					pmax	pmax			
	comp=Z,90nm,1.0s,mb5.8								
YSS					MLR	MLR			
	comp=Z,500nm,18.0s,MS4.7								
YSS	**Yuzh-Sakhalins**	**62.59**	**31**	⇑*iP*		**P**		**12 23 23.5**	**-1.0**
CASY	**Casey**	**62.84**	**176**	*eP*		**P**		**12 23 31.1**	**+5.3**
CASY	**Casey**	**62.84**	**176**	P		**P**		**12 23 32.8**	**+7.0**
	comp=Z,14nm,1.3s,mb4.9								
KMBO	**Kilima Mbogo**	**63.38**	**271**	P		**P**		**12 23 31.7**	**+1.3**
	comp=Z,1.1nm,0.5s,mb4.3,baz=63,slow=18,SNR=2.8								
KMBO	**Kilima Mbogo**	**63.38**	**271**	P		**P**		**12 23 31.7**	**+1.3**
SVE	**Sverdlovsk**	**68.50**	**338**	⇓*eP*		**P**		**12 24 02.4**	**-0.1**
SVE				*eS*		S		12 32 53.9	-8.7
SVE					pmax	pmax			
	comp=Z,81nm,1.1s,mb5.7								
SVE					MLR	MLR			
	comp=Z,843nm,21.0s,MS5.0								
MAW	**Mawson**	**68.80**	**195**	*eP*		**P**		**12 24 12.1**	**+7.9**
	comp=Z,6.3nm,0.8s,mb4.6								
MAW	**Mawson**	**68.80**	**195**	P		**P**		**12 24 04.7**	**+0.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=351,slow=8.0,SNR=5.5								
ARU	**Arti**	**69.02**	**336**	*iP*		**P**		**12 24 05.2**	**-0.5**
	comp=Z,170nm,1.1s,mb5.9,SNR=6.4								
ARU	**Arti**	**69.02**	**336**	*c iP*		**P**		**12 24 05.1**	**-0.6**
ARU				*e*				12 26 36.2	
ARU				*e*PPP				12 28 15.9	
ARU				*e*S		S		12 33 07.4	-1.4
ARU				*e*SS		SS		12 37 30.7	-4.4
ARU					pmax	pmax			
	comp=Z,47nm,1.2s,mb5.3								
ARU	**Arti**	**69.02**	**336**	⇑*iP*		**P**		**12 24 05.2**	**-0.5**
YAK	**Yakutsk**	**69.23**	**14**	*c iP*		**P**		**12 24 05.2**	**-1.7**
YAK					pmax	pmax			
	comp=Z,100nm,1.3s,mb5.6								
MALT	**Malatya**	**70.96**	**313**	*eP*		**P**		**12 24 17.0**	**-1.1**
MALT					pmax	pmax			
	comp=Z,20nm,1.3s,mb4.9								
MALT	**Malatya**	**70.96**	**313**	*eP*		**P**		**12 24 17.0**	**-1.0**
	comp=Z,20nm,1.3s,mb4.9								
LSZ	**Lusaka**	**72.11**	**255**	*eP*		**P**		**12 24 28.9**	**+3.5**
LSZ					pmax	pmax			
	comp=Z,17nm,1.1s,mb4.9								
LSZ	**Lusaka**	**72.11**	**255**	*eP*		**P**		**12 24 28.9**	**+3.5**
	comp=Z,17nm,1.1s,mb4.9								
CSS	**Prodhromos**	**73.77**	**308**	*eP*		**P**		**12 24 35.5**	**+0.6**
	comp=Z,40nm,1.1s,mb5.3								
CSS				*ep*		pP		12 24 45.4	+1.7
PETK	**Petropavlovsk-**	**73.98**	**32**	P		**P**		**12 24 34.2**	**-1.6**
	comp=Z,6.6nm,0.8s,mb4.6,baz=205,slow=4.3,SNR=15								
PET	**Petropavlovsk**	**74.45**	**32**	⇑*eP*		**P**		**12 24 37.3**	**-1.2**
PET					pmax	pmax			
	comp=Z,46nm,1.3s,mb5.2								
BR131	**Keskin Array S**	**74.94**	**313**	*eP*		**P**		**12 24 41.0**	**-0.6**
	comp=Z,12nm,0.9s,mb4.8								
BOSA	**Boshof**	**75.41**	**242**	P		**P**		**12 24 44.2**	**-0.4**
	comp=Z,6.6nm,0.9s,mb4.5,baz=100,slow=5.9,SNR=4.9								
BOSA	**Boshof**	**75.41**	**242**	P		**P**		**12 24 44.2**	**-0.4**
VSR	**Storozhevoye**	**75.54**	**325**	*eP*		**P**		**12 24 43.3**	**-1.5**
VSR				*e**PP		pP		12 24 53.5	-0.2
VSR					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
VSR					pmax	pmax			
	comp=N,10.0nm,1.2s								
VSR					pmax	pmax			
	comp=E,20nm,0.9s								
SIM	**Simferopol'**	**76.29**	**318**	⇓*eP*		**P**		**12 24 49.5**	**+0.3**
SIM					pmax	pmax			
	comp=Z,19nm,1.0s,mb5.0								
SYO	**Syowa Base**	**76.47**	**199**	⇓*eP*		**P**		**12 24 49.0**	**-0.8**
SYO	**Syowa Base**	**76.47**	**199**	⇓*es*P		sP		12 24 56.0	-5.9
SYO	**Syowa Base**	**76.47**	**199**	⇑*e*PP		PP		12 27 21.6	-20
TIXI	**Tiksi**	**77.44**	**9**	*eP*		**P**		**12 24 52.4**	**-2.7**
TIXI					pmax	pmax			
	comp=Z,39nm,1.6s,mb5.1								
TIXI	**Tiksi**	**77.44**	**9**	⇓*eP*		**P**		**12 24 51.7**	**-3.4**
MOS	**Moscow**	**78.28**	**329**	*eP*		**P**		**12 24 58.5**	**-1.7**
MOS				*e*				12 25 04.7	
MOS					pmax	pmax			
	comp=Z,60nm,1.0s,mb5.5								
OBN	**Obninsk**	**78.58**	**328**	⇓*iP*		**P**		**12 25 02.1**	**+0.3**
OBN				*e*		pP		12 25 10.4	-0.3
OBN				*i*		pP		12 25 11.9	+1.2
OBN				*e*				12 25 20.6	
OBN				*e*S		S		12 34 56.1	-0.5
OBN					pmax	pmax			
	comp=Z,64nm,1.1s,mb5.5								
OBN	**Obninsk**	**78.58**	**328**	*eP*		**P**		**12 25 01.7**	**-0.1**
	comp=Z,78nm,1.3s,mb5.5								
TIRR	**Tirgusor**	**80.02**	**316**	*eP*		**P**		**12 25 08.3**	**-1.6**
TIRR					pmax	pmax			
	comp=Z,16nm,0.9s,mb5.0								
TIRR	**Tirgusor**	**80.02**	**316**	*eP*		**P**		**12 25 08.3**	**-1.6**
	comp=Z,16nm,0.9s,mb5.0								
KIS	**Kishinev**	**80.43**	**319**	*eP*		**P**		**12 25 12.0**	**-0.1**
KIS				*e*		pP		12 25 21.0	0.0
KIS	**Kishinev**	**80.43**	**319**	*e*UNK				12 25 12.0	
AKASG	**Malin Array Be**	**81.22**	**322**	P		**P**		**12 25 15.4**	**-0.8**
	comp=Z,4.7nm,0.8s,mb4.5,baz=84,slow=4.1,SNR=16								
KIEV	**Kiev**	**81.23**	**322**	*eP*		**P**		**12 25 14.7**	**-1.6**
KIEV					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4								
KIEV	**Kiev**	**81.23**	**322**	*eP*		**P**		**12 25 14.7**	**-1.6**
	comp=Z,3.9nm,0.8s,mb4.4								
SBA	**Scott Base**	**81.47**	**169**	*eP*		**P**		**12 25 21.5**	**+4.4**
SBA					pmax	pmax			
	comp=Z,11nm,0.9s,mb4.8								
SBA	**Scott Base**	**81.47**	**169**	*eP*		**P**		**12 25 21.5**	**+4.5**
	comp=Z,11nm,0.9s,mb4.8								
BUR08	**Bucovina Ar. S**	**82.98**	**319**	*eP*		**P**		**12 25 26.4**	**+0.9**
BUR08				*ep*		pP		12 25 36.6	+2.2
JOF	**Joensuu**	**84.03**	**334**	*ep*		**P**		**12 25 29.2**	**-1.4**
APA	**Apatity**	**84.90**	**339**	⇑*eP*		**P**		**12 25 35.0**	**+0.1**
APA					pmax	pmax			
	comp=Z,16nm,1.0s,mb5.1								
APA					MLR	MLR			
	comp=Z,700nm,23.0s,MS5.0								
KWP	**Kalwaria**	**85.02**	**320**	*eP*		**P**		**12 25 35.5**	**-0.4**
KWP					pmax	pmax			
	comp=Z,19nm,0.6s,mb5.4								
KWP	**Kalwaria**	**85.02**	**320**	*eP*		**P**		**12 25 35.5**	**-0.4**
	comp=Z,19nm,0.6s,mb5.4								
KOLS	**Kolonicke sedl**	**85.16**	**320**	*eP*		**P**		**12 25 37.4**	**+0.8**
STHS	**Stebnicka Huta**	**85.92**	**320**	*eP*		**P**		**12 25 41.2**	**+0.8**
STHS					pmax	pmax			
	comp=Z,9.0nm,0.9s,mb5.0								
STHS	**Stebnicka Huta**	**85.92**	**320**	*eP*		**P**		**12 25 41.2**	**+0.8**
	comp=Z,9.3nm,0.9s,mb5.0								
KAF	**Kangasniemi**	**85.99**	**333**	*ep*		**P**		**12 25 39.0**	**-1.4**
KECS	**Kecovo**	**86.24**	**319**	*eP*		**P**		**12 25 42.4**	**+0.4**
KECS					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.6								
KECS	**Kecovo**	**86.24**	**319**	*eP*		**P**		**12 25 42.4**	**+0.4**
	comp=Z,3.2nm,0.8s,mb4.6								
PSZ	**Piszkesteto**	**86.54**	**318**	*eP*		**P**		**12 25 43.9**	**+0.4**
PSZ					pmax	pmax			
	comp=Z,10.0nm,0.9s,mb5.0								
PSZ	**Piszkesteto**	**86.54**	**318**	⇑*eP*		**P**		**12 25 43.8**	**+0.3**
PSZ	**Piszkesteto**	**86.54**	**318**	*eP*		**P**		**12 25 43.9**	**+0.4**
	comp=Z,10nm,0.9s,mb5.1								
VYHS	**Vyhne**	**87.33**	**319**	*eP*		**P**		**12 25 47.6**	**+0.3**
OKC	**Ostrava-Krasne**	**87.97**	**320**	*eP*		**P**		**12 25 51.1**	**+0.8**
OKC				*ep*		pP		12 26 00.3	+1.0
ARCES	**ARCESS Array B**	**88.29**	**340**	P		**P**		**12 25 51.9**	**+0.5**
	comp=Z,13nm,0.9s,mb5.2,baz=113,slow=3.2,SNR=20								
ARCES	**ARCESS Array B**	**88.29**	**340**	P		**P**		**12 25 51.9**	**+0.5**
MODS	**Modra-Piesok**	**88.34**	**319**	*eP*		**P**		**12 25 52.7**	**+0.6**
MORC	**Moravsky Berou**	**88.35**	**320**	*eP*		**P**		**12 25 52.6**	**+0.5**
MORC				*e**PP		pP		12 26 02.3	+1.2
MORC					pmax	pmax			
	comp=Z,8.0nm,0.9s,mb5.0								
MORC	**Moravsky Berou**	**88.35**	**320**	*eP*		**P**		**12 25 52.6**	**+0.5**
	comp=Z,8.0nm,0.9s,mb5.0								
MORC				*ep*		pP		12 26 02.3	+1.2
ZST	**Bratislava**	**88.43**	**318**	*eP*		**P**		**12 25 59.0**	**+6.4**
ZST					pmax	pmax			
	comp=Z,12nm,0.5s,mb5.4								
ZST	**Bratislava**	**88.43**	**318**	*eP*		**P**		**12 25 59.0**	**+6.4**
	comp=Z,12nm,0.5s,mb5.4								
DPC	**Dobruska-Polom**	**89.20**	**320**	*eP*		**P**		**12 25 57.1**	**+1.0**
DPC				*ep*		pP		12 26 05.2	0.0
ARSA	**Arzberg**	**89.38**	**317**	⇑*iP*		**P**		**12 25 57.8**	**+0.7**
	comp=Z,13nm,1.0s,mb5.2								
UPC	**Upice**	**89.42**	**321**	*eP*		**P**		**12 25 58.0**	**+0.9**
TREC	**Trest**	**89.62**	**319**	*eP*		**P**		**12 25 58.8**	**+0.7**
SOKA	**Soboth**	**89.66**	**317**	⇑*iP*		**P**		**12 25 58.6**	**+0.2**
	comp=Z,21nm,1.0s,mb5.4								
PRU	**Pruhonice**	**90.30**	**320**	*eP*		**P**		**12 26 01.9**	**+0.6**
PRU				*ep*		pP		12 26 09.0	-1.3
GEC2	**GERESS Array S**	**90.75**	**319**	*eP*		**P**		**12 26 03.6**	**+0.2**
GEC2					pmax	pmax			
	comp=Z,26nm,1.4s,mb5.4								
GEC2	**GERESS Array S**	**90.75**	**319**	*eP*		**P**		**12 26 03.6**	**+0.2**
	comp=Z,26nm,1.4s,mb5.4								
GERES	**GERESS Array B**	**90.75**	**319**	P		**P**		**12 26 03.8**	**+0.4**
	comp=Z,4.3nm,0.7s,mb4.9,baz=91,slow=5.3,SNR=20								
BRG	**Berggiesshubel**	**90.76**	**321**	*eP*		**P**		**12 26 04.2**	**+0.8**
BRG				*i*		pP		12 26 11.9	-0.5
BRG					pmax	pmax			
	comp=Z,8.0nm,1.2s,mb4.9								
BRG					pmax	pmax			
	comp=Z,10.0nm,1.3s,mb5.0								
BRG	**Berggiesshubel**	**90.76**	**321**	*eP*		**P**		**12 26 04.2**	**+0.7**
	comp=Z,13nm,1.1s,mb5.2								
BRG				*i*		pP		12 26 11.9	-0.5
	comp=Z,16nm,1.3s								
KHC	**Kasperske Hory**	**90.85**	**319**	*eP*		**P**		**12 26 03.5**	**-0.4**
KHC				*ep*		pP		12 26 13.8	+0.9
RJOB	**Jochberg**	**91.27**	**318**	*eP*		**P**		**12 26 05.6**	**-0.2**
	comp=Z,9.0nm,0.9s,mb5.1								
WET	**Wettzell**	**91.31**	**319**	*eP*		**P**		**12 26 05.9**	**-0.1**
WET					pmax	pmax			
	comp=Z,14nm,1.2s,mb5.2								
WET	**Wettzell**	**91.31**	**319**	*eP*		**P**		**12 26 05.9**	**-0.1**
	comp=Z,14nm,1.2s,mb5.2								
CLL	**Collm**	**91.39**	**321**	*i* P		**P**		**12 26 06.5**	**+0.2**
CLL				*i*		pP		12 26 15.8	+0.5
CLL					pmax	pmax			
	comp=Z,10.0nm,1.2s,mb5.0								
CLL					MLR	MLR			
	comp=Z,200nm,21.5s,MS4.5								
CLL	**Collm**	**91.39**	**321**	*eP*		**P**		**12 26 06.2**	**-0.1**
	comp=Z,21nm,1.6s,mb5.2								
CLL	**Collm**	**91.39**	**321**	*i* P		**P**		**12 26 06.5**	**+0.2**
	comp=Z,10.0nm,1.2s,mb5.0								
CLL					LmV			12 11 00.0	
	comp=Z,200nm,21.5s								
CLL				*i* pP		pP		12 26 15.8	+0.5
CLL	**Collm**	**91.39**	**321**	*i* P		**P**		**12 26 06.5**	**+0.2**
	comp=Z,10.0nm,1.2s,mb5.0								
CLL				*i*		pP		12 26 15.8	+0.5
CLL				LR		LR			
	comp=Z,200nm,21.5s,MS4.5								
NKC	**Novy Kostel**	**91.67**	**320**	*eP*		**P**		**12 26 08.8**	**+1.2**
NKC				*ep*		pP		12 26 18.6	+2.0
TANN	**Tannenbergstha**	**91.67**	**320**	*eP*		**P**		**12 26 08.6**	**+1.0**
	comp=Z,8.0nm,1.3s,mb4.9								
MANZ	**Manzenberg**	**91.87**	**320**	*eP*		**P**		**12 26 09.2**	**+0.6**
	comp=Z,14nm,1.2s,mb5.2								
WTTA	**Wattenberg**	**92.02**	**317**	⇑*iP*		**P**		**12 26 09.2**	**-0.1**
	comp=Z,9.8nm,0.8s,mb5.2								
MOX	**Moxa**	**92.22**	**320**	*eP*		**P**		**12 26 11.5**	**+1.3**
MOX	**Moxa**	**92.22**	**320**	*eP*		**P**		**12 26 10.8**	**+0.6**
	comp=Z,18nm,1.5s,mb5.2								
GRA1	**Grafenberg Arr**	**92.43**	**319**	*eP*		**P**		**12 26 11.8**	**+0.6**
	comp=Z,12nm,1.0s,mb5.2								
GRA1				*ep*		pP		12 26 21.6	+1.4
GRF	**Grafenberg Arr**	**92.43**	**319**	*eP*		**P**		**12 26 11.8**	**+0.6**
GRF				*e**PP		pP		12 26 21.6	+1.4
GRF					pmax	pmax			
	comp=Z,12nm,1.0s,mb5.2								
GRF	**Grafenberg Arr**	**92.43**	**319**	*eP*		**P**		**12 26 11.8**	**+0.6**
GRF				*e**PP		pP		12 26 21.6	+1.4
GRF					pmax	pmax			
	comp=Z,12nm,1.0s,mb5.2								
GRF	**Grafenberg Arr**	**92.43**	**319**	*eP*		**P**		**12 26 11.8**	**+0.6**
	comp=Z,12nm,1.0s,mb5.2								
GRF				*ep*		pP		12 26 21.6	+1.4
NB2	**NORSAR Subarra**	**92.94**	**331**	P		**P**		**12 26 13.1**	**-0.2**
	comp=Z,1.2nm,0.8s,mb4.4,baz=97,slow=5.1								
NOA	**NORSAR Array B**	**92.94**	**331**	P		**P**		**12 26 12.9**	**-0.4**
	comp=Z,2.5nm,0.9s,mb4.6,baz=95,slow=5.1,SNR=4.1								
CLZ	**Clausthal**	**93.06**	**322**	*eP*		**P**		**12 26 14.4**	**+0.4**
CLZ					pmax	pmax			
	comp=Z,37nm,2.0s,mb5.5								
CLZ	**Clausthal**	**93.06**	**322**	*eP*		**P**		**12 26 14.4**	**+0.4**
	comp=Z,37nm,2.0s,mb5.5								
KEST	**Kesra**	**93.20**	**305**	P		**P**		**12 26 15.5**	**+0.5**
	comp=Z,4.7nm,1.0s,mb4.9,baz=132,slow=3.5,SNR=7.5								
YKA	**Yellowknife Ar**	**115.81**	**17**	PKP		PKPdf		12 31 41.3	-1.2
	comp=Z,1.0nm,0.9s,baz=312,slow=2.5,SNR=3.7								
YKA				PP		PP		12 32 42.2	-3.3
	comp=Z,1.5nm,1.0s,baz=324,slow=7.3,SNR=4.2								
YKA	**Yellowknife Ar**	**115.81**	**17**	PKP		PKPdf		12 31 41.4	-1.2
YKA				PP		PP		12 32 42.2	-3.3
CMW	**Cultus Mountai**	**122.41**	**32**	P		PKPdf		12 31 55.8	+0.1
TDL	**Tradedollar La**	**123.58**	**34**	P		PKPdf		12 31 58.4	+0.4
FL2	**Flat Top 2**	**123.59**	**35**	P		PKPdf		12 31 58.7	+0.7
ETW	**Entiat**	**123.86**	**32**	*e*PKPdf		PKPdf		12 31 58.2	-0.3
RSW	**Rattlesnake Hi**	**125.01**	**33**	*e*PKPdf		PKPdf		12 32 01.3	+0.6
HAWA	**Hanford**	**125.04**	**33**	*e*PKPdf		PKPdf		12 32 01.3	+0.5
HAWA				*ep*PKPdf		pPKPdf		12 32 11.2	+1.2
HUMO	**Hull Mountain**	**125.23**	**39**	*e*PKPdf		PKPdf		12 32 01.9	+0.6
LNOR	**Lincton Mounta**	**126.04**	**33**	*e*PKIKP		PKPdf		12 32 02.5	-0.2
LTIM	**Timbered Crate**	**126.93**	**39**	P		PKPdf		12 32 05.1	+0.5
LBCM	**Butte Creek Ri**	**127.20**	**40**	P		PKPdf		12 32 05.5	+0.4
MOD	**Modoc**	**127.26**	**38**	*e*PKPdf		PKPdf		12 32 05.3	+0.1
MOD				*ep*PKPdf		pPKPdf		12 32 15.7	+1.3
MOD				*es*PKPdf				12 32 19.5	
NSHM	**Saint Helena R**	**127.59**	**43**	*e*PKPdf		PKPdf		12 32 06.7	+0.7
NSHM				*ep*PKPdf		pPKPdf		12 32 16.7	+1.5
CHMT	**Chamberlain Mo**	**127.93**	**29**	*e*PKPdf		PKPdf		12 32 06.5	+0.2
WVOR	**Wild Horse Val**	**127.96**	**36**	*e*PKIKP		PKPdf		12 32 07.1	+0.6
WVOR				*e*				12 32 17.4	
DLMT	**Dillon**	**129.35**	**30**	*e*PKPdf		PKPdf		12 32 09.6	+0.5
DLMT				*ep*PKPdf		pPKPdf		12 32 20.0	+1.7
MCMT	**McKenzie Canyo**	**129.60**	**31**	*e*PKPdf		PKPdf		12 32 10.8	+1.3
NVAR	**Mina Array Bea**	**130.49**	**40**	PKP		PKPdf		12 32 13.2	+1.8
	comp=Z,3.1nm,1.0s,baz=259,slow=1.9,SNR=16								
REDW	**Red Top Meadow**	**131.65**	**31**	*e*PKPdf		PKPdf		12 32 13.2	-0.3
BGU	**Big Grassy Mou**	**132.16**	**35**	*e*PKPdf		PKPdf		12 32 16.2	+1.7
PDAR	**Pinedale Array**	**132.74**	**30**	PKP		PKPdf		12 32 16.6	+1.1
	comp=Z,9.9nm,0.9s,baz=117,slow=1.7,SNR=5.5								
RSSD	**Black Hills**	**134.24**	**25**	*e*PKIKP		PKPdf		12 32 17.9	-0.4
PFO	**Pinyon Flat Ob**	**134.40**	**45**	PKP		PKPdf		12 32 18.6	-0.4
	comp=Z,3.4nm,0.7s,baz=176,slow=6.0,SNR=4.0								
PV01	**Paradox Valley**	**136.58**	**34**	*e*PKPdf		PKPdf		12 32 23.6	+0.7
WUAZ	**Wupatki**	**136.67**	**39**	*e*PKPdf		PKPdf		12 32 24.2	+1.0
LAZ	**Ladron**	**140.01**	**37**	*e*PKPdf		PKPdf		12 32 30.6	+1.3
ANMO	**Albuquerque**	**140.03**	**36**	PKhKP				12 32 23.9	
	comp=Z,2.4nm,0.9s,baz=233,slow=1.2,SNR=5.4								
ANMO	**Albuquerque**	**140.03**	**36**	PKP				12 32 23.9	
BNM	**Barren Site**	**140.49**	**37**	*e*PKPdf		PKPdf		12 32 30.9	+0.7
CPUP	**Villa Florida**	**143.31**	**214**	PKP		PKPdf		12 32 38.5	+3.0
	comp=Z,0.3nm,0.3s,baz=53,slow=4.3,SNR=3.5								
CPUP	**Villa Florida**	**143.31**	**214**	PKP		PKPdf		12 32 38.5	+3.0
CCM	**Cathedral Cave**	**144.13**	**16**	*e*PKIKP		PKPdf		12 32 33.2	-3.3
OLIL	**Olney**	**144.24**	**12**	*e*PKPdf		PKPdf		12 32 33.6	-3.1
WMOK	**Wichita Mounta**	**144.25**	**28**	*e*PKIKP		PKPdf		12 32 33.9	-2.9
FVM	**French Village**	**144.42**	**15**	*e*PKIKP		PKPdf		12 32 34.3	-2.7
WCI	**Wyandotte Cave**	**145.06**	**10**	*e*PKIKP		PKPdf		12 32 36.7	-1.5
USIN	**University of**	**145.07**	**12**	*e*PKPdf		PKPdf		12 32 36.7	-1.4
TXAR	**Lajitas Array**	**145.63**	**40**	PKPbc		PKPbc		12 32 39.9	+0.3
	comp=Z,51nm,0.9s,baz=278,slow=1.6,SNR=295								
TXAR	**Lajitas Array**	**145.63**	**40**	PKPbc		PKPbc		12 32 39.9	+0.3
URVA	**University of**	**146.26**	**357**	*e*PKPbc		PKPbc		12 32 40.5	-0.8
MIAR	**Mount Ida**	**146.59**	**22**	*e*PKPdf		PKPdf		12 32 39.8	-1.1
MIAR				*ep*PKPdf		pPKPdf		12 32 51.8	+1.7
ELN	**Prospectdale**	**146.62**	**2**	*e*PKPdf		PKPdf		12 32 40.2	-0.6
BLA	**Blacksburg**	**146.65**	**2**	*e*PKP2		PKPbc		12 32 41.2	-1.2
HALT	**Halls**	**146.66**	**15**	*e*PKPbc		PKPbc		12 32 41.8	-0.7
UALR	**University of**	**146.82**	**20**	*e*PKPbc		PKPbc		12 32 42.5	-0.5
TZTN	**Tazewell**	**147.10**	**6**	*e*PKPbc		PKPbc		12 32 42.8	-0.9
JCT	**Junction City**	**147.11**	**34**	*e*PKP2		PKPbc		12 32 42.0	-2.0
TKL	**Tuckaleechee C**	**147.95**	**7**	PKPbc		PKPbc		12 32 45.1	-1.0
	comp=Z,24nm,1.0s,baz=162,slow=1.7,SNR=19								
TKL	**Tuckaleechee C**	**147.95**	**7**	*e*PKPbc		PKPbc		12 32 44.9	-1.2
OXF	**Oxford**	**147.96**	**16**	*e*PKP2		PKPbc		12 32 45.4	-0.8
CPCT	**Cooper Cave**	**148.06**	**8**	*e*PKPbc		PKPbc		12 32 45.7	-0.7
SWET	**Sewanee**	**148.06**	**10**	*e*PKPbc		PKPbc		12 32 44.7	-1.7
JSC	**Jenkinsville**	**149.53**	**3**	*e*PKP2		PKPbc		12 32 49.6	-0.6
HKT	**Hockley**	**149.60**	**29**	*e*PKP2		PKPbc		12 32 51.0	+0.5
LRAL	**Lakeview Retre**	**149.96**	**13**	*e*PKPbc		PKPbc		12 32 50.2	-1.2
GOGA	**Godfrey**	**150.20**	**7**	*e*PKIKP		PKPbc		12 32 51.7	-0.2

IDC ***13*** *12:13:43.2±0.9, 192.5×9932E, h0km, mb4.9/15, mb1 5.0/15, mb1mx4.8/20, mbtmp4.9/15, MS4.4/1, Ms1 4.4/1, ms1mx3.8/30, Error ellipse: s-maj=31.4km s-min=16.4km az=49.0*
ISCJB ***13*** *12:13:48.3±3.4, 18S±01×995E±02, h44km±31km, mb4.9/14, Error ellipse: s-maj=29.3km s-min=13.7km az=148.2*
NEIC ***13*** *12:13:48.8±0.7, 183S×9934E, h35km, mb4.9/3, Error ellipse: s-maj=24.7km s-min=9.6km az=56.0*
ISC 13 12:13:51.6±2.4, 18S±01×995E±02, h59km±22km, n26, σ0§82/22, mb4.9/14, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**10.59**	**145**	*e*Pn	**Pn**		**12 16 21.1**	**+0.3**
CMAR	**Chiang Mai Arr**	**20.14**	**359**	P	**P**		**12 18 19.9**	**-1.2**
	27nm,0.7s,baz=188,slow=10,SNR=16							
KAPI	**Kappang**	**20.52**	**99**	P	**P**		**12 18 25.7**	**+0.6**
	30nm,0.9s,baz=285,slow=12,SNR=7.6							
WRA	**Warramunga Arr**	**38.57**	**120**	P	**P**		**12 21 07.6**	**-1.3**
	32nm,0.8s,mb5.1,baz=297,slow=9.5,SNR=12							
WB2	**Warramunga Arr**	**38.58**	**120**	*eP*	**P**		**12 21 07.9**	**-1.2**
KSRS	**Korea Array**	**47.14**	**31**	P	**P**		**12 22 18.1**	**0.0**
	8.4nm,0.8s,mb4.7,baz=224,slow=7.4,S

comp=Z,6.6nm,0.7s,mb4.7,baz=149,slow=8.2,SNR=33
MJAR Matsushiro Arr 53.37 38 P **P 12 35 12.1 -1.0**
comp=Z,3.0nm,0.8s,mb4.3,baz=217,slow=7.5,SNR=11
KURK Kurchatov 57.51 344 P **P 12 35 42.7 +0.1**
comp=Z,5.4nm,0.7s,mb4.7,baz=160,slow=6.8,SNR=8.7
KURK Kurchatov 57.51 344 P **P 12 35 42.7 +0.1**
ZAA0 Zalesovo Array 59.06 349 *eP* **P 12 35 53.5 +0.1**
ZALV Zalesovo Beam 59.06 349 P **P 12 35 53.7 +0.3**
comp=Z,12nm,0.8s,mb5.0,baz=179,slow=4.9,SNR=16
ZALV Zalesovo Beam 59.06 349 P **P 12 35 53.7 +0.3**
BVAR Borovoye Array 62.08 340 P **P 12 36 13.9 -0.1**
comp=Z,3.0nm,0.7s,mb4.5,baz=141,slow=9.6,SNR=12
PETK Petropavlovsk- 74.14 32 P **P 12 37 28.9 -0.8**
comp=Z,1.8nm,0.7s,mb4.1,baz=239,slow=4.3,SNR=5.4
TXAR Lajitas Array 145.79 40 PKPbc PKPbc 12 45 34.4 +1.1
comp=Z,7.1nm,0.8s,baz=267,slow=1.4,SNR=63

IDC 13 12:39:40.7±2.7,241S×10031E,h0km,mb3.6/6,mb1 3.8/6, mb1mx3.6/20,mbtmp3.7/6,MS4.0/1,Ms1 4.0/1, ms1mx3.3/43,Error ellipse: s-maj=114.8km s-min=20.6km az=57.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.78**	**356**	P	P	12 44 22.8	-0.7
	0.7nm,0.5s,baz=183,slow=11,SNR=4.2						
BATI	**Baumata**	**24.46**	**109**	LR	LR	12 58 33.1	
	comp=Z,290nm,18.2s,baz=163,slow=46						
WRA	**Warramunga Arr**	**37.52**	**120**	P	P	12 46 56.4	-0.3
	0.4nm,0.5s,baz=304,slow=9.1,SNR=9.2						
ASAR	**Alice Springs**	**38.77**	**126**	P	P	12 47 07.5	+0.3
	0.7nm,0.8s,baz=299,slow=8.1,SNR=4.1						
SONM	**Songino Array**	**50.32**	**5**	P	P	12 48 39.8	+0.7
	0.6nm,0.4s,baz=190,slow=8.7,SNR=6.9						
MKAR	**Makanchi Array**	**51.50**	**344**	P	P	12 48 48.6	+0.5
	1.0nm,0.6s,baz=138,slow=7.9,SNR=5.1						
KURK	**Kurchatov**	**56.09**	**344**	P	P	12 49 20.7	-0.9
	0.3nm,0.2s,baz=162,slow=6.5,SNR=3.5						
TXAR	**Lajitas Array**	**144.84**	**38**	PKP	PKPdf	12 59 19.9	-0.6
	0.5nm,0.6s,baz=282,slow=0.8,SNR=8.2						

*ISCJB **13** 12:41:07.4±0.7,4237N±008×2399E±007,h10km,Error ellipse: s-maj=13.1km s-min=4.1km az=29.2*
*BEO **13** 12:41:08.1±0.4,4244N×2406E,ML2.4/2*
*CSEM **13** 12:41:21.9,4075N×2449E,h10km,MD3.0/3,After ATH*
*ATH **13** 12:41:21.9,4075N×2449E,h10km,MD3.0/3*
ISC 13 12:41:07.9±0.7,4243N±007×2404E±007,h10km,n8, σ0s93/13,1C,Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLD	**Plovdiv**	**0.59**	**123**	*e*Pg	**Pg**	**12 41 18.5**	**-0.8**
PLD				*e*Sg	**Sg**	**12 41 26.7**	**-0.3**
VTS	**Vitosha**	**0.64**	**285**	*e*Pg	**Pg**	**12 41 19.3**	**-1.0**
VTS				*e*Sg	**Sg**	**12 41 28.6**	**0.0**
NVR	**Nevrokopi**	**1.09**	**187**	*e*PB	**Sg**	**12 41 36.4**	**-6.5**
ZAPS	**Zavoj**	**1.34**	**310**	*e*Pg	**Pn**	**12 41 31.7**	**-0.9**
ZAPS				*e*Sg	**Sg**	**12 41 51.7**	**+0.7**
BARS	**Barje**	**1.69**	**284**	⇑*i*Pn	**Pn**	**12 41 38.4**	**+0.9**
BARS				*e*Sg	**Sg**	**12 42 02.4**	**+0.2**
RDO	**Rodhopi**	**1.70**	**138**	*e*PB	**Pn**	**12 41 38.7**	**+1.1**
BOLS	**Boljevac**	**2.07**	**313**	*e*Pn	**Pn**	**12 41 44.7**	**+1.9**
BOLS				*e*Sg	**Sg**	**12 42 13.2**	**-1.4**
KZN	**Kozani**	**2.72**	**220**	*e*PN	**Pg**	**12 41 59.8**	**-0.3**

IDC 13 13:02:49.2±11.0,1150S×16587E,h170km±94km,mb3.6/8, mb1 3.8/8,mb1mx3.5/17,mbtmp3.6/8,MS3.4/1,Ms1 3.4/1, ms1mx3.0/28,Error ellipse: s-maj=50.0km s-min=41.6km az=118.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.18**	**289**	LR	LR	13 05 46.1	
	comp=Z,299nm,18.9s,baz=135,slow=29						
CTA	**Charters Tower**	**20.70**	**243**	P	P	13 07 18.0	+1.7
	3.4nm,0.8s,baz=61,slow=1.1,SNR=5.1						
WRA	**Warramunga Arr**	**31.44**	**251**	P	P	13 08 54.2	-0.6
	1.7nm,0.9s,baz=81,slow=9.1,SNR=10						
WRA				PcP	PcP	13 11 43.1	-0.9
	0.7nm,0.9s,baz=79,slow=4.8,SNR=4.5						
ASAR	**Alice Springs**	**32.70**	**244**	P	P	13 09 05.0	-0.8
	1.9nm,0.8s,baz=68,slow=9.7,SNR=23						
ASAR				PcP	PcP	13 11 48.0	+0.5
	0.8nm,0.8s,baz=70,slow=2.6,SNR=6.0						
CMAR	**Chiang Mai Arr**	**72.41**	**294**	P	P	13 13 59.2	+1.9
	0.8nm,0.7s,baz=114,slow=4.9,SNR=5.5						
SONM	**Songino Array**	**79.11**	**324**	P	P	13 14 34.2	-0.5
	0.3nm,0.6s,baz=146,slow=8.6,SNR=4.0						
MKAR	**Makanchi Array**	**93.94**	**317**	P	P	13 15 46.8	-0.8
	0.9nm,0.5s,baz=101,slow=5.7,SNR=7.6						
ZALV	**Zalesovo Beam**	**94.00**	**324**	P	P	13 15 47.2	-0.5
	0.7nm,0.5s,baz=106,slow=3.1,SNR=2.9						
TXAR	**Lajitas Array**	**95.94**	**61**	P	P	13 15 57.8	+0.6
	0.3nm,0.6s,baz=239,slow=1.3,SNR=4.0						

*ISCJB **13** 13:08:08.5±1.1,2200S×0106×1794BW±009,h553km±17km, mb4.3/18,Error ellipse: s-maj=14.4km s-min=8.2km az=27.8*
*IDC **13** 13:08:09.3±2.0,2202S×17940W,h553km±22km,mb3.8/10, mb1 4.0/12,mb1mx3.8/19,mbtmp3.8/12,Error ellipse: s-maj=23.7km s-min=13.2km az=144.0*
*NEIC **13** 13:08:10.2±1.2,2200S×17941W,h569km±15km,mb4.8/12, Error ellipse: s-maj=13.5km s-min=10.4km az=129.0*
ISC 13 13:08:09.4±1.3,2199S±008×17947W±010,h549km±18km, n47,σ1s00/38,mb4.3/18,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**10.87**	**44**	P	**P**	**13 10 36.9**	**+0.6**
	3.6nm,0.3s,baz=44,slow=20,SNR=8.2						
AFI				S	**S**	**13 12 33.4**	**-3.7**
	1.6nm,0.3s,baz=90,slow=23,SNR=3.0						
AFI	**Afiamalu**	**10.87**	**44**	*e*P	**P**	**13 10 36.3**	**0.0**
AFI				S	**S**	**13 12 33.4**	**-3.7**
URZ	**Urewera**	**16.48**	**190**	P	**P**	**13 11 31.9**	**-1.3**
	3.2nm,0.3s,baz=346,slow=2.8,SNR=23						
URZ				S	**S**	**13 14 15.0**	**-4.6**
	0.8nm,0.3s,baz=226,slow=22,SNR=9.2						
SNZO	**South Karori**	**19.88**	**193**	P	**P**	**13 12 03.5**	**-0.7**
	33nm,0.7s						
TCW	**Tory Channel**	**19.88**	**194**	*e*P	**P**	**13 12 05.9**	**+1.7**
THZ	**Tophouse**	**20.74**	**196**	*e*P	**P**	**13 12 11.8**	**-0.1**
KHZ	**Kahutara**	**21.20**	**194**	P	**P**	**13 12 15.0**	**-1.1**
ARMA	**Armidale**	**27.20**	**246**	*e*P	**P**	**13 13 11.7**	**+2.2**
CNB	**Canberra Magne**	**30.27**	**237**	*e*P	**P**	**13 13 37.9**	**+1.8**
CTA	**Charters Tower**	**32.01**	**267**	*e*P	**P**	**13 13 52.2**	**+1.0**
	12nm,0.4s,mb4.8						
CTA	**Charters Tower**	**32.01**	**267**	P	**P**	**13 13 52.1**	**+0.9**
	15nm,0.4s,mb4.9,baz=93,slow=11,SNR=43						
CTAO	**Charters Tower**	**32.01**	**267**	*e*P	**P**	**13 13 51.9**	**+0.7**
	17nm,0.5s,mb4.8						
PMG	**Port Moresby**	**34.38**	**286**	*e*P	**P**	**13 14 11.7**	**+0.3**
	31nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**35.92**	**246**	*e*P	**P**	**13 14 24.9**	**+1.1**
	4.6nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**35.92**	**246**	P	**P**	**13 14 24.6**	**+0.7**
	6.5nm,0.5s,mb4.4,baz=293,slow=9.0,SNR=3.1						
STKA	**Stephens Creek**	**35.92**	**246**	*e*P	**P**	**13 14 24.5**	**+0.6**
	7.5nm,0.6s,mb4.4						
ASAR	**Alice Springs**	**42.86**	**258**	P	**P**	**13 15 19.9**	**+0.1**
	15nm,0.6s,mb4.7,baz=99,slow=8.2,SNR=221						
ASAR				PcP	PcP	13 16 57.4	-0.9
	1.7nm,0.6s,baz=94,slow=3.6,SNR=6.2						
WB2	**Warramunga Arr**	**43.05**	**264**	*e*P	**P**	**13 15 20.6**	**-0.7**
WRAB	**Tennant Creek**	**43.05**	**264**	*e*P	**P**	**13 15 20.6**	**-0.7**
	18nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**43.06**	**264**	P	**P**	**13 15 20.9**	**-0.4**
	7.2nm,0.3s,mb4.7,baz=95,slow=7.8,SNR=361						
FORT	**Forrest**	**47.46**	**248**	*e*P	**P**	**13 15 54.6**	**-0.2**
	19nm,0.6s,mb4.8						
GUMO	**Guam**	**49.73**	**312**	P	**P**	**13 16 11.4**	**-0.5**
	32nm,0.8s,mb4.8,baz=130,slow=10,SNR=3.0						
MBWA	**Marble Bar**	**56.20**	**259**	*e*P	**P**	**13 16 56.7**	**-1.3**
	30nm,0.7s,mb4.6						
SBA	**Scott Base**	**56.31**	**183**	*e*P	**P**	**13 16 57.1**	**-0.6**
	3.3nm,1.0s,mb3.5						
KKM	**Kota Kinabalu**	**68.83**	**286**	*e*P	**P**	**13 18 18.4**	**-1.2**
MJAR	**Matsushiro Arr**	**70.61**	**325**	P	**P**	**13 18 29.4**	**-0.3**
	3.3nm,0.8s,mb3.9,baz=164,slow=5.8,SNR=8.1						
MAJO	**Matsushiro**	**70.61**	**325**	*e*P	**P**	**13 18 28.0**	**-1.6**
	9.3nm,1.0s,mb4.3						
KSM	**Kuching**	**72.27**	**279**	*e*P	**P**	**13 18 39.2**	**-0.7**
PETK	**Petropavlovsk-**	**77.36**	**346**	P	**P**	**13 19 07.4**	**-0.1**
	7.5nm,0.7s,mb4.2,baz=122,slow=4.5,SNR=24						
CMB	**Columbia Colle**	**81.48**	**43**	*e*P	**P**	**13 19 29.9**	**+0.4**
	4.0nm,1.0s,mb3.8						
NVAR	**Mina Array Bea**	**83.04**	**44**	P	**P**	**13 19 38.2**	**+0.8**
	0.6nm,0.6s,mb3.3,baz=224,slow=8.4,SNR=6.0						
TXAR	**Lajitas Array**	**89.01**	**58**	P	**P**	**13 20 07.2**	**+1.0**
	0.7nm,0.7s,mb3.6,baz=209,slow=6.5,SNR=9.0						
TXAR	**Lajitas Array**	**89.01**	**58**	P	**P**	**13 20 07.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P	**P**	**13 20 09.3**	**+1.4**
	6.0nm,0.8s,mb4.5,baz=134,slow=3.3,SNR=8.6						
CHTO	**Chiang Mai**	**89.47**	**290**	*e*P	**P**	**13 20 09.2**	**+0.7**
	2.2nm,0.6s,mb4.2						
BVAR	**Borovoye Array**	**119.32**	**319**	PKP	PKPdf	13 25 54.3	-1.8
	1.7nm,0.3s,baz=114,slow=2.7,SNR=8.4						
ARCES	**ARCESS Array B**	**130.12**	**349**	PKP	PKPdf	13 26 15.1	-1.3
	2.4nm,0.9s,baz=52,slow=2.2,SNR=4.1						
ARCES	**ARCESS Array B**	**130.12**	**349**	PKP	PKPdf	13 26 15.1	-1.3
HFS	**Hagfors**	**140.77**	**350**	PKhKP		13 26 29.1	
	1.8nm,0.3s,baz=66,slow=3.7,SNR=7.5						
AKASG	**Malin Array Be**	**143.61**	**329**	PKP	PKPdf	13 26 38.5	-3.1
	2.8nm,0.3s,baz=36,slow=4.3,SNR=10						
KIEV	**Kiev**	**143.62**	**329**	*e*PKPdf	PKPdf	13 26 38.5	-3.1
MALT	**Malatya**	**143.70**	**305**	*e*PKPdf	PKPdf	13 26 39.2	-3.0
ASF	**Jabal al Asfar**	**146.21**	**295**	PKPbc	PKPbc	13 26 48.8	0.0
	2.1nm,0.6s,baz=307,slow=2.6,SNR=4.4						
MMAI	**Mount Meron Ar**	**147.31**	**297**	PKPbc	PKPbc	13 26 51.8	0.0
	2.7nm,0.3s,baz=72,slow=5.4,SNR=7.1						
CLL	**Collm**	**149.16**	**345**	*i* PKPbc	PKPbc	13 26 55.2	-0.6
CLL				*e*PKPab	PKPab	13 27 02.0	-0.5
BRG	**Berggiesshubel**	**149.32**	**343**	*i* P	PKPbc	13 26 55.7	-0.5
	10.0nm,0.8s						
GERES	**GERESS Array B**	**151.22**	**342**	PKPbc	PKPbc	13 26 59.7	-1.0
	1.1nm,0.4s,baz=18,slow=2.0,SNR=4.8						

*SZGRF **13** 13:10:06.8,520S×10239E,h48km,mb5.4, Southern Sumatera, Indonesia*
*NEIC **13** 13:10:14.4±2.2,275S×10097E,h17km±13km,mb5.5/91, MS4.9/155,Error ellipse: s-maj=5.3km s-min=3.3km az=223.0*
NEIC Felt [III] at Bengkulu and [II] at Kapahiang, Sumatra.
*BJI **13** 13:10:14.1,284S×10091E,h34km,mB5.2,mb5.3,Ms4.9, Msz4.8*
*MOS **13** 13:10:15.9±0.9,256S×10108E,h33km,mb5.8/84, MS4.8/33,Error ellipse: s-maj=8.6km s-min=4.4km az=119.7*
*ISCJB **13** 13:10:17.3±0.1,272S±003×10090E±002,h46km, mb5.5/207,MS4.8/163,Error ellipse: s-maj=4.4km s-min=2.9km az=33.6*
*IDC **13** 13:10:19.7±1.1,270S×10110E,h57km±8km,mb5.1/40, mb1 5.1/41,mb1mx5.1/41,mbtmp5.1/41,Error ellipse: s-maj=11.9km s-min=6.4km az=44.0*
*DJA **13** 13:10:21,280S×10064E,h84km,Mw5.5/37*
ISC 13 13:10:19.2±0.1,274S±003×10086E±002,h48km, h48km±.9km:pP-P,n742,σ1s02/530,mb5.5/205,MS4.8/163, 66C-25D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPI	**Padang Panjang**	**2.32**	**348**	P	**Pn**	**13 10 55.7**	**+0.8**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.34**	**59**	P	**Pn**	**13 11 23.5**	**+0.8**
	0.0nm,0.0s						
KLI	**Kotabumi**	**4.51**	**118**	P	**Pn**	**13 11 26.6**	**+1.6**
	0.0nm,0.0s						
BLSI	**Bandar Lampung**	**5.09**	**121**	P	**Pn**	**13 11 36.7**	**+3.7**
	930nm,0.9s						
TRSI	**Tarutung**	**5.10**	**338**	P	**Pn**	**13 11 41.0**	**+7.8**
	2µm,0.9s						
PPBI	**Pangkal Pinang**	**5.30**	**84**	P	**Pn**	**13 11 38.1**	**+2.2**
	210nm,1.0s						
KGM	**Kluang**	**5.33**	**27**	⇓P	**Pn**	**13 11 38.8**	**+2.5**
MYKOM	**Kota Tinggi**	**5.40**	**34**	⇑P	**Pn**	**13 11 39.7**	**+2.5**
FRIM	**Kepong**	**5.99**	**7**	⇓P	**Pn**	**13 11 48.0**	**+2.7**
SBJI	**Serang**	**6.23**	**123**	P	**Pn**	**13 11 53.1**	**+4.4**
	733nm,1.2s						
TPI	**Tanjungpandan**	**6.78**	**90**	P	**Pn**	**13 11 59.3**	**+3.1**
	143nm,0.8s						
DBJI	**Dramaga**	**6.98**	**123**	P	**Pn**	**13 11 59.6**	**+0.6**
	417nm,1.4s						
CBJI	**Citeko**	**7.00**	**122**	P	**Pn**	**13 12 02.9**	**+3.7**
	2µm,0.8s						
IPM	**Ipoh**	**7.18**	**1**	⇓P	**Pn**	**13 12 05.9**	**+4.3**
LEM	**Lembang**	**7.86**	**121**	P	**Pn**	**13 12 13.1**	**+2.1**
	350nm,0.9s						
JCJI	**Jatiwangi**	**8.27**	**117**	P	**Pn**	**13 12 21.5**	**+4.9**
	396nm,0.8s						
KTGM	**Kuala Trenggan**	**8.33**	**16**	⇓P	**Pn**	**13 12 21.8**	**+4.4**
TGJI	**Tegal**	**9.19**	**117**	P	**Pn**	**13 12 21.6**	**-7.7**
	248nm,0.8s						
SNG	**Songkhla**	**9.86**	**359**	P	**Pn**	**13 12 40.0**	**+1.6**
	640nm,0.9s						
BSI	**Banda Aceh**	**9.89**	**326**	P	**Pn**	**13 12 39.3**	**+0.4**
	231nm,1.1s						
BJII	**Banjamegara**	**9.92**	**118**	P	**Pn**	**13 12 40.5**	**+1.2**
	123nm,1.1s						
COCO	**West Island**	**10.20**	**203**	Pn	**Pn**	**13 12 39.1**	**-3.9**
	4µm,0.9s,SNR=9.3						
COCO	**West Island**	**10.20**	**203**	*e*Pn	**Pn**	**13 12 37.5**	**-5.5**
	332nm,0.8s						
KSM	**Kuching**	**10.33**	**66**	⇑P	**Pn**	**13 12 47.8**	**+2.9**
KSM	**Kuching**	**10.33**	**66**	*e*Pn	**Pn**	**13 12 45.6**	**+0.7**
PBKI	**Pangkalan Bun**	**10.80**	**90**	P		13 13 04.6	
	49nm,1.1s						
STKI	**Sintang**	**10.97**	**75**	P	**Pn**	**13 12 57.9**	**+4.3**
	165nm,1.0s						
SJI	**Sawahan**	**11.94**	**115**	P	**Pn**	**13 13 06.4**	**-0.4**
	278nm,0.7s						
SBUM	**Sibu**	**12.47**	**66**	⇓P	**Pn**	**13 13 18.8**	**+4.7**
KRKI	**Karangkates**	**12.73**	**115**	P	**Pn**	**13 13 22.2**	**+4.6**
	316nm,0.7s						
PLKI	**Palangkaraya**	**13.08**	**88**	P	**Pn**	**13 13 32.2**	**+10**
	56nm,1.0s						
BTM	**Bintulu**	**13.57**	**64**	⇑P	**Pn**	**13 13 33.2**	**+4.1**
KMMI	**Kalianget**	**13.74**	**109**	P	**Pn**	**13 13 33.3**	**+1.9**
	186nm,1.3s						
BBKI	**Banjar Baru**	**13.98**	**93**	P	**Pn**	**13 13 39.6**	**+4.9**
	502nm,0.8s						
KHKI	**Kahang-Kahang**	**15.70**	**111**	P	**Pn**	**13 13 57.7**	**+0.4**
	121nm,0.8s						
MTNI	**Mataram**	**16.31**	**112**	P	**Pn**	**13 14 03.7**	**-1.4**
	136nm,1.1s						
SMKI	**Samarinda**	**16.50**	**82**	P	**Pn**	**13 14 12.6**	**+5.1**
	435nm,1.0s						
KKM	**Kota Kinabalu**	**17.64**	**60**	⇑P	**Pn**	**13 14 24.3**	**+2.6**
KKM	**Kota Kinabalu**	**17.64**	**60**	⇑*i*Pn	**Pn**	**13 14 22.1**	**+0.4**
NST	**Nakhon Sawan**	**18.31**	**358**	P	**Pn**	**13 14 24.5**	**-5.3**
	35nm,0.6s						
SDKM	**Sandakan**	**18.32**	**63**	⇑P	**Pn**	**13 14 31.5**	**+1.6**
UBT	**Ubonrachathani**	**18.34**	**13**	P	**Pn**	**13 14 21.0**	**-9.1**
TSM	**Tawau**	**18.38**	**68**	⇓P	**Pn**	**13 14 32.1**	**+1.4**
KDM	**Kudat**	**18.61**	**59**	⇓P	**Pn**	**13 14 34.8**	**+1.4**
KAPI	**Kappang**	**18.98**	**97**	P	**Pn**	**13 14 37.5**	**-0.4**
	2µm,1.1s,SNR=22						
KAPI	**Kappang**	**18.98**	**97**	P	**Pn**	**13 14 33.7**	**-4.2**
	10nm,0.3s,baz=280,slow=11,SNR=42						
KAPI	**Kappang**	**18.98**	**97**	P	**Pn**	**13 14 33.7**	**-4.2**
KAPI				⇑*e*P		13 14 36.8	
PCI	**Palu**	**19.05**	**85**	P	**Pn**	**13 14 39.0**	**+0.2**
	393nm,1.4s						
KKTK	**Khon Kaen**	**19.06**	**6**	P	**Pn**	**13 14 35.0**	**-3.8**
	926nm,0.5s						
MYLDM	**Lahad Datu**	**19.30**	**66**	⇑P	**Pn**	**13 14 43.5**	**+1.8**
BDT	**Bhumibol Dam**	**19.94**	**355**	P	**Pn**	**13 14 45.0**	**-4.3**
	27nm,0.9s						
CMAR	**Chiang Mai Arr**	**21.15**	**355**	P	**P**	**13 14 58.2**	**-2.2**
	85nm,0.9s,mb5.1,baz=185,slow=10.0,SNR=182						
CMAR				PcP	PcP	13 19 05.7	+0.6
	8.2nm,0.9s,baz=210,slow=3.0,SNR=8.0						
CMAR				ScP	ScP	13 22 37.1	-1.0
	2.7nm,0.8s,baz=199,slow=3.2,SNR=6.8						
CMAR	**Chiang Mai Arr**	**21.15**	**355**	P	**P**	**13 14 58.2**	**-2.2**
CMAR						13 19 05.7	
CMAR				pmax	pmax		
	comp=Z,85nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMAR				pmax	pmax		
	comp=N,3.0nm,0.8s						
NANT	**Nan**	**21.41**	**360**	⇑P	**P**	**13 15 02.0**	**-1.1**
	comp=N,325nm,1.0s,mb5.6						
CHG	**Chiang Mai**	**21.50**	**355**	P	**P**	**13 15 01.3**	**-2.8**
CHTO	**Chiang Mai**	**21.50**	**355**	⇑*e*P	**P**	**13 15 00.7**	**-3.4**
	comp=N,55nm,0.8s,mb5.0						
CHTO				LR	LR		
	comp=Z,2µm,19.0s,MS4.4						
KDI	**Kendari**	**21.75**	**94**	P	**P**	**13 15 08.5**	**+1.6**
	comp=Z,185nm,1.0s,mb5.5						
BBSI	**Bau Bau**	**21.82**	**98**	P	**P**	**13 15 09.8**	**+2.1**
	comp=Z,268nm,1.1s,mb5.6						
PALK	**Pallekele**	**22.44**	**296**	*e*P	**P**	**13 15 12.2**	**-2.1**
	comp=Z,108nm,1.7s,mb5.0						
PALK				LR	LR		
	comp=Z,1µm,20.0s,MS4.3						
CHRT	**Chiangrai**	**22.50**	**357**	⇓P	**P**	**13 15 14.5**	**-0.2**
	comp=Z,684nm,0.9s,mb6.1						
QIZ	**Qiongzhong**	**23.37**	**22**	P	**P**	**13 15 22.6**	**-1.2**
QIZ				XP	sP	13 15 33.1	-8.3
QIZ				PP		13 15 51.6	
QIZ				S	**S**	**13 19 29.9**	**-3.3**
QIZ				XS	sS	13 19 40.8	-13
QIZ				AMB	AMB		
	comp=Z,40nm,1.3s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,337nm,4.1s						
QIZ				LR	LR		
	comp=N,1µm,16.9s,MS4.5						
QIZ				LR	LR		
	comp=E,718nm,15.3s,MS4.5						
QIZ				LR	LR		
	comp=Z,2µm,20.9s						
QIZ	**Qiongzhong**	**23.37**	**22**	⇓*e*P	**P**	**13 15 22.1**	**-1.7**
	comp=Z,162nm,1.5s,mb5.2						
QIZ				LR	LR		
	comp=Z,2µm,20.0s,MS4.5						
BATI	**Baumata**	**23.82**	**109**	P	**P**	**13 15 25.7**	**-2.4**
	comp=Z,159nm,1.0s,mb5.4						
BATI	**Baumata**	**23.82**	**109**	P	**P**	**13 15 24.6**	**-3.4**
	comp=Z,91nm,0.8s,mb5.2,baz=96,slow=1.3,SNR=14						
BATI				S	**S**	**13 19 35.3**	**-5.4**
	comp=Z,34nm,0.5s,baz=134,slow=22,SNR=7.6						
BATI	**Baumata**	**23.82**	**109**	P	pP	13 15 39.1	-1.2
	comp=Z,162nm,0.7s,baz=294,slow=5.4,SNR=10.0						
MBWA	**Marble Bar**	**25.93**	**136**	*e*P	**P**	**13 15 45.9**	**-1.2**
	comp=Z,42nm,0.8s,mb5.0						
MBWA				LR	LR		
	comp=Z,1µm,21.0s,MS4.4						
RCP	**Roxas**	**25.99**	**56**	⇑*e*P	**P**	**13 15 48.4**	**+0.6**
TBP	**Tagbilaran**	**26.03**	**61**	*e*P	**P**	**13 15 48.5**	**+0.4**
DAV	**Davao City (W)**	**26.53**	**68**	⇑*e*P	**P**	**13 15 50.6**	**-2.0**
DAV	**Davao City (W)**	**26.53**	**68**	PFAKE		13 16 00.0	+7.4
DAV				LR	LR		
	comp=Z,2µm,22.0s,MS4.6						
KOD	**Kodaikanal**	**26.62**	**299**	*e*P	**P**	**13 15 54.0**	**+0.5**
KOD				AMb	AMB	13 16 16.1	
	comp=Z,58nm,1.2s,mb5.0						
VIS	**Vishakhapatnam**	**26.69**	**320**	*e*P	**P**	**13 15 53.9**	**-0.1**
VIS				AMb	AMB	13 16 12.4	
	comp=Z,108nm,0.9s,mb5.4						
VIS				*i* x	x	13 20 40.7	
LBMI	**Labuha**	**26.71**	**86**	P	**P**	**13 15 53.8**	**-0.5**
	comp=Z,251nm,1.2s,mb5.6						
BWNR	**Bhubaneshwar**	**27.25**	**328**	*e*P	**P**	**13 15 56.0**	**-3.0**
BWNR				*ex*	x	13 20 22.0	
KMI	**Kunming**	**27.76**	**4**	P	**P**	**13 16 03.8**	**+0.3**
KMI				AP	pP	13 16 13.8	-2.2
KMI				XP	sP	13 16 17.8	-4.0
KMI				S	**S**	**13 20 49.8**	**+6.9**
KMI				XS	sS	13 21 04.8	+0.7
KMI				SS		13 22 06.6	
KMI				AMB	AMB		
	comp=Z,27nm,0.6s,mb5.0						
KMI				AMB	AMB		
	comp=Z,54nm,3.7s						
KMI				LR	LR		
	comp=N,2µm,19.1s,MS4.8						
KMI				LR	LR		
	comp=E,2µm,16.4s,MS4.8						
KMI				LR	LR		
	comp=Z,2µm,19.1s,MS4.8						
IMP	**Imphal**	**28.18**	**347**	*e*P	**P**	**13 16 07.0**	**-0.2**
DGAR	**Diego Garcia**	**28.67**	**260**	PFAKE		13 16 20.0	+8.2
DGAR				LR	LR		
	comp=Z,1µm,20.0s,MS4.6						
FITZ	**Fitzroy Crossi**	**28.69**	**124**	*e*P	**P**	**13 16 10.3**	**-1.6**
	comp=Z,42nm,0.8s,mb5.2						
FITZ	**Fitzroy Crossi**	**28.69**	**124**	*e*P	**P**	**13 16 15.6**	**+3.7**
	comp=Z,56nm,0.6s,mb5.5						
FITZ				*e*PCP	PcP	13 19 21.5	-0.3
FITZ	**Fitzroy Crossi**	**28.69**	**124**	P	**P**	**13 16 09.4**	**-2.5**
	comp=Z,29nm,0.9s,mb5.0,baz=309,slow=7.5,SNR=62						
FITZ	**Fitzroy Cr

YHNB LR LR
comp=Z,1µm,22.0s,MS4.5
DMN Daman 33.78 334 *e*P **P** **13 16 57.5 +0.9**
comp=Z,321nm,1.0s,mb6.2
KKN Kakani 33.86 335 *e*P **P** **13 16 58.1 +0.8**
comp=Z,401nm,0.6s,mb6.5
POO Poona 33.97 310 *e*P **P** **13 16 57.6 -0.7**
POO AMb AMB 13 17 00.9
comp=Z,48nm,1.0s,mb5.4
TATO Taipei 34.06 35 PFAKE 13 17 10.0 +11
TATO LR LR
comp=Z,1µm,22.0s,MS4.5
GKN Gorkha 34.33 334 *e*P **P** **13 17 02.2 +0.9**
comp=Z,241nm,0.6s,mb6.3
KOLN Koldanda 34.59 332 *e*P **P** **13 17 04.7 +1.1**
comp=Z,190nm,0.6s,mb6.2
DANN Dangsing 35.01 333 *e*P **P** **13 17 08.3 +1.0**
comp=Z,687nm,0.6s
WRA Warramunga Arr 36.88 120 P **P** **13 17 21.7 -1.6**
comp=Z,55nm,0.6s,mb5.6,baz=302,slow=8.8,SNR=210
WRA PcP PcP 13 19 43.9 -0.5
comp=Z,12nm,0.7s,baz=303,slow=2.4,SNR=7.3
WRA S **S** **13 22 59.2 -5.8**
comp=Z,9.5nm,1.0s,baz=292,slow=16,SNR=8.4
WRA Warramunga Arr 36.88 120 P pP 13 17 35.9 -0.2
comp=Z,43nm,0.7s,baz=302,slow=8.6,SNR=12
WRA Warramunga Arr 36.88 120 P **P** **13 17 21.7 -1.7**
WRA 13 19 43.9
WRA S **S** **13 22 59.2 -5.8**
WRA pmax pmax
comp=Z,55nm,0.6s
WRA pmax pmax
comp=Z,12nm,0.7s
WRA smax
comp=N,10.0nm,1.0s
WRAB Tennant Creek 36.88 120 P **P** **13 17 21.0 -2.4**
comp=N,733nm,0.8s,mb6.6,SNR=46
WRAB Tennant Creek 36.88 120 ⇑*i*P **P** **13 17 21.8 -1.6**
comp=N,114nm,0.9s,mb5.7
WRAB LR LR
comp=Z,481nm,20.0s,MS4.3
WB2 Warramunga Arr 36.89 120 *e*P **P** **13 17 21.7 -1.8**
WB2 *e*PCP PcP 13 19 44.3 -0.2
XAN Xi'an 37.37 11 P **P** **13 17 25.5 -1.8**
XAN AP pP 13 17 34.4 -5.6
XAN XP sP 13 17 39.3 -6.4
XAN AMB AMB
comp=Z,191nm,0.7s,mb6.0
PTH Pithoragarh 37.71 330 *e*P **P** **13 17 31.3 +1.1**
PTH *ex* x 13 23 28.1
FORT Forrest 37.92 140 *e*P **P** **13 17 41.4 +9.3**
comp=Z,46nm,0.5s,mb5.5
FORT *e*PCP PcP 13 19 48.2 +0.8
FORT Forrest 37.92 140 *e*P **P** **13 17 30.4 -1.7**
comp=Z,9.3nm,0.8s,mb4.6
ASAR Alice Springs 38.12 126 P **P** **13 17 32.9 -1.0**
comp=Z,40nm,0.7s,mb5.3,baz=301,slow=7.9,SNR=128
ASAR PcP PcP 13 19 48.1 -0.1
comp=Z,16nm,0.7s,baz=304,slow=3.0,SNR=8.8
ASAR S **S** **13 23 19.3 -4.5**
comp=Z,12nm,0.7s,baz=300,slow=17,SNR=21
ASAR Alice Springs 38.12 126 P pP 13 17 46.5 -0.2
comp=Z,45nm,0.8s,baz=302,slow=7.8,SNR=14
ASAR Alice Springs 38.12 126 P **P** **13 17 32.9 -1.0**
ASAR 13 19 48.1
ASAR S **S** **13 23 19.3 -4.5**
ASAR pmax pmax
comp=Z,40nm,0.7s
ASAR pmax pmax
comp=Z,16nm,0.7s
ASAR smax
comp=N,12nm,0.7s
AJM Ajmer 38.55 321 *e*P **P** **13 17 36.6 -0.7**
AJM AMb AMB 13 17 39.8
comp=Z,43nm,1.1s,mb5.1
NJ2 Nanjing 38.59 25 *e*P **P** **13 17 39.4 +1.8**
NJ2 AP pP 13 17 45.9 -4.5
NJ2 XP sP 13 17 50.4 -5.7
NJ2 PP PP 13 19 10.3 +3.5
NJ2 S **S** **13 23 34.5 +3.9**
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
NJ2 AMB AMB
comp=Z,2µm,4.6s
NJ2 LR LR
comp=N,670nm,20.3s,MS4.7
NJ2 LR LR
comp=E,990nm,17.8s,MS4.7
NDI New Delhi 38.62 326 ⇑*i*P **P** **13 17 38.0 0.0**
comp=E,22nm,0.7s,mb5.0
NDI *e*S **S** **13 23 35.0 +3.8**
LZH Lanzhou 38.73 4 ⇓P **P** **13 17 37.5 -1.2**
LZH PP PP 13 19 11.3 +3.1
LZH PCP PcP 13 19 49.0 -0.8
LZH *e*S **S** **13 23 35.4 +2.9**
LZH SS SS 13 26 19.0 -5.8
LZH SCS ScS 13 27 45.0 +0.2
LZH AMB AMB
comp=Z,39nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,195nm,4.8s
LZH LR LR
comp=N,2µm,16.3s
LZH LR LR
comp=Z,2µm,17.6s,MS5.1
DDI Dehra Dun 39.44 328 ⇑*i*P **P** **13 17 43.1 -1.7**
DDI *ex* x 13 23 34.0
JOW Kunigami 39.56 40 P **P** **13 17 45.7 -0.1**
comp=Z,26nm,0.8s,mb5.0,baz=222,slow=6.6,SNR=9.9
SMLA Simla 40.54 328 *i*P **P** **13 17 54.4 +0.5**
SMLA *ex* x 13 17 55.2
comp=Z,577nm,0.7s
SDNR Sundarnagar 40.94 328 *e*P **P** **13 17 57.2 0.0**
GTA Gaotai 41.96 359 ⇑P **P** **13 18 04.3 -1.1**
GTA AP pP 13 18 12.6 -5.7
GTA XP sP 13 18 16.6 -7.3
GTA PCP PcP 13 19 59.8 -0.3
GTA SCP ScP 13 23 46.9 +0.2
GTA S **S** **13 24 20.8 +0.2**
GTA XS sS 13 24 35.0 -7.3
GTA SS SS 13 27 22.4 -6.6
GTA SCS ScS 13 28 01.1 -2.8
GTA AMB AMB
comp=Z,12nm,1.0s,mb4.5
GTA AMB AMB
comp=Z,169nm,8.1s
GTA LR LR
comp=N,943nm,21.0s,MS4.8
GTA LR LR
comp=E,747nm,17.4s,MS4.8
GTA LR LR
comp=Z,1µm,21.0s,MS4.8
THN Thein Dam 42.33 328 *e*P **P** **13 18 07.7 -0.9**
THN *ex* x 13 24 36.7
HHC Hu-ho-hao-te 44.47 12 ⇑*i*P **P** **13 18 26.0 +0.3**
HHC AP pP 13 18 34.1 -4.6
HHC XP sP 13 18 37.5 -6.8
HHC PCP PcP 13 20 08.3 -0.2
HHC PP PP 13 20 11.4 +1.2
HHC SCP ScP 13 23 57.5 +0.6
HHC PCS PcS 13 24 00.8 -1.0
HHC S **S** **13 25 00.1 +2.7**
HHC XS sS 13 25 14.8 -4.4
HHC SS SS 13 28 12.5 -5.7
HHC SCS ScS 13 28 19.5 -0.1
HHC AMB AMB
comp=Z,50nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,286nm,6.5s
HHC LR LR
comp=N,784nm,14.6s,MS4.9
HHC LR LR
comp=E,728nm,14.9s,MS4.9
HHC LR LR
comp=Z,798nm,14.5s,MS4.8
BJT Baijiatuau 44.81 17 *e*P **P** **13 18 28.0 -0.4**
BJT pmax pmax
comp=Z,29nm,0.8s
BJT MLR MLR
comp=Z,2µm,20.0s
BJT Baijiatuau 44.81 17 *e*P **P** **13 18 28.0 -0.4**
comp=Z,29nm,0.8s,mb5.2
BJT LR LR
comp=Z,2µm,20.0s,MS5.1
BJI Beijing 44.83 17 P **P** **13 18 28.1 -0.5**
BJI XP sP 13 18 39.9 -7.3
BJI S **S** **13 25 09.3 +6.6**
BJI XS sS 13 25 19.8 -4.7
BJI AMB AMB
comp=Z,42nm,0.6s,mb5.5
BJI AMB AMB
comp=Z,234nm,4.6s
BJI LR LR
comp=N,2µm,17.6s,MS5.1
BJI LR LR
comp=E,903nm,18.4s,MS5.1
BJI LR LR
comp=Z,2µm,19.4s,MS5.0
MSEY Mahe Island 45.32 266 PFAKE 13 18 40.0 +7.1
MSEY LR LR
comp=Z,696nm,22.0s,MS4.5
DL2 Dalian 45.65 23 ⇑P **P** **13 18 34.5 -0.6**
DL2 *e*S **S** **13 25 16.3 +1.7**
DL2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
DL2 AMB AMB
comp=Z,120nm,5.0s
DL2 LR LR
comp=N,370nm,18.4s,MS4.5
DL2 LR LR
comp=E,370nm,17.0s,MS4.5
DL2 LR LR
comp=Z,480nm,16.7s,MS4.5
PMG Port Moresby 46.47 100 *e*P **P** **13 18 39.4 -2.6**
PMG pmax pmax
comp=Z,34nm,1.0s
PMG MLR MLR
comp=Z,278nm,21.0s
PMG Port Moresby 46.47 100 *e*P **P** **13 18 39.4 -2.6**
comp=Z,34nm,1.0s,mb5.2
PMG LR LR
comp=Z,278nm,21.0s,MS4.2
GUMO Guam 46.57 68 P **P** **13 18 39.3 -3.4**
comp=Z,122nm,0.5s,mb6.1,baz=175,slow=5.0,SNR=30
GUMO Guam 46.57 68 P **P** **13 18 39.3 -3.4**
GUMO pmax pmax
comp=Z,96nm,0.6s,mb5.9
GUMO Guam 46.57 68 *e*P **P** **13 18 38.6 -4.1**
comp=Z,96nm,0.6s,mb5.9
INCN Inchon 46.62 28 PFAKE 13 18 50.0 +7.2
INCN LR LR
comp=Z,496nm,19.0s,MS4.5
KSRS Korea Array 47.23 30 P **P** **13 18 46.9 -0.6**
comp=Z,18nm,0.6s,mb5.2,baz=228,slow=8.1,SNR=73
KSRS PcP PcP 13 20 17.8 -0.5
comp=Z,5.4nm,0.8s,baz=225,slow=3.1,SNR=5.4
KSRS Korea Array 47.23 30 P pP 13 18 59.1 -1.5
comp=Z,31nm,1.0s,baz=236,slow=46,SNR=19
KSRS Korea Array 47.23 30 P **P** **13 18 46.9 -0.6**
KSRS 13 20 17.8
KSRS pmax pmax
comp=Z,18nm,0.6s,mb5.2
KSRS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CTA Charters Tower 47.51 115 *e*P **P** **13 18 48.8 -1.2**
comp=Z,75nm,0.8s,mb5.8
CTA Charters Tower 47.51 115 P **P** **13 18 48.8 -1.2**
comp=Z,93nm,0.8s,mb5.9,baz=291,slow=9.9,SNR=127
CTA Charters Tower 47.51 115 P pP 13 19 01.8 -1.3
comp=Z,37nm,0.8s,baz=302,slow=8.0,SNR=8.8
CTA Charters Tower 47.51 115 P **P** **13 18 48.8 -1.2**
CTA pmax pmax
comp=Z,93nm,0.8s
CTAO Charters Tower 47.51 115 *e*P **P** **13 18 48.3 -1.7**
CTAO pmax pmax
comp=Z,98nm,0.8s,mb5.9
CTAO MLR MLR
comp=Z,499nm,21.0s,MS4.5
CTAO Charters Tower 47.51 115 *e*P **P** **13 18 48.3 -1.6**
comp=Z,98nm,0.8s,mb5.9
CTAO LR LR
comp=Z,499nm,21.0s,MS4.5
WMQ Urumqi 47.84 347 ⇑*i*P **P** **13 18 52.8 +0.7**
WMQ PP PP 13 20 46.0 +1.6
WMQ *e*S **S** **13 25 45.0 -0.6**
WMQ AMB AMB
comp=Z,690nm,4.0s
WMQ LR LR
comp=N,768nm,16.0s,MS5.0
WMQ LR LR
comp=E,872nm,15.4s,MS5.0
WMQ LR LR
comp=Z,652nm,24.6s
KSH Kashi 47.87 334 *i*P **P** **13 18 53.1 +0.7**
KSH *e*AP pP 13 19 00.1 -5.5
KSH *e*XP sP 13 19 03.0 -8.2
KSH *e*PCP PcP 13 20 22.0 +1.5
KSH *e*PP PP 13 20 44.1 -0.7
KSH *e*SCP ScP 13 24 13.1 +2.0
KSH *e*PCS PcS 13 24 16.0 -0.1
KSH *e*S **S** **13 25 46.5 +0.2**
KSH *e*XS sS 13 25 59.0 -9.2
KSH *e*SCS ScS 13 28 42.1 +0.3
KSH *e*SS SS 13 29 10.1 -5.5
KSH AMB AMB
comp=Z,861nm,2.0s,mb6.4
KSH LR LR
comp=N,522nm,4.4s
KSH LR LR
comp=E,561nm,4.2s
KSH LR LR
comp=Z,639nm,5.0s
STKA Stephens Creek 48.02 132 *e*P **P** **13 18 53.2 -0.5**
comp=Z,53nm,0.7s,mb5.7
STKA Stephens Creek 48.02 132 P **P** **13 18 53.7 -0.1**
comp=Z,34nm,0.5s,mb5.6,baz=309,slow=8.2,SNR=53
SNY Shenyang 48.92 23 ⇑P **P** **13 18 58.8 -1.7**
SNY S **S** **13 26 07.3 +6.3**
SNY AMB AMB
comp=Z,16nm,1.5s,mb4.8
SNY AMB AMB
comp=Z,224nm,7.1s
SNY LR LR
comp=N,604nm,18.0s,MS4.8
SNY LR LR
comp=E,597nm,17.4s,MS4.8
SNY LR LR
comp=Z,697nm,15.6s,MS4.8
CBIJ Chichi jima 49.67 51 P **P** **13 19 04.3 -2.1**
comp=Z,131nm,0.6s,mb6.2,baz=300,slow=8.7,SNR=11
ULHL Ulahol 50.03 336 P **P** **13 19 08.0 -0.9**
SNR=15
KZA Kyzart 50.30 335 P **P** **13 19 12.1 +1.2**
SNR=90
SONM Songino Array 50.60 5 P **P** **13 19 13.5 +0.4**
comp=Z,98nm,0.7s,mb5.8,baz=186,slow=8.8,SNR=420
SONM PcP PcP 13 20 29.8 -0.4
comp=Z,25nm,0.8s,baz=185,slow=3.9,SNR=6.4
SONM ScP ScP 13 24 21.6 -1.0
comp=Z,4.3nm,0.9s,baz=195,slow=3.9,SNR=5.9
SONM Songino Array 50.60 5 P **P** **13 19 13.5 +0.4**
SONM 13 20 29.8
SONM pmax pmax
comp=Z,98nm,0.7s
SONM pmax pmax
comp=Z,25nm,0.8s
SONM pmax pmax
comp=N,4.0nm,0.9s
ULN Ulaanbaatar 50.69 5 *e*P **P** **13 19 13.7 -0.1**
ULN pmax pmax
comp=Z,63nm,0.8s,mb5.6
ULN MLR MLR
comp=Z,680nm,20.0s,MS4.7
ULN Ulaanbaatar 50.69 5 *e*P **P** **13 19 13.7 -0.1**
comp=Z,63nm,0.8s,mb5.6
ULN LR LR
comp=Z,680nm,20.0s,MS4.7
UCH Uchtor 50.73 335 P **P** **13 19 15.5 +1.3**
SNR=45
UCH Uchtor 50.73 335 *e*P **P** **13 19 15.1 +0.9**
comp=Z,38nm,0.6s,mb5.5
TKM2 Tokmak 2 50.85 336 *e*P **P** **13 19 15.8 +0.7**
TKM2 pmax pmax
comp=Z,153nm,0.7s,mb6.0
TKM2 MLR MLR
comp=Z,298nm,20.0s,MS4.3
TKM2 Tokmak 2 50.85 336 P **P** **13 19 15.7 +0.6**
SNR=246
TKM2 Tokmak 2 50.85 336 *e*P **P** **13 19 15.8 +0.7**
comp=Z,153nm,0.7s,mb6.0
TKM2 LR LR
comp=Z,298nm,20.0s,MS4.3
KBK Karagaybulak 50.90 335 P **P** **13 19 16.8 +1.3**
SNR=56
AML Almayashu 51.00 334 P **P** **13 19 17.7 +1.4**
SNR=6.1
AML Almayashu 51.00 334 *e*P **P** **13 19 17.1 +0.8**
comp=Z,128nm,0.7s,mb6.0
AML LR LR
comp=Z,368nm,22.0s,MS4.4
AAK Ala-Archa 51.07 335 P **P** **13 19 17.9 +1.1**
SNR=33
FRU Bishkek 51.18 335 *e*P **P** **13 19 17.5 -0.1**
FRU *e* 13 21 10.0
FRU pmax pmax
comp=Z,130nm,2.0s,mb5.5
CHMS Chumysh 51.26 336 P **P** **13 19 18.5 +0.3**
SNR=34
CN2 Changchun 51.33 23 *e*P **P** **13 19 17.0 -1.7**
CN2 *e*XP sP 13 19 29.5 -8.0
CN2 *e*S **S** **13 26 35.4 +1.0**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CN2 AMB AMB
comp=Z,1µm,8.0s
EKS2 Erkin-Say 51.40 335 P **P** **13 19 20.4 +1.1**
SNR=373
EKS2 Erkin-Say 51.40 335 *e*P **P** **13 19 20.2 +1.0**
comp=Z,301nm,0.8s,mb6.3
EKS2 LR LR
comp=Z,377nm,22.0s,MS4.4
USP Ospenovka 51.59 336 P **P** **13 19 21.0 +0.3**
SNR=112
MKAR Makanchi Array 51.97 344 P **P** **13 19 23.2 -0.2**
comp=Z,84nm,0.7s,mb5.8,baz=154,slow=8.4,SNR=459
MKAR S **S** **13 26 44.4 +1.2**
comp=Z,2.2nm,0.9s,baz=144,slow=17,SNR=4.3
MKAR PKiKP PKiKP 13 27 12.9 -3.2
comp=Z,5.8nm,1.2s,baz=156,slow=9.3,SNR=4.7
MKAR Makanchi Array 51.97 344 P **P** **13 19 23.2 -0.2**
MKAR S **S** **13 26 44.4 +1.2**
MKAR pmax pmax
comp=Z,84nm,0.7s
MKAR smax
comp=N,2.0nm,0.9s
MKAR pmax pmax
comp=Z,6.0nm,1.2s
MAJO Matsushiro 52.31 38 *e*P **P** **13 19 23.8 -2.4**
MAJO pmax pmax
comp=Z,11nm,0.6s,mb5.0
MAJO MLR MLR
comp=Z,314nm,20.0s,MS4.3
MAJO Matsushiro 52.31 38 *e*P **P** **13 19 23.8 -2.4**
comp=Z,11nm,0.6s,mb5.0
MAJO LR LR
comp=Z,314nm,20.0s,MS4.3
MAT Matsushiro 52.31 38 P **P** **13 19 25.4 -0.8**
MJAR Matsushiro Arr 52.31 38 P **P** **13 19 24.2 -2.0**
comp=Z,8.0nm,0.7s,mb4.8,baz=212,slow=7.3,SNR=26
MJAR ScP ScP 13 24 28.7 -1.6
comp=Z,3.5nm,0.9s,baz=218,slow=4.8,SNR=8.8
MJAR Matsushiro Arr 52.31 38 P pP 13 19 37.6 -1.9
comp=Z,9.5nm,0.9s,baz=220,slow=7.9,SNR=8.4
MJAR Matsushiro Arr 52.31 38 P **P** **13 19 24.2 -2.0**
MJAR pmax pmax
comp=Z,8.0nm,0.7s
MJAR pmax pmax
comp=N,4.0nm,0.9s
ZAK Zakamensk 52.96 2 ⇓*i*P **P** **13 19 30.0 -0.6**
ZAK *e* 13 20 31.8
ZAK pmax pmax
comp=Z,26nm,1.0s,mb5.1
TOO Toolangi 53.58 136 *e*P **P** **13 19 36.5 +1.0**
MDJ Mudanjiang 53.68 25 P **P** **13 19 35.4 -0.7**
MDJ XP sP 13 19 47.4 -7.5
MDJ PCP PcP 13 20 43.9 +2.0
MDJ AMB AMB
comp=Z,17nm,1.1s,mb4.9
MDJ AMB AMB
comp=Z,194nm,10.2s
MDJ LR LR
comp=N,645nm,23.2s
MDJ LR LR
comp=Z,824nm,23.2s,MS4.7
MDJ Mudanjiang 53.68 25 *e*P **P** **13 19 35.3 -0.8**
comp=Z,8.2nm,0.6s,mb4.8
MDJ *e* pP 13 19 47.8 -1.6
MDJ LR LR
comp=Z,923nm,21.0s,MS4.8
MOY Mondy 54.20 0 *e*P **P** **13 19 40.0 +0.2**
MOY pmax pmax
comp=Z,72nm,2.4s,mb5.2
TLY Talaya 54.27 2 P **P** **13 19 40.2 0.0**
comp=Z,536nm,0.8s,mb6.5,SNR=16
TLY Talaya 54.27 2 ⇑*i*P **P** **13 19 40.6 +0.4**
TLY pmax pmax
comp=Z,90nm,0.9s,mb5.7
TLY MLR MLR
comp=Z,1µm,17.0s,MS5.0
TLY Talaya 54.27 2 *e*P **P** **13 19 40.5 +0.3**
comp=Z,76nm,0.9s,mb5.6
TLY LR LR
comp=Z,1µm,19.0s,MS5.0
IRK Irkutsk 54.86 3 ⇓*i*P **P** **13 19 44.2 -0.3**
IRK pmax pmax
comp=Z,114nm,1.9s,mb5.6
CAN Canberra 55.08 132 *e*P **P** **13 19 46.5 0.0**
CAN *e* pP 13 19 59.9 +0.1
ARMA Armidale 55.27 125 *e*P **P** **13 19 48.8 +0.8**
CNB Canberra Magne 55.35 132 *e*P **P** **13 19 47.8 -0.6**
CIT Chita 55.61 9 *e*P **P** **13 19 50.4 +0.5**
CIT *e* pP 13 20 01.9 -1.4
CIT *e* 13 23 14.9
CIT pmax pmax
comp=Z,121nm,1.5s,mb5.7
RIV Riverview 56.12 130 *e*P **P** **13 19 54.1 +0.1**
KURK Kurchatov 56.56 343 P **P** **13 19 56.4 -0.3**
comp=Z,655nm,0.7s,SNR=66
KURK Kurchatov 56.56 343 P **P** **13 19 54.8 -1.9**
comp=Z,57nm,0.7s,mb5.7,baz=161,slow=6.9,SNR=126
KURK S **S** **13 27 43.6 -1.3**
comp=Z,1.1nm,0.8s,baz=150,slow=14,SNR=4.0
KURK Kurchatov 56.56 343 P pP 13 20 09.3 -0.8
comp=Z,80nm,1.0s,baz=159,slow=7.3,SNR=16
KURK Kurchatov 56.56 343 P **P** **13 19 54.8 -1.9**
KURK S **S** **13 27 43.6 -1.3**
KURK pmax pmax
comp=Z,57nm,0.7s,mb5.7
KURK smax
comp=N,1.0nm,0.9s
KURK Kurchatov 56.56 343 *e*P **P** **13 19 56.2 -0.5**
comp=N,130nm,0.9s,mb6.0
KURK LR LR
comp=Z,437nm,19.0s,MS4.6
ABKT Ailbek 56.56 320 P **P** **13 19 56.5 -0.5**
comp=Z,184nm,0.9s,mb6.1,SNR=9.6
TAU Tasmania Unive 57.47 141 PFAKE 13 20 10.0 +6.7
TAU LR LR
comp=Z,462nm,20.0s,MS4.6
ZAA0 Zalesovo Array 58.05 349 *e*P **P** **13 20 06.0 -1.2**
ZALV Zalesovo Beam 58.05 349 P **P** **13 20 06.6 -0.6**
comp=Z,246nm,0.8s,mb6.3,baz=163,slow=5.6,SNR=351
ZALV S **S** **13 28 03.0 -1.4**
comp=Z,2.3nm,0.7s,baz=158,slow=16,SNR=5.3
ZALV Zalesovo Beam 58.05 349 P pP 13 20 19.6 -1.1
comp=Z,148nm,0.9s,baz=142,slow=5.1,SNR=12
ZALV Zalesovo Beam 58.05 349 P **P** **13 20 06.6 -0.6**
ZALV S **S** **13 28 03.0 -1.4**
ZALV pmax pmax
comp=Z,246nm,0.9s,mb6.2
ZALV smax
comp=N,2.0nm,0.7s
KLR Kul'dur 58.26 23 ⇓*i*P **P** **13 20 04.2 -4.6**
KLR pmax pmax
comp=E,40nm,0.9s
KLR pmax pmax
comp=Z,100nm,0.9s,mb5.8
ERM Erimo 58.74 36 PFAKE 13 20 20.0 +7.7
ERM LR LR
comp=Z,350nm,20.0s,MS4.5
KRAR Krasnoyarsk 58.92 355 *e*P **P** **13 20 12.3 -0.9**
KRAR pmax pmax
comp=Z,372nm,1.1s,mb6.3
HNR Honiara 59.06 99 P **P** **13 20 13.3 -1.7**
comp=Z,117nm,0.9s,mb5.9,baz=296,slow=4.7,SNR=5.3
HNR Honiara 59.06 99 *e*P **P** **13 20 12.6 -2.4**
HNR pmax pmax
comp=Z,165nm,1.0s,mb6.0

HNR MLR MLR
comp=Z,266nm,20.0s,MS4.4
HNR Honiara 59.06 99 *eP* **P 13 20 12.6 -2.4**
comp=Z,165nm,1.0s,mb6.0
HNR LR LR
comp=Z,266nm,20.0s,MS4.4
NVS Novosibirsk 59.21 348⇑ *iP* **P 13 20 14.0 -1.2**
NVS *i* pP 13 20 27.0 -1.7
NVS *i* S **S 13 28 16.9 -2.5**
NVS pmax pmax
comp=Z,81nm,1.0s,mb5.7
NVS pmax pmax
comp=N,75nm,1.3s
NVS pmax pmax
comp=E,44nm,1.1s
NVS smax
comp=N,36nm,1.6s
NVS smax
comp=E,45nm,1.9s
ASAJ Asahikawa 59.74 34 P **P 13 20 17.6 -1.6**
comp=E,19nm,0.4s,mb5.5,baz=239,slow=8.5,SNR=80
ASAJ Asahikawa 59.74 34 P **P 13 20 17.6 -1.5**
ASAJ pmax pmax
comp=Z,19nm,0.4s
BRVK Borovoye 61.24 339 P **P 13 20 28.3 -0.8**
comp=Z,435nm,0.5s,SNR=17
BRVK Borovoye 61.24 339 *eP* **P 13 20 28.1 -1.0**
BRVK pmax pmax
comp=Z,40nm,0.6s,mb5.7
BRVK Borovoye 61.24 339 *eP* **P 13 20 28.1 -1.1**
comp=Z,40nm,0.6s,mb5.7
BOD Bodaibo 61.29 8⇓ *iP* **P 13 20 28.1 -1.3**
BOD pmax pmax
comp=Z,78nm,0.8s,mb5.9
YSS Yuzh-Sakhalins 61.66 31⇑ *eP* **P 13 20 31.0 -1.1**
YSS *e* pP 13 20 41.5 -4.2
YSS pmax pmax
comp=Z,150nm,1.0s,mb6.1
YSS MLR MLR
comp=Z,500nm,16.0s,MS4.8
YSS Yuzh-Sakhalins 61.66 31 *eP* **P 13 20 31.1 -1.0**
comp=Z,101nm,0.8s,mb6.0
YSS LR LR
comp=Z,86nm,19.0s,MS3.9
CLNS Chul'man 62.50 15 *eP* **P 13 20 37.0 -0.6**
CLNS pmax pmax
comp=E,25nm,0.9s
CLNS pmax pmax
comp=Z,44nm,0.9s,mb5.6
CLNS pmax pmax
comp=N,24nm,0.9s
KMBO Kilima Mbogo 63.59 270 P **P 13 20 46.7 +1.1**
comp=N,1.9nm,0.6s,mb4.3,baz=61,slow=20,SNR=4.6
KMBO Kilima Mbogo 63.59 270 P pP 13 21 00.7 +1.5
comp=N,12nm,1.1s,baz=58,slow=10,SNR=12
KMBO Kilima Mbogo 63.59 270 P **P 13 20 45.6 -0.1**
KMBO pmax pmax
comp=Z,27nm,1.3s
KMBO MLR MLR
comp=Z,486nm,22.0s
KMBO Kilima Mbogo 63.59 270 P **P 13 20 45.6 -0.1**
comp=Z,27nm,1.3s,mb5.1
KMBO *i* P 13 20 48.9
KMBO LR LR
comp=Z,486nm,22.0s,MS4.6
CASY Casey 63.78 176 *eP* **P 13 20 47.3 +1.4**
comp=Z,56nm,1.3s,mb5.4
CASY LR LR
comp=Z,892nm,22.0s,MS4.9
BHD Baghdad 64.14 309 *ex* x 13 20 50.0
BHD *ex* x 13 29 20.0
AKTO Aktyubinsk 64.42 331 P **P 13 20 49.4 -1.0**
comp=Z,35nm,0.9s,mb5.4
AKTO Aktyubinsk 64.42 331 P **P 13 20 49.4 -1.0**
AKTO pmax pmax
comp=Z,35nm,0.9s,mb5.4
MAK Makhachkala 66.09 320 *e* PcP 13 21 31.6 +0.1
MAK *e* 13 23 27.7
MAK *e*PPP 13 25 10.8
MAK *e*SS SS 13 34 08.1 +5.5
MAK pmax pmax
comp=Z,478nm,1.2s,mb6.4
GNI Garni 66.65 316 P **P 13 21 04.8 -0.2**
comp=Z,11nm,0.7s,mb5.0,baz=311,slow=12,SNR=5.9
GNI Garni 66.65 316 P pP 13 21 20.1 +1.4
comp=Z,39nm,0.9s,baz=323,slow=10,SNR=9.8
GNI Garni 66.65 316 *eP* **P 13 21 04.8 -0.2**
comp=Z,72nm,1.1s,mb5.6
GNI LR LR
comp=Z,170nm,20.0s,MS4.3
MTA Mtatsminda 67.29 318 P **P 13 21 10.2 +1.2**
TBLG Delisi 67.34 318 P **P 13 21 10.1 +0.7**
TBLG Delisi 67.34 318 P **P 13 21 10.1 +0.8**
SVE Sverdlovsk 67.69 337⇓ *eP* **P 13 21 10.9 -0.3**
SVE *eS* S 13 30 07.1 +2.1
SVE pmax pmax
comp=Z,139nm,1.0s,mb5.9
GOR Gori 67.88 318 P **P 13 21 12.6 -0.2**
ARU Arti 68.23 336 P **P 13 21 13.0 -1.6**
comp=Z,388nm,1.1s,mb6.3,SNR=18
ARU Arti 68.23 336*c iP* **P 13 21 13.7 -0.9**
ARU *e* 13 21 41.0
ARU *e* 13 23 45.1
ARU *e*S S 13 30 12.1 +0.7
ARU *e*SS SS 13 34 29.5 -5.8
ARU pmax pmax
comp=Z,96nm,1.2s,mb5.7
ARU Arti 68.23 336 *eP* **P 13 21 13.5 -1.1**
comp=Z,63nm,0.9s,mb5.7
ARU LR LR
comp=Z,355nm,19.0s,MS4.6
YAK Yakutsk 68.24 14*c iP* **P 13 21 13.0 -1.6**
YAK pmax pmax
comp=Z,315nm,0.9s,mb6.3
YAK Yakutsk 68.24 14 *eP* **P 13 21 12.5 -2.1**
comp=Z,278nm,0.8s,mb6.3
YAK LR LR
comp=Z,1μm,19.0s,MS5.2
ONI Oni 68.57 318 P **P 13 21 17.7 +0.6**
ASF Jabal al Asfar 69.72 306 P **P 13 21 24.8 +0.4**
comp=Z,21nm,0.9s,mb5.1,baz=337,slow=3.7,SNR=16
ASF Jabal al Asfar 69.72 306 P pP 13 21 40.4 +2.2
comp=Z,24nm,1.0s,baz=342,slow=3.8,SNR=11
ASF Jabal al Asfar 69.72 306 P **P 13 21 24.8 +0.4**
ASF pmax pmax
comp=Z,21nm,0.9s
MAW Mawson 69.78 195 *eP* **P 13 21 25.3 +1.2**
comp=Z,12nm,1.5s,mb4.6
MAW Mawson 69.78 195 P **P 13 21 25.4 +1.3**
comp=Z,3.7nm,0.8s,mb4.3,baz=34,slow=10,SNR=7.5
MAW PKP2ab 13 49 26.4
comp=Z,4.5nm,0.9s,baz=238,slow=7.3,SNR=7.2
MAW Mawson 69.78 195 P pP 13 21 38.3 +0.5
comp=Z,4.7nm,0.8s,baz=32,slow=9.5,SNR=5.7
MAW Mawson 69.78 195 P **P 13 21 25.4 +1.3**
MAW pmax pmax
comp=Z,4.0nm,0.8s
MAW pmax pmax
comp=Z,5.0nm,0.9s
MALT Malatya 70.47 312 *eP* **P 13 21 27.4 -1.5**
MALT pmax pmax
comp=Z,46nm,1.1s,mb5.3
MALT MLR MLR
comp=Z,353nm,22.0s,MS4.6
MALT Malatya 70.47 312⇑ *iP* **P 13 21 27.5 -1.4**
MALT Malatya 70.47 312 *eP* **P 13 21 27.4 -1.5**
comp=Z,46nm,1.1s,mb5.3
MALT LR LR
comp=Z,353nm,22.0s,MS4.6
EIL Elat 70.64 303 P **P 13 21 30.8 +0.6**
comp=Z,37nm,0.9s,mb5.3,baz=83,slow=2.7,SNR=6.1
SKR Severo-Kuril's 71.00 34 *eP* **P 13 21 31.0 -0.9**
SKR pmax pmax
comp=E,50nm,0.7s
SKR pmax pmax
comp=Z,90nm,0.7s,mb5.8
MMAI Mount Meron Ar 71.17 306 P **P 13 21 34.0 +0.8**
comp=Z,18nm,0.6s,mb5.1,baz=96,slow=8.5,SNR=20
MMAI Mount Meron Ar 71.17 306 P pP 13 21 49.1 +2.0
comp=Z,12nm,0.7s,baz=94,slow=9.4,SNR=7.7
SOC Sochi 71.48 318*c iP* **P 13 21 34.3 -0.6**
SOC *e* pP 13 21 48.1 -0.6
SOC *e*PPP 13 26 03.5
SOC *e*S S 13 30 44.3 -5.8
SOC pmax pmax
comp=Z,73nm,0.8s,mb5.7

LSZ Lusaka 72.57 255 *eP* **P 13 21 44.0 +2.0**
LSZ pmax pmax
comp=Z,48nm,1.5s,mb5.2
LSZ MLR MLR
comp=Z,455nm,19.0s,MS4.8
LSZ Lusaka 72.57 255 *eP* **P 13 21 44.0 +2.0**
comp=Z,48nm,1.5s,mb5.2
LSZ LR LR
comp=Z,455nm,19.0s,MS4.8
PEA0B Petropavlovsk- 73.05 32 *eP* **P 13 21 42.5 -1.6**
PETK Petropavlovsk- 73.05 32 P **P 13 21 43.0 -1.0**
comp=Z,20nm,0.7s,mb5.2,baz=339,slow=0.6,SNR=65
CSS Prodhromos 73.36 308 *eP* **P 13 21 46.4 +0.1**
comp=Z,98nm,1.3s,mb5.6
VRHR Novokhopersk 73.42 326 *eP* **P 13 21 45.4 -0.9**
VRHR pmax pmax
comp=Z,130nm,0.7s,mb6.0
VRHR pmax pmax
comp=N,50nm,0.9s
VRHR pmax pmax
comp=E,90nm,1.3s
PET Petropavlovsk 73.52 32⇑ *iP* **P 13 21 45.8 -1.0**
PET pmax pmax
comp=Z,125nm,0.8s,mb5.9
PET Petropavlovsk 73.52 32 *eP* **P 13 21 45.4 -1.4**
comp=Z,83nm,0.9s,mb5.7
PET LR LR
comp=Z,387nm,20.0s,MS4.7
RPZ Rata Peaks 73.85 135 P **P 13 21 48.7 -0.3**
comp=Z,24nm,0.7s,mb5.2,baz=76,slow=0.5,SNR=17
RPZ Rata Peaks 73.85 135 P **P 13 21 48.7 -0.3**
BR131 Keskin Array S 74.45 312 *eP* **P 13 21 51.6 -0.9**
comp=Z,19nm,0.7s,mb5.1
VSR Storozhevoye 74.87 325 *eP* **P 13 21 53.6 -1.2**
VSR *eS* S 13 31 36.4 +8.1
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=Z,30nm,0.7s,mb5.3
VSR pmax pmax
comp=E,50nm,0.8s
VSR smax
comp=E,30nm,2.3s
VSR smax
comp=Z,7.0nm,2.1s
VSR smax
comp=N,20nm,3.1s
VOR Voronezh 75.07 325 P **P 13 21 54.0 -1.9**
VOR pmax pmax
comp=Z,300nm,1.3s,mb6.1
ANTO Ankara 75.12 312 *eP* **P 13 21 55.8 -0.6**
ANTO pmax pmax
comp=Z,55nm,1.2s,mb5.4
ANTO MLR MLR
comp=Z,164nm,21.0s,MS4.3
ANTO Ankara 75.12 312 *eP* **P 13 21 55.8 -0.7**
comp=Z,55nm,1.2s,mb5.4
ANTO LR LR
comp=Z,164nm,21.0s,MS4.3
SIM Simferopol' 75.72 318⇑ *eP* **P 13 21 59.8 0.0**
SIM *e* pP 13 22 12.0 -1.7
SIM *e* 13 24 48.0
SIM pmax pmax
comp=Z,30nm,0.9s,mb5.2
BOSA Boshof 76.06 241 P **P 13 22 02.1 0.0**
comp=Z,5.1nm,1.1s,mb4.4,baz=308,slow=19,SNR=4.0
BOSA Boshof 76.06 241 P pP 13 22 17.2 +1.2
comp=Z,14nm,0.9s,baz=97,slow=7.0,SNR=8.5
BOSA Boshof 76.06 241 P **P 13 22 02.1 0.0**
BOSA pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
SNZO South Karori 76.08 132 PFAKE 13 22 10.0 +8.1
SNZO LR LR
comp=Z,316nm,21.0s,MS4.6
ISP Isparta 76.30 310 PFAKE
ISP LR LR 13 22 10.0 +6.8
comp=Z,212nm,21.0s,MS4.4
TIXI Tiksi 76.45 9*c iP* **P 13 22 01.7 -1.7**
TIXI pmax pmax
comp=Z,122nm,1.1s,mb5.7
TIXI MLR MLR
comp=Z,1μm,17.0s,MS5.2
TIXI Tiksi 76.45 9 *eP* **P 13 22 01.6 -1.8**
comp=Z,66nm,0.8s,mb5.6
TIXI LR LR
comp=Z,1μm,20.0s,MS5.2
SYO Syowa Base 77.45 199⇓ *eP* **P 13 22 08.2 -0.9**
SYO Syowa Base 77.45 199⇓ *e*pP pP 13 22 18.2 -4.8
URZ Urewera 77.51 128 P **P 13 22 08.7 -1.3**
comp=Z,8.5nm,0.6s,mb4.8,baz=328,slow=4.3,SNR=7.3
MOS Moscow 77.57 329 *eP* **P 13 22 08.2 -1.8**
MOS *i* pP 13 22 22.5 -1.4
MOS *e* 13 25 03.6
MOS *e* 13 32 18.0
MOS pmax pmax
comp=Z,102nm,0.7s,mb5.9
MOS pmax pmax
comp=Z,100μm,0.8s
OBN Obninsk 77.88 328α *iP* **P 13 22 11.5 -0.2**
OBN *e* pP 13 22 21.9 -3.7
OBN *i* *SP sP 13 22 25.2 -5.8
OBN *e* 13 25 08.5
OBN pmax pmax
comp=Z,128nm,1.4s,mb5.7
OBN MLR MLR
comp=Z,300nm,23.0s,MS4.6
OBN Obninsk 77.88 328 *eP* **P 13 22 11.4 -0.3**
comp=Z,41nm,0.6s,mb5.5
OBN *e* pP 13 22 23.9 -1.8
OBN LR LR
comp=Z,153nm,19.0s,MS4.3
FUNA Funafuti 78.07 98 PFAKE 13 22 20.0 +6.4
FUNA LR LR
comp=Z,8μm,20.0s,MS6.1
TIRR Tirgusor 79.48 316 *eP* **P 13 22 20.5 -0.3**
TIRR *e* pP 13 22 33.6 -1.2
TIRR pmax pmax
comp=Z,62nm,0.9s,mb5.5
TIRR Tirgusor 79.48 316⇑ *iP* **P 13 22 20.6 -0.2**
TIRR Tirgusor 79.48 316 *eP* **P 13 22 20.5 -0.3**
comp=Z,62nm,0.9s,mb5.5
TIRR *e* pP 13 22 33.6 -1.1
KIS Kishinev 79.86 319 *eP* **P 13 22 22.0 -0.7**
KIS *i* 13 22 25.0
KIS *i* pP 13 22 37.1 +0.3
KIS Kishinev 79.86 319 *e*UNK **P 13 22 22.0 -0.7**
SANT Santorini 79.91 308 PFAKE 13 22 30.0 +6.7
SANT LR LR
comp=Z,155nm,21.0s,MS4.3
IDI Anoyia 80.17 306 P **P 13 22 23.7 -1.0**
comp=Z,29nm,0.6s,mb5.4,baz=68,slow=5.8,SNR=16
AKASG Malin Array Be 80.59 322 P **P 13 22 25.7 -0.9**
comp=Z,9.1nm,0.7s,mb4.8,baz=75,slow=4.7,SNR=29
AKASG PP PP 13 25 29.6 -1.2
comp=Z,0.7nm,0.3s,baz=84,slow=6.9,SNR=4.5
AKASG Malin Array Be 80.59 322 P pP 13 22 39.6 -1.0
comp=Z,27nm,1.0s,baz=86,slow=4.7,SNR=30
AKASG Malin Array Be 80.59 322 P **P 13 22 25.7 -0.9**
AKASG 13 25 29.6
AKASG pmax pmax
comp=Z,9.0nm,0.7s
AKASG pmax pmax
comp=Z,1.0nm,0.3s
KIEV Kiev 80.60 322 *eP* **P 13 22 25.4 -1.3**
KIEV *e* pP 13 22 37.7 -3.0
KIEV pmax pmax
comp=Z,50nm,1.1s,mb5.4
KIEV MLR MLR
comp=Z,298nm,21.0s,MS4.6
KIEV Kiev 80.60 322 *eP* **P 13 22 25.4 -1.3**
comp=Z,50nm,1.1s,mb5.4
KIEV *e* pP 13 22 37.7 -3.0
KIEV LR LR
comp=Z,298nm,21.0s,MS4.6
VRI Vrincioaia 80.98 317⇓ *iP* **P 13 22 29.5 +0.7**
VRI Vrincioaia 80.98 317 P **P 13 22 29.3 +0.5**
PLOR Plostina 81.03 317 P **P 13 22 29.9 +0.8**
MLR Muntele Rosu 81.43 317 P **P 13 22 30.4 -0.7**
comp=Z,35nm,0.9s,mb5.3,baz=158,slow=2.5,SNR=22
MLR Muntele Rosu 81.43 317 P pP 13 22 44.6 -0.6
comp=Z,64nm,1.1s,baz=124,slow=8.0,SNR=13
MLR Muntele Rosu 81.43 317 P **P 13 22 30.4 -0.8**
MLR pmax pmax
comp=Z,35nm,0.9s
MLR Muntele Rosu 81.43 317⇑ *iP* **P 13 22 31.6 +0.4**
MLR Muntele Rosu 81.43 317 P **P 13 22 31.8 +0.6**

PGB Panagyurishte 82.08 313 P **P 13 22 34.3 -0.4**
SBA Scott Base 82.36 169 *eP* **P 13 22 36.4 +0.9**
SBA pmax pmax
comp=Z,139nm,2.0s,mb5.5
SBA MLR MLR
comp=Z,552nm,19.0s,MS4.9
SBA Scott Base 82.36 169 *eP* **P 13 22 36.4 +0.9**
comp=Z,139nm,2.0s,mb5.5
SBA LR LR
comp=Z,552nm,19.0s,MS4.9
BURAR Bucovina Array 82.38 319⇓ *iP* **P 13 22 37.0 +0.8**
BURAR Bucovina Array 82.38 319⇓ P **P 13 22 37.0 +0.9**
BUR08 Bucovina Ar. S 82.40 319 *eP* **P 13 22 36.8 +0.5**
BUR08 *e* pP 13 22 50.1 -0.2
MNK Minsk 82.45 326 *eP* **P 13 22 33.0 -3.3**
MNK *e* pP 13 22 47.0 -3.4
PUL Pulkovo 82.68 331⇑ *eP* **P 13 22 38.1 +0.7**
KKB Krupnik 82.74 313 P **P 13 22 37.4 -0.8**
TSUM Tsumeb 82.76 251 P **P 13 22 36.8 -2.0**
comp=Z,13nm,1.1s,mb4.9
TSUM LR LR
comp=Z,820nm,20.0s,MS5.1
VTS Vitosha 82.78 313 P **P 13 22 38.1 -0.2**
JOF Joensuu 83.25 334 *ep* **P 13 22 39.2 -1.1**
comp=Z,34nm,0.7s,mb5.5
JOF Joensuu 83.25 334 *eP* **P 13 22 39.2 -1.1**
JOF pmax pmax
comp=Z,34nm,0.7s,mb5.5
BILL Bilibino 83.55 20*d iP* **P 13 22 40.9 -0.9**
BILL pmax pmax
comp=Z,26nm,1.0s,mb5.3
BILL Bilibino 83.55 20 P **P 13 22 40.1 -1.7**
comp=Z,20nm,0.9s,mb5.2
BILL LR LR
comp=Z,711nm,21.0s,MS5.0
GZR Gura Zlata 83.59 316 P **P 13 22 43.2 +0.7**
LVZ Lovozero 83.77 340 P **P 13 22 42.3 -0.6**
comp=Z,481nm,0.7s,mb6.7,SNR=5.0
LVZ Lovozero 83.77 340⇑ *eP* **P 13 22 42.5 -0.4**
LVZ pmax pmax
comp=Z,110nm,1.5s,mb5.8
DRGR 83.89 317⇓ *iP* **P 13 22 44.6 +0.6**
DRGR 83.89 317 P **P 13 22 44.5 +0.5**
APA Apatity 84.08 339⇓ *eP* **P 13 22 44.0 -0.5**
APA *i* pP 13 22 57.4 -1.2
APA pmax pmax
comp=Z,42nm,1.0s,mb5.5
KWP Kalwaria 84.42 320 *eP* **P 13 22 47.3 +0.7**
KWP *e* pP 13 23 01.1 +0.4
KWP Kalwaria 84.42 320 P **P 13 22 46.9 +0.3**
KWP *e* pP 13 22 55.8 -4.9
KWP pmax pmax
comp=Z,110nm,1.2s,mb5.9
KWP Kalwaria 84.42 320⇑ *iP* **P 13 22 47.2 +0.6**
KWP Kalwaria 84.42 320 *eP* **P 13 22 47.3 +0.7**
KWP *e* pP 13 23 01.1 +0.4
BZS Buzias 84.44 316 P **P 13 22 47.2 +0.4**
UZH Uzhgorod 84.50 319 *eP* **P 13 22 47.2 +0.2**
UZH *e* 13 22 52.6
UZH *e*S S 13 33 10.4 +0.3
UZH *e*PS 13 34 14.0
KOLS Kolonicke sedl 84.57 320 *eP* **P 13 22 48.3 +0.9**
KOLS *e* pP 13 23 02.9 +1.4
SUW Suwalki 84.98 325 *eP* **P 13 22 49.3 0.0**
SUW *e* pP 13 23 02.4 -1.0
SUW Suwalki 84.98 325 P **P 13 22 49.2 -0.1**
SUW pmax pmax
comp=Z,480nm,1.0s,mb6.6
SUW Suwalki 84.98 325 *eP* **P 13 22 49.3 0.0**
SUW *e* pP 13 23 02.4 -1.0
TIR Tirane 85.04 312 PFAKE 13 23 00.0 +10
TIR LR LR
comp=Z,196nm,20.0s,MS4.5
CRVS Cervenica-Dubn 85.09 319 *eP* **P 13 22 50.4 +0.4**
CRVS *e* pP 13 23 04.9 +0.8
KAF Kangasniemi 85.23 333 *ep* **P 13 22 49.3 -1.1**
comp=Z,37nm,0.7s,mb5.6,baz=99,slow=4.6
KAF Kangasniemi 85.23 333 *eP* **P 13 22 49.3 -1.1**
KAF pmax pmax
comp=Z,37nm,0.7s,mb5.6
STHS Stebnicka Huta 85.32 320 *eP* **P 13 22 51.9 +0.8**
STHS *e* pP 13 23 04.9 -0.3
STHS pmax pmax
comp=Z,52nm,1.0s,mb5.6
STHS Stebnicka Huta 85.32 320 *eP* **P 13 22 51.9 +0.8**
comp=Z,52nm,1.0s,mb5.6
STHS *e* pP 13 23 04.9 -0.3
KECS Kecovo 85.66 319 *eP* **P 13 22 53.0 +0.2**
KECS *e* pP 13 23 06.6 -0.4
KECS pmax pmax
comp=Z,19nm,1.0s,mb5.3
KECS Kecovo 85.66 319 *eP* **P 13 22 53.0 +0.2**
comp=Z,19nm,1.0s,mb5.3
KECS *e* pP 13 23 06.6 -0.4
NIE Niedzica 85.92 320 *eP* **P 13 22 55.2 +1.1**
NIE *e* pP 13 23 09.5 +1.3
NIE Niedzica 85.92 320 *eP* **P 13 22 55.2 +1.1**
NIE *e* pP 13 23 09.5 +1.3
PSZ Piszkesteto 85.97 318 *eP* **P 13 22 52.5 -1.9**
PSZ *e* pP 13 23 08.4 -0.1
PSZ pmax pmax
comp=Z,38nm,1.0s,mb5.6
PSZ MLR MLR
comp=Z,213nm,21.0s,MS4.5
PSZ Piszkesteto 85.97 318⇑ *e*PcP PcP 13 22 54.6 -2.4
PSZ Piszkesteto 85.97 318⇑ *iP* **P 13 22 54.5 +0.1**
PSZ Piszkesteto 85.97 318 *eP* **P 13 22 52.5 -1.9**
comp=Z,38nm,1.0s,mb5.6
PSZ *e* pP 13 23 08.4 -0.1
PSZ LR LR
comp=Z,213nm,21.0s,MS4.5
OJC Ojcow 86.37 321 *eP* **P 13 22 56.6 +0.3**
OJC *e**SP sP 13 23 13.4 -2.4
PKSM Moragy 86.58 316⇑ *iP* **P 13 22 57.3 -0.1**
PKSM Moragy 86.58 316⇑ P **P 13 22 57.3 -0.1**
VYHS Vyhne 86.75 319 *eP* **P 13 22 58.2 0.0**
VYHS *e* pP 13 23 12.9 +0.6
VYHS pmax pmax
comp=Z,13nm,1.5s,mb4.9
VYHS Vyhne 86.75 319 *eP* **P 13 22 58.2 0.0**
comp=Z,12nm,1.5s,mb4.9
VYHS *e* pP 13 23 12.9 +0.6
KEV Kevo 87.01 340 *ep* **P 13 22 57.0 -2.0**
comp=Z,30nm,0.8s,mb5.6
KEV Kevo 87.01 340 *eP* **P 13 22 57.0 -2.0**
KEV pmax pmax
comp=Z,30nm,0.8s,mb5.6
KOLL Kolacno 87.05 319 *e* pP 13 23 14.0 +0.2
MAIT Maitri 87.14 199 *eP* **P 13 23 00.9 +1.2**
TIP Timpagrande 87.14 309 *eP* **P 13 23 00.8 +0.4**
comp=Z,42nm,1.2s,mb5.5
TIP LR LR
comp=Z,128nm,20.0s,MS4.3
OKC Ostrava-Krasne 87.38 320 *eP* **P 13 23 01.8 +0.6**
OKC *e*pP pP 13 23 15.8 +0.4
ARCES ARCESS Array B 87.46 340 P **P 13 23 01.2 0.0**
comp=Z,34nm,0.8s,mb5.6,baz=101,slow=6.3,SNR=64
ARCES ARCESS Array B 87.46 340 P pP 13 23 14.7 -0.6
comp=Z,21nm,0.8s,baz=116,slow=5.5,SNR=9.7
ARCES ARCESS Array B 87.46 340 P **P 13 23 01.2 0.0**
ARCES pmax pmax
comp=Z,34nm,0.8s
ARCES ARCESS Array B 87.46 340 P **P 13 23 01.2 0.0**
ORI Oriolo Calabro 87.47 310 P **P 13 23 03.1 +1.2**
ORI pmax pmax
comp=Z,815nm,3.2s
ORI Oriolo Calabro 87.47 310 P **P 13 23 03.1 +1.2**
comp=Z,815nm,3.2s
MODS Modra-Piesok 87.77 318 *eP* **P 13 23 03.5 +0.4**
MODS *e* pP 13 23 17.7 +0.4
PTRP Pietrapertosa 87.81 311 P **P 13 23 04.6 +1.1**
comp=Z,98nm,1.1s,mb6.0
ZST Bratislava 87.86 318 *eP* **P 13 23 04.2 +0.6**
ZST *e* pP 13 23 18.6 +0.9
ZST pmax pmax
comp=Z,35nm,0.9s,mb5.6
ZST Bratislava 87.86 318 *eP* **P 13 23 04.2 +0.6**
comp=Z,35nm,0.9s,mb5.6
ZST *e* pP 13 23 18.6 +0.9
CUC Castrocucco 87.95 310 *eP* **P 13 23 03.7 -0.5**
comp=Z,18nm,1.0s,mb5.3
CUC LR LR
comp=Z,266nm,20.0s,MS4.7
SOP Sopron 88.17 318⇑ *eP* **P 13 23 03.9 -1.1**

FG4 Candela 88.28 311 P P 13 23 06.6 +0.9
FG4 pmax pmax
comp=Z,312nm,1.0s,mb6.5
FG4 Candela 88.28 311 P P 13 23 06.6 +0.9
comp=Z,312nm,1.0s,mb6.5
VRAC Vranov 88.32 319 P P 13 23 05.9 +0.2
comp=Z,3.8nm,0.4s,mb5.0,baz=150,slow=9.0,SNR=3.7
VRAC Vranov 88.32 319 P pP 13 23 20.9 +1.0
comp=Z,5.3nm,0.5s,baz=91,slow=7.3,SNR=9.0
VRAC Vranov 88.32 319 P P 13 23 05.9 +0.2
VRAC pmax pmax
comp=Z,4.0nm,0.4s
GKP Gorka Klasztor 88.36 323 *e*P **P 13 23 06.2 +0.4**
GKP *e* pP 13 23 20.3 +0.3
GKP Gorka Klasztor 88.36 323 *e*P **P 13 23 06.2 +0.4**
GKP *e* pP 13 23 20.3 +0.3
SGO Sicignano 88.38 311 P P 13 23 06.0 -0.2
SGO pmax pmax
comp=Z,16nm,0.6s,mb5.4
SGO Sicignano 88.38 311 P P 13 23 06.0 -0.2
comp=Z,16nm,0.6s,mb5.4
DPC Dobruska-Polom 88.60 320 *e*P **P 13 23 08.1 +1.1**
DPC *e*pP pP 13 23 22.2 +1.0
CSSN Cassano Irpino 88.62 311 P P 13 23 07.7 +0.3
comp=Z,82nm,1.2s,mb5.9
CONA Conrad Observa 88.66 318⇑ *i*P **P 13 23 07.4 0.0**
comp=Z,8.8nm,0.8s,mb5.1
CSNA Conrad Observa 88.66 318⇑ *i*P **P 13 23 07.5 +0.1**
comp=Z,9.1nm,0.9s,mb5.1
KSP Ksiaz 88.67 321 *e*P **P 13 23 08.3 +1.0**
KSP *e* pP 13 23 22.5 +0.9
KSP Ksiaz 88.67 321⇑ *e*P **P 13 23 08.0 +0.7**
KSP *e*pP pP 13 23 22.0 +0.5
UPC Upice 88.81 320 *e*P **P 13 23 08.9 +0.9**
UPC *e*pP pP 13 23 23.3 +1.1
UPC Upice 88.81 320 *e*P **P 13 23 08.9 +0.9**
UPC *e*pP pP 13 23 23.3 +1.1
BOJS Bojanci 88.86 315 *i*P **P 13 23 08.7 +0.4**
BOJS *i* pP 13 23 23.0 +0.4
TREC Trest 89.04 319 *e*P **P 13 23 09.6 +0.5**
TREC *e*pP pP 13 23 24.1 +0.8
PERS Pernice 89.05 317 *i*P **P 13 23 09.7 +0.5**
PERS *i* pP 13 23 23.9 +0.5
SOKA Soboth 89.11 317⇑ *i*P **P 13 23 10.1 +0.6**
comp=Z,28nm,0.9s,mb5.6
SOKA Soboth 89.11 317⇑ *i*PcP PcP 13 23 10.1 -0.9
comp=Z,28nm,0.9s
RNI2 Rionero Sannit 89.34 312 P P 13 23 10.8 +0.1
comp=Z,200nm,2.0s,mb6.1
LJU Ljubljana 89.41 316 *i*P **P 13 23 11.6 +0.7**
LJU *i* pP 13 23 25.8 +0.7
OBKA Obir 89.43 316⇑ *i*P **P 13 23 11.4 +0.4**
comp=Z,23nm,1.3s,mb5.3
OBKA Obir 89.43 316⇑ *i*PcP PcP 13 23 11.4 -0.9
comp=Z,23nm,1.3s
INTR Introdacqua 89.55 312 P P 13 23 10.8 -0.9
SDI San Donato 89.60 312 P P 13 23 11.7 -0.2
SDI pmax pmax
comp=Z,75nm,1.4s,mb5.8
SDI San Donato 89.60 312 P P 13 23 11.7 -0.2
comp=Z,74nm,1.4s,mb5.8
PRU Pruhonice 89.71 320 *e*P **P 13 23 12.9 +0.7**
PRU *e*pP pP 13 23 27.0 +0.6
PRU AMS AMS 14 06 50.0
comp=Z,300nm,24.7s
JAVS Javornik 89.72 316 *i*P **P 13 23 12.2 -0.2**
JAVS *i* pP 13 23 26.6 0.0
MOA Molln 89.72 318⇑ *i*P **P 13 23 12.4 +0.1**
comp=Z,8.7nm,0.7s,mb5.2
PVCC Panska Ves 89.73 320 *e*P **P 13 23 13.3 +1.0**
PVCC *e*pP pP 13 23 27.8 +1.3
VOY Vojsko 89.84 316⇑ *e*P **P 13 23 12.8 -0.2**
VOY *e* pP 13 23 27.1 -0.1
AQU L'Aquila 89.95 312 P P 13 23 14.1 +0.6
AQU pmax pmax
comp=Z,123nm,1.1s,mb6.2
AQU L'Aquila 89.95 312 P P 13 23 14.1 +0.6
comp=Z,123nm,1.1s,mb6.2
MYKA Terra Mystica 90.06 317⇓ *i*P **P 13 23 14.2 +0.2**
comp=Z,9.1nm,0.6s,mb5.2
BRG Berggiesshubel 90.16 321 *i*P **P 13 23 15.1 +0.8**
BRG *i**PP pP 13 23 29.4 +0.9
BRG pmax pmax
comp=Z,15nm,0.8s,mb5.4
BRG pmax pmax
comp=Z,46nm,1.3s,mb5.7
BRG Berggiesshubel 90.16 321 *e*P **P 13 23 15.1 +0.8**
comp=Z,24nm,0.8s,mb5.6
BRG Berggiesshubel 90.16 321 *i*P **P 13 23 15.1 +0.8**
comp=Z,24nm,0.8s,mb5.6
BRG *i*pP pP 13 23 29.4 +0.9
comp=Z,76nm,1.3s
CING Cingoli 90.16 313 P P 13 23 15.0 +0.5
comp=Z,68nm,1.4s,mb5.8
GEC2 GERESS Array S 90.17 319 *e*P **P 13 23 15.2 +0.8**
GEC2 pmax pmax
comp=Z,21nm,0.9s,mb5.5
GEC2 GERESS Array S 90.17 319 *e*P **P 13 23 15.2 +0.8**
comp=Z,21nm,0.9s,mb5.5
GERES GERESS Array B 90.17 319 P P 13 23 14.9 +0.5
comp=Z,10nm,0.7s,mb5.3,baz=85,slow=4.6,SNR=47
GERES GERESS Array B 90.17 319 P pP 13 23 29.6 +1.0
comp=Z,37nm,1.1s,baz=94,slow=4.0,SNR=26
GERES GERESS Array B 90.17 319 P P 13 23 14.9 +0.5
GERES pmax pmax
comp=Z,10.0nm,0.7s
NRCA Norcia 90.19 313 P P 13 23 14.9 +0.3
comp=Z,42nm,1.1s,mb5.7
PTCC Patocco-Chiusa 90.24 316 P P 13 23 14.9 +0.1
comp=Z,76nm,1.1s,mb5.9
KHC Kasperske Hory 90.27 319 *e*P **P 13 23 15.3 +0.4**
KHC *e**PP pP 13 23 29.5 +0.4
KHC MLR MLR
comp=E,200nm,19.2s
KHC Kasperske Hory 90.27 319 *e*P **P 13 23 15.3 +0.4**
KHC *e*pP pP 13 23 29.5 +0.4
KBA Koelnbreinsper 90.29 317⇑ *i*P **P 13 23 14.7 -0.3**
comp=E,11nm,0.8s,mb5.2
GMNA Gemona 90.32 316 P P 13 23 15.6 +0.5
comp=E,532nm,1.2s
RUE Ruedersdorf 90.37 322 *e*P pP 13 23 30.3 +0.8
FSSB Fossombrone 90.49 314 P P 13 23 16.9 +0.9
comp=E,118nm,1.4s,mb6.0
RJOB Jochberg 90.70 318 *e*P **P 13 23 16.7 -0.2**
comp=Z,12nm,0.9s,mb5.2
WET Wettzell 90.73 319 *e*P **P 13 23 17.7 +0.7**
WET pmax pmax
comp=Z,23nm,0.9s,mb5.5
WET Wettzell 90.73 319 *e*P **P 13 23 17.7 +0.7**
comp=Z,23nm,0.9s,mb5.5
CLL Collm 90.78 321 *i*P **P 13 23 17.1 -0.1**
CLL *i* pP 13 23 31.9 +0.5
CLL pmax pmax
comp=Z,17nm,1.2s,mb5.2
CLL MLR MLR
comp=Z,200nm,22.3s,MS4.5
CLL Collm 90.78 321 *e*P **P 13 23 17.4 +0.2**
comp=Z,17nm,1.2s,mb5.2
CLL Collm 90.78 321 *i*P **P 13 23 17.1 -0.1**
comp=Z,17nm,1.2s,mb5.2
CLL *i* x x 13 23 31.9
comp=Z,53nm,1.3s
CLL *e*PP PP 13 26 53.0 -0.2
CLL *e*(SKSac) 13 33 39.0
CLL *e*SSSS 13 47 00.0
CLL Collm 90.78 321 *i*P **P 13 23 17.1 -0.1**
comp=Z,17nm,1.2s,mb5.2
CLL *i* pP 13 23 31.9 +0.5
CLL LR LR
comp=Z,200nm,22.3s,MS4.5
HFS Hagfors 90.94 330 P P 13 23 17.5 -0.3
comp=Z,26nm,0.7s,mb5.7,baz=114,slow=3.6,SNR=28
HFS Hagfors 90.94 330 P pP 13 23 31.8 -0.1
comp=Z,25nm,0.8s,baz=130,slow=4.6,SNR=9.6
HFS Hagfors 90.94 330 P P 13 23 17.5 -0.2
HFS pmax pmax
comp=Z,26nm,0.7s
NKC Novy Kostel 91.07 320 *e*P **P 13 23 19.4 +0.8**
NKC *e*pP pP 13 23 33.2 +0.4
NKC Novy Kostel 91.07 320 *e*P **P 13 23 19.4 +0.8**
NKC *e*pP pP 13 23 33.2 +0.4
TANN Tannenbergstha 91.07 320 *e*P **P 13 23 19.2 +0.6**
comp=Z,10.0nm,1.2s,mb5.0
SFI Santa Sofia 91.17 314 P P 13 23 20.2 +1.0
SFI pmax pmax
comp=Z,124nm,1.4s,mb6.0
SFI Santa Sofia 91.17 314 *e*P **P 13 23 20.2 +1.0**
comp=Z,124nm,1.4s,mb6.0
ROTZ Rotzenmuhle 91.20 320 *e*P **P 13 23 20.3 +1.1**
comp=Z,14nm,1.0s,mb5.2
MANZ Manzenberg 91.28 320 *e*P **P 13 23 20.6 +1.1**
comp=Z,22nm,1.0s,mb5.4
WTTA Wattenberg 91.47 317⇑ *i*P **P 13 23 20.3 -0.2**
comp=Z,26nm,0.7s,mb5.7
WATA Walderalm 91.51 317⇑ *i*P **P 13 23 20.2 -0.5**
comp=Z,7.2nm,0.8s,mb5.1
SPITS Spitsbergen Ar 91.53 348 P P 13 23 18.6 -1.5
comp=Z,25nm,0.8s,mb5.6,baz=344,slow=8.8,SNR=17
SPITS Spitsbergen Ar 91.53 348 P pP 13 23 33.0 -1.4
comp=Z,8.4nm,0.6s,baz=123,slow=7.2,SNR=8.6
SPITS Spitsbergen Ar 91.53 348 P P 13 23 18.6 -1.6
SPITS pmax pmax
comp=Z,25nm,0.8s
MOX Moxa 91.62 320 *e*P **P 13 23 20.9 -0.2**
comp=Z,25nm,1.4s,mb5.3
MOX *e* pP 13 23 36.1 +0.8
comp=Z,60nm,1.5s
MOX Moxa 91.62 320 *e*P **P 13 23 20.9 -0.2**
MOX *e* pP 13 23 36.1 +0.8
MOX pmax pmax
comp=Z,25nm,1.4s,mb5.3
MOX pmax pmax
comp=Z,60nm,1.5s,mb5.7
MOX Moxa 91.62 320 *e*P **P 13 23 21.7 +0.6**
comp=Z,13nm,1.0s,mb5.2
SNAA Sanae 91.70 198⇑ *e*P pP 13 23 36.1 +0.8
FUR Furstenfeldbru 91.75 318 *e*P **P 13 23 21.8 +0.1**
FUR pmax pmax
comp=Z,31nm,0.7s,mb5.8
FUR Furstenfeldbru 91.75 318 *e*P **P 13 23 21.8 +0.1**
comp=Z,31nm,0.7s,mb5.8
MOTA Moosalm 91.83 317⇑ *i*P **P 13 23 21.8 -0.4**
comp=Z,12nm,0.9s,mb5.3
GRA1 Grafenberg Arr 91.84 319 *e*P **P 13 23 23.1 +1.0**
comp=Z,22nm,1.1s,mb5.4
GRA1 *e*pP pP 13 23 37.3 +0.9
GRF Grafenberg Arr 91.84 319 *e*P **P 13 23 23.1 +1.0**
GRF *e**PP pP 13 23 37.3 +0.9
GRF pmax pmax
comp=Z,22nm,1.1s,mb5.4
GRF Grafenberg Arr 91.84 319 *e*P **P 13 23 23.1 +1.0**
GRF *e**PP pP 13 23 37.3 +0.9
GRF pmax pmax
comp=Z,22nm,1.1s,mb5.4
GRF Grafenberg Arr 91.84 319 *e*P **P 13 23 23.1 +1.0**
comp=Z,22nm,1.1s,mb5.4
GRF *e*pP pP 13 23 37.3 +0.9
RETA Reutte 92.07 317⇑ *i*P **P 13 23 23.3 0.0**
comp=Z,23nm,0.7s,mb5.6
RETA Reutte 92.07 317⇑ *i*PcP **P 13 23 23.3 0.0**
comp=Z,23nm,0.7s,mb5.6
FETA Feichten 92.08 317⇑ *i*P **P 13 23 23.6 +0.3**
comp=Z,13nm,0.8s,mb5.3
FETA Feichten 92.08 317⇑ *i*PcP **P 13 23 23.6 +0.3**
comp=Z,13nm,0.8s,mb5.3
GSCL Gusciola 92.09 314 P **P 13 23 24.6 +1.1**
comp=Z,25nm,0.9s,mb5.5
NOA NORSAR Array B 92.21 331 P **P 13 23 23.5 -0.1**
comp=Z,13nm,0.7s,mb5.3,baz=93,slow=4.7,SNR=28
NOA NORSAR Array B 92.21 331 P pP 13 23 37.5 -0.4
comp=Z,20nm,1.0s,baz=92,slow=4.7,SNR=7.9
NOA NORSAR Array B 92.21 331 P **P 13 23 23.5 -0.1**
NOA pmax pmax
comp=Z,13nm,0.7s
VLC Villacollemand 92.23 314 PFAKE
VLC LR LR 13 23 40.0 +16
comp=Z,208nm,22.0s,MS4.5
BRMO Bormio 92.31 316 P **P 13 23 24.9 +0.5**
comp=Z,25nm,1.1s,mb5.5
NIKO Nikolski 92.34 37 *e*P **P 13 23 22.5 -1.9**
CLZ Clausthal 92.44 322 *e*P **P 13 23 25.4 +0.5**
CLZ pmax pmax
comp=Z,11nm,0.9s,mb5.2
CLZ Clausthal 92.44 322 *e*P **P 13 23 25.4 +0.5**
comp=Z,11nm,0.9s,mb5.2
KBS Kingsbay 92.46 349 PFAKE
KBS LR LR 13 23 40.0 +16
comp=Z,318nm,21.0s,MS4.7
BSEG Bad Segeberg 92.52 324 *e*P **P 13 23 25.6 +0.4**
BSEG pmax pmax
comp=Z,13nm,1.0s,mb5.3
BSEG Bad Segeberg 92.52 324 *e*P **P 13 23 25.6 +0.4**
comp=Z,13nm,1.0s,mb5.3
NRDL Niedersach Rie 92.52 322 *e*P **P 13 23 26.4 +0.7**
comp=Z,10.0nm,0.9s,mb5.2
UBBA Unterbreizbach 92.65 321 *e*P **P 13 23 26.2 +0.3**
comp=Z,5.0nm,0.7s,mb5.0
DAVOX Davos/Dischmat 92.65 317 P **P 13 23 26.7 +0.7**
comp=Z,13nm,0.6s,mb5.5,baz=133,slow=5.3,SNR=17
DAVOX Davos/Dischmat 92.65 317 P pP 13 23 41.4 +1.3
comp=Z,45nm,1.1s,baz=127,slow=10,SNR=23
DAVA Damuels 92.66 317⇑ *i*P **P 13 23 26.4 +0.4**
comp=Z,25nm,0.8s,mb5.7
DAVA Damuels 92.66 317⇑ *i*PcP **P 13 23 26.4 +0.4**
comp=Z,25nm,0.8s,mb5.7
DAVOS Davos 92.71 317 P **P 13 23 26.7 +0.5**
KEST Kesra 92.82 305 P **P 13 23 27.5 +0.5**
comp=Z,8.5nm,0.9s,mb5.2,baz=37,slow=1.0,SNR=18
KEST Kesra 92.82 305 P pP 13 23 43.5 +2.2
comp=Z,7.0nm,0.9s,baz=1.5,slow=9.4,SNR=6.7
VSL Villasalto 92.87 309 PFAKE
VSL LR LR 13 23 40.0 +13
comp=Z,181nm,19.0s,MS4.5
KONO Kongsberg 92.99 329⇓ *e*P **P 13 23 27.4 +0.2**
TUE Stuetta 93.02 316 *e*P **P 13 23 28.2 +0.5**
comp=Z,17nm,1.0s,mb5.4
TUE LR LR
comp=Z,204nm,21.0s,MS4.6
STU Stuttgart 93.14 319 *e*P **P 13 23 28.5 +0.3**
comp=Z,12nm,0.6s,mb5.5
PGF Pioggiola 93.21 312 *e*P **P 13 23 28.6 -0.1**
comp=Z,23nm,0.9s,mb5.3
PGF Pioggiola 93.21 312 *e*P **P 13 23 28.6 -0.1**
PGF pmax pmax
comp=Z,12nm,0.9s,mb5.3
PGF Pioggiola 93.21 312 *e*P **P 13 23 28.6 -0.1**
comp=Z,12nm,0.9s,mb5.3
VNA2 Neumayer--Watz 93.32 198 *e*P **P 13 23 35.3 +6.7**
VNA2 *e* pP 13 23 44.6 +1.8
VNA1 Neumayer--Stat 93.69 198 *e*P pP 13 23 46.8 +2.3
BFO Black Forest 93.72 318 *e*P **P 13 23 30.7 -0.1**
comp=Z,9.0nm,0.7s,mb5.3
BFO Black Forest 93.72 318 *e*P **P 13 23 29.9 -1.0**
BFO *e*P 13 23 30.7
BFO *e* pP 13 23 44.8 -0.3
BFO LR LR
comp=Z,311nm,21.0s,MS4.7
VNA3 Neumayer Olymp 93.92 198 *e*P pP 13 23 46.9 +1.4
IBBN Ibbenburen 94.06 322 *e*P **P 13 23 32.6 +0.3**
comp=Z,18nm,0.6s,mb5.7
SBF Sospel 94.36 314 *e*P **P 13 23 33.7 -0.2**
comp=Z,67nm,1.0s,mb5.7
SBF Sospel 94.36 314 *e*P **P 13 23 33.7 -0.2**
SBF pmax pmax
comp=Z,33nm,1.0s,mb5.7
SBF Sospel 94.36 314 *e*P **P 13 23 33.7 -0.2**
comp=Z,33nm,1.0s,mb5.7
BUG Bochum--Univer 94.37 321 *e*P **P 13 23 33.9 +0.1**
comp=Z,10.0nm,0.6s,mb5.4
CDF Champ du Feu 94.42 318 *e*P **P 13 23 33.7 -0.4**
comp=Z,9.6nm,0.7s,mb5.1
CDF Champ du Feu 94.42 318 *e*P **P 13 23 33.7 -0.4**
CDF pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
CDF Champ du Feu 94.42 318 *e*P **P 13 23 33.7 -0.4**
comp=Z,4.8nm,0.7s,mb5.0
ECH Echery 94.50 318 *e*P **P 13 23 33.9 -0.5**
ECH *e* pP 13 23 45.9 -2.8
HINF Hinteralfeld 94.71 318 *e*P **P 13 23 34.7 -0.7**
MBDF Montbardon 94.83 314 *e*P **P 13 23 35.3 -0.7**
LPG La Plagne 94.83 315 *e*P **P 13 23 36.1 +0.1**
comp=Z,21nm,0.8s,mb5.3
LPG La Plagne 94.83 315 *e*P **P 13 23 36.1 +0.1**
LPG pmax pmax
comp=Z,10.0nm,0.8s,mb5.3
LPG La Plagne 94.83 315 *e*P **P 13 23 36.1 +0.1**
comp=Z,10nm,0.8s,mb5.3
LPL La Plagne 94.84 315 *e*P **P 13 23 36.1 0.0**
BNI Bardonecchia 94.89 315 PFAKE
BNI LR LR 13 23 50.0 +14
comp=Z,262nm,20.0s,MS4.7
FRF La Foret Royal 94.93 313 *e*P **P 13 23 36.4 -0.1**
LMR La Mourre 95.04 313 *e*P **P 13 23 36.8 -0.2**
HAU Haudompre 95.05 318 *e*P **P 13 23 36.6 -0.4**
comp=Z,20nm,0.7s,mb5.4
HAU *e*MLR MLR
comp=Z,114nm,21.0s,MS4.0
HAU Haudompre 95.05 318 *e*P **P 13 23 36.6 -0.4**
HAU pmax pmax
comp=Z,10.0nm,0.7s,mb5.3
HAU MLR MLR
comp=Z,110nm,21.0s,MS4.3
HAU Haudompre 95.05 318 *e*P **P 13 23 36.6 -0.4**
comp=Z,9.9nm,0.7s,mb5.3
HAU LR LR
comp=Z,110nm,21.0s,MS4.3
WLF Walferdange 95.13 319 *e*P **P 13 23 37.8 +0.5**
comp=Z,9.0nm,0.7s,mb5.3
WLF Walferdange 95.13 319 PFAKE
WLF LR LR 13 23 50.0 +13
comp=Z,177nm,22.0s,MS4.5
CABF La Chapelle 95.26 316 *e*P **P 13 23 37.9 -0.1**
comp=Z,16nm,0.9s,mb5.2
CABF La Chapelle 95.26 316 *e*P **P 13 23 37.9 -0.1**
CABF pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
CABF La Chapelle 95.26 316 *e*P **P 13 23 37.9 -0.1**
comp=Z,8.1nm,0.9s,mb5.2
ORIF Oris-en-Rattie 95.45 315 *e*P **P 13 23 38.6 -0.3**
ORIF *e*MLR MLR
comp=Z,228nm,23.0s,MS4.3
SMRF Simiane la Rot 95.70 314 *e*P **P 13 23 40.5 +0.5**
comp=Z,17nm,0.9s,mb5.2
SMRF Simiane la Rot 95.70 314 *e*P **P 13 23 40.5 +0.5**
comp=Z,17nm,0.9s,mb5.5
MEZF Maizieres J'vi 95.90 318 *e*P **P 13 23 40.6 -0.2**
GIVF Givet 95.97 320 *e*P **P 13 23 40.9 -0.2**
TAM Tamanrasset 95.97 293 *e*P **P 13 23 42.6 +0.8**
TAM *e* pP 13 23 58.0 +2.0
BAIF Baives 96.37 320 *e*P **P 13 23 42.9 0.0**
comp=Z,13nm,0.7s,mb5.1
BAIF Baives 96.37 320 *e*P **P 13 23 42.9 0.0**
BAIF pmax pmax
comp=Z,6.0nm,0.7s,mb5.1
BAIF Baives 96.37 320 *e*P **P 13 23 42.9 0.0**
comp=Z,6.3nm,0.7s,mb5.2
LOR Lormes 96.76 317 *e*P **P 13 23 44.4 -0.4**
LOR *e*MLR MLR
comp=Z,241nm,22.0s,MS4.3
LOR Lormes 96.76 317 *e*P **P 13 23 44.4 -0.4**
LOR LR LR
comp=Z,240nm,22.0s,MS4.6
SMF Signal de Mont 96.81 316 *e*P **P 13 23 44.6 -0.4**
comp=Z,8.1nm,0.7s,mb5.0
SMF Signal de Mont 96.81 316 *e*P **P 13 23 44.6 -0.4**
SMF pmax pmax
comp=Z,4.0nm,0.7s,mb5.0
SMF Signal de Mont 96.81 316 *e*P **P 13 23 44.6 -0.4**
comp=Z,4.1nm,0.7s,mb5.0
LASF Ste Croix 96.94 314 *e*P **P 13 23 45.4 -0.2**
comp=Z,18nm,1.1s,mb5.1
SSF Saint Saulge 97.01 317 *e*P **P 13 23 45.7 -0.2**
AVF Avril sur Loir 97.14 317 *e*P **P 13 23 45.9 -0.6**
TCF Toulx Ste Croi 97.96 316 *e*P **P 13 23 50.6 +0.4**
LDF La Druitiere 99.32 319 *e*P **P 13 23 55.8 -0.4**
TORD Torodi Ar. Bea 99.54 283 P Pdif 13 23 58.1 +1.0
comp=Z,2.0nm,0.9s,baz=87,slow=4.8,SNR=7.5
TORD PP PP 13 28 12.7 +10
comp=Z,0.9nm,0.8s,baz=88,slow=6.1,SNR=3.8
TORD Torodi Ar. Bea 99.54 283 P pP 13 24 13.1 +0.9
comp=Z,1.9nm,0.9s,baz=149,slow=36,SNR=5.2
COLD Coldfoot 99.79 22 *e*P Pdif 13 23 57.1 -1.1
comp=Z,4.5nm,0.9s
EKA Eskdalemuir Ar 100.21 326 P Pdif 13 24 00.4 +0.3
comp=Z,1.1nm,0.8s,baz=75,slow=7.9,SNR=3.9
EKA Eskdalemuir Ar 100.21 326 P 13 24 14.8
comp=Z,1.6nm,0.7s,baz=76,slow=3.5,SNR=3.8
EKA Eskdalemuir Ar 100.21 326 P Pdif 13 24 00.4 +0.3
EKA pmax pmax
comp=Z,1.0nm,0.8s
BPAW Bear Paw Mtn. 100.33 25 *e*P Pdif 13 23 59.2 -1.4
comp=Z,3µm,0.8s
KDAK Kodiak Island 101.11 32 PFAKE 13 24 10.0 +6.0
KDAK LR LR
comp=Z,91nm,22.0s,MS4.2
MCK McKinley 101.31 25 *e*P Pdif 13 24 03.4 -1.5
COLA College 101.41 24 P Pdif 13 24 02.6 -2.8
COLA MLR MLR
comp=Z,292nm,21.0s,MS4.8
PMR Palmer 101.84 27 PFAKE 13 24 20.0 +13
PMR LR LR
comp=Z,326nm,22.0s,MS4.8
PAB San Pablo 103.46 310 PFAKE 13 24 30.0 +16
PAB LR LR
comp=Z,192nm,20.0s,MS4.6
SFS San Fernando 105.33 307 PFAKE 13 28 50.0 +13
SFS LR LR
comp=Z,321nm,21.0s,MS4.8
MTE Manteigas 105.76 311 PFAKE 13 28 50.0 +12
MTE LR LR
comp=Z,174nm,20.0s,MS4.6
RTC Rabat Centre 106.20 304 PFAKE 13 28 50.0 +11
RTC LR LR
comp=Z,169nm,21.0s,MS4.6
SIT Sitka 110.09 29 PFAKE 13 29 00.0 +15
SIT LR LR
comp=Z,631nm,20.0s,MS5.2
WRAK Wrangell Islan 111.84 29 PFAKE 13 29 00.0 +11
WRAK LR LR
comp=Z,301nm,22.0s,MS4.8
YKA Yellowknife Ar 114.82 17 PKP PKiKP 13 28 52.7 -1.5
comp=Z,2.1nm,0.8s,baz=323,slow=2.0,SNR=10
YKA PP PP 13 29 46.7 -5.7
comp=Z,1.6nm,0.9s,baz=329,slow=7.2,SNR=3.8
YKA Yellowknife Ar 114.82 17 PKIKP PKiKP 13 28 52.7 -1.5
YKA pmax pmax
comp=Z,2.0nm,0.8s
YKA pmax pmax
comp=Z,2.0nm,1.0s
YKA Yellowknife Ar 114.82 17 PKP PKiKP 13 28 52.7 -1.5
YKA PP PP 13 29 46.7 -5.7
NLWA Neilton Lookou 121.13 34 PFAKE 13 29 20.0 +13
NLWA LR LR
comp=Z,303nm,19.0s,MS5.0
HDW Hoodsport 121.44 33 P PKPdf 13 29 07.9 +0.5
JCW Jim Creek 121.72 32 *e*PKPdf PKPdf 13 29 07.3 -0.6
RPW Rockport 121.79 32 *e*PKPdf PKPdf 13 29 06.7 -1.4
EDM Edmonton 122.32 24 *e*PKIKP PKPdf 13 29 07.8 -1.1
ERK Elk Rock 122.62 34 P PKPdf 13 29 10.0 +0.3
ETW Entiat 122.93 32 *e*PKPdf PKPdf 13 29 09.0 -1.3
COR Corvallis 123.04 36 PFAKE 13 29 20.0 +9.4
COR LR LR
comp=Z,893nm,21.0s,MS5.4
WTV Waterville 123.07 32 P PKPdf 13 29 09.8 -0.8
EBG Ellensburg 123.23 33 P PKPdf 13 29 10.8 -0.1
OD2 Odessa Site #2 123.92 31 *e*PKPdf PKPdf 13 29 10.9 -1.2
RSW Rattlesnake Hi 124.08 33 *e*PKPdf PKPdf 13 29 12.6 +0.1
HAWA Hanford 124.11 33 *e*PKPdf PKPdf 13 29 12.0 -0.6
HAWA LR LR
comp=Z,303nm,21.0s,MS4.9
NEW Newport 124.16 30 *e*PKIKP PKPdf 13 29 11.4 -1.2
NEW MLR MLR
comp=Z,288nm,19.0s
HUMO Hull Mountain 124.34 38 *e*PKPdf PKPdf 13 29 12.9 -0.2
HUMO LR LR
comp=Z,246nm,19.0s,MS4.9
FFC Flin Flon 124.94 16 *e*PKIKP PKPdf 13 29 12.3 -1.6
FFC MLR MLR
comp=Z,419nm,22.0s,MS5.1
YBH Yreka Blue Hor 124.97 39 *e*PKIKP PKPdf 13 29 13.5 -0.9
YBH MLR MLR
comp=Z,185nm,21.0s
LNOR Lincton Mounta 125.12 33 *e*PKIKP PKPdf 13 29 13.6 -0.9
LHEM Herd Peak 125.34 39 P PKPdf 13 29 15.2 +0.1
KIPM Iron Peak 125.49 41 *e*PKPdf PKPdf 13 29 15.2 -0.3
WDC Whiskeytown Da 125.70 40 *e*PKIKP PKPdf 13 29 14.5 -1.3
WDC MLR MLR
comp=Z,194nm,19.0s,MS4.8
HOPS Hopland 126.18 42 PFAKE 13 29 30.0 +13
HOPS LR LR
comp=Z,262nm,20.0s,MS4.9
BMO Blue Mountains 126.30 33 PFAKE 13 29 30.0 +13
BMO LR LR
comp=Z,183nm,19.0s,MS4.8
MOD Modoc 126.37 38 *e*PKPdf PKPdf 13 29 17.0 -0.1
MOD LR LR

comp=Z,272nm,21.0s,MS4.9
MSO Missoula 126.71 29 ePKPdf PKPdf 13 29 16.4 -1.1
MSO LR LR
comp=Z,224nm,21.0s,MS4.8
MCCM Marconi Confer 126.74 43 PFAKE 13 29 30.0 +12
MCCM LR LR
comp=Z,324nm,21.0s,MS5.0
CHMT Chamberlain Mo 126.98 29 ePKPdf PKPdf 13 29 16.9 -1.2
WVOR Wild Horse Val 127.05 36 ePKIKP PKPdf 13 29 18.1 -0.2
WVOR MLR MLR
comp=Z,269nm,19.0s,MS4.9
SCHQ Schefferville 127.11 351 PKiKP PKiKP 13 29 19.1 +0.5
comp=Z,8.2nm,0.9s,baz=69,slow=6.2,SNR=4.6
EGMT Eagleton 127.76 26 ePKPdf PKPdf 13 29 18.8 -0.7
EGMT LR LR
comp=Z,322nm,19.0s,MS5.0
DLMT Dillon 128.41 30 ePKPdf PKPdf 13 29 20.6 -0.2
SAO San Andreas Ge 128.43 44 PFAKE 13 29 30.0 +8.8
SAO LR LR
comp=Z,213nm,19.0s,MS4.8
CMB Columbia Colle 128.48 42 PFAKE 13 29 30.0 +8.8
CMB LR LR
comp=Z,271nm,21.0s,MS4.9
MCMT McKenzie Canyo 128.66 30 ePKPdf PKPdf 13 29 21.3 0.0
BOZ Bozeman (W) 128.67 29 PKIKP PKPdf 13 29 21.4 +0.1
BOZ Bozeman (W) 128.67 29 ePKPdf PKPdf 13 29 20.0 -1.3
BOZ LR LR
comp=Z,242nm,19.0s,MS4.9
HLID Hailey 128.71 33 ePKPdf PKPdf 13 29 21.2 -0.3
HLID LR LR
comp=Z,299nm,20.0s,MS5.0
BMN Battle Mountai 129.11 37 PFAKE 13 29 30.0 +7.7
BMN LR LR
comp=Z,224nm,21.0s,MS4.8
QLMT Earthquake Lak 129.36 29 ePKPdf PKPdf 13 29 22.6 -0.1
DGMT Dagmar 129.62 21 PFAKE 13 29 30.0 +7.0
DGMT LR LR
comp=Z,375nm,19.0s,MS5.1
NVAR Mina Array Bea 129.62 40 PKP PKPdf 13 29 24.5 +1.1
comp=Z,4.8nm,0.6s,baz=299,slow=2.0,SNR=42
NVAR SKPbc 13 32 41.5
comp=Z,3.7nm,0.7s,baz=280,slow=3.6,SNR=10.0
YMR Madison River 129.71 29 PFAKE 13 29 30.0 +6.7
YMR LR LR
comp=Z,2µm,20.0s,MS5.8
PTRM Twissleman Ran 129.85 44 ePKPdf PKPdf 13 29 24.6 +0.7
YFT Old Faithful 129.93 29 ePKPdf PKPdf 13 29 25.7 +1.9
LKWY Lake 130.06 29 PFAKE 13 29 40.0 +16
LKWY LR LR
comp=Z,484nm,19.0s,MS5.2
ELK Elko 130.10 36 ePKIKP PKPdf 13 29 24.5 +0.3
ELK MLR MLR
comp=Z,225nm,20.0s
RLMT Red Lodge 130.18 28 PFAKE 13 29 40.0 +16
RLMT LR LR
comp=Z,134nm,21.0s,MS4.6
LAO LASA Array 130.29 24 PFAKE 13 29 40.0 +16
LAO LR LR
comp=Z,343nm,19.0s,MS5.1
RRI2 Red Ridge 130.49 31 ePKPdf PKPdf 13 29 24.7 -0.2
TPH Tonopah 130.52 40 PFAKE 13 29 40.0 +15
TPH LR LR
comp=Z,230nm,21.0s,MS4.8
TPAW Teton Pass 130.57 30 ePKPdf PKPdf 13 29 25.6 +0.5
ULM Lac du Bonnet 130.58 14 PKP PKPdf 13 29 24.6 -0.3
comp=Z,14nm,0.6s,baz=342,slow=3.8,SNR=16
REDW Red Top Meadow 130.71 30 ePKPdf PKPdf 13 29 24.2 -1.0
HVU Hansel Valley 130.81 33 ePKIKP PKPdf 13 29 25.5 0.0
AHID Auburn Hatcher 131.01 31 PFAKE 13 29 40.0 +14
AHID LR LR
comp=Z,313nm,19.0s,MS5.0
ISA Isabella 131.05 43 PFAKE 13 29 40.0 +14
ISA LR LR
comp=Z,218nm,21.0s,MS4.8
BGU Big Grassy Mou 131.25 34↓↓ ePKP PKPdf 13 29 26.0 -0.4
DAC Darwin (Calif) 131.31 42 PFAKE 13 29 40.0 +13
DAC LR LR
comp=Z,197nm,21.0s,MS4.8
SNCC San Nicolas Is 131.57 47 PFAKE 13 29 40.0 +13
SNCC LR LR
comp=Z,402nm,20.0s,MS5.1
HWUT Hardware Ranch 131.59 33 ePKPdf PKPdf 13 29 26.3 -0.7
HWUT LR LR
comp=Z,261nm,19.0s,MS5.0
BW06 Boulder Array 131.79 30 PFAKE 13 29 40.0 +13
BW06 LR LR
comp=Z,296nm,22.0s,MS5.0
PDAR Pinedale Array 131.79 30 PKhKP 13 29 19.4
comp=Z,0.5nm,0.7s,baz=100,slow=4.5,SNR=4.6
PDAR PKP PKPdf 13 29 26.8 -0.6
comp=Z,2.5nm,0.7s,baz=211,slow=1.7,SNR=17
PDAR PP PP 13 31 47.2 0.0
comp=Z,0.5nm,0.6s,baz=254,slow=1.1,SNR=3.9
PDAR SKPbc SKPbc 13 32 48.0 -1.4
comp=Z,4.9nm,0.9s,baz=0.0,slow=1.5,SNR=12
PDAR SKP 13 32 56.8
comp=Z,2.2nm,0.9s,baz=22,slow=1.6,SNR=4.1
PDAR Pinedale Array 131.79 30 PKP PKPdf 13 29 26.8 -0.6
PDAR PP PP 13 31 47.2 0.0
PDAR SKPbc SKPbc 13 32 48.0 -1.4
PDAR SKP 13 32 56.8
TPNV Topopah Spring 131.81 40 ePKIKP PKPdf 13 29 26.3 -1.3
TPNV MLR MLR
comp=Z,227nm,22.0s,MS4.8
DUG Dugway 131.86 35 ePKIKP PKPdf 13 29 27.1 -0.5
DUG MLR MLR
comp=Z,216nm,19.0s,MS4.9
MWC Mount Wilson 132.11 45 PFAKE 13 29 40.0 +12
MWC LR LR
comp=Z,259nm,22.0s,MS4.9
GSC Goldstone 132.38 43 PFAKE 13 29 40.0 +11
GSC LR LR
comp=Z,210nm,19.0s,MS4.9
AGMN Agassiz Refuge 132.39 15 PFAKE 13 29 40.0 +12
AGMN LR LR
comp=Z,334nm,20.0s,MS5.0
NLU North Lily Min 132.44 34 ePKPdf PKPdf 13 29 29.1 +0.4
DAU Daniels Canyon 132.58 33 ePKIKP PKPdf 13 29 28.4 -0.5
MPU Maple Canyon 132.65 34 PFAKE 13 29 40.0 +11
MPU LR LR
comp=Z,655nm,22.0s,MS5.3
RSSD Black Hills 133.28 25 ePKHKP 13 29 20.2
RSSD e 13 29 29.1
RSSD MLR MLR
comp=Z,652nm,22.0s,MS5.3
MVU Marysvale 133.33 36 PFAKE 13 29 40.0 +10
MVU LR LR
comp=Z,264nm,19.0s,MS5.0
MSU Marysvale 133.34 36 ePKIKP PKPdf 13 29 30.9 +0.5
TMUT Trail Mountain 133.38 35 ePKPdf PKPdf 13 29 30.7 +0.2
PFO Pinyon Flat Ob 133.56 44 PFAKE 13 29 40.0 +9.0
PFO LR LR
comp=Z,214nm,20.0s,MS4.9
LDFC Landfair 133.65 42 ePKPdf PKPdf 13 29 31.7 +0.6
EYMN Ely 133.72 11 PFAKE 13 29 40.0 +9.2
EYMN LR LR
comp=Z,435nm,20.0s,MS5.2
RWWY Rawlins 133.76 29 ePKPdf PKPdf 13 29 30.0 -1.1
SRU San Rafael 133.89 34 ePKIKP PKPdf 13 29 30.9 -0.5
PHWY Pilot Hill 134.90 28 ePKPdf PKPdf 13 29 31.9 -1.3
GLA Glamis 135.00 44 ePKIKP PKPdf 13 29 34.0 +0.3
GLA MLR MLR
comp=Z,162nm,21.0s,MS4.7
PV10 Paradox Valley 135.23 34 ePKPdf PKPdf 13 29 34.8 +0.9
PV01 Paradox Valley 135.66 34 ePKPdf PKPdf 13 29 35.2 +0.4
WUAZ Wupatki 135.79 39 ePKPdf PKPdf 13 29 35.9 +0.8
WUAZ LR LR
comp=Z,253nm,20.0s,MS4.9
COWI Conover 135.94 10 PFAKE 13 29 50.0 +15
COWI LR LR
comp=Z,435nm,20.0s,MS5.2
ISCO Idaho Springs 135.98 30 PFAKE 13 29 50.0 +15
ISCO LR LR
comp=Z,263nm,20.0s,MS5.0
PLCA Paso Flores 136.03 189 PKP PKPdf 13 29 34.8 -0.6
comp=Z,1.4nm,0.8s,baz=249,slow=8.2,SNR=3.1
PLCA Paso Flores 136.03 189 PKIKP PKPdf 13 29 34.8 -0.6
PLCA pmax pmax
comp=Z,1.0nm,0.8s
ECSD EROS,Sioux Fal 136.34 18 PFAKE 13 29 50.0 +14
ECSD LR LR
comp=Z,408nm,20.0s,MS5.2
MVCO Mesa Verde 136.36 35 ePKPdf PKPdf 13 29 36.4 +0.3
MVCO LR LR
comp=Z,312nm,19.0s,MS5.1
TRQA Tornquist 136.41 200 PFAKE 13 29 50.0 +14
TRQA LR LR
comp=Z,466nm,22.0s,MS5.2
OGNE Ogallala 136.73 25 PFAKE 13 29 50.0 +13
OGNE LR LR
comp=Z,346nm,19.0s,MS5.1
PKME Peaks-Kenny Pk 136.78 350 PFAKE 13 29 50.0 +13
PKME LR LR
comp=Z,216nm,19.0s,MS4.9
SDCO Great Sand Dun 137.60 31 PFAKE 13 29 50.0 +12
SDCO LR LR
comp=Z,254nm,19.0s,MS5.0
GLMI Grayling 137.81 6 PFAKE 13 29 50.0 +11
GLMI LR LR
comp=Z,497nm,19.0s,MS5.3
TUC Tucson 138.19 42 ePKIKP PKPdf 13 29 39.1 -0.5
TUC MLR MLR
comp=Z,148nm,20.0s,MS4.7
NCB Newcomb 138.72 355 PFAKE 13 29 50.0 +10
NCB LR LR
comp=Z,469nm,20.0s,MS5.2
JFWS Jewell Farm 138.79 12 PFAKE 13 29 50.0 +10
JFWS LR LR
comp=Z,516nm,20.0s,MS5.3
LAZ Ladron 139.11 36 ePKPdf PKPdf 13 29 41.1 -0.1
ANMO Albuquerque 139.12 35 ePKHKP 13 29 34.4
ANMO e 13 29 41.7
ANMO MLR MLR
comp=Z,258nm,20.0s
CBKS Cedar Bluff 139.48 25 PFAKE 13 29 50.0 +8.2
CBKS LR LR
comp=Z,438nm,22.0s,MS5.2
BNM Barren Site 139.59 36 ePKPpre 13 29 37.4
HRV Adam Dziewonsk 139.83 351 PFAKE 13 29 50.0 +7.7
HRV LR LR
comp=Z,208nm,19.0s,MS4.9
WES Weston 139.92 351 PFAKE 13 29 50.0 +7.5
WES LR LR
comp=Z,818nm,19.0s,MS5.5
KSU1 Kansas State U 140.47 22 PFAKE 13 29 50.0 +6.4
KSU1 LR LR
comp=Z,527nm,19.0s,MS5.3
BINY Binghamton 140.62 356 PFAKE 13 30 00.0 +16
BINY LR LR
comp=Z,285nm,22.0s,MS5.0
AMTX Amarillo 141.77 31 PFAKE 13 30 00.0 +14
AMTX LR LR
comp=Z,308nm,20.0s,MS5.1
MVL Millersville 142.83 356 ePKPpre 13 29 41.2
CCM Cathedral Cave 143.15 16 ePKHKP 13 29 43.3
CCM MLR MLR
comp=Z,306nm,20.0s,MS5.1
OLIL Olney 143.26 12 ePKPdf PKPdf 13 29 44.9 -3.6
WMOK Wichita Mounta 143.29 28 ePKHKP 13 29 43.8
WMOK MLR MLR
comp=Z,322nm,19.0s,MS5.1
WCI Wyandotte Cave 144.08 10 ePKIKP PKPdf 13 29 46.6 -3.4
WCI MLR MLR
comp=Z,294nm,19.0s,MS5.1
BDFB Brasilia 144.20 238 PKP PKPdf 13 29 49.4 -1.4
comp=Z,8.2nm,0.8s,baz=132,slow=0.9,SNR=5.7
BDFB Brasilia 144.20 238 PKP pPKPdf 13 30 04.7 -0.8
comp=Z,14nm,0.6s,baz=101,slow=2.3,SNR=10
BDFB Brasilia 144.20 238 PKIKP PKPdf 13 29 49.4 -1.4
BDFB pmax pmax
comp=Z,8.0nm,0.8s
CPUP Villa Florida 144.22 215 PKP PKPdf 13 29 49.1 -1.6
comp=Z,6.9nm,0.7s,baz=135,slow=2.9,SNR=24
CPUP Villa Florida 144.22 215 PKIKP PKPdf 13 29 49.1 -1.5
CPUP pmax pmax
comp=Z,7.0nm,0.7s
TXAR Lajitas Array 144.75 39 PKP PKPdf 13 29 50.4 -1.1
comp=Z,42nm,0.5s,baz=231,slow=0.7,SNR=874
TXAR SKPbc SKPbc 13 33 25.7 -1.3
comp=Z,2.2nm,0.8s,baz=338,slow=2.1,SNR=3.4
TXAR Lajitas Array 144.75 39 PKIKP PKPdf 13 29 50.4 -1.1
TXAR pmax pmax
comp=Z,42nm,0.5s
TXAR pmax pmax
comp=N,2.0nm,0.8s
PARMO Parma 144.85 15 ePKPdf PKPdf 13 29 49.4 -2.0
URVA University of 145.31 358 ePKPdf PKPdf 13 29 50.6 -1.5
GLAT Glass 145.34 15 ePKPdf PKPdf 13 29 51.3 -1.0
UTMT University of 145.38 14 ePKPdf PKPdf 13 29 51.1 -1.2
GNAR Gosnell 145.44 16 ePKPdf PKPdf 13 29 51.6 -0.8
MIAR Mount Ida 145.62 21 ePKIKP PKPdf 13 29 52.3 -0.5
MIAR MLR MLR
comp=Z,289nm,22.0s,MS5.0
HBAR Harrisburg 145.65 17 ePKPdf PKPdf 13 29 52.3 -0.5
ELN Prospectdale 145.65 2 ePKPdf PKPdf 13 29 51.3 -1.5
HALT Halls 145.67 15 ePKPpre 13 29 46.3
HALT ePKPdf PKPdf 13 29 51.8 -1.0
BLA Blacksburg 145.68 2 ePKIKP PKPdf 13 29 51.5 -1.3
BLA MLR MLR
comp=Z,394nm,19.0s,MS5.2
WVT Waverly 145.82 13 ePKP2 PKPab 13 29 52.4 -1.6
WVT MLR MLR
comp=Z,441nm,20.0s,MS5.2
UALR University of 145.84 20 ePKPdf PKPdf 13 29 52.3 -0.9
TZTN Tazewell 146.12 6 ePKPdf PKPdf 13 29 53.1 -0.5
TZTN LR LR
comp=Z,287nm,21.0s,MS5.0
JCT Junction City 146.19 33 ePKPdf PKPdf 13 29 53.4 -0.5
JCT LR LR
comp=Z,288nm,19.0s,MS5.1
TKL Tuckaleechee C 146.97 7 ePKIKP PKPdf 13 29 54.2 -0.9
OXF Oxford 146.98 16 ePKP2 PKPbc 13 29 55.3 -1.8
OXF MLR MLR
comp=Z,599nm,21.0s,MS5.3
CPCT Cooper Cave 147.08 8 ePKPdf PKPdf 13 29 55.3 +0.1
SWET Sewanee 147.08 10 ePKPdf PKPdf 13 29 55.5 +0.2
LCO Las Campanas 147.41 194 PFAKE 13 30 10.0 +14
LCO LR LR
comp=Z,362nm,19.0s,MS5.2
BBSR BB Station 147.55 337 ePKPbc PKPbc 13 29 58.2 -0.5
BBSR LR LR
comp=Z,320nm,19.0s,MS5.1
NATX Nacogdoches 147.65 25 ePKPbc PKPbc 13 29 58.1 -0.9
NATX LR LR
comp=Z,600nm,19.0s,MS5.4
CNNC Cliffs of the 147.65 358 ePKPdf PKPbc 13 29 58.3 -0.6
CNNC LR LR
comp=Z,637nm,20.0s,MS5.4
JSC Jenkinsville 148.56 3 ePKP2 PKPbc 13 30 00.0 -1.4
HKT Hockley 148.65 29 ePKP2 PKPbc 13 30 01.0 -0.7
HKT MLR MLR
comp=Z,530nm,19.0s,MS5.3
VBMS Vicksburg 148.79 19 ePKPbc PKPab 13 30 04.6 -1.2
VBMS LR LR
comp=Z,346nm,22.0s,MS5.1
LRAL Lakeview Retre 148.98 13 ePKPbc PKPbc 13 30 00.5 -2.0
LRAL LR LR
comp=Z,547nm,22.0s,MS5.3
GOGA Godfrey 149.22 7 ePKP2 PKPbc 13 30 02.1 -1.0
GOGA MLR MLR
comp=Z,840nm,20.0s,MS5.5
COW Cow Castle Cre 149.49 3 ePKPbc PKPbc 13 30 03.4 -0.3
KVTX Kingsville 149.51 34 PFAKE 13 30 10.0 +11
KVTX LR LR
comp=Z,437nm,19.0s,MS5.3
NHSC New Hope 149.78 2 PFAKE 13 30 10.0 +10
NHSC LR LR
comp=Z,458nm,19.0s,MS5.3
BRAL Brewton 150.91 14 ePKPbc PKPbc 13 30 05.9 -1.3
BRAL LR LR
comp=Z,192nm,19.0s,MS4.9
LVC Limon Verde 152.89 201 ePKPdf PKPdf 13 30 03.6 -1.2
LVC ePKPbc PKPbc 13 30 12.2 +0.2
LVC LR LR
comp=Z,430nm,20.0s,MS5.3
DWPF Disney 154.68 5 PFAKE 13 30 20.0 +13
DWPF LR LR
comp=Z,272nm,19.0s,MS5.1
LPAZ La Paz 158.19 210 PKP PKPdf 13 30 13.3 +1.4
comp=Z,3.4nm,0.8s,baz=328,slow=0.2,SNR=15
LPAZ La Paz 158.19 210 PKIKP PKPdf 13 30 13.4 +1.4
LPAZ pmax pmax
comp=Z,3.0nm,0.8s
SJG San Juan 160.11 321 PFAKE 13 30 20.0 +5.8
SJG LR LR
comp=Z,170nm,21.0s
GRGR Grenville 160.33 299 PFAKE 13 30 30.0 +15
GRGR LR LR
comp=Z,267nm,20.0s
TEIG Tepich 160.47 26 PFAKE 13 30 20.0 +5.4
TEIG LR LR
comp=Z,255nm,20.0s
NNA Nana 165.19 189 PFAKE 13 30 30.0 +11
NNA LR LR
comp=Z,293nm,22.0s
TGUH Tegucigalpa,Un 166.18 35 PFAKE 13 30 30.0 +10
TGUH LR LR
comp=Z,276nm,20.0s
SDV Santo Domingo 169.57 306 PFAKE 13 30 30.0 +7.5
SDV LR LR
comp=Z,80nm,20.0s
JTS JuntasAbangare 170.54 37 PFAKE 13 30 30.0 +7.0
JTS LR LR
comp=Z,174nm,19.0s
BCIP Isla Barro Col 173.58 6 PFAKE 13 30 30.0 +5.6
BCIP LR LR
comp=Z,282nm,21.0s
OTAV Otavalo 177.42 195 ePKPdf PKPdf 13 30 25.2 -0.3
OTAV LR LR
comp=Z,332nm,21.0s

JMA 13 13:11:19.5±0.2, 4288N×14692E, h54km±4km, M3.8, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.99**	**300**	P	Pn	13 11 37.4	+0.3
NEM2				eS	Sn	13 11 50.5	+0.3
JAK	**Akkeshi**	**1.64**	**275**	P	Pn	13 11 46.6	+0.7
JAK				eS	Sn	13 12 05.8	0.0
JRA	**Rausu**	**1.68**	**310**	P	Pn	13 11 47.2	+0.7
JRA				eS	Sn	13 12 07.8	+0.8
JNK	**Nakash**	**1.76**	**294**	P	Pn	13 11 47.8	+0.3
JNK				eS	Sn	13 12 08.2	-0.5
JAR	**Ashorobuto**	**2.34**	**281**	P	Pn	13 11 56.8	+1.3
JTKR	**Abashiri--Toko**	**2.45**	**297**	P	Pn	13 11 58.5	+1.5
JCH	**Churui**	**2.63**	**265**	P	Pn	13 12 00.5	+1.0
JCH				eS	Sn	13 12 30.4	+0.2
JMP	**Maruseppu**	**2.83**	**295**	P	Pn	13 12 03.8	+1.7
JEM	**Erimo**	**2.92**	**254**	P	Pn	13 12 05.6	+2.2
JNBK	**Urakawa-nobuka**	**3.13**	**260**	P	Pn	13 12 07.5	+1.1

IDC 13 13:33:29.6±4.8, 267S×10278E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/18, mbtmp3.6/4, Error ellipse: s-maj=255.1km s-min=23.6km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**35.27**	**121**	P	P	13 40 27.0	+0.7
	0.2nm,0.4s,baz=301,slow=9.4,SNR=5.5						
ASAR	**Alice Springs**	**36.63**	**127**	P	P	13 40 37.4	-0.6
	0.3nm,0.4s,baz=300,slow=7.6,SNR=9.2						
MKAR	**Makanchi Array**	**52.46**	**342**	P	P	13 42 43.8	-0.2
	0.7nm,0.7s,baz=144,slow=7.6,SNR=5.5						
ZALV	**Zalesovo Beam**	**58.38**	**348**	P	P	13 43 27.0	+0.4
	0.5nm,0.3s,baz=151,slow=5.6,SNR=4.1						
TXAR	**Lajitas Array**	**143.47**	**41**	PKP	PKPdf	13 53 05.6	-1.3
	0.3nm,0.6s,baz=322,slow=1.3,SNR=4.1						

NEIC ***13*** *13:40:21.6±0.8, 091S×10086E, h35km, mb4.1/3, Error ellipse: s-maj=28.2km s-min=13.1km az=61.0*
ISCJB ***13*** *13:40:24.5±8.0, 08S±0.1×1009E±02, h79km±76km, mb4.0/8, Error ellipse: s-maj=36.7km s-min=16.2km az=147.6*
IDC ***13*** *13:40:27.1±10.0, 082S×10087E, h82km±98km, mb3.5/7, mb1 3.5/8, mb1mx3.4/21, mbtmp3.4/8, ML4.0/1, Error ellipse: s-maj=32.0km s-min=16.8km az=59.0*

ISC 13 13:40:22.3±4.9, 08S±01×1009E±02, h38km±46km, n14, σ0§86/13, mb4.0/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.26**	**354**	P	**Pn**	**13 44 44.9**	**0.0**
	0.2nm,0.3s,baz=184,slow=9.1,SNR=4.2						
CHTO	**Chiang Mai**	**19.61**	**354**	P	**Pn**	**13 44 49.0**	**-0.1**
	1.3nm,0.6s						
WRA	**Warramunga Arr**	**37.83**	**122**	P	**P**	**13 47 36.2**	**+0.7**
	0.4nm,0.5s,mb3.4,baz=303,slow=9.4,SNR=7.0						
WRAB	**Tennant Creek**	**37.84**	**122**	P	**P**	**13 47 33.5**	**-2.0**
	6.0nm,1.2s,mb4.2						
ASAR	**Alice Springs**	**39.23**	**128**	P	**P**	**13 47 48.0**	**+0.8**
	0.5nm,0.6s,mb3.5,baz=301,slow=7.7,SNR=14						
SONM	**Songino Array**	**48.70**	**5**	P	**P**	**13 49 04.4**	**+1.6**
	0.7nm,1.0s,mb3.6,baz=189,slow=8.4,SNR=3.7						
MKAR	**Makanchi Array**	**50.16**	**343**	P	**P**	**13 49 13.8**	**-0.1**
	1.5nm,0.8s,mb4.1,baz=145,slow=7.8,SNR=6.4						
MKAR	**Makanchi Array**	**50.16**	**343**	P	**P**	**13 49 13.8**	**-0.1**
KURK	**Kurchatov**	**54.75**	**343**	P	**P**	**13 49 47.2**	**-0.6**
	0.4nm,0.6s,mb3.6,baz=157,slow=7.2,SNR=4.2						
KURK	**Kurchatov**	**54.75**	**343**	P	**P**	**13 49 46.7**	**-1.1**
	1.8nm,0.6s,mb4.3						
OPO	**Ambohidratompo**	**55.54**	**248**	P	**P**	**13 49 54.5**	**+0.3**
	2.0nm,0.3s,mb4.6,baz=62,slow=2.3,SNR=7.2						
ZAA0	**Zalesovo Array**	**56.19**	**349**	eP	**P**	**13 49 57.8**	**-0.4**
ZALV	**Zalesovo Beam**	**56.19**	**349**	P	**P**	**13 49 58.1**	**-0.1**
	2.0nm,0.7s,mb4.3,baz=188,slow=3.0,SNR=9.3						
TXAR	**Lajitas Array**	**143.22**	**37**	PKP	PKPdf	13 59 51.2	-1.9
	0.7nm,0.4s,baz=256,slow=0.2,SNR=17						

BJI ***13*** *13:43:57.2, 286S×10044E, h31km, mB5.0, mb5.1, Ms4.8, Ms2.7*
MOS ***13*** *13:43:58.4±1.1, 261S×10047E, h33km, mb5.4/22, Error ellipse: s-maj=13.7km s-min=7.0km az=105.2*
NEIC ***13*** *13:43:58.9±0.3, 292S×10027E, h35km, mb5.1/31, Error ellipse: s-maj=10.0km s-min=6.8km az=51.0*
ISCJB ***13*** *13:44:00.2±0.9, 278S±005×10029E±005, h53km±6km, mb5.0/77, MS4.4/22, Error ellipse: s-maj=9.7km s-min=5.2km az=135.2*
IDC ***13*** *13:44:01.1±2.8, 273S×10041E, h44km±23km, mb4.4/22, mb1 4.6/23, mb1mx4.4/27, mbtmp4.5/23, ML4.5/1, MS4.3/10, Ms1 4.3/10, ms1mx3.9/36, Error ellipse: s-maj=26.3km s-min=9.5km az=44.0*
DJA ***13*** *13:44:08, 248S×10046E, h70km, Mw5.2/16*

ISC 13 13:44:02.2±0.8, 280S±005×10030E±005, h55km±6km, h35km±2.3km; pP-P, n190, σ1§03/187, mb5.0/77, MS4.4/22, 14C-11D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPI	**Padang Panjang**	**2.33**	**2**	P	**Pn**	**13 44 36.1**	**-2.0**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.17**	**40**	P	**Pn**	**13 44 49.6**	**0.0**
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.53**	**71**	P	**Pn**	**13 45 04.3**	**+10**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.86**	**62**	P	**Pn**	**13 45 13.3**	**+0.6**
	0.0nm,0.0s						
TRSI	**Tarutung**	**4.98**	**344**	P	**Pn**	**13 45 22.3**	**+7.9**
	0.0nm,0.0s						
KLI	**Kotabumi**	**4.99**	**114**	P	**Pn**	**13 45 17.4**	**+2.9**
	353nm,0.8s						
KGM	**Kluang**	**5.66**	**32**	⇑P	**Pn**	**13 45 23.7**	**0.0**
MYKOM	**Kota Tinggi**	**5.78**	**38**	⇓P	**Pn**	**13 45 25.1**	**-0.2**
FRIM	**Kepong**	**6.14**	**12**	⇓P	**Pn**	**13 45 29.7**	**-0.7**
IPM	**Ipoh**	**7.27**	**6**	⇓P	**Pn**	**13 45 46.1**	**+0.3**
DBJI	**Dramaga**	**7.43**	**120**	P	**Pn**	**13 45 49.7**	**+1.7**
	166nm,1.1s						
CBJI	**Citeko**	**7.45**	**119**	P	**Pn**	**13 45 52.8**	**+4.5**
	630nm,0.9s						
LEM	**Lembang**	**8.31**	**119**	P	**Pn**	**13 46 04.4**	**+4.2**
	186nm,1.1s						
KTGM	**Kuala Trenggan**	**8.56**	**19**	⇑P	**Pn**	**13 46 03.9**	**+0.5**
XMIS	**Christmas Isla**	**9.30**	**145**	eP	**Pn**	**13 46 05.5**	**-8.1**
XMIS				eS	**Sn**	**13 47 42.5**	**-14**
COCO	**West Island**	**9.94**	**200**	eP	**Pn**	**13 46 16.4**	**-6.0**
BJII	**Banjamegara**	**10.39**	**116**	P	**Pn**	**13 46 35.5**	**+6.9**
	48nm,1.2s						
KSM	**Kuching**	**10.87**	**67**	⇑P	**Pn**	**13 46 37.4**	**+2.3**
KSM	**Kuching**	**10.87**	**67**	ePn	**Pn**	**13 46 34.2**	**-0.9**
STKI	**Sintang**	**11.53**	**76**	P	**Pn**	**13 46 52.1**	**+7.9**
	47nm,1.1s						
SJI	**Sawahan**	**12.42**	**114**	P	**Pn**	**13 46 55.9**	**-0.5**
	68nm,0.7s						
SBUM	**Sibu**	**13.01**	**66**	⇑P	**Pn**	**13 47 06.9**	**+2.6**
PLKI	**Palangkaraya**	**13.64**	**88**	P	**Pn**	**13 47 22.2**	**+9.2**
	165nm,1.0s						
BTM	**Bintulu**	**14.10**	**65**	⇓P	**Pn**	**13 47 21.2**	**+2.1**
BBKI	**Banjar Baru**	**14.53**	**93**	P	**Pn**	**13 47 31.0**	**+6.1**

200nm,0.9s
KKM Kota Kinabalu 18.16 61 ⇑P **Pn 13 48 11.3 +0.7**
KKM Kota Kinabalu 18.16 61 *e*Pn **Pn 13 48 10.3 -0.3**
SDKM Sandakan 18.84 64 ⇓P **Pn 13 48 18.9 0.0**
TSM Tawau 18.92 68 ⇑P **Pn 13 48 19.6 -0.2**
KAPI Kappang 19.53 97 Pn **Pn 13 48 25.1 -1.9**
463nm,0.9s,SNR=7.8
KAPI Kappang 19.53 97 P **Pn 13 48 22.6 -4.4**
1.6nm,0.3s,baz=265,slow=11,SNR=13
KAPI Kappang 19.53 97 *e*Pn **Pn 13 48 24.5 -2.6**
88nm,1.0s
PCI Palu 19.61 85 P **Pn 13 48 27.9 -0.2**
120nm,1.9s
MYLDM Lahad Datu 19.83 66 ⇓P **Pn 13 48 30.1 -0.6**
BDT Bhumibol Dam 19.96 356 P **Pn 13 48 29.0 -3.0**
CMAR Chiang Mai Arr 21.17 356 P **P 13 48 40.5 -2.5**
12nm,0.8s,mb4.2,baz=187,slow=10,SNR=24
CMAR PcP PcP 13 52 47.0 -0.2
2.1nm,0.9s,baz=215,slow=3.1,SNR=4.6
CMAR LR LR 13 57 53.6
comp=Z,855nm,18.2s,MS4.2,baz=187,slow=40
CMAR Chiang Mai Arr 21.17 356⇑ *e*P **P 13 48 40.5 -2.5**
NANT Nan 21.47 1 P **P 13 48 44.2 -2.0**
188nm,1.0s,mb5.4
CHTO Chiang Mai 21.52 356 *e*P **P 13 48 43.8 -3.0**
CHTO pmax pmax
comp=Z,13nm,0.8s,mb4.4
CHTO Chiang Mai 21.52 356 *e*Pn **P 13 48 43.8 -3.0**
comp=Z,12nm,0.8s,mb4.4
KDI Kendari 22.31 94 P **P 13 48 57.5 +2.2**
comp=Z,38nm,1.1s,mb4.7
QIZ Qiongzhong 23.64 23 P **P 13 49 07.3 -1.3**
QIZ AP 13 49 17.1
QIZ S **S 13 53 23.8 +4.5**
QIZ AMB AMB
comp=Z,43nm,1.1s,mb4.8
QIZ AMB AMB
comp=Z,129nm,5.2s
QIZ LR LR
comp=N,602nm,14.8s
QIZ LR LR
comp=Z,741nm,16.0s,MS4.2
QIZ Qiongzhong 23.64 23 *e*P **P 13 49 07.4 -1.2**
comp=Z,47nm,1.0s,mb4.9
BATI Baumata 24.33 109 P **P 13 49 13.5 -1.5**
comp=Z,22nm,0.8s,mb4.7,baz=47,slow=21,SNR=3.0
MBWA Marble Bar 26.28 135 *e*P **P 13 49 37.8 +5.1**
LBMI Labuha 27.27 86 P **P 13 49 43.1 +1.4**
comp=Z,86nm,1.2s,mb5.2
KMI Kunming 27.86 5 P **P 13 49 47.8 +1.1**
KMI AP pP 13 49 58.8 -1.7
KMI XP sP 13 50 03.3 -3.7
KMI PP PP 13 50 41.3 -9.3
KMI S **S 13 54 31.5 +5.2**
KMI AMB AMB
comp=Z,18nm,1.0s,mb4.7
KMI AMB AMB
comp=Z,120nm,5.9s
KMI LR LR
comp=N,754nm,18.8s,MS4.4
KMI LR LR
comp=E,372nm,17.3s,MS4.4
KMI LR LR
comp=Z,888nm,19.3s,MS4.4
FITZ Fitzroy Crossi 29.12 123 *e*P **P 13 49 57.2 -0.9**
comp=Z,27nm,0.9s,mb5.0
FITZ Fitzroy Crossi 29.12 123 P **P 13 49 56.8 -1.3**
comp=Z,3.6nm,0.9s,mb4.1,baz=288,slow=8.0,SNR=7.1
SWI Sorong 31.00 87 P **P 13 50 14.7 -0.1**
comp=Z,33nm,1.1s,mb5.1
ODAN Odare 32.02 338 *e*P **P 13 50 24.2 +0.7**
comp=Z,99nm,0.9s,mb5.6
TAPN Taplejung 32.34 339 *e*P **P 13 50 27.8 +1.4**
comp=Z,142nm,0.9s,mb5.8
RAMN Ramite 32.40 337 *e*P **P 13 50 28.0 +1.1**
comp=Z,38nm,0.7s,mb5.4
JIRN Jiri 33.20 337 *e*P **P 13 50 34.7 +0.9**
comp=Z,73nm,0.6s,mb5.8
PKI Pulchoki 33.43 336 *e*P **P 13 50 36.4 +0.5**
PKIN Phulchoki 33.44 336 *e*P **P 13 50 36.1 +0.1**
LSA Lhasa 33.48 345 P **P 13 50 37.8 +1.5**
LSA Lhasa 33.48 345 *e*P **P 13 50 37.1 +0.8**
LSA pmax pmax
comp=Z,56nm,1.0s,mb5.5
LSA Lhasa 33.48 345 *e*P **P 13 50 37.1 +0.7**
comp=Z,56nm,1.0s,mb5.4
GUN Gumba 33.54 336 *e*P **P 13 50 37.5 +0.6**
comp=Z,121nm,0.7s,mb5.9
DMN Daman 33.59 335 *e*P **P 13 50 37.6 +0.3**
KKN Kakani 33.68 336 *e*P **P 13 50 38.3 +0.2**
comp=Z,68nm,0.7s,mb5.7
CD2 Chengdu 33.68 5⇑ *i*P **P 13 50 37.0 -1.0**
CD2 AP pP 13 50 46.8 -5.2
CD2 XP sP 13 50 51.0 -7.4
CD2 PP PP 13 51 51.3 -3.9
CD2 PCP PcP 13 53 14.8 -2.2
CD2 S **S 13 55 59.0 +1.6**
CD2 XS sS 13 56 15.0 -6.0
CD2 PCS PcS 13 56 59.8 -3.1
CD2 SCS ScS 14 00 56.3 -2.4
CD2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
CD2 AMB AMB
comp=Z,100nm,6.8s
CD2 LR LR
comp=N,1μm,14.4s,MS4.8
CD2 LR LR
comp=E,920nm,16.4s,MS4.8
CD2 LR LR
comp=Z,1μm,14.4s,MS4.7
NWAO Narrogin (SRO) 33.91 154 LR LR 14 03 51.5
comp=Z,452nm,18.6s,MS4.2,baz=329,slow=35
GKN Gorkha 34.13 335 *e*P **P 13 50 42.3 +0.3**
KOLN Koldanda 34.39 333 *e*P **P 13 50 44.7 +0.5**
DANN Dangsing 34.81 334 *e*P **P 13 50 48.5 +0.6**
WHN Wuhan 35.77 21 ⇑P **P 13 50 57.0 +1.0**
WRA Warramunga Arr 37.33 120 P **P 13 51 09.1 -0.5**
comp=Z,1.8nm,0.3s,mb4.4,baz=306,slow=8.6,SNR=48
WRA S **S 13 56 53.4 -0.3**
comp=Z,3.9nm,0.9s,baz=292,slow=16,SNR=10
WRA LR LR 14 08 34.9
comp=Z,262nm,19.7s,MS4.0,baz=305,slow=40
WRA Warramunga Arr 37.33 120 P **P 13 51 09.1 -0.5**
WRA S **S 13 56 53.4 -0.3**
WRAB Tennant Creek 37.34 120 P **P 13 51 09.1 -0.5**
comp=Z,197nm,1.0s,mb5.9,SNR=7.8
WRAB Tennant Creek 37.34 120 *e*P **P 13 51 08.4 -1.2**
WRAB pmax pmax
comp=Z,28nm,0.9s,mb5.1
WRAB Tennant Creek 37.34 120 *e*P **P 13 51 08.4 -1.2**
comp=Z,28nm,0.9s,mb5.1
WB2 Warramunga Arr 37.34 120 *e*P **P 13 51 08.6 -1.1**
WB2 *e*S **S 13 56 50.7 -3.2**
PTH Pithoragarh 37.48 331 *ex* P **P 13 51 10.9 +0.3**
XAN Xi'an 37.53 12 P **P 13 51 09.5 -1.5**
XAN AP pP 13 51 17.9 -7.2
XAN XP sP 13 51 22.1 -9.4
XAN AMB AMB
comp=Z,49nm,1.1s,mb5.2
NDI New Delhi 38.36 326 *e*P **P 13 51 25.5 +7.4**
comp=Z,5.0nm,1.0s,mb4.2
ASAR Alice Springs 38.54 125 P **P 13 51 19.5 -0.2**
comp=Z,12nm,0.9s,mb4.6,baz=300,slow=7.8,SNR=27
ASAR PcP PcP 13 53 32.8 +1.1
comp=Z,2.9nm,1.0s,baz=301,slow=3.8,SNR=4.4
ASAR S **S 13 57 12.3 +0.4**
comp=Z,1.3nm,0.8s,baz=289,slow=16,SNR=6.1
LZH Lanzhou 38.83 5 ⇓P **P 13 51 21.9 0.0**
LZH AP pP 13 51 31.5 -4.5
LZH XP sP 13 51 36.0 -6.4
LZH PP PP 13 52 56.0 +4.2
LZH *e*S **S 13 57 20.0 +4.2**
LZH XS sS 13 57 36.1 -3.6
LZH SS SS 14 00 05.3 -3.6
LZH AMB AMB
comp=Z,45nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,174nm,5.4s
LZH LR LR
comp=N,1μm,14.5s
LZH LR LR
comp=Z,2μm,17.0s,MS4.9
NJ2 Nanjing 38.88 25 *e*P **P 13 51 23.8 +1.4**
NJ2 AP pP 13 51 33.9 -2.6
NJ2 XP sP 13 51 37.6 -5.3
NJ2 PP PP 13 52 59.0 +6.6
NJ2 S **S 13 57 21.0 +4.3**
NJ2 XS sS 13 57 37.0 -3.6
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
NJ2 LR LR
comp=N,2μm,16.3s,MS5.2
NJ2 LR LR
comp=E,1μm,14.4s,MS5.2
DDI Dehra Dun 39.20 329 *ex* x 13 51 22.8
GTA Gaotai 42.01 359 ⇑P **P 13 51 48.1 0.0**
GTA AP pP 13 51 58.5 -3.9
GTA XP sP 13 52 02.5 -6.2
GTA PCP PcP 13 53 43.3 +0.9
GTA S **S 13 58 05.4 +2.3**
GTA XS sS 13 58 22.8 -4.4
GTA SS SS 14 01 08.3 -3.8
GTA AMB AMB
comp=Z,21nm,1.2s,mb4.6
GTA AMB AMB
comp=Z,103nm,4.5s
GTA LR LR
comp=N,513nm,15.0s,MS4.7
GTA LR LR
comp=E,490nm,16.2s,MS4.7
GTA LR LR
comp=Z,511nm,16.2s,MS4.5
HHC Hu-ho-hao-te 44.64 12⇑ *i*P **P 13 52 10.4 +1.1**
HHC AP pP 13 52 14.0 -10
HHC PCP PcP 13 53 51.5 +0.2
HHC PP PP 13 53 56.5 +2.0
HHC SCP ScP 13 57 42.5 +3.4
HHC PCS PcS 13 57 43.9 -0.8
HHC S **S 13 58 48.0 +6.3**
HHC XS sS 13 58 54.3 -12
HHC SS SS 14 02 01.0 -2.6
HHC SCS ScS 14 02 04.5 +2.3
HHC AMB AMB
comp=Z,39nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,212nm,6.3s
HHC LR LR
comp=N,496nm,16.3s,MS4.6
HHC LR LR
comp=E,311nm,16.5s,MS4.6
HHC LR LR
comp=Z,460nm,15.6s,MS4.5
BJT Baijiatuau 45.03 17 *e*P **P 13 52 12.4 0.0**
BJT pmax pmax
comp=Z,51nm,1.1s
BJT Baijiatuau 45.03 17 *e*P **P 13 52 12.4 0.0**
comp=Z,51nm,1.1s,mb5.3
BJI Beijing 45.05 17 P **P 13 52 13.1 +0.5**
BJI AMB AMB
comp=Z,44nm,0.9s,mb5.3
KSRS Korea Array 47.55 30 P **P 13 52 32.0 -0.3**
comp=Z,11nm,1.0s,mb4.8,baz=224,slow=8.4,SNR=36
KSRS LR LR 14 14 10.4
comp=Z,256nm,18.3s,MS4.2,baz=240,slow=38
KSH Kashi 47.68 334 *e*P **P 13 52 39.1 +5.8**
KSH *e*AP pP 13 52 48.1 +0.3
KSH *e*XP sP 13 52 52.1 -2.0
KSH *e*PCP PcP 13 54 07.3 +5.3
KSH *e*PP PP 13 54 30.1 +4.7
KSH *e*SCP ScP 13 57 57.0 +5.2
KSH *e*PCS PcS 13 58 01.0 +3.6
KSH *e*S **S 13 59 35.4 +10**
KSH *e*XS sS 13 59 50.0 +0.3
KSH *e*SCS ScS 14 02 26.1 +4.1
KSH AMB AMB
comp=Z,284nm,1.8s,mb6.0
KSH LR LR
comp=N,344nm,4.4s
KSH LR LR
comp=E,545nm,3.8s
KSH LR LR
comp=Z,390nm,5.6s
WMQ Urumqi 47.77 348 P **P 13 52 34.9 +1.0**
WMQ AP pP 13 52 45.0 -3.4
WMQ XP sP 13 52 49.0 -5.7
WMQ *e*S **S 13 59 29.0 +2.5**
WMQ XS sS 13 59 47.0 -3.9
WMQ AMB AMB
comp=Z,91nm,0.9s,mb5.8
WMQ AMB AMB
comp=Z,295nm,4.0s
WMQ LR LR
comp=N,428nm,22.0s,MS4.5
WMQ LR LR
comp=E,400nm,22.0s,MS4.5
WMQ LR LR
comp=Z,358nm,23.2s,MS4.3
CTA Charters Tower 47.99 115 *e*P **P 13 52 35.7 -0.3**
comp=Z,12nm,0.8s,mb5.0
CTA Charters Tower 47.99 115 *e*P **P 13 52 35.7 -0.3**
CTA pmax pmax
comp=Z,12nm,0.8s
CTAO Charters Tower 47.99 115 *e*P **P 13 52 35.1 -0.9**
CTAO pmax pmax
comp=Z,20nm,0.9s,mb5.2
CTAO Charters Tower 47.99 115 *e*P **P 13 52 35.1 -0.9**
comp=Z,20nm,0.9s,mb5.1
STKA Stephens Creek 48.40 131 *e*P **P 13 52 39.7 +0.7**
comp=Z,11nm,0.8s,mb4.9
STKA Stephens Creek 48.40 131 P **P 13 52 39.8 +0.8**
comp=Z,8.5nm,0.8s,mb4.8,baz=301,slow=6.5,SNR=12
STKA LR LR 14 14 46.7
comp=Z,490nm,21.1s,MS4.5,baz=111,slow=38
UCH Uchtor 50.54 335 *e*P **P 13 52 55.5 +0.4**
comp=Z,2.5nm,0.7s,mb4.2
TKM2 Tokmak 2 50.68 337 *e*P **P 13 52 56.5 +0.4**
TKM2 pmax pmax
comp=Z,55nm,1.0s,mb5.4
TKM2 Tokmak 2 50.68 337 *e*P **P 13 52 56.5 +0.3**
comp=Z,55nm,1.0s,mb5.4
SONM Songino Array 50.71 5 P **P 13 52 57.0 +0.8**
comp=Z,40nm,0.8s,mb5.4,baz=188,slow=8.2,SNR=207
ULN Ulaanbaatar 50.80 6 *e*P **P 13 52 56.7 -0.2**
ULN *e* 13 54 12.7
ULN pmax pmax
comp=Z,45nm,1.0s,mb5.3
ULN Ulaanbaatar 50.80 6 *e*P **P 13 52 56.7 -0.2**
comp=Z,46nm,1.0s,mb5.4
ULN *e*PcP PcP 13 54 12.7 -0.5
AML Almayashu 50.81 335 *e*P **P 13 52 52.1 -5.0**
comp=Z,31nm,0.9s,mb5.2
FRU Bishkek 51.00 336 *e*P **P 13 52 58.0 -0.5**
EKS2 Erkin-Say 51.21 335 *e*P **P 13 53 00.8 +0.7**
comp=Z,33nm,0.8s,mb5.3
EKS2 *e* 13 53 07.9
CN2 Changchun 51.60 23 *e*P **P 13 53 01.9 -1.1**
CN2 *e*XP sP 13 53 16.8 -7.1
CN2 *e*S **S 14 00 21.6 +1.7**
CN2 AMB AMB
comp=Z,70nm,1.0s,mb5.5
CN2 AMB AMB
comp=Z,700nm,8.0s
MKAR Makanchi Array 51.88 344 P **P 13 53 05.0 +0.1**
comp=Z,29nm,0.8s,mb5.2,baz=149,slow=8.1,SNR=133
MKAR LR LR 14 17 31.1
comp=Z,157nm,21.5s,MS4.0,baz=163,slow=39
MAJO Matsushiro 52.71 38 *e*P **P 13 53 09.7 -1.7**
MAJO pmax pmax
comp=Z,20nm,1.0s,mb5.0
MAJO Matsushiro 52.71 38 *e*P **P 13 53 09.7 -1.7**
comp=Z,20nm,1.0s,mb5.0
MAT Matsushiro 52.71 38 P **P 13 53 11.1 -0.3**
MJAR Matsushiro Arr 52.71 38 P **P 13 53 10.6 -0.7**
comp=Z,17nm,1.0s,mb4.9,baz=220,slow=7.7,SNR=38
VLA Vladivostok 53.85 28 *i* P **P 13 53 20.3 +0.7**
MDJ Mudanjiang 53.97 26 P **P 13 53 20.4 -0.1**
MDJ AP pP 13 53 29.3 -5.9
MDJ PP PP 13 55 17.9 -4.5
MDJ S **S 14 00 55.9 +3.6**
MDJ SS SS 14 04 37.9 +3.5
MDJ AMB AMB
comp=Z,18nm,1.0s,mb5.0
MDJ AMB AMB
comp=Z,98nm,6.1s
MDJ LR LR
comp=N,274nm,21.2s,MS4.5
MDJ LR LR
comp=E,372nm,18.4s,MS4.5
MDJ LR LR
comp=Z,359nm,21.2s,MS4.4
MDJ Mudanjiang 53.97 26 *e*P **P 13 53 20.3 -0.2**
comp=Z,12nm,0.8s,mb4.9
TLY Talaya 54.35 3 *e*P **P 13 53 23.6 +0.5**
TLY pmax pmax
comp=Z,13nm,0.9s,mb4.9
TLY MLR MLR
comp=Z,613nm,16.0s,MS4.8
TLY Talaya 54.35 3 *e*P **P 13 53 23.3 +0.2**
comp=Z,13nm,0.9s,mb4.9
IRK Irkutsk 54.94 3 *e*P **P 13 53 27.1 -0.3**
IRK pmax pmax
comp=Z,43nm,2.3s,mb5.1
CIT Chita 55.76 10 *e*P **P 13 53 32.1 -1.2**
KURK Kurchatov 56.45 344 P **P 13 53 38.0 -0.3**
comp=Z,293nm,0.9s,SNR=27
KURK Kurchatov 56.45 344 P **P 13 53 37.5 -0.7**
comp=Z,21nm,0.8s,mb5.2,baz=164,slow=7.0,SNR=70
KURK LR LR 14 23 45.9
comp=Z,140nm,18.7s,MS4.1,baz=185,slow=42
KURK Kurchatov 56.45 344⇑ *i*P **P 13 53 38.1 -0.2**
KURK pmax pmax
comp=Z,57nm,1.0s,mb5.6
KURK Kurchatov 56.45 344 *e*P **P 13 53 37.7 -0.5**
comp=Z,46nm,0.9s,mb5.5
ZAA0 Zalesovo Array 58.01 349 *e*P **P 13 53 48.4 -0.8**
ZALV Zalesovo Beam 58.01 349 P **P 13 53 48.8 -0.3**
comp=Z,38nm,0.8s,mb5.5,baz=163,slow=5.6,SNR=61
KLR Kul'dur 58.54 24 *e*P **P 13 53 48.7 -4.2**
KLR pmax pmax
comp=E,45nm,1.6s
KLR pmax pmax
comp=Z,85nm,1.6s,mb5.5
NVS Novosibirsk 59.15 349 *i* P **P 13 53 55.7 -1.4**
NVS *e* pP 13 54 11.6 -0.4
NVS *e*S **S 14 01 59.7 -0.7**
NVS pmax pmax
comp=Z,22nm,1.2s,mb5.1
NVS pmax pmax
comp=N,20nm,1.5s
NVS pmax pmax
comp=E,14nm,1.2s
NVS smax
comp=N,13nm,1.6s
BVAR Borovoye Array 61.03 340 P **P 13 54 09.0 -1.0**
comp=N,4.0nm,0.7s,mb4.7,baz=142,slow=7.5,SNR=23
BRVK Borovoye 61.10 340 *e*P **P 13 54 08.9 -1.5**
BRVK pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
BRVK Borovoye 61.10 340 *e*P **P 13 54 08.9 -1.5**
comp=Z,9.4nm,0.8s,mb5.0
BOD Bodaibo 61.42 8⇓ *i*P **P 13 54 12.5 -0.1**
BOD pmax pmax
comp=Z,30nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 62.00 32⇑ *e*P **P 13 54 16.0 -0.7**
YSS pmax pmax
comp=Z,80nm,1.0s,mb5.8
YSS Yuzh-Sakhalins 62.00 32 *e*P **P 13 54 16.6 0.0**
comp=Z,86nm,1.0s,mb5.8
CASY Casey 63.77 175 P **P 13 54 35.1 +7.0**
AKTK Aktyubinsk 64.20 331 P **P 13 54 30.6 -0.6**
AKTO Aktyubinsk 64.20 331 P **P 13 54 30.6 -0.6**
comp=Z,7.8nm,1.2s,mb4.6,baz=125,slow=6.1,SNR=8.1
GNI Garni 66.31 316 P **P 13 54 44.3 -0.8**
GNI pmax pmax
comp=Z,37nm,1.4s
GNI Garni 66.31 316 P **P 13 54 44.3 -0.7**
comp=Z,37nm,1.4s,mb5.2
SVE Sverdlovsk 67.53 338⇑ *e*P **P 13 54 52.2 -0.3**
SVE pmax pmax
comp=Z,29nm,0.9s,mb5.3
ARU Arti 68.06 337 *d i*P **P 13 54 55.3 -0.5**
ARU *e* 13 55 17.9
ARU *e*PPP 13 59 03.3
ARU *e*S S 14 03 53.8 +2.8
ARU *e*SS SS 14 08 12.1 -2.3
ARU pmax pmax
comp=Z,20nm,1.7s,mb4.9
ARU Arti 68.06 337 *e*P **P 13 54 54.3 -1.5**
comp=Z,13nm,1.0s,mb4.9
YAK Yakutsk 68.44 14 *e*P **P 13 54 56.3 -1.7**
YAK pmax pmax
comp=Z,55nm,0.9s,mb5.6
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK MLR MLR
comp=Z,315nm,16.0s,MS4.6
YAK MLR MLR
comp=N,243nm,21.0s,MS4.5
YAK MLR MLR
comp=E,135nm,20.0s,MS4.5
YAK Yakutsk 68.44 14 *e*P **P 13 54 56.6 -1.5**
comp=E,56nm,0.8s,mb5.6
MAW Mawson 69.59 194 LR LR 14 18 59.2
comp=E,242nm,19.7s,MS4.5,baz=13,slow=30
MALT Malatya 70.10 312 *e*P **P 13 55 05.1 -3.7**
MALT pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
MALT Malatya 70.10 312 *e*P **P 13 55 05.1 -3.7**
comp=Z,5.5nm,1.0s,mb4.4
SOC Sochi 71.15 318 *e*P **P 13 55 17.6 +2.5**
SOC *e* 13 57 58.8
SOC *e*S S 14 04 35.2 +7.3
PETK Petropavlovsk- 73.40 32 P **P 13 55 27.8 -0.5**
comp=Z,5.6nm,0.7s,mb4.6,baz=195,slow=3.3,SNR=15
PET Petropavlovsk 73.86 32 *e*P **P 13 55 29.9 -1.2**
PET pmax pmax
comp=Z,30nm,0.9s,mb5.2
BOSA Boshof 75.54 241 LR LR 14 25 44.2
comp=Z,208nm,18.7s,MS4.5,baz=168,slow=33
TIXI Tiksi 76.59 9⇓ *e*P **P 13 55 45.3 -1.1**
TIXI pmax pmax
comp=Z,24nm,1.5s,mb4.9
OBN Obninsk 77.63 328⇓ *e*P **P 13 55 52.6 +0.1**
OBN *e* 13 56 02.6
OBN *e* pP 13 56 11.4 +3.4
OBN pmax pmax
comp=Z,20nm,1.0s,mb5.0
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.2
OBN Obninsk 77.63 328 P **P 13 55 52.1 -0.4**
AKASG Malin Array Be 80.30 322 P **P 13 56 06.1 -1.1**
comp=Z,0.3nm,0.2s,baz=79,slow=3.7,SNR=6.1
MLR Muntele Rosu 81.09 317 P **P 13 56 11.7 +0.2**
comp=Z,5.9nm,0.9s,mb4.5,baz=301,slow=3.5,SNR=4.4
BUR08 Bucovina Ar. S 82.07 319 *e*P **P 13 56 16.9 +0.2**
SBA Scott Base 82.42 169 *e*P **P 13 56 18.8 +0.8**
SBA pmax pmax
comp=Z,11nm,1.5s,mb4.6
SBA Scott Base 82.42 169 *e*P **P 13 56 18.8 +0.8**
comp=Z,11nm,1.5s,mb4.6
KOLS Kolonicke sedl 84.25 320 *e*P **P 13 56 28.8 +0.8**
STHS Stebnicka Huta 85.00 320 *e*P **P 13 56 32.3 +0.6**
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
STHS Stebnicka Huta 85.00 320 *e*P **P 13 56 32.3 +0.6**
comp=Z,4.7nm,1.0s,mb4.6
KECS Kecovo 85.34 319 *e*P **P 13 56 33.1 -0.3**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
KECS Kecovo 85.34 319 *e*P **P 13 56 33.1 -0.3**
comp=Z,2.7nm,1.0s,mb4.3
QSPA South Pole Qui 87.17 180 LR LR 14 33 09.2
comp=Z,190nm,20.7s,MS4.5,baz=317,slow=34
ARCES ARCESS Array B 87.32 340 P **P 13 56 43.0 +0.3**
comp=Z,3.4nm,0.7s,mb4.7,baz=102,slow=5.5,SNR=11
MODS Modra-Piesok 87.44 319 *e*P **P 13 56 45.1 +1.4**
MODS pmax pmax
comp=Z,2.0nm,0.9s,mb4.3
MODS Modra-Piesok 87.44 319 *e*P **P 13 56 45.1 +1.4**
comp=Z,2.3nm,0.9s,mb4.4
GERES GERESS Array B 89.84 319 P **P 13 56 55.5 +0.4**
comp=Z,1.4nm,0.4s,mb4.7,baz=108,slow=4.3,SNR=10
BRG Berggiesshubel 89.85 321 *e*P **P 13 56 56.0 +0.9**
BRG *e* 13 57 04.3
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
BRG Berggiesshubel 89.85 321 *e*P **P 13 56 56.0 +0.9**
comp=Z,4.7nm,0.9s,mb4.8
BRG *e* 13 57 04.3
comp=Z,2.5nm,0.8s

BRG				*e*				13 57 18.5	
	comp=Z,5.8nm,1.0s								
CLL	**Collm**	**90.47**	**321**	*e*P		**P**		**13 56 58.0**	**+0.1**
SNAA	**Sanae**	**91.48**	**198**	P		**P**		**13 57 02.2**	**0.0**
SNAA				pmax		pmax			
	comp=Z,23nm,1.8s								
SNAA	**Sanae**	**91.48**	**198**	P		**P**		**13 57 02.1**	**-0.1**
	comp=Z,23nm,1.8s,mb5.2								
NOA	**NORSAR Array B**	**91.99**	**331**	P		**P**		**13 57 04.4**	**-0.3**
	comp=Z,1.8nm,0.9s,mb4.4,baz=94,slow=5.3,SNR=3.8								
DAVOX	**Davos/Dischmat**	**92.31**	**317**	P		**P**		**13 57 06.9**	**+0.3**
	comp=Z,1.6nm,0.4s,mb4.7,baz=242,slow=8.7,SNR=3.4								
DAVOS	**Davos**	**92.37**	**317**	P		**P**		**13 57 06.9**	**0.0**
KEST	**Kesra**	**92.39**	**305**	P		**P**		**13 57 08.8**	**+1.6**
	comp=Z,2.2nm,1.0s,mb4.4,baz=140,slow=3.5,SNR=4.1								
YKA	**Yellowknife Ar**	**115.04**	**17**	PP		PP		14 03 36.1	-0.2
	comp=Z,1.4nm,1.0s,baz=327,slow=6.1,SNR=5.4								
NVAR	**Mina Array Bea**	**130.02**	**40**	PKP		PKPdf		14 03 07.6	+1.3
	comp=Z,0.7nm,0.9s,baz=248,slow=3.4,SNR=4.0								
PDAR	**Pinedale Array**	**132.12**	**30**	PP		PP		14 05 31.6	0.0
	comp=Z,0.2nm,0.5s,baz=5.7,slow=3.0,SNR=3.7								
WMOK	**Wichita Mounta**	**143.60**	**27**	*e*PKIKP		PKPdf		14 03 27.8	-3.7
CPUP	**Villa Florida**	**143.85**	**215**	PKP		PKPdf		14 03 34.8	+2.6
	comp=Z,1.3nm,0.6s,baz=18,slow=3.2,SNR=4.0								
TXAR	**Lajitas Array**	**145.15**	**38**	PKPbc		PKPbc		14 03 34.9	+1.0
	comp=Z,23nm,0.9s,baz=284,slow=1.4,SNR=163								
URVA	**University of**	**145.34**	**357**	*e*PKPdf		PKPdf		14 03 34.3	-0.1
ELN	**Prospectdale**	**145.73**	**1**	*e*PKPdf		PKPdf		14 03 34.4	-0.7
BLA	**Blacksburg**	**145.75**	**1**	*e*PKHKP				14 03 31.0	
MIAR	**Mount Ida**	**145.88**	**21**	*e*PKP2		PKPab		14 03 35.9	-0.6
WVT	**Waverly**	**145.99**	**12**	*e*PKP2		PKPab		14 03 35.8	-1.1
JCT	**Junction City**	**146.54**	**33**	*e*PKP2		PKPab		14 03 37.7	-1.4
TKL	**Tuckaleechee C**	**147.09**	**6**	*e*PKP2		PKPbc		14 03 38.8	-0.7
OXF	**Oxford**	**147.18**	**15**	*e*PKIKP		PKPdf		14 03 35.1	-2.5
GOGA	**Godfrey**	**149.34**	**6**	*e*PKP2		PKPbc		14 03 44.8	-0.8

TAP ***13*** *13:46:12.1,2536N×122.91E,h219km±2km, ML3.4, D*
ISCJB ***13*** *13:46:14.3±1.4,255N±02×12265E±005,h208km±13km, Error ellipse: s-maj=24.6km s-min=7.2km az=4.9*
JMA ***13*** *13:46:15.0±0.3,2540N×12265E, h208km*
ISC 13 13:46:14.5±1.3,255N±02×12265E±005,h209km±12km, n15,σ0°51/25,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCYT	**Pengchaiyu**	**0.55**	**289**	*e*P	**Pn**	**13 46 42.6**	**-0.3**
	baz=289						
TWB1	**Santiao Chiao**	**0.74**	**234**	*e*P	**Pn**	**13 46 43.3**	**-0.4**
	baz=251						
TWB1				*e*S	**Sn**	**13 47 06.7**	**+0.4**
	baz=251						
YOJ	**Yonaguni jima**	**1.03**	**161**	P	**Pn**	**13 46 45.6**	**+0.1**
YOJ				*e*S	**Sn**	**13 47 09.7**	**+0.2**
TWC	**Suao**	**1.10**	**221**	*e*P	**Pn**	**13 46 45.6**	**-0.3**
	baz=225						
TWE	**Neicheng**	**1.15**	**231**	*e*P	**Pn**	**13 46 46.9**	**+0.6**
	baz=240						
ENTT	**Nioudou**	**1.27**	**231**	P	**Pn**	**13 46 47.2**	**+0.1**
	baz=235						
ENTT				S	**Sn**	**13 47 13.3**	**+0.8**
	baz=235						
ENA	**Nanau**	**1.31**	**219**	P	**Pn**	**13 46 47.2**	**-0.3**
	baz=223						
ENA				*e*S	**Sn**	**13 47 12.3**	**-0.7**
	baz=223						
IRIF	**Iriomote-Funau**	**1.48**	**138**	P	**Pn**	**13 46 49.0**	**+0.1**
IRIF				S	**Sn**	**13 47 15.7**	**+0.1**
NSTT	**Nanjuang**	**1.70**	**242**	*e*P	**Pn**	**13 46 49.6**	**-1.2**
	baz=253						
JKRS	**Kuro-shima**	**1.73**	**134**	P	**Pn**	**13 46 51.4**	**+0.3**
JKRS				S	**Sn**	**13 47 19.3**	**-0.2**
JIJ	**Ishigaki jima**	**1.73**	**128**	P	**Pn**	**13 46 51.0**	**-0.2**
JIJ				S	**Sn**	**13 47 18.3**	**-1.3**
HATJ	**Hateruma jima**	**1.74**	**142**	P	**Pn**	**13 46 51.5**	**+0.3**
HATJ				S	**Sn**	**13 47 19.9**	**+0.2**
WHF	**Hehuan Shan**	**1.81**	**224**	P	**Pn**	**13 46 52.0**	**+0.1**
	baz=224						
WHF				*e*S	**Sn**	**13 47 21.2**	**+0.4**
	baz=224						
JTJ	**Tarama**	**2.03**	**113**	P	**Pn**	**13 46 54.9**	**+0.9**
JTJ				S	**Sn**	**13 47 24.7**	**-0.1**
JOGS	**Gusukube**	**2.59**	**105**	*e*S	**Sn**	**13 47 35.8**	**+0.3**

CSEM ***13*** *13:49:13.7±0.0,3767N×2928E, h2km, MD2.7, Error ellipse: s-maj=0.9km s-min=0.7km az=14.0*
ISCJB ***13*** *13:49:14.7±0.6,3761N±005×2919E±008,h15km±9km, Error ellipse: s-maj=12.0km s-min=6.2km az=147.1*
ISK ***13*** *13:49:14.6,3766N×2925E, h9km, MD2.8*
DDA ***13*** *13:49:15.0,3765N×2924E, h7km±6km, Md2.7*
ISC 13 13:49:15.1±0.7,3764N±005×2922E±008,h14km±9km,n11, σ0°69/16,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DNZL	**Cakiroluk**	**0.14**	**289**	*i* P	**Pg**	**13 49 18.9**	**+0.1**
DNZL				*i* S	**Sg**	**13 49 21.9**	**+0.5**
DENT	**Denizli**	**0.18**	**307**	*e*PG	**Pg**	**13 49 19.0**	**-0.5**
DENT				*e*SG	**Sg**	**13 49 22.8**	**+0.4**
GOLH	**Golhisar**	**0.49**	**146**	*i* P	**Pg**	**13 49 23.6**	**-1.2**
GOLH				*i* S	**Sg**	**13 49 32.4**	**+1.1**
GOLH	**Golhisar**	**0.49**	**146**	*i* P	**Pg**	**13 49 23.5**	**-1.3**
YER	**Yerkesik**	**0.90**	**236**	*e*PG	**Pg**	**13 49 32.9**	**+0.4**
TKTP	**Tekketepe**	**0.96**	**65**	*i* P	**Pb**	**13 49 32.9**	**-0.6**
TKTP				*i* S	**Sb**	**13 49 47.2**	**+1.2**
TKTP	**Tekketepe**	**0.96**	**65**	*i* P	**Pb**	**13 49 32.8**	**-0.7**
TKTP				*i* S	**Sb**	**13 49 47.2**	**+1.2**
KULA	**Kula-Manisa**	**0.98**	**333**	*e*PG	**Pg**	**13 49 33.4**	**-0.6**
ELL	**Elmali**	**1.05**	**148**	*e*PG	**Pg**	**13 49 35.0**	**-0.3**
BCK	**Bucak**	**1.10**	**99**	*e*PG	**Pg**	**13 49 35.8**	**-0.6**
ALT	**Altintas**	**1.57**	**26**	*e*PN	**Pn**	**13 49 42.9**	**+0.3**

PRU ***13*** *13:51:59.8,5022N×1896E, h0km*
WAR 13 13:51:59.0,5023N×1911E, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.73**	**238**	*e*PG	Pg	13 52 11.8	-1.2
OKC				*e*SG	Sg	13 52 20.3	-2.2
	comp=Z,17nm,0.4s						
NIE	**Niedzica**	**1.12**	**136**	*e*Pg	Pg	13 52 21.7	+1.2
NIE				*e*Sg	Sg	13 52 36.6	+1.5
STHS	**Stebnicka Huta**	**1.60**	**120**	*e*PN	Pn	13 52 29.9	+1.4
STHS				*e*SN	Sn	13 52 51.3	+1.4
KOLL	**Kolacno**	**1.71**	**196**	*e*PN	Pn	13 52 29.8	-0.2
KOLL				*e*SN	Sn	13 52 52.9	+0.3
VYHS	**Vyhne**	**1.74**	**186**	*e*PN	Pn	13 52 29.6	-0.9
VYHS				*e*SN	Sn	13 52 51.5	-1.9
DPC	**Dobruska-Polom**	**1.79**	**275**	*e*PG	Pg	13 52 29.8	-3.5
DPC				*e*SG	Sg	13 52 54.7	-1.8
	comp=Z,13nm,0.5s						
KECS	**Kecovo**	**1.96**	**152**	*e*SN	Sn	13 52 56.9	-1.9
UPC	**Upice**	**2.00**	**279**	*e*SG	Sg	13 52 59.4	-3.9
UPC	**Upice**	**2.00**	**279**	*e*Sg	Sg	13 52 59.4	-3.9
CRVS	**Cervenica-Dubn**	**2.03**	**130**	*e*PN	Pn	13 52 38.3	+4.0
CRVS				*e*SN	Sn	13 53 05.0	+4.7
PRU	**Pruhonice**	**2.95**	**267**	*e*SG	Sg	13 53 29.9	-3.8
	comp=Z,4.6nm,0.6s						
BRG	**Berggiesshubel**	**3.36**	**283**	SG	Sg	13 53 44.7	-2.1
	comp=Z,4.5nm,0.5s						
KHC	**Kasperske Hory**	**3.75**	**255**	*e*SG	Sg	13 53 54.3	-5.3
	comp=Z,4.7nm,0.5s						
NKC	**Novy Kostel**	**4.28**	**273**	*e*SG	Sg	13 54 13.6	-2.7
NKC	**Novy Kostel**	**4.28**	**273**	*e*Sg	Sg	13 54 13.6	-2.7

IDC ***13*** *14:08:17.1±3.6, 388S×10161E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.5/19, mbtmp3.5/6, Error ellipse: s-maj=162.9km s-min=21.0km az=54.0*
ISCJB ***13*** *14:08:19.4±1.1,39S±02×1016E±02, h33km, mb3.7/7, Error ellipse: s-maj=44.2km s-min=15.8km az=44.3*
NEIC ***13*** *14:08:21.0±1.1,401S×10139E, h35km, mb4.4/1, Error ellipse: s-maj=45.0km s-min=15.5km az=225.0*
ISC 13 14:08:21.1±1.1,40S±02×1014E±02,h35km,n11,σ0°83/10, mb3.7/7,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**23.50**	**298**	P	**P**	**14 13 28.6**	**+0.3**
	16nm,1.1s,mb4.3						

WRA	**Warramunga Arr**	**35.79**	**119**	P		**P**		**14 15 16.9**	**-0.4**
	0.1nm,0.5s,mb3.0,baz=297,slow=8.9,SNR=3.0								
ASAR	**Alice Springs**	**36.95**	**125**	P		**P**		**14 15 27.6**	**+0.3**
	0.4nm,0.5s,mb3.5,baz=295,slow=7.6,SNR=14								
SONM	**Songino Array**	**51.82**	**4**	P		**P**		**14 17 25.9**	**+0.3**
	0.8nm,0.8s,mb3.7,baz=197,slow=12,SNR=5.7								
UCH	**Uchtor**	**52.10**	**335**	P		**P**		**14 17 25.5**	**-2.3**
MKAR	**Makanchi Array**	**53.34**	**344**	P		**P**		**14 17 37.0**	**+0.1**
	0.6nm,0.8s,mb3.6,baz=139,slow=7.8,SNR=4.8								
MKAR	**Makanchi Array**	**53.34**	**344**	P		**P**		**14 17 37.0**	**+0.1**
KURK	**Kurchatov**	**57.93**	**343**	P		**P**		**14 18 10.6**	**+0.8**
	0.3nm,0.5s,mb3.6,baz=160,slow=7.2,SNR=2.5								
KURK	**Kurchatov**	**57.93**	**343**	P		**P**		**14 18 10.6**	**+0.8**
ZALV	**Zalesovo Beam**	**59.40**	**349**	P		**P**		**14 18 20.1**	**+0.2**
	0.9nm,0.7s,mb3.9,baz=156,slow=4.7,SNR=4.3								
TXAR	**Lajitas Array**	**145.39**	**41**	PKPbc		PKPbc		14 27 56.4	+0.4
	0.3nm,0.9s,baz=37,slow=0.6,SNR=3.8								

IDC 13 14:25:34.0±3.5,579S×13105E,h0km,mb4.0/1,mb1 3.7/3, mb1mx3.5/13,mbtmp3.6/3,ML3.5/2,MS3.0/1,Ms1 3.0/1, ms1mx2.5/22,Error ellipse: s-maj=250.2km s-min=30.6km az=72.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**8.54**	**239**	LR	LR	14 30 51.9	
	comp=Z,106nm,20.1s,baz=122,slow=37						
WRA	**Warramunga Arr**	**14.43**	**168**	Pn	Pn	14 29 00.5	+0.9
	0.2nm,0.3s,baz=349,slow=12,SNR=14						
WRA				Sn	Sn	14 31 30.1	-10
	0.4nm,0.3s,baz=346,slow=22,SNR=7.6						
ASAR	**Alice Springs**	**17.99**	**172**	P	Pn	14 29 45.2	-0.4
	0.2nm,0.3s,baz=346,slow=9.8,SNR=19						
ASAR				S	Sn	14 32 55.5	-11
	0.1nm,0.3s,baz=48,slow=29,SNR=6.1						
MKAR	**Makanchi Array**	**67.80**	**326**	P	P	14 36 33.9	+0.1
	0.9nm,0.5s,baz=137,slow=7.1,SNR=8.6						

IDC ***13*** *14:28:27.3±1.1,2970S×17845W, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.9/16, mbtmp4.0/5, ML3.6/1, MS3.7/7, Ms1 3.7/7, ms1mx3.3/25, Error ellipse: s-maj=37.1km s-min=12.5km az=143.0*
ISCJB ***13*** *14:28:30.8±0.6,2979S±008×1785W±0.1, h33km, mb3.9/4, MS3.7/5, Error ellipse: s-maj=18.3km s-min=6.9km az=36.4*
ISC 13 14:28:32.6±0.6,2970S±009×1785W±01,h35km,n12, σ0°78/10,mb3.9/4,MS3.7/5,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.66**	**47**	Pn	**Pn**	**14 28 43.9**	**-1.5**
	606nm,0.3s,baz=87,slow=19,SNR=13						
RAO				LR	LR	14 28 51.1	
	comp=Z,5μm,19.9s,baz=0.0,slow=37						
RAO				Sn	**Sn**	**14 28 55.2**	**+0.6**
	2μm,0.3s,baz=103,slow=22,SNR=15						
URZ	**Urewera**	**9.29**	**202**	Pn	**Pn**	**14 30 43.4**	**-0.6**
	0.6nm,0.3s,baz=29,slow=10,SNR=3.0						
URZ				Sn	**Sn**	**14 32 27.0**	**-0.2**
	0.8nm,0.3s,baz=109,slow=18,SNR=5.4						
URZ				LR	LR	14 33 54.6	
	comp=Z,621nm,20.3s,baz=232,slow=35						
RPZ	**Rata Peaks**	**16.29**	**208**	LR	LR	14 37 54.4	
	comp=Z,276nm,21.9s,baz=204,slow=35						
PPT	**Papeete**	**29.01**	**72**	LR	LR	14 42 35.1	
	comp=Z,187nm,19.8s,MS3.7,baz=255,slow=29						
CTA	**Charters Tower**	**33.29**	**279**	LR	LR	14 46 51.6	
	comp=Z,205nm,19.2s,MS3.9,baz=112,slow=33						
STKA	**Stephens Creek**	**34.25**	**256**	P	**P**	**14 35 16.4**	**+1.1**
	2.5nm,0.8s,mb4.2,baz=98,slow=6.7,SNR=3.8						
STKA				LR	LR	14 46 18.2	
	comp=Z,70nm,19.1s,MS3.4,baz=117,slow=31						
ASAR	**Alice Springs**	**42.74**	**266**	P	**P**	**14 36 26.3**	**-0.4**
	1.2nm,0.8s,mb3.7,baz=104,slow=7.5,SNR=7.4						
WRA	**Warramunga Arr**	**43.67**	**272**	P	**P**	**14 36 33.6**	**-0.6**
	1.1nm,0.5s,mb3.8,baz=110,slow=7.9,SNR=13						
WRA				LR	LR	14 52 54.0	
	comp=Z,103nm,19.3s,MS3.8,baz=125,slow=34						
FITZ	**Fitzroy Crossi**	**51.96**	**270**	P	**P**	**14 37 38.7**	**+0.2**
	1.5nm,0.9s,mb3.9,baz=172,slow=7.1,SNR=2.8						
FITZ				LR	LR	14 57 47.4	
	comp=Z,79nm,21.9s,MS3.7,baz=130,slow=34						
VNA3	**Neumayer Olymp**	**79.02**	**176**	*e*	**P**	**14 40 33.6**	**+1.1**
VNA3				*e*		14 40 40.5	
VNA2	**Neumayer--Watz**	**79.45**	**177**	*e*	**P**	**14 40 35.2**	**+0.3**
VNA2				*e*		14 40 42.2	
TORD	**Torodi Ar. Bea**	**163.52**	**181**	PKPab	PKPab	14 49 22.8	-0.7
	1.1nm,1.1s,baz=174,slow=5.5,SNR=2.9						

IDC ***13*** *15:00:32.3±1.6,2.15S×9955E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.0/22, mbtmp4.2/11, Error ellipse: s-maj=59.3km s-min=14.7km az=57.0*
NEIC ***13*** *15:00:36.9±0.7,220S×9953E, h35km, mb4.4/7, Error ellipse: s-maj=21.8km s-min=7.3km az=52.0*
ISCJB ***13*** *15:00:38.9±9.1,21S±02×996E±03, h71km±80km, mb4.3/14, Error ellipse: s-maj=52.2km s-min=11.5km az=146.3*
ISC 13 15:00:41.3±7.1,21S±02×997E±03,h72km±61km,n23, σ0°82/21,mb4.3/14,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**18.42**	**64**	*e*P	**Pn**	**15 04 51.8**	**0.0**
KAPI	**Kappang**	**20.25**	**99**	P	**P**	**15 05 10.6**	**-0.3**
	15nm,1.0s,baz=233,slow=15,SNR=4.0						
CMAR	**Chiang Mai Arr**	**20.48**	**358**	P	**P**	**15 05 11.8**	**-1.6**
	1.3nm,0.7s,baz=184,slow=10,SNR=10.0						
CHTO	**Chiang Mai**	**20.84**	**358**	*e*P	**P**	**15 05 19.1**	**+1.9**
	4.6nm,1.1s						
FITZ	**Fitzroy Crossi**	**30.01**	**124**	P	**P**	**15 06 43.2**	**-0.2**
	1.9nm,0.8s,mb3.8,baz=266,slow=12,SNR=5.3						
WRA	**Warramunga Arr**	**38.21**	**120**	P	**P**	**15 07 54.4**	**0.0**
	2.1nm,0.5s,mb4.2,baz=303,slow=9.1,SNR=37						
WRAB	**Tennant Creek**	**38.22**	**120**	*e*P	**P**	**15 07 54.5**	**0.0**
	3.8nm,0.7s,mb4.3						
WRAB				*e*		15 08 04.5	
ASAR	**Alice Springs**	**39.44**	**126**	P	**P**	**15 08 05.2**	**+0.5**
	1.2nm,0.5s,mb4.0,baz=302,slow=8.0,SNR=18						
KSRS	**Korea Array**	**47.31**	**31**	P	**P**	**15 09 08.0**	**+0.2**
	1.6nm,0.8s,mb3.8,baz=220,slow=7.1,SNR=7.3						
CTAO	**Charters Tower**	**48.84**	**115**	P	**P**	**15 09 18.2**	**-1.6**
	3.2nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**49.31**	**131**	P	**P**	**15 09 24.8**	**+1.5**
	1.3nm,0.6s,mb4.1,baz=240,slow=9.1,SNR=4.6						
STKA	**Stephens Creek**	**49.31**	**131**	P	**P**	**15 09 24.3**	**+1.1**
	3.1nm,0.7s,mb4.3						
TKM2	**Tokmak 2**	**49.83**	**337**	*e*P	**P**	**15 09 27.4**	**+0.4**
	0.6nm,0.5s,mb3.8						
SONM	**Songino Array**	**50.12**	**6**	P	**P**	**15 09 30.0**	**+1.0**
	4.0nm,0.7s,mb4.5,baz=188,slow=9.2,SNR=31						
ULN	**Ulaanbaatar**	**50.22**	**6**	*e*P	**P**	**15 09 30.2**	**+0.4**
	4.0nm,0.9s,mb4.3						
EKS2	**Erkin-Say**	**50.35**	**335**	*e*P	**P**	**15 09 30.6**	**-0.3**
MKAR	**Makanchi Array**	**51.07**	**345**	P	**P**	**15 09 36.0**	**-0.2**
	2.7nm,0.6s,mb4.5,baz=149,slow=8.1,SNR=33						
KURK	**Kurchatov**	**55.65**	**344**	P	**P**	**15 10 09.1**	**-0.7**
	1.9nm,0.2s,mb4.7,baz=164,slow=6.6,SNR=2.9						
ZAA0	**Zalesovo Array**	**57.24**	**350**	*e*P	**P**	**15 10 20.4**	**-0.6**
ZALV	**Zalesovo Beam**	**57.24**	**350**	P	**P**	**15 10 20.8**	**-0.2**
	18nm,1.1s,mb5.0,baz=175,slow=5.5,SNR=20						
YSS	**Yuzh-Sakhalins**	**61.78**	**32**	*e*P	**P**	**15 10 58.2**	**+5.8**
	25nm,1.1s,mb5.2						
TXAR	**Lajitas Array**	**145.02**	**37**	PKPbc	PKPbc	15 20 12.1	+1.6
	2.7nm,0.7s,baz=288,slow=1.1,SNR=43						
TXAR	**Lajitas Array**	**145.02**	**37**	PKPbc	PKPbc	15 20 12.1	+1.6

IDC ***13*** *15:05:32.3±2.1,447S×101.11E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/19, mbtmp3.9/8, Error ellipse: s-maj=77.8km s-min=19.3km az=55.0*
ISCJB ***13*** *15:05:34.4±1.6,45S±02×101.1E±03, h33km, mb4.0/12, Error ellipse: s-maj=56.6km s-min=13.1km az=145.2*
NEIC ***13*** *15:05:37.6±1.6,437S×10126E, h35km, mb4.1/4, Error ellipse: s-maj=61.7km s-min=11.3km az=56.0*
ISC 13 15:05:37.3±1.6,44S±02×1012E±03,h35km,n15,σ0°80/13, mb4.0/12,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.84**	**354**	P	**P**	**15 10 37.3**	**-0.2**
	1.7nm,0.5s,mb3.7,baz=181,slow=8.3,SNR=15						

CHTO	**Chiang Mai**	**23.19**	**355**	*e*P		**P**		**15 10 40.1**	**-1.1**
	4.0nm,1.0s,mb3.8								
WRA	**Warramunga Arr**	**35.77**	**118**	P		**P**		**15 12 32.8**	**-0.5**
	0.4nm,0.5s,mb3.6,baz=300,slow=8.5,SNR=8.4								
WRAB	**Tennant Creek**	**35.78**	**118**	P		**P**		**15 12 32.6**	**-0.8**
	4.1nm,1.0s,mb4.3								
ASAR	**Alice Springs**	**36.89**	**124**	P		**P**		**15 12 43.8**	**+0.9**
	0.4nm,0.4s,mb3.6,baz=299,slow=7.6,SNR=5.6								
KSRS	**Korea Array**	**48.52**	**29**	P		**P**		**15 14 17.3**	**+0.3**
	1.2nm,0.8s,mb4.0,baz=217,slow=6.6,SNR=5.9								
SONM	**Songino Array**	**52.23**	**4**	P		**P**		**15 14 46.6**	**+1.7**
	2.7nm,0.8s,mb4.2,baz=186,slow=8.9,SNR=15								
ULN	**Ulaanbaatar**	**52.32**	**5**	*e*P		**P**		**15 14 45.5**	**0.0**
	1.4nm,0.6s,mb4.1								
TKM2	**Tokmak 2**	**52.51**	**336**	*e*P		**P**		**15 14 46.9**	**-0.1**
	2.0nm,0.8s,mb4.1								
MKAR	**Makanchi Array**	**53.67**	**344**	P		**P**		**15 14 56.4**	**+1.0**
	1.4nm,0.7s,mb4.0,baz=139,slow=8.1,SNR=12								
MKAR	**Makanchi Array**	**53.67**	**344**	P		**P**		**15 14 56.4**	**+1.0**
KURK	**Kurchatov**	**58.25**	**343**	P		**P**		**15 15 27.7**	**-0.5**
	0.7nm,0.3s,mb4.2,baz=159,slow=7.6,SNR=9.3								
ZALV	**Zalesovo Beam**	**59.76**	**349**	P		**P**		**15 15 37.9**	**-0.6**
	0.5nm,0.5s,mb3.8,baz=224,slow=4.1,SNR=4.5								
TXAR	**Lajitas Array**	**145.82**	**41**	PKPbc	PKPbc	15 25 15.1	+1.5
	0.5nm,0.6s,baz=306,slow=0.9,SNR=8.0								
TXAR	**Lajitas Array**	**145.82**	**41**	PKPbc	PKPbc	15 25 15.1	+1.5

BJI ***13*** *15:08:49.3, 479S×10123E, h27km, mB5.4, mb5.5, Ms5.2, Msz5.0*
ISCJB ***13*** *15:08:53.0±0.2, 433S±003×10120E±002, h24km, mb5.6/140, MS5.1/191, Error ellipse: s-maj=4.1km s-min=2.6km az=37.7*
MOS ***13*** *15:08:54.0±1.1, 421S×10134E, h28km, mb5.7/50, MS4.9/40, Error ellipse: s-maj=9.6km s-min=5.2km az=114.6*
NEIC ***13*** *15:08:54.7±0.1, 430S×10127E, mb5.5/57, MS5.1/162, Error ellipse: s-maj=5.9km s-min=4.0km az=46.0*
NEIC Felt [III] at Bengkulu and [II] at Kapahiang. Also felt in Singapore.
GCMT ***13*** *15:08:54.7±0.4, 481S×10097E, h36km±1km, MW5.2/54, Moment Tensor Solution. s33,c47; s54,c80; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_r0.52±.05; $M_{\theta\theta}$-0.56±.03; $M_{\phi\phi}$0.03±.04; $M_{r\theta}$0.58±.04; $M_{r\phi}$0.36±.02; $M_{\theta\phi}$-0.03±.06; Best double couple: $M_0$0.86800×10^{17} NP1:ϕ=319.00000°, δ28.00000°, λ128.00000°. NP2: ϕ=97.00000°, δ68.00000°, λ72.00000°. Principal axes: T 0.7970, Plg63.0000°, Azm339.0000°; N 0.1430, Plg17.0000°, Azm104.0000°; P -0.9390, Plg21.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
DJA ***13*** *15:08:54.4,475S×10101E, h20km, Mw5.6/34*
IDC ***13*** *15:08:56.1±2.3, 429S×10135E, h33km±16km, mb5.1/24, mb1 5.1/25, mb1mx5.1/27, mbtmp5.1/25, ML4.7/1, MS4.7/15, Ms1 4.7/15, ms1mx4.4/33, Error ellipse: s-maj=12.5km s-min=8.8km az=42.0*
SZGRF ***13*** *15:09:18.0, 035S×9853E, h33km, mb5.1, Southern Sumatera, Indonesia*
ISC 13 15:08:55.0±0.2,435S±002×10118E±002,h26km, h26km±1.0km:pP-P,n571,σ1s04/378,mb5.6/140,MS5.1/191, 67C-14D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMBI	**JAMBI**	**3.65**	**42**	P	**Pn**	**15 09 52.3**	**+2.4**
	0.0nm,0.0s						
KLI	**Kotabumi**	**3.70**	**98**	P	**Pn**	**15 09 51.9**	**+1.2**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.94**	**349**	P	**Pn**	**15 09 54.1**	**+0.1**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.13**	**42**	P	**Pn**	**15 10 11.6**	**+1.3**
	1μm,1.0s						
SBJI	**Serang**	**5.24**	**110**	P	**Pn**	**15 10 12.9**	**+1.1**
	1μm,1.1s						
PPBI	**Pangkal Pinang**	**5.41**	**66**	P	**Pn**	**15 10 14.9**	**+0.8**
	616nm,1.0s						
TNG	**Tangerang**	**5.74**	**109**	P	**Pn**	**15 10 19.8**	**+1.1**
	3μm,0.9s						
DBJI	**Dramaga**	**5.96**	**112**	P	**Pn**	**15 10 21.9**	**+0.1**
	2μm,1.3s						
SKJI	**Sukabumi**	**5.97**	**117**	P	**Pn**	**15 10 22.3**	**+0.5**
	2μm,0.8

CMAR Chiang Mai Arr 22.77 355⇑ *e*P P 15 13 53.4 -2.2
NANT Nan 23.00 359 ⇑P P 15 13 56.6 -1.5
300nm,1.0s,mb5.7
BATI Baumata 23.04 106 P P **15 13 57.7 -0.9**
182nm,0.9s,mb5.5
BATI Baumata 23.04 106 P P **15 13 56.8 -1.8**
105nm,0.6s,mb5.5,baz=167,slow=0.6,SNR=14
BATI S **S** **15 18 01.6 -6.5**
86nm,0.7s,baz=238,slow=5.9,SNR=5.1
CHG Chiang Mai 23.12 355 ⇑P P **15 13 56.9 -2.4**
150nm,0.9s,mb5.4
CHTO Chiang Mai 23.12 355 *e*P P **15 13 57.2 -2.1**
132nm,1.0s,mb5.3
CHTO LR LR
comp=Z,3μm,19.0s,MS4.8
PALK Pallekele 23.47 299 PFAKE 15 14 10.0 +6.9
PALK LR LR
comp=Z,1μm,19.0s,MS4.4
CHRT Chiangrai 24.11 357 ⇑P P **15 14 08.0 -0.8**
comp=Z,1μm,1.0s,mb6.2
MBWA Marble Bar 24.58 134 *e*P P **15 14 11.9 -1.2**
comp=Z,55nm,1.2s,mb5.0
MBWA LR LR
comp=Z,2μm,21.0s,MS4.7
QIZ Qiongzhong 24.75 20 P P **15 14 15.0 +0.3**
QIZ S **S** **15 18 38.0 +2.5**
QIZ LR LR
comp=E,2μm,13.0s
LBMI Labuha 26.55 83 P P **15 14 30.7 -0.5**
comp=E,260nm,1.1s,mb5.7
RCP Roxas 26.65 53‖ *e*P P **15 14 32.1 +0.1**
DAV Davao City (W) 26.87 65⇑ *e*P P **15 14 31.8 -2.3**
DAV Davao City (W) 26.87 65 PFAKE 15 14 40.0 +6.0
DAV LR LR
comp=Z,1μm,20.0s,MS4.5
FITZ Fitzroy Crossi 27.56 122 *e*P P **15 14 39.6 -0.6**
comp=Z,118nm,0.9s,mb5.5
FITZ *e*S **S** **15 19 18.0 -2.2**
FITZ Fitzroy Crossi 27.56 122 P P **15 14 39.7 -0.5**
comp=Z,68nm,0.8s,mb5.3,baz=293,slow=6.9,SNR=162
KMI Kunming 29.33 3 P P **15 14 57.1 +1.3**
KMI AP pP 15 15 04.6 +1.2
KMI XP sP 15 15 09.0 +2.4
KMI PP PP 15 15 56.1 -6.3
KMI S **S** **15 19 53.4 +5.5**
KMI XS sS 15 20 07.6 +7.2
KMI AMB AMB
comp=Z,102nm,1.0s,mb5.5
KMI AMB AMB
comp=Z,346nm,4.1s
KMI LR LR
comp=N,3μm,15.7s,MS5.1
KMI LR LR
comp=E,3μm,16.4s,MS5.1
KMI LR LR
comp=Z,3μm,17.6s,MS5.0
CAL Calcutta 29.53 335 *e*P P **15 14 58.8 +1.2**
CAL *ex* x 15 20 11.9
IMP Imphal 29.80 347 *e*P P **15 14 59.0 -1.0**
SWI Sorong 30.25 84 P P **15 15 01.9 -2.3**
comp=Z,103nm,1.5s,mb5.3
MUN Mundaring 30.89 155 *e*P P **15 15 09.9 +0.3**
GYA Guiyang 31.08 10⇑ *i*P P **15 15 11.8 +0.5**
GYA AP pP 15 15 20.9 +2.0
GYA XP sP 15 15 24.8 +2.8
GYA PP PP 15 16 15.4 -6.4
GYA PCP PcP 15 18 07.5 +0.9
GYA S **S** **15 20 12.6 -2.7**
GYA XS sS 15 20 30.3 +2.5
GYA SCP ScP 15 21 48.0 -0.1
GYA SCS ScS 15 25 43.0 -2.2
GYA AMB AMB
comp=Z,140nm,1.0s,mb5.8
GYA AMB AMB
comp=Z,1μm,6.2s
GYA LR LR
comp=N,12μm,18.2s,MS5.8
GYA LR LR
comp=E,15μm,15.9s,MS5.8
GYA LR LR
comp=Z,11μm,17.8s,MS5.6
HYB Hyderabad 31.09 315 *i* P P **15 15 12.0 +0.5**
HYB Hyderabad 31.09 315 *e*P P **15 15 12.0 +0.5**
KLBR Kellerberrin 31.26 152 *e*P P **15 15 12.6 -0.3**
comp=Z,53nm,1.6s,mb5.1
NWAO Narrogin (SRO) 32.15 154 P P **15 15 20.5 -0.2**
comp=Z,43nm,1.0s,mb5.2,baz=330,slow=9.8,SNR=20
NWAO LR LR 15 27 55.3
comp=Z,2μm,19.5s,MS4.7,baz=326,slow=36
NWAO Narrogin (SRO) 32.15 154 *e*P P **15 15 19.8 -0.9**
comp=Z,62nm,1.1s,mb5.3
NWAO LR LR
comp=Z,2μm,22.0s,MS4.6
ODAN Odare 33.77 337 *e*P P **15 15 36.3 +1.4**
comp=Z,484nm,0.9s,mb6.4
TAPN Taplejung 34.09 338 *e*P P **15 15 39.3 +1.6**
comp=Z,672nm,1.0s,mb6.5
RAMN Ramite 34.16 336 *e*P P **15 15 39.8 +1.6**
comp=Z,309nm,0.9s,mb6.2
YHNB Yeheng 34.90 33 *e*P P **15 15 42.6 -2.1**
comp=Z,43nm,1.1s,mb5.3
YHNB LR LR
comp=Z,804nm,22.0s,MS4.4
JIRN Jiri 34.95 336 *e*P P **15 15 46.8 +1.7**
comp=Z,775nm,0.9s,mb6.6
CD2 Chengdu 35.14 4⇑ *i*P P **15 15 46.0 -0.7**
CD2 AP pP 15 15 50.4 -4.0
CD2 PP PP 15 17 05.8 -1.0
CD2 PCP PcP 15 18 16.0 -1.9
CD2 S **S** **15 21 19.0 +0.7**
CD2 PCS PcS 15 22 01.9 -2.9
CD2 SS SS 15 23 37.3 -14
CD2 SCS ScS 15 26 03.0 -3.1
CD2 AMB AMB
comp=Z,180nm,1.0s,mb6.0
CD2 AMB AMB
comp=Z,250nm,7.2s
CD2 LR LR
comp=N,2μm,16.8s,MS5.3
CD2 LR LR
comp=E,5μm,20.4s,MS5.3
CD2 LR LR
comp=Z,4μm,14.4s
LSA Lhasa 35.19 345⇑ *i*P P **15 15 48.0 +0.8**
comp=Z,43nm,0.8s,mb5.4
LSA LR LR
comp=Z,1μm,22.0s,MS4.6
PKI Pulchoki 35.19 335 *e*P P **15 15 48.3 +1.1**
comp=Z,131nm,1.0s,mb5.8
PKIN Phulchoki 35.20 335 *e*P P **15 15 48.4 +1.1**
comp=Z,86nm,0.9s,mb5.7
TATO Taipei 35.20 33 PFAKE 15 16 00.0 +13
TATO LR LR
comp=Z,843nm,19.0s,MS4.5
GUN Gumba 35.30 336 *e*P P **15 15 49.8 +1.7**
comp=Z,410nm,0.8s,mb6.4
DMN Daman 35.35 335 *e*P P **15 15 49.7 +1.1**
comp=Z,227nm,1.1s,mb6.0
KKN Kakani 35.44 335 *e*P P **15 15 50.4 +1.1**
comp=Z,376nm,1.0s,mb6.3
WRA Warramunga Arr 35.82 118 P P **15 15 51.9 -0.9**
comp=Z,58nm,0.8s,mb5.5,baz=292,slow=10.0,SNR=200
WRA S **S** **15 21 28.3 -0.8**
comp=Z,7.9nm,1.1s,baz=290,slow=16,SNR=5.9
WRAB Tennant Creek 35.83 118 P P **15 15 52.0 -0.8**
comp=Z,629nm,0.8s,mb6.6,SNR=42
WRAB Tennant Creek 35.83 118⇑ *i*P P **15 15 52.0 -0.8**
comp=Z,84nm,0.8s,mb5.7
WRAB LR LR
comp=Z,1μm,21.0s,MS4.7
WB2 Warramunga Arr 35.83 118 *e*P P **15 15 51.8 -1.1**
WB2 *e*S **S** **15 21 25.2 -4.0**
GKN Gorkha 35.90 335 *e*P P **15 15 54.2 +1.0**
comp=Z,479nm,1.1s,mb6.3
KOLN Koldanda 36.15 333 *e*P P **15 15 56.7 +1.3**
comp=Z,135nm,0.8s,mb5.9
FORT Forrest 36.50 139 *e*P P **15 15 58.5 +0.1**
comp=Z,37nm,0.8s,mb5.3
DANN Dangsing 36.58 334 *e*P P **15 16 00.3 +1.2**
comp=Z,529nm,1.2s,mb6.3
WHN Wuhan 36.91 19 P P **15 16 01.5 -0.4**
WHN PCP PcP 15 18 23.3 +0.1
WHN LR LR
comp=N,881nm,12.0s,MS5.2
WHN LR LR
comp=E,3μm,14.0s,MS5.2

ASAR Alice Springs 36.95 124 P P **15 16 02.1 -0.2**
comp=E,26nm,0.8s,mb5.2,baz=294,slow=7.8,SNR=168
ASAR PcP PcP 15 18 23.5 0.0
comp=E,14nm,0.9s,baz=298,slow=2.9,SNR=8.8
ASAR S **S** **15 21 44.9 -1.3**
comp=E,4.7nm,1.1s,baz=288,slow=14,SNR=5.4
XAN Xi'an 38.87 10 P P **15 16 17.4 -1.0**
XAN AP pP 15 16 27.1 +1.0
XAN XP sP 15 16 31.9 +2.7
XAN PP PP 15 17 48.5 +0.7
XAN S **S** **15 22 09.9 -5.1**
XAN AMB AMB
comp=Z,119nm,1.2s,mb5.5
XAN AMB AMB
comp=Z,89nm,5.3s
XAN LR LR
comp=N,1μm,15.3s,MS5.0
XAN LR LR
comp=E,1μm,16.2s,MS5.0
XAN LR LR
comp=Z,4μm,15.3s,MS5.4
PTH Pithoragarh 39.25 330 *e*P P **15 16 22.3 +0.7**
PTH *e*S **S** **15 22 22.3 +1.5**
NJ2 Nanjing 39.91 24 *e*P P **15 16 26.3 -0.8**
NJ2 AP pP 15 16 32.8 -2.0
NJ2 XP sP 15 16 36.9 -1.0
NJ2 PP PP 15 18 05.0 +5.8
NJ2 S **S** **15 22 30.6 -0.1**
NJ2 XS sS 15 22 41.8 -1.6
NJ2 AMB AMB
comp=Z,30nm,1.0s,mb5.0
NJ2 AMB AMB
comp=Z,3μm,5.6s
NJ2 LR LR
comp=N,590nm,20.4s,MS4.8
NJ2 LR LR
comp=E,1μm,19.2s,MS4.8
SSE Sheshan 40.09 27⇑ P P **15 16 28.8 +0.2**
SSE AP pP 15 16 35.8 -0.5
SSE XP sP 15 16 38.8 -0.6
SSE S **S** **15 22 33.9 +0.6**
SSE XS sS 15 22 48.5 +2.5
SSE AMB AMB
comp=Z,92nm,1.1s,mb5.4
SSE AMB AMB
comp=Z,185nm,5.1s
SSE LR LR
comp=N,1μm,15.8s,MS5.0
SSE LR LR
comp=E,974nm,15.8s,MS5.0
SSE LR LR
comp=Z,979nm,13.4s,MS4.8
NDI New Delhi 40.12 326⇑ *i*P P **15 16 27.5 -1.4**
NDI *ex* x 15 22 37.0
LZH Lanzhou 40.30 3⇑ P **15 16 30.5 +0.3**
LZH AP pP 15 16 35.1 -2.8
LZH XP sP 15 16 37.6 -3.5
LZH PP PP 15 18 07.9 +4.6
LZH PCP PcP 15 18 33.8 +0.2
LZH S **S** **15 22 36.1 -0.2**
LZH SS SS 15 25 32.6 -3.0
LZH SCS ScS 15 26 32.0 -3.1
LZH AMB AMB
comp=Z,165nm,1.3s,mb5.6
LZH AMB AMB
comp=Z,478nm,6.2s
LZH LR LR
comp=N,2μm,14.0s
LZH LR LR
comp=Z,4μm,17.6s,MS5.3
JOW Kunigami 40.59 39 P P **15 16 32.5 -0.3**
comp=Z,22nm,0.7s,mb4.9,baz=254,slow=11,SNR=5.3
DDI Dehra Dun 40.96 329⇑ *i*P pP 15 16 46.3 +2.8
DDI *e*S **S** **15 22 54.9 +8.5**
SMLA Simla 42.06 329 *i* P P **15 16 44.8 -0.1**
SMLA *ex* x 15 16 45.7
comp=Z,57nm,0.6s
SMLA *i* x x 15 23 17.1
COEN Coen 42.48 106⇑ *e*P P **15 16 46.2 -2.3**
comp=Z,39nm,1.1s,mb5.0
TIY Taiyuan 43.13 13 *e*P P **15 16 54.3 +0.9**
TIY LR LR
comp=N,1μm,13.3s,MS5.0
TIY LR LR
comp=E,824nm,13.5s,MS5.0
TIY LR LR
comp=Z,1μm,15.2s,MS4.8
GTA Gaotai 43.56 358⇑ P P **15 16 57.3 +0.5**
GTA AP pP 15 17 04.8 +0.2
GTA XP sP 15 17 08.1 +0.4
GTA PCP PcP 15 18 45.0 +0.7
GTA S **S** **15 23 25.3 +0.9**
GTA XS sS 15 23 37.3 +0.1
GTA SS SS 15 26 32.8 -7.1
GTA AMB AMB
comp=Z,57nm,1.4s,mb5.1
GTA AMB AMB
comp=Z,370nm,5.7s
GTA LR LR
comp=N,1μm,15.9s,MS5.2
GTA LR LR
comp=E,2μm,18.9s,MS5.2
GTA LR LR
comp=Z,2μm,15.6s,MS5.1
THN Thein Dam 43.85 328 *e*P P **15 16 58.1 -1.2**
BTO Baotou 45.46 9 *e*P P **15 17 11.3 -0.7**
MSEY Mahe Island 45.55 268 PFAKE 15 17 30.0 +17
MSEY LR LR
comp=Z,839nm,19.0s,MS4.7
PMG Port Moresby 45.90 99⇑ *i*P P **15 17 14.3 -1.7**
comp=Z,182nm,1.0s,mb6.0
PMG LR LR
comp=Z,705nm,22.0s,MS4.6
HHC Hu-ho-hao-te 45.97 11⇑ *i*P P **15 17 16.6 +0.6**
HHC AP pP 15 17 20.0 -3.9
HHC PCP PcP 15 18 52.8 +0.2
HHC PP PP 15 19 05.3 +1.1
HHC SCP ScP 15 22 44.0 -0.2
HHC PCS PcS 15 22 46.1 -0.7
HHC S **S** **15 24 02.0 +2.6**
HHC SCS ScS 15 27 09.3 -1.0
HHC SS SS 15 27 19.4 -5.3
HHC AMB AMB
comp=Z,80nm,1.1s,mb5.6
HHC AMB AMB
comp=Z,474nm,7.0s
HHC LR LR
comp=N,3μm,14.5s,MS5.4
HHC LR LR
comp=E,1μm,15.3s,MS5.4
HHC LR LR
comp=Z,3μm,14.7s,MS5.3
BJT Baijiatuau 46.25 16 *e*P P **15 17 17.9 -0.4**
BJT pmax pmax
comp=Z,167nm,1.2s
BJT MLR MLR
comp=Z,2μm,19.0s
BJT Baijiatuau 46.25 16 *e*P P **15 17 17.9 -0.4**
comp=Z,167nm,1.2s,mb5.8
BJT LR LR
comp=Z,2μm,19.0s,MS5.0
BJI Beijing 46.27 16 P P **15 17 18.3 -0.1**
BJI AP pP 15 17 25.8 -0.4
BJI XP sP 15 17 28.5 -0.8
BJI S **S** **15 24 07.3 +3.5**
BJI XS sS 15 24 18.8 +2.2
BJI AMB AMB
comp=Z,121nm,1.2s,mb5.7
BJI AMB AMB
comp=Z,461nm,7.0s
BJI LR LR
comp=N,859nm,17.1s,MS5.1
BJI LR LR
comp=E,2μm,17.9s,MS5.1
BJI LR LR
comp=Z,1μm,19.1s,MS4.9
CTA Charters Tower 46.56 114 *e*P P **15 17 20.8 -0.3**
comp=Z,79nm,1.1s,mb5.6
CTA *e*S **S** **15 24 07.7 -0.9**
CTA Charters Tower 46.56 114 *e*P P **15 17 20.8 -0.3**
CTA *e*S **S** **15 24 07.7 -0.9**
CTA pmax pmax
comp=Z,79nm,1.1s
CTAO Charters Tower 46.56 114 *e*P P **15 17 19.8 -1.3**
CTAO pmax pmax
comp=Z,223nm,1.3s,mb5.9
CTAO MLR MLR
comp=Z,836nm,21.0s,MS4.7
CTAO Charters Tower 46.56 114 *e*P P **15 17 19.8 -1.3**
comp=Z,223nm,1.3s,mb5.9
CTAO LR LR
comp=Z,836nm,21.0s,MS4.7
STKA Stephens Creek 46.73 131 *e*P P **15 17 22.3 +0.1**
comp=Z,36nm,0.7s,mb5.4
STKA Stephens Creek 46.73 131 P P **15 17 22.4 +0.2**
comp=Z,33nm,0.8s,mb5.3,baz=303,slow=7.7,SNR=38
STKA LR LR 15 38 38.0
comp=Z,1μm,20.8s,MS4.8,baz=298,slow=38
GUMO Guam 46.88 67 *e*P P **15 17 17.6 -6.0**
DL2 Dalian 47.01 22⇑ *i*P P **15 17 23.5 -0.7**
DL2 PP PP 15 19 19.1 +4.0
DL2 S **S** **15 24 15.6 +1.2**
DL2 AMB AMB
comp=Z,30nm,0.7s,mb5.3
DL2 AMB AMB
comp=Z,170nm,5.1s
DL2 LR LR
comp=N,420nm,17.0s,MS4.6
DL2 LR LR
comp=E,420nm,18.9s,MS4.6
DL2 LR LR
comp=Z,590nm,19.2s,MS4.6
INCN Inchon 47.88 27 *e*P P **15 17 29.1 -2.0**
comp=Z,27nm,0.8s,mb5.3
INCN LR LR
comp=Z,483nm,21.0s,MS4.5
KSRS Korea Array 48.47 29 P P **15 17 34.9 -0.7**
comp=Z,80nm,0.9s,mb5.8,baz=216,slow=8.0,SNR=250
KSRS PcP PcP 15 19 01.2 -0.3
comp=Z,11nm,0.9s,baz=223,slow=3.6,SNR=5.4
KSH Kashi 49.44 334⇑ *i*P P **15 17 43.4 +0.4**
KSH *e*AP pP 15 17 51.0 +0.1
KSH *e*XP sP 15 17 54.1 +0.1
KSH *e*PCP PcP 15 19 05.0 0.0
KSH *e*PP PP 15 19 40.1 +2.7
KSH *e*SCP ScP 15 22 58.1 -0.8
KSH *e*PCS PcS 15 23 00.3 -1.2
KSH *e*S **S** **15 24 47.0 -1.8**
KSH *e*XS sS 15 25 02.0 +0.3
KSH *e*SCS ScS 15 27 31.0 -2.4
KSH *e*SS SS 15 28 17.1 -4.0
KSH AMB AMB
comp=Z,1μm,2.4s,mb6.5
KSH LR LR
comp=N,1μm,10.3s
KSH LR LR
comp=E,775nm,8.5s
KSH LR LR
comp=Z,1μm,14.0s,MS5.0
WMQ Urumqi 49.46 347⇑ *i*P P **15 17 43.8 +0.7**
WMQ AP pP 15 17 49.0 -1.9
WMQ XP sP 15 17 52.0 -2.0
WMQ PCP PcP 15 19 05.0 0.0
WMQ S **S** **15 24 49.0 +0.1**
WMQ AMB AMB
comp=Z,205nm,0.9s,mb6.2
WMQ AMB AMB
comp=Z,898nm,3.6s
WMQ LR LR
comp=N,2μm,18.6s,MS5.2
WMQ LR LR
comp=E,2μm,16.8s,MS5.2
WMQ LR LR
comp=Z,1μm,21.4s,MS5.0
SNY Shenyang 50.28 22⇑ P P **15 17 48.1 -1.3**
SNY S **S** **15 25 09.9 +9.5**
SNY AMB AMB
comp=Z,63nm,1.1s,mb5.6
SNY AMB AMB
comp=Z,211nm,14.7s
SNY LR LR
comp=N,997nm,18.6s,MS5.0
SNY LR LR
comp=E,918nm,16.7s,MS5.0
SNY LR LR
comp=Z,1μm,15.7s,MS5.0
ULHL Ulahol 51.61 336 P P **15 18 00.4 +1.0**
SNR=9.8
SONM Songino Array 52.16 4 P P **15 18 04.1 +0.8**
comp=Z,111nm,0.9s,mb5.8,baz=183,slow=9.0,SNR=474
SONM PcP PcP 15 19 15.1 +0.2
comp=Z,25nm,0.8s,baz=190,slow=3.9,SNR=7.9
SONM LR LR 15 44 24.9
comp=Z,1μm,18.3s,MS4.9,baz=281,slow=41
SONM Songino Array 52.16 4 P P **15 18 04.1 +0.8**
SONM 15 19 15.1
ULN Ulaanbaatar 52.25 5 *e*P P **15 18 04.4 +0.4**
ULN *e* 15 19 14.9
ULN pmax pmax
comp=Z,90nm,1.0s,mb5.7
ULN MLR MLR
comp=Z,898nm,20.0s,MS4.8
ULN Ulaanbaatar 52.25 5 *e*P P **15 18 04.4 +0.5**
comp=Z,90nm,1.0s,mb5.7
ULN *e*PcP PcP 15 19 14.9 -0.3
ULN LR LR
comp=Z,898nm,20.0s,MS4.8
UCH Uchtor 52.31 335 P P **15 18 05.5 +1.0**
SNR=9.1
UCH Uchtor 52.31 335 *e*P P **15 18 05.0 +0.5**
comp=Z,20nm,0.9s,mb5.1
TKM2 Tokmak 2 52.44 336 *e*P P **15 18 05.8 +0.3**
TKM2 pmax pmax
comp=Z,80nm,0.8s,mb5.7
TKM2 MLR MLR
comp=Z,1μm,20.0s,MS4.9
TKM2 Tokmak 2 52.44 336 P P **15 18 06.1 +0.6**
SNR=91
TKM2 Tokmak 2 52.44 336 *e*P P **15 18 05.8 +0.3**
comp=Z,80nm,0.8s,mb5.7
TKM2 LR LR
comp=Z,1μm,20.0s,MS4.9
KBK Karagaybulak 52.48 336 P P **15 18 06.9 +1.1**
SNR=32
AML Almayashu 52.58 334 P P **15 18 07.4 +0.9**
SNR=18
AML Almayashu 52.58 334 *e*P P **15 18 06.9 +0.4**
comp=Z,43nm,0.9s,mb5.4
AML LR LR
comp=Z,546nm,22.0s,MS4.5
AAK Ala-Archa 52.65 335 P P **15 18 07.8 +0.7**
SNR=12
CN2 Changchun 52.68 22 *e*P P **15 18 06.3 -1.0**
CN2 *e*AP pP 15 18 13.9 -1.3
CN2 PCP PcP 15 19 15.6 -1.3
CN2 *e*S **S** **15 25 31.8 -1.6**
CN2 *e*SS SS 15 29 09.5 -2.8
CN2 AMB AMB
comp=Z,220nm,0.8s,mb6.1
CN2 AMB AMB
comp=Z,560nm,3.0s
CN2 LR LR
comp=N,1μm,19.0s,MS5.0
CN2 LR LR
comp=E,920nm,19.0s,MS5.0
CN2 LR LR
comp=Z,900nm,18.0s,MS4.9
FRU Bishkek 52.76 336⇑ *e*P P **15 18 07.5 -0.4**
FRU pmax pmax
comp=Z,140nm,2.0s,mb5.5
CHMS Chumysh 52.84 336 P P **15 18 08.6 +0.1**
SNR=9.3
EKS2 Erkin-Say 52.97 335 P P **15 18 10.0 +0.6**
SNR=93
EKS2 Erkin-Say 52.97 335 *e*P P **15 18 10.0 +0.6**
comp=Z,89nm,0.8s,mb5.7
EKS2 LR LR
comp=Z,718nm,20.0s,MS4.7
USP Ospenovka 53.17 336 P P **15 18 11.0 +0.1**
SNR=64
MAJO Matsushiro 53.38 37 *e*P P **15 18 10.6 -2.0**
MAJO pmax pmax
comp=Z,118nm,1.2s,mb5.7
MAJO MLR MLR
comp=Z,436nm,19.0s,MS4.5
MAJO Matsushiro 53.38 37 *e*P P **15 18 10.6 -2.0**
comp=Z,118nm,1.2s,mb5.7
MAJO LR LR
comp=Z,436nm,19.0s,MS4.5
MAT Matsushiro 53.38 37 P P **15 18 11.6 -1.0**
MAT S **S** **15 25 39.0 -4.3**

MJAR Matsushiro Arr 53.38 37 P **P** **15 18 10.8 -1.8**
comp=Z,60nm,0.9s,mb5.5,baz=218,slow=7.6,SNR=134
MJAR PcP PcP 15 19 20.2 +0.4
comp=Z,12nm,0.9s,baz=211,slow=4.8,SNR=4.9
MJAR ScP ScP 15 23 16.4 +0.3
comp=Z,1.5nm,0.8s,baz=221,slow=4.8,SNR=4.2
MJAR Matsushiro Arr 53.38 37 P **P** **15 18 10.8 -1.8**
MJAR 15 19 20.2
MJAR Matsushiro Arr 53.38 P **P** **15 18 10.8 -1.8**
MJAR PcP PcP 15 19 20.2 +0.4
MJAR ScP ScP 15 23 16.4 +0.3
MKAR Makanchi Array 53.59 344 P **P** **15 18 13.9 0.0**
comp=Z,73nm,0.7s,mb5.7,baz=146,slow=8.3,SNR=495
MKAR LR LR 15 45 57.7
comp=Z,352nm,19.6s,MS4.4,baz=160,slow=42
CAN Canberra 53.78 131 P **P** **15 18 16.7 +1.1**
CAN Canberra 53.78 131 *e*P **P** **15 18 15.9 +0.3**
ARMA Armidale 54.10 125 *e*P **P** **15 18 19.7 +1.7**
ZAK Zakamensk 54.54 2⇓ *i*P **P** **15 18 20.7 -0.1**
ZAK *e* 15 19 23.9
ZAK pmax pmax
comp=Z,33nm,1.0s,mb5.3
OPO Ambohidratompo 54.55 250 P **P** **15 18 23.4 +1.9**
comp=Z,5.6nm,0.7s,mb4.7,baz=90,slow=4.9,SNR=8.4
MDJ Mudanjiang 54.99 25 P **P** **15 18 23.6 -0.6**
MDJ XP sP 15 18 31.3 -3.9
MDJ PCP PcP 15 19 24.8 -0.9
MDJ S **S** **15 26 04.8 +0.1**
MDJ XS sS 15 26 15.8 -2.0
MDJ SS SS 15 29 51.3 +2.4
MDJ AMB AMB
comp=Z,60nm,1.0s,mb5.6
MDJ AMB AMB
comp=Z,180nm,7.9s
MDJ LR LR
comp=N,437nm,19.2s,MS4.8
MDJ LR LR
comp=E,696nm,18.0s,MS4.8
MDJ LR LR
comp=Z,613nm,21.6s,MS4.6
MDJ Mudanjiang 54.99 25 *e*P **P** **15 18 23.5 -0.6**
comp=Z,62nm,1.0s,mb5.6
MDJ *ep*P pP 15 18 31.1 -1.0
MDJ LR LR
comp=Z,638nm,21.0s,MS4.7
MOY Mondy 55.80 360 *e*P **P** **15 18 30.0 +0.2**
MOY pmax pmax
comp=Z,73nm,3.1s
TLY Talaya 55.85 2 P **P** **15 18 31.2 +1.0**
comp=Z,388nm,1.0s,mb6.4,SNR=9.3
TLY Talaya 55.85 2 *e*P **P** **15 18 30.6 +0.4**
TLY *e* 15 20 38.5
TLY *e*PPP 15 21 58.2
TLY *e*S **S** **15 26 14.7 -1.2**
TLY *e*PS 15 26 29.2
TLY pmax pmax
comp=Z,77nm,1.0s,mb5.7
TLY MLR MLR
comp=Z,1μm,16.0s,MS5.1
TLY Talaya 55.85 2 *e*P **P** **15 18 30.9 +0.7**
comp=Z,67nm,1.0s,mb5.6
TLY LR LR
comp=Z,972nm,19.0s,MS4.9
TAU Tasmania Unive 56.03 140 *e*P **P** **15 18 31.3 -0.5**
TAU MLR MLR
comp=Z,1μm,19.0s,MS4.9
IRK Irkutsk 56.44 2⇓ *i*P **P** **15 18 34.4 0.0**
IRK *e* 15 19 31.0
IRK *e* 15 20 40.2
IRK pmax pmax
comp=Z,119nm,1.9s,mb5.6
CIT Chita 57.13 9 *e*P **P** **15 18 39.4 +0.1**
CIT *e* pP 15 18 45.6 -1.7
CIT *e* 15 18 53.0
CIT *e* 15 19 30.4
CIT pmax pmax
comp=Z,188nm,1.5s,mb5.9
ABKT Ailbek 57.99 320 P **P** **15 18 45.7 0.0**
comp=Z,268nm,1.0s,mb6.2,SNR=13
KURK Kurchatov 58.18 343 P **P** **15 18 46.3 -0.4**
comp=Z,694nm,0.9s,mb6.7,SNR=77
KURK Kurchatov 58.18 343 P **P** **15 18 45.8 -0.9**
comp=Z,64nm,0.9s,mb5.6,baz=160,slow=6.3,SNR=69
KURK Kurchatov 58.18 343⇑ *i*P **P** **15 18 46.5 -0.2**
KURK pmax pmax
comp=Z,161nm,1.1s,mb6.0
KURK Kurchatov 58.18 343 *e*P **P** **15 18 46.1 -0.6**
comp=Z,122nm,1.0s,mb5.9
KURK LR LR
comp=Z,1μm,20.0s,MS5.0
HNR Honiara 58.51 98 *e*P **P** **15 18 47.9 -1.9**
HNR pmax pmax
comp=Z,404nm,1.1s,mb6.4
HNR MLR MLR
comp=Z,568nm,21.0s,MS4.7
HNR Honiara 58.51 98 *e*P **P** **15 18 47.9 -1.8**
comp=Z,404nm,1.1s,mb6.4
HNR LR LR
comp=Z,568nm,21.0s,MS4.7
KLR Kul'dur 59.60 23⇓ *e*P **P** **15 18 51.5 -5.2**
KLR pmax pmax
comp=E,90nm,1.4s
KLR pmax pmax
comp=Z,260nm,1.4s,mb6.1
ZAA0 Zalesovo Array 59.68 349 *e*P **P** **15 18 56.3 -0.7**
ZALV Zalesovo Beam 59.68 349 P **P** **15 18 56.6 -0.5**
comp=Z,153nm,1.0s,mb6.0,baz=160,slow=4.7,SNR=295
ZALV LR LR 15 48 39.3
comp=Z,463nm,18.5s,MS4.7,baz=23,slow=40
ERM Erimo 59.85 35 *e*P **P** **15 18 57.8 -0.7**
ERM pmax pmax
comp=Z,58nm,0.9s,mb5.6
ERM MLR MLR
comp=Z,345nm,19.0s,MS4.5
ERM Erimo 59.85 35 *e*P **P** **15 18 57.8 -0.7**
comp=Z,58nm,0.9s,mb5.6
ERM LR LR
comp=Z,345nm,19.0s,MS4.5
NVS Novosibirsk 60.83 348⇑ *i*P **P** **15 19 03.3 -1.7**
NVS *e*S **S** **15 27 19.2 -1.6**
NVS pmax pmax
comp=Z,75nm,1.3s,mb5.7
NVS pmax pmax
comp=N,66nm,1.5s
NVS pmax pmax
comp=E,37nm,1.3s
NVS smax
comp=E,28nm,1.5s
NVS smax
comp=N,14nm,1.6s
RDF Al-Radifah 61.17 306 *e*P **P** **15 19 07.3 -0.5**
baz=306
RDF AMb AMB 15 19 08.9
comp=Z,125nm,1.1s,mb6.0,baz=306
UMR Umm Al-Rimmam 61.29 307 *e*P **P** **15 19 08.3 -0.3**
baz=307
UMR AMb AMB 15 19 09.4
comp=Z,119nm,0.9s,mb6.0,baz=307
NAY Al-Naaiem 61.55 307 *e*P **P** **15 19 09.5 -0.8**
baz=307
NAY AMb AMB 15 19 11.3
comp=Z,47nm,1.0s,mb5.6,baz=307
MIB Mutribah 61.69 307 *e*P **P** **15 19 10.9 -0.4**
baz=307
MIB AMb AMB 15 19 12.6
comp=Z,135nm,0.9s,mb6.1,baz=307
RST Umm Al-Ruwaisa 61.84 307 *e*P **P** **15 19 11.3 -1.0**
baz=307
RST AMb AMB 15 19 13.2
comp=Z,105nm,1.0s,mb5.9,baz=307
CASY Casey 62.17 176 *e*P **P** **15 19 13.5 -0.3**
CASY LR LR
comp=Z,923nm,20.0s,MS4.9
BOD Bodaibo 62.82 8 *e*P **P** **15 19 17.7 -0.6**
BOD pmax pmax
comp=Z,72nm,1.1s,mb5.7
BRVK Borovoye 62.84 340 P **P** **15 19 17.4 -1.1**
comp=Z,337nm,0.9s,mb6.5,SNR=21
BRVK Borovoye 62.84 340 *e*P **P** **15 19 17.5 -1.0**
BRVK *e**PP pP 15 19 24.6 -2.0
BRVK pmax pmax
comp=Z,52nm,0.9s,mb5.7
BRVK MLR MLR
comp=Z,626nm,20.0s,MS4.8
BRVK Borovoye 62.84 340 *e*P **P** **15 19 17.5 -1.0**
comp=Z,52nm,0.9s,mb5.7
BRVK *ep*P pP 15 19 24.6 -2.0
BRVK LR LR
comp=Z,626nm,20.0s,MS4.8
YSS Yuzh-Sakhalins 62.86 31⇑ *i*P **P** **15 19 18.0 -0.8**
YSS *e* pP 15 19 25.0 -1.8
YSS pmax pmax
comp=Z,230nm,0.9s,mb6.3
YSS MLR MLR
comp=Z,600nm,20.0s,MS4.8
YSS Yuzh-Sakhalins 62.86 31 *e*P **P** **15 19 17.9 -0.8**
comp=Z,259nm,1.1s,mb6.3
YSS *ep*P pP 15 19 26.0 -0.8
YSS LR LR
comp=Z,132nm,22.0s,MS4.1
KMBO Kilima Mbogo 63.92 271 P **P** **15 19 27.9 +1.5**
comp=Z,0.7nm,0.3s,baz=68,slow=11,SNR=4.5
KMBO LR LR 15 45 39.5
comp=Z,237nm,19.7s,MS4.4,baz=128,slow=34
KMBO Kilima Mbogo 63.92 271 *e*P **P** **15 19 27.6 +1.1**
KMBO *ep*P pP 15 19 34.0 -0.5
KMBO LR LR
comp=Z,312nm,21.0s,MS4.5
CLNS Chul'man 63.97 14 *e*P **P** **15 19 25.6 -0.3**
CLNS pmax pmax
comp=Z,58nm,0.9s,mb5.6
CLNS pmax pmax
comp=E,27nm,1.0s
CLNS pmax pmax
comp=N,38nm,0.8s
BHD Baghdad 65.39 310 *ex* x 15 19 40.0
BHD *ex* x 15 28 16.0
AKTK Aktyubinsk 65.97 331 P **P** **15 19 38.2 -0.8**
AKTO Aktyubinsk 65.97 331 P **P** **15 19 38.2 -0.8**
comp=N,20nm,1.0s,mb5.1,baz=132,slow=7.1,SNR=48
MAK Makhachkala 67.51 320 *e*P **P** **15 19 46.0 -3.0**
MAK *e* 15 20 22.4
MAK *e*S S 15 28 42.9 -1.1
MAK *i* 15 29 38.9
MAK pmax pmax
comp=Z,508nm,1.5s,mb6.3
GNI Garni 68.02 316 P **P** **15 19 52.7 +0.3**
comp=Z,3.6nm,0.3s,mb4.9,baz=63,slow=6.2,SNR=6.9
GNI LR LR 15 50 56.4
comp=Z,147nm,20.7s,MS4.2,baz=316,slow=37
GNI Garni 68.02 316 P **P** **15 19 53.1 +0.7**
GNI pmax pmax
comp=Z,30nm,1.0s
GNI Garni 68.02 316 *e*P **P** **15 19 52.3 0.0**
comp=Z,30nm,0.9s,mb5.3
GNI LR LR
comp=Z,288nm,22.0s,MS4.5
MAW Mawson 68.32 195 *e*P **P** **15 19 54.5 +0.8**
comp=Z,8.9nm,0.8s,mb4.8
MAW Mawson 68.32 195 P **P** **15 19 54.2 +0.5**
comp=Z,11nm,0.8s,mb4.9,baz=23,slow=5.9,SNR=26
MAW LR LR 15 42 45.4
comp=Z,836nm,18.8s,MS5.0,baz=47,slow=30
MAW Mawson 68.32 195 *e*P **P** **15 19 54.5 +0.8**
MAW pmax pmax
comp=Z,9.0nm,0.8s
MTA Mtatsminda 68.68 318 P **P** **15 19 57.6 +1.1**
TBLG Delisi 68.73 318 P **P** **15 19 57.8 +1.0**
TBLG Delisi 68.73 318 P **P** **15 19 57.8 +1.1**
SVE Sverdlovsk 69.29 338⇓ *e*P **P** **15 19 59.9 +0.1**
SVE *e* 15 22 38.9
SVE *e* 15 29 49.9
SVE *e*SS SS 15 33 29.8 -2.0
SVE pmax pmax
comp=Z,168nm,1.0s,mb5.9
SVE MLR MLR
comp=Z,898nm,22.0s,MS5.0
YAK Yakutsk 69.71 14*c i*P **P** **15 20 00.9 -1.5**
YAK pmax pmax
comp=Z,258nm,1.0s,mb6.1
YAK Yakutsk 69.71 14 *e*P **P** **15 20 00.7 -1.7**
comp=Z,238nm,0.9s,mb6.1
YAK *ep*P pP 15 20 09.0 -1.5
YAK LR LR
comp=Z,592nm,20.0s,MS4.8
ARU Arti 69.81 336 P **P** **15 20 02.2 -0.9**
comp=Z,449nm,1.1s,mb6.3,SNR=22
ARU Arti 69.81 336*c i*P **P** **15 20 02.6 -0.5**
ARU *e* 15 20 23.1
ARU *e* 15 22 35.8
ARU *e*PPP 15 24 15.5
ARU *e*S S 15 29 10.1 -0.7
ARU pmax pmax
comp=Z,157nm,1.7s,mb5.7
ARU Arti 69.81 336 *e*P **P** **15 20 02.5 -0.6**
comp=Z,79nm,1.0s,mb5.6
ARU *ep*P pP 15 20 09.6 -1.7
ARU LR LR
comp=Z,627nm,20.0s,MS4.9
ONI Oni 69.97 318 P **P** **15 20 05.4 +1.0**
EIL Elat 71.77 303 LR LR 15 53 16.2
comp=Z,776nm,18.4s,MS5.0,baz=292,slow=37
MALT Malatya 71.78 313⇑ P **P** **15 20 14.1 -1.4**
MALT Malatya 71.78 313 *e*P **P** **15 20 13.6 -1.9**
comp=Z,28nm,1.0s,mb5.2
MALT LR LR
comp=Z,340nm,19.0s,MS4.6
SKR Severo-Kuril's 72.16 33 *e*P **P** **15 20 15.8 -1.7**
SKR *e* 15 20 28.0
SKR pmax pmax
comp=N,110nm,1.0s
SKR pmax pmax
comp=E,110nm,1.0s
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.0
MMAI Mount Meron Ar 72.36 306 LR LR 15 53 27.9
comp=Z,770nm,18.4s,MS5.0,baz=95,slow=37
LSZ Lusaka 72.47 255 P **P** **15 20 20.2 +0.2**
comp=Z,5.2nm,0.9s,mb4.5,baz=64,slow=6.5,SNR=11
LSZ Lusaka 72.47 255 *e*P **P** **15 20 19.7 -0.4**
LSZ pmax pmax
comp=Z,18nm,1.3s,mb4.8
LSZ MLR MLR
comp=Z,671nm,20.0s,MS4.9
LSZ Lusaka 72.47 255 *e*P **P** **15 20 19.7 -0.4**
comp=Z,18nm,1.3s,mb4.8
LSZ LR LR
comp=Z,671nm,20.0s,MS4.9
SOC Sochi 72.87 318*c i*P **P** **15 20 21.0 -0.9**
SOC *e* 15 20 35.1
SOC *e* 15 23 03.0
SOC *e*S S 15 29 36.6 -10
SOC *e* 15 30 12.6
SOC pmax pmax
comp=Z,51nm,0.8s,mb5.5
PETK Petropavlovsk- 74.24 32 P **P** **15 20 28.6 -1.1**
comp=Z,22nm,0.8s,mb5.2,baz=208,slow=4.2,SNR=50
PETK LR LR 15 58 20.9
comp=Z,180nm,18.1s,MS4.4,baz=254,slow=40
CSS Prodhromos 74.58 308 *e*P **P** **15 20 32.1 0.0**
comp=Z,53nm,0.6s,mb5.6
CSS LR LR
comp=Z,300nm,20.0s,MS4.6
PET Petropavlovsk 74.70 32⇑ *i*P **P** **15 20 31.4 -1.0**
PET *e* 15 20 47.8
PET *e* 15 23 24.1
PET *e*S S 15 30 03.3 -3.7
PET pmax pmax
comp=Z,131nm,0.9s,mb5.9
PET pmax pmax
comp=Z,56nm,0.8s,mb5.5
PET MLR MLR
comp=Z,200nm,21.0s,MS4.4
PET Petropavlovsk 74.70 32 *e*P **P** **15 20 31.2 -1.2**
comp=Z,70nm,0.8s,mb5.6
PET *ep*P pP 15 20 39.2 -1.4
PET LR LR
comp=Z,296nm,21.0s,MS4.6
SNZO South Karori 74.78 132 PFAKE 15 20 40.0 +6.8
SNZO LR LR
comp=Z,952nm,21.0s,MS5.1
BOSA Boshof 75.57 242 P **P** **15 20 38.3 +0.3**
comp=Z,7.4nm,1.0s,mb4.6,baz=102,slow=14,SNR=6.3
BOSA LR LR 15 48 19.5
comp=Z,597nm,18.5s,MS4.9,baz=100,slow=31
SYO Syowa Base 76.04 199⇓ *e*P **P** **15 20 38.8 -1.1**
SYO Syowa Base 76.04 199⇓ *ep*P pP 15 20 45.1 -3.0
SYO Syowa Base 76.04 199⇑ *e*PcP PcP 15 20 53.0 +1.0
VSR Storozhevoye 76.36 325 *e*P **P** **15 20 40.7 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,8.0nm,1.0s
VSR pmax pmax
comp=E,30nm,1.1s
ANTO Ankara 76.43 313 PFAKE 15 20 50.0 +7.4
ANTO LR LR
comp=Z,341nm,20.0s,MS4.7
SIM Simferopol' 77.12 318*c i*P **P** **15 20 46.1 -0.3**
SIM pmax pmax
comp=Z,36nm,0.7s,mb5.4
FUNA Funafuti 77.54 98 PFAKE 15 21 00.0 +11
FUNA LR LR
comp=Z,11μm,22.0s,MS6.1
ISP Isparta 77.56 310 PFAKE 15 21 00.0 +11
ISP LR LR
comp=Z,272nm,20.0s,MS4.6
TIXI Tiksi 77.98 9*c i*P **P** **15 20 48.9 -1.8**
TIXI pmax pmax
comp=Z,72nm,1.0s,mb5.6
TIXI MLR MLR
comp=Z,1μm,20.0s,MS5.2
TIXI Tiksi 77.98 9 *e*P **P** **15 20 48.9 -1.8**
comp=Z,58nm,1.1s,mb5.4
TIXI LR LR
comp=Z,984nm,19.0s,MS5.2
MOS Moscow 79.10 329 *e*P **P** **15 20 55.9 -1.2**
MOS pmax pmax
comp=Z,80nm,0.9s,mb5.7
OBN Obninsk 79.39 328*k e*P **P** **15 20 58.1 -0.7**
OBN *e* pP 15 21 06.6 -0.4
OBN *e* 15 21 09.5
OBN 15 23 58.2
OBN *e*S S 15 30 52.8 -5.2
OBN *e*SS SS 15 36 02.8 -2.9
OBN pmax pmax
comp=Z,103nm,1.4s,mb5.6
OBN MLR MLR
comp=Z,400nm,21.0s,MS4.7
OBN Obninsk 79.39 328 *e*P **P** **15 20 58.0 -0.7**
comp=Z,213nm,1.6s,mb5.8
OBN LR LR
comp=Z,565nm,20.0s,MS4.9
SBA Scott Base 80.74 169 *e*P **P** **15 21 05.9 +0.2**
SBA *e**PP pP 15 21 14.3 +0.4
SBA pmax pmax
comp=Z,17nm,1.1s,mb4.9
SBA MLR MLR
comp=Z,440nm,20.0s,MS4.8
SBA Scott Base 80.74 169 *e*P **P** **15 21 05.9 +0.2**
comp=Z,17nm,1.1s,mb4.9
SBA *ep*P pP 15 21 14.3 +0.3
SBA LR LR
comp=Z,440nm,20.0s,MS4.8
SANT Santorini 81.14 308 PFAKE 15 21 20.0 +11
SANT LR LR
comp=Z,267nm,19.0s,MS4.6
IDI Anoyia 81.37 306 LR LR 15 59 20.8
comp=Z,216nm,20.6s,MS4.5,baz=306,slow=37
AKASG Malin Array Be 82.05 322 P **P** **15 21 12.6 -0.5**
comp=Z,10nm,0.8s,mb4.8,baz=84,slow=4.0,SNR=23
AKASG PP PP 15 24 18.8 -2.4
comp=Z,0.3nm,0.3s,baz=94,slow=7.1,SNR=4.6
KIEV Kiev 82.06 322 PFAKE 15 21 20.0 +6.9
KIEV LR LR
comp=Z,264nm,19.0s,MS4.6
VRI Vrincioaia 82.36 317⇑ *i*P **P** **15 21 15.4 +0.6**
VRI Vrincioaia 82.36 317⇑ P **P** **15 21 15.4 +0.6**
TSUM Tsumeb 82.54 251 PFAKE 15 21 30.0 +14
TSUM LR LR
comp=Z,606nm,20.0s,MS5.0
MLR Muntele Rosu 82.80 317 LR LR 16 05 34.5
comp=Z,404nm,18.2s,MS4.8,baz=20,slow=41
MLR Muntele Rosu 82.80 317⇑ *i*P **P** **15 21 17.5 +0.4**
MLR Muntele Rosu 82.80 317⇑ P **P** **15 21 17.5 +0.3**
BURAR Bucovina Array 83.79 319⇑ *i*P **P** **15 21 23.2 +1.0**
BURAR Bucovina Array 83.79 319⇑ P **P** **15 21 23.2 +1.1**
BUR08 Bucovina Ar. S 83.80 319 *e*P **P** **15 21 22.9 +0.7**
JOF Joensuu 84.83 334 *ep* **P** **15 21 25.9 -1.2**
comp=Z,22nm,0.9s,mb5.3
JOF Joensuu 84.83 334 *e*P **P** **15 21 25.9 -1.2**
JOF pmax pmax
comp=Z,22nm,0.9s,mb5.3
BILL Bilibino 84.94 20*c i*P **P** **15 21 26.8 -0.8**
BILL pmax pmax
comp=Z,76nm,1.4s,mb5.6
BILL Bilibino 84.94 20 *e*P **P** **15 21 26.7 -0.8**
comp=Z,53nm,1.2s,mb5.5
BILL LR LR
comp=Z,609nm,20.0s,MS5.0
LVV L'vov 85.05 321 *i* P **P** **15 21 27.8 -0.7**
DRGR 85.28 318⇑ *i*P **P** **15 21 30.4 +0.7**
DRGR 85.28 318⇑ P **P** **15 21 30.4 +0.6**
LVZ Lovozero 85.38 340⇑ *e*P **P** **15 21 29.7 0.0**
LVZ Lovozero 85.38 340 PFAKE 15 21 40.0 +10
LVZ LR LR
comp=Z,674nm,21.0s,MS5.0
APA Apatity 85.69 339⇑ *i*P **P** **15 21 30.4 -0.9**
APA *i* pP 15 21 36.4 -3.2
APA pmax pmax
comp=Z,50nm,1.2s,mb5.6
APA MLR MLR
comp=Z,1μm,22.0s,MS5.2
MAIT Maitri 85.74 199 *e*P **P** **15 21 33.8 +2.2**
BZS Buzias 85.80 316⇑ *i*P **P** **15 21 32.3 -0.1**
BZS Buzias 85.80 316⇑ P **P** **15 21 32.3 0.0**
KWP Kalwaria 85.85 320 *e*P **P** **15 21 32.7 +0.2**
KWP Kalwaria 85.85 320 *e*P **P** **15 21 32.8 +0.3**
KWP pmax pmax
comp=Z,52nm,1.4s,mb5.6
KWP Kalwaria 85.85 320 *e*P **P** **15 21 32.7 +0.2**
KWP LR LR
comp=Z,477nm,22.0s,MS4.8
UZH Uzhgorod 85.92 319 *e*P **P** **15 21 24.8 -8.1**
UZH *e* pP 15 21 33.0 -8.2
KOLS Kolonicke sedl 85.99 320 *e*P **P** **15 21 34.0 +0.8**
TIR Tirane 86.34 312 PFAKE 15 21 50.0 +15
TIR LR LR
comp=Z,353nm,19.0s,MS4.8
SUW Suwalki 86.47 325 *e*P **P** **15 21 35.4 0.0**
SUW Suwalki 86.47 325 *e*P **P** **15 21 35.4 0.0**
CRVS Cervenica-Dubn 86.51 319 *e*P **P** **15 21 35.1 -0.7**
STHS Stebnicka Huta 86.74 320 *e*P **P** **15 21 37.7 +0.8**
STHS pmax pmax
comp=Z,12nm,0.9s,mb5.1
STHS Stebnicka Huta 86.74 320 *e*P **P** **15 21 37.7 +0.8**
comp=Z,12nm,0.9s,mb5.1
KAF Kangasniemi 86.79 333 *ep* **P** **15 21 35.2 -1.7**
comp=Z,35nm,0.9s,mb5.6,baz=100,slow=4.4
KAF Kangasniemi 86.79 333 *e*P **P** **15 21 35.2 -1.7**
KAF pmax pmax
comp=Z,35nm,0.9s,mb5.6
KECS Kecovo 87.07 319 *i* P **P** **15 21 38.5 0.0**
KECS pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
KECS Kecovo 87.07 319 *i* P **P** **15 21 38.5 0.0**
comp=Z,6.2nm,0.9s,mb4.8
PSZ Piszkesteto 87.37 318 *e*P **P** **15 21 39.5 -0.5**
PSZ pmax pmax
comp=Z,12nm,1.1s,mb5.0
PSZ MLR MLR
comp=Z,179nm,21.0s,MS4.5
PSZ Piszkesteto 87.37 318⇑ *e*P **P** **15 21 40.2 +0.2**
PSZ Piszkesteto 87.37 318⇑ *i*P **P** **15 21 40.1 +0.1**
PSZ Piszkesteto 87.37 318 *e*P **P** **15 21 39.5 -0.5**
comp=Z,12nm,1.1s,mb5.0
PSZ LR LR
comp=Z,179nm,21.0s,MS4.5
OJC Ojcow 87.80 321 *e*P **P** **15 21 41.0 -1.0**
OJC *ep*P pP 15 21 44.0 -6.3
PKSM Moragy 87.95 316⇑ *i*P **P** **15 21 42.6 -0.2**
PKSM Moragy 87.95 316⇑ P **P** **15 21 42.6 -0.2**
VYHS Vyhne 88.16 319 *e*P **P** **15 21 43.8 +0.1**
TIP Timpagrande 88.39 309 PFAKE 15 22 00.0 +15
TIP LR LR
comp=Z,182nm,20.0s,MS4.5
KOLL Kolacno 88.45 319 *e*P **P** **15 21 45.5 +0.4**
KEV Kevo 88.62 340 *ep* **P** **15 21 43.6 -1.9**
comp=Z,47nm,1.0s,mb5.8
KEV Kevo 88.62 340 *e*P **P** **15 21 43.6 -1.9**
KEV pmax pmax
comp=Z,47nm,1.0s,mb5.8
OKC Ostrava-Krasne 88.80 320 *e*P **P** **15 21 47.0 +0.3**
OKC AMS AMS 16 09 20.0
comp=Z,200nm,14.3s
ARCES ARCESS Array B 89.06 340 P **P** **15 21 47.8 +0.3**

comp=Z,30nm,0.8s,mb5.7,baz=106,slow=4.3,SNR=41
MODS Modra-Piesok 89.17 318 *e*P **P 15 21 49.1 +0.6**
MORC Moravsky Berou 89.18 320 *e*P **P 15 21 48.7 +0.2**
MORC *e* pP 15 21 56.1 -0.8
MORC pmax pmax
comp=Z,22nm,1.0s,mb5.4
MORC Moravsky Berou 89.18 320⇑ *i*P **P 15 21 48.9 +0.4**
MORC Moravsky Berou 89.18 320 *e*P **P 15 21 48.7 +0.1**
comp=Z,22nm,1.0s,mb5.4
MORC *e* pP 15 21 56.1 -0.8
CUC Castrocucco 89.21 310 PFAKE 15 22 00.0 +11
CUC LR LR
comp=Z,274nm,19.0s,MS4.7
ZST Bratislava 89.26 318 *e*P **P 15 21 49.3 +0.4**
comp=Z,18nm,1.0s,mb5.3
ZST LR LR
comp=Z,200nm,18.0s,MS4.6
DPC Dobruska-Polom 90.03 320 *e*P **P 15 21 53.4 +0.9**
DPC *e*pP pP 15 22 03.1 +2.3
CONA Conrad Observa 90.05 318⇑ *i*P **P 15 21 52.6 -0.1**
comp=Z,11nm,1.4s,mb5.0
CSNA Conrad Observa 90.06 318⇓ *i*P **P 15 21 52.6 -0.1**
comp=Z,9.7nm,1.4s,mb5.0
KSP Ksiaz 90.11 321 *e*P **P 15 21 54.0 +1.1**
KSP Ksiaz 90.11 321 *e*P **P 15 21 52.6 -0.2**
KSP *e*S S 15 32 46.0 +1.3
ARSA Arzberg 90.21 317⇑ *i*P **P 15 21 53.8 +0.4**
comp=Z,22nm,1.2s,mb5.3
ARSA Arzberg 90.21 317⇑ *i*PcP **P 15 21 53.8 +0.4**
comp=Z,22nm,1.2s,mb5.3
BOJS Bojanci 90.21 315 *i* P **P 15 21 53.5 +0.1**
UPC Upice 90.25 320 *e*P **P 15 21 53.9 +0.4**
UPC *e*pP pP 15 22 04.1 +2.3
SNAA Sanae 90.29 198 *e*P **P 15 21 54.5 +1.2**
SNAA *e* 15 21 57.8
SNAA *e* pP 15 22 03.8 +2.2
SNAA *e* 15 22 07.1
SNAA Sanae 90.29 198 *e*P **P 15 21 54.1 +0.8**
SNAA *e* pP 15 22 02.3 +0.7
SNAA pmax pmax
comp=Z,27nm,1.1s
SNAA Sanae 90.29 198 *e*P **P 15 21 54.1 +0.8**
comp=Z,27nm,1.1s,mb5.5
SNAA *e* pP 15 22 02.3 +0.6
PERS Pernice 90.42 317 *i* P **P 15 21 54.7 +0.3**
TREC Trest 90.45 319 *e*P **P 15 21 54.8 +0.3**
SOKA Soboth 90.48 317⇑ *i*P **P 15 21 55.1 +0.4**
comp=Z,28nm,1.1s,mb5.5
SOKA Soboth 90.48 317⇑ *i*PcP **P 15 21 55.1 +0.4**
comp=Z,28nm,1.1s,mb5.5
LJU Ljubljana 90.77 316 *i* P **P 15 21 56.0 0.0**
JAVS Javornik 91.08 316 *i* P **P 15 21 57.1 -0.3**
PRU Pruhonice 91.13 320 *e*P **P 15 21 57.8 +0.2**
PRU AMS AMS 16 09 40.0
comp=Z,300nm,16.6s
PVCC Panska Ves 91.16 320 *e*P **P 15 21 58.4 +0.6**
PVCC *e*pP pP 15 22 04.9 -1.2
PVCC AMS AMS 16 09 40.0
comp=Z,200nm,17.2s
PVCC Panska Ves 91.16 320 *e*P **P 15 21 58.4 +0.6**
comp=Z,197nm,0.3s
PVCC *e* pP 15 22 04.9 -1.2
PVCC LR LR
comp=Z,200nm,17.2s,MS4.6
GEC2 GERESS Array S 91.58 319 *e*P **P 15 22 00.0 +0.3**
GEC2 pmax pmax
comp=Z,19nm,1.0s,mb5.4
GEC2 GERESS Array S 91.58 319 *e*P **P 15 22 00.0 +0.3**
comp=Z,19nm,1.0s,mb5.4
GERES GERESS Array B 91.58 319 P **P 15 22 00.4 +0.6**
comp=Z,8.3nm,0.9s,mb5.1,baz=97,slow=3.1,SNR=47
BRG Berggiesshubel 91.59 321 *e*P **P 15 22 00.0 +0.3**
BRG *e* 15 22 15.2
BRG S S 15 32 56.0 -2.3
BRG pmax pmax
comp=Z,22nm,1.7s,mb5.2
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.8
BRG MLR MLR
comp=N,124nm,17.4s,MS4.6
BRG MLR MLR
comp=E,165nm,21.8s,MS4.6
BRG MLR MLR
comp=Z,173nm,21.9s,MS4.5
BRG Berggiesshubel 91.59 321 *e*P **P 15 21 59.6 -0.1**
comp=Z,13nm,0.9s,mb5.3
BRG Berggiesshubel 91.59 321 *e*P **P 15 22 00.0 +0.3**
comp=Z,37nm,1.7s,mb5.4
BRG *e* 15 22 15.2
comp=Z,12nm,1.3s
BRG S S 15 32 56.0 -2.3
BRG
comp=N,207nm,17.4s
BRG
comp=E,276nm,21.8s
BRG
comp=Z,289nm,21.9s
BRG Berggiesshubel 91.59 321 *e*P **P 15 22 00.0 +0.3**
comp=Z,22nm,1.7s,mb5.2
BRG *e* 15 22 15.2
BRG S S 15 32 56.0 -2.3
BRG LR LR
comp=Z,170nm,21.9s,MS4.5
KHC Kasperske Hory 91.68 319 *e*P **P 15 22 00.1 -0.1**
KHC *e*pP pP 15 22 08.5 0.0
KHC AMS AMS 16 08 20.0
comp=Z,200nm,20.8s
VNA2 Neumayer--Watz 91.91 198 *e*P **P 15 22 02.1 +1.2**
VNA2 *e* 15 22 05.3
VNA2 *e* pP 15 22 11.5 +2.3
VNA2 *e* 15 22 14.7
RJOB Jochberg 92.09 318 *e*P **P 15 22 01.7 -0.4**
comp=Z,12nm,1.2s,mb5.1
WET Wettzell 92.14 319 *e*P **P 15 22 02.6 +0.3**
WET pmax pmax
comp=Z,17nm,1.1s,mb5.3
WET Wettzell 92.14 319 *e*P **P 15 22 02.6 +0.3**
comp=Z,17nm,1.1s,mb5.3
CLL Collm 92.22 321 *i* P **P 15 22 02.5 -0.1**
CLL *e**PP pP 15 22 11.0 0.0
CLL pmax pmax
comp=Z,18nm,1.4s,mb5.2
CLL MLR MLR
comp=Z,200nm,20.5s,MS4.5
CLL Collm 92.22 321 *e*P **P 15 22 02.4 -0.2**
comp=Z,18nm,1.4s,mb5.2
CLL Collm 92.22 321 *i* P **P 15 22 02.5 -0.1**
comp=Z,18nm,1.4s,mb5.2
CLL *e*pP pP 15 22 11.0 0.0
CLL *e*PP PP 15 25 42.0 -1.1
CLL *e*S S 15 33 11.0 +7.1
CLL *e*PS PS 15 34 27.0 +9.5
CLL *ex* x 15 36 25.0
CLL *e*SSSS 15 46 24.0
CLL Collm 92.22 321 *i* P **P 15 22 02.5 -0.1**
comp=Z,18nm,1.4s,mb5.2
CLL *e*pP pP 15 22 11.0 0.0
CLL *e*S S 15 33 11.0 +7.1
CLL LR LR
comp=Z,200nm,20.5s,MS4.5
VNA1 Neumayer--Stat 92.27 198 *e*P **P 15 22 04.3 +1.8**
VNA1 *e* 15 22 07.1
VNA1 *e* pP 15 22 13.3 +2.4
VNA1 *e* 15 22 16.4
NKC Novy Kostel 92.49 320 *e*P **P 15 22 04.5 +0.6**
VNA3 Neumayer Olymp 92.50 198 *e*P **P 15 22 03.8 +0.2**
VNA3 *e* 15 22 06.9
VNA3 *e* 15 22 13.7
VNA3 *e* 15 22 17.1
TANN Tannenbergstha 92.50 320 *e*P **P 15 22 03.3 -0.6**
comp=Z,10.0nm,1.2s,mb5.0
ROTZ Rotzenmuhle 92.62 320 *e*P **P 15 22 04.9 +0.4**
comp=Z,11nm,1.1s,mb5.2
MANZ Manzenberg 92.70 320 *e*P **P 15 22 05.4 +0.5**
comp=Z,26nm,1.3s,mb5.5
MOX Moxa 93.05 320 *e*P **P 15 22 06.7 +0.2**
comp=Z,15nm,1.5s,mb5.2
MOX Moxa 93.05 320 *e*P **P 15 22 06.7 +0.2**
MOX pmax pmax
comp=Z,15nm,1.5s,mb5.2
MOX Moxa 93.05 320 *e*P **P 15 22 06.2 -0.3**
comp=Z,12nm,1.3s,mb5.2
FUR Furstenfeldbru 93.14 318 *e*P **P 15 22 07.3 +0.3**
FUR pmax pmax
comp=Z,15nm,0.8s,mb5.5
FUR Furstenfeldbru 93.14 318 *e*P **P 15 22 07.3 +0.3**
comp=Z,15nm,0.8s,mb5.5
GRA2 Grafenberg Arr 93.16 319 *e*P **P 15 22 07.2 +0.2**
comp=Z,14nm,1.0s,mb5.3
VLC Villacollemand 93.56 314 PFAKE 15 22 20.0 +11
VLC LR LR
comp=Z,283nm,21.0s,MS4.7
CLZ Clausthal 93.88 322 *e*P **P 15 22 10.4 +0.1**
CLZ pmax pmax
comp=Z,12nm,0.9s,mb5.3
CLZ Clausthal 93.88 322 *e*P **P 15 22 10.4 +0.1**
comp=Z,12nm,0.9s,mb5.3
BSEG Bad Segeberg 93.99 324 *e*P **P 15 22 11.0 +0.3**
BSEG pmax pmax
comp=Z,20nm,1.4s,mb5.3
BSEG Bad Segeberg 93.99 324 *e*P **P 15 22 11.0 +0.3**
comp=Z,20nm,1.4s,mb5.3
NRDL Niedersach Rie 94.07 322 *e*P **P 15 22 11.2 +0.1**
comp=Z,20nm,1.5s,mb5.3
KBS Kingsbay 94.09 349 PFAKE 15 22 20.0 +9.3
KBS LR LR
comp=Z,633nm,19.0s,MS5.1
VSL Villasalto 94.12 309 PFAKE 15 22 20.0 +8.3
VSL LR LR
comp=Z,133nm,20.0s,MS4.4
TUE Stuetta 94.38 316 PFAKE 15 22 20.0 +7.3
TUE LR LR
comp=Z,259nm,20.0s,MS4.7
BFO Black Forest 95.11 318 PFAKE 15 22 30.0 +14
BFO LR LR
comp=Z,247nm,22.0s,MS4.6
BUG Bochum--Univer 95.81 321 *e*P **P 15 22 19.6 +0.5**
comp=Z,8.0nm,0.8s,mb5.2
BNI Bardonecchia 96.23 315 PFAKE 15 22 30.0 +8.8
BNI LR LR
comp=Z,447nm,19.0s,MS5.0
WLF Walferdange 96.55 319 PFAKE 15 22 30.0 +7.5
WLF LR LR
comp=Z,588nm,19.0s,MS5.1
TORD Torodi Ar. Bea 100.20 283 P Pdif 15 22 39.6 +0.8
comp=Z,0.4nm,0.8s,baz=87,slow=7.4,SNR=3.7
KDAK Kodiak Island 102.30 32 PFAKE 15 23 00.0 +12
KDAK LR LR
comp=Z,100nm,20.0s,MS4.3
COLA College 102.74 24 PFAKE 15 23 00.0 +10
COLA LR LR
comp=Z,261nm,20.0s,MS4.8
PMR Palmer 103.11 28 PFAKE 15 23 00.0 +8.3
PMR LR LR
comp=Z,602nm,19.0s,MS5.1
PAB San Pablo 104.72 310 PFAKE 15 23 10.0 +11
PAB LR LR
comp=Z,232nm,20.0s,MS4.7
SFS San Fernando 106.54 307 PFAKE 15 27 30.0 +12
SFS LR LR
comp=Z,488nm,22.0s,MS5.0
PPT Papeete 106.92 110 *e*LR LR 15 58 45.4
comp=Z,314nm,22.8s
MTE Manteigas 107.04 311 PFAKE 15 27 30.0 +11
MTE LR LR
comp=Z,407nm,20.0s,MS5.0
RTC Rabat Centre 107.36 304 PFAKE 15 27 30.0 +10
RTC LR LR
comp=Z,273nm,21.0s,MS4.8
SIT Sitka 111.33 29 PFAKE 15 27 40.0 +13
SIT LR LR
comp=Z,431nm,20.0s,MS5.0
WRAK Wrangell Islan 113.08 29 PFAKE 15 27 40.0 +10
WRAK LR LR
comp=Z,637nm,20.0s,MS5.2
YKA Yellowknife Ar 116.25 18 PKP PKPdf 15 27 34.8 -1.0
comp=Z,2.9nm,0.9s,baz=323,slow=2.6,SNR=13
YKA PP PP 15 28 40.8 -0.3
comp=Z,1.7nm,0.8s,baz=323,slow=7.4,SNR=6.2
YKA Yellowknife Ar 116.25 18 PKP PKPdf 15 27 34.9 -1.0
YKA PP PP 15 28 40.8 -0.3
RKT Rikitea 118.81 119 *e*PS PS 15 38 48.9 +0.5
comp=Z,148nm,25.8s
RKT *e*SS SS 15 45 21.6 +3.1
comp=Z,410nm,29.8s
RKT Rikitea 118.81 119 *e*LR LR 16 03 57.8
comp=Z,682nm,26.5s
EFI East Falkland 121.45 195 PFAKE 15 28 00.0 +14
EFI LR LR
comp=Z,1μm,21.0s,MS5.5
NLWA Neilton Lookou 122.27 35 PFAKE 15 28 00.0 +12
NLWA LR LR
comp=Z,430nm,21.0s,MS5.1
MBW Mount Baker 122.56 32 P PKPdf 15 27 48.8 +0.4
CMW Cultus Mountai 122.66 33 P PKPdf 15 27 49.3 +0.6
JCW Jim Creek 122.89 33 *e*PKPdf PKPdf 15 27 49.0 -0.1
RPW Rockport 122.97 33 P PKPdf 15 27 49.3 +0.1
MPOR Mary's Peak 124.02 37 P PKPdf 15 27 52.6 +1.2
ETW Entiat 124.11 33 *e*PKPdf PKPdf 15 27 51.2 -0.3
COR Corvallis 124.13 37 PFAKE 15 28 00.0 +8.4
COR LR LR
comp=Z,471nm,22.0s,MS5.1
TBM Table Mountain 124.22 33 P PKPdf 15 27 52.2 +0.5
KEBM Edson Butte 124.39 39 *e*PKPdf PKPdf 15 27 52.3 +0.2
EBG Ellensburg 124.39 34 P PKPdf 15 27 52.8 +0.7
OD2 Odessa Site #2 125.11 32 *e*PKPdf PKPdf 15 27 53.0 -0.4
RSW Rattlesnake Hi 125.24 34 *e*PKPdf PKPdf 15 27 54.4 +0.7
HAWA Hanford 125.28 34 *e*PKPdf PKPdf 15 27 53.7 0.0
HAWA LR LR
comp=Z,701nm,22.0s,MS5.3
NEW Newport 125.37 31 *e*PKIKP PKPdf 15 27 53.4 -0.5
NEW MLR MLR
comp=Z,646nm,22.0s
HUMO Hull Mountain 125.39 39 *e*PKPdf PKPdf 15 27 54.3 +0.3
HUMO LR LR
comp=Z,374nm,19.0s,MS5.1
VTHM Trough 125.41 35 P PKPdf 15 27 54.9 +0.8
YBH Yreka Blue Hor 126.00 40 *e*PKIKP PKPdf 15 27 54.8 -0.5
YBH MLR MLR
comp=Z,366nm,20.0s
LNOR Lincton Mounta 126.28 33 PKIKP PKPdf 15 27 55.9 +0.2
LNOR Lincton Mounta 126.28 33 *e*PKPdf PKPdf 15 27 55.2 -0.5
LHEM Herd Peak 126.37 40 P PKPdf 15 27 56.9 +0.9
FFC Flin Flon 126.38 16 PFAKE 15 28 10.0 +14
FFC LR LR
comp=Z,944nm,21.0s,MS5.4
WALA Waterton Lakes 126.40 28 *e*PKPdf PKPdf 15 27 55.2 -0.6
WALA *ep*PKPdf pPKPdf 15 28 01.6 -2.8
KIPM Iron Peak 126.47 42 *e*PKPdf PKPdf 15 27 56.5 +0.2
WDC Whiskeytown Da 126.71 41 *e*PKIKP PKPdf 15 27 56.4 -0.2
WDC MLR MLR
comp=Z,343nm,19.0s,MS5.0
HOPS Hopland 127.14 43 *e*PKPdf PKPdf 15 27 58.1 +0.6
HOPS LR LR
comp=Z,536nm,21.0s,MS5.2
LBCM Butte Creek Ri 127.35 40 P PKPdf 15 27 58.7 +0.8
MOD Modoc 127.43 39 *e*PKPdf PKPdf 15 27 58.8 +0.8
MOD LR LR
comp=Z,443nm,21.0s,MS5.1
BMO Blue Mountains 127.45 34 *e*PKIKP PKPdf 15 27 57.0 -0.9
BMO MLR MLR
comp=Z,393nm,22.0s,MS5.0
MCCM Marconi Confer 127.69 44 PFAKE 15 28 10.0 +11
MCCM LR LR
comp=Z,455nm,22.0s,MS5.1
NSHM Saint Helena R 127.69 43 *e*PKPdf PKPdf 15 27 59.6 +1.1
MSO Missoula 127.94 30 *e*PKPdf PKPdf 15 27 57.9 -0.9
MSO LR LR
comp=Z,416nm,20.0s,MS5.1
WVOR Wild Horse Val 128.15 37 *e*PKIKP PKPdf 15 28 00.2 +0.9
WVOR MLR MLR
comp=Z,339nm,20.0s,MS5.0
CHMT Chamberlain Mo 128.22 30 *e*PKPdf PKPdf 15 27 58.6 -0.8
SCHQ Schefferville 128.74 351 PKP PKPdf 15 27 59.9 -0.2
comp=Z,11nm,0.9s,baz=296,slow=4.4,SNR=3.7
EGMT Eagleton 129.05 26 *e*PKPdf PKPdf 15 28 01.8 +0.9
EGMT LR LR
comp=Z,1μm,22.0s,MS5.5
HRY Holter Researc 129.05 29 *e*PKPdf PKPdf 15 28 00.5 -0.4
PAHR Pah Rah Range 129.22 40 *e*PKPdf PKPdf 15 28 02.5 +1.0
SAO San Andreas Ge 129.35 45 PFAKE 15 28 10.0 +8.2
SAO LR LR
comp=Z,522nm,19.0s,MS5.2
CMB Columbia Colle 129.45 43 PFAKE 15 28 10.0 +8.0
CMB LR LR
comp=Z,505nm,22.0s,MS5.2
DLMT Dillon 129.63 31 *e*PKPdf PKPdf 15 28 02.5 +0.5
HLID Hailey 129.88 33 *e*PKPdf PKPdf 15 28 03.2 +0.6
HLID LR LR
comp=Z,410nm,20.0s,MS5.1
BOZ Bozeman (W) 129.91 30 *e*PKIKP PKPdf 15 28 02.2 -0.4
BOZ MLR MLR
comp=Z,379nm,19.0s,MS5.1
BMN Battle Mountai 130.18 38 PFAKE 15 28 10.0 +6.7
BMN LR LR
comp=Z,438nm,21.0s,MS5.1
NVAR Mina Array Bea 130.62 41 PKP PKPdf 15 28 05.1 +0.9
comp=Z,5.9nm,0.7s,baz=300,slow=1.9,SNR=36
NVAR PP PP 15 30 20.6 +1.8
comp=Z,0.9nm,0.7s,baz=256,slow=5.5,SNR=3.9
PTRM Twissleman Ran 130.76 45 *e*PKPdf PKPdf 15 28 05.0 +0.5
YMR Madison River 130.94 30 *e*PKPdf PKPdf 15 28 05.5 +0.9
YMR LR LR
comp=Z,2μm,22.0s,MS5.8
DGMT Dagmar 130.98 22 PFAKE 15 28 20.0 +15
DGMT LR LR
comp=Z,952nm,22.0s,MS5.5
MTUM Tungsten Hills 131.03 42 *e*PKPdf PKPdf 15 28 06.1 +1.1
YFT Old Faithful 131.16 30 *e*PKPdf PKPdf 15 28 06.5 +1.5
ELK Elko 131.20 37 *e*PKIKP PKPdf 15 28 05.9 +0.7
ELK MLR MLR
comp=Z,493nm,21.0s
LKWY Lake 131.29 30 PFAKE 15 28 20.0 +15
LKWY LR LR
comp=Z,959nm,22.0s,MS5.5
RLMT Red Lodge 131.44 29 *e*PKPdf PKPdf 15 28 05.3 -0.2
RLMT LR LR
comp=Z,616nm,19.0s,MS5.3
TPH Tonopah 131.53 41 PFAKE 15 28 20.0 +14
TPH LR LR
comp=Z,377nm,19.0s,MS5.1
LAO LASA Array 131.61 25 PFAKE 15 28 20.0 +14
LAO LR LR
comp=Z,767nm,20.0s,MS5.4
RRI2 Red Ridge 131.69 32 *e*PKPdf PKPdf 15 28 06.5 +0.4
LOHW Long Hollow 131.87 31 *e*PKPdf PKPdf 15 28 06.5 +0.2
REDW Red Top Meadow 131.92 31 *e*PKPdf PKPdf 15 28 07.0 +0.5
HVU Hansel Valley 131.96 34 *e*PKIKP PKPdf 15 28 07.0 +0.4
ISA Isabella 131.98 44 PFAKE 15 28 20.0 +13
ISA LR LR
comp=Z,379nm,22.0s,MS5.1
ULM Lac du Bonnet 132.05 15 PKP PKPdf 15 28 06.3 -0.2
comp=Z,14nm,0.8s,baz=350,slow=3.2,SNR=10.0
AHID Auburn Hatcher 132.21 32 PFAKE 15 28 20.0 +13
AHID LR LR
comp=Z,584nm,21.0s,MS5.3
DAC Darwin (Calif) 132.27 43 PFAKE 15 28 20.0 +13
DAC LR LR
comp=Z,506nm,20.0s,MS5.2
BGU Big Grassy Mou 132.38 35 *e*PKPdf PKPdf 15 28 07.5 0.0
HWUT Hardware Ranch 132.75 34 *e*PKPdf PKPdf 15 28 08.7 +0.6
HWUT LR LR
comp=Z,598nm,20.0s,MS5.3
TPNV Topopah Spring 132.80 42 *e*PKIKP PKPdf 15 28 05.7 -2.6
TPNV MLR MLR
comp=Z,553nm,21.0s,MS5.2
DUG Dugway 132.98 36 *e*PKIKP PKPdf 15 28 08.0 -0.6
DUG MLR MLR
comp=Z,658nm,19.0s,MS5.4
BW06 Boulder Array 133.01 31 PFAKE 15 28 20.0 +11
BW06 LR LR
comp=Z,755nm,20.0s,MS5.4
PDAR Pinedale Array 133.01 31 PKhKP 15 28 04.0
comp=Z,2.9nm,0.9s,baz=92,slow=3.4,SNR=8.7
PDAR PP PP 15 30 33.0 -0.7
comp=Z,1.1nm,0.8s,baz=13,slow=3.3,SNR=3.4
MWC Mount Wilson 133.01 46 PFAKE 15 28 20.0 +11
MWC LR LR
comp=Z,466nm,20.0s,MS5.2
GSC Goldstone 133.33 44 *e*PKIKP PKPdf 15 28 10.2 +0.8
GSC MLR MLR
comp=Z,643nm,22.0s,MS5.3
DAU Daniels Canyon 133.73 35 *e*PKIKP PKPdf 15 28 10.3 +0.3
MPU Maple Canyon 133.78 35 PFAKE 15 28 20.0 +10
MPU LR LR
comp=Z,1μm,21.0s,MS5.6
AGMN Agassiz Refuge 133.84 16 PFAKE 15 28 20.0 +10
AGMN LR LR
comp=Z,673nm,20.0s,MS5.4
ARUT Antelope Range 134.12 39 *e*PKIKP PKPdf 15 28 11.4 +0.6
MVU Marysvale 134.42 37 PFAKE 15 28 20.0 +8.7
MVU LR LR
comp=Z,551nm,21.0s,MS5.2
MSU Marysvale 134.44 37 PKIKP PKPdf 15 28 12.5 +1.1
MSU Marysvale 134.44 37 *e*PKPdf PKPdf 15 28 12.6 +1.2
PFO Pinyon Flat Ob 134.47 46 PFAKE 15 28 20.0 +8.4
PFO LR LR
comp=Z,500nm,21.0s,MS5.2
TMUT Trail Mountain 134.50 36 *e*PKPdf PKPdf 15 28 12.3 +0.8
RSSD Black Hills 134.59 26 *e*PKIKP PKPdf 15 28 07.1 -4.4
RSSD MLR MLR
comp=Z,1μm,21.0s,MS5.6
LDFC Landfair 134.61 43 *e*PKPdf PKPdf 15 28 09.3 -2.5
BAR Barrett 134.79 47 PFAKE 15 28 20.0 +7.8
BAR LR LR
comp=Z,613nm,22.0s,MS5.3
RWWY Rawlins 134.99 30 *e*PKPdf PKPdf 15 28 11.3 -1.0
TRQA Tornquist 135.01 199 PFAKE 15 28 20.0 +7.5
TRQA LR LR
comp=Z,859nm,19.0s,MS5.5
SRU San Rafael 135.02 35 *e*PKIKP PKPdf 15 28 11.9 -0.5
EYMN Ely 135.22 12 PFAKE 15 28 20.0 +7.5
EYMN LR LR
comp=Z,865nm,20.0s,MS5.5
GLA Glamis 135.92 45 PFAKE 15 28 30.0 +16
GLA LR LR
comp=Z,398nm,20.0s,MS5.1
PHWY Pilot Hill 136.14 29 *e*PKPdf PKPdf 15 28 13.3 -1.2
PV10 Paradox Valley 136.37 35 *e*PKPpre 15 28 16.3
PV01 Paradox Valley 136.80 35 *e*PKPdf PKPdf 15 28 15.8 0.0
WUAZ Wupatki 136.82 40 *e*PKPdf PKPdf 15 28 17.0 +1.1
WUAZ LR LR
comp=Z,692nm,19.0s,MS5.4
ISCO Idaho Springs 137.20 31 PFAKE 15 28 30.0 +14
ISCO LR LR
comp=Z,796nm,22.0s,MS5.4
COWI Conover 137.45 11 PFAKE 15 28 30.0 +13
COWI LR LR
comp=Z,541nm,20.0s,MS5.3
MVCO Mesa Verde 137.48 36 PFAKE 15 28 30.0 +13
MVCO LR LR
comp=Z,653nm,20.0s,MS5.4
ECSD EROS,Sioux Fal 137.74 19 *e*PKPpre 15 28 07.2
ECSD *e*PKPdf PKPdf 15 28 16.6 -0.8
ECSD LR LR
comp=Z,849nm,21.0s,MS5.5
OGNE Ogallala 138.02 27 PFAKE 15 28 30.0 +12
OGNE LR LR
comp=Z,1μm,20.0s,MS5.7
SDCO Great Sand Dun 138.78 33 PFAKE 15 28 30.0 +11
SDCO LR LR
comp=Z,397nm,20.0s,MS5.2
TUC Tucson 139.15 43 *e*PKIKP PKPdf 15 28 15.1 -5.2
TUC *e* 15 28 20.8
TUC MLR MLR
comp=Z,553nm,20.0s,MS5.3
GLMI Grayling 139.37 6 PFAKE 15 28 30.0 +10
GLMI LR LR
comp=Z,846nm,21.0s,MS5.5
LONY Lake Ozonia 139.72 355 PFAKE 15 28 30.0 +9.1
LONY LR LR
comp=Z,531nm,21.0s,MS5.3
LBNH Lisbon 139.81 352 PFAKE 15 28 30.0 +8.9
LBNH LR LR
comp=Z,704nm,21.0s,MS5.4
ANMO Albuquerque 140.23 37 *e*PKHKP 15 28 14.9
ANMO MLR MLR
comp=Z,751nm,22.0s
JFWS Jewell Farm 140.28 13 PFAKE 15 28 30.0 +8.0
JFWS LR LR
comp=Z,547nm,21.0s,MS5.3
LPM Los Pinos Moun 140.56 37 *e*PKPdf PKPdf 15 28 23.4 +0.6
BNM Barren Site 140.67 38 *e*PKPpre 15 28 17.1
CBKS Cedar Bluff 140.78 26 PFAKE 15 28 30.0 +6.9
CBKS LR LR
comp=Z,1μm,21.0s,MS5.5
HRV Adam Dziewonsk 141.46 351 PFAKE 15 28 40.0 +16
HRV LR LR
comp=Z,727nm,21.0s,MS5.4
WES Weston 141.54 351 PFAKE 15 28 40.0 +16
WES LR LR
comp=Z,1μm,21.0s,MS5.6
KSU1 Kansas State U 141.82 23 PFAKE 15 28 40.0 +15
KSU1 LR LR
comp=Z,660nm,22.0s,MS5.3

BINY	**Binghamton**	**142.23**	**357**	*e*PKPdf	PKPdf	15 28 23.3	-2.3		
BINY				LR	LR				
	comp=Z,674nm,20.0s,MS5.4								
AMTX	**Amarillo**	**142.97**	**32**	*e*PKPpre		15 28 23.8			
AMTX				*e*PKPdf	PKPdf	15 28 29.1	+2.1		
AMTX				LR	LR				
	comp=Z,825nm,19.0s,MS5.5								
CPUP	**Villa Florida**	**143.08**	**213**	PKHKP		15 28 24.2			
	comp=Z,3.7nm,0.7s,baz=102,slow=4.7,SNR=11								
CPUP	**Villa Florida**	**143.08**	**213**	PKP	PKPdf	15 28 24.2	-3.4		
BDFB	**Brasilia**	**143.61**	**236**	PKP	PKPdf	15 28 26.5	-2.2		
	comp=Z,4.3nm,0.6s,baz=128,slow=7.3,SNR=5.5								
BDFB	**Brasilia**	**143.61**	**236**	PKP	PKPdf	15 28 26.5	-2.2		
BDFB				LR	LR				
	comp=Z,2μm,19.0s,MS5.8								
ACSO	**Alum Creek Sta**	**144.08**	**5**	PFAKE		15 28 40.0	+11		
ACSO				LR	LR				
	comp=Z,930nm,22.0s,MS5.5								
MVL	**Millersville**	**144.44**	**357**	*e*PKPpre		15 28 18.0			
WMOK	**Wichita Mounta**	**144.55**	**29**	*e*PKIKP	PKPdf	15 28 27.6	-2.3		
WMOK				*e*		15 28 36.5			
WMOK				MLR	MLR				
	comp=Z,911nm,20.0s,MS5.5								
CCM	**Cathedral Cave**	**144.59**	**17**	*e*PKIKP	PKPdf	15 28 27.1	-2.7		
CCM				MLR	MLR				
	comp=Z,576nm,20.0s,MS5.3								
BLO	**Bloomington**	**144.64**	**10**	PKIKP	PKPdf	15 28 28.0	-1.9		
BLO	**Bloomington**	**144.64**	**10**	*e*PKPdf	PKPdf	15 28 27.8	-2.1		
OLIL	**Olney**	**144.75**	**13**	*e*PKPdf	PKPdf	15 28 28.2	-1.9		
MCWV	**Mont Chateau**	**144.84**	**1**	*e*PKPdf	PKPdf	15 28 28.6	-1.6		
MCWV				LR	LR				
	comp=Z,985nm,21.0s,MS5.6								
FVM	**French Village**	**144.88**	**16**	PKIKP	PKPdf	15 28 28.6	-1.7		
FVM	**French Village**	**144.88**	**16**	*e*PKPdf	PKPdf	15 28 27.9	-2.4		
SDMD	**Soldier's Deli**	**145.05**	**357**	*e*PKPdf	PKPdf	15 28 28.6	-2.0		
SIUC	**Southern Illin**	**145.46**	**15**	*e*PKPdf	PKPdf	15 28 30.5	-0.8		
USIN	**University of**	**145.58**	**12**	*e*PKPdf	PKPdf	15 28 30.5	-1.0		
WCI	**Wyandotte Cave**	**145.59**	**10**	*e*PKPdf	PKPdf	15 28 31.0	-0.6		
WCI				LR	LR				
	comp=Z,495nm,20.0s,MS5.3								
TXAR	**Lajitas Array**	**145.77**	**41**	PKPbc	PKPbc	15 28 32.8	+0.2		
	comp=Z,97nm,0.9s,baz=285,slow=1.6,SNR=415								
LCO	**Las Campanas**	**145.93**	**193**	PFAKE		15 28 40.0	+7.6		
LCO				LR	LR				
	comp=Z,2μm,19.0s,MS5.8								
PARMO	**Parma**	**146.31**	**16**	*e*PKPdf	PKPdf	15 28 33.4	+0.6		
GLAT	**Glass**	**146.80**	**16**	*e*PKPbc	PKPbc	15 28 34.7	-0.7		
UTMT	**University of**	**146.84**	**15**	*e*PKPbc	PKPbc	15 28 35.5	-0.1		
GNAR	**Gosnell**	**146.88**	**17**	*e*PKPbc	PKPbc	15 28 35.6	-0.1		
URVA	**University of**	**146.91**	**358**	*e*PKPdf	PKPdf	15 28 34.6	+0.8		
MIAR	**Mount Ida**	**146.98**	**23**	*e*PKP2	PKPbc	15 28 34.2	-1.8		
MIAR				MLR	MLR				
	comp=Z,1μm,19.0s,MS5.6								
HALT	**Halls**	**147.13**	**16**	*e*PKPdf	PKPdf	15 28 35.5	+1.3		
ELN	**Prospectdale**	**147.23**	**3**	*e*PKPdf	PKPdf	15 28 34.2	-0.2		
UALR	**University of**	**147.23**	**21**	*e*PKPdf	PKPdf	15 28 34.7	+0.2		
BLA	**Blacksburg**	**147.26**	**2**	*e*PKIKP	PKPdf	15 28 33.8	-0.6		
BLA				MLR	MLR				
	comp=Z,668nm,20.0s,MS5.4								
WVT	**Waverly**	**147.30**	**14**	*e*PKIKP	PKPdf	15 28 33.9	-0.6		
WVT				*e*		15 28 36.5			
WVT				MLR	MLR				
	comp=Z,533nm,20.0s,MS5.3								
JCT	**Junction City**	**147.33**	**35**	*e*PKP2	PKPbc	15 28 34.9	-2.2		
JCT				MLR	MLR				
	comp=Z,415nm,20.0s,MS5.2								
TZTN	**Tazewell**	**147.66**	**7**	*e*PKPdf	PKPdf	15 28 34.9	-0.2		
TZTN				*e*PKPbc	PKPbc	15 28 37.0	-0.8		
TZTN				LR	LR				
	comp=Z,695nm,19.0s,MS5.5								
OXF	**Oxford**	**148.42**	**17**	*e*PKIKP	PKPdf	15 28 36.3	-0.1		
OXF				*e*		15 28 39.2			
OXF				MLR	MLR				
	comp=Z,3μm,20.0s,MS6.1								
TKL	**Tuckaleechee C**	**148.51**	**8**	*e*PKIKP	PKPdf	15 28 36.6	+0.1		
TKL				*e*		15 28 39.3			
SWET	**Sewanee**	**148.59**	**11**	*e*PKPdf	PKPdf	15 28 36.4	-0.3		
SWET				*e*PKPbc	PKPbc	15 28 39.0	-1.3		
CPCT	**Cooper Cave**	**148.60**	**9**	*e*PKPdf	PKPdf	15 28 36.8	+0.1		
CPCT				*e*PKPbc	PKPbc	15 28 40.1	-0.2		
NATX	**Nacogdoches**	**148.94**	**27**	*e*PKPbc	PKPbc	15 28 41.4	+0.1		
NATX				LR	LR				
	comp=Z,774nm,20.0s,MS5.5								
BBSR	**BB Station**	**149.14**	**336**	*e*PKPbc	PKPbc	15 28 41.5	-0.3		
BBSR				LR	LR				
	comp=Z,562nm,20.0s,MS5.4								
CNNC	**Cliffs of the**	**149.25**	**359**	*e*PKPbc	PKPbc	15 28 41.0	-1.0		
CNNC				LR	LR				
	comp=Z,3μm,19.0s,MS6.1								
HKT	**Hockley**	**149.88**	**30**	*e*PKHKP		15 28 39.7			
HKT				*e*		15 28 44.2			
HKT				MLR	MLR				
	comp=Z,842nm,19.0s,MS5.6								
JSC	**Jenkinsville**	**150.13**	**4**	*e*PKP2	PKPbc	15 28 43.5	-0.7		
VBMS	**Vicksburg**	**150.19**	**20**	*e*PKPbc	PKPbc	15 28 44.1	-0.3		
VBMS				LR	LR				
	comp=Z,934nm,21.0s,MS5.6								
LRAL	**Lakeview Retre**	**150.46**	**14**	*e*PKPdf	PKPdf	15 28 39.2	-0.5		
LRAL				*e*PKPbc	PKPbc	15 28 44.1	-0.9		
LRAL				LR	LR				
	comp=Z,842nm,19.0s,MS5.6								
KVTX	**Kingsville**	**150.63**	**36**	*e*PKPbc	PKPbc	15 28 46.9	+1.4		
KVTX				LR	LR				
	comp=Z,865nm,20.0s,MS5.5								
GOGA	**Godfrey**	**150.76**	**8**	*e*PKIKP	PKPbc	15 28 44.8	-0.9		
GOGA				MLR	MLR				
	comp=Z,1μm,19.0s,MS5.8								
COW	**Cow Castle Cre**	**151.06**	**3**	*e*PKPbc	PKPbc	15 28 45.8	-0.6		
NHSC	**New Hope**	**151.36**	**2**	*e*PKPbc	PKPbc	15 28 46.9	-0.3		
NHSC				LR	LR				
	comp=Z,2μm,20.0s,MS5.8								
LVC	**Limon Verde**	**151.51**	**199**	*e*PKPbc	PKPbc	15 28 48.8	+1.1		
LVC				LR	LR				
	comp=Z,767nm,20.0s,MS5.5								
BRAL	**Brewton**	**152.37**	**15**	*e*PKPbc	PKPbc	15 28 48.9	-0.6		
BRAL				LR	LR				
	comp=Z,634nm,19.0s,MS5.5								
DWPF	**Disney**	**156.24**	**6**	*e*PKPab	PKPab	15 29 14.9	-0.9		
DWPF				LR	LR				
	comp=Z,484nm,20.0s,MS5.3								
LPAZ	**La Paz**	**156.93**	**207**	PKP	PKPdf	15 28 50.4	+1.0		
	comp=Z,1.7nm,0.9s,baz=10,slow=2.2,SNR=6.0								
LPAZ				PKPab	PKPab	15 29 18.8	-0.3		
	comp=Z,2.4nm,0.8s,baz=150,slow=3.7,SNR=5.9								
BBGH	**Gun Hill**	**159.07**	**296**	PFAKE		15 29 00.0	+8.0		
BBGH				LR	LR				
	comp=Z,1μm,19.0s,MS5.8								
GRGR	**Grenville**	**161.34**	**296**	PFAKE		15 29 10.0	+15		
GRGR				LR	LR				
	comp=Z,483nm,20.0s								
CPD	**Cerro la Pandu**	**161.44**	**318**	PKIKP	PKPdf	15 28 54.2	-0.4		
SJG	**San Juan**	**161.54**	**319**	PFAKE		15 29 10.0	+15		
SJG				LR	LR				
	comp=Z,578nm,19.0s								
TEIG	**Tepich**	**161.73**	**29**	PFAKE		15 29 10.0	+15		
TEIG				LR	LR				
	comp=Z,780nm,19.0s								
NNA	**Nana**	**163.65**	**187**	PFAKE		15 29 10.0	+13		
NNA				LR	LR				
	comp=Z,870nm,22.0s								
TGUH	**Tegucigalpa,Un**	**167.25**	**40**	PFAKE		15 29 10.0	+10		
TGUH				LR	LR				
	comp=Z,1μm,20.0s								
PAYG	**Puerto Ayora**	**167.51**	**113**	PFAKE		15 29 10.0	+10		
PAYG				LR	LR				
	comp=Z,648nm,20.0s								
SDV	**Santo Domingo**	**170.70**	**299**	PFAKE		15 29 10.0	+7.9		
SDV				LR	LR				
	comp=Z,349nm,20.0s								
JTS	**JuntasAbangare**	**171.53**	**45**	PFAKE		15 29 10.0	+7.5		
JTS				LR	LR				
	comp=Z,381nm,19.0s								
BCIP	**Isla Barro Col**	**175.11**	**12**	PFAKE		15 29 10.0	+6.1		
BCIP				LR	LR				
	comp=Z,1μm,21.0s								
OTAV	**Otavalo**	**175.90**	**185**	*e*PKPbc	PKPdf	15 29 03.7	-0.4		
OTAV				LR	LR				
	comp=Z,2μm,20.0s								

KRSC 13 15:13:15.7±0.9, 5081N×16053E, h43km±42km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**2.06**	**323**	P	Pn	15 13 49.6	+1.9
RUS				S	Sn	15 14 14.7	+2.6
SPN	**Mys Shipunski**	**2.31**	**352**	*e*S	Sn	15 14 21.1	+2.7
NLC	**Nalytchevo**	**2.48**	**343**	S	Sn	15 14 26.1	+3.7
PET	**Petropavlovsk**	**2.50**	**333**	S	Sn	15 14 27.4	+4.3
AVH	**Avacha**	**2.70**	**336**	*e*P	Pn	15 13 59.9	+3.4
AVH				*e*S	Sn	15 14 31.4	+3.6
MIPR	**Malaya Ipel'ka**	**2.77**	**303**	P	Pn	15 14 01.1	+3.5
MIPR				S	Sn	15 14 34.1	+4.3
ALID	**Alaid**	**3.16**	**273**	*e*P	Pn	15 14 04.3	+1.5
ALID				*e*S	Sn	15 14 40.1	+0.9
GNL	**Ganaly**	**3.30**	**332**	*e*P	Pn	15 14 08.4	+3.7
GNL				S	Sn	15 14 46.8	+4.1
MKZ	**Mys Kozlova**	**3.82**	**11**	*e*P	Pn	15 14 13.9	+2.0
MKZ				*e*S	Sn	15 14 56.9	+1.3
KBTR	**Krutoberegovo**	**5.58**	**13**	P	Pn	15 14 39.4	+3.4

IDC 13 15:24:58.8±3.2, 185S×9954E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.4/19, mbtmp3.3/5, Error ellipse: s-maj=124.9km s-min=26.2km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.19**	**358**	P	P	15 29 34.9	-0.3
	0.4nm,0.7s,baz=191,slow=8.9,SNR=3.3						
WRA	**Warramunga Arr**	**38.47**	**120**	P	P	15 32 22.7	-0.1
	0.3nm,0.6s,baz=304,slow=9.1,SNR=2.6						
SONM	**Songino Array**	**49.84**	**6**	P	P	15 33 53.9	+0.3
	0.2nm,0.5s,baz=192,slow=13,SNR=2.2						
MKAR	**Makanchi Array**	**50.76**	**345**	P	P	15 34 00.5	-0.1
	0.2nm,0.4s,baz=147,slow=7.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**56.94**	**350**	P	P	15 34 45.6	0.0
	0.6nm,0.5s,baz=169,slow=8.4,SNR=3.7						
TXAR	**Lajitas Array**	**144.87**	**37**	PKP	PKPdf	15 44 38.2	-0.4
	0.3nm,0.6s,baz=283,slow=1.2,SNR=5.3						

IDC 13 15:36:38.9±7.0, 210S×10331E, h0km, mb3.2/4, mb1 3.5/4, mb1mx3.3/18, mbtmp3.3/4, Error ellipse: s-maj=269.1km s-min=23.6km az=61.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.88**	**348**	P	P	15 41 22.4	-0.3
	0.2nm,0.4s,baz=184,slow=9.4,SNR=4.6						
WRA	**Warramunga Arr**	**35.12**	**123**	P	P	15 43 35.0	+0.6
	0.3nm,0.5s,baz=305,slow=9.1,SNR=6.7						
ASAR	**Alice Springs**	**36.55**	**128**	P	P	15 43 46.0	-0.7
	0.2nm,0.3s,baz=297,slow=7.8,SNR=8.0						
SONM	**Songino Array**	**49.80**	**3**	P	P	15 45 33.8	+0.4
	0.4nm,0.6s,baz=174,slow=14,SNR=3.0						

DDA ***13*** *15:37:39.7, 3701N×3150E, h7km±4km, Md3.0*
ISK ***13*** *15:37:41.7, 3702N×3153E, h21km, MD3.1*
CSEM ***13*** *15:37:41.9±0.1, 3706N×3156E, h20km, MD3.1, Error ellipse: s-maj=4.4km s-min=2.0km az=14.0*
ISCJB ***13*** *15:37:43.5±0.9, 3708N±007×3156E±004, h33km±9km, Error ellipse: s-maj=11.6km s-min=4.9km az=10.6*

ISC 13 15:37:43.4±0.8, 3709N±007×3156E±004, h26km±9km, n13, σ0 s74/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDMB	**Hadim**	**0.75**	**99**	*e*PG	**Pb**	**15 37 57.3**	**-0.5**
HDMB				*e*SG	**Sb**	**15 38 08.3**	**+0.7**
BCK	**Bucak**	**0.86**	**296**	*e*PG	**Pb**	**15 37 59.1**	**-0.6**
BCK				*e*SG	**Sb**	**15 38 11.8**	**+0.9**
KONT	**Konya--Tatoy**	**1.07**	**36**	*e*PN	**Pn**	**15 38 02.8**	**+0.2**
ISP	**Isparta**	**1.13**	**312**	*e*PN	**Pn**	**15 38 03.4**	**0.0**
ERMK	**Ermenek**	**1.17**	**112**	*i* P	**Pn**	**15 38 03.0**	**-1.1**
ERMK				*i* S	**Sn**	**15 38 18.8**	**-0.3**
LADK	**Ladik-KONYA**	**1.28**	**30**	*e*PN	**Pn**	**15 38 06.0**	**+0.5**
ELL	**Elmali**	**1.37**	**256**	*e*PN	**Pn**	**15 38 05.7**	**-1.0**
TKTP	**Tekketepe**	**1.37**	**314**	*i* P	**Pn**	**15 38 06.0**	**-0.8**
TKTP	**Tekketepe**	**1.37**	**314**	*i* P	**Pn**	**15 38 05.9**	**-0.9**
AKAS	**Kas**	**1.79**	**242**	*i* P	**Pn**	**15 38 12.6**	**+0.1**
AKAS				*i* S	**Sn**	**15 38 35.5**	**+1.2**
AKAS	**Kas**	**1.79**	**242**	*i* P	**Pn**	**15 38 12.6**	**+0.1**
AKAS				*i* S	**Sn**	**15 38 35.5**	**+1.1**
IKL	**Isikli**	**1.91**	**116**	*e*PN	**Pn**	**15 38 13.3**	**-0.8**
MEST	**Erdemli**	**2.13**	**103**	*i* P	**Pn**	**15 38 18.2**	**+1.0**
MEST				*i* S	**Sn**	**15 38 43.6**	**+0.8**

ISCJB ***13*** *15:44:52.8±0.5, 5138N±003×16.16E±003, h0km, Error ellipse: s-maj=3.8km s-min=2.2km az=15.8*
NEIC ***13*** *15:44:53.8±0.8, 5149N×1613E, h5km, ML2.9(SZGRF), Error ellipse: s-maj=10.2km s-min=5.2km az=213.0*
IPEC ***13*** *15:44:54.9±0.3, 5142N×1649E, h0km, ML2.4/4, Error ellipse: s-maj=3.1km s-min=1.9km az=96.0*
PRU ***13*** *15:44:55.5, 5139N×1611E, h0km*
WAR ***13*** *15:44:55, 5147N×1614E, ML2.8, Mining Induced*
CSEM ***13*** *15:44:55.5±0.2, 5140N×1608E, h1km, ML3.5/12, Error ellipse: s-maj=3.4km s-min=2.0km az=20.0*
VIE ***13*** *15:44:56.3±0.5, 5126N×1613E, h0km, mb2.5/4, ML3.0/4, Error ellipse: s-maj=3.3km s-min=3.2km az=117.0 64 km WNW of Breslau Suspected Mining induced.*

ISC 13 15:44:53.9±0.5, 5144N±003×1614E±003, h0km, n46, σ0 s85/91, 6C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.61**	**171**	*e*Pg	**Pg**	**15 45 06.3**	**+0.8**
KSP				*e*Sg	**Sg**	**15 45 13.5**	**+0.1**
KSP	**Ksiaz**	**0.61**	**171**	*e*Pg	**Pg**	**15 45 06.2**	**+0.7**
KSP				*e*Sg	**Sg**	**15 45 13.4**	**0.0**
KSP	**Ksiaz**	**0.61**	**171**	*i*Pg	**Pg**	**15 45 06.3**	**+0.8**
KSP				*i*		15 45 07.5	
KSP				*e*Sg	**Sg**	**15 45 14.8**	**+1.4**
KSP				*e*		15 45 18.0	
UPC	**Upice**	**0.94**	**185**	*e*PG	**Pg**	**15 45 12.3**	**+0.5**
DPC	**Dobruska-Polom**	**1.10**	**174**	*e*PG	**Pg**	**15 45 15.1**	**+0.2**
DPC				*e*SG	**Sg**	**15 45 29.1**	**-0.1**
	comp=Z,65nm,0.4s						
PVCC	**Panska Ves**	**1.35**	**228**	*e*SG	**Sg**	**15 45 37.7**	**+0.6**
	comp=Z,197nm,0.3s						
BRG	**Berggiesshubel**	**1.49**	**248**	PN	**Pn**	**15 45 20.9**	**-1.0**
BRG				PG	**Pg**	**15 45 22.3**	**-0.2**
BRG				SG	**Sg**	**15 45 42.6**	**+0.8**
	comp=Z,8.0nm,0.4s						
PRU	**Pruhonice**	**1.77**	**215**	*e*PN	**Pn**	**15 45 26.0**	**+0.3**
PRU				*e*PG	**Pg**	**15 45 27.1**	**-0.7**
PRU				*e*SG	**Sg**	**15 45 50.6**	**-0.2**
	comp=Z,78nm,0.6s						
RUE	**Ruedersdorf**	**1.79**	**306**	*e*Pn	**Pn**	**15 45 24.0**	**-2.0**
RUE	**Ruedersdorf**	**1.79**	**306**	*e*Pn	**Pn**	**15 45 24.0**	**-1.9**
MORC	**Moravsky Berou**	**1.89**	**151**	*e*Pn	**Pn**	**15 45 26.8**	**-0.6**
MORC				*e*Sn	**Sn**	**15 45 50.0**	**-1.9**
MORC				*e*Sg	**Sg**	**15 45 50.5**	**-4.1**
MORC	**Moravsky Berou**	**1.89**	**151**	*e*Pn	**Pn**	**15 45 27.0**	**-0.4**
MORC				*e*Sn	**Sn**	**15 45 50.0**	**-2.0**
CLL	**Collm**	**1.97**	**267**	*e*Pn	**Pn**	**15 45 27.0**	**-1.4**
CLL				*e*Pg	**Pg**	**15 45 30.0**	**-1.6**
CLL				*i* x	x	15 45 31.2	
CLL				*i* x	x	15 45 34.1	
CLL				*i* x	x	15 45 45.4	
CLL				*i* Sg	**Sg**	**15 45 57.0**	**0.0**
	comp=Z,36nm,0.5s						
CLL	**Collm**	**1.97**	**267**	*e*Pn	**Pn**	**15 45 27.0**	**-1.4**
CLL				*e*Pg	**Pg**	**15 45 30.0**	**-1.6**
CLL				*i* Sg	**Sg**	**15 45 57.0**	**0.0**
OKC	**Ostrava-Krasne**	**2.06**	**141**	*e*PG	**Pg**	**15 45 33.5**	**+0.3**
OKC				*e*SG	**Sg**	**15 45 58.3**	**-1.5**
	comp=Z,35nm,0.4s						
VRAC	**Vranov**	**2.16**	**172**	*e*Pn	**Pn**	**15 45 31.6**	**+0.6**
VRAC				*e*Sg	**Sg**	**15 46 01.0**	**-2.1**
	comp=Z,24nm,0.3s						
TREC	**Trest**	**2.19**	**191**	Pg	**Pg**	**15 45 34.9**	**-0.9**
TREC	**Trest**	**2.19**	**191**	*e*PN	**Pn**	**15 45 32.8**	**+1.3**
TREC				*e*PG	**Pg**	**15 45 34.9**	**-0.9**
KRUC	**Moravsky**	**2.39**	**176**	*e*Pn	**Pn**	**15 45 35.2**	**+1.0**
KRUC				*e*Sg	**Sg**	**15 46 09.3**	**-1.3**
	comp=Z,14nm,0.3s						
OJC	**Ojcow**	**2.63**	**116**	*e*Pg	**Pg**	**15 45 43.9**	**-0.2**
OJC				*e*Sg	**Sg**	**15 46 18.6**	**+0.5**

NKC	**Novy Kostel**	**2.63**	**244**	*e*PN	**Pn**	**15 45 37.7**	**+0.2**
NKC				*e*PG	**Pg**	**15 45 44.0**	**-0.3**
NKC				*e*SG	**Sg**	**15 46 19.8**	**+1.4**
	comp=Z,52nm,0.3s						
JAVC	**Velka Javorina**	**2.77**	**159**	*e*Sg	**Sg**	**15 46 22.4**	**-0.3**
	comp=Z,16nm,0.6s						
KHC	**Kasperske Hory**	**2.84**	**216**	*e*PN	**Pn**	**15 45 40.8**	**+0.5**
KHC				*e*PG	**Pg**	**15 45 46.5**	**-1.7**
KHC				*e*SG	**Sg**	**15 46 24.2**	**-0.7**
	comp=Z,21nm,0.4s						
MOX	**Moxa**	**2.96**	**256**	*e*PN	**Pn**	**15 45 42.4**	**+0.3**
MOX				*e*PG	**Pg**	**15 45 50.2**	**-0.4**
MOX				*i* SG	**Sg**	**15 46 30.2**	**+1.2**
GEC2	**GERESS Array S**	**3.04**	**212**	*e*Pn	**Pn**	**15 45 43.2**	**+0.1**
GEC2	**GERESS Array S**	**3.04**	**212**	*e*Pn	**Pn**	**15 45 43.2**	**+0.2**
GEC2				*e*Pb	**Pb**	**15 45 49.7**	**+1.0**
GEC2				*e*Pg	**Pg**	**15 45 53.2**	**+1.2**
GEC2				*e*Sn	**Sn**	**15 46 21.0**	**+0.9**
GEC2	**GERESS Array S**	**3.04**	**212**	*e*Sg	**Sg**	**15 46 31.1**	**-0.2**
WET	**Wettzell**	**3.11**	**223**	*e*Pn	**Pn**	**15 45 44.1**	**0.0**
MODS	**Modra-Piesok**	**3.16**	**166**	*e*PG	**Pg**	**15 45 53.7**	**-0.7**
MODS				*e*SG	**Sg**	**15 46 36.1**	**+0.8**
MODS	**Modra-Piesok**	**3.16**	**166**	*e*Pg	**Pg**	**15 45 53.7**	**-0.7**
MODS				*e*Sg	**Sg**	**15 46 36.1**	**+0.8**
KOLL	**Kolacno**	**3.22**	**152**	*e*PG	**Pg**	**15 45 55.8**	**+0.3**
KOLL				*e*SG	**Sg**	**15 46 36.7**	**-0.5**
KOLL	**Kolacno**	**3.22**	**152**	*e*Pg	**Pg**	**15 45 55.8**	**+0.3**
KOLL				*e*Sg	**Sg**	**15 46 36.7**	**-0.5**
ZST	**Bratislava**	**3.31**	**169**	*e*SG	**Sg**	**15 46 40.4**	**+0.3**
ZST	**Bratislava**	**3.31**	**169**	*e*Sg	**Sg**	**15 46 40.4**	**+0.3**
ZST	**Bratislava**	**3.31**	**169**	*e*Sg	**Sg**	**15 46 40.4**	**+0.3**
NIE	**Niedzica**	**3.35**	**126**	*e*P	**Pg**	**15 45 57.7**	**-0.4**
NIE				*e*S	**Sg**	**15 46 41.0**	**-0.5**
VYHS	**Vyhne**	**3.43**	**148**	*e*PN	**Pn**	**15 45 48.0**	**-0.5**
VYHS				*e*SG	**Sg**	**15 46 44.2**	**+0.3**
VYHS	**Vyhne**	**3.43**	**148**	*e*Pn	**Pn**	**15 45 48.0**	**-0.5**
VYHS				*e*Sg	**Sg**	**15 46 44.2**	**+0.3**
VYHS	**Vyhne**	**3.43**	**148**	*e*Pn	**Pn**	**15 45 48.0**	**-0.5**
VYHS				*e*Sg	**Sg**	**15 46 44.2**	**+0.3**
CONA	**Conrad Observa**	**3.52**	**183**	*i*Pn	**Pn**	**15 45 50.5**	**+0.7**
CONA				*i*Sg	**Sg**	**15 46 46.9**	**0.0**
	comp=Z,22nm,0.5s						
CSNA	**Conrad Observa**	**3.52**	**183**	*i*Pn	**Pn**	**15 45 50.7**	**+0.9**
CSNA				*i*Sg	**Sg**	**15 46 46.9**	**-0.1**
	comp=Z,15nm,0.4s						
MOA	**Molln**	**3.80**	**199**	*i*Pn	**Pn**	**15 45 52.9**	**-0.7**
MOA				*i*Sg	**Sg**	**15 46 55.9**	**+0.2**
	comp=Z,34nm,0.6s						
STHS	**Stebnicka Huta**	**3.84**	**120**	*e*PN	**Pn**	**15 45 55.4**	**+1.2**
STHS				*e*PG	**Pg**	**15 46 07.6**	**+0.1**
STHS				*e*SG	**Sg**	**15 46 58.3**	**+1.0**
STHS	**Stebnicka Huta**	**3.84**	**120**	*e*Pn	**Pn**	**15 45 55.4**	**+1.2**
STHS	**Stebnicka Huta**	**3.84**	**120**	*e*Pn	**Pn**	**15 45 55.4**	**+1.2**
STHS				*e*Pg	**Pg**	**15 46 07.6**	**+0.1**
STHS				*e*Sg	**Sg**	**15 46 58.3**	**+1.0**
CRVS	**Cervenica-Dubn**	**4.26**	**125**	*e*PG	**Pg**	**15 46 16.4**	**+0.9**
CRVS				*e*SG	**Sg**	**15 47 11.8**	**+1.0**

ISCJB ***13*** *15:47:01.8±0.4, 1289N±004×89.16W±003, h66km±4km, mb4.8/81, Error ellipse: s-maj=7.9km s-min=3.2km az=33.1*
IDC ***13*** *15:47:01.9±2.0, 1319N×8902W, h39km±16km, mb4.4/16, mb1 4.6/20, mb1mx4.4/28, mbtmp4.5/20, ML4.7/3, MS3.6/5, Ms1 3.6/5, ms1mx3.3/32, Error ellipse: s-maj=24.0km s-min=10.0km az=55.0*
CASC ***13*** *15:47:01.1±2.8, 1270N×8932W, h46km±301km, MD4.6, ML4.9, mb4.9(NEIC)*
BJI ***13*** *15:47:03.7, 1290N×89.10W, h85km, mB5.0, Ms5.1, Msz4.9*
NEIC ***13*** *15:47:04.7±0.6, 1287N×89.14W, h85km±6km, mb4.9/71, MD5.2(SNET), Error ellipse: s-maj=7.8km s-min=4.1km az=52.0*
NEIC Felt [III] at San Salvador.

ISC 13 15:47:03.3±0.4, 1297N±004×8912W±003, h59km±4km, n505, σ0 s81/485, mb4.8/80, MS4.1/8, 163C-155D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIES		**0.48**	**8**	*e*P	x	15 47 16.1	
AIES				*e*S	x	15 47 28.4	
AIES				*e*		15 47 31.7	
	comp=Z,29μm,0.6s						
LFRS

CAO Cobano 5.11 129⇑ eP Pn 15 48 16.4 -0.9
CGA2 Cerro Gallo 2 5.42 122 eP Pn 15 48 21.8 +0.1
CGA2 Cerro Gallo 2 5.42 122 eP Pn 15 48 22.4 +0.7
PRS1 Puriscal 5.57 122 eP Pn 15 48 24.6 +0.9
PRS1 Puriscal 5.57 122 eP Pn 15 48 24.3 +0.6
LCR2 La Lucha 2 5.96 122 eP Pn 15 48 29.2 +0.3
LCR2 La Lucha 2 5.96 122⇑ eP Pn 15 48 29.1 +0.2
BUS Buena Vista 6.26 122 eP Pn 15 48 34.8 +1.7
BUS Buena Vista 6.26 122 eP Pn 15 48 34.3 +1.2
BAR1 6.80 122 eP Pn 15 48 41.0 +0.5
CMIG Matias Romero 6.91 307 Pn Pn 15 48 39.7 -2.3
comp=N,7.7nm,0.3s,baz=96,slow=9.0,SNR=76
CMIG Sn Sn 15 49 52.0 -7.3
comp=N,5.8nm,0.3s,baz=65,slow=17,SNR=4.7
CMIG Matias Romero 6.91 307 Pn Pn 15 48 39.7 -2.3
CMIG Sn Sn 15 49 52.0 -7.3
ACR Cerro Adams 7.25 126 eP Pn 15 48 47.9 +1.1
ACR Cerro Adams 7.25 126 eP Pn 15 48 47.7 +1.0
ACR eS Sn 15 50 16.0 +8.3
TEIG Tepich 7.26 6 Pn Pn 15 48 51.3 +4.5
comp=N,7.5nm,0.3s,baz=175,slow=4.4,SNR=22
TEIG Tepich 7.26 6 ePn Pn 15 48 50.4 +3.6
comp=N,50nm,0.4s
CTCR Cotoan 7.44 122⇑ eP Pn 15 48 49.9 +0.6
CTCR eS Sn 15 50 12.3 -0.1
KVTX Kingsville 16.66 332 ePn Pn 15 50 54.2 +1.3
comp=N,365nm,1.4s
ROSC El Rosal 16.68 118 Pn Pn 15 50 54.8 +1.5
comp=N,1.1nm,0.3s,baz=108,slow=22,SNR=14
CHI2 17.29 117⇑ eP Px 15 47 35.7
HKT Hockley 18.00 341 eP Pn 15 51 10.5 +1.0
comp=N,103nm,1.5s
LAPE La Pedrera 18.07 106⇑ eP Px 15 48 04.9
LAPE eS Sx 15 48 55.2
SDV Santo Domingo 18.59 101 P Pn 15 51 15.8 -1.0
comp=N,5.1nm,0.3s,baz=318,slow=9.6,SNR=7.7
SDV Santo Domingo 18.59 101 eP Pn 15 51 15.0 -1.8
comp=N,49nm,0.8s
VBMS Vicksburg 19.20 356 eP Pn 15 51 25.3 +1.5
comp=N,124nm,0.6s
NATX Nacogdoches 19.38 346 eP Pn 15 51 25.6 -0.4
comp=N,139nm,0.8s
JCT Junction City 20.03 332 eP P 15 51 31.1 -0.3
comp=N,97nm,0.6s
LRAL Lakeview Retre 20.06 5 eP P 15 51 34.3 +2.5
comp=N,39nm,0.8s
GOGA Godfrey 20.99 13 eP P 15 51 43.7 +1.9
comp=N,20nm,0.6s
TXAR Lajitas Array 21.16 323 P P 15 51 44.2 +0.6
comp=N,42nm,0.6s,mb5.0,baz=145,slow=11,SNR=564
TXAR Lajitas Array 21.16 323 P P 15 51 44.2 +0.5
OXF Oxford 21.44 359 eP P 15 51 48.2 +1.6
comp=N,243nm,0.9s,mb5.5
COW Cow Castle Cre 21.72 19 eP P 15 51 52.9 +3.3
MIAR Mount Ida 21.85 350 eP P 15 51 51.7 +0.7
comp=N,109nm,0.9s,mb5.3
UALR University of 21.90 353 eP P 15 51 52.3 +0.7
comp=N,184nm,1.3s,mb5.3
ATAH Atahualpa 22.52 151 P P 15 52 01.6 +3.2
comp=N,3.0nm,0.6s,mb3.9,baz=245,slow=17,SNR=4.1
ATAH LR LR 15 59 28.7
comp=N,190nm,19.3s,MS3.5,baz=318,slow=33
HBAR Harrisburg 22.53 357 eP P 15 52 00.0 +1.8
CPCT Cooper Cave 22.76 10 eP P 15 52 01.6 +0.9
GNAR Gosnell 22.91 358 eP P 15 52 03.2 +1.1
comp=N,4µm,1.2s
WVT Waverly 23.09 3 eP P 15 52 02.0 -2.0
comp=N,9.1nm,0.7s,mb4.3
TKL Tuckaleechee C 23.09 11 P P 15 52 03.0 -1.2
comp=N,20nm,0.7s,mb4.7,baz=184,slow=11,SNR=28
TKL LR LR 16 00 51.7
comp=N,202nm,19.9s,MS3.6,baz=141,slow=36
TKL Tuckaleechee C 23.09 11 eP P 15 52 04.0 -0.2
GLAT Glass 23.20 360 P P 15 52 04.1 -1.1
PTP Ponta Puerca 23.22 74⇑ eP Px 15 48 53.8
WMOK Wichita Mounta 23.37 340 eP P 15 52 04.7 -2.1
comp=N,65nm,0.9s,mb5.1
PARMO Parma 23.60 359 eP P 15 52 09.4 +0.6
TZTN Tazewell 24.00 11 eP P 15 52 12.0 -0.5
comp=N,16nm,1.0s,mb4.4
PCRV Puerto La Cruz 24.14 94 P P 15 52 14.1 0.0
comp=N,10nm,0.6s,mb4.5,baz=269,slow=4.9,SNR=6.2
AMTX Amarillo 24.60 335 eP P 15 52 17.3 -0.8
comp=N,123nm,0.9s,mb5.4
SIUC Southern Illin 24.64 360 eP P 15 52 18.8 +0.4
comp=N,75nm,0.8s,mb5.3
USIN University of 24.92 3 eP P 15 52 20.4 -0.5
FVM French Village 24.93 358 eP P 15 52 20.5 -0.5
comp=N,20nm,0.6s,mb4.8
CCM Cathedral Cave 25.05 356 eP P 15 52 22.0 -0.1
comp=N,85nm,0.8s,mb5.3
WCI Wyandotte Cave 25.28 5 eP P 15 52 24.1 0.0
comp=N,34nm,0.7s,mb5.0
ELN Prospectdale 25.29 16 eP P 15 52 24.4 +0.2
BLA Blacksburg 25.36 16 eP P 15 52 25.8 +0.9
comp=N,16nm,1.0s,mb4.5
SLM Saint Louis 25.58 358 eP P 15 52 28.7 +1.8
comp=N,81nm,0.6s,mb5.4
OLIL Olney 25.67 2 eP P 15 52 27.6 -0.1
comp=N,33nm,0.9s,mb4.9
319A Douglas 26.07 318 ⇑P P 15 52 31.3 -0.1
baz=26,SNR=9.9
BNM Barren Site 26.41 326 eP P 15 52 34.8 +0.3
219A White Tail Can 26.46 319 ⇑P P 15 52 35.3 +0.4
baz=27,SNR=45
LPM Los Pinos Moun 26.54 326 eP P 15 52 35.9 +0.3
318A Bisbee 26.58 317 ⇑P P 15 52 36.3 +0.3
baz=27,SNR=15
LENM Lemitar 26.61 325 eP P 15 52 37.2 +0.9
KSU1 Kansas State U 26.86 347 eP P 15 52 37.8 -0.6
comp=N,86nm,0.7s,mb5.4
LAZ Ladron 26.88 326 eP P 15 52 39.0 +0.4
ANMO Albuquerque 26.93 327 P P 15 52 38.6 -0.5
comp=N,2.1nm,0.6s,mb3.8,baz=156,slow=21,SNR=5.2
ANMO LR LR 16 06 25.7
comp=N,83nm,19.5s,MS3.3,baz=32,slow=43
ANMO Albuquerque 26.93 327 eP P 15 52 39.8 +0.7
comp=N,2.3nm,0.7s,mb3.8
218A Dragoon 26.95 318 ⇑P P 15 52 40.1 +0.7
baz=27,SNR=7.4
119A Ashpeak Ranch, 27.00 320 ⇓P P 15 52 40.3 +0.6
baz=27,SNR=40
118A Homack Ranch, 27.34 319 ⇑P P 15 52 43.1 +0.3
baz=28,SNR=42
217A Green Valley 27.34 317 ⇑P P 15 52 43.0 +0.2
baz=28,SNR=9.8
TUC Tucson 27.65 318 eP P 15 52 45.4 -0.3
comp=N,24nm,0.9s,mb4.8
Y19A Nutrioso 27.78 322 ⇓P P 15 52 46.5 -0.3
baz=28
117A Oracle 27.79 318 ⇓P P 15 52 47.0 +0.2
baz=28,SNR=9.6
216A Three Points, 27.91 316 ⇑P P 15 52 47.5 -0.4
baz=28
X19A St. Johns 28.13 323 ⇓P P 15 52 50.0 +0.1
baz=28
Y18A Canyon Day Jun 28.13 321 ⇓P P 15 52 49.9 +0.1
baz=28
116A Eloy 28.42 317 ⇑P P 15 52 52.7 +0.3
baz=29
SDMD Soldier's Deli 28.48 20 eP P 15 52 54.2 +1.3
comp=N,12nm,0.8s,mb4.6
Y17A Roosevelt 28.58 320 ⇑P P 15 52 54.4 +0.5
baz=29
X18A Snowflake 28.59 322 ⇑P P 15 52 54.0 +0.1
baz=29
W19A Sanders 28.67 324 ⇓P P 15 52 53.9 -0.7
baz=29
SDCO Great Sand Dun 28.68 332 eP P 15 52 55.1 +0.4
comp=N,2.8nm,0.6s,mb4.2
214A Organ Pipe Nat 28.80 315 ⇓P P 15 52 55.7 -0.2
baz=29
115A Sonoran Desert 28.85 317 ⇑P P 15 52 56.3 0.0
baz=29
Y16A Circle Bar Ran 29.10 319 ⇓P P 15 52 58.7 +0.2
baz=29,SNR=6.2
V18A Ganado 29.41 324 ⇑P P 15 53 01.3 +0.1
baz=30
W17A Winslow 29.42 322 ⇑P P 15 53 00.9 -0.5
baz=30
X16A Lo Mia Camp, P 29.43 320 ⇓P P 15 53 01.8 +0.4
baz=30,SNR=14
Y15A Casa Rosa Ranc 29.69 319 ⇑P P 15 53 03.8 0.0
baz=30
T19A Beclabito 29.71 327 ⇑P P 15 53 03.7 -0.1
baz=30

MVCO Mesa Verde 29.72 328 P P 15 53 03.8 -0.1
comp=N,13nm,0.8s,mb4.7
JFWS Jewell Farm 29.85 358 eP P 15 53 04.6 -0.3
comp=N,40nm,0.6s,mb5.3
W16A Flagstaff 29.93 321 ⇓P P 15 53 06.1 +0.3
baz=30
113A Mohawk Valley, 29.93 315 ⇓P P 15 53 05.8 -0.1
baz=30
X15A Humboldt 29.97 320 ⇑P P 15 53 06.2 0.0
baz=30
WUAZ Wupatki 30.12 322 eP P 15 53 08.3 +0.8
comp=N,14nm,0.9s,mb4.7
Y14A Wickenburg 30.12 318 ⇓P P 15 53 07.3 -0.2
baz=30
X14A Yava 30.38 319 ⇓P P 15 53 10.1 +0.3
baz=31,SNR=7.5
T18A Mexican Hat 30.40 326 ⇑P P 15 53 10.9 +1.0
baz=31
ISCO Idaho Springs 30.42 334 eP P 15 53 10.1 0.0
comp=N,7.9nm,0.7s,mb4.5
W15A Williams 30.44 321 ⇑P P 15 53 10.7 +0.4
baz=31
U17A Shonto 30.45 324 ⇑P P 15 53 10.5 +0.1
baz=31
S19A Harvey Farm, M 30.45 328 ⇓P P 15 53 11.0 +0.6
baz=31
PV01 Paradox Valley 30.46 329 eP P 15 53 10.5 +0.1
Y13A Salome 30.59 317 ⇑P P 15 53 12.1 +0.4
baz=31
V15A Kaibab Nationa 30.80 322 ⇑P P 15 53 14.1 +0.6
baz=31,SNR=12
T17A Navajo Res., N 30.81 325 ⇓P P 15 53 14.4 +0.8
baz=31
GLA Glamis 30.83 315 ⇑P P 15 53 14.5 +0.7
baz=31,SNR=6.7
GLA Glamis 30.83 315 eP P 15 53 12.3 -1.5
comp=N,21nm,1.0s,mb4.9
S18A Hurst Farm, Bl 30.87 327 ⇑P P 15 53 14.5 +0.4
baz=31,SNR=8.0
PV10 Paradox Valley 30.88 329 eP P 15 53 13.9 -0.2
R19A Curley Farm, L 30.93 328 ⇓P P 15 53 14.9 +0.3
baz=31
W14A Seligman 30.97 320 ⇓P P 15 53 15.8 +0.8
baz=31,SNR=12
Y12C Blythe 31.02 316 ⇓P P 15 53 15.8 +0.3
baz=31
X13A Yucca 31.06 318 ⇑P P 15 53 16.4 +0.6
baz=31
PDMCI Parker Dam,Lak 31.09 317 ⇓P P 15 53 16.4 +0.3
baz=31,SNR=8.0
V14A Boquillas Ranc 31.25 320 ⇓P P 15 53 18.3 +0.8
baz=32,SNR=20
S17A Black Ridge (B 31.27 326 ⇑P P 15 53 18.6 +1.0
baz=32
U15A North Rim 31.28 322 ⇓P P 15 53 18.2 +0.5
baz=32,SNR=6.4
ECSD EROS,Sioux Fal 31.32 350 eP P 15 53 16.4 -1.6
comp=N,8.7nm,0.6s,mb4.8
R18A Canyonlands Na 31.33 328 ⇑P P 15 53 18.3 +0.1
baz=32
W13A Hualapai Mount 31.41 319 ⇑P P 15 53 19.5 +0.7
baz=32,SNR=7.3
Q19A Hogan Spring (31.43 329 ⇑P P 15 53 19.0 -0.1
baz=32,SNR=7.4
SWSC Sam W. Stewart 31.44 314 ⇓P P 15 53 20.2 +1.0
baz=32
BC3 Big Chuckw Mtn 31.60 315 ⇓P P 15 53 21.2 +0.6
baz=32,SNR=18
PHWY Pilot Hill 31.63 336 eP P 15 53 21.4 +0.6
comp=N,23nm,0.9s,mb5.0
IRM Iron Mountain 31.68 316 ⇓P P 15 53 21.9 +0.6
baz=32,SNR=12
T15A Red Dirt Ranch 31.73 323 ⇓P P 15 53 21.7 0.0
baz=32
S16A Weppner Ranch, 31.77 325 ⇓P P 15 53 22.1 0.0
baz=32
R17A Hanksville Air 31.79 327 ⇑P P 15 53 22.6 +0.5
baz=32,SNR=8.7
U14A Mt Trumbull 31.81 321 ⇑P P 15 53 23.0 +0.6
baz=32,SNR=12
P19A Cripple Cowboy 31.82 330 ⇑P P 15 53 23.5 +1.1
baz=32
MONP Monument Peak 31.86 313 ⇑P P 15 53 23.6 +0.7
baz=32
V13A Grand Canyon W 31.94 320 ⇑P P 15 53 24.2 +0.6
baz=32,SNR=13
Q18A Rafter H Ranch 31.99 328 ⇑P P 15 53 23.7 -0.2
baz=32,SNR=6.0
R16A Teasdale 32.11 326 ⇑P P 15 53 25.5 +0.6
baz=32,SNR=6.5
BELC Belle Mtn. 32.17 315 ⇓P P 15 53 26.0 +0.5
baz=32,SNR=7.1
W12A Cal Nev Ari 32.17 318 ⇑P P 15 53 26.0 +0.5
baz=32
S15A Panguitch 32.17 324 ⇑P P 15 53 26.3 +0.8
baz=32
LDFC Landfair 32.19 318 eP P 15 53 27.1 +1.4
comp=N,41nm,0.8s,mb5.3
SRU San Rafael 32.20 328 ⇑P P 15 53 26.1 +0.4
baz=32,SNR=5.8
PFO Pinyon Flat Ob 32.27 314 ⇓P P 15 53 27.3 +0.9
baz=32
U13A Pakoon Wash 32.29 321 ⇓P P 15 53 27.6 +1.1
baz=32,SNR=15
GMRC Granite Mounta 32.38 317 ⇑P P 15 53 28.1 +0.6
baz=33,SNR=12
Q16A Castle Valley 32.40 327 ⇑P P 15 53 27.9 +0.5
baz=33
O19A Miners Draw (B 32.41 331 ⇑P P 15 53 28.1 +0.6
baz=33
V12A Nelson 32.42 319 ⇓P P 15 53 28.3 +0.6
baz=33,SNR=18
P18A Preston Nutter 32.44 329 ⇑P P 15 53 28.4 +0.6
baz=33
P17A Butcher Ranch, 32.58 328 ⇑P P 15 53 29.9 +0.8
baz=33
T13A Saint George 32.64 322 ⇓P P 15 53 30.5 +0.8
baz=33
MSU Marysvale 32.65 325 eP P 15 53 30.2 +0.5
U12A Valley of Fire 32.66 320 ⇓P P 15 53 30.1 +0.3
baz=33
RWWY Rawlins 32.67 334 eP P 15 53 30.1 +0.3
comp=N,17nm,0.6s,mb5.1
TMUT Trail Mountain 32.69 327 P P 15 53 30.9 +0.8
MURC Murrieta 32.79 313 ⇑P P 15 53 31.9 +0.9
baz=33
O18A Roosevelt 32.81 330 ⇓P P 15 53 32.0 +0.9
baz=33
V11A Goodsprings 32.86 318 ⇑P P 15 53 31.8 +0.2
baz=33
HEC Hector,Ludlow 32.86 316 ⇑P P 15 53 32.3 +0.6
baz=33
ARUT Antelope Range 32.87 323 eP P 15 53 32.7 +1.0
N19A John Jarvie Ra 32.90 331 ⇑P P 15 53 32.9 +1.1
baz=33,SNR=6.6
TUQ Turquoise Moun 32.94 317 ⇑P P 15 53 33.0 +0.7
baz=33,SNR=7.1
S13A Holt Ranch, En 32.98 322 ⇓P P 15 53 34.0 +1.4
baz=33,SNR=7.0
COWI Conover 33.02 360 eP P 15 53 32.2 -0.6
comp=N,90nm,0.7s,mb5.8
O17A Robinson Place 33.12 329 ⇓P P 15 53 34.4 +0.6
baz=33,SNR=8.7
N18A Larsen Ranch, 33.20 331 ⇓P P 15 53 35.7 +1.3
baz=33,SNR=7.0
R13A O'Grain Ranch, 33.45 323 ⇑P P 15 53 37.9 +1.2
baz=34
BFSC Mount Baldy St 33.45 314 ⇑P P 15 53 37.5 +0.7
baz=34
GSC Goldstone 33.45 316 ⇓P P 15 53 37.2 +0.5
baz=34
GSC Goldstone 33.45 316 eP P 15 53 37.2 +0.4
comp=N,5.0nm,0.5s,mb4.7
P15A Leamington 33.46 327 ⇓P P 15 53 37.2 +0.4
baz=34
O16A Springville 33.52 328 ⇓P P 15 53 38.0 +0.8
baz=34
DAU Daniels Canyon 33.54 329 eP P 15 53 37.5 0.0
RSSD Black Hills 33.58 340 eP P 15 53 37.9 +0.2
comp=N,14nm,0.7s,mb5.0
T11A Corn Creek, Al 33.59 321 ⇓P P 15 53 38.6 +0.7
baz=34
S12A Delamar Landin 33.60 321 ⇓P P 15 53 38.8 +0.8
baz=34
Q14A Sevier Lake (B 33.60 325 ⇓P P 15 53 37.9 -0.1
baz=34,SNR=6.9
N17A Moffit Pass 33.73 330 ⇑P P 15 53 40.0 +0.9
baz=34

P14A Drum Mountains 33.90 326 ⇑P P 15 53 40.8 +0.2
baz=34,SNR=8.3
R12A Pony Springs, 33.92 323 ⇓P P 15 53 41.2 +0.4
baz=34,SNR=14
N16A Rees Ranch, Co 33.99 329 ⇑P P 15 53 42.0 +0.7
baz=34
Q13A Wheeler Ranch, 34.00 324 ⇓P P 15 53 42.1 +0.7
baz=34,SNR=9.7
EDW2 Edwards Air Fo 34.02 315 ⇓P P 15 53 42.1 +0.4
baz=34
TPNV Topopah Spring 34.05 319 eP P 15 53 43.0 +1.0
comp=N,8.4nm,0.9s,mb4.7
O15A The Old Anders 34.07 327 ⇓P P 15 53 42.7 +0.6
baz=34
FURC Furnace Creek, 34.16 318 ⇓P P 15 53 43.3 +0.4
baz=34,SNR=5.0
S11A Rachel 34.17 321 ⇓P P 15 53 44.0 +1.1
baz=34
P13A Bates Ranch, G 34.34 325 ⇑P P 15 53 44.9 +0.5
baz=35,SNR=18
MPMC Manual Prospec 34.34 317 ⇑P P 15 53 44.4 0.0
baz=34,SNR=16
R11A Troy Canyon, C 34.52 322 ⇓P P 15 53 46.6 +0.7
baz=35,SNR=5.9
N15A Stansbury Isla 34.54 328 ⇑P P 15 53 46.2 +0.1
baz=35
PDAR Pinedale Array 34.56 333 P P 15 53 45.6 -0.6
comp=N,2.2nm,0.5s,mb4.3,baz=124,slow=11,SNR=19
PDAR PcP PcP 15 56 19.8 -0.2
comp=N,1.2nm,0.7s,baz=131,slow=4.5,SNR=4.8
PDAR ScP ScP 16 00 04.6 +4.3
comp=N,0.3nm,0.4s,baz=116,slow=6.8,SNR=5.2
PDAR LR LR 16 10 44.6
comp=N,128nm,18.8s,MS3.7,baz=308,slow=41
HWUT Hardware Ranch 34.59 330 eP P 15 53 46.5 -0.1
comp=N,10.0nm,0.9s,mb4.8
ARVC Arvin 34.74 315 ⇑P P 15 53 48.8 +0.9
baz=35
ISA Isabella 34.78 316 ⇓P P 15 53 49.0 +0.7
baz=35,SNR=5.1
ISA Isabella 34.78 316 eP P 15 53 47.8 -0.5
comp=N,13nm,1.3s,mb4.7
GRAC Grapevine Rang 34.80 318 ⇓P P 15 53 49.2 +0.7
baz=35,SNR=18
SPUT South Promonto 34.81 328 eP P 15 53 47.7 -0.8
BGU Big Grassy Mou 34.83 327 eP P 15 53 48.0 -0.6
P12A McGill 34.85 324 ⇑P P 15 53 49.8 +1.0
baz=35
N14A Grayback Hills 34.86 327 ⇑P P 15 53 49.5 +0.6
baz=35
S10A Tonopah Range, 34.87 320 ⇓P P 15 53 49.5 +0.5
baz=35,SNR=12
Q11A Duckwater 34.88 322 ⇑P P 15 53 49.6 +0.5
baz=35,SNR=11
R10A Warm Springs 34.91 321 ⇓P P 15 53 49.6 +0.2
baz=35,SNR=7.7
EYMN Ely 34.92 357 eP P 15 53 47.8 -1.5
comp=N,29nm,0.6s,mb5.4
M15A Larsen Ranch, 34.93 329 ⇓P P 15 53 49.9 +0.4
baz=35,SNR=12
S09A Goldfield 35.14 320 ⇑P P 15 53 51.9 +0.5
baz=35,SNR=9.2
AHID Auburn Hatcher 35.26 331 eP P 15 53 51.8 -0.5
comp=N,16nm,0.8s,mb5.0
VES Vestal, Ringr 35.29 315 ⇓P P 15 53 53.1 +0.5
baz=36,SNR=7.3
L15A Malad City 35.30 329 ⇓P P 15 53 52.4 -0.2
baz=36,SNR=18
O12A Currie 35.30 325 ⇓P P 15 53 53.2 +0.5
baz=36,SNR=6.6
Q10A Clear Creek Ra 35.31 322 ⇑P P 15 53 54.3 +1.5
baz=36
PKM Peak Mountain 35.31 313 ⇑P P 15 53 54.0 +1.1
baz=36
HVU Hansel Valley 35.33 329 eP P 15 53 52.0 -0.9
comp=N,14nm,1.1s,mb4.8
TPH Tonopah 35.35 320 P P 15 53 53.5 +0.4
R09A Tonopah 35.36 320 ⇑P P 15 53 53.7 +0.5
baz=36,SNR=14
P11A Circle Ranch, 35.40 323 ⇓P P 15 53 54.3 +0.8
baz=36
N13A Wendover, West 35.41 326 ⇑P P 15 53 53.8 +0.2
baz=36
M14A Sheep Mountain 35.42 328 ⇓P P 15 53 53.8 +0.2
baz=36,SNR=18
K16A Soda Springs 35.54 331 ⇑P P 15 53 54.9 +0.3
baz=36
REDW Red Top Meadow 35.61 332 eP P 15 53 55.2 -0.1
comp=N,45nm,0.7s,mb5.5
S08C White Mtn Res 35.62 318 ⇓P P 15 53 56.2 +0.8
baz=36,SNR=15
SNOW Snow King Moun 35.64 333 eP P 15 53 56.0 +0.5
comp=N,38nm,0.6s,mb5.5
AGMN Agassiz Refuge 35.66 352 eP P 15 53 53.9 -1.8
comp=N,42nm,0.6s,mb5.5
LOHW Long Hollow 35.69 333 eP P 15 53 55.7 -0.3
comp=N,16nm,0.7s,mb5.1
HELL Mitchell Peak 35.71 317 ⇑P P 15 53 56.8 +0.5
baz=36,SNR=15
LPAZ La Paz 35.72 144 P P 15 54 00.5 +4.0
comp=N,0.8nm,0.5s,mb3.9,baz=332,slow=5.9,SNR=4.3
LPAZ La Paz 35.72 144 P P 15 54 00.5 +4.0
O11A Cowboy Ranch, 35.72 324 ⇓P P 15 53 56.5 +0.1
baz=36
M13A Montello 35.74 327 ⇑P P 15 53 56.7 +0.2
baz=36,SNR=7.6
L14A Malta 35.75 329 ⇑P P 15 53 56.4 -0.1
baz=36,SNR=9.9
TPAW Teton Pass 35.75 332 eP P 15 53 56.5 0.0
comp=N,16nm,0.6s,mb5.1
MTUM Tungsten Hills 35.79 318 eP P 15 53 56.9 0.0
RRI2 Red Ridge 35.81 332 eP P 15 53 56.2 -0.8
comp=N,19nm,0.8s,mb5.1
RRI2 ePcP PcP 15 56 24.2 +0.6
P10A Eureka 35.86 323 ⇓P P 15 53 58.6 +1.1
baz=36
MOOW Moose Ponds 35.86 333 eP P 15 53 57.1 -0.3
comp=N,12nm,0.9s,mb4.8
N12A Clover Valley, 35.86 326 ⇓P P 15 53 58.0 +0.5
baz=36,SNR=5.7
K15A Arbon 35.88 330 ⇓P P 15 53 57.4 -0.2
baz=36,SNR=15
J16A Bone 35.89 332 ⇑P P 15 53 58.2 +0.6
baz=36
ELK Elko 35.90 325 eP P 15 53 57.9 +0.1
comp=N,6.2nm,0.8s,mb4.6
IMW Indian Meadow 36.07 333 eP P 15 53 57.5 -1.7
comp=N,9.8nm,0.5s,mb5.0
K14A Jones Ranch, D 36.09 329 ⇑P P 15 53 59.2 -0.2
baz=36,SNR=15
M12A Wells 36.19 326 ⇑P P 15 54 00.1 -0.1
baz=36
NVAR Mina Array Bea 36.25 320 P P 15 54 02.1 +1.3
comp=N,16nm,0.9s,mb5.0,baz=136,slow=9.0,SNR=77
NVAR PcP PcP 15 56 25.9 +0.9
comp=N,5.9nm,0.8s,baz=135,slow=3.8,SNR=15
NVAR ScP ScP 16 00 11.7 +5.2
comp=N,1.0nm,0.6s,baz=128,slow=3.8,SNR=7.9
NVAR Mina Array Bea 36.25 320 P P 15 54 02.1 +1.3
NVAR PcP PcP 15 56 25.9 +0.9
NVAR ScP ScP 16 00 11.7 +5.2
RLMT Red Lodge 36.35 336 eP P 15 54 01.1 -0.5
comp=N,19nm,1.1s,mb4.9
T06C Millerton Lake 36.35 317 ⇓P P 15 54 00.9 -0.8
baz=36
PKD Parkfield 36.36 314 ⇓P P 15 54 02.0 +0.2
baz=36,SNR=6.3
J15A Blackfoot 36.37 331 ⇓P P 15 54 02.1 +0.3
baz=37,SNR=11
YFT Old Faithful 36.46 334 eP P 15 54 03.5 +0.9
K13A Stover Farm, H 36.62 329 ⇑P P 15 54 03.9 -0.1
baz=37
M11A Holland Ranch, 36.67 326 ⇑P P 15 54 04.3 -0.1
baz=37,SNR=6.0
U04C Hernandez Rese 36.74 315 ⇑P P 15 54 05.3 +0.2
baz=37,SNR=12
J14A Carey 36.84 330 ⇓P P 15 54 06.1 +0.4
baz=37,SNR=12
H16A Russell Place, 36.84 333 ⇓P P 15 54 06.3 +0.5
baz=37,SNR=6.3
S06C San Francisco 36.92 318 ⇓P P 15 54 06.7 0.0
baz=37,SNR=8.3
S05C Merced 36.95 317 ⇓P P 15 54 06.6 -0.3
baz=37
QLMT Earthquake Lak 37.02 333 eP P 15 54 07.9 +0.6
R06C Coleville 37.03 319 ⇑P P 15 54 07.9 +0.4
baz=37,SNR=5.7
K12A Draper Farm, C 37.04 328 ⇑P P 15 54 07.4 -0.1

baz=37
GCMT **Greycliff** 37.06 336 *e*P P 15 54 06.8 -0.8
M10A **I.L. Ranch, Tu** 37.15 325 ⇓P P 15 54 09.2 +0.8
baz=37,SNR=7.8
L11A **Cat Creek Ranc** 37.16 327 ⇓P P 15 54 08.3 -0.2
baz=37,SNR=6.5
J13A **Cove Ranch, Pi** 37.21 329 ⇓P P 15 54 08.5 -0.5
baz=38
I14A **Mackay** 37.25 331 ⇑P P 15 54 09.8 +0.5
baz=38,SNR=11
N09A **Rock Creek Ran** 37.27 323 ⇑P P 15 54 09.9 +0.4
baz=38,SNR=8.1
CMB **Columbia Colle** 37.36 318 ⇓P P 15 54 10.1 -0.2
baz=38,SNR=6.3
CMB **Columbia Colle** 37.36 318 *e*P P 15 54 10.1 -0.2
comp=N,13nm,1.0s,mb4.7
H15A **Lima** 37.40 332 ⇑P P 15 54 11.2 +0.7
baz=38,SNR=20
SAO **San Andreas Ge** 37.40 315 *e*P P 15 54 10.0 -0.7
comp=N,7.1nm,0.8s,mb4.5
PACP **Pacheco Peak** 37.42 315 ⇓P P 15 54 10.4 -0.4
baz=38
HLID **Hailey** 37.45 329 ⇓P P 15 54 10.9 -0.1
baz=38,SNR=6.7
HLID **Hailey** 37.45 329 *e*P P 15 54 10.0 -1.0
comp=N,3.8nm,0.8s,mb4.3
L10A **Juniper Basin** 37.48 326 ⇑P P 15 54 11.1 -0.2
baz=38
R05C **Kirkwood Meado** 37.53 319 ⇓P P 15 54 12.8 +1.0
baz=38,SNR=7.7
DGMT **Dagmar** 37.54 343 *e*P P 15 54 11.2 -0.5
comp=N,76nm,0.8s,mb5.5
I13A **Wildhorse Cree** 37.56 330 ⇑P P 15 54 12.4 +0.4
baz=38,SNR=18
J12A **Stokes Ranch,** 37.57 328 ⇓P P 15 54 11.9 -0.1
baz=38
ULM **Lac du Bonnet** 37.58 353 P P 15 54 10.6 -1.4
comp=N,36nm,0.8s,mb5.2,baz=168,slow=8.7,SNR=25
O07A **Toulon** 37.64 321 ⇓P P 15 54 12.7 +0.1
baz=38,SNR=7.5
MCMT **McKenzie Canyo** 37.65 332 *e*P P 15 54 13.4 +0.8
K11A **Parker Ranch,** 37.72 327 ⇓P P 15 54 12.9 -0.3
baz=38
H14A **Leadore** 37.73 331 ⇓P P 15 54 14.0 +0.7
baz=38,SNR=16
G15A **Dillon** 37.75 333 ⇑P P 15 54 13.6 +0.2
baz=38,SNR=8.0
BOZ **Bozeman (W)** 37.75 344 *e*P P 15 54 13.1 -0.4
comp=N,4.3nm,0.6s,mb4.4
BOZ *e*PP PP 15 55 42.0 +1.3
DLMT **Dillon** 37.95 333 *e*P P 15 54 15.5 +0.3
comp=N,10nm,0.7s,mb4.7
LAVA **Lava Cap Winer** 37.99 318 ⇓P P 15 54 15.8 +0.2
baz=38,SNR=5.3
MFID **Camas Ranch** 38.07 328 ⇓P P 15 54 16.3 +0.1
baz=38
H13A **Challis** 38.11 331 ⇓P P 15 54 16.9 +0.3
baz=38,SNR=17
K10A **MacKenzie Ranc** 38.18 326 ⇓P P 15 54 16.9 -0.2
baz=38
P05C **Yuba Gap, Truc** 38.22 319 ⇓P P 15 54 18.1 +0.6
baz=38,SNR=6.8
O06A **Flanigan** 38.23 321 ⇓P P 15 54 17.7 +0.1
baz=38,SNR=7.7
F15A **Butte** 38.28 333 ⇓P P 15 54 17.9 0.0
baz=38,SNR=12
BEKR **Beckwourth** 38.38 320 ⇓P P 15 54 19.4 +0.5
baz=39,SNR=12
H12A **Diamond D Ranc** 38.39 330 ⇓P P 15 54 18.6 -0.3
baz=39,SNR=5.9
G13A **Cobalt** 38.49 331 ⇑P P 15 54 20.1 +0.3
baz=39,SNR=14
M07A **Soldier Meadow** 38.57 323 ⇑P P 15 54 20.1 -0.4
baz=39
N06A **Buffalo Meadow** 38.58 322 ⇑P P 15 54 20.5 0.0
baz=39,SNR=9.2
K09A **Rome** 38.59 326 ⇑P P 15 54 20.6 0.0
baz=39,SNR=16
L08A **Fields** 38.60 324 ⇑P P 15 54 20.7 0.0
baz=39
F14A **Wisdom** 38.64 333 ⇓P P 15 54 21.7 +0.7
baz=39
E15A **Deer Lodge** 38.80 334 ⇓P P 15 54 22.1 -0.2
baz=39,SNR=6.6
CVS **Carmenet Viney** 38.91 317 ⇑P P 15 54 23.6 +0.3
baz=39
WVOR **Wild Horse Val** 38.93 325 *e*P P 15 54 22.3 -1.1
comp=N,10nm,0.9s,mb4.6
WVOR *e*PcP PcP 15 56 33.4 +0.3
ORV **Oroville** 38.93 319 ⇑P P 15 54 23.5 +0.1
baz=39,SNR=6.4
EGMT **Eagleton** 38.95 338 *e*P P 15 54 23.4 -0.1
comp=N,46nm,1.2s,mb5.1
K08A **Mann Creek Ran** 39.03 325 ⇑P P 15 54 24.7 +0.4
baz=39,SNR=59
J09A **Fry Pan Ranch,** 39.04 326 ⇑P P 15 54 24.1 -0.2
baz=39,SNR=10.0
F13A **Darby** 39.06 332 ⇓P P 15 54 24.1 -0.4
baz=39,SNR=20
L07A **Adell** 39.07 323 ⇑P P 15 54 24.5 -0.1
baz=39,SNR=13
H11A **Donnelly** 39.07 329 ⇓P P 15 54 24.5 -0.1
baz=39
MCCM **Marconi Confer** 39.09 316 ⇑P P 15 54 25.5 +0.6
baz=39
NSHM **Saint Helena R** 39.10 317 *e*P P 15 54 25.9 +1.0
E14A **Clinton** 39.16 333 ⇓P P 15 54 25.4 +0.1
baz=39,SNR=8.2
D15A **Lincoln** 39.23 335 ⇓P P 15 54 26.0 +0.1
baz=40,SNR=6.3
M06C **Likely Place G** 39.24 322 ⇑P P 15 54 25.9 -0.2
baz=40
H10A **Noah's Angus R** 39.36 329 ⇓P P 15 54 26.4 -0.6
baz=40
K07A **Rock Creek Ran** 39.44 324 ⇓P P 15 54 27.4 -0.2
baz=40,SNR=20
J08A **Circle Bar Ran** 39.44 326 ⇑P P 15 54 27.7 0.0
baz=40
I09A **Lost Marbles R** 39.45 327 ⇑P P 15 54 27.4 -0.3
baz=40,SNR=8.3
F12A **Elk City** 39.47 331 ⇓P P 15 54 27.6 -0.3
baz=40,SNR=24
E13A **Victor** 39.49 333 ⇑P P 15 54 27.9 -0.2
baz=40,SNR=8.9
MOD **Modoc** 39.56 323 ⇑P P 15 54 27.8 -0.8
baz=40
MOD **Modoc** 39.56 323 *e*P P 15 54 28.1 -0.6
comp=N,6.2nm,1.0s,mb4.3
HOPS **Hopland** 39.66 317 *e*P P 15 54 29.4 -0.1
comp=N,7.2nm,1.1s,mb4.3
MSO **Missoula** 39.68 333 *e*P P 15 54 28.7 -0.9
comp=N,11nm,1.1s,mb4.5
D14A **Greenough** 39.68 334 ⇓P P 15 54 28.8 -0.8
baz=40,SNR=7.5
G11A **Walters Elk Ra** 39.70 330 ⇓P P 15 54 28.6 -1.2
baz=40,SNR=8.5
M05C **Lookout** 39.74 321 ⇑P P 15 54 30.0 -0.2
baz=40,SNR=8.0
GASB **Alder Springs** 39.77 318 ⇑P P 15 54 31.7 +1.2
baz=40,SNR=17
BMO **Blue Mountains** 39.83 328 *e*P P 15 54 29.1 -1.8
comp=N,5.7nm,1.0s,mb4.3
LTIM **Timbered Crate** 39.84 321 P P 15 54 31.2 +0.2
H09A **Durkee** 39.89 328 ⇓P P 15 54 30.8 -0.6
baz=40
L05A **Lakeview** 39.96 322 ⇓P P 15 54 31.6 -0.5
baz=40
SIV **San Ignacio** 39.97 135 P P 15 54 33.5 +1.2
comp=N,19nm,0.8s,mb4.9,baz=318,slow=9.2,SNR=87
F11A **Grangeville** 39.99 330 ⇑P P 15 54 31.4 -0.9
baz=40
G10A **Bishop Farm, J** 40.05 329 ⇓P P 15 54 31.7 -1.0
baz=40,SNR=8.3
K06A **Valley Falls** 40.08 324 ⇑P P 15 54 32.0 -1.0
baz=40,SNR=5.1
O02C **Red Bluff** 40.10 319 ⇓P P 15 54 31.8 -1.4
baz=40,SNR=9.8
E12A **Beaver Dam Sad** 40.10 331 ⇓P P 15 54 32.4 -0.8
baz=40
D13A **Huson** 40.11 333 ⇓P P 15 54 33.0 -0.1
baz=40,SNR=12
LASM **Arnica Sink** 40.14 321 P P 15 54 33.9 +0.4
WDC **Whiskeytown Da** 40.16 319 ⇑P P 15 54 31.5 -2.2
baz=40
J06A **Christmas Vall** 40.31 324 ⇑P P 15 54 33.7 -1.2
baz=40,SNR=5.7
H08A **Prairie City** 40.32 327 ⇑P P 15 54 34.6 -0.3
baz=40,SNR=5.8
C14A **Swan Lake** 40.32 334 ⇓P P 15 54 35.5 +0.6
baz=41
KIPM **Iron Peak** 40.35 318 *e*P P 15 54 35.7 +0.4
KCPM **Cahto Peak** 40.35 318 *e*P P 15 54 34.7 -0.6
E11A **Bogner Ranch,** 40.36 331 ⇑P P 15 54 33.8 -1.4
baz=41,SNR=9.3
G09A **Cove** 40.37 328 ⇑P P 15 54 34.0 -1.3
baz=41,SNR=7.5
K05A **Summer Lake** 40.41 323 ⇑P P 15 54 35.1 -0.6
baz=41
M04C **Macdoel** 40.41 321 ⇓P P 15 54 35.4 -0.3
baz=41,SNR=5.2
I07A **Izee** 40.48 326 ⇑P P 15 54 35.2 -1.0
baz=41,SNR=8.6
D12A **Red Ives Fores** 40.48 332 ⇓P P 15 54 35.5 -0.7
baz=41
LVC **Limon Verde** 40.53 151 LR LR 16 08 58.0
comp=N,79nm,19.6s,MS3.6,baz=231,slow=32
F10A **Beach Ranch, E** 40.58 330 ⇓P P 15 54 36.4 -0.7
baz=41,SNR=21
C13A **Hot Springs** 40.61 333 ⇓P P 15 54 37.1 -0.1
baz=41
L04A **Klamath Falls** 40.67 322 ⇑P P 15 54 37.1 -0.7
baz=41
F09A **S2 Ranch, Elgi** 40.73 329 ⇑P P 15 54 38.4 +0.1
baz=41
O01C **Eel River Cons** 40.75 318 ⇑P P 15 54 39.1 +0.5
baz=41,SNR=6.3
I06A **Prineville** 40.78 325 ⇓P P 15 54 38.0 -0.8
baz=41
N02C **Big Bar** 40.78 319 ⇑P P 15 54 38.0 -0.9
baz=41
M02C **Callahan** 40.81 320 ⇑P P 15 54 37.8 -1.2
baz=41
H07A **Lands Inn, Kim** 40.84 326 ⇓P P 15 54 38.0 -1.2
baz=41,SNR=8.3
YBH **Yreka Blue Hor** 40.91 321 ⇑P P 15 54 38.5 -1.4
baz=41
D11A **Klaveano Farm,** 40.93 331 ⇓P P 15 54 39.3 -0.6
baz=41
J05A **Fort Rock** 40.95 324 ⇓P P 15 54 39.8 -0.4
baz=41
G08A **Pilot Rock** 40.99 328 ⇑P P 15 54 39.3 -1.1
baz=41
C12B **Naegeli Ranch,** 41.02 333 ⇓P P 15 54 40.6 -0.2
baz=41
LNOR **Lincton Mounta** 41.03 329 P P 15 54 39.1 -1.7
B13A **Whitefish** 41.09 334 ⇑P P 15 54 41.1 -0.2
baz=41
F08A **Pendleton** 41.23 328 ⇑P P 15 54 41.5 -1.0
baz=42
JCC **Jacoby Creek** 41.24 319 ⇑P P 15 54 42.6 0.0
baz=41
G07A **Ruggs Ranch, H** 41.34 327 ⇑P P 15 54 42.3 -1.1
baz=42
H06A **Lindquist Farm** 41.35 326 ⇑P P 15 54 42.6 -0.9
baz=42
D10A **Wagner Farm, O** 41.37 331 ⇑P P 15 54 42.7 -0.9
baz=42
J04A **Umpqua Nationa** 41.43 323 ⇓P P 15 54 43.7 -0.5
baz=42,SNR=12
C11A **Tepee Creek (N** 41.47 332 ⇓P P 15 54 43.8 -0.6
baz=42
A13A **Flathead Natio** 41.51 335 ⇓P P 15 54 44.5 -0.1
baz=42
BBOR **Butler Butte** 41.56 322 P P 15 54 44.1 -1.1
HUMO **Hull Mountain** 41.56 322 ⇑P P 15 54 43.4 -1.8
baz=42
M01C **Crescent City** 41.85 320 ⇑P P 15 54 47.3 -0.3
baz=42
D09A **Jones Farm, Ri** 41.88 330 ⇑P P 15 54 46.9 -0.8
baz=42
I04A **Tendick Farm,** 41.94 324 ⇑P P 15 54 46.9 -1.4
baz=42,SNR=5.8
B11A **Sandpoint** 41.97 333 ⇑P P 15 54 48.2 -0.2
baz=42
IRO **Indian Ridge** 41.97 324 P P 15 54 48.3 -0.3
K02A **Glendale** 41.98 322 ⇑P P 15 54 47.4 -1.2
baz=42
A12A **Yaak River Ran** 42.03 334 ⇑P P 15 54 49.2 +0.3
baz=42
KBO **Bosley Butte** 42.12 320 *e*P P 15 54 49.9 +0.2
D08A **Wollman Farm,** 42.17 330 ⇑P P 15 54 49.7 -0.5
baz=42
E07A **Sunnyside** 42.30 328 ⇑P P 15 54 50.7 -0.5
baz=42
OD2 **Odessa Site #2** 42.30 330 *e*P P 15 54 49.9 -1.3
H04A **Detroit Lake** 42.35 325 ⇑P P 15 54 50.7 -0.9
baz=43,SNR=7.5
A11A **Hall Mountain,** 42.35 333 ⇑P P 15 54 51.6 0.0
baz=43,SNR=9.7
J02A **Umpqua** 42.37 322 ⇓P P 15 54 51.2 -0.5
baz=43,SNR=5.7
I03A **Eugene** 42.55 323 ⇓P P 15 54 52.4 -0.8
baz=43
KEBM **Edson Butte** 42.55 321 *e*P P 15 54 52.0 -1.2
F05A **White Salmon** 42.70 327 ⇓P P 15 54 54.7 +0.3
baz=43
C08A **Higginbotham F** 42.74 330 ⇑P P 15 54 55.2 +0.5
baz=43
B09A **Rice** 42.77 332 ⇑P P 15 54 54.2 -0.8
baz=43,SNR=6.4
FFC **Flin Flon** 42.86 349 *e*P P 15 54 54.8 -0.8
comp=N,6.6nm,0.6s,mb4.5
E06A **Yakima** 42.87 328 ⇓P P 15 54 55.3 -0.5
baz=43,SNR=5.1
I02A **Mapleton** 42.89 323 ⇓P P 15 54 55.4 -0.6
baz=43
H03A **Soap Creek Ran** 42.97 324 ⇑P P 15 54 56.5 -0.1
baz=43
ETW **Entiat** 43.25 329 P P 15 54 57.0 -1.8
B08A **Colville Reser** 43.28 331 ⇑P P 15 54 58.3 -0.8
baz=44
E05A **Randle** 43.29 327 ⇓P P 15 54 59.0 -0.2
baz=44
G03A **Yamhill** 43.35 325 ⇓P P 15 54 59.0 -0.7
baz=44
A09A **Danville** 43.36 332 ⇓P P 15 54 59.0 -0.7
baz=44
A08A **Turner Farm, O** 43.67 331 ⇑P P 15 55 01.3 -0.9
baz=44
F03A **Seaside** 43.88 325 ⇓P P 15 55 03.3 -0.6
baz=44
E03A **Lebam** 44.25 326 ⇓P P 15 55 06.4 -0.5
baz=44
A07A **Ashnola River,** 44.26 331 ⇓P P 15 55 06.6 -0.3
baz=44,SNR=9.7
RPW **Rockport** 44.40 329 P P 15 55 07.2 -0.9
B06A **Marblemount** 44.43 329 ⇑P P 15 55 07.4 -1.0
baz=45
JCW **Jim Creek** 44.44 329 *e*P P 15 55 07.0 -1.4
EDM **Edmonton** 44.54 339 *e*P P 15 55 07.9 -1.2
B05A **Bryant** 44.57 329 ⇓P P 15 55 08.3 -1.1
baz=45
D03A **Wishkah Elem.** 44.72 326 ⇑P P 15 55 09.6 -1.0
baz=45
NLWA **Neilton Lookou** 44.94 327 ⇑P P 15 55 11.9 -0.4
baz=45
A04A **Legoe Bay, Lum** 45.18 329 ⇓P P 15 55 14.1 -0.2
baz=45
SCHQ **Schefferville** 45.27 18 P P 15 55 14.1 -0.7
comp=N,17nm,0.7s,mb5.0,baz=208,slow=6.2,SNR=14
SCHQ **Schefferville** 45.27 18 P P 15 55 14.1 -0.8
FCC **Fort Churchill** 45.85 356 *e*P P 15 55 18.0 -1.4
comp=N,11nm,0.9s,mb4.8
BDFB **Brasilia** 49.62 124 P P 15 55 50.2 +1.0
comp=N,6.7nm,0.8s,mb4.7,baz=298,slow=4.8,SNR=6.9
CPUP **Villa Florida** 49.82 142 P P 15 55 52.5 +1.9
comp=N,2.0nm,0.6s,mb4.4,baz=325,slow=10.0,SNR=7.5
YKA **Yellowknife Ar** 52.69 345 P P 15 56 10.4 -1.1
comp=N,10nm,0.8s,mb4.8,baz=142,slow=7.7,SNR=61
YKA PcP PcP 15 57 20.1 -0.5
comp=N,1.0nm,0.6s,baz=148,slow=4.0,SNR=4.3
YKA **Yellowknife Ar** 52.69 345 P P 15 56 10.4 -1.1
YKA PcP PcP 15 57 20.1 -0.5
DLBC **Dease Lake** 54.74 335 *e*P P 15 56 26.6 0.0
PLCA **Paso Flores** 56.13 163 P P 15 56 39.0 +2.3
comp=N,2.3nm,1.0s,mb4.2,baz=0.0,slow=10,SNR=2.7
TRF **Thorofare Moun** 65.76 334 *e*P P 15 57 40.1 -1.7
comp=N,4.3nm,0.8s,mb4.5
BPAW **Bear Paw Mtn.** 66.28 335 *e*P P 15 57 43.3 -1.8
comp=N,3.8nm,0.8s,mb4.5
SUMG **Summit** 66.49 15 *e*P P 15 57 45.6 -0.8
comp=N,4.3nm,1.0s,mb4.4
ARCES **ARCESS Array B** 86.22 19 P P 15 59 36.6 -1.4
comp=N,2.3nm,0.9s,mb4.4,baz=316,slow=3.3,SNR=3.7
TORD **Torodi Ar. Bea** 87.88 77 P P 15 59 45.5 -1.7
comp=N,0.4nm,0.7s,mb3.8,baz=295,slow=4.7,SNR=4.5
SONM **Songino Array** 117.91 348 PKP PKPdf 16 05 43.0 -0.4
comp=N,0.3nm,0.3s,baz=334,slow=1.7,SNR=4.5
KSRS **Korea Array** 118.96 327 PKP PKPdf 16 05 45.7 0.0
comp=N,1.7nm,0.7s,baz=6.4,slow=1.2,SNR=9.2
MKAR **Makanchi Array** 120.01 7 PKP PKPdf 16 05 46.9 -0.5
comp=N,0.3nm,0.3s,baz=303,slow=2.3,SNR=3.5
MKAR **Makanchi Array** 120.01 7 PKP PKPdf 16 05 46.9 -0.5
HHC **Hu-ho-hao-te** 123.13 341 *e*PKP PKPdf 16 05 45.6 -8.0
HHC XPKP 16 06 21.1
HHC PKS 16 09 22.0
HHC SKKS SKKSac 16 14 13.3 -14
HHC PP PP
comp=Z,104nm,10.9s
HHC LR LR
comp=N,1μm,22.4s,MS5.5
HHC LR LR
comp=E,534nm,21.5s,MS5.5
HHC LR LR
comp=Z,684nm,20.9s,MS5.3
WMQ **Urumqi** 123.41 3 *e*PKP PKPdf 16 05 50.0 -4.1
NJ2 **Nanjing** 127.83 330 *e*PKP PKPdf 16 05 59.9 -3.0
LZH **Lanzhou** 129.69 346 *e*PKP PKPdf 16 06 03.5 -2.8
LZH XPKP 16 06 41.3
LZH *e*PP PP 16 08 19.3 +3.3
LZH SKKS SKKSac 16 14 59.8 -9.5
LZH PP PP
comp=Z,93nm,7.9s
LZH LR LR
comp=E,157nm,18.0s
LZH LR LR
comp=Z,229nm,20.3s,MS4.9
CD2 **Chengdu** 134.65 344 *e*PKP PKPdf 16 06 10.9 -4.9
CD2 XPKP 16 06 48.3
CD2 PP PP 16 08 49.3 +1.4
CD2 PKS 16 09 45.9
CD2 SKS SKSdf 16 13 10.3 -12
CD2 PP PP
comp=Z,120nm,10.2s
WRA **Warramunga Arr** 137.84 255 PKhKP 16 06 18.2
comp=Z,1.0nm,0.9s,baz=94,slow=3.1,SNR=8.0
WRA SKP 16 10 00.9
comp=Z,1.0nm,0.9s,baz=89,slow=3.2,SNR=7.1
GYA **Guiyang** 137.91 339 *e*PDIF Pdif 16 03 27.3 -3.2
GYA XPKP 16 06 54.8
GYA PP PP 16 09 12.3 +3.8
GYA PKS 16 09 52.0
GYA SKS SKSdf 16 13 18.6 -9.5
GYA PP PP
comp=Z,120nm,7.8s
GYA LR LR
comp=N,190nm,20.2s,MS4.9
GYA LR LR
comp=E,120nm,21.9s,MS4.9
GYA LR LR
comp=Z,110nm,20.8s,MS4.6
ASAR **Alice Springs** 137.94 249 PKhKP 16 06 17.9
comp=Z,1.0nm,0.9s,baz=97,slow=2.7,SNR=7.0
ASAR SKP 16 10 01.6
comp=Z,0.9nm,0.9s,baz=99,slow=2.6,SNR=6.5
KMI **Kunming** 140.41 343 PKP PKPdf 16 06 25.8 -0.8
FITZ **Fitzroy Crossi** 146.16 257 PKPbc PKPbc 16 06 36.5 -1.4
comp=Z,1.1nm,0.6s,baz=354,slow=23,SNR=6.6
CHTO **Chiang Mai** 147.43 346 *e*PKPbc PKPbc 16 06 40.2 -1.3
HYB **Hyderabad** 147.44 22 *i* PKP PKPdf 16 06 42.5 +3.5
HYB **Hyderabad** 147.44 22 *e*P PKPdf 16 06 41.0 +2.0
CMAR **Chiang Mai Arr** 147.77 346 PKPbc PKPbc 16 06 41.1 -1.3
comp=Z,9.8nm,0.7s,baz=330,slow=2.7,SNR=71
KSM **Kuching** 155.97 305 *e*PKPab PKPab 16 07 18.1 -1.1

IDC ***13*** *15:47:06.8±0.6,2540N×5616E,h0km,mb4.4/22, mb1 4.5/26,mb1mx4.5/32,mbtmp4.4/26,ML4.7/3,Error ellipse: s-maj=14.7km s-min=12.0km az=169.0*
CSEM ***13*** *15:47:07.0±0.1,2550N×5600E,h15km,mb4.7/43,Ms4.5, Error ellipse: s-maj=2.3km s-min=1.8km az=67.0*
BJI ***13*** *15:47:07.7,2550N×5620E,h14km,mB4.9,mb4.7,Ms4.7, Msz4.5*
ISCJB ***13*** *15:47:08.4±0.6,2547N±003×5609E±003,h24km±4km, mb4.6/89,MS3.9/7,Error ellipse: s-maj=5.1km s-min=4.5km az=163.2*
THR ***13*** *15:47:08.6±0.4,2546N×5620E,h14km±7km,ML4.5*
NEIC ***13*** *15:47:08.7,2546N×5620E,h14km,mb4.7/44, ML4.5(THR),After THR.*
NEIC Felt [IV] at Dubai. Also felt at Al Fujayrah, Khawr Fakkan, Ra's al Khaymah and Sharjah, United Arab Emirates.
MOS ***13*** *15:47:10.1±1.1,2551N×5604E,h33km,mb4.8/45,Error ellipse: s-maj=8.1km s-min=5.3km az=120.7*

ISC 13 15:47:08.1±0.5,2548N±002×5614E±003,h9km±3km, h17km±2.2km:pP-P,n271,σ1§08/282,mb4.6/89,MS3.9/7, 7C-4D,Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BANOM	**Banah**	0.46	19	Pg	**Pg**	**Pg**	**15 47 16.3**	**-0.9**
	SNR=1000							
BANOM				Sg	**Sg**	**Sg**	**15 47 22.3**	**-1.0**
NAZ	**Nazwa, Dubai**	0.65	221	Pg	**Pg**	**Pg**	**15 47 22.6**	**+1.9**
HATD	**Hatta, Dubai**	0.65	180	Pg	**Pg**	**Pg**	**15 47 19.9**	**-0.9**
	SNR=1000							
HATD				Sg	**Sg**	**Sg**	**15 47 28.8**	**-0.5**
ASHO	**Ashiyiah**	0.80	185	Pg	**Pg**	**Pg**	**15 47 22.7**	**-0.8**
	SNR=721							
FAQ	**Al Faqa, Dubai**	0.88	214	Pg	**Pg**	**Pg**	**15 47 26.0**	**+0.9**
	SNR=408							
ASUD	**Al Ashush, Dub**	1.12	221	Pg	**Pg**	**Pg**	**15 47 30.6**	**+0.9**
	SNR=704							
BNDS	**Bandar-Abbas**	1.91	1	*e*Pg	**Pg**	**Pg**	**15 47 43.8**	**-1.0**
BNDS				*e*Sg	**Sg**	**Sg**	**15 48 09.7**	**+0.1**
BNDS				AML	AML	AML	15 48 14.7	
	comp=N,3μm,1.0s							
BNDS	**Bandar-Abbas**	1.91	1	*e*Pg	**Pg**	**Pg**	**15 47 43.8**	**-1.0**
	SNR=90							
BNDS				*e*Sg	**Sg**	**Sg**	**15 48 09.7**	**+0.1**
	SNR=90							
GHIR	**Ghir-Karzin**	3.96	316	*e*Pn	**Pn**	**Pn**	**15 48 12.0**	**+2.9**
GHIR				AML	AML	AML	15 49 00.6	
	comp=N,494nm,0.6s							
GHIR				AML	AML	AML	15 49 03.2	
	comp=E,476nm,0.6s							
GHIR	**Ghir-Karzin**	3.96	316	Pn	**Pn**	**Pn**	**15 48 11.9**	**+2.8**
KRBR	**Kerman**	4.52	7	*e*Pn	**Pn**	**Pn**	**15 48 19.3**	**+2.6**
KRBR				AML	AML	AML	15 49 16.4	
	comp=E,667nm,0.2s							
KRBR				AML	AML	AML	15 49 19.1	
	comp=N,548nm,0.1s							
KRBR	**Kerman**	4.52	7	Pn	**Pn**	**Pn**	**15 48 19.2**	**+2.5**
BTHS		5.02	255	P	**Pn**	**Pn**	**15 48 24.2**	**+0.7**
SLWS		5.02	263	P	**Pn**	**Pn**	**15 48 24.7**	**+1.0**
BOQSS		6.11	275	P	**Pn**	**Pn**	**15 48 39.9**	**+1.3**
HRDDS		6.60	249	P	**Pn**	**Pn**	**15 48 45.4**	**+0.1**
SHAO	**Shalim**	7.44	184	P	**Pn**	**Pn**	**15 48 57.1**	**+0.2**
	SNR=29							
KFJS		7.80	292	S	**Sn**	**Sn**	**15 50 26.5**	**-3.7**
KBD	**Kabd**	8.36	298	*e*P	**Pn**	**Pn**	**15 49 11.1**	**+1.6**
	baz=298							
KBD				AML	AML	AML	15 50 43.7	
	comp=Z,168nm,0.3s,baz=298							
RDF	**Al-Radifah**	8.38	296	*e*P	**Pn**	**Pn**	**15 49 10.8**	**+1.1**
	baz=296							
RDF				AML	AML	AML	15 50 42.7	
	comp=Z,223nm,0.4s,baz=296							
UMR	**Umm Al-Rimmam**	8.50	300	*e*P	**Pn**	**Pn**	**15 49 12.8**	**+1.4**
	baz=300							
UMR				AML	AML	AML	15 50 44.8	
	comp=Z,106nm,0.5s,baz=300							
NAY	**Al-Naaiem**	8.75	297	*e*P	**Pn**	**Pn**	**15 49 15.9**	**+1.1**
	baz=297							
LYLS		8.83	249	P	**Pn**	**Pn**	**15 49 15.1**	**-0.9**
LYLS				S	**Sn**	**Sn**	**15 50 50.7**	**-5.0**
MIB	**Mutribah**	8.91	301	*e*P	**Pn**	**Pn**	**15 49 18.0**	**+1.0**
	baz=301							
MIB				AML	AML	AML	15 50 54.2	
	comp=Z,86nm,0.6s,baz=301							
KBL	**Kabul**	14.36	48	*e*P	**Pn**	**Pn**	**15 50 35.6**	**+4.0**
KBL				pmax	pmax			
	comp=Z,5.0nm,0.6s							
KBL	**Kabul**	14.36	48	*e*Pn	**Pn**	**Pn**	**15 50 35.6**	**+4.0**
	comp=Z,4.7nm,0.6s							
KBL	**Kabul**	14.36	48	*e*Pn	**Pn**	**Pn**	**15 50 35.6**	**+4.0**
	comp=Z,4.7nm,0.6s							
BDHA	**Al Bayda'**	15.15	223	*e*P	**Pn**	**Pn**	**15 50 40.0**	**-2.4**
CEP	**Cherat**	16.02	55	P	**Pn**	**Pn**	**15 50 52.0**	**-1.7**
TRBA	**At Turbah**	16.63	225	*e*P	**Pn**	**Pn**	**15 50 59.7**	**-1.8**

GNI Garni 17.46 330 Pn **Pn** **15 51 15.5 +3.7**
comp=Z,4.5nm,0.3s,baz=299,slow=1.0,SNR=21
GNI Garni 17.46 330 P **Pn** **15 51 15.5 +3.7**
GNI pmax pmax
comp=Z,5.0nm,0.3s
GNI Garni 17.46 330 *e*Pn **Pn** **15 51 15.9 +4.1**
GNI Garni 17.46 330 *e*Pn **Pn** **15 51 15.9 +4.1**
comp=Z,55nm,0.6s
ASF Jabal al Asfar 18.11 296 P **Pn** **15 51 21.1 +1.1**
comp=Z,1.8nm,0.3s,baz=306,slow=3.4,SNR=14
ASF Jabal al Asfar 18.11 296 P **Pn** **15 51 21.1 +1.1**
ASF pmax pmax
comp=Z,2.0nm,0.3s
EIL Elat 19.23 287 P **Pn** **15 51 34.4 +0.8**
comp=Z,1.7nm,0.3s,baz=103,slow=6.8,SNR=20
EIL Elat 19.23 287 P **Pn** **15 51 34.4 +0.8**
SMLA Simla 19.34 68 *i* P **Pn** **15 51 38.8 +3.9**
SMLA *ex* x 15 51 42.0
comp=Z,53nm,0.5s
SMLA *i* S **Sn** **15 54 53.9 -18**
SMLA *i* S **Sn** **15 54 59.6 -12**
MMAI Mount Meron Ar 19.57 297 P **Pn** **15 51 38.6 +1.0**
comp=Z,5.3nm,0.3s,baz=96,slow=14,SNR=22
MALT Malatya 19.70 315 *e*P **Pn** **15 51 38.3 -0.8**
MALT *e*S **Sn** **15 55 12.7 -7.7**
MALT pmax pmax
comp=Z,14nm,0.8s
MALT Malatya 19.70 315 *e*P **Pn** **15 51 38.3 -0.8**
comp=Z,14nm,0.8s
MALT *e*S **Sn** **15 55 12.6 -7.8**
MALT Malatya 19.70 315 *e*P **Pn** **15 51 38.3 -0.8**
comp=Z,14nm,0.8s
MALT *e*S **Sn** **15 55 12.7 -7.7**
KIV Kislovodsk 21.44 333 *c i*P **P** **15 51 59.0 +2.5**
KIV *e* 15 52 11.4
KIV 15 52 22.0
KIV pmax pmax
comp=Z,218nm,1.0s,mb5.4
KIV MLR MLR
comp=Z,100nm,15.0s,MS3.3
KIV Kislovodsk 21.44 333 *e*P **P** **15 51 58.6 +2.1**
KIV Kislovodsk 21.44 333 *e*P **P** **15 51 58.6 +2.1**
CSS Prodhromos 21.81 301 *e*P **P** **15 51 59.5 -1.1**
comp=Z,32nm,0.9s,mb4.8
CSS Prodhromos 21.81 301 *e*P **P** **15 51 59.5 -1.1**
comp=Z,32nm,0.9s,mb4.8
AML Almayashu 22.03 37 *e*P **P** **15 52 02.3 -0.6**
comp=Z,12nm,0.6s,mb4.5
AML Almayashu 22.03 37 *e*P **P** **15 52 02.3 -0.6**
comp=Z,12nm,0.6s,mb4.5
EKS2 Erkin-Say 22.45 36 *e*P **P** **15 52 06.9 -0.4**
comp=Z,71nm,0.6s,mb5.3
EKS2 Erkin-Say 22.45 36 *e*P **P** **15 52 07.0 -0.3**
comp=Z,71nm,0.6s,mb5.3
UCH Uchtor 22.55 38 *e*P **P** **15 52 10.9 +2.5**
comp=Z,3.4nm,0.6s,mb4.0
UCH Uchtor 22.55 38 *e*P **P** **15 52 10.9 +2.6**
comp=Z,3.4nm,0.6s,mb4.0
BR131 Keskin Array S 23.60 313 *e*P **P** **15 52 20.0 +0.6**
comp=Z,6.7nm,0.6s,mb4.2
TKM2 Tokmak 2 23.61 38 *e*P **P** **15 52 19.1 -0.3**
TKM2 pmax pmax
comp=Z,2.0nm,0.8s,mb3.6
TKM2 Tokmak 2 23.61 38 *e*P **P** **15 52 19.1 -0.3**
comp=Z,2.3nm,0.8s,mb3.7
TKM2 Tokmak 2 23.61 38 *e*P **P** **15 52 19.1 -0.3**
comp=Z,2.3nm,0.8s,mb3.7
ANN Anapa 24.50 327 *e*P **P** **15 52 26.2 -1.4**
ANN pmax pmax
comp=Z,101nm,1.2s,mb5.1
ANN MLR MLR
comp=Z,216nm,12.0s,MS3.9
AKTK Aktyubinsk 24.95 3 P **P** **15 52 32.3 +0.6**
AKTK Aktyubinsk 24.95 3 P **P** **15 52 32.4 +0.7**
AKTO Aktyubinsk 24.95 3 P **P** **15 52 32.4 +0.7**
comp=Z,14nm,0.5s,mb4.7,baz=168,slow=10,SNR=36
AKTO Aktyubinsk 24.95 3 P **P** **15 52 32.4 +0.7**
AKTO pmax pmax
comp=Z,14nm,0.5s,mb4.8
SIM Simferopol' 26.33 323 P **P** **15 52 49.2 +5.0**
SIM *e*PPP 15 53 45.0
SIM pmax pmax
comp=Z,39nm,0.5s,mb5.2
SIM MLR MLR
comp=Z,170nm,19.0s,MS3.6
IDI Anoyia 28.57 297 P **P** **15 53 05.7 +1.3**
comp=Z,7.4nm,0.5s,mb4.7,baz=286,slow=8.7,SNR=8.4
BVAR Borovoye Array 29.52 18 P **P** **15 53 13.3 +0.7**
comp=Z,2.6nm,0.4s,mb4.3,baz=198,slow=8.2,SNR=18
BVAR Borovoye Array 29.52 18 P **P** **15 53 13.3 +0.6**
BVAR pmax pmax
comp=Z,3.0nm,0.4s
BRVK Borovoye 29.52 17 *e*P **P** **15 53 11.9 -0.8**
BRVK pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
BRVK Borovoye 29.52 17 *e*P **P** **15 53 11.9 -0.8**
comp=Z,2.5nm,0.4s,mb4.3
BRVK Borovoye 29.52 17 *e*P **P** **15 53 11.9 -0.7**
comp=Z,2.5nm,0.4s,mb4.3
MKAR Makanchi Array 29.74 38 P **P** **15 53 15.8 +1.2**
comp=Z,1.6nm,0.6s,mb4.0,baz=224,slow=6.8,SNR=11
MKAR Makanchi Array 29.74 38 P **P** **15 53 15.8 +1.2**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 29.74 38 P **P** **15 53 15.8 +1.2**
KURK Kurchatov 30.55 29 P **P** **15 53 21.2 -0.5**
comp=Z,2.6nm,0.7s,mb4.2,baz=227,slow=8.6,SNR=9.8
KURK Kurchatov 30.55 29 P **P** **15 53 21.3 -0.5**
KURK pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
KURK Kurchatov 30.55 29 *e*P **P** **15 53 22.3 +0.5**
comp=Z,3.0nm,1.0s,mb4.1
KURK Kurchatov 30.55 29 *e*P **P** **15 53 22.3 +0.5**
comp=Z,3.0nm,1.0s,mb4.1
ARU Arti 30.97 3 *d i*P **P** **15 53 28.3 +2.9**
ARU *e* 15 54 22.9
ARU *e*PPP 15 54 38.2
ARU *e* 15 56 15.1
ARU *e*S **S** **15 58 32.8 +3.0**
ARU *e*SS SS 16 00 13.5 -29
ARU pmax pmax
comp=Z,9.0nm,1.7s,mb4.3
ARU Arti 30.97 3 *e*P **P** **15 53 28.0 +2.6**
ARU Arti 30.97 3 *e*P **P** **15 53 28.1 +2.7**
WMQ Urumqi 31.50 46 *e*P **P** **15 53 32.3 +2.1**
WMQ AP pP 15 53 39.0 +5.9
WMQ AMB AMB
comp=Z,8.0nm,0.6s,mb4.7
KMBO Kilima Mbogo 32.15 217 P **P** **15 53 36.0 -0.2**
comp=Z,3.8nm,0.9s,mb4.2,baz=33,slow=15,SNR=4.9
KMBO Kilima Mbogo 32.15 217 *e*P **P** **15 53 39.0 +2.8**
KMBO pmax pmax
comp=Z,7.0nm,1.1s
KMBO Kilima Mbogo 32.15 217 *e*P **P** **15 53 39.0 +2.8**
comp=Z,6.8nm,1.1s,mb4.4
KMBO Kilima Mbogo 32.15 217 *e*P **P** **15 53 39.0 +2.8**
comp=Z,6.8nm,1.1s,mb4.4
AKASG Malin Array Be 32.57 328 P **P** **15 53 39.9 +0.3**
comp=Z,2.5nm,0.5s,mb4.4,baz=136,slow=7.9,SNR=6.3
AKASG Malin Array Be 32.57 328 P **P** **15 53 39.9 +0.4**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 32.57 328 P **P** **15 53 39.8 +0.3**
KIEV Kiev 32.57 328 *e*P **P** **15 53 38.7 -0.9**
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KIEV Kiev 32.57 328 *e*P **P** **15 53 38.7 -0.9**
comp=Z,7.2nm,0.8s,mb4.7
KIEV Kiev 32.57 328 *e*P **P** **15 53 38.7 -0.8**
comp=Z,7.2nm,0.8s,mb4.7
OBN Obninsk 32.91 339 *ce*P **P** **15 53 45.1 +2.6**
OBN pmax pmax
comp=Z,51nm,1.4s,mb5.3
OBN MLR MLR
comp=Z,200nm,17.0s,MS3.9
OBN Obninsk 32.91 339 P **P** **15 53 44.4 +1.9**
OBN Obninsk 32.91 339 P **P** **15 53 44.4 +1.9**
BUR08 Bucovina Ar. S 32.92 320 *e*P **P** **15 53 42.7 +0.1**
BUR08 Bucovina Ar. S 32.92 320 *e*P **P** **15 53 42.7 0.0**
KWP Kalwaria 35.36 322 *e*P **P** **15 54 04.6 +0.8**
KWP pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
KWP Kalwaria 35.36 322 *e*P **P** **15 54 04.6 +0.8**
comp=Z,9.1nm,0.5s,mb5.0
KWP Kalwaria 35.36 322 *e*P **P** **15 54 04.6 +0.8**
comp=Z,9.1nm,0.5s,mb5.0

NVS Novosibirsk 35.47 27 ⇓ *i*P **P** **15 54 04.8 +0.2**
NVS pmax pmax
comp=Z,25nm,1.0s,mb5.1
NVS pmax pmax
comp=N,16nm,0.9s
NVS pmax pmax
comp=E,9.0nm,1.1s
ZAA0 Zalesovo Array 35.53 29 *e*P **P** **15 54 05.5 +0.3**
ZAA0 Zalesovo Array 35.53 29 *e*P **P** **15 54 05.5 +0.3**
ZALV Zalesovo Beam 35.53 29 P **P** **15 54 05.8 +0.7**
comp=E,12nm,0.6s,mb5.0,baz=253,slow=9.8,SNR=44
ZALV Zalesovo Beam 35.53 29 P **P** **15 54 05.9 +0.7**
ZALV pmax pmax
comp=Z,12nm,0.6s,mb5.0
TIP Timpagrande 35.68 302 *e*P **P** **15 54 06.6 -0.1**
comp=Z,5.7nm,0.7s,mb4.6
TIP Timpagrande 35.68 302 *e*P **P** **15 54 06.6 -0.1**
comp=Z,5.7nm,0.7s,mb4.6
OJC Ojcow 37.29 321 *e*P **P** **15 54 20.7 +0.4**
MORC Moravsky Berou 38.39 319 *e*P **P** **15 54 31.0 +1.4**
MORC pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
MORC Moravsky Berou 38.39 319 *e*P **P** **15 54 31.0 +1.4**
comp=Z,2.9nm,0.7s,mb4.1
MORC Moravsky Berou 38.39 319 *e*P **P** **15 54 31.0 +1.3**
comp=Z,2.9nm,0.7s,mb4.1
GTA Gaotai 39.02 58 P **P** **15 54 37.4 +2.4**
GTA AP pP 15 54 41.0 +3.1
GTA XP sP 15 54 42.5 +3.4
GTA S **S** **16 00 37.8 +3.7**
GTA XS sS 16 00 46.1 +7.2
GTA AMB AMB
comp=Z,8.0nm,0.6s,mb4.6
GTA AMB AMB
comp=Z,120nm,3.9s
GTA LR LR
comp=N,73nm,14.4s,MS4.0
GTA LR LR
comp=E,138nm,15.0s,MS4.0
GTA LR LR
comp=Z,128nm,16.2s,MS3.8
CHTO Chiang Mai 40.07 91 *e*P **P** **15 54 44.6 +0.6**
CHTO pmax pmax
comp=Z,21nm,1.9s,mb4.5
CHTO Chiang Mai 40.07 91 *e*P **P** **15 54 44.6 +0.6**
comp=Z,21nm,1.9s,mb4.5
CHTO Chiang Mai 40.07 91 *e*P **P** **15 54 44.6 +0.5**
comp=Z,21nm,1.9s,mb4.5
CMAR Chiang Mai Arr 40.18 91 P **P** **15 54 45.0 0.0**
comp=Z,0.6nm,0.5s,mb3.6,baz=280,slow=10,SNR=6.4
CMAR Chiang Mai Arr 40.18 91 P **P** **15 54 45.0 +0.1**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
KHC Kasperske Hory 40.54 317 *i* P **P** **15 54 48.1 +0.5**
JOF Joensuu 40.90 343 *ep* **P** **15 54 49.9 -0.4**
comp=Z,4.6nm,0.6s,mb4.3
JOF Joensuu 40.90 343 *e*P **P** **15 54 49.9 -0.4**
JOF pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
BRG Berggiesshubel 40.95 320 *e*P **P** **15 54 46.0 -4.9**
BRG pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
BRG Berggiesshubel 40.95 320 *e*P **P** **15 54 46.0 -4.9**
comp=Z,1.0nm,0.5s,mb3.7
WTTA Wattenberg 41.20 314 ⇑ *i*P **P** **15 54 52.4 -0.7**
comp=Z,18nm,0.5s,mb4.9
KEST Kesra 41.21 296 P **P** **15 54 55.3 +2.0**
comp=Z,1.6nm,0.6s,mb3.9,baz=33,slow=0.5,SNR=10
FINES FINESS Array B 41.31 339 P **P** **15 54 53.0 -0.7**
VSL Villasalto 41.40 302 P **P** **15 54 54.1 -0.6**
comp=Z,19nm,0.9s,mb4.7
VSL Villasalto 41.40 302 P **P** **15 54 54.1 -0.6**
comp=Z,19nm,0.9s,mb4.7
SQTA Sankt Quirin 41.47 313 ⇑ *i*P **P** **15 54 55.1 -0.2**
MOTA Moosalm 41.58 314 ⇑ *i*P **P** **15 54 55.5 -0.6**
comp=Z,5.9nm,0.4s,mb4.5
CLL Collm 41.66 320 ⇓ *i*pP pP 15 55 01.2 +1.6
KAF Kangasniemi 41.73 339 *ep* **P** **15 54 57.0 -0.1**
FETA Feichten 41.74 313 ⇑ *i*P **P** **15 54 57.5 +0.1**
comp=Z,7.8nm,0.5s,mb4.6
RETA Reutte 41.84 314 ⇓ *i*P **P** **15 54 57.6 -0.6**
comp=Z,9.9nm,0.5s,mb4.7
KMI Kunming 41.97 80 P **P** **15 54 56.6 -3.0**
KMI AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
LZH Lanzhou 41.97 64 *e*P **P** **15 54 59.8 +0.3**
LZH AP pP 15 55 04.3 +1.9
LZH XP sP 15 55 06.8 +3.3
LZH *e*PP PP 15 56 39.5 +3.0
LZH AMB AMB
comp=Z,20nm,1.5s,mb4.5
LZH AMB AMB
comp=Z,59nm,6.3s
LZH LR LR
comp=E,437nm,14.8s
LZH LR LR
comp=Z,649nm,18.2s,MS4.5
PGF Pioggiola 42.04 306 *e*P **P** **15 54 59.2 -0.8**
comp=Z,17nm,0.7s,mb4.5
PGF Pioggiola 42.04 306 *e*P **P** **15 54 59.2 -0.8**
PGF pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
PGF Pioggiola 42.04 306 *e*P **P** **15 54 59.2 -0.8**
comp=Z,8.4nm,0.7s,mb4.5
CD2 Chengdu 42.07 71 *e*P **P** **15 55 00.6 +0.2**
CD2 AP pP 15 55 05.3 +2.0
CD2 XP sP 15 55 07.8 +3.3
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
CD2 AMB AMB
comp=Z,20nm,4.2s
DAVA Damuels 42.37 313 ⇑ *i*P **P** **15 55 02.4 -0.2**
comp=Z,21nm,0.5s,mb5.0
SBF Sospel 43.37 308 *e*P **P** **15 55 09.8 -1.0**
comp=Z,46nm,0.9s,mb4.9
SBF Sospel 43.37 308 *e*P **P** **15 55 09.8 -1.0**
SBF pmax pmax
comp=Z,23nm,0.9s,mb4.9
SBF Sospel 43.37 308 *e*P **P** **15 55 09.8 -1.0**
comp=Z,23nm,0.9s,mb4.9
FRF La Foret Royal 43.89 307 *e*P **P** **15 55 13.7 -1.3**
MBDF Montbardon 43.97 309 *e*P **P** **15 55 15.3 -0.3**
comp=Z,12nm,0.7s,mb4.5
MBDF Montbardon 43.97 309 *e*P **P** **15 55 15.3 -0.3**
MBDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
MBDF Montbardon 43.97 309 *e*P **P** **15 55 15.3 -0.3**
comp=Z,6.2nm,0.7s,mb4.5
BNI Bardonecchia 44.09 309 *e*P **P** **15 55 15.7 -0.8**
BNI pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
BNI Bardonecchia 44.09 309 *e*P **P** **15 55 15.7 -0.8**
comp=Z,5.1nm,0.8s,mb4.3
LPG La Plagne 44.11 310 *e*P **P** **15 55 16.1 -0.6**
comp=Z,19nm,0.8s,mb4.6
LPG La Plagne 44.11 310 *e*P **P** **15 55 16.1 -0.6**
LPG pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
LPG La Plagne 44.11 310 *e*P **P** **15 55 16.1 -0.6**
comp=Z,9.4nm,0.8s,mb4.6
LPL La Plagne 44.13 310 *e*P **P** **15 55 15.6 -1.2**
ECH Echery 44.37 314 P **P** **15 55 17.6 -1.1**
HINF Hinteralfeld 44.48 313 *e*P **P** **15 55 18.3 -1.3**
CABF La Chapelle 44.76 311 *e*P **P** **15 55 20.9 -1.0**
comp=Z,10.0nm,0.6s,mb4.5
CABF La Chapelle 44.76 311 *e*P **P** **15 55 20.9 -1.0**
CABF pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
CABF La Chapelle 44.76 311 *e*P **P** **15 55 20.9 -1.0**
comp=Z,5.0nm,0.6s,mb4.5
SONM Songino Array 45.13 47 P **P** **15 55 26.4 +1.6**
comp=Z,1.0nm,0.7s,mb3.7,baz=250,slow=8.4,SNR=7.2
SONM Songino Array 45.13 47 P **P** **15 55 26.4 +1.6**
SONM pmax pmax
comp=Z,1.0nm,0.7s
GYA Guiyang 45.20 77 P **P** **15 55 27.3 +1.7**
GYA PCP PcP 15 57 08.0 +2.1
GYA PP PP 15 57 13.9 +2.6
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
GYA AMB AMB
comp=Z,70nm,4.9s
GYA LR LR
comp=N,390nm,18.8s,MS4.5
GYA LR LR
comp=E,320nm,19.9s,MS4.5

GYA LR LR
comp=Z,410nm,18.4s,MS4.4
HFA0 Hagfors New Ar 45.24 332 P **P** **15 55 24.0 -1.5**
WLF Walferdange 45.34 316 P **P** **15 55 25.2 -1.3**
VIVF Saint-Julien-l 45.47 309 *e*P **P** **15 55 26.2 -1.3**
comp=Z,10nm,0.7s,mb4.5
VIVF Saint-Julien-l 45.47 309 *e*P **P** **15 55 26.2 -1.3**
VIVF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
VIVF Saint-Julien-l 45.47 309 *e*P **P** **15 55 26.2 -1.3**
comp=Z,5.2nm,0.7s,mb4.5
ULN Ulaanbaatar 45.57 47 P **P** **15 55 29.6 +1.3**
ULN pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
ULN Ulaanbaatar 45.57 47 P **P** **15 55 29.6 +1.3**
comp=Z,2.1nm,0.8s,mb4.1
ULN Ulaanbaatar 45.57 47 P **P** **15 55 29.6 +1.3**
comp=Z,2.1nm,0.8s,mb4.1
SSB Saint Sauveur 45.62 309 *e*P **P** **15 55 27.7 -1.0**
SSB Saint Sauveur 45.62 309 *e*P **P** **15 55 27.7 -1.0**
LASF Ste Croix 45.96 308 *e*P **P** **15 55 30.6 -0.8**
comp=Z,14nm,0.7s,mb4.7
LASF Ste Croix 45.96 308 *e*P **P** **15 55 30.6 -0.8**
comp=Z,7.0nm,0.7s,mb4.7
TAM Tamanrasset 46.04 278 *e*P **P** **15 55 32.3 -0.1**
BCLA Clavier 46.05 316 P **P** **15 55 32.1 +0.1**
comp=Z,12nm,2.5s,mb4.4
GIVF Givet 46.28 316 *e*P **P** **15 55 33.8 0.0**
comp=Z,20nm,0.8s,mb4.8
GIVF Givet 46.28 316 *e*P **P** **15 55 33.8 0.0**
GIVF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GIVF Givet 46.28 316 *e*P **P** **15 55 33.8 0.0**
comp=Z,10nm,0.8s,mb4.8
SMF Signal de Mont 46.29 311 *e*P **P** **15 55 32.8 -1.2**
comp=Z,13nm,0.6s,mb4.7
SMF Signal de Mont 46.29 311 *e*P **P** **15 55 32.8 -1.2**
SMF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
SMF Signal de Mont 46.29 311 *e*P **P** **15 55 32.8 -1.2**
comp=Z,6.4nm,0.6s,mb4.7
LOR Lormes 46.38 312 *e*P **P** **15 55 33.7 -0.9**
comp=Z,4.7nm,0.5s,mb4.4
LOR Lormes 46.38 312 *e*P **P** **15 55 33.7 -0.9**
LOR pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
LOR Lormes 46.38 312 *e*P **P** **15 55 33.7 -0.9**
comp=Z,2.3nm,0.5s,mb4.4
DOU Dourbes 46.42 316 P **P** **15 55 35.6 +0.7**
SSF Saint Saulge 46.58 312 *e*P **P** **15 55 35.1 -1.2**
comp=Z,2.1nm,0.6s,mb4.7
SSF Saint Saulge 46.58 312 *e*P **P** **15 55 35.1 -1.2**
SSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
SSF Saint Saulge 46.58 312 *e*P **P** **15 55 35.1 -1.2**
comp=Z,5.6nm,0.6s,mb4.7
AVF Avril sur Loir 46.65 311 *e*P **P** **15 55 35.2 -1.6**
comp=Z,7.4nm,0.6s,mb4.5
AVF Avril sur Loir 46.65 311 *e*P **P** **15 55 35.2 -1.6**
AVF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
AVF Avril sur Loir 46.65 311 *e*P **P** **15 55 35.2 -1.6**
comp=Z,3.7nm,0.6s,mb4.5
BAIF Baives 46.66 316 *e*P **P** **15 55 36.8 0.0**
comp=Z,17nm,0.8s,mb4.7
BAIF Baives 46.66 316 *e*P **P** **15 55 36.8 0.0**
BAIF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BAIF Baives 46.66 316 *e*P **P** **15 55 36.8 0.0**
comp=Z,8.6nm,0.8s,mb4.7
NB2 NORSAR Subarra 46.74 332 P **P** **15 55 36.6 -0.7**
comp=Z,3.7nm,0.5s,mb4.6,baz=115,slow=7.9
NB2 NORSAR Subarra 46.74 332 P **P** **15 55 39.0 +1.7**
NOA NORSAR Array B 46.74 332 P **P** **15 55 36.4 -0.9**
comp=Z,3.6nm,0.7s,mb4.4,baz=122,slow=8.3,SNR=12
NOA NORSAR Array B 46.74 332 P **P** **15 55 36.4 -0.9**
NOA pmax pmax
comp=Z,4.0nm,0.7s
BGF Bois d'Agland 46.96 311 *e*P **P** **15 55 38.1 -1.1**
comp=Z,14nm,0.6s,mb4.7
BGF Bois d'Agland 46.96 311 *e*P **P** **15 55 38.1 -1.1**
BGF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
BGF Bois d'Agland 46.96 311 *e*P **P** **15 55 38.1 -1.1**
comp=Z,7.1nm,0.6s,mb4.8
MTLF Montolieu 47.08 306 *e*P **P** **15 55 40.0 -0.2**
comp=Z,17nm,0.7s,mb4.8
MTLF Montolieu 47.08 306 *e*P **P** **15 55 40.0 -0.2**
MTLF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
MTLF Montolieu 47.08 306 *e*P **P** **15 55 40.0 -0.2**
comp=Z,8.5nm,0.7s,mb4.8
CAF Calviac 47.32 309 *e*P **P** **15 55 41.5 -0.6**
comp=Z,12nm,0.7s,mb4.7
CAF Calviac 47.32 309 *e*P **P** **15 55 41.5 -0.6**
CAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
CAF Calviac 47.32 309 *e*P **P** **15 55 41.5 -0.6**
comp=Z,5.9nm,0.7s,mb4.7
TCF Toulx Ste Croi 47.36 310 *e*P **P** **15 55 41.5 -0.9**
comp=Z,6.1nm,0.7s,mb4.3
TCF Toulx Ste Croi 47.36 310 *e*P **P** **15 55 41.5 -0.9**
TCF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
TCF Toulx Ste Croi 47.36 310 *e*P **P** **15 55 41.5 -0.9**
comp=Z,3.0nm,0.7s,mb4.3
KEV Kevo 47.47 347 *ep* **P** **15 55 42.6 -0.3**
ARCES ARCESS Array B 47.62 346 P **P** **15 55 44.0 0.0**
comp=Z,4.4nm,0.8s,mb4.6,baz=146,slow=7.9,SNR=19
ARCES ARCESS Array B 47.62 346 P **P** **15 55 44.0 0.0**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
ARCES ARCESS Array B 47.62 346 P **P** **15 55 44.0 -0.1**
RJF Les Rejaudoux 47.74 309 *e*P **P** **15 55 44.8 -0.6**
comp=Z,14nm,0.8s,mb4.8
RJF Les Rejaudoux 47.74 309 *e*P **P** **15 55 44.8 -0.6**
RJF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
RJF Les Rejaudoux 47.74 309 *e*P **P** **15 55 44.8 -0.6**
comp=Z,7.2nm,0.8s,mb4.8
HHC Hu-ho-hao-te 48.10 57 *e*P **P** **15 55 46.3 -1.9**
HHC S **S** **16 02 42.9 -4.0**
HHC AMB AMB
comp=Z,8.0nm,0.6s,mb4.9
HHC AMB AMB
comp=Z,124nm,6.5s
LSZ Lusaka 48.81 217 *e*P **P** **15 55 54.9 +1.0**
LSZ pmax pmax
comp=Z,70nm,2.6s,mb5.2
LSZ Lusaka 48.81 217 *e*P **P** **15 55 54.9 +1.0**
comp=Z,70nm,2.6s,mb5.2
LSZ Lusaka 48.81 217 *e*P **P** **15 55 54.9 +1.0**
comp=Z,70nm,2.6s,mb5.2
ETSF Etsaut 49.09 306 *e*P **P** **15 55 55.6 -0.2**
comp=Z,8.8nm,0.8s,mb4.6
ETSF Etsaut 49.09 306 *e*P **P** **15 55 55.6 -0.2**
ETSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ETSF Etsaut 49.09 306 *e*P **P** **15 55 55.6 -0.2**
comp=Z,4.4nm,0.8s,mb4.6
FLN La Foliniere 49.47 313 *e*P **P** **15 55 57.7 -0.9**
comp=Z,12nm,0.7s,mb4.7
FLN La Foliniere 49.47 313 *e*P **P** **15 55 57.7 -0.9**
FLN pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
FLN La Foliniere 49.47 313 *e*P **P** **15 55 57.7 -0.9**
comp=Z,5.9nm,0.7s,mb4.7
SJPF Ste Jean 49.58 306 *e*P **P** **15 55 59.5 0.0**
comp=Z,7.1nm,0.4s,mb4.7
SJPF Ste Jean 49.58 306 *e*P **P** **15 55 59.5 0.0**
comp=Z,3.5nm,0.4s,mb4.7
SGMF Saint Gilles 50.79 313 *e*P **P** **15 56 07.5 -1.1**
comp=Z,14nm,0.8s,mb4.7
SGMF Saint Gilles 50.79 313 *e*P **P** **15 56 07.5 -1.1**
SGMF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SGMF Saint Gilles 50.79 313 *e*P **P** **15 56 07.5 -1.1**
comp=Z,7.2nm,0.8s,mb4.7
ESDC Sonseca Array 51.70 302 P **P** **15 56 15.2 -0.3**
comp=Z,1.9nm,0.4s,mb4.4,baz=66,slow=7.5,SNR=9.7
BOD Bodaibo 51.78 35 *e*P **P** **15 56 14.6 -1.3**
BOD pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
TORD Torodi Ar. Bea 52.50 267 P **P** **15 56 21.6 -0.3**
comp=Z,11nm,0.6s,mb5.0,baz=57,slow=6.8,SNR=52
EVO Evora 54.93 300 *e*P **P** **15 56 39.6 +0.2**
comp=Z,8.8nm,0.7s,mb4.6

EVOP	**Sao Brissos**	**55.02**	**300**	*e*P		**P**		**15 56 39.6**	**-0.4**
	comp=Z,4.4nm,0.7s,mb4.6								
YAK	**Yakutsk**	**60.13**	**31**	P		**P**		**15 57 14.0**	**-1.6**
YAK				pmax		pmax			
	comp=Z,6.0nm,0.7s,mb4.7								
YAK	**Yakutsk**	**60.13**	**31**	P		**P**		**15 57 14.0**	**-1.6**
	comp=Z,5.6nm,0.7s,mb4.7								
YAK	**Yakutsk**	**60.13**	**31**	P		**P**		**15 57 14.0**	**-1.7**
	comp=Z,5.6nm,0.7s,mb4.7								
DBIC	**Dimbokro**	**61.00**	**263**	P		**P**		**15 57 22.3**	**-0.1**
	comp=Z,9.7nm,0.6s,mb5.1,baz=21,slow=5.2,SNR=14								
DBIC	**Dimbokro**	**61.00**	**263**	P		**P**		**15 57 22.3**	**-0.1**
DBIC				pmax		pmax			
	comp=Z,10.0nm,0.6s								
KIC	**Kosan Boka**	**61.03**	**263**	*e*PKP2		**P**		**15 57 22.8**	**+0.2**
	comp=Z,23nm,0.5s,mb5.5								
KSRS	**Korea Array**	**61.06**	**60**	P		**P**		**15 57 22.2**	**-0.2**
	comp=Z,1.3nm,0.6s,mb4.2,baz=275,slow=7.1,SNR=7.5								
KSRS	**Korea Array**	**61.06**	**60**	P		**P**		**15 57 22.3**	**-0.1**
KSRS				pmax		pmax			
	comp=Z,1.0nm,0.6s,mb4.1								
TIC	**Toumodi**	**61.16**	**263**	*e*PKP2		**P**		**15 57 23.6**	**+0.2**
	comp=Z,17nm,0.3s,mb5.7								
LIC	**Lamto**	**61.35**	**263**	*e*P		**P**		**15 57 24.1**	**-0.6**
	comp=Z,13nm,0.5s,mb5.0								
LIC	**Lamto**	**61.35**	**263**	*e*PKP2		**P**		**15 57 24.0**	**-0.7**
	comp=Z,23nm,0.5s,mb5.5								
LIC	**Lamto**	**61.35**	**263**	*e*P		**P**		**15 57 24.1**	**-0.6**
	comp=Z,6.7nm,0.5s,mb5.0								
BOSA	**Boshof**	**61.43**	**211**	P		**P**		**15 57 24.8**	**-0.1**
	comp=Z,2.7nm,0.4s,mb4.7,baz=3.0,slow=6.6,SNR=16								
BOSA	**Boshof**	**61.43**	**211**	P		**P**		**15 57 24.8**	**-0.1**
BOSA				pmax		pmax			
	comp=Z,3.0nm,0.4s,mb4.8								
SUMG	**Summit**	**67.28**	**341**	*e*P		**P**		**15 58 04.3**	**+1.6**
SUMG	**Summit**	**67.28**	**341**	*e*P		**P**		**15 58 04.3**	**+1.6**
YSS	**Yuzh-Sakhalins**	**69.62**	**47**	*e*P		**P**		**15 58 16.9**	**-0.8**
YSS				pmax		pmax			
	comp=Z,13nm,0.8s,mb4.9								
YSS	**Yuzh-Sakhalins**	**69.62**	**47**	*e*P		**P**		**15 58 16.9**	**-0.8**
	comp=Z,13nm,0.8s,mb4.9								
YSS	**Yuzh-Sakhalins**	**69.62**	**47**	*e*P		**P**		**15 58 16.9**	**-0.8**
	comp=Z,13nm,0.8s,mb4.9								
FITZ	**Fitzroy Crossi**	**80.28**	**115**	P		**P**		**15 59 19.8**	**+0.1**
	comp=Z,0.8nm,0.4s,mb4.0								
WRA	**Warramunga Arr**	**88.35**	**113**	P		**P**		**16 00 00.3**	**-0.4**
	comp=Z,1.9nm,0.7s,mb4.4,baz=307,slow=4.3,SNR=25								
WRA	**Warramunga Arr**	**88.35**	**113**	P		**P**		**16 00 00.3**	**-0.4**
WRA				pmax		pmax			
	comp=Z,2.0nm,0.7s								
WRAB	**Tennant Creek**	**88.36**	**113**	*i* P		**P**		**16 00 01.6**	**+0.9**
ASAR	**Alice Springs**	**89.73**	**116**	P		**P**		**16 00 07.1**	**0.0**
	comp=Z,1.5nm,0.6s,mb4.5,baz=300,slow=4.8,SNR=23								
ASAR	**Alice Springs**	**89.73**	**116**	P		**P**		**16 00 07.1**	**0.0**
ASAR				pmax		pmax			
	comp=Z,2.0nm,0.6s								
YKA	**Yellowknife Ar**	**92.02**	**356**	P		**P**		**16 00 18.8**	**+1.7**
	comp=Z,0.9nm,0.9s,mb4.1,baz=4.4,slow=5.3,SNR=4.0								
YKA	**Yellowknife Ar**	**92.02**	**356**	P		**P**		**16 00 18.8**	**+1.7**
YKA				pmax		pmax			
	comp=Z,1.0nm,0.9s								
YKA	**Yellowknife Ar**	**92.02**	**356**	P		**P**		**16 00 18.8**	**+1.7**
WES	**Weston**	**96.89**	**324**	*e*P		**P**		**16 00 41.4**	**+1.6**
WES	**Weston**	**96.89**	**324**	*e*P		**P**		**16 00 41.4**	**+1.6**
HRV	**Adam Dziewonsk**	**96.93**	**324**	*e*P		**P**		**16 00 48.2**	**+8.2**
HRV	**Adam Dziewonsk**	**96.93**	**324**	*e*P		**P**		**16 00 48.2**	**+8.2**
PAL	**Palisades**	**99.23**	**324**	*e*P		**P**		**16 00 44.9**	**-5.5**
PAL	**Palisades**	**99.23**	**324**	*e*P		**P**		**16 00 44.9**	**-5.5**
EIDS	**Eidsvold**	**104.64**	**111**	*e*Pdif		Pdif		16 01 10.2	-4.0

*NEIC **13** 16:05:25.4±1.7, 4.34S×101.26E, h35km, mb3.5/1, Error ellipse: s-maj=68.6km s-min=12.6km az=57.0*
IDC 13 16:05:19.6±2.8, 447S×10108E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.7/19, mbtmp3.7/7, Error ellipse: s-maj=114.0km s-min=19.3km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.88**	**355**	P	P	16 10 24.8	-0.2
	1.1nm,0.5s,baz=185,slow=8.7,SNR=11						
CHTO	**Chiang Mai**	**23.23**	**355**	P	P	16 10 28.0	-0.7
	1.5nm,0.8s						
WRA	**Warramunga Arr**	**35.85**	**118**	P	P	16 12 20.1	-1.3
	0.2nm,0.3s,baz=308,slow=9.0,SNR=7.9						
ASAR	**Alice Springs**	**36.96**	**124**	P	P	16 12 31.9	+1.1
	0.3nm,0.8s,baz=298,slow=8.0,SNR=8.6						
SONM	**Songino Array**	**52.29**	**5**	P	P	16 14 33.4	+0.6
	1.7nm,0.6s,baz=188,slow=9.0,SNR=9.3						
MKAR	**Makanchi Array**	**53.68**	**344**	P	P	16 14 43.2	+0.1
	0.8nm,0.7s,baz=152,slow=8.8,SNR=7.7						
MKAR	**Makanchi Array**	**53.68**	**344**	P	P	16 14 43.2	+0.1
ZALV	**Zalesovo Beam**	**59.78**	**349**	P	P	16 15 26.4	0.0
	0.6nm,0.4s,baz=160,slow=4.7,SNR=4.6						
BVAR	**Borovoye Array**	**62.85**	**340**	P	P	16 15 46.7	-0.5
	0.5nm,0.4s,baz=148,slow=12,SNR=3.7						
TXAR	**Lajitas Array**	**145.93**	**41**	PKPbc	PKPbc	16 25 01.4	-0.5
	0.4nm,0.5s,baz=179,slow=0.8,SNR=6.5						

*TAP **13** 16:05:58.7, 24.17N×121.72E, h52km, ML3.4, C*
*ISCJB **13** 16:05:59.1±0.3, 24.16N±0.002×121.79E±0.002, h51km±4km, Error ellipse: s-maj=4.1km s-min=2.4km az=143.0*
*JMA **13** 16:05:59.5±0.2, 24.37N×121.84E, h83km, M2.2*
ISC 13 16:05:59.6±0.3, 2417N±0.002×12178E±0.002, h48km±5km, n52, σ0892/90, 2C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.19**	**243**	⇑*i*P	**Pn**	**16 06 07.1**	**-0.6**
TWD	baz=244			*i* S	**Sn**	**16 06 13.1**	**-0.4**
	baz=244						
HWA	**Hwalien**	**0.25**	**220**	*e*P	**Pn**	**16 06 08.0**	**-0.1**
HWA	baz=218			*e*S	**Sn**	**16 06 15.7**	**+1.5**
	baz=218						
ENA	**Nanau**	**0.26**	**352**	⇓*i*P	**Pn**	**16 06 07.9**	**-0.4**
ENA	baz=357			*e*S	**Sn**	**16 06 15.4**	**+1.0**
	baz=357						
ESF	**Shoufeng Towns**	**0.39**	**220**	*e*P	**Pn**	**16 06 08.9**	**-0.5**
	baz=222						
TWC	**Suao**	**0.44**	**8**	⇓*i*P	**Pn**	**16 06 10.1**	**0.0**
TWC	baz=19			S	**Sn**	**16 06 18.6**	**+1.0**
	baz=19						
NNS	**Nan Shan**	**0.46**	**306**	⇑P	**Pn**	**16 06 09.7**	**-0.6**
	baz=314						
WHF	**Hehuan Shan**	**0.47**	**267**	*e*P	**Pn**	**16 06 09.9**	**-0.5**
WHF	baz=266			*e*S	**Sn**	**16 06 17.3**	**-0.8**
	baz=266						
ESL	**Shilin**	**0.48**	**222**	⇓*i*P	**Pn**	**16 06 09.0**	**-1.5**
ESL	baz=222			*e*S	**Sn**	**16 06 16.2**	**-2.1**
	baz=222						
ENTT	**Nioudou**	**0.51**	**337**	⇓*i*P	**Pn**	**16 06 10.3**	**-0.6**
ENTT	baz=341			*e*S	**Sn**	**16 06 18.5**	**-0.4**
	baz=341						
TWE	**Neicheng**	**0.56**	**349**	*e*P	**Pn**	**16 06 11.1**	**-0.4**
TWE	baz=349			*e*S	**Sn**	**16 06 20.5**	**+0.4**
	baz=349						
ILA	**Ilan**	**0.59**	**357**	*e*P	**Pn**	**16 06 12.2**	**+0.2**
	baz=358						
EHY	**Hungye**	**0.78**	**213**	*e*P	**Pn**	**16 06 13.3**	**-1.1**
EHY	baz=208			*e*S	**Sn**	**16 06 23.4**	**-1.7**
	baz=208						
TWA	**Mucha**	**0.83**	**347**	P	**Pn**	**16 06 14.9**	**-0.1**
TWA	baz=342			*e*S	**Sn**	**16 06 25.5**	**-0.7**
	baz=342						
NSTT	**Nanjuang**	**0.85**	**303**	*e*P	**Pn**	**16 06 15.0**	**-0.2**
NSTT	baz=304			*e*S	**Sn**	**16 06 26.0**	**-0.7**
	baz=304						
SMLT	**Sun Moon Lake**	**0.85**	**251**	*e*P	**Pn**	**16 06 14.8**	**-0.6**
SMLT	baz=245			*e*S	**Sn**	**16 06 26.5**	**-0.3**
	baz=245						
TWB1	**Santiao Chiao**	**0.86**	**13**	*i* P	**Pn**	**16 06 15.8**	**+0.4**
	baz=25						
TWB1				S	**Sn**	**16 06 28.4**	**+1.5**
	baz=25						
TYC	**Yuchr**	**0.89**	**253**	*e*P	**Pn**	**16 06 15.2**	**-0.5**
	baz=247						
TYC				*e*S	**Sn**	**16 06 27.9**	**+0.3**
	baz=247						
NWF	**Wu-fen Shan**	**0.90**	**360**	*e*P	**Pn**	**16 06 16.1**	**+0.1**
	baz=351						
NWF				*e*S	**Sn**	**16 06 29.6**	**+1.7**
	baz=351						
TWF1	**Yuli**	**0.93**	**209**	*e*P	**Pn**	**16 06 14.2**	**-2.1**
	baz=211						
TWQ1	**Liyutan**	**0.94**	**281**	*e*P	**Pn**	**16 06 15.5**	**-0.9**
	baz=281						
TWQ1				*e*S	**Sn**	**16 06 28.8**	**-0.1**
	baz=281						
TWS1	**Kuangyinshan**	**0.98**	**340**	*e*P	**Pn**	**16 06 16.5**	**-0.6**
	baz=343						
TWS1				*e*S	**Sn**	**16 06 29.5**	**-0.5**
	baz=343						
TCU	**Taichung**	**1.01**	**269**	*e*P	**Pn**	**16 06 17.3**	**-0.2**
	baz=268						
TCU				*e*S	**Sn**	**16 06 30.8**	**+0.3**
	baz=268						
YUS	**Yu-Shan**	**1.02**	**228**	*e*P	**Pn**	**16 06 17.2**	**-0.3**
	baz=222						
YUS				*e*S	**Sn**	**16 06 30.3**	**-0.4**
	baz=222						
WNT	**Mingjian**	**1.04**	**254**	*e*P	**Pn**	**16 06 18.0**	**+0.1**
	baz=252						
WNT				*e*S	**Sn**	**16 06 32.5**	**+1.1**
	baz=252						
ALS	**Alishan**	**1.11**	**234**	*e*P	**Pn**	**16 06 18.9**	**+0.1**
	baz=225						
CHKT	**Chengkung**	**1.13**	**200**	*e*P	**Pn**	**16 06 18.3**	**-0.8**
	baz=186						
CHKT				*e*S	**Sn**	**16 06 34.7**	**+1.2**
	baz=186						
CHN5	**Tsauling**	**1.16**	**241**	*e*P	**Pn**	**16 06 19.2**	**-0.2**
	baz=239						
CHN5				*e*S	**Sn**	**16 06 36.1**	**+1.9**
	baz=239						
YOJ	**Yonaguni jima**	**1.16**	**75**	P	**Pn**	**16 06 19.8**	**+0.3**
YOJ				*e*S	**Sn**	**16 06 34.8**	**+0.6**
ELDTW	**Lidau**	**1.20**	**216**	*e*P	**Pn**	**16 06 18.5**	**-1.5**
	baz=206						
WGK	**Gukeng**	**1.22**	**247**	*e*P	**Pn**	**16 06 20.4**	**+0.2**
	baz=245						
WGK				*e*S	**Sn**	**16 06 36.9**	**+1.3**
	baz=245						
CHN2	**Minshiung**	**1.35**	**242**	*e*P	**Pn**	**16 06 22.1**	**-0.1**
	baz=232						
CHN2				*e*S	**Sn**	**16 06 41.7**	**+2.7**
	baz=232						
CHN4	**Tsaushan**	**1.36**	**233**	*e*P	**Pn**	**16 06 22.5**	**+0.3**
	baz=231						
CHN4				*e*S	**Sn**	**16 06 41.2**	**+2.1**
	baz=231						
STYT	**Tauyuan**	**1.37**	**223**	*e*P	**Pn**	**16 06 22.0**	**-0.3**
	baz=221						
STYT				*e*S	**Sn**	**16 06 40.8**	**+1.4**
	baz=221						
WTCT	**Ta-ch'eng**	**1.41**	**258**	*e*P	**Pn**	**16 06 22.4**	**-0.4**
	baz=256						
WTCT				*e*S	**Sn**	**16 06 39.3**	**-0.9**
	baz=256						
WTP	**Ta-pu**	**1.41**	**230**	*e*P	**Pn**	**16 06 22.8**	**-0.1**
	baz=227						
WTP				*e*S	**Sn**	**16 06 42.3**	**+2.0**
	baz=227						
CHY	**Chiayi**	**1.41**	**242**	*e*P	**Pn**	**16 06 23.0**	**+0.1**
	baz=240						
TWK	**Hsinying**	**1.49**	**233**	*e*P	**Pn**	**16 06 24.0**	**+0.1**
	baz=231						
TWK				*e*S	**Sn**	**16 06 43.4**	**+1.2**
	baz=231						
TWG	**Pinlang**	**1.49**	**206**	*e*P	**Pn**	**16 06 21.6**	**-2.4**
	baz=194						
CHN1	**Nanshi**	**1.51**	**230**	*e*P	**Pn**	**16 06 24.2**	**-0.1**
	baz=227						
CHN1				*e*S	**Sn**	**16 06 43.8**	**+1.0**
	baz=227						
WSF	**Szhu**	**1.52**	**250**	*e*P	**Pn**	**16 06 24.2**	**-0.2**
	baz=259						
WSF				*e*S	**Sn**	**16 06 43.1**	**+0.1**
	baz=259						
SGST	**Jiashian**	**1.54**	**226**	*e*P	**Pn**	**16 06 24.7**	**0.0**
	baz=223						
SGST				*e*S	**Sn**	**16 06 44.8**	**+1.3**
	baz=223						
CHN8	**Yiju**	**1.66**	**241**	*e*P	**Pn**	**16 06 26.2**	**0.0**
	baz=239						
CHN8				*e*S	**Sn**	**16 06 47.6**	**+1.3**
	baz=239						
ECL	**Taimali**	**1.74**	**206**	*e*P	**Pn**	**16 06 25.3**	**-2.1**
	baz=197						
SSD	**Sandimen**	**1.77**	**217**	*e*P	**Pn**	**16 06 28.3**	**+0.5**
	baz=206						
IRIF	**Iriomote-Funau**	**1.79**	**84**	P	**Pn**	**16 06 27.9**	**-0.1**
IRIF				S	**Sn**	**16 06 49.7**	**+0.2**
HATJ	**Hateruma jima**	**1.85**	**93**	*e*S	**Sn**	**16 06 52.3**	**+1.1**
EAST	**Anshuo**	**1.97**	**206**	*e*P	**Pn**	**16 06 30.8**	**+0.2**
	baz=199						
JKRS	**Kuro-shima**	**2.04**	**88**	P	**Pn**	**16 06 31.9**	**+0.5**
JKRS				*e*S	**Sn**	**16 06 56.7**	**+1.0**
SCZT	**Fangliau**	**2.08**	**211**	*e*P	**Pn**	**16 06 32.2**	**+0.1**
	baz=221						
PNG	**Penghu**	**2.12**	**254**	*e*P	**Pn**	**16 06 30.9**	**-1.8**
	baz=252						
JIJ	**Ishigaki jima**	**2.16**	**84**	P	**Pn**	**16 06 33.3**	**+0.1**
JIJ				S	**Sn**	**16 06 58.5**	**-0.3**
JTJ	**Tarama**	**2.70**	**79**	P	**Pn**	**16 06 40.8**	**+0.2**
JTJ				*e*S	**Sn**	**16 07 11.3**	**-0.8**

*BJI **13** 16:09:12.7, 3.47S×101.28E, h44km, mB6.2, mb5.9, Ms6.0, Ms7.5.8*
*MOS **13** 16:09:14.1±0.8, 3.08S×101.52E, h36km, mb6.3/99, MS5.5/111, Error ellipse: s-maj=7.9km s-min=3.8km az=122.6*
*ISCJB **13** 16:09:15.4±0.1, 3.19S±0.002×101.40E±0.002, h49km, mb6.2/262, MS5.7/260, Error ellipse: s-maj=3.1km s-min=2.1km az=22.7*
*GCMT **13** 16:09:16.4±0.1, 3.52S×101.17E, h52km, MW6.0/107, Moment Tensor Solution. s107,c239; s100,c225; Duration: 284 Moment tensor: Scale 10^18Nm; Mrr0.86±.01; Mθθ-0.49±.01; Mϕϕ-0.36±.01; Mrθ0.62±.01; Mθϕ0.59±.01; Mϕr-0.33±.01; Best double couple: Mo1.17600×10^18 NP1:ϕs324.00000°, δ28.00000°, λ109.00000°. NP2:ϕs122.00000°, δ64.00000°, λ80.00000°. Principal axes: T 1.1100, Plg70.0000°, Azm12.0000°; N 0.1330, Plg9.0000°, Azm127.0000°; P -1.2430, Plg18.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **13** 16:09:16.9±0.1, 3.17S×101.52E, h53km, mb6.1/143, ME6.1 Error ellipse: s-maj=4.9km s-min=3.1km az=38.0 Broadband fault plane solution: P waves. NP1: ϕs305.00000°, δ25.00000°, λ90.00000°. NP2: ϕs125.00000°, δ65.00000°, λ90.00000°. Principal axes: T Plg70.0000°, Azm35.0000°; N Plg0.0000°, Azm0.0000°; P Plg20.0000°, Azm215.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Bengkulu and [III] at Kapahiang and Padang.
*IDC **13** 16:09:16.9±0.5, 3.21S×101.69E, h52km±3km, mb5.7/24, mb1 5.7/25, mb1mx5.7/25, mbtmp5.7/25, MS5.5/33, Ms1 5.5/33, ms1mx5.4/44 Error ellipse: s-maj=11.6km s-min=7.0km az=41.0*
*DJA **13** 16:09:17, 3.28S×101.26E, h55km, Mw6.4/51*
*SZGRF **13** 16:09:19.7, 3.43S×100.37E, h50km, mb6.3, MS5.5, Southern Sumatera, Indonesia*
ISC 13 16:09:17.2±0.1, 321S±0.002×10137E±0.002, h51km, h51km±.6km: pP-P, n1621, σ0896/965, mb6.2/263, MS5.7/260, 498C-225D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMBI	**JAMBI**	**2.76**	**56**	P	**Pn**	**16 10 00.7**	**+1.7**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**2.90**	**340**	P	**Pn**	**16 09 52.9**	**-8.0**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.00**	**19**	P	**Pn**	**16 10 04.6**	**+2.3**
	0.0nm,0.0s						
KLI	**Kotabumi**	**3.85**	**115**	P	**Pn**	**16 10 15.7**	**+1.7**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.20**	**50**	P	**Pn**	**16 10 20.4**	**+1.6**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**4.88**	**78**	P	**Pn**	**16 10 28.5**	**+0.4**
	0.0nm,0.0s						
KGM	**Kluang**	**5.54**	**21**	⇓P	**Pn**	**16 10 40.9**	**+3.7**
MYKOM	**Kota Tinggi**	**5.55**	**27**	⇓P	**Pn**	**16 10 40.7**	**+3.3**
SBJI	**Serang**	**5.56**	**122**	P	**Pn**	**16 10 38.5**	**+1.1**
	8μm,1.1s						
TRSI	**Tarutung**	**5.73**	**335**	P	**Pn**	**16 10 42.7**	**+2.9**
	5μm,0.8s						
TNG	**Tangerang**	**6.03**	**119**	P	**Pn**	**16 10 45.4**	**+1.5**
	12μm,1.1s						
TPI	**Tanjungpandan**	**6.30**	**86**	P	**Pn**	**16 10 47.7**	**+0.2**
	1μm,0.9s						
DBJI	**Dramaga**	**6.31**	**122**	P	**Pn**	**16 10 48.2**	**+0.5**
	6μm,1.6s						
CBJI	**Citeko**	**6.33**	**120**	P	**Pn**	**16 10 51.4**	**+3.4**
	30μm,1.1s						
SKJI	**Sukabumi**	**6.40**	**126**	P	**Pn**	**16 10 49.2**	**+0.2**
	6μm,1.0s						
FRIM	**Kepong**	**6.41**	**2**	⇓P	**Pn**	**16 10 40.9**	**-8.2**
LEM	**Lembang**	**7.19**	**120**	P	**Pn**	**16 11 01.0**	**+1.2**
	5μm,1.2s						
JCJI	**Jatiwangi**	**7.61**	**116**	P	**Pn**	**16 11 07.9**	**+2.3**
	3μm,1.1s						
IPM	**Ipoh**	**7.64**	**357**	⇓P	**Pn**	**16 11 10.1**	**+4.0**
XMIS	**Christmas Isla**	**8.38**	**150**	*e*Pn	**Pn**	**16 11 07.8**	**-8.4**
XMIS				*e*Sn	**Sn**	**16 12 36.5**	**-13**
KTGM	**Kuala Trenggan**	**8.66**	**12**	⇑P	**Pn**	**16 11 23.1**	**+3.1**
CLJI	**Cilicap**	**8.83**	**121**	P	**Pn**	**16 11 28.0**	**+5.7**
	3μm,1.7s						
BJII	**Banjamegara**	**9.26**	**117**	P	**Pn**	**16 11 28.8**	**+0.6**
	1μm,1.4s						
COCO	**West Island**	**9.99**	**206**	Pn	**Pn**	**16 11 34.5**	**-3.6**
	14μm,0.5s,SNR=32						
COCO	**West Island**	**9.99**	**206**	*e*Pn	**Pn**	**16 11 33.3**	**-4.8**
	2μm,0.9s						
KSM	**Kuching**	**10.08**	**63**	⇑P	**Pn**	**16 11 41.7**	**+2.3**
KSM	**Kuching**	**10.08**	**63**	⇓*e*Pn	**Pn**	**16 11 40.2**	**+0.8**
	1μm,2.0s						
KSM				*e*Sn	**Sn**	**16 13 44.4**	**+13**
PBKI	**Pangkalan Bun**	**10.30**	**87**	P	**Pn**	**16 11 45.5**	**+3.0**
	4μm,1.1s						
SNG	**Songkhla**	**10.34**	**356**	P	**Pn**	**16 11 44.0**	**+1.0**
	2μm,1.1s						
BSI	**Banda Aceh**	**10.56**	**325**	P	**Pn**	**16 11 45.4**	**-0.6**
	774nm,1.1s						
STKI	**Sintang**	**10.62**	**72**	P	**Pn**	**16 11 48.5**	**+1.7**
	1μm,1.3s						
SJI	**Sawahan**	**11.29**	**114**	P	**Pn**	**16 11 55.7**	**-0.2**
	2μm,0.8s						
KRKI	**Karangkates**	**12.08**	**114**	P	**Pn**	**16 12 04.9**	**-1.8**
	2μm,1.0s						
SBUM	**Sibu**	**12.22**	**63**	⇑P	**Pn**	**16 12 13.8**	**+5.1**
PLKI	**Palangkaraya**	**12.60**	**86**	P	**Pn**	**16 12 16.3**	**+2.4**
	3μm,1.2s						
KMMI	**Kalianget**	**13.12**	**107**	P	**Pn**	**16 12 21.9**	**+1.0**
	1μm,1.3s						
BTM	**Bintulu**	**13.33**	**62**	⇓P	**Pn**	**16 12 28.8**	**+5.0**
BBKI	**Banjar Baru**	**13.46**	**91**	P	**Pn**	**16 12 28.4**	**+2.8**
	9μm,0.8s						
NBBI	**Negara**	**14.14**	**112**	P	**Pn**	**16 12 34.6**	**-0.3**
	2μm,0.7s						
IGBI	**Denpasar**	**14.79**	**113**	P	**Pn**	**16 12 39.8**	**-3.6**
	2μm,1.2s						
DNP	**Denpasar**	**14.80**	**112**	P	**Pn**	**16 12 40.8**	**-2.7**
	2μm,0.8s						
KHKI	**Kahang-Kahang**	**15.06**	**110**	P	**Pn**	**16 12 45.2**	**-1.8**
	921nm,0.9s						
MTNI	**Mataram**	**15.68**	**111**	P	**Pn**	**16 12 50.3**	**-4.6**
	1μm,1.0s						
NNT	**Nongplab**	**15.78**	**354**	P	**Pn**	**16 12 55.5**	**-0.7**
SMKI	**Samarinda**	**16.07**	**80**	P	**Pn**	**16 13 03.5**	**+3.6**
	2μm,1.2s						
KKM	**Kota Kinabalu**	**17.45**	**58**	⇓P	**Pn**	**16 13 20.2**	**+3.0**
KKM	**Kota Kinabalu**	**17.45**	**58**	⇑*e*Pn	**Pn**	**16 13 18.4**	**+1.3**
	5μm,1.7s						
SDKM	**Sandakan**	**18.09**	**61**	⇓P	**Pn**	**16 13 27.7**	**+2.6**
TSM	**Tawau**	**18.10**	**66**	⇑P	**Pn**	**16 13 27.6**	**+2.4**
KAPI	**Kappang**	**18.43**	**96**	Pn	**Pn**	**16 13 27.7**	**-1.4**
	12μm,1.1s						
KAPI	**Kappang**	**18.43**	**96**	P	**Pn**	**16 13 26.4**	**-2.7**
	22nm,0.3s,baz=277,slow=10,SNR=76						
KAPI				LR	LR	16 21 13.2	
	comp=Z,18μm,18.1s,baz=78,slow=40						
KAPI	**Kappang**	**18.43**	**96**	⇑*i*Pn	**Pn**	**16 13 26.9**	**-2.2**
	5μm,1.0s						
KDM	**Kudat**	**18.43**	**57**	⇑P	**Pn**	**16 13 31.4**	**+2.3**
PCI	**Palu**	**18.60**	**83**	P	**Pn**	**16 13 31.6**	**+0.4**
	4μm,1.9s						
UBT	**Ubonrachathani**	**18.69**	**11**	P	**Pn**	**16 13 31.8**	**-0.4**
	417nm,1.0s						
NST	**Nakhon Sawan**	**18.80**	**356**	P	**Pn**	**16 13 30.7**	**-2.9**
	107nm,1.2s						
MYLDM	**Lahad Datu**	**19.04**	**64**	⇑P	**Pn**	**16 13 39.1**	**+2.7**
KKTK	**Khon Kaen**	**19.47**	**4**	P	**Pn**	**16 13 39.0**	**-2.6**
	2μm,0.5s						
BATP	**Bataraza**	**20.27**	**54**	*e*P	**P**	**16 13 50.2**	**+1.5**
BDT	**Bhumibol Dam**	**20.46**	**354**	⇑P	**P**	**16 13 49.0**	**-1.7**
	58nm,1.0s						
KDI	**Kendari**	**21.23**	**93**	P	**P**	**16 13 59.8**	**+0.7**
	2μm,1.4s,mb6.2						
PPR	**Puerto Princes**	**21.58**	**53**	⇓*e*P	**P**	**16 14 03.0**	**+0.2**
CM31	**Chiang Mai Arr**	**21.66**	**354**	*e*P	**P**	**16 14 00.7**	**-3.0**
	527nm,1.2s,mb5.8						
CMAR	**Chiang Mai Arr**	**21.66**	**354**	P	**P**	**16 14 01.0**	**-2.6**
	143nm,1.0s,mb5.3,baz=185,slow=10,SNR=158						
CMAR				PcP	PcP	16 18 04.3	+0.7
	30nm,0.8s,baz=208,slow=3.3,SNR=9.2						
CMAR				ScP	ScP	16 21 36.6	-0.2
	34nm,1.2s,baz=204,slow=4.1,SNR=10						
CMAR				LR	LR	16 23 28.0	
	comp=Z,21μm,18.4s,MS5.6,baz=328,slow=39						
CMAR				PKiKP	PKiKP	16 25 49.5	-1

PAGZ Pagadian 24.56 63 *e*P P 16 14 33.7 +1.2
DCPH Dipolog City 24.86 62⇑*e*P P 16 14 35.3 0.0
SJMP San Jose 25.05 51 *e*P P 16 14 37.7 +0.7
CTBH Cotabato--PC H 25.08 66 *e*P P 16 14 37.2 0.0
CTBH *i* S sP 16 15 08.3 +12
LUBP Lubang 25.18 48 *e*P P 16 14 38.3 +0.2
GUIM Jordan 25.20 57 *e*P P 16 14 39.1 +0.7
MBWA Marble Bar 25.25 136⇑*e*P P 16 14 37.3 -1.5
comp=Z,362nm,1.0s,mb5.9
MBWA *e*S **S 16 19 18.2 +17**
MBWA LR LR
comp=Z,10µm,20.0s,MS5.3
GSPH General Santos 25.30 69⇑*e*P P 16 14 42.7 +3.5
KALP Kalibo 25.57 54⇓*e*P P 16 14 39.9 -1.8
OTRP Odiongan 25.70 53 *e*P P 16 14 43.6 +0.7
TBP Tagbilaran 25.82 60 *e*P P 16 14 43.9 -0.1
RCP Roxas 25.83 55⇑*i*P P 16 14 45.1 +1.0
NBP Mount Natib 25.97 46⇓*e*P P 16 14 45.2 -0.1
BUKP Musuan 26.08 65 *e*P P 16 14 46.3 0.0
LBPH Los Banos 26.15 48⇑*e*P P 16 14 47.7 +0.8
LLP Lapu-Lapu 26.21 59⇑*e*P P 16 14 47.2 -0.3
DAV Davao City (W) 26.24 67 P P 16 14 46.3 -1.5
comp=Z,213nm,0.4s,mb6.0,baz=128,slow=7.7,SNR=11
DAV LR LR 16 26 59.1
comp=Z,7µm,19.4s,MS5.2,baz=59,slow=41
DAV Davao City (W) 26.24 67⇑*i*P P 16 14 46.4 -1.4
DAV Davao City (W) 26.24 67 *e*P P 16 14 49.1 +1.4
comp=Z,410nm,0.8s,mb6.0
DAV LR LR
comp=Z,19µm,22.0s,MS5.6
LBMI Labuha 26.24 85 P P 16 14 47.0 -0.8
comp=Z,3µm,1.1s,mb6.8
SCZP Santa Cruz 26.32 44 *e*P P 16 14 48.5 +0.1
MDRS Chennai 26.48 308 *e*P P 16 14 49.7 -0.2
MDRS AMb AMB 16 15 13.6
comp=Z,518nm,1.8s,mb5.8
BOLP Bolinao 26.74 43 *e*P P 16 14 52.1 -0.2
AUQP San Andres 26.78 52 *e*P P 16 14 53.8 +1.1
AAI Ambon 26.78 92 P P 16 14 54.1 +1.4
comp=Z,563nm,1.1s,mb6.0
AAI Ambon 26.78 92 P P 16 14 54.1 +1.4
comp=Z,813nm,1.1s,mb6.2
MATI Mati 26.82 68 *e*P P 16 14 53.0 0.0
MSLP Maasin 26.89 60 *e*P P 16 14 44.6 -9.1
TRD Trivandrum 26.98 296 *e*P P 16 14 54.9 +0.4
TRD AMb AMB 16 15 19.0
comp=Z,394nm,1.6s,mb5.7
PCPH Palayan 27.00 46⇓*e*P P 16 14 52.9 -1.7
BUTP Butuan 27.04 63 *e*P P 16 14 58.2 +3.2
POLP Polilio Island 27.08 48 *e*P P 16 14 55.3 +0.1
OCLP Ormoc 27.12 58 *e*P P 16 14 55.1 -0.6
SCPH Surigao 27.28 62⇑*e*P P 16 14 59.0 +1.9
KOD Kodaikanal 27.29 300 *e*P P 16 14 59.0 +1.8
VIS Vishakhapatnam 27.37 320 *e*P P 16 14 58.4 +0.6
VIS *i* S **S 16 19 35.2 +0.8**
BIPH Bislig 27.38 65⇑*i*P P 16 14 56.7 -1.3
BALP Baler 27.46 46 *e*P P 16 14 58.1 -0.7
PLP Palo 27.49 58⇓*e*P P 16 14 58.0 -1.0
BWNR Bhubaneshwar 27.91 327 *e*P P 16 15 03.0 +0.3
BWNR *e*S **S 16 19 43.0 0.0**
CNP Catarman 27.92 56 *e*P P 16 15 03.0 +0.2
FITZ Fitzroy Crossi 28.01 124 *e*P P 16 15 02.3 -1.3
comp=Z,470nm,0.8s,mb6.2
FITZ *e*S **S 16 19 37.9 -6.8**
FITZ Fitzroy Crossi 28.01 124 P P 16 15 02.4 -1.2
comp=Z,200nm,0.8s,mb5.8,baz=302,slow=8.4,SNR=375
FITZ S **S 16 19 38.7 -5.9**
comp=Z,58nm,1.0s,baz=100,slow=22,SNR=6.4
FITZ LR LR 16 25 55.1
comp=Z,6µm,21.8s,MS5.1,baz=298,slow=36
PVCP Virac 28.11 53 *e*P P 16 15 03.4 -1.2
ABRA Dolores 28.17 42 *e*P P 16 15 04.3 -0.8
KMI Kunming 28.20 3 P P 16 15 05.8 +0.6
KMI AP pP 16 15 15.3 -2.9
KMI XP sP 16 15 21.0 -3.3
KMI PP PP 16 15 54.9 -15
KMI S **S 16 19 46.4 -0.9**
KMI XS sS 16 20 05.3 -4.1
KMI AMB AMB
comp=Z,83nm,1.0s,mb5.3
KMI AMB AMB
comp=Z,2µm,8.0s
KMI LR LR
comp=N,20µm,19.8s,MS5.8
KMI LR LR
comp=E,10µm,19.0s,MS5.8
KMI LR LR
comp=Z,21µm,18.2s,MS5.8
KMI Kunming 28.20 3 P P 16 15 05.7 +0.5
comp=Z,83nm,1.0s,mb5.3
KMI pP pP 16 15 15.3 -2.9
KMI sP sP 16 15 21.0 -3.3
KMI PP PP 16 15 54.9 -15
KMI PPP 16 16 10.3
KMI S **S 16 19 46.4 -0.9**
KMI sS sS 16 20 05.2 -4.2
KMI SS SS 16 21 09.4 -39
KMI SSS 16 21 29.3
KMI LR LR
comp=Z,21µm,18.2s,MS5.8
HKC Hong Kong Obse 28.28 26⇑*i*P P 16 15 08.0 +2.1
HKC *i* S **S 16 19 48.0 -0.7**
CAUP Cauayan 28.45 45 *e*P P 16 15 07.0 -0.5
CAL Calcutta 28.58 334 *e*P P 16 15 08.4 -0.2
CAL *e*S **S 16 19 54.3 +0.8**
APYP Conner 28.68 42 *e*P P 16 15 08.8 -0.8
IMP Imphal 28.75 346 *e*P P 16 15 09.0 -1.1
IMP *ex* x 16 18 21.0
PALP Palanan 28.95 45⇓*e*P P 16 15 11.2 -0.7
DGAR Diego Garcia 29.08 261 PFAKE 16 15 20.0 +6.8
DGAR LR LR
comp=Z,13µm,21.0s,MS5.5
GYA Guiyang 29.93 10⇑*i*P P 16 15 20.5 -0.1
GYA AP pP 16 15 33.8 +0.1
GYA XP sP 16 15 40.9 +1.2
GYA PP PP 16 16 20.4 -8.6
GYA PCP PcP 16 18 20.3 -2.1
GYA S **S 16 20 12.6 -2.1**
GYA XS sS 16 20 38.8 +2.0
GYA SS SS 16 21 54.9 -29
GYA SCP ScP 16 21 56.4 -4.1
GYA SCS ScS 16 25 50.1 -5.9
GYA AMB AMB
comp=Z,240nm,1.0s,mb5.9
GYA AMB AMB
comp=Z,2µm,6.0s
GYA LR LR
comp=N,12µm,18.3s,MS5.8
GYA LR LR
comp=E,15µm,15.9s,MS5.8
GYA LR LR
comp=Z,11µm,18.2s,MS5.5
SWI Sorong 29.96 86 P P 16 15 19.5 -1.6
comp=Z,905nm,1.1s,mb6.4
HYB Hyderabad 30.44 313⇑*i*P P 16 15 26.0 +0.8
HYB *e*S **S 16 20 24.0 +1.1**
HYB Hyderabad 30.44 313 *e*P P 16 15 26.0 +0.8
HYB *e*S **S 16 20 24.0 +1.1**
BOK Bokaro 30.79 331 *e*P P 16 15 28.8 +0.6
BOK AMb AMB 16 15 45.3
comp=Z,1µm,1.8s,mb6.4
BOK *ex* x 16 20 26.6
MUN Mundaring 31.84 156 *e*P P 16 15 37.8 +0.5
MUN *e*PCP PcP 16 18 27.3 -0.1
MUN *e*S **S 16 20 44.9 +0.5**
KLBR Kellerberrin 32.17 153 *e*P P 16 15 40.0 -0.3
comp=Z,242nm,1.2s,mb5.9
LATR Latur 32.54 312 *e*P P 16 15 43.9 +0.3
QZH Quanzhou 32.60 30⇑*i*P P 16 15 44.5 +0.4
QZH XP sP 16 15 59.6 -3.7
QZH AMB AMB
comp=Z,740nm,1.2s,mb6.5
QZH AMB AMB
comp=Z,2µm,3.6s
QZH LR LR
comp=N,18µm,20.2s,MS5.9
QZH LR LR
comp=E,17µm,17.6s,MS5.9
QZH LR LR
comp=Z,31µm,30.2s
NGP Nagpur 32.62 319 *e*P P 16 15 43.1 -1.2
NGP AMb AMB 16 15 48.1
comp=Z,292nm,1.7s,mb5.9
ODAN Odare 32.80 337 *e*P P 16 15 46.9 +1.1
comp=Z,924nm,0.6s,mb6.9
GOA Goa 32.99 305⇑*i*P P 16 15 48.9 +1.3
GOA *i* x x 16 21 00.7
NWAO Narrogin (SRO) 33.09 155 P P 16 15 48.2 -0.1
comp=Z,67nm,0.9s,mb5.6,baz=315,slow=9.6,SNR=23
NWAO LR LR 16 28 03.7
comp=Z,16µm,20.4s,MS5.7,baz=328,slow=34
NWAO Narrogin (SRO) 33.09 155 P P 16 15 48.2 -0.1
NWAO pmax pmax
comp=Z,67nm,0.9s
NWAO MLR MLR
comp=Z,16µm,20.4s
NWAO Narrogin (SRO) 33.09 155 *e*P P 16 15 47.2 -1.1
comp=Z,169nm,1.0s,mb5.9
NWAO LR LR
comp=Z,15µm,22.0s,MS5.6
TAPN Taplejung 33.11 337 *e*P P 16 15 50.1 +1.5
comp=Z,2µm,0.9s,mb7.1
RAMN Ramite 33.20 335 *e*P P 16 15 50.8 +1.5
comp=Z,470nm,0.5s,mb6.7
JBP Jabalpur 33.50 323 *e*P P 16 15 53.2 +1.2
JBP *e*S **S 16 21 10.0 -0.4**
NACB Ninganchiao 33.59 35⇑*e*P P 16 15 52.0 -0.7
comp=Z,254nm,1.0s,mb6.1
AKL Akola 33.69 316 *e*P P 16 15 54.1 +0.5
AKL AMb AMB 16 16 14.6
comp=Z,359nm,1.7s,mb6.0
YHNB Yeheng 33.85 34⇑*i*P P 16 15 55.0 0.0
comp=Z,355nm,1.1s,mb6.2
YHNB LR LR
comp=Z,9µm,22.0s,MS5.4
JIRN Jiri 34.00 335 *e*P P 16 15 57.8 +1.6
comp=Z,2µm,0.9s,mb7.0
CD2 Chengdu 34.01 4⇑*i*P P 16 15 55.3 -0.9
CD2 PP PP 16 17 09.9 -4.2
CD2 PCP PcP 16 18 32.0 -1.4
CD2 S **S 16 21 16.4 -1.6**
CD2 SS SS 16 23 29.0 -18
CD2 SCS ScS 16 26 16.3 0.0
CD2 AMB AMB
comp=Z,230nm,0.7s,mb6.2
CD2 AMB AMB
comp=Z,1µm,7.2s
CD2 LR LR
comp=N,29µm,18.0s,MS6.1
CD2 LR LR
comp=E,16µm,18.0s,MS6.1
CD2 LR LR
comp=Z,33µm,19.2s,MS6.1
LSA Lhasa 34.15 344 P P 16 15 58.0 +0.4
LSA AP pP 16 16 08.9 -1.9
LSA XP sP 16 16 15.4 -1.4
LSA PP PP 16 17 17.3 +1.5
LSA S **S 16 21 19.3 -1.1**
LSA XS sS 16 21 46.0 +3.4
LSA AMB AMB
comp=Z,210nm,1.2s,mb5.9
LSA LR LR
comp=N,5µm,33.2s
LSA LR LR
comp=E,9µm,41.4s
LSA LR LR
comp=Z,11µm,22.7s
LSA Lhasa 34.15 344⇑*i*P P 16 15 57.7 +0.2
comp=Z,186nm,0.9s,mb6.0
LSA LR LR
comp=Z,8µm,22.0s,MS5.4
TATO Taipei 34.16 34⇑*e*P P 16 15 57.8 +0.1
comp=Z,343nm,1.5s,mb6.1
TATO LR LR
comp=Z,7µm,22.0s,MS5.4
PKI Pulchoki 34.25 334 *e*P P 16 15 59.7 +1.3
PKIN Phulchoki 34.26 334 *e*P P 16 15 59.4 +0.9
comp=Z,477nm,0.9s,mb6.4
GUN Gumba 34.35 335 *e*P P 16 16 00.9 +1.6
DMN Daman 34.41 334 *e*P P 16 16 01.2 +1.3
KKN Kakani 34.50 334 *e*P P 16 16 01.7 +1.1
comp=Z,2µm,0.9s,mb6.9
POO Poona 34.65 310 *e*P P 16 16 00.6 -1.4
GKN Gorkha 34.96 334 *e*P P 16 16 05.8 +1.2
comp=Z,3µm,1.1s,mb7.1
KOLN Koldanda 35.24 332 *e*P P 16 16 08.6 +1.7
comp=Z,892nm,0.6s,mb6.9
DANN Dangsing 35.66 333 *e*P P 16 16 12.0 +1.5
comp=Z,849nm,0.4s,mb7.0
BOM Bombay 35.66 309 *ex* x 16 15 00.6
BOM *ex* x 16 21 37.2
WHN Wuhan 35.78 19⇑P P 16 16 12.0 +0.4
WHN XP sP 16 16 24.6 -6.2
WHN S **S 16 21 44.8 -0.6**
WHN AMB AMB
comp=Z,446nm,1.2s,mb6.3
WHN AMB AMB
comp=Z,5µm,8.6s
WHN LR LR
comp=N,13µm,10.6s
WHN LR LR
comp=E,4µm,9.9s
WHN LR LR
comp=Z,20µm,14.6s,MS6.0
WRA Warramunga Arr 36.21 120 P P 16 16 13.8 -1.6
comp=Z,775nm,1.0s,mb6.6,baz=292,slow=10,SNR=1018
WRA S **S 16 21 46.5 -5.8**
comp=Z,149nm,0.9s,baz=291,slow=17,SNR=16
WRA LR LR 16 32 54.9
comp=Z,5µm,20.6s,MS5.2,baz=290,slow=40
WRA P3KPbc 16 46 52.7
comp=Z,2.0nm,0.7s,baz=106,slow=4.2,SNR=15
WRA Warramunga Arr 36.21 120 P P 16 16 13.8 -1.6
WRA S **S 16 21 46.5 -5.8**
WRA pmax pmax
comp=Z,775nm,1.0s
WRA smax
comp=N,149nm,1.0s
WRA MLR MLR
comp=Z,5µm,20.6s
WRA pmax pmax
comp=Z,2.0nm,0.7s
WRA Warramunga Arr 36.21 120 P P 16 16 13.8 -1.6
WRA S **S 16 21 46.5 -5.8**
WRA LR LR 16 32 54.9
WRA *e* 16 46 52.7
WRAB Tennant Creek 36.22 120 P P 16 16 14.0 -1.5
comp=Z,6µm,0.9s,mb7.5
WRAB Tennant Creek 36.22 120⇑*i*P P 16 16 13.8 -1.7
comp=Z,1µm,1.0s,mb6.7
WRAB *e*S **S 16 21 45.3 -7.1**
WRAB LR LR
comp=Z,6µm,20.0s,MS5.3
FORT Forrest 37.24 140 *e*P P 16 16 23.8 -0.3
comp=Z,359nm,0.8s,mb6.2
FORT *e*PCP PcP 16 18 43.5 +0.5
FORT *e*S **S 16 22 05.8 -2.0**
ASAR Alice Springs 37.44 126 P P 16 16 25.1 -0.8
comp=Z,637nm,0.9s,mb6.5,baz=301,slow=7.8,SNR=2809
ASAR PcP PcP 16 18 44.0 +0.2
comp=Z,58nm,0.9s,baz=311,slow=2.0,SNR=6.1
ASAR S **S 16 22 05.2 -5.9**
comp=Z,87nm,0.8s,baz=294,slow=13,SNR=21
ASAR P3KPbc 16 46 46.3
comp=Z,0.7nm,0.6s,baz=104,slow=4.2,SNR=11
ASAR PKPPKP 16 49 05.8
comp=Z,1.4nm,1.0s,baz=160,slow=3.0,SNR=4.3
ASAR Alice Springs 37.44 126 P P 16 16 25.1 -0.8
ASAR 16 18 44.0
ASAR S **S 16 22 05.2 -5.8**
ASAR pmax pmax
comp=Z,637nm,0.9s
ASAR pmax pmax
comp=Z,58nm,0.9s
ASAR smax
comp=N,87nm,0.8s
ASAR pmax pmax
comp=Z,1.0nm,0.6s
ASAR pmax pmax
comp=Z,1.0nm,1.0s
ASAR Alice Springs 37.44 126 P P 16 16 25.1 -0.8
ASAR PcP PcP 16 18 44.0 +0.2
ASAR S **S 16 22 05.2 -5.9**
ASAR *e* 16 46 46.3
ASAR P'P' 16 49 05.8
XAN Xi'an 37.73 10 P P 16 16 27.6 -0.5
XAN AP pP 16 16 39.5 -1.9
XAN PP PP 16 17 54.9 -0.2
XAN S **S 16 22 11.8 -3.2**
XAN AMB AMB
comp=Z,332nm,1.2s,mb5.9
XAN AMB AMB
comp=Z,2µm,11.8s
XAN LR LR
comp=N,4µm,24.5s,MS5.6
XAN LR LR
comp=E,12µm,23.7s,MS5.6
XAN LR LR
comp=Z,21µm,20.3s,MS5.9
PTH Pithoragarh 38.36 330 *e*P P 16 16 34.8 +1.3
PTH *e*S **S 16 22 25.9 +1.2**
NJ2 Nanjing 38.80 24 *e*P P 16 16 37.1 -0.1
NJ2 AP pP 16 16 49.9 -0.7
NJ2 XP sP 16 16 55.6 -0.9
NJ2 PP PP 16 18 10.6 +3.7
NJ2 S **S 16 22 31.0 -0.3**
NJ2 XS sS 16 22 51.5 -2.3
NJ2 AMB AMB
comp=Z,90nm,1.2s,mb5.4
NJ2 LR LR
comp=N,5µm,23.4s,MS5.6
NJ2 LR LR
comp=E,9µm,20.7s,MS5.6
NJ2 LR LR
comp=Z,28µm,23.0s,MS6.0
SSE Sheshan 39.00 28 ⇑P P 16 16 39.8 +1.0
SSE S **S 16 22 38.0 +3.8**
SSE AMB AMB
comp=Z,248nm,1.3s,mb5.8
SSE AMB AMB
comp=Z,2µm,5.2s
SSE LR LR
comp=N,8µm,22.0s,MS5.5
SSE LR LR
comp=E,3µm,22.0s,MS5.5
SSE LR LR
comp=Z,9µm,27.5s
SSE Sheshan 39.00 28 ⇑P P 16 16 39.8 +1.0
comp=Z,248nm,1.3s,mb5.8
SSE pP pP 16 16 41.7 -10
SSE S **S 16 22 38.0 +3.8**
SSE sS sS 16 22 40.2 -17
SSE LR LR
comp=Z,9µm,27.5s,MS5.5
LZH Lanzhou 39.16 3 ⇑P P 16 16 40.3 +0.2
LZH PP PP 16 18 14.0 +3.2
LZH PCP PcP 16 18 49.3 +0.5
LZH S **S 16 22 41.3 +4.8**
LZH SS SS 16 25 27.3 -3.8
LZH SCS ScS 16 26 44.0 -0.8
LZH AMB AMB
comp=Z,393nm,1.1s,mb6.0
LZH AMB AMB
comp=Z,3µm,8.0s
LZH LR LR
comp=N,24µm,16.2s
LZH LR LR
comp=Z,36µm,19.4s,MS6.2
LZH Lanzhou 39.16 3 ⇑P P 16 16 40.2 +0.1
comp=Z,393nm,1.1s,mb6.0
LZH pP pP 16 16 44.7 -8.8
LZH sP sP 16 16 47.3 -12
LZH PP PP 16 18 14.0 +3.2
LZH PcP PcP 16 18 49.2 +0.4
LZH S **S 16 22 41.2 +4.7**
LZH sS sS 16 22 48.5 -11
LZH SS SS 16 25 27.3 -3.8
LZH ScS ScS 16 26 44.0 -0.8
LZH LR LR
comp=Z,36µm,19.4s,MS6.2
AJM Ajmer 39.23 320 *e*P P 16 16 39.9 -0.9
AJM AMb AMB 16 16 57.7
comp=Z,515nm,1.4s,mb6.1
AJM *ex* x 16 22 30.1
NDI New Delhi 39.29 325⇑*e*P P 16 16 40.0 -1.3
comp=Z,432nm,0.8s,mb6.2
NDI *ex* x 16 22 36.0
JAY Jayapura 39.30 90 P P 16 16 38.6 -3.0
comp=Z,422nm,0.9s,mb6.2
SMLA Simla 41.20 328⇑*i*P P 16 16 57.7 +0.6
SMLA *ex* x 16 16 59.2
comp=Z,1µm,0.6s
SMLA *i* S **S 16 23 06.0 -1.2**
SDNR Sundarnagar 41.60 328 *e*P P 16 17 01.0 +0.7
SDNR *ex* x 16 23 06.5
BHK Bhakra 41.83 327 *e*P P 16 17 02.4 +0.2
TIA Tai'an 41.89 19 *e*P P 16 17 01.8 -0.8
TIA AMB AMB
comp=Z,105nm,1.1s,mb5.4
TIA LR LR
comp=N,9µm,15.0s
TIY Taiyuan 41.99 13 ⇑P P 16 17 04.4 +1.0
TIY S **S 16 23 22.0 +3.3**
TIY AMB AMB
comp=Z,2µm,4.7s
TIY LR LR
comp=N,18µm,16.5s,MS6.1
TIY LR LR
comp=E,2µm,14.7s,MS6.1
TIY LR LR
comp=Z,19µm,18.4s,MS6.0
GTA Gaotai 42.43 358 ⇑P P 16 17 07.0 0.0
GTA PCP PcP 16 18 59.3 -0.1
GTA SCP ScP 16 22 48.3 +2.3
GTA S **S 16 23 30.3 +5.1**
GTA SS SS 16 26 33.6 -2.5
GTA SCS ScS 16 27 01.5 -2.8
GTA AMB AMB
comp=Z,97nm,2.2s,mb5.0
GTA AMB AMB
comp=Z,3µm,5.4s
GTA LR LR
comp=N,17µm,19.2s,MS6.0
GTA LR LR
comp=E,10µm,18.6s,MS6.0
GTA LR LR
comp=Z,26µm,19.8s,MS6.1
COEN Coen 42.62 107⇑*i*P P 16 17 05.7 -3.3
comp=Z,118nm,0.8s,mb5.7
DLH Dalhousie 42.94 328 *e*P P 16 17 11.0 -0.3
THN Thein Dam 42.99 328 *e*P P 16 17 11.2 -0.5
THN *e*S **S 16 23 31.9 -1.7**
BTO Baotou 44.32 9 *e*P P 16 17 21.8 -0.4
HHC Hu-ho-hao-te 44.83 11⇑*i*P P 16 17 27.3 +1.1
HHC AP pP 16 17 39.8 0.0
HHC XP sP 16 17 44.9 -0.9
HHC PCP PcP 16 19 08.5 +1.1
HHC PP PP 16 19 13.8 +2.0
HHC SCP ScP 16 22 55.8 +0.1
HHC PCS PcS 16 23 00.5 -0.5
HHC S **S 16 24 01.4 +1.3**
HHC XS sS 16 24 23.8 +0.9
HHC SS SS 16 27 15.3 -7.4
HHC SCS ScS 16 27 18.3 -1.0
HHC AMB AMB
comp=Z,273nm,1.0s,mb6.0
HHC AMB AMB
comp=Z,4µm,6.7s
HHC LR LR
comp=N,10µm,17.2s,MS5.9
HHC LR LR
comp=E,9µm,17.9s,MS5.9
HHC LR LR
comp=Z,12µm,17.6s,MS5.9
BJT Baijiatuau 45.11 16⇑*i*P P 16 17 28.6 +0.1
comp=Z,329nm,1.0s,mb6.1
BJT LR LR
comp=Z,16µm,19.0s,MS6.0
BJI Beijing 45.13 16 P P 16 17 28.8 +0.1
BJI PP PP 16 19 18.3 +3.2
BJI S **S 16 24 03.3 -1.3**
BJI AMB AMB
comp=Z,267nm,1.5s,mb5.8
BJI AMB AMB
comp=Z,4µm,4.5s
BJI LR LR
comp=N,15µm,19.4s,MS6.0
BJI LR LR
comp=E,6µm,15.2s,MS6.0
BJI LR LR
comp=Z,11µm,20.4s
BJI Beijing 45.13 16 P P 16 17 28.8 +0.1
comp=Z,267nm,1.5s,mb5.8
BJI PP PP 16 19 18.2 +3.1

BJI S **S** **16 24 03.3 -1.3**
BJI SS SS 16 27 35.3 +6.7
BJI LR LR
comp=Z,11μm,20.4s,MS5.8
MSEY Mahe Island 45.80 267 *e*P **P** **16 17 36.3 +1.9**
comp=Z,152nm,1.7s,mb5.7
MSEY LR LR
comp=Z,7μm,21.0s,MS5.6
DL2 Dalian 45.89 22⇑ *i*P **P** **16 17 34.8 +0.1**
DL2 XP sP 16 17 47.8 -6.4
DL2 PCP PcP 16 19 09.3 -1.9
DL2 PP PP 16 19 25.3 +2.2
DL2 SCP ScP 16 22 59.3 -0.9
DL2 S **S** **16 24 21.4 +5.9**
DL2 XS sS 16 24 32.8 -5.6
DL2 AMB AMB
comp=Z,120nm,0.8s,mb5.9
DL2 AMB AMB
comp=Z,1μm,4.8s
DL2 LR LR
comp=N,3μm,18.4s,MS5.4
DL2 LR LR
comp=E,2μm,16.7s,MS5.4
DL2 LR LR
comp=Z,5μm,17.2s,MS5.5
PMG Port Moresby 45.90 100⇑ *i*P **P** **16 17 32.5 -2.7**
comp=Z,143nm,0.8s,mb6.0
PMG *e*PcP PcS 16 23 00.1 -6.3
PMG LR LR
comp=Z,4μm,20.0s,MS5.4
GUMO Guam 46.27 68 P **P** **16 17 34.9 -3.2**
comp=Z,177nm,0.6s,mb6.2,baz=186,slow=6.6,SNR=27
GUMO Guam 46.27 68 *e*P **P** **16 17 34.1 -4.0**
GUMO pmax pmax
comp=Z,180nm,0.8s,mb6.0
GUMO MLR MLR
comp=Z,3μm,21.0s,MS5.2
GUMO Guam 46.27 68 *e*P **P** **16 17 34.1 -4.0**
comp=Z,180nm,0.8s,mb6.0
GUMO LR LR
comp=Z,3μm,21.0s,MS5.2
INCN Inchon 46.80 28 *e*P **P** **16 17 40.4 -1.5**
comp=Z,68nm,0.8s,mb5.6
INCN LR LR
comp=Z,4μm,21.0s,MS5.4
CTA Charters Tower 46.85 115 *e*P **P** **16 17 41.4 -1.2**
comp=Z,940nm,0.8s,mb6.8
CTA *e*SCP ScP 16 23 01.9 -2.8
CTA *e*S **S** **16 24 22.8 -7.1**
CTA Charters Tower 46.85 115 P **P** **16 17 41.1 -1.5**
comp=Z,1μm,0.8s,mb6.8,baz=289,slow=9.5,SNR=908
CTA S **S** **16 24 24.1 -5.8**
comp=Z,19nm,1.1s,baz=55,slow=19,SNR=5.8
CTA LR LR 16 39 16.6
comp=Z,6μm,20.6s,MS5.6,baz=284,slow=39
CTAO Charters Tower 46.85 115⇑ *i*P **P** **16 17 41.2 -1.4**
CTAO pmax pmax
comp=Z,1μm,0.9s,mb6.8
CTAO MLR MLR
comp=Z,6μm,20.0s,MS5.6
CTAO Charters Tower 46.85 115⇑ *i*P **P** **16 17 41.2 -1.4**
comp=Z,1μm,0.9s,mb6.8
CTAO *e*ScP ScP 16 23 01.0 -3.7
CTAO LR LR
comp=Z,6μm,20.0s,MS5.6
STKA Stephens Creek 47.33 132⇑ *i*P **P** **16 17 45.8 -0.4**
comp=Z,505nm,1.0s,mb6.4
STKA *e*S **S** **16 24 33.5 -2.9**
STKA Stephens Creek 47.33 132 P **P** **16 17 45.5 -0.7**
comp=Z,197nm,1.0s,mb6.0,baz=299,slow=7.9,SNR=145
STKA S **S** **16 24 33.9 -2.5**
comp=Z,33nm,1.0s,baz=302,slow=17,SNR=8.4
STKA LR LR 16 37 57.3
comp=Z,10μm,21.3s,MS5.7,baz=291,slow=36
KSRS Korea Array 47.38 29 P **P** **16 17 46.4 -0.1**
comp=Z,73nm,1.0s,mb5.6,baz=220,slow=7.7,SNR=241
KSRS pP pP 16 17 59.0 -1.1
comp=Z,178nm,1.0s,baz=231,slow=8.0,SNR=28
KSRS ScP ScP 16 23 05.4 -1.1
comp=Z,7.1nm,1.1s,baz=218,slow=3.8,SNR=5.3
KSRS LR LR 16 39 28.3
comp=Z,3μm,19.7s,MS5.3,baz=226,slow=38
KSRS Korea Array 47.38 29 P **P** **16 17 46.4 0.0**
KSRS *PP pP 16 17 59.1 -1.0
KSRS pmax pmax
comp=Z,73nm,1.0s,mb5.6
KSRS pmax pmax
comp=Z,178nm,1.0s,mb6.0
KSRS pmax pmax
comp=N,7.0nm,1.1s
KSRS MLR MLR
comp=Z,3μm,19.7s,MS5.3
WMQ Urumqi 48.40 347⇑ *i*P **P** **16 17 55.3 +1.1**
WMQ PCP PcP 16 19 21.0 +1.0
WMQ PP PP 16 19 47.0 -0.3
WMQ S **S** **16 24 51.0 -0.1**
WMQ SCS ScS 16 27 42.0 -0.5
WMQ AMB AMB
comp=Z,1μm,1.2s,mb6.8
WMQ AMB AMB
comp=Z,4μm,4.5s
WMQ LR LR
comp=N,5μm,18.9s,MS5.7
WMQ LR LR
comp=E,6μm,20.4s,MS5.7
WMQ LR LR
comp=Z,6μm,23.3s,MS5.5
KSH Kashi 48.51 334⇑ *i*P **P** **16 17 56.0 +0.9**
KSH AP pP 16 18 05.0 -3.8
KSH XP sP 16 18 09.0 -5.7
KSH PCP PcP 16 19 20.0 -0.5
KSH PP PP 16 19 49.1 +0.7
KSH SCP ScP 16 23 11.1 -0.1
KSH PCS PcS 16 23 14.3 -2.2
KSH S **S** **16 24 56.1 +3.3**
KSH XS sS 16 25 13.1 -2.7
KSH SCS ScS 16 27 42.0 -1.4
KSH SS SS 16 28 23.0 -0.5
KSH AMB AMB
comp=Z,12μm,3.4s
KSH LR LR
comp=N,9μm,16.8s,MS6.0
KSH LR LR
comp=E,7μm,13.3s,MS6.0
KSH LR LR
comp=Z,7μm,19.2s
SNY Shenyang 49.16 22⇑ P **P** **16 17 59.0 -1.1**
SNY S **S** **16 24 58.8 -3.1**
SNY AMB AMB
comp=Z,141nm,1.2s,mb5.9
SNY AMB AMB
comp=Z,3μm,3.6s
SNY LR LR
comp=N,7μm,19.2s,MS5.8
SNY LR LR
comp=E,7μm,19.2s,MS5.8
SNY LR LR
comp=Z,11μm,15.7s,MS6.0
ULHL Ulahol 50.66 336 P **P** **16 18 15.0 +3.6**
SNR=9.8
KZA Kyzart 50.93 335 P **P** **16 18 13.0 -0.4**
SNR=54
SONM Songino Array 51.02 4 P **P** **16 18 14.9 +0.9**
comp=Z,153nm,0.5s,mb6.2,baz=189,slow=9.4,SNR=1045
SONM pP pP 16 18 27.7 -0.1
comp=Z,195nm,0.8s,baz=187,slow=8.7,SNR=13
SONM ScP ScP 16 23 19.9 -1.8
comp=Z,7.4nm,0.9s,baz=182,slow=3.8,SNR=3.7
SONM LR LR 16 43 07.2
comp=Z,14μm,18.7s,MS6.0,baz=185,slow=40
SONM PKPPKP 16 48 47.1
comp=Z,1.2nm,1.0s,baz=8.5,slow=2.9,SNR=4.1
SONM Songino Array 51.02 4 P **P** **16 18 14.9 +0.9**
SONM *PP pP 16 18 27.7 -0.1
SONM pmax pmax
comp=Z,153nm,0.5s
SONM pmax pmax
comp=Z,195nm,0.8s
SONM pmax pmax
comp=N,7.0nm,0.9s
SONM MLR MLR
comp=Z,14μm,18.7s
SONM pmax pmax
comp=Z,1.0nm,1.0s
ULN Ulaanbaatar 51.10 5⇑ *i*P **P** **16 18 15.1 +0.5**
ULN *e* pP 16 18 27.5 -1.0
ULN pmax pmax
comp=Z,381nm,1.1s,mb6.2
ULN MLR MLR
comp=Z,9μm,20.0s,MS5.8
ULN Ulaanbaatar 51.10 5⇑ *i*P **P** **16 18 15.1 +0.4**
comp=Z,381nm,1.1s,mb6.2
ULN *e* pP 16 18 27.5 -1.0
ULN LR LR
comp=Z,9μm,20.0s,MS5.8
AAA Alma-Ata 51.24 337 *i* P **P** **16 18 15.5 -0.3**
AAA *e*S **S** **16 25 30.3 -0.4**
AAA pmax pmax
comp=Z,7μm,4.1s
AAA smax
comp=E,6μm,6.1s
AAA MLR MLR
comp=Z,3μm,26.0s,MS5.2
UCH Uchtor 51.36 335 P **P** **16 18 18.0 +1.3**
SNR=66
UCH Uchtor 51.36 335⇑ *i*P **P** **16 18 17.8 +1.1**
comp=Z,694nm,1.5s,mb6.4
UCH *e* pP 16 18 30.9 +0.3
TKM2 Tokmak 2 51.48 336⇑ *i*P **P** **16 18 17.9 +0.3**
TKM2 *e* pP 16 18 30.7 -0.7
TKM2 pmax pmax
comp=Z,922nm,1.2s,mb6.6
TKM2 MLR MLR
comp=Z,3μm,19.0s,MS5.4
TKM2 Tokmak 2 51.48 336 P **P** **16 18 18.3 +0.7**
SNR=371
TKM2 Tokmak 2 51.48 336⇑ *i*P **P** **16 18 17.9 +0.3**
comp=Z,922nm,1.2s,mb6.6
TKM2 *e* pP 16 18 30.7 -0.7
TKM2 LR LR
comp=Z,3μm,19.0s,MS5.4
KBK Karagaybulak 51.53 335 P **P** **16 18 19.1 +1.2**
SNR=33
CN2 Changchun 51.56 22 *e*P **P** **16 18 17.3 -0.9**
CN2 PCP PcP 16 19 30.5 -1.1
CN2 *e*PP PP 16 20 15.9 -0.2
CN2 *e*S **S** **16 25 39.0 +3.8**
CN2 *e*SS SS 16 29 13.3 +1.2
CN2 AMB AMB
comp=Z,490nm,1.0s,mb6.4
CN2 AMB AMB
comp=Z,3μm,4.0s
CN2 LR LR
comp=N,7μm,19.0s,MS5.8
CN2 LR LR
comp=E,6μm,19.0s,MS5.8
CN2 LR LR
comp=Z,9μm,18.0s,MS5.8
AML Almayashu 51.64 334 P **P** **16 18 20.0 +1.2**
SNR=152
AML Almayashu 51.64 334⇑ *i*P **P** **16 18 19.6 +0.8**
comp=Z,2μm,1.7s,mb6.7
AML *e* pP 16 18 33.0 +0.3
AML LR LR
comp=Z,3μm,22.0s,MS5.3
AAK Ala-Archa 51.70 335 P **P** **16 18 20.2 +1.0**
SNR=52
FRU Bishkek 51.81 335⇑ *i*P **P** **16 18 20.0 -0.1**
FRU *e* 16 20 23.0
FRU *e*S **S** **16 25 39.5 +0.8**
FRU pmax pmax
comp=Z,850nm,2.0s,mb6.3
FRU pmax pmax
comp=Z,5μm,5.5s
FRU smax
comp=N,8μm,6.5s
FRU MLR MLR
comp=Z,5μm,22.0s,MS5.5
FRU MLR MLR
comp=N,4μm,21.0s,MS5.5
FRU MLR MLR
comp=E,4μm,21.0s,MS5.5
CHMS Chumysh 51.89 335 P **P** **16 18 20.9 +0.2**
SNR=65
EKS2 Erkin-Say 52.03 334 P **P** **16 18 22.6 +0.9**
SNR=44
EKS2 Erkin-Say 52.03 334⇑ *i*P **P** **16 18 22.6 +0.9**
comp=E,515nm,1.0s,mb6.4
EKS2 *e* pP 16 18 35.8 +0.3
EKS2 LR LR
comp=Z,3μm,22.0s,MS5.3
USP Ospenovka 52.22 335 P **P** **16 18 23.3 +0.2**
SNR=15
MAJO Matsushiro 52.37 38⇑ *i*P **P** **16 18 22.9 -1.4**
MAJO pmax pmax
comp=Z,238nm,1.1s,mb6.0
MAJO MLR MLR
comp=Z,4μm,22.0s,MS5.4
MAJO Matsushiro 52.37 38⇑ *i*P **P** **16 18 22.9 -1.5**
comp=Z,238nm,1.1s,mb6.0
MAJO *e*ScP ScP 16 23 23.6 -4.3
MAJO LR LR
comp=Z,4μm,22.0s,MS5.4
MAT Matsushiro 52.37 38 P **P** **16 18 23.9 -0.4**
MAT S **S** **16 25 43.0 -3.5**
MJAR Matsushiro Arr 52.37 38 P **P** **16 18 23.0 -1.3**
comp=Z,122nm,1.0s,mb5.8,baz=218,slow=7.5,SNR=213
MJAR pP pP 16 18 36.0 -2.2
comp=Z,11nm,0.5s,baz=145,slow=24,SNR=8.5
MJAR ScP ScP 16 23 26.5 -1.4
comp=Z,17nm,0.9s,baz=220,slow=4.9,SNR=13
MJAR LR LR 16 40 01.7
comp=Z,3μm,21.6s,MS5.3,baz=250,slow=35
MJAR Matsushiro Arr 52.37 38 P **P** **16 18 23.0 -1.3**
MJAR *PP pP 16 18 36.0 -2.2
MJAR pmax pmax
comp=Z,122nm,1.0s
MJAR pmax pmax
comp=Z,11nm,0.5s
MJAR pmax pmax
comp=N,17nm,0.9s
MJAR MLR MLR
comp=Z,3μm,21.6s
MJAR Matsushiro Arr 52.37 38 P **P** **16 18 23.0 -1.3**
MJAR pP pP 16 18 36.0 -2.2
MJAR ScP ScP 16 23 26.5 -1.4
MJAR LR LR 16 40 01.6
MKAR Makanchi Array 52.56 344 P **P** **16 18 24.4 -1.1**
comp=Z,220nm,0.5s,mb6.4,baz=159,slow=7.9,SNR=1385
MKAR S **S** **16 25 50.9 +2.2**
comp=Z,7.2nm,1.1s,baz=153,slow=9.7,SNR=4.1
MKAR LR LR 16 45 41.9
comp=Z,4μm,21.0s,MS5.4,baz=154,slow=42
MKAR PKP2bc 16 49 03.1
comp=Z,0.4nm,0.4s,baz=0.0,slow=7.6,SNR=3.6
MKAR Makanchi Array 52.56 344 P **P** **16 18 24.4 -1.1**
MKAR S **S** **16 25 50.9 +2.2**
MKAR pmax pmax
comp=Z,220nm,0.5s
MKAR smax
comp=N,7.0nm,1.2s
MKAR MLR MLR
comp=Z,4μm,21.0s
MKAR pmax pmax
comp=Z,3.0nm,1.0s
MKAR Makanchi Array 52.56 344 P **P** **16 18 24.4 -1.1**
MKAR S **S** **16 25 50.9 +2.2**
MKAR LR LR 16 45 41.9
MKAR ⇑ *e* 16 49 03.1
TOO Toolangi 52.90 136 *e*P **P** **16 18 29.0 +0.8**
TOO *e*S **S** **16 25 56.0 +2.2**
ZAK Zakamensk 53.41 2⇓ *i*P **P** **16 18 31.7 0.0**
ZAK pmax pmax
comp=Z,131nm,1.3s,mb5.7
VLA Vladivostok 53.71 27 *i* P **P** **16 18 33.7 -0.4**
MDJ Mudanjiang 53.89 25 P **P** **16 18 35.3 0.0**
MDJ AP pP 16 18 48.0 -1.2
MDJ XP sP 16 18 54.8 -0.3
MDJ PP PP 16 20 37.0 -0.1
MDJ SCP ScP 16 23 32.8 -1.5
MDJ PCS PcS 16 23 38.9 -0.6
MDJ S **S** **16 26 05.6 -1.3**
MDJ XS sS 16 26 31.1 +0.9
MDJ AMB AMB
comp=Z,195nm,1.1s,mb6.0
MDJ AMB AMB
comp=Z,2μm,9.8s
MDJ LR LR
comp=N,7μm,24.6s,MS5.8
MDJ LR LR
comp=E,8μm,21.7s,MS5.8
MDJ LR LR
comp=Z,9μm,24.1s,MS5.7
MDJ Mudanjiang 53.89 25⇑ *i*P **P** **16 18 35.1 -0.2**
comp=Z,190nm,0.9s,mb6.0
MDJ LR LR
comp=Z,10μm,22.0s,MS5.8
CAN Canberra 54.39 132⇑ *i*P **P** **16 18 39.2 -0.1**
comp=Z,244nm,1.3s,mb6.0
CAN *e* pP 16 18 50.1 -3.0
ARMA Armidale 54.59 125 *e*P **P** **16 18 41.6 +0.8**
ARMA *e*SCP ScP 16 23 38.4 +0.6
CNB Canberra Magne 54.66 132 *e*P **P** **16 18 40.9 -0.3**
CNB *e*S **S** **16 26 17.0 -0.7**
MOY Mondy 54.67 360⇑ *i*P **P** **16 18 41.7 +0.9**
MOY pmax pmax
comp=Z,793nm,2.3s,mb6.3
TLY Talaya 54.72 2 P **P** **16 18 42.2 +1.0**
comp=Z,2μm,1.0s,mb7.0,SNR=86
TLY Talaya 54.72 2*c* *i*P **P** **16 18 42.3 +1.1**
TLY *e* 16 20 38.7
TLY *e*S **S** **16 26 19.0 +1.2**
TLY pmax pmax
comp=Z,319nm,0.9s,mb6.3
TLY MLR MLR
comp=Z,14μm,18.0s,MS6.1
TLY Talaya 54.72 2⇑ *i*P **P** **16 18 42.0 +0.8**
comp=Z,552nm,1.3s,mb6.4
TLY *e* pP 16 18 54.1 -1.0
TLY LR LR
comp=Z,15μm,19.0s,MS6.1
IRK Irkutsk 55.30 2⇑ *i*P **P** **16 18 45.6 +0.2**
IRK *e*S **S** **16 26 27.0 +1.4**
IRK pmax pmax
comp=Z,1μm,2.2s,mb6.5
RIV Riverview 55.43 129 *e*P **P** **16 18 46.8 0.0**
CIT Chita 55.99 9 *e*P **P** **16 18 49.9 -0.4**
CIT *e* pP 16 18 59.7 -4.6
CIT *e* 16 26 32.5
CIT *e* 16 28 32.6
CIT pmax pmax
comp=Z,1μm,2.5s,mb6.5
TAU Tasmania Unive 56.79 141 P **P** **16 18 56.5 +0.2**
comp=Z,977nm,1.2s,mb6.7,SNR=7.2
TAU Tasmania Unive 56.79 141 *e*P **P** **16 18 56.4 +0.1**
TAU pmax pmax
comp=Z,371nm,1.4s,mb6.2
TAU MLR MLR
comp=Z,5μm,22.0s,MS5.5
TAU Tasmania Unive 56.79 141 *e*P **P** **16 18 56.4 +0.2**
comp=Z,371nm,1.4s,mb6.2
TAU LR LR
comp=Z,5μm,22.0s,MS5.5
KURK Kurchatov 57.15 343 P **P** **16 18 58.2 -0.4**
comp=Z,4μm,0.9s,mb7.5
KURK Kurchatov 57.15 343 LR LR 16 46 47.7
comp=Z,3μm,18.5s,MS5.5,baz=200,slow=39
KURK PKP2bc 16 48 59.2
comp=Z,3.2nm,1.0s,baz=315,slow=2.7,SNR=5.9
KURK P4KPbc 16 56 09.0
comp=Z,0.2nm,0.3s,baz=148,slow=1.4,SNR=3.8
KURK Kurchatov 57.15 343⇑ *i*P **P** **16 18 58.2 -0.4**
KURK *e* pP 16 19 11.3 -1.3
KURK *e*S **S** **16 26 48.3 -1.9**
KURK pmax pmax
comp=Z,1μm,1.1s,mb6.8
KURK MLR MLR
comp=Z,5μm,21.0s,MS5.6
KURK Kurchatov 57.15 343⇑ *i*P **P** **16 18 58.2 -0.4**
comp=Z,1μm,1.1s,mb6.8
KURK *e* pP 16 19 11.3 -1.4
KURK *e*S **S** **16 26 48.3 -1.8**
KURK LR LR
comp=Z,5μm,21.0s,MS5.6
ABKT Ailbek 57.24 320 P **P** **16 18 59.9 +0.3**
comp=Z,694nm,1.0s,mb6.6,SNR=48
LBOS 58.17 288 *e*P **P** **16 19 07.6 +1.1**
KLR Kul'dur 58.49 23⇓ *i*P **P** **16 19 04.0 -4.1**
KLR *e*S ScS 16 28 45.2 -8.2
KLR pmax pmax
comp=E,370nm,1.6s
KLR pmax pmax
comp=Z,1μm,1.6s,mb6.7
KLR pmax pmax
comp=Z,3μm,7.0s
HNR Honiara 58.49 99 P **P** **16 19 05.9 -2.8**
comp=Z,493nm,0.9s,mb6.5,baz=188,slow=3.6,SNR=46
HNR Honiara 58.49 99⇑ *i*P **P** **16 19 05.6 -3.2**
HNR pmax pmax
comp=Z,1μm,1.2s,mb6.8
HNR MLR MLR
comp=Z,2μm,22.0s,MS5.2
HNR Honiara 58.49 99⇑ *i*P **P** **16 19 05.6 -3.2**
comp=Z,1μm,1.2s,mb6.8
HNR LR LR
comp=Z,2μm,22.0s,MS5.2
ZAA0 Zalesovo Array 58.61 349⇑ *i*P **P** **16 19 08.2 -0.5**
ZAA0 *e* pP 16 19 20.7 -2.2
ZAA0 *e*S **S** **16 27 06.0 -3.1**
ZALV Zalesovo Beam 58.61 349 P **P** **16 19 08.5 -0.3**
comp=Z,1μm,0.9s,mb6.9,baz=160,slow=4.7,SNR=1373
ZALV pP pP 16 19 21.7 -1.1
comp=Z,640nm,0.8s,baz=161,slow=5.8,SNR=14
ZALV S **S** **16 27 06.9 -2.2**
comp=Z,13nm,0.8s,baz=142,slow=24,SNR=11
ZALV LR LR 16 48 14.7
comp=Z,5μm,19.5s,MS5.6,baz=152,slow=40
ZALV PKPPKP 16 48 45.4
comp=Z,5.4nm,0.9s,baz=160,slow=4.6,SNR=11
ZALV Zalesovo Beam 58.61 349 P **P** **16 19 08.5 -0.3**
ZALV pmax pmax
comp=Z,640nm,0.8s,mb6.7
ZALV smax
comp=N,13nm,0.8s
ZALV MLR MLR
comp=Z,5μm,19.5s,MS5.6
ZALV pmax pmax
comp=Z,5.0nm,0.9s
ERM Erimo 58.82 35 P **P** **16 19 10.6 +0.1**
comp=Z,918nm,1.0s,mb6.8,SNR=19
ERM Erimo 58.82 35⇓ *i*P **P** **16 19 10.1 -0.4**
ERM pmax pmax
comp=Z,152nm,0.9s,mb6.0
ERM MLR MLR
comp=Z,3μm,22.0s,MS5.3
ERM Erimo 58.82 35⇓ *i*P **P** **16 19 10.1 -0.4**
comp=Z,152nm,0.9s,mb6.0
ERM LR LR
comp=Z,3μm,22.0s,MS5.3
TRBA At Turbah 59.11 287 *e*P **P** **16 19 14.9 +1.9**
KRAR Krasnoyarsk 59.43 354 *c* *i*P **P** **16 19 13.7 -0.7**
KRAR pmax pmax
comp=Z,2μm,1.5s,mb6.9
NVS Novosibirsk 59.77 348⇑ *i*P **P** **16 19 15.8 -1.0**
NVS *i* pP 16 19 28.6 -2.3
NVS *i* S **S** **16 27 21.3 -2.8**
NVS *e*PS 16 27 40.5
NVS pmax pmax
comp=Z,1μm,2.0s,mb6.6
NVS pmax pmax
comp=N,819nm,1.8s
NVS pmax pmax
comp=E,351nm,1.5s
NVS smax
comp=N,322nm,2.0s
KBD Kabd 60.64 306 *e*P **P** **16 19 23.3 0.0**
baz=306
KBD AMb AMB 16 19 44.2
comp=Z,400nm,1.5s,mb6.3,baz=306
RDF Al-Radifah 60.66 306 *e*P **P** **16 19 23.3 -0.2**
baz=306
RDF AMb AMB 16 19 25.2
comp=Z,454nm,0.9s,mb6.6,baz=306
UMR Umm Al-Rimmam 60.77 306 *e*P **P** **16 19 24.1 -0.1**
baz=306
UMR AMb AMB 16 19 26.1
comp=Z,534nm,0.8s,mb6.7,baz=306
NAY Al-Naaiem 61.03 306 *e*P **P** **16 19 25.7 -0.3**
baz=306
NAY AMb AMB 16 19 36.0
comp=Z,243nm,0.5s,mb6.6,baz=306
MIB Mutribah 61.17 307 *e*P **P** **16 19 26.9 0.0**
baz=306
MIB AMb AMB 16 19 47.8
comp=Z,643nm,1.3s,mb6.6,baz=306
RST Umm Al-Ruwaisa 61.33 306 *e*P **P** **16 19 27.5 -0.5**
baz=306
RST AMb AMB 16 19 37.8

comp=Z,452nm,0.6s,mb6.8,baz=306
YUK Yuzh-Kuril'sk 61.63 35⇑ *iP* **P 16 19 29.2 -0.5**
YUK *e* 16 20 13.0
YUK *e* 16 21 52.0
YUK *e*PPP 16 23 14.0
YUK S **S 16 27 56.0 +7.7**
YUK pmax pmax
comp=Z,370nm,0.5s,mb6.8
YUK pmax pmax
comp=N,4μm,2.0s
YUK pmax pmax
comp=E,2μm,2.0s
YUK pmax pmax
comp=Z,6μm,2.0s
YUK MLR MLR
comp=E,2μm,15.0s
YUK MLR MLR
comp=Z,3μm,15.0s,MS5.5
BOD Bodaibo 61.68 8 *eP* **P 16 19 29.5 -0.2**
BOD pmax pmax
comp=Z,398nm,1.0s,mb6.5
BVAR Borovoye Array 61.78 339 PKP2bc 16 48 47.7
comp=Z,5.2nm,1.1s,baz=7.6,slow=2.2,SNR=4.3
BVAR LR LR 16 51 19.6
comp=Z,2μm,20.6s,MS5.3,baz=137,slow=41
YSS Yuzh-Sakhalins 61.80 31α *iP* **P 16 19 30.5 -0.2**
YSS *e* pP 16 19 40.0 -4.9
YSS *e* 16 20 17.0
YSS *e* 16 21 44.0
YSS *e*S **S 16 27 50.0 -0.3**
YSS *e*PS 16 28 08.0
YSS pmax pmax
comp=Z,870nm,0.9s,mb6.9
YSS pmax pmax
comp=Z,3μm,5.0s
YSS MLR MLR
comp=E,2μm,18.0s
YSS MLR MLR
comp=Z,2μm,18.0s,MS5.3
YSS Yuzh-Sakhalins 61.80 31⇑ *iP* **P 16 19 30.6 -0.2**
comp=Z,803nm,0.9s,mb6.8
YSS LR LR
comp=Z,735nm,22.0s,MS4.8
BRVK Borovoye 61.85 339 P **P 16 19 30.4 -0.6**
comp=Z,2μm,1.2s,mb7.1,SNR=48
BRVK Borovoye 61.85 339⇑ *iP* **P 16 19 29.9 -1.1**
BRVK pmax pmax
comp=Z,916nm,1.4s,mb6.7
BRVK MLR MLR
comp=Z,3μm,20.0s,MS5.4
BRVK Borovoye 61.85 339⇑ *iP* **P 16 19 29.9 -1.1**
comp=Z,588nm,1.4s,mb6.5
BRVK LR LR
comp=Z,2μm,20.0s,MS5.2
CLNS Chul'man 62.83 14 *eP* **P 16 19 37.4 0.0**
CLNS *e* 16 20 17.1
CLNS *e* 16 21 54.5
CLNS *e*PPP 16 23 21.4
CLNS *e*S **S 16 28 00.6 -2.3**
CLNS *e*SS SS 16 32 06.1 -2.7
CLNS pmax pmax
comp=Z,408nm,1.1s,mb6.5
CLNS pmax pmax
comp=E,180nm,1.0s
CLNS pmax pmax
comp=N,252nm,1.1s
CLNS smax
comp=N,332μm,13.3s
CLNS smax
comp=E,266μm,13.8s
CLNS MLR MLR
comp=E,3μm,18.0s,MS5.7
CLNS MLR MLR
comp=N,4μm,22.0s,MS5.7
CLNS MLR MLR
comp=Z,3μm,22.0s,MS5.5
CASY Casey 63.28 176 *eP* **P 16 19 40.7 +0.4**
CASY *e*S **S 16 28 07.1 -1.2**
CASY Casey 63.28 176 *eP* **P 16 19 40.7 +0.4**
CASY *e*S **S 16 28 07.1 -1.2**
CASY LR LR
comp=Z,6μm,20.0s,MS5.8
MIR Mirnyy 63.49 184κ *iP* **P 16 19 42.5 +0.8**
MIR *i* pP 16 20 00.0 +4.1
MIR *i*S **S 16 28 13.0 +2.0**
MIR *i*PS 16 28 41.0
MIR *i* 16 29 28.0
MIR pmax pmax
comp=Z,200nm,1.8s,mb6.0
MIR pmax pmax
comp=Z,1μm,3.0s
MIR MLR MLR
comp=Z,2μm,19.0s,MS5.3
FURI Furi 63.63 282 *eP* **P 16 19 46.3 +2.7**
FURI S **S 16 28 21.4 +7.0**
KMBO Kilima Mbogo 64.09 270 P **P 16 19 47.7 +1.0**
comp=Z,7.5nm,0.9s,mb4.7,baz=41,slow=12,SNR=10
KMBO LR LR 16 42 14.7
comp=Z,4μm,21.5s,MS5.6,baz=78,slow=31
KMBO Kilima Mbogo 64.09 270 P **P 16 19 47.7 +1.0**
KMBO pmax pmax
comp=Z,8.0nm,0.9s
KMBO MLR MLR
comp=Z,4μm,21.5s
KMBO Kilima Mbogo 64.09 270 *eP* **P 16 19 47.6 +0.9**
comp=Z,51nm,1.1s,mb5.5
KMBO LR LR
comp=Z,4μm,21.0s,MS5.6
BHD Baghdad 64.82 309 *ex* x 16 19 50.0
BHD *i* x 16 28 26.0
DZM Mont Dzumac 65.73 113 *eP* **P 16 19 56.7 -0.5**
DZM Mont Dzumac 65.73 113⇑ *iP* **P 16 19 56.3 -0.9**
comp=Z,366nm,1.3s,mb6.2
MAK Makhachkala 66.77 320 *eP* **P 16 20 01.0 -2.4**
MAK *i* pP 16 20 19.4 +1.7
MAK *i* 16 22 28.7
MAK *e*S S 16 28 48.4 -3.5
MAK *e* 16 29 53.6
MAK pmax pmax
comp=Z,556nm,1.7s,mb6.3
MAK MLR MLR
comp=Z,2μm,18.0s,MS5.3
MSL Mosul 66.98 312 *ex* x 16 20 07.0
MSL *ex* x 16 28 52.0
MSL *ex* x 16 29 49.0
HAKT HAKKARI 67.00 313 *iP* **P 16 20 05.0 0.0**
GNI Garni 67.34 316⇑ *iP* **P 16 20 07.8 +0.7**
GNI *e**PP pP 16 20 22.2 +0.8
GNI *e*S S 16 29 02.1 +3.2
GNI pmax pmax
comp=Z,431nm,1.4s
GNI MLR MLR
comp=Z,1μm,21.0s
GNI Garni 67.34 316⇑ *iP* **P 16 20 07.8 +0.7**
comp=Z,431nm,1.4s,mb6.3
GNI *e*pP pP 16 20 22.2 +0.8
GNI *e*S S 16 29 02.1 +3.2
GNI LR LR
comp=Z,1μm,21.0s,MS5.1
DGRG David-gareji 67.47 318 P **P 16 20 09.8 +1.9**
DGRG S S 16 29 04.2 +3.8
DYDN Diyadin 67.82 315 *iP* **P 16 20 10.9 +0.7**
MTA Mtatsminda 67.97 318 P **P 16 20 11.9 +0.8**
MTA S S 16 29 07.0 +0.6
TBLG Delisi 68.02 318 P **P 16 20 12.4 +1.0**
TBLG S S 16 29 07.6 +0.6
SVE Sverdlovsk 68.31 337⇑ *eP* **P 16 20 12.5 -0.4**
SVE *e* pP 16 20 26.7 -0.5
SVE *e* 16 22 47.4
SVE *e*PPP 16 24 26.2
SVE *e*S S 16 29 10.8 +0.9
SVE *e*SS SS 16 33 34.2 +0.1
SVE pmax pmax
comp=Z,481nm,1.2s,mb6.4
SVE pmax pmax
comp=Z,760nm,6.4s
SVE MLR MLR
comp=Z,4μm,22.0s,MS5.6
YAK Yakutsk 68.57 14*c iP* **P 16 20 13.2 -1.1**
YAK *e**PP pP 16 20 27.2 -1.5
YAK *i*S S 16 29 07.5 -5.3
YAK *e* 16 29 49.9
YAK pmax pmax
comp=Z,901nm,0.9s,mb6.7
YAK pmax pmax
comp=E,193nm,1.0s
YAK pmax pmax
comp=N,328nm,1.2s
YAK pmax pmax
comp=Z,200nm,2.6s,mb5.6
YAK smax
comp=E,194μm,1.7s
YAK smax
comp=N,110μm,1.9s
YAK MLR MLR
comp=Z,7μm,17.0s,MS5.9
YAK MLR MLR
comp=E,4μm,22.0s,MS5.7
YAK MLR MLR
comp=N,3μm,19.0s,MS5.7
YAK Yakutsk 68.57 14⇑ *iP* **P 16 20 12.8 -1.5**
comp=N,1μm,0.9s,mb6.9
YAK LR LR
comp=Z,8μm,19.0s,MS6.0
DRV Dumont d'Urvil 68.80 165 P **P 16 20 25.0 +9.3**
DRV S S 16 29 24.0 +8.6
DRV SS SS 16 33 42.0 +0.9
DRV L 16 37 00.0
DRV R 16 41 00.0
ARU Arti 68.86 336 P **P 16 20 15.3 -0.9**
comp=Z,2μm,1.6s,mb6.7
ARU Arti 68.86 336*c iP* **P 16 20 15.5 -0.7**
ARU *e* 16 20 42.8
ARU *e*PPP 16 24 28.8
ARU *e*S S 16 29 10.3 -6.0
ARU *e* 16 30 11.3
ARU pmax pmax
comp=Z,468nm,1.7s,mb6.1
ARU MLR MLR
comp=Z,4μm,24.0s,MS5.6
ARU Arti 68.86 336⇑ *iP* **P 16 20 15.5 -0.8**
comp=Z,781nm,1.4s,mb6.5
ARU *e* pP 16 20 28.9 -1.7
ARU LR LR
comp=Z,4μm,21.0s,MS5.6
MARD Mardin 69.06 312 *iP* **P 16 20 18.0 +0.1**
ONI Oni 69.25 318 P **P 16 20 19.8 +0.8**
ONI S S 16 29 22.8 +1.2
HOMI Horasan 69.28 315 *iP* **P 16 20 20.1 +0.9**
BNGL BINGOL 69.40 314 *iP* **P 16 20 20.7 +0.7**
MAW Mawson 69.46 195 *eP* **P 16 20 20.8 +1.0**
comp=Z,77nm,1.5s,mb5.4
MAW *e*S S 16 29 21.0 -2.2
MAW Mawson 69.46 195 P **P 16 20 20.9 +1.1**
comp=Z,27nm,0.9s,mb5.2,baz=36,slow=7.1,SNR=50
MAW LR LR 16 44 17.1
comp=Z,10μm,21.3s,MS6.0,baz=32,slow=30
MAW PKP2bc 16 48 25.7
comp=Z,24nm,1.2s,baz=210,slow=3.9,SNR=18
MAW Mawson 69.46 195 *eP* **P 16 20 20.8 +1.0**
MAW *e*S S 16 29 21.0 -2.2
MAW pmax pmax
comp=Z,77nm,1.5s
ERZM Erzurum 69.61 315 *iP* **P 16 20 22.4 +1.2**
ARTV Artvin 69.71 316 *iP* **P 16 20 21.6 -0.3**
DIYA Diyarbakir 69.77 312 *iP* **P 16 20 23.2 +0.9**
KOPT Kop Dagi 70.27 315 *iP* **P 16 20 26.4 +1.1**
KIV Kislovodsk 70.34 319 P **P 16 20 26.1 +0.4**
comp=Z,1μm,0.9s,mb6.9,SNR=47
KIV Kislovodsk 70.34 319α *iP* **P 16 20 26.0 +0.3**
KIV *e* pP 16 20 36.4 -3.7
KIV *i* *SP sP 16 20 40.2 -5.6
KIV *i* 16 23 02.2
KIV *e*PPP 16 24 49.0
KIV *i*S S 16 29 33.5 -0.8
KIV *e* 16 29 57.5
KIV pmax pmax
comp=Z,1μm,1.6s,mb6.5
KIV pmax pmax
comp=Z,447nm,1.2s,mb6.3
KIV MLR MLR
comp=Z,1μm,19.0s,MS5.2
KIV Kislovodsk 70.34 319⇑ *iP* **P 16 20 25.7 0.0**
comp=Z,337nm,1.1s,mb6.2
KIV *e* pP 16 20 39.8 -0.3
KIV *e*S S 16 29 32.3 -2.1
KIV LR LR
comp=Z,2μm,20.0s,MS5.3
ASF Jabal al Asfar 70.40 306 PKP2bc 16 48 23.0
comp=Z,15nm,1.4s,baz=117,slow=1.9,SNR=6.4
ASF LR LR 16 53 15.1
comp=Z,2μm,18.0s,MS5.5,baz=327,slow=37
SLAT Slait 70.47 288 *iP* **P 16 20 19.3 -7.7**
SLAT AMb AMB 16 20 49.3
comp=Z,317nm,1.8s,mb5.9
SLAT *i*S S 16 29 28.4 -8.4
JAWL J.Aulia 70.57 287 *iP* **P 16 20 19.6 -8.0**
JAWL AMb AMB 16 20 42.7
comp=Z,588nm,1.7s,mb6.2
JAWL *i*S S 16 29 30.3 -7.6
ATAB Bozova 70.97 311 *iP* **P 16 20 30.6 +0.9**
SKR Severo-Kuril's 71.11 33 *eP* **P 16 20 28.1 -2.1**
SKR *e* pP 16 20 40.0 -4.7
SKR *e* pP 16 20 43.0 -1.7
SKR *e* 16 23 05.0
SKR *e*S S 16 29 36.0 -7.0
SKR *e*PS 16 30 04.0
SKR *e* 16 30 18.0
SKR *e*SS SS 16 34 13.0 -4.5
SKR pmax pmax
comp=N,130nm,1.0s
SKR pmax pmax
comp=E,220nm,1.0s
SKR pmax pmax
comp=Z,900nm,1.0s,mb6.7
SKR pmax pmax
comp=N,2μm,4.0s
SKR pmax pmax
comp=Z,5μm,4.0s
SKR pmax pmax
comp=E,2μm,3.0s
SKR smax
comp=N,3μm,10.0s
SKR smax
comp=E,3μm,10.0s
SKR MLR MLR
comp=N,4μm,20.0s
SKR MLR MLR
comp=Z,3μm,20.0s,MS5.6
MACK Trabzon 71.13 315 *iP* **P 16 20 31.0 +0.4**
MALT Malatya 71.16 312⇑ *iP* **P 16 20 29.7 -1.1**
MALT Malatya 71.16 312⇑ *iP* **P 16 20 29.4 -1.3**
MALT LR LR
comp=Z,2μm,22.0s,MS5.3
GZT Gaziantep 71.48 311 *iP* **P 16 20 32.8 0.0**
AKCD Akcadag 71.52 312 *iP* **P 16 20 33.0 0.0**
RCY Rachaya 71.65 307⇑ *eP* **P 16 20 35.5 +1.5**
BHL Bhannes 71.90 307⇑ *eP* **P 16 20 36.5 +1.2**
SOC Sochi 72.16 318*c iP* **P 16 20 36.1 -0.6**
SOC *e* pP 16 20 50.3 -0.8
SOC *e* 16 23 13.4
SOC *e*PPP 16 24 57.0
SOC *i*S S 16 29 51.4 -4.0
SOC *e* 16 30 36.2
SOC *e*SS SS 16 34 27.8 -6.0
SOC pmax pmax
comp=Z,122nm,0.6s,mb6.0
SOC pmax pmax
comp=Z,417nm,4.2s
COBT Iskenderun 72.21 310 *iP* **P 16 20 37.2 +0.1**
ANDN Andirin 72.47 311 *iP* **P 16 20 38.2 -0.5**
YURE YUREGIR 72.78 310 *iP* **P 16 20 40.4 -0.1**
LSZ Lusaka 72.94 255 LR LR 16 47 22.7
comp=Z,6μm,22.0s,MS5.8,baz=86,slow=31
LSZ Lusaka 72.94 255 *eP* **P 16 20 42.1 +0.2**
LSZ pmax pmax
comp=Z,144nm,1.3s,mb5.7
LSZ MLR MLR
comp=Z,6μm,22.0s,MS5.8
LSZ Lusaka 72.94 255 *eP* **P 16 20 42.1 +0.2**
comp=Z,144nm,1.3s,mb5.7
LSZ LR LR
comp=Z,6μm,22.0s,MS5.8
RPZ Rata Peaks 73.17 135 LR LR 16 51 48.6
comp=Z,5μm,21.7s,MS5.8,baz=282,slow=35
PEA0B Petropavlovsk- 73.18 32⇑ *iP* **P 16 20 41.6 -0.9**
PEA0B *e*PP PP 16 23 26.8 +0.7
PETK Petropavlovsk- 73.18 32 P **P 16 20 41.7 -0.9**
comp=Z,135nm,0.8s,mb5.9,baz=206,slow=3.4,SNR=182
PETK LR LR 16 58 25.3
comp=Z,2μm,18.8s,MS5.4,baz=255,slow=40
PETK Petropavlovsk- 73.18 32 P **P 16 20 41.7 -0.9**
PETK LR LR 16 58 25.3
PET Petropavlovsk 73.64 32α *iP* **P 16 20 44.5 -0.7**
PET *e* pP 16 20 58.2 -1.5
PET *e* 16 23 31.8
PET *e*S S 16 30 11.1 -0.7
PET pmax pmax
comp=Z,2μm,5.8s
PET pmax pmax
comp=Z,685nm,0.9s,mb6.6
PET pmax pmax
comp=Z,800nm,12.7s
PET pmax pmax
comp=Z,274nm,1.3s,mb6.0
PET smax
comp=N,800nm,10.6s
PET smax
comp=E,800nm,10.4s
PET Petropavlovsk 73.64 32⇑ *iP* **P 16 20 44.4 -0.9**
comp=E,596nm,1.0s,mb6.5
PET *e* pP 16 20 57.8 -2.0
PET LR LR
comp=Z,2μm,19.0s,MS5.5
MEST Erdemli 73.85 309 *iP* **P 16 20 45.9 -1.0**
CSS Prodhromos 74.04 308 ⇑P **P 16 20 48.4 +0.4**
comp=Z,4.3nm,1.3s
CSS Prodhromos 74.04 308⇑ *iP* **P 16 20 48.4 +0.4**
VRHR Novokhopersk 74.09 326 *eP* **P 16 20 47.2 -0.7**
VRHR *e*S S 16 30 12.4 -4.6
VRHR pmax pmax
comp=Z,2μm,1.4s,mb6.8
VRHR pmax pmax
comp=N,460nm,1.1s
VRHR pmax pmax
comp=E,340nm,0.5s
VRHR smax
comp=N,210nm,1.1s
VRHR smax
comp=Z,140nm,2.9s
VRHR smax
comp=E,190nm,1.2s
ANN Anapa 74.14 318 *eP* **P 16 20 45.5 -2.8**
ANN *e*S S 16 30 14.0 -3.8
ANN pmax pmax
comp=Z,107nm,1.3s,mb5.6
ANN MLR MLR
comp=Z,703nm,16.0s,MS5.0
MAMC Mammari 74.18 308 ⇑P **P 16 20 49.7 +0.9**
CDAG Cicekdag 74.57 312 *iP* **P 16 20 50.5 -0.5**
CTKT Corum 74.57 314 *iP* **P 16 20 51.0 +0.1**
ALFC Alevga 74.67 308 ⇑P **P 16 20 51.6 0.0**
comp=Z,1.8nm,0.6s
PPCY Paphos 74.80 307 P **P 16 20 51.9 -0.5**
ERMK Ermenek 74.82 309 *iP* **P 16 20 53.1 +0.6**
SNZO South Karori 75.39 132 *eP* **P 16 20 54.3 -1.4**
comp=Z,444nm,1.4s,mb6.2
SNZO LR LR
comp=Z,7μm,22.0s,MS5.9
ILGA Ilgaz 75.48 314 *iP* **P 16 20 56.0 -0.2**
VSR Storozhevoye 75.54 325 *eP* **P 16 20 55.4 -0.9**
VSR *e*S S 16 30 27.3 -5.8
VSR pmax pmax
comp=Z,290nm,1.2s,mb6.1
VSR pmax pmax
comp=N,120nm,1.3s
VSR pmax pmax
comp=E,420nm,1.2s
VSR smax
comp=E,120nm,2.6s
VSR smax
comp=Z,10.0nm,1.7s
VSR smax
comp=N,110nm,1.2s
VOR Voronezh 75.74 325 *iP* **P 16 20 57.0 -0.4**
VOR *e*S S 16 30 31.0 -4.3
VOR pmax pmax
comp=Z,1μm,2.0s,mb6.5
VOR smax
comp=N,250nm,2.0s
LBTB Lobatse 75.75 245 LR LR 16 48 05.1
comp=N,6μm,21.6s,MS5.8,baz=97,slow=31
ANTO Ankara 75.80 312 *iP* **P 16 20 57.5 -0.6**
ANTO pmax pmax
comp=Z,219nm,1.3s,mb5.9
ANTO MLR MLR
comp=Z,856nm,22.0s,MS5.0
ANTO Ankara 75.80 312⇑ *iP* **P 16 20 57.9 -0.2**
ANTO Ankara 75.80 312⇑ *iP* **P 16 20 57.5 -0.5**
comp=Z,219nm,1.3s,mb5.9
ANTO LR LR
comp=Z,856nm,22.0s,MS5.0
BALT Daday 75.86 314 *iP* **P 16 20 57.4 -0.9**
KDHN Kadinhani 75.94 311 *iP* **P 16 20 57.5 -1.3**
BOSA Boshof 76.28 241 P **P 16 21 01.6 +0.6**
comp=Z,13nm,0.6s,mb5.0,baz=93,slow=5.2,SNR=31
BOSA LR LR 16 48 18.6
comp=Z,4μm,21.0s,MS5.7,baz=81,slow=31
BOSA Boshof 76.28 241 P **P 16 21 01.6 +0.6**
BOSA pmax pmax
comp=Z,13nm,0.6s,mb5.0
BOSA MLR MLR
comp=Z,4μm,21.0s,MS5.7
SIM Simferopol' 76.41 318*c iP* **P 16 21 01.4 0.0**
SIM *i* pP 16 21 16.0 +0.1
SIM *e* 16 23 56.0
SIM *i*S S 16 30 38.4 -4.5
SIM *i* 16 31 05.0
SIM *e*SS SS 16 35 48.0 +10
SIM pmax pmax
comp=Z,167nm,1.2s,mb5.8
SIM MLR MLR
comp=Z,960nm,21.7s,MS5.1
URZ Urewera 76.83 128 P **P 16 21 01.7 -2.3**
comp=Z,40nm,1.0s,mb5.3,baz=200,slow=1.0,SNR=10
URZ LR LR 16 54 54.9
comp=Z,3μm,21.6s,MS5.6,baz=93,slow=36
TIXI Tiksi 76.83 9*c iP* **P 16 21 01.5 -1.7**
TIXI *e* pP 16 21 14.3 -3.5
TIXI pmax pmax
comp=Z,683nm,1.8s,mb6.3
TIXI MLR MLR
comp=Z,12μm,20.0s,MS6.2
TIXI Tiksi 76.83 9⇑ *iP* **P 16 21 01.4 -1.9**
comp=Z,360nm,1.0s,mb6.3
TIXI *e* pP 16 21 14.9 -3.0
TIXI *e* pP 16 21 19.9 +2.1
TIXI LR LR
comp=Z,12μm,20.0s,MS6.2
ISP Isparta 76.98 310⇑ *iP* **P 16 21 03.4 -1.4**
ISP *e* pP 16 21 18.1 -1.3
ISP *e* 16 24 01.6
ISP pmax pmax
comp=Z,45nm,0.7s,mb5.5
ISP MLR MLR
comp=Z,2μm,19.0s,MS5.5
ISP Isparta 76.98 310⇑ *iP* **P 16 21 03.6 -1.2**
ISP Isparta 76.98 310⇑ *iP* **P 16 21 03.4 -1.4**
comp=Z,45nm,0.7s,mb5.5
ISP *e* pP 16 21 18.1 -1.3
ISP *e*PP PP 16 24 01.6 +2.9
ISP LR LR
comp=Z,2μm,19.0s,MS5.5
ESKT Eskisehir 77.15 312 *iP* **P 16 21 04.8 -0.9**
SYO Syowa Base 77.17 199⇑ *eP* **P 16 21 04.6 -0.6**
SYO Syowa Base 77.17 199⇑ *e*PcP PcP 16 21 18.4 +2.6
SYO Syowa Base 77.17 199⇓ *e*pP pP 16 21 22.8 +3.0
AKAS Kas 77.30 308 *iP* **P 16 20 59.4 -7.2**
HENT Hendek 77.46 313 *iP* **P 16 21 06.2 -1.2**
FUNA Funafuti 77.50 98⇑ *eP* **P 16 21 07.8 -0.4**
comp=Z,271nm,0.9s,mb6.2
FUNA LR LR
comp=Z,9μm,22.0s,MS6.0
GOLH Golhisar 77.56 309 *iP* **P 16 21 06.9 -1.2**
KHAL Karahalli 77.89 310 *iP* **P 16 21 08.8 -1.0**
DNZL Cakiroluk 78.07 309 *iP* **P 16 21 09.5 -1.4**
GDZ Gediz 78.07 311 *iP* **P 16 21 10.3 -0.5**
TURN Turunc 78.23 309 *iP* **P 16 21 03.8 -8.0**
MOS Moscow 78.23 329 *eP* **P 16 21 06.8 -4.5**
MOS *i* pP 16 21 23.9 -2.0
MOS *e* 16 24 05.3
MOS *e*S S 16 30 58.2 -4.1
MOS *i* 16 31 19.1
MOS pmax pmax
comp=Z,590nm,1.1s,mb6.4

MOS pmax pmax
comp=Z,2400µm,2.0s
MOS MLR MLR
comp=Z,4µm,23.0s,MS5.7
ARG Arkhangelos 78.45 308 *eP* **P 16 21 13.2 +0.2**
OBN Obninsk 78.53 328 P **P 16 21 13.9 +0.9**
comp=Z,3µm,1.5s,mb6.9,SNR=16
OBN Obninsk 78.53 328α *iP* **P 16 21 13.0 0.0**
OBN *e* 16 21 22.0
OBN *i* pP 16 21 26.8 -0.8
OBN *e* 16 24 11.6
OBN *i* S S 16 31 01.3 -4.2
OBN *i* 16 31 23.4
OBN *e*PPS 16 32 12.4
OBN *e*SS SS 16 36 06.3 -3.7
OBN pmax pmax
comp=Z,749nm,1.5s,mb6.4
OBN pmax pmax
comp=Z,3µm,2.4s,mb6.8
OBN MLR MLR
comp=Z,3µm,22.0s,MS5.6
OBN Obninsk 78.53 328⇑ *iP* **P 16 21 12.5 -0.5**
comp=Z,642nm,1.1s,mb6.5
OBN *e* pP 16 21 26.4 -1.3
OBN *e* pP 16 21 31.4 +3.7
OBN *e*PP PP 16 24 16.7 +5.5
OBN LR LR
comp=Z,2µm,21.0s,MS5.4
ULDT Uludag 78.59 312 *iP* **P 16 21 12.2 -1.5**
DEMI Demirci 78.64 311 *iP* **P 16 21 13.2 -0.7**
DURS Dursunbey 78.95 311 *iP* **P 16 21 14.8 -0.9**
AYDN Tasoluk 78.97 309 *iP* **P 16 21 15.6 -0.2**
KARP Karpathos 79.08 307 *eP* **P 16 21 15.9 -0.6**
BDRM Kayabasi 79.17 309 *iP* **P 16 21 13.5 -3.5**
AKHS Akhisar 79.29 310 *iP* **P 16 21 17.1 -0.4**
ELBA Catalca 79.35 313 *iP* **P 16 21 16.9 -0.9**
GCAM G?zelcaml? 79.47 309 *iP* **P 16 21 13.5 -5.1**
KDAG Bornova 79.60 310 *iP* **P 16 21 16.9 -2.3**
BALY Balya 79.63 311 *iP* **P 16 21 19.1 -0.3**
SMG Samos 79.78 309 *eP* **P 16 21 20.4 +0.1**
URLA Izmir 80.11 310 *iP* **P 16 21 21.4 -0.6**
PSN Preselentsi 80.14 315 P **P 16 21 22.0 0.0**
SART Tekirdag 80.17 312 *iP* **P 16 21 21.2 -1.0**
TIRR Tirgusor 80.17 316⇑ *iP* **P 16 21 21.8 -0.4**
TIRR *e* pP 16 21 35.5 -1.3
TIRR *e* 16 24 21.6
TIRR pmax pmax
comp=Z,161nm,0.9s,mb6.0
TIRR Tirgusor 80.17 316⇑ *iP* **P 16 21 21.8 -0.3**
comp=Z,161nm,0.9s,mb6.0
TIRR *e* pP 16 21 35.5 -1.4
TIRR *e*PP PP 16 24 21.6 -3.5
AYVA Ayvalik 80.23 311 *iP* **P 16 21 22.4 -0.3**
NPS Neapolis 80.26 306 *eP* **P 16 21 23.6 +0.7**
SUR Sutherland 80.31 238 P **P 16 21 25.8 +2.5**
comp=Z,676nm,0.8s,mb6.6,SNR=5.9
SUR Sutherland 80.31 238 LR LR 16 52 21.3
comp=Z,4µm,19.4s,MS5.8,baz=101,slow=32
SUR Sutherland 80.31 238 *eP* **P 16 21 24.6 +1.3**
comp=Z,405nm,1.5s,mb6.1
SUR LR LR
comp=Z,5µm,22.0s,MS5.8
RAO Raoul Island 80.34 119 LR LR 16 57 15.3
comp=Z,3µm,21.6s,MS5.6,baz=167,slow=36
RAO Raoul Island 80.34 119 PFAKE 16 21 30.0 +6.5
RAO LR LR
comp=Z,4µm,21.0s,MS5.8
CHOS Chios island 80.53 310 *eP* **P 16 21 24.6 +0.3**
KIS Kishinev 80.54 319α *iP* **P 16 21 24.0 -0.1**
KIS *i* *PP pP 16 21 38.0 -0.8
KIS *e* 16 24 28.0
KIS *i* S S 16 31 23.0 -4.1
KIS *i* 16 31 34.0
KIS *i* 16 32 06.0
KIS *e*PS 16 32 22.0
KIS *e*SS SS 16 36 37.0 -3.4
KIS pmax pmax
comp=E,640nm,2.2s
KIS pmax pmax
comp=Z,1µm,2.2s,mb6.4
KIS pmax pmax
comp=Z,2µm,12.0s
KIS pmax pmax
comp=Z,2µm,13.6s
KIS MLR MLR
comp=N,1µm,19.0s,MS5.4
KIS MLR MLR
comp=E,1µm,19.0s,MS5.4
KIS MLR MLR
comp=Z,1µm,19.0s,MS5.3
KIS MLR MLR
comp=Z,1µm,19.0s
KIS Kishinev 80.54 319 *iP* **P 16 21 24.0 -0.1**
comp=Z,1µm,2.2s,mb6.4
KIS *i* pP pP 16 21 38.0 -0.8
KIS Kishinev 80.54 319 *e*PP PP 16 24 28.0 -0.1
PRK Paraskevi 80.54 310 *eP* **P 16 21 24.4 +0.1**
PRK Paraskevi 80.54 310 *eP* **P 16 21 24.1 -0.2**
PRD Provadia 80.58 315 P **P 16 21 24.6 +0.2**
SANT Santorini 80.60 307 *eP* **P 16 21 24.3 -0.3**
SANT Santorini 80.60 307 P **P 16 21 24.3 -0.3**
SANT LR LR
comp=Z,745nm,20.0s,MS5.0
JMB Yambol 81.00 314 P **P 16 21 27.4 +0.7**
ALN Alexandroupoli 81.05 312 *eP* **P 16 21 27.0 0.0**
AKASG Malin Array Be 81.27 322 P **P 16 21 27.2 -0.7**
comp=Z,81nm,0.9s,mb5.7,baz=81,slow=4.3,SNR=215
AKASG pP pP 16 21 41.5 -1.1
comp=Z,17nm,0.5s,baz=83,slow=4.2,SNR=8.2
AKASG PP PP 16 24 33.0 -1.0
comp=Z,19nm,1.0s,baz=92,slow=6.0,SNR=7.9
AKASG LR LR 17 03 00.4
comp=Z,2µm,21.2s,MS5.3,baz=90,slow=40
AKASG Malin Array Be 81.27 322 P **P 16 21 27.2 -0.7**
AKASG *PP pP 16 21 41.5 -1.1
AKASG 16 24 33.1
AKASG pmax pmax
comp=Z,81nm,0.9s
AKASG pmax pmax
comp=Z,17nm,0.5s
AKASG pmax pmax
comp=Z,19nm,1.0s
AKASG MLR MLR
comp=Z,2µm,21.2s
KIEV Kiev 81.28 322⇑ *iP* **P 16 21 26.9 -1.1**
KIEV *e* pP 16 21 40.8 -1.8
KIEV *e* 16 24 31.0
KIEV pmax pmax
comp=Z,164nm,1.1s,mb5.9
KIEV MLR MLR
comp=Z,2µm,20.0s,MS5.4
KIEV Kiev 81.28 322⇑ *iP* **P 16 21 26.9 -1.0**
comp=Z,164nm,1.1s,mb5.9
KIEV *e* pP 16 21 40.8 -1.8
KIEV *e* 16 21 46.2
KIEV *e*PP PP 16 24 31.0 -3.1
KIEV LR LR
comp=Z,2µm,20.0s,MS5.4
GVD Gavdhos 81.42 306 *eP* **P 16 21 27.5 -1.6**
VAM Vamos 81.42 306 *eP* **P 16 21 31.0 +1.9**
RDO Rodhopi 81.48 312 *eP* **P 16 21 28.9 -0.4**
LIA Limnos Island 81.49 311 *eP* **P 16 21 29.2 -0.2**
LIA Limnos Island 81.49 311 *eP* **P 16 21 29.2 -0.2**
LOS Limnos 81.58 311 *eP* **P 16 21 29.6 -0.2**
SZH Strazhica 81.64 314 P **P 16 21 29.8 -0.2**
VRI Vrincioaia 81.66 317⇑ *iP* **P 16 21 31.0 +0.9**
VRI Vrincioaia 81.66 317 P **P 16 21 30.9 +0.8**
DIM Dimitrovgrad 81.67 313 P **P 16 21 30.1 -0.1**
KDZ Kurdzhali 81.67 313 P **P 16 21 30.1 -0.2**
PLOR Plostina 81.71 317 P **P 16 21 31.2 +0.8**
PLOR Plostina 81.71 317⇑ *iP* **P 16 21 31.0 +0.6**
SBA Scott Base 81.81 169 *eP* **P 16 21 31.2 +0.9**
SBA pmax pmax
comp=Z,71nm,1.0s,mb5.5
SBA MLR MLR
comp=Z,3µm,22.0s,MS5.6
SBA Scott Base 81.81 169⇑ *eP* **P 16 21 31.2 +0.8**
comp=Z,71nm,1.0s,mb5.5
SBA LR LR
comp=Z,3µm,22.0s,MS5.6
PVL Pavlikeni 82.05 314 P **P 16 21 33.0 +0.8**
MLR Muntele Rosu 82.11 317⇑ *iP* **P 16 21 33.1 +0.6**
MLR Muntele Rosu 82.11 317 P **P 16 21 33.2 +0.7**
ZIMR 82.12 315 P **P 16 21 33.2 +0.6**

SMY Shemya 82.18 36 P **P 16 21 31.8 -0.9**
SMY *e* pP 16 21 45.6 -1.8
SMY pmax pmax
comp=Z,630nm,1.3s,mb6.4
SMY Shemya 82.18 36 *eP* **P 16 21 31.8 -0.9**
comp=Z,841nm,1.5s,mb6.5
SMY LR LR
comp=Z,1µm,21.0s,MS5.3
RZN Rozhen 82.19 313 P **P 16 21 33.2 +0.2**
ATH Athens Observa 82.26 309 *eP* **P 16 21 32.7 -0.7**
PLD Plovdiv 82.28 313 P **P 16 21 33.2 -0.3**
KYTH Kithira 82.50 307 *eP* **P 16 21 32.5 -2.3**
DID Didima 82.55 308 *eP* **P 16 21 33.8 -1.1**
PAIG Paliouri 82.63 311 *eP* **P 16 21 34.7 -0.6**
VLI Veliai 82.66 307 *eP* **P 16 21 31.9 -3.6**
VOIR 82.71 316⇓ *iP* **P 16 21 35.3 -0.3**
VOIR 82.71 316 P **P 16 21 35.5 -0.1**
NVR Nevrokopi 82.76 312 *eP* **P 16 21 35.4 -0.6**
PGB Panagyurishte 82.76 313 P **P 16 21 35.9 0.0**
LTK Loutraki 82.85 309 *eP* **P 16 21 35.1 -1.4**
NEO Neokhori 82.87 310 *eP* **P 16 21 35.1 -1.5**
PLG Polygyros 82.89 311 *eP* **P 16 21 36.3 -0.4**
PLG Polygyros 82.89 311 *eP* **P 16 21 36.2 -0.5**
MMB Musomiste 82.90 312 P **P 16 21 36.1 -0.6**
XOR Xorichti 82.91 310 *eP* **P 16 21 35.7 -1.1**
LKR Lokris 82.93 309 *eP* **P 16 21 35.7 -1.3**
LKR Lokris 82.93 309 *eP* **P 16 21 35.5 -1.4**
SOH Sokhos 83.04 312 *eP* **P 16 21 37.9 +0.5**
BURAR Bucovina Array 83.06 319⇑ *iP* **P 16 21 38.7 +1.3**
BUR08 Bucovina Ar. S 83.08 319⇑ *iP* **P 16 21 38.4 +0.9**
TSUM Tsumeb 83.08 251 LR LR 16 53 08.0
comp=Z,5µm,21.9s,MS5.9,baz=80,slow=32
TSUM Tsumeb 83.08 251 *eP* **P 16 21 37.6 -0.6**
comp=Z,133nm,1.4s,mb5.8
TSUM LR LR
comp=Z,5µm,21.0s,MS5.9
MNK Minsk 83.11 326⇑ *iP* **P 16 21 34.0 -3.5**
MNK *e* pP 16 21 49.0 -3.2
MNK *e*S S 16 31 48.0 -5.3
MNK pmax pmax
comp=E,140nm,1.0s
MNK pmax pmax
comp=Z,2µm,1.0s,mb7.0
HORT Hortiatis 83.19 311 *eP* **P 16 21 37.5 -0.7**
VLX Vlachokerasia 83.20 308 *eP* **P 16 21 38.2 -0.2**
THE Thessaloniki 83.30 311 *eP* **P 16 21 37.8 -1.0**
PUL Pulkovo 83.33 331⇑ *iP* **P 16 21 39.0 +0.5**
CRAR CRAIOVA 83.36 315 P **P 16 21 39.9 +0.9**
KKB Krupnik 83.43 313 P **P 16 21 38.8 -0.6**
VTS Vitosha 83.46 313 P **P 16 21 39.6 0.0**
VTS Vitosha 83.46 313 P **P 16 21 39.7 +0.2**
AGG Agios Georgios 83.51 310 *eP* **P 16 21 38.8 -1.1**
ITM Ithomi 83.53 308 *eP* **P 16 21 39.8 -0.2**
LIT Litokhoron 83.56 311 *eP* **P 16 21 39.5 -0.7**
PYL PYLOS 83.63 307 *eP* **P 16 21 39.6 -0.9**
VAY Valandovo 83.71 312 *iP* **P 16 21 39.4 -1.4**
comp=Z,400nm,1.5s,mb6.3
GRG Griva 83.77 312 *eP* **P 16 21 40.7 -0.5**
BILL Bilibino 83.81 20*c iP* **P 16 21 40.1 -0.7**
BILL pmax pmax
comp=Z,276nm,1.8s,mb6.1
BILL Bilibino 83.81 20⇑ *iP* **P 16 21 39.7 -1.1**
comp=Z,240nm,1.4s,mb6.1
BILL *e* pP 16 21 53.2 -2.3
BILL *e* pP 16 21 58.4 +2.8
BILL LR LR
comp=Z,5µm,20.0s,MS5.9
MIDW Midway 83.82 61 PFAKE 16 21 50.0 +8.3
MIDW LR LR
comp=Z,3µm,21.0s,MS5.6
THL Klokotos Trika 83.84 310 *eP* **P 16 21 39.9 -1.6**
THL Klokotos Trika 83.84 310 *eP* **P 16 21 39.9 -1.7**
JOF Joensuu 83.89 334 *ep* **P 16 21 39.3 -2.0**
comp=Z,106nm,0.9s,mb6.0
JOF Joensuu 83.89 334 *eP* **P 16 21 39.3 -2.0**
JOF pmax pmax
comp=Z,106nm,0.9s,mb6.0
EVR Evrytania 83.89 310 *eP* **P 16 21 41.6 -0.3**
RLS Riolos of Patr 84.03 309 *eP* **P 16 21 42.9 +0.3**
STIP Stip 84.06 312 *iP* **P 16 21 40.9 -1.8**
comp=Z,11nm,1.1s,mb4.9
KZN Kozani 84.14 311 *eP* **P 16 21 41.8 -1.3**
GZR Gura Zlata 84.28 316 P **P 16 21 44.1 +0.4**
LVV L'vov 84.29 321*d iP* **P 16 21 43.4 -0.2**
LVV *i* pP 16 22 02.4 +4.0
LVV 16 24 59.6
LVV *i* S S 16 32 06.6 +1.2
LVV MLR MLR
comp=Z,1µm,20.0s,MS5.2
LVV MLR MLR
comp=N,800nm,21.0s,MS5.3
LVV MLR MLR
comp=E,900nm,21.0s,MS5.3
LVZ Lovozero 84.38 340 P **P 16 21 43.2 -0.5**
comp=E,731nm,1.7s,mb6.5,SNR=11
LVZ Lovozero 84.38 340⇑ *iP* **P 16 21 43.1 -0.6**
LVZ pmax pmax
comp=Z,300nm,2.0s,mb6.1
MEV Metsovon 84.47 310 *eP* **P 16 21 44.9 +0.1**
FNA Florina 84.51 311 *eP* **P 16 21 44.1 -0.9**
DRGR 84.57 317⇑ *iP* **P 16 21 45.8 +0.7**
DRGR 84.57 317 P **P 16 21 45.9 +0.7**
BIA Bitola 84.59 312 *iP* **P 16 21 43.4 -1.9**
comp=Z,23nm,1.4s,mb5.1
SKO Skopje 84.65 312 *iP* **P 16 21 45.1 -0.6**
comp=Z,257nm,1.6s,mb6.1
APA Apatity 84.70 339⇓ *iP* **P 16 21 44.0 -1.3**
APA *i* pP 16 22 03.0 +2.9
APA *i* 16 32 03.0
APA pmax pmax
comp=Z,180nm,1.2s,mb6.1
APA pmax pmax
comp=Z,2µm,5.0s
APA MLR MLR
comp=Z,6µm,23.0s,MS5.9
VLS Valsamata 84.73 309 *eP* **P 16 21 46.2 +0.1**
VLS Valsamata 84.73 309 *eP* **P 16 21 45.9 -0.2**
VSU Vasula 84.73 329*c iP* **P 16 21 45.8 +0.1**
JAN Janina 84.74 310 *eP* **P 16 21 46.2 +0.1**
LKD Levkas 84.75 309 *eP* **P 16 21 46.5 +0.3**
AMKA Amchitka 84.98 38 *eP* **P 16 21 45.5 -1.5**
AMKA *e* pP 16 21 59.3 -2.5
OHR Ohrid 85.00 312 *iP* **P 16 21 45.6 -1.8**
comp=Z,312nm,1.3s,mb6.3
KWP Kalwaria 85.10 320 *eP* **P 16 21 48.2 +0.5**
comp=Z,1µm,2.0s,mb6.6
KWP *e*pP pP 16 22 02.5 +0.1
KWP *e*S S 16 32 16.7 +3.3
KWP LMZ 17 01 19.8
comp=Z,2µm,26.9s
KWP Kalwaria 85.10 320⇑ *eP* **P 16 21 48.2 +0.5**
KWP *e**PP pP 16 22 02.5 0.0
KWP *e*S S 16 32 16.7 +3.3
KWP pmax pmax
comp=Z,1µm,2.0s,mb6.6
KWP MLR MLR
comp=Z,2µm,26.9s,MS5.4
KWP Kalwaria 85.10 320⇓ *iP* **P 16 21 48.2 +0.5**
KWP Kalwaria 85.10 320⇑ *eP* **P 16 21 48.2 +0.5**
KWP *e*pP pP 16 22 02.5 0.0
KWP *e*S S 16 32 16.7 +3.3
KWP LR LR
comp=Z,2µm,20.0s,MS5.5
BZS Buzias 85.12 316⇑ *iP* **P 16 21 48.2 +0.3**
IGT Igoumenitsa 85.12 310 *eP* **P 16 21 47.9 -0.2**
UZH Uzhgorod 85.18 319⇑ *eP* **P 16 21 47.2 -0.9**
UZH *i* pP 16 22 05.4 +2.5
UZH *e* 16 25 07.0
UZH *e*S S 16 32 15.0 +0.7
UZH *e*PS 16 33 07.0
UZH *e*SS SS 16 37 45.0 -4.2
UZH *e*SSS 16 41 21.0
UZH MLR MLR
comp=E,550nm,17.0s
UZH MLR MLR
comp=Z,520nm,17.0s,MS5.0
KOLS Kolonicke sedl 85.25 319 *iP* **P 16 21 49.5 +1.0**
KOLS *e* 16 21 51.1
KOLS *e*PP PP 16 25 03.9 -2.8
KOLS *e*S S 16 32 16.7 +1.8
KEK Kerkira 85.55 310 *eP* **P 16 21 50.3 +0.1**
SUW Suwalki 85.66 325 *eP* **P 16 21 50.3 -0.1**
comp=Z,2µm,1.3s,mb7.2

SUW *e*pP pP 16 22 04.4 -0.7
SUW *e*SKS 16 32 12.1
SUW *e*S S 16 32 19.6 +1.0
SUW *e*SS SS 16 38 01.4 +5.6
SUW LMZ 16 59 17.6
comp=Z,2µm,28.7s
SUW Suwalki 85.66 325⇑ *eP* **P 16 21 50.3 -0.1**
SUW *e**PP pP 16 22 04.4 -0.7
SUW *e* 16 32 12.1
SUW *e*S S 16 32 19.6 +0.9
SUW *e*SS SS 16 38 01.4 +5.6
SUW pmax pmax
comp=Z,2µm,1.3s,mb7.2
SUW MLR MLR
comp=Z,2µm,28.7s,MS5.4
SUW Suwalki 85.66 325⇑ *eP* **P 16 21 50.3 -0.1**
SUW *e*pP pP 16 22 04.4 -0.7
SUW *e*SKS 16 32 12.1
SUW *e*S S 16 32 19.6 +0.9
SUW *e*SS SS 16 38 01.4 +5.6
TIR Tirane 85.73 312⇑ *iP* **P 16 21 50.3 -0.7**
TIR *e* pP 16 22 04.8 -1.0
TIR pmax pmax
comp=Z,35nm,0.7s,mb5.7
TIR MLR MLR
comp=Z,1µm,20.0s,MS5.3
TIR Tirane 85.73 312⇑ *iP* **P 16 21 50.3 -0.7**
comp=Z,161nm,0.7s,mb6.4
TIR *e* pP 16 22 04.8 -1.1
TIR LR LR
comp=Z,1µm,20.0s,MS5.3
CRVS Cervenica-Dubn 85.77 319 *eP* **P 16 21 51.5 +0.4**
CRVS *e*S S 16 32 18.5 -1.6
PVY Plav 85.82 313⇑ *iP* **P 16 21 51.3 -0.2**
KAF Kangasniemi 85.87 333 *ep* **P 16 21 50.3 -1.0**
comp=Z,79nm,0.5s,mb6.2,baz=99,slow=4.5
KAF Kangasniemi 85.87 333 *eP* **P 16 21 50.3 -1.0**
KAF pmax pmax
comp=Z,79nm,0.5s,mb6.2
IVA Berane 85.92 313⇑ *iP* **P 16 21 51.9 0.0**
STHS Stebnicka Huta 86.00 320 *iP* **P 16 21 52.9 +0.7**
STHS *e* pP 16 22 11.8 +4.8
STHS pmax pmax
comp=Z,135nm,1.2s,mb6.0
STHS Stebnicka Huta 86.00 320 *iP* **P 16 21 52.8 +0.6**
STHS *e*pP pP 16 22 11.8 +4.8
STHS Stebnicka Huta 86.00 320 *iP* **P 16 21 52.9 +0.7**
comp=Z,135nm,1.2s,mb6.0
STHS *e* pP 16 22 11.8 +4.8
AFI Afiamalu 86.19 104 LR LR 16 59 16.6
comp=Z,885nm,20.9s,MS5.1,baz=99,slow=35
AFI Afiamalu 86.19 104⇑ *iP* **P 16 21 54.5 +0.6**
AFI pmax pmax
comp=Z,257nm,0.9s,mb6.5
AFI MLR MLR
comp=Z,2µm,19.0s,MS5.4
AFI Afiamalu 86.19 104⇑ *iP* **P 16 21 54.5 +0.6**
comp=Z,257nm,0.9s,mb6.5
AFI LR LR
comp=Z,2µm,19.0s,MS5.4
ULC Ulcinj 86.27 312 *eP* **P 16 21 53.7 0.0**
TTG Podgorica 86.32 313⇑ *iP* **P 16 21 53.6 -0.3**
KECS Kecovo 86.34 319 *iP* **P 16 21 54.1 +0.2**
KECS *e* pP 16 22 10.2 +1.5
KECS pmax pmax
comp=Z,75nm,1.4s,mb5.7
KECS Kecovo 86.34 319 *iP* **P 16 21 54.1 +0.2**
comp=Z,75nm,1.4s,mb5.7
KECS *e* pP 16 22 10.2 +1.5
KECS *e*PP PP 16 25 26.3 +11
PLE Pljevlja 86.35 314⇑ *iP* **P 16 21 54.5 +0.5**
NKY Niksic 86.56 313⇑ *iP* **P 16 21 55.1 0.0**
BUM Brajici-Budva 86.57 313⇑ *iP* **P 16 21 55.1 -0.1**
NIE Niedzica 86.60 320 *eP* **P 16 21 56.0 +0.9**
NIE *e*PP PP 16 25 21.0 +3.4
WAR Warsaw 86.61 323 *eP* **P 16 21 55.8 +0.7**
WAR *e*SKS 16 32 17.1
WAR LMZ 16 58 08.3
comp=Z,2µm,30.3s
WAR Warsaw 86.61 323⇑ *eP* **P 16 21 55.8 +0.7**
WAR *e*SKS 16 32 17.1
WAR LR LR
comp=Z,2µm,30.3s,MS5.4
PSZ Piszkesteto 86.65 318⇑ *iP* **P 16 21 55.5 +0.1**
PSZ *e* pP 16 22 09.7 -0.5
PSZ pmax pmax
comp=Z,215nm,1.4s,mb6.2
PSZ MLR MLR
comp=Z,1µm,20.0s,MS5.3
PSZ Piszkesteto 86.65 318⇑ *eP* **P 16 21 55.8 +0.4**
PSZ Piszkesteto 86.65 318⇑ *iP* **P 16 21 55.8 +0.4**
UPM Unac-Piva 86.68 313⇑ *iP* **P 16 21 55.6 -0.1**
QSPA South Pole Qui 86.76 180 LR LR 16 55 06.3
comp=Z,4µm,21.2s,MS5.8,baz=315,slow=32
NVL N'lazarevskaya 86.84 199 P **P 16 22 01.4 +5.5**
NVL *i* S S 16 32 14.9 -15
NVL pmax pmax
comp=Z,145nm,2.3s,mb5.8
MAIT Maitri 86.87 199 *eP* **P 16 21 57.9 +1.9**
HCY Herceg Novi 86.88 313⇑ *iP* **P 16 21 56.4 -0.3**
BRY Bratogost 86.91 313⇑ *iP* **P 16 21 56.6 -0.2**
OJC Ojcow 87.05 320 *eP* **P 16 21 57.6 +0.3**
OJC *e* 16 25 21.7
OJC *e* 16 32 34.2
OJC *e*SS SS 16 38 18.4 +1.9
OJC MLR MLR
comp=Z,2µm,22.1s,MS5.6
BUD Budapest 87.17 318⇑ *eP* **P 16 21 58.1 +0.1**
PKSM Moragy 87.26 316 P **P 16 21 58.9 +0.5**
PKSM Moragy 87.26 316⇑ *iP* **P 16 21 58.7 +0.3**
PKSM Moragy 87.26 316⇑ *eP* **P 16 21 58.7 +0.3**
VYHS Vyhne 87.43 319 *iP* **P 16 21 59.4 +0.2**
VYHS pmax pmax
comp=Z,58nm,1.7s,mb5.5
VYHS Vyhne 87.43 319 *iP* **P 16 21 59.4 +0.2**
comp=Z,58nm,1.7s,mb5.5
VYHS *e*S S 16 32 34.0 -2.2
STON Ston 87.52 313 P **P 16 21 59.2 -0.6**
ADK Adak 87.53 38⇑ *iP* **P 16 21 58.0 -1.6**
ADK *e* pP 16 22 11.4 -3.0
ADK pmax pmax
comp=Z,782nm,1.5s,mb6.7
ADK MLR MLR
comp=Z,1µm,20.0s,MS5.3
ADK Adak 87.53 38⇑ *iP* **P 16 21 58.0 -1.7**
comp=Z,782nm,1.5s,mb6.7
ADK *e* pP 16 22 11.3 -3.1
ADK LR LR
comp=Z,1µm,20.0s,MS5.3
KEV Kevo 87.62 340 *ep* **P 16 21 58.1 -1.5**
comp=Z,131nm,0.9s,mb6.2
KEV Kevo 87.62 340 *eP* **P 16 21 58.1 -1.5**
KEV pmax pmax
comp=Z,131nm,0.9s,mb6.2
KOLL Kolacno 87.73 319 *iP* **P 16 22 00.9 +0.3**
TIP Timpagrande 87.83 309⇑ *iP* **P 16 22 02.0 +0.7**
comp=Z,1µm,2.3s,mb6.7
TIP *e* pP 16 22 16.1 0.0
TIP LR LR
comp=Z,791nm,20.0s,MS5.1
GRI Girifalco 88.05 309 P **P 16 22 03.7 +1.3**
OKC Ostrava-Krasne 88.05 320 *eP* **P 16 22 02.8 +0.7**
OKC *e*pP pP 16 22 17.1 +0.1
OKC *e*PP PP 16 25 27.9 -1.4
OKC *e*SKS 16 32 40.1
OKC AMS AMS 17 10 40.0
comp=Z,2µm,21.3s
OKC Ostrava-Krasne 88.05 320 *eP* **P 16 22 02.8 +0.7**
OKC *e*pP pP 16 22 17.1 +0.1
OKC *e*PP PP 16 25 27.9 -1.4
OKC *e*SKS 16 32 40.1
RAC Raciborz 88.06 320 *eP* **P 16 22 03.2 +1.1**
RAC *e*S S 16 32 42.0 -0.1
RAC MLR MLR
comp=Z,2µm,22.0s,MS5.5
ARCES ARCESS Array B 88.07 340 P **P 16 22 01.6 -0.1**
comp=Z,149nm,1.0s,mb6.2,baz=104,slow=4.1,SNR=136
ARCES pP pP 16 22 15.4 -1.2
comp=Z,174nm,1.0s,baz=106,slow=4.3,SNR=13
ARCES PP PP 16 25 31.0 +2.1
comp=Z,36nm,1.0s,baz=102,slow=8.8,SNR=6.5
ARCES LR LR 17 05 30.4
comp=Z,4µm,21.3s,MS5.8,baz=108,slow=38
ARCES ARCESS Array B 88.07 340 P **P 16 22 01.7 -0.1**

ARCES *PP pP 16 22 15.4 -1.2
ARCES 16 25 31.0
ARCES pmax pmax
comp=Z,149nm,1.0s
ARCES pmax pmax
comp=Z,174nm,1.0s
ARCES pmax pmax
comp=Z,37nm,1.0s
ARCES MLR MLR
comp=Z,4μm,21.3s
ORI Oriolo Calabro 88.15 310 P **P 16 22 04.2 +1.4**
SOI Samo 88.27 308 P **P 16 22 04.4 +1.0**
CEL Celeste 88.41 308 PFAKE 16 22 10.0 +5.9
CEL LR LR
comp=Z,37μm,22.0s,MS6.8
MORC Moravsky Berou 88.44 320 P **P 16 22 04.5 +0.6**
MORC pmax pmax
comp=Z,210nm,1.1s,mb6.3
MORC Moravsky Berou 88.44 320⇑ *i*P **P 16 22 04.8 +0.9**
MORC Moravsky Berou 88.44 320 *e*P **P 16 22 04.6 +0.7**
MORC *e* pP 16 22 19.1 +0.3
MODS Modra-Piesok 88.45 318 *i* P **P 16 22 04.5 +0.5**
MODS *ep*P pP 16 22 18.5 -0.4
MODS *e*PP PP 16 25 29.6 -2.9
MODS *e*S S 16 32 45.2 -0.6
MODS Modra-Piesok 88.45 318 *i* P **P 16 22 04.6 +0.6**
MODS *e* pP 16 22 18.5 -0.4
MODS *e*PP PP 16 25 29.6 -2.9
MODS *e*S S 16 32 45.2 -0.6
PTRP Pietrapertosa 88.49 311 P **P 16 22 05.8 +1.4**
comp=Z,1μm,2.1s,mb6.7
MTTG Motta San Giov 88.54 308 P **P 16 22 05.9 +1.2**
ZST Bratislava 88.54 318 *i* P **P 16 22 05.1 +0.6**
ZST *ep*P pP 16 22 19.8 +0.5
ZST *e*PP PP 16 25 30.5 -2.8
ZST *e*S S 16 32 46.6 -0.2
ZST Bratislava 88.54 318 *i* P **P 16 22 05.1 +0.6**
comp=Z,120nm,0.9s,mb6.2
ZST *e* pP 16 22 19.8 +0.5
ZST *e*PP PP 16 25 30.5 -2.8
ZST *e*S S 16 32 46.6 -0.2
ZST LR LR
comp=Z,2μm,21.0s,MS5.4
SCLL Scilla 88.55 308 P **P 16 22 05.4 +0.6**
CUC Castrocucco 88.63 310⇑ *i*P **P 16 22 04.8 -0.3**
comp=Z,183nm,1.2s,mb6.3
CUC *e* pP 16 22 19.1 -0.8
CUC LR LR
comp=Z,2μm,20.0s,MS5.4
KTK1 Kautokeino 88.73 339 *e*P **P 16 22 04.4 -0.5**
KTK1 AMb AMB 16 22 09.1
comp=Z,207nm,1.6s,mb6.2
KTK1 Kautokeino 88.73 339 *e*P **P 16 22 04.4 -0.5**
comp=Z,207nm,1.6s,mb6.2
SISC Sisak 88.75 315 P **P 16 22 06.2 +0.7**
SOP Sopron 88.85 318⇑ *e*P **P 16 22 06.3 +0.4**
HAVL Avola 88.90 307 P **P 16 22 07.0 +0.5**
MRLC Muro Lucano 88.95 311 P **P 16 22 06.7 +0.1**
RGNG Rignano Grg 88.96 312 P **P 16 22 06.8 +0.2**
FG4 Candela 88.96 311 P **P 16 22 07.6 +1.0**
FG4 pmax pmax
comp=Z,2μm,1.4s,mb7.2
FG4 Candela 88.96 311 P **P 16 22 07.6 +1.0**
comp=Z,2μm,1.4s,mb7.2
SSY Sortino 88.96 307 P **P 16 22 07.2 +0.5**
VRAC Vranov 89.00 319 P **P 16 22 07.2 +0.6**
VRAC Vranov 89.00 319⇑ *i*P **P 16 22 07.1 +0.5**
VRAC Vranov 89.00 319 *e*P **P 16 22 06.9 +0.3**
VRAC *e* pP 16 22 22.0 +0.5
GKP Gorka Klasztor 89.03 323 *e*P **P 16 22 07.1 +0.4**
comp=Z,900nm,1.3s,mb6.9
GKP *ep*P pP 16 22 21.1 -0.5
GKP *e*S S 16 32 51.0 -0.2
GKP LMZ 16 59 36.8
comp=Z,2μm,30.0s
GKP Gorka Klasztor 89.03 323⇑ *e*P **P 16 22 07.1 +0.4**
GKP *e**PP pP 16 22 21.0 -0.5
GKP *e*S S 16 32 51.0 -0.1
GKP pmax pmax
comp=Z,900nm,1.3s,mb6.9
GKP MLR MLR
comp=Z,2μm,30.0s,MS5.4
GKP Gorka Klasztor 89.03 323⇑ *e*P **P 16 22 07.1 +0.4**
comp=Z,0.9nm,1.3s
GKP *ep*P pP 16 22 21.0 -0.5
GKP *e*S S 16 32 51.0 -0.1
GKP LR LR
comp=Z,2μm,30.0s,MS5.4
SGO Sicignano 89.07 311 P **P 16 22 07.5 +0.4**
SGO pmax pmax
comp=Z,271nm,1.1s,mb6.5
SGO Sicignano 89.07 311 P **P 16 22 07.5 +0.4**
comp=Z,271nm,1.1s,mb6.5
FG5 Orsara di Pugl 89.16 311 P **P 16 22 08.4 +0.8**
FG5 pmax pmax
comp=Z,428nm,1.3s,mb6.6
FG5 Orsara di Pugl 89.16 311 P **P 16 22 08.4 +0.8**
comp=Z,428nm,1.3s,mb6.6
DPC Dobruska-Polom 89.28 320 *e*P **P 16 22 09.0 +1.1**
DPC *ep*P pP 16 22 23.3 +0.5
DPC *e*PP PP 16 25 36.7 -2.4
DPC AMS AMS 17 11 00.0
comp=Z,2μm,21.0s
FG2 Serracapriola 89.28 312 P **P 16 22 08.8 +0.7**
comp=Z,2μm,1.4s,mb7.3
CSSN Cassano Irpino 89.31 311 P **P 16 22 08.6 +0.3**
comp=Z,216nm,1.1s,mb6.4
MNO Monte Soro 89.32 308 P **P 16 22 09.8 +1.4**
CONA Conrad Observa 89.34 318 *i* P **P 16 22 08.5 +0.2**
comp=Z,701nm,2.9s,mb6.5,SNR=29
CSNA Conrad Observa 89.34 318⇑ *i*P **P 16 22 08.4 +0.2**
comp=Z,644nm,2.9s,mb6.5
KSP Ksiaz 89.35 321 *e*P **P 16 22 09.2 +1.0**
comp=Z,2μm,2.2s,mb7.0
KSP *ep*P pP 16 22 23.7 +0.6
KSP *e*PP PP 16 25 37.4 -2.2
KSP *e*S S 16 32 54.2 0.0
KSP LMZ 17 07 41.3
comp=Z,4μm,24.1s
KSP Ksiaz 89.35 321⇑ *i*P **P 16 22 09.0 +0.8**
KSP *ep*P pP 16 22 23.4 +0.3
KSP *e*PP PP 16 25 37.0 -2.6
KSP *e*S S 16 32 53.5 -0.7
KSP LR LR
comp=Z,5μm,24.1s,MS5.9
CIGN Sant'Elia a Pi 89.46 312 P **P 16 22 08.8 -0.2**
comp=Z,731nm,2.0s,mb6.7
UPC Upice 89.49 320 *e*P **P 16 22 09.8 +0.9**
UPC *ep*P pP 16 22 25.0 +1.2
PSB1 Pescosannita 89.50 311 P **P 16 22 09.1 0.0**
comp=Z,875nm,2.3s,mb6.7
ARSA Arzberg 89.51 317 *i* P **P 16 22 09.5 +0.5**
comp=Z,1μm,2.7s,mb6.7,SNR=88
ARSA Arzberg 89.51 317 *i* PcP **P 16 22 09.5 +0.5**
comp=Z,1μm,2.7s,mb6.7,SNR=88
RAFF Raffo Rosso 89.53 307 P **P 16 22 10.4 +1.0**
BOJS Bojanci 89.54 315 *i* P **P 16 22 09.8 +0.6**
BOJS *e* pP 16 22 23.6 -0.5
BOJS *e*PP PP 16 25 41.4 +0.1
BOJS *e*SKSac SKSac 16 32 33.4 -2.1
BOJS *e*S S 16 32 54.2 -2.0
TREC Trest 89.72 319 *e*P **P 16 22 10.5 +0.5**
TREC *ep*P pP 16 22 25.3 +0.5
TREC *e*S S 16 32 57.3 -0.4
TREC AMS AMS 17 11 40.0
comp=Z,2μm,21.5s
NVLJ Novalja 89.73 314 P **P 16 22 09.8 -0.3**
PERS Pernice 89.73 317 *i* P **P 16 22 10.7 +0.6**
PERS *e*S S 16 32 55.7 -2.2
SOKA Soboth 89.79 317⇑ *i*P **P 16 22 11.1 +0.7**
comp=Z,707nm,1.7s,mb6.7
SOKA Soboth 89.79 317⇑ *i*PcP **P 16 22 11.1 +0.7**
comp=Z,707nm,1.7s,mb6.7
SGG Gregorio Mates 89.84 311 P **P 16 22 10.3 -0.4**
comp=Z,182nm,1.5s,mb6.2
MIDA Miranda 89.95 312 P **P 16 22 11.3 +0.1**
comp=Z,778nm,2.6s,mb6.6
RNI2 Rionero Sannit 90.03 312 P **P 16 22 12.0 +0.4**
comp=Z,760nm,1.9s,mb6.7
LJU Ljubljana 90.09 316 *i* P **P 16 22 12.6 +0.8**
LJU *e* pP 16 22 26.6 0.0
LJU *e*PP PP 16 25 48.4 +2.8
LJU *e*SKSac SKSac 16 32 36.0 -2.7
LJU *e*S S 16 32 59.5 -1.8

OBKA Obir 90.11 316 *i* P **P 16 22 12.6 +0.7**
comp=Z,1μm,3.0s,SNR=23
OBKA Obir 90.11 316 *i* PcP **P 16 22 12.6 +0.7**
comp=Z,1μm,3.0s,SNR=23
RFI Roccamonfina 90.12 311 P **P 16 22 12.2 +0.1**
comp=Z,62nm,1.4s,mb5.8
MCT Mte Cammarata 90.14 308 P **P 16 22 13.2 +1.0**
INTR Introdacqua 90.24 312 P **P 16 22 12.3 -0.3**
SDJ San Donato 90.28 312 P **P 16 22 12.7 -0.1**
TRO Tromso 90.35 340 *e*P **P 16 22 11.0 -1.4**
TRO *e*PP PP 16 25 47.5 +0.4
TRO *e*SS SS 16 39 04.3 +0.8
TRO AMS AMS 17 06 53.9
comp=Z,2μm,22.6s,MS5.5
TRO Tromso 90.35 340 *e*P **P 16 22 11.0 -1.4**
TRO *i* 16 32 59.8
TRO LR LR
comp=Z,2μm,22.6s,MS5.5
PRU Pruhonice 90.39 320 *e*P **P 16 22 13.8 +0.7**
PRU *ep*P pP 16 22 28.4 +0.4
PRU *e*S S 16 33 02.5 -1.4
PRU AMS AMS 17 11 40.0
comp=Z,2μm,20.1s
JAVS Javornik 90.40 316 *i* P **P 16 22 13.3 +0.1**
JAVS *e*SKSac SKSac 16 32 38.3 -2.2
JAVS *e*S S 16 33 02.0 -2.2
MOA Molln 90.41 318 *i* P **P 16 22 13.2 0.0**
comp=Z,1μm,5.0s,SNR=16
PVCC Panska Ves 90.41 320 *e*P **P 16 22 14.2 +1.0**
PVCC *ep*P pP 16 22 28.8 +0.7
PVCC *e*PP PP 16 25 47.3 -0.8
PVCC *e*S S 16 32 58.6 -5.5
PVCC AMS AMS 17 11 30.0
comp=Z,2μm,21.1s
VVLD Villa Vallelon 90.44 312 P **P 16 22 13.1 -0.4**
TERO Teramo 90.50 312 P **P 16 22 13.6 -0.2**
VOY Vojsko 90.53 316⇑ *e*P **P 16 22 14.0 +0.2**
VOY *e* pP 16 22 29.9 +1.2
VOY *e* 16 22 42.4
AOI Ancona 90.56 313 P **P 16 22 14.7 +0.6**
PTQR Pietraquaria 90.61 312 P **P 16 22 14.6 +0.3**
AQU L'Aquila 90.63 312 P **P 16 22 15.0 +0.6**
MYKA Terra Mystica 90.74 316⇑ *i*P **P 16 22 15.2 +0.3**
comp=Z,3μm,2.1s,mb7.3
MYKA Terra Mystica 90.74 316⇑ *i*PcP **P 16 22 15.2 +0.3**
comp=Z,3μm,2.1s,mb7.3
BRG Berggiesshubel 90.83 321⇑ *i*P **P 16 22 15.9 +0.8**
BRG *i* pP 16 22 30.6 +0.6
BRG 16 25 50.0
BRG *i* 16 34 18.0
BRG pmax pmax
comp=Z,136nm,1.3s,mb6.1
BRG pmax pmax
comp=Z,333nm,2.0s,mb6.3
BRG pmax pmax
comp=Z,60nm,1.9s,mb5.6
BRG pmax pmax
comp=Z,2.0nm,0.9s
BRG MLR MLR
comp=N,608nm,24.5s,MS5.3
BRG MLR MLR
comp=E,1μm,25.1s,MS5.3
BRG MLR MLR
comp=Z,1μm,20.9s,MS5.3
BRG Berggiesshubel 90.83 321 *e*P **P 16 22 15.9 +0.8**
comp=Z,227nm,1.3s,mb6.3
BRG *ep*P pP 16 22 30.5 +0.5
BRG *e*S S 16 33 06.6 -1.3
BRG Berggiesshubel 90.83 321⇑ *i*P **P 16 22 15.9 +0.8**
comp=Z,227nm,1.3s,mb6.3
BRG *i* pP 16 22 30.6 +0.6
BRG PP PP 16 25 50.0 -1.4
comp=Z,556nm,2.0s
BRG *i* 16 26 03.9
BRG S S 16 33 39.0 +31
comp=Z,101nm,1.9s
BRG *i* 16 34 18.0
BRG PKPPKP 16 48 04.8
comp=Z,2.5nm,0.9s
BRG P'P' 16 48 04.8
comp=N,1μm,24.5s
BRG LR LR
comp=E,2μm,25.1s
BRG pmax pmax
comp=Z,2μm,20.9s
BRG Berggiesshubel 90.83 321⇑ *i*P **P 16 22 15.9 +0.8**
comp=Z,136nm,1.3s,mb6.1
FIAM Fiamignano 90.84 312 P **P 16 22 15.8 +0.4**
CING Cingoli 90.85 313 P **P 16 22 16.0 +0.6**
GEC2 GERESS Array S 90.85 319 *e*P **P 16 22 16.0 +0.7**
GEC2 *e**PP pP 16 22 30.6 +0.5
GEC2 *e*S S 16 33 06.8 -1.4
GEC2 pmax pmax
comp=Z,462nm,1.6s,mb6.6
GEC2 GERESS Array S 90.85 319 *e*P **P 16 22 16.0 +0.7**
comp=Z,462nm,1.6s,mb6.6
GEC2 *ep*P pP 16 22 30.6 +0.5
GEC2 *e*S S 16 33 06.8 -1.4
GERES GERESS Array B 90.85 319 P **P 16 22 15.9 +0.6**
comp=Z,53nm,1.0s,mb5.8,baz=104,slow=4.3,SNR=128
GERES pP pP 16 22 30.5 +0.4
comp=Z,34nm,1.0s,baz=94,slow=4.0,SNR=4.7
GERES GERESS Array B 90.85 319 P **P 16 22 15.9 +0.6**
GERES *PP pP 16 22 30.5 +0.4
GERES pmax pmax
comp=Z,53nm,1.0s
GERES pmax pmax
comp=Z,34nm,1.0s
NRCA Norcia 90.87 313 P **P 16 22 15.7 +0.2**
CERT Cerreto 90.92 312 P **P 16 22 15.1 -0.7**
PTCC Patocco-Chiusa 90.93 316 P **P 16 22 15.7 0.0**
KHC Kasperske Hory 90.95 319 *e*P **P 16 22 16.1 +0.4**
KHC *ep*P pP 16 22 30.2 -0.4
KHC *e*PP PP 16 25 44.7 -7.7
KHC *e*S S 16 33 08.5 -0.6
KHC AMS AMS 17 12 20.0
comp=Z,3μm,19.8s
KHC Kasperske Hory 90.95 319 *e*P **P 16 22 16.1 +0.4**
KHC *ep*P pP 16 22 30.2 -0.4
KHC *e*SKS 16 33 08.5
KHC LR LR
comp=Z,3μm,19.8s,MS5.7
BJO Bjornoya 90.98 345 *e*P **P 16 22 14.5 -0.8**
BJO *e*PP PP 16 25 52.9 +0.9
BJO *e*SKS 16 32 41.7
BJO AMS AMS 17 10 04.5
comp=Z,5μm,20.5s,MS6.0
KBA Koelnbreinsper 90.98 317⇓ *i*P **P 16 22 15.6 -0.2**
comp=Z,195nm,1.6s,mb6.2,SNR=29
BJO1 Bjornoya 91.03 345 *e*P **P 16 22 14.5 -1.0**
BJO1 LR LR
comp=Z,5μm,20.5s,MS6.0
SNTG Esanatoglia 91.03 313 P **P 16 22 16.5 +0.3**
RUE Ruedersdorf 91.05 322⇑ *i*P **P 16 22 16.4 +0.3**
comp=Z,360nm,1.3s,mb6.5
RUE *e* pP 16 22 30.7 -0.3
RUE *e*PP PP 16 25 51.1 -2.0
RDP Rocca di Papa 91.11 312 P **P 16 22 16.3 -0.3**
PESA Pesaro 91.14 314 P **P 16 22 17.3 +0.6**
MNS Montasola 91.17 312 P **P 16 22 16.2 -0.7**
FSSB Fossombrone 91.17 314 P **P 16 22 17.6 +0.7**
MURB Monte Urbino 91.33 313 P **P 16 22 17.2 -0.4**
FVI Forni Avoltri 91.33 316 P **P 16 22 17.5 -0.1**
RJOB Jochberg 91.39 318 *e*P **P 16 22 17.6 -0.2**
comp=Z,617nm,2.5s,mb6.5
RJOB *ep*P pP 16 22 32.2 -0.5
RJOB *e*S S 16 33 09.8 -3.3
WET Wettzell 91.41 319 *e*P **P 16 22 18.5 +0.6**
WET *e**PP pP 16 22 33.1 +0.4
WET *e*S S 16 33 12.7 -0.6
comp=Z,219nm,1.3s,mb6.3
WET Wettzell 91.41 319 *e*P **P 16 22 18.5 +0.6**
comp=Z,219nm,1.3s,mb6.3
WET *ep*P pP 16 22 33.1 +0.4
WET *e*S S 16 33 12.7 -0.6

SNAA Sanae 91.42 198 *e*P **P 16 22 18.4 +0.9**
SNAA *e* 16 22 24.1
SNAA *e* pP 16 22 36.2 +3.9
SNAA *e* 16 26 10.0
SNAA *e* 16 39 36.1
SNAA Sanae 91.42 198 *e*P **P 16 22 18.0 +0.5**
SNAA *e* 16 25 54.1
SNAA pmax pmax
comp=Z,70nm,1.3s
SNAA Sanae 91.42 198 *e*P **P 16 22 18.0 +0.5**
comp=Z,70nm,1.3s,mb5.8
SNAA *e*PP PP 16 25 54.1 -1.2
RSM Repubblica di 91.42 314 P **P 16 22 19.1 +1.1**
CLL Collm 91.45 321⇑ *i*P **P 16 22 18.0 0.0**
CLL *i* *PP pP 16 22 32.4 -0.5
CLL *e* 16 32 43.0
CLL *e*S S 16 33 15.0 +1.4
CLL pmax pmax
comp=Z,147nm,1.4s,mb6.1
CLL MLR MLR
comp=Z,2μm,23.6s,MS5.5
CLL Collm 91.45 321 *e*P **P 16 22 18.2 +0.2**
comp=Z,147nm,1.4s,mb6.1
CLL *ep*P pP 16 22 32.8 -0.1
CLL *e*S S 16 33 10.9 -2.7
CLL Collm 91.45 321⇑ *i*P **P 16 22 18.0 0.0**
comp=Z,147nm,1.4s,mb6.1
CLL *i* pP pP 16 22 32.4 -0.5
CLL *es*P sP 16 22 37.0 -1.5
CLL *e*PP PP 16 25 56.0 -0.3
CLL *e*PPP 16 27 54.0
CLL *e*PPPP 16 29 37.0
CLL *e*SKSac SKSac 16 32 43.0 -3.2
CLL *e*S S 16 33 15.0 +1.4
CLL *es*S sS 16 33 41.0 +2.3
CLL *e*PS PS 16 34 25.0 -4.0
CLL *e*PPS 16 35 06.0
CLL *ex* x 16 36 35.0
CLL *e*SS SS 16 39 24.0 +3.7
CLL *e*SSS 16 43 00.0
CLL *e*SSSS 16 46 13.0
CLL *e*PKPPKPdf 16 47 46.0
CLL Collm 91.45 321⇑ *i*P **P 16 22 18.0 0.0**
comp=Z,147nm,1.4s,mb6.1
CLL *i* pP pP 16 22 32.4 -0.5
CLL *es*P sP 16 22 37.0 -1.5
CLL *e*SKS 16 32 43.0
CLL *e*S S 16 33 15.0 +1.4
CLL *eP'P'* 16 47 46.0
CLL LR LR
comp=Z,2μm,23.6s,MS5.5
STEI Steigen 91.49 338 *e*P **P 16 22 17.6 -0.2**
STEI AMb AMB 16 22 19.6
comp=Z,289nm,0.9s,mb6.6
STEI *ep*P pP 16 22 31.8 -0.9
ABTA Abfaltersbach 91.53 317⇑ *i*P **P 16 22 18.2 -0.3**
comp=Z,433nm,3.0s,SNR=28
BADI Badiali 91.55 313 P **P 16 22 18.7 +0.1**
MOR8 Moi Rana 91.67 336 *e*P **P 16 22 17.8 -0.8**
MOR8 AMb AMB 16 22 20.3
comp=Z,158nm,1.4s,mb6.2
MOR8 *ep*P pP 16 22 32.2 -1.3
MOR8 *es*P sP 16 22 37.9 -1.3
MOR8 Moi Rana 91.67 336 *e*P **P 16 22 17.8 -0.8**
comp=Z,158nm,1.4s,mb6.2
SEST Monte Rota 91.73 317 P **P 16 22 19.2 -0.2**
NKC Novy Kostel 91.75 320 *e*P **P 16 22 20.0 +0.6**
NKC *e**PP pP 16 22 34.4 +0.1
NKC *e* 16 33 16.9
NKC MLR MLR
comp=Z,2μm,21.6s,MS5.6
NKC Novy Kostel 91.75 320 *e*P **P 16 22 20.0 +0.6**
NKC *ep*P pP 16 22 34.4 +0.1
NKC *e*S S 16 33 16.9 +0.6
NKC *ex* x 16 33 35.4
NKC AMS AMS 17 12 40.0
comp=Z,2μm,21.6s
NKC Novy Kostel 91.75 320 *e*P **P 16 22 20.0 +0.6**
NKC *ep*P pP 16 22 34.4 +0.1
NKC *e*SKS 16 33 16.9
NKC *e* 16 33 35.4
TANN Tannenbergstha 91.75 320 *e*P **P 16 22 20.0 +0.6**
comp=Z,117nm,1.4s,mb6.0
TANN *ep*P pP 16 22 34.6 +0.3
TANN *e*S S 16 33 15.8 -0.5
ROTZ Rotzenmuhle 91.88 320 *e*P **P 16 22 21.1 +1.1**
comp=Z,168nm,1.4s,mb6.2
ROTZ *ep*P pP 16 22 35.7 +0.8
ROTZ *e*S S 16 33 17.8 +0.3
MANZ Manzenberg 91.95 320 *e*P **P 16 22 21.4 +1.0**
comp=Z,234nm,1.4s,mb6.3
MANZ *ep*P pP 16 22 36.0 +0.8
MANZ *e*S S 16 33 18.4 +0.3
CTI Castel Tesino 92.09 316 P **P 16 22 21.7 +0.6**
FLOS Flostrand 92.11 336 *e*P **P 16 22 20.3 -0.4**
FLOS *ep*P pP 16 22 34.9 -0.7
LOF Lofoten 92.14 338 *e*P **P 16 22 22.4 +1.6**
LOF *ep*P pP 16 22 35.6 -0.1
WTTA Wattenberg 92.15 317 *i* P **P 16 22 21.2 -0.1**
comp=Z,685nm,2.7s,mb6.5,SNR=31
WATA Walderalm 92.19 317⇑ *i*P **P 16 22 21.1 -0.4**
comp=Z,107nm,1.3s,mb6.0,SNR=17
KONS Konsvik 92.22 336 *e*P **P 16 22 21.2 0.0**
KONS AMb AMB 16 22 23.4
comp=Z,191nm,1.6s,mb6.2
KONS *ep*P pP 16 22 35.2 -0.9
STOK Stokkvaagen 92.25 336 *e*P **P 16 22 20.7 -0.7**
MOX Moxa 92.30 320 *e*P **P 16 22 22.1 +0.2**
comp=Z,186nm,1.6s,mb6.2
MOX *e* pP 16 22 36.9 +0.1
MOX *e* 16 26 02.3
MOX
comp=Z,2μm,22.0s
MOX Moxa 92.30 320 *e*P **P 16 22 22.1 +0.2**
MOX *e* pP 16 22 36.9 +0.1
MOX *e* 16 26 02.3
MOX pmax pmax
comp=Z,186nm,1.6s,mb6.2
MOX MLR MLR
comp=Z,2μm,22.0s,MS5.4
MOX Moxa 92.30 320 *e*P **P 16 22 22.4 +0.5**
comp=Z,162nm,1.5s,mb6.1
MOX *ep*P pP 16 22 37.0 +0.2
MOX *e*S S 16 33 19.6 -1.6
APPI Appiano 92.40 316 P **P 16 22 21.4 -1.1**
NIKO Nikolski 92.41 37⇑ *i*P **P 16 22 20.1 -2.2**
comp=Z,339nm,1.0s,mb6.6
GRA2 Grafenberg Arr 92.43 319 *e*P **P 16 22 23.1 +0.6**
comp=Z,197nm,1.4s,mb6.2
GRA2 *ep*P pP 16 22 38.1 +0.7
GRA2 *e*PP PP 16 26 02.0 -2.0
GRA2 *e*SKSac SKSac 16 32 49.8 -2.0
GRA2 *e*S S 16 33 20.8 -1.6
GRA2 *eL* 17 13 26.7
comp=Z,2μm,20.3s
FUR Furstenfeldbru 92.43 318 *e*P **P 16 22 22.5 -0.1**
FUR *e**PP pP 16 22 37.2 -0.3
FUR *e*S S 16 33 18.7 -3.7
FUR pmax pmax
comp=Z,125nm,1.2s,mb6.1
FUR Furstenfeldbru 92.43 318 *e*P **P 16 22 22.5 -0.1**
comp=Z,125nm,1.2s,mb6.1
FUR *ep*P pP 16 22 37.2 -0.3
FUR *e*S S 16 33 18.7 -3.7
MOTA Moosalm 92.52 317 *i* P **P 16 22 22.9 -0.1**
comp=Z,106nm,1.1s,mb6.2,SNR=23
MOTA Moosalm 92.52 317 *i* PcP **P 16 22 22.9 -0.1**
comp=Z,106nm,1.1s,mb6.2,SNR=23
NSS Namsos 92.61 334 *e*P **P 16 22 22.0 -1.1**
NSS AMS AMS 17 10 18.6
comp=Z,3μm,23.4s,MS5.7
RETA Reutte 92.75 317 *i* P **P 16 22 24.2 +0.1**
comp=Z,632nm,2.7s,mb6.6,SNR=27
RETA Reutte 92.75 317 *i* PcP **P 16 22 24.2 +0.1**
comp=Z,632nm,2.7s,mb6.6,SNR=27
FETA Feichten 92.76 317 *i* P **P 16 22 24.4 +0.3**
comp=Z,854nm,3.3s,SNR=39
FETA Feichten 92.76 317 *i* PcP **P 16 22 24.4 +0.3**
comp=Z,854nm,3.3s,SNR=39
NB2 NORSAR Subarra 92.86 331 P **P 16 22 23.5 -0.8**
comp=Z,110nm,1.2s,mb6.2,baz=95,slow=5.3
NOA NORSAR Array B 92.86 331 P **P 16 22 23.8 -0.5**
comp=Z,31nm,1.0s,mb5.7,baz=85,slow=5.0,SNR=45

NOA LR LR 17 10 41.2
comp=Z,2µm,21.2s,MS5.6,baz=100,slow=40
NOA NORSAR Array B 92.86 331 P **P** **16 22 23.8 -0.5**
NOA pmax pmax
comp=Z,31nm,1.0s
NOA MLR MLR
comp=Z,2µm,21.2s
VLC Villacollemand 92.92 314 PFAKE 16 22 30.0 +5.1
VLC LR LR
comp=Z,1µm,21.0s,MS5.3
KBS Kingsbay 93.02 349 AMS AMS 17 11 42.3
comp=Z,5µm,18.7s,MS6.0
KBS Kingsbay 93.02 349⇑ *e*P **P** **16 22 22.7 -2.0**
KBS pmax pmax
comp=Z,48nm,1.1s,mb5.8
KBS MLR MLR
comp=Z,4µm,19.0s,MS5.9
KBS Kingsbay 93.02 349⇑ *e*P **P** **16 22 22.6 -2.1**
comp=Z,48nm,1.1s,mb5.8
KBS LR LR
comp=Z,4µm,19.0s,MS5.9
VNA2 Neumayer--Watz 93.04 198 *e*P **P** **16 22 26.0 +1.0**
VNA2 *e* 16 22 30.8
VNA2 *e* pP 16 22 41.8 +1.9
VNA2 *e* 16 26 08.6
VNA2 *e* 16 26 22.7
VNA2 *e* 16 39 32.2
CLZ Clausthal 93.12 322 *e*P **P** **16 22 26.1 +0.4**
CLZ *e**PP pP 16 22 40.7 +0.1
CLZ *e*S S 16 33 25.7 -2.7
CLZ pmax pmax
comp=Z,112nm,1.3s,mb6.1
CLZ Clausthal 93.12 322 *e*P **P** **16 22 26.1 +0.4**
comp=Z,112nm,1.3s,mb6.1
CLZ *e*pP pP 16 22 40.7 +0.1
CLZ *e*S S 16 33 25.7 -2.7
BSEG Bad Segeberg 93.19 324 *e*P **P** **16 22 26.3 +0.3**
BSEG *e**PP pP 16 22 40.9 0.0
BSEG *e*S S 16 33 27.9 -1.1
BSEG pmax pmax
comp=Z,107nm,1.2s,mb6.2
BSEG Bad Segeberg 93.19 324 *e*P **P** **16 22 26.3 +0.3**
comp=Z,107nm,1.2s,mb6.2
BSEG *e*pP pP 16 22 40.9 0.0
BSEG *e*S S 16 33 27.9 -1.1
NRDL Niedersach Rie 93.29 322 *e*P **P** **16 22 27.1 +0.6**
comp=Z,123nm,1.3s,mb6.2
NRDL *e*pP pP 16 22 41.6 +0.2
NRDL *e*S S 16 33 27.8 -2.1
UBBA Unterbreizbach 93.33 321 *e*P **P** **16 22 26.9 +0.2**
comp=Z,123nm,1.7s,mb6.1
UBBA *e*pP pP 16 22 41.5 -0.1
UBBA *e*S S 16 33 28.4 -1.9
DAVA Damuels 93.34 317 *i* P **P** **16 22 27.2 +0.4**
comp=Z,685nm,2.8s,mb6.6,SNR=28
DAVA Damuels 93.34 317 *i* PcP **P** **16 22 27.2 +0.4**
comp=Z,685nm,2.8s,mb6.6,SNR=28
VNA1 Neumayer--Stat 93.40 198 *e*P **P** **16 22 27.8 +1.2**
VNA1 *e* 16 22 33.8
VNA1 *e* pP 16 22 44.8 +3.3
VNA1 *e* 16 26 11.5
VNA1 *e* 16 26 25.5
VNA1 *e* 16 39 31.3
KEST Kesra 93.50 305 P **P** **16 22 29.3 +1.5**
comp=Z,22nm,1.0s,mb5.5,baz=232,slow=0.1,SNR=32
KEST LR LR 17 02 46.5
comp=Z,808nm,22.0s,MS5.1,baz=273,slow=34
VSL Villasalto 93.56 309⇑ *e*P **P** **16 22 27.4 -0.6**
comp=Z,46nm,1.1s,mb5.8
VSL LR LR
comp=Z,731nm,22.0s,MS5.1
VNA3 Neumayer Olymp 93.63 198 *e*P **P** **16 22 28.7 +1.0**
VNA3 *e* 16 22 34.3
VNA3 *e* pP 16 22 45.5 +2.9
VNA3 *e* 16 26 12.3
VNA3 *e* 16 26 27.5
VNA3 *e* 16 39 30.3
KONO Kongsberg 93.64 329 *e*P **P** **16 22 28.5 +0.6**
KONO *e*PP PP 16 26 11.5 -1.7
KONO *e* 16 33 32.4
KONO AMS AMS 17 09 42.5
comp=Z,2µm,19.0s,MS5.6
KONO Kongsberg 93.64 329⇑ *e*P **P** **16 22 27.7 -0.2**
TUE Stuetta 93.70 316⇑ *i*P **P** **16 22 28.2 -0.3**
comp=Z,47nm,1.2s,mb5.8
TUE LR LR
comp=Z,2µm,21.0s,MS5.5
CORF Corte 93.78 312 *e*P **P** **16 22 29.0 0.0**
STU Stuttgart 93.83 319⇑ *i*P **P** **16 22 28.6 -0.4**
STU *e* pP 16 22 42.9 -1.0
STU pmax pmax
comp=Z,51nm,1.0s,mb5.9
STU Stuttgart 93.83 319 *e*P **P** **16 22 29.2 +0.2**
comp=Z,405nm,2.2s,mb6.5
STU *e*pP pP 16 22 43.8 -0.1
STU *e*S S 16 33 33.1 -1.7
STU Stuttgart 93.83 319⇑ *i*P **P** **16 22 28.6 -0.5**
comp=Z,51nm,1.0s,mb5.9
STU *e* pP 16 22 42.9 -1.0
PGF Pioggiola 93.89 312⇑ *i*P **P** **16 22 29.5 0.0**
comp=Z,217nm,1.5s,mb6.0
PGF Pioggiola 93.89 312⇑ *i*P **P** **16 22 29.5 0.0**
PGF pmax pmax
comp=Z,108nm,1.5s,mb6.1
PGF Pioggiola 93.89 312⇑ *i*P **P** **16 22 29.5 0.0**
comp=Z,108nm,1.5s,mb6.1
TOD Tromm 94.09 319 *e*P **P** **16 22 29.8 -0.4**
SPAK Spaichingen-Ko 94.09 318 *e*P **P** **16 22 30.4 +0.1**
BFO Black Forest 94.40 318 P **P** **16 22 31.9 +0.2**
comp=Z,166nm,1.2s,mb6.3,SNR=9.7
BFO Black Forest 94.40 318 *e*P **P** **16 22 31.5 -0.2**
comp=Z,72nm,1.4s,mb5.9
BFO *e*pP pP 16 22 46.1 -0.5
BFO *e*S S 16 33 37.5 -2.3
BFO Black Forest 94.40 318 *e*P **P** **16 22 31.5 -0.2**
comp=Z,72nm,1.4s,mb5.9
BFO *e*pP pP 16 22 46.1 -0.5
BFO *e*S S 16 33 37.5 -2.3
BFO LR LR
comp=Z,2µm,21.0s,MS5.5
KTD Kalmit 94.56 319 *e*P **P** **16 22 32.4 0.0**
MOL Molde 94.59 332 AMS AMS 17 12 25.9
comp=Z,3µm,15.2s,MS5.8
FELD Feldberg im Sc 94.62 318 *e*P **P** **16 22 32.4 -0.3**
IBBN Ibbenburen 94.73 322 *e*P **P** **16 22 33.3 +0.2**
comp=Z,131nm,1.4s,mb6.2
IBBN *e*pP pP 16 22 47.9 -0.1
IBBN *e*S S 16 33 41.0 -1.5
LANF Langenberg 94.74 319 *e*P **P** **16 22 32.9 -0.3**
LIBD Limburg 94.89 318 *e*P **P** **16 22 33.7 -0.2**
ABH Alteburg 94.90 320 *e*P **P** **16 22 34.2 +0.3**
SAOF Saorge 94.95 314 *e*P **P** **16 22 33.4 -0.9**
BBS Basel-Blauen 94.96 317 *e*P **P** **16 22 33.4 -0.8**
SBF Sospel 95.04 314⇑ *i*P **P** **16 22 34.6 -0.1**
comp=Z,197nm,1.3s,mb6.1
SBF Sospel 95.04 314⇑ *i*P **P** **16 22 34.6 -0.1**
SBF pmax pmax
comp=Z,99nm,1.3s,mb6.1
SBF Sospel 95.04 314⇑ *i*P **P** **16 22 34.6 -0.1**
comp=Z,99nm,1.3s,mb6.1
AUTN L'Aution 95.05 314 *e*P **P** **16 22 33.4 -1.3**
BUG Bochum--Univer 95.05 321 *e*P **P** **16 22 34.6 0.0**
comp=Z,80nm,1.4s,mb6.0
BUG *e*pP pP 16 22 49.2 -0.3
BUG *e*S S 16 33 44.2 -1.1
REVF Revere 95.09 313 *e*P **P** **16 22 34.5 -0.5**
CDF Champ du Feu 95.10 318⇑ *i*P **P** **16 22 34.5 -0.4**
comp=Z,108nm,1.4s,mb5.8
CDF Champ du Feu 95.10 318⇑ *i*P **P** **16 22 34.5 -0.4**
CDF pmax pmax
comp=Z,54nm,1.4s,mb5.8
CDF Champ du Feu 95.10 318⇑ *i*P **P** **16 22 34.5 -0.4**
comp=Z,54nm,1.4s,mb5.8
LUCF Luceram 95.11 314 *e*P **P** **16 22 35.1 +0.1**
ODD1 Odda 95.14 330 *e*P **P** **16 22 37.7 +2.9**
TOUF Mont Tournerai 95.18 314 *e*P **P** **16 22 35.3 0.0**
ECH Echery 95.18 318 *e*P **P** **16 22 34.8 -0.5**
ECH Echery 95.18 318⇑ *i*P **P** **16 22 34.6 -0.7**
comp=Z,29nm,1.1s,mb5.6
MOF Molkenrain 95.21 318 *e*P **P** **16 22 34.5 -0.9**
RUP Ruppelstein 95.22 319 *e*P **P** **16 22 35.2 -0.2**
MVIF Mont Vial 95.25 314 *e*P **P** **16 22 35.3 -0.4**
BLS5 Blasjo 95.25 329 *e*P **P** **16 22 35.4 +0.1**
BLS5 Blasjo 95.25 329 *e*P **P** **16 22 28.7 -6.6**

HYA Hoyanger 95.30 331 *e*P **P** **16 22 37.4 +1.9**
HYA *es*P sP 16 22 54.9 -1.1
WTSB Winterswijk 95.33 322⇑ *e*P **P** **16 22 35.8 0.0**
comp=Z,50nm,1.6s,mb5.7
HINF Hinteralfeld 95.39 318⇑ *i*P **P** **16 22 35.6 -0.6**
comp=Z,98nm,1.6s,mb5.7
HINF Hinteralfeld 95.39 318⇑ *i*P **P** **16 22 35.6 -0.6**
HINF pmax pmax
comp=Z,49nm,1.6s,mb5.7
HINF Hinteralfeld 95.39 318⇑ *i*P **P** **16 22 35.6 -0.6**
comp=Z,49nm,1.6s,mb5.7
LOMF Lomont 95.42 317 *e*P **P** **16 22 35.4 -1.0**
CALN Calern 95.44 313 *e*P **P** **16 22 36.4 -0.1**
MBDF Montbardon 95.51 314⇑ *i*P **P** **16 22 36.0 -0.8**
comp=Z,27nm,1.2s,mb5.2
MBDF Montbardon 95.51 314⇑ *i*P **P** **16 22 36.0 -0.8**
MBDF pmax pmax
comp=Z,14nm,1.3s,mb5.2
MBDF Montbardon 95.51 314⇑ *i*P **P** **16 22 36.0 -0.8**
comp=Z,14nm,1.3s,mb5.2
LPG La Plagne 95.51 315⇑ *i*P **P** **16 22 36.9 +0.1**
comp=Z,73nm,1.2s,mb5.7
LPG La Plagne 95.51 315⇑ *i*P **P** **16 22 36.9 +0.1**
LPG pmax pmax
comp=Z,36nm,1.2s,mb5.7
LPG La Plagne 95.51 315⇑ *i*P **P** **16 22 36.9 +0.1**
comp=Z,36nm,1.2s,mb5.7
LPL La Plagne 95.52 315⇑ *i*P **P** **16 22 36.9 0.0**
comp=Z,68nm,1.1s,mb5.7
LPL La Plagne 95.52 315⇑ *i*P **P** **16 22 36.9 0.0**
LPL pmax pmax
comp=Z,34nm,1.1s,mb5.7
LPL La Plagne 95.52 315⇑ *i*P **P** **16 22 36.9 0.0**
comp=Z,34nm,1.1s,mb5.7
BNI Bardonecchia 95.57 315⇑ *e*P **P** **16 22 35.2 -1.9**
BNI *e* 16 26 30.2
BNI pmax pmax
comp=Z,19nm,0.9s,mb5.5
BNI MLR MLR
comp=Z,2µm,21.0s,MS5.5
BNI Bardonecchia 95.57 315⇑ *e*P **P** **16 22 35.2 -1.9**
comp=Z,19nm,0.9s,mb5.5
BNI *e*PP PP 16 26 30.2 +1.5
BNI LR LR
comp=Z,2µm,21.0s,MS5.5
FRF La Foret Royal 95.62 313⇑ *i*P **P** **16 22 37.3 -0.1**
comp=Z,148nm,1.3s,mb6.0
FRF La Foret Royal 95.62 313⇑ *i*P **P** **16 22 37.3 -0.1**
FRF pmax pmax
comp=Z,74nm,1.3s,mb6.0
FRF La Foret Royal 95.62 313⇑ *i*P **P** **16 22 37.3 -0.1**
comp=Z,74nm,1.3s,mb6.0
LMR La Mourre 95.72 313⇑ *i*P **P** **16 22 37.7 -0.1**
comp=Z,113nm,1.5s,mb5.8
LMR La Mourre 95.72 313⇑ *i*P **P** **16 22 37.7 -0.1**
LMR pmax pmax
comp=Z,56nm,1.5s,mb5.8
LMR La Mourre 95.72 313⇑ *i*P **P** **16 22 37.7 -0.1**
comp=Z,56nm,1.5s,mb5.8
HAU Haudompre 95.73 318⇑ *i*P **P** **16 22 37.3 -0.5**
comp=Z,201nm,1.4s,mb6.1
HAU *e*MLR MLR
comp=Z,2µm,20.8s,MS5.3
HAU Haudompre 95.73 318⇑ *i*P **P** **16 22 37.3 -0.5**
HAU pmax pmax
comp=Z,101nm,1.4s,mb6.1
HAU MLR MLR
comp=Z,2µm,20.8s,MS5.6
HAU Haudompre 95.73 318⇑ *i*P **P** **16 22 37.3 -0.5**
comp=Z,101nm,1.4s,mb6.1
HAU LR LR
comp=Z,2µm,20.8s,MS5.6
BER Bergen 95.76 330 *e*P **P** **16 22 35.2 -2.4**
BER *e*PP PP 16 26 32.4 +2.7
BER *e* 16 33 49.8
BER AMS AMS 17 12 31.0
comp=Z,2µm,18.8s,MS5.6
BER Bergen 95.76 330 *e*P **P** **16 22 35.2 -2.4**
BER *i* 16 33 52.2
BER LR LR
comp=Z,2µm,18.8s,MS5.6
WLF Walferdange 95.81 319 P **P** **16 22 38.7 +0.6**
comp=Z,41nm,1.7s,mb5.6
WLF AP pP 16 22 53.5 +0.5
WLF XP sP 16 22 58.4 -0.2
WLF Walferdange 95.81 319⇑ *i*P **P** **16 22 38.0 -0.1**
WLF *e**PP pP 16 22 52.5 -0.5
WLF *e* 16 26 27.8
WLF pmax pmax
comp=Z,37nm,1.1s,mb5.7
WLF MLR MLR
comp=Z,2µm,19.0s,MS5.5
WLF Walferdange 95.81 319 *e*P **P** **16 22 38.5 +0.4**
comp=Z,81nm,1.4s,mb6.0
WLF *e*pP pP 16 22 53.1 +0.1
WLF *e*S S 16 33 50.2 -1.8
WLF Walferdange 95.81 319⇑ *i*P **P** **16 22 38.0 0.0**
comp=Z,43nm,1.1s,mb5.8
WLF *e*pP pP 16 22 52.5 -0.4
WLF *e*PP PP 16 26 27.8 -2.6
WLF LR LR
comp=Z,2µm,19.0s,MS5.5
MEM Membach 95.87 320 P **P** **16 22 38.0 -0.3**
comp=Z,17nm,1.5s,mb5.3
MEM AP pP 16 22 53.1 -0.1
MEM XP sP 16 22 57.2 -1.6
HGN Heimansgroeve 95.91 321⇑ *e*P **P** **16 22 38.1 -0.4**
comp=Z,49nm,2.1s,mb5.6
HGN Heimansgroeve 95.91 321 *e*PP PP 16 25 55.3 -36
HGN Heimansgroeve 95.91 321 *e*Sdif S 16 33 49.7 -3.2
HGN Heimansgroeve 95.91 321 *e*SS SS 16 39 54.9 -29
CABF La Chapelle 95.95 316⇑ *i*P **P** **16 22 38.9 +0.1**
comp=Z,146nm,1.3s,mb5.9
CABF La Chapelle 95.95 316⇑ *i*P **P** **16 22 38.9 +0.1**
CABF pmax pmax
comp=Z,73nm,1.3s,mb6.0
CABF La Chapelle 95.95 316⇑ *i*P **P** **16 22 38.9 +0.1**
comp=Z,73nm,1.3s,mb6.0
THEF They Montfort 95.97 318 *e*P **P** **16 22 38.1 -0.7**
ORIF Oris-en-Rattie 96.14 315⇑ *i*P **P** **16 22 39.7 0.0**
comp=Z,117nm,1.5s,mb5.8
ORIF *e*MLR MLR
comp=Z,3µm,22.0s,MS5.4
ORIF Oris-en-Rattie 96.14 315⇑ *i*P **P** **16 22 39.7 0.0**
ORIF pmax pmax
comp=Z,58nm,1.5s,mb5.8
ORIF Oris-en-Rattie 96.14 315⇑ *i*P **P** **16 22 39.7 0.0**
comp=Z,58nm,1.5s,mb5.8
BCLA Clavier 96.33 320 P **P** **16 22 40.5 0.0**
comp=Z,19nm,2.0s,mb5.2
BCLA AP pP 16 22 55.0 -0.3
BCLA XP sP 16 22 59.9 -1.1
SMRF Simiane la Rot 96.39 314⇑ *i*P **P** **16 22 41.3 +0.5**
comp=Z,67nm,1.3s,mb5.6
SMRF Simiane la Rot 96.39 314⇑ *i*P **P** **16 22 41.3 +0.5**
comp=Z,67nm,1.3s,mb5.9
MEZF Maizieres J'vi 96.58 318⇑ *i*P **P** **16 22 41.4 -0.2**
comp=Z,135nm,1.3s,mb5.9
MEZF Maizieres J'vi 96.58 318⇑ *i*P **P** **16 22 41.4 -0.2**
comp=Z,135nm,1.3s,mb6.2
TAM Tamanrasset 96.62 292⇑ *i*P **P** **16 22 43.0 +0.6**
comp=Z,20nm,1.3s,mb5.4
TAM *e*PP PP 16 26 36.4 -1.0
GIVF Givet 96.65 320⇑ *i*P **P** **16 22 41.6 -0.3**
comp=Z,63nm,1.2s,mb5.6
GIVF Givet 96.65 320⇑ *i*P **P** **16 22 41.6 -0.3**
GIVF pmax pmax
comp=Z,31nm,1.2s,mb5.6
GIVF Givet 96.65 320⇑ *i*P **P** **16 22 41.6 -0.3**
comp=Z,31nm,1.2s,mb5.6
DOU Dourbes 96.80 320 P **P** **16 22 42.6 +0.1**
comp=Z,24nm,2.4s,mb5.2
DOU AP pP 16 22 57.0 -0.4
DOU XP sP 16 23 02.0 -1.1
UCC Uccle 96.91 321 P **P** **16 22 42.5 -0.6**
VIVF Saint-Julien-l 97.00 315⇑ *i*P **P** **16 22 43.4 -0.2**
comp=Z,95nm,1.5s,mb5.7
VIVF Saint-Julien-l 97.00 315⇑ *i*P **P** **16 22 43.4 -0.2**
VIVF pmax pmax
comp=Z,47nm,1.5s,mb5.7
VIVF Saint-Julien-l 97.00 315⇑ *i*P **P** **16 22 43.4 -0.2**
comp=Z,47nm,1.5s,mb5.7
BAIF Baives 97.05 320⇑ *i*P **P** **16 22 43.6 -0.1**
comp=Z,148nm,1.3s,mb5.9
BAIF Baives 97.05 320⇑ *i*P **P** **16 22 43.6 -0.1**
BAIF pmax pmax
comp=Z,74nm,1.3s,mb6.0
BAIF Baives 97.05 320⇑ *i*P **P** **16 22 43.6 -0.1**
comp=Z,74nm,1.3s,mb6.0
SSB Saint Sauveur 97.07 315 *e*P **P** **16 22 43.4 -0.5**
SSB Saint Sauveur 97.07 315⇑ *i*P **P** **16 22 43.6 -0.4**
comp=Z,11nm,1.1s,mb5.2
SSB *e* pP 16 22 57.7 -1.2
SSB *e*PP PP 16 26 37.2 -3.1
LOR Lormes 97.44 317⇑ *i*P **P** **16 22 45.2 -0.3**
comp=Z,143nm,1.4s,mb5.9
LOR *e*MLR MLR
comp=Z,1µm,21.5s,MS5.0
LOR Lormes 97.44 317⇑ *i*P **P** **16 22 45.2 -0.3**
LOR pmax pmax
comp=Z,72nm,1.4s,mb5.9
LOR MLR MLR
comp=Z,1µm,21.5s,MS5.3
LOR Lormes 97.44 317⇑ *i*P **P** **16 22 45.2 -0.3**
comp=Z,72nm,1.4s,mb5.9
LOR LR LR
comp=Z,1µm,21.5s,MS5.3
SMF Signal de Mont 97.49 316⇑ *i*P **P** **16 22 45.4 -0.4**
comp=Z,102nm,1.2s,mb5.8
SMF Signal de Mont 97.49 316⇑ *i*P **P** **16 22 45.4 -0.4**
SMF pmax pmax
comp=Z,51nm,1.2s,mb5.8
SMF Signal de Mont 97.49 316⇑ *i*P **P** **16 22 45.4 -0.4**
comp=Z,51nm,1.2s,mb5.8
LASF Ste Croix 97.62 314⇑ *i*P **P** **16 22 46.5 +0.1**
comp=Z,60nm,1.4s,mb5.6
PLDF La Plantade 97.68 316 *e*P **P** **16 22 46.6 -0.1**
SSF Saint Saulge 97.70 317⇑ *i*P **P** **16 22 46.4 -0.3**
comp=Z,101nm,1.6s,mb5.8
SSF Saint Saulge 97.70 317⇑ *i*P **P** **16 22 46.4 -0.3**
SSF pmax pmax
comp=Z,50nm,1.6s,mb5.8
SSF Saint Saulge 97.70 317⇑ *i*P **P** **16 22 46.4 -0.3**
comp=Z,50nm,1.6s,mb5.8
AVF Avril sur Loir 97.82 317⇑ *i*P **P** **16 22 46.8 -0.4**
comp=Z,88nm,1.4s,mb5.8
AVF Avril sur Loir 97.82 317⇑ *i*P **P** **16 22 46.8 -0.4**
AVF pmax pmax
comp=Z,44nm,1.4s,mb5.8
AVF Avril sur Loir 97.82 317⇑ *i*P **P** **16 22 46.8 -0.4**
comp=Z,44nm,1.4s,mb5.8
LBL Lubilhac 97.99 315 *e*P **P** **16 22 48.4 +0.3**
AGO Saint Agoulin 98.02 316 *e*P **P** **16 22 47.9 -0.3**
PYM Petit Puy Mans 98.12 316 *e*P **P** **16 22 43.9 -4.7**
BGF Bois d'Agland 98.18 316⇑ *i*P **P** **16 22 48.9 0.0**
comp=Z,111nm,1.4s,mb5.9
BGF Bois d'Agland 98.18 316⇑ *i*P **P** **16 22 48.9 0.0**
BGF pmax pmax
comp=Z,56nm,1.4s,mb5.9
BGF Bois d'Agland 98.18 316⇑ *i*P **P** **16 22 48.9 0.0**
comp=Z,56nm,1.4s,mb5.9
MENF Mencas 98.32 320 *e*P **P** **16 22 47.5 -1.9**
VERF Verneugheol 98.49 316 *e*P **P** **16 22 51.1 +0.8**
TCF Toulx Ste Croi 98.64 316⇑ *i*P **P** **16 22 50.8 -0.1**
comp=Z,79nm,1.7s,mb5.7
TCF Toulx Ste Croi 98.64 316⇑ *i*P **P** **16 22 50.8 -0.1**
TCF pmax pmax
comp=Z,40nm,1.7s,mb5.7
TCF Toulx Ste Croi 98.64 316⇑ *i*P **P** **16 22 50.8 -0.1**
comp=Z,40nm,1.7s,mb5.7
CAF Calviac 98.85 315⇑ *i*P **P** **16 22 52.1 +0.2**
MTLF Montolieu 98.85 313⇑ *i*P **P** **16 22 51.9 -0.1**
comp=Z,70nm,1.5s,mb5.7
MTLF Montolieu 98.85 313⇑ *i*P **P** **16 22 51.9 -0.1**
MTLF pmax pmax
comp=Z,35nm,1.5s,mb5.7
MTLF Montolieu 98.85 313⇑ *i*P **P** **16 22 51.9 -0.1**
comp=Z,35nm,1.5s,mb5.7
IMA2 Indian Mountai 98.97 24 *e*P **P** **16 22 51.5 -0.4**
RJF Les Rejaudoux 99.20 315⇑ *i*P **P** **16 22 53.8 +0.3**
comp=Z,114nm,1.7s,mb5.8
RJF *e*MLR MLR
comp=Z,2µm,22.2s,MS5.4
RJF Les Rejaudoux 99.20 315⇑ *i*P **P** **16 22 53.8 +0.3**
RJF pmax pmax
comp=Z,57nm,1.7s,mb5.8
RJF MLR MLR
comp=Z,2µm,22.3s,MS5.7
RJF Les Rejaudoux 99.20 315⇑ *i*P **P** **16 22 53.8 +0.3**
comp=Z,57nm,1.7s,mb5.8
RJF LR LR
comp=Z,2µm,22.3s,MS5.7
JMIC Jan Mayen 99.43 342 AMS AMS 17 14 39.5
comp=Z,3µm,18.8s,MS5.8
DAG Danmarks Havn 99.74 348 *i* P PP 16 27 02.0 +2.3
comp=Z,31nm,1.3s
LFF La Frestale 99.78 315⇑ *i*P Pdif 16 22 56.5 +0.7
LDF La Druitiere 100.00 319⇑ *i*P Pdif 16 22 56.6 -0.2
comp=Z,56nm,1.3s
LDF La Druitiere 100.00 319⇑ *i*P Pdif 16 22 56.6 -0.2
LDF pmax pmax
comp=Z,28nm,1.3s,mb5.5
LDF La Druitiere 100.00 319⇑ *i*P Pdif 16 22 56.6 -0.2
comp=Z,28nm,1.3s
COLD Coldfoot 100.03 22 *e*Pdif Pdif 16 22 56.2 -0.8
comp=Z,39nm,1.3s
COLD *e*PP PP 16 27 00.1 -2.1
COLD *e*PKPdf PKiKP 16 27 20.0 -4.3
TORD Torodi Ar. Bea 100.13 283 P Pdif 16 22 58.1 +0.7
comp=Z,4.7nm,1.1s,baz=95,slow=4.2,SNR=17
TORD pP 16 23 15.3
comp=Z,9.4nm,1.1s,baz=85,slow=4.3,SNR=9.8
TORD PP PP 16 27 07.1 +2.5
comp=Z,3.6nm,1.2s,baz=49,slow=5.2,SNR=3.5
TORD PKKPbc PKKPbc 16 39 12.8 -3.3
comp=Z,0.5nm,0.3s,baz=301,slow=4.1,SNR=8.5
TORD Torodi Ar. Bea 100.13 283 P Pdif 16 22 58.1 +0.7
TORD pP 16 23 15.3
TORD PP PP 16 27 07.1 +2.5
TORD PKKPbc PKKPbc 16 39 12.8 -3.3
FLN La Foliniere 100.22 319⇑ *i*P Pdif 16 22 57.5 -0.3
comp=Z,82nm,1.2s
FLN *e*MLR MLR
comp=Z,2µm,21.8s,MS5.2
FLN La Foliniere 100.22 319⇑ *i*P Pdif 16 22 57.5 -0.3
FLN pmax pmax
comp=Z,41nm,1.2s
FLN MLR MLR
comp=Z,2µm,21.8s,MS5.5
FLN La Foliniere 100.22 319⇑ *i*P Pdif 16 22 57.5 -0.3
comp=Z,41nm,1.2s
FLN LR LR
comp=Z,2µm,21.8s,MS5.5
MFF Saint Martin d 100.23 317⇑ *i*P Pdif 16 22 57.8 0.0
comp=Z,53nm,1.3s
MFF Saint Martin d 100.23 317⇑ *i*P Pdif 16 22 57.8 0.0
MFF pmax pmax
comp=Z,27nm,1.3s
MFF Saint Martin d 100.23 317⇑ *i*P Pdif 16 22 57.8 0.0
comp=Z,27nm,1.3s
GRR Gorron 100.51 319⇑ *i*P Pdif 16 22 59.0 -0.1
comp=Z,58nm,1.3s
GRR Gorron 100.51 319⇑ *i*P Pdif 16 22 59.0 -0.1
GRR pmax pmax
comp=Z,29nm,1.3s
GRR Gorron 100.51 319⇑ *i*P Pdif 16 22 59.0 -0.1
comp=Z,29nm,1.3s
BPAW Bear Paw Mtn. 100.54 25 *e*Pdif Pdif 16 22 57.6 -1.6
comp=Z,164nm,1.8s
ESK Eskdalemuir 100.91 326 PFAKE 16 23 10.0 +9.2
ESK LR LR
comp=Z,2µm,21.0s,MS5.5
KIP Kipapa 101.05 69 PFAKE 16 23 10.0 +8.5
KIP LR LR
comp=Z,2µm,22.0s,MS5.6
KDAK Kodiak Island 101.24 32 PFAKE 16 23 10.0 +7.7
KDAK LR LR
comp=Z,632nm,20.0s,MS5.1
MCK McKinley 101.51 25 *e*P Pdif 16 23 01.9 -1.6
MCK pmax pmax
comp=Z,20nm,1.0s
MCK McKinley 101.51 25 *e*Pdif Pdif 16 23 01.9 -1.7
comp=Z,20nm,1.0s
COLA College 101.63 24 *e*P Pdif 16 23 01.5 -2.5
COLA MLR MLR
comp=Z,3µm,19.0s,MS5.8
SGMF Saint Gilles 101.65 319⇑ *i*P Pdif 16 23 03.9 -0.2
comp=Z,22nm,1.1s
SGMF Saint Gilles 101.65 319⇑ *i*P Pdif 16 23 03.9 -0.2
SGMF pmax pmax
comp=Z,11nm,1.1s
SGMF Saint Gilles 101.65 319⇑ *i*P Pdif 16 23 03.9 -0.2

comp=Z,11nm,1.1s
PMR Palmer 102.02 27 PFAKE 16 23 10.0 +4.2
PMR LR LR
comp=Z,3μm,19.0s,MS5.8
ROSF Rostrenen 102.11 319 *e*P Pdif 16 23 04.7 -1.5
comp=Z,34nm,1.3s
ROSF Rostrenen 102.11 319 *e*P Pdif 16 23 04.7 -1.5
ROSF pmax pmax
comp=Z,17nm,1.3s
ROSF Rostrenen 102.11 319 *e*P Pdif 16 23 04.7 -1.5
comp=Z,17nm,1.3s
POHA Pohakuloa 103.41 71 PFAKE 16 23 20.0 +8.0
POHA LR LR
comp=Z,2μm,21.0s,MS5.6
ESDC Sonseca Array 103.83 310 PP PP 16 27 32.5 +0.8
comp=Z,6.1nm,0.9s,baz=60,slow=6.2,SNR=6.7
ESDC PKKPbc PKKPbc 16 39 04.1 -2.0
comp=Z,0.2nm,0.2s,baz=294,slow=3.4,SNR=7.6
PAB San Pablo 104.14 310 PFAKE 16 23 30.0 +15
PAB LR LR
comp=Z,1μm,21.0s,MS5.5
SHEL Horse Pasture 105.51 253 PFAKE 16 27 50.0 +14
SHEL LR LR
comp=Z,5μm,21.0s,MS6.0
MVO Moncorvo 105.92 312 *e*PP PP 16 27 48.0 +0.9
SFS San Fernando 106.02 307 PFAKE 16 27 50.0 +14
SFS LR LR
comp=Z,2μm,20.0s,MS5.7
PBAR Barrancos 106.42 309 *e*PP PP 16 27 49.3 -1.5
MTE Manteigas 106.44 311 *e*PP PP 16 27 51.1 +0.2
MTE Manteigas 106.44 311 PFAKE 16 27 50.0 +13
MTE LR LR
comp=Z,957nm,19.0s,MS5.4
DBIC Dimbokro 106.47 276 PKKPbc PKKPbc 16 38 55.5 -1.8
comp=Z,3.7nm,0.9s,baz=226,slow=9.4,SNR=3.3
DBIC PKKPab PKKPab 16 39 12.8 -0.6
comp=Z,9.5nm,1.0s,baz=241,slow=6.2,SNR=6.1
PCBR Castelo Branco 106.49 311 *e*PP PP 16 27 51.7 +0.4
PMRV Marv??o 106.49 310 *e*PP PP 16 27 51.8 +0.5
TRIS Tristan da Cun 106.70 230 PFAKE 16 27 50.0 +13
TRIS LR LR
comp=Z,5μm,22.0s,MS6.0
PESTR Estremoz 106.73 310 *e*PP PP 16 27 53.7 +0.6
RTC Rabat Centre 106.88 304 PFAKE 16 27 50.0 +12
RTC LR LR
comp=Z,1μm,19.0s,MS5.5
PVAQ Vaqueiros 107.07 308 *e*PP PP 16 27 54.7 -1.0
PPT Papeete 107.12 109 *e*PP PP 16 27 46.9 -10
comp=Z,385nm,27.5s
PPT Papeete 107.12 109 *e*PS PS 16 37 16.3 -2.1
comp=Z,1μm,25.8s
PPT Papeete 107.12 109 *e*LR LR 16 59 15.8
comp=Z,2μm,24.0s
EVO Evora 107.12 309 *e*PP PP 16 27 57.0 +1.1
PBDV Barranco-do-Ve 107.27 308 *e*PP PP 16 27 53.7 -3.4
HYT Haines Junctio 107.54 26 PKPdf PKiKP 16 27 37.4 -0.7
MORF Marmelete 107.82 308 *e*PP PP 16 28 01.8 +0.7
PFVI Vila Bisbo 107.99 308 *e*PP PP 16 27 59.1 -3.3
PMAFR Mafra 108.02 310 *e*PP PP 16 28 04.1 +1.6
SKAG Skagway 109.14 27 *e*PKPdf PKiKP 16 27 35.7 -5.5
SIT Sitka 110.25 29 PFAKE 16 27 50.0 +6.7
SIT LR LR
comp=Z,3μm,20.0s,MS5.9
PMSA Palmer Station 111.34 187 PFAKE 16 27 50.0 +4.8
PMSA LR LR
comp=Z,7μm,21.0s,MS6.2
WRAK Wrangell Islan 112.00 29 PFAKE 16 28 00.0 +13
WRAK LR LR
comp=Z,3μm,21.0s,MS5.8
DLBC Dease Lake 112.03 26 *e*PKPdf PKiKP 16 27 46.1 -0.5
DLBC *e* 16 28 00.5
DLBC *e*PP PP 16 28 28.9 -1.6
SFJD Kangerlussuaq 113.43 348 *i* P PP 16 28 36.5 -3.7
comp=Z,101nm,1.9s
SFJD Kangerlussuaq 113.43 348 PFAKE 16 28 00.0 +11
SFJD LR LR
comp=Z,5μm,22.0s,MS6.0
ASCN Ascension 114.94 260 PFAKE 16 28 00.0 +6.4
ASCN LR LR
comp=Z,2μm,19.0s,MS5.8
YKA Yellowknife Ar 115.12 18 PKP PKiKP 16 27 50.8 -1.6
comp=Z,12nm,1.0s,baz=317,slow=2.4,SNR=32
YKA PP PP 16 28 47.1 -5.1
comp=Z,7.1nm,1.0s,baz=324,slow=7.7,SNR=7.8
YKA PKKPbc PKKPbc 16 38 33.0 +2.5
comp=Z,1.4nm,0.8s,baz=132,slow=4.0,SNR=8.6
YKA Yellowknife Ar 115.12 18 PKIKP PKiKP 16 27 50.8 -1.7
YKA 16 38 33.0
YKA pmax pmax
comp=Z,12nm,1.0s
YKA pmax pmax
comp=Z,7.0nm,1.0s
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 115.12 18 PKP PKiKP 16 27 50.9 -1.6
YKA PP PP 16 28 47.1 -5.1
YKA PKKPbc PKKPbc 16 38 33.0 +2.5
RKT Rikitea 119.20 119 *e*PS PS 16 39 16.1 +4.8
comp=Z,1μm,28.2s
RKT *e*SS SS 16 45 45.3 +4.9
comp=Z,1μm,31.2s
RKT Rikitea 119.20 119 *e*LR LR 17 04 36.4
comp=Z,2μm,27.5s
C03A Quillayute Air 120.53 34 ⇑P PKPdf 16 28 03.6 +0.3
baz=120,SNR=5.9
B04A Port Angeles 121.06 34 ⇓P PKPdf 16 28 04.0 -0.3
baz=121
OSD Olympics--Snow 121.09 34 P PKPdf 16 28 04.8 +0.4
A04A Legoe Bay, Lum 121.11 33 ⇑P PKPdf 16 28 04.1 -0.3
baz=121
NLWA Neilton Lookou 121.23 34 ⇑P PKPdf 16 28 04.2 -0.5
baz=121,SNR=7.9
NLWA Neilton Lookou 121.23 34 *e*PKPdf PKPdf 16 28 04.4 -0.3
NLWA *e* 16 28 16.1
NLWA *e*PP PP 16 29 32.8 -2.4
NLWA LR LR
comp=Z,1μm,19.0s,MS5.5
A05A Maple Falls 121.28 32 ⇓P PKPdf 16 28 03.5 -1.2
baz=121,SNR=8.7
D03A Wishkah Elem. 121.44 35 ⇓P PKPdf 16 28 05.2 +0.1
baz=121
A06A Chilliwack 121.54 32 ⇓P PKPdf 16 28 04.0 -1.2
baz=121,SNR=7.4
USHA Ushuaia 121.55 187 PKP PKPdf 16 28 04.5 -0.6
comp=Z,25nm,0.8s,baz=147,slow=4.2,SNR=5.4
C04A Brinnon 121.55 34 ⇑P PKPdf 16 28 04.9 -0.4
baz=121,SNR=11
B05A Bryant 121.71 33 ⇓P PKPdf 16 28 04.7 -0.9
baz=122,SNR=20
JCW Jim Creek 121.84 33 *e*PKPdf PKPdf 16 28 05.1 -0.8
JCW *e* 16 28 19.3
E03A Lebam 121.88 35 ⇑P PKPdf 16 28 05.9 0.0
baz=122
B06A Marblemount 121.89 32 ⇑P PKPdf 16 28 04.9 -1.0
baz=122
RPW Rockport 121.91 32 *e*PKPdf PKPdf 16 28 05.0 -1.0
D04A Dobbs Creek Ra 121.99 34 ⇓P PKPdf 16 28 06.3 +0.1
baz=122
BMW Boistfort Moun 122.11 35 PKIKP PKPdf 16 28 06.9 +0.5
BMW Boistfort Moun 122.11 35 *e*PKPdf PKPdf 16 28 06.1 -0.3
A07A Ashnola River, 122.14 31 ⇓P PKPdf 16 28 05.8 -0.6
baz=122,SNR=35
F03A Seaside 122.22 36 ⇑P PKPdf 16 28 06.6 0.0
baz=122
C05A Tolt Reservoir 122.27 33 ⇓P PKPdf 16 28 06.0 -0.6
baz=122,SNR=8.8
E04A Onalaska 122.33 35 ⇑P PKPdf 16 28 06.2 -0.7
baz=122
D05A Enumclaw 122.40 34 ⇓P PKPdf 16 28 06.6 -0.4
baz=122,SNR=10.0
EDM Edmonton 122.54 24 PKIKP PKPdf 16 28 06.3 -0.7
EDM Edmonton 122.54 24 *e*PKPdf PKPdf 16 28 05.7 -1.3
C06A Tall Timber Ra 122.56 32 ⇑P PKPdf 16 28 06.2 -1.0
baz=122
EFI East Falkland 122.59 195 PFAKE 16 28 20.0 +13
EFI LR LR
comp=Z,3μm,21.0s,MS5.9
B07A Winthrop 122.64 32 ⇑P PKPdf 16 28 06.7 -0.6
baz=122,SNR=22
H02A Toledo 122.65 37 ⇓P PKPdf 16 28 07.8 +0.3
baz=122
G03A Yamhill 122.73 36 ⇓P PKPdf 16 28 07.6 -0.1
baz=123
TDL Tradedollar La 122.76 35 P PKPdf 16 28 07.8 +0.1
A08A Turner Farm, O 122.77 31 ⇑P PKPdf 16 28 07.0 -0.6
baz=123,SNR=22
F04A Amboy 122.88 35 ⇑P PKPdf 16 28 07.4 -0.6
baz=123,SNR=24
E05A Randle 122.89 34 ⇑P PKPdf 16 28 07.1 -0.8
baz=123,SNR=23
D06A Cle Elum 123.03 33 ⇑P PKPdf 16 28 07.4 -0.8
baz=123,SNR=7.6
ETW Entiat 123.06 32 *e*PKPdf PKPdf 16 28 07.1 -1.1
H03A Soap Creek Ran 123.07 37 ⇓P PKPdf 16 28 08.0 -0.3
baz=123
A09A Danville 123.11 30 ⇑P PKPdf 16 28 07.7 -0.5
baz=123,SNR=12
I02A Mapleton 123.11 38 ⇓P PKPdf 16 28 08.4 0.0
baz=123
COR Corvallis 123.11 37 *e*PKIKP PKPdf 16 28 08.5 +0.1
COR MLR MLR
comp=Z,2μm,22.0s,MS5.7
B08A Colville Reser 123.11 31 ⇓P PKPdf 16 28 07.3 -1.0
baz=123,SNR=18
C07A Waterville 123.15 32 ⇓P PKPdf 16 28 07.2 -1.2
baz=123,SNR=17
G04A Mulino 123.26 36 ⇓P PKPdf 16 28 08.6 -0.1
baz=123
K01A Sixes 123.34 39 ⇓P PKPdf 16 28 08.2 -0.7
baz=123
E06A Yakima 123.34 34 ⇑P PKPdf 16 28 08.3 -0.4
baz=123,SNR=34
EBG Ellensburg 123.35 33 P PKPdf 16 28 08.5 -0.2
KEBM Edson Butte 123.39 39 *e*PKPdf PKPdf 16 28 08.7 -0.3
F05A White Salmon 123.46 35 ⇑P PKPdf 16 28 08.6 -0.4
baz=123,SNR=5.7
I03A Eugene 123.46 37 ⇓P PKPdf 16 28 08.9 -0.2
baz=123
D07A Quincy 123.50 33 ⇓P PKPdf 16 28 08.3 -0.8
baz=123,SNR=9.9
J02A Umpqua 123.61 38 ⇑P PKPdf 16 28 09.1 -0.2
baz=124
A10A Northport 123.61 30 ⇓P PKPdf 16 28 08.8 -0.4
baz=124
C08A Higginbotham F 123.63 32 ⇑P PKPdf 16 28 08.4 -0.9
baz=124,SNR=26
B09A Rice 123.68 31 ⇑P PKPdf 16 28 09.1 -0.3
baz=124,SNR=27
H04A Detroit Lake 123.72 36 ⇓P PKPdf 16 28 09.0 -0.6
baz=124
F06A Goldendale 123.91 34 ⇓P PKPdf 16 28 09.6 -0.3
baz=124,SNR=13
G05A Wamic 123.91 35 ⇓P PKPdf 16 28 09.7 -0.2
baz=124,SNR=5.4
E07A Sunnyside 123.95 33 ⇓P PKPdf 16 28 09.6 -0.3
baz=124,SNR=7.2
K02A Glendale 123.98 39 ⇓P PKPdf 16 28 09.7 -0.4
baz=124
C09A Chrisman Ranch 124.02 31 ⇓P PKPdf 16 28 09.2 -0.8
baz=124,SNR=11
OD2 Odessa Site #2 124.05 32 *e*PKPdf PKPdf 16 28 09.2 -0.9
M01C Crescent City 124.05 40 ⇑P PKPdf 16 28 10.1 -0.2
baz=124
I04A Tendick Farm, 124.08 37 ⇓P PKPdf 16 28 09.4 -0.9
baz=124
D08A Wollman Farm, 124.15 32 ⇑P PKPdf 16 28 09.6 -0.7
baz=124,SNR=30
RSW Rattlesnake Hi 124.20 33 *e*PKPdf PKPdf 16 28 10.4 0.0
RSW *e* 16 28 25.1
A11A Hall Mountain, 124.22 29 ⇓P PKPdf 16 28 10.7 +0.3
baz=124
L02A Cave Junction 124.23 39 ⇑P PKPdf 16 28 11.0 +0.3
baz=124
B10A Chitwood Farm, 124.23 30 ⇓P PKPdf 16 28 10.0 -0.4
baz=124
HAWA Hanford 124.23 33 *e*PKPdf PKPdf 16 28 10.2 -0.3
HAWA LR LR
comp=Z,2μm,19.0s,MS5.7
WIFE Three Sisters- 124.29 37 P PKPdf 16 28 10.8 +0.1
NEW Newport 124.30 30 *e*PKIKP PKPdf 16 28 09.1 -1.5
NEW MLR MLR
comp=Z,3μm,21.0s
G06A Carlson Farm, 124.31 35 ⇑P PKPdf 16 28 10.7 0.0
baz=124,SNR=30
H05A Madras 124.31 36 ⇑P PKPdf 16 28 10.4 -0.2
baz=124,SNR=11
F07A Phinny Hill Vi 124.31 34 ⇑P PKPdf 16 28 10.8 +0.1
baz=124,SNR=7.4
HUMO Hull Mountain 124.39 39 ⇓P PKPdf 16 28 11.1 +0.2
baz=124
HUMO Hull Mountain 124.39 39 *e*PKPdf PKPdf 16 28 10.9 0.0
HUMO LR LR
comp=Z,996nm,21.0s,MS5.5
E08A Dider Farm, El 124.43 33 ⇓P PKPdf 16 28 10.5 -0.3
baz=124,SNR=35
D09A Jones Farm, Ri 124.47 32 ⇑P PKPdf 16 28 10.3 -0.6
baz=124,SNR=33
C10A Spilker Farm, 124.50 31 ⇑P PKPdf 16 28 10.4 -0.6
baz=124
I05A Bend 124.56 36 ⇑P PKPdf 16 28 11.2 0.0
baz=124
B11A Sandpoint 124.57 30 ⇓P PKPdf 16 28 11.0 -0.1
baz=124
J04A Umpqua Nationa 124.57 38 ⇑P PKPdf 16 28 11.2 0.0
baz=124
A12A Yaak River Ran 124.58 29 ⇑P PKPdf 16 28 10.9 -0.2
baz=124
JCC Jacoby Creek 124.64 41 ⇑P PKPdf 16 28 11.6 +0.2
baz=124
H06A Lindquist Farm 124.78 35 ⇓P PKPdf 16 28 11.3 -0.3
baz=125,SNR=50
G07A Rugg Ranch, H 124.84 34 ⇓P PKPdf 16 28 11.6 -0.1
baz=125,SNR=15
E09A Wood Farm, Sta 124.91 32 ⇑P PKPdf 16 28 11.2 -0.6
baz=125,SNR=15
B12A Libby 124.93 29 ⇑P PKPdf 16 28 11.4 -0.3
baz=125
F08A Pendleton 125.01 33 ⇓P PKPdf 16 28 11.5 -0.5
baz=125,SNR=15
YBH Yreka Blue Hor 125.01 39 ⇓P PKPdf 16 28 12.1 -0.1
baz=125
YBH Yreka Blue Hor 125.01 39 *e*PKPdf PKPdf 16 28 11.3 -0.8
YBH LR LR
comp=Z,1μm,22.0s,MS5.5
D10A Wagner Farm, O 125.02 31 ⇓P PKPdf 16 28 11.2 -0.7
baz=125,SNR=14
C11A Tepee Creek (N 125.02 30 ⇑P PKPdf 16 28 11.0 -1.0
baz=125
J05A Fort Rock 125.08 37 ⇑P PKPdf 16 28 12.3 +0.1
baz=125
M02C Callahan 125.10 40 ⇑P PKPdf 16 28 12.6 +0.3
baz=125
N02C Big Bar 125.11 41 ⇑P PKPdf 16 28 12.5 +0.2
baz=125
O01C Eel River Cons 125.11 42 ⇓P PKPdf 16 28 12.8 +0.4
baz=125
K04A Chilquin 125.15 38 ⇓P PKPdf 16 28 12.3 0.0
baz=125
G08A Pilot Rock 125.22 34 ⇑P PKPdf 16 28 12.2 -0.3
baz=125,SNR=30
LNOR Lincton Mounta 125.23 33 *e*PKIKP PKPdf 16 28 11.6 -0.8
FFC Flin Flon 125.25 16 *e*PKPdf PKPdf 16 28 10.9 -1.3
FFC *e*PP PP 16 29 53.0 -8.7
FFC LR LR
comp=Z,4μm,20.0s,MS6.1
L04A Klamath Falls 125.29 39 ⇓P PKPdf 16 28 12.3 -0.3
baz=125
H07A Lands Inn, Kim 125.30 35 ⇑P PKPdf 16 28 12.3 -0.3
baz=125,SNR=57
I06A Prineville 125.31 36 ⇑P PKPdf 16 28 12.7 +0.1
baz=125,SNR=19
WALA Waterton Lakes 125.31 28 *e*PKPdf PKPdf 16 28 11.4 -1.0
WALA *e*PP PP 16 29 57.4 -5.0
E10A Myers Farm, Un 125.47 32 ⇓P PKPdf 16 28 12.1 -0.7
baz=125,SNR=8.3
KCPM Cahto Peak 125.50 42 *e*PKPdf PKPdf 16 28 13.1 -0.1
C12B Naegeli Ranch, 125.50 30 ⇑P PKPdf 16 28 11.8 -1.1
baz=125
KIPM Iron Peak 125.50 42 *e*PKPdf PKPdf 16 28 13.1 -0.1
KIPM *e* 16 28 27.8
D11A Klaveano Farm, 125.51 31 ⇑P PKPdf 16 28 11.6 -1.4
baz=125,SNR=12
B13A Whitefish 125.53 29 ⇓P PKPdf 16 28 12.3 -0.6
baz=125
M04C Macdoel 125.54 39 ⇓P PKPdf 16 28 12.8 -0.3
baz=125
F09A S2 Ranch, Elgi 125.54 33 ⇑P PKPdf 16 28 12.6 -0.4
baz=125
K05A Summer Lake 125.60 38 ⇓P PKPdf 16 28 13.8 +0.6
baz=126
M03C McCloud 125.63 40 ⇓P PKPdf 16 28 12.9 -0.5
baz=126
I07A Izee 125.64 35 ⇑P PKPdf 16 28 13.2 0.0
baz=126,SNR=42
WDC Whiskeytown Da 125.73 41 ⇓P PKPdf 16 28 13.1 -0.5
baz=126
WDC Whiskeytown Da 125.73 41 *e*PKPdf PKPdf 16 28 12.7 -0.8
WDC *e* 16 28 27.5
WDC LR LR
comp=Z,1μm,22.0s,MS5.6
F10A Beach Ranch, E 125.74 32 ⇑P PKPdf 16 28 12.3 -1.1
baz=126,SNR=50
J06A Christmas Vall 125.75 37 ⇓P PKPdf 16 28 13.3 -0.2
baz=126,SNR=58
O02C Red Bluff 125.78 41 ⇓P PKPdf 16 28 14.2 +0.5
baz=126
H08A Prairie City 125.86 35 ⇓P PKPdf 16 28 13.6 0.0
baz=126,SNR=23
G09A Cove 125.88 33 ⇑P PKPdf 16 28 12.8 -0.9
baz=126
K06A Valley Falls 125.95 37 ⇑P PKPdf 16 28 14.3 +0.4
baz=126
C13A Hot Springs 125.96 29 ⇑P PKPdf 16 28 12.6 -1.1
baz=126
D12A Red Ives Fores 126.00 30 ⇑P PKPdf 16 28 12.5 -1.4
baz=126
L05A Lakeview 126.02 38 ⇓P PKPdf 16 28 14.3 +0.3
baz=126
E11A Bogner Ranch, 126.03 31 ⇓P PKPdf 16 28 12.7 -1.3
baz=126,SNR=40
GASB Alder Springs 126.09 42 ⇓P PKPdf 16 28 14.9 +0.6
baz=126
J07A Hines 126.17 36 ⇓P PKPdf 16 28 14.4 +0.1
baz=126,SNR=11
HOPS Hopland 126.19 43 ⇓P PKPdf 16 28 15.0 +0.5
baz=126
HOPS Hopland 126.19 43 *e*PKPdf PKPdf 16 28 14.2 -0.2
HOPS *e* 16 28 29.7
HOPS LR LR
comp=Z,2μm,21.0s,MS5.7
M05C Lookout 126.20 39 ⇑P PKPdf 16 28 14.3 -0.1
baz=126
G10A Bishop Farm, J 126.23 33 ⇑P PKPdf 16 28 13.1 -1.3
baz=126,SNR=10
I08A Drewsey 126.28 35 ⇑P PKPdf 16 28 14.7 +0.2
baz=126,SNR=59
C14A Swan Lake 126.30 29 ⇑P PKPdf 16 28 13.4 -1.0
baz=126
E12A Beaver Dam Sad 126.32 31 ⇑P PKPdf 16 28 13.2 -1.3
baz=126
H09A Durkee 126.33 34 ⇑P PKPdf 16 28 13.9 -0.7
baz=126,SNR=8.4
F11A Grangeville 126.36 32 ⇓P PKPdf 16 28 13.2 -1.4
baz=126,SNR=28
BMO Blue Mountains 126.41 34 *e*PKIKP PKPdf 16 28 13.5 -1.2
BMO MLR MLR
comp=Z,2μm,22.0s,MS5.7
D13A Huson 126.42 30 ⇓P PKPdf 16 28 13.6 -1.0
baz=126
MOD Modoc 126.43 38 ⇓P PKPdf 16 28 14.9 0.0
baz=126
MOD Modoc 126.43 38 *e*PKPdf PKPdf 16 28 14.6 -0.2
MOD LR LR
comp=Z,2μm,22.0s,MS5.7
K07A Rock Creek Ran 126.61 37 ⇑P PKPdf 16 28 15.2 0.0
baz=126,SNR=72
G11A Walters Elk Ra 126.62 32 ⇓P PKPdf 16 28 14.2 -0.9
baz=126,SNR=14
MNRC McLaughlin Nat 126.67 42 ⇓P PKPdf 16 28 15.5 +0.1
baz=126
J08A Circle Bar Ran 126.67 36 ⇓P PKPdf 16 28 15.4 +0.2
baz=126,SNR=37
M06C Likely Place G 126.71 39 ⇓P PKPdf 16 28 15.4 0.0
baz=127
I09A Lost Marbles R 126.72 35 ⇑P PKPdf 16 28 14.8 -0.6
baz=127,SNR=28
MCCM Marconi Confer 126.74 43 ⇓P PKPdf 16 28 15.0 -0.5
baz=127
MCCM Marconi Confer 126.74 43 *e*PKPdf PKPdf 16 28 15.3 -0.3
MCCM LR LR
comp=Z,1μm,22.0s,MS5.5
NSHM Saint Helena R 126.74 43 *e*PKPdf PKPdf 16 28 15.3 -0.2
O04C Chester 126.81 40 ⇓P PKPdf 16 28 15.5 -0.1
baz=127
MSO Missoula 126.86 30 *e*PKPdf PKPdf 16 28 14.3 -1.2
MSO *e*PP PP 16 30 09.0 -3.8
MSO LR LR
comp=Z,2μm,19.0s,MS5.8
ELFS Eagle Lake Fie 126.87 40 ⇑P PKPdf 16 28 15.9 +0.1
baz=127
FARB Farallon Islan 126.87 44 ⇑P PKPdf 16 28 14.9 -0.9
baz=127
H10A Noah's Angus R 126.89 33 ⇑P PKPdf 16 28 14.7 -0.9
baz=127
D14A Greenough 126.90 29 ⇓P PKPdf 16 28 14.5 -1.0
baz=127
F12A Elk City 126.92 31 ⇓P PKPdf 16 28 14.1 -1.5
baz=127,SNR=18
CVS Carmenet Viney 126.93 43 ⇑P PKPdf 16 28 15.7 -0.2
baz=127
ORV Oroville 126.95 41 ⇑P PKPdf 16 28 15.4 -0.5
baz=127
L07A Adell 126.95 37 ⇓P PKPdf 16 28 15.7 -0.1
baz=127,SNR=38
E13A Victor 127.01 30 ⇑P PKPdf 16 28 14.9 -0.9
baz=127
K08A Mann Creek Ran 127.04 36 ⇑P PKPdf 16 28 16.0 0.0
baz=127,SNR=70
Q03C Winters 127.08 42 ⇑P PKPdf 16 28 16.9 +0.7
baz=127
J09A Fry Pan Ranch, 127.09 35 ⇑P PKPdf 16 28 16.1 0.0
baz=127,SNR=27
O05C Quincy 127.11 40 ⇓P PKPdf 16 28 15.9 -0.3
baz=127
WVOR Wild Horse Val 127.13 37 *e*PKIKP PKPdf 16 28 16.2 0.0
WVOR MLR MLR
comp=Z,1μm,20.0s,MS5.7
CHMT Chamberlain Mo 127.14 29 *e*PKPdf PKPdf 16 28 14.7 -1.3
CHMT *e*PP PP 16 30 15.2 +0.6
I10A Payette 127.17 34 ⇑P PKPdf 16 28 16.4 +0.2
baz=127
H11A Donnelly 127.21 33 ⇓P PKPdf 16 28 15.9 -0.3
baz=127,SNR=9.2
N06A Buffalo Meadow 127.37 39 ⇓P PKPdf 16 28 16.7 0.0
baz=127
E14A Clinton 127.37 30 ⇓P PKPdf 16 28 15.8 -0.7
baz=127
F13A Darby 127.38 31 ⇓P PKPdf 16 28 15.1 -1.4
baz=127,SNR=20
Q04C Lincoln 127.40 42 ⇓P PKPdf 16 28 16.8 0.0
baz=127
D15A Lincoln 127.41 29 ⇑P PKPdf 16 28 15.9 -0.7
baz=127
M07A Soldier Meadow 127.42 38 ⇓P PKPdf 16 28 17.2 +0.5
baz=127
L08A Fields 127.45 37 ⇓P PKPdf 16 28 17.3 +0.5
baz=127,SNR=7.9
K09A Rome 127.51 36 ⇑P PKPdf 16 28 16.8 -0.1
baz=127,SNR=80
BEKR Beckwourth 127.52 40 ⇓P PKPdf 16 28 16.8 -0.2
baz=127
BDM Black Diamond 127.53 43 ⇓P PKPdf 16 28 17.0 -0.1
baz=127
JRSC Jasper Ridge 127.55 44 ⇓P PKPdf 16 28 16.7 -0.4
baz=127
J10A Berg Farm, Mel 127.61 35 ⇓P PKPdf 16 28 16.9 -0.1
baz=128,SNR=6.3
SCHQ Schefferville 127.65 351 PKP PKPdf 16 28 16.7 -0.1
comp=Z,39nm,0.9s,baz=37,slow=2.0,SNR=17
P05C Yuba Gap, Truc 127.67 41 ⇓P PKPdf 16 28 17.4 +0.1
baz=128
O06A Flanigan 127.70 40 ⇑P PKPdf 16 28 17.3 0.0
baz=128
I11A Placerville 127.75 34 ⇓P PKPdf 16 28 17.0 -0.4
baz=128
WENL Wente Vineyard 127.77 43 ⇓P PKPdf 16 28 17.5 -0.1
baz=128
E15A Deer Lodge 127.79 29 ⇓P PKPdf 16 28 16.6 -0.7
baz=128
F14A Wisdom 127.85 30 ⇑P PKPdf 16 28 16.9 -0.6
baz=128
LAVA Lava Cap Winer 127.87 42 ⇑P PKPdf 16 28 17.4 -0.3
baz=128
N07B Gerlach 127.89 39 ⇓P PKPdf 16 28 17.9 +0.2
baz=128
G13A Cobalt 127.90 32 ⇓P PKPdf 16 28 16.5 -1.1
baz=128,SNR=13
P06A Stead Airport, 127.92 40 ⇑P PKPdf 16 28 17.7 0.0
baz=128
H12A Diamond D Ranc 127.94 32 ⇑P PKPdf 16 28 17.4 -0.2
baz=128,SNR=43

EGMT	**Eagleton**	**127.95**	**26**	*e*PKPdf	PKPdf	16 28 16.7	-0.8
EGMT				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
L09A	**Wilkinson Ranc**	**127.95**	**37**	⇑P	PKPdf	16 28 18.1	+0.4
	baz=128,SNR=5.3						
K10A	**MacKenzie Ranc**	**127.96**	**35**	⇓P	PKPdf	16 28 17.9	+0.1
	baz=128,SNR=27						
HRY	**Holter Researc**	**127.97**	**29**	*e*PKPdf	PKPdf	16 28 16.2	-1.4
R04C	**Big Horse Ranc**	**128.00**	**42**	⇓P	PKPdf	16 28 17.3	-0.7
	baz=128						
MFID	**Camas Ranch**	**128.15**	**34**	⇓P	PKPdf	16 28 18.2	+0.1
	baz=128						
G14A	**Jackson**	**128.20**	**31**	⇑P	PKPdf	16 28 17.8	-0.4
	baz=128,SNR=8.2						
WCN	**Washoe City**	**128.22**	**41**	⇓P	PKPdf	16 28 18.5	+0.2
	baz=128						
PAHR	**Pah Rah Range**	**128.24**	**40**	*e*PKPdf	PKPdf	16 28 18.1	-0.3
H13A	**Challis**	**128.25**	**32**	⇑P	PKPdf	16 28 17.7	-0.5
	baz=128,SNR=38						
F15A	**Butte**	**128.27**	**30**	⇓P	PKPdf	16 28 17.6	-0.6
	baz=128						
O07A	**Toulon**	**128.30**	**39**	⇓P	PKPdf	16 28 18.6	+0.1
	baz=128						
R05C	**Kirkwood Meado**	**128.34**	**41**	⇑P	PKPdf	16 28 18.8	+0.2
	baz=128						
PACP	**Pacheco Peak**	**128.40**	**44**	⇓P	PKPdf	16 28 18.9	+0.1
	baz=128						
N08A	**GE Springer Mi**	**128.41**	**38**	⇓P	PKPdf	16 28 18.5	-0.2
	baz=128,SNR=32						
SAO	**San Andreas Ge**	**128.41**	**44**	*e*PKIKP	PKPdf	16 28 18.5	-0.3
SAO				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.6						
K11A	**Parker Ranch,**	**128.44**	**35**	⇑P	PKPdf	16 28 18.8	+0.1
	baz=128						
M09A	**Marrel Ranch,**	**128.44**	**37**	⇓P	PKPdf	16 28 19.0	+0.3
	baz=128,SNR=20						
CMB	**Columbia Colle**	**128.49**	**42**	⇑P	PKPdf	16 28 18.4	-0.5
	baz=128						
CMB	**Columbia Colle**	**128.49**	**42**	*e*PKPdf	PKPdf	16 28 18.1	-0.8
CMB				*e*PP	PP	16 30 21.4	-2.6
CMB				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
DLMT	**Dillon**	**128.56**	**30**	*e*PKPdf	PKPdf	16 28 18.5	-0.3
DLMT				*e*PP	PP	16 30 22.4	-1.5
L10A	**Juniper Basin**	**128.62**	**36**	⇑P	PKPdf	16 28 19.6	+0.6
	baz=128,SNR=42						
P07A	**Fallon**	**128.65**	**40**	⇓P	PKPdf	16 28 19.5	+0.3
	baz=128						
J12A	**Stokes Ranch,**	**128.66**	**34**	⇑P	PKPdf	16 28 19.2	+0.1
	baz=128,SNR=45						
O08A	**Rochester Mine**	**128.68**	**39**	⇓P	PKPdf	16 28 19.3	+0.1
	baz=128						
N09A	**Rock Creek Ran**	**128.74**	**38**	⇑P	PKPdf	16 28 19.2	-0.1
	baz=129,SNR=52						
G15A	**Dillon**	**128.75**	**30**	⇑P	PKPdf	16 28 19.4	+0.2
	baz=129						
I13A	**Wildhorse Cree**	**128.76**	**33**	⇑P	PKPdf	16 28 19.2	0.0
	baz=129,SNR=41						
MCMT	**McKenzie Canyo**	**128.80**	**31**	*e*PKPdf	PKPdf	16 28 19.1	-0.2
HLID	**Hailey**	**128.83**	**33**	⇓P	PKPdf	16 28 19.4	0.0
	baz=129,SNR=26						
HLID	**Hailey**	**128.83**	**33**	*e*PKPdf	PKPdf	16 28 19.5	+0.1
HLID				*e*PP	PP	16 30 24.4	-1.4
HLID				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
BOZ	**Bozeman (W)**	**128.83**	**29**	*e*PKIKP	PKPdf	16 28 19.2	-0.1
BOZ				*e*		16 30 24.6	
BOZ				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.8						
R06C	**Coleville**	**128.84**	**41**	⇑P	PKPdf	16 28 20.1	+0.5
	baz=129						
S05C	**Merced**	**128.88**	**43**	⇓P	PKPdf	16 28 19.2	-0.5
	baz=129						
M10A	**I.L. Ranch, Tu**	**128.93**	**36**	⇓P	PKPdf	16 28 19.9	+0.3
	baz=129,SNR=12						
S06C	**San Francisco**	**128.93**	**42**	⇓P	PKPdf	16 28 19.3	-0.5
	baz=129						
V03C	**Hunter Liggett**	**128.93**	**45**	⇓P	PKPdf	16 28 20.3	+0.5
	baz=129						
L11A	**Cat Creek Ranc**	**128.98**	**35**	⇑P	PKPdf	16 28 20.3	+0.6
	baz=129						
Q07A	**Schurz**	**129.03**	**40**	⇓P	PKPdf	16 28 19.8	-0.1
	baz=129						
H15A	**Lima**	**129.05**	**31**	⇑P	PKPdf	16 28 19.7	0.0
	baz=129,SNR=37						
J13A	**Cove Ranch, Pi**	**129.07**	**33**	⇑P	PKPdf	16 28 20.1	+0.2
	baz=129,SNR=45						
P08A	**Dixie Valley**	**129.07**	**39**	⇑P	PKPdf	16 28 20.3	+0.3
	baz=129						
U04C	**Hernandez Rese**	**129.08**	**44**	⇓P	PKPdf	16 28 20.7	+0.6
	baz=129						
I14A	**Mackay**	**129.10**	**32**	⇑P	PKPdf	16 28 19.4	-0.5
	baz=129,SNR=11						
K12A	**Draper Farm, C**	**129.17**	**34**	⇑P	PKPdf	16 28 20.2	+0.2
	baz=129						
BMN	**Battle Mountai**	**129.17**	**38**	*e*PKPdf	PKPdf	16 28 20.2	+0.1
BMN				*e*PP	PP	16 30 21.2	-7.1
BMN				*e*SKP		16 31 36.3	
BMN				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
R07C	**Lee Vining**	**129.35**	**41**	⇑P	PKPdf	16 28 20.6	0.0
	baz=129						
L12A	**House Creek Ra**	**129.42**	**35**	⇑P	PKPdf	16 28 21.1	+0.6
	baz=129						
M11A	**Holland Ranch,**	**129.42**	**36**	⇓P	PKPdf	16 28 20.9	+0.3
	baz=129,SNR=28						
N10A	**Dunphy**	**129.44**	**37**	⇑P	PKPdf	16 28 20.7	0.0
	baz=129						
PKD	**Parkfield**	**129.46**	**45**	⇑P	PKPdf	16 28 20.8	0.0
	baz=129						
J14A	**Carey**	**129.48**	**33**	⇓P	PKPdf	16 28 20.8	+0.2
	baz=129,SNR=15						
T06C	**Millerton Lake**	**129.48**	**43**	⇓P	PKPdf	16 28 20.6	-0.3
	baz=129						
QLMT	**Earthquake Lak**	**129.52**	**30**	*e*PKPdf	PKPdf	16 28 20.7	+0.1
QLMT				*e*PP	PP	16 30 27.5	-2.7
QLMT				*e*SKP		16 31 37.3	
U05C	**Westside ANR,**	**129.55**	**44**	⇓P	PKPdf	16 28 21.7	+0.7
	baz=129						
I15A	**Monteview**	**129.56**	**31**	⇑P	PKPdf	16 28 20.7	0.0
	baz=129,SNR=9.8						
K13A	**Stover Farm, H**	**129.62**	**34**	⇓P	PKPdf	16 28 21.2	+0.3
	baz=130,SNR=5.1						
Q08A	**Gabbs**	**129.64**	**40**	⇑P	PKPdf	16 28 21.2	+0.1
	baz=130,SNR=5.2						
NVAR	**Mina Array Bea**	**129.65**	**41**	PKP	PKPdf	16 28 21.6	+0.5
	comp=Z,29nm,0.9s,baz=255,slow=2.1,SNR=60						
NVAR				SKPbc		16 31 38.8	
	comp=Z,40nm,1.1s,baz=268,slow=4.2,SNR=13						
GCMT	**Greycliff**	**129.67**	**28**	*e*PKPdf	PKPdf	16 28 20.1	-0.8
GCMT				*e*		16 28 35.2	
GCMT				*e*PP	PP	16 30 30.0	-1.1
H16A	**Russell Place,**	**129.70**	**30**	⇓P	PKPdf	16 28 21.6	+0.6
	baz=130						
O10A	**Cortez Mining,**	**129.70**	**38**	⇓P	PKPdf	16 28 21.5	+0.4
	baz=130						
MLAC	**Mammoth Lakes**	**129.74**	**42**	⇑P	PKPdf	16 28 21.5	+0.2
	baz=130						
P09A	**Austin**	**129.75**	**39**	⇓P	PKPdf	16 28 21.1	-0.1
	baz=130						
R08A	**Mina**	**129.82**	**41**	⇑P	PKPdf	16 28 21.8	+0.4
	baz=130						
PTRM	**Twissleman Ran**	**129.83**	**45**	*e*PKPdf	PKPdf	16 28 22.1	+0.5
PTRM				*e*PP	PP	16 30 31.3	-1.6
PTRM				*e*SKP		16 31 39.0	
N11A	**Elko Archery C**	**129.84**	**37**	⇑P	PKPdf	16 28 21.7	+0.3
	baz=130						
DGMT	**Dagmar**	**129.86**	**22**	*e*PKPdf	PKPdf	16 28 20.4	-0.8
DGMT				*e*PP	PP	16 30 29.8	-2.4
DGMT				*e*SKP		16 31 37.6	
DGMT				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
YMR	**Madison River**	**129.86**	**30**	*e*PKPdf	PKPdf	16 28 21.8	+0.5
YMR				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
V05C	**Boulder Hill,**	**129.94**	**44**	⇓P	PKPdf	16 28 22.2	+0.5
	baz=130						
M12A	**Wells**	**129.94**	**35**	⇑P	PKPdf	16 28 21.9	+0.3
	baz=130						
YNR	**Norris Junctio**	**129.97**	**30**	*e*PKPdf	PKPdf	16 28 21.9	+0.4
YNR				*e*PP	PP	16 30 33.4	+0.3
YNR				*e*SKP		16 31 40.0	
J15A	**Blackfoot**	**130.00**	**32**	⇓P	PKPdf	16 28 21.8	+0.2
	baz=130,SNR=7.9						
L13A	**Double Diamond**	**130.06**	**34**	⇑P	PKPdf	16 28 22.4	+0.7
	baz=130,SNR=23						
MTUM	**Tungsten Hills**	**130.07**	**42**	*e*PKPdf	PKPdf	16 28 22.2	+0.3
MTUM				*e*PP	PP	16 30 32.4	-1.9
MTUM				*e*SKP		16 31 40.0	
YFT	**Old Faithful**	**130.08**	**30**	*e*PKPdf	PKPdf	16 28 22.9	+1.2
YFT				*e*PP	PP	16 30 33.2	-0.7
HELL	**Mitchell Peak**	**130.12**	**43**	⇑P	PKPdf	16 28 21.9	-0.1
	baz=130						
P10A	**Eureka**	**130.12**	**38**	⇑P	PKPdf	16 28 22.2	+0.3
	baz=130,SNR=12						
Q09A	**Carvers**	**130.14**	**40**	⇓P	PKPdf	16 28 22.0	0.0
	baz=130,SNR=7.5						
SMMC	**Simmler**	**130.16**	**45**	⇓P	PKPdf	16 28 22.7	+0.6
	baz=130						
I16A	**Newdale**	**130.16**	**31**	⇑P	PKPdf	16 28 22.2	+0.3
	baz=130						
RCTC	**Rector, Farmer**	**130.17**	**43**	⇑P	PKPdf	16 28 21.7	-0.4
	baz=130						
ELK	**Elko**	**130.18**	**36**	*e*PKPdf	PKPdf	16 28 21.7	-0.3
ELK				*e*SKP		16 31 40.5	
ELK				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
K14A	**Jones Ranch, D**	**130.19**	**33**	⇑P	PKPdf	16 28 21.9	-0.1
	baz=130,SNR=23						
LKWY	**Lake**	**130.22**	**30**	*e*PKPdf	PKPdf	16 28 21.6	-0.4
LKWY				*e*SKP		16 31 41.3	
LKWY				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
N12A	**Clover Valley,**	**130.23**	**36**	⇑P	PKPdf	16 28 22.6	+0.5
	baz=130						
S08C	**White Mtn Res**	**130.25**	**42**	⇑P	PKPdf	16 28 22.7	+0.5
	baz=130						
O11A	**Cowboy Ranch,**	**130.31**	**37**	⇑P	PKPdf	16 28 22.7	+0.4
	baz=130,SNR=15						
RLMT	**Red Lodge**	**130.35**	**28**	*e*PKPdf	PKPdf	16 28 21.9	-0.3
RLMT				*e*PP	PP	16 30 38.2	+2.6
RLMT				*e*SKP		16 31 39.6	
RLMT				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
M13A	**Montello**	**130.41**	**35**	⇓P	PKPdf	16 28 22.9	+0.4
	baz=130						
FLWY	**Flagg Ranch**	**130.42**	**30**	*e*PKPdf	PKPdf	16 28 20.8	-1.6
FLWY				*e*SKP		16 31 41.4	
IMW	**Indian Meadow**	**130.43**	**30**	*e*PKPdf	PKPdf	16 28 22.0	-0.4
IMW				*e*PP	PP	16 30 30.1	-6.1
IMW				*e*SKP		16 31 41.2	
K15A	**Arbon**	**130.44**	**33**	⇓P	PKPdf	16 28 22.3	-0.2
	baz=130,SNR=13						
TIN	**Tinemaha**	**130.46**	**42**	⇓P	PKPdf	16 28 22.9	+0.2
	baz=130						
L14A	**Malta**	**130.49**	**34**	⇑P	PKPdf	16 28 22.5	-0.1
	baz=130,SNR=23						
PKM	**Peak Mountain**	**130.49**	**45**	⇑P	PKPdf	16 28 23.5	+0.7
	baz=130						
LAO	**LASA Array**	**130.51**	**25**	*e*PKPdf	PKPdf	16 28 22.0	-0.4
LAO				*e*		16 28 37.3	
LAO				*e*SKP		16 31 40.3	
LAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
DCID1	**Drake Creek**	**130.52**	**31**	*e*PKPdf	PKPdf	16 28 23.1	+0.5
J16A	**Bone**	**130.52**	**32**	⇑P	PKPdf	16 28 22.4	-0.2
	baz=130,SNR=11						
VES	**Vestal, Richgr**	**130.53**	**44**	⇓P	PKPdf	16 28 22.0	-0.8
	baz=130						
TPH	**Tonopah**	**130.55**	**40**	*e*PKIKP	PKPdf	16 28 22.4	-0.4
TPH				*e*		16 30 34.7	
TPH				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.6						
TPH	**Tonopah**	**130.55**	**40**	*e*PKPdf	PKPdf	16 28 22.4	-0.4
TPH				*e*PP	PP	16 30 34.7	-2.7
TPH				*e*SKP		16 31 42.0	
TPH				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
R09A	**Tonopah**	**130.55**	**40**	⇓P	PKPdf	16 28 22.4	-0.4
	baz=130,SNR=14						
P11A	**Circle Ranch,**	**130.60**	**38**	⇓P	PKPdf	16 28 23.0	+0.1
	baz=130,SNR=12						
RRI2	**Red Ridge**	**130.62**	**31**	*e*PKPdf	PKPdf	16 28 22.6	-0.1
RRI2				*e*PP	PP	16 30 31.9	-5.5
RRI2				*e*SKP		16 31 41.6	
MOOW	**Moose Ponds**	**130.63**	**31**	*e*PKPdf	PKPdf	16 28 22.4	-0.4
MOOW				*e*PP	PP	16 30 29.4	-8.1
MOOW				*e*SKP		16 31 41.3	
Q10A	**Clear Creek Ra**	**130.64**	**39**	⇑P	PKPdf	16 28 22.7	-0.3
	baz=130,SNR=12						
TPAW	**Teton Pass**	**130.71**	**31**	*e*PKPdf	PKPdf	16 28 22.7	-0.3
TPAW				*e*PP	PP	16 30 34.2	-3.8
TPAW				*e*SKP		16 31 41.1	
N13A	**Wendover, West**	**130.71**	**36**	⇓P	PKPdf	16 28 23.2	+0.1
	baz=131						
S09A	**Goldfield**	**130.75**	**41**	⇓P	PKPdf	16 28 23.0	-0.2
	baz=131,SNR=20						
O12A	**Currie**	**130.77**	**37**	⇑P	PKPdf	16 28 23.3	+0.1
	baz=131						
M14A	**Sheep Mountain**	**130.78**	**34**	⇑P	PKPdf	16 28 23.2	0.0
	baz=131,SNR=53						
LOHW	**Long Hollow**	**130.80**	**31**	*e*PKPdf	PKPdf	16 28 22.8	-0.3
LOHW				*e*PP	PP	16 30 35.3	-3.3
LOHW				*e*SKP		16 31 40.9	
SNOW	**Snow King Moun**	**130.83**	**31**	*e*PKPdf	PKPdf	16 28 23.0	-0.1
SNOW				*e*PP	PP	16 30 39.4	+0.7
SNOW				*e*SKP		16 31 41.2	
K16A	**Soda Springs**	**130.84**	**32**	⇑P	PKPdf	16 28 23.1	-0.1
	baz=131,SNR=12						
REDW	**Red Top Meadow**	**130.85**	**31**	*e*PKPdf	PKPdf	16 28 22.8	-0.4
REDW				*e*PP	PP	16 30 39.0	+0.1
REDW				*e*SKP		16 31 42.1	
CWC	**Cottonwood Cre**	**130.89**	**43**	⇓P	PKPdf	16 28 23.3	-0.2
	baz=131						
ULM	**Lac du Bonnet**	**130.91**	**15**	PKP	PKPdf	16 28 22.3	-0.8
	comp=Z,36nm,0.8s,baz=356,slow=2.3,SNR=19						
ULM				PP	PP	16 30 36.3	-2.4
	comp=Z,14nm,0.9s,baz=330,slow=7.7,SNR=3.7						
ULM				SKPbc	SKPbc	16 31 40.5	-2.8
	comp=Z,22nm,0.7s,baz=331,slow=4.7,SNR=10						
HVU	**Hansel Valley**	**130.92**	**34**	*e*PKIKP	PKPdf	16 28 23.3	-0.1
HVU				*e*		16 30 38.8	
HVU	**Hansel Valley**	**130.92**	**34**	*e*PKPdf	PKPdf	16 28 23.3	-0.1
HVU				*e*PP	PP	16 30 38.8	-0.7
HVU				*e*SKP		16 31 42.2	
L15A	**Malad City**	**130.98**	**33**	⇑P	PKPdf	16 28 23.0	-0.5
	baz=131,SNR=23						
R10A	**Warm Springs**	**131.01**	**40**	⇑P	PKPdf	16 28 23.7	0.0
	baz=131,SNR=7.0						
ISA	**Isabella**	**131.04**	**44**	*e*PKIKP	PKPdf	16 28 17.9	-5.9
ISA				*e*		16 28 23.3	
ISA				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.6						
ISA	**Isabella**	**131.04**	**44**	⇑P	PKPdf	16 28 23.8	-0.1
	baz=131						
ISA	**Isabella**	**131.04**	**44**	*e*PKPpre		16 28 17.9	
ISA				*e*PKPdf	PKPdf	16 28 23.3	-0.5
ISA				*e*SKP		16 31 43.1	
ISA				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
S10A	**Tonopah Range,**	**131.04**	**40**	⇑P	PKPdf	16 28 23.7	0.0
	baz=131,SNR=22						
GRAC	**Grapevine Rang**	**131.06**	**42**	⇓P	PKPdf	16 28 24.0	+0.2
	baz=131,SNR=6.5						
ARVC	**Arvin**	**131.07**	**45**	⇓P	PKPdf	16 28 24.2	+0.3
	baz=131						
BSC	**Santa Cruz Isl**	**131.07**	**46**	⇑P	PKPdf	16 28 23.5	-0.5
	baz=131						
Q11A	**Duckwater**	**131.09**	**39**	⇓P	PKPdf	16 28 23.9	+0.1
	baz=131,SNR=33						
AHID	**Auburn Hatcher**	**131.15**	**32**	*e*PKPdf	PKPdf	16 28 23.1	-0.7
AHID				*e*SKP		16 31 43.3	
AHID				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
P12A	**McGill**	**131.17**	**37**	⇓P	PKPdf	16 28 23.9	0.0
	baz=131,SNR=18						
N14A	**Grayback Hills**	**131.30**	**35**	⇑P	PKPdf	16 28 24.1	0.0
	baz=131,SNR=13						
DAC	**Darwin (Calif)**	**131.31**	**43**	PFAKE		16 28 30.0	+5.7
DAC				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
M15A	**Larsen Ranch,**	**131.31**	**34**	⇓P	PKPdf	16 28 23.4	-0.7
	baz=131,SNR=18						
BGU	**Big Grassy Mou**	**131.34**	**35**	*e*PKPdf	PKPdf	16 28 24.3	+0.1
BGU				*e*SKP		16 31 44.7	
OSI	**Osito Adit**	**131.41**	**45**	⇑P	PKPdf	16 28 25.0	+0.4
	baz=131						
OSI	**Osito Adit**	**131.41**	**45**	*e*PKPdf	PKPdf	16 28 25.0	+0.4
OSI				*e*		16 28 38.5	
OSI				*e*SKP		16 31 45.6	
SPUT	**South Promonto**	**131.42**	**34**	*e*PKPdf	PKPdf	16 28 23.8	-0.6
SPUT				*e*PP	PP	16 30 41.2	-1.5
SPUT				*e*SKP		16 31 44.3	
BLG	**Laguna Peak**	**131.43**	**46**	⇓P	PKPdf	16 28 24.5	-0.1
	baz=131						
R11A	**Troy Canyon, C**	**131.43**	**39**	⇓P	PKPdf	16 28 24.8	+0.3
	baz=131,SNR=84						
Q12A	**Willow Creek R**	**131.48**	**38**	⇓P	PKPdf	16 28 24.6	+0.1
	baz=131,SNR=15						
L16A	**Fish Haven**	**131.49**	**33**	⇓P	PKPdf	16 28 24.4	-0.1
	baz=131						
MPMC	**Manual Prospec**	**131.50**	**43**	⇓P	PKPdf	16 28 25.0	+0.3
	baz=131,SNR=24						
SNCC	**San Nicolas Is**	**131.52**	**47**	⇑P	PKPdf	16 28 24.8	0.0
	baz=131						
SNCC	**San Nicolas Is**	**131.52**	**47**	PFAKE		16 28 30.0	+5.2
SNCC				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
N15A	**Stansbury Isla**	**131.66**	**34**	⇓P	PKPdf	16 28 24.7	-0.1
	baz=132,SNR=19						
LRMC	**Laurel Mountai**	**131.68**	**44**	⇑P	PKPdf	16 28 24.7	-0.3
	baz=132						
FURC	**Furnace Creek,**	**131.70**	**42**	⇑P	PKPdf	16 28 25.5	+0.4
	baz=132,SNR=5.8						
HWUT	**Hardware Ranch**	**131.70**	**33**	*e*PKPdf	PKPdf	16 28 21.5	-3.4
HWUT				*e*SKP		16 31 46.0	
HWUT				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
P13A	**Bates Ranch, G**	**131.72**	**37**	⇑P	PKPdf	16 28 25.2	+0.2
	baz=132						
S11A	**Rachel**	**131.75**	**40**	⇑P	PKPdf	16 28 25.2	+0.1
	baz=132,SNR=8.3						
EDW2	**Edwards Air Fo**	**131.79**	**44**	⇓P	PKPdf	16 28 25.5	+0.3
	baz=132						
TPNV	**Topopah Spring**	**131.83**	**41**	*e*PKIKP	PKPdf	16 28 17.2	-8.1
TPNV				*e*		16 28 25.4	
TPNV				*e*		16 30 42.4	
TPNV				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.5						
TPNV	**Topopah Spring**	**131.83**	**41**	*e*PKPpre		16 28 17.2	
TPNV				*e*PKPdf	PKPdf	16 28 25.4	+0.1
TPNV				*e*PP	PP	16 30 42.4	-3.2
TPNV				*e*SKP		16 31 46.2	
TPNV				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
M16A	**Huntsville**	**131.87**	**33**	⇓P	PKPdf	16 28 25.1	-0.1
	baz=132,SNR=7.0						
DECC	**Green Verdugo**	**131.88**	**45**	⇓P	PKPdf	16 28 25.2	-0.2
	baz=132						
BW06	**Boulder Array**	**131.94**	**31**	PFAKE		16 28 30.0	+4.7
BW06				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
PDAR	**Pinedale Array**	**131.94**	**31**	PKhKP		16 28 10.8	
	comp=Z,1.3nm,1.0s,baz=315,slow=0.4,SNR=5.7						
PDAR				PKP	PKPdf	16 28 24.1	-1.3
	comp=Z,9.5nm,0.9s,baz=200,slow=0.9,SNR=31						
PDAR				PP	PP	16 30 41.9	-4.0
	comp=Z,5.4nm,1.0s,baz=339,slow=2.3,SNR=4.0						
PDAR				SKPbc	SKPbc	16 31 45.2	-2.1
	comp=Z,18nm,1.0s,baz=329,slow=1.1,SNR=9.2						
DUG	**Dugway**	**131.95**	**35**	*e*PKIKP	PKPdf	16 28 23.7	-1.7
DUG				*e*		16 30 40.8	
DUG				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.8						
DUG	**Dugway**	**131.95**	**35**	*e*PKPdf	PKPdf	16 28 23.7	-1.7
DUG				*e*PP	PP	16 30 40.8	-5.4
DUG				*e*SKP		16 31 47.1	
DUG				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
Q13A	**Wheeler Ranch,**	**132.03**	**37**	⇓P	PKPdf	16 28 25.7	+0.1
	baz=132						
NOQ	**North Oquirrh**	**132.04**	**34**	*e*PKPdf	PKPdf	16 28 25.1	-0.5
NOQ				*e*		16 28 40.3	
NOQ				*e*SKP		16 31 47.7	
R12A	**Pony Springs,**	**132.06**	**38**	⇑P	PKPdf	16 28 25.6	-0.1
	baz=132,SNR=9.6						
U10A	**Ash Meadows, A**	**132.08**	**42**	⇑P	PKPdf	16 28 26.4	+0.7
	baz=132,SNR=6.4						
MWC	**Mount Wilson**	**132.08**	**45**	*e*PKIKP	PKPdf	16 28 25.6	-0.2
MWC				*e*		16 30 51.5	
MWC				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.6						
MWC	**Mount Wilson**	**132.08**	**45**	*e*PKPdf	PKPdf	16 28 25.6	-0.3
MWC				*e*PP	PP	16 30 51.5	+4.1
MWC				*e*SKP		16 31 47.4	
MWC				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
O15A	**The Old Anders**	**132.09**	**35**	⇑P	PKPdf	16 28 26.0	+0.3
	baz=132,SNR=11						
FMP	**Fort Macarthur**	**132.18**	**46**	⇑P	PKPdf	16 28 25.9	-0.1
	baz=132						
P14A	**Drum Mountains**	**132.19**	**36**	⇓P	PKPdf	16 28 26.7	+0.8
	baz=132						
CTU	**Camp Tracy**	**132.22**	**34**	*e*PKPdf	PKPdf	16 28 25.4	-0.5
CTU				*e*		16 28 40.6	
CTU				*e*SKP		16 31 46.1	
CIS	**Catalina Islan**	**132.25**	**46**	⇑P	PKPdf	16 28 26.2	0.0
	baz=132						
N16A	**Rees Ranch, Co**	**132.26**	**34**	⇑P	PKPdf	16 28 25.7	-0.3

U12A	**Valley of Fire**	**133.24**	**40**	⇑P		PKPdf	16 28 28.3	+0.4
	baz=133,SNR=7.3								
T13A	**Saint George**	**133.30**	**39**	⇓P		PKPdf	16 28 28.7	+0.6
	baz=133								
S14A	**Cedar City**	**133.30**	**38**	⇓P		PKPdf	16 28 28.0	0.0
	baz=133								
CCUT	**Cedar City**	**133.31**	**38**	*e*PKPdf		PKPdf	16 28 28.4	+0.4
CCUT				*e*PP		PP	16 30 48.3	-6.7
CCUT				*e*SKP			16 31 52.1	
MVU	**Marysvale**	**133.41**	**37**	PFAKE			16 28 40.0	+12
MVU				LR		LR			
	comp=Z,2µm,22.0s,MS5.7								
MSU	**Marysvale**	**133.42**	**37**	PKIKP			16 28 21.1		
MSU	**Marysvale**	**133.42**	**37**	*e*PKPpre			16 28 18.5		
MSU				*e*PKPdf		PKPdf	16 28 28.8	+0.6	
MSU				*e*SKP			16 31 51.6		
GMRC	**Granite Mounta**	**133.45**	**43**	⇑P		PKPdf	16 28 29.2	+0.8	
	baz=133,SNR=29								
V12A	**Nelson**	**133.45**	**41**	⇑P		PKPdf	16 28 28.7	+0.4	
	baz=133,SNR=13								
109C	**Camp Elliot, M**	**133.46**	**46**	⇓P		PKPdf	16 28 28.3	-0.2	
	baz=133								
TMUT	**Trail Mountain**	**133.47**	**35**	*e*PKPdf		PKPdf	16 28 28.7	+0.4	
TMUT				*e*			16 28 43.6		
TMUT				*e*SKP			16 31 51.2		
O18A	**Roosevelt**	**133.48**	**33**	⇑P		PKPdf	16 28 28.2	-0.1	
	baz=133,SNR=17								
RSSD	**Black Hills**	**133.49**	**25**	*e*PKHKP			16 28 18.5		
RSSD				*e*			16 28 27.0		
RSSD				MLR		MLR			
	comp=Z,2µm,19.0s,MS5.9								
RSSD	**Black Hills**	**133.49**	**25**	*e*PKPpre			16 28 18.5		
RSSD				*e*PKPdf		PKPdf	16 28 27.0	-1.2	
RSSD				*e*SKP			16 31 49.9		
RSSD				LR		LR			
	comp=Z,2µm,19.0s,MS5.9								
N19A	**John Jarvie Ra**	**133.49**	**32**	⇑P		PKPdf	16 28 27.3	-1.0	
	baz=133								
PFO	**Pinyon Flat Ob**	**133.54**	**45**	⇑P		PKPdf	16 28 29.1	+0.4	
	baz=133,SNR=8.4								
PFO	**Pinyon Flat Ob**	**133.54**	**45**	*e*PKPdf		PKPdf	16 28 28.8	+0.2	
PFO				*e*SKP			16 31 52.7		
PFO				LR		LR			
	comp=Z,934nm,21.0s,MS5.5								
R15A	**Junction**	**133.56**	**37**	⇑P		PKPdf	16 28 29.4	+0.9	
	baz=133								
P17A	**Butcher Ranch,**	**133.62**	**35**	⇓P		PKPdf	16 28 28.6	0.0	
	baz=134,SNR=16								
U13A	**Pakoon Wash**	**133.62**	**40**	⇓P		PKPdf	16 28 29.3	+0.6	
	baz=134								
BELC	**Belle Mtn.**	**133.65**	**44**	⇑P		PKPdf	16 28 29.3	+0.5	
	baz=134,SNR=12								
LDFC	**Landfair**	**133.66**	**42**	*e*PKPdf		PKPdf	16 28 29.4	+0.6	
LDFC				*e*SKP			16 31 53.2		
W12A	**Cal Nev Ari**	**133.69**	**42**	⇓P		PKPdf	16 28 29.2	+0.3	
	baz=134								
Q16A	**Castle Valley**	**133.75**	**36**	⇑P		PKPdf	16 28 29.0	+0.1	
	baz=134,SNR=12								
T14A	**Hurricane**	**133.79**	**39**	⇓P		PKPdf	16 28 29.6	+0.6	
	baz=134								
P18A	**Preston Nutter**	**133.79**	**34**	⇓P		PKPdf	16 28 29.2	+0.3	
	baz=134,SNR=31								
S15A	**Panguitch**	**133.85**	**38**	⇓P		PKPdf	16 28 29.7	+0.6	
	baz=134								
BAR	**Barrett**	**133.88**	**46**	*e*PKPdf		PKPdf	16 28 28.2	-1.0	
BAR				*e*SKP			16 31 52.9		
BAR				LR		LR			
	comp=Z,935nm,21.0s,MS5.5								
RWWY	**Rawlins**	**133.91**	**30**	*e*PKPdf		PKPdf	16 28 28.2	-0.9	
RWWY				*e*SKP			16 31 53.4		
O19A	**Miners Draw (B**	**133.94**	**33**	⇑P		PKPdf	16 28 28.3	-0.9	
	baz=134								
MONP	**Monument Peak**	**133.95**	**46**	⇑P		PKPdf	16 28 29.9	+0.6	
	baz=134,SNR=8.4								
V13A	**Grand Canyon W**	**133.95**	**41**	⇓P		PKPdf	16 28 30.1	+0.8	
	baz=134								
R16A	**Teasdale**	**133.98**	**36**	⇑P		PKPdf	16 28 29.7	+0.4	
	baz=134,SNR=11								
SRU	**San Rafael**	**133.99**	**35**	*e*PKIKP			16 28 23.0		
SRU				*e*			16 28 28.4		
SRU	**San Rafael**	**133.99**	**35**	⇓P		PKPdf	16 28 29.0	-0.2	
	baz=134,SNR=14								
SRU	**San Rafael**	**133.99**	**35**	*e*PKPpre			16 28 23.0		
SRU				*e*PKPdf		PKPdf	16 28 28.4	-0.9	
SRU				*e*SKP			16 31 53.0		
EYMN	**Ely**	**134.08**	**12**	PFAKE			16 28 40.0	+11	
EYMN				LR		LR			
	comp=Z,3µm,22.0s,MS6.0								
U14A	**Mt Trumbull**	**134.12**	**40**	⇑P		PKPdf	16 28 30.1	+0.5	
	baz=134								
IRM	**Iron Mountain**	**134.15**	**43**	⇑P		PKPdf	16 28 30.2	+0.5	
	baz=134,SNR=11								
NEE2	**Needles Airpor**	**134.16**	**42**	⇑P		PKPdf	16 28 29.7	0.0	
	baz=134								
Q18A	**Rafter H Ranch**	**134.22**	**35**	⇑P		PKPdf	16 28 29.5	-0.3	
	baz=134,SNR=26								
BC3	**Big Chuckw Mtn**	**134.22**	**44**	⇑P		PKPdf	16 28 30.6	+0.7	
	baz=134,SNR=14								
T15A	**Red Dirt Ranch**	**134.25**	**38**	⇓P		PKPdf	16 28 29.9	+0.1	
	baz=134								
S16A	**Weppner Ranch,**	**134.28**	**37**	⇓P		PKPdf	16 28 29.7	-0.1	
	baz=134,SNR=26								
DVTC	**Desert V Tower**	**134.30**	**46**	⇓P		PKPdf	16 28 30.7	+0.7	
	baz=134								
R17A	**Hanksville Air**	**134.35**	**36**	⇑P		PKPdf	16 28 29.7	-0.3	
	baz=134,SNR=22								
SWSC	**Sam W. Stewart**	**134.36**	**45**	⇓P		PKPdf	16 28 30.6	+0.4	
	baz=134,SNR=10								
W13A	**Hualapai Mount**	**134.46**	**42**	⇑P		PKPdf	16 28 30.9	+0.6	
	baz=134								
P19A	**Cripple Cowboy**	**134.49**	**33**	⇓P		PKPdf	16 28 30.1	-0.1	
	baz=134								
V14A	**Boquillas Ranc**	**134.65**	**40**	⇓P		PKPdf	16 28 31.3	+0.7	
	baz=134								
U15A	**North Rim**	**134.68**	**39**	⇑P		PKPdf	16 28 31.4	+0.7	
	baz=134								
PDMCI	**Parker Dam,Lak**	**134.76**	**43**	⇓P		PKPdf	16 28 31.0	+0.2	
	baz=135								
Q19A	**Hogan Spring (**	**134.81**	**34**	⇓P		PKPdf	16 28 31.0	+0.2	
	baz=135,SNR=37								
Y12C	**Blythe**	**134.81**	**44**	⇑P		PKPdf	16 28 30.9	-0.1	
	baz=135,SNR=8.7								
S17A	**Black Ridge (B**	**134.81**	**37**	⇑P		PKPdf	16 28 30.3	-0.5	
	baz=135,SNR=9.1								
T16A	**Glen Canyon Da**	**134.81**	**38**	⇓P		PKPdf	16 28 29.9	-1.0	
	baz=135,SNR=8.9								
R18A	**Canyonlands Na**	**134.84**	**35**	⇑P		PKPdf	16 28 30.7	-0.2	
	baz=135,SNR=38								
W14A	**Seligman**	**134.92**	**41**	⇑P		PKPdf	16 28 31.9	+0.8	
	baz=135								
GLA	**Glamis**	**134.99**	**45**	⇑P		PKPdf	16 28 31.2	-0.1	
	baz=135,SNR=14								
GLA	**Glamis**	**134.99**	**45**	*e*PKPdf		PKPdf	16 28 31.6	+0.2	
GLA				*e*SKP			16 31 56.7		
GLA				LR		LR			
	comp=Z,829nm,21.0s,MS5.4								
PHWY	**Pilot Hill**	**135.06**	**29**	*e*PKPdf		PKPdf	16 28 30.1	-1.1	
PHWY				*e*SKP			16 31 56.8		
V15A	**Kaibab Nationa**	**135.14**	**40**	⇑P		PKPdf	16 28 32.1	+0.6	
	baz=135,SNR=15								
T17A	**Navajo Res., N**	**135.23**	**37**	⇓P		PKPdf	16 28 32.1	+0.4	
	baz=135,SNR=16								
Y13A	**Salome**	**135.25**	**43**	⇑P		PKPdf	16 28 32.2	+0.4	
	baz=135								
S18A	**Hurst Farm, Bl**	**135.25**	**36**	⇑P		PKPdf	16 28 31.6	-0.1	
	baz=135,SNR=17								
R19A	**Curley Farm, L**	**135.27**	**35**	⇓P		PKPdf	16 28 31.8	+0.1	
	baz=135,SNR=15								
PV10	**Paradox Valley**	**135.34**	**34**	*e*PKPdf		PKPdf	16 28 30.9	-0.9	
112A	**Yuma**	**135.44**	**45**	⇑P		PKPdf	16 28 32.6	+0.4	
	baz=135								
W15A	**Williams**	**135.47**	**40**	⇑P		PKPdf	16 28 32.8	+0.7	
	baz=135								
X14A	**Yava**	**135.49**	**42**	⇑P		PKPdf	16 28 33.1	+0.9	
	baz=135								
U17A	**Shonto**	**135.58**	**38**	⇑P		PKPdf	16 28 33.4	+1.0	
	baz=135								
U16A	**Tuba City**	**135.59**	**38**	⇑P		PKPdf	16 28 33.0	+0.7	
	baz=135,SNR=15								
PLCA	**Paso Flores**	**135.65**	**189**	PKP		PKPdf	16 28 30.6	-1.7	
	comp=Z,11nm,1.0s,baz=164,slow=6.8,SNR=11								
PLCA	**Paso Flores**	**135.65**	**189**	PKIKP		PKPdf	16 28 30.6	-1.8	
PLCA				pmax		pmax			
	comp=Z,11nm,1.0s								
T18A	**Mexican Hat**	**135.70**	**36**	⇑P		PKPdf	16 28 32.2	-0.3	
	baz=136,SNR=31								
CAM3	**Guarapari**	**135.71**	**236**	(P)		pPKPdf	16 28 42.3	-6.1	
CAM3				*i*			16 28 51.3		
CAM3				*i*			16 29 05.2		
S19A	**Harvey Farm, M**	**135.71**	**35**	⇑P		PKPdf	16 28 32.5	-0.1	
	baz=136,SNR=7.7								
Y14A	**Wickenburg**	**135.73**	**42**	⇓P		PKPdf	16 28 32.6	-0.1	
	baz=136								
PV01	**Paradox Valley**	**135.77**	**34**	*e*PKPpre			16 28 18.4		
PV01				*e*PKPdf		PKPdf	16 28 32.7	0.0	
PV01				*e*SKP			16 31 58.2		
WUAZ	**Wupatki**	**135.83**	**39**	*e*PKPpre			16 28 25.5		
WUAZ				*e*PKPdf		PKPdf	16 28 33.2	+0.4	
WUAZ				*e*SKP			16 32 00.1		
WUAZ				LR		LR			
	comp=Z,1µm,20.0s,MS5.7								
113A	**Mohawk Valley,**	**135.88**	**44**	⇑P		PKPdf	16 28 32.8	-0.2	
	baz=136								
X15A	**Humboldt**	**135.91**	**41**	⇓P		PKPdf	16 28 33.5	+0.5	
	baz=136								
W16A	**Flagstaff**	**136.00**	**40**	⇑P		PKPdf	16 28 33.5	+0.4	
	baz=136								
Z14A	**Wintersburg**	**136.11**	**43**	⇓P		PKPdf	16 28 33.5	+0.1	
	baz=136								
ISCO	**Idaho Springs**	**136.13**	**30**	*e*PKIKP		PKPdf	16 28 31.9	-1.4	
ISCO				*e*			16 31 13.4		
ISCO				MLR		MLR			
	comp=Z,2µm,20.0s,MS5.8								
ISCO	**Idaho Springs**	**136.13**	**30**	*e*PKPdf		PKPdf	16 28 31.9	-1.4	
ISCO				*e*PP		PP	16 31 13.4	+0.9	
ISCO				*e*SKP			16 32 00.5		
ISCO				LR		LR			
	comp=Z,2µm,20.0s,MS5.8								
TRQA	**Tornquist**	**136.14**	**199**	*e*PKPpre			16 28 30.4		
TRQA				*e*SKP			16 31 59.4		
TRQA				LR		LR			
	comp=Z,2µm,21.0s,MS5.9								
Y15A	**Casa Rosa Ranc**	**136.17**	**42**	⇓P		PKPdf	16 28 34.0	+0.5	
	baz=136								
U18A	**Rough Rock, Ch**	**136.18**	**37**	⇓P		PKPdf	16 28 34.1	+0.6	
	baz=136,SNR=12								
COWI	**Conover**	**136.31**	**11**	*e*PKPdf		PKPdf	16 28 32.5	-0.9	
COWI				*e*PP		PP	16 31 08.7	-4.4	
COWI				LR		LR			
	comp=Z,3µm,22.0s,MS6.0								
T19A	**Beclabito**	**136.41**	**36**	⇑P		PKPdf	16 28 34.1	+0.3	
	baz=136								
MVCO	**Mesa Verde**	**136.45**	**35**	*e*PKPdf		PKPdf	16 28 33.6	-0.3	
MVCO				*e*SKP			16 32 01.8		
MVCO				LR		LR			
	comp=Z,2µm,19.0s,MS5.8								
X16A	**Lo Mia Camp, P**	**136.47**	**41**	⇓P		PKPdf	16 28 34.4	+0.4	
	baz=136,SNR=11								
W17A	**Winslow**	**136.53**	**39**	⇓P		PKPdf	16 28 34.3	+0.1	
	baz=136,SNR=7.4								
V18A	**Granado**	**136.60**	**38**	⇓P		PKPdf	16 28 34.5	+0.3	
	baz=136,SNR=12								
ECSD	**EROS,Sioux Fal**	**136.61**	**19**	*e*PKPpre			16 28 30.0		
ECSD				*e*PP		PP	16 31 09.7	-5.5	
ECSD				*e*SKP			16 32 00.8		
ECSD				LR		LR			
	comp=Z,3µm,21.0s,MS6.0								
Z15A	**Gila River Ind**	**136.68**	**42**	⇓P		PKPdf	16 28 35.0	+0.5	
	baz=136								
Y16A	**Circle Bar Ran**	**136.78**	**41**	⇓P		PKPdf	16 28 35.1	+0.5	
	baz=137								
OGNE	**Ogallala**	**136.93**	**26**	PFAKE			16 28 40.0	+5.3	
OGNE				LR		LR			
	comp=Z,3µm,19.0s,MS6.0								
X17A	**Forest Lakes**	**136.94**	**40**	⇑P		PKPdf	16 28 35.5	+0.6	
	baz=137,SNR=15								
115A	**Sonoran Desert**	**136.98**	**43**	⇑P		PKPdf	16 28 35.5	+0.5	
	baz=137								
214A	**Organ Pipe Nat**	**137.01**	**44**	⇓P		PKPdf	16 28 35.3	+0.2	
	baz=137								
W18A	**Petrified Fore**	**137.11**	**38**	⇓P		PKPdf	16 28 35.3	+0.1	
	baz=137,SNR=14								
Z16A	**Peralta Trail,**	**137.14**	**42**	⇑P		PKPdf	16 28 35.7	+0.3	
	baz=137								
V19A	**Window Rock**	**137.14**	**37**	⇓P		PKPdf	16 28 35.8	+0.5	
	baz=137,SNR=22								
Y17A	**Roosevelt**	**137.31**	**41**	⇓P		PKPdf	16 28 35.6	0.0	
	baz=137,SNR=12								
PKME	**Peaks-Kenny Pk**	**137.32**	**350**	*e*PKPpre			16 28 31.4		
PKME				*e*PP		PP	16 31 16.2	-3.2	
PKME				*e*SKP			16 31 59.7		
PKME				LR		LR			
	comp=Z,3µm,22.0s,MS5.9								
W19A	**Sanders**	**137.33**	**38**	⇓P		PKPdf	16 28 35.9	+0.2	
	baz=137,SNR=12								
X18A	**Snowflake**	**137.36**	**39**	⇓P		PKPdf	16 28 36.0	+0.3	
	baz=137,SNR=6.1								
LPA	**La Plata**	**137.39**	**205**	*ce*P		Pdif	16 25 38.0	-5.0	
LPA				*ep*PKP		pPKPdf	16 28 45.0	-6.2	
LPA				*e*SKP			16 32 05.0		
LPA				*e*SKS		SKSdf	16 35 45.0	+2.4	
LPA									
	comp=Z,1µm,19.0s								
116A	**Eloy**	**137.42**	**43**	⇓P		PKPdf	16 28 36.3	+0.4	
	baz=137								
SDCO	**Great Sand Dun**	**137.73**	**32**	*e*PKPpre			16 28 25.7		
SDCO				*e*PKPdf		PKPdf	16 28 35.7	-0.6	
SDCO				*e*PP		PP	16 31 23.3	+0.7	
SDCO				LR		LR			
	comp=Z,2µm,22.0s,MS5.8								
Y18A	**Canyon Day Jun**	**137.78**	**40**	⇓P		PKPdf	16 28 37.3	+0.8	
	baz=138								
Z17A	**San Carlos Hig**	**137.80**	**41**	⇓P		PKPdf	16 28 37.5	+0.9	
	baz=138								
X19A	**St. Johns**	**137.84**	**39**	⇑P		PKPdf	16 28 37.4	+0.8	
	baz=138,SNR=15								
216A	**Three Points,**	**137.92**	**43**	⇓P		PKPdf	16 28 36.9	+0.1	
	baz=138								
117A	**Oracle**	**138.07**	**42**	⇓P		PKPdf	16 28 37.7	+0.7	
	baz=138,SNR=5.6								
Y19A	**Nutrioso**	**138.17**	**39**	⇑P		PKPdf	16 28 37.5	+0.3	
	baz=138								
TUC	**Tucson**	**138.19**	**43**	*e*PKPdf		PKPdf	16 28 26.7	-11	
TUC				*e*SKP			16 32 06.5		
TUC				LR		LR			
	comp=Z,1µm,20.0s,MS5.7								
Z18A	**Geronimo**	**138.22**	**41**	⇑P		PKPdf	16 28 37.6	+0.3	
	baz=138								
GLMI	**Grayling**	**138.22**	**6**	PFAKE			16 28 50.0	+13	
GLMI				LR		LR			
	comp=Z,3µm,20.0s,MS6.0								
217A	**Green Valley**	**138.49**	**43**	⇑P		PKPdf	16 28 38.2	+0.3	
	baz=138,SNR=6.1								
118A	**Homack Ranch,**	**138.54**	**42**	⇑P		PKPdf	16 28 37.8	-0.1	
	baz=138,SNR=13								
Z19A	**T-Link Ranch,**	**138.59**	**40**	⇓P		PKPdf	16 28 38.4	+0.4	
	baz=138								
LONY	**Lake Ozonia**	**138.61**	**356**	*e*PKPpre			16 28 24.4		
LONY				*e*PKPdf		PKPdf	16 28 36.5	-1.1	
LONY				LR		LR			
	comp=Z,3µm,20.0s,MS6.0								
LBNH	**Lisbon**	**138.71**	**353**	*e*PKIKP		PKPdf	16 28 32.7	-5.2	
LBNH				*e*			16 31 25.1		
LBNH				MLR		MLR			
	comp=Z,3µm,20.0s,MS6.0								
218A	**Dragoon**	**138.90**	**42**	⇓P		PKPdf	16 28 38.9	+0.3	
	baz=139,SNR=5.8								
119A	**Ashpeak Ranch,**	**138.90**	**41**	⇑P		PKPdf	16 28 39.0	+0.4	
	baz=139,SNR=7.0								
MDV	**Middlebury**	**139.10**	**354**	*e*PKPdf		PKPdf	16 28 37.0	-1.6	
MDV				*e*PP		PP	16 31 28.1	-2.2	
JFWS	**Jewell Farm**	**139.13**	**13**	*e*PKIKP		PKPdf	16 28 35.9	-2.8	
JFWS				*e*			16 31 26.9		
JFWS				MLR		MLR			
	comp=Z,3µm,20.0s,MS6.0								
LAZ	**Ladron**	**139.18**	**37**	*e*PKPpre			16 28 31.7		
LAZ				*e*PKPdf		PKPdf	16 28 39.4	+0.3	
LAZ				*e*PP		PP	16 31 20.1	-12	
LAZ				*e*SKP			16 32 10.3		
ANMO	**Albuquerque**	**139.21**	**36**	*e*PKHKP			16 28 29.6		
ANMO				*e*			16 28 39.4		
ANMO				MLR		MLR			
	comp=Z,2µm,19.0s								
ANMO	**Albuquerque**	**139.21**	**36**	*e*PKPpre			16 28 29.6		
ANMO				*e*PKPdf		PKPdf	16 28 39.4	+0.3	
ANMO				*e*SKP			16 32 10.1		
ANMO				LR		LR			
	comp=Z,2µm,19.0s,MS5.8								
NCB	**Newcomb**	**139.22**	**355**	*e*PKPpre			16 28 27.6		
NCB				*e*PKPdf		PKPdf	16 28 38.6	-0.2	
NCB				*e*PP		PP	16 31 29.6	-1.5	
NCB				*e*SKP			16 32 08.5		
NCB				LR		LR			
	comp=Z,3µm,21.0s,MS5.9								
318A	**Bisbee**	**139.26**	**43**	⇓P		PKPdf	16 28 39.4	+0.1	
	baz=139,SNR=11								
HNH	**Hanover**	**139.28**	**353**	*e*PKPdf		PKPdf	16 28 37.1	-1.9	
HNH				*e*PP		PP	16 31 28.4	-3.1	
219A	**White Tail Can**	**139.41**	**42**	⇓P		PKPdf	16 28 39.9	+0.4	
	baz=139,SNR=43								
LENM	**Lemitar**	**139.44**	**37**	*e*PKPdf		PKPdf	16 28 39.3	-0.3	
LENM				*e*SKP			16 32 05.0		
Y22C	**IRIS PASSCAL I**	**139.54**	**37**	⇑P		PKPdf	16 28 40.0	+0.3	
	baz=139								
LPM	**Los Pinos Moun**	**139.55**	**37**	*e*PKPpre			16 28 32.8		
LPM				*e*PKPdf		PKPdf	16 28 40.1	+0.3	
LPM				*e*PP		PP	16 31 21.6	-13	
LPM				*e*SKP			16 32 10.6		
SPB	**Sao Paulo**	**139.58**	**227**	*e*PKPdf		PKPdf	16 28 40.0	-0.1	
BNM	**Barren Site**	**139.66**	**37**	*e*PKPpre			16 28 30.3		
BNM				*e*PKPdf		PKPdf	16 28 39.9	-0.1	
BNM				*e*PP		PP	16 31 31.8	-2.9	
BNM				*e*SKP			16 32 11.3		
CBKS	**Cedar Bluff**	**139.68**	**26**	*e*PKHKP			16 28 31.4		
CBKS				MLR		MLR			
	comp=Z,4µm,19.0s,MS6.2								
319A	**Douglas**	**139.78**	**42**	⇓P		PKPdf	16 28 40.6	+0.4	
	baz=140,SNR=8.0								
HRV	**Adam Dziewonsk**	**140.37**	**352**	*e*PKIKP		PKPdf	16 28 38.9	-2.1	
HRV				*e*			16 31 37.9		
HRV				MLR		MLR			
	comp=Z,3µm,20.0s,MS6.0								
WES	**Weston**	**140.45**	**351**	PFAKE			16 28 50.0	+8.9	
WES				LR		LR			
	comp=Z,3µm,20.0s,MS6.0								
QUA2	**Belchertown**	**140.70**	**353**	*e*PKPdf		PKPdf	16 28 40.8	-0.8	
KSU1	**Kansas State U**	**140.71**	**22**	*e*PKPdf		PKPdf	16 28 38.6	-3.1	
KSU1				LR		LR			
	comp=Z,3µm,21.0s,MS6.1								
BINY	**Binghamton**	**141.11**	**357**	*e*PKPpre			16 28 33.7		
BINY				*e*PKPdf		PKPdf	16 28 41.6	-0.7	
BINY				*e*PP		PP	16 31 39.7	-3.0	
BINY				LR		LR			
	comp=Z,3µm,20.0s,MS6.1								
AMTX	**Amarillo**	**141.91**	**31**	*e*PKPpre			16 28 38.3		
AMTX				*e*PKPdf		PKPdf	16 28 44.1	+0.1	
AMTX				LR		LR			
	comp=Z,3µm,22.0s,MS6.0								
PAL	**Palisades**	**142.13**	**354**	PKIKP		PKPdf	16 28 39.3	-4.9	
PAL	**Palisades**	**142.13**	**354**	*e*PKPdf		PKPdf	16 28 36.2	-8.0	
CPNY	**Central Park**	**142.35**	**354**	*e*PKPdf		PKPdf	16 28 43.0	-1.6	
FCH	**Farellones**	**142.81**	**192**	*i* P		PKPdf	16 28 40.1	-5.5	
ACSO	**Alum Creek Sta**	**142.94**	**6**	*e*PKPpre			16 28 39.7		
ACSO				*e*PKPdf		PKPdf	16 28 45.0	-0.7	
ACSO				*e*PP		PP	16 31 48.8	-5.0	
ACSO				LR		LR			
	comp=Z,3µm,20.0s,MS6.0								
MVL	**Millersville**	**143.32**	**357**	*e*PKPpre			16 28 32.7		
MVL				*e*SKP			16 32 10.0		
CCM	**Cathedral Cave**	**143.45**	**17**	*e*PKHKP			16 28 41.5		
CCM				MLR		MLR			
	comp=Z,3µm,19.0s,MS6.1								
WMOK	**Wichita Mounta**	**143.47**	**28**	*e*PKHKP			16 28 41.7		
WMOK				MLR		MLR			
	comp=Z,4µm,20.0s,MS6.2								
BLO	**Bloomington**	**143.49**	**10**	*e*PKIKP		PKPdf	16 28 42.5	-4.1	
OLIL	**Olney**	**143.60**	**13**	*e*PKPdf		PKPdf	16 28 43.0	-3.9	
MCWV	**Mont Chateau**	**143.70**	**2**	*e*PKPdf		PKPdf	16 28 42.6	-4.4	
MCWV				LR		LR			
	comp=Z,5µm,21.0s,MS6.3								
FVM	**French Village**	**143.75**	**16**	*e*PKIKP		PKPdf	16 28 42.7	-4.4	
SDMD	**Soldier's Deli**	**143.93**	**358**	*e*PKPdf		PKPdf	16 28 43.3	-4.1	
CFAA	**Coronel Fontan**	**143.99**	**195**	PKP		PKPdf	16 28 45.4	-2.4	
	comp=Z,7.1nm,0.8s,baz=155,slow=3.9,SNR=49								
CFAA				pPKP		pPKPdf	16 29 03.6	+0.4	
	comp=Z,26nm,0.8s,baz=216,slow=1.8,SNR=15								
CPUP	**Villa Florida**	**144.12**	**214**	PKP		PKPdf	16 28 46.2	-1.9	
	comp=Z,27nm,0.9s,baz=107,slow=3.5,SNR=40								
CPUP	**Villa Florida**	**144.12**	**214**	PKIKP		PKPdf	16 28 46.3	-1.8	
CPUP				pmax		pmax			

CNNC					LR	LR			
	comp=Z,4μm,22.0s,MS6.1								
BBSR	**BB Station**	**148.18**	**337**	*e*PKPdf	PKPdf	16 28 54.0	-0.9		
BBSR				*e*PKPab	PKPbc	16 28 57.3	-0.8		
BBSR				*e*SKP		16 32 26.5			
BBSR				LR	LR				
	comp=Z,3μm,22.0s,MS6.0								
HKT	**Hockley**	**148.81**	**30**	*e*PKIKP	PKPdf	16 28 55.4	-0.5		
HKT				*e*		16 28 59.7			
HKT				MLR	MLR				
	comp=Z,3μm,22.0s,MS6.1								
LHS	**Liberty Hill**	**148.83**	**3**	PKHKP		16 28 52.7			
JSC	**Jenkinsville**	**148.99**	**4**	*e*PKIKP	PKPdf	16 28 55.6	-0.5		
JSC				*e*		16 28 59.1			
VBMS	**Vicksburg**	**149.06**	**20**	PFAKE		16 29 10.0	+14		
VBMS				LR	LR				
	comp=Z,3μm,20.0s,MS6.0								
LRAL	**Lakeview Retre**	**149.31**	**14**	*e*PKPdf	PKPdf	16 28 55.2	-1.5		
LRAL				LR	LR				
	comp=Z,3μm,20.0s,MS6.1								
KVTX	**Kingsville**	**149.60**	**35**	*e*PKP	PKPdf	16 28 58.2	+0.9		
KVTX				LR	LR				
	comp=Z,2μm,20.0s,MS6.0								
GOGA	**Godfrey**	**149.62**	**8**	*e*PKPdf	PKPdf	16 28 56.4	-0.8		
GOGA				*e*PKPbc	PKPbc	16 29 00.8	-1.0		
GOGA				LR	LR				
	comp=Z,4μm,20.0s,MS6.2								
COW	**Cow Castle Cre**	**149.92**	**3**	*e*PKPdf	PKPdf	16 28 57.0	-0.6		
COW				*e*PKPbc	PKPbc	16 29 02.0	-0.5		
NHSC	**New Hope**	**150.22**	**3**	*e*PKPdf	PKPdf	16 28 57.5	-0.6		
NHSC				*e*PKPbc	PKPbc	16 29 02.4	-0.8		
NHSC				LR	LR				
	comp=Z,4μm,20.0s,MS6.2								
BRAL	**Brewton**	**151.23**	**15**	*e*PKPdf	PKPdf	16 28 59.4	-0.3		
BRAL				*e*PKPbc	PKPbc	16 29 05.4	-0.3		
BRAL				LR	LR				
	comp=Z,3μm,22.0s,MS6.0								
LVC	**Limon Verde**	**152.63**	**200**	PKP	PKPdf	16 29 03.3	+1.3		
	comp=Z,14nm,1.0s,baz=166,slow=3.2,SNR=10								
LVC				PKPbc	PKPbc	16 29 10.3	+1.2		
	comp=Z,59nm,0.9s,baz=144,slow=1.4,SNR=30								
LVC	**Limon Verde**	**152.63**	**200**	*e*PKPdf	PKPdf	16 29 02.7	+0.7		
LVC				*e*PKPbc	PKPbc	16 29 10.3	+1.2		
LVC				LR	LR				
	comp=Z,1μm,19.0s,MS5.8								
SIV	**San Ignacio**	**154.20**	**222**	PKP	PKPdf	16 29 04.0	-0.5		
	comp=Z,10nm,0.9s,baz=146,slow=2.6,SNR=7.7								
DWPF	**Disney**	**155.09**	**6**	PFAKE		16 29 10.0	+4.6		
DWPF				LR	LR				
	comp=Z,3μm,20.0s,MS6.1								
LPAZ	**La Paz**	**158.02**	**208**	PKP	PKPdf	16 29 10.1	+0.6		
	comp=Z,16nm,1.1s,baz=34,slow=2.2,SNR=48								
LPAZ	**La Paz**	**158.02**	**208**	*e*PKPdf	PKPdf	16 29 10.0	+0.6		
LPAZ				LR	LR				
	comp=Z,988nm,21.0s,MS5.6								
BBGH	**Gun Hill**	**158.72**	**299**	PFAKE		16 29 20.0	+10		
BBGH				LR	LR				
	comp=Z,4μm,22.0s,MS6.2								
FDF	**Fort de France**	**159.30**	**305**	*e*PKIKP	PKPdf	16 29 10.5	-0.5		
MTP	**Monte Pirata**	**160.42**	**320**	*e*PKPdf	PKPdf	16 29 11.8	-0.4		
HUMP	**Col San Antoni**	**160.58**	**321**	*e*PKPdf	PKPdf	16 29 11.2	-1.2		
TEIG	**Tepich**	**160.65**	**28**	*e*PKPdf	PKPdf	16 29 11.0	-1.4		
TEIG				*e*PP	PP	16 33 34.0	-1.5		
TEIG				LR	LR				
	comp=Z,2μm,20.0s								
CPD	**Cerro la Pandu**	**160.70**	**321**	*e*PKIKP	PKPdf	16 29 11.5	-1.0		
CPD				*e*		16 29 53.9			
CPD				*e*		16 33 35.7			
SJG	**San Juan**	**160.79**	**321**	*e*PKIKP	PKPdf	16 29 11.7	-0.9		
SJG				MLR	MLR				
	comp=Z,3μm,22.0s								
GRGR	**Grenville**	**160.99**	**299**	PFAKE		16 29 20.0	+7.1		
GRGR				LR	LR				
	comp=Z,842nm,20.0s								
NNA	**Nana**	**164.80**	**187**	PKP	PKPdf	16 29 16.7	0.0		
	comp=Z,34nm,1.0s,baz=298,slow=1.2,SNR=5.5								
NNA	**Nana**	**164.80**	**187**	*e*PKPdf	PKPdf	16 29 15.9	-0.7		
NNA				LR	LR				
	comp=Z,2μm,20.0s								
TGUH	**Tegucigalpa,Un**	**166.26**	**38**	*e*PKPdf	PKPdf	16 29 15.5	-2.3		
TGUH				*e*		16 29 32.0			
TGUH				*e*PKPdf	PKPab	16 30 18.4	-0.4		
TGUH				*e*PP	PP	16 34 02.6	-2.8		
TGUH				LR	LR				
	comp=Z,2μm,20.0s								
PAYG	**Puerto Ayora**	**167.73**	**108**	PFAKE		16 29 30.0	+11		
PAYG				LR	LR				
	comp=Z,2μm,22.0s								
ATAH	**Atahualpa**	**169.85**	**181**	PKP	PKPdf	16 29 20.9	+0.5		
	baz=200,slow=3.0								
SDV	**Santo Domingo**	**170.25**	**306**	PFAKE		16 29 30.0	+9.4		
SDV				LR	LR				
	comp=Z,896nm,22.0s								
JTS	**JuntasAbangare**	**170.58**	**41**	PFAKE		16 29 30.0	+9.3		
JTS				LR	LR				
	comp=Z,3μm,22.0s								
BCIP	**Isla Barro Col**	**173.96**	**11**	PFAKE		16 29 30.0	+7.8		
BCIP				LR	LR				
	comp=Z,2μm,20.0s								
ROSC	**El Rosal**	**175.41**	**291**	PKP	PKPdf	16 29 22.0	-0.7		
	comp=Z,29nm,1.0s,baz=270,slow=23,SNR=23								
OTAV	**Otavalo**	**177.04**	**184**	*e*PKPdf	PKPdf	16 29 22.8	-0.2		
OTAV				*e*PKPab	PKPab	16 31 08.6	+2.1		
OTAV				*e*PP	PP	16 34 58.7	+1.0		
OTAV				LR	LR				
	comp=Z,3μm,22.0s								

KRSC 13 16:28:24.0±1.0, 5258N×15948E, h89km±59km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLC	**Nalytchevo**	**0.60**	**352**	*e*P	Pn	16 28 40.1	+0.7
NLC				*e*S	Sn	16 28 52.2	+1.3
RUS	**Russkaya**	**0.61**	**256**	*e*P	Pn	16 28 39.5	0.0
RUS				*e*S	Sn	16 28 51.1	0.0
SPN	**Mys Shipunski**	**0.61**	**32**	*e*P	Pn	16 28 40.8	+1.2
SPN				*e*S	Sn	16 28 52.6	+1.4
PET	**Petropavlovsk**	**0.67**	**312**	*e*P	Pn	16 28 40.1	0.0
PET				*e*S	Sn	16 28 52.1	0.0
AVH	**Avacha**	**0.82**	**327**	*e*P	Pn	16 28 42.4	+0.8
AVH				*e*S	Sn	16 28 55.8	+1.1
GRL	**Gorelyy**	**0.86**	**269**	*e*P	Pn	16 28 42.9	+0.9
GRL				*e*S	Sn	16 28 56.7	+1.2
GNL	**Ganaly**	**1.45**	**321**	*e*P	Pn	16 28 49.0	0.0
GNL				*e*S	Sn	16 29 07.2	-0.7
KII	**Karymskiy**	**1.46**	**359**	*e*P	Pn	16 28 49.7	+0.6
KII				*e*S	Sn	16 29 08.8	+0.7
MIPR	**Malaya Ipel'ka**	**1.69**	**261**	*e*P	Pn	16 28 52.2	+0.1
MIPR				*e*S	Sn	16 29 12.6	-0.9
MKZ	**Mys Kozlova**	**2.39**	**33**	*e*P	Pn	16 29 02.0	+0.7
MKZ				*e*S	Sn	16 29 29.4	-0.4
TUMR	**Tumrok**	**2.74**	**8**	*e*S	Sn	16 29 38.1	0.0
ALID	**Alaid**	**2.98**	**237**	*e*P	Pn	16 29 10.6	+1.4
ALID				*e*S	Sn	16 29 44.5	+0.4
KMNR	**Kamenistaya**	**3.21**	**8**	*e*P	Pn	16 29 14.5	+2.2
KMNR				*e*S	Sn	16 29 50.6	+1.1
BZMR	**Bezymyannaya**	**3.41**	**10**	*e*P	Pn	16 29 17.0	+2.0
BZMR				S	Sn	16 29 56.1	+1.7
KIRR	**Kirishev**	**3.42**	**8**	*e*P	Pn	16 29 17.0	+2.0
KPT	**Kopyto**	**3.42**	**7**	P	Pn	16 29 16.5	+1.4
KPT				*e*S	Sn	16 29 54.7	+0.2
KOZ	**Kozyrevsk**	**3.49**	**4**	P	Pn	16 29 17.0	+1.0
ZLN	**Zelenaya**	**3.53**	**12**	*e*P	Pn	16 29 18.1	+1.6
ZLN				*e*S	Sn	16 29 56.7	-0.5
KRSR	**Krestovskiy**	**3.70**	**9**	*e*P	Pn	16 29 20.8	+2.0
SRDR	**Sredinnyy**	**3.75**	**2**	*e*P	Pn	16 29 20.2	+0.7
KLY	**Klyuchi**	**3.80**	**10**	*e*P	Pn	16 29 22.4	+2.2
KBTR	**Krutoberegovo**	**4.13**	**27**	*e*P	Pn	16 29 25.4	+0.8
KBTR				*e*S	Sn	16 30 10.2	-1.4

*IDC **13** 16:38:52.5±1.1, 271S×9957E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.8/20, mbtmp4.0/6, Error ellipse: s-maj=53.4km s-min=20.0km az=61.0*
*ISCJB **13** 16:38:56.4±1.0, 25S±02×99E±03, h33km, mb4.2/7, Error ellipse: s-maj=49.6km s-min=16.4km az=150.7*
*MOS **13** 16:38:58.9±0.6, 204S×10047E, h33km, mb4.9/2, Error ellipse: s-maj=58.1km s-min=24.3km az=116.3*
*NEIC **13** 16:38:58.0±1.0, 261S×9976E, h35km, Error ellipse: s-maj=48.0km s-min=16.2km az=62.0*

ISC 13 16:38:58.2±1.0, 26S±02×998E±03, h35km, n10, σ1s01/9, mb4.2/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.95**	**358**	P	**P**	**16 43 36.3**	**-1.9**
	1.2nm,0.5s,baz=188,slow=10,SNR=14						
WRA	**Warramunga Arr**	**37.88**	**120**	P	**P**	**16 46 11.9**	**-0.3**
	0.8nm,0.6s,mb3.6,baz=303,slow=9.0,SNR=13						
WRA				PcP	PcP	16 48 29.4	+1.3
	0.6nm,0.9s,baz=326,slow=2.2,SNR=4.9						
ASAR	**Alice Springs**	**39.08**	**125**	P	**P**	**16 46 23.1**	**+0.8**
	1.0nm,0.6s,mb3.7,baz=303,slow=8.3,SNR=27						
MKAR	**Makanchi Array**	**51.55**	**345**	P	**P**	**16 48 00.9**	**+0.2**
	1.6nm,0.5s,mb4.2,baz=148,slow=8.2,SNR=19						
ZAK	**Zakamensk**	**52.87**	**3**	*e*P	**P**	**16 48 17.4**	**+7.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.9s,mb4.1						
KURK	**Kurchatov**	**56.13**	**344**	*e*P	**P**	**16 48 35.1**	**+1.0**
KURK				pmax	pmax		
	comp=Z,35nm,1.5s,mb5.2						
KURK	**Kurchatov**	**56.13**	**344**	*e*P	**P**	**16 48 35.1**	**+1.0**
	comp=Z,35nm,1.5s,mb5.2						
ARCES	**ARCESS Array B**	**86.97**	**340**	P	**P**	**16 51 40.2**	**+0.8**
	comp=Z,3.9nm,1.1s,mb4.6,baz=91,slow=6.1,SNR=3.5						
QSPA	**South Pole Qui**	**87.36**	**180**	P	**P**	**16 51 40.0**	**-1.1**
	comp=Z,0.9nm,0.5s,mb4.2,baz=297,slow=6.2,SNR=14						
TXAR	**Lajitas Array**	**145.32**	**38**	PKPbc	PKPbc	16 58 33.3	+0.4
	comp=Z,0.5nm,0.5s,baz=239,slow=0.9,SNR=8.0						

NEIC 13 16:39:25.3, 3845S×17595E, h167km, MG4.3(WEL), 1D, After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WATZ	**Wairara**	**0.31**	**213**	P	Pn	16 39 48.1	+0.3
RATZ	**Rangitukua**	**0.44**	**198**	P	Pn	16 39 48.3	0.0
HATZ	**Hinemaiaia**	**0.46**	**166**	P	Pn	16 39 48.3	0.0
RITZ	**Rihia Road**	**0.53**	**188**	P	Pn	16 39 49.0	+0.3
KATZ	**Kakaramea**	**0.56**	**201**	P	Pn	16 39 49.0	+0.2
WTVZ	**West Tongariro**	**0.72**	**205**	P	Pn	16 39 49.8	+0.1
TWVZ	**Taurewa**	**0.74**	**213**	P	Pn	16 39 49.9	+0.1
NGZ	**Ngauruhoe**	**0.78**	**200**	P	Pn	16 39 50.3	+0.3
WPVZ	**Whakapapa**	**0.82**	**203**	P	Pn	16 39 50.1	-0.2
BKZ	**Black Stump Fm**	**0.83**	**150**	⇓P	Pn	16 39 50.6	+0.2
TUVZ	**Tukino**	**0.85**	**196**	P	Pn	16 39 50.9	+0.4
HIZ	**Hauiti**	**0.86**	**265**	P	Pn	16 39 50.5	-0.1
FWVZ	**Far West T-bar**	**0.86**	**201**	P	Pn	16 39 50.6	0.0
DRZ	**Dome Shelter**	**0.88**	**200**	P	Pn	16 39 51.3	+0.6
WNVZ	**Wahianoa**	**0.92**	**197**	P	Pn	16 39 51.3	+0.3
URZ	**Urewera**	**0.93**	**79**	P	Pn	16 39 50.8	-0.3
MOVZ	**Moawhango**	**0.97**	**189**	P	Pn	16 39 51.2	-0.2
VRZ	**Vera Road**	**1.15**	**234**	P	Pn	16 39 52.8	-0.1
MKAZ	**Moumakai**	**1.47**	**335**	P	Pn	16 39 55.9	0.0
RAEZ	**Rainy Point**	**1.48**	**235**	P	Pn	16 39 56.3	+0.4
WAZ	**Wanganui**	**1.50**	**210**	P	Pn	16 39 55.9	-0.3
TSZ	**Takapari Road**	**1.61**	**180**	P	Pn	16 39 56.6	-0.6
NEZ	**North Egmont**	**1.66**	**240**	P	Pn	16 39 58.3	+0.5
PKE	**Pukeiti**	**1.70**	**243**	P	Pn	16 39 58.6	+0.4
PUZ	**Puketiti**	**1.85**	**79**	P	Pn	16 39 58.5	-0.3
MRZ	**Mangatainoka R**	**2.23**	**187**	P	Pn	16 40 02.7	-1.3
KIW	**Kapiti Island**	**2.54**	**198**	P	Pn	16 40 05.9	-1.8
MTW	**Mount Morrison**	**2.73**	**187**	P	Pn	16 40 08.0	-1.9
CAW	**Cannon Point**	**2.74**	**194**	P	Pn	16 40 08.2	-1.9
MRW	**Makara Radio**	**2.94**	**199**	P	Pn	16 40 10.3	-2.2
PAWZ	**Paruwai Farm**	**2.96**	**188**	P	Pn	16 40 10.6	-2.1
WEL	**Wellington**	**2.98**	**197**	P	Pn	16 40 10.7	-2.3
MSWZ	**Moikau Station**	**3.01**	**190**	P	Pn	16 40 11.1	-2.3
SNZO	**South Karori**	**3.01**	**198**	P	Pn	16 40 11.1	-2.3
TCW	**Tory Channel**	**3.05**	**205**	P	Pn	16 40 11.7	-2.1
BHW	**Baring Head**	**3.07**	**195**	P	Pn	16 40 11.8	-2.3
NNZ	**Nelson**	**3.40**	**215**	P	Pn	16 40 15.6	-2.7
QRZ	**Quartz Range**	**3.55**	**227**	P	Pn	16 40 17.2	-3.0
BSWZ	**Blackbirch Sta**	**3.63**	**205**	P	Pn	16 40 18.6	-2.6
THZ	**Tophouse**	**4.05**	**214**	P	Pn	16 40 23.4	-3.2
KHZ	**Kahutara**	**4.37**	**204**	P	Pn	16 40 27.7	-3.0
LTZ	**Lake Taylor**	**5.16**	**212**	P	Pn	16 40 37.0	-3.9
CRLZ	**Canterbury Las**	**5.71**	**205**	P	Pn	16 40 43.7	-4.5
MQZ	**McQueen's Vall**	**5.81**	**204**	P	Pn	16 40 44.7	-4.9
RPZ	**Rata Peaks**	**6.43**	**214**	P	Pn	16 40 53.6	-4.1
ODZ	**Otahua Downs**	**7.69**	**209**	P	Pn	16 41 10.2	-4.1
WKZ	**Wanaka**	**8.22**	**217**	P	Pn	16 41 16.1	-5.2
TUZ	**Tuapeka**	**8.84**	**210**	P	Pn	16 41 26.0	-3.6
WHZ	**Wether Hill Ro**	**9.52**	**216**	P	Pn	16 41 33.6	-4.9

*BJI **13** 16:51:11.9, 4375N×144.90E, h156km, mb4.4*
*ISCJB **13** 16:51:13.0±0.3, 4400N±004×14487E±004, h154km±2km, mb4.3/26, Error ellipse: s-maj=7.3km s-min=4.9km az=158.4*
*MOS **13** 16:51:12.9±0.8, 4402N×14481E, h157km, mb4.1/8, Error ellipse: s-maj=16.7km s-min=11.5km az=52.4*
*NEIC **13** 16:51:13.4±0.6, 4407N×14479E, h141km±6km, mb4.4/5, Error ellipse: s-maj=9.9km s-min=5.8km az=141.0*
*JMA **13** 16:51:13.7±0.2, 4394N×14486E, h155km±2km, M3.8*
JMA Felt I J1.
*IDC **13** 16:51:14.9±1.1, 4401N×14476E, h157km±8km, mb3.7/11, mb1 3.8/13, mb1mx3.6/25, mbtmp3.6/13, Error ellipse: s-maj=20.4km s-min=13.0km az=160.0*

ISC 13 16:51:14.1±0.3, 4400N±004×14487E±004, h149km±2km, n70, σ0s76/86, mb4.3/26, 12C-3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JRA	**Rausu**	**0.19**	**107**	⇓P	**Pn**	**16 51 34.6**	**+0.4**
JRA				*e*S	**Sn**	**16 51 50.4**	**+0.9**
JNK	**Nakash**	**0.42**	**195**	⇑P	**Pn**	**16 51 35.0**	**0.0**
JNK				*e*S	**Sn**	**16 51 51.2**	**+0.3**
JTKR	**Abashiri--Toko**	**0.69**	**268**	⇑P	**Pn**	**16 51 36.6**	**+0.2**
JTKR				*e*S	**Sn**	**16 51 52.8**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**0.72**	**87**	⇓*i*PN	**Pn**	**16 51 37.0**	**+0.4**
YUK				*i* S	**Sn**	**16 51 55.0**	**+1.3**
YUK				pmax	pmax		
	comp=N,320nm,0.4s						
YUK				pmax	pmax		
	comp=E,350nm,0.4s						
YUK				pmax	pmax		
	comp=Z,2μm,0.4s						
YUK				pmax	pmax		
	comp=Z,7μm,0.8s						
YUK				smax			
	comp=N,3μm,0.7s						
YUK				smax			
	comp=E,2μm,0.6s						
YUK				smax			
	comp=N,10μm,1.0s						
YUK				smax			
	comp=E,10μm,1.2s						
NEM2	**Nemuro 2**	**0.90**	**134**	⇓P	**Pn**	**16 51 37.3**	**-0.6**
NEM2				*e*S	**Sn**	**16 51 54.7**	**-1.3**
JAK	**Akkeshi**	**1.01**	**187**	⇑P	**Pn**	**16 51 38.5**	**-0.4**
JAK				*e*S	**Sn**	**16 51 56.7**	**-1.0**
JAR	**Ashorobuto**	**1.06**	**229**	⇑P	**Pn**	**16 51 39.7**	**+0.4**
JAR				*e*S	**Sn**	**16 51 59.7**	**+1.2**
JMP	**Maruseppu**	**1.09**	**271**	⇑P	**Pn**	**16 51 39.5**	**0.0**
JOB	**Onbets**	**1.32**	**215**	⇑P	**Pn**	**16 51 41.8**	**0.0**
JOB				*e*S	**Sn**	**16 52 02.8**	**-0.1**
JKK2	**Kamakawa 2**	**1.54**	**266**	⇑P	**Pn**	**16 51 44.1**	**+0.2**
JKK2				*e*S	**Sn**	**16 52 07.3**	**+0.6**
ASAJ	**Asahikawa**	**1.64**	**275**	P	**Pn**	**16 51 45.5**	**+0.4**
	comp=E,94nm,0.3s,baz=96,slow=8.8,SNR=1024						
ASAJ				S	**Sn**	**16 52 09.2**	**+0.5**
	comp=E,7.0nm,0.3s,baz=245,slow=31,SNR=19						
ASAJ	**Asahikawa**	**1.64**	**275**	⇑P	**Pn**	**16 51 45.5**	**+0.5**
ASAJ				*e*S	**Sn**	**16 52 09.5**	**+0.7**
ASAJ	**Asahikawa**	**1.64**	**275**	PN	**Pn**	**16 51 45.5**	**+0.5**
ASAJ				S	**Sn**	**16 52 09.3**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,94nm,0.3s						
ASAJ				smax			
	comp=N,7.0nm,0.3s						
JCH	**Churui**	**1.76**	**219**	⇑P	**Pn**	**16 51 45.8**	**-0.7**
JCH				*e*S	**Sn**	**16 52 09.9**	**-1.3**
JFR	**Furan**	**1.85**	**244**	⇑P	**Pn**	**16 51 47.6**	**+0.2**
JFR				*e*S	**Sn**	**16 52 13.2**	**+0.3**
JSE	**Soyaes**	**1.90**	**301**	⇑P	**Pn**	**16 51 47.9**	**0.0**
JSE				*e*S	**Sn**	**16 52 13.3**	**-0.6**
JHR	**Hokuryu**	**2.29**	**265**	P	**Pn**	**16 51 53.2**	**+0.7**
JHR				*e*S	**Sn**	**16 52 23.3**	**+1.2**
JNBK	**Urakawa-nobuka**	**2.31**	**223**	⇑P	**Pn**	**16 51 51.5**	**-1.3**
ERM	**Erimo**	**2.34**	**213**	*e*Pn	**Pn**	**16 51 52.8**	**-0.4**
ERM				*e*Sn	**Sn**	**16 52 24.6**	**+1.2**
YSS	**Yuzh-Sakhalins**	**3.31**	**334**	*e*Pn	**Pn**	**16 52 03.4**	**-1.9**
MJAR	**Matsushiro Arr**	**9.01**	**217**	P	**Pn**	**16 53 20.8**	**-0.2**
	comp=N,0.4nm,0.3s,baz=22,slow=12,SNR=8.4						
SKR	**Severo-Kuril's**	**10.14**	**45**	*e*PN	**Pn**	**16 53 35.9**	**+0.1**
PETK	**Petropavlovsk-**	**12.45**	**38**	P	**Pn**	**16 54 04.0**	**-2.0**
	comp=N,0.7nm,0.3s,baz=218,slow=9.6,SNR=24						
PET	**Petropavlovsk**	**12.83**	**40**	*e*PN	**Pn**	**16 54 09.6**	**-1.3**
CN2	**Changchun**	**14.01**	**276**	*e*P	**Pn**	**16 54 25.3**	**-0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
KSRS	**Korea Array**	**14.40**	**249**	P	**Pn**	**16 54 29.5**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=64,slow=12,SNR=14						
ULN	**Ulaanbaatar**	**26.41**	**292**	*e*P	**P**	**16 56 35.7**	**-0.7**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	**26.41**	**292**	*e*P	**P**	**16 56 35.6**	**-0.8**
	comp=Z,2.0nm,0.6s,mb3.9						
SONM	**Songino Array**	**26.85**	**292**	P	**P**	**16 56 40.2**	**-0.2**
	comp=Z,4.6nm,0.8s,mb4.2,baz=84,slow=8.4,SNR=29						
SONM	**Songino Array**	**26.85**	**292**	P	**P**	**16 56 40.2**	**-0.2**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KMI	**Kunming**	**38.97**	**255**	P	**P**	**16 58 25.8**	**+0.2**
KMI				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.2						
PPLA	**Purkeypile**	**40.03**	**39**	*e*P	**P**	**16 58 35.1**	**+1.1**
	comp=Z,14nm,1.1s,mb4.5						
KDAK	**Kodiak Island**	**40.30**	**47**	P	**P**	**16 58 36.4**	**+0.1**
	comp=Z,4.6nm,0.6s,mb4.3,baz=273,slow=16,SNR=6.0						
BPAW	**Bear Paw Mtn.**	**40.53**	**37**	*e*P	**P**	**16 58 38.5**	**+0.4**
	comp=Z,2.9nm,0.7s,mb4.0						
KTH	**Kantishna Hill**	**40.58**	**38**	*e*P	**P**	**16 58 39.0**	**+0.6**
	comp=Z,16nm,0.9s,mb4.7						
MK31	**Makanchi Array**	**43.00**	**297**	*e*P	**P**	**16 58 57.2**	**-1.2**
MKAR	**Makanchi Array**	**43.00**	**297**	P	**P**	**16 58 57.7**	**-0.6**
	comp=Z,1.9nm,0.6s,mb3.9,baz=80,slow=8.7,SNR=19						
MKAR	**Makanchi Array**	**43.00**	**297**	P	**P**	**16 58 57.7**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**43.00**	**297**	P	**P**	**16 58 57.7**	**-0.6**
KURK	**Kurchatov**	**44.02**	**303**	P	**P**	**16 59 06.2**	**-0.3**
	comp=Z,1.0nm,0.5s,mb3.7,baz=72,slow=9.0,SNR=5.1						
KURK	**Kurchatov**	**44.02**	**303**	P	**P**	**16 59 06.2**	**-0.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
LSA	**Lhasa**	**44.54**	**270**	*e*P	**P**	**16 59 11.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**46.02**	**251**	P	**P**	**16 59 22.6**	**0.0**
	comp=Z,1.4nm,0.9s,mb3.6,baz=44,slow=7.0,SNR=9.3						
CMAR	**Chiang Mai Arr**	**46.02**	**251**	P	**P**	**16 59 22.6**	**0.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HYT	**Haines Junctio**	**47.22**	**41**	*e*P	**P**	**16 59 33.0**	**+1.6**
BVAR	**Borovoye Array**	**48.06**	**309**	P	**P**	**16 59 37.0**	**-1.0**
	comp=Z,0.5nm,0.4s,mb3.5,baz=77,slow=9.4,SNR=4.6						
BVAR	**Borovoye Array**	**48.06**	**309**	P	**P**	**16 59 37.0**	**-1.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TAPN	**Taplejung**	**48.36**	**270**	*e*P	**P**	**16 59 40.9**	**+0.3**
	comp=Z,9.1nm,0.3s,mb4.8						
ODAN	**Odare**	**48.88**	**269**	*e*P	**P**	**16 59 45.5**	**+0.9**
	comp=Z,8.3nm,0.6s,mb4.5						
JIRN	**Jiri**	**49.27**	**271**	*e*P	**P**	**16 59 48.1**	**+0.5**
	comp=Z,20nm,0.6s,mb5.0						
GUN	**Gumba**	**49.35**	**272**	*e*P	**P**	**16 59 48.7**	**+0.5**
	comp=Z,41nm,0.5s,mb5.3						
RAMN	**Ramite**	**49.39**	**270**	*e*P	**P**	**16 59 48.3**	**-0.2**
	comp=Z,55nm,0.6s,mb5.4						
KKN	**Kakani**	**49.86**	**272**	*e*P	**P**	**16 59 52.4**	**+0.4**
PKI	**Pulchoki**	**49.89**	**272**	*e*P	**P**	**16 59 51.8**	**-0.5**
	comp=Z,17nm,0.7s,mb4.8						
DMN	**Daman**	**50.09**	**272**	*e*P	**P**	**16 59 53.7**	**-0.1**
	comp=Z,12nm,0.5s,mb4.8						
GKN	**Gorkha**	**50.20**

mb1 5.1/31,mb1mx5.1/32,mbtmp5.1/31,MS5.2/24,
Ms1 5.2/24,ms1mx5.1/33,Error ellipse: s-maj=12.0km
s-min=6.9km az=48.0
DJA ***13*** *16:59:26.2,228S×99.78E,h30km,Mw5.6/44*
ISC 13 16:59:26.1±0.1,222S±002×9980E±002,h34km,
h34km±.8km:pP-P,n901,s1900/539,mb5.5/180,MS5.4/224,
165C-116D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMBI	**JAMBI**	**3.89**	**81**	P	**Pn**	**17 00 24.9**	**+1.5**
	0.0nm,0.0s						
TRSI	**Tarutung**	**4.30**	**349**	P	**Pn**	**17 00 28.7**	**-0.4**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.08**	**70**	P	**Pn**	**17 00 40.3**	**+0.4**
	0.0nm,0.0s						
KGM	**Kluang**	**5.49**	**40**	⇑P	**Pn**	**17 00 47.6**	**+2.1**
MYKOM	**Kota Tinggi**	**5.68**	**45**	⇑P	**Pn**	**17 00 50.1**	**+2.0**
KLI	**Kotabumi**	**5.69**	**118**	P	**Pn**	**17 00 48.6**	**+0.4**
	2µm,1.0s						
FRIM	**Kepong**	**5.72**	**19**	⇓P	**Pn**	**17 00 50.5**	**+1.8**
PPBI	**Pangkal Pinang**	**6.33**	**90**	P	**Pn**	**17 00 59.4**	**+2.3**
	124nm,1.3s						
IPM	**Ipoh**	**6.77**	**10**	⇓P	**Pn**	**17 01 05.3**	**+2.2**
SBJI	**Serang**	**7.41**	**122**	P	**Pn**	**17 01 13.5**	**+1.7**
	826nm,1.0s						
TPI	**Tanjungpandan**	**7.87**	**94**	P	**Pn**	**17 01 20.4**	**+2.3**
	177nm,0.9s						
DBJI	**Dramaga**	**8.16**	**122**	P	**Pn**	**17 01 21.5**	**-0.6**
	688nm,1.2s						
CBJI	**Citeko**	**8.17**	**121**	P	**Pn**	**17 01 24.3**	**+1.9**
	3µm,0.8s						
KTGM	**Kuala Trenggan**	**8.21**	**24**	⇓P	**Pn**	**17 01 24.9**	**+2.1**
SKJI	**Sukabumi**	**8.24**	**125**	P	**Pn**	**17 01 23.6**	**+0.3**
	991nm,0.9s						
BSI	**Banda Aceh**	**8.89**	**330**	P	**Pn**	**17 01 30.8**	**-1.4**
	217nm,0.9s						
LEM	**Lembang**	**9.04**	**121**	P	**Pn**	**17 01 35.7**	**+1.5**
	630nm,0.9s						
SNG	**Songkhla**	**9.37**	**5**	P	**Pn**	**17 01 39.0**	**+0.2**
	500nm,1.0s						
JCJI	**Jatiwangi**	**9.45**	**117**	P	**Pn**	**17 01 41.7**	**+1.8**
	614nm,0.9s						
COCO	**West Island**	**10.33**	**196**	*e*Pn	**Pn**	**17 01 44.5**	**-7.4**
	143nm,0.8s						
BJII	**Banjamegara**	**11.10**	**118**	P	**Pn**	**17 02 02.2**	**-0.3**
	184nm,1.4s						
KSM	**Kuching**	**11.13**	**71**	⇓P	**Pn**	**17 02 05.7**	**+2.7**
KSM	**Kuching**	**11.13**	**71**	*e*Pn	**Pn**	**17 02 03.9**	**+0.9**
PBKI	**Pangkalan Bun**	**11.87**	**93**	P	**Pn**	**17 02 17.6**	**+4.6**
	440nm,1.0s						
STKI	**Sintang**	**11.90**	**79**	P	**Pn**	**17 02 18.3**	**+4.9**
	108nm,1.1s						
SJI	**Sawahan**	**13.12**	**115**	P	**Pn**	**17 02 27.7**	**-2.4**
	250nm,1.0s						
SBUM	**Sibu**	**13.26**	**70**	⇑P	**Pn**	**17 02 34.7**	**+2.7**
KRKI	**Karangkates**	**13.91**	**116**	P	**Pn**	**17 02 42.7**	**+1.8**
	303nm,0.8s						
PLKI	**Palangkaraya**	**14.14**	**90**	P	**Pn**	**17 02 46.1**	**+2.1**
	631nm,1.0s						
KMMI	**Kalianget**	**14.91**	**109**	P	**Pn**	**17 02 54.7**	**+0.2**
	301nm,1.2s						
BBKI	**Banjar Baru**	**15.07**	**95**	P	**Pn**	**17 02 57.9**	**+1.2**
	451nm,0.8s						
NBBI	**Negara**	**15.97**	**113**	P	**Pn**	**17 03 18.2**	**+10**
	266nm,1.3s						
DNP	**Denpasar**	**16.62**	**113**	P	**Pn**	**17 03 23.9**	**+7.3**
	322nm,0.7s						
KHKI	**Kahang-Kahang**	**16.88**	**112**	P	**Pn**	**17 03 21.2**	**+1.4**
	199nm,0.8s						
MTNI	**Mataram**	**17.49**	**112**	P	**Pn**	**17 03 26.1**	**-1.4**
	119nm,1.0s						
SMKI	**Samarinda**	**17.49**	**84**	P	**Pn**	**17 03 29.4**	**+1.9**
	329nm,1.1s						
NST	**Nakhon Sawan**	**17.78**	**1**	P	**Pn**	**17 03 26.6**	**-4.4**
	47nm,0.7s						
UBT	**Ubonrachathani**	**18.11**	**16**	⇓P	**Pn**	**17 03 34.9**	**-0.1**
KKM	**Kota Kinabalu**	**18.34**	**63**	⇓P	**Pn**	**17 03 38.1**	**+0.2**
KKM	**Kota Kinabalu**	**18.34**	**63**	⇑*e*Pn	**Pn**	**17 03 36.7**	**-1.1**
SDKM	**Sandakan**	**19.05**	**66**	⇑P	**Pn**	**17 03 46.2**	**-0.3**
TSM	**Tawau**	**19.19**	**70**	⇓P	**Pn**	**17 03 47.7**	**-0.5**
KDM	**Kudat**	**19.27**	**62**	⇓P	**Pn**	**17 03 49.0**	**-0.3**
BDT	**Bhumibol Dam**	**19.36**	**358**	⇑P	**Pn**	**17 03 48.0**	**-2.1**
	33nm,1.0s						
PCI	**Palu**	**20.07**	**87**	P	**P**	**17 03 56.6**	**-0.2**
	630nm,1.1s						
MYLDM	**Lahad Datu**	**20.08**	**68**	⇑P	**P**	**17 03 58.3**	**+1.5**
KAPI	**Kappang**	**20.10**	**98**	P	**P**	**17 03 55.6**	**-1.5**
	2µm,0.8s,SNR=22						
KAPI	**Kappang**	**20.10**	**98**	⇑*i*P	**P**	**17 03 54.5**	**-2.6**
	247nm,0.9s						
CMAR	**Chiang Mai Arr**	**20.57**	**358**	P	**P**	**17 04 01.4**	**-0.7**
	122nm,0.8s,baz=187,slow=9.8,SNR=255						
CMAR				PcP	PcP	17 08 13.8	+1.4
	7.1nm,0.9s,baz=212,slow=3.1,SNR=6.6						
CMAR				LR	LR	17 12 24.8	
	comp=Z,12µm,19.9s,MS5.3,baz=189,slow=38						
CMAR	**Chiang Mai Arr**	**20.57**	**358**	P	**P**	**17 04 01.4**	**-0.6**
CMAR						17 08 13.9	
CMAR				pmax	pmax		
	comp=Z,122nm,0.8s						
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,12µm,19.9s						
NANT	**Nan**	**20.91**	**2**	⇓P	**P**	**17 04 05.6**	**-0.1**
	comp=Z,1µm,0.9s						
CHG	**Chiang Mai**	**20.92**	**358**	⇑P	**P**	**17 04 04.9**	**-0.9**
	comp=Z,59nm,0.9s						
CHTO	**Chiang Mai**	**20.92**	**358**	⇑*e*P	**P**	**17 04 03.1**	**-2.7**
	comp=Z,43nm,0.8s						
CHTO				LR	LR		
	comp=Z,11µm,21.0s,MS5.2						
BATP	**Bataraza**	**21.02**	**58**	*e*P	**P**	**17 04 06.9**	**-0.1**
PALK	**Pallekele**	**21.26**	**296**	*e*P	**P**	**17 04 12.3**	**+2.7**
	comp=Z,68nm,0.9s,mb5.0						
PALK				LR	LR		
	comp=Z,6µm,21.0s,MS5.0						
CHRT	**Chiangrai**	**21.95**	**360**	⇓P	**P**	**17 04 16.0**	**-0.9**
	comp=Z,605nm,0.9s,mb6.0						
KDI	**Kendari**	**22.85**	**95**	P	**P**	**17 04 26.7**	**+0.1**
	comp=Z,211nm,1.2s,mb5.5						
QIZ	**Qiongzhong**	**23.31**	**25**	P	**P**	**17 04 30.3**	**-1.1**
QIZ				AP		17 04 39.8	
QIZ				XP	sP	17 04 42.9	-2.1
QIZ				S	**S**	**17 08 39.5**	**-2.0**
QIZ				AMB	AMB		
	comp=Z,71nm,0.9s,mb5.1						
QIZ				AMB	AMB		
	comp=Z,1µm,8.6s						
QIZ				LR	LR		
	comp=E,9µm,14.3s						
QIZ				LR	LR		
	comp=Z,11µm,17.9s,MS5.4						
QIZ	**Qiongzhong**	**23.31**	**25**	*e*P	**P**	**17 04 30.2**	**-1.2**
	comp=Z,95nm,0.9s,mb5.2						
QIZ				LR	LR		
	comp=Z,6µm,20.0s,MS5.1						
ENPP	**El Nido**	**23.64**	**55**	*e*P	**P**	**17 04 33.6**	**-1.0**
BUSP	**Coron**	**24.71**	**55**	*e*P	**P**	**17 04 43.8**	**-0.5**
CUYO	**Cuyo Island**	**24.79**	**58**	*e*P	**P**	**17 04 45.0**	**-0.1**
IPIL	**Ipil**	**24.80**	**66**	*e*P	**P**	**17 04 44.7**	**-0.4**
BATI	**Baumata**	**25.00**	**110**	P	**P**	**17 04 45.7**	**-1.2**
	comp=Z,82nm,1.0s,mb5.2						
BATI	**Baumata**	**25.00**	**110**	P	**P**	**17 04 44.8**	**-2.2**
	comp=Z,91nm,0.7s,mb5.4,baz=357,slow=0.7,SNR=11						
BATI				S	**S**	**17 09 01.9**	**-6.9**
	comp=Z,50nm,0.9s,baz=358,slow=21,SNR=3.7						
KOD	**Kodaikanal**	**25.44**	**299**	*e*P	**P**	**17 04 53.4**	**+2.4**
PAGZ	**Pagadian**	**25.56**	**67**	*e*P	**P**	**17 04 52.3**	**+0.2**
VIS	**Vishakhapatnam**	**25.62**	**321**	*e*P	**P**	**17 04 52.1**	**-0.4**
VIS				AMb	AMB	17 05 15.8	
	comp=Z,145nm,2.1s,mb5.1						
VIS				*i* S	**S**	**17 09 19.8**	**+1.2**
SJMP	**San Jose**	**25.71**	**55**	*e*P	**P**	**17 04 52.6**	**-0.8**
LUBP	**Lubang**	**25.74**	**51**	*e*P	**P**	**17 04 52.6**	**-1.0**
GUIM	**Jordan**	**26.03**	**60**	*e*P	**P**	**17 04 58.4**	**+2.1**
BWNR	**Bhubaneshwar**	**26.25**	**329**	*ex*	x	17 04 51.0	
BWNR				*ex*	x	17 09 28.0	
OTRP	**Odiongan**	**26.41**	**56**	*e*P	**P**	**17 04 59.2**	**-0.5**
TBP	**Tagbilaran**	**26.73**	**63**	*e*P	**P**	**17 05 02.7**	**+0.1**
CAL	**Calcutta**	**27.04**	**336**	*e*P	**P**	**17 05 05.0**	**-0.2**
CAL				*ex*	x	17 09 57.7	
MBWA	**Marble Bar**	**27.05**	**136**	*e*P	**P**	**17 05 05.2**	**-0.1**
	comp=Z,24nm,0.7s,mb4.8						
MBWA				LR	LR		
	comp=Z,7µm,22.0s,MS5.2						
LLP	**Lapu-Lapu**	**27.09**	**62**	⇓*e*P	**P**	**17 05 04.7**	**-1.2**
BUKP	**Musuan**	**27.12**	**68**	*e*P	**P**	**17 05 07.4**	**+1.2**
KMI	**Kunming**	**27.33**	**6**	P	**P**	**17 05 08.4**	**+0.5**
KMI				AP	pP	17 05 12.6	-5.2
KMI				PP		17 05 58.5	
KMI				S	**S**	**17 09 51.4**	**+5.9**
KMI				XS	sS	17 09 58.8	-3.1
KMI				AMB	AMB		
	comp=Z,27nm,0.9s,mb4.8						
KMI				AMB	AMB		
	comp=Z,834nm,8.4s						
KMI				LR	LR		
	comp=N,7µm,19.4s						
KMI				LR	LR		
	comp=E,7µm,13.4s						
KMI				LR	LR		
	comp=E,8µm,18.2s,MS5.3						
DAV	**Davao City (W)**	**27.34**	**70**	P	**P**	**17 05 06.9**	**-1.2**
	comp=Z,158nm,0.5s,mb5.8,baz=90,slow=4.0,SNR=3.8						
DAV				LR	LR	17 17 17.9	
	comp=Z,7µm,20.0s,MS5.2,baz=34,slow=39						
DAV	**Davao City (W)**	**27.34**	**70**	P	**P**	**17 05 03.6**	**-4.5**
DAV				LR	LR	17 17 17.9	
IMP	**Imphal**	**27.44**	**348**	*e*P	**P**	**17 05 09.0**	**+0.1**
IMP				*ex*	x	17 09 53.0	
POLP	**Polilio Island**	**27.65**	**52**	*e*P	**P**	**17 05 13.4**	**+2.5**
DGAR	**Diego Garcia**	**27.72**	**258**	PFAKE		17 05 20.0	+8.4
DGAR				LR	LR		
	comp=Z,6µm,20.0s,MS5.2						
LBMI	**Labuha**	**27.74**	**87**	P	**P**	**17 05 10.3**	**-1.4**
	comp=Z,261nm,1.4s,mb5.7						
MATI	**Mati**	**27.93**	**71**	*e*P	**P**	**17 05 12.9**	**-0.6**
BALP	**Baler**	**27.97**	**50**	*e*P	**P**	**17 05 17.7**	**+4.0**
OCLP	**Ormoc**	**27.98**	**61**	*e*P	**P**	**17 05 15.0**	**+1.1**
BUTP	**Butuan**	**28.04**	**66**	*e*P	**P**	**17 05 04.2**	**-10**
ABRA	**Dolores**	**28.55**	**45**	*e*P	**P**	**17 05 18.2**	**-0.7**
HYB	**Hyderabad**	**28.63**	**314**	*i* P	**P**	**17 05 21.0**	**+1.4**
HYB	**Hyderabad**	**28.63**	**314**	*e*P	**P**	**17 05 21.0**	**+1.4**
CNP	**Catarman**	**28.71**	**59**	*e*P	**P**	**17 05 20.8**	**+0.5**
CAUP	**Cauayan**	**28.90**	**48**	*e*P	**P**	**17 05 20.4**	**-1.6**
APYP	**Conner**	**29.07**	**46**	*e*P	**P**	**17 05 22.8**	**-0.6**
BOK	**Bokaro**	**29.19**	**333**	*e*P	**P**	**17 05 25.1**	**+0.6**
BOK				AMb	AMB	17 05 44.5	
	comp=Z,130nm,1.8s,mb5.4						
GYA	**Guiyang**	**29.27**	**13**	⇑*i*P	**P**	**17 05 24.4**	**-0.8**
GYA				AP	pP	17 05 34.8	-0.3
GYA				XP	sP	17 05 40.4	+1.1
GYA				PP	PP	17 06 24.3	-7.4
GYA				PCP	PcP	17 08 33.8	+2.2
GYA				S	**S**	**17 10 19.3**	**+3.3**
GYA				SCP	ScP	17 12 11.4	+0.5
GYA				SCS	ScS	17 16 05.6	+0.3
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,1µm,5.8s						
GYA				LR	LR		
	comp=N,15µm,18.0s,MS5.8						
GYA				LR	LR		
	comp=E,13µm,17.9s,MS5.8						
GYA				LR	LR		
	comp=Z,18µm,18.6s,MS5.7						
FITZ	**Fitzroy Crossi**	**29.86**	**124**	*e*P	**P**	**17 05 28.6**	**-1.9**
	comp=Z,40nm,0.8s,mb5.2						
FITZ				*e*S	**S**	**17 10 21.0**	**-4.4**
FITZ	**Fitzroy Crossi**	**29.86**	**124**	P	**P**	**17 05 28.7**	**-1.8**
	comp=Z,24nm,0.8s,mb5.0,baz=300,slow=8.2,SNR=43						
FITZ				S	**S**	**17 10 19.5**	**-5.9**
	comp=Z,2.1nm,0.8s,baz=217,slow=24,SNR=3.7						
LATR	**Latur**	**30.72**	**313**	*e*P	**P**	**17 05 38.3**	**+0.1**
NGP	**Nagpur**	**30.86**	**320**	*e*P	**P**	**17 05 38.8**	**-0.5**
NGP				*ex*	x	17 10 36.5	
GOA	**Goa**	**31.14**	**305**	*ex*	**P**	**17 05 35.4**	**-6.5**
SWI	**Sorong**	**31.48**	**88**	P	**P**	**17 05 42.9**	**-2.0**
	comp=Z,200nm,1.3s,mb5.8						
AKL	**Akola**	**31.90**	**317**	*ex*	**P**	**17 05 52.5**	**+4.0**
QZH	**Quanzhou**	**32.58**	**33**	P	**P**	**17 05 54.3**	**-0.1**
QZH				AMB	AMB		
	comp=Z,130nm,1.2s,mb5.7						
QZH				AMB	AMB		
	comp=Z,2µm,4.6s						
QZH				LR	LR		
	comp=N,8µm,15.0s,MS5.8						
QZH				LR	LR		
	comp=E,12µm,16.8s,MS5.8						
QZH				LR	LR		
	comp=Z,18µm,17.1s,MS5.8						
LSA	**Lhasa**	**32.80**	**346**	P	**P**	**17 05 56.8**	**+0.5**
LSA				AP	pP	17 06 07.5	+1.3
LSA				XP	sP	17 06 14.8	+4.4
LSA				S	**S**	**17 11 11.8**	**+0.6**
LSA				LR	LR		
	comp=N,3µm,24.6s,MS5.2						
LSA				LR	LR		
	comp=E,4µm,27.2s,MS5.2						
LSA				LR	LR		
	comp=Z,5µm,25.1s,MS5.2						
LSA	**Lhasa**	**32.80**	**346**	*e*P	**P**	**17 05 57.4**	**+1.1**
LSA				*e*S	**S**	**17 11 15.4**	**+4.2**
LSA				pmax	pmax		
	comp=Z,113nm,0.8s,mb5.8						
LSA				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.0						
LSA	**Lhasa**	**32.80**	**346**	*e*P	**P**	**17 05 57.4**	**+1.1**
	comp=Z,113nm,0.8s,mb5.8						
LSA				*e*S	**S**	**17 11 15.4**	**+4.2**
LSA				LR	LR		
	comp=Z,4µm,22.0s,MS5.0						
POO	**Poona**	**32.82**	**310**	*e*P	**P**	**17 05 54.5**	**-2.2**
POO				AMb	AMB	17 06 18.8	
	comp=Z,86nm,1.4s,mb5.5						
CD2	**Chengdu**	**33.16**	**6**	⇑*i*P	**P**	**17 05 57.9**	**-1.5**
CD2				AP	pP	17 06 07.5	-1.9
CD2				XP	sP	17 06 11.6	-1.9
CD2				PP	PP	17 07 09.5	-5.4
CD2				PCP	PcP	17 08 40.3	-1.6
CD2				S	**S**	**17 11 14.4**	**-2.4**
CD2				XS	sS	17 11 30.4	-2.8
CD2				PCS	PcS	17 12 23.8	-3.7
CD2				SS	SS	17 13 16.8	-24
CD2				SCS	ScS	17 16 19.9	-4.5
CD2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.4						
CD2				AMB	AMB		
	comp=Z,180nm,7.2s						
CD2				LR	LR		
	comp=N,12µm,16.8s,MS5.8						
CD2				LR	LR		
	comp=E,12µm,20.4s,MS5.8						
CD2				LR	LR		
	comp=Z,10µm,16.8s,MS5.6						
MUN	**Mundaring**	**33.39**	**154**	*e*P	**P**	**17 06 02.0**	**+0.6**
MUN				*e*S	**S**	**17 11 22.0**	**+1.7**
ENH	**Enshi**	**33.61**	**15**	PFAKE		17 06 10.0	+6.7
ENH				LR	LR		
	comp=Z,5.0nm,22.0s						
NACB	**Ninganchiao**	**33.72**	**38**	*e*P	**P**	**17 06 04.4**	**0.0**
	comp=Z,303nm,0.9s,mb6.2						
YHNB	**Yeheng**	**33.96**	**37**	*e*P	**P**	**17 06 06.5**	**+0.1**
	comp=Z,56nm,0.9s,mb5.5						
YHNB				LR	LR		
	comp=Z,6µm,21.0s,MS5.3						
TATO	**Taipei**	**34.26**	**37**	PFAKE		17 06 20.0	+11
TATO				LR	LR		
	comp=Z,4µm,21.0s,MS5.2						
NWAO	**Narrogin (SRO)**	**34.65**	**154**	P	**P**	**17 06 11.9**	**-0.5**
	comp=Z,15nm,0.7s,mb5.0,baz=327,slow=11,SNR=11						
NWAO				LR	LR	17 19 17.9	
	comp=Z,8µm,20.8s,MS5.4,baz=329,slow=35						
NWAO	**Narrogin (SRO)**	**34.65**	**154**	*e*P	**P**	**17 06 12.1**	**-0.2**
NWAO				*e**PP	pP	17 06 20.8	-1.5
NWAO				pmax	pmax		
	comp=Z,39nm,0.9s						
NWAO				MLR	MLR		
	comp=Z,6µm,20.0s						
NWAO	**Narrogin (SRO)**	**34.65**	**154**	*e*P	**P**	**17 06 12.1**	**-0.3**
	comp=Z,39nm,0.9s,mb5.3						
NWAO				*ep*P	pP	17 06 20.8	-1.5
NWAO				LR	LR		
	comp=Z,6µm,20.0s,MS5.3						
WHN	**Wuhan**	**35.42**	**22**	⇑P	**P**	**17 06 18.9**	**0.0**
WHN				AP	pP	17 06 31.1	+2.1
WHN				S	**S**	**17 11 48.1**	**-3.5**
WHN				AMB	AMB		
	comp=Z,86nm,0.8s,mb5.7						
WHN				AMB	AMB		
	comp=Z,1µm,7.8s						
WHN				LR	LR		
	comp=N,28µm,15.4s,MS6.1						
WHN				LR	LR		
	comp=E,13µm,18.9s,MS6.1						
WHN				LR	LR		
	comp=Z,36µm,16.5s,MS6.2						
BAKI	**Biak**	**36.31**	**89**	P	**P**	**17 06 27.1**	**+0.2**
	comp=Z,86nm,1.2s,mb5.5						
PTH	**Pithoragarh**	**36.73**	**331**	*e*P	**P**	**17 06 30.9**	**+0.7**
PTH				*ex*	x	17 12 32.9	
XAN	**Xi'an**	**37.08**	**13**	P	**P**	**17 06 31.5**	**-1.6**
XAN				AP	pP	17 06 42.5	-0.6
XAN				XP	sP	17 06 48.0	+0.7
XAN				PP	PP	17 07 58.9	+0.8
XAN				S	**S**	**17 12 17.3**	**+0.4**
XAN				AMB	AMB		
	comp=Z,65nm,0.7s,mb5.6						
XAN				AMB	AMB		
	comp=Z,381nm,13.6s						
XAN				LR	LR		
	comp=N,1µm,18.6s,MS5.6						
XAN				LR	LR		
	comp=E,8µm,15.4s,MS5.6						
XAN				LR	LR		
	comp=Z,15µm,14.7s,MS5.9						
AJM	**Ajmer**	**37.48**	**321**	*e*P	**P**	**17 06 35.0**	**-1.6**
WRA	**Warramunga Arr**	**38.05**	**120**	P	**P**	**17 06 39.7**	**-1.9**
	comp=Z,115nm,0.8s,mb5.7,baz=304,slow=9.1,SNR=264						
WRA				S	**S**	**17 12 28.6**	**-3.6**
	comp=Z,17nm,1.1s,baz=297,slow=16,SNR=9.3						
WRA				LR	LR	17 24 24.8	
	comp=Z,3µm,21.0s,MS5.1,baz=295,slow=40						
WRA	**Warramunga Arr**	**38.05**	**120**	P	**P**	**17 06 39.7**	**-1.9**
WRA				S	**S**	**17 12 28.6**	**-3.6**
WRA				pmax	pmax		
	comp=Z,115nm,0.8s						
WRA				smax			
	comp=N,17nm,1.1s						
WRA				MLR	MLR		
	comp=Z,3µm,21.0s						
WRAB	**Tennant Creek**	**38.06**	**120**	P	**P**	**17 06 40.0**	**-1.7**
	comp=Z,1µm,0.9s,mb6.6,SNR=77						
WRAB	**Tennant Creek**	**38.06**	**120**	⇑*e*P	**P**	**17 06 39.0**	**-2.6**
	comp=Z,148nm,0.8s,mb5.8						
WRAB				*e*S	**S**	**17 12 27.2**	**-5.0**
WRAB				LR	LR		
	comp=Z,5µm,22.0s,MS5.2						
WB2	**Warramunga Arr**	**38.07**	**120**	*e*P	**P**	**17 06 39.7**	**-2.0**
WB2				*e*S	**S**	**17 12 27.3**	**-5.0**
LZH	**Lanzhou**	**38.30**	**5**	⇑P	**P**	**17 06 43.0**	**-0.4**
LZH				AP	pP	17 06 53.5	0.0
LZH				XP	sP	17 06 57.0	-0.6
LZH				PP	PP	17 08 15.3	+3.8
LZH				PCP	PcP	17 08 57.0	0.0
LZH				S	**S**	**17 12 35.3**	**0.0**
LZH				XS	sS	17 12 51.6	-0.4
LZH				SS	SS	17 15 15.8	-8.8
LZH				SCS	ScS	17 16 49.8	-2.4
LZH				AMB	AMB		
	comp=Z,89nm,1.4s,mb5.3						
LZH				AMB	AMB		
	comp=Z,608nm,8.7s						
LZH				LR	LR		
	comp=N,5µm,14.5s						
LZH				LR	LR		
	comp=Z,8µm,17.6s,MS5.6						
NJ2	**Nanjing**	**38.58**	**26**	*e*P	**P**	**17 06 46.1**	**+0.2**
NJ2				AP	pP	17 06 55.6	-0.3
NJ2				XP	sP	17 06 59.8	-0.3
NJ2				PP	PP	17 08 16.8	+2.2
NJ2				S	**S**	**17 12 41.5**	**+1.7**
NJ2				XS	sS	17 12 59.0	+2.6
NJ2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,1µm,4.6s						
NJ2				LR	LR		
	comp=N,1µm,16.0s,MS5.3						
NJ2				LR	LR		
	comp=E,4µm,18.0s,MS5.3						
NJ2				LR	LR		
	comp=Z,56µm,18.0s,MS6.4						
SSE	**Sheshan**	**38.89**	**30**	⇑P	**P**	**17 06 49.0**	**+0.6**
SSE				AP	pP	17 07 00.3	+1.8
SSE				XP	sP	17 07 05.3	+2.6
SSE				S	**S**	**17 12 45.6**	**+1.2**
SSE				XS	sS	17 13 04.3	+3.2
SSE				SCS	ScS	17 16 55.1	-0.8
SSE				AMB	AMB		
	comp=Z,69nm,0.8s,mb5.4						
SSE				AMB	AMB		
	comp=Z,385nm,5.3s						
SSE				LR	LR		
	comp=N,3µm,19.7s,MS5.5						
SSE				LR	LR		
	comp=E,6µm,19.7s,MS5.5						
SSE				LR	LR		
	comp=Z,7µm,13.1s						
ASAR	**Alice Springs**	**39.29**	**126**	P	**P**	**17 06 50.8**	**-1.1**
	comp=Z,47nm,0.6s,mb5.4,baz=303,slow=8.1,SNR=157						
ASAR				PcP	PcP	17 09 00.7	+0.3
	comp=Z,12nm,0.7s,baz=305,slow=2.6,SNR=6.3						
ASAR				S	**S**	**17 12 48.1**	**-2.6**
	comp=Z,30nm,1.1s,baz=296,slow=15,SNR=33						
ASAR	**Alice Springs**	**39.29**	**126**	P	**P**	**17 06 50.8**	**-1.1**
ASAR						17 09 00.7	
ASAR				S	**S**	**17 12 48.1**	**-2.6**
ASAR				pmax	pmax		
	comp=Z,47nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,12nm,0.7s						
ASAR				smax			
	comp=N,30nm,1.1s						
SMLA	**Simla**	**39.55**	**329**	*e*P	**P**	**17 06 53.3**	**-0.7**
SMLA				AMb	AMB	17 07 14.0	
	comp=Z,241nm,2.1s,mb5.6						
JOW	**Kunigami**	**39.86**	**42**	P	**P**	**17 06 56.9**	**+0.2**
	comp=Z,22nm,0.4s,mb5.2,baz=284,slow=18,SNR=20						
JOW				LR	LR	17 23 22.2	
	comp=Z,2µm,20.4s,MS4.9,baz=341,slow=36						
SDNR	**Sundarnagar**	**39.94**	**329**	*e*P	**P**	**17 06 57.6**	**+0.4**
JAY	**Jayapura**	**40.87**	**91**	P	**P**	**17 07 11.1**	**+5.9**
	comp=Z,80nm,0.8s,mb5.4						
THN	**Thein Dam**	**41.33**	**329**	*e*P	**P**	**17 07 07.5**	**-1.2**
GTA	**Gaotai**	**41.43**	**0**	*e*P	**P**	**17 07 09.8**	**+0.5**

MSEY LR LR
comp=Z,3μm,22.0s,MS5.2
BJT Baijiatuau 44.63 18 *e*P **P 17 07 35.5 +0.2**
BJT pmax pmax
comp=Z,97nm,1.0s
BJT MLR MLR
comp=Z,4μm,19.0s
BJT Baijiatuau 44.63 18 *e*P **P 17 07 35.5 +0.2**
comp=Z,97nm,1.0s,mb5.6
BJT LR LR
comp=Z,4μm,19.0s,MS5.3
BJI Beijing 44.66 18 P **P 17 07 35.5 0.0**
BJI XP sP 17 07 49.0 -0.8
BJI PP PP 17 09 20.3 +0.1
BJI S **S 17 14 11.3 +1.8**
BJI XS sS 17 14 26.1 -0.2
BJI AMB AMB
comp=Z,96nm,0.8s,mb5.7
BJI AMB AMB
comp=Z,1μm,4.2s
BJI LR LR
comp=N,8μm,15.8s,MS5.8
BJI LR LR
comp=E,3μm,15.8s,MS5.8
BJI LR LR
comp=Z,6μm,18.5s,MS5.6
DL2 Dalian 45.60 24⇑ *i*P **P 17 07 42.8 -0.2**
DL2 S **S 17 14 24.1 +0.9**
DL2 AMB AMB
comp=Z,50nm,0.9s,mb5.4
DL2 AMB AMB
comp=Z,470nm,4.9s
DL2 LR LR
comp=N,2μm,17.8s,MS5.3
DL2 LR LR
comp=E,2μm,14.1s,MS5.3
DL2 LR LR
comp=Z,2μm,15.3s,MS5.2
INCN Inchon 46.69 30 *e*P **P 17 07 50.1 -1.4**
comp=Z,37nm,0.6s,mb5.5
INCN LR LR
comp=Z,3μm,19.0s,MS5.3
KSH Kashi 46.95 335⇑ *i*P **P 17 07 53.5 -0.1**
KSH *e*APP pP 17 08 02.0 -1.8
KSH *e*XP sP 17 08 06.1 -1.8
KSH *e*PCP PcP 17 09 26.0 +0.2
KSH *e*PP PP 17 09 41.0 -3.4
KSH *e*SCP ScP 17 13 15.1 -2.0
KSH *e*PCS PcS 17 13 19.0 -1.7
KSH *e*S **S 17 14 39.3 -3.2**
KSH *e*SCS ScS 17 17 41.1 -4.4
KSH AMB AMB
comp=Z,1μm,4.4s
KSH LR LR
comp=N,3μm,12.9s,MS5.7
KSH LR LR
comp=E,4μm,15.0s,MS5.7
KSH LR LR
comp=Z,6μm,15.5s,MS5.7
WMQ Urumqi 47.11 348⇑ *i*P **P 17 07 56.1 +1.4**
WMQ AP pP 17 08 06.0 +1.0
WMQ XP sP 17 08 10.0 +0.9
WMQ PCP PcP 17 09 27.0 +0.8
WMQ PP PP 17 09 47.0 +1.1
WMQ PCS PcS 17 13 21.0 -0.2
WMQ S **S 17 14 46.3 +1.7**
WMQ XS sS 17 15 01.4 -0.2
WMQ SCS ScS 17 17 46.0 -0.4
WMQ AMB AMB
comp=Z,316nm,0.9s,mb6.2
WMQ AMB AMB
comp=Z,824nm,3.7s
WMQ LR LR
comp=N,2μm,20.2s,MS5.4
WMQ LR LR
comp=E,3μm,17.0s,MS5.4
WMQ LR LR
comp=Z,2μm,26.4s
KSRS Korea Array 47.31 31 P **P 17 07 56.0 -0.4**
comp=Z,61nm,0.8s,mb5.6,baz=225,slow=8.5,SNR=264
KSRS LR LR 17 27 51.8
comp=Z,3μm,21.0s,MS5.2,baz=226,slow=36
KSRS Korea Array 47.31 31 P **P 17 07 56.1 -0.4**
KSRS pmax pmax
comp=Z,61nm,0.8s,mb5.6
KSRS MLR MLR
comp=Z,3μm,21.0s,MS5.2
GUMO Guam 47.37 69 P **P 17 07 53.4 -3.9**
comp=Z,37nm,0.6s,mb5.5,baz=166,slow=13,SNR=6.8
GUMO LR LR 17 27 32.4
comp=Z,1μm,21.9s,MS4.9,baz=72,slow=36
GUMO Guam 47.37 69 P **P 17 07 53.4 -3.9**
GUMO pmax pmax
comp=Z,37nm,0.6s,mb5.5
GUMO MLR MLR
comp=Z,1μm,21.9s,MS4.9
GUMO Guam 47.37 69 *e*P **P 17 07 53.0 -4.3**
comp=Z,38nm,0.6s,mb5.5
GUMO LR LR
comp=Z,2μm,19.0s,MS5.0
PMG Port Moresby 47.61 101 *e*P **P 17 07 57.2 -2.0**
PMG pmax pmax
comp=Z,26nm,0.8s
PMG MLR MLR
comp=Z,3μm,21.0s
PMG Port Moresby 47.61 101 *e*P **P 17 07 57.2 -2.0**
comp=Z,26nm,0.8s,mb5.3
PMG LR LR
comp=Z,3μm,21.0s,MS5.2
CTA Charters Tower 48.69 115 *e*P **P 17 08 06.1 -1.3**
comp=Z,57nm,0.9s,mb5.6
CTA *e*S **S 17 15 04.7 -3.1**
CTA Charters Tower 48.69 115 *e*P **P 17 08 06.1 -1.3**
CTA *e*S **S 17 15 04.7 -3.1**
CTA pmax pmax
comp=Z,57nm,0.9s
CTAO Charters Tower 48.69 115⇑ *i*P **P 17 08 05.8 -1.6**
comp=Z,76nm,0.8s,mb5.8
CTAO LR LR
comp=Z,3μm,21.0s,MS5.3
SNY Shenyang 48.87 24⇓ P **P 17 08 06.3 -2.1**
SNY S **S 17 15 05.3 -4.3**
SNY AMB AMB
comp=Z,28nm,0.9s,mb5.3
SNY AMB AMB
comp=Z,663nm,7.0s
SNY LR LR
comp=N,3μm,14.9s,MS5.7
SNY LR LR
comp=E,4μm,14.3s,MS5.7
SNY LR LR
comp=Z,6μm,14.4s,MS5.7
STKA Stephens Creek 49.15 131 *e*P **P 17 08 10.4 -0.4**
comp=Z,44nm,0.8s,mb5.5
STKA *e*S **S 17 15 11.0 -3.1**
STKA Stephens Creek 49.15 131 P **P 17 08 10.5 -0.3**
comp=Z,40nm,0.8s,mb5.5,baz=307,slow=7.1,SNR=32
STKA LR LR 17 30 24.9
comp=Z,6μm,21.1s,MS5.5,baz=292,slow=38
UCH Uchtor 49.81 335 P **P 17 08 17.1 +1.5**
SNR=18
UCH Uchtor 49.81 335 *e*P **P 17 08 16.1 +0.5**
comp=Z,56nm,1.3s,mb5.4
TKM2 Tokmak 2 49.95 337 *e*P **P 17 08 17.4 +0.7**
TKM2 pmax pmax
comp=Z,79nm,0.8s,mb5.8
TKM2 MLR MLR
comp=Z,3μm,20.0s,MS5.2
TKM2 Tokmak 2 49.95 337 P **P 17 08 17.7 +1.0**
SNR=96
TKM2 Tokmak 2 49.95 337 *e*P **P 17 08 17.4 +0.7**
comp=Z,80nm,0.8s,mb5.8
TKM2 LR LR
comp=Z,3μm,20.0s,MS5.2
KBK Karagaybulak 49.99 336 P **P 17 08 18.4 +1.5**
SNR=42
AML Almayashu 50.08 335 P **P 17 08 18.9 +1.2**
SNR=15
AML Almayashu 50.08 335 *e*P **P 17 08 18.7 +1.0**
comp=Z,62nm,0.9s,mb5.6
AML LR LR
comp=Z,2μm,22.0s,MS5.1
AAK Ala-Archa 50.16 336 P **P 17 08 19.4 +1.1**
SNR=14
CBIJ Chichi jima 50.17 51 LR LR 17 29 15.6
comp=Z,2μm,20.1s,MS5.0,baz=293,slow=36

SONM Songino Array 50.18 6 P **P 17 08 19.1 +0.8**
comp=Z,209nm,0.7s,mb6.3,baz=189,slow=8.9,SNR=996
SONM PcP PcP 17 09 37.8 +0.6
comp=Z,19nm,0.7s,baz=185,slow=1.5,SNR=2.9
SONM Songino Array 50.18 6 P **P 17 08 19.1 +0.8**
SONM 17 09 37.8
SONM pmax pmax
comp=Z,209nm,0.7s
SONM pmax pmax
comp=Z,19nm,0.7s
FRU Bishkek 50.27 336 *e*P **P 17 08 19.0 -0.1**
FRU *e*S **S 17 15 30.0 +0.7**
FRU pmax pmax
comp=Z,350nm,2.5s,mb6.0
FRU smax
comp=E,320nm,3.5s
ULN Ulaanbaatar 50.28 6⇑ *i*P **P 17 08 19.5 +0.5**
comp=E,137nm,0.8s,mb6.0
ULN LR LR
comp=Z,6μm,21.0s,MS5.6
CHMS Chumysh 50.36 336 P **P 17 08 20.2 +0.5**
SNR=20
EKS2 Erkin-Say 50.48 335 P **P 17 08 21.9 +1.2**
SNR=29
EKS2 Erkin-Say 50.48 335 *e*P **P 17 08 21.6 +1.0**
comp=Z,50nm,0.6s,mb5.7
EKS2 LR LR
comp=Z,3μm,21.0s,MS5.3
USP Ospenovka 50.68 336 P **P 17 08 22.8 +0.6**
SNR=84
MK31 Makanchi Array 51.19 345 *e*P **P 17 08 26.4 +0.5**
MK31 *e*S **S 17 15 44.6 +2.8**
MKAR Makanchi Array 51.19 345 P **P 17 08 26.4 +0.5**
comp=Z,96nm,0.7s,mb5.8,baz=148,slow=8.1,SNR=517
MKAR S **S 17 15 44.2 +2.4**
comp=Z,0.3nm,0.3s,baz=164,slow=14,SNR=3.7
MKAR LR LR 17 34 01.2
comp=Z,2μm,20.8s,MS5.0,baz=161,slow=40
MKAR Makanchi Array 51.19 345 P **P 17 08 26.4 +0.5**
MKAR S **S 17 15 44.2 +2.4**
MKAR pmax pmax
comp=Z,96nm,0.7s
MKAR MLR MLR
comp=Z,2μm,20.8s
CN2 Changchun 51.27 24 *e*P **P 17 08 25.4 -1.2**
CN2 *e*XP sP 17 08 40.0 -1.0
CN2 *e*S **S 17 15 40.8 -2.3**
CN2 AMB AMB
comp=Z,130nm,0.8s,mb5.9
CN2 AMB AMB
comp=Z,900nm,6.0s
CN2 LR LR
comp=N,4μm,18.0s,MS5.6
CN2 LR LR
comp=E,2μm,18.0s,MS5.6
CN2 LR LR
comp=Z,5μm,18.0s,MS5.6
ZAK Zakamensk 52.48 3⇓ *i*P **P 17 08 35.6 +0.1**
ZAK *e* 17 09 44.3
ZAK pmax pmax
comp=Z,19nm,0.9s,mb5.0
MAJO Matsushiro 52.57 39⇑ *i*P **P 17 08 34.8 -1.6**
comp=Z,50nm,0.9s,mb5.4
MAJO LR LR
comp=Z,2μm,19.0s,MS5.2
MAT Matsushiro 52.57 39 P **P 17 08 35.9 -0.5**
MAT S **S 17 16 07.0 +5.7**
MJAR Matsushiro Arr 52.57 39 P **P 17 08 35.2 -1.2**
comp=Z,45nm,1.1s,mb5.3,baz=219,slow=7.5,SNR=69
MJAR Matsushiro Arr 52.57 39 P **P 17 08 35.2 -1.2**
MJAR pmax pmax
comp=Z,45nm,1.1s
MJAR Matsushiro Arr 52.57 39 P **P 17 08 35.2 -1.2**
VLA Vladivostok 53.59 29 *i*P **P 17 08 43.3 -0.5**
MDJ Mudanjiang 53.67 26 P **P 17 08 44.4 0.0**
MDJ XP sP 17 08 57.3 -1.6
MDJ PP PP 17 10 45.5 -0.1
MDJ PCS PcS 17 13 48.9 -0.5
MDJ S **S 17 16 18.3 +2.3**
MDJ AMB AMB
comp=Z,43nm,1.0s,mb5.3
MDJ AMB AMB
comp=Z,764nm,8.9s
MDJ LR LR
comp=N,3μm,20.2s,MS5.6
MDJ LR LR
comp=E,4μm,18.0s,MS5.6
MDJ LR LR
comp=Z,5μm,21.3s,MS5.5
MDJ Mudanjiang 53.67 26 *e*P **P 17 08 44.1 -0.3**
comp=Z,38nm,0.9s,mb5.3
MDJ LR LR
comp=Z,5μm,22.0s,MS5.6
MOY Mondy 53.70 1 *e*P **P 17 08 44.7 +0.3**
MOY pmax pmax
comp=Z,93nm,4.3s
TLY Talaya 53.80 3 P **P 17 08 46.0 +0.8**
comp=Z,409nm,0.7s,mb6.5,SNR=16
TLY Talaya 53.80 3 *e*P **P 17 08 45.9 +0.7**
TLY *e*S **S 17 16 13.1 -4.3**
TLY *e*SS SS 17 20 01.4 +2.6
TLY pmax pmax
comp=Z,53nm,0.8s,mb5.5
TLY MLR MLR
comp=Z,3μm,15.0s,MS5.5
TLY Talaya 53.80 3⇑ *i*P **P 17 08 45.7 +0.5**
comp=Z,54nm,0.8s,mb5.5
TLY LR LR
comp=Z,2μm,20.0s,MS5.2
OPO Ambohidratompo 54.00 249 P **P 17 08 48.3 +1.1**
comp=Z,5.9nm,0.8s,mb4.6,baz=66,slow=5.6,SNR=8.4
IRK Irkutsk 54.40 3 *e*P **P 17 08 48.2 -1.3**
IRK *e* 17 09 51.6
IRK pmax pmax
comp=Z,116nm,3.2s
TOO Toolangi 54.69 136 *e*P **P 17 08 52.4 +0.4**
CIT Chita 55.28 10 *e*P **P 17 08 56.6 +0.7**
CIT pmax pmax
comp=Z,161nm,3.1s
ABKT Ailbek 55.49 320 P **P 17 08 57.8 +0.1**
comp=Z,308nm,1.0s,mb6.3,SNR=7.7
KURK Kurchatov 55.76 344 P **P 17 08 59.0 -0.4**
comp=Z,744nm,0.9s,mb6.7,SNR=99
KURK Kurchatov 55.76 344 P **P 17 08 58.9 -0.5**
comp=Z,58nm,0.9s,mb5.6,baz=160,slow=6.9,SNR=70
KURK S **S 17 16 46.4 +2.5**
comp=Z,1.5nm,1.0s,baz=137,slow=17,SNR=4.5
KURK LR LR 17 38 03.0
comp=Z,2μm,19.5s,MS5.2,baz=170,slow=42
KURK Kurchatov 55.76 344 P **P 17 08 58.9 -0.5**
KURK S **S 17 16 46.4 +2.6**
KURK pmax pmax
comp=Z,58nm,0.9s,mb5.6
KURK smax
comp=N,2.0nm,1.0s
KURK MLR MLR
comp=Z,2μm,19.5s,MS5.2
KURK Kurchatov 55.76 344⇑ *i*P **P 17 08 59.5 +0.1**
comp=Z,114nm,0.9s,mb5.9
KURK *e*S **S 17 16 42.9 -0.9**
KURK LR LR
comp=Z,2μm,20.0s,MS5.2
CAN Canberra 56.21 132 P **P 17 09 03.3 +0.3**
CAN Canberra 56.21 132⇑ *e*P **P 17 09 02.9 -0.1**
CNB Canberra Magne 56.48 132 *e*P **P 17 09 05.1 +0.2**
ZAA0 Zalesovo Array 57.35 350⇑ *i*P **P 17 09 10.3 -0.3**
ZALV Zalesovo Beam 57.35 350 P **P 17 09 10.6 -0.1**
comp=Z,148nm,0.8s,mb6.0,baz=163,slow=5.6,SNR=236
ZALV S **S 17 17 10.1 +5.4**
comp=Z,1.8nm,0.8s,baz=165,slow=6.0,SNR=3.7
ZALV LR LR 17 36 32.3
comp=Z,1μm,19.8s,MS5.1,baz=359,slow=39
ZALV PKP2bc 17 39 10.3
comp=Z,0.3nm,0.3s,baz=305,slow=5.1,SNR=3.5
ZALV Zalesovo Beam 57.35 350 P **P 17 09 10.6 0.0**
ZALV S **S 17 17 10.1 +5.4**
ZALV pmax pmax
comp=Z,148nm,0.9s,mb6.0
ZALV smax
comp=N,2.0nm,0.8s
ZALV MLR MLR
comp=Z,1μm,19.8s,MS5.1
ZALV Zalesovo Beam 57.35 350 P **P 17 09 10.6 -0.1**
ZALV S **S 17 17 10.1 +5.4**
ZALV LR LR 17 36 32.3
ZALV ⇑*e* 17 39 10.3

KLR Kul'dur 58.22 24⇓ *i*P **P 17 09 13.0 -3.8**
KLR pmax pmax
comp=E,74nm,1.6s
KLR pmax pmax
comp=Z,220nm,1.6s,mb5.9
NVS Novosibirsk 58.49 349 *i* P **P 17 09 17.5 -1.1**
NVS *e*S **S 17 17 20.2 +0.6**
NVS pmax pmax
comp=Z,251nm,2.8s,mb5.8
NVS pmax pmax
comp=N,125nm,2.3s
NVS smax
comp=E,181nm,3.2s
TAU Tasmania Unive 58.54 141 *e*P **P 17 09 18.6 -0.6**
TAU pmax pmax
comp=Z,32nm,1.2s,mb5.2
TAU MLR MLR
comp=Z,2μm,21.0s,MS5.2
TAU Tasmania Unive 58.54 141 *e*P **P 17 09 18.6 -0.6**
comp=Z,32nm,1.2s,mb5.2
TAU LR LR
comp=Z,2μm,21.0s,MS5.2
UMR Umm Al-Rimmam 58.92 307 *e*P **P 17 09 21.6 -0.6**
baz=307
UMR AMb AMB 17 09 42.5
comp=Z,118nm,1.0s,mb5.9,baz=307
ERM Erimo 58.95 37 P **P 17 09 22.8 +0.7**
comp=Z,310nm,0.7s,mb6.5,SNR=12
ERM Erimo 58.95 37 *e*P **P 17 09 21.8 -0.3**
ERM pmax pmax
comp=Z,33nm,0.7s,mb5.5
ERM MLR MLR
comp=Z,2μm,19.0s,MS5.2
ERM Erimo 58.95 37 *e*P **P 17 09 21.8 -0.4**
comp=Z,33nm,0.7s,mb5.5
ERM LR LR
comp=Z,2μm,19.0s,MS5.2
NAY Al-Naaiem 59.19 306 *e*P **P 17 09 22.8 -1.2**
baz=306
NAY AMb AMB 17 09 40.1
comp=Z,34nm,0.8s,mb5.4,baz=306
MIB Mutribah 59.33 307 *e*P **P 17 09 24.4 -0.5**
baz=307
MIB AMb AMB 17 09 43.2
comp=Z,137nm,0.8s,mb6.0,baz=307
RST Umm Al-Ruwaisa 59.48 306 *e*P **P 17 09 25.0 -1.0**
baz=306
RST AMb AMB 17 09 41.9
comp=Z,52nm,1.3s,mb5.4,baz=306
ASAJ Asahikawa 59.91 34 P **P 17 09 29.0 +0.3**
comp=Z,37nm,0.4s,mb5.7,baz=230,slow=8.4,SNR=119
ASAJ Asahikawa 59.91 34 P **P 17 09 29.0 +0.3**
ASAJ pmax pmax
comp=Z,37nm,0.4s
HNR Honiara 60.20 100 P **P 17 09 29.5 -1.7**
HNR pmax pmax
comp=Z,89nm,1.0s,mb5.8
HNR Honiara 60.20 100 *e*P **P 17 09 27.3 -4.0**
comp=Z,89nm,1.0s,mb5.8
HNR LR LR
comp=Z,1μm,21.0s,MS5.0
BVAR Borovoye Array 60.32 340 P **P 17 09 30.5 -0.8**
comp=Z,11nm,0.6s,mb5.0,baz=146,slow=8.4,SNR=59
BVAR LR LR 17 40 12.3
comp=Z,2μm,21.0s,MS5.2,baz=39,slow=40
BRVK Borovoye 60.39 340 P **P 17 09 31.3 -0.4**
comp=Z,292nm,0.7s,mb6.4,SNR=8.2
BRVK Borovoye 60.39 340 *e*P **P 17 09 30.8 -0.9**
BRVK pmax pmax
comp=Z,60nm,1.0s,mb5.6
BRVK MLR MLR
comp=Z,1μm,22.0s,MS5.0
BRVK Borovoye 60.39 340 *e*P **P 17 09 30.8 -1.0**
comp=Z,60nm,1.0s,mb5.6
BRVK LR LR
comp=Z,1μm,22.0s,MS5.0
BOD Bodaibo 60.93 9 *e*P **P 17 09 35.3 0.0**
BOD pmax pmax
comp=Z,42nm,1.1s,mb5.5
YUK Yuzh-Kuril'sk 61.74 36 *e*P **P 17 09 41.0 -0.2**
YUK S **S 17 18 20.0 +18**
YSS Yuzh-Sakhalins 61.78 32⇑ *e*P **P 17 09 40.5 -0.8**
YSS *e* pP 17 09 53.0 +1.1
YSS *e* 17 11 54.0
YSS *e*S **S 17 18 16.0 +14**
YSS *e*PS 17 18 36.0
YSS MLR MLR
comp=N,2μm,14.0s
YSS MLR MLR
comp=Z,1μm,14.0s,MS5.3
YSS Yuzh-Sakhalins 61.78 32⇑ *e*P **P 17 09 40.8 -0.5**
comp=Z,389nm,1.3s,mb6.4
YSS LR LR
comp=Z,342nm,20.0s,MS4.5
CLNS Chul'man 62.28 15 *e*P **P 17 09 44.5 0.0**
CLNS pmax pmax
comp=N,28nm,0.8s
CLNS pmax pmax
comp=E,20nm,0.8s
CLNS pmax pmax
comp=Z,29nm,0.7s,mb5.5
CLNS MLR MLR
comp=E,771nm,17.0s,MS5.5
CLNS MLR MLR
comp=N,3μm,16.0s,MS5.5
CLNS MLR MLR
comp=Z,4μm,16.0s,MS5.6
KMBO Kilima Mbogo 62.52 270 P **P 17 09 47.8 +0.8**
comp=Z,4.9nm,0.8s,mb4.7,baz=62,slow=12,SNR=6.9
KMBO LR LR 17 32 37.1
comp=Z,3μm,19.7s,MS5.4,baz=90,slow=32
KMBO Kilima Mbogo 62.52 270⇑ *e*P **P 17 09 47.9 +0.9**
KMBO *e**PP pP 17 09 57.1 -0.5
KMBO pmax pmax
comp=Z,10.0nm,0.4s
KMBO MLR MLR
comp=Z,3μm,20.0s
KMBO Kilima Mbogo 62.52 270⇑ *e*P **P 17 09 47.9 +0.9**
comp=Z,10nm,0.4s,mb5.3
KMBO *e*pP pP 17 09 57.1 -0.5
KMBO LR LR
comp=Z,3μm,20.0s,MS5.4
BHD Baghdad 62.99 309 *ex* x 17 09 39.0
BHD *ex* x 17 18 15.0
CASY Casey 64.38 175 *e*P **P 17 09 57.4 -0.8**
CASY LR LR
comp=Z,2μm,20.0s,MS5.3
MAK Makhachkala 65.01 320 *e*P **P 17 10 00.7 -2.1**
MAK *e* 17 12 22.8
MAK *i*S S 17 18 39.8 -2.7
MAK *i* 17 19 51.0
MAK *e*SS SS 17 22 52.5 -2.6
MAK pmax pmax
comp=Z,325nm,1.4s,mb6.2
MSL Mosul 65.17 312 *ex* x 17 10 06.0
MSL *ex* x 17 18 43.0
HAKT HAKKARI 65.19 313 *i*P **P 17 10 03.9 -0.2**
GNI Garni 65.55 316 *e*P **P 17 10 06.2 -0.1**
GNI pmax pmax
comp=Z,61nm,1.2s
GNI MLR MLR
comp=Z,618nm,20.0s
GNI Garni 65.55 316 *e*P **P 17 10 06.2 -0.1**
comp=Z,61nm,1.2s,mb5.5
GNI LR LR
comp=Z,618nm,20.0s,MS4.8
MTA Mtatsminda 66.19 318 P **P 17 10 10.1 -0.4**
TBLG Delisi 66.25 318 P **P 17 10 09.9 -0.9**
TBLG Delisi 66.25 318 P **P 17 10 10.0 -0.8**
SVE Sverdlovsk 66.81 338⇓ *e*P **P 17 10 13.8 -0.3**
SVE *e* 17 10 30.8
SVE *e*S S 17 19 05.4 +1.4
SVE pmax pmax
comp=Z,78nm,1.0s,mb5.7
SVE MLR MLR
comp=Z,2μm,21.0s,MS5.3
MARD Mardin 67.24 312 *i*P **P 17 10 16.8 -0.5**
ARU Arti 67.33 337 P **P 17 10 16.2 -1.2**
comp=Z,260nm,0.7s,mb6.4,SNR=14
ARU Arti 67.33 337*c* *i*P **P 17 10 16.6 -0.8**
ARU *e* 17 10 47.6
ARU *e* 17 12 41.5
ARU *e*S S 17 19 09.6 -0.7
ARU *e*SS SS 17 23 27.2 -3.4
ARU pmax pmax
comp=Z,33nm,0.8s,mb5.4

ARU MLR MLR
comp=Z,2µm,20.0s,MS5.4
ARU Arti 67.33 337 *eP* **P 17 10 16.0 -1.4**
comp=Z,74nm,1.1s,mb5.6
ARU LR LR
comp=Z,3µm,21.0s,MS5.4
HOMI Horasan 67.48 315 *i* P **P 17 10 20.1 +1.4**
ONI Oni 67.48 318 P **P 17 10 18.1 -0.6**
DZM Mont Dzumac 67.55 113 *eP* **P 17 10 18.4 -1.1**
YAK Yakutsk 68.01 15*c i*P **P 17 10 20.4 -1.1**
YAK *e* 17 10 49.7
YAK *e* 17 12 49.8
YAK *eS* S 17 19 11.5 -6.7
YAK *e* 17 20 11.9
YAK pmax pmax
comp=Z,97nm,0.8s,mb5.9
YAK pmax pmax
comp=E,9.0nm,0.9s
YAK pmax pmax
comp=N,6.0nm,0.7s
YAK pmax pmax
comp=Z,154nm,3.5s
YAK pmax pmax
comp=E,34nm,2.1s
YAK pmax pmax
comp=N,79nm,2.8s
YAK smax
comp=N,308µm,10.1s
YAK smax
comp=E,486µm,17.6s
YAK MLR MLR
comp=Z,4µm,16.0s,MS5.8
YAK MLR MLR
comp=N,3µm,17.0s,MS5.6
YAK MLR MLR
comp=E,2µm,15.0s,MS5.6
YAK Yakutsk 68.01 15⇑ *i*P **P 17 10 20.2 -1.3**
comp=E,141nm,0.7s,mb6.1
YAK LR LR
comp=Z,4µm,19.0s,MS5.6
KOPT Kop Dagi 68.46 315 *i* P **P 17 10 23.5 -1.3**
KIV Kislovodsk 68.58 319 P **P 17 10 25.4 -0.1**
comp=Z,323nm,1.0s,mb6.2,SNR=8.9
KIV Kislovodsk 68.58 319*c i*P **P 17 10 25.5 0.0**
KIV *i* pP 17 10 37.3 +1.1
KIV *e* 17 10 44.0
KIV *iS* S 17 19 26.3 +0.6
KIV *i* 17 19 43.3
KIV pmax pmax
comp=Z,57nm,0.9s,mb5.5
KIV Kislovodsk 68.58 319⇑ *i*P **P 17 10 25.6 +0.1**
KIV Kislovodsk 68.58 319⇑ *i*P **P 17 10 25.2 -0.3**
comp=Z,78nm,1.1s,mb5.5
KIV LR LR
comp=Z,1µm,20.0s,MS5.1
MALT Malatya 69.34 312⇑ *eP* **P 17 10 28.6 -1.8**
MALT pmax pmax
comp=Z,26nm,1.0s,mb5.1
MALT MLR MLR
comp=Z,1µm,21.0s,MS5.2
MALT Malatya 69.34 312⇑ *i*P **P 17 10 28.8 -1.6**
MALT Malatya 69.34 312⇑ *eP* **P 17 10 28.6 -1.8**
comp=Z,26nm,1.0s,mb5.1
MALT LR LR
comp=Z,1µm,21.0s,MS5.2
GZT Gaziantep 69.66 311 *i* P **P 17 10 32.4 0.0**
MAW Mawson 70.02 194 *eP* **P 17 10 32.6 -1.4**
comp=Z,12nm,1.0s,mb4.8
MAW Mawson 70.02 194 P **P 17 10 33.3 -0.6**
comp=Z,6.1nm,1.0s,mb4.5,baz=360,slow=3.1,SNR=8.6
MAW LR LR 17 34 38.8
comp=Z,3µm,20.1s,MS5.5,baz=47,slow=30
MAW PKPPKP 17 38 36.5
comp=Z,3.5nm,0.9s,baz=232,slow=4.3,SNR=5.1
MAW Mawson 70.02 194 P **P 17 10 33.3 -0.7**
MAW pmax pmax
comp=Z,6.0nm,1.0s
MAW MLR MLR
comp=Z,3µm,20.1s
MAW pmax pmax
comp=Z,4.0nm,0.9s
SOC Sochi 70.38 318 *eP* **P 17 10 35.5 -1.2**
SOC *e* 17 10 52.8
SOC *e* 17 13 10.4
SOC *eS* S 17 19 40.8 -6.2
SOC *e* 17 20 14.2
SOC pmax pmax
comp=Z,72nm,1.2s,mb5.5
SKR Severo-Kuril's 71.17 34 *eP* **P 17 10 39.5 -1.8**
SKR *e* pP 17 10 51.5 -0.5
SKR pmax pmax
comp=N,50nm,0.7s
SKR pmax pmax
comp=Z,120nm,0.7s,mb5.9
SKR pmax pmax
comp=N,2µm,4.0s
SKR pmax pmax
comp=Z,2µm,4.0s
SKR MLR MLR
comp=E,2µm,18.0s
SKR MLR MLR
comp=Z,3µm,18.0s,MS5.6
LSZ Lusaka 71.68 255 *eP* **P 17 10 45.3 +0.2**
LSZ pmax pmax
comp=Z,47nm,1.1s,mb5.3
LSZ MLR MLR
comp=Z,2µm,20.0s,MS5.4
LSZ Lusaka 71.68 255 *eP* **P 17 10 45.3 +0.2**
comp=Z,47nm,1.1s,mb5.3
LSZ LR LR
comp=Z,2µm,20.0s,MS5.4
CSS Prodhromos 72.20 308 *eP* **P 17 10 47.5 -0.4**
comp=Z,51nm,1.0s,mb5.4
ANN Anapa 72.37 319 *eP* **P 17 10 46.8 -1.8**
ANN *eS* S 17 20 06.6 -3.2
ANN pmax pmax
comp=Z,74nm,1.2s,mb5.5
PEA0B Petropavlovsk- 73.18 32 *eP* **P 17 10 52.5 -0.7**
PETK Petropavlovsk- 73.18 32 P **P 17 10 52.3 -1.0**
comp=Z,29nm,0.7s,mb5.3,baz=334,slow=1.0,SNR=57
PETK LR LR 17 48 19.0
comp=Z,719nm,19.2s,MS5.0,baz=118,slow=40
BR131 Keskin Array S 73.32 313 *eP* **P 17 10 52.9 -1.5**
comp=Z,12nm,0.7s,mb4.9
PET Petropavlovsk 73.65 33 *eP* **P 17 10 55.5 -0.5**
PET pmax pmax
comp=Z,107nm,0.6s,mb6.0
PET MLR MLR
comp=Z,800nm,18.0s,MS5.0
PET Petropavlovsk 73.65 33 *eP* **P 17 10 54.8 -1.3**
comp=Z,66nm,0.7s,mb5.7
PET LR LR
comp=Z,1µm,19.0s,MS5.2
VSR Storozhevoye 73.84 325 *eP* **P 17 10 55.9 -1.3**
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.2
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,40nm,0.8s
ANTO Ankara 73.99 313 P **P 17 10 58.0 -0.3**
ANTO *e* pP 17 11 05.6 -3.5
ANTO pmax pmax
comp=Z,66nm,1.2s,mb5.4
ANTO Ankara 73.99 313 *eP* **P 17 10 57.2 -1.2**
comp=Z,21nm,0.8s,mb5.1
ANTO LR LR
comp=Z,991nm,19.0s,MS5.1
VOR Voronezh 74.04 326 P **P 17 10 58.0 -0.4**
VOR pmax pmax
comp=Z,180nm,2.0s,mb5.7
SIM Simferopol' 74.63 318*c i*P **P 17 11 01.4 -0.5**
SIM *e* 17 11 16.0
SIM pmax pmax
comp=Z,19nm,0.7s,mb5.1
RPZ Rata Peaks 74.97 135 LR LR 17 45 22.0
comp=Z,2µm,21.3s,MS5.4,baz=282,slow=37
ISP Isparta 75.15 310 PFAKE 17 11 20.0 +15
ISP LR LR
comp=Z,888nm,22.0s,MS5.0
ESKT Eskisehir 75.33 312 *i* P **P 17 10 57.1 -9.0**
BOSA Boshof 75.37 241 P **P 17 11 07.7 +1.1**
comp=Z,13nm,0.8s,mb4.9,baz=71,slow=6.5,SNR=17
BOSA LR LR 17 40 27.4
comp=Z,3µm,18.4s,MS5.6,baz=73,slow=33
TIXI Tiksi 76.11 9 *eP* **P 17 11 08.5 -1.4**
TIXI pmax pmax
comp=Z,95nm,1.5s,mb5.5
TIXI Tiksi 76.11 9 *eP* **P 17 11 08.3 -1.6**
comp=Z,34nm,0.6s,mb5.5
TIXI LR LR
comp=Z,5µm,21.0s,MS5.8
MOS Moscow 76.58 329 *eP* **P 17 11 11.2 -1.7**
MOS *e* pP 17 11 22.6 -1.1
MOS *eS* S 17 20 53.9 -2.7
MOS *e* 17 21 56.8
MOS pmax pmax
comp=Z,138nm,0.9s,mb5.9
MOS pmax pmax
comp=Z,100µm,0.9s
MOS MLR MLR
comp=Z,3µm,22.0s,MS5.6
ULDT Uludag 76.77 312 *i* P **P 17 11 13.1 -1.2**
OBN Obninsk 76.88 328 P **P 17 11 14.3 -0.2**
comp=Z,459nm,0.7s,mb6.5,SNR=5.5
OBN Obninsk 76.88 328*a i*P **P 17 11 14.2 -0.3**
OBN *i* pP 17 11 24.3 -1.1
OBN *i* 17 11 31.4
OBN 17 14 09.0
OBN *eS* S 17 20 59.8 0.0
OBN *e* 17 21 44.4
OBN pmax pmax
comp=Z,96nm,1.1s,mb5.6
OBN MLR MLR
comp=Z,1µm,20.0s,MS5.2
OBN Obninsk 76.88 328 *eP* **P 17 11 13.8 -0.7**
comp=Z,163nm,1.3s,mb5.8
OBN LR LR
comp=Z,1µm,21.0s,MS5.2
SNZO South Karori 77.21 132 PFAKE 17 11 30.0 +13
SNZO LR LR
comp=Z,3µm,22.0s,MS5.6
SYO Syowa Base 77.59 199⇑ *eP* **P 17 11 16.8 -1.5**
SYO Syowa Base 77.59 199⇑ *epP* pP 17 11 25.6 -3.6
KDAG Bornova 77.77 310 *i* P **P 17 11 19.4 -0.6**
TIRR Tirgusor 78.37 316 *eP* **P 17 11 22.3 -0.9**
TIRR pmax pmax
comp=Z,53nm,1.1s,mb5.4
TIRR Tirgusor 78.37 316 *eP* **P 17 11 22.3 -0.9**
comp=Z,53nm,1.1s,mb5.4
URZ Urewera 78.67 128 LR LR 17 47 04.5
comp=Z,2µm,20.6s,MS5.5,baz=107,slow=36
SANT Santorini 78.76 308 PFAKE 17 11 40.0 +15
SANT LR LR
comp=Z,838nm,19.0s,MS5.1
KIS Kishinev 78.77 319 *eP* **P 17 11 26.0 +0.7**
KIS *e* pP 17 11 34.0 -2.1
KIS *e* 17 11 44.0
KIS Kishinev 78.77 319 *eP* **P 17 11 26.0 +0.7**
KIS LRM 17 54 50.0
comp=Z,900nm,20.0s
FUNA Funafuti 79.19 98 PFAKE 17 11 40.0 +12
FUNA LR LR
comp=Z,7µm,19.0s,MS6.0
SUR Sutherland 79.51 238 *eP* **P 17 11 31.1 +1.4**
comp=Z,63nm,1.0s,mb5.5
SUR *epP* pP 17 11 40.5 -0.1
SUR LR LR
comp=Z,4µm,20.0s,MS5.7
AKASG Malin Array Be 79.54 322 P **P 17 11 28.4 -1.0**
comp=Z,6.6nm,0.8s,mb4.6,baz=87,slow=3.9,SNR=18
AKASG LR LR 17 50 30.0
comp=Z,746nm,21.1s,MS5.0,baz=75,slow=38
KIEV Kiev 79.54 322 *eP* **P 17 11 28.1 -1.3**
KIEV pmax pmax
comp=Z,12nm,0.8s,mb4.9
KIEV MLR MLR
comp=Z,980nm,20.0s,MS5.2
KIEV Kiev 79.54 322 *eP* **P 17 11 28.1 -1.4**
comp=Z,12nm,0.8s,mb4.9
KIEV LR LR
comp=Z,980nm,20.0s,MS5.2
VRI Vrincioaia 79.88 317⇑ *i*P **P 17 11 31.9 +0.6**
VRI Vrincioaia 79.88 317 P **P 17 11 32.5 +1.2**
ZIMR 80.32 315 P **P 17 11 34.4 +0.6**
MLR Muntele Rosu 80.32 317 P **P 17 11 34.6 +0.8**
comp=Z,39nm,0.9s,mb5.3,baz=144,slow=4.6,SNR=18
MLR Muntele Rosu 80.32 317⇑ *i*P **P 17 11 34.2 +0.4**
VOIR 80.92 317⇑ *i*P **P 17 11 36.8 -0.2**
VOIR 80.92 317 ⇑P **P 17 11 36.8 -0.2**
BURAR Bucovina Array 81.29 319⇑ *i*P **P 17 11 39.9 +1.0**
BURAR Bucovina Array 81.29 319 ⇑P **P 17 11 39.9 +1.0**
BUR08 Bucovina Ar. S 81.31 319 *eP* **P 17 11 39.5 +0.6**
BUR08 *epP* pP 17 11 49.3 -0.6
VTS Vitosha 81.65 313 P **P 17 11 41.0 +0.1**
PUL Pulkovo 81.72 331⇑ *eP* **P 17 11 42.2 +1.3**
TSUM Tsumeb 81.92 251 *eP* **P 17 11 43.1 +0.3**
comp=Z,25nm,1.1s,mb5.0
TSUM *epP* pP 17 11 52.3 -1.5
TSUM LR LR
comp=Z,3µm,19.0s,MS5.7
RAO Raoul Island 82.19 119 PFAKE 17 11 50.0 +6.0
RAO LR LR
comp=Z,2µm,22.0s,MS5.4
SMY Shemya 82.31 36 PFAKE 17 11 50.0 +5.9
SMY LR LR
comp=Z,988nm,21.0s,MS5.2
JOF Joensuu 82.33 335 *ep* **P 17 11 43.2 -0.8**
comp=Z,27nm,0.7s,mb5.3
JOF Joensuu 82.33 335 *eP* **P 17 11 43.2 -0.8**
JOF pmax pmax
comp=Z,27nm,0.7s,mb5.3
GZR Gura Zlata 82.48 316⇑ *i*P **P 17 11 45.9 +0.7**
GZR Gura Zlata 82.48 316 P **P 17 11 47.2 +2.0**
LVV L'vov 82.54 321 *eP* **P 17 11 44.6 -0.8**
DRGR 82.79 318⇑ *i*P **P 17 11 47.2 +0.4**
DRGR 82.79 318 P **P 17 11 47.6 +0.8**
LVZ Lovozero 82.92 340⇑ *eP* **P 17 11 47.1 +0.1**
LVZ MLR MLR
comp=Z,3µm,21.0s,MS5.6
SBA Scott Base 83.08 169 *eP* **P 17 11 48.7 +1.0**
SBA *e**PP pP 17 11 56.6 -2.0
SBA pmax pmax
comp=Z,14nm,0.9s,mb5.0
SBA MLR MLR
comp=Z,1µm,20.0s,MS5.2
SBA Scott Base 83.08 169 *eP* **P 17 11 48.7 +1.0**
comp=Z,14nm,0.9s,mb5.0
SBA *epP* pP 17 11 56.6 -2.0
SBA LR LR
comp=Z,1µm,20.0s,MS5.2
APA Apatity 83.22 339⇓ *i*P **P 17 11 48.8 +0.2**
APA *i* 17 11 56.0
APA pmax pmax
comp=Z,31nm,1.0s,mb5.3
APA MLR MLR
comp=Z,2µm,19.0s,MS5.6
BZS Buzias 83.33 316⇑ *i*P **P 17 11 49.4 -0.2**
BZS Buzias 83.33 316 P **P 17 11 49.9 +0.3**
KWP Kalwaria 83.34 320 *eP* **P 17 11 50.1 +0.6**
KWP Kalwaria 83.34 320 *eP* **P 17 11 50.1 +0.5**
KWP LR LR
comp=Z,1µm,20.0s,MS5.3
UZH Uzhgorod 83.42 319 *eP* **P 17 11 45.0 -5.0**
UZH *i* pP 17 11 57.4 -3.5
UZH *e* 17 12 01.4
BILL Bilibino 83.43 20 *i* P **P 17 11 50.8 +1.1**
BILL Bilibino 83.43 20 *i* P **P 17 11 50.9 +1.2**
BILL LR LR
comp=Z,2µm,19.0s,MS5.6
KOLS Kolonicke sedl 83.49 320 *eP* **P 17 11 51.2 +0.9**
KOLS *epP* pP 17 12 03.0 +1.7
TIR Tirane 83.91 312 PFAKE 17 12 00.0 +7.3
TIR LR LR
comp=Z,1µm,19.0s,MS5.3
SUW Suwalki 83.95 325 *eP* **P 17 11 52.4 -0.1**
SUW Suwalki 83.95 325 *eP* **P 17 11 52.4 -0.2**
CRVS Cervenica-Dubn 84.01 319 *eP* **P 17 11 53.1 +0.1**
STHS Stebnicka Huta 84.24 320 *eP* **P 17 11 54.7 +0.5**
STHS *e* 17 12 13.9
STHS pmax pmax
comp=Z,22nm,1.0s,mb5.2
STHS Stebnicka Huta 84.24 320 *eP* **P 17 11 54.7 +0.5**
comp=Z,22nm,1.0s,mb5.2
STHS *e* 17 12 13.9
KAF Kangasniemi 84.29 333 *ep* **P 17 11 53.2 -0.9**
comp=Z,59nm,0.8s,mb5.8,baz=100,slow=4.7
KAF Kangasniemi 84.29 333 *eP* **P 17 11 53.2 -0.9**
KAF pmax pmax
comp=Z,59nm,0.8s,mb5.8
KECS Kecovo 84.58 319 *i* P **P 17 11 55.9 0.0**
KECS pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
KECS Kecovo 84.58 319 *i* P **P 17 11 55.9 0.0**
comp=Z,8.4nm,0.8s,mb4.9
PSZ Piszkesteto 84.88 318⇓ *eP* **P 17 11 57.9 +0.5**
PSZ Piszkesteto 84.88 318⇑ *i*P **P 17 11 58.2 +0.8**
PSZ Piszkesteto 84.88 318 PFAKE 17 12 10.0 +13
PSZ LR LR
comp=Z,704nm,20.0s,MS5.0
OJC Ojcow 85.30 321 *eP* **P 17 11 59.4 -0.1**
BUD Budapest 85.39 318⇑ *ePcP* PcP 17 12 03.4 +0.4
PKSM Moragy 85.47 317⇑ *i*P **P 17 12 00.1 -0.3**
PKSM Moragy 85.47 317 P **P 17 12 00.6 +0.2**
VYHS Vyhne 85.66 319 *eP* **P 17 12 01.7 +0.4**
VYHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.6
VYHS Vyhne 85.66 319 *eP* **P 17 12 01.7 +0.4**
comp=Z,4.1nm,1.1s,mb4.6
KOLL Kolacno 85.96 319 *eP* **P 17 12 02.7 -0.1**
TIP Timpagrande 85.99 309 PFAKE 17 12 10.0 +6.8
TIP LR LR
comp=Z,940nm,20.0s,MS5.2
KEV Kevo 86.17 341 *ep* **P 17 12 02.6 -0.8**
comp=Z,31nm,0.8s,mb5.6
KEV Kevo 86.17 341 *eP* **P 17 12 02.6 -0.8**
KEV pmax pmax
comp=Z,31nm,0.8s,mb5.6
OKC Ostrava-Krasne 86.30 320 *eP* **P 17 12 03.5 -0.9**
OKC *epP* pP 17 12 15.0 -0.4
OKC AMS AMS 18 00 40.0
comp=Z,600nm,19.7s
OKC Ostrava-Krasne 86.30 320 *eP* **P 17 12 03.5 -0.9**
OKC *epP* pP 17 12 15.0 -0.4
CEL Celeste 86.57 308 PFAKE 17 12 20.0 +14
CEL LR LR
comp=Z,39µm,20.0s,MS6.8
ARCES ARCESS Array B 86.61 340 P **P 17 12 05.9 +0.3**
comp=Z,41nm,0.9s,mb5.7,baz=105,slow=4.3,SNR=40
ARCES LR LR 17 55 04.1
comp=Z,3µm,20.4s,MS5.6,baz=111,slow=38
ARE0 ARCESS Array S 86.61 340 *eP* **P 17 12 05.8 +0.2**
MODS Modra-Piesok 86.67 319 *eP* **P 17 12 06.0 -0.3**
MORC Moravsky Berou 86.68 320⇑ *i*P **P 17 12 06.9 +0.6**
MORC Moravsky Berou 86.68 320 P **P 17 12 06.9 +0.6**
ZST Bratislava 86.77 318 *eP* **P 17 12 07.1 +0.3**
comp=Z,19nm,0.8s,mb5.4
ZST LR LR
comp=Z,700nm,21.1s,MS5.0
CUC Castrocucco 86.80 310 PFAKE 17 12 20.0 +13
CUC LR LR
comp=Z,814nm,20.0s,MS5.1
SOP Sopron 87.07 318⇓ *eP* **P 17 12 09.4 +1.1**
FG4 Candela 87.14 311 P **P 17 12 09.6 +0.8**
FG4 pmax pmax
comp=Z,55nm,0.6s,mb6.0
FG4 Candela 87.14 311 P **P 17 12 09.6 +0.8**
comp=Z,55nm,0.6s,mb6.0
VRAC Vranov 87.23 319 P **P 17 12 09.4 +0.4**
comp=Z,3.9nm,0.6s,mb4.8,baz=19,slow=6.3,SNR=4.3
NVL N'lazarevskaya 87.24 199 P **P 17 12 16.9 +8.2**
NVL pmax pmax
comp=Z,35nm,1.4s,mb5.4
MAIT Maitri 87.28 199 *eP* **P 17 12 10.1 +1.3**
CSSN Cassano Irpino 87.48 311 P **P 17 12 10.7 +0.3**
comp=Z,12nm,0.6s,mb5.3
DPC Dobruska-Polom 87.53 320 *eP* **P 17 12 11.1 +0.7**
DPC *epP* pP 17 12 21.0 -0.4
DPC *eS* S 17 22 50.0 +0.7
DPC AMS AMS 17 58 20.0
comp=Z,900nm,18.9s
KSP Ksiaz 87.60 321 *eP* **P 17 12 11.1 +0.3**
KSP *e**PP pP 17 12 19.4 -2.3
ADK Adak 87.72 38 PFAKE 17 12 20.0 +8.7
ADK LR LR
comp=Z,812nm,21.0s,MS5.1
UPC Upice 87.74 321 *eP* **P 17 12 11.9 +0.5**
UPC *epP* pP 17 12 21.7 -0.7
BOJS Bojanci 87.74 316 *i* P **P 17 12 11.7 +0.1**
PERS Pernice 87.94 317 *i* P **P 17 12 12.8 +0.3**
AFI Afiamalu 87.94 104 P **P 17 12 12.9 -0.3**
comp=Z,44nm,1.0s,mb5.7,baz=75,slow=19,SNR=3.8
TREC Trest 87.95 319 AMS AMS 18 00 00.0
comp=Z,600nm,21.2s
SOKA Soboth 88.00 317⇑ *i*P **P 17 12 13.1 +0.3**
comp=Z,19nm,1.2s,mb5.2
SDI San Donato 88.46 312 P **P 17 12 14.5 -0.6**
SDI pmax pmax
comp=Z,11nm,0.6s,mb5.3
SDI San Donato 88.46 312 P **P 17 12 14.5 -0.6**
comp=Z,11nm,0.6s,mb5.3
JAVS Javornik 88.61 316 *i* P **P 17 12 15.5 -0.2**
VVLD Villa Vallelon 88.62 312 P **P 17 12 16.9 +1.1**
PRU Pruhonice 88.63 320 *eP* **P 17 12 15.8 +0.1**
PRU *epP* pP 17 12 25.4 -1.2
PRU AMS AMS 17 58 30.0
comp=Z,800nm,17.2s
PVCC Panska Ves 88.66 320 *eP* **P 17 12 16.7 +0.9**
PVCC AMS AMS 17 59 40.0
comp=Z,800nm,19.6s
VOY Vojsko 88.73 316 *eP* **P 17 12 16.3 0.0**
VOY *e* 17 12 33.9
PTQR Pietraquaria 88.79 312 P **P 17 12 16.9 +0.3**
comp=Z,60nm,0.9s,mb5.9
AQU L'Aquila 88.81 312 P **P 17 12 17.7 +1.0**
AQU pmax pmax
comp=Z,74nm,1.0s,mb6.0
AQU L'Aquila 88.81 312 P **P 17 12 17.7 +1.0**
comp=Z,74nm,1.0s,mb6.0
CING Cingoli 89.04 313 P **P 17 12 18.2 +0.5**
comp=Z,126nm,2.5s,mb5.8
NRCA Norcia 89.06 313 P **P 17 12 18.3 +0.4**
comp=Z,22nm,0.9s,mb5.5
GEC2 GERESS Array S 89.08 319 *eP* **P 17 12 17.8 0.0**
GEC2 pmax pmax
comp=Z,19nm,1.0s,mb5.4
GEC2 GERESS Array S 89.08 319 *eP* **P 17 12 17.8 0.0**
comp=Z,19nm,1.0s,mb5.4
GERES GERESS Array B 89.08 319 P **P 17 12 17.8 -0.1**
comp=Z,6.4nm,0.8s,mb5.0,baz=88,slow=4.7,SNR=27
BRG Berggiesshubel 89.09 321 *eP* **P 17 12 18.2 +0.4**
BRG *i* pP 17 12 28.4 -0.4
BRG pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
BRG pmax pmax
comp=Z,15nm,1.2s,mb5.2
BRG pmax pmax
comp=Z,5.0nm,1.3s,mb4.7
BRG MLR MLR
comp=N,304nm,19.7s,MS5.0
BRG MLR MLR
comp=E,484nm,21.1s,MS5.0
BRG MLR MLR
comp=Z,571nm,15.6s
BRG Berggiesshubel 89.09 321 *eP* **P 17 12 17.8 0.0**
comp=Z,26nm,1.3s,mb5.4
BRG Berggiesshubel 89.09 321 *eP* **P 17 12 18.2 +0.5**
comp=Z,13nm,0.8s,mb5.3
BRG *i* pP 17 12 28.4 -0.4
comp=Z,25nm,1.2s
BRG PP PP 17 16 00.1 +12
comp=Z,7.5nm,1.2s
BRG
comp=N,508nm,19.7s
BRG
comp=E,808nm,21.1s
BRG
comp=Z,954nm,15.6s
BRG Berggiesshubel 89.09 321 *eP* **P 17 12 18.2 +0.5**
comp=Z,7.9nm,0.8s,mb5.1
BRG *i* pP 17 12 28.4 -0.4
BRG PP PP 17 16 00.1 +12
BRG LR LR
comp=Z,570nm,15.6s,MS5.1
PTCC Patocco-Chiusa 89.14 316 P **P 17 12 18.1 0.0**
comp=Z,16nm,0.7s,mb5.5
KHC Kasperske Hory 89.19 319 *eP* **P 17 12 18.2 -0.1**
KHC *epP* pP 17 12 27.1 -2.2
KHC *eS* S 17 23 03.7 -1.4
KHC AMS AMS 17 58 20.0
comp=Z,900nm,19.8s
RUE Ruedersdorf 89.31 322 *eP* **P 17 12 19.3 +0.5**
comp=Z,53nm,0.8s,mb5.9
FSSB Fossombrone 89.36 314 P **P 17 12 19.9 +0.6**
comp=Z,26nm,0.8s,mb5.6

RJOB Jochberg 89.61 318 *e*P P **17 12 19.4 -0.9**
comp=Z,16nm,0.9s,mb5.3
RJOB *e*pP pP 17 12 30.3 -1.0
WET Wettzell 89.64 319 *e*P P **17 12 20.4 -0.1**
WET *e**PP pP 17 12 31.0 -0.4
WET pmax pmax
comp=Z,18nm,0.9s,mb5.4
WET Wettzell 89.64 319 *e*P P **17 12 20.4 -0.1**
comp=Z,18nm,0.9s,mb5.4
WET *e*pP pP 17 12 31.0 -0.4
WET Wettzell 89.64 319 *e*P P **17 12 20.4 -0.1**
comp=Z,18nm,0.9s,mb5.4
WET *e*pP pP 17 12 31.0 -0.4
CLL Collm 89.71 321 *i* P P **17 12 20.8 +0.1**
CLL *i* *PP pP 17 12 30.7 -1.0
CLL *i* *SP sP 17 12 34.3 -1.3
CLL *e*S S 17 23 17.0 +7.1
CLL pmax pmax
comp=Z,20nm,1.1s,mb5.4
CLL MLR MLR
comp=Z,800nm,19.3s,MS5.2
CLL Collm 89.71 321 *e*P P **17 12 20.3 -0.4**
comp=Z,13nm,1.0s,mb5.2
CLL *e*pP pP 17 12 31.0 -0.7
CLL Collm 89.71 321 *i* P P **17 12 20.8 +0.1**
comp=Z,20nm,1.1s,mb5.4
CLL *i* pP pP 17 12 30.7 -1.0
CLL *i* sP sP 17 12 34.3 -1.3
CLL *i* x x 17 12 41.7
CLL *e*PP PP 17 16 01.0 +8.0
CLL *e*S S 17 23 17.0 +7.1
CLL *e*x x 17 23 42.0
CLL *e*SSSS 17 36 00.0
CLL LmV 18 01 00.0
comp=Z,800nm,19.3s
CLL Collm 89.71 321 *i* P P **17 12 20.8 +0.1**
comp=Z,20nm,1.1s,mb5.4
CLL *i* pP pP 17 12 30.7 -1.0
CLL *i* sP sP 17 12 34.3 -1.3
CLL *e*S S 17 23 17.0 +7.1
CLL LR LR
comp=Z,800nm,19.3s,MS5.2
BADI Badiali 89.74 313 P P **17 12 23.0 +2.0**
comp=Z,28nm,0.9s,mb5.6
HFS Hagfors 89.96 330 P P **17 12 21.6 -0.1**
comp=Z,18nm,1.0s,mb5.4,baz=134,slow=6.2,SNR=6.1
NKC Novy Kostel 89.99 320 *e*P P **17 12 23.0 +1.0**
NKC *e*pP pP 17 12 31.6 -1.4
NKC *e*S S 17 23 11.9 -0.6
NKC AMS AMS 18 03 40.0
comp=Z,800nm,20.4s
NKC Novy Kostel 89.99 320 *e*P P **17 12 23.0 +1.0**
NKC *e*pP pP 17 12 31.6 -1.4
NKC *e*SKS 17 23 11.9
TANN Tannenbergstha 89.99 320 *e*P P **17 12 22.0 -0.1**
comp=Z,10.0nm,1.1s,mb5.1
SFI Santa Sofia 90.05 314 P P **17 12 23.6 +1.1**
SFI pmax pmax
comp=Z,39nm,0.8s,mb5.8
SFI Santa Sofia 90.05 314 P P **17 12 23.6 +1.1**
comp=Z,39nm,0.8s,mb5.8
ROTZ Rotzenmuhle 90.12 320 *e*P P **17 12 23.1 +0.4**
comp=Z,17nm,1.0s,mb5.3
MANZ Manzenberg 90.20 320 *e*P P **17 12 23.4 +0.4**
comp=Z,30nm,1.0s,mb5.6
VMG Vicchio 90.27 314 P P **17 12 24.2 +0.7**
comp=Z,47nm,1.1s,mb5.7
CTI Castel Tesino 90.30 316 P P **17 12 24.1 +0.5**
CTI pmax pmax
comp=Z,25nm,1.1s,mb5.5
CTI Castel Tesino 90.30 316 P P **17 12 24.1 +0.5**
comp=Z,25nm,1.1s,mb5.5
WTTA Wattenberg 90.36 317⇑ *i*P P **17 12 23.6 -0.3**
comp=Z,28nm,1.0s,mb5.6,SNR=7.9
MOX Moxa 90.55 320 *e*P P **17 12 24.9 +0.3**
comp=Z,19nm,1.3s,mb5.3
MOX
comp=Z,700nm,20.0s
MOX Moxa 90.55 320 *e*P P **17 12 24.9 +0.3**
MOX pmax pmax
comp=Z,19nm,1.3s,mb5.3
MOX MLR MLR
comp=Z,700nm,20.0s,MS5.1
MOX Moxa 90.55 320 *e*P P **17 12 24.6 0.0**
comp=Z,16nm,1.1s,mb5.3
FNVD Fontana Vidola 90.58 314 P P **17 12 26.0 +1.1**
GRFL Gerfalco 90.64 313 P P **17 12 24.7 -0.6**
comp=Z,14nm,1.0s,mb5.2
FUR Furstenfeldbru 90.65 318 *e*P P **17 12 24.5 -0.7**
FUR pmax pmax
comp=Z,20nm,0.8s,mb5.5
FUR Furstenfeldbru 90.65 318 *e*P P **17 12 24.5 -0.7**
comp=Z,20nm,0.8s,mb5.5
GRA2 Grafenberg Arr 90.66 319 *e*P P **17 12 25.7 +0.5**
comp=Z,22nm,0.9s,mb5.5
MOTA Moosalm 90.73 317⇑ *i*P P **17 12 25.3 -0.3**
comp=Z,18nm,1.0s,mb5.4
SPB4 Spitsberger Ar 90.81 348 *e*P P **17 12 24.5 -0.8**
RETA Reutte 90.97 317⇑ *i*P P **17 12 26.8 +0.2**
comp=Z,24nm,1.2s,mb5.4
GSCL Gusciola 90.97 314 P P **17 12 27.5 +0.7**
comp=Z,24nm,0.8s,mb5.6
MABI Malga Bissina 91.09 316 P P **17 12 27.7 +0.5**
comp=Z,24nm,1.2s,mb5.4
VLC Villacollemand 91.11 314 PFAKE 17 12 40.0 +13
VLC LR LR
comp=Z,927nm,22.0s,MS5.2
BRMO Bormio 91.20 316 P P **17 12 28.4 +0.6**
comp=Z,16nm,0.8s,mb5.4
NOA NORSAR Array B 91.24 331 LR LR 18 02 26.1
comp=Z,823nm,18.9s,MS5.2,baz=90,slow=41
CLZ Clausthal 91.38 322 *e*P P **17 12 28.5 +0.1**
CLZ pmax pmax
comp=Z,22nm,1.5s,mb5.3
CLZ Clausthal 91.38 322 *e*P P **17 12 28.5 +0.1**
comp=Z,22nm,1.5s,mb5.3
BSEG Bad Segeberg 91.47 324 *e*P P **17 12 29.0 +0.1**
BSEG pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
BSEG Bad Segeberg 91.47 324 *e*P P **17 12 29.0 +0.1**
comp=Z,6.0nm,0.7s,mb5.0
DAVOX Davos/Dischmat 91.55 317 P P **17 12 30.3 +1.0**
comp=Z,20nm,0.8s,mb5.5,baz=135,slow=1.4,SNR=4.8
NRDL Niedersach Rie 91.56 322 *e*P P **17 12 29.6 +0.3**
comp=Z,18nm,1.4s,mb5.2
DAVA Damuels 91.56 317⇑ *i*P P **17 12 29.9 +0.5**
comp=Z,29nm,1.0s,mb5.6,SNR=9.8
DAVA Damuels 91.56 317⇑ *i*PcP PcP 17 12 29.9 -0.4
comp=Z,29nm,1.0s,SNR=9.8
UBBA Unterbreizbach 91.58 321 *e*P P **17 12 29.1 -0.3**
comp=Z,10.0nm,1.4s,mb5.0
DAVOS Davos 91.61 317 P P **17 12 30.3 +0.7**
KEST Kesra 91.65 306 P P **17 12 31.6 +1.5**
comp=Z,9.6nm,1.0s,mb5.1,baz=308,slow=2.8,SNR=10.0
KEST LR LR 17 54 26.2
comp=Z,598nm,19.8s,MS5.0,baz=186,slow=36
VSL Villasalto 91.72 309 PFAKE 17 12 40.0 +10
VSL LR LR
comp=Z,432nm,20.0s,MS4.9
KBS Kingsbay 91.75 349 PFAKE 17 12 40.0 +10
KBS LR LR
comp=Z,2μm,19.0s,MS5.6
SNAA Sanae 91.87 198 *e*P pP 17 12 42.7 +1.3
SNAA *e* 17 12 46.4
SNAA Sanae 91.87 198 P P **17 12 35.9 +5.5**
SNAA pmax pmax
comp=Z,36nm,1.8s
SNAA Sanae 91.87 198 *e*P P **17 12 36.5 +6.1**
comp=Z,36nm,1.8s,mb5.4
TUE Stuetta 91.91 316 *e*P P **17 12 30.5 -0.5**
comp=Z,14nm,0.9s,mb5.3
TUE LR LR
comp=Z,748nm,20.0s,MS5.1
STU Stuttgart 92.05 319 *e*P P **17 12 31.2 -0.5**
comp=Z,16nm,0.6s,mb5.5
BFO Black Forest 92.62 318 P P **17 12 34.5 +0.2**
BFO pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
BFO Black Forest 92.62 318 *e*P P **17 12 33.6 -0.7**
comp=Z,7.0nm,0.9s,mb5.1
BFO LR LR
comp=Z,642nm,20.0s,MS5.1
IBBN Ibbenburen 93.00 322 *e*P P **17 12 35.8 -0.1**
comp=Z,10.0nm,0.5s,mb5.5
MOL Molde 93.00 332 PFAKE 17 12 50.0 +14
MOL LR LR
comp=Z,3μm,15.2s,MS5.8
SBF Sospel 93.23 314 *e*P P **17 12 37.1 -0.1**
comp=Z,66nm,1.1s,mb5.7
SBF Sospel 93.23 314 *e*P P **17 12 37.1 -0.1**
SBF pmax pmax
comp=Z,33nm,1.1s,mb5.7
SBF Sospel 93.23 314 *e*P P **17 12 37.1 -0.1**
comp=Z,33nm,1.1s,mb5.7
CDF Champ du Feu 93.33 318 *e*P P **17 12 37.3 -0.3**
ECH Echery 93.41 318 P P **17 12 38.0 +0.1**
ECH *e* pP 17 12 50.5 +1.6
ECH Echery 93.41 318 *e*P P **17 12 37.4 -0.5**
ECH *e*pP pP 17 12 49.5 +0.5
VNA2 Neumayer--Watz 93.48 198 *e*P P **17 12 39.3 +1.5**
VNA2 *e* pP 17 12 49.4 +0.6
VNA2 *e* 17 12 53.1
MBDF Montbardon 93.70 314 *e*P P **17 12 38.8 -0.6**
comp=Z,6.3nm,0.8s,mb4.8
MBDF Montbardon 93.70 314 *e*P P **17 12 38.8 -0.6**
MBDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
MBDF Montbardon 93.70 314 *e*P P **17 12 38.8 -0.6**
comp=Z,3.2nm,0.8s,mb4.8
LPG La Plagne 93.71 315 *e*P P **17 12 39.6 +0.2**
comp=Z,20nm,1.0s,mb5.2
LPG La Plagne 93.71 315 *e*P P **17 12 39.6 +0.2**
LPG pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
LPG La Plagne 93.71 315 *e*P P **17 12 39.6 +0.2**
comp=Z,9.9nm,1.0s,mb5.2
LPL La Plagne 93.72 315 *e*P P **17 12 39.6 +0.1**
BNI Bardonecchia 93.77 315 PFAKE 17 12 50.0 +10
BNI LR LR
comp=Z,913nm,19.0s,MS5.3
FRF La Foret Royal 93.81 313 *e*P P **17 12 38.8 -1.1**
comp=Z,30nm,1.0s,mb5.4
FRF La Foret Royal 93.81 313 *e*P P **17 12 38.8 -1.1**
FRF pmax pmax
comp=Z,15nm,1.0s,mb5.4
FRF La Foret Royal 93.81 313 *e*P P **17 12 38.8 -1.1**
comp=Z,15nm,1.0s,mb5.4
VNA1 Neumayer--Stat 93.84 199 *e*P P **17 12 40.8 +1.3**
VNA1 *e* pP 17 12 51.6 +1.1
VNA1 *e* 17 12 55.6
HAU Haudompre 93.95 318 *e*P P **17 12 40.1 -0.3**
comp=Z,16nm,0.9s,mb5.1
HAU *e*MLR MLR
comp=Z,826nm,22.8s,MS4.8
HAU Haudompre 93.95 318 *e*P P **17 12 40.1 -0.3**
HAU pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
HAU MLR MLR
comp=Z,830nm,22.8s,MS5.1
HAU Haudompre 93.95 318 *e*P P **17 12 40.1 -0.3**
comp=Z,7.8nm,0.9s,mb5.1
HAU LR LR
comp=Z,830nm,22.8s,MS5.1
WLF Walferdange 94.05 319 *e*P P **17 12 40.8 0.0**
comp=Z,12nm,1.2s,mb5.2
WLF Walferdange 94.05 319 PFAKE 17 12 50.0 +9.2
WLF LR LR
comp=Z,676nm,20.0s,MS5.1
VNA3 Neumayer Olymp 94.09 198 *e*P P **17 12 41.6 +1.0**
VNA3 *e* pP 17 12 52.7 +1.1
VNA3 *e* 17 12 56.6
CABF La Chapelle 94.16 316 *e*P P **17 12 41.6 +0.2**
comp=Z,14nm,0.9s,mb5.1
CABF La Chapelle 94.16 316 *e*P P **17 12 41.6 +0.2**
CABF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
CABF La Chapelle 94.16 316 *e*P P **17 12 41.6 +0.2**
comp=Z,7.2nm,0.9s,mb5.1
ORIF Oris-en-Rattie 94.34 315 *e*P P **17 12 42.5 +0.2**
comp=Z,13nm,1.0s,mb5.0
ORIF *e*MLR MLR
comp=Z,1μm,21.5s,MS5.0
ORIF Oris-en-Rattie 94.34 315 *e*P P **17 12 42.5 +0.2**
ORIF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
ORIF Oris-en-Rattie 94.34 315 *e*P P **17 12 42.5 +0.2**
comp=Z,6.7nm,1.0s,mb5.0
VIVF Saint-Julien-l 95.20 315 *e*P P **17 12 46.1 -0.1**
BAIF Baives 95.29 320 *e*P P **17 12 46.7 +0.2**
LOR Lormes 95.66 317 *e*P P **17 12 48.0 -0.3**
comp=Z,12nm,0.9s,mb5.0
LOR *e*MLR MLR
comp=Z,738nm,22.5s,MS4.8
LOR Lormes 95.66 317 *e*P P **17 12 48.0 -0.3**
LOR pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
LOR MLR MLR
comp=Z,740nm,22.5s,MS5.1
LOR Lormes 95.66 317 *e*P P **17 12 48.0 -0.3**
comp=Z,5.8nm,0.9s,mb5.0
LOR LR LR
comp=Z,740nm,22.5s,MS5.1
SMF Signal de Mont 95.70 316 *e*P P **17 12 48.1 -0.4**
comp=Z,21nm,1.1s,mb5.2
SMF Signal de Mont 95.70 316 *e*P P **17 12 48.1 -0.4**
SMF pmax pmax
comp=Z,11nm,1.1s,mb5.2
SMF Signal de Mont 95.70 316 *e*P P **17 12 48.1 -0.4**
comp=Z,11nm,1.1s,mb5.2
MTLF Montolieu 97.04 313 *e*P P **17 12 55.7 +1.1**
comp=Z,6.9nm,0.9s,mb4.8
MTLF Montolieu 97.04 313 *e*P P **17 12 55.7 +1.1**
MTLF pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
MTLF Montolieu 97.04 313 *e*P P **17 12 55.7 +1.1**
comp=Z,3.5nm,0.9s,mb4.8
LDF La Druitiere 98.23 319 *e*P P **17 12 59.2 -0.7**
TORD Torodi Ar. Bea 98.39 283 P P **17 13 02.7 +1.4**
comp=Z,0.5nm,0.7s,baz=108,slow=5.9,SNR=2.4
TORD LR LR 17 56 24.4
comp=Z,1μm,19.6s,MS5.4,baz=145,slow=35
RAR Rarotonga 98.91 112 PFAKE 17 13 10.0 +6.4
RAR LR LR
comp=Z,2.0nm,20.0s
ESK Eskdalemuir 99.21 326 PFAKE 17 13 20.0 +16
ESK LR LR
comp=Z,1μm,21.0s,MS5.3
QUIF Quistinic 100.33 318 *e*P Pdif 17 13 08.4 -0.7
KDAK Kodiak Island 101.22 31 PFAKE 17 13 20.0 +7.0
KDAK LR LR
comp=Z,490nm,20.0s,MS5.0
MCK McKinley 101.29 25 *e*P Pdif 17 13 12.5 -0.9
COLA College 101.37 24 PFAKE 17 13 20.0 +6.3
COLA LR LR
comp=Z,1μm,22.0s,MS5.3
PMR Palmer 101.87 27 PFAKE 17 13 30.0 +14
PMR LR LR
comp=Z,1μm,20.0s,MS5.4
PAB San Pablo 102.31 310 PFAKE 17 13 30.0 +12
PAB LR LR
comp=Z,661nm,19.0s,MS5.2
SFS San Fernando 104.17 307 PFAKE 17 13 40.0 +14
SFS LR LR
comp=Z,1μm,20.0s,MS5.4
SHEL Horse Pasture 104.30 253 PFAKE 17 13 40.0 +13
SHEL LR LR
comp=Z,2μm,20.0s,MS5.6
MTE Manteigas 104.62 311 PFAKE 17 13 40.0 +12
MTE LR LR
comp=Z,538nm,19.0s,MS5.1
DBIC Dimbokro 104.81 276 PFAKE 17 13 40.0 +11
DBIC LR LR
comp=Z,1μm,22.0s,MS5.3
RTC Rabat Centre 105.03 304 PFAKE 17 18 00.0 +15
RTC LR LR
comp=Z,712nm,19.0s,MS5.2
PPT Papeete 108.92 109 *e*LR LR 17 49 56.9
comp=Z,2μm,24.5s
SIT Sitka 110.15 29 PFAKE 17 18 10.0 +16
SIT LR LR
comp=Z,2μm,19.0s,MS5.7
WRAK Wrangell Islan 111.89 28 PFAKE 17 18 10.0 +13
WRAK LR LR
comp=Z,1μm,22.0s,MS5.5
SFJD Kangerlussuaq 112.15 348 PFAKE 17 18 10.0 +12
SFJD LR LR
comp=Z,1μm,19.0s,MS5.6
HOPE Hope Point 113.10 206 PFAKE 17 18 10.0 +10
HOPE LR LR
comp=Z,8.0nm,21.0s
ASCN Ascension 113.57 260 PFAKE 17 18 10.0 +8.2
ASCN LR LR
comp=Z,2μm,21.0s,MS5.6
YKA Yellowknife Ar 114.64 17 PKP PKiKP 17 18 01.3 -1.1
comp=Z,1.6nm,0.8s,baz=315,slow=2.3,SNR=7.4
YKA Yellowknife Ar 114.64 17 PKIKP PKiKP 17 18 01.3 -1.2
YKA pmax pmax
comp=Z,2.0nm,0.9s
RKT Rikitea 121.04 119 *e*LR LR 17 55 35.3
comp=Z,2μm,26.2s
NLWA Neilton Lookou 121.29 33 PFAKE 17 18 30.0 +14
NLWA LR LR
comp=Z,1μm,21.0s,MS5.5
A06A Chilliwack 121.51 31 ⇑P PKPdf 17 18 15.8 -0.3
baz=121
B05A Bryant 121.71 32 ⇓P PKPdf 17 18 16.6 +0.1
baz=122
JCW Jim Creek 121.84 32 *e*PKPdf PKPdf 17 18 16.9 +0.1
E03A Lebam 121.96 34 ⇓P PKPdf 17 18 17.1 +0.1
baz=122
A07A Ashnola River, 122.09 30 ⇑P PKPdf 17 18 17.2 0.0
baz=122
EDM Edmonton 122.27 23 PKIKP PKPdf 17 18 17.3 -0.1
EDM Edmonton 122.27 23 *e*PKPdf PKPdf 17 18 16.2 -1.2
C05A Tolt Reservoir 122.28 32 ⇑P PKPdf 17 18 17.4 -0.3
baz=122
B07A Winthrop 122.61 30 ⇓P PKPdf 17 18 17.7 -0.5
baz=122
A08A Turner Farm, O 122.71 30 ⇓P PKPdf 17 18 18.3 -0.1
baz=123
F04A Amboy 122.96 34 ⇓P PKPdf 17 18 18.2 -0.8
baz=123
A09A Danville 123.03 29 ⇓P PKPdf 17 18 18.4 -0.6
baz=123
D06A Cle Elum 123.04 32 ⇑P PKPdf 17 18 18.9 -0.2
baz=123
ETW Entiat 123.05 31 *e*PKPdf PKPdf 17 18 18.6 -0.6
B08A Colville Reser 123.07 30 ⇓P PKPdf 17 18 19.0 -0.1
baz=123
EFI East Falkland 123.11 196 PFAKE 17 18 30.0 +11
EFI LR LR
comp=Z,1μm,22.0s,MS5.5
C07A Waterville 123.14 31 ⇓P PKPdf 17 18 18.7 -0.5
baz=123
H03A Soap Creek Ran 123.20 36 ⇑P PKPdf 17 18 19.1 -0.4
baz=123
COR Corvallis 123.25 36 PFAKE 17 18 30.0 +10
COR LR LR
comp=Z,928nm,22.0s,MS5.4
E06A Yakima 123.38 33 ⇑P PKPdf 17 18 19.6 -0.2
baz=123
D07A Quincy 123.50 32 ⇓P PKPdf 17 18 19.2 -0.8
baz=123
A10A Northport 123.52 29 ⇓P PKPdf 17 18 19.6 -0.4
baz=123
C08A Higginbotham F 123.59 31 ⇑P PKPdf 17 18 19.4 -0.8
baz=124
B09A Rice 123.62 29 ⇑P PKPdf 17 18 19.5 -0.7
baz=124
I03A Eugene 123.62 36 ⇑P PKPdf 17 18 19.3 -1.0
baz=124
J02A Umpqua 123.79 37 ⇑P PKPdf 17 18 20.5 -0.2
baz=124
H04A Detroit Lake 123.84 35 ⇓P PKPdf 17 18 20.7 0.0
baz=124
E07A Sunnyside 123.97 32 ⇓P PKPdf 17 18 20.9 0.0
baz=124
A11A Hall Mountain, 124.11 28 ⇑P PKPdf 17 18 21.3 +0.2
baz=124
D08A Wollman Farm, 124.14 31 ⇑P PKPdf 17 18 21.1 -0.1
baz=124
K02A Glendale 124.17 38 ⇓P PKPdf 17 18 21.5 +0.1
baz=124,SNR=5.4
RSW Rattlesnake Hi 124.22 32 *e*PKPdf PKPdf 17 18 21.3 -0.1
NEW Newport 124.23 29 PFAKE 17 18 30.0 +8.7
NEW LR LR
comp=Z,1μm,22.0s,MS5.6
I04A Tendick Farm, 124.23 36 ⇑P PKPdf 17 18 21.1 -0.4
baz=124,SNR=7.6
HAWA Hanford 124.25 32 *e*PKPdf PKPdf 17 18 21.4 0.0
HAWA LR LR
comp=Z,1μm,22.0s,MS5.5
G06A Carlson Farm, 124.38 34 ⇓P PKPdf 17 18 21.7 0.0
baz=124
H05A Madras 124.41 35 ⇑P PKPdf 17 18 22.0 +0.2
baz=124
E08A Dider Farm, El 124.44 32 ⇓P PKPdf 17 18 22.2 +0.4
baz=124
L02A Cave Junction 124.44 38 ⇑P PKPdf 17 18 22.1 +0.2
baz=124
D09A Jones Farm, Ri 124.45 31 ⇑P PKPdf 17 18 21.7 -0.1
baz=124
A12A Yaak River Ran 124.45 28 ⇑P PKPdf 17 18 22.1 +0.3
baz=124
B11A Sandpoint 124.47 28 ⇑P PKPdf 17 18 22.0 +0.2
baz=124
HUMO Hull Mountain 124.59 38 ⇑P PKPdf 17 18 22.0 -0.2
baz=124,SNR=8.1
HUMO Hull Mountain 124.59 38 *e*PKPdf PKPdf 17 18 22.2 0.0
HUMO LR LR
comp=Z,690nm,20.0s,MS5.3
FFC Flin Flon 124.73 15 PFAKE 17 18 30.0 +7.9
FFC LR LR
comp=Z,1μm,20.0s,MS5.6
J04A Umpqua Nationa 124.73 36 ⇓P PKPdf 17 18 22.5 +0.1
baz=125,SNR=8.8
H06A Lindquist Farm 124.86 34 ⇑P PKPdf 17 18 22.3 -0.4
baz=125
G07A Ruggs Ranch, H 124.89 33 ⇓P PKPdf 17 18 22.7 0.0
baz=125
E09A Wood Farm, Sta 124.90 31 ⇓P PKPdf 17 18 22.7 0.0
baz=125
C11A Tepee Creek (N 124.94 29 ⇑P PKPdf 17 18 22.9 +0.2
baz=125
D10A Wagner Farm, O 124.98 30 ⇓P PKPdf 17 18 23.0 +0.2
baz=125
F08A Pendleton 125.03 32 ⇑P PKPdf 17 18 23.0 0.0
baz=125
J05A Fort Rock 125.22 36 ⇓P PKPdf 17 18 23.3 -0.1
baz=125,SNR=7.9
YBH Yreka Blue Hor 125.23 38 ⇑P PKPdf 17 18 23.5 0.0
baz=125
YBH Yreka Blue Hor 125.23 38 PFAKE 17 18 30.0 +6.5
YBH LR LR
comp=Z,829nm,20.0s,MS5.4
LNOR Lincton Mounta 125.25 32 PKIKP PKPdf 17 18 23.3 -0.1
LNOR Lincton Mounta 125.25 32 *e*PKPdf PKPdf 17 18 22.4 -0.9
G08A Pilot Rock 125.26 33 ⇑P PKPdf 17 18 23.6 +0.2
baz=125
M02C Callahan 125.33 39 ⇑P PKPdf 17 18 23.8 +0.1
baz=125
N02C Big Bar 125.36 39 ⇑P PKPdf 17 18 23.7 0.0
baz=125
H07A Lands Inn, Kim 125.38 34 ⇑P PKPdf 17 18 24.1 +0.5
baz=125
B13A Whitefish 125.40 27 ⇑P PKPdf 17 18 23.3 -0.3
baz=125
I06A Prineville 125.42 35 ⇓P PKPdf 17 18 23.9 +0.2
baz=125
L04A Klamath Falls 125.48 37 ⇑P PKPdf 17 18 24.3 +0.4
baz=125
F09A S2 Ranch, Elgi 125.55 32 ⇓P PKPdf 17 18 24.2 +0.2
baz=125
I07A Izee 125.73 34 ⇑P PKPdf 17 18 24.7 +0.3
baz=126
F10A Beach Ranch, E 125.73 31 ⇑P PKPdf 17 18 24.4 +0.1
baz=126
M04C Macdoel 125.74 38 ⇓P PKPdf 17 18 24.6 +0.1
baz=126
K05A Summer Lake 125.76 36 ⇑P PKPdf 17 18 24.8 +0.4
baz=126,SNR=8.9
KIPM Iron Peak 125.80 41 *e*PKPdf PKPdf 17 18 25.2 +0.6
C13A Hot Springs 125.86 28 ⇑P PKPdf 17 18 24.5 0.0
baz=126
J06A Christmas Vall 125.87 35 ⇓P PKPdf 17 18 24.8 +0.2
baz=126,SNR=9.7
G09A Cove 125.90 32 ⇓P PKPdf 17 18 25.0 +0.3
baz=126
H08A Prairie City 125.92 33 ⇓P PKPdf 17 18 24.8 +0.1
baz=126
WDC Whiskeytown Da 125.98 39 ⇓P PKPdf 17 18 24.5 -0.4
baz=126
WDC Whiskeytown Da 125.98 39 PFAKE 17 18 40.0 +15
WDC LR LR
comp=Z,775nm,20.0s,MS5.4
E11A Bogner Ranch, 125.99 30 ⇓P PKPdf 17 18 24.8 0.0
baz=126
O02C Red Bluff 126.05 40 ⇓P PKPdf 17 18 25.5 +0.4
baz=126

K06A **Valley Falls** **126.09** **36** ⇑P PKPdf 17 18 25.2 +0.1
baz=126,SNR=11
L05A **Lakeview** **126.20** **37** ⇓P PKPdf 17 18 25.4 +0.1
baz=126
E12A **Beaver Dam Sad** **126.27** **30** ⇓P PKPdf 17 18 25.9 +0.6
baz=126
D13A **Huson** **126.33** **29** ⇑P PKPdf 17 18 25.2 -0.2
baz=126
F11A **Grangeville** **126.34** **31** ⇑P PKPdf 17 18 25.6 +0.1
baz=126
I08A **Drewsey** **126.36** **34** ⇑P PKPdf 17 18 26.0 +0.4
baz=126
H09A **Durkee** **126.37** **33** ⇓P PKPdf 17 18 25.7 +0.2
baz=126
GASB **Alder Springs** **126.38** **40** ⇓P PKPdf 17 18 25.4 -0.3
baz=126
M05C **Lookout** **126.41** **38** ⇑P PKPdf 17 18 25.8 +0.1
baz=126
SCHQ **Schefferville** **126.43** **350** PKP PKPdf 17 18 25.6 +0.3
comp=Z,5.5nm,0.9s,baz=273,slow=4.6,SNR=4.1
BMO **Blue Mountains** **126.44** **32** *e*PKIKP PKPdf 17 18 25.4 -0.3
BMO MLR MLR
comp=Z,804nm,20.0s,MS5.4
HOPS **Hopland** **126.50** **41** ⇓P PKPdf 17 18 25.9 -0.1
baz=126
HOPS **Hopland** **126.50** **41** PFAKE 17 18 40.0 +14
HOPS LR LR
comp=Z,991nm,20.0s,MS5.5
MOD **Modoc** **126.60** **37** ⇑P PKPdf 17 18 26.2 +0.1
baz=126
MOD **Modoc** **126.60** **37** PFAKE 17 18 40.0 +14
MOD LR LR
comp=Z,1μm,21.0s,MS5.5
K07A **Rock Creek Ran** **126.74** **35** ⇓P PKPdf 17 18 26.5 +0.1
baz=127,SNR=12
J08A **Circle Bar Ran** **126.77** **34** ⇑P PKPdf 17 18 26.4 0.0
baz=127
MSO **Missoula** **126.77** **28** *e*PKPdf PKPdf 17 18 25.6 -0.6
MSO *ep*PKPdf pPKPdf 17 18 35.2 -2.4
MSO LR LR
comp=Z,926nm,19.0s,MS5.5
I09A **Lost Marbles R** **126.78** **33** ⇓P PKPdf 17 18 25.9 -0.5
baz=127
D14A **Greenough** **126.79** **28** ⇓P PKPdf 17 18 26.3 0.0
baz=127
F12A **Elk City** **126.89** **30** ⇑P PKPdf 17 18 26.3 -0.2
baz=127
M06C **Likely Place G** **126.91** **38** ⇓P PKPdf 17 18 26.2 -0.5
baz=127
H10A **Noah's Angus R** **126.91** **32** ⇑P PKPdf 17 18 25.8 -0.8
baz=127
E13A **Victor** **126.93** **29** ⇑P PKPdf 17 18 26.3 -0.3
baz=127
MNRC **McLaughlin Nat** **126.98** **41** ⇑P PKPdf 17 18 27.6 +0.6
baz=127
CHMT **Chamberlain Mo** **127.03** **28** *e*PKPdf PKPdf 17 18 26.0 -0.7
CHMT *ep*PKPdf pPKPdf 17 18 37.4 -0.6
NSHM **Saint Helena R** **127.06** **42** *e*PKPdf PKPdf 17 18 27.7 +0.6
MCCM **Marconi Confer** **127.08** **42** ⇓P PKPdf 17 18 27.5 +0.4
baz=127
MCCM **Marconi Confer** **127.08** **42** PFAKE 17 18 40.0 +13
MCCM LR LR
comp=Z,775nm,19.0s,MS5.4
L07A **Adell** **127.10** **36** ⇓P PKPdf 17 18 27.9 +0.8
baz=127
K08A **Mann Creek Ran** **127.16** **35** ⇑P PKPdf 17 18 27.5 +0.4
baz=127,SNR=8.2
J09A **Fry Pan Ranch,** **127.18** **34** ⇑P PKPdf 17 18 27.8 +0.6
baz=127
ORV **Oroville** **127.22** **40** ⇓P PKPdf 17 18 27.6 +0.3
baz=127
H11A **Donnelly** **127.22** **32** ⇓P PKPdf 17 18 27.4 +0.2
baz=127
FARB **Farallon Islan** **127.23** **43** ⇓P PKPdf 17 18 27.7 +0.2
baz=127
CVS **Carmenet Viney** **127.25** **42** ⇑P PKPdf 17 18 27.7 +0.2
baz=127
WVOR **Wild Horse Val** **127.25** **35** *e*PKIKP PKPdf 17 18 27.5 +0.2
WVOR MLR MLR
comp=Z,1μm,22.0s,MS5.6
D15A **Lincoln** **127.28** **27** ⇓P PKPdf 17 18 27.6 +0.3
baz=127
E14A **Clinton** **127.28** **29** ⇓P PKPdf 17 18 27.9 +0.7
baz=127
F13A **Darby** **127.32** **30** ⇓P PKPdf 17 18 27.7 +0.3
baz=127
O05C **Quincy** **127.36** **39** ⇓P PKPdf 17 18 27.9 +0.3
baz=127
N06A **Buffalo Meadow** **127.57** **38** ⇓P PKPdf 17 18 28.5 +0.6
baz=127
L08A **Fields** **127.58** **35** ⇑P PKPdf 17 18 28.3 +0.3
baz=127
M07A **Soldier Meadow** **127.59** **37** ⇑P PKPdf 17 18 29.1 +1.1
baz=127
K09A **Rome** **127.61** **35** ⇑P PKPdf 17 18 28.3 +0.4
baz=128,SNR=16
EGMT **Eagleton** **127.74** **25** PFAKE 17 18 40.0 +12
EGMT LR LR
comp=Z,827nm,19.0s,MS5.4
BEKR **Beckwourth** **127.76** **39** ⇑P PKPdf 17 18 28.4 0.0
baz=128
O06A **Flanigan** **127.92** **38** ⇑P PKPdf 17 18 29.2 +0.5
baz=128
H12A **Diamond D Ranc** **127.93** **31** ⇓P PKPdf 17 18 29.4 +0.9
baz=128
P05C **Yuba Gap, Truc** **127.93** **40** ⇑P PKPdf 17 18 29.6 +0.9
baz=128
K10A **MacKenzie Ranc** **128.04** **34** ⇑P PKPdf 17 18 29.7 +0.8
baz=128
N07B **Gerlach** **128.08** **37** ⇓P PKPdf 17 18 30.2 +1.3
baz=128
LAVA **Lava Cap Winer** **128.16** **40** ⇑P PKPdf 17 18 29.5 +0.4
baz=128
F15A **Butte** **128.18** **28** ⇓P PKPdf 17 18 29.1 +0.2
baz=128
MFID **Camas Ranch** **128.19** **33** ⇓P PKPdf 17 18 29.4 +0.4
baz=128
H13A **Challis** **128.22** **31** ⇑P PKPdf 17 18 29.6 +0.5
baz=128
DLMT **Dillon** **128.47** **29** *e*PKPdf PKPdf 17 18 29.9 +0.3
O07A **Toulon** **128.51** **38** ⇓P PKPdf 17 18 30.7 +0.9
baz=128
K11A **Parker Ranch,** **128.51** **33** ⇓P PKPdf 17 18 30.3 +0.6
baz=128
N08A **GE Springer Mi** **128.58** **37** ⇑P PKPdf 17 18 30.9 +1.0
baz=128
M09A **Marrel Ranch,** **128.58** **36** ⇑P PKPdf 17 18 30.8 +0.9
baz=128
R05C **Kirkwood Meado** **128.61** **40** ⇓P PKPdf 17 18 30.6 +0.6
baz=128
H14A **Leadore** **128.63** **30** ⇑P PKPdf 17 18 30.6 +0.8
baz=128
G15A **Dillon** **128.67** **29** ⇓P PKPdf 17 18 30.3 +0.4
baz=128
J12A **Stokes Ranch,** **128.69** **32** ⇑P PKPdf 17 18 30.8 +0.7
baz=128
L10A **Juniper Basin** **128.72** **34** ⇓P PKPdf 17 18 30.8 +0.7
baz=129,SNR=9.3
BOZ **Bozeman (W)** **128.72** **28** *e*PKIKP PKPdf 17 18 30.5 +0.5
BOZ MLR MLR
comp=Z,1μm,21.0s,MS5.5
I13A **Wildhorse Cree** **128.75** **31** ⇓P PKPdf 17 18 31.1 +1.0
baz=129
PACP **Pacheco Peak** **128.76** **42** ⇓P PKPdf 17 18 31.0 +0.7
baz=129
SAO **San Andreas Ge** **128.78** **43** PFAKE 17 18 40.0 +10
SAO LR LR
comp=Z,935nm,20.0s,MS5.5
CMB **Columbia Colle** **128.79** **41** ⇑P PKPdf 17 18 31.0 +0.6
baz=129
CMB **Columbia Colle** **128.79** **41** PFAKE 17 18 40.0 +10
CMB LR LR
comp=Z,757nm,20.0s,MS5.4
HLID **Hailey** **128.84** **32** ⇓P PKPdf 17 18 30.8 +0.5
baz=129
HLID **Hailey** **128.84** **32** *e*PKPdf PKPdf 17 18 30.2 -0.1
HLID LR LR
comp=Z,919nm,21.0s,MS5.4
N09A **Rock Creek Ran** **128.90** **36** ⇑P PKPdf 17 18 31.0 +0.5
baz=129
H15A **Lima** **128.99** **30** ⇓P PKPdf 17 18 31.4 +0.9
baz=129
L11A **Cat Creek Ranc** **129.06** **34** ⇓P PKPdf 17 18 31.7 +0.9
baz=129,SNR=13
J13A **Cove Ranch, Pi** **129.08** **32** ⇓P PKPdf 17 18 31.7 +1.0
baz=129
I14A **Mackay** **129.08** **31** ⇑P PKPdf 17 18 31.1 +0.4
baz=129

R06C **Coleville** **129.12** **40** ⇑P PKPdf 17 18 31.3 +0.3
baz=129
S06C **San Francisco** **129.23** **41** ⇓P PKPdf 17 18 31.4 +0.2
baz=129
BMN **Battle Mountai** **129.34** **36** PFAKE 17 18 40.0 +8.6
BMN LR LR
comp=Z,807nm,21.0s,MS5.4
QLMT **Earthquake Lak** **129.43** **29** *e*PKPdf PKPdf 17 18 32.3 +0.9
U04C **Hernandez Rese** **129.44** **43** ⇓P PKPdf 17 18 32.3 +0.7
baz=129
J14A **Carey** **129.47** **31** ⇑P PKPdf 17 18 32.7 +1.2
baz=129
L12A **House Creek Ra** **129.49** **33** ⇓P PKPdf 17 18 32.5 +0.9
baz=129
GCMT **Greycliff** **129.51** **26** *e*PKPdf PKPdf 17 18 31.9 +0.3
DGMT **Dagmar** **129.52** **21** PFAKE 17 18 40.0 +8.6
DGMT LR LR
comp=Z,2μm,20.0s,MS5.7
H16A **Russell Place,** **129.61** **29** ⇑P PKPdf 17 18 33.1 +1.4
baz=130
K13A **Stover Farm, H** **129.65** **32** ⇑P PKPdf 17 18 32.9 +1.1
baz=130
YMR **Madison River** **129.77** **28** *e*PKPdf PKPdf 17 18 32.0 -0.1
YMR LR LR
comp=Z,486nm,20.0s,MS5.2
T06C **Millerton Lake** **129.81** **42** ⇓P PKPdf 17 18 32.9 +0.5
baz=130
NVAR **Mina Array Bea** **129.90** **39** PKP PKPdf 17 18 33.1 +0.6
comp=Z,4.0nm,0.8s,baz=303,slow=1.5,SNR=21
L13A **Double Diamond** **130.11** **33** ⇑P PKPdf 17 18 33.2 +0.4
baz=130
LKWY **Lake** **130.11** **28** PFAKE 17 18 40.0 +7.3
LKWY LR LR
comp=Z,2μm,21.0s,MS5.7
K14A **Jones Ranch, D** **130.20** **32** ⇑P PKPdf 17 18 34.0 +1.0
baz=130
RLMT **Red Lodge** **130.21** **27** *e*PKPdf PKPdf 17 18 33.8 +1.0
RLMT LR LR
comp=Z,1μm,20.0s,MS5.7
LAO **LASA Array** **130.25** **23** PFAKE 17 18 40.0 +7.1
LAO LR LR
comp=Z,1μm,21.0s,MS5.6
ELK **Elko** **130.29** **35** PFAKE 17 18 40.0 +6.8
ELK LR LR
comp=Z,951nm,20.0s,MS5.5
P10A **Eureka** **130.30** **37** ⇓P PKPdf 17 18 34.1 +0.8
baz=130
ULM **Lac du Bonnet** **130.33** **13** PKP PKPdf 17 18 32.9 0.0
comp=Z,8.7nm,0.7s,baz=305,slow=5.2,SNR=6.5
N12A **Clover Valley,** **130.34** **35** ⇑P PKPdf 17 18 34.2 +1.0
baz=130
MTUM **Tungsten Hills** **130.36** **40** *e*PKPdf PKPdf 17 18 34.5 +1.1
MTUM *ep*PKPdf pPKPdf 17 18 42.3 -2.4
K15A **Arbon** **130.44** **31** ⇑P PKPdf 17 18 34.3 +0.9
baz=130
HELL **Mitchell Peak** **130.45** **41** ⇑P PKPdf 17 18 33.7 +0.1
baz=130
O11A **Cowboy Ranch,** **130.45** **36** ⇓P PKPdf 17 18 34.5 +1.0
baz=130
L14A **Malta** **130.52** **32** ⇓P PKPdf 17 18 34.1 +0.5
baz=130
S08C **White Mtn Res** **130.53** **40** ⇓P PKPdf 17 18 34.4 +0.7
baz=130
RRI2 **Red Ridge** **130.57** **30** *e*PKPdf PKPdf 17 18 34.0 +0.4
RRI2 *e*PP PP 17 20 53.0 +5.2
P11A **Circle Ranch,** **130.77** **36** ⇓P PKPdf 17 18 34.9 +0.8
baz=131
TPH **Tonopah** **130.79** **39** PFAKE 17 18 50.0 +16
TPH LR LR
comp=Z,908nm,21.0s,MS5.5
REDW **Red Top Meadow** **130.79** **29** *e*PKPdf PKPdf 17 18 34.6 +0.6
REDW *e*PP PP 17 20 51.4 +2.2
O12A **Currie** **130.89** **35** ⇓P PKPdf 17 18 34.9 +0.6
baz=131
HVU **Hansel Valley** **130.95** **32** *e*PKIKP PKPdf 17 18 34.8 +0.4
HVU *e* 17 18 43.6
L15A **Malad City** **131.00** **32** ⇓P PKPdf 17 18 35.6 +1.1
baz=131
S09A **Goldfield** **131.00** **39** ⇓P PKPdf 17 18 35.8 +1.1
baz=131
AHID **Auburn Hatcher** **131.11** **30** PFAKE 17 18 50.0 +15
AHID LR LR
comp=Z,1μm,20.0s,MS5.6
R10A **Warm Springs** **131.23** **38** ⇑P PKPdf 17 18 35.8 +0.8
baz=131
S10A **Tonopah Range,** **131.28** **39** ⇑P PKPdf 17 18 36.1 +1.0
baz=131
Q11A **Duckwater** **131.28** **37** ⇓P PKPdf 17 18 36.3 +1.2
baz=131
M15A **Larsen Ranch,** **131.35** **32** ⇑P PKPdf 17 18 36.1 +1.0
baz=131
N14A **Grayback Hills** **131.37** **33** ⇑P PKPdf 17 18 36.1 +0.8
baz=131
ISA **Isabella** **131.39** **42** PFAKE 17 18 50.0 +15
ISA LR LR
comp=Z,831nm,22.0s,MS5.4
BGU **Big Grassy Mou** **131.41** **33** *e*PKPdf PKPdf 17 18 35.6 +0.3
BGU *ep*PKPdf pPKPdf 17 18 46.8 +0.2
BGU *e*SKP 17 21 57.3
DAC **Darwin (Calif)** **131.62** **41** PFAKE 17 18 50.0 +14
DAC LR LR
comp=Z,1μm,21.0s,MS5.5
R11A **Troy Canyon, C** **131.63** **38** ⇓P PKPdf 17 18 36.4 +0.7
baz=132
HWUT **Hardware Ranch** **131.71** **32** *e*PKPdf PKPdf 17 18 34.9 -1.0
HWUT LR LR
comp=Z,1μm,19.0s,MS5.6
MPMC **Manual Prospec** **131.82** **41** ⇓P PKPdf 17 18 36.7 +0.5
baz=132
P13A **Bates Ranch, G** **131.85** **35** ⇑P PKPdf 17 18 37.0 +0.8
baz=132
BW06 **Boulder Array** **131.87** **29** PFAKE 17 18 50.0 +14
BW06 LR LR
comp=Z,1μm,20.0s,MS5.6
PDAR **Pinedale Array** **131.87** **29** PKP PKPdf 17 18 36.2 +0.1
comp=Z,2.1nm,0.7s,baz=340,slow=0.9,SNR=12
PDAR SKP 17 22 11.9
comp=Z,1.2nm,0.8s,baz=70,slow=1.1,SNR=3.9
SNCC **San Nicolas Is** **131.97** **46** PFAKE 17 18 50.0 +13
SNCC LR LR
comp=Z,1μm,22.0s,MS5.5
DUG **Dugway** **132.03** **34** *e*PKIKP PKPdf 17 18 36.6 +0.1
DUG MLR MLR
comp=Z,860nm,20.0s,MS5.5
TPNV **Topopah Spring** **132.09** **39** PFAKE 17 18 50.0 +13
TPNV LR LR
comp=Z,871nm,20.0s,MS5.5
AGMN **Agassiz Refuge** **132.16** **14** PFAKE 17 18 50.0 +14
AGMN LR LR
comp=Z,2μm,21.0s,MS5.7
Q13A **Wheeler Ranch,** **132.18** **36** ⇑P PKPdf 17 18 37.9 +1.1
baz=132
P14A **Drum Mountains** **132.30** **35** ⇓P PKPdf 17 18 37.8 +0.8
baz=132
MWC **Mount Wilson** **132.48** **44** PFAKE 17 18 50.0 +12
MWC LR LR
comp=Z,948nm,20.0s,MS5.5
Q14A **Sevier Lake (B** **132.59** **35** ⇓P PKPdf 17 18 37.6 0.0
baz=132
GSC **Goldstone** **132.71** **42** ⇓P PKPdf 17 18 38.2 +0.3
baz=133
GSC **Goldstone** **132.71** **42** *e*PKPdf PKPdf 17 18 38.1 +0.2
GSC LR LR
comp=Z,761nm,20.0s,MS5.4
R13A **O'Grain Ranch,** **132.72** **37** ⇑P PKPdf 17 18 38.6 +0.7
baz=133
DAU **Daniels Canyon** **132.73** **32** PKIKP PKPdf 17 18 40.0 +2.2
DAU **Daniels Canyon** **132.73** **32** *e*PKPpre 17 18 34.4
MPU **Maple Canyon** **132.80** **33** PFAKE 17 18 50.0 +12
MPU LR LR
comp=Z,1μm,20.0s,MS5.6
N18A **Larsen Ranch,** **133.15** **31** ⇑P PKPdf 17 18 39.6 +1.1
baz=133
O17A **Robinson Place** **133.16** **32** ⇑P PKPdf 17 18 39.3 +0.7
baz=133,SNR=13
S13A **Holt Ranch, En** **133.17** **37** ⇓P PKPdf 17 18 39.9 +1.2
baz=133
RSSD **Black Hills** **133.24** **24** *e*PKHKP 17 18 26.7
RSSD *e* 17 18 38.9
RSSD MLR MLR
comp=Z,2μm,20.0s,MS5.8
EYMN **Ely** **133.42** **10** PFAKE 17 18 50.0 +11
EYMN LR LR
comp=Z,2μm,22.0s,MS5.7
N19A **John Jarvie Ra** **133.46** **30** ⇑P PKPdf 17 18 39.7 +0.5
baz=133

O18A **Roosevelt** **133.49** **32** ⇓P PKPdf 17 18 40.1 +0.9
baz=133
MVU **Marysvale** **133.53** **35** PFAKE 17 18 50.0 +11
MVU LR LR
comp=Z,860nm,21.0s,MS5.4
MSU **Marysvale** **133.54** **35** *e*PKPdf PKPdf 17 18 38.6 -0.7
MSU *e*SKP 17 22 08.5
V12A **Nelson** **133.73** **40** ⇓P PKPdf 17 18 40.6 +0.8
baz=134
GMRC **Granite Mounta** **133.78** **41** ⇑P PKPdf 17 18 40.3 +0.4
baz=134
RWWY **Rawlins** **133.81** **28** *e*PKPdf PKPdf 17 18 38.6 -1.2
Q16A **Castle Valley** **133.83** **34** ⇑P PKPdf 17 18 40.6 +0.7
baz=134
P18A **Preston Nutter** **133.83** **32** ⇓P PKPdf 17 18 40.5 +0.6
baz=134,SNR=10
PFO **Pinyon Flat Ob** **133.93** **43** PFAKE 17 18 50.0 +10
PFO LR LR
comp=Z,752nm,21.0s,MS5.4
BELC **Belle Mtn.** **134.01** **43** ⇑P PKPdf 17 18 41.0 +0.6
baz=134
R16A **Teasdale** **134.09** **35** ⇑P PKPdf 17 18 41.5 +1.1
baz=134
Q18A **Rafter H Ranch** **134.27** **33** ⇓P PKPdf 17 18 41.8 +1.1
baz=134
BAR **Barrett** **134.30** **44** PFAKE 17 18 50.0 +9.0
BAR LR LR
comp=Z,609nm,21.0s,MS5.3
U14A **Mt Trumbull** **134.34** **38** ⇓P PKPdf 17 18 42.1 +1.2
baz=134
MONP **Monument Peak** **134.36** **44** ⇑P PKPdf 17 18 42.2 +1.1
baz=134
S16A **Weppner Ranch,** **134.42** **35** ⇑P PKPdf 17 18 42.1 +1.1
baz=134
R17A **Hanksville Air** **134.44** **34** ⇑P PKPdf 17 18 42.0 +1.0
baz=134
IRM **Iron Mountain** **134.49** **42** ⇓P PKPdf 17 18 42.5 +1.2
baz=134
P19A **Cripple Cowboy** **134.49** **31** ⇓P PKPdf 17 18 42.6 +1.5
baz=134
BC3 **Big Chuckw Mtn** **134.58** **43** ⇓P PKPdf 17 18 42.3 +0.8
baz=134
W13A **Hualapai Mount** **134.74** **40** ⇑P PKPdf 17 18 41.9 +0.1
baz=135
U15A **North Rim** **134.88** **37** ⇓P PKPdf 17 18 42.2 +0.3
baz=135
V14A **Boquillas Ranc** **134.89** **39** ⇑P PKPdf 17 18 42.1 +0.1
baz=135
R18A **Canyonlands Na** **134.91** **33** ⇑P PKPdf 17 18 42.8 +0.8
baz=135
PHWY **Pilot Hill** **134.93** **27** *e*PKPdf PKPdf 17 18 41.8 -0.1
R19A **Curley Farm, L** **135.32** **33** ⇓P PKPdf 17 18 43.4 +0.7
baz=135
V15A **Kaibab Nationa** **135.35** **38** ⇓P PKPdf 17 18 43.4 +0.5
baz=135
S18A **Hurst Farm, Bl** **135.35** **34** ⇓P PKPdf 17 18 43.3 +0.5
baz=135
GLA **Glamis** **135.36** **43** PFAKE 17 18 50.0 +7.1
GLA LR LR
comp=Z,553nm,19.0s,MS5.3
T17A **Navajo Res., N** **135.37** **35** ⇑P PKPdf 17 18 43.6 +0.8
baz=135
PV10 **Paradox Valley** **135.38** **33** *e*PKPdf PKPdf 17 18 43.5 +0.6
COWI **Conover** **135.60** **9** PFAKE 17 18 50.0 +7.0
COWI LR LR
comp=Z,1μm,20.0s,MS5.7
U17A **Shonto** **135.73** **36** ⇓P PKPdf 17 18 44.3 +0.8
baz=136
T18A **Mexican Hat** **135.81** **35** ⇑P PKPdf 17 18 43.8 +0.1
baz=136
PV01 **Paradox Valley** **135.81** **33** *e*PKPdf PKPdf 17 18 44.7 +1.1
WUAZ **Wupatki** **136.03** **37** PFAKE 17 19 00.0 +16
WUAZ LR LR
comp=Z,754nm,20.0s,MS5.4
ISCO **Idaho Springs** **136.05** **28** PFAKE 17 19 00.0 +16
ISCO LR LR
comp=Z,946nm,20.0s,MS5.5
PKME **Peaks-Kenny Pk** **136.07** **349** PFAKE 17 19 00.0 +16
PKME LR LR
comp=Z,2μm,20.0s,MS5.7
ECSD **EROS,Sioux Fal** **136.17** **17** *e*PKPpre 17 18 39.6
ECSD LR LR
comp=Z,1μm,19.0s,MS5.7
PLCA **Paso Flores** **136.35** **191** PKP PKPdf 17 18 45.0 +0.4
comp=Z,1.2nm,0.8s,baz=74,slow=20,SNR=3.5
T19A **Beclabito** **136.50** **34** ⇓P PKPdf 17 18 46.2 +1.2
baz=136
TRQA **Tornquist** **136.52** **201** PFAKE 17 19 00.0 +15
TRQA LR LR
comp=Z,2μm,20.0s,MS5.8
MVCO **Mesa Verde** **136.52** **33** PFAKE 17 19 00.0 +15
MVCO LR LR
comp=Z,976nm,20.0s,MS5.5
OGNE **Ogallala** **136.70** **24** PFAKE 17 19 00.0 +15
OGNE LR LR
comp=Z,1μm,22.0s,MS5.7
X17A **Forest Lakes** **137.17** **38** ⇓P PKPdf 17 18 47.7 +1.4
baz=137
W18A **Petrified Fore** **137.29** **37** ⇑P PKPdf 17 18 47.8 +1.3
baz=137
GLMI **Grayling** **137.40** **5** PFAKE 17 19 00.0 +14
GLMI LR LR
comp=Z,1μm,19.0s,MS5.7
LONY **Lake Ozonia** **137.49** **354** PFAKE 17 19 00.0 +13
LONY LR LR
comp=Z,2μm,19.0s,MS5.8
LBNH **Lisbon** **137.52** **351** PFAKE 17 19 00.0 +13
LBNH LR LR
comp=Z,2μm,20.0s,MS5.8
SDCO **Great Sand Dun** **137.70** **30** PFAKE 17 19 00.0 +13
SDCO LR LR
comp=Z,1μm,21.0s,MS5.6
X19A **St. Johns** **138.03** **37** ⇑P PKPdf 17 18 49.1 +1.3
baz=138
NCB **Newcomb** **138.09** **354** PFAKE 17 19 00.0 +12
NCB LR LR
comp=Z,1μm,20.0s,MS5.6
TUC **Tucson** **138.50** **41** PFAKE 17 19 00.0 +11
TUC LR LR
comp=Z,1μm,20.0s,MS5.6
JFWS **Jewell Farm** **138.50** **11** PFAKE 17 19 00.0 +12
JFWS LR LR
comp=Z,2μm,20.0s,MS5.8
Z19A **T-Link Ranch,** **138.82** **38** ⇑P PKPdf 17 18 50.0 +0.6
baz=139
217A **Green Valley** **138.82** **41** ⇑P PKPdf 17 18 50.2 +0.8
baz=139
HRV **Adam Dziewonsk** **139.15** **350** PFAKE 17 19 00.0 +10
HRV LR LR
comp=Z,1μm,20.0s,MS5.6
218A **Dragoon** **139.19** **40** ⇑P PKPdf 17 18 51.3 +1.2
baz=139
WES **Weston** **139.23** **350** PFAKE 17 19 00.0 +10
WES LR LR
comp=Z,1μm,21.0s,MS5.6
ANMO **Albuquerque** **139.30** **34** *e*PKHKP 17 18 40.1
ANMO MLR MLR
comp=Z,1μm,20.0s
LAZ **Ladron** **139.31** **35** *e*PKPdf PKPdf 17 18 49.9 -0.4
CBKS **Cedar Bluff** **139.44** **24** PFAKE 17 19 00.0 +10
CBKS LR LR
comp=Z,1μm,19.0s,MS5.7
LENM **Lemitar** **139.58** **35** *e*PKPdf PKPdf 17 18 49.4 -1.3
LPM **Los Pinos Moun** **139.67** **35** *e*PKPpre 17 18 41.6
LPM *e*PKPdf PKPdf 17 18 51.3 +0.4
219A **White Tail Can** **139.68** **40** ⇑P PKPdf 17 18 52.3 +1.3
baz=140
BNM **Barren Site** **139.79** **35** *e*PKPpre 17 18 43.4
BINY **Binghamton** **140.02** **355** *e*PKPdf PKPdf 17 18 50.1 -1.1
BINY LR LR
comp=Z,1μm,20.0s,MS5.7
319A **Douglas** **140.08** **40** ⇓P PKPdf 17 18 52.9 +1.2
baz=140
KSU1 **Kansas State U** **140.36** **20** PFAKE 17 19 00.0 +8.0
KSU1 LR LR
comp=Z,1μm,22.0s,MS5.7
AMTX **Amarillo** **141.85** **29** PFAKE 17 19 10.0 +15
AMTX LR LR
comp=Z,11240μm,22.0s
ACSO **Alum Creek Sta** **142.08** **3** *e*PKPpre 17 18 48.9
ACSO LR LR
comp=Z,2μm,21.0s,MS5.8
MVL **Millersville** **142.24** **355** *e*PKPdf 17 18 41.7
MCWV **Mont Chateau** **142.74** **360** PFAKE 17 19 10.0 +14
MCWV LR LR
comp=Z,3μm,21.0s,MS6.0

CCM	**Cathedral Cave**	**142.93**	**15**	PFAKE			17 19 10.0	+13
CCM				LR	LR			
	comp=Z,1μm,22.0s,MS5.7							
OLIL	**Olney**	**142.95**	**10**	*e*PKPdf	PKPdf		17 18 52.5	-4.1
WMOK	**Wichita Mounta**	**143.31**	**26**	*e*PKHKP			17 18 52.3	
WMOK				MLR	MLR			
	comp=Z,1μm,22.0s,MS5.7							
BDFB	**Brasilia**	**143.56**	**240**	PKP	PKPdf		17 18 58.0	-0.2
	comp=Z,4.2nm,0.9s,baz=128,slow=12,SNR=2.8							
WCI	**Wyandotte Cave**	**143.73**	**8**	*e*PKHKP			17 18 53.0	
WCI				MLR	MLR			
	comp=Z,2μm,20.0s,MS5.9							
CPUP	**Villa Florida**	**144.02**	**216**	PKP	PKPdf		17 18 56.9	-2.0
	comp=Z,2.1nm,0.5s,baz=100,slow=1.6,SNR=10.0							
URVA	**University of**	**144.74**	**356**	*e*PKPdf	PKPdf		17 18 58.0	-1.8
TXAR	**Lajitas Array**	**145.00**	**37**	PKP	PKPdf		17 19 00.4	-0.1
	comp=Z,91nm,0.6s,baz=286,slow=1.1,SNR=816							
UTMT	**University of**	**145.12**	**12**	*e*PKPab	PKPdf		17 18 59.6	-0.4
ELN	**Prospectdale**	**145.16**	**1**	*e*PKPdf	PKPdf		17 18 58.5	-2.1
BLA	**Blacksburg**	**145.18**	**0**	*e*PKIKP	PKPdf		17 18 59.0	-1.6
BLA				MLR	MLR			
	comp=Z,2μm,22.0s,MS5.8							
GNAR	**Gosnell**	**145.22**	**14**	*e*PKPdf	PKPdf		17 18 59.5	-1.1
HALT	**Halls**	**145.43**	**13**	*e*PKPdf	PKPdf		17 18 59.8	-1.3
HBAR	**Harrisburg**	**145.44**	**15**	*e*PKPdf	PKPdf		17 19 00.2	-0.9
MIAR	**Mount Ida**	**145.51**	**20**	*e*PKIKP	PKPdf		17 19 00.7	-0.5
MIAR				MLR	MLR			
	comp=Z,1μm,19.0s,MS5.7							
WVT	**Waverly**	**145.53**	**11**	*e*PKIKP	PKPdf		17 19 00.5	-0.7
WVT				MLR	MLR			
	comp=Z,2μm,20.0s,MS5.8							
UALR	**University of**	**145.70**	**18**	*e*PKPdf	PKPdf		17 18 60.0	-1.5
TZTN	**Tazewell**	**145.71**	**5**	*e*PKPdf	PKPdf		17 19 00.7	-0.8
TZTN				LR	LR			
	comp=Z,2μm,20.0s,MS5.9							
JCT	**Junction City**	**146.32**	**31**	*e*PKPdf	PKPdf		17 19 02.6	-0.1
JCT				*e*PKPbc	PKPbc		17 19 04.1	+0.2
JCT				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
TKL	**Tuckaleechee C**	**146.57**	**5**	PKPbc	PKPbc		17 19 03.7	-0.7
	comp=Z,32nm,0.7s,baz=124,slow=2.4,SNR=42							
TKL	**Tuckaleechee C**	**146.57**	**5**	PKP2	PKPab		17 19 03.7	-1.7
TKL				pmax	pmax			
	comp=Z,32nm,0.7s							
TKL	**Tuckaleechee C**	**146.57**	**5**	*e*PKPdf	PKPdf		17 19 02.9	-0.1
BBSR	**BB Station**	**146.65**	**336**	PFAKE			17 19 10.0	+6.8
BBSR				LR	LR			
	comp=Z,963nm,22.0s,MS5.5							
CPCT	**Cooper Cave**	**146.70**	**6**	*e*PKPbc	PKPbc		17 19 04.2	-0.6
SWET	**Sewanee**	**146.74**	**9**	*e*PKPdf	PKPdf		17 19 03.5	+0.3
OXF	**Oxford**	**146.75**	**14**	*e*PKP2	PKPab		17 19 04.0	-2.2
OXF				MLR	MLR			
	comp=Z,2μm,21.0s,MS5.8							
CNNC	**Cliffs of the**	**147.08**	**357**	PFAKE			17 19 10.0	+6.1
CNNC				LR	LR			
	comp=Z,1μm,20.0s,MS5.7							
NATX	**Nacogdoches**	**147.61**	**23**	*e*PKPbc	PKPbc		17 19 07.2	-0.3
NATX				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
LCO	**Las Campanas**	**147.64**	**196**	*e*PKPdf	PKPdf		17 19 03.5	-1.5
LCO				LR	LR			
	comp=Z,1μm,21.0s,MS5.7							
JSC	**Jenkinsville**	**148.09**	**2**	PKP2	PKPab		17 19 08.7	-2.7
JSC	**Jenkinsville**	**148.09**	**2**	*e*PKPbc	PKPbc		17 19 08.2	-0.5
VBMS	**Vicksburg**	**148.62**	**17**	PFAKE			17 19 20.0	+14
VBMS				LR	LR			
	comp=Z,1μm,22.0s,MS5.7							
HKT	**Hockley**	**148.69**	**27**	*e*PKP2	PKPab		17 19 10.5	-3.5
HKT				MLR	MLR			
	comp=Z,1μm,21.0s,MS5.7							
LRAL	**Lakeview Retre**	**148.69**	**11**	*e*PKPbc	PKPbc		17 19 08.9	-1.4
LRAL				LR	LR			
	comp=Z,2μm,19.0s,MS5.8							
GOGA	**Godfrey**	**148.82**	**5**	*e*PKP2	PKPbc		17 19 10.0	-0.7
GOGA				MLR	MLR			
	comp=Z,1μm,21.0s,MS5.7							
COW	**Cow Castle Cre**	**149.00**	**1**	*e*PKPdf	PKPdf		17 19 08.9	+1.8
NHSC	**New Hope**	**149.28**	**360**	PFAKE			17 19 20.0	+12
NHSC				LR	LR			
	comp=Z,2μm,22.0s,MS5.8							
KVTX	**Kingsville**	**149.66**	**32**	*e*PKPbc	PKPbc		17 19 12.4	-0.5
KVTX				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
BRAL	**Brewton**	**150.64**	**12**	*e*PKPbc	PKPbc		17 19 14.9	-0.2
BRAL				LR	LR			
	comp=Z,1μm,20.0s,MS5.8							
LVC	**Limon Verde**	**152.97**	**203**	*e*PKPbc	PKPbc		17 19 21.6	+0.8
LVC				LR	LR			
	comp=Z,1μm,22.0s,MS5.6							
DWPF	**Disney**	**154.23**	**3**	PFAKE			17 19 30.0	+15
DWPF				LR	LR			
	comp=Z,913nm,20.0s,MS5.6							
BBGH	**Gun Hill**	**156.87**	**299**	PFAKE			17 19 30.0	+11
BBGH				LR	LR			
	comp=Z,2μm,19.0s,MS5.9							
LPAZ	**La Paz**	**158.08**	**213**	PKP	PKPdf		17 19 20.4	-0.1
	comp=Z,2.0nm,0.9s,baz=53,slow=5.5,SNR=6.5							
SJG	**San Juan**	**159.04**	**320**	PFAKE			17 19 30.0	+8.4
SJG				LR	LR			
	comp=Z,635nm,19.0s,MS5.5							
GRGR	**Grenville**	**159.15**	**299**	PFAKE			17 19 30.0	+8.2
GRGR				LR	LR			
	comp=Z,978nm,21.0s,MS5.6							
TEIG	**Tepich**	**160.45**	**23**	PFAKE			17 19 30.0	+6.9
TEIG				LR	LR			
	comp=Z,963nm,20.0s							
NNA	**Nana**	**165.49**	**193**	PFAKE			17 19 40.0	+12
NNA				LR	LR			
	comp=Z,814nm,21.0s							
TGUH	**Tegucigalpa,Un**	**166.32**	**30**	PFAKE			17 19 40.0	+11
TGUH				LR	LR			
	comp=Z,773nm,19.0s							
SDV	**Santo Domingo**	**168.41**	**305**	PFAKE			17 19 40.0	+10
SDV				LR	LR			
	comp=Z,525nm,19.0s							
PAYG	**Puerto Ayora**	**169.52**	**106**	PFAKE			17 19 40.0	+8.9
PAYG				LR	LR			
	comp=Z,785nm,20.0s							
JTS	**JuntasAbangare**	**170.70**	**30**	PFAKE			17 19 40.0	+8.3
JTS				LR	LR			
	comp=Z,584nm,22.0s							
BCIP	**Isla Barro Col**	**173.09**	**357**	PFAKE			17 19 40.0	+7.1
BCIP				LR	LR			
	comp=Z,930nm,21.0s							
OTAV	**Otavalo**	**177.36**	**222**	*e*PKPdf	PKPdf		17 19 33.6	-0.5
OTAV				LR	LR			
	comp=Z,1μm,21.0s							

LDG ***13*** *17:00:21.6±0.2, 18.22N×68.60W, h60km, Mb4.6/12, Error ellipse: s-maj=9.7km s-min=5.7km az=55.0*
BJI ***13*** *17:00:24.0, 18.10N×68.40W, h86km, mB5.1, Ms5.0, Msz4.8*
ISCJB ***13*** *17:00:24.3±0.1, 18.17N±.003×68.44W±.002, h77km, mb4.6/76, Error ellipse: s-maj=4.9km s-min=1.8km az=18.4*
IDC ***13*** *17:00:25.4±0.5, 18.15N×68.41W, h77km±4km, mb4.2/22, mb1 4.4/26, mb1mx4.3/30, mbtmp4.2/26, Error ellipse: s-maj=9.0km s-min=6.6km az=23.0*
RSPR ***13*** *17:00:26.0, 18.09N×68.41W, h87km±2km, MD4.6/17, MD4.6/17*
NEIC ***13*** *17:00:26.0, 18.09N×68.41W, h87km, mb4.8/57, MD4.6(RSPR), After RSPR.*
NEIC Felt [IV] in eastern Dominican Republic. Also felt [IV] at Mayaguez, Puerto Rico. Felt at Adjuntas, Anasco, Arecibo, Caguas, San Juan and Utuado, Puerto Rico.
ISC 13 17:00:26.1±0.1, 18.18N±.003×68.40W±.002, h79km, h79km±1.2km:pP-P,n446,σ0≤64/443, mb4.6/76, 121C-135D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IMO	**Isla Mona**	**0.48**	**98**	*i*P		**Pn**	**17 00 39.5**	**+0.1**
MPR	**Mayaguez**	**1.20**	**88**	*e*P		**Pn**	**17 00 47.5**	**0.0**
MPR				*e*S		**Sn**	**17 01 03.5**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.24**	**98**	*i*P		**Pn**	**17 00 48.2**	**+0.1**
CRPR				*e*S		**Sn**	**17 01 04.4**	**-0.1**
AGPR	**Aguadilla, PR**	**1.26**	**77**	*e*P		**Pn**	**17 00 48.8**	**+0.6**
AGPR				*e*S		**Sn**	**17 01 06.5**	**+1.5**
GBPR	**Guanica, Bosqu**	**1.46**	**98**	*e*P		**Pn**	**17 00 50.9**	**0.0**
GBPR	**Guanica, Bosqu**	**1.46**	**98**	*e*S		**Sn**	**17 01 09.6**	**-0.1**
STDO	**Santo Domingo**	**1.47**	**281**	*e*P		**Pn**	**17 00 51.0**	**0.0**
STDO				*e*S		**Sn**	**17 01 09.2**	**-0.6**
LRS	**Lares**	**1.49**	**85**	*i*P		**Pn**	**17 00 51.1**	**0.0**
AOPR	**Arecibo Observ**	**1.58**	**84**	*e*P		**Pn**	**17 00 52.4**	**0.0**
AOPR				*e*S		**Sn**	**17 01 12.5**	**+0.3**
OBIP	**Obispado Ponce**	**1.71**	**94**	*e*P		**Pn**	**17 00 54.0**	**-0.1**
OBIP				*e*S		**Sn**	**17 01 15.0**	**-0.4**
DR08	**Loma La Naviza**	**1.72**	**297**	*e*P		**Pn**	**17 00 54.0**	**-0.3**
CELP	**Cerrillos**	**1.74**	**93**	*i*P		**Pn**	**17 00 54.3**	**-0.2**
ICM	**Isla Caja Muer**	**1.81**	**99**	*i*P		**Pn**	**17 00 55.1**	**-0.4**
ICM				*e*S		**Sn**	**17 01 17.6**	**-0.2**
SJG	**San Juan**	**2.14**	**91**	*e*P		**Pn**	**17 00 59.6**	**-0.2**
SJG	**San Juan**	**2.14**	**91**	*e*P		**Pn**	**17 00 59.7**	**-0.2**
SJG	**San Juan**	**2.14**	**91**	*e*S		**Sn**	**17 01 25.8**	**+0.1**
SJG	**San Juan**	**2.14**	**91**	P		**Pn**	**17 00 59.6**	**-0.3**
	115nm,0.3s,baz=280,slow=10.0,SNR=68							
SJG				S		**Sn**	**17 01 25.1**	**-0.6**
	516nm,0.3s,baz=338,slow=19,SNR=15							
SJG	**San Juan**	**2.14**	**91**	*e*P		**Pn**	**17 00 59.7**	**-0.2**
SJG				*e*S		**Sn**	**17 01 25.8**	**+0.1**
CPD	**Cerro la Pandu**	**2.37**	**93**	*e*P		**Pn**	**17 01 02.3**	**-0.6**
HUMP	**Col San Antoni**	**2.43**	**90**	*e*P		**Pn**	**17 01 04.1**	**+0.4**
MTP	**Monte Pirata**	**2.71**	**91**	*e*P		**Pn**	**17 01 07.0**	**-0.5**
CDVI	**St. Croix**	**3.49**	**96**	*e*P		**Pn**	**17 01 16.5**	**-1.5**
TBVI	**Tortola**	**3.61**	**86**	*e*P		**Pn**	**17 01 18.9**	**-0.7**
ABV	**Anegada**	**3.90**	**81**	*e*P		**Pn**	**17 01 23.4**	**-0.4**
MASC	**Masc**	**5.86**	**291**	*e*P		**Pn**	**17 01 50.2**	**-0.1**
	baz=116							
MASC				*e*S		**Sn**	**17 02 53.6**	**-2.5**
	comp=N,989nm,0.3s							
MASC				*e*				
	comp=E,827nm,0.4s							
ANWB	**Willy Bob**	**6.32**	**94**	*e*Pn		**Pn**	**17 01 56.0**	**-0.7**
BPA	**Boggy Peak**	**6.34**	**99**	*e*P		**Pn**	**17 01 56.6**	**-0.4**
BPA				*e*S		**Sn**	**17 03 05.3**	**-2.8**
LZG	**Guadaloupe-1**	**6.65**	**107**	*e*P		**Pn**	**17 02 01.7**	**+0.4**
LZG				*e*S		**Sn**	**17 03 14.0**	**-1.6**
TBG	**Guadaloupe-3**	**6.87**	**109**	*e*P		**Pn**	**17 02 04.0**	**-0.1**
RCC	**Rio Carpintero**	**7.13**	**286**	*e*P		**Pn**	**17 02 05.3**	**-2.4**
	baz=93							
RCC				*e*S		**Sn**	**17 03 14.4**	**-13**
	comp=N,92nm,0.6s							
RCC				*e*				
	comp=E,74nm,0.5s							
MGG	**Marie-Galante**	**7.14**	**107**	*e*P		**Pn**	**17 02 08.0**	**+0.1**
DBCT	**Belle View Cho**	**7.35**	**112**	*e*P		**Pn**	**17 02 11.9**	**+1.1**
FDF	**Fort de France**	**7.75**	**115**	*e*P		**Pn**	**17 02 15.8**	**-0.5**
FDF	**Fort de France**	**7.75**	**115**	*e*Pn		**Pn**	**17 02 15.4**	**-0.9**
BIM	**Bigot**	**7.92**	**116**	*e*P		**Pn**	**17 02 18.4**	**-0.2**
SLB	**Belfond**	**8.29**	**120**	*e*P		**Pn**	**17 02 24.0**	**+0.3**
LMGC	**Las Mercedes**	**8.35**	**284**	*e*P		**Pn**	**17 02 22.9**	**-1.4**
	baz=124							
LMGC				*e*S		**Sn**	**17 03 49.7**	**-7.3**
	comp=N,55nm,0.5s							
LMGC				*e*				
	comp=E,86nm,0.6s							
SVV	**Soufriere Volc**	**8.44**	**124**	*e*P		**Pn**	**17 02 26.6**	**+0.9**
SSV	**Crater Summit**	**8.45**	**124**	*e*P		**Pn**	**17 02 23.1**	**-2.7**
BHS	**Barnard House**	**8.52**	**124**	*e*P		**Pn**	**17 02 27.2**	**+0.5**
PCRV	**Puerto La Cruz**	**8.75**	**155**	P		**Pn**	**17 02 30.4**	**+0.4**
	comp=E,11nm,0.3s,baz=324,slow=7.1,SNR=21							
PCRV				S		**Sn**	**17 03 59.3**	**-7.7**
	comp=E,8.3nm,0.3s,baz=323,slow=23,SNR=7.9							
GRW	**Mount Saint Ca**	**8.84**	**132**	*e*P		**Pn**	**17 02 31.2**	**+0.1**
GRGR	**Grenville**	**8.86**	**132**	*e*Pn		**Pn**	**17 02 29.6**	**-1.8**
	comp=E,572nm,0.9s							
SDV	**Santo Domingo**	**9.49**	**193**	S		**Sn**	**17 04 17.5**	**-7.5**
	comp=E,3.6nm,0.3s,baz=78,slow=19,SNR=3.3							
TCE	**Chacachacare**	**9.84**	**138**	*e*P		**Pn**	**17 02 54.3**	**+10**
TRN	**Trinidad (W)**	**10.10**	**137**	*e*P		**Pn**	**17 02 50.6**	**+2.4**
TPR	**Prospect**	**10.13**	**132**	*e*P		**Pn**	**17 02 52.9**	**+4.1**
BOT	**Bacolet**	**10.19**	**132**	*e*P		**Pn**	**17 02 53.7**	**+4.1**
TBH	**Brigand Hill**	**10.44**	**136**	*e*P		**Pn**	**17 02 55.8**	**+2.8**
ROSC	**El Rosal**	**14.45**	**204**	P		**Pn**	**17 03 52.7**	**+5.9**
	comp=E,4.0nm,0.3s,baz=90,slow=8.2,SNR=38							
ROSC				S		**Sn**	**17 06 21.0**	**-4.9**
	baz=284,slow=19,SNR=2.0							
JTS	**JuntasAbangare**	**17.84**	**246**	P		**Pn**	**17 04 29.9**	**+0.6**
	comp=E,4.9nm,0.3s,baz=63,slow=7.6,SNR=38							
JTS	**JuntasAbangare**	**17.84**	**246**	*e*P		**Pn**	**17 04 29.5**	**+0.2**
	comp=E,152nm,1.0s							
TGUH	**Tegucigalpa,Un**	**18.58**	**260**	*e*P		**Pn**	**17 04 39.2**	**+1.0**
	comp=E,24nm,0.8s							
TEIG	**Tepich**	**18.88**	**279**	P		**Pn**	**17 04 39.4**	**-2.3**
	comp=E,0.8nm,0.3s,baz=73,slow=19,SNR=3.1							
JSC	**Jenkinsville**	**19.72**	**327**	*e*P		**Pn**	**17 04 49.4**	**-2.2**
GOGA	**Godfrey**	**20.31**	**321**	*e*P		**P**	**17 04 55.8**	**0.0**
	comp=E,44nm,1.2s							
OTAV	**Otavalo**	**20.38**	**210**	*e*P		**P**	**17 04 58.4**	**+1.7**
	comp=E,66nm,1.0s							
URVA	**University of**	**20.92**	**339**	*e*P		**P**	**17 05 02.8**	**+0.5**
BLA	**Blacksburg**	**21.71**	**333**	*e*P		**P**	**17 05 11.1**	**+0.4**
	comp=E,37nm,0.8s,mb4.8							
ELN	**Prospectdale**	**21.86**	**333**	*e*P		**P**	**17 05 12.7**	**+0.4**
TKL	**Tuckaleechee C**	**22.11**	**325**	P		**P**	**17 05 14.2**	**-0.7**
	comp=E,12nm,0.7s,mb4.3,baz=151,slow=12,SNR=14							
TKL				pP			17 05 29.5	
	comp=E,14nm,0.8s,baz=142,slow=14,SNR=6.2							
TKL				S		**S**	**17 09 14.2**	**0.0**
	comp=E,32nm,0.9s,baz=230,slow=20,SNR=8.8							
LRAL	**Lakeview Retre**	**22.31**	**315**	*e*P		**P**	**17 05 16.6**	**-0.5**
	comp=E,73nm,1.0s,mb5.0							
LRAL				*e*pP			17 05 32.1	
CPCT	**Cooper Cave**	**22.37**	**323**	*e*P		**P**	**17 05 17.6**	**-0.1**
SDMD	**Soldier's Deli**	**22.39**	**343**	*e*P		**P**	**17 05 18.6**	**+0.7**
TZTN	**Tazewell**	**22.65**	**327**	*e*P		**P**	**17 05 21.0**	**+0.3**
	comp=E,40nm,1.0s,mb4.7							
SWET	**Sewanee**	**23.03**	**321**	*e*P		**P**	**17 05 24.2**	**-0.4**
HRV	**Adam Dziewonsk**	**24.40**	**354**	*e*P		**P**	**17 05 36.6**	**-0.4**
	comp=E,25nm,1.3s,mb4.4							
WVT	**Waverly**	**24.79**	**320**	*e*P		**P**	**17 05 40.0**	**-0.6**
	comp=E,31nm,0.8s,mb4.8							
OXF	**Oxford**	**24.80**	**315**	*e*P		**P**	**17 05 40.6**	**-0.2**
	comp=E,121nm,1.0s,mb5.3							
OXF				*e*			17 05 59.3	
BINY	**Binghamton**	**24.80**	**346**	*e*P		**P**	**17 05 41.6**	**+0.9**
	comp=E,53nm,1.2s,mb4.8							
ACSO	**Alum Creek Sta**	**25.33**	**333**	*e*P		**P**	**17 05 46.1**	**+0.6**
	comp=E,70nm,1.1s,mb5.0							
ACSO				pP		pP	17 06 01.6	-2.0
WCI	**Wyandotte Cave**	**25.36**	**326**	*e*P		**P**	**17 05 46.0**	**+0.2**
	comp=E,18nm,0.8s,mb4.6							
WCI				*e*		pP	17 06 02.9	-1.1
USIN	**University of**	**25.93**	**323**	*e*P		**P**	**17 05 50.5**	**-0.5**
	comp=E,47nm,0.8s,mb5.0							
USIN				*e*pP		pP	17 06 09.5	+0.4
GNAR	**Gosnell**	**26.06**	**317**	*e*P		**P**	**17 05 51.7**	**-0.5**
	comp=E,2μm,1.3s							
GNAR				*e*pP		pP	17 06 11.3	+0.9
SIUC	**Southern Illin**	**26.67**	**321**	*e*P		**P**	**17 05 57.5**	**-0.1**
	comp=E,34nm,0.8s,mb4.9							
SIUC				*e*pP		pP	17 06 15.9	+0.1
OLIL	**Olney**	**26.71**	**324**	*e*P		**P**	**17 05 58.4**	**+0.3**
	comp=E,62nm,0.8s,mb5.2							
OLIL				*e*pP		pP	17 06 16.7	+0.5
ATAH	**Atahualpa**	**26.89**	**202**	P		**P**	**17 06 02.5**	**+2.7**
	comp=E,16nm,0.9s,mb4.5,baz=359,slow=4.4,SNR=12							
HKT	**Hockley**	**27.58**	**300**	P		**P**	**17 06 04.9**	**-1.0**
	comp=E,12nm,1.1s,mb4.3							
HKT				*e*pP		pP	17 06 24.9	+0.8
MIAR	**Mount Ida**	**27.71**	**311**	P		**P**	**17 06 07.1**	**+0.1**
	comp=E,15nm,1.1s,mb4.4							
MIAR				*e*pP		pP	17 06 25.8	+0.5
SADO	**Sadowa**	**28.00**	**344**	P		**P**	**17 06 09.3**	**-0.1**
	baz=159,slow=12							
CCM	**Cathedral Cave**	**28.12**	**319**	*e*P		**P**	**17 06 10.4**	**-0.2**
	comp=E,19nm,1.0s,mb4.6							
CCM				*e*pP		pP	17 06 27.6	-1.2
JFWS	**Jewell Farm**	**30.83**	**328**	*e*P		**P**	**17 06 34.8**	**+0.2**
	comp=E,49nm,1.1s,mb5.2							
WMOK	**Wichita Mounta**	**31.64**	**307**	*e*P		**P**	**17 06 40.3**	**-1.5**
	comp=E,12nm,0.8s,mb4.7							
WMOK				*e*pP		pP	17 06 59.0	-1.2
TXAR	**Lajitas Array**	**34.01**	**296**	P		**P**	**17 07 01.5**	**-1.1**
	comp=E,2.6nm,0.6s,mb4.2,baz=106,slow=8.0,SNR=27							
TXAR				PcP		PcP	17 09 38.5	-0.5
	comp=E,3.1nm,0.6s,baz=132,slow=5.1,SNR=18							
TXAR				ScP		ScP	17 13 16.5	-0.5
	comp=E,1.3nm,0.8s,baz=134,slow=6.0,SNR=8.3							
TXAR	**Lajitas Array**	**34.01**	**296**	P		**P**	**17 07 01.5**	**-1.1**
TXAR				PcP		PcP	17 09 38.5	-0.5
TXAR				ScP		ScP	17 13 16.5	-0.5
LPAZ	**La Paz**	**34.25**	**180**	P		**P**	**17 07 05.0**	**+0.4**
	comp=E,5.0nm,0.8s,mb4.4,baz=342,slow=4.8,SNR=11							
SIV	**San Ignacio**	**34.71**	**168**	P		**P**	**17 07 09.7**	**+1.0**
	comp=E,1.3nm,0.7s,mb3.9,baz=5.7,slow=11,SNR=4.5							
ECSD	**EROS,Sioux Fal**	**34.83**	**323**	*e*P		**P**	**17 07 08.6**	**-0.8**
	comp=E,18nm,0.8s,mb5.0							
ECSD				*e*pP		pP	17 07 26.8	-1.1
SCHQ	**Schefferville**	**36.61**	**2**	P		**P**	**17 07 25.2**	**+0.8**
	comp=E,17nm,0.9s,mb5.0,baz=173,slow=5.6,SNR=6.2							
BNM	**Barren Site**	**37.57**	**303**	*e*P		**P**	**17 07 32.8**	**-0.2**
BNM				*e*pP		pP	17 07 51.8	+0.2
LPM	**Los Pinos Moun**	**37.61**	**303**	*e*P		**P**	**17 07 33.3**	**0.0**
SDCO	**Great Sand Dun**	**37.80**	**309**	*e*P		**P**	**17 07 35.0**	**+0.1**
	comp=E,4.5nm,0.7s,mb4.4							
LAZ	**Ladron**	**38.04**	**303**	*e*P		**P**	**17 07 36.8**	**-0.1**
LAZ				*e*pP		pP	17 07 55.8	+0.1
ISCO	**Idaho Springs**	**38.65**	**312**	*e*P		**P**	**17 07 41.6**	**-0.4**
	comp=E,38nm,1.6s,mb5.0							
ULM	**Lac du Bonnet**	**38.81**	**332**	P		**P**	**17 07 41.9**	**-1.2**
	comp=E,14nm,0.9s,mb4.8,baz=149,slow=9.0,SNR=7.2							
ULM	**Lac du Bonnet**	**38.81**	**332**	P		**P**	**17 07 41.9**	**-1.2**
BDFB	**Brasilia**	**39.15**	**148**	P		**P**	**17 07 45.4**	**-0.9**
	comp=E,1.5nm,0.4s,mb4.1,baz=354,slow=19,SNR=2.4							
319A	**Douglas**	**39.15**	**298**	⇑P		**P**	**17 07 46.4**	**+0.1**
	baz=39,SNR=5.3							
219A	**White Tail Can**	**39.24**	**299**	⇑P		**P**	**17 07 47.2**	**+0.1**
	baz=39							
119A	**Ashpeak Ranch,**	**39.42**	**300**	⇓P		**P**	**17 07 48.9**	**+0.4**
	baz=39							
Y19A	**Nutrioso**	**39.63**	**302**	⇓P		**P**	**17 07 50.6**	**+0.3**
	baz=40							
318A	**Bisbee**	**39.76**	**297**	⇓P		**P**	**17 07 51.6**	**+0.2**
	baz=40							
218A	**Dragoon**	**39.90**	**298**	⇑P		**P**	**17 07 52.2**	**-0.2**
	baz=40							
118A	**Homack Ranch,**	**39.95**	**299**	⇑P		**P**	**17 07 52.7**	**-0.2**
	baz=40,SNR=6.6							
T19A	**Beclabito**	**40.18**	**306**	⇓P		**P**	**17 07 55.3**	**+0.6**
	baz=40							
PV01	**Paradox Valley**	**40.22**	**308**	*e*P		**P**	**17 07 55.5**	**+0.4**
217A	**Green Valley**	**40.51**	**298**	⇓P		**P**	**17 07 57.6**	**+0.1**
	baz=40							
S19A	**Harvey Farm, M**	**40.53**	**307**	⇓P		**P**	**17 07 57.9**	**+0.3**
	baz=40							
LVC	**Limon Verde**	**40.54**	**181**	P		**P**	**17 07 56.8**	**-1.0**
	comp=E,9.6nm,0.7s,mb4.7,baz=16,slow=5.9,SNR=8.0							
LVC				pP		pP	17 08 15.0	-1.7
	comp=E,12nm,0.8s,baz=353,slow=7.4,SNR=3.7							
LVC	**Limon Verde**	**40.54**	**181**	*e*P		**P**	**17 07 56.3**	**-1.5**
	comp=E,188nm,1.2s,mb5.8							
LVC				*e*pP		pP	17 08 14.5	-2.2
117A	**Oracle**	**40.58**	**299**	⇓P		**P**	**17 07 58.1**	**0.0**
	baz=41							
PV10	**Paradox Valley**	**40.65**	**308**	*e*P		**P**	**17 07 58.4**	**-0.2**
Y17A	**Roosevelt**	**40.87**	**301**	⇓P		**P**	**17 08 00.8**	**+0.2**
	baz=41,SNR=5.7							
T18A	**Mexican Hat**	**40.92**	**306**	⇑P		**P**	**17 08 00.5**	**-0.3**
	baz=41,SNR=13							
Q19A	**Hogan Spring (**	**40.99**	**309**	⇓P		**P**	**17 08 00.9**	**-0.5**
	baz=41,SNR=10							
P19A	**Cripple Cowboy**	**41.01**	**310**	⇑P		**P**	**17 08 01.4**	**-0.1**
	baz=41							
S18A	**Hurst Farm, Bl**	**41.16**	**307**	⇓P		**P**	**17 08 02.4**	**-0.4**
	baz=41,SNR=10							
R18A	**Canyonlands Na**	**41.29**	**308**	⇓P		**P**	**17 08 03.5**	**-0.3**
	baz=41,SN

BGU epP pP 17 08 46.2 -1.6
H16A Russell Place, 44.40 316 ⇓P P 17 08 29.7 +0.8
baz=44
N14A Grayback Hills 44.45 310 ⇓P P 17 08 29.3 0.0
baz=44,SNR=5.2
IRM Iron Mountain 44.48 300 ⇑P P 17 08 30.0 +0.3
baz=44,SNR=11
V12A Nelson 44.50 303 ⇓P P 17 08 30.2 +0.4
baz=44
Q13A Wheeler Ranch, 44.55 307 ⇓P P 17 08 30.9 +0.7
baz=44,SNR=5.0
QLMT Earthquake Lak 44.57 316 *eP* P 17 08 31.3 +1.0
LDFC Landfair 44.59 302 P P 17 08 31.8 +1.1
comp=E,17nm,0.5s,mb5.0
BC3 Big Chuckw Mtn 44.66 300 ⇑P P 17 08 31.1 0.0
baz=45
P13A Bates Ranch, G 44.67 308 ⇑P P 17 08 31.6 +0.4
baz=45,SNR=9.5
J15A Blackfoot 44.72 314 ⇓P P 17 08 31.5 0.0
baz=45
M14A Sheep Mountain 44.75 311 ⇓P P 17 08 31.9 +0.1
baz=45
L14A Malta 44.84 312 ⇑P P 17 08 32.4 0.0
baz=45,SNR=10
R12A Pony Springs, 44.85 306 ⇑P P 17 08 33.1 +0.5
baz=45
EGMT Eagleton 44.85 321 *eP* P 17 08 32.8 +0.3
comp=E,46nm,1.2s,mb5.1
S12A Delamar Landin 44.87 305 ⇑P P 17 08 33.8 +1.0
baz=45
K14A Jones Ranch, D 44.95 313 ⇑P P 17 08 33.5 +0.1
baz=45
GMRC Granite Mounta 44.99 301 ⇑P P 17 08 33.8 0.0
baz=45,SNR=5.8
BOZ Bozeman (W) 45.02 317 *eP* P 17 08 33.4 -0.4
comp=E,5.8nm,0.9s,mb4.3
BOZ epP pP 17 08 52.5 -0.4
T11A Corn Creek, Al 45.09 305 ⇓P P 17 08 35.1 +0.6
baz=45
BELC Belle Mtn. 45.15 300 ⇑P P 17 08 35.3 +0.2
baz=45
Q12A Willow Creek R 45.18 307 ⇑P P 17 08 35.6 +0.4
baz=45,SNR=6.8
H15A Lima 45.30 315 ⇓P P 17 08 36.9 +0.9
baz=45,SNR=6.3
M13A Montello 45.30 311 ⇑P P 17 08 36.3 +0.2
baz=45
TUQ Turquoise Moun 45.31 302 ⇑P P 17 08 36.8 +0.5
baz=45
P12A McGill 45.35 308 ⇑P P 17 08 36.9 +0.4
baz=45,SNR=5.6
L13A Double Diamond 45.36 312 ⇑P P 17 08 36.6 +0.1
baz=45
MONP Monument Peak 45.36 298 ⇓P P 17 08 37.2 +0.5
baz=45
G15A Dillon 45.39 316 ⇑P P 17 08 37.4 +0.6
baz=45,SNR=6.2
J14A Carey 45.44 313 ⇑P P 17 08 37.8 +0.6
baz=45,SNR=7.5
CPUP Villa Florida 45.53 166 P P 17 08 36.5 -1.5
comp=E,2.5nm,0.7s,mb4.1,baz=341,slow=7.0,SNR=8.3
DLMT Dillon 45.53 316 *eP* P 17 08 38.0 +0.1
comp=E,12nm,1.0s,mb4.6
I14A Mackay 45.60 314 ⇑P P 17 08 39.3 +0.9
baz=46,SNR=9.7
R11A Troy Canyon, C 45.60 306 ⇑P P 17 08 39.0 +0.5
baz=46,SNR=16
K13A Stover Farm, H 45.62 312 ⇓P P 17 08 39.0 +0.3
baz=46
F15A Butte 45.65 317 ⇑P P 17 08 39.2 +0.4
baz=46,SNR=10.0
Q11A Duckwater 45.76 307 ⇑P P 17 08 40.1 +0.3
baz=46,SNR=11
H14A Leadore 45.78 315 ⇓P P 17 08 40.7 +0.9
baz=46
N12A Clover Valley, 45.80 310 ⇓P P 17 08 40.3 +0.3
baz=46
TPNV Topopah Spring 45.84 304 *eP* P 17 08 41.6 +1.2
comp=E,10nm,0.8s,mb4.6
M12A Wells 45.86 310 ⇓P P 17 08 40.2 -0.3
baz=46
J13A Cove Ranch, Pi 45.92 313 ⇓P P 17 08 41.2 +0.2
baz=46
E15A Deer Lodge 45.97 318 ⇑P P 17 08 41.4 +0.1
baz=46,SNR=5.2
GSC Goldstone 46.00 302 ⇓P P 17 08 42.1 +0.3
baz=46
GSC Goldstone 46.00 302 *eP* P 17 08 42.8 +1.0
comp=E,4.9nm,0.7s,mb4.3
P11A Circle Ranch, 46.00 308 ⇓P P 17 08 41.9 +0.3
baz=46
I13A Wildhorse Cree 46.05 314 ⇑P P 17 08 42.5 +0.6
baz=46,SNR=12
O11A Cowboy Ranch, 46.07 309 ⇑P P 17 08 42.5 +0.3
baz=46,SNR=5.7
D15A Lincoln 46.13 319 ⇑P P 17 08 42.8 +0.3
baz=46,SNR=8.9
HLID Hailey 46.14 314 ⇓P P 17 08 43.4 +0.7
baz=46
HLID Hailey 46.14 314 *eP* P 17 08 42.7 0.0
comp=E,5.2nm,0.9s,mb4.3
R10A Warm Springs 46.14 306 ⇑P P 17 08 43.8 +1.0
baz=46
K12A Draper Farm, C 46.20 312 ⇑P P 17 08 43.6 +0.4
baz=46
F14A Wisdom 46.21 317 ⇑P P 17 08 43.3 +0.1
baz=46,SNR=5.0
S10A Tonopah Range, 46.29 305 ⇓P P 17 08 44.6 +0.6
baz=46,SNR=16
Q10A Clear Creek Ra 46.33 307 ⇑P P 17 08 44.7 +0.5
baz=46,SNR=7.2
H13A Challis 46.36 315 ⇑P P 17 08 44.6 +0.2
baz=46
M11A Holland Ranch, 46.50 310 ⇓P P 17 08 45.9 +0.4
baz=46,SNR=8.2
E14A Clinton 46.51 318 ⇓P P 17 08 45.9 +0.4
baz=46,SNR=15
J12A Stokes Ranch, 46.52 313 ⇓P P 17 08 45.6 -0.1
baz=46
CHMT Chamberlain Mo 46.54 318 *eP* P 17 08 46.0 +0.2
P10A Eureka 46.55 308 ⇑P P 17 08 46.6 +0.6
baz=46
L11A Cat Creek Ranc 46.67 311 ⇑P P 17 08 47.3 +0.4
baz=47
MPMC Manual Prospec 46.67 303 ⇓P P 17 08 47.1 +0.2
baz=47,SNR=9.0
R09A Tonopah 46.72 306 ⇑P P 17 08 47.4 +0.1
baz=47,SNR=13
S09A Goldfield 46.74 305 ⇓P P 17 08 47.8 +0.3
baz=47,SNR=8.8
H12A Diamond D Ranc 46.76 315 ⇑P P 17 08 47.5 0.0
baz=47
D14A Greenough 46.77 318 ⇑P P 17 08 47.2 -0.4
baz=47,SNR=6.7
TPH Tonopah 46.81 305 *eP* P 17 08 48.7 +0.7
comp=E,41nm,1.8s,mb4.8
TPH epP pP 17 09 05.7 -1.6
F13A Darby 46.83 316 ⇓P P 17 08 47.7 -0.3
baz=47,SNR=5.7
EDW2 Edwards Air Fo 46.90 301 ⇑P P 17 08 49.1 +0.3
baz=47,SNR=6.6
E13A Victor 46.97 317 ⇓P P 17 08 49.3 +0.2
baz=47
K11A Parker Ranch, 47.03 312 ⇓P P 17 08 49.6 -0.1
baz=47
MFID Camas Ranch 47.07 313 ⇑P P 17 08 49.9 -0.1
baz=47,SNR=5.9
L10A Juniper Basin 47.16 311 ⇓P P 17 08 50.7 0.0
baz=47,SNR=11
C14A Swan Lake 47.18 319 ⇓P P 17 08 50.9 +0.1
baz=47,SNR=11
D13A Huson 47.38 318 ⇓P P 17 08 52.4 +0.1
baz=47,SNR=8.3
ISA Isabella 47.40 302 ⇓P P 17 08 52.9 +0.3
baz=47
F12A Elk City 47.42 316 ⇑P P 17 08 52.4 -0.3
baz=47,SNR=6.1
S08C White Mtn Res 47.44 304 ⇑P P 17 08 53.6 +0.7
baz=47,SNR=23
Q08A Gabbs 47.51 306 ⇑P P 17 08 54.1 +0.7
baz=48
ARVC Arvin 47.62 301 ⇓P P 17 08 54.9 +0.5
baz=48
N09A Rock Creek Ran 47.62 309 ⇓P P 17 08 54.3 0.0
baz=48,SNR=9.9
K10A MacKenzie Ranc 47.63 312 ⇑P P 17 08 54.2 -0.1
baz=48,SNR=12
C13A Hot Springs 47.66 319 ⇑P P 17 08 54.6 +0.1
baz=48,SNR=7.7
M09A Marrel Ranch, 47.70 310 ⇓P P 17 08 55.5 +0.6
baz=48
NVAR Mina Array Bea 47.71 306 P P 17 08 55.5 +0.5
comp=E,6.3nm,0.8s,mb4.5,baz=88,slow=7.0,SNR=31
NVAR pP pP 17 09 14.7 +0.3
comp=E,7.6nm,0.9s,baz=108,slow=2.9,SNR=6.4
NVAR Mina Array Bea 47.71 306 P P 17 08 55.5 +0.5
NVAR pP pP 17 09 14.7 +0.3
MTUM Tungsten Hills 47.73 304 *eP* P 17 08 55.7 +0.5
MTUM epP pP 17 09 15.1 +0.6
E12A Beaver Dam Sad 47.85 317 ⇓P P 17 08 55.9 -0.1
baz=48
B13A Whitefish 47.86 320 ⇑P P 17 08 55.7 -0.3
baz=48,SNR=6.8
VES Vestal, Richgr 47.91 302 ⇓P P 17 08 56.8 +0.2
baz=48,SNR=5.4
G11A Walters Elk Ra 47.98 315 ⇓P P 17 08 56.8 -0.2
baz=48
HELL Mitchell Peak 47.98 303 ⇑P P 17 08 57.3 +0.2
baz=48,SNR=13
H10A Noah's Angus R 48.05 314 ⇓P P 17 08 56.7 -0.8
baz=48,SNR=5.2
F11A Grangeville 48.06 316 ⇑P P 17 08 57.4 -0.2
baz=48,SNR=11
RCTC Rector, Farmer 48.10 303 ⇑P P 17 08 58.1 0.0
baz=48
BSC Santa Cruz Isl 48.15 300 ⇓P P 17 08 58.7 +0.2
baz=48
K09A Rome 48.22 311 ⇑P P 17 08 59.0 +0.1
baz=48,SNR=29
C12B Naegeli Ranch, 48.24 318 ⇓P P 17 08 59.2 +0.2
baz=48
E11A Bogner Ranch, 48.25 317 ⇑P P 17 08 58.8 -0.2
baz=48,SNR=30
PKM Peak Mountain 48.40 301 ⇑P P 17 09 00.9 +0.6
baz=48
J09A Fry Pan Ranch, 48.40 312 ⇑P P 17 09 00.4 +0.1
baz=48
O07A Toulon 48.48 308 ⇓P P 17 09 01.2 +0.3
baz=48
G10A Bishop Farm, J 48.52 315 ⇓P P 17 09 00.6 -0.5
baz=48,SNR=10
L08A Fields 48.53 311 ⇓P P 17 09 01.5 +0.2
baz=48
D11A Klaveano Farm, 48.56 317 ⇑P P 17 09 01.0 -0.4
baz=49,SNR=10
I09A Lost Marbles R 48.56 313 ⇓P P 17 09 01.0 -0.5
baz=49
T06C Millerton Lake 48.58 304 ⇑P P 17 09 01.1 -0.6
baz=49
N07B Gerlach 48.68 309 ⇓P P 17 09 01.7 -0.7
baz=49,SNR=8.3
H09A Durkee 48.70 314 ⇓P P 17 09 01.8 -0.7
baz=49,SNR=5.2
K08A Mann Creek Ran 48.77 311 ⇓P P 17 09 02.6 -0.5
baz=49,SNR=6.9
C11A Tepee Creek (N 48.78 318 ⇓P P 17 09 02.9 -0.2
baz=49
F10A Beach Ranch, E 48.80 316 ⇑P P 17 09 03.1 -0.1
baz=49
A12A Yaak River Ran 48.80 320 ⇑P P 17 09 03.3 +0.1
baz=49,SNR=5.2
WVOR Wild Horse Val 48.80 311 *eP* P 17 09 01.9 -1.4
comp=E,18nm,1.2s,mb4.9
S06C San Francisco 48.82 305 ⇓P P 17 09 03.8 +0.3
baz=49,SNR=7.3
J08A Circle Bar Ran 48.91 312 ⇑P P 17 09 04.0 -0.1
baz=49
M07A Soldier Meadow 48.95 309 ⇑P P 17 09 04.2 -0.3
baz=49,SNR=22
G09A Cove 48.96 315 ⇑P P 17 09 04.3 -0.2
baz=49,SNR=14
B11A Sandpoint 49.06 319 ⇑P P 17 09 05.3 +0.1
baz=49
PKD Parkfield 49.10 302 ⇑P P 17 09 05.7 0.0
baz=49
R05C Kirkwood Meado 49.12 306 ⇓P P 17 09 06.5 +0.6
baz=49,SNR=7.9
D10A Wagner Farm, O 49.17 317 ⇓P P 17 09 05.4 -0.7
baz=49
L07A Adell 49.22 310 ⇓P P 17 09 06.2 -0.3
baz=49,SNR=16
A11A Hall Mountain, 49.25 320 ⇓P P 17 09 06.6 -0.1
baz=49
EDM Edmonton 49.28 326 *eP* P 17 09 05.6 -1.2
K07A Rock Creek Ran 49.30 311 ⇑P P 17 09 06.9 -0.3
baz=49
N06A Buffalo Meadow 49.31 308 ⇓P P 17 09 07.3 0.0
baz=49,SNR=11
U04C Hernandez Rese 49.35 303 ⇑P P 17 09 07.5 -0.1
baz=49,SNR=5.4
H08A Pirrie City 49.35 314 ⇓P P 17 09 07.5 0.0
baz=49
LNOR Lincton Mounta 49.47 315 *eP* P 17 09 08.0 -0.4
NEW Newport 49.47 319 P P 17 09 07.7 -0.7
E09A Wood Farm, Sta 49.57 316 ⇑P P 17 09 08.5 -0.6
baz=50,SNR=5.9
P05C Yuba Gap, Truc 49.63 306 ⇑P P 17 09 09.6 -0.1
baz=50
LAVA Lava Cap Winer 49.65 306 ⇓P P 17 09 09.9 0.0
baz=50
G08A Pilot Rock 49.76 314 ⇑P P 17 09 10.3 -0.3
baz=50,SNR=10.0
F08A Pendleton 49.78 315 ⇑P P 17 09 10.0 -0.8
baz=50,SNR=7.0
I07A Izee 49.82 313 ⇓P P 17 09 11.4 +0.3
baz=50,SNR=8.2
PACP Pacheco Peak 49.83 303 ⇓P P 17 09 11.0 -0.3
baz=50,SNR=5.6
D09A Jones Farm, Ri 49.84 317 ⇓P P 17 09 10.7 -0.5
baz=50
M06C Likely Place G 49.88 309 ⇓P P 17 09 11.5 -0.1
baz=50
MOD Modoc 49.89 310 ⇓P P 17 09 11.2 -0.4
baz=50
SAO San Andreas Ge 49.93 303 *eP* P 17 09 12.1 0.0
comp=E,8.3nm,0.9s,mb4.7
H07A Lands Inn, Kim 49.99 313 ⇑P P 17 09 11.8 -0.5
baz=50,SNR=14
A10A Northport 49.99 319 ⇓P P 17 09 11.7 -0.6
baz=50,SNR=7.3
K06A Valley Falls 50.05 311 ⇑P P 17 09 13.4 +0.6
baz=50
C09A Chrisman Ranch 50.05 318 ⇓P P 17 09 12.6 -0.1
baz=50
J06A Christmas Vall 50.08 312 ⇓P P 17 09 12.6 -0.4
baz=50
SFJD Kangerlussuaq 50.14 9 P P 17 09 13.5 +0.4
comp=E,7.2nm,0.6s,mb4.8,baz=209,slow=9.5,SNR=3.9
B09A Rice 50.17 319 ⇑P P 17 09 12.8 -0.9
baz=50,SNR=7.0
OD2 Odessa Site #2 50.20 317 *eP* P 17 09 13.2 -0.8
G07A Ruggs Ranch, H 50.24 314 ⇓P P 17 09 14.0 -0.2
baz=50
D08A Wollman Farm, 50.24 317 ⇓P P 17 09 13.8 -0.4
baz=50
I06A Prineville 50.28 312 ⇓P P 17 09 14.6 +0.1
baz=50
L05A Lakeview 50.31 310 ⇑P P 17 09 14.2 -0.6
baz=50,SNR=5.9
ORV Oroville 50.36 307 ⇑P P 17 09 15.2 0.0
baz=50
M05C Lookout 50.40 309 ⇑P P 17 09 14.8 -0.7
baz=50
K05A Summer Lake 50.49 311 ⇓P P 17 09 15.9 -0.3
baz=50
C08A Higginbotham F 50.54 318 ⇓P P 17 09 15.7 -0.8
baz=50,SNR=27
H06A Lindquist Farm 50.56 313 ⇑P P 17 09 17.0 +0.3
baz=50,SNR=9.8
A09A Danville 50.63 319 ⇑P P 17 09 16.5 -0.6
baz=51,SNR=7.9
E07A Sunnyside 50.71 316 ⇑P P 17 09 17.1 -0.7
baz=51
G06A Carlson Farm, 50.89 314 ⇓P P 17 09 18.9 -0.2
baz=51
B08A Colville Reser 50.90 318 ⇑P P 17 09 18.6 -0.5
baz=51,SNR=11
CVS Carmenet Viney 50.92 305 ⇓P P 17 09 19.6 +0.1
baz=51
D07A Quincy 50.97 317 ⇓P P 17 09 19.4 -0.3
baz=51,SNR=6.2
A08A Turner Farm, O 51.05 319 ⇑P P 17 09 19.7 -0.5
baz=51,SNR=8.1
MCCM Marconi Confer 51.23 305 ⇑P P 17 09 22.0 +0.2
baz=51
FARB Farallon Islan 51.27 304 ⇓P P 17 09 22.2 +0.1
baz=51
ETW Entiat 51.32 317 *eP* P 17 09 21.5 -0.8
B07A Winthrop 51.43 318 ⇓P P 17 09 22.6 -0.5
baz=51,SNR=10
O02C Red Bluff 51.43 307 ⇓P P 17 09 21.5 -1.8
baz=51
E06A Yakima 51.45 316 ⇑P P 17 09 23.4 +0.1
baz=51
J04A Umpqua Nationa 51.47 311 ⇓P P 17 09 23.8 +0.3
baz=52
HOPS Hopland 51.48 306 ⇑P P 17 09 24.2 +0.6
baz=52
D06A Cle Elum 51.54 316 ⇓P P 17 09 24.0 +0.1
baz=52
F05A White Salmon 51.61 315 ⇑P P 17 09 24.7 +0.2
baz=52,SNR=5.5
YBH Yreka Blue Hor 51.63 309 ⇑P P 17 09 23.3 -1.4
baz=52,SNR=5.4
M02C Callahan 51.67 309 ⇓P P 17 09 23.9 -1.1
baz=52
ASR Mount Adams--S 51.77 315 P P 17 09 26.6 +0.9
A07A Ashnola River, 51.77 319 ⇑P P 17 09 25.5 -0.2
baz=52,SNR=21
I04A Tendick Farm, 51.80 312 ⇓P P 17 09 25.2 -0.7
baz=52,SNR=5.8
H04A Detroit Lake 51.83 313 ⇓P P 17 09 25.9 -0.2
baz=52,SNR=7.5
KIPM Iron Peak 51.91 307 *eP* P 17 09 25.7 -1.1
N02C Big Bar 51.92 308 ⇑P P 17 09 25.5 -1.4
baz=52
D05A Enumclaw 52.29 316 ⇓P P 17 09 28.8 -0.7
baz=52
RPW Rockport 52.32 318 P P 17 09 28.6 -1.1
B06A Marblemount 52.32 318 ⇓P P 17 09 28.5 -1.2
baz=52
K02A Glendale 52.38 310 ⇓P P 17 09 29.5 -0.8
baz=52
I03A Eugene 52.45 312 ⇑P P 17 09 30.0 -0.8
baz=52
JCC Jacoby Creek 52.46 308 ⇓P P 17 09 30.6 -0.3
baz=52
A06A Chilliwack 52.48 319 ⇑P P 17 09 30.2 -0.7
baz=52
J02A Umpqua 52.55 311 ⇑P P 17 09 31.1 -0.4
baz=52
B05A Bryant 52.64 317 ⇑P P 17 09 30.7 -1.4
baz=53
G03A Yamhill 52.72 314 ⇓P P 17 09 33.3 +0.5
baz=53
I02A Mapleton 52.85 312 ⇓P P 17 09 33.6 -0.1
baz=53
K01A Sixes 53.09 310 ⇓P P 17 09 35.5 0.0
baz=53
E03A Lebam 53.19 315 ⇑P P 17 09 36.3 +0.1
baz=53
D03A Wishkah Elem. 53.45 316 ⇓P P 17 09 38.5 +0.4
baz=53
B04A Port Angeles 53.50 317 ⇓P P 17 09 38.4 0.0
baz=54
NLWA Neilton Lookou 53.58 316 ⇓P P 17 09 39.3 +0.3
baz=54
C03A Quillayute Air 54.17 316 ⇓P P 17 09 43.6 +0.4
baz=54
YKA Yellowknife Ar 54.54 336 P P 17 09 44.8 -0.9
comp=E,15nm,0.7s,mb5.1,baz=114,slow=7.3,SNR=66
YKA PcP PcP 17 10 47.0 -1.1
comp=E,3.2nm,0.7s,baz=111,slow=5.5,SNR=6.2
YKA Yellowknife Ar 54.54 336 P P 17 09 44.8 -1.0
YKA PcP PcP 17 10 47.0 -1.1
EVO Evora 55.89 55 *eP* P 17 09 55.7 -0.2
comp=E,14nm,0.8s,mb4.7
SUMG Summit 57.05 10 *eP* P 17 10 04.4 +0.8
comp=E,11nm,1.1s,mb4.8
PLCA Paso Flores 58.64 182 P P 17 10 14.0 -1.0
comp=E,16nm,0.5s,mb4.3,baz=1.3,slow=12,SNR=4.9
ESDC Sonseca Array 59.09 54 P P 17 10 18.9 +0.5
comp=E,5.2nm,0.6s,mb4.7,baz=272,slow=7.2,SNR=25
ESDC pP pP 17 10 38.5 +0.2
comp=E,3.2nm,0.7s,baz=274,slow=7.0,SNR=4.5
DLBC Dease Lake 59.91 328 *eP* P 17 10 24.3 +0.6
QUIF Quistinic 60.18 45 *eP* P 17 10 26.0 +0.3
SJPF Ste Jean 61.24 50 *eP* P 17 10 33.9 +0.9
comp=E,18nm,0.7s,mb4.9
SJPF Ste Jean 61.24 50 *eP* P 17 10 33.9 +0.9
comp=E,2.2nm,0.7s,mb4.9
LDF La Druitiere 62.26 44 *eP* P 17 10 40.5 +0.8
EPF Esparros 62.38 50 *eP* P 17 10 41.7 +1.0
comp=E,20nm,0.8s,mb4.9
EPF Esparros 62.38 50 *eP* P 17 10 41.7 +1.0
comp=E,9.9nm,0.8s,mb4.9
TIC Toumodi 62.69 92 *eP* pP 17 11 03.3 -0.1
comp=E,50nm,1.0s
LIC Lamto 62.81 92 *eP* pP 17 11 03.9 -0.3
comp=E,44nm,1.1s
SKAG Skagway 62.81 328 *eP* P 17 10 43.7 +0.4
DBIC Dimbokro 62.84 92 P P 17 10 42.4 -1.8
comp=E,2.0nm,0.6s,mb4.2,baz=240,slow=6.6,SNR=3.3
DBIC pP pP 17 11 02.0 -2.3
comp=E,8.7nm,0.9s,baz=280,slow=6.5,SNR=6.0
KIC Kosan Boka 63.04 92 *eP* pP 17 11 05.7 0.0
comp=E,72nm,1.1s
RJF Les Rejaudoux 63.26 48 *eP* P 17 10 46.6 +0.2
comp=E,9.1nm,0.7s,mb4.5
RJF Les Rejaudoux 63.26 48 *eP* P 17 10 46.6 +0.2
comp=E,4.6nm,0.7s,mb4.5
CAF Calviac 63.64 48 *eP* P 17 10 49.3 +0.3
comp=E,8.0nm,0.8s,mb4.3
CAF Calviac 63.64 48 *eP* P 17 10 49.3 +0.3
comp=E,4.0nm,0.8s,mb4.3
TCF Toulx Ste Croi 63.75 47 *eP* P 17 10 49.8 +0.1
comp=E,7.8nm,0.7s,mb4.3
TCF Toulx Ste Croi 63.75 47 *eP* P 17 10 49.8 +0.1
comp=E,3.9nm,0.7s,mb4.3
MTLF Montolieu 63.76 50 *eP* P 17 10 50.1 +0.3
comp=E,12nm,0.8s,mb4.5
MTLF Montolieu 63.76 50 *eP* P 17 10 50.1 +0.3
comp=E,6.1nm,0.8s,mb4.5
AVF Avril sur Loir 64.55 46 *eP* P 17 10 54.8 -0.1
SSF Saint Saulge 64.65 46 *eP* P 17 10 55.7 +0.2
SMF Signal de Mont 64.88 46 *eP* P 17 10 57.0 0.0
LOR Lormes 64.89 46 *eP* P 17 10 56.9 -0.2
comp=E,8.7nm,0.8s,mb4.4
LOR Lormes 64.89 46 *eP* P 17 10 56.9 -0.2
comp=E,4.3nm,0.8s,mb4.4
LASF Ste Croix 64.93 49 *eP* P 17 10 58.1 +0.7
VIVF Saint-Julien-I 65.49 48 *eP* P 17 11 02.2 +1.2
comp=E,11nm,0.9s,mb4.4
VIVF Saint-Julien-I 65.49 48 *eP* P 17 11 02.2 +1.2
comp=E,5.4nm,0.9s,mb4.4
MEZF Maizieres J'vi 65.69 44 *eP* P 17 11 02.6 +0.3
LPG La Plagne 66.94 48 *eP* P 17 11 11.4 +1.1
MBDF Montbardon 66.99 48 *eP* P 17 11 11.5 +0.9
comp=E,11nm,0.9s,mb4.4
MBDF Montbardon 66.99 48 *eP* P 17 11 11.5 +0.9
comp=E,5.4nm,0.9s,mb4.4
TORD Torodi Ar. Bea 67.33 83 P P 17 11 12.7 -0.6
comp=E,2.0nm,0.7s,mb4.1,baz=291,slow=6.3,SNR=22
TORD pP pP 17 11 31.9 -1.8
comp=E,9.5nm,0.9s,baz=287,slow=5.8,SNR=15
BMRM Bremner River 67.59 329 *eP* P 17 11 14.7 +0.7
DIV Divide 68.16 329 *eP* P 17 11 17.7 0.0
comp=E,14nm,0.9s,mb4.8
PGF Pioggiola 68.77 51 *eP* P 17 11 21.8 0.0
NB2 NORSAR Subarra 69.25 31 P P 17 11 24.9 +0.4
comp=Z,2.7nm,0.8s,mb4.1,baz=269,slow=6.5
MCK McKinley 69.68 332 *eP* P 17 11 26.4 -0.7
comp=Z,26nm,1.0s,mb5.0
KEST Kesra 69.86 58 P P 17 11 29.8 +1.1
comp=Z,2.2nm,1.0s,mb3.9,baz=335,slow=8.0,SNR=4.3
KEST pP pP 17 11 49.2 0.0
comp=Z,1.7nm,0.9s,baz=236,slow=2.9,SNR=4.5
COLD Coldfoot 70.22 336 *eP* P 17 11 29.9 -0.4
comp=Z,15nm,1.0s,mb4.8
TRF Thorofare Moun 70.29 332 *eP* P 17 11 30.8 0.0
comp=Z,2µm,0.6s
BPAW Bear Paw Mtn. 70.58 332 *eP* P 17 11 31.8 -0.7
comp=Z,12nm,0.9s,mb4.7
CLL Collm 70.70 41 *epP* pP 17 11 57.0 +2.9
PPLA Purkeypile 71.17 331 *eP* P 17 11 35.4 -0.7
comp=Z,10nm,1.0s,mb4.6
GERES GERESS Array B 71.40 44 P P 17 11 38.3 +0.6
comp=Z,1.2nm,0.9s,mb3.7,baz=309,slow=4.3,SNR=6.1
KDAK Kodiak Island 71.73 326 P P 17 11 40.0 +0.4
comp=Z,23nm,0.8s,mb5.1,baz=73,slow=5.3,SNR=13
ARCES ARCESS Array B 74.49 21 P P 17 11 56.4 +0.7
comp=Z,3.5nm,0.6s,mb4.2,baz=292,slow=4.1,SNR=26
ARCES ARCESS Array B 74.49 21 P P 17 11 56.4 +0.7

TIP	**Timpagrande**	**75.08**	**53**	*e*P		**P**	17 11 58.5	-1.2
	comp=Z,4.3nm,0.8s,mb4.2								
WMQ	**Urumqi**	**114.53**	**19**	*e*PKP	PKiKP	PKP	17 18 55.0	-2.3
HHC	**Hu-ho-hao-te**	**121.28**	**0**	*e*PKP	PKPdf	PKP	17 19 02.3	-8.1
HHC				PP	PP				
	comp=Z,276nm,9.7s								
GTA	**Gaotai**	**121.67**	**11**	*e*PKP	PKPdf	PKP	17 19 08.5	-2.7
GTA				XPKP			17 19 46.1		
KSRS	**Korea Array**	**122.57**	**345**	PKP	PKPdf	PKP	17 19 11.1	-1.9
	comp=Z,1.3nm,0.9s,baz=346,slow=1.2,SNR=6.6								
LZH	**Lanzhou**	**125.54**	**8**	*e*PKP	PKPdf	PKP	17 19 15.5	-3.2
LZH				XPKP			17 19 49.5		
LZH				*e*PP	PP		17 21 10.6	+1.4	
LZH				SKKS	SKKSac		17 27 53.0	-8.6	
LZH				*e*SS	SS		17 37 58.5	-2.7	
LZH				PP	PP				
	comp=Z,87nm,8.2s								
LZH				LR	LR				
	comp=N,149nm,18.5s								
LZH				LR	LR				
	comp=Z,225nm,20.3s								
CD2	**Chengdu**	**130.62**	**9**	*e*PKP	PKPdf		17 19 26.1	-2.4	
CD2				XPKP			17 20 03.5		
CD2				PP	PP		17 21 45.5	+3.0	
CD2				PKS			17 23 01.5		
CD2				SKS	SKSdf		17 26 26.5	-6.9	
CD2				SKKS	SKKSac		17 28 26.5	-7.1	
CD2				SS	SS		17 39 01.5	-2.8	
CD2				PP	PP				
	comp=Z,100nm,10.2s								
CD2				LR	LR				
	comp=N,180nm,18.4s								
CD2				LR	LR				
	comp=Z,160nm,16.2s								
GYA	**Guiyang**	**135.38**	**6**	*e*PDIF	Pdif		17 16 38.3	-1.4	
GYA				PKP	PKPdf		17 19 36.4	-1.2	
GYA				XPKP			17 20 08.8		
GYA				PP	PP		17 22 16.8	+3.9	
GYA				PP	PP				
	comp=Z,90nm,8.2s								
KMI	**Kunming**	**136.11**	**12**	PKP	PKPdf		17 19 35.9	-3.1	
CMAR	**Chiang Mai Arr**	**141.53**	**20**	PKhKP			17 19 43.1		
	comp=Z,0.6nm,0.5s,baz=321,slow=3.9,SNR=4.8								
CMAR				PKP	PKPdf		17 19 48.6	-0.4	
	comp=Z,0.9nm,0.7s,baz=330,slow=3.3,SNR=6.1								
CMAR				SKPbc	SKPbc		17 23 17.9	-1.5	
	comp=Z,0.9nm,0.8s,baz=324,slow=3.4,SNR=6.5								
CTA	**Charters Tower**	**147.24**	**261**	*e*PKP	PKPdf		17 19 57.7	-1.2	
	comp=Z,6.7nm,0.7s								
CTA	**Charters Tower**	**147.24**	**261**	PKPbc	PKPbc		17 19 59.5	-1.8	
	comp=Z,9.0nm,0.8s,baz=71,slow=3.1,SNR=9.2								
STKA	**Stephens Creek**	**149.71**	**237**	*e*PKP	PKPdf		17 20 01.7	-0.9	
	comp=Z,6.8nm,0.9s								
STKA	**Stephens Creek**	**149.71**	**237**	PKP	PKPdf		17 20 01.9	-0.6	
	comp=Z,8.0nm,0.9s,baz=93,slow=2.9,SNR=3.1								
STKA				PKPbc	PKPbc		17 20 05.6	-1.7	
	comp=Z,8.0nm,0.9s,baz=11,slow=4.0,SNR=7.2								
WB2	**Warramunga Arr**	**158.42**	**262**	*e*PKP	PKPdf		17 20 24.5	+9.4	
WRA	**Warramunga Arr**	**158.43**	**262**	PKP	PKPdf		17 20 13.5	-1.6	
	comp=Z,2.1nm,0.9s,baz=82,slow=1.1,SNR=12								
WRA				pPKP	pPKPdf		17 20 37.4	0.0	
	comp=Z,1.7nm,1.1s,baz=87,slow=3.6,SNR=4.1								
WRA				PKPab	PKPab		17 20 47.9	-2.3	
	comp=Z,1.7nm,0.6s,baz=86,slow=4.0,SNR=11								
ASAR	**Alice Springs**	**158.47**	**251**	PKP	PKPdf		17 20 12.7	-2.4	
	comp=Z,1.1nm,0.8s,baz=96,slow=1.3,SNR=10								
ASAR				PKPab	PKPab		17 20 48.2	-2.0	
	comp=Z,2.6nm,0.7s,baz=96,slow=4.4,SNR=19								

*ISCJB **13** 17:18:53.8±1.0, 25.12S×007×17981E±008, h464km±12km, mb4.1/23, Error ellipse: s-maj=12.3km s-min=9.5km az=42.0*
*NEIC **13** 17:18:55.8±0.9, 2520S×17995E, h483km±11km, mb4.4/10, Error ellipse: s-maj=14.7km s-min=9.9km az=156.0*
*IDC **13** 17:18:56.5±1.6, 2513S×17989E, h486km±16km, mb3.7/17, mb1 3.9/20, mb1mx3.8/23, mbtmp3.7/20, Error ellipse: s-maj=13.5km s-min=12.2km az=140.0*

ISC 13 17:18:55.1±0.9, 2517S·007×17986E±008, h467km±11km, n54, σ0§88/45, mb4.1/23, 1C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
RAO	**Raoul Island**	**4.52**	**155**	*e*P		**P**	**17 20 15.4**	**-0.4**
DZM	**Mont Dzumac**	**12.68**	**281**	*e*P		**P**	**17 21 46.3**	**+5.1**
DZM	**Mont Dzumac**	**12.68**	**281**	*e*P		**P**	**17 21 45.2**	**+4.0**
URZ	**Urewera**	**13.26**	**189**	P		**P**	**17 21 47.2**	**0.0**
	1.1nm,0.3s,baz=31,slow=12,SNR=6.3							
URZ				S		**S**	**17 24 09.0**	**-0.1**
	0.4nm,0.3s,baz=300,slow=20,SNR=5.2							
AFI	**Afiamalu**	**13.69**	**37**	P		**P**	**17 21 51.1**	**-1.0**
	2.7nm,0.3s,baz=189,slow=19,SNR=3.8							
RPZ	**Rata Peaks**	**19.85**	**199**	P		**P**	**17 22 54.1**	**+0.2**
	3.2nm,0.3s,baz=37,slow=1.7,SNR=18							
CNB	**Canberra Magne**	**28.12**	**242**	*e*P		**P**	**17 24 09.5**	**+1.5**
CTA	**Charters Tower**	**31.38**	**272**	⇓*i*P		**P**	**17 24 37.6**	**+1.1**
	10nm,0.3s,mb4.7							
CTA	**Charters Tower**	**31.38**	**272**	P		**P**	**17 24 37.8**	**+1.3**
	15nm,0.3s,mb4.9,baz=98,slow=11,SNR=26							
CTAO	**Charters Tower**	**31.38**	**272**	*e*P		**P**	**17 24 37.4**	**+0.9**
	18nm,0.5s,mb4.8							
TOO	**Toolangi**	**31.67**	**239**	*e*P		**P**	**17 24 40.9**	**+2.1**
STKA	**Stephens Creek**	**34.15**	**250**	*e*P		**P**	**17 25 00.9**	**+0.9**
	3.1nm,0.4s,mb4.1							
STKA	**Stephens Creek**	**34.15**	**250**	P		**P**	**17 25 00.9**	**+0.9**
	3.3nm,0.4s,mb4.1,baz=93,slow=12,SNR=26							
ASAR	**Alice Springs**	**41.72**	**262**	P		**P**	**17 26 02.4**	**+0.2**
	5.7nm,0.3s,mb4.5,baz=95,slow=7.1,SNR=446							
ASAR				S		**S**	**17 31 41.9**	**-2.7**
	0.7nm,0.6s,baz=98,slow=16,SNR=7.3							
WB2	**Warramunga Arr**	**42.20**	**268**	⇓*i*P		**P**	**17 26 05.3**	**-0.7**
WRAB	**Tennant Creek**	**42.20**	**268**	*e*P		**P**	**17 26 05.3**	**-0.7**
	14nm,0.6s,mb4.6							
WRA	**Warramunga Arr**	**42.21**	**268**	P		**P**	**17 26 05.6**	**-0.4**
	9.6nm,0.3s,mb4.7,baz=100,slow=6.9,SNR=783							
WRA				ScP		ScP	17 30 54.0	-1.5	
	3.9nm,1.1s,baz=103,slow=4.0,SNR=9.6							
WRA				S		**S**	**17 31 47.2**	**-4.6**
	3.0nm,1.0s,baz=102,slow=14,SNR=9.6							
FORT	**Forrest**	**45.76**	**251**	*e*P		**P**	**17 26 33.4**	**-0.2**
	18nm,0.6s,mb4.7							
FITZ	**Fitzroy Crossi**	**50.62**	**267**	*e*P		**P**	**17 27 10.0**	**-0.2**
	14nm,0.6s,mb4.3							
FITZ	**Fitzroy Crossi**	**50.62**	**267**	P		**P**	**17 27 10.5**	**+0.3**
	7.8nm,0.7s,mb4.1,baz=125,slow=9.1,SNR=29							
KLBR	**Kellerberrin**	**54.39**	**248**	*e*P		**P**	**17 27 36.0**	**-1.2**
	8.2nm,0.6s,mb4.2							
MUN	**Mundaring**	**55.62**	**247**	*e*P		**P**	**17 27 44.3**	**-1.5**
QSPA	**South Pole Qui**	**64.92**	**180**	P		**P**	**17 28 48.2**	**+1.4**
	6.9nm,1.0s,mb4.3,baz=28,slow=2.9,SNR=21							
MJAR	**Matsushiro Arr**	**72.87**	**326**	P		**P**	**17 29 34.7**	**-0.9**
	1.2nm,0.6s,mb3.6,baz=160,slow=7.0,SNR=5.9							
MJAR	**Matsushiro Arr**	**72.87**	**326**	P		**P**	**17 29 34.7**	**-0.9**
MAW	**Mawson**	**76.52**	**201**	P		**P**	**17 29 56.0**	**+0.3**
	0.8nm,0.4s,mb3.6,baz=126,slow=6.8,SNR=8.0							
KSRS	**Korea Array**	**79.14**	**320**	P		**P**	**17 30 10.2**	**-0.1**
	0.9nm,0.5s,mb3.5,baz=131,slow=5.9,SNR=5.6							
PETK	**Petropavlovsk-**	**80.30**	**347**	P		**P**	**17 30 15.6**	**-0.5**
	2.7nm,0.6s,mb4.0,baz=126,slow=6.5,SNR=5.7							
SNAA	**Sanae**	**83.40**	**179**	*e*		**P**	**17 30 30.6**	**-1.3**
VNA3	**Neumayer Olymp**	**83.62**	**177**	*e*		**P**	**17 30 32.4**	**-0.6**
VNA2	**Neumayer--Watz**	**84.03**	**178**	*e*		**P**	**17 30 34.7**	**-0.4**
PFO	**Pinyon Flat Ob**	**84.13**	**49**	P		**P**	**17 30 37.3**	**+1.1**
	3.7nm,0.8s,mb4.0,baz=135,slow=1.4,SNR=3.2							
VNA1	**Neumayer--Stat**	**84.27**	**177**	*e*		**P**	**17 30 36.1**	**-0.1**
YBH	**Yreka Blue Hor**	**85.14**	**39**	P		**P**	**17 30 41.5**	**+0.7**
	1.6nm,0.7s,mb3.8,baz=270,slow=2.0,SNR=5.7							
NVAR	**Mina Array Bea**	**85.75**	**44**	P		**P**	**17 30 43.9**	**-0.1**
	2.4nm,0.7s,mb3.9,baz=224,slow=8.3,SNR=18							
TPNV	**Topopah Spring**	**86.20**	**46**	*e*P		**P**	**17 30 45.9**	**-0.2**
	2.7nm,0.8s,mb3.9							
TUC	**Tucson**	**87.39**	**52**	*e*P		**P**	**17 30 53.0**	**+1.1**
	10nm,1.6s,mb4.3							
PLCA	**Paso Flores**	**87.47**	**134**	P		**P**	**17 30 51.0**	**-1.2**
	4.7nm,1.1s,mb4.1,baz=202,slow=4.5,SNR=3.1							
WVOR	**Wild Horse Val**	**87.95**	**41**	*e*P		**P**	**17 30 54.4**	**+0.2**
	6.1nm,1.1s,mb4.2							
ELK	**Elko**	**89.02**	**43**	P		**P**	**17 30 59.3**	**0.0**
	1.0nm,0.5s,mb3.9,baz=210,slow=4.4,SNR=6.0							
CMAR	**Chiang Mai Arr**	**89.85**	**290**	P		**P**	**17 31 04.7**	**+1.0**
	1.5nm,0.9s,mb3.8,baz=136,slow=3.8,SNR=10							
TXAR	**Lajitas Array**	**91.21**	**58**	P		**P**	**17 31 10.4**	**+0.7**
	2.5nm,0.8s,mb4.2,baz=213,slow=6.4,SNR=22							
MKAR	**Makanchi Array**	**112.92**	**312**	PKiKP	PKiKP		17 36 37.4	-0.6
	0.2nm,0.3s,baz=114,slow=0.6,SNR=2.6							
KURK	**Kurchatov**	**116.03**	**316**	PKP	PKPdf		17 36 42.0	-1.8
	0.3nm,0.7s,baz=93,slow=1.7,SNR=4.8							
BVAR	**Borovoye Array**	**121.30**	**318**	PKP	PKPdf		17 36 52.4	-1.5
	0.8nm,0.5s,baz=116,slow=2.0,SNR=6.4							
ARCES	**ARCESS Array B**	**133.10**	**348**	PKP	PKPdf		17 37 13.2	-2.7
	3.6nm,1.0s,baz=33,slow=2.9,SNR=10							
ARCES				SKPbc	SKPbc		17 39 55.9	-3.8
	2.8nm,0.9s,baz=15,slow=2.7,SNR=10.0							
NB2	**NORSAR Subarra**	**143.31**	**351**	PKP	PKPdf		17 37 31.0	-3.8
	comp=Z,1.4nm,0.6s,baz=16,slow=3.3							
NOA	**NORSAR Array B**	**143.31**	**351**	PKP	PKPdf		17 37 31.2	-3.6
	comp=Z,2.9nm,0.8s,baz=16,slow=2.4,SNR=8.4							
AKASG	**Malin Array Be**	**145.96**	**326**	PKPbc	PKPbc		17 37 39.4	-2.0
	comp=Z,1.1nm,0.4s,baz=44,slow=4.3,SNR=6.7							
EKA	**Eskdalemuir Ar**	**149.79**	**3**	PKPbc	PKPbc		17 37 49.1	-1.9
	comp=Z,1.6nm,0.8s,baz=3.3,slow=3.8,SNR=7.3							
CLL	**Collm**	**152.03**	**342**	⇑*i*PKPbc	PKPbc		17 37 55.0	-1.4
	comp=Z,9.0nm,1.1s							
BRG	**Berggiesshubel**	**152.14**	**341**	*e*P	PKPdf		17 37 55.8	+6.3
	comp=Z,5.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**167.92**	**189**	PKP	PKPdf		17 38 06.0	-1.9
	comp=Z,1.3nm,1.1s,baz=266,slow=0.6,SNR=3.7							
TORD				PKPab	PKPab		17 39 17.2	-0.8
	comp=Z,1.1nm,0.9s,baz=178,slow=2.8,SNR=4.1							
TORD	**Torodi Ar. Bea**	**167.92**	**189**	PKP	PKPdf		17 38 06.0	-1.9
TORD				PKPab	PKPab		17 39 17.2	-0.8

*IDC **13** 17:23:09.2±0.9, 1702S×17243W, h0km, mb4.1/9, mb1 4.3/10, mb1mx4.2/20, mbtmp4.1/10, ML2.1/1, MS3.9/2, Ms1 3.9/2, ms1mx3.5/20, Error ellipse: s-maj=35.5km s-min=19.3km az=143.0*
*VIE **13** 17:23:11.3, 1732S×17252W, h0km, mb4.2 397 km SSW of Apia*
*ISCJB **13** 17:23:12.8±0.8, 1684S±0.10×1726W±0.2, h33km, mb4.1/13, Error ellipse: s-maj=23.8km s-min=8.4km az=29.9*
*NEIC **13** 17:23:16.0±0.7, 1722S×17249W, h45km, mb4.4/1, Error ellipse: s-maj=30.4km s-min=14.4km az=150.0*
*SZGRF **13** 17:23:17.8, 1731S×17778W, h33km, Fiji Islands region*

ISC 13 17:23:14.8±0.8, 1683S±0.10×1725W±0.2, h35km, n68, σ1§16/19, mb4.1/13, 3C, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
AFI	**Afiamalu**	**2.99**	**14**	Pn		**Pn**	**17 23 58.2**	**-1.6**
	14nm,0.3s,baz=20,slow=11,SNR=18							
AFI				Sn		**Sn**	**17 24 34.3**	**-0.2**
	38nm,0.3s,baz=150,slow=23,SNR=12							
AFI				LR	LR		17 24 48.2	
	comp=Z,220nm,20.3s,baz=198,slow=31							
AFI	**Afiamalu**	**2.99**	**14**	Pn		**Pn**	**17 23 58.2**	**-1.6**
AFI				Sn		**Sn**	**17 24 34.3**	**-0.2**
AFI				LR	LR		17 24 48.2	
RPZ	**Rata Peaks**	**30.20**	**204**	P		**P**	**17 29 26.4**	**+4.6**
	11nm,1.0s,mb4.5,baz=18,slow=20,SNR=3.4							
CTA	**Charters Tower**	**39.15**	**259**	P		**P**	**17 30 38.6**	**-0.8**
	2.5nm,0.5s,mb4.2,baz=78,slow=11,SNR=6.0							
CTAO	**Charters Tower**	**39.15**	**259**	*e*P		**P**	**17 30 38.2**	**-1.1**
STKA	**Stephens Creek**	**44.06**	**241**	P		**P**	**17 31 18.9**	**-0.6**
	3.0nm,0.9s,mb4.0,baz=129,slow=16,SNR=4.4							
WRAB	**Tennant Creek**	**50.33**	**258**	*e*P		**P**	**17 32 07.8**	**-0.7**
	3.4nm,0.8s,mb4.4							
WRA	**Warramunga Arr**	**50.33**	**258**	P		**P**	**17 32 08.3**	**-0.3**
	2.2nm,0.6s,mb4.4,baz=98,slow=6.5,SNR=23							
ASAR	**Alice Springs**	**50.47**	**253**	P		**P**	**17 32 09.4**	**-0.1**
	17nm,0.7s,mb5.2,baz=87,slow=8.6,SNR=102							
FITZ	**Fitzroy Crossi**	**58.73**	**259**	P		**P**	**17 33 10.9**	**+1.4**
	1.2nm,1.0s,mb3.9,baz=96,slow=9.2,SNR=3.1							
QSPA	**South Pole Qui**	**73.23**	**180**	P		**P**	**17 34 40.4**	**-1.3**
	2.9nm,1.1s,mb4.1,baz=328,slow=1.3,SNR=4.5							
QSPA	**South Pole Qui**	**73.23**	**180**	P		**P**	**17 34 40.4**	**-1.3**
PETK	**Petropavlovsk-**	**74.23**	**342**	P		**P**	**17 34 51.3**	**+3.4**
	1.9nm,0.8s,mb4.1,baz=127,slow=11,SNR=3.8							
NVAR	**Mina Array Bea**	**74.84**	**41**	P		**P**	**17 34 52.4**	**+0.6**
	0.4nm,0.7s,mb3.5,baz=228,slow=13,SNR=3.7							
KSRS	**Korea Array**	**77.75**	**315**	P		**P**	**17 35 11.9**	**+3.7**
	3.2nm,1.1s,mb4.2,baz=131,slow=6.2,SNR=8.0							
TXAR	**Lajitas Array**	**80.73**	**56**	P		**P**	**17 35 25.6**	**+0.8**
	0.1nm,0.4s,mb3.1,baz=204,slow=4.0,SNR=4.3							
YKA	**Yellowknife Ar**	**91.08**	**23**	LR		LR	18 12 28.2	
	comp=Z,421nm,21.2s,baz=140,slow=32							
CMAR	**Chiang Mai Arr**	**93.84**	**288**	P		**P**	**17 36 31.0**	**+2.0**
	0.4nm,0.7s,mb3.9,baz=94,slow=2.3,SNR=4.4							
CLL	**Collm**	**145.32**	**354**	*e*PKPbc	PKPbc		17 42 50.1	+1.5
CLL	**Collm**	**145.32**	**354**	*i* PKPbc	PKPbc		17 42 50.2	+1.6
	comp=Z,9.0nm,1.2s							
CLL	**Collm**	**145.32**	**354**	*e*P	PKPbc		17 42 43.0	-5.6
CLL				*i*	PKPab		17 42 50.2	+1.5
STHS	**Stebnicka Huta**	**145.62**	**344**	*e*PKP	PKPdf		17 42 52.2	+2.9
BRG	**Berggiesshubel**	**145.64**	**353**	*e*PKPbc	PKPbc		17 42 51.2	+1.6
BRG	**Berggiesshubel**	**145.64**	**353**	*e*P	PKPdf		17 42 51.5	+2.2
	comp=Z,5.8nm,0.9s							
FBE	**Freiberg**	**145.66**	**353**	*e*PKPbc	PKPbc		17 42 51.4	+1.7
MOX	**Moxa**	**146.10**	**355**	*e*PKPbc	PKPbc		17 42 53.1	+2.1
WERD	**Werda**	**146.24**	**354**	*e*PKPbc	PKPbc		17 42 53.1	+1.7
TANN	**Tannenbergstha**	**146.25**	**354**	*e*PKPbc	PKPbc		17 42 54.1	+2.6
GUNZ	**Gunzen**	**146.32**	**354**	*e*PKPbc	PKPbc		17 42 54.4	+2.7
WERN	**Wernitzgruen**	**146.39**	**354**	*e*PKPbc	PKPbc		17 42 55.0	+3.1
NKC	**Novy Kostel**	**146.44**	**354**	*e*PKPbc	PKPbc		17 42 54.0	+2.0
KECS	**Kecovo**	**146.68**	**344**	*e*PKP	PKPab		17 42 54.8	+0.9
KECS	**Kecovo**	**146.68**	**344**	*e*	PKPab		17 42 54.8	+0.9
ROTZ	**Rotzenmuhle**	**146.92**	**354**	*e*PKPbc	PKPbc		17 42 55.4	+2.0
VYHS	**Vyhne**	**147.07**	**346**	*e*PKP	PKPab		17 42 55.2	-0.3
VYHS	**Vyhne**	**147.07**	**346**	*e*	PKPab		17 42 55.2	-0.3
GRA2	**Grafenberg Arr**	**147.10**	**355**	*e*PKPbc	PKPbc		17 42 56.0	+2.0
ROSF	**Rostrenen**	**147.37**	**13**	*e*PKP1	PKPbc		17 42 54.6	-0.2
WET	**Wettzell**	**147.47**	**353**	*e*PKPbc	PKPbc		17 42 57.0	+2.0
WET	**Wettzell**	**147.47**	**353**	*e*PKPbc	PKPbc		17 42 57.0	+2.0
FLN	**La Orotiliere**	**147.50**	**10**	*e*PKP1	PKPbc		17 42 55.6	+0.5
MODS	**Modra-Piesok**	**147.53**	**348**	*e*PKP	PKPab		17 42 57.8	+0.5
MODS	**Modra-Piesok**	**147.53**	**348**	*e*	PKPab		17 42 57.8	+0.5
SGMF	**Saint Gilles**	**147.60**	**13**	*e*PKP1	PKPbc		17 42 55.5	+0.1
	comp=Z,34nm,1.1s							
GEC2	**GERESS Array S**	**147.66**	**352**	*e*PKPbc	PKPbc		17 42 56.8	+1.3
GEC2	**GERESS Array S**	**147.66**	**352**	*e*PKPbc	PKPbc		17 42 56.8	+1.3
GERES	**GERESS Array B**	**147.66**	**352**	PKPbc	PKPbc		17 42 56.0	+0.5
	comp=Z,1.1nm,0.7s,baz=33,slow=3.2,SNR=11							
LDF	**La Druitiere**	**147.72**	**9**	*e*PKP1	PKPbc		17 42 56.1	+0.4
	comp=Z,21nm,1.0s							
QUIF	**Quistinic**	**147.79**	**13**	*e*PKP1	PKPbc		17 42 55.8	-0.1
GRR	**Gorron**	**147.80**	**10**	*e*PKP1	PKPbc		17 42 56.4	+0.5
	comp=Z,31nm,1.0s							
CSNA	**Conrad Observa**	**148.22**	**349**	⇑*i*P	PKPab		17 42 59.5	-0.6
	comp=Z,5.9nm,1.1s							
CDF	**Champ du Feu**	**148.50**	**0**	*e*PKP1	PKPbc		17 42 58.8	+1.0
HAU	**Haudompre**	**148.89**	**1**	*e*PKP1	PKPbc		17 42 59.8	+1.0
	comp=Z,21nm,1.0s							
HINF	**Hinteralfeld**	**149.09**	**1**	*e*PKP1	PKPbc		17 42 59.9	+0.6
WTTA	**Wattenberg**	**149.45**	**354**	⇑*i*P	PKPbc		17 43 02.2	+2.0
	comp=Z,4.6nm,0.5s							
LOR	**Lormes**	**149.50**	**5**	*e*PKP1	PKPbc		17 43 01.3	+1.0
	comp=Z,19nm,1.1s							
MFF	**Saint Martin d**	**149.65**	**10**	*e*PKP1	PKPbc		17 43 01.1	+0.4
SSF	**Saint Saulge**	**149.68**	**5**	*e*PKP1	PKPbc		17 43 01.7	+0.9
	comp=Z,32nm,1.2s							
ABTA	**Abfaltersbach**	**149.87**	**353**	⇑*i*P	PKPbc		17 43 02.5	+1.3
	comp=Z,7.2nm,1.1s							
AVF	**Avril sur Loir**	**149.93**	**6**	*e*PKP1	PKPbc		17 43 02.0	+0.6
BGF	**Bois d'Agland**	**150.11**	**6**	*e*PKP1	PKPbc		17 43 02.6	+0.7
	comp=Z,21nm,1.1s							
SMF	**Signal de Mont**	**150.12**	**5**	*e*PKP1	PKPbc		17 43 02.5	+0.6
CABF	**La Chapelle**	**150.28**	**2**	*e*PKP1	PKPbc		17 43 03.8	+1.5
	comp=Z,23nm,1.1s							
TCF	**Toulx Ste Croi**	**150.30**	**7**	*e*PKP1	PKPbc		17 43 02.7	+0.4
	comp=Z,33nm,1.5s							
RJF	**Les Rejaudoux**	**151.18**	**9**	*e*PKP1	PKPbc		17 43 04.8	+0.4
LPG	**La Plagne**	**151.41**	**1**	*e*PKP1	PKPbc		17 43 06.8	+1.8
CAF	**Calviac**	**151.62**	**8**	*e*PKP1	PKPbc		17 43 06.0	+0.5
	comp=Z,21nm,1.5s							
ORIF	**Oris-en-Rattie**	**151.96**	**2**	*e*PKP1	PKPbc		17 43 07.3	+1.1

IDC 13 17:24:10.1±3.6, 362S×10092E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.4/20, mbtmp3.5/6, Error ellipse: s-maj=156.7km s-min=20.5km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**36.40**	**119**	P		**P**	17 31 16.3	-0.3
	0.3nm,0.5s,baz=300,slow=9.2,SNR=4.3							
ASAR	**Alice Springs**	**37.57**	**125**	P		**P**	17 31 26.8	+0.2
	0.2nm,0.3s,baz=302,slow=7.6,SNR=6.5							
SONM	**Songino Array**	**51.46**	**5**	P		**P**	17 33 17.5	+0.3
	0.3nm,0.5s,baz=179,slow=6.8,SNR=2.9							
MKAR	**Makanchi Array**	**52.82**	**344**	P		**P**	17 33 27.8	+0.4
	0.2nm,0.3s,baz=151,slow=8.4,SNR=4.0							
KURK	**Kurchatov**	**57.41**	**343**	P		**P**	17 34 00.1	-0.3
	0.3nm,0.7s,baz=163,slow=7.4,SNR=2.9							
ZALV	**Zalesovo Beam**	**58.92**	**349**	P		**P**	17 34 10.2	-0.7
	0.4nm,0.4s,baz=134,slow=6.2,SNR=3.3							
TXAR	**Lajitas Array**	**145.38**	**40**	PKPbc	PKPbc		17 43 50.2	-0.4
	0.3nm,0.7s,baz=298,slow=2.7,SNR=3.5							

*IDC **13** 18:06:01.4±3.7, 2819N×5678E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.4/23, mbtmp3.8/3, Error ellipse: s-maj=100.2km s-min=34.4km az=148.0*
*ISCJB **13** 18:06:03.1±0.6, 2843N±004×5665E±008, h10km, mb3.7/3, Error ellipse: s-maj=9.6km s-min=4.9km az=7.4*
*CSEM **13** 18:06:03.6±0.2, 2847N×5654E, h2km, ML3.7/2, Error ellipse: s-maj=4.6km s-min=2.1km az=101.0*
*THR **13** 18:06:04.5±1.0, 2840N×5681E, h14km±10km, ML3.4*
*KISR **13** 18:06:05.8, 2843N×5610E, h1km, ML3.7*

ISC 13 18:06:04.7±1.1, 2841N±004×5672E±007, h11km±9km, n17, σ1§08/21, mb3.7/3, 2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
BNDS	**Bandar-Abbas**	**1.12**	**206**	*e*Pg		**Pg**	**18 06 25.7**	**-0.5**
BNDS				AML	AML		18 06 45.7	
	comp=N,1μm,0.5s							
KRBR	**Kerman**	**1.57**	**1**	*e*Pg		**Pg**	**18 06 33.1**	**-1.7**
KRBR				*e*Sg		**Sg**	**18 06 55.3**	**+0.1**
KRBR				AML	AML		18 07 05.6	
	comp=E,351nm,0.2s							
KRBR	**Kerman**	**1.57**	**1**	*e*Pg		**Pg**	**18 06 33.2**	**-1.6**
	SNR=90							
KRBR				*e*Sg		**Sg**	**18 06 55.3**	**+0.1**
	SNR=90							
BANOM	**Banah**	**2.50**	**189**	⇓P		**Pn**	**18 06 45.0**	**-0.4**
	SNR=27							
BANOM	**Banah**	**2.50**	**189**	Pn		**Pn**	**18 06 45.0**	**-0.4**
	SNR=27							
BANOM				Sn

comp=Z,6.7nm,0.9s,mb4.6
CN2 Changchun 52.08 22 *e*P **P 18 25 32.5 -0.6**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
MKAR Makanchi Array 52.79 344 P **P 18 25 38.4 0.0**
comp=Z,4.4nm,0.8s,mb4.5,baz=147,slow=8.1,SNR=14
MKAR pP pP 18 25 46.5 -0.1
comp=Z,2.1nm,0.7s,baz=147,slow=8.2,SNR=4.3
MKAR Makanchi Array 52.79 344 P **P 18 25 38.4 0.0**
MKAR pP pP 18 25 46.5 -0.1
MJAR Matsushiro Arr 52.95 38 P **P 18 25 39.9 +0.2**
comp=Z,1.7nm,0.6s,mb4.2,baz=217,slow=7.8,SNR=5.8
KURK Kurchatov 57.37 343 *e*P **P 18 26 10.8 -0.5**
comp=Z,6.8nm,0.9s,mb4.7
ZAA0 Zalesovo Array 58.88 349 *e*P **P 18 26 21.2 -0.6**
ZAA0 *e* pP 18 26 31.5 +1.2
ZALV Zalesovo Beam 58.88 349 P **P 18 26 21.6 -0.3**
comp=Z,6.5nm,0.8s,mb4.7,baz=170,slow=4.5,SNR=28
GERES GERESS Array B 90.83 319 P **P 18 29 26.6 0.0**
comp=Z,0.5nm,0.8s,mb3.9,baz=98,slow=9.6,SNR=4.1
TXAR Lajitas Array 145.37 40 PKPbc PKPbc 18 36 02.7 +1.1
comp=Z,3.5nm,0.5s,baz=269,slow=0.8,SNR=53
TXAR pPKPbc pPKPbc 18 36 10.8 +0.3
comp=Z,5.3nm,0.7s,baz=285,slow=1.1,SNR=19
TXAR Lajitas Array 145.37 40 PKPbc PKPbc 18 36 02.7 +1.1
TXAR pPKPbc pPKPbc 18 36 10.8 +0.3
JCT Junction City 146.85 34 *e*PKPbc PKPbc 18 36 06.3 +0.3

LDG ***13*** *18:19:40.3±0.1, 1778S×16876E, h10km, Mb4.5/1, Error ellipse: s-maj=18.7km s-min=2.7km az=108.0*
IDC ***13*** *18:19:40.8±1.4, 1766S×16745E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.9/18, mbtmp4.0/7, Error ellipse: s-maj=36.3km s-min=29.9km az=30.0*
NEIC ***13*** *18:19:42.3±1.2, 1772S×16751E, h10km, mb3.8/2, Error ellipse: s-maj=25.3km s-min=18.1km az=57.0*
ISCJB ***13*** *18:19:46.6±4.5, 179S±02×1672E±02, h41km±38km, mb3.9/6, Error ellipse: s-maj=33.7km s-min=23.8km az=44.4*
ISC 13 18:19:48.0±4.5, 179S±02×1673E±02, h41km±41km, n37, σ0 76/12, mb3.9/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.25**	**191**	*e*P	**Pn**	**18 20 50.1**	**-0.1**
DZM				*e*S	**Sn**	**18 21 38.8**	**+0.2**
DZM	**Mont Dzumac**	**4.25**	**191**	*e*P	**Pn**	**18 20 49.2**	**-1.0**
CTA	**Charters Tower**	**20.03**	**260**	*e*P	**P**	**18 24 19.4**	**+1.8**
	4.0nm,0.9s						
CTA	**Charters Tower**	**20.03**	**260**	P	**P**	**18 24 19.1**	**+1.5**
	3.4nm,0.8s,baz=85,slow=12,SNR=4.7						
CTAO	**Charters Tower**	**20.03**	**260**	*e*P	**P**	**18 24 19.2**	**+1.7**
	5.3nm,1.0s						
URZ	**Urewera**	**22.04**	**159**	P	**P**	**18 24 39.3**	**+0.3**
	14nm,1.0s,mb4.3,baz=315,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**31.23**	**261**	P	**P**	**18 26 03.0**	**-0.9**
	1.2nm,0.9s,mb3.7,baz=87,slow=8.8,SNR=5.1						
ASAR	**Alice Springs**	**31.71**	**254**	P	**P**	**18 26 07.8**	**-0.3**
	2.8nm,0.8s,mb4.1,baz=80,slow=8.2,SNR=17						
FITZ	**Fitzroy Crossi**	**39.57**	**263**	P	**P**	**18 27 14.5**	**-1.0**
	2.2nm,0.9s,mb3.9,baz=116,slow=8.7,SNR=5.8						
CMAR	**Chiang Mai Arr**	**76.28**	**295**	P	**P**	**18 31 33.4**	**+0.5**
	0.5nm,0.8s,mb3.5,baz=121,slow=4.4,SNR=4.8						
SONM	**Songino Array**	**85.04**	**324**	P	**P**	**18 32 19.2**	**+0.1**
	0.7nm,0.8s,mb3.9,baz=145,slow=5.3,SNR=5.0						
ARCES	**ARCESS Array B**	**123.29**	**345**	PKP	PKPdf	18 38 37.0	-2.8
	2.1nm,0.8s,baz=59,slow=3.5,SNR=3.5						
ARCES	**ARCESS Array B**	**123.29**	**345**	PKP	PKPdf	18 38 37.0	-2.8
BAIF	**Baives**	**145.15**	**341**	*e*PKP1	PKPbc	18 39 17.9	-2.6
CDF	**Champ du Feu**	**145.48**	**336**	*e*PKP1	PKPbc	18 39 19.2	-2.4
	20nm,0.9s						
HINF	**Hinteralfeld**	**146.13**	**336**	*e*PKP1	PKPbc	18 39 20.8	-2.8
	3.6nm,0.6s						
HAU	**Haudompre**	**146.16**	**337**	*e*PKP1	PKPbc	18 39 21.2	-2.5
CABF	**La Chapelle**	**147.42**	**336**	*e*PKP1	PKPbc	18 39 25.4	-2.0
	12nm,0.9s						
LOR	**Lormes**	**147.69**	**339**	*e*PKP1	PKPbc	18 39 25.5	-2.6
	11nm,0.9s						
LDF	**La Druitiere**	**147.70**	**344**	*e*PKP1	PKPbc	18 39 25.1	-3.0
SSF	**Saint Saulge**	**147.99**	**339**	*e*PKP1	PKPbc	18 39 26.4	-2.5
	11nm,0.8s						
LPL	**La Plagne**	**148.04**	**334**	*e*PKP1	PKPbc	18 39 27.1	-2.0
	7.8nm,0.8s						
LPG	**La Plagne**	**148.05**	**334**	*e*PKP1	PKPbc	18 39 27.3	-1.8
	22nm,1.2s						
GRR	**Gorron**	**148.08**	**345**	*e*PKP1	PKPbc	18 39 26.3	-2.8
SMF	**Signal de Mont**	**148.23**	**338**	*e*PKP1	PKPbc	18 39 27.8	-1.7
AVF	**Avril sur Loir**	**148.27**	**339**	*e*PKP1	PKPbc	18 39 27.6	-2.0
BGF	**Bois d'Agland**	**148.65**	**339**	*e*PKP1	PKPbc	18 39 28.1	-2.5
	18nm,0.9s						
ORIF	**Oris-en-Rattie**	**148.88**	**334**	*e*PKP1	PKPbc	18 39 29.0	-2.3
	9.5nm,0.8s						
TCF	**Toulx Ste Croi**	**149.10**	**340**	*e*PKP1	PKPbc	18 39 29.3	-2.5
PGF	**Pioggiola**	**149.26**	**328**	*e*PKP1	PKPbc	18 39 30.7	-1.6
VIVF	**Saint-Julien-l**	**149.43**	**335**	*e*PKP1	PKPbc	18 39 31.1	-1.5
MFF	**Saint Martin d**	**149.54**	**343**	*e*PKP1	PKPbc	18 39 30.1	-2.8
	21nm,1.2s						
RJF	**Les Rejaudoux**	**150.19**	**340**	*e*PKP1	PKPbc	18 39 32.1	-2.4
	23nm,1.3s						
CAF	**Calviac**	**150.34**	**339**	*e*PKP1	PKPbc	18 39 32.7	-2.2
	5.9nm,0.8s						
LASF	**Ste Croix**	**150.40**	**335**	*e*PKP1	PKPbc	18 39 32.8	-2.2
	15nm,0.8s						
LFF	**La Frestale**	**150.77**	**340**	*e*PKP1	PKPbc	18 39 33.3	-2.6
	10nm,0.7s						
MTLF	**Montolieu**	**151.65**	**337**	*e*PKP1	PKPbc	18 39 35.6	-2.4
	9.4nm,1.0s						

BJI ***13*** *18:28:32.4, 3.12S×100.11E, h30km, mB4.7, mb4.9*
IDC ***13*** *18:28:34.8±1.5, 248S×10009E, h0km, mb4.3/11, mb1 4.4/11, mb1mx4.1/20, mbtmp4.3/11, MS3.8/1, Ms1 3.8/1, ms1mx2.8/34, Error ellipse: s-maj=54.0km s-min=15.6km az=59.0*
ISCJB ***13*** *18:28:38.1±1.0, 24S±01×1002E±02, h33km, mb4.4/18, Error ellipse: s-maj=34.5km s-min=10.0km az=145.1*
NEIC ***13*** *18:28:40.6±0.7, 231S×10032E, h35km, mb4.7/6, Error ellipse: s-maj=29.4km s-min=7.7km az=56.0*
ISC 13 18:28:40.3±1.0, 24S±01×1002E±02, h35km, n26, σ0 76/24, mb4.4/18, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.77**	**357**	P	**P**	**18 33 17.4**	**-1.0**
	3.2nm,0.8s,baz=186,slow=9.8,SNR=18						
CHTO	**Chiang Mai**	**21.12**	**357**	*e*P	**P**	**18 33 19.5**	**-2.7**
	2.8nm,0.9s,mb3.6						
LSA	**Lhasa**	**33.08**	**345**	P	**P**	**18 35 13.9**	**+1.0**
LSA	**Lhasa**	**33.08**	**345**	*e*P	**P**	**18 35 13.6**	**+0.7**
	3.7nm,0.7s,mb4.4						
WRA	**Warramunga Arr**	**37.60**	**120**	P	**P**	**18 35 51.9**	**0.0**
	2.0nm,0.6s,mb4.0,baz=303,slow=9.0,SNR=23						
WRAB	**Tennant Creek**	**37.61**	**120**	*e*P	**P**	**18 35 50.7**	**-1.2**
ASAR	**Alice Springs**	**38.84**	**126**	P	**P**	**18 36 02.4**	**+0.1**
	1.5nm,0.5s,mb4.0,baz=300,slow=7.2,SNR=28						
GTA	**Gaotai**	**41.61**	**360**	*e*P	**P**	**18 36 25.6**	**+0.6**
GTA				AP	pP	18 36 30.8	-4.5
GTA				XP	sP	18 36 33.6	-5.9
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.1						
KSRS	**Korea Array**	**47.26**	**30**	P	**P**	**18 37 11.2**	**+1.1**
	comp=Z,2.0nm,0.6s,mb4.2,baz=224,slow=8.2,SNR=12						
KSRS				LR	LR	18 59 28.4	
	comp=Z,114nm,19.9s,baz=10.0,slow=39						
CTA	**Charters Tower**	**48.23**	**115**	P	**P**	**18 37 17.9**	**-0.1**
	comp=Z,6.5nm,1.1s,mb4.6,baz=267,slow=4.4,SNR=5.0						
STKA	**Stephens Creek**	**48.72**	**132**	P	**P**	**18 37 22.3**	**+0.6**
	comp=Z,2.5nm,0.8s,mb4.3,baz=318,slow=13,SNR=4.7						
STKA	**Stephens Creek**	**48.72**	**132**	P	**P**	**18 37 22.3**	**+0.6**
TKM2	**Tokmak 2**	**50.29**	**337**	*e*P	**P**	**18 37 33.3**	**-0.1**
	comp=Z,12nm,0.8s,mb5.0						
SONM	**Songino Array**	**50.32**	**5**	P	**P**	**18 37 34.9**	**+1.4**
	comp=Z,5.9nm,0.9s,mb4.6,baz=185,slow=9.0,SNR=35						
SONM				PcP	PcP	18 38 51.7	-0.2
	comp=Z,0.8nm,0.7s,baz=192,slow=2.5,SNR=2.3						
ULN	**Ulaanbaatar**	**50.42**	**6**	*e*P	**P**	**18 37 34.6**	**+0.3**
	comp=Z,5.5nm,1.0s,mb4.5						
AML	**Almayashu**	**50.42**	**334**	*e*P	**P**	**18 37 34.5**	**+0.1**
	comp=Z,5.9nm,0.7s,mb4.7						
EKS2	**Erkin-Say**	**50.82**	**335**	*e*P	**P**	**18 37 37.7**	**+0.3**
	comp=Z,10nm,0.8s,mb4.8						
MKAR	**Makanchi Array**	**51.48**	**344**	P	**P**	**18 37 42.3**	**+0.1**
	comp=Z,10nm,0.7s,mb4.9,baz=147,slow=8.1,SNR=48						
MJAR	**Matsushiro Arr**	**52.45**	**39**	P	**P**	**18 37 49.6**	**-0.1**
	comp=Z,1.1nm,0.8s,mb3.8,baz=239,slow=8.5,SNR=4.7						
KURK	**Kurchatov**	**56.05**	**344**	*e*P	**P**	**18 38 15.1**	**-0.5**
	comp=Z,8.6nm,0.8s,mb4.8						
ZAA0	**Zalesovo Array**	**57.60**	**349**	*e*P	**P**	**18 38 26.2**	**-0.4**
ZALV	**Zalesovo Beam**	**57.60**	**349**	P	**P**	**18 38 26.4**	**-0.2**
	comp=Z,4.8nm,0.8s,mb4.6,baz=160,slow=4.7,SNR=15						
ZALV	**Zalesovo Beam**	**57.60**	**349**	P	**P**	**18 38 26.4**	**-0.2**
ARCES	**ARCESS Array B**	**86.93**	**340**	P	**P**	**18 41 21.1**	**-0.2**
	comp=Z,3.1nm,0.9s,mb4.5,baz=99,slow=5.7,SNR=4.0						
TXAR	**Lajitas Array**	**144.89**	**38**	PKPbc	PKPdf	18 48 14.6	+0.2
	comp=Z,5.1nm,0.7s,baz=277,slow=0.9,SNR=64						
JCT	**Junction City**	**146.25**	**32**	*e*PKPdf	PKPdf	18 48 17.6	+0.8

BJI ***13*** *18:30:34.1, 287S×9986E, h36km, mB5.1, mb5.0, Ms4.6, Msz4.5*
ISCJB ***13*** *18:30:36.6±0.2, 245S±003×9985E±003, h29km, mb5.0/84, MS4.4/20, Error ellipse: s-maj=5.8km s-min=3.8km az=42.3*
MOS ***13*** *18:30:37.4±0.9, 234S×9997E, h33km, mb5.2/23, Error ellipse: s-maj=12.2km s-min=6.8km az=108.3*
IDC ***13*** *18:30:38.4±0.4, 243S×9996E, h27km±2km, mb4.6/23, mb1 4.7/24, mb1mx4.6/26, mbtmp4.6/24, ML4.7/1, MS4.2/8, Ms1 4.2/8, ms1mx3.7/37, Error ellipse: s-maj=12.7km s-min=8.7km az=43.0*
DJA ***13*** *18:30:38, 279S×9935E, h49km, Mw5.3/11*
NEIC ***13*** *18:30:39.9±1.8, 242S×9988E, h41km±16km, mb5.0/31, Error ellipse: s-maj=10.5km s-min=5.5km az=53.0*
NEIC Felt [III] at Padang and Painan, Sumatra.
SZGRF ***13*** *18:30:43.9, 246S×9825E, h33km, mb5.2, Southwest of Sumatera, Indonesia*
ISC 13 18:30:38.7±0.2, 250S±003×9981E±003, h31km, h31km±7km: pP-P, n200, σ1s0 0/205, mb5.0/84, MS4.4/20, 27C-14D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLI	**Kotabumi**	**5.56**	**115**	P	**Pn**	**18 32 01.0**	**+1.7**
	396nm,0.8s						
KGM	**Kluang**	**5.69**	**38**	⇑P	**Pn**	**18 32 00.1**	**-1.0**
MYKOM	**Kota Tinggi**	**5.87**	**44**	⇑P	**Pn**	**18 32 04.6**	**+1.0**
FRIM	**Kepong**	**5.97**	**18**	⇑P	**Pn**	**18 32 06.6**	**+1.5**
IPM	**Ipoh**	**7.03**	**10**	⇓P	**Pn**	**18 32 19.8**	**+0.3**
DBJI	**Dramaga**	**8.00**	**120**	P	**Pn**	**18 32 33.4**	**+0.5**
	182nm,1.0s						
CBJI	**Citeko**	**8.03**	**119**	P	**Pn**	**18 32 36.7**	**+3.5**
	761nm,0.9s						
SKJI	**Sukabumi**	**8.08**	**124**	P	**Pn**	**18 32 34.6**	**+0.7**
	0.0nm,0.0s						
KTGM	**Kuala Trenggan**	**8.45**	**23**	⇑P	**Pn**	**18 32 40.1**	**+1.1**
LEM	**Lembang**	**8.89**	**119**	P	**Pn**	**18 32 47.9**	**+2.8**
	205nm,1.0s						
XMIS	**Christmas Isla**	**9.83**	**144**	P	**Pn**	**18 32 51.7**	**-6.2**
COCO	**West Island**	**10.07**	**197**	*e*P	**Pn**	**18 32 58.2**	**-3.1**
KSM	**Kuching**	**11.21**	**70**	*e*P	**Pn**	**18 33 18.4**	**+1.5**
SJI	**Sawahan**	**12.99**	**114**	P	**Pn**	**18 33 40.4**	**-0.9**
	74nm,0.7s						
SBUM	**Sibu**	**13.34**	**68**	⇑P	**Pn**	**18 33 49.4**	**+3.3**
PLKI	**Palangkaraya**	**14.12**	**89**	P	**Pn**	**18 34 02.6**	**+5.9**
	0.0nm,0.0s						
BTM	**Bintulu**	**14.42**	**67**	⇓P	**Pn**	**18 34 07.8**	**+7.0**
KKM	**Kota Kinabalu**	**18.45**	**63**	⇑P	**Pn**	**18 34 52.8**	**+0.6**
KKM	**Kota Kinabalu**	**18.45**	**63**	*e*P	**Pn**	**18 34 52.2**	**0.0**
SDKM	**Sandakan**	**19.15**	**65**	⇓P	**Pn**	**18 35 00.3**	**-0.3**
TSM	**Tawau**	**19.27**	**70**	⇑P	**Pn**	**18 35 01.9**	**-0.1**
KDM	**Kudat**	**19.39**	**61**	⇓P	**Pn**	**18 35 04.1**	**+0.6**
BDT	**Bhumibol Dam**	**19.63**	**358**	P	**Pn**	**18 35 04.0**	**-2.3**
KAPI	**Kappang**	**20.05**	**98**	P	**P**	**18 35 08.4**	**-1.1**
	327nm,0.8s,SNR=7.3						
KAPI	**Kappang**	**20.05**	**98**	P	**P**	**18 35 08.0**	**-1.5**
	2.1nm,0.3s,baz=278,slow=10,SNR=11						
KAPI				LR	LR	18 43 57.5	
	comp=Z,528nm,18.9s,MS3.9,baz=67,slow=40						
KAPI	**Kappang**	**20.05**	**98**	*e*P	**P**	**18 35 07.8**	**-1.7**
	72nm,1.1s						
PCI	**Palu**	**20.08**	**86**	P	**P**	**18 35 10.7**	**+0.9**
	114nm,0.9s						
MYLDM	**Lahad Datu**	**20.16**	**68**	⇓P	**P**	**18 35 12.2**	**+1.5**
CMAR	**Chiang Mai Arr**	**20.84**	**358**	P	**P**	**18 35 16.5**	**-1.4**
	22nm,0.8s,baz=187,slow=10.0,SNR=56						
CMAR				PcP	PcP	18 39 27.4	+1.3
	1.4nm,0.8s,baz=211,slow=2.7,SNR=5.9						
CMAR				pPcP		18 39 36.5	
	2.9nm,1.1s,baz=222,slow=3.2,SNR=4.9						
CMAR				LR	LR	18 43 52.9	
	comp=Z,495nm,19.1s,MS3.9,baz=186,slow=38						
CMAR	**Chiang Mai Arr**	**20.84**	**358**	P	**P**	**18 35 16.5**	**-1.4**
CMAR						18 39 27.4	
CMAR						18 39 36.5	
NANT	**Nan**	**21.18**	**2**	⇑P	**P**	**18 35 21.0**	**-0.6**
	150nm,1.0s,mb5.3						
CHG	**Chiang Mai**	**21.19**	**358**	⇓P	**P**	**18 35 20.0**	**-1.8**
	18nm,0.8s,mb4.5						
CHTO	**Chiang Mai**	**21.19**	**358**	*e*P	**P**	**18 35 19.5**	**-2.3**
CHTO				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.3						
CHTO	**Chiang Mai**	**21.19**	**358**	*e*P	**P**	**18 35 19.5**	**-2.3**
	comp=Z,12nm,0.8s,mb4.3						
CHRT	**Chingrai**	**22.23**	**360**	⇑P	**P**	**18 35 31.5**	**-1.3**
KDI	**Kendari**	**22.82**	**94**	P	**P**	**18 35 40.3**	**+1.1**
	comp=Z,0.0nm,0.0s						
QIZ	**Qiongzhong**	**23.55**	**24**	P	**P**	**18 35 45.8**	**-0.9**
QIZ				S	**S**	**18 40 00.3**	**+1.6**
QIZ				LR	LR		
	comp=E,609nm,11.4s						
QIZ				LR	LR		
	comp=Z,574nm,16.0s,MS4.1						
BATI	**Baumata**	**24.89**	**109**	P	**P**	**18 35 56.6**	**-2.5**
	comp=Z,14nm,0.5s,mb4.8,baz=214,slow=0.6,SNR=8.5						
MBWA	**Marble Bar**	**26.84**	**135**	P	**P**	**18 36 16.0**	**-0.6**
KMI	**Kunming**	**27.60**	**6**	P	**P**	**18 36 26.3**	**+3.0**
KMI				AP	pP	18 36 35.6	+3.3
KMI				XP	sP	18 36 40.3	+4.2
KMI				PP		18 37 15.5	
KMI				S	**S**	**18 41 05.8**	**+2.8**
KMI				XS	sS	18 41 22.8	+4.9
KMI				SS		18 42 27.0	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
KMI				AMB	AMB		
	comp=Z,33nm,3.6s						
KMI				LR	LR		
	comp=N,382nm,16.1s,MS4.4						
KMI				LR	LR		
	comp=E,772nm,15.2s,MS4.4						
KMI				LR	LR		
	comp=Z,398nm,14.8s,MS4.1						
LBMI	**Labuha**	**27.74**	**87**	P	**P**	**18 36 25.4**	**+0.6**
	comp=Z,92nm,1.2s,mb5.3						
GYA	**Guiyang**	**29.54**	**13**	P	**P**	**18 36 40.5**	**0.0**
GYA				AP	pP	18 36 50.0	+0.4
GYA				XP	sP	18 36 54.5	+1.1
GYA				PP	PP	18 37 36.3	-11
GYA				PCP	PcP	18 39 46.3	+0.9
GYA				S	**S**	**18 41 29.8**	**-3.7**
GYA				SS	SS	18 43 12.0	-28
GYA				SCP	ScP	18 43 24.5	-0.7
GYA				SCS	ScS	18 47 18.3	-1.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
GYA				AMB	AMB		
	comp=Z,250nm,5.7s						
GYA				LR	LR		
	comp=N,900nm,14.0s,MS4.7						
GYA				LR	LR		
	comp=E,1μm,15.6s,MS4.7						
GYA				LR	LR		
	comp=Z,1μm,14.2s,MS4.7						
FITZ	**Fitzroy Crossi**	**29.70**	**123**	*e*P	**P**	**18 36 41.6**	**-0.5**
	comp=Z,8.5nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**29.70**	**123**	P	**P**	**18 36 41.4**	**-0.7**
	comp=Z,5.8nm,0.9s,mb4.3,baz=263,slow=4.5,SNR=14						
FITZ				LR	LR	18 50 30.0	
	comp=Z,259nm,18.6s,MS3.9,baz=293,slow=40						
SWI	**Sorong**	**31.48**	**88**	P	**P**	**18 36 56.4**	**-1.5**
	comp=Z,0.0nm,0.0s						
ODAN	**Odare**	**31.55**	**338**	*e*P	**P**	**18 36 59.0**	**+0.6**
	comp=Z,34nm,0.7s,mb5.3						
TAPN	**Taplejung**	**31.88**	**339**	*e*P	**P**	**18 37 02.2**	**+0.9**
	comp=Z,65nm,0.9s,mb5.5						
RAMN	**Ramite**	**31.93**	**337**	*e*P	**P**	**18 37 02.6**	**+0.9**
	comp=Z,27nm,0.7s,mb5.2						
JIRN	**Jiri**	**32.73**	**337**	*e*P	**P**	**18 37 09.2**	**+0.5**
	comp=Z,50nm,0.8s,mb5.5						
PKI	**Pulchoki**	**32.95**	**336**	*e*P	**P**	**18 37 10.8**	**+0.1**
LSA	**Lhasa**	**33.07**	**346**	P	**P**	**18 37 11.0**	**-0.6**
LSA	**Lhasa**	**33.07**	**346**	*e*P	**P**	**18 37 12.4**	**+0.8**
LSA				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
LSA	**Lhasa**	**33.07**	**346**	*e*P	**P**	**18 37 12.4**	**+0.8**
	comp=Z,20nm,1.0s,mb5.0						
GUN	**Gumba**	**33.07**	**337**	*e*P	**P**	**18 37 12.4**	**+0.7**
	comp=Z,42nm,0.7s,mb5.5						
DMN	**Daman**	**33.11**	**336**	*e*P	**P**	**18 37 12.2**	**+0.2**
	comp=Z,22nm,1.0s,mb5.0						
KKN	**Kakani**	**33.20**	**336**	*e*P	**P**	**18 37 13.0**	**+0.2**
	comp=Z,26nm,0.8s,mb5.2						
CD2	**Chengdu**	**33.43**	**6**	⇑*i*P	**P**	**18 37 14.4**	**-0.4**
CD2				AP	pP	18 37 24.0	+0.2
CD2				XP	sP	18 37 28.1	+0.5
CD2				PP	PP	18 38 28.5	-2.3
CD2				XS	sS	18 42 50.9	+1.7
CD2				SS	SS	18 44 41.3	-18
CD2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
CD2				AMB	AMB		
	comp=Z,20nm,6.2s						
CD2				LR	LR		
	comp=N,560nm,16.8s,MS4.6						
CD2				LR	LR		
	comp=E,780nm,15.6s,MS4.6						
CD2				LR	LR		
	comp=Z,500nm,16.8s,MS4.3						
GKN	**Gorkha**	**33.65**	**335**	*e*P	**P**	**18 37 17.0**	**+0.2**
	comp=Z,26nm,0.9s,mb5.2						
KOLN	**Koldanda**	**33.90**	**334**	*e*P	**P**	**18 37 19.3**	**+0.4**
	comp=Z,26nm,0.8s,mb5.2						
DANN	**Dangsing**	**34.33**	**334**	*e*P	**P**	**18 37 23.1**	**+0.5**
	comp=Z,33nm,0.7s,mb5.3						
NWAO	**Narrogin (SRO)**	**34.40**	**154**	LR	LR	18 50 44.0	
	comp=Z,396nm,19.9s,MS4.2,baz=32,slow=35						
WHN	**Wuhan**	**35.66**	**22**	P	**P**	**18 37 34.0**	**-0.1**
WHN				*e*S	**S**	**18 43 04.4**	**-4.3**
WHN				LR	LR		
	comp=N,950nm,10.8s,MS5.0						
WHN				LR	LR		
	comp=E,1μm,12.0s,MS5.0						
WHN				LR	LR		
	comp=Z,2μm,16.1s,MS4.9						
XAN	**Xi'an**	**37.34**	**13**	P	**P**	**18 37 46.5**	**-1.8**
XAN				AP	pP	18 37 55.9	-1.6
XAN				XP	sP	18 38 00.5	-0.7
XAN				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.2						
WRA	**Warramunga Arr**	**37.91**	**120**	P	**P**	**18 37 52.6**	**-0.8**
	comp=Z,45nm,0.6s,mb5.4,baz=304,slow=9.1,SNR=200						
WRA				PcP	PcP	18 40 09.1	-0.2
	comp=Z,2.4nm,0.7s,baz=296,slow=2.6,SNR=4.7						
WRA				S	**S**	**18 43 41.1**	**-2.2**
	comp=Z,1.7nm,0.8s,baz=295,slow=16,SNR=5.8						
WRAB	**Tennant Creek**	**37.91**	**120**	P	**P**	**18 37 53.3**	**-0.2**
	comp=Z,582nm,0.6s,SNR=7.9						
WRAB	**Tennant Creek**	**37.91**	**120**	*e*P	**P**	**18 37 52.4**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,54nm,0.6s,mb5.5						
WRAB	**Tennant Creek**	**37.91**	**120**	*e*P	**P**	**18 37 52.4**	**-1.0**
	comp=Z,54nm,0.6s,mb5.5						
WB2	**Warramunga Arr**	**37.92**	**120**	*e*P	**P**	**18 37 52.5**	**-1.0**
WB2				*e*S	**S**	**18 43 38.7**	**-4.8**
LZH	**Lanzhou**	**38.57**	**5**	*e*P	**P**	**18 37 58.0**	**-0.7**
LZH				AP	pP	18 38 07.6	-0.2
LZH				XP	sP	18 38 11.8	+0.2
LZH				PP	PP	18 39 31.3	+3.9
LZH				*e*S	**S**	**18 43 53.4**	**+0.7**
LZH				XS	sS	18 44 09.5	+1.6
LZH				*e*SS	SS	18 46 36.3	-7.2
LZH				AMB	AMB		
	comp=Z,31nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,153nm,5.3s						
LZH				LR	LR		
	comp=E,597nm,17.4s						
LZH				LR	LR		
	comp=Z,993nm,18.5s,MS4.7						
NJ2	**Nanjing**	**38.82**	**26**	*e*P	**P**	**18 38 02.1**	**+1.2**
NJ2				AP	pP	18 38 12.3	+2.3
NJ2				XP	sP	18 38 15.8	+2.0
NJ2				PP	PP	18 39 36.0	+5.8
NJ2				S	**S**	**18 43 58.0**	**+1.3**
NJ2				XS	sS	18 44 14.0	+2.2
NJ2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,1μm,4.4s						
NJ2				LR	LR		
	comp=N,2μm,15.2s,MS5.4						
NJ2				LR	LR		
	comp=E,4μm,17.7s,MS5.4						
ASAR	**Alice Springs**	**39.12**	**125**	P	**P**	**18 38 03.5**	**0.0**
	comp=E,10nm,0.6s,mb4.8,baz=301,slow=7.8,SNR=54						
ASAR				PcP	PcP

KSH					AMB	AMB			
	comp=Z,224nm,3.0s								
KSH					LR	LR			
	comp=N,336nm,4.7s								
KSH					LR	LR			
	comp=E,334nm,4.2s								
KSH					LR	LR			
	comp=Z,476nm,5.4s								
WMQ	**Urumqi**	**47.37**	**348**		P	**P**	**18 39 10.8**	**+0.9**	
WMQ					AP	pP	18 39 21.0	+1.8	
WMQ					XP	sP	18 39 24.9	+2.0	
WMQ					PCP	PcP	18 40 41.0	+0.7	
WMQ					PP	PP	18 41 01.0	-0.4	
WMQ				*e*S	**S**		**18 46 02.0**	**+0.2**	
WMQ					XS	sS	18 46 18.0	+0.8	
WMQ					AMB	AMB			
	comp=Z,61nm,0.9s,mb5.5								
WMQ					AMB	AMB			
	comp=Z,274nm,5.9s								
WMQ					LR	LR			
	comp=N,456nm,14.6s,MS4.7								
WMQ					LR	LR			
	comp=E,365nm,15.1s,MS4.7								
WMQ					LR	LR			
	comp=Z,331nm,20.6s								
KSRS	**Korea Array**	**47.54**	**31**		P	**P**	**18 39 10.4**	**-0.9**	
	comp=Z,25nm,0.9s,mb5.3,baz=226,slow=8.4,SNR=86								
KSRS					pP	pP	18 39 19.0	-1.6	
	comp=Z,12nm,0.8s,baz=236,slow=7.9,SNR=11								
KSRS					PcP	PcP	18 40 41.0	-0.1	
	comp=Z,1.1nm,0.8s,baz=199,slow=3.0,SNR=4.6								
KSRS					pPcP		18 40 49.8		
	comp=Z,2.5nm,1.0s,baz=205,slow=5.4,SNR=3.5								
CTA	**Charters Tower**	**48.56**	**115**	*e*P		**P**	**18 39 19.1**	**-0.4**	
	comp=Z,18nm,0.8s,mb5.2								
CTA				*e*pP		pP	18 39 27.5	-1.3	
CTA	**Charters Tower**	**48.56**	**115**	P		**P**	**18 39 19.0**	**-0.5**	
	comp=Z,36nm,1.0s,mb5.3,baz=289,slow=9.7,SNR=25								
CTA					pP	pP	18 39 27.1	-1.8	
	comp=Z,19nm,0.8s,baz=282,slow=9.1,SNR=9.9								
CTA					LR	LR	19 02 50.2		
	comp=Z,257nm,19.6s,MS4.2,baz=309,slow=40								
CTA	**Charters Tower**	**48.56**	**115**	*e*P		**P**	**18 39 19.1**	**-0.4**	
CTA				*e**PP		pP	18 39 27.5	-1.3	
CTA					pmax	pmax			
	comp=Z,18nm,0.8s								
CTAO	**Charters Tower**	**48.56**	**115**	*e*P		**P**	**18 39 19.1**	**-0.4**	
CTAO				*e*		pP	18 39 27.5	-1.3	
CTAO					pmax	pmax			
	comp=Z,42nm,1.1s,mb5.4								
CTAO	**Charters Tower**	**48.56**	**115**	*e*P		**P**	**18 39 19.1**	**-0.4**	
	comp=Z,42nm,1.1s,mb5.4								
CTAO				*e*		pP	18 39 27.5	-1.4	
STKA	**Stephens Creek**	**48.96**	**131**	*e*P		**P**	**18 39 23.0**	**+0.6**	
	comp=Z,17nm,0.7s,mb5.2								
STKA	**Stephens Creek**	**48.96**	**131**	P		**P**	**18 39 23.2**	**+0.8**	
	comp=Z,21nm,0.7s,mb5.3,baz=306,slow=7.7,SNR=32								
STKA					LR	LR	19 01 31.4		
	comp=Z,513nm,21.3s,MS4.5,baz=114,slow=38								
SNY	**Shenyang**	**49.11**	**23**	ǁP		AMB	AMB	**18 39 22.6**	**-0.7**
SNY					AMB	AMB			
	comp=Z,13nm,1.0s,mb4.9								
UCH	**Uchtor**	**50.06**	**336**	*e*P		**P**	**18 39 28.1**	**-2.5**	
	comp=Z,7.1nm,1.0s,mb4.7								
TKM2	**Tokmak 2**	**50.21**	**337**	P		**P**	**18 39 32.0**	**+0.4**	
	SNR=21								
TKM2	**Tokmak 2**	**50.21**	**337**	*e*P		**P**	**18 39 31.8**	**+0.1**	
KBK	**Karagaybulak**	**50.24**	**336**	P		**P**	**18 39 33.5**	**+1.6**	
	SNR=6.0								
AML	**Almayashu**	**50.33**	**335**	P		**P**	**18 39 33.8**	**+1.2**	
	SNR=5.6								
AML	**Almayashu**	**50.33**	**335**	*e*P		**P**	**18 39 33.0**	**+0.4**	
	comp=Z,7.1nm,0.7s,mb4.8								
SONM	**Songino Array**	**50.45**	**6**	P		**P**	**18 39 33.8**	**+0.4**	
	comp=Z,33nm,0.8s,mb5.4,baz=186,slow=9.2,SNR=102								
SONM					pP	pP	18 39 42.2	-0.6	
	comp=Z,32nm,0.9s,baz=188,slow=9.1,SNR=19								
SONM					PcP	PcP	18 40 51.8	+0.5	
	comp=Z,5.7nm,0.7s,baz=191,slow=3.8,SNR=4.5								
ULN	**Ulaanbaatar**	**50.55**	**6**	*e*P		**P**	**18 39 34.3**	**+0.2**	
ULN				*e*		pP	18 39 42.7	-0.8	
ULN					pmax	pmax			
	comp=Z,35nm,0.9s,mb5.3								
ULN	**Ulaanbaatar**	**50.55**	**6**	*e*P		**P**	**18 39 34.3**	**+0.2**	
	comp=Z,35nm,0.9s,mb5.3								
ULN				*e*		pP	18 39 42.7	-0.9	
CHMS	**Chumysh**	**50.61**	**336**	P		**P**	**18 39 34.9**	**+0.2**	
	SNR=7.3								
EKS2	**Erkin-Say**	**50.73**	**335**	P		**P**	**18 39 36.3**	**+0.7**	
	SNR=13								
EKS2	**Erkin-Say**	**50.73**	**335**	*e*P		**P**	**18 39 36.2**	**+0.6**	
	comp=Z,20nm,0.9s,mb5.0								
USP	**Ospenovka**	**50.94**	**336**	P		**P**	**18 39 37.4**	**+0.3**	
	SNR=14								
MKAR	**Makanchi Array**	**51.45**	**345**	P		**P**	**18 39 41.0**	**+0.1**	
	comp=Z,28nm,0.7s,mb5.3,baz=148,slow=8.2,SNR=75								
MKAR					pP	pP	18 39 50.2	-0.2	
	comp=Z,20nm,0.7s,baz=150,slow=8.0,SNR=15								
CN2	**Changchun**	**51.51**	**24**	*e*P		**P**	**18 39 40.3**	**-1.1**	
CN2				*e*XP		sP	18 39 52.0	-2.6	
CN2				*e*S		**S**	**18 46 58.6**	**-1.2**	
CN2					AMB	AMB			
	comp=Z,50nm,0.9s,mb5.4								
CN2					AMB	AMB			
	comp=Z,400nm,6.0s								
ZAK	**Zakamensk**	**52.76**	**3**	*e*P		**P**	**18 39 49.7**	**-0.9**	
ZAK				*e*			18 40 59.4		
ZAK					pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.6								
MAJO	**Matsushiro**	**52.77**	**39**	*e*P		**P**	**18 39 50.0**	**-1.0**	
MAJO					pmax	pmax			
	comp=Z,16nm,0.9s,mb5.0								
MAJO	**Matsushiro**	**52.77**	**39**	*e*P		**P**	**18 39 50.0**	**-1.0**	
	comp=Z,16nm,0.9s,mb5.0								
MAT	**Matsushiro**	**52.77**	**39**	P		**P**	**18 39 50.4**	**-0.6**	
MJAR	**Matsushiro Arr**	**52.77**	**39**	P		**P**	**18 39 49.5**	**-1.5**	
	comp=Z,11nm,1.0s,mb4.8,baz=220,slow=7.6,SNR=26								
MJAR					pP	pP	18 39 58.2	-2.3	
	comp=Z,5.8nm,1.0s,baz=219,slow=7.3,SNR=5.4								
MJAR	**Matsushiro Arr**	**52.77**	**39**	P		**P**	**18 39 49.5**	**-1.5**	
MJAR					pP	pP	18 39 58.2	-2.3	
MDJ	**Mudanjiang**	**53.91**	**26**	P		**P**	**18 39 59.3**	**+0.1**	
MDJ					AP	pP	18 40 07.8	-0.8	
MDJ					AMB	AMB			
	comp=Z,17nm,1.0s,mb4.9								
MDJ					AMB	AMB			
	comp=Z,47nm,5.9s								
MDJ					LR	LR			
	comp=N,200nm,19.9s,MS4.3								
MDJ					LR	LR			
	comp=E,179nm,19.1s,MS4.3								
MDJ					LR	LR			
	comp=Z,194nm,22.2s,MS4.1								
MDJ	**Mudanjiang**	**53.91**	**26**	*e*P		**P**	**18 39 59.6**	**+0.4**	
	comp=Z,17nm,0.9s,mb5.0								
MOY	**Mondy**	**53.97**	**1**	*e*P		**P**	**18 39 59.3**	**-0.1**	
TLY	**Talaya**	**54.07**	**3**	*e*P		**P**	**18 40 01.4**	**+1.2**	
TLY					pmax	pmax			
	comp=Z,14nm,1.0s,mb4.8								
TLY	**Talaya**	**54.07**	**3**	*e*P		**P**	**18 40 00.7**	**+0.5**	
	comp=Z,13nm,1.0s,mb4.8								
CIT	**Chita**	**55.55**	**10**	*e*P		**P**	**18 40 11.2**	**+0.3**	
CIT				*e*		pP	18 40 18.5	-1.9	
CIT				*e*			18 40 25.9		
KURK	**Kurchatov**	**56.03**	**344**	P		**P**	**18 40 14.3**	**-0.1**	
	comp=Z,183nm,0.9s,mb6.1,SNR=12								
KURK	**Kurchatov**	**56.03**	**344**	⇑*i*P		**P**	**18 40 14.1**	**-0.3**	
KURK					pmax	pmax			
	comp=Z,35nm,1.0s,mb5.3								
KURK	**Kurchatov**	**56.03**	**344**	*e*P		**P**	**18 40 14.0**	**-0.4**	
	comp=Z,29nm,0.9s,mb5.3								
ZAA0	**Zalesovo Array**	**57.62**	**350**	*e*P		**P**	**18 40 25.1**	**-0.4**	
ZALV	**Zalesovo Beam**	**57.62**	**350**	P		**P**	**18 40 25.1**	**-0.4**	
	comp=Z,26nm,0.8s,mb5.3,baz=163,slow=5.6,SNR=50								
KLR	**Kul'dur**	**58.46**	**24**	*e*P		**P**	**18 40 27.2**	**-4.4**	
KLR					pmax	pmax			
	comp=E,28nm,1.6s								
KLR					pmax	pmax			
	comp=Z,68nm,1.6s,mb5.4								
NVS	**Novosibirsk**	**58.76**	**349**	*e*P		**P**	**18 40 32.2**	**-1.4**	
NVS					pmax	pmax			
	comp=Z,20nm,1.1s,mb5.1								
NVS					pmax	pmax			
	comp=N,18nm,1.4s								
NVS					pmax	pmax			
	comp=E,16nm,1.4s								
BRVK	**Borovoye**	**60.65**	**340**	*e*P		**P**	**18 40 45.6**	**-1.0**	
BRVK					pmax	pmax			
	comp=Z,15nm,1.1s,mb5.0								
BRVK	**Borovoye**	**60.65**	**340**	*e*P		**P**	**18 40 45.6**	**-1.0**	
	comp=Z,15nm,1.1s,mb5.0								
BOD	**Bodaibo**	**61.20**	**9**	*e*P		**P**	**18 40 50.1**	**-0.1**	
BOD				*e*		pP	18 40 58.1	-1.7	
BOD					pmax	pmax			
	comp=Z,12nm,1.0s,mb5.0								
BOD					pmax	pmax			
	comp=Z,21nm,1.5s,mb5.0								
YSS	**Yuzh-Sakhalins**	**62.00**	**32**	*e*P		**P**	**18 40 55.0**	**-0.9**	
YSS				*e*		pP	18 41 04.0	-1.5	
YSS	**Yuzh-Sakhalins**	**62.00**	**32**	*e*P		**P**	**18 40 55.4**	**-0.4**	
	comp=Z,48nm,1.0s,mb5.6								
YSS				*e*		pP	18 41 04.4	-1.0	
KMBO	**Kilima Mbogo**	**62.54**	**270**	P		**P**	**18 41 02.4**	**+2.2**	
	comp=Z,0.9nm,0.4s,mb4.2,baz=58,slow=17,SNR=2.5								
KMBO					pP	pP	18 41 10.6	+0.8	
	comp=Z,1.9nm,0.6s,baz=34,slow=10,SNR=3.1								
KMBO					LR	LR	19 02 57.9		
	comp=Z,193nm,20.1s,MS4.3,baz=225,slow=31								
KMBO	**Kilima Mbogo**	**62.54**	**270**	P		**P**	**18 41 02.4**	**+2.2**	
KMBO					*PP	pP	18 41 10.6	+0.8	
SVE	**Sverdlovsk**	**67.07**	**338**⇑	*e*P		**P**	**18 41 28.7**	**-0.1**	
SVE					pmax	pmax			
	comp=Z,31nm,0.9s,mb5.3								
ARU	**Arti**	**67.58**	**337**	*c i*P		**P**	**18 41 31.0**	**-1.1**	
ARU				*e*			18 43 56.1		
ARU				*e*S		S	18 50 24.8	-1.9	
ARU				*e*SS		SS	18 54 44.0	-3.9	
ARU					pmax	pmax			
	comp=Z,19nm,1.2s,mb5.0								
ARU	**Arti**	**67.58**	**337**	*e*P		**P**	**18 41 30.9**	**-1.2**	
	comp=Z,16nm,1.1s,mb5.0								
ARU				*e*		pP	18 41 39.1	-2.7	
YAK	**Yakutsk**	**68.27**	**15**	*c i*P		**P**	**18 41 34.9**	**-1.3**	
YAK					pmax	pmax			
	comp=Z,70nm,1.1s,mb5.6								
YAK	**Yakutsk**	**68.27**	**15**	*e*P		**P**	**18 41 35.1**	**-1.1**	
	comp=Z,43nm,0.8s,mb5.5								
ASF	**Jabal al Asfar**	**68.72**	**306**	P		**P**	**18 41 40.3**	**+0.5**	
	comp=Z,1.0nm,0.5s,mb4.0,baz=141,slow=6.5,SNR=3.1								
KIV	**Kislovodsk**	**68.79**	**319**	*c e*P		**P**	**18 41 40.2**	**+0.3**	
KIV				*e**PP		pP	18 41 50.5	+0.9	
KIV				*SP		sP	18 41 55.6	+2.3	
KIV					pmax	pmax			
	comp=Z,13nm,1.2s,mb4.7								
KIV	**Kislovodsk**	**68.79**	**319**	*e*P		**P**	**18 41 39.5**	**-0.4**	
	comp=Z,7.5nm,0.9s,mb4.6								
MAW	**Mawson**	**69.76**	**194**	P		**P**	**18 41 46.9**	**+1.4**	
	comp=Z,1.1nm,0.7s,mb3.9,baz=301,slow=5.9,SNR=2.4								
LSZ	**Lusaka**	**71.62**	**255**	P		**P**	**18 41 58.8**	**+1.0**	
	comp=Z,2.0nm,0.7s,mb4.2,baz=61,slow=6.2,SNR=5.9								
LSZ					pP	pP	18 42 07.5	-0.1	
	comp=Z,3.5nm,0.6s,baz=98,slow=9.0,SNR=5.5								
LSZ	**Lusaka**	**71.62**	**255**	*e*P		**P**	**18 41 58.0**	**+0.2**	
LSZ					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4								
LSZ	**Lusaka**	**71.62**	**255**	*e*P		**P**	**18 41 58.0**	**+0.2**	
	comp=Z,3.9nm,0.8s,mb4.4								
PETK	**Petropavlovsk-**	**73.40**	**32**	P		**P**	**18 42 07.1**	**-0.5**	
	comp=Z,7.3nm,0.8s,mb4.7,baz=226,slow=2.0,SNR=9.4								
BR131	**Keskin Array S**	**73.52**	**313**	*e*P		**P**	**18 42 07.6**	**-1.1**	
	comp=Z,2.3nm,0.7s,mb4.2								
PET	**Petropavlovsk**	**73.87**	**33**	*e*P		**P**	**18 42 09.6**	**-0.8**	
PET					pmax	pmax			
	comp=Z,26nm,0.8s,mb5.2								
PET	**Petropavlovsk**	**73.87**	**33**	*e*P		**P**	**18 42 09.8**	**-0.6**	
	comp=Z,23nm,0.8s,mb5.2								
VSR	**Storozhevoye**	**74.07**	**325**	*e*P		**P**	**18 42 10.3**	**-1.3**	
VSR					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
VSR					pmax	pmax			
	comp=N,4.0nm,0.6s								
VSR					pmax	pmax			
	comp=E,20nm,0.9s								
RPZ	**Rata Peaks**	**74.77**	**135**	P		**P**	**18 42 17.0**	**+1.1**	
	comp=E,6.6nm,0.6s,mb4.7,baz=263,slow=4.1,SNR=4.5								
BOSA	**Boshof**	**75.25**	**241**	P		**P**	**18 42 19.9**	**+0.8**	
	comp=E,4.6nm,1.0s,mb4.4,baz=252,slow=15,SNR=3.3								
BOSA					pP	pP	18 42 28.6	-0.2	
	comp=E,6.2nm,0.7s,baz=90,slow=6.6,SNR=4.7								
BOSA					LR	LR	19 11 54.3		
	comp=E,202nm,18.2s,MS4.5,baz=168,slow=33								
BOSA	**Boshof**	**75.25**	**241**	P		**P**	**18 42 19.9**	**+0.9**	
BOSA				*PP		pP	18 42 28.6	-0.2	
TIXI	**Tiksi**	**76.37**	**9**	*e*P		**P**	**18 42 22.7**	**-1.8**	
TIXI					pmax	pmax			
	comp=Z,36nm,1.6s,mb5.0								
TIXI	**Tiksi**	**76.37**	**9**	*e*P		**P**	**18 42 22.7**	**-1.8**	
	comp=Z,17nm,0.8s,mb5.0								
MOS	**Moscow**	**76.82**	**329**	*e*P		**P**	**18 42 25.9**	**-1.4**	
MOS					pmax	pmax			
	comp=Z,51nm,1.0s,mb5.4								
OBN	**Obninsk**	**77.11**	**328**	*ce*P		**P**	**18 42 28.7**	**-0.3**	
OBN				*e*			18 42 43.5		
OBN					pmax	pmax			
	comp=Z,33nm,1.4s,mb5.1								
SYO	**Syowa Base**	**77.34**	**199**⇑	*e*pP		pP	18 42 43.6	+3.8	
URZ	**Urewera**	**78.49**	**128**	P		**P**	**18 42 37.4**	**+0.3**	
	comp=Z,5.1nm,0.6s,mb4.7,baz=256,slow=4.2,SNR=4.2								
AKASG	**Malin Array Be**	**79.76**	**322**	P		**P**	**18 42 42.6**	**-1.1**	
	comp=Z,1.1nm,0.6s,mb4.0,baz=88,slow=3.4,SNR=5.5								
AKASG					pP	pP	18 42 51.7	-1.8	
	comp=Z,1.2nm,0.6s,baz=86,slow=4.1,SNR=4.3								
AKASG	**Malin Array Be**	**79.76**	**322**	P		**P**	**18 42 42.6**	**-1.1**	
AKASG					pP	pP	18 42 51.7	-1.8	
VRI	**Vrincioaia**	**80.08**	**317**	⇓*i*P		**P**	**18 42 46.2**	**+0.6**	
VRI	**Vrincioaia**	**80.08**	**317**	⇓P		**P**	**18 42 46.2**	**+0.7**	
MLR	**Muntele Rosu**	**80.53**	**317**	⇓*i*P		**P**	**18 42 48.5**	**+0.5**	
BURAR	**Bucovina Array**	**81.51**	**319**	⇓*i*P		**P**	**18 42 54.4**	**+1.3**	
BURAR	**Bucovina Array**	**81.51**	**319**	⇓P		**P**	**18 42 54.4**	**+1.3**	
BUR08	**Bucovina Ar. S**	**81.52**	**319**	*e*P		**P**	**18 42 53.5**	**+0.3**	
BUR08				*e*		pP	18 43 02.5	-0.5	
JOF	**Joensuu**	**82.58**	**335**	*e*p		**P**	**18 42 57.1**	**-1.3**	
	comp=Z,9.2nm,0.8s,mb4.9								
JOF	**Joensuu**	**82.58**	**335**	*e*P		**P**	**18 42 57.1**	**-1.3**	
JOF					pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.8								
BZS	**Buzias**	**83.53**	**316**	⇓*i*P		**P**	**18 43 03.3**	**-0.4**	
BZS	**Buzias**	**83.53**	**316**	⇓P		**P**	**18 43 03.3**	**-0.4**	
KOLS	**Kolonicke sedl**	**83.70**	**320**	*e*P		**P**	**18 43 05.1**	**+0.6**	
SUW	**Suwalki**	**84.18**	**325**	*e*P		**P**	**18 43 06.7**	**-0.1**	
SUW	**Suwalki**	**84.18**	**325**	*e*P		**P**	**18 43 06.7**	**-0.1**	
STHS	**Stebnicka Huta**	**84.46**	**320**	*e*P		**P**	**18 43 09.4**	**+1.0**	
STHS				*e*		pP	18 43 18.0	-0.3	
STHS					pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.7								
STHS	**Stebnicka Huta**	**84.46**	**320**	*e*P		**P**	**18 43 09.4**	**+1.0**	
	comp=Z,5.7nm,0.9s,mb4.7								
STHS				*e*		pP	18 43 18.0	-0.3	
KAF	**Kangasniemi**	**84.54**	**333**	*e*p		**P**	**18 43 07.9**	**-0.6**	
	comp=Z,12nm,0.8s,mb5.1								
KAF	**Kangasniemi**	**84.54**	**333**	*e*P		**P**	**18 43 07.9**	**-0.6**	
KAF					pmax	pmax			
	comp=Z,12nm,0.8s,mb5.1								
KECS	**Kecovo**	**84.79**	**319**	*e*P		**P**	**18 43 10.0**	**-0.1**	
KECS				*e*		pP	18 43 17.9	-2.1	
KECS					pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.2								
KECS	**Kecovo**	**84.79**	**319**	*e*P		**P**	**18 43 10.0**	**-0.1**	
KECS				*e*pP		pP	18 43 17.9	-2.1	
KECS	**Kecovo**	**84.79**	**319**	*e*P		**P**	**18 43 10.0**	**-0.1**	
	comp=Z,2.2nm,0.9s,mb4.3								
KECS				*e*		pP	18 43 17.9	-2.1	
PKSM	**Moragy**	**85.68**	**317**	⇑*i*P		**P**	**18 43 14.5**	**-0.1**	
PKSM	**Moragy**	**85.68**	**317**	⇑P		**P**	**18 43 14.5**	**-0.1**	
ARCES	**ARCESS Array B**	**86.87**	**340**	P		**P**	**18 43 20.4**	**+0.5**	
	comp=Z,5.9nm,0.8s,mb4.9,baz=94,slow=4.9,SNR=13								
MORC	**Moravsky Berou**	**86.89**	**320**	⇑*i*P		**P**	**18 43 21.3**	**+0.8**	
MORC	**Moravsky Berou**	**86.89**	**320**	⇑P		**P**	**18 43 21.3**	**+0.8**	
ZST	**Bratislava**	**86.98**	**318**	*e*P		**P**	**18 43 21.0**	**+0.1**	
	comp=Z,8.1nm,0.5s,mb5.2								
GERES	**GERESS Array B**	**89.30**	**319**	P		**P**	**18 43 32.1**	**+0.2**	
	comp=Z,1.9nm,0.8s,mb4.5,baz=85,slow=4.3,SNR=13								
GERES					pP	pP	18 43 41.1	-0.8	
	comp=Z,1.3nm,0.7s,baz=94,slow=4.3,SNR=6.2								
BRG	**Berggiesshubel**	**89.30**	**321**	*i* P		**P**	**18 43 32.7**	**+0.8**	
BRG					pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.6								
BRG	**Berggiesshubel**	**89.30**	**321**	*i* P		**P**	**18 43 32.7**	**+0.8**	
	comp=Z,5.7nm,1.0s,mb4.9								
KHC	**Kasperske Hory**	**89.40**	**319**⇑	*e*P		**P**	**18 43 33.4**	**+1.0**	
CLL	**Collm**	**89.93**	**321**	*e*P		**P**	**18 43 33.0**	**-1.8**	
CLL				*e*(pP)		pP	18 43 44.0	-0.8	
GRA2	**Grafenberg Arr**	**90.88**	**319**	*e*P		**P**	**18 43 39.8**	**+0.5**	
	comp=Z,31nm,2.0s,mb5.3								
MOTA	**Moosalm**	**90.94**	**317**⇑	*i*P		**P**	**18 43 39.3**	**-0.3**	
	comp=Z,5.8nm,1.0s,mb4.9								
DAVA	**Damuels**	**91.77**	**317**⇑	*i*P		**P**	**18 43 44.0**	**+0.5**	
	comp=Z,10nm,0.9s,mb5.1								
DAVA	**Damuels**	**91.77**	**317**⇑	*i*PcP		PcP	18 43 44.0	-0.3	
	comp=Z,10nm,0.9s								
KEST	**Kesra**	**91.82**	**306**	P		**P**	**18 43 45.0**	**+1.0**	
	comp=Z,4.8nm,1.1s,mb4.7,baz=285,slow=1.7,SNR=4.8								
KEST					pP	pP	18 43 54.1	+0.2	
	comp=Z,3.1nm,1.0s,baz=67,slow=5.0,SNR=3.8								
NVAR	**Mina Array Bea**	**130.10**	**39**	PKP		PKPdf	18 49 47.9	+1.9	
	comp=Z,0.7nm,0.7s,baz=283,slow=2.1,SNR=4.7								
CPUP	**Villa Florida**	**143.81**	**216**	PKP		PKPdf	18 50 10.0	-1.6	
	comp=Z,1.2nm,0.5s,baz=129,slow=2.4,SNR=7.2								
CPUP					pPKP	pPKPdf	18 50 19.7	-2.2	
	comp=Z,1.9nm,0.5s,baz=98,slow=3.3,SNR=4.6								
CPUP	**Villa Florida**	**143.81**	**216**	PKP		PKPdf	18 50 10.0	-1.6	
CPUP					pPKP	pPKPdf	18 50 19.7	-2.2	
TXAR	**Lajitas Array**	**145.21**	**38**	PKPbc		PKPbc	18 50 14.3	+0.8	
	comp=Z,34nm,0.6s,baz=283,slow=1.0,SNR=206								
TXAR	**Lajitas Array**	**145.21**	**38**	PKPbc		PKPbc	18 50 14.3	+0.7	
MIAR	**Mount Ida**	**145.76**	**20**	*e*PKP2		PKPab	18 50 14.7	-0.8	
JCT	**Junction City**	**146.54**	**32**	*e*PKP2		PKPab	18 50 17.0	-1.6	

IDC 13 18:36:15.0±3.1, 237S×9896E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.5/19, mbtmp3.5/4, Error ellipse: s-maj=127.6km s-min=26.4km az=58.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.70**	**360**	P	P	18 40 57.5	+0.5
	1.4nm,0.7s,baz=190,slow=10,SNR=9.7						
ASAR	**Alice Springs**	**39.89**	**125**	P	P	18 43 50.9	+0.1
	0.3nm,0.9s,baz=298,slow=7.6,SNR=3.2						
MKAR	**Makanchi Array**	**51.11**	**345**	P	P	18 45 19.5	+0.1
	0.5nm,0.7s,baz=158,slow=8.1,SNR=2.6						
ZALV	**Zalesovo Beam**	**57.34**	**350**	P	P	18 46 04.3	-0.5
	0.8nm,0.4s,baz=176,slow=4.3,SNR=3.6						

NEIC 13 18:47:48.5, 3731S×17734E, h135km, MG4.0(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.81**	**109**	P	Pn	18 48 10.2	0.0
URZ	**Urewera**	**0.97**	**191**	P	Pn	18 48 11.8	+0.3
MWZ	**Matawai**	**1.03**	**172**	P	Pn	18 48 12.4	+0.3
PUZ	**Puketiti**	**1.05**	**137**	P	Pn	18 48 12.3	0.0
KNZ	**Kokohu**	**1.73**	**171**	P	Pn	18 48 19.3	-0.2
BKZ	**Black Stump Fm**	**1.97**	**200**	P	Pn	18 48 22.4	+0.1
FWVZ	**Far West T-bar**	**2.40**	**215**	P	Pn	18 48 28.1	+0.5
WNVZ	**Wahianoa**	**2.44**	**214**	P	Pn	18 48 28.2	+0.1
MOVZ	**Moawhango**	**2.44**	**210**	P	Pn	18 48 27.7	-0.4
TSZ	**Takapari Road**	**2.95**	**201**	P	Pn	18 48 33.0	-1.6
MRZ	**Mangatainoka R**	**3.62**	**202**	P	Pn	18 48 40.8	-2.5
KIW	**Kapiti Island**	**4.02**	**207**	P	Pn	18 48 45.9	-2.7
MSWZ	**Moikau Station**	**4.41**	**201**	P	Pn	18 48 48.8	-4.9
TCW	**Tory Channel**	**4.57**	**210**	P	Pn	18 48 52.3	-3.5

*ISCJB **13** 18:54:10.4±0.6, 5142N±003×1610E±003, h0km, Error ell

CONA	**Conrad Observa**	**3.58**	**182**	⇓*i*Pn	**Pn**	**18 55 07.8**	**0.0**
CONA				⇑*i*Sg	**Sg**	**18 56 06.3**	**+0.1**
	comp=Z,12nm,0.5s						
CSNA	**Conrad Observa**	**3.58**	**182**	⇑*i*Pn	**Pn**	**18 55 08.3**	**+0.4**
CSNA				⇑*i*Sg	**Sg**	**18 56 06.2**	**+0.1**
	comp=Z,10nm,0.4s						
MOA	**Molln**	**3.84**	**199**	⇑*i*Pn	**Pn**	**18 55 11.5**	**+0.1**
MOA				⇑*i*Sg	**Sg**	**18 56 14.7**	**+0.2**
	comp=Z,8.7nm,0.5s						
STHS	**Stebnicka Huta**	**3.91**	**120**	*e*PG	**Pg**	**18 55 26.3**	**+0.4**
STHS				*e*SG	**Sg**	**18 56 18.5**	**+2.0**
STHS	**Stebnicka Huta**	**3.91**	**120**	*e*Pg	**Pg**	**18 55 26.3**	**+0.4**
STHS				*e*Sg	**Sg**	**18 56 18.5**	**+2.0**
STHS	**Stebnicka Huta**	**3.91**	**120**	*e*Pg	**Pg**	**18 55 26.3**	**+0.4**
STHS				*e*Sg	**Sg**	**18 56 18.5**	**+2.0**
KECS	**Kecovo**	**4.15**	**135**	*e*SG	**Sg**	**18 56 23.9**	**-0.5**
KECS	**Kecovo**	**4.15**	**135**	*e*Sg	**Sg**	**18 56 23.9**	**-0.5**

IDC 13 18:54:54.2±4.0, 150S×10006E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.4/18, mbtmp3.4/4, Error ellipse: s-maj=161.3km s-min=24.8km az=59.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.20**	**121**	P	P	19 02 16.0	0.0
	0.3nm,0.4s,baz=301,slow=9.5,SNR=4.6						
ASAR	**Alice Springs**	**39.50**	**127**	P	P	19 02 26.9	+0.1
	0.2nm,0.7s,baz=300,slow=7.3,SNR=5.6						
SONM	**Songino Array**	**49.45**	**6**	P	P	19 03 46.6	+0.5
	0.2nm,0.5s,baz=179,slow=10,SNR=3.1						
ZALV	**Zalesovo Beam**	**56.69**	**349**	P	P	19 04 39.3	-0.1
	0.7nm,0.6s,baz=188,slow=7.5,SNR=3.9						
TXAR	**Lajitas Array**	**144.27**	**37**	PKP	PKPdf	19 14 31.0	-2.0
	0.3nm,0.4s,baz=184,slow=0.9,SNR=3.7						

NEIC 13 18:59:56.1±0.9, 668N×12370E, h600km, mb3.6/1, Error ellipse: s-maj=29.6km s-min=11.6km az=54.0
ISCJB 13 18:59:57.3±3.1, 66N±02×1237E±03, h652km±46km, mb3.5/7, Error ellipse: s-maj=53.5km s-min=14.6km az=147.9
IDC 13 18:59:57.3±2.2, 658N×12364E, h615km±25km, mb2.8/6, mb1 3.0/7, mb1mx2.7/22, mbtmp2.9/7, Error ellipse: s-maj=52.6km s-min=11.0km az=63.0
ISC 13 18:59:58.0±3.1, 66N±02×1236E±03, h629km±44km, n9, σ0§54/11, mb3.6/7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSM	**Kuching**	**14.23**	**250**	*e*P	**P**	**19 02 58.3**	**+0.2**
BATI	**Baumata**	**16.70**	**180**	P	**P**	**19 03 19.9**	**-0.7**
	3.1nm,0.3s,baz=312,slow=3.7,SNR=8.1						
FITZ	**Fitzroy Crossi**	**24.63**	**175**	P	**P**	**19 04 32.1**	**+0.4**
	0.6nm,0.3s,mb3.7,baz=10.0,slow=14,SNR=8.6						
CMAR	**Chiang Mai Arr**	**26.78**	**298**	P	**P**	**19 04 50.4**	**-0.2**
	0.5nm,0.6s,mb3.3,baz=112,slow=7.7,SNR=5.9						
WRAB	**Tennant Creek**	**28.40**	**158**	*e*P	**P**	**19 05 04.3**	**-0.3**
	0.7nm,0.4s,mb3.6						
WRA	**Warramunga Arr**	**28.41**	**158**	P	**P**	**19 05 04.6**	**0.0**
	0.3nm,0.2s,mb3.5,baz=337,slow=9.4,SNR=17						
WRA				S	**S**	**19 09 08.3**	**-1.3**
	0.4nm,0.5s,baz=334,slow=15,SNR=7.3						
WRA				ScP	ScP	19 10 42.0	+3.5
	1.0nm,0.6s,baz=340,slow=3.1,SNR=9.2						
ASAR	**Alice Springs**	**31.71**	**162**	P	**P**	**19 05 33.8**	**+0.9**
	1.4nm,0.3s,mb4.1,baz=339,slow=7.6,SNR=89						
ASAR				S	**S**	**19 10 01.2**	**+0.9**
	1.1nm,0.6s,baz=342,slow=20,SNR=13						
NWAO	**Narrogin (SRO)**	**39.78**	**188**	P	**P**	**19 06 38.9**	**0.0**
	5.8nm,0.8s,mb4.2,baz=29,slow=10,SNR=3.6						
KURK	**Kurchatov**	**57.68**	**328**	P	**P**	**19 08 50.2**	**0.0**
	0.2nm,0.3s,mb2.7,baz=131,slow=6.0,SNR=2.2						

ISCJB 13 19:13:02.6±0.7, 2432S×007×677W±02, h243km±18km, Error ellipse: s-maj=22.5km s-min=10.3km az=7.4
GUC 13 19:13:03.6±0.5, 2435S×6762W, h200km
IDC 13 19:13:08.1±2.1, 2372S×6710W, h231km±25km, mb3.2/1, mb1 3.4/5, mb1mx3.2/18, mbtmp3.2/5, Error ellipse: s-maj=28.0km s-min=18.8km az=95.0
ISC 13 19:13:03.6±0.8, 2435S±007×677W±02, h235km±18km, n10, σ0§87/16, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPN1	**Cerro Paranal**	**2.45**	**263**	*e*P	**Pn**	**19 13 50.0**	**+0.7**
CPN1				*i*S	**S**	**19 14 25.7**	**+0.6**
CEN1	**Los Morros**	**2.45**	**292**	⇓*i*P	**Pn**	**19 13 50.3**	**+1.0**
CEN1				*i*S	**S**	**19 14 25.4**	**+0.2**
ANCH	**Antofagasta**	**2.54**	**285**	⇑*i*P	**Pn**	**19 13 50.8**	**+0.6**
ANCH				*i*S	**S**	**19 14 26.1**	**-0.6**
CDCH	**Caldera**	**3.90**	**225**	*i*P	**Pn**	**19 14 05.0**	**-0.5**
CDCH				*i*S	**S**	**19 14 53.5**	**-1.0**
LCO	**Las Campanas**	**5.35**	**209**	*i*P	**Pn**	**19 14 23.1**	**-0.1**
LCO				*i*S	**S**	**19 15 26.6**	**-0.1**
LPAZ	**La Paz**	**8.03**	**357**	P	**Pn**	**19 14 55.5**	**-1.8**
	0.9nm,0.3s,baz=161,slow=7.7,SNR=25						
LPAZ				S	**S**	**19 16 20.7**	**-7.9**
	baz=233,slow=20,SNR=4.5						
CPUP	**Villa Florida**	**9.62**	**104**	P	**Pn**	**19 15 17.9**	**+0.4**
	0.4nm,0.3s,baz=260,slow=6.1,SNR=3.8						
PLCA	**Paso Flores**	**16.51**	**188**	P	**P**	**19 16 53.1**	**+12**
	0.3nm,0.3s,baz=7.4,slow=9.9,SNR=8.7						
BDFB	**Brasilia**	**20.43**	**69**	P	**P**	**19 17 19.8**	**-3.5**
	1.0nm,0.3s,baz=229,slow=11,SNR=11						
TORD	**Torodi Ar. Bea**	**77.32**	**69**	P	**P**	**19 24 33.6**	**+1.0**
	0.3nm,0.4s,baz=253,slow=5.7,SNR=10.0						

BJI 13 19:17:26.9, 340S×10121E, h43km, mB4.8, mb4.4
IDC 13 19:17:26.2±1.3, 288S×10100E, h0km, mb4.2/14, mb1 4.3/14, mb1mx4.1/23, mbtmp4.2/14, Error ellipse: s-maj=47.5km s-min=13.9km az=56.0
ISCJB 13 19:17:29.7±0.9, 28S±02×1011E±02, h33km, mb4.3/18, Error ellipse: s-maj=35.4km s-min=9.3km az=143.8
NEIC 13 19:17:32.2±0.7, 273S×10124E, h35km, mb4.5/4, Error ellipse: s-maj=33.0km s-min=6.7km az=54.0
DJA 13 19:17:54, 087S×10124E, h92km, MLv4.2/6
ISC 13 19:17:32.0±0.9, 28S±02×1011E±02, h35km, n27, σ0§69/24, mb4.3/18, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.25**	**354**	P	**P**	**19 22 13.2**	**-2.0**
	1.9nm,0.8s,mb3.5,baz=184,slow=9.7,SNR=12						
FITZ	**Fitzroy Crossi**	**28.41**	**124**	P	**P**	**19 23 23.3**	**-0.2**
	2.1nm,1.0s,mb3.7,baz=330,slow=8.1,SNR=3.8						
LSA	**Lhasa**	**33.72**	**344**	P	**P**	**19 24 11.0**	**+0.9**
LSA	**Lhasa**	**33.72**	**344**	*e*P	**P**	**19 24 11.2**	**+1.1**
	2.5nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**36.60**	**120**	P	**P**	**19 24 34.7**	**-0.4**
	2.4nm,0.4s,mb4.4,baz=303,slow=8.9,SNR=49						
WRAB	**Tennant Creek**	**36.61**	**120**	*e*P	**P**	**19 24 35.2**	**0.0**
WB2	**Warramunga Arr**	**36.61**	**120**	*e*P	**P**	**19 24 35.0**	**-0.2**
ASAR	**Alice Springs**	**37.85**	**126**	P	**P**	**19 24 46.2**	**+0.5**
	0.8nm,0.6s,mb3.7,baz=296,slow=7.7,SNR=12						
DDI	**Dehra Dun**	**39.65**	**328**	*ex*	x	19 25 25.0	
DDI				*ex*	x	19 28 56.0	
KSRS	**Korea Array**	**47.16**	**29**	P	**P**	**19 26 01.6**	**+0.5**
	0.6nm,0.6s,mb3.7,baz=225,slow=9.1,SNR=4.1						
STKA	**Stephens Creek**	**47.76**	**132**	P	**P**	**19 26 05.7**	**-0.2**
	3.2nm,0.7s,mb4.4,baz=300,slow=12,SNR=2.5						
SONM	**Songino Array**	**50.65**	**5**	P	**P**	**19 26 28.3**	**+0.6**
	12nm,1.1s,mb4.7,baz=183,slow=8.8,SNR=35						
ULN	**Ulaanbaatar**	**50.74**	**5**	*e*P	**P**	**19 26 29.0**	**+0.7**
	3.6nm,1.0s,mb4.3						
TKM2	**Tokmak 2**	**51.03**	**336**	*e*P	**P**	**19 26 30.9**	**+0.3**
	4.4nm,0.6s,mb4.6						
AML	**Almayashu**	**51.19**	**334**	*e*P	**P**	**19 26 32.4**	**+0.6**
EKS2	**Erkin-Say**	**51.58**	**334**	*e*P	**P**	**19 26 35.6**	**+0.9**
	8.3nm,0.8s,mb4.7						
MKAR	**Makanchi Array**	**52.12**	**344**	P	**P**	**19 26 39.0**	**+0.3**
	5.2nm,0.6s,mb4.6,baz=148,slow=8.4,SNR=38						
KURK	**Kurchatov**	**56.71**	**343**	P	**P**	**19 27 11.4**	**-0.6**
	1.3nm,0.5s,mb4.2,baz=163,slow=7.2,SNR=17						
ZAA0	**Zalesovo Array**	**58.18**	**349**	*e*P	**P**	**19 27 21.2**	**-1.1**
ZALV	**Zalesovo Beam**	**58.18**	**349**	P	**P**	**19 27 21.9**	**-0.4**
	6.0nm,0.5s,mb4.9,baz=163,slow=5.7,SNR=57						
ASAJ	**Asahikawa**	**59.65**	**34**	P	**P**	**19 27 33.2**	**+0.5**
	2.0nm,0.5s,mb4.4,baz=337,slow=4.8						
BVAR	**Borovoye Array**	**61.34**	**339**	P	**P**	**19 27 43.0**	**-1.0**
	1.1nm,0.5s,mb4.2,baz=131,slow=8.1,SNR=12						
PETK	**Petropavlovsk-**	**72.97**	**32**	P	**P**	**19 28 57.5**	**-0.3**
	3.2nm,1.0s,mb4.2,baz=336,slow=2.7,SNR=4.5						
ARCES	**ARCESS Array B**	**87.62**	**340**	P	**P**	**19 30 16.3**	**0.0**
	1.5nm,0.7s,mb4.3,baz=94,slow=5.5,SNR=8.6						
ARCES	**ARCESS Array B**	**87.62**	**340**	P	**P**	**19 30 16.3**	**0.0**
TXAR	**Lajitas Array**	**144.64**	**39**	PKP	PKPdf	19 37 04.9	-0.8
	1.0nm,0.4s,baz=269,slow=0.9,SNR=20						
JCT	**Junction City**	**146.10**	**34**	*e*PKPdf	PKPdf	19 37 09.5	+1.4

BJI 13 19:22:37.6, 366S×10130E, h23km, mB4.6, mb4.7
IDC 13 19:22:40.3±1.1, 3.10S×10122E, h0km, mb4.4/15, mb1 4.5/15, mb1mx4.3/23, mbtmp4.5/15, Error ellipse: s-maj=40.1km s-min=13.4km az=58.0
ISCJB 13 19:22:42.6±0.5, 342S±006×10094E±006, h33km, mb4.8/34, Error ellipse: s-maj=11.0km s-min=6.5km az=138.3
NEIC 13 19:22:45.7±0.6, 304S×10135E, h35km, mb4.6/10, Error ellipse: s-maj=26.2km s-min=5.8km az=54.0
DJA 13 19:23:03, 194S×10137E, h0km, MLv4.4/8
ISC 13 19:22:44.8±0.5, 343S±006×10099E±007, h35km, n54, σ1§28/53, mb4.8/34, 4C-6D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KGM	**Kluang**	**5.89**	**23**	⇓P	**Pn**	**19 24 09.1**	**-0.5**
MYKOM	**Kota Tinggi**	**5.92**	**29**	⇓P	**Pn**	**19 24 08.9**	**-1.1**
FRIM	**Kepong**	**6.65**	**6**	⇑P	**Pn**	**19 24 21.1**	**+1.0**
IPM	**Ipoh**	**7.85**	**0**	⇓P	**Pn**	**19 24 39.8**	**+3.2**
KTGM	**Kuala Trenggan**	**8.96**	**14**	⇓P	**Pn**	**19 24 52.9**	**+1.1**
KSM	**Kuching**	**10.51**	**63**	⇑P	**Pn**	**19 25 16.9**	**+3.7**
SBUM	**Sibu**	**12.65**	**63**	⇑P	**Pn**	**19 25 45.1**	**+2.6**
KKM	**Kota Kinabalu**	**17.88**	**58**	⇑P	**Pn**	**19 26 54.3**	**+3.3**
SDKM	**Sandakan**	**18.53**	**61**	⇓P	**Pn**	**19 27 01.2**	**+2.3**
KDM	**Kudat**	**18.86**	**57**	⇓P	**Pn**	**19 27 05.0**	**+2.1**
CMAR	**Chiang Mai Arr**	**21.84**	**355**	P	**P**	**19 27 30.3**	**-4.1**
	2.8nm,0.7s,mb3.8,baz=187,slow=8.6,SNR=22						
CMAR				PcP	PcP	19 31 34.2	+0.6
	0.4nm,0.6s,baz=203,slow=2.5,SNR=4.7						
CHTO	**Chiang Mai**	**22.19**	**355**	*e*P	**P**	**19 27 36.5**	**-1.6**
	1.9nm,0.8s						
BATI	**Baumata**	**23.49**	**108**	P	**P**	**19 27 50.6**	**-1.2**
	8.9nm,0.5s,mb4.5,baz=162,slow=6.8,SNR=4.4						
FITZ	**Fitzroy Crossi**	**28.21**	**123**	*e*P	**P**	**19 28 34.5**	**0.0**
	2.0nm,0.4s,mb4.1						
FITZ	**Fitzroy Crossi**	**28.21**	**123**	P	**P**	**19 28 34.5**	**0.0**
	3.5nm,1.0s,mb3.9,baz=265,slow=4.8,SNR=13						
ODAN	**Odare**	**32.85**	**337**	*e*P	**P**	**19 29 16.0**	**+0.6**
	33nm,0.7s,mb5.4						
TAPN	**Taplejung**	**33.17**	**338**	*e*P	**P**	**19 29 18.8**	**+0.6**
	59nm,0.9s,mb5.5						
RAMN	**Ramite**	**33.24**	**336**	*e*P	**P**	**19 29 19.9**	**+1.1**
	17nm,0.6s,mb5.1						
JIRN	**Jiri**	**34.04**	**336**	*e*P	**P**	**19 29 26.7**	**+1.0**
	58nm,0.8s,mb5.5						
LSA	**Lhasa**	**34.26**	**345**	*e*P	**P**	**19 29 27.0**	**-0.6**
	1.9nm,0.4s,mb4.4						
PKI	**Pulchoki**	**34.28**	**335**	*e*P	**P**	**19 29 28.6**	**+0.7**
	14nm,0.6s,mb5.1						
GUN	**Gumba**	**34.39**	**336**	*e*P	**P**	**19 29 29.7**	**+0.9**
	75nm,0.6s,mb5.8						
DMN	**Daman**	**34.44**	**335**	*e*P	**P**	**19 29 29.9**	**+0.6**
	9.3nm,0.8s,mb5.1						
KKN	**Kakani**	**34.53**	**335**	*e*P	**P**	**19 29 30.6**	**+0.6**
	51nm,0.8s,mb5.5						
GKN	**Gorkha**	**34.99**	**334**	*e*P	**P**	**19 29 34.7**	**+0.7**
	19nm,0.4s,mb5.4						
KOLN	**Koldanda**	**35.25**	**333**	*e*P	**P**	**19 29 37.3**	**+1.1**
	32nm,0.7s,mb5.4						
DANN	**Dangsing**	**35.67**	**333**	*e*P	**P**	**19 29 40.8**	**+0.9**
	71nm,0.5s						
WRA	**Warramunga Arr**	**36.43**	**119**	P	**P**	**19 29 46.3**	**-0.2**
	5.6nm,0.4s,mb4.8,baz=302,slow=9.0,SNR=78						
WRAB	**Tennant Creek**	**36.44**	**119**	*e*P	**P**	**19 29 45.9**	**-0.6**
	6.1nm,0.6s,mb4.7						
WB2	**Warramunga Arr**	**36.44**	**119**	*e*P	**P**	**19 29 46.2**	**-0.4**
ASAR	**Alice Springs**	**37.63**	**125**	P	**P**	**19 29 57.4**	**+0.8**
	3.1nm,0.6s,mb4.2,baz=299,slow=8.4,SNR=57						
CTA	**Charters Tower**	**47.11**	**114**	*e*P	**P**	**19 31 13.6**	**-0.3**
	3.8nm,0.7s,mb4.4						
CTAO	**Charters Tower**	**47.11**	**114**	*e*P	**P**	**19 31 13.2**	**-0.7**
STKA	**Stephens Creek**	**47.47**	**131**	*e*P	**P**	**19 31 17.9**	**+1.4**
	4.4nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**47.47**	**131**	P	**P**	**19 31 17.9**	**+1.4**
	2.0nm,0.5s,mb4.3,baz=354,slow=20,SNR=6.6						
KSRS	**Korea Array**	**47.76**	**29**	P	**P**	**19 31 16.4**	**-2.2**
	1.1nm,0.6s,mb4.0,baz=229,slow=7.9,SNR=6.0						
SONM	**Songino Array**	**51.27**	**5**	P	**P**	**19 31 44.3**	**-0.9**
	2.6nm,0.4s,mb4.5,baz=186,slow=9.6,SNR=31						
SONM				PcP	PcP	19 32 59.0	-0.9
	1.1nm,0.4s,baz=188,slow=3.9,SNR=6.6						
ULN	**Ulaanbaatar**	**51.35**	**5**	*e*P	**P**	**19 31 44.6**	**-1.2**
	1.4nm,0.4s,mb4.2						
TKM2	**Tokmak 2**	**51.52**	**336**	*e*P	**P**	**19 31 47.5**	**+0.3**
	9.9nm,0.7s,mb4.8						
AML	**Almayashu**	**51.67**	**334**	*e*P	**P**	**19 31 48.8**	**+0.5**
	7.4nm,0.8s,mb4.7						
CN2	**Changchun**	**51.91**	**22**	*e*P	**P**	**19 31 47.8**	**-2.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
EKS2	**Erkin-Say**	**52.06**	**335**	*e*P	**P**	**19 31 51.6**	**+0.4**
	comp=Z,17nm,0.8s,mb5.0						
MKAR	**Makanchi Array**	**52.66**	**344**	P	**P**	**19 31 54.7**	**-0.9**
	comp=Z,13nm,0.7s,mb5.0,baz=150,slow=8.1,SNR=84						
MKAR	**Makanchi Array**	**52.66**	**344**	P	**P**	**19 31 54.7**	**-0.9**
KURK	**Kurchatov**	**57.24**	**343**	*e*P	**P**	**19 32 26.2**	**-2.4**
	comp=Z,17nm,1.3s,mb4.9						
ZAA0	**Zalesovo Array**	**58.74**	**349**	*e*P	**P**	**19 32 37.5**	**-1.6**
ZALV	**Zalesovo Beam**	**58.74**	**349**	P	**P**	**19 32 37.7**	**-1.4**
	comp=Z,17nm,0.5s,mb5.3,baz=166,slow=5.3,SNR=111						
ASAJ	**Asahikawa**	**60.24**	**33**	P	**P**	**19 32 48.1**	**-1.4**
	comp=Z,2.9nm,0.4s,mb4.7,baz=44,slow=27,SNR=10						
BRVK	**Borovoye**	**61.92**	**340**	*e*P	**P**	**19 32 59.1**	**-1.7**
RPZ	**Rata Peaks**	**73.28**	**135**	P	**P**	**19 34 14.4**	**+1.6**
	comp=Z,13nm,1.0s,mb4.8,baz=333,slow=6.8,SNR=3.4						
PETK	**Petropavlovsk-**	**73.56**	**32**	P	**P**	**19 34 12.0**	**-2.2**
	comp=Z,3.0nm,0.8s,mb4.3,baz=214,slow=2.0,SNR=5.5						
ARCES	**ARCESS Array B**	**88.14**	**340**	P	**P**	**19 35 31.3**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.4,baz=79,slow=6.3,SNR=5.4						
GERES	**GERESS Array B**	**90.76**	**319**	P	**P**	**19 35 45.6**	**+1.3**
	comp=Z,0.3nm,0.5s,mb3.9,baz=76,slow=4.1,SNR=3.6						
TXAR	**Lajitas Array**	**145.20**	**40**	PKP	PKPdf	19 42 18.6	-0.9
	comp=Z,3.1nm,0.6s,baz=301,slow=1.3,SNR=29						

IDC 13 19:29:37.9±5.9, 349S×10108E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/19, mbtmp3.6/4, Error ellipse: s-maj=290.8km s-min=23.7km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.33**	**119**	P	P	19 36 43.4	-0.4
	0.2nm,0.4s,baz=293,slow=8.3,SNR=4.7						
ASAR	**Alice Springs**	**37.52**	**125**	P	P	19 36 54.1	+0.3
	0.2nm,0.3s,baz=302,slow=7.4,SNR=6.0						
MKAR	**Makanchi Array**	**52.74**	**344**	P	P	19 38 55.0	+0.5
	0.4nm,0.6s,baz=167,slow=7.0,SNR=3.2						
ZALV	**Zalesovo Beam**	**58.82**	**349**	P	P	19 39 37.5	-0.5
	0.5nm,0.4s,baz=161,slow=5.8,SNR=5.5						

ISCJB 13 19:35:12.5±1.4, 3709N×007×34.33E±009, h10km, Error ellipse: s-maj=13.1km s-min=5.8km az=44.0
ISK 13 19:35:12.7, 3708N×3438E, h9km, MD2.6
CSEM 13 19:35:12.7, 3708N×3438E, h9km, MD2.6, After ISK
ISC 13 19:35:12.7±1.8, 3711N±009×343E±01, h3km±21km, n5, σ0§17/8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MERS	**Mersin**	**0.29**	**145**	*e*PG	**Pg**	**19 35 18.4**	**+0.1**
MERS				*e*SG	**Sg**	**19 35 22.0**	**-0.1**
MEST	**Erdemli**	**0.54**	**195**	*i*P	**Pg**	**19 35 23.1**	**+0.1**
MEST				*i*S	**Sg**	**19 35 29.9**	**-0.1**
KARA	**Karaisali**	**0.61**	**75**	*e*PG	**Pg**	**19 35 24.1**	**-0.2**
KARA				*e*SG	**Sg**	**19 35 32.4**	**+0.1**
IKL	**Isikli**	**1.00**	**211**	*e*PG	**Pg**	**19 35 32.0**	**0.0**
KOZT	**Kozan**	**1.26**	**72**	*e*PN	**Pn**	**19 35 37.2**	**0.0**

MOS 13 19:50:29.2±1.2, 4271N×4638E, h23km, mb3.9/1, 3C-4D, Error ellipse: s-maj=17.8km s-min=9.3km az=25.6,

Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	**Botlikh**	**0.13**	**247**	*i*PG	Pb	19 50 35.9	+2.1
BTLR				*e*S	Sb	19 50 43.1	+6.2
BTLR				pmax	pmax		
	comp=Z,67nm,0.5s						
DBC	**Dubki**	**0.45**	**47**	*i*PG	Pb	19 50 38.0	-0.5
DBC				*i*S	Sb	19 50 48.0	+3.2
BUJR	**Buynaksk**	**0.55**	**78**	*e*PG	Pb	19 50 44.0	+3.9
KMKR	**Kumukh**	**0.79**	**137**	⇓*i*PG	Pb	19 50 44.0	-0.2
KMKR				*i*S	Sb	19 50 57.0	+2.5
KMKR				pmax	pmax		
	comp=Z,119nm,0.2s						
SNJR	**Sundja**	**1.21**	**288**	⇓*i*PG	Pn	19 50 50.8	+0.2
SNJR				*i*S	Sn	19 51 07.1	+0.9
VLKR	**Vladikavkaz**	**1.29**	**285**	*e*PG	Pn	19 50 52.3	+0.5
VLKR				*e*S	Sn	19 51 09.4	+1.0
BTKR	**Batakoyurt**	**1.50**	**297**	⇑*i*PG	Pn	19 50 55.7	+1.0
BTKR				*e*S	Sn	19 51 15.8	+2.3
LACR	**Lac**	**1.54**	**275**	⇑*i*PG	Pn	19 50 55.7	+0.5
TRKR	**Terskaya**	**1.57**	**311**	⇑*i*PG	Pn	19 50 56.0	+0.4
TRKR				*i*S	Sn	19 51 17.2	+1.9
KMSR	**Komsomolskaya**	**1.67**	**294**	⇓*i*PN	Pn	19 50 57.9	+1.0
KMSR				*i*S	Sn	19 51 20.2	+2.6
KSMR	**Kasumkent**	**1.71**	**130**	*e*PN	Pn	19 50 57.5	0.0
KORR	**Kora**	**1.74**	**283**	*e*PN	Pn	19 50 58.2	+0.2
LSNR	**Lesken**	**1.96**	**287**	⇓*i*PN	Pn	19 51 01.0	0.0

IDC 13 19:57:43.5±1.9, 1728S×7408W, h0km, mb3.9/2, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=55.5km s-min=30.6km az=21.0
ISCJB 13 19:57:44.4±3.7, 1764S±010×7409W±009, h23km±30km, mb3.7/2, Error ellipse: s-maj=18.8km s-min=11.3km az=39.6
NEIC 13 19:57:45.6±1.2, 1745S×7399W, h10km, Error ellipse: s-maj=28.2km s-min=12.7km az=218.0
ISC 13 19:57:48.6±1.5, 1759S±009×741W±01, h42km±17km, n9, σ1§13/12, mb3.7/2, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.86**	**78**	Pn	**Pn**	**19 59 11.8**	**-1.1**
	0.1nm,0.3s,baz=259,slow=8.0,SNR=2.3						
LPAZ				Sn	**Sn**	**20 00 20.4**	**+1.5**
	0.1nm,0.3s,baz=82,slow=19,SNR=2.8						
LPAZ	**La Paz**	**5.86**	**78**	Pn	**Pn**	**19 59 11.8**	**-1.1**
LPAZ				Sn	**Sn**	**20 00 20.4**	**+1.5**
NNA	**Nana**	**6.17**	**334**	Pn	**Pn**	**19 59 17.5**	**+0.3**
	2.6nm,0.3s,baz=217,slow=13,SNR=4.1						
LVC	**Limon Verde**	**6.98**	**137**	Pn	**Pn**	**19 59 30.3**	**+2.0**
	2.2nm,0.3s,baz=306,slow=10,SNR=12						
LVC				Sn	**Sn**	**20 00 45.9**	**-0.6**
	1.2nm,0.3s,baz=96,slow=21,SNR=6.8						
LVC	**Limon Verde**	**6.98**	**137**	*e*P	**Pn**	**19 59 29.8**	**+1.5**
LVC				Sn	**Sn**	**20 00 45.9**	**-0.6**
SIV	**San Ignacio**	**12.58**	**85**	Pn	**Pn**	**20 00 43.1**	**-1.9**
	0.2nm,0.3s,baz=264,slow=13,SNR=9.4						
TORD	**Torodi Ar. Bea**	**80.78**	**73**	P	**P**	**20 09 58.3**	**0.0**
	0.8nm,0.8s,mb3.7,baz=257,slow=5.3,SNR=3.8						
YKA	**Yellowknife Ar**	**85.94**	**342**	P	**P**	**20 10 23.9**	**+0.1**
	0.3nm,0.6s,mb3.7,baz=139,slow=6.0,SNR=4.7						
MKAR	**Makanchi Array**	**144.96**	**29**	PKP	PKPdf	20 17 22.2	+1.0
	0.3nm,0.2s,baz=336,slow=3.2,SNR=3.7						

ISCJB 13 20:02:27.3±0.6, 4374N±005×10521W±007, h0km, Error ellipse: s-maj=8.0km s-min=5.4km az=39.5
IDC 13 20:02:27.2±1.6, 4348N×10532W, h0km, mb4.0/1, mb1 3.8/6, mb1mx3.5/26, mbtmp3.5/6, ML3.4/5, Error ellipse: s-maj=45.2km s-min=8.4km az=151.0
*NEIC 13 20:02:29.2±0.4, 4376N×10524W, h0km, ML3.3, Error ellipse: s-maj=6.2km s-min=

3.0nm,0.9s,mb4.1,baz=36,slow=0.2,SNR=8.5
PMSA Palmer Station 37.97 136 LR LR 20 23 40.6
comp=Z,4μm,22.0s,MS5.1,baz=238,slow=29
USHA Ushuaia 41.74 121 LR LR 20 25 17.8
comp=Z,4μm,19.1s,MS5.3,baz=212,slow=29
VNA3 Neumayer Olymp 47.88 163 *e*P **P** **20 13 37.3 -0.1**
VNA3 *e* 20 13 44.2
VNA3 *e* 20 13 48.7
SNAA Sanae 48.47 166 *e*P **P** **20 13 41.9 0.0**
SNAA *e* 20 13 49.0
SNAA *e* 20 13 53.2
SNAA Sanae 48.47 166 *e*P **P** **20 13 41.5 -0.5**
9.0nm,1.0s,mb4.8
VNA2 Neumayer--Watz 48.51 164 *e*P **P** **20 13 42.4 +0.2**
VNA2 *e* 20 13 49.3
VNA2 *e* 20 13 53.3
VNA1 Neumayer--Stat 48.62 163 *e*P **P** **20 13 43.7 +0.6**
VNA1 *e* 20 13 50.5
VNA1 *e* 20 13 55.0
MAW Mawson 52.82 194 P **P** **20 14 20.4 +5.6**
2.9nm,1.0s,mb4.2,baz=182,slow=7.4,SNR=4.1
CTAO Charters Tower 60.43 279 *e*P **P** **20 15 11.1 +1.6**
3.5nm,0.7s,mb4.5
ASAR Alice Springs 64.09 266 P **P** **20 15 33.5 -0.5**
2.2nm,0.9s,mb4.2,baz=145,slow=6.5,SNR=13
WRA Warramunga Arr 66.89 269 P **P** **20 15 51.4 -0.7**
2.3nm,0.9s,mb4.2,baz=147,slow=5.6,SNR=15
LPAZ La Paz 70.88 90 P **P** **20 16 16.5 -0.5**
1.0nm,0.7s,mb3.9,baz=215,slow=5.7,SNR=5.0
SIV San Ignacio 74.90 96 P **P** **20 16 40.9 +0.1**
1.0nm,0.4s,mb4.1,baz=214,slow=11,SNR=5.0
KBL Kabul 146.11 243 *e*PKPdf PKPdf 20 24 39.6 +1.0
MKAR Makanchi Array 148.17 272 PKPbc PKPbc 20 24 43.3 -1.6
7.9nm,0.7s,baz=107,slow=4.1,SNR=17
AML Almayashu 149.61 257 *e*PKPbc PKPbc 20 24 50.2 +1.5
ESDC Sonseca Array 150.53 112 PKPbc PKPbc 20 24 51.2 +0.2
2.9nm,0.9s,baz=235,slow=1.3,SNR=10
ESLA Sonseca Array 150.53 112 *e*PKPbc PKPbc 20 24 50.1 -0.9
ZALV Zalesovo Beam 150.86 285 PKPbc PKPbc 20 24 50.4 -0.9
0.4nm,0.6s,baz=5.7,slow=2.0,SNR=2.4
KURK Kurchatov 152.44 275 PKPbc PKPbc 20 24 52.7 -2.3
1.5nm,1.0s,baz=123,slow=1.9,SNR=8.5
GERES GERESS Array B 165.79 121 PKP PKPdf 20 25 06.0 +2.3
0.1nm,0.3s,baz=230,slow=0.8,SNR=2.6

ISCJB ***13*** *20:06:36.8±0.3, 5779S±006×14721W±0.10, h10km, mb5.4/37, MS5.7/203, Error ellipse: s-maj=8.4km s-min=7.4km az=9.5*

IDC ***13*** *20:06:36.6±0.4, 5769S×14723W, h0km, mb5.0/22, mb1 5.1/22, mb1mx5.0/27, mbtmp5.0/22, MS5.8/15, Ms1 5.8/15, ms1mx5.6/18, Error ellipse: s-maj=20.4km s-min=11.5km az=4.0*

BJI ***13*** *20:06:37.9, 5760S×14730W, h10km, mB5.9, Ms5.8, Msz5.6*

GCMT ***13*** *20:06:38.9±0.1, 5787S×14727W, h14km, MW6.0/104, Moment Tensor Solution. s104,c203; s104,c242; Duration: 2s3 Moment tensor: Scale 10^18Nm; Mrr-0.09±.01; Mθθ0.91±.01; Mϕϕ-0.82±.01; Mrθ-0.03±.02; Mθϕ0.59±.01; Mϕr0.06±.02; Best double couple: M₀1.05300×10^18 NP1:ϕs208.00000°, δ87.00000°, λ-178.00000°. NP2:ϕs118.00000°, δ88.00000°, λ-3.00000°. Principal axes: T 1.0980, Plg1.0000°, Azm163.0000°; N -0.0900, Plg86.0000°, Azm261.0000°; P -1.0080, Plg4.0000°, Azm73.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***13*** *20:06:38.9±0.2, 5763S×14730W, h10km, mb5.7/18, MS5.7/179 Error ellipse: s-maj=15.2km s-min=8.7km az=179.0*

MOS ***13*** *20:06:41.0±1.9, 5754S×14886W, h10km, mb5.5/11, MS5.7/29, Error ellipse: s-maj=22.6km s-min=17.3km az=91.4*

DJA ***13*** *20:06:46, 5827S×147.92W, h10km, Mw6.1/11*

ISC 13 20:06:38.5±0.3, 5777S±006×14716W±009, h10km, (h21km±1.2km:pP-P), n515, σ1523/89, mb5.4/37, MS5.7/202, 14C-5D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**25.33**	**201**	*e*P		**P**	**20 12 04.7**	**-0.2**
SBA				pmax		pmax		
	comp=Z,164nm,1.5s,mb5.3							
SBA				MLR		MLR		
	comp=Z,18μm,22.0s,MS5.5							
SBA	**Scott Base**	**25.33**	**201**	*e*P		**P**	**20 12 04.7**	**-0.2**
	comp=Z,164nm,1.5s,mb5.3							
SBA				LR		LR		
	comp=Z,18μm,22.0s,MS5.5							
SNZO	**South Karori**	**29.22**	**288**	PFAKE			20 12 50.0	+10
SNZO				LR		LR		
	comp=Z,9μm,19.0s,MS5.4							
RPZ	**Rata Peaks**	**29.41**	**280**	LR		LR	20 21 52.8	
	comp=Z,22μm,18.3s,MS5.8,baz=127,slow=31							
URZ	**Urewera**	**30.33**	**294**	LR		LR	20 20 51.9	
	comp=Z,8μm,20.2s,MS5.3,baz=332,slow=28							
QSPA	**South Pole Qui**	**32.38**	**180**	P		**P**	**20 13 08.0**	**+0.4**
	comp=Z,13nm,1.0s,mb4.7,baz=54,slow=2.2,SNR=14							
QSPA	**South Pole Qui**	**32.38**	**180**	P		**P**	**20 13 08.0**	**+0.4**
DRV	**Dumont d'Urvil**	**33.14**	**224**	P		**P**	**20 13 23.0**	**+8.7**
DRV				S		**S**	**20 18 45.0**	**+12**
DRV				L			20 20 00.0	
DRV				R			20 23 00.0	
PTCN	**Pitcairn Islan**	**34.87**	**28**	PFAKE			20 13 40.0	+10
PTCN				LR		LR		
	comp=Z,9μm,20.0s,MS5.5							
RAO	**Raoul Island**	**35.62**	**310**	LR		LR	20 24 28.2	
	comp=Z,6μm,20.4s,MS5.3,baz=130,slow=30							
RAO	**Raoul Island**	**35.62**	**310**	PFAKE			20 13 50.0	+14
RAO				LR		LR		
	comp=Z,8μm,20.0s,MS5.5							
RKT	**Rikitea**	**35.72**	**19**	*e*LQ			20 21 39.3	
	comp=Z,19μm,29.0s							
RKT				*e*LR		LR	20 23 11.2	
	comp=Z,24μm,28.2s,baz=187							
RAR	**Rarotonga**	**37.66**	**341**	LR		LR	20 24 44.3	
	comp=Z,14μm,21.5s,MS5.7,baz=156,slow=29							
PMSA	**Palmer Station**	**37.78**	**136**	P		**P**	**20 13 54.8**	**+0.6**
	comp=Z,7.4nm,0.8s,mb4.5,baz=234,slow=17,SNR=3.6							
PMSA	**Palmer Station**	**37.78**	**136**	P		**P**	**20 13 54.9**	**+0.6**
PMSA				LR		LR		
	comp=Z,14μm,20.0s,MS5.8							
TVO	**Taravao**	**39.95**	**357**	*e*P		**P**	**20 14 14.6**	**+1.7**
	comp=Z,1μm,1.5s,mb6.4							
PAE	**Paea**	**40.08**	**356**	*e*P		**P**	**20 14 15.6**	**+1.7**
	comp=Z,573nm,1.5s,mb6.1							
PPT	**Papeete**	**40.17**	**356**	*e*LQ			20 23 25.7	
	comp=Z,11μm,30.2s							
PPT				*e*LR		LR	20 25 14.1	
	comp=Z,37μm,25.5s,baz=186							
PPT	**Papeete**	**40.17**	**356**	LR		LR	20 26 16.5	
	comp=Z,8μm,20.4s,MS5.6,baz=173,slow=29							
TIAR	**Tiarei**	**40.18**	**357**	*e*P		**P**	**20 14 16.6**	**+1.9**
	comp=Z,618nm,1.3s,mb6.2							
USHA	**Ushuaia**	**41.48**	**121**	P		**P**	**20 14 23.7**	**-1.3**
	comp=Z,14nm,0.8s,mb4.6,baz=245,slow=4.6,SNR=3.5							
TAU	**Tasmania Unive**	**42.62**	**261**	PFAKE			20 14 50.0	+15
TAU				LR		LR		
	comp=Z,13μm,19.0s,MS5.8							
CASY	**Casey**	**43.46**	**215**	*e*P		**P**	**20 14 43.1**	**+2.0**
CNB	**Canberra Magne**	**47.04**	**270**	*e*P		**P**	**20 15 12.3**	**+2.5**
CNB				*e*PCS		PcS	20 20 28.3	-8.6
CNB				*e*S		**S**	**20 22 08.0**	**+6.7**
CAN	**Canberra**	**47.23**	**270**	*e*P		**P**	**20 15 12.7**	**+1.4**
TOO	**Toolangi**	**47.42**	**265**	*e*P		**P**	**20 15 13.2**	**+0.4**
TOO				*e*S		**S**	**20 22 16.1**	**+9.3**
AFI	**Afiamalu**	**47.56**	**327**	P		**P**	**20 15 12.6**	**-1.5**
	comp=Z,33nm,0.8s,mb5.4,baz=165,slow=20,SNR=2.6							
AFI				LR		LR	20 30 58.0	
	comp=Z,6μm,18.8s,MS5.6,baz=112,slow=31							
VNA3	**Neumayer Olymp**	**47.85**	**163**	*e*P		**P**	**20 15 15.8**	**+0.1**
VNA3				*e*			20 15 23.2	
VNA3				*e*			20 15 27.1	
MIR	**Mirnyy**	**48.16**	**208**	*e*P		**P**	**20 15 24.0**	**+5.8**
MIR				*i* S		**S**	**20 22 26.0**	**+9.4**
MIR				pmax		pmax		
	comp=Z,200nm,1.2s,mb6.0							
MIR				MLR		MLR		
	comp=Z,15μm,18.0s,MS6.0							
EFI	**East Falkland**	**48.25**	**123**	PFAKE			20 15 30.0	+11
EFI				LR		LR		
	comp=Z,7μm,22.0s,MS5.6							
SNAA	**Sanae**	**48.46**	**166**	*e*P		**P**	**20 15 20.3**	**-0.1**
SNAA				*e*			20 15 27.9	
SNAA				*e*			20 15 32.4	
SNAA	**Sanae**	**48.46**	**166**	*e*P		**P**	**20 15 20.6**	**+0.2**
SNAA	**Sanae**	**48.46**	**166**	*e*P		**P**	**20 15 18.5**	**-1.9**
	comp=Z,114nm,1.6s,mb5.7							
VNA2	**Neumayer--Watz**	**48.49**	**164**	*e*P		**P**	**20 15 19.0**	**-1.6**
VNA2				*e*			20 15 28.4	
VNA2				*e*			20 15 32.0	
VNA1	**Neumayer--Stat**	**48.60**	**163**	*e*P		**P**	**20 15 22.7**	**+1.2**
VNA1				*e*			20 15 29.6	
VNA1				*e*			20 15 34.1	
DZM	**Mont Dzumac**	**48.84**	**297**	*e*P		**P**	**20 15 20.8**	**-3.1**
TAOE	**Nuku Hiva Isla**	**49.10**	**9**	*e*S		**S**	**20 22 29.8**	**-1.0**
	comp=Z,9μm,25.4s							
TAOE				*e*LQ			20 26 57.4	
	comp=Z,45μm,30.3s							
TAOE				*e*LR		LR	20 29 31.6	
	comp=Z,68μm,24.8s,baz=197							
ARMA	**Armidale**	**49.59**	**276**	*e*P		**P**	**20 15 31.4**	**+1.8**
ARMA				*e*pP		pP	20 15 36.2	+3.4
ARMA				*e*S		**S**	**20 22 39.5**	**+2.0**
MAIT	**Maitri**	**50.88**	**171**	*e*P		**P**	**20 15 40.5**	**+1.7**
NVL	**N'lazarevskaya**	**50.90**	**171**	*c i*P		**P**	**20 15 39.3**	**+0.3**
NVL				*e**PP		pP	20 15 47.0	+4.9
NVL				pmax		pmax		
	comp=Z,47nm,2.2s,mb5.0							
NVL				MLR		MLR		
	comp=N,12μm,17.0s,MS6.0							
NVL				MLR		MLR		
	comp=E,6μm,17.0s,MS6.0							
NVL				MLR		MLR		
	comp=Z,17μm,17.0s,MS6.1							
MAW	**Mawson**	**52.99**	**194**	*e*P		**P**	**20 15 55.9**	**+1.3**
	comp=Z,14nm,0.9s,mb4.9							
MAW	**Mawson**	**52.99**	**194**	P		**P**	**20 15 56.0**	**+1.5**
	comp=Z,17nm,0.9s,mb5.0,baz=197,slow=7.4,SNR=10							
MAW				LR		LR	20 36 12.6	
	comp=Z,10μm,19.1s,MS5.9,baz=155,slow=34							
MAW	**Mawson**	**52.99**	**194**	P		**P**		
MAW				pmax		pmax		
	comp=Z,17nm,0.9s							
MAW				MLR		MLR		
	comp=Z,10μm,19.1s							
SYO	**Syowa Base**	**53.43**	**183**	*i*pP		pP	20 15 57.0	-4.0
SYO	**Syowa Base**	**53.43**	**183**	*i*PcP		PcP	20 17 02.0	-2.8
STKA	**Stephens Creek**	**53.83**	**266**	*e*P		**P**	**20 16 01.9**	**+0.7**
	comp=Z,22nm,0.9s,mb5.1							
STKA				*e*pP		pP	20 16 08.0	+3.6
STKA				*e*S		**S**	**20 23 41.7**	**+5.9**
STKA	**Stephens Creek**	**53.83**	**266**	P		**P**	**20 16 01.3**	**+0.1**
	comp=Z,25nm,0.8s,mb5.2,baz=129,slow=6.7,SNR=18							
STKA				LR		LR	20 35 49.4	
	comp=Z,10μm,18.5s,MS5.9,baz=132,slow=33							
FUNA	**Funafuti**	**55.55**	**318**	PFAKE			20 16 30.0	+16
FUNA				LR		LR		
	comp=Z,15μm,19.0s,MS6.1							
TRQA	**Tornquist**	**56.37**	**109**	*e*P		**P**	**20 16 17.0**	**-2.5**
	comp=Z,314nm,2.1s,mb6.0							
TRQA				LR		LR		
	comp=Z,4μm,19.0s,MS5.5							
CFAA	**Coronel Fontan**	**58.12**	**100**	P		**P**	**20 16 31.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=225,slow=7.0,SNR=6.3							
LCO	**Las Campanas**	**58.85**	**96**	PFAKE			20 16 50.0	+13
LCO				LR		LR		
	comp=Z,4μm,21.0s,MS5.6							
XMAS	**Kiritimati**	**60.19**	**348**	PFAKE			20 17 00.0	+14
XMAS				LR		LR		
	comp=Z,13μm,21.0s,MS6.0							
CTA	**Charters Tower**	**60.77**	**279**	*e*P		**P**	**20 16 50.6**	**+0.2**
	comp=Z,20nm,0.9s,mb5.2							
CTA				*e*pP		pP	20 16 56.8	+3.2
CTA				*e*S		**S**	**20 25 13.0**	**+5.7**
CTA	**Charters Tower**	**60.77**	**279**	P		**P**	**20 16 50.4**	**0.0**
	comp=Z,29nm,0.9s,mb5.4,baz=155,slow=7.9,SNR=20							
CTA	**Charters Tower**	**60.77**	**279**	*e*P		**P**	**20 16 50.6**	**+0.2**
CTA				*e**PP		pP	20 16 56.8	+3.2
CTA				*e*S		**S**	**20 25 13.0**	**+5.7**
CTA				pmax		pmax		
	comp=Z,20nm,0.9s							
CTAO	**Charters Tower**	**60.77**	**279**	*e*P		**P**	**20 16 50.5**	**+0.1**
CTAO				pmax		pmax		
	comp=Z,70nm,0.9s,mb5.8							
CTAO				MLR		MLR		
	comp=Z,6μm,21.0s,MS5.7							
CTAO	**Charters Tower**	**60.77**	**279**	*e*P		**P**	**20 16 50.5**	**+0.1**
	comp=Z,70nm,0.9s,mb5.8							
CTAO				LR		LR		
	comp=Z,6μm,21.0s,MS5.7							
FORT	**Forrest**	**61.85**	**256**	*e*P		**P**	**20 16 57.6**	**0.0**
	comp=Z,83nm,0.9s,mb5.9							
HNR	**Honiara**	**62.84**	**298**	P		**P**	**20 17 00.2**	**-4.2**
HNR				pmax		pmax		
	comp=Z,232nm,1.2s,mb6.2							
HNR				MLR		MLR		
	comp=Z,2μm,22.0s,MS5.3							
HNR	**Honiara**	**62.84**	**298**	P		**P**	**20 17 00.1**	**-4.2**
	comp=Z,232nm,1.2s,mb6.2							
HNR				LR		LR		
	comp=Z,2μm,22.0s,MS5.3							
ASAR	**Alice Springs**	**64.45**	**266**	P		**P**	**20 17 14.1**	**-0.9**
	comp=Z,36nm,0.9s,mb5.4,baz=141,slow=6.5,SNR=54							
ASAR				PKP2bc			20 46 07.9	
	comp=Z,0.3nm,0.4s,baz=298,slow=2.7,SNR=5.1							
ASAR	**Alice Springs**	**64.45**	**266**	P		**P**	**20 17 14.1**	**-0.9**
ASAR				⇑*e*			20 46 07.9	
LVC	**Limon Verde**	**64.93**	**93**	P		**P**	**20 17 18.8**	**+0.7**
	comp=Z,15nm,0.9s,mb5.0,baz=213,slow=6.1,SNR=9.0							
LVC	**Limon Verde**	**64.93**	**93**	P		**P**	**20 17 18.8**	**+0.7**
LVC				LR		LR		
	comp=Z,3μm,21.0s,MS5.4							
NWAO	**Narrogin (SRO)**	**65.63**	**247**	P		**P**	**20 17 21.8**	**-0.7**
	comp=Z,24nm,1.1s,mb5.1,baz=157,slow=4.9,SNR=4.5							
NWAO	**Narrogin (SRO)**	**65.63**	**247**	P		**P**	**20 17 21.8**	**-0.7**
NWAO				pmax		pmax		
	comp=Z,24nm,1.1s							
NWAO	**Narrogin (SRO)**	**65.63**	**247**	*e*P		**P**	**20 17 20.5**	**-2.0**
NWAO				LR		LR		
	comp=Z,5μm,21.0s,MS5.7							
KLBR	**Kellerberrin**	**66.45**	**248**	*e*P		**P**	**20 17 29.0**	**+1.2**
	comp=Z,51nm,1.0s,mb5.5							
MUN	**Mundaring**	**66.90**	**247**	*e*P		**P**	**20 17 29.5**	**-1.2**
MUN				*e*S		S	20 26 20.9	-2.5
WB2	**Warramunga Arr**	**67.24**	**269**	*e*P		**P**	**20 17 32.0**	**-1.0**
WB2				*e*pP		pP	20 17 38.0	+1.8
WB2				*e*S		S	20 26 29.8	+2.1
WRA	**Warramunga Arr**	**67.25**	**269**	P		**P**	**20 17 32.3**	**-0.8**
	comp=Z,32nm,0.9s,mb5.3,baz=147,slow=5.6,SNR=42							
WRA				LR		LR	20 43 57.6	
	comp=Z,6μm,18.8s,MS5.8,baz=145,slow=33							
WRA	**Warramunga Arr**	**67.25**	**269**	P		**P**	**20 17 32.3**	**-0.8**
WRA				LR		LR	20 43 57.6	
WRAB	**Tennant Creek**	**67.25**	**269**	P		**P**	**20 17 32.0**	**-1.0**
	comp=Z,475nm,1.1s,SNR=12							
WRAB	**Tennant Creek**	**67.25**	**269**	*e*P		**P**	**20 17 29.9**	**-3.1**
WRAB				pmax		pmax		
	comp=Z,89nm,1.0s,mb5.8							
WRAB				MLR		MLR		
	comp=Z,6μm,20.0s,MS5.8							
WRAB	**Tennant Creek**	**67.25**	**269**	*e*P		**P**	**20 17 29.9**	**-3.2**
	comp=Z,89nm,1.0s,mb5.8							
WRAB				LR		LR		
	comp=Z,6μm,20.0s,MS5.8							
COEN	**Coen**	**67.47**	**280**	P		**P**	**20 17 31.5**	**-2.9**
	comp=Z,24nm,1.1s,mb5.1							
CPUP	**Villa Florida**	**68.04**	**105**	P		**P**	**20 17 37.4**	**-0.6**
	comp=Z,7.6nm,0.8s,mb4.8,baz=218,slow=7.0,SNR=13							
ARE	**Arequipa**	**68.59**	**87**	P		**P**	**20 17 42.0**	**+0.6**
PMG	**Port Moresby**	**69.22**	**286**	P		**P**	**20 17 43.2**	**-2.2**
PMG				pmax		pmax		
	comp=Z,107nm,1.5s							
PMG				MLR		MLR		
	comp=Z,5μm,21.0s							
PMG	**Port Moresby**	**69.22**	**286**	P		**P**	**20 17 43.2**	**-2.2**
	comp=Z,106nm,1.5s,mb5.5							
PMG				LR		LR		
	comp=Z,5μm,21.0s,MS5.8							
NNA	**Nana**	**69.46**	**80**	PFAKE			20 18 00.0	+13
NNA				LR		LR		
	comp=Z,2μm,19.0s,MS5.4							
LPAZ	**La Paz**	**70.53**	**90**	P		**P**	**20 17 54.5**	**+1.1**
	comp=Z,26nm,1.3s,mb5.0,baz=211,slow=2.5,SNR=10							
PAYG	**Puerto Ayora**	**72.38**	**61**	PFAKE			20 18 20.0	+15
PAYG				LR		LR		
	comp=Z,884nm,19.0s,MS5.0							
FITZ	**Fitzroy Crossi**	**73.41**	**262**	*e*P		**P**	**20 18 10.0**	**-0.7**
	comp=Z,15nm,0.9s,mb4.9							
FITZ				*e*pP		pP	20 18 16.4	+2.4
FITZ				*e*S		S	20 27 42.0	+2.2
FITZ	**Fitzroy Crossi**	**73.41**	**262**	P		**P**	**20 18 10.1**	**-0.6**
	comp=Z,8.0nm,0.9s,mb4.6,baz=152,slow=10,SNR=14							
FITZ				LR		LR	20 46 08.8	
	comp=Z,7μm,21.1s,MS5.9,baz=145,slow=32							
MBWA	**Marble Bar**	**73.99**	**256**	*e*P		**P**	**20 18 13.2**	**-0.9**
	comp=Z,55nm,1.1s,mb5.4							
MBWA				LR		LR		
	comp=Z,4μm,19.0s,MS5.7							
POHA	**Pohakuloa**	**77.54**	**352**	PFAKE			20 18 50.0	+16
POHA				LR		LR		
	comp=Z,5μm,19.0s,MS5.8							
TRIS	**Tristan da Cun**	**78.20**	**145**	PFAKE			20 18 50.0	+12
TRIS				LR		LR		
	comp=Z,7μm,20.0s,MS6.0							
OTAV	**Otavalo**	**78.98**	**72**	*e*P		**P**	**20 18 41.8**	**-0.6**
OTAV				LR		LR		
	comp=Z,2μm,22.0s,MS5.5							
KIP	**Kipapa**	**79.41**	**350**	PFAKE			20 19 00.0	+16
KIP				LR		LR		
	comp=Z,8μm,19.0s,MS6.1							
BATI	**Baumata**	**81.02**	**265**	P		**P**	**20 18 52.5**	**-1.0**
	comp=Z,16nm,0.8s,mb5.0,baz=153,slow=2.3,SNR=2.8							
BATI				LR		LR	20 51 12.6	
	comp=Z,11μm,21.3s,MS6.2,baz=171,slow=33							
BDFB	**Brasilia**	**81.71**	**106**	P		**P**	**20 18 56.6**	**-0.6**
	comp=Z,10nm,0.9s,mb4.7,baz=154,slow=3.5,SNR=5.8							
BDFB				LR		LR	20 52 13.4	
	comp=Z,6μm,18.4s,MS6.0,baz=16,slow=34							
JTS	**JuntasAbangare**	**84.48**	**61**	P		**P**	**20 19 10.4**	**-0.9**
	comp=Z,3.1nm,0.3s,mb4.9,baz=230,slow=6.2,SNR=4.8							
JTS	**JuntasAbangare**	**84.48**	**61**	P		**P**	**20 19 10.4**	**-0.9**
JTS				LR		LR		
	comp=Z,2μm,19.0s,MS5.5							
ROSC	**El Rosal**	**85.03**	**73**	LR		LR	20 50 59.4	
	comp=Z,3μm,18.8s,MS5.8,baz=190,slow=31							
BCIP	**Isla Barro Col**	**85.96**	**66**	PFAKE			20 19 30.0	+11
BCIP				LR		LR		
	comp=Z,6μm,21.0s,MS6.0							
CMIG	**Matias Romero**	**86.16**	**49**	P		**P**	**20 19 19.5**	**-0.1**
	comp=Z,7.2nm,0.9s,mb4.9,baz=231,slow=2.2,SNR=9.4							
TGUH	**Tegucigalpa,Un**	**86.72**	**57**	*e*P		**P**	**20 19 23.4**	**+0.9**
	comp=Z,83nm,1.2s,mb5.8							
TGUH				LR		LR		
	comp=Z,1μm,21.0s,MS5.3							
KAPI	**Kappang**	**87.45**	**265**	P		**P**	**20 19 25.0**	**-1.1**
	comp=Z,33nm,1.1s,mb5.5,baz=180,slow=9.1,SNR=6.3							
KAPI				LR		LR	20 55 15.9	
	comp=Z,6μm,20.8s,MS6.0,baz=161,slow=33							
KAPI	**Kappang**	**87.45**	**265**	*e*P		**P**	**20 19 22.6**	**-3.6**
	comp=Z,91nm,1.3s,mb5.8							
KAPI				LR		LR		
	comp=Z,6μm,20.0s,MS6.0							
MIDW	**Midway**	**89.33**	**334**	PFAKE			20 19 50.0	+15
MIDW				LR		LR		
	comp=Z,5μm,20.0s,MS5.9							
SUR	**Sutherland**	**89.63**	**170**	PFAKE			20 19 50.0	+14
SUR				LR		LR		
	comp=Z,8μm,20.0s,MS6.1							
SDV	**Santo Domingo**	**90.35**	**74**	P		**P**	**20 19 40.3**	**+0.6**
	comp=Z,9.0nm,0.3s,mb5.6,baz=207,slow=22,SNR=3.8							
SDV	**Santo Domingo**	**90.35**	**74**	P		**P**	**20 19 40.4**	**+0.6**
SDV				LR		LR		
	comp=Z,678nm,20.0s,MS5.1							
TEIG	**Tepich**	**91.72**	**54**	P		**P**	**20 19 46.6**	**+0.7**
	comp=Z,26nm,1.0s,mb5.5,baz=252,slow=6.0,SNR=6.5							
TEIG	**Tepich**	**91.72**	**54**	P		**P**	**20 19 44.5**	**-1.4**
	comp=Z,44nm,1.1s,mb5.7							
TEIG				LR		LR		
	comp=Z,1μm,19.0s,MS5.4							
COCO	**West Island**	**93.02**	**242**	PFAKE			20 20 00.0	+7.8
COCO				LR		LR		
	comp=Z,1μm,20.0s,MS5.3							
SNCC	**San Nicolas Is**	**93.60**	**23**	PFAKE			20 20 10.0	+16
SNCC				LR		LR		
	comp=Z,4μm,20.0s,MS5.8							
BAR	**Barrett**	**93.68**	**25**	PFAKE			20 20 10.0	+15
BAR				LR		LR		
	comp=Z,4μm,20.0s,MS5.8							
BOSA	**Boshof**	**93.72**	**173**	LR		LR	20 57 45.5	
	comp=Z,11μm,20.7s,MS6.3,baz=176,slow=33							
TXAR	**Lajitas Array**	**94.13**	**37**	P		**P**	**20 19 57.1**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=195,slow=7.8,SNR=4.8							
TXAR				PKKPbc		PKKPbc	20 36 56.8	-0.1
	comp=Z,0.3nm,0.8s,baz=48,slow=1.9,SNR=3.6							
KVTX	**Kingsville**	**94.46**	**42**	PFAKE			20 20 10.0	+12
KVTX				LR		LR		
	comp=Z,2μm,21.0s,MS5.4							
DAV	**Davao City (W)**	**94.47**	**276**	PFAKE			20 20 10.0	+11
DAV				LR		LR		
	comp=Z,2μm,20.0s,MS5.5							
GLA	**Glamis**	**94.47**	**27**	PFAKE			20 20 10.0	+12
GLA				LR		LR		
	comp=Z,3μm,20.0s,MS5.7							
PFO	**Pinyon Flat Ob**	**94.62**	**25**	PFAKE			20 20 10.0	+11
PFO				LR		LR		
	comp=Z,4μm,20.0s,MS5.8							
TUC	**Tucson**	**94.80**	**30**	PFAKE			20 20 10.0	+10
TUC				LR		LR		
	comp=Z,2μm,19.0s,MS5.7							
MWC	**Mount Wilson**	**94.85**	**24**	PFAKE			20 20 10.0	+10
MWC				LR		LR		
	comp=Z,4μm,20.0s,MS5.8							
ISA	**Isabella**	**96.15**	**23**	PFAKE			20 20 20.0	+14
ISA				LR		LR		
	comp=Z,4μm,20.0s,MS5.8							
GSC	**Goldstone**	**96.17**	**25**	PFAKE			20 20 20.0	+14
GSC				LR		LR		
	comp=

WDC Whiskeytown Da 100.13 19 PFAKE 20 20 40.0 +16
WDC LR LR
comp=Z,5µm,19.0s,MS6.1
MVU Marysvale 100.30 27 PFAKE 20 20 40.0 +15
MVU LR LR
comp=Z,3µm,20.0s,MS5.8
SJG San Juan 100.44 73 PFAKE 20 20 40.0 +14
SJG LR LR
comp=Z,2µm,19.0s,MS5.6
WMOK Wichita Mounta 100.70 39 PFAKE 20 20 40.0 +13
WMOK LR LR
comp=Z,2µm,19.0s,MS5.6
BMN Battle Mountai 101.00 23 PFAKE 20 20 40.0 +12
BMN LR LR
comp=Z,3µm,19.0s,MS5.9
YBH Yreka Blue Hor 101.22 18 PFAKE 20 20 40.0 +11
YBH LR LR
comp=Z,5µm,19.0s,MS6.0
SDCO Great Sand Dun 101.37 33 PFAKE 20 20 40.0 +10
SDCO LR LR
comp=Z,3µm,19.0s,MS5.8
VBMS Vicksburg 101.43 46 PFAKE 20 20 40.0 +10
VBMS LR LR
comp=Z,1µm,19.0s,MS5.4
DWPF Disney 101.60 55 PFAKE 20 20 40.0 +9.0
DWPF LR LR
comp=Z,890nm,22.0s,MS5.2
ELK Elko 101.73 24 PFAKE 20 20 40.0 +8.4
ELK LR LR
comp=Z,4µm,22.0s,MS5.8
BRAL Brewton 101.74 49 PFAKE 20 20 40.0 +8.4
BRAL LR LR
comp=Z,908nm,19.0s,MS5.3
DUG Dugway 101.76 26 PFAKE 20 20 40.0 +8.3
DUG LR LR
comp=Z,3µm,19.0s,MS5.8
MOD Modoc 101.82 20 PFAKE 20 20 40.0 +8.0
MOD LR LR
comp=Z,3µm,22.0s,MS5.8
MPU Maple Canyon 101.87 27 PFAKE 20 20 40.0 +7.8
MPU LR LR
comp=Z,4µm,21.0s,MS5.9
HUMO Hull Mountain 102.04 18 PFAKE 20 20 40.0 +7.0
HUMO LR LR
comp=Z,2µm,21.0s,MS5.7
TSUM Tsumeb 102.28 165 PFAKE 20 20 50.0 +16
TSUM LR LR
comp=Z,6µm,20.0s,MS6.1
MIAR Mount Ida 102.35 43 PFAKE 20 20 50.0 +16
MIAR LR LR
comp=Z,1µm,20.0s,MS5.3
WVOR Wild Horse Val 102.65 21 PFAKE 20 20 50.0 +14
WVOR LR LR
comp=Z,3µm,21.0s,MS5.8
ISCO Idaho Springs 103.25 32 PFAKE 20 20 50.0 +12
ISCO LR LR
comp=Z,3µm,20.0s,MS5.7
HWUT Hardware Ranch 103.39 27 PFAKE 20 20 50.0 +11
HWUT LR LR
comp=Z,3µm,20.0s,MS5.8
LRAL Lakeview Retre 103.53 49 PFAKE 20 20 50.0 +10
LRAL LR LR
comp=Z,1µm,19.0s,MS5.5
OXF Oxford 103.88 46 PFAKE 20 20 50.0 +8.8
OXF LR LR
comp=Z,1µm,19.0s,MS5.4
COR Corvallis 103.91 17 PFAKE 20 20 50.0 +8.7
COR LR LR
comp=Z,4µm,22.0s,MS5.9
CBKS Cedar Bluff 104.10 36 PFAKE 20 20 50.0 +7.9
CBKS LR LR
comp=Z,3µm,19.0s,MS5.9
ASCN Ascension 104.18 131 PFAKE 20 20 50.0 +7.5
ASCN LR LR
comp=Z,1µm,19.0s,MS5.5
HLID Hailey 104.60 24 PFAKE 20 21 00.0 +16
HLID LR LR
comp=Z,5µm,20.0s,MS6.0
AHID Auburn Hatcher 104.60 27 PFAKE 20 21 00.0 +16
AHID LR LR
comp=Z,2µm,20.0s,MS5.7
BW06 Boulder Array 104.98 28 PFAKE 20 21 00.0 +14
BW06 LR LR
comp=Z,3µm,20.0s,MS5.8
BMO Blue Mountains 105.23 22 PFAKE 20 25 10.0 +10
BMO LR LR
comp=Z,3µm,19.0s,MS5.8
GOGA Godfrey 105.31 51 PFAKE 20 25 10.0 +9.3
GOGA LR LR
comp=Z,2µm,19.0s,MS5.6
OGNE Ogallala 105.35 34 PFAKE 20 25 10.0 +9.5
OGNE LR LR
comp=Z,2µm,21.0s,MS5.7
KSU1 Kansas State U 105.38 39 PFAKE 20 25 10.0 +9.3
KSU1 LR LR
comp=Z,2µm,19.0s,MS5.6
WVT Waverly 105.92 46 PFAKE 20 25 10.0 +8.3
WVT LR LR
comp=Z,1µm,19.0s,MS5.4
HAWA Hanford 106.30 20 PFAKE 20 25 10.0 +7.9
HAWA LR LR
comp=Z,4µm,19.0s,MS6.0
CCM Cathedral Cave 106.33 43 PFAKE 20 25 10.0 +7.6
CCM LR LR
comp=Z,907nm,19.0s,MS5.3
YMR Madison River 106.43 26 PFAKE 20 25 10.0 +7.6
YMR LR LR
comp=Z,1µm,21.0s,MS5.5
NHSC New Hope 106.44 54 PFAKE 20 25 10.0 +7.2
NHSC LR LR
comp=Z,2µm,19.0s,MS5.6
LKWY Lake 106.47 26 PFAKE 20 25 10.0 +7.5
LKWY LR LR
comp=Z,4µm,19.0s,MS6.0
NLWA Neilton Lookou 106.56 16 PFAKE 20 25 10.0 +7.5
NLWA LR LR
comp=Z,4µm,20.0s,MS6.0
LSZ Lusaka 107.13 175 PFAKE 20 25 20.0 +15
LSZ LR LR
comp=Z,7µm,21.0s,MS6.2
BOZ Bozeman (W) 107.20 25 PFAKE 20 25 20.0 +16
BOZ LR LR
comp=Z,2µm,22.0s,MS5.5
RLMT Red Lodge 107.26 27 PFAKE 20 25 20.0 +16
RLMT LR LR
comp=Z,1µm,21.0s,MS5.5
DGAR Diego Garcia 107.54 222 PFAKE 20 25 20.0 +14
DGAR LR LR
comp=Z,4µm,21.0s,MS5.9
RSSD Black Hills 107.69 31 PFAKE 20 25 20.0 +15
RSSD LR LR
comp=Z,1µm,19.0s,MS5.5
MSO Missoula 107.81 23 PFAKE 20 25 20.0 +15
MSO LR LR
comp=Z,2µm,22.0s,MS5.5
TZTN Tazewell 107.98 49 PFAKE 20 25 20.0 +14
TZTN LR LR
comp=Z,1µm,19.0s,MS5.5
WCI Wyandotte Cave 108.34 46 PFAKE 20 25 20.0 +14
WCI LR LR
comp=Z,860nm,19.0s,MS5.3
NEW Newport 108.55 21 PFAKE 20 25 20.0 +14
NEW LR LR
comp=Z,3µm,19.0s,MS5.9
CNNC Cliffs of the 109.25 54 PFAKE 20 25 20.0 +12
CNNC LR LR
comp=Z,2µm,19.0s,MS5.7
LAO LASA Array 109.49 29 PFAKE 20 25 20.0 +12
LAO LR LR
comp=Z,3µm,20.0s,MS5.9
ECSD EROS,Sioux Fal 109.55 36 PFAKE 20 25 20.0 +12
ECSD LR LR
comp=Z,3µm,20.0s,MS5.9
BLA Blacksburg 109.84 51 PFAKE 20 25 20.0 +11
BLA LR LR
comp=Z,1µm,19.0s,MS5.5
EGMT Eagleton 109.87 26 PFAKE 20 25 20.0 +11
EGMT LR LR
comp=Z,2µm,20.0s,MS5.7
JFWS Jewell Farm 110.97 41 PFAKE 20 25 20.0 +9.0
JFWS LR LR
comp=Z,2µm,19.0s,MS5.7
YHNB Yeheng 111.28 283 PFAKE 20 25 20.0 +7.8
YHNB LR LR
comp=Z,2µm,21.0s,MS5.6

ACSO Alum Creek Sta 111.37 48 PFAKE 20 25 20.0 +8.2
ACSO LR LR
comp=Z,1µm,19.0s,MS5.5
TATO Taipei 111.47 283 PFAKE 20 25 20.0 +7.5
TATO LR LR
comp=Z,2µm,22.0s,MS5.6
DGMT Dagmar 111.66 29 PFAKE 20 25 20.0 +7.9
DGMT LR LR
comp=Z,2µm,20.0s,MS5.8
ADK Adak 111.93 341 PFAKE 20 25 20.0 +7.5
ADK LR LR
comp=Z,5µm,21.0s,MS6.1
MCWV Mont Chateau 112.15 50 PFAKE 20 25 30.0 +17
MCWV LR LR
comp=Z,3µm,20.0s,MS5.8
MAJO Matsushiro 112.72 303 PFAKE 20 25 30.0 +15
MAJO LR LR
comp=Z,2µm,22.0s,MS5.6
MAT Matsushiro 112.72 303 PP PP 20 26 11.0 +8.4
QIZ Qiongzhong 112.81 270 PKP PKiKP 20 25 12.8 -2.4
QIZ PP PP 20 26 04.1 +0.8
QIZ SS SS 20 41 47.4 +1.6
QIZ PP PP
comp=Z,182nm,7.7s
QIZ LR LR
comp=N,776nm,23.2s
QIZ LR LR
comp=Z,2µm,30.2s
QIZ Qiongzhong 112.81 270 PFAKE 20 25 30.0 +15
QIZ LR LR
comp=Z,1µm,20.0s,MS5.5
BBSR BB Station 112.97 66 PFAKE 20 25 30.0 +15
BBSR LR LR
comp=Z,893nm,20.0s,MS5.4
AGMN Agassiz Refuge 113.87 35 PFAKE 20 25 30.0 +14
AGMN LR LR
comp=Z,3µm,22.0s,MS5.8
COWI Conover 114.13 40 PFAKE 20 25 30.0 +13
COWI LR LR
comp=Z,1µm,20.0s,MS5.6
WRAK Wrangell Islan 114.45 9 PFAKE 20 25 30.0 +13
WRAK LR LR
comp=Z,4µm,22.0s,MS5.9
SMY Shemya 114.58 335 PFAKE 20 25 30.0 +12
SMY LR LR
comp=Z,2µm,19.0s,MS5.7
GLMI Grayling 114.66 44 PFAKE 20 25 30.0 +12
GLMI LR LR
comp=Z,2µm,21.0s,MS5.6
SIT Sitka 114.86 7 PFAKE 20 25 30.0 +12
SIT LR LR
comp=Z,6µm,20.0s,MS6.2
EYMN Ely 114.94 38 PFAKE 20 25 30.0 +12
EYMN LR LR
comp=Z,3µm,20.0s,MS5.9
ERM Erimo 115.11 309 PFAKE 20 25 30.0 +11
ERM LR LR
comp=Z,2µm,20.0s,MS5.6
MSEY Mahe Island 115.13 205 PFAKE 20 25 30.0 +10
MSEY LR LR
comp=Z,3µm,19.0s,MS5.9
KDAK Kodiak Island 115.28 357 PFAKE 20 25 30.0 +11
KDAK LR LR
comp=Z,574nm,20.0s,MS5.2
BINY Binghamton 115.88 51 PFAKE 20 25 30.0 +10
BINY LR LR
comp=Z,3µm,19.0s,MS5.9
SSE Sheshan 116.56 287 *e*PKP PKPdf 20 25 25.9 +3.8
SSE PP PP 20 26 31.9 +2.1
SSE SS SS 20 42 28.8 -6.4
SSE PP PP
comp=Z,42nm,12.0s
SSE LR LR
comp=N,579nm,27.6s,MS5.3
SSE LR LR
comp=E,857nm,27.6s,MS5.3
SSE LR LR
comp=Z,1µm,30.4s,MS5.3
PALK Pallekele 117.58 236 PFAKE 20 25 40.0 +15
PALK LR LR
comp=Z,2µm,22.0s,MS5.8
FFC Flin Flon 117.94 28 PFAKE 20 25 40.0 +16
FFC LR LR
comp=Z,2µm,20.0s,MS5.8
HRV Adam Dziewonsk 118.02 54 PFAKE 20 25 40.0 +16
HRV LR LR
comp=Z,2µm,20.0s,MS5.7
WES Weston 118.02 54 PFAKE 20 25 40.0 +16
WES LR LR
comp=Z,1µm,19.0s,MS5.5
NCB Newcomb 118.07 51 PFAKE 20 25 40.0 +15
NCB LR LR
comp=Z,2µm,20.0s,MS5.7
CM31 Chiang Mai Arr 118.15 260 PFAKE 20 25 40.0 +15
CM31 LR LR
comp=Z,2µm,20.0s,MS5.6
CMAR Chiang Mai Arr 118.15 260 PKP PKPdf 20 25 24.9 -0.6
comp=Z,2.4nm,0.8s,baz=198,slow=2.4,SNR=15
CMAR PP PP 20 26 40.4 -0.4
comp=Z,2.1nm,1.0s,baz=171,slow=7.0,SNR=5.5
CHTO Chiang Mai 118.44 260 PFAKE 20 25 40.0 +14
CHTO LR LR
comp=Z,2µm,20.0s,MS5.7
LONY Lake Ozonia 118.45 51 PFAKE 20 25 40.0 +15
LONY LR LR
comp=Z,2µm,20.0s,MS5.7
NJ2 Nanjing 118.53 285 *e*PKP PKPdf 20 25 21.3 -4.5
NJ2 XPKP 20 25 35.8
NJ2 PP PP 20 26 44.0 +0.5
NJ2 PKS 20 28 56.0
NJ2 PP PP
comp=Z,1µm,10.2s
PET Petropavlovsk 118.91 326 PFAKE 20 25 40.0 +14
PET LR LR
comp=Z,4µm,22.0s,MS6.0
INCN Inchon 118.91 295 PFAKE 20 25 40.0 +14
INCN LR LR
comp=Z,932nm,22.0s,MS5.4
PMR Palmer 119.03 359 PFAKE 20 25 40.0 +14
PMR LR LR
comp=Z,5µm,20.0s,MS6.2
LBNH Lisbon 119.26 53 PFAKE 20 25 40.0 +13
LBNH LR LR
comp=Z,2µm,21.0s,MS5.8
PETK Petropavlovsk- 119.27 325 PKP PKPdf 20 25 25.2 -1.3
comp=Z,3.5nm,1.0s,baz=131,slow=6.1,SNR=3.8
YSS Yuzh-Sakhalins 119.34 312 PFAKE 20 25 40.0 +13
YSS LR LR
comp=Z,498nm,21.0s,MS5.1
GYA Guiyang 120.53 272 PDIF Pdif 20 21 56.3 +1.1
GYA PKP PKPdf 20 25 31.4 +1.5
GYA PP PP 20 27 03.8 +6.5
GYA PKS 20 29 06.3
GYA SKS SKSdf 20 32 41.8 +0.1
GYA SKKS SKKSac 20 33 54.9 -1.6
GYA SS SS 20 43 29.6 +3.1
GYA PP PP
comp=Z,640nm,8.4s
GYA LR LR
comp=N,5µm,21.0s,MS6.2
GYA LR LR
comp=E,4µm,20.9s,MS6.2
GYA LR LR
comp=Z,9µm,21.6s,MS6.4
MCK McKinley 121.18 359 *e*PKIKP PKPdf 20 25 29.5 -0.4
KMBO Kilima Mbogo 121.18 185 PFAKE 20 25 40.0 +8.4
KMBO LR LR
comp=Z,8µm,20.0s,MS6.4
PKME Peaks-Kenny Pk 121.21 54 PFAKE 20 25 40.0 +9.5
PKME LR LR
comp=Z,1µm,20.0s,MS5.6
KMI Kunming 121.56 268 PKP PKPdf 20 25 30.1 -1.8
KMI XPKP 20 25 40.4
KMI PP PP 20 27 07.3 +3.0
KMI SKKS SKKSac 20 34 01.3 -2.0
KMI SS SS 20 43 40.4 +0.7
KMI PP PP
comp=Z,237nm,9.0s
KMI LR LR
comp=N,618nm,20.7s,MS5.5
KMI LR LR
comp=E,730nm,17.5s,MS5.5
KMI LR LR
comp=Z,2µm,28.7s
DAWY Dawson 121.65 4 *e*PKPdf PKPdf 20 25 29.9 -0.8

COLA College 122.32 360 PKIKP PKPdf 20 25 30.3 -1.7
COLA MLR MLR
comp=Z,3µm,19.0s,MS6.0
YKA Yellowknife Ar 122.55 17 PKP PKPdf 20 25 32.9 +0.4
comp=Z,1.1nm,0.8s,baz=182,slow=2.6,SNR=6.0
MDJ Mudanjiang 123.09 302 PKP PKPdf 20 25 35.5 +1.3
MDJ PP PP 20 27 16.3 +1.7
MDJ SS SS 20 44 00.5 +1.4
MDJ LR LR
comp=N,1µm,23.7s,MS5.7
MDJ LR LR
comp=E,1µm,22.3s,MS5.7
MDJ LR LR
comp=Z,2µm,23.7s,MS5.8
MDJ Mudanjiang 123.09 302 PFAKE 20 25 50.0 +16
MDJ LR LR
comp=Z,2µm,22.0s,MS5.8
CN2 Changchun 124.38 299 *e*PKP PKPdf 20 25 36.9 +0.2
CD2 Chengdu 125.60 273 *e*PKP PKPdf 20 25 41.0 +1.5
CD2 PP PP 20 27 33.4 +1.9
CD2 PKS 20 29 16.8
CD2 SKS SKSdf 20 32 47.8 -3.2
CD2 SKKS SKKSac 20 34 26.0 -3.1
CD2 SS SS 20 44 30.3 -0.6
CD2 PP PP
comp=Z,280nm,7.2s
CD2 LR LR
comp=N,930nm,26.4s,MS5.6
CD2 LR LR
comp=E,1µm,22.8s,MS5.6
CD2 LR LR
comp=Z,1µm,22.8s,MS5.5
KLR Kul'dur 125.67 307 *e*PKIKP PKPdf 20 25 35.7 -3.2
BJT Baijiatuau 126.06 289 PFAKE 20 25 50.0 +10
BJT LR LR
comp=Z,2µm,20.0s,MS5.7
HHC Hu-ho-hao-te 129.02 287 *e*PKP PKPdf 20 25 44.8 -0.8
HHC PP PP 20 27 56.9 +2.8
HHC PKS 20 29 20.3
HHC SKS SKSdf 20 32 55.4 -1.4
HHC SKKS SKKSac 20 34 48.5 -1.6
HHC SS SS 20 45 15.8 +2.4
HHC PP PP
comp=Z,100nm,8.1s
HHC LR LR
comp=N,570nm,20.6s,MS5.5
HHC LR LR
comp=E,710nm,20.4s,MS5.5
HHC LR LR
comp=Z,2µm,21.6s,MS5.7
LZH Lanzhou 129.53 277 *e*PKP PKPdf 20 25 52.3 +5.5
LZH XPKP 20 25 56.8
LZH *e*PP PP 20 27 59.5 +2.1
LZH SKKS SKKSac 20 34 54.5 +1.0
LZH SS SS 20 45 19.8 +0.1
LZH PP PP
comp=Z,348nm,9.8s
LZH LR LR
comp=N,1µm,19.5s
LZH LR LR
comp=Z,2µm,21.0s,MS5.7
TORD Torodi Ar. Bea 129.61 139 PKP PKPdf 20 25 47.5 -0.1
comp=Z,0.8nm,0.7s,baz=206,slow=1.7,SNR=4.9
BILL Bilibino 130.07 339 PFAKE 20 26 00.0 +13
BILL LR LR
comp=Z,2µm,19.0s,MS5.9
LSA Lhasa 131.39 261 PKP PKPdf 20 25 52.0 +1.5
LSA PP PP 20 28 08.3 -1.1
LSA LR LR
comp=Z,1µm,32.3s,MS5.4
LSA Lhasa 131.39 261 *e*PKPdf PKPdf 20 25 50.5 -0.1
LSA LR LR
comp=Z,1µm,20.0s,MS5.6
GTA Gaotai 134.13 277 *e*PKP PKPdf 20 25 57.8 +2.4
YAK Yakutsk 135.60 318 PFAKE 20 26 10.0 +13
YAK LR LR
comp=Z,961nm,19.0s,MS5.5
CIT Chita 135.83 299 *e*PKIKP PKPdf 20 25 56.6 -1.5
ULN Ulaanbaatar 136.25 290 *e*PKIKP PKPdf 20 25 56.3 -2.7
ULN MLR MLR
comp=Z,899nm,21.0s,MS5.5
SONM Songino Array 136.56 290 PKP PKPdf 20 25 59.4 -0.2
comp=Z,1.0nm,0.9s,baz=172,slow=1.6,SNR=4.4
SONM PP PP 20 28 43.6 +1.3
comp=Z,0.5nm,0.8s,baz=152,slow=5.7,SNR=2.7
SONM PKP2ab 20 41 14.7
comp=Z,0.2nm,0.5s,baz=8.7,slow=11,SNR=3.5
SONM Songino Array 136.56 290 PKIKP PKPdf 20 25 59.4 -0.2
SONM 20 28 43.6
BOD Bodaibo 139.22 306 *e*PKHKP 20 25 54.5
BOD *e* 20 26 08.1
BOD pmax pmax
comp=Z,7.0nm,1.2s
BOD pmax pmax
comp=Z,10.0nm,1.5s
ZAK Zakamensk 139.77 291 *e*PKHKP 20 25 55.2
ZAK pmax pmax
comp=Z,4.0nm,1.9s
TAM Tamanrasset 139.87 139 *e*PKHKP 20 26 04.4
TLY Talaya 140.39 293 *i* PKIKP PKPdf 20 26 08.5 +2.0
TLY pmax pmax
comp=Z,10.0nm,1.5s
TLY MLR MLR
comp=Z,2µm,22.0s,MS5.7
TLY Talaya 140.39 293 PFAKE 20 26 20.0 +14
TLY LR LR
comp=Z,1µm,22.0s,MS5.7
IRK Irkutsk 140.42 294 *e*PKIKP PKPdf 20 26 03.8 -2.7
IRK pmax pmax
comp=Z,37nm,2.9s
TIXI Tiksi 141.53 330 PFAKE 20 26 20.0 +12
TIXI LR LR
comp=Z,2µm,20.0s,MS5.8
MOY Mondy 141.70 291 *e*PKIKP PKPdf 20 26 09.5 +0.7
SFJD Kangerlussuaq 143.16 41 PFAKE 20 26 20.0 +9.0
SFJD LR LR
comp=Z,2µm,19.0s,MS5.8
WMQ Urumqi 143.69 272 *e*PKP PKPdf 20 26 13.0 +0.3
WMQ APKP 20 26 20.0
WMQ PP PP 20 29 29.0 +2.9
WMQ PKS 20 29 47.0
WMQ SKS SKSdf 20 33 20.0 -1.8
WMQ SKKS SKKSac 20 36 16.0 -1.8
WMQ SS SS 20 48 05.0 -3.4
WMQ PP PP
comp=Z,484nm,5.4s
WMQ LR LR
comp=N,835nm,17.2s,MS5.7
WMQ LR LR
comp=E,810nm,18.4s,MS5.7
WMQ LR LR
comp=Z,823nm,22.0s,MS5.5
PFVI Vila Bisbo 145.83 109 *e*PKP PKPdf 20 26 17.8 +1.2
MORF Marmelete 146.06 109 *e*PKP PKPdf 20 26 18.7 +1.7
PTEO Sao Teotonio 146.20 109 *e*PKP PKPab 20 26 19.8 +0.8
PBDV Barranco-do-Ve 146.37 110 *e*PKP PKPab 20 26 19.9 +0.2
KBL Kabul 146.46 242 *e*PKIKP PKPdf 20 26 18.4 +0.6
PVAQ Vaqueiros 146.60 110 *e*PKP PKPbc 20 26 20.0 +0.5
SFS San Fernando 146.63 113 PFAKE 20 26 30.0 +12
SFS LR LR
comp=Z,3µm,19.0s,MS6.0
EGRO El Granado 146.82 110 PKP PKPdf 20 26 19.5 +1.3
EJIF Jimena Fronter 146.98 113 PKHKP PKPbc 20 26 21.6 +1.0
PBEJ Beja 147.01 109 *e*PKP PKPbc 20 26 21.4 +0.8
ESPR Espera 147.12 113 PKP PKPbc 20 26 21.7 +0.7
EVO Evora 147.32 108 *e*PKIKP PKPbc 20 26 21.1 -0.4
comp=Z,229nm,1.7s
EVO *e*MLR MLR
comp=Z,2µm,19.8s,MS5.6
EVO Evora 147.32 108 *e*PKP PKPbc 20 26 21.8 +0.3
EMIJ Mijas 147.41 114 PKP PKPdf 20 26 20.9 +1.7
EMIN Mina Concepcio 147.41 111 PKP PKPbc 20 26 21.4 -0.4
PBAR Barrancos 147.54 110 *e*PKP PKPbc 20 26 22.1 0.0
PESTR Estremoz 147.79 108 *e*PKP PKPbc 20 26 23.1 +0.4
PTOM Tomar 147.93 106 *e*PKP PKPbc 20 26 23.1 0.0
EBAD Badajoz 148.00 109 PKP PKPbc 20 26 24.3 +1.1
KRAR Krasnoyarsk 148.09 293 *i* PKIKP PKPdf 20 26 21.6 +1.9
ELOJ Sierra Loja 148.17 114 PKHKP PKPbc 20 26 23.1 -0.7
ERON Agron 148.24 115 PKP PKPbc 20 26 23.6 -0.4
ECAB El Cabril 148.28 112 PKP PKPbc 20 26 25.2 +1.2
PMRV Marv??o 148.31 108 *e*PKP PKPbc 20 26 24.4 +0.3
MKAR Makanchi Array 148.52 271 PKPbc PKPbc 20 26 24.0 -0.4
comp=Z,46nm,0.8s,baz=96,slow=3.7,SNR=40
MKAR PP PP 20 29 55.1 +0.4

comp=Z,5.2nm,0.9s,baz=132,slow=7.0,SNR=4.3
ECOG Cogollos-Vega 148.56 115 PKIKP PKPbc 20 26 24.9 +0.1
PCBR Castelo Branco 148.58 107 *e*PKP PKPbc 20 26 25.2 +0.4
EBER Berja 148.59 116 PKP PKPbc 20 26 25.7 +0.8
EADA Adamuz 148.76 113 PKP PKPbc 20 26 25.9 +0.6
MTE Manteigas 148.96 106 *e*PKP PKPbc 20 26 26.2 +0.5
MTE Manteigas 148.96 106 *e*PKPbc PKPbc 20 26 25.7 0.0
MTE LR LR
comp=Z,2μm,19.0s,MS5.9
SUMG Summit 148.96 34 *e*PKPbc PKPbc 20 26 23.7 -1.0
ENIJ Nijar 148.97 117 PKHKP PKPbc 20 26 26.5 +0.6
PVIS Viseu 149.01 106 *e*PKP PKPbc 20 26 26.1 +0.3
EBAN Banos Encina 149.15 113 PKIKP PKPbc 20 26 26.4 +0.1
EQES Quesada 149.22 115 PKP PKPbc 20 26 26.0 -0.4
ETRT Tiaret 149.31 123 P PKPbc 20 26 28.0 +1.2
RDF Al-Radifah 149.39 206 *e*P PKPbc 20 26 27.1 -0.1
baz=206
RDF AMb AMB 20 26 34.6
comp=Z,119nm,1.4s,baz=206
PVRL Vila Real 149.51 105 *e*PKP PKPbc 20 26 27.4 +0.3
TKM2 Tokmak 2 149.53 260 *e*PKIKP PKPbc 20 26 26.4 -0.7
TKM2 MLR MLR
comp=Z,2μm,21.0s,MS5.8
KBD Kabd 149.60 206 *e*P PKPbc 20 26 27.4 -0.2
baz=206
KBD AMb AMB 20 26 35.0
comp=Z,95nm,1.8s,baz=206
UCH Uchtor 149.62 257 PFAKE 20 26 40.0 +17
UCH LR LR
comp=Z,34nm,19.0s
PCAB Cabril 149.66 104 *e*PKP PKPbc 20 26 27.3 -0.1
EANR 'Ain N'Sour 149.69 122 P PKPbc 20 26 29.0 +1.3
ELOB Lobios 149.76 104 PKP PKPbc 20 26 27.7 0.0
NAY Al-Naaiem 149.77 206 *e*P PKPbc 20 26 27.9 -0.2
baz=205
NAY AMb AMB 20 26 35.1
comp=Z,54nm,1.6s,baz=205
MVO Moncorvo 149.78 106 *e*PKP PKPbc 20 26 28.4 +0.7
PAB San Pablo 149.94 111 PFAKE PKPab 20 26 40.0 +6.1
PAB LR LR
comp=Z,2μm,20.0s,MS5.9
UMR Umm Al-Rimmam 149.95 207 *e*P PKPbc 20 26 28.8 +0.3
baz=206
UMR AMb AMB 20 26 40.8
comp=Z,213nm,1.8s,baz=206
ECHA Ech Chlef 149.97 122 P PKPbc 20 26 30.0 +1.6
AML Almayashu 149.97 256 *e*PKPdf PKPbc 20 26 23.1 -5.1
AML *e*PKPbc PKPbc 20 26 29.2 +1.0
AML LR LR
comp=Z,2μm,21.0s,MS5.8
FRU Bishkek 149.99 258 *e*PKP2 PKPbc 20 26 31.0 +2.8
FRU pmax pmax
comp=Z,320nm,2.0s
CART Cartagena 150.04 118 *e*PKPbc PKPdf 20 26 26.4 +2.9
EMAZ Mazaricos 150.04 101 PKP PKPbc 20 26 27.3 -1.0
RST Umm Al-Ruwaisa 150.07 205 *e*P PKPbc 20 26 28.3 -0.5
baz=205
RST AMb AMB 20 26 40.8
comp=Z,107nm,1.4s,baz=205
EMUR La Murta 150.13 117 PKP PKPbc 20 26 29.3 +0.6
EVIA Vianos 150.15 114 PKIKP PKPbc 20 26 29.9 +1.2
EBNR Beni Rached 150.16 122 P PKPab 20 26 36.0 +1.1
STS Santiago 150.22 102 PKIKP PKPbc 20 26 28.6 -0.1
ESDC Sonseca Array 150.23 111 PKPbc PKPbc 20 26 28.7 -0.2
comp=Z,21nm,0.8s,baz=235,slow=1.6,SNR=36
ESDC Sonseca Array 150.23 111 PKP PKPbc 20 26 29.6 +0.8
ESLA Sonseca Array 150.23 111 PFAKE 20 26 40.0 +16
ESLA LR LR
comp=Z,5μm,20.0s,MS6.3
MIB Mutribah 150.28 206 *e*P PKPbc 20 26 29.2 -0.2
baz=206
MIB AMb AMB 20 26 41.9
comp=Z,80nm,0.9s,baz=206
EKS2 Erkin-Say 150.31 257 *e*PKPbc PKPbc 20 26 28.9 -0.1
EKS2 LR LR
comp=Z,1μm,20.0s,MS5.7
ECAL Calabor 150.50 105 PKP PKPbc 20 26 29.5 +0.1
ERUA La Rua 150.61 104 PKIKP PKPbc 20 26 29.0 -0.7
ETOB Tobarra 150.62 116 PKP PKPbc 20 26 31.2 +1.4
EMHD Djebel Mahouad 150.72 124 P PKPbc 20 26 32.0 +1.8
GUD Guadarrama 150.87 110 PKIKP PKPbc 20 26 31.4 +1.1
ZAA0 Zalesovo Array 151.18 285 *e*PKPdf PKPdf 20 26 26.4 +1.7
ZALV Zalesovo Beam 151.18 285 PKP PKPdf 20 26 26.1 +1.4
comp=Z,5.2nm,0.8s,baz=176,slow=4.2,SNR=3.8
ZALV PKPbc PKPbc 20 26 30.4 -0.2
comp=Z,6.2nm,0.8s,baz=140,slow=2.3,SNR=12
ZALV PKPab PKPab 20 26 36.9 -1.8
comp=Z,9.1nm,0.8s,baz=132,slow=2.8,SNR=12
ZALV PP PP 20 30 10.6 +0.6
comp=Z,3.0nm,0.9s,baz=134,slow=6.4,SNR=4.8
ZALV Zalesovo Beam 151.18 285 PKP PKPdf 20 26 26.1 +1.4
ZALV PKPbc PKPbc 20 26 30.4 -0.2
ZALV PKPab PKPab 20 26 36.9 -1.8
ZALV PP PP 20 30 10.6 +0.6
EPON Pontenova 151.26 103 PKP PKPbc 20 26 30.1 -1.0
ECHE Chera 151.64 115 PKIKP PKPbc 20 26 33.1 +0.9
ETOR Torete 152.05 112 PKIKP PKPdf 20 26 30.7 +4.2
EARI Arriondas 152.26 105 PKP PKPdf 20 26 27.1 +0.4
NVS Novosibirsk 152.41 286 *e*PKIKP PKPbc 20 26 36.3 +2.9
NVS *e* 20 30 19.9
NVS pmax pmax
comp=Z,62nm,1.5s
NVS pmax pmax
comp=E,26nm,1.4s
KURK Kurchatov 152.79 275 PKP PKPdf 20 26 26.8 -0.4
comp=E,3.3nm,1.1s,baz=128,slow=1.9,SNR=2.9
KURK PKPbc PKPbc 20 26 33.3 -1.1
comp=E,14nm,0.8s,baz=124,slow=1.8,SNR=26
KURK Kurchatov 152.79 275 PKIKP PKPdf 20 26 26.8 -0.4
KURK 20 26 33.3
KURK pmax pmax
comp=Z,3.0nm,1.1s
KURK pmax pmax
comp=Z,14nm,0.8s
KURK Kurchatov 152.79 275 *e*PKPdf PKPdf 20 26 24.7 -2.5
KURK *e*PKPbc PKPbc 20 26 32.8 -1.6
KURK LR LR
comp=Z,2μm,19.0s,MS5.9
KEST Kesra 152.97 134 PKPbc PKPbc 20 26 35.2 0.0
comp=Z,2.6nm,0.9s,baz=163,slow=5.6,SNR=4.6
SJPF Ste Jean 154.16 110 *e*PKIKP PKPdf 20 26 30.9 +1.4
comp=Z,35nm,1.1s
ETSF Etsaut 154.34 111 *e*PKIKP PKPdf 20 26 31.8 +2.1
comp=Z,53nm,1.4s
EBIE Bielsa 154.53 112 PKP PKPdf 20 26 32.9 +2.9
MTLF Montolieu 156.04 114 *e*PKIKP PKPdf 20 26 33.6 +1.6
comp=Z,22nm,1.3s
VSL Villasalto 156.24 130 PFAKE 20 26 40.0 +7.6
VSL LR LR
comp=Z,2μm,20.0s,MS6.0
QUIF Quistinic 156.39 99 *e*PKIKP PKPdf 20 26 33.7 +1.4
comp=Z,69nm,1.5s
LFF La Frestale 156.46 109 *e*PKIKP PKPdf 20 26 34.2 +1.7
ROSF Rostrenen 156.59 98 *e*PKIKP PKPdf 20 26 33.6 +1.0
comp=Z,88nm,1.6s
SGMF Saint Gilles 156.92 99 *e*PKIKP PKPdf 20 26 34.0 +1.0
comp=Z,186nm,1.6s
RJF Les Rejaudoux 157.11 109 *e*PKIKP PKPdf 20 26 35.1 +1.8
comp=Z,59nm,1.6s
RJF *e*MLR MLR
comp=Z,3μm,21.0s,MS5.8
RJF Les Rejaudoux 157.11 109 *e*PKPdf PKPdf 20 26 35.1 +1.8
RJF LR LR
comp=Z,3μm,21.0s,MS6.1
CAF Calviac 157.12 111 *e*PKIKP PKPdf 20 26 35.4 +2.0
comp=Z,86nm,1.7s
MFF Saint Martin d 157.14 105 *e*PKIKP PKPdf 20 26 35.0 +1.7
comp=Z,51nm,1.4s
CSS Prodhromos 157.19 181 PFAKE 20 26 50.0 +16
CSS LR LR
comp=Z,3μm,20.0s,MS6.1
LASF Ste Croix 157.39 115 *e*PKIKP PKPdf 20 26 35.6 +1.9
comp=Z,109nm,1.7s
KBS Kingsbay 157.69 10 PFAKE 20 26 40.0 +6.9
KBS LR LR
comp=Z,2μm,20.0s,MS6.0
GRR Gorron 157.90 101 *e*PKIKP PKPdf 20 26 35.7 +1.5
comp=Z,156nm,1.5s
LBL Lubilhac 157.92 112 PKP PKPdf 20 26 40.9 +6.5
SANT Santorini 158.04 164 PFAKE 20 26 50.0 +15
SANT LR LR
comp=Z,2μm,22.0s,MS5.9
TCF Toulx Ste Croi 158.13 108 *e*PKIKP PKPdf 20 26 36.2 +1.6
comp=Z,24nm,1.3s
SMRF Simiane la Rot 158.14 117 *e*PKIKP PKPdf 20 26 36.0 +1.3

PYM Petit Puy Mans 158.17 110 PKP PKPdf 20 26 40.6 +6.0
FLN La Foliniere 158.33 100 *e*PKIKP PKPdf 20 26 36.2 +1.5
comp=Z,194nm,1.8s
FLN *e*MLR MLR
comp=Z,3μm,20.0s,MS5.8
FLN La Foliniere 158.33 100 *e*PKPdf PKPdf 20 26 36.2 +1.5
FLN LR LR
comp=Z,3μm,20.0s,MS6.0
FRF La Foret Royal 158.33 120 *e*PKIKP PKPdf 20 26 36.8 +1.9
VIVF Saint-Julien-l 158.35 114 *e*PKIKP PKPdf 20 26 36.8 +1.9
BVAR Borovoye Array 158.36 274 PP PP 20 30 49.7 -0.5
comp=Z,2.7nm,1.1s,baz=107,slow=5.1,SNR=5.5
LDF La Druitiere 158.41 101 *e*PKIKP PKPdf 20 26 36.2 +1.4
comp=Z,98nm,1.6s
BRVK Borovoye 158.43 274 PFAKE 20 26 50.0 +15
BRVK LR LR
comp=Z,2μm,22.0s,MS5.9
PGF Pioggiola 158.60 125 *e*PKIKP PKPdf 20 26 37.0 +1.7
BGF Bois d'Agland 158.64 109 *e*PKIKP PKPdf 20 26 36.8 +1.6
comp=Z,86nm,1.4s
TIP Timpagrande 158.66 144 PFAKE 20 26 50.0 +15
TIP LR LR
comp=Z,4μm,20.0s,MS6.2
SBF Sospel 158.93 120 *e*PKIKP PKPdf 20 26 38.0 +2.4
comp=Z,76nm,1.3s
AVF Avril sur Loir 159.06 109 *e*PKIKP PKPdf 20 26 37.7 +2.0
comp=Z,38nm,1.5s
CUC Castrocucco 159.09 141 PFAKE 20 26 50.0 +14
CUC LR LR
comp=Z,5μm,22.0s,MS6.3
SMF Signal de Mont 159.20 110 *e*PKIKP PKPdf 20 26 37.1 +1.3
comp=Z,49nm,1.4s
MBDF Montbardon 159.27 118 *e*PKIKP PKPdf 20 26 38.1 +2.1
comp=Z,24nm,1.0s
BNI Bardonecchia 159.47 117 PFAKE 20 26 50.0 +14
BNI LR LR
comp=Z,3μm,22.0s,MS6.0
FIN Finale Ligure 159.55 121 PKIKP PKPdf 20 26 41.6 +5.3
LOR Lormes 159.63 109 *e*PKIKP PKPdf 20 26 38.1 +1.8
LOR *e*MLR MLR
comp=Z,3μm,20.0s,MS5.8
LOR Lormes 159.63 109 *e*PKPdf PKPdf 20 26 38.1 +1.8
LOR LR LR
comp=Z,3μm,20.0s,MS6.1
LPG La Plagne 159.83 116 *e*PKIKP PKPdf 20 26 38.5 +1.9
comp=Z,106nm,1.4s
LPL La Plagne 159.83 116 *e*PKIKP PKPdf 20 26 38.4 +1.8
comp=Z,119nm,1.4s
SDI San Donato 159.88 135 PKIKP PKPdf 20 26 42.0 +5.2
LSD Lago del Serru 159.99 117 PKIKP PKPdf 20 26 41.6 +4.8
ISP Isparta 160.00 175 PFAKE 20 26 50.0 +13
ISP LR LR
comp=Z,2μm,21.0s
MNS Montasola 160.01 132 PKIKP PKPdf 20 26 40.0 +3.1
FIAM Fiamignano 160.09 133 PKP PKPdf 20 26 39.5 +2.5
ESK Eskdalemuir 160.12 82 PFAKE 20 26 50.0 +13
ESK LR LR
comp=Z,2μm,20.0s
MALT Malatya 160.19 193 PFAKE 20 26 50.0 +13
MALT LR LR
comp=Z,3μm,20.0s
CABF La Chapelle 160.30 113 *e*PKIKP PKPdf 20 26 39.3 +2.2
VLC Villacollemand 160.49 125 PFAKE 20 26 50.0 +13
VLC LR LR
comp=Z,2μm,20.0s
NRCA Norcia 160.56 132 PKP PKPdf 20 26 41.3 +3.8
GSCL Gusciola 160.73 125 PKP PKPdf 20 26 40.6 +3.0
GNI Garni 160.77 209 PFAKE 20 26 50.0 +12
GNI LR LR
comp=Z,3μm,19.0s
FNVD Fontana Vidola 160.82 126 PKP PKPdf 20 26 43.0 +5.3
SFI Santa Sofia 160.92 128 PKIKP PKPdf 20 26 39.9 +2.0
MEZF Maizieres J'vi 161.05 107 *e*PKIKP PKPdf 20 26 39.8 +2.0
comp=Z,104nm,1.3s
FSSB Fossombrone 161.14 130 PKP PKPdf 20 26 43.6 +5.5
LOMF Lomont 161.18 112 PKP PKPdf 20 26 44.1 +6.1
THEF They Montfort 161.34 109 PKP PKPdf 20 26 43.4 +5.2
AOI Anzona 161.36 131 PKP PKPdf 20 26 41.7 +3.4
HAU Haudompre 161.38 110 *e*PKIKP PKPdf 20 26 40.0 +1.8
comp=Z,90nm,1.5s
HAU *e*MLR MLR
comp=Z,3μm,22.5s
HAU Haudompre 161.38 110 *e*PKPdf PKPdf 20 26 40.0 +1.8
HAU LR LR
comp=Z,3μm,22.5s
HINF Hinteralfeld 161.51 111 *e*PKIKP PKPdf 20 26 40.1 +1.8
comp=Z,138nm,1.7s
BAIF Baives 161.56 102 *e*PKIKP PKPdf 20 26 40.2 +1.9
comp=Z,84nm,1.5s
TIR Tirane 161.59 148 PFAKE 20 26 50.0 +11
TIR LR LR
comp=Z,4μm,22.0s
BBS Basel-Blauen 161.59 113 PKIKP PKPdf 20 26 44.2 +5.7
MOF Molkenrain 161.67 112 PKP PKPdf 20 26 43.9 +5.4
TUE Stuetta 161.78 118 *e*PKPdf PKPdf 20 26 39.2 +0.5
TUE LR LR
comp=Z,1μm,20.0s
DOU Dourbes 161.79 103 PKP PKPdf 20 26 43.9 +5.3
GIVF Givet 161.91 103 *e*PKIKP PKPdf 20 26 40.5 +1.8
ECH Echery 161.93 111 PKP PKPdf 20 26 44.1 +5.3
ECH Echery 161.93 111 *e*PKPdf PKPdf 20 26 39.8 +1.0
ECH PKP PKPdf 20 26 44.1 +5.3
BR131 Keskin Array S 161.94 182 PFAKE 20 26 50.0 +11
BR131 LR LR
comp=Z,1μm,21.0s
UCC Uccle 162.06 101 PKP PKPdf 20 26 45.4 +6.6
ANTO Ankara 162.09 180 PFAKE 20 26 50.0 +11
ANTO LR LR
comp=Z,2μm,19.0s
LIBD Limburg 162.11 112 PKIKP PKPdf 20 26 44.4 +5.4
CDF Champ du Feu 162.12 111 *e*PKIKP PKPdf 20 26 40.6 +1.6
comp=Z,70nm,1.5s
FELD Feldberg im Sc 162.12 113 PKP PKPdf 20 26 43.6 +4.6
BRMO Bormio 162.26 120 PKP PKPdf 20 26 44.7 +5.5
WLF Walferdange 162.34 106 PKP PKPdf 20 26 46.3 +7.1
WLF Walferdange 162.34 106 *e*PKPdf PKPdf 20 26 44.6 +5.5
WLF Walferdange 162.34 106 PFAKE 20 26 50.0 +11
WLF LR LR
comp=Z,2μm,19.0s
BCLA Clavier 162.34 103 PKP PKPdf 20 26 42.3 +3.2
CTI Castel Tesino 162.52 123 PKIKP PKPdf 20 26 45.0 +5.6
BFO Black Forest 162.59 112 *e*PKPdf PKPdf 20 26 44.6 +5.2
BFO Black Forest 162.59 112 *e*PKPdf PKPdf 20 26 38.5 -0.9
BFO *e*PKPdf PKPdf 20 26 44.6 +5.2
BFO LR LR
comp=Z,2μm,20.0s
DAVA Damuels 162.62 117⇑ *i*P PKPdf 20 26 43.7 +4.2
comp=Z,44nm,1.5s,SNR=11
DAVA Damuels 162.62 117⇑ *i*pPKPdf pPKPdf 20 26 43.7 +0.8
comp=Z,44nm,1.5s,SNR=11
APPI Appiano 162.66 121 PKP PKPdf 20 26 43.8 +4.2
SPAK Spaichingen-Ko 162.66 114 PKP PKPdf 20 26 44.4 +4.9
LANF Langenberg 162.75 110 PKP PKPdf 20 26 43.9 +4.3
MEM Membach 162.82 103 PKP PKPdf 20 26 45.6 +6.0
RUP Ruppelstein 162.83 107 PKIKP PKPdf 20 26 44.9 +5.3
FETA Feichten 162.83 119⇑ *i*P PKPdf 20 26 44.8 +5.0
comp=Z,35nm,1.4s,SNR=11
FETA Feichten 162.83 119⇑ *i*pPKPdf pPKPdf 20 26 44.8 +1.6
comp=Z,35nm,1.4s,SNR=11
HGN Heimansgroeve 162.87 103 *e*PKiKP PKPdf 20 26 45.2 +5.6
comp=Z,32nm,3.0s
HGN Heimansgroeve 162.87 103 *e*PP PP 20 31 18.9 +4.4
ABH Alteburg 163.19 107 PKP PKPdf 20 26 44.2 +4.2
WTTA Wattenberg 163.43 120⇑ *i*P PKPdf 20 26 43.1 +2.8
comp=Z,43nm,1.5s,SNR=9.1
PTCC Patocco-Chiusa 163.55 125 PKP PKPdf 20 26 41.3 +0.9
TOD Tromm 163.66 110 PKIKP PKPdf 20 26 44.9 +4.5
MYKA Terra Mystica 163.85 125⇑ *i*P PKPdf 20 26 43.1 +2.4
comp=Z,44nm,1.5s
FUR Furstenfeldbru 163.91 117 *e*PKPdf PKPdf 20 26 45.3 +4.6
FUR *e*PKPab PKPab 20 27 39.7 +6.1
BUG Bochum--Univer 163.95 102 *e*PKPdf PKPdf 20 26 46.1 +5.5
WTSB Winterswijk 163.98 100⇑ *e*PKiKP PKPdf 20 26 46.6 +6.0
comp=Z,61nm,1.7s
KBA Koelnbreinsper 164.07 124⇓ *i*P PKPdf 20 26 46.0 +5.2
comp=Z,17nm,1.6s
KBA Koelnbreinsper 164.07 124⇓ *i*pPKPdf pPKPdf 20 26 46.0 +1.7
comp=Z,17nm,1.6s
RJOB Jochberg 164.31 121 *e*PKPdf PKPdf 20 26 46.0 +4.9
SOKA Soboth 164.49 128⇑ *i*P PKPdf 20 26 42.3 +1.1
comp=Z,16nm,1.5s
IBBN Ibbenburen 164.66 100 *e*PKPdf PKPdf 20 26 46.3 +5.1
KIV Kislovodsk 164.87 208 PFAKE 20 26 50.0 +8.3
KIV LR LR

comp=Z,2μm,21.0s
GRA2 Grafenberg Arr 164.96 113 *e*PKPdf PKPdf 20 26 46.5 +4.9
GRA2 *e*SS SS 20 52 07.7 +8.2
GRA2 *e*L 21 47 10.8
comp=Z,2μm,19.6s
SVE Sverdlovsk 164.99 278 *e*PKP2 PKPab 20 27 41.5 +3.3
SVE pmax pmax
comp=Z,46nm,1.5s
UBBA Unterbreizbach 165.01 108 *e*PKPdf PKPdf 20 26 46.3 +4.7
WETT Wettzell 165.35 118 *e*PKPdf PKPdf 20 26 46.0 +4.1
GEC2 GERESS Array S 165.53 120 *e*PKPdf PKPdf 20 26 46.1 +4.0
GERES GERESS Array B 165.53 120 PKP PKPdf 20 26 47.3 +5.2
comp=Z,5.4nm,0.9s,baz=131,slow=4.1,SNR=5.7
MANZ Manzenberg 165.54 114 *e*PKPdf PKPdf 20 26 46.3 +4.2
KHC Kasperske Hory 165.67 119 *e*PKPdf PKPdf 20 26 47.1 +4.9
KHC *e*PKPab PKPab 20 27 42.5 +1.1
KHC *e*PP PP 20 31 29.8 +0.8
KHC *e*SS SS 20 52 02.4 -4.2
KHC AMS AMS 21 44 20.0
comp=Z,3μm,20.5s
MOX Moxa 165.72 111 *e*PKP PKPdf 20 26 47.7 +5.5
comp=Z,82nm,2.4s
MOX
comp=Z,1μm,21.0s
MOX Moxa 165.72 111 *e*PKIKP PKPdf 20 26 47.7 +5.5
MOX pmax pmax
comp=Z,82nm,2.4s
MOX MLR MLR
comp=Z,1μm,21.0s
CLZ Clausthal 165.79 105 *e*PKPdf PKPdf 20 26 47.0 +4.8
NKC Novy Kostel 165.87 114 *e*PKPdf PKPdf 20 26 46.6 +4.3
NKC *e*SS SS 20 52 13.7 +4.9
NKC AMS AMS 21 42 00.0
comp=Z,2μm,19.6s
NKC Novy Kostel 165.87 114 *e*PKP PKPdf 20 26 46.6 +4.3
NKC *e* 20 52 13.7
SOP Sopron 165.92 129⇑ *e*pPKP pPKPdf 20 26 47.3 +1.4
ARU Arti 165.99 275 PKP2 PKPab 20 27 43.5 +0.9
ARU Arti 165.99 275 PFAKE 20 26 50.0 +7.8
ARU LR LR
comp=Z,4μm,21.0s
TANN Tannenbergstha 166.00 113 *e*PKPdf PKPdf 20 26 46.8 +4.4
NRDL Niedersach Rie 166.00 102 *e*PKPdf PKPdf 20 26 46.7 +4.4
ZST Bratislava 166.55 129 PKP PKPab 20 27 50.3 +5.0
TREC Trest 166.67 122 AMS AMS 21 42 50.0
comp=Z,2μm,21.1s
PRU Pruhonice 166.72 118 *e*PKIKP PKPdf 20 26 48.2 +5.2
PRU *e* 20 31 37.3
PRU MLR MLR
comp=Z,2μm,18.2s
PRU Pruhonice 166.72 118 *e*PKPdf PKPdf 20 26 48.2 +5.2
PRU *e*PKPab PKPab 20 27 45.0 -1.0
PRU *e*PP PP 20 31 37.3 +2.9
PRU *e*SS SS 20 52 15.7 -1.6
PRU AMS AMS 21 48 10.0
comp=Z,2μm,18.2s
MODS Modra-Piesok 166.76 129 *e*PKP PKPdf 20 26 47.9 +4.8
MODS *e* 20 27 49.9
MODS Modra-Piesok 166.76 129 *e*PKP PKPdf 20 26 47.9 +4.8
MODS *e* 20 27 49.9
BSEG Bad Segeberg 166.80 97 *e*PKPdf PKPdf 20 26 47.1 +4.2
CLL Collm 166.82 111⇑ *i*PKIKP PKPdf 20 26 47.0 +4.0
CLL *i* 20 26 50.5
CLL *i* 20 27 52.3
CLL pmax pmax
comp=Z,16nm,1.5s
CLL pmax pmax
comp=Z,74nm,2.7s
CLL MLR MLR
comp=Z,2μm,20.5s
CLL Collm 166.82 111 *e*PKPdf PKPdf 20 26 46.8 +3.8
CLL Collm 166.82 111 *e*PKPdf PKPdf 20 26 43.0 0.0
CLL *i* pPKPdf pPKPdf 20 26 47.0 +0.5
comp=Z,16nm,1.5s
CLL *i* sPKPdf 20 26 50.5
comp=Z,24nm,1.6s
CLL *e*PKPlp 20 26 57.0
CLL ⇑*i*PKPab PKPab 20 27 46.0 -0.4
comp=Z,74nm,2.7s
CLL *i* pPKPab pPKPab 20 27 52.3 +2.6
CLL *i* x x 20 27 57.4
CLL *e*x x 20 31 12.0
CLL *e*PP PP 20 31 34.0 -1.0
CLL *e*(sPP) 20 31 43.0
CLL *i* x x 20 31 46.3
CLL *e*PPP 20 35 24.0
CLL *e*SKKSac SKKSac 20 38 27.0 +5.7
CLL *e*SKKSacre 20 40 19.0
CLL *e*PSKSrev 20 44 20.0
CLL *e*PPS 20 45 18.0
CLL *e*x x 20 48 26.0
CLL *e*x x 20 51 04.0
CLL *e*SS SS 20 52 23.0 +4.6
CLL *e*x x 20 54 53.0
CLL *e*SSrev 20 56 24.0
CLL *e*SSS 20 58 47.0
CLL *e*x x 21 00 29.0
CLL *e*SSSS 21 03 12.0
CLL LmV 21 45 00.0
comp=Z,2μm,20.5s
CLL Collm 166.82 111 *i* PKP PKPdf 20 26 47.0 +4.0
CLL *i* pPKP pPKPdf 20 26 50.5 +4.0
BRG Berggiesshubel 167.01 114 *e*PKIKP PKPdf 20 26 48.7 +5.5
BRG *e* 20 27 53.0
BRG *e* 20 31 42.3
BRG pmax pmax
comp=Z,10.0nm,1.5s
BRG pmax pmax
comp=Z,9.0nm,1.7s
BRG pmax pmax
comp=Z,19nm,1.9s
BRG pmax pmax
comp=N,5.0nm,1.4s
BRG pmax pmax
comp=Z,24nm,2.1s
BRG MLR MLR
comp=N,1μm,18.0s
BRG MLR MLR
comp=E,1μm,20.7s
BRG MLR MLR
comp=Z,1μm,19.6s
BRG Berggiesshubel 167.01 114 *e*PKPdf PKPdf 20 26 47.5 +4.3
BRG Berggiesshubel 167.01 114 *e*PKP PKPdf 20 26 48.7 +5.6
comp=Z,17nm,1.4s
BRG *e* 20 27 53.0
comp=Z,14nm,1.7s
BRG *e* 20 27 54.1
comp=Z,32nm,1.9s
BRG *e*SKP 20 29 57.5
comp=Z,7.5nm,1.4s
BRG *e* 20 31 42.3
comp=Z,40nm,2.1s
BRG SS SS 20 52 19.0 -1.3
BRG
comp=N,2μm,18.0s
BRG
comp=E,2μm,20.7s
BRG
comp=Z,2μm,19.6s
BRG Berggiesshubel 167.01 114 *e*PKP PKPdf 20 26 48.7 +5.6
BRG *e* 20 27 53.0
BRG *e* 20 27 54.1
BRG *e*SKP 20 29 57.5
BRG *e* 20 31 42.3
BRG SS SS 20 52 19.0 -1.3
BRG LR LR
comp=Z,1μm,19.6s
PVCC Panska Ves 167.09 116 *e*PKIKP PKPdf 20 26 46.4 +3.2
PVCC *e* 20 27 53.7
PVCC MLR MLR
comp=Z,2μm,22.1s
PVCC Panska Ves 167.09 116 *e*PKPdf PKPdf 20 26 46.4 +3.2
PVCC *e*PKPab PKPab 20 27 53.7 +6.1
PVCC *e*PP PP 20 31 38.3 +1.9
PVCC *e*SS SS 20 52 25.3 +4.2
PVCC AMS AMS 21 42 00.0
comp=Z,2μm,22.1s
KOLL Kolacno 167.39 131 *e*PKP PKPdf 20 26 47.8 +4.3
PSZ Piszkesteto 167.43 136⇓ *e*pPKP pPKPdf 20 26 49.2 +2.2
PSZ Piszkesteto 167.43 136 PFAKE 20 27 00.0 +16
PSZ LR LR
comp=Z,3μm,21.0s
VYHS Vyhne 167.50 132 *e*PKP PKPdf 20 26 48.0 +4.4
UPC Upice 167.77 119 *e*PKPdf PKPdf 20 26 48.1 +4.4

UPC				*e*PKPab	PKPab	20 27 50.8	+0.2
DPC	**Dobruska-Polom**	**167.80**	**120**	*e*PKIKP	PKPdf	20 26 48.2	+4.4
DPC				*e*		20 31 42.9	
DPC				MLR	MLR		
	comp=Z,2μm,20.4s						
DPC	**Dobruska-Polom**	**167.80**	**120**	*e*PKPdf	PKPdf	20 26 48.2	+4.4
DPC				*e*PKPab	PKPab	20 27 51.3	+0.6
DPC				*e*PP	PP	20 31 42.9	+2.9
DPC				*e*SS	SS	20 52 23.1	-5.0
DPC				AMS	AMS	21 40 10.0	
	comp=Z,2μm,20.4s						
OKC	**Ostrava-Krasne**	**168.25**	**126**	*e*PKPdf	PKPdf	20 26 48.2	+4.1
OKC				*e*SS	SS	20 52 31.1	-1.4
OKC				AMS	AMS	21 43 20.0	
	comp=Z,2μm,22.6s						
OKC	**Ostrava-Krasne**	**168.25**	**126**	*e*PKP	PKPdf	20 26 48.2	+4.1
OKC				*e*		20 52 31.1	
NIE	**Niedzica**	**168.82**	**133**	*e*PKPdf	PKPdf	20 26 48.6	+4.1
CRVS	**Cervenica-Dubn**	**168.83**	**138**	*e*PKP	PKPdf	20 26 49.0	+4.5
KOLS	**Kolonicke sedl**	**169.14**	**140**	*e*PKP	PKPab	20 28 06.5	+10
OJC	**Ojcow**	**169.24**	**129**	*e*PKPdf	PKPdf	20 26 49.4	+4.7
OJC				*e*SS	SS	20 52 45.6	+3.3
OJC				LR	LR		
	comp=Z,2μm,25.9s						
LVZ	**Lovozero**	**169.80**	**356**	PFAKE		20 27 00.0	+15
LVZ				LR	LR		
	comp=Z,3μm,20.0s						
KWP	**Kalwaria**	**169.88**	**139**	*e*PKIKP	PKPdf	20 26 47.9	+2.8
KWP				MLR	MLR		
	comp=Z,3μm,22.0s						
KIEV	**Kiev**	**172.60**	**162**	PFAKE		20 27 00.0	+14
KIEV				LR	LR		
	comp=Z,4μm,21.0s						
AKASG	**Malin Array Be**	**172.61**	**162**	PKP	PKPdf	20 26 45.6	-0.8
	comp=Z,0.4nm,0.4s,baz=356,slow=1.6,SNR=2.9						
AKASG				PKPab	PKPab	20 28 12.4	+0.5
	comp=Z,1.6nm,0.7s,baz=202,slow=4.9,SNR=8.3						
OBN	**Obninsk**	**176.63**	**219**	*i*PKIKP	PKPdf	20 26 51.1	+3.5
OBN						20 32 27.0	
OBN				*e*		20 46 41.1	
OBN				*e*		21 01 02.3	
OBN				pmax	pmax		
	comp=Z,42nm,1.8s						
OBN				pmax	pmax		
	comp=Z,50nm,1.8s						
OBN	**Obninsk**	**176.63**	**219**	PFAKE		20 27 00.0	+12
OBN				LR	LR		
	comp=Z,2μm,21.0s						
MOS	**Moscow**	**176.67**	**234**	*e*PKIKP	PKPdf	20 26 49.7	+2.2
MOS				*e*		20 32 24.8	
MOS				pmax	pmax		
	comp=Z,34nm,1.0s						

NEIC ***13*** *20:12:34.0±1.8,320S×10049E,h35km,mb4.2/2,Error ellipse: s-maj=74.8km s-min=11.3km az=56.0*

IDC 13 20:12:28.4±2.7,330S×10038E,h0km,mb4.1/7,mb1 4.2/7, mb1mx4.0/20,mbtmp4.1/7,Error ellipse: s-maj=114.5km s-min=17.9km az=56.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.67**	**356**	P	P	20 17 20.1	-0.7
	0.9nm,0.5s,baz=184,slow=11,SNR=7.3						
WRA	**Warramunga Arr**	**37.02**	**119**	P	P	20 19 39.9	-0.4
	0.8nm,0.3s,baz=306,slow=8.3,SNR=23						
WRAB	**Tennant Creek**	**37.03**	**119**	*e*P	P	20 19 40.9	+0.6
	2.0nm,0.4s						
ASAR	**Alice Springs**	**38.19**	**125**	P	P	20 19 49.9	-0.2
	1.8nm,0.5s,baz=298,slow=7.7,SNR=25						
SONM	**Songino Array**	**51.20**	**5**	P	P	20 21 34.0	+0.6
	2.5nm,0.5s,baz=188,slow=9.7,SNR=18						
MKAR	**Makanchi Array**	**52.38**	**344**	P	P	20 21 42.4	+0.1
	3.1nm,0.6s,baz=146,slow=7.9,SNR=30						
KURK	**Kurchatov**	**56.95**	**344**	P	P	20 22 14.7	-0.8
	1.2nm,0.6s,baz=165,slow=7.1,SNR=8.9						
KURK	**Kurchatov**	**56.95**	**344**	*e*P	P	20 22 14.9	-0.5
	1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**58.51**	**349**	P	P	20 22 25.9	-0.4
	2.7nm,0.8s,baz=160,slow=4.7,SNR=10						
TXAR	**Lajitas Array**	**145.49**	**39**	PKPbc	PKPbc	20 32 09.8	+0.5
	2.2nm,0.5s,baz=238,slow=0.6,SNR=46						
TXAR	**Lajitas Array**	**145.49**	**39**	PKPbc	PKPbc	20 32 09.8	+0.5

IDC 13 20:27:04.3±1.9,371N×6334E,h0km,mb3.8/7,mb1 4.0/7, mb1mx3.7/21,mbtmp3.8/7,Error ellipse: s-maj=54.5km s-min=28.2km az=64.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**37.77**	**64**	P	P	20 34 23.9	+1.4
	0.5nm,0.7s,baz=256,slow=8.9,SNR=5.0						
MKAR	**Makanchi Array**	**45.96**	**18**	P	P	20 35 28.1	-0.9
	0.5nm,0.8s,baz=216,slow=8.4,SNR=2.4						
ZALV	**Zalesovo Beam**	**53.08**	**16**	P	P	20 36 22.6	-0.6
	0.4nm,0.4s,baz=217,slow=6.9,SNR=3.3						
SONM	**Songino Array**	**57.40**	**33**	P	P	20 36 54.9	+0.3
	0.9nm,0.6s,baz=225,slow=6.6,SNR=8.0						
ARCES	**ARCESS Array B**	**70.29**	**347**	P	P	20 38 19.5	+0.4
	3.5nm,1.0s,baz=110,slow=6.8,SNR=4.0						
WRA	**Warramunga Arr**	**73.50**	**112**	P	P	20 38 38.9	-0.5
	1.3nm,1.1s,baz=290,slow=5.2,SNR=5.1						
ASAR	**Alice Springs**	**73.81**	**116**	P	P	20 38 41.0	-0.2
	1.4nm,1.1s,baz=292,slow=5.8,SNR=5.8						
TXAR	**Lajitas Array**	**144.86**	**340**	PKP	PKPdf	20 46 45.4	+1.2
	0.8nm,0.7s,baz=64,slow=3.0,SNR=9.4						

IDC ***13*** *20:45:46.4±1.0,348S×13047E,h0km,mb3.8/7,mb1 4.0/8, mb1mx3.8/17,mbtmp3.9/8,ML3.7/1,Error ellipse: s-maj=70.6km s-min=18.3km az=67.0*

NEIC ***13*** *20:45:48.1±0.6,346S×13051E,h10km,mb3.8/1,Error ellipse: s-maj=18.9km s-min=9.4km az=73.0*

ISCJB ***13*** *20:45:49.2±0.7,356S±009×1305E±02,h33km,mb3.7/6, Error ellipse: s-maj=27.5km s-min=11.0km az=166.5*

DJA ***13*** *20:45:53, 3.11S×13092E, h50km, MLv4.3/3*

ISC 13 20:45:49.8±4.5,357S±009×1306E±02,h23km±33km,n14, σ1°38/15,mb3.7/6,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.23**	**198**	*e*P	**Pn**	**20 49 23.7**	**+0.2**
	2.5nm,0.5s						
FITZ				*e*S	Sx	20 52 08.0	
FITZ	**Fitzroy Crossi**	**15.23**	**198**	Pn	**Pn**	**20 49 22.9**	**-0.6**
	0.3nm,0.3s,baz=53,slow=16,SNR=10						
FITZ				Sn	Sx	20 52 08.7	
	0.2nm,0.3s,baz=157,slow=18,SNR=3.5						
WRAB	**Tennant Creek**	**16.68**	**167**	*e*P	**Pn**	**20 49 39.7**	**-2.6**
WRA	**Warramunga Arr**	**16.69**	**168**	Pn	**Pn**	**20 49 38.2**	**-4.2**
	0.2nm,0.3s,baz=343,slow=13,SNR=13						
WRA				Sn	Sx	20 52 35.7	
	0.6nm,0.3s,baz=357,slow=23,SNR=8.0						
WB2	**Warramunga Ar**	**16.69**	**167**	*e*P	**Pn**	**20 49 39.5**	**-2.9**
WB2				*e*S	Sx	20 52 32.1	
ASAR	**Alice Springs**	**20.24**	**171**	P	**P**	**20 50 25.4**	**+1.8**
	9.1nm,0.6s,baz=351,slow=10,SNR=84						
ASAR				S	**S**	**20 54 08.7**	**-1.0**
	0.7nm,0.6s,baz=352,slow=26,SNR=4.5						
MBWA	**Marble Bar**	**20.41**	**210**	*e*P	**P**	**20 50 27.1**	**+1.6**
CTA	**Charters Tower**	**22.45**	**138**	P	**P**	**20 50 48.5**	**+1.2**
	1.0nm,0.3s,mb3.7,baz=278,slow=9.0,SNR=3.8						
CTAO	**Charters Tower**	**22.45**	**138**	*e*P	**P**	**20 50 49.0**	**+1.6**
STKA	**Stephens Creek**	**30.01**	**161**	P	**P**	**20 51 57.7**	**+0.7**
	3.2nm,1.0s,mb4.0,baz=333,slow=12,SNR=3.0						
SONM	**Songino Array**	**55.40**	**340**	P	**P**	**20 55 22.7**	**+0.5**
	0.3nm,0.7s,mb3.5,baz=140,slow=7.2,SNR=3.1						
MKAR	**Makanchi Array**	**65.69**	**326**	P	**P**	**20 56 32.9**	**+0.4**
	0.6nm,0.6s,mb3.8,baz=115,slow=7.2,SNR=5.9						
ZALV	**Zalesovo Beam**	**68.78**	**333**	P	**P**	**20 56 50.6**	**-1.3**
	0.3nm,0.4s,mb3.6,baz=132,slow=8.0,SNR=2.9						
BVAR	**Borovoye Array**	**75.48**	**327**	P	**P**	**20 57 31.3**	**-0.8**
	0.8nm,0.8s,mb3.7,baz=134,slow=6.2,SNR=5.6						

IDC ***13*** *20:52:09.2±0.5, 178S×9954E, h0km, mb4.5/22, mb1 4.6/22,mb1mx4.5/27,mbtmp4.5/22,Error ellipse: s-maj=21.3km s-min=11.8km az=47.0*

BJI ***13*** *20:52:11.0, 173S×9970E, h21km, mB5.1, mb4.7, Ms5.1, Msz4.8*

MOS ***13*** *20:52:12.3±0.8, 177S×9957E, h33km, mb5.1/14, Error ellipse: s-maj=16.4km s-min=9.0km az=105.7*

NEIC ***13*** *20:52:14.4±0.4, 176S×9959E, h35km, mb4.8/9, Error ellipse: s-maj=14.1km s-min=7.3km az=48.0*

ISCJB ***13*** *20:52:15.1±1.2, 186S±005×9954E±006, h61km±10km, mb4.8/54, Error ellipse: s-maj=11.9km s-min=6.2km az=140.7*

DJA ***13*** *20:52:17, 161S×9946E, h61km, MLv4.9/5*

ISC 13 20:52:17.5±1.0,185S±005×9958E±006,h64km±8km,n104, σ0°78/102,mb4.8/54,10C-9D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RGRI	**Rengat**	**3.13**	**62**	P	**Pn**	**20 53 04.6**	**+0.1**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.18**	**75**	P	**Pn**	**20 53 31.5**	**-1.0**
	0.0nm,0.0s						
KGM	**Kluang**	**5.36**	**44**	⇑P	**Pn**	**20 53 35.5**	**+0.5**
FRIM	**Kepong**	**5.45**	**22**	⇑P	**Pn**	**20 53 35.3**	**-0.9**
MYKOM	**Kota Tinggi**	**5.60**	**50**	⇓P	**Pn**	**20 53 37.8**	**-0.4**
KLI	**Kotabumi**	**6.06**	**120**	P	**Pn**	**20 53 44.3**	**-0.2**
	0.0nm,0.0s						
IPM	**Ipoh**	**6.45**	**13**	⇑P	**Pn**	**20 53 49.3**	**-0.6**
KTGM	**Kuala Trenggan**	**7.97**	**26**	⇓P	**Pn**	**20 54 10.6**	**-0.1**
DBJI	**Dramaga**	**8.54**	**123**	P	**Pn**	**20 54 17.7**	**-0.8**
	0.0nm,0.0s						
CBJI	**Citeko**	**8.55**	**122**	P	**Pn**	**20 54 21.1**	**+2.4**
	0.0nm,0.0s						
LEM	**Lembang**	**9.42**	**122**	P	**Pn**	**20 54 30.8**	**+0.3**
	0.0nm,0.0s						
KSM	**Kuching**	**11.23**	**73**	⇓P	**Pn**	**20 54 55.2**	**0.0**
SBUM	**Sibu**	**13.34**	**71**	⇑P	**Pn**	**20 55 25.1**	**+1.0**
KKM	**Kota Kinabalu**	**18.37**	**65**	⇓P	**Pn**	**20 56 28.4**	**+0.5**
KKM	**Kota Kinabalu**	**18.37**	**65**	*e*P	**Pn**	**20 56 27.6**	**-0.4**
SDKM	**Sandakan**	**19.10**	**67**	⇑P	**Pn**	**20 56 37.1**	**+0.4**
TSM	**Tawau**	**19.27**	**72**	⇓P	**Pn**	**20 56 38.0**	**-0.7**
KDM	**Kudat**	**19.30**	**63**	⇓P	**Pn**	**20 56 38.9**	**-0.2**
MYLDM	**Lahad Datu**	**20.15**	**70**	⇓P	**P**	**20 56 49.1**	**+2.3**
CMAR	**Chiang Mai Arr**	**20.19**	**358**	P	**P**	**20 56 43.4**	**-3.7**
	6.5nm,0.5s,baz=190,slow=10,SNR=38						
PCI	**Palu**	**20.27**	**88**	P	**P**	**20 56 48.4**	**+0.3**
	0.0nm,0.0s						
KAPI	**Kappang**	**20.38**	**99**	P	**P**	**20 56 48.1**	**-1.1**
	11nm,0.8s,baz=268,slow=12,SNR=4.8						
CHG	**Chiang Mai**	**20.54**	**358**	⇑P	**P**	**20 56 53.9**	**+3.0**
	11nm,0.6s						
CHTO	**Chiang Mai**	**20.54**	**358**	*e*P	**P**	**20 56 46.3**	**-4.6**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHTO	**Chiang Mai**	**20.54**	**358**	*e*P	**P**	**20 56 46.3**	**-4.6**
	comp=Z,9.9nm,0.9s						
NANT	**Nan**	**20.55**	**3**	⇑P	**P**	**20 56 50.5**	**-0.5**
	comp=Z,94nm,0.9s						
QIZ	**Qiongzhong**	**23.07**	**25**	P	**P**	**20 57 17.0**	**-0.9**
KMI	**Kunming**	**26.99**	**6**	P	**P**	**20 57 49.4**	**-4.0**
KMI				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.3						
FITZ	**Fitzroy Crossi**	**30.24**	**124**	*e*P	**P**	**20 58 22.0**	**-0.5**
	comp=Z,3.8nm,0.7s,mb4.2						
FITZ	**Fitzroy Crossi**	**30.24**	**124**	P	**P**	**20 58 22.1**	**-0.4**
	comp=Z,1.2nm,0.7s,mb3.8,baz=318,slow=12,SNR=7.8						
ODAN	**Odare**	**30.87**	**338**	*e*P	**P**	**20 58 28.6**	**+0.7**
	comp=Z,35nm,0.6s,mb5.4						
TAPN	**Taplejung**	**31.20**	**339**	*e*P	**P**	**20 58 31.7**	**+0.9**
	comp=Z,45nm,0.8s,mb5.4						
RAMN	**Ramite**	**31.25**	**337**	*e*P	**P**	**20 58 32.5**	**+1.3**
	comp=Z,29nm,0.6s,mb5.3						
SWI	**Sorong**	**31.69**	**89**	P	**P**	**20 58 35.0**	**-0.3**
	comp=Z,0.0nm,0.0s						
JIRN	**Jiri**	**32.05**	**337**	*e*P	**P**	**20 58 39.1**	**+0.9**
	comp=Z,68nm,0.7s,mb5.6						
PKI	**Pulchoki**	**32.27**	**336**	*e*P	**P**	**20 58 40.5**	**+0.3**
	comp=Z,12nm,0.6s,mb4.9						
GUN	**Gumba**	**32.39**	**337**	*e*P	**P**	**20 58 41.9**	**+0.7**
	comp=Z,64nm,0.6s,mb5.6						
LSA	**Lhasa**	**32.39**	**346**	P	**P**	**20 58 41.6**	**+0.4**
LSA	**Lhasa**	**32.39**	**346**	*e*P	**P**	**20 58 42.0**	**+0.8**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
LSA	**Lhasa**	**32.39**	**346**	*e*P	**P**	**20 58 42.0**	**+0.8**
	comp=Z,6.7nm,0.6s,mb4.7						
DMN	**Daman**	**32.43**	**336**	*e*P	**P**	**20 58 41.9**	**+0.3**
	comp=Z,8.4nm,0.7s,mb4.7						
KKN	**Kakani**	**32.52**	**336**	*e*P	**P**	**20 58 42.6**	**+0.2**
	comp=Z,36nm,0.8s,mb5.3						
GKN	**Gorkha**	**32.98**	**335**	*e*P	**P**	**20 58 46.7**	**+0.3**
	comp=Z,10nm,0.3s,mb5.2						
KOLN	**Koldanda**	**33.22**	**334**	*e*P	**P**	**20 58 49.0**	**+0.5**
	comp=Z,37nm,0.7s,mb5.4						
DANN	**Dangsing**	**33.65**	**334**	*e*P	**P**	**20 58 52.7**	**+0.5**
	comp=Z,14nm,0.5s,mb5.2						
WRA	**Warramunga Arr**	**38.43**	**120**	P	**P**	**20 59 33.0**	**-0.3**
	comp=Z,7.3nm,0.7s,mb4.5,baz=300,slow=8.9,SNR=43						
WRA				PcP	PcP	21 01 46.1	+0.5
	comp=Z,0.8nm,0.6s,baz=313,slow=2.8,SNR=5.8						
WRAB	**Tennant Creek**	**38.44**	**120**	*i*P	**P**	**20 59 32.1**	**-1.2**
WB2	**Warramunga Arr**	**38.44**	**120**	*e*P	**P**	**20 59 32.6**	**-0.7**
ASAR	**Alice Springs**	**39.68**	**126**	P	**P**	**20 59 43.9**	**+0.2**
	comp=Z,3.3nm,0.7s,mb4.2,baz=298,slow=7.5,SNR=39						
ASAR				PcP	PcP	21 01 50.8	+1.3
	comp=Z,1.3nm,0.9s,baz=303,slow=2.7,SNR=3.9						
GTA	**Gaotai**	**41.06**	**0**	P	**P**	**20 59 54.8**	**0.0**
GTA				AP	pP	20 59 59.0	-12
GTA				XP	sP	21 00 01.5	-17
GTA				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.2						
WMQ	**Urumqi**	**46.70**	**348**	P	**P**	**21 00 41.4**	**+1.5**
WMQ				AP	pP	21 00 49.0	-7.2
WMQ				XP	sP	21 00 52.5	-11
WMQ				AMB	AMB		
	comp=Z,19nm,0.9s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,118nm,5.4s						
WMQ				LR	LR		
	comp=N,1μm,22.0s						
WMQ				LR	LR		
	comp=E,1μm,22.0s						
WMQ				LR	LR		
	comp=Z,1μm,25.2s						
KSRS	**Korea Array**	**47.11**	**31**	P	**P**	**21 00 43.0**	**-0.3**
	comp=Z,5.6nm,0.9s,mb4.5,baz=223,slow=8.7,SNR=21						
KSRS	**Korea Array**	**47.11**	**31**	P	**P**	**21 00 43.0**	**-0.2**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
CTA	**Charters Tower**	**49.04**	**115**	P	**P**	**21 00 58.6**	**+0.2**
	comp=Z,1.2nm,0.3s,mb4.3,baz=289,slow=7.6,SNR=5.2						
TKM2	**Tokmak 2**	**49.53**	**337**	*e*P	**P**	**21 01 02.3**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
TKM2	**Tokmak 2**	**49.53**	**337**	*e*P	**P**	**21 01 02.3**	**+0.5**
	comp=Z,11nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**49.56**	**132**	*e*P	**P**	**21 01 03.0**	**+0.7**
	comp=Z,3.0nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**49.56**	**132**	*e*P	**P**	**21 01 03.0**	**+0.7**
	comp=Z,9.1nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**49.56**	**132**	P	**P**	**21 01 03.3**	**+1.1**
	comp=Z,6.3nm,0.6s,mb4.8,baz=294,slow=7.9,SNR=16						
SONM	**Songino Array**	**49.84**		6 P	**P**	**21 01 04.7**	**+0.7**
	comp=Z,11nm,0.8s,mb4.9,baz=187,slow=8.4,SNR=66						
SONM				PcP	PcP	21 02 24.8	+1.0
	comp=Z,2.5nm,0.7s,baz=188,slow=4.4,SNR=5.1						
ULN	**Ulaanbaatar**	**49.94**	**7**	*e*P	**P**	**21 01 05.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**49.94**	**7**	*e*P	**P**	**21 01 05.0**	**+0.1**
	comp=Z,8.9nm,0.8s,mb4.8						
EKS2	**Erkin-Say**	**50.05**	**335**	*e*P	**P**	**21 01 06.4**	**+0.7**
	comp=Z,13nm,0.8s,mb5.0						
MKAR	**Makanchi Array**	**50.77**	**345**	P	**P**	**21 01 11.3**	**+0.2**
	comp=Z,12nm,0.6s,mb5.0,baz=150,slow=8.0,SNR=121						
MKAR	**Makanchi Array**	**50.77**	**345**	P	**P**	**21 01 11.3**	**+0.2**
ZAK	**Zakamensk**	**52.13**	**3**	*i*P	**P**	**21 01 21.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MAT	**Matsushiro**	**52.43**	**39**	P	**P**	**21 01 23.9**	**+0.2**
MJAR	**Matsushiro Arr**	**52.43**	**39**	P	**P**	**21 01 23.2**	**-0.5**
	comp=Z,5.3nm,0.7s,mb4.6,baz=219,slow=7.3,SNR=15						
MOY	**Mondy**	**53.33**	**1**	*e*P	**P**	**21 01 25.5**	**-4.5**
KURK	**Kurchatov**	**55.35**	**344**	*i*P	**P**	**21 01 44.6**	**-0.1**
KURK				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
KURK	**Kurchatov**	**55.35**	**344**	*e*P	**P**	**21 01 44.4**	**-0.3**
	comp=Z,15nm,0.8s,mb5.1						
ZAA0	**Zalesovo Array**	**56.95**	**350**	*e*P	**P**	**21 01 56.1**	**0.0**
ZALV	**Zalesovo Beam**	**56.95**	**350**	P	**P**	**21 01 56.1**	**+0.1**
	comp=Z,37nm,0.8s,mb5.5,baz=181,slow=5.8,SNR=126						
KLR	**Kul'dur**	**57.97**	**24**	*e*P	**P**	**21 01 58.2**	**-5.1**
NVS	**Novosibirsk**	**58.09**	**349**	*e*P	**P**	**21 02 03.4**	**-0.6**
NVS				*e*S	**S**	**21 10 17.2**	**+17**
NVS				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
NVS				pmax	pmax		
	comp=N,15nm,1.4s						
RDF	**Al-Radifah**	**58.42**	**306**	*e*P	**P**	**21 02 05.8**	**-1.1**
	baz=306						
RDF				AMb	AMB	21 02 14.2	
	comp=Z,30nm,1.2s,mb5.2,baz=306						
NAY	**Al-Naaiem**	**58.79**	**306**	*e*P	**P**	**21 02 08.4**	**-1.1**
	baz=306						
NAY				AMb	AMB	21 02 20.2	
	comp=Z,9.0nm,1.2s,mb4.7,baz=306						
MIB	**Mutribah**	**58.93**	**307**	*e*P	**P**	**21 02 09.4**	**-1.0**
	baz=307						
MIB				AMb	AMB	21 02 10.8	
	comp=Z,17nm,1.1s,mb5.0,baz=307						
RST	**Umm Al-Ruwaisa**	**59.09**	**306**	*e*P	**P**	**21 02 10.4**	**-1.2**
	baz=306						
RST				AMb	AMB	21 02 19.4	
	comp=Z,15nm,1.1s,mb4.9,baz=306						
BRVK	**Borovoye**	**59.96**	**340**	*e*P	**P**	**21 02 15.8**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
BRVK	**Borovoye**	**59.96**	**340**	*e*P	**P**	**21 02 15.8**	**-1.2**
	comp=Z,5.5nm,0.9s,mb4.6						
BOD	**Bodaibo**	**60.60**	**9**	*e*P	**P**	**21 02 21.3**	**0.0**
BOD				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
YSS	**Yuzh-Sakhalins**	**61.58**	**32**	*i*P	**P**	**21 02 28.5**	**+0.3**
YSS				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.4						
SVE	**Sverdlovsk**	**66.39**	**338**	*e*P	**P**	**21 02 59.2**	**-0.3**
SVE				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
ARU	**Arti**	**66.90**	**337**	*d i*P	**P**	**21 03 02.2**	**-0.6**
ARU				*e*		21 05 24.7	
ARU				*e*S	S	21 11 53.0	+2.2
ARU				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.8						
YAK	**Yakutsk**	**67.71**	**15**	*e*P	**P**	**21 03 07.0**	**-0.8**
YAK				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.5						
KIV	**Kislovodsk**	**68.16**	**319**	P	**P**	**21 03 11.0**	**0.0**
KIV				*e*		21 03 36.5	
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
ASF	**Jabal al Asfar**	**68.16**	**306**	P	**P**	**21 03 10.3**	**-1.0**
	comp=Z,2.0nm,0.9s,mb4.2,baz=18,slow=6.4,SNR=3.4						
EIL	**Eilat**	**69.09**	**303**	P	**P**	**21 03 17.0**	**-0.1**
	comp=Z,4.4nm,0.8s,mb4.4,baz=135,slow=5.7,SNR=3.6						
MMAI	**Mount Meron Ar**	**69.61**	**306**	P	**P**	**21 03 20.8**	**+0.5**
	comp=Z,1.6nm,0.6s,mb4.2,baz=92,slow=9.2,SNR=5.2						
MAW	**Mawson**	**70.32**	**194**	P	**P**	**21 03 25.9**	**+2.0**
	comp=Z,3.1nm,1.0s,mb4.2,baz=27,slow=4.3,SNR=4.3						
PETK	**Petropavlovsk-**	**72.98**	**32**	P	**P**	**21 03 40.5**	**+0.3**
	comp=Z,3.2nm,0.6s,mb4.5,baz=164,slow=0.7,SNR=8.3						
PET	**Petropavlovsk**	**73.46**	**33**	*e*P	**P**	**21 03 43.6**	**+0.6**
PET				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.2						
OBN	**Obninsk**	**76.45**	**328**	P	**P**	**21 04 00.0**	**-0.2**
OBN				*e*		21 04 10.2	
OBN				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
AKASG	**Malin Array Be**	**79.11**	**322**	P	**P**	**21 04 14.0**	**-1.1**
	comp=Z,1.3nm,0.6s,mb4.1,baz=84,slow=4.5,SNR=4.6						
MLR	**Muntele Rosu**	**79.90**	**317**	P	**P**	**21 04 19.6**	**+0.1**
	comp=Z,8.2nm,0.9s,mb4.7,baz=191,slow=6.1,SNR=8.6						
JOF	**Joensuu**	**81.90**	**335**	*ep*	**P**	**21 04 28.8**	**-1.0**
KAF	**Kangasniemi**	**83.86**	**333**	*ep*	**P**	**21 04 38.9**	**-1.0**
ARCES	**ARCESS Array B**	**86.19**	**340**	P	**P**	**21 04 51.9**	**+0.4**
	comp=Z,4.7nm,0.8s,mb4.8,baz=97,slow=2.9,SNR=14						
GERES	**GERESS Array B**	**88.66**	**319**	P	**P**	**21 05 04.3**	**+0.6**
	comp=Z,1.2nm,0.8s,mb4.3,baz=72,slow=4.3,SNR=6.2						
DAVOX	**Davos/Dischmat**	**91.13**	**317**	P	**P**	**21 05 16.0**	**+0.6**
	comp=Z,3.2nm,0.6s,mb4.8,baz=128,slow=11,SNR=5.7						
NVAR	**Mina Array Bea**	**129.75**	**39**	PKP	PKPdf	21 11 19.9	-0.1
	comp=Z,0.6nm,0.7s,baz=300,slow=1.5,SNR=5.1						
TXAR	**Lajitas Array**	**144.84**	**37**	PKP	PKPdf	21 11 48.6	+0.6
	comp=Z,1.1nm,0.6s,baz=260,slow=0.9,SNR=160						
**TXA

RTMI				Sn		Sn	21 06 13.8	-6.0
HNKL	**Nakhl**	**8.44**	**118**	P		Pn	21 04 45.5	-0.4
MMLI	**Mount Malkishu**	**8.55**	**100**	Pn		Pn	21 04 47.0	-0.5
MMLI				Sn		Sn	21 06 17.4	-5.2
KSDI	**Kefar Szold**	**8.58**	**94**	Pn		Pn	21 04 48.9	+1.0
KSDI				Sn		Sn	21 06 18.6	-4.9
HRI	**Mount Hermon**	**8.63**	**94**	Sn		Sn	21 06 21.0	-3.7
HMDT	**Nahal Hemdat**	**8.69**	**101**	Pn		Pn	21 04 50.0	+0.7
HMDT				Sn		Sn	21 06 20.7	-5.3
RMNI	**Mount Ramon**	**8.69**	**112**	Sn		Sn	21 06 20.1	-6.0
DSI	**Dead Sea**	**8.78**	**105**	Pn		Pn	21 04 50.5	-0.1
DSI				Sn		Sn	21 06 22.7	-5.7
MZDA	**Masada**	**8.86**	**107**	Pn		Pn	21 04 52.0	+0.2
MZDA				Sn		Sn	21 06 24.2	-6.2
KRMI	**Paran Flat**	**8.89**	**115**	Pn		Pn	21 04 52.5	+0.4
KRMI				Sn		Sn	21 06 24.7	-6.4
PRNI	**Paran**	**8.99**	**113**	Pn		Pn	21 04 53.9	+0.4
PRNI				Sn		Sn	21 06 26.8	-6.7
ZFRI	**Zfri**	**9.03**	**112**	Pn		Pn	21 04 53.9	-0.2
ZFRI				Sn		Sn	21 06 27.8	-6.6
PE1	**Pezze di Greco**	**9.11**	**318**	*e*Pn		Pn	21 04 53.5	-1.6
HRFI	**Mount Harif**	**9.17**	**115**	Pn		Pn	21 04 56.4	+0.5
HRFI				Sn		Sn	21 06 31.6	-6.2
MBRI	**Mt Berech**	**9.20**	**116**	Pn		Pn	21 04 57.2	+0.8
MBRI				Sn		Sn	21 06 33.4	-5.2
HKAT	**Jabal Katrina**	**9.29**	**126**	P		Pn	21 04 57.4	-0.2
EIL	**Elat**	**9.29**	**117**	Pn		Pn	21 04 57.9	+0.2
	0.6nm,0.3s,baz=64,slow=23,SNR=14							
EIL				Sn		Sn	21 06 35.3	-5.6
	2.0nm,0.3s,baz=160,slow=23,SNR=7.2							
EIL	**Elat**	**9.29**	**117**	Pn		Pn	21 04 57.8	+0.2
EIL				Sn		Sn	21 06 35.3	-5.6
EIL	**Elat**	**9.29**	**117**	Pn		Pn	21 04 57.9	+0.3
EIL				Sn		Sn	21 06 34.2	-6.7
AQBJ	**Aqaba**	**9.33**	**116**	Pn		Pn	21 04 58.5	+0.3
VAE	**Valguarnera**	**9.50**	**293**	Pn		Pn	21 04 59.0	-1.5
	0.5nm,0.3s,baz=63,slow=6.8,SNR=2.3							
VAE				Sn		Sn	21 06 43.8	-2.2
	0.8nm,0.3s,baz=110,slow=19,SNR=2.7							
SG1	**Sgolgore (BA)**	**9.56**	**316**	*e*Pn		Pn	21 04 58.6	-2.6
ASF	**Jabal al Asfar**	**9.83**	**99**	Pn		Pn	21 05 06.4	+1.4
	0.1nm,0.3s,baz=295,slow=14,SNR=1.8							
ASF				Sn		Sn	21 06 50.2	-3.8
	0.6nm,0.3s,baz=237,slow=15,SNR=4.8							
GNI	**Garni**	**16.45**	**63**	Pn		Pn	21 06 36.3	+2.1
	0.2nm,0.3s,baz=80,slow=11,SNR=3.3							
AKASG	**Malin Array Be**	**16.66**	**8**	Pn		Pn	21 06 37.0	+0.3
	1.7nm,0.3s,baz=201,slow=10,SNR=4.6							
AKASG	**Malin Array Be**	**16.66**	**8**	Pn		Pn	21 06 37.0	+0.3
GERES	**GERESS Array B**	**16.98**	**333**	P		Pn	21 06 42.0	+1.2
	0.2nm,0.3s,baz=144,slow=12,SNR=4.7							
GERES				S		S	21 09 48.1	-9.2
	0.2nm,0.3s,baz=141,slow=28,SNR=5.4							
HFS	**Hagfors**	**27.00**	**347**	P		P	21 08 23.5	-0.9
	2.0nm,0.8s,mb3.7,baz=180,slow=40,SNR=3.6							
HFS	**Hagfors**	**27.00**	**347**	P		P	21 08 23.4	-0.9
TORD	**Torodi Ar. Bea**	**30.10**	**231**	P		P	21 08 52.2	-0.2
	0.6nm,0.5s,mb3.6,baz=33,slow=8.6,SNR=9.5							
TORD	**Torodi Ar. Bea**	**30.10**	**231**	P		P	21 08 52.2	-0.2
MKAR	**Makanchi Array**	**44.08**	**56**	P		P	21 10 52.1	+1.5
	0.5nm,0.5s,mb3.5,baz=272,slow=7.1,SNR=5.4							
ZALV	**Zalesovo Beam**	**45.46**	**46**	P		P	21 11 01.4	-0.1
	0.5nm,0.4s,mb3.7,baz=280,slow=8.5,SNR=3.2							

IDC 13 21:06:07.3±2.0, 385S×9919E, h0km, mb4.1/5, mb1 4.1/5, mb1mx3.8/18, mbtmp4.1/5, Error ellipse: s-maj=66.9km s-min=20.4km az=51.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.16**	**359**	P	P	21 11 01.2	-3.7
	0.8nm,0.7s,baz=191,slow=7.3,SNR=4.8						
DAV	**Davao City (W)**	**28.49**	**68**	P	P	21 12 05.7	+1.1
	659nm,0.4s,baz=356,slow=0.8,SNR=7.2						
WRA	**Warramunga Arr**	**37.81**	**118**	P	P	21 13 24.7	-1.0
	0.7nm,0.5s,baz=306,slow=9.2,SNR=16						
ASAR	**Alice Springs**	**38.87**	**124**	P	P	21 13 34.9	+0.3
	0.4nm,0.4s,baz=299,slow=8.0,SNR=6.4						
SONM	**Songino Array**	**51.85**	**6**	P	P	21 15 15.7	-1.5
	2.6nm,0.6s,baz=188,slow=9.3,SNR=20						
MKAR	**Makanchi Array**	**52.59**	**345**	P	P	21 15 23.5	+0.8
	3.6nm,0.7s,baz=150,slow=8.2,SNR=35						
ZALV	**Zalesovo Beam**	**58.83**	**350**	P	P	21 16 07.2	-0.2
	2.9nm,0.8s,baz=176,slow=4.5,SNR=13						
TXAR	**Lajitas Array**	**146.65**	**38**	PKPbc	PKPbc	21 25 52.1	+0.5
	1.8nm,0.7s,baz=304,slow=1.0,SNR=20						

*ISCJB **13** 21:14:24.9±0.4, 34.13N±003×2634E±005, h33km, Error ellipse: s-maj=5.9km s-min=4.1km az=0.7*
*CSEM **13** 21:14:24.5±0.1, 3.409N×2625E, h30km, MD3.6, Error ellipse: s-maj=3.0km s-min=1.7km az=82.0*
*HLW **13** 21:14:24.4, 34.32N×2650E, h33km, Mb3.3*
*NEIC **13** 21:14:25.0, 34.17N×2615E, h41km, MD3.6(ATH), After ATH.*
*ATH **13** 21:14:25.0, 34.17N×26.15E, h41km±13km, MD3.6/5*

ISC 13 21:14:26.3±2.4, 3415N±003×2629E±005, h35km±23km, n23, σ1§19/29, 1C-3D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**1.24**	**334**	*e*P	**Pn**	21 14 46.0	-1.2
NPS				*e*S	**Sn**	21 15 01.5	-1.3
KARP	**Karpathos**	**1.57**	**27**	⇓*i*P	**Pn**	21 14 52.5	+0.7
IDI	**Anoyia**	**1.62**	**315**	P	**Pn**	21 14 53.8	+1.4
GVD	**Gavdhos**	**1.94**	**291**	*e*P	**Pn**	21 14 55.5	-1.3
VAM	**Vamos**	**2.13**	**307**	*e*P	**Pn**	21 14 59.0	-0.4
ARG	**Arkhangelos**	**2.56**	**36**	*e*P	**Pn**	21 15 06.7	+1.4
SLUM		**2.80**	**199**	⇑P	**Pn**	21 15 09.8	+1.2
SLUM				S	**Sn**	21 15 42.5	+1.3
HMAT	**Matruh**	**3.12**	**167**	P	**Pn**	21 15 13.9	+0.9
HMAT				S	**Sn**	21 15 48.8	-0.2
HMAT	**Matruh**	**3.12**	**167**	P	**Pn**	21 15 13.9	+0.9
HMAT				S	**Sn**	21 15 48.8	-0.3
TURN	**Turunc**	**3.31**	**34**	*i* P	**Pn**	21 15 13.7	-2.0
AKAS	**Kas**	**3.42**	**52**	*i* P	**Pn**	21 15 17.7	+0.5
AKAS	**Kas**	**3.42**	**52**	*i* P	**Pn**	21 15 17.7	+0.5
AKAS				*i* S	**Sn**	21 15 56.5	-0.1
SMG	**Samos**	**3.58**	**7**	P	**Pn**	21 15 20.1	+0.7
GOLH	**Golhisar**	**4.08**	**40**	*i* P	**Pn**	21 15 27.6	+1.5
GOLH	**Golhisar**	**4.08**	**40**	*i* P	**Pn**	21 15 27.6	+1.4
GOLH				*i* S	**Sn**	21 16 13.0	+0.3
ITM	**Ithomi**	**4.66**	**312**	P	**Pn**	21 15 34.3	+0.1
ERMK	**Ermenek**	**5.96**	**63**	*i* P	**Pn**	21 15 54.0	+1.9
AYT	**Al 'Ayyat**	**6.06**	**136**	⇓P	**Pn**	21 15 52.3	-1.2
AWBH		**6.22**	**158**	P	**Pn**	21 15 56.1	+0.4
KOT	**Kottamia**	**6.31**	**130**	P	**Pn**	21 15 55.5	-1.4
HHAG	**Hagoal**	**6.47**	**129**	P	**Pn**	21 15 56.7	-2.3
GLL	**Jalalah**	**6.48**	**133**	⇓P	**Pn**	21 15 57.2	-2.1
HFRF	**Wahat Farafira**	**7.19**	**165**	P	**Pn**	21 16 09.6	+0.6

IDC 13 21:41:25.9±8.6, 141S×10039E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.4/18, mbtmp3.5/3, Error ellipse: s-maj=428.8km s-min=29.3km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.96**	**121**	P	P	21 48 45.8	+0.1
	0.1nm,0.5s,baz=309,slow=8.5,SNR=3.8						
MKAR	**Makanchi Array**	**50.57**	**344**	P	P	21 50 26.6	+0.3
	0.3nm,0.2s,baz=158,slow=7.6,SNR=3.9						
ZALV	**Zalesovo Beam**	**56.66**	**349**	P	P	21 51 10.8	0.0
	0.3nm,0.4s,baz=151,slow=3.3,SNR=3.8						
TXAR	**Lajitas Array**	**144.00**	**37**	PKP	PKPdf	22 01 02.5	-1.8
	0.3nm,0.5s,baz=223,slow=1.2,SNR=4.9						

*BJI **13** 21:53:03.2, 5400N×16480W, h34km, mB4.5, mb4.4, Ms4.6, Msz4.5*
*ISCJB **13** 21:53:08.6±0.5, 5388N±006×16473W±006, h69km±3km, mb4.3/31, Error ellipse: s-maj=11.8km s-min=3.5km az=154.7*
*NEIC **13** 21:53:10.2±0.5, 5398N×16483W, h65km±4km, mb4.3/1, ML4.2(AEIC), ML4.3(PMR), Error ellipse: s-maj=13.7km s-min=4.2km az=157.0*
*IDC **13** 21:53:14.5±4.5, 5398N×16496W, h103km±42km, mb3.8/19, mb1 4.0/19, mb1mx3.9/28, mbtmp3.8/19, Error ellipse: s-maj=21.7km s-min=11.3km az=4.0*

ISC 13 21:53:09.5±0.6, 5381N±006×16474W±006, h62km±4km, n73, σ1§03/84, mb4.4/31, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKA	**Akutan**	**0.69**	**299**	P	**Pn**	21 53 23.6	-0.1
AKUT	**Akutan**	**0.69**	**298**	*e*P	**Pn**	21 53 23.5	-0.3
AKUT				*e*S	**Sn**	21 53 34.4	+0.2
AKLV	**Akutan Long Va**	**0.80**	**297**	P	**Pn**	21 53 24.8	-0.3
AKLV				S	**Sn**	21 53 36.7	+0.2
AKGG	**Akutan Green G**	**0.84**	**298**	P	**Pn**	21 53 25.4	0.0
AKGG				S	**Sn**	21 53 38.0	+0.7
UNV	**Unalaska Valle**	**1.05**	**273**	P	**Pn**	21 53 27.4	-0.7
UNV				S	**Sn**	21 53 41.8	-0.2
FALS	**False Pass**	**1.30**	**36**	P	**Pn**	21 53 31.5	-0.1
FALS				S	**Sn**	21 53 49.7	+1.7
OKCD	**Okmok Cone D**	**2.05**	**261**	P	**Pn**	21 53 42.2	+0.6
OKCE	**Okmok Cone E**	**2.08**	**261**	P	**Pn**	21 53 42.9	+1.0
NIKO	**Nikolski**	**2.60**	**253**	*e*Pn	**Pn**	21 53 48.7	-0.4
NIKO				*e*Sn	**Sn**	21 54 19.0	-0.5
SDPT	**Sand Point**	**2.92**	**56**	*e*Pn	**Pn**	21 53 53.6	+0.2
SDPT				*e*Sn	**Sn**	21 54 24.4	-2.8
CHGN	**Chignik**	**4.41**	**53**	P	**Pn**	21 54 14.4	+0.7
OHAK	**Old Harbor**	**7.34**	**58**	*e*P	**Pn**	21 54 53.7	-0.2
OHAK				*e*Sn	**Sn**	21 56 11.8	-3.8
ADK	**Adak**	**7.49**	**260**	*e*Pn	**Pn**	21 54 58.8	+2.9
KDAK	**Kodiak Island**	**7.92**	**55**	P	**Pn**	21 55 00.5	-1.2
	5.6nm,0.3s,baz=238,slow=8.6,SNR=36						
KDAK	**Kodiak Island**	**7.92**	**55**	*e*Pn	**Pn**	21 55 00.7	-1.0
SVW2	**Sparrevohn**	**8.81**	**30**	*e*P	**Pn**	21 55 14.9	+1.0
AMKA	**Amchitka**	**10.01**	**262**	*e*P	**Pn**	21 55 30.4	0.0
	6.0nm,0.3s						
SLKM	**Skilak Lake**	**10.34**	**44**	*e*Pn	**Pn**	21 55 34.5	-0.2
SLKM				*e*Sn	**Sn**	21 57 28.1	-0.7
SEW	**Seward**	**10.45**	**47**	*e*Pn	**Pn**	21 55 34.6	-1.6
RC01	**Rabbit Creek A**	**10.87**	**42**	*e*Pn	**Pn**	21 55 40.3	-1.6
PPLA	**Purkeypile**	**11.22**	**31**	*e*Pn	**Pn**	21 55 50.1	+3.4
KTH	**Kantishna Hill**	**12.09**	**31**	*e*Pn	**Pn**	21 55 58.6	-0.1
	4.7nm,0.6s						
KTH				*e*Sn	**Sn**	21 58 13.9	+2.2
TRF	**Thorofare Moun**	**12.21**	**32**	*e*Pn	**Pn**	21 56 04.1	+3.8
BPAW	**Bear Paw Mtn.**	**12.49**	**29**	*e*Pn	**Pn**	21 56 05.3	+1.3
	16nm,1.0s						
BPAW				Sn	**Sn**	21 58 21.6	+0.4
DIV	**Divide**	**12.53**	**47**	*e*Pn	**Pn**	21 56 02.3	-2.3
RAGM	**Ragged Mountai**	**12.71**	**51**	*e*Pn	**Pn**	21 56 05.3	-1.8
RAGM				*e*Sn	**Sn**	21 58 27.2	+0.7
MCK	**McKinley**	**12.84**	**33**	*e*Pn	**Pn**	21 56 15.2	+6.4
BMRM	**Bremner River**	**12.97**	**48**	*e*Pn	**Pn**	21 56 08.0	-2.6
PNL	**Peninsula**	**15.03**	**57**	*e*P	**Pn**	21 56 37.2	-0.7
	31nm,0.8s						
HYT	**Haines Junctio**	**16.21**	**53**	*e*Pn	**Pn**	21 56 54.1	+1.2
HYT				Sn	**Sn**	21 59 55.7	+4.2
DAWY	**Dawson**	**16.50**	**42**	*e*Pn	**Pn**	21 56 55.6	-0.8
DLBC	**Dease Lake**	**19.74**	**62**	P	**Pn**	21 57 36.6	+0.8
DLBC	**Dease Lake**	**19.74**	**62**	*e*P	**Pn**	21 57 36.8	+1.0
PETK	**Petropavlovsk-**	**22.21**	**284**	P	**P**	21 57 59.8	-0.5
	5.1nm,0.3s,mb4.4,baz=84,slow=13,SNR=36						
YKA	**Yellowknife Ar**	**27.17**	**51**	P	**P**	21 58 47.9	+1.3
	2.6nm,0.8s,mb3.8,baz=276,slow=9.6,SNR=13						
YKA	**Yellowknife Ar**	**27.17**	**51**	P	**P**	21 58 47.9	+1.3
NVAR	**Mina Array Bea**	**34.98**	**97**	P	**P**	21 59 58.4	+3.0
	3.1nm,0.7s,mb4.3,baz=299,slow=8.5,SNR=22						
NVAR	**Mina Array Bea**	**34.98**	**97**	P	**P**	21 59 58.4	+3.0
ASAJ	**Asahikawa**	**35.16**	**276**	P	**P**	21 59 56.6	-0.3
	5.4nm,0.8s,mb4.5,baz=287,slow=12,SNR=4.2						
PDAR	**Pinedale Array**	**37.43**	**84**	P	**P**	22 00 18.9	+2.6
	0.3nm,0.3s,mb3.6,baz=178,slow=37,SNR=3.3						
MDJ	**Mudanjiang**	**42.43**	**285**	P	**P**	22 00 56.5	-1.2
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb3.9						
MDJ				LR	LR		
	comp=N,397nm,22.6s						
MDJ				LR	LR		
	comp=Z,455nm,23.3s						
MJAR	**Matsushiro Arr**	**42.52**	**270**	P	**P**	22 00 58.0	-0.6
	comp=Z,1.7nm,0.6s,mb4.0,baz=30,slow=5.7,SNR=5.1						
KSRS	**Korea Array**	**47.98**	**279**	P	**P**	22 01 42.3	+0.5
	comp=Z,1.3nm,0.7s,mb4.1,baz=47,slow=7.9,SNR=5.7						
TXAR	**Lajitas Array**	**49.99**	**94**	P	**P**	22 01 58.9	+1.7
	comp=Z,3.1nm,0.6s,mb4.5,baz=299,slow=5.5,SNR=46						
SONM	**Songino Array**	**52.92**	**302**	P	**P**	22 02 18.9	+0.1
	comp=Z,0.3nm,0.3s,mb3.7,baz=33,slow=9.0,SNR=5.8						
SONM				PcP	PcP	22 03 28.1	+1.1
	comp=Z,1.1nm,0.5s,baz=56,slow=1.7,SNR=9.0						
ARCES	**ARCESS Array B**	**56.74**	**356**	P	**P**	22 02 45.7	-0.4
	comp=Z,2.4nm,0.9s,mb4.2,baz=11,slow=6.7,SNR=3.5						
ARCES	**ARCESS Array B**	**56.74**	**356**	P	**P**	22 02 45.7	-0.4
ZALV	**Zalesovo Beam**	**58.20**	**319**	P	**P**	22 02 56.4	-0.2
	comp=Z,0.4nm,0.3s,mb3.9,baz=36,slow=7.7,SNR=4.3						
ZALV				PcP	PcP	22 03 46.3	-1.1
	comp=Z,0.5nm,0.3s,baz=37,slow=3.7,SNR=3.7						
ZALV	**Zalesovo Beam**	**58.20**	**319**	P	**P**	22 02 56.4	-0.2
ZALV				PcP	PcP	22 03 46.3	-1.1
GTA	**Gaotai**	**62.26**	**299**	*e*P	**P**	22 03 23.3	-1.3
GTA				AP	pP	22 03 36.9	-4.2
GTA				XP	sP	22 03 42.8	-5.3
GTA				AMB	AMB		
	comp=Z,2.0nm,1.2s,mb4.1						
JOF	**Joensuu**	**62.93**	**352**	*e*p	**P**	22 03 27.8	-0.9
KURK	**Kurchatov**	**63.10**	**320**	P	**P**	22 03 29.9	0.0
	comp=Z,0.6nm,0.7s,mb3.9,baz=52,slow=7.2,SNR=4.6						
KAF	**Kangasniemi**	**64.09**	**354**	*e*p	**P**	22 03 35.4	-0.9
	comp=Z,1.8nm,0.5s,mb4.4						
BVAR	**Borovoye Array**	**64.10**	**327**	P	**P**	22 03 35.7	-0.8
	comp=Z,1.2nm,0.6s,mb4.1,baz=45,slow=8.6,SNR=8.4						
BVAR				PcP	PcP	22 04 11.2	0.0
	comp=Z,0.7nm,0.5s,baz=26,slow=3.2,SNR=4.6						
MKAR	**Makanchi Array**	**64.79**	**316**	P	**P**	22 03 40.4	-0.7
	comp=Z,0.4nm,0.3s,mb3.9,baz=42,slow=5.7,SNR=7.3						
GYA	**Guiyang**	**68.30**	**285**	P	**P**	22 04 05.3	+1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
LSA	**Lhasa**	**74.27**	**299**	P	**P**	22 04 40.1	+0.3
AKASG	**Malin Array Be**	**75.20**	**351**	P	**P**	22 04 42.6	-2.3
	comp=Z,0.9nm,0.4s,mb4.0,baz=17,slow=6.1,SNR=6.8						
GUN	**Gumba**	**78.42**	**302**	*e*P	**P**	22 05 03.5	+0.2
	comp=Z,19nm,0.4s,mb5.4						
JIRN	**Jiri**	**78.47**	**301**	*e*P	**P**	22 05 04.3	+0.7
	comp=Z,30nm,0.4s,mb5.5						
KKN	**Kakani**	**78.82**	**302**	*e*P	**P**	22 05 05.9	+0.4
	comp=Z,2.9nm,0.3s,mb4.7						
RAMN	**Ramite**	**78.84**	**300**	*e*P	**P**	22 05 05.9	+0.2
	comp=Z,14nm,0.6s,mb5.1						
PKI	**Pulchoki**	**78.94**	**302**	*e*P	**P**	22 05 06.4	+0.2
CMAR	**Chiang Mai Arr**	**78.97**	**286**	P	**P**	22 05 06.2	-0.2
	comp=Z,2.6nm,0.7s,mb4.3,baz=23,slow=5.9,SNR=18						
GKN	**Gorkha**	**78.97**	**303**	*e*P	**P**	22 05 06.3	0.0
	comp=Z,9.7nm,0.4s,mb5.1						
DMN	**Daman**	**79.06**	**302**	*e*P	**P**	22 05 07.0	+0.2
	comp=Z,8.7nm,0.6s,mb4.8						
DANN	**Dangsing**	**79.12**	**303**	*e*P	**P**	22 05 07.8	+0.6
	comp=Z,36nm,0.6s,mb5.5						
KOLN	**Koldanda**	**79.68**	**303**	*e*P	**P**	22 05 10.4	+0.2
	comp=Z,12nm,0.7s,mb4.9						
WRA	**Warramunga Arr**	**90.11**	**235**	P	**P**	22 06 02.1	-0.3
	comp=Z,0.9nm,0.3s,mb4.5,baz=46,slow=9.4,SNR=11						
FITZ	**Fitzroy Crossi**	**93.00**	**243**	P	**P**	22 06 15.8	0.0
	comp=Z,0.8nm,0.7s,mb4.3,baz=163,slow=7.6,SNR=4.4						
ASAR	**Alice Springs**	**93.48**	**234**	P	**P**	22 06 17.9	-0.1
	comp=Z,0.6nm,0.7s,mb4.2,baz=26,slow=4.4,SNR=5.8						
BOSA	**Boshof**	**153.78**	**340**	PKPbc	PKPbc	22 13 00.2	-0.9
	comp=Z,5.2nm,1.0s,baz=159,slow=8.6,SNR=3.2						
BOSA	**Boshof**	**153.78**	**340**	PKPbc	PKPbc	22 13 00.2	-0.9

IDC 13 22:03:45.9±2.4, 345S×10050E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/20, mbtmp3.8/7, ML3.9/1, Error ellipse: s-maj=83.0km s-min=19.0km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**19.26**	**95**	P	Pn	22 08 10.9	-2.3
	0.4nm,0.3s,baz=228,slow=17,SNR=3.9						
CMAR	**Chiang Mai Arr**	**21.82**	**356**	P	P	22 08 42.0	+2.0
	1.1nm,0.5s,baz=185,slow=8.4,SNR=10.0						
WRA	**Warramunga Arr**	**36.84**	**119**	P	P	22 10 56.0	-0.1
	0.2nm,0.3s,baz=310,slow=8.9,SNR=4.4						
ASAR	**Alice Springs**	**38.01**	**125**	P	P	22 11 07.0	+1.0
	0.3nm,0.4s,baz=300,slow=7.6,SNR=5.2						
SONM	**Songino Array**	**51.33**	**5**	P	P	22 12 52.1	+0.2
	1.8nm,0.7s,baz=188,slow=9.4,SNR=16						
MKAR	**Makanchi Array**	**52.55**	**344**	P	P	22 13 00.7	-0.3
	0.9nm,0.5s,baz=152,slow=8.2,SNR=12						
ZALV	**Zalesovo Beam**	**58.68**	**349**	P	P	22 13 44.0	-0.9
	1.5nm,0.7s,baz=197,slow=4.5,SNR=7.9						
TXAR	**Lajitas Array**	**145.53**	**39**	PKPbc	PKPbc	22 23 26.3	-0.6
	1.1nm,0.7s,baz=292,slow=1.0,SNR=14						

*NDI **13** 22:18:24.0±3.2, 3376N×7038E, h33km, ML3.7*
*ISCJB **13** 22:18:41.9±2.2, 341N±02×727E±03, h10km, Error ellipse: s-maj=37.4km s-min=6.9km az=145.9*

ISC 13 22:18:42.7±1.9, 339N±01×725E±02, h10km, n8, σ1§41/14, 2C, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**3.09**	**118**	*e*P	**Pn**	22 19 33.6	+2.1
THN				*ex*	**Sn**	22 20 10.0	+1.5
DLH	**Dalhousie**	**3.23**	**115**	*e*P	**Pn**	22 19 35.0	+1.7
DLH				*ex*	**Sn**	22 20 11.0	-0.8
SDNR	**Sundarnagar**	**4.49**	**122**	*e*P	**Pn**	22 19 50.0	-0.7
SDNR				*ex*	**Sn**	22 20 51.0	+8.0
SMLA	**Simla**	**4.84**	**124**	*i* P	**Pn**	22 19 57.5	+1.9
SMLA				*i* S	**Sb**	22 21 04.4	-1.4
SMLA				*ex*	x	22 21 06.6	
	comp=N,471nm,0.3s						
SMLA				*ex*	x	22 21 07.4	
	comp=E,462nm,0.4s						
KLP	**Kalpa**	**5.41**	**115**	*e*P	**Pn**	22 20 02.9	-0.5
KLP				*e*S	**Sb**	22 21 16.2	-6.0
KLP				AML	AML	22 21 24.0	
	comp=E,110nm,0.6s						
KLP				AML	AML	22 21 24.2	
	comp=N,77nm,0.6s						
DDI	**Dehra Dun**	**5.94**	**126**	*ex*	**Pn**	22 20 09.0	-1.6
SONA	**Sohna**	**6.90**	**144**	*e*S	**Sn**	22 21 38.6	-3.8
SONA				AML	AML	22 22 37.0	
	comp=E,9.1nm,0.2s						
SONA				AML	AML	22 22 37.0	
	comp=N,5.3nm,0.3s						
KK31	**Karatay Array**	**9.28**	**351**	⇑P	**Pn**	22 21 02.0	+5.5
	comp=N,0.5nm,0.4s,baz=174,slow=14,SNR=27						
KK31				⇑S	**Sn**	22 22 40.2	-0.7
	comp=N,0.5nm,0.4s,baz=170,slow=22,SNR=5.8						

*ISCJB **13** 22:24:05.6±1.3, 3878N±006×2682E±0.10, h8km±11km, Error ellipse: s-maj=13.1km s-min=9.3km az=172.8*
*ISK **13** 22:24:05.2, 3878N×2683E, h6km, MD2.9*
*DDA **13** 22:24:05.5, 3880N×2687E, h7km±5km, Md2.8*
*CSEM **13** 22:24:05.3±0.1, 3878N×2683E, h12km, MD2.9, Error ellipse: s-maj=3.0km s-min=2.0km az=79.0*

ISC 13 22:24:05.8±1.3, 3878N±005×268E±01, h12km±10km, n7, σ0§61/10, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.44**	**154**	*e*PG	**Pg**	22 24 14.2	-0.2
BLCB				*e*SG	**Sg**	22 24 20.4	+0.2
AYVA	**Ayvalik**	**0.54**	**351**	*i* P	**Pg**	22 24 16.9	+0.6
AKS	**Akhisar**	**0.80**	**82**	*e*PG	**Pg**	22 24 21.0	-0.2
AKS				*e*SG	**Sg**	22 24 31.8	0.0
BALY	**Balya**	**1.15**	**33**	*i* P	**Pb**	22 24 26.4	-1.3
BALY				*i* S	**Sb**	22 24 43.1	+0.5
BALB	**Balikesir**	**1.20**	**44**	*e*PN	**Pn**	22 24 27.6	-0.8
DEMI	**Demirci**	**1.52**	**79**	*i* P	**Pn**	22 24 33.5	+0

TXAR Pg Pg 22 41 19.0 -11
0.4nm,0.3s,baz=228,slow=13,SNR=4.9
TXAR Lg 22 43 08.3
0.6nm,0.3s,baz=232,slow=27,SNR=3.8
TXAR LR LR 22 44 26.6
comp=Z,184nm,21.0s,baz=265,slow=42
TXAR Lajitas Array 6.93 50 Pn Pn 22 40 57.6 -1.1
TXAR Pg Pg 22 41 19.0 -11
TXAR Lg 22 43 08.3
TXAR LR LR 22 44 26.6
219A White Tail Can 6.97 4 P Pn 22 40 57.4 -2.1
baz=6.7,SNR=8.6
216A Three Points, 7.12 348 ⇓P Pn 22 40 59.9 -1.5
baz=6.9
TUC Tucson 7.33 353 *e*Pn Pn 22 41 01.5 -2.7
118A Homack Ranch, 7.60 359 ⇓P Pn 22 41 04.9 -3.1
baz=7.4
116A Eloy 7.71 348 ⇑P Pn 22 41 07.5 -2.0
baz=7.5,SNR=6.9
119A Ashpeak Ranch, 7.74 3 ⇑P Pn 22 41 06.6 -3.2
baz=7.5
115A Sonoran Desert 7.96 345 ⇓P Pn 22 41 10.9 -2.0
baz=7.7
Y17A Roosevelt 8.70 354 ⇓P Pn 22 41 21.9 -1.2
baz=8.5
Y18A Canyon Day Jun 8.74 359 ⇓P Pn 22 41 23.1 -0.5
baz=8.5
Y19A Nutrioso 8.92 3 ⇓P Pn 22 41 25.4 -0.7
baz=8.7,SNR=9.8
Y16A Circle Bar Ran 8.96 351 ⇑P Pn 22 41 26.0 -0.6
baz=8.7,SNR=9.1
GLA Glamis 9.15 332 ⇓P Pn 22 41 29.4 +0.2
baz=8.9
Y15A Casa Rosa Ranc 9.19 347 ⇑P Pn 22 41 28.9 -0.9
baz=8.9,SNR=5.4
Y14A Wickenburg 9.33 343 ⇓P Pn 22 41 31.3 -0.4
baz=9.1
X17A Forest Lakes 9.34 355 ⇑P Pn 22 41 31.4 -0.4
baz=9.1
X19A St. Johns 9.39 2 ⇓P Pn 22 41 31.5 -1.0
baz=9.2,SNR=5.9
X16A Lo Mia Camp, P 9.48 352 ⇑P Pn 22 41 33.2 -0.7
baz=9.2,SNR=13
X18A Snowflake 9.48 359 ⇑P Pn 22 41 33.5 -0.3
baz=9.3
X15A Humboldt 9.68 348 ⇓P Pn 22 41 35.9 -0.7
baz=9.4
MONP Monument Peak 9.77 325 ⇑P Pn 22 41 38.3 +0.5
baz=9.5
X14A Yava 9.81 345 ⇓P Pn 22 41 38.0 -0.3
baz=9.6
BC3 Big Chuckw Mtn 9.94 331 ⇑P Pn 22 41 40.3 +0.2
baz=9.7
PDMCI Parker Dam,Lak 10.01 339 ⇑P Pn 22 41 41.5 +0.6
baz=9.8,SNR=5.2
X13A Yucca 10.18 341 ⇓P Pn 22 41 43.5 +0.2
baz=9.9,SNR=10.0
ANMO Albuquerque 10.31 15 Pn Pn 22 41 45.1 0.0
0.1nm,0.3s,baz=205,slow=12,SNR=6.8
ANMO LR LR 22 46 00.9
comp=Z,359nm,21.0s,baz=130,slow=39
ANMO Albuquerque 10.31 15 *e*Pn Pn 22 41 46.2 +1.1
W15A Williams 10.36 349 ⇑P Pn 22 41 46.8 +1.0
baz=10
PFO Pinyon Flat Ob 10.36 327 Pn Pn 22 41 41.6 -4.3
0.1nm,0.3s,baz=37,slow=5.1,SNR=1.9
PFO LR LR 22 44 51.7
comp=Z,359nm,20.4s,baz=56,slow=33
PFO Pinyon Flat Ob 10.36 327 ⇓P Pn 22 41 47.4 +1.5
baz=10
WUAZ Wupatki 10.56 353 *e*Pn Pn 22 41 50.5 +1.9
W14A Seligman 10.56 345 P Pn 22 41 48.6 0.0
baz=10,SNR=10.0
W13A Hualapai Mount 10.66 341 ⇑P Pn 22 41 51.0 +1.0
baz=10,SNR=15
V19A Window Rock 10.69 3 ⇓P Pn 22 41 50.0 -0.3
baz=10
V15A Kaibab Nationa 10.97 350 ⇓P Pn 22 41 55.7 +1.6
baz=11
V14A Boquillas Ranc 10.97 346 ⇓P Pn 22 41 54.1 -0.1
baz=11,SNR=7.4
U16A Tuba City 11.16 354 ⇓P Pn 22 41 57.9 +1.2
baz=11,SNR=8.6
W12A Cal Nev Ari 11.16 338 ⇓P Pn 22 41 57.8 +1.0
baz=11
V13A Grand Canyon W 11.40 342 ⇓P Pn 22 42 01.2 +1.1
baz=11
V12A Nelson 11.54 339 ⇓P Pn 22 42 02.6 +0.5
baz=11,SNR=5.6
U15A North Rim 11.58 350 ⇓P Pn 22 42 02.9 +0.3
baz=11
U14A Mt Trumbull 11.74 346 ⇓P Pn 22 42 05.5 +0.8
baz=12
T19A Beclabito 11.80 3 ⇑P Pn 22 42 06.3 +0.8
baz=12
GSC Goldstone 11.92 331 ⇓P Pn 22 42 08.6 +1.3
baz=12
GSC Goldstone 11.92 331 *e*Pn Pn 22 42 07.9 +0.7
U13A Pakoon Wash 11.92 343 ⇑P Pn 22 42 07.7 +0.5
baz=12
T18A Mexican Hat 12.09 360 ⇑P Pn 22 42 09.6 +0.2
baz=12
MVCO Mesa Verde 12.21 5 *e*Pn Pn 22 42 14.3 +3.2
SHPR Sheep Range 12.36 339 *e*Pn Pn 22 42 15.0 +1.9
S18A Hurst Farm, Bl 12.64 359 ⇑P Pn 22 42 17.0 0.0
baz=12
MPMC Manual Prospec 12.86 331 ⇑P Pn 22 42 21.4 +1.4
baz=13
FURC Furnace Creek, 12.94 334 ⇑P Pn 22 42 22.5 +1.4
baz=13
ISA Isabella 13.00 327 ⇑P Pn 22 42 24.3 +2.3
baz=13
TPNV Topopah Spring 13.13 337 *e*Pn Pn 22 42 23.9 +0.2
69nm,2.0s
TPNV Sn Sn 22 44 48.4 -1.3
R16A Teasdale 13.31 354 ⇓P Pn 22 42 27.0 +0.8
baz=13
R18A Canyonlands Na 13.33 360 ⇓P Pn 22 42 26.5 0.0
baz=13
R17A Hanksville Air 13.39 357 ⇑P Pn 22 42 28.1 +0.9
baz=13,SNR=6.3
WMOK Wichita Mounta 13.58 42 *e*Pn Pn 22 42 31.1 +1.2
R13A O'Grain Ranch, 13.60 346 ⇑P Pn 22 42 31.6 +1.4
baz=13
MSU Marysvale 13.61 352 *e*Pn Pn 22 42 31.8 +1.5
R12A Pony Springs, 13.90 344 ⇑P Pn 22 42 35.7 +1.5
baz=14
Q16A Castle Valley 13.91 355 ⇑P Pn 22 42 35.3 +0.9
baz=14
SRU San Rafael 14.07 358 *e*Pn Pn 22 42 37.1 +0.6
HELL Mitchell Peak 14.08 328 ⇓P Pn 22 42 37.6 +1.0
baz=14
S10A Tonopah Range, 14.12 337 ⇓P Pn 22 42 37.9 +0.7
baz=14,SNR=7.1
S09A Goldfield 14.18 335 ⇑P Pn 22 42 38.5 +0.5
baz=14,SNR=8.7
R11A Troy Canyon, C 14.18 341 ⇓P Pn 22 42 38.1 0.0
baz=14
R10A Warm Springs 14.35 339 ⇓P Pn 22 42 41.2 +0.8
baz=14
Q13A Wheeler Ranch, 14.36 347 ⇑P Pn 22 42 40.8 +0.4
baz=14,SNR=12
S08C White Mtn Res 14.36 332 ⇑P Pn 22 42 42.1 +1.5
baz=14,SNR=5.8
MTUM Tungsten Hills 14.41 331 *e*Pn Pn 22 42 43.1 +1.9
TPH Tonopah 14.48 336 *e*Pn Pn 22 42 43.5 +1.3
P19A Cripple Cowboy 14.59 2 ⇑P Pn 22 42 43.9 +0.2
baz=14
Q12A Willow Creek R 14.63 344 ⇓P Pn 22 42 44.5 +0.4
baz=14
Q11A Duckwater 14.66 342 ⇑P Pn 22 42 45.1 +0.4
baz=14
T06C Millerton Lake 14.67 327 ⇑P Pn 22 42 45.6 +0.9
baz=14
P14A Drum Mountains 14.80 350 ⇑P Pn 22 42 47.0 +0.5
baz=15,SNR=10.0
P13A Bates Ranch, G 14.84 347 ⇑P Pn 22 42 47.8 +0.8
baz=15
Q10A Clear Creek Ra 14.87 339 ⇑P Pn 22 42 49.1 +1.6
baz=15
P12A McGill 15.05 345 ⇓P Pn 22 42 50.4 +0.5
baz=15,SNR=5.8
ISCO Idaho Springs 15.15 12 *e*Pn Pn 22 42 57.2 +5.9
NVAR Mina Array Bea 15.21 334 Pn Pn 22 42 48.7 -3.3
0.1nm,0.3s,baz=49,slow=38,SNR=2.2
NVAR Mina Array Bea 15.21 334 Pn Pn 22 42 48.7 -3.3
DUG Dugway 15.35 351 *e*P Pn 22 42 55.5 +1.6
11nm,0.9s
DAU Daniels Canyon 15.41 356 *e*P Pn 22 42 55.9 +1.3
S06C San Francisco 15.43 329 ⇑P Pn 22 42 56.9 +2.0
baz=15
NOQ North Oquirrh 15.72 353 Pn Pn 22 42 55.9 -2.8
WAKR Walker 15.75 331 *e*Pn Pn 22 43 03.1 +4.0
R06C Coleville 15.77 331 ⇓P Pn 22 43 02.0 +2.7
baz=16
O12A Currie 15.77 346 ⇓P Pn 22 43 00.9 +1.5
baz=16
O11A Cowboy Ranch, 15.87 343 ⇓P Pn 22 43 01.4 +0.9
baz=16
CMIG Matias Romero 15.96 117 Pn Pn 22 43 02.8 +0.8
0.3nm,0.3s,baz=286,slow=9.1,SNR=2.8
CMIG LR LR 22 49 08.8
comp=Z,352nm,19.0s,baz=284,slow=36
N14A Grayback Hills 16.05 351 ⇑P Pn 22 43 04.1 +1.2
baz=16
BGU Big Grassy Mou 16.10 351 *e*Pn Pn 22 43 04.0 +0.4
BGU *e*Sn Sn 22 45 50.3 -12
R05C Kirkwood Meado 16.20 330 ⇓P Pn 22 43 06.9 +2.0
baz=16
O10A Cortez Mining, 16.25 341 P Pn 22 43 06.4 +0.9
baz=16,SNR=15
M16A Huntsville 16.33 355 ⇑P Pn 22 43 07.2 +0.6
baz=16
ELK Elko 16.34 345 Pn Pn 22 43 05.9 -0.8
0.1nm,0.3s,baz=172,slow=11,SNR=5.7
N12A Clover Valley, 16.40 346 ⇑P Pn 22 43 08.4 +1.0
baz=16
SPUT South Promonto 16.41 353 *e*Pn Pn 22 43 06.8 -0.7
SPUT *e*Sn Sn 22 46 05.0 -4.5
WCN Washoe City 16.55 332 ⇓P Pn 22 43 11.5 +2.1
baz=16
M15A Larsen Ranch, 16.56 353 ⇑P Pn 22 43 09.8 +0.3
baz=16,SNR=7.5
BMN Battle Mountai 16.59 340 *e*Pn Pn 22 43 09.0 -0.9
HWUT Hardware Ranch 16.62 355 *e*Pn Pn 22 43 11.6 +1.5
M14A Sheep Mountain 16.71 351 ⇓P Pn 22 43 12.1 +0.7
baz=16
HVU Hansel Valley 16.91 352 *e*Pn Pn 22 43 14.4 +0.5
MIAR Mount Ida 16.95 52 *e*Pn Pn 22 43 17.1 +2.7
11nm,0.9s
N09A Rock Creek Ran 17.07 340 ⇑P Pn 22 43 17.0 +1.0
baz=17
L15A Malad City 17.09 353 ⇓P Pn 22 43 17.1 +1.0
baz=17
M11A Holland Ranch, 17.12 344 ⇓P Pn 22 43 18.0 +1.4
baz=17
L14A Malta 17.22 351 ⇓P Pn 22 43 17.8 +0.1
baz=17,SNR=8.7
BEKR Beckwourth 17.28 332 ⇓P Pn 22 43 20.7 +2.2
baz=17
M10A I.L. Ranch, Tu 17.40 343 ⇓P Pn 22 43 20.7 +0.7
baz=17
N07B Gerlach 17.50 336 ⇓P Pn 22 43 21.3 +0.1
baz=17
L12A House Creek Ra 17.63 347 ⇓P Pn 22 43 24.1 +1.2
baz=17
BW06 Boulder Array 17.71 1 *e*Pn Pn 22 43 23.2 -0.7
PDAR Pinedale Array 17.71 1 P Pn 22 43 22.9 -0.9
0.1nm,0.3s,baz=171,slow=10,SNR=14
PDAR LR LR 22 49 48.1
comp=Z,247nm,19.2s,baz=339,slow=36
K14A Jones Ranch, D 17.71 352 ⇓P Pn 22 43 24.5 +0.6
baz=18
K15A Arbon 17.77 353 P Pn 22 43 25.1 +0.5
baz=18,SNR=5.5
N06A Buffalo Meadow 17.80 334 ⇓P Pn 22 43 26.1 +1.0
baz=18
L11A Cat Creek Ranc 17.81 345 P Pn 22 43 25.7 +0.6
baz=18,SNR=6.7
L10A Juniper Basin 17.90 344 P Pn 22 43 26.8 +0.6
baz=18,SNR=8.1
M07A Soldier Meadow 18.11 337 ⇑P Pn 22 43 29.9 +1.1
baz=18
J16A Bone 18.28 356 ⇓P Pn 22 43 31.6 +0.7
baz=18
REDW Red Top Meadow 18.33 357 *e*Pn Pn 22 43 31.3 -0.1
RRI2 Red Ridge 18.33 356 *e*Pn Pn 22 43 31.4 -0.1
66nm,2.3s
K11A Parker Ranch, 18.45 345 ⇓P Pn 22 43 33.0 +0.1
baz=18
TPAW Teton Pass 18.46 357 *e*Pn Pn 22 43 34.5 +1.5
45nm,1.9s
J15A Blackfoot 18.47 354 ⇓P Pn 22 43 33.4 +0.2
baz=18
J14A Carey 18.52 351 P Pn 22 43 34.2 +0.4
baz=18,SNR=9.1
L08A Fields 18.54 340 ⇓P Pn 22 43 34.1 0.0
baz=18
LOHW Long Hollow 18.57 358 *e*Pn Pn 22 43 33.4 -1.0
K10A MacKenzie Ranc 18.66 343 ⇓P Pn 22 43 35.3 -0.2
baz=18
J13A Cove Ranch, Pi 18.69 350 ⇑P Pn 22 43 35.4 -0.5
baz=18
MOOW Moose Ponds 18.71 358 *e*Pn Pn 22 43 35.3 -0.8
56nm,2.4s
J12A Stokes Ranch, 18.71 348 ⇓P Pn 22 43 36.1 0.0
baz=18
K09A Rome 18.82 342 P Pn 22 43 36.5 -0.9
baz=19,SNR=13
WVOR Wild Horse Val 18.86 339 *e*P Pn 22 43 36.6 -1.3
14nm,1.3s
IMW Indian Meadow 18.86 357 *e*Pn Pn 22 43 37.3 -0.6
50nm,1.9s
HLID Hailey 18.89 350 ⇑P Pn 22 43 37.0 -1.3
baz=19
MOD Modoc 18.97 335 ⇓P Pn 22 43 40.3 +0.9
baz=19
MFID Camas Ranch 19.02 346 ⇓P Pn 22 43 40.0 +0.2
baz=19
K08A Mann Creek Ran 19.08 340 ⇑P Pn 22 43 40.1 -0.5
baz=19
I14A Mackay 19.11 352 ⇓P Pn 22 43 40.6 -0.3
baz=19
K07A Rock Creek Ran 19.29 338 ⇑P Pn 22 43 41.6 -1.4
baz=19
L05A Lakeview 19.30 334 ⇑P Pn 22 43 42.4 -0.8
baz=19
N02C Big Bar 19.40 328 ⇓P Pn 22 43 44.7 +0.3
baz=19
M04C Macdoel 19.49 332 ⇑P Pn 22 43 45.9 +0.4
baz=19
RSSD Black Hills 19.63 12 *e*P Pn 22 43 46.3 -0.9
1.5nm,0.5s
J08A Circle Bar Ran 19.64 341 ⇓P Pn 22 43 45.4 -1.9
baz=19
H16A Russell Place, 19.68 357 ⇓P Pn 22 43 46.5 -1.3
baz=20
H15A Lima 19.70 354 ⇓P Pn 22 43 46.5 -1.5
baz=20
K06A Valley Falls 19.73 337 ⇓P Pn 22 43 47.0 -1.4
baz=20
H14A Leadore 19.78 352 ⇓P Pn 22 43 47.0 -2.0
baz=20
YBH Yreka Blue Hor 19.83 330 LR LR 22 51 04.8
comp=Z,210nm,20.8s,baz=273,slow=36
K05A Summer Lake 19.91 335 ⇓P Pn 22 43 48.8 -1.7
baz=20
H12A Diamond D Ranc 19.93 349 P Pn 22 43 49.2 -1.4
baz=20,SNR=6.1
MCMT McKenzie Canyo 19.93 354 *e*P Pn 22 43 49.5 -1.2
MCMT *e* 22 43 57.6
J06A Christmas Vall 20.09 337 P P 22 43 50.5 -0.3
baz=20,SNR=8.7
I08A Drewsey 20.18 341 ⇑P P 22 43 51.5 -0.3
baz=20
G15A Dillon 20.23 354 ⇓P P 22 43 52.4 0.0
baz=20
H11A Donnelly 20.29 347 ⇓P P 22 43 52.6 -0.3
baz=20
H10A Noah's Angus R 20.34 346 P P 22 43 52.9 -0.6
baz=20,SNR=6.9
G13A Cobalt 20.36 351 P P 22 43 53.4 -0.3
baz=20,SNR=7.8
TEIG Tepich 20.39 99 LR LR 22 53 33.2
comp=Z,260nm,18.8s,MS3.6,baz=85,slow=41
CCM Cathedral Cave 20.40 46 *e*Pn P 22 43 59.9 +5.5
DLMT Dillon 20.43 354 *e*P P 22 43 54.7 +0.2
J05A Fort Rock 20.51 336 ⇓P P 22 43 55.0 -0.5
baz=20,SNR=9.5
I07A Izee 20.62 340 ⇑P P 22 43 56.5 0.0
baz=20
H09A Durkee 20.63 344 ⇓P P 22 43 56.3 -0.4
baz=20
BMO Blue Mountains 20.72 345 *e*P P 22 43 55.9 -1.8
6.6nm,1.1s
BMO *e* 22 44 05.2
J04A Umpqua Nationa 20.81 334 ⇑P P 22 43 58.9 +0.2
baz=21
LRM Limekiln Ridge 20.88 355 *e*P P 22 43 59.1 -0.2
LRM *e*Pn P 22 44 09.3 +10
F15A Butte 20.90 355 P P 22 43 59.4 -0.2
baz=21,SNR=6.3
G11A Walters Elk Ra 21.01 347 P P 22 44 00.0 -0.8
baz=21,SNR=5.4
F13A Darby 21.05 351 P P 22 44 00.4 -0.9
baz=21,SNR=22
G10A Bishop Farm, J 21.09 345 ⇑P P 22 44 00.9 -0.8
baz=21
H07A Lands Inn, Kim 21.09 340 ⇓P P 22 44 00.7 -1.0
baz=21
F12A Elk City 21.16 349 ⇓P P 22 44 01.9 -0.6
baz=21
G09A Cove 21.23 344 P P 22 44 02.4 -0.8
baz=21,SNR=9.9
LRAL Lakeview Retre 21.43 63 *e*P P 22 44 06.9 +1.5
F11A Grangeville 21.45 348 ⇑P P 22 44 04.2 -1.4
baz=21
H06A Lindquist Farm 21.46 339 ⇑P P 22 44 05.0 -0.7
baz=21
ECSD EROS,Sioux Fal 21.55 27 *e*P P 22 44 08.9 +2.3
8.4nm,0.8s,mb4.2
E13A Victor 21.68 352 ⇓P P 22 44 06.7 -1.3
baz=22
G07A Ruggs Ranch, H 21.74 341 ⇑P P 22 44 08.0 -0.6
baz=22
F10A Beach Ranch, E 21.76 346 ⇑P P 22 44 07.8 -1.1
baz=22
LAO LASA Array 21.82 7 *e*P P 22 44 09.2 -0.3
WVT Waverly 21.85 54 *e*P P 22 44 12.1 +2.1
E12A Beaver Dam Sad 21.86 349 ⇑P P 22 44 08.9 -1.0
baz=22
I03A Eugene 21.89 333 ⇓P P 22 44 10.5 +0.2
baz=22
LNOR Lincton Mounta 21.91 344 *e*P P 22 44 09.1 -1.4
E11A Bogner Ranch, 21.91 348 ⇑P P 22 44 09.6 -0.9
baz=22
G06A Carlson Farm, 22.01 339 ⇑P P 22 44 11.2 -0.3
baz=22
CHMT Chamberlain Mo 22.03 354 *e*P P 22 44 10.8 -0.9
D15A Lincoln 22.09 355 ⇑P P 22 44 11.9 -0.5
baz=22
D14A Greenough 22.23 353 ⇑P P 22 44 12.3 -1.5
baz=22,SNR=9.3
D11A Klaveano Farm, 22.61 348 ⇓P P 22 44 15.8 -2.1
baz=22
SWET Sewanee 22.94 58 *e*P P 22 44 24.1 +2.6
E06A Yakima 23.28 340 ⇓P P 22 44 22.6 -2.4
baz=23
C11A Tepee Creek (N 23.36 349 ⇑P P 22 44 23.2 -2.5
baz=23
E05A Randle 23.55 339 ⇑P P 22 44 26.1 -1.7
baz=23
NEW Newport 23.92 348 *e*P P 22 44 29.1 -2.1
ETW Entiat 24.05 342 *e*P P 22 44 30.6 -1.8
CPCT Cooper Cave 24.10 59 *e*P P 22 44 35.1 +2.1
WALA Waterton Lakes 24.22 353 *e*P P 22 44 32.6 -1.4
17nm,1.0s,mb4.4
A11A Hall Mountain, 24.45 349 ⇓P P 22 44 34.7 -1.4
baz=24
TKL Tuckaleechee C 24.75 58 P P 22 44 40.6 +1.7
8.7nm,1.0s,mb4.2,baz=235,slow=7.1,SNR=6.5
TKL LR LR 22 55 10.3
comp=Z,405nm,18.2s,MS4.0,baz=256,slow=38
TZTN Tazewell 25.21 57 *e*P P 22 44 46.6 +3.5
BBB Bella Bella 30.51 338 LR LR 22 57 27.6
comp=Z,175nm,19.3s,MS3.7,baz=305,slow=36
DLBC Dease Lake 36.36 342 P P 22 46 19.3 -1.8
YKA Yellowknife Ar 37.61 356 P P 22 46 28.3 -3.5
0.9nm,0.8s,mb3.5,baz=182,slow=7.6,SNR=5.1
YKA LR LR 23 02 43.4
comp=Z,112nm,18.7s,MS3.7,baz=150,slow=37
OTAV Otavalo 39.03 124 *e*P P 22 46 43.5 -0.8
DAWY Dawson 43.58 342 *e*P P 22 47 18.5 -2.5
GERES GERESS Array B 90.85 33 LR LR 23 32 46.7
comp=Z,70nm,18.7s,MS4.1,baz=182,slow=35

IDC 13 22:39:59.2±4.1, 199S×9905E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.5/19, mbtmp3.6/4, Error ellipse: s-maj=177.6km s-min=29.0km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**40.03**	**125**	P	P	22 47 36.1	-0.2
	0.6nm,0.7s,baz=306,slow=8.5,SNR=4.7						
SONM	**Songino Array**	**50.03**	**6**	P	P	22 48 55.8	+0.3
	0.2nm,0.5s,baz=184,slow=12,SNR=2.6						
MKAR	**Makanchi Array**	**50.77**	**345**	P	P	22 49 01.6	+0.5
	0.4nm,0.7s,baz=155,slow=7.9,SNR=5.6						
ZALV	**Zalesovo Beam**	**56.99**	**350**	P	P	22 49 45.4	-1.0
	0.7nm,0.6s,baz=145,slow=5.4,SNR=4.9						
TXAR	**Lajitas Array**	**145.26**	**36**	PKPbc	PKPbc	22 59 39.2	-0.2
	0.2nm,0.4s,baz=303,slow=2.7,SNR=3.8						

IDC 13 22:41:31.1±1.9, 642S×12984E, h0km, mb3.4/2, mb1 3.7/6, mb1mx3.6/17, mbtmp3.6/6, ML3.6/4, Error ellipse: s-maj=53.8km s-min=26.4km az=83.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**7.18**	**238**	Pn	Pn	22 43 19.1	+1.7
	6.6nm,0.3s,baz=126,slow=5.7,SNR=4.6						
BATI				Sn	Sn	22 44 23.9	-16
	6.0nm,0.3s,baz=41,slow=5.6,SNR=4.1						
FITZ	**Fitzroy Crossi**	**12.31**	**199**	Pn	Pn	22 44 26.5	-1.3
	0.1nm,0.3s,baz=21,slow=14,SNR=5.0						
FITZ				Sn	Sn	22 46 21.5	-24
	0.2nm,0.3s,baz=284,slow=22,SNR=5.0						
WRA	**Warramunga Arr**	**14.13**	**162**	Pn	Pn	22 44 52.6	-0.1
	0.3nm,0.3s,baz=342,slow=13,SNR=15						
WRA				Sn	Sn	22 47 15.1	-15
	0.7nm,0.3s,baz=330,slow=23,SNR=10						
ASAR	**Alice Springs**	**17.59**	**168**	P	Pn	22 45 38.1	+0.3
	0.2nm,0.3s,baz=344,slow=9.5,SNR=7.5						
ASAR				S	Sn	22 48 36.5	-18
	0.1nm,0.3s,baz=342,slow=23,SNR=3.0						
MKAR	**Makanchi Array**	**67.66**	**327**	P	P	22 52 30.0	0.0
	0.1nm,0.3s,baz=111,slow=7.9,SNR=2.4						
KURK	**Kurchatov**	**71.94**	**329**	P	P	22 52 56.2	-0.1
	0.3nm,0.6s,baz=132,slow=4.6,SNR=2.3						

IDC 13 22:49:05.8±2.7, 258S×13917E, h0km, mb3.5/3, mb1 4.0/5, mb1mx3.7/15, mbtmp3.9/5, ML4.0/2, Error ellipse: s-maj=76.5km s-min=25.9km az=93.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**17.16**	**243**	P	Pn	22 53 08.2	+1.0
	1.2nm,0.3s,baz=110,slow=6.3,SNR=2.5						
WRA	**Warramunga Arr**	**17.89**	**195**	P	Pn	22 53 17.2	+1.0
	0.4nm,0.3s,baz=17,slow=13,SNR=20						
FITZ	**Fitzroy Crossi**	**20.34**	**220**	P	P	22 53 42.8	-1.2
	0.8nm,0.7s,baz=56,slow=18,SNR=2.9						
ASAR	**Alice Springs**	**21.57**	**193**	P	P	22 53 57.2	+0.1
	1.3nm,0.7s,baz=19,slow=11,SNR=14						
MKAR	**Makanchi Array**	**69.97**	**322**	P	P	23 00 19.3	+0.2
	0.8nm,0.4s,baz=116,slow=7.9,SNR=10						

ISCJB ***13*** *22:49:12.1±0.3, 3722N±001×541W±002, h3km±2km, Error ellipse: s-maj=2.5km s-min=2.3km az=32.1*
INMG ***13*** *22:49:13.0±1.6, 3699N×521W, h24km±4km, ML2.8, Error ellipse: s-maj=6.6km s-min=3.3km az=119.0*
CSEM ***13*** *22:49:14.2±0.1, 3707N×540W, h5km, ML3.5/12, Error ellipse: s-maj=1.8km s-min=1.3km az=6.0*
MDD ***13*** *22:49:14.7±0.3, 37.10N×539W, h11km, mbLg2.7/31, Error ellipse: s-maj=2.4km s-min=2.1km az=0.0, PRIMO*
MDD EMS: II INTENSIDAD MIMA.
IGIL ***13*** *22:49:15.3, 37.12N×540W, h11km, ML2.8*
NEIC ***13*** *22:49:15.1, 37.12N×540W, h11km, MN2.7(MDD), After MDD.*
SFS ***13*** *22:49:15.0, 37.12N×540W, h0km, ML2.7*
ISC 13 22:49:13.5±0.3, 3716N±002×539W±002, h11km±2km, n130, σ1§**05**/216, **4C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIJA	**Lijar**	**0.25**	**182**	⇑P	**Pg**	**22 49 16.4**	**-2.2**
LIJA	**Lijar**	**0.25**	**182**	*i* P	**Pg**	**22 49 16.4**	**-2.3**
ESPR	**Espera**	**0.47**	**232**	⇑Pg	**Pg**	**22 49 23.1**	**+0.4**
	10nm,0.1s,SNR=18						
ESPR				Lg		22 49 28.4	
	439nm,0.3s,SNR=7.9						
ESPR	**Espera**	**0.47**	**232**	Pg	**Pg**	**22 49 23.1**	**+0.4**
	23nm,0.3s,SNR=7.9						
ESPR				Lg		22 49 30.2	
	102nm,0.3s,SNR=7.9						
ESPR	**Espera**	**0.47**	**232**	Pg	**Pg**	**22 49 23.1**	**+0.4**
ESPR				Lg		22 49 30.2	
GIBL	**Gibalbin**	**0.56**	**235**	P	**Pg**	**22 49 24.4**	**-0.1**
GIBL				S	**Sg**	**22 49 33.2**	**+1.3**
GIBL	**Gibalbin**	**0.56**	**235**	*e*P	**Pg**	**22 49 24.4**	**-0.1**
REAL	**Reales**	**0.69**	**167**	P	**Pg**	**22 49 25.2**	**-1.7**
REAL				S	**Sg**	**22 49 36.5**	**+0.7**
REAL	**Reales**	**0.69**	**167**	*e*P	**Pg**	**22 49 25.2**	**-1.6**
EJIF	**Jimena Fronter**	**0.71**	**185**	Pg	**Pg**	**22 49 25.2**	**-2.0**
	36nm,0.4s,SNR=7.9						
EJIF				Lg		22 49 36.1	
	152nm,0.6s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.71**	**185**	Pg	**Pg**	**22 49 25.2**	**-2.0**
	36nm,0.4s,SNR=7.9						
EJIF				Lg		22 49 37.4	
	152nm,0.6s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.71**	**185**	Pg	**Pg**	**22 49 25.2**	**-2.0**
EJIF				Lg		22 49 37.4	
EMIJ	**Mijas**	**0.77**	**140**	⇑Pg	**Pg**	**22 49 26.5**	**-2.0**
	18nm,0.2s,SNR=18						
EMIJ				Lg		22 49 37.9	
	140nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**0.77**	**140**	Pg	**Pg**	**22 49 26.4**	**-2.1**
	29nm,0.2s,SNR=7.9						
EMIJ				Lg		22 49 39.1	
	109nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**0.77**	**140**	Pg	**Pg**	**22 49 26.4**	**-2.0**
EMIJ				Lg		22 49 39.1	
SCRT	**Cerro San Cris**	**0.81**	**230**	P	**Pg**	**22 49 30.1**	**+0.8**
SCRT				S	**Sg**	**22 49 39.9**	**+0.1**
SCRT	**Cerro San Cris**	**0.81**	**230**	*e*P	**Pg**	**22 49 30.1**	**+0.9**
MOMI	**Momias**	**0.87**	**198**	P	**Pg**	**22 49 30.5**	**+0.3**
MOMI				S	**Sg**	**22 49 44.4**	**+2.9**
MOMI	**Momias**	**0.87**	**198**	*e*P	**Pg**	**22 49 30.5**	**+0.3**
MOMI				*e*S	**Sg**	**22 49 44.4**	**+2.9**
ECAB	**El Cabril**	**0.92**	**359**	Pg	**Pg**	**22 49 32.7**	**+1.6**
	69nm,0.1s,SNR=68						
ECAB				Lg		22 49 46.6	
	104nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**0.92**	**359**	Pg	**Pg**	**22 49 32.7**	**+1.5**
	102nm,0.2s,SNR=68						
ECAB				Lg		22 49 46.8	
	137nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**0.92**	**359**	Pg	**Pg**	**22 49 32.7**	**+1.5**
ECAB				Lg		22 49 46.8	
CNIL	**Conil**	**0.95**	**214**	P	**Pg**	**22 49 32.2**	**+0.4**
CNIL				S	**Sg**	**22 49 44.8**	**+0.7**
CNIL	**Conil**	**0.95**	**214**	*e*P	**Pg**	**22 49 32.2**	**+0.4**
CNIL				*e*S	**Sg**	**22 49 44.8**	**+0.7**
ELOJ	**Sierra Loja**	**0.99**	**90**	Pg	**Pg**	**22 49 33.7**	**+1.1**
	4.9nm,0.2s,SNR=7.9						
ELOJ				Lg		22 49 47.0	
	19nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**0.99**	**90**	Pn	**Pn**	**22 49 32.9**	**-0.5**
	1.4nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**0.99**	**90**	Pg	**Pg**	**22 49 34.0**	**+1.4**
	3.9nm,0.2s,SNR=7.9						
ELOJ				Lg		22 49 47.0	
	SNR=7.9						
ELOJ	**Sierra Loja**	**0.99**	**90**	Pn	**Pn**	**22 49 32.9**	**-0.5**
ELOJ				Pg	**Pg**	**22 49 34.0**	**+1.4**
ELOJ				Lg		22 49 47.0	
EMIN	**Mina Concepcio**	**1.19**	**301**	Pn	**Pn**	**22 49 35.8**	**-0.3**
	3.9nm,0.1s,SNR=7.9						
EMIN				Pg	**Pg**	**22 49 36.6**	**+0.3**
	41nm,0.2s,SNR=7.9						
EMIN				Lg		22 49 53.3	
	118nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.19**	**301**	Pn	**Pn**	**22 49 35.8**	**-0.3**
	3.9nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.19**	**301**	Pg	**Pg**	**22 49 36.6**	**+0.3**
	41nm,0.2s,SNR=7.9						
EMIN				Lg		22 49 53.6	
	118nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.19**	**301**	Pn	**Pn**	**22 49 35.8**	**-0.3**
EMIN				Pg	**Pg**	**22 49 36.6**	**+0.3**
EMIN				Lg		22 49 53.6	
EADA	**Adamuz**	**1.20**	**33**	Pg	**Pg**	**22 49 37.6**	**+1.0**
	8.1nm,0.1s,SNR=7.9						
EADA				Lg		22 49 54.3	
	43nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.20**	**33**	Pn	**Pn**	**22 49 36.8**	**+0.6**
	1.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.20**	**33**	Pg	**Pg**	**22 49 37.6**	**+1.1**
	8.1nm,0.1s,SNR=7.9						
EADA				Lg		22 49 54.5	
	43nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.20**	**33**	Pn	**Pn**	**22 49 36.8**	**+0.5**
EADA				Pg	**Pg**	**22 49 37.6**	**+1.1**
EADA				Lg		22 49 54.5	
ECEU	**Ceuta**	**1.26**	**179**	Pg	**Pg**	**22 49 36.8**	**-0.9**
	1.0nm,0.1s,SNR=7.9						
ECEU				Lg		22 49 53.1	
	3.7nm,0.2s,SNR=7.9						
ECEU	**Ceuta**	**1.26**	**179**	Pg	**Pg**	**22 49 36.4**	**-1.3**
	1.7nm,0.2s,SNR=7.9						
ERON	**Agron**	**1.28**	**96**	Pg	**Pg**	**22 49 37.4**	**-0.7**
	4.8nm,0.2s,SNR=7.9						
ERON				Lg		22 49 54.5	
	11nm,0.2s,SNR=7.9						
ERON	**Agron**	**1.28**	**96**	Pg	**Pg**	**22 49 37.4**	**-0.7**
	12nm,0.2s,SNR=7.9						
ERON				Lg		22 49 56.6	
	20nm,0.3s,SNR=7.9						
ERON	**Agron**	**1.28**	**96**	Pg	**Pg**	**22 49 37.4**	**-0.6**
ERON				Lg		22 49 56.6	
ECOG	**Cogollos-Vega**	**1.46**	**85**	Pg	**Pg**	**22 49 41.7**	**+0.1**
	11nm,0.4s,SNR=7.9						
ECOG				Lg		22 50 02.1	
	25nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.46**	**85**	Pn	**Pn**	**22 49 40.5**	**+0.6**
	1.4nm,0.3s,SNR=12						
ECOG	**Cogollos-Vega**	**1.46**	**85**	Pg	**Pg**	**22 49 41.9**	**+0.3**
	11nm,0.4s,SNR=7.9						
ECOG				Lg		22 50 03.1	
	35nm,0.4s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.46**	**85**	Pn	**Pn**	**22 49 40.5**	**+0.6**
ECOG				Pg	**Pg**	**22 49 41.9**	**+0.3**
ECOG				Lg		22 50 03.1	
EQUE	**Quentar**	**1.56**	**88**	Pg	**Pg**	**22 49 42.9**	**-0.6**
	3.0nm,0.1s,SNR=7.9						
EQUE				Lg		22 50 04.3	
	46nm,0.4s,SNR=7.9						
EQUE	**Quentar**	**1.56**	**88**	Pn	**Pn**	**22 49 42.1**	**+0.9**
	0.4nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**1.56**	**88**	Pg	**Pg**	**22 49 43.2**	**-0.3**
	13nm,0.3s,SNR=7.9						
EQUE				Lg		22 50 06.0	
	46nm,0.4s,SNR=7.9						
EBAN	**Banos Encina**	**1.62**	**51**	Pn	**Pn**	**22 49 43.6**	**+1.5**
	1.2nm,0.1s,SNR=16						
EBAN				Pg	**Pg**	**22 49 44.7**	**+0.1**
	6.8nm,0.1s,SNR=7.9						
EBAN				Sn	**Sn**	**22 50 03.8**	**+0.8**
	8.9nm,0.2s,SNR=7.9						
EBAN				Lg		22 50 06.9	
	22nm,0.1s,SNR=8.8						
EBAN	**Banos Encina**	**1.62**	**51**	Pn	**Pn**	**22 49 43.0**	**+0.9**
	0.7nm,0.1s,SNR=16						
EBAN	**Banos Encina**	**1.62**	**51**	Pg	**Pg**	**22 49 44.7**	**0.0**
	4.9nm,0.2s,SNR=7.9						
EBAN				Sn	**Sn**	**22 50 03.8**	**+0.8**
	8.9nm,0.2s,SNR=7.9						
EBAN				Lg		22 50 07.0	
	22nm,0.1s,SNR=8.8						
EBAN	**Banos Encina**	**1.62**	**51**	Pn	**Pn**	**22 49 43.0**	**+0.9**
EBAN				Pg	**Pg**	**22 49 44.8**	**+0.1**
EBAN				Sn	**Sn**	**22 50 03.9**	**+0.8**
EBAN				Lg		22 50 07.0	
PBAR	**Barrancos**	**1.65**	**308**	*e*Pn	**Pn**	**22 49 42.5**	**0.0**
PBAR				*e*Sn	**Sn**	**22 50 05.9**	**+2.2**
PBAR				A		22 50 15.6	
	58nm,0.5s						
PBAR	**Barrancos**	**1.65**	**308**	*e*Pn	**Pn**	**22 49 42.5**	**0.0**
PBAR				*e*Sn	**Sn**	**22 50 05.9**	**+2.2**
	58nm,0.5s						
DKH	**Dar Kharkhour**	**1.67**	**179**	*i* P	**Pn**	**22 49 43.0**	**+0.3**
DKH				*i* S	**Sn**	**22 50 08.0**	**+3.9**
EGRO	**El Granado**	**1.71**	**283**	Pg	**Pg**	**22 49 45.2**	**-1.0**
	4.0nm,0.2s,SNR=22						
EGRO				Lg		22 50 07.7	
	42nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**1.71**	**283**	Pg	**Pg**	**22 49 45.2**	**-1.0**
	4.0nm,0.2s,SNR=22						
EGRO				Lg		22 50 08.8	
	42nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**1.71**	**283**	Pg	**Pg**	**22 49 45.2**	**-1.0**
EGRO				Lg		22 50 08.8	
PVAQ	**Vaqueiros**	**1.87**	**278**	*e*Pn	**Pn**	**22 49 44.7**	**-0.8**
PVAQ				*e*Sn	**Sn**	**22 50 12.1**	**+3.0**
PVAQ				A		22 50 22.4	
	59nm,0.4s						
PVAQ	**Vaqueiros**	**1.87**	**278**	*e*Pn	**Pn**	**22 49 44.7**	**-0.8**
PVAQ				*e*Sn	**Sn**	**22 50 12.1**	**+3.0**
	59nm,0.4s						
EQES	**Quesada**	**1.96**	**70**	Pn	**Pn**	**22 49 47.6**	**+1.0**
	0.3nm,0.1s,SNR=4.0						
EQES				Pg	**Pg**	**22 49 49.3**	**-1.7**
	1.0nm,0.1s,SNR=4.0						
EQES				Sn	**Sn**	**22 50 12.3**	**+1.0**
	7.2nm,0.2s,SNR=7.9						
EQES				Lg		22 50 17.8	
	17nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.96**	**70**	Pn	**Pn**	**22 49 48.2**	**+1.5**
	1.4nm,0.3s,SNR=13						
EQES				Sn	**Sn**	**22 50 12.0**	**+0.8**
	1.9nm,0.2s,SNR=7.9						
EQES				Lg		22 50 18.1	
	14nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.96**	**70**	Pn	**Pn**	**22 49 48.2**	**+1.6**
EQES				Sn	**Sn**	**22 50 12.0**	**+0.8**
EQES				Lg		22 50 18.1	
EBER	**Berja**	**2.02**	**97**	Pg	**Pg**	**22 49 51.8**	**-0.5**
	23nm,0.5s,SNR=22						
EBER				Lg		22 50 19.1	
	36nm,0.5s,SNR=7.9						
EBER	**Berja**	**2.02**	**97**	Pg	**Pg**	**22 49 51.8**	**-0.5**
	13nm,0.4s,SNR=22						
EBER				Lg		22 50 19.7	
	22nm,0.4s,SNR=7.9						
EBER	**Berja**	**2.02**	**97**	Pg	**Pg**	**22 49 51.8**	**-0.5**
EBER				Lg		22 50 19.7	
PBDV	**Barranco-do-Ve**	**2.03**	**273**	*e*Pn	**Pn**	**22 49 47.0**	**-0.6**
PBDV				*e*Sn	**Sn**	**22 50 12.5**	**-0.5**
PBDV				A		22 50 21.0	
	58nm,0.6s						
PBDV	**Barranco-do-Ve**	**2.03**	**273**	*e*Pn	**Pn**	**22 49 47.0**	**-0.6**
PBDV				*e*Sn	**Sn**	**22 50 12.5**	**-0.5**
	58nm,0.6s						
EBAD	**Badajoz**	**2.04**	**322**	⇑Pn	**Pn**	**22 49 48.1**	**+0.2**
	5.2nm,0.2s,SNR=18						
EBAD				Pg	**Pg**	**22 49 51.4**	**-1.3**
	4.4nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**22 50 14.0**	**+0.6**
	37nm,0.2s,SNR=7.9						
EBAD				Lg		22 50 20.5	
	103nm,0.3s,SNR=6.1						
EBAD	**Badajoz**	**2.04**	**322**	Pn	**Pn**	**22 49 48.1**	**+0.2**
	5.2nm,0.2s,SNR=16						
EBAD	**Badajoz**	**2.04**	**322**	Pg	**Pg**	**22 49 51.7**	**-1.0**
	18nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**22 50 14.1**	**+0.7**
	30nm,0.2s,SNR=7.9						
EBAD				Lg		22 50 20.5	
	103nm,0.3s,SNR=6.1						
EBAD	**Badajoz**	**2.04**	**322**	Pn	**Pn**	**22 49 48.1**	**+0.2**
EBAD				Pg	**Pg**	**22 49 51.7**	**-1.0**
EBAD				Sn	**Sn**	**22 50 14.1**	**+0.6**
EBAD				Lg		22 50 20.5	
PBEJ	**Beja**	**2.15**	**295**	*e*Pn	**Pn**	**22 49 49.4**	**+0.1**
PBEJ				*e*Sn	**Sn**	**22 50 21.5**	**+5.6**
PBEJ				A		22 50 32.4	
	24nm,0.6s						
PBEJ	**Beja**	**2.15**	**295**	*e*Pn	**Pn**	**22 49 49.4**	**+0.1**
PBEJ				*e*Sn	**Sn**	**22 50 21.5**	**+5.6**
	24nm,0.6s						
PESTR	**Estremoz**	**2.43**	**315**	*e*Pn	**Pn**	**22 49 53.3**	**+0.1**
PESTR				*e*Sn	**Sn**	**22 50 24.4**	**+1.4**
PESTR				A		22 50 37.8	
	48nm,0.3s						
PESTR	**Estremoz**	**2.43**	**315**	*e*Pn	**Pn**	**22 49 53.3**	**+0.1**
PESTR				*e*Sn	**Sn**	**22 50 24.4**	**+1.4**
	48nm,0.3s						
EVO	**Evora**	**2.49**	**304**	*e*Pn	**Pn**	**22 49 54.0**	**+0.1**
EVO	**Evora**	**2.49**	**304**	*e*Pg	**Pg**	**22 50 00.9**	**-0.3**
EVO	**Evora**	**2.49**	**304**	Pn	**Pn**	**22 49 54.0**	**+0.1**
EVO				Pg	**Pg**	**22 50 00.9**	**-0.3**
EVO	**Evora**	**2.49**	**304**	*e*Pg	**Pg**	**22 50 00.9**	**-0.3**
MORF	**Marmelete**	**2.60**	**274**	*e*Pn	**Pn**	**22 49 55.6**	**0.0**
MORF	**Marmelete**	**2.60**	**274**	Pn	**Pn**	**22 49 55.6**	**0.0**
MORF				S	**Sn**	**22 50 25.4**	**-1.8**
PTEO	**Sao Teotonio**	**2.68**	**279**	*e*Pn	**Pn**	**22 49 56.4**	**-0.2**
PTEO				*e*Sn	**Sn**	**22 50 28.4**	**-0.7**
PTEO				*e*Sg	**Sg**	**22 50 40.8**	**+1.1**
PTEO				A		22 50 41.6	
	41nm,0.5s						
PTEO	**Sao Teotonio**	**2.68**	**279**	*e*Pn	**Pn**	**22 49 56.4**	**-0.2**
PTEO				*e*Sn	**Sn**	**22 50 28.4**	**-0.7**
PTEO				*e*Sg	**Sg**	**22 50 40.8**	**+1.1**
	41nm,0.5s						
MOE	**Montemor**	**2.71**	**301**	*e*Pn	**Pn**	**22 49 57.1**	**+0.1**
MOE				*e*Sn	**Sn**	**22 50 30.6**	**+0.8**
MOE				*e*Sg	**Sg**	**22 50 40.1**	**-0.4**
EVIA	**Vianos**	**2.72**	**56**	Pn	**Pn**	**22 49 57.3**	**+0.1**
	1.5nm,0.1s,SNR=7.9						
EVIA				Sn	**Sn**	**22 50 29.5**	**-0.7**
	2.9nm,0.2s,SNR=4.0						
EVIA				Lg		22 50 41.9	
	3.0nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**2.72**	**56**	Pn	**Pn**	**22 49 57.2**	**0.0**
	1.5nm,0.1s,SNR=7.9						
EVIA				Sn	**Sn**	**22 50 28.7**	**-1.4**
	SNR=7.9						
EVIA				Lg		22 50 41.5	
	7.1nm,0.5s,SNR=7.9						
EVIA	**Vianos**	**2.72**	**56**	Pn	**Pn**	**22 49 57.1**	**-0.1**
EVIA				Sn	**Sn**	**22 50 28.7**	**-1.5**
EVIA				Lg		22 50 41.5	
PFVI	**Vila Bisbo**	**2.74**	**270**	*e*Pn	**Pn**	**22 49 56.4**	**-1.1**
PFVI				*e*Sn	**Sn**	**22 50 29.1**	**-1.5**
PFVI				A		22 50 45.5	
	21nm,0.6s						
PFVI	**Vila Bisbo**	**2.74**	**270**	*e*Pn	**Pn**	**22 49 56.4**	**-1.1**
PFVI				*e*Sn	**Sn**	**22 50 29.1**	**-1.5**
	21nm,0.6s						
ESDC	**Sonseca Array**	**2.75**	**24**	Pn	**Pn**	**22 49 59.2**	**+1.6**
	0.3nm,0.2s,baz=203,slow=12,SNR=8.0						
ESDC				Lg		22 50 41.4	
	17nm,0.5s,SNR=7.9						
ESDC	**Sonseca Array**	**2.75**	**24**	Pn	**Pn**	**22 49 59.2**	**+1.6**
	0.3nm,0.2s,SNR=8.0						
ESDC				Lg		22 50 41.4	
	17nm,0.5s,SNR=7.9						
PMRV	**Marv??o**	**2.76**	**326**	*e*Pn	**Pn**	**22 49 58.0**	**+0.3**
PMRV				*e*Sn	**Sn**	**22 50 32.5**	**+1.5**
PMRV				*e*Sg	**Sg**	**22 50 41.0**	**-1.1**
PMRV				A		22 50 46.0	
	30nm,0.4s						
PMRV	**Marv??o**	**2.76**	**326**	*e*Pn	**Pn**	**22 49 58.0**	**+0.3**
PMRV				*e*Sn	**Sn**	**22 50 32.5**	**+1.5**
PMRV				*e*Sg	**Sg**	**22 50 41.0**	**-1.1**
	30nm,0.4s						
PCBR	**Castelo Branco**	**3.14**	**329**	*e*Pn	**Pn**	**22 50 03.0**	**+0.1**
PCBR				*e*Sn	**Sn**	**22 50 39.5**	**-0.9**
PCBR				*e*Sg	**Sg**	**22 50 55.5**	**+1.2**
PCBR				A		22 50 58.0	
	18nm,0.2s						
PCBR	**Castelo Branco**	**3.14**	**329**	*e*Pn	**Pn**	**22 50 03.0**	**+0.1**
PCBR				*e*Sn	**Sn**	**22 50 39.5**	**-0.9**
PCBR				*e*Sg	**Sg**	**22 50 55.5**	**+1.2**
	18nm,0.2s						
ALMR	**Almeirim**	**3.20**	**309**	*e*P	**Pn**	**22 50 03.8**	**0.0**
ALMR				*e*S	**Sn**	**22 50 40.1**	**-1.9**
ALMR				*e*S	**Sn**	**22 50 40.1**	**-1.9**
ALMR				AML	AML	22 50 45.6	
	comp=E,30nm,0.6s						
ALMR	**Almeirim**	**3.20**	**309**	*e*P	**Pn**	**22 50 03.8**	**0.0**
ALMR				*e*S	**Sn**	**22 50 40.1**	**-1.9**
ALMR	**Almeirim**	**3.20**	**309**	P	**Pn**	**22 50 03.8**	**0.0**
ALMR				S	**Sn**	**22 50 40.1**	**-1.9**
EMUR	**La Murta**	**3.37**	**77**	Lg		**22 51 01.8**	
	comp=E,10.0nm,0.5s,SNR=4.0						
EMUR	**La Murta**	**3.37**	**77**	Lg		**22 51 02.2**	
	comp=E,3.9nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**3.38**	**63**	Pn	**Pn**	**22 50 06.4**	**+0.1**
	comp=E,0.4nm,0.1s,SNR=5.7						
ETOB				Sn	**Sn**	**22 50 45.8**	**-0.6**
	comp=E,1.2nm,0.1s,SNR=7.9						
ETOB				Lg		22 51 02.1	
	comp=E,9.0nm,0.4s,SNR=6.2						
ETOB	**Tobarra**	**3.38**	**63**	Pn	**Pn**	**22 50 06.8**	**+0.5**
	comp=E,0.4nm,0.1s,SNR=5.7						
ETOB				Sn	**Sn**	**22 50 45.8**	**-0.7**
	SNR=7.9						
ETOB				Lg		22 51 02.4	
	comp=E,9.0nm,0.4s,SNR=6.2						
ETOB	**Tobarra**	**3.38**	**63**	Pn	**Pn**	**22 50 06.8**	**+0.5**
ETOB				Sn	**Sn**	**22 50 45.8**	**-0.6**
ETOB				Lg		22 51 02.4	
PTOM	**Tomar**	**3.41**	**317**	*e*Pn	**Pn**	**22 50 07.7**	**+1.0**
PTOM				*e*Sn	**Sn**	**22 50 47.7**	**+0.5**
PTOM				*e*Sg	**Sg**	**22 51 01.9**	**-1.2**
PTOM				A		22 51 08.8	
	comp=E,22nm,0.4s						
PTOM	**Tomar**	**3.41**	**317**	*e*Pn	**Pn**	**22 50 07.7**	**+1.0**
PTOM				*e*Sn	**Sn**	**22 50 47.7**	**+0.5**
PTOM				*e*Sg	**Sg**	**22 51 01.9**	**-1.2**
	comp=E,22nm,0.4s						
GUD	**Guadarrama**	**3.61**	**15**	Pg	**Pg**	**22 50 22.5**	**-0.2**
	comp=E,0.5nm,0.2s,SNR=7.9						
GUD				Sn	**Sn**	**22 50 50.9**	**-1.2**
	comp=E,1.8nm,0.2s,SNR=7.9						
GUD				Lg		22 51 10.4	
	comp=E,14nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**3.61**	**15**	Sn	**Sn**	**22 50 53.8**	**+1.8**
	SNR=7.9						
GUD				Lg		22 51 08.9	
	comp=E,11nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**3.65**	**333**	*e*Sn	**Sn**	**22 50 53.3**	**+0.4**
MTE				*e*Sg	**Sg**	**22 51 12.0**	**+1.4**
MTE				A		22 51 14.6	
	comp=E,42nm,0.7s						
MTE	**Manteigas**	**3.65**	**333**	*e*Sn	**Sn**	**22 50 53.3**	**+0.4**
MTE				*e*Sg	**Sg**	**22 51 12.0**	**+1.4**
	comp=E,42nm,0.7s						
PVIS	**Viseu**	**4.05**	**332**	*e*Sn	**Sn**	**22 51 02.4**	**-0.5**
PVIS				*e*Sg	**Sg**	**22 51 25.2**	**+1.6**
PVIS				A		22 51 28.7	
	comp=E,9.8nm,0.6s						
PVIS	**Viseu**	**4.05**	**332**	*e*Sn	**Sn**	**22 51 02.4**	**-0.5**
PVIS				*e*Sg	**Sg**	**22 51 25.2**	**+1.6**
	comp=E,9.8nm,0.6s						
MVO	**Moncorvo**	**4.20**	**343**	*e*Pn	**Pn**	**22 50 18.0**	**+0.5**
MVO				*e*Sn	**Sn**	**22 51 06.3**	**-0.2**
MVO				*e*Sg	**Sg**	**22 51 26.6**	**-1.7**
MVO				A		22 51 35.6	
	comp=E,13nm,0.6s						
MVO	**Moncorvo**	**4.20**	**343**	*e*Pn	**Pn**	**22 50 18.0**	**+0.5**
MVO				*e*Sn	**Sn**	**22 51 06.3**	**-0.2**
MVO				*e*Sg	**Sg**	**22 51 26.6**	**-1.7**
	comp=E,13nm,0.6s						
ETOR	**Torete**	**4.49**	**34**	Pn	**Pn**	**22 50 22.7**	**+1.3**
	comp=E,4.3nm,0.3s,SNR=11						
ETOR				Sn	**Sn**	**22 51 12.0**	**-1.6**
	comp=E,6.4nm,0.2s,SNR=7.9						
ETOR				Lg		22 51 38.0	
	comp=E,18nm,0.4s,SNR=6.1						
ETOR	**Torete**	**4.49**	**34**	Pn	**Pn**	**22 50 22.7**	**+1.3**
	comp=E,4.3nm,0.3s,SNR=11						
ETOR				Sn	**Sn**	**22 51 12.3**	**-1.3**
	SNR=7.9						
ETOR				Lg		22 51 38.0	
	comp=E,0.4nm,0.8s,SNR=6.1						
ETOR	**Torete**	**4.49**	**34**	Pn	**Pn**	**22 50 22.7**	**+1.3**
ETOR				Sn	**Sn**	**22 51 12.3**	**-1.3**
ETOR				Lg		22 51 38.0	
PVRL	**Vila Real**	**4.49**	**337**	*e*Sn	**Sn**	**22 51 12.2**	**-1.5**
PVRL				A		22 51 15.4	
	comp=E,9.4nm,0.1s						
PVRL	**Vila Real**	**4.49**	**337**	*e*Sn	**Sn**	**22 51 12.2**	**-1.5**
	comp=E,9.4nm,0.1s						
ECAL	**Calabor**	**4.89**	**348**	Pn	**Pn**	**22 50 28.5**	**+1.6**
	comp=E,0.5nm,0.2s,SNR=4.0						
ECAL				Sn	**Sn**	**22 51 22.6**	**-0.9**
	comp=E,3.3nm,0.2s,SNR=7.9						
ECAL				Lg		22 51 50.4	
	comp=E,9.5nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**4.89**	**348**	Sn	**Sn**	**22 51 22.7**	**-0.8**
	SNR=7.9						
ECAL				Lg		22 51 51.9	
	comp=E,9.5nm,0.3s,SNR=7.9						
PCAB	**Cabril**	**4.98**	**337**	*e*Pn	**Pn**	**22 50 28.3**	**+0.1**
PCAB				*e*Sn	**Sn**	**22 51 25.1**	**-0.7**
PCAB				*e*Sg	**Sg**	**22 51 52.4**	**-1.0**
PCAB				A		22 52 05.4	
	comp=E,9.4nm,0.5s						
PCAB	**Cabril**	**4.98**	**337**	*e*Pn	**Pn**	**22 50 28.3**	**+0.1**
PCAB				*e*Sn	**Sn**	**22 51 25.1**	**-0.7**
PCAB				*e*Sg	**Sg**	**22 51 52.4**	**-1.0**

AOS				*e*Sg	**Sg**	**22 53 27.6**	**+1.1**
NEO	**Neokhori**	**1.40**	**345**	*e*Pn	**Pn**	**22 53 12.5**	**+0.6**
XOR	**Xorichti**	**1.46**	**345**	*e*Pg	**Pg**	**22 53 13.4**	**-1.6**
XOR				*e*Sg	**Sg**	**22 53 34.5**	**+0.4**
AGG	**Agios Georgios**	**1.51**	**315**	*e*Pg	**Pg**	**22 53 14.4**	**-1.6**
AGG				*e*Sg	**Sg**	**22 53 35.7**	**+0.1**
PYL	**PYLOS**	**1.88**	**236**	*e*Pb	**Pb**	**22 53 20.2**	**-0.7**

CSEM ***13*** *22:53:15.6±0.7, 37.11N×542W, h12km±2km, ML3.9/1, Error ellipse: s-maj=5.1km s-min=3.5km az=6.0, After MDD*

MDD 13 22:53:14.9±0.4, 3712N×541W, h0km, mbLg2.1/15, Error ellipse: s-maj=3.8km s-min=3.3km az=159.0, PRIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPR	**Espera**	**0.44**	**235**	Pg	Pg	22 53 23.0	-0.3
	10nm,0.2s,SNR=7.9						
ESPR				Lg		22 53 30.2	
	119nm,0.3s,SNR=7.9						
ESPR	**Espera**	**0.44**	**235**	Pg	Pg	22 53 22.7	-0.6
	8.1nm,0.2s,SNR=7.9						
ESPR				Lg		22 53 30.2	
	63nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.67**	**184**	Pg	Pg	22 53 26.9	-0.8
	9.6nm,0.2s,SNR=7.9						
EJIF				Lg		22 53 37.1	
	55nm,0.6s,SNR=7.9						
EMIJ	**Mijas**	**0.75**	**137**	Pg	Pg	22 53 27.8	-1.5
	7.7nm,0.4s,SNR=7.9						
EMIJ				Lg		22 53 38.2	
	37nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**0.75**	**137**	Pg	Pg	22 53 29.0	-0.3
	14nm,0.4s,SNR=7.9						
EMIJ				Lg		22 53 38.2	
	28nm,0.4s,SNR=7.9						
ECAB	**El Cabril**	**0.95**	**359**	Pg	Pg	22 53 32.6	-0.6
	14nm,0.1s,SNR=7.9						
ECAB				Lg		22 53 46.6	
	33nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**0.95**	**359**	Lg		22 53 46.6	
	40nm,0.1s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.00**	**88**	Lg		22 53 47.2	
	6.9nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.00**	**88**	Lg		22 53 47.4	
	6.9nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.20**	**303**	Pg	Pg	22 53 36.2	-1.6
	6.9nm,0.1s,SNR=7.9						
EMIN				Lg		22 53 53.0	
	27nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.20**	**303**	Lg		22 53 53.0	
	34nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**1.23**	**32**	Pg	Pg	22 53 38.2	-0.4
	3.4nm,0.1s,SNR=7.9						
EADA				Sn	Sn	22 53 50.7	-6.1
	5.9nm,0.1s,SNR=7.9						
EADA				Lg		22 53 54.7	
	16nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.23**	**32**	Sn	Sn	22 53 50.7	-6.1
	5.9nm,0.1s,SNR=7.9						
EADA				Lg		22 53 55.1	
	19nm,0.3s,SNR=7.9						
ERON	**Agron**	**1.28**	**94**	Lg		22 53 57.8	
	3.2nm,0.2s,SNR=4.0						
ERON	**Agron**	**1.28**	**94**	Lg		22 53 57.8	
	3.3nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.48**	**83**	Lg		22 54 02.3	
	5.6nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.48**	**83**	Lg		22 54 03.6	
	5.6nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**1.57**	**86**	Pg	Pg	22 53 43.6	-1.4
	3.5nm,0.3s,SNR=7.9						
EQUE				Lg		22 54 04.6	
	8.0nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**1.57**	**86**	Pn	Pn	22 53 42.5	-1.5
	3.5nm,0.3s,SNR=7.9						
EQUE				Lg		22 54 04.6	
	5.2nm,0.7s,SNR=7.9						
EBAN	**Banos Encina**	**1.66**	**50**	Pg	Pg	22 53 45.0	-1.6
	2.0nm,0.1s,SNR=7.9						
EBAN				Lg		22 54 06.8	
	5.6nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**1.66**	**50**	Pg	Pg	22 53 45.0	-1.6
	1.5nm,0.1s,SNR=7.9						
EBAN				Lg		22 54 06.7	
	5.6nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**1.71**	**285**	Pg	Pg	22 53 45.2	-2.5
	1.1nm,0.1s,SNR=7.9						
EGRO				Lg		22 54 07.9	
	7.0nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.71**	**285**	Lg		22 54 08.3	
	9.1nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.98**	**69**	Lg		22 54 17.7	
	3.2nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.98**	**69**	Lg		22 54 17.7	
	7.7nm,0.3s,SNR=7.9						
EBER	**Berja**	**2.02**	**96**	Pn	Pn	22 53 50.3	0.0
	7.4nm,0.5s,SNR=4.0						
EBER				Lg		22 54 18.5	
	22nm,0.8s,SNR=7.9						
EBER	**Berja**	**2.02**	**96**	Pn	Pn	22 53 50.3	0.0
	SNR=7.9						
EBER				Lg		22 54 19.9	
	24nm,1.0s,SNR=7.9						
EBAD	**Badajoz**	**2.07**	**323**	Lg		22 54 19.9	
	18nm,0.2s,SNR=7.9						

ISCJB ***13*** *22:53:30.6±0.4, 39.12N×002×2801E×003, h5km±6km, Error ellipse: s-maj=4.3km s-min=4.1km az=139.7*

DDA ***13*** *22:53:30.2, 39.15N×2800E, h7km±2km, Md2.9*

ISK ***13*** *22:53:30.1, 39.11N×2805E, h4km, MD2.9*

ISC 13 22:53:31.0±0.4, 3912N±003×2801E±003, h7km±6km, n21, σ0s68/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.29**	**212**	*i* P	**Pg**	**22 53 36.5**	**-0.1**
AKHS				*i* S	**Sg**	**22 53 41.0**	**+0.5**
AKS	**Akhisar**	**0.29**	**212**	*e*PG	**Pg**	**22 53 36.6**	**0.0**
AKS				*e*SG	**Sg**	**22 53 41.2**	**+0.8**
BALB	**Balikesir**	**0.53**	**349**	*e*PG	**Pg**	**22 53 41.6**	**+0.4**
BALB				*e*SG	**Sg**	**22 53 50.0**	**+2.0**
DEMI	**Demirci**	**0.56**	**98**	*i* P	**Pg**	**22 53 41.9**	**+0.2**
DEMI				*i* S	**Sg**	**22 53 49.6**	**+0.7**
DURS	**Dursunbey**	**0.60**	**37**	*i* P	**Pg**	**22 53 41.8**	**-0.7**
DST	**Dursunbey**	**0.68**	**45**	*e*PG	**Pg**	**22 53 43.5**	**-0.6**
BALY	**Balya**	**0.69**	**334**	*i* P	**Pg**	**22 53 43.6**	**-0.6**
BALY				*i* S	**Sg**	**22 53 52.7**	**-0.5**
KULA	**Kula-Manisa**	**0.79**	**140**	*e*PG	**Pg**	**22 53 45.9**	**-0.3**
KULA				*e*SG	**Sg**	**22 53 56.3**	**-0.2**
IZM	**Izmir**	**0.93**	**219**	*e*PG	**Pg**	**22 53 49.0**	**+0.1**
AYVA	**Ayvalik**	**1.04**	**281**	*i* P	**Pg**	**22 53 50.0**	**-1.0**
AYVA				*i* S	**Sg**	**22 54 04.2**	**-0.3**
BLCB	**Balcova**	**1.06**	**226**	*e*PG	**Pg**	**22 53 50.6**	**-0.7**
GDZ	**Gediz**	**1.15**	**91**	*i* P	**Pg**	**22 53 52.4**	**-0.5**
GDZ				*i* S	**Sg**	**22 54 07.9**	**+0.1**
KCT	**Karacabey**	**1.17**	**13**	*e*PN	**Pn**	**22 53 52.6**	**-1.2**
ULDT	**Uludag**	**1.34**	**40**	*i* P	**Pn**	**22 53 55.2**	**-0.9**
KHL	**Karahalli**	**1.43**	**124**	*e*PN	**Pn**	**22 53 57.2**	**-0.1**
MRMT	**Marmara Adasi**	**1.51**	**348**	*e*PN	**Pn**	**22 53 59.1**	**+0.6**
GEMT	**Gemlik**	**1.59**	**34**	*e*PN	**Pn**	**22 54 00.0**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.69**	**338**	*e*PN	**Pn**	**22 54 01.4**	**+0.5**
MFT	**Murefte**	**1.75**	**342**	*e*PN	**Pn**	**22 54 02.4**	**+0.6**
YLV	**Yalova**	**1.78**	**36**	*e*PN	**Pn**	**22 54 02.7**	**+0.5**
ESKT	**Eskisehir**	**2.24**	**79**	*i* P	**Pn**	**22 54 12.3**	**+3.9**

ISCJB ***13*** *23:00:57.9±0.3, 3722N±001×537W±002, h4km±2km, Error ellipse: s-maj=2.5km s-min=2.1km az=179.7*

MDD ***13*** *23:00:59.9±0.2, 3705N×543W, h10km, mbLg2.8/34, Error ellipse: s-maj=2.5km s-min=2.0km az=12.0, PRIMO*

MDD EMS: II INTENSIDAD MIMA.

INMG ***13*** *23:00:59.5±1.7, 3700N×528W, h16km±4km, ML3.0, Error ellipse: s-maj=5.4km s-min=2.6km az=132.0*

IGIL ***13*** *23:01:00.6, 3709N×539W, h11km, ML2.9*

LDG ***13*** *23:01:00.5±0.1, 3706N×539W, h10km, Ml3.1/3*

CSEM ***13*** *23:01:00.3±0.1, 3706N×540W, h5km, ML3.5/15, Error ellipse: s-maj=1.0km s-min=1.0km az=158.0*

SFS ***13*** *23:01:00.0, 3709N×539W, h0km, ML2.5*

NEIC ***13*** *23:01:00.7, 37.10N×539W, h11km, MN2.5(MDD), After MDD.*

ISC 13 23:00:59.4±0.3, 3716N±002×537W±002, h11km±2km, n167, σ1s09/288, 3C-1D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIJA	**Lijar**	**0.26**	**185**	⇑P	**Pg**	**23 01 02.9**	**-1.8**
LIJA	**Lijar**	**0.26**	**185**	*i* P	**Pg**	**23 01 02.9**	**-1.8**
ESPR	**Espera**	**0.48**	**233**	Pg	**Pg**	**23 01 06.2**	**-2.7**
	2.5nm,0.1s,SNR=33						
ESPR				Lg		23 01 12.2	
	747nm,0.3s						
ESPR	**Espera**	**0.48**	**233**	Pg	**Pg**	**23 01 08.9**	**0.0**
	12nm,0.1s,SNR=33						
ESPR	**Espera**	**0.48**	**233**	Pg	**Pg**	**23 01 08.9**	**0.0**
ESPR				Lg		23 01 16.1	
GIBL	**Gibalbin**	**0.58**	**235**	⇑P	**Pg**	**23 01 11.2**	**+0.5**
GIBL				S	**Sg**	**23 01 20.0**	**+1.7**
GIBL	**Gibalbin**	**0.58**	**235**	*i* P	**Pg**	**23 01 11.2**	**+0.5**
REAL	**Reales**	**0.69**	**169**	P	**Pg**	**23 01 12.0**	**-0.8**
REAL				S	**Sg**	**23 01 20.9**	**-0.8**
REAL	**Reales**	**0.69**	**169**	*e*P	**Pg**	**23 01 12.0**	**-0.8**
EJIF	**Jimena Fronter**	**0.71**	**186**	Pg	**Pg**	**23 01 09.2**	**-4.0**
	12nm,0.3s,SNR=7.9						
EJIF				Lg		23 01 19.5	
	298nm,0.6s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.71**	**186**	Pg	**Pg**	**23 01 11.5**	**-1.7**
	12nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.71**	**186**	Pg	**Pg**	**23 01 11.5**	**-1.7**
EJIF				Lg		23 01 22.4	
EMIJ	**Mijas**	**0.77**	**141**	⇑Pg	**Pg**	**23 01 12.5**	**-1.7**
	0.8nm,0.2s,SNR=18						
EMIJ				Lg		23 01 23.1	
	231nm,0.5s,SNR=19						
EMIJ	**Mijas**	**0.77**	**141**	Pg	**Pg**	**23 01 12.5**	**-1.7**
EMIJ				Lg		23 01 24.1	
SCRT	**Cerro San Cris**	**0.83**	**231**	P	**Pg**	**23 01 16.4**	**+1.0**
SCRT				S	**Sg**	**23 01 27.6**	**+1.3**
SCRT	**Cerro San Cris**	**0.83**	**231**	*e*P	**Pg**	**23 01 16.4**	**+0.9**
SCRT				*e*S	**Sg**	**23 01 27.6**	**+1.3**
MOMI	**Momias**	**0.88**	**199**	P	**Pg**	**23 01 16.8**	**+0.5**
MOMI				S	**Sg**	**23 01 29.3**	**+1.6**
MOMI	**Momias**	**0.88**	**199**	*e*P	**Pg**	**23 01 16.8**	**+0.5**
MOMI				*e*S	**Sg**	**23 01 29.3**	**+1.6**
ECAB	**El Cabril**	**0.91**	**358**	Pg	**Pg**	**23 01 19.0**	**+1.9**
	230nm,0.1s,SNR=190						
ECAB				Lg		23 01 32.8	
	235nm,0.1s						
ECAB	**El Cabril**	**0.91**	**358**	Pg	**Pg**	**23 01 19.0**	**+1.9**
	181nm,0.1s,SNR=190						
ECAB	**El Cabril**	**0.91**	**358**	Pg	**Pg**	**23 01 19.1**	**+2.0**
ECAB				Lg		23 01 33.0	
CNIL	**Conil**	**0.96**	**215**	P	**Pg**	**23 01 18.2**	**+0.2**
CNIL				S	**Sg**	**23 01 31.9**	**+1.5**
CNIL	**Conil**	**0.96**	**215**	*e*P	**Pg**	**23 01 18.2**	**+0.3**
CNIL				*e*S	**Sg**	**23 01 31.9**	**+1.5**
SFS	**San Fernando**	**0.96**	**224**	P	**Pg**	**23 01 18.6**	**+0.6**
SFS	**San Fernando**	**0.96**	**224**	*e*P	**Pg**	**23 01 18.6**	**+0.6**
ELOJ	**Sierra Loja**	**0.97**	**90**	Pg	**Pg**	**23 01 19.0**	**+0.8**
	2.0nm,0.2s,SNR=15						
ELOJ				Lg		23 01 34.0	
	18nm,0.2s,SNR=11						
ELOJ	**Sierra Loja**	**0.97**	**90**	Pg	**Pg**	**23 01 20.0**	**+1.8**
	2.0nm,0.2s,SNR=15						
ELOJ	**Sierra Loja**	**0.97**	**90**	Pg	**Pg**	**23 01 20.0**	**+1.7**
ELOJ				Lg		23 01 34.0	
EADA	**Adamuz**	**1.19**	**32**	Pn	**Pn**	**23 01 21.8**	**-0.2**
	0.6nm,0.1s,SNR=7.9						
EADA				Pg	**Pg**	**23 01 23.8**	**+1.5**
	2.7nm,0.1s,SNR=28						
EADA				Lg		23 01 40.7	
	212nm,0.2s						
EADA	**Adamuz**	**1.19**	**32**	Pg	**Pg**	**23 01 23.6**	**+1.3**
	2.7nm,0.1s,SNR=28						
EADA	**Adamuz**	**1.19**	**32**	Pg	**Pg**	**23 01 23.6**	**+1.3**
EADA				Lg		23 01 41.0	
EMIN	**Mina Concepcio**	**1.20**	**301**	Pn	**Pn**	**23 01 19.2**	**-2.9**
	1.0nm,0.1s,SNR=78						
EMIN				Pg	**Pg**	**23 01 21.6**	**-0.9**
	81nm,0.2s,SNR=7.9						
EMIN				Lg		23 01 39.2	
	297nm,0.4s,SNR=9.0						
EMIN	**Mina Concepcio**	**1.20**	**301**	Pn	**Pn**	**23 01 20.7**	**-1.5**
	56nm,0.3s,SNR=78						
EMIN	**Mina Concepcio**	**1.20**	**301**	Pg	**Pg**	**23 01 22.8**	**+0.3**
	81nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.20**	**301**	Pn	**Pn**	**23 01 20.7**	**-1.4**
EMIN				Pg	**Pg**	**23 01 22.8**	**+0.3**
EMIN				Lg		23 01 39.2	
ECEU	**Ceuta**	**1.26**	**180**	Pg	**Pg**	**23 01 22.2**	**-1.4**
	1.3nm,0.1s,SNR=7.1						
ECEU				Lg		23 01 38.1	
	2.8nm,0.1s,SNR=5.2						
ECEU	**Ceuta**	**1.26**	**180**	Pg	**Pg**	**23 01 21.8**	**-1.9**
	1.3nm,0.1s,SNR=7.1						
ERON	**Agron**	**1.26**	**96**	Pg	**Pg**	**23 01 24.2**	**+0.6**
	6.2nm,0.2s,SNR=7.9						
ERON				Lg		23 01 43.3	
	15nm,0.3s,SNR=7.9						
ERON	**Agron**	**1.26**	**96**	Pg	**Pg**	**23 01 24.0**	**+0.3**
ERON				Lg		23 01 43.3	
ECOG	**Cogollos-Vega**	**1.45**	**85**	Pg	**Pg**	**23 01 26.6**	**-0.6**
	14nm,0.4s,SNR=10						
ECOG				Lg		23 01 46.8	
	15nm,0.1s,SNR=4.0						
ECOG	**Cogollos-Vega**	**1.45**	**85**	Pn	**Pn**	**23 01 26.8**	**+1.2**
	0.9nm,0.2s,SNR=10						
ECOG	**Cogollos-Vega**	**1.45**	**85**	Pn	**Pn**	**23 01 26.8**	**+1.2**
ECOG				Lg		23 01 46.8	
EQUE	**Quentar**	**1.54**	**88**	Pn	**Pn**	**23 01 26.6**	**-0.3**
	0.4nm,0.1s,SNR=21						
EQUE				Pg	**Pg**	**23 01 28.3**	**-0.8**
	1.5nm,0.2s,SNR=7.9						
EQUE				Lg		23 01 51.4	
	60nm,0.4s,SNR=6.5						
EQUE	**Quentar**	**1.54**	**88**	Pg	**Pg**	**23 01 28.3**	**-0.8**
	2.1nm,0.3s,SNR=21						
EBAN	**Banos Encina**	**1.61**	**51**	Pn	**Pn**	**23 01 28.5**	**+0.7**
	0.7nm,0.1s,SNR=16						
EBAN				Pg	**Pg**	**23 01 30.7**	**+0.3**
	14nm,0.2s,SNR=7.9						
EBAN				Sn	**Sn**	**23 01 50.2**	**+1.7**
	8.0nm,0.1s,SNR=7.9						
EBAN				Lg		23 01 53.0	
	32nm,0.2s,SNR=8.9						
EBAN	**Banos Encina**	**1.61**	**51**	Pn	**Pn**	**23 01 29.6**	**+1.8**
	1.4nm,0.2s,SNR=16						
EBAN	**Banos Encina**	**1.61**	**51**	Pn	**Pn**	**23 01 29.6**	**+1.8**
EBAN				Lg		23 01 52.6	
PBAR	**Barrancos**	**1.67**	**308**	*e*Pn	**Pn**	**23 01 28.8**	**+0.2**
PBAR	**Barrancos**	**1.67**	**308**	*e*Pg	**Pg**	**23 01 31.7**	**+0.3**
PBAR				*e*Sn	**Sn**	**23 01 52.6**	**+2.7**
PBAR				A		23 02 01.8	
	93nm,0.5s						
PBAR	**Barrancos**	**1.67**	**308**	Pn	**Pn**	**23 01 28.8**	**+0.2**
PBAR				Pg	**Pg**	**23 01 31.7**	**+0.3**
PBAR				Sn	**Sn**	**23 01 52.6**	**+2.7**
	47nm,0.5s						
PBAR	**Barrancos**	**1.67**	**308**	*e*Pg	**Pg**	**23 01 31.7**	**+0.3**
PBAR				*e*Sn	**Sn**	**23 01 52.6**	**+2.7**
	93nm,0.5s						
DKH	**Dar Kharkhour**	**1.67**	**180**	P	**Pn**	**23 01 33.0**	**+4.4**
DKH				S	**Sn**	**23 01 50.0**	**0.0**
DKH	**Dar Kharkhour**	**1.67**	**180**	*i* P	**Pn**	**23 01 33.0**	**+4.4**
EGRO	**El Granado**	**1.72**	**283**	Pn	**Pn**	**23 01 28.6**	**-0.8**
	1.0nm,0.1s,SNR=7.9						
EGRO				Pg	**Pg**	**23 01 31.4**	**-1.1**
	7.4nm,0.1s,SNR=21						
EGRO				Sn	**Sn**	**23 01 50.2**	**-1.1**
	8.0nm,0.1s,SNR=7.9						
EGRO				Lg		23 01 53.9	
	87nm,0.2s,SNR=11						
EGRO	**El Granado**	**1.72**	**283**	Pn	**Pn**	**23 01 29.0**	**-0.4**
	1.6nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.72**	**283**	Pg	**Pg**	**23 01 31.5**	**-1.0**
	15nm,0.2s,SNR=21						
EGRO				Sn	**Sn**	**23 01 50.5**	**-0.9**
	11nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**1.72**	**283**	Pn	**Pn**	**23 01 29.0**	**-0.4**
EGRO				Pg	**Pg**	**23 01 31.5**	**-0.9**
EGRO				Sn	**Sn**	**23 01 50.5**	**-0.9**
EGRO				Lg		23 01 53.9	
PVAQ	**Vaqueiros**	**1.89**	**278**	*e*Pn	**Pn**	**23 01 31.1**	**-0.5**
PVAQ				*e*Sn	**Sn**	**23 01 55.1**	**-0.3**
PVAQ				A		23 02 03.1	
	95nm,0.6s						
PVAQ	**Vaqueiros**	**1.89**	**278**	*e*Pn	**Pn**	**23 01 31.1**	**-0.5**
PVAQ				*e*Sn	**Sn**	**23 01 55.1**	**-0.3**
	95nm,0.6s						
EQES	**Quesada**	**1.94**	**70**	Pn	**Pn**	**23 01 32.8**	**+0.5**
	0.7nm,0.2s,SNR=7.9						
EQES				Pg	**Pg**	**23 01 37.6**	**+0.9**
	3.6nm,0.1s,SNR=11						
EQES				Sn	**Sn**	**23 01 56.7**	**-0.1**
	3.5nm,0.1s,SNR=5.9						
EQES				Lg		23 02 04.4	
	18nm,0.2s,SNR=5.9						
EQES	**Quesada**	**1.94**	**70**	Pn	**Pn**	**23 01 33.1**	**+0.7**
	0.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.94**	**70**	Pg	**Pg**	**23 01 37.4**	**+0.7**
	2.6nm,0.2s,SNR=11						
EQES				Sn	**Sn**	**23 01 56.7**	**0.0**
	3.1nm,0.2s,SNR=5.9						
EQES	**Quesada**	**1.94**	**70**	Pn	**Pn**	**23 01 33.1**	**+0.7**
EQES				Pg	**Pg**	**23 01 37.4**	**+0.7**
EQES				Sn	**Sn**	**23 01 56.7**	**-0.1**
EQES				Lg		23 02 03.4	
EBER	**Berja**	**2.00**	**97**	Pg	**Pg**	**23 01 36.2**	**-1.7**
	26nm,0.4s,SNR=10						
EBER				Lg		23 02 04.1	
	48nm,0.6s						
EBER	**Berja**	**2.00**	**97**	Pg	**Pg**	**23 01 37.3**	**-0.6**
	7.9nm,0.5s,SNR=10						
EBER	**Berja**	**2.00**	**97**	Pg	**Pg**	**23 01 37.3**	**-0.6**
EBER				Lg		23 02 04.1	
PBDV	**Barranco-do-Ve**	**2.04**	**273**	*e*Pn	**Pn**	**23 01 33.2**	**-0.6**
PBDV	**Barranco-do-Ve**	**2.04**	**273**	*e*Pg	**Pg**	**23 01 37.5**	**-1.1**
PBDV				*e*Sn	**Sn**	**23 01 59.0**	**-0.3**
PBDV				*e*Sg	**Sg**	**23 02 04.7**	**-0.4**
PBDV				A		23 02 06.6	
	97nm,0.7s						
PBDV	**Barranco-do-Ve**	**2.04**	**273**	Pn	**Pn**	**23 01 33.2**	**-0.6**
PBDV				Pg	**Pg**	**23 01 37.5**	**-1.1**
PBDV				Sn	**Sn**	**23 01 59.0**	**-0.3**
PBDV				Lg		23 02 04.7	
	48nm,0.7s						
PBDV	**Barranco-do-Ve**	**2.04**	**273**	*e*Pg	**Pg**	**23 01 37.5**	**-1.1**
PBDV				*e*Sn	**Sn**	**23 01 59.0**	**-0.3**
PBDV				*e*Sg	**Sg**	**23 02 04.7**	**-0.4**
	97nm,0.7s						
EBAD	**Badajoz**	**2.05**	**321**	⇓Pn	**Pn**	**23 01 34.2**	**+0.3**
	4.5nm,0.1s,SNR=18						
EBAD				Pg	**Pg**	**23 01 38.2**	**-0.7**
	8.1nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**23 02 00.2**	**+0.7**
	60nm,0.3s,SNR=4.9						
EBAD				Lg		23 02 06.5	
	99nm,0.2s						
EBAD	**Badajoz**	**2.05**	**321**	Pn	**Pn**	**23 01 34.2**	**+0.3**
	4.5nm,0.1s,SNR=10						
EBAD	**Badajoz**	**2.05**	**321**	Pg	**Pg**	**23 01 38.0**	**-0.8**
	8.1nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**2.05**	**321**	Pn	**Pn**	**23 01 34.2**	**+0.3**
EBAD				Pg	**Pg**	**23 01 38.0**	**-0.8**
EBAD				Sn	**Sn**	**23 02 00.8**	**+1.3**
EBAD				Lg		23 02 06.4	
PBEJ	**Beja**	**2.16**	**294**	*e*Pn	**Pn**	**23 01 35.2**	**-0.2**
PBEJ	**Beja**	**2.16**	**294**	*e*Pg	**Pg**	**23 01 41.4**	**+0.5**
PBEJ				*e*Sn	**Sn**	**23 02 03.9**	**+1.7**
PBEJ				A		23 02 15.9	
	39nm,0.6s						
PBEJ	**Beja**	**2.16**	**294**	Pn	**Pn**	**23 01 35.2**	**-0.2**
PBEJ				Pg	**Pg**	**23 01 41.4**	**+0.5**
PBEJ				Sn	**Sn**	**23 02 03.9**	**+1.7**
	19nm,0.6s						
PBEJ	**Beja**	**2.16**	**294**	*e*Pg	**Pg**	**23 01 41.4**	**+0.5**
PBEJ				*e*Sn	**Sn**	**23 02 03.9**	**+1.7**
	39nm,0.6s						
PESTR	**Estremoz**	**2.44**	**315**	*e*Pn	**Pn**	**23 01 39.9**	**+0.6**
PESTR				*e*Sn	**Sn**	**23 02 10.5**	**+1.4**
PESTR				A		23 02 24.1	
	80nm,0.3s						
PESTR	**Estremoz**	**2.44**	**315**	Pn	**Pn**	**23 01 39.9**	**+0.6**
PESTR				Sn	**Sn**	**23 02 10.5**	**+1.4**
	40nm,0.3s						
EVO	**Evora**	**2.50**	**304**	*e*Pn	**Pn**	**23 01 41.2**	**+1.2**
EVO	**Evora**	**2.50**	**304**	*e*Pg	**Pg**	**23 01 47.6**	**+0.3**
EVO				*e*Sn	**Sn**	**23 02 11.5**	**+1.0**
EVO				*e*Sg	**Sg**	**23 02 21.5**	**+1.8**
	104nm,0.4s						
EVO	**Evora**	**2.50**	**304**	*e*Pn	**Pn**	**23 01 40.3**	**+0.3**
EVO	**Evora**	**2.50**	**304**	*e*Pg	**Pg**	**23 01 47.3**	**0.0**
EVO				*e*Sn	**Sn**	**23 02 11.6**	**+1.1**
EVO				*e*Sg	**Sg**	**23 02 21.0**	**+1.3**
EVO				A		23 02 24.1	
	68nm,0.3s						
EVO	**Evora**	**2.50**	**304**	Pn	**Pn**	**23 01 40.3**	**+0.3**
EVO				Pg	**Pg**	**23 01 47.3**	**0.0**
EVO				Sn	**Sn**	**23 02 11.6**	**+1.1**
EVO				Lg		23 02 21.0	
	34nm,0.3s						
EVO	**Evora**	**2.50**	**304**	*e*Pg	**Pg**	**23 01 47.3**	**0.0**
EVO				*e*Sn	**Sn**	**23 02 11.6**	**+1.1**
EVO				*e*Sg	**Sg**	**23 02 21.0**	**+1.3**
	68nm,0.3s						
EVOP	**Sao Brissos**	**2.57**	**303**	*e*Pn	**Pn**	**23 01 41.2**	**+0.2**
EVOP	**Sao Brissos**	**2.57**	**303**	*e*Pg	**Pg**	**23 01

41nm,0.6s
PMRV Marv??o 2.77 326 *e*Pn **Pn** **23 01 44.3 +0.6**
PMRV Marv??o 2.77 326 *e*Pg **Pg** **23 01 50.7 -1.7**
PMRV *e*Sn **Sn** **23 02 18.5 +1.4**
PMRV *e*Sg **Sg** **23 02 27.2 -1.1**
PMRV A 23 02 32.5
58nm,0.7s
PMRV Marv??o 2.77 326 *e*Pg **Pg** **23 01 50.7 -1.7**
PMRV *e*Sn **Sn** **23 02 18.5 +1.4**
PMRV *e*Sg **Sg** **23 02 27.2 -1.1**
58nm,0.7s
PCBR Castelo Branco 3.14 329 *e*Pn **Pn** **23 01 49.5 +0.6**
PCBR *e*Sn **Sn** **23 02 25.9 -0.5**
PCBR A 23 02 44.3
28nm,0.3s
PCBR Castelo Branco 3.14 329 *e*Pn **Pn** **23 01 49.5 +0.6**
PCBR *e*Sn **Sn** **23 02 25.9 -0.5**
28nm,0.3s
ALMR Almeirim 3.22 309 *e*P **Pn** **23 01 49.9 0.0**
ALMR *e*S **Sn** **23 02 25.4 -2.8**
ALMR AML AML 23 02 31.9
comp=E,50nm,0.8s
ALMR Almeirim 3.22 309 *e*P **Pn** **23 01 49.9 0.0**
ALMR *e*S **Sn** **23 02 25.4 -2.8**
ALMR Almeirim 3.22 309 P **Pn** **23 01 49.9 0.0**
ALMR S **Sn** **23 02 25.4 -2.8**
EMUR La Murta 3.36 77 Pg **Pg** **23 02 03.6 -0.1**
comp=E,0.8nm,0.2s,SNR=4.0
EMUR Sn **Sn** **23 02 31.0 -0.7**
comp=E,20nm,1.0s,SNR=7.9
EMUR Lg 23 02 48.4
comp=E,22nm,0.7s,SNR=7.9
EMUR La Murta 3.36 77 Pg **Pg** **23 02 03.4 -0.3**
comp=E,1.2nm,0.3s,SNR=7.9
ETOB Tobarra 3.37 63 Pn **Pn** **23 01 52.8 +0.8**
comp=E,0.4nm,0.1s,SNR=7.9
ETOB Sn **Sn** **23 02 32.1 +0.1**
comp=E,0.7nm,0.1s,SNR=6.6
ETOB Lg 23 02 49.4
comp=E,12nm,0.4s,SNR=5.0
ETOB Tobarra 3.37 63 Pn **Pn** **23 01 52.2 +0.2**
comp=E,0.4nm,0.1s,SNR=7.9
ETOB Sn **Sn** **23 02 30.7 -1.3**
comp=E,17nm,0.7s,SNR=6.6
ETOB Tobarra 3.37 63 Pn **Pn** **23 01 52.2 +0.2**
ETOB Sn **Sn** **23 02 30.7 -1.3**
ETOB Lg 23 02 49.4
PTOM Tomar 3.42 317 *e*Pn **Pn** **23 01 53.4 +0.7**
PTOM Tomar 3.42 317 *e*Pg **Pg** **23 02 03.8 -1.2**
PTOM *e*Sn **Sn** **23 02 34.1 +0.8**
PTOM A 23 02 54.9
comp=E,35nm,0.3s
PTOM Tomar 3.42 317 Pn **Pn** **23 01 53.4 +0.7**
PTOM Pg **Pg** **23 02 03.8 -1.2**
PTOM Sn **Sn** **23 02 34.1 +0.8**
comp=E,17nm,0.3s
PTOM Tomar 3.42 317 *e*Pg **Pg** **23 02 03.8 -1.2**
PTOM *e*Sn **Sn** **23 02 34.1 +0.8**
comp=E,35nm,0.3s
GUD Guadarrama 3.60 15 Pn **Pn** **23 01 56.1 +0.8**
comp=E,0.2nm,0.2s,SNR=7.9
GUD Pg **Pg** **23 02 06.2 -2.3**
comp=E,0.5nm,0.2s,SNR=7.9
GUD Sn **Sn** **23 02 35.7 -2.1**
comp=E,3.0nm,0.2s,SNR=5.1
GUD Lg 23 02 52.3
comp=E,16nm,0.3s,SNR=7.4
GUD Guadarrama 3.60 15 Pg **Pg** **23 02 08.1 -0.4**
comp=E,0.5nm,0.2s,SNR=7.9
GUD Guadarrama 3.60 15 Pn **Pn** **23 01 56.1 +0.8**
GUD Pg **Pg** **23 02 08.1 -0.4**
GUD Sn **Sn** **23 02 34.0 -3.8**
GUD Lg 23 02 52.1
MTE Manteigas 3.65 333 *e*Sn **Sn** **23 02 39.9 +0.9**
MTE *e*Sg **Sg** **23 02 57.5 +0.8**
MTE A 23 03 00.9
comp=E,78nm,0.4s
MTE Manteigas 3.65 333 *e*Sn **Sn** **23 02 39.9 +0.9**
MTE *e*Sg **Sg** **23 02 57.5 +0.8**
comp=E,78nm,0.4s
PVIS Viseu 4.06 332 *e*Pn **Pn** **23 02 02.6 +1.1**
PVIS *e*Sn **Sn** **23 02 48.1 -0.9**
PVIS *e*Sg **Sg** **23 03 11.3 +1.6**
PVIS A 23 03 15.0
comp=E,18nm,0.4s
PVIS Viseu 4.06 332 *e*Pn **Pn** **23 02 02.6 +1.1**
PVIS *e*Sn **Sn** **23 02 48.1 -0.9**
PVIS *e*Sg **Sg** **23 03 11.3 +1.6**
comp=E,18nm,0.4s
MVO Moncorvo 4.20 343 *e*Pn **Pn** **23 02 04.3 +0.9**
MVO *e*Sn **Sn** **23 02 52.6 +0.1**
MVO A 23 03 19.8
comp=E,27nm,0.4s
MVO Moncorvo 4.20 343 *e*Pn **Pn** **23 02 04.3 +0.9**
MVO *e*Sn **Sn** **23 02 52.6 +0.1**
comp=E,27nm,0.4s
ETOR Torete 4.47 34 Pn **Pn** **23 02 08.8 +1.6**
comp=E,2.0nm,0.1s,SNR=8.0
ETOR Sn **Sn** **23 02 58.2 -1.0**
comp=E,1.9nm,0.3s,SNR=7.9
ETOR Lg 23 03 24.3
comp=E,26nm,0.5s,SNR=9.0
ETOR Torete 4.47 34 Pn **Pn** **23 02 08.6 +1.4**
comp=E,2.0nm,0.1s,SNR=8.0
ETOR Torete 4.47 34 Pn **Pn** **23 02 08.7 +1.4**
ETOR Sn **Sn** **23 02 56.4 -2.9**
ETOR Lg 23 03 23.0
PVRL Vila Real 4.49 337 *e*Pn **Pn** **23 02 07.8 +0.3**
PVRL *e*Sn **Sn** **23 02 59.0 -0.7**
ECAL Calabor 4.89 348 Pn **Pn** **23 02 14.4 +1.5**
comp=E,0.4nm,0.2s,SNR=7.9
ECAL Sn **Sn** **23 03 08.6 -0.9**
comp=E,6.0nm,0.4s,SNR=7.9
ECAL Lg 23 03 36.9
comp=E,62nm,0.6s,SNR=5.6
ECAL Calabor 4.89 348 Pn **Pn** **23 02 13.8 +0.9**
comp=E,0.4nm,0.2s,SNR=7.9
ECAL Sn **Sn** **23 03 08.5 -1.0**
comp=E,1.5nm,0.3s,SNR=7.9
ECAL Calabor 4.89 348 Pn **Pn** **23 02 13.8 +1.0**
ECAL Sn **Sn** **23 03 08.5 -1.0**
ECAL Lg 23 03 35.4
PCAB Cabril 4.99 336 *e*Pn **Pn** **23 02 14.9 +0.7**
PCAB *e*Sn **Sn** **23 03 10.5 -1.3**
PCAB A 23 03 51.7
comp=E,18nm,0.6s
PCAB Cabril 4.99 336 *e*Pn **Pn** **23 02 14.9 +0.7**
PCAB *e*Sn **Sn** **23 03 10.5 -1.3**
comp=E,18nm,0.6s
EMOS Mosqueruela 4.99 49 Sn **Sn** **23 03 12.2 +0.2**
comp=E,0.8nm,0.2s,SNR=7.9
EMOS Lg 23 03 40.3
comp=E,5.2nm,0.5s,SNR=7.9
EMOS Mosqueruela 4.99 49 Sn **Sn** **23 03 12.2 +0.3**
SNR=7.9
ELOB Lobios 5.14 337 Pn **Pn** **23 02 17.0 +0.7**
comp=E,0.9nm,0.2s,SNR=7.9
ELOB Sn **Sn** **23 03 13.1 -2.5**
comp=E,2.8nm,0.3s,SNR=5.0
ELOB Lg 23 03 43.4
comp=E,24nm,0.5s,SNR=6.4
ELOB Lobios 5.14 337 Pn **Pn** **23 02 16.7 +0.4**
comp=E,0.9nm,0.2s,SNR=7.9
ELOB Sn **Sn** **23 03 14.2 -1.4**
comp=E,1.3nm,0.2s,SNR=5.0
ELOB Lobios 5.14 337 Pn **Pn** **23 02 16.7 +0.4**
ELOB Sn **Sn** **23 03 14.2 -1.4**
ELOB Lg 23 03 43.4
ERUA La Rua 5.40 346 Sn **Sn** **23 03 20.2 -1.9**
comp=E,2.7nm,0.3s,SNR=7.9
ERUA Lg 23 03 50.7
comp=E,1.2nm,0.2s,SNR=4.0
ERTA Horta de San J 5.84 48 Lg 23 04 07.3
comp=E,0.2nm,0.1s,SNR=7.9
ESAC San Caprasio 5.93 38 Lg 23 04 11.5
comp=E,23nm,0.5s,SNR=7.9
EARI Arriondas 6.13 1 Sn **Sn** **23 03 36.5 -3.6**
comp=E,0.0nm,0.0s,SNR=7.9
EARI Lg 23 04 17.2
comp=E,3.8nm,0.4s,SNR=7.9
ELAN Lanestosa 6.24 13 Pn **Pn** **23 02 32.2 +0.7**
comp=E,0.1nm,0.1s,SNR=7.9
ELAN Sn **Sn** **23 03 39.3 -3.5**
comp=E,0.1nm,0.0s,SNR=7.9
ELAN Lg 23 04 18.8
comp=E,1.4nm,0.4s,SNR=7.9
ELAN Lanestosa 6.24 13 Pn **Pn** **23 02 31.9 +0.4**
comp=E,0.2nm,0.2s,SNR=7.9
ELAN Lanestosa 6.24 13 Pn **Pn** **23 02 31.9 +0.5**
ELAN Sn **Sn** **23 03 39.1 -3.7**
ELAN Lg 23 04 17.8
EPON Pontenova 6.31 348 Sn **Sn** **23 03 40.4 -4.0**
comp=E,0.5nm,0.2s,SNR=7.9
EPON Lg 23 04 21.5
comp=E,12nm,0.5s,SNR=7.9
EMAZ Mazaricos 6.41 336 Pn **Pn** **23 02 33.3 -0.4**
comp=E,0.1nm,0.0s,SNR=7.9
EMAZ Sn **Sn** **23 03 43.2 -3.7**
comp=E,0.4nm,0.1s,SNR=7.9
EMAZ Lg 23 04 24.1
comp=E,0.7nm,0.1s,SNR=7.9
EMAZ Mazaricos 6.41 336 Pn **Pn** **23 02 33.8 +0.1**
EMAZ Mazaricos 6.41 336 Pn **Pn** **23 02 33.8 +0.1**
EMAZ Sn **Sn** **23 03 42.5 -4.3**
EMAZ Lg 23 04 23.9
SJPF Ste Jean 6.74 27 *e*Pn **Pn** **23 02 38.9 +0.6**
SJPF *e*Sn **Sn** **23 03 51.7 -3.4**
comp=E,1.9nm,0.4s
SJPF Ste Jean 6.74 27 Pn **Pn** **23 02 38.9 +0.6**
SJPF Sn **Sn** **23 03 51.7 -3.4**
comp=E,0.9nm,0.4s
ETSF Etsaut 6.82 31 *e*Pn **Pn** **23 02 40.2 +0.8**
ETSF *e*Sn **Sn** **23 03 53.0 -3.9**
comp=E,1.2nm,0.5s
ETSF Etsaut 6.82 31 Pn **Pn** **23 02 40.2 +0.8**
ETSF Sn **Sn** **23 03 53.0 -3.9**
comp=E,0.6nm,0.5s
EBIE Bielsa 6.96 36 Pn **Pn** **23 02 44.1 +2.8**
comp=E,1.7nm,0.4s,SNR=11
EBIE Lg 23 04 43.5
comp=E,0.0nm,0.1s,SNR=4.0
EBIE Bielsa 6.96 36 Pn **Pn** **23 02 46.8 +5.5**
EBIE Bielsa 6.96 36 Pn **Pn** **23 02 46.8 +5.5**
EBIE Lg 23 04 59.2
EPF Esparros 7.32 35 *e*Pn **Pn** **23 02 46.9 +0.7**
LFF La Frestale 9.04 29 *e*Pn **Pn** **23 03 10.1 +0.3**

BJI ***13*** *23:12:29.4,299S×101 01E, h35km, mB4.8, mb4.9, Ms4.4, Msz4.2*
MOS ***13*** *23:12:30.7±1.0,271S×101 33E, h33km, mb5.2/28, Error ellipse: s-maj=12.8km s-min=6.1km az=114.9*
ISCJB ***13*** *23:12:31.5±0.2,298S±004×10107E±003, h44km, mb5.1/94, MS3.9/34, Error ellipse: s-maj=6.0km s-min=4.3km az=28.6*
NEIC ***13*** *23:12:32.2±0.2,284S×101 23E, h35km, mb5.0/27, Error ellipse: s-maj=8.3km s-min=4.9km az=48.0*
IDC ***13*** *23:12:33.6±0.4,283S×101 38E, h50km±3km, mb4.5/20, mb1 4.6/20, mb1mx4.6/23, mbtmp4.5/20, MS3.8/23, Ms1 3.8/23, ms1mx3.6/38, Error ellipse: s-maj=13.4km s-min=8.0km az=55.0*
DJA ***13*** *23:12:40, 283S×101.13E, h95km, Mw5.2/14*
ISC 13 23:12:33.4±0.2, 301S±004×10104E±003, h45km, h45km±2.0km:pP-P, n287, σ1s10/259, mb5.1/94, MS3.9/34, 28C-20D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPI	**Padang Panjang** 0.0nm,0.0s	**2.61**	**346**	P	**Pn**	**23 13 13.8**	**+0.7**
JMBI	**JAMBI** 0.0nm,0.0s	**2.94**	**62**	P	**Pn**	**23 13 20.7**	**+3.1**
RGRI	**Rengat** 0.0nm,0.0s	**2.94**	**26**	P	**Pn**	**23 13 18.7**	**+1.1**
KLI	**Kotabumi** 0.0nm,0.0s	**4.23**	**116**	P	**Pn**	**23 13 39.2**	**+3.8**
PPBI	**Pangkal Pinang** 0.0nm,0.0s	**5.16**	**81**	P	**Pn**	**23 13 49.6**	**+1.5**
KGM	**Kluang**	**5.49**	**25**	⇑P	**Pn**	**23 13 54.4**	**+1.8**
MYKOM	**Kota Tinggi**	**5.53**	**31**	⇑P	**Pn**	**23 13 55.1**	**+1.8**
FRIM	**Kepong**	**6.23**	**5**	⇓P	**Pn**	**23 14 04.3**	**+1.5**
DBJI	**Dramaga** 166nm,1.0s	**6.69**	**122**	P	**Pn**	**23 14 14.3**	**+5.1**
CBJI	**Citeko** 657nm,0.8s	**6.71**	**121**	P	**Pn**	**23 14 18.0**	**+8.6**
IPM	**Ipoh**	**7.44**	**360**	⇑P	**Pn**	**23 14 24.1**	**+4.7**
BJII	**Banjamegara** 35nm,1.1s	**9.64**	**117**	P	**Pn**	**23 14 59.1**	**+9.5**
SNG	**Songkhla** 240nm,1.0s	**10.12**	**358**	P	**Pn**	**23 14 57.0**	**+0.8**
KSM	**Kuching**	**10.28**	**64**	*e*Pn	**Pn**	**23 14 60.0**	**+1.6**
SJI	**Sawahan** 88nm,0.8s	**11.66**	**114**	P	**Pn**	**23 15 18.0**	**+0.7**
SBUM	**Sibu**	**12.42**	**64**	⇓P	**Pn**	**23 15 32.4**	**+4.7**
BTM	**Bintulu**	**13.53**	**63**	⇓P	**Pn**	**23 15 47.2**	**+4.4**
BBKI	**Banjar Baru** 176nm,0.8s	**13.79**	**92**	P	**Pn**	**23 15 53.8**	**+7.5**
SMKI	**Samarinda** 92nm,0.7s	**16.36**	**81**	P	**Pn**	**23 16 26.8**	**+6.8**
KKM	**Kota Kinabalu**	**17.62**	**59**	⇑P	**Pn**	**23 16 39.2**	**+3.4**
KKM	**Kota Kinabalu**	**17.62**	**59**	*e*Pn	**Pn**	**23 16 36.9**	**+1.1**
SDKM	**Sandakan**	**18.28**	**62**	⇑P	**Pn**	**23 16 45.4**	**+1.6**
TSM	**Tawau**	**18.32**	**67**	⇑P	**Pn**	**23 16 45.8**	**+1.6**
KDM	**Kudat**	**18.59**	**58**	⇓P	**Pn**	**23 16 50.2**	**+2.6**
KAPI	**Kappang** 742nm,1.0s,SNR=6.2	**18.77**	**97**	Pn	**Pn**	**23 16 48.4**	**-1.4**
KAPI	**Kappang** 5.3nm,0.3s,baz=279,slow=11,SNR=23	**18.77**	**97**	P	**Pn**	**23 16 48.2**	**-1.6**
KAPI	**Kappang**	**18.77**	**97**	*e*P	**Pn**	**23 16 47.6**	**-2.1**
PCI	**Palu** 94nm,1.2s	**18.90**	**84**	P	**Pn**	**23 16 51.5**	**+0.2**
MYLDM	**Lahad Datu**	**19.25**	**65**	⇓P	**Pn**	**23 16 57.1**	**+1.6**
CM31	**Chiang Mai Arr** 19nm,0.6s,mb4.6	**21.43**	**355**	*e*P	**P**	**23 17 14.6**	**-3.1**
CMAR	**Chiang Mai Arr** 12nm,0.7s,mb4.4,baz=184,slow=10,SNR=36	**21.43**	**355**	P	**P**	**23 17 14.3**	**-3.4**
CMAR	1.3nm,0.5s,baz=206,slow=2.6,SNR=8.8			PcP	PcP	23 21 20.7	+0.6
CMAR	comp=Z,198nm,18.8s,MS3.5,baz=338,slow=39			LR	LR	23 26 23.6	
CMAR	**Chiang Mai Arr**	**21.43**	**355**	P	**P**	**23 17 14.3**	**-3.4**
CMAR						23 21 20.7	
KDI	**Kendari** 45nm,1.0s,mb4.9	**21.56**	**93**	P	**P**	**23 17 21.2**	**+1.9**
NANT	**Nan**	**21.67**	**359**	P	**P**	**23 17 18.5**	**-1.8**
CHG	**Chiang Mai** 11nm,0.7s,mb4.4	**21.78**	**355**	⇑P	**P**	**23 17 20.9**	**-0.6**
CHTO	**Chiang Mai**	**21.78**	**355**	*e*P	**P**	**23 17 21.4**	**-0.1**
CHRT	**Chiangrai** 132nm,1.0s,mb5.3	**22.77**	**357**	⇑P	**P**	**23 17 31.5**	**-0.5**
QIZ	**Qiongzhong**	**23.55**	**21**	P	**P**	**23 17 39.4**	**-0.5**
QIZ				PP		23 18 14.8	
QIZ	comp=Z,29nm,1.4s,mb4.5			AMB	AMB		
QIZ	comp=Z,123nm,4.8s			AMB	AMB		
QIZ	comp=N,333nm,19.8s			LR	LR		
QIZ	comp=Z,300nm,21.7s,MS3.7			LR	LR		
BATI	**Baumata** comp=Z,23nm,0.6s,mb4.8,baz=237,slow=8.3,SNR=5.0	**23.57**	**109**	P	**P**	**23 17 37.0**	**-3.2**
MBWA	**Marble Bar** comp=Z,11nm,0.8s,mb4.4	**25.62**	**136**	*e*P	**P**	**23 17 59.7**	**+0.9**
DAV	**Davao City (W)** comp=Z,268nm,19.6s,MS3.8,baz=246,slow=39	**26.46**	**68**	LR	LR	23 29 19.3	
LBMI	**Labuha** comp=Z,117nm,1.0s,mb5.4	**26.55**	**85**	P	**P**	**23 18 07.4**	**+0.1**
KMI	**Kunming**	**28.01**	**3**	P	**P**	**23 18 20.3**	**+0.1**
KMI				AP	pP	23 18 32.9	+0.7
KMI				XP	sP	23 18 37.5	-0.1
KMI				PP	PP	23 19 12.8	-.11
KMI				S	**S**	**23 23 06.1**	**+4.6**
KMI	comp=Z,8.0nm,0.8s,mb4.4			AMB	AMB		
KMI	comp=Z,49nm,5.0s			AMB	AMB		
KMI	comp=N,279nm,19.7s,MS4.0			LR	LR		
KMI	comp=E,235nm,16.4s,MS4.0			LR	LR		
KMI	comp=Z,306nm,19.3s,MS3.9			LR	LR		
FITZ	**Fitzroy Crossi** comp=Z,22nm,0.9s,mb4.8	**28.39**	**124**	*e*P	**P**	**23 18 22.6**	**-1.1**
FITZ	**Fitzroy Crossi** comp=Z,13nm,0.8s,mb4.6,baz=292,slow=5.7,SNR=23	**28.39**	**124**	P	**P**	**23 18 22.6**	**-1.1**
FITZ	comp=Z,81nm,20.0s,MS3.3,baz=140,slow=36			LR	LR	23 29 36.9	
FITZ	**Fitzroy Crossi** comp=Z,22nm,0.7s,mb4.9	**28.39**	**124**	*e*P	**P**	**23 18 22.3**	**-1.5**
GYA	**Guiyang**	**29.79**	**10**	P	**P**	**23 18 34.3**	**-1.7**
GYA				AP	pP	23 18 49.3	+1.2
GYA				XP	sP	23 18 54.9	+1.4
GYA				PCP	PcP	23 21 40.3	+1.4
GYA				S	**S**	**23 23 34.6**	**+5.0**
GYA				SCP	ScP	23 25 18.5	+1.1
GYA				SCS	ScS	23 29 12.8	+0.2
GYA	comp=Z,30nm,0.8s,mb5.1			AMB	AMB		
GYA	comp=Z,190nm,5.2s			AMB	AMB		
GYA	comp=N,2μm,18.0s,MS4.8			LR	LR		
GYA	comp=E,1μm,15.4s,MS4.8			LR	LR		
GYA	comp=Z,2μm,17.2s,MS4.8			LR	LR		
SWI	**Sorong** comp=Z,34nm,1.0s,mb5.0	**30.28**	**87**	P	**P**	**23 18 40.5**	**0.0**
ODAN	**Odare** comp=Z,157nm,0.6s,mb6.0	**32.49**	**337**	*e*P	**P**	**23 19 00.4**	**+0.6**
TAPN	**Taplejung** comp=Z,301nm,0.9s,mb6.2	**32.80**	**338**	*e*P	**P**	**23 19 03.4**	**+0.9**
RAMN	**Ramite** comp=Z,87nm,0.7s,mb5.8	**32.88**	**336**	*e*P	**P**	**23 19 04.3**	**+1.1**
NWAO	**Narrogin (SRO)** comp=Z,173nm,20.7s,MS3.8,baz=148,slow=35	**33.41**	**155**	LR	LR	23 32 01.2	
JIRN	**Jiri**	**33.68**	**336**	*e*P	**P**	**23 19 11.3**	**+1.1**
CD2	**Chengdu**	**33.83**	**4**	*e*P	**P**	**23 19 08.6**	**-2.8**
CD2				AP	pP	23 19 16.1	-7.4
CD2				XP	sP	23 19 19.8	-9.1
CD2				PP	PP	23 20 20.8	-7.9
CD2				PCP	PcP	23 21 44.1	-5.6
CD2				S	**S**	**23 24 28.4**	**-4.0**
CD2				XS	sS	23 24 44.4	-8.3
CD2				PCS	PcS	23 25 29.1	-6.7
CD2				SS	SS	23 26 36.6	-24
CD2				SCS	ScS	23 29 25.8	-6.9
CD2	comp=Z,10.0nm,0.6s,mb4.9			AMB	AMB		
CD2	comp=Z,30nm,4.8s			AMB	AMB		
CD2	comp=N,340nm,21.6s			LR	LR		
CD2	comp=E,280nm,15.6s			LR	LR		
CD2	comp=Z,460nm,20.4s,MS4.2			LR	LR		
YHNB	**Yeheng**	**33.87**	**35**	*e*P	**P**	**23 19 10.6**	**-1.3**
YHNB				*e*PP	PP	23 20 26.3	-2.9
LSA	**Lhasa**	**33.87**	**344**	P	**P**	**23 19 11.3**	**-0.5**
LSA	**Lhasa**	**33.87**	**344**	*e*P	**P**	**23 19 10.9**	**-0.9**
LSA				*e**PP	pP	23 19 20.4	-3.5
LSA				*e*		23 20 27.0	
LSA				*e*		23 21 50.8	
LSA	comp=Z,9.0nm,0.8s,mb4.8			pmax	pmax		
LSA	**Lhasa** comp=Z,9.3nm,0.8s,mb4.8	**33.87**	**344**	*e*P	**P**	**23 19 10.9**	**-0.9**
LSA				*e*pP	pP	23 19 20.4	-3.5
LSA				*e*PP	PP	23 20 27.0	-2.2
LSA				*e*PcP	PcP	23 21 50.8	+0.9
PKI	**Pulchoki**	**33.93**	**335**	*e*P	**P**	**23 19 12.8**	**+0.5**
PKIN	**Phulchoki** comp=Z,23nm,0.5s,mb5.4	**33.94**	**335**	*e*P	**P**	**23 19 12.8**	**+0.4**
GUN	**Gumba** comp=Z,447nm,0.7s	**34.03**	**336**	*e*P	**P**	**23 19 14.3**	**+1.1**
DMN	**Daman**	**34.09**	**334**	*e*P	**P**	**23 19 14.4**	**+0.6**
KKN	**Kakani** comp=Z,172nm,0.7s,mb6.1	**34.17**	**335**	*e*P	**P**	**23 19 15.0**	**+0.5**
GKN	**Gorkha** comp=Z,86nm,0.4s,mb6.0	**34.64**	**334**	*e*P	**P**	**23 19 19.2**	**+0.7**
KOLN	**Koldanda** comp=Z,93nm,0.7s,mb5.8	**34.91**	**332**	*e*P	**P**	**23 19 21.8**	**+1.0**
DANN	**Dangsing** comp=Z,182nm,0.4s	**35.33**	**333**	*e*P	**P**	**23 19 25.3**	**+0.9**
WHN	**Wuhan**	**35.70**	**20**	P	**P**	**23 19 27.0**	**-0.6**
WRA	**Warramunga Arr** comp=Z,16nm,0.4s,mb5.2,baz=304,slow=8.9,SNR=322	**36.59**	**120**	P	**P**	**23 19 34.0**	**-1.4**
WRA				PcP	PcP	23 21 56.9	-1.2
WRA	comp=Z,3.8nm,0.8s,baz=296,slow=2.4,SNR=4.7			S	**S**	**23 25 09.0**	**-6.3**
WRA	comp=Z,2.4nm,0.8s,baz=294,slow=16,SNR=8.6			LR	LR	23 35 06.4	
WRA	**Warramunga Arr** comp=Z,58nm,18.5s,MS3.4,baz=185,slow=37	**36.59**	**120**	P	**P**	**23 19 34.0**	**-1.4**
WRA						23 21 56.9	
WRA				S	**S**	**23 25 09.0**	**-6.3**
WRAB	**Tennant Creek** comp=Z,258nm,0.9s,mb6.1,SNR=58	**36.60**	**120**	P	**P**	**23 19 34.0**	**-1.4**
WRAB	**Tennant Creek** comp=Z,27nm,0.7s,mb5.2	**36.60**	**120**	*e*P	**P**	**23 19 33.5**	**-1.9**
WRAB	comp=Z,27nm,0.7s,mb5.2			pmax	pmax		
WRAB	**Tennant Creek** comp=Z,27nm,0.7s,mb5.2	**36.60**	**120**	*e*P	**P**	**23 19 33.5**	**-1.9**
WB2	**Warramunga Arr**	**36.60**	**120**	*e*P	**P**	**23 19 34.0**	**-1.5**
WB2				*e*S	**S**	**23 25 09.8**	**-5.6**
WB2	**Warramunga Arr**	**36.60**	**120**	*e*P	**P**	**23 19 34.2**	**-1.2**
WB2				*e*PcP	PcP	23 21 56.3	-1.8
WB2				*e*S	**S**	**23 25 09.8**	**-5.6**
XAN	**Xi'an**	**37.59**	**11**	P	**P**	**23 19 41.6**	**-2.0**
XAN				AP	pP	23 19 52.1	-3.8
XAN				XP	sP	23 19 57.3	-3.9
XAN	comp=Z,61nm,0.8s,mb5.4			AMB	AMB		
ASAR	**Alice Springs** comp=Z,12nm,0.9s,mb4.6,baz=300,slow=7.9,SNR=81	**37.82**	**126**	P	**P**	**23 19 45.3**	**-0.5**
ASAR				PcP	PcP	23 22 01.8	0.0
ASAR	comp=Z,4.5nm,0.7s,baz=301,slow=3.0,SNR=10.0			S	**S**	**23 25 28.9**	**-5.0**
PTH	**Pithoragarh** comp=Z,2.5nm,0.7s,baz=298,slow=15,SNR=13	**38.02**	**330**	*e*P	**P**	**23 19 48.6**	**+1.2**
NJ2	**Nanjing**	**38.75**	**25**	*e*P	**P**	**23 19 55.1**	**+1.6**
NJ2	comp=Z,70nm,1.0s,mb5.3			AMB	AMB		
NDI	**New Delhi**	**38.94**	**326**	*ex*	x	23 19 54.0	
LZH	**Lanzhou**	**38.98**	**4**	*e*P	**P**	**23 19 54.0**	**-1.3**
LZH				PP	PP	23 21 27.3	+2.0
LZH	comp=Z,25nm,1.2s,mb4.8			AMB	AMB		
LZH	comp=Z,103nm,5.5s			AMB	AMB		
LZH	comp=E,578nm,14.3s			LR	LR		
LZH	comp=Z,783nm,17.8s,MS4.6			LR	LR		
JOW	**Kunigami** comp=Z,114nm,21.8s,MS3.7,baz=140,slow=33	**39.65**	**40**	LR	LR	23 34 18.1	
SMLA	**Simla**	**40.86**	**328**	*i* x	**P**	**23 20 10.9**	**0.0**
GTA	**Gaotai**	**42.22**	**359**	*e*P	**P**	**23 20 20.9**	**-1.1**
GTA				S	**S**	**23 26 38.9**	**-0.3**
GTA	comp=Z,4.0nm,0.5s,mb4.3			AMB	AMB		
GTA	comp=Z,59nm,5.1s			AMB	AMB		
GTA	comp=N,206nm,17.4s,MS4.1			LR	LR		
GTA	comp=E,118nm,17.4s,MS4.1			LR	LR		
GTA	comp=Z,302nm,18.3s,MS4.2			LR	LR		
THN	**Thein Dam**	**42.65**	**328**	*ex*	**P**	**23 20 24.5**	**-1.1**
HHC	**Hu-ho-hao-te**	**44.69**	**11**	*e*P	**P**	**23 20 42.0**	**+0.1**
HHC				AP	pP	23 20 52.3	-2.1
HHC				XP	sP	23 20 56.3	-3.4
HHC				PCP	PcP	23 22 23.3	-0.5
HHC				PP	PP	23 22 28.4	+1.4
HHC				SCP	ScP	23 26 11.3	-1.3
HHC				PCS	PcS	23 26 15.9	-1.3
HHC				S	**S**	**23 27 17.5**	**+2.2**
HHC				XS	sS	23 27 35.0	-1.1
HHC				SS	SS	23 30 31.6	-5.4
HHC				SCS	ScS	23 30 34.5	-1.3
HHC				AMB	AMB		
HHC	comp=Z,15nm,0.7s,mb4.9			AMB	AMB		
HHC	comp=Z,101nm,7.0s			LR	LR		
HHC	comp=N,171nm,16.0s,MS4.2			LR	LR		
HHC	comp=E,147nm,16.2s,MS4.2			LR	LR		
HHC	comp=Z,208nm,15.6s,MS4.2			LR	LR		

BJT Baijiatuau 45.01 16 *e*P **P** **23 20 41.1 -3.3**
BJT *e* 23 22 23.3
BJI Beijing 45.03 16 P **P** **23 20 43.8 -0.8**
BJI AMB AMB
comp=Z,11nm,0.5s,mb4.9
BJI LR LR
comp=N,225nm,20.4s,MS4.2
BJI LR LR
comp=E,174nm,20.4s,MS4.2
BJI LR LR
comp=Z,193nm,19.9s,MS4.0
GUMO Guam 46.50 68 LR LR 23 40 11.4
comp=Z,71nm,19.0s,MS3.6,baz=269,slow=36
CTA Charters Tower 47.23 115 *e*P **P** **23 21 01.3 -1.0**
comp=Z,18nm,0.8s,mb5.0
CTA Charters Tower 47.23 115 *e*P **P** **23 21 01.3 -1.0**
CTA pmax pmax
comp=Z,18nm,0.8s
CTAO Charters Tower 47.23 115 *e*P **P** **23 21 01.3 -1.0**
CTAO pmax pmax
comp=Z,24nm,0.8s,mb5.2
CTAO Charters Tower 47.23 115 *e*P **P** **23 21 01.3 -1.0**
comp=Z,24nm,0.8s,mb5.2
KSRS Korea Array 47.37 29 P **P** **23 21 01.4 -1.7**
comp=Z,6.0nm,0.9s,mb4.5,baz=227,slow=8.1,SNR=19
KSRS pP pP 23 21 14.9 -0.7
comp=Z,17nm,1.1s,baz=219,slow=8.3,SNR=8.2
KSRS LR LR 23 43 05.6
comp=Z,60nm,19.3s,MS3.6,baz=234,slow=39
STKA Stephens Creek 47.71 132 *e*P **P** **23 21 05.7 -0.1**
comp=Z,12nm,0.6s,mb5.1
STKA Stephens Creek 47.71 132 P **P** **23 21 05.8 -0.1**
comp=Z,15nm,0.6s,mb5.2,baz=305,slow=6.8,SNR=32
STKA pP pP 23 21 17.1 -1.2
comp=Z,11nm,0.5s,baz=310,slow=6.8,SNR=6.7
STKA LR LR 23 40 39.3
comp=Z,171nm,19.1s,MS4.0,baz=296,slow=35
KBL Kabul 47.95 324 *e*P **P** **23 21 07.4 -0.2**
KBL *e*PP pP 23 21 16.0 -4.2
KBL *e*SP sP 23 21 22.5 -3.0
KBL pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
KBL Kabul 47.95 324 *e*P **P** **23 21 07.4 -0.2**
comp=Z,6.3nm,0.6s,mb4.8
KBL *e*pP pP 23 21 16.0 -4.2
KBL *e*sP sP 23 21 22.5 -3.0
WMQ Urumqi 48.13 347⇑*i*P **P** **23 21 09.1 +0.3**
WMQ AP pP 23 21 19.0 -2.4
WMQ XP sP 23 21 23.0 -3.7
WMQ PCP PcP 23 22 34.0 -1.8
WMQ *e*S **S** **23 28 06.5 +2.0**
WMQ AMB AMB
comp=Z,31nm,0.8s,mb5.4
WMQ AMB AMB
comp=Z,177nm,5.7s
WMQ LR LR
comp=N,173nm,23.6s,MS4.1
WMQ LR LR
comp=E,159nm,22.8s,MS4.1
WMQ LR LR
comp=Z,136nm,21.9s,MS3.9
KSH Kashi 48.19 334 P **P** **23 21 10.0 +0.7**
KSH *e*AP pP 23 21 19.0 -2.9
KSH *e*XP sP 23 21 23.0 -4.2
KSH *e*PCP PcP 23 22 37.3 +1.2
KSH *e*PP PP 23 23 01.0 -1.1
KSH *e*SCP ScP 23 26 27.0 -0.2
KSH *e*PCS PcS 23 26 31.0 -0.9
KSH *e*S **S** **23 28 05.1 -0.3**
KSH *e*XS sS 23 28 22.0 -4.4
KSH *e*SCS ScS 23 30 57.0 -1.6
KSH *e*SS SS 23 31 30.1 -5.2
KSH AMB AMB
comp=Z,281nm,2.5s,mb5.8
KSH LR LR
comp=N,423nm,4.6s
KSH LR LR
comp=E,354nm,5.1s
KSH LR LR
comp=Z,371nm,4.9s
SONM Songino Array 50.85 5 P **P** **23 21 29.3 -0.1**
comp=Z,44nm,0.8s,mb5.4,baz=184,slow=9.3,SNR=194
SONM PcP PcP 23 22 45.0 -0.6
comp=Z,3.1nm,0.5s,baz=190,slow=3.9,SNR=6.9
SONM LR LR 23 45 45.9
comp=Z,128nm,18.1s,MS4.0,baz=243,slow=39
SONM Songino Array 50.85 5 P **P** **23 21 29.3 -0.1**
SONM 23 22 45.0
ULN Ulaanbaatar 50.93 5 *e*P **P** **23 21 29.8 -0.3**
ULN pmax pmax
comp=Z,20nm,0.7s,mb5.2
ULN Ulaanbaatar 50.93 5 *e*P **P** **23 21 29.8 -0.3**
comp=Z,20nm,0.7s,mb5.2
TKM2 Tokmak 2 51.16 336 *e*P **P** **23 21 32.2 +0.3**
TKM2 pmax pmax
comp=Z,32nm,0.3s,mb5.7
TKM2 Tokmak 2 51.16 336 P **P** **23 21 32.2 +0.3**
SNR=33
TKM2 Tokmak 2 51.16 336 *e*P **P** **23 21 32.2 +0.3**
comp=Z,32nm,0.3s,mb5.7
KBK Karagaybulak 51.21 335 P **P** **23 21 33.2 +1.0**
SNR=7.1
AML Almayashu 51.32 334 P **P** **23 21 34.0 +0.9**
SNR=6.5
AML Almayashu 51.32 334 *e*P **P** **23 21 33.7 +0.6**
comp=Z,32nm,0.7s,mb5.3
AAK Ala-Archa 51.38 335 P **P** **23 21 34.3 +0.7**
SNR=6.3
CN2 Changchun 51.50 22 *e*P **P** **23 21 32.3 -2.1**
CN2 *e*XP sP 23 21 47.3 -5.1
CN2 *e*S **S** **23 28 50.8 -0.7**
CN2 AMB AMB
comp=Z,30nm,0.7s,mb5.3
CN2 AMB AMB
comp=Z,600nm,5.0s
CHMS Chumysh 51.58 335 P **P** **23 21 34.9 -0.1**
SNR=10
EKS2 Erkin-Say 51.71 335 P **P** **23 21 36.9 +0.9**
SNR=49
EKS2 Erkin-Say 51.71 335 *e*P **P** **23 21 36.4 +0.4**
comp=Z,56nm,0.8s,mb5.6
EKS2 *e* pP 23 21 47.9 -0.8
USP Ospenovka 51.90 335 P **P** **23 21 37.4 0.0**
SNR=18
MKAR Makanchi Array 52.27 344 P **P** **23 21 39.5 -0.6**
comp=Z,30nm,0.6s,mb5.4,baz=147,slow=8.2,SNR=292
MKAR pP pP 23 21 53.0 +0.2
comp=Z,9.8nm,0.6s,baz=142,slow=7.2,SNR=6.6
MKAR LR LR 23 45 04.8
comp=Z,64nm,22.0s,MS3.6,baz=153,slow=37
MKAR Makanchi Array 52.27 344 P **P** **23 21 39.5 -0.6**
MKAR *PP pP 23 21 53.0 +0.2
MAT Matsushiro 52.41 38 P **P** **23 21 40.2 -1.2**
MAT *e*S S 23 29 45.0 +41
MJAR Matsushiro Arr 52.41 38 P **P** **23 21 39.3 -2.1**
comp=Z,5.8nm,0.7s,mb4.6,baz=203,slow=7.0,SNR=21
MJAR pP pP 23 21 52.5 -1.6
comp=Z,3.9nm,0.8s,baz=218,slow=8.7,SNR=4.1
MJAR LR LR 23 42 52.9
comp=Z,78nm,20.4s,MS3.7,baz=220,slow=35
MJAR Matsushiro Arr 52.41 38 P **P** **23 21 39.3 -2.1**
MJAR *PP pP 23 21 52.5 -1.6
EIDS Eidsvold 52.96 120 *e*P **P** **23 21 49.5 +3.9**
ZAK Zakamensk 53.21 2 *e*P **P** **23 21 46.0 -1.0**
ZAK *e* 23 22 53.7
ZAK pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
MDJ Mudanjiang 53.84 25 P **P** **23 21 52.3 +0.6**
MDJ AP pP 23 22 01.3 -3.2
MDJ XP sP 23 22 04.8 -4.9
MDJ S **S** **23 29 28.6 +5.2**
MDJ XS sS 23 29 42.4 -2.3
MDJ AMB AMB
comp=Z,6.0nm,1.0s,mb4.5
MDJ AMB AMB
comp=Z,42nm,5.7s
MDJ LR LR
comp=N,68nm,29.8s
MDJ LR LR
comp=E,96nm,23.6s
MDJ LR LR
comp=Z,129nm,23.6s
MOY Mondy 54.47 360 *e*P **P** **23 21 55.8 -0.3**
TLY Talaya 54.52 2 P **P** **23 21 57.2 +0.6**
comp=Z,142nm,0.9s,mb6.0,SNR=6.4
TLY Talaya 54.52 2 *e*P **P** **23 21 56.5 -0.1**
TLY pmax pmax
comp=Z,19nm,0.8s,mb5.2
TLY MLR MLR
comp=Z,172nm,17.0s,MS4.2
TLY Talaya 54.52 2 *e*P **P** **23 21 57.1 +0.6**
KURK Kurchatov 56.86 343 P **P** **23 22 12.8 -0.5**
comp=Z,235nm,0.6s,SNR=25
KURK Kurchatov 56.86 343 P **P** **23 22 11.9 -1.5**
comp=Z,14nm,0.6s,mb5.2,baz=165,slow=7.2,SNR=119
KURK pP pP 23 22 25.8 -0.4
comp=Z,10.0nm,0.8s,baz=175,slow=6.0,SNR=12
KURK Kurchatov 56.86 343 *e*P **P** **23 22 12.1 -1.2**
KURK *e* pP 23 22 24.9 -1.3
KURK *PP pP 23 22 25.8 -0.4
KURK pmax pmax
comp=Z,20nm,0.6s,mb5.3
KURK Kurchatov 56.86 343 *e*P **P** **23 22 12.1 -1.2**
KURK *e* pP 23 22 24.9 -1.3
KURK pP pP 23 22 25.8 -0.4
ZAA0 Zalesovo Array 58.35 349 *e*P **P** **23 22 22.8 -0.9**
ZALV Zalesovo Beam 58.35 349 P **P** **23 22 22.8 -0.9**
comp=Z,114nm,0.8s,mb6.0,baz=170,slow=5.4,SNR=451
ZALV S **S** **23 30 19.1 -3.8**
comp=Z,0.5nm,0.2s,baz=149,slow=12,SNR=4.6
ZALV LR LR 23 49 15.4
comp=Z,66nm,21.2s,MS3.7,baz=139,slow=38
ZALV Zalesovo Beam 58.35 349 P **P** **23 22 22.8 -0.9**
ZALV S **S** **23 30 19.1 -3.8**
KLR Kul'dur 58.43 23 *e*P **P** **23 22 19.4 -5.0**
HNR Honiara 58.85 99 LR LR
comp=Z,98nm,18.2s,MS4.0,baz=105,slow=38
NVS Novosibirsk 59.50 348⇑*i*P **P** **23 22 30.1 -1.6**
NVS pmax pmax
comp=Z,34nm,0.9s,mb5.4
NVS pmax pmax
comp=N,20nm,0.9s
NVS pmax pmax
comp=E,17nm,0.8s
RDF Al-Radifah 60.28 306 *e*P **P** **23 22 37.8 +0.2**
baz=306
RDF AMb AMB 23 22 38.5
comp=Z,34nm,0.8s,mb5.4,baz=306
UMR Umm Al-Rimmam 60.38 307 *e*P **P** **23 22 38.6 +0.3**
baz=307
UMR AMb AMB 23 22 39.7
comp=Z,36nm,0.6s,mb5.6,baz=307
NAY Al-Naaiem 60.65 306 *e*P **P** **23 22 40.2 +0.1**
baz=306
NAY AMb AMB 23 22 40.8
comp=Z,17nm,0.7s,mb5.3,baz=306
MIB Mutribah 60.78 307 *e*P **P** **23 22 41.3 +0.2**
baz=307
MIB AMb AMB 23 22 58.0
comp=Z,38nm,0.8s,mb5.6,baz=307
RST Umm Al-Ruwaisa 60.94 306 *e*P **P** **23 22 41.9 -0.3**
baz=306
RST AMb AMB 23 22 42.7
comp=Z,29nm,0.7s,mb5.5,baz=306
BVAR Borovoye Array 61.48 339 P **P** **23 22 44.0 -1.3**
comp=Z,19nm,0.6s,mb5.4,baz=141,slow=9.1,SNR=93
BVAR pP pP 23 22 57.6 -0.7
comp=Z,16nm,0.7s,baz=146,slow=8.6,SNR=15
BOD Bodaibo 61.52 8 *e*P **P** **23 22 44.2 -1.2**
BOD pmax pmax
comp=Z,14nm,0.9s,mb5.1
BRVK Borovoye 61.55 339 P **P** **23 22 44.7 -1.0**
comp=Z,176nm,0.7s,SNR=11
BRVK Borovoye 61.55 339 *e*P **P** **23 22 44.2 -1.5**
BRVK *e* pP 23 22 57.5 -1.2
YSS Yuzh-Sakhalins 61.79 31 *e*P **P** **23 22 46.0 -1.5**
YSS *e* pP 23 22 58.0 -2.4
YSS pmax pmax
comp=Z,50nm,0.9s,mb5.6
YSS Yuzh-Sakhalins 61.79 31 *e*P **P** **23 22 46.9 -0.5**
KMBO Kilima Mbogo 63.77 270 LR LR 23 45 23.8
comp=Z,90nm,18.9s,MS4.0,baz=104,slow=31
AKTK Aktyubinsk 64.73 331 P **P** **23 23 05.5 -1.4**
AKTO Aktyubinsk 64.73 331 P **P** **23 23 05.5 -1.4**
comp=Z,5.9nm,0.5s,mb4.9,baz=122,slow=5.5,SNR=26
GNI Garni 66.97 316 *e*P **P** **23 23 21.9 +0.4**
SVE Sverdlovsk 68.00 337⇓*e*P **P** **23 23 27.2 -0.5**
SVE *e* 23 23 56.8
SVE *e* 23 25 53.8
SVE *e*PPP 23 27 37.1
SVE *e* 23 33 19.7
SVE pmax pmax
comp=Z,40nm,0.9s,mb5.5
YAK Yakutsk 68.45 14*c i*P **P** **23 23 28.4 -2.0**
YAK pmax pmax
comp=Z,72nm,0.7s,mb5.8
YAK Yakutsk 68.45 14 *e*P **P** **23 23 27.5 -2.9**
comp=Z,52nm,0.7s,mb5.7
ARU Arti 68.54 336 P **P** **23 23 30.1 -0.9**
comp=Z,123nm,0.6s,mb6.0,SNR=9.0
ARU Arti 68.54 336*c i*P **P** **23 23 29.9 -1.1**
ARU *e*PPP 23 27 38.3
ARU *e*S S 23 32 30.6 +0.8
ARU *e*SS SS 23 36 51.7 -3.0
ARU pmax pmax
comp=Z,18nm,0.8s,mb5.0
ARU Arti 68.54 336 *e*P **P** **23 23 30.0 -1.1**
comp=Z,14nm,0.7s,mb5.0
ARU *e*pP pP 23 23 40.5 -3.7
MAW Mawson 69.57 195 P **P** **23 23 39.2 +1.9**
comp=Z,1.9nm,0.8s,mb4.1,baz=313,slow=3.6,SNR=5.4
MAW pP pP 23 23 53.3 +2.9
comp=Z,3.5nm,1.0s,baz=34,slow=6.6,SNR=3.7
MAW LR LR 23 51 46.7
comp=Z,95nm,18.6s,MS4.1,baz=192,slow=34
MAW Mawson 69.57 195 P **P** **23 23 39.2 +1.9**
MAW *PP pP 23 23 53.3 +2.9
KIV Kislovodsk 69.98 319*c* **P** **23 23 40.8 +0.6**
KIV *e**PP pP 23 23 54.8 +1.4
KIV 23 24 01.0
KIV pmax pmax
comp=Z,19nm,1.1s,mb4.9
KIV Kislovodsk 69.98 319 *e*P **P** **23 23 40.9 +0.7**
ASF Jabal al Asfar 70.02 306 LR LR 23 54 45.9
comp=Z,40nm,21.4s,MS3.6,baz=270,slow=36
MALT Malatya 70.78 312 *e*P **P** **23 23 44.4 -0.9**
MALT pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
MALT Malatya 70.78 312 *e*P **P** **23 23 44.4 -0.9**
comp=Z,3.6nm,1.0s,mb4.3
LSZ Lusaka 72.67 255 P **P** **23 23 59.3 +2.2**
comp=Z,0.7nm,0.4s,baz=76,slow=9.7,SNR=4.1
LSZ pP pP 23 24 12.7 +2.4
comp=Z,1.0nm,0.4s,baz=73,slow=5.7,SNR=3.6
LSZ LR LR 23 53 05.9
comp=Z,133nm,18.6s,MS4.2,baz=107,slow=33
LSZ Lusaka 72.67 255 P **P** **23 23 59.3 +2.2**
LSZ *PP pP 23 24 12.8 +2.5
PEA0B Petropavlovsk- 73.18 32 *e*P **P** **23 23 58.2 -1.1**
PETK Petropavlovsk- 73.18 32 P **P** **23 23 58.0 -1.4**
comp=Z,10nm,0.7s,mb4.9,baz=288,slow=1.6,SNR=30
PETK pP pP 23 24 11.5 -1.1
comp=Z,5.1nm,0.7s,baz=230,slow=5.2,SNR=4.8
PETK LR LR 23 57 44.8
comp=Z,31nm,21.8s,MS3.5,baz=76,slow=37
RPZ Rata Peaks 73.54 135 LR LR 23 55 10.1
comp=Z,156nm,19.5s,MS4.3,baz=136,slow=35
PET Petropavlovsk 73.64 32 *e*P **P** **23 24 00.7 -1.3**
PET pmax pmax
comp=Z,56nm,0.8s,mb5.5
PET Petropavlovsk 73.64 32⇓*i*P **P** **23 24 01.1 -0.9**
BR131 Keskin Array S 74.76 312 *e*P **P** **23 24 08.5 -0.3**
comp=Z,6.2nm,0.7s,mb4.7
VSR Storozhevoye 75.19 325 *e*P **P** **23 24 09.8 -1.3**
VSR pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
BOSA Boshof 76.09 241 P **P** **23 24 18.9 +2.1**
comp=E,1.9nm,0.5s,mb4.2,baz=96,slow=14,SNR=7.0
BOSA pP pP 23 24 32.8 +2.7
comp=E,3.3nm,0.6s,baz=103,slow=9.1,SNR=3.0
BOSA LR LR 23 53 06.7
comp=E,95nm,18.4s,MS4.1,baz=134,slow=32
BOSA Boshof 76.09 241 P **P** **23 24 18.9 +2.2**
BOSA *PP pP 23 24 32.8 +2.8
TIXI Tiksi 76.68 9 *e*P **P** **23 24 16.9 -2.3**
TIXI pmax pmax
comp=Z,14nm,0.6s,mb5.1
TIXI MLR MLR
comp=Z,135nm,16.0s,MS4.3
TIXI Tiksi 76.68 9⇑*i*P **P** **23 24 17.0 -2.2**
SYO Syowa Base 77.26 199⇓*e*pP pP 23 24 34.6 -1.2
OBN Obninsk 78.19 328*α i*P **P** **23 24 27.6 -0.3**
OBN pP 23 24 36.0 -5.3
OBN *e*PP pP 23 24 42.8 +1.5
OBN pmax pmax
comp=Z,23nm,0.7s,mb5.2
OBN Obninsk 78.19 328 *e*P **P** **23 24 27.8 -0.1**
AKASG Malin Array Be 80.91 322 P **P** **23 24 42.2 -0.6**
comp=Z,1.0nm,0.4s,mb4.1,baz=86,slow=4.0,SNR=10
VRI Vrincioaia 81.29 317⇓*i*P **P** **23 24 45.9 +1.0**
VRI Vrincioaia 81.29 317 ⇓P **P** **23 24 45.9 +1.0**
MLR Muntele Rosu 81.74 317⇓*i*P **P** **23 24 48.0 +0.7**
MLR Muntele Rosu 81.74 317 ⇓P **P** **23 24 48.0 +0.6**
BURAR Bucovina Array 82.70 319⇑*i*P **P** **23 24 53.4 +1.1**
BURAR Bucovina Array 82.70 319 ⇑P **P** **23 24 53.4 +1.1**
BUR08 Bucovina Ar. S 82.71 319 *e*P **P** **23 24 53.1 +0.8**
JOF Joensuu 83.57 334 *e*p **P** **23 24 55.3 -1.1**
comp=Z,10nm,0.7s,mb5.1
JOF Joensuu 83.57 334 *e*P **P** **23 24 55.3 -1.1**
JOF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
DRGR 84.21 317⇓*i*P **P** **23 25 00.9 +0.8**
DRGR 84.21 317 ⇓P **P** **23 25 00.9 +0.8**
KWP Kalwaria 84.74 320 *e*P **P** **23 25 03.1 +0.4**
KWP Kalwaria 84.74 320⇓*i*P **P** **23 25 03.0 +0.3**
KWP Kalwaria 84.74 320 *e*P **P** **23 25 03.1 +0.4**
BZS Buzias 84.75 316⇑*i*P **P** **23 25 01.9 -0.9**
BZS Buzias 84.75 316 ⇑P **P** **23 25 01.9 -1.0**
KOLS Kolonicke sedl 84.89 320 *e*P **P** **23 25 04.2 +0.8**
KOLS *e*pP pP 23 25 09.5 -7.4
SUW Suwalki 85.30 325 *e*P **P** **23 25 05.6 +0.2**
SUW Suwalki 85.30 325 *e*P **P** **23 25 05.6 +0.2**
CRVS Cervenica-Dubn 85.41 319 *e*P **P** **23 25 06.4 +0.3**
KAF Kangasniemi 85.55 333 *e*p **P** **23 25 05.3 -1.1**
comp=Z,16nm,0.7s,mb5.3,baz=100,slow=4.5
KAF Kangasniemi 85.55 333 *e*P **P** **23 25 05.3 -1.1**
KAF pmax pmax
comp=Z,16nm,0.7s,mb5.4
STHS Stebnicka Huta 85.64 320 *e*P **P** **23 25 07.9 +0.7**
STHS pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
STHS Stebnicka Huta 85.64 320 *e*P **P** **23 25 07.9 +0.7**
comp=Z,5.8nm,0.7s,mb4.9
STHS *e*PP PP 23 28 28.6 +2.1
KECS Kecovo 85.98 319 *e*P **P** **23 25 07.7 -1.2**
KECS *e* pP 23 25 23.5 +1.1
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
KECS Kecovo 85.98 319 *e*P **P** **23 25 07.7 -1.2**
comp=Z,2.1nm,0.7s,mb4.5
KECS *e* pP 23 25 23.5 +1.1
PKSM Moragy 86.89 316⇑*i*P **P** **23 25 13.7 +0.3**
PKSM Moragy 86.89 316 ⇑P **P** **23 25 13.7 +0.3**
LIKS Likavka 86.97 319 *e*P **P** **23 25 12.1 -1.6**
VYHS Vyhne 87.06 319 *e*P **P** **23 25 14.2 0.0**
KEV Kevo 87.32 340 *e*p **P** **23 25 12.4 -2.6**
comp=Z,13nm,1.0s,mb5.1
KEV Kevo 87.32 340 *e*P **P** **23 25 12.4 -2.6**
KEV pmax pmax
comp=Z,13nm,1.0s,mb5.1
OKC Ostrava-Krasne 87.69 320 *e*P **P** **23 25 17.7 +0.5**
OKC *ex* x 23 25 32.2
ARCES ARCESS Array B 87.77 340 P **P** **23 25 16.8 -0.4**
comp=Z,8.8nm,0.8s,mb5.1,baz=105,slow=5.4,SNR=27
ARCES LR LR 00 05 35.3
comp=Z,75nm,20.6s,MS4.1,baz=131,slow=36
MORC Moravsky Berou 88.07 320⇓*i*P **P** **23 25 19.9 +0.9**
MORC Moravsky Berou 88.07 320 ⇓P **P** **23 25 19.9 +0.9**
MODS Modra-Piesok 88.08 318 *e*PP PP 23 28 44.2 -2.1
ZST Bratislava 88.17 318 *e*P **P** **23 25 20.1 +0.6**
ZST pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
ZST Bratislava 88.17 318 *e*P **P** **23 25 20.1 +0.6**
comp=Z,4.5nm,0.8s,mb4.8
GKP Gorka Klasztor 88.68 323 *e*P **P** **23 25 22.3 +0.5**
GKP Gorka Klasztor 88.68 323 *e*P **P** **23 25 22.3 +0.5**
DPC Dobruska-Polom 88.92 320 *e*P **P** **23 25 24.0 +1.0**
DPC *ex* x 23 25 38.4
KSP Ksiaz 88.99 321 *e*P **P** **23 25 24.9 +1.6**
UPC Upice 89.13 320 *e*P **P** **23 25 24.4 +0.4**
ARSA Arzberg 89.14 317⇑*i*P **P** **23 25 24.6 +0.5**
comp=Z,6.2nm,0.9s,mb4.9
TREC Trest 89.35 319 *e*P **P** **23 25 25.2 +0.1**
SOKA Soboth 89.42 317⇑*i*P **P** **23 25 26.1 +0.7**
comp=Z,7.5nm,0.8s,mb5.1
SOKA Soboth 89.42 317⇑*i*PcP **P** **23 25 26.1 +0.7**
comp=Z,7.5nm,0.8s,mb5.1
PRU Pruhonice 90.02 320 *e*P **P** **23 25 28.7 +0.5**
PRU *e*pP pP 23 25 43.1 +1.3
PVCC Panska Ves 90.05 320 *e*P **P** **23 25 29.1 +0.8**
BRG Berggiesshubel 90.47 321 *e*P **P** **23 25 31.0 +0.7**
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
BRG Berggiesshubel 90.47 321 *e*P **P** **23 25 30.7 +0.4**
BRG Berggiesshubel 90.47 321 *e*P **P** **23 25 31.0 +0.8**
comp=Z,5.0nm,0.8s,mb4.9
BRG *e* 23 25 50.9
comp=Z,4.8nm,1.0s
GEC2 GERESS Array S 90.49 319 *e*P **P** **23 25 31.0 +0.6**
GEC2 pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
GEC2 GERESS Array S 90.49 319 *e*P **P** **23 25 31.0 +0.6**
comp=Z,8.0nm,1.1s,mb5.0
GEC2 GERESS Array S 90.49 319 *e*P **P** **23 25 29.4 -1.0**
GEC2 *e* pP 23 25 44.8 +0.8
GERES GERESS Array B 90.49 319 P **P** **23 25 31.2 +0.8**
comp=Z,2.9nm,0.7s,mb4.7,baz=83,slow=4.6,SNR=28
GERES pP pP 23 25 45.8 +1.8
comp=Z,1.5nm,0.7s,baz=93,slow=5.3,SNR=5.4
KHC Kasperske Hory 90.59 319*d i*P **P** **23 25 30.6 -0.2**
KHC Kasperske Hory 90.59 319 *e*P **P** **23 25 30.5 -0.3**
WET Wettzell 91.05 319 *e*P **P** **23 25 33.3 +0.3**
WET pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
WET Wettzell 91.05 319 *e*P **P** **23 25 33.3 +0.3**
comp=Z,7.0nm,0.9s,mb5.0
CLL Collm 91.09 321 *i* P **P** **23 25 33.1 0.0**
CLL *e**PP pP 23 25 44.0 -2.7
CLL pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
CLL Collm 91.09 321 *e*P **P** **23 25 33.1 0.0**
comp=Z,6.0nm,1.2s,mb4.8
CLL Collm 91.09 321 *i* P **P** **23 25 33.1 0.0**
comp=Z,6.0nm,1.1s,mb4.8
CLL *e*pP pP 23 25 44.0 -2.7
ROTZ Rotzenmuhle 91.52 320 *e*P **P** **23 25 35.8 +0.7**
comp=Z,4.0nm,0.9s,mb4.8
MANZ Manzenberg 91.59 320 *e*P **P** **23 25 36.4 +0.9**
comp=Z,9.0nm,1.1s,mb5.0
MOX Moxa 91.94 320 *e*P **P** **23 25 37.4 +0.3**
comp=Z,4.0nm,1.1s,mb4.7
GRA2 Grafenberg Arr 92.06 319 *e*P **P** **23 25 37.9 +0.2**
comp=Z,7.0nm,1.2s,mb4.9
MOTA Moosalm 92.15 317⇑*i*P **P** **23 25 37.9 -0.3**
comp=Z,4.5nm,1.0s,mb4.8
RETA Reutte 92.38 317⇑*i*P **P** **23 25 39.3 +0.1**
comp=Z,8.0nm,0.8s,mb5.1
NOA NORSAR Array B 92.52 331 LR LR 00 13 47.3
comp=Z,37nm,18.1s,MS3.9,baz=270,slow=40
BFO Black Forest 94.03 318 *e*P **P** **23 25 47.0 +0.2**
BFO pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
BFO Black Forest 94.03 318 *e*P **P** **23 25 47.0 +0.2**
comp=Z,4.0nm,0.9s,mb4.8
NVAR Mina Array Bea 129.71 40 PKhKP 23 31 31.4
comp=Z,12nm,0.3s,baz=226,slow=20,SNR=67
NVAR Mina Array Bea 129.71 40 PKP PKPdf 23 31 31.4 -6.6
ULM Lac du Bonnet 130.79 14 PKP PKPdf 23 31 39.0 -0.8
comp=Z,4.9nm,0.6s,baz=326,slow=2.1,SNR=5.8
ULM Lac du Bonnet 130.79 14 PKP PKPdf 23 31 39.0 -0.8
PDAR Pinedale Array 131.93 30 SKPbc SKPbc 23 35 01.2 -3.4
comp=Z,0.5nm,0.6s,baz=194,slow=1.2,SNR=4.7
RWWY Rawlins 133.90 29 *e*PKPdf PKPdf 23 31 41.3 -4.6
PHWY Pilot Hill 135.04 28 *e*PKP PKPdf 23 31 42.6 -5.4
ANMO Albuquerque 139.23 36⇑*i*PKIKP PKPdf 23 31 57.4 +1.4
WMOK Wichita Mounta 143.44 28 *e*PKIKP PKPdf 23 31 58.7 -4.8
CFAA Coronel Fontan 144.10 196 PKP PKPdf 23 32 03.7 -1.1
comp=Z,0.3nm,0.5s,baz=165,slow=4.7,SNR=6.5
CPUP Villa Florida 144.11 214 PKP PKPdf 23 32 04.8 -0.2

comp=Z,0.8nm,0.4s,baz=97,slow=5.5,SNR=6.6
BDFB Brasilia 144.21 238 PKP PKPdf 23 32 04.8 -0.5
comp=Z,2.4nm,0.4s,baz=97,slow=5.4,SNR=4.9
TXAR Lajitas Array 144.84 39 PKP PKPdf 23 32 04.9 -1.2
comp=Z,16nm,0.6s,baz=283,slow=1.2,SNR=161
TXAR pPKP pPKPdf 23 32 19.4 -0.8
comp=Z,12nm,0.6s,baz=334,slow=0.4,SNR=12
TXAR SKPbc SKPbc 23 35 40.3 -1.7
comp=Z,0.9nm,0.6s,baz=60,slow=0.5,SNR=5.0
TXAR Lajitas Array 144.84 39 PKIKP PKPdf 23 32 04.9 -1.2
TXAR 23 32 19.4
URVA University of 145.58 358 *e*PKPdf PKPdf 23 32 06.0 -1.1
MIAR Mount Ida 145.80 22 *e*PKIKP PKPdf 23 32 07.2 -0.4
MIAR *e* 23 32 19.4
UALR University of 146.03 20 *e*PKPdf PKPdf 23 32 08.1 +0.1
WVT Waverly 146.04 13 *e*PKPdf PKPdf 23 32 07.2 -0.8
WVT *e* 23 32 21.4
WVT *e*SKPdf SKPdf 23 35 39.0 +0.3
JCT Junction City 146.31 34 *e*PKP2 PKPbc 23 32 08.4 -1.4
TZTN Tazewell 146.36 7 *e*PKPdf PKPdf 23 32 08.0 -0.5
OXF Oxford 147.18 16 *e*PKP2 PKPbc 23 32 10.6 -1.6
TKL Tuckaleechee C 147.21 7 PKPbc PKPbc 23 32 10.8 -1.5
comp=Z,8.1nm,0.8s,baz=11,slow=12,SNR=13
TKL Tuckaleechee C 147.21 7 *e*PKPdf PKPdf 23 32 10.2 +0.2
TKL PKPbc PKPbc 23 32 10.8 -1.5
SWET Sewanee 147.31 11 *e*PKPdf PKPdf 23 32 10.3 +0.2
SWET *e* 23 32 24.4
CPCT Cooper Cave 147.31 8 *e*PKPdf PKPdf 23 32 10.4 +0.3
HKT Hockley 148.79 29 *e*PKIKP PKPdf 23 32 13.9 +1.2
HKT *e* 23 32 16.5
JSC Jenkinsville 148.81 4 *e*PKIKP PKPdf 23 32 13.0 +0.3
LRAL Lakeview Retre 149.19 13 *e*PKPdf PKPdf 23 32 14.3 +1.0
GOGA Godfrey 149.46 7 *e*PKIKP PKPdf 23 32 15.4 +1.7
COW Cow Castle Cre 149.74 3 *e*PKPdf PKPdf 23 32 12.9 -1.2
LPAZ La Paz 158.04 209 PKP PKPdf 23 32 28.4 +2.1
comp=Z,1.3nm,0.9s,baz=160,slow=1.6,SNR=3.5
LPAZ La Paz 158.04 209 PKP PKPdf 23 32 28.4 +2.1

ISCJB ***13*** *23:20:08.1±1.0, 1351S±008×762W±0.1, h69km±10km, mb3.8/10, Error ellipse: s-maj=23.6km s-min=6.2km az=147.1*
IDC ***13*** *23:20:08.3±0.7, 1348S×7592W, h42km±5km, mb3.5/7, mb1 3.8/10, mb1mx3.7/20, mbtmp3.6/10, ML4.1/3, MS3.2/4, Ms1 3.3/4, ms1mx2.9/28, Error ellipse: s-maj=35.3km s-min=7.3km az=56.0*
NEIC ***13*** *23:20:09.6±1.7, 1349S×76.16W, h62km±16km, mb4.5/3, Error ellipse: s-maj=30.3km s-min=12.9km az=56.0*
NEIC Felt [III] at Chincha.
ISC 13 23:20:09.8±0.9, 1350S±008×762W±01, h68km±9km, h44km±3.1km; pP-P, n26, σ1§36/28, mb3.8/10, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**1.62**	**338**	P	**Pn**	**23 20 33.9**	**-2.5**
	51nm,0.3s,baz=160,slow=12,SNR=52						
NNA				S	**Sn**	**23 20 57.1**	**+0.7**
	315nm,0.3s,baz=196,slow=18,SNR=14						
NNA				LR	LR	23 21 04.8	
	comp=Z,586nm,19.9s,baz=143,slow=33						
ARE	**Arequipa**	**5.43**	**123**	*e*P	**Pn**	**23 21 30.0**	**+1.8**
ARE				*e*S		23 23 41.0	
ATAH	**Atahualpa**	**6.81**	**341**	P	**Pn**	**23 21 47.1**	**+0.1**
	2.8nm,0.3s,baz=184,slow=2.9,SNR=12						
ATAH				S	**Sn**	**23 23 02.5**	**-0.6**
	2.1nm,0.3s,baz=87,slow=18,SNR=2.7						
ATAH				LR	LR	23 24 18.0	
	comp=Z,118nm,21.9s,baz=352,slow=37						
LPAZ	**La Paz**	**8.29**	**111**	P	**Pn**	**23 22 09.2**	**+1.9**
	2.0nm,0.3s,baz=286,slow=8.7,SNR=38						
LPAZ				LR	LR	23 25 46.6	
	comp=Z,138nm,19.6s,baz=144,slow=42						
LVC	**Limon Verde**	**11.41**	**144**	P	**Pn**	**23 22 48.6**	**-1.3**
	0.9nm,0.3s,baz=303,slow=11,SNR=7.6						
LVC				S	**Sn**	**23 24 57.1**	**+1.2**
	1.4nm,0.3s,baz=100,slow=20,SNR=7.6						
LVC				LR	LR	23 27 09.1	
	comp=Z,84nm,20.6s,baz=281,slow=37						
LVC	**Limon Verde**	**11.41**	**144**	P	**Pn**	**23 22 48.6**	**-1.3**
LVC				S	**Sn**	**23 24 57.1**	**+1.2**
LVC				LR	LR	23 27 09.1	
SIV	**San Ignacio**	**14.85**	**101**	P	**Pn**	**23 23 35.0**	**-1.1**
	0.4nm,0.3s,baz=282,slow=12,SNR=7.7						
CFAA	**Coronel Fontan**	**19.45**	**159**	P	**Pn**	**23 24 31.5**	**-1.2**
	0.1nm,0.3s,baz=334,slow=9.9,SNR=8.7						
CFAA	**Coronel Fontan**	**19.45**	**159**	P	**Pn**	**23 24 31.5**	**-1.2**
PLCA	**Paso Flores**	**27.58**	**171**	P	**P**	**23 25 49.9**	**-0.5**
	1.3nm,0.7s,mb3.6,baz=356,slow=10,SNR=3.7						
PLCA	**Paso Flores**	**27.58**	**171**	P	**P**	**23 25 49.9**	**-0.5**
CPD	**Cerro la Pandu**	**32.94**	**18**	P	**P**	**23 26 35.9**	**-2.1**
TXAR	**Lajitas Array**	**50.16**	**328**	P	**P**	**23 29 01.1**	**+2.6**
	0.2nm,0.5s,mb3.3,baz=144,slow=11,SNR=2.2						
TXAR				pP	pP	23 29 12.7	-3.2
	1.1nm,0.8s,baz=151,slow=7.8,SNR=8.2						
ANMO	**Albuquerque**	**56.08**	**330**	*e*P	**P**	**23 29 44.6**	**+2.6**
	7.4nm,1.0s,mb4.7						
MSU	**Marysvale**	**61.72**	**328**	P	**P**	**23 30 21.1**	**+0.1**
PDAR	**Pinedale Array**	**63.80**	**333**	P	**P**	**23 30 38.7**	**+3.9**
	0.1nm,0.3s,mb3.1,baz=144,slow=2.0,SNR=2.2						
PDAR				pP	pP	23 30 48.8	-4.0
	0.9nm,1.0s,baz=126,slow=7.7,SNR=3.6						
NVAR	**Mina Array Bea**	**64.95**	**324**	P	**P**	**23 30 46.5**	**+4.1**
	0.3nm,0.5s,mb3.4,baz=140,slow=6.1,SNR=2.2						
NVAR				pP	pP	23 30 57.5	-2.9
	1.3nm,0.7s,baz=142,slow=6.7,SNR=5.2						
NVAR	**Mina Array Bea**	**64.95**	**324**	P	**P**	**23 30 46.5**	**+4.1**
NVAR				pP	pP	23 30 57.5	-2.9
HLID	**Hailey**	**66.65**	**331**	*e*P	**P**	**23 30 53.0**	**-0.2**
	1.3nm,0.6s,mb3.9						
SNAA	**Sanae**	**72.06**	**161**	*e*P	**P**	**23 31 24.5**	**-1.7**
	12nm,1.6s,mb4.5						
SNAA				*e*	pP	23 31 38.8	-5.7
DBIC	**Dimbokro**	**73.61**	**79**	P	**P**	**23 31 35.9**	**-0.6**
	2.0nm,0.8s,mb3.9,baz=243,slow=6.8,SNR=4.2						
YKA	**Yellowknife Ar**	**81.46**	**343**	P	**P**	**23 32 19.8**	**+0.7**
	0.5nm,0.7s,mb3.5,baz=144,slow=5.6,SNR=3.6						
YKA				pP	pP	23 32 33.5	-4.2
	0.6nm,0.7s,baz=137,slow=6.3,SNR=4.0						
YKA	**Yellowknife Ar**	**81.46**	**343**	P	**P**	**23 32 19.8**	**+0.7**
YKA				pP	pP	23 32 33.5	-4.2
TORD	**Torodi Ar. Bea**	**81.60**	**74**	P	**P**	**23 32 20.6**	**-0.4**
	2.5nm,0.8s,mb4.1,baz=260,slow=5.3,SNR=11						
TORD				pP	pP	23 32 34.4	-5.2
	1.0nm,0.7s,baz=268,slow=4.5,SNR=3.1						
TORD				LR	LR	00 05 13.6	
	comp=Z,56nm,20.0s,baz=350,slow=33						
ULN	**Ulaanbaatar**	**145.63**	**356**	*e*PKPdf	PKPdf	23 39 39.4	-1.0
SONM	**Songino Array**	**145.70**	**357**	PKPbc	PKPbc	23 39 42.1	+1.2
	1.1nm,0.7s,baz=352,slow=2.8,SNR=6.4						
SONM				pPKPbc	pPKPbc	23 39 55.2	-5.1
	3.1nm,0.7s,baz=18,slow=2.6,SNR=13						

IDC ***13*** *23:24:20.5±1.0, 1292N×93.18E, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.8/23, mbtmp3.8/11, ML4.5/1, MS3.6/1, Ms1 3.6/1, ms1mx2.5/34, Error ellipse: s-maj=35.9km s-min=18.8km az=58.0*
ISCJB ***13*** *23:24:24.7±2.1, 1303N±009×9324E±006, h41km±19km, mb3.8/12, Error ellipse: s-maj=16.1km s-min=8.8km az=23.6*
NEIC ***13*** *23:24:25.9±0.5, 1296N×93.14E, h35km, mb4.2/2, Error ellipse: s-maj=10.9km s-min=8.4km az=70.0*
ISC 13 23:24:26.5±1.8, 1301N±010×9317E±006, h40km±17km, n32, σ0§76/34, mb3.8/12, 1C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**7.76**	**45**	*e*Pn	**Pn**	**23 26 16.8**	**-0.1**
CM31				*e*Sn	**Sn**	**23 27 44.9**	**+1.3**
CMAR	**Chiang Mai Arr**	**7.76**	**45**	Pn	**Pn**	**23 26 17.6**	**+0.7**
	1.6nm,0.3s,baz=234,slow=16,SNR=57						
CHG	**Chiang Mai**	**8.01**	**43**	⇑P	**Pn**	**23 26 23.9**	**+3.6**
	20nm,0.8s						
CHTO	**Chiang Mai**	**8.01**	**43**	*e*Pn	**Pn**	**23 26 21.5**	**+1.1**
	20nm,0.8s						
CHTO				*e*Sn	**Sn**	**23 27 47.5**	**-2.2**
NANT	**Nan**	**9.25**	**51**	P	**Pn**	**23 26 42.1**	**+4.7**
ODAN	**Odare**	**14.80**	**339**	*e*P	**Pn**	**23 27 53.2**	**0.0**
	10nm,0.3s						
TAPN	**Taplejung**	**15.15**	**341**	*e*P	**Pn**	**23 27 57.7**	**-0.1**
	6.8nm,0.3s						
RAMN	**Ramite**	**15.17**	**337**	*e*P	**Pn**	**23 27 57.1**	**-0.9**
	11nm,0.2s						
JIRN	**Jiri**	**15.97**	**337**	*e*P	**Pn**	**23 28 08.5**	**+0.2**
	6.3nm,0.3s						
PKI	**Pulchoki**	**16.20**	**335**	*e*P	**Pn**	**23 28 11.3**	**0.0**
	12nm,0.4s						
PKIN	**Phulchoki**	**16.21**	**335**	*e*P	**Pn**	**23 28 11.6**	**+0.2**
	16nm,0.4s						
GUN	**Gumba**	**16.31**	**336**	*e*P	**Pn**	**23 28 11.6**	**-1.1**
	7.6nm,0.4s						
DMN	**Daman**	**16.36**	**334**	*e*P	**Pn**	**23 28 13.0**	**-0.4**
	9.4nm,0.4s						
KKN	**Kakani**	**16.45**	**335**	*e*P	**Pn**	**23 28 13.8**	**-0.6**
GKN	**Gorkha**	**16.91**	**333**	*e*P	**Pn**	**23 28 20.6**	**+0.4**
	14nm,0.3s						
KOLN	**Koldanda**	**17.19**	**330**	*e*P	**Pn**	**23 28 24.8**	**+1.1**
	8.2nm,0.3s						
DANN	**Dangsing**	**17.60**	**332**	*e*P	**Pn**	**23 28 28.5**	**-0.3**
	6.8nm,0.3s						
MKAR	**Makanchi Array**	**34.90**	**347**	P	**P**	**23 31 14.9**	**+0.8**
	1.0nm,0.6s,mb3.9,baz=163,slow=8.1,SNR=8.9						
SONM	**Songino Array**	**36.43**	**15**	P	**P**	**23 31 26.6**	**-0.7**
	0.2nm,0.4s,mb3.4,baz=217,slow=12,SNR=3.6						
KURK	**Kurchatov**	**39.43**	**345**	P	**P**	**23 31 52.0**	**-0.5**
	1.4nm,0.7s,mb3.8,baz=162,slow=7.9,SNR=9.6						
ZALV	**Zalesovo Beam**	**41.37**	**353**	P	**P**	**23 32 09.0**	**+0.5**
	0.7nm,0.3s,mb3.7,baz=180,slow=8.9,SNR=6.1						
ZALV	**Zalesovo Beam**	**41.37**	**353**	P	**P**	**23 32 09.0**	**+0.5**
BVAR	**Borovoye Array**	**43.85**	**340**	P	**P**	**23 32 28.8**	**+0.1**
	0.4nm,0.4s,mb3.5,baz=146,slow=8.8,SNR=4.4						
FITZ	**Fitzroy Crossi**	**44.52**	**133**	*e*P	**P**	**23 32 34.7**	**+0.3**
	1.6nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**52.09**	**128**	P	**P**	**23 33 32.1**	**-0.8**
	0.3nm,0.4s,mb3.6,baz=306,slow=9.8,SNR=9.3						
WRAB	**Tennant Creek**	**52.09**	**128**	*e*P	**P**	**23 33 32.6**	**-0.4**
	0.7nm,0.3s,mb4.1						
WB2	**Warramunga Arr**	**52.10**	**128**	*e*P	**P**	**23 33 33.4**	**+0.4**
ASAR	**Alice Springs**	**53.99**	**132**	P	**P**	**23 33 46.0**	**-0.9**
	0.3nm,0.4s,mb3.6,baz=310,slow=7.1,SNR=6.0						
ARCES	**ARCESS Array B**	**70.14**	**340**	P	**P**	**23 35 34.3**	**-0.2**
	3.9nm,0.9s,mb4.3,baz=76,slow=6.6,SNR=4.4						
GERES	**GERESS Array B**	**73.40**	**317**	P	**P**	**23 35 55.3**	**+0.8**
	0.6nm,0.5s,mb3.8,baz=77,slow=7.0,SNR=6.3						
TORD	**Torodi Ar. Bea**	**88.50**	**283**	P	**P**	**23 37 16.7**	**+1.1**
	0.9nm,0.9s,mb4.1,baz=75,slow=4.2,SNR=4.5						
TORD	**Torodi Ar. Bea**	**88.50**	**283**	P	**P**	**23 37 16.7**	**+1.1**

IDC ***13*** *23:39:16.8±1.4, 649S×13070E, h0km, mb4.4/3, mb1 4.7/7, mb1mx4.3/15, mbtmp4.6/7, ML4.8/4, Error ellipse: s-maj=46.1km s-min=20.9km az=70.0*
NEIC ***13*** *23:39:25.9±2.1, 687S×13055E, h57km±21km, mb4.1/3, Error ellipse: s-maj=20.0km s-min=11.7km az=204.0*
ISCJB ***13*** *23:39:32.9±0.7, 753S±006×13011E±005, h100km, mb4.3/4, Error ellipse: s-maj=9.6km s-min=5.8km az=41.5*
DJA ***13*** *23:39:32, 705S×13006E, h119km, MLv4.6/5*
ISC 13 23:39:32.3±1.1, 727S±007×13015E±007, h96km±17km, n22, σ1§24/28, mb4.3/4, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**4.05**	**331**	P	**Pn**	**23 40 30.9**	**-1.3**
	0.0nm,0.0s						
BATI	**Baumata**	**7.05**	**245**	P	**Pn**	**23 41 14.4**	**+1.5**
	0.0nm,0.0s						
BATI	**Baumata**	**7.05**	**245**	Pn	**Pn**	**23 41 14.2**	**+1.3**
	46nm,0.3s,baz=82,slow=3.2,SNR=20						
BATI				Sn	**Sn**	**23 42 29.8**	**-1.7**
	33nm,0.3s,baz=73,slow=20,SNR=14						
KDI	**Kendari**	**8.19**	**293**	P	**Pn**	**23 41 30.3**	**+1.9**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**11.63**	**202**	*e*P	**Pn**	**23 42 13.7**	**-1.6**
	22nm,0.6s						
FITZ				*e*S	**Sn**	**23 44 15.9**	**-7.3**
FITZ	**Fitzroy Crossi**	**11.63**	**202**	Pn	**Pn**	**23 42 14.9**	**-0.4**
	3.0nm,0.3s,baz=33,slow=12,SNR=73						
FITZ				Sn	**Sn**	**23 44 17.6**	**-5.6**
	6.5nm,0.3s,baz=215,slow=17,SNR=12						
PCI	**Palu**	**12.07**	**301**	P	**Pn**	**23 42 24.0**	**+2.8**
	0.0nm,0.0s						
WRAB	**Tennant Creek**	**13.23**	**162**	*e*Pn	**Pn**	**23 42 36.4**	**-0.1**
	12nm,0.5s						
WRAB				*e*Sn	**Sn**	**23 44 54.9**	**-7.1**
WRA	**Warramunga Arr**	**13.24**	**163**	Pn	**Pn**	**23 42 36.1**	**-0.5**
	3.7nm,0.3s,baz=349,slow=14,SNR=79						
WRA				Sn	**Sn**	**23 44 56.3**	**-5.9**
	9.7nm,0.3s,baz=344,slow=23,SNR=12						
WB2	**Warramunga Arr**	**13.24**	**162**	*e*P	**Pn**	**23 42 36.2**	**-0.4**
WB2				*e*S	**Sn**	**23 44 56.5**	**-5.8**
COEN	**Coen**	**14.42**	**119**	*e*Pn	**Pn**	**23 42 50.6**	**-1.3**
	6.2nm,0.6s						
BBKI	**Banjar Baru**	**15.70**	**283**	P	**Pn**	**23 43 09.6**	**+1.4**
	0.0nm,0.0s						
ASAR	**Alice Springs**	**16.70**	**168**	P	**Pn**	**23 43 21.9**	**+1.4**
	1.7nm,0.3s,baz=359,slow=14,SNR=33						
ASAR				S	**S**	**23 46 19.1**	**-12**
	0.8nm,0.3s,baz=8.2,slow=11,SNR=4.6						
MBWA	**Marble Bar**	**17.09**	**215**	*e*Pn	**Pn**	**23 43 25.6**	**+0.3**
	5.4nm,0.5s						
MBWA				*e*Sn	Sn	23 46 13.1	-22
CTAO	**Charters Tower**	**20.15**	**131**	*e*P	**P**	**23 44 00.5**	**+1.4**
	7.9nm,1.1s						
STKA	**Stephens Creek**	**26.71**	**158**	P	**P**	**23 45 02.7**	**0.0**
	2.7nm,0.7s,mb3.9,baz=97,slow=21,SNR=2.9						
STKA	**Stephens Creek**	**26.71**	**158**	P	**P**	**23 45 02.7**	**0.0**
CMAR	**Chiang Mai Arr**	**40.02**	**310**	P	**P**	**23 46 52.9**	**-5.3**
	3.4nm,0.6s,mb4.3,baz=138,slow=7.1,SNR=12						
CHTO	**Chiang Mai**	**40.23**	**311**	*e*P	**P**	**23 46 55.4**	**-4.5**
	4.8nm,0.6s,mb4.5						
RAO	**Raoul Island**	**53.44**	**121**	P	**P**	**23 48 43.5**	**+0.8**
MKAR	**Makanchi Array**	**68.53**	**327**	P	**P**	**23 50 19.9**	**-4.6**
	5.0nm,0.5s,mb4.7,baz=116,slow=8.6,SNR=66						
TORD	**Torodi Ar. Bea**	**129.01**	**281**	PKP	PKPdf	23 58 26.6	-3.5
	0.7nm,0.6s,baz=61,slow=2.4,SNR=8.3						

ISCJB ***13*** *23:41:11.2±0.3, 3720N±001×539W±001, h2km±2km, Error ellipse: s-maj=2.5km s-min=2.0km az=6.4*
MDD ***13*** *23:41:13.8±0.2, 3710N×538W, h6km±3km, mbLg2.7/36, Error ellipse: s-maj=2.3km s-min=1.8km az=164.0, PRIMO MDD EMS: II INTENSIDAD MIMA.*
SFS ***13*** *23:41:13.0, 3710N×537W, h0km, ML2.5*
LDG ***13*** *23:41:13.8±0.2, 3705N×538W, h5km, Ml3.2/3, Error ellipse: s-maj=3.1km s-min=2.5km az=19.0*
IGIL ***13*** *23:41:13.1, 3710N×537W, h5km, ML3.0*
INMG ***13*** *23:41:13.1±1.4, 3700N×528W, h20km±3km, ML2.9, Error ellipse: s-maj=4.6km s-min=2.5km az=139.0*
CSEM ***13*** *23:41:13.5±0.1, 3706N×540W, h2km, ML3.5/18, Error ellipse: s-maj=1.3km s-min=0.9km az=178.0*
NEIC ***13*** *23:41:14.0, 3710N×537W, h5km, MN2.5(MDD), After MDD.*
ISC 13 23:41:12.8±0.2, 3715N±002×537W±001, h10km±2km, n157, σ1§15/286, 2C-3D, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIJA	**Lijar**	**0.25**	**186**	⇓P	**Pg**	**23 41 16.1**	**-1.7**
LIJA	**Lijar**	**0.25**	**186**	*i* P	**Pg**	**23 41 16.1**	**-1.7**
ESPR	**Espera**	**0.48**	**234**	Pg	**Pg**	**23 41 22.1**	**-0.1**
	15nm,0.1s,SNR=84						
ESPR				Lg		23 41 27.0	
	274nm,0.4s						
ESPR	**Espera**	**0.48**	**234**	Pg	**Pg**	**23 41 22.2**	**+0.1**
	15nm,0.1s,SNR=84						
ESPR				Lg		23 41 29.5	
	177nm,0.3s						
ESPR	**Espera**	**0.48**	**234**	Pg	**Pg**	**23 41 22.2**	**+0.1**
ESPR				Lg		23 41 29.5	
GIBL	**Gibalbin**	**0.57**	**236**	P	**Pg**	**23 41 24.3**	**+0.4**
GIBL				S	**Sg**	**23 41 34.1**	**+2.7**
GIBL	**Gibalbin**	**0.57**	**236**	*e*P	**Pg**	**23 41 24.3**	**+0.4**
REAL	**Reales**	**0.68**	**169**	P	**Pg**	**23 41 25.1**	**-0.9**
REAL				S	**Sg**	**23 41 34.4**	**-0.4**
REAL	**Reales**	**0.68**	**169**	*e*P	**Pg**	**23 41 25.1**	**-0.9**
EJIF	**Jimena Fronter**	**0.70**	**186**	⇑Pg	**Pg**	**23 41 24.8**	**-1.6**
	19nm,0.3s,SNR=18						
EJIF				Lg		23 41 36.0	
	123nm,0.4s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.70**	**186**	Pg	**Pg**	**23 41 24.9**	**-1.5**
	31nm,0.6s,SNR=7.9						
EJIF				Lg		23 41 36.2	
	51nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.70**	**186**	Pg	**Pg**	**23 41 24.9**	**-1.5**
EJIF				Lg		23 41 36.2	
EMIJ	**Mijas**	**0.76**	**140**	Pg	**Pg**	**23 41 25.9**	**-1.5**
	21nm,0.3s,SNR=50						
EMIJ				Lg		23 41 37.5	
	207nm,0.4s						
SCRT	**Cerro San Cris**	**0.82**	**231**	P	**Pg**	**23 41 29.9**	**+1.2**
SCRT				S	**Sg**	**23 41 40.4**	**+0.9**
SCRT	**Cerro San Cris**	**0.82**	**231**	*e*P	**Pg**	**23 41 29.9**	**+1.2**
EMAL	**Malaga-Limoner**	**0.85**	**117**	Pg	**Pg**	**23 41 32.7**	**+3.5**
	9.3nm,0.1s,SNR=7.9						
EMAL				Lg		23 41 44.8	
	46nm,0.1s,SNR=7.9						
EMAL	**Malaga-Limoner**	**0.85**	**117**	Pg	**Pg**	**23 41 31.4**	**+2.2**
	SNR=7.9						
EMAL				Lg		23 41 44.7	
	38nm,0.2s,SNR=7.9						
MOMI	**Momias**	**0.87**	**199**	*e*S	**Sg**	**23 41 43.6**	**+2.8**
ECAB	**El Cabril**	**0.92**	**358**	Pg	**Pg**	**23 41 32.4**	**+1.8**
	62nm,0.1s,SNR=197						
ECAB				Lg		23 41 46.4	
	332nm,0.2s,SNR=30						
ECAB	**El Cabril**	**0.92**	**358**	Pg	**Pg**	**23 41 32.4**	**+1.8**
	62nm,0.1s,SNR=197						
ECAB				Lg		23 41 46.3	
	86nm,0.1s,SNR=30						
ECAB	**El Cabril**	**0.92**	**358**	Pg	**Pg**	**23 41 32.4**	**+1.8**
ECAB				Lg		23 41 46.3	
CNIL	**Conil**	**0.95**	**215**	P	**Pg**	**23 41 31.9**	**+0.7**
CNIL				S	**Sg**	**23 41 44.1**	**+0.6**
CNIL	**Conil**	**0.95**	**215**	*e*P	**Pg**	**23 41 31.9**	**+0.8**
CNIL				*e*S	**Sg**	**23 41 44.2**	**+0.7**
SFS	**San Fernando**	**0.96**	**225**	P	**Pg**	**23 41 32.3**	**+1.1**
SFS				S	**Sg**	**23 41 44.6**	**+1.0**
SFS	**San Fernando**	**0.96**	**225**	*e*P	**Pg**	**23 41 32.3**	**+1.1**
SFS				*e*S	**Sg**	**23 41 44.6**	**+0.9**
ELOJ	**Sierra Loja**	**0.98**	**90**	Pg	**Pg**	**23 41 32.3**	**+0.7**
	13nm,0.2s,SNR=33						
ELOJ				Lg		23 41 47.2	
	24nm,0.2s,SNR=13						
ELOJ	**Sierra Loja**	**0.98**	**90**	Pg	**Pg**	**23 41 32.3**	**+0.7**
	5.2nm,0.4s,SNR=33						
ELOJ				Lg		23 41 46.7	
	33nm,0.3s,SNR=13						
ELOJ	**Sierra Loja**	**0.98**	**90**	Pg	**Pg**	**23 41 32.3**	**+0.7**
ELOJ				Lg		23 41 46.7	
EADA	**Adamuz**	**1.20**	**32**	⇑Pg	**Pg**	**23 41 36.3**	**+0.5**
	15nm,0.2s,SNR=18						
EADA				Lg		23 41 53.1	
	103nm,0.1s						
EADA	**Adamuz**	**1.20**	**32**	Pg	**Pg**	**23 41 37.4**	**+1.6**
	15nm,0.2s,SNR=85						
EADA				Lg		23 41 53.4	
	52nm,0.2s						
EADA	**Adamuz**	**1.20**	**32**	Pg	**Pg**	**23 41 37.4**	**+1.7**
EADA				Lg		23 41 53.4	
EMIN	**Mina Concepcio**	**1.20**	**301**	⇓Pg	**Pg**	**23 41 35.5**	**-0.4**
	7.4nm,0.1s,SNR=18						
EMIN				Lg		23 41 53.3	
	142nm,0.3s,SNR=5.0						
EMIN	**Mina Concepcio**	**1.20**	**301**	Pg	**Pg**	**23 41 35.5**	**-0.4**
	39nm,0.2s,SNR=145						
EMIN				Lg		23 41 53.9	
	47nm,0.1s,SNR=5.0						
EMIN	**Mina Concepcio**	**1.20**	**301**	Pg	**Pg**	**23 41 35.5**	**-0.4**
EMIN				Lg		23 41 53.9	
ECEU	**Ceuta**	**1.25**	**180**	Pg	**Pg**	**23 41 35.3**	**-1.5**
	1.9nm,0.1s,SNR=10.0						
ECEU				Lg		23 41 51.5	
	5.5nm,0.2s,SNR=4.0						
ECEU	**Ceuta**	**1.25**	**180**	Pg	**Pg**	**23 41 35.4**	**-1.4**
	2.8nm,0.1s,SNR=10.0						
ERON	**Agron**	**1.26**	**96**	Pg	**Pg**	**23 41 37.0**	**0.0**
	6.8nm,0.2s,SNR=7.9						
ERON				Lg		23 41 54.6	
	21nm,0.3s,SNR=7.9						
ERON	**Agron**	**1.26**	**96**	Pg	**Pg**	**23 41 36.1**	**-0.9**
	6.8nm,0.2s,SNR=7.9						
ERON				Lg		23 41 54.3	
	12nm,0.2s,SNR=7.9						
ERON	**Agron**	**1.26**	**96**	Pg	**Pg**	**23 41 36.1**	**-0.9**
ERON				Lg		23 41 54.3	
ECOG	**Cogollos-Vega**	**1.45**	**84**	Pg	**Pg**	**23 41 39.5**	**-1.2**
	10nm,0.3s,SNR=19						
ECOG				Lg		23 41 58.9	
	38nm,0.3s						
ECOG	**Cogollos-Vega**	**1.45**	**84**	Pg	**Pg**	**23 41 40.0**	**-0.6**
	10nm,0.3s,SNR=19						
ECOG				Lg		23 41 58.8	
	11nm,0.2s						
ECOG	**Cogollos-Vega**	**1.45**	**84**	Pg	**Pg**	**23 41 40.0**	**-0.6**
ECOG				Lg		23 41 58.8	
EQUE	**Quentar**	**1.54**	**87**	Pg	**Pg**	**23 41 41.3**	**-1.1**
	12nm,0.2s,SNR=58						
EQUE				Lg		23 42 04.7	
	101nm,0.4s,SNR=4.7						
EQUE	**Quentar**	**1.54**	**87**	Pg	**Pg**	**23 41 41.3**	**-1

EQES Sn **Sn** **23 42 11.5 +1.2**
EQES Lg 23 42 17.4
EBER Berja 2.00 97 Pn **Pn** **23 41 47.0 +0.2**
1.2nm,0.2s,SNR=6.7
EBER Pg **Pg** **23 41 51.9 +0.6**
8.3nm,0.3s,SNR=7.9
EBER Lg 23 42 19.2
23nm,0.3s,SNR=5.0
EBER Berja 2.00 97 Pn **Pn** **23 41 47.6 +0.9**
6.5nm,0.4s,SNR=6.7
EBER Lg 23 42 18.4
7.6nm,0.3s,SNR=5.0
EBER Berja 2.00 97 Pn **Pn** **23 41 47.6 +0.9**
EBER Lg 23 42 18.4
PBDV Barranco-do-Ve 2.04 273 *e*Pn **Pn** **23 41 46.6 -0.7**
PBDV *e*Sn **Sn** **23 42 12.1 -0.7**
PBDV *e*Sg **Sg** **23 42 18.1 -0.4**
PBDV A 23 42 21.3
53nm,0.5s
PBDV Barranco-do-Ve 2.04 273 *e*Pn **Pn** **23 41 46.6 -0.7**
PBDV *e*Sn **Sn** **23 42 12.1 -0.7**
PBDV *e*Sg **Sg** **23 42 18.1 -0.4**
53nm,0.5s
EBAD Badajoz 2.06 322 ||Pn **Pn** **23 41 47.7 +0.2**
2.9nm,0.1s,SNR=18
EBAD Pg **Pg** **23 41 51.8 -0.5**
4.0nm,0.1s,SNR=9.1
EBAD Sn **Sn** **23 42 14.2 +1.0**
54nm,0.2s,SNR=8.4
EBAD Lg 23 42 20.0
135nm,0.2s,SNR=13
EBAD Badajoz 2.06 322 Pn **Pn** **23 41 47.7 +0.2**
3.6nm,0.3s,SNR=22
EBAD Badajoz 2.06 322 Pg **Pg** **23 41 51.5 -0.8**
10nm,0.2s,SNR=9.1
EBAD Sn **Sn** **23 42 14.2 +1.0**
18nm,0.3s,SNR=8.4
EBAD Lg 23 42 20.2
82nm,0.2s,SNR=13
EBAD Badajoz 2.06 322 Pn **Pn** **23 41 47.8 +0.3**
EBAD Pg **Pg** **23 41 51.5 -0.8**
EBAD Sn **Sn** **23 42 14.2 +1.0**
EBAD Lg 23 42 20.2
PBEJ Beja 2.16 295 *e*Pn **Pn** **23 41 48.6 -0.3**
PBEJ *e*Sn **Sn** **23 42 16.8 +1.0**
PBEJ A 23 42 26.9
29nm,0.2s
PBEJ Beja 2.16 295 *e*Pn **Pn** **23 41 48.6 -0.3**
PBEJ *e*Sn **Sn** **23 42 16.8 +1.0**
29nm,0.2s
EALB Alboran 2.24 122 Pn **Pn** **23 41 50.2 +0.3**
4.1nm,0.3s,SNR=4.0
EALB Pg **Pg** **23 41 54.1 -1.6**
3.6nm,0.1s,SNR=7.9
EALB Sn **Sn** **23 42 17.0 -0.6**
4.4nm,0.1s,SNR=7.9
EALB Lg 23 42 23.0
13nm,0.2s,SNR=7.9
PESTR Estremoz 2.45 315 *e*Pn **Pn** **23 41 53.3 +0.5**
PESTR *e*Sn **Sn** **23 42 23.8 +1.0**
PESTR A 23 42 37.3
46nm,0.5s
PESTR Estremoz 2.45 315 *e*Pn **Pn** **23 41 53.3 +0.5**
PESTR *e*Sn **Sn** **23 42 23.8 +1.0**
46nm,0.5s
EVO Evora 2.50 304 *e*Pn **Pn** **23 41 54.6 +1.0**
EVO Evora 2.50 304 *e*Pg **Pg** **23 42 01.1 +0.3**
EVO *e*Sn **Sn** **23 42 25.0 +0.9**
EVO *e*Sg **Sg** **23 42 34.5 +1.3**
74nm,0.4s
EVO Evora 2.50 304 *e*Pn **Pn** **23 41 53.8 +0.2**
EVO Evora 2.50 304 *e*Pg **Pg** **23 42 01.2 +0.4**
EVO *e*Sn **Sn** **23 42 24.8 +0.7**
EVO Evora 2.50 304 Pn **Pn** **23 41 53.8 +0.2**
EVO Pg **Pg** **23 42 01.2 +0.4**
EVO Sn **Sn** **23 42 24.8 +0.7**
EVO Evora 2.50 304 *e*Pg **Pg** **23 42 01.2 +0.4**
EVO *e*Sn **Sn** **23 42 24.8 +0.7**
ENIJ Nijar 2.54 93 Pn **Pn** **23 41 54.4 +0.4**
1.2nm,0.1s,SNR=7.9
ENIJ Sn **Sn** **23 42 25.6 +0.5**
0.5nm,0.3s,SNR=7.9
ENIJ Nijar 2.54 93 Pn **Pn** **23 41 54.0 -0.1**
SNR=7.9
ENIJ Sn **Sn** **23 42 25.5 +0.5**
SNR=7.9
ENIJ Nijar 2.54 93 Pn **Pn** **23 41 54.0 0.0**
ENIJ Sn **Sn** **23 42 25.5 +0.5**
EVOP Sao Brissos 2.57 303 *e*Pn **Pn** **23 41 54.6 0.0**
EVOP Sao Brissos 2.57 303 *e*Pg **Pg** **23 42 01.1 -1.1**
EVOP *e*Sn **Sn** **23 42 25.0 -0.9**
EVOP *e*Sg **Sg** **23 42 34.5 -1.0**
37nm,0.4s
MORF Marmelete 2.62 274 *e*Pn **Pn** **23 41 54.9 -0.3**
MORF Marmelete 2.62 274 *e*Pg **Pg** **23 42 01.1 -1.9**
MORF *e*Sn **Sn** **23 42 25.8 -1.2**
MORF *e*Sg **Sg** **23 42 36.2 -0.8**
MORF A 23 42 38.4
34nm,0.3s
MORF Marmelete 2.62 274 Pn **Pn** **23 41 54.9 -0.3**
MORF Pg **Pg** **23 42 01.1 -1.9**
MORF Sn **Sn** **23 42 25.8 -1.2**
MORF Lg 23 42 36.2
34nm,0.3s
MORF Marmelete 2.62 274 *e*Pg **Pg** **23 42 01.1 -1.9**
MORF *e*Sn **Sn** **23 42 25.8 -1.2**
MORF *e*Sg **Sg** **23 42 36.2 -0.8**
34nm,0.3s
PTEO Sao Teotonio 2.70 279 *e*Pn **Pn** **23 41 55.9 -0.4**
PTEO Sao Teotonio 2.70 279 *e*Pg **Pg** **23 42 02.7 -1.8**
PTEO *e*Sn **Sn** **23 42 28.2 -0.8**
PTEO *e*Sg **Sg** **23 42 39.3 -0.2**
PTEO A 23 42 50.4
39nm,0.6s
PTEO Sao Teotonio 2.70 279 Pn **Pn** **23 41 55.9 -0.4**
PTEO Pg **Pg** **23 42 02.7 -1.8**
PTEO Sn **Sn** **23 42 28.2 -0.8**
PTEO Lg 23 42 39.3
20nm,0.6s
PTEO Sao Teotonio 2.70 279 *e*Pg **Pg** **23 42 02.7 -1.8**
PTEO *e*Sn **Sn** **23 42 28.2 -0.8**
PTEO *e*Sg **Sg** **23 42 39.3 -0.2**
39nm,0.6s
EVIA Vianos 2.71 56 Pn **Pn** **23 41 56.5 0.0**
1.7nm,0.1s,SNR=7.0
EVIA Pg **Pg** **23 42 04.3 -0.5**
2.3nm,0.2s,SNR=6.2
EVIA Sn **Sn** **23 42 30.3 +0.9**
2.7nm,0.1s,SNR=7.9
EVIA Lg 23 42 40.6
12nm,0.3s,SNR=5.7
EVIA Vianos 2.71 56 Pn **Pn** **23 41 57.1 +0.6**
2.0nm,0.5s,SNR=7.0
EVIA Vianos 2.71 56 Pg **Pg** **23 42 04.3 -0.5**
2.3nm,0.2s,SNR=6.2
EVIA Lg 23 42 41.1
28nm,0.6s,SNR=5.7
EVIA Vianos 2.71 56 Pn **Pn** **23 41 57.1 +0.6**
EVIA Pg **Pg** **23 42 04.3 -0.5**
EVIA Lg 23 42 41.1
MOE Montemor 2.73 301 *e*Pn **Pn** **23 41 56.8 +0.2**
MOE *e*Sn **Sn** **23 42 30.2 +0.6**
ESDC Sonseca Array 2.75 23 Pn **Pn** **23 41 58.9 +1.9**
0.5nm,0.3s,baz=201,slow=12,SNR=8.3
ESDC Pg **Pg** **23 42 05.9 +0.3**
0.6nm,0.3s,baz=202,slow=16,SNR=13
ESDC Sn **Sn** **23 42 30.8 +0.5**
SNR=7.9
ESDC Lg 23 42 42.1
8.3nm,0.4s,baz=207,slow=29,SNR=18
ESDC Sonseca Array 2.75 23 Pn **Pn** **23 41 58.9 +1.9**
0.5nm,0.3s,SNR=8.3
ESDC Sonseca Array 2.75 23 Pg **Pg** **23 42 05.9 +0.3**
0.6nm,0.3s,SNR=13
ESDC Sn **Sn** **23 42 30.8 +0.5**
SNR=7.9
ESDC Lg 23 42 42.1
8.3nm,0.4s,SNR=18
PFVI Vila Bisbo 2.76 271 *e*Pn **Pn** **23 41 56.0 -1.1**
PFVI *e*Sn **Sn** **23 42 28.6 -1.9**
PMRV Marv??o 2.77 326 *e*Pn **Pn** **23 41 57.8 +0.5**
PMRV *e*Sn **Sn** **23 42 30.7 -0.1**
PMRV *e*Sg **Sg** **23 42 41.2 -0.7**
PCBR Castelo Branco 3.15 329 *e*Pn **Pn** **23 42 03.2 +0.7**
PCBR *e*Sn **Sn** **23 42 38.9 -1.2**
PCBR *e*Sg **Sg** **23 42 55.8 +1.8**
PCBR A 23 43 10.5
20nm,0.4s
PCBR Castelo Branco 3.15 329 *e*Pn **Pn** **23 42 03.2 +0.7**
PCBR *e*Sn **Sn** **23 42 38.9 -1.2**
PCBR *e*Sg **Sg** **23 42 55.8 +1.8**
20nm,0.4s
ALMR Almeirim 3.22 309 *e*P **Pn** **23 42 03.6 +0.2**
ALMR *e*S **Sn** **23 42 39.0 -2.9**
ALMR AML AML 23 42 44.6
comp=E,45nm,0.8s
ALMR Almeirim 3.22 309 *e*P **Pn** **23 42 03.6 +0.2**
ALMR *e*S **Sn** **23 42 39.0 -2.9**
ALMR Almeirim 3.22 309 P **Pn** **23 42 03.6 +0.2**
ALMR S **Sn** **23 42 39.0 -2.9**
EMUR La Murta 3.36 77 Pg **Pg** **23 42 17.6 +0.4**
comp=E,3.9nm,0.4s,SNR=7.9
EMUR Sn **Sn** **23 42 41.9 -3.4**
comp=E,3.0nm,0.8s,SNR=7.9
EMUR Lg 23 43 02.0
comp=E,14nm,0.5s,SNR=7.9
EMUR La Murta 3.36 77 Pg **Pg** **23 42 16.6 -0.6**
comp=E,1.7nm,0.3s,SNR=7.9
EMUR Sn **Sn** **23 42 41.9 -3.4**
SNR=7.9
EMUR Lg 23 43 02.2
comp=E,3.0nm,0.3s,SNR=7.9
ETOB Tobarra 3.37 63 Pn **Pn** **23 42 05.9 +0.3**
comp=E,1.1nm,0.2s,SNR=9.3
ETOB Pg **Pg** **23 42 16.9 -0.5**
comp=E,1.3nm,0.1s,SNR=7.3
ETOB Sn **Sn** **23 42 45.4 -0.3**
comp=E,2.4nm,0.2s,SNR=4.9
ETOB Lg 23 43 04.1
comp=E,3.8nm,0.2s
ETOB Tobarra 3.37 63 Pn **Pn** **23 42 05.9 +0.4**
comp=E,2.9nm,0.6s,SNR=9.3
ETOB Tobarra 3.37 63 Pg **Pg** **23 42 16.6 -0.9**
comp=E,1.0nm,0.1s,SNR=7.3
ETOB Sn **Sn** **23 42 45.4 -0.2**
comp=E,6.1nm,0.4s,SNR=4.9
ETOB Lg 23 43 01.8
comp=E,2.7nm,0.1s
ETOB Tobarra 3.37 63 Pn **Pn** **23 42 05.9 +0.3**
ETOB Pg **Pg** **23 42 16.6 -0.8**
ETOB Sn **Sn** **23 42 45.4 -0.3**
ETOB Lg 23 43 01.8
PTOM Tomar 3.43 317 *e*Pn **Pn** **23 42 07.5 +1.2**
PTOM *e*Sn **Sn** **23 42 47.2 +0.2**
PTOM A 23 43 08.5
comp=E,33nm,0.5s
PTOM Tomar 3.43 317 *e*Pn **Pn** **23 42 07.5 +1.2**
PTOM *e*Sn **Sn** **23 42 47.2 +0.2**
comp=E,33nm,0.5s
GUD Guadarrama 3.61 15 Pn **Pn** **23 42 11.1 +2.2**
comp=E,0.5nm,0.2s,SNR=7.9
GUD Pg **Pg** **23 42 21.6 -0.4**
comp=E,0.7nm,0.2s,SNR=5.1
GUD Sn **Sn** **23 42 53.5 +1.9**
comp=E,1.9nm,0.2s,SNR=7.3
GUD Guadarrama 3.61 15 Pn **Pn** **23 42 11.0 +2.2**
SNR=7.9
GUD Guadarrama 3.61 15 Pg **Pg** **23 42 22.4 +0.3**
comp=E,0.5nm,0.2s,SNR=5.1
GUD Sn **Sn** **23 42 51.3 -0.2**
comp=E,12nm,0.3s,SNR=7.3
GUD Guadarrama 3.61 15 Pn **Pn** **23 42 11.0 +2.2**
GUD Pg **Pg** **23 42 22.4 +0.3**
GUD Sn **Sn** **23 42 51.3 -0.2**
MTE Manteigas 3.66 333 *e*Pn **Pn** **23 42 10.4 +0.9**
MTE *e*Sn **Sn** **23 42 53.0 +0.3**
MTE *e*Sg **Sg** **23 43 12.1 +1.8**
MTE A 23 43 14.3
comp=E,53nm,0.7s
MTE Manteigas 3.66 333 *e*Pn **Pn** **23 42 10.4 +0.9**
MTE *e*Sn **Sn** **23 42 53.0 +0.3**
MTE *e*Sg **Sg** **23 43 12.1 +1.8**
comp=E,53nm,0.7s
PVIS Viseu 4.07 332 *e*Pn **Pn** **23 42 16.0 +1.0**
PVIS *e*Sn **Sn** **23 43 02.0 -0.7**
MVO Moncorvo 4.21 343 *e*Pn **Pn** **23 42 17.9 +0.9**
MVO *e*Sn **Sn** **23 43 05.5 -0.7**
MVO *e*Sg **Sg** **23 43 27.0 -0.9**
MVO A 23 43 41.4
comp=E,22nm,0.5s
MVO Moncorvo 4.21 343 *e*Pn **Pn** **23 42 17.9 +0.9**
MVO *e*Sn **Sn** **23 43 05.5 -0.7**
MVO *e*Sg **Sg** **23 43 27.0 -0.9**
comp=E,22nm,0.5s
ETOR Torete 4.48 34 Pn **Pn** **23 42 22.1 +1.3**
comp=E,4.3nm,0.3s,SNR=20
ETOR Pg **Pg** **23 42 36.8 -1.9**
comp=E,5.4nm,0.2s,SNR=7.8
ETOR Sn **Sn** **23 43 11.1 -1.9**
comp=E,5.6nm,0.2s,SNR=7.9
ETOR Lg 23 43 39.5
comp=E,20nm,0.3s
ETOR Torete 4.48 34 Pn **Pn** **23 42 24.2 +3.4**
comp=E,4.3nm,0.3s,SNR=20
ETOR Torete 4.48 34 Pg **Pg** **23 42 36.6 -2.1**
comp=E,5.4nm,0.2s,SNR=7.8
ETOR Sn **Sn** **23 43 11.0 -2.0**
SNR=7.9
ETOR Lg 23 43 39.7
comp=E,9.8nm,0.3s
ETOR Torete 4.48 34 Pn **Pn** **23 42 24.2 +3.4**
ETOR Pg **Pg** **23 42 36.6 -2.1**
ETOR Sn **Sn** **23 43 11.0 -2.0**
ETOR Lg 23 43 39.7
ECAL Calabor 4.90 348 Pn **Pn** **23 42 27.1 +0.6**
comp=E,0.0nm,0.2s,SNR=4.0
ECAL Pg **Pg** **23 42 44.0 -2.6**
comp=E,0.9nm,0.2s,SNR=4.0
ECAL Sn **Sn** **23 43 22.6 -0.6**
comp=E,5.1nm,0.4s,SNR=4.8
ECAL Lg 23 43 51.6
comp=E,19nm,0.3s,SNR=5.1
ECAL Calabor 4.90 348 Pn **Pn** **23 42 29.6 +3.1**
SNR=7.9
ECAL Calabor 4.90 348 Pg **Pg** **23 42 45.6 -1.0**
comp=E,0.7nm,0.2s,SNR=7.9
ECAL Sn **Sn** **23 43 24.0 +0.8**
comp=E,2.6nm,0.3s,SNR=4.8
ECAL Lg 23 43 53.3
comp=E,5.9nm,0.3s,SNR=5.1
ECAL Calabor 4.90 348 Pn **Pn** **23 42 29.6 +3.1**
ECAL Pg **Pg** **23 42 45.6 -1.1**
ECAL Sn **Sn** **23 43 24.0 +0.8**
ECAL Lg 23 43 53.3
PCAB Cabril 4.99 337 *e*Sn **Sn** **23 43 24.8 -0.8**
PCAB *e*Sg **Sg** **23 43 52.5 -0.6**
PCAB A 23 44 04.9
comp=E,12nm,0.6s
PCAB Cabril 4.99 337 *e*Sn **Sn** **23 43 24.8 -0.8**
PCAB *e*Sg **Sg** **23 43 52.5 -0.6**
comp=E,12nm,0.6s
EMOS Mosqueruela 5.00 49 Sn **Sn** **23 43 24.1 -1.5**
comp=E,0.6nm,0.3s,SNR=4.0
EMOS Lg 23 43 53.8
comp=E,1.8nm,0.3s,SNR=7.9
EMOS Mosqueruela 5.00 49 Sn **Sn** **23 43 23.5 -2.1**
SNR=7.9
EMOS Lg 23 43 53.8
comp=E,1.1nm,0.3s,SNR=7.9
ELOB Lobios 5.15 337 Pn **Pn** **23 42 30.2 +0.3**
comp=E,0.3nm,0.2s,SNR=7.9
ELOB Sn **Sn** **23 43 26.4 -2.9**
comp=E,2.9nm,0.2s,SNR=7.9
ELOB Lg 23 43 58.6
comp=E,9.9nm,0.4s,SNR=6.2
ELOB Lobios 5.15 337 Pn **Pn** **23 42 31.3 +1.4**
SNR=7.9
ELOB Sn **Sn** **23 43 26.4 -2.9**
SNR=7.9
ELOB Lg 23 43 58.8
comp=E,3.3nm,0.2s,SNR=6.2
ELOB Lobios 5.15 337 Pn **Pn** **23 42 31.3 +1.4**
ELOB Sn **Sn** **23 43 26.4 -2.9**
ELOB Lg 23 43 58.8
ERTA Horta de San J 5.84 48 Lg 23 44 21.2
comp=E,5.9nm,0.5s,SNR=7.9
ERTA Horta de San J 5.84 48 Lg 23 44 21.1
comp=E,0.9nm,0.3s,SNR=7.9
EARI Arriondas 6.14 1 Sn **Sn** **23 43 50.7 -3.2**
comp=E,0.1nm,0.1s,SNR=7.9
EARI Lg 23 44 31.0
comp=E,0.5nm,0.4s,SNR=7.9
EARI Arriondas 6.14 1 Sn **Sn** **23 43 50.6 -3.3**
SNR=7.9
EARI Lg 23 44 30.8
comp=E,0.5nm,0.4s,SNR=7.9
ELAN Lanestosa 6.25 13 Pn **Pn** **23 42 47.2 +2.1**
comp=E,0.0nm,0.1s,SNR=4.0
ELAN Sn **Sn** **23 43 53.3 -3.3**
comp=E,3.0nm,0.6s,SNR=7.9
ELAN Lg 23 44 33.2
comp=E,6.3nm,0.5s,SNR=7.9
ELAN Lanestosa 6.25 13 Pn **Pn** **23 42 47.2 +2.1**
SNR=7.9
ELAN Sn **Sn** **23 43 53.3 -3.2**
SNR=7.9
ELAN Lg 23 44 33.9
comp=E,0.8nm,0.4s,SNR=7.9
ELAN Lanestosa 6.25 13 Pn **Pn** **23 42 47.2 +2.1**
ELAN Sn **Sn** **23 43 53.3 -3.3**
ELAN Lg 23 44 33.9
EPON Pontenova 6.32 348 Sn **Sn** **23 43 55.1 -3.0**
comp=E,0.1nm,0.1s,SNR=7.9
EPON Lg 23 44 34.3
comp=E,2.6nm,0.2s,SNR=7.9
EPON Pontenova 6.32 348 Sn **Sn** **23 43 55.3 -2.8**
SNR=7.9
EPON Lg 23 44 34.0
comp=E,1.1nm,0.3s,SNR=7.9
EMAZ Mazaricos 6.42 336 Pn **Pn** **23 42 49.3 +2.0**
comp=E,1.3nm,0.2s,SNR=7.9
EMAZ Sn **Sn** **23 43 56.5 -4.1**
comp=E,1.7nm,0.2s,SNR=7.9
EMAZ Lg 23 44 42.2
comp=E,1.0nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.42 336 Pn **Pn** **23 42 49.2 +1.9**
EMAZ Mazaricos 6.42 336 Pn **Pn** **23 42 49.2 +1.9**
EMAZ Sn **Sn** **23 43 56.1 -4.5**
EMAZ Lg 23 44 39.8
SJPF Ste Jean 6.75 27 *e*Pn **Pn** **23 42 52.7 +0.8**
SJPF *e*Sn **Sn** **23 44 06.5 -2.3**
comp=E,3.2nm,0.6s
SJPF Ste Jean 6.75 27 Pn **Pn** **23 42 52.7 +0.8**
SJPF Sn **Sn** **23 44 06.5 -2.3**
comp=E,1.6nm,0.6s
ETSF Etsaut 6.83 31 *e*Pn **Pn** **23 42 53.5 +0.6**
ETSF *e*Sn **Sn** **23 44 08.2 -2.5**
comp=E,5.4nm,0.7s
ETSF Etsaut 6.83 31 Pn **Pn** **23 42 53.5 +0.6**
ETSF Sn **Sn** **23 44 08.2 -2.5**
comp=E,2.7nm,0.7s
EPF Esparros 7.32 35 *e*Pn **Pn** **23 43 00.3 +0.5**

IDC 13 23:41:15.9±2.3, 344S×10063E, h45km±7km, mb3.9/5, mb1 4.0/5, mb1mx3.7/20, mbtmp3.9/5, Error ellipse: s-maj=76.5km s-min=40.7km az=59.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.82**	**356**	P	P	23 46 04.5	+0.1
	0.8nm,0.4s,baz=187,slow=8.7,SNR=11						
SONM	**Songino Array**	**51.30**	**5**	P	P	23 50 15.6	+0.2
	3.1nm,0.7s,baz=186,slow=9.1,SNR=16						
SONM				pP	pP	23 50 28.0	0.0
	2.3nm,0.6s,baz=188,slow=9.1,SNR=9.6						
MKAR	**Makanchi Array**	**52.57**	**344**	P	P	23 50 25.2	+0.4
	2.7nm,0.5s,baz=143,slow=7.7,SNR=13						
MKAR				pP	pP	23 50 37.9	+0.4
	1.6nm,0.6s,baz=142,slow=8.0,SNR=3.4						
ZALV	**Zalesovo Beam**	**58.69**	**349**	P	P	23 51 08.6	-0.1
	2.3nm,0.4s,baz=157,slow=7.7,SNR=15						
ZALV				pP	pP	23 51 21.3	-0.2
	2.6nm,0.3s,baz=163,slow=5.6,SNR=6.5						
AKTO	**Aktyubinsk**	**64.91**	**331**	P	P	23 51 50.2	-0.4
	1.0nm,0.6s,baz=111,slow=7.3,SNR=5.9						
TXAR	**Lajitas Array**	**145.43**	**39**	PKPbc	PKPbc	00 00 48.9	-0.9
	1.0nm,0.6s,baz=242,slow=1.0,SNR=15						
TXAR				pPKPbc	pPKPbc	00 01 02.9	-0.6
	0.8nm,0.6s,baz=294,slow=0.9,SNR=5.9						

*BJI **13** 23:53:00.5, 470S×101.19E, h26km, mB5.0, mb4.8, Ms4.2, Msz3.9*
*ISCJB **13** 23:53:03.7±1.6, 44S±0.1×1010E±0.1, h34km±11km, mb4.4/16, Error ellipse: s-maj=25.8km s-min=7.6km az=137.9*
*NEIC **13** 23:53:06.8±1.1, 423S×10122E, h35km, mb4.3/1, Error ellipse: s-maj=40.9km s-min=8.9km az=57.0*
*IDC **13** 23:53:06.3±4.1, 427S×101.19E, h30km±30km, mb4.1/11, mb1 4.3/11, mb1mx4.0/20, mbtmp4.2/11, MS3.3/2, Ms1 3.4/2, ms1mx3.0/27, Error ellipse: s-maj=47.9km s-min=13.6km az=55.0*
*DJA **13** 23:53:22, 599S×10126E, h197km, Mw5.1/4*
ISC 13 23:53:06.4±1.4, 43S±01×1010E±01, h37km±9km, n35, σ0s97/34, mb4.4/16, 1C, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMBI	**JAMBI**	**3.76**	**44**	P	**Pn**	**23 54 05.9**	**+4.0**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.91**	**351**	P	**Pn**	**23 54 04.1**	**+0.1**
	0.0nm,0.0s						
SBJI	**Serang**	**5.39**	**109**	P	**Pn**	**23 54 24.3**	**-0.1**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.56**	**67**	P	**Pn**	**23 54 25.9**	**-0.7**
	0.0nm,0.0s						
DBJI	**Dramaga**	**6.12**	**111**	P	**Pn**	**23 54 33.6**	**-0.7**
	0.0nm,0.0s						
CBJI	**Citeko**	**6.17**	**110**	P	**Pn**	**23 54 37.2**	**+2.2**
	0.0nm,0.0s						
LEM	**Lembang**	**7.02**	**111**	P	**Pn**	**23 54 46.3**	**-0.4**
	0.0nm,0.0s						
SJI	**Sawahan**	**11.21**	**108**	P	**Pn**	**23 55 47.4**	**+3.2**
	45nm,0.8s						
BSI	**Banda Aceh**	**11.32**	**330**	P	**Pn**	**23 55 44.8**	**-0.9**
	0.0nm,0.0s						
PCI	**Palu**	**19.11**	**80**	P	**Pn**	**23 57 26.9**	**-0.4**
	0.0nm,0.0s						
BBSI	**Bau Bau**	**21.51**	**94**	P	**P**	**23 57 54.5**	**+2.2**
	0.0nm,0.0s						
KDI	**Kendari**	**21.55**	**90**	P	**P**	**23 57 51.7**	**-1.1**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**22.75**	**355**	P	**P**	**23 58 04.2**	**-1.2**
	10nm,0.9s,mb4.3,baz=183,slow=8.6,SNR=54						
CMAR				LR	LR	00 08 07.1	
	comp=Z,60nm,20.5s,baz=165,slow=40						
CHTO	**Chiang Mai**	**23.10**	**355**	*e*P	**P**	**23 58 08.9**	**-0.2**
	9.5nm,0.9s,mb4.2						
QIZ	**Qiongzhong**	**24.80**	**20**	P	**P**	**23 58 20.0**	**-5.1**
FITZ	**Fitzroy Crossi**	**27.70**	**122**	P	**P**	**23 58 50.0**	**-1.3**
	3.6nm,0.8s,mb4.1,baz=277,slow=5.4,SNR=10.0						
GYA	**Guiyang**	**31.11**	**10**	P	**P**	**23 59 22.1**	**+0.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**35.97**	**118**	P	**P**	**00 00 03.2**	**-0.6**
	comp=Z,1.3nm,0.6s,mb4.1,baz=303,slow=9.2,SNR=22						
WRA				S	**S**	**00 05 39.6**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=296,slow=15,SNR=2.6						
WB2	**Warramunga Arr**	**35.98**	**118**	*e*P	**P**	**00 00 03.0**	**-1.0**
ASAR	**Alice Springs**	**37.08**	**124**	P	**P**	**00 00 13.2**	**-0.1**
	comp=Z,1.4nm,0.8s,mb3.9,baz=294,slow=7.8,SNR=13						
LZH	**Lanzhou**	**40.31**	**4**	↑↑P	**P**	**00 00 41.0**	**+0.9**
LZH				AP	pP	00 00 48.0	-2.8
LZH				XP	sP	00 00 52.3	-3.0
LZH				AMB	AMB		
	comp=Z,25nm,1.5s,mb4.7						
LZH				AMB	AMB		
	comp=Z,124nm,4.8s						
GTA	**Gaotai**	**43.55**	**359**	*e*P	**P**	**00 01 07.8**	**+1.2**
GTA				AP	pP	00 01 12.8	-4.6
GTA				XP	sP	00 01 15.3	-6.5
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**46.86**	**131**	P	**P**	**00 01 34.5**	**+1.4**
	comp=Z,1.5nm,0.6s,mb4.1,baz=242,slow=7.4,SNR=3.7						
KSRS	**Korea Array**	**48.54**	**29**	P	**P**	**00 01 45.9**	**-0.1**
	comp=Z,6.5nm,0.9s,mb4.7,baz=216,slow=8.4,SNR=20						
SONM	**Songino Array**	**52.17**	**5**	P	**P**	**00 02 14.4**	**+1.2**
	comp=Z,8.9nm,0.8s,mb4.7,baz=184,slow=8.8,SNR=46						
CN2	**Changchun**	**52.74**	**22**	*e*P	**P**	**00 02 17.0**	**-0.5**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
MJAR	**Matsushiro Arr**	**53.48**	**37**	P	**P**	**00 02 22.2**	**-0.9**
	comp=Z,1.4nm,0.4s,mb4.2,baz=215,slow=8.1,SNR=8.8						

MKAR	**Makanchi Array**	**53.54**	**344**	P		**P**	**00 02 24.0**	**+0.6**
	comp=Z,6.7nm,0.7s,mb4.7,baz=145,slow=8.6,SNR=46							
ZAA0	**Zalesovo Array**	**59.65**	**349**	*e*P		**P**	**00 03 06.8**	**+0.2**
ZALV	**Zalesovo Beam**	**59.65**	**349**	P		**P**	**00 03 06.7**	**+0.1**
	comp=Z,5.6nm,0.7s,mb4.7,baz=172,slow=4.5,SNR=28							
ZALV				LR		LR	00 31 06.8	
	comp=Z,33nm,21.6s,baz=135,slow=38							
ZALV	**Zalesovo Beam**	**59.65**	**349**	P		**P**	**00 03 06.7**	**+0.1**
ZALV				LR		LR	00 31 06.8	
AKTK	**Aktyubinsk**	**65.89**	**331**	P		**P**	**00 03 47.9**	**-0.3**
AKTO	**Aktyubinsk**	**65.89**	**331**	P		**P**	**00 03 47.9**	**-0.3**
	comp=Z,0.4nm,0.3s,mb3.9,baz=213,slow=6.4,SNR=3.8							
TXAR	**Lajitas Array**	**145.88**	**41**	PKPbc		PKPbc	00 12 43.7	+1.2
	comp=Z,6.9nm,1.0s,baz=276,slow=2.3,SNR=40							
TXAR	**Lajitas Array**	**145.88**	**41**	PKPbc		PKPbc	00 12 43.7	+1.2

ISCJB ***14*** *00:19:42.4±0.4, 24.21N±002×122.23E±002, h31km±3km, Error ellipse: s-maj=4.1km s-min=2.6km az=162.0*
JMA ***14*** *00:19:42.2±0.2, 24.45N×122.22E, h67km±2km, M2.2*
TAP ***14*** *00:19:42.7, 24.27N×122.16E, h50km, ML3.2, C*

ISC 14 00:19:42.7±0.5, 2422N±002×12222E±002, h31km±3km, n44, σ0°96/79, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ENA	**Nanau**	**0.49**	**295**	⇓*i*P		**Pb**	**00 19 53.2**	**+0.2**
	baz=296							
ENA				S		**Sb**	**00 20 01.1**	**+1.1**
	baz=296							
TWC	**Suao**	**0.51**	**318**	*i* P		**Pb**	**00 19 53.4**	**-0.1**
	baz=323							
TWC				S		**Sb**	**00 20 00.7**	**-0.1**
	baz=323							
TWD	**Chiawan**	**0.59**	**256**	*i* P		**Pb**	**00 19 54.3**	**-0.4**
	baz=243							
TWD				*i* S		**Sb**	**00 20 03.1**	**+0.3**
	baz=243							
HWA	**Hwalien**	**0.62**	**247**	*e*P		**Pb**	**00 19 54.0**	**-1.1**
	baz=240							
TWE	**Neicheng**	**0.71**	**314**	P		**Pn**	**00 19 56.2**	**-0.4**
	baz=308							
TWE				*e*S		**Sb**	**00 20 06.1**	**0.0**
	baz=308							
ENTT	**Nioudou**	**0.73**	**305**	*i* P		**Pn**	**00 19 56.4**	**-0.5**
	baz=304							
ENTT				S		**Sb**	**00 20 06.3**	**-0.4**
	baz=304							
YOJ	**Yonaguni jima**	**0.76**	**72**	P		**Pn**	**00 19 57.3**	**0.0**
YOJ				S		**Sn**	**00 20 08.5**	**+0.9**
NNS	**Nan Shan**	**0.81**	**286**	*e*P		**Pn**	**00 19 56.9**	**-1.0**
	baz=283							
NNS				*e*S		**Sn**	**00 20 08.1**	**-0.8**
	baz=283							
TWB1	**Santiao Chiao**	**0.81**	**345**	*e*P		**Pn**	**00 19 57.0**	**-1.0**
	baz=359							
TWB1				*e*S		**Sn**	**00 20 07.0**	**-2.0**
	baz=359							
ESL	**Shilin**	**0.83**	**241**	P		**Pn**	**00 19 57.3**	**-1.0**
	baz=228							
ESL				*e*S		**Sn**	**00 20 08.5**	**-1.0**
	baz=228							
WHF	**Hehuan Shan**	**0.88**	**265**	⇓*i*P		**Pn**	**00 19 58.4**	**-0.6**
	baz=253							
WHF				*e*S		**Sn**	**00 20 09.9**	**-0.8**
	baz=253							
NSK	**Sanguang**	**0.91**	**300**	*e*P		**Pn**	**00 19 58.8**	**-0.6**
	baz=291							
NWF	**Wu-fen Shan**	**0.94**	**335**	*e*P		**Pn**	**00 19 59.6**	**-0.1**
	baz=348							
TWA	**Mucha**	**0.95**	**322**	*e*P		**Pn**	**00 20 00.1**	**+0.1**
	baz=335							
TWA				*e*S		**Sn**	**00 20 12.6**	**+0.1**
	baz=335							
EHY	**Hungye**	**1.09**	**229**	*e*P		**Pn**	**00 20 01.3**	**-0.6**
	baz=225							
EHY				*e*S		**Sn**	**00 20 13.8**	**-2.1**
	baz=225							
TWS1	**Kuangyinshan**	**1.14**	**320**	*e*P		**Pn**	**00 20 02.3**	**-0.2**
	baz=332							
TWS1				*e*S		**Sn**	**00 20 17.4**	**+0.2**
	baz=332							
NSTT	**Nanjuang**	**1.19**	**290**	*e*P		**Pn**	**00 20 03.1**	**-0.1**
	baz=288							
NSTT				*e*S		**Sn**	**00 20 18.2**	**-0.1**
	baz=288							
TWF1	**Yuli**	**1.21**	**225**	*e*P		**Pn**	**00 20 02.7**	**-0.9**
	baz=231							
TWF1				*e*S		**Sn**	**00 20 17.9**	**-1.0**
	baz=231							
SMLT	**Sun Moon Lake**	**1.26**	**255**	P		**Pn**	**00 20 04.9**	**+0.7**
	baz=245							
SMLT				S		**Sn**	**00 20 19.5**	**-0.5**
	baz=245							
TYC	**Yuchr**	**1.29**	**256**	*e*P		**Pn**	**00 20 04.8**	**+0.2**
	baz=245							
TYC				*e*S		**Sn**	**00 20 19.9**	**-0.9**
	baz=245							
TWQ1	**Liyutan**	**1.33**	**276**	*e*P		**Pn**	**00 20 05.4**	**+0.3**
	baz=273							
TWQ1				*e*S		**Sn**	**00 20 22.3**	**+0.5**
	baz=273							
CHKT	**Chengkung**	**1.37**	**215**	*e*P		**Pn**	**00 20 04.8**	**-0.9**
	baz=204							
CHKT				*e*S		**Sn**	**00 20 20.0**	**-2.7**
	baz=204							
YUS	**Yu-Shan**	**1.38**	**238**	*e*P		**Pn**	**00 20 06.3**	**+0.5**
	baz=227							
YUS				*e*S		**Sn**	**00 20 21.9**	**-1.0**
	baz=227							
IRIF	**Iriomote-Funau**	**1.38**	**85**	*e*S		**Sn**	**00 20 23.1**	**+0.1**
TCU	**Taichung**	**1.42**	**267**	*e*P		**Pn**	**00 20 07.1**	**+0.7**
	baz=265							
TCU				*e*S		**Sn**	**00 20 25.0**	**+1.1**
	baz=265							
WNT	**Mingjian**	**1.45**	**257**	*e*P		**Pn**	**00 20 07.5**	**+0.7**
	baz=246							
WNT				*e*S		**Sn**	**00 20 26.2**	**+1.5**
	baz=246							
HATJ	**Hateruma jima**	**1.45**	**96**	S		**Sn**	**00 20 26.3**	**+1.4**
ALS	**Alishan**	**1.48**	**242**	*e*P		**Pn**	**00 20 08.1**	**+0.8**
	baz=230							
ELDTW	**Lidau**	**1.51**	**227**	*e*P		**Pn**	**00 20 06.6**	**-1.1**
	baz=217							
CHN5	**Tsauling**	**1.55**	**247**	*e*P		**Pn**	**00 20 08.6**	**+0.5**
	baz=244							
CHN5				*e*S		**Sn**	**00 20 28.3**	**+1.2**
	baz=244							
WGK	**Gukeng**	**1.61**	**251**	*e*P		**Pn**	**00 20 10.4**	**+1.4**
	baz=238							
WGK				*e*S		**Sn**	**00 20 30.6**	**+1.8**
	baz=238							
JKRS	**Kuro-shima**	**1.63**	**89**	P		**Pn**	**00 20 09.7**	**+0.4**
JKRS				*e*S		**Sn**	**00 20 30.0**	**+0.8**
STYT	**Tauyuan**	**1.71**	**232**	*e*P		**Pn**	**00 20 10.8**	**+0.4**
	baz=224							
STYT				*e*S		**Sn**	**00 20 31.4**	**+0.2**
	baz=224							
CHN4	**Tsaushan**	**1.73**	**240**	*e*P		**Pn**	**00 20 12.1**	**+1.5**
	baz=229							
CHN4				*e*S		**Sn**	**00 20 33.2**	**+1.5**
	baz=229							
TWG	**Pinlang**	**1.75**	**217**	*e*P		**Pn**	**00 20 10.1**	**-0.9**
	baz=215							
TWG				*e*S		**Sn**	**00 20 29.8**	**-2.4**
	baz=215							
JIJ	**Ishigaki jima**	**1.76**	**85**	P		**Pn**	**00 20 10.9**	**-0.1**
JIJ				*e*S		**Sn**	**00 20 31.6**	**-0.7**
WTP	**Ta-pu**	**1.77**	**237**	*e*P		**Pn**	**00 20 12.4**	**+1.3**
	baz=228							
WTP				*e*S		**Sn**	**00 20 33.7**	**+1.1**
	baz=228							
TWK	**Hsinying**	**1.85**	**239**	*e*P		**Pn**	**00 20 12.3**	**-0.1**
	baz=237							
TWK				*e*S		**Sn**	**00 20 35.9**	**+1.2**
	baz=237							
CHN1	**Nanshi**	**1.87**	**237**	*e*P		**Pn**	**00 20 12.9**	**+0.4**
	baz=225							
CHN1				*e*S		**Sn**	**00 20 36.8**	**+1.7**
	baz=225							
SGST	**Jiashian**	**1.89**	**233**	*e*P		**Pn**	**00 20 14.2**	**+1.4**
	baz=231							
SGST				*e*S		**Sn**	**00 20 37.2**	**+1.7**
	baz=231							
ECL	**Taimali**	**2.00**	**216**	*e*P		**Pn**	**00 20 12.9**	**-1.4**
	baz=214							
ECL				*e*S		**Sn**	**00 20 35.8**	**-2.4**
	baz=214							
SSD	**Sandimen**	**2.07**	**225**	*e*P		**Pn**	**00 20 15.6**	**+0.2**
	baz=215							
LAY	**Lan-yu**	**2.26**	**196**	*e*P		**Pn**	**00 20 17.8**	**-0.2**
	baz=195							
JTJ	**Tarama**	**2.30**	**79**	P		**Pn**	**00 20 18.7**	**+0.2**
JTJ				*e*S		**Sn**	**00 20 45.3**	**-0.4**

IDC 14 00:36:51.3±3.6, 250S×10274E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/19, mbtmp3.8/6, MS3.0/1, Ms1 3.0/1, ms1mx2.2/33, Error ellipse: s-maj=220.3km s-min=18.4km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**27.29**	**126**	LR		LR	00 54 52.8	
	comp=Z,30nm,18.9s,baz=58,slow=40							
WRA	**Warramunga Arr**	**35.39**	**122**	P		P	00 43 48.1	-1.0
	0.5nm,0.4s,baz=299,slow=11,SNR=13							
ASAR	**Alice Springs**	**36.76**	**128**	P		P	00 44 00.9	+0.1
	1.0nm,0.6s,baz=296,slow=7.7,SNR=4.1							
STKA	**Stephens Creek**	**46.79**	**133**	P		P	00 45 24.0	+1.2
	1.8nm,0.8s,baz=308,slow=10,SNR=5.1							
MKAR	**Makanchi Array**	**52.29**	**342**	P		P	00 46 05.3	+0.8
	0.5nm,0.5s,baz=169,slow=8.5,SNR=6.1							
ZALV	**Zalesovo Beam**	**58.20**	**348**	P		P	00 46 48.1	+1.0
	0.4nm,0.3s,baz=193,slow=5.9,SNR=3.9							
BVAR	**Borovoye Array**	**61.62**	**338**	P		P	00 47 09.2	-1.4
	0.2nm,0.3s,baz=269,slow=8.6,SNR=2.8							
TXAR	**Lajitas Array**	**143.37**	**41**	PKP		PKPdf	00 56 26.4	-2.1
	0.2nm,0.5s,baz=254,slow=1.0,SNR=5.2							

ISCJB ***14*** *00:43:22.4±0.3, 37.16N±002×539W±002, h8km±2km, Error ellipse: s-maj=2.8km s-min=2.5km az=156.8*
MDD ***14*** *00:43:24.5±0.2, 3706N×541W, h11km, mbLg2.9/30, Error ellipse: s-maj=2.4km s-min=2.2km az=161.0, PRIMO*
MDD EMS: II INTENSIDAD MIMA.
SFS ***14*** *00:43:24.0, 3700N×530W, h0km, ML2.9*
LDG ***14*** *00:43:24.5±0.1, 3705N×541W, h10km, Ml3.2/3, Error ellipse: s-maj=2.4km s-min=1.9km az=4.0*
CSEM ***14*** *00:43:24.3±0.1, 3707N×540W, h10km, ML3.4/10, Error ellipse: s-maj=1.6km s-min=1.2km az=143.0*
NEIC ***14*** *00:43:24.7, 3707N×537W, h10km, MN2.9(MDD), After MDD.*
IGIL ***14*** *00:43:25.1, 3707N×537W, h10km, ML3.1*
CNRM ***14*** *00:43:26.5, 37.14N×5.13W, h30km, MD3.9*

ISC 14 00:43:23.7±0.3, 3713N±002×540W±002, h13km±2km, n121, σ1°§12/190, 2C-2D, Spain

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LIJA	**Lijar**	**0.23**	**181**	⇑P		**Pg**	**00 43 26.7**	**-1.9**
LIJA	**Lijar**	**0.23**	**181**	*i* P		**Pg**	**00 43 26.7**	**-1.9**
ESPR	**Espera**	**0.45**	**235**	Pg		**Pg**	**00 43 32.5**	**-0.1**
	41nm,0.2s,SNR=117							
ESPR				Lg			00 43 36.8	
	672nm,0.3s,SNR=16							
ESPR	**Espera**	**0.45**	**235**	Pg		**Pg**	**00 43 32.5**	**-0.2**
	41nm,0.2s,SNR=117							
ESPR	**Espera**	**0.45**	**235**	Pg		**Pg**	**00 43 32.5**	**-0.1**
ESPR				Lg			00 43 39.5	
GIBL	**Gibalbin**	**0.55**	**237**	P		**Pg**	**00 43 35.0**	**+0.5**
GIBL				S		**Sg**	**00 43 43.7**	**+2.0**
GIBL	**Gibalbin**	**0.55**	**237**	*e*P		**Pg**	**00 43 35.0**	**+0.5**
REAL	**Reales**	**0.67**	**167**	⇓P		**Pg**	**00 43 35.2**	**-1.4**
REAL				S		**Sg**	**00 43 45.0**	**-0.4**
REAL	**Reales**	**0.67**	**167**	*i* P		**Pg**	**00 43 35.2**	**-1.5**
EJIF	**Jimena Fronter**	**0.68**	**185**	Pg		**Pg**	**00 43 34.9**	**-2.1**
	85nm,0.4s,SNR=7.9							
EJIF				Lg			00 43 44.0	
	419nm,0.5s,SNR=7.9							
EJIF	**Jimena Fronter**	**0.68**	**185**	Pg		**Pg**	**00 43 35.5**	**-1.5**
	85nm,0.4s,SNR=7.9							
EJIF	**Jimena Fronter**	**0.68**	**185**	Pg		**Pg**	**00 43 35.5**	**-1.5**
EJIF				Lg			00 43 44.0	
EMIJ	**Mijas**	**0.76**	**138**	Pg		**Pg**	**00 43 36.3**	**-2.1**
	70nm,0.2s,SNR=138							
EMIJ				Lg			00 43 46.3	
	268nm,0.3s,SNR=16							
EMIJ	**Mijas**	**0.76**	**138**	Pg		**Pg**	**00 43 36.5**	**-1.9**
	70nm,0.2s,SNR=138							
EMIJ	**Mijas**	**0.76**	**138**	Pg		**Pg**	**00 43 36.5**	**-1.9**
EMIJ				Lg			00 43 46.1	
SCRT	**Cerro San Cris**	**0.80**	**232**	P		**Pg**	**00 43 40.4**	**+1.2**
SCRT				S		**Sg**	**00 43 50.7**	**+1.1**
SCRT	**Cerro San Cris**	**0.80**	**232**	*e*P		**Pg**	**00 43 40.4**	**+1.2**
SCRT				*e*S		**Sg**	**00 43 50.7**	**+1.1**
MOMI	**Momias**	**0.84**	**198**	P		**Pg**	**00 43 41.6**	**+1.6**
MOMI	**Momias**	**0.84**	**198**	*e*P		**Pg**	**00 43 41.6**	**+1.6**
EMAL	**Malaga-Limoner**	**0.86**	**115**	Pg		**Pg**	**00 43 43.3**	**+3.0**
	22nm,0.1s,SNR=7.9							
EMAL				Lg			00 43 55.5	
	89nm,0.3s,SNR=7.9							
EMAL	**Malaga-Limoner**	**0.86**	**115**	*e*P		**Pg**	**00 43 39.4**	**-0.9**
EMAL	**Malaga-Limoner**	**0.86**	**115**	Pg		**Pg**	**00 43 43.1**	**+2.8**
	25nm,0.1s,SNR=7.9							
EMAL				*e*S		**Sg**	**00 43 54.3**	**+2.7**
EMAL	**Malaga-Limoner**	**0.86**	**115**	Pg		**Pg**	**00 43 43.1**	**+2.7**
EMAL				Lg			00 43 55.5	
CNIL	**Conil**	**0.93**	**215**	P		**Pg**	**00 43 42.4**	**+0.8**
CNIL				S		**Sg**	**00 43 55.7**	**+2.0**
CNIL	**Conil**	**0.93**	**215**	*e*P		**Pg**	**00 43 42.4**	**+0.8**
CNIL				*e*S		**Sg**	**00 43 55.7**	**+2.0**
SFS	**San Fernando**	**0.93**	**225**	P		**Pg**	**00 43 41.9**	**+0.2**
SFS	**San Fernando**	**0.93**	**225**	*e*P		**Pg**	**00 43 42.0**	**+0.3**
SFS				S		**Sg**	**00 43 52.3**	**-1.5**
SFS	**San Fernando**	**0.93**	**225**	*e*P		**Pg**	**00 43 42.0**	**+0.4**
SFS				S		**Sg**	**00 43 52.3**	**-1.5**
ECAB	**El Cabril**	**0.94**	**359**	Pg		**Pg**	**00 43 42.9**	**+1.0**
	94nm,0.1s,SNR=395							
ECAB				Lg			00 43 57.0	
	314nm,0.2s,SNR=26							
ECAB	**El Cabril**	**0.94**	**359**	Pg		**Pg**	**00 43 43.0**	**+1.1**
	94nm,0.1s,SNR=395							
ECAB	**El Cabril**	**0.94**	**359**	Pg		**Pg**	**00 43 43.0**	**+1.1**
ECAB				Lg			00 43 57.0	
ELOJ	**Sierra Loja**	**0.99**	**89**	Pg		**Pg**	**00 43 43.0**	**+0.1**
	24nm,0.2s,SNR=49							
ELOJ				Lg			00 43 57.8	
	47nm,0.3s,SNR=13							
ELOJ	**Sierra Loja**	**0.99**	**89**	Pg		**Pg**	**00 43 43.0**	**+0.1**
ELOJ				Lg			00 43 57.8	
EMIN	**Mina Concepcio**	**1.20**	**302**	Pg		**Pg**	**00 43 46.1**	**-0.7**
	45nm,0.2s,SNR=199							
EMIN				Lg			00 44 02.1	
	41nm,0.1s,SNR=14							
EMIN	**Mina Concepcio**	**1.20**	**302**	Pg		**Pg**	**00 43 46.1**	**-0.7**
	38nm,0.2s,SNR=199							
EMIN	**Mina Concepcio**	**1.20**	**302**	Pg		**Pg**	**00 43 46.1**	**-0.7**
EMIN				Lg			00 44 03.6	
EADA	**Adamuz**	**1.22**	**32**	⇑Pn		**Pn**	**00 43 47.0**	**+0.5**
	0.6nm,0.1s,SNR=18							
EADA				Pg		**Pg**	**00 43 47.8**	**+0.6**
	17nm,0.2s,SNR=99							
EADA				Sn		**Sn**	**00 44 03.8**	**+0.9**
	19nm,0.1s,SNR=6.4							
EADA				Lg			00 44 05.6	
	127nm,0.1s,SNR=5.0							
EADA	**Adamuz**	**1.22**	**32**	Pn		**Pn**	**00 43 47.1**	**+0.6**
	0.6nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**1.22**	**32**	Pg		**Pg**	**00 43 48.1**	**+0.9**
	17nm,0.2s,SNR=99							
EADA				Sn		**Sn**	**00 44 03.7**	**+0.9**
	19nm,0.1s,SNR=6.4							
EADA	**Adamuz**	**1.22**	**32**	Pn		**Pn**	**00 43 47.1**	**+0.6**
EADA				Pg		**Pg**	**00 43 48.1**	**+0.9**
EADA				Sn		**Sn**	**00 44 03.7**	**+0.8**
EADA				Lg			00 44 05.7	
ECEU	**Ceuta**	**1.23**	**179**	Pg		**Pg**	**00 43 45.8**	**-1.6**
	8.8nm,0.2s,SNR=20							
ECEU				Lg			00 44 02.2	
	33nm,0.3s,SNR=4.0							
ECEU	**Ceuta**	**1.23**	**179**	Pg		**Pg**	**00 43 46.0**	**-1.4**
	8.8nm,0.2s,SNR=20							
ERON	**Agron**	**1.28**	**95**	Pg		**Pg**	**00 43 47.6**	**-0.7**
	8.3nm,0.2s,SNR=7.9							
ERON				Lg			00 44 05.0	
	48nm,0.4s,SNR=7.9							
ERON	**Agron**	**1.28**	**95**	Pg		**Pg**	**00 43 47.6**	**-0.7**
ERON				Lg			00 44 06.4	
ECOG	**Cogollos-Vega**	**1.47**	**84**	Pg		**Pg**	**00 43 50.6**	**-1.3**
	13nm,0.2s,SNR=24							
ECOG				Lg			00 44 13.1	
	49nm,0.2s,SNR=5.0							
ECOG	**Cogollos-Vega**	**1.47**	**84**	Pg		**Pg**	**00 43 50.7**	**-1.3**
	13nm,0.2s,SNR=24							
ECOG	**Cogollos-Vega**	**1.47**	**84**	Pg		**Pg**	**00 43 50.7**	**-1.3**
ECOG				Lg			00 44 13.1	
EQUE	**Quentar**	**1.56**	**87**	Pn		**Pn**	**00 43 51.9**	**+0.7**
	6.6nm,0.3s,SNR=66							
EQUE				Pg		**Pg**	**00 43 53.9**	**+0.1**
	15nm,0.2s,SNR=9.4							
EQUE				Lg			00 44 14.8	
	141nm,0.4s,SNR=5.0							
EQUE	**Quentar**	**1.56**	**87**	Pg		**Pg**	**00 43 53.8**	**0.0**
	22nm,0.3s,SNR=9.4							
DKH	**Dar Kharkhour**	**1.64**	**179**	P		**Pn**	**00 43 53.0**	**+0.8**
DKH				S		**Sn**	**00 44 12.0**	**-1.2**
DKH	**Dar Kharkhour**	**1.64**	**179**	*i* P		**Pn**	**00 43 53.0**	**+0.8**
EBAN	**Banos Encina**	**1.64**	**51**	Pn		**Pn**	**00 43 52.6**	**+0.3**
	1.4nm,0.1s,SNR=7.9							
EBAN				Pg		**Pg**	**00 43 54.9**	**-0.3**
	7.6nm,0.1s,SNR=27							
EBAN				Sn		**Sn**	**00 44 15.0**	**+1.8**
	13nm,0.1s,SNR=7.9							
EBAN				Lg			00 44 16.8	
	38nm,0.1s,SNR=18							
EBAN	**Banos Encina**	**1.64**	**51**	Pn		**Pn**	**00 43 52.4**	**+0.1**
	SNR=7.9							
EBAN	**Banos Encina**	**1.64**	**51**	Pn		**Pn**	**00 43 52.4**	**+0.2**
EBAN				Pg		**Pg**	**00 43 54.7**	**-0.5**
EBAN				Lg			00 44 16.8	
EGRO	**El Granado**	**1.71**	**284**	⇓Pn		**Pn**	**00 43 52.8**	**-0.4**
	2.3nm,0.1s,SNR=18							
EGRO				Pg		**Pg**	**00 43 55.5**	**-1.0**
	14nm,0.2s,SNR=17							
EGRO				Sn		**Sn**	**00 44 14.5**	**-0.4**
	19nm,0.2s,SNR=10							
EGRO				Lg			00 44 18.1	
	74nm,0.2s,SNR=7.9							
EGRO	**El Granado**	**1.71**	**284**	Pn		**Pn**	**00 43 53.0**	**-0.2**
	2.3nm,0.1s,SNR=48							
EGRO	**El Granado**	**1.71**	**284**	Pg		**Pg**	**00 43 55.5**	**-1.1**
	29nm,0.4s,SNR=17							
EGRO	**El Granado**	**1.71**	**284**	Pn		**Pn**	**00 43 53.0**	**-0.2**
EGRO				Pg		**Pg**	**00 43 55.5**	**-1.0**
EGRO				Lg			00 44 16.5	
EQES	**Quesada**	**1.97**	**69**	Pn		**Pn**	**00 43 57.1**	**+0.4**
	1.3nm,0.3s,SNR=28							
EQES				Pg		**Pg**	**00 44 01.3**	**-0.2**
	10nm,0.2s,SNR=19							
EQES				Sn		**Sn**	**00 44 22.7**	**+1.4**
	5.2nm,0.1s,SNR=7.9							
EQES				Lg			00 44 28.6	
	20nm,0.1s,SNR=9.3							
EQES	**Quesada**	**1.97**	**69**	Pn		**Pn**	**00 43 57.1**	**+0.4**
	0.8nm,0.1s,SNR=28							
EQES	**Quesada**	**1.97**	**69**	Pg		**Pg**	**00 44 01.0**	**-0.5**
	5.0nm,0.1s,SNR=19							
EQES				Sn		**Sn**	**00 44 21.9**	**+0.6**
	7.3nm,0.1s,SNR=7.9							
EQES	**Quesada**	**1.97**	**69**	Pn		**Pn**	**00 43 57.1**	**+0.4**
EQES				Pg		**Pg**	**00 44 01.0**	**-0.5**
EQES				Sn		**Sn**	**00 44 21.9**	**+0.6**
EQES				Lg			00 44 28.6	
EBER	**Berja**	**2.02**	**96**	Pn		**Pn**	**00 43 58.0**	**+0.6**
	1.1nm,0.2s,SNR=10							
EBER				Pg		**Pg**	**00 44 02.6**	**+0.1**
	14nm,0.3s,SNR=35							
EBER				Lg			00 44 30.2	
	37nm,0.5s,SNR=5.0							
EBER	**Berja**	**2.02**	**96**	Pn		**Pn**	**00 43 58.0**	**+0.5**
	1.1nm,0.2s,SNR=10							
EBER	**Berja**	**2.02**	**96**	Pg		**Pg**	**00 44 02.3**	**-0.2**
	14nm,0.3s,SNR=35							
EBER	**Berja**	**2.02**	**96**	Pn		**Pn**	**00 43 58.0**	**+0.6**
EBER				Pg		**Pg**	**00 44 02.3**	**-0.2**
EBER				Lg			00 44 29.1	
EBAD	**Badajoz**	**2.06**	**322**	Pn		**Pn**	**00 43 58.3**	**+0.2**
	1.9nm,0.1s,SNR=26							
EBAD				Pg		**Pg**	**00 44 02.2**	**-1.1**
	5.6nm,0.1s,SNR=7.9							
EBAD				Sn		**Sn**	**00 44 24.2**	**+0.5**
	64nm,0.2s,SNR=9.2							
EBAD				Lg			00 44 30.6	
	102nm,0.2s,SNR=7.9							
EBAD	**Badajoz**	**2.06**	**322**	Pn		**Pn**	**00 43 58.4**	**+0.3**
	1.9nm,0.1s,SNR=26							
EBAD				Sn		**Sn**	**00 44 23.9**	**+0.3**
	64nm,0.2s,SNR=9.2							
EBAD	**Badajoz**	**2.06**	**322**	Pn		**Pn**	**00 43 58.4**	**+0.3**
EBAD				Sn		**Sn**	**00 44 23.9**	**+0.3**
EBAD				Lg			00 44 30.6	
EALB	**Alboran**	**2.24**	**121**	Pn		**Pn**	**00 44 00.6**	**+0.1**
	0.6nm,0.0s,SNR=7.9							
EALB				Sn		**Sn**	**00 44 28.2**	**+0.1**
	7.4nm,0.2s,SNR=7.9							
EALB	**Alboran**	**2.24**	**121**	Pn		**Pn**	**00 44 00.6**	**+0.1**
	7.9nm,0.3s,SNR=7.9							
EALB				Sn		**Sn**	**00 44 27.6**	**-0.5**
	7.4nm,0.2s,SNR=7.9							
EALB	**Alboran**	**2.24**	**121**	Pn		**Pn**	**00 44 00.6**	**+0.1**
EALB				Sn		**Sn**	**00 44 27.6**	**-0.5**
RSA	**Sarsar**	**2.28**	**189**	P		**Pn**	**00 44 00.0**	**-1.0**
RSA				S		**Sn**	**00 44 28.0**	**-0.9**
RSA	**Sarsar**	**2.28**	**189**	*e*P		**Pn**	**00 44 00.0**	**-1.0**
EVO	**Evora**	**2.50**	**305**	*e*Pn

	comp=E,1.8nm,0.2s,SNR=12								
ETOB					Sn	**Sn**	**00 44 55.7**	**-0.9**	
	comp=E,3.0nm,0.1s,SNR=6.7								
ETOB	**Tobarra**	**3.40**	**62**		Pn	**Pn**	**00 44 16.5**	**+0.1**	
ETOB					Sn	**Sn**	**00 44 55.7**	**-0.9**	
ETOB					Lg		00 45 12.9		
GUD	**Guadarrama**	**3.64**	**15**		Pn	**Pn**	**00 44 21.7**	**+2.0**	
	comp=E,0.5nm,0.2s,SNR=5.0								
GUD					Lg		00 45 16.0		
	comp=E,19nm,0.4s,SNR=7.2								
GUD	**Guadarrama**	**3.64**	**15**		Pn	**Pn**	**00 44 21.3**	**+1.6**	
	comp=E,0.5nm,0.2s,SNR=5.0								
GUD	**Guadarrama**	**3.64**	**15**		Pn	**Pn**	**00 44 21.3**	**+1.6**	
GUD					Lg		00 45 15.9		
CZD	**Col de Zad**	**4.10**	**176**		P	**Pn**	**00 44 27.0**	**+0.9**	
CZD					S	**Sn**	**00 45 10.5**	**-3.4**	
CZD	**Col de Zad**	**4.10**	**176**		*e*P	**Pn**	**00 44 27.0**	**+0.9**	
ETOR	**Torete**	**4.51**	**34**		Pn	**Pn**	**00 44 32.7**	**+1.0**	
	comp=E,4.8nm,0.2s,SNR=16								
ETOR					Sn	**Sn**	**00 45 22.4**	**-1.6**	
	comp=E,7.8nm,0.2s,SNR=8.8								
ETOR					Lg		00 45 47.8		
	comp=E,36nm,0.5s,SNR=5.0								
ETOR	**Torete**	**4.51**	**34**		Pn	**Pn**	**00 44 32.7**	**+1.0**	
	comp=E,8.9nm,0.2s,SNR=16								
ETOR					Sn	**Sn**	**00 45 22.4**	**-1.5**	
	comp=E,7.5nm,0.2s,SNR=8.8								
ETOR	**Torete**	**4.51**	**34**		Pn	**Pn**	**00 44 32.7**	**+1.0**	
ETOR					Sn	**Sn**	**00 45 22.4**	**-1.6**	
ETOR					Lg		00 45 47.8		
ECAL	**Calabor**	**4.91**	**348**		Pn	**Pn**	**00 44 39.9**	**+2.7**	
	comp=E,0.9nm,0.3s,SNR=7.9								
ECAL					Sn	**Sn**	**00 45 33.4**	**-0.5**	
	comp=E,2.9nm,0.3s,SNR=4.7								
ECAL					Lg		00 45 59.4		
	comp=E,45nm,0.6s,SNR=9.0								
ECAL	**Calabor**	**4.91**	**348**		Pn	**Pn**	**00 44 39.8**	**+2.6**	
	comp=E,0.9nm,0.3s,SNR=7.9								
ECAL					Sn	**Sn**	**00 45 32.9**	**-1.0**	
	comp=E,2.9nm,0.3s,SNR=4.7								
ECAL	**Calabor**	**4.91**	**348**		Pn	**Pn**	**00 44 39.8**	**+2.6**	
ECAL					Sn	**Sn**	**00 45 32.9**	**-1.0**	
ECAL					Lg		00 45 59.4		
EMOS	**Mosqueruela**	**5.02**	**49**		Pn	**Pn**	**00 44 40.9**	**+2.2**	
	comp=E,0.4nm,0.1s,SNR=7.9								
EMOS					Lg		00 46 04.6		
	comp=E,4.1nm,0.4s,SNR=7.9								
ELOB	**Lobios**	**5.16**	**337**		Pn	**Pn**	**00 44 40.8**	**+0.2**	
	comp=E,0.2nm,0.1s,SNR=5.7								
ELOB					Sn	**Sn**	**00 45 38.3**	**-1.6**	
	comp=E,1.6nm,0.1s,SNR=5.1								
ELOB					Lg		00 46 09.1		
	comp=E,19nm,0.5s,SNR=7.4								
ELOB	**Lobios**	**5.16**	**337**		Pn	**Pn**	**00 44 41.4**	**+0.8**	
	comp=E,1.4nm,0.3s,SNR=5.7								
ELOB					Sn	**Sn**	**00 45 38.2**	**-1.7**	
	comp=E,1.6nm,0.1s,SNR=5.1								
ELOB	**Lobios**	**5.16**	**337**		Pn	**Pn**	**00 44 41.4**	**+0.8**	
ELOB					Sn	**Sn**	**00 45 38.2**	**-1.7**	
ELOB					Lg		00 46 08.3		
ERTA	**Horta de San J**	**5.87**	**48**		Lg		00 46 30.2		
	comp=E,9.9nm,0.5s,SNR=7.9								
EARI	**Arriondas**	**6.16**	**1**		Pn	**Pn**	**00 44 55.1**	**+0.7**	
	comp=E,0.0nm,0.0s,SNR=4.0								
EARI					Sn	**Sn**	**00 46 01.0**	**-3.7**	
	comp=E,0.1nm,0.1s,SNR=4.0								
EARI					Lg		00 46 42.1		
	comp=E,6.0nm,0.5s,SNR=7.9								
ELAN	**Lanestosa**	**6.28**	**13**		Sn	**Sn**	**00 46 06.0**	**-1.4**	
	comp=E,0.0nm,0.1s,SNR=7.9								
ELAN					Lg		00 46 41.3		
	comp=E,3.1nm,0.5s,SNR=7.9								
EPON	**Pontenova**	**6.33**	**348**		Sn	**Sn**	**00 46 06.7**	**-2.1**	
	comp=E,0.6nm,0.1s,SNR=7.9								
EPON					Lg		00 46 45.3		
	comp=E,7.4nm,0.4s,SNR=7.9								
EALK	**Alkurruntz**	**6.77**	**25**		Pn	**Pn**	**00 45 03.4**	**+0.6**	
	comp=E,0.4nm,0.2s,SNR=7.9								
EALK					Sn	**Sn**	**00 46 17.3**	**-2.3**	
	comp=E,0.1nm,0.0s,SNR=5.7								
EALK	**Alkurruntz**	**6.77**	**25**		Pn	**Pn**	**00 45 03.3**	**+0.6**	
EALK	**Alkurruntz**	**6.77**	**25**		Pn	**Pn**	**00 45 03.4**	**+0.6**	
EALK					Sn	**Sn**	**00 46 15.6**	**-4.0**	
SJPF	**Ste Jean**	**6.77**	**27**		*e*Pn	**Pn**	**00 45 02.6**	**-0.2**	
SJPF					*e*Sn	**Sn**	**00 46 16.3**	**-3.4**	
	comp=E,3.5nm,0.6s								
SJPF	**Ste Jean**	**6.77**	**27**		Pn	**Pn**	**00 45 02.6**	**-0.2**	
SJPF					Sn	**Sn**	**00 46 16.3**	**-3.4**	
	comp=E,1.8nm,0.6s								
ETSF	**Etsaut**	**6.85**	**31**		*e*Pn	**Pn**	**00 45 03.4**	**-0.4**	
ETSF					*e*Sn	**Sn**	**00 46 18.3**	**-3.3**	
	comp=E,2.3nm,0.5s								
ETSF	**Etsaut**	**6.85**	**31**		Pn	**Pn**	**00 45 03.4**	**-0.4**	
ETSF					Sn	**Sn**	**00 46 18.3**	**-3.3**	
	comp=E,1.2nm,0.5s								
EPF	**Esparros**	**7.35**	**35**		*e*Pn	**Pn**	**00 45 11.2**	**+0.5**	

IDC 14 00:47:41.8±7.5, 559S×15345E, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/16, mbtmp4.2/4, Error ellipse: s-maj=120.7km s-min=73.9km az=38.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**23.42**	**231**	*e*P	P	00 52 54.3	+1.5
WRA	**Warramunga Arr**	**23.43**	**231**	P	P	00 52 53.1	+0.1
	5.7nm,0.5s,baz=56,slow=10.0,SNR=25						
ASAR	**Alice Springs**	**26.02**	**224**	P	P	00 53 16.8	+0.1
	1.3nm,0.3s,baz=57,slow=9.1,SNR=25						
STKA	**Stephens Creek**	**28.41**	**202**	P	P	00 53 37.5	-0.6
	6.6nm,1.2s,baz=17,slow=14,SNR=3.0						
FITZ	**Fitzroy Crossi**	**29.86**	**243**	*e*P	P	00 53 51.5	+0.3
	2.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**29.86**	**243**	P	P	00 53 51.5	+0.3
	0.4nm,0.3s,baz=81,slow=9.5,SNR=7.3						

IDC 14 00:47:55.4±1.0, 228S×125.49E, h0km, mb3.8/6, mb1 3.9/9, mb1mx3.8/21, mbtmp3.8/9, ML3.9/3, MS3.5/2, Ms1 3.5/2, ms1mx2.8/31, Error ellipse: s-maj=46.3km s-min=18.8km az=70.0

ISCJB 14 00:47:58.5±0.7, 237S±008×1254E±01, h33km, mb3.8/6, Error ellipse: s-maj=20.4km s-min=10.5km az=161.3

NEIC 14 00:48:00.7±0.7, 240S×12536E, h35km, mb4.7/1, Error ellipse: s-maj=20.2km s-min=10.2km az=67.0

DJA 14 00:48:02, 235S×12520E, h60km, MLv3.9/5

ISC 14 00:48:00.5±0.7, 244S±009×1254E±01, h35km, n14, σ0§94/14, mb3.8/6, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.20**	**245**	Pn	**Pn**	**00 49 29.8**	**+0.1**
	4.8nm,0.3s,baz=93,slow=4.0,SNR=12						
KAPI	**Kappang**	**6.20**	**245**	Pn	**Pn**	**00 49 29.8**	**+0.1**
BATI	**Baumata**	**7.91**	**193**	Pn	**Pn**	**00 49 57.7**	**+4.5**
	7.2nm,0.3s,baz=85,slow=3.1,SNR=4.3						
BATI				LR	LR	00 53 01.7	
	comp=Z,82nm,19.6s,baz=115,slow=38						
FITZ	**Fitzroy Crossi**	**15.57**	**179**	Pn	**Pn**	**00 51 36.6**	**-0.9**
	0.1nm,0.3s,baz=17,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**19.46**	**154**	P	**Pn**	**00 52 24.8**	**-1.0**
	0.6nm,0.3s,baz=334,slow=12,SNR=23						
WB2	**Warramunga Arr**	**19.47**	**154**	*e*P	**Pn**	**00 52 26.1**	**+0.3**
ASAR	**Alice Springs**	**22.65**	**159**	P	**P**	**00 53 00.3**	**+1.6**
	0.6nm,0.5s,mb3.3,baz=347,slow=12,SNR=8.8						
MKAR	**Makanchi Array**	**61.94**	**328**	P	**P**	**00 58 16.5**	**-0.3**
	0.7nm,0.4s,mb4.1,baz=115,slow=9.3,SNR=10						
ZALV	**Zalesovo Beam**	**65.52**	**335**	P	**P**	**00 58 39.9**	**-0.4**
	0.4nm,0.5s,mb3.7,baz=155,slow=4.8,SNR=2.7						
KURK	**Kurchatov**	**66.28**	**330**	P	**P**	**00 58 44.2**	**-1.0**
	1.5nm,0.6s,mb4.2,baz=136,slow=6.1,SNR=9.2						
KURK	**Kurchatov**	**66.28**	**330**	*e*P	**P**	**00 58 44.2**	**-1.0**
	3.6nm,0.5s,mb4.7						
BVAR	**Borovoye Array**	**71.80**	**329**	P	**P**	**00 59 18.5**	**-0.9**
	0.6nm,0.5s,mb3.8,baz=146,slow=11,SNR=3.8						
BVAR				LR	LR	01 33 52.0	
	comp=Z,150nm,21.4s,baz=152,slow=38						
AKTK	**Aktyubinsk**	**77.69**	**323**	P	**P**	**00 59 54.9**	**+1.3**
AKTO	**Aktyubinsk**	**77.69**	**323**	P	**P**	**00 59 54.9**	**+1.3**
	0.4nm,0.5s,mb3.6,baz=110,slow=8.0,SNR=4.4						

CSEM 14 00:53:40.4±0.1, 46.75N×1053E, h20km, ML2.6/9, Error ellipse: s-maj=1.4km s-min=1.1km az=142.0

ISCJB 14 00:53:40.8±0.3, 4679N±002×1055E±002, h3km±4km, Error ellipse: s-maj=3.4km s-min=2.5km az=145.7

VIE 14 00:53:40.9±0.1, 4679N×1053E, h10km±1km, mb1.5/6, ML1.9/11, Error ellipse: s-maj=1.0km s-min=0.6km az=163.0

ZUR 14 00:53:41.4, 4678N×1051E, h10km±2km, ML1.8/4

ROM 14 00:53:41.3±0.4, 4675N×1050E, h8km±3km, Md2.3/9, MI1.7/7, Error ellipse: s-maj=3.7km s-min=2.3km az=17.0

PRU 14 00:53:42.7, 4681N×1053E, h2km

ISC 14 00:53:41.5±0.3, 4678N±002×1053E±003, h5km±4km, n25, σ0§63/48, 11C-10D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUORN	**Ofenpass-Fuorn**	**0.25**	**228**	*e*Sg	**Pg**	**00 53 46.6**	**+0.3**
	312nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**0.25**	**228**	⇑*i*Pg	**Sg**	**00 53 50.0**	**+0.5**
	312nm,0.3s						
FETA	**Feichten**	**0.27**	**30**	*e*Pg	**Pg**	**00 53 47.0**	**+0.2**
	7.5nm,0.1s,SNR=163						
FETA				⇑*i*Sg	**Sg**	**00 53 50.7**	**+0.3**
	14nm,0.1s						
BRMO	**Bormio**	**0.33**	**200**	⇓*i*Pg	**Pg**	**00 53 47.8**	**0.0**
BRMO				Sg	**Sg**	**00 53 52.2**	**+0.2**
	63nm,0.3s						
DAVOX	**Davos/Dischmat**	**0.45**	**270**	⇑*i*Pg	**Pg**	**00 53 50.0**	**-0.1**
	112nm,0.2s						
DAVOX				*e*Sg	**Sg**	**00 53 56.1**	**+0.2**
	112nm,0.2s						
DAVOX	**Davos/Dischmat**	**0.45**	**270**	⇑*i*Pg	**Pg**	**00 53 50.0**	**-0.1**
	112nm,0.2s						
DAVOX				Sg	**Sg**	**00 53 56.2**	**+0.3**
BERNI	**Berninapass**	**0.51**	**224**	*e*Pg	**Pg**	**00 53 51.2**	**-0.1**
	241nm,0.2s						
BERNI				*e*Sg	**Sg**	**00 53 57.8**	**-0.1**
	241nm,0.2s						
APPI	**Appiano**	**0.57**	**122**	Pg	**Pg**	**00 53 52.9**	**+0.5**
APPI				Sg	**Sg**	**00 54 00.4**	**+0.6**
	59nm,0.1s						
DAVA	**Damuels**	**0.67**	**319**	⇑*e*Pg	**Pg**	**00 53 54.5**	**+0.1**
	2.7nm,0.1s,SNR=8.0						
DAVA				⇑*i*Sg	**Sg**	**00 54 03.5**	**+0.4**
	5.6nm,0.1s						
MOTA	**Moosalm**	**0.68**	**35**	⇑*e*Pg	**Pg**	**00 53 54.5**	**-0.1**
	5.3nm,0.2s,SNR=19						
MOTA				⇓*i*Sg	**Sg**	**00 54 03.8**	**+0.4**
	4.3nm,0.1s						
MOTA	**Moosalm**	**0.68**	**35**	Pg	**Pg**	**00 53 54.5**	**-0.1**
	5.3nm,0.2s,SNR=19						
MOTA				Sg	**Sg**	**00 54 03.8**	**+0.3**
	4.3nm,0.1s						
MABI	**Malga Bissina**	**0.73**	**181**	Pg	**Pg**	**00 53 55.3**	**-0.2**
MABI				Sg	**Sg**	**00 54 04.6**	**-0.3**
	10.0nm,0.1s						
VDL	**Val di Lei**	**0.80**	**248**	⇓*i*P	**Pg**	**00 53 56.1**	**-0.8**
	67nm,0.2s						
PLONS	**Plons/SG**	**0.83**	**289**	*e*Sg	**Sg**	**00 54 08.3**	**+0.1**
	31nm,0.4s						
TUE	**Stuetta**	**0.87**	**250**	Pg	**Pg**	**00 53 57.4**	**-0.8**
TUE				Sg	**Sg**	**00 54 10.3**	**+0.7**
	13nm,0.3s						
WTTA	**Wattenberg**	**0.90**	**57**	⇓*e*Pg	**Pg**	**00 53 58.2**	**-0.4**
	2.3nm,0.1s,SNR=7.4						
WTTA				⇓*i*Sg	**Sg**	**00 54 10.1**	**-0.2**
	1.7nm,0.1s						
WATA	**Walderalm**	**0.90**	**52**	⇑*i*Pg	**Pg**	**00 53 58.2**	**-0.6**
	2.6nm,0.1s						
WATA				⇓*i*Sg	**Sg**	**00 54 11.3**	**+0.8**
	2.0nm,0.1s						
MAGA	**Magasa**	**1.01**	**176**	Pg	**Pg**	**00 54 00.4**	**-0.5**
MAGA				Sg	**Sg**	**00 54 13.8**	**-0.2**
	31nm,0.3s						
CTI	**Castel Tesino**	**1.07**	**133**	Pg	**Pg**	**00 54 01.9**	**0.0**
CTI				Sg	**Sg**	**00 54 15.6**	**-0.2**
	23nm,0.4s						
ABTA	**Abfaltersbach**	**1.36**	**91**	⇓*e*Pg	**Pg**	**00 54 07.0**	**-0.5**
	1.9nm,0.2s,SNR=8.6						
ABTA				⇑*i*Sn	**Sn**	**00 54 24.8**	**-0.9**
ABTA				⇑*i*Sg	**Sg**	**00 54 26.1**	**+0.9**
	4.2nm,0.2s						
VAI	**Varese**	**1.53**	**234**	Pn	**Pn**	**00 54 10.2**	**+0.8**
	3.0nm,0.3s						
FVI	**Forni Avoltri**	**1.56**	**96**	Pn	**Pn**	**00 54 10.7**	**+0.8**
FVI				Sn	**Sn**	**00 54 30.9**	**+0.4**
	7.0nm,0.3s						
KBA	**Koelnbreinsper**	**1.95**	**80**	⇓*i*Pn	**Pn**	**00 54 14.6**	**-0.7**
KBA				⇓*i*Pg	**Pg**	**00 54 17.9**	**-0.9**
	2.0nm,0.2s						
KBA				⇓*i*Sn	**Sn**	**00 54 39.7**	**-0.4**
KBA				⇑*i*Sg	**Sg**	**00 54 45.5**	**+1.4**
	4.1nm,0.6s						
KHC	**Kasperske Hory**	**3.12**	**40**	*e*PG	**Pg**	**00 54 39.0**	**-2.1**
KHC				*e*SN	**Sn**	**00 55 09.6**	**+0.8**
KHC				*e*SG	**Sg**	**00 55 22.1**	**+0.6**
PRU	**Pruhonice**	**4.17**	**38**	*e*SG	**Sg**	**00 55 54.3**	**-1.1**

BJI 14 01:02:01.6, 431S×10171E, h41km, mB5.5, mb5.8, Ms5.2, Msz5.0

GCMT 14 01:02:05.3±0.1, 408S×10158E, h47km, MW5.4/82, Moment Tensor Solution. s82,c155; s79,c154; Duration: 1§3 Moment tensor: Scale 10^17 Nm; Mrr 1.22±.03; Mθθ -0.65±.02; Mφφ -0.57±.03; Mrθ 1.04±.03; Mθφ 0.81±.02; Mφr -0.57±.03; Best double couple: M0 1.78100×10^17 NP1:φs 326.00000°, δ26.00000°, λ111.00000°. NP2:φs 123.00000°, δ66.00000°, λ80.00000°. Principal axes: T 1.7030, Plg67.0000°, Azm215.0000°; N 0.1510, Plg9.0000°, Azm127.0000°; P -1.8580, Plg21.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

MOS 14 01:02:05.3±0.9, 364S×10190E, h33km, mb6.0/85, MS4.8/72 Error ellipse: s-maj=8.1km s-min=4.0km az=121.3

NEIC 14 01:02:05.3±1.5, 378S×10183E, h27km±10km, mb5.7/111, MS5.0/163, Error ellipse: s-maj=4.7km s-min=3.2km az=220.0

NEIC Felt [III] at Bengkulu and Kapahiang.

ISCJB 14 01:02:06.6±0.1, 376S±002×10174E±002, h44km, mb5.8/232, MS4.9/202, Error ellipse: s-maj=3.5km s-min=2.5km az=23.7

IDC 14 01:02:10.1±1.1, 374S×10202E, h64km±9km, mb5.4/27, mb1 5.4/28, mb1mx5.4/28, mbtmp5.4/28, MS4.6/27, Ms1 4.6/27, ms1mx4.6/30, Error ellipse: s-maj=11.5km s-min=6.8km az=48.0

SZGRF 14 01:02:10.3, 367S×10128E, h48km, mb5.6, MS4.7, Southern Sumatera, Indonesia

DJA 14 01:02:10, 383S×10163E, h48km, Mw5.7/39

ISC 14 01:02:08.4±0.1, 378S±002×10171E±002, h46km, h46km±.9km:pP-P, n1002, σ0§91/795, mb5.8/232, MS4.9/202, 184C-33D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLI	**Kotabumi**	**3.32**	**109**	P	**Pn**	**01 02 59.0**	**+1.2**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.46**	**10**	P	**Pn**	**01 02 58.3**	**-1.5**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.55**	**338**	P	**Pn**	**01 03 02.7**	**+1.7**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.35**	**41**	P	**Pn**	**01 03 14.0**	**+2.0**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**4.70**	**70**	P	**Pn**	**01 03 17.5**	**+0.7**
	0.0nm,0.0s						
SBJI	**Serang**	**4.98**	**118**	P	**Pn**	**01 03 23.4**	**+2.8**
	2μm,1.1s						
TNG	**Tangerang**	**5.46**	**116**	P	**Pn**	**01 03 31.4**	**+4.1**
	4μm,1.1s						
DBJI	**Dramaga**	**5.72**	**119**	P	**Pn**	**01 03 32.5**	**+1.6**
	2μm,1.3s						
SKJI	**Sukabumi**	**5.79**	**124**	P	**Pn**	**01 03 34.2**	**+2.4**
	2μm,1.0s						
MYKOM	**Kota Tinggi**	**5.92**	**21**	⇓P	**Pn**	**01 03 37.1**	**+3.4**
KGM	**Kluang**	**5.97**	**16**	⇑P	**Pn**	**01 03 37.8**	**+3.5**
TPI	**Tanjungpandan**	**6.02**	**80**	P	**Pn**	**01 03 36.0**	**+1.1**
	302nm,0.8s						
TRSI	**Tarutung**	**6.38**	**334**	P	**Pn**	**01 03 45.9**	**+5.9**
	3μm,0.8s						
LEM	**Lembang**	**6.61**	**118**	P	**Pn**	**01 03 45.6**	**+2.5**
	1μm,1.8s						
FRIM	**Kepong**	**6.96**	**359**	⇓P	**Pn**	**01 03 50.7**	**+2.7**
XMIS	**Christmas Isla**	**7.72**	**150**	*e*Pn	**Pn**	**01 03 50.1**	**-8.2**
XMIS				Sn	**Sn**	**01 05 13.2**	**-11**
IPM	**Ipoh**	**8.23**	**355**	⇑P	**Pn**	**01 04 08.0**	**+2.8**
BJII	**Banjamegara**	**8.71**	**114**	P	**Pn**	**01 04 14.0**	**+2.2**
	253nm,1.4s						
KTGM	**Kuala Trenggan**	**9.15**	**9**	⇑P	**Pn**	**01 04 21.1**	**+3.2**
COCO	**West Island**	**9.65**	**210**	⇑P	**Pn**	**01 04 21.8**	**-3.0**
	SNR=6.2						
COCO	**West Island**	**9.65**	**210**	*e*Pn	**Pn**	**01 04 19.7**	**-5.1**
COCO				*e*Sn	**Sn**	**01 06 01.1**	**-11**
PBKI	**Pangkalan Bun**	**10.00**	**84**	P	**Pn**	**01 04 36.1**	**+6.6**
	360nm,1.1s						
KSM	**Kuching**	**10.05**	**59**	⇓P	**Pn**	**01 04 32.4**	**+2.2**
KSM	**Kuching**	**10.05**	**59**	*e*Pn	**Pn**	**01 04 31.2**	**+1.0**
SJI	**Sawahan**	**10.75**	**112**	P	**Pn**	**01 04 40.1**	**+0.3**
	536nm,0.8s						
SNG	**Songkhla**	**10.93**	**354**	P	**Pn**	**01 04 43.0**	**+0.7**
	1μm,1.0s						
BSI	**Banda Aceh**	**11.22**	**325**	P	**Pn**	**01 04 45.3**	**-0.9**
	1μm,1.0s						
KRKI	**Karangkates**	**11.53**	**113**	P	**Pn**	**01 04 53.8**	**+3.3**
	492nm,0.7s						
SBUM	**Sibu**	**12.19**	**60**	⇓P	**Pn**	**01 05 04.5**	**+5.1**
PLKI	**Palangkaraya**	**12.31**	**83**	P	**Pn**	**01 05 05.7**	**+4.5**
	1μm,1.0s						
KMMI	**Kalianget**	**12.62**	**105**	P	**Pn**	**01 05 07.0**	**+1.6**
	350nm,1.5s						
BBKI	**Banjar Baru**	**13.11**	**89**	P	**Pn**	**01 05 17.0**	**+5.0**
	956nm,1.1s						
BTM	**Bintulu**	**13.31**	**59**	⇑P	**Pn**	**01 05 19.7**	**+5.0**
NBBI	**Negara**	**13.62**	**110**	P	**Pn**	**01 05 26.7**	**+7.7**
	485nm,0.9s						
IGBI	**Denpasar**	**14.26**	**111**	P	**Pn**	**01 05 26.9**	**-0.8**
	622nm,0.9s						
DNP	**Denpasar**	**14.27**	**111**	P	**Pn**	**01 05 29.0**	**+1.1**
	647nm,1.1s						
KHKI	**Kahang-Kahang**	**14.55**	**109**	P	**Pn**	**01 05 32.5**	**+0.9**
	208nm,1.0s						
MTNI	**Mataram**	**15.16**	**109**	P	**Pn**	**01 05 35.4**	**-4.2**
	304nm,0.9s						
SMKI	**Samarinda**	**15.83**	**78**	P	**Pn**	**01 05 52.4**	**+4.1**
	617nm,1.3s						
NNT	**Nongplab**	**16.38**	**353**	P	**Pn**	**01 05 53.8**	**-1.4**
KKM	**Kota Kinabalu**	**17.46**	**56**	⇓P	**Pn**	**01 06 11.3**	**+2.6**
KKM	**Kota Kinabalu**	**17.46**	**56**	*e*Pn	**Pn**	**01 06 10.3**	**+1.6**
PBA	**Port Blair**	**17.74**	**330**	*ex*	x	01 06 31.6	
TSM	**Tawau**	**18.02**	**64**	⇑P	**Pn**	**01 06 17.9**	**+2.2**
KAPI	**Kappang**	**18.03**	**95**	P	**Pn**	**01 06 14.9**	**-0.8**
	SNR=17						
KAPI	**Kappang**	**18.03**	**95**	P	**Pn**	**01 06 13.3**	**-2.4**
	4.2nm,0.3s,baz=272,slow=11,SNR=39						
KAPI				LR	LR	01 13 52.0	
	comp=Z,4μm,18.6s,baz=73,slow=40						
KAPI	**Kappang**	**18.03**	**95**	*e*Pn	**Pn**	**01 06 13.8**	**-2.0**
SDKM	**Sandakan**	**18.07**	**59**	⇑P	**Pn**	**01 06 17.9**	**+1.7**
PCI	**Palu**	**18.33**	**82**	P	**Pn**	**01 06 20.5**	**+1.1**
	839nm,1.4s						
KDM	**Kudat**	**18.45**	**55**	⇑P	**Pn**	**01 06 22.3**	**+1.5**
MSSI	**Masamba**	**18.62**	**87**	P	**Pn**	**01 06 18.8**	**-4.1**
	222nm,0.7s						
NST	**Nakhon Sawan**	**19.39**	**355**	P	**Pn**	**01 06 30.0**	**-2.0**
	75nm,0.9s						
KKTK	**Khon Kaen**	**20.01**	**3**	⇑P	**P**	**01 06 37.0**	**-0.4**
	5μm,0.4s						
BATP	**Bataraza**	**20.33**	**52**	*e*P	**P**	**01 06 42.3**	**+1.5**
BBSI	**Bau Bau**	**20.86**	**95**	P	**P**	**01 06 46.2**	**-0.4**
	444nm,1.0s						
KDI	**Kendari**	**20.86**	**91**	P	**P**	**01 06 46.9**	**+0.2**
	385nm,0.8s						
BDT	**Bhumibol Dam**	**21.05**	**353**	⇑P	**P**	**01 06 47.0**	**-1.7**
	84nm,1.2s,mb5.0						
PPR	**Puerto Princes**	**21.65**	**51**	*e*P	**P**	**01 07 00.0**	**+4.9**
CMAR	**Chiang Mai Arr**	**22.26**	**353**	P	**P**	**01 07 00.9**	**-0.6**
	211nm,0.8s,mb5.6,baz=185,slow=10,SNR=94						
CMAR				PcP	PcP	01 10 57.2	+0.6
	9.8nm,0.6s,baz=210,slow=3.0,SNR=6.0						
CMAR				ScP	ScP	01 14 30.1	-0.4
	6.3nm,0.9s,baz=217,slow=2.4,SNR=7.1						
CMAR				LR	LR	01 16 10.1	
	comp=Z,2μm,18.6s,MS4.6,baz=175,slow=38						
CMAR	**Chiang Mai Arr**	**22.26**	**353**	P	**P**	**01 07 01.0**	**-0.5**
CMAR						01 10 57.2	
NANT	**Nan**	**22.45**	**357**	⇑P	**P**	**01 07 01.0**	**-2.6**
	706nm,0.9s,mb6.1						
CHG	**Chiang Mai**	**22.61**	**353**	⇑P	**P**	**01 07 02.9**	**-2.4**
	203nm,0.8s,mb5.6						
CHTO	**Chiang Mai**	**22.61**	**353**	P	**P**	**01 07 05.3**	**+0.1**
	SNR=55						
CHTO	**Chiang Mai**	**22.61**	**353**	*e*P	**P**	**01 07 04.1**	**-1.2**
CHTO				*e*		01 10 56.2	
CHTO				pmax	pmax		
	comp=Z,155nm,0.8s,mb5.5						
CHTO				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.5						
CHTO	**Chiang Mai**	**22.61**	**353**	*e*P	**P**	**01 07 04.1**	**-1.2**
	comp=Z,155nm,0.8s,mb5.5						
CHTO				*e*PcP	PcP	01 10 56.2	-1.1
CH

VIS ex x 01 08 18.8
comp=Z,107nm,1.9s,mb5.1

BWNR Bhubaneshwar 28.57 327 eP **P** **01 07 59.0 -1.2**
BWNR eS **S** **01 12 46.0 +0.7**
CAUP Cauayan 28.61 43 eP **P** **01 08 00.3 -0.3**
KMI Kunming 28.74 2 P **P** **01 08 03.0 +1.4**
KMI AP pP 01 08 14.5 +0.7
KMI XP sP 01 08 19.8 +0.5
KMI PP PP 01 08 56.3 -11
KMI PCP PcP 01 11 11.8 +0.6
KMI S **S** **01 12 47.3 -0.6**
KMI XS sS 01 13 08.4 0.0
KMI AMB AMB
comp=Z,176nm,1.0s,mb5.8
KMI AMB AMB
comp=Z,405nm,4.1s
KMI LR LR
comp=N,3μm,17.4s,MS5.0
KMI LR LR
comp=E,2μm,16.9s,MS5.0
KMI LR LR
comp=Z,4μm,18.3s,MS5.0

APYP Conner 28.87 41 eP **P** **01 08 02.4 -0.4**
CAL Calcutta 29.24 334 eP **P** **01 08 07.3 +1.2**
CAL eS **S** **01 12 57.1 +1.2**
DGAR Diego Garcia 29.34 262 PFAKE 01 08 20.0 +13
DGAR LR LR
comp=Z,4μm,20.0s,MS5.0

IMP Imphal 29.38 345 eP **P** **01 08 06.0 -1.3**
IMP ex x 01 11 14.0
SWI Sorong 29.66 85 P **P** **01 08 08.1 -1.9**
comp=Z,152nm,1.0s,mb5.7

GYA Guiyang 30.43 9⇑*i*P **P** **01 08 15.8 -0.8**
GYA AP pP 01 08 25.3 -3.5
GYA XP sP 01 08 30.4 -3.9
GYA PP PP 01 09 15.8 -10
GYA PCP PcP 01 11 17.3 +1.8
GYA S **S** **01 13 09.5 -5.0**
GYA XS sS 01 13 34.3 -0.7
GYA SCP ScP 01 14 52.9 -1.5
GYA AMB AMB
comp=Z,140nm,1.3s,mb5.5
GYA AMB AMB
comp=Z,360nm,3.9s
GYA LR LR
comp=N,3μm,14.1s,MS5.2
GYA LR LR
comp=E,2μm,16.2s,MS5.2
GYA LR LR
comp=Z,3μm,16.2s,MS5.1

HYB Hyderabad 31.08 313 *i* P **P** **01 08 23.5 +1.1**
HYB Hyderabad 31.08 313 eP **P** **01 08 23.5 +1.1**
MUN Mundaring 31.18 156 eP **P** **01 08 23.0 -0.2**
BOK Bokaro 31.44 331 eP **P** **01 08 26.9 +1.3**
BOK AMb AMB 01 08 29.2
comp=Z,706nm,0.9s,mb6.5

KLBR Kellerberrin 31.52 153 eP **P** **01 08 28.3 +2.2**
comp=Z,22nm,0.9s,mb5.0

NWAO Narrogin (SRO) 32.44 155 P **P** **01 08 33.5 -0.7**
comp=Z,23nm,0.9s,mb5.0,baz=327,slow=5.2,SNR=6.5
NWAO LR LR 01 20 03.8
comp=Z,3μm,21.6s,MS5.0,baz=323,slow=33

NWAO Narrogin (SRO) 32.44 155 eP **P** **01 08 34.1 -0.1**
comp=Z,78nm,1.0s,mb5.5
NWAO LR LR
comp=Z,3μm,22.0s,MS5.0

NGP Nagpur 33.27 319 ex x 01 08 33.0
NGP AMb AMB 01 08 43.2
comp=Z,107nm,1.8s,mb5.5

ODAN Odare 33.45 336 eP **P** **01 08 44.2 +1.1**
comp=Z,883nm,0.9s,mb6.7

TAPN Taplejung 33.77 337 eP **P** **01 08 47.3 +1.4**
comp=Z,2μm,0.9s,mb7.0

RAMN Ramite 33.86 335 eP **P** **01 08 47.9 +1.3**
comp=Z,411nm,0.9s,mb6.4

NACB Ninganchiao 33.86 34 eP **P** **01 08 46.7 0.0**
comp=Z,308nm,0.9s,mb6.2

YHNB Yeheng 34.13 33 eP **P** **01 08 49.2 +0.2**
comp=Z,75nm,1.0s,mb5.6
YHNB LR LR
comp=Z,1μm,20.0s,MS4.6

TATO Taipei 34.44 33 eP **P** **01 08 49.7 -2.0**
TATO LR LR
comp=Z,811nm,20.0s,MS4.5

CD2 Chengdu 34.54 3⇑*i*P **P** **01 08 52.0 -0.5**
CD2 AP pP 01 09 01.8 -3.0
CD2 XP sP 01 09 05.8 -4.5
CD2 PP PP 01 10 09.8 -1.8
CD2 PCP PcP 01 11 25.1 -1.6
CD2 S **S** **01 14 19.0 +0.6**
CD2 PCS PcS 01 15 10.6 -2.6
CD2 SS SS 01 16 33.8 -16
CD2 SCS ScS 01 19 08.8 -2.5
CD2 AMB AMB
comp=Z,390nm,0.7s,mb6.5
CD2 AMB AMB
comp=Z,320nm,6.0s
CD2 LR LR
comp=N,5μm,19.2s,MS5.3
CD2 LR LR
comp=E,2μm,15.6s,MS5.3
CD2 LR LR
comp=Z,5μm,19.2s,MS5.3

JIRN Jiri 34.65 335 eP **P** **01 08 54.9 +1.4**
comp=Z,703nm,0.8s,mb6.6

ALBI Allahabad 34.77 327 eP **P** **01 08 53.5 -1.1**
LSA Lhasa 34.79 344 P **P** **01 08 55.4 +0.7**
LSA XP sP 01 09 12.5 0.0
LSA S **S** **01 14 21.8 -0.4**
LSA AMB AMB
comp=Z,370nm,0.9s,mb6.3
LSA LR LR
comp=N,720nm,26.7s,MS4.5
LSA LR LR
comp=E,970nm,31.2s,MS4.5
LSA LR LR
comp=Z,1μm,27.4s,MS4.6

LSA Lhasa 34.79 344 eP **P** **01 08 55.4 +0.7**
LSA eS **S** **01 14 22.6 +0.4**
LSA pmax pmax
comp=Z,386nm,1.0s,mb6.3
LSA MLR MLR
comp=Z,1μm,22.0s,MS4.7

LSA Lhasa 34.79 344 eP **P** **01 08 55.4 +0.7**
comp=Z,386nm,1.0s,mb6.3
LSA eS **S** **01 14 22.6 +0.4**
LSA LR LR
comp=Z,1μm,22.0s,MS4.7

PKI Pulchoki 34.91 334 eP **P** **01 08 56.5 +0.8**
comp=Z,207nm,0.7s,mb6.2

PKIN Phulchoki 34.92 334 eP **P** **01 08 56.5 +0.7**
comp=Z,160nm,0.7s,mb6.1

GUN Gumba 35.00 335 eP **P** **01 08 57.9 +1.4**
comp=Z,1μm,0.6s,mb6.9

DMN Daman 35.07 334 eP **P** **01 08 58.1 +0.9**
comp=Z,324nm,0.9s,mb6.3

KKN Kakani 35.15 334 eP **P** **01 08 58.7 +0.8**
comp=Z,535nm,0.8s,mb6.5

GKN Gorkha 35.62 334 eP **P** **01 09 02.7 +0.8**
comp=Z,411nm,0.6s,mb6.5

WRA Warramunga Arr 35.63 119 P **P** **01 09 00.4 -1.7**
comp=Z,42nm,0.6s,mb5.6,baz=301,slow=8.9,SNR=375
WRA S **S** **01 14 28.4 -7.1**
comp=Z,16nm,1.0s,baz=291,slow=17,SNR=12
WRA LR LR 01 25 34.0
comp=Z,527nm,20.6s,MS4.3,baz=330,slow=40

WRA Warramunga Arr 35.63 119 P **P** **01 09 00.4 -1.7**
WRA S **S** **01 14 28.4 -7.0**
WRAB Tennant Creek 35.64 119 eP **P** **01 09 00.8 -1.3**
WRAB eS **S** **01 14 31.1 -4.4**
WRAB pmax pmax
comp=Z,85nm,0.8s,mb5.7
WRAB MLR MLR
comp=Z,917nm,21.0s,MS4.5

WRAB Tennant Creek 35.64 119 eP **P** **01 09 00.8 -1.4**
comp=Z,85nm,0.8s,mb5.7
WRAB eS **S** **01 14 31.1 -4.4**
WRAB LR LR
comp=Z,917nm,21.0s,MS4.5

WB2 Warramunga Arr 35.64 119 eP **P** **01 09 00.3 -1.9**
WB2 eS **S** **01 14 29.5 -6.1**
KOLN Koldanda 35.90 332 eP **P** **01 09 05.4 +1.2**
WHN Wuhan 36.20 19 ⇑P **P** **01 09 07.1 +0.3**
WHN XP sP 01 09 19.4 -5.2
WHN PP PP 01 10 34.4 +4.5
WHN PCP PcP 01 11 31.5 -0.1
WHN S **S** **01 14 45.1 +1.3**
WHN AMB AMB
comp=Z,147nm,0.8s,mb6.0
WHN AMB AMB
comp=Z,599nm,8.5s
WHN LR LR
comp=N,2μm,15.6s,MS5.2
WHN LR LR
comp=E,3μm,19.4s,MS5.2
WHN LR LR
comp=Z,3μm,19.4s,MS5.1

DANN Dangsing 36.31 333 eP **P** **01 09 08.9 +1.1**
comp=Z,796nm,0.5s,mb6.9

FORT Forrest 36.59 140 eP **P** **01 09 10.1 -0.1**
comp=Z,20nm,0.6s,mb5.1
FORT *e* pP 01 09 22.2 -0.3

ASAR Alice Springs 36.83 125 P **P** **01 09 11.4 -0.9**
comp=Z,74nm,0.7s,mb5.6,baz=297,slow=7.9,SNR=683
ASAR PcP PcP 01 11 33.6 0.0
comp=Z,15nm,0.8s,baz=316,slow=3.1,SNR=5.3
ASAR S **S** **01 14 47.3 -6.4**
comp=Z,32nm,1.1s,baz=297,slow=14,SNR=16

XAN Xi'an 38.22 10 P **P** **01 09 23.5 -0.4**
XAN AP pP 01 09 32.6 -3.7
XAN XP sP 01 09 37.3 -4.4
XAN PP PP 01 10 54.4 +2.4
XAN AMB AMB
comp=Z,323nm,0.9s,mb6.0
XAN AMB AMB
comp=Z,265nm,8.6s
XAN LR LR
comp=N,196nm,17.5s,MS4.9
XAN LR LR
comp=E,2μm,18.3s,MS4.9
XAN LR LR
comp=Z,4μm,14.1s,MS5.4

PTH Pithoragarh 39.02 330 eP **P** **01 09 31.2 +0.5**
PTH *ex* x 01 15 22.8

NJ2 Nanjing 39.18 23 eP **P** **01 09 32.9 +1.0**
NJ2 AP pP 01 09 43.8 -0.6
NJ2 XP sP 01 09 47.3 -2.5
NJ2 PP PP 01 11 07.0 +4.5
NJ2 S **S** **01 15 27.0 -1.9**
NJ2 AMB AMB
comp=Z,340nm,0.8s,mb6.1
NJ2 AMB AMB
comp=Z,150nm,5.7s
NJ2 LR LR
comp=N,1μm,18.9s,MS5.0
NJ2 LR LR
comp=E,2μm,18.5s,MS5.0
NJ2 LR LR
comp=Z,2μm,18.5s,MS4.9

SSE Sheshan 39.34 27 P **P** **01 09 33.1 -0.2**
SSE XP sP 01 09 48.5 -2.7
SSE S **S** **01 15 32.3 +0.9**
SSE XS sS 01 15 51.8 -0.4
SSE SS SS 01 18 28.0 +1.4
SSE AMB AMB
comp=Z,58nm,1.0s,mb5.3
SSE AMB AMB
comp=Z,213nm,6.2s
SSE LR LR
comp=N,849nm,19.5s,MS4.8
SSE LR LR
comp=E,908nm,19.5s,MS4.8
SSE LR LR
comp=Z,1μm,21.7s,MS4.7

LZH Lanzhou 39.70 3⇑P **P** **01 09 36.8 +0.6**
LZH AP pP 01 09 47.0 -1.7
LZH XP sP 01 09 51.3 -2.8
LZH PP PP 01 11 13.0 +4.8
LZH PCP PcP 01 11 43.3 +1.0
LZH SCP ScP 01 15 27.0 -0.5
LZH S **S** **01 15 37.0 +0.3**
LZH SCS ScS 01 19 37.4 -2.7
LZH AMB AMB
comp=Z,241nm,1.2s,mb5.8
LZH AMB AMB
comp=Z,539nm,5.7s
LZH LR LR
comp=N,3μm,15.1s
LZH LR LR
comp=Z,5μm,17.2s,MS5.4

JOW Kunigami 39.81 39 P **P** **01 09 38.0 +0.7**
comp=Z,45nm,0.6s,mb5.4,baz=238,slow=10,SNR=8.4
JOW LR LR 01 25 22.4
comp=Z,1μm,21.1s,MS4.7,baz=177,slow=35

AJM Ajmer 39.88 320 eP **P** **01 09 37.7 -0.2**
AJM AMb AMB 01 09 40.4
comp=Z,98nm,0.8s,mb5.6

DDI Dehra Dun 40.76 328⇓*i*P **P** **01 09 43.0 -2.1**
DDI *ex* x 01 15 57.6

BHJ Bhuj 41.23 312 eP **P** **01 09 49.9 +0.8**
BHJ AMb AMB 01 09 52.9
comp=Z,149nm,0.9s,mb5.6

SMLA Simla 41.86 328 *i* P **P** **01 09 54.6 +0.4**
SMLA *ex* x 01 09 55.2
comp=Z,473nm,0.6s
SMLA ⇓*i*S **S** **01 16 08.9 -0.1**

COEN Coen 42.13 107 eP **P** **01 09 54.0 -2.6**
comp=Z,10nm,0.8s,mb4.5

SDNR Sundarnagar 42.26 328 eP **P** **01 09 58.0 +0.6**
SDNR *ex* x 01 12 04.0

TIA Tai'an 42.31 19⇑P **P** **01 09 56.8 -0.9**
TIA PCP PcP 01 11 50.5 -0.3
TIA S **S** **01 16 25.5 +10**
TIA AMB AMB
comp=Z,48nm,1.0s,mb5.1
TIA LR LR
comp=N,2μm,16.0s,MS5.1
TIA LR LR
comp=E,602nm,14.0s,MS5.1

TIY Taiyuan 42.46 13 P **P** **01 10 00.3 +1.4**
TIY XP sP 01 10 12.9 -4.0
TIY LR LR
comp=N,2μm,17.2s,MS5.2
TIY LR LR
comp=E,1μm,15.4s,MS5.2
TIY LR LR
comp=Z,3μm,19.2s,MS5.1

GTA Gaotai 43.01 358⇑P **P** **01 10 03.6 +0.3**
GTA AP pP 01 10 13.8 -2.1
GTA XP sP 01 10 17.8 -3.5
GTA PCP PcP 01 11 53.1 +0.1
GTA SCP ScP 01 15 40.9 +0.3
GTA S **S** **01 16 26.8 +1.2**
GTA XS sS 01 16 43.5 -3.1
GTA SS SS 01 19 33.3 -5.8
GTA SCS ScS 01 19 57.8 -2.2
GTA AMB AMB
comp=Z,166nm,1.2s,mb5.6
GTA AMB AMB
comp=Z,596nm,6.6s
GTA LR LR
comp=N,3μm,18.6s,MS5.2
GTA LR LR
comp=E,1μm,19.2s,MS5.2
GTA LR LR
comp=Z,4μm,18.6s,MS5.3

DLH Dalhousie 43.60 328 eP **P** **01 10 08.0 -0.2**
THN Thein Dam 43.65 328 eP **P** **01 10 07.2 -1.4**
THN eS **S** **01 16 38.6 +3.3**
BTO Baotou 44.82 9 eP **P** **01 10 16.8 -1.0**
HHC Hu-ho-hao-te 45.31 11⇑*i*P **P** **01 10 22.5 +0.7**
HHC AP pP 01 10 32.9 -1.5
HHC XP sP 01 10 37.3 -2.5
HHC PCP PcP 01 12 00.8 -0.1
HHC PP PP 01 12 09.8 +1.3
HHC SCP ScP 01 15 50.0 0.0
HHC PCS PcS 01 15 54.3 -0.4
HHC S **S** **01 17 00.8 +1.7**
HHC XS sS 01 17 18.5 -1.8
HHC SCS ScS 01 20 13.8 -0.8
HHC SS SS 01 20 16.6 -6.8
HHC AMB AMB
comp=Z,204nm,0.9s,mb6.0
HHC AMB AMB
comp=Z,752nm,6.5s
HHC LR LR
comp=N,2μm,16.3s,MS5.2
HHC LR LR
comp=E,1μm,16.0s,MS5.2
HHC LR LR
comp=Z,2μm,16.7s,MS5.1

PMG Port Moresby 45.46 99 eP **P** **01 10 21.2 -2.2**
PMG pmax pmax
comp=Z,84nm,0.9s
PMG MLR MLR
comp=Z,661nm,20.0s

PMG Port Moresby 45.46 99 eP **P** **01 10 21.2 -2.2**
comp=Z,84nm,0.9s,mb5.6
PMG LR LR
comp=Z,661nm,20.0s,MS4.6

BJT Baijiatuao 45.56 16 eP **P** **01 10 23.3 -0.4**
BJT pmax pmax
comp=Z,124nm,0.8s
BJT MLR MLR
comp=Z,2μm,20.0s

BJT Baijiatuao 45.56 16 eP **P** **01 10 23.3 -0.4**
comp=Z,124nm,0.8s,mb5.9
BJT eScP ScP 01 15 48.6 -2.4
BJT LR LR
comp=Z,2μm,20.0s,MS5.1

BJI Beijing 45.58 16 P **P** **01 10 23.9 0.0**
BJI XP sP 01 10 37.6 -4.3
BJI PCP PcP 01 12 01.8 0.0
BJI PP PP 01 12 12.8 +1.4
BJI SCP ScP 01 15 48.8 -2.3
BJI S **S** **01 17 02.6 -0.4**
BJI XS sS 01 17 22.0 -2.2
BJI AMB AMB
comp=Z,152nm,0.8s,mb6.0
BJI AMB AMB
comp=Z,562nm,4.5s
BJI LR LR
comp=N,2μm,17.7s,MS5.1
BJI LR LR
comp=E,904nm,15.3s,MS5.1
BJI LR LR
comp=Z,2μm,19.5s,MS5.0

MSEY Mahe Island 46.11 267 PFAKE 01 10 40.0 +11
MSEY LR LR
comp=Z,1μm,21.0s,MS4.9

GUMO Guam 46.17 67 P **P** **01 10 25.4 -3.5**
comp=Z,57nm,0.5s,mb5.7,baz=177,slow=13,SNR=7.1
GUMO LR LR 01 30 28.7
comp=Z,223nm,21.5s,MS4.1,baz=271,slow=37

GUMO Guam 46.17 67 eP **P** **01 10 25.5 -3.4**
DL2 Dalian 46.28 22⇑P **P** **01 10 28.5 -0.9**
DL2 S **S** **01 17 13.1 0.0**
DL2 AMB AMB
comp=Z,40nm,0.8s,mb5.4
DL2 AMB AMB
comp=Z,220nm,5.0s
DL2 LR LR
comp=N,520nm,17.4s,MS4.7
DL2 LR LR
comp=E,430nm,17.0s,MS4.7
DL2 LR LR
comp=Z,950nm,18.3s,MS4.8

CTA Charters Tower 46.30 114 eP **P** **01 10 28.9 -1.1**
comp=Z,140nm,0.9s,mb5.9
CTA *e* 01 10 46.7

CTA Charters Tower 46.30 114 P **P** **01 10 28.3 -1.7**
comp=Z,198nm,1.0s,mb6.0,baz=290,slow=9.2,SNR=105
CTA LR LR 01 32 41.2
comp=Z,638nm,20.7s,MS4.5,baz=153,slow=40

CTA Charters Tower 46.30 114 eP **P** **01 10 28.9 -1.1**
CTA *e* 01 10 46.7
CTA pmax pmax
comp=Z,140nm,0.9s

CTAO Charters Tower 46.30 114 eP **P** **01 10 28.3 -1.7**
CTAO pmax pmax
comp=Z,260nm,1.0s,mb6.1
CTAO MLR MLR
comp=Z,828nm,19.0s,MS4.7

CTAO Charters Tower 46.30 114 eP **P** **01 10 28.3 -1.7**
comp=Z,260nm,1.0s,mb6.1
CTAO LR LR
comp=Z,828nm,19.0s,MS4.7

STKA Stephens Creek 46.70 131 eP **P** **01 10 32.6 -0.3**
comp=Z,71nm,1.1s,mb5.5
STKA epP pP 01 10 46.6 +1.0
STKA eS **S** **01 17 18.9 -0.5**

STKA Stephens Creek 46.70 131 P **P** **01 10 32.7 -0.2**
comp=Z,88nm,0.9s,mb5.7,baz=304,slow=8.1,SNR=69
STKA LR LR 01 30 38.7
comp=Z,1μm,21.5s,MS4.9,baz=288,slow=37

INCN Inchon 47.13 27 PFAKE 01 10 50.0 +14
INCN LR LR
comp=Z,561nm,20.0s,MS4.5

KSRS Korea Array 47.71 28 P **P** **01 10 40.2 -0.4**
comp=Z,84nm,0.8s,mb5.8,baz=215,slow=8.1,SNR=193
KSRS PcP PcP 01 12 06.8 -2.6
comp=Z,15nm,0.8s,baz=215,slow=3.7,SNR=6.0
KSRS ScP ScP 01 15 57.0 -3.1
comp=Z,3.6nm,0.8s,baz=199,slow=7.8,SNR=8.9
KSRS LR LR 01 29 09.0
comp=Z,442nm,21.5s,MS4.4,baz=232,slow=34

KBL Kabul 48.97 324 eP **P** **01 10 50.0 -0.3**
KBL pmax pmax
comp=Z,62nm,0.6s,mb5.8

KBL Kabul 48.97 324 eP **P** **01 10 50.0 -0.3**
comp=Z,62nm,0.6s,mb5.8

WMQ Urumqi 49.03 347⇑*i*P **P** **01 10 51.4 +0.7**
WMQ AP pP 01 11 01.0 -2.4
WMQ XP sP 01 11 05.0 -3.8
WMQ PCP PcP 01 12 17.0 +3.0
WMQ PP PP 01 12 44.0 -0.6
WMQ S **S** **01 17 50.0 -2.0**
WMQ XS sS 01 18 09.0 -4.3
WMQ SCS ScS 01 20 37.0 -1.9
WMQ AMB AMB
comp=Z,34nm,0.7s,mb5.5
WMQ AMB AMB
comp=Z,910nm,3.6s
WMQ LR LR
comp=N,1μm,19.3s,MS5.1
WMQ LR LR
comp=E,2μm,17.8s,MS5.1
WMQ LR LR
comp=Z,2μm,22.4s,MS5.0

KSH Kashi 49.17 334⇑*i*P **P** **01 10 52.0 +0.2**
KSH *e*AP pP 01 11 01.0 -3.6
KSH *e*XP sP 01 11 05.0 -4.9
KSH *e*PCP PcP 01 12 14.1 -0.5
KSH *e*SCP ScP 01 16 05.0 -1.2
KSH *e*PCS PcS 01 16 09.1 -1.9
KSH *e*S **S** **01 17 51.6 -2.5**
KSH *e*XS sS 01 18 12.0 -3.4
KSH *e*SCS ScS 01 20 38.0 -2.0
KSH *e*SS SS 01 21 23.0 -3.0
KSH AMB AMB
comp=Z,1μm,1.9s,mb6.5
KSH LR LR
comp=N,507nm,4.6s
KSH LR LR
comp=E,445nm,4.5s
KSH LR LR
comp=Z,994nm,19.6s,MS4.8

WBK Wadi Bani Khal 49.29 304 ⇓P **P** **01 10 54.0 +1.0**
SNR=8.0

CBIJ Chichi jima 49.68 49 P **P** **01 10 54.7 -1.2**
comp=Z,158nm,0.9s,mb6.0,baz=265,slow=15,SNR=4.1

JMDO Jabal Madar 49.91 303⇑P **P** **01 10 58.2 +0.5**
SNR=6.1

SMDO Samad 50.25 304 ⇓P **P** **01 11 01.4 +1.0**
SNR=13

BIDO Bidbid 50.40 305⇑P **P** **01 11 02.4 +1.0**
SNR=25

BSY Bisya 50.82 303 ⇓P **P** **01 11 05.3 +0.7**
SNR=12

HOQ Hoqain 51.09 304⇑P **P** **01 11 07.9 +1.2**
SNR=21

ULHL Ulahol 51.31 336 P **P** **01 11 08.5 +0.6**
SNR=7.6

JHJ Hachijo jima 2 51.41 41 LR LR 01 31 04.2
comp=Z,554nm,21.9s,MS4.5,baz=168,slow=34

SONM Songino Array 51.56 4 P **P** **01 11 10.4 +0.7**
comp=Z,244nm,0.7s,mb6.2,baz=186,slow=9.6,SNR=1158
SONM ScP ScP 01 16 12.9 -3.4
comp=Z,1.1nm,0.7s,baz=309,slow=34,SNR=3.5
SONM LR LR 01 37 51.8
comp=Z,2μm,20.0s,MS5.0,baz=185,slow=42

ULN Ulaanbaatar 51.63 5 P **P** **01 11 11.2 +0.9**
SNR=63

ULN Ulaanbaatar 51.63 5 eP **P** **01 11 10.8 +0.5**
ULN pmax pmax

comp=Z,137nm,0.8s,mb5.9
ULN MLR MLR
comp=Z,1μm,20.0s,MS5.0
ULN Ulaanbaatar 51.63 5 *e*P **P 01 11 10.8 +0.5**
comp=Z,137nm,0.8s,mb5.9
ULN LR LR
comp=Z,1μm,20.0s,MS5.0
ARQ Araqi 51.64 304 ⇑P **P 01 11 11.5 +0.7**
SNR=16
CN2 Changchun 51.95 22 ⇑P **P 01 11 11.8 -0.9**
CN2 *e*XP sP 01 11 26.8 -4.1
CN2 *e*S **S 01 18 31.8 -0.8**
CN2 AMB AMB
comp=Z,320nm,0.9s,mb6.2
CN2 AMB AMB
comp=Z,660nm,4.0s
CN2 LR LR
comp=N,2μm,17.0s,MS5.2
CN2 LR LR
comp=E,940nm,17.0s,MS5.2
CN2 LR LR
comp=Z,1μm,17.0s,MS5.1
TKM2 Tokmak 2 52.13 336 *e*P **P 01 11 14.4 +0.3**
TKM2 pmax pmax
comp=Z,16nm,0.7s,mb5.1
TKM2 MLR MLR
comp=Z,705nm,22.0s,MS4.7
TKM2 Tokmak 2 52.13 336 P **P 01 11 14.5 +0.4**
SNR=163
TKM2 Tokmak 2 52.13 336 *e*P **P 01 11 14.3 +0.2**
comp=Z,16nm,0.7s,mb5.1
TKM2 LR LR
comp=Z,705nm,22.0s,MS4.7
KBK Karagaybulak 52.19 335 P **P 01 11 15.6 +1.1**
SNR=102
TOO Toolangi 52.25 136 *e*P **P 01 11 15.5 +0.4**
AML Almayashu 52.30 334 P **P 01 11 16.2 +0.8**
SNR=141
AML Almayashu 52.30 334 PFAKE
AML LR LR
comp=Z,431nm,20.0s,MS4.5
AAK Ala-Archa 52.36 335 P **P 01 11 16.3 +0.5**
SNR=42
FRU Bishkek 52.47 335 *e*P **P 01 11 16.5 -0.1**
FRU pmax pmax
comp=Z,270nm,2.0s,mb5.8
CHMS Chumysh 52.55 335 P **P 01 11 17.1 -0.1**
SNR=54
MAJO Matsushiro 52.61 37 *e*P **P 01 11 15.7 -2.0**
MAJO *e* 01 12 26.2
MAJO pmax pmax
comp=Z,28nm,0.7s,mb5.3
MAJO MLR MLR
comp=Z,332nm,20.0s,MS4.4
MAJO Matsushiro 52.61 37 *e*P **P 01 11 15.7 -2.0**
comp=Z,28nm,0.7s,mb5.3
MAJO *e*PcP PcP 01 12 26.2 -1.2
MAJO LR LR
comp=Z,332nm,20.0s,MS4.4
MAT Matsushiro 52.61 37 P **P 01 11 17.0 -0.7**
MAT *e*S **S 01 18 49.0 +7.2**
MJAR Matsushiro Arr 52.61 37 P **P 01 11 16.2 -1.5**
comp=Z,56nm,0.9s,mb5.5,baz=217,slow=7.6,SNR=107
MJAR PcP PcP 01 12 25.8 -1.6
comp=Z,12nm,0.8s,baz=204,slow=4.2,SNR=4.4
MJAR ScP ScP 01 16 18.3 -2.9
comp=Z,2.7nm,0.7s,baz=222,slow=5.2,SNR=6.5
MJAR LR LR 01 33 30.8
comp=Z,126nm,21.7s,MS3.9,baz=225,slow=36
MJAR Matsushiro Arr 52.61 37 P **P 01 11 16.2 -1.5**
MJAR 01 12 25.8
MJAR Matsushiro Arr 52.61 37 P **P 01 11 16.2 -1.5**
MJAR PcP PcP 01 12 25.8 -1.6
MJAR ScP ScP 01 16 18.3 -2.9
MJAR LR LR 01 33 30.8
EKS2 Erkin-Say 52.69 334 P **P 01 11 19.0 +0.8**
SNR=252
EKS2 Erkin-Say 52.69 334 *e*P **P 01 11 18.6 +0.4**
comp=Z,272nm,0.8s,mb6.2
EKS2 LR LR
comp=Z,705nm,22.0s,MS4.7
USP Ospenovka 52.87 335 P **P 01 11 19.7 +0.1**
SNR=140
MKAR Makanchi Array 53.20 343 P **P 01 11 21.6 -0.2**
comp=Z,240nm,0.7s,mb6.2,baz=145,slow=7.9,SNR=662
MKAR S **S 01 18 51.1 +1.7**
comp=Z,0.7nm,0.7s,baz=254,slow=16,SNR=2.6
MKAR LR LR 01 38 45.6
comp=Z,355nm,20.7s,MS4.4,baz=160,slow=41
MKAR Makanchi Array 53.20 343 P **P 01 11 21.6 -0.3**
MKAR S **S 01 18 51.1 +1.6**
CAN Canberra 53.76 132 *e*P **P 01 11 26.1 -0.2**
ZAK Zakamensk 53.96 1⇓ *i*P **P 01 11 27.3 -0.1**
ZAK *e* pP 01 11 39.6 -0.7
ZAK *e* 01 12 31.6
ZAK pmax pmax
comp=Z,49nm,0.9s,mb5.4
CNB Canberra Magne 54.03 132 *e*P **P 01 11 28.2 -0.1**
CNB *e*pP pP 01 11 41.2 0.0
VLA Vladivostok 54.05 27 *e*P **P 01 11 26.0 -2.2**
VLA pmax pmax
comp=Z,152nm,1.0s,mb5.9
VLA Vladivostok 54.05 27 *i* P **P 01 11 27.7 -0.5**
MDJ Mudanjiang 54.26 24 P **P 01 11 29.3 -0.4**
MDJ AP pP 01 11 38.5 -4.1
MDJ XP sP 01 11 42.3 -5.6
MDJ PP PP 01 13 30.9 -1.1
MDJ SCP ScP 01 16 29.3 +1.2
MDJ PCS PcS 01 16 32.9 +0.1
MDJ S **S 01 19 04.6 +0.7**
MDJ XS sS 01 19 20.3 -5.1
MDJ SCS ScS 01 21 16.3 +1.2
MDJ AMB AMB
comp=Z,121nm,1.0s,mb5.8
MDJ AMB AMB
comp=Z,277nm,7.0s
MDJ LR LR
comp=N,598nm,26.7s,MS4.6
MDJ LR LR
comp=E,559nm,29.7s,MS4.6
MDJ LR LR
comp=Z,1μm,27.5s,MS4.8
MDJ Mudanjiang 54.26 24 *e*P **P 01 11 29.1 -0.6**
comp=Z,98nm,0.8s,mb5.8
MDJ LR LR
comp=Z,1μm,22.0s,MS4.9
MOY Mondy 55.23 359 *e*P **P 01 11 37.1 +0.5**
MOY pmax pmax
comp=Z,94nm,2.2s,mb5.4
TLY Talaya 55.27 1 P **P 01 11 37.9 +1.1**
SNR=42
TLY Talaya 55.27 1 *e*P **P 01 11 37.6 +0.8**
TLY *e* pP 01 11 49.5 -0.3
TLY *e* 01 13 38.6
TLY *e*S **S 01 19 18.0 +0.8**
TLY pmax pmax
comp=Z,115nm,0.9s,mb5.9
TLY MLR MLR
comp=Z,1μm,17.0s,MS5.1
TLY Talaya 55.27 1 *e*P **P 01 11 37.1 +0.3**
comp=Z,128nm,0.8s,mb6.0
TLY LR LR
comp=Z,1μm,20.0s,MS5.0
IRK Irkutsk 55.85 2⇑ *i*P **P 01 11 40.9 -0.1**
IRK *e* 01 13 51.8
IRK pmax pmax
comp=Z,139nm,1.4s,mb5.8
TAU Tasmania Unive 56.13 141 *e*P **P 01 11 43.5 +0.2**
TAU pmax pmax
comp=Z,45nm,0.8s,mb5.5
TAU MLR MLR
comp=Z,1μm,22.0s,MS4.9
TAU Tasmania Unive 56.13 141 *e*P **P 01 11 43.5 +0.2**
comp=Z,44nm,0.8s,mb5.5
TAU LR LR
comp=Z,1μm,22.0s,MS4.9
CIT Chita 56.49 9 *e*P **P 01 11 45.6 0.0**
CIT *e* pP 01 11 59.0 +0.4
CIT pmax pmax
comp=Z,237nm,1.6s,mb6.0
KURK Kurchatov 57.79 343 ⇑P **P 01 11 55.4 +0.6**
SNR=107
KURK Kurchatov 57.79 343 P **P 01 11 53.7 -1.1**
comp=Z,89nm,0.6s,mb6.0,baz=166,slow=7.0,SNR=332
KURK PcP PcP 01 12 46.9 -0.2
comp=Z,41nm,0.6s,baz=138,slow=3.6,SNR=6.0
KURK S **S 01 19 49.9 -0.7**
comp=Z,3.3nm,1.0s,baz=135,slow=18,SNR=6.2
KURK Kurchatov 57.79 343 P **P 01 11 53.7 -1.1**
KURK 01 12 46.9
KURK S **S 01 19 49.9 -0.7**
KURK pmax pmax
comp=Z,89nm,0.6s,mb6.0
KURK smax
comp=N,3.0nm,1.0s
KURK Kurchatov 57.79 343 *e*P **P 01 11 54.1 -0.7**
comp=N,260nm,0.8s,mb6.3
KURK LR LR
comp=Z,848nm,22.0s,MS4.8
ABKT Ailbek 57.90 320 P **P 01 11 55.5 -0.3**
comp=Z,714nm,0.9s,mb6.7,SNR=38
HNR Honiara 58.06 99 LR LR 01 36 43.0
comp=Z,219nm,22.0s,MS4.2,baz=147,slow=36
HNR Honiara 58.06 99 PFAKE 01 12 10.0 +13
HNR LR LR
comp=Z,357nm,20.0s,MS4.5
KLR Kul'dur 58.87 23⇓ *i*P **P 01 11 57.8 -4.6**
KLR *e* 01 20 24.8
KLR pmax pmax
comp=E,110nm,1.0s
KLR pmax pmax
comp=Z,320nm,1.0s,mb6.3
ERM Erimo 59.08 35 *e*P **P 01 12 03.5 -0.5**
ERM pmax pmax
comp=Z,108nm,0.8s,mb5.9
ERM MLR MLR
comp=Z,577nm,22.0s,MS4.7
ERM Erimo 59.08 35 *e*P **P 01 12 03.5 -0.5**
comp=Z,108nm,0.8s,mb5.9
ERM LR LR
comp=Z,577nm,22.0s,MS4.7
ZAA0 Zalesovo Array 59.23 348 *e*P **P 01 12 03.9 -0.9**
ZALV Zalesovo Beam 59.23 348 P **P 01 12 04.2 -0.6**
comp=Z,714nm,0.8s,mb6.8,baz=167,slow=5.0,SNR=1638
ZALV S **S 01 20 06.9 -2.3**
comp=Z,7.3nm,0.8s,baz=153,slow=10.0,SNR=8.8
ZALV ScS ScS 01 21 45.9 -4.9
comp=Z,9.0nm,1.0s,baz=187,slow=7.5,SNR=5.3
ZALV LR LR 01 41 00.8
comp=Z,987nm,21.1s,MS4.9,baz=152,slow=39
ZALV PKPPKP 01 41 35.0
comp=Z,0.3nm,0.3s,baz=197,slow=4.6,SNR=4.1
ZALV Zalesovo Beam 59.23 348 P **P 01 12 04.2 -0.6**
ZALV S **S 01 20 06.9 -2.3**
ZALV 01 21 45.9
KRAR Krasnoyarsk 60.02 354*c* *i*P **P 01 12 09.3 -0.9**
KRAR pmax pmax
comp=Z,536nm,1.4s,mb6.4
ASAJ Asahikawa 60.13 33 P **P 01 12 09.9 -1.3**
comp=Z,96nm,0.7s,mb6.0,baz=237,slow=8.7,SNR=70
ASAJ LR LR 01 36 06.8
comp=Z,255nm,20.8s,MS4.3,baz=180,slow=34
NVS Novosibirsk 60.39 348 *i*P **P 01 12 11.3 -1.4**
NVS *e* pP 01 12 23.8 -2.0
NVS *i* S **S 01 20 20.6 -3.5**
NVS pmax pmax
comp=Z,206nm,1.0s,mb6.1
NVS pmax pmax
comp=N,173nm,1.3s
NVS pmax pmax
comp=E,108nm,1.1s
NVS smax
comp=E,71nm,1.4s
NVS smax
comp=N,36nm,1.6s
KBD Kabd 61.25 306 *e*P **P 01 12 19.2 +0.1**
baz=306
KBD AMb AMB 01 12 38.6
comp=Z,102nm,1.2s,mb5.8,baz=306
RDF Al-Radifah 61.27 306 *e*P **P 01 12 19.1 -0.1**
baz=306
RDF AMb AMB 01 12 35.1
comp=Z,188nm,1.3s,mb6.1,baz=306
UMR Umm Al-Rimmam 61.38 307 *e*P **P 01 12 20.2 +0.2**
baz=306
UMR AMb AMB 01 12 21.7
comp=Z,208nm,1.0s,mb6.2,baz=306
NAY Al-Naaiem 61.64 306 *e*P **P 01 12 21.8 0.0**
baz=306
MIB Mutribah 61.78 307 *e*P **P 01 12 22.9 +0.2**
baz=307
MIB AMb AMB 01 12 46.0
comp=Z,286nm,1.2s,mb6.3,baz=307
RST Umm Al-Ruwaisa 61.94 306 *e*P **P 01 12 23.6 -0.1**
baz=306
RST AMb AMB 01 12 38.5
comp=Z,166nm,1.2s,mb6.0,baz=306
YSS Yuzh-Sakhalins 62.10 31α *i*P **P 01 12 24.0 -0.5**
YSS *e* pP 01 12 36.0 -1.6
YSS *e*S **S 01 20 44.0 -2.2**
YSS *e*PPS 01 21 14.0
YSS pmax pmax
comp=Z,450nm,0.9s,mb6.6
YSS MLR MLR
comp=N,400nm,16.0s,MS4.7
YSS MLR MLR
comp=E,200nm,16.0s,MS4.7
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.7
YSS Yuzh-Sakhalins 62.10 31 *e*P **P 01 12 23.7 -0.8**
comp=Z,331nm,0.8s,mb6.5
YSS LR LR
comp=Z,156nm,20.0s,MS4.2
BOD Bodaibo 62.19 7 *e*P **P 01 12 23.6 -1.2**
BOD pmax pmax
comp=Z,113nm,0.7s,mb6.1
BVAR Borovoye Array 62.43 339 P **P 01 12 25.6 -1.0**
comp=Z,110nm,0.5s,mb6.2,baz=145,slow=9.0,SNR=623
BVAR PcP PcP 01 13 04.8 -0.8
comp=Z,31nm,0.6s,baz=142,slow=5.6,SNR=5.2
BRVK Borovoye 62.50 339 ⇑P **P 01 12 26.9 -0.1**
SNR=31
BRVK Borovoye 62.50 339 *e*P **P 01 12 25.7 -1.3**
BRVK pmax pmax
comp=Z,107nm,0.6s,mb6.2
BRVK MLR MLR
comp=Z,554nm,22.0s,MS4.7
BRVK Borovoye 62.50 339 *e*P **P 01 12 25.7 -1.3**
comp=Z,107nm,0.6s,mb6.2
BRVK LR LR
comp=Z,554nm,22.0s,MS4.7
CASY Casey 62.70 176 *e*P **P 01 12 28.5 +0.4**
CASY LR LR
comp=Z,1μm,21.0s,MS5.1
MIR Mirnyy 62.96 184⇑ *i*P pP 01 12 44.0 +1.0
MIR pmax pmax
comp=Z,200nm,1.0s,mb6.2
CLNS Chul'man 63.29 14 *e*P **P 01 12 31.8 -0.4**
CLNS *e**PP pP 01 12 48.7 +3.4
CLNS *e* 01 13 08.6
CLNS *e*PPP 01 16 18.4
CLNS *e*S **S 01 20 56.3 -4.4**
CLNS *e* 01 22 14.0
CLNS pmax pmax
comp=Z,152nm,0.8s,mb6.2
CLNS pmax pmax
comp=E,64nm,0.9s
CLNS pmax pmax
comp=N,75nm,0.9s
CLNS smax
comp=N,65μm,16.9s
CLNS smax
comp=E,281μm,17.7s
CLNS MLR MLR
comp=Z,1μm,17.0s,MS5.1
CLNS MLR MLR
comp=N,723nm,16.0s,MS5.0
CLNS MLR MLR
comp=E,388nm,14.0s,MS5.0
KMBO Kilima Mbogo 64.44 271 P **P 01 12 42.2 +1.5**
comp=E,5.6nm,0.8s,mb4.6,baz=46,slow=9.8,SNR=6.0
KMBO LR LR 01 35 26.5
comp=E,584nm,21.5s,MS4.7,baz=93,slow=31
KMBO Kilima Mbogo 64.44 271 *e*P **P 01 12 42.2 +1.5**
KMBO pmax pmax
comp=Z,21nm,1.3s
KMBO MLR MLR
comp=Z,582nm,21.0s
KMBO Kilima Mbogo 64.44 271 *e*P **P 01 12 42.2 +1.5**
comp=Z,21nm,1.3s,mb5.0
KMBO LR LR
comp=Z,582nm,21.0s,MS4.8
DZM Mont Dzumac 65.19 112 *e*P **P 01 12 44.9 -0.5**
BHD Baghdad 65.45 309 *ex* x 01 12 43.0
BHD *ex* x 01 21 25.0
AKTK Aktyubinsk 65.73 331 P **P 01 12 47.4 -0.9**
AKTO Aktyubinsk 65.73 331 P **P 01 12 47.4 -0.9**
comp=Z,52nm,0.8s,mb5.6,baz=125,slow=8.0,SNR=181
MAK Makhachkala 67.42 320 *e*P **P 01 12 57.4 -1.8**
MAK *e* 01 15 27.7
MAK *e*PPP 01 17 05.8
MAK *e*S S 01 21 50.8 -1.0
MAK *i* 01 22 46.2
MAK pmax pmax
comp=Z,459nm,1.2s,mb6.4
MSL Mosul 67.62 312 *i* x x 01 13 03.0
MSL *i* x x 01 13 13.5
MSL *ex* x 01 21 53.0
HAKT HAKKARI 67.64 313 *i* P **P 01 12 59.8 -0.9**
GNI Garni 67.98 316 P **P 01 13 04.1 +1.2**
SNR=12
GNI Garni 67.98 316 *e*P **P 01 13 03.2 +0.4**
GNI pmax pmax
comp=Z,117nm,0.8s
GNI MLR MLR
comp=Z,329nm,22.0s
GNI Garni 67.98 316 *e*P **P 01 13 03.2 +0.4**
comp=Z,117nm,0.8s,mb6.0
GNI LR LR
comp=Z,329nm,22.0s,MS4.5
DGRG David-gareji 68.12 318 P **P 01 13 04.8 +1.2**
DRV Dumont d'Urvil 68.16 165 P **P 01 13 12.0 +8.5**
TVAN Van 68.25 314 *i* P **P 01 13 04.3 -0.3**
DYDN Diyadin 68.46 315 *i* P **P 01 13 07.0 +1.2**
MTA Mtatsminda 68.62 318 P **P 01 13 07.3 +0.5**
TBLG Delisi 68.67 318 P **P 01 13 07.7 +0.6**
SVE Sverdlovsk 68.97 337⇓ *e*P **P 01 13 08.5 -0.1**
SVE *e* pP 01 13 22.2 +0.3
SVE *e*PPP 01 17 18.7
SVE *e*S S 01 22 10.7 +1.0
SVE pmax pmax
comp=Z,316nm,1.0s,mb6.2
SVE MLR MLR
comp=Z,570nm,22.0s,MS4.8
MAW Mawson 69.01 195 *e*P **P 01 13 09.5 +0.8**
comp=Z,9.3nm,0.8s,mb4.8
MAW *e*pP pP 01 13 23.3 +1.3
MAW Mawson 69.01 195 P **P 01 13 09.9 +1.1**
comp=Z,9.5nm,0.7s,mb4.8,baz=26,slow=6.5,SNR=21
MAW LR LR 01 37 15.1
comp=Z,2μm,18.7s,MS5.4,baz=38,slow=30
MAW PKP2bc 01 41 16.4
comp=Z,12nm,1.0s,baz=248,slow=3.7,SNR=15
MAW Mawson 69.01 195 *e*P **P 01 13 09.5 +0.8**
MAW *e**PP pP 01 13 23.3 +1.3
MAW pmax pmax
comp=Z,9.0nm,0.8s
YAK Yakutsk 69.03 14*c* *i*P **P 01 13 07.5 -1.4**
YAK *e**PP pP 01 13 17.5 -4.7
YAK *e* 01 13 28.0
YAK *e* 01 15 40.3
YAK *e*S S 01 22 11.9 +1.6
YAK *e* 01 22 58.4
YAK pmax pmax
comp=E,66nm,1.0s
YAK pmax pmax
comp=N,106nm,1.2s
YAK pmax pmax
comp=Z,622nm,1.2s,mb6.4
YAK pmax pmax
comp=Z,194nm,3.8s
YAK smax
comp=N,100μm,2.7s
YAK smax
comp=E,164μm,4.2s
YAK MLR MLR
comp=Z,932nm,16.0s,MS5.1
YAK MLR MLR
comp=E,450nm,18.0s,MS5.0
YAK MLR MLR
comp=N,603nm,14.0s,MS5.0
YAK Yakutsk 69.03 14 *e*P **P 01 13 06.9 -2.0**
comp=N,662nm,0.8s,mb6.6
YAK LR LR
comp=Z,357nm,19.0s,MS4.6
GOR Gori 69.21 318 P **P 01 13 10.9 +0.5**
ARU Arti 69.51 336*c* *i*P **P 01 13 11.2 -0.8**
ARU *e* 01 13 33.6
ARU *e* 01 15 42.1
ARU *e*PPP 01 17 29.9
ARU *e*S S 01 22 17.0 +0.9
ARU *e*SS SS 01 26 42.7 -1.9
ARU pmax pmax
comp=Z,186nm,1.0s,mb6.0
ARU MLR MLR
comp=Z,740nm,22.0s,MS4.9
ARU Arti 69.51 336 *e*P **P 01 13 11.1 -0.8**
comp=Z,149nm,0.9s,mb5.9
ARU LR LR
comp=Z,583nm,20.0s,MS4.8
BEST Besiri 69.55 313 *i* P **P 01 13 13.8 +1.1**
MARD Mardin 69.69 312 *i* P **P 01 13 13.6 0.0**
ONI Oni 69.90 318 P **P 01 13 15.5 +0.8**
HOMI Horasan 69.92 315 *i* P **P 01 13 15.0 +0.1**
BNGL BINGOL 70.03 314 *i* P **P 01 13 16.3 +0.7**
ERZM Erzurum 70.25 315 *i* P **P 01 13 17.7 +0.8**
KOPT Kop Dagi 70.91 315 *i* P **P 01 13 21.7 +0.8**
KIV Kislovodsk 71.00 319 P **P 01 13 22.0 +0.6**
SNR=20
KIV Kislovodsk 71.00 319*c* *i*P **P 01 13 21.7 +0.3**
KIV *e* pP 01 13 36.1 +1.4
KIV *e* 01 15 57.4
KIV *i* S 01 22 35.1 +1.1
KIV pmax pmax
comp=Z,185nm,1.1s,mb5.9
KIV MLR MLR
comp=Z,200nm,21.0s,MS4.3
KIV Kislovodsk 71.00 319⇓ *i*P **P 01 13 21.6 +0.2**
KIV Kislovodsk 71.00 319 *e*P **P 01 13 21.4 0.0**
comp=Z,158nm,0.9s,mb6.0
KIV LR LR
comp=Z,166nm,20.0s,MS4.3
SKR Severo-Kuril's 71.39 33 *e*P **P 01 13 22.0 -1.6**
SKR *e* pP 01 13 35.5 -1.5
SKR *e* 01 13 49.5
SKR pmax pmax
comp=Z,130nm,0.6s,mb6.0
SKR pmax pmax
comp=N,2μm,4.0s
SKR pmax pmax
comp=E,2μm,4.0s
SKR pmax pmax
comp=Z,2μm,4.0s
ATAB Bozova 71.60 311 *i* P **P 01 13 26.0 +0.8**
MALT Malatya 71.79 312 *e*P **P 01 13 24.4 -1.9**
MALT pmax pmax
comp=Z,66nm,0.9s,mb5.6
MALT MLR MLR
comp=Z,205nm,20.0s,MS4.4
MALT Malatya 71.79 312⇑ *i*P **P 01 13 25.2 -1.1**
MALT Malatya 71.79 312 *e*P **P 01 13 24.4 -1.9**
comp=Z,66nm,0.9s,mb5.6
MALT LR LR
comp=Z,205nm,20.0s,MS4.4
GZT Gaziantep 72.11 311 *i* P **P 01 13 28.9 +0.7**
BHL Bhannes 72.52 307⇑ *e*P **P 01 13 31.9 +1.2**
SOC Sochi 72.81 318*c* *i*P **P 01 13 31.5 -0.7**
SOC *i* pP 01 13 44.7 -1.0
SOC *e*PPP 01 17 54.5
SOC *e*S S 01 22 49.8 -5.1
SOC *e* 01 23 33.1
SOC pmax pmax
comp=Z,146nm,0.7s,mb6.0
SOC pmax pmax
comp=Z,209nm,0.9s,mb6.1
GRSN GIRESUNGRSN 72.82 315 *i* P **P 01 13 31.1 -1.3**
LSZ Lusaka 73.13 255 LR LR 01 40 19.4
comp=Z,1μm,22.0s,MS5.1,baz=165,slow=31
LSZ Lusaka 73.13 255 *e*P **P 01 13 35.3 +0.6**
LSZ pmax pmax
comp=Z,30nm,0.9s,mb5.2
LSZ MLR MLR
comp=Z,1μm,22.0s,MS5.2
LSZ Lusaka 73.13 255 *e*P **P 01 13 35.3 +0.6**
comp=Z,30nm,0.9s,mb5.2
LSZ LR LR
comp=Z,1μm,22.0s,MS5.2
YURE YUREGİR 73.41 310 *i* P **P 01 13 36.6 +0.6**

PEA0B Petropavlovsk- 73.48 31 *eP* **P 01 13 34.5 -1.4**
PETK Petropavlovsk- 73.48 31 P **P 01 13 34.8 -1.2**
comp=Z,32nm,0.5s,mb5.5,baz=315,slow=0.1,SNR=129
PETK LR LR 01 48 22.6
comp=Z,263nm,19.2s,MS4.5,baz=252,slow=38
PET Petropavlovsk 73.94 32⇑ *iP* **P 01 13 37.5 -1.2**
PET *e* pP 01 13 53.1 +1.0
PET *eS* S 01 23 05.6 -1.6
PET pmax pmax
comp=Z,300nm,3.4s
PET pmax pmax
comp=Z,226nm,0.6s,mb6.3
PET MLR MLR
comp=Z,400nm,19.0s,MS4.7
PET Petropavlovsk 73.94 32 *eP* **P 01 13 37.7 -0.9**
comp=Z,143nm,0.6s,mb6.1
PET LR LR
comp=Z,138nm,19.0s,MS4.3
MEST Erdemli 74.47 309 *i* P **P 01 13 41.8 -0.4**
CSS Prodhromos 74.66 308 *eP* **P 01 13 43.1 -0.2**
comp=Z,166nm,0.9s,mb6.0
CSS *ep*P pP 01 13 57.6 +0.9
VRHR Novokhopersk 74.75 325 *eP* **P 01 13 42.7 -0.7**
VRHR *e**SP sP 01 13 56.4 -5.7
VRHR *eS* S 01 23 11.8 -4.7
VRHR pmax pmax
comp=Z,500nm,0.7s,mb6.5
VRHR pmax pmax
comp=N,20nm,0.4s
VRHR pmax pmax
comp=E,120nm,0.8s
VRHR smax
comp=E,390nm,2.7s
VRHR smax
comp=Z,160nm,2.7s
VRHR smax
comp=N,170nm,1.1s
SNZO South Karori 74.76 132 PFAKE 01 13 50.0 +6.2
SNZO LR LR
comp=Z,1μm,22.0s,MS5.2
ANN Anapa 74.79 318 *eP* pP 01 13 56.4 -0.9
ANN *e* 01 14 05.8
ANN *eS* SKSac 01 23 44.3 -4.5
ANN pmax pmax
comp=Z,91nm,0.9s,mb5.7
CDAG Cicekdag 75.20 313 *i* P **P 01 13 46.1 -0.3**
CTKT Corum 75.21 314 *i* P **P 01 13 46.2 -0.1**
ERMK Ermenek 75.44 309 *i* P **P 01 13 48.1 +0.4**
BR131 Keskin Array S 75.77 312⇑ *iP* **P 01 13 49.0 -0.6**
comp=Z,65nm,0.7s,mb5.7
VSR Storozhevoye 76.20 325 *eP* **P 01 13 51.1 -0.7**
VSR *e**SP sP 01 14 04.1 -6.4
VSR *eS* S 01 23 27.4 -5.1
VSR pmax pmax
comp=Z,110nm,0.7s,mb5.9
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,80nm,0.8s
VSR smax
comp=N,220nm,2.5s
VSR smax
comp=Z,130nm,5.4s
VSR smax
comp=E,160nm,3.0s
BOSA Boshof 76.31 242 P **P 01 13 53.0 0.0**
comp=E,12nm,0.7s,mb5.0,baz=93,slow=5.0,SNR=34
BOSA LR LR 01 41 18.7
comp=E,1μm,20.8s,MS5.2,baz=94,slow=31
BOSA Boshof 76.31 242 P **P 01 13 53.0 0.0**
BOSA LR LR 01 41 18.7
VOR Voronezh 76.39 325 *eP* **P 01 13 52.0 -0.8**
VOR pmax pmax
comp=Z,300nm,1.5s,mb6.0
ANTO Ankara 76.44 312 P **P 01 13 53.7 +0.3**
SNR=13
ANTO Ankara 76.44 312 *eP* **P 01 13 52.8 -0.6**
ANTO pmax pmax
comp=Z,98nm,0.9s,mb5.7
ANTO MLR MLR
comp=Z,241nm,19.0s,MS4.5
ANTO Ankara 76.44 312⇑ *iP* **P 01 13 53.3 -0.1**
ANTO Ankara 76.44 312 *eP* **P 01 13 52.8 -0.6**
comp=Z,98nm,0.9s,mb5.7
ANTO LR LR
comp=Z,241nm,19.0s,MS4.5
BALT Daday 76.50 314 *i* P **P 01 13 53.5 -0.2**
KDHN Kadinhani 76.57 311 *i* P **P 01 13 53.3 -0.8**
SYO Syowa Base 76.75 199⇑ *eP* **P 01 13 53.4 -1.2**
SYO Syowa Base 76.75 199⇑ *eP* **P 01 13 57.6 +3.0**
SYO Syowa Base 76.75 199⇓ *iP* pP 01 14 08.4 +0.3
SIM Simferopol' 77.06 318*c iP* **P 01 13 56.6 -0.1**
SIM *PP pP 01 14 10.5 +0.3
SIM *eS* S 01 23 41.0 -1.1
SIM pmax pmax
comp=Z,173nm,0.8s,mb6.0
SGKT Sivrigoynuk 77.18 313 *i* P **P 01 13 54.2 -3.3**
TIXI Tiksi 77.34 9*c iP* **P 01 13 55.8 -2.0**
TIXI *e* pP 01 14 08.1 -3.2
TIXI *e* 01 16 49.4
TIXI pmax pmax
comp=Z,92nm,0.9s,mb5.7
TIXI MLR MLR
comp=Z,2μm,17.0s,MS5.4
TIXI Tiksi 77.34 9 *eP* **P 01 13 55.5 -2.2**
comp=Z,91nm,0.9s,mb5.7
TIXI LR LR
comp=Z,2μm,19.0s,MS5.4
ISP Isparta 77.61 310 *eP* **P 01 14 00.2 +0.2**
ISP pmax pmax
comp=Z,34nm,0.8s,mb5.3
ISP MLR MLR
comp=Z,275nm,22.0s,MS4.5
ISP Isparta 77.61 310⇑ *iP* **P 01 13 59.8 -0.2**
ISP Isparta 77.61 310 *eP* **P 01 14 00.2 +0.2**
comp=Z,34nm,0.8s,mb5.3
ISP LR LR
comp=Z,275nm,22.0s,MS4.5
ESKT Eskisehir 77.78 312 *i* P **P 01 14 00.1 -0.8**
AKAS Kas 77.91 308 *i* P **P 01 13 60.0 -1.8**
HENT Hendek 78.09 313 *i* P **P 01 14 01.8 -0.8**
GOLH Golhisar 78.19 309 *i* P **P 01 13 57.6 -5.6**
TURN Turunc 78.85 309 *i* P **P 01 14 07.5 +0.6**
MOS Moscow 78.89 329⇓ *iP* **P 01 14 05.6 -1.1**
MOS *e* pP 01 14 15.9 -4.3
MOS *e* 01 17 01.6
MOS *eS* S 01 23 57.1 -4.3
MOS *e* 01 24 19.2
MOS pmax pmax
comp=Z,281nm,1.0s,mb6.2
MOS pmax pmax
comp=Z,500μm,1.4s
OBN Obninsk 79.19 328*c iP* **P 01 14 08.3 -0.1**
OBN *e* pP 01 14 22.2 +0.3
OBN *e* 01 14 27.1
OBN *e* 01 17 07.7
OBN *eS* S 01 24 02.1 -2.6
OBN pmax pmax
comp=Z,348nm,1.2s,mb6.2
OBN MLR MLR
comp=Z,400nm,24.0s,MS4.7
OBN Obninsk 79.19 328 *eP* **P 01 14 08.1 -0.3**
comp=Z,204nm,0.8s,mb6.1
OBN LR LR
comp=Z,417nm,20.0s,MS4.8
ULDT Uludag 79.22 312 *i* P **P 01 14 08.5 -0.4**
DEMI Demirci 79.27 311 *i* P **P 01 14 08.8 -0.3**
DURS Dursunbey 79.58 311 *i* P **P 01 14 09.9 -0.9**
KARP Karpathos 79.69 307 *eP* **P 01 14 12.1 +0.6**
BDRM Kayabasi 79.80 309 *i* P **P 01 14 10.4 -1.6**
AKHS Akhisar 79.91 310 *i* P **P 01 14 11.4 -1.2**
KDAG Bornova 80.22 310 *i* P **P 01 14 14.5 +0.2**
BALY Balya 80.26 311 *i* P **P 01 14 14.5 0.0**
SUR Sutherland 80.31 238 *eP* **P 01 14 16.7 +1.7**
comp=Z,126nm,0.9s,mb5.8
SUR *ep*P pP 01 14 30.7 +2.2
SUR LR LR
comp=Z,793nm,22.0s,MS5.0
TLCR 80.72 317⇑ *iP* **P 01 14 17.3 +0.5**
TLCR 80.72 317⇑ P **P 01 14 17.2 +0.4**
PSN Preselentsi 80.78 315 P **P 01 14 17.3 +0.1**
TIRR Tirgusor 80.81 316 *eP* **P 01 14 17.1 -0.2**
TIRR *e**PP pP 01 14 31.2 +0.3
TIRR pmax pmax
comp=Z,71nm,0.8s,mb5.7
TIRR Tirgusor 80.81 316⇓ *iP* **P 01 14 17.3 0.0**
TIRR Tirgusor 80.81 316 *eP* **P 01 14 17.1 -0.2**
comp=Z,71nm,0.8s,mb5.7
TIRR *ep*P pP 01 14 31.2 +0.3
NPS Neapolis 80.88 306 *eP* **P 01 14 15.9 -2.0**
LAST Lasithi 80.96 306 *eP* **P 01 14 21.1 +2.8**
CHOS Chios island 81.15 310 *eP* **P 01 14 20.2 +0.9**
PRK Paraskevi 81.17 310 *eP* **P 01 14 19.2 -0.2**
PRK Paraskevi 81.17 310 *eP* **P 01 14 19.0 -0.4**
KIS Kishinev 81.19 319*α iP* **P 01 14 19.0 -0.3**
KIS *i* pP 01 14 33.0 +0.1
KIS pmax pmax
comp=Z,250μm,1.2s
KIS Kishinev 81.19 319⇓ *iP* **P 01 14 19.4 +0.1**
KIS Kishinev 81.19 319 *i* UNK **P 01 14 19.0 -0.3**
KIS XM 01 14 19.5
comp=Z,300nm,1.2s
KIS Kishinev 81.19 319⇓ P **P 01 14 19.4 +0.1**
SBA Scott Base 81.19 169 *eP* **P 01 14 20.0 +1.2**
SBA *e**PP pP 01 14 33.3 +0.9
SBA pmax pmax
comp=Z,43nm,0.8s,mb5.4
SBA MLR MLR
comp=Z,780nm,20.0s,MS5.1
SBA Scott Base 81.19 169 *eP* **P 01 14 20.0 +1.2**
comp=Z,43nm,0.8s,mb5.4
SBA *ep*P pP 01 14 33.3 +0.9
SBA LR LR
comp=Z,780nm,20.0s,MS5.1
SANT Santorini 81.21 308 *eP* **P 01 14 19.2 -0.5**
comp=Z,152nm,1.0s,mb5.9
SANT LR LR
comp=Z,303nm,22.0s,MS4.6
PRD Provadia 81.22 315 P **P 01 14 19.7 +0.2**
APE Apeiranthos 81.29 308⇑ *iP* **P 01 14 20.4 +0.3**
APE Apeiranthos 81.29 308⇑ P **P 01 14 20.4 +0.3**
SIVA Sivas 81.47 306 *eP* **P 01 14 21.8 +0.7**
JMB Yambol 81.63 314 P **P 01 14 22.6 +0.8**
ALN Alexandroupoli 81.69 312 *eP* **P 01 14 21.9 -0.1**
AKASG Malin Array Be 81.92 322 P **P 01 14 22.3 -0.8**
comp=Z,43nm,0.7s,mb5.5,baz=82,slow=4.2,SNR=109
AKASG PP PP 01 17 32.4 +1.2
comp=Z,4.7nm,0.7s,baz=95,slow=5.9,SNR=4.2
AKASG LR LR 01 55 05.9
comp=Z,214nm,22.0s,MS4.5,baz=100,slow=39
AKASG Malin Array Be 81.92 322 P **P 01 14 22.3 -0.8**
AKASG 01 17 32.4
KIEV Kiev 81.93 322 *eP* **P 01 14 22.1 -1.0**
KIEV pmax pmax
comp=Z,50nm,0.7s,mb5.5
KIEV MLR MLR
comp=Z,322nm,19.0s,MS4.7
KIEV Kiev 81.93 322 *eP* **P 01 14 22.1 -1.0**
comp=Z,50nm,0.7s,mb5.6
KIEV LR LR
comp=Z,322nm,19.0s,MS4.7
GVD Gavdhos 82.03 306 *eP* **P 01 14 24.0 0.0**
VAM Vamos 82.04 306 *eP* **P 01 14 26.0 +2.0**
IAS Iasi 82.07 319⇓ *iP* **P 01 14 24.2 +0.3**
IAS Iasi 82.07 319 P **P 01 14 24.2 +0.3**
RDO Rodhopi 82.11 312 *eP* **P 01 14 24.1 -0.2**
LIA Limnos Island 82.12 311 *eP* **P 01 14 23.4 -1.0**
SZH Strazhica 82.28 314 P **P 01 14 25.1 0.0**
DIM Dimitrovgrad 82.31 313 P **P 01 14 25.4 +0.1**
KDZ Kurdzhali 82.31 313 P **P 01 14 25.4 +0.1**
VRI Vrincioaia 82.31 317⇑ *iP* **P 01 14 26.0 +0.8**
VRI Vrincioaia 82.31 317 P **P 01 14 26.1 +0.9**
PLOR Plostina 82.36 317⇑ *iP* **P 01 14 26.1 +0.6**
PVL Pavlikeni 82.69 314 P **P 01 14 28.2 +0.9**
MLR Muntele Rosu 82.76 317⇑ *iP* **P 01 14 28.2 +0.6**
MLR Muntele Rosu 82.76 317 P **P 01 14 28.3 +0.8**
ZIMR 82.76 315⇓ *iP* **P 01 14 28.2 +0.6**
ZIMR 82.76 315 P **P 01 14 28.2 +0.5**
KVR Kavouri 82.81 309 *eP* **P 01 14 27.0 -1.0**
RZN Rozhen 82.83 313 P **P 01 14 28.4 +0.4**
ATH Athens Observa 82.88 309 *eP* **P 01 14 27.8 -0.6**
PLD Plovdiv 82.92 313 P **P 01 14 28.4 -0.1**
SNX Sinaia 83.02 316⇑ *iP* **P 01 14 30.0 +1.1**
SNX Sinaia 83.02 316⇑ P **P 01 14 30.0 +1.1**
OUR Ouranopolis 83.11 311 *eP* **P 01 14 29.4 -0.2**
KYTH Kithira 83.12 307 *eP* **P 01 14 28.5 -1.2**
DID Didima 83.17 308 *eP* **P 01 14 28.9 -1.0**
TSUM Tsumeb 83.23 251 *eP* **P 01 14 31.8 +1.2**
comp=Z,83nm,1.3s,mb5.6
TSUM *ep*P pP 01 14 42.7 -1.6
TSUM LR LR
comp=Z,963nm,20.0s,MS5.2
PAIG Paliouri 83.26 311 *eP* **P 01 14 30.1 -0.3**
VLI Veliai 83.27 307 *eP* **P 01 14 26.1 -4.3**
VOIR 83.36 316⇑ *iP* **P 01 14 30.5 -0.2**
VOIR 83.36 316 P **P 01 14 30.5 -0.2**
NVR Nevrokopi 83.39 312 *eP* **P 01 14 30.5 -0.4**
PGB Panagyurishte 83.40 313 P **P 01 14 31.0 0.0**
PLG Polygyros 83.52 311 *eP* **P 01 14 31.2 -0.4**
PLG Polygyros 83.52 311 *eP* **P 01 14 31.2 -0.4**
MMB Musomiste 83.54 312 P **P 01 14 31.3 -0.4**
LKR Lokris 83.56 309 *eP* **P 01 14 30.6 -1.2**
LKR Lokris 83.56 309 *eP* **P 01 14 30.5 -1.4**
SOH Sokhos 83.67 312 *eP* **P 01 14 31.9 -0.4**
BURAR Bucovina Array 83.71 319⇑ *iP* **P 01 14 33.7 +1.3**
BURAR Bucovina Array 83.71 319 P **P 01 14 33.9 +1.4**
BUR08 Bucovina Ar. S 83.73 319 *eP* **P 01 14 33.7 +1.1**
MNK Minsk 83.77 326⇑ *iP* **P 01 14 29.0 -3.6**
MNK *e* pP 01 14 44.0 -2.2
MNK pmax pmax
comp=Z,560nm,1.0s,mb6.7
MIDW Midway 83.78 61 *eP* **P 01 14 31.7 -1.6**
HORT Hortiatis 83.82 311 *eP* **P 01 14 32.5 -0.6**
VLX Vlachokerasia 83.82 308 *eP* **P 01 14 33.1 -0.1**
PUL Pulkovo 83.99 331⇓ *iP* **P 01 14 34.4 +0.8**
KKB Krupnik 84.06 313 P **P 01 14 34.1 -0.3**
KNT Kendrikon 84.07 312 *eP* **P 01 14 33.7 -0.8**
VTS Vitosha 84.10 313⇓ *iP* **P 01 14 34.7 +0.2**
VTS Vitosha 84.10 313 P **P 01 14 34.8 +0.3**
VTS Vitosha 84.10 313 P **P 01 14 34.9 +0.3**
AGG Agios Georgios 84.13 310 *eP* **P 01 14 33.9 -0.9**
ITM Ithomi 84.15 308 *eP* **P 01 14 33.9 -1.0**
LIT Litokhoron 84.19 311 *eP* **P 01 14 34.3 -0.8**
BILL Bilibino 84.22 20*c iP* **P 01 14 33.4 -1.2**
BILL *eSS SS 01 30 24.5 -1.7
BILL pmax pmax
comp=Z,62nm,1.1s,mb5.7
BILL Bilibino 84.22 20 *eP* **P 01 14 33.4 -1.2**
comp=Z,23nm,0.5s,mb5.6
BILL LR LR
comp=Z,1μm,19.0s,MS5.3
VAY Valandovo 84.34 312⇑ *iP* **P 01 14 34.6 -1.2**
comp=Z,70nm,1.0s,mb5.7
GRG Griva 84.41 312 *eP* **P 01 14 35.5 -0.6**
THL Klokotos Trika 84.47 310 *eP* **P 01 14 35.2 -1.3**
THL Klokotos Trika 84.47 310 *eP* **P 01 14 35.1 -1.4**
EVR Evrytania 84.52 310 *eP* **P 01 14 36.5 -0.2**
JOF Joensuu 84.55 334 *ep* **P 01 14 35.5 -0.8**
comp=Z,88nm,0.7s,mb6.0
JOF Joensuu 84.55 334 *eP* **P 01 14 35.5 -0.8**
JOF pmax pmax
comp=Z,88nm,0.7s,mb6.0
RLS Riolos of Patr 84.65 309 *eP* **P 01 14 37.5 +0.1**
STIP Stip 84.69 312⇑ *iP* **P 01 14 36.2 -1.4**
comp=Z,7.5nm,0.9s,mb4.8
GZR Gura Zlata 84.92 316⇑ *iP* **P 01 14 39.2 +0.6**
GZR Gura Zlata 84.92 316 P **P 01 14 39.0 +0.4**
LVV L'vov 84.95 321 *eP* **P 01 14 37.7 -0.9**
LVV *e* pP 01 14 52.7 +0.4
LVZ Lovozero 85.03 340⇑ *eP* **P 01 14 37.9 -0.8**
LVZ pmax pmax
comp=Z,106nm,0.7s,mb6.1
LVZ Lovozero 85.03 340⇑ *eP* **P 01 14 37.0 -1.7**
LVZ LR LR
comp=Z,940nm,22.0s,MS5.1
FNA Florina 85.14 311 *eP* **P 01 14 38.8 -1.0**
AMKA Amchitka 85.21 38 *eP* **P 01 14 38.2 -1.8**
BIA Bitola 85.22 312 *eP* **P 01 14 38.6 -1.6**
comp=Z,5.0nm,0.7s,mb4.8
DRGR 85.22 317⇑ *iP* **P 01 14 40.8 +0.7**
DRGR 85.22 317 P **P 01 14 40.8 +0.7**
SKO Skopje 85.29 312 *eP* **P 01 14 40.0 -0.6**
comp=Z,30nm,0.8s,mb5.5
APA Apatity 85.34 339⇓ *iP* **P 01 14 39.3 -0.9**
APA pmax pmax
comp=Z,70nm,1.0s,mb5.8
APA MLR MLR
comp=Z,900nm,20.0s,MS5.2
JAN Janina 85.37 310 *eP* **P 01 14 41.2 +0.2**
VSU Vasula 85.39 329*c iP* **P 01 14 40.8 +0.1**
VSU Vasula 85.39 329⇑ *iP* **P 01 14 40.9 +0.2**
OHR Ohrid 85.63 312⇑ *iP* **P 01 14 40.6 -1.6**
comp=Z,106nm,0.9s,mb6.1
IGT Igoumenitsa 85.75 310 *eP* **P 01 14 42.8 -0.1**
KWP Kalwaria 85.75 320 *i* P **P 01 14 43.1 +0.4**
KWP Kalwaria 85.75 320⇑ *iP* **P 01 14 42.9 +0.2**
KWP Kalwaria 85.75 320⇑ *iP* **P 01 14 43.1 +0.4**
KWP LR LR
comp=Z,344nm,20.0s,MS4.7
BZS Buzias 85.76 316⇑ *iP* **P 01 14 43.1 +0.3**
BZS Buzias 85.76 316 P **P 01 14 43.1 +0.3**
UZH Uzhgorod 85.84 319⇓ *iP* **P 01 14 43.0 -0.1**
UZH *e* pP 01 14 57.0 +0.2
UZH *e* 01 18 01.7
UZH *eS* S 01 25 11.0 -1.8
KOLS Kolonicke sedl 85.90 319 *eP* **P 01 14 44.5 +1.1**
KEK Kerkira 86.18 310 *eP* **P 01 14 44.8 -0.2**
SUW Suwalki 86.31 325 *i* P **P 01 14 45.2 -0.1**
SUW *e* pP 01 14 59.2 +0.2
SUW *e* 01 15 04.0
SUW Suwalki 86.31 325 P **P 01 14 44.3 -1.0**
SUW pmax pmax
comp=Z,280nm,0.8s,mb6.5
SUW Suwalki 86.31 325⇑ *iP* **P 01 14 45.2 -0.1**
SUW *e* pP 01 14 59.2 +0.2
SUW *e* 01 15 04.0
TIR Tirane 86.36 312 *eP* **P 01 14 46.2 +0.3**
TIR pmax pmax
comp=Z,64nm,0.9s,mb5.8
TIR MLR MLR
comp=Z,292nm,22.0s,MS4.6
TIR Tirane 86.36 312 *eP* **P 01 14 46.2 +0.3**
comp=Z,64nm,0.9s,mb5.8
TIR LR LR
comp=Z,292nm,22.0s,MS4.6
NVL N'lazarevskaya 86.42 199 P **P 01 14 52.8 +7.2**
NVL pmax pmax
comp=Z,67nm,1.3s,mb5.7
CRVS Cervenica-Dubn 86.42 319 *eP* **P 01 14 46.5 +0.5**
MAIT Maitri 86.45 199 *eP* pP 01 14 58.8 -0.6
PVY Plav 86.46 313⇓ *iP* **P 01 14 46.0 -0.3**
KAF Kangasniemi 86.53 333 *ep* **P 01 14 45.6 -0.6**
comp=Z,103nm,0.6s,mb6.2,baz=98,slow=4.5
KAF Kangasniemi 86.53 333 *eP* **P 01 14 45.6 -0.6**
KAF pmax pmax
comp=Z,103nm,0.6s,mb6.2
IVA Berane 86.55 313⇓ *iP* **P 01 14 46.7 -0.1**
STHS Stebnicka Huta 86.65 320 *i* P **P 01 14 48.0 +0.9**
STHS *e* pP 01 15 01.3 +0.5
STHS pmax pmax
comp=Z,57nm,0.8s,mb5.8
STHS Stebnicka Huta 86.65 320 *i* P **P 01 14 48.0 +0.9**
comp=Z,57nm,0.8s,mb5.8
STHS *e* pP 01 15 01.3 +0.5
ULC Ulcinj 86.90 312⇓ *iP* **P 01 14 48.5 0.0**
TTG Podgorica 86.96 313 *eP* **P 01 14 48.4 -0.4**
PLE Pljevlja 86.98 314 *eP* **P 01 14 50.2 +1.3**
KECS Kecovo 86.99 319 *i* P **P 01 14 49.1 +0.3**
KECS *e* pP 01 15 02.8 +0.3
KECS pmax pmax
comp=Z,23nm,0.8s,mb5.5
KECS Kecovo 86.99 319 *i* P **P 01 14 49.1 +0.3**
comp=Z,22nm,0.8s,mb5.5
KECS *e* pP 01 15 02.8 +0.3
NKY Niksic 87.20 313⇓ *iP* **P 01 14 49.7 -0.2**
BUM Brajici-Budva 87.21 313⇓ *iP* **P 01 14 49.5 -0.5**
NIE Niedzica 87.25 320 *eP* **P 01 14 50.8 +0.8**
NIE *ePP PP 01 18 16.8 +2.3
WAR Warsaw 87.27 323 *eP* **P 01 14 50.6 +0.6**
WAR Warsaw 87.27 323⇑ *eP* **P 01 14 50.6 +0.6**
PSZ Piszkesteto 87.30 318 *eP* **P 01 14 50.1 -0.2**
PSZ pmax pmax
comp=Z,46nm,0.9s,mb5.7
PSZ MLR MLR
comp=Z,370nm,21.0s,MS4.8
PSZ Piszkesteto 87.30 318⇑ *eP* **P 01 14 50.6 +0.3**
PSZ Piszkesteto 87.30 318⇑ *iP* **P 01 14 50.7 +0.4**
PSZ Piszkesteto 87.30 318 *eP* **P 01 14 50.1 -0.2**
comp=Z,46nm,0.9s,mb5.7
PSZ LR LR
comp=Z,370nm,21.0s,MS4.8
UPM Unac-Piva 87.32 313⇓ *iP* **P 01 14 50.1 -0.4**
HCY Herceg Novi 87.52 313⇓ *iP* **P 01 14 50.9 -0.6**
BRY Bratogost 87.54 313⇓ *iP* **P 01 14 51.5 -0.1**
OJC Ojcow 87.70 320 *eP* **P 01 14 52.3 +0.1**
OJC *e**PP pP 01 15 04.2 -1.7
OJC *e* 01 18 18.3
OJC *eS* S 01 25 31.1 +0.2
OJC Ojcow 87.70 320 *eP* **P 01 14 52.3 +0.1**
OJC *ep*P pP 01 15 04.2 -1.7
OJC *e*PP PP 01 18 18.3 +0.2
OJC *eS* S 01 25 31.1 +0.2
OJC LR LR
comp=Z,400nm,21.7s,MS4.8
ADK Adak 87.76 38 *eP* **P 01 14 50.6 -1.8**
ADK pmax pmax
comp=Z,107nm,1.1s,mb6.0
ADK MLR MLR
comp=Z,374nm,21.0s,MS4.8
ADK Adak 87.76 38 *eP* **P 01 14 50.6 -1.8**
comp=Z,107nm,1.1s,mb6.0
ADK LR LR
comp=Z,374nm,21.0s,MS4.8
BUD Budapest 87.82 318⇑ *eP* **P 01 14 53.2 +0.4**
PKSM Moragy 87.91 316⇑ *iP* **P 01 14 53.5 +0.3**
PKSM Moragy 87.91 316 P **P 01 14 53.6 +0.4**
VYHS Vyhne 88.08 319 *eP* **P 01 14 54.3 +0.3**
VYHS *e* pP 01 15 06.8 -1.0
VYHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
VYHS Vyhne 88.08 319 *eP* **P 01 14 54.3 +0.3**
comp=Z,6.2nm,0.9s,mb4.8
VYHS *e* pP 01 15 06.8 -1.0
STON Ston 88.16 313 P **P 01 14 53.9 -0.6**
KEV Kevo 88.26 340 *ep* **P 01 14 53.2 -1.2**
comp=Z,120nm,0.8s,mb6.2
KEV Kevo 88.26 340 *eP* **P 01 14 53.2 -1.2**
KEV pmax pmax
comp=Z,121nm,0.8s,mb6.2
KOLL Kolacno 88.38 319 *eP* **P 01 14 56.0 +0.6**
KOLL *ep*P pP 01 15 10.0 +0.8
TIP Timpagrande 88.45 309 *eP* **P 01 14 56.8 +0.8**
comp=Z,84nm,1.1s,mb5.9
TIP *ep*P pP 01 15 10.2 +0.5
GRI Girifalco 88.67 309 P **P 01 14 58.5 +1.4**
OKC Ostrava-Krasne 88.71 320⇑ *iP* **P 01 14 57.5 +0.6**
OKC *es*P sP 01 15 11.6 -4.2
OKC *ex* x 01 25 39.4
OKC AMS AMS 02 03 30.0
comp=Z,300nm,15.6s
OKC Ostrava-Krasne 88.71 320⇑ *iP* **P 01 14 57.5 +0.6**
OKC *e* pP 01 15 11.6 +0.9
OKC *e* 01 25 39.4
RAC Raciborz 88.71 320 *eP* **P 01 14 58.1 +1.2**
ARCES ARCESS Array B 88.71 340 P **P 01 14 56.4 -0.1**
comp=Z,105nm,0.7s,mb6.3,baz=80,slow=6.8,SNR=254
ARCES PP PP 01 18 28.6 +2.8
comp=Z,9.6nm,0.9s,baz=126,slow=9.5,SNR=4.2
ARCES LR LR 01 58 50.9
comp=Z,589nm,20.7s,MS5.0,baz=106,slow=38
ARCES ARCESS Array B 88.71 340 P **P 01 14 56.4 -0.1**
ARCES 01 18 28.6
ARCES ARCESS Array B 88.71 340 P **P 01 14 56.4 -0.1**
ARCES PP PP 01 18 28.6 +2.8
ARCES LR LR 01 58 50.9
ORI Oriolo Calabro 88.78 310 P **P 01 14 58.6 +1.1**
SOI Samo 88.88 308 P **P 01 14 59.1 +1.0**
MORC Moravsky Berou 89.09 320 *eP* **P 01 14 59.1 +0.4**
MORC *e**PP pP 01 15 13.1 +0.6
MORC pmax pmax
comp=Z,64nm,0.8s,mb6.0
MORC Moravsky Berou 89.09 320⇑ *iP* **P 01 14 59.5 +0.8**
MORC Moravsky Berou 89.09 320 *eP* **P 01 14 59.1 +0.4**
comp=Z,64nm,0.8s,mb6.0
MORC *ep*P pP 01 15 13.1 +0.6
MODS Modra-Piesok 89.10 318 *i* P **P 01 14 59.5 +0.7**
PTRP Pietrapertosa 89.12 311 P **P 01 15 00.6 +1.5**
MTTG Motta San Giov 89.16 308 P **P 01 15 00.6 +1.2**
comp=Z,155nm,0.8s,mb6.4
SCLL Scilla 89.17 308 P **P 01 15 00.4 +1.0**
comp=Z,188nm,1.6s,mb6.2

ZST Bratislava 89.19 318 *i* P **P** **01 15 00.1 +0.8**
ZST *ep*P pP 01 15 13.6 +0.6
ZST Bratislava 89.19 318 *i* P **P** **01 15 00.1 +0.8**
comp=Z,64nm,1.0s,mb5.9
ZST *e* pP 01 15 13.6 +0.6
ZST LR LR
comp=Z,300nm,20.4s,MS4.7
CUC Castrocucco 89.26 310 *e*P **P** **01 14 59.5 -0.2**
CUC LR LR
comp=Z,268nm,19.0s,MS4.7
SISC Sisak 89.39 315 P **P** **01 15 00.7 +0.4**
SOP Sopron 89.50 318⇑ *e*P **P** **01 15 01.0 +0.3**
HAVL Avola 89.52 307 P **P** **01 15 01.7 +0.6**
SSY Sortino 89.58 307 P **P** **01 15 01.8 +0.5**
RGNG Rignano Grg 89.59 312 P **P** **01 15 01.5 +0.2**
FG4 Candela 89.59 311 P **P** **01 15 02.2 +0.9**
VRAC Vranov 89.65 319⇓ *i*P **P** **01 15 02.0 +0.6**
VRAC Vranov 89.65 319 P **P** **01 15 02.2 +0.8**
GKP Gorka Klasztor 89.69 323 *i* P **P** **01 15 01.6 +0.2**
GKP *e* 01 15 07.2
GKP *e* pP 01 15 15.6 +0.4
GKP Gorka Klasztor 89.69 323⇑ *i*P **P** **01 15 01.6 +0.1**
GKP *e* 01 15 07.2
GKP *e* pP 01 15 15.6 +0.4
SGO Sicignano 89.70 311 P **P** **01 15 02.3 +0.5**
FG5 Orsara di Pugl 89.79 311 P **P** **01 15 03.1 +0.9**
HVZN Vizzini 89.86 307 P **P** **01 15 02.9 +0.2**
comp=Z,130nm,0.9s,mb6.3
SLNA Salina 89.89 308 P **P** **01 15 02.8 +0.1**
FG2 Serracapriola 89.92 312 P **P** **01 15 03.5 +0.7**
DPC Dobruska-Polom 89.93 320⇑ *i*P **P** **01 15 03.7 +1.0**
DPC *ex* x 01 15 17.7
DPC *eS* S 01 25 52.2 +0.4
DPC AMS AMS 02 04 20.0
comp=Z,400nm,18.2s
CSSN Cassano Irpino 89.94 311 P **P** **01 15 03.4 +0.5**
CONA Conrad Observa 89.99 318 *i* P **P** **01 15 03.2 +0.2**
comp=Z,21nm,0.8s,mb5.5,SNR=21
CSNA Conrad Observa 89.99 318⇑ *i*P **P** **01 15 03.1 +0.1**
comp=Z,21nm,0.8s,mb5.5
KSP Ksiaz 90.00 321 *i* P **P** **01 15 03.9 +0.9**
KSP *e* pP 01 15 17.7 +1.0
KSP Ksiaz 90.00 321⇑ *i*P **P** **01 15 03.8 +0.8**
KSP *ep*P pP 01 15 16.8 +0.1
KSP *eS* S 01 25 53.5 +1.1
CIGN Sant'Elia a Pi 90.09 312 P **P** **01 15 02.9 -0.7**
PSB1 Pescosannita 90.13 311 P **P** **01 15 03.8 0.0**
comp=Z,106nm,1.2s,mb6.0
UPC Upice 90.15 320⇑ *i*P **P** **01 15 04.5 +0.8**
UPC *es*P sP 01 15 16.3 -6.3
ARSA Arzberg 90.16 317 *i* P **P** **01 15 04.3 +0.5**
comp=Z,51nm,0.8s,mb5.9,SNR=40
ARSA Arzberg 90.16 317 *i* PcP **P** **01 15 04.3 +0.5**
comp=Z,51nm,0.8s,mb5.9,SNR=40
BOJS Bojanci 90.18 315 *i* P **P** **01 15 04.5 +0.5**
BOJS *i* pP pP 01 15 18.2 +0.5
TREC Trest 90.37 319⇑ *i*P **P** **01 15 05.2 +0.5**
TREC *es*P sP 01 15 19.4 -4.2
TREC AMS AMS 02 05 00.0
comp=Z,400nm,22.3s
NVLJ Novalja 90.37 314 P **P** **01 15 04.4 -0.4**
PERS Pernice 90.38 317 *i* P **P** **01 15 05.3 +0.5**
PERS *i* pP pP 01 15 19.3 +0.7
SOKA Soboth 90.44 317⇑ *i*P **P** **01 15 05.7 +0.6**
SOKA Soboth 90.44 317⇑ *i*PcP **P** **01 15 05.7 +0.6**
SGG Gregorio Mates 90.47 311 P **P** **01 15 04.4 -1.0**
comp=Z,68nm,1.2s,mb5.8
GIB Gibilmanna 90.47 308 P **P** **01 15 04.9 -0.6**
MIDA Miranda 90.58 312 P **P** **01 15 05.9 0.0**
comp=Z,51nm,0.9s,mb5.8
LJU Ljubljana 90.73 316 *i* P **P** **01 15 07.2 +0.7**
LJU *i* pP pP 01 15 21.1 +0.9
OBKA Obir 90.76 316⇑ *i*P **P** **01 15 07.1 +0.5**
comp=Z,38nm,0.8s,mb5.8,SNR=22
OBKA Obir 90.76 316⇑ *i*PcP **P** **01 15 07.1 +0.5**
comp=Z,38nm,0.8s,mb5.8,SNR=22
RFI Roccamonfina 90.76 311 P pP 01 15 20.1 -0.4
SDI San Donato 90.92 312 P **P** **01 15 07.3 -0.2**
SDI pmax pmax
comp=Z,91nm,1.5s,mb5.9
SDI San Donato 90.92 312 P **P** **01 15 07.3 -0.2**
comp=Z,91nm,1.5s,mb5.9
SNAA Sanae 90.99 198 *e*P **P** **01 15 08.0 +0.8**
SNAA *e**PP pP 01 15 19.0 -2.0
SNAA pmax pmax
comp=Z,57nm,1.1s
SNAA Sanae 90.99 198 *e*P **P** **01 15 08.0 +0.8**
comp=Z,57nm,1.1s,mb5.8
SNAA *ep*P pP 01 15 19.0 -1.9
PRU Pruhonice 91.04 320⇑ *i*P **P** **01 15 08.2 +0.4**
PRU *ex* x 01 15 22.4
PRU *ex* x 01 25 52.3
PRU AMS AMS 02 05 00.0
comp=Z,400nm,19.2s
JAVS Javornik 91.04 316 *i* P **P** **01 15 08.0 0.0**
JAVS *i* pP pP 01 15 21.7 0.0
MOA Molln 91.05 318⇑ *i*P **P** **01 15 07.9 0.0**
comp=Z,23nm,0.8s,mb5.6
PVCC Panska Ves 91.07 320⇑ *i*P **P** **01 15 08.6 +0.7**
PVCC *es*P sP 01 15 22.4 -4.5
PVCC AMS AMS 02 04 50.0
comp=Z,400nm,21.4s
VVLD Villa Vallelon 91.07 312 P **P** **01 15 07.9 -0.3**
comp=Z,48nm,1.0s,mb5.8
VOY Vojsko 91.17 316⇑ *e*P **P** **01 15 08.7 +0.2**
VOY *e* 01 15 12.7
VOY *e* pP 01 15 22.3 0.0
AOI Ancona 91.20 313 P **P** **01 15 09.0 +0.3**
PTQR Pietraquaria 91.24 312 P **P** **01 15 09.1 +0.1**
comp=Z,43nm,0.6s,mb6.0
AQU L'Aquila 91.27 312 P **P** **01 15 09.4 +0.3**
MYKA Terra Mystica 91.39 316⇑ *i*P **P** **01 15 09.7 +0.2**
comp=Z,19nm,0.6s,mb5.6
MYKA Terra Mystica 91.39 316⇑ *i*PcP **P** **01 15 09.7 +0.2**
comp=Z,19nm,0.6s,mb5.6
FIAM Fiamignano 91.47 312 P **P** **01 15 09.7 -0.3**
CING Cingoli 91.49 313 P **P** **01 15 10.5 +0.4**
BRG Berggiesshubel 91.49 321⇑ *i*P **P** **01 15 10.5 +0.6**
BRG *i* pP 01 15 24.2 +0.5
BRG pmax pmax
comp=Z,25nm,0.9s,mb5.5
BRG pmax pmax
comp=Z,19nm,0.9s,mb5.4
BRG pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
BRG MLR MLR
comp=N,195nm,23.6s
BRG MLR MLR
comp=E,131nm,17.4s
BRG MLR MLR
comp=Z,194nm,30.0s
BRG Berggiesshubel 91.49 321 *e*P **P** **01 15 10.4 +0.5**
comp=Z,41nm,0.9s,mb5.8
BRG Berggiesshubel 91.49 321⇑ *i*P **P** **01 15 10.5 +0.6**
comp=Z,41nm,0.9s,mb5.8
BRG *i* pP 01 15 24.2 +0.6
comp=Z,32nm,0.9s
BRG PP PP 01 19 02.2 +14
comp=Z,8.7nm,0.9s
BRG S S 01 26 37.0 +31
BRG
comp=N,326nm,23.6s
BRG
comp=E,219nm,17.4s
BRG
comp=Z,324nm,30.0s
BRG Berggiesshubel 91.49 321⇑ *i*P **P** **01 15 10.5 +0.6**
comp=Z,25nm,0.9s,mb5.5
BRG *i* pP 01 15 24.2 +0.6
BRG PP PP 01 19 02.2 +14
BRG S S 01 26 37.0 +31
BRG LR LR
comp=Z,190nm,30.0s,MS4.4
GEC2 GERESS Array S 91.50 319 *e*P **P** **01 15 10.5 +0.5**
GEC2 pmax pmax
comp=Z,72nm,1.4s,mb5.8
GEC2 GERESS Array S 91.50 319 *e*P **P** **01 15 10.5 +0.5**
comp=Z,72nm,1.4s,mb5.8
GERES GERESS Array B 91.50 319 P **P** **01 15 10.5 +0.5**
comp=Z,21nm,0.8s,mb5.5,baz=92,slow=4.3,SNR=175
NRCA Norcia 91.51 313 P **P** **01 15 10.6 +0.4**
CERT Cerreto 91.55 312 P **P** **01 15 09.7 -0.7**
comp=Z,30nm,1.1s,mb5.5
PTCC Patocco-Chiusa 91.57 316 P **P** **01 15 10.5 +0.1**

KHC Kasperske Hory 91.60 319⇑ *i*P **P** **01 15 10.5 0.0**
KHC *ex* x 01 15 24.6
KHC *eS* S 01 26 05.8 -1.3
KHC AMS AMS 02 05 40.0
comp=Z,400nm,21.2s
KBA Koelnbreinsper 91.62 317⇑ *i*P **P** **01 15 10.3 -0.3**
comp=Z,22nm,1.1s,mb5.4,SNR=17
GMNA Gemona 91.64 316 P **P** **01 15 11.1 +0.4**
SNTG Esanatoglia 91.66 313 P **P** **01 15 11.4 +0.5**
RDP Rocca di Papa 91.74 312 P **P** **01 15 10.9 -0.4**
MA9 Marino 91.78 312 P **P** **01 15 11.5 0.0**
MNS Monsola 91.80 312 P **P** **01 15 10.7 -0.9**
FSSB Fossombrone 91.81 313 P **P** **01 15 12.2 +0.6**
FVI Forni Avoltri 91.98 316 P **P** **01 15 12.2 -0.1**
RJOB Jochberg 92.04 318 *e*P **P** **01 15 12.1 -0.4**
comp=Z,32nm,0.8s,mb5.7
RSM Repubblica di 92.06 314 P **P** **01 15 13.7 +1.0**
WET Wettzell 92.06 319 *e*P **P** **01 15 13.0 +0.4**
WET *e**PP pP 01 15 27.1 +0.7
WET pmax pmax
comp=Z,65nm,1.4s,mb5.8
WET Wettzell 92.06 319 *e*P **P** **01 15 13.0 +0.4**
comp=Z,65nm,1.4s,mb5.8
WET *ep*P pP 01 15 27.1 +0.7
WET *es*P sP 01 15 31.7 +0.2
CLL Collm 92.11 321⇑ *i*P **P** **01 15 12.7 -0.1**
CLL *e**PP pP 01 15 22.0 -4.5
CLL *i**SP sP 01 15 26.8 -4.9
CLL *e* 01 18 53.0
CLL *eS* S 01 26 15.0 +3.4
CLL pmax pmax
comp=Z,23nm,1.0s,mb5.5
CLL MLR MLR
comp=Z,300nm,23.9s,MS4.7
CLL Collm 92.11 321 *e*P **P** **01 15 12.7 -0.1**
comp=Z,23nm,0.9s,mb5.5
CLL Collm 92.11 321⇑ *i*P **P** **01 15 12.7 -0.1**
comp=Z,23nm,1.0s,mb5.5
CLL *ep*P pP 01 15 22.0 -4.5
CLL *i* sP sP 01 15 26.8 -4.9
CLL *ex* x 01 15 31.0
CLL *e*PP PP 01 18 53.0 -0.1
CLL *es*PP 01 19 08.0
CLL *eS* S 01 26 15.0 +3.4
CLL *ex* x 01 26 45.0
CLL *ex* x 01 27 18.0
CLL *e*PS PS 01 27 29.0 +1.2
CLL *eSS* SS 01 32 30.0 +8.2
CLL *e*SSS 01 36 30.0
CLL *e*SSSS 01 39 16.0
CLL Collm 92.11 321⇑ *i*P **P** **01 15 12.7 -0.1**
comp=Z,23nm,1.0s,mb5.5
CLL *ep*P pP 01 15 22.0 -4.5
CLL *i* sP sP 01 15 26.8 -4.9
CLL *e*PP PP 01 18 53.0 -0.1
CLL *eS* S 01 26 15.0 +3.4
CLL LR LR
comp=Z,300nm,23.9s,MS4.7
ABTA Abfaltersbach 92.17 317⇑ *i*P **P** **01 15 12.7 -0.5**
comp=Z,26nm,1.1s,mb5.5,SNR=14
BADI Badiali 92.19 313 P **P** **01 15 13.7 +0.4**
MOR8 Moi Rana 92.32 336 *e*P **P** **01 15 12.5 -0.9**
SEST Monte Rota 92.38 317 P **P** **01 15 13.6 -0.5**
NKC Novy Kostel 92.40 320⇑ *i*P **P** **01 15 14.5 +0.4**
NKC *es*P sP 01 15 27.8 -5.2
TANN Tannenbergstha 92.40 320 *e*P **P** **01 15 14.4 +0.3**
comp=Z,15nm,1.1s,mb5.2
SFI Santa Sofia 92.49 314 P **P** **01 15 15.6 +0.9**
ROTZ Rotzenmuhle 92.53 320 *e*P **P** **01 15 15.6 +0.8**
comp=Z,24nm,1.0s,mb5.6
ROTZ *ep*P pP 01 15 29.4 +0.9
MANZ Manzenberg 92.61 320 *e*P **P** **01 15 15.9 +0.8**
comp=Z,36nm,1.0s,mb5.8
NIKO Nikolski 92.64 37 *e*P **P** **01 15 13.8 -1.4**
comp=Z,240nm,1.0s,mb6.6
NIKO *ep*P pP 01 15 26.6 -2.4
VMG Vicchio 92.72 314 P **P** **01 15 16.5 +0.8**
CTI Castel Tesino 92.73 316 P **P** **01 15 16.0 +0.2**
WTTA Wattenberg 92.80 317⇑ *i*P **P** **01 15 15.8 -0.2**
comp=Z,40nm,0.7s,mb5.9,SNR=23
WATA Walderalm 92.84 317⇑ *i*P **P** **01 15 15.7 -0.5**
comp=Z,19nm,1.0s,mb5.5,SNR=13
SEI Scarperia 92.85 314 P **P** **01 15 16.8 +0.4**
MOX Moxa 92.95 320 *e*P **P** **01 15 17.0 +0.3**
comp=Z,38nm,1.4s,mb5.6
MOX *e* pP 01 15 31.0 +0.6
MOX
comp=Z,100nm,22.0s
MOX Moxa 92.95 320 *e*P **P** **01 15 17.0 +0.3**
MOX *e* pP 01 15 31.0 +0.6
MOX pmax pmax
comp=Z,38nm,1.4s,mb5.6
MOX MLR MLR
comp=Z,100nm,22.0s,MS4.2
MOX Moxa 92.95 320 *e*P **P** **01 15 16.9 +0.2**
comp=Z,21nm,0.9s,mb5.6
MOX *ep*P pP 01 15 30.8 +0.4
FNVD Fontana Vidola 93.03 314 P **P** **01 15 17.2 0.0**
FUR Furstenfeldbru 93.08 318 *e*P **P** **01 15 17.1 -0.2**
FUR pmax pmax
comp=Z,31nm,0.9s,mb5.7
FUR Furstenfeldbru 93.08 318 *e*P **P** **01 15 17.1 -0.2**
comp=Z,31nm,0.9s,mb5.7
MOTA Moosalm 93.16 317⇑ *i*P **P** **01 15 17.4 -0.3**
comp=Z,26nm,0.9s,mb5.7,SNR=27
GRA1 Grafenberg Arr 93.17 319 *e*P **P** **01 15 18.3 +0.6**
comp=Z,44nm,0.9s,mb5.9
GRA1 *ep*P pP 01 15 32.3 +0.8
GRA1 *e*PP PP 01 19 00.7 -0.8
GRA1 *eS* S 01 26 22.7 +1.6
GRA1 LR LR
comp=Z,300nm,21.7s,MS4.7
GRF Grafenberg Arr 93.17 319 *e*P **P** **01 15 18.3 +0.6**
GRF *e**PP pP 01 15 32.3 +0.8
GRF *e* 01 19 00.7
GRF *eS* S 01 26 22.7 +1.6
GRF pmax pmax
comp=Z,44nm,0.9s,mb5.9
GRF MLR MLR
comp=Z,300nm,21.7s,MS4.7
GRF Grafenberg Arr 93.17 319 *e*P **P** **01 15 18.3 +0.6**
comp=Z,44nm,0.9s,mb5.9
GRF *ep*P pP 01 15 32.3 +0.8
GRF *e*PP PP 01 19 00.7 -0.8
GRF *eS* S 01 26 22.7 +1.6
GRF *eL* 02 05 15.4
comp=Z,284nm,21.7s
RETA Reutte 93.40 317⇑ *i*P **P** **01 15 18.7 -0.1**
comp=Z,35nm,0.8s,mb5.8,SNR=12
FETA Feichten 93.41 317⇑ *i*P **P** **01 15 19.2 +0.3**
comp=Z,23nm,0.9s,mb5.6,SNR=13
FETA Feichten 93.41 317⇑ *i*PcP **P** **01 15 19.2 +0.3**
comp=Z,23nm,0.9s,mb5.6,SNR=13
GSCL Gusciola 93.42 314 P **P** **01 15 19.8 +0.8**
NOA NORSAR Array B 93.52 331 P **P** **01 15 18.0 -1.0**
comp=Z,12nm,0.7s,mb5.4,baz=95,slow=5.0,SNR=40
NOA LR LR 02 02 10.5
comp=Z,324nm,20.2s,MS4.8,baz=80,slow=38
MABI Malga Bissina 93.52 316 P **P** **01 15 19.3 -0.1**
ERBM Eremo 93.55 314 P **P** **01 15 20.5 +0.9**
VLC Villacollemand 93.56 314 PFAKE 01 15 30.0 +10
VLC LR LR
comp=Z,258nm,22.0s,MS4.6
BRMO Bormio 93.63 316 P **P** **01 15 20.1 +0.2**
KBS Kingsbay 93.63 349⇑ *e*P **P** **01 15 19.0 -0.3**
KBS MLR MLR
comp=Z,467nm,19.0s,MS5.0
CLZ Clausthal 93.77 322 *e*P **P** **01 15 20.6 +0.2**
CLZ *e**PP pP 01 15 34.0 -0.2
CLZ pmax pmax
comp=Z,21nm,0.9s,mb5.6
CLZ Clausthal 93.77 322 *e*P **P** **01 15 20.6 +0.2**
comp=Z,21nm,0.9s,mb5.6
CLZ *ep*P pP 01 15 34.0 -0.2
CLZ *es*P sP 01 15 39.8 +0.5
BSEG Bad Segeberg 93.85 324 *e*P **P** **01 15 20.9 +0.2**
BSEG pmax pmax
comp=Z,31nm,1.0s,mb5.7
BSEG Bad Segeberg 93.85 324 *e*P **P** **01 15 20.9 +0.2**
comp=Z,31nm,1.0s,mb5.7
NRDL Niedersach Rie 93.95 322 *e*P **P** **01 15 21.5 +0.3**
comp=Z,26nm,0.9s,mb5.7
UBBA Unterbreizbach 93.98 321 *e*P **P** **01 15 21.3 -0.1**
comp=Z,8.0nm,0.9s,mb5.2

UBBA *ep*P pP 01 15 35.5 +0.3
UBBA *es*P sP 01 15 41.2 +0.9
DAVA Damuels 93.99 317 *i* P **P** **01 15 21.8 +0.3**
comp=Z,45nm,0.9s,mb5.9,SNR=24
DAVA Damuels 93.99 317 *i* PcP **P** **01 15 21.8 +0.3**
comp=Z,45nm,0.9s,mb5.9,SNR=24
KEST Kesra 94.10 305 P **P** **01 15 24.0 +1.6**
comp=Z,11nm,0.9s,mb5.3,baz=282,slow=1.0,SNR=20
KEST LR LR 01 58 09.9
comp=Z,105nm,20.1s,MS4.3,baz=17,slow=36
VSL Villasalto 94.18 309 PFAKE 01 15 30.0 +7.4
VSL LR LR
comp=Z,169nm,20.0s,MS4.5
TUE Stuetta 94.34 316 *e*P **P** **01 15 21.9 -1.2**
comp=Z,20nm,1.2s,mb5.4
TUE *ep*P pP 01 15 36.3 -0.6
TUE LR LR
comp=Z,344nm,20.0s,MS4.8
STU Stuttgart 94.48 318 *e*P **P** **01 15 23.7 0.0**
comp=Z,17nm,1.0s,mb5.4
STU Stuttgart 94.48 318 *e*P **P** **01 15 22.0 -1.7**
PGF Pioggiola 94.53 312 *e*P **P** **01 15 24.0 -0.1**
comp=Z,31nm,1.0s,mb5.4
PGF Pioggiola 94.53 312 *e*P **P** **01 15 24.0 -0.1**
PGF pmax pmax
comp=Z,16nm,1.0s,mb5.4
PGF Pioggiola 94.53 312 *e*P **P** **01 15 24.0 -0.1**
comp=Z,16nm,1.0s,mb5.4
TOD Tromm 94.74 319 *e*P **P** **01 15 24.7 -0.2**
SPAK Spaichingen-Ko 94.74 318 *e*P **P** **01 15 24.7 -0.3**
BFO Black Forest 95.05 318 *e*P **P** **01 15 25.9 -0.5**
comp=Z,10.0nm,0.8s,mb5.3
BFO LR LR
comp=Z,421nm,20.0s,MS4.9
FIN Finale Ligure 95.12 314 P **P** **01 15 26.4 -0.4**
FELD Feldberg im Sc 95.27 318 *e*P **P** **01 15 26.7 -0.7**
IBBN Ibbenburen 95.39 322 *e*P **P** **01 15 27.9 +0.1**
comp=Z,28nm,1.0s,mb5.7
IBBN *ep*P pP 01 15 40.9 -0.7
IBBN *es*P sP 01 15 46.5 -0.2
LANF Langenberg 95.39 319 *e*P **P** **01 15 27.9 0.0**
ABH Alteburg 95.55 320 *e*P **P** **01 15 28.2 -0.4**
SBF Sospel 95.68 314⇑ *i*P **P** **01 15 29.0 -0.4**
comp=Z,78nm,1.2s,mb5.7
SBF Sospel 95.68 314⇑ *i*P **P** **01 15 29.0 -0.4**
SBF pmax pmax
comp=Z,39nm,1.2s,mb5.7
SBF Sospel 95.68 314⇑ *i*P **P** **01 15 29.0 -0.4**
comp=Z,39nm,1.2s,mb5.7
BUG Bochum--Univer 95.70 321 *e*P **P** **01 15 29.1 -0.2**
comp=Z,20nm,1.1s,mb5.5
CDF Champ du Feu 95.75 318⇑ *i*P **P** **01 15 29.0 -0.6**
comp=Z,17nm,0.8s,mb5.2
CDF Champ du Feu 95.75 318⇑ *i*P **P** **01 15 29.0 -0.6**
CDF pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
CDF Champ du Feu 95.75 318⇑ *i*P **P** **01 15 29.0 -0.6**
comp=Z,8.4nm,0.8s,mb5.2
ECH Echery 95.83 318 *e*P **P** **01 15 29.3 -0.6**
ECH Echery 95.83 318 *e*P **P** **01 15 29.2 -0.8**
ECH *ep*P pP 01 15 43.8 0.0
RUP Ruppelstein 95.87 319 *e*P **P** **01 15 29.9 -0.2**
HINF Hinteralfeld 96.04 318⇑ *i*P **P** **01 15 30.0 -0.9**
comp=Z,4.2nm,0.6s,mb4.7
HINF Hinteralfeld 96.04 318⇑ *i*P **P** **01 15 30.0 -0.9**
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
HINF Hinteralfeld 96.04 318⇑ *i*P **P** **01 15 30.0 -0.9**
comp=Z,2.1nm,0.6s,mb4.7
LOMF Lomont 96.07 317 *e*P **P** **01 15 30.2 -0.8**
MBDF Montbardon 96.15 314⇑ *i*P **P** **01 15 30.6 -0.9**
comp=Z,6.5nm,0.8s,mb4.8
MBDF Montbardon 96.15 314⇑ *i*P **P** **01 15 30.6 -0.9**
MBDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
MBDF Montbardon 96.15 314⇑ *i*P **P** **01 15 30.6 -0.9**
comp=Z,3.3nm,0.8s,mb4.8
LPG La Plagne 96.15 315⇑ *i*P **P** **01 15 31.4 -0.1**
comp=Z,18nm,0.7s,mb5.3
LPG La Plagne 96.15 315⇑ *i*P **P** **01 15 31.4 -0.1**
LPG pmax pmax
comp=Z,9.0nm,0.7s,mb5.3
LPG La Plagne 96.15 315⇑ *i*P **P** **01 15 31.4 -0.1**
comp=Z,9.2nm,0.7s,mb5.3
LPL La Plagne 96.17 315⇑ *i*P **P** **01 15 31.4 -0.1**
comp=Z,18nm,0.7s,mb5.3
LPL La Plagne 96.17 315⇑ *i*P **P** **01 15 31.4 -0.1**
LPL pmax pmax
comp=Z,9.0nm,0.7s,mb5.3
LPL La Plagne 96.17 315⇑ *i*P **P** **01 15 31.4 -0.1**
comp=Z,8.9nm,0.7s,mb5.3
BNI Bardonecchia 96.21 315 *e*P **P** **01 15 29.8 -1.9**
BNI pmax pmax
comp=Z,11nm,1.0s,mb5.2
BNI MLR MLR
comp=Z,401nm,20.0s,MS4.9
BNI Bardonecchia 96.21 315 *e*P **P** **01 15 29.8 -1.9**
comp=Z,11nm,1.0s,mb5.2
BNI LR LR
comp=Z,401nm,20.0s,MS4.9
FRF La Foret Royal 96.26 313⇑ *i*P **P** **01 15 31.7 -0.3**
comp=Z,28nm,0.9s,mb5.4
FRF La Foret Royal 96.26 313⇑ *i*P **P** **01 15 31.7 -0.3**
FRF pmax pmax
comp=Z,14nm,0.9s,mb5.4
FRF La Foret Royal 96.26 313⇑ *i*P **P** **01 15 31.7 -0.3**
comp=Z,14nm,0.9s,mb5.4
LMR La Mourre 96.36 313 *e*P **P** **01 15 32.0 -0.5**
HAU Haudompre 96.38 318⇑ *i*P **P** **01 15 31.8 -0.6**
comp=Z,29nm,0.8s,mb5.5
HAU *e*MLR MLR
comp=Z,252nm,20.0s,MS4.4
HAU Haudompre 96.38 318⇑ *i*P **P** **01 15 31.8 -0.6**
HAU pmax pmax
comp=Z,15nm,0.8s,mb5.5
HAU MLR MLR
comp=Z,250nm,20.0s,MS4.7
HAU Haudompre 96.38 318⇑ *i*P **P** **01 15 31.8 -0.6**
comp=Z,15nm,0.8s,mb5.5
HAU LR LR
comp=Z,250nm,20.0s,MS4.7
WLF Walferdange 96.46 319 P **P** **01 15 33.3 +0.5**
comp=Z,9.7nm,1.4s,mb5.0
WLF Walferdange 96.46 319 *e*P **P** **01 15 33.2 +0.4**
WLF pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
WLF MLR MLR
comp=Z,208nm,21.0s,MS4.6
WLF Walferdange 96.46 319 *e*P **P** **01 15 33.0 +0.2**
comp=Z,22nm,1.2s,mb5.5
WLF Walferdange 96.46 319 *e*P **P** **01 15 33.2 +0.5**
comp=Z,7.9nm,0.9s,mb5.1
WLF LR LR
comp=Z,208nm,21.0s,MS4.6
MEM Membach 96.52 320 P **P** **01 15 32.9 -0.2**
comp=Z,6.5nm,0.9s,mb5.1
CABF La Chapelle 96.59 316⇑ *i*P **P** **01 15 33.3 -0.1**
THEF They Montfort 96.61 318 *e*P **P** **01 15 32.3 -1.2**
ORIF Oris-en-Rattie 96.78 315 *e*P **P** **01 15 34.2 -0.1**
comp=Z,18nm,1.0s,mb5.2
ORIF *e*MLR MLR
comp=Z,381nm,21.2s,MS4.5
ORIF Oris-en-Rattie 96.78 315 *e*P **P** **01 15 34.2 -0.1**
ORIF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
ORIF Oris-en-Rattie 96.78 315 *e*P **P** **01 15 34.2 -0.1**
comp=Z,8.9nm,1.0s,mb5.2
BCLA Clavier 96.98 320 P **P** **01 15 34.1 -1.0**
SMRF Simiane la Rot 97.02 314⇑ *i*P **P** **01 15 35.7 +0.2**
comp=Z,16nm,1.0s,mb5.1
SMRF Simiane la Rot 97.02 314⇑ *i*P **P** **01 15 35.7 +0.2**
comp=Z,16nm,1.0s,mb5.4
TAM Tamanrasset 97.15 292 *e*P **P** **01 15 35.0 -1.5**
MEZF Maizieres J'vi 97.23 318⇑ *i*P **P** **01 15 35.9 -0.4**
comp=Z,19nm,0.7s,mb5.3
MEZF Maizieres J'vi 97.23 318⇑ *i*P **P** **01 15 35.9 -0.4**
comp=Z,19nm,0.7s,mb5.6
GIVF Givet 97.30 320 *e*P **P** **01 15 36.1 -0.5**
DOU Dourbes 97.45 320 P **P** **01 15 37.2 -0.1**
comp=Z,5.3nm,1.0s,mb4.9
VIVF Saint-Julien-l 97.64 315 *e*P **P** **01 15 37.8 -0.4**
BAIF Baives 97.70 320⇑ *i*P **P** **01 15 38.2 -0.2**
comp=Z,22nm,0.8s,mb5.4
BAIF Baives 97.70 320⇑ *i*P **P** **01 15 38.2 -0.2**
BAIF pmax pmax
comp=Z,11nm,0.8s,mb5.4

BAIF Baives 97.70 320 ⇑ *i*P P 01 15 38.2 -0.2
comp=Z,11nm,0.8s,mb5.4
SSB Saint Sauveur 97.72 315 *e*P P 01 15 38.1 -0.4
LOR Lormes 98.09 317 ⇑ *i*P P 01 15 39.6 -0.6
comp=Z,21nm,0.9s,mb5.4
LOR *e*MLR MLR
comp=Z,250nm,21.0s,MS4.4
LOR Lormes 98.09 317 ⇑ *i*P P 01 15 39.6 -0.6
LOR pmax pmax
comp=Z,11nm,0.9s,mb5.4
LOR MLR MLR
comp=Z,250nm,21.0s,MS4.7
LOR Lormes 98.09 317 ⇑ *i*P P 01 15 39.6 -0.6
comp=Z,11nm,0.9s,mb5.4
LOR LR LR
comp=Z,250nm,21.0s,MS4.7
SMF Signal de Mont 98.14 316 ⇑ *i*P P 01 15 39.8 -0.6
comp=Z,30nm,1.2s,mb5.4
SMF Signal de Mont 98.14 316 ⇑ *i*P P 01 15 39.8 -0.6
SMF pmax pmax
comp=Z,15nm,1.2s,mb5.4
SMF Signal de Mont 98.14 316 ⇑ *i*P P 01 15 39.8 -0.6
comp=Z,15nm,1.2s,mb5.4
LASF Ste Croix 98.26 314 *e*P P 01 15 40.7 -0.3
comp=Z,27nm,1.3s,mb5.3
SSF Saint Saulge 98.34 317 ⇑ *i*P P 01 15 40.8 -0.5
comp=Z,16nm,1.2s,mb5.1
SSF Saint Saulge 98.34 317 ⇑ *i*P P 01 15 40.8 -0.5
SSF pmax pmax
comp=Z,8.0nm,1.2s,mb5.1
SSF Saint Saulge 98.34 317 ⇑ *i*P P 01 15 40.8 -0.5
comp=Z,7.9nm,1.2s,mb5.1
AVF Avril sur Loir 98.47 317 ⇑ *i*P P 01 15 41.4 -0.5
comp=Z,23nm,1.3s,mb5.2
AVF Avril sur Loir 98.47 317 ⇑ *i*P P 01 15 41.4 -0.5
AVF pmax pmax
comp=Z,11nm,1.3s,mb5.2
AVF Avril sur Loir 98.47 317 ⇑ *i*P P 01 15 41.4 -0.5
comp=Z,11nm,1.3s,mb5.2
BGF Bois d'Agland 98.83 316 ⇑ *i*P P 01 15 43.3 -0.2
comp=Z,24nm,1.0s,mb5.4
BGF Bois d'Agland 98.83 316 ⇑ *i*P P 01 15 43.3 -0.2
BGF pmax pmax
comp=Z,12nm,1.0s,mb5.4
BGF Bois d'Agland 98.83 316 ⇑ *i*P P 01 15 43.3 -0.2
comp=Z,12nm,1.0s,mb5.4
HYF Humbligny 98.92 317 ⇑ *i*P P 01 15 44.0 +0.1
MENF Mencas 98.98 320 *e*P P 01 15 43.6 -0.5
TCF Toulx Ste Croi 99.29 316 ⇑ *i*P P 01 15 45.3 -0.2
comp=Z,27nm,1.4s,mb5.3
TCF Toulx Ste Croi 99.29 316 ⇑ *i*P P 01 15 45.3 -0.2
TCF pmax pmax
comp=Z,14nm,1.4s,mb5.3
TCF Toulx Ste Croi 99.29 316 *i*P P 01 15 45.3 -0.2
comp=Z,14nm,1.4s,mb5.3
IMA2 Indian Mountai 99.34 24 *e*P P 01 15 44.4 -0.9
MTLF Montolieu 99.49 313 ⇑ *i*P P 01 15 46.3 -0.2
comp=Z,13nm,1.1s,mb5.1
MTLF Montolieu 99.49 313 ⇑ *i*P P 01 15 46.3 -0.2
MTLF pmax pmax
comp=Z,6.0nm,1.1s,mb5.0
MTLF Montolieu 99.49 313 ⇑ *i*P P 01 15 46.3 -0.2
comp=Z,6.4nm,1.1s,mb5.1
RJF Les Rejaudoux 99.85 315 *i*P Pdif 01 15 48.1 +0.3
RJF *e*MLR MLR
comp=Z,329nm,21.8s,MS4.5
RJF Les Rejaudoux 99.85 315 ⇑ *i*P Pdif 01 15 48.1 +0.3
RJF LR LR
comp=Z,330nm,21.8s,MS4.8
CHUM Lake Minchumin 100.38 26 *e*Pdif Pdif 01 15 49.8 -0.4
comp=Z,6.3nm,0.6s
COLD Coldfoot 100.42 22 *e*Pdif Pdif 01 15 49.1 -1.3
comp=Z,42nm,0.6s
LFF La Frestale 100.42 315 ⇑ *i*P Pdif 01 15 50.8 +0.4
TORD Torodi Ar. Bea 100.60 283 P Pdif 01 15 52.3 +1.1
comp=Z,1.5nm,1.0s,baz=112,slow=6.0,SNR=6.5
TORD PP PP 01 20 08.6 +8.9
comp=Z,0.8nm,0.9s,baz=73,slow=4.0,SNR=2.5
TORD PKKPbc PKKPbc 01 32 04.8 -1.7
comp=Z,1.0nm,0.8s,baz=290,slow=2.5,SNR=9.9
TORD Torodi Ar. Bea 100.60 283 P Pdif 01 15 52.3 +1.1
TORD PP PP 01 20 08.6 +8.8
TORD PKKPbc PKKPbc 01 32 04.8 -1.7
LDF La Druitiere 100.65 319 *e*P Pdif 01 15 51.1 -0.3
comp=Z,25nm,1.2s
LDF La Druitiere 100.65 319 *e*P Pdif 01 15 51.1 -0.3
LDF pmax pmax
comp=Z,12nm,1.2s
LDF La Druitiere 100.65 319 *e*P Pdif 01 15 51.1 -0.3
comp=Z,12nm,1.2s
PPLA Purkeypile 100.65 27 *e*Pdif Pdif 01 15 52.8 +1.3
FLN La Foliniere 100.87 319 *e*P Pdif 01 15 52.0 -0.4
FLN *e*MLR MLR
comp=Z,344nm,22.5s,MS4.5
FLN La Foliniere 100.87 319 *e*P Pdif 01 15 52.0 -0.4
FLN LR LR
comp=Z,340nm,22.5s,MS4.8
MFF Saint Martin d 100.88 317 ⇑ *i*P Pdif 01 15 52.2 -0.2
comp=Z,23nm,1.3s
MFF Saint Martin d 100.88 317 ⇑ *i*P Pdif 01 15 52.2 -0.2
MFF pmax pmax
comp=Z,11nm,1.3s
MFF Saint Martin d 100.88 317 ⇑ *i*P Pdif 01 15 52.2 -0.2
comp=Z,11nm,1.3s
BPAW Bear Paw Mtn. 100.90 25 *e*Pdif Pdif 01 15 51.1 -1.5
comp=Z,9.3nm,1.0s
GRR Gorron 101.16 318 ⇑ *i*P Pdif 01 15 53.6 -0.1
KDAK Kodiak Island 101.53 32 PFAKE 01 16 10.0 +15
KDAK LR LR
comp=Z,85nm,20.0s,MS4.3
MCK McKinley 101.87 25 *e*P Pdif 01 15 55.5 -1.3
MCK pmax pmax
comp=Z,6.0nm,0.6s
MCK McKinley 101.87 25 *e*Pdif Pdif 01 15 55.5 -1.4
comp=Z,6.3nm,0.6s
COLA College 102.00 24 PFAKE 01 16 10.0 +13
COLA LR LR
comp=Z,358nm,19.0s,MS4.9
SGMF Saint Gilles 102.30 318 ⇑ *i*P Pdif 01 15 58.5 -0.3
PMR Palmer 102.36 28 PFAKE 01 16 10.0 +11
PMR LR LR
comp=Z,346nm,19.0s,MS4.9
ESDC Sonseca Array 104.46 310 PP PP 01 20 28.2 +0.2
comp=Z,2.9nm,1.0s,baz=76,slow=6.3,SNR=4.4
PAB San Pablo 104.77 310 PFAKE 01 16 20.0 +10
PAB LR LR
comp=Z,194nm,19.0s,MS4.7
PPT Papeete 106.60 109 *e*LR LR 01 51 22.4
comp=Z,555nm,23.2s
SFS San Fernando 106.63 307 PFAKE 01 20 40.0 +11
SFS LR LR
comp=Z,434nm,20.0s,MS5.0
DBIC Dimbokro 106.87 276 Pdiff Pdif 01 16 21.3 +2.2
comp=Z,3.1nm,0.9s,baz=264,slow=9.0,SNR=3.6
MTE Manteigas 107.07 311 PFAKE 01 20 40.0 +10
MTE LR LR
comp=Z,228nm,20.0s,MS4.7
RTC Rabat Centre 107.48 304 PFAKE 01 20 40.0 +9.4
RTC LR LR
comp=Z,170nm,19.0s,MS4.6
SIT Sitka 110.57 29 PFAKE 01 20 50.0 +14
SIT LR LR
comp=Z,567nm,20.0s,MS5.2
WRAK Wrangell Islan 112.32 29 PFAKE 01 20 50.0 +11
WRAK LR LR
comp=Z,293nm,19.0s,MS4.9
YKA Yellowknife Ar 115.55 18 PKP PKPdf 01 20 43.4 -1.7
comp=Z,3.0nm,0.9s,baz=301,slow=1.6,SNR=14
YKA PP PP 01 21 43.7 -3.3
comp=Z,3.8nm,0.9s,baz=324,slow=6.2,SNR=6.0
YKA PKKPab PKKPab 01 31 27.8 +3.8
comp=Z,0.5nm,0.7s,baz=101,slow=14,SNR=2.6
YKA Yellowknife Ar 115.55 18 PKP PKPdf 01 20 43.4 -1.6
YKA PP PP 01 21 43.7 -3.3
YKA PKKPab PKKPab 01 31 27.8 +3.8
TAOE Nuku Hiva Isla 117.07 102 *e*LR LR 01 56 21.2
comp=Z,1µm,23.3s
RKT Rikitea 118.62 119 *e*LR LR 01 16 33.0
comp=Z,369nm,26.8s
RKT Rikitea 118.62 119 *e*LR LR 01 57 00.5
comp=Z,329nm,29.8s
RPW Rockport 122.20 33 *e*PKPdf PKPdf 01 20 57.2 -1.1
BMW Boistfort Moun 122.37 35 *e*PKIKP PKPdf 01 20 58.2 -0.5
HEBO Mount Hebo 122.75 37 *e*PKPdf PKPdf 01 20 59.2 -0.2
EDM Edmonton 122.91 24 *e*PKIKP PKPdf 01 20 58.5 -1.0
LON Longmire 123.03 34 *e*PKIKP PKPdf 01 20 59.5 -0.4

ETW Entiat 123.34 33 *e*PKPdf PKPdf 01 20 59.8 -0.7
COR Corvallis 123.35 37 PFAKE 01 21 10.0 +9.4
COR LR LR
comp=Z,432nm,21.0s,MS5.1
TBM Table Mountain 123.45 33 P PKPdf 01 21 00.4 -0.3
VLMM Larch Mountain 123.58 36 P PKPdf 01 21 01.2 +0.1
KEBM Edson Butte 123.61 39 *e*PKPdf PKPdf 01 21 01.3 +0.1
FCC Fort Churchill 123.79 10 *e*PKIKP PKPdf 01 20 59.8 -1.2
OD2 Odessa Site #2 124.34 32 *e*PKPdf PKPdf 01 21 01.8 -0.7
HBO Huckleberry Mo 124.35 38 P PKPdf 01 21 02.5 0.0
RSW Rattlesnake Hi 124.47 34 *e*PKPdf PKPdf 01 21 02.3 -0.4
HAWA Hanford 124.51 34 *e*PKPdf PKPdf 01 21 02.4 -0.3
NEW Newport 124.61 31 *e*PKIKP PKPdf 01 21 02.4 -0.5
NEW MLR MLR
comp=Z,340nm,22.0s
HUMO Hull Mountain 124.61 39 *e*PKPdf PKPdf 01 21 02.9 -0.2
HUMO LR LR
comp=Z,243nm,20.0s,MS4.9
YBH Yreka Blue Hor 125.22 40 PKP PKPdf 01 21 04.0 -0.3
comp=Z,4.4nm,0.9s,baz=312,slow=2.9,SNR=12
YBH Yreka Blue Hor 125.22 40 *e*PKPdf PKPdf 01 21 04.2 -0.1
YBH LR LR
comp=Z,315nm,21.0s,MS5.0
LNOR Lincton Mounta 125.51 33 PKIKP PKPdf 01 21 04.3 -0.4
LHEM Herd Peak 125.59 40 P PKPdf 01 21 05.0 0.0
WALA Waterton Lakes 125.65 28 *e*PKPdf PKPdf 01 21 04.1 -0.8
FFC Flin Flon 125.69 17 *e*PKIKP PKPdf 01 21 03.7 -1.1
FFC MLR MLR
comp=Z,743nm,22.0s,MS5.3
KIPM Iron Peak 125.69 42 *e*PKPdf PKPdf 01 21 05.5 +0.2
WDC Whiskeytown Da 125.93 41 *e*PKIKP PKPdf 01 21 05.2 -0.5
WDC MLR MLR
comp=Z,293nm,20.0s,MS5.0
HOPS Hopland 126.36 43 *e*PKPdf PKPdf 01 21 06.3 -0.2
HOPS LR LR
comp=Z,316nm,20.0s,MS5.0
MOD Modoc 126.65 39 *e*PKPdf PKPdf 01 21 07.4 +0.4
MOD LR LR
comp=Z,224nm,20.0s,MS4.8
BMO Blue Mountains 126.69 34 *e*PKIKP PKPdf 01 21 05.2 -1.8
BMO MLR MLR
comp=Z,365nm,20.0s,MS5.0
MCCM Marconi Confer 126.91 44 PFAKE 01 21 20.0 +12
MCCM LR LR
comp=Z,357nm,22.0s,MS5.0
NSHM Saint Helena R 126.91 43 *e*PKPdf PKPdf 01 21 07.7 +0.1
MSO Missoula 127.18 30 *e*PKPdf PKPdf 01 21 06.7 -1.1
MSO LR LR
comp=Z,424nm,22.0s,MS5.1
WVOR Wild Horse Val 127.37 37 *e*PKIKP PKPdf 01 21 08.2 -0.2
WVOR MLR MLR
comp=Z,319nm,20.0s,MS5.0
CHMT Chamberlain Mo 127.46 30 *e*PKPdf PKPdf 01 21 07.1 -1.3
SCHQ Schefferville 128.26 352 PKP PKPdf 01 21 09.4 -0.3
comp=Z,13nm,0.8s,baz=54,slow=4.1,SNR=6.8
EGMT Eagleton 128.30 27 *e*PKPpre 01 21 06.0
EGMT *e*PKPdf PKPdf 01 21 09.9 0.0
EGMT LR LR
comp=Z,383nm,21.0s,MS5.1
PAHR Pah Rah Range 128.44 40 *e*PKPdf PKPdf 01 21 10.5 0.0
SAO San Andreas Ge 128.57 45 PFAKE 01 21 20.0 +9.2
SAO LR LR
comp=Z,187nm,19.0s,MS4.8
CMB Columbia Colle 128.66 43 *e*PKIKP PKPdf 01 21 10.2 -0.8
CMB *e* 01 23 13.2
CMB MLR MLR
comp=Z,274nm,19.0s,MS5.0
DLMT Dillon 128.86 31 *e*PKPdf PKPdf 01 21 10.9 -0.2
MCMT McKenzie Canyo 129.10 31 *e*PKPdf PKPdf 01 21 11.9 +0.3
HLID Hailey 129.11 34 *e*PKPdf PKPdf 01 21 12.1 +0.4
HLID LR LR
comp=Z,452nm,19.0s,MS5.2
BOZ Bozeman (W) 129.15 30 *e*PKIKP PKPdf 01 21 11.7 0.0
BOZ MLR MLR
comp=Z,371nm,21.0s,MS5.0
BMN Battle Mountai 129.40 38 PFAKE 01 21 20.0 +7.7
BMN LR LR
comp=Z,217nm,21.0s,MS4.8
QLMT Earthquake Lak 129.83 30 *e*PKPdf PKPdf 01 21 13.8 +0.8
NVAR Mina Array Bea 129.84 41 PKhKP 01 21 08.0
comp=Z,1.0nm,0.8s,baz=243,slow=4.5,SNR=4.9
NVAR PKP PKPdf 01 21 13.6 +0.4
comp=Z,9.7nm,0.7s,baz=284,slow=1.8,SNR=18
NVAR PP PP 01 23 25.1 +0.6
comp=Z,1.9nm,0.9s,baz=286,slow=5.0,SNR=3.0
NVAR SKPbc 01 24 29.8
comp=Z,3.3nm,0.7s,baz=268,slow=4.2,SNR=6.4
NVAR Mina Array Bea 129.84 41 PKP 01 21 08.0
NVAR PKP PKPdf 01 21 13.6 +0.4
NVAR PP PP 01 23 25.1 +0.6
NVAR SKPbc 01 24 29.8
GCMT Greycliff 130.00 28 *e*PKPdf PKPdf 01 21 12.9 -0.4
YMR Madison River 130.18 30 *e*PKPdf PKPdf 01 21 14.0 +0.3
YMR LR LR
comp=Z,1µm,21.0s,MS5.5
DGMT Dagmar 130.25 22 PFAKE 01 21 20.0 +6.3
DGMT LR LR
comp=Z,423nm,19.0s,MS5.2
MTUM Tungsten Hills 130.25 42 *e*PKPdf PKPdf 01 21 12.6 -1.5
ELK Elko 130.42 37 PKP PKPdf 01 21 13.7 -0.6
comp=Z,10nm,0.7s,baz=295,slow=2.6,SNR=54
ELK SKPbc SKPbc 01 24 33.9 0.0
comp=Z,4.5nm,0.8s,baz=318,slow=3.2,SNR=8.4
ELK Elko 130.42 37 PKIKP PKPdf 01 21 13.7 -0.5
ELK pmax pmax
comp=Z,10.0nm,0.7s
ELK pmax pmax
comp=N,5.0nm,0.9s
ELK Elko 130.42 37 *e*PKPdf PKPdf 01 21 14.6 +0.3
ELK *e*SKPbc SKPbc 01 24 33.4 -0.5
ELK LR LR
comp=Z,330nm,21.0s,MS5.0
LKWY Lake 130.53 30 PFAKE 01 21 30.0 +16
LKWY LR LR
comp=Z,464nm,20.0s,MS5.2
RLMT Red Lodge 130.68 29 *e*PKPdf PKPdf 01 21 12.0 -2.6
RLMT *e*SKPbc SKPbc 01 24 32.9 -1.9
RLMT LR LR
comp=Z,404nm,20.0s,MS5.1
TPH Tonopah 130.75 41 *e*PKPdf PKPdf 01 21 14.1 -0.8
TPH *e*SKPbc SKPbc 01 24 34.7 -0.6
TPH *e* 01 24 56.5
TPH LR LR
comp=Z,243nm,20.0s,MS4.9
LAO LASA Array 130.87 25 *e*PKPdf PKPdf 01 21 15.5 +0.6
LAO *e*SKPbc SKPbc 01 24 33.7 -1.7
RRI2 Red Ridge 130.92 32 *e*PKPdf PKPdf 01 21 14.8 -0.3
RRI2 PP PP 01 23 31.6 +0.5
RRI2 *e*SKPbc SKPbc 01 24 35.5 -0.3
MOOW Moose Ponds 130.94 31 *e*PKPdf PKPdf 01 21 15.1 0.0
TPAW Teton Pass 131.01 31 *e*PKPdf PKPdf 01 21 15.8 +0.5
TPAW *e*SKPbc SKPbc 01 24 34.8 -1.3
LOHW Long Hollow 131.11 31 *e*PKPdf PKPdf 01 21 15.4 -0.1
LOHW *e*SKPbc SKPbc 01 24 35.8 -0.7
SNOW Snow King Moun 131.13 31 *e*PKPdf PKPdf 01 21 15.7 +0.2
SNOW *e*SKPbc SKPbc 01 24 35.2 -1.4
REDW Red Top Meadow 131.15 31 *e*PKPdf PKPdf 01 21 15.8 +0.2
REDW *e*SKPbc SKPbc 01 24 35.1 -1.5
HVU Hansel Valley 131.19 34 *e*PKPdf PKPdf 01 21 15.6 -0.1
HVU *e*SKPbc SKPbc 01 24 36.0 -0.8
ISA Isabella 131.20 44 PFAKE 01 21 30.0 +14
ISA LR LR
comp=Z,238nm,19.0s,MS4.9
ULM Lac du Bonnet 131.36 15 PKP PKPdf 01 21 14.7 -1.0
comp=Z,14nm,0.7s,baz=354,slow=3.7,SNR=12
ULM SKPbc SKPbc 01 24 34.3 -2.8
comp=Z,9.2nm,0.6s,baz=352,slow=5.6,SNR=11
AHID Auburn Hatcher 131.44 32 PFAKE 01 21 30.0 +14
AHID LR LR
comp=Z,285nm,19.0s,MS5.0
DAC Darwin (Calif) 131.49 43 PFAKE 01 21 30.0 +14
DAC LR LR
comp=Z,266nm,20.0s,MS4.9
BGU Big Grassy Mou 131.60 35 *e*PKPdf PKPdf 01 21 16.2 -0.2
BGU *e*SKPbc SKPbc 01 24 37.8 -0.6
SPUT South Promonto 131.69 35 *e*PKPdf PKPdf 01 21 16.4 -0.2
SPUT *e* 01 21 29.8
SPUT *e*SKPbc SKPbc 01 24 38.1 -0.5
HWUT Hardware Ranch 131.98 34 *e*PKPpre 01 21 13.6
HWUT *e*PKPdf PKPdf 01 21 16.8 -0.4
HWUT *e*SKPbc SKPbc 01 24 39.4 -0.3
HWUT LR LR
comp=Z,313nm,20.0s,MS5.0
TPNV Topopah Spring 132.02 42 *e*PKPdf PKPdf 01 21 14.0 -3.4

TPNV *e*SKPbc SKPbc 01 24 39.5 -0.5
TPNV LR LR
comp=Z,393nm,21.0s,MS5.1
DUG Dugway 132.20 36 *e*PKPdf PKPdf 01 21 16.9 -0.8
DUG *e*SKPbc SKPbc 01 24 39.6 -0.9
DUG LR LR
comp=Z,260nm,21.0s,MS4.9
MWC Mount Wilson 132.23 46 PFAKE 01 21 30.0 +12
MWC LR LR
comp=Z,279nm,19.0s,MS5.0
BW06 Boulder Array 132.25 31 *e*PKPpre 01 21 13.6
BW06 *e*PKPdf PKPdf 01 21 17.4 -0.2
BW06 LR LR
comp=Z,347nm,19.0s,MS5.1
PDAR Pinedale Array 132.25 31 PKhKP 01 21 02.2
comp=Z,0.3nm,0.5s,baz=186,slow=1.5,SNR=3.7
PDAR PKP PKPdf 01 21 15.2 -2.4
comp=Z,1.3nm,0.6s,baz=139,slow=2.4,SNR=5.1
PDAR SKPbc SKPbc 01 24 39.8 -0.8
comp=Z,7.7nm,0.9s,baz=59,slow=0.9,SNR=10.0
NOQ North Oquirrh 132.31 35 *e*PKPpre 01 21 12.0
NOQ *e*PKPdf PKPdf 01 21 18.4 +0.5
NOQ *e*SKPbc SKPbc 01 24 40.4 -0.5
CTU Camp Tracy 132.49 35 *e*PKPdf PKPdf 01 21 18.5 +0.4
CTU *e*SKPbc SKPbc 01 24 40.6 -0.9
CTU *e*SKPdf SKPdf 01 24 51.6 +1.8
GSC Goldstone 132.55 44 *e*PKPdf PKPdf 01 21 18.7 +0.2
GSC *e*SKPbc SKPbc 01 24 41.2 -0.7
GSC LR LR
comp=Z,154nm,19.0s,MS4.7
JLU Jordanelle 132.72 35 *e*PKPpre 01 21 14.6
JLU *e*PKPdf PKPdf 01 21 18.9 +0.3
JLU *e*SKPbc SKPbc 01 24 42.4 +0.1
NLU North Lily Min 132.79 36 *e*PKPdf PKPdf 01 21 18.6 -0.1
NLU *e*SKPbc SKPbc 01 24 41.6 -0.9
DAU Daniels Canyon 132.96 35 *e*PKPdf PKPdf 01 21 19.5 +0.5
DAU *e*SKPbc SKPbc 01 24 43.1 0.0
MPU Maple Canyon 133.00 35 PFAKE 01 21 30.0 +11
MPU LR LR
comp=Z,864nm,22.0s,MS5.4
AGMN Agassiz Refuge 133.15 16 PFAKE 01 21 30.0 +11
AGMN LR LR
comp=Z,680nm,21.0s,MS5.3
CCUT Cedar City 133.53 39 *e*PKPdf PKPdf 01 21 21.2 +1.0
CCUT *e*SKPbc SKPbc 01 24 45.3 +0.1
MVU Marysvale 133.65 37 PFAKE 01 21 30.0 +10
MVU LR LR
comp=Z,303nm,21.0s,MS5.0
MSU Marysvale 133.66 37 *e*PKPdf PKPdf 01 21 21.4 +1.0
MSU *e*SKPbc SKPbc 01 24 46.1 +0.5
PFO Pinyon Flat Ob 133.69 45 *e*PKPdf PKPdf 01 21 20.8 +0.1
PFO *e*SKPbc SKPbc 01 24 45.3 -0.5
PFO LR LR
comp=Z,264nm,21.0s,MS4.9
TMUT Trail Mountain 133.73 36 *e*PKPdf PKPdf 01 21 21.2 +0.7
TMUT *e*SKPbc SKPbc 01 24 46.1 +0.4
RSSD Black Hills 133.84 26 *e*PKIKP 01 21 12.0
RSSD *e* 01 21 20.0
RSSD Black Hills 133.84 26 *e*PKPpre 01 21 11.9
RSSD *e*PKPdf PKPdf 01 21 20.0 -0.6
RSSD *e*SKPbc SKPbc 01 24 45.3 -0.6
BAR Barrett 134.01 47 PFAKE 01 21 30.0 +8.7
BAR LR LR
comp=Z,252nm,19.0s,MS5.0
RWWY Rawlins 134.23 30 *e*PKPdf PKPdf 01 21 20.6 -0.8
RWWY *e*SKPbc SKPbc 01 24 46.2 -1.2
SRU San Rafael 134.25 35 *e*PKPdf PKPdf 01 21 20.9 -0.6
SRU *e*SKPbc SKPbc 01 24 47.9 +0.4
EYMN Ely 134.55 12 PFAKE 01 21 30.0 +8.2
EYMN LR LR
comp=Z,278nm,20.0s,MS5.0
GLA Glamis 135.14 45 *e*PKPdf PKPdf 01 21 23.5 +0.1
GLA *e*SKPbc SKPbc 01 24 49.8 -0.8
GLA LR LR
comp=Z,203nm,19.0s,MS4.9
PLCA Paso Flores 135.15 188 PKhKP 01 21 09.4
comp=Z,2.1nm,1.0s,baz=303,slow=18,SNR=2.9
PLCA PKP PKPdf 01 21 22.9 -0.3
comp=Z,2.8nm,0.9s,baz=211,slow=7.8,SNR=3.8
PHWY Pilot Hill 135.39 29 *e*PKPpre 01 21 14.1
PHWY *e*PKPdf PKPdf 01 21 22.8 -0.7
PHWY *e*SKPbc SKPbc 01 24 50.0 -1.0
PV10 Paradox Valley 135.60 35 *e*PKPdf PKPdf 01 21 23.6 -0.5
PV10 *e*SKPbc SKPbc 01 24 51.5 -0.3
TRQA Tornquist 135.72 199 *e*PKPdf PKPdf 01 21 24.8 +0.5
TRQA LR LR
comp=Z,347nm,19.0s,MS5.1
PV01 Paradox Valley 136.03 35 *e*PKPpre 01 21 14.3
PV01 *e*PKPdf PKPdf 01 21 24.6 -0.3
PV01 *e*SKPbc SKPbc 01 24 52.0 -1.2
WUAZ Wupatki 136.04 40 *e*PKPpre 01 21 18.5
WUAZ *e*PKPdf PKPdf 01 21 25.4 +0.5
WUAZ *e*SKPbc SKPbc 01 24 53.0 -0.3
WUAZ LR LR
comp=Z,264nm,19.0s,MS5.0
ISCO Idaho Springs 136.44 31 *e*PKIKP PKPdf 01 21 25.9 +0.3
ISCO MLR MLR
comp=Z,379nm,20.0s,MS5.1
MVCO Mesa Verde 136.71 36 *e*PKPpre 01 21 21.8
MVCO *e*PKPdf PKPdf 01 21 27.0 +0.8
MVCO *e*SKPbc SKPbc 01 24 54.7 -0.5
MVCO LR LR
comp=Z,317nm,22.0s,MS5.0
COWI Conover 136.79 11 PFAKE 01 21 40.0 +14
COWI LR LR
comp=Z,712nm,21.0s,MS5.4
ECSD EROS,Sioux Fal 137.03 20 *e*PKPpre 01 21 14.8
ECSD *e*PKPdf PKPdf 01 21 22.8 -3.7
ECSD *e*SKPbc SKPbc 01 24 54.1 -1.9
ECSD LR LR
comp=Z,651nm,20.0s,MS5.4
OGNE Ogallala 137.27 27 PFAKE 01 21 40.0 +13
OGNE LR LR
comp=Z,437nm,19.0s,MS5.2
SDCO Great Sand Dun 138.02 33 *e*PKPdf PKPdf 01 21 28.1 -0.5
SDCO LR LR
comp=Z,250nm,21.0s,MS4.9
TUC Tucson 138.37 43 *e*PKHKP 01 21 19.5
TUC *e* 01 21 29.4
TUC MLR MLR
comp=Z,270nm,19.0s,MS5.0
TUC Tucson 138.37 43 *e*PKPpre 01 21 19.5
TUC *e*PKPdf PKPdf 01 21 29.4 0.0
TUC *e*SKPbc SKPbc 01 24 59.3 -1.0
TUC LR LR
comp=Z,270nm,19.0s,MS5.0
GLMI Grayling 138.74 7 *e*PKPdf PKPdf 01 21 31.1 +1.5
GLMI LR LR
comp=Z,678nm,19.0s,MS5.4
LONY Lake Ozonia 139.19 356 *e*PKPpre 01 21 18.9
LONY *e*PKPdf PKPdf 01 21 29.3 -1.2
LONY LR LR
comp=Z,596nm,19.0s,MS5.3
ANMO Albuquerque 139.45 37 PKhKP 01 21 22.6
comp=Z,3.8nm,0.7s,baz=348,slow=0.9,SNR=14
ANMO SKPbc SKPbc 01 25 03.2 0.0
comp=Z,10.0nm,1.1s,baz=305,slow=2.8,SNR=8.6
ANMO Albuquerque 139.45 37 *e*PKHKP 01 21 22.4
ANMO *e* 01 21 31.5
ANMO MLR MLR
comp=Z,342nm,20.0s
ANMO Albuquerque 139.45 37 *e*PKPpre 01 21 22.4
ANMO *e*PKPdf PKPdf 01 21 31.5 +0.2
ANMO *e*SKPdf SKPdf 01 25 02.8 +0.3
ANMO LR LR
comp=Z,342nm,20.0s,MS5.1
JFWS Jewell Farm 139.60 14 *e*PKHKP 01 21 23.6
NCB Newcomb 139.81 355 *e*PKPpre 01 21 21.9
NCB *e*SKPdf SKPdf 01 25 02.1 -0.7
NCB LR LR
comp=Z,690nm,21.0s,MS5.4
CBKS Cedar Bluff 140.03 26 *e*PKHKP 01 21 24.1
CBKS MLR MLR
comp=Z,386nm,21.0s,MS5.1
WES Weston 141.06 352 PFAKE 01 21 50.0 +16
WES LR LR
comp=Z,739nm,21.0s,MS5.4
KSU1 Kansas State U 141.09 23 *e*PKPdf PKPdf 01 21 27.5 -6.6
KSU1 LR LR
comp=Z,508nm,20.0s,MS5.3
QUA2 Belchertown 141.30 353 *e*PKPpre 01 21 26.4
QUA2 *e*PKPdf PKPdf 01 21 34.1 -0.2
AAM Ann Arbor 141.34 6 PFAKE 01 21 50.0 +16

AAM LR LR
comp=Z,610nm,19.0s,MS5.4
BINY Binghamton 141.69 357 *e*PKPpre 01 21 30.9
BINY *e*PKPdf PKPdf 01 21 34.5 -0.6
BINY *e*PP PP 01 24 36.9 -1.0
AMTX Amarillo 142.20 32 *e*PKPpre 01 21 30.6
AMTX LR LR
comp=Z,419nm,21.0s,MS5.2
PAL Palisades 142.73 355 *e*PKHKP 01 21 31.2
PAL *e* 01 21 36.0
ACSO Alum Creek Sta 143.46 6 *e*PKPpre 01 21 33.7
ACSO LR LR
comp=Z,818nm,22.0s,MS5.5
SLM Saint Louis 143.63 16 *e*PKIKP PKPdf 01 21 34.7 -4.0
WMOK Wichita Mounta 143.79 29 *e*PKIKP PKPdf 01 21 35.0 -4.1
WMOK MLR MLR
comp=Z,506nm,20.0s,MS5.3
CPUP Villa Florida 143.84 213 PKP PKPdf 01 21 37.8 -1.6
comp=Z,20nm,0.9s,baz=112,slow=1.8,SNR=37
CCM Cathedral Cave 143.88 17 *e*PKIKP PKPdf 01 21 34.8 -4.3
CCM MLR MLR
comp=Z,338nm,19.0s,MS5.1
MVL Millersville 143.90 357 *e*PKPpre 01 21 26.2
BLO Bloomington 143.98 11 *e*PKIKP PKPdf 01 21 35.9 -3.4
OLIL Olney 144.07 13 *e*PKPdf PKPdf 01 21 36.3 -3.1
FVM French Village 144.19 16 *e*PKIKP PKPdf 01 21 36.0 -3.7
MCWV Mont Chateau 144.25 2 *e*PKPdf PKPdf 01 21 37.1 -2.6
BDFB Brasilia 144.37 236 PKP PKPdf 01 21 39.6 -0.9
comp=Z,18nm,0.8s,baz=97,slow=3.5,SNR=21
SDMD Soldier's Deli 144.50 358 *e*PKPdf PKPdf 01 21 37.6 -2.6
SIUC Southern Illin 144.77 15 *e*PKPdf PKPdf 01 21 38.5 -2.1
USIN University of 144.91 13 *e*PKPdf PKPdf 01 21 39.1 -1.7
WCI Wyandotte Cave 144.94 11 *e*PKIKP PKPdf 01 21 39.0 -1.9
WCI MLR MLR
comp=Z,426nm,20.0s,MS5.2
TXAR Lajitas Array 144.99 41 PKP PKPdf 01 21 40.5 -0.8
comp=Z,152nm,0.7s,baz=292,slow=1.2,SNR=1771
PARMO Parma 145.61 16 *e*PKPbc PKPbc 01 21 41.4 -1.0
GLAT Glass 146.11 16 *e*PKPbc PKPbc 01 21 43.0 -0.9
UTMT University of 146.16 15 *e*PKPbc PKPbc 01 21 43.0 -1.1
GNAR Gosnell 146.19 17 *e*PKPbc PKPbc 01 21 43.2 -1.0
MIAR Mount Ida 146.25 23 *e*PKP2 PKPab 01 21 43.4 -1.7
MIAR MLR MLR
comp=Z,441nm,21.0s,MS5.2
URVA University of 146.36 359 *e*PKPbc PKPbc 01 21 43.3 -1.3
HBAR Harrisburg 146.37 18 *e*PKPbc PKPbc 01 21 43.7 -1.0
HALT Halls 146.43 16 *e*PKPbc PKPbc 01 21 44.1 -0.8
UALR University of 146.51 21 *e*PKPbc PKPbc 01 21 43.4 -1.7
JCT Junction City 146.56 35 *e*PKP2 PKPbc 01 21 44.0 -1.4
JCT MLR MLR
comp=Z,468nm,21.0s,MS5.2
LCO Las Campanas 146.60 192 *e*PKPdf PKPdf 01 21 45.2 +1.1
LCO LR LR
comp=Z,586nm,22.0s,MS5.3
WVT Waverly 146.62 14 *e*PKP2 PKPbc 01 21 43.5 -1.9
WVT MLR MLR
comp=Z,579nm,20.0s,MS5.4
BLA Blacksburg 146.67 3 *e*PKP2 PKPbc 01 21 43.4 -2.1
BLA MLR MLR
comp=Z,698nm,20.0s,MS5.4
TZTN Tazewell 147.03 8 *e*PKPbc PKPdf 01 21 44.2 -0.4
TZTN LR LR
comp=Z,661nm,20.0s,MS5.4
OXF Oxford 147.72 17 *e*PKIKP PKPdf 01 21 44.6 -1.2
OXF *e* 01 21 47.2
OXF MLR MLR
comp=Z,636nm,20.0s,MS5.4
TKL Tuckaleechee C 147.87 8 PKPbc PKPbc 01 21 47.2 -1.8
comp=Z,79nm,0.6s,baz=124,slow=2.6,SNR=186
TKL Tuckaleechee C 147.87 8 *e*PKPdf PKPdf 01 21 45.4 -0.6
TKL *e*PKPbc PKPbc 01 21 47.6 -1.3
SWET Sewanee 147.92 12 *e*PKPdf PKPdf 01 21 44.9 -1.2
SWET *e*PKPbc PKPbc 01 21 47.3 -1.8
CPCT Cooper Cave 147.96 10 *e*PKPdf PKPdf 01 21 45.4 -0.7
CPCT *e*PKPbc PKPbc 01 21 48.2 -1.0
NATX Nacogdoches 148.19 27 *e*PKPdf PKPdf 01 21 46.6 0.0
NATX *e*PKPbc PKPbc 01 21 49.5 -0.4
NATX LR LR
comp=Z,526nm,20.0s,MS5.3
CNNC Cliffs of the 148.69 359 *e*PKPdf PKPdf 01 21 47.6 +0.3
CNNC *e*PKPbc PKPbc 01 21 50.6 -0.5
CNNC LR LR
comp=Z,744nm,20.0s,MS5.5
BBSR BB Station 148.83 337 *e*PKPdf PKPdf 01 21 46.8 -0.9
BBSR *e*PKPbc PKPbc 01 21 51.0 -0.5
BBSR LR LR
comp=Z,335nm,20.0s,MS5.1
HKT Hockley 149.12 31 *e*PKP2 PKPab 01 21 52.1 -4.5
HKT MLR MLR
comp=Z,476nm,20.0s,MS5.3
VBMS Vicksburg 149.47 21 *e*PKPbc PKPbc 01 21 52.5 -0.7
VBMS LR LR
comp=Z,576nm,21.0s,MS5.3
JSC Jenkinsville 149.52 5 *e*PKPdf PKPdf 01 21 48.5 -0.2
JSC *e*PKPbc PKPbc 01 21 52.5 -0.8
LRAL Lakeview Retre 149.77 15 *e*PKPdf PKPdf 01 21 48.5 -0.7
LRAL *e*PKPbc PKPbc 01 21 52.7 -1.2
LRAL LR LR
comp=Z,640nm,22.0s,MS5.4
KVTX Kingsville 149.85 36 *e*PKPbc PKPbc 01 21 55.1 +0.8
KVTX *e*PKPab PKPab 01 22 01.0 +1.3
KVTX LR LR
comp=Z,553nm,19.0s,MS5.4
GOGA Godfrey 150.12 9 *e*PKPdf PKPdf 01 21 49.5 -0.2
GOGA *e*PKPbc PKPbc 01 21 54.0 -0.7
GOGA *e*PKPab PKPab 01 21 59.5 -1.1
GOGA LR LR
comp=Z,820nm,19.0s,MS5.5
COW Cow Castle Cre 150.46 4 *e*PKPbc PKPbc 01 21 55.0 -0.5
NHSC New Hope 150.77 3 *e*PKPbc PKPbc 01 21 55.6 -0.7
NHSC LR LR
comp=Z,591nm,19.0s,MS5.4
BRAL Brewton 151.67 16 *e*PKPdf PKPdf 01 21 52.4 +0.3
BRAL *e*PKPbc PKPbc 01 21 58.1 -0.4
BRAL LR LR
comp=Z,601nm,22.0s,MS5.4
LVC Limon Verde 152.22 199 PKP PKPdf 01 21 53.8 +0.6
comp=Z,5.9nm,0.9s
LVC PKPbc PKPbc 01 22 01.1 +1.2
baz=269,slow=2.9
LVC Limon Verde 152.22 199 *e*PKPdf PKPdf 01 21 54.0 +0.8
LVC *e*PKPbc PKPbc 01 22 00.8 +0.9
LVC *e*PKPab PKPab 01 22 09.4 -0.2
LVC LR LR
comp=Z,431nm,19.0s,MS5.3
SIV San Ignacio 154.01 221 PKP PKPdf 01 21 55.4 -0.5
comp=Z,3.7nm,0.8s,baz=97,slow=2.4,SNR=1.6
SIV PKPbc PKPbc 01 22 03.3 -0.7
comp=Z,6.0nm,0.8s,baz=118,slow=4.4,SNR=2.0
DWPF Disney 155.61 7 *e*PKPab PKPab 01 22 23.1 -0.7
DWPF LR LR
comp=Z,515nm,22.0s,MS5.3
LPAZ La Paz 157.68 206 PKP PKPdf 01 22 02.0 +1.2
comp=Z,5.6nm,1.1s,baz=65,slow=2.6,SNR=13
CMIG Matias Romero 159.02 50 PKP PKPdf 01 22 01.8 -0.6
comp=Z,4.9nm,0.8s,baz=13,slow=1.7,SNR=6.9
CMIG PKPab PKPab 01 22 36.7 -2.2
comp=Z,4.5nm,0.6s,baz=302,slow=4.8,SNR=6.4
CMIG Matias Romero 159.02 50 PKP PKPdf 01 22 01.8 -0.6
CMIG PKPab PKPab 01 22 36.7 -2.2
TEIG Tepich 160.97 30 PFAKE 01 22 10.0 +5.5
TEIG LR LR
comp=Z,390nm,22.0s
HUMP Col San Antoni 161.23 320 *e*PKPdf PKPdf 01 22 04.1 -0.7
HUMP *e*PKPab PKPab 01 22 48.5 +0.1
CPD Cerro la Pandu 161.35 320 *e*PKIKP PKPdf 01 22 04.7 -0.3
CPD *e* 01 22 48.7
SJG San Juan 161.45 321 PKP PKPdf 01 22 03.9 -1.2
comp=Z,12nm,0.8s,baz=50,slow=5.5,SNR=4.7
SJG PKPab PKPab 01 22 49.3 -0.1
comp=Z,9.1nm,0.6s,baz=64,slow=5.9,SNR=4.3
SJG San Juan 161.45 321 PKP PKPdf 01 22 03.9 -1.2
SJG PKPab PKPab 01 22 49.3 -0.1
SJG LR LR
comp=Z,306nm,20.0s
NNA Nana 164.28 185 PKP PKPdf 01 22 07.1 -0.8
comp=Z,13nm,0.8s,baz=231,slow=3.2,SNR=4.4
NNA Nana 164.28 185 *e*PKPdf PKPdf 01 22 07.7 -0.3
NNA LR LR
comp=Z,419nm,21.0s
TGUH Tegucigalpa,Un 166.47 40 *e*PKPdf PKPdf 01 22 08.9 -0.8
TGUH *e*PKPab PKPab 01 23 11.4 -0.1
TGUH LR LR
comp=Z,338nm,20.0s

ATAH Atahualpa 169.30 179 PKP PKPdf 01 22 12.8 +1.1
comp=Z,5.8nm,0.9s,baz=345,slow=1.3,SNR=5.1
JTS JuntasAbangare 170.75 45 *e*PKIKP PKPdf 01 22 08.7 -3.9
JTS MLR MLR
comp=Z,297nm,22.0s
SDV Santo Domingo 170.85 304 PKP PKPdf 01 22 11.3 -1.3
comp=Z,4.4nm,0.2s,baz=22,slow=1.7,SNR=7.0
SDV PP PP 01 27 24.2 +2.8
comp=Z,3.7nm,0.3s,baz=7.9,slow=22,SNR=3.7
SDV Santo Domingo 170.85 304 PKP PKPdf 01 22 11.3 -1.3
SDV PP PP 01 27 24.2 +2.8
SDV LR LR
comp=Z,174nm,21.0s
BCIP Isla Barro Col 174.43 16 PFAKE 01 22 20.0 +5.8
BCIP LR LR
comp=Z,524nm,19.0s
ROSC El Rosal 175.91 285 PKP PKPdf 01 22 14.5 -0.1
comp=Z,8.8nm,0.7s,baz=248,slow=6.4,SNR=9.3
ROSC PP PP 01 27 52.1 +5.4
comp=Z,6.7nm,0.5s,baz=108,slow=15,SNR=4.0
ROSC El Rosal 175.91 285 *e*PKPdf PKPdf 01 22 13.9 -0.7
OTAV Otavalo 176.48 177 *e*PKPdf PKPdf 01 22 14.4 -0.4
OTAV *e*PKPab PKPab 01 23 57.5 +1.8
OTAV LR LR
comp=Z,315nm,20.0s

*ISCJB **14** 01:29:08.7±0.6, 3707N±003×3629E±003, h5km±5km, Error ellipse: s-maj=6.2km s-min=3.6km az=155.6*
*ISK **14** 01:29:08.6, 3707N×3630E, h9km, MD3.5*
*DDA **14** 01:29:08.8, 37.15N×3623E, h7km±2km, Md3.3*
*CSEM **14** 01:29:08.7±0.1, 37.10N×3627E, h8km, MD3.3, Error ellipse: s-maj=3.5km s-min=2.0km az=156.0*
ISC 14 01:29:09.4±0.5**, 3707N**±003×**3629E**±003**, h6**km±4km**, n30,**
σ0**82/37, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
CEYT	**Ceyhan**	**0.43**	**262**	*e*PG		**Pg**	**01 29 17.2**	**-0.6**
CEYT				*e*SG		**Sg**	**01 29 24.6**	**+1.1**
ANDN	**Andirin**	**0.51**	**5**	*i* P		**Pg**	**01 29 17.6**	**-1.6**
ANDN				*i* S		**Sg**	**01 29 24.3**	**-1.5**
KOZT	**Kozan**	**0.55**	**318**	*e*PG		**Pg**	**01 29 20.4**	**+0.4**
KOZT				*e*SG		**Sg**	**01 29 28.2**	**+1.2**
YURE	**YUREGIR**	**0.58**	**245**	*i* P		**Pg**	**01 29 20.2**	**-0.4**
KMRS	**Kahramanmaras**	**0.65**	**49**	*e*PG		**Pg**	**01 29 21.2**	**-0.8**
KMRS				*e*SG		**Sg**	**01 29 30.2**	**-0.2**
GAZ	**Gaziantep**	**0.75**	**82**	*e*PG		**Pg**	**01 29 24.1**	**+0.3**
HTY	**Hatay**	**0.96**	**187**	*e*PG		**Pg**	**01 29 28.1**	**+0.3**
GZT	**Gaziantep**	**1.06**	**74**	*i* P		**Pg**	**01 29 29.8**	**0.0**
GZT				*i* S		**Sg**	**01 29 45.4**	**+1.9**
MERS	**Mersin**	**1.43**	**262**	*e*PN		**Pn**	**01 29 35.0**	**-0.8**
SARI	**SarD1z-Kayseri**	**1.64**	**11**	*e*PN		**Pn**	**01 29 34.3**	**-4.4**
ATAB	**Bozova**	**1.65**	**76**	*i* P		**Pn**	**01 29 39.0**	**0.0**
NIG	**Nigde**	**1.69**	**308**	*e*PN		**Pn**	**01 29 39.3**	**-0.1**
AKCD	**Akcadag**	**1.78**	**46**	*i* P		**Pn**	**01 29 41.4**	**+0.7**
AKCD				*i* S		**Sn**	**01 30 04.0**	**+0.3**
MEST	**Erdemli**	**1.78**	**255**	*i* P		**Pn**	**01 29 39.3**	**-1.4**
MEST				*i* S		**Sn**	**01 30 03.2**	**-0.5**
BNN	**Bunyan**	**1.81**	**349**	*e*PN		**Pn**	**01 29 41.1**	**+0.1**
URFA	**Urfa**	**2.06**	**79**	*e*PN		**Pn**	**01 29 43.3**	**-1.2**
MYA	**Malataya**	**2.11**	**53**	*e*PN		**Pn**	**01 29 44.9**	**-0.3**
DARE	**Darende-Malaty**	**2.23**	**32**	*e*PN		**Pn**	**01 29 40.5**	**-6.3**
IKL	**Isikli**	**2.25**	**249**	*e*PN		**Pn**	**01 29 46.4**	**-0.7**
SVRC	**Sivrice-ELAZID**	**2.73**	**61**	*e*PN		**Pn**	**01 29 53.8**	**+0.1**
LFK	**Lefkose**	**2.86**	**232**	*e*PN		**Pn**	**01 29 55.3**	**-0.2**
SVSK	**Karacayir**	**2.89**	**11**	*e*PN		**Pn**	**01 29 56.5**	**+0.6**
HDMB	**Hadim**	**3.04**	**269**	*e*PN		**Pn**	**01 29 59.0**	**+1.0**
PTK	**Pertek**	**3.05**	**53**	*e*PN		**Pn**	**01 29 59.1**	**+0.9**
KAMT	**Kaman**	**3.06**	**319**	*e*PN		**Pn**	**01 29 58.2**	**-0.1**
CSS	**Prodhromos**	**3.19**	**230**	*e*PN		**Pn**	**01 30 01.0**	**+1.0**
KONT	**Konya--Tatoy**	**3.24**	**287**	*e*PN		**Pn**	**01 30 01.1**	**+0.3**
CORM	**Corum**	**3.36**	**338**	*e*PN		**Pn**	**01 30 03.5**	**+1.1**
RSDY	**Resadiye-TOKAT**	**3.42**	**13**	*e*PN		**Pn**	**01 30 03.7**	**+0.5**
MARD	**Mardin**	**3.60**	**85**	*i* P		**Pn**	**01 30 04.6**	**-1.1**

*IDC **14** 01:31:52.9±0.6, 379S×10076E, h0km, mb4.6/15, mb1 4.7/16, mb1mx4.6/21, mbtmp4.6/16, ML4.8/1, MS4.0/10, Ms1 4.0/10, ms1mx3.7/37, Error ellipse: s-maj=20.4km s-min=11.0km az=45.0*
*BJI **14** 01:31:54.2, 404S×10077E, h34km, mB5.2, mb5.0, Ms4.6, Ms2.4*
*ISCJB **14** 01:31:55.8±0.3, 372S±005×10074E±004, h26km, mb5.0/69, MS4.2/23, Error ellipse: s-maj=7.7km s-min=4.2km az=39.6*
*MOS **14** 01:31:57.1±1.2, 364S×10081E, h33km, mb5.1/25, Error ellipse: s-maj=12.7km s-min=7.3km az=103.7*
*NEIC **14** 01:31:57.4±0.2, 373S×10077E, mb4.9/23, Error ellipse: s-maj=8.3km s-min=5.1km az=223.0*
NEIC Felt [II] at Bengkulu, Sumatra.
*DJA **14** 01:32:00, 369S×10063E, h53km, Mw5.0/6*
ISC 14 01:31:57.8±0.3**, 376S**±005×**10076E**±004**, h28**km**, h28**km±.7km**:pP-P, n172,** σ0**97/160, mb5.0/69, MS4.2/23, 14C-14D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
PPI	**Padang Panjang** 0.0nm,0.0s	**3.30**	**354**	P		**Pn**	**01 32 47.0**	**-0.7**
RGRI	**Rengat** 0.0nm,0.0s	**3.73**	**25**	P		**Pn**	**01 32 55.1**	**+1.5**
KLI	**Kotabumi** 0.0nm,0.0s	**4.23**	**105**	P		**Pb**	**01 33 11.0**	**-0.5**
BLSI	**Bandar Lampung** 0.0nm,0.0s	**4.75**	**110**	P		**Pb**	**01 33 18.8**	**-1.5**
DSRI	**Dabo** 0.0nm,0.0s	**5.02**	**50**	P		**Pn**	**01 33 12.8**	**+1.5**
PPBI	**Pangkal Pinang** 124nm,1.2s	**5.60**	**74**	P		**Pb**	**01 33 29.7**	**-5.1**
SBJI	**Serang** 268nm,1.2s	**5.84**	**114**	P		**Pb**	**01 33 39.1**	**+0.1**
DBJI	**Dramaga** 229nm,1.0s	**6.58**	**115**	P		**Pn**	**01 33 36.1**	**+3.4**
SKJI	**Sukabumi** 280nm,0.8s	**6.61**	**119**	P		**Pb**	**01 33 44.7**	**-7.4**
CBJI	**Citeko** 2μm,0.3s	**6.62**	**114**	P		**Pb**	**01 33 46.5**	**-5.7**
LEM	**Lembang** 170nm,0.9s	**7.48**	**114**	P		**Pn**	**01 33 55.2**	**+10**
BJII	**Banjamegara** 44nm,1.3s	**9.59**	**112**	P		**Pn**	**01 34 27.7**	**+14**
SJI	**Sawahan** 140nm,0.6s	**11.64**	**110**	P		**Pn**	**01 34 43.5**	**+1.3**
BBKI	**Banjar Baru** 560nm,0.8s	**14.05**	**89**	P		**Pn**	**01 35 23.6**	**+8.4**
KKM	**Kota Kinabalu**	**18.25**	**58**	*e*P		**Pn**	**01 36 07.6**	**-1.6**
KAPI	**Kappang** 367nm,0.8s,SNR=9.1	**18.98**	**94**	Pn		**Pn**	**01 36 17.6**	**-0.4**
KAPI	**Kappang** 3.2nm,0.3s,baz=272,slow=12,SNR=12	**18.98**	**94**	P		**Pn**	**01 36 17.1**	**-1.0**
KAPI	**Kappang**	**18.98**	**94**	*e*P		**Pn**	**01 36 17.6**	**-0.5**
PCI	**Palu** 119nm,1.1s	**19.27**	**82**	P		**Pn**	**01 36 24.2**	**+2.6**
BDT	**Bhumibol Dam** 13nm,1.0s	**20.94**	**355**	P		**P**	**01 36 37.5**	**-1.1**
BBSI	**Bau Bau** 74nm,1.0s,mb5.1	**21.80**	**95**	P		**P**	**01 36 53.1**	**+5.1**
KDI	**Kendari** 67nm,1.1s,mb5.0	**21.81**	**91**	P		**P**	**01 36 50.7**	**+2.7**
CMAR	**Chiang Mai Arr** 17nm,0.6s,mb4.7,baz=186,slow=8.4,SNR=39	**22.15**	**355**	P		**P**	**01 36 49.5**	**-2.1**
CMAR	1.3nm,0.3s,baz=195,slow=2.8,SNR=5.7			PcP		PcP	01 40 48.4	+0.1
CMAR	comp=Z,228nm,19.7s,MS3.6,baz=180,slow=36			LR		LR	01 45 22.4	
CMAR	**Chiang Mai Arr**	**22.15**	**355**	P		**P**	**01 36 49.5**	**-2.0**
CMAR							01 40 48.4	
CHG	**Chiang Mai** 26nm,1.1s,mb4.6	**22.50**	**355**	⇑P		**P**	**01 36 55.4**	**+0.1**
CHTO	**Chiang Mai**	**22.50**	**355**	*e*P		**P**	**01 36 55.6**	**+0.3**
CHTO	comp=Z,28nm,1.0s,mb4.7			pmax		pmax		
CHTO	**Chiang Mai** comp=Z,28nm,1.0s,mb4.7	**22.50**	**355**	*e*P		**P**	**01 36 55.6**	**+0.3**
CHRT	**Chiangrai** comp=Z,184nm,0.9s,mb5.5	**23.50**	**358**	⇑P		**P**	**01 37 04.0**	**-1.7**
BATI	**Baumata** comp=Z,19nm,0.4s,baz=263,slow=23,SNR=4.0	**23.61**	**107**	S		**S**	**01 41 19.5**	**0.0**
QIZ	**Qiongzhong**	**24.35**	**21**	P		**P**	**01 37 13.4**	**-0.1**
QIZ				S		**S**	**01 41 38.1**	**+6.8**
QIZ				LR		LR		
	comp=N,237nm,14.9s,MS4.0							
QIZ				LR		LR		
	comp=E,346nm,15.3s,MS4.0							
QIZ				LR		LR		
	comp=Z,328nm,19.9s,MS3.8							
QIZ	**Qiongzhong** comp=Z,58nm,1.4s,mb4.8	**24.35**	**21**	*e*P		**P**	**01 37 12.9**	**-0.5**
LBMI	**Labuha** comp=Z,78nm,1.1s,mb5.2	**26.90**	**84**	P		**P**	**01 37 45.2**	**+8.5**
FITZ	**Fitzroy Crossi** comp=Z,28nm,1.0s,mb4.8	**28.22**	**122**	*e*P		**P**	**01 37 49.1**	**+0.6**
KMI	**Kunming**	**28.77**	**4**	P		**P**	**01 37 53.8**	**+0.5**
KMI				AP		pP	01 38 03.5	+2.0
KMI				XP		sP	01 38 07.3	+2.3
KMI				PP		PP	01 38 50.3	-8.4
KMI				S		**S**	**01 42 44.3**	**+3.0**
KMI				XS		sS	01 42 57.1	+2.2
KMI				SS		SS	01 44 13.4	-31
KMI				AMB		AMB		
	comp=Z,12nm,1.0s,mb4.6							
KMI				AMB		AMB		
	comp=Z,51nm,3.1s							
KMI				LR		LR		
	comp=N,387nm,13.9s,MS4.3							
KMI				LR		LR		
	comp=E,398nm,12.1s,MS4.3							
KMI				LR		LR		
	comp=Z,463nm,13.4s,MS4.3							
GYA	**Guiyang**	**30.58**	**10**	⇑P		**P**	**01 38 08.9**	**-0.4**
GYA				AP		pP	01 38 15.9	-1.6
GYA				XP		sP	01 38 19.6	-1.3
GYA				PP		PP	01 39 08.6	-10
GYA				PCP		PcP	01 41 09.4	+1.7
GYA				S		**S**	**01 43 05.1**	**-4.5**
GYA				XS		sS	01 43 25.4	+2.2
GYA				SCP		ScP	01 44 48.6	+0.1
GYA				SS		SS	01 44 55.3	-26
GYA				AMB		AMB		
	comp=Z,20nm,1.0s,mb4.9							
GYA				AMB		AMB		
	comp=Z,140nm,5.7s							
GYA				LR		LR		
	comp=N,610nm,13.8s,MS4.5							
GYA				LR		LR		
	comp=E,590nm,14.0s,MS4.5							
GYA				LR		LR		
	comp=Z,800nm,15.0s,MS4.5							
NWAO	**Narrogin (SRO)** comp=Z,259nm,20.1s,MS3.9,baz=213,slow=32	**32.86**	**154**	LR		LR	01 49 25.6	
ODAN	**Odare** comp=Z,117nm,1.0s,mb5.8	**33.07**	**338**	*e*P		**P**	**01 38 31.9**	**+0.7**
TAPN	**Taplejung** comp=Z,229nm,0.9s,mb6.1	**33.40**	**339**	*e*P		**P**	**01 38 35.5**	**+1.5**
RAMN	**Ramite**	**33.46**	**337**	*e*P		**P**	**01 38 35.8**	**+1.2**
JIRN	**Jiri** comp=Z,113nm,0.7s,mb5.9	**34.25**	**337**	*e*P		**P**	**01 38 42.7**	**+1.2**
NACB	**Ninganchiao** comp=Z,111nm,0.8s,mb5.8	**34.38**	**35**	*e*P		**P**	**01 38 41.2**	**-1.5**
PKI	**Pulchoki**	**34.49**	**335**	*e*P		**P**	**01 38 44.1**	**+0.6**
LSA	**Lhasa**	**34.52**	**345**	P		**P**	**01 38 44.0**	**+0.2**
LSA	**Lhasa**	**34.52**	**345**	*e*P		**P**	**01 38 45.1**	**+1.3**
LSA				pmax		pmax		
	comp=Z,35nm,1.5s,mb5.1							
LSA	**Lhasa** comp=Z,35nm,1.5s,mb5.1	**34.52**	**345**	*e*P		**P**	**01 38 45.1**	**+1.4**
CD2	**Chengdu**	**34.59**	**5**	P		**P**	**01 38 43.4**	**-1.0**
CD2				AP		pP	01 38 50.8	-1.9
CD2				XP		sP	01 38 55.0	-1.1
CD2				PP		PP	01 40 01.3	-1.9
CD2				S		**S**	**01 44 11.8**	**-0.2**
CD2				SS		SS	01 46 25.5	-17
CD2				AMB		AMB		
	comp=Z,20nm,1.2s,mb4.9							
CD2				LR		LR		
	comp=N,490nm,14.4s,MS4.6							
CD2				LR		LR		
	comp=E,850nm,19.2s,MS4.6							
CD2				LR		LR		
	comp=Z,590nm,14.4s,MS4.5							
GUN	**Gumba**	**34.60**	**336**	*e*P		**P**	**01 38 45.6**	**+1.1**
DMN	**Daman**	**34.65**	**335**	*e*P		**P**	**01 38 45.5**	**+0.6**
KKN	**Kakani**	**34.74**	**335**	*e*P		**P**	**01 38 46.2**	**+0.5**
GKN	**Gorkha**	**35.19**	**335**	*e*P		**P**	**01 38 50.1**	**+0.5**
KOLN	**Koldanda** comp=Z,39nm,0.8s,mb5.4	**35.44**	**333**	*e*P		**P**	**01 38 52.5**	**+0.7**
DANN	**Dangsing**	**35.87**	**334**	*e*P		**P**	**01 38 55.9**	**+0.4**
WRA	**Warramunga Arr** comp=Z,9.7nm,0.9s,mb4.8,baz=293,slow=9.9,SNR=13	**36.47**	**119**	P		**P**	**01 39 00.5**	**-0.2**
WRA				S		**S**	**01 44 41.4**	**+0.2**
	comp=Z,1.7nm,1.0s,baz=293,slow=16,SNR=5.9							
WRA				LR		LR	01 55 29.0	
	comp=Z,195nm,20.8s,MS3.9,baz=295,slow=39							
WRA	**Warramunga Arr**	**36.47**	**119**	P		**P**	**01 39 00.5**	**-0.2**
WRA				S		**S**	**01 44 41.4**	**+0.3**
WRAB	**Tennant Creek**	**36.47**	**119**	*e*P		**P**	**01 39 01.2**	**+0.5**
WRAB				pmax		pmax		
	comp=Z,13nm,0.5s,mb5.1							
WRAB	**Tennant Creek** comp=Z,13nm,0.5s,mb5.1	**36.47**	**119**	*e*P		**P**	**01 39 01.2**	**+0.4**
WB2	**Warramunga Arr**	**36.48**	**119**	*e*P		**P**	**01 39 00.9**	**+0.1**
WB2				*e*pP		pP	01 39 10.2	+1.1
WHN	**Wuhan**	**36.50**	**20**	⇓P		**P**	**01 39 01.0**	**+0.2**
WHN				AMB		AMB		
	comp=Z,44nm,0.6s,mb5.6							
WHN				LR		LR		
	comp=Z,1μm,16.2s,MS4.7							
ASAR	**Alice Springs** comp=Z,3.2nm,0.3s,mb4.5,baz=299,slow=8.0,SNR=19	**37.62**	**125**	P		**P**	**01 39 10.4**	**-0.1**
ASAR				PcP		PcP	01 41 28.6	+0.7
	comp=Z,1.2nm,0.7s,baz=320,slow=2.8,SNR=4.4							
ASAR				S		**S**	**01 45 00.8**	**+2.2**
	comp=Z,0.7nm,0.6s,baz=298,slow=15,SNR=4.1							
XAN	**Xi'an**	**38.38**	**11**	P		**P**	**01 39 15.8**	**-0.8**
XAN				AP		pP	01 39 24.6	-0.4
XAN				XP		sP	01 39 29.0	+0.6
XAN				AMB		AMB		
	comp=Z,63nm,1.0s,mb5.3							
LZH	**Lanzhou**	**39.74**	**4**	⇑P		**P**	**01 39 28.3**	**+0.3**
LZH				AP		pP	01 39 35.8	-0.6
LZH				XP		sP	01 39 39.3	-0.5
LZH				PP		PP	01 41 05.3	+5.6
LZH				*e*S		**S**	**01 45 32.5**	**+2.3**
LZH				XS		sS	01 45 44.3	+0.3
LZH				*e*SS		SS	01 48 23.6	-3.2
LZH				AMB		AMB		
	comp=Z,39nm,1.1s,mb5.0							
LZH				AMB		AMB		
	comp=Z,157nm,5.3s							
LZH				LR		LR		
	comp=N,452nm,13.0s							
LZH				LR		LR		
	comp=Z,715nm,16.7s,MS4.6							
JAY	**Jayapura** comp=Z,100nm,0.5s,mb5.8	**39.90**	**89**	P		**P**	**01 39 28.8**	**-1.0**
GTA	**Gaotai**	**42.96**	**359**	⇑P		**P**	**01 39 54.5**	**+0.1**
GTA				AP		pP	01 40 02.4	-0.5
GTA				XP		sP	01 40 06.1	-0.1
GTA				S		**S**	**01 46 17.4**	**-0.6**
GTA				SS		SS	01 49 21.9	-8.7
GTA				AMB		AMB		
	comp=Z,22nm,1.2s,mb4.8							
GTA				AMB		AMB		
	comp=Z,133nm,6.0s							
GTA				LR		LR		
	comp=N,154nm,15.6s,MS4.4							
GTA				LR		LR		
	comp=E,379nm,18.6s,MS4.4							
GTA				LR		LR		
	comp=Z,176nm,18.0s,MS4.0							
COEN	**Coen** comp=Z,5.1nm,0.9s,mb4.2	**43.04**	**106**	*e*P		**P**	**01 39 54.3**	**-1.2**
HHC	**Hu-ho-hao-te**	**45.48**	**12**	*e*P		**P**	**01 40 15.4**	**+0.8**
HHC				AP		pP	01 40 23.4	+0.4
HHC				XP		sP	01 40 26.3	-0.1
HHC				PCP		PcP	01 41 53.3	+0.1
HHC				PP		PP	01 42 03.8	+2.4
HHC				S

comp=Z,382nm,5.9s
HHC LR LR
comp=N,298nm,16.6s,MS4.5
HHC LR LR
comp=E,359nm,17.1s,MS4.5
HHC LR LR
comp=Z,265nm,14.5s,MS4.3
BJT Baijiatuan 45.81 17 *e*P **P 01 40 17.3 +0.1**
BJT *e**PP pP 01 40 25.2 -0.4
BJT pmax pmax
comp=Z,20nm,0.8s
BJT Baijiatuan 45.81 17 *e*P **P 01 40 17.2 +0.1**
comp=Z,20nm,0.8s,mb5.1
BJT *e*pP pP 01 40 25.2 -0.5
BJI Beijing 45.83 17 P **P 01 40 17.4 +0.1**
BJI AMB AMB
comp=Z,21nm,0.9s,mb5.1
CTA Charters Tower 47.18 114 *e*P **P 01 40 28.6 +0.3**
comp=Z,6.6nm,0.7s,mb4.7
CTA Charters Tower 47.18 114 LR LR 02 02 47.2
comp=Z,165nm,18.3s,MS4.0,baz=51,slow=39
CTA Charters Tower 47.18 114 *e*P **P 01 40 28.6 +0.3**
CTA pmax pmax
comp=Z,7.0nm,0.7s
CTAO Charters Tower 47.18 114 *e*P **P 01 40 28.9 +0.6**
CTAO *e**PP pP 01 40 37.1 +0.3
CTAO pmax pmax
comp=Z,11nm,0.8s,mb4.8
CTAO Charters Tower 47.18 114 *e*P **P 01 40 28.9 +0.6**
comp=Z,11nm,0.8s,mb4.8
CTAO *e*pP pP 01 40 37.1 +0.3
STKA Stephens Creek 47.42 131 *e*P **P 01 40 36.4 +6.3**
comp=Z,6.4nm,0.4s,mb4.9
STKA Stephens Creek 47.42 131 P **P 01 40 30.7 +0.6**
comp=Z,2.3nm,0.8s,mb4.2,baz=318,slow=20,SNR=3.2
STKA LR LR 02 01 40.3
comp=Z,285nm,19.1s,MS4.2,baz=115,slow=38
STKA Stephens Creek 47.42 131 P **P 01 40 30.7 +0.6**
STKA LR LR 02 01 40.3
KSRS Korea Array 48.16 29 P **P 01 40 35.6 0.0**
comp=Z,24nm,1.0s,mb5.2,baz=219,slow=8.3,SNR=58
KSRS Korea Array 48.16 29 P **P 01 40 35.6 0.0**
KSRS pmax pmax
comp=Z,24nm,1.0s,mb5.2
KBL Kabul 48.40 325 *e*P **P 01 40 38.2 +0.7**
KBL pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
KBL Kabul 48.40 325 *e*P **P 01 40 38.2 +0.7**
comp=Z,3.0nm,0.5s,mb4.6
WMQ Urumqi 48.80 347⇑ *i*P **P 01 40 41.4 +1.0**
WMQ AP pP 01 40 49.0 0.0
WMQ XP sP 01 40 52.0 -0.3
WMQ PCP PcP 01 42 02.0 -3.0
WMQ *e*S **S 01 47 42.0 +0.2**
WMQ AMB AMB
comp=Z,52nm,1.0s,mb5.5
WMQ AMB AMB
comp=Z,204nm,5.6s
WMQ LR LR
comp=N,195nm,19.7s,MS4.3
WMQ LR LR
comp=E,246nm,19.7s,MS4.3
WMQ LR LR
comp=Z,179nm,25.2s
SONM Songino Array 51.62 5 P **P 01 41 02.4 +0.8**
comp=Z,19nm,0.8s,mb5.1,baz=187,slow=9.0,SNR=88
ULN Ulaanbaatar 51.70 5 *e*P **P 01 41 03.0 +0.7**
ULN *e**PP pP 01 41 10.5 -0.4
ULN pmax pmax
comp=Z,15nm,0.8s,mb5.0
ULN Ulaanbaatar 51.70 5 *e*P **P 01 41 03.0 +0.6**
comp=Z,15nm,0.8s,mb5.0
ULN *e*pP pP 01 41 10.5 -0.4
TKM2 Tokmak 2 51.74 337 *e*P **P 01 41 03.0 +0.3**
TKM2 pmax pmax
comp=Z,12nm,0.5s,mb5.1
TKM2 Tokmak 2 51.74 337 *e*P **P 01 41 03.0 +0.3**
comp=Z,12nm,0.5s,mb5.1
AML Almayashu 51.87 335 *e*P **P 01 41 03.6 0.0**
comp=Z,7.0nm,0.6s,mb4.8
EKS2 Erkin-Say 52.27 335 *e*P **P 01 41 06.6 0.0**
comp=Z,199nm,1.4s,mb5.8
CN2 Changchun 52.30 22 *e*P **P 01 41 05.9 -0.9**
CN2 *e*XP sP 01 41 17.9 -0.9
CN2 *e*S **S 01 48 28.8 -1.6**
CN2 AMB AMB
comp=Z,30nm,0.7s,mb5.3
CN2 AMB AMB
comp=Z,250nm,4.0s
CN2 LR LR
comp=N,420nm,18.0s,MS4.6
CN2 LR LR
comp=E,320nm,18.0s,MS4.6
CN2 LR LR
comp=Z,280nm,18.0s,MS4.3
MKAR Makanchi Array 52.92 344 P **P 01 41 11.2 -0.2**
comp=Z,21nm,0.8s,mb5.1,baz=141,slow=7.8,SNR=95
MKAR LR LR 02 06 56.0
comp=Z,79nm,19.9s,MS3.8,baz=262,slow=40
MAJO Matsushiro 53.17 38 *e*P **P 01 41 12.7 -0.8**
MAJO pmax pmax
comp=Z,18nm,1.1s,mb4.9
MAJO Matsushiro 53.17 38 *e*P **P 01 41 12.7 -0.8**
comp=Z,18nm,1.1s,mb4.9
MAT Matsushiro 53.17 38 P **P 01 41 13.9 +0.4**
MJAR Matsushiro Arr 53.17 38 P **P 01 41 12.5 -1.0**
comp=Z,12nm,0.9s,mb4.8,baz=220,slow=8.1,SNR=21
MJAR Matsushiro Arr 53.17 38 P **P 01 41 12.5 -1.0**
ZAK Zakamensk 53.97 2⇑ *i*P **P 01 41 18.7 -0.3**
ZAK *e* pP 01 41 26.7 -0.9
ZAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
MDJ Mudanjiang 54.64 25 P **P 01 41 23.9 -0.1**
MDJ AP pP 01 41 30.1 -2.5
MDJ SCP ScP 01 46 24.0 +0.5
MDJ PCS PcS 01 46 26.4 +0.2
MDJ S **S 01 49 03.0 +0.9**
MDJ XS sS 01 49 14.1 -2.2
MDJ SCS ScS 01 51 11.8 +0.4
MDJ SS SS 01 52 47.4 +2.0
MDJ AMB AMB
comp=Z,8.0nm,0.7s,mb4.9
MDJ AMB AMB
comp=Z,359nm,11.3s
MDJ LR LR
comp=Z,266nm,16.3s,MS4.4
MOY Mondy 55.21 0 *e*P **P 01 41 28.5 +0.5**
TLY Talaya 55.28 2 *e*P **P 01 41 29.3 +0.8**
TLY *e* pP 01 41 36.9 -0.3
TLY pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,251nm,17.0s,MS4.4
TLY Talaya 55.28 2 *e*P **P 01 41 29.2 +0.7**
comp=Z,11nm,0.7s,mb5.0
KURK Kurchatov 57.50 343 P **P 01 41 44.0 -0.3**
comp=Z,172nm,0.8s,mb6.1,SNR=22
KURK Kurchatov 57.50 343*c i*P **P 01 41 43.8 -0.5**
KURK pmax pmax
comp=Z,29nm,0.9s,mb5.3
KURK Kurchatov 57.50 343 *e*P **P 01 41 43.9 -0.4**
ZAA0 Zalesovo Array 59.03 349 *e*P **P 01 41 53.6 -1.3**
ZALV Zalesovo Beam 59.03 349 P **P 01 41 53.5 -1.4**
comp=Z,28nm,0.8s,mb5.3,baz=174,slow=4.5,SNR=72
KLR Kul'dur 59.23 23 *e*P **P 01 41 52.2 -4.3**
NVS Novosibirsk 60.18 348 *e*P **P 01 42 01.4 -1.5**
NVS pmax pmax
comp=Z,17nm,1.2s,mb5.0
NVS pmax pmax
comp=N,11nm,1.4s
BRVK Borovoye 62.15 340 *e*P **P 01 42 14.8 -1.5**
BRVK pmax pmax
comp=Z,12nm,0.8s,mb5.1
BRVK Borovoye 62.15 340 *e*P **P 01 42 14.8 -1.5**
comp=Z,12nm,0.8s,mb5.1
BOD Bodaibo 62.30 8 *e*P **P 01 42 16.5 -0.7**
BOD *e* pP 01 42 24.7 -1.2
BOD pmax pmax
comp=Z,11nm,1.0s,mb4.9
BOD pmax pmax
comp=Z,11nm,1.0s,mb4.9
YSS Yuzh-Sakhalins 62.57 31⇑ *e*P **P 01 42 18.2 -1.1**
YSS *e* pP 01 42 27.0 -1.0
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 62.57 31 *e*P **P 01 42 19.3 0.0**
comp=Z,49nm,0.9s,mb5.6
KMBO Kilima Mbogo 63.49 271 LR LR 02 07 04.1
comp=Z,154nm,20.2s,MS4.2,baz=234,slow=33
MAK Makhachkala 66.80 320 *e*P pP 01 43 02.9 +7.2
SVE Sverdlovsk 68.59 338⇓ *e*P **P 01 42 57.5 -0.4**
SVE pmax pmax
comp=Z,24nm,1.1s,mb5.0
MAW Mawson 68.78 195 LR LR 02 05 35.7
comp=Z,210nm,21.7s,MS4.3,baz=185,slow=29
ARU Arti 69.11 336*d i*P **P 01 43 00.5 -0.7**
ARU *e* 01 43 18.0
ARU *e*S S 01 52 04.1 -0.6
ARU pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
ARU Arti 69.11 336 *e*P **P 01 43 00.3 -0.8**
comp=Z,4.8nm,0.6s,mb4.6
YAK Yakutsk 69.25 14⇓ *e*P **P 01 43 00.6 -1.3**
YAK pmax pmax
comp=Z,42nm,1.1s,mb5.3
KIV Kislovodsk 70.36 319 *i* P **P 01 43 11.3 +2.1**
KIV *e* 01 43 29.1
KIV *e*SS SS 01 56 48.7 -2.5
KIV pmax pmax
comp=Z,16nm,1.3s,mb4.8
LSZ Lusaka 72.21 255 P **P 01 43 19.9 -1.0**
comp=Z,1.6nm,0.9s,mb4.0,baz=128,slow=10,SNR=3.0
LSZ Lusaka 72.21 255 *e*P **P 01 43 19.9 -1.0**
LSZ pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
LSZ Lusaka 72.21 255 *e*P **P 01 43 19.9 -1.0**
comp=Z,9.1nm,1.2s,mb4.6
CSS Prodhromos 73.89 308 *e*P **P 01 43 30.6 +0.1**
comp=Z,9.5nm,0.6s,mb4.9
PETK Petropavlovsk- 73.96 32 P **P 01 43 29.7 -0.8**
comp=Z,2.3nm,0.6s,mb4.3,baz=234,slow=1.4,SNR=8.7
PET Petropavlovsk 74.43 32 *i* P **P 01 43 32.8 -0.4**
PET pmax pmax
comp=Z,22nm,0.6s,mb5.3
PET MLR MLR
comp=Z,100nm,21.0s,MS4.1
PET Petropavlovsk 74.43 32 *e*P **P 01 43 32.5 -0.7**
BOSA Boshof 75.48 242 P **P 01 43 39.0 -0.9**
comp=Z,5.9nm,1.1s,mb4.4,baz=9.9,slow=4.7,SNR=3.7
BOSA LR LR 02 14 35.3
comp=Z,87nm,18.1s,MS4.1,baz=282,slow=34
VSR Storozhevoye 75.64 325 *e*P **P 01 43 38.7 -1.6**
VSR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
VSR pmax pmax
comp=N,5.0nm,0.7s
VSR pmax pmax
comp=E,8.0nm,0.8s
TIXI Tiksi 77.47 9⇑ *e*P **P 01 43 47.8 -2.4**
TIXI pmax pmax
comp=Z,25nm,1.5s,mb4.9
OBN Obninsk 78.68 328⇓ *i*P **P 01 43 57.1 -0.1**
OBN *e* pP 01 44 05.2 -1.0
OBN *e*SS SS 01 58 56.7 -0.4
OBN pmax pmax
comp=Z,33nm,1.6s,mb5.0
AKASG Malin Array Be 81.33 322 P **P 01 44 10.2 -1.4**
comp=Z,2.5nm,0.8s,mb4.2,baz=94,slow=2.6,SNR=7.5
VRI Vrincioaia 81.65 317⇓ *i*P **P 01 44 13.9 +0.4**
VRI Vrincioaia 81.65 317⇓ P **P 01 44 13.9 +0.4**
MLR Muntele Rosu 82.09 317⇓ *i*P **P 01 44 16.1 +0.3**
MLR Muntele Rosu 82.09 317⇓ P **P 01 44 16.1 +0.2**
TSUM Tsumeb 82.34 251 LR LR 02 14 54.0
comp=Z,122nm,19.7s,MS4.3,baz=142,slow=31
BURAR Bucovina Array 83.08 319⇑ *i*P **P 01 44 21.6 +0.7**
BURAR Bucovina Array 83.08 319⇑ P **P 01 44 21.6 +0.8**
BUR08 Bucovina Ar. S 83.09 319 *e*P **P 01 44 21.3 +0.4**
BUR08 *e*pP pP 01 44 30.0 +0.1
VTS Vitosha 83.40 313⇓ *i*P **P 01 44 22.5 -0.2**
VTS Vitosha 83.40 313⇓ P **P 01 44 22.5 -0.2**
BILL Bilibino 84.53 20 *e*P **P 01 44 29.1 +1.2**
BILL *e*SS SS 02 00 22.8 -0.9
BILL pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
DRGR 84.57 318⇓ *i*P **P 01 44 29.0 +0.4**
BZS Buzias 85.09 316⇓ *i*P **P 01 44 31.3 +0.1**
PKSM Moragy 87.24 316⇓ *i*P **P 01 44 41.8 0.0**
ARCES ARCESS Array B 88.38 340 P **P 01 44 47.0 +0.2**
comp=Z,3.7nm,0.8s,mb4.7,baz=93,slow=6.1,SNR=7.6
MORC Moravsky Berou 88.46 320 *e*P **P 01 44 48.2 +0.7**
MORC pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
MORC Moravsky Berou 88.46 320 *e*P **P 01 44 48.2 +0.7**
comp=Z,1.9nm,0.6s,mb4.5
SOKA Soboth 89.77 317⇑ *i*P **P 01 44 54.1 +0.3**
SOKA Soboth 89.77 317⇑ *i*PcP **P 01 44 54.1 +0.3**
GEC2 GERESS Array S 90.86 319 *e*P **P 01 44 58.8 0.0**
GERES GERESS Array B 90.86 319 P **P 01 44 59.1 +0.3**
comp=Z,1.7nm,0.8s,mb4.5,baz=104,slow=4.8,SNR=14
CLL Collm 91.50 321 *e*(pP) pP 01 45 12.0 +1.2
NVAR Mina Array Bea 130.45 41 PKP PKPdf 01 51 06.6 +0.4
comp=Z,1.2nm,0.9s,baz=253,slow=1.1,SNR=4.9
NVAR SKPbc SKPbc 01 54 28.9 +1.1
comp=Z,0.8nm,0.8s,baz=302,slow=2.8,SNR=3.9
HWUT Hardware Ranch 132.49 33 *e*PKPdf PKPdf 01 51 10.6 +0.6
DUG Dugway 132.74 35 *e*PKIKP PKPdf 01 51 11.6 +1.1
RSSD Black Hills 134.24 25 *e*PKIKP PKPdf 01 51 12.9 -0.3
WMOK Wichita Mounta 144.24 28 *e*PKIKP PKPdf 01 51 29.1 -2.6
WMOK *e* 01 51 37.0
WCI Wyandotte Cave 145.09 10 *e*PKIKP PKPdf 01 51 31.6 -1.5
WCI *e* 01 51 40.0
TXAR Lajitas Array 145.60 40 PKPbc PKPbc 01 51 35.1 +0.8
comp=Z,8.9nm,0.4s,baz=265,slow=0.6,SNR=164
URVA University of 146.31 358 *e*PKPbc PKPbc 01 51 35.9 -0.4
URVA *e* 01 51 45.7
MIAR Mount Ida 146.60 22 *e*PKP2 PKPab 01 51 37.2 -1.1
WVT Waverly 146.83 13 *e*PKP2 PKPab 01 51 37.3 -1.8
JCT Junction City 147.08 34 *e*PKP2 PKPbc 01 51 38.4 -0.4
TZTN Tazewell 147.13 6 *e*PKPbc PKPbc 01 51 37.7 -1.1
TKL Tuckaleechee C 147.98 7 *e*PKP2 PKPbc 01 51 40.3 -0.8
CPCT Cooper Cave 148.09 8 *e*PKPbc PKPbc 01 51 40.8 -0.6
SWET Sewanee 148.09 10 *e*PKPbc PKPbc 01 51 40.0 -1.4
HKT Hockley 149.58 29 *e*PKHKP PKPdf 01 51 40.8 0.0
HKT *e* PKPbc 01 51 45.9 +0.5
GOGA Godfrey 150.24 7 *e*PKIKP PKPbc 01 51 45.6 -1.2
LVC Limon Verde 151.91 201 *e*PKPbc PKPbc 01 51 50.3 -0.8

MOS 14 01:39:22.2±0.6, 4266N×4588E, h9km, mb3.6/1, 1C, Error ellipse: s-maj=38.8km s-min=10.5km az=33.9, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.89**	**298**	*e*PG	Pg	01 39 39.7	+0.4
SNJR				*e*S	Sg	01 39 50.4	-0.4
LACR	**Lac**	**1.18**	**279**⇑	*i*PG	Pg	01 39 44.4	-0.4
LACR				*e*S	Sb	01 39 58.4	-1.7
BTKR	**Batakoyurt**	**1.22**	**307**	*e*PG	Pg	01 39 44.9	-0.6
BTKR				*e*S	Sb	01 39 59.8	-1.3
ARNR	**Ardon**	**1.29**	**295**	*e*PG	Pg	01 39 46.1	-0.9
ARNR				*i* S	Sb	01 40 01.6	-1.7
TRKR	**Terskaya**	**1.36**	**322**	*e*PG	Pg	01 39 47.4	-0.9
TRKR				*e*S	Sb	01 40 04.2	-1.0
KMSR	**Komsomolskaya**	**1.37**	**302**	*e*PG	Pg	01 39 47.3	-1.1
KMSR				*e*S	Sb	01 40 03.7	-1.8
KORR	**Kora**	**1.40**	**288**	*e*PG	Pg	01 39 49.2	+0.1
KORR				*e*S	Sb	01 40 06.0	-0.5
ZEI	**Tsey**	**1.47**	**275**	*e*PG	Pg	01 39 48.7	-1.6
ZEI				*e*S	Sn	01 40 06.6	-1.5
LSNR	**Lesken**	**1.64**	**293**	*e*PN	Pn	01 39 51.2	+0.1

*BJI **14** 02:34:44.5, 102S×98.15E, h20km, mB5.0, mb5.0, Ms4.6, Msz4.4*
*ISCJB **14** 02:34:47.3±1.2, 045S±005×9809E±005, h8km±7km, mb4.8/59, MS4.2/16, Error ellipse: s-maj=9.7km s-min=6.4km az=38.9*
*IDC **14** 02:34:48.7±0.6, 029S×9821E, h0km, mb4.5/16, mb1 4.6/17, mb1mx4.4/23, mbtmp4.5/17, ML5.1/1, MS3.8/5, Ms1 3.9/5, ms1mx3.3/32, Error ellipse: s-maj=21.2km s-min=14.3km az=66.0*
*MOS **14** 02:34:51.9±1.1, 027S×9819E, h33km, mb5.0/21, Error ellipse: s-maj=15.0km s-min=7.2km az=96.3*
*NEIC **14** 02:34:52.7±4.4, 036S×9820E, h28km±29km, mb4.8/18, Error ellipse: s-maj=14.7km s-min=6.7km az=53.0*
*DJA **14** 02:34:55, 036S×9825E, h30km, Mw5.2/4*

ISC 14 02:34:50.1±1.2, 045S±005×9815E±004, h12km±8km, h25km±17km: pP-P, n136, σ1s08/130, mb4.8/59, MS4.2/16, 3C-8D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang** 0.0nm,0.0s	**2.25**	**90**	P	**Pn**	**02 35 28.8**	**+1.7**
TRSI	**Tarutung** 0.0nm,0.0s	**2.59**	**18**	P	**Pn**	**02 35 32.2**	**+0.4**
RGRI	**Rengat** 0.0nm,0.0s	**4.18**	**89**	P	**Pn**	**02 35 58.6**	**+4.8**
KSI	**Kapahiang** 0.0nm,0.0s	**5.46**	**126**	P	**Pn**	**02 36 14.9**	**+3.5**
KGM	**Kluang**	**5.72**	**65**⇓	P	**Pn**	**02 36 17.3**	**+2.4**
MYKOM	**Kota Tinggi**	**6.12**	**69**⇓	P	**Pn**	**02 36 17.3**	**-3.1**
DSRI	**Dabo** 0.0nm,0.0s	**6.43**	**90**	P	**Pn**	**02 36 29.3**	**+4.7**
BSI	**Banda Aceh** 0.0nm,0.0s	**6.56**	**334**	P	**Pn**	**02 36 24.6**	**-1.8**
KTGM	**Kuala Trenggan**	**7.59**	**41**⇑	P	**Pn**	**02 36 42.1**	**+1.4**
TPI	**Tanjungpandan** 0.0nm,0.0s	**9.77**	**104**	P	**Pn**	**02 37 13.0**	**+2.4**
CLJI	**Cilicap** 0.0nm,0.0s	**13.02**	**124**	P	**Pn**	**02 37 53.1**	**-1.9**
PBKI	**Pangkalan Bun** 0.0nm,0.0s	**13.70**	**100**	P	**Pn**	**02 38 01.9**	**-2.4**
NST	**Nakhon Sawan**	**16.14**	**7**	P	**Pn**	**02 38 37.0**	**+0.1**
CMAR	**Chiang Mai Arr** 2.6nm,0.3s,baz=195,slow=10,SNR=38	**18.80**	**2**	P	**Pn**	**02 39 08.7**	**-1.4**
CMAR				LR	LR	02 47 12.8	
KKM	**Kota Kinabalu**	**19.15**	**70**⇓	P	**Pn**	**02 39 13.7**	**-0.7**
KKM	**Kota Kinabalu**	**19.15**	**70**	*e*P	**Pn**	**02 39 14.5**	**+0.1**
CHG	**Chiang Mai** 11nm,0.6s	**19.16**	**2**⇓	P	**Pn**	**02 39 12.9**	**-1.5**
CHTO	**Chiang Mai**	**19.16**	**2**	*e*P	**Pn**	**02 39 13.0**	**-1.4**
SDKM	**Sandakan**	**19.95**	**72**⇓	P	**Pn**	**02 39 23.2**	**-0.8**
CHRT	**Chiangrai** 105nm,0.7s	**20.25**	**4**	P	**P**	**02 39 25.0**	**-0.5**
KAPI	**Kappang** 46nm,1.2s,mb4.8	**22.04**	**102**	*e*P	**P**	**02 39 44.1**	**-0.8**
QIZ	**Qiongzhong**	**22.50**	**30**	P	**P**	**02 39 49.6**	**-0.1**
QIZ				XP	sP	02 39 59.0	+4.1
QIZ				S	**S**	**02 43 56.9**	**+0.1**
QIZ				XS	sS	02 44 06.9	+4.3
QIZ				LR	LR		
QIZ	comp=N,316nm,15.2s,MS4.0			LR	LR		
QIZ	comp=E,295nm,14.2s,MS4.0			LR	LR		
KMI	comp=Z,431nm,12.7s,MS4.1 **Kunming**	**25.80**	**10**	P	**P**	**02 40 22.3**	**+1.1**
KMI				AP	pP	02 40 30.8	+5.8
KMI				XP	sP	02 40 33.0	+6.4
KMI				PP		02 41 05.4	
KMI				S	**S**	**02 44 51.9**	**+1.4**
KMI				XS	sS	02 45 01.9	+5.2
KMI				SS		02 45 57.6	
KMI				AMB	AMB		
KMI	comp=Z,17nm,0.9s,mb4.6			AMB	AMB		
KMI	comp=Z,73nm,4.1s			LR	LR		
KMI	comp=N,604nm,15.9s,MS4.3			LR	LR		
KMI	comp=E,398nm,14.8s,MS4.3			LR	LR		
KMI	comp=Z,729nm,17.0s,MS4.3			LR	LR		
MNI	**Manado** comp=Z,0.0nm,0.0s	**26.75**	**86**	P	**P**	**02 40 30.1**	**+0.1**
GYA	**Guiyang**	**27.98**	**16**	P	**P**	**02 40 40.9**	**+0.1**
GYA				AP	pP	02 40 47.9	+3.3
GYA				XP	sP	02 40 50.4	+4.2
GYA				PP		02 41 31.8	
GYA				PCP	PcP	02 43 57.0	+1.0
GYA				S	**S**	**02 45 26.3**	**+1.5**
GYA				XS	sS	02 45 35.8	+4.7
GYA				SS		02 46 49.3	
GYA				AMB	AMB		
GYA	comp=Z,20nm,0.8s,mb4.8			AMB	AMB		
GYA	comp=Z,120nm,4.6s			LR	LR		
GYA	comp=N,630nm,13.9s,MS4.5			LR	LR		
GYA	comp=E,540nm,14.4s,MS4.5			LR	LR		
GYA	comp=Z,730nm,15.6s,MS4.4			LR	LR		
ODAN	**Odare** comp=Z,13nm,0.7s,mb4.8	**29.06**	**340**	*e*P	**P**	**02 40 51.0**	**+0.6**
TAPN	**Taplejung**	**29.40**	**341**	*e*P	**P**	**02 40 54.0**	**+0.5**
RAMN	**Ramite** comp=Z,18nm,0.6s,mb5.0	**29.42**	**339**	*e*P	**P**	**02 40 54.9**	**+1.3**
JIRN	**Jiri** comp=Z,36nm,0.7s,mb5.2	**30.21**	**339**	*e*P	**P**	**02 41 01.6**	**+0.9**
PKI	**Pulchoki**	**30.43**	**337**	*e*P	**P**	**02 41 04.0**	**+1.5**
GUN	**Gumba** comp=Z,53nm,0.6s,mb5.5	**30.56**	**338**	*e*P	**P**	**02 41 04.8**	**+1.1**
DMN	**Daman**	**30.58**	**337**	*e*P	**P**	**02 41 04.5**	**+0.6**
KKN	**Kakani**	**30.68**	**337**	*e*P	**P**	**02 41 05.2**	**+0.5**
LSA	**Lhasa**	**30.71**	**348**	P	**P**	**02 41 06.3**	**+1.3**
LSA	**Lhasa**	**30.71**	**348**	*e*P	**P**	**02 41 06.5**	**+1.5**
LSA	comp=Z,15nm,0.7s,mb4.9			pmax	pmax		
LSA	**Lhasa** comp=Z,14nm,0.7s,mb4.9	**30.71**	**348**	*e*P	**P**	**02 41 06.5**	**+1.5**
GKN	**Gorkha**	**31.12**	**336**	*e*P	**P**	**02 41 09.0**	**+0.4**
KOLN	**Koldanda** comp=Z,38nm,0.7s,mb5.3	**31.34**	**335**	*e*P	**P**	**02 41 11.5**	**+0.9**
CD2	**Chengdu**	**31.64**	**9**⇓	*i*P	**P**	**02 41 12.6**	**-0.5**
CD2				AP	pP	02 41 18.3	+1.3
CD2				XP	sP	02 41 21.8	+3.3
CD2				PP	PP	02 42 18.1	-6.7
CD2				S	**S**	**02 46 20.8**	**-1.3**
CD2				AMB	AMB		
CD2	comp=Z,20nm,1.2s,mb4.8			AMB	AMB		
CD2	comp=Z,30nm,5.8s			LR	LR		
CD2	comp=N,670nm,14.4s,MS4.5			LR	LR		
CD2	comp=E,400nm,16.8s,MS4.5			LR	LR		
CD2	comp=Z,700nm,12.0s,MS4.6			LR	LR		
DANN	**Dangsing** comp=Z,22nm,0.7s,mb5.1	**31.78**	**335**	*e*P	**P**	**02 41 15.0**	**+0.5**
FITZ	**Fitzroy Crossi** comp=Z,11nm,1.0s,mb4.6	**32.21**	**125**	*e*P	**P**	**02 41 18.5**	**+0.1**
TATO	**Taipei**	**33.90**	**40**	*e*P	**P**	**02 41 30.9**	**-2.1**
XAN	**Xi'an**	**35.77**	**15**	P	**P**	**02 41 48.4**	**-0.6**
XAN				AP	pP	02 41 59.3	+6.4
XAN				XP	sP	02 42 04.8	+10
XAN				AMB	AMB		
XAN	comp=Z,28nm,0.8s,mb5.2						
LZH	**Lanzhou**	**36.73**	**8**	*e*P	**P**	**02 41 57.0**	**-0.3**
LZH				AP	pP	02 42 04.5	+3.4
LZH				XP	sP	02 42 07.6	+4.9
LZH				PP	PP	02 43 28.1	+7.0
LZH				*e*S	**S**	**02 47 47.3**	**+6.5**
LZH				XS	sS	02 48 00.0	+13
LZH				AMB	AMB		
LZH	comp=Z,25nm,1.2s,mb4.9			AMB	AMB		
LZH	comp=Z,127nm,5.0s			LR	LR		
LZH	comp=E,452nm,13.2s			LR	LR		
LZH	comp=Z,698nm,17.5s,MS4.5			LR	LR		
NJ2	**Nanjing**	**37.79**	**29**	*e*P	**P**	**02 42 08.6**	**+2.2**
NJ2				AMB	AMB		
NJ2	comp=Z,20nm,0.5s,mb5.1						
GTA	**Gaotai**	**39.70**	**2**	*e*P	**P**	**02 42 21.8**	**-0.4**
GTA				AP	pP	02 42 27.9	+1.8
GTA				XP	sP	02 42 30.9	+3.3
GTA				S	**S**	**02 48 24.5**	**-1.0**
GTA				AMB	AMB		
GTA	comp=Z,7.0nm,0.9s,mb4.4			AMB	AMB		
GTA	comp=Z,40nm,4.5s			LR	LR		
GTA	comp=N,209nm,14.7s,MS4.2			LR	LR		
GTA	comp=E,159nm,14.4s,MS4.2			LR	LR		
GTA	comp=Z,186nm,12.9s,MS4.1						

WRA	**Warramunga Arr**	**40.37**	**121**	P	**P**	**02 42 27.6**	**-0.6**		
	comp=Z,5.1nm,0.6s,mb4.5,baz=300,slow=9.0,SNR=88								
WRAB	**Tennant Creek**	**40.38**	**121**	*e*P	**P**	**02 42 28.1**	**-0.1**		
WRAB				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.5								
WRAB	**Tennant Creek**	**40.38**	**121**	*e*P	**P**	**02 42 28.1**	**0.0**		
	comp=Z,7.3nm,0.7s,mb4.5								
WB2	**Warramunga Arr**	**40.38**	**121**	*e*P	**P**	**02 42 27.9**	**-0.3**		
WB2				*e*S	**S**	**02 48 43.3**	**+6.9**		
ASAR	**Alice Springs**	**41.66**	**126**	P	**P**	**02 42 39.5**	**+0.9**		
	comp=Z,3.2nm,0.6s,mb4.1,baz=297,slow=7.6,SNR=34								
HHC	**Hu-ho-hao-te**	**42.88**	**15**	*e*P	**P**	**02 42 50.1**	**+1.8**		
HHC				AP	pP	02 42 56.5	+4.3		
HHC				XP	sP	02 42 59.4	+5.6		
HHC				PP	PP	02 44 32.5	+4.5		
HHC				PCP	PcP	02 44 39.9	+0.7		
HHC				SCP	ScP	02 48 28.8	-1.5		
HHC				PCS	PcS	02 48 31.3	-0.1		
HHC				S	**S**	**02 49 14.4**	**+1.7**		
HHC				XS	sS	02 49 25.3	+6.2		
HHC				SS	SS	02 52 20.9	-3.5		
HHC				SCS	ScS	02 52 47.3	-2.0		
HHC				AMB	AMB				
	comp=Z,31nm,0.7s,mb5.2								
HHC				AMB	AMB				
	comp=Z,131nm,6.5s								
HHC				LR	LR				
	comp=N,426nm,15.9s,MS4.5								
HHC				LR	LR				
	comp=E,203nm,15.0s,MS4.5								
HHC				LR	LR				
	comp=Z,425nm,16.0s,MS4.4								
BJT	**Baijiatuau**	**43.50**	**20**	*e*P	**P**	**02 42 54.5**	**+1.1**		
BJT				pmax	pmax				
	comp=Z,29nm,0.7s								
BJT	**Baijiatuau**	**43.50**	**20**	*e*P	**P**	**02 42 54.5**	**+1.0**		
	comp=Z,29nm,0.7s,mb5.1								
BJI	**Beijing**	**43.53**	**20**	P	**P**	**02 42 54.0**	**+0.4**		
BJI				S	**S**	**02 49 24.8**	**+2.5**		
BJI				AMB	AMB				
	comp=Z,39nm,0.9s,mb5.1								
BJI				AMB	AMB				
	comp=Z,88nm,3.1s								
BJI				LR	LR				
	comp=N,203nm,15.8s,MS4.3								
BJI				LR	LR				
	comp=E,216nm,15.8s,MS4.3								
BJI				LR	LR				
	comp=Z,127nm,19.6s,MS3.8								
WMQ	**Urumqi**	**45.05**	**349**	P	**P**	**02 43 07.1**	**+1.3**		
WMQ				AP	pP	02 43 13.0	+3.3		
WMQ				XP	sP	02 43 16.0	+4.8		
WMQ				PP	PP	02 44 52.0	+0.8		
WMQ				*e*S	**S**	**02 49 44.0**	**-0.4**		
WMQ				AMB	AMB				
	comp=Z,26nm,0.9s,mb5.1								
WMQ				AMB	AMB				
	comp=Z,135nm,3.7s								
WMQ				LR	LR				
	comp=N,123nm,22.4s,MS4.0								
WMQ				LR	LR				
	comp=E,146nm,22.0s,MS4.0								
WMQ				LR	LR				
	comp=Z,153nm,23.2s,MS3.9								
KSRS	**Korea Array**	**46.68**	**33**	P	**P**	**02 43 17.9**	**-0.9**		
	comp=Z,4.2nm,0.7s,mb4.5,baz=224,slow=9.3,SNR=16								
KSRS				LR	LR	03 04 02.7			
	comp=Z,147nm,19.7s,MS3.9,baz=51,slow=38								
KSRS	**Korea Array**	**46.68**	**33**	P	**P**	**02 43 17.9**	**-0.9**		
KSRS				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.5								
KSRS				MLR	MLR				
	comp=Z,147nm,19.7s,MS3.9								
TKM2	**Tokmak 2**	**47.69**	**338**	*e*P	**P**	**02 43 27.0**	**+0.5**		
TKM2				pmax	pmax				
	comp=Z,7.0nm,0.8s,mb4.7								
TKM2	**Tokmak 2**	**47.69**	**338**	*e*P	**P**	**02 43 27.0**	**+0.5**		
	comp=Z,6.5nm,0.8s,mb4.7								
AML	**Almayashu**	**47.78**	**335**	*e*P	**P**	**02 43 28.2**	**+1.0**		
	comp=Z,11nm,1.1s,mb4.8								
EKS2	**Erkin-Say**	**48.19**	**336**	*e*P	**P**	**02 43 30.9**	**+0.5**		
	comp=Z,6.5nm,0.8s,mb4.7								
SONM	**Songino Array**	**48.62**	**7**	P	**P**	**02 43 34.2**	**+0.6**		
	comp=Z,14nm,0.7s,mb5.1,baz=190,slow=9.4,SNR=46								
ULN	**Ulaanbaatar**	**48.74**	**8**	*e*P	**P**	**02 43 35.0**	**+0.5**		
ULN				pmax	pmax				
	comp=Z,16nm,1.0s,mb5.0								
ULN	**Ulaanbaatar**	**48.74**	**8**	*e*P	**P**	**02 43 35.0**	**+0.5**		
	comp=Z,16nm,1.0s,mb5.0								
MK31	**Makanchi Array**	**49.06**	**346**	*e*P	**P**	**02 43 37.3**	**+0.3**		
MKAR	**Makanchi Array**	**49.06**	**346**	P	**P**	**02 43 37.2**	**+0.1**		
	comp=Z,24nm,0.6s,mb5.4,baz=153,slow=7.9,SNR=226								
MKAR				LR	LR	03 05 58.2			
	comp=Z,54nm,19.6s,MS3.5,baz=261,slow=38								
MKAR	**Makanchi Array**	**49.06**	**346**	P	**P**	**02 43 37.2**	**+0.1**		
MKAR				LR	LR	03 05 58.1			
CN2	**Changchun**	**50.35**	**26**	*e*P	**P**	**02 43 46.0**	**-0.9**		
CN2				*e*AP	pP	02 43 52.5	+1.6		
CN2				*e*S	**S**	**02 50 57.8**	**-1.9**		
CN2				AMB	AMB				
	comp=Z,20nm,0.7s,mb5.3								
CN2				AMB	AMB				
	comp=Z,300nm,4.0s								
CN2				LR	LR				
	comp=N,800nm,16.0s,MS5.0								
CN2				LR	LR				
	comp=E,1μm,16.0s,MS5.0								
CN2				LR	LR				
	comp=Z,1μm,17.0s,MS5.0								
ZAK	**Zakamensk**	**50.83**	**4**	*e*P	**P**	**02 43 49.0**	**-1.4**		
ZAK				pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.5								
STKA	**Stephens Creek**	**51.56**	**132**	*e*P	**P**	**02 43 58.8**	**+2.6**		
	comp=Z,3.4nm,0.5s,mb4.5								
STKA	**Stephens Creek**	**51.56**	**132**	P	**P**	**02 43 57.7**	**+1.5**		
	comp=Z,3.9nm,0.6s,mb4.5,baz=322,slow=13,SNR=7.5								
TLY	**Talaya**	**52.14**	**4**	*e*P	**P**	**02 44 00.8**	**+0.6**		
TLY				*e*S	**S**	**02 51 24.0**	**-0.2**		
TLY				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.5								
TLY				MLR	MLR				
	comp=Z,376nm,18.0s,MS4.5								
TLY	**Talaya**	**52.14**	**4**	*e*P	**P**	**02 44 01.4**	**+1.1**		
	comp=Z,7.8nm,0.7s,mb4.8								
MJAR	**Matsushiro Arr**	**52.28**	**41**	P	**P**	**02 44 00.4**	**-1.1**		
	comp=Z,3.8nm,0.9s,mb4.3,baz=222,slow=6.8,SNR=7.7								
MDJ	**Mudanjiang**	**52.85**	**28**	P	**P**	**02 44 05.3**	**-0.3**		
MDJ				AP	pP	02 44 11.5	+1.9		
MDJ				XP	sP	02 44 14.3	+3.2		
MDJ				SCP	ScP	02 49 10.3	-2.0		
MDJ				PCS	PcS	02 49 12.8	-0.5		
MDJ				S	**S**	**02 51 34.0**	**-0.1**		
MDJ				XS	sS	02 51 44.5	+3.8		
MDJ				SCS	ScS	02 53 53.9	-1.4		
MDJ				AMB	AMB				
	comp=Z,10.0nm,1.1s,mb4.7								
MDJ				AMB	AMB				
	comp=Z,74nm,5.6s								
MDJ				LR	LR				
	comp=N,250nm,16.7s,MS4.4								
MDJ				LR	LR				
	comp=E,178nm,15.3s,MS4.4								
MDJ				LR	LR				
	comp=Z,399nm,14.9s,MS4.6								
HIA	**Hailar**	**52.90**	**18**	*i* P	**P**	**02 44 06.1**	**+0.2**		
OPO	**Ambohidratompo**	**53.14**	**247**	LR	LR	03 02 19.9			
	comp=Z,99nm,21.0s,MS3.8,baz=192,slow=31								
KURK	**Kurchatov**	**53.62**	**345**	P	**P**	**02 44 10.5**	**-0.7**		
	comp=Z,7.0nm,0.7s,mb4.7,baz=167,slow=7.1,SNR=29								
KURK	**Kurchatov**	**53.62**	**345**	P	**P**	**02 44 10.5**	**-0.7**		
KURK				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.7								
KURK	**Kurchatov**	**53.62**	**345**	*e*P	**P**	**02 44 10.9**	**-0.2**		
	comp=Z,12nm,0.9s,mb4.8								
ZAA0	**Zalesovo Array**	**55.33**	**350**	*e*P	**P**	**02 44 23.4**	**-0.1**		
ZALV	**Zalesovo Beam**	**55.33**	**350**	P	**P**	**02 44 23.4**	**-0.1**		
	comp=Z,27nm,0.6s,mb5.4,baz=183,slow=6.5,SNR=59								
ZALV				LR	LR	03 10 35.3			
	comp=Z,54nm,18.6s,MS3.7,baz=162,slow=39								
NVS	**Novosibirsk**	**56.45**	**350**	*e*P	**P**	**02 44 30.9**	**-0.7**		
NVS				pmax	pmax				
	comp=Z,14nm,1.0s,mb5.0								
NVS				pmax	pmax				
	comp=N,6.0nm,0.8s								
MIB	**Mutribah**	**56.95**	**307**	*e*P	**P**	**02 44 35.9**	**+0.3**		
MIB				AMb	AMB	02 44 38.7			
	comp=Z,29nm,0.8s,mb5.4								
KLR	**Kul'dur**	**57.31**	**26**	⇓*i* P	**P**	**02 44 33.9**	**-3.8**		
KLR				pmax	pmax				
	comp=E,24nm,1.4s								
KLR				pmax	pmax				
	comp=Z,72nm,1.4s,mb5.5								
BVAR	**Borovoye Array**	**58.11**	**341**	P	**P**	**02 44 42.4**	**-0.9**		
	comp=Z,5.0nm,0.6s,mb4.7,baz=143,slow=9.4,SNR=22								
BRVK	**Borovoye**	**58.17**	**341**	*e*P	**P**	**02 44 42.6**	**-1.1**		
BRVK				pmax	pmax				
	comp=Z,6.0nm,0.7s,mb4.7								
BRVK	**Borovoye**	**58.17**	**341**	*e*P	**P**	**02 44 42.6**	**-1.2**		
	comp=Z,6.1nm,0.7s,mb4.7								
BOD	**Bodaibo**	**59.45**	**10**	*e*P	**P**	**02 44 52.2**	**-0.4**		
BOD				pmax	pmax				
	comp=Z,9.0nm,0.9s,mb4.8								
AKTK	**Aktyubinsk**	**61.12**	**332**	P	**P**	**02 45 02.4**	**-1.7**		
AKTO	**Aktyubinsk**	**61.12**	**332**	P	**P**	**02 45 02.4**	**-1.7**		
	comp=Z,2.2nm,0.9s,mb4.3,baz=129,slow=5.9,SNR=7.6								
AKTO	**Aktyubinsk**	**61.12**	**332**	P	**P**	**02 45 02.4**	**-1.7**		
AKTO				pmax	pmax				
	comp=Z,2.0nm,0.9s,mb4.2								
YSS	**Yuzh-Sakhalins**	**61.18**	**33**	⇑*e*P	**P**	**02 45 04.5**	**-0.1**		
YSS				pmax	pmax				
	comp=Z,40nm,1.1s,mb5.5								
YSS	**Yuzh-Sakhalins**	**61.18**	**33**	*e*P	**P**	**02 45 04.9**	**+0.3**		
	comp=Z,22nm,0.6s,mb5.5								
MAK	**Makhachkala**	**62.60**	**320**	*e*P	**P**	**02 45 18.3**	**+4.1**		
SVE	**Sverdlovsk**	**64.56**	**338**	*e*P	**P**	**02 45 26.2**	**-0.7**		
SVE				pmax	pmax				
	comp=Z,15nm,0.8s,mb5.1								
ARU	**Arti**	**65.06**	**337**	*d* iP	**P**	**02 45 29.1**	**-1.1**		
ARU				*e*		02 47 48.7			
ARU				*e*S	S	02 54 07.4	-4.8		
ARU				*e*SS	SS	02 58 15.4	-9.1		
ARU				pmax	pmax				
	comp=Z,20nm,2.5s,mb4.7								
ARU	**Arti**	**65.06**	**337**	*e*P	**P**	**02 45 29.2**	**-1.0**		
KIV	**Kislovodsk**	**66.17**	**319**	*e*P	**P**	**02 45 38.0**	**+0.4**		
KIV				pmax	pmax				
	comp=Z,15nm,0.9s,mb5.0								
KIV	**Kislovodsk**	**66.17**	**319**	*e*P	**P**	**02 45 38.0**	**+0.4**		
	comp=Z,15nm,0.9s,mb5.0								
YAK	**Yakutsk**	**66.73**	**16**	⇑*e*P	**P**	**02 45 39.4**	**-1.5**		
YAK				pmax	pmax				
	comp=Z,25nm,0.9s,mb5.2								
MALT	**Malatya**	**66.93**	**312**	*e*P	**P**	**02 45 41.8**	**-0.8**		
MALT				pmax	pmax				
	comp=Z,5.0nm,1.1s,mb4.5								
MALT	**Malatya**	**66.93**	**312**	*e*P	**P**	**02 45 41.8**	**-0.9**		
	comp=Z,5.4nm,1.1s,mb4.5								
VSR	**Storozhevoye**	**71.45**	**325**	*e*P	**P**	**02 46 08.6**	**-1.8**		
VSR				pmax	pmax				
	comp=Z,10.0nm,3.4s								
VSR				pmax	pmax				
	comp=N,10.0nm,1.7s								
VSR				pmax	pmax				
	comp=E,110nm,4.3s								
PETK	**Petropavlovsk-**	**72.58**	**33**	P	**P**	**02 46 16.4**	**-0.7**		
	comp=E,3.8nm,0.7s,mb4.4,baz=238,slow=2.8,SNR=5.8								
PETK	**Petropavlovsk-**	**72.58**	**33**	P	**P**	**02 46 16.4**	**-0.7**		
PET	**Petropavlovsk**	**73.07**	**33**	*e*P	**P**	**02 46 19.1**	**-0.9**		
PET				pmax	pmax				
	comp=Z,9.0nm,0.4s,mb5.0								
PET	**Petropavlovsk**	**73.07**	**33**	*e*P	**P**	**02 46 19.4**	**-0.6**		
	comp=Z,15nm,0.6s,mb5.1								
OBN	**Obninsk**	**74.51**	**328**	*e*P	**P**	**02 46 28.8**	**+0.4**		
OBN				*e*		02 46 41.1			
OBN				*e*S	S	02 56 01.6	-1.7		
OBN				*e*SS	SS	03 00 50.6	+0.5		
OBN				pmax	pmax				
	comp=Z,7.0nm,1.2s,mb4.5								
TIXI	**Tiksi**	**74.64**	**10**	*e*P	**P**	**02 46 27.9**	**-0.9**		
TIXI				pmax	pmax				
	comp=Z,5.0nm,0.4s,mb4.8								
TIXI	**Tiksi**	**74.64**	**10**	*e*P	**P**	**02 46 27.9**	**-1.0**		
	comp=Z,5.5nm,0.4s,mb4.8								
BOSA	**Boshof**	**74.79**	**241**	P	**P**	**02 46 32.1**	**+1.4**		
	comp=Z,14nm,1.2s,mb4.8,baz=319,slow=18,SNR=8.4								
AKASG	**Malin Array Be**	**77.13**	**323**	P	**P**	**02 46 43.1**	**-0.4**		
	comp=Z,1.6nm,0.7s,mb4.1,baz=105,slow=3.5,SNR=5.6								
BUR08	**Bucovina Ar. S**	**78.90**	**319**	*e*P	**P**	**02 46 53.4**	**0.0**		
ARCES	**ARCESS Array B**	**84.40**	**340**	P	**P**	**02 47 23.5**	**+1.5**		
	comp=Z,0.9nm,0.6s,mb4.1,baz=104,slow=3.9,SNR=5.4								
ARCES	**ARCESS Array B**	**84.40**	**340**	P	**P**	**02 47 23.5**	**+1.5**		
GERES	**GERESS Array B**	**86.67**	**319**	P	**P**	**02 47 32.9**	**-0.9**		
	comp=Z,0.4nm,0.8s,mb3.7,baz=122,slow=4.9,SNR=5.0								
BOZ	**Bozeman (W)**	**127.91**	**26**	*e*PKIKP	PKPdf	02 53 57.2	+1.2		
NVAR	**Mina Array Bea**	**129.53**	**37**	PKP	PKPdf	02 54 00.3	+0.9		
	comp=Z,0.6nm,0.6s,baz=319,slow=1.1,SNR=4.7								
TPAW	**Teton Pass**	**129.88**	**27**	*e*PKPdf	PKPdf	02 54 01.6	+1.8		
PDAR	**Pinedale Array**	**131.09**	**27**	PKP	PKPdf	02 54 02.9	+0.7		
	comp=Z,0.3nm,0.6s,baz=174,slow=2.7,SNR=3.1								
WMOK	**Wichita Mounta**	**142.40**	**23**	*e*PKHKP		02 54 17.8			
WVT	**Waverly**	**144.07**	**8**	*e*PKIKP	PKPdf	02 54 24.1	-2.2		
MIAR	**Mount Ida**	**144.35**	**17**	*e*PKIKP	PKPdf	02 54 25.5	-1.3		
CPUP	**Villa Florida**	**144.40**	**220**	PKP	PKPdf	02 54 26.8	-0.4		
	comp=Z,8.5nm,1.0s,baz=114,slow=5.3,SNR=10								
TXAR	**Lajitas Array**	**144.53**	**34**	PKP	PKPdf	02 54 26.9	-0.3		
	comp=Z,6.0nm,0.5s,baz=176,slow=0.2,SNR=168								
TXAR	**Lajitas Array**	**144.53**	**34**	PKP	PKPdf	02 54 26.9	-0.3		
TKL	**Tuckaleechee C**	**144.92**	**3**	*e*PKIKP	PKPdf	02 54 25.9	-1.9		
CPCT	**Cooper Cave**	**145.09**	**4**	*e*PKPdf	PKPdf	02 54 27.5	-0.5		
SWET	**Sewanee**	**145.20**	**6**	*e*PKPbc	PKPbc	02 54 26.5	-1.3		
JCT	**Junction City**	**145.60**	**28**	*e*PKIKP	PKPdf	02 54 29.6	+0.5		
CFAA	**Coronel Fontan**	**145.61**	**201**	PKPbc	PKPbc	02 54 31.0	+1.8		
	comp=Z,0.2nm,0.7s,baz=140,slow=3.2,SNR=3.6								
CFAA	**Coronel Fontan**	**145.61**	**201**	PKPbc	PKPbc	02 54 31.0	+1.8		
LRAL	**Lakeview Retre**	**147.22**	**8**	*e*PKPbc	PKPbc	02 54 33.6	-0.4		
SIV	**San Ignacio**	**153.78**	**231**	PKPbc	PKPbc	02 54 51.2	+1.0		
	comp=Z,0.4nm,0.6s,baz=179,slow=9.8,SNR=3.6								
SIV				PKPab	PKPab	02 55 04.8	+1.8		
	comp=Z,0.5nm,0.7s,baz=159,slow=3.6,SNR=4.3								

TAP 14 02:41:11.8, 24.14N × 120.96E, h 9 km, ML 3.6, 5C-9D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWT	**Tachien**	**0.23**	**61**	⇓*i* P		Pg	02 41 16.7	+0.2
TWT	baz=66			*i* S		Sg	02 41 19.4	-0.2
TYC	**Yuchr**	**0.26**	**202**	⇓*i* P		Pg	02 41 17.7	+0.7
TYC	baz=195			*i* S		Sg	02 41 21.5	+1.1
TCU	**Taichung**	**0.26**	**271**	*i* P		Pg	02 41 18.7	+1.6
TCU	baz=272			S		Sg	02 41 23.3	+2.8
SMLT	**Sun Moon Lake**	**0.26**	**192**	⇑*i* P		Pg	02 41 18.0	+0.9
SMLT	baz=181			*i* S		Sg	02 41 22.3	+1.7
TWQ1	**Liyutan**	**0.27**	**320**	⇑*i* P		Pg	02 41 18.5	+1.3
TWQ1	baz=321			*i* S		Sg	02 41 23.0	+2.2
WHF	**Hehuan Shan**	**0.28**	**89**	⇓*i* P		Pg	02 41 18.7	+1.3
WHF	baz=90			*e*S		Sg	02 41 22.6	+1.5
NSY	**Sanyi**	**0.33**	**327**	⇑*i* P		Pg	02 41 20.0	+1.7
NSY	baz=327			S		Sg	02 41 25.6	+2.9
WNT	**Mingjian**	**0.36**	**224**	⇓*i* P		Pg	02 41 21.1	+2.1
WNT	baz=219			*e*S		Sg	02 41 26.9	+3.1
NNS	**Nan Shan**	**0.48**	**52**	⇓*i* P		Pg	02 41 21.5	+0.3
NNS	baz=53			*e*S		Sg	02 41 27.2	-0.3
NSTT	**Nanjuang**	**0.49**	**4**	⇓*i* P		Pg	02 41 22.3	+1.0
NSTT	baz=5.0			S		Sg	02 41 28.9	+1.1
ESL	**Shilin**	**0.54**	**127**	P		Pg	02 41 23.1	+0.7
ESL	baz=121			S		Sg	02 41 30.2	+0.8
WGK	**Gukeng**	**0.58**	**219**	*e*P		Pg	02 41 24.7	+1.6
WGK	baz=218			*e*S		Sg	02 41 34.3	+3.6
TWD	**Chiawan**	**0.58**	**96**	P		Pg	02 41 23.9	+0.8
TWD	baz=104			S		Sg	02 41 31.6	+0.8
CHN5	**Tsauling**	**0.60**	**205**	*i* P		Pg	02 41 25.3	+1.9
CHN5	baz=205			S		Sg	02 41 34.8	+3.5
HWA	**Hwalien**	**0.61**	**105**	*i* P		Pg	02 41 24.7	+1.0
HWA	baz=106			*i* S		Sg	02 41 33.3	+1.6
ALS	**Alishan**	**0.64**	**193**	*e*P		Pg	02 41 25.3	+1.1
ALS	baz=182			*e*S		Sg	02 41 35.6	+2.9
NSK	**Sanguang**	**0.64**	**34**	⇓*i* P		Pg	02 41 24.4	+0.1
YUS	**Yu-Shan**	**0.65**	**181**	*e*P		Pg	02 41 24.8	+0.4
HSN	**Hsinchu**	**0.66**	**1**	*e*P		Pg	02 41 27.2	+2.6
HSN	baz=352			*e*S		Sg	02 41 37.1	+4.0
WTCT	**Ta-ch'eng**	**0.68**	**246**	*e*P		Pg	02 41 25.7	+0.8
EHY	**Hungye**	**0.71**	**152**	⇑*i* P		Pg	02 41 26.1	+0.5
ENTT	**Nioudou**	**0.74**	**48**	P		Pg	02 41 26.1	-0.1
CHN2	**Minshiung**	**0.75**	**216**	P		Pg	02 41 28.0	+1.7
CHN2	baz=215			*e*S		Sg	02 41 39.4	+3.2
ENA	**Nanau**	**0.77**	**68**	⇓*i* P		Pg	02 41 26.8	+0.1
ENA	baz=77			*e*S		Sg	02 41 37.1	+0.4
CHY	**Chiayi**	**0.81**	**217**	*e*P		Pg	02 41 28.8	+1.4
CHY	baz=216			*e*S		Sg	02 41 40.9	+3.0
TWF1	**Yuli**	**0.84**	**158**	⇑*i* P		Pg	02 41 28.3	+0.2
TWF1	baz=152			*e*S		Sg	02 41 41.3	+2.2
NCU	**National Centr**	**0.85**	**14**	P		Pg	02 41 30.0	+1.7
NCU	baz=4.0			S		Sg	02 41 42.4	+3.1
CHN4	**Tsaushan**	**0.86**	**203**	P		Pg	02 41 29.9	+1.6
CHN4	baz=202			S		Sg	02 41 42.7	+3.2
TWE	**Neicheng**	**0.86**	**48**	*e*P		Pg	02 41 28.4	-0.1
TWC	**Suao**	**0.94**	**60**	P		Pg	02 41 29.5	-0.3
TWC	baz=61			*e*S		Sg	02 41 43.9	+1.9
WTP	**Ta-pu**	**0.95**	**200**	*i* P		Pg	02 41 31.0	+1.0
WTP	baz=213			S		Sg	02 41 44.9	+2.5
ELDTW	**Lidau**	**0.95**	**177**	*e*P		Pg	02 41 31.0	+0.9
TWK	**Hsinying**	**0.97**	**206**	P		Pg	02 41 31.5	+1.0
TWK	baz=205			S		Sg	02 41 45.6	+2.4
STYT	**Tauyuan**	**0.99**	**191**	*e*P		Pg	02 41 31.4	+0.5
STYT	baz=190			*e*S		Sg	02 41 46.3	+2.5
TWA	**Mucha**	**1.01**	**34**	*e*P		Pg	02 41 31.5	+0.3
TWA	baz=38			*e*S		Sg	02 41 47.8	+3.4
TAP1	**Taipei**	**1.03**	**30**	*e*P		Pg	02 41 31.5	-0.2
TAP1	baz=40			*e*S		Sg	02 41 47.3	+2.2
CHN1	**Nanshi**	**1.03**	**203**	*i* P		Pg	02 41 32.7	+1.0
CHN1	baz=201			*e*S		Sg	02 41 47.3	+2.3
TWS1	**Kuangyinshan**	**1.04**	**24**	⇓*i* P		Pg	02 41 33.5	+1.6
TWS1	baz=24			*e*S		Sg	02 41 48.1	+2.7
CHN8	**Yiju**	**1.05**	**221**	*e*P		Pg	02 41 33.9	+1.9
CHKT	**Chengkung**	**1.10**	**160**	*e*P		Pg	02 41 33.1	+0.1
SGST	**Jiashian**	**1.11**	**198**	*e*P		Pg	02 41 34.7	+1.6
SGST	baz=209			*e*S		Sg	02 41 50.9	+3.3
NWF	**Wu-fen Shan**	**1.19**	**39**	P		Pb	02 41 34.7	+0.2
NWF	baz=48			*e*S		Sb	02 41 51.2	+1.1
TWY	**Chenhua**	**1.27**	**27**	*e*P		Pn	02 41 36.3	+0.5
TWY	baz=28			*e*S		Sb	02 41 53.2	+0.8
TWB1	**Santiao Chiao**	**1.27**	**47**	*e*P		Pn	02 41 35.7	-0.2
TWG	**Pinlang**	**1.32**	**175**	*e*P		Pn	02 41 37.3	+0.9
TWG	baz=174			*e*S		Sb	02 41 55.9	+2.1
TWM1	**Shoushan**	**1.40**	**201**	*e*P		Pn	02 41 38.3	+0.7
PNG	**Penghu**	**1.41**	**246**	*e*P		Pn	02 41 37.9	+0.3
SSD	**Sandimen**	**1.42**	**192**	*e*P		Pn	02 41 39.2	+1.3
SSD	baz=180			*e*S		Sn	02 41 59.5	+2.9
ECL	**Taimali**	**1.54**	**180**	*e*P		Pn	02 41 41.1	+1.7
ECL	baz=178			*e*S		Sn	02 42 02.3	+2.7
EAST	**Anshuo**	**1.75**	**183**	*e*P		Pn	02 41 44.5	+2.1
SCZT	**Fangliau**	**1.79**	**190**	*e*P		Pn	02 41 44.1	+1.2
SCZT	baz=188			*e*S		Sn	02 42 08.3	+2.5
PCYT	**Pengchaiyu**	**1.79**	**34**	*e*P		Pn	02 41 43.8	+0.8
YOJ	**Yonaguni jima**	**1.90**	**80**	*e*P		Pn	02 41 46.3	+1.8
LAY	**Lan-yu**	**2.16**	**165**	*e*P		Pn	02 41 48.6	+0.5
TWK1	**Hengchun**	**2.19**	**184**	*e*P		Pn	02 41 50.2	+1.8
KNM	**Kinmen**	**2.32**	**277**	*e*P		Pn	02 41 55.0	+4.7

ISCJB ***14*** *02:52:11.9, 1.4, 738S, 008 × 15583E, 007, h102 km, 15 km, mb4.4/17, Error ellipse: s-maj=14.0km s-min=11.0km az=167.4*

IDC ***14*** *02:52:13.4, 2.5, 745S × 15584E, h100 km, 25 km, mb4.2/13, mb1 4.3/15, mb1mx4.2/19, mbtmp4.2/15, MS3.1/5, Ms1 3.1/5, ms1mx3.0/21, Error ellipse: s-maj=18.3km s-min=13.8km az=

CTA	**Charters Tower**	**15.65**	**215**	*e*P		**Pn**	**02 55 51.0**	**+2.5**
	4.0nm,0.6s							
CTA	**Charters Tower**	**15.65**	**215**	P		**Pn**	**02 55 48.6**	**+0.1**
	0.7nm,0.3s,baz=38,slow=12,SNR=11							
CTA				LR		LR	02 59 47.5	
	comp=Z,18nm,22.0s,baz=51,slow=29							
GUMO	**Guam**	**23.53**	**332**	LR		LR	03 04 28.6	
	comp=Z,96nm,20.7s,baz=247,slow=31							
WRAB	**Tennant Creek**	**24.26**	**237**	*e*P		**P**	**02 57 21.0**	**-0.3**
	15nm,0.6s,mb4.5							
WB2	**Warramunga Arr**	**24.26**	**237**	*e*P		**P**	**02 57 21.3**	**-0.1**
WRA	**Warramunga Arr**	**24.27**	**237**	P		**P**	**02 57 21.3**	**-0.2**
	11nm,0.5s,mb4.5,baz=60,slow=9.4,SNR=210							
WRA				LR		LR	03 06 40.8	
	comp=Z,77nm,18.6s,baz=295,slow=36							
ASAR	**Alice Springs**	**26.53**	**230**	P		**P**	**02 57 41.0**	**-0.8**
	2.8nm,0.7s,mb3.9,baz=61,slow=9.5,SNR=26							
STKA	**Stephens Creek**	**27.73**	**207**	*e*P		**P**	**02 57 54.1**	**+1.6**
	3.4nm,0.6s,mb4.0							
STKA	**Stephens Creek**	**27.73**	**207**	P		**P**	**02 57 51.6**	**-0.8**
	3.6nm,0.5s,mb4.1,baz=47,slow=14,SNR=10							
FITZ	**Fitzroy Crossi**	**31.25**	**247**	*e*P		**P**	**02 58 23.1**	**-0.7**
	12nm,0.6s,mb4.8							
FITZ	**Fitzroy Crossi**	**31.25**	**247**	LR		LR	03 09 33.1	
	comp=Z,34nm,20.1s,baz=278,slow=33							
MBWA	**Marble Bar**	**37.44**	**245**	*e*P		**P**	**02 59 16.4**	**-0.9**
	3.8nm,0.6s,mb4.5							
RPZ	**Rata Peaks**	**38.55**	**162**	P		**P**	**02 59 25.6**	**-0.6**
	6.8nm,0.7s,mb4.6,baz=214,slow=7.3,SNR=3.8							
MJAR	**Matsushiro Arr**	**46.74**	**340**	P		**P**	**03 00 30.7**	**-1.8**
	1.3nm,0.6s,mb3.9,baz=226,slow=16,SNR=6.6							
MAT	**Matsushiro**	**46.74**	**340**	P		**P**	**03 00 32.3**	**-0.2**
KSRS	**Korea Array**	**51.69**	**332**	P		**P**	**03 01 10.5**	**+0.3**
	3.7nm,0.8s,mb4.5,baz=148,slow=8.1,SNR=14							
PETK	**Petropavlovsk-**	**60.30**	**1**	P		**P**	**03 02 11.7**	**+0.4**
	1.0nm,0.5s,mb4.1,baz=251,slow=17,SNR=4.2							
CMAR	**Chiang Mai Arr**	**61.70**	**295**	P		**P**	**03 02 23.2**	**+1.8**
	2.4nm,0.5s,mb4.5,baz=114,slow=5.3,SNR=11							
SONM	**Songino Array**	**70.13**	**327**	P		**P**	**03 03 16.5**	**+1.6**
	6.8nm,0.4s,mb4.8,baz=144,slow=6.1,SNR=58							
QSPA	**South Pole Qui**	**82.57**	**180**	P		**P**	**03 04 25.4**	**+0.7**
	2.8nm,0.6s,mb4.3,baz=280,slow=0.8,SNR=13							
MK31	**Makanchi Array**	**84.26**	**319**	*e*P		**P**	**03 04 34.0**	**+0.1**
MKAR	**Makanchi Array**	**84.26**	**319**	P		**P**	**03 04 34.0**	**+0.1**
	6.2nm,0.8s,mb4.5,baz=100,slow=6.1,SNR=28							
MAW	**Mawson**	**84.34**	**209**	P		**P**	**03 04 34.8**	**+0.8**
	4.6nm,0.6s,mb4.5,baz=89,slow=6.0,SNR=14							
ZALV	**Zalesovo Beam**	**84.98**	**326**	P		**P**	**03 04 36.9**	**-0.5**
	2.2nm,0.5s,mb4.3,baz=104,slow=6.3,SNR=7.4							
KURK	**Kurchatov**	**87.66**	**322**	*e*P		**P**	**03 04 49.8**	**-0.8**
	2.8nm,0.4s,mb4.7							
BDFB	**Brasilia**	**147.10**	**134**	PKPbc		PKPbc	03 11 45.0	-0.7
	3.1nm,0.7s,baz=293,slow=1.2,SNR=5.0							
TORD	**Torodi Ar. Bea**	**153.93**	**285**	PKPbc		PKPbc	03 12 01.2	-0.9
	0.8nm,1.0s,baz=50,slow=1.0,SNR=4.2							

IDC ***14*** *03:04:34.9±1.3,31.16S×68.51W,h102km±9km,mb3.7/1, mb1 3.5/5,mb1mx3.3/18,mbtmp3.4/5,Error ellipse: s-maj=42.1km s-min=23.7km az=93.0*

ISCJB ***14*** *03:04:35.0±0.5,31.11S±003×6838W±005,h111km±7km, Error ellipse: s-maj=7.2km s-min=4.5km az=179.0*

GUC ***14*** *03:04:35.7±0.7,31.12S×68.63W,h150km,MD3.8,ML4.1*

NEIC ***14*** *03:04:35.7±0.4,31.13S×68.38W,h109km±8km, MD3.8(GUC),Error ellipse: s-maj=8.6km s-min=6.1km az=97.0*

ISC 14 03:04:36.1±0.5,3110S±003×6838W±005,h104km±7km, n31,σ0°81/48,8C-1D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**0.52**	**167**	P	**Pn**	**03 04 52.2**	**-0.2**
	16nm,0.3s,baz=347,slow=4.4,SNR=2613						
CFAA				S	**Sn**	**03 05 04.8**	**0.0**
	85nm,0.3s,baz=198,slow=14,SNR=339						
CFAA	**Coronel Fontan**	**0.52**	**167**	P	**Pn**	**03 04 52.2**	**-0.2**
CFAA				S	**Sn**	**03 05 04.8**	**0.0**
TLL	**Tololo Astrono**	**2.29**	**293**	*e*P	**Pn**	**03 05 13.6**	**+1.1**
TLL				*i* S	**Sn**	**03 05 41.3**	**+0.8**
TLL				AML	AML	03 05 47.1	
	comp=N,633nm,0.5s						
TLL	**Tololo Astrono**	**2.29**	**293**	*e*P	**Pn**	**03 05 13.6**	**+1.1**
TLL				*i* S	**Sn**	**03 05 41.3**	**+0.8**
JACH	**Jahuel**	**2.46**	**230**	*e*P	**Pn**	**03 05 15.3**	**+0.6**
JACH				*i* S	**Sn**	**03 05 44.8**	**+0.4**
OVCH	**Ovalle**	**2.48**	**281**	⇑*i*P	**Pn**	**03 05 14.8**	**-0.3**
OVCH				*i* S	**Sn**	**03 05 43.6**	**-1.3**
LSCH	**La Serena**	**2.75**	**295**	*e*P	**Pn**	**03 05 17.7**	**-0.9**
LSCH				*i* S	**Sn**	**03 05 49.8**	**-1.4**
FCH	**Farellones**	**2.75**	**216**	*e*P	**Pn**	**03 05 20.0**	**+1.4**
FCH				*i* S	**Sn**	**03 05 53.0**	**+1.7**
FCH				AML	AML	03 05 54.8	
	comp=E,268nm,0.3s						
PEL	**Peldehue**	**2.83**	**223**	⇑*i*P	**Pn**	**03 05 19.4**	**-0.2**
PEL				*i* S	**Sn**	**03 05 52.6**	**-0.5**
PEL				AML	AML	03 05 53.9	
	comp=E,713nm,0.5s						
LCO	**Las Campanas**	**2.90**	**315**	⇑*i*P	**Pn**	**03 05 21.3**	**+0.7**
LCO				*i* S	**Sn**	**03 05 56.0**	**+1.1**
CLCH	**Cerro Calan**	**2.93**	**218**	*e*P	**Pn**	**03 05 21.2**	**+0.2**
CLCH				*i* S	**Sn**	**03 05 55.6**	**0.0**
CLCH				AML	AML	03 06 03.3	
	comp=E,713nm,0.6s						
PCH	**Pirque**	**3.10**	**215**	*e*P	**Pn**	**03 05 23.3**	**+0.1**
PCH				*i* S	**Sn**	**03 06 00.3**	**+0.8**
ANTU	**Antumapu**	**3.12**	**217**	*e*P	**Pn**	**03 05 23.3**	**-0.2**
ANTU				*i* S	**Sn**	**03 05 59.8**	**-0.2**
ANTU				AML	AML	03 06 00.8	
	comp=E,307nm,0.3s						
ANTU	**Antumapu**	**3.12**	**217**	*e*P	**Pn**	**03 05 23.3**	**-0.2**
ANTU				*i* S	**Sn**	**03 05 59.8**	**-0.2**
LMEL	**Las Melosas**	**3.14**	**209**	⇑*i*P	**Pn**	**03 05 24.0**	**+0.2**
LMEL				AML	AML	03 06 11.3	
	comp=N,181nm,0.5s						
VACH	**Vallenar**	**3.26**	**320**	*i* S	**Sn**	**03 06 03.4**	**0.0**
VACH				AML	AML	03 06 04.8	
	comp=N,607nm,0.3s						
TACH	**Talagante**	**3.34**	**220**	⇑*i*P	**Pn**	**03 05 25.6**	**-0.9**
TACH				*i* S	**Sn**	**03 06 04.3**	**-1.1**
CHCH	**Chadas Angostu**	**3.42**	**214**	⇑*i*P	**Pn**	**03 05 27.2**	**-0.3**
CHCH				*i* S	**Sn**	**03 06 06.9**	**-0.2**
CACH	**El Canelo**	**3.54**	**211**	⇓*i*P	**Pn**	**03 05 29.5**	**+0.3**
CACH				*i* S	**Sn**	**03 06 10.8**	**+0.6**
CICH	**Cipreses**	**3.64**	**208**	⇑*i*P	**Pn**	**03 05 30.7**	**+0.2**
CICH				*i* S	**Sn**	**03 06 12.9**	**+0.3**
LNV	**Longovilo**	**3.83**	**221**	⇑*i*P	**Pn**	**03 05 30.5**	**-2.5**
LVC	**Limon Verde**	**8.47**	**357**	P	**Pn**	**03 06 35.0**	**-1.0**
	comp=N,4.0nm,0.3s,baz=192,slow=8.4,SNR=33						
LVC	**Limon Verde**	**8.47**	**357**	*e*Pn	**Pn**	**03 06 34.5**	**-1.5**
TRQA	**Tornquist**	**8.71**	**145**	*e*Pn	**Pn**	**03 06 37.9**	**-1.3**
	comp=N,16nm,0.6s						
CPUP	**Villa Florida**	**10.80**	**67**	P	**Pn**	**03 07 07.7**	**+0.1**
	comp=N,0.3nm,0.3s,baz=358,slow=18,SNR=2.8						
CPUP	**Villa Florida**	**10.80**	**67**	P	**Pn**	**03 07 07.7**	**+0.1**
LPAZ	**La Paz**	**14.75**	**1**	P	**Pn**	**03 08 00.2**	**+0.8**
	comp=N,0.2nm,0.3s,baz=167,slow=8.1,SNR=14						
LPAZ	**La Paz**	**14.75**	**1**	P	**Pn**	**03 08 00.2**	**+0.8**
SIV	**San Ignacio**	**16.45**	**26**	P	**Pn**	**03 08 21.4**	**+0.6**
	comp=N,0.2nm,0.3s,baz=231,slow=15,SNR=4.4						
TORD	**Torodi Ar. Bea**	**80.29**	**68**	P	**P**	**03 16 35.8**	**-0.1**
	comp=N,0.8nm,0.5s,baz=276,slow=6.3,SNR=13						
WRA	**Warramunga Arr**	**124.76**	**206**	PKP	PKPdf	03 23 22.5	-1.6
	comp=N,0.4nm,0.4s,baz=166,slow=1.6,SNR=8.7						

BJI ***14*** *03:07:10.0,3.17S×101.02E,h33km,mB4.9,mb4.9,Ms4.4, Msz4.1*

ISCJB ***14*** *03:07:13.2±0.2,2.99S±003×100.98E±003,h39km, mb5.1/110,MS4.1/34,Error ellipse: s-maj=5.0km s-min=4.0km az=20.8*

MOS ***14*** *03:07:14.9±1.0,2.63S×101.28E,h46km,mb5.3/38, MS4.2/4,Error ellipse: s-maj=12.1km s-min=5.6km az=116.4*

NEIC ***14*** *03:07:14.7±1.0,2.92S×101.15E,h40km±8km,mb5.1/39, Error ellipse: s-maj=6.8km s-min=4.6km az=46.0*

NEIC Felt [II] at Bengkulu.

IDC ***14*** *03:07:18.1±2.2,2.74S×101.35E,h64km±18km,mb4.7/21, mb1 4.8/22,mb1mx4.7/26,mbtmp4.7/22,MS3.9/18, Ms1 3.9/18,ms1mx3.8/25,Error ellipse: s-maj=20.5km s-min=8.9km az=47.0*

DJA ***14*** *03:07:23,2.36S×101.23E,h23km,Mw5.2/4*

SZGRF ***14*** *03:07:25.2,2.50S×99.50E,h54km,mb4.9,Southern Sumatera, Indonesia*

ISC 14 03:07:15.1±0.2,300S±003×10099E±003,h41km, h41km±2.9km:pP-P,n325,σ1s09/291,mb5.1/110,MS4.1/34, 38C-18D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**1.02**	**28**	P	**Pn**	**03 07 32.7**	**-0.2**
	0.0nm,0.0s						
KSI	**Kapahiang**	**1.73**	**112**	P	**Pn**	**03 07 43.5**	**+0.9**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**2.59**	**347**	P	**Pn**	**03 07 55.5**	**+0.9**
	0.0nm,0.0s						
RGRI	**Rengat**	**2.96**	**27**	P	**Pn**	**03 08 00.5**	**+0.9**
	0.0nm,0.0s						
JMBI	**JAMBI**	**2.98**	**63**	P	**Pn**	**03 08 09.9**	**+10**
	0.0nm,0.0s						
KLI	**Kotabumi**	**4.28**	**116**	P	**Pn**	**03 08 21.9**	**+4.2**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.37**	**55**	P	**Pn**	**03 08 19.6**	**+0.5**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.21**	**81**	P	**Pn**	**03 08 32.6**	**+2.1**
	84nm,0.9s						
KGM	**Kluang**	**5.50**	**25**	⇑P	**Pn**	**03 08 36.4**	**+1.8**
MYKOM	**Kota Tinggi**	**5.55**	**31**	⇓P	**Pn**	**03 08 37.0**	**+1.7**
FRIM	**Kepong**	**6.23**	**6**	⇑P	**Pn**	**03 08 47.5**	**+2.9**
IPM	**Ipoh**	**7.43**	**0**	⇑P	**Pn**	**03 09 05.6**	**+4.5**
LEM	**Lembang**	**7.62**	**120**	P	**Pn**	**03 09 12.6**	**+9.0**
	170nm,1.1s						
KTGM	**Kuala Trenggan**	**8.54**	**15**	⇑P	**Pn**	**03 09 19.5**	**+3.1**
XMIS	**Christmas Isla**	**8.75**	**148**	*e*Pn	**Pn**	**03 09 14.8**	**-4.4**
COCO	**West Island**	**10.02**	**204**	Pn	**Pn**	**03 09 37.8**	**+1.3**
	2µm,0.4s,SNR=13						
COCO	**West Island**	**10.02**	**204**	*e*Pn	**Pn**	**03 09 36.5**	**0.0**
SNG	**Songkhla**	**10.12**	**358**	P	**Pn**	**03 09 40.0**	**+2.1**
	180nm,0.9s						
KSM	**Kuching**	**10.32**	**65**	⇓P	**Pn**	**03 09 44.8**	**+4.1**
KSM	**Kuching**	**10.32**	**65**	*e*Pn	**Pn**	**03 09 41.9**	**+1.2**
SJI	**Sawahan**	**11.71**	**114**	P	**Pn**	**03 10 01.2**	**+1.4**
	142nm,1.0s						
SBUM	**Sibu**	**12.46**	**64**	⇑P	**Pn**	**03 10 13.9**	**+3.9**
BTM	**Bintulu**	**13.56**	**63**	⇓P	**Pn**	**03 10 29.2**	**+4.1**
BBKI	**Banjar Baru**	**13.84**	**92**	P	**Pn**	**03 10 36.7**	**+7.9**
	160nm,0.8s						
KKM	**Kota Kinabalu**	**17.66**	**59**	⇑P	**Pn**	**03 11 21.3**	**+3.1**
KKM	**Kota Kinabalu**	**17.66**	**59**	*e*Pn	**Pn**	**03 11 17.4**	**-0.8**
SDKM	**Sandakan**	**18.32**	**62**	⇓P	**Pn**	**03 11 27.8**	**+1.5**
TSM	**Tawau**	**18.36**	**67**	⇓P	**Pn**	**03 11 28.2**	**+1.4**
KDM	**Kudat**	**18.63**	**58**	⇑P	**Pn**	**03 11 30.3**	**+0.3**
KAPI	**Kappang**	**18.82**	**97**	Pn	**Pn**	**03 11 31.6**	**-0.8**
	889nm,1.0s,SNR=12						
KAPI	**Kappang**	**18.82**	**97**	P	**Pn**	**03 11 29.9**	**-2.5**
	4.5nm,0.3s,baz=279,slow=11,SNR=24						
KAPI				LR	LR	03 19 39.1	
	comp=Z,268nm,18.5s,baz=65,slow=40						
KAPI	**Kappang**	**18.82**	**97**	*e*Pn	**Pn**	**03 11 31.0**	**-1.4**
PCI	**Palu**	**18.95**	**84**	P	**Pn**	**03 11 36.7**	**+2.8**
	95nm,1.4s						
MYLDM	**Lahad Datu**	**19.29**	**65**	⇑P	**Pn**	**03 11 39.5**	**+1.5**
BATP	**Bataraza**	**20.45**	**55**	*e*P	**P**	**03 11 52.5**	**+3.2**
CMAR	**Chiang Mai Arr**	**21.42**	**355**	P	**P**	**03 11 56.8**	**-2.9**
	15nm,0.8s,mb4.4,baz=185,slow=9.9,SNR=43						
CMAR				PcP	PcP	03 16 02.9	+0.5
	1.7nm,0.4s,baz=210,slow=3.0,SNR=6.1						
CMAR				ScP	ScP	03 19 35.3	-1.0
	0.9nm,0.4s,baz=217,slow=2.8,SNR=5.2						
CMAR				LR	LR	03 20 43.8	
	comp=Z,203nm,18.1s,MS3.6,baz=165,slow=38						
CMAR	**Chiang Mai Arr**	**21.42**	**355**	P	**P**	**03 11 56.8**	**-2.9**
CMAR						03 16 02.9	
KDI	**Kendari**	**21.61**	**93**	P	**P**	**03 12 04.1**	**+2.2**
	35nm,1.1s,mb4.7						
BBSI	**Bau Bau**	**21.66**	**97**	P	**P**	**03 12 09.0**	**+6.6**
	105nm,1.0s,mb5.2						
CHG	**Chiang Mai**	**21.77**	**355**	⇓P	**P**	**03 12 02.3**	**-1.2**
	15nm,0.7s,mb4.5						
CHTO	**Chiang Mai**	**21.77**	**355**	*e*P	**P**	**03 12 03.5**	**0.0**
CHTO				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.3						
CHTO	**Chiang Mai**	**21.77**	**355**	*e*P	**P**	**03 12 03.5**	**0.0**
	comp=Z,11nm,0.8s,mb4.3						
CHRT	**Chiangrai**	**22.76**	**357**	P	**P**	**03 12 11.0**	**-3.0**
	comp=Z,210nm,0.8s,mb5.6						
QIZ	**Qiongzhong**	**23.56**	**21**	P	**P**	**03 12 21.3**	**-0.8**
QIZ				XP	sP	03 12 35.3	-2.6
QIZ				S	**S**	**03 16 33.3**	**-0.1**
QIZ				XS	sS	03 16 48.6	-3.2
QIZ				AMB	AMB		
	comp=Z,27nm,1.6s,mb4.4						
QIZ				LR	LR		
	comp=N,257nm,22.5s						
QIZ				LR	LR		
	comp=Z,312nm,23.4s,MS3.7						
BATI	**Baumata**	**23.62**	**109**	P	**P**	**03 12 23.6**	**+0.8**
	comp=Z,35nm,1.1s,mb4.7						
BATI	**Baumata**	**23.62**	**109**	P	**P**	**03 12 19.6**	**-3.2**
	comp=Z,21nm,0.3s,mb5.0,baz=159,slow=2.1,SNR=4.6						
BUSP	**Coron**	**24.22**	**52**	*e*P	**P**	**03 12 27.9**	**-0.4**
PAGZ	**Pagadian**	**24.80**	**64**	*e*P	**P**	**03 12 34.3**	**+0.8**
LUBP	**Lubang**	**25.32**	**49**	*e*P	**P**	**03 12 37.2**	**-1.1**
MBWA	**Marble Bar**	**25.66**	**136**	*e*P	**P**	**03 12 41.1**	**-0.2**
	comp=Z,14nm,0.9s,mb4.5						
OTRP	**Odiongan**	**25.88**	**53**	*e*P	**P**	**03 12 42.9**	**-0.4**
RCP	**Roxas**	**26.02**	**56**	⇓*e*P	**P**	**03 12 45.0**	**+0.4**
DAV	**Davao City (W)**	**26.50**	**68**	LR	LR	03 24 01.7	
	comp=Z,285nm,20.6s,MS3.8,baz=280,slow=38						
LBMI	**Labuha**	**26.60**	**85**	P	pP	03 12 59.7	-1.3
	comp=Z,102nm,0.9s						
KMI	**Kunming**	**28.01**	**3**	P	**P**	**03 13 03.6**	**+1.3**
KMI				AP	pP	03 13 15.4	+1.9
KMI				XP	sP	03 13 19.8	+1.4
KMI				PP	PP	03 13 56.8	-9.4
KMI				S	**S**	**03 17 45.9**	**+1.9**
KMI				XS	sS	03 18 05.1	+2.5
KMI				SS		03 19 11.0	
KMI				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.5						
KMI				AMB	AMB		
	comp=Z,55nm,4.1s						
KMI				LR	LR		
	comp=N,333nm,19.4s,MS4.0						
KMI				LR	LR		
	comp=E,192nm,19.4s,MS4.0						
KMI				LR	LR		
	comp=Z,303nm,18.1s,MS3.9						
FITZ	**Fitzroy Crossi**	**28.44**	**124**	*e*P	**P**	**03 13 05.4**	**-0.9**
	comp=Z,24nm,0.8s,mb4.9						
FITZ				eS	**S**	**03 17 44.5**	**-6.5**
FITZ	**Fitzroy Crossi**	**28.44**	**124**	P	**P**	**03 13 05.7**	**-0.6**
	comp=Z,13nm,0.7s,mb4.6,baz=298,slow=6.4,SNR=26						
FITZ				LR	LR	03 24 21.9	
	comp=Z,112nm,19.2s,MS3.5,baz=137,slow=36						
GYA	**Guiyang**	**29.79**	**10**	⇑*i*P	**P**	**03 13 17.1**	**-1.1**
GYA				AP	pP	03 13 27.0	-2.4
GYA				XP	sP	03 13 33.8	-0.5
GYA				PCP	PcP	03 16 20.8	-0.4
GYA				S	**S**	**03 18 08.5**	**-3.6**
GYA				XS	sS	03 18 27.3	-3.5
GYA				SS	SS	03 19 47.3	-33
GYA				SCP	ScP	03 19 58.6	-1.6
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
GYA				AMB	AMB		
	comp=Z,110nm,4.2s						
GYA				LR	LR		
	comp=N,520nm,12.3s,MS4.5						
GYA				LR	LR		
	comp=E,560nm,12.0s,MS4.5						
GYA				LR	LR		
	comp=Z,720nm,12.2s,MS4.5						
ODAN	**Odare**	**32.46**	**337**	*e*P	**P**	**03 13 42.3**	**+0.6**
	comp=Z,213nm,0.7s,mb6.1						
TAPN	**Taplejung**	**32.78**	**338**	*e*P	**P**	**03 13 45.5**	**+1.0**
	comp=Z,398nm,0.9s,mb6.3						
RAMN	**Ramite**	**32.86**	**336**	*e*P	**P**	**03 13 46.2**	**+1.0**
	comp=Z,95nm,0.7s,mb5.8						
NWAO	**Narrogin (SRO)**	**33.44**	**155**	LR	LR	03 25 13.4	
	comp=Z,302nm,21.1s,MS4.0,baz=214,slow=32						
JIRN	**Jiri**	**33.65**	**336**	*e*P	**P**	**03 13 53.2**	**+1.1**
CD2	**Chengdu**	**33.82**	**4**	*e*P	**P**	**03 13 55.8**	**+2.3**
CD2				AP	pP	03 14 06.3	+1.5
CD2				XP	sP	03 14 11.3	+1.6
CD2				PP	PP	03 15 10.1	-0.6
CD2				PCP	PcP	03 16 33.5	+1.5
CD2				S	**S**	**03 19 17.8**	**+2.9**
CD2				XS	sS	03 19 33.8	+0.2
CD2				PCS	PcS	03 20 18.5	+0.5
CD2				SS	SS	03 21 26.1	-16
CD2				SCS	ScS	03 24 15.1	-0.3
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
CD2				AMB	AMB		
	comp=Z,30nm,5.8s						
CD2				LR	LR		
	comp=N,530nm,21.6s						
CD2				LR	LR		
	comp=E,230nm,15.6s						
CD2				LR	LR		
	comp=Z,510nm,19.6s,MS4.2						
LSA	**Lhasa**	**33.85**	**345**	P	**P**	**03 13 53.4**	**-0.4**
YHNB	**Yeheng**	**33.89**	**35**	*e*P	**P**	**03 13 52.5**	**-1.8**
	comp=Z,24nm,1.0s,mb5.1						
PKI	**Pulchoki**	**33.90**	**335**	*e*P	**P**	**03 13 54.7**	**+0.4**
	comp=Z,66nm,0.8s,mb5.6						
PKIN	**Phulchoki**	**33.91**	**335**	*e*P	**P**	**03 13 54.7**	**+0.3**
	comp=Z,34nm,0.5s,mb5.5						
GUN	**Gumba**	**34.00**	**336**	*e*P	**P**	**03 13 56.2**	**+1.1**
	comp=Z,141nm,0.4s,mb6.2						
DMN	**Daman**	**34.06**	**334**	*e*P	**P**	**03 13 56.3**	**+0.6**
KKN	**Kakani**	**34.15**	**335**	*e*P	**P**	**03 13 57.1**	**+0.7**
	comp=Z,136nm,0.6s,mb6.0						
GKN	**Gorkha**	**34.61**	**334**	*e*P	**P**	**03 14 01.1**	**+0.7**
KOLN	**Koldanda**	**34.88**	**332**	*e*P	**P**	**03 14 03.5**	**+0.8**
	comp=Z,82nm,0.7s,mb5.8						
DANN	**Dangsing**	**35.30**	**333**	*e*P	**P**	**03 14 07.2**	**+0.8**
	comp=Z,153nm,0.4s,mb6.3						
WHN	**Wuhan**	**35.71**	**20**	⇓P	**P**	**03 14 09.3**	**-0.6**
WHN				*e*S	**S**	**03 19 35.1**	**-8.9**
WHN				AMB	AMB		
	comp=Z,46nm,0.9s,mb5.4						
WHN				LR	LR		
	comp=Z,480nm,15.4s,MS4.4						
WRA	**Warramunga Arr**	**36.64**	**120**	P	**P**	**03 14 17.0**	**-1.0**
	comp=Z,26nm,0.6s,mb5.2,baz=303,slow=8.9,SNR=302						
WRA				S	**S**	**03 19 54.5**	**-4.0**
	comp=Z,2.7nm,0.8s,baz=293,slow=16,SNR=8.3						
WRA				LR	LR	03 30 55.8	
	comp=Z,75nm,19.0s,MS3.5,baz=235,slow=39						
WRA	**Warramunga Arr**	**36.64**	**120**	P	**P**	**03 14 17.0**	**-1.0**
WRA				S	**S**	**03 19 54.5**	**-4.0**
WRAB	**Tennant Creek**	**36.64**	**120**	P	**P**	**03 14 17.0**	**-1.0**
	comp=Z,293nm,0.5s,SNR=49						
WRAB	**Tennant Creek**	**36.64**	**120**	*e*P	**P**	**03 14 17.3**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.2						
WRAB	**Tennant Creek**	**36.64**	**120**	*e*P	**P**	**03 14 17.3**	**-0.7**
	comp=Z,29nm,0.7s,mb5.2						
WB2	**Warramunga Arr**	**36.65**	**120**	*e*P	**P**	**03 14 16.9**	**-1.1**
WB2				*e*S	**S**	**03 19 50.6**	**-8.0**
XAN	**Xi'an**	**37.59**	**11**	P	**P**	**03 14 23.9**	**-1.9**
XAN				AP	pP	03 14 34.8	-2.4
XAN				XP	sP	03 14 40.3	-1.7
XAN				AMB	AMB		
	comp=Z,49nm,0.8s,mb5.3						
FORT	**Forrest**	**37.64**	**140**	*e*P	pP	03 14 36.5	-1.2
	comp=Z,27nm,0.8s						
FORT	**Forrest**	**37.64**	**140**	*e*P	**P**	**03 14 24.7**	**-1.7**
	comp=Z,3.8nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**37.87**	**126**	P	**P**	**03 14 28.2**	**-0.1**
	comp=Z,14nm,0.8s,mb4.7,baz=305,slow=8.2,SNR=104						
ASAR				PcP	PcP	03 16 44.5	+0.3
	comp=Z,5.0nm,0.8s,baz=316,slow=2.4,SNR=9.0						
ASAR				S	**S**	**03 20 13.2**	**-4.0**
	comp=Z,1.9nm,0.6s,baz=293,slow=16,SNR=10.0						
NJ2	**Nanjing**	**38.77**	**25**	*e*P	**P**	**03 14 35.8**	**0.0**
NJ2				AP	pP	03 14 45.3	-1.9
NJ2				XP	sP	03 14 48.8	-3.2
NJ2				PP	PP	03 16 09.8	+4.6
NJ2				S	**S**	**03 20 29.0**	**-1.4**
NJ2				XS	sS	03 20 45.0	-4.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,40nm,4.6s						
NJ2				LR	LR		
	comp=N,380nm,26.5s,MS4.2						
NJ2				LR	LR		
	comp=E,430nm,28.8s,MS4.2						
NJ2				LR	LR		
	comp=Z,420nm,27.4s,MS4.1						
NDI	**New Delhi**	**

KSRS LR LR 03 35 29.0
comp=Z,81nm,19.3s,MS3.7,baz=268,slow=36
STKA Stephens Creek 47.75 132 *eP* **P 03 15 48.7 +0.4**
comp=Z,13nm,0.6s,mb5.1
STKA Stephens Creek 47.75 132 P **P 03 15 48.9 +0.5**
comp=Z,16nm,0.7s,mb5.2,baz=310,slow=9.2,SNR=31
STKA LR LR 03 36 01.4
comp=Z,181nm,20.9s,MS4.0,baz=319,slow=36
KBL Kabul 47.92 324 *eP* **P 03 15 49.9 +0.3**
KBL pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KBL Kabul 47.92 324 *eP* **P 03 15 49.9 +0.4**
comp=Z,10nm,0.8s,mb4.9
WMQ Urumqi 48.12 347⇑ *iP* **P 03 15 50.8 -0.1**
WMQ AP pP 03 16 01.0 -1.6
WMQ XP sP 03 16 05.0 -2.4
WMQ PCP PcP 03 17 17.0 -1.1
WMQ *eS* **S 03 22 47.0 +0.2**
WMQ XS sS 03 23 06.0 -0.2
WMQ AMB AMB
comp=Z,112nm,0.9s,mb5.9
WMQ AMB AMB
comp=Z,140nm,5.4s
WMQ LR LR
comp=N,175nm,27.8s
WMQ LR LR
comp=E,134nm,13.2s
WMQ LR LR
comp=Z,219nm,28.5s,MS4.0
KSH Kashi 48.16 334 *eP* **P 03 15 52.1 +0.8**
KSH *eAP* pP 03 16 02.1 -0.9
KSH *eXP* sP 03 16 06.1 -1.7
KSH *ePCP* PcP 03 17 20.0 +1.7
KSH *ePP* PP 03 17 44.0 0.0
KSH *eSCP* ScP 03 21 10.1 +0.3
KSH *ePCS* PcS 03 21 14.1 0.0
KSH *eS* **S 03 22 46.3 -1.3**
KSH *eXS* sS 03 23 05.0 -1.9
KSH *eSCS* ScS 03 25 40.1 -1.1
KSH *eSS* SS 03 26 13.1 -4.3
KSH LR LR
comp=N,497nm,5.2s
KSH LR LR
comp=E,534nm,4.9s
KSH LR LR
comp=Z,482nm,5.2s
SONM Songino Array 50.84 5 P **P 03 16 11.3 -0.3**
comp=Z,44nm,0.9s,mb5.4,baz=184,slow=8.7,SNR=183
SONM PcP PcP 03 17 27.5 -0.4
comp=Z,2.7nm,0.4s,baz=179,slow=4.0,SNR=6.4
SONM LR LR 03 40 16.5
comp=Z,123nm,18.6s,MS4.0,baz=175,slow=39
SONM Songino Array 50.84 5 P **P 03 16 11.3 -0.3**
SONM 03 17 27.5
ULN Ulaanbaatar 50.93 5 *eP* **P 03 16 12.1 -0.2**
ULN pmax pmax
comp=Z,26nm,0.9s,mb5.2
ULN Ulaanbaatar 50.93 5 *eP* **P 03 16 12.1 -0.2**
comp=Z,26nm,0.9s,mb5.2
TKM2 Tokmak 2 51.14 336 *eP* **P 03 16 14.2 +0.2**
TKM2 pmax pmax
comp=Z,31nm,0.8s,mb5.3
TKM2 Tokmak 2 51.14 336 P **P 03 16 14.4 +0.4**
SNR=25
TKM2 Tokmak 2 51.14 336 *eP* **P 03 16 14.2 +0.3**
comp=Z,31nm,0.8s,mb5.3
KBK Karagaybulak 51.19 335 P **P 03 16 15.3 +1.0**
SNR=7.5
AML Almayashu 51.29 334 P **P 03 16 16.0 +0.9**
SNR=19
AML Almayashu 51.29 334 *eP* **P 03 16 15.6 +0.5**
comp=Z,31nm,0.8s,mb5.3
AAK Ala-Archa 51.36 335 P **P 03 16 16.4 +0.8**
SNR=7.1
CN2 Changchun 51.51 23 *eP* **P 03 16 14.8 -1.9**
CN2 *eXP* sP 03 16 30.8 -2.4
CN2 *eS* **S 03 23 31.4 -2.8**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CN2 AMB AMB
comp=Z,500nm,4.0s
CHMS Chumysh 51.55 336 P **P 03 16 17.0 0.0**
SNR=7.1
EKS2 Erkin-Say 51.68 335 P **P 03 16 18.8 +0.8**
SNR=56
EKS2 Erkin-Say 51.68 335 *eP* **P 03 16 18.2 +0.1**
comp=Z,83nm,0.9s,mb5.7
USP Ospenovka 51.88 336 P **P 03 16 19.3 -0.1**
SNR=13
MK31 Makanchi Array 52.26 344 *eP* **P 03 16 21.4 -0.8**
MKAR Makanchi Array 52.26 344 P **P 03 16 21.5 -0.7**
comp=Z,42nm,0.8s,mb5.4,baz=149,slow=8.0,SNR=195
MKAR Makanchi Array 52.26 344 P **P 03 16 21.5 -0.7**
MAJO Matsushiro 52.44 38 *eP* **P 03 16 22.6 -1.2**
MAJO pmax pmax
comp=Z,50nm,2.1s,mb5.1
MAJO Matsushiro 52.44 38 *eP* **P 03 16 22.6 -1.1**
comp=Z,50nm,2.1s,mb5.1
MAT Matsushiro 52.44 38 P **P 03 16 22.2 -1.6**
MJAR Matsushiro Arr 52.44 38 P **P 03 16 21.9 -1.9**
comp=Z,4.6nm,0.8s,mb4.5,baz=210,slow=7.5,SNR=14
ZAK Zakamensk 53.21 2⇓ *iP* **P 03 16 28.2 -1.0**
ZAK *e* 03 17 35.7
ZAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KK31 Karatay Array 53.49 332 P **P 03 16 30.4 -1.0**
KK31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
MDJ Mudanjiang 53.86 25 P **P 03 16 35.1 +1.0**
MDJ AP pP 03 16 44.1 -1.7
MDJ XP sP 03 16 48.0 -2.6
MDJ SCP ScP 03 21 35.4 +1.1
MDJ PCS PcS 03 21 39.3 +0.9
MDJ S **S 03 24 09.4 +3.2**
MDJ XS sS 03 24 24.9 -0.9
MDJ SCS ScS 03 26 21.6 +1.5
MDJ AMB AMB
comp=Z,6.0nm,1.3s,mb4.4
MDJ AMB AMB
comp=Z,65nm,4.4s
MDJ LR LR
comp=N,103nm,26.6s
MDJ LR LR
comp=E,106nm,20.2s
MDJ LR LR
comp=Z,177nm,22.7s,MS4.1
MOY Mondy 54.46 0 *eP* **P 03 16 38.0 -0.3**
MOY pmax pmax
comp=Z,15nm,1.2s,mb4.8
TLY Talaya 54.52 2 P **P 03 16 38.9 +0.2**
comp=Z,160nm,0.7s,mb6.2,SNR=7.4
TLY Talaya 54.52 2 *eP* **P 03 16 38.7 0.0**
TLY pmax pmax
comp=Z,27nm,0.9s,mb5.3
TLY MLR MLR
comp=Z,167nm,17.0s,MS4.2
TLY Talaya 54.52 2 *eP* **P 03 16 38.5 -0.2**
comp=Z,25nm,0.9s,mb5.2
KURK Kurchatov 56.84 343 P **P 03 16 54.5 -0.9**
comp=Z,178nm,0.7s,mb6.2,SNR=19
KURK Kurchatov 56.84 343⇑ P **P 03 16 54.6 -0.8**
SNR=6.8
KURK Kurchatov 56.84 343 *c iP* **P 03 16 54.7 -0.7**
KURK pmax pmax
comp=Z,44nm,1.4s,mb5.3
KURK Kurchatov 56.84 343 *eP* **P 03 16 54.5 -0.9**
comp=Z,26nm,0.9s,mb5.3
ZAA0 Zalesovo Array 58.33 349 *eP* **P 03 17 04.9 -1.0**
ZALV Zalesovo Beam 58.33 349 P **P 03 17 04.8 -1.1**
comp=Z,142nm,0.9s,mb6.0,baz=166,slow=5.2,SNR=276
ZALV LR LR 03 43 21.0
comp=Z,66nm,19.8s,MS3.8,baz=155,slow=37
KLR Kul'dur 58.45 23 *eP* **P 03 17 01.4 -5.3**
HNR Honiara 58.90 99 LR LR 03 43 58.0
comp=Z,94nm,20.3s,MS3.9,baz=102,slow=38
NVS Novosibirsk 59.49 348 *i P* **P 03 17 12.0 -1.8**
NVS pmax pmax
comp=Z,41nm,1.0s,mb5.4
NVS pmax pmax
comp=N,35nm,1.3s
NVS pmax pmax
comp=E,24nm,1.1s
RDF Al-Radifah 60.24 306 *eP* **P 03 17 19.4 -0.1**
baz=306
RDF AMb AMB 03 17 20.7
comp=Z,57nm,0.8s,mb5.7,baz=306
UMR Umm Al-Rimmam 60.34 307 *eP* **P 03 17 20.5 +0.3**
baz=306
UMR AMb AMB 03 17 21.6
comp=Z,57nm,0.7s,mb5.7,baz=306
MIB Mutribah 60.74 307 *eP* **P 03 17 23.3 +0.4**
baz=307
MIB AMb AMB 03 17 24.7
comp=Z,58nm,1.2s,mb5.6,baz=307
BVA0 Borovoye Array 61.46 340 *i* P **P 03 17 25.7 -1.6**
BVA0 pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
BVAR Borovoye Array 61.46 340 P **P 03 17 25.8 -1.6**
comp=Z,20nm,0.7s,mb5.3,baz=145,slow=8.7,SNR=8.1
BVAR Borovoye Array 61.46 340 P **P 03 17 25.8 -1.6**
BOD Bodaibo 61.52 8 *eP* **P 03 17 26.3 -1.4**
BOD pmax pmax
comp=Z,14nm,0.9s,mb5.1
BRVK Borovoye 61.52 339 *eP* **P 03 17 26.8 -1.0**
YSS Yuzh-Sakhalins 61.81 31⇑ *eP* **P 03 17 28.8 -1.0**
YSS pmax pmax
comp=Z,32nn,1.0s,mb5.4
YSS Yuzh-Sakhalins 61.81 31 *eP* **P 03 17 28.6 -1.3**
comp=Z,16nm,0.8s,mb5.2
AB31 Akbulak array 62.99 331 *i* P **P 03 17 36.7 -1.0**
AB31 pmax pmax
comp=Z,232nm,0.5s
KMBO Kilima Mbogo 63.72 270 LR LR 03 41 05.9
comp=Z,79nm,18.1s,MS3.9,baz=256,slow=32
AKTK Aktyubinsk 64.70 331 P **P 03 17 47.9 -1.0**
AKTO Aktyubinsk 64.70 331 P **P 03 17 47.9 -1.0**
comp=Z,12nm,0.7s,mb5.0,baz=126,slow=7.1,SNR=31
AKTO Aktyubinsk 64.70 331 P **P 03 17 47.7 -1.2**
AKTO pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
GNI Garni 66.93 316⇓ *eP* **P 03 18 04.7 +1.2**
GNI pmax pmax
comp=Z,29nm,1.7s
SVE Sverdlovsk 67.98 337⇑ *eP* **P 03 18 09.6 -0.2**
SVE pmax pmax
comp=Z,41nm,0.9s,mb5.5
YAK Yakutsk 68.46 14 *i* P **P 03 18 10.6 -2.1**
YAK pmax pmax
comp=Z,49nm,0.9s,mb5.5
YAK pmax pmax
comp=N,12nm,0.8s
YAK pmax pmax
comp=E,9.0nm,1.2s
YAK Yakutsk 68.46 14 *eP* **P 03 18 11.0 -1.7**
comp=E,50nm,0.6s,mb5.7
ARU Arti 68.51 336 *d iP* **P 03 18 12.0 -1.1**
ARU *eS* S 03 27 12.8 +0.6
ARU *eSS* SS 03 31 40.7 +3.8
ARU pmax pmax
comp=Z,31nm,1.0s,mb5.2
ARU Arti 68.51 336 *eP* **P 03 18 12.0 -1.1**
comp=Z,34nm,1.1s,mb5.2
MAW Mawson 69.57 195 *eP* **P 03 18 22.9 +3.4**
comp=Z,7.8nm,1.0s,mb4.6
MAW Mawson 69.57 195 P **P 03 18 23.1 +3.6**
comp=Z,2.1nm,0.7s,mb4.2,baz=2.6,slow=4.3,SNR=4.1
MAW LR LR 03 44 45.5
comp=Z,309nm,20.0s,MS4.5,baz=199,slow=32
MAW Mawson 69.57 195 *eP* **P 03 18 22.9 +3.4**
MAW pmax pmax
comp=Z,8.0nm,1.0s
KIV Kislovodsk 69.94 319⇑ *eP* **P 03 18 22.6 +0.3**
KIV *e* 03 18 41.2
KIV pmax pmax
comp=Z,19nm,1.0s,mb5.0
KIV Kislovodsk 69.94 319 *eP* **P 03 18 22.2 -0.1**
comp=Z,19nm,1.0s,mb5.0
MALT Malatya 70.74 312 *eP* **P 03 18 25.9 -1.4**
MALT pmax pmax
comp=Z,11nm,1.1s,mb4.7
MALT Malatya 70.74 312⇓ *iP* **P 03 18 26.1 -1.2**
MALT Malatya 70.74 312 *eP* **P 03 18 25.9 -1.4**
comp=Z,10nm,1.1s,mb4.7
SKR Severo-Kuril's 71.15 33 *eP* **P 03 18 27.0 -2.4**
SKR *e* 03 18 52.0
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.7
SKR pmax pmax
comp=E,40nm,0.7s
PETK Petropavlovsk- 73.20 32 P **P 03 18 40.2 -1.4**
comp=E,9.8nm,0.8s,mb4.8,baz=283,slow=0.2,SNR=12
PETK LR LR 03 55 44.3
comp=E,40nm,18.7s,MS3.7,baz=34,slow=40
PET Petropavlovsk 73.67 32⇑ *iP* **P 03 18 43.0 -1.4**
PET pmax pmax
comp=Z,42nm,1.0s,mb5.3
PET MLR MLR
comp=Z,100nm,18.0s,MS4.1
PET Petropavlovsk 73.67 32 *eP* **P 03 18 43.1 -1.3**
comp=Z,37nm,1.0s,mb5.3
ANN Anapa 73.73 318 *eP* **P 03 18 44.9 -0.1**
ANN pmax pmax
comp=Z,86nm,0.8s,mb5.7
BR131 Keskin Array S 74.72 312 *eP* **P 03 18 50.4 -0.5**
comp=Z,5.6nm,0.6s,mb4.7
VSR Storozhevoye 75.16 325 *eP* **P 03 18 52.1 -1.0**
VSR *e*SP* sP 03 19 06.7 -3.4
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,8.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,0.9s
BOSA Boshof 76.05 241 LR LR 03 44 29.9
comp=E,176nm,20.6s,MS4.3,baz=143,slow=29
TIXI Tiksi 76.69 9 *c iP* **P 03 18 59.0 -2.4**
TIXI pmax pmax
comp=Z,27nm,0.9s,mb5.2
TIXI MLR MLR
comp=Z,193nm,17.0s,MS4.5
TIXI Tiksi 76.69 9 *eP* **P 03 18 59.5 -1.9**
comp=Z,15nm,0.6s,mb5.1
SYO Syowa Base 77.25 199⇓ *esP* sP 03 19 20.8 -0.8
OBN Obninsk 78.16 328⇑ *eP* **P 03 19 09.7 -0.3**
OBN *e* 03 22 06.5
OBN *eS* S 03 29 00.7 -0.8
OBN pmax pmax
comp=Z,50nm,1.2s,mb5.3
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.2
OBN Obninsk 78.16 328 *eP* **P 03 19 09.9 -0.1**
comp=Z,31nm,0.7s,mb5.3
TIRR Tirgusor 79.76 316⇑ *iP* **P 03 19 18.8 -0.2**
TIRR Tirgusor 79.76 316⇑ P **P 03 19 18.8 -0.2**
SUR Sutherland 80.11 238 *eP* **P 03 19 21.8 +0.6**
comp=Z,15nm,0.9s,mb4.9
AKASG Malin Array Be 80.88 322 P **P 03 19 24.1 -0.8**
comp=Z,4.1nm,0.8s,mb4.4,baz=84,slow=4.4,SNR=14
AKASG PP PP 03 22 30.2 +0.5
comp=Z,0.4nm,0.3s,baz=101,slow=5.8,SNR=4.1
VRI Vrincioaia 81.25 317⇓ *iP* **P 03 19 26.9 -0.1**
VRI Vrincioaia 81.25 317⇓ P **P 03 19 26.9 -0.1**
MLR Muntele Rosu 81.70 317 P **P 03 19 30.4 +1.0**
comp=Z,9.0nm,0.9s,mb4.7,baz=104,slow=1.0,SNR=11
MLR Muntele Rosu 81.70 317⇑ *iP* **P 03 19 29.5 +0.1**
MLR Muntele Rosu 81.70 317⇑ P **P 03 19 29.5 +0.1**
BURAR Bucovina Array 82.66 319⇑ *iP* **P 03 19 35.5 +1.1**
BURAR Bucovina Array 82.66 319⇑ P **P 03 19 35.5 +1.1**
BUR08 Bucovina Ar. S 82.68 319 *eP* **P 03 19 35.5 +1.1**
VTS Vitosha 83.05 313⇑ *iP* **P 03 19 36.4 -0.1**
VTS Vitosha 83.05 313⇑ P **P 03 19 36.4 -0.1**
JOF Joensuu 83.54 334 *ep* **P 03 19 38.4 -0.2**
comp=Z,12nm,0.7s,mb5.1
JOF Joensuu 83.54 334 *eP* **P 03 19 38.4 -0.2**
JOF pmax pmax
comp=Z,12nm,0.7s,mb5.1
BILL Bilibino 83.75 20 *eP* **P 03 19 38.1 -1.4**
BILL *e* 03 22 48.0
BILL pmax pmax
comp=Z,11nm,1.0s,mb4.9
APA Apatity 84.37 339⇑ *eP* **P 03 19 35.0 -7.7**
APA pmax pmax
comp=Z,16nm,1.0s,mb5.1
APA MLR MLR
comp=Z,600nm,21.0s,MS5.0
BZS Buzias 84.71 316⇓ *iP* **P 03 19 45.1 +0.2**
BZS Buzias 84.71 316⇓ P **P 03 19 45.1 +0.2**
UZH Uzhgorod 84.78 319 *eP* **P 03 19 45.0 -0.2**
KOLS Kolonicke sedl 84.85 320 *eP* **P 03 19 46.5 +1.0**
SUW Suwalki 85.27 325 *eP* **P 03 19 47.3 -0.2**
SUW Suwalki 85.27 325 *eP* **P 03 19 47.3 -0.2**
CRVS Cervenica-Dubn 85.37 319 *eP* **P 03 19 49.5 +1.4**
STHS Stebnicka Huta 85.60 320 *eP* **P 03 19 49.8 +0.5**
STHS pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
STHS Stebnicka Huta 85.60 320 *eP* **P 03 19 49.8 +0.5**
comp=Z,7.6nm,0.9s,mb4.9
KECS Kecovo 85.94 319 *eP* **P 03 19 51.5 +0.5**
KECS pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
KECS Kecovo 85.94 319 *eP* **P 03 19 51.5 +0.5**
comp=Z,2.7nm,0.7s,mb4.6
PSZ Piszkesteto 86.25 318 *eP* **P 03 19 52.8 +0.3**
PSZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
PSZ Piszkesteto 86.25 318 *eP* **P 03 19 52.8 +0.3**
comp=Z,5.0nm,0.8s,mb4.8
PKSM Moragy 86.85 316⇓ *iP* **P 03 19 55.6 +0.1**
VYHS Vyhne 87.03 319 *eP* **P 03 19 56.4 +0.1**
KEV Kevo 87.30 340 *ep* **P 03 19 55.4 -1.8**
comp=Z,15nm,0.9s,mb5.2
KEV Kevo 87.30 340 *eP* **P 03 19 55.4 -1.8**
KEV pmax pmax
comp=Z,15nm,0.9s,mb5.2
KOLL Kolacno 87.33 319 *eP* **P 03 19 57.8 0.0**
KOLL Kolacno 87.33 319 *eP* **P 03 19 57.9 +0.1**
OKC Ostrava-Krasne 87.65 320 *eP* **P 03 20 00.2 +0.9**
OKC *ex* x 03 20 14.2
ARCES ARCESS Array B 87.74 340 P **P 03 19 59.0 -0.3**
comp=Z,13nm,0.8s,mb5.2,baz=122,slow=15,SNR=33
ARCES LR LR 04 03 05.3
comp=Z,53nm,21.5s,MS3.9,baz=172,slow=38
ARCES ARCESS Array B 87.74 340 P **P 03 19 59.0 -0.3**
ARCES LR LR 04 03 05.3
MORC Moravsky Berou 88.04 320⇑ *iP* **P 03 20 03.0 +1.9**
MORC Moravsky Berou 88.04 320 *eP* **P 03 20 01.6 +0.4**
MODS Modra-Piesok 88.04 318 *eP* **P 03 20 02.2 +1.0**
DPC Dobruska-Polom 88.88 320 *eP* **P 03 20 06.2 +1.1**
DPC *ex* x 03 20 24.9
UPC Upice 89.09 320 *eP* **P 03 20 07.4 +1.3**
BOJS Bojanci 89.13 315 *i P* **P 03 20 06.9 +0.5**
TREC Trest 89.31 319 *eP* **P 03 20 07.8 +0.6**
PERS Pernice 89.32 317 *i P* **P 03 20 07.9 +0.6**
SOKA Soboth 89.38 317⇑ *iP* **P 03 20 08.5 +0.9**
SOKA Soboth 89.38 317⇑ *iPcP* **P 03 20 08.5 +0.9**
LJU Ljubljana 89.68 316 *i P* **P 03 20 09.7 +0.8**
PRU Pruhonice 89.99 320 *eP* **P 03 20 11.0 +0.7**
JAVS Javornik 89.99 316 *i P* **P 03 20 10.4 0.0**
PVCC Panska Ves 90.01 320 *eP* **P 03 20 11.3 +0.9**
BRG Berggiesshubel 90.44 321 *eP* **P 03 20 13.2 +0.8**
BRG pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
BRG Berggiesshubel 90.44 321 *eP* **P 03 20 13.0 +0.6**
comp=Z,9.0nm,0.9s,mb5.1
BRG Berggiesshubel 90.44 321 *eP* **P 03 20 13.2 +0.8**
comp=Z,9.0nm,0.9s,mb5.1
GEC2 GERESS Array S 90.45 319 *eP* **P 03 20 13.0 +0.5**
GEC2 pmax pmax
comp=Z,16nm,1.4s,mb5.2
GEC2 GERESS Array S 90.45 319 *eP* **P 03 20 13.0 +0.5**
comp=Z,16nm,1.4s,mb5.2
GERES GERESS Array B 90.45 319 P **P 03 20 13.2 +0.7**
comp=Z,3.9nm,0.8s,mb4.8,baz=90,slow=4.5,SNR=30
KHC Kasperske Hory 90.55 319 *eP* **P 03 20 13.5 +0.6**
KHC *ex* x 03 20 30.5
KHC Kasperske Hory 90.55 319 *eP* **P 03 20 13.5 +0.6**
KHC *e* 03 20 30.5
KBA Koelnbreinsper 90.57 317⇑ *iP* **P 03 20 13.1 0.0**
comp=Z,3.7nm,0.7s,mb4.8
RJOB Jochberg 90.98 318 *eP* **P 03 20 14.9 -0.1**
comp=Z,6.0nm,0.9s,mb4.9
WET Wettzell 91.01 319 *eP* **P 03 20 15.4 +0.3**
WET pmax pmax
comp=Z,12nm,1.2s,mb5.1
WET Wettzell 91.01 319 *eP* **P 03 20 15.4 +0.3**
comp=Z,12nm,1.2s,mb5.1
CLL Collm 91.06 321 *eP* **P 03 20 15.0 -0.2**
CLL *e*SP* sP 03 20 31.0 -1.4
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
CLL Collm 91.06 321 *eP* **P 03 20 15.0 -0.2**
comp=Z,6.0nm,1.0s,mb4.9
CLL *es*P sP 03 20 31.0 -1.4
ABTA Abfaltersbach 91.12 317⇑ *iP* **P 03 20 15.6 0.0**
comp=Z,4.3nm,1.0s,mb4.7
HFS Hagfors 91.23 330 P **P 03 20 15.9 +0.1**
comp=Z,12nm,0.8s,mb5.2,baz=98,slow=4.5,SNR=12
NKC Novy Kostel 91.35 320 *eP* **P 03 20 16.2 -0.4**
TANN Tannenbergstha 91.35 320 *eP* **P 03 20 17.6 +1.0**
comp=Z,7.0nm,1.4s,mb4.8
ROTZ Rotzenmuhle 91.48 320 *eP* **P 03 20 17.8 +0.6**
comp=Z,6.0nm,1.0s,mb4.9
MANZ Manzenberg 91.56 320 *eP* **P 03 20 18.5 +0.9**
comp=Z,9.0nm,1.1s,mb5.0
MANZ *ep*P pP 03 20 33.0 +2.9
MOX Moxa 91.90 320 *eP* **P 03 20 19.7 +0.5**
MOX Moxa 91.90 320 *eP* **P 03 20 19.6 +0.4**
comp=Z,7.0nm,1.5s,mb4.8
MOTA Moosalm 92.11 317⇑ *iP* **P 03 20 20.0 -0.2**
comp=Z,7.8nm,1.1s,mb5.0
GRA1 Grafenberg Arr 92.12 319 *eP* **P 03 20 20.9 +0.7**
comp=Z,5.0nm,0.9s,mb4.8
GRA1 *ep*P pP 03 20 37.5 +4.8
GRF Grafenberg Arr 92.12 319 *eP* **P 03 20 20.9 +0.7**
GRF *e*PP* pP 03 20 37.5 +4.8
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
GRF Grafenberg Arr 92.12 319 *eP* **P 03 20 20.9 +0.7**
GRF *e*PP* pP 03 20 37.5 +4.8
GRF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
GRF Grafenberg Arr 92.12 319 *eP* **P 03 20 20.9 +0.7**
comp=Z,5.0nm,0.9s,mb4.8
GRF *ep*P pP 03 20 37.5 +4.8
RETA Reutte 92.34 317⇑ *iP* **P 03 20 21.4 +0.1**
comp=Z,6.7nm,0.7s,mb5.1
RETA Reutte 92.34 317⇑ *iPcP* **P 03 20 21.4 +0.1**
comp=Z,6.7nm,0.7s,mb5.1
NB2 NORSAR Subarra 92.49 331 P **P 03 20 21.0 -0.7**
comp=Z,2.2nm,0.7s,mb4.6,baz=95,slow=5.3
NOA NORSAR Array B 92.49 331 LR LR 04 05 21.4
comp=Z,63nm,18.8s,MS4.1,baz=90,slow=38
CLZ Clausthal 92.72 322 *eP* **P 03 20 23.5 +0.6**
CLZ pmax pmax
comp=Z,18nm,1.7s,mb5.2
CLZ Clausthal 92.72 322 *eP* **P 03 20 23.5 +0.6**
comp=Z,18nm,1.7s,mb5.2
DAVOX Davos/Dischmat 92.93 317 P **P 03 20 24.9 +0.9**
comp=Z,4.4nm,0.6s,mb5.1,baz=34,slow=3.6,SNR=8.2
DAVA Damuels 92.94 317⇑ *iP* **P 03 20 24.7 +0.7**
comp=Z,8.1nm,0.9s,mb5.1
DAVA Damuels 92.94 317⇑ *iPcP* **P 03 20 24.7 +0.7**
comp=Z,8.1nm,0.9s,mb5.1
DAVOS Davos 92.99 317 P **P 03 20 24.9 +0.6**
STU Stuttgart 93.42 319 *ep*P pP 03 20 39.5 +0.7
BUG Bochum--Univer 94.65 321 *ep*P pP 03 20 51.3 +6.9
LPG La Plagne 95.10 315 *eP* **P 03 20 33.8 -0.2**
LPL La Plagne 95.11 315 *eP* **P 03 20 34.0 -0.1**
comp=Z,5.7nm,0.9s,mb4.7
HAU Haudompre 95.33 318 *eP* **P 03 20 33.0 -2.0**
comp=Z,12nm,0.9s,mb5.0
CABF La Chapelle 95.54 316 *eP* **P 03 20 36.7 +0.7**
SSF Saint Saulge 97.29 317 *eP* **P 03 20 47.3 +3.4**
comp=Z,7.8nm,1.0s,mb4.8
HUMO Hull Mountain 124.46 38 *e*PKPdf PKPdf 03 26 10.3 +0.1
LNOR Lincton Mounta 125.26 33 *e*PKIKP PKPdf 03 26 10.5 -1.1
WVOR Wild Horse Val 127.18 36 *e*PKIKP PKPdf 03 26 15.4 0.0
BOZ Bozeman (W) 128.84 29 *e*PKIKP PKPdf 03 26 18.5 0.0
NVAR Mina Array Bea 129.73 40 PKP PKPdf 03 26 21.1 +0.8
comp=Z,0.8nm,0.5s,baz=277,slow=2.2,SNR=9.0
ELK Elko 130.23 36 *e*PKIKP PKPdf 03 26 21.3 0.0
TPAW Teton Pass 130.72 31 *e*PKPdf PKPdf 03 26 22.3 +0.2
LOHW Long Hollow 130.81 30 *e*PKPdf PKPdf 03 26 22.0 -0.2
HWUT Hardware Ranch 131.73 33 *e*PKPdf PKPdf 03 26 23.9 -0.2
PDAR Pinedale Array 131.95 30 PKP PKPdf 03 26 23.9 -0.6
comp=Z,0.5nm,0.6s,baz=207,slow=3.0,SNR=5.1
DUG Dugway 131.99 35 *e*PKIKP PKPdf 03 26 25.3 +0.7
RSSD Black Hills 133.46 25 *e*PKIKP PKPdf 03 26 26.9 -0.4
MSU Marysvale 133.47 36 *e*PKIKP PKPdf 03 26 28.1 +0.6
ANMO Albuquerque 139.25 35⇑ *i*PKIKP PKPdf 03 26 39.3 +1.0
WMOK Wichita Mounta 143.46 28 *e*PKHKP 03 26 40.9
CPUP Villa Florida 144.09 214 PKP PKPdf 03 26 46.4 -0.9
comp=Z,2.4nm,0.7s,baz=353,slow=16,SNR=3.8
BDFB Brasilia 144.18 238 PKP PKPdf 03 26 47.5 -0.1
comp=Z,3.7nm,0.5s,baz=132,slow=5.2,SNR=6.6
WCI Wyandotte Cave 144.31 10 *e*PKIKP PKPdf 03 26 44.2 -3.0

TXAR	**Lajitas Array**	**144.87**	**39**	PKP	PKPdf	03 26 47.3	-1.2
	comp=Z,11nm,0.6s,baz=271,slow=1.0,SNR=202						
URVA	**University of**	**145.57**	**358**	*e*PKPbc	PKPbc	03 26 48.5	-1.1
UTMT	**University of**	**145.60**	**14**	*e*PKPbc	PKPbc	03 26 48.9	-0.9
MIAR	**Mount Ida**	**145.81**	**22**	*e*PKIKP	PKPdf	03 26 49.4	-0.6
HALT	**Halls**	**145.89**	**15**	*e*PKPbc	PKPbc	03 26 49.5	-1.2
ELN	**Prospectdale**	**145.90**	**2**	*e*PKPbc	PKPbc	03 26 48.5	-2.1
BLA	**Blacksburg**	**145.93**	**2**	*e*PKIKP	PKPdf	03 26 50.3	+0.2
WVT	**Waverly**	**146.04**	**13**	*e*PKP2	PKPab	03 26 49.2	-2.4
UALR	**University of**	**146.04**	**20**	*e*PKPbc	PKPbc	03 26 51.4	+0.2
JCT	**Junction City**	**146.33**	**34**	*e*PKP2	PKPab	03 26 50.8	-2.1
TZTN	**Tazewell**	**146.36**	**7**	*e*PKPbc	PKPbc	03 26 50.1	-1.9
OXF	**Oxford**	**147.19**	**16**	*e*PKP2	PKPbc	03 26 52.7	-1.8
TKL	**Tuckaleechee C**	**147.21**	**7**	*e*PKPbc	PKPdf	03 26 51.6	-0.7
	comp=Z,9.2nm,0.8s,baz=140,slow=3.1,SNR=13						
TKL	**Tuckaleechee C**	**147.21**	**7**	*e*PKPbc	PKPdf	03 26 52.0	-0.3
SWET	**Sewanee**	**147.31**	**11**	*e*PKPbc	PKPbc	03 26 52.5	-2.3
CPCT	**Cooper Cave**	**147.31**	**8**	*e*PKPbc	PKPbc	03 26 53.3	-1.5
NATX	**Nacogdoches**	**147.82**	**26**	*e*PKPbc	PKPbc	03 26 55.2	-1.1
JSC	**Jenkinsville**	**148.81**	**4**	*e*PKP2	PKPbc	03 26 57.8	-1.0
HKT	**Hockley**	**148.81**	**29**	*e*PKP2	PKPbc	03 26 58.7	-0.3
LRAL	**Lakeview Retre**	**149.20**	**13**	*e*PKPbc	PKPbc	03 26 58.0	-1.8
GOGA	**Godfrey**	**149.46**	**7**	*e*PKP2	PKPbc	03 26 59.1	-1.4
SIV	**San Ignacio**	**154.10**	**223**	PKP	PKPdf	03 27 04.6	+1.2
	comp=Z,0.7nm,0.6s,baz=250,slow=3.9,SNR=5.7						
LPAZ	**La Paz**	**158.03**	**209**	PKP	PKPdf	03 27 10.1	+1.5
	comp=Z,1.3nm,0.9s,baz=88,slow=7.0,SNR=5.3						
LPAZ	**La Paz**	**158.03**	**209**	PKP	PKPdf	03 27 10.1	+1.5

VIE ***14*** *03:08:58.2±0.5, 4371N×1700E, h10km, mb2.5/2, ML2.8/3, Error ellipse: s-maj=8.4km s-min=4.2km az=58.0*
BEO ***14*** *03:08:59.7±1.4, 4385N×1640E, h7km±8km, ML2.5/2*
CSEM ***14*** *03:08:59.7±0.2, 4392N×1665E, h0km, ML2.5, Error ellipse: s-maj=5.0km s-min=2.0km az=47.0*
ISCJB ***14*** *03:09:02.1±0.4, 4392N±003×1662E±004, h10km, Error ellipse: s-maj=5.5km s-min=2.4km az=136.0*
PDG ***14*** *03:09:05.7±0.1, 4366N×1690E, h0km±11km, ML2.8/10, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*

ISC 14 03:09:02.1±0.9, 4389N±003×1658E±005, h4km±5km, n30, σ1°09/56, 10C-5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.97**	**26**	*e*Pg	**Pg**	**03 09 18.7**	**-1.9**
BLY				*e*Sg	**Sg**	**03 09 35.0**	**+1.8**
BLY	**Banja Luka**	**0.97**	**26**	*e*Pn	**Pg**	**03 09 18.8**	**-1.8**
BLY				*e*Sn	**Sg**	**03 09 31.1**	**-2.1**
STON	**Ston**	**1.30**	**141**	*e*Pg	**Pn**	**03 09 22.4**	**-4.6**
STON				Sg	**Sn**	**03 09 41.7**	**-3.1**
STON	**Ston**	**1.30**	**141**	*e*Pg	**Pn**	**03 09 22.3**	**-4.7**
STON				Sg	**Sn**	**03 09 41.6**	**-3.1**
NVLJ	**Novalja**	**1.41**	**299**	*e*Pn	**Pn**	**03 09 26.8**	**-1.6**
NVLJ				Sg	**Sg**	**03 09 48.7**	**+1.4**
NVLJ	**Novalja**	**1.41**	**299**	*e*Pn	**Pn**	**03 09 26.8**	**-1.6**
NVLJ				Sg	**Sg**	**03 09 48.6**	**+1.3**
BRY	**Bratogost**	**1.74**	**124**	↑*i*Pg	**Pn**	**03 09 31.7**	**-1.3**
BRY				*e*Sg	**Sn**	**03 09 54.1**	**-1.4**
TREB	**Trebinje**	**1.74**	**132**	*e*Pn	**Pn**	**03 09 31.3**	**-1.7**
TREB				*e*Sn	**Sn**	**03 09 54.2**	**-1.4**
TREB				*e*Sg	**Sg**	**03 09 58.0**	**0.0**
UPM	**Unac-Piva**	**1.82**	**111**	↓*i*Pg	**Pn**	**03 09 33.8**	**-0.4**
UPM				*e*Sg	**Sn**	**03 09 58.0**	**+0.3**
HCY	**Herceg Novi**	**2.01**	**135**	↑*i*Pn	**Pn**	**03 09 36.7**	**0.0**
HCY				*e*Sn	**Sn**	**03 10 02.3**	**+0.1**
BBLS	**Lazi?i**	**2.04**	**90**	*e*Pn	**Pn**	**03 09 36.4**	**-0.8**
BBLS				*e*Sg	**Sg**	**03 10 07.7**	**0.0**
NKY	**Niksic**	**2.06**	**120**	↓*i*Pn	**Pn**	**03 09 37.9**	**+0.4**
NKY				*e*Sn	**Sn**	**03 10 04.1**	**+0.5**
CRES	**Cresnjev**	**2.10**	**338**	*e*Pn	**Pn**	**03 09 38.2**	**+0.2**
CRES				*e*Sn	**Sn**	**03 10 05.3**	**+0.8**
PLE	**Pljevlja**	**2.12**	**104**	↓*i*Pn	**Pn**	**03 09 39.7**	**+1.5**
PLE				*e*Sn	**Sn**	**03 10 06.5**	**+1.6**
BUM	**Brajici-Budva**	**2.32**	**132**	↓*i*Pn	**Pn**	**03 09 41.6**	**+0.6**
BUM				*e*Sn	**Sn**	**03 10 10.0**	**+0.1**
CEY	**Cerknica**	**2.41**	**321**	*e*Pn	**Pn**	**03 09 43.4**	**+1.2**
CEY				*e*Sn	**Sn**	**03 10 14.2**	**+2.1**
PDG	**Podgorica**	**2.44**	**126**	↑*i*Pn	**Pn**	**03 09 43.5**	**+0.8**
TTG	**Podgorica**	**2.44**	**126**	↑*i*Pn	**Pn**	**03 09 43.5**	**+0.8**
TTG				*e*Sn	**Sn**	**03 10 13.2**	**+0.3**
DIVS	**Divibare**	**2.47**	**84**	*e*Pn	**Pn**	**03 09 42.5**	**-0.6**
DIVS				*e*Sg	**Sg**	**03 10 22.9**	**+1.5**
DIVS	**Divibare**	**2.47**	**84**	*e*Pn	**Pn**	**03 09 40.8**	**-2.3**
KOGS	**Kog**	**2.57**	**355**	*e*Pn	**Pn**	**03 09 43.9**	**-0.6**
KOGS				*e*Sn	**Sn**	**03 10 16.1**	**-0.1**
BEY	**Berane**	**2.62**	**112**	*e*Pn	**Pn**	**03 09 46.2**	**+1.1**
IVA	**Berane**	**2.62**	**112**	*e*Pn	**Pn**	**03 09 46.2**	**+1.1**
IVA				*e*Sn	**Sn**	**03 10 18.0**	**+0.7**
FGSL	**Fruska Gora**	**2.64**	**60**	*e*Pn	**Pn**	**03 09 44.1**	**-1.3**
ULC	**Ulcinj**	**2.74**	**134**	↑*i*Pn	**Pn**	**03 09 47.7**	**+0.9**
ULC				*e*Sn	**Sn**	**03 10 20.2**	**-0.2**
PVY	**Plav**	**2.79**	**116**	↑*i*Pn	**Pn**	**03 09 48.6**	**+1.1**
PVY				*e*Sn	**Sn**	**03 10 22.1**	**+0.5**
VOY	**Vojsko**	**2.87**	**319**	*e*Pn	**Pg**	**03 09 51.3**	**-5.8**
VOY				*e*Sn	**Sg**	**03 10 28.3**	**-6.1**
OBKA	**Obir**	**2.99**	**332**	↑*i*Pn	**Pn**	**03 09 49.8**	**-0.4**
OBKA				↑↑*i*Sn	**Sn**	**03 10 30.2**	**+3.7**
SOKA	**Soboth**	**3.00**	**339**	↑*i*Pn	**Pn**	**03 09 49.6**	**-0.8**
SOKA				↑↑*i*Sn	**Sn**	**03 10 25.4**	**-1.3**
MOA	**Molln**	**4.28**	**339**	↓*i*Pn	**Pn**	**03 10 07.6**	**-0.4**

KISR ***14*** *03:10:38.4, 2705N×5679E, h33km, ML3.7*
ISCJB ***14*** *03:10:39.9±1.3, 2554N±005×564E±02, h33km, Error ellipse: s-maj=19.9km s-min=6.2km az=6.8*
CSEM ***14*** *03:10:39.9±0.3, 2547N×5648E, h2km, ML3.7, Error ellipse: s-maj=7.5km s-min=2.2km az=97.0*

ISC 14 03:10:39.7±1.7, 2552N±005×565E±02, h35km, n12, σ1°01/17, 2C-1D, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BANOM	**Banah**	**0.43**	**337**	↑↑P	**Pn**	**03 10 49.9**	**+0.5**
	SNR=381						
BANOM	**Banah**	**0.43**	**337**	Pg	**Pn**	**03 10 49.3**	**-0.1**
	SNR=381						
BANOM				Sg	**Sn**	**03 10 55.1**	**-1.0**
HATD	**Hatta, Dubai**	**0.77**	**205**	↑↑P	**Pn**	**03 10 53.3**	**-0.6**
	SNR=58						
HATD	**Hatta, Dubai**	**0.77**	**205**	Pg	**Pn**	**03 10 53.3**	**-0.7**
	SNR=58						
HATD				Sg	**Sn**	**03 11 02.9**	**-1.4**
NAZ	**Nazwa, Dubai**	**0.92**	**235**	Pg	**Pn**	**03 10 56.1**	**0.0**
	SNR=11						
NAZ				Sg	**Sn**	**03 11 07.7**	**-0.4**
ASHO	**Ashiyiah**	**0.92**	**205**	↓↓P	**Pn**	**03 10 56.3**	**+0.2**
	SNR=80						
ASHO	**Ashiyiah**	**0.92**	**205**	Pg	**Pn**	**03 10 55.9**	**-0.2**
	SNR=80						
FAQ	**Al Faqa, Dubai**	**1.12**	**227**	Pg	**Pn**	**03 11 00.1**	**+1.2**
	SNR=49						
ASUD	**Al Ashush, Dub**	**1.38**	**230**	Pg	**Pn**	**03 11 05.1**	**+2.7**
RDF	**Al-Radifah**	**8.65**	**295**	*e*P	**Pn**	**03 12 43.3**	**+1.0**
MIB	**Mutribah**	**9.16**	**300**	*e*P	**Pn**	**03 12 48.7**	**-0.6**
MIB				*e*S	**Sn**	**03 14 26.3**	**-4.9**
	4.3nm,0.6s						
MIB	**Mutribah**	**9.16**	**300**	*e*P	**Pn**	**03 12 48.7**	**-0.7**
	baz=290						
MIB				*e*S	**Sn**	**03 14 26.3**	**-4.9**
	baz=290						
MIB				AML	AML	03 14 30.2	
	comp=Z,4.0nm,0.6s,baz=290						

CSEM ***14*** *03:11:09.0, 4083N×3862E, h5km, MD2.7, After ISK*

ISK 14 03:11:09.0, 4083N×3862E, h5km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESPY	**Espiye-Giresun**	**0.12**	**42**	*e*PG	Pg	03 11 12.0	+0.5
ESPY				*e*SG	Sg	03 11 14.7	+1.4
GUMT	**Gumushane**	**0.75**	**119**	*e*PG	Pg	03 11 24.1	+0.7
GUMT				*e*SG	Sg	03 11 34.7	+1.6
RSDY	**Resadiye-TOKAT**	**1.07**	**247**	*e*PG	Pg	03 11 29.9	+0.4
SVSK	**Karacayir**	**1.53**	**234**	*e*PN	Pn	03 11 38.3	+1.3

ISCJB ***14*** *03:15:17.8±0.7, 683N±008×7295W±008, h176km±7km, mb3.3/2, Error ellipse: s-maj=16.5km s-min=7.6km az=43.2*

FUNV ***14*** *03:15:18.3, 690N×73.12W, h185km, MW3.5*
IDC ***14*** *03:15:19.1±1.2, 7.18N×73.39W, h126km±26km, mb3.1/2, mb1 3.6/4, mb1mx3.2/21, mbtmp3.4/4, MS3.1/1, Ms1 3.2/1, ms1mx2.4/19, Error ellipse: s-maj=49.1km s-min=8.6km az=132.0*

ISC 14 03:15:18.8±0.7, 682N±008×7294W±008, h170km±7km, n17, σ0§91/21, mb3.3/2, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.21**	**31**	*e*P	**Pn**	**03 15 47.6**	**+0.3**
CAPV				*e*S	**Sn**	**03 16 10.1**	**+0.9**
ROSC	**El Rosal**	**2.39**	**215**	P	**Pn**	**03 15 59.7**	**-0.1**
	40nm,0.3s,baz=294,slow=18,SNR=154						
ROSC				S	**Sn**	**03 16 31.0**	**-0.4**
	20nm,0.3s,baz=105,slow=18,SNR=5.3						
SOCV	**Socops**	**2.52**	**55**	*e*P	**Pn**	**03 16 02.0**	**+0.8**
VIGV	**El Vigia**	**2.54**	**38**	*e*P	**Pn**	**03 16 02.0**	**+0.6**
VIGV				*e*S	**Sn**	**03 16 32.9**	**-1.6**
SDV	**Santo Domingo**	**3.07**	**48**	P	**Pn**	**03 16 09.5**	**+1.6**
	12nm,0.3s,baz=237,slow=5.1,SNR=5.7						
SDV				S	**Sn**	**03 16 47.1**	**+1.1**
	18nm,0.3s,baz=258,slow=22,SNR=21						
ELOV	**Elorza**	**3.43**	**87**	*e*P	**Pn**	**03 16 13.2**	**+0.8**
VIRV	**Villa del Rosa**	**3.70**	**8**	*e*P	**Pn**	**03 16 13.9**	**-1.8**
VIRV				*e*S	**Sn**	**03 16 54.8**	**-5.4**
QARV	**Quebrada Arrib**	**4.12**	**35**	*e*P	**Pn**	**03 16 20.6**	**-0.7**
CURV	**Curarigua**	**4.33**	**43**	*e*P	**Pn**	**03 16 23.5**	**-0.3**
TEPV	**Terepaima**	**4.85**	**50**	*e*P	**Pn**	**03 16 30.3**	**-0.3**
BAUV	**El Baul**	**5.29**	**66**	*e*P	**Pn**	**03 16 35.9**	**-0.5**
TURV	**Turiamo**	**6.20**	**54**	*e*P	**Pn**	**03 16 47.5**	**-0.9**
CAOV	**Caicara del Or**	**6.58**	**85**	*e*P	**Pn**	**03 16 53.0**	**-0.4**
CAOV				*e*S	**Sn**	**03 18 04.1**	**-3.8**
LPAZ	**La Paz**	**23.45**	**168**	LR	LR	03 31 18.2	
	comp=Z,46nm,21.7s,baz=301,slow=40						
TXAR	**Lajitas Array**	**36.60**	**312**	P	**P**	**03 22 09.4**	**+0.7**
	0.3nm,0.6s,mb3.1,baz=127,slow=9.3,SNR=6.0						
YKA	**Yellowknife Ar**	**63.33**	**340**	P	**P**	**03 25 29.9**	**+0.5**
	0.5nm,0.5s,mb3.6,baz=133,slow=6.6,SNR=6.2						
WRA	**Warramunga Arr**	**150.50**	**241**	PKP	PKPdf	03 34 51.4	+5.6
	0.1nm,0.3s,baz=108,slow=2.5,SNR=9.3						

IDC ***14*** *03:27:39.5±3.7, 3396S×17937E, h175km±28km, mb4.0/7, mb1 4.1/8, mb1mx3.9/17, mbtmp4.0/8, MS3.4/1, Ms1 3.4/1, ms1mx2.7/20, Error ellipse: s-maj=33.7km s-min=16.1km az=46.0*
ISCJB ***14*** *03:27:41.1±1.0, 3430S±008×17911E±01, h202km±9km, mb4.1/8, Error ellipse: s-maj=18.1km s-min=9.5km az=30.9*
NEIC ***14*** *03:27:43.8±2.0, 3451S×17911E, h213km±16km, mb4.4/2, Error ellipse: s-maj=24.6km s-min=18.7km az=201.0*

ISC 14 03:27:43.4±1.1, 3445S±009×17926E±01, h211km±11km, n43, σ1§44/50, mb4.1/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.19**	**192**	P	**Pn**	**03 28 35.6**	**0.0**
MXZ				S	**S**	**03 29 19.8**	**+2.9**
PUZ	**Puketiti**	**3.69**	**191**	P	**Pn**	**03 28 41.9**	**+0.2**
MWZ	**Matawai**	**4.10**	**198**	*e*P	**Pn**	**03 28 47.5**	**+0.9**
MWZ				S	**S**	**03 29 41.6**	**+5.0**
URZ	**Urewera**	**4.15**	**203**	P	**Pn**	**03 28 49.5**	**+2.2**
	4.5nm,0.3s,baz=354,slow=2.2,SNR=42						
URZ				S	**S**	**03 29 42.7**	**+4.9**
	34nm,0.3s,baz=329,slow=19,SNR=13						
URZ	**Urewera**	**4.15**	**203**	*e*P	**Pn**	**03 28 48.2**	**+0.9**
KNZ	**Kokohu**	**4.72**	**194**	*e*P	**Pn**	**03 28 53.6**	**-0.8**
KNZ				S	**S**	**03 29 55.0**	**+4.4**
BKZ	**Black Stump Fm**	**5.17**	**204**	P	**Pn**	**03 29 01.3**	**+1.2**
BKZ				S	**S**	**03 30 06.1**	**+5.2**
FWVZ	**Far West T-bar**	**5.60**	**210**	*e*P	**Pn**	**03 29 06.7**	**+1.1**
FWVZ				S	**S**	**03 30 17.2**	**+6.4**
RAO	**Raoul Island**	**5.75**	**26**	S	Sx	03 29 49.7	
	167nm,0.3s,baz=71,slow=23,SNR=7.8						
RAO				LR	LR	03 30 24.9	
	comp=Z,428nm,21.6s,baz=130,slow=32						
MRZ	**Mangatainoka R**	**6.82**	**204**	*e*P	**Pn**	**03 29 19.4**	**-1.8**
MRZ				S	**S**	**03 30 37.9**	**-1.3**
KIW	**Kapiti Island**	**7.23**	**206**	*e*P	**Pn**	**03 29 25.0**	**-1.6**
KIW				S	**S**	**03 30 49.2**	**+0.4**
CAW	**Cannon Point**	**7.39**	**205**	*e*P	**Pn**	**03 29 26.2**	**-2.4**
CAW				S	**S**	**03 30 52.6**	**0.0**
MSWZ	**Moikau Station**	**7.61**	**203**	*e*P	**Pn**	**03 29 31.3**	**-0.1**
MSWZ				S	**S**	**03 30 57.1**	**-0.6**
MRW	**Makara Radio**	**7.63**	**206**	*e*P	**Pn**	**03 29 33.7**	**+2.0**
MRW				S	**S**	**03 31 00.2**	**+2.0**
SNZO	**South Karori**	**7.70**	**206**	*e*Pn	**Pn**	**03 29 30.5**	**-2.1**
TCW	**Tory Channel**	**7.78**	**208**	*e*P	**Pn**	**03 29 31.9**	**-1.7**
TCW				S	**S**	**03 31 03.2**	**+1.6**
NNZ	**Nelson**	**8.16**	**212**	*e*P	**Pn**	**03 29 38.1**	**-0.4**
NNZ				S	**S**	**03 31 10.8**	**+0.2**
QRZ	**Quartz Range**	**8.26**	**218**	*e*P	**Pn**	**03 29 41.2**	**+1.4**
QRZ				S	**S**	**03 31 15.2**	**+2.3**
THZ	**Tophouse**	**8.81**	**212**	*e*P	**Pn**	**03 29 45.5**	**-1.4**
THZ				S	**S**	**03 31 26.0**	**+0.1**
KHZ	**Kahutara**	**9.09**	**207**	*e*P	**Pn**	**03 29 48.6**	**-2.0**
KHZ				S	**S**	**03 31 29.8**	**-2.9**
LTZ	**Lake Taylor**	**9.91**	**211**	*e*P	**Pn**	**03 29 59.7**	**-1.4**
RPZ	**Rata Peaks**	**11.19**	**212**	P	**Pn**	**03 30 17.2**	**-0.2**
	0.8nm,0.3s,baz=236,slow=23,SNR=4.9						
RPZ				S	**S**	**03 32 20.0**	**-2.4**
	5.6nm,0.3s,baz=360,slow=20,SNR=14						
ODZ	**Otahua Downs**	**12.44**	**209**	*e*P	**Pn**	**03 30 31.6**	**-1.6**
CTA	**Charters Tower**	**32.39**	**288**	P	**P**	**03 33 54.5**	**+1.2**
	5.7nm,0.5s,mb4.3,baz=106,slow=12,SNR=6.6						
ASAR	**Alice Springs**	**40.69**	**273**	P	**P**	**03 35 04.0**	**+0.7**
	3.4nm,0.6s,mb4.0,baz=113,slow=7.6,SNR=46						
WB2	**Warramunga Arr**	**42.05**	**278**	*e*P	**P**	**03 35 14.2**	**-0.2**
WRA	**Warramunga Arr**	**42.06**	**278**	P	**P**	**03 35 14.4**	**-0.2**
	2.8nm,0.6s,mb3.9,baz=119,slow=7.5,SNR=40						
QSPA	**South Pole Qui**	**55.67**	**180**	P	**P**	**03 37 02.1**	**+5.1**
	15nm,0.6s,mb4.7,baz=27,slow=1.6,SNR=108						
MAW	**Mawson**	**67.68**	**202**	*e*P	**P**	**03 38 19.9**	**+2.7**
	12nm,1.9s,mb4.2						
MAW	**Mawson**	**67.68**	**202**	P	**P**	**03 38 20.2**	**+3.0**
	7.2nm,0.8s,mb4.4,baz=122,slow=7.3,SNR=12						
SNAA	**Sanae**	**74.17**	**179**	*e*P	**P**	**03 38 58.4**	**+2.2**
	11nm,1.2s,mb4.4						
PLCA	**Paso Flores**	**81.48**	**134**	P	**P**	**03 39 38.2**	**+1.2**
	1.6nm,0.9s,mb3.7,baz=172,slow=4.9,SNR=3.3						
PLCA	**Paso Flores**	**81.48**	**134**	P	**P**	**03 39 38.2**	**+1.2**
NVAR	**Mina Array Bea**	**92.82**	**44**	P	**P**	**03 40 29.7**	**-2.0**
	0.5nm,0.7s,mb3.6,baz=224,slow=12,SNR=4.0						
ARCES	**ARCESS Array B**	**141.96**	**345**	PKP	PKPdf	03 46 49.2	+0.4
	3.6nm,1.1s,baz=48,slow=1.8,SNR=5.0						
ARCES	**ARCESS Array B**	**141.96**	**345**	PKP	PKPdf	03 46 49.2	+0.3
LIC	**Lamto**	**151.65**	**171**	*e*PKP1	PKPbc	03 47 13.2	0.0
	51nm,1.5s						
KIC	**Kosan Boka**	**151.82**	**172**	*e*PKP1	PKPbc	03 47 13.3	-0.3
	19nm,0.6s						
TIC	**Toumodi**	**152.07**	**171**	*e*PKP1	PKPbc	03 47 14.3	+0.2
	14nm,0.2s						
DBIC	**Dimbokro**	**152.11**	**171**	PKPbc	PKPbc	03 47 14.7	+0.5
	2.2nm,0.5s,baz=89,slow=4.6,SNR=11						
DBIC	**Dimbokro**	**152.11**	**171**	*e*PKPdf	PKPdf	03 47 07.7	+0.3
DBIC				*e*PKPbc	PKPbc	03 47 14.6	+0.4
TOA0	**Torodi Ar. Sit**	**158.67**	**187**	*e*PKPab	PKPab	03 47 53.2	+0.8
TORD	**Torodi Ar. Bea**	**158.67**	**187**	PKPab	PKPab	03 47 53.3	+0.9
	1.2nm,0.5s,baz=165,slow=5.0,SNR=20						

IDC 14 03:31:19.9±4.3, 416S×10177E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/18, mbtmp3.7/4, Error ellipse: s-maj=161.7km s-min=27.0km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.65**	**353**	P	P	03 36 23.8	+1.0
	1.0nm,0.4s,baz=188,slow=10,SNR=5.2						
WRA	**Warramunga Arr**	**35.39**	**119**	P	P	03 38 17.5	-0.2
	0.3nm,0.6s,baz=303,slow=9.3,SNR=3.2						
SONM	**Songino Array**	**51.94**	**4**	P	P	03 40 30.9	+0.5
	1.1nm,0.7s,baz=176,slow=8.8,SNR=6.0						
MKAR	**Makanchi Array**	**53.58**	**343**	P	P	03 40 41.4	-1.2
	0.6nm,0.8s,baz=145,slow=8.6,SNR=3.6						
TXAR	**Lajitas Array**	**145.25**	**41**	PKPbc	PKPbc	03 50 59.6	-0.3
	0.2nm,0.5s,baz=218,slow=0.9,SNR=5.6						

ISCJB ***14*** *03:34:16.8±0.3, 3720N±002×542W±001, h5km±2km, Error ellipse: s-maj=2.9km s-min=2.0km az=4.9*

CSEM ***14*** *03:34:18.9±0.1, 3706N×542W, h2km, ML3.6/20, Error ellipse: s-maj=1.5km s-min=0.8km az=7.0*
LDG ***14*** *03:34:19.2±0.1, 3706N×543W, h10km, Ml3.0/3, Error ellipse: s-maj=2.3km s-min=1.6km az=4.0*
NEIC ***14*** *03:34:19.2, 3707N×540W, h10km, MN2.6(MDD), After MDD.*
INMG ***14*** *03:34:19.8±1.3, 3707N×540W, h17km±2km, ML2.9, Error ellipse: s-maj=1.8km s-min=1.4km az=178.0*
SFS ***14*** *03:34:19.0, 3700N×540W, h10km, ML2.6*
MDD ***14*** *03:34:19.1±0.2, 3705N×541W, h10km, mbLg2.8/38, Error ellipse: s-maj=2.3km s-min=1.9km az=178.0, PRIMO*
MDD EMS: II INTENSIDAD MIMA.

ISC 14 03:34:18.1±0.3, 3715N±002×541W±001, h11km±2km, n151, σ1§05/275, 7C-3D, Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIJA	**Lijar**	**0.24**	**179**	↑↑P	**Pg**	**03 34 21.4**	**-1.7**
LIJA				S	**Sg**	**03 34 23.3**	**-3.1**
LIJA	**Lijar**	**0.24**	**179**	*i*P	**Pg**	**03 34 21.4**	**-1.7**
ESPR	**Espera**	**0.45**	**232**	↑↑Pg	**Pg**	**03 34 27.2**	**+0.2**
	47nm,0.2s,SNR=18						
ESPR				Lg		03 34 32.9	
	650nm,0.3s,SNR=5.0						
ESPR	**Espera**	**0.45**	**232**	Pg	**Pg**	**03 34 27.2**	**+0.2**
	47nm,0.2s,SNR=18						
ESPR	**Espera**	**0.45**	**232**	↑↑Pg	**Pg**	**03 34 27.2**	**+0.2**
ESPR				Lg		03 34 33.5	
GIBL	**Gibalbin**	**0.55**	**235**	↑↑P	**Pg**	**03 34 29.7**	**+1.0**
GIBL				S	**Sg**	**03 34 36.4**	**+0.4**
GIBL	**Gibalbin**	**0.55**	**235**	*i*P	**Pg**	**03 34 29.7**	**+0.9**
REAL	**Reales**	**0.68**	**166**	P	**Pg**	**03 34 29.9**	**-1.5**
REAL				S	**Sg**	**03 34 35.5**	**-4.7**
REAL	**Reales**	**0.68**	**166**	*e*P	**Pg**	**03 34 29.9**	**-1.4**
EJIF	**Jimena Fronter**	**0.70**	**184**	↑↑Pg	**Pg**	**03 34 30.1**	**-1.5**
	41nm,0.2s,SNR=18						
EJIF				Lg		03 34 39.2	
	117nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**0.78**	**139**	↑↑Pg	**Pg**	**03 34 31.1**	**-2.0**
	28nm,0.3s,SNR=18						
EMIJ				Lg		03 34 42.0	
	172nm,0.3s,SNR=13						
SCRT	**Cerro San Cris**	**0.80**	**230**	↓↓P	**Pg**	**03 34 35.7**	**+2.1**
SCRT				S	**Sg**	**03 34 44.8**	**+0.9**
SCRT	**Cerro San Cris**	**0.80**	**230**	*i*P	**Pg**	**03 34 35.7**	**+2.2**
MOMI	**Momias**	**0.85**	**197**	P	**Pg**	**03 34 36.2**	**+1.7**
MOMI	**Momias**	**0.85**	**197**	*e*P	**Pg**	**03 34 36.2**	**+1.6**
EMAL	**Malaga-Limoner**	**0.88**	**116**	Pg	**Pg**	**03 34 38.9**	**+4.0**
	8.2nm,0.1s,SNR=7.9						
EMAL				Lg		03 34 49.7	
	64nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**0.93**	**360**	Pg	**Pg**	**03 34 37.7**	**+1.7**
	68nm,0.1s,SNR=353						
ECAB				Lg		03 34 51.5	
	262nm,0.1s,SNR=28						
ECAB	**El Cabril**	**0.93**	**360**	Pn	**Pn**	**03 34 37.6**	**+0.5**
	4.2nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**0.93**	**360**	Pg	**Pg**	**03 34 38.1**	**+2.2**
	93nm,0.1s,SNR=353						
ECAB	**El Cabril**	**0.93**	**360**	Pn	**Pn**	**03 34 37.6**	**+0.5**
ECAB				Pg	**Pg**	**03 34 38.1**	**+2.1**
ECAB				Lg		03 34 51.5	
CNIL	**Conil**	**0.93**	**214**	P	**Pg**	**03 34 35.8**	**-0.3**
CNIL				S	**Sg**	**03 34 44.7**	**-3.5**
CNIL	**Conil**	**0.93**	**214**	*e*P	**

EGRO	**El Granado**	**1.70**	**284**	Pn		**Pn**	**03 34 47.6**	**-0.1**
	3.3nm,0.1s,SNR=55							
EGRO				Pg		**Pg**	**03 34 50.1**	**-0.6**
	18nm,0.2s,SNR=7.9							
EGRO				Lg			03 35 12.8	
	56nm,0.1s,SNR=5.0							
EGRO	**El Granado**	**1.70**	**284**	Pn		**Pn**	**03 34 47.7**	**0.0**
	3.3nm,0.2s,SNR=55							
EGRO	**El Granado**	**1.70**	**284**	Pg		**Pg**	**03 34 50.0**	**-0.6**
	27nm,0.3s,SNR=7.9							
EGRO	**El Granado**	**1.70**	**284**	Pn		**Pn**	**03 34 47.7**	**0.0**
EGRO				Pg		**Pg**	**03 34 50.0**	**-0.7**
EGRO				Lg			03 35 12.8	
PVAQ	**Vaqueiros**	**1.86**	**279**	*e*Pn		**Pn**	**03 34 49.8**	**-0.1**
PVAQ	**Vaqueiros**	**1.86**	**279**	*e*Pg		**Pg**	**03 34 52.6**	**-1.1**
PVAQ				*e*Sn		**Sn**	**03 35 12.3**	**-1.1**
PVAQ				*e*Sg		**Sg**	**03 35 17.6**	**-0.2**
PVAQ				A			03 35 20.0	
	69nm,0.2s							
PVAQ	**Vaqueiros**	**1.86**	**279**	Pn		**Pn**	**03 34 49.8**	**-0.1**
PVAQ				Pg		**Pg**	**03 34 52.6**	**-1.1**
PVAQ				Sn		**Sn**	**03 35 12.3**	**-1.1**
PVAQ				Lg			03 35 17.6	
	34nm,0.2s							
PVAQ	**Vaqueiros**	**1.86**	**279**	*e*Pg		**Pg**	**03 34 52.6**	**-1.1**
PVAQ				*e*Sn		**Sn**	**03 35 12.3**	**-1.1**
PVAQ				*e*Sg		**Sg**	**03 35 17.6**	**-0.2**
	69nm,0.2s							
EQES	**Quesada**	**1.97**	**70**	Pn		**Pn**	**03 34 51.6**	**+0.2**
	1.2nm,0.1s,SNR=18							
EQES				Pg		**Pg**	**03 34 55.8**	**-0.2**
	4.9nm,0.2s,SNR=16							
EQES				Sn		**Sn**	**03 35 16.1**	**-0.1**
	18nm,0.5s,SNR=5.8							
EQES				Lg			03 35 23.2	
	29nm,0.2s,SNR=8.8							
EQES	**Quesada**	**1.97**	**70**	Pn		**Pn**	**03 34 51.7**	**+0.2**
	1.0nm,0.1s,SNR=18							
EQES	**Quesada**	**1.97**	**70**	Pg		**Pg**	**03 34 55.5**	**-0.4**
	4.9nm,0.2s,SNR=16							
EQES				Sn		**Sn**	**03 35 16.1**	**-0.1**
	18nm,0.5s,SNR=5.8							
EQES	**Quesada**	**1.97**	**70**	Pn		**Pn**	**03 34 51.7**	**+0.3**
EQES				Pg		**Pg**	**03 34 55.5**	**-0.4**
EQES				Sn		**Sn**	**03 35 16.1**	**-0.1**
EQES				Lg			03 35 23.4	
PBDV	**Barranco-do-Ve**	**2.02**	**273**	*e*Pn		**Pn**	**03 34 52.0**	**-0.1**
PBDV				*e*Sn		**Sn**	**03 35 16.4**	**-0.9**
PBDV				*e*Sg		**Sg**	**03 35 22.7**	**-0.2**
PBDV				A			03 35 25.7	
	75nm,0.4s							
PBDV	**Barranco-do-Ve**	**2.02**	**273**	*e*Pn		**Pn**	**03 34 52.0**	**-0.1**
PBDV				*e*Sn		**Sn**	**03 35 16.4**	**-0.9**
PBDV				*e*Sg		**Sg**	**03 35 22.7**	**-0.2**
	75nm,0.4s							
EBER	**Berja**	**2.03**	**96**	Pn		**Pn**	**03 34 52.9**	**+0.6**
	0.9nm,0.2s,SNR=7.9							
EBER				Pg		**Pg**	**03 34 56.8**	**-0.3**
	31nm,0.5s,SNR=22							
EBER				Lg			03 35 23.7	
	89nm,0.7s,SNR=5.6							
EBER	**Berja**	**2.03**	**96**	Pn		**Pn**	**03 34 52.9**	**+0.6**
	0.9nm,0.2s,SNR=7.9							
EBER	**Berja**	**2.03**	**96**	Pg		**Pg**	**03 34 56.8**	**-0.3**
	16nm,0.4s,SNR=22							
EBAD	**Badajoz**	**2.04**	**322**	⇓Pn		**Pn**	**03 34 53.1**	**+0.6**
	4.3nm,0.3s,SNR=18							
EBAD				Pg		**Pg**	**03 34 57.0**	**-0.3**
	3.6nm,0.1s,SNR=6.7							
EBAD				Sn		**Sn**	**03 35 18.8**	**+0.8**
	43nm,0.2s,SNR=5.6							
EBAD				Lg			03 35 25.3	
	40nm,0.3s,SNR=5.0							
EBAD	**Badajoz**	**2.04**	**322**	Pn		**Pn**	**03 34 53.1**	**+0.6**
	3.4nm,0.3s,SNR=38							
EBAD	**Badajoz**	**2.04**	**322**	Pg		**Pg**	**03 34 56.7**	**-0.6**
	7.5nm,0.1s,SNR=6.7							
EBAD				Sn		**Sn**	**03 35 18.8**	**+0.8**
	25nm,0.3s,SNR=5.6							
EBAD	**Badajoz**	**2.04**	**322**	Pn		**Pn**	**03 34 53.1**	**+0.6**
EBAD				Pg		**Pg**	**03 34 56.7**	**-0.6**
EBAD				Sn		**Sn**	**03 35 18.8**	**+0.8**
EBAD				Lg			03 35 25.3	
PBEJ	**Beja**	**2.14**	**295**	*e*Pn		**Pn**	**03 34 54.3**	**+0.5**
PBEJ				*e*Sg		**Sg**	**03 35 27.3**	**+0.5**
PBEJ				A			03 35 37.3	
	38nm,0.3s							
PBEJ	**Beja**	**2.14**	**295**	*e*Pn		**Pn**	**03 34 54.3**	**+0.5**
PBEJ				*e*Sg		**Sg**	**03 35 27.3**	**+0.5**
	38nm,0.3s							
EALB	**Alboran**	**2.26**	**122**	Pn		**Pn**	**03 34 55.8**	**+0.4**
	4.9nm,0.2s,SNR=4.0							
EALB				Sn		**Sn**	**03 35 22.1**	**-1.2**
	5.3nm,0.2s,SNR=7.9							
EALB	**Alboran**	**2.26**	**122**	Pn		**Pn**	**03 34 55.5**	**0.0**
	4.9nm,0.2s,SNR=7.9							
EALB				Sn		**Sn**	**03 35 23.2**	**-0.1**
	SNR=7.9							
EALB	**Alboran**	**2.26**	**122**	Pn		**Pn**	**03 34 55.5**	**+0.1**
EALB				Sn		**Sn**	**03 35 23.2**	**-0.2**
PESTR	**Estremoz**	**2.43**	**316**	*e*Pn		**Pn**	**03 34 58.7**	**+0.9**
PESTR				*e*Sn		**Sn**	**03 35 28.6**	**+1.1**
PESTR				*e*Sg		**Sg**	**03 35 35.8**	**-0.4**
PESTR				A			03 35 42.8	
	66nm,0.6s							
PESTR	**Estremoz**	**2.43**	**316**	*e*Pn		**Pn**	**03 34 58.7**	**+0.9**
PESTR				*e*Sn		**Sn**	**03 35 28.6**	**+1.1**
PESTR				*e*Sg		**Sg**	**03 35 35.8**	**-0.4**
	66nm,0.6s							
EVO	**Evora**	**2.48**	**305**	*e*Pn		**Pn**	**03 35 00.0**	**+1.5**
EVO	**Evora**	**2.48**	**305**	*e*Pg		**Pg**	**03 35 06.4**	**+0.8**
EVO				*e*Sn		**Sn**	**03 35 30.0**	**+1.3**
EVO				*e*Sg		**Sg**	**03 35 39.8**	**+2.0**
	80nm,0.3s							
EVO	**Evora**	**2.48**	**305**	*e*Pn		**Pn**	**03 34 59.0**	**+0.5**
EVO				*e*Sn		**Sn**	**03 35 29.8**	**+1.1**
EVO				*e*Sg		**Sg**	**03 35 37.2**	**-0.6**
EVO				A			03 35 42.9	
	67nm,0.3s							
EVO	**Evora**	**2.48**	**305**	*e*Pn		**Pn**	**03 34 59.0**	**+0.5**
EVO				*e*Sn		**Sn**	**03 35 29.8**	**+1.1**
EVO				*e*Sg		**Sg**	**03 35 37.2**	**-0.6**
	67nm,0.3s							
EVOP	**Sao Brissos**	**2.55**	**303**	*e*Pn		**Pn**	**03 35 00.0**	**+0.6**
EVOP	**Sao Brissos**	**2.55**	**303**	*e*Pg		**Pg**	**03 35 06.4**	**-0.6**
EVOP				*e*Sn		**Sn**	**03 35 30.0**	**-0.5**
EVOP				*e*Sg		**Sg**	**03 35 39.8**	**-0.3**
	40nm,0.3s							
MORF	**Marmelete**	**2.59**	**274**	*e*Pn		**Pn**	**03 34 59.9**	**-0.1**
MORF				*e*Sn		**Sn**	**03 35 30.4**	**-1.1**
MORF				*e*Sg		**Sg**	**03 35 40.1**	**-1.3**
MORF				A			03 35 44.2	
	44nm,0.1s							
MORF	**Marmelete**	**2.59**	**274**	*e*Pn		**Pn**	**03 34 59.9**	**-0.1**
MORF				*e*Sn		**Sn**	**03 35 30.4**	**-1.1**
MORF				*e*Sg		**Sg**	**03 35 40.1**	**-1.3**
	44nm,0.1s							
PTEO	**Sao Teotonio**	**2.67**	**280**	*e*Pn		**Pn**	**03 35 01.2**	**+0.1**
PTEO				*e*Sn		**Sn**	**03 35 33.4**	**0.0**
PTEO				A			03 35 46.7	
	54nm,0.7s							
PTEO	**Sao Teotonio**	**2.67**	**280**	*e*Pn		**Pn**	**03 35 01.2**	**+0.1**
PTEO				*e*Sn		**Sn**	**03 35 33.4**	**0.0**
	54nm,0.7s							
PFVI	**Vila Bisbo**	**2.73**	**271**	*e*Pn		**Pn**	**03 35 01.2**	**-0.7**
PFVI	**Vila Bisbo**	**2.73**	**271**	*e*Pg		**Pg**	**03 35 08.9**	**-1.5**
PFVI				*e*Sn		**Sn**	**03 35 33.5**	**-1.4**
PFVI				*e*Sg		**Sg**	**03 35 44.9**	**-0.9**
PFVI				A			03 35 50.5	
	42nm,0.5s							
PFVI	**Vila Bisbo**	**2.73**	**271**	*e*Pg		**Pg**	**03 35 08.9**	**-1.5**
PFVI				*e*Sn		**Sn**	**03 35 33.5**	**-1.4**
PFVI				*e*Sg		**Sg**	**03 35 44.9**	**-0.9**
	42nm,0.5s							
EVIA	**Vianos**	**2.74**	**56**	Pn		**Pn**	**03 35 01.7**	**-0.4**
	1.1nm,0.2s,SNR=6.4							
EVIA				Pg		**Pg**	**03 35 10.4**	**-0.2**
	3.3nm,0.2s,SNR=7.9							
EVIA				Sn		**Sn**	**03 35 35.1**	**-0.1**
	2.0nm,0.1s,SNR=5.9							
EVIA				Lg			03 35 46.4	
	14nm,0.3s,SNR=5.0							
EVIA	**Vianos**	**2.74**	**56**	Pg		**Pg**	**03 35 10.0**	**-0.6**
	3.3nm,0.2s,SNR=7.9							
EVIA				Sn		**Sn**	**03 35 35.1**	**0.0**
	26nm,0.6s,SNR=5.9							
EVIA	**Vianos**	**2.74**	**56**	Pn		**Pn**	**03 35 01.7**	**-0.4**
EVIA				Pg		**Pg**	**03 35 10.0**	**-0.6**
EVIA				Sn		**Sn**	**03 35 35.1**	**-0.1**
EVIA				Lg			03 35 46.4	
	45nm,0.6s							
PMRV	**Marv??o**	**2.76**	**326**	*e*Pn		**Pn**	**03 35 03.0**	**+0.7**
PMRV	**Marv??o**	**2.76**	**326**	*e*Pg		**Pg**	**03 35 09.8**	**-1.2**
PMRV				*e*Sg		**Sg**	**03 35 46.1**	**-0.6**
PMRV				A			03 35 54.0	
	45nm,0.6s							
PMRV	**Marv??o**	**2.76**	**326**	*e*Pg		**Pg**	**03 35 09.8**	**-1.2**
PMRV				*e*Sg		**Sg**	**03 35 46.1**	**-0.6**
	45nm,0.6s							
ESDC	**Sonseca Array**	**2.77**	**24**	Pn		**Pn**	**03 35 04.2**	**+1.8**
	1.6nm,0.2s,baz=204,slow=12,SNR=7.4							
ESDC				Pg		**Pg**	**03 35 11.8**	**+0.6**
	2.1nm,0.1s,baz=207,slow=16,SNR=11							
ESDC				Sn		**Sn**	**03 35 34.8**	**-1.0**
	0.9nm,0.3s,baz=203,slow=24,SNR=7.2							
ESDC				Lg			03 35 48.6	
	6.4nm,0.3s,baz=206,slow=28,SNR=24							
ESDC	**Sonseca Array**	**2.77**	**24**	Pn		**Pn**	**03 35 04.2**	**+1.8**
	1.6nm,0.2s,baz=204,slow=12,SNR=7.4							
ESDC	**Sonseca Array**	**2.77**	**24**	Pg		**Pg**	**03 35 11.8**	**+0.7**
	2.1nm,0.1s,slow=16,SNR=11							
PCBR	**Castelo Branco**	**3.14**	**330**	*e*Pn		**Pn**	**03 35 08.4**	**+0.9**
PCBR				*e*Sn		**Sn**	**03 35 44.6**	**-0.4**
PCBR				A			03 36 04.5	
	26nm,0.3s							
PCBR	**Castelo Branco**	**3.14**	**330**	*e*Pn		**Pn**	**03 35 08.4**	**+0.9**
PCBR				*e*Sn		**Sn**	**03 35 44.6**	**-0.4**
	26nm,0.3s							
EMUR	**La Murta**	**3.39**	**77**	Lg			03 36 07.4	
	8.7nm,0.4s,SNR=4.9							
ETOB	**Tobarra**	**3.40**	**63**	Pn		**Pn**	**03 35 10.9**	**-0.2**
	0.6nm,0.2s,SNR=7.7							
ETOB				Pg		**Pg**	**03 35 22.4**	**-0.8**
	1.6nm,0.2s,SNR=4.9							
ETOB				Sn		**Sn**	**03 35 50.2**	**-1.2**
	1.6nm,0.2s,SNR=4.7							
ETOB				Lg			03 36 08.7	
	17nm,0.5s,SNR=5.8							
ETOB	**Tobarra**	**3.40**	**63**	Pn		**Pn**	**03 35 10.4**	**-0.7**
	0.6nm,0.2s,SNR=7.7							
ETOB	**Tobarra**	**3.40**	**63**	Pg		**Pg**	**03 35 22.5**	**-0.8**
	1.6nm,0.2s,SNR=4.9							
ETOB				Sn		**Sn**	**03 35 50.2**	**-1.2**
	4.1nm,0.4s,SNR=4.7							
ETOB	**Tobarra**	**3.40**	**63**	Pn		**Pn**	**03 35 10.4**	**-0.7**
ETOB				Pg		**Pg**	**03 35 22.4**	**-0.8**
ETOB				Sn		**Sn**	**03 35 50.2**	**-1.2**
ETOB				Lg			03 36 08.7	
PTOM	**Tomar**	**3.41**	**317**	*e*Pn		**Pn**	**03 35 12.3**	**+1.0**
PTOM				*e*Sn		**Sn**	**03 35 51.7**	**0.0**
PTOM				A			03 36 13.8	
	42nm,0.2s							
PTOM	**Tomar**	**3.41**	**317**	*e*Pn		**Pn**	**03 35 12.3**	**+1.0**
PTOM				*e*Sn		**Sn**	**03 35 51.7**	**0.0**
	42nm,0.2s							
PMAFR	**Mafra**	**3.55**	**302**	*e*Pn		**Pn**	**03 35 13.9**	**+0.7**
PMAFR				*e*Sn		**Sn**	**03 35 54.2**	**-0.9**
PMAFR				A			03 36 24.3	
	36nm,0.6s							
PMAFR	**Mafra**	**3.55**	**302**	*e*Pn		**Pn**	**03 35 13.9**	**+0.7**
PMAFR				*e*Sn		**Sn**	**03 35 54.2**	**-0.9**
	36nm,0.6s							
GUD	**Guadarrama**	**3.62**	**15**	Pn		**Pn**	**03 35 15.8**	**+1.6**
	0.7nm,0.2s,SNR=5.7							
GUD				Pg		**Pg**	**03 35 27.7**	**+0.2**
	0.9nm,0.2s,SNR=5.4							
GUD				Sn		**Sn**	**03 35 59.0**	**+2.1**
	3.7nm,0.4s,SNR=6.1							
GUD				Lg			03 36 10.9	
	18nm,0.4s,SNR=5.8							
GUD	**Guadarrama**	**3.62**	**15**	Pn		**Pn**	**03 35 15.7**	**+1.5**
	0.3nm,0.1s,SNR=5.7							
GUD	**Guadarrama**	**3.62**	**15**	Pg		**Pg**	**03 35 27.7**	**+0.2**
	1.1nm,0.2s,SNR=5.4							
GUD	**Guadarrama**	**3.62**	**15**	Pn		**Pn**	**03 35 15.7**	**+1.5**
GUD				Pg		**Pg**	**03 35 27.7**	**+0.2**
GUD				Sn		**Sn**	**03 35 53.4**	**-3.6**
GUD				Lg			03 36 10.9	
MTE	**Manteigas**	**3.65**	**333**	*e*Pn		**Pn**	**03 35 16.2**	**+1.7**
MTE				*e*Sn		**Sn**	**03 35 58.0**	**+0.4**
MTE				*e*Sg		**Sg**	**03 36 14.5**	**-0.8**
MTE				A			03 36 20.0	
	70nm,0.7s							
MTE	**Manteigas**	**3.65**	**333**	*e*Pn		**Pn**	**03 35 16.2**	**+1.7**
MTE				*e*Sn		**Sn**	**03 35 58.0**	**+0.4**
MTE				*e*Sg		**Sg**	**03 36 14.5**	**-0.8**
	70nm,0.7s							
PVIS	**Viseu**	**4.05**	**332**	*e*Pn		**Pn**	**03 35 21.6**	**+1.5**
PVIS				*e*Sn		**Sn**	**03 36 07.4**	**-0.2**
PVIS				A			03 36 33.8	
	18nm,0.7s							
PVIS	**Viseu**	**4.05**	**332**	*e*Pn		**Pn**	**03 35 21.6**	**+1.5**
PVIS				*e*Sn		**Sn**	**03 36 07.4**	**-0.2**
	18nm,0.7s							
MVO	**Moncorvo**	**4.20**	**343**	*e*Pn		**Pn**	**03 35 23.3**	**+1.2**
MVO				*e*Sn		**Sn**	**03 36 11.0**	**-0.2**
MVO				*e*Sg		**Sg**	**03 36 31.4**	**-1.6**
MVO				A			03 36 38.6	
	27nm,0.6s							
MVO	**Moncorvo**	**4.20**	**343**	*e*Pn		**Pn**	**03 35 23.3**	**+1.2**
MVO				*e*Sn		**Sn**	**03 36 11.0**	**-0.2**
ECHE	**Chera**	**4.26**	**54**	Sn		**Sn**	**03 36 11.8**	**-0.8**
	3.4nm,0.5s,SNR=4.0							
ECHE				Lg			03 36 39.5	
	3.1nm,0.3s,SNR=4.0							
EBEN	**Beniarda**	**4.38**	**68**	Sn		**Sn**	**03 36 11.8**	**-3.9**
	12nm,0.7s,SNR=7.9							
EBEN				Lg			03 36 40.7	
	38nm,1.0s,SNR=7.9							
PVRL	**Vila Real**	**4.49**	**337**	*e*Pn		**Pn**	**03 35 27.8**	**+1.7**
PVRL				*e*Sn		**Sn**	**03 36 17.8**	**-0.6**
PVRL				A			03 36 53.9	
	16nm,0.6s							
PVRL	**Vila Real**	**4.49**	**337**	*e*Pn		**Pn**	**03 35 27.8**	**+1.7**
PVRL				*e*Sn		**Sn**	**03 36 17.8**	**-0.6**
	16nm,0.6s							
ETOR	**Torete**	**4.50**	**34**	Pn		**Pn**	**03 35 27.4**	**+1.1**
	4.3nm,0.2s,SNR=9.5							
ETOR				Sn		**Sn**	**03 36 16.6**	**-2.0**
	7.4nm,0.2s,SNR=7.9							
ETOR				Lg			03 36 43.7	
	17nm,0.4s,SNR=5.1							
ETOR	**Torete**	**4.50**	**34**	Pn		**Pn**	**03 35 27.4**	**+1.1**
ETOR				Sn		**Sn**	**03 36 15.6**	**-3.0**
ETOR				Lg			03 36 41.5	
ECAL	**Calabor**	**4.89**	**348**	Pn		**Pn**	**03 35 32.5**	**+0.9**
	0.6nm,0.2s,SNR=7.9							
ECAL				Sn		**Sn**	**03 36 27.3**	**-1.0**
	2.9nm,0.3s,SNR=4.7							
ECAL				Lg			03 36 56.6	
	42nm,0.6s,SNR=7.1							
ECAL	**Calabor**	**4.89**	**348**	Pn		**Pn**	**03 35 33.9**	**+2.3**
	0.6nm,0.2s,SNR=7.9							
ECAL	**Calabor**	**4.89**	**348**	Pn		**Pn**	**03 35 33.9**	**+2.2**
ECAL				Sn		**Sn**	**03 36 27.0**	**-1.3**
ECAL				Lg			03 36 54.2	
PCAB	**Cabril**	**4.99**	**337**	*e*Pn		**Pn**	**03 35 33.9**	**+1.0**
PCAB				*e*Sn		**Sn**	**03 36 29.2**	**-1.3**
PCAB				*e*Sg		**Sg**	**03 36 55.4**	**-2.7**
PCAB				A			03 37 04.3	
	16nm,0.7s							
PCAB	**Cabril**	**4.99**	**337**	Pn		**Pn**	**03 35 33.9**	**+1.0**
PCAB				Sn		**Sn**	**03 36 29.2**	**-1.3**
PCAB				Lg			03 36 55.4	
	7.8nm,0.7s							
PCAB	**Cabril**	**4.99**	**337**	*e*Pn		**Pn**	**03 35 33.9**	**+1.0**
PCAB				*e*Sn		**Sn**	**03 36 29.2**	**-1.3**
EMOS	**Mosqueruela**	**5.02**	**49**	Sn		**Sn**	**03 36 30.7**	**-0.7**
	0.0nm,0.0s,SNR=7.9							
EMOS				Lg			03 36 57.4	
	0.1nm,0.1s,SNR=7.9							
ELOB	**Lobios**	**5.14**	**337**	Pn		**Pn**	**03 35 35.6**	**+0.6**
	0.4nm,0.1s,SNR=4.6							
ELOB				Sn		**Sn**	**03 36 31.5**	**-2.8**
	5.1nm,0.3s,SNR=5.0							
ELOB				Lg			03 37 03.7	
	5.0nm,0.6s,SNR=6.3							
ELOB	**Lobios**	**5.14**	**337**	Pn		**Pn**	**03 35 35.6**	**+0.6**
ELOB				Sn		**Sn**	**03 36 30.9**	**-3.3**
ELOB				Lg			03 37 03.2	
ESAC	**San Caprasio**	**5.96**	**38**	Lg			03 37 31.5	
	25nm,0.5s,SNR=7.9							
EARI	**Arriondas**	**6.15**	**1**	Sn		**Sn**	**03 36 56.0**	**-3.1**
	0.3nm,0.2s,SNR=7.9							
EARI				Lg			03 37 36.4	
	30nm,1.1s,SNR=7.9							
ELAN	**Lanestosa**	**6.26**	**13**	Pn		**Pn**	**03 35 50.5**	**0.0**
	0.2nm,0.0s,SNR=4.0							
ELAN	**Lanestosa**	**6.26**	**13**	Pn		**Pn**	**03 35 50.2**	**-0.2**
EPON	**Pontenova**	**6.31**	**348**	Sn		**Sn**	**03 37 00.4**	**-2.8**
	1.5nm,0.3s,SNR=7.9							
EPON				Lg			03 37 42.0	
	5.9nm,0.6s,SNR=5.0							
EALK	**Alkurruntz**	**6.76**	**25**	Pn		**Pn**	**03 35 58.6**	**+1.3**
	1.0nm,0.3s,SNR=7.9							
EALK				Sn		**Sn**	**03 37 10.8**	**-3.3**
	2.7nm,0.3s,SNR=7.9							
SJPF	**Ste Jean**	**6.76**	**27**	*e*Pn		**Pn**	**03 35 57.4**	**+0.1**
SJPF				*e*Sn		**Sn**	**03 37 11.0**	**-3.3**
	1.3nm,0.3s							
SJPF	**Ste Jean**	**6.76**	**27**	Pn		**Pn**	**03 35 57.4**	**+0.1**
SJPF				Sn		**Sn**	**03 37 11.0**	**-3.3**
	0.6nm,0.3s							
ETSF	**Etsaut**	**6.84**	**31**	*e*Pn		**Pn**	**03 35 58.2**	**-0.2**
ETSF				*e*Sn		**Sn**	**03 37 12.9**	**-3.3**
	0.6nm,0.3s							
ETSF	**Etsaut**	**6.84**	**31**	Pn		**Pn**	**03 35 58.2**	**-0.2**
ETSF				Sn		**Sn**	**03 37 12.9**	**-3.3**
	0.3nm,0.3s							
EBIE	**Bielsa**	**6.98**	**36**	Pn		**Pn**	**03 36 01.6**	**+1.3**
	0.9nm,0.3s,SNR=8.8							
EBIE				Sn		**Sn**	**03 37 18.6**	**-1.1**
	0.1nm,0.1s,SNR=4.0							
EBIE	**Bielsa**	**6.98**	**36**	Pn		**Pn**	**03 36 01.6**	**+1.3**
EBIE				Sn		**Sn**	**03 37 16.6**	**-3.1**
EPF	**Esparros**	**7.34**	**35**	*e*Pn		**Pn**	**03 36 05.9**	**+0.6**

*ISCJB **14** 03:45:03.1±0.2,37.13N±001×543W±001,h8^{km}±2^{km}, Error ellipse: s-maj=2.1km s-min=1.7km az=24.0*
*INMG **14** 03:45:04.4±1.7,3697N×525W,h21^{km}±3^{km}, ML5.1, Error ellipse: s-maj=5.3km s-min=3.2km az=119.0*
*LDG **14** 03:45:05.7±0.1,3700N×543W,h10^{km}, Ml3.9/4, Error ellipse: s-maj=2.8km s-min=2.0km az=11.0*
*IGIL **14** 03:45:05.8,3698N×524W,h24^{km}, ML3.6*
*NEIC **14** 03:45:05.6,3706N×539W,h7^{km}, MN3.2(MDD), After MDD.*
*SFS **14** 03:45:05.0,3700N×540W,h10^{km}, ML3.3*
*MDD **14** 03:45:05.4±0.2,3704N×541W,h8^{km}±2^{km}, mbLg3.5/32, Error ellipse: s-maj=2.0km s-min=1.7km az=4.0, PRIMO*
*CSEM **14** 03:45:05.9±0.0,3700N×536W,h15^{km}, ML4.4/22, Error ellipse: s-maj=1.1km s-min=0.9km az=5.0*
*CNRM **14** 03:45:07.7,3705N×548W,h30^{km}, MD4.2*

ISC 14 03:45:04.6±0.2,3709N±001×542W±001,h12^{km}±1^{km},n263,
σ1§13/451,**8C-7D,Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIJA	**Lijar**	**0.18**	**177**	⇑P	**Pg**	**03 45 07.9**	**-0.9**
LIJA	**Lijar**	**0.18**	**177**	*i* P	**Pg**	**03 45 07.9**	**-0.8**
EXAO	**Algodonales**	**0.21**	**177**	Pg	**Pg**	**03 45 10.7**	**-1.5**
EXAO				Lg		03 45 10.7	
ESPR	**Espera**	**0.42**	**238**	⇓Pg	**Pg**	**03 45 13.3**	**+0.5**
	200nm,0.3s,SNR=18						
ESPR				Lg		03 45 18.8	
	2μm,0.3s,SNR=7.9						
ESPR	**Espera**	**0.42**	**238**	Pg	**Pg**	**03 45 13.5**	**+0.7**
	200nm,0.3s,SNR=371						
ESPR	**Espera**	**0.42**	**238**	Pg	**Pg**	**03 45 13.5**	**+0.6**
ESPR				Lg		03 45 20.7	
GIBL	**Gibalbin**	**0.51**	**240**	⇑P	**Pg**	**03 45 16.2**	**+1.5**
GIBL				S	**Sg**	**03 45 21.5**	**+0.1**
GIBL	**Gibalbin**	**0.51**	**240**	*i* P	**Pg**	**03 45 16.2**	**+1.6**
REAL	**Reales**	**0.63**	**164**	⇑P	**Pg**	**03 45 16.3**	**-0.5**
REAL				S	**Sg**	**03 45 19.2**	**-5.9**
REAL	**Reales**	**0.63**	**164**	*i* P	**Pg**	**03 45 16.3**	**-0.5**
EJIF	**Jimena Fronter**	**0.64**	**184**	Pg	**Pg**	**03 45 15.9**	**-1.1**
	136nm,0.4s,SNR=7.9						
EJIF				Lg		03 45 27.4	
	357nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.64**	**184**	Pg	**Pg**	**03 45 15.8**	**-1.2**
	136nm,0.4s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.64**	**184**	Pg	**Pg**	**03 45 15.8**	**-1.2**
EJIF				Lg		03 45 27.1	
EMIJ	**Mijas**	**0.74**	**135**	⇓Pg	**Pg**	**03 45 17.4**	**-1.5**
	114nm,0.3s,SNR=18						
EMIJ				Lg		03 45 28.3	
	1μm,0.4s,SNR=7.9						
**EMIJ

ERON Agron 1.29 93 Pg Pg 03 45 30.3 +0.9
11nm,0.1s,SNR=7.9
ERON Agron 1.29 93 Lg 03 45 49.9
209nm,0.4s,SNR=7.9
ERON Agron 1.29 93 Pn Pn 03 45 28.8 +0.4
ERON Pg Pg 03 45 30.3 +0.9
ERON Lg 03 45 49.9
ECOG Cogollos-Vega 1.49 82 ⇓Pg Pg 03 45 31.9 -1.3
13nm,0.3s,SNR=18
ECOG Lg 03 45 54.5
233nm,0.4s,SNR=9.1
EQUE Quentar 1.58 85 ⇑Pn Pn 03 45 33.1 +0.7
14nm,0.3s,SNR=18
EQUE Pg Pg 03 45 35.1 +0.1
38nm,0.3s,SNR=7.9
EQUE Lg 03 45 56.6
362nm,0.4s,SNR=8.3
DKH Dar Kharkhour 1.60 178 *i* P Pn 03 45 33.0 +0.4
DKH *i* S Sn 03 45 51.0 -2.2
EBAN Banos Encina 1.68 50 ⇑Pn Pn 03 45 33.8 0.0
6.4nm,0.3s,SNR=18
EBAN Pg Pg 03 45 36.4 -0.5
21nm,0.2s,SNR=7.9
EBAN Sn Sn 03 45 55.5 +0.3
21nm,0.1s,SNR=7.9
EBAN Lg 03 45 58.6
110nm,0.1s,SNR=7.9
EBAN Banos Encina 1.68 50 Pn Pn 03 45 33.8 0.0
20nm,0.2s,SNR=11
EBAN Sn Sn 03 45 55.7 +0.5
28nm,0.2s,SNR=7.9
EBAN Banos Encina 1.68 50 Pn Pn 03 45 33.8 +0.1
EBAN Sn Sn 03 45 55.7 +0.5
EBAN Lg 03 45 58.5
PBAR Barrancos 1.68 311 *e*Pn Pn 03 45 34.0 +0.2
PBAR *e*Sg Sg 03 45 58.9 +0.2
PBAR A 03 46 07.2
544nm,0.5s
PBAR Barrancos 1.68 311 *e*Pn Pn 03 45 34.0 +0.2
PBAR *e*Sn Sn 03 45 59.1 +3.9
EGRO El Granado 1.71 286 ⇓Pn Pn 03 45 34.1 0.0
7.6nm,0.1s,SNR=18
EGRO Pg Pg 03 45 36.6 -0.7
124nm,0.3s,SNR=7.9
EGRO Lg 03 45 59.5
425nm,0.3s,SNR=12
EGRO El Granado 1.71 286 Pn Pn 03 45 34.1 0.0
97nm,0.3s,SNR=112
EGRO El Granado 1.71 286 Pg Pg 03 45 36.7 -0.6
33nm,0.1s,SNR=7.9
EGRO El Granado 1.71 286 Pn Pn 03 45 34.1 0.0
EGRO Pg Pg 03 45 36.7 -0.6
EGRO Lg 03 46 01.1
PVAQ Vaqueiros 1.86 280 *e*Pn Pn 03 45 36.3 +0.1
PVAQ *e*Sn Sn 03 45 58.8 -0.9
PVAQ A 03 46 11.0
397nm,0.5s
PVAQ Vaqueiros 1.86 280 *e*Pn Pn 03 45 36.3 +0.1
PVAQ *e*Sn Sn 03 45 58.8 -0.9
PVAQ *e*Sg Sg 03 46 05.9 +1.4
PVAQ A 03 46 11.0
395nm,0.4s
PVAQ Vaqueiros 1.86 280 *e*Pn Pn 03 45 36.3 +0.1
PVAQ *e*Sn Sn 03 45 58.8 -0.9
397nm,0.5s
PVAQ *e*Sg Sg 03 46 05.9 +1.4
395nm,0.4s
EQES Quesada 2.00 68 ⇑Pn Pn 03 45 38.3 +0.2
7.5nm,0.5s,SNR=18
EQES Pg Pg 03 45 41.5 -1.4
3.5nm,0.1s,SNR=7.9
EQES Sn Sn 03 46 03.6 +0.6
25nm,0.4s,SNR=7.9
EQES Lg 03 46 10.4
175nm,0.4s,SNR=9.2
EQES Quesada 2.00 68 Pn Pn 03 45 38.6 +0.5
2.0nm,0.2s,SNR=49
EQES Quesada 2.00 68 Pg Pg 03 45 41.5 -1.4
3.5nm,0.1s,SNR=7.9
EQES Quesada 2.00 68 Pn Pn 03 45 38.6 +0.5
EQES Pg Pg 03 45 41.5 -1.4
EQES Lg 03 46 10.4
PBDV Barranco-do-Ve 2.01 275 *e*Pn Pn 03 45 38.6 +0.3
PBDV Barranco-do-Ve 2.01 275 *e*Pg Pg 03 45 42.8 -0.4
PBDV *e*Sn Sn 03 46 03.7 +0.3
PBDV *e*Sg Sg 03 46 09.9 +0.5
PBDV A 03 46 13.4
438nm,0.6s
PBDV Barranco-do-Ve 2.01 275 *e*Pn Pn 03 45 38.6 +0.3
PBDV Barranco-do-Ve 2.01 275 *e*Pg Pg 03 45 42.8 -0.4
PBDV *e*Sn Sn 03 46 03.2 -0.2
PBDV *e*Sg Sg 03 46 09.8 +0.4
PBDV A 03 46 13.5
431nm,0.7s
PBDV Barranco-do-Ve 2.01 275 Pn Pn 03 45 38.6 +0.3
PBDV Pg Pg 03 45 42.8 -0.4
PBDV Sn Sn 03 46 03.7 +0.3
PBDV Lg 03 46 09.9
219nm,0.6s
PBDV Barranco-do-Ve 2.01 275 *e*Pg Pg 03 45 42.8 -0.4
PBDV *e*Sn Sn 03 46 03.2 -0.2
PBDV *e*Sg Sg 03 46 09.8 +0.4
431nm,0.7s
EBER Berja 2.03 95 Pn Pn 03 45 39.4 +0.9
2.1nm,0.5s,SNR=28
EBER Pg Pg 03 45 43.4 -0.2
9.5nm,0.3s,SNR=7.9
EBER Lg 03 46 11.0
290nm,0.6s,SNR=7.9
EBER Berja 2.03 95 Pn Pn 03 45 39.4 +0.8
2.1nm,0.5s,SNR=28
EBER Berja 2.03 95 Pg Pg 03 45 43.7 +0.1
9.5nm,0.3s,SNR=7.9
EBER Berja 2.03 95 Pn Pn 03 45 39.5 +0.9
EBER Pg Pg 03 45 43.7 +0.1
EBER Lg 03 46 11.0
EBAD Badajoz 2.09 323 ⇓Pn Pn 03 45 39.6 +0.3
20nm,0.1s,SNR=18
EBAD Pg Pg 03 45 43.3 -1.3
33nm,0.1s,SNR=7.9
EBAD Sn Sn 03 46 05.7 +0.4
252nm,0.2s,SNR=7.9
EBAD Lg 03 46 11.9
383nm,0.2s,SNR=18
EBAD Badajoz 2.09 323 Pn Pn 03 45 39.6 +0.3
27nm,0.3s,SNR=204
EBAD Badajoz 2.09 323 Pg Pg 03 45 43.3 -1.3
SNR=7.9
EBAD Sn Sn 03 46 05.8 +0.6
178nm,0.2s,SNR=7.9
EBAD Badajoz 2.09 323 Pn Pn 03 45 39.6 +0.3
EBAD Pg Pg 03 45 43.3 -1.3
EBAD Sn Sn 03 46 05.8 +0.5
EBAD Lg 03 46 12.6
PBEJ Beja 2.16 296 *e*Pn Pn 03 45 40.5 +0.2
PBEJ Beja 2.16 296 *e*Pg Pg 03 45 46.3 +0.3
PBEJ *e*Sn Sn 03 46 10.6 +3.6
PBEJ Beja 2.16 296 *e*Pn Pn 03 45 40.7 +0.4
PBEJ *e*Sg Sg 03 46 14.2 +0.2
PBEJ A 03 46 24.1
250nm,0.6s
PBEJ Beja 2.16 296 Pn Pn 03 45 40.5 +0.2
PBEJ Pg Pg 03 45 46.3 +0.3
PBEJ Sn Sn 03 46 10.6 +3.6
PBEJ Lg 03 46 14.2
125nm,0.6s
PBEJ Beja 2.16 296 *e*Pn Pn 03 45 40.7 +0.4
PBEJ Beja 2.16 296 *e*Pg Pg 03 45 46.3 +0.3
PBEJ *e*Sn Sn 03 46 10.6 +3.6
PBEJ *e*Sg Sg 03 46 14.2 +0.2
250nm,0.6s
MPAL Palemas 2.21 147 *e*P Pn 03 45 42.0 +1.0
MPAL *e*S Sn 03 46 06.0 -2.3
RSA Sarsar 2.23 189 *i* P Pn 03 45 41.5 +0.1
RSA *i* S Sn 03 46 06.0 -2.8
EALB Alboran 2.24 120 Pn Pn 03 45 41.8 +0.4
1.2nm,0.0s,SNR=14
EALB Pg Pg 03 45 44.6 -2.8
85nm,0.5s,SNR=7.9
EALB Sn Sn 03 46 10.2 +1.3
73nm,0.4s,SNR=7.9
EALB Alboran 2.24 120 Pn Pn 03 45 41.9 +0.5
106nm,0.6s,SNR=14
EALB Alboran 2.24 120 Pg Pg 03 45 44.6 -2.9
SNR=7.9
EALB Sn Sn 03 46 10.4 +1.5
SNR=7.9
EALB Alboran 2.24 120 Pn Pn 03 45 41.9 +0.5
EALB Pg Pg 03 45 44.6 -2.8
EALB Sn Sn 03 46 10.4 +1.5
EHUE Huescar 2.36 71 Pn Pn 03 45 43.2 +0.1
2.3nm,0.1s,SNR=7.9
EHUE Pg Pg 03 45 48.3 -1.5
5.2nm,0.1s,SNR=7.9
EHUE Lg 03 46 19.9
44nm,0.2s,SNR=7.9
EHUE Huescar 2.36 71 Pn Pn 03 45 43.2 +0.1
EHUE Lg 03 46 21.2
PESTR Estremoz 2.47 317 *e*Pg Pg 03 45 51.7 -0.2
PESTR *e*Sn Sn 03 46 15.8 +1.2
PESTR A 03 46 29.3
376nm,0.4s
PESTR A 03 47 12.3
431nm,0.9s
PESTR Estremoz 2.47 317 *e*Pn Pn 03 45 45.0 +0.4
PESTR *e*Sg Sg 03 46 22.3 -1.6
PESTR A 03 46 29.4
385nm,0.4s
PESTR Estremoz 2.47 317 Pn Pn 03 45 45.0 +0.4
PESTR Pg Pg 03 45 51.7 -0.2
PESTR Sn Sn 03 46 15.8 +1.2
188nm,0.4s
PESTR Lg 03 46 22.3
192nm,0.4s
PESTR Estremoz 2.47 317 *e*Pg Pg 03 45 51.7 -0.2
PESTR *e*Sn Sn 03 46 15.8 +1.2
431nm,0.9s
PESTR Estremoz 2.47 317 A 03 47 12.3
420nm,0.8s
EVO Evora 2.51 306 *e*Pn Pn 03 45 46.6 +1.4
EVO Evora 2.51 306 *e*Pg Pg 03 45 53.0 +0.3
EVO *e*Sn Sn 03 46 16.6 +1.0
EVO *e*Sg Sg 03 46 26.2 +1.0
482nm,0.4s
EVO Evora 2.51 306 *e*Pn Pn 03 45 45.6 +0.5
EVO *e*Sn Sn 03 46 16.6 +1.0
EVO *e*Sg Sg 03 46 26.9 +1.7
EVO A 03 46 29.7
296nm,0.3s
EVO Evora 2.51 306 *e*Pn Pn 03 45 45.7 +0.6
EVO Evora 2.51 306 *e*Pg Pg 03 45 51.4 -1.3
EVO *e*Sn Sn 03 46 15.0 -0.6
EVO A 03 46 29.5
297nm,0.4s
EVO Evora 2.51 306 Pn Pn 03 45 45.6 +0.5
EVO Pg Pg 03 45 51.4 -1.3
EVO Sn Sn 03 46 16.6 +1.0
EVO Lg 03 46 26.9
148nm,0.3s
EVO Evora 2.51 306 *e*Pn Pn 03 45 45.7 +0.6
EVO Evora 2.51 306 *e*Pg Pg 03 45 51.4 -1.3
EVO *e*Sn Sn 03 46 15.0 -0.6
297nm,0.4s
EVO *e*Sg Sg 03 46 26.9 +1.7
296nm,0.3s
ENIJ Nijar 2.57 92 Pn Pn 03 45 46.0 0.0
0.6nm,0.1s,SNR=7.9
ENIJ Pg Pg 03 45 54.5 +0.6
37nm,0.4s,SNR=7.9
ENIJ Lg 03 46 30.0
60nm,1.1s,SNR=7.9
ENIJ Nijar 2.57 92 Pn Pn 03 45 45.6 -0.4
SNR=7.9
ENIJ Nijar 2.57 92 Pg Pg 03 45 56.0 +2.1
37nm,0.4s,SNR=7.9
ENIJ Nijar 2.57 92 Pn Pn 03 45 45.6 -0.4
ENIJ Pg Pg 03 45 56.0 +2.1
ENIJ Lg 03 46 30.0
EVOP Sao Brissos 2.58 305 *e*Pn Pn 03 45 46.6 +0.5
EVOP Sao Brissos 2.58 305 *e*Pg Pg 03 45 53.0 -1.1
EVOP *e*Sn Sn 03 46 16.6 -0.8
EVOP *e*Sg Sg 03 46 26.2 -1.3
241nm,0.4s
MORF Marmelete 2.59 276 *e*Pn Pn 03 45 46.1 -0.2
MORF Marmelete 2.59 276 *e*Pg Pg 03 45 53.1 -1.2
MORF *e*Sn Sn 03 46 17.8 +0.2
MORF A 03 46 36.4
286nm,0.5s
MORF Marmelete 2.59 276 *e*Pn Pn 03 45 46.3 0.0
MORF Marmelete 2.59 276 *e*Pg Pg 03 45 52.7 -1.6
MORF *e*Sn Sn 03 46 17.6 0.0
MORF *e*Sg Sg 03 46 26.8 -1.1
MORF A 03 46 36.3
284nm,0.6s
MORF Marmelete 2.59 276 Pn Pn 03 45 46.1 -0.2
MORF Pg Pg 03 45 53.1 -1.2
MORF Sn Sn 03 46 17.8 +0.2
286nm,0.5s
MORF Lg 03 46 26.8
284nm,0.6s
MORF Marmelete 2.59 276 *e*Pn Pn 03 45 46.3 0.0
MORF Marmelete 2.59 276 *e*Pg Pg 03 45 52.7 -1.6
MORF *e*Sn Sn 03 46 17.6 0.0
MORF *e*Sg Sg 03 46 26.8 -1.1
284nm,0.6s
PAB San Pablo 2.59 19 *e*Pn Pn 03 45 48.0 +1.7
PAB San Pablo 2.59 19 *e*Pg Pg 03 45 55.2 +0.9
PAB San Pablo 2.59 19 *e*Pn Pn 03 45 48.0 +1.7
PAB *e*Pg Pg 03 45 55.2 +0.9
PAB *e*Sn Sn 03 46 19.0 +1.4
PAB *e*Sg Sg 03 46 27.0 -0.9
PTEO Sao Teotonio 2.68 281 *e*Pn Pn 03 45 47.7 +0.3
PTEO *e*Sn Sn 03 46 19.9 +0.2
PTEO Sao Teotonio 2.68 281 *e*Pn Pn 03 45 47.7 +0.3
PTEO *e*Sn Sn 03 46 19.5 -0.2
PTEO A 03 46 33.2
335nm,0.6s
PTEO Sao Teotonio 2.68 281 *e*Pn Pn 03 45 47.7 +0.3
PTEO *e*Sn Sn 03 46 19.5 -0.2
335nm,0.6s
PFVI Vila Bisbo 2.73 272 *e*Pn Pn 03 45 47.8 -0.3
PFVI *e*Sn Sn 03 46 20.7 -0.3
PFVI A 03 46 37.1
226nm,0.5s
PFVI Vila Bisbo 2.73 272 *e*Pn Pn 03 45 47.8 -0.3
PFVI *e*Sn Sn 03 46 20.4 -0.6
PFVI A 03 46 37.1
229nm,0.5s
PFVI Vila Bisbo 2.73 272 *e*Pn Pn 03 45 47.8 -0.3
PFVI *e*Sn Sn 03 46 20.4 -0.6
229nm,0.5s
MOE Montemor 2.73 302 *e*Pn Pn 03 45 48.4 +0.2
MOE Montemor 2.73 302 *e*Pg Pg 03 45 56.0 -0.9
MOE *e*Sn Sn 03 46 22.1 +1.1
MOE Montemor 2.73 302 *e*Pn Pn 03 45 48.6 +0.4
MOE *e*Sg Sg 03 46 31.8 -0.5
MOE Montemor 2.73 302 Pn Pn 03 45 48.6 +0.4
MOE Pg Pg 03 45 56.0 -0.9
MOE Sn Sn 03 46 22.1 +1.1
MOE Lg 03 46 31.8
MOE Montemor 2.73 302 *e*Pn Pn 03 45 48.6 +0.4
MOE Montemor 2.73 302 *e*Pg Pg 03 45 56.0 -0.9
MOE *e*Sn Sn 03 46 22.1 +1.1
MOE *e*Sg Sg 03 46 31.8 -0.5
EVIA Vianos 2.78 55 Pn Pn 03 45 48.9 +0.1
8.6nm,0.1s,SNR=23
EVIA Lg 03 46 32.4
50nm,0.3s,SNR=8.6
EVIA Vianos 2.78 55 Pn Pn 03 45 48.9 +0.1
EVIA Lg 03 46 34.1
PMRV Marv??o 2.80 327 *e*Pn Pn 03 45 49.6 +0.4
PMRV *e*Sn Sn 03 46 24.0 +1.1
PMRV *e*Sg Sg 03 46 32.6 -2.1
PMRV A 03 46 37.5
278nm,0.4s
PMRV Marv??o 2.80 327 *e*Pn Pn 03 45 49.6 +0.4
PMRV Marv??o 2.80 327 *e*Pg Pg 03 45 56.4 -1.9
PMRV *e*Sn Sn 03 46 22.9 0.0
PMRV *e*Sg Sg 03 46 32.9 -1.8
PMRV A 03 46 37.4
284nm,0.4s
PMRV Marv??o 2.80 327 *e*Pg Pg 03 45 56.4 -1.9
PMRV *e*Sn Sn 03 46 22.9 0.0
ESDC Sonseca Array 2.82 23 Pn Pn 03 45 50.4 +0.9
2.3nm,0.3s,baz=204,slow=12,SNR=37
ESDC Pg Pg 03 45 59.2 +0.5
SNR=7.9
ESDC Lg 03 46 34.8
34nm,0.4s,baz=202,slow=29,SNR=29
ESDC Sonseca Array 2.82 23 Pn Pn 03 45 50.4 +1.0
2.3nm,0.3s,SNR=37
ESDC Sonseca Array 2.82 23 Pg Pg 03 45 59.2 +0.5
SNR=7.9
ZAI Zaio 3.03 134 *e*P Pn 03 45 52.0 -0.3
ZAI *e*S Sn 03 46 25.5 -2.9
TGT Taghat 3.03 174 *e*P Pn 03 45 54.0 +1.7
TGT *e*S Sn 03 46 26.0 -2.4
TZK Tazeka 3.16 161 *i* P Pn 03 45 55.0 +0.9
TZK *i* S Sn 03 46 28.0 -3.7
PCBR Castelo Branco 3.19 330 *e*Pn Pn 03 45 54.8 +0.3
PCBR *e*Sn Sn 03 46 30.9 -1.4
PCBR *e*Sg Sg 03 46 46.8 -0.1
PCBR A 03 46 50.9
125nm,0.5s
PCBR Castelo Branco 3.19 330 *e*Pn Pn 03 45 54.8 +0.3
PCBR *e*Sn Sn 03 46 30.8 -1.5
PCBR *e*Sn Sn 03 46 31.0 -1.3
PCBR A 03 46 51.1
127nm,0.5s
PCBR Castelo Branco 3.19 330 Pn Pn 03 45 54.8 +0.3
PCBR Sn Sn 03 46 30.8 -1.5
PCBR Lg 03 46 46.8
62nm,0.5s
PCBR Castelo Branco 3.19 330 *e*Pn Pn 03 45 54.8 +0.3
PCBR *e*Sn Sn 03 46 31.0 -1.3
127nm,0.5s
PCBR *e*Sg Sg 03 46 46.8 -0.1
125nm,0.5s
ALMR Almeirim 3.23 311 *e*P Pn 03 45 55.5 +0.3
ALMR *e*S Sn 03 46 33.8 +0.3
ALMR *e*S Sn 03 46 33.8 +0.3
ALMR AML AML 03 46 36.8
comp=E,322nm,0.7s
ALMR Almeirim 3.23 311 P Pn 03 45 55.5 +0.3
ALMR S Sn 03 46 33.8 +0.3
ALMR Almeirim 3.23 311 *e*P Pn 03 45 55.5 +0.4
ALMR *e*S Sn 03 46 33.8 +0.3
LIS Lisbon 3.37 300 *e*P Pn 03 45 57.5 +0.5
LIS AML AML 03 46 12.2
comp=Z,138nm,1.0s
LIS *e*S Sn 03 46 36.7 -0.1
LIS *e*S Sn 03 46 36.8 -0.1
LIS Lisbon 3.37 300 *e*P Pn 03 45 57.5 +0.5
LIS A 03 46 12.2
comp=Z,138nm,1.0s
LIS *e*S Sn 03 46 36.7 -0.1
LIS Lisbon 3.37 300 P Pn 03 45 57.5 +0.5
LIS S Sn 03 46 36.7 -0.1
LIS Lisbon 3.37 300 *e*P Pn 03 45 57.5 +0.5
comp=Z,138nm,1.0s
EMUR La Murta 3.41 76 Pn Pn 03 45 59.4 +1.9
comp=Z,1.1nm,0.2s,SNR=7.9
EMUR Pg Pg 03 46 06.2 -3.6
comp=Z,2.9nm,0.3s,SNR=7.9
EMUR Lg 03 46 55.0
comp=Z,52nm,0.5s,SNR=7.9
ETOB Tobarra 3.43 62 Pn Pn 03 45 57.7 -0.1
comp=Z,1.3nm,0.2s,SNR=28
ETOB Sn Sn 03 46 37.6 -0.8
comp=Z,8.7nm,0.2s,SNR=7.9
ETOB Lg 03 46 54.3
comp=Z,48nm,0.4s,SNR=5.1
ETOB Tobarra 3.43 62 Pn Pn 03 45 57.7 -0.1
comp=Z,1.3nm,0.2s,SNR=28
ETOB Sn Sn 03 46 37.6 -0.8
SNR=7.9
ETOB Tobarra 3.43 62 Pn Pn 03 45 57.7 -0.1
ETOB Sn Sn 03 46 37.6 -0.8
ETOB Lg 03 46 56.5
PTOM Tomar 3.45 318 *e*Pn Pn 03 45 58.5 +0.4
PTOM *e*Sn Sn 03 46 39.2 +0.4
PTOM A 03 47 00.5
comp=Z,222nm,0.5s
PTOM Tomar 3.45 318 *e*Pn Pn 03 45 58.4 +0.3
PTOM *e*Sn Sn 03 46 38.6 -0.2
PTOM A 03 47 00.5
comp=Z,228nm,0.5s
PTOM Tomar 3.45 318 Pn Pn 03 45 58.4 +0.3
PTOM Sn Sn 03 46 38.6 -0.2
comp=Z,114nm,0.5s
PTOM Tomar 3.45 318 *e*Pn Pn 03 45 58.5 +0.4
PTOM *e*Sn Sn 03 46 38.6 -0.2
comp=Z,228nm,0.5s
CART Cartagena 3.55 81 *e*Pn Pn 03 46 01.5 +2.0
CART *e*Sg Sg 03 46 58.9 +0.2
CART Cartagena 3.55 81 *e*Pn Pn 03 46 01.5 +2.0
CART *e*Sg Sg 03 46 58.9 +0.2
PMAFR Mafra 3.58 303 *e*Pn Pn 03 46 00.3 +0.5
PMAFR *e*Sn Sn 03 46 41.7 -0.2
PMAFR *e*Sg Sg 03 47 00.5 +1.1
PMAFR A 03 47 12.8
comp=Z,266nm,0.4s
PMAFR Mafra 3.58 303 *e*Pn Pn 03 46 00.3 +0.5
PMAFR *e*Sn Sn 03 46 40.8 -1.1
PMAFR A 03 47 12.8
comp=Z,264nm,0.6s
PMAFR Mafra 3.58 303 *e*Pn Pn 03 46 00.3 +0.5
PMAFR *e*Sn Sn 03 46 40.8 -1.1
comp=Z,264nm,0.6s
PMAFR *e*Sg Sg 03 47 00.5 +1.1
comp=Z,266nm,0.4s
MIF Mishlifen 3.68 178 *e*P Pn 03 46 03.0 +1.8
MIF *i* S Sn 03 46 41.0 -3.4
GUD Guadarrama 3.68 15 Pn Pn 03 46 02.6 +1.3
comp=Z,1.8nm,0.3s,SNR=14
GUD Lg 03 46 57.7
comp=Z,54nm,0.3s,SNR=7.9
GUD Guadarrama 3.68 15 Pn Pn 03 46 02.6 +1.3
GUD Lg 03 47 00.6
MTE Manteigas 3.70 334 *e*Pn Pn 03 46 01.9 +0.4
MTE *e*Sn Sn 03 46 44.8 -0.2
MTE *e*Sg Sg 03 47 02.8 -0.6
MTE A 03 47 06.2
comp=Z,389nm,0.8s
MTE Manteigas 3.70 334 *e*Pn Pn 03 46 02.0 +0.5
MTE *e*Sn Sn 03 46 44.6 -0.4
MTE *e*Sg Sg 03 47 00.6 -2.8
MTE A 03 47 06.2
comp=Z,392nm,0.8s
MTE Manteigas 3.70 334 Pn Pn 03 46 02.0 +0.5
MTE Sn Sn 03 46 44.6 -0.4
MTE Lg 03 47 00.6
comp=Z,196nm,0.8s
MTE Manteigas 3.70 334 *e*Pn Pn 03 46 02.0 +0.5
MTE Manteigas 3.70 334 *e*Pg Pg 03 46 15.2 -0.3
MTE *e*Sn Sn 03 46 44.6 -0.4
MTE *e*Sg Sg 03 47 02.8 -0.6
comp=Z,389nm,0.8s
MTE Manteigas 3.70 334 *e*Pn Pn 03 46 02.5 +1.0
MTE *e*Pg Pg 03 46 15.2 -0.2
MTE *e*Sn Sn 03 46 45.5 +0.5
MTE *e*Sg Sg 03 47 04.1 +0.7
CZD Col de Zad 4.06 176 *i* P Pn 03 46 06.0 -0.5
CZD *i* S Sn 03 46 51.0 -2.9
PVIS Viseu 4.10 333 *e*Pn Pn 03 46 07.3 +0.2
PVIS *e*Sn Sn 03 46 53.6 -1.3
PVIS *e*Sg Sg 03 47 15.6 -0.7
PVIS A 03 47 19.7
comp=Z,102nm,0.7s
PVIS Viseu 4.10 333 *e*Pn Pn 03 46 07.4 +0.3
PVIS *e*Sn Sn 03 46 54.0 -0.9
PVIS A 03 47 19.7
comp=Z,102nm,0.6s
PVIS Viseu 4.10 333 Pn Pn 03 46 07.4 +0.3
PVIS Sn Sn 03 46 54.0 -0.9
comp=Z,51nm,0.6s
PVIS Lg 03 47 15.6
comp=Z,51nm,0.7s
PVIS Viseu 4.10 333 *e*Pn Pn 03 46 07.4 +0.3
PVIS *e*Sn Sn 03 46 53.6 -1.3
PVIS *e*Sg Sg 03 47 15.6 -0.7
comp=Z,102nm,0.7s
AVE Averroes 4.12 204 P Pn 03 46 05.1 -2.2
MVO Moncorvo 4.26 343 *e*Pn Pn 03 46 09.6 +0.4
MVO *e*Sn Sn 03 46 57.7 -1.0
MVO *e*Sg Sg 03 47 20.2 -1.1
MVO A 03 47 25.3
comp=Z,124nm,0.6s
MVO Moncorvo 4.26 343 *e*Pn Pn 03 46 09.7 +0.5
MVO *e*Sn Sn 03 46 57.7 -1.0
MVO *e*Sg Sg 03 47 18.5 -2.8
MVO A 03 47 25.3
comp=Z,123nm,0.6s

MVO	**Moncorvo**	**4.26**	**343**	*e*Pn		**Pn**	**03 46 09.6**	**+0.4**
MVO				*e*Sn		**Sn**	**03 46 57.7**	**-1.0**
MVO				*e*Sg		**Sg**	**03 47 20.2**	**-1.1**
	comp=Z,124nm,0.6s							
EBEN	**Beniarda**	**4.41**	**67**	Pn		**Pn**	**03 46 10.9**	**-0.3**
	comp=Z,0.3nm,0.1s,SNR=7.0							
EBEN				Sn		**Sn**	**03 47 01.2**	**-1.3**
	comp=Z,42nm,1.0s,SNR=7.9							
EBEN	**Beniarda**	**4.41**	**67**	Pn		**Pn**	**03 46 12.2**	**+0.9**
	comp=Z,6.9nm,0.6s,SNR=7.0							
EBEN	**Beniarda**	**4.41**	**67**	Pn		**Pn**	**03 46 12.2**	**+1.0**
KIB	**El Ksiba**	**4.53**	**187**	P		**Pn**	**03 46 13.0**	**0.0**
KIB				S		**Sn**	**03 47 01.0**	**-4.6**
KIB	**El Ksiba**	**4.53**	**187**	*i* P		**Pn**	**03 46 13.0**	**0.0**
PVRL	**Vila Real**	**4.54**	**338**	*e*Pn		**Pn**	**03 46 13.7**	**+0.6**
PVRL				*e*Sn		**Sn**	**03 47 04.2**	**-1.6**
PVRL	**Vila Real**	**4.54**	**338**	*e*Pn		**Pn**	**03 46 13.6**	**+0.5**
PVRL				*e*Sn		**Sn**	**03 47 04.3**	**-1.5**
PVRL	**Vila Real**	**4.54**	**338**	Pn		**Pn**	**03 46 13.6**	**+0.5**
PVRL				Sn		**Sn**	**03 47 04.3**	**-1.5**
PVRL	**Vila Real**	**4.54**	**338**	*e*Pn		**Pn**	**03 46 13.6**	**+0.5**
PVRL				*e*Sn		**Sn**	**03 47 04.2**	**-1.6**
ETOR	**Torete**	**4.55**	**34**	Pn		**Pn**	**03 46 14.0**	**+0.8**
	comp=Z,23nm,0.2s,SNR=27							
ETOR				Lg			03 47 31.1	
	comp=Z,98nm,0.4s,SNR=7.4							
ETOR	**Torete**	**4.55**	**34**	Pn		**Pn**	**03 46 14.2**	**+1.0**
	comp=Z,23nm,0.2s,SNR=27							
ETOR	**Torete**	**4.55**	**34**	Pn		**Pn**	**03 46 14.2**	**+0.9**
ETOR				Lg			03 47 31.1	
ECAL	**Calabor**	**4.95**	**349**	Pn		**Pn**	**03 46 19.3**	**+0.6**
	comp=Z,2.3nm,0.3s,SNR=11							
ECAL				Sn		**Sn**	**03 47 15.0**	**-0.9**
	comp=Z,21nm,0.3s,SNR=7.9							
ECAL				Lg			03 47 44.2	
	comp=Z,183nm,0.8s,SNR=4.6							
ECAL	**Calabor**	**4.95**	**349**	Pn		**Pn**	**03 46 19.7**	**+1.0**
	comp=Z,3.9nm,0.5s,SNR=11							
ECAL				Sn		**Sn**	**03 47 15.4**	**-0.4**
	SNR=7.9							
ECAL	**Calabor**	**4.95**	**349**	Pn		**Pn**	**03 46 19.7**	**+1.0**
ECAL				Sn		**Sn**	**03 47 15.4**	**-0.5**
ECAL				Lg			03 47 44.2	
TZC	**Tazercounte**	**5.01**	**190**	P		**Pn**	**03 46 20.0**	**+0.5**
TZC				S		**Sn**	**03 47 13.0**	**-4.3**
TZC	**Tazercounte**	**5.01**	**190**	*e*P		**Pn**	**03 46 20.0**	**+0.5**
PCAB	**Cabril**	**5.04**	**337**	*e*Pn		**Pn**	**03 46 20.2**	**+0.3**
PCAB				*e*Sn		**Sn**	**03 47 17.8**	**-0.1**
PCAB				*e*Sg		**Sg**	**03 47 44.5**	**-1.8**
PCAB				A			03 47 56.8	
	comp=Z,102nm,0.5s							
PCAB	**Cabril**	**5.04**	**337**	*e*Pn		**Pn**	**03 46 20.2**	**+0.3**
PCAB				*e*Sn		**Sn**	**03 47 16.0**	**-1.9**
PCAB				*e*Sg		**Sg**	**03 47 41.8**	**-4.5**
PCAB				A			03 47 57.1	
	comp=Z,103nm,0.7s							
PCAB	**Cabril**	**5.04**	**337**	Pn		**Pn**	**03 46 20.2**	**+0.3**
PCAB				Sn		**Sn**	**03 47 16.0**	**-1.9**
PCAB				Lg			03 47 44.5	
	comp=Z,51nm,0.5s							
PCAB	**Cabril**	**5.04**	**337**	*e*Pn		**Pn**	**03 46 20.2**	**+0.3**
PCAB				*e*Sn		**Sn**	**03 47 16.0**	**-1.9**
PCAB				*e*Sg		**Sg**	**03 47 41.8**	**-4.5**
	comp=Z,103nm,0.7s							
EMOS	**Mosqueruela**	**5.06**	**48**	Pn		**Pn**	**03 46 20.5**	**+0.2**
	comp=Z,3.3nm,0.3s,SNR=7.9							
EMOS				Sn		**Sn**	**03 47 16.9**	**-1.7**
	comp=Z,19nm,0.6s,SNR=7.9							
EMOS				Lg			03 47 45.2	
	comp=Z,35nm,1.0s,SNR=7.9							
EMOS	**Mosqueruela**	**5.06**	**48**	Pn		**Pn**	**03 46 20.8**	**+0.6**
	SNR=7.9							
EMOS	**Mosqueruela**	**5.06**	**48**	Pn		**Pn**	**03 46 20.8**	**+0.6**
EMOS				Lg			03 47 45.2	
ZFT	**Errachidia**	**5.12**	**170**	P		**Pn**	**03 46 21.0**	**0.0**
ZFT				S		**Sn**	**03 47 15.0**	**-5.0**
ZFT	**Errachidia**	**5.12**	**170**	*i* P		**Pn**	**03 46 21.0**	**0.0**
ELOB	**Lobios**	**5.19**	**338**	Pn		**Pn**	**03 46 22.4**	**+0.4**
	comp=Z,4.4nm,0.3s,SNR=14							
ELOB				Sn		**Sn**	**03 47 20.2**	**-1.5**
	comp=Z,4.9nm,0.3s,SNR=7.9							
ELOB				Lg			03 47 52.0	
	comp=Z,34nm,0.4s,SNR=7.9							
ELOB	**Lobios**	**5.19**	**338**	Pn		**Pn**	**03 46 22.4**	**+0.4**
	comp=Z,3.5nm,0.3s,SNR=14							
ELOB				Sn		**Sn**	**03 47 20.2**	**-1.5**
	SNR=7.9							
ERUA	**La Rua**	**5.46**	**346**	Pn		**Pn**	**03 46 26.5**	**+0.8**
	comp=Z,3.5nm,0.1s,SNR=7.9							
ERUA				Sn		**Sn**	**03 47 28.0**	**-0.4**
	comp=Z,6.4nm,0.2s,SNR=7.9							
ERUA				Lg			03 48 00.1	
	comp=Z,52nm,0.6s,SNR=7.9							
ERUA	**La Rua**	**5.46**	**346**	Pn		**Pn**	**03 46 25.3**	**-0.4**
	SNR=7.9							
ERUA	**La Rua**	**5.46**	**346**	Pn		**Pn**	**03 46 25.3**	**-0.4**
ERUA				Lg			03 48 00.1	
EIBI	**Ibiza**	**5.67**	**68**	Sn		**Sn**	**03 47 30.8**	**-2.9**
	comp=Z,22nm,0.6s,SNR=7.9							
EIBI	**Ibiza**	**5.67**	**68**	Sn		**Sn**	**03 47 30.4**	**-3.3**
	SNR=7.9							
ESAC	**San Caprasio**	**6.00**	**38**	Pn		**Pn**	**03 46 35.9**	**+2.7**
	SNR=4.0							
ESAC				Lg			03 48 18.8	
	comp=Z,40nm,0.6s,SNR=7.9							
ESAC	**San Caprasio**	**6.00**	**38**	Lg			03 48 18.8	
	comp=Z,40nm,0.6s,SNR=7.9							
CIA	**Chichaoua**	**6.17**	**208**	P		**Pn**	**03 46 34.5**	**-0.9**
CIA				S		**Sn**	**03 47 39.0**	**-6.8**
EARI	**Arriondas**	**6.21**	**1**	Pn		**Pn**	**03 46 37.4**	**+1.5**
	comp=Z,0.2nm,0.1s,SNR=7.9							
EARI				Lg			03 48 21.6	
	SNR=7.9							
OUK	**Oukaimeden**	**6.21**	**200**	P		**Pn**	**03 46 35.0**	**-1.0**
OUK				S		**Sn**	**03 47 40.0**	**-6.9**
STS	**Santiago**	**6.27**	**338**	Pn		**Pn**	**03 46 37.8**	**+1.0**
	comp=Z,1.8nm,0.1s,SNR=7.9							
STS				Lg			03 48 26.7	
	SNR=7.9							
STS	**Santiago**	**6.27**	**338**	Lg			03 48 26.7	
	SNR=7.9							
JHA	**Jbel Lahdid**	**6.30**	**213**	P		**Pn**	**03 46 37.0**	**-0.2**
JHA				S		**Sn**	**03 47 45.0**	**-4.0**
ELAN	**Lanestosa**	**6.32**	**13**	Pn		**Pn**	**03 46 39.2**	**+1.7**
	comp=Z,0.7nm,0.2s,SNR=7.9							
ELAN				Sn		**Sn**	**03 47 47.0**	**-2.6**
	comp=Z,3.7nm,0.5s,SNR=7.9							
ELAN				Lg			03 48 28.6	
	SNR=7.9							
ELAN	**Lanestosa**	**6.32**	**13**	Pn		**Pn**	**03 46 37.9**	**+0.4**
	SNR=7.9							
ELAN	**Lanestosa**	**6.32**	**13**	Pn		**Pn**	**03 46 37.9**	**+0.4**
ELAN				Lg			03 48 28.6	
ELAN	**Lanestosa**	**6.32**	**13**	Lg			03 48 28.6	
EPON	**Pontenova**	**6.37**	**349**	Pn		**Pn**	**03 46 39.3**	**+1.1**
	comp=Z,0.6nm,0.2s,SNR=7.9							
EPON				Sn		**Sn**	**03 47 48.5**	**-2.2**
	comp=Z,2.7nm,0.3s,SNR=7.9							
EPON	**Pontenova**	**6.37**	**349**	Pn		**Pn**	**03 46 39.2**	**+1.0**
EMAZ	**Mazaricos**	**6.46**	**336**	Pn		**Pn**	**03 46 39.7**	**+0.4**
	comp=Z,2.2nm,0.2s,SNR=7.9							
EMAZ				Sn		**Sn**	**03 47 48.3**	**-4.7**
	comp=Z,2.2nm,0.1s,SNR=7.9							
EMAZ				Lg			03 48 33.0	
	SNR=7.9							
EMAZ	**Mazaricos**	**6.46**	**336**	Pn		**Pn**	**03 46 39.3**	**-0.1**
EMAZ	**Mazaricos**	**6.46**	**336**	Pn		**Pn**	**03 46 39.3**	**-0.1**
EMAZ				Lg			03 48 33.0	
EMAZ	**Mazaricos**	**6.46**	**336**	Lg			03 48 33.0	
IZUN	**Zunzarren**	**6.52**	**27**	Pn		**Pn**	**03 46 43.8**	**+3.6**
	comp=Z,0.9nm,0.2s,SNR=7.9							
IZUN				Lg			03 48 34.3	
	comp=Z,4.3nm,0.3s,SNR=7.9							
EORO	**Oroz-Betelu**	**6.60**	**27**	Pn		**Pn**	**03 46 43.6**	**+2.3**
	comp=Z,3.6nm,0.4s,SNR=18							
EPOB	**Poblet**	**6.60**	**48**	Pn		**Pn**	**03 46 42.3**	**+1.0**
	comp=Z,0.5nm,0.2s,SNR=7.9							
ELIZ	**Elizondo**	**6.76**	**25**	Pn		**Pn**	**03 46 45.8**	**+2.3**
	comp=Z,3.2nm,0.4s,SNR=7.9							
EALK	**Alkurruntz**	**6.81**	**25**	Pn		**Pn**	**03 46 45.7**	**+1.4**
	comp=Z,4.2nm,0.3s,SNR=7.9							
EALK				Sn		**Sn**	**03 47 59.3**	**-2.4**
	comp=Z,35nm,0.5s,SNR=7.9							
SJPF	**Ste Jean**	**6.82**	**27**	*e*Pn		**Pn**	**03 46 45.6**	**+1.3**
SJPF				*e*Sn		**Sn**	**03 47 59.0**	**-2.8**
SJPF				*e*Sg		**Sg**	**03 48 41.5**	**-1.9**
	comp=Z,14nm,0.5s							
SJPF	**Ste Jean**	**6.82**	**27**	*e*Pn		**Pn**	**03 46 45.6**	**+1.3**
SJPF				*e*Sn		**Sn**	**03 47 59.0**	**-2.8**
ETSF	**Etsaut**	**6.89**	**31**	*e*Pn		**Pn**	**03 46 46.9**	**+1.5**
ETSF				*e*Sg		**Sg**	**03 48 44.0**	**-1.8**
	comp=Z,14nm,0.5s							
OSSF	**Osses**	**6.93**	**26**	Pg		**Pn**	**03 46 47.3**	**+1.4**
EBIE	**Bielsa**	**7.04**	**36**	Pn		**Pn**	**03 46 48.7**	**+1.4**
	comp=Z,6.7nm,0.5s,SNR=13							
EBIE				Lg			03 48 50.4	
	comp=Z,12nm,0.5s,SNR=7.9							
EBIE	**Bielsa**	**7.04**	**36**	Pn		**Pn**	**03 46 48.6**	**+1.3**
EBIE	**Bielsa**	**7.04**	**36**	Pn		**Pn**	**03 46 48.6**	**+1.3**
REYF	**Montagne du Re**	**7.11**	**31**	Pg		**Pn**	**03 46 50.1**	**+1.8**
EPF	**Esparros**	**7.39**	**35**	*e*Pn		**Pn**	**03 46 52.9**	**+0.7**
EPF	**Esparros**	**7.39**	**35**	Pn		**Pn**	**03 46 52.9**	**+0.7**
LFF	**La Frestale**	**9.12**	**29**	*e*Pn		**Pn**	**03 47 16.0**	**+0.2**
CAF	**Calviac**	**9.65**	**33**	*e*Pn		**Pn**	**03 47 23.2**	**0.0**
RJF	**Les Rejaudoux**	**9.72**	**30**	*e*Pn		**Pn**	**03 47 24.4**	**+0.2**
MFF	**Saint Martin d**	**10.28**	**21**	*e*Pn		**Pn**	**03 47 31.8**	**0.0**
QUIF	**Quistinic**	**10.95**	**8**	*e*Pn		**Pn**	**03 47 40.8**	**-0.1**
ROSF	**Rostrenen**	**11.35**	**7**	*e*Pn		**Pn**	**03 47 46.4**	**0.0**
SGMF	**Saint Gilles**	**11.35**	**10**	*e*Pn		**Pn**	**03 47 46.2**	**-0.3**

*ISCJB **14** 03:45:46.1±0.4, 3723N±002×541W±002, h5km±3km, Error ellipse: s-maj=3.3km s-min=2.7km az=24.8*
*SFS **14** 03:45:48.0, 3708N×541W, h11km, ML3.6*
*LDG **14** 03:45:48.8±0.1, 3706N×540W, h10km, Ml4.0/4*
*CSEM **14** 03:45:48.8±0.1, 37.14N×544W, h10km, ML4.3/15, Error ellipse: s-maj=3.0km s-min=2.4km az=170.0*
*MDD **14** 03:45:48.1±0.3, 3706N×540W, h5km±5km, mbLg3.6/35, Error ellipse: s-maj=2.9km s-min=2.5km az=143.0, PRIMO*
MDD EMS: IV INTENSIDAD MIMA.
*NEIC **14** 03:45:48.4, 3705N×541W, h11km, MN3.6(MDD), After MDD.*
NEIC Felt [IV] in the Moron de la Frontera area.

ISC 14 03:45:47.7±0.3, 3716N±002×541W±002, h9km±3km, n125, σ1s29/132, 3C-1D, Spain

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
LIJA	**Lijar**	**0.25**	**179**	⇓P		**Pg**	**03 45 50.6**		**-2.1**
LIJA				S		**Sg**	**03 45 52.2**		**-4.0**
EXAO	**Algodonales**	**0.28**	**180**	Pg		**Pg**	**03 45 50.3**		**-2.9**
EXAO				Lg			03 45 53.5		
ESPR	**Espera**	**0.46**	**231**	Pg		**Pg**	**03 45 57.2**		**+0.6**
	239nm,0.2s,SNR=7.9								
ESPR				Lg			03 46 02.1		
	4µm,0.5s,SNR=4.9								
ESPR	**Espera**	**0.46**	**231**	Pg		**Pg**	**03 45 56.8**		**+0.1**
	SNR=7.9								
ESPR	**Espera**	**0.46**	**231**	Pg		**Pg**	**03 45 56.9**		**+0.2**
ESPR				Lg			03 46 02.9		
GIBL	**Gibalbin**	**0.56**	**234**	⇑P		**Pg**	**03 45 59.6**		**+1.2**
GIBL				S		**Sg**	**03 46 06.9**		**+1.2**
GIBL	**Gibalbin**	**0.56**	**234**	*i* P		**Pg**	**03 45 59.6**		**+1.1**
REAL	**Reales**	**0.69**	**167**	⇑P		**Pg**	**03 45 59.8**		**-1.3**
EJIF	**Jimena Fronter**	**0.71**	**184**	Pg		**Pg**	**03 45 59.9**		**-1.5**
	337nm,0.4s,SNR=7.9								
EJIF				Lg			03 46 09.3		
	1µm,0.5s,SNR=7.9								
EMIJ	**Mijas**	**0.78**	**139**	Pg		**Pg**	**03 46 00.9**		**-1.8**
	SNR=7.9								
EMIJ				Lg			03 46 11.6		
	1µm,0.2s,SNR=8.1								
SCRT	**Cerro San Cris**	**0.81**	**230**	⇑P		**Pg**	**03 46 04.9**		**+1.7**
SCRT				S		**Sg**	**03 46 13.9**		**+0.1**
SCRT	**Cerro San Cris**	**0.81**	**230**	*i* P		**Pg**	**03 46 04.9**		**+1.7**
MOMI	**Momias**	**0.86**	**197**	S		**Sg**	**03 46 12.0**		**-3.6**
EMAL	**Malaga-Limoner**	**0.88**	**117**	Pg		**Pg**	**03 46 07.8**		**+3.3**
	141nm,0.2s,SNR=7.9								
EMAL				Lg			03 46 22.3		
	184nm,0.2s,SNR=7.9								
EMAL	**Malaga-Limoner**	**0.88**	**117**	*e*P		**Pg**	**03 46 04.5**		**-0.1**
EMAL	**Malaga-Limoner**	**0.88**	**117**	Pg		**Pg**	**03 46 07.8**		**+3.2**
	SNR=7.9								
EMAL				*e*S		**Sg**	**03 46 18.3**		**+2.3**
ECAB	**El Cabril**	**0.91**	**359**	Pg		**Pg**	**03 46 06.8**		**+1.5**
	510nm,0.1s,SNR=4.4								
ECAB				Lg			03 46 21.2		
	761nm,0.1s,SNR=16								
ECAB	**El Cabril**	**0.91**	**359**	Pg		**Pg**	**03 46 07.1**		**+1.8**
	476nm,0.4s,SNR=4.4								
ECAB	**El Cabril**	**0.91**	**359**	Pg		**Pg**	**03 46 07.1**		**+1.8**
ECAB				Lg			03 46 21.2		
SFS	**San Fernando**	**0.94**	**223**	P		**Pg**	**03 46 07.4**		**+1.6**
SFS				S		**Sg**	**03 46 22.3**		**+4.2**
SFS	**San Fernando**	**0.94**	**223**	*e*P		**Pg**	**03 46 07.4**		**+1.6**
ELOJ	**Sierra Loja**	**1.00**	**90**	Pg		**Pg**	**03 46 08.0**		**+1.0**
	34nm,0.2s,SNR=7.9								
ELOJ				Lg			03 46 20.8		
	382nm,0.5s,SNR=6.0								
EMIN	**Mina Concepcio**	**1.18**	**301**	Pg		**Pg**	**03 46 10.2**		**0.0**
	73nm,0.1s,SNR=7.9								
EMIN				Lg			03 46 27.6		
	656nm,0.2s,SNR=13								
EMIN	**Mina Concepcio**	**1.18**	**301**	Pg		**Pg**	**03 46 10.2**		**-0.1**
	SNR=7.9								
EADA	**Adamuz**	**1.20**	**33**	Pg		**Pg**	**03 46 12.6**		**+1.8**
	52nm,0.1s,SNR=7.9								
EADA				Lg			03 46 30.0		
	310nm,0.1s,SNR=6.2								
EADA	**Adamuz**	**1.20**	**33**	Pg		**Pg**	**03 46 12.6**		**+1.8**
	SNR=7.9								
ERON	**Agron**	**1.29**	**96**	Lg			03 46 30.9		
	156nm,0.3s,SNR=7.9								
ECOG	**Cogollos-Vega**	**1.47**	**85**	Pg		**Pg**	**03 46 16.6**		**+0.6**
	50nm,0.3s,SNR=5.4								
ECOG				Lg			03 46 36.0		
	134nm,0.3s,SNR=5.6								
EQUE	**Quentar**	**1.57**	**88**	Pg		**Pg**	**03 46 17.2**		**-0.6**
	108nm,0.4s,SNR=4.0								
EQUE				Lg			03 46 37.8		
	189nm,0.3s,SNR=6.4								
EQUE	**Quentar**	**1.57**	**88**	Pg		**Pg**	**03 46 17.7**		**-0.1**
	127nm,0.4s,SNR=4.0								
EBAN	**Banos Encina**	**1.63**	**52**	Pg		**Pg**	**03 46 18.9**		**-0.1**
	31nm,0.2s,SNR=7.9								
EBAN				Sn		**Sn**	**03 46 38.3**		**+0.6**
	70nm,0.2s,SNR=7.9								
EBAN				Lg			03 46 40.7		
	75nm,0.1s,SNR=7.6								
EBAN	**Banos Encina**	**1.63**	**52**	Pg		**Pg**	**03 46 18.9**		**-0.1**
	SNR=7.9								
EBAN				Sn		**Sn**	**03 46 37.9**		**+0.2**
	52nm,0.2s,SNR=7.9								
EBAN	**Banos Encina**	**1.63**	**52**	Pg		**Pg**	**03 46 18.9**		**-0.1**
EBAN				Sn		**Sn**	**03 46 37.9**		**+0.2**
EBAN				Lg			03 46 40.7		
PBAR	**Barrancos**	**1.65**	**309**	*e*Sg		**Sg**	**03 46 39.6**		**-1.0**
PBAR				A			03 46 42.8		
	497nm,0.5s								
PBAR	**Barrancos**	**1.65**	**309**	*e*Sg		**Sg**	**03 46 39.6**		**-1.0**
	497nm,0.5s								
EGRO	**El Granado**	**1.70**	**283**	Pg		**Pg**	**03 46 19.5**		**-0.7**
	94nm,0.1s,SNR=7.9								
EGRO				Sn		**Sn**	**03 46 38.3**		**-1.0**
	86nm,0.1s,SNR=7.9								
EGRO				Lg			03 46 41.4		
	879nm,0.3s,SNR=7.4								
PVAQ	**Vaqueiros**	**1.86**	**278**	*e*Sg		**Sg**	**03 46 47.1**		**-0.3**
PVAQ				A			03 46 52.3		
	658nm,0.2s								
PVAQ	**Vaqueiros**	**1.86**	**278**	*e*Sg		**Sg**	**03 46 47.1**		**-0.3**
	658nm,0.2s								
EQES	**Quesada**	**1.97**	**70**	Lg			03 46 51.9		
	268nm,0.3s,SNR=7.9								
EBAD	**Badajoz**	**2.04**	**322**	Sn		**Sn**	**03 46 50.0**		**+2.2**
	176nm,0.2s,SNR=7.9								
EBAD				Lg			03 46 53.9		
	463nm,0.2s,SNR=8.1								
PBEJ	**Beja**	**2.14**	**295**	*e*Sg		**Sg**	**03 46 55.9**		**-0.4**
PBEJ				A			03 47 04.3		
	269nm,0.2s								
PBEJ	**Beja**	**2.14**	**295**	*e*Sg		**Sg**	**03 46 55.9**		**-0.4**
	269nm,0.2s								
EALB	**Alboran**	**2.27**	**122**	Sn		**Sn**	**03 46 51.2**		**-2.2**
	28nm,0.2s,SNR=4.0								
EALB	**Alboran**	**2.27**	**122**	Sn		**Sn**	**03 46 51.2**		**-2.1**
	26nm,0.2s,SNR=5.0								
EHUE	**Huescar**	**2.33**	**73**	Lg			03 47 02.4		
	47nm,0.3s,SNR=7.9								
PESTR	**Estremoz**	**2.42**	**315**	*e*Sg		**Sg**	**03 47 05.5**		**-0.1**
PESTR	**Estremoz**	**2.42**	**315**	*e*Sg		**Sg**	**03 47 05.5**		**-0.1**
	420nm,0.8s								
EVO	**Evora**	**2.48**	**304**	*e*Sn		**Sn**	**03 46 59.1**		**+0.5**
EVO				*e*Sg		**Sg**	**03 47 11.0**		**+3.7**
	1µm,0.7s								
EVO	**Evora**	**2.48**	**304**	*e*Sg		**Sg**	**03 47 04.7**		**-2.6**
EVO				A			03 47 11.0		
	290nm,0.2s								
EVO	**Evora**	**2.48**	**304**	*e*Sg		**Sg**	**03 47 04.7**		**-2.6**
	290nm,0.2s								
EVOP	**Sao Brissos**	**2.55**	**303**	*e*Sn		**Sn**	**03 46 59.1**		**-1.2**
EVOP				*e*Sg		**Sg**	**03 47 11.0**		**+1.5**
	574nm,0.7s								
ENIJ	**Nijar**	**2.57**	**93**	Lg			03 47 10.4		
	26nm,0.4s,SNR=7.9								
MORF	**Marmelete**	**2.59**	**274**	*e*Sg		**Sg**	**03 47 10.0**		**-1.0**
MORF				A			03 47 13.4		
	315nm,0.4s								
MORF	**Marmelete**	**2.59**	**274**	*e*Sg		**Sg**	**03 47 10.0**		**-1.0**
	315nm,0.4s								
PTEO	**Sao Teotonio**	**2.67**	**279**	*e*Sn		**Sn**	**03 47 03.2**		**-0.2**
PTEO				A			03 47 14.7		
	350nm,0.5s								
PTEO	**Sao Teotonio**	**2.67**	**279**	*e*Sn		**Sn**	**03 47 03.2**		**-0.2**
	350nm,0.5s								
EVIA	**Vianos**	**2.73**	**56**	Lg			03 47 17.4		
	110nm,0.4s,SNR=4.7								
PMRV	**Marv??o**	**2.75**	**326**	*e*Sg		**Sg**	**03 47 15.5**		**-0.6**
PMRV				A			03 47 22.4		
	303nm,0.4s								
PMRV	**Marv??o**	**2.75**	**326**	*e*Sg		**Sg**	**03 47 15.5**		**-0.6**
	303nm,0.4s								
ESDC	**Sonseca Array**	**2.75**	**24**	Lg			03 47 17.0		
	187nm,0.6s,baz=208,slow=29,SNR=12								
EMUR	**La Murta**	**3.38**	**77**	Lg			03 47 35.3		
	70nm,0.4s,SNR=4.1								
ETOB	**Tobarra**	**3.39**	**63**	Lg			03 47 37.5		
	77nm,0.5s,SNR=5.0								
GUD	**Guadarrama**	**3.61**	**15**	Lg			03 47 40.7		
	117nm,0.5s,SNR=6.5								
MTE	**Manteigas**	**3.64**	**333**	*e*Sg		**Sg**	**03 47 44.0**		**-0.6**
MTE				A			03 47 49.2		
	304nm,0.6s								
MTE	**Manteigas**	**3.64**	**333**	*e*Sg		**Sg**	**03 47 44.0**		**-0.6**
	304nm,0.6s								
PVIS	**Viseu**	**4.05**	**332**	*e*Sg		**Sg**	**03 47 56.5**		**-1.1**
PVIS				A			03 48 02.6		
	130nm,0.4s								
PVIS	**Viseu**	**4.05**	**332**	*e*Sg		**Sg**	**03 47 56.5**		**-1.1**
	130nm,0.4s								
MVO	**Moncorvo**	**4.19**	**343**	*e*Sg		**Sg**	**03 48 04.5**		**+2.2**
MVO				A			03 48 09.1		
	154nm,0.3s								
MVO	**Moncorvo**	**4.19**	**343**	*e*Sg		**Sg**	**03 48 04.5**		**+2.2**
	154nm,0.3s								
EBEN	**Beniarda**	**4.38**	**68**	Pn		**Pn**	**03 46 53.8**		**-0.5**
	15nm,0.5s,SNR=7.9								
EBEN				Lg			03 48 09.3		
	127nm,1.2s,SNR=7.9								
EBEN	**Beniarda**	**4.38**	**68**	Pn		**Pn**	**03 46 54.3**		**0.0**
	2.8nm,0.3s,SNR=7.9								
EBEN	**Beniarda**	**4.38**	**68**	Pn		**Pn**	**03 46 54.3**		**0.0**
EBEN				Lg			03 48 06.5		
ETOR	**Torete**	**4.49**	**35**	Pn		**Pn**	**03 46 57.3**		**+1.4**
	20nm,0.2s,SNR=5.6								
ETOR				Lg			03 48 12.9		
	124nm,0.3s,SNR=4.4								
ETOR	**Torete**	**4.49**	**35**	Pn		**Pn**	**03 46 56.9**		**+1.0**
	23nm,0.3s,SNR=5.6								
ETOR	**Torete**	**4.49**	**35**	Pn		**Pn**	**03 46 56.9**		**+1.0**
ETOR				Lg			03 48 12.9		
ECAL	**Calabor**	**4.88**	**348**	Lg			03 48 26.3		
	428nm,0.7s,SNR=4.7								
EMOS	**Mosqueruela**	**5.01**	**49**	Lg			03 48 29.0

EBIE	**Bielsa**	**6.97**	**36**	Pn		**Pn**	**03 47 31.6**	**+1.6**
REYF	**Montagne du Re**	**7.04**	**31**	Sg		**Pn**	**03 47 33.0**	**+2.1**
EPF	**Esparros**	**7.33**	**35**	*e*Pn		**Pn**	**03 47 34.8**	**-0.1**
EPF				*e*Sg		**Sg**	**03 49 40.9**	**-2.1**
	37nm,0.9s							
EPF	**Esparros**	**7.33**	**35**	Pn		**Pn**	**03 47 34.8**	**-0.1**
EPF				Lg			03 49 40.9	
	18nm,0.9s							
EPF	**Esparros**	**7.33**	**35**	Lg		**Sn**	**03 48 59.3**	**+1.1**
	11nm,0.7s							
EPF	**Esparros**	**7.33**	**35**	*e*Sg		**Sn**	**03 48 59.3**	**+1.1**
	23nm,0.7s							
LFF	**La Frestale**	**9.05**	**29**	*e*Pn		**Pn**	**03 47 58.1**	**-0.4**
CAF	**Calviac**	**9.59**	**34**	*e*Pn		**Pn**	**03 48 05.1**	**-0.7**
RJF	**Les Rejaudoux**	**9.66**	**30**	*e*Pn		**Pn**	**03 48 06.4**	**-0.4**
QUIF	**Quistinic**	**10.88**	**8**	*e*Pn		**Pn**	**03 48 22.8**	**-0.6**
ROSF	**Rostrenen**	**11.28**	**7**	*e*Pn		**Pn**	**03 48 28.4**	**-0.6**
SGMF	**Saint Gilles**	**11.28**	**10**	*e*Pn		**Pn**	**03 48 28.2**	**-0.8**

ISCJB ***14*** *03:48:01.1±0.4, 37.12N±003×539W±003, h4km±4km, Error ellipse: s-maj=5.2km s-min=3.8km az=149.4*
CSEM ***14*** *03:48:02.6±0.1, 3705N×543W, h7km±1km, ML3.2/3, Error ellipse: s-maj=2.5km s-min=2.2km az=178.0*
MDD ***14*** *03:48:03.1±0.4, 3704N×542W, h11km, mbLg2.8/19, Error ellipse: s-maj=3.9km s-min=2.8km az=178.0, PRIMO*
MDD EMS: II INTENSIDAD MIMA.
NEIC ***14*** *03:48:03.5, 3705N×542W, h14km, MN2.8(MDD), After MDD.*
SFS ***14*** *03:48:03.0, 3700N×540W, h11km, ML3.6*

ISC 14 03:48:02.0±0.4,**3709N**±003×**540W**±003,**h10**km±5km,**n52,** σ1**9**10/61,**Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIJA	**Lijar**	**0.19**	**181**	*i* P	**Pg**	**03 48 05.0**	**-1.0**
LIJA				*i* S	**Sg**	**03 48 05.6**	**-3.0**
ESPR	**Espera**	**0.43**	**239**	Pg	**Pg**	**03 48 11.3**	**+0.9**
	23nm,0.2s,SNR=7.9						
ESPR				Lg		03 48 15.9	
	169nm,0.2s,SNR=5.8						
ESPR	**Espera**	**0.43**	**239**	Pg	**Pg**	**03 48 11.2**	**+0.8**
	23nm,0.2s,SNR=7.9						
ESPR				Lg		03 48 16.5	
	169nm,0.2s,SNR=5.8						
ESPR	**Espera**	**0.43**	**239**	Pg	**Pg**	**03 48 11.2**	**+0.8**
ESPR				Lg		03 48 16.5	
GIBL	**Gibalbin**	**0.53**	**240**	P	**Pg**	**03 48 12.9**	**+0.7**
GIBL				S	**Sg**	**03 48 19.7**	**+0.6**
GIBL	**Gibalbin**	**0.53**	**240**	*e*P	**Pg**	**03 48 12.9**	**+0.7**
REAL	**Reales**	**0.63**	**166**	P	**Pg**	**03 48 13.3**	**-0.8**
REAL				S	**Sg**	**03 48 18.9**	**-3.4**
REAL	**Reales**	**0.63**	**166**	*e*P	**Pg**	**03 48 13.4**	**-0.7**
EJIF	**Jimena Fronter**	**0.64**	**185**	Pg	**Pg**	**03 48 13.8**	**-0.6**
	17nm,0.1s,SNR=7.9						
EJIF				Lg		03 48 23.7	
	80nm,0.4s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.64**	**185**	Pg	**Pg**	**03 48 13.8**	**-0.6**
	17nm,0.1s,SNR=7.9						
EJIF				Lg		03 48 24.4	
	80nm,0.4s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.64**	**185**	Pg	**Pg**	**03 48 13.8**	**-0.6**
EJIF				Lg		03 48 24.4	
EMIJ	**Mijas**	**0.73**	**136**	Pg	**Pg**	**03 48 15.2**	**-0.8**
	17nm,0.1s,SNR=7.9						
EMIJ				Lg		03 48 25.4	
	121nm,0.3s,SNR=7.2						
SCRT	**Cerro San Cris**	**0.77**	**234**	P	**Pg**	**03 48 18.7**	**+1.8**
SCRT				S	**Sg**	**03 48 25.6**	**-1.4**
SCRT	**Cerro San Cris**	**0.77**	**234**	*e*P	**Pg**	**03 48 18.7**	**+1.8**
MOMI	**Momias**	**0.80**	**199**	P	**Pg**	**03 48 21.8**	**+4.3**
MOMI				S	**Sg**	**03 48 33.8**	**+5.9**
EMAL	**Malaga-Limoner**	**0.84**	**113**	Pg	**Pg**	**03 48 22.8**	**+4.5**
	20nm,0.1s,SNR=7.9						
EMAL				Lg		03 48 33.1	
	60nm,0.2s,SNR=7.9						
EMAL	**Malaga-Limoner**	**0.84**	**113**	*e*P	**Pg**	**03 48 18.7**	**+0.5**
EMAL	**Malaga-Limoner**	**0.84**	**113**	Pg	**Pg**	**03 48 22.8**	**+4.6**
	20nm,0.1s,SNR=7.9						
EMAL				Lg		03 48 34.8	
	60nm,0.2s,SNR=7.9						
EMAL	**Malaga-Limoner**	**0.84**	**113**	Pg	**Pg**	**03 48 22.8**	**+4.5**
EMAL				Lg		03 48 34.8	
CNIL	**Conil**	**0.89**	**216**	P	**Pg**	**03 48 20.7**	**+1.5**
CNIL				S	**Sg**	**03 48 32.4**	**+1.6**
CNIL	**Conil**	**0.89**	**216**	*e*P	**Pg**	**03 48 20.7**	**+1.5**
CNIL				*e*S	**Sg**	**03 48 32.4**	**+1.6**
ECAB	**El Cabril**	**0.98**	**359**	Pg	**Pg**	**03 48 21.6**	**+0.7**
	95nm,0.1s,SNR=7.9						
ECAB				Lg		03 48 35.3	
	147nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**0.98**	**359**	Pg	**Pg**	**03 48 21.8**	**+0.9**
	95nm,0.1s,SNR=7.9						
ECAB				Lg		03 48 35.7	
	238nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**0.98**	**359**	Pg	**Pg**	**03 48 21.8**	**+0.9**
ECAB				Lg		03 48 35.7	
ELOJ	**Sierra Loja**	**1.00**	**86**	Pg	**Pg**	**03 48 22.6**	**+1.4**
	4.3nm,0.2s,SNR=7.9						
ELOJ				Lg		03 48 35.8	
	18nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.00**	**86**	Pg	**Pg**	**03 48 22.7**	**+1.5**
	5.9nm,0.1s,SNR=7.9						
ELOJ				Lg		03 48 35.8	
	23nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.00**	**86**	Pg	**Pg**	**03 48 22.7**	**+1.6**
ELOJ				Lg		03 48 35.8	
EMIN	**Mina Concepcio**	**1.22**	**304**	Pn	**Pn**	**03 48 24.5**	**-0.5**
	6.0nm,0.1s,SNR=7.9						
EMIN				Pg	**Pg**	**03 48 25.5**	**+0.1**
	27nm,0.1s,SNR=7.9						
EMIN				Lg		03 48 42.2	
	51nm,0.2s,SNR=6.6						
EMIN	**Mina Concepcio**	**1.22**	**304**	Pn	**Pn**	**03 48 24.5**	**-0.5**
	6.0nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.22**	**304**	Pg	**Pg**	**03 48 25.7**	**+0.3**
	27nm,0.1s,SNR=7.9						
EMIN				Lg		03 48 42.2	
	105nm,0.4s,SNR=6.6						
EMIN	**Mina Concepcio**	**1.22**	**304**	Pn	**Pn**	**03 48 24.5**	**-0.5**
EMIN				Pg	**Pg**	**03 48 25.7**	**+0.3**
EMIN				Lg		03 48 42.2	
EADA	**Adamuz**	**1.26**	**31**	Pg	**Pg**	**03 48 26.6**	**+0.5**
	8.8nm,0.1s,SNR=7.9						
EADA				Lg		03 48 44.3	
	225nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**1.26**	**31**	Pg	**Pg**	**03 48 26.6**	**+0.5**
	8.8nm,0.1s,SNR=7.9						
EADA				Lg		03 48 44.3	
	24nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.47**	**82**	Pg	**Pg**	**03 48 30.7**	**+0.4**
	6.8nm,0.2s,SNR=7.9						
ECOG				Lg		03 48 51.6	
	22nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**1.57**	**85**	Pg	**Pg**	**03 48 32.5**	**+0.4**
	9.1nm,0.4s,SNR=7.9						
EQUE				Lg		03 48 53.2	
	19nm,0.3s,SNR=7.9						
EBAN	**Banos Encina**	**1.67**	**50**	Pg	**Pg**	**03 48 33.3**	**-0.7**
	5.4nm,0.1s,SNR=7.9						
EBAN				Sn	**Sn**	**03 48 52.0**	**-0.6**
	8.4nm,0.2s,SNR=7.9						
EBAN				Lg		03 48 55.6	
	26nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.72**	**285**	Pg	**Pg**	**03 48 33.4**	**-1.6**
	5.2nm,0.1s,SNR=7.9						
EGRO				Lg		03 48 56.3	
	47nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**1.72**	**285**	Pg	**Pg**	**03 48 33.4**	**-1.6**
	5.2nm,0.1s,SNR=7.9						
EGRO				Lg		03 48 55.6	
	47nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**1.72**	**285**	Pg	**Pg**	**03 48 33.4**	**-1.6**
EGRO				Lg		03 48 55.6	
EQES	**Quesada**	**1.98**	**68**	Sn	**Sn**	**03 49 01.9**	**+1.5**
	5.2nm,0.2s,SNR=7.9						
EQES				Lg		03 49 06.8	
	25nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.98**	**68**	Sn	**Sn**	**03 49 01.9**	**+1.5**
	5.2nm,0.2s,SNR=7.9						
EQES				Lg		03 49 06.9	
	20nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**2.10**	**323**	Pn	**Pn**	**03 48 37.1**	**0.0**
	6.9nm,0.1s,SNR=7.9						
EBAD				Pg	**Pg**	**03 48 41.0**	**-1.2**
	4.3nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**03 49 02.8**	**-0.4**
	16nm,0.1s,SNR=7.9						
EBAD				Lg		03 49 08.8	
	50nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**2.10**	**323**	Pg	**Pg**	**03 48 40.7**	**-1.5**
	6.5nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**03 49 02.8**	**-0.4**
	11nm,0.1s,SNR=7.9						
EBAD				Lg		03 49 09.6	
	54nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**2.10**	**323**	Pn	**Pn**	**03 48 37.1**	**0.0**
EBAD				Pg	**Pg**	**03 48 40.7**	**-1.5**
EBAD				Sn	**Sn**	**03 49 02.8**	**-0.4**
EBAD				Lg		03 49 09.6	
ESDC	**Sonseca Array**	**2.81**	**23**	Lg		03 49 31.0	
	14nm,0.1s,baz=208,slow=28,SNR=103						
ESDC	**Sonseca Array**	**2.81**	**23**	Lg		03 49 31.0	
	14nm,0.1s,SNR=103						
ETOB	**Tobarra**	**3.42**	**62**	Sn	**Sn**	**03 49 35.0**	**-0.8**
	1.8nm,0.1s,SNR=7.9						
ETOB				Lg		03 49 51.4	
	24nm,0.6s,SNR=7.9						
ETOB	**Tobarra**	**3.42**	**62**	Sn	**Sn**	**03 49 35.0**	**-0.8**
	1.8nm,0.1s,SNR=7.9						
ETOR	**Torete**	**4.54**	**34**	Lg		03 50 24.5	
	29nm,0.7s,SNR=4.0						
ETOR	**Torete**	**4.54**	**34**	Lg		03 50 24.5	
	19nm,0.4s,SNR=7.9						
ECAL	**Calabor**	**4.95**	**348**	Lg		03 50 37.9	
	23nm,0.4s,SNR=7.9						
ELOB	**Lobios**	**5.20**	**337**	Lg		03 50 44.4	
	4.1nm,0.3s,SNR=7.9						

BJI ***14*** *04:03:42.3, 2.13S×100.12E, h30km, mB5.1, mb5.0, Ms5.1, Msz4.9*
NEIC ***14*** *04:03:44.3±2.0, 2.15S×100.12E, h29km±13km, mb5.3/45, Error ellipse: s-maj=6.5km s-min=4.3km az=49.0*
NEIC Felt [III] at Padangpanjang and Painan and [II] at Bengkulu, Sumatra.
ISCJB ***14*** *04:03:44.2±0.2, 2.14S±003×10007E±003, h39km, mb5.2/114, MS4.6/54, Error ellipse: s-maj=4.7km s-min=3.8km az=23.0*
GCMT ***14*** *04:03:44.3±0.2, 240S×9995E, h42km±1km, MW5.2/69, Moment Tensor Solution. s55,c86; s69,c104; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr5.08±.21; Mθθ-4.21±.15; Mϕϕ-0.87±.20; Mrθ3.72±.15; Mθϕ3.74±.12; Mϕr-2.07±.18; Best double couple: Mo7.24400×10^16 NP1:ϕs307.00000°, δ27.00000°, λ.96.00000°. NP2: ϕs120.00000°, δ63.00000°, λ.87.00000°. Principal axes: T 6.4730, Plg72.0000°, Azm23.0000°; N 1.5400, Plg3.0000°, Azm121.0000°; P -8.0150, Plg18.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MOS ***14*** *04:03:44.8±1.0, 191S×10024E, h38km, mb5.5/42, MS4.5/9 Error ellipse: s-maj=11.1km s-min=5.3km az=113.2*
IDC ***14*** *04:03:46.5±0.7, 2.13S×10022E, h43km±5km, mb4.7/15, mb1 4.8/16, mb1mx4.7/19, mbtmp4.7/16, ML4.8/1, MS4.5/24, Ms1 4.5/24, ms1mx4.4/29, Error ellipse: s-maj=17.7km s-min=9.8km az=44.0*
DJA ***14*** *04:03:47, 2.12S×10000E, h45km, Mw5.4/11*
VIE ***14*** *04:03:51.2±3.5, 286N×10375E, h35km, mb5.0/3, Ms5.2/3, Error ellipse: s-maj=246.9km s-min=103.0km az=39.0 153 km N of Johore Bharu*
SZGRF ***14*** *04:03:56.9, 087N×99.89E, h35km, mb5.1, Northern Sumatera, Indonesia*

ISC 14 04:03:46.1±0.2,**218S**±003×**10006E**±003,**h41**km, **h41**km±1.4km:**pP-P, n348,** σ1**9**00/316,**mb5.2**/114,**MS4.6**/54, **36C-18D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.74**	**11**	P	**Pn**	**04 04 12.8**	**-1.0**
	0.0nm,0.0s						
RGRI	**Rengat**	**2.91**	**51**	P	**Pn**	**04 04 30.9**	**+1.0**
	0.0nm,0.0s						
TRSI	**Tarutung**	**4.32**	**345**	P	**Pn**	**04 04 53.0**	**+3.7**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.82**	**70**	P	**Pn**	**04 04 57.5**	**+1.3**
	0.0nm,0.0s						
KGM	**Kluang**	**5.29**	**38**	⇑P	**Pn**	**04 05 04.2**	**+1.6**
MYKOM	**Kota Tinggi**	**5.46**	**44**	⇑P	**Pn**	**04 05 06.2**	**+1.2**
KLI	**Kotabumi**	**5.48**	**119**	P	**Pn**	**04 05 09.2**	**+4.0**
	449nm,0.7s						
FRIM	**Kepong**	**5.60**	**16**	⇑P	**Pn**	**04 05 08.1**	**+1.2**
PPBI	**Pangkal Pinang**	**6.07**	**90**	P	**Pn**	**04 05 18.3**	**+5.0**
	60nm,1.4s						
IPM	**Ipoh**	**6.68**	**8**	⇓P	**Pn**	**04 05 23.7**	**+1.9**
DBJI	**Dramaga**	**7.96**	**123**	P	**Pn**	**04 05 42.6**	**+3.3**
	280nm,1.1s						
KTGM	**Kuala Trenggan**	**8.06**	**22**	⇑P	**Pn**	**04 05 42.8**	**+2.1**
LEM	**Lembang**	**8.83**	**122**	P	**Pn**	**04 05 55.8**	**+4.5**
	175nm,0.9s						
SNG	**Songkhla**	**9.31**	**3**	P	**Pn**	**04 05 58.0**	**+0.2**
	160nm,1.0s						
COCO	**West Island**	**10.45**	**198**	*e*Pn	**Pn**	**04 06 12.2**	**-1.2**
KSM	**Kuching**	**10.87**	**71**	⇑P	**Pn**	**04 06 21.0**	**+1.8**
KSM	**Kuching**	**10.87**	**71**	*e*Pn	**Pn**	**04 06 20.5**	**+1.4**
BJII	**Banjamegara**	**10.89**	**118**	P	**Pn**	**04 06 26.6**	**+7.1**
	83nm,1.2s						
SJI	**Sawahan**	**12.90**	**116**	P	**Pn**	**04 06 47.3**	**+0.4**
	88nm,1.2s						
SBUM	**Sibu**	**12.99**	**69**	⇓P	**Pn**	**04 06 49.7**	**+1.4**
BTM	**Bintulu**	**14.07**	**68**	⇑P	**Pn**	**04 07 04.2**	**+1.3**
KMMI	**Kalianget**	**14.68**	**110**	P	**Pn**	**04 07 12.7**	**+1.5**
	178nm,1.4s						
BBKI	**Banjar Baru**	**14.81**	**95**	P	**Pn**	**04 07 19.2**	**+6.2**
	132nm,1.4s						
SMKI	**Samarinda**	**17.23**	**85**	P	**Pn**	**04 07 47.5**	**+3.7**
	186nm,1.1s						
KKM	**Kota Kinabalu**	**18.08**	**63**	⇓P	**Pn**	**04 07 54.7**	**+0.4**
KKM	**Kota Kinabalu**	**18.08**	**63**	*e*P	**Pn**	**04 07 54.8**	**+0.5**
SDKM	**Sandakan**	**18.79**	**66**	⇑P	**Pn**	**04 08 03.4**	**+0.4**
TSM	**Tawau**	**18.92**	**70**	⇓P	**Pn**	**04 08 04.3**	**-0.3**
PCI	**Palu**	**19.81**	**87**	P	**Pn**	**04 08 16.7**	**+1.6**
	290nm,1.7s						
MYLDM	**Lahad Datu**	**19.82**	**68**	⇑P	**Pn**	**04 08 13.7**	**-1.5**
KAPI	**Kappang**	**19.85**	**99**	Pn	**Pn**	**04 08 13.3**	**-2.3**
	600nm,1.0s,SNR=11						
KAPI	**Kappang**	**19.85**	**99**	P	**Pn**	**04 08 13.8**	**-1.9**
	SNR=12						
KAPI	**Kappang**	**19.85**	**99**	P	**Pn**	**04 08 12.9**	**-2.7**
	2.7nm,0.3s,baz=279,slow=11,SNR=18						
KAPI	**Kappang**	**19.85**	**99**	*e*P	**Pn**	**04 08 12.9**	**-2.7**
CMAR	**Chiang Mai Arr**	**20.53**	**357**	P	**P**	**04 08 19.7**	**-1.4**
	20nm,0.5s,baz=186,slow=9.5,SNR=68						
CMAR				LR	LR	04 16 26.8	
	comp=Z,2μm,19.5s,MS4.5,baz=187,slow=37						
NANT	**Nan**	**20.85**	**2**	⇑P	**P**	**04 08 20.0**	**-4.6**
	165nm,0.8s						
CHG	**Chiang Mai**	**20.89**	**357**	⇑P	**P**	**04 08 23.7**	**-1.2**
	20nm,0.7s						
CHTO	**Chiang Mai**	**20.89**	**357**	P	**P**	**04 08 23.0**	**-1.9**
	SNR=8.2						
CHTO	**Chiang Mai**	**20.89**	**357**	*e*P	**P**	**04 08 23.0**	**-1.9**
CHTO				pmax	pmax		
	comp=Z,34nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.5						
CHTO	**Chiang Mai**	**20.89**	**357**	*e*P	**P**	**04 08 23.0**	**-1.9**
	comp=Z,34nm,1.2s						
CHTO				LR	LR		
	comp=Z,2μm,20.0s,MS4.5						
KDI	**Kendari**	**22.59**	**95**	P	**P**	**04 08 44.3**	**+1.0**
	comp=Z,91nm,1.3s,mb5.0						
QIZ	**Qiongzhong**	**23.16**	**24**	P	**P**	**04 08 47.1**	**-2.1**
QIZ				AP		04 08 53.0	
QIZ				S	**S**	**04 12 54.6**	**-3.3**
QIZ				XS	sS	04 13 08.4	-7.9
QIZ				AMB	AMB		
	comp=Z,41nm,1.3s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,393nm,2.9s,mb5.3						
QIZ				LR	LR		
	comp=N,2μm,16.1s						
QIZ				LR	LR		
	comp=Z,2μm,18.3s,MS4.6						
QIZ	**Qiongzhong**	**23.16**	**24**	*e*P	**P**	**04 08 47.7**	**-1.5**
	comp=Z,50nm,1.1s,mb4.9						
MBWA	**Marble Bar**	**26.89**	**136**	*e*P	**P**	**04 09 22.2**	**-1.2**
	comp=Z,9.0nm,0.9s,mb4.3						
MBWA				LR	LR		
	comp=Z,2μm,21.0s,MS4.6						
DAV	**Davao City (W)**	**27.07**	**70**	P	**P**	**04 09 25.5**	**+0.4**
	comp=Z,168nm,0.3s,mb6.0,baz=251,slow=13,SNR=3.9						
DAV				LR	LR	04 21 26.7	
	comp=Z,1μm,20.4s,MS4.4,baz=266,slow=39						
KMI	**Kunming**	**27.26**	**5**	P	**P**	**04 09 26.3**	**-0.3**
KMI				AP	pP	04 09 36.8	-1.0
KMI				XP	sP	04 09 41.1	-1.6
KMI				PP		04 10 17.3	
KMI				S	**S**	**04 14 05.4**	**+2.2**
KMI				XS	sS	04 14 20.6	-1.3
KMI				SS		04 15 22.6	
KMI				AMB	AMB		
	comp=Z,22nm,1.0s,mb4.6						
KMI				AMB	AMB		
	comp=Z,115nm,6.5s						
KMI				LR	LR		
	comp=N,1μm,19.1s,MS4.8						
KMI				LR	LR		
	comp=E,2μm,15.9s,MS4.8						
KMI				LR	LR		
	comp=Z,2μm,18.0s,MS4.7						
GYA	**Guiyang**	**29.17**	**12**	⇑*i*P	**P**	**04 09 42.3**	**-1.3**
GYA				AP	pP	04 09 51.3	-3.6
GYA				XP	sP	04 09 55.3	-4.5
GYA				PP	PP	04 10 36.8	-13
GYA				PCP	PcP	04 12 50.8	+0.2
GYA				S	**S**	**04 14 29.6**	**-3.7**
GYA				XS	sS	04 14 45.3	-6.7
GYA				SS	SS	04 15 59.5	-39
GYA				SCP	ScP	04 16 28.6	-0.5
GYA				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.7						
GYA				LR	LR		
	comp=N,3μm,17.5s,MS5.0						
GYA				LR	LR		
	comp=E,2μm,16.4s,MS5.0						
GYA				LR	LR		
	comp=Z,2μm,17.0s,MS4.9						
FITZ	**Fitzroy Crossi**	**29.66**	**124**	*e*P	**P**	**04 09 47.5**	**-0.6**
	comp=Z,27nm,0.9s,mb5.0						
FITZ				*e*		04 10 03.8	
FITZ				*e*		04 11 12.3	
FITZ				*e*S	**S**	**04 14 37.5**	**-3.7**
FITZ	**Fitzroy Crossi**	**29.66**	**124**	P	**P**	**04 09 47.7**	**-0.4**
	comp=Z,15nm,0.9s,mb4.7,baz=296,slow=6.3,SNR=31						
FITZ				LR	LR	04 21 11.9	
	comp=Z,348nm,21.4s,MS4.0,baz=301,slow=35						
SWI	**Sorong**	**31.21**	**88**	P	**P**	**04 10 00.9**	**-1.0**
	comp=Z,202nm,0.6s,mb6.1						
ODAN	**Odare**	**31.35**	**338**	*e*P	**P**	**04 10 03.4**	**+0.5**
	comp=Z,56nm,0.8s,mb5.5						
TAPN	**Taplejung**	**31.68**	**339**	*e*P	**P**	**04 10 06.8**	**+1.0**
	comp=Z,120nm,0.9s,mb5.7						
RAMN	**Ramite**	**31.74**	**337**	*e*P	**P**	**04 10 07.1**	**+0.8**
	comp=Z,53nm,0.7s,mb5.5						
QZH	**Quanzhou**	**32.40**	**33**	P	**P**	**04 10 14.3**	**+2.1**
QZH				S	**S**	**04 15 22.0**	**-1.9**
QZH				LR	LR		
	comp=N,3μm,16.1s						
QZH				LR	LR		
	comp=E,5μm,26.1s						
QZH				LR	LR		
	comp=Z,4μm,16.4s,MS5.2						
JIRN	**Jiri**	**32.53**	**337**	*e*P	**P**	**04 10 14.3**	**+1.0**
	comp=Z,113nm,0.7s,mb5.9						
PKI	**Pulchoki**	**32.77**	**335**	*e*P	**P**	**04 10 15.7**	**+0.4**
LSA	**Lhasa**	**32.82**	**346**	P	**P**	**04 10 15.4**	**-0.4**
LSA				XP	sP	04 10 30.8	-1.2
LSA				S	**S**	**04 15 27.4**	**-2.9**
LSA				XS	sS	04 15 49.0	-0.1
LSA				LR	LR		
	comp=N,400nm,25.7s						
LSA				LR	LR		
	comp=E,590nm,41.7s						
LSA				LR	LR		
	comp=Z,680nm,26.4s,MS4.2						
LSA	**Lhasa**	**32.82**	**346**	*e*P	**P**	**04 10 15.9**	**+0.1**
LSA				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.4						
LSA	**Lhasa**	**32.82**	**346**	*e*P	**P**	**04 10 15.9**	**+0.1**
	comp=Z,33nm,0.7s,mb5.4						
GUN	**Gumba**	**32.88**	**336**	*e*P	**P**	**04 10 17.2**	**+0.9**
	comp=Z,124nm,0.5s,mb6.1						
DMN	**Daman**	**32.93**	**335**	*e*P	**P**	**04 10 17.1**	**+0.4**
	comp=Z,17nm,0.6s,mb5.1						
POO	**Poona**	**33.00**	**310**	*ex*	x	04 10 15.0	
KKN	**Kakani**	**33.02**	**335**	*e*P	**P**	**04 10 17.9**	**+0.4**
CD2	**Chengdu**	**33.09**	**6**	P	**P**	**04 10 16.3**	**-1.8**
CD2				AP	pP	04 10 25.8	-3.6
CD2				XP	sP	04 10 30.0	-4.3
CD2				PP	PP	04 11 28.4	-5.1
CD2				PCP	PcP	04 12 57.4	-3.5
CD2				S	**S**	**04 15 33.8**	**-0.6**
CD2				XS	sS	04 15 50.1	-3.2
CD2				PCS	PcS	04 16 42.0	-4.4
CD2				SS	SS	04 17 37.9	-20
CD2				SCS	ScS	04 20 37.5	-5.0
CD2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,2μm,19.2s,MS5.0						
CD2				LR	LR		
	comp=E,2μm,15.6s,MS5.0						
CD2				LR	LR		
	comp=Z,2μm,15.6s,MS5.0						
GKN	**Gorkha**	**33.47**	**335**	*e*P	**P**	**04 10 21.8**	**+0.3**
	comp=Z,31nm,0.4s,mb5.6						
KOLN	**Koldanda**	**33.73**	**333**	*e*P	**P**	**04 10 24.2**	**+0.5**
	comp=Z,23nm,0.5s,mb5.4						
YHNB	**Yeheng**	**33.77**	**37**	*e*P	**P**	**04 10 24.4**	**+0.3**
DANN	**Dangsing**	**34.15**	**334**	*e*P	**P**	**04 10 27.7**	**+0.3**
	comp=Z,30nm,0.4s,mb5.6						
NWAO	**Narrogin (SRO)**	**34.58**	**154**	LR	LR	04 22 43.4	
	comp=Z,2μm,21.4s,MS4.7,baz=152,slow=33						
WHN	**Wuhan**	**35.27**	**22**	⇓P	**P**	**04 10 36.6**	**-0.5**
WHN				S	**S**	**04 16 07

comp=Z,106nm,1.3s,mb5.4
LZH AMB AMB
comp=Z,257nm,5.2s
LZH LR LR
comp=N,1µm,13.6s
LZH LR LR
comp=Z,2µm,17.3s,MS5.0
NJ2 Nanjing 38.42 26 *e*P **P 04 11 00.5 -3.3**
NJ2 AP pP 04 11 11.4 -3.9
NJ2 XP sP 04 11 14.3 -5.9
NJ2 PP PP 04 12 33.3 +0.9
NJ2 S **S 04 16 54.0 -2.2**
NJ2 XS sS 04 17 12.5 -2.7
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
NJ2 AMB AMB
comp=Z,100nm,4.4s
NJ2 LR LR
comp=N,680nm,17.8s,MS4.7
NJ2 LR LR
comp=E,850nm,16.1s,MS4.7
NJ2 LR LR
comp=Z,930nm,14.3s,MS4.7
SSE Sheshan 38.72 30 P **P 04 11 08.0 +1.7**
SSE XP sP 04 11 16.1 -6.5
SSE S **S 04 17 05.6 +5.0**
SSE XS sS 04 17 20.6 +0.9
SSE AMB AMB
comp=Z,41nm,0.7s,mb5.3
SSE AMB AMB
comp=Z,144nm,4.7s
SSE LR LR
comp=N,1µm,18.5s,MS4.8
SSE LR LR
comp=E,791nm,18.5s,MS4.8
SSE LR LR
comp=Z,1µm,19.5s,MS4.8
FORT Forrest 38.87 140 *e*P **P 04 11 08.9 +1.3**
comp=Z,15nm,0.6s,mb4.9
ASAR Alice Springs 39.10 126 P **P 04 11 09.7 0.0**
comp=Z,21nm,0.8s,mb4.9,baz=302,slow=8.0,SNR=118
ASAR PcP PcP 04 13 19.9 +0.9
comp=Z,2.9nm,0.8s,baz=316,slow=2.0,SNR=4.9
ASAR S **S 04 17 04.2 -2.4**
comp=Z,12nm,1.1s,baz=297,slow=17,SNR=21
JOW Kunigami 39.65 41 LR LR 04 25 49.1
comp=Z,434nm,21.8s,MS4.2,baz=197,slow=34
TIY Taiyuan 41.31 15 *e*P **P 04 11 26.1 -1.6**
TIY S **S 04 17 38.9 -0.3**
TIY LR LR
comp=N,433nm,13.2s,MS4.8
TIY LR LR
comp=E,639nm,12.2s,MS4.8
TIY LR LR
comp=Z,937nm,21.2s
GTA Gaotai 41.38 360 *e*P **P 04 11 27.8 -0.5**
GTA AP pP 04 11 36.3 -3.5
GTA XP sP 04 11 40.1 -4.6
GTA S **S 04 17 40.6 +0.3**
GTA XS sS 04 17 54.8 -4.6
GTA SS SS 04 20 40.3 -5.2
GTA AMB AMB
comp=Z,14nm,1.8s,mb4.3
GTA AMB AMB
comp=Z,116nm,5.1s
GTA LR LR
comp=N,661nm,15.6s,MS4.9
GTA LR LR
comp=E,1µm,16.8s,MS4.9
GTA LR LR
comp=Z,803nm,17.1s,MS4.7
HHC Hu-ho-hao-te 44.09 13 *e*P **P 04 11 50.0 -0.2**
HHC AP pP 04 12 00.3 -1.5
HHC XP sP 04 12 04.6 -2.1
HHC PP PP 04 13 34.6 +1.0
HHC SCP ScP 04 17 22.9 -0.8
HHC PCS PcS 04 17 26.1 -1.9
HHC S **S 04 18 21.3 +1.3**
HHC XS sS 04 18 38.0 -1.3
HHC SS SS 04 21 31.5 -7.1
HHC SCS ScS 04 21 43.3 -2.3
HHC AMB AMB
comp=Z,21nm,0.8s,mb4.9
HHC AMB AMB
comp=Z,219nm,7.8s
HHC LR LR
comp=N,1µm,16.4s,MS5.0
HHC LR LR
comp=E,750nm,16.1s,MS5.0
HHC LR LR
comp=Z,1µm,16.3s,MS4.9
BJT Baijiatuau 44.51 18 *e*P **P 04 11 53.2 -0.4**
BJT pmax pmax
comp=Z,94nm,1.4s
BJT Baijiatuau 44.51 18 *e*P **P 04 11 53.2 -0.4**
comp=Z,94nm,1.4s,mb5.4
BJI Beijing 44.53 18 P **P 04 11 53.4 -0.4**
BJI XP sP 04 12 04.5 -5.7
BJI S **S 04 18 32.1 +5.6**
BJI XS sS 04 18 42.8 -2.9
BJI AMB AMB
comp=Z,44nm,1.3s,mb5.1
BJI AMB AMB
comp=Z,257nm,3.5s
BJI LR LR
comp=N,2µm,16.1s,MS5.1
BJI LR LR
comp=E,405nm,17.4s,MS5.1
BJI LR LR
comp=Z,1µm,17.3s,MS4.9
DL2 Dalian 45.45 24⇑ *i*P **P 04 11 59.8 -1.3**
DL2 *e*S **S 04 18 40.9 +1.1**
DL2 AMB AMB
comp=Z,30nm,0.7s,mb5.2
DL2 AMB AMB
comp=Z,130nm,4.9s
DL2 LR LR
comp=N,450nm,17.5s,MS4.6
DL2 LR LR
comp=E,400nm,15.4s,MS4.6
DL2 LR LR
comp=Z,540nm,18.8s,MS4.5
KSH Kashi 47.02 334 P **P 04 12 13.1 -0.3**
KSH *e*AP pP 04 12 23.0 -2.1
KSH *e*XP sP 04 12 27.1 -2.8
KSH *e*PCP PcP 04 13 45.3 +0.1
KSH *e*PP PP 04 14 04.1 -0.4
KSH *e*SCP ScP 04 17 35.1 -0.8
KSH *e*PCS PcS 04 17 39.1 -1.1
KSH *e*S **S 04 18 59.9 -2.4**
KSH *e*XS sS 04 19 20.1 -1.6
KSH *e*SCS ScS 04 22 02.1 -2.4
KSH *e*SS SS 04 22 24.1 -5.7
KSH AMB AMB
comp=Z,586nm,3.1s
KSH LR LR
comp=N,774nm,5.3s
KSH LR LR
comp=E,622nm,5.3s
KSH LR LR
comp=Z,509nm,5.5s
WMQ Urumqi 47.12 348⇑ *i*P **P 04 12 14.8 +0.7**
WMQ AP pP 04 12 24.5 -1.3
WMQ XP sP 04 12 29.0 -1.6
WMQ PCP PcP 04 13 46.0 +0.6
WMQ PP PP 04 14 05.0 -0.3
WMQ S **S 04 19 05.0 +1.5**
WMQ SCS ScS 04 22 03.0 -2.0
WMQ AMB AMB
comp=Z,165nm,1.4s,mb5.8
WMQ AMB AMB
comp=Z,561nm,4.0s
WMQ LR LR
comp=N,724nm,15.6s,MS4.8
WMQ LR LR
comp=E,562nm,15.0s,MS4.8
WMQ LR LR
comp=Z,607nm,20.8s
KSRS Korea Array 47.14 30 P **P 04 12 14.1 -0.3**
comp=Z,27nm,1.1s,mb5.1,baz=223,slow=8.3,SNR=24
KSRS LR LR
comp=Z,420nm,18.4s,MS4.4,baz=238,slow=39
CTA Charters Tower 48.47 115 *e*P **P 04 12 24.5 -0.5**
comp=Z,18nm,0.9s,mb5.1
CTA *e* pP 04 12 36.5 -0.2
CTA Charters Tower 48.47 115 LR LR 04 35 13.2
comp=Z,428nm,20.6s,MS4.4,baz=16,slow=39
CTA Charters Tower 48.47 115 *e*P **P 04 12 24.5 -0.5**
CTA *e* pP 04 12 36.5 -0.2
CTA pmax pmax
comp=Z,18nm,0.9s
CTAO Charters Tower 48.47 115 *e*P **P 04 12 24.3 -0.7**
CTAO *e**PP pP 04 12 36.3 -0.4
CTAO pmax pmax
comp=Z,21nm,0.8s,mb5.2
CTAO Charters Tower 48.47 115 *e*P **P 04 12 24.3 -0.7**
comp=Z,21nm,0.8s,mb5.2
CTAO *e*pP pP 04 12 36.3 -0.4
SNY Shenyang 48.72 23⇑⇑ P **P 04 12 21.4 -5.1**
SNY AMB AMB
comp=Z,240nm,3.9s
SNY LR LR
comp=N,802nm,15.3s,MS4.9
SNY LR LR
comp=E,667nm,15.5s,MS4.9
STKA Stephens Creek 48.99 132 *e*P **P 04 12 29.7 +0.9**
comp=E,8.8nm,0.6s,mb5.0
STKA Stephens Creek 48.99 132 P **P 04 12 29.8 +1.0**
comp=E,16nm,0.7s,mb5.2,baz=305,slow=7.5,SNR=26
STKA LR LR 04 34 57.5
comp=E,792nm,19.0s,MS4.7,baz=266,slow=38
TKM2 Tokmak 2 50.02 337 P **P 04 12 37.2 +0.8**
TKM2 pmax pmax
comp=Z,50nm,0.8s,mb5.6
TKM2 Tokmak 2 50.02 337 P **P 04 12 37.6 +1.1**
SNR=14
TKM2 Tokmak 2 50.02 337 *e*P **P 04 12 37.1 +0.6**
comp=Z,50nm,0.8s,mb5.6
KBK Karagaybulak 50.06 336 P **P 04 12 38.5 +1.8**
SNR=12
SONM Songino Array 50.11 6 P **P 04 12 37.1 +0.1**
comp=Z,17nm,0.7s,mb5.2,baz=191,slow=6.9,SNR=55
SONM pP pP 04 12 48.8 0.0
comp=Z,13nm,0.7s,baz=189,slow=8.8,SNR=9.3
SONM LR LR 04 37 02.7
comp=Z,1µm,18.7s,MS4.9,baz=85,slow=40
SONM Songino Array 50.11 6 P **P 04 12 37.1 +0.1**
SONM *PP pP 04 12 48.8 0.0
SONM Songino Array 50.11 6 P **P 04 12 37.1 +0.1**
SONM pP pP 04 12 48.8 0.0
SONM LR LR 04 37 02.7
AML Almayashu 50.15 335 P **P 04 12 38.6 +1.1**
SNR=18
AML Almayashu 50.15 335 *e*P **P 04 12 38.3 +0.8**
comp=Z,22nm,0.5s,mb5.5
ULN Ulaanbaatar 50.21 6 P **P 04 12 38.1 +0.3**
SNR=20
ULN Ulaanbaatar 50.21 6 *e*P **P 04 12 37.8 0.0**
ULN pmax pmax
comp=Z,55nm,1.4s,mb5.4
ULN Ulaanbaatar 50.21 6 *e*P **P 04 12 37.8 0.0**
comp=Z,55nm,1.4s,mb5.4
FRU Bishkek 50.34 336 *e*P **P 04 12 39.0 +0.1**
FRU pmax pmax
comp=Z,91nm,2.2s,mb5.4
CHMS Chumysh 50.42 336 P **P 04 12 39.9 +0.4**
SNR=8.1
EKS2 Erkin-Say 50.55 335 P **P 04 12 41.6 +1.1**
SNR=23
EKS2 Erkin-Say 50.55 335 *e*P **P 04 12 41.3 +0.8**
comp=Z,22nm,0.6s,mb5.3
USP Ospenovka 50.75 336 P **P 04 12 42.3 +0.4**
SNR=30
CN2 Changchun 51.12 23 *e*P **P 04 12 42.8 -1.9**
CN2 *e*XP sP 04 12 54.8 -6.6
CN2 *e*S **S 04 19 57.0 -2.8**
CN2 AMB AMB
comp=Z,30nm,1.2s,mb5.1
CN2 AMB AMB
comp=Z,250nm,6.0s
CN2 LR LR
comp=N,1µm,16.0s,MS5.0
CN2 LR LR
comp=E,640nm,16.0s,MS5.0
CN2 LR LR
comp=Z,3µm,18.0s,MS5.4
MK31 Makanchi Array 51.21 344 *e*P **P 04 12 45.3 -0.1**
MKAR Makanchi Array 51.21 344 P **P 04 12 45.4 0.0**
comp=Z,30nm,0.7s,mb5.4,baz=147,slow=7.8,SNR=149
MKAR pP pP 04 12 57.2 0.0
comp=Z,18nm,0.5s,baz=155,slow=8.1,SNR=11
MKAR LR LR 04 38 21.3
comp=Z,242nm,20.1s,MS4.2,baz=161,slow=40
MKAR Makanchi Array 51.21 344 P **P 04 12 45.4 0.0**
MKAR *PP pP 04 12 57.2 0.0
MKAR Makanchi Array 51.21 344 P **P 04 12 45.4 0.0**
MKAR pP pP 04 12 57.2 0.0
MKAR LR LR 04 38 21.3
JHJ Hachijo jima 2 51.35 43 LR LR 04 33 03.8
comp=Z,246nm,19.6s,MS4.2,baz=302,slow=34
KK31 Karatay Array 52.34 333 P **P 04 12 53.3 -0.5**
KK31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
MAJO Matsushiro 52.37 39 *e*P **P 04 12 53.2 -1.0**
MAJO pmax pmax
comp=Z,38nm,1.4s,mb5.1
MAJO Matsushiro 52.37 39 *e*P **P 04 12 53.2 -1.0**
comp=Z,38nm,1.4s,mb5.1
MAT Matsushiro 52.37 39 P **P 04 12 53.6 -0.6**
MAT *e*S **S 04 20 16.8 -0.4**
MJAR Matsushiro Arr 52.37 39 P **P 04 12 53.4 -0.9**
comp=Z,5.5nm,0.8s,mb4.5,baz=221,slow=7.6,SNR=21
MJAR pP pP 04 13 06.0 -0.1
comp=Z,4.0nm,0.5s,baz=222,slow=7.7,SNR=5.1
MJAR LR LR 04 36 49.0
comp=Z,382nm,18.9s,MS4.5,baz=235,slow=38
MJAR Matsushiro Arr 52.37 39 P **P 04 12 53.4 -0.8**
MJAR *PP pP 04 13 06.0 -0.1
ZAK Zakamensk 52.43 3 *e*P **P 04 12 52.0 -2.4**
ZAK *e* 04 14 04.5
ZAK pmax pmax
comp=Z,12nm,1.4s,mb4.6
VLA Vladivostok 53.42 29 *e*P **P 04 13 00.8 -1.0**
VLA pmax pmax
comp=Z,104nm,2.0s,mb5.4
MDJ Mudanjiang 53.52 26 P **P 04 13 01.9 -0.6**
MDJ AP pP 04 13 08.1 -6.3
MDJ XP sP 04 13 10.9 -8.3
MDJ SCP ScP 04 18 05.5 +1.8
MDJ PCS PcS 04 18 07.9 0.0
MDJ S **S 04 20 32.5 -0.1**
MDJ XS sS 04 20 44.3 -7.9
MDJ SCS ScS 04 22 50.3 +1.6
MDJ SS SS 04 24 15.1 +1.6
MDJ AMB AMB
comp=Z,13nm,1.4s,mb4.7
MDJ AMB AMB
comp=Z,137nm,4.6s
MDJ LR LR
comp=N,818nm,19.9s,MS5.0
MDJ LR LR
comp=E,904nm,17.3s,MS5.0
MDJ LR LR
comp=Z,1µm,21.6s,MS4.9
MOY Mondy 53.65 1 *e*P **P 04 13 03.5 +0.2**
MOY pmax pmax
comp=Z,49nm,2.7s,mb5.0
TLY Talaya 53.74 3 P **P 04 13 04.2 +0.2**
comp=Z,114nm,1.3s,mb5.6,SNR=8.0
TLY Talaya 53.74 3 P **P 04 13 04.7 +0.7**
SNR=16
TLY Talaya 53.74 3 *e*P **P 04 13 04.5 +0.5**
TLY *e*S **S 04 20 31.3 -4.0**
TLY pmax pmax
comp=Z,25nm,1.0s,mb5.1
TLY MLR MLR
comp=Z,1µm,17.0s,MS5.0
TLY Talaya 53.74 3 *e*P **P 04 13 04.5 +0.5**
EIDS Eidsvold 54.21 120 *e*P **P 04 12 59.4 -8.6**
comp=Z,47nm,0.8s,mb5.5
IRK Irkutsk 54.33 3 *e*P **P 04 13 07.9 -0.4**
IRK *e* 04 14 16.8
IRK pmax pmax
comp=Z,89nm,2.2s,mb5.3
KURK Kurchatov 55.79 344 P **P 04 13 18.4 -0.5**
comp=Z,220nm,1.5s,mb6.0,SNR=26
KURK Kurchatov 55.79 344 P **P 04 13 19.0 +0.1**
SNR=27
KURK Kurchatov 55.79 344*c i*P **P 04 13 18.8 -0.1**
KURK pmax pmax
comp=Z,96nm,2.0s,mb5.5
KURK Kurchatov 55.79 344 *e*P **P 04 13 18.7 -0.2**
comp=Z,59nm,1.1s,mb5.5
ZAA0 Zalesovo Array 57.35 349 *e*P **P 04 13 29.4 -0.5**
ZALV Zalesovo Beam 57.35 349 P **P 04 13 29.3 -0.6**
comp=Z,10nm,0.4s,mb5.2,baz=184,slow=6.6,SNR=38
ZALV pP pP 04 13 42.0 +0.1
comp=Z,41nm,0.8s,baz=152,slow=5.1,SNR=12
ZALV LR LR 04 40 37.2
comp=Z,295nm,21.5s,MS4.4,baz=166,slow=39
ZALV Zalesovo Beam 57.35 349 P **P 04 13 29.3 -0.6**
ZALV *PP pP 04 13 42.0 +0.1
ZALV Zalesovo Beam 57.35 349 P **P 04 13 29.3 -0.6**
ZALV pP pP 04 13 42.0 +0.1
ZALV LR LR 04 40 37.2
KLR Kul'dur 58.07 24⇓ *e*P **P 04 13 30.5 -4.5**
KLR pmax pmax
comp=E,42nm,1.8s
KLR pmax pmax
comp=Z,140nm,1.8s,mb5.7
NVS Novosibirsk 58.50 349 *e*P **P 04 13 36.6 -1.3**
NVS *e*S **S 04 21 40.8 +2.4**
NVS pmax pmax
comp=Z,62nm,1.8s,mb5.3
NVS pmax pmax
comp=N,67nm,1.7s
NVS pmax pmax
comp=E,28nm,1.5s
NVS smax
comp=E,17nm,1.5s
RDF Al-Radifah 59.01 306 *e*P **P 04 13 41.7 -0.3**
baz=306
RDF AMb AMB 04 13 56.8
comp=Z,49nm,1.2s,mb5.4,baz=306
NAY Al-Naaiem 59.38 306 *e*P **P 04 13 43.9 -0.7**
baz=306
NAY AMb AMB 04 13 58.9
comp=Z,22nm,1.5s,mb5.0,baz=306
RST Umm Al-Ruwaisa 59.67 306 *e*P **P 04 13 45.3 -1.3**
baz=306
RST AMb AMB 04 14 03.4
comp=Z,32nm,1.4s,mb5.2,baz=306
HNR Honiara 59.94 100 LR LR 04 41 47.0
comp=Z,147nm,20.3s,MS4.1,baz=145,slow=38
BVA0 Borovoye Array 60.37 340 *i* P **P 04 13 49.7 -1.2**
BVA0 pmax pmax
comp=Z,6.0nm,1.6s,mb4.4
BRVK Borovoye 60.43 340 P **P 04 13 50.7 -0.6**
SNR=10
BRVK Borovoye 60.43 340 *e*P **P 04 13 50.2 -1.1**
BRVK pmax pmax
comp=Z,31nm,1.1s,mb5.2
BRVK Borovoye 60.43 340 *e*P **P 04 13 50.2 -1.1**
comp=Z,31nm,1.1s,mb5.2
BOD Bodaibo 60.84 8 *e*P **P 04 13 53.5 -0.5**
BOD pmax pmax
comp=Z,58nm,1.2s,mb5.6
YSS Yuzh-Sakhalins 61.60 32*c i*P **P 04 13 59.0 -0.3**
YSS pmax pmax
comp=Z,96nm,1.2s,mb5.8
YSS Yuzh-Sakhalins 61.60 32 *e*P **P 04 13 58.8 -0.5**
comp=Z,94nm,1.1s,mb5.8
AB31 Akbulak array 61.82 331 *i* P **P 04 13 59.8 -1.0**
AB31 pmax pmax
comp=Z,426nm,0.9s
CLNS Chul'man 62.16 15 *e*P **P 04 14 02.0 -1.0**
CLNS *e**PP pP 04 14 10.4 -4.6
CLNS *e* 04 14 42.7
CLNS *e* 04 16 18.0
CLNS *e*S **S 04 22 27.5 +2.2**
CLNS *e*SS SS 04 26 31.5 +2.5
CLNS pmax pmax
comp=Z,37nm,1.0s,mb5.5
CLNS pmax pmax
comp=E,17nm,0.8s
CLNS pmax pmax
comp=N,19nm,0.9s
CLNS smax
comp=N,63µm,13.1s
CLNS smax
comp=E,154µm,12.7s
CLNS MLR MLR
comp=Z,689nm,17.0s,MS4.9
CLNS MLR MLR
comp=N,513nm,17.0s,MS4.8
CLNS MLR MLR
comp=E,218nm,14.0s,MS4.8
KMBO Kilima Mbogo 62.79 270 LR LR 04 38 35.2
comp=E,550nm,19.3s,MS4.7,baz=100,slow=33
AKTO Aktyubinsk 63.54 331 P **P 04 14 10.6 -1.6**
AKTO pmax pmax
comp=Z,15nm,1.4s,mb4.8
GNI Garni 65.70 316 *e*P **P 04 14 26.3 -0.2**
GNI pmax pmax
comp=Z,41nm,1.3s
GNI Garni 65.70 316 *e*P **P 04 14 26.3 -0.3**
comp=Z,41nm,1.3s,mb5.3
SVE Sverdlovsk 66.87 338⇑ *e*P **P 04 14 33.7 0.0**
SVE *e* 04 16 58.0
SVE *e*SSS 04 30 35.3
SVE pmax pmax
comp=Z,61nm,1.4s,mb5.4
SVE MLR MLR
comp=Z,445nm,22.0s,MS4.6
ARU Arti 67.39 336*d i*P **P 04 14 36.8 -0.2**
ARU *e* 04 15 01.2
ARU *e*S S 04 23 32.3 +2.6
ARU *e*SS SS 04 27 56.6 +6.2
ARU pmax pmax
comp=Z,45nm,1.7s,mb5.2
ARU MLR MLR
comp=Z,473nm,21.0s,MS4.7
ARU Arti 67.39 336 *e*P **P 04 14 36.3 -0.7**
comp=Z,55nm,1.3s,mb5.4
ARU LR LR
comp=Z,489nm,20.0s,MS4.7
YAK Yakutsk 67.89 15⇑ *i*P **P 04 14 38.9 -1.2**
YAK pmax pmax
comp=Z,176nm,1.2s,mb6.0
YAK Yakutsk 67.89 15 *e*P **P 04 14 38.8 -1.3**
comp=Z,162nm,1.1s,mb6.0
KIV Kislovodsk 68.72 319*c i*P **P 04 14 45.7 +0.1**
KIV *e*SS SS 04 28 12.8 +1.4
KIV pmax pmax
comp=Z,72nm,2.1s,mb5.2
KIV MLR MLR
comp=Z,100nm,17.0s,MS4.1
KIV Kislovodsk 68.72 319 *e*P **P 04 14 45.7 +0.1**
comp=Z,12nm,0.8s,mb4.9
MALT Malatya 69.50 312 P **P 04 14 49.6 -1.0**
MALT pmax pmax
comp=Z,42nm,1.5s,mb5.2
MALT Malatya 69.50 312 *e*P **P 04 14 49.3 -1.4**
comp=Z,42nm,1.5s,mb5.2
MALT LR LR
comp=Z,243nm,22.0s,MS4.4
MAW Mawson 70.13 194 LR LR 04 39 29.6
comp=Z,628nm,18.6s,MS4.9,baz=9.8,slow=30
SKR Severo-Kuril's 70.98 34 *e*P **P 04 14 58.1 -1.3**
ANN Anapa 72.51 318 *e*P **P 04 15 05.8 -2.9**
ANN *e* 04 24 30.8
ANN pmax pmax
comp=Z,106nm,1.0s,mb5.7
PETK Petropavlovsk- 73.00 32 P **P 04 15 11.0 -0.4**
comp=Z,6.4nm,0.8s,mb4.6,baz=204,slow=3.3,SNR=6.1
PETK LR LR 04 51 54.6
comp=Z,176nm,18.5s,MS4.4,baz=351,slow=40
PET Petropavlovsk 73.47 33⇓ *i*P **P 04 15 13.6 -0.6**
PET pmax pmax
comp=Z,84nm,1.3s,mb5.5
PET Petropavlovsk 73.47 33 *e*P **P 04 15 14.0 -0.2**
comp=Z,76nm,1.3s,mb5.5
PET *e*pP pP 04 15 25.3 -1.2
VSR Storozhevoye 73.96 325 *e*P **P 04 15 15.9 -1.2**
VSR *e**PP pP 04 15 24.2 -5.2
VSR *e**SP sP 04 15 29.2 -4.9
VSR pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
VSR pmax pmax
comp=N,9.0nm,1.0s
VSR pmax pmax
comp=E,7.0nm,0.9s
ANTO Ankara 74.15 312 *e*P **P 04 15 17.9 -0.6**
ANTO pmax pmax
comp=Z,59nm,1.7s,mb5.2
ANTO MLR MLR
comp=Z,173nm,22.0s,MS4.3

ANTO Ankara 74.15 312 *e*P **P 04 15 17.9 -0.6**
comp=Z,58nm,1.7s,mb5.2
ANTO LR LR
comp=Z,173nm,22.0s,MS4.3
RPZ Rata Peaks 74.81 135 LR LR 04 48 13.3
comp=Z,520nm,21.2s,MS4.8,baz=173,slow=36
BOSA Boshof 75.63 241 P **P 04 15 27.4 0.0**
comp=Z,2.8nm,0.8s,mb4.2,baz=41,slow=11,SNR=2.8
BOSA LR LR 04 44 13.3
comp=Z,649nm,18.6s,MS5.0,baz=123,slow=32
TIXI Tiksi 76.02 9*d iP* **P 04 15 26.7 -1.9**
TIXI *e* pP 04 15 38.2 -2.8
TIXI *e*S S 04 25 07.5 -1.0
TIXI pmax pmax
comp=Z,51nm,1.6s,mb5.2
TIXI Tiksi 76.02 9⇑ *eP* **P 04 15 27.0 -1.6**
MOS Moscow 76.68 329 *eP* **P 04 15 31.4 -1.3**
MOS *i* pP 04 15 45.0 0.0
OBN Obninsk 76.98 328⇑ *eP* **P 04 15 34.1 -0.2**
OBN *e**PP pP 04 15 42.3 -4.4
OBN *e**SP sP 04 15 47.9 -3.5
OBN *e* 04 18 27.1
OBN pmax pmax
comp=Z,55nm,1.4s,mb5.3
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.5
OBN Obninsk 76.98 328 *eP* **P 04 15 34.1 -0.3**
comp=Z,161nm,1.5s,mb5.7
OBN LR LR
comp=Z,309nm,19.0s,MS4.6
SYO Syowa Base 77.72 199⇑ *es*P sP 04 15 54.4 -0.9
SYO Syowa Base 77.72 199⇓ *e*PP PP 04 18 35.0 +1.1
AKASG Malin Array Be 79.66 322 P **P 04 15 48.8 -0.5**
comp=Z,0.8nm,0.4s,mb4.0,baz=97,slow=6.1,SNR=8.1
AKASG LR LR 05 00 00.1
comp=Z,142nm,18.4s,MS4.3,baz=275,slow=42
VRI Vrincioaia 80.02 317⇓ *iP* **P 04 15 52.1 +0.7**
VRI Vrincioaia 80.02 317⇓ P **P 04 15 52.1 +0.7**
MLR Muntele Rosu 80.47 317⇑ *iP* **P 04 15 54.3 +0.5**
MLR Muntele Rosu 80.47 317⇑ P **P 04 15 54.3 +0.5**
BURAR Bucovina Array 81.43 319⇑ *iP* **P 04 15 59.9 +1.0**
BURAR Bucovina Array 81.43 319⇑ P **P 04 15 59.9 +1.0**
BUR08 Bucovina Ar. S 81.45 319 *eP* **P 04 15 59.3 +0.4**
VTS Vitosha 81.81 313⇓ *iP* **P 04 16 00.8 -0.2**
VTS Vitosha 81.81 313⇓ P **P 04 16 00.8 -0.2**
JOF Joensuu 82.40 335 *ep* **P 04 16 03.2 -0.4**
comp=Z,11nm,0.8s,mb4.8
JOF Joensuu 82.40 335 *eP* **P 04 16 03.2 -0.4**
JOF pmax pmax
comp=Z,11nm,0.8s,mb4.8
LVV L'vov 82.67 321 *eP* **P 04 16 05.1 -0.2**
LVV *e* pP 04 16 19.3 +1.5
DRGR 82.94 318⇓ *iP* **P 04 16 07.8 +1.0**
DRGR 82.94 318⇓ P **P 04 16 07.8 +1.0**
BZS Buzias 83.48 316⇑ *iP* **P 04 16 09.7 +0.1**
BZS Buzias 83.48 316⇑ P **P 04 16 09.7 +0.1**
KWP Kalwaria 83.48 320 *eP* **P 04 16 10.2 +0.7**
KWP Kalwaria 83.48 320 P **P 04 16 10.1 +0.6**
KWP *e* pP 04 16 23.6 +1.6
KWP pmax pmax
comp=Z,100nm,1.6s,mb5.6
KWP Kalwaria 83.48 320 *eP* **P 04 16 10.2 +0.7**
KOLS Kolonicke sedl 83.63 320 *eP* **P 04 16 11.2 +0.9**
SUW Suwalki 84.06 325 *eP* **P 04 16 12.2 -0.2**
SUW Suwalki 84.06 325 P **P 04 16 12.5 +0.1**
SUW *e* pP 04 16 26.2 +1.3
SUW pmax pmax
comp=Z,75nm,1.2s,mb5.7
CRVS Cervenica-Dubn 84.15 319 *eP* **P 04 16 13.0 +0.1**
KAF Kangasniemi 84.37 333 *ep* **P 04 16 13.7 0.0**
comp=Z,8.6nm,0.6s,mb5.1,baz=91,slow=4.6
KAF Kangasniemi 84.37 333 *eP* **P 04 16 13.7 0.0**
KAF pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
STHS Stebnicka Huta 84.38 320 *eP* **P 04 16 13.1 -1.0**
STHS *e* pP 04 16 25.3 -1.3
STHS pmax pmax
comp=Z,10.0nm,1.3s,mb4.8
STHS Stebnicka Huta 84.38 320 *eP* **P 04 16 13.1 -1.0**
STHS *ep*P pP 04 16 25.2 -1.4
STHS Stebnicka Huta 84.38 320 *eP* **P 04 16 13.1 -1.0**
comp=Z,10nm,1.3s,mb4.8
STHS *e* pP 04 16 25.3 -1.3
KECS Kecovo 84.71 319 *eP* **P 04 16 14.4 -1.4**
KECS *e* 04 16 30.1
KECS pmax pmax
comp=Z,5.0nm,1.2s,mb4.5
KECS Kecovo 84.71 319 *eP* **P 04 16 14.4 -1.4**
comp=Z,5.2nm,1.2s,mb4.5
KECS *e* 04 16 30.1
NIE Niedzica 84.98 320 *eP* **P 04 16 18.0 +0.9**
PSZ Piszkesteto 85.02 318 *eP* **P 04 16 16.7 -0.6**
PSZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
PSZ Piszkesteto 85.02 318 *eP* **P 04 16 16.7 -0.7**
comp=Z,5.7nm,0.8s,mb4.8
OJC Ojcow 85.43 321 *eP* **P 04 16 19.0 -0.4**
PKSM Moragy 85.62 316⇓ *iP* **P 04 16 20.5 +0.1**
PKSM Moragy 85.62 316⇓ P **P 04 16 20.5 +0.1**
VYHS Vyhne 85.80 319 *eP* **P 04 16 21.1 -0.1**
VYHS *e* 04 16 37.1
VYHS pmax pmax
comp=Z,9.0nm,1.7s,mb4.7
VYHS Vyhne 85.80 319 *eP* **P 04 16 21.1 -0.1**
comp=Z,9.0nm,1.7s,mb4.7
VYHS *e* 04 16 37.1
KEV Kevo 86.22 341 *ep* **P 04 16 20.1 -2.7**
comp=Z,16nm,1.0s,mb5.2
KEV Kevo 86.22 341 *eP* **P 04 16 20.1 -2.7**
KEV pmax pmax
comp=Z,16nm,1.0s,mb5.2
OKC Ostrava-Krasne 86.43 320 *eP* **P 04 16 25.8 +1.5**
OKC *es*P sP 04 16 39.5 -2.0
ARCES ARCESS Array B 86.66 340 P **P 04 16 25.3 +0.3**
comp=Z,8.1nm,0.6s,mb5.1,baz=105,slow=4.8,SNR=69
ARCES LR LR 04 58 41.3
comp=Z,285nm,19.6s,MS4.7,baz=13,slow=38
ARCES ARCESS Array B 86.66 340 P **P 04 16 25.3 +0.3**
ARCES LR LR 04 58 41.3
ARE0 ARCESS Array S 86.66 340 *eP* **P 04 16 24.9 -0.1**
MORC Moravsky Berou 86.81 320 *eP* **P 04 16 26.1 -0.1**
MORC pmax pmax
comp=Z,38nm,1.7s,mb5.3
MORC Moravsky Berou 86.81 320 *eP* **P 04 16 26.1 -0.1**
comp=Z,38nm,1.7s,mb5.3
MODS Modra-Piesok 86.81 319 *eP* **P 04 16 26.9 +0.7**
MODS *ep*P pP 04 16 41.5 +2.7
MODS Modra-Piesok 86.81 319 *eP* **P 04 16 27.0 +0.8**
MODS *e* pP 04 16 41.5 +2.7
DPC Dobruska-Polom 87.66 320 *eP* **P 04 16 31.1 +0.8**
DPC *ep*P pP 04 16 44.5 +1.7
KSP Ksiaz 87.73 321 *eP* **P 04 16 30.9 +0.3**
KSP *e**PP pP 04 16 41.5 -1.7
UPC Upice 87.87 321 *eP* **P 04 16 31.4 +0.1**
UPC *es*P sP 04 16 44.6 -3.9
BOJS Bojanci 87.89 316 *iP* **P 04 16 31.8 +0.3**
BOJS *i* pP pP 04 16 44.9 +0.8
PERS Pernice 88.09 317 *iP* **P 04 16 32.8 +0.4**
PERS *i* pP pP 04 16 46.4 +1.4
TREC Trest 88.09 319 *eP* **P 04 16 32.7 +0.4**
TREC *es*P sP 04 16 46.5 -3.1
SOKA Soboth 88.15 317⇑ *iP* **P 04 16 33.4 +0.7**
LJU Ljubljana 88.45 316 *iP* **P 04 16 34.8 +0.7**
LJU *i* pP pP 04 16 49.1 +2.4
JAVS Javornik 88.76 316 *iP* **P 04 16 35.4 -0.2**
JAVS *i* pP pP 04 16 49.0 +0.8
PRU Pruhonice 88.77 320 *eP* **P 04 16 35.9 +0.4**
PRU *es*P sP 04 16 49.9 -2.8
PVCC Panska Ves 88.79 320 *eP* **P 04 16 36.0 +0.4**
PVCC *es*P sP 04 16 49.9 -2.9
PTQR Pietraquaria 88.96 312 P **P 04 16 37.1 +0.5**
comp=Z,22nm,0.7s,mb5.6
AQU L'Aquila 88.98 312 P pP 04 16 49.4 +0.1
CING Cingoli 89.20 313 P pP 04 16 50.0 -0.3
BRG Berggiesshubel 89.22 321 *eP* **P 04 16 38.2 +0.6**
BRG *e* pP 04 16 52.2 +2.0
BRG pmax pmax
comp=Z,15nm,1.8s,mb5.0
BRG pmax pmax
comp=Z,18nm,1.4s,mb5.2
BRG Berggiesshubel 89.22 321 *eP* **P 04 16 38.3 +0.7**
comp=Z,20nm,1.5s,mb5.2
BRG *ep*P pP 04 16 47.9 -2.3
BRG Berggiesshubel 89.22 321 *eP* **P 04 16 38.2 +0.6**
comp=Z,25nm,1.8s,mb5.2
BRG *e* pP 04 16 52.2 +2.1
comp=Z,29nm,1.4s
GEC2 GERESS Array S 89.22 319 *eP* **P 04 16 38.1 +0.4**
GEC2 pmax pmax
comp=Z,27nm,1.5s,mb5.4
GEC2 GERESS Array S 89.22 319 *eP* **P 04 16 38.1 +0.4**
comp=Z,27nm,1.5s,mb5.4
GERES GERESS Array B 89.22 319 P **P 04 16 38.2 +0.6**
comp=Z,1.7nm,0.7s,mb4.5,baz=106,slow=4.3,SNR=16
NRCA Norcia 89.22 313 P **P 04 16 37.9 +0.1**
PTCC Patocco-Chiusa 89.29 316 P **P 04 16 38.1 +0.1**
KHC Kasperske Hory 89.32 319 *eP* **P 04 16 35.4 -2.8**
KHC *ep*P pP 04 16 46.9 -3.8
RUE Ruedersdorf 89.44 322 *eP* **P 04 16 39.2 +0.6**
comp=Z,27nm,0.8s,mb5.6
FSSB Fossombrone 89.52 314 P **P 04 16 38.9 -0.3**
RJOB Jochberg 89.75 318 *eP* **P 04 16 41.0 +0.8**
comp=Z,5.0nm,0.7s,mb5.0
RSM Repubblica di 89.77 314 P pP 04 16 56.1 +3.1
WET Wettzell 89.78 319 *eP* **P 04 16 40.7 +0.4**
WET pmax pmax
comp=Z,17nm,1.4s,mb5.2
WET Wettzell 89.78 319 *eP* **P 04 16 40.7 +0.4**
comp=Z,17nm,1.4s,mb5.2
CLL Collm 89.84 321⇑ *iP* **P 04 16 40.8 +0.3**
CLL *i* *PP pP 04 16 50.5 -2.6
CLL *i* *SP sP 04 16 54.8 -2.9
CLL *e*S S 04 27 30.0 +0.3
CLL pmax pmax
comp=Z,18nm,1.6s,mb5.2
CLL MLR MLR
comp=Z,200nm,16.6s,MS4.6
CLL Collm 89.84 321 *eP* **P 04 16 40.7 +0.2**
comp=Z,8.0nm,0.4s,mb5.4
CLL Collm 89.84 321⇑ *iP* **P 04 16 40.8 +0.3**
comp=Z,18nm,1.6s,mb5.2
CLL *i* pP pP 04 16 50.5 -2.6
CLL *i* (sP) sP 04 16 54.8 -2.9
comp=Z,31nm,1.7s
CLL *i* x x 04 17 02.9
CLL *e*S S 04 27 30.0 +0.3
CLL *ex* x 04 27 54.0
CLL *e*SS SS 04 33 32.0 +4.4
CLL *e*SSS 04 37 18.0
CLL *e*SSSS 04 40 30.0
CLL Collm 89.84 321⇑ *iP* **P 04 16 40.8 +0.3**
comp=Z,18nm,1.6s,mb5.2
CLL *i* pP pP 04 16 50.5 -2.6
CLL *i* sP sP 04 16 54.8 -2.9
CLL *e*S S 04 27 30.0 +0.3
CLL LR LR
comp=Z,200nm,16.6s,MS4.6
NKC Novy Kostel 90.13 320 *eP* **P 04 16 42.5 +0.6**
NKC *es*P sP 04 16 55.9 -3.2
TANN Tannenbergstha 90.13 320 *eP* **P 04 16 42.1 +0.2**
comp=Z,24nm,1.8s,mb5.2
SFI Santa Sofia 90.20 314 P **P 04 16 43.8 +1.4**
SFI pmax pmax
comp=Z,68nm,1.4s,mb5.8
SFI Santa Sofia 90.20 314 P **P 04 16 43.8 +1.4**
comp=Z,68nm,1.4s,mb5.8
ROTZ Rotzenmuhle 90.26 320 *eP* **P 04 16 43.5 +1.0**
comp=Z,17nm,1.6s,mb5.1
MANZ Manzenberg 90.33 320 *eP* **P 04 16 43.7 +0.9**
comp=Z,12nm,1.2s,mb5.1
MANZ *ep*P pP 04 16 54.2 -1.2
CTI Castel Tesino 90.45 316 P **P 04 16 44.5 +1.0**
WTTA Wattenberg 90.51 317⇑ *iP* **P 04 16 43.9 +0.2**
comp=Z,10nm,1.0s,mb5.1
MOX Moxa 90.68 320 *eP* **P 04 16 45.0 +0.6**
MOX *e* pP 04 16 59.1 +2.1
comp=Z,38nm,1.9s
MOX Moxa 90.68 320 *eP* **P 04 16 45.0 +0.6**
MOX *e* pP 04 16 59.1 +2.1
MOX pmax pmax
comp=Z,38nm,1.9s,mb5.4
MOX Moxa 90.68 320 *eP* **P 04 16 44.9 +0.5**
comp=Z,17nm,1.5s,mb5.2
MOX Moxa 90.68 320 *eP* **P 04 16 45.0 +0.6**
comp=Z,38nm,1.9s,mb5.4
MOX *e* pP 04 16 59.1 +2.1
MOTA Moosalm 90.88 317⇑ *iP* **P 04 16 45.4 -0.1**
comp=Z,12nm,1.3s,mb5.1
GRA1 Grafenberg Arr 90.89 320 *eP* **P 04 16 46.2 +0.7**
comp=Z,28nm,1.7s,mb5.3
GRA1 *ep*P pP 04 16 57.0 -1.1
GRF Grafenberg Arr 90.89 320 *eP* **P 04 16 46.2 +0.7**
GRF *e**PP pP 04 16 57.0 -1.1
GRF pmax pmax
comp=Z,28nm,1.7s,mb5.3
GRF Grafenberg Arr 90.89 320 *eP* **P 04 16 46.2 +0.7**
GRF *e**PP pP 04 16 57.0 -1.1
GRF pmax pmax
comp=Z,28nm,1.7s,mb5.3
GRF Grafenberg Arr 90.89 320 *eP* **P 04 16 46.2 +0.7**
comp=Z,28nm,1.7s,mb5.3
GRF *ep*P pP 04 16 57.0 -1.1
FETA Feichten 91.12 317⇑ *iP* **P 04 16 47.1 +0.5**
comp=Z,9.4nm,1.4s,mb4.9
NOA NORSAR Array B 91.33 331 LR LR 05 03 01.1
comp=Z,105nm,19.4s,MS4.3,baz=70,slow=39
CLZ Clausthal 91.50 322 *eP* **P 04 16 48.8 +0.6**
CLZ pmax pmax
comp=Z,13nm,1.4s,mb5.1
CLZ Clausthal 91.50 322 *eP* **P 04 16 48.8 +0.6**
comp=Z,13nm,1.4s,mb5.1
BSEG Bad Segeberg 91.59 324 *eP* **P 04 16 48.9 +0.3**
BSEG pmax pmax
comp=Z,44nm,1.9s,mb5.5
BSEG Bad Segeberg 91.59 324 *eP* **P 04 16 48.9 +0.3**
comp=Z,44nm,1.9s,mb5.5
DAVA Damuels 91.71 317⇑ *iP* **P 04 16 50.1 +0.8**
comp=Z,16nm,1.2s,mb5.2
UBBA Unterbreizbach 91.71 321 *eP* **P 04 16 49.7 +0.5**
comp=Z,8.0nm,1.2s,mb4.9
KEST Kesra 91.84 306 P **P 04 16 51.4 +1.2**
comp=Z,3.9nm,1.1s,mb4.7,baz=305,slow=2.4,SNR=6.3
STU Stuttgart 92.19 319 *eP* **P 04 16 53.0 +1.5**
comp=Z,10.0nm,0.7s,mb5.2
TORD Torodi Ar. Bea 98.64 283 P **P 04 17 22.2 +0.5**
comp=Z,0.3nm,0.9s,baz=91,slow=6.8,SNR=2.3
TORD LR LR 05 00 54.5
comp=Z,180nm,18.4s,MS4.6,baz=100,slow=35
PPT Papeete 108.68 109 *e*LR LR 04 54 18.5
comp=Z,150nm,22.0s
TAOE Nuku Hiva Isla 119.00 101 *e*LR LR 04 59 01.4
comp=Z,726nm,29.1s
EDM Edmonton 122.12 23 *e*PKIKP PKPdf 04 22 35.5 -0.8
ETW Entiat 122.87 31 *e*PKPdf PKPdf 04 22 37.0 -0.9
HUMO Hull Mountain 124.39 38 *e*PKPdf PKPdf 04 22 41.7 +0.7
CHMT Chamberlain Mo 126.86 28 *e*PKPdf PKPdf 04 22 44.8 -0.8
WVOR Wild Horse Val 127.06 35 *e*PKIKP PKPdf 04 22 46.5 +0.4
EGMT Eagleton 127.59 25 *e*PKPdf PKPdf 04 22 47.3 +0.4
DLMT Dillon 128.31 29 *e*PKPdf PKPdf 04 22 49.1 +0.7
BOZ Bozeman (W) 128.56 28 *e*PKIKP PKPdf 04 22 49.5 +0.6
MCMT McKenzie Canyo 128.57 30 *e*PKPdf PKPdf 04 22 49.0 +0.1
HLID Hailey 128.66 32 *e*PKPdf PKPdf 04 22 50.2 +1.1
NVAR Mina Array Bea 129.70 39 PKP PKPdf 04 22 52.6 +1.4
comp=Z,1.7nm,0.9s,baz=273,slow=3.2,SNR=8.3
NVAR PP PP 04 25 04.4 +2.7
comp=Z,0.4nm,0.7s,baz=284,slow=6.0,SNR=3.8
ELK Elko 130.10 35 *e*PKIKP PKPdf 04 22 52.4 +0.4
ULM Lac du Bonnet 130.22 13 PKP PKPdf 04 22 51.8 -0.1
comp=Z,4.5nm,0.8s,baz=358,slow=6.6,SNR=5.7
PDAR Pinedale Array 131.70 29 PKP PKPdf 04 22 55.6 +0.7
comp=Z,0.5nm,0.5s,baz=318,slow=2.0,SNR=7.0
DUG Dugway 131.84 34 *e*PKIKP PKPdf 04 22 56.1 +0.8
DUG *e* 04 23 09.9
RSSD Black Hills 133.09 24 *e*PKIKP PKPdf 04 22 58.6 +1.1
MSU Marysvale 133.35 35 *e*PKIKP PKPdf 04 23 00.4 +2.2
SDCO Great Sand Dun 137.53 30 *e*PKPdf PKPdf 04 23 06.3 +0.3
ANMO Albuquerque 139.11 34⇑ *i*PKIKP PKPdf 04 23 10.7 +1.7
WMOK Wichita Mounta 143.16 26 *e*PKIKP PKPdf 04 23 11.8 -4.5
CPUP Villa Florida 144.22 216 PKP PKPdf 04 23 17.3 -1.1
comp=Z,1.9nm,0.5s,baz=133,slow=3.2,SNR=11
TXAR Lajitas Array 144.80 38 PKP PKPdf 04 23 18.9 -0.5
comp=Z,4.6nm,0.3s,baz=286,slow=0.4,SNR=249
TXAR pPKP pPKPdf 04 23 32.1 -0.2
comp=Z,5.5nm,0.5s,baz=196,slow=0.8,SNR=11
GNAR Gosnell 145.11 14 *e*PKPdf PKPdf 04 23 18.4 -1.3
BLA Blacksburg 145.13 1 *e*PKIKP PKPdf 04 23 17.8 -1.8
BLA *e* 04 23 30.9
MIAR Mount Ida 145.38 20 *e*PKIKP PKPdf 04 23 19.6 -0.5
WVT Waverly 145.43 11 *e*PKIKP PKPdf 04 23 19.3 -0.9
WVT *e* 04 23 32.5
UALR University of 145.57 18 *e*PKPdf PKPdf 04 23 19.8 -0.7
UALR 04 23 33.2
TZTN Tazewell 145.64 5 *e*PKPbc PKPbc 04 23 19.8 -1.0
JCT Junction City 146.14 32 *e*PKPbc PKPbc 04 23 22.3 -0.2
JCT *e* 04 23 35.3
TKL Tuckaleechee C 146.50 6 *e*PKP2 PKPab 04 23 22.4 -1.9
CPCT Cooper Cave 146.62 7 *e*PKPbc PKPbc 04 23 23.1 -0.7
OXF Oxford 146.64 14 *e*PKP2 PKPbc 04 23 22.4 -1.5
SWET Sewanee 146.66 9 *e*PKPbc PKPbc 04 23 22.3 -1.6
CNNC Cliffs of the 147.05 357 *e*PKPbc PKPbc 04 23 24.7 -0.3
NATX Nacogdoches 147.46 24 *e*PKPbc PKPbc 04 23 24.3 -2.0
JSC Jenkinsville 148.04 2 *e*PKPbc PKPbc 04 23 27.5 -0.3
JSC *e* 04 23 39.9
VBMS Vicksburg 148.50 17 *e*PKPbc PKPbc 04 23 29.2 +0.2
HKT Hockley 148.52 27 *e*PKP2 PKPbc 04 23 29.6 +0.4
LRAL Lakeview Retre 148.60 11 *e*PKPbc PKPbc 04 23 28.1 -1.2
GOGA Godfrey 148.75 6 *e*PKP2 PKPbc 04 23 29.0 -0.6
LVC Limon Verde 153.12 203 *e*PKPdf PKPdf 04 23 31.6 -1.3
LPAZ La Paz 158.26 212 PKP PKPdf 04 23 40.7 +0.9
comp=Z,1.8nm,1.2s,baz=4.7,slow=1.7,SNR=4.1
LPAZ PKPab PKPab 04 24 16.8 +3.0
comp=Z,0.7nm,0.8s,baz=170,slow=6.1,SNR=3.7
LPAZ La Paz 158.26 212 PKP PKPdf 04 23 40.7 +0.9
LPAZ PKPab PKPab 04 24 16.8 +3.0

IDC 14 04:22:40.5±2.8, 1236N×14412E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/19, mbtmp3.7/3, Error ellipse: s-maj=225.5km s-min=13.4km az=117.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.42**	**31**	Pg	Pg	04 23 06.8	-0.9
	94nm,0.3s,baz=189,slow=5.5,SNR=22						
GUMO				Lg		04 23 25.1	
	139nm,0.3s,baz=154,slow=23,SNR=16						
WRA	**Warramunga Arr**	**33.51**	**197**	P	P	04 29 21.2	-0.6
	0.7nm,0.8s,baz=20,slow=9.9,SNR=8.7						
ASAR	**Alice Springs**	**37.17**	**196**	P	P	04 29 53.3	-0.1
	0.5nm,0.6s,baz=16,slow=12,SNR=4.8						
NVAR	**Mina Array Bea**	**88.26**	**51**	P	P	04 35 35.5	+1.4
	0.4nm,0.6s,baz=251,slow=4.5,SNR=4.4						

*ISCJB **14** 04:24:46.7±0.3, 3275N±002×11737W±002, h10km, Error ellipse: s-maj=3.1km s-min=2.2km az=144.1*
*NEIC **14** 04:24:47.3, 3276N×11736W, h6km, ML3.0(PAS), After PAS.*
NEIC Felt in the San Diego area.
*ECX **14** 04:24:48.6±0.7, 3274N×11730W, h0km±20km, MD3.0, ML3.1*

ISC 14 04:24:47.0±0.3, 3275N±002×11736W±002, h10km, n57, σ1s09/87, 32C-27D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
109C	**Camp Elliot, M**	**0.26**	**56**	P	**Pg**	**04 24 52.2**	**-0.1**
	baz=0.2,SNR=126						
109C				⇑S	**Sg**	**04 24 55.4**	**-0.4**
	baz=0.2						
BAR	**Barrett**	**0.58**	**96**	P	**Pg**	**04 24 57.8**	**-0.5**
BAR				*i* S	**Sg**	**04 25 05.8**	**-0.2**
CBX	**Cerro Bola**	**0.73**	**126**⇑	*iP*	**Pg**	**04 25 01.0**	**-0.1**
CBX				*e*S	**Sg**	**04 25 11.1**	**+0.5**
PLM	**Palomar**	**0.74**	**34**⇓	*iP*	**Pg**	**04 25 00.5**	**-0.8**
PLM				*e*S	**Sg**	**04 25 10.2**	**-0.7**
MONP	**Monument Peak**	**0.81**	**79**	⇓P	**Pg**	**04 25 01.8**	**-0.7**
	baz=0.8,SNR=34						
MONP				⇓S	**Sg**	**04 25 12.3**	**-0.7**
	baz=0.8						
MURC	**Murrieta**	**0.86**	**9**	P	**Pg**	**04 25 02.7**	**-1.0**
	baz=0.8,SNR=80						
MURC				⇑S	**Sg**	**04 25 13.8**	**-1.2**
	baz=0.8						
CBKC	**Canebrake**	**0.95**	**80**⇓	*iP*	**Pg**	**04 25 04.3**	**-0.9**
CBKC				*e*S	**Sg**	**04 25 16.5**	**-1.0**
BORC	**Borrego Spring**	**0.95**	**56**⇓	*iP*	**Pg**	**04 25 04.3**	**-1.0**
BORC				*e*S	**Sg**	**04 25 16.5**	**-1.2**
DGR	**Domenigoni Val**	**0.95**	**18**	*eP*	**Pg**	**04 25 03.9**	**-1.4**
DGR				*e*S	**Sg**	**04 25 16.3**	**-1.4**
POB	**Polly Butte**	**1.01**	**21**⇓	*iP*	**Pg**	**04 25 05.1**	**-1.3**
POB				*e*S	**Sg**	**04 25 18.7**	**-0.8**
SCI	**San Clemente I**	**1.03**	**284**	⇑S	**Sg**	**04 25 20.0**	**-0.1**
	baz=1.0						
ENX	**Ensenada**	**1.04**	**145**	*eP*	**Pg**	**04 25 06.6**	**-0.5**
ENX				*e*S	**Sg**	**04 25 20.5**	**-0.1**
CCX	**Cicese**	**1.05**	**146**	*eP*	**Pg**	**04 25 06.9**	**-0.4**
CCX				*e*S	**Sg**	**04 25 20.6**	**-0.4**
DVTC	**Desert V Tower**	**1.07**	**94**	⇓P	**Pg**	**04 25 06.6**	**-0.9**
	baz=1.1,SNR=22						
DVTC				⇑S	**Sg**	**04 25 20.6**	**-0.7**
	baz=1.1						
DVTC	**Desert V Tower**	**1.07**	**94**	*eP*	**Pg**	**04 25 06.7**	**-0.8**
DVTC				*e*S	**Sg**	**04 25 20.4**	**-1.0**
RMX	**La Rumorosa**	**1.09**	**97**⇓	*eP*	**Pb**	**04 25 07.1**	**-0.8**
RMX				*e*S	**Sg**	**04 25 21.5**	**-0.7**
CIS	**Catalina Islan**	**1.10**	**307**	⇓P	**Pb**	**04 25 06.2**	**-1.9**
	baz=1.1,SNR=104						
CIS				⇑S	**Sg**	**04 25 21.1**	**-1.3**
	baz=1.1						
PBX	**Punta Banda**	**1.14**	**152**	*eP*	**Pb**	**04 25 07.6**	**-1.1**
PBX				*e*S	**Sb**	**04 25 23.7**	**+0.2**
PBX				⇑*e*		04 25 25.4	
	comp=N,464nm,0.2s						
PFO	**Pinyon Flat Ob**	**1.15**	**41**	P	**Pb**	**04 25 08.0**	**-1.0**
	baz=1.1,SNR=299						
PFO				⇑S	**Sb**	**04 25 22.7**	**-1.2**
	baz=1.1						
PFO	**Pinyon Flat Ob**	**1.15**	**41**	P	**Pb**	**04 25 08.1**	**-0.9**
PFO				*e*S	**Sb**	**04 25 22.6**	**-1.4**
CRR	**Carrizo Plain**	**1.18**	**83**⇑	*iP*	**Pb**	**04 25 09.0**	**-0.5**
CRR				*e*S	**Sb**	**04 25 23.0**	**-1.8**
YUH	**Yuha Desert**	**1.22**	**94**⇑	*iP*	**Pn**	**04 25 09.2**	**-0.9**
FMP	**Fort Macarthur**	**1.24**	**321**	⇓P	**Pn**	**04 25 09.5**	**-1.0**
	baz=1.2,SNR=10						
ECNX	**Esteban Cantu**	**1.26**	**149**⇓	*eP*	**Pn**	**04 25 10.8**	**+0.1**
ECNX				*eP*		04 25 06.9	
ECNX				*e*S	**Sb**	**04 25 20.6**	**-6.6**
ECNX				*e*S	**Sb**	**04 25 27.6**	**+0.4**
SWSC	**Sam W. Stewart**	**1.33**	**81**	⇑P	**Pn**	**04 25 11.2**	**-0.5**
	baz=1.3,SNR=74						
SWSC				⇓S	**Sb**	**04 25 28.9**	**-0.2**
	baz=1.3						
BFSC	**Mount Baldy St**	**1.51**	**351**	⇑P	**Pn**	**04 25 13.8**	**-0.3**
	baz=1.4,SNR=46						
BFSC				⇑S	**Sn**	**04 25 33.6**	**-0.2**
	baz=1.4						
BBRC	**Big Bear Sol-O**	**1.56**	**14**	⇓P	**Pn**	**04 25 15.0**	**+0.3**
	baz=1.5,SNR=17						
BBRC				⇑S	**Sn**	**04 25 34.9**	**-0.1**
	baz=1.5						
BELC	**Belle Mtn.**	**1.69**	**42**	⇑P	**Pn**	**04 25 16.7**	**0.0**
	baz=1.6,SNR=27						
BC3	**Big Chuckw Mtn**	**1.84**	**60**	⇑P	**Pn**	**04 25 18.5**	**-0.2**
	baz=1.8,SNR=44						
BC3				⇓S	**Sn**	**04 25 41.8**	**-0.1**
	baz=1.8						
BLG	**Laguna Peak**	**1.97**	**314**	⇓S	**Sn**	**04 25 43.6**	**-1.6**
	baz=1.9						
RRX	**Edison Barstow**	**2.15**	**8**	⇑Sb	**Sb**	**04 25 54.0**	**+1.2**
	baz=2.1						
GLA	**Glamis**	**2.15**	**81**	⇓P	**Pn**	**04 25 22.9**	**-0.1**
	baz=2.1,SNR=8.5						
EDW2	**Edwards Air Fo**	**2.19**	**346**	⇑P	**Pn**	**04 25 24.0**	**+0.5**
	baz=2.1,SNR=26						
EDW2				⇑S	**Sn**	**04 25 50.9**	**+0.2**
	baz=2.1						
HEC	**Hector,Ludlow**	**2.25**	**22**	⇓Sb	**Sb**	**04 25 56.7**	**+1.1**
	baz=2.2						
IRM	**Iron Mountain**	**2.33**	**52**	⇑P	**Pn**	**04 25 25.5**	**+0.2**
	baz=2.3,SNR=8.3						
IRM				⇓Sb	**Sb**	**04 25 59.1**	**+1.3**
	baz=2.3						
SPX	**San Pedro Mart**	**2.34**	**136**	*eP*	**Pn**	**04 25 28.1**	**+2.6**
SPX				*e*S	**Sn**	**04 25 59.8**	**+5.6**
112A	**Yuma**	**2.35**	**94**	⇓P	**Pn**	**04 25 26.1**	**+0.3**
	baz=2.3,SNR=45						
112A				⇓S	**Sn**	**04 25 54.6**	**-0.1**
	baz=2.3						
GMRC	**Granite Mounta**	**2.48**	**34**	⇓P	**Pn**	**04 25 27.7**	**+0.3**

baz=2.4,SNR=13
Y12C Blythe 2.58 66 ⇑Sb Sb 04 26 07.1 +2.0
baz=2.5
GSC Goldstone 2.59 10 ⇑Sb Sb 04 26 07.1 +1.6
baz=2.5
113A Mohawk Valley, 3.03 89 ⇑P Pn 04 25 35.5 +0.6
baz=3.0,SNR=7.2
X13A Yucca 3.47 57 P Pn 04 25 42.2 +1.1
baz=3.4,SNR=9.5
V11A Goodsprings 3.48 27 ⇓P Pn 04 25 41.9 +0.7
baz=3.4,SNR=5.8
V12A Nelson 3.63 34 ⇓P Pn 04 25 44.0 +0.8
baz=3.6,SNR=7.8
V13A Grand Canyon W 4.17 41 ⇑P Pn 04 25 52.3 +1.6
baz=4.1,SNR=34
W14A Seligman 4.32 54 ⇓P Pn 04 25 54.2 +1.5
baz=4.3,SNR=6.7
U12A Valley of Fire 4.35 32 ⇑P Pn 04 25 54.7 +1.5
baz=4.3,SNR=13
V14A Boquillas Ranc 4.55 50 ⇑P Pn 04 25 57.7 +1.8
baz=4.5,SNR=11
V03C Hunter Liggett 4.58 317 ⇓P Pn 04 25 55.2 -1.0
baz=4.5,SNR=15
U13A Pakoon Wash 4.61 36 ⇑P Pn 04 25 58.4 +1.7
baz=4.5,SNR=30
U14A Mt Trumbull 5.03 42 ⇑P Pn 04 26 04.5 +2.0
baz=5.0
T13A Saint George 5.12 33 ⇑P Pn 04 26 05.9 +2.1
baz=5.1
X16A Lo Mia Camp, P 5.21 70 ⇑P Pn 04 26 07.1 +2.1
baz=5.2
V15A Kaibab Nationa 5.28 53 ⇓P Pn 04 26 08.1 +2.2
baz=5.2
T14A Hurricane 5.56 38 ⇑P Pn 04 26 11.9 +2.2
baz=5.5
U15A North Rim 5.56 47 ⇓P Pn 04 26 12.1 +2.3
baz=5.5
S13A Holt Ranch, En 5.61 30 ⇑P Pn 04 26 12.9 +2.4
baz=5.5

*ISCJB **14** 05:09:42.2±0.5, 4174N±002×744E±003, h10km, Error ellipse: s-maj=3.3km s-min=3.1km az=7.6*
*STR **14** 05:09:45.4±0.6, 4184N×754E, h10km, MI3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ROM **14** 05:09:45.9±0.8, 4148N×775E, h10km, Md2.9/4, MI2.6/2, Error ellipse: s-maj=25.7km s-min=4.5km az=64.0*
*NEIC **14** 05:09:45.4, 4184N×754E, h10km, ML2.6(ROM), ML3.1(STR), ML3.2(LDG), MN2.4(MDD), After STR.*
*CSEM **14** 05:09:48.3±0.2, 4152N×751E, h35km, ML3.2/20, Error ellipse: s-maj=3.4km s-min=2.3km az=4.0*
*LDG **14** 05:09:50.2±0.2, 4161N×744E, h20km, MI3.2/20, Error ellipse: s-maj=3.0km s-min=2.0km az=165.0*
*GEN **14** 05:09:55.0, 4204N×760E, h4km, ML3.0*
ISC 14 05:09:43.7±0.5, 4173N±002×749E±003, h10km, n69,
σ1§39/125, 2D, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSPF	**L'Ospedale**	**1.28**	**93**	Pg	**Pg**	**05 10 09.1**	**+0.9**
OSPF				Sg	**Sg**	**05 10 24.9**	**+0.1**
PGF	**Pioggiola**	**1.39**	**54**	*e*Pn	**Pg**	**05 10 14.4**	**+4.0**
PGF				*e*Sn	**Sg**	**05 10 32.2**	**+3.8**
	121nm,0.4s						
PGF	**Pioggiola**	**1.39**	**54**	*e*Pn	**Pg**	**05 10 14.4**	**+4.0**
PGF				*e*Sn	**Sg**	**05 10 32.2**	**+3.8**
	61nm,0.4s						
LMR	**La Mourre**	**1.76**	**336**	*e*Pn	**Pg**	**05 10 19.4**	**+2.0**
LMR				*e*Sn	**Sg**	**05 10 41.2**	**+1.0**
	136nm,0.3s						
LMR	**La Mourre**	**1.76**	**336**	*e*Pn	**Pg**	**05 10 19.4**	**+2.0**
LMR				*e*Sn	**Sg**	**05 10 41.2**	**+1.0**
	68nm,0.3s						
FRF	**La Foret Royal**	**1.93**	**341**	*e*Pn	**Pg**	**05 10 22.1**	**+1.4**
FRF				*e*Sn	**Sg**	**05 10 45.1**	**-0.7**
	50nm,0.2s						
FRF	**La Foret Royal**	**1.93**	**341**	*e*Pn	**Pg**	**05 10 22.1**	**+1.4**
FRF				*e*Sn	**Sg**	**05 10 45.1**	**-0.7**
	25nm,0.2s						
BERF	**Bertagne**	**2.06**	**321**	Pg	**Pg**	**05 10 23.7**	**+0.4**
BERF				Sg	**Sg**	**05 10 50.3**	**+0.2**
NEGI	**Seborga**	**2.12**	**4**	P	**Pg**	**05 10 24.7**	**+0.3**
SBF	**Sospel**	**2.13**	**359**	*e*Pn	**Pg**	**05 10 24.8**	**+0.2**
SBF				*e*Sn	**Sg**	**05 10 50.2**	**-2.0**
	29nm,0.3s						
SBF	**Sospel**	**2.13**	**359**	*e*Pn	**Pg**	**05 10 24.8**	**+0.2**
SBF				*e*Sn	**Sg**	**05 10 50.2**	**-2.0**
	15nm,0.3s						
DGI	**Dorgali Grotta**	**2.14**	**131**	⇓*i*Pg	**Pn**	**05 10 18.5**	**-0.9**
DGI				Sg	**Sn**	**05 10 41.0**	**-5.0**
	28nm,0.5s						
TAVF	**Tavernes**	**2.16**	**331**	Pg	**Pg**	**05 10 26.4**	**+1.3**
TAVF				Sg	**Sg**	**05 10 53.4**	**+0.3**
LUCF	**Luceram**	**2.16**	**357**	Pg	**Pg**	**05 10 25.6**	**+0.4**
LUCF				Sg	**Sg**	**05 10 53.2**	**0.0**
PUYF	**Puyloubier**	**2.23**	**324**	Pg	**Pg**	**05 10 26.1**	**-0.4**
PUYF				Sg	**Sg**	**05 10 54.8**	**-0.6**
GELF	**Grande-Etoile**	**2.25**	**318**	Pg	**Pg**	**05 10 26.2**	**-0.6**
SAOF	**Saorge**	**2.25**	**1**	Pg	**Pg**	**05 10 26.8**	**-0.1**
SAOF				Sg	**Sg**	**05 10 54.3**	**-1.8**
AUTN	**L'Aution**	**2.26**	**359**	Pg	**Pg**	**05 10 26.9**	**-0.2**
AUTN				Sg	**Sg**	**05 10 55.5**	**-0.9**
TOUF	**Mont Tournerai**	**2.29**	**356**	Pg	**Pg**	**05 10 27.3**	**-0.3**
TOUF				Sg	**Sg**	**05 10 57.2**	**0.0**
ENR	**Entracque**	**2.49**	**359**	P	**Pg**	**05 10 30.8**	**-0.7**
STV	**Sant Anna di V**	**2.51**	**357**	Pg	**Pg**	**05 10 31.4**	**-0.5**
STV				Sg	**Sg**	**05 11 02.3**	**-2.2**
FIN	**Finale Ligure**	**2.53**	**12**	Pg	**Pg**	**05 10 30.7**	**-1.5**
ROB	**Robourent**	**2.58**	**6**	P	**Pg**	**05 10 31.8**	**-1.3**
SMRF	**Simiane la Rot**	**2.65**	**329**	*e*Pn	**Pg**	**05 10 32.0**	**-2.5**
SMRF				*e*Sn	**Sg**	**05 11 01.6**	**-7.2**
	20nm,0.4s						
SMRF	**Simiane la Rot**	**2.65**	**329**	*e*Pn	**Pg**	**05 10 32.0**	**-2.5**
SMRF				*e*Sn	**Sg**	**05 11 01.6**	**-7.2**
	10nm,0.4s						
VSL	**Villasalto**	**2.66**	**147**	⇓*i*Pn	**Pn**	**05 10 24.3**	**-2.3**
DOI	**San Damiano**	**2.78**	**356**	Pn	**Pg**	**05 10 35.7**	**-1.2**
	28nm,0.4s						
PCP	**Piancastagn**	**2.91**	**15**	P	**Pg**	**05 10 36.2**	**-3.3**
MBDF	**Montbardon**	**3.04**	**350**	*e*Pn	**Pn**	**05 10 37.3**	**+5.5**
MBDF				*e*Sn	**Sn**	**05 11 11.9**	**+3.7**
	22nm,0.5s						
MBDF	**Montbardon**	**3.04**	**350**	*e*Pn	**Pn**	**05 10 37.3**	**+5.5**
MBDF				*e*Sn	**Sn**	**05 11 11.9**	**+3.7**
	11nm,0.5s						
RRL	**Rocca Remolon**	**3.23**	**351**	P	**Pg**	**05 10 43.5**	**-2.1**
ORIF	**Oris-en-Rattie**	**3.39**	**340**	*e*Pn	**Pn**	**05 10 41.8**	**+5.1**
ORIF				*e*Sn	**Sn**	**05 11 20.1**	**+3.1**
	4.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.39**	**340**	*e*Pn	**Pn**	**05 10 41.8**	**+5.1**
ORIF				*e*Sn	**Sn**	**05 11 20.1**	**+3.1**
	2.3nm,0.3s						
EJON	**La Jonquera**	**3.50**	**283**	P	**Pn**	**05 10 38.5**	**+0.4**
	1.2nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**3.50**	**283**	P	**Pn**	**05 10 38.5**	**+0.4**
EJON				S	**Sn**	**05 11 17.1**	**-2.4**
LASF	**Ste Croix**	**3.55**	**312**	*e*Pn	**Pn**	**05 10 42.3**	**+3.4**
LASF				*e*Sn	**Sn**	**05 11 22.3**	**+1.5**
	14nm,0.2s						
LASF	**Ste Croix**	**3.55**	**312**	*e*Pn	**Pn**	**05 10 42.3**	**+3.4**
LASF				*e*Sn	**Sn**	**05 11 22.3**	**+1.5**
	7.1nm,0.2s						
VIVF	**Saint-Julien-l**	**3.74**	**328**	*e*Pn	**Pn**	**05 10 46.3**	**+4.9**
VIVF				*e*Sn	**Sn**	**05 11 27.8**	**+2.3**
	6.6nm,0.2s						
VIVF	**Saint-Julien-l**	**3.74**	**328**	*e*Pn	**Pn**	**05 10 46.3**	**+4.9**
VIVF				*e*Sn	**Sn**	**05 11 27.8**	**+2.3**
	3.3nm,0.2s						
LPG	**La Plagne**	**3.80**	**352**	*e*Pn	**Pn**	**05 10 46.8**	**+4.5**
LPG				*e*Sn	**Sn**	**05 11 30.5**	**+3.5**
	11nm,0.6s						
LPG	**La Plagne**	**3.80**	**352**	*e*Pn	**Pn**	**05 10 46.8**	**+4.5**
LPG				*e*Sn	**Sn**	**05 11 30.5**	**+3.5**
	5.3nm,0.6s						
LPL	**La Plagne**	**3.82**	**352**	*e*Pn	**Pn**	**05 10 47.4**	**+4.8**
LPL				*e*Sn	**Sn**	**05 11 30.6**	**+3.1**
	5.3nm,0.3s						
LPL	**La Plagne**	**3.82**	**352**	*e*Pn	**Pn**	**05 10 47.4**	**+4.8**
LPL				*e*Sn	**Sn**	**05 11 30.6**	**+3.1**
	2.7nm,0.3s						
ETOS	**Mallorca**	**4.06**	**243**	P	**Pn**	**05 10 44.8**	**-1.0**
	1.5nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**4.06**	**243**	P	**Pn**	**05 10 44.8**	**-1.1**
ETOS				S	**Sn**	**05 11 23.3**	**-10**
MTLF	**Montolieu**	**4.21**	**294**	*e*Pn	**Pn**	**05 10 49.9**	**+1.9**
MTLF				*e*Sn	**Sn**	**05 11 36.4**	**-0.8**
	20nm,0.3s						
MTLF	**Montolieu**	**4.21**	**294**	*e*Pn	**Pn**	**05 10 49.9**	**+1.9**
MTLF				*e*Sn	**Sn**	**05 11 36.4**	**-0.8**
	10nm,0.3s						
EMIR	**Miracle**	**4.46**	**274**	P	**Pn**	**05 10 52.1**	**+0.7**
	3.7nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**4.46**	**274**	P	**Pn**	**05 10 52.1**	**+0.7**
EMIR				S	**Sn**	**05 11 41.1**	**-2.1**
EPOB	**Poblet**	**4.83**	**268**	P	**Pn**	**05 10 55.5**	**-0.9**
	0.3nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.83**	**268**	P	**Pn**	**05 10 55.5**	**-0.9**
EPOB				S	**Sn**	**05 11 48.6**	**-3.8**
CAF	**Calviac**	**5.08**	**311**	*e*Pn	**Pn**	**05 11 03.4**	**+3.5**
CAF				*e*Sn	**Sn**	**05 11 58.8**	**+0.2**
	7.0nm,0.3s						
CAF	**Calviac**	**5.08**	**311**	*e*Pn	**Pn**	**05 11 03.4**	**+3.5**
CAF				*e*Sn	**Sn**	**05 11 58.8**	**+0.2**
	3.5nm,0.3s						
EPF	**Esparros**	**5.45**	**286**	*e*Pn	**Pn**	**05 11 08.7**	**+3.7**
EPF				*e*Sn	**Sn**	**05 12 06.8**	**-0.9**
	2.2nm,0.2s						
EPF	**Esparros**	**5.45**	**286**	*e*Pn	**Pn**	**05 11 08.7**	**+3.7**
EPF				*e*Sn	**Sn**	**05 12 06.8**	**-0.9**
	1.1nm,0.2s						
EBIE	**Bielsa**	**5.54**	**282**	P	**Pn**	**05 11 07.6**	**+1.4**
EBIE				S	**Sn**	**05 12 07.8**	**-2.1**
SMF	**Signal de Mont**	**5.57**	**333**	*e*Pn	**Pn**	**05 11 11.0**	**+4.4**
SMF				*e*Sn	**Sn**	**05 12 11.7**	**+1.2**
	1.4nm,0.2s						
SMF	**Signal de Mont**	**5.57**	**333**	*e*Pn	**Pn**	**05 11 11.0**	**+4.4**
SMF				*e*Sn	**Sn**	**05 12 11.7**	**+1.2**
	0.7nm,0.2s						
AVF	**Avril sur Loir**	**5.86**	**331**	*e*Pn	**Pn**	**05 11 14.3**	**+3.7**
AVF				*e*Sn	**Sn**	**05 12 18.6**	**+0.8**
	1.8nm,0.4s						
AVF	**Avril sur Loir**	**5.86**	**331**	*e*Pn	**Pn**	**05 11 14.3**	**+3.7**
AVF				*e*Sn	**Sn**	**05 12 18.6**	**+0.8**
	0.9nm,0.4s						
BGF	**Bois d'Agland**	**5.87**	**327**	*e*Pn	**Pn**	**05 11 14.9**	**+4.2**
BGF				*e*Sn	**Sn**	**05 12 18.6**	**+0.7**
	2.9nm,0.3s						
BGF	**Bois d'Agland**	**5.87**	**327**	*e*Pn	**Pn**	**05 11 14.9**	**+4.2**
BGF				*e*Sn	**Sn**	**05 12 18.6**	**+0.7**
	1.5nm,0.3s						
LFF	**La Frestale**	**5.87**	**305**	*e*Pn	**Pn**	**05 11 14.6**	**+3.8**
LFF				*e*Sn	**Sn**	**05 12 17.5**	**-0.6**
	4.6nm,0.3s						
LFF	**La Frestale**	**5.87**	**305**	*e*Pn	**Pn**	**05 11 14.6**	**+3.8**
LFF				*e*Sn	**Sn**	**05 12 17.5**	**-0.6**
	2.3nm,0.3s						
ESAC	**San Caprasio**	**5.96**	**273**	P	**Pn**	**05 11 12.7**	**+0.8**
ESAC				S	**Sn**	**05 12 16.5**	**-3.6**
ETSF	**Etsaut**	**6.08**	**284**	*e*Pn	**Pn**	**05 11 16.6**	**+3.0**
ETSF				*e*Sn	**Sn**	**05 12 22.4**	**-0.8**
	4.2nm,0.4s						
ETSF	**Etsaut**	**6.08**	**284**	*e*Pn	**Pn**	**05 11 16.6**	**+3.0**
ETSF				*e*Sn	**Sn**	**05 12 22.4**	**-0.8**
	2.1nm,0.4s						
SJPF	**Ste Jean**	**6.59**	**285**	*e*Pn	**Pn**	**05 11 24.8**	**+4.1**
SJPF				*e*Sn	**Sn**	**05 12 33.8**	**-2.1**
	4.3nm,0.7s						
SJPF	**Ste Jean**	**6.59**	**285**	*e*Pn	**Pn**	**05 11 24.8**	**+4.1**
SJPF				*e*Sn	**Sn**	**05 12 33.8**	**-2.1**
	2.2nm,0.7s						

*ISCJB **14** 05:13:59.6±0.3, 3721N±001×544W±001, h4km±2km, Error ellipse: s-maj=2.5km s-min=1.9km az=13.4*
*SFS **14** 05:14:01.0, 3700N×540W, h7km, ML3.0*
*CSEM **14** 05:14:01.5±0.1, 3708N×541W, h0km, ML3.6/23, Error ellipse: s-maj=1.6km s-min=1.0km az=10.0*
*NEIC **14** 05:14:01.9, 3706N×541W, h8km, MN3.0(MDD), After MDD.*
*IGIL **14** 05:14:02.4, 3706N×541W, h7km, ML2.7*
*MDD **14** 05:14:02.0±0.2, 3705N×542W, h11km, mbLg2.9/44, Error ellipse: s-maj=2.3km s-min=1.8km az=180.0, PRIMO*
MDD EMS: II-III INTENSIDAD MIMA.
*LDG **14** 05:14:02.0±0.1, 3703N×543W, h10km, MI3.1/4, Error ellipse: s-maj=2.8km s-min=2.1km az=9.0*
*INMG **14** 05:14:02.4±1.3, 3706N×540W, h15km±2km, ML2.9, Error ellipse: s-maj=2.0km s-min=1.5km az=4.0*
ISC 14 05:14:01.1±0.3, 3714N±001×542W±001, h11km±2km, n160,
σ1§13/303, 3C-5D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIJA	**Lijar**	**0.23**	**177**	⇓P	**Pg**	**05 14 04.4**	**-1.5**
LIJA	**Lijar**	**0.23**	**177**	*i* P	**Pg**	**05 14 04.4**	**-1.6**
ESPR	**Espera**	**0.44**	**232**	Pg	**Pg**	**05 14 10.2**	**+0.4**
	21nm,0.1s,SNR=18						
ESPR				Lg		05 14 14.3	
	181nm,0.3s,SNR=26						
ESPR	**Espera**	**0.44**	**232**	Pg	**Pg**	**05 14 10.1**	**+0.3**
	21nm,0.1s,SNR=18						
ESPR	**Espera**	**0.44**	**232**	⇑Pg	**Pg**	**05 14 10.1**	**+0.3**
ESPR				Lg		05 14 14.7	
GIBL	**Gibalbin**	**0.54**	**235**	P	**Pg**	**05 14 12.7**	**+1.1**
GIBL				S	**Sg**	**05 14 17.7**	**-1.0**
GIBL	**Gibalbin**	**0.54**	**235**	*e*P	**Pg**	**05 14 12.7**	**+1.1**
REAL	**Reales**	**0.68**	**166**	P	**Pg**	**05 14 13.1**	**-1.1**
REAL				S	**Sg**	**05 14 19.6**	**-3.5**
REAL	**Reales**	**0.68**	**166**	*e*P	**Pg**	**05 14 13.1**	**-1.1**
EJIF	**Jimena Fronter**	**0.69**	**183**	⇑Pg	**Pg**	**05 14 12.7**	**-1.7**
	26nm,0.3s,SNR=18						
EJIF				Lg		05 14 21.7	
	121nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**0.77**	**138**	⇑Pg	**Pg**	**05 14 14.1**	**-1.9**
	18nm,0.2s,SNR=18						
EMIJ				Lg		05 14 24.1	
	188nm,0.3s,SNR=5.0						
SCRT	**Cerro San Cris**	**0.79**	**230**	⇓P	**Pg**	**05 14 18.3**	**+1.9**
SCRT				S	**Sg**	**05 14 27.5**	**+0.9**
SCRT	**Cerro San Cris**	**0.79**	**230**	*i* P	**Pg**	**05 14 18.3**	**+2.0**
MOMI	**Momias**	**0.85**	**197**	P	**Pg**	**05 14 18.3**	**+0.9**
MOMI				S	**Sg**	**05 14 26.2**	**-2.2**
MOMI	**Momias**	**0.85**	**197**	*e*P	**Pg**	**05 14 18.3**	**+0.9**
EMAL	**Malaga-Limoner**	**0.88**	**115**	Pg	**Pg**	**05 14 21.5**	**+3.5**
	15nm,0.1s,SNR=4.0						
EMAL				Lg		05 14 29.8	
	31nm,0.1s,SNR=7.9						
EMAL	**Malaga-Limoner**	**0.88**	**115**	*e*P	**Pg**	**05 14 18.0**	**0.0**
EMAL	**Malaga-Limoner**	**0.88**	**115**	Pg	**Pg**	**05 14 21.5**	**+3.5**
	4.5nm,0.1s,SNR=7.9						
CNIL	**Conil**	**0.93**	**214**	P	**Pg**	**05 14 20.3**	**+1.4**
CNIL				S	**Sg**	**05 14 36.0**	**+5.0**
CNIL	**Conil**	**0.93**	**214**	*e*P	**Pg**	**05 14 20.3**	**+1.4**
CNIL				*e*S	**Sg**	**05 14 36.0**	**+5.1**
ECAB	**El Cabril**	**0.93**	**360**	Pg	**Pg**	**05 14 20.7**	**+1.6**
	126nm,0.1s,SNR=386						
ECAB				Lg		05 14 34.7	
	604nm,0.2s,SNR=5.0						
ECAB	**El Cabril**	**0.93**	**360**	Pg	**Pg**	**05 14 20.8**	**+1.7**
	126nm,0.1s,SNR=386						
ECAB	**El Cabril**	**0.93**	**360**	Pg	**Pg**	**05 14 20.8**	**+1.7**
ECAB				Lg		05 14 34.5	
ELOJ	**Sierra Loja**	**1.01**	**89**	Pg	**Pg**	**05 14 22.1**	**+1.5**
	5.2nm,0.1s,SNR=18						
ELOJ				Lg		05 14 33.4	
	40nm,0.3s,SNR=5.0						
ELOJ	**Sierra Loja**	**1.01**	**89**	Pg	**Pg**	**05 14 21.3**	**+0.8**
	26nm,0.2s,SNR=18						
ELOJ	**Sierra Loja**	**1.01**	**89**	Pg	**Pg**	**05 14 21.3**	**+0.8**
ELOJ				Lg		05 14 34.1	
EMIN	**Mina Concepcio**	**1.18**	**302**	⇓Pg	**Pg**	**05 14 23.7**	**0.0**
	37nm,0.2s,SNR=18						
EMIN				Lg		05 14 40.4	
	128nm,0.2s,SNR=5.0						
EMIN	**Mina Concepcio**	**1.18**	**302**	Lg		05 14 40.4	
	92nm,0.2s,SNR=5.0						
EMIN	**Mina Concepcio**	**1.18**	**302**	Pg	**Pg**	**05 14 23.8**	**+0.1**
EADA	**Adamuz**	**1.22**	**33**	Pn	**Pn**	**05 14 24.6**	**+0.5**
	1.6nm,0.1s,SNR=7.9						
EADA				Pg	**Pg**	**05 14 26.0**	**+1.4**
	12nm,0.1s,SNR=42						
EADA				Sn	**Sn**	**05 14 40.4**	**-0.2**
	4.0nm,0.2s,SNR=33						
EADA				Lg		05 14 42.9	
	179nm,0.1s,SNR=5.0						
EADA	**Adamuz**	**1.22**	**33**	Pn	**Pn**	**05 14 24.6**	**+0.5**
	1.6nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.22**	**33**	Pn	**Pn**	**05 14 25.9**	**+1.3**
	12nm,0.1s,SNR=42						
EADA				Sn	**Sn**	**05 14 40.2**	**-0.4**
	4.0nm,0.2s,SNR=33						
EADA	**Adamuz**	**1.22**	**33**	Pn	**Pn**	**05 14 24.6**	**+0.5**
EADA				Pg	**Pg**	**05 14 25.9**	**+1.3**
EADA				Sn	**Sn**	**05 14 40.2**	**-0.4**
EADA				Lg		05 14 42.7	
ERON	**Agron**	**1.29**	**95**	Pg	**Pg**	**05 14 25.5**	**-0.4**
	16nm,0.2s,SNR=7.9						
ERON				Lg		05 14 44.3	
	44nm,0.4s,SNR=7.9						
ERON	**Agron**	**1.29**	**95**	Pg	**Pg**	**05 14 25.5**	**-0.4**
ERON				Lg		05 14 44.0	
ECOG	**Cogollos-Vega**	**1.48**	**84**	Pn	**Pn**	**05 14 27.4**	**-0.3**
	1.0nm,0.1s,SNR=7.9						
ECOG				Pg	**Pg**	**05 14 29.4**	**-0.1**
	2.6nm,0.1s,SNR=19						
ECOG				Lg		05 14 51.1	
	43nm,0.3s,SNR=9.1						
ECOG	**Cogollos-Vega**	**1.48**	**84**	Pg	**Pg**	**05 14 28.6**	**-1.0**
	41nm,0.5s,SNR=19						
ECOG	**Cogollos-Vega**	**1.48**	**84**	Pg	**Pg**	**05 14 28.6**	**-1.0**
ECOG				Lg		05 14 49.8	
EQUE	**Quentar**	**1.58**	**87**	Pn	**Pn**	**05 14 29.6**	**+0.6**
	1.0nm,0.1s,SNR=46						
EQUE				Pg	**Pg**	**05 14 31.3**	**-0.1**
	20nm,0.3s,SNR=7.3						
EQUE				Lg		05 14 52.7	
	94nm,0.4s,SNR=5.8						
EQUE	**Quentar**	**1.58**	**87**	Pn	**Pn**	**05 14 29.5**	**+0.5**
	1.0nm,0.3s,SNR=46						
EBAN	**Banos Encina**	**1.65**	**51**	Pn	**Pn**	**05 14 30.1**	**+0.2**
	1.9nm,0.2s,SNR=14						
EBAN				Pg	**Pg**	**05 14 31.6**	**-1.1**
	7.8nm,0.1s,SNR=10						
EBAN				Sn	**Sn**	**05 14 52.1**	**+1.0**
	13nm,0.1s,SNR=5.0						
EBAN				Lg		05 14 54.9	
	22nm,0.2s,SNR=5.0						
EBAN	**Banos Encina**	**1.65**	**51**	Pn	**Pn**	**05 14 30.3**	**+0.3**
	1.9nm,0.2s,SNR=14						
EBAN	**Banos Encina**	**1.65**	**51**	Pg	**Pg**	**05 14 31.6**	**-1.1**
	7.8nm,0.1s,SNR=10						
EBAN				Sn	**Sn**	**05 14 52.1**	**+1.0**
	13nm,0.1s,SNR=5.0						
EBAN	**Banos Encina**	**1.65**	**51**	Pn	**Pn**	**05 14 30.3**	**+0.3**
EBAN				Pg	**Pg**	**05 14 31.6**	**-1.1**
EBAN				Sn	**Sn**	**05 14 52.1**	**+1.0**
EBAN				Lg		05 14 54.9	
PBAR	**Barrancos**	**1.65**	**309**	*e*Pn	**Pn**	**05 14 30.4**	**+0.4**
PBAR				*e*Sn	**Sn**	**05 14 51.7**	**+0.6**
PBAR				*e*Sg	**Sg**	**05 14 56.8**	**+2.7**
PBAR				A		05 15 03.4	
	84nm,0.5s						
PBAR	**Barrancos**	**1.65**	**309**	*e*Pn	**Pn**	**05 14 30.4**	**+0.4**
PBAR				*e*Sn	**Sn**	**05 14 51.7**	**+0.6**
PBAR				*e*Sg	**Sg**	**05 14 56.8**	**+2.7**
	84nm,0.5s						
DKH	**Dar Kharkhour**	**1.65**	**178**	*i* P	**Pn**	**05 14 33.0**	**+3.0**
DKH				*i* S	**Sn**	**05 14 53.0**	**+1.9**
EGRO	**El Granado**	**1.69**	**284**	Pn	**Pn**	**05 14 30.6**	**0.0**
	1.0nm,0.1s,SNR=54						
EGRO				Pg	**Pg**	**05 14 32.7**	**-0.9**
	5.7nm,0.1s,SNR=18						
EGRO				Sn	**Sn**	**05 14 51.2**	**-0.9**
	9.9nm,0.2s,SNR=7.9						
EGRO				Lg		05 14 55.1	
	50nm,0.1s,SNR=5.0						
EGRO	**El Granado**	**1.69**	**284**	Lg		05 14 55.1	
	50nm,0.1s,SNR=5.0						
EGRO	**El Granado**	**1.69**	**284**	Pn	**Pn**	**05 14 30.5**	**0.0**
	1.7nm,0.1s,SNR=54						
EGRO	**El Granado**	**1.69**	**284**	Pg	**Pg**	**05 14 32.4**	**-1.2**
	2.5nm,0.1s,SNR=18						
EGRO	**El Granado**	**1.69**	**284**	Pn	**Pn**	**05 14 30.6**	**0.0**
EGRO				Pg	**Pg**	**05 14 32.4**	**-1.1**
EGRO				Lg		05 14 55.1	
PVAQ	**Vaqueiros**	**1.85**	**279**	*e*Pn	**Pn**	**05 14 32.7**	**-0.1**
PVAQ				*e*Sn	**Sn**	**05 14 55.1**	**-1.0**
PVAQ				*e*Sg	**Sg**	**05 15 00.7**	**0.0**
PVAQ				A		05 15 03.0	
	74nm,0.2s						
PVAQ	**Vaqueiros**	**1.85**	**279**	*e*Pn	**Pn**	**05 14 32.7**	**-0.1**
PVAQ				*e*Sn	**Sn**	**05 14 55.1**	**-1.0**
PVAQ				*e*Sg	**Sg**	**05 15 00.7**	**0.0**
	74nm,0.2s						
EQES	**Quesada**	**1.98**	**70**	Pn	**Pn**	**05 14 33.9**	**-0.6**
	0.5nm,0.2s,SNR=17						
EQES				Pg	**Pg**	**05 14 38.9**	**-0.1**
	2.9nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**05 15 00.9**	**+1.6**
	14nm,0.2s,SNR=4.9						
EQES				Lg		05 15 04.5	
	41nm,0.2s,SNR=10						
EQES	**Quesada**	**1.98**	**70**	Pn	**Pn**	**05 14 34.9**	**+0.4**
	2.2nm,0.2s,SNR=17						
EQES	**Quesada**	**1.98**	**70**	Pg	**Pg**	**05 14 38.7**	**-0.4**
	3.9nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**05 15 00.3**	**+1.0**
	14nm,0.2s,SNR=4.9						
EQES	**Quesada**	**1.98**	**70**	Pn	**Pn**	**05 14 34.9**	**+0.4**
EQES				Pg	**Pg**	**05 14 38.7**	**-0.4**
EQES				Sn	**Sn**	**05 15 00.3**	**+1.1**
EQES				Lg		05 15 05.7	
PBDV	**

EVO	**Evora**	**2.48 305**	*e*Pn		**Pn**	**05 14 42.0**	**+0.6**
EVO	**Evora**	**2.48 305**	*e*Pg		**Pg**	**05 14 48.7**	**+0.1**
EVO			*e*Sn		**Sn**	**05 15 11.7**	**+0.1**
EVO			*e*Sg		**Sg**	**05 15 20.5**	**-0.3**
EVO			A			05 15 28.9	
	57nm,0.4s						
EVO	**Evora**	**2.48 305**	Pn		**Pn**	**05 14 42.0**	**+0.6**
EVO			Pg		**Pg**	**05 14 48.7**	**+0.1**
EVO			Sn		**Sn**	**05 15 11.7**	**+0.1**
EVO			Lg			05 15 20.5	
	29nm,0.4s						
EVO	**Evora**	**2.48 305**	*e*Pg		**Pg**	**05 14 48.7**	**+0.1**
EVO			*e*Sn		**Sn**	**05 15 11.7**	**+0.1**
EVO			*e*Sg		**Sg**	**05 15 20.5**	**-0.3**
	57nm,0.4s						
EVOP	**Sao Brissos**	**2.55 304**	*e*Pn		**Pn**	**05 14 42.7**	**+0.4**
EVOP	**Sao Brissos**	**2.55 304**	*e*Pg		**Pg**	**05 14 49.3**	**-0.7**
EVOP			*e*Sn		**Sn**	**05 15 12.8**	**-0.6**
EVOP			*e*Sg		**Sg**	**05 15 22.3**	**-0.7**
	36nm,0.3s						
MORF	**Marmelete**	**2.59 275**	*e*Pn		**Pn**	**05 14 43.0**	**+0.2**
MORF	**Marmelete**	**2.59 275**	*e*Pg		**Pg**	**05 14 49.3**	**-1.4**
MORF			*e*Sn		**Sn**	**05 15 14.2**	**0.0**
MORF			*e*Sg		**Sg**	**05 15 23.7**	**-0.5**
MORF			A			05 15 29.1	
	42nm,0.2s						
MORF	**Marmelete**	**2.59 275**	Pn		**Pn**	**05 14 43.0**	**+0.2**
MORF			Pg		**Pg**	**05 14 49.3**	**-1.4**
MORF			Sn		**Sn**	**05 15 14.2**	**0.0**
MORF			Lg			05 15 23.7	
	42nm,0.2s						
MORF	**Marmelete**	**2.59 275**	*e*Pg		**Pg**	**05 14 49.3**	**-1.4**
MORF			*e*Sn		**Sn**	**05 15 14.2**	**0.0**
MORF			*e*Sg		**Sg**	**05 15 23.7**	**-0.5**
	42nm,0.2s						
PTEO	**Sao Teotonio**	**2.67 280**	*e*Pn		**Pn**	**05 14 44.0**	**+0.1**
PTEO			*e*Sn		**Sn**	**05 15 14.7**	**-1.5**
PTEO			*e*Sn		**Sn**	**05 15 14.8**	**-1.4**
PTEO			*e*Sg		**Sg**	**05 15 26.1**	**-0.6**
PTEO			A			05 15 31.0	
	32nm,0.3s						
PTEO	**Sao Teotonio**	**2.67 280**	Pn		**Pn**	**05 14 44.0**	**+0.1**
PTEO			Sn		**Sn**	**05 15 14.7**	**-1.5**
PTEO			Lg			05 15 26.1	
	16nm,0.3s						
PTEO	**Sao Teotonio**	**2.67 280**	*e*Pn		**Pn**	**05 14 44.0**	**+0.1**
PTEO			*e*Sn		**Sn**	**05 15 14.8**	**-1.4**
PTEO			*e*Sg		**Sg**	**05 15 26.1**	**-0.6**
	32nm,0.3s						
MOE	**Montemor**	**2.70 302**	*e*Pn		**Pn**	**05 14 45.0**	**+0.6**
MOE			*e*Sn		**Sn**	**05 15 18.4**	**+1.3**
MOE			*e*Sg		**Sg**	**05 15 27.4**	**-0.4**
PFVI	**Vila Bisbo**	**2.72 271**	*e*Pn		**Pn**	**05 14 44.2**	**-0.5**
PFVI			*e*Sn		**Sn**	**05 15 16.3**	**-1.3**
PFVI			*e*Sg		**Sg**	**05 15 27.3**	**-1.3**
PFVI			A			05 15 33.2	
	26nm,0.5s						
PFVI	**Vila Bisbo**	**2.72 271**	*e*Pn		**Pn**	**05 14 44.2**	**-0.5**
PFVI			*e*Sn		**Sn**	**05 15 16.3**	**-1.3**
PFVI			*e*Sg		**Sg**	**05 15 27.3**	**-1.3**
	26nm,0.5s						
EVIA	**Vianos**	**2.75 56**	Pn		**Pn**	**05 14 44.9**	**-0.2**
	4.3nm,0.1s,SNR=15						
EVIA			Pg		**Pg**	**05 14 54.4**	**+0.7**
	1.6nm,0.2s,SNR=7.9						
EVIA			Lg			05 15 29.7	
	10nm,0.2s,SNR=4.0						
PMRV	**Marv??o**	**2.76 326**	*e*Pn		**Pn**	**05 14 46.1**	**+0.9**
PMRV			*e*Sn		**Sn**	**05 15 18.7**	**+0.1**
PMRV			*e*Sg		**Sg**	**05 15 29.3**	**-0.5**
PMRV			A			05 15 33.9	
	51nm,0.3s						
PMRV	**Marv??o**	**2.76 326**	*e*Pn		**Pn**	**05 14 46.1**	**+0.9**
PMRV			*e*Sn		**Sn**	**05 15 18.7**	**+0.1**
PMRV			*e*Sg		**Sg**	**05 15 29.3**	**-0.5**
	51nm,0.3s						
ESDC	**Sonseca Array**	**2.77 24**	Pn		**Pn**	**05 14 47.5**	**+2.0**
	320µm,0.1s,baz=205,slow=12,SNR=118						
ESDC			Lg			05 15 28.9	
	28nm,0.2s,baz=203,slow=34,SNR=22						
ESDC	**Sonseca Array**	**2.77 24**	Pn		**Pn**	**05 14 47.5**	**+2.1**
	320µm,0.1s,baz=205,slow=12,SNR=118						
PCBR	**Castelo Branco**	**3.14 330**	*e*Pn		**Pn**	**05 14 51.5**	**+1.0**
PCBR			*e*Sn		**Sn**	**05 15 27.4**	**-0.5**
PCBR			*e*Sg		**Sg**	**05 15 42.5**	**+0.5**
PCBR			A			05 15 49.9	
	24nm,0.3s						
PCBR	**Castelo Branco**	**3.14 330**	*e*Pn		**Pn**	**05 14 51.5**	**+1.0**
PCBR			*e*Sn		**Sn**	**05 15 27.4**	**-0.5**
PCBR			*e*Sg		**Sg**	**05 15 42.5**	**+0.5**
	24nm,0.3s						
ALMR	**Almeirim**	**3.20 310**	*e*P		**Pn**	**05 14 51.9**	**+0.6**
ALMR			*e*S		**Sn**	**05 15 28.3**	**-1.1**
ALMR			*e*S		**Sn**	**05 15 28.3**	**-1.1**
ALMR			AML		AML	05 15 31.9	
	comp=E,29nm,0.3s						
ALMR	**Almeirim**	**3.20 310**	*e*P		**Pn**	**05 14 51.9**	**+0.6**
ALMR			*e*S		**Sn**	**05 15 28.3**	**-1.1**
ALMR			*e*S		**Sn**	**05 15 28.3**	**-1.1**
ALMR	**Almeirim**	**3.20 310**	P		**Pn**	**05 14 51.9**	**+0.6**
ALMR			S		**Sn**	**05 15 28.3**	**-1.1**
EMUR	**La Murta**	**3.40 77**	Lg			05 15 49.9	
	comp=E,8.6nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**3.41 63**	Pn		**Pn**	**05 14 53.8**	**-0.3**
	comp=E,0.4nm,0.1s,SNR=7.9						
ETOB			Pg		**Pg**	**05 15 03.5**	**-2.9**
	comp=E,0.7nm,0.1s,SNR=7.9						
ETOB			Sn		**Sn**	**05 15 33.5**	**-1.0**
	comp=E,3.4nm,0.2s,SNR=7.9						
ETOB			Lg			05 15 50.9	
	comp=E,16nm,0.4s,SNR=4.6						
ETOB	**Tobarra**	**3.41 63**	Pn		**Pn**	**05 14 54.2**	**+0.1**
	comp=E,0.4nm,0.1s,SNR=7.9						
ETOB			Sn		**Sn**	**05 15 33.5**	**-1.0**
	comp=E,3.4nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.41 63**	Pn		**Pn**	**05 14 54.2**	**+0.1**
ETOB			Sn		**Sn**	**05 15 33.5**	**-1.0**
ETOB			Lg			05 15 50.9	
PTOM	**Tomar**	**3.41 317**	*e*Pn		**Pn**	**05 14 55.0**	**+0.8**
PTOM			*e*Sn		**Sn**	**05 15 34.8**	**+0.2**
PTOM			*e*Sg		**Sg**	**05 15 50.2**	**-0.5**
PTOM			A			05 15 55.8	
	comp=E,13nm,0.1s						
PTOM	**Tomar**	**3.41 317**	*e*Pn		**Pn**	**05 14 55.0**	**+0.8**
PTOM			*e*Sn		**Sn**	**05 15 34.8**	**+0.2**
PTOM			*e*Sg		**Sg**	**05 15 50.2**	**-0.5**
	comp=E,13nm,0.1s						
PMAFR	**Mafra**	**3.55 302**	*e*Pn		**Pn**	**05 14 56.8**	**+0.7**
PMAFR			*e*Sn		**Sn**	**05 15 37.8**	**-0.2**
PMAFR			A			05 16 05.5	
	comp=E,36nm,0.6s						
PMAFR	**Mafra**	**3.55 302**	*e*Pn		**Pn**	**05 14 56.8**	**+0.7**
PMAFR			*e*Sn		**Sn**	**05 15 37.8**	**-0.2**
	comp=E,36nm,0.6s						
GUD	**Guadarrama**	**3.63 15**	Pn		**Pn**	**05 14 58.9**	**+1.7**
	comp=E,0.6nm,0.2s,SNR=7.9						
GUD			Pg		**Pg**	**05 15 10.4**	**-0.3**
	comp=E,0.7nm,0.2s,SNR=7.9						
GUD			Sn		**Sn**	**05 15 38.4**	**-1.7**
	comp=E,3.1nm,0.3s,SNR=6.5						
GUD			Lg			05 15 53.8	
	comp=E,8.2nm,0.2s,SNR=5.9						
GUD	**Guadarrama**	**3.63 15**	Pn		**Pn**	**05 14 58.9**	**+1.7**
GUD			Sn		**Sn**	**05 15 38.4**	**-1.7**
GUD			Lg			05 15 53.4	
MTE	**Manteigas**	**3.65 334**	*e*Pn		**Pn**	**05 14 59.2**	**+1.7**
MTE			*e*Sn		**Sn**	**05 15 41.0**	**+0.5**
MTE			*e*Sg		**Sg**	**05 15 56.5**	**-1.9**
MTE			A			05 16 03.0	
	comp=E,47nm,0.6s						
MTE	**Manteigas**	**3.65 334**	*e*Pn		**Pn**	**05 14 59.2**	**+1.7**
MTE			*e*Sn		**Sn**	**05 15 41.0**	**+0.5**
MTE			*e*Sg		**Sg**	**05 15 56.5**	**-1.9**
	comp=E,47nm,0.6s						
PVIS	**Viseu**	**4.06 332**	*e*Pn		**Pn**	**05 15 04.5**	**+1.4**
PVIS			*e*Sn		**Sn**	**05 15 50.3**	**-0.2**
PVIS			*e*Sg		**Sg**	**05 16 11.3**	**-0.1**
PVIS			A			05 16 19.5	
	comp=E,15nm,0.5s						
PVIS	**Viseu**	**4.06 332**	*e*Pn		**Pn**	**05 15 04.5**	**+1.4**
PVIS			*e*Sn		**Sn**	**05 15 50.3**	**-0.2**
PVIS			*e*Sg		**Sg**	**05 16 11.3**	**-0.1**
	comp=E,15nm,0.5s						
CZD	**Col de Zad**	**4.11 176**	P		**Pn**	**05 15 03.0**	**-0.8**
CZD			S		**Sn**	**05 15 48.0**	**-3.9**
CZD	**Col de Zad**	**4.11 176**	*e*P		**Pn**	**05 15 03.0**	**-0.8**
MVO	**Moncorvo**	**4.21 343**	*e*Pn		**Pn**	**05 15 06.1**	**+1.0**
MVO			*e*Sn		**Sn**	**05 15 54.3**	**+0.1**
MVO			*e*Sg		**Sg**	**05 16 15.5**	**-0.7**
MVO			A			05 16 29.2	
	comp=E,17nm,0.4s						
MVO	**Moncorvo**	**4.21 343**	*e*Pn		**Pn**	**05 15 06.1**	**+1.0**
MVO			*e*Sn		**Sn**	**05 15 54.3**	**+0.1**
MVO			*e*Sg		**Sg**	**05 16 15.5**	**-0.7**
	comp=E,17nm,0.4s						
ECHE	**Chera**	**4.27 54**	Lg			05 16 20.1	
	comp=E,3.7nm,0.4s,SNR=7.9						
PVRL	**Vila Real**	**4.50 337**	*e*Pn		**Pn**	**05 15 11.3**	**+2.2**
PVRL			*e*Sn		**Sn**	**05 16 00.8**	**-0.6**
PVRL			A			05 16 02.3	
	comp=E,19nm,0.1s						
PVRL			*e*Sg		**Sg**	**05 16 26.9**	**+1.4**
PVRL	**Vila Real**	**4.50 337**	*e*Pn		**Pn**	**05 15 11.3**	**+2.2**
PVRL			*e*Sn		**Sn**	**05 16 00.8**	**-0.6**
	comp=E,19nm,0.1s						
PVRL			*e*Sg		**Sg**	**05 16 26.9**	**+1.4**
ETOR	**Torete**	**4.51 34**	Pn		**Pn**	**05 15 10.3**	**+1.0**
	comp=E,3.3nm,0.2s,SNR=9.6						
ETOR			Sn		**Sn**	**05 16 01.3**	**-0.4**
	comp=E,8.2nm,0.1s,SNR=7.9						
ETOR			Lg			05 16 26.7	
	comp=E,27nm,0.3s,SNR=5.0						
ETOR	**Torete**	**4.51 34**	Pn		**Pn**	**05 15 10.3**	**+1.0**
	comp=E,12nm,0.3s,SNR=9.6						
ETOR			Sn		**Sn**	**05 16 00.6**	**-1.1**
	comp=E,8.9nm,0.1s,SNR=7.9						
ETOR	**Torete**	**4.51 34**	Pn		**Pn**	**05 15 10.3**	**+1.0**
ETOR			Sn		**Sn**	**05 16 00.6**	**-1.1**
ETOR			Lg			05 16 25.6	
ECAL	**Calabor**	**4.90 348**	Pn		**Pn**	**05 15 15.7**	**+1.1**
	comp=E,0.6nm,0.1s,SNR=7.9						
ECAL			Sn		**Sn**	**05 16 08.5**	**-2.8**
	comp=E,1.2nm,0.1s,SNR=5.8						
ECAL			Lg			05 16 38.1	
	comp=E,20nm,0.4s,SNR=7.4						
ECAL	**Calabor**	**4.90 348**	Pn		**Pn**	**05 15 16.0**	**+1.4**
	comp=E,0.4nm,0.1s,SNR=7.9						
ECAL			Sn		**Sn**	**05 15 16.0**	**+1.3**
ECAL	**Calabor**	**4.90 348**	Pn		**Pn**	**05 16 09.7**	**-1.6**
ECAL			Sn		**Sn**	**05 16 09.7**	**-1.6**
ECAL			Lg			05 16 38.1	
PCAB	**Cabril**	**4.99 337**	*e*Pn		**Pn**	**05 15 17.0**	**+1.1**
PCAB			*e*Sn		**Sn**	**05 16 12.5**	**-1.0**
PCAB			*e*Sg		**Sg**	**05 16 37.4**	**-3.8**
PCAB			A			05 16 49.5	
	comp=E,13nm,0.5s						
PCAB	**Cabril**	**4.99 337**	Pn		**Pn**	**05 15 17.0**	**+1.1**
PCAB			Sn		**Sn**	**05 16 12.5**	**-1.0**
PCAB			Lg			05 16 37.4	
	comp=E,6.4nm,0.5s						
PCAB	**Cabril**	**4.99 337**	*e*Pn		**Pn**	**05 15 17.0**	**+1.1**
PCAB			*e*Sn		**Sn**	**05 16 12.5**	**-1.0**
EMOS	**Mosqueruela**	**5.03 49**	Pn		**Pn**	**05 15 16.8**	**+0.4**
	comp=E,0.5nm,0.2s,SNR=4.0						
EMOS			Sn		**Sn**	**05 16 13.5**	**-1.0**
	comp=E,1.1nm,0.4s,SNR=7.9						
EMOS			Lg			05 16 43.1	
	comp=E,2.2nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**5.03 49**	Pn		**Pn**	**05 15 17.3**	**+0.9**
	comp=E,0.1nm,0.2s,SNR=7.9						
EMOS			Sn		**Sn**	**05 16 13.5**	**-1.0**
	comp=E,0.8nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**5.03 49**	Pn		**Pn**	**05 15 17.3**	**+0.9**
EMOS			Sn		**Sn**	**05 16 13.5**	**-0.9**
EMOS			Lg			05 16 40.8	
ELOB	**Lobios**	**5.14 337**	Pn		**Pn**	**05 15 18.9**	**+1.0**
	comp=E,0.3nm,0.1s,SNR=7.9						
ELOB			Sn		**Sn**	**05 16 15.6**	**-1.7**
	comp=E,3.5nm,0.2s,SNR=7.9						
ELOB			Lg			05 16 47.3	
	comp=E,10.0nm,0.4s,SNR=4.9						
ELOB	**Lobios**	**5.14 337**	Pn		**Pn**	**05 15 19.0**	**+1.0**
	comp=E,0.5nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.14 337**	Pn		**Pn**	**05 15 18.9**	**+1.0**
ELOB			Sn		**Sn**	**05 16 15.6**	**-1.7**
ELOB			Lg			05 16 46.0	
ERTA	**Horta de San J**	**5.88 48**	Lg			05 17 09.6	
	comp=E,11nm,0.5s,SNR=7.9						
ESAC	**San Caprasio**	**5.96 38**	Lg			05 17 13.4	
	comp=E,37nm,0.4s,SNR=7.9						
EARI	**Arriondas**	**6.16 1**	Pn		**Pn**	**05 15 33.7**	**+1.9**
	comp=E,0.2nm,0.1s,SNR=7.9						
EARI			Sn		**Sn**	**05 16 39.0**	**-3.2**
	comp=E,0.1nm,0.1s,SNR=7.9						
EARI			Lg			05 17 19.1	
	comp=E,2.1nm,0.4s,SNR=7.9						
EARI	**Arriondas**	**6.16 1**	Pn		**Pn**	**05 15 33.7**	**+1.8**
	comp=E,0.3nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**6.16 1**	Pn		**Pn**	**05 15 33.7**	**+1.9**
EARI			Sn		**Sn**	**05 16 39.2**	**-3.0**
EARI			Lg			05 17 18.5	
ELAN	**Lanestosa**	**6.27 13**	Pn		**Pn**	**05 15 33.9**	**+0.5**
	comp=E,0.3nm,0.2s,SNR=7.9						
ELAN			Sn		**Sn**	**05 16 42.1**	**-2.9**
	comp=E,1.3nm,0.2s,SNR=7.9						
ELAN			Lg			05 17 23.0	
	comp=E,28nm,0.9s,SNR=7.9						
ELAN	**Lanestosa**	**6.27 13**	Pn		**Pn**	**05 15 35.2**	**+1.8**
	comp=E,0.3nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**6.27 13**	Pn		**Pn**	**05 15 35.2**	**+1.8**
ELAN			Sn		**Sn**	**05 16 42.7**	**-2.3**
ELAN			Lg			05 17 23.0	
EPON	**Pontenova**	**6.32 348**	Pn		**Pn**	**05 15 36.0**	**+1.9**
	comp=E,0.2nm,0.1s,SNR=4.0						
EPON			Sn		**Sn**	**05 16 44.8**	**-1.5**
	comp=E,0.4nm,0.2s,SNR=7.9						
EPON			Lg			05 17 24.9	
	comp=E,12nm,0.6s,SNR=7.9						
EPON	**Pontenova**	**6.32 348**	Pn		**Pn**	**05 15 36.0**	**+1.9**
EPON			Sn		**Sn**	**05 16 44.7**	**-1.5**
EPON	**Pontenova**	**6.32 348**	Pn		**Pn**	**05 15 36.0**	**+1.9**
EPON			Sn		**Sn**	**05 16 44.6**	**-1.6**
EPON			Lg			05 17 24.6	
EALK	**Alkurruntz**	**6.77 25**	Sn		**Sn**	**05 16 56.2**	**-1.1**
	comp=E,2.5nm,0.2s,SNR=7.9						
SJPF	**Ste Jean**	**6.77 27**	*e*Pn		**Pn**	**05 15 40.5**	**+0.1**
SJPF			*e*Sn		**Sn**	**05 16 54.3**	**-3.1**
	comp=E,1.8nm,0.3s						
SJPF	**Ste Jean**	**6.77 27**	Pn		**Pn**	**05 15 40.5**	**+0.1**
SJPF			Sn		**Sn**	**05 16 54.3**	**-3.1**
	comp=E,0.9nm,0.3s						
ETSF	**Etsaut**	**6.85 31**	*e*Pn		**Pn**	**05 15 42.0**	**+0.6**
ETSF			*e*Sn		**Sn**	**05 16 56.4**	**-3.0**
	comp=E,1.4nm,0.4s						
ETSF	**Etsaut**	**6.85 31**	Pn		**Pn**	**05 15 42.0**	**+0.6**
ETSF			Sn		**Sn**	**05 16 56.4**	**-3.0**
	comp=E,0.7nm,0.4s						
EBIE	**Bielsa**	**6.99 36**	Pn		**Pn**	**05 15 44.7**	**+1.3**
	comp=E,0.7nm,0.2s,SNR=5.7						
EBIE			Sn		**Sn**	**05 17 00.6**	**-2.2**
	comp=E,0.5nm,0.3s,SNR=7.9						
EBIE	**Bielsa**	**6.99 36**	Pn		**Pn**	**05 15 44.7**	**+1.3**
EBIE			Sn		**Sn**	**05 17 00.6**	**-2.2**
EPF	**Esparros**	**7.35 35**	*e*Pn		**Pn**	**05 15 48.7**	**+0.4**
EPF			*e*Sn		**Sn**	**05 17 08.3**	**-3.4**
	comp=E,1.9nm,0.4s						
EPF	**Esparros**	**7.35 35**	Pn		**Pn**	**05 15 48.7**	**+0.4**
EPF			Sn		**Sn**	**05 17 08.3**	**-3.4**
	comp=E,0.9nm,0.4s						
LFF	**La Frestale**	**9.07 29**	*e*Pn		**Pn**	**05 16 12.1**	**+0.3**
CAF	**Calviac**	**9.61 34**	*e*Pn		**Pn**	**05 16 19.3**	**+0.1**

IDC 14 05:20:36.2±3.5, 368S×10166E, h0km, mb3.7/5, mb1 3.7/5, mb1mx3.6/18, mbtmp3.7/5, Error ellipse: s-maj=152.6km s-min=22.2km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.72**	**120**	P	P	05 27 36.2	-0.6
	0.2nm,0.5s,baz=298,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**36.93**	**125**	P	P	05 27 47.8	+0.7
	0.5nm,0.6s,baz=298,slow=7.7,SNR=5.8						
SONM	**Songino Array**	**51.47**	**4**	P	P	05 29 43.5	+0.3
	1.1nm,0.7s,baz=187,slow=9.5,SNR=10						
MKAR	**Makanchi Array**	**53.09**	**343**	P	P	05 29 55.6	+0.3
	0.5nm,0.6s,baz=150,slow=8.1,SNR=3.7						
ZALV	**Zalesovo Beam**	**59.13**	**348**	P	P	05 30 38.1	-0.3
	0.9nm,0.3s,baz=152,slow=6.5,SNR=1.9						
TXAR	**Lajitas Array**	**144.96**	**41**	PKP	PKPdf	05 40 15.3	-0.9
	0.3nm,0.8s,baz=238,slow=1.2,SNR=3.7						

ISK ***14*** *05:26:42.9, 4062N×3234E, h2km, MD3.3*
DDA ***14*** *05:26:43.5, 4064N×3235E, h5km±2km, Md3.2*
CSEM ***14*** *05:26:43.4±0.1, 4062N×3234E, h5km, MD3.2, Error ellipse: s-maj=1.5km s-min=1.2km az=159.0*
ISCJB ***14*** *05:26:44.3±0.3, 4061N±003×3233E±003, h10km, Error ellipse: s-maj=4.0km s-min=3.5km az=143.4*

ISC 14 05:26:44.3±0.5, 4062N±003×3233E±003, h3km±5km, n28, σ0°72/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGKT	**Sivrigoynuk**	**0.22**	**257**	*i* P	**Pg**	**05 26 48.9**	**+0.4**
SGKT				*i* S	**Sg**	**05 26 53.1**	**+1.8**
SAFT	**Safranbolu**	**0.67**	**23**	PG	**Pg**	**05 26 56.9**	**-0.3**
SAFT				*e*SG	**Sg**	**05 27 06.7**	**+0.8**
LOD	**Lodumlu**	**0.80**	**156**	*e*PG	**Pg**	**05 26 58.2**	**-1.5**
LOD				*e*SG	**Sg**	**05 27 11.1**	**+1.0**
ANTO	**Ankara**	**0.83**	**155**	*e*PG	**Pg**	**05 26 59.5**	**-0.7**
ANTO				*e*SG	**Sg**	**05 27 11.5**	**+0.5**
MDU	**Mudurnu**	**0.87**	**260**	*e*PG	**Pg**	**05 27 00.6**	**-0.3**
KDZE	**Karadeniz Ereo**	**0.96**	**316**	*e*PG	**Pg**	**05 27 01.6**	**-1.2**
ILGA	**Ilgaz**	**1.13**	**67**	*i* P	**Pg**	**05 27 05.2**	**-0.8**
ILGA				*i* S	**Sg**	**05 27 25.9**	**+5.2**
ILGA	**Ilgaz**	**1.13**	**67**	*i* P	**Pg**	**05 27 05.2**	**-0.8**
BALT	**Daday**	**1.21**	**41**	*i* P	**Pg**	**05 27 06.2**	**-1.2**
BALT				*i* S	**Sg**	**05 27 24.4**	**+1.3**
TOS	**Tosya**	**1.35**	**72**	*e*PN	**Pn**	**05 27 09.3**	**-0.6**
GPA	**Golpazari**	**1.58**	**258**	*e*PN	**Pn**	**05 27 12.7**	**-0.4**
ESKT	**Eskisehir**	**1.58**	**226**	*i* P	**Pn**	**05 27 12.6**	**-0.6**
ESKT				*i* S	**Sn**	**05 27 38.7**	**+4.6**
SEYT	**Eskypehyr**	**1.58**	**226**	*i* P	**Pn**	**05 27 12.6**	**-0.6**
KAMT	**Kaman**	**1.64**	**139**	*e*PN	**Pn**	**05 27 14.0**	**+0.1**
KIZT	**Kizilcal**	**1.78**	**191**	*e*PN	**Pn**	**05 27 15.3**	**-0.5**
CORM	**Corum**	**1.81**	**103**	*e*PN	**Pn**	**05 27 16.8**	**+0.6**
BZK	**Bozkurt**	**1.83**	**43**	*e*PN	**Pn**	**05 27 16.9**	**+0.3**
CDAG	**Cicekdag**	**1.85**	**122**	*i* P	**Pn**	**05 27 16.6**	**-0.3**
CDAG				*i* S	**Sn**	**05 27 45.3**	**+4.5**
CTKT	**Corum**	**1.87**	**89**	*i* P	**Pn**	**05 27 18.1**	**+1.0**
CTKT				*i* S	**Sn**	**05 27 46.9**	**+5.7**
ADVT	**Abdulvahap**	**1.99**	**265**	*e*PN	**Pn**	**05 27 19.0**	**+0.3**
BYBT	**Boyabat**	**2.02**	**65**	*e*PN	**Pn**	**05 27 19.4**	**+0.1**
HRT	**Hereke**	**2.04**	**276**	*e*PN	**Pn**	**05 27 19.3**	**-0.1**
KDHN	**Kadinhani**	**2.11**	**185**	*i* P	**Pn**	**05 27 20.1**	**-0.2**
KDHN				*i* S	**Sn**	**05 27 53.3**	**+6.2**
YLV	**Yalova**	**2.25**	**270**	*e*PN	**Pn**	**05 27 22.5**	**+0.1**
ALT	**Altintas**	**2.32**	**228**	*e*PN	**Pn**	**05 27 23.7**	**+0.4**
GEMT	**Gemlik**	**2.40**	**267**	*e*PN	**Pn**	**05 27 24.4**	**-0.1**
DIKM	**Dikmen**	**2.44**	**64**	*e*PN	**Pn**	**05 27 24.9**	**0.0**
YOZ	**Yozgat**	**2.49**	**112**	*e*PN	**Pn**	**05 27 25.8**	**+0.2**

IDC 14 05:45:14.7±4.2, 325S×10108E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.5/19, mbtmp3.5/4, Error ellipse: s-maj=177.4km s-min=24.0km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.44**	**120**	P	P	05 52 20.0	-1.5
	0.3nm,0.4s,baz=307,slow=9.1,SNR=6.2						
ASAR	**Alice Springs**	**37.66**	**126**	P	P	05 52 33.0	+1.1
	0.3nm,0.3s,baz=299,slow=7.4,SNR=3.3						
SONM	**Songino Array**	**51.08**	**5**	P	P	05 54 20.1	+1.2
	0.2nm,0.4s,baz=183,slow=8.9,SNR=3.7						
MKAR	**Makanchi Array**	**52.51**	**344**	P	P	05 54 29.0	-0.7
	0.2nm,0.3s,baz=175,slow=8.5,SNR=2.3						
TXAR	**Lajitas Array**	**145.00**	**40**	PKPbc	PKPbc	06 04 53.5	-0.5
	0.5nm,0.5s,baz=247,slow=1.1,SNR=9.7						

IDC ***14*** *05:46:26.2±1.7, 196S×9945E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.9/20, mbtmp4.0/7, Error ellipse: s-maj=64.1km s-min=19.6km az=57.0*
ISCJB ***14*** *05:46:30.3±1.4, 16S±02×998E±03, h33km, mb4.1/10, Error ellipse: s-maj=52.4km s-min=12.7km az=143.5*
NEIC ***14*** *05:46:34.7±0.7, 1.10S×10056E, h35km, mb4.3/4, Error ellipse: s-maj=22.4km s-min=9.4km az=49.0*

ISC 14 05:46:32.8±1.3, 16S±02×999E±03, h35km, n19, σ0°85/16, mb4.1/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**18.01**	**65**	*e*P	**Pn**	**05 50 31.6**	**-8.9**
CHTO

36nm,0.3s,baz=111,slow=23,SNR=5.7
AFI LR LR 05 49 22.7
comp=Z,54µm,18.6s,baz=285,slow=38
AFI Afiamalu 4.57 71 *e*Pn **Pn 05 47 43.5 -8.5**
AFI Sn **Sn 05 48 35.7 -8.7**
FUNA Funafuti 8.22 326 *e*Pn **Pn 05 48 42.6 +0.5**
RAO Raoul Island 13.81 186 LR LR 05 54 31.5
comp=Z,15µm,19.0s,baz=210,slow=34
RAR Rarotonga 16.63 113 LR LR 05 55 26.6
comp=Z,6µm,21.8s,baz=290,slow=32
DZM Mont Dzumac 17.67 246 *e*P **Pn 05 50 53.4 +4.5**
DZM Mont Dzumac 17.67 246‖ *e*Pn **Pn 05 50 51.4 +2.5**
URZ Urewera 23.45 193 LR LR 06 00 02.7
comp=Z,7µm,19.4s,MS5.1,baz=25,slow=34
HNR Honiara 24.02 282 LR LR 05 59 48.3
comp=Z,8µm,19.6s,MS5.2,baz=116,slow=33
HNR Honiara 24.02 282 *e*P **P 05 51 59.3 +1.8**
HNR pmax pmax
comp=Z,180nm,0.9s,mb5.5
HNR MLR MLR
comp=Z,9µm,21.0s,MS5.2
HNR Honiara 24.02 282 *e*P **P 05 51 59.2 +1.8**
comp=Z,180nm,0.9s,mb5.5
HNR LR LR
comp=Z,9µm,21.0s,MS5.2
XMAS Kiritimati 25.45 48 *e*P **P 05 52 10.2 -0.4**
comp=Z,276nm,1.3s,mb5.6
XMAS LR LR
comp=Z,12µm,21.0s,MS5.4
PAE Paea 25.63 99 *e*P **P 05 52 13.1 +1.0**
comp=Z,834nm,1.3s,mb6.1
PPT Papeete 25.63 98 *e*P **P 05 52 13.6 +1.4**
comp=Z,63nm,1.2s,mb5.0
PPT *e*LQ 05 57 20.1
comp=Z,33µm,26.0s
PPT *e*LR LR 05 58 16.2
comp=Z,4µm,24.5s
PPT Papeete 25.63 98 LR LR 05 59 15.4
comp=Z,2µm,19.6s,MS4.5,baz=272,slow=30
TIAR Tiarei 25.85 98 *e*P **P 05 52 15.6 +1.5**
comp=Z,720nm,1.3s,mb6.0
TVO Taravao 25.94 99 *e*P **P 05 52 16.5 +1.5**
comp=Z,2µm,1.5s
SNZO South Karori 26.92 195 PFAKE 05 52 40.0 +16
SNZO LR LR
comp=Z,8µm,20.0s,MS5.3
PMOR Pomariorio Ree 27.33 93 *e*P **P 05 52 29.0 +1.4**
comp=Z,337nm,1.4s,mb5.7
VAH Vaihoa 27.57 93 *e*P **P 05 52 30.9 +1.2**
comp=Z,248nm,1.4s,mb5.6
TAOE Nuku Hiva Isla 35.84 84 *e*LR LR 06 03 04.6
comp=Z,43µm,26.8s
CTA Charters Tower 35.97 257 *e*P **P 05 53 43.9 +0.5**
comp=Z,14nm,1.4s,mb4.7
CTA *e*S **S 05 59 20.8 -0.1**
CTA Charters Tower 35.97 257 P **P 05 53 43.2 -0.3**
comp=Z,14nm,1.0s,mb4.8,baz=89,slow=10.0,SNR=11
CTA LR LR 06 06 38.5
comp=Z,5µm,19.6s,MS5.3,baz=312,slow=33
CTA Charters Tower 35.97 257 *e*P **P 05 53 43.9 +0.5**
CTA *e*S **S 05 59 20.8 -0.1**
CTA pmax pmax
comp=Z,14nm,1.4s
CTAO Charters Tower 35.97 257 *e*P **P 05 53 43.8 +0.4**
CTAO pmax pmax
comp=Z,41nm,1.3s,mb5.2
CTAO MLR MLR
comp=Z,5µm,20.0s,MS5.2
CTAO Charters Tower 35.97 257 *e*P **P 05 53 43.8 +0.4**
comp=Z,41nm,1.3s,mb5.2
CTAO LR LR
comp=Z,5µm,20.0s,MS5.2
PMG Port Moresby 36.22 275 P **P 05 53 45.2 -0.5**
PMG pmax pmax
comp=Z,25nm,1.1s
PMG MLR MLR
comp=Z,5µm,19.0s
PMG Port Moresby 36.22 275 P **P 05 53 45.2 -0.4**
comp=Z,25nm,1.1s,mb5.1
PMG LR LR
comp=Z,5µm,19.0s,MS5.3
CNB Canberra Magne 36.58 231 *e*P **P 05 53 49.6 +1.2**
CNB *e*S **S 05 59 37.8 +8.0**
COEN Coen 39.26 267 *e*P **P 05 54 11.1 -0.2**
comp=Z,11nm,1.0s,mb4.5
RKT Rikitea 39.57 108 *e*LQ 06 03 06.3
comp=Z,3µm,28.8s
RKT *e*LR LR 06 05 31.6
comp=Z,2µm,22.5s
TOO Toolangi 40.33 230 *e*P **P 05 54 15.7 -4.3**
TOO *e* 05 54 58.5
TOO *e*S S 06 00 00.9 -26
POHA Pohakuloa 40.49 31 PFAKE 05 54 30.0 +8.6
POHA LR LR
comp=Z,3µm,22.0s,MS5.1
KIP Kipapa 40.78 26 PFAKE 05 54 40.0 +16
KIP LR LR
comp=Z,4µm,19.0s,MS5.2
TAU Tasmania Unive 41.45 221 PFAKE 05 54 40.0 +11
TAU LR LR
comp=Z,5µm,20.0s,MS5.4
STKA Stephens Creek 41.65 239 *e*P **P 05 54 29.2 -1.7**
comp=Z,22nm,1.0s,mb4.8
STKA *e*S **S 06 00 51.8 +5.5**
STKA Stephens Creek 41.65 239 P **P 05 54 29.4 -1.5**
comp=Z,18nm,0.9s,mb4.7,baz=52,slow=8.3,SNR=14
MIDW Midway 43.44 359 P **P 05 54 45.0 -0.4**
comp=Z,281nm,1.5s,mb5.8
MIDW LR LR
comp=Z,3µm,21.0s,MS5.2
WB2 Warramunga Arr 47.16 257 *e*P **P 05 55 14.3 -0.9**
WB2 *e*S **S 06 02 07.8 +1.1**
WRAB Tennant Creek 47.17 257 *e*P **P 05 55 14.3 -0.9**
WRAB pmax pmax
comp=Z,54nm,1.7s,mb5.2
WRAB Tennant Creek 47.17 257 *e*P **P 05 55 14.3 -0.9**
comp=Z,54nm,1.7s,mb5.2
WRA Warramunga Arr 47.17 257 P **P 05 55 14.1 -1.2**
comp=Z,6.0nm,1.0s,mb4.5,baz=89,slow=7.5,SNR=21
ASAR Alice Springs 47.50 252 P **P 05 55 16.3 -1.5**
comp=Z,11nm,0.8s,mb4.8,baz=84,slow=8.1,SNR=25
FORT Forrest 52.96 243 *e*P **P 05 55 49.8 -9.2**
comp=Z,28nm,1.5s,mb5.0
FITZ Fitzroy Crossi 55.53 258 *e*P **P 05 56 15.8 -2.1**
comp=Z,5.3nm,1.1s,mb4.5
FITZ *e*pP pP 05 56 22.6 -2.9
FITZ *e*S **S 06 04 08.9 +6.6**
FITZ Fitzroy Crossi 55.53 258 P **P 05 56 17.1 -0.9**
comp=Z,8.0nm,0.9s,mb4.8,baz=116,slow=12,SNR=13
MBWA Marble Bar 60.72 254 *e*P **P 05 56 53.1 -1.2**
SBA Scott Base 62.98 184 *e*P **P 05 57 08.9 +0.3**
KAPI Kappang 63.66 272 P **P 05 57 14.3 +0.2**
comp=Z,4.5nm,0.5s,mb4.8,baz=232,slow=23,SNR=4.4
AMKA Amchitka 66.67 357 *e*P **P 05 57 31.4 -1.4**
ADK Adak 67.06 360 *e*P **P 05 57 37.3 +2.0**
ADK MLR MLR
comp=Z,3µm,21.0s,MS5.5
MJAR Matsushiro Arr 67.26 321 P **P 05 57 35.7 -1.2**
comp=Z,1.8nm,0.5s,mb4.4,baz=159,slow=5.7,SNR=10
MAJO Matsushiro 67.26 321 *e*P **P 05 57 36.8 -0.1**
MAJO pmax pmax
comp=Z,32nm,1.4s,mb5.2
MAJO Matsushiro 67.26 321 *e*P **P 05 57 36.8 -0.1**
comp=Z,32nm,1.4s,mb5.2
MAT Matsushiro 67.26 321 P **P 05 57 37.4 +0.5**
MAT S S 06 06 27.0 -3.6
PET Petropavlovsk 71.57 344 *e*P **P 05 58 05.5 +2.3**
PET *e*PS 06 07 50.3
PET pmax pmax
comp=Z,41nm,1.7s,mb5.1
PET pmax pmax
comp=Z,100nm,14.7s
PET MLR MLR
comp=Z,6µm,21.0s,MS5.8
PET MLR MLR
comp=Z,4µm,18.0s
PET Petropavlovsk 71.57 344 *i* P **P 05 58 05.2 +2.0**
PEA0B Petropavlovsk- 71.90 344 *e*P **P 05 58 04.4 -0.7**
PETK Petropavlovsk- 71.90 344 P **P 05 58 02.0 -3.1**
comp=Z,8.5nm,0.7s,mb4.8,baz=124,slow=9.7,SNR=11
YSS Yuzh-Sakhalins 72.22 332 *e*P **P 05 58 07.0 -0.2**
YSS *e*S S 06 07 24.0 -4.5
YSS pmax pmax
comp=Z,500nm,5.0s
YSS Yuzh-Sakhalins 72.22 332 *e*P **P 05 58 08.4 +1.2**
YSS LR LR
comp=Z,4µm,19.0s,MS5.7
JRSC Jasper Ridge 73.07 42 ⇑P **P 05 58 12.9 +0.4**
baz=73
MCCM Marconi Confer 73.09 41 ⇑P **P 05 58 12.5 -0.1**
baz=73
SAO San Andreas Ge 73.22 43 *e*P **P 05 58 13.8 +0.4**
SAO pmax pmax
comp=Z,23nm,1.2s,mb5.0
SAO MLR MLR
comp=Z,4µm,19.0s,MS5.7
SAO San Andreas Ge 73.22 43 *e*P **P 05 58 13.8 +0.4**
comp=Z,23nm,1.2s,mb5.0
SAO LR LR
comp=Z,4µm,19.0s,MS5.7
PKD Parkfield 73.37 44 ⇓P **P 05 58 14.6 +0.3**
baz=74
SMMC Simmler 73.39 45 ⇓P **P 05 58 14.8 +0.4**
baz=74
U04C Hernandez Rese 73.44 44 ⇓P **P 05 58 15.1 +0.4**
baz=74
PACP Pacheco Peak 73.47 43 ⇑P **P 05 58 15.2 +0.3**
baz=74
HOPS Hopland 73.47 41 ⇓P **P 05 58 14.8 0.0**
baz=74,SNR=8.3
HOPS Hopland 73.47 41 *e*P **P 05 58 14.7 -0.1**
comp=Z,50nm,1.1s,mb5.3
HOPS LR LR
comp=Z,4µm,20.0s,MS5.7
CVS Carmenet Viney 73.47 41 ⇓P **P 05 58 14.9 +0.1**
baz=74
NSHM Saint Helena R 73.48 41 *e*P **P 05 58 17.4 +2.5**
WENL Wente Vineyard 73.51 42 ⇓P **P 05 58 15.5 +0.4**
baz=74
KCPM Cahto Peak 73.56 40 *e*P **P 05 58 15.3 -0.1**
KIPM Iron Peak 73.70 40 *e*P **P 05 58 16.2 0.0**
MNRC McLaughlin Nat 73.80 41 ⇓P **P 05 58 16.8 +0.1**
baz=74,SNR=19
U05C Westside ANR, 73.87 44 ⇑P **P 05 58 17.5 +0.3**
baz=74
Q03C Winters 73.93 41 ⇑P **P 05 58 17.8 +0.3**
baz=74
GASB Alder Springs 74.08 40 ⇑P **P 05 58 19.0 +0.6**
baz=74,SNR=20
ARVC Arvin 74.09 46 ⇓P **P 05 58 18.6 +0.1**
baz=74
MWC Mount Wilson 74.15 47 *e*P **P 05 58 19.1 +0.1**
KHMM Horse Mountain 74.19 39 *e*P **P 05 58 21.5 +2.5**
S05C Merced 74.29 43 ⇑P **P 05 58 19.3 -0.4**
baz=74,SNR=6.2
VES Vestal, Richgr 74.30 45 ⇓P **P 05 58 19.6 -0.2**
baz=74
KSRS Korea Array 74.32 317 P **P 05 58 18.5 -1.3**
comp=Z,1.9nm,0.8s,mb4.0,baz=120,slow=7.4,SNR=7.3
O02C Red Bluff 74.35 40 ⇑P **P 05 58 20.5 +0.5**
baz=74,SNR=8.0
R04C Big Horse Ranc 74.40 42 ⇓P **P 05 58 20.0 -0.4**
baz=75
N02C Big Bar 74.42 39 ⇓P **P 05 58 20.6 +0.3**
baz=75
BFSC Mount Baldy St 74.44 47 ⇓P **P 05 58 20.3 -0.4**
baz=75
Q04C Lincoln 74.45 42 ⇓P **P 05 58 20.5 -0.1**
baz=75
KRMB Red Mountain 74.48 38 P **P 05 58 22.3 +1.6**
KSM Kuching 74.48 276 *e*P **P 05 58 22.2 +0.8**
T06C Millerton Lake 74.51 44 ⇑P **P 05 58 21.0 +0.1**
baz=75,SNR=6.3
EDW2 Edwards Air Fo 74.55 46 ⇑P **P 05 58 21.0 -0.2**
baz=75
M01C Crescent City 74.55 38 ⇑P **P 05 58 20.9 -0.1**
baz=75
ISA Isabella 74.62 46 *e*P **P 05 58 21.7 0.0**
ISA pmax pmax
comp=Z,15nm,1.1s,mb4.8
ISA Isabella 74.62 46 ⇓P **P 05 58 21.7 +0.1**
baz=75,SNR=6.4
ISA Isabella 74.62 46 *e*P **P 05 58 21.7 +0.1**
comp=Z,15nm,1.1s,mb4.8
CMB Columbia Colle 74.64 43 *e*P **P 05 58 21.9 +0.2**
CMB pmax pmax
comp=Z,27nm,1.1s,mb5.1
CMB Columbia Colle 74.64 43 ⇓P **P 05 58 21.7 0.0**
baz=75,SNR=17
CMB Columbia Colle 74.64 43 *e*P **P 05 58 21.9 +0.2**
comp=Z,27nm,1.1s,mb5.1
MONP Monument Peak 74.64 49 ⇓P **P 05 58 21.8 -0.1**
baz=75
WDC Whiskeytown Da 74.74 40 ⇓P **P 05 58 22.1 -0.1**
baz=75,SNR=16
WDC Whiskeytown Da 74.74 40 *e*P **P 05 58 22.5 +0.3**
DVTC Desert V Tower 74.76 49 ⇓P **P 05 58 22.4 -0.1**
baz=75
ORV Oroville 74.78 41 ⇓P **P 05 58 22.3 -0.2**
baz=75,SNR=8.2
HELL Mitchell Peak 74.80 44 ⇑P **P 05 58 22.8 +0.1**
baz=75,SNR=6.9
LAVA Lava Cap Winer 74.81 42 ⇑P **P 05 58 22.8 +0.2**
baz=75
S06C San Francisco 74.90 43 ⇓P **P 05 58 23.2 0.0**
baz=75,SNR=9.3
PFO Pinyon Flat Ob 74.98 48 *e*P **P 05 58 29.0 +5.2**
M02C Callahan 75.03 39 ⇑P **P 05 58 24.3 +0.4**
baz=75,SNR=13
L02A Cave Junction 75.05 38 ⇓P **P 05 58 24.4 +0.5**
baz=75
SWSC Sam W. Stewart 75.12 49 ⇓P **P 05 58 24.8 +0.1**
baz=75
VLA Vladivostok 75.21 323 *e*P **P 05 58 25.2 +0.4**
VLA pmax pmax
comp=Z,65nm,1.5s,mb5.3
VLA MLR MLR
comp=Z,31µm,19.0s,MS6.6
VLA Vladivostok 75.21 323 *i* P **P 05 58 27.7 +2.9**
P05C Yuba Gap, Truc 75.21 41 ⇓P **P 05 58 25.0 0.0**
baz=75,SNR=6.3
R05C Kirkwood Meado 75.21 42 ⇓P **P 05 58 25.0 0.0**
baz=75
RRX Edison Barstow 75.24 47 ⇑P **P 05 58 25.0 -0.2**
baz=75
CWC Cottonwood Cre 75.31 45 ⇓P **P 05 58 25.9 +0.4**
baz=75
YBH Yreka Blue Hor 75.32 38 P **P 05 58 20.8 -4.8**
comp=Z,1.8nm,1.0s,mb4.0
YBH Yreka Blue Hor 75.32 38 ⇑P **P 05 58 26.0 +0.4**
baz=76,SNR=24
O05C Quincy 75.39 41 ⇑P **P 05 58 26.4 +0.5**
baz=76
M03C McCloud 75.40 39 ⇓P **P 05 58 26.4 +0.4**
baz=76,SNR=16
MTUM Tungsten Hills 75.47 44 *e*P **P 05 58 24.9 -1.6**
K02A Glendale 75.48 37 ⇓P **P 05 58 26.7 +0.3**
baz=76
O04C Chester 75.49 40 ⇓P **P 05 58 26.7 +0.2**
baz=76,SNR=5.3
BELC Belle Mtn. 75.51 48 ⇑P **P 05 58 26.6 -0.2**
baz=76
MPMC Manual Prospec 75.51 46 ⇓P **P 05 58 27.1 +0.3**
baz=76,SNR=11
WAKR Walker 75.52 43 *e*P **P 05 58 26.2 -0.6**
R06C Coleville 75.52 43 ⇑P **P 05 58 27.1 +0.4**
baz=76,SNR=16
KDAK Kodiak Island 75.56 13 P **P 05 58 22.0 -4.5**
comp=Z,5.9nm,0.8s,mb4.6,baz=194,slow=5.8,SNR=1.7
KDAK Kodiak Island 75.56 13 P **P 05 58 22.0 -4.5**
GSC Goldstone 75.59 47 ⇓P **P 05 58 27.2 -0.1**
baz=76
GSC Goldstone 75.59 47 *e*P **P 05 58 27.2 0.0**
LBCM Butte Creek Ri 75.62 40 P **P 05 58 25.7 -1.6**
BEKR Beckwourth 75.69 41 ⇑P **P 05 58 27.6 -0.1**
baz=76,SNR=21
HEC Hector,Ludlow 75.69 47 ⇓P **P 05 58 27.9 +0.1**
baz=76
HUMO Hull Mountain 75.70 38 ⇓P **P 05 58 27.9 +0.2**
baz=76,SNR=23
HUMO Hull Mountain 75.70 38 *e*P **P 05 58 28.5 +0.8**
comp=Z,39nm,1.3s,mb5.2
BC3 Big Chuckw Mtn 75.73 49 ⇑P **P 05 58 28.0 -0.1**
baz=76
WCN Washoe City 75.75 42 ⇓P **P 05 58 28.1 0.0**
baz=76,SNR=8.5
J02A Umpqua 75.80 37 ⇑P **P 05 58 28.6 +0.4**
baz=76,SNR=5.8
S08C White Mtn Res 75.81 44 ⇓P **P 05 58 28.6 +0.2**
baz=76,SNR=18
112A Yuma 75.82 50 ⇓P **P 05 58 28.8 +0.2**
baz=76
P06A Stead Airport, 75.87 41 ⇓P **P 05 58 28.8 0.0**
baz=76
M04C Macdoel 75.88 39 ⇓P **P 05 58 28.9 +0.2**
baz=76
ELFS Eagle Lake Fie 75.88 40 ⇑P **P 05 58 28.8 0.0**
baz=76
GLA Glamis 75.89 49 *e*P **P 05 58 29.9 +0.9**
GLA pmax pmax
comp=Z,39nm,1.3s,mb5.2
GLA Glamis 75.89 49 ⇑P **P 05 58 28.5 -0.5**
baz=76
GLA Glamis 75.89 49 *e*P **P 05 58 29.9 +0.9**
comp=Z,39nm,1.3s,mb5.2
BUOR Burton Butte 75.92 38 P **P 05 58 29.9 +0.9**
I02A Mapleton 76.05 36 ⇓P **P 05 58 30.2 +0.5**
baz=76
M05C Lookout 76.05 39 ⇓P **P 05 58 29.9 +0.1**
baz=76,SNR=6.0
L04A Klamath Falls 76.08 38 ⇑P **P 05 58 30.0 +0.2**
baz=76,SNR=12
GRAC Grapevine Rang 76.09 45 ⇓P **P 05 58 29.9 -0.1**
baz=76
GMRC Granite Mounta 76.14 48 ⇓P **P 05 58 30.6 +0.2**
baz=76
FURC Furnace Creek, 76.16 46 ⇑P **P 05 58 30.1 -0.3**
baz=76
O06A Flanigan 76.19 41 ⇑P **P 05 58 30.9 +0.3**
baz=76,SNR=6.5
IRM Iron Mountain 76.20 48 ⇑P **P 05 58 30.4 -0.3**
baz=76
PAHR Pah Rah Range 76.22 42 *e*P **P 05 58 31.4 +0.7**
comp=Z,29nm,1.1s,mb5.1
NVAR Mina Array Bea 76.22 43 P **P 05 58 28.7 -2.1**
comp=Z,27nm,1.0s,mb5.1,baz=228,slow=8.3,SNR=30
I03A Eugene 76.34 36 ⇓P **P 05 58 31.2 -0.1**
baz=76
M06C Likely Place G 76.37 40 ⇑P **P 05 58 31.6 0.0**
baz=76
Y12C Blythe 76.45 49 ⇓P **P 05 58 32.2 0.0**
baz=77
U10A Ash Meadows, A 76.50 46 ⇓P **P 05 58 32.6 +0.2**
baz=77,SNR=5.8
N06A Buffalo Meadow 76.52 41 ⇑P **P 05 58 32.7 +0.3**
baz=77,SNR=19
113A Mohawk Valley, 76.53 50 ⇓P **P 05 58 32.8 +0.1**
baz=77
S09A Goldfield 76.57 44 ⇓P **P 05 58 32.6 -0.1**
baz=77,SNR=23
J04A Umpqua Nationa 76.58 37 ⇓P **P 05 58 33.1 +0.5**
baz=77
L05A Lakeview 76.64 39 ⇑P **P 05 58 33.4 +0.4**
baz=77,SNR=14
LDFC Landfair 76.68 48 *e*P **P 05 58 34.8 +1.4**
Q08A Gabbs 76.70 43 ⇓P **P 05 58 33.4 0.0**
baz=77,SNR=8.0
I04A Tendick Farm, 76.73 37 ⇓P **P 05 58 33.7 +0.1**
baz=77,SNR=6.4
TPH Tonopah 76.75 44 *e*P **P 05 58 34.7 +0.9**
TPH pmax pmax
comp=Z,74nm,1.3s,mb5.5
TPH MLR MLR
comp=Z,4µm,19.0s,MS5.7
TPH Tonopah 76.75 44 *e*P **P 05 58 34.7 +0.9**
comp=Z,74nm,1.3s,mb5.5
TPH LR LR
comp=Z,4µm,19.0s,MS5.7
H03A Soap Creek Ran 76.76 36 ⇓P **P 05 58 34.2 +0.6**
baz=77,SNR=5.8
O07A Toulon 76.79 42 ⇑P **P 05 58 34.2 +0.3**
baz=77,SNR=18
TPNV Topopah Spring 76.83 45 *e*P **P 05 58 34.4 +0.2**
TPNV pmax pmax
comp=Z,12nm,1.0s,mb4.8
TPNV Topopah Spring 76.83 45 *e*P **P 05 58 34.4 +0.2**
comp=Z,12nm,1.0s,mb4.8
V11A Goodsprings 76.83 47 ⇑P **P 05 58 33.9 -0.4**
baz=77
214A Organ Pipe Nat 76.86 51 ⇑P **P 05 58 34.6 0.0**
baz=77,SNR=18
MOD Modoc 76.88 39 ⇓P **P 05 58 34.7 +0.3**
baz=77,SNR=21
MOD Modoc 76.88 39 *e*P **P 05 58 35.2 +0.8**
MOD LR LR
comp=Z,4µm,19.0s,MS5.7
R09A Tonopah 76.94 44 ⇓P **P 05 58 34.9 0.0**
baz=77,SNR=6.4
IRO Indian Ridge 76.95 37 P **P 05 58 35.3 +0.5**
W12A Cal Nev Ari 76.96 47 ⇑P **P 05 58 35.0 0.0**
baz=77
Y13A Salome 76.99 49 ⇓P **P 05 58 35.1 -0.1**
baz=77,SNR=15
PDMCI Parker Dam,Lak 76.99 49 ⇑P **P 05 58 35.4 +0.2**
baz=77
K05A Summer Lake 77.00 38 ⇑P **P 05 58 35.1 0.0**
baz=77,SNR=20
P08A Dixie Valley 77.05 42 ⇓P **P 05 58 35.4 0.0**
baz=77,SNR=6.0
N07B Gerlach 77.08 41 ⇑P **P 05 58 35.7 +0.2**
baz=77,SNR=10
S10A Tonopah Range, 77.09 44 ⇓P **P 05 58 35.8 +0.1**
baz=77,SNR=8.0
J05A Fort Rock 77.12 38 ⇓P **P 05 58 36.4 +0.7**
baz=77,SNR=36
G03A Yamhill 77.16 35 ⇓P **P 05 58 36.4 +0.4**
baz=77
Q09A Carvers 77.18 43 ⇓P **P 05 58 35.9 -0.3**
baz=77
V12A Nelson 77.18 47 ⇓P **P 05 58 36.6 +0.4**
baz=77,SNR=6.2
M07A Soldier Meadow 77.29 40 ⇑P **P 05 58 36.6 -0.2**
baz=77,SNR=22
O08A Rochester Mine 77.33 42 ⇑P **P 05 58 37.3 +0.4**
baz=78,SNR=22
SHPR Sheep Range 77.36 46 *e*P **P 05 58 38.2 +1.0**
X13A Yucca 77.36 49 ⇑P **P 05 58 36.8 -0.5**
baz=78,SNR=12
F03A Seaside 77.39 35 ⇑P **P 05 58 36.6 -0.5**
baz=78
H04A Detroit Lake 77.39 36 ⇑P **P 05 58 37.3 0.0**
baz=78,SNR=7.9
Z14A Wintersburg 77.42 50 ⇑P **P 05 58 37.1 -0.5**
baz=78,SNR=7.3
K06A Valley Falls 77.42 39 ⇓P **P 05 58 37.5 0.0**
baz=78,SNR=18
MDJ Mudanjiang 77.44 324 P **P 05 58 38.8 +1.3**
MDJ AP pP 05 58 45.3 0.0
MDJ XP sP 05 58 47.9 -0.2
MDJ S S 06 08 31.0 +4.2
MDJ XS sS 06 08 42.0 +2.4
MDJ AMB AMB
comp=Z,4.0nm,1.4s,mb4.2
MDJ AMB AMB
comp=Z,101nm,3.5s
MDJ LR LR
comp=Z,7µm,25.0s,MS5.9
R10A Warm Springs 77.48 44 ⇑P **P 05 58 37.9 0.0**
baz=78,SNR=18
S11A Rachel 77.53 45 ⇑P **P 05 58 38.4 +0.2**
baz=78
L07A Adell 77.54 40 ⇓P **P 05 58 38.0 -0.1**
baz=78
G04A Mulino 77.55 36 ⇓P **P 05 58 37.7 -0.3**
baz=78
W13A Hualapai Mount 77.56 48 ⇓P **P 05 58 38.1 -0.3**
baz=78,SNR=13
P09A Austin 77.59 43 ⇓P **P 05 58 38.3 -0.2**
baz=78
N08A GE Springer Mi 77.61 41 ⇓P **P 05 58 38.6 0.0**
baz=78,SNR=6.5
I05A Bend 77.61 37 ⇑P **P 05 58 39.1 +0.6**
baz=78,SNR=5.5
115A Sonoran Desert 77.65 51 ⇓P **P 05 58 38.6 -0.3**
baz=78,SNR=6.4
Y14A Wickenburg 77.65 49 ⇓P **P 05 58 38.4 -0.5**
baz=78,SNR=19
T11A Corn Creek, Al 77.68 46 ⇓P **P 05 58 38.7 -0.3**
baz=78,SNR=16
Q10A Clear Creek Ra 77.69 44 ⇑P **P 05 58 39.3 +0.3**
baz=78,SNR=8.9
J06A Christmas Vall 77.74 38 ⇓P **P 05 58 39.6 +0.4**
baz=78,SNR=20
U12A Valley of Fire 77.75 47 ⇓P **P 05 58 39.4 0.0**
baz=78
E03A Lebam 77.77 34 ⇑P **P 05 58 39.3 0.0**
baz=78,SNR=8.3
T12A Moapa 77.78 46 ⇑P **P 05 58 40.1 +0.5**
baz=78
M08A Happy Creek Ra 77.82 41 ⇓P **P 05 58 40.1 +0.4**
baz=78,SNR=7.1

V13A **Grand Canyon W** 77.86 47 ⇑P P 05 58 40.0 0.0
baz=78,SNR=12
BMW **Boistfort Moun** 77.91 34 eP P 05 58 39.2 -0.8
216A **Three Points,** 77.91 52 ⇑P P 05 58 40.9 +0.5
baz=78,SNR=14
H05A **Madras** 77.92 37 ⇓P P 05 58 41.8 +1.6
baz=78,SNR=6.3
Z15A **Gila River Ind** 77.97 50 ⇓P P 05 58 41.0 +0.3
baz=78
K07A **Rock Creek Ran** 77.97 39 ⇑P P 05 58 40.8 +0.2
baz=78,SNR=19
116A **Eloy** 77.97 51 ⇓P P 05 58 40.9 +0.1
baz=78
X14A **Yava** 77.98 49 ⇑P P 05 58 41.3 +0.5
baz=78,SNR=16
R11A **Troy Canyon, C** 78.00 44 ⇓P P 05 58 40.6 -0.1
baz=78,SNR=17
BMN **Battle Mountai** 78.00 42 eP P 05 58 40.5 -0.2
BMN pmax pmax
comp=Z,30nm,1.2s,mb5.1
BMN MLR MLR
comp=Z,3µm,19.0s,MS5.6
BMN **Battle Mountai** 78.00 42 eP P 05 58 40.5 -0.2
comp=Z,30nm,1.2s,mb5.1
BMN LR LR
comp=Z,3µm,19.0s,MS5.6
D03A **Wishkah Elem.** 78.01 34 ⇑P P 05 58 41.1 +0.5
baz=78
F04A **Amboy** 78.02 35 ⇑P P 05 58 40.9 +0.2
baz=78
N09A **Rock Creek Ran** 78.03 41 ⇑P P 05 58 40.9 0.0
baz=78,SNR=7.7
NJ2 **Nanjing** 78.05 308 eP P 05 58 42.8 +1.6
NJ2 AP pP 05 58 49.9 +0.9
NJ2 XP sP 05 58 52.1 +0.3
NJ2 PP PP 06 01 41.3 +3.4
NJ2 S S 06 08 33.5 -0.4
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
NJ2 AMB AMB
comp=Z,180nm,5.0s
NJ2 LR LR
comp=N,7µm,29.9s
NJ2 LR LR
comp=E,7µm,22.6s
NJ2 LR LR
comp=Z,7µm,22.6s
P10A **Eureka** 78.07 43 ⇓P P 05 58 40.8 -0.3
baz=78
SVW2 **Sparrevohn** 78.07 10 eP P 05 58 37.9 -2.7
I06A **Prineville** 78.11 38 ⇑P P 05 58 41.5 +0.3
baz=78,SNR=25
C03A **Quillayute Air** 78.11 33 ⇑P P 05 58 41.6 +0.4
baz=78
S12A **Delamar Landin** 78.12 45 ⇓P P 05 58 41.5 +0.1
baz=78,SNR=17
NLWA **Neilton Lookou** 78.13 33 ⇓P P 05 58 41.4 +0.1
baz=78
NLWA **Neilton Lookou** 78.13 33 eP P 05 58 43.0 +1.8
NLWA LR LR
comp=Z,3µm,22.0s,MS5.6
U13A **Pakoon Wash** 78.15 47 ⇓P P 05 58 41.7 +0.1
baz=78,SNR=18
Y15A **Casa Rosa Ranc** 78.15 50 ⇑P P 05 58 41.8 +0.1
baz=78,SNR=27
W14A **Seligman** 78.19 48 ⇑P P 05 58 41.6 -0.3
baz=78,SNR=20
WVOR **Wild Horse Val** 78.20 40 eP P 05 58 42.3 +0.5
WVOR pmax pmax
comp=Z,38nm,1.1s,mb5.2
WVOR MLR MLR
comp=Z,4µm,19.0s,MS5.7
WVOR **Wild Horse Val** 78.20 40 eP P 05 58 42.3 +0.5
comp=Z,38nm,1.1s,mb5.2
WVOR LR LR
comp=Z,4µm,19.0s,MS5.7
Q11A **Duckwater** 78.20 44 ⇓P P 05 58 41.9 0.0
baz=78,SNR=25
G05A **Wamic** 78.22 36 ⇑P P 05 58 42.0 +0.1
baz=78
L08A **Fields** 78.25 40 ⇓P P 05 58 42.0 0.0
baz=78,SNR=22
E04A **Onalaska** 78.25 34 ⇓P P 05 58 42.6 +0.6
baz=78
217A **Green Valley** 78.29 52 ⇑P P 05 58 42.6 +0.1
baz=78,SNR=20
J07A **Hines** 78.32 39 ⇑P P 05 58 42.3 -0.1
baz=78
SEW **Seward** 78.35 13 eP P 05 58 40.8 -1.4
V14A **Boquillas Ranc** 78.38 48 ⇑P P 05 58 42.9 -0.1
baz=78,SNR=19
M09A **Marrel Ranch,** 78.39 41 ⇓P P 05 58 43.0 +0.2
baz=78,SNR=6.6
O10A **Cortez Mining,** 78.40 42 ⇑P P 05 58 42.6 -0.3
baz=78
K08A **Mann Creek Ran** 78.46 39 ⇓P P 05 58 43.6 +0.3
baz=79,SNR=6.4
X15A **Humboldt** 78.47 49 ⇑P P 05 58 43.9 +0.5
baz=79,SNR=24
T13A **Saint George** 78.48 46 ⇑P P 05 58 43.5 0.0
baz=79,SNR=14
H06A **Lindquist Farm** 78.49 37 ⇑P P 05 58 43.3 0.0
baz=79,SNR=24
P11A **Circle Ranch,** 78.50 43 ⇑P P 05 58 43.4 -0.1
baz=79
F05A **White Salmon** 78.53 36 ⇓P P 05 58 45.6 +2.1
baz=79,SNR=9.0
Z16A **Peralta Trail,** 78.54 51 ⇑P P 05 58 43.3 -0.6
baz=79
SLKM **Skilak Lake** 78.55 13 eP P 05 58 40.8 -2.5
TUC **Tucson** 78.56 52 eP P 05 58 42.0 -2.0
TUC pmax pmax
comp=Z,37nm,1.1s,mb5.2
TUC MLR MLR
comp=Z,4µm,20.0s,MS5.8
TUC **Tucson** 78.56 52 eP P 05 58 42.0 -2.0
comp=Z,37nm,1.1s,mb5.2
TUC LR LR
comp=Z,4µm,20.0s,MS5.8
I07A **Izee** 78.60 38 ⇓P P 05 58 44.1 +0.2
baz=79,SNR=24
G06A **Carlson Farm,** 78.61 36 ⇓P P 05 58 43.5 -0.5
baz=79
N10A **Dunphy** 78.62 42 ⇑P P 05 58 44.3 +0.2
baz=79
R12A **Pony Springs,** 78.65 45 ⇓P P 05 58 44.6 +0.2
baz=79,SNR=17
U14A **Mt Trumbull** 78.70 47 ⇓P P 05 58 45.3 +0.6
baz=79,SNR=28
117A **Oracle** 78.71 52 ⇓P P 05 58 45.6 +0.7
baz=79,SNR=26
Y16A **Circle Bar Ran** 78.74 50 ⇓P P 05 58 45.7 +0.7
baz=79,SNR=8.7
E05A **Randle** 78.76 35 ⇑P P 05 58 44.1 -0.7
baz=79,SNR=14
W15A **Williams** 78.77 49 ⇑P P 05 58 45.5 +0.4
baz=79
318A **Bisbee** 78.78 53 ⇓P P 05 58 44.4 -0.8
baz=79,SNR=9.2
S13A **Holt Ranch, En** 78.79 46 ⇑P P 05 58 45.6 +0.4
baz=79,SNR=20
C04A **Brinnon** 78.81 33 ⇓P P 05 58 45.5 +0.5
baz=79
J08A **Circle Bar Ran** 78.81 39 ⇑P P 05 58 45.1 0.0
baz=79,SNR=8.7
F06A **Goldendale** 78.84 36 ⇓P P 05 58 45.7 +0.5
baz=79
Q12A **Willow Creek R** 78.86 44 ⇓P P 05 58 45.2 -0.3
baz=79,SNR=6.2
H07A **Lands Inn, Kim** 78.86 37 ⇓P P 05 58 45.3 -0.1
baz=79,SNR=20
O11A **Cowboy Ranch,** 78.86 43 ⇑P P 05 58 45.4 -0.1
baz=79,SNR=19
K09A **Rome** 78.91 40 ⇓P P 05 58 46.3 +0.6
baz=79,SNR=30
218A **Dragoon** 78.97 52 ⇑P P 05 58 47.0 +0.7
baz=79,SNR=25
R13A **O'Grain Ranch,** 79.01 45 ⇓P P 05 58 46.8 +0.4
baz=79,SNR=7.5
D05A **Enumclaw** 79.01 34 ⇑P P 05 58 46.2 +0.1
baz=79
X16A **Lo Mia Camp, P** 79.02 50 ⇑P P 05 58 47.1 +0.6
baz=79,SNR=30
M10A **I.L. Ranch, Tu** 79.02 41 ⇓P P 05 58 46.6 +0.2
baz=79,SNR=15
P12A **McGill** 79.02 44 ⇑P P 05 58 46.3 -0.1
baz=79
I08A **Drewsey** 79.06 38 ⇓P P 05 58 45.9 -0.6
baz=79
T14A **Hurricane** 79.08 47 ⇑P P 05 58 46.4 -0.4
baz=79
KLR **Kul'dur** 79.12 328 eP P 05 58 46.0 -0.7
CCUT **Cedar City** 79.12 46 eP P 05 58 45.1 -1.9
Y17A **Roosevelt** 79.13 51 ⇓P P 05 58 47.5 +0.4
baz=79,SNR=20
V15A **Kaibab Nationa** 79.14 48 ⇑P P 05 58 48.2 +1.2
baz=79,SNR=22
N11A **Elko Archery C** 79.17 42 ⇑P P 05 58 46.9 -0.3
baz=79,SNR=5.2
ARUT **Antelope Range** 79.18 46 eP P 05 58 45.2 -2.1
E06A **Yakima** 79.18 35 ⇑P P 05 58 47.0 -0.1
baz=79,SNR=5.3
G07A **Ruggs Ranch, H** 79.18 37 ⇑P P 05 58 47.6 +0.5
baz=79,SNR=8.9
Z17A **San Carlos Hig** 79.23 51 ⇑P P 05 58 48.9 +1.3
baz=79,SNR=7.8
J09A **Fry Pan Ranch,** 79.25 39 ⇓P P 05 58 47.2 -0.3
baz=79,SNR=8.6
W16A **Flagstaff** 79.26 49 ⇓P P 05 58 48.0 +0.2
baz=79
319A **Douglas** 79.30 53 ⇓P P 05 58 47.9 -0.2
baz=79
118A **Homack Ranch,** 79.32 52 ⇑P P 05 58 49.0 +0.8
baz=79,SNR=26
U15A **North Rim** 79.34 47 ⇓P P 05 58 49.2 +1.1
baz=79,SNR=22
H08A **Prairie City** 79.34 38 ⇓P P 05 58 47.8 -0.2
baz=80,SNR=11
S14A **Cedar City** 79.36 46 ⇑P P 05 58 48.4 +0.1
baz=80
L10A **Juniper Basin** 79.36 41 ⇑P P 05 58 48.1 -0.1
baz=80,SNR=21
Q13A **Wheeler Ranch,** 79.36 45 ⇓P P 05 58 48.2 0.0
baz=80,SNR=22
F07A **Phinny Hill Vi** 79.40 36 ⇓P P 05 58 48.1 -0.1
baz=80
CN2 **Changchun** 79.41 321 eP P 05 58 48.8 +0.4
CN2 eXP sP 05 59 02.0 +3.0
CN2 eS S 06 08 48.0 0.0
CN2 AMB AMB
comp=Z,20nm,1.6s,mb4.8
CN2 AMB AMB
comp=Z,700nm,4.0s
X17A **Forest Lakes** 79.45 50 ⇓P P 05 58 48.4 -0.4
baz=80,SNR=25
M11A **Holland Ranch,** 79.45 42 ⇑P P 05 58 48.3 -0.4
baz=80
ELK **Elko** 79.45 43 eP P 05 58 48.4 -0.3
ELK pmax pmax
comp=Z,16nm,1.1s
ELK **Elko** 79.45 43 eP P 05 58 48.4 -0.4
comp=Z,16nm,1.1s,mb4.9
Z18A **Geronimo** 79.47 51 ⇓P P 05 58 48.6 -0.4
baz=80
C05A **Tolt Reservoir** 79.48 34 ⇓P P 05 58 48.3 -0.4
baz=80,SNR=6.7
K10A **MacKenzie Ranc** 79.48 40 ⇑P P 05 58 49.0 +0.2
baz=80,SNR=22
O12A **Currie** 79.53 43 ⇑P P 05 58 49.3 +0.2
baz=80
T15A **Red Dirt Ranch** 79.55 47 ⇑P P 05 58 49.5 +0.2
baz=80,SNR=20
WUAZ **Wupatki** 79.57 49 eP P 05 58 50.2 +0.7
WUAZ LR LR
comp=Z,25nm,1.1s,mb5.0
comp=Z,4µm,21.0s,MS5.7
219A **White Tail Can** 79.58 53 ⇑P P 05 58 49.4 -0.2
baz=80,SNR=19
I09A **Lost Marbles R** 79.60 39 ⇓P P 05 58 49.0 -0.4
baz=80
B05A **Bryant** 79.61 33 ⇓P P 05 58 49.2 -0.1
baz=80
G08A **Pilot Rock** 79.61 37 ⇓P P 05 58 49.4 -0.1
baz=80,SNR=23
P13A **Bates Ranch, G** 79.61 44 ⇓P P 05 58 48.7 -0.9
baz=80
N12A **Clover Valley,** 79.64 43 ⇑P P 05 58 49.2 -0.6
baz=80,SNR=6.5
D06A **Cle Elum** 79.64 35 ⇓P P 05 58 49.8 +0.2
baz=80
JCW **Jim Creek** 79.65 34 eP P 05 58 49.7 +0.1
TTA **Tatalina** 79.73 9 eP P 05 58 49.7 0.0
RAGM **Ragged Mountai** 79.74 15 eP P 05 58 51.7 +1.9
PMR **Palmer** 79.76 13 eP P 05 58 48.7 -1.2
PMR pmax pmax
comp=Z,56nm,1.4s,mb5.3
PMR MLR MLR
comp=Z,3µm,22.0s,MS5.5
PMR **Palmer** 79.76 13 eP P 05 58 48.7 -1.2
comp=Z,56nm,1.4s,mb5.3
PMR LR LR
comp=Z,3µm,22.0s,MS5.5
Y18A **Canyon Day Jun** 79.77 51 ⇑P P 05 58 50.8 +0.1
baz=80,SNR=28
E07A **Sunnyside** 79.82 36 ⇓P P 05 58 50.8 +0.2
baz=80,SNR=5.6
L11A **Cat Creek Ranc** 79.86 41 ⇑P P 05 58 51.2 +0.4
baz=80,SNR=20
RSW **Rattlesnake Hi** 79.88 36 eP P 05 58 50.7 -0.1
119A **Ashpeak Ranch,** 79.88 52 ⇑P P 05 58 51.9 +0.7
baz=80,SNR=16
Q14A **Sevier Lake (B** 79.88 45 ⇓P P 05 58 51.4 +0.3
baz=80,SNR=26
MDW **Midway** 79.91 36 P P 05 58 54.2 +3.2
HAWA **Hanford** 79.91 36 eP P 05 58 51.1 0.0
HAWA LR LR
comp=Z,32nm,1.2s,mb5.1
comp=Z,3µm,20.0s,MS5.7
K11A **Parker Ranch,** 80.00 40 ⇑P P 05 58 51.7 0.0
baz=80,SNR=6.5
F08A **Pendleton** 80.00 37 ⇑P P 05 58 51.3 -0.3
baz=80,SNR=7.4
M12A **Wells** 80.01 42 ⇓P P 05 58 52.3 +0.6
baz=80,SNR=17
H09A **Durkee** 80.02 38 ⇓P P 05 58 52.8 +1.1
baz=80,SNR=6.3
RPW **Rockport** 80.03 33 eP P 05 58 51.7 +0.1
U16A **Tuba City** 80.03 48 ⇓P P 05 58 52.5 +0.5
baz=80,SNR=15
DIV **Divide** 80.11 14 eP P 05 58 49.1 -2.7
comp=Z,59nm,1.1s,mb5.4
D07A **Quincy** 80.12 35 ⇑P P 05 58 52.0 -0.2
baz=80
T16A **Glen Canyon Da** 80.15 47 ⇑P P 05 58 53.0 +0.4
baz=80,SNR=5.9
ETW **Entiat** 80.17 35 eP P 05 58 52.0 -0.4
X18A **Snowflake** 80.17 50 ⇓P P 05 58 53.6 +0.9
baz=80,SNR=11
N13A **Wendover, West** 80.19 43 ⇑P P 05 58 51.6 -1.1
baz=80,SNR=7.7
I10A **Payette** 80.23 39 ⇓P P 05 58 53.3 +0.5
baz=80
BMRM **Bremner River** 80.26 15 eP P 05 58 51.9 -0.7
G09A **Cove** 80.29 38 ⇑P P 05 58 53.5 +0.4
baz=80,SNR=20
P14A **Drum Mountains** 80.31 44 ⇓P P 05 58 53.7 +0.3
baz=80,SNR=28
L12A **House Creek Ra** 80.32 41 ⇓P P 05 58 53.9 +0.6
baz=80,SNR=7.9
LNOR **Lincton Mounta** 80.33 37 eP P 05 58 52.2 -1.1
BMO **Blue Mountains** 80.34 38 eP P 05 58 53.4 0.0
BMO LR LR
comp=Z,3µm,20.0s,MS5.7
PPLA **Purkeypile** 80.34 11 eP P 05 58 52.0 -1.0
comp=Z,46nm,1.5s,mb5.2
C07A **Waterville** 80.36 35 ⇑P P 05 58 54.1 +0.7
baz=80,SNR=7.0
MSU **Marysvale** 80.40 46 eP P 05 58 55.1 +1.2
QIZ **Qiongzhong** 80.41 293 P P 05 58 57.4 +3.0
QIZ AMB AMB
comp=Z,265nm,4.9s
WTV **Waterville** 80.43 35 P P 05 58 53.7 -0.1
Y19A **Nutrioso** 80.43 51 ⇑P P 05 58 54.2 0.0
baz=80,SNR=26
S16A **Weppner Ranch,** 80.44 47 ⇓P P 05 58 53.4 -0.7
baz=80
A06A **Chilliwack** 80.44 33 ⇑P P 05 58 54.4 +0.6
baz=81
WRAK **Wrangell Islan** 80.45 23 eP P 05 59 00.9 +7.2
WRAK LR LR
comp=Z,27nm,1.2s,mb5.0
comp=Z,3µm,22.0s,MS5.6
F09A **S2 Ranch, Elgi** 80.45 37 ⇑P P 05 58 54.7 +0.7
baz=81
M13A **Montello** 80.47 42 ⇑P P 05 58 54.2 0.0
baz=81,SNR=6.0
MFID **Camas Ranch** 80.47 40 ⇑P P 05 58 54.7 +0.5
baz=81,SNR=6.6
Q15A **Fillmore** 80.50 45 ⇑P P 05 58 54.4 0.0
baz=81,SNR=7.0
H10A **Noah's Angus R** 80.53 39 ⇓P P 05 58 54.7 +0.2
baz=81,SNR=19
U17A **Shonto** 80.58 48 ⇑P P 05 58 54.7 -0.2
baz=81,SNR=6.1
X19A **St. Johns** 80.61 50 ⇑P P 05 58 55.0 -0.1
baz=81,SNR=24
D08A **Wollman Farm,** 80.63 36 ⇓P P 05 58 55.4 +0.5
baz=81,SNR=6.3
K12A **Draper Farm, C** 80.64 41 ⇑P P 05 58 55.6 +0.5
baz=81,SNR=7.6
I11A **Placerville** 80.65 39 ⇓P P 05 58 55.3 +0.2
baz=81,SNR=5.8
T17A **Navajo Res., N** 80.66 48 ⇓P P 05 58 55.6 +0.3
baz=81,SNR=18
G10A **Bishop Farm, J** 80.69 38 ⇑P P 05 58 55.4 +0.1
baz=81,SNR=9.4
V18A **Ganado** 80.70 49 ⇓P P 05 58 55.4 -0.2
baz=81
E09A **Wood Farm, Sta** 80.77 36 ⇑P P 05 58 55.2 -0.4
baz=81,SNR=8.7
R16A **Teasdale** 80.78 46 ⇓P P 05 58 55.9 0.0
baz=81
DUG **Dugway** 80.78 44 eP P 05 58 54.3 -1.6
DUG pmax pmax
comp=Z,23nm,1.0s,mb5.1
DUG MLR MLR
comp=Z,5µm,19.0s,MS5.9
DUG **Dugway** 80.78 44 eP P 05 58 54.3 -1.6
comp=Z,23nm,1.0s,mb5.1
DUG LR LR
comp=Z,5µm,19.0s,MS5.9
B07A **Winthrop** 80.78 34 ⇓P P 05 58 55.8 0.0
baz=81,SNR=14
J12A **Stokes Ranch,** 80.83 40 ⇓P P 05 58 56.1 0.0
baz=81
W19A **Sanders** 80.84 50 ⇓P P 05 58 55.3 -1.1
baz=81
N14A **Grayback Hills** 80.85 43 ⇑P P 05 58 56.1 -0.1
baz=81,SNR=7.6
OD2 **Odessa Site #2** 80.94 35 eP P 05 58 55.9 -0.7
S17A **Black Ridge (B** 80.95 47 ⇑P P 05 58 56.9 +0.1
baz=81
L13A **Double Diamond** 80.97 42 ⇑P P 05 58 56.9 +0.1
baz=81,SNR=7.7
C08A **Higginbotham F** 80.98 35 ⇓P P 05 58 56.5 -0.2
baz=81,SNR=6.5
D09A **Jones Farm, Ri** 80.98 36 ⇑P P 05 58 57.1 +0.3
baz=81,SNR=7.6
A07A **Ashnola River,** 80.99 33 ⇓P P 05 58 56.6 -0.2
baz=81,SNR=6.0
BGU **Big Grassy Mou** 80.99 43 eP P 05 58 52.4 -4.7
F10A **Beach Ranch, E** 81.00 37 ⇓P P 05 58 56.3 -0.6
baz=81,SNR=13
H11A **Donnelly** 81.04 39 ⇑P P 05 58 56.2 -0.9
baz=81,SNR=14
O15A **The Old Anders** 81.05 44 ⇓P P 05 58 57.4 +0.1
baz=81
U18A **Rough Rock, Ch** 81.07 48 ⇑P P 05 58 57.1 -0.4
baz=81
M14A **Sheep Mountain** 81.07 43 ⇓P P 05 58 56.3 -1.1
baz=81,SNR=37
B08A **Colville Reser** 81.15 34 ⇓P P 05 58 57.3 -0.4
baz=81,SNR=6.4
NLU **North Lily Min** 81.16 44 eP P 05 59 02.7 +4.7
K13A **Stover Farm, H** 81.17 41 ⇑P P 05 58 57.5 -0.4
baz=81,SNR=6.9
KTH **Kantishna Hill** 81.18 11 eP P 05 58 55.7 -1.8
comp=Z,56nm,1.5s,mb5.3
TRF **Thorofare Moun** 81.20 11 eP P 05 58 56.7 -0.9
comp=Z,2µm,0.6s
CHUM **Lake Minchumin** 81.23 10 eP P 05 58 58.5 +0.8
comp=Z,102nm,1.6s,mb5.5
G11A **Walters Elk Ra** 81.25 38 ⇓P P 05 58 57.5 -0.8
baz=81,SNR=19
N15A **Stansbury Isla** 81.31 43 ⇑P P 05 58 58.8 +0.1
baz=81
E10A **Myers Farm, Un** 81.35 37 ⇑P P 05 58 58.8 0.0
baz=82
V19A **Window Rock** 81.35 49 ⇓P P 05 58 59.2 +0.2
baz=82
R17A **Hanksville Air** 81.38 46 ⇓P P 05 58 58.8 -0.3
baz=82,SNR=9.3
T18A **Mexican Hat** 81.39 48 ⇑P P 05 58 59.4 +0.3
baz=82,SNR=20
L14A **Malta** 81.40 42 ⇓P P 05 58 59.4 +0.3
baz=82,SNR=6.3
C09A **Chrisman Ranch** 81.42 35 ⇓P P 05 58 59.2 +0.1
baz=82
HLID **Hailey** 81.42 40 ⇑P P 05 58 59.3 +0.1
baz=82,SNR=20
MPU **Maple Canyon** 81.49 45 eP P 05 58 59.6 -0.1
MPU LR LR
comp=Z,8µm,21.0s,MS6.0
J13A **Cove Ranch, Pi** 81.49 41 ⇑P P 05 58 59.7 +0.1
baz=82,SNR=20
A08A **Turner Farm, O** 81.53 34 ⇓P P 05 59 00.4 +0.8
baz=82,SNR=5.7
S18A **Hurst Farm, Bl** 81.55 47 ⇑P P 05 58 59.6 -0.5
baz=82
SPUT **South Promonto** 81.56 43 eP P 05 58 56.7 -3.4
D10A **Wagner Farm, O** 81.56 36 ⇓P P 05 59 00.1 +0.2
baz=82,SNR=6.1
HVU **Hansel Valley** 81.58 43 eP P 05 58 58.6 -1.5
HVU pmax pmax
comp=Z,19nm,1.1s,mb4.9
HVU **Hansel Valley** 81.58 43 eP P 05 58 58.6 -1.5
comp=Z,19nm,1.1s,mb4.9
F11A **Grangeville** 81.58 38 ⇑P P 05 58 59.8 -0.3
baz=82
M15A **Larsen Ranch,** 81.64 43 ⇑P P 05 59 00.2 -0.3
baz=82,SNR=16
H12A **Diamond D Ranc** 81.66 39 ⇓P P 05 59 00.6 +0.2
baz=82,SNR=15
BPAW **Bear Paw Mtn.** 81.67 11 eP P 05 58 58.5 -1.5
comp=Z,20nm,1.3s,mb4.9
O16A **Springville** 81.67 44 ⇓P P 05 59 00.4 -0.2
baz=82,SNR=6.1
K14A **Jones Ranch, D** 81.70 42 ⇓P P 05 59 00.6 -0.1
baz=82
SKAG **Skagway** 81.70 20 eP P 05 59 00.5 +0.2
comp=Z,46nm,1.0s,mb5.4
MCK **McKinley** 81.72 12 eP P 05 58 59.5 -0.8
MCK pmax pmax
comp=Z,41nm,1.1s,mb5.3
MCK **McKinley** 81.72 12 eP P 05 58 59.5 -0.8
comp=Z,41nm,1.1s,mb5.3
CTU **Camp Tracy** 81.73 44 eP P 05 59 02.5 +1.6
I13A **Wildhorse Cree** 81.79 40 ⇓P P 05 59 00.6 -0.5
baz=82
E11A **Bogner Ranch,** 81.80 37 ⇑P P 05 59 01.2 0.0
baz=82
SRU **San Rafael** 81.83 46 eP P 05 59 01.7 +0.2
SRU pmax pmax
comp=Z,12nm,1.1s,mb4.7
SRU **San Rafael** 81.83 46 ⇓P P 05 59 01.8 +0.3
baz=82,SNR=7.3
SRU **San Rafael** 81.83 46 eP P 05 59 01.7 +0.2
comp=Z,12nm,1.1s,mb4.7
B09A **Rice** 81.84 35 ⇑P P 05 59 01.5 +0.2
baz=82
T19A **Beclabito** 81.86 48 ⇓P P 05 59 01.8 +0.1
baz=82,SNR=12
J14A **Carey** 81.87 41 ⇓P P 05 59 01.9 +0.3
baz=82,SNR=13
JLU **Jordanelle** 81.89 44 eP P 05 59 01.7 -0.1
A09A **Danville** 81.91 34 ⇓P P 05 59 01.8 +0.1
baz=82,SNR=8.7
DAU **Daniels Canyon** 81.93 44 eP P 05 59 02.3 +0.3
R18A **Canyonlands Na** 81.93 47 ⇑P P 05 59 01.9 -0.2
baz=82,SNR=7.0
L15A **Malad City** 81.94 43 ⇑P P 05 59 01.8 -0.2
baz=82,SNR=6.3
N16A **Rees Ranch, Co** 82.03 44 ⇑P P 05 59 02.1 -0.4
baz=82,SNR=5.8
H13A **Challis** 82.03 40 ⇓P P 05 59 03.1 +0.6
baz=82,SNR=16
F12A **Elk City** 82.05 38 ⇓P P 05 59 02.5 +0.1
baz=82,SNR=25
HYT **Haines Junctio** 82.09 18 eP P 05 59 02.4 0.0
Q18A **Rafter H Ranch** 82.09 46 ⇑P P 05 59 02.2 -0.7
baz=82,SNR=8.6
D11A **Klaveano Farm,** 82.10 37 ⇑P P 05 59 02.2 -0.5
baz=82,SNR=7.5

M16A	Huntsville	82.11	43	⇓P		P		05 59 02.0	-0.9
	baz=82,SNR=6.7								
K15A	Arbon	82.18	42	⇑P		P		05 59 02.9	-0.3
	baz=82,SNR=6.1								
O17A	Robinson Place	82.18	45	⇑P		P		05 59 03.3	0.0
	baz=82,SNR=26								
S19A	Harvey Farm, M	82.18	47	⇓P		P		05 59 02.4	-1.0
	baz=82								
E12A	Beaver Dam Sad	82.21	37	⇓P		P		05 59 03.1	-0.1
	baz=82								
I14A	Mackay	82.21	40	⇓P		P		05 59 03.0	-0.4
	baz=82,SNR=6.5								
HWUT	Hardware Ranch	82.29	43	*e*P		P		05 59 04.1	+0.2
NEW	Newport	82.32	35	*e*P		P		05 59 06.2	+2.4
NEW					MLR	MLR			
	comp=Z,2μm,20.0s								
G13A	Cobalt	82.32	39	⇓P		P		05 59 03.8	-0.1
	baz=82,SNR=14								
MVCO	Mesa Verde	82.40	48	*e*P		P		05 59 07.2	+2.6
MVCO					LR	LR			
	comp=Z,3μm,22.0s,MS5.6								
N17A	Moffit Pass	82.46	44	⇑P		P		05 59 04.7	-0.1
	baz=83,SNR=6.5								
A10A	Northport	82.47	35	⇓P		P		05 59 04.6	0.0
	baz=83,SNR=5.7								
PV10	Paradox Valley	82.53	47	*e*P		P		05 59 06.0	+0.8
L16A	Fish Haven	82.57	43	⇑P		P		05 59 05.2	-0.1
	baz=83,SNR=6.0								
C11A	Tepee Creek (N	82.57	36	⇑P		P		05 59 05.0	-0.2
	baz=83								
J15A	Blackfoot	82.59	41	⇓P		P		05 59 04.7	-0.7
	baz=83,SNR=5.9								
H14A	Leadore	82.61	40	⇓P		P		05 59 04.3	-1.1
	baz=83,SNR=18								
F13A	Darby	82.61	38	⇑P		P		05 59 04.5	-0.9
	baz=83,SNR=7.5								
Q19A	Hogan Spring (	82.63	46	⇑P		P		05 59 04.5	-1.2
	baz=83								
D12A	Red Ives Fores	82.67	37	⇓P		P		05 59 05.7	0.0
	baz=83								
O18A	Roosevelt	82.71	45	⇓P		P		05 59 05.7	-0.4
	baz=83								
PV01	Paradox Valley	82.75	47	*e*P		P		05 59 06.5	+0.2
DLBC	Dease Lake	82.78	22	*e*P		P		05 59 05.5	-0.5
B11A	Sandpoint	82.83	35	⇑P		P		05 59 07.1	+0.6
	baz=83								
I15A	Monteview	82.85	41	⇓P		P		05 59 06.8	+0.1
	baz=83								
K16A	Soda Springs	82.86	42	⇓P		P		05 59 06.7	-0.1
	baz=83								
TXAR	Lajitas Array	82.92	57	P		P		05 59 05.7	-1.7
	comp=Z,12nm,1.1s,mb4.8,baz=224,slow=5.2,SNR=27								
TXAR					LR	LR		06 28 19.8	
	comp=Z,4μm,20.3s,MS5.8,baz=20,slow=30								
TXAR	Lajitas Array	82.92	57	P		P		05 59 05.7	-1.7
TXAR					LR	LR		06 28 19.8	
ANMO	Albuquerque	82.94	51	⇑*e*P		P		05 59 08.5	+1.1
C12B	Naegeli Ranch,	82.95	36	⇑P		P		05 59 06.3	-0.9
	baz=83								
COLA	College	82.96	12	*e*P		P		05 59 05.7	-1.1
COLA					pmax	pmax			
	comp=Z,56nm,1.3s,mb5.4								
COLA					MLR	MLR			
	comp=Z,2μm,20.0s,MS5.5								
COLA	College	82.96	12	*e*P		P		05 59 05.7	-1.1
	comp=Z,56nm,1.3s,mb5.4								
COLA					LR	LR			
	comp=Z,2μm,20.0s,MS5.5								
IMA2	Indian Mountai	83.03	9	*e*P		P		05 59 09.2	+2.1
MCMT	McKenzie Canyo	83.03	40	*e*P		P		05 59 06.2	-1.5
E13A	Victor	83.04	38	⇑P		P		05 59 07.2	-0.4
	baz=83,SNR=17								
J16A	Bone	83.05	42	⇑P		P		05 59 07.9	+0.1
	baz=83,SNR=21								
H15A	Lima	83.06	40	⇑P		P		05 59 07.2	-0.5
	baz=83,SNR=13								
A11A	Hall Mountain,	83.12	35	⇓P		P		05 59 07.7	-0.3
	baz=83								
P19A	Cripple Cowboy	83.13	46	⇑P		P		05 59 07.5	-0.8
	baz=83,SNR=6.7								
AHID	Auburn Hatcher	83.14	42	*e*P		P		05 59 08.2	0.0
	comp=Z,34nm,1.4s,mb5.2								
AHID					LR	LR			
	comp=Z,5μm,19.0s,MS5.9								
F14A	Wisdom	83.21	39	⇑P		P		05 59 08.2	-0.4
	baz=83								
D13A	Huson	83.21	37	⇓P		P		05 59 07.6	-0.9
	baz=83,SNR=7.2								
RRI2	Red Ridge	83.28	42	*e*P		P		05 59 06.9	-2.0
O19A	Miners Draw (B	83.33	45	⇑P		P		05 59 08.5	-0.8
	baz=83,SNR=5.9								
MSO	Missoula	83.38	38	*e*P		P		05 59 09.0	-0.4
MSO					LR	LR			
	comp=Z,2μm,20.0s,MS5.5								
G15A	Dillon	83.42	40	⇓P		P		05 59 09.0	-0.6
	baz=84,SNR=15								
I16A	Newdale	83.42	41	⇑P		P		05 59 09.3	-0.3
	baz=84,SNR=15								
E14A	Clinton	83.44	38	⇑P		P		05 59 09.2	-0.5
	baz=84,SNR=8.8								
C13A	Hot Springs	83.45	37	⇑P		P		05 59 09.6	-0.1
	baz=84,SNR=5.4								
DLMT	Dillon	83.45	39	*e*P		P		05 59 07.7	-2.1
	comp=Z,28nm,1.1s,mb5.2								
DCID1	Drake Creek	83.48	42	*e*P		P		05 59 13.0	+3.0
BJT	Baijiatuau	83.55	314	*e*P		P		05 59 10.5	+0.1
BJT					pmax	pmax			
	comp=Z,85nm,1.5s								
BJT	Baijiatuau	83.55	314	*e*P		P		05 59 10.5	+0.1
	comp=Z,85nm,1.5s,mb5.7								
BJI	Beijing	83.55	314	P		P		05 59 11.8	+1.4
BJI				S		S		06 09 35.4	+4.3
BJI					AMB	AMB			
	comp=Z,22nm,1.1s,mb5.2								
BJI					AMB	AMB			
	comp=Z,426nm,5.7s								
N19A	John Jarvie Ra	83.56	45	⇓P		P		05 59 08.9	-1.5
	baz=84								
TPAW	Teton Pass	83.58	42	*e*P		P		05 59 07.8	-2.7
REDW	Red Top Meadow	83.58	42	*e*P		P		05 59 10.9	+0.3
SNOW	Snow King Moun	83.69	42	*e*P		P		05 59 08.9	-2.1
	comp=Z,33nm,1.1s,mb5.4								
F15A	Butte	83.75	39	⇓P		P		05 59 10.3	-1.0
	baz=84,SNR=5.4								
D14A	Greenough	83.77	38	⇑P		P		05 59 10.3	-1.1
	baz=84,SNR=5.2								
LRM	Limekiln Ridge	83.77	39	*e*P		P		05 59 11.8	+0.4
CHMT	Chamberlain Mo	83.83	38	*e*P		P		05 59 09.4	-2.3
MOOW	Moose Ponds	83.83	42	*e*P		P		05 59 11.9	+0.2
	comp=Z,16nm,1.1s,mb5.0								
LOHW	Long Hollow	83.86	42	*e*P		P		05 59 12.1	+0.1
	comp=Z,20nm,1.2s,mb5.1								
B13A	Whitefish	83.87	36	⇓P		P		05 59 11.0	-0.9
	baz=84								
QLMT	Earthquake Lak	83.92	40	*e*P		P		05 59 12.3	+0.1
E15A	Deer Lodge	83.95	39	⇑P		P		05 59 11.6	-0.7
	baz=84								
H16A	Russell Place,	83.97	41	⇑P		P		05 59 11.9	-0.6
	baz=84,SNR=19								
C14A	Swan Lake	83.97	37	⇓P		P		05 59 11.9	-0.5
	baz=84								
FLWY	Flagg Ranch	84.02	41	*e*P		P		05 59 13.6	+0.9
YMR	Madison River	84.13	41	*e*P		P		05 59 12.4	-0.8
	comp=Z,67nm,1.3s,mb5.6								
BW06	Boulder Array	84.15	43	*e*P		P		05 59 11.7	-1.7
	comp=Z,21nm,1.1s,mb5.2								
BW06					LR	LR			
	comp=Z,3μm,20.0s,MS5.6								
PDAR	Pinedale Array	84.15	43	P		P		05 59 10.9	-2.5
	comp=Z,12nm,1.1s,mb5.0,baz=204,slow=3.3,SNR=24								
DAWY	Dawson	84.18	15	*e*P		P		05 59 12.1	-0.9
BOZ	Bozeman (W)	84.19	40	*e*P		P		05 59 13.7	+0.2
A13A	Flathead Natio	84.19	36	⇑P		P		05 59 13.0	-0.5
	baz=84								
BILL	Bilibino	84.24	353	⇑*e*P		P		05 59 15.0	+1.7
BILL				*e*				06 02 28.2	
BILL					pmax	pmax			
	comp=Z,17nm,1.0s,mb5.1								
BILL					MLR	MLR			
	comp=Z,5μm,22.0s,MS5.9								
BILL	Bilibino	84.24	353	*e*P		P		05 59 13.1	-0.2
D15A	Lincoln	84.33	38	⇓P		P		05 59 13.7	-0.5
	baz=84,SNR=6.3								
WALA	Waterton Lakes	84.54	36	*e*P		P		05 59 18.5	+3.3
	comp=Z,50nm,1.9s,mb5.3								
COLD	Coldfoot	84.65	10	*e*P		P		05 59 15.2	-0.1
	comp=Z,75nm,1.4s,mb5.6								
SDCO	Great Sand Dun	84.79	49	*e*P		P		05 59 16.2	-0.6
	comp=Z,8.7nm,1.1s,mb4.8								
RWWY	Rawlins	85.24	45	*e*P		P		05 59 19.0	+0.1
	comp=Z,26nm,1.1s,mb5.3								
GCMT	Greycliff	85.47	40	*e*P		P		05 59 20.4	+0.4
HIA	Hailar	85.62	324	*e*P		P		05 59 21.4	+0.7
GYA	Guiyang	85.68	299	P		P		05 59 22.3	+0.8
GYA					AP	pP		05 59 30.1	+0.7
GYA					XP	sP		05 59 33.4	+1.2
GYA					AMB	AMB			
	comp=Z,20nm,0.9s,mb5.3								
GYA					AMB	AMB			
	comp=Z,270nm,6.3s								
PHWY	Pilot Hill	86.27	45	*e*pP		pP		05 59 42.6	+11
EGMT	Eagleton	86.44	38	*e*P		P		05 59 27.9	+3.1
	comp=Z,38nm,1.6s,mb5.4								
CMIG	Matias Romero	86.48	71	LR		LR		06 32 47.6	
	comp=Z,2μm,18.4s,MS5.6,baz=208,slow=32								
MAW	Mawson	86.85	199	*e*P		P		05 59 26.2	-0.3
	comp=Z,6.9nm,1.0s,mb4.8								
MAW	Mawson	86.85	199	P		P		05 59 23.2	-3.3
	comp=Z,2.6nm,0.8s,mb4.5,baz=38,slow=12,SNR=3.3								
HHC	Hu-ho-hao-te	87.09	314	*e*P		P		05 59 30.3	+2.2
HHC					AP	pP		05 59 36.6	+0.6
HHC					XP	sP		05 59 39.5	+0.7
HHC					PP	PP		06 02 57.3	+5.3
HHC					AMB	AMB			
	comp=Z,23nm,0.8s,mb5.5								
HHC					AMB	AMB			
	comp=Z,355nm,6.4s								
USHA	Ushuaia	87.38	147	LR		LR		06 32 22.1	
	comp=Z,μm,20.5s,MS5.6,baz=228,slow=31								
LAO	LASA Array	88.01	40	*e*P		P		05 59 31.1	-1.2
	comp=Z,31nm,1.2s,mb5.4								
BTO	Baotou	88.08	313	*e*P		P		05 59 33.0	+0.2
YAK	Yakutsk	88.11	338	*e*P		P		05 59 33.8	+1.3
YAK					pmax	pmax			
	comp=Z,19nm,1.0s,mb5.3								
YAK	Yakutsk	88.11	338	⇑*e*P		P		05 59 35.3	+2.8
KMI	Kunming	88.61	296	P		P		05 59 39.6	+3.9
KMI					AP	pP		05 59 45.8	+2.2
KMI					XP	sP		05 59 48.9	+2.5
KMI					PP	PP		06 03 09.4	+4.8
KMI					AMB	AMB			
	comp=Z,9.0nm,1.2s,mb5.0								
KMI					AMB	AMB			
	comp=Z,158nm,5.6s								
CD2	Chengdu	89.53	302	*e*P		P		05 59 41.8	+1.9
CD2					AP	pP		05 59 49.9	+2.1
CD2					XP	sP		05 59 53.4	+2.8
CD2					PP	PP		06 03 16.8	+5.0
CD2					AMB	AMB			
	comp=Z,10.0nm,0.9s,mb5.2								
CD2					AMB	AMB			
	comp=Z,30nm,6.8s								
DGMT	Dagmar	89.99	39	*e*P		P		05 59 40.1	-1.6
	comp=Z,26nm,1.1s,mb5.5								
CMAR	Chiang Mai Arr	90.06	289	P		P		05 59 43.7	+1.1
	comp=Z,6.8nm,1.0s,mb4.9,baz=108,slow=3.2,SNR=19								
CHTO	Chiang Mai	90.15	289	*e*P		P		05 59 43.9	+0.8
CHTO					pmax	pmax			
	comp=Z,9.0nm,1.2s,mb5.0								
CHTO	Chiang Mai	90.15	289	*e*P		P		05 59 43.9	+0.8
	comp=Z,9.0nm,1.2s,mb5.0								
LZH	Lanzhou	91.08	307	*e*P		P		05 59 50.4	+3.4
LZH					AP	pP		05 59 58.5	+3.6
LZH					XP	sP		06 00 01.8	+4.0
LZH					PP	PP		06 03 30.5	+6.5
LZH					AMB	AMB			
	comp=Z,21nm,1.5s,mb5.2								
LZH					AMB	AMB			
	comp=Z,176nm,8.9s								
LZH					LR	LR			
	comp=N,569nm,18.0s								
LZH					LR	LR			
	comp=Z,874nm,20.1s,MS5.2								
YKA	Yellowknife Ar	91.25	24	P		P		05 59 42.6	-4.6
	comp=Z,0.6nm,0.7s,mb4.1,baz=155,slow=35,SNR=2.9								
SYO	Syowa Base	91.98	192	⇑*e*P		P		05 59 48.2	-2.4
SYO	Syowa Base	91.98	192	⇓*e*pP		pP		05 59 53.6	-4.9
ULN	Ulaanbaatar	92.68	319	*e*P		P		05 59 54.4	+0.2
ULN					pmax	pmax			
	comp=Z,10.0nm,1.2s,mb5.1								
ULN	Ulaanbaatar	92.68	319	*e*P		P		05 59 54.4	+0.2
	comp=Z,9.9nm,1.2s,mb5.1								
SNAA	Sanae	92.96	178	*e*P		P		05 59 53.5	-1.6
	comp=Z,9.1nm,1.1s,mb5.1								
SONM	Songino Array	93.09	319	P		P		05 59 53.3	-2.7
	comp=Z,0.2nm,0.5s,baz=276,slow=22,SNR=2.1								
SONM					PP	PP		06 03 41.2	+1.6
	comp=Z,0.8nm,0.9s,baz=123,slow=5.5,SNR=5.3								
ECSD	EROS,Sioux Fal	93.24	46	*e*P		P		05 59 55.7	-1.2
	comp=Z,14nm,1.2s,mb5.3								
JTS	JuntasAbangare	93.91	80	LR		LR		06 31 15.8	
	comp=Z,3μm,21.0s,MS5.8,baz=236,slow=29								
GTA	Gaotai	95.11	309	*e*P		P		06 00 08.3	+2.8
GTA					AP	pP		06 00 16.4	+3.0
GTA					XP	sP		06 00 19.9	+3.7
GTA					AMB	AMB			
	comp=Z,4.0nm,1.5s,mb4.6								
GTA					AMB	AMB			
	comp=Z,114nm,3.9s								
GTA					LR	LR			
	comp=N,2μm,14.4s,MS5.8								
GTA					LR	LR			
	comp=E,2μm,13.8s,MS5.8								
GTA					LR	LR			
	comp=Z,4μm,16.2s,MS6.0								
ZAK	Zakamensk	95.83	321	*e*P		P		06 00 11.0	+2.4
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.6s,mb4.5								
OXF	Oxford	96.04	56	*e*P		P		06 00 16.3	+6.4
OXF					pmax	pmax			
	comp=Z,37nm,1.2s,mb5.7								
OXF	Oxford	96.04	56	*e*P		P		06 00 16.3	+6.4
	comp=Z,37nm,1.2s,mb5.7								
LVC	Limon Verde	99.43	117	LR		LR		06 33 24.3	
	comp=Z,2μm,20.6s,MS5.5,baz=253,slow=28								
ZALV	Zalesovo Beam	107.61	322	PP		PP		06 05 29.5	+0.1
	comp=Z,0.3nm,0.3s,baz=94,slow=4.3,SNR=4.1								
MKAR	Makanchi Array	108.93	315	PKiKP		PKiKP		06 05 09.8	-1.9
	comp=Z,0.9nm,0.8s,baz=92,slow=7.2,SNR=3.5								
KURK	Kurchatov	111.40	319	PKiKP		PKiKP		06 05 13.3	-2.9
	comp=Z,0.8nm,0.7s,baz=123,slow=1.5,SNR=2.6								
KURK	Kurchatov	111.40	319	*i* PKiKP		PKiKP		06 05 14.4	-1.8
BVAR	Borovoye Array	116.26	322	PKP		PKPdf		06 05 23.2	-2.3
	comp=Z,0.6nm,0.4s,baz=231,slow=38,SNR=2.8								
BVAR					PP	PP		06 06 30.4	-0.9
	comp=Z,0.3nm,0.3s,baz=90,slow=5.9,SNR=2.7								
BRVK	Borovoye	116.31	322	*i* PKiKP		PKPdf		06 05 26.3	+0.7
ARU	Arti	121.95	328	*i* PKiKP		PKPdf		06 05 37.6	+1.3
ARU								06 07 10.1	
ARU								06 12 34.1	
ARU					SS	SS		06 23 55.3	+8.7
ARU	Arti	121.95	328	*e*PKPdf		PKPdf		06 05 37.9	+1.6
AKTK	Aktyubinsk	124.34	321	PKP		PKPdf		06 05 37.1	-3.9
AKTO	Aktyubinsk	124.34	321	PKP		PKPdf		06 05 37.1	-3.9
	comp=Z,0.6nm,0.3s,baz=261,slow=8.1,SNR=2.4								
OBN	Obninsk	133.05	335	⇓*i* PKiKP		PKPdf		06 05 57.5	0.0
OBN					pmax	pmax			
	comp=Z,6.0nm,0.7s								
OBN	Obninsk	133.05	335	⇓*e*PKP		PKPdf		06 05 57.6	+0.1
KIV	Kislovodsk	136.48	319	*e*PKiKP		PKPdf		06 06 02.6	-1.7
KIV					pmax	pmax			
	comp=Z,6.0nm,1.2s								
ANN	Anapa	139.25	323	*i* PKHKP				06 05 51.2	
ANN					pmax	pmax			
	comp=Z,193nm,1.3s								
AKASG	Malin Array Be	139.31	335	PKP		PKPdf		06 06 04.8	-4.5
	comp=Z,0.2nm,0.4s,baz=132,slow=1.4,SNR=3.4								
AKASG					PP	PP		06 08 59.2	-3.3
	comp=Z,0.3nm,0.4s,baz=345,slow=2.9,SNR=3.7								
KWP	Kalwaria	142.60	340	⇑*i* PKP		PKPdf		06 06 13.8	-1.4
KWP	Kalwaria	142.60	340	*e*PKPdf		PKPdf		06 06 16.1	+0.9
KOLS	Kolonicke sedl	143.34	339	*e*PKP		PKPdf		06 06 18.0	+1.4
CLL	Collm	143.49	350	*e*PKiKP		PKPdf		06 06 18.0	+1.2
CLL					pmax	pmax			
	comp=Z,12nm,1.2s								
CLL	Collm	143.49	350	*e*PKPdf		PKPdf		06 06 18.0	+1.2
	comp=Z,12nm,1.2s								
UZH	Uzhgorod	143.60	339	*e*PKiKP		PKPdf		06 06 17.3	+0.3
CRVS	Cervenica-Dubn	143.64	340	*e*PKP		PKPdf		06 06 17.9	+0.8
UPC	Upice	143.67	347	*e*PKP		PKPdf		06 06 17.9	+0.8
BRG	Berggiesshubel	143.74	349	*e*PKiKP		PKiKP		06 06 22.5	+1.9
BRG					pmax	pmax			
	comp=Z,6.0nm,1.3s								
BRG	Berggiesshubel	143.74	349	*e*PKP		PKiKP		06 06 22.5	+1.8
	comp=Z,10nm,1.3s								
DPC	Dobruska-Polom	143.75	346	*e*PKP		PKPdf		06 06 19.0	+1.7
PVCC	Panska Ves	143.96	348	*e*PKP		PKPdf		06 06 20.2	+2.6
KECS	Kecovo	144.32	341	*e*PKP		PKPdf		06 06 16.7	-1.6
KECS				*e*				06 06 21.5	
MOX	Moxa	144.34	351	*e*PKP		PKPdf		06 06 20.6	+2.3
	comp=Z,16nm,1.5s								
MOX	Moxa	144.34	351	*e*PKiKP		PKPdf		06 06 20.6	+2.3
MOX					pmax	pmax			
	comp=Z,16nm,1.5s								
MOX	Moxa	144.34	351	*e*PKPdf		PKPdf		06 06 20.5	+2.2
TIRR	Tirgusor	144.35	329	⇑*i*P		PKPdf		06 06 20.5	+2.0
TIRR	Tirgusor	144.35	329	⇑P		PKPdf		06 06 20.5	+2.0
BR131	Keskin Array S	144.45	319	*e*PKPdf		PKPdf		06 06 15.4	-3.4
PRU	Pruhonice	144.47	348	*e*PKP		PKPdf		06 06 21.6	+3.1
VRAC	Vranov	144.66	345	PKHKP				06 06 17.3	
MLR	Muntele Rosu	144.74	333	PKiKP		PKPdf		06 06 20.5	+1.4
MLR	Muntele Rosu	144.74	333	⇑*i*P		PKPdf		06 06 16.9	-2.2
MLR	Muntele Rosu	144.74	333	⇑P		PKPdf		06 06 16.9	-2.2
MLR				P				06 06 20.5	
VYHS	Vyhne	144.81	343	*e*PKP		PKPdf		06 06 18.2	-1.0
KOLL	Kolacno	144.86	343	*e*PKP		PKPdf		06 06 21.4	+2.2
ANTO	Ankara	144.90	320	⇓*i*P		PKPdf		06 06 21.2	+1.6
ANTO	Ankara	144.90	320	*e*PKPdf		PKPdf		06 06 20.7	+1.1
MANZ	Manzenberg	144.91	351	*e*PKPdf		PKPdf		06 06 20.6	+1.3
PSZ	Piszkesteto	145.01	341	⇓*e*PKP		PKPdf		06 06 18.9	-0.6
PSZ	Piszkesteto	145.01	341	⇓*i*P		PKPbc		06 06 19.8	+1.0
PSZ	Piszkesteto	145.01	341	*e*PKPdf		PKPdf		06 06 18.4	-1.1
DRGR		145.01	337	⇓*i*P		PKPbc		06 06 18.7	-0.2
DRGR		145.01	337	P		PKPbc		06 06 19.3	+0.4
ROTZ	Rotzenmuhle	145.11	350	*e*PKPdf		PKPdf		06 06 19.0	-0.6
BCLA	Clavier	145.12	358	PKP		PKPdf		06 06 21.9	+2.2
VOIR		145.17	333	⇓*i*P		PKPbc		06 06 23.6	+4.1
VOIR		145.17	333	P		PKPbc		06 06 20.6	+1.1
VOIR				⇓P				06 06 23.6	
GRA1	Grafenberg Arr	145.33	351	*e*PKPdf		PKPdf		06 06 19.8	-0.2
GRF	Grafenberg Arr	145.33	351	*e*PKPdf		PKPdf		06 06 19.8	-0.2
MODS	Modra-Piesok	145.35	344	*e*PKP		PKPdf		06 06 19.2	-0.9
GIVF	Givet	145.44	359	*e*PKP		PKPbc		06 06 21.9	+1.7
DOU	Dourbes	145.46	359	PKP		PKPbc		06 06 22.8	+2.6
KHC	Kasperske Hory	145.48	349	*e*PKP		PKPdf		06 06 20.6	+0.3
BAIF	Baives	145.50	360	*e*PKP1		PKPbc		06 06 21.6	+1.3
	comp=Z,49nm,1.1s								
ABH	Alteburg	145.54	356	PKP		PKPdf		06 06 21.2	+0.8
ZST	Bratislava	145.56	344	*e*PKP		PKPbc		06 06 23.4	+2.8
WET	Wettzell	145.60	349	*e*PKPdf		PKPdf		06 06 20.6	+0.1
ASF	Jabal al Asfar	145.62	305	PKPbc		PKPbc		06 06 19.1	-2.3
	comp=Z,8.4nm,1.1s,baz=289,slow=0.9,SNR=7.3								
BUD	Budapest	145.66	342	*e*PKP		PKPdf		06 06 21.5	+0.8
TOD	Tromm	145.71	354	PKIKP		PKPdf		06 06 21.4	+0.7
GEC2	GERESS Array S	145.73	348	*e*PKPdf		PKPdf		06 06 21.0	+0.3
GEC2	GERESS Array S	145.73	348	*e*PKPdf		PKPdf		06 06 18.0	-2.8
GEC2				*e*PKPdf		PKPdf		06 06 21.0	+0.3
GERES	GERESS Array B	145.73	348	PKPbc		PKPbc		06 06 18.3	-2.8
	comp=Z,4.7nm,0.8s,baz=28,slow=3.2,SNR=17								
RUP	Ruppelstein	145.75	356	PKIKP		PKPdf		06 06 21.3	+0.6
WLF	Walferdange	145.84	357	PKP		PKPdf		06 06 22.2	+1.3
WLF	Walferdange	145.84	357	*e*PKPdf		PKPdf		06 06 21.8	+0.9
KTD	Kalmit	146.06	355	PKIKP		PKPbc		06 06 25.0	+2.9
CONA	Conrad Observa	146.12	345	⇓*i*P		PKPdf		06 06 22.1	+0.6
	comp=Z,56nm,1.5s,SNR=13								
CSNA	Conrad Observa	146.12	345	⇓*i*P		PKPdf		06 06 21.8	+0.4
	comp=Z,49nm,1.3s								
GZR	Gura Zlata	146.15	336	⇓*i*P		PKPbc		06 06 25.3	+2.8
GZR	Gura Zlata	146.15	336	P		PKPdf		06 06 24.0	+2.4
SOP	Sopron	146.18	344	⇓*e*PKP		PKPbc		06 06 22.8	+0.3
BZS	Buzias	146.41	337	⇑*i*P		PKPbc		06 06 25

AOI	**Ancona**	**150.78**	**345**	PKP	PKPbc	06 06 36.3 +1.6
SFI	**Santa Sofia**	**150.83**	**348**	PKP2	PKPbc	06 06 37.2 +2.4
VMG	**Vicchio**	**150.84**	**348**	PKP	PKPbc	06 06 37.6 +2.7
FSSB	**Fossombrone**	**150.84**	**347**	PKP	PKPbc	06 06 37.1 +2.2
CING	**Cingoli**	**151.04**	**346**	PKP	PKPbc	06 06 37.0 +1.6
SNTG	**Esanatoglia**	**151.22**	**346**	PKP	PKPbc	06 06 33.9 -1.9
MURB	**Monte Urbino**	**151.30**	**347**	PKP	PKPbc	06 06 37.3 +1.3
TOUF	**Mont Tournerai**	**151.39**	**355**	PKP	PKPbc	06 06 33.6 -2.5
AUTN	**L'Aution**	**151.40**	**354**	PKP	PKPbc	06 06 33.9 -2.3
LASF	**Ste Croix**	**151.49**	**360**	*e*PKP1	PKPbc	06 06 37.0 +0.6
	comp=Z,99nm,1.5s					
LUCF	**Luceram**	**151.50**	**355**	PKP	PKPdf	06 06 33.4 +3.1
MVIF	**Mont Vial**	**151.52**	**355**	PKP	PKPbc	06 06 33.6 -2.8
SBF	**Sospel**	**151.53**	**354**	*e*PKP1	PKPbc	06 06 36.4 -0.1
	comp=Z,134nm,1.4s					
SMRF	**Simiane la Rot**	**151.54**	**357**	*e*PKP1	PKPbc	06 06 37.5 +1.0
	comp=Z,88nm,1.3s					
NRCA	**Norcia**	**151.57**	**345**	PKP	PKPbc	06 06 33.3 -3.3
CALN	**Calern**	**151.68**	**355**	PKP	PKPbc	06 06 33.4 -3.4
FRF	**La Foret Royal**	**151.89**	**356**	*e*PKP1	PKPbc	06 06 37.4 +0.1
LMR	**La Mourre**	**152.13**	**356**	*e*PKP1	PKPbc	06 06 37.9 +0.1
	comp=Z,72nm,1.4s					
MTLF	**Montolieu**	**152.19**	**2**	*e*PKP1	PKPbc	06 06 38.4 +0.4
	comp=Z,38nm,1.3s					
PTQR	**Pietraquaria**	**152.26**	**344**	PKP	PKPbc	06 06 40.2 +2.0
ETSF	**Etsaut**	**152.41**	**7**	*e*PKP1	PKPbc	06 06 39.1 +0.6
	comp=Z,47nm,1.3s					
SDI	**San Donato**	**152.45**	**344**	PKIKP	PKPbc	06 06 39.4 +0.8
PGF	**Pioggiola**	**152.64**	**352**	*e*PKP1	PKPbc	06 06 39.1 +0.1
	comp=Z,117nm,1.4s					
CSSN	**Cassano Irpino**	**152.88**	**341**	PKP	PKPbc	06 06 40.2 +0.6
MTE	**Manteigas**	**153.27**	**19**	*e*PKPbc	PKPbc	06 06 39.9 -0.6
TIP	**Timpagrande**	**153.77**	**337**	*e*PKPbc	PKPbc	06 06 43.4 +1.7
ESDC	**Sonseca Array**	**154.95**	**14**	PKP	PKPdf	06 06 34.4 -1.0
	comp=Z,0.2nm,0.3s,baz=306,slow=21,SNR=2.7					
ESDC				PP	PP	06 10 35.4 +1.1
	comp=Z,0.3nm,0.3s,baz=3.4,slow=6.4,SNR=2.4					
MDT	**Midelt**	**161.12**	**22**	PKP	PKPdf	06 06 41.6 -1.6
TOA0	**Torodi Ar. Sit**	**176.94**	**139**	*e*PKPdf	PKPdf	06 06 54.3 +0.7
TORD	**Torodi Ar. Bea**	**176.94**	**139**	PKP	PKPdf	06 06 51.5 -2.0
	comp=Z,0.7nm,1.1s,baz=199,slow=2.6,SNR=3.2					

ISCJB ***14*** *05:53:00.4±0.5, 38.70N×003×2242E±004, h8km±10km, Error ellipse: s-maj=5.2km s-min=4.2km az=137.6*

THE ***14*** *05:53:01.0, 38.70N×2243E, h0km, ML2.8*

CSEM ***14*** *05:53:00.8±0.2, 38.69N×2242E, h1km, ML2.8, Error ellipse: s-maj=3.0km s-min=2.1km az=41.0*

ATH ***14*** *05:53:00.2, 38.71N×2244E, h18km±5km, MD3.1/4*

ISC 14 05:53:01.1±0.5, 38.70N±003×2242E±004, h11km±9km, n13, σ0°79/26, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGG	**Agios Georgios**	**0.33**	**347**	*e*Pg	**Pg**	**05 53 06.9**	**-0.8**
AGG				*e*Sg	**Sg**	**05 53 12.3**	**+0.2**
LKR	**Lokris**	**0.45**	**96**	*e*Pg	**Pg**	**05 53 10.4**	**+0.4**
LKR				*e*Sg	**Sg**	**05 53 16.0**	**0.0**
LKR	**Lokris**	**0.45**	**96**	*e*PB	**Pg**	**05 53 09.3**	**-0.7**
LKR				*e*SB	**Sg**	**05 53 15.5**	**-0.5**
LKR	**Lokris**	**0.45**	**96**	*e*Pg	**Pg**	**05 53 10.4**	**+0.4**
LKR				*e*Sb	**Sg**	**05 53 15.5**	**-0.5**
LKR				*e*Sg	**Sg**	**05 53 16.0**	**0.0**
EVR	**Evrytania**	**0.53**	**294**	*e*PN	**Pg**	**05 53 11.0**	**-0.4**
EVR				*e*SN	**Sg**	**05 53 18.4**	**0.0**
LTK	**Loutraki**	**0.80**	**148**	*e*Pg	**Pg**	**05 53 15.8**	**-0.7**
XOR	**Xorichti**	**0.90**	**42**	*e*Pg	**Pg**	**05 53 18.1**	**-0.2**
XOR				*e*Sg	**Sg**	**05 53 30.6**	**+0.6**
THL	**Klokotos Trika**	**0.92**	**340**	*e*Pg	**Pg**	**05 53 17.8**	**-1.0**
THL				*e*Sg	**Sg**	**05 53 32.2**	**+1.4**
THL	**Klokotos Trika**	**0.92**	**340**	*e*Pn	**Pg**	**05 53 17.6**	**-1.2**
THL				*e*Sn	**Sg**	**05 53 30.3**	**-0.5**
RLS	**Riolos of Patr**	**0.99**	**230**	⇓*i*PN	**Pg**	**05 53 19.0**	**-1.1**
RLS				*e*SN	**Sg**	**05 53 33.5**	**+0.5**
DID	**Didima**	**1.35**	**151**	*e*Pg	**Pn**	**05 53 25.6**	**-0.3**
DID				*e*Sg	**Sg**	**05 53 46.3**	**+1.7**
DID	**Didima**	**1.35**	**151**	*e*Pg	**Pn**	**05 53 25.5**	**-0.3**
DID				*e*Sg	**Sg**	**05 53 46.3**	**+1.7**
MEV	**Metsovon**	**1.43**	**320**	*e*Pg	**Pn**	**05 53 27.1**	**+0.2**
MEV				*e*Sg	**Sg**	**05 53 48.4**	**+1.4**

BJI ***14*** *06:01:27.6, 469S×101.13E, h34km, mB6.6, mb5.9, Ms6.7, Msz6.5*

ISCJB ***14*** *06:01:31.7±0.1, 4.15S±002×101.12E±002, h31km, mb5.8/204, MS6.3/253, Error ellipse: s-maj=3.2km s-min=2.1km az=24.6*

IDC ***14*** *06:01:32.7±0.9, 4.13S×101.17E, h25km±4km, mb5.5/33, mb1 5.4/34, mb1mx5.4/34, mbtmp5.5/34, ML5.0/1, MS6.2/7, Ms1 6.2/7, ms1mx5.8/24, Error ellipse: s-maj=6.8km s-min=5.5km az=22.0*

IGIL ***14*** *06:01:32.5, 4.11S×101.16E, h27km, MS6.0*

GCMT ***14*** *06:01:32.3±0.1, 4.46S×100.88E, h15km, MW6.4/107, Moment Tensor Solution. s107,c230; s100,c301; Duration: 4ˢ4 Moment tensor: Scale 10¹⁸Nm; Mrr1.18±.01; Mθθ-0.62±.01; Mφφ-0.56±.01; Mrθ3.55±.04; Mrφ0.82±.01; Mθφ-2.14±.05; Best double couple: Mo4.34500×10¹⁸ NP1:φs330.00000°, δ10.00000°, λ118.00000°. NP2:φs122.00000°, δ82.00000°, λ85.00000°. Principal axes: T 4.2690, Plg53.0000°, Azm26.0000°; N 0.1550, Plg5.0000°, Azm122.0000°; P -4.4200, Plg36.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***14*** *06:01:32.3±0.1, 4.08S×101.17E, h23km, mb5.9/99, ME6.2, MS6.3/211 Error ellipse: s-maj=6.2km s-min=4.1km az=218.0 Broadband fault plane solution: P waves. NP1:φs305.00000°, δ5.00000°, λ90.00000°. NP2: φs125.00000°, δ85.00000°, λ90.00000°. Principal axes: T Plg50.0000°, Azm35.0000°; N Plg0.0000°, Azm0.0000°; P Plg40.0000°, Azm215.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [III] at Bengkulu and Kapahiang; [II] at Padangpanjang. Also felt in Singapore.

DJA ***14*** *06:01:35, 4.21S×101.03E, h46km, Mw6.6/43*

MOS ***14*** *06:01:36.4±1.4, 3.95S×101.20E, h63km, mb6.1/75, MS6.3/99, Error ellipse: s-maj=7.9km s-min=4.2km az=117.0*

SZGRF ***14*** *06:01:38.0, 3.06S×101.38E, h33km, mb5.4, MS6.1, Southern Sumatera, Indonesia*

ISC 14 06:01:33.7±0.1, 4.16S±002×101.10E±002, h33km, h33km±.8km: pP-P, n1126, σ1°08/858, mb5.8/204, MS6.3/253, 151C-27D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.57**	**71**	P	**Pn**	**06 01 59.5**	**+0.2**
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.57**	**45**	P	**Pn**	**06 02 29.8**	**+3.0**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.74**	**349**	P	**Pn**	**06 02 29.0**	**-0.2**
	0.0nm,0.0s						
KLI	**Kotabumi**	**3.81**	**101**	P	**Pn**	**06 02 31.6**	**+1.4**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.98**	**18**	P	**Pn**	**06 02 33.9**	**+1.4**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.04**	**44**	P	**Pn**	**06 02 48.9**	**+1.8**
	0.0nm,0.0s						
SBJI	**Serang**	**5.38**	**111**	P	**Pn**	**06 02 53.2**	**+1.5**
	6µm,1.3s						
PPBI	**Pangkal Pinang**	**5.41**	**69**	P	**Pn**	**06 02 53.5**	**+1.4**
	3µm,1.1s						
TNG	**Tangerang**	**5.88**	**110**	P	**Pn**	**06 03 00.4**	**+1.8**
	12µm,1.4s						
DBJI	**Dramaga**	**6.11**	**113**	P	**Pn**	**06 03 02.1**	**+0.3**
	9µm,1.6s						
SKJI	**Sukabumi**	**6.12**	**118**	P	**Pn**	**06 03 02.5**	**+0.5**
	7µm,1.2s						
CBJI	**Citeko**	**6.15**	**112**	P	**Pn**	**06 03 05.4**	**+3.0**
	27µm,1.6s						
TRSI	**Tarutung**	**6.50**	**341**	P	**Pn**	**06 03 11.2**	**+4.0**
	4µm,1.1s						
MYKOM	**Kota Tinggi**	**6.51**	**25**	⇓P	**Pn**	**06 03 09.0**	**+1.6**
KGM	**Kluang**	**6.52**	**20**	⇑P	**Pn**	**06 03 09.1**	**+1.7**
TPI	**Tanjungpandan**	**6.69**	**78**	P	**Pn**	**06 03 12.1**	**+2.4**
	804nm,1.3s						
LEM	**Lembang**	**7.01**	**113**	P	**Pn**	**06 03 15.4**	**+1.2**
	8µm,1.4s						
FRIM	**Kepong**	**7.36**	**4**	⇓P	**Pn**	**06 03 20.0**	**+1.0**
JCJI	**Jatiwangi**	**7.51**	**108**	P	**Pn**	**06 03 23.6**	**+2.6**
	4µm,1.4s						
XMIS	**Christmas Isla**	**7.74**	**145**	*e*Pn	**Pn**	**06 03 17.5**	**-6.7**
XMIS				*e*Sn	**Sn**	**06 04 39.3**	**-11**
IPM	**Ipoh**	**8.58**	**360**	⇓P	**Pn**	**06 03 38.0**	**+2.3**
CLJI	**Cilicap**	**8.63**	**115**	P	**Pn**	**06 03 38.4**	**+2.0**
	5µm,1.3s						
COCO	**West Island**	**9.03**	**208**	Pn	**Pn**	**06 03 36.1**	**-5.8**
	21µm,1.1s,SNR=34						
COCO	**West Island**	**9.03**	**208**	⇑P	**Pn**	**06 03 42.6**	**+0.8**
	SNR=15						
COCO	**West Island**	**9.03**	**208**	⇑*e*Pn	**Pn**	**06 03 36.3**	**-5.6**
BJII	**Banjamegara**	**9.13**	**111**	P	**Pn**	**06 03 43.7**	**+0.4**
	1µm,1.6s						
KTGM	**Kuala Trenggan**	**9.64**	**12**	⇑P	**Pn**	**06 03 51.3**	**+1.1**
KSM	**Kuching**	**10.77**	**59**	⇓P	**Pn**	**06 04 08.4**	**+2.7**
KSM	**Kuching**	**10.77**	**59**	⇑*e*Pn	**Pn**	**06 04 07.1**	**+1.4**
SJI	**Sawahan**	**11.19**	**109**	P	**Pn**	**06 04 11.2**	**-0.3**
	2µm,1.3s						
BSI	**Banda Aceh**	**11.20**	**329**	P	**Pn**	**06 04 11.8**	**+0.1**
	1µm,1.0s						
SNG	**Songkhla**	**11.27**	**358**	P	**Pn**	**06 04 11.0**	**-1.6**
	760nm,1.0s						
KRKI	**Karangkates**	**11.97**	**110**	P	**Pn**	**06 04 22.4**	**+0.3**
	1µm,1.3s						
SBUM	**Sibu**	**12.90**	**60**	⇑P	**Pn**	**06 04 39.9**	**+5.0**
KMMI	**Kalianget**	**13.12**	**103**	P	**Pn**	**06 04 39.1**	**+1.1**
	1µm,1.2s						
BBKI	**Banjar Baru**	**13.73**	**88**	P	**Pn**	**06 04 48.2**	**+2.0**
	2µm,1.2s						
BTM	**Bintulu**	**14.03**	**59**	⇑P	**Pn**	**06 04 54.0**	**+3.7**
IGBI	**Denpasar**	**14.70**	**109**	P	**Pn**	**06 04 58.7**	**-0.8**
	2µm,1.4s						
DNP	**Denpasar**	**14.72**	**108**	P	**Pn**	**06 04 59.4**	**-0.4**
	2µm,1.4s						
KHKI	**Kahang-Kahang**	**15.01**	**107**	P	**Pn**	**06 05 04.7**	**+1.0**
	609nm,1.2s						
MTNI	**Mataram**	**15.62**	**107**	P	**Pn**	**06 05 09.8**	**-1.8**
	647nm,1.4s						
NNT	**Nongplab**	**16.69**	**355**	P	**Pn**	**06 05 24.3**	**-1.0**
	543nm,1.1s						
KKM	**Kota Kinabalu**	**18.18**	**56**	⇑P	**Pn**	**06 05 44.6**	**+0.8**
KKM	**Kota Kinabalu**	**18.18**	**56**	⇑*i*Pn	**Pn**	**06 05 43.9**	**+0.2**
KAPI	**Kappang**	**18.61**	**93**	P	**Pn**	**06 05 47.3**	**-1.8**
	3µm,1.1s,SNR=51						
KAPI	**Kappang**	**18.61**	**93**	P	**Pn**	**06 05 47.4**	**-1.6**
	SNR=59						
KAPI	**Kappang**	**18.61**	**93**	P	**Pn**	**06 05 46.4**	**-2.7**
	4.9nm,0.3s,baz=270,slow=9.7,SNR=33						
KAPI				S	**Sn**	**06 09 16.0**	**-0.4**
	baz=168,slow=19,SNR=1.2						
KAPI				LR	LR	06 13 51.3	
	comp=Z,81µm,18.3s,baz=279,slow=40						
KAPI	**Kappang**	**18.61**	**93**	⇑*i*P	**Pn**	**06 05 45.3**	**-3.7**
TSM	**Tawau**	**18.74**	**64**	⇑P	**Pn**	**06 05 51.7**	**+1.0**
SDKM	**Sandakan**	**18.79**	**59**	⇓P	**Pn**	**06 05 51.6**	**+0.4**
PCI	**Palu**	**18.99**	**81**	P	**Pn**	**06 05 54.0**	**+0.3**
	6µm,1.6s						
KDM	**Kudat**	**19.17**	**55**	⇑P	**Pn**	**06 05 56.3**	**+0.5**
MYLDM	**Lahad Datu**	**19.70**	**62**	⇑P	**Pn**	**06 06 02.2**	**+0.1**
NST	**Nakhon Sawan**	**19.72**	**357**	P	**Pn**	**06 05 58.0**	**-4.3**
	133nm,0.7s						
BATP	**Bataraza**	**21.04**	**52**	*e*P	**P**	**06 06 15.3**	**+0.2**
BDT	**Bhumibol Dam**	**21.36**	**354**	⇑P	**P**	**06 06 17.0**	**-1.5**
	151nm,1.2s,mb5.2						
BBSI	**Bau Bau**	**21.43**	**94**	P	**P**	**06 06 21.2**	**+1.9**
	1µm,1.1s,mb6.2						
KDI	**Kendari**	**21.47**	**90**	P	**P**	**06 06 20.0**	**+0.3**
	2µm,1.4s,mb6.3						
PPR	**Puerto Princes**	**22.36**	**52**	⇓*e*P	**P**	**06 06 28.0**	**-1.2**
CM31	**Chiang Mai Arr**	**22.57**	**355**	PFAKE		06 06 40.0	+8.7
CM31				LR	LR		
	comp=Z,102µm,22.0s,MS6.2						
CMAR	**Chiang Mai Arr**	**22.57**	**355**	P	**P**	**06 06 28.6**	**-2.7**
	comp=Z,390nm,0.9s,mb5.8,baz=185,slow=9.3,SNR=108						
CMAR				PcP	PcP	06 10 26.4	+2.2
	comp=Z,6.9nm,0.7s,baz=222,slow=3.0,SNR=4.3						
CMAR				S	**S**		
	comp=Z,2.1nm,0.3s,baz=111,slow=41,SNR=3.2						
CMAR				LR	LR	06 16 32.4	
	comp=Z,55µm,19.6s,MS6.0,baz=184,slow=40						
CMAR	**Chiang Mai Arr**	**22.57**	**355**	P	**P**	**06 06 28.7**	**-2.6**
CMAR						06 10 26.5	
NANT	**Nan**	**22.81**	**359**	⇑P	**P**	**06 06 30.0**	**-3.9**
	comp=Z,894nm,0.8s,mb6.2						
CHG	**Chiang Mai**	**22.92**	**355**	⇑P	**P**	**06 06 33.0**	**-2.1**
	comp=Z,428nm,1.2s,mb5.8						
CHTO	**Chiang Mai**	**22.92**	**355**	⇓P	**P**	**06 06 34.6**	**-0.5**
	SNR=236						
CHTO	**Chiang Mai**	**22.92**	**355**	⇑*i*P	**P**	**06 06 32.0**	**-3.1**
CHTO				pmax	pmax		
	comp=Z,745nm,1.4s,mb5.9						
CHTO				MLR	MLR		
	comp=Z,62µm,19.0s,MS6.1						
CHTO	**Chiang Mai**	**22.92**	**355**	⇑*i*P	**P**	**06 06 31.9**	**-3.1**
	comp=Z,746nm,1.4s,mb5.9						
CHTO				LR	LR		
	comp=Z,62µm,19.0s,MS6.1						
BATI	**Baumata**	**23.17**	**106**	P	**P**	**06 06 37.4**	**-0.4**
	comp=Z,768nm,1.5s,mb5.9						
BATI	**Baumata**	**23.17**	**106**	P	**P**	**06 06 36.2**	**-1.5**
	comp=Z,162nm,0.5s,mb5.8,baz=125,slow=0.4,SNR=14						
BATI				S	**S**	**06 10 40.5**	**-6.8**
	comp=Z,431nm,1.0s,baz=206,slow=19,SNR=3.3						
PALK	**Pallekele**	**23.31**	**299**	⇑*e*P	**P**	**06 06 41.3**	**+2.1**
	comp=Z,200nm,1.4s,mb5.3						
PALK				LR	LR		
	comp=Z,45µm,20.0s,MS5.9						
ENPP	**El Nido**	**23.78**	**50**	*e*P	**P**	**06 06 42.8**	**-0.8**
QIZ	**Qiongzhong**	**24.59**	**20**	P	**P**	**06 06 51.3**	**+0.3**
QIZ				AP		06 06 57.3	
QIZ				XP	sP	06 07 01.1	-3.4
QIZ				AMB	AMB		
	comp=Z,437nm,1.5s,mb5.8						
QIZ				AMB	AMB		
	comp=Z,14µm,8.2s						
QIZ				LR	LR		
	comp=E,62µm,16.1s						
QIZ				LR	LR		
	comp=Z,67µm,21.5s						
QIZ	**Qiongzhong**	**24.59**	**20**	⇑*i*P	**P**	**06 06 50.9**	**-0.2**
	comp=Z,473nm,1.1s,mb5.9						
QIZ				LR	LR		
	comp=Z,73µm,21.0s,MS6.2						
MBWA	**Marble Bar**	**24.77**	**135**	P	**P**	**06 06 53.7**	**+1.1**
	SNR=9.7						
MBWA	**Marble Bar**	**24.77**	**135**	*e*P	**P**	**06 06 50.2**	**-2.4**
MBWA				LR	LR		
	comp=Z,93µm,20.0s,MS6.3						
CUYO	**Cuyo Island**	**24.81**	**53**	*e*P	**P**	**06 06 54.0**	**+1.0**
BUSP	**Coron**	**24.87**	**50**	*e*P	**P**	**06 06 53.4**	**-0.2**
DCPH	**Dipolog City**	**25.54**	**60**	⇑*e*P	**P**	**06 07 03.1**	**+3.3**
SJMP	**San Jose**	**25.85**	**50**	*e*P	**P**	**06 07 02.3**	**-0.2**
GUIM	**Jordan**	**25.95**	**55**	*e*P	**P**	**06 07 03.8**	**+0.3**
LUBP	**Lubang**	**26.02**	**47**	*e*P	**P**	**06 07 03.5**	**-0.5**
OTRP	**Odiongan**	**26.49**	**51**	*e*P	**P**	**06 07 07.8**	**-0.4**
TBP	**Tagbilaran**	**26.52**	**59**	*e*P	**P**	**06 07 08.5**	**-0.1**
RCP	**Roxas**	**26.60**	**54**	⇑*i*P	**P**	**06 07 09.4**	**+0.1**
BUKP	**Musuan**	**26.73**	**63**	*e*P	**P**	**06 07 09.8**	**-0.7**
DAV	**Davao City (W)**	**26.86**	**66**	P	**P**	**06 07 11.2**	**-0.5**
	comp=Z,127nm,0.3s,mb5.9,baz=186,slow=6.7,SNR=6.7						
DAV				S	**S**	**06 11 50.4**	**+4.1**
	comp=Z,150nm,0.4s,baz=92,slow=9.9,SNR=1.9						
DAV	**Davao City (W)**	**26.86**	**66**	⇑*e*P	**P**	**06 07 11.3**	**-0.3**
DAV				LR	LR		
	comp=Z,59µm,19.0s,MS6.2						
TRD	**Trivandrum**	**27.16**	**298**	*e*P	**P**	**06 07 15.4**	**+1.0**
SCZP	**Santa Cruz**	**27.18**	**43**	*e*P	**P**	**06 07 13.5**	**-1.0**
KOD	**Kodaikanal**	**27.54**	**301**	*e*P	**P**	**06 07 20.1**	**+2.3**
KOD				AMb	AMB	06 08 10.5	
	comp=Z,140nm,2.5s,mb5.1						
BOLP	**Bolinao**	**27.61**	**42**	*e*P	**P**	**06 07 17.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**27.73**	**122**	⇑*i*P	**P**	**06 07 18.6**	**-0.8**
	comp=Z,248nm,0.7s,mb6.0						
FITZ				*e*S	**S**	**06 11 58.7**	**-1.2**
FITZ	**Fitzroy Crossi**	**27.73**	**122**	P	**P**	**06 07 18.7**	**-0.7**
	comp=Z,89nm,0.8s,mb5.4,baz=301,slow=8.4,SNR=106						
FITZ				S	**S**	**06 11 56.4**	**-3.5**
	comp=Z,14nm,0.9s,baz=120,slow=19,SNR=1.7						
FITZ				LR	LR	06 19 00.1	
	comp=Z,12µm,19.0s,MS5.5,baz=139,slow=38						
POLP	**Polilio Island**	**27.90**	**47**	*e*P	**P**	**06 07 20.6**	**-0.3**
BIPH	**Bislig**	**28.02**	**64**	⇑*i*P	**P**	**06 07 20.3**	**-1.8**
BALP	**Baler**	**28.31**	**45**	*e*P	**P**	**06 07 23.6**	**-1.0**
BWNR	**Bhubaneshwar**	**28.57**	**329**	*e*P	**P**	**06 07 27.0**	**+0.2**
BWNR				*ex*	x	06 11 59.0	
DGAR	**Diego Garcia**	**28.68**	**262**	PFAKE		06 07 40.0	+12
DGAR				LR	LR		
	comp=Z,33µm,20.0s,MS5.9						
KMI	**Kunming**	**29.15**	**3**	P	**P**	**06 07 33.3**	**+1.4**
KMI				AP	pP	06 07 40.0	-1.4
KMI				XP	sP	06 07 42.6	-2.8
KMI				PP	PP	06 08 28.1	-10
KMI				S	**S**	**06 12 21.9**	**-0.1**
KMI				AMB	AMB		
	comp=Z,258nm,1.0s,mb5.9						
KMI				AMB	AMB		
	comp=Z,5µm,5.7s						
KMI				LR	LR		
	comp=N,86µm,13.4s,MS6.7						
KMI				LR	LR		
	comp=E,69µm,12.9s,MS6.7						
KMI				LR	LR		
	comp=Z,97µm,13.4s,MS6.6						
HKC	**Hong Kong Obse**	**29.24**	**25**	⇑*i*P	**P**	**06 07 33.0**	**+0.2**
HKC				S	**S**	**06 12 24.0**	**+0.4**
HKC	**Hong Kong Obse**	**29.24**	**25**	*e*P	**P**	**06 07 32.0**	**-0.8**
CAL	**Calcutta**	**29.32**	**335**	*e*P	**P**	**06 07 33.4**	**-0.1**
CAL				*ex*	x	06 12 42.4	
IMP	**Imphal**	**29.60**	**347**	*e*P	**P**	**06 07 35.0**	**-0.9**
IMP				*ex*	x	06 10 43.0	
SWI	**Sorong**	**30.30**	**85**	P	**P**	**06 07 41.2**	**-1.2**
	comp=Z,355nm,1.8s,mb5.8						
HYB	**Hyderabad**	**30.90**	**315**	*i* P	**P**	**06 07 48.5**	**+0.9**
	comp=Z,91nm,1.2s,mb5.5						
HYB				*e*S	**S**	**06 12 50.0**	**+0.2**
HYB				LR	LR	06 21 48.0	
	comp=Z,40nm,18.0s						
GYA	**Guiyang**	**30.91**	**10**	⇑*i*P	**P**	**06 07 47.6**	**+0.1**
GYA				AP	pP	06 07 57.3	+0.3
GYA				XP	sP	06 08 01.3	+0.3
GYA				PP	PP	06 08 51.0	-6.7
GYA				AMB	AMB		
	comp=Z,260nm,1.2s,mb5.9						
GYA				AMB	AMB		
	comp=Z,4µm,8.1s						
GYA				LR	LR		
	comp=N,55µm,20.4s						
GYA				LR	LR		
	comp=Z,59µm,16.4s,MS6.3						
MUN	**Mundaring**	**31.10**	**155**	*e*P	**P**	**06 07 51.2**	**+2.0**
KLBR	**Kellerberrin**	**31.46**	**152**	*e*P	**P**	**06 07 53.9**	**+1.5**
	comp=Z,98nm,1.2s,mb5.5						
BOK	**Bokaro**	**31.49**	**333**	*e*P	**P**	**06 07 53.1**	**+0.4**
BOK				AMb	AMB	06 07 58.6	
	comp=Z,236nm,1.3s,mb5.9						
BOK				*i* S	**S**	**06 13 00.2**	**+1.4**
SHBG	**Sahibganj**	**31.98**	**337**	*ex*	x	06 07 49.5	
NWAO	**Narrogin (SRO)**	**32.35**	**154**	P	**P**	**06 07 59.4**	**-0.8**
	comp=Z,106nm,1.0s,mb5.6,baz=311,slow=9.2,SNR=14						
NWAO				S	**S**	**06 13 09.9**	**-2.3**
	comp=Z,30nm,1.2s,baz=117,slow=0.9,SNR=2.7						
NWAO				LR	LR	06 20 38.8	
	comp=Z,83µm,19.9s,MS6.4,baz=329,slow=35						
NWAO	**Narrogin (SRO)**	**32.35**	**154**	P	**P**	**06 07 59.4**	**-0.8**
NWAO				S	**S**	**06 13 09.9**	**-2.3**
NWAO				pmax	pmax		
	comp=Z,106nm,1.0s						
NWAO				smax			
	comp=N,30nm,1.2s						
NWAO				MLR	MLR		
	comp=Z,83µm,19.9s						
NWAO	**Narrogin (SRO)**	**32.35**	**154**	*e*P	**P**	**06 08 00.3**	**+0.1**
NWAO				LR	LR		
	comp=Z,67µm,20.0s,MS6.3						
LATR	**Latur**	**32.98**	**314**	*e*P	**P**	**06 08 07.0**	**+1.1**
LATR				AMb	AMB	06 08 26.1	
	comp=Z,140nm,0.8s,mb5.9						
NGP	**Nagpur**	**33.16**	**320**	*i* P	**P**	**06 08 04.6**	**-2.8**
NGP				AMb	AMB	06 08 26.6	
	comp=Z,155nm,0.4s,mb6.3						
NGP				*e*S	**S**	**06 13 21.9**	**-3.1**
GOA	**Goa**	**33.32**	**306**	⇑*i*P	**P**	**06 08 10.1**	**+1.3**
GOA				AMb	AMB	06 08 34.1	
	comp=Z,320nm,1.8s,mb5.9						
GOA				*e*S	**S**	**06 13 28.4**	**+0.8**
GTK	**Gangtok**	**33.55**	**340**	*e*P	**P**	**06 08 11.0**	**+0.4**
QZH	**Quanzhou**	**33.55**	**30**	⇑*i*P	**P**	**06 08 10.3**	**-0.4**
QZH				PP	PP	06 09 21.1	-6.0
QZH				AMB	AMB		
	comp=Z,170nm,1.2s,mb5.8						
QZH				AMB	AMB		
	comp=Z,9µm,7.6s						
QZH				LR	LR		
	comp=N,78µm,20.0s,MS6.7						
QZH				LR	LR		
	comp=E,93µm,17.4s,MS6.7						
QZH				LR	LR		
	comp=Z,99µm,15.7s,MS6.6						
ODAN	**

WRA Warramunga Arr 35.98 119 P **P** **06 08 30.9 -0.9**
WRA S **S** **06 14 04.1 -4.5**
WRAB Tennant Creek 35.99 119 P **P** **06 08 32.0 +0.1**
comp=Z,2µm,0.9s,mb6.9,SNR=58
WRAB Tennant Creek 35.99 119⇑*i*P **P** **06 08 30.8 -1.1**
WRAB *e*S **S** **06 14 04.5 -4.2**
WRAB pmax pmax
comp=Z,274nm,0.9s,mb6.2
WRAB MLR MLR
comp=Z,67µm,21.0s,MS6.4
WRAB Tennant Creek 35.99 119⇑*i*P **P** **06 08 30.8 -1.1**
comp=Z,274nm,0.9s,mb6.2
WRAB *e*S **S** **06 14 04.5 -4.2**
WRAB LR LR
comp=Z,67µm,21.0s,MS6.4
WB2 Warramunga Arr 35.99 119 *e*P **P** **06 08 30.9 -1.0**
WB2 *e*S **S** **06 14 05.2 -3.6**
BOM Bombay 36.06 310 *ex* x 06 08 23.7
BOM *ex* x 06 08 56.5
comp=Z,198nm,1.3s
BOM *e*S **S** **06 14 11.3 +1.5**
DANN Dangsing 36.37 334 *e*P **P** **06 08 36.1 +1.1**
comp=Z,680nm,0.8s,mb6.7
FORT Forrest 36.70 139 *e*S **S** **06 14 19.2 -0.1**
FORT Forrest 36.70 139 *e*P **P** **06 08 37.8 0.0**
comp=Z,89nm,0.8s,mb5.7
FORT Forrest 36.70 139 *e*S **S** **06 14 19.2 -0.1**
WHN Wuhan 36.76 19 P **P** **06 08 38.1 -0.2**
WHN PP PP 06 10 06.8 +4.4
WHN AMB AMB
comp=Z,11µm,8.0s
WHN LR LR
comp=N,126µm,13.4s,MS6.9
WHN LR LR
comp=E,23µm,10.8s,MS6.9
WHN LR LR
comp=Z,147µm,15.0s,MS6.9
ASAR Alice Springs 37.12 125 P **P** **06 08 41.2 -0.2**
comp=Z,86nm,0.9s,mb5.6,baz=295,slow=8.0,SNR=234
ASAR S **S** **06 14 25.5 -0.3**
comp=Z,24nm,1.2s,baz=293,slow=16,SNR=4.3
XAN Xi'an 38.70 10 P **P** **06 08 54.1 -0.5**
XAN AP pP 06 09 03.4 -0.9
XAN XP sP 06 09 08.0 -0.3
XAN S **S** **06 14 47.3 -2.2**
XAN SS SS 06 17 33.5 -7.4
XAN AMB AMB
comp=Z,662nm,1.0s,mb6.3
XAN AMB AMB
comp=Z,2µm,5.9s
XAN LR LR
comp=N,79µm,18.5s,MS6.7
XAN LR LR
comp=E,64µm,20.2s,MS6.7
XAN LR LR
comp=Z,105µm,16.3s,MS6.7
PTH Pithoragarh 39.04 330 *e*P **P** **06 08 59.8 +2.2**
PTH *e*S **S** **06 14 55.9 +1.1**
NJ2 Nanjing 39.77 24 *e*P **P** **06 09 04.5 +0.9**
NJ2 AP pP 06 09 12.3 -1.0
NJ2 XP sP 06 09 14.8 -2.5
NJ2 PP PP 06 10 40.0 +4.5
NJ2 AMB AMB
comp=Z,70nm,1.1s,mb5.3
NJ2 AMB AMB
comp=Z,3µm,7.8s
NJ2 LR LR
comp=N,29µm,18.2s,MS6.5
NJ2 LR LR
comp=E,58µm,20.6s,MS6.5
NJ2 LR LR
comp=Z,57µm,20.6s,MS6.4
AJM Ajmer 39.79 321 *e*P **P** **06 09 04.8 +0.9**
NDI New Delhi 39.92 326 *e*P **P** **06 09 03.5 -1.4**
NDI *ex* x 06 15 04.0
SSE Sheshan 39.95 27 P **P** **06 09 05.8 +0.6**
SSE PP PP 06 10 39.1 +1.6
SSE PCP PcP 06 11 08.5 -1.7
SSE S **S** **06 15 11.3 +2.9**
SSE XS sS 06 15 30.3 +5.9
SSE AMB AMB
comp=Z,171nm,1.2s,mb5.7
SSE AMB AMB
comp=Z,6µm,12.0s
SSE LR LR
comp=N,53µm,15.2s,MS6.6
SSE LR LR
comp=E,35µm,15.2s,MS6.6
SSE LR LR
comp=Z,42µm,14.5s,MS6.4
LZH Lanzhou 40.11 3 ⇑P **P** **06 09 07.3 +0.9**
LZH AP pP 06 09 17.3 +1.2
LZH XP sP 06 09 21.1 +1.1
LZH PP PP 06 10 44.8 +5.7
LZH PCP PcP 06 11 10.0 -0.6
LZH AMB AMB
comp=Z,1µm,1.3s,mb6.4
LZH AMB AMB
comp=Z,10µm,7.6s
LZH LR LR
comp=E,65µm,18.5s
LZH LR LR
comp=Z,87µm,19.7s,MS6.6
JOW Kunigami 40.49 39 P **P** **06 09 09.6 -0.1**
comp=Z,173nm,1.0s,mb5.8,baz=252,slow=3.7,SNR=8.8
DDI Dehra Dun 40.76 329⇑*i*P **P** **06 09 09.6 -2.3**
DDI *e*S **S** **06 15 22.0 +1.5**
SMLA Simla 41.86 329 *i* P **P** **06 09 21.5 +0.6**
SMLA *ex* x 06 09 24.6
comp=Z,541nm,0.7s
SMLA *i* S **S** **06 15 36.8 -0.1**
SDNR Sundarnagar 42.26 329 *e*P **P** **06 09 25.0 +0.9**
SDNR *e*S **S** **06 15 42.1 -0.6**
BHK Bhakra 42.48 328 *ex* x 06 09 39.8
BHK *ex* x 06 10 17.8
COEN Coen 42.61 106⇑*i*P **P** **06 09 24.7 -2.6**
comp=Z,162nm,1.4s,mb5.6
TIA Tai'an 42.87 19 ⇑P **P** **06 09 28.3 -0.7**
TIA XP sP 06 09 45.0 +2.3
TIA PCP PcP 06 11 20.3 +0.7
TIA XS sS 06 16 07.0 -0.5
TIA AMB AMB
comp=Z,84nm,1.1s,mb5.4
TIA AMB AMB
comp=Z,2µm,7.0s
TIA LR LR
comp=N,45µm,19.0s,MS6.9
TIA LR LR
comp=E,135µm,19.0s,MS6.9
TIY Taiyuan 42.97 13 ⇑P **P** **06 09 30.8 +1.0**
TIY PCS PcS 06 15 10.9 -1.3
TIY S **S** **06 15 53.8 +0.9**
TIY XS sS 06 16 11.9 +2.9
TIY SS SS 06 19 01.5 -4.2
TIY SCS ScS 06 19 25.5 -2.7
TIY LR LR
comp=N,62µm,17.5s,MS6.7
TIY LR LR
comp=E,39µm,15.8s,MS6.7
TIY LR LR
comp=Z,72µm,19.3s,MS6.6
GTA Gaotai 43.37 359 ⇑P **P** **06 09 33.8 +0.8**
GTA AP pP 06 09 44.3 +1.6
GTA XP sP 06 09 48.3 +1.6
GTA PCP PcP 06 11 21.8 +0.6
GTA SCP ScP 06 15 09.8 -0.6
GTA S **S** **06 15 59.0 +0.3**
GTA XS sS 06 16 15.6 +0.9
GTA SS SS 06 19 06.4 -7.0
GTA SCS ScS 06 19 28.1 -2.5
GTA AMB AMB
comp=Z,209nm,2.4s,mb5.4
GTA AMB AMB
comp=Z,8µm,6.3s
GTA LR LR
comp=N,51µm,19.2s,MS6.8
GTA LR LR
comp=E,102µm,19.2s,MS6.8
GTA LR LR
comp=Z,62µm,19.2s,MS6.5
DLH Dalhousie 43.60 329 *e*P **P** **06 09 35.0 0.0**
DLH *ex* x 06 10 09.0
THN Thein Dam 43.65 328 *e*P **P** **06 09 34.4 -1.0**
THN *ex* x 06 15 45.1

BTO Baotou 45.29 10 *i* P **P** **06 09 48.3 0.0**
BTO S **S** **06 16 23.5 -3.1**
MSEY Mahe Island 45.48 268 PFAKE 06 10 00.0 +10
MSEY LR LR
comp=Z,24µm,20.0s,MS6.1
HHC Hu-ho-hao-te 45.80 11⇑*i*P **P** **06 09 53.0 +0.6**
HHC AP pP 06 10 01.3 -0.9
HHC XP sP 06 10 04.5 -1.6
HHC PCP PcP 06 11 30.5 +0.9
HHC PP PP 06 11 40.8 +0.6
HHC AMB AMB
comp=Z,171nm,1.2s,mb5.8
HHC AMB AMB
comp=Z,8µm,6.9s
HHC LR LR
comp=N,55µm,15.1s,MS6.7
HHC LR LR
comp=E,43µm,16.4s,MS6.7
HHC LR LR
comp=Z,57µm,15.0s,MS6.6
PMG Port Moresby 46.00 99⇑*i*P **P** **06 09 52.9 -1.6**
PMG MLR MLR
comp=Z,34µm,20.0s
BJT Baijiatuao 46.09 16⇑*i*P **P** **06 09 54.2 -0.5**
BJT *e* 06 11 32.3
BJT pmax pmax
comp=Z,154nm,0.8s
BJT MLR MLR
comp=Z,71µm,19.0s
BJT Baijiatuao 46.09 16*i*P **P** **06 09 54.2 -0.5**
comp=Z,154nm,0.8s,mb6.0
BJT *e*PcP PcP 06 11 32.2 +1.7
BJT LR LR
comp=Z,71µm,19.0s,MS6.6
BJI Beijing 46.11 16 P **P** **06 09 54.8 0.0**
BJI XP sP 06 10 10.3 +1.7
BJI PCP PcP 06 11 32.5 +1.8
BJI AMB AMB
comp=Z,246nm,1.2s,mb6.0
BJI LR LR
comp=E,71µm,19.1s
BJI LR LR
comp=Z,48µm,19.1s,MS6.5
CTA Charters Tower 46.71 114 *e*P **P** **06 09 59.6 -0.3**
comp=Z,163nm,1.0s,mb5.9
CTA Charters Tower 46.71 114 P **P** **06 09 59.8 -0.1**
comp=Z,304nm,1.2s,mb6.1,baz=289,slow=9.1,SNR=57
CTA S **S** **06 16 47.2 -0.6**
comp=Z,22nm,0.7s,baz=324,slow=11,SNR=9.8
CTA Charters Tower 46.71 114 P **P** **06 09 59.8 -0.1**
CTA S **S** **06 16 47.2 -0.6**
CTA pmax pmax
comp=Z,304nm,1.2s
CTA smax
comp=N,22nm,0.7s
CTAO Charters Tower 46.71 114⇑*i*P **P** **06 09 59.6 -0.3**
CTAO pmax pmax
comp=Z,684nm,1.4s,mb6.4
CTAO MLR MLR
comp=Z,40µm,22.0s,MS6.3
CTAO Charters Tower 46.71 114⇑*i*P **P** **06 09 59.6 -0.3**
comp=Z,684nm,1.4s,mb6.4
CTAO LR LR
comp=Z,40µm,22.0s,MS6.3
DL2 Dalian 46.86 22⇑*i*P **P** **06 10 00.3 -0.4**
DL2 PP PP 06 11 47.5 -3.9
DL2 S **S** **06 16 51.0 +1.7**
DL2 AMB AMB
comp=Z,120nm,1.2s,mb5.7
DL2 AMB AMB
comp=Z,3µm,6.6s
DL2 LR LR
comp=N,18µm,17.4s,MS6.2
DL2 LR LR
comp=E,17µm,17.3s,MS6.2
DL2 LR LR
comp=Z,26µm,17.5s,MS6.2
GUMO Guam 46.88 67 P **P** **06 09 57.3 -4.0**
comp=Z,101nm,0.5s,mb6.0,baz=170,slow=5.6,SNR=12
GUMO Guam 46.88 67 *e*P **P** **06 09 57.2 -4.1**
GUMO pmax pmax
comp=Z,394nm,1.4s,mb6.2
GUMO MLR MLR
comp=Z,10µm,20.0s,MS5.8
GUMO Guam 46.88 67 *e*P **P** **06 09 57.2 -4.1**
comp=Z,394nm,1.4s,mb6.2
GUMO LR LR
comp=Z,10µm,20.0s,MS5.8
STKA Stephens Creek 46.91 131⇑*i*P **P** **06 10 01.5 +0.2**
comp=Z,170nm,0.9s,mb6.0
STKA *e*S **S** **06 16 49.6 -0.7**
STKA Stephens Creek 46.91 131 P **P** **06 10 01.3 0.0**
comp=Z,102nm,1.0s,mb5.7,baz=303,slow=7.7,SNR=41
STKA S **S** **06 16 50.7 +0.3**
comp=Z,14nm,1.1s,baz=191,slow=20,SNR=2.3
STKA Stephens Creek 46.91 131 *e*P **P** **06 10 01.2 -0.1**
STKA *e*S **S** **06 16 49.6 -0.7**
INCN Inchon 47.75 28 P **P** **06 10 07.3 -0.4**
SNR=7.2
INCN Inchon 47.75 28⇑*i*P **P** **06 10 06.4 -1.3**
comp=Z,181nm,1.2s,mb6.0
INCN LR LR
comp=Z,20µm,21.0s,MS6.1
KSRS Korea Array 48.34 29 P **P** **06 10 11.8 -0.4**
comp=Z,308nm,1.0s,mb6.3,baz=217,slow=8.0,SNR=218
KSRS PcP PcP 06 11 40.1 +1.5
comp=Z,29nm,1.0s,baz=221,slow=4.1,SNR=4.0
KSRS S **S** **06 17 11.5 +1.2**
comp=Z,1.4nm,0.9s,baz=70,slow=40,SNR=2.4
KSRS Korea Array 48.34 29 P **P** **06 10 11.9 -0.3**
KSRS 06 11 40.2
KSRS S **S** **06 17 11.5 +1.2**
KSRS pmax pmax
comp=Z,308nm,1.0s,mb6.3
KSRS smax
comp=N,1.0nm,0.9s
KBL Kabul 48.91 324⇑*i*P **P** **06 10 16.0 -0.7**
KBL pmax pmax
comp=Z,233nm,1.5s,mb6.0
KBL Kabul 48.91 324⇑*i*P **P** **06 10 16.0 -0.8**
comp=Z,234nm,1.5s,mb6.0
WBK Wadi Bani Khal 49.00 305 P **P** **06 10 19.5 +1.9**
SNR=11
KSH Kashi 49.24 334⇑*i*P **P** **06 10 20.0 +0.9**
KSH *e*AP pP 06 10 29.1 +0.1
KSH *e*XP sP 06 10 33.0 +0.1
KSH *e*PCP PcP 06 11 43.0 +1.1
KSH *e*PP PP 06 12 14.1 +0.8
KSH *e*SCP ScP 06 15 34.3 -0.6
KSH *e*PCS PcS 06 15 38.1 -0.2
KSH *e*S **S** **06 17 21.6 -1.3**
KSH *e*XS sS 06 17 38.3 -0.9
KSH *e*SCS ScS 06 20 06.0 -2.8
KSH *e*SS SS 06 20 49.0 -5.9
KSH AMB AMB
comp=Z,11µm,5.8s
KSH LR LR
comp=N,26µm,14.0s,MS6.6
KSH LR LR
comp=E,38µm,14.4s,MS6.6
KSH LR LR
comp=Z,25µm,18.1s,MS6.2
WMQ Urumqi 49.26 347⇑*i*P **P** **06 10 20.3 +1.1**
WMQ AP pP 06 10 30.0 +0.9
WMQ XP sP 06 10 34.0 +1.0
WMQ PCP PcP 06 11 43.0 +1.2
WMQ PP PP 06 12 14.5 +1.1
WMQ AMB AMB
comp=Z,432nm,0.8s,mb6.5
WMQ AMB AMB
comp=Z,8µm,4.7s
WMQ LR LR
comp=N,23µm,20.0s,MS6.5
WMQ LR LR
comp=E,37µm,18.7s,MS6.5
WMQ LR LR
comp=Z,27µm,21.6s,MS6.2
JMDO Jabal Madar 49.61 304 P **P** **06 10 22.8 +0.6**
SNR=10
SMDO Samad 49.96 305 P **P** **06 10 26.7 +1.7**
SNR=15
BIDO Bidbid 50.11 305 P **P** **06 10 27.9 +1.8**
SNR=15
SNY Shenyang 50.13 22 ⇑P **P** **06 10 24.9 -1.0**
SNY S **S** **06 17 32.4 -3.0**
SNY AMB AMB
comp=Z,112nm,1.5s,mb5.7
SNY AMB AMB
comp=Z,5µm,4.8s
SNY LR LR
comp=N,46µm,18.3s,MS6.5
SNY LR LR
comp=E,22µm,19.0s,MS6.5
SNY LR LR
comp=Z,38µm,18.4s,MS6.4
BSY Bisya 50.52 304 P **P** **06 10 31.1 +1.9**
SNR=26
HOQ Hoqain 50.80 305 ⇑P **P** **06 10 32.2 +0.9**
SNR=15
ARQ Araqi 51.34 304 ⇓P **P** **06 10 36.0 +0.7**
SNR=15
ULHL Ulahol 51.41 336 P **P** **06 10 36.1 +0.6**
SNR=18
WHFO Wadi Hawf 51.56 297 P **P** **06 10 38.6 +1.5**
SNR=9.2
KZA Kyzart 51.67 336 P **P** **06 10 38.3 +0.8**
SNR=26
SONM Songino Array 51.98 5 P **P** **06 10 40.6 +0.9**
comp=Z,332nm,0.9s,mb6.3,baz=186,slow=6.5,SNR=475
SONM PcP PcP 06 11 54.0 +2.2
comp=Z,32nm,0.9s,baz=188,slow=3.8,SNR=5.0
SONM S **S** **06 18 02.9 +2.2**
comp=Z,2.5nm,1.0s,baz=169,slow=17,SNR=2.4
SONM PKP2bc 06 41 30.0
comp=Z,0.9nm,0.8s,baz=118,slow=2.2,SNR=4.1
SONM Songino Array 51.98 5 P **P** **06 10 40.6 +1.0**
SONM 06 11 54.0
SONM S **S** **06 18 02.9 +2.2**
SONM Songino Array 51.98 5 P **P** **06 10 40.6 +0.9**
SONM PcP PcP 06 11 54.0 +2.2
SONM S **S** **06 18 02.9 +2.2**
SONM ⇑*e* 06 41 30.0
AAA Alma-Ata 52.01 338 *e*P **P** **06 10 39.1 -0.8**
AAA *e*S **S** **06 18 01.7 +0.5**
AAA pmax pmax
comp=Z,8µm,8.1s
AAA smax
comp=E,23µm,12.5s
AAA MLR MLR
comp=Z,18µm,19.0s,MS6.1
AAA Alma-Ata 52.01 338 *i* P **P** **06 10 39.6 -0.3**
ULN Ulaanbaatar 52.06 5 P **P** **06 10 41.4 +1.1**
SNR=177
ULN Ulaanbaatar 52.06 5⇑*i*P **P** **06 10 40.5 +0.2**
ULN pmax pmax
comp=Z,234nm,1.0s,mb6.1
ULN MLR MLR
comp=Z,26µm,20.0s,MS6.3
ULN Ulaanbaatar 52.06 5⇑*i*P **P** **06 10 40.5 +0.2**
comp=Z,234nm,1.0s,mb6.1
ULN *e*PP PP 06 12 26.6 -12
ULN LR LR
comp=Z,26µm,20.0s,MS6.3
JHJ Hachijo jima 2 52.10 42 S **S** **06 18 08.7 +5.8**
comp=Z,58nm,0.8s,baz=79,slow=20,SNR=2.6
TKM2 Tokmak 2 52.23 336⇑*i*P **P** **06 10 41.9 +0.3**
TKM2 pmax pmax
comp=Z,412nm,1.2s,mb6.2
TKM2 MLR MLR
comp=Z,39µm,20.0s,MS6.4
TKM2 Tokmak 2 52.23 336 P **P** **06 10 42.3 +0.6**
SNR=124
TKM2 Tokmak 2 52.23 336⇑*i*P **P** **06 10 41.9 +0.3**
comp=Z,412nm,1.2s,mb6.2
TKM2 LR LR
comp=Z,39µm,20.0s,MS6.4
KBK Karagaybulak 52.27 336 P **P** **06 10 43.1 +1.1**
SNR=16
HATD Hatta, Dubai 52.33 306 P **P** **06 10 43.8 +1.1**
SNR=11
EIDS Eidsvold 52.35 119 *e*P **P** **06 10 49.7 +6.8**
AML Almayashu 52.37 334 P **P** **06 10 43.5 +0.8**
SNR=20
AML Almayashu 52.37 334⇑*i*P **P** **06 10 43.2 +0.5**
AML LR LR
comp=Z,18µm,22.0s,MS6.1
TOO Toolangi 52.41 135 *e*P **P** **06 10 42.4 -0.7**
AAK Ala-Archa 52.44 335 P **P** **06 10 43.9 +0.6**
SNR=11
CN2 Changchun 52.53 22 *e*P **P** **06 10 42.8 -1.0**
CN2 *e*XP sP 06 10 57.4 -0.3
CN2 *e*PP PP 06 12 42.4 -0.7
CN2 AMB AMB
comp=Z,470nm,1.1s,mb6.3
CN2 LR LR
comp=N,44µm,19.0s,MS6.6
CN2 LR LR
comp=E,23µm,19.0s,MS6.6
CN2 LR LR
comp=Z,44µm,20.0s,MS6.5
FRU Bishkek 52.56 336⇑*i*P **P** **06 10 43.5 -0.6**
FRU *e*S **S** **06 18 10.0 +1.2**
FRU *i* 06 18 21.0
FRU pmax pmax
comp=Z,2µm,3.0s
FRU pmax pmax
comp=Z,5µm,9.0s
FRU smax
comp=E,10µm,10.0s
FRU MLR MLR
comp=Z,38µm,20.0s,MS6.4
CHMS Chumysh 52.64 336 P **P** **06 10 45.5 +0.9**
SNR=14
EKS2 Erkin-Say 52.77 335 P **P** **06 10 46.5 +0.9**
SNR=109
EKS2 Erkin-Say 52.77 335⇑*i*P **P** **06 10 46.2 +0.6**
comp=Z,338nm,1.0s,mb6.2
EKS2 LR LR
comp=Z,26µm,21.0s,MS6.3
USP Ospenovka 52.97 336 P **P** **06 10 47.2 +0.2**
SNR=68
MAJO Matsushiro 53.28 37⇑*i*P **P** **06 10 47.7 -1.8**
MAJO *e* 06 11 57.9
MAJO MLR MLR
comp=Z,16µm,21.0s,MS6.0
MAT Matsushiro 53.28 37 P **P** **06 10 48.8 -0.7**
MAT S **S** **06 18 18.0 -0.9**
MJAR Matsushiro Arr 53.28 37 P **P** **06 10 48.0 -1.5**
comp=Z,226nm,1.1s,mb6.0,baz=218,slow=7.3,SNR=175
MJAR S **S** **06 18 18.4 -0.4**
comp=Z,0.8nm,0.3s,baz=27,slow=12,SNR=2.8
MK31 Makanchi Array 53.39 344⇑*i*P **P** **06 10 50.1 0.0**
MKAR Makanchi Array 53.39 344 P **P** **06 10 49.9 -0.2**
comp=Z,295nm,0.7s,mb6.3,baz=152,slow=5.5,SNR=489
MKAR S **S** **06 18 19.9 0.0**
comp=Z,1.4nm,0.8s,baz=329,slow=30,SNR=4.4
MKAR PKP2bc 06 41 22.7
comp=Z,1.1nm,1.1s,baz=355,slow=5.2,SNR=5.1
MKAR Makanchi Array 53.39 344 P **P** **06 10 49.9 -0.2**
MKAR S **S** **06 18 19.9 -0.1**
MKAR Makanchi Array 53.39 344 P **P** **06 10 49.9 -0.2**
MKAR S **S** **06 18 19.9 0.0**
MKAR ⇑*e* 06 41 22.7
CAN Canberra 53.97 131 *e*P **P** **06 10 57.2 +2.6**
CNB Canberra Magne 54.24 131 *e*P **P** **06 10 56.5 -0.1**
OPO Ambohidratompo 54.54 250 P **P** **06 11 00.6 +1.5**
comp=Z,12nm,0.8s,mb4.9,baz=84,slow=7.5,SNR=9.1
OPO S **S** **06 18 40.4 +3.8**
comp=Z,1.6nm,0.8s,baz=0.8,slow=23,SNR=2.2
KK31 Karatay Array 54.56 333 *i* P **P** **06 10 58.1 -0.6**
MDJ Mudanjiang 54.85 25 P **P** **06 11 00.3 -0.5**
MDJ AP pP 06 11 06.6 -4.2
MDJ PP PP 06 13 02.6 -1.4
MDJ AMB AMB
comp=Z,157nm,1.1s,mb6.0
MDJ AMB AMB
comp=Z,5µm,7.5s
MDJ LR LR
comp=N,13µm,24.9s,MS5.9
MDJ LR LR
comp=E,7µm,26.6s,MS5.9
MDJ LR LR
comp=Z,7µm,24.4s,MS5.7
MDJ Mudanjiang 54.85 25⇑*i*P **P** **06 11 00.4 -0.5**
comp=Z,176nm,1.0s,mb6.0
MDJ LR LR
comp=Z,26µm,20.0s,MS6.3
MOY Mondy 55.61 360 *e*P **P** **06 11 06.9 +0.8**
MOY pmax pmax
comp=Z,406nm,2.2s,mb6.1
HIA Hailar 55.62 15⇑*i*P **P** **06 11 05.3 -1.0**
HIA pmax pmax

comp=Z,124nm,1.1s
HIA MLR MLR
comp=Z,50µm,19.0s
HIA Hailar 55.62 15⇑*i*P P 06 11 05.3 -1.0
comp=Z,124nm,1.1s,mb5.8
HIA LR LR
comp=Z,50µm,19.0s,MS6.6
TLY Talaya 55.66 2 P P **06 11 07.2 +0.7**
comp=Z,850nm,0.7s,mb6.9,SNR=43
TLY Talaya 55.66 2 P P **06 11 07.8 +1.3**
SNR=92
TLY Talaya 55.66 2*c i*P P 06 11 07.2 +0.7
TLY *e*S **S 06 18 48.9 -1.5**
TLY *e* 06 20 53.7
TLY pmax pmax
comp=Z,107nm,0.8s,mb5.9
TLY pmax pmax
comp=Z,3µm,4.3s
TLY pmax pmax
comp=Z,42µm,16.0s
TLY Talaya 55.66 2⇑*i*P P 06 11 07.2 +0.6
TLY LR LR
comp=Z,18µm,22.0s,MS6.1
TAU Tasmania Unive 56.23 140 *e*P P **06 11 13.1 +2.3**
TAU pmax pmax
comp=Z,228nm,1.3s,mb6.0
TAU MLR MLR
comp=Z,37µm,19.0s,MS6.5
TAU Tasmania Unive 56.23 140 *e*P P **06 11 13.1 +2.3**
comp=Z,228nm,1.3s,mb6.0
TAU LR LR
comp=Z,37µm,19.0s,MS6.5
IRK Irkutsk 56.25 2 *e*P P **06 11 09.8 -0.9**
IRK *e* 06 13 15.0
IRK *e*S **S 06 19 07.1 +8.9**
IRK pmax pmax
comp=Z,656nm,2.9s,mb6.2
CIT Chita 56.96 9 *e*P P **06 11 16.6 +0.8**
CIT *e* 06 11 40.5
CIT *e* 06 12 12.0
CIT *e* 06 19 12.2
CIT pmax pmax
comp=Z,673nm,3.6s
ABKT Ailbek 57.80 320 P P **06 11 21.9 -0.1**
comp=Z,680nm,1.0s,mb6.6,SNR=18
KURK Kurchatov 57.97 343 ⇑P P **06 11 24.3 +1.3**
SNR=175
KURK Kurchatov 57.97 343 P P **06 11 22.2 -0.8**
comp=Z,178nm,0.8s,mb6.1,baz=160,slow=6.2,SNR=196
KURK S **S 06 19 21.1 +0.1**
comp=Z,2.9nm,1.0s,baz=147,slow=4.7,SNR=2.7
KURK Kurchatov 57.97 343 P P **06 11 22.2 -0.7**
KURK S **S 06 19 21.1 +0.1**
KURK pmax pmax
comp=Z,178nm,0.9s,mb6.1
KURK smax
comp=N,3.0nm,1.0s
KURK Kurchatov 57.97 343⇑*i*P P **06 11 22.4 -0.5**
comp=N,284nm,0.8s,mb6.3
KURK *e*S **S 06 19 07.5 -13**
KURK LR LR
comp=Z,38µm,20.0s,MS6.5
HNR Honiara 58.61 98 P P **06 11 26.7 -1.5**
comp=Z,300nm,0.9s,mb6.3,baz=198,slow=8.2,SNR=13
HNR S **S 06 19 29.6 -1.1**
comp=Z,45nm,0.3s,baz=107,slow=8.2,SNR=2.4
HNR Honiara 58.61 98 P P **06 11 26.7 -1.4**
HNR S **S 06 19 29.6 -1.0**
HNR pmax pmax
comp=Z,300nm,0.9s,mb6.3
HNR smax
comp=N,45nm,0.3s
HNR Honiara 58.61 98⇑*i*P P **06 11 26.4 -1.8**
comp=N,7µm,1.9s,mb7.3
HNR LR LR
comp=Z,19µm,22.0s,MS6.2
KLR Kul'dur 59.46 23⇓*i*P P **06 11 29.9 -3.4**
KLR *e*S **S 06 19 38.3 -2.1**
KLR pmax pmax
comp=Z,5µm,6.5s
KLR pmax pmax
comp=E,320nm,1.8s
KLR pmax pmax
comp=Z,1µm,1.8s,mb6.5
ZAA0 Zalesovo Array 59.48 349⇑*i*P P **06 11 32.5 -0.8**
ZALV Zalesovo Beam 59.48 349 P P **06 11 33.0 -0.4**
comp=Z,289nm,0.8s,mb6.4,baz=164,slow=5.3,SNR=378
ZALV S **S 06 19 39.2 -1.2**
comp=Z,4.9nm,0.9s,baz=167,slow=7.0,SNR=3.6
ZALV PKP2bc 06 41 17.6
comp=Z,1.5nm,0.4s,baz=290,slow=5.7,SNR=4.0
ZALV Zalesovo Beam 59.48 349 P P **06 11 33.0 -0.3**
ZALV S **S 06 19 39.2 -1.2**
ZALV Zalesovo Beam 59.48 349 P P **06 11 33.0 -0.4**
ZALV S **S 06 19 39.2 -1.2**
ZALV ⇑*e* 06 41 17.6
ERM Erimo 59.74 35 P P **06 11 35.8 +0.4**
comp=Z,892nm,1.4s,mb6.6,SNR=12
ERM Erimo 59.74 35⇓*i*P P **06 11 34.8 -0.6**
ERM pmax pmax
comp=Z,176nm,1.0s,mb6.0
ERM MLR MLR
comp=Z,14µm,21.0s,MS6.1
ERM Erimo 59.74 35⇓*i*P P **06 11 34.8 -0.7**
comp=Z,176nm,1.0s,mb6.0
ERM LR LR
comp=Z,14µm,21.0s,MS6.1
NVS Novosibirsk 60.63 348⇑*i*P P **06 11 40.3 -0.9**
NVS *i* S **S 06 19 53.3 -1.9**
NVS *e* 06 20 25.8
NVS pmax pmax
comp=Z,680nm,2.3s,mb6.4
NVS pmax pmax
comp=N,659nm,2.2s
NVS pmax pmax
comp=E,255nm,2.0s
NVS smax
comp=E,283nm,2.1s
ASAJ Asahikawa 60.78 33 P P **06 11 42.4 -0.1**
comp=E,55nm,0.5s,mb5.9,baz=251,slow=13,SNR=28
ASAJ S **S 06 19 57.6 +0.1**
comp=E,2.5nm,0.3s,baz=327,slow=33,SNR=2.3
ASAJ Asahikawa 60.78 33 P P **06 11 42.4 -0.1**
ASAJ S **S 06 19 57.7 +0.2**
ASAJ pmax pmax
comp=Z,55nm,0.5s
ASAJ smax
comp=N,3.0nm,0.3s
RDF Al-Radifah 61.00 306 *e*P P **06 11 43.9 -0.4**
baz=306
RDF AMb AMB 06 12 20.0
comp=Z,271nm,1.6s,mb6.1,baz=306
UMR Umm Al-Rimmam 61.12 307 *e*P P **06 11 44.9 -0.2**
baz=307
UMR AMb AMB 06 11 57.1
comp=Z,180nm,1.5s,mb6.0,baz=307
NAY Al-Naaiem 61.37 306 *e*P P **06 11 46.5 -0.3**
baz=306
NAY AMb AMB 06 12 11.8
comp=Z,74nm,1.1s,mb5.7,baz=306
MIB Mutribah 61.52 307 *e*P P **06 11 47.6 -0.1**
baz=307
MIB AMb AMB 06 12 12.9
comp=Z,319nm,1.4s,mb6.3,baz=307
RST Umm Al-Ruwaisa 61.67 307 *e*P P **06 11 48.0 -0.8**
baz=307
RST AMb AMB 06 12 02.4
comp=Z,183nm,1.7s,mb5.9,baz=307
CASY Casey 62.36 176 *e*P P **06 11 53.3 +0.5**
CASY LR LR
comp=Z,41µm,20.0s,MS6.6
MIR Mirnyy 62.54 184⇑*i*P P **06 11 54.5 +0.5**
MIR *i* 06 12 37.0
MIR *i* S **S 06 20 22.0 +2.9**
MIR *i* PS 06 20 40.0
MIR *i* 06 21 38.0
MIR pmax pmax
comp=Z,200nm,1.5s,mb6.0
MIR MLR MLR
comp=Z,19µm,18.0s,MS6.3
BVA0 Borovoye Array 62.57 340 *i* P P **06 11 53.4 -1.0**
BVA0 pmax pmax
comp=Z,45nm,1.5s,mb5.4
BVAR Borovoye Array 62.57 340 P P **06 11 53.5 -0.9**
comp=Z,64nm,0.6s,mb5.9,baz=145,slow=8.4,SNR=198
BVAR S **S 06 20 19.9 0.0**
comp=Z,0.7nm,0.5s,baz=259,slow=33,SNR=2.3
BRVK Borovoye 62.64 340 P P **06 11 54.7 -0.1**
comp=Z,892nm,1.3s,mb6.7,SNR=27
BRVK Borovoye 62.64 340⇑P P **06 11 55.4 +0.7**
SNR=92
BRVK Borovoye 62.64 340⇑*i*P P **06 11 53.7 -1.1**
BRVK pmax pmax
comp=Z,205nm,1.1s,mb6.2
BRVK MLR MLR
comp=Z,19µm,20.0s,MS6.2
BRVK Borovoye 62.64 340⇑*i*P P **06 11 53.7 -1.1**
comp=Z,205nm,1.1s,mb6.2
BRVK LR LR
comp=Z,19µm,20.0s,MS6.2
BOD Bodaibo 62.65 8⇓*i*P P **06 11 54.3 -0.5**
BOD pmax pmax
comp=Z,146nm,0.9s,mb6.1
YSS Yuzh-Sakhalins 62.74 31α*i*P P **06 11 54.8 -0.8**
YSS *e**SP sP 06 12 11.6 +2.0
YSS *e* 06 12 32.0
YSS *e* 06 14 19.0
YSS *e*PPP 06 15 45.0
YSS *e*S **S 06 20 20.0 -2.2**
YSS *e*PS 06 20 39.0
YSS *e*PPS 06 20 55.0
YSS pmax pmax
comp=Z,600nm,1.1s,mb6.6
YSS pmax pmax
comp=Z,4µm,7.0s
YSS Yuzh-Sakhalins 62.74 31⇑*i*P P **06 11 55.1 -0.5**
comp=Z,585nm,1.1s,mb6.6
YSS LR LR
comp=Z,4µm,19.0s,MS5.6
FURI Furi 63.56 282 *e*P P **06 12 09.0 +7.3**
FURI S **S 06 20 40.3 +6.6**
CLNS Chul'man 63.80 14 *e*P P **06 12 01.8 -0.6**
CLNS *e* 06 12 34.4
CLNS *e* 06 14 22.9
CLNS *e*PPP 06 15 51.5
CLNS *e*S **S 06 20 37.7 +2.6**
CLNS pmax pmax
comp=Z,134nm,1.1s,mb5.9
CLNS pmax pmax
comp=E,97nm,1.2s
CLNS pmax pmax
comp=N,93nm,1.2s
CLNS smax
comp=N,3261µm,14.3s
CLNS smax
comp=E,1110µm,12.1s
CLNS MLR MLR
comp=Z,39µm,21.0s,MS6.6
CLNS MLR MLR
comp=N,29µm,17.0s,MS6.6
CLNS MLR MLR
comp=E,17µm,17.0s,MS6.6
KMBO Kilima Mbogo 63.84 271⇓P P **06 12 05.0 +1.4**
SNR=6.8
KMBO Kilima Mbogo 63.84 271 P P **06 12 05.3 +1.8**
comp=E,5.0nm,1.0s,mb4.5,baz=48,slow=12,SNR=6.3
KMBO S **S 06 20 41.1 +3.9**
comp=E,0.9nm,0.6s,baz=269,slow=24,SNR=2.6
KMBO LR LR 06 38 25.2
comp=E,12µm,18.9s,MS6.1,baz=93,slow=35
KMBO Kilima Mbogo 63.84 271 *e*P P **06 12 04.5 +1.0**
comp=E,28nm,1.1s,mb5.2
KMBO S **S 06 20 41.1 +3.9**
KMBO LR LR 06 38 25.2
AB31 Akbulak array 64.05 331 *i* P P **06 12 03.3 -0.9**
AB31 Akbulak array 64.05 331 *i* P P **06 12 03.4 -0.8**
BHD Baghdad 65.21 310 *ex* x 06 12 10.0
BHD *i* x x 06 20 52.0
DZM Mont Dzumac 65.62 112 *e*P P **06 12 15.0 0.0**
DZM Mont Dzumac 65.62 112 *e*P P **06 12 14.9 -0.1**
AKTK Aktyubinsk 65.76 331 P P **06 12 14.4 -0.9**
AKTK S S 06 20 58.3 -1.2
AKTO Aktyubinsk 65.76 331 P P **06 12 14.4 -0.9**
comp=E,37nm,1.0s,mb5.4,baz=132,slow=6.9,SNR=48
AKTO S S 06 20 58.3 -1.2
comp=E,0.8nm,0.5s,baz=102,slow=22,SNR=2.4
MAK Makhachkala 67.31 320 *e*P P **06 12 24.9 -0.5**
MAK *e* 06 12 53.3
MAK *e*PPP 06 16 29.7
MAK *i* S S 06 21 18.3 -0.3
MAK *e*SS SS 06 25 38.5 -0.5
MAK pmax pmax
comp=Z,581nm,1.8s,mb6.3
MAK Makhachkala 67.31 320 *e*P P **06 12 24.8 -0.6**
MSL Mosul 67.42 312 *ex* x 06 12 10.0
MSL *ex* x 06 20 52.0
MSL Mosul 67.42 312 *ex* x 06 12 23.0
MSL *i* x x 06 21 20.0
MSL *ex* x 06 22 19.0
HAKT HAKKARI 67.45 314 *i* P P **06 12 26.3 -0.2**
GNI Garni 67.83 316 *e*P P **06 12 29.3 +0.5**
GNI Garni 67.83 316 P P **06 12 30.4 +1.6**
SNR=12
GNI Garni 67.83 316 P P **06 12 28.8 0.0**
comp=Z,6.6nm,0.4s,mb5.0,baz=343,slow=17,SNR=7.5
GNI S S 06 21 25.8 +0.8
comp=Z,3.6nm,0.4s,baz=211,slow=18,SNR=1.7
GNI Garni 67.83 316 P P **06 12 28.8 0.0**
GNI S S 06 21 25.8 +0.9
GNI pmax pmax
comp=Z,7.0nm,0.4s
GNI smax
comp=N,4.0nm,0.4s
GNI Garni 67.83 316⇑*i*P P **06 12 28.7 -0.1**
comp=N,136nm,1.1s,mb5.9
GNI LR LR
comp=Z,8µm,22.0s,MS5.9
DRV Dumont d'Urvil 67.96 164 P pP 06 12 40.0 +0.7
DRV Dumont d'Urvil 67.96 164 PP PP 06 15 10.0 +11
DRV S S 06 21 32.0 +6.4
DRV SS SS 06 25 49.0 +1.0
DRV L 06 30 00.0
DRV L 06 31 00.0
DRV R 06 34 00.0
DRV R 06 36 00.0
CLDR Caldiran 67.97 315 *e*P P **06 12 30.5 +0.9**
DGRG David-gareji 67.99 318 P P **06 12 30.7 +0.9**
DGRG S S 06 21 28.9 +2.2
VANB Van 68.11 314 *e*P P **06 12 29.4 -1.2**
DYDN Diyadin 68.30 315 *i* P P **06 12 32.4 +0.6**
MAW Mawson 68.49 195 *e*P P **06 12 32.3 -0.1**
comp=Z,26nm,1.2s,mb5.1
MAW *e*S S 06 21 30.8 -1.0
MAW Mawson 68.49 195 P P **06 12 32.2 -0.1**
comp=Z,29nm,1.0s,mb5.2,baz=19,slow=6.9,SNR=23
MAW S S 06 21 32.0 +0.2
comp=Z,1.0nm,0.6s,baz=270,slow=21,SNR=1.7
MAW PKP2ab 06 40 53.5
comp=Z,12nm,1.1s,baz=275,slow=7.4,SNR=6.7
MAW Mawson 68.49 195 *e*P P **06 12 32.3 -0.1**
MAW *e*S S 06 21 30.8 -1.0
MAW pmax pmax
comp=Z,26nm,1.2s
MAW MLR MLR
comp=Z,71nm,22.0s
MAW Mawson 68.49 195 *e*P P **06 12 32.3 -0.1**
comp=Z,26nm,1.2s,mb5.1
MAW *e*S S 06 21 30.8 -1.0
MAW LR LR
comp=Z,71µm,22.0s,MS6.8
MTA Mtatsminda 68.49 318 P P **06 12 33.2 +0.3**
MTA S S 06 21 35.1 +2.4
TBLG Delisi 68.54 318 P P **06 12 33.5 +0.3**
AGRB Hanur-Agry 68.80 315 *e*P P **06 12 35.9 +1.1**
GOR Gori 69.08 318 P P **06 12 38.1 +1.6**
SVE Sverdlovsk 69.08 338⇑*e*P P **06 12 36.6 +0.4**
SVE *e* 06 12 55.8
SVE *e*PPP 06 16 48.4
SVE *e*S S 06 21 39.6 +0.5
SVE *e* 06 22 25.9
SVE *e*SS SS 06 26 04.8 -0.9
SVE pmax pmax
comp=Z,387nm,1.4s,mb6.1
SVE pmax pmax
comp=Z,3µm,14.7s
SVE MLR MLR
comp=Z,37µm,20.0s,MS6.6
KARS Kars 69.17 316 *e*P P **06 12 37.5 +0.4**
MARD Mardin 69.49 312 *i* P P **06 12 39.5 +0.3**
YAK Yakutsk 69.55 14*c i*P P **06 12 37.8 -1.2**
YAK *e* 06 12 59.9
YAK *e* 06 15 12.1
YAK *e*PPP 06 16 58.0
YAK *e*S S 06 21 41.9 -2.5
YAK *e* 06 22 34.7
YAK pmax pmax
comp=Z,418nm,1.1s,mb6.3
YAK pmax pmax
comp=N,197nm,1.6s
YAK pmax pmax
comp=E,83nm,1.2s
YAK pmax pmax
comp=E,503nm,5.1s
YAK pmax pmax
comp=N,636nm,5.7s
YAK pmax pmax
comp=Z,1µm,5.2s
YAK smax
comp=E,321µm,5.4s
YAK smax
comp=N,1561µm,6.6s
YAK MLR MLR
comp=Z,38µm,15.0s,MS6.8
YAK MLR MLR
comp=E,22µm,16.0s,MS6.7
YAK MLR MLR
comp=N,23µm,16.0s,MS6.7
YAK Yakutsk 69.55 14⇑*i*P P **06 12 37.4 -1.6**
comp=N,387nm,0.9s,mb6.3
YAK LR LR
comp=Z,36µm,19.0s,MS6.6
ARU Arti 69.61 336 P P **06 12 39.7 +0.2**
comp=Z,974nm,1.1s,mb6.7,SNR=19
ARU Arti 69.61 336*c i*P P **06 12 38.9 -0.6**
ARU *e* 06 13 00.9
ARU *e*PPP 06 16 55.9
ARU *e*S S 06 21 45.4 0.0
ARU *e* 06 22 33.5
ARU *e*SS SS 06 26 08.6 -5.3
ARU pmax pmax
comp=Z,337nm,2.5s,mb5.8
ARU MLR MLR
comp=Z,18µm,19.0s,MS6.3
ARU Arti 69.61 336⇑*i*P P **06 12 38.8 -0.7**
comp=Z,360nm,1.4s,mb6.1
ARU *e*PP PP 06 15 13.9 +0.2
ARU LR LR
comp=Z,21µm,22.0s,MS6.3
HOMI Horasan 69.76 315 *i* P P **06 12 41.4 +0.6**
ONI Oni 69.78 318 P P **06 12 40.4 -0.5**
ONI S S 06 21 44.4 -3.5
BNGL BINGOL 69.86 314 *i* P P **06 12 42.4 +1.0**
ERZM Erzurum 70.08 315 *i* P P **06 12 44.4 +1.6**
EZM Erzurum 70.08 315 *e*P P **06 12 44.3 +1.5**
ARTV Artvin 70.21 316 *i* P P **06 12 42.8 -0.7**
SLAT Slait 70.51 288 *i* P P **06 12 45.0 -0.9**
SLAT *i* S S 06 21 57.6 +0.2
SLAT AMS AMS 06 32 59.5
comp=N,5µm,22.8s
BCA Borcka 70.53 317 *e*P P **06 12 44.4 -1.1**
ASF Jabal al Asfar 70.73 306 P P **06 12 47.9 +1.0**
comp=N,26nm,0.9s,mb5.2,baz=354,slow=1.7,SNR=40
KOPT Kop Dagi 70.74 315 *i* P P **06 12 47.6 +0.8**
MRKH Merkhyat 70.79 288 *i* P P **06 12 46.7 -0.8**
MRKH AMb AMB 06 13 01.9
comp=Z,149nm,1.3s,mb5.8
MRKH *i* S S 06 22 00.9 +0.3
MRKH AMS AMS 06 22 47.3
comp=N,4µm,19.9s
KIV Kislovodsk 70.88 319 P P **06 12 48.4 +0.8**
comp=N,352nm,1.1s,mb6.2,SNR=6.4
KIV Kislovodsk 70.88 319 P P **06 12 47.9 +0.3**
SNR=14
KIV Kislovodsk 70.88 319*c i*P P **06 12 47.5 -0.1**
KIV *e* 06 13 08.4
KIV *e* 06 15 23.8
KIV pmax pmax
comp=Z,98nm,2.1s,mb5.4
KIV MLR MLR
comp=Z,9µm,19.0s,MS6.0
KIV Kislovodsk 70.88 319⇑*i*P P **06 12 47.4 -0.2**
KIV Kislovodsk 70.88 319⇑*i*P P **06 12 47.2 -0.4**
comp=Z,286nm,1.2s,mb6.1
KIV LR LR
comp=Z,9µm,20.0s,MS6.0
SVRC Sivrice-ELAZID 70.97 313 *e*P P **06 12 46.6 -1.6**
URFA Urfa 70.99 312 *e*P P **06 12 48.8 +0.4**
PTK Pertek 71.10 313 *e*P P **06 12 49.7 +0.7**
EZC Erzincan 71.12 314 *e*P P **06 12 52.2 +3.1**
ATAB Bozova 71.39 312 *i* P P **06 12 51.5 +0.7**
MALT Malatya 71.59 313 *e*P P **06 12 50.5 -1.5**
MALT Malatya 71.59 313⇑*i*P P **06 12 49.6 -2.4**
MALT pmax pmax
comp=Z,122nm,1.2s,mb5.7
MALT MLR MLR
comp=Z,13µm,22.0s,MS6.2
MALT Malatya 71.59 313⇑*i*P P **06 12 50.0 -2.0**
MALT Malatya 71.59 313⇑*i*P P **06 12 49.5 -2.5**
comp=Z,122nm,1.2s,mb5.7
MALT LR LR
comp=Z,13µm,22.0s,MS6.2
EIL Elat 71.61 303 P P **06 12 52.5 +0.2**
comp=Z,40nm,0.9s,mb5.4,baz=92,slow=2.1,SNR=30
EIL S S 06 22 11.3 +1.6
comp=Z,1.6nm,0.5s,baz=19,slow=17,SNR=3.6
EIL Elat 71.61 303 P P **06 12 52.5 +0.2**
EIL S S 06 22 11.3 +1.6
GUMT Gumushane 71.63 315 *e*P P **06 12 53.0 +0.9**
GZT Gaziantep 71.90 311 *i* P P **06 12 54.4 +0.6**
AKD Akcadag 71.96 312 *i* P P **06 12 54.7 +0.5**
SKR Severo-Kuril's 72.05 33 *e*P P **06 12 52.9 -1.5**
SKR *e* 06 13 16.0
SKR *e* 06 15 29.0
SKR *e*S S 06 22 14.0 +0.1
SKR *e* 06 23 04.0
SKR *e*SS SS 06 26 48.0 -3.6
SKR *e*SSS 06 29 54.0
SKR pmax pmax
comp=N,110nm,1.0s
SKR pmax pmax
comp=E,110nm,1.0s
SKR pmax pmax
comp=Z,600nm,1.0s,mb6.5
SKR pmax pmax
comp=N,3µm,12.0s
SKR pmax pmax
comp=E,4µm,12.0s
SKR pmax pmax
comp=Z,5µm,12.0s
SKR pmax pmax
comp=N,9µm,18.0s
SKR pmax pmax
comp=E,9µm,18.0s
SKR MLR MLR
comp=N,11µm,20.0s,MS6.2
SKR MLR MLR
comp=E,6µm,20.0s,MS6.2
SKR MLR MLR
comp=Z,14µm,20.0s,MS6.2
GAZ Gaziantep 72.10 311 *e*P P **06 12 56.0 +0.9**
BHL Bhannes 72.26 307⇑*e*P P **06 12 56.0 -0.1**
ESPY Espiye-Giresun 72.33 315 *e*P P **06 12 55.3 -1.1**
LSZ Lusaka 72.44 255 ⇑P P **06 12 58.5 +1.0**
SNR=6.7
LSZ Lusaka 72.44 255 P P **06 12 57.4 -0.2**
comp=Z,7.3nm,0.9s,mb4.6,baz=85,slow=4.8,SNR=11
LSZ S S 06 22 22.2 +2.4
comp=Z,0.7nm,0.3s,baz=356,slow=14,SNR=2.2
LSZ Lusaka 72.44 255 P P **06 12 57.4 -0.1**
LSZ S S 06 22 22.2 +2.4
LSZ pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
LSZ smax
comp=N,1.0nm,0.3s
LSZ Lusaka 72.44 255 *e*P P **06 12 59.7 +2.2**
comp=N,66nm,1.3s,mb5.4
LSZ LR LR
comp=Z,23µm,20.0s,MS6.5
KMRS Kahramanmaras 72.45 311 *e*P P **06 12 57.8 +0.7**
SOC Sochi 72.68 318 *e*P P **06 12 56.3 -2.1**
SOC *e* 06 15 42.3
SOC *e*PPP 06 17 32.0
SOC *e*S S 06 22 18.6 -2.9
SOC *e* 06 22 54.0
SOC *e*SS SS 06 27 03.1 +1.5

SOC eSSS 06 30 10.7
SOC pmax pmax
comp=Z,61nm,0.6s,mb5.7
SOC MLR MLR
comp=Z,1μm,20.0s,MS5.2
RPZ Rata Peaks 72.69 134 LR LR 06 43 53.2
comp=Z,43μm,21.7s,MS6.7,baz=280,slow=35
ANDN Andirin 72.89 311 *i* P **P 06 13 01.3 +1.6**
SARI SarD1z-Kayseri 72.99 312 *e*P **P 06 13 01.0 +0.6**
RSDY Resadiye-TOKAT 73.13 314 *e*P **P 06 12 58.9 -2.2**
CEYT Ceyhan 73.15 311 *e*P **P 06 13 01.5 +0.2**
YURE YUREGIR 73.18 310 *i* P **P 06 13 01.7 +0.2**
SVSK Karacayir 73.20 314 *e*P **P 06 13 02.5 +0.9**
KOZT Kozan 73.24 311 *e*P **P 06 13 04.2 +2.3**
BNN Bunyan 73.68 312 *e*P **P 06 13 02.5 -1.9**
KARA Karaisali 73.76 311 *e*P **P 06 13 04.4 -0.5**
MERS Mersin 74.04 310 *e*P **P 06 13 06.4 -0.2**
PEA0B Petropavlovsk- 74.12 32⇑ *i*P **P 06 13 05.8 -0.9**
PETK Petropavlovsk- 74.12 32 P **P 06 13 05.6 -1.0**
comp=Z,133nm,1.0s,mb5.8,baz=211,slow=2.4,SNR=49
PETK S S 06 22 35.5 -1.9
comp=Z,2.6nm,0.9s,baz=310,slow=53,SNR=2.4
IKL Isikli 74.49 309 *e*P **P 06 13 08.0 -1.3**
PET Petropavlovsk 74.58 32α *i*P **P 06 13 08.6 -0.7**
PET *e* 06 15 52.7
PET *e*S S 06 22 42.4 -0.2
PET pmax pmax
comp=Z,4μm,8.6s
PET pmax pmax
comp=Z,411nm,1.2s,mb6.2
PET pmax pmax
comp=Z,6μm,18.0s
PET pmax pmax
comp=Z,4μm,18.3s
PET pmax pmax
comp=Z,3μm,17.5s
PET smax
comp=N,4μm,24.8s
PET smax
comp=E,6μm,23.6s
PET MLR MLR
comp=Z,8μm,20.0s,MS6.0
PET MLR MLR
comp=Z,5μm,17.0s
PET Petropavlovsk 74.58 32⇑ *i*P **P 06 13 08.1 -1.2**
comp=Z,442nm,1.1s,mb6.3
PET LR LR
comp=Z,10μm,19.0s,MS6.2
ANN Anapa 74.67 319 *e*P **P 06 13 06.0 -4.0**
ANN *e*S S 06 22 38.5 -5.4
ANN pmax pmax
comp=N,84nm,1.3s
ANN pmax pmax
comp=E,70nm,1.3s
ANN pmax pmax
comp=Z,121nm,1.3s,mb5.7
VRHR Novokhopersk 74.72 326 *e*P **P 06 13 08.9 -1.3**
VRHR *e*S S 06 22 40.4 -3.8
VRHR pmax pmax
comp=Z,140nm,1.1s,mb5.8
VRHR pmax pmax
comp=N,40nm,0.7s
VRHR pmax pmax
comp=E,80nm,1.2s
VRHR smax
comp=N,5μm,7.2s
VRHR smax
comp=Z,480nm,4.2s
VRHR smax
comp=E,4μm,7.8s
VRHR MLR MLR
comp=Z,14μm,22.0s,MS6.2
VRHR MLR MLR
comp=N,8μm,19.0s,MS6.1
VRHR MLR MLR
comp=E,7μm,20.0s,MS6.1
LEF Lefka 74.79 308 *e*P **P 06 13 09.9 -1.1**
SNZO South Karori 74.97 132 PFAKE 06 13 20.0 +8.1
SNZO LR LR
comp=Z,37μm,19.0s,MS6.7
CORM Corum 75.00 313 *e*P **P 06 13 11.0 -1.1**
CDAG Cicekdag 75.01 313 *i* P **P 06 13 11.5 -0.7**
CTKT Corum 75.03 314 *i* P **P 06 13 11.7 -0.5**
DIKM Dikmen 75.03 315 *e*P **P 06 13 12.9 +0.7**
LBTB Lobatse 75.12 245 *e*P **P 06 13 12.7 -0.4**
LBTB *e**PP pP 06 13 21.8 -1.6
LBTB pmax pmax
comp=Z,22nm,0.8s,mb5.1
LBTB MLR MLR
comp=Z,25μm,21.0s,MS6.5
LBTB Lobatse 75.12 245 *e*P **P 06 13 12.7 -0.4**
comp=Z,22nm,0.8s,mb5.1
LBTB *e*pP pP 06 13 21.8 -1.7
LBTB LR LR
comp=Z,25μm,21.0s,MS6.5
KAMT Kaman 75.42 312 *e*P **P 06 13 13.3 -1.2**
BR131 Keskin Array S 75.58 313 PFAKE 06 13 30.0 +15
BR131 LR LR
comp=Z,9μm,20.0s,MS6.0
BOSA Boshof 75.60 242 P **P 06 13 15.4 -0.3**
comp=Z,8.4nm,0.9s,mb4.7,baz=66,slow=4.6,SNR=7.2
BOSA S S 06 22 56.9 +2.0
comp=Z,1.7nm,0.9s,baz=183,slow=12,SNR=1.8
BOSA Boshof 75.60 242 P **P 06 13 15.4 -0.3**
BOSA S S 06 22 56.9 +2.0
BOSA LR LR
comp=Z,23μm,20.0s,MS6.5
HDMB Hadim 75.63 310 *e*P **P 06 13 15.8 +0.1**
TOS Tosya 75.71 314 *e*P **P 06 13 15.9 -0.2**
CANT Cankiri 75.87 314 *e*P **P 06 13 16.5 -0.5**
ILGA Ilgaz 75.94 314 *i* P **P 06 13 17.2 -0.2**
KONT Konya--Tatoy 76.00 311 P **P 06 13 15.3 -2.5**
LADK Ladik-KONYA 76.07 311 *e*P **P 06 13 16.4 -1.8**
VSR Storozhevoye 76.16 325 *e*P **P 06 13 17.4 -1.1**
VSR *e*S S 06 22 55.8 -4.4
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,7.0nm,0.5s
VSR pmax pmax
comp=E,20nm,0.8s
VSR smax
comp=N,3μm,9.7s
VSR smax
comp=Z,210nm,7.4s
VSR smax
comp=E,1μm,8.3s
VSR MLR MLR
comp=Z,4μm,21.0s,MS5.7
VSR MLR MLR
comp=N,3μm,23.0s,MS6.0
VSR MLR MLR
comp=E,7μm,22.0s,MS6.0
SYO Syowa Base 76.20 199‖ *i*P **P 06 13 17.6 -0.8**
SYO Syowa Base 76.20 199‖ *i*pP pP 06 13 25.0 -3.7
ANTO Ankara 76.24 313 *e*P **P 06 13 18.6 -0.6**
ANTO Ankara 76.24 313 P **P 06 13 19.8 +0.6**
SNR=7.6
ANTO Ankara 76.24 313⇑ *i*P **P 06 13 17.9 -1.3**
ANTO pmax pmax
comp=Z,163nm,1.2s,mb5.8
ANTO MLR MLR
comp=Z,11μm,20.0s,MS6.2
ANTO Ankara 76.24 313⇑ *i*P **P 06 13 18.7 -0.5**
ANTO Ankara 76.24 313⇑ *i*P **P 06 13 17.9 -1.3**
comp=Z,163nm,1.2s,mb5.8
ANTO LR LR
comp=Z,11μm,20.0s,MS6.2
BALT Daday 76.32 314 *i* P **P 06 13 14.7 -4.9**
KDHN Kadinhani 76.35 311 *i* P **P 06 13 15.9 -4.0**
VOR Voronezh 76.36 326 *e*P **P 06 13 18.0 -1.6**
VOR *e*S S 06 23 01.0 -1.3
VOR pmax pmax
comp=Z,540nm,2.0s,mb6.1
URZ Urewera 76.46 128 P **P 06 13 19.4 -1.1**
comp=Z,20nm,1.1s,mb5.0,baz=272,slow=4.7,SNR=5.8
SAFT Safranbolu 76.73 314 *e*P **P 06 13 22.3 +0.3**

SIM Simferopol' 76.92 318c *i*P **P 06 13 24.1 +1.2**
SIM *i* S S 06 23 06.0 -2.8
SIM pmax pmax
comp=Z,141nm,1.0s,mb5.8
ISP Isparta 77.38 310 *e*P **P 06 13 25.1 -0.5**
ISP Isparta 77.38 310⇑ *i*P **P 06 13 24.7 -1.0**
ISP LR LR
comp=Z,11μm,22.0s,MS6.1
SHUT Suhut-Afyon 77.54 311 *e*P **P 06 13 24.4 -2.2**
ELL Elmali 77.56 309 *e*P **P 06 13 25.8 -0.9**
MDU Mudurnu 77.57 313 *e*P **P 06 13 27.0 +0.3**
ESKT Eskisehir 77.58 312 *i* P **P 06 13 26.3 -0.5**
FUNA Funafuti 77.64 98 PFAKE 06 13 40.0 +12
FUNA LR LR
comp=Z,15μm,21.0s,MS6.3
AKAS Kas 77.67 308 *i* P **P 06 13 30.1 +2.8**
TIXI Tiksi 77.80 9c *i*P **P 06 13 25.6 -1.7**
TIXI *e* pP 06 13 35.4 -2.3
TIXI *e*S S 06 23 11.5 -5.8
TIXI *e* 06 23 39.1
TIXI *e*SS SS 06 28 08.2 -10
TIXI pmax pmax
comp=N,49nm,1.3s
TIXI pmax pmax
comp=Z,211nm,1.6s,mb5.8
TIXI pmax pmax
comp=E,61nm,2.2s
TIXI pmax pmax
comp=Z,1516μm,7.2s
TIXI smax
comp=E,422μm,15.0s
TIXI smax
comp=N,6799μm,26.0s
TIXI MLR MLR
comp=N,16μm,16.0s,MS6.5
TIXI MLR MLR
comp=Z,38μm,17.0s,MS6.8
TIXI MLR MLR
comp=E,12μm,16.0s,MS6.5
TIXI Tiksi 77.80 9⇑ *i*P **P 06 13 25.6 -1.7**
comp=E,182nm,1.1s,mb5.9
TIXI LR LR
comp=Z,45μm,20.0s,MS6.8
GOLH Golhisar 77.95 309 *i* P **P 06 13 25.5 -3.4**
ALT Altintas 78.01 311 *e*P **P 06 13 28.9 -0.3**
DNZL Cakiroluk 78.46 310 *i* P **P 06 13 30.8 -0.9**
GDZ Gediz 78.49 311 *i* P **P 06 13 31.4 -0.3**
TURN Turunc 78.61 309 *i* P **P 06 13 34.0 +1.5**
ADVT Abdulvahap 78.65 312 *e*P **P 06 13 32.1 -0.6**
ARG Arkhangelos 78.82 308 *e*P **P 06 13 34.7 +1.0**
MOS Moscow 78.90 329 *e*P **P 06 13 31.2 -2.4**
MOS *e* pP 06 13 41.8 -2.2
MOS *e* 06 16 29.3
MOS *e*S S 06 23 25.5 -4.1
MOS *e* 06 23 41.0
MOS *e*SS SS 06 28 29.2 -6.0
MOS pmax pmax
comp=Z,208nm,1.4s,mb5.9
MOS MLR MLR
comp=Z,24μm,22.0s,MS6.5
MOS Moscow 78.90 329 *e*P **P 06 13 31.0 -2.6**
YER Yerkesik 78.92 309 *e*P **P 06 13 34.3 +0.1**
YLV Yalova 78.95 313 *e*P **P 06 13 33.7 -0.6**
KULA Kula-Manisa 78.96 310 *e*P **P 06 13 34.2 -0.2**
ULDT Uludag 79.02 312 *i* P **P 06 13 34.2 -0.4**
DEMI Demirci 79.05 311 *i* P **P 06 13 34.5 -0.4**
GEMT Gemlik 79.05 312 *e*P **P 06 13 33.3 -1.6**
OBN Obninsk 79.19 328 P **P 06 13 36.7 +1.4**
comp=Z,575nm,0.8s,mb6.6,SNR=5.8
OBN Obninsk 79.19 328c *i*P **P 06 13 35.1 -0.2**
OBN *e* 06 13 42.0
OBN *e* 06 16 33.1
OBN *e*S S 06 23 31.7 -1.1
OBN pmax pmax
comp=Z,75nm,0.8s,mb5.7
OBN MLR MLR
comp=Z,10μm,21.0s,MS6.2
OBN Obninsk 79.19 328 *e*P **P 06 13 34.5 -0.8**
comp=Z,396nm,1.4s,mb6.2
OBN LR LR
comp=Z,18μm,21.0s,MS6.4
MLSB Milas 79.35 309 *e*P **P 06 13 35.6 -1.0**
AYDN Tasoluk 79.36 309 *i* P **P 06 13 37.2 +0.6**
DURS Dursunbey 79.37 311 *i* P **P 06 13 35.7 -0.9**
KLYT Kilyos 79.37 313 *e*P **P 06 13 35.6 -0.9**
KAP Karpathos 79.42 307 *e*P **P 06 13 37.4 +0.4**
BGKT Bogazkoy 79.55 313 *e*P **P 06 13 37.3 -0.3**
SUR Sutherland 79.59 238 P **P 06 13 39.5 +1.5**
comp=Z,134nm,1.4s,mb5.7
SUR *e*pP pP 06 13 47.6 -0.7
SUR LR LR
comp=Z,7μm,20.0s,MS6.0
AKHS Akhisar 79.69 311 *i* P **P 06 13 38.0 -0.4**
ELBA Catalca 79.79 313 *i* P **P 06 13 37.7 -1.2**
BALB Balikesir 79.83 311 *e*P **P 06 13 38.7 -0.4**
GCAM G?zelcaml? 79.86 309 *i* P **P 06 13 39.7 +0.3**
SLVT Silivri 79.97 313 *e*P **P 06 13 38.4 -1.4**
IZM Izmir 80.00 310 *e*P **P 06 13 39.7 -0.4**
BALY Balya 80.05 311 *i* P **P 06 13 39.7 -0.6**
RAO Raoul Island 80.12 119 PFAKE 06 13 50.0 +9.1
RAO LR LR
comp=Z,17μm,20.0s,MS6.4
BLCB Balcova 80.17 310 *e*P **P 06 13 41.2 +0.2**
URLA Izmir 80.50 310 *i* P **P 06 13 42.7 -0.1**
MFT Murefte 80.55 312 *e*P **P 06 13 40.4 -2.5**
SART Tekirdag 80.60 312 *i* P **P 06 13 42.7 -0.6**
RKY Sarkoy-Tekirda 80.60 312 *e*P **P 06 13 42.1 -1.2**
PSN Preselentsi 80.62 315 P **P 06 13 42.8 -0.5**
TIRR Tirgusor 80.66 316‖ *e*P **P 06 13 42.5 -1.0**
TIRR pmax pmax
comp=Z,117nm,1.2s,mb5.7
TIRR Tirgusor 80.66 316⇑ *i*P **P 06 13 43.2 -0.3**
TIRR Tirgusor 80.66 316‖ *e*P **P 06 13 42.5 -0.9**
comp=Z,118nm,1.2s,mb5.7
SBA Scott Base 80.94 169 *e*P **P 06 13 46.5 +2.1**
SBA pmax pmax
comp=Z,222nm,1.6s,mb5.8
SBA MLR MLR
comp=Z,9μm,20.0s,MS6.1
SBA Scott Base 80.94 169 *e*P **P 06 13 46.5 +2.1**
comp=Z,222nm,1.6s,mb5.8
SBA LR LR
comp=Z,9μm,20.0s,MS6.1
PRK Paraskevi 80.95 311 *e*P **P 06 13 44.8 -0.3**
PRK Paraskevi 80.95 311 *e*P **P 06 13 43.5 -1.6**
SANT Santorini 80.96 308 P **P 06 13 44.8 -0.5**
comp=Z,102nm,0.8s,mb5.8
SANT LR LR
comp=Z,7μm,20.0s,MS6.0
EZN Ezine 81.04 311 *e*P **P 06 13 45.5 -0.1**
PRD Provadia 81.05 315 P **P 06 13 43.3 -2.3**
KIS Kishinev 81.07 319 P **P 06 13 45.0 -0.6**
KIS *i* 06 14 07.0
KIS *e* 06 16 50.0
KIS *i* S S 06 23 50.0 -2.8
KIS *e*PS 06 24 36.0
KIS pmax pmax
comp=Z,460nm,2.2s,mb6.0
KIS pmax pmax
comp=Z,3μm,14.0s
KIS pmax pmax
comp=Z,3μm,18.0s
KIS pmax pmax
comp=Z,4μm,16.0s
KIS pmax pmax
comp=Z,2μm,20.0s
KIS smax
comp=N,8μm,18.0s
KIS smax
comp=E,3μm,14.0s
KIS Kishinev 81.07 319 *e*P **P 06 13 45.0 -0.6**
comp=E,3μm,14.0s
KIS Kishinev 81.07 319 *e*PP PP 06 16 50.0 -0.9
comp=E,4μm,16.0s
KIS Kishinev 81.07 319 *e*PPP 06 18 56.0
KIS *i* S S 06 23 50.0 -2.8
comp=E,8μm,18.0s
KIS Kishinev 81.07 319 *e*PS 06 24 36.0
KIS *e*SS SS 06 28 50.0 -18
KIS *e*SSS 06 32 44.0
KIS LRM 06 56 10.0
comp=E,8μm,20.0s
IDI Anoyia 81.19 306 P **P 06 13 45.4 -1.2**
comp=E,34nm,0.9s,mb5.3,baz=137,slow=7.1,SNR=8.6

SIVA Sivas 81.20 306 *e*P **P 06 13 46.8 +0.2**
ENEZ Enez 81.37 312 *e*P **P 06 13 45.4 -2.0**
JMB Yambol 81.45 314 P **P 06 13 47.4 -0.3**
ALN Alexandroupoli 81.48 312 *e*P **P 06 13 48.1 +0.1**
VAM Vamos 81.77 306 *e*P **P 06 13 49.4 -0.2**
AKASG Malin Array Be 81.85 322 P **P 06 13 48.2 -1.4**
comp=E,9.8nm,0.8s,mb4.8,baz=86,slow=4.4,SNR=28
AKASG PP PP 06 16 54.6 -2.6
comp=E,2.2nm,0.6s,baz=81,slow=5.7,SNR=2.6
AKASG S S 06 24 00.6 -0.2
comp=E,0.7nm,0.5s,baz=160,slow=23,SNR=3.6
AKBB Malin Array Si 81.85 322 *e*P **P 06 13 48.5 -1.1**
KIEV Kiev 81.86 322⇑ *i*P **P 06 13 48.3 -1.4**
KIEV pmax pmax
comp=Z,66nm,1.2s,mb5.4
KIEV MLR MLR
comp=Z,8μm,20.0s,MS6.1
KIEV Kiev 81.86 322⇑ *i*P **P 06 13 48.3 -1.4**
comp=Z,66nm,1.2s,mb5.4
KIEV LR LR
comp=Z,8μm,20.0s,MS6.1
LIA Limnos Island 81.91 311 *e*P **P 06 13 49.4 -0.9**
LIA Limnos Island 81.91 311 *e*P **P 06 13 49.6 -0.6**
RDO Rodhopi 81.92 312 *e*P **P 06 13 48.3 -1.9**
KARN Karanos 82.00 306 *e*P **P 06 13 51.9 +1.1**
KDZ Kurdzhali 82.11 313 P **P 06 13 50.2 -1.1**
VRI Vrincioaia 82.17 317⇑ *i*P **P 06 13 52.2 +0.8**
VRI Vrincioaia 82.17 317 P **P 06 13 52.9 +1.5**
PLOR Plostina 82.22 317⇑ *i*P **P 06 13 53.9 +2.2**
TSUM Tsumeb 82.53 251⇑ *e*P **P 06 13 54.6 +0.6**
comp=Z,25nm,1.0s,mb5.2
TSUM LR LR
comp=Z,17μm,20.0s,MS6.4
ZIMR 82.59 315 P **P 06 13 54.7 +1.0**
MLR Muntele Rosu 82.61 317‖ *i*P **P 06 13 54.3 +0.5**
MLR Muntele Rosu 82.61 317 P **P 06 13 54.8 +1.1**
RZN Rozhen 82.64 313 *i* P **P 06 13 52.6 -1.4**
ATH Athens Observa 82.64 309 *e*P **P 06 13 53.6 -0.5**
PLD Plovdiv 82.73 313 P **P 06 13 53.5 -1.0**
DID Didima 82.93 308 *e*P **P 06 13 54.2 -1.4**
VLI Veliai 83.02 308 *e*P **P 06 13 55.0 -1.1**
PAIG Paliouri 83.05 311 *e*P **P 06 13 55.6 -0.6**
SMY Shemya 83.09 36 *e*P **P 06 13 56.0 -0.1**
SMY pmax pmax
comp=Z,516nm,1.4s,mb6.4
SMY MLR MLR
comp=Z,7μm,22.0s,MS6.0
SMY Shemya 83.09 36 *e*P **P 06 13 56.0 -0.1**
comp=Z,516nm,1.4s,mb6.4
SMY LR LR
comp=Z,7μm,22.0s,MS6.0
NVR Nevrokopi 83.19 312 *e*P **P 06 13 55.0 -1.9**
VOIR 83.21 317 P pP 06 14 07.9 +0.6
NEO Neokhori 83.27 310 *e*P **P 06 13 55.5 -1.8**
PLG Polygyros 83.31 311 *e*P **P 06 13 56.6 -0.9**
PLG Polygyros 83.31 311 *e*P **P 06 13 57.3 -0.2**
LKR Lokris 83.32 310 *e*P **P 06 13 56.0 -1.6**
LKR Lokris 83.32 310 *e*P **P 06 13 50.2 -7.4**
MMB Musomiste 83.34 313 *i* P **P 06 13 55.8 -1.8**
SOH Sokhos 83.47 312 *e*P **P 06 13 57.0 -1.3**
VLC Vlachokerasia 83.57 308 *e*P **P 06 13 58.3 -0.6**
BURAR Bucovina Array 83.59 319⇑ *i*P **P 06 13 59.8 +1.0**
BURAR Bucovina Array 83.59 319 P **P 06 14 00.7 +1.9**
BUR08 Bucovina Ar. S 83.61 319⇑ *i*P **P 06 13 59.4 +0.6**
HORT Hortiatis 83.61 311 *e*P **P 06 13 57.6 -1.5**
THE Thessaloniki 83.72 311 *e*P **P 06 13 59.1 -0.5**
MNK Minsk 83.74 326 *e*P **P 06 13 56.0 -3.4**
MNK *e*S S 06 24 13.0 -6.9
MNK *e*PS 06 25 06.0
MNK pmax pmax
comp=Z,140nm,1.0s,mb6.0
MNK MLR MLR
comp=N,10μm,18.0s,MS6.6
MNK MLR MLR
comp=E,26μm,22.0s,MS6.6
MNK MLR MLR
comp=Z,18μm,18.0s,MS6.5
KKB Krupnik 83.87 313 *i* P **P 06 13 58.6 -1.7**
KNT Kendrikon 83.87 312 *e*P **P 06 13 59.3 -1.1**
ITM Ithomi 83.90 308 *e*P **P 06 13 59.7 -0.9**
AGG Agios Georgios 83.90 310 *e*P **P 06 13 59.2 -1.4**
VTS Vitosha 83.92 313⇑ *i*P **P 06 14 00.8 +0.2**
VTS Vitosha 83.92 313 *i* P **P 06 13 59.5 -1.1**
VTS Vitosha 83.92 313 P **P 06 14 01.2 +0.7**
LIT Litokhoron 83.98 311 *e*P **P 06 13 59.7 -1.2**
PYL PYLOS 83.99 308 *e*P **P 06 13 59.0 -2.1**
PUL Pulkovo 84.03 331 *i* P **P 06 14 02.0 +1.3**
VAY Valandovo 84.14 312 *i* P **P 06 14 00.2 -1.5**
GRG Griva 84.20 312 *e*P **P 06 14 01.3 -0.7**
THL Klokotos Trika 84.24 310 *e*P **P 06 14 00.3 -2.0**
THL Klokotos Trika 84.24 310 *e*P **P 06 13 59.7 -2.6**
EVR Evrytania 84.29 310 *e*P **P 06 14 00.3 -2.2**
RLS Riolos of Patr 84.40 309 *e*P **P 06 13 58.9 -4.3**
MIDW Midway 84.50 61 PFAKE 06 14 10.0 +6.1
MIDW LR LR
comp=Z,6μm,19.0s,MS6.0
KZN Kozani 84.56 311 *e*P **P 06 14 01.9 -2.0**
JOF Joensuu 84.62 334 *e*p **P 06 14 03.4 -0.3**
comp=Z,44nm,0.8s,mb5.6
JOF Joensuu 84.62 334 *e*P **P 06 14 03.4 -0.3**
JOF pmax pmax
comp=Z,44nm,0.8s,mb5.6
GZR Gura Zlata 84.77 316 P **P 06 14 05.6 +0.8**
BILL Bilibino 84.79 20c *i*P **P 06 14 04.1 -0.3**
BILL *i* 06 14 21.1
BILL pmax pmax
comp=Z,194nm,1.5s,mb6.0
BILL MLR MLR
comp=Z,18μm,19.0s,MS6.5
BILL Bilibino 84.79 20⇑ *i*P **P 06 14 03.7 -0.7**
comp=Z,130nm,1.0s,mb6.0
BILL LR LR
comp=Z,20μm,20.0s,MS6.5
LVV L'vov 84.85 321 *e*P **P 06 14 05.1 0.0**
LVV *e* 06 17 24.3
LVV *e*PPP 06 19 16.1
LVV *e*S S 06 24 30.3 -0.9
LVV *e*PS 06 25 30.9
FNA Florina 84.94 311 *e*P **P 06 14 04.7 -1.1**
DRGR 85.09 318⇑ *i*P **P 06 14 07.0 +0.6**
DRGR 85.09 318 P **P 06 14 07.6 +1.2**
SKO Skopje 85.09 313 *i* P **P 06 14 06.0 -0.6**
VLS Valsamata 85.11 309 *e*P **P 06 14 07.5 +0.8**
VLS Valsamata 85.11 309 *e*P **P 06 14 05.6 -1.1**
JAN Janina 85.14 310 *e*P **P 06 14 06.4 -0.4**
LKD Levkas 85.14 309 *e*P **P 06 14 06.8 -0.1**
LVZ Lovozero 85.17 340 P **P 06 14 06.2 -0.1**
comp=Z,518nm,0.8s,mb6.7,SNR=6.0
LVZ Lovozero 85.17 340⇑ *i*P **P 06 14 05.9 -0.4**
LVZ MLR MLR
comp=Z,27μm,22.0s,MS6.6
VSU Vasula 85.41 329⇑ *i*P **P 06 14 07.9 +0.2**
OHR Ohrid 85.42 312 *i* P **P 06 14 06.4 -1.8**
APA Apatity 85.48 339⇑ *i*P **P 06 14 07.0 -0.9**
APA *i* 06 17 25.0
APA *e* 06 24 29.0
APA *i* S S 06 24 37.0 +0.3
APA *i* PS 06 25 26.0
APA pmax pmax
comp=Z,60nm,1.2s,mb5.6
APA pmax pmax
comp=Z,5μm,19.0s
BZS Buzias 85.61 316‖ *i*P **P 06 14 09.0 0.0**
BZS Buzias 85.61 316 P **P 06 14 09.5 +0.4**
KWP Kalwaria 85.65 320 *e*P **P 06 14 09.8 +0.6**
KWP *e*S S 06 24 39.5 +0.3
KWP LMZ 06 59 15.0
comp=Z,12μm,24.1s
KWP Kalwaria 85.65 320 *e*P **P 06 14 09.8 +0.7**
KWP *e*S S 06 24 39.5 +0.4
KWP Kalwaria 85.65 320 *e*P **P 06 14 09.8 +0.7**
KWP *e*S S 06 24 39.5 +0.4
KWP LR LR
comp=Z,8μm,20.0s,MS6.1
UZH Uzhgorod 85.72 319 *e*P **P 06 14 09.5 0.0**
UZH *i* 06 14 27.0
UZH *i* S S 06 24 38.9 -1.0
UZH *e*PS 06 25 47.0
KOLS Kolonicke sedl 85.79 320 *e*P **P 06 14 10.7 +0.9**
KOLS *e* 06 14 33.5
KOLS *e*S S 06 24 40.4 -0.2
KOLS *e*SS SS 06 30 18.6 +0.6

KOLS Kolonicke sedl 85.79 320 *e*P **P** **06 14 10.7 +0.9**
KOLS *e* 06 14 33.5
KOLS *e*S S 06 24 40.4 -0.2
KOLS *e*SS SS 06 30 18.7 +0.7
NVL N'lazarevskaya 85.86 199*c i*P **P** **06 14 12.9 +3.1**
NVL *e*S S 06 24 29.8 -11
NVL pmax pmax
comp=Z,50nm,1.4s,mb5.5
AMKA Amchitka 85.89 38 *e*P **P** **06 14 09.8 -0.5**
comp=Z,93nm,1.4s,mb5.8
MAIT Maitri 85.89 199 *e*P **P** **06 14 12.0 +2.0**
KEK Kerkira 85.95 310 *e*P **P** **06 14 09.9 -1.0**
TIR Tirane 86.15 312 PFAKE 06 14 20.0 +8.2
TIR LR LR
comp=Z,9µm,20.0s,MS6.2
AFI Afiamalu 86.23 104 *e*P **P** **06 14 13.9 +1.2**
AFI pmax pmax
comp=Z,174nm,1.1s,mb6.2
AFI MLR MLR
comp=Z,8µm,20.0s,MS6.1
AFI Afiamalu 86.23 104 *e*P **P** **06 14 13.9 +1.1**
comp=Z,174nm,1.1s,mb6.2
AFI LR LR
comp=Z,8µm,20.0s,MS6.1
SUW Suwalki 86.27 325 *e*P **P** **06 14 11.9 -0.1**
SUW *e*S S 06 24 40.3 -4.7
SUW LMZ 06 56 15.0
comp=Z,6µm,25.6s
SUW Suwalki 86.27 325 *e*P **P** **06 14 11.9 -0.2**
SUW *e*S S 06 24 40.3 -4.7
CRVS Cervenica-Dubn 86.31 319 *e*P **P** **06 14 13.7 +1.3**
CRVS *e*S S 06 24 45.4 -0.2
CRVS *e*SS SS 06 30 26.2 +0.6
STHS Stebnicka Huta 86.55 320 *e*P **P** **06 14 15.0 +1.4**
STHS *e* 06 14 35.6
STHS pmax pmax
comp=Z,68nm,1.1s,mb5.8
STHS Stebnicka Huta 86.55 320 *e*P **P** **06 14 15.0 +1.4**
comp=Z,68nm,1.1s,mb5.8
STHS *e* 06 14 35.6
KAF Kangasniemi 86.59 333 *e*p **P** **06 14 12.6 -0.9**
comp=Z,57nm,0.9s,mb5.8,baz=98,slow=4.4
KAF Kangasniemi 86.59 333 *e*P **P**
KAF pmax pmax
comp=Z,57nm,0.9s,mb5.8
KECS Kecovo 86.88 319 *e*P **P** **06 14 15.8 +0.6**
KECS *e* 06 14 36.7
KECS *e*S S 06 24 50.6 -0.5
KECS pmax pmax
comp=Z,35nm,1.2s,mb5.5
KECS Kecovo 86.88 319 *e*P **P** **06 14 15.8 +0.6**
comp=Z,35nm,1.2s,mb5.5
KECS *e* 06 14 36.7
KECS *e*S S 06 24 50.6 -0.5
NIE Niedzica 87.15 320 *e*P **P** **06 14 17.7 +1.2**
PSZ Piszkesteto 87.17 318⇑*e*P **P** **06 14 16.2 -0.4**
PSZ pmax pmax
comp=Z,127nm,1.3s,mb6.0
PSZ MLR MLR
comp=Z,7µm,20.0s,MS6.0
PSZ Piszkesteto 87.17 318⇑*e*P **P** **06 14 16.9 +0.3**
PSZ Piszkesteto 87.17 318⇑*i*P **P** **06 14 16.9 +0.3**
PSZ Piszkesteto 87.17 318⇑*e*P **P** **06 14 16.2 -0.4**
comp=Z,127nm,1.3s,mb6.0
PSZ LR LR
comp=Z,7µm,20.0s,MS6.0
BUD Budapest 87.69 318⇑*e*P **P** **06 14 18.6 -0.5**
PKSM Moragy 87.76 316⇑*i*P **P** **06 14 19.5 0.0**
PKSM Moragy 87.76 316 P **P** **06 14 20.4 +0.8**
VYHS Vyhne 87.96 319 *e*P **P** **06 14 19.9 -0.5**
VYHS *e* 06 14 42.6
VYHS *e*S S 06 25 02.0 +0.5
VYHS Vyhne 87.96 319 *e*P **P** **06 14 19.9 -0.5**
comp=Z,20nm,1.4s,mb5.1
VYHS *e* 06 14 42.6
VYHS *e*S S 06 25 02.0 +0.5
VYHS LR LR
comp=Z,4µm,20.9s,MS5.8
TIP Timpagrande 88.22 309 PFAKE 06 14 30.0 +8.2
TIP LR LR
comp=Z,7µm,22.0s,MS6.0
KOLL Kolacno 88.26 319 *e*P **P** **06 14 23.0 +1.2**
KOLL *e* 06 14 43.7
KEV Kevo 88.41 340 *e*p **P** **06 14 21.0 -1.1**
comp=Z,55nm,0.9s,mb5.8
KEV Kevo 88.41 340 *e*P **P** **06 14 21.0 -1.1**
KEV pmax pmax
comp=Z,55nm,0.9s,mb5.8
ADK Adak 88.44 38⇑*e*P **P** **06 14 21.1 -1.5**
ADK pmax pmax
comp=Z,330nm,1.3s,mb6.4
ADK MLR MLR
comp=Z,5µm,21.0s,MS5.9
ADK Adak 88.44 38⇑*e*P **P** **06 14 21.1 -1.5**
comp=Z,330nm,1.3s,mb6.4
ADK LR LR
comp=Z,5µm,21.0s,MS5.9
ORI Oriolo Calabro 88.56 310 P **P** **06 14 24.4 +1.0**
ORI pmax pmax
comp=Z,333nm,1.2s,mb6.5
ORI Oriolo Calabro 88.56 310 P **P** **06 14 24.4 +1.0**
comp=Z,333nm,1.2s,mb6.5
OKC Ostrava-Krasne 88.60 320 *e*P **P** **06 14 24.2 +0.8**
OKC *e*pP pP 06 14 34.4 +0.5
OKC *e*PP PP 06 17 51.5 -0.6
OKC *e*S S 06 25 05.6 -2.0
OKC AMS AMS 07 00 40.0
comp=Z,6µm,19.6s
OKC Ostrava-Krasne 88.60 320 *e*P **P** **06 14 24.2 +0.8**
OKC *e* pP 06 14 34.4 +0.5
OKC *e*PP PP 06 17 51.5 -0.6
OKC *e*SKS 06 25 05.6
RAC Raciborz 88.61 320 *e*P **P** **06 14 24.4 +1.0**
RAC *e* 06 17 49.5
RAC *e*S S 06 25 07.0 -0.6
RAC Raciborz 88.61 320 *e*P **P** **06 14 24.4 +1.0**
RAC *e*PP PP 06 17 49.5 -2.7
RAC *e*S S 06 25 07.0 -0.6
RAC LR LR
comp=Z,8µm,18.0s,MS6.2
SOI Samo 88.64 308 P **P** **06 14 23.6 -0.3**
CEL Celeste 88.78 308 PFAKE 06 14 40.0 +15
CEL LR LR
comp=Z,71µm,22.0s,MS7.0
ARCES ARCESS Array B 88.86 340 P **P** **06 14 24.6 +0.3**
comp=Z,57nm,0.8s,mb5.9,baz=97,slow=3.9,SNR=70
ARCES S S 06 24 52.1 -17
comp=Z,3.3nm,0.9s,baz=337,slow=21,SNR=3.1
ARE0 ARCESS Array S 88.86 340⇑*e*P **P** **06 14 24.2 0.0**
PTRP Pietrapertosa 88.90 311 P **P** **06 14 25.6 +0.5**
comp=Z,154nm,0.9s,mb6.3
MTTG Motta San Giov 88.91 308 P **P** **06 14 26.1 +0.9**
SCLL Scilla 88.92 308 P **P** **06 14 33.2 +8.0**
comp=Z,180nm,1.6s,mb6.2
MODS Modra-Piesok 88.97 318 *e*P **P** **06 14 26.1 +0.9**
MODS *e* 06 14 47.4
MODS *e*S S 06 25 10.7 -0.4
MORC Moravsky Berou 88.98 320⇑*i*P **P** **06 14 25.6 +0.4**
MORC Moravsky Berou 88.98 320 P **P** **06 14 26.4 +1.2**
CUC Castrocucco 89.03 310⇑*e*P **P** **06 14 25.1 -0.5**
comp=Z,12nm,0.8s,mb5.3
CUC LR LR
comp=Z,11µm,22.0s,MS6.2
ZST Bratislava 89.07 318 *e*P **P** **06 14 27.4 +1.8**
ZST *e* 06 14 47.3
ZST *e*S S 06 25 09.0 -3.0
ZST Bratislava 89.07 318 *e*P **P** **06 14 27.4 +1.8**
comp=Z,73nm,1.1s,mb5.9
ZST *e* 06 14 47.3
ZST *e*S S 06 25 09.0 -3.0
ZST LR LR
comp=Z,7µm,19.7s,MS6.1
FGMS Monte Sant'Ang 89.11 312 P **P** **06 14 26.8 +0.8**
HAVL Avola 89.25 307 P **P** **06 14 26.1 -0.7**
SSY Sortino 89.32 307 P **P** **06 14 26.1 -1.0**
SOP Sopron 89.37 318⇑*e*P **P** **06 14 26.9 -0.2**
FG4 Candela 89.38 311 P **P** **06 14 28.8 +1.5**
FG4 pmax pmax
comp=Z,204nm,0.8s,mb6.5
FG4 Candela 89.38 311 P **P** **06 14 28.8 +1.5**
comp=Z,204nm,0.8s,mb6.5
RGNG Rignano Grg 89.38 312 P **P** **06 14 27.8 +0.5**
SGO Sicignano 89.48 311 P pP 06 14 38.6 +0.3
FG5 Orsara di Pugl 89.58 311 P **P** **06 14 29.6 +1.4**
FG5 pmax pmax
comp=Z,148nm,1.1s,mb6.2
FG5 Orsara di Pugl 89.58 311 P **P** **06 14 29.6 +1.4**
comp=Z,148nm,1.1s,mb6.2
HVZN Vizzini 89.60 307 P **P** **06 14 28.8 +0.4**
GKP Gorka Klasztor 89.63 323 *e*P **P** **06 14 29.1 +1.0**
GKP *e*S S 06 25 16.5 -0.5
GKP LMZ 07 00 48.5
comp=Z,13µm,23.8s
GKP Gorka Klasztor 89.63 323 *e*P **P** **06 14 29.1 +1.0**
GKP *e*S S 06 25 16.5 -0.5
GKP Gorka Klasztor 89.63 323 *e*P **P** **06 14 29.1 +1.0**
GKP *e*S S 06 25 16.5 -0.5
GKP LR LR
comp=Z,13µm,23.8s,MS6.3
CSSN Cassano Irpino 89.72 311 P **P** **06 14 29.4 +0.5**
DPC Dobruska-Polom 89.83 320 *e*P **P** **06 14 30.0 +0.8**
DPC *ex* x 06 14 40.6
DPC *e*PP PP 06 17 54.0 -7.9
DPC *e*SKKS SKKSac 06 25 13.8 +3.3
DPC AMS AMS 07 03 50.0
comp=Z,9µm,19.7s
CONA Conrad Observa 89.86 318 *i* P **P** **06 14 30.2 +0.8**
comp=Z,26nm,1.3s,mb5.4,SNR=9.0
CONA Conrad Observa 89.86 318 *i* PcP **P** **06 14 30.2 +0.8**
comp=Z,26nm,1.3s,mb5.4,SNR=9.0
CSNA Conrad Observa 89.86 318⇓*i*P **P** **06 14 30.0 +0.7**
comp=Z,27nm,1.4s,mb5.4
CSNA Conrad Observa 89.86 318⇓*i*PcP **P** **06 14 30.0 +0.7**
comp=Z,27nm,1.4s,mb5.4
KSP Ksiaz 89.91 321 *e*P **P** **06 14 30.6 +1.0**
KSP *e*S S 06 25 20.9 +1.1
KSP LMZ 06 59 33.1
comp=Z,15µm,23.4s
KSP Ksiaz 89.91 321⇑*e*P **P** **06 14 30.2 +0.7**
KSP *e* 06 14 51.5
KSP *e*S S 06 25 20.0 +0.2
KSP Ksiaz 89.91 321⇑*e*P **P** **06 14 30.2 +0.7**
KSP *e*pP pP 06 14 40.7 +0.7
KSP *e* 06 14 51.5
KSP *e*PP PP 06 17 54.0 -8.5
KSP *e*S S 06 25 20.0 +0.2
KSP LR LR
comp=Z,17µm,23.4s,MS6.4
PSB1 Pescosannita 89.92 311 P **P** **06 14 28.4 -1.4**
comp=Z,243nm,1.6s,mb6.3
ARSA Arzberg 90.02 317 *i* P **P** **06 14 31.3 +1.2**
comp=Z,60nm,1.2s,mb5.8,SNR=10
ARSA Arzberg 90.02 317 *i* PcP **P** **06 14 31.3 +1.2**
comp=Z,60nm,1.2s,mb5.8,SNR=10
BOJS Bojanci 90.02 315 *i* P **P** **06 14 30.4 +0.3**
BOJS *i* pP pP 06 14 41.0 +0.4
BOJS *e*PP PP 06 17 59.0 -4.6
BOJS *e*SKSac SKSac 06 25 11.8 +13
BOJS *e*S S 06 25 30.2 +9.2
UPC Upice 90.05 320 *e*P **P** **06 14 31.3 +1.1**
UPC *e*pP pP 06 14 41.9 +1.2
PERS Pernice 90.23 317 *i* P **P** **06 14 31.4 +0.3**
PERS *i* pP 06 14 42.1 +0.4
TREC Trest 90.25 319 *e*P **P** **06 14 32.2 +1.0**
TREC *e*pP pP 06 14 42.5 +0.8
TREC *e*PP PP 06 18 07.3 +2.0
TREC *e*S S 06 25 22.3 -0.7
TREC AMS AMS 07 01 30.0
comp=Z,8µm,22.7s
SGG Gregorio Mates 90.26 311 P **P** **06 14 30.1 -1.3**
comp=Z,58nm,1.0s,mb5.9
SOKA Soboth 90.29 317⇓*i*P **P** **06 14 32.5 +1.1**
SOKA Soboth 90.29 317⇓*i*PcP **P** **06 14 32.5 +1.1**
MIDA Miranda 90.37 312 P **P** **06 14 31.1 -0.8**
comp=Z,126nm,1.3s,mb6.1
SNAA Sanae 90.44 198 *e*P **P** **06 14 32.0 +0.4**
SNAA pmax pmax
comp=Z,49nm,1.0s
SNAA Sanae 90.44 198 *e*P **P** **06 14 32.0 +0.3**
comp=Z,49nm,1.0s,mb5.8
RNI2 Rionero Sannit 90.45 312 P **P** **06 14 32.1 -0.2**
comp=Z,258nm,1.6s,mb6.3
RFI Roccamonfina 90.54 311 P **P** **06 14 33.6 +0.9**
LJU Ljubljana 90.58 316 *i* P **P** **06 14 33.2 +0.4**
LJU *e* 06 25 15.1
LJU Ljubljana 90.58 316 *i* P **P** **06 14 33.2 +0.5**
LJU *i* pP pP 06 14 44.1 +0.8
LJU *e*SKSac SKSac 06 25 15.1 +13
LJU *e*S S 06 25 38.5 +12
OBKA Obir 90.61 316⇓*i*P **P** **06 14 34.5 +1.6**
comp=Z,44nm,1.1s,mb5.7
OBKA Obir 90.61 316⇓*i*PcP **P** **06 14 34.5 +1.6**
comp=Z,44nm,1.1s,mb5.7
INTR Introdacqua 90.67 312 P **P** **06 14 32.2 -1.1**
VVLD Villa Vallelon 90.86 312 P **P** **06 14 32.4 -1.8**
PRU Pruhonice 90.94 320 *e*P **P** **06 14 34.9 +0.6**
PRU *e*pP pP 06 14 45.2 +0.4
PRU *e*SKKS SKKSac 06 25 19.9 +1.2
PRU AMS AMS 07 02 10.0
comp=Z,7µm,18.3s
PVCC Panska Ves 90.97 320 *e*P **P** **06 14 35.1 +0.6**
PVCC *e*pP pP 06 14 45.8 +0.8
PVCC *e*SKS 06 25 30.5
PVCC AMS AMS 07 02 10.0
comp=Z,8µm,19.5s
AOI Ancona 91.02 313 P **P** **06 14 34.2 -0.7**
VOY Vojsko 91.02 316 *e*P **P** **06 14 34.8 0.0**
VOY *e* pP 06 14 45.7 +0.4
VOY *e* 06 14 56.8
TRO Tromso 91.14 340 *e*P **P** **06 14 35.3 +0.5**
TRO AMb AMB 06 14 48.7
comp=Z,88nm,2.6s,mb5.6
TRO *e*PP PP 06 18 17.9 +6.2
TRO *e*SS SS 06 31 47.9 +13
TRO AMS AMS 06 59 39.8
comp=Z,14µm,18.6s,MS6.4
MYKA Terra Mystica 91.24 316⇓*i*P **P** **06 14 36.4 +0.6**
comp=Z,63nm,1.2s,mb5.8
MYKA Terra Mystica 91.24 316⇓*i*PcP **P** **06 14 36.4 +0.6**
comp=Z,63nm,1.2s,mb5.8
FIAM Fiamignano 91.27 312 P **P** **06 14 35.5 -0.6**
CING Cingoli 91.30 313 P **P** **06 14 35.0 -1.2**
GEC2 GERESS Array S 91.38 319 *e*P **P** **06 14 36.9 +0.5**
GEC2 *e* 06 25 02.2
GEC2 *e*S S 06 25 32.4 -1.0
GEC2 pmax pmax
comp=Z,46nm,1.5s,mb5.6
GEC2 GERESS Array S 91.38 319 *e*P **P** **06 14 36.9 +0.5**
comp=Z,46nm,1.5s,mb5.6
GEC2 *e*pP pP 06 14 47.1 +0.1
GEC2 *e*SKSac SKSac 06 25 02.2 -4.2
GEC2 *e*S S 06 25 32.4 -1.0
GERES GERESS Array B 91.38 319 P **P** **06 14 37.1 +0.6**
comp=Z,8.4nm,0.7s,mb5.2,baz=97,slow=4.2,SNR=46
GERES S SKSac 06 25 08.6 +2.2
comp=Z,0.3nm,0.3s,baz=144,slow=39,SNR=2.2
BRG Berggiesshubel 91.39 321 *i* P **P** **06 14 36.8 +0.4**
BRG *i* 06 14 58.7
BRG 06 18 11.0
BRG S S 06 25 36.0 +2.6
BRG *i* 06 26 42.0
BRG SS SS 06 31 41.0 +1.6
BRG pmax pmax
comp=Z,23nm,1.4s,mb5.3
BRG pmax pmax
comp=Z,100nm,2.0s,mb5.8
BRG pmax pmax
comp=Z,76nm,1.4s,mb5.8
BRG pmax pmax
comp=Z,62nm,1.5s,mb5.7
BRG pmax pmax
comp=N,1.0nm,0.6s
BRG MLR MLR
comp=N,3µm,20.4s,MS5.9
BRG MLR MLR
comp=E,4µm,23.0s,MS5.9
BRG MLR MLR
comp=Z,7µm,23.1s,MS6.0
BRG Berggiesshubel 91.39 321 *e*P **P** **06 14 36.7 +0.3**
comp=Z,38nm,1.4s,mb5.5
BRG *e* 06 14 58.5
BRG *e*S S 06 25 32.1 -1.3
BRG Berggiesshubel 91.39 321 *i* P **P** **06 14 36.8 +0.4**
comp=Z,38nm,1.4s,mb5.5
BRG *i* pP 06 14 47.4 +0.5
comp=Z,167nm,2.0s
BRG *i* 06 14 58.7
comp=Z,127nm,1.4s
BRG *i* 06 15 23.0
comp=Z,104nm,1.5s
BRG PP PP 06 18 11.0 -3.3
BRG S S 06 25 36.0 +2.6
BRG *i* 06 26 42.0
BRG SS SS 06 31 41.0 +1.6
BRG SKKS 06 40 35.1
comp=Z,2.0nm,0.6s
BRG
comp=N,5µm,20.4s
BRG
comp=E,6µm,23.0s
BRG
comp=Z,11µm,23.1s
BRG Berggiesshubel 91.39 321 *i* P **P** **06 14 36.8 +0.4**
comp=Z,23nm,1.4s,mb5.3
BRG *i* pP 06 14 47.4 +0.5
BRG *i* 06 14 58.7
PTCC Patocco-Chiusa 91.42 316 P **P** **06 14 36.5 -0.2**
KHC Kasperske Hory 91.49 319 *e*P **P** **06 14 37.4 +0.5**
KHC *e*pP pP 06 14 47.3 -0.1
KHC *e*PP PP 06 18 17.5 +2.4
KHC *e*SKKS SKKSac 06 25 21.7 -1.2
KHC AMS AMS 07 02 30.0
comp=Z,9µm,21.0s
GMNA Gemona 91.49 316 P **P** **06 14 37.0 0.0**
FSSB Fossombrone 91.62 314 P **P** **06 14 38.0 +0.3**
RUE Ruedersdorf 91.63 322⇑*e*P **P** **06 14 37.6 +0.1**
comp=Z,312nm,1.6s,mb6.4
BJO Bjornoya 91.81 345 *e*P **P** **06 14 39.2 +1.3**
BJO *e*PP PP 06 18 16.7 -0.3
BJO *e*SS SS 06 31 51.4 +7.1
BJO AMS AMS 07 04 20.8
comp=Z,20µm,21.6s,MS6.5
RSM Repubblica di 91.88 314 P **P** **06 14 43.2 +4.3**
RJOB Jochberg 91.90 318 *e*P **P** **06 14 39.0 +0.1**
comp=Z,13nm,1.2s,mb5.1
WET Wettzell 91.95 319 *e*P **P** **06 14 39.3 +0.3**
WET *e* 06 15 01.2
WET pmax pmax
comp=Z,31nm,1.3s,mb5.5
WET Wettzell 91.95 319 *e*P **P** **06 14 39.3 +0.3**
comp=Z,31nm,1.3s,mb5.5
WET *e*pP pP 06 14 49.7 +0.1
WET *e* 06 15 01.2
BADI Badiali 92.00 313 P **P** **06 14 38.2 -1.2**
CLL Collm 92.02 321⇑*i*P **P** **06 14 39.1 -0.2**
CLL *i* 06 15 00.5
CLL *e*S S 06 25 38.0 -1.0
CLL pmax pmax
comp=Z,26nm,1.5s,mb5.3
CLL MLR MLR
comp=Z,8µm,23.0s,MS6.1
CLL Collm 92.02 321 *e*P **P** **06 14 39.2 -0.1**
comp=Z,27nm,1.5s,mb5.4
CLL *e* 06 15 00.9
CLL *e*S S 06 25 37.0 -2.0
CLL Collm 92.02 321⇑*i*P **P** **06 14 39.1 -0.2**
comp=Z,26nm,1.5s,mb5.3
CLL LmH 06 02 00.0
comp=N,13µm,20.3s
CLL LmH 06 02 00.0
comp=E,4µm,19.7s
CLL *e*Plp 06 14 42.0
comp=Z,1µm,20.0s
CLL *i* pP pP 06 14 46.3 -3.5
CLL *i* sP sP 06 14 49.8 -3.8
comp=Z,51nm,1.4s
CLL *i* x x 06 15 00.5
comp=Z,68nm,1.4s
CLL *i* x x 06 15 17.2
CLL *e*PP PP 06 18 13.0 -6.2
CLL *ex* x 06 18 57.0
CLL *e*PPP 06 20 25.0
CLL *e*PPPP 06 22 06.0
CLL *e*SKSac SKSac 06 25 17.0 +7.1
CLL *e*S S 06 25 38.0 -1.0
CLL *e*PS PS 06 26 56.0 +2.8
CLL *e*SS SS 06 31 56.0 +7.7
CLL *ex* x 06 33 11.0
CLL *e*SSS 06 35 18.0
CLL *ex* x 06 37 12.0
CLL *e*SSSS 06 38 42.0
CLL Collm 92.02 321⇑*i*P **P** **06 14 39.1 -0.2**
comp=Z,26nm,1.5s,mb5.3
CLL *i* pP pP 06 14 46.3 -3.5
CLL *i* sP sP 06 14 49.8 -3.8
CLL *i* 06 15 00.5
CLL *e*SKS 06 25 17.0
CLL *e*S S 06 25 38.0 -1.0
CLL LR LR
comp=Z,8µm,23.0s,MS6.1
ABTA Abfaltersbach 92.03 317⇑*i*P **P** **06 14 40.2 +0.8**
comp=Z,12nm,1.0s,mb5.2
ABTA Abfaltersbach 92.03 317⇑*i*PcP **P** **06 14 40.2 +0.8**
comp=Z,12nm,1.0s,mb5.2
NKC Novy Kostel 92.30 320 *e*P **P** **06 14 40.9 +0.3**
NKC *e*SKKS SKKSac 06 25 29.0 +0.1
NKC AMS AMS 07 04 30.0
comp=Z,11µm,19.4s
NKC Novy Kostel 92.30 320 *e*P **P** **06 14 40.9 +0.3**
NKC *e*SKS 06 25 29.0
TANN Tannenbergstha 92.30 320 *e*P **P** **06 14 40.5 -0.1**
comp=Z,26nm,1.6s,mb5.3
TANN *e* 06 15 02.6
SFI Santa Sofia 92.31 314 P **P** **06 14 42.5 +1.6**
ROTZ Rotzenmuhle 92.42 320 *e*P **P** **06 14 41.4 +0.2**
comp=Z,24nm,1.5s,mb5.3
ROTZ *e* 06 15 03.4
ROTZ *e*SKSac SKSac 06 25 13.8 +1.5
MANZ Manzenberg 92.50 320 *e*P **P** **06 14 42.2 +0.6**
comp=Z,41nm,1.5s,mb5.6
MANZ *e* 06 15 04.1
CTI Castel Tesino 92.58 316 P **P** **06 14 41.0 -1.0**
COP Copenhagen 92.65 325 *i* P **P** **06 14 44.4 +2.3**
COP *i* S S 06 25 28.3 -16
COP MLR MLR
comp=Z,6µm,19.0s,MS6.0
COP Copenhagen 92.65 325 *i* P **P** **06 14 44.4 +2.3**
COP *e* 06 18 40.6
COP *i* S S 06 25 28.3 -16
COP *i* 06 25 47.2
COP *i* 06 26 05.1
COP
comp=Z,6µm,19.0s
WTTA Wattenberg 92.66 317⇓*i*P **P** **06 14 42.7 +0.3**
comp=Z,26nm,1.2s,mb5.5
WTTA Wattenberg 92.66 317⇓*i*PcP **P** **06 14 42.7 +0.3**
comp=Z,26nm,1.2s,mb5.5
FNVD Fontana Vidola 92.85 314 P **P** **06 14 42.8 -0.5**
MOX Moxa 92.85 320 *e*P **P** **06 14 43.4 +0.2**
MOX *e* pP 06 14 54.5 +0.8
comp=Z,92nm,1.6s
MOX *e* 06 18 26.9
MOX
comp=Z,6µm,22.0s
MOX Moxa 92.85 320 *e*P **P** **06 14 43.4 +0.2**
MOX *e* 06 18 26.9
MOX pmax pmax
comp=Z,92nm,1.6s,mb6.0
MOX MLR MLR
comp=Z,6µm,22.0s,MS6.0
MOX Moxa 92.85 320 *e*P **P** **06 14 43.5 +0.3**
comp=Z,15nm,1.2s,mb5.3
MOX *e*pP pP 06 14 53.8 +0.1
MOX *e*SKSac SKSac 06 25 14.0 -0.6
MOX Moxa 92.85 320 *e*P **P** **06 14 43.4 +0.2**
comp=Z,92nm,1.6s,mb6.0
MOX *e* pP 06 14 54.5 +0.8
MOX *e* 06 18 26.9
MOX LR LR
comp=Z,6µm,22.0s,MS6.0
GRA1 Grafenberg Arr 93.06 319 *e*P **P** **06 14 45.1 +0.9**
comp=Z,21nm,1.1s,mb5.5
GRA1 *e* 06 15 06.3
GRA1 *e*SKSac SKSac 06 25 18.2 +2.4
GRA1 *e*S S 06 25 48.9 +0.6
GRA1 LR LR
comp=Z,7µm,19.5s,MS6.1
GRF Grafenberg Arr 93.06 319 *e*P **P** **06 14 45.1 +0.9**
GRF *e* 06 15 06.3
GRF *e*S S 06 25 48.9 +0.6
GRF pmax pmax
comp=Z,21nm,1.1s,mb5.5

GRF Grafenberg Arr 93.06 319 *e*P **P** **06 14 45.1 +0.9**
GRF *e* 06 15 06.3
GRF *e*S S 06 25 48.9 +0.6
GRF pmax pmax
comp=Z,21nm,1.1s,mb5.5
GRF MLR MLR
comp=Z,7µm,19.5s,MS6.1
GRF Grafenberg Arr 93.06 319 *e*P **P** **06 14 45.1 +0.9**
comp=Z,21nm,1.1s,mb5.5
GRF *e* 06 15 06.3
GRF *e*SKSac SKSac 06 25 18.2 +2.4
GRF *e*S S 06 25 48.9 +0.6
GRF *e*L 07 04 54.7
comp=Z,7µm,19.5s
GSCL Gusciola 93.24 314 P **P** **06 14 46.1 +1.0**
RETA Reutte 93.26 317⇑ *i*P **P** **06 14 44.6 -0.5**
comp=Z,28nm,1.0s,mb5.6
NIKO Nikolski 93.31 37⇑ *i*P **P** **06 14 44.3 -0.9**
comp=Z,214nm,1.0s,mb6.5
NSS Namsos 93.35 334 *e*P **P** **06 14 49.0 +3.9**
NSS *e*PP PP 06 18 28.7 -0.6
NSS *e*SS SS 06 32 11.6 +4.9
NSS AMS AMS 07 02 20.1
comp=Z,11µm,20.7s,MS6.3
ERBM Eremo 93.37 314 P **P** **06 14 47.9 +2.2**
VLC Villacollemand 93.38 314 PFAKE 06 15 00.0 +14
VLC LR LR
comp=Z,9µm,21.0s,MS6.2
BRMO Bormio 93.48 316 P **P** **06 14 46.3 +0.1**
NB2 NORSAR Subarra 93.55 331 P **P** **06 14 45.8 -0.4**
comp=Z,0.7nm,0.8s,baz=95,slow=5.3
NOA NORSAR Array B 93.55 331 P **P** **06 14 45.5 -0.7**
comp=Z,10.0nm,0.9s,mb5.2,baz=94,slow=4.6,SNR=13
NOA S SKSac 06 25 21.8 +3.8
comp=Z,1.2nm,0.9s,baz=357,slow=16,SNR=2.5
CLZ Clausthal 93.69 322 *e*P **P** **06 14 47.8 +0.8**
CLZ *e* 06 15 08.5
CLZ pmax pmax
comp=Z,18nm,1.3s,mb5.3
CLZ Clausthal 93.69 322 *e*P **P** **06 14 47.8 +0.8**
comp=Z,18nm,1.3s,mb5.3
CLZ *e* 06 15 08.5
BSEG Bad Segeberg 93.79 324 *e*P **P** **06 14 47.7 +0.3**
BSEG *e* 06 25 17.1
BSEG *e*S S 06 25 53.9 -0.7
BSEG pmax pmax
comp=Z,27nm,1.2s,mb5.5
BSEG Bad Segeberg 93.79 324 *e*P **P** **06 14 47.7 +0.3**
comp=Z,27nm,1.2s,mb5.5
BSEG *e*SKSac SKSac 06 25 17.1 -2.5
BSEG *e*S S 06 25 53.9 -0.7
KEST Kesra 93.82 305 P **P** **06 14 48.5 +0.4**
comp=Z,1.9nm,0.8s,mb4.6,baz=20,slow=2.5,SNR=5.8
KEST S SKSac 06 25 23.9 +3.2
comp=Z,0.8nm,0.7s,baz=318,slow=19,SNR=1.8
NRDL Niedersach Rie 93.87 322 *e* sP 06 15 09.5 +7.4
UBBA Unterbreizbach 93.89 321 *e*P **P** **06 14 48.0 +0.1**
comp=Z,112nm,2.7s,mb5.8
UBBA *e*pP pP 06 14 57.8 -0.7
UBBA *e*SKSac SKSac 06 25 21.7 +1.4
UBBA *e*S S 06 25 50.4 -5.2
KBS Kingsbay 93.89 349 *e*P **P** **06 14 46.5 -0.9**
KBS *e*PP PP 06 18 34.0 +0.8
KBS AMS AMS 07 06 16.5
comp=Z,24µm,19.0s,MS6.7
KBS Kingsbay 93.89 349 P **P** **06 14 45.7 -1.7**
KBS pmax pmax
comp=Z,32nm,1.1s,mb5.7
KBS MLR MLR
comp=Z,23µm,19.0s,MS6.7
KBS Kingsbay 93.89 349 P **P** **06 14 45.6 -1.8**
comp=Z,32nm,1.1s,mb5.7
KBS LR LR
comp=Z,23µm,19.0s,MS6.7
VSL Villasalto 93.94 309 PFAKE 06 15 00.0 +12
VSL LR LR
comp=Z,4µm,19.0s,MS5.9
TUE Stuetta 94.19 316⇑ *e*P **P** **06 14 48.8 -0.7**
comp=Z,24nm,1.2s,mb5.5
TUE LR LR
comp=Z,9µm,21.0s,MS6.2
KONO Kongsberg 94.32 329 *e*P **P** **06 14 50.9 +1.2**
KONO *e*PP PP 06 18 38.3 +1.4
KONO *e* 06 25 59.8
KONO *e*SS SS 06 32 23.6 +2.8
KONO AMS AMS 07 04 40.2
comp=Z,11µm,21.1s,MS6.3
PGF Pioggiola 94.33 312 *e*P **P** **06 14 57.4 +7.2**
comp=Z,90nm,1.6s,mb5.7
PGF Pioggiola 94.33 312 *e*P **P** **06 14 57.4 +7.2**
PGF pmax pmax
comp=Z,45nm,1.6s,mb5.7
PGF Pioggiola 94.33 312 *e*P **P** **06 14 57.4 +7.2**
comp=Z,45nm,1.6s,mb5.7
MUD Monsted U'grnd 94.50 326 *e*P **P** **06 14 51.5 +0.9**
MUD *i* 06 18 51.6
MUD *e*S S 06 25 52.2 -8.5
MUD *e* 06 27 14.9
MUD MLR MLR
comp=Z,11µm,20.0s,MS6.3
MUD Monsted U'grnd 94.50 326 *i* P **P** **06 14 51.5 +0.9**
MUD *i* 06 18 51.6
MUD *e*S S 06 25 52.2 -8.5
MUD *e* 06 27 14.9
MUD
comp=Z,11µm,20.0s
BFO Black Forest 94.92 318 PFAKE 06 15 00.0 +7.2
BFO LR LR
comp=Z,6µm,20.0s,MS6.1
FIN Finale Ligure 94.94 314 P **P** **06 14 51.7 -1.3**
AKUT Akutan 95.18 36 *e*P **P** **06 14 53.0 -0.8**
MOL Molde 95.30 332 *e*P **P** **06 15 00.3 +6.1**
MOL *e*PP PP 06 18 44.3 -0.2
MOL *e*SS SS 06 32 45.9 +11
MOL AMS AMS 07 06 00.3
comp=Z,11µm,20.2s,MS6.3
IBBN Ibbenburen 95.31 322 *e* sP 06 15 15.5 +6.8
IBBN *e*SKSac SKSac 06 25 28.2 +0.3
IBBN *e*S S 06 26 06.9 -1.0
SBF Sospel 95.50 314 *e*P **P** **06 15 02.9 +7.4**
BUG Bochum--Univer 95.61 321 *e*P **P** **06 14 56.1 +0.3**
comp=Z,11nm,0.8s,mb5.3
CDF Champ du Feu 95.62 318 *e*P **P** **06 15 02.9 +6.9**
comp=Z,67nm,1.5s,mb5.5
CDF Champ du Feu 95.62 318 *e*P **P** **06 15 02.9 +6.9**
CDF pmax pmax
comp=Z,33nm,1.5s,mb5.5
CDF Champ du Feu 95.62 318 *e*P **P** **06 15 02.9 +6.9**
comp=Z,34nm,1.5s,mb5.5
HINF Hinteralfeld 95.91 317 *e*P **P** **06 15 04.2 +6.9**
MBDF Montbardon 95.98 314 *e*P **P** **06 15 04.4 +6.7**
comp=Z,33nm,1.3s,mb5.3
MBDF Montbardon 95.98 314 *e*P **P** **06 15 04.4 +6.7**
MBDF pmax pmax
comp=Z,16nm,1.3s,mb5.3
MBDF Montbardon 95.98 314 *e*P **P** **06 15 04.4 +6.7**
comp=Z,16nm,1.3s,mb5.3
LPG La Plagne 95.99 315 *e*P **P** **06 15 05.3 +7.6**
LPL La Plagne 96.00 315 *e*P **P** **06 15 05.3 +7.5**
comp=Z,83nm,1.4s,mb5.7
LPL La Plagne 96.00 315 *e*P **P** **06 15 05.3 +7.5**
LPL pmax pmax
comp=Z,42nm,1.4s,mb5.7
LPL La Plagne 96.00 315 *e*P **P** **06 15 05.3 +7.5**
comp=Z,42nm,1.4s,mb5.7
BNI Bardonecchia 96.04 315 PFAKE 06 15 10.0 +12
BNI LR LR
comp=Z,9µm,20.0s,MS6.2
FRF La Foret Royal 96.07 313 *e*P **P** **06 15 05.6 +7.5**
LMR La Mourre 96.17 313 *e*P **P** **06 15 05.7 +7.1**
HAU Haudompre 96.25 318 *e*P **P** **06 15 05.8 +7.0**
comp=Z,78nm,1.4s,mb5.7
HAU *e*MLR MLR
comp=Z,9µm,21.0s,MS5.9
HAU Haudompre 96.25 318 *e*P **P** **06 15 05.8 +7.0**
HAU pmax pmax
comp=Z,39nm,1.4s,mb5.6
HAU MLR MLR
comp=Z,9µm,21.0s,MS6.2
HAU Haudompre 96.25 318 *e*P **P** **06 15 05.8 +7.0**
comp=Z,39nm,1.4s,mb5.6
HAU LR LR
comp=Z,9µm,21.0s,MS6.2
WLF Walferdange 96.35 319 *e* sP 06 15 21.0 +7.5
WLF *e*SKSac SKSac 06 25 42.0 +8.5
WLF Walferdange 96.35 319 PFAKE 06 15 10.0 +11
WLF LR LR
comp=Z,8µm,21.0s,MS6.2
CABF La Chapelle 96.44 316 *e*P **P** **06 15 07.4 +7.7**
comp=Z,33nm,1.1s,mb5.4
CABF La Chapelle 96.44 316 *e*P **P** **06 15 07.4 +7.7**
CABF pmax pmax
comp=Z,16nm,1.1s,mb5.4
CABF La Chapelle 96.44 316 *e*P **P** **06 15 07.4 +7.7**
comp=Z,16nm,1.1s,mb5.4
BER Bergen 96.44 330 *e*P **P** **06 14 57.5 -1.9**
BER *e*PP PP 06 18 53.3 -0.1
BER *e*SS SS 06 32 58.9 +8.0
BER AMS AMS 07 03 57.0
comp=Z,10µm,20.2s,MS6.3
ORIF Oris-en-Rattie 96.61 315 *e*P **P** **06 15 07.9 +7.4**
comp=Z,66nm,1.5s,mb5.5
ORIF *e*MLR MLR
comp=Z,14µm,22.8s,MS6.1
ORIF Oris-en-Rattie 96.61 315 *e*P **P** **06 15 07.9 +7.4**
ORIF pmax pmax
comp=Z,33nm,1.5s,mb5.5
ORIF Oris-en-Rattie 96.61 315 *e*P **P** **06 15 07.9 +7.4**
comp=Z,33nm,1.5s,mb5.5
TAM Tamanrasset 96.73 292 *e*P **P** **06 15 03.4 +1.8**
SMRF Simiane la Rot 96.84 314 *e*P **P** **06 15 09.5 +7.9**
MEZF Maizieres J'vi 97.10 318 *e*P **P** **06 15 09.9 +7.2**
GIVF Givet 97.20 320 *e*P **P** **06 15 10.1 +7.0**
VIVF Saint-Julien-l 97.47 315 *e*P **P** **06 15 11.9 +7.5**
comp=Z,48nm,1.5s,mb5.4
VIVF Saint-Julien-l 97.47 315 *e*P **P** **06 15 11.9 +7.5**
VIVF pmax pmax
comp=Z,24nm,1.5s,mb5.4
VIVF Saint-Julien-l 97.47 315 *e*P **P** **06 15 11.9 +7.5**
comp=Z,24nm,1.5s,mb5.4
BAIF Baives 97.59 320 *e*P **P** **06 15 12.2 +7.3**
comp=Z,69nm,1.4s,mb5.7
BAIF Baives 97.59 320 *e*P **P** **06 15 12.2 +7.3**
BAIF pmax pmax
comp=Z,35nm,1.4s,mb5.7
BAIF Baives 97.59 320 *e*P **P** **06 15 12.2 +7.3**
comp=Z,35nm,1.4s,mb5.7
LOR Lormes 97.95 317 *e*P **P** **06 15 13.7 +7.2**
comp=Z,42nm,1.3s,mb5.5
LOR *e*MLR MLR
comp=Z,6µm,21.8s,MS5.8
LOR Lormes 97.95 317 *e*P **P** **06 15 13.7 +7.2**
LOR pmax pmax
comp=Z,21nm,1.3s,mb5.5
LOR MLR MLR
comp=Z,6µm,21.8s,MS6.1
LOR Lormes 97.95 317 *e*P **P** **06 15 13.7 +7.2**
comp=Z,21nm,1.3s,mb5.5
LOR LR LR
comp=Z,6µm,21.8s,MS6.1
SMF Signal de Mont 97.99 316 *e*P **P** **06 15 14.0 +7.3**
comp=Z,76nm,1.5s,mb5.7
SMF Signal de Mont 97.99 316 *e*P **P** **06 15 14.0 +7.3**
SMF pmax pmax
comp=Z,38nm,1.5s,mb5.7
SMF Signal de Mont 97.99 316 *e*P **P** **06 15 14.0 +7.3**
comp=Z,38nm,1.5s,mb5.7
SSF Saint Saulge 98.20 317 *e*P **P** **06 15 15.0 +7.3**
comp=Z,57nm,1.6s,mb5.5
SSF Saint Saulge 98.20 317 *e*P **P** **06 15 15.0 +7.3**
SSF pmax pmax
comp=Z,29nm,1.6s,mb5.6
SSF Saint Saulge 98.20 317 *e*P **P** **06 15 15.0 +7.3**
comp=Z,29nm,1.6s,mb5.5
AVF Avril sur Loir 98.32 317 *e*P **P** **06 15 15.1 +6.9**
BGF Bois d'Agland 98.68 316 *e*P **P** **06 15 17.3 +7.5**
TCF Toulx Ste Croi 99.13 316 *e*P **P** **06 15 19.5 +7.6**
MTLF Montolieu 99.30 313 *e*P **P** **06 15 20.3 +7.6**
CAF Calviac 99.32 315 *e*P **P** **06 15 20.6 +7.9**
RJF Les Rejaudoux 99.68 315 *e*P Pdif 06 15 21.9 +7.8
RJF *e*MLR MLR
comp=Z,9µm,23.0s,MS5.9
IMA2 Indian Mountai 99.93 24 *e*P Pdif 06 15 14.0 -1.2
TOA0 Torodi Ar. Sit 100.08 283 *e*Pdif Pdif 06 15 24.8 +8.9
TORD Torodi Ar. Bea 100.08 283 P Pdif 06 15 17.0 +1.1
comp=Z,0.6nm,0.9s,baz=289,slow=1.3,SNR=2.6
TORD S SKSac 06 25 54.4 +0.6
comp=Z,0.9nm,1.0s,baz=76,slow=1.4,SNR=2.4
TORD PKKPbc PKKPbc 06 31 36.7 +1.7
comp=Z,0.7nm,0.8s,baz=237,slow=5.0,SNR=2.7
TORD Torodi Ar. Bea 100.08 283 P Pdif 06 15 17.0 +1.1
TORD S SKSac 06 25 54.4 +0.6
TORD PKKPbc PKKPbc 06 31 36.7 +1.7
JMIC Jan Mayen 100.24 342 *e*PP PP 06 19 21.4 -0.7
JMIC AMS AMS 07 04 43.6
comp=Z,9µm,20.3s,MS6.3
LDF La Druitiere 100.53 319 *e*P Pdif 06 15 25.2 +7.3
comp=Z,28nm,1.2s
LDF La Druitiere 100.53 319 *e*P Pdif 06 15 25.2 +7.3
LDF pmax pmax
comp=Z,14nm,1.2s
LDF La Druitiere 100.53 319 *e*P Pdif 06 15 25.2 +7.3
comp=Z,14nm,1.2s
COLD Coldfoot 101.00 22 *e*P Pdif 06 15 19.1 -0.8
comp=Z,83nm,1.7s
GRR Gorron 101.03 318 *e*P Pdif 06 15 27.3 +7.2
comp=Z,21nm,1.1s
GRR Gorron 101.03 318 *e*P Pdif 06 15 27.3 +7.2
GRR pmax pmax
comp=Z,11nm,1.1s
GRR Gorron 101.03 318 *e*P Pdif 06 15 27.3 +7.2
comp=Z,11nm,1.1s
BPAW Bear Paw Mtn. 101.50 25 *e*Pdif Pdif 06 15 21.8 -0.4
comp=Z,50nm,1.4s
ESK Eskdalemuir 101.53 326 PFAKE 06 15 30.0 +7.7
ESK LR LR
comp=Z,7µm,22.0s,MS6.1
XMAS Kiritimati 101.57 89 PFAKE 06 15 30.0 +7.5
XMAS LR LR
comp=Z,6µm,21.0s,MS6.1
KIP Kipapa 101.63 69 PFAKE 06 15 30.0 +7.2
KIP LR LR
comp=Z,6µm,20.0s,MS6.1
KDAK Kodiak Island 102.17 32 PFAKE 06 15 40.0 +15
KDAK LR LR
comp=Z,4µm,21.0s,MS5.9
MCK McKinley 102.47 25 *e*Pdif Pdif 06 15 25.3 -1.2
comp=Z,28nm,1.2s
MCK *e*PP PP 06 19 37.2 -2.0
COLA College 102.59 24 PFAKE 06 15 40.0 +13
COLA LR LR
comp=Z,9µm,20.0s,MS6.3
PMR Palmer 102.98 28 PFAKE 06 15 40.0 +11
PMR LR LR
comp=Z,12µm,20.0s,MS6.4
SEW Seward 103.22 29 *e*Pdif Pdif 06 15 28.7 -1.1
POHA Pohakuloa 103.97 71 PFAKE 06 15 50.0 +17
POHA LR LR
comp=Z,6µm,22.0s,MS6.1
ESLA Sonseca Array 104.23 310 PFAKE 06 15 50.0 +16
ESLA LR LR
comp=Z,24µm,20.0s,MS6.7
PAB San Pablo 104.54 310 PFAKE 06 15 50.0 +14
PAB LR LR
comp=Z,4µm,19.0s,MS6.0
SHEL Horse Pasture 104.97 252 PFAKE 06 20 10.0 +17
SHEL LR LR
comp=Z,13µm,21.0s,MS6.5
BMRM Bremner River 105.25 27 *e*PKPdf PKiKP 06 19 47.6 -5.1
RAGM Ragged Mountai 105.41 28 *e*PKPdf PKiKP 06 19 52.6 -0.4
TRIS Tristan da Cun 105.89 230 PFAKE 06 20 10.0 +15
TRIS LR LR
comp=Z,11µm,22.0s,MS6.4
DBIC Dimbokro 106.30 276 PFAKE 06 20 10.0 +14
DBIC LR LR
comp=Z,10µm,19.0s,MS6.4
DAWY Dawson 106.30 23 *e*Pdif Pdif 06 15 44.6 +1.1
MVO Moncorvo 106.35 312 *e*PP PP 06 20 09.8 +1.1
MVO *e*SKS Sdif 06 27 40.9 +0.1
MVO Moncorvo 106.35 312 *e*LR LR 06 55 16.7
comp=Z,6µm,20.0s
SFS San Fernando 106.36 307 PFAKE 06 20 10.0 +14
SFS LR LR
comp=Z,9µm,20.0s,MS6.3
PBAR Barrancos 106.80 309 *e*PP PP 06 20 17.2 +5.1
PBAR *e*SKS Sdif 06 27 43.8 -0.7
PBAR *i* P PS 06 29 34.2 +1.7
PBAR *i* SS SS 06 35 29.1 +13
PBAR Barrancos 106.80 309 *e*LQ 06 54 30.5
PBAR *e*LR LR 06 59 41.1
comp=Z,5µm,20.0s
MTE Manteigas 106.86 311 *e*PP PP 06 20 08.2 -4.3
MTE *e*SKS Sdif 06 27 43.2 -1.8
MTE *i* SS SS 06 35 19.7 +3.4
MTE Manteigas 106.86 311 *e*LR LR 07 02 57.9
comp=Z,5µm,20.0s
MTE Manteigas 106.86 311 PFAKE 06 20 10.0 +14
MTE LR LR
comp=Z,5µm,20.0s,MS6.0
PMRV Marv??o 106.89 310 *e*SKS Sdif 06 27 50.3 +5.0
PMRV *i* P 06 29 22.2
PMRV *i* SS SS 06 35 33.3 +17
PMRV Marv??o 106.89 310 *e*LR LR 06 58 58.7
comp=Z,4µm,18.0s
PPT Papeete 107.05 110 *e*PP PP 06 20 04.3 -10
comp=Z,1µm,26.0s
PPT Papeete 107.05 110 *e*PS PS 06 29 34.4 -1.4
comp=Z,4µm,27.5s
PPT *e*SS SS 06 35 17.9 -2.2
comp=Z,7µm,25.2s
PPT Papeete 107.05 110 *e*LR LR 06 51 26.4
comp=Z,14µm,22.2s
PPT Papeete 107.05 110 PFAKE 06 20 10.0 +13
PPT LR LR
comp=Z,4µm,21.0s,MS5.9
BORG Borgarnes 107.12 338 PFAKE 06 20 10.0 +14
BORG LR LR
comp=Z,10µm,20.0s,MS6.4
PESTR Estremoz 107.13 309 *e*PP PP 06 20 10.0 -4.5
PESTR *e*SKS Sdif 06 27 47.0 -0.3
PESTR *i* P PS 06 29 37.4 +1.5
PESTR *i* SS SS 06 35 34.8 +15
PESTR Estremoz 107.13 309 *e*LR LR 07 01 21.2
comp=Z,5µm,20.0s
RTC Rabat Centre 107.19 304 PFAKE 06 20 10.0 +13
RTC LR LR
comp=Z,6µm,19.0s,MS6.1
PVAQ Vaqueiros 107.44 308 *e*PP PP 06 20 15.1 -1.8
PVAQ *e*SKS SKSdf 06 27 20.6 +13
PVAQ *i* P PS 06 29 38.4 -0.8
PVAQ *i* SS SS 06 35 02.9 -22
PVAQ Vaqueiros 107.44 308 *e*LR LR 06 54 59.1
comp=Z,7µm,22.0s
EVO Evora 107.50 309 *e*PKIKP PP 06 20 09.6 -7.7
comp=Z,29nm,1.2s
EVO *e*MLR MLR
comp=Z,8µm,21.5s,MS5.9
PBDV Barranco-do-Ve 107.63 308 *e*PP PP 06 20 10.4 -7.9
PBDV *e*SKS Sdif 06 27 50.5 -1.0
PBDV *i* SS SS 06 35 20.2 -6.8
PBDV Barranco-do-Ve 107.63 308 *e*LR LR 07 00 56.7
comp=Z,5µm,22.0s
MORF Marmelete 108.19 308 *e*PP PKiKP 06 20 02.1 +3.2
MORF *e*SKS Sdif 06 27 54.4 -1.7
MORF *i* P 06 30 00.9
MORF *i* SS SS 06 35 24.8 -10
MORF Marmelete 108.19 308 *e*LR LR 07 01 10.3
comp=Z,6µm,20.0s
LIS Lisbon 108.35 309 *e*PP PP 06 20 22.5 -1.0
LIS *e*SS SS 06 35 38.6 +1.9
LIS AMS AMS 07 06 12.4
comp=Z,5µm,21.9s,MS6.0
LIS Lisbon 108.35 309 *e*PP PP 06 20 22.5 -1.0
LIS Lisbon 108.35 309 *e*SS SS 06 35 38.6 +2.0
LIS A 07 06 12.4
comp=Z,5µm,21.9s
PFVI Vila Biebo 108.36 308 *e*PP PP 06 20 21.3 -2.3
PFVI Vila Bisbo 108.36 308 *i* SS SS 06 35 50.4 +14
PFVI Vila Bisbo 108.36 308 *e*LR LR 07 01 19.2
comp=Z,6µm,20.0s
PMAFR Mafra 108.42 310 *e*PP PP 06 20 20.4 -3.5
PMAFR *e*SKS Sdif 06 28 02.5 +4.5
PMAFR *i* P PKKPbc 06 30 56.6 -14
PMAFR *i* SS SS 06 35 57.6 +20
PMAFR Mafra 108.42 310 *e*LR LR 07 00 06.6
comp=Z,5µm,18.0s
PMSA Palmer Station 110.37 187 PFAKE 06 20 10.0 +7.8
PMSA LR LR
comp=Z,18µm,22.0s,MS6.6
SIT Sitka 111.20 29 PFAKE 06 20 20.0 +16
SIT LR LR
comp=Z,15µm,21.0s,MS6.6
WRAK Wrangell Islan 112.95 29 PFAKE 06 20 20.0 +13
WRAK LR LR
comp=Z,8µm,20.0s,MS6.3
DLBC Dease Lake 112.98 26 *e*PKPdf PKiKP 06 20 05.3 -2.0
SFJD Kangerlussuaq 114.29 348 PFAKE 06 20 20.0 +10
SFJD LR LR
comp=Z,11µm,20.0s,MS6.5
ASCN Ascension 114.51 259 PFAKE 06 20 20.0 +8.5
ASCN LR LR
comp=Z,10µm,19.0s,MS6.4
YKA Yellowknife Ar 116.09 18 PKP PKPdf 06 20 13.1 0.0
comp=Z,9.6nm,1.0s,baz=317,slow=2.2,SNR=11
YKA Yellowknife Ar 116.09 18 PKIKP PKPdf 06 20 13.1 -0.1
YKA pmax pmax
comp=Z,10.0nm,1.0s
RKT Rikitea 118.97 119 *e*PP PP 06 21 33.7 -5.5
comp=Z,751nm,26.5s
RKT Rikitea 118.97 119 *e*PS PS 06 31 25.2 -2.4
comp=Z,3µm,25.8s
RKT *e*SS SS 06 37 56.5 -1.1
comp=Z,10µm,27.5s
RKT Rikitea 118.97 119 *e*LR LR 06 56 50.0
comp=Z,17µm,22.5s
CMLA Cha da Macela 121.03 312 *e*PP PP 06 21 55.8 +2.9
CMLA Cha da Macela 121.03 312 *e*SS SS 06 38 22.4 -0.8
CMLA Cha da Macela 121.03 312 *e*LQ 06 52 05.5
CMLA *e*LR LR 06 58 08.2
CMLA Cha da Macela 121.03 312 PFAKE 06 20 40.0 +17
CMLA LR LR
comp=Z,6µm,19.0s,MS6.2
EFI East Falkland 121.61 195 PFAKE 06 20 40.0 +16
EFI LR LR
comp=Z,8µm,20.0s,MS6.4
NLWA Neilton Lookou 122.16 35 *e*PKPdf PKPdf 06 20 25.8 +0.6
NLWA LR LR
comp=Z,8µm,22.0s,MS6.3
PTCN Pitcairn Islan 122.45 123 PFAKE 06 20 40.0 +13
PTCN LR LR
comp=Z,10µm,19.0s,MS6.5
JCW Jim Creek 122.78 33 P PKPdf 06 20 27.4 +1.0
RPW Rockport 122.85 32 *e*PKPdf PKPdf 06 20 26.5 0.0
BMW Boistfort Moun 123.03 35 *e*PKIKP PKPdf 06 20 28.1 +1.1
HEBO Mount Hebo 123.42 37 *e*PKPdf PKPdf 06 20 29.2 +1.4
EDM Edmonton 123.51 24 *e*PKIKP PKPdf 06 20 27.6 -0.1
LON Longmire 123.68 34 *e*PKIKP PKPdf 06 20 28.6 +0.4
LON *e* 06 22 09.1
TWW Teanaway 123.98 33 P PKPdf 06 20 30.0 +1.2
ETW Entiat 123.99 33 *e*PKPdf PKPdf 06 20 29.2 +0.4
ETW *e*PP PP 06 22 09.4 -2.9
COR Corvallis 124.02 37 *e*PKIKP PKPdf 06 20 30.8 +1.8
COR MLR MLR
comp=Z,6µm,19.0s,MS6.2
TBM Table Mountain 124.11 33 P PKPdf 06 20 29.8 +0.8
WTV Waterville 124.14 32 P PKPdf 06 20 29.5 +0.4
FCC Fort Churchill 124.27 10 *e*PKIKP PKPdf 06 20 27.6 -1.4
EBG Ellensburg 124.28 33 P PKPdf 06 20 30.3 +1.0
KEBM Edson Butte 124.29 39 *e*PKPdf PKPdf 06 20 31.1 +1.6
IRO Indian Ridge 124.37 37 P PKPdf 06 20 31.7 +0.9
OD2 Odessa Site #2 124.99 32 P PKPdf 06 20 31.4 +0.7
RSW Rattlesnake Hi 125.13 33 *e*PKPdf PKPdf 06 20 32.3 +1.3
HAWA Hanford 125.16 33 *e*PKPdf PKPdf 06 20 32.0 +0.9
HAWA LR LR
comp=Z,6µm,20.0s,MS6.2
CROR Criterion Ridg 125.17 36 P PKPdf 06 20 32.2 +1.0
KRMB Red Mountain 125.24 41 *e*PKPdf PKPdf 06 20 32.6 +1.3
NEW Newport 125.25 30 *e*PKIKP PKPdf 06 20 32.0 +0.8
NEW *e* 06 22 17.0
NEW MLR MLR
comp=Z,12µm,21.0s
HUMO Hull Mountain 125.29 39 *e*PKPdf PKPdf 06 20 31.7 +0.3
HUMO *e*PP PP 06 22 17.8 -3.5
HUMO LR LR
comp=Z,7µm,22.0s,MS6.3
KTRM Thompson Ridge 125.39 40 P PKPdf 06 20 33.4 +1.8
VIPM Ingram Point 125.66 36 PKIKP PKPdf 06 20 33.6 +1.5
YBH Yreka Blue Hor 125.91 40 *e*PKIKP PKPdf 06 20 33.1 +0.4
YBH MLR MLR
comp=Z,6µm,21.0s
LNOR Lincton Mounta 126.17 33 *e*PKIKP PKPdf 06 20 32.5 -0.5
FFC Flin Flon 126.22 16 *e*PKIKP PKPdf 06 20 32.5 -0.3
FFC MLR MLR
comp=Z,14µm,20.0s,MS6.6

WALA Waterton Lakes 126.27 28 ePKPdf PKPdf 06 20 32.9 -0.2
HOG Hogback Mounta 126.27 39 P PKPdf 06 20 34.9 +1.5
KCPM Cahto Peak 126.37 42 ePKPdf PKPdf 06 20 34.0 +0.4
KIPM Iron Peak 126.38 42 ePKPdf PKPdf 06 20 34.1 +0.5
WDC Whiskeytown Da 126.61 41 ePKIKP PKPdf 06 20 33.8 -0.2
WDC MLR MLR
comp=Z,7µm,21.0s,MS6.3
HOPS Hopland 127.06 43 ePKPdf PKPdf 06 20 36.0 +1.0
HOPS LR LR
comp=Z,6µm,22.0s,MS6.2
LBCM Butte Creek Ri 127.25 40 P PKPdf 06 20 36.4 +1.1
MOD Modoc 127.33 38 ePKPdf PKPdf 06 20 36.5 +1.1
MOD ePP PP 06 22 21.9 -13
MOD LR LR
comp=Z,6µm,20.0s,MS6.2
BMO Blue Mountains 127.34 34 ePKIKP PKPdf 06 20 34.9 -0.4
BMO MLR MLR
comp=Z,7µm,19.0s,MS6.4
MCCM Marconi Confer 127.60 44 ePKPdf PKPdf 06 20 37.0 +1.0
MCCM LR LR
comp=Z,5µm,22.0s,MS6.1
NSHM Saint Helena R 127.61 43 ePKPdf PKPdf 06 20 36.8 +0.8
MSO Missoula 127.81 30 ePKPdf PKPdf 06 20 36.1 0.0
MSO LR LR
comp=Z,9µm,20.0s,MS6.4
WVOR Wild Horse Val 128.04 37 PFAKE 06 20 50.0 +13
WVOR LR LR
comp=Z,7µm,21.0s,MS6.3
CHMT Chamberlain Mo 128.09 29 ePKPdf PKPdf 06 20 36.9 +0.3
SCHQ Schefferville 128.54 351 PKP PKPdf 06 20 38.0 +0.7
comp=Z,9.9nm,1.0s,baz=358,slow=3.9,SNR=4.9
SCHQ Schefferville 128.54 351 PKP PKPdf 06 20 38.0 +0.7
SCHQ LR LR
comp=Z,4µm,20.0s,MS6.1
EGMT Eagleton 128.91 26 ePKPdf PKPdf 06 20 39.1 +0.9
EGMT LR LR
comp=Z,7µm,20.0s,MS6.3
PAHR Pah Rah Range 129.13 40 ePKPdf PKPdf 06 20 40.4 +1.5
SAO San Andreas Ge 129.27 45 ePKIKP PKPdf 06 20 40.3 +1.1
SAO MLR MLR
comp=Z,5µm,19.0s,MS6.2
CMB Columbia Colle 129.36 43 ePKPdf PKPdf 06 20 40.1 +0.8
CMB e 06 20 49.4
CMB ePP PP 06 22 43.2 -5.0
CMB LR LR
comp=Z,6µm,22.0s,MS6.3
DLMT Dillon 129.50 30 ePKPdf PKPdf 06 20 40.5 +1.1
MCMT McKenzie Canyo 129.74 31 ePKPdf PKPdf 06 20 40.6 +0.7
HLID Hailey 129.76 33 ePKPpre 06 20 31.4
HLID ePKPdf PKPdf 06 20 40.5 +0.6
HLID LR LR
comp=Z,9µm,20.0s,MS6.5
BOZ Bozeman (W) 129.78 30 ePKIKP PKPdf 06 20 40.6 +0.7
BOZ MLR MLR
comp=Z,8µm,19.0s,MS6.4
BMN Battle Mountai 130.08 38 ePKIKP PKPdf 06 20 41.7 +1.1
BMN e 06 22 49.1
BMN MLR MLR
comp=Z,5µm,20.0s,MS6.2
QLMT Earthquake Lak 130.46 30 ePKPdf PKPdf 06 20 42.3 +1.1
NVAR Mina Array Bea 130.53 41 PKhKP 06 20 35.7
comp=Z,2.3nm,0.9s,baz=243,slow=4.0,SNR=6.7
NVAR PKP PKPdf 06 20 42.2 +0.7
comp=Z,18nm,1.0s,baz=188,slow=2.2,SNR=27
NVAR PP PP 06 22 54.2 -1.6
comp=Z,0.5nm,0.3s,baz=102,slow=18,SNR=3.2
NVAR SKPbc SKPbc 06 24 03.0 +0.2
comp=Z,1.0nm,0.3s,baz=232,slow=45,SNR=4.0
NVAR Mina Array Bea 130.53 41 PKP 06 20 35.6
NVAR PKP PKPdf 06 20 42.2 +0.7
NVAR PP PP 06 22 54.2 -1.6
NVAR SKPbc SKPbc 06 24 03.0 +0.2
GCMT Greycliff 130.62 28 ePKPdf PKPdf 06 20 41.8 +0.3
GCMT ePP PP 06 22 50.1 -5.8
PTRM Twissleman Ran 130.69 45 ePKPdf PKPdf 06 20 43.6 +1.7
YMR Madison River 130.81 30 ePKPdf PKPdf 06 20 43.3 +1.4
YMR LR LR
comp=Z,9µm,19.0s,MS6.5
DGMT Dagmar 130.83 22 ePKPdf PKPdf 06 20 40.8 -1.0
DGMT LR LR
comp=Z,10µm,20.0s,MS6.5
ELK Elko 131.09 37 ePKIKP PKPdf 06 20 43.6 +1.0
ELK MLR MLR
comp=Z,7µm,21.0s
LKWY Lake 131.16 30 ePKIKP PKPdf 06 20 44.2 +1.6
LKWY MLR MLR
comp=Z,15µm,20.0s,MS6.7
RLMT Red Lodge 131.31 28 ePKPdf PKPdf 06 20 43.8 +0.9
RLMT ePP PP 06 23 00.5 +0.2
RLMT LR LR
comp=Z,10µm,19.0s,MS6.5
FLWY Flagg Ranch 131.36 30 ePKPdf PKPdf 06 20 44.8 +1.8
IMW Indian Meadow 131.37 31 ePKPdf PKPdf 06 20 43.8 +0.8
IMW ePP PP 06 23 00.5 -0.4
IMW eSKP 06 24 05.7
TPH Tonopah 131.44 41 ePKIKP PKPdf 06 20 44.1 +0.8
TPH MLR MLR
comp=Z,4µm,20.0s,MS6.2
DCID1 Drake Creek 131.46 31 ePKPdf PKPdf 06 20 44.9 +1.7
LAO LASA Array 131.47 25 ePKPpre 06 20 37.3
LAO ePKPdf PKPdf 06 20 44.4 +1.3
LAO LR LR
comp=Z,9µm,19.0s,MS6.5
RRI2 Red Ridge 131.56 32 ePKPdf PKPdf 06 20 45.0 +1.6
MOOW Moose Ponds 131.58 31 ePKPpre 06 20 33.0
MOOW ePKPdf PKPdf 06 20 43.6 +0.2
MOOW ePP PP 06 22 52.1 -10
MOOW eSKP 06 24 07.6
TPAW Teton Pass 131.65 31 ePKPpre 06 20 35.3
TPAW ePKPdf PKPdf 06 20 43.1 -0.4
TPAW ePP PP 06 23 05.5 +2.8
TPAW eSKP 06 24 08.5
LOHW Long Hollow 131.75 31 ePKPdf PKPdf 06 20 44.1 +0.4
SNOW Snow King Moun 131.78 31 ePKPdf PKPdf 06 20 45.0 +1.2
REDW Red Top Meadow 131.79 31 ePKPpre 06 20 30.3
REDW ePKPdf PKPdf 06 20 42.4 -1.4
HVU Hansel Valley 131.85 34 ePKPdf PKPdf 06 20 44.5 +0.5
HVU eSKP 06 24 08.0
ULM Lac du Bonnet 131.88 15 PKP PKPdf 06 20 44.7 +0.9
comp=Z,27nm,0.8s,baz=351,slow=2.7,SNR=20
ULM SKPbc SKPbc 06 24 06.5 -0.9
comp=Z,8.3nm,0.9s,baz=178,slow=21,SNR=5.1
ULM Lac du Bonnet 131.88 15 PKP PKPdf 06 20 44.7 +0.9
ULM SKPbc SKPbc 06 24 06.5 -0.9
ISA Isabella 131.90 44 ePKIKP PKPdf 06 20 44.4 +0.1
ISA MLR MLR
comp=Z,6µm,21.0s,MS6.2
AHID Auburn Hatcher 132.09 32 PFAKE 06 21 00.0 +16
AHID LR LR
comp=Z,6µm,19.0s,MS6.3
DAC Darwin (Calif) 132.18 43 PFAKE 06 21 00.0 +15
DAC LR LR
comp=Z,4µm,20.0s,MS6.2
BGU Big Grassy Mou 132.27 35 ePKPdf PKPdf 06 20 45.4 +0.6
BGU eSKP 06 24 11.1
SPUT South Promonto 132.34 34 ePKPdf PKPdf 06 20 45.9 +1.0
SNCC San Nicolas Is 132.35 48 PFAKE 06 21 00.0 +15
SNCC LR LR
comp=Z,5µm,20.0s,MS6.2
HWUT Hardware Ranch 132.63 33 ePKPpre 06 20 37.8
HWUT ePKPdf PKPdf 06 20 45.7 +0.2
HWUT LR LR
comp=Z,6µm,19.0s,MS6.3
TPNV Topopah Spring 132.71 41 ePKIKP PKPdf 06 20 40.5 -5.2
TPNV MLR MLR
comp=Z,6µm,22.0s,MS6.3
DUG Dugway 132.87 36 ePKIKP PKPdf 06 20 47.3 +1.4
DUG MLR MLR
comp=Z,7µm,19.0s,MS6.4
BW06 Boulder Array 132.88 31 PFAKE 06 21 00.0 +14
BW06 LR LR
comp=Z,7µm,20.0s,MS6.4
PDAR Pinedale Array 132.88 31 PKhKP 06 20 33.0
comp=Z,1.5nm,0.9s,baz=29,slow=3.4,SNR=6.3
PDAR PKP PKPdf 06 20 46.2 +0.4
comp=Z,6.0nm,0.9s,baz=107,slow=1.3,SNR=14
PDAR SKPbc SKPbc 06 24 12.6 +1.4
comp=Z,3.6nm,1.0s,baz=96,slow=1.5,SNR=2.1
PDAR SKP 06 24 19.2
comp=Z,4.7nm,1.0s,baz=264,slow=1.8,SNR=4.0
PDAR Pinedale Array 132.88 31 PKP 06 20 33.0
PDAR PKP PKPdf 06 20 46.2 +0.4
PDAR SKPbc SKPbc 06 24 12.6 +1.4
PDAR SKP 06 24 19.2

MWC Mount Wilson 132.93 46 ePKIKP PKPdf 06 20 44.4 -1.8
MWC MLR MLR
comp=Z,6µm,22.0s,MS6.2
NOQ North Oquirrh 132.97 35 ePKPdf PKPdf 06 20 46.3 +0.2
CTU Camp Tracy 133.15 34 ePKPdf PKPdf 06 20 46.6 +0.2
GSC Goldstone 133.25 44 ePKIKP PKPdf 06 20 47.9 +1.1
GSC MLR MLR
comp=Z,6µm,20.0s,MS6.3
JLU Jordanelle 133.38 34 ePKPdf PKPdf 06 20 47.5 +0.6
NLU North Lily Min 133.45 35 ePKPdf PKPdf 06 20 48.1 +1.1
DAU Daniels Canyon 133.62 34 ePKIKP PKPdf 06 20 49.0 +1.7
MPU Maple Canyon 133.67 35 ePKPdf PKPdf 06 20 48.0 +0.6
MPU LR LR
comp=Z,8µm,21.0s,MS6.4
AGMN Agassiz Refuge 133.68 16 ePKPdf PKPdf 06 20 44.5 -2.7
AGMN LR LR
comp=Z,13µm,21.0s,MS6.6
ARUT Antelope Range 134.01 39 ePKIKP PKPdf 06 20 51.0 +2.8
CCUT Cedar City 134.21 39 ePKPdf PKPdf 06 20 43.2 -5.4
MVU Marysvale 134.32 37 PFAKE 06 21 00.0 +11
MVU LR LR
comp=Z,9µm,20.0s,MS6.5
MSU Marysvale 134.33 37 ePKIKP PKPdf 06 20 51.5 +2.8
PFO Pinyon Flat Ob 134.39 45 ePKPdf PKPdf 06 20 48.7 -0.3
PFO eSKP 06 24 17.6
PFO LR LR
comp=Z,6µm,19.0s,MS6.4
RSSD Black Hills 134.45 25 ePKPpre 06 20 40.7
RSSD ePKPdf PKPdf 06 20 49.8 +1.0
RSSD LR LR
comp=Z,8µm,21.0s,MS6.4
LDFC Landfair 134.53 43 ePKPdf PKPdf 06 20 47.3 -1.9
PLCA Paso Flores 134.68 189 PKhKP 06 20 42.1
comp=Z,1.3nm,0.8s,baz=0.4,slow=14,SNR=2.2
PLCA Paso Flores 134.68 189 PKP 06 20 42.1
PLCA LR LR
comp=Z,10µm,19.0s,MS6.5
BAR Barrett 134.72 47 ePKPdf PKPdf 06 20 50.6 +1.0
BAR LR LR
comp=Z,5µm,19.0s,MS6.2
RWWY Rawlins 134.86 30 ePKPdf PKPdf 06 20 50.0 +0.4
RWWY eSKP 06 24 19.8
SRU San Rafael 134.91 35 ePKIKP PKPdf 06 20 50.0 +0.2
EYMN Ely 135.05 12 ePKPdf PKPdf 06 20 49.1 -0.6
EYMN LR LR
comp=Z,17µm,21.0s,MS6.8
TRQA Tornquist 135.16 199 PFAKE 06 21 00.0 +10
TRQA LR LR
comp=Z,8µm,19.0s,MS6.5
GLA Glamis 135.84 45 ePKIKP PKPdf 06 20 52.1 +0.4
GLA MLR MLR
comp=Z,5µm,21.0s,MS6.2
PHWY Pilot Hill 136.01 29 ePKPdf PKPdf 06 20 51.9 +0.1
PHWY eSKP 06 24 20.6
PV10 Paradox Valley 136.26 35 ePKPdf PKPdf 06 20 54.4 +2.1
PV01 Paradox Valley 136.69 35 ePKPpre 06 20 43.2
PV01 ePKPdf PKPdf 06 20 55.1 +2.0
WUAZ Wupatki 136.72 40 ePKPdf PKPdf 06 20 54.1 +0.8
WUAZ LR LR
comp=Z,5µm,20.0s,MS6.2
ISCO Idaho Springs 137.08 31 ePKHKP 06 20 42.4
ISCO MLR MLR
comp=Z,8µm,21.0s,MS6.4
COWI Conover 137.28 11 PFAKE 06 21 10.0 +16
COWI LR LR
comp=Z,10µm,21.0s,MS6.5
MVCO Mesa Verde 137.37 36 PFAKE 06 21 10.0 +16
MVCO LR LR
comp=Z,6µm,20.0s,MS6.3
ECSD EROS,Sioux Fal 137.59 19 ePKPpre 06 20 45.3
ECSD ePKPdf PKPdf 06 20 54.0 -0.7
ECSD LR LR
comp=Z,13µm,19.0s,MS6.7
OGNE Ogallala 137.88 26 PFAKE 06 21 10.0 +15
OGNE LR LR
comp=Z,9µm,20.0s,MS6.5
PKME Peaks-Kenny Pk 138.20 350 PFAKE 06 21 10.0 +14
PKME LR LR
comp=Z,8µm,20.0s,MS6.5
SDCO Great Sand Dun 138.66 33 ePKPpre 06 20 49.2
SDCO ePKPdf PKPdf 06 20 57.4 +0.6
SDCO LR LR
comp=Z,9µm,21.0s,MS6.5
TUC Tucson 139.06 43 ePKPpre 06 20 49.0
TUC ePKPdf PKPdf 06 21 00.5 +2.8
TUC eSKP 06 24 32.6
TUC LR LR
comp=Z,6µm,20.0s,MS6.3
GLMI Grayling 139.19 6 PFAKE 06 21 10.0 +12
GLMI LR LR
comp=Z,11µm,20.0s,MS6.6
LONY Lake Ozonia 139.52 355 PFAKE 06 21 10.0 +12
LONY LR LR
comp=Z,13µm,21.0s,MS6.7
SADO Sadowa 139.55 0 PKhKP 06 20 51.5
SADO PKP PKPdf 06 20 59.0 +0.7
SADO PP PP 06 23 48.4 -3.4
LBNH Lisbon 139.61 352 PFAKE 06 21 10.0 +12
LBNH LR LR
comp=Z,14µm,20.0s,MS6.7
MDV Middlebury 140.00 354 ePKPdf PKPdf 06 20 59.7 +0.6
MDV ePP PP 06 23 52.7 -1.9
JFWS Jewell Farm 140.11 13 ePKHKP 06 20 44.6
JFWS e 06 20 58.8
JFWS MLR MLR
comp=Z,11µm,20.0s,MS6.6
ANMO Albuquerque 140.12 36 ePKIKP PKPdf 06 20 55.8 -3.8
ANMO MLR MLR
comp=Z,8µm,20.0s
NCB Newcomb 140.13 355 ePKPpre 06 20 50.2
NCB LR LR
comp=Z,14µm,22.0s,MS6.7
CBKS Cedar Bluff 140.64 26 ePKHKP 06 20 52.3
CBKS MLR MLR
comp=Z,13µm,21.0s,MS6.7
HRV Adam Dziewonsk 141.26 351 ePKIKP PKPdf 06 21 01.6 +0.2
HRV MLR MLR
comp=Z,7µm,22.0s,MS6.4
WES Weston 141.34 351 PFAKE 06 21 10.0 +8.5
WES LR LR
comp=Z,7µm,20.0s,MS6.4
QUA2 Belchertown 141.59 352 ePKPpre 06 20 56.6
KSU1 Kansas State U 141.68 22 ePKPdf PKPdf 06 20 58.0 -4.2
KSU1 LR LR
comp=Z,15µm,22.0s,MS6.7
AAM Ann Arbor 141.78 6 PFAKE 06 21 10.0 +7.7
AAM LR LR
comp=Z,12µm,20.0s,MS6.7
BINY Binghamton 142.03 356 ePKPdf PKPdf 06 20 59.3 -3.4
BINY ePP PP 06 24 05.8 -1.1
BINY LR LR
comp=Z,21µm,21.0s,MS6.9
AMTX Amarillo 142.84 32 ePKPdf PKPdf 06 21 01.2 -3.2
AMTX LR LR
comp=Z,12µm,21.0s,MS6.6
CFAA Coronel Fontan 143.02 195 PKP PKPdf 06 21 03.0 -1.9
comp=Z,0.8nm,0.8s,baz=198,slow=1.9,SNR=13
CFAA Coronel Fontan 143.02 195 PKP PKPdf 06 21 03.0 -1.9
PAL Palisades 143.04 354 ePKIKP PKPdf 06 21 00.7 -3.9
CPUP Villa Florida 143.19 213 PKP PKPdf 06 21 03.7 -1.6
comp=Z,3.0nm,0.8s,baz=134,slow=2.7,SNR=11
CPUP SKPbc SKPbc 06 24 40.9 -0.6
comp=Z,5.0nm,1.0s,baz=303,slow=6.6,SNR=1.5
CPUP Villa Florida 143.19 213 ePKPdf PKPdf 06 21 03.0 -2.3
CPUP LR LR
comp=Z,844nm,19.0s,MS5.5
BDFB Brasilia 143.65 237 PKP PKPdf 06 21 06.7 +0.4
comp=Z,5.3nm,0.8s,baz=140,slow=6.4,SNR=5.8
BDFB SKPbc SKPbc 06 24 43.6 +0.8
comp=Z,3.7nm,0.9s,baz=186,slow=2.1,SNR=1.2
BDFB Brasilia 143.65 237 ePKPdf PKPdf 06 21 03.5 -2.9
BDFB PKP PKPdf 06 21 06.7 +0.4
BDFB SKPbc SKPbc 06 24 43.6 +0.8
BDFB LR LR
comp=Z,7µm,20.0s,MS6.4
ACSO Alum Creek Sta 143.90 5 ePKPdf PKPdf 06 21 02.6 -3.5
ACSO LR LR
comp=Z,12µm,22.0s,MS6.6
SLM Saint Louis 144.16 15 ePKIKP PKPdf 06 21 04.5 -2.1
WMOK Wichita Mounta 144.42 29 ePKIKP PKPdf 06 21 04.9 -2.3
WMOK MLR MLR
comp=Z,11µm,21.0s,MS6.6
CCM Cathedral Cave 144.43 17 ePKIKP PKPdf 06 21 04.1 -3.0
CCM MLR MLR

comp=Z,9µm,21.0s,MS6.5
BLO Bloomington 144.46 10 ePKIKP PKPdf 06 21 05.4 -1.8
OLIL Olney 144.58 12 ePKPdf PKPdf 06 21 05.2 -2.1
MCWV Mont Chateau 144.65 1 ePKPdf PKPdf 06 21 06.1 -1.4
MCWV LR LR
comp=Z,14µm,20.0s,MS6.7
FVM French Village 144.72 16 ePKIKP PKPdf 06 21 05.5 -2.1
SDMD Soldier's Deli 144.86 357 ePKPdf PKPdf 06 21 06.4 -1.4
TLL Tololo Astrono 145.00 192 eP PKPab 06 21 08.6 +1.0
SIUC Southern Illin 145.29 14 ePKPdf PKPdf 06 21 07.8 -0.8
USIN University of 145.41 12 ePKPdf PKPdf 06 21 08.1 -0.8
WCI Wyandotte Cave 145.42 10 ePKIKP PKPdf 06 21 08.1 -0.7
WCI MLR MLR
comp=Z,12µm,21.0s,MS6.6
TXAR Lajitas Array 145.68 40 PKPbc PKPbc 06 21 10.8 +0.9
comp=Z,420nm,1.0s,baz=270,slow=1.3,SNR=567
LCO Las Campanas 146.10 193 ePKPdf PKPdf 06 21 11.3 +1.0
LCO LR LR
comp=Z,15µm,19.0s,MS6.8
PARMO Parma 146.14 16 ePKPdf PKPdf 06 21 11.2 +1.1
PVMO Portageville 146.39 16 ePKPdf PKPdf 06 21 10.5 -0.1
GLAT Glass 146.64 15 ePKPdf PKPdf 06 21 11.3 +0.4
UTMT University of 146.68 15 ePKPdf PKPdf 06 21 12.0 +1.0
URVA University of 146.72 358 ePKPdf PKPdf 06 21 11.9 +0.8
GNAR Gosnell 146.72 17 ePKPdf PKPdf 06 21 12.1 +0.9
MIAR Mount Ida 146.83 22 ePKP2 PKPbc 06 21 11.5 -1.6
MIAR MLR MLR
comp=Z,8µm,19.0s,MS6.5
HBAR Harrisburg 146.92 18 ePKPdf PKPdf 06 21 12.6 +1.2
HALT Halls 146.96 16 ePKPbc PKPbc 06 21 13.4 0.0
ELN Prospectdale 147.04 3 ePKPdf PKPdf 06 21 12.1 +0.5
BLA Blacksburg 147.07 2 PKP2 PKPab 06 21 13.4 -1.8
BLA MLR MLR
comp=Z,10µm,20.0s,MS6.6
UALR University of 147.08 21 ePKPdf PKPdf 06 21 12.4 +0.6
WVT Waverly 147.13 13 ePKIKP PKPdf 06 21 10.9 -0.9
WVT e 06 21 14.0
WVT MLR MLR
comp=Z,11µm,21.0s,MS6.6
JCT Junction City 147.22 35 ePKPdf PKPdf 06 21 12.3 +0.2
JCT ePKPbc PKPbc 06 21 15.6 +1.2
JCT LR LR
comp=Z,9µm,21.0s,MS6.5
TZTN Tazewell 147.49 7 ePKPdf PKPdf 06 21 12.5 +0.1
TZTN LR LR
comp=Z,11µm,20.0s,MS6.6
MET Memphis--Engin 147.54 17 ePKPbc PKPbc 06 21 15.5 +0.4
OXF Oxford 148.26 17 ePKIKP PKPdf 06 21 13.6 -0.1
OXF e 06 21 16.7
OXF MLR MLR
comp=Z,9µm,20.0s,MS6.6
TKL Tuckaleechee C 148.33 8 PKP PKPdf 06 21 13.9 +0.1
comp=Z,123nm,0.9s,baz=39,slow=1.1,SNR=61
TKL PKPbc PKPbc 06 21 17.3 +0.1
comp=Z,123nm,0.9s,baz=104,slow=1.6,SNR=90
TKL Tuckaleechee C 148.33 8 PKIKP PKPdf 06 21 13.9 +0.1
TKL 06 21 17.3
TKL pmax pmax
comp=Z,123nm,0.9s
TKL pmax pmax
comp=Z,123nm,0.9s
TKL Tuckaleechee C 148.33 8 ePKPdf PKPdf 06 21 13.8 0.0
TKL ePKPbc PKPbc 06 21 17.0 -0.2
SWET Sewanee 148.41 11 ePKPdf PKPdf 06 21 13.2 -0.7
SWET ePKPbc PKPbc 06 21 16.7 -0.7
CPCT Cooper Cave 148.43 9 ePKPdf PKPdf 06 21 14.1 +0.2
CPCT ePKPbc PKPbc 06 21 17.6 +0.1
NATX Nacogdoches 148.80 27 ePKPdf PKPdf 06 21 16.0 +1.4
NATX ePKPbc PKPbc 06 21 19.5 +0.9
NATX LR LR
comp=Z,13µm,19.0s,MS6.7
BBSR BB Station 148.93 336 PFAKE 06 21 30.0 +15
BBSR LR LR
comp=Z,7µm,21.0s,MS6.5
CNNC Cliffs of the 149.06 358 ePKPdf PKPdf 06 21 16.0 +1.0
CNNC ePKPbc PKPbc 06 21 19.7 +0.6
CNNC LR LR
comp=Z,10µm,20.0s,MS6.6
HKT Hockley 149.75 30 ePKHKP 06 21 16.5
HKT e 06 21 22.1
HKT MLR MLR
comp=Z,17µm,22.0s,MS6.8
JSC Jenkinsville 149.94 4 ePKHKP 06 21 17.0
JSC e 06 21 21.9
VBMS Vicksburg 150.03 20 ePKPdf PKPdf 06 21 15.1 -1.6
VBMS ePKPbc PKPbc 06 21 22.2 +0.6
VBMS LR LR
comp=Z,15µm,21.0s,MS6.8
LRAL Lakeview Retre 150.29 14 ePKPdf PKPdf 06 21 16.9 -0.1
LRAL ePKPbc PKPbc 06 21 22.5 +0.3
LRAL LR LR
comp=Z,13µm,22.0s,MS6.7
KVTX Kingsville 150.52 36 ePKPdf PKPbc 06 21 20.3 -2.6
KVTX ePKPbc PKPab 06 21 24.5 -4.9
KVTX LR LR
comp=Z,10µm,20.0s,MS6.6
GOGA Godfrey 150.58 8 ePKPdf PKPdf 06 21 16.7 -0.7
GOGA ePKPbc PKPbc 06 21 23.5 +0.7
GOGA LR LR
comp=Z,10µm,20.0s,MS6.6
COW Cow Castle Cre 150.88 3 ePKPdf PKPdf 06 21 18.9 +1.0
COW ePKPbc PKPbc 06 21 24.6 +1.0
NHSC New Hope 151.17 2 ePKPdf PKPdf 06 21 19.2 +0.8
NHSC ePKPbc PKPbc 06 21 25.0 +0.7
NHSC LR LR
comp=Z,16µm,21.0s,MS6.8
LVC Limon Verde 151.66 200 PKP PKPdf 06 21 20.0 +0.6
comp=Z,4.2nm,1.1s,baz=207,slow=7.4,SNR=2.5
LVC PKPbc PKPbc 06 21 27.4 +1.7
comp=Z,11nm,0.8s,baz=47,slow=0.9,SNR=7.1
LVC PKPab PKPab 06 21 36.4 +2.2
comp=Z,54nm,0.9s,baz=157,slow=1.3,SNR=14
LVC Limon Verde 151.66 200 PKP PKPdf 06 21 20.0 +0.6
LVC ePKPbc PKPbc 06 21 27.3 +1.6
LVC PKPab PKPab 06 21 36.4 +2.2
LVC ePKPab PKPab 06 21 36.6 +2.4
LVC LR LR
comp=Z,6µm,19.0s,MS6.4
BRAL Brewton 152.20 15 ePKPdf PKPdf 06 21 20.7 +0.7
BRAL ePKPbc PKPbc 06 21 28.0 +1.3
BRAL LR LR
comp=Z,13µm,20.0s,MS6.7
SIV San Ignacio 153.32 221 PKP PKPdf 06 21 22.1 +0.1
comp=Z,1.9nm,0.8s,baz=329,slow=4.8,SNR=6.4
DWPF Disney 156.06 6 PKPdf PKPdf 06 21 28.6 +3.1
DWPF LR LR
comp=Z,13µm,22.0s,MS6.7
LPAZ La Paz 157.06 207 PKP PKPdf 06 21 27.9 +0.8
comp=Z,1.4nm,0.9s,baz=48,slow=3.7,SNR=5.5
LPAZ PKPab PKPab 06 21 59.7 +2.4
comp=Z,5.9nm,0.9s,baz=221,slow=25,SNR=5.8
LPAZ PP PP 06 25 31.5 -3.1
comp=Z,1.2nm,0.9s,baz=207,slow=8.7,SNR=1.9
LPAZ La Paz 157.06 207 PKP PKPdf 06 21 27.9 +0.8
LPAZ PKPab PKPab 06 21 59.7 +2.4
LPAZ PP PP 06 25 31.5 -3.1
LPAZ LR LR
comp=Z,9µm,21.0s,MS6.6
BBGH Gun Hill 158.91 296 PFAKE 06 21 40.0 +11
BBGH LR LR
comp=Z,13µm,21.0s,MS6.8
CMIG Matias Romero 159.73 49 PKP PKPdf 06 21 30.4 +0.2
comp=Z,4.0nm,0.8s,baz=22,slow=1.4,SNR=6.7
CMIG PKPab PKPab 06 22 08.7 -0.3
comp=Z,11nm,0.9s,baz=314,slow=6.5,SNR=5.3
CMIG PP PP 06 25 45.6 -4.5
comp=Z,2.7nm,1.0s,baz=170,slow=21,SNR=1.9
MTP Monte Pirata 160.96 318 ePKPdf PKPdf 06 21 33.5 +1.9
HUMP Col San Antoni 161.12 318 ePKPdf PKPdf 06 21 29.5 -2.3
GRGR Grenville 161.19 296 PFAKE 06 21 40.0 +8.0
GRGR LR LR
comp=Z,5µm,20.0s
CPD Cerro la Pandu 161.24 318 ePKIKP PKPdf 06 21 29.0 -2.9
SJG San Juan 161.34 319 PFAKE 06 21 40.0 +8.0
SJG LR LR
comp=Z,7µm,20.0s
TRN Trinidad (W) 161.50 291 eP PKPdf 06 21 30.3 -2.0
TEIG Tepich 161.60 29 PKP PKPdf 06 21 33.0 +0.8
comp=Z,14nm,1.1s,baz=234,slow=3.9,SNR=3.8
TEIG PKPab PKPab 06 22 16.9 -0.1
comp=Z,29nm,1.1s,baz=303,slow=3.9,SNR=4.3
TEIG PP PP 06 25 59.1 -0.2
comp=Z,36nm,1.3s,baz=86,slow=16,SNR=3.6
TEIG Tepich 161.60 29 ePKPdf PKPdf 06 21 30.3 -2.0

TEIG				*e*PKPab	PKPab	06 22 16.9	-0.1
TEIG				LR	LR		
	comp=Z,11µm,20.0s						
NNA	**Nana**	**163.83**	**187**	PKP	PKPdf	06 21 35.5	+0.9
	comp=Z,5.2nm,0.8s,baz=180,slow=11,SNR=2.2						
NNA				PP	PP	06 26 11.3	+0.8
	comp=Z,3.3nm,0.7s,baz=268,slow=16,SNR=2.2						
NNA	**Nana**	**163.83**	**187**	PKP	PKPdf	06 21 35.5	+0.9
NNA				PP	PP	06 26 11.3	+0.8
NNA				LR	LR		
	comp=Z,11µm,19.0s						
PCRV	**Puerto La Cruz**	**164.64**	**294**	PKP	PKPdf	06 21 34.7	-0.6
	comp=Z,11nm,1.1s,baz=354,slow=16,SNR=1.8						
TGUH	**Tegucigalpa,Un**	**167.16**	**39**	*e*PKPdf	PKPdf	06 21 36.2	-1.1
TGUH				*e*PKPab	PKPab	06 22 42.9	+1.4
TGUH				LR	LR		
	comp=Z,12µm,21.0s						
PAYG	**Puerto Ayora**	**167.65**	**113**	PFAKE		06 21 50.0	+12
PAYG				LR	LR		
	comp=Z,8µm,19.0s						
ATAH	**Atahualpa**	**168.91**	**183**	PKP	PKPdf	06 21 40.0	+1.4
	comp=Z,5.4nm,0.9s,baz=37,slow=8.4,SNR=4.3						
ATAH				PP	PP	06 26 36.3	-0.3
	comp=Z,1.8nm,0.6s,baz=144,slow=18,SNR=1.6						
SDV	**Santo Domingo**	**170.54**	**300**	PKP	PKPdf	06 21 38.8	-0.7
	comp=Z,8.6nm,0.3s,baz=156,slow=3.5,SNR=3.6						
SDV				PP	PP	06 26 44.3	-2.6
	comp=Z,6.1nm,0.3s,baz=26,slow=23,SNR=2.1						
SDV	**Santo Domingo**	**170.54**	**300**	PKP	PKPdf	06 21 38.9	-0.7
SDV				PP	PP	06 26 44.3	-2.6
SDV				LR	LR		
	comp=Z,4µm,19.0s						
JTS	**JuntasAbangare**	**171.45**	**44**	PKP	PKPdf	06 21 39.1	-0.9
	comp=Z,1.8nm,0.6s,baz=312,slow=22,SNR=2.2						
JTS				PKPab	PKPab	06 22 58.6	-2.0
	comp=Z,5.2nm,0.9s,baz=298,slow=22,SNR=2.5						
JTS				PP	PP	06 26 47.0	-3.7
	comp=Z,1.7nm,0.4s,baz=317,slow=21,SNR=1.9						
JTS	**JuntasAbangare**	**171.45**	**44**	PKP	PKPdf	06 21 39.1	-0.9
JTS				PKPab	PKPab	06 22 58.6	-2.0
JTS				PP	PP	06 26 47.0	-3.7
JTS				LR	LR		
	comp=Z,5µm,19.0s						
BCIP	**Isla Barro Col**	**174.94**	**11**	PFAKE		06 21 50.0	+8.6
BCIP				LR	LR		
	comp=Z,10µm,20.0s						
ROSC	**El Rosal**	**175.39**	**279**	PKP	PKPdf	06 21 41.6	0.0
	comp=Z,4.4nm,0.8s,baz=88,slow=16,SNR=5.7						
ROSC				PP	PP	06 27 08.1	-3.2
	comp=Z,5.5nm,1.0s,baz=263,slow=22,SNR=1.9						
ROSC	**El Rosal**	**175.39**	**279**	*e*PKPdf	PKPdf	06 21 40.3	-1.3
OTAV	**Otavalo**	**176.08**	**187**	*e*PKPdf	PKPdf	06 21 41.5	-0.2
OTAV				LR	LR		
	comp=Z,8µm,22.0s						

*ISCJB **14** 06:03:11.8±6.1, 442S±007×10095E±008, h7^{km}±39^{km}, mb5.6/32, MS6.2/4, Error ellipse: s-maj=15.1km s-min=10.3km az=144.9*

*IDC **14** 06:03:13.6±0.9, 435S×10102E, h0^{km}, mb5.5/16, mb1 5.6/17, mb1mx5.3/24, mbtmp5.5/17, ML4.7/1, MS6.1/4, Ms1 6.1/4, ms1mx5.7/24, Error ellipse: s-maj=34.5km s-min=13.7km az=55.0*

*NEIC **14** 06:03:16.5±0.3, 442S×10095E, mb5.8/18, Error ellipse: s-maj=11.1km s-min=6.6km az=63.0*

*MOS **14** 06:03:16.3±0.9, 430S×10107E, h33^{km}, mb6.0/12, Error ellipse: s-maj=17.7km s-min=9.7km az=107.3*

ISC 14 06:03:13.7±5.8, 440S±007×10098E±008, h6^{km}±37km, h27^{km}±1.4km:pP-P,n63,σ0s76/53,mb5.6/32,MS6.2/4,1C, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
COCO	**West Island**	**8.76**	**208**	*e*Pn		**Pn**		**06 05 19.9**	**-1.1**
KAPI	**Kappang**	**18.72**	**93**	P		**Pn**		**06 07 34.2**	**+0.6**
	2.2nm,0.3s,baz=277,slow=17,SNR=2.2								
CM31	**Chiang Mai Arr**	**22.80**	**355**	*e*P		**P**		**06 08 18.5**	**+1.2**
	224nm,1.0s,mb5.5								
CMAR	**Chiang Mai Arr**	**22.80**	**355**	P		**P**		**06 08 18.0**	**+0.7**
	159nm,0.9s,mb5.4,baz=183,slow=8.6,SNR=7.1								
CHTO	**Chiang Mai**	**23.15**	**355**	*e*P		**P**		**06 08 20.6**	**-0.5**
CHTO				pmax	pmax				
	comp=Z,236nm,1.1s,mb5.5								
CHTO	**Chiang Mai**	**23.15**	**355**	*e*P		**P**		**06 08 20.6**	**-0.5**
	comp=Z,236nm,1.1s,mb5.5								
QIZ	**Qiongzhong**	**24.86**	**20**	*e*P		**P**		**06 08 36.6**	**-0.6**
	comp=Z,155nm,1.2s,mb5.4								
RCP	**Roxas**	**26.83**	**54**	*e*P		**P**		**06 08 55.1**	**-0.1**
DAV	**Davao City (W)**	**27.06**	**65**	*e*P		**P**		**06 08 56.1**	**-1.2**
	comp=Z,1µm,1.3s,mb6.2								
FITZ	**Fitzroy Crossi**	**27.70**	**121**	P		**P**		**06 09 03.4**	**+0.4**
	comp=Z,84nm,1.0s,mb5.3,baz=214,slow=9.0,SNR=2.2								
NWAO	**Narrogin (SRO)**	**32.19**	**154**	P		**P**		**06 09 42.9**	**+0.4**
	comp=Z,31nm,0.8s,mb5.2,baz=285,slow=10,SNR=2.0								
NWAO	**Narrogin (SRO)**	**32.19**	**154**	P		**P**		**06 09 42.9**	**+0.4**
WRA	**Warramunga Arr**	**35.97**	**118**	P		**P**		**06 10 15.8**	**+0.2**
	comp=Z,52nm,0.9s,mb5.5,baz=298,slow=11,SNR=4.5								
ASAR	**Alice Springs**	**37.08**	**124**	P		**P**		**06 10 26.2**	**+1.2**
	comp=Z,93nm,1.1s,mb5.5,baz=296,slow=7.6,SNR=4.9								
PMG	**Port Moresby**	**46.08**	**99**	P		**P**		**06 11 39.0**	**0.0**
PMG				pmax	pmax				
	comp=Z,73nm,0.8s								
PMG	**Port Moresby**	**46.08**	**99**	P		**P**		**06 11 39.0**	**0.0**
	comp=Z,73nm,0.8s,mb5.7								
CTA	**Charters Tower**	**46.72**	**113**	P		**P**		**06 11 44.9**	**+1.0**
	comp=Z,86nm,1.0s,mb5.6,baz=291,slow=8.6,SNR=1.6								
CTA	**Charters Tower**	**46.72**	**113**	P		**P**		**06 11 44.9**	**+1.0**
CTAO	**Charters Tower**	**46.72**	**113**	*e*P		**P**		**06 11 44.1**	**+0.1**
CTAO				pmax	pmax				
	comp=Z,142nm,1.2s,mb5.8								
CTAO	**Charters Tower**	**46.72**	**113**	*e*P		**P**		**06 11 44.1**	**+0.1**
	comp=Z,142nm,1.2s,mb5.8								
STKA	**Stephens Creek**	**46.84**	**131**	*e*P		**P**		**06 11 44.3**	**-0.4**
	comp=Z,94nm,0.9s,mb5.7								
KSRS	**Korea Array**	**48.61**	**29**	P		**P**		**06 11 58.1**	**-0.1**
	comp=Z,92nm,0.9s,mb5.8,baz=217,slow=8.2,SNR=7.5								
SONM	**Songino Array**			P		**P**		**06 12 26.7**	**+1.2**
	comp=Z,114nm,0.9s,mb5.8,baz=186,slow=6.5,SNR=4.6								
SONM				PcP		PcP		06 13 38.2	+1.2
	comp=Z,28nm,1.0s,baz=184,slow=4.8,SNR=3.4								
SONM				LR		LR		06 37 08.9	
	comp=Z,30µm,18.6s,MS6.3,baz=188,slow=39								
SONM	**Songino Array**	**52.23**	**5**	P		**P**		**06 12 26.7**	**+1.2**
SONM								06 13 38.2	
TKM2	**Tokmak 2**	**52.41**	**337**	*e*P		**P**		**06 12 28.3**	**+1.3**
TKM2				pmax	pmax				
	comp=Z,116nm,1.0s,mb5.8								
TKM2	**Tokmak 2**	**52.41**	**337**	*e*P		**P**		**06 12 28.3**	**+1.3**
	comp=Z,116nm,1.0s,mb5.8								
EKS2	**Erkin-Say**	**52.94**	**335**	P		**P**		**06 12 31.0**	**+0.1**
	comp=Z,98nm,0.9s,mb5.7								
MJAR	**Matsushiro Arr**	**53.54**	**37**	P		**P**		**06 12 34.5**	**-0.9**
	comp=Z,46nm,0.9s,mb5.4,baz=216,slow=7.4,SNR=4.6								
MK31	**Makanchi Array**	**53.59**	**344**	*e*P		**P**		**06 12 36.4**	**+0.8**
MK31				*e*PP		pP		06 12 44.9	+7.4
MKAR	**Makanchi Array**	**53.59**	**344**	P		**P**		**06 12 36.4**	**+0.8**
	comp=Z,90nm,0.8s,mb5.7,baz=156,slow=7.7,SNR=4.2								
MDJ	**Mudanjiang**	**55.12**	**25**	*e*P		**P**		**06 12 46.8**	**0.0**
	comp=Z,87nm,1.0s,mb5.7								
HIA	**Hailar**	**55.88**	**15**	*e*P		**P**		**06 12 50.9**	**-1.3**
HIA				pmax	pmax				
	comp=Z,100nm,1.3s								
HIA	**Hailar**	**55.88**	**15**	*e*P		**P**		**06 12 50.9**	**-1.3**
	comp=Z,100nm,1.3s,mb5.7								
TLY	**Talaya**	**55.91**	**2**	*e*P		**P**		**06 12 51.6**	**-0.7**
TLY				*e*PP		pP		06 12 58.8	+4.6
TLY				pmax	pmax				
	comp=Z,86nm,1.0s,mb5.7								
TLY	**Talaya**	**55.91**	**2**	*e*P		**P**		**06 12 51.6**	**-0.7**
	comp=Z,86nm,1.0s,mb5.7								
TLY				*e*pP		pP		06 12 58.8	+4.6
KURK	**Kurchatov**	**58.17**	**343**	P		**P**		**06 13 08.3**	**-0.1**
	comp=Z,74nm,0.9s,mb5.7,baz=156,slow=6.7,SNR=3.6								
KURK	**Kurchatov**	**58.17**	**343**	*e*P		**P**		**06 13 08.1**	**-0.3**
KURK				pmax	pmax				
	comp=Z,131nm,0.9s,mb6.0								
KURK	**Kurchatov**	**58.17**	**343**	*e*P		**P**		**06 13 08.1**	**-0.3**
	comp=Z,131nm,0.9s,mb5.8								
ZALV	**Zalesovo Beam**	**59.69**	**349**	P		**P**		**06 13 19.6**	**+0.8**
	comp=Z,112nm,0.9s,mb5.9,baz=166,slow=5.8,SNR=4.5								
BVAR	**Borovoye Array**	**62.76**	**340**	P		**P**		**06 13 39.4**	**-0.3**
	comp=Z,13nm,0.6s,mb5.2,baz=122,slow=7.8,SNR=3.2								
BVAR				LR		LR		06 42 27.9	
	comp=Z,17µm,20.1s,MS6.2,baz=147,slow=38								
BRVK	**Borovoye**	**62.82**	**340**	P		**P**		**06 13 38.8**	**-1.3**
BRVK				pmax	pmax				
	comp=Z,55nm,1.0s,mb5.6								
BRVK	**Borovoye**	**62.82**	**340**	P		**P**		**06 13 38.8**	**-1.3**
	comp=Z,55nm,1.0s,mb5.6								
YSS	**Yuzh-Sakhalins**	**63.01**	**31**	*e*P		**P**		**06 13 41.5**	**0.0**
YSS				*e*PP		pP		06 13 49.3	+5.9
YSS				pmax	pmax				
	comp=Z,151nm,0.9s,mb6.1								
YSS	**Yuzh-Sakhalins**	**63.01**	**31**	*e*P		**P**		**06 13 41.5**	**+0.1**
	comp=Z,151nm,0.9s,mb6.1								
YSS				*e*pP		pP		06 13 49.3	+5.9
ARU	**Arti**	**69.78**	**336**	*e*P		**P**		**06 14 24.1**	**-0.6**
ARU				pmax	pmax				
	comp=Z,73nm,1.0s,mb5.6								
ARU	**Arti**	**69.78**	**336**	*e*P		**P**		**06 14 24.1**	**-0.6**
	comp=Z,73nm,1.0s,mb5.6								
YAK	**Yakutsk**	**69.81**	**14**	P		**P**		**06 14 24.1**	**-0.6**
YAK				pmax	pmax				
	comp=Z,202nm,1.1s,mb6.0								
YAK	**Yakutsk**	**69.81**	**14**	P		**P**		**06 14 24.1**	**-0.6**
	comp=Z,202nm,1.1s,mb6.0								
PETK	**Petropavlovsk-**	**74.39**	**32**	P		**P**		**06 14 52.1**	**-0.2**
	comp=Z,28nm,0.9s,mb5.2,baz=202,slow=2.8,SNR=3.9								
PET	**Petropavlovsk**	**74.85**	**32**	*e*P		**P**		**06 14 54.1**	**-0.9**
PET				pmax	pmax				
	comp=Z,145nm,1.0s,mb5.9								
PET	**Petropavlovsk**	**74.85**	**32**	*e*P		**P**		**06 14 53.7**	**-1.3**
	comp=Z,100nm,0.8s,mb5.8								
ARCES	**ARCESS Array B**	**89.05**	**340**	P		**P**		**06 16 09.4**	**+0.1**
	comp=Z,22nm,0.9s,mb5.5,baz=93,slow=4.5,SNR=2.8								
GERES	**GERESS Array B**	**91.49**	**319**	P		**P**		**06 16 22.2**	**+1.0**
	comp=Z,5.6nm,0.9s,mb4.9,baz=87,slow=4.0,SNR=2.3								
GERES				LR		LR		07 02 31.0	
	comp=Z,9µm,21.7s,MS6.2,baz=210,slow=39								
RAR	**Rarotonga**	**97.01**	**112**	LR		LR		06 59 31.5	
	comp=Z,6µm,21.8s,MS6.0,baz=262,slow=35								
NVAR	**Mina Array Bea**	**130.79**	**41**	PKP		PKPdf		06 22 29.3	+2.9
	comp=Z,5.3nm,0.9s,baz=267,slow=3.5,SNR=3.3								
ULM	**Lac du Bonnet**	**132.15**	**15**	PKP		PKPdf		06 22 28.1	-0.5
	comp=Z,8.4nm,0.8s,baz=330,slow=1.3,SNR=3.1								
PDAR	**Pinedale Array**	**133.15**	**31**	PKP		PKPdf		06 22 30.5	-0.2
	comp=Z,3.6nm,0.9s,baz=88,slow=2.6,SNR=3.9								
SDMD	**Soldier's Deli**	**145.09**	**357**	*e*PKPdf		PKPdf		06 22 51.0	-1.6
USIN	**University of**	**145.67**	**12**	*e*PKPdf		PKPdf		06 22 53.1	-0.5
TXAR	**Lajitas Array**	**145.94**	**41**	PKPbc		PKPbc		06 22 56.7	+1.7
	comp=Z,92nm,1.0s,baz=269,slow=1.8,SNR=5.1								
TXAR	**Lajitas Array**	**145.94**	**41**	PKPbc		PKPbc		06 22 56.7	+1.7
TKL	**Tuckaleechee C**	**148.59**	**7**	PKPbc		PKPbc		06 23 02.4	+0.2
	comp=Z,62nm,0.9s,baz=54,slow=2.0,SNR=3.7								
OTAV	**Otavalo**	**175.83**	**188**	*e*PKPdf		PKPdf		06 23 24.5	-1.5

*TRN **14** 06:03:13.3, 1841N×6444W, h99^{km}, MD4.6, M3.5(FDF)*

TRN Felt IV British V.I.

*BJI **14** 06:03:13.0, 1840N×6440W, h94^{km}, mB5.9*

*ISCJB **14** 06:03:13.9±0.2, 1836N±003×6442W±002, h104^{km}±2^{km}, mb4.7/61, Error ellipse: s-maj=5.0km s-min=2.1km az=24.9*

*IDC **14** 06:03:14.7±1.1, 1824N×6449W, h103^{km}±9^{km}, mb4.2/21, mb1 4.4/23, mb1mx4.3/29, mbtmp4.3/23, MS3.2/1, Ms1 3.2/1, ms1mx2.8/35, Error ellipse: s-maj=12.5km s-min=8.1km az=60.0*

*NEIC **14** 06:03:15.0, 1838N×6445W, h94^{km}, mb4.8/49, MD4.1(RSPR), MD4.6(TRN), After RSPR.*

NEIC Felt [V] on Saint Thomas. Felt on Saint John and in the British Virgin Islands. Also felt at San Juan, Puerto Rico.

*RSPR **14** 06:03:15.8, 1838N×6445W, h94^{km}, mb4.1/20, MD4.1/20*

ISC 14 06:03:15.0±0.2, 1838N±003×6443W±002, h96^{km}±2km, n499,σ0s72/552, mb4.7/61, 175C-141D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.19**	**283**	*e*P		**Pn**		**06 03 28.4**	**-0.2**
ABV	**Anegada**	**0.36**	**14**	*e*P		**Pn**		**06 03 29.8**	**+0.3**
ABV	**Anegada**	**0.36**	**14**	*e*S		**Sn**		**06 03 40.6**	**+0.4**
CDVI	**St. Croix**	**0.70**	**208**	*e*P		**Pn**		**06 03 32.2**	**+0.2**
CDVI				*e*S		**Sn**		**06 03 45.0**	**+0.2**
MTP	**Monte Pirata**	**1.11**	**256**	*e*P		**Pn**		**06 03 36.6**	**+0.4**
MTP				*e*S		**Sn**		**06 03 52.0**	**-0.3**
STMA	**St. Maarten, A**	**1.29**	**105**	*i*P		**Pn**		**06 03 39.1**	**+0.6**
STMA				*e*S		**Sn**		**06 03 56.4**	**+0.2**
CBYP	**Canovanas**	**1.36**	**266**	*e*P		**Pn**		**06 03 39.5**	**+0.2**
CBYP				*e*Sn		**Sn**		**06 03 58.0**	**+0.2**
HUMP	**Col San Antoni**	**1.37**	**261**	*e*P		**Pn**		**06 03 39.4**	**-0.1**
HUMP				*e*S		**Sn**		**06 03 58.0**	**0.0**
CPD	**Cerro la Pandu**	**1.46**	**257**	*e*P		**Pn**		**06 03 40.8**	**+0.3**
CPD				*e*S		**Sn**		**06 03 58.7**	**-1.1**
SJG	**San Juan**	**1.66**	**261**	*e*P		**Pn**		**06 03 42.9**	**-0.1**
SJG	**San Juan**	**1.66**	**261**	*e*S		**Sn**		**06 04 04.6**	**+0.2**
SJG	**San Juan**	**1.66**	**261**	*e*P		**Pn**		**06 03 42.8**	**-0.3**
SJG	**San Juan**	**1.66**	**261**	P		**Pn**		**06 03 43.2**	**+0.2**
	220nm,0.3s,baz=84,slow=12,SNR=173								
SJG				S		**Sn**		**06 04 02.8**	**-1.6**
	1µm,0.3s,baz=84,slow=18,SNR=37								
SJG	**San Juan**	**1.66**	**261**	*e*P		**Pn**		**06 03 42.9**	**-0.1**
SJG				*e*S		**Sn**		**06 04 04.6**	**+0.2**
ICM	**Isla Caja Muer**	**2.05**	**257**	*e*P		**Pn**		**06 03 48.1**	**+0.1**
ICM				*e*S		**Sn**		**06 04 5 +0.2**	
CELP	**Cerrillos**	**2.07**	**262**	*e*P		**Pn**		**06 03 48.3**	**0.0**
OBIP	**Obispado Ponce**	**2.10**	**261**	*e*P		**Pn**		**06 03 48.9**	**+0.2**
OBIP				*e*S		**Sn**		**06 04 15.3**	**+0.8**
AOPR	**Arecibo Observ**	**2.21**	**270**	*e*P		**Pn**		**06 03 49.7**	**-0.5**
AOPR				*e*S		**Sn**		**06 04 16.4**	**-0.7**
LRS	**Lares**	**2.30**	**268**	*e*P		**Pn**		**06 03 50.6**	**-0.7**
GBPR	**Guanica, Bosqu**	**2.37**	**261**	*e*P		**Pn**		**06 03 51.9**	**-0.3**
GBPR				*e*S		**Sn**		**06 04 20.9**	**+0.2**
LSP	**Las Mesas**	**2.54**	**266**	*e*P		**Pn**		**06 03 54.5**	**+0.1**
AGPR	**Aguadilla, PR**	**2.55**	**272**	*e*P		**Pn**		**06 03 54.1**	**-0.6**
AGPR				*e*S		**Sn**		**06 04 23.4**	**-1.7**
CRPR	**Cabo Rojo, PR**	**2.58**	**262**	*i*P		**Pn**		**06 03 55.1**	**+0.1**
CRPR				*e*S		**Sn**		**06 04 24.5**	**-1.3**
MPR	**Mayaguez**	**2.58**	**267**	*e*P		**Pn**		**06 03 55.1**	**0.0**
MPR	**Mayaguez**	**2.58**	**267**	*i*P		**Pn**		**06 03 55.1**	**0.0**
MPR				*e*S		**Sn**		**06 04 24.7**	**-1.2**
MPR	**Mayaguez**	**2.58**	**267**	*i*P		**Pn**		**06 03 55.1**	**0.0**
MPR				*e*S		**Sn**		**06 04 24.7**	**-1.2**
ANWB	**Willy Bob**	**2.61**	**105**	*e*Pn		**Pn**		**06 03 53.5**	**-1.9**
ANWB				*e*Sn		**Sn**		**06 04 20.6**	**-5.9**
MBGB		**2.66**	**128**	*i*P		**Pn**		**06 03 56.3**	**+0.2**
MBGB				*i* S		**Sn**		**06 04 28.5**	**+0.9**
MBWH		**2.68**	**127**	*i*P		**Pn**		**06 03 56.5**	**+0.1**
MBWH				*i* S		**Sn**		**06 04 29.1**	**+0.9**
MLYT	**Lee's Yard**	**2.69**	**127**	*i* P		**Pn**		**06 03 56.7**	**+0.1**
MLYT				*i* S		**Sn**		**06 04 29.1**	**+0.6**
MBLG		**2.71**	**127**	*i*P		**Pn**		**06 03 57.2**	**+0.4**
MBLG				*i* S		**Sn**		**06 04 29.8**	**+0.8**
MLGT	**Long Ground**	**2.71**	**127**	*i*P		**Pn**		**06 03 57.2**	**+0.4**
MLGT				*i* S		**Sn**		**06 04 29.8**	**+0.8**
MBRY		**2.73**	**127**	*i*P		**Pn**		**06 03 57.5**	**+0.5**
MBRY				*i* S		**Sn**		**06 04 30.4**	**+1.0**
MRYT		**2.73**	**127**	*i*P		**Pn**		**06 03 57.5**	**+0.5**
MRYT				*i* S		**Sn**		**06 04 30.4**	**+1.0**
BPA	**Boggy Peak**	**2.78**	**118**	*e*P		**Pn**		**06 03 56.6**	**-1.1**
BPA				*e*S		**Sn**		**06 04 29.6**	**-1.0**
BPA	**Boggy Peak**	**2.78**	**118**	*e*P		**Pn**		**06 03 56.6**	**-1.1**
BPA				*e*S		**Sn**		**06 04 28.4**	**-2.2**
IMO	**Isla Mona**	**3.32**	**266**	*e*P		**Pn**		**06 04 04.9**	**0.0**
LZG	**Guadaloupe-1**	**3.37**	**131**	*e*P		**Pn**		**06 04 05.6**	**0.0**
SCG	**Saint Claude**	**3.51**	**131**	*e*P		**Pn**		**06 04 07.8**	**+0.2**
HMG	**Houelmont**	**3.53**	**132**	*e*P		**Pn**		**06 04 07.7**	**-0.1**
HMG				*i*e*S		**Sn**		**06 04 49.0**	**+0.4**
TBG	**Guadaloupe-3**	**3.66**	**133**	*e*P		**Pn**		**06 04 09.3**	**-0.2**
DEG	**La Desirade**	**3.81**	**122**	*e*P		**Pn**		**06 04 15.0**	**+3.4**
MGG	**Marie-Galante**	**3.85**	**129**	*i*P		**Pn**		**06 04 12.2**	**+0.1**
DWS	**Wesley**	**4.08**	**133**	*e*P		**Pn**		**06 04 16.1**	**+0.9**
DWS				*e*S		**Sn**		**06 05 00.5**	**-1.5**
DWS	**Wesley**	**4.08**	**133**	*e*P		**Pn**		**06 04 16.1**	**+0.9**
DWS				*e*S		**Sn**		**06 05 04.1**	**+2.1**
MDN	**Morne-Daniel**	**4.20**	**136**	*e*P		**Pn**		**06 04 16.6**	**-0.3**
MDN				*e*S		**Sn**		**06 05 03.9**	**-1.1**
DBCT	**Belle View Cho**	**4.27**	**136**	*e*P		**Pn**		**06 04 17.8**	**0.0**
DBCT				*e*S		**Sn**		**06 05 06.1**	**-0.4**
DBCT	**Belle View Cho**	**4.27**	**136**	*e*P		**Pn**		**06 04 17.8**	**0.0**
DBCT				*e*S		**Sn**		**06 05 03.1**	**-3.4**
DSHT	**Scott's Head**	**4.29**	**137**	*e*P		**Pn**		**06 04 18.0**	**-0.1**
DSHT				*e*S		**Sn**		**06 05 06.9**	**-0.1**
DSHT	**Scott's Head**	**4.29**	**137**	*e*P		**Pn**		**06 04 18.0**	**-0.1**
DSHT				*e*S		**Sn**		**06 05 03.7**	**-3.4**
DR12	**Loma Pena Alta**	**4.72**	**276**	*i*P		**Pn**		**06 04 23.7**	**-0.1**
FDF	**Fort de France**	**4.79**	**139**	*e*P		**Pn**		**06 04 24.5**	**-0.4**
FDF	**Fort de France**	**4.79**	**139**	*e*Pn		**Pn**		**06 04 24.0**	**-0.9**
BIM	**Bigot**	**5.01**	**140**	*e*P		**Pn**		**06 04 27.9**	**+0.1**
SVB	**Belmont**	**5.92**	**149**	*e*P		**Pn**		**06 04 41.2**	**+1.0**
SVB				*e*S		**Sn**		**06 05 49.5**	**+2.8**
GRSS	**Sisters**	**6.62**	**155**	*e*P		**Pn**		**06 04 49.7**	**-0.1**
GRSS	**Sisters**	**6.62**	**155**	*e*P		**Pn**		**06 04 47.8**	**-2.0**
GRIC	**Isle de Caille**	**6.64**	**155**	*e*P		**Pn**		**06 04 50.5**	**+0.4**
GRHS	**Sauteurs**	**6.68**	**156**	*e*		**Pn**		**06 04 58.1**	**+7.5**
GRW	**Mount Saint Ca**	**6.73**	**156**	*e*P		**Pn**		**06 04 50.6**	**-0.6**
BBGH	**Gun Hill**	**7.00**	**137**	*e*Pn		**Pn**		**06 04 57.3**	**+2.4**
TOSP	**Speyside**	**7.98**	**151**	*e*P		**Pn**		**06 05 09.1**	**+0.9**
TOSP				*e*S		**Sn**		**06 06 36.0**	**-0.9**
PCRV	**Puerto La Cruz**	**8.15**	**181**	P		**Pn**		**06 05 09.8**	**-0.9**
	11nm,0.3s,baz=319,slow=4.9,SNR=47								
PCRV				S		**Sn**		**06 06 35.0**	**-6.1**
	4.3nm,0.3s,baz=120,slow=9.4,SNR=3.0								
PCRV				LR		LR		06 07 58.4	
	comp=Z,155nm,18.5s,baz=151,slow=35								
MASC	**Masc**	**9.43**	**283**	*e*P		**Pn**		**06 05 24.2**	**-3.8**
MASC				*e*S		**Sn**		**06 07 02.1**	**-10**
	comp=N,1µm,0.4s								
MASC				*e*					
	comp=E,1µm,0.2s								
MOAC	**Moa**	**10.19**	**285**	*e*P		**Pn**		**06 05 33.1**	**-5.2**
MOAC				*e*S		**Sn**		**06 07 20.3**	**-10**
	comp=N,142nm,0.2s								
MOAC				*e*					
	comp=E,204nm,0.3s								
RCC	**Rio Carpintero**	**10.77**	**280**	*e*P		**Pn**		**06 05 40.0**	**-6.2**
RCC				*e*S		Sn		06 07 21.7	-23
	comp=N,167nm,1.0s								
RCC				*e*					
	comp=E,561nm,1.5s								
SDV	**Santo Domingo**	**11.19**	**213**	P		**Pn**		**06 05 49.9**	**-2.1**
	comp=E,3.0nm,0.3s,baz=54,slow=9.3,SNR=6.0								
SDV				S		**Sn**		**06 07 47.3**	**-7.9**
	comp=E,2.3nm,0.3s,baz=210,slow=23,SNR=2.2								
SDV	**Santo Domingo**	**11.19**	**213**	*e*Pn		**Pn**		**06 05 52.2**	**+0.2**
LMGC	**Las Mercedes**	**12.00**	**280**	*e*P		**Pn**		**06 05 57.3**	**-5.5**
LMGC				*e*S		**Sn**		**06 08 00.9**	**-14**
	comp=N,167nm,1.1s								
LMGC				*e*					
	comp=E,371nm,0.9s								
BBSR	**BB Station**	**13.94**	**359**	*e*Pn		**Pn**		**06 06 25.2**	**-3.1**
BBSR				*e*Sn		**Sn**		**06 08 49.0**	**-13**
MGV	**Manicaragua**	**15.06**	**287**	*e*

comp=E,4.3nm,1.0s,baz=226,slow=9.5,SNR=2.8
AGMN **Agassiz Refuge** 39.26 327 *eP* P 06 10 33.6 -0.5
ULM **Lac du Bonnet** 40.51 329 P P 06 10 43.5 -0.9
comp=E,23nm,0.6s,mb5.2,baz=132,slow=8.4,SNR=35
ULM **Lac du Bonnet** 40.51 329 *eP* P 06 10 42.9 -1.4
comp=E,19nm,0.6s,mb5.1
SDCO **Great Sand Dun** 40.67 307 *eP* P 06 10 46.1 +0.2
ANMO **Albuquerque** 40.70 302 *eP* P 06 10 46.4 +0.1
comp=E,9.3nm,0.9s,mb4.6
LVC **Limon Verde** 40.97 186 P P 06 10 45.9 -2.6
comp=E,11nm,0.5s,mb4.9,baz=2.9,slow=5.8,SNR=30
LVC **Limon Verde** 40.97 186 *eP* P 06 10 45.4 -3.1
comp=E,14nm,0.6s,mb5.0
ISCO **Idaho Springs** 41.38 310 *eP* P 06 10 52.0 +0.2
RSSD **Black Hills** 41.90 317 *eP* P 06 10 55.3 -0.6
319A **Douglas** 42.43 297 ⇓P P 06 11 00.8 +0.4
baz=42,SNR=8.9
219A **White Tail Can** 42.49 298 ⇑P P 06 11 01.4 +0.5
baz=42,SNR=19
119A **Ashpeak Ranch,** 42.63 299 ⇓P P 06 11 02.7 +0.7
baz=43,SNR=6.5
Z19A **T-Link Ranch,** 42.68 299 ⇓P P 06 11 02.8 +0.4
baz=43
Y19A **Nutrioso** 42.78 300 ⇑P P 06 11 03.9 +0.7
baz=43,SNR=16
X19A **St. Johns** 42.89 301 ⇓P P 06 11 04.5 +0.4
baz=43,SNR=12
V19A **Window Rock** 42.93 303 ⇓P P 06 11 04.8 +0.4
baz=43
318A **Bisbee** 43.04 297 ⇓P P 06 11 05.6 +0.3
baz=43,SNR=12
PV01 **Paradox Valley** 43.11 307 *eP* P 06 11 06.3 +0.5
RWWY **Rawlins** 43.15 312 *eP* P 06 11 06.3 +0.3
comp=E,8.1nm,0.9s,mb4.5
218A **Dragoon** 43.15 297 ⇑P P 06 11 07.0 +0.8
baz=43,SNR=25
T19A **Beclabito** 43.15 305 ⇓P P 06 11 06.0 -0.1
baz=43,SNR=14
118A **Homack Ranch,** 43.17 298 ⇓P P 06 11 06.9 +0.5
baz=43,SNR=24
W18A **Petrified Fore** 43.37 302 ⇓P P 06 11 07.9 0.0
baz=43,SNR=6.5
Y18A **Canyon Day Jun** 43.39 300 ⇓P P 06 11 08.5 +0.4
baz=43,SNR=12
X18A **Snowflake** 43.44 301 ⇓P P 06 11 08.8 +0.3
baz=43,SNR=18
S19A **Harvey Farm, M** 43.45 306 ⇑P P 06 11 08.3 -0.2
baz=43,SNR=5.7
V18A **Ganado** 43.64 303 ⇑P P 06 11 10.6 +0.5
baz=44,SNR=6.3
R19A **Curley Farm, L** 43.68 307 ⇓P P 06 11 10.3 -0.1
baz=44
Z17A **San Carlos Hig** 43.68 299 ⇓P P 06 11 11.2 +0.8
baz=44,SNR=5.2
U18A **Rough Rock, Ch** 43.73 304 ⇑P P 06 11 10.7 -0.1
baz=44
217A **Green Valley** 43.77 297 ⇓P P 06 11 11.4 +0.1
baz=44,SNR=14
117A **Oracle** 43.80 298 ⇑P P 06 11 12.1 +0.6
baz=44,SNR=23
TUC **Tucson** 43.81 298 *eP* P 06 11 12.1 +0.6
comp=E,13nm,1.3s,mb4.5
Q19A **Hogan Spring (** 43.84 307 ⇑P P 06 11 11.6 -0.1
baz=44
T18A **Mexican Hat** 43.88 305 ⇓P P 06 11 12.0 0.0
baz=44,SNR=15
Y17A **Roosevelt** 44.04 300 ⇓P P 06 11 14.1 +0.8
baz=44,SNR=24
S18A **Hurst Farm, Bl** 44.10 306 ⇓P P 06 11 14.0 +0.2
baz=44,SNR=6.6
X17A **Forest Lakes** 44.11 301 ⇑P P 06 11 14.4 +0.5
baz=44,SNR=7.3
R18A **Canyonlands Na** 44.18 307 ⇑P P 06 11 14.0 -0.4
baz=44,SNR=5.3
N19A **John Jarvie Ra** 44.31 310 ⇑P P 06 11 14.5 -0.9
baz=44
216A **Three Points,** 44.34 297 ⇑P P 06 11 15.9 +0.1
baz=44,SNR=6.0
LAO **LASA Array** 44.39 319 *eP* P 06 11 16.1 +0.2
U17A **Shonto** 44.39 304 ⇑P P 06 11 16.4 +0.3
baz=44
Z16A **Peralta Trail,** 44.48 299 ⇑P P 06 11 17.5 +0.6
baz=44,SNR=27
Q18A **Rafter H Ranch** 44.54 307 ⇑P P 06 11 17.2 0.0
baz=44
T17A **Navajo Res., N** 44.58 304 ⇓P P 06 11 17.9 +0.3
baz=44,SNR=5.4
Y16A **Circle Bar Ran** 44.59 300 ⇓P P 06 11 18.8 +1.0
baz=44,SNR=21
116A **Eloy** 44.61 298 ⇑P P 06 11 18.2 +0.2
baz=45,SNR=7.4
X16A **Lo Mia Camp, P** 44.64 301 ⇑P P 06 11 18.9 +0.8
baz=45,SNR=15
U16A **Tuba City** 44.67 303 ⇓P P 06 11 18.2 -0.2
baz=45
N18A **Larsen Ranch,** 44.69 310 ⇓P P 06 11 18.6 +0.2
baz=45
S17A **Black Ridge (B** 44.71 305 ⇓P P 06 11 18.9 +0.2
baz=45,SNR=6.4
O18A **Roosevelt** 44.74 309 ⇑P P 06 11 18.9 +0.1
baz=45
P18A **Preston Nutter** 44.75 308 ⇓P P 06 11 19.2 +0.3
baz=45,SNR=5.2
WUAZ **Wupatki** 44.76 302 *eP* P 06 11 20.1 +1.1
comp=E,19nm,1.0s,mb4.8
W16A **Flagstaff** 44.82 302 ⇑P P 06 11 20.5 +1.0
baz=45,SNR=6.1
SRU **San Rafael** 44.83 307 ⇓P P 06 11 19.5 -0.1
baz=45
SRU **San Rafael** 44.83 307 *eP* P 06 11 19.3 -0.3
CPUP **Villa Florida** 44.97 171 P P 06 11 17.7 -2.9
comp=E,5.8nm,0.6s,mb4.5,baz=335,slow=8.2,SNR=24
CPUP **Villa Florida** 44.97 171 *eP* P 06 11 17.3 -3.4
comp=E,31nm,0.6s,mb5.2
115A **Sonoran Desert** 45.07 298 ⇑P P 06 11 22.4 +0.9
baz=45,SNR=5.9
Z15A **Gila River Ind** 45.08 299 ⇑P P 06 11 22.5 +0.9
baz=45,SNR=8.5
PDAR **Pinedale Array** 45.14 313 P P 06 11 21.4 -0.5
comp=E,4.2nm,0.6s,mb4.3,baz=114,slow=8.5,SNR=41
PDAR PcP PcP 06 13 00.0 -0.9
comp=E,2.1nm,0.9s,baz=101,slow=7.7,SNR=3.9
PDAR ScP ScP 06 16 43.0 -1.8
comp=E,1.1nm,0.7s,baz=117,slow=6.4,SNR=8.6
BW06 **Boulder Array** 45.15 313 *eP* P 06 11 22.2 +0.2
O17A **Robinson Place** 45.26 309 ⇓P P 06 11 23.5 +0.5
baz=45,SNR=9.1
X15A **Humboldt** 45.30 301 ⇑P P 06 11 24.1 +0.8
baz=45,SNR=21
Y15A **Casa Rosa Ranc** 45.31 300 ⇓P P 06 11 24.0 +0.6
baz=45,SNR=27
S16A **Weppner Ranch,** 45.35 305 ⇑P P 06 11 24.0 +0.3
baz=45
R16A **Teasdale** 45.38 306 ⇑P P 06 11 24.5 +0.6
baz=45
TMUT **Trail Mountain** 45.39 307 *eP* P 06 11 24.7 +0.7
W15A **Williams** 45.42 302 ⇑P P 06 11 25.5 +1.1
baz=45,SNR=6.4
V15A **Kaibab Nationa** 45.45 302 ⇑P P 06 11 25.6 +1.0
baz=45,SNR=7.9
214A **Organ Pipe Nat** 45.48 297 ⇓P P 06 11 25.4 +0.6
baz=45,SNR=9.2
U15A **North Rim** 45.65 303 ⇓P P 06 11 27.0 +0.9
baz=46,SNR=7.3
DAU **Daniels Canyon** 45.70 309 *eP* P 06 11 27.2 +0.8
RLMT **Red Lodge** 45.73 316 *eP* P 06 11 26.9 +0.3
comp=E,26nm,1.3s,mb4.8
Z14A **Wintersburg** 45.74 299 ⇓P P 06 11 27.3 +0.5
baz=46
T15A **Red Dirt Ranch** 45.83 304 ⇓P P 06 11 27.9 +0.4
baz=46,SNR=9.2
O16A **Springville** 45.83 309 ⇑P P 06 11 27.5 0.0
baz=46
X14A **Yava** 45.83 300 ⇓P P 06 11 28.3 +0.8
baz=46,SNR=23
Y14A **Wickenburg** 45.86 300 ⇑P P 06 11 28.2 +0.5
baz=46,SNR=18
S15A **Panguitch** 45.93 305 ⇓P P 06 11 28.6 +0.3
baz=46,SNR=7.3
N16A **Rees Ranch, Co** 45.95 310 ⇓P P 06 11 28.6 +0.2
baz=46
MSU **Marysvale** 45.96 306 *eP* P 06 11 29.0 +0.6
W14A **Seligman** 46.09 301 ⇓P P 06 11 30.6 +1.0
baz=46,SNR=11
CTU **Camp Tracy** 46.13 309 *eP* P 06 11 29.9 +0.1
LOHW **Long Hollow** 46.13 313 *eP* P 06 11 29.4 -0.3
comp=E,5.9nm,0.8s,mb4.4
LOHW *e* 06 11 58.4

V14A **Boquillas Ranc** 46.17 302 ⇑P P 06 11 31.3 +1.1
baz=46,SNR=12
SNOW **Snow King Moun** 46.19 313 *eP* P 06 11 30.6 +0.4
comp=E,9.1nm,1.0s,mb4.5
M16A **Huntsville** 46.21 310 ⇑P P 06 11 30.1 -0.2
baz=46,SNR=8.1
FFC **Flin Flon** 46.22 331 *eP* P 06 11 29.1 -1.1
comp=E,14nm,1.1s,mb4.6
Q15A **Fillmore** 46.22 307 ⇓P P 06 11 30.6 +0.1
baz=46
REDW **Red Top Meadow** 46.23 313 *eP* P 06 11 30.9 +0.4
GCMT **Greycliff** 46.23 317 *eP* P 06 11 30.9 +0.4
HWUT **Hardware Ranch** 46.24 310 *eP* P 06 11 29.9 -0.6
L16A **Fish Haven** 46.25 311 ⇓P P 06 11 30.5 -0.2
baz=46,SNR=9.8
MOOW **Moose Ponds** 46.27 314 *eP* P 06 11 30.8 -0.1
U14A **Mt Trumbull** 46.35 303 ⇑P P 06 11 32.3 +0.7
baz=46,SNR=9.3
113A **Mohawk Valley,** 46.36 298 ⇑P P 06 11 31.8 +0.1
baz=46
IMW **Indian Meadow** 46.45 314 *eP* P 06 11 32.5 +0.3
Y13A **Salome** 46.52 299 ⇑P P 06 11 33.7 +0.7
baz=46,SNR=13
RRI2 **Red Ridge** 46.55 313 *eP* P 06 11 33.5 +0.5
comp=E,16nm,1.4s,mb4.5
X13A **Yucca** 46.62 300 ⇓P P 06 11 34.3 +0.6
baz=47,SNR=7.6
W13A **Hualapai Mount** 46.73 301 ⇑P P 06 11 35.9 +1.4
baz=47,SNR=12
J16A **Bone** 46.73 313 ⇓P P 06 11 34.9 +0.5
baz=47
N15A **Stansbury Isla** 46.75 309 ⇑P P 06 11 35.4 +0.8
baz=47
ARUT **Antelope Range** 46.79 305 *eP* P 06 11 35.2 +0.2
DUG **Dugway** 46.80 308 *eP* P 06 11 35.5 +0.5
I16A **Newdale** 46.83 313 ⇑P P 06 11 35.4 +0.2
baz=47,SNR=6.7
PDMCI **Parker Dam,Lak** 46.84 300 ⇑P P 06 11 35.6 +0.2
baz=47
M15A **Larsen Ranch,** 46.84 310 ⇑P P 06 11 35.0 -0.3
baz=47,SNR=8.6
P14A **Drum Mountains** 46.86 307 ⇓P P 06 11 35.6 +0.1
baz=47
Q14A **Sevier Lake (B** 46.90 307 ⇑P P 06 11 36.3 +0.5
baz=47,SNR=10
V13A **Grand Canyon W** 46.91 302 ⇑P P 06 11 36.7 +0.8
baz=47,SNR=21
H16A **Russell Place,** 46.92 315 ⇑P P 06 11 37.2 +1.4
baz=47,SNR=12
L15A **Malad City** 46.93 311 ⇑P P 06 11 35.9 -0.1
baz=47,SNR=14
U13A **Pakoon Wash** 46.98 303 ⇓P P 06 11 37.4 +0.9
baz=47,SNR=16
112A **Yuma** 47.03 298 ⇑P P 06 11 37.9 +0.9
baz=47
T13A **Saint George** 47.03 304 ⇓P P 06 11 37.6 +0.8
baz=47
QLMT **Earthquake Lak** 47.08 315 *eP* P 06 11 38.6 +1.5
S13A **Holt Ranch, En** 47.09 305 ⇑P P 06 11 37.8 +0.5
baz=47,SNR=11
Y12C **Blythe** 47.09 299 ⇑P P 06 11 37.7 +0.3
baz=47
EGMT **Eagleton** 47.12 319 *eP* P 06 11 37.8 +0.4
BGU **Big Grassy Mou** 47.13 309 *eP* P 06 11 37.5 -0.1
HVU **Hansel Valley** 47.16 310 *eP* P 06 11 37.9 +0.1
K15A **Arbon** 47.22 312 ⇑P P 06 11 38.5 +0.3
baz=47
N14A **Grayback Hills** 47.23 309 ⇑P P 06 11 38.5 +0.1
baz=47,SNR=16
R13A **O'Grain Ranch,** 47.27 305 ⇑P P 06 11 39.6 +0.8
baz=47,SNR=5.8
GLA **Glamis** 47.28 298 *eP* P 06 11 39.8 +1.0
comp=E,6.6nm,0.7s,mb4.5
J15A **Blackfoot** 47.34 313 ⇓P P 06 11 39.8 +0.6
baz=47
U12A **Valley of Fire** 47.44 303 ⇓P P 06 11 41.1 +1.0
baz=47
Q13A **Wheeler Ranch,** 47.46 306 ⇑P P 06 11 40.7 +0.6
baz=47,SNR=8.8
BOZ **Bozeman (W)** 47.48 316 *eP* P 06 11 40.4 +0.2
M14A **Sheep Mountain** 47.50 310 ⇓P P 06 11 40.2 -0.2
baz=48,SNR=5.2
I15A **Monteview** 47.55 313 ⇓P P 06 11 41.4 +0.6
baz=48,SNR=5.3
P13A **Bates Ranch, G** 47.55 307 ⇓P P 06 11 41.8 +1.0
baz=48
W12A **Cal Nev Ari** 47.55 301 ⇓P P 06 11 41.2 +0.2
baz=48
L14A **Malta** 47.55 311 ⇓P P 06 11 40.9 0.0
baz=48,SNR=13
V12A **Nelson** 47.59 302 ⇑P P 06 11 41.9 +0.6
baz=48,SNR=14
T12A **Moapa** 47.62 303 ⇑P P 06 11 42.4 +0.9
baz=48
K14A **Jones Ranch, D** 47.64 311 ⇑P P 06 11 41.9 +0.4
baz=48,SNR=12
IRM **Iron Mountain** 47.65 300 ⇑P P 06 11 42.5 +0.8
baz=48,SNR=22
LDFC **Landfair** 47.72 301 *eP* P 06 11 44.0 +1.8
R12A **Pony Springs,** 47.80 305 ⇑P P 06 11 43.7 +0.9
baz=48,SNR=12
H15A **Lima** 47.84 314 ⇑P P 06 11 44.2 +1.2
baz=48,SNR=11
BC3 **Big Chuckw Mtn** 47.85 299 ⇓P P 06 11 44.0 +0.7
baz=48,SNR=8.6
S12A **Delamar Landin** 47.86 304 ⇓P P 06 11 44.1 +0.8
baz=48,SNR=5.9
G15A **Dillon** 47.90 315 ⇑P P 06 11 44.2 +0.7
baz=48,SNR=9.4
N13A **Wendover, West** 47.99 309 ⇓P P 06 11 44.3 +0.1
baz=48
DLMT **Dillon** 48.03 315 *eP* P 06 11 45.2 +0.7
comp=E,9.6nm,0.9s,mb4.6
MCMT **McKenzie Canyo** 48.04 314 *eP* P 06 11 45.3 +0.8
M13A **Montello** 48.07 309 ⇑P P 06 11 45.1 +0.2
baz=48
V11A **Goodsprings** 48.07 302 ⇓P P 06 11 45.2 +0.2
baz=48
L13A **Double Diamond** 48.08 310 ⇓P P 06 11 45.1 +0.3
baz=48,SNR=6.7
LRM **Limekiln Ridge** 48.08 316 *eP* P 06 11 45.7 +0.8
SWSC **Sam W. Stewart** 48.08 298 ⇑P P 06 11 46.1 +1.0
baz=48
J14A **Carey** 48.08 312 ⇓P P 06 11 45.6 +0.7
baz=48,SNR=17
Q12A **Willow Creek R** 48.09 306 ⇓P P 06 11 45.4 +0.3
baz=48,SNR=6.2
T11A **Corn Creek, Al** 48.10 304 ⇓P P 06 11 45.3 +0.1
baz=48,SNR=8.5
F15A **Butte** 48.11 316 ⇓P P 06 11 45.4 +0.4
baz=48,SNR=6.3
GMRC **Granite Mounta** 48.14 300 ⇓P P 06 11 45.7 +0.2
baz=48,SNR=8.8
I14A **Mackay** 48.20 313 ⇑P P 06 11 46.2 +0.4
baz=48,SNR=8.6
P12A **McGill** 48.23 307 ⇑P P 06 11 46.4 +0.3
baz=48,SNR=7.5
O12A **Currie** 48.27 308 ⇓P P 06 11 46.6 +0.2
baz=48
K13A **Stover Farm, H** 48.31 311 ⇑P P 06 11 46.8 +0.1
baz=48,SNR=10
H14A **Leadore** 48.33 314 ⇑P P 06 11 47.3 +0.4
baz=48,SNR=8.4
BELC **Belle Mtn.** 48.34 299 ⇓P P 06 11 47.7 +0.7
baz=48,SNR=5.0
E15A **Deer Lodge** 48.40 316 ⇓P P 06 11 46.8 -0.5
baz=48
TUQ **Turquoise Moun** 48.42 301 ⇑P P 06 11 48.0 +0.3
baz=48,SNR=11
D15A **Lincoln** 48.52 317 ⇑P P 06 11 48.6 +0.4
baz=48,SNR=10
R11A **Troy Canyon, C** 48.56 305 ⇓P P 06 11 48.7 0.0
baz=48,SNR=6.9
J13A **Cove Ranch, Pi** 48.57 312 ⇓P P 06 11 48.6 0.0
baz=48,SNR=6.3
S11A **Rachel** 48.57 304 ⇓P P 06 11 49.7 +0.9
baz=48
MONP **Monument Peak** 48.60 298 ⇑P P 06 11 49.6 +0.6
baz=48
N12A **Clover Valley,** 48.60 309 ⇑P P 06 11 49.0 +0.1
baz=48,SNR=8.6
M12A **Wells** 48.63 309 ⇑P P 06 11 49.3 +0.1
baz=49,SNR=8.4
I13A **Wildhorse Cree** 48.66 313 ⇓P P 06 11 49.6 +0.3
baz=49,SNR=9.8
F14A **Wisdom** 48.69 315 ⇑P P 06 11 50.1 +0.6
baz=49
Q11A **Duckwater** 48.69 306 ⇑P P 06 11 49.7 0.0
baz=49,SNR=8.8
ELK **Elko** 48.73 308 *eP* P 06 11 50.1 +0.1
SHOC **Shoshone** 48.77 302 ⇓P P 06 11 50.4 +0.1
baz=49
HLID **Hailey** 48.78 312 ⇓P P 06 11 50.5 +0.3
baz=49,SNR=7.0
HLID **Hailey** 48.78 312 *eP* P 06 11 50.6 +0.3
comp=E,18nm,1.6s,mb4.7
U10A **Ash Meadows, A** 48.87 303 ⇓P P 06 11 51.5 +0.5
baz=49,SNR=5.7
TPNV **Topopah Spring** 48.87 303 *eP* P 06 11 52.3 +1.2
comp=E,11nm,0.8s,mb4.8
K12A **Draper Farm, C** 48.90 311 ⇓P P 06 11 51.3 +0.1
baz=49,SNR=8.0
O11A **Cowboy Ranch,** 48.92 308 ⇑P P 06 11 51.9 +0.4
baz=49,SNR=16
H13A **Challis** 48.93 314 ⇓P P 06 11 51.1 -0.3
baz=49,SNR=5.7
E14A **Clinton** 48.95 316 ⇑P P 06 11 51.5 0.0
baz=49
G13A **Cobalt** 49.06 314 ⇓P P 06 11 53.3 +0.9
baz=49
R10A **Warm Springs** 49.10 305 ⇑P P 06 11 53.7 +0.9
baz=49,SNR=9.9
GSC **Goldstone** 49.13 301 ⇑P P 06 11 53.5 +0.5
baz=49,SNR=5.9
GSC **Goldstone** 49.13 301 *eP* P 06 11 53.1 +0.1
comp=E,9.7nm,1.0s,mb4.7
D14A **Greenough** 49.17 317 ⇓P P 06 11 52.9 -0.3
baz=49
109C **Camp Elliot, M** 49.17 298 ⇓P P 06 11 53.6 +0.2
baz=49
J12A **Stokes Ranch,** 49.18 312 ⇓P P 06 11 53.6 +0.3
baz=49,SNR=5.5
Q10A **Clear Creek Ra** 49.26 306 ⇓P P 06 11 54.4 +0.4
baz=49
M11A **Holland Ranch,** 49.28 309 ⇑P P 06 11 54.4 +0.3
baz=49,SNR=7.5
S10A **Tonopah Range,** 49.28 304 ⇑P P 06 11 54.9 +0.8
baz=49,SNR=20
MURC **Murrieta** 49.30 299 ⇑P P 06 11 54.6 +0.1
baz=49,SNR=5.2
F13A **Darby** 49.32 315 ⇑P P 06 11 54.4 +0.1
baz=49
H12A **Diamond D Ranc** 49.34 313 ⇑P P 06 11 54.4 -0.1
baz=49
L11A **Cat Creek Ranc** 49.41 310 ⇑P P 06 11 54.9 -0.1
baz=49,SNR=7.3
E13A **Victor** 49.42 316 ⇓P P 06 11 55.0 0.0
baz=49,SNR=14
C14A **Swan Lake** 49.54 318 ⇑P P 06 11 56.1 +0.1
baz=50
R09A **Tonopah** 49.70 305 ⇑P P 06 11 57.1 -0.2
baz=50,SNR=7.2
BFSC **Mount Baldy St** 49.73 300 ⇑P P 06 11 57.2 -0.5
baz=50
K11A **Parker Ranch,** 49.74 311 ⇑P P 06 11 57.7 +0.1
baz=50
MFID **Camas Ranch** 49.74 312 ⇓P P 06 11 57.7 +0.1
baz=50,SNR=5.5
S09A **Goldfield** 49.74 304 ⇑P P 06 11 57.6 -0.1
baz=50,SNR=10
MPMC **Manual Prospec** 49.76 302 ⇑P P 06 11 58.2 +0.3
baz=50,SNR=6.2
GRAC **Grapevine Rang** 49.77 303 ⇓P P 06 11 58.6 +0.7
baz=50
TPH **Tonopah** 49.79 305 *eP* P 06 11 58.2 +0.2
D13A **Huson** 49.79 317 ⇑P P 06 11 57.7 -0.2
baz=50,SNR=6.4
LRMC **Laurel Mountai** 49.86 301 ⇓P P 06 11 58.7 0.0
baz=50
L10A **Juniper Basin** 49.91 310 ⇑P P 06 11 59.2 +0.3
baz=50,SNR=11
F12A **Elk City** 49.93 315 ⇓P P 06 11 58.9 -0.1
baz=50,SNR=6.0
I11A **Placerville** 49.95 312 ⇓P P 06 11 59.0 -0.1
baz=50,SNR=6.9
C13A **Hot Springs** 50.05 317 ⇓P P 06 11 59.5 -0.3
baz=50
EDW2 **Edwards Air Fo** 50.05 300 ⇓P P 06 11 59.8 -0.3
baz=50,SNR=6.8
WALA **Waterton Lakes** 50.07 319 *eP* P 06 11 59.5 -0.6
comp=E,3.8nm,0.7s,mb4.4
H11A **Donnelly** 50.18 313 ⇑P P 06 12 00.9 0.0
baz=50
B13A **Whitefish** 50.20 318 ⇑P P 06 12 00.6 -0.4
baz=50,SNR=6.7
E12A **Beaver Dam Sad** 50.33 316 ⇑P P 06 12 01.9 -0.1
baz=50
K10A **MacKenzie Ranc** 50.34 311 ⇓P P 06 12 02.1 0.0
baz=50,SNR=8.1
A13A **Flathead Natio** 50.34 319 ⇓P P 06 12 01.8 -0.3
baz=50
D12A **Red Ives Fores** 50.36 316 ⇓P P 06 12 01.8 -0.4
baz=50
SCI **San Clemente I** 50.39 298 ⇓P P 06 12 02.4 -0.2
baz=50
J10A **Berg Farm, Mel** 50.41 312 ⇑P P 06 12 02.9 +0.2
baz=50
Q08A **Gabbs** 50.45 306 ⇓P P 06 12 03.0 0.0
baz=50,SNR=6.8
N09A **Rock Creek Ran** 50.45 308 ⇓P P 06 12 03.2 +0.2
baz=50,SNR=5.1
S08C **White Mtn Res** 50.46 304 ⇓P P 06 12 03.9 +0.7
baz=50,SNR=19
M09A **Marrel Ranch,** 50.50 309 ⇓P P 06 12 03.5 +0.2
baz=50
ISA **Isabella** 50.52 301 ⇑P P 06 12 03.9 +0.3
baz=50
ISA **Isabella** 50.52 301 *eP* P 06 12 03.8 +0.2
comp=E,4.7nm,0.9s,mb4.5
R08A **Mina** 50.52 305 ⇑P P 06 12 03.9 +0.4
baz=50,SNR=5.4
G11A **Walters Elk Ra** 50.53 314 ⇑P P 06 12 03.0 -0.5
baz=50
F11A **Grangeville** 50.58 315 ⇑P P 06 12 03.4 -0.5
baz=50,SNR=13
C12B **Naegeli Ranch,** 50.63 317 ⇓P P 06 12 03.3 -0.9
baz=51
H10A **Noah's Angus R** 50.66 313 ⇓P P 06 12 03.5 -1.0
baz=51,SNR=6.7
NVAR **Mina Array Bea** 50.68 305 P P 06 12 04.8 +0.1
comp=E,3.6nm,0.7s,mb4.5,baz=91,slow=7.5,SNR=25
NVAR PcP PcP 06 13 20.8 -0.1
comp=E,0.6nm,0.6s,baz=120,slow=5.4,SNR=2.2
NVAR ScP ScP 06 17 06.9 -1.5
comp=E,0.4nm,0.6s,baz=123,slow=3.7,SNR=3.6
E11A **Bogner Ranch,** 50.74 315 ⇑P P 06 12 04.7 -0.3
baz=51,SNR=19
ARVC **Arvin** 50.76 301 ⇑P P 06 12 05.6 +0.2
baz=51
O08A **Rochester Mine** 50.84 307 ⇑P P 06 12 05.4 -0.5
baz=51
N08A **GE Springer Mi** 50.90 308 ⇓P P 06 12 06.4 0.0
baz=51
K09A **Rome** 50.94 310 ⇑P P 06 12 06.6 0.0
baz=51,SNR=10
D11A **Klaveano Farm,** 51.01 316 ⇓P P 06 12 06.6 -0.4
baz=51,SNR=21
VES **Vestal, Richgr** 51.02 302 ⇓P P 06 12 07.6 +0.2
baz=51,SNR=5.8
HELL **Mitchell Peak** 51.05 303 ⇓P P 06 12 07.8 +0.2
baz=51,SNR=12
G10A **Bishop Farm, J** 51.08 314 ⇑P P 06 12 06.9 -0.7
baz=51
BMO **Blue Mountains** 51.11 313 *eP* P 06 12 06.5 -1.4
comp=E,5.0nm,1.2s,mb4.4
A12A **Yaak River Ran** 51.12 319 ⇑P P 06 12 08.1 +0.2
baz=51,SNR=7.0
C11A **Tepee Creek (N** 51.18 317 ⇓P P 06 12 08.4 +0.1
baz=51
RCTC **Rector, Farmer** 51.19 302 ⇑P P 06 12 08.6 0.0
baz=51,SNR=5.6
M08A **Happy Creek Ra** 51.19 309 ⇑P P 06 12 08.5 -0.1
baz=51,SNR=6.0
EDM **Edmonton** 51.28 324 *eP* P 06 12 08.0 -0.9
L08A **Fields** 51.30 310 ⇑P P 06 12 08.9 -0.4
baz=51,SNR=12
H09A **Durkee** 51.31 313 ⇓P P 06 12 08.9 -0.5
baz=51
O07A **Toulon** 51.36 307 ⇓P P 06 12 09.4 -0.5
baz=51,SNR=6.1
E10A **Myers Farm, Un** 51.37 315 ⇓P P 06 12 09.5 -0.3
baz=51
B11A **Sandpoint** 51.42 318 ⇑P P 06 12 09.8 -0.3
baz=51,SNR=11
N07B **Gerlach** 51.53 308 ⇓P P 06 12 11.1 0.0
baz=52

G09A	Cove	51.53	314	⇑P		P	06 12 10.4	-0.6	
	baz=52,SNR=6.0								
A11A	Hall Mountain,	51.57	319	⇑P		P	06 12 11.6	+0.3	
	baz=52								
WAKR	Walker	51.57	305	*eP*		P	06 12 12.5	+1.0	
R06C	Coleville	51.59	305	⇑P		P	06 12 12.1	+0.6	
	baz=52,SNR=7.8								
J08A	Circle Bar Ran	51.61	311	⇑P		P	06 12 10.7	-0.9	
	baz=52,SNR=6.8								
D10A	Wagner Farm, O	51.63	316	⇑P		P	06 12 11.0	-0.7	
	baz=52,SNR=7.0								
T06C	Millerton Lake	51.63	303	⇓P		P	06 12 10.7	-1.2	
	baz=52								
SMMC	Simmler	51.73	301	⇑P		P	06 12 13.0	+0.4	
	baz=52,SNR=5.4								
M07A	Soldier Meadow	51.77	309	⇓P		P	06 12 12.6	-0.2	
	baz=52								
S06C	San Francisco	51.83	304	⇑P		P	06 12 13.2	-0.2	
	baz=52,SNR=6.4								
NEW	Newport	51.85	317	*eP*		P	06 12 12.8	-0.6	
	comp=E,21nm,0.8s,mb5.2								
H08A	Prairie City	51.98	313	⇑P		P	06 12 13.9	-0.5	
	baz=52,SNR=9.5								
L07A	Adell	52.00	309	⇓P		P	06 12 14.2	-0.3	
	baz=52,SNR=6.1								
LNOR	Lincton Mounta	52.01	314	*eP*		P	06 12 14.1	-0.5	
E09A	Wood Farm, Sta	52.07	315	⇓P		P	06 12 15.0	0.0	
	baz=52								
R05C	Kirkwood Meado	52.09	305	⇓P		P	06 12 15.8	+0.5	
	baz=52								
N06A	Buffalo Meadow	52.17	308	⇑P		P	06 12 15.2	-0.6	
	baz=52,SNR=7.0								
CMB	Columbia Colle	52.27	304	⇑P		P	06 12 15.9	-0.7	
	baz=52								
CMB	Columbia Colle	52.27	304	*eP*		P	06 12 16.2	-0.3	
F08A	Pendleton	52.33	314	⇓P		P	06 12 16.1	-0.9	
	baz=52,SNR=5.3								
A10A	Northport	52.33	318	⇓P		P	06 12 16.2	-0.7	
	baz=52								
G08A	Pilot Rock	52.35	313	⇓P		P	06 12 16.5	-0.5	
	baz=52								
U04C	Hernandez Rese	52.44	302	⇓P		P	06 12 16.9	-1.0	
	baz=52								
BEKR	Beckwourth	52.45	306	⇑P		P	06 12 17.2	-0.8	
	baz=52								
C09A	Chrisman Ranch	52.48	317	⇑P		P	06 12 17.1	-0.8	
	baz=52								
I07A	Izee	52.48	312	⇓P		P	06 12 17.5	-0.5	
	baz=52,SNR=8.8								
B09A	Rice	52.56	317	⇑P		P	06 12 17.2	-1.3	
	baz=52,SNR=8.5								
P05C	Yuba Gap, Truc	52.57	306	⇑P		P	06 12 18.4	-0.4	
	baz=52								
LAVA	Lava Cap Winer	52.62	305	⇑P		P	06 12 18.8	-0.4	
	baz=52,SNR=6.3								
H07A	Lands Inn, Kim	52.62	312	⇑P		P	06 12 18.6	-0.5	
	baz=53								
OD2	Odessa Site #2	52.66	316	*eP*		P	06 12 18.4	-1.0	
MOD	Modoc	52.69	309	⇑P		P	06 12 18.8	-0.8	
	baz=53								
J06A	Christmas Vall	52.80	311	⇑P		P	06 12 19.5	-0.9	
	baz=53								
G07A	Ruggs Ranch, H	52.83	313	⇓P		P	06 12 20.1	-0.5	
	baz=53								
PACP	Pacheco Peak	52.89	303	⇑P		P	06 12 21.6	+0.4	
	baz=53								
I06A	Prineville	52.96	312	⇑P		P	06 12 21.7	+0.1	
	baz=53,SNR=6.1								
C08A	Higginbotham F	52.98	316	⇑P		P	06 12 21.2	-0.5	
	baz=53,SNR=11								
A09A	Danville	52.98	318	⇑P		P	06 12 21.1	-0.6	
	baz=53,SNR=11								
L05A	Lakeview	53.10	309	⇓P		P	06 12 22.6	-0.1	
	baz=53								
H06A	Lindquist Farm	53.19	313	⇑P		P	06 12 23.1	-0.2	
	baz=53								
E07A	Sunnyside	53.23	315	⇓P		P	06 12 23.7	+0.1	
	baz=53								
M05C	Lookout	53.24	308	⇑P		P	06 12 22.8	-0.9	
	baz=53								
K05A	Summer Lake	53.25	310	⇓P		P	06 12 23.5	-0.2	
	baz=53								
ORV	Oroville	53.29	306	⇓P		P	06 12 23.9	-0.2	
	baz=53,SNR=14								
WENL	Wente Vineyard	53.31	304	⇑P		P	06 12 23.6	-0.7	
	baz=53								
A08A	Turner Farm, O	53.41	318	⇓P		P	06 12 23.6	-1.2	
	baz=53,SNR=6.8								
D07A	Quincy	53.45	316	⇑P		P	06 12 24.8	-0.4	
	baz=53								
G06A	Carlson Farm,	53.49	313	⇓P		P	06 12 26.1	+0.6	
	baz=53								
J05A	Fort Rock	53.58	311	⇑P		P	06 12 25.8	-0.3	
	baz=54,SNR=5.1								
Q03C	Winters	53.60	305	⇓P		P	06 12 26.7	+0.3	
	baz=54								
C07A	Waterville	53.62	316	⇓P		P	06 12 26.5	+0.1	
	baz=54								
JRSC	Jasper Ridge	53.68	303	⇓P		P	06 12 27.0	0.0	
	baz=54								
B07A	Winthrop	53.84	317	⇓P		P	06 12 27.1	-0.9	
	baz=54,SNR=6.7								
K04A	Chilquin	53.84	310	⇑P		P	06 12 27.7	-0.4	
	baz=54								
L04A	Klamath Falls	53.90	309	⇓P		P	06 12 28.1	-0.4	
	baz=54,SNR=6.7								
CVS	Carmenet Viney	53.92	304	⇑P		P	06 12 28.7	-0.1	
	baz=54,SNR=5.7								
MNRC	McLaughlin Nat	53.95	305	⇓P		P	06 12 28.8	-0.2	
	baz=54								
E06A	Yakima	53.99	315	⇓P		P	06 12 29.3	+0.2	
	baz=54								
D06A	Cle Elum	54.03	315	⇑P		P	06 12 28.9	-0.5	
	baz=54								
NSHM	Saint Helena R	54.05	305	*eP*		P	06 12 29.8	+0.1	
A07A	Ashnola River,	54.15	318	⇑P		P	06 12 29.8	-0.4	
	baz=54,SNR=11								
F05A	White Salmon	54.19	314	⇓P		P	06 12 30.3	-0.2	
	baz=54								
WDC	Whiskeytown Da	54.19	307	⇓P		P	06 12 28.5	-2.2	
	baz=54								
WDC	Whiskeytown Da	54.19	307	*eP*		P	06 12 28.6	-2.0	
	comp=E,13nm,1.5s,mb4.7								
MCCM	Marconi Confer	54.24	304	⇑P		P	06 12 31.2	+0.2	
	baz=54								
O02C	Red Bluff	54.34	307	⇑P		P	06 12 29.8	-1.9	
	baz=54								
YBH	Yreka Blue Hor	54.45	308	P		P	06 12 30.9	-1.6	
	comp=E,4.0nm,0.7s,mb4.6,baz=68,slow=1.8,SNR=21								
YBH	Yreka Blue Hor	54.45	308	⇓P		P	06 12 31.0	-1.5	
	baz=54,SNR=9.6								
HOPS	Hopland	54.45	305	⇑P		P	06 12 33.1	+0.5	
	baz=54								
HOPS	Hopland	54.45	305	*eP*		P	06 12 33.5	+0.9	
H04A	Detroit Lake	54.48	312	⇑P		P	06 12 32.4	-0.3	
	baz=54								
I04A	Tendick Farm,	54.50	311	⇑P		P	06 12 31.0	-1.8	
	baz=54								
M02C	Callahan	54.52	308	⇑P		P	06 12 31.6	-1.4	
	baz=54								
HUMO	Hull Mountain	54.74	310	⇑P		P	06 12 33.3	-1.3	
	baz=55								
HUMO	Hull Mountain	54.74	310	*eP*		P	06 12 33.6	-1.0	
D05A	Enumclaw	54.79	315	⇑P		P	06 12 34.7	-0.2	
	baz=55								
N02C	Big Bar	54.80	307	⇑P		P	06 12 33.5	-1.5	
	baz=55								
B05A	Bryant	55.08	316	⇓P		P	06 12 34.9	-2.0	
	baz=55								
O01C	Eel River Cons	55.12	306	⇓P		P	06 12 37.2	-0.2	
	baz=55								
K02A	Glendale	55.15	310	⇓P		P	06 12 36.0	-1.5	
	baz=55								
I03A	Eugene	55.15	311	⇓P		P	06 12 36.4	-1.1	
	baz=55								
L02A	Cave Junction	55.16	309	⇑P		P	06 12 36.4	-1.3	
	baz=55								
J02A	Umpqua	55.28	310	⇑P		P	06 12 37.3	-1.2	
	baz=55								
YKA	Yellowknife Ar	55.95	335	P		P	06 12 41.7	-1.2	
	comp=E,11nm,0.7s,mb5.0,baz=111,slow=7.4,SNR=24								
YKA	Yellowknife Ar	55.95	335	P		P	06 12 41.7	-1.2	
YKW3	Yellowknife Ar	55.99	335	*eP*		P	06 12 41.8	-1.4	
TRQA	Tornquist	56.18	178	*eP*		P	06 12 43.6	-1.2	
	comp=E,24nm,1.4s,mb5.0								
SUMG	Summit	56.22	9	*eP*		P	06 12 44.6	-0.2	
	comp=E,5.1nm,1.0s,mb4.5								
DBIC	Dimbokro	59.07	93	P		P	06 13 05.4	-0.3	
	comp=E,6.3nm,0.6s,mb4.8,baz=288,slow=6.0,SNR=10								
DBIC	Dimbokro	59.07	93	*eP*		P	06 13 04.2	-1.5	
	comp=E,7.8nm,0.8s,mb4.8								
PLCA	Paso Flores	59.08	185	P		P	06 13 04.3	-0.7	
	comp=E,2.9nm,1.0s,mb4.3,baz=350,slow=2.4,SNR=6.3								
PLCA	Paso Flores	59.08	185	*eP*		P	06 13 04.1	-0.9	
	comp=E,4.3nm,0.9s,mb4.5								
DLBC	Dease Lake	61.78	327	*eP*		P	06 13 23.9	+0.5	
TORD	Torodi Ar. Bea	63.56	84	P		P	06 13 35.5	-0.4	
	comp=E,1.1nm,0.6s,mb3.9,baz=267,slow=6.6,SNR=11								
TORD					pP	pP	06 13 58.6	-1.3	
	comp=E,1.2nm,0.9s,baz=293,slow=7.3,SNR=2.8								
LOMF	Lomont	64.07	46	*eP*		P	06 13 38.6	-0.1	
RUP	Ruppelstein	64.27	43	*eP*		P	06 13 35.5	-4.5	
ECH	Echery	64.31	45	*eP*		P	06 13 40.1	-0.1	
FELD	Feldberg im Sc	64.87	45	*eP*		P	06 13 38.6	-5.3	
DAWY	Dawson	67.06	333	*eP*		P	06 13 57.7	0.0	
NB2	NORSAR Subarra	67.15	31	P		P	06 13 58.6	+0.3	
	comp=Z,4.7nm,0.8s,mb4.4,baz=267,slow=6.5								
NOA	NORSAR Array B	67.15	31	P		P	06 13 58.7	+0.4	
	comp=Z,3.0nm,0.8s,mb4.2,baz=267,slow=6.3,SNR=6.0								
GERES	GERESS Array B	68.64	44	P		P	06 14 07.3	-0.5	
	comp=Z,0.6nm,0.4s,mb3.7,baz=266,slow=3.9,SNR=5.4								
MORC	Moravsky Berou	71.06	43	*eP*		P	06 14 22.6	-0.1	
	comp=Z,109nm,1.3s,mb5.5								
COLD	Coldfoot	71.59	336	*eP*		P	06 14 24.6	-1.0	
TRF	Thorofare Moun	71.90	332	*eP*		P	06 14 26.7	-0.8	
	comp=Z,14nm,0.8s,mb4.8								
TIP	Timpagrande	71.92	54	*eP*		P	06 14 21.8	-6.3	
	comp=Z,91nm,1.3s,mb5.5								
BPAW	Bear Paw Mtn.	72.15	333	*eP*		P	06 14 27.8	-1.2	
	comp=Z,14nm,0.8s,mb4.8								
KTH	Kantishna Hill	72.17	332	*eP*		P	06 14 28.1	-0.9	
	comp=Z,21nm,1.0s,mb4.9								
CHUM	Lake Minchumin	72.76	332	*eP*		P	06 14 31.4	-1.1	
KDAK	Kodiak Island	73.69	326	P		P	06 14 37.4	-0.8	
	comp=Z,5.1nm,0.7s,mb4.3,baz=51,slow=4.2,SNR=3.2								
SVW2	Sparrevohn	74.66	330	*eP*		P	06 14 41.2	-2.5	
HHC	Hu-ho-hao-te	120.97	4	*e*PKP		PKPdf	06 21 50.3	-6.2	
HHC				PP		PP	06 23 23.8	-1.5	
HHC				PP		PP			
	comp=Z,6μm,8.6s								
MJAR	Matsushiro Arr	121.34	339	PKP		PKPdf	06 21 55.3	-2.1	
	comp=Z,0.9nm,0.4s,baz=47,slow=0.7,SNR=3.5								
LZH	Lanzhou	124.71	12	*e*PKP		PKPdf	06 22 03.1	-0.8	
LZH				XPKP			06 22 40.6		
LZH				LR	LR				
	comp=E,119nm,18.3s								
LZH				LR	LR				
	comp=Z,196nm,20.5s								
CD2	Chengdu	129.70	13	*e*PKP		PKPdf	06 22 11.3	-2.2	
WRA	Warramunga Arr	162.20	262	PKP		PKPdf	06 23 03.3	-2.8	
	comp=Z,1.1nm,0.9s,baz=70,slow=0.2,SNR=2.8								

MAN **14** *06:08:03,2089N×12103E,h47km,mb5.7,ML4.7,MS5.1*
BJI **14** *06:08:13.8,1979N×12123E,h28km,mB5.4,mb5.0,ML4.7, Ms5.5,Msz5.3*
MOS **14** *06:08:13.3±1.1,1984N×12125E,h26km,mb5.5/26,Error ellipse: s-maj=12.0km s-min=6.7km az=114.8*
NEIC **14** *06:08:14.7±1.8,1988N×12134E,h28km±12km,mb5.3/37, Error ellipse: s-maj=6.7km s-min=4.7km az=88.0*
IDC **14** *06:08:16.0±4.0,1987N×12138E,h33km±30km,mb4.7/29, mb1 4.8/31,mb1mx4.7/35,mbtmp4.7/31,ML4.5/2,Error ellipse: s-maj=14.8km s-min=9.1km az=70.0*
ISCJB **14** *06:08:15.4±0.5,1993N±002×12135E±004,h43km±4km, mb5.0/70,MS5.4/6,Error ellipse: s-maj=6.2km s-min=3.5km az=176.0*
DJA **14** *06:08:22,2017N×12195E,h102km,mb5.3/8*
ISC 14 06:08:17.4±0.4,1992N±002×12132E±004,h47km±4km, h30km±7.3km:pP-P,n193,σ1s09/196,mb5.0/70,MS5.4/6, 10C-14D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	1.72	203	⇓*e*P		P	Pn	06 08 42.7	-2.3
PIP				*e*S			Sn	06 09 04.5	-1.3
SGCP	Mt. Cagua	1.81	158	*e*P		P	Pn	06 08 46.6	+0.4
APYP	Conner	2.05	182	*e*P		P	Pn	06 08 50.1	+0.6
APYP				*e*S			Sn	06 09 18.6	+4.7
ABRA	Dolores	2.33	194	*e*P		P	Pn	06 08 53.5	+0.2
ABRA				*e*S			Sn	06 09 31.3	+10
CAUP	Cauayan	3.00	171	*e*P		P	Pn	06 09 04.3	+1.8
CAUP				*e*S			Sn	06 09 47.2	+10
PALP	Palanan	3.03	160	*e*P		P	Pn	06 09 04.7	+1.7
PALP				*e*S			Sn	06 09 43.8	+5.8
BCPH	Baguio City Da	3.59	191	⇓*e*P		P	Pn	06 09 10.8	+0.1
BCPH				*e*S			Sn	06 10 01.5	+10
BOLP	Bolinao	3.77	201	*e*P		P	Pn	06 09 12.5	-0.6
BOLP				*e*S			Sn	06 10 05.0	+8.8
BALP	Baler	4.17	177	*e*P		P	Pn	06 09 19.2	+0.7
NACB	Ninganchiao	4.24	3	*e*Pn		P	Pn	06 09 17.8	-1.7
NACB				*e*Sn			Sn	06 10 03.8	-3.9
SCZP	Santa Cruz	4.34	198	*e*P		P	Pn	06 09 20.4	-0.5
SCZP				*e*S			Sn	06 10 24.3	+14
YHNB	Yeheng	4.72	1	*e*Pn		P	Pn	06 09 26.1	0.0
YHNB				*e*Sn			Sn	06 10 18.8	-0.8
TATO	Taipei	5.03	2	*e*Pn		P	Pn	06 09 27.8	-2.6
TATO				*e*Sn			Sn	06 10 27.1	-0.2
POLP	Polilio Island	5.20	173	*e*P		P	Pn	06 09 34.3	+1.6
QZH	Quanzhou	5.60	334	P		P	Pn	06 09 35.0	-3.1
QZH				S			Sn	06 10 33.3	-7.8
QZH				Smax					
	comp=N,540nm,0.6s								
QZH				Smax					
	comp=E,760nm,1.2s								
LUBP	Lubang	6.24	190	*e*P		P	Pn	06 09 49.2	+2.2
SJMP	San Jose	7.42	182	*e*P		P	Pn	06 10 04.9	+1.6
OTRP	Odiongan	7.55	175	*e*P		P	Pn	06 10 09.4	+4.4
BUSP	Coron	7.95	188	*e*P		P	Pn	06 10 10.4	-0.1
ENPP	El Nido	8.86	192	*e*P		P	Pn	06 10 23.0	+0.1
JOW	Kunigami	9.38	42	Pn		P	Pn	06 10 30.1	+0.1
	comp=E,9.7nm,0.3s,baz=210,slow=15,SNR=7.8								
JOW				Sn			Sn	06 12 09.6	-4.6
	comp=E,2.3nm,0.3s,baz=109,slow=26,SNR=2.4								
QIZ	Qiongzhong	10.86	267	P		P	Pn	06 10 46.5	-3.8
QIZ				S		S	Sn	06 12 41.6	-8.9
QIZ				AMB		AMB			
	comp=Z,57nm,0.6s								
QIZ	Qiongzhong	10.86	267	*e*Pn		P	Pn	06 10 46.5	-3.8
QIZ				*e*Sn		S	Sn	06 12 40.2	-10
NJ2	Nanjing	12.28	350	*e*P		P	Pn	06 11 10.0	+0.4
NJ2				AP				06 11 16.3	
NJ2				XP				06 11 20.5	
NJ2				PP				06 11 21.5	
NJ2				S			Sn	06 13 26.5	+1.4
NJ2				XS				06 13 39.0	
NJ2				AMB		AMB			
	comp=Z,120nm,1.0s								
NJ2				AMB		AMB			
	comp=Z,380nm,4.5s								
NJ2				LR		LR			
	comp=N,8μm,21.0s								
NJ2				LR		LR			
	comp=E,7μm,21.5s								
NJ2				LR		LR			
	comp=Z,6μm,17.5s								
KKM	Kota Kinabalu	14.66	200	*e*Pn		P	Pn	06 11 39.4	-2.7
GYA	Guiyang	14.96	299	⇑*e*P		P	Pn	06 11 44.8	-1.1
GYA				AP		pP		06 11 49.6	-12
GYA				XP		sP		06 11 54.3	-13
GYA				PP				06 11 59.4	
GYA				S		S	Sn	06 14 30.6	+0.2
GYA				SS				06 14 50.3	
GYA				AMB		AMB			
	comp=Z,40nm,0.8s								
GYA				AMB		AMB			
	comp=Z,180nm,4.3s								
GYA				LR		LR			
	comp=N,4μm,12.4s								
GYA				LR		LR			
	comp=E,4μm,13.9s								
GYA				LR		LR			
	comp=Z,4μm,12.7s								
UBT	Ubonrachathani	16.22	256	P		P	Pn	06 12 09.5	+7.3
KMI	Kunming	17.92	290	P		P	Pn	06 12 23.3	0.0
KMI				AP		pP		06 12 31.9	-2.5
KMI				XP		sP		06 12 37.3	-3.0
KMI				PP				06 12 39.9	
KMI				AMB		AMB			
	comp=Z,15nm,1.8s								
KMI				AMB		AMB			
	comp=Z,823nm,4.6s								
KSRS	Korea Array	18.39	17	P		Pn		06 12 28.6	-0.4
	comp=Z,1.5nm,0.3s,baz=197,slow=11,SNR=5.2								
CD2	Chengdu	19.24	308	*e*P		Pn		06 12 38.5	-0.7
CD2				AP		pP		06 12 46.8	-2.1
CD2				XP		sP		06 12 51.3	-3.5
CD2				PP				06 12 56.8	
CD2				S		S		06 16 09.9	-3.5
CD2				XS		sS		06 16 22.6	-8.4
CD2				SS				06 16 36.8	
CD2				AMB		AMB			
	comp=Z,160nm,1.0s								
BJT	Baijiatuao	20.51	349	*e*P		P		06 12 51.8	+0.2
BJT				pmax		pmax			
	comp=Z,117nm,0.8s								
BJT	Baijiatuao	20.51	349	*e*P		P		06 12 51.8	+0.2
	comp=Z,117nm,0.8s								
BJI	Beijing	20.53	349	P		P		06 12 52.3	+0.5
BJI				S		S		06 16 38.6	-0.3
BJI				AMB		AMB			
	comp=Z,151nm,0.8s								
CMAR	Chiang Mai Arr	21.18	270	P		P		06 12 59.7	+0.7
	comp=Z,3.7nm,0.6s,mb3.9,baz=70,slow=9.5,SNR=5.0								
CMAR				PcP		PcP		06 17 04.7	+1.3
	comp=Z,4.2nm,0.7s,baz=56,slow=0.7,SNR=7.4								
KSM	Kuching	21.27	212	*e*P		P		06 12 59.7	-0.2
MJAR	Matsushiro Arr	22.20	38	P		P		06 13 10.4	+0.7
	comp=Z,22nm,1.0s,mb4.6,baz=226,slow=7.2,SNR=3.6								
LZH	Lanzhou	22.24	320	*e*P		P		06 13 11.4	+1.2
LZH				AP				06 13 21.5	
LZH				XP		sP		06 13 25.4	-1.9
LZH				PP				06 13 38.8	
LZH				S		S		06 17 08.3	-4.2
LZH				XS		sS		06 17 24.5	-6.2
LZH				SS				06 17 50.6	
LZH				AMB		AMB			
	comp=Z,97nm,1.0s,mb5.2								
LZH				AMB		AMB			
	comp=Z,376nm,4.2s								
LZH				LR		LR			
	comp=N,9μm,12.9s								
LZH				LR		LR			
	comp=Z,10μm,15.0s,MS5.4								
HHC	Hu-ho-hao-te	22.46	340	⇓P		P		06 13 12.8	+0.3
HHC				AP				06 13 22.8	
HHC				XP		sP		06 13 27.0	-2.6
HHC				PP				06 13 41.3	
HHC				PCP		PcP		06 17 06.0	+0.5
HHC				S		S		06 17 13.4	-3.0
HHC				XS		sS		06 17 28.3	-6.6
HHC				SS				06 17 54.9	
HHC				SCP		ScP		06 20 40.8	+1.5
HHC				PCS		PcS		06 20 44.6	+0.4
HHC				AMB		AMB			
	comp=Z,23nm,1.0s,mb4.6								
HHC				AMB		AMB			
	comp=Z,1μm,5.7s								
HHC				LR		LR			
	comp=N,6μm,11.6s,MS5.4								
HHC				LR		LR			
	comp=E,6μm,12.8s,MS5.4								
HHC				LR		LR			
	comp=Z,7μm,12.6s,MS5.3								
GUMO	Guam	23.40	102	P		P		06 13 22.1	-0.3
	comp=Z,41nm,0.5s,mb5.1,baz=19,slow=22,SNR=4.7								
GUMO	Guam	23.40	102	*e*P		P		06 13 21.9	-0.5
GUMO				pmax		pmax			
	comp=Z,194nm,1.1s,mb5.5								
GUMO	Guam	23.40	102	*e*P		P		06 13 21.9	-0.6
	comp=Z,194nm,1.1s,mb5.5								
CN2	Changchun	24.06	7	*e*P		P		06 13 29.0	+0.8
CN2				*e*XP		sP		06 13 42.3	-3.7
CN2				*e*S		S		06 17 41.5	-0.8
CN2				LR		LR			
	comp=N,17μm,24.0s,MS5.5								
CN2				LR		LR			
	comp=E,11μm,24.0s,MS5.5								
CN2				LR		LR			
	comp=Z,15μm,24.0s,MS5.4								
KAPI	Kappang	24.83	184	P		P		06 13 34.9	-0.6
	comp=Z,27nm,0.8s,mb4.9,baz=332,slow=11,SNR=6.6								
MDJ	Mudanjiang	25.57	14	P		P		06 13 42.6	+0.7
MDJ				AP		pP		06 13 48.5	-5.6
MDJ				XP		sP		06 13 51.3	-8.5
MDJ				S		S		06 18 09.9	+3.5
MDJ				SCP		ScP		06 20 50.4	+2.7
MDJ				PCS		PcS		06 20 52.9	+0.4
MDJ				AMB		AMB			
	comp=Z,15nm,2.2s,mb4.1								
MDJ				AMB		AMB			
	comp=Z,284nm,4.7s								
MDJ				LR		LR			
	comp=N,13μm,26.7s,MS5.4								
MDJ				LR		LR			
	comp=E,7μm,26.9s,MS5.4								
MDJ				LR		LR			
	comp=Z,7μm,24.6s,MS5.1								
ERM	Erimo	28.75	35	*e*P		P		06 14 12.8	+2.3
ERM				*e*				06 14 16.0	
ERM				pmax		pmax			
	comp=Z,42nm,0.8s,mb5.2								
ERM	Erimo	28.75	35	*e*P		P		06 14 12.8	+2.3
	comp=Z,42nm,0.8s,mb5.2								
ERM				⇑*e*P				06 14 16.0	
LSA	Lhasa	28.99	296	P		P		06 14 11.0	-1.8
LSA				pmax		pmax			
	comp=Z,75nm,1.4s,mb5.2								
LSA	Lhasa	28.99	296	P		P		06 14 11.0	-1.8
	comp=Z,75nm,1.4s,mb5.2								
BATI	Baumata	30.03	175	P		P		06 14 21.4	-0.7
	comp=Z,86nm,0.6s,mb5.6,baz=324,slow=0.1,SNR=6.7								
SONM	Songino Array	30.36	340	P		P		06 14 25.4	+0.7
	comp=Z,6.2nm,0.6s,mb4.5,baz=161,slow=9.1,SNR=3.6

CTAO	Charters Tower	46.66	147	*e*P		P	06 16 41.1	-0.4	
	comp=Z,28nm,0.7s,mb5.3								
KBL	Kabul	48.21	299	*e*P		P	06 16 52.2	-1.3	
KBL					pmax	pmax			
	comp=Z,29nm,1.1s,mb5.2								
KBL	Kabul	48.21	299	*e*P		P	06 16 52.2	-1.3	
	comp=Z,29nm,1.1s,mb5.2								
FORT	Forrest	50.82	173	*e*P		P	06 17 13.0	-0.3	
	comp=Z,150nm,0.7s,mb6.0								
BVAR	Borovoye Array	51.09	323	P		P	06 17 17.2	+2.1	
	comp=Z,3.6nm,0.7s,mb4.4,baz=99,slow=8.9,SNR=3.9								
BVAR				PcP		PcP	06 18 30.2	-0.1	
	comp=Z,8.7nm,0.8s,baz=109,slow=3.3,SNR=5.5								
KLBR	Kellerberrin	51.33	184	*e*P		P	06 17 15.9	-1.2	
	comp=Z,39nm,0.8s,mb5.4								
MUN	Mundaring	51.84	186	*e*P		P	06 17 20.1	-0.8	
NWAO	Narrogin (SRO)	52.70	184	P		P	06 17 27.2	0.0	
	comp=Z,42nm,0.6s,mb5.5,baz=1.7,slow=6.6,SNR=20								
NWAO	Narrogin (SRO)	52.70	184	*e*P		P	06 17 26.5	-0.7	
NWAO					pmax	pmax			
	comp=Z,264nm,1.7s								
NWAO	Narrogin (SRO)	52.70	184	*e*P		P	06 17 26.5	-0.7	
	comp=Z,264nm,1.7s,mb5.9								
EIDS	Eidsvold	53.52	146	*e*P		P	06 17 30.7	-2.7	
AMKA	Amchitka	54.79	41	*e*P		P	06 17 42.2	-0.2	
STKA	Stephens Creek	55.05	159	*e*P		P	06 17 44.2	-0.3	
	comp=Z,18nm,0.8s,mb5.2								
STKA	Stephens Creek	55.05	159	P		P	06 17 44.2	-0.2	
	comp=Z,22nm,0.8s,mb5.2,baz=186,slow=24,SNR=9.5								
BILL	Bilibino	55.65	19	*e*P		P	06 17 50.8	+2.5	
BILL					pmax	pmax			
	comp=Z,11nm,1.4s,mb4.7								
BILL	Bilibino	55.65	19	P		P	06 17 44.8	-3.5	
SVE	Sverdlovsk	57.57	325	*e*P		P	06 18 06.1	+3.9	
SVE					pmax	pmax			
	comp=Z,52nm,1.2s,mb5.4								
AKTK	Aktyubinsk	57.94	318	P		P	06 18 06.1	+1.2	
AKTO	Aktyubinsk	57.94	318	P		P	06 18 06.1	+1.2	
	comp=Z,3.9nm,0.8s,mb4.5,baz=148,slow=20,SNR=3.3								
ARU	Arti	58.60	325	P		P	06 18 15.3	+5.9	
ARU					pmax	pmax			
	comp=Z,69nm,1.4s,mb5.5								
ARU	Arti	58.60	325	P		P	06 18 15.3	+5.9	
	comp=Z,69nm,1.4s,mb5.5								
CNB	Canberra Magne	61.04	154	*e*P		P	06 18 27.5	+1.2	
TOO	Toolangi	61.55	158	*e*P		P	06 18 31.0	+1.3	
NIKO	Nikolski	62.23	40	P		P	06 18 32.4	-1.8	
	comp=Z,41nm,1.0s,mb5.5								
UNV	Unalaska Valle	63.67	39	P		P	06 18 43.3	-0.5	
	comp=Z,28nm,1.1s,mb5.2								
TAU	Tasmania Unive	66.95	160	*e*P		P	06 19 06.4	+1.4	
TAU					pmax	pmax			
	comp=Z,54nm,0.8s,mb5.6								
TAU	Tasmania Unive	66.95	160	*e*P		P	06 19 06.4	+1.4	
	comp=Z,54nm,0.8s,mb5.6								
GNI	Garni	67.36	306	P		P	06 19 08.8	+0.9	
	comp=Z,3.9nm,0.4s,mb4.8,baz=1.5,slow=19,SNR=2.8								
GNI	Garni	67.36	306	*i* P		P	06 19 09.7	+1.8	
GNI					pmax	pmax			
	comp=Z,44nm,1.7s								
KIV	Kislovodsk	68.39	310	*c i*P		P	06 19 15.6	+1.3	
KIV				*e*			06 21 48.4		
KIV				*i*			06 28 12.7		
KIV					pmax	pmax			
	comp=Z,33nm,0.7s,mb5.5								
KIV	Kislovodsk	68.39	310	*e*P		P	06 19 15.9	+1.6	
	comp=Z,36nm,0.9s,mb5.4								
PPLA	Purkeypile	70.89	29	*e*P		P	06 19 27.9	-1.4	
	comp=Z,59nm,0.9s,mb5.5								
OBN	Obninsk	70.93	323	*e*P		P	06 19 30.1	+0.4	
OBN				*e*			06 22 12.9		
OBN				*i*			06 28 35.9		
OBN					pmax	pmax			
	comp=Z,14nm,0.9s,mb4.9								
COLD	Coldfoot	71.23	24	P		P	06 19 23.7	-7.6	
	comp=Z,56nm,1.4s,mb5.3								
KDAK	Kodiak Island	71.32	34	P		P	06 19 32.0	0.0	
	comp=Z,165nm,0.7s,mb6.1,SNR=6.8								
KDAK	Kodiak Island	71.32	34	*e*P		P	06 19 31.8	-0.2	
	comp=Z,30nm,1.1s,mb5.1								
KTH	Kantishna Hill	71.38	28	*e*P		P	06 19 32.5	+0.3	
	comp=Z,67nm,1.2s,mb5.5								
MCK	McKinley	72.23	28	*e*P		P	06 19 37.6	+0.2	
	comp=Z,38nm,0.9s,mb5.3								
MCK				*e*		pP	06 19 48.6	-2.3	
JOF	Joensuu	72.47	331	*e*p		P	06 19 39.1	+0.3	
	comp=Z,21nm,1.0s,mb5.0								
JOF	Joensuu	72.47	331	*e*P		P	06 19 39.1	+0.3	
JOF					pmax	pmax			
	comp=Z,21nm,1.0s,mb5.0								
PMR	Palmer	72.48	30	*e*P		P	06 19 37.8	-1.1	
PMR					pmax	pmax			
	comp=Z,17nm,0.7s,mb5.1								
PMR	Palmer	72.48	30	*e*P		P	06 19 37.8	-1.1	
	comp=Z,18nm,0.7s,mb5.1								
MALT	Malatya	72.50	305	*e*P		P	06 19 38.8	-0.7	
MALT					pmax	pmax			
	comp=Z,31nm,1.1s,mb5.2								
MALT	Malatya	72.50	305	⇑*i*P		P	06 19 39.2	-0.3	
MALT	Malatya	72.50	305	*e*P		P	06 19 38.8	-0.7	
	comp=Z,31nm,1.1s,mb5.2								
COLA	College	72.51	27	*i* P		P	06 19 42.1	+3.1	
SEW	Seward	72.57	32	*e*P		P	06 19 38.4	-1.1	
KEV	Kevo	72.97	339	*e*p		P	06 19 40.3	-1.3	
	comp=Z,18nm,0.9s,mb5.0								
KEV	Kevo	72.97	339	*e*P		P	06 19 40.3	-1.3	
KEV					pmax	pmax			
	comp=Z,18nm,0.9s,mb5.0								
ARCES	ARCESS Array B	73.53	339	P		P	06 19 45.6	+0.7	
	comp=Z,6.3nm,0.9s,mb4.5,baz=63,slow=5.6,SNR=4.1								
DIV	Divide	74.16	30	*e*P		P	06 19 49.2	+0.4	
	comp=Z,70nm,1.4s,mb5.4								
KBS	Kingsbay	74.22	349	*e*P		P	06 19 49.8	+0.9	
KBS	Kingsbay	74.22	349	*e*P		P	06 19 49.9	+1.0	
KAF	Kangasniemi	74.91	331	*e*p		P	06 19 52.2	-0.9	
	comp=Z,17nm,0.8s,mb5.0,baz=71,slow=5.3								
KAF	Kangasniemi	74.91	331	*e*P		P	06 19 52.2	-0.9	
KAF					pmax	pmax			
	comp=Z,17nm,0.8s,mb5.0								
ASF	Jabal al Asfar	75.11	299	P		P	06 19 54.7	-0.2	
	comp=Z,2.1nm,0.8s,mb4.2,baz=325,slow=5.5,SNR=2.6								
AKASG	Malin Array Be	76.14	319	P		P	06 20 00.1	-0.3	
	comp=Z,6.8nm,0.8s,mb4.6,baz=61,slow=5.3,SNR=7.1								
AKASG	Malin Array Be	76.14	319	*i* P		P	06 19 59.7	-0.7	
AKASG					pmax	pmax			
	comp=Z,7.0nm,0.8s								
DAWY	Dawson	76.27	27	*e*P		P	06 20 01.1	+0.3	
EIL	Elat	77.37	297	P		P	06 20 08.0	+0.3	
	comp=Z,6.9nm,1.0s,mb4.5,baz=18,slow=16,SNR=2.7								
EIL	Elat	77.37	297	P		P	06 20 08.0	+0.3	
HYT	Haines Junctio	78.12	29	*e*P		P	06 20 10.8	-0.5	
DHAK	Deception Hill	78.35	31	P		P	06 20 11.0	-1.6	
SUW	Suwalki	78.77	323	*e*P		P	06 20 14.7	-0.3	
VRI	Vrincioaia	79.06	315	⇓*i*P		P	06 20 18.2	+1.4	
VRI	Vrincioaia	79.06	315	⇓P		P	06 20 18.2	+1.4	
BURAR	Bucovina Array	79.53	317	⇑*i*P		P	06 20 19.1	-0.2	
BURAR	Bucovina Array	79.53	317	⇑P		P	06 20 19.1	-0.2	
SKAG	Skagway	79.61	30	*e*P		P	06 20 20.4	+0.9	
	comp=Z,47nm,1.3s,mb5.3								
MLR	Muntele Rosu	79.70	315	⇓*i*P		P	06 20 21.2	+0.9	
MLR	Muntele Rosu	79.70	315	⇓P		P	06 20 21.2	+0.9	
SIT	Sitka	80.50	33	*e*P		P	06 20 24.9	+0.5	
SIT					pmax	pmax			
	comp=Z,16nm,0.7s,mb5.1								
SIT	Sitka	80.50	33	*e*P		P	06 20 24.9	+0.5	
	comp=Z,16nm,0.7s,mb5.1								
DAG	Danmarks Havn	80.58	351	*j i*P		P	06 20 24.0	-0.4	
DAG					pmax	pmax			
	comp=Z,26nm,0.8s,mb5.2								
DAG					MLR	MLR			
	comp=Z,13μm,19.0s,MS6.3								
DAG					MLR	MLR			
	comp=E,12μm,21.0s								
DAG	Danmarks Havn	80.58	351	*j* P		P	06 20 24.0	-0.4	
	comp=E,26nm,0.8s,mb5.2								
DAG									
	comp=Z,13μm,19.0s								
DRGR		81.41	317	⇑*i*P		P	06 20 30.0	+0.6	
DRGR		81.41	317	⇑P		P	06 20 30.0	+0.6	
STHS	Stebnicka Huta	81.43	319	*e*P		P	06 20 26.1	-3.4	
STHS					pmax	pmax			
	comp=Z,7.0nm,1.2s,mb4.5								
STHS	Stebnicka Huta	81.43	319	*e*P		P	06 20 26.1	-3.4	
	comp=Z,7.2nm,1.2s,mb4.5								
CRVS	Cervenica-Dubn	81.48	319	*e*P		P	06 20 28.0	-1.7	
NB2	NORSAR Subarra	82.04	333	P		P	06 20 31.9	-0.5	
	comp=Z,12nm,0.8s,mb4.9,baz=64,slow=5.3								
NOA	NORSAR Array B	82.04	333	P		P	06 20 32.2	-0.2	
	comp=Z,8.6nm,0.8s,mb4.7,baz=64,slow=5.2,SNR=14								
NOA	NORSAR Array B	82.04	333	P		P	06 20 32.2	-0.2	
OPO	Ambohidratompo	82.14	247	P		P	06 20 34.6	+1.0	
	comp=Z,7.4nm,0.8s,mb4.7,baz=39,slow=2.6,SNR=9.2								
KECS	Kecovo	82.23	319	*e*P		P	06 20 34.1	+0.4	
KECS					pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.3								
KECS	Kecovo	82.23	319	*e*P		P	06 20 34.1	+0.4	
	comp=Z,3.9nm,0.9s,mb4.3								
WRAK	Wrangell Islan	82.27	33	*e*P		P	06 20 33.6	-0.1	
	comp=Z,12nm,0.9s,mb4.8								
VYHS	Vyhne	83.24	319	*e*P		P	06 20 39.8	+0.8	
VYHS					pmax	pmax			
	comp=Z,8.0nm,1.6s,mb4.5								
VYHS	Vyhne	83.24	319	*e*P		P	06 20 39.8	+0.8	
	comp=Z,8.0nm,1.6s,mb4.5								
KSP	Ksiaz	83.84	322	*e*P		P	06 20 41.5	-0.5	
MODS	Modra-Piesok	84.25	319	*e*P		P	06 20 45.7	+1.6	
KMBO	Kilima Mbogo	84.80	267	P		P	06 20 49.1	+1.6	
	comp=Z,5.7nm,0.9s,mb4.7,baz=58,slow=8.1,SNR=7.6								
CLL	Collm	85.52	323	⇓*i*P		P	06 20 50.6	+0.2	
CLL				*e*		pP	06 21 00.0	-4.3	
CLL				*i*		pP	06 21 02.0	-2.3	
CLL					pmax	pmax			
	comp=Z,23nm,1.2s,mb5.3								
CLL	Collm	85.52	323	⇓*i*P		P	06 20 50.6	+0.2	
	comp=Z,23nm,1.2s,mb5.3								
CLL				*i* PcP		PcP	06 20 52.9	-0.4	
CLL				*e*(pP)		pP	06 21 00.0	-4.3	
CLL				*i* sP		sP	06 21 02.0	-7.5	
CLL				*i* sPcP		pP	06 21 05.4	+1.1	
CLL	Collm	85.52	323	⇓*i*P		P	06 20 50.6	+0.2	
	comp=Z,23nm,1.2s,mb5.3								
CLL				*e*		pP	06 21 00.0	-4.3	
CLL				*i*		pP	06 21 02.0	-2.3	
GERES	GERESS Array B	86.21	321	P		P	06 20 54.4	+0.5	
	comp=Z,1.3nm,0.6s,mb4.4,baz=72,slow=4.3,SNR=3.7								
SUMG	Summit	86.73	354	*e*P		P	06 20 56.3	+0.3	
YKW3	Yellowknife Ar	86.79	23	*e*P		P	06 20 57.1	+0.7	
YKA	Yellowknife Ar	86.83	23	P		P	06 20 56.8	+0.2	
	comp=Z,14nm,0.7s,mb5.3,baz=308,slow=4.6,SNR=32								
SFJD	Kangerlussuaq	93.13	357	*i* P		P	06 21 25.8	-0.3	
SFJD					pmax	pmax			
	comp=Z,27nm,1.0s,mb5.6								
SFJD	Kangerlussuaq	93.13	357	*i* P		P	06 21 25.8	-0.3	
	comp=Z,27nm,1.0s,mb5.6								
LSZ	Lusaka	97.95	257	P		P	06 21 48.8	-0.2	
	comp=Z,4.0nm,0.8s,mb5.0,baz=88,slow=5.0,SNR=4.8								
PDAR	Pinedale Array	102.01	36	PKiKP		PKiKP	06 26 27.6	-1.5	
	comp=Z,3.1nm,0.9s,baz=162,slow=0.6,SNR=2.9								
TORD	Torodi Ar. Bea	112.12	294	PKiKP		PKiKP	06 26 48.2	-0.4	
	comp=Z,1.4nm,0.7s,baz=37,slow=2.2,SNR=4.5								
TORD					PKKPbc	PKKPbc	06 37 40.3	+0.9	
	comp=Z,1.0nm,0.8s,baz=232,slow=2.1,SNR=4.4								
TORD					PKKPab	PKKPab	06 37 48.9	-0.7	
	comp=Z,1.2nm,0.6s,baz=265,slow=3.8,SNR=6.3								
TORD	Torodi Ar. Bea	112.12	294	PKPdf		PKiKP	06 26 48.2	-0.4	
TORD					PKKPbc	PKKPbc	06 37 40.3	+0.9	
TORD					PKKPab	PKKPab	06 37 48.9	-0.7	
TXAR	Lajitas Array	114.58	43	PKP		PKiKP	06 26 53.9	+0.8	
	comp=Z,1.7nm,0.8s,baz=194,slow=1.2,SNR=3.3								
TXAR					PKKPab	PKKPab	06 37 37.1	-2.3	
	comp=Z,0.2nm,0.6s,baz=134,slow=7.7,SNR=4.3								
TKL	Tuckaleechee C	119.82	23	PKP		PKPdf	06 27 02.2	-0.7	
	comp=Z,6.7nm,0.9s,baz=220,slow=17,SNR=4.8								
DBIC	Dimbokro	120.83	291	PKP		PKPdf	06 27 05.2	-0.3	
	comp=Z,4.1nm,0.9s,baz=305,slow=2.5,SNR=3.7								
CMIG	Matias Romero	128.84	46	PKP		PKPdf	06 27 21.1	+0.4	
	comp=Z,2.7nm,0.8s,baz=253,slow=7.8,SNR=3.0								
USHA	Ushuaia	144.37	170	PKP		PKPdf	06 27 48.1	0.0	
	comp=Z,10nm,0.7s,baz=132,slow=2.8,SNR=4.3								
FDF	Fort de France	145.48	4	*e*PKP2		PKPab	06 27 50.2	-1.2	
SDV	Santo Domingo	149.05	23	PKP		PKPdf	06 27 58.2	+0.9	
	comp=Z,40nm,0.8s,baz=152,slow=1.4,SNR=8.2								
SDV					PKPbc	PKPbc	06 28 01.6	+0.2	
	comp=Z,40nm,0.8s,baz=153,slow=1.1,SNR=8.2								
SDV	Santo Domingo	149.05	23	*e*P		PKPdf	06 27 58.4	+1.2	
PCRV	Puerto La Cruz	149.52	12	PKPbc		PKPbc	06 28 00.5	-2.0	
	comp=Z,14nm,1.0s,baz=339,slow=21,SNR=5.4								
PLCA	Paso Flores	156.91	157	PKPbc		PKPdf	06 28 19.2	+11	
	comp=Z,2.6nm,0.9s,baz=203,slow=4.3,SNR=4.8								
PLCA					PKPab	PKPab	06 28 38.9	+1.0	
	comp=Z,9.4nm,0.9s,baz=228,slow=5.2,SNR=9.3								
CFAA	Coronel Fontan	165.54	145	PKP		PKPdf	06 28 17.3	0.0	
	comp=Z,0.2nm,0.3s,baz=274,slow=22,SNR=18								
CFAA					PKPab	PKPab	06 29 16.5	+0.7	
	comp=Z,0.5nm,0.8s,baz=230,slow=3.2,SNR=5.9								
BDFB	Brasilia	168.99	291	PKP		PKPdf	06 28 20.1	0.0	
	comp=Z,3.4nm,0.8s,baz=143,slow=12,SNR=2.3								
LVC	Limon Verde	170.09	107	PKP		PKPdf	06 28 21.5	+0.8	
	comp=Z,5.3nm,0.9s,baz=277,slow=3.1,SNR=2.9								
LVC	Limon Verde	170.09	107	PKP		PKPdf	06 28 21.5	+0.8	
LPAZ	La Paz	170.31	70	PKP		PKPdf	06 28 22.7	+1.7	
	comp=Z,9.1nm,1.2s,baz=68,slow=1.9,SNR=5.7								
LPAZ					PKPab	PKPab	06 29 38.2	+0.7	
	comp=Z,3.6nm,1.1s,baz=315,slow=14,SNR=4.9								
LPAZ	La Paz	170.31	70	PKP		PKPdf	06 28 22.7	+1.7	
LPAZ					PKPab	PKPab	06 29 38.2	+0.7	
CPUP	Villa Florida	173.50	191	PKP		PKPdf	06 28 22.3	+0.1	
	comp=Z,1.4nm,0.7s,baz=120,slow=6.1,SNR=2.6								
CPUP					PKPab	PKPab	06 29 51.5	+0.5	
	comp=Z,0.7nm,0.5s,baz=35,slow=9.1,SNR=2.9								
SIV	San Ignacio	175.47	31	PKP		PKPdf	06 28 23.9	+0.9	
	comp=Z,8.4nm,0.9s,baz=186,slow=2.4,SNR=9.8								
SIV					PKPab	PKPab	06 29 58.8	-1.2	
	comp=Z,1.6nm,0.8s,baz=40,slow=9.4,SNR=2.9								

*ISCJB **14** 06:18:00.6±1.1, 3626N±007×715E±02, h249km±32km, Error ellipse: s-maj=32.9km s-min=9.3km az=170.3*
*NNC **14** 06:18:08.6±2.6, 3689N×7112E, h214km±26km, mb3.4, mpv4.5, Error ellipse: s-maj=27.2km s-min=17.4km az=42.0*

ISC 14 06:18:01.6±1.4, 3628N±007×714E±03, h199km±50km, n11, σ0§86/16, 3C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
THN	Thein Dam	5.24	136	*e*P		Pn		06 19 20.7	+1.6
THN				*e*S		Sn		06 20 18.8	-1.3
DLH	Dalhousie	5.30	133	*e*P		Sn		06 20 21.0	-0.6
AML	Almayashu	6.11	16	P		Pn		06 19 30.5	+0.3
	SNR=12								
EKS2	Erkin-Say	6.64	15	P		Pn		06 19 37.2	+0.2
	SNR=5.4								
AAK	Ala-Archa	6.78	20	P		Pn		06 19 40.0	+1.1
	SNR=7.4								
KK31	Karatay Array	6.85	355	⇓P		Pn		06 19 39.1	-0.7
	14nm,0.2s,baz=176,slow=12,SNR=465								
KK31				⇓S		Sn		06 20 50.9	-6.8
	5.9nm,0.5s,baz=181,slow=22,SNR=7.3								
CHMS	Chumysh	7.19	20	P		Pn		06 19 44.8	+0.6
	SNR=7.5								
USP	Ospenovka	7.38	18	P		Pn		06 19 46.6	0.0
	SNR=14								
TKM2	Tokmak 2	7.38	25	⇑P		Pn		06 19 47.6	+0.9
	13nm,0.6s								
TKM2				⇑S		Sn		06 21 09.1	-1.2
	11nm,1.2s								
AB31	Akbulak array	15.44	331	P		Pn		06 21 28.3	-0.7
	9.0nm,0.3s,baz=158,slow=11,SNR=45								
AB31				⇓S		S		06 24 12.9	-7.1
	19nm,0.7s,baz=163,slow=22,SNR=4.3								
AKTO	Aktyubinsk	17.14	330	⇓P		P		06 21 47.3	-0.5
	4.8nm,2.0s								
AKTO				⇑S		S		06 24 47.4	-8.4
	4.4nm,2.5s								

*MOS **14** 06:48:10.8±1.5, 4826N×15480E, h46km, mb4.3/7, Error ellipse: s-maj=16.4km s-min=10.5km az=60.6*
*ISCJB **14** 06:48:11.2±1.2, 4829N±009×1548E±01, h49km±11km, mb4.0/11, Error ellipse: s-maj=20.1km s-min=7.9km az=40.5*
*NEIC **14** 06:48:11.6±1.6, 4827N×15471E, h36km±15km, mb4.6/1, Error ellipse: s-maj=21.7km s-min=12.6km az=132.0*
*IDC **14** 06:48:14.3±3.1, 4829N×15473E, h60km±28km, mb3.7/10, mb1 4.0/12, mb1mx3.8/24, mbtmp3.8/12, ML4.0/2, Error ellipse: s-maj=23.1km s-min=16.6km az=140.0*

ISC 14 06:48:13.8±1.1, 4835N±009×1548E±01, h55km±9km, n32, σ1§11/33, mb4.0/11, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
SKR	Severo-Kuril's	2.50	20	*e*PN		Pn		06 48 49.5	-2.4
SKR				*e*S		Sn		06 49 20.8	-0.3
SKR					pmax	pmax			
	comp=E,200nm,1.0s								
SKR					pmax	pmax			
	comp=Z,220nm,1.0s								
SKR					smax				
	comp=N,310nm,0.5s								
SKR					smax				
	comp=E,190nm,0.5s								
PEA0B	Petropavlovsk-	5.12	20	*e*Pn		Pn		06 49 28.1	+0.4
PETK	Petropavlovsk-	5.12	20	P		Pn		06 49 28.4	+0.7
	comp=E,2.5nm,0.3s,baz=168,slow=13,SNR=74								
PET	Petropavlovsk	5.29	26	*e*PN		Pn		06 49 31.7	+1.6
PET					pmax	pmax			
	comp=Z,32nm,0.6s								
PET	Petropavlovsk	5.29	26	*e*Pn		Pn		06 49 26.8	-3.3
KUR	Kuril'sk	5.68	239	*e*PN		Pn		06 49 31.0	-4.5
KUR					pmax	pmax			
	comp=Z,380nm,1.0s								
YSS	Yuzh-Sakhalins	8.24	265	⇓*e*PN		Pn		06 50 13.1	+2.5
YSS					pmax	pmax			
	comp=Z,11nm,0.7s								
ASAJ	Asahikawa	9.45	248	P		Pn		06 50 28.6	+1.5
	comp=Z,2.5nm,0.3s,baz=87,slow=13,SNR=5.7								
ASAJ	Asahikawa	9.45	248	PN		Pn		06 50 28.6	+1.6
ASAJ					pmax	pmax			
	comp=Z,3.0nm,0.3s								
ERM	Erimo	10.36	237	*i* PN		Pn		06 50 39.0	-0.5
MAJO	Matsushiro	16.95	232	P		Pn		06 52 04.7	-2.3
MAJO				*e*				06 52 21.8	
YAK	Yakutsk	19.65	323	*i* P		Pn		06 52 39.2	-0.2
YAK					pmax	pmax			
	comp=Z,18nm,0.5s								
KSRS	Korea Array	22.38	251	P		P		06 53 06.7	-0.4
	comp=Z,2.9nm,0.8s,mb3.7,baz=56,slow=10,SNR=7.0								
KSRS	Korea Array	22.38	251	*e*P		P		06 53 07.7	+0.6
KSRS					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb3.8								
MK31	Makanchi Array	47.23	297	*e*P		P		06 56 40.3	-0.6
MKAR	Makanchi Array	47.23	297	P		P		06 56 40.1	-0.7
	comp=Z,1.7nm,0.6s,mb4.1,baz=64,slow=7.4,SNR=12								
MKAR	Makanchi Array	47.23	297	*e*P		P		06 56 40.5	-0.4
MKAR					pmax	pmax			
	comp=Z,2.0nm,0.6s								
KURK	Kurchatov	47.43	303	P		P		06 56 42.3	-0.1
	comp=Z,3.4nm,0.6s,mb4.5,baz=66,slow=8.6,SNR=34								
KURK	Kurchatov	47.43	303	P		P		06 56 42.3	-0.1
KURK					pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4								
KURK	Kurchatov	47.43	303	*e*P		P		06 56 41.3	-1.1
	comp=Z,5.1nm,0.7s,mb4.6								
CMAR	Chiang Mai Arr	53.85	257	P		P		06 57 32.3	+1.2
	comp=Z,1.0nm,0.3s,mb4.2,baz=32,slow=7.2,SNR=5.2								
CMAR	Chiang Mai Arr	53.85	257	*e*P		P		06 57 31.9	+0.8
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
PDAR	Pinedale Array	62.90	55	P		P		06 58 35.0	+1.1
	comp=Z,0.4nm,0.7s,mb3.6,baz=298,slow=3.2,SNR=4.0								
OBN	Obninsk	64.63	326	*e*P		P		06 58 44.1	-1.0
OBN					pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.5								
WRA	Warramunga Arr	70.40	200	P		P		06 59 20.5	-1.3
	comp=Z,1.7nm,1.1s,mb3.9,baz=13,slow=6.4,SNR=6.1								
WRA	Warramunga Arr	70.40	200	*e*P		P		06 59 21.4	-0.4
WRA					pmax	pmax			
	comp=Z,2.0nm,1.1s								
AKASG	Malin Array Be	70.84	327	P		P

BSO3				S	Sn	07 18 55.9	-0.4	
JKO	**Kozu shima**	**1.38**	**302**	P	Pn	07 18 39.4	-0.5	
JKO				S	Sn	07 18 55.7	-1.4	
BSO4	**Boso 4**	**1.54**	**354**	P	Pn	07 18 42.5	+0.3	
JOD2	**Odawara 2**	**2.17**	**327**	P	Pn	07 18 50.1	-0.6	
JHU	**Hanno**	**2.61**	**337**	P	Pn	07 18 56.7	0.0	
JRY	**Ryogami san**	**2.90**	**333**	P	Pn	07 19 00.8	+0.2	
MJAR	**Matsushiro Arr**	**3.63**	**329**	P	Pn	07 19 12.0	+1.3	
	2.0nm,0.3s,baz=158,slow=12,SNR=19							
MJAR				S	Sn	07 19 54.2	+1.9	
	1.3nm,0.3s,baz=146,slow=13,SNR=4.9							
MAT	**Matsushiro**	**3.63**	**329**	P	Pn	07 19 12.6	+1.9	
MAT				eS	Sn	07 19 52.8	+0.5	
WRA	**Warramunga Arr**	**53.42**	**187**	P	P	07 27 31.0	-0.6	
	0.7nm,0.5s,mb3.8,baz=1.8,slow=7.6,SNR=17							
ASAR	**Alice Springs**	**57.15**	**187**	P	P	07 27 58.0	-0.4	
	0.4nm,0.5s,mb3.7,baz=8.9,slow=8.3,SNR=9.0							

*ISCJB **14** 07:18:41.1±2.0,3346N±007×1403E±03,h76km±16km, mb3.9/2,Error ellipse: s-maj=48.9km s-min=8.2km az=168.8*
*JMA **14** 07:18:41.9±0.1,3357N×14046E,h43km,M3.4*
*IDC **14** 07:18:43.8±3.2,3333N×14006E,h70km±19km,mb3.5/2, mb1 3.8/3,mb1mx3.3/21,mbtmp3.5/3,MS4.1/1,Ms1 4.1/1, ms1mx2.7/28,Error ellipse: s-maj=91.2km s-min=11.5km az=80.0*

ISC 14 07:18:42.0±1.9,3348N×006×1404E±03,h64km±17km,n9, σ0$89/13,mb3.9/2,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.60**	**233**	P	Pn	07 18 55.5	+0.2
JHJ2				S	Sn	07 19 05.3	+0.2
JHJ	**Hachijo jima 2**	**0.62**	**235**	P	Pn	07 18 55.5	-0.1
	338nm,0.3s,baz=241,slow=22,SNR=4.4						
JHJ				S	Sn	07 19 05.4	0.0
	714nm,0.3s,baz=83,slow=22,SNR=12						
JMY	**Miyakejima3**	**0.94**	**309**	P	Pn	07 18 59.0	-0.4
JKO	**Kozu shima**	**1.26**	**305**	P	Pn	07 19 03.5	-0.1
JKO				eS	Sn	07 19 19.6	-0.1
JOD2	**Odawara 2**	**2.08**	**329**	P	Pn	07 19 14.0	-0.6
JOD2				S	Sn	07 19 37.2	-2.3
MJAR	**Matsushiro Arr**	**3.54**	**330**	P	Pn	07 19 35.8	+1.2
	3.2nm,0.3s,baz=159,slow=13,SNR=9.6						
MJAR				S	Sn	07 20 17.2	+2.1
	2.4nm,0.3s,baz=124,slow=16,SNR=4.5						
KSRS	**Korea Array**	**10.91**	**295**	LR	LR	07 24 16.1	
	comp=Z,1μm,19.2s,baz=322,slow=31						
WRA	**Warramunga Arr**	**53.43**	**187**	P	P	07 27 55.0	-0.5
	0.7nm,0.4s,mb3.9,baz=3.2,slow=7.6,SNR=13						
ASAR	**Alice Springs**	**57.16**	**187**	P	P	07 28 22.4	+0.2
	0.5nm,0.5s,mb3.8,baz=9.0,slow=8.4,SNR=8.9						

CASC 14 07:43:20.8±1.9,1337W×9021W,h31km±4km,MD3.8, ML3.1,10C-1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**0.74**	**50**⇑	*eP*	x	07 43 35.1	
SBLS				eS	x	07 43 46.3	
SNJE	**San Jose**	**0.77**	**49**⇑	*eP*	x	07 43 35.6	
SNJE				⇑*iP*	x	07 43 35.6	
SNJE				eS	x	07 43 46.9	
RBDL	**Robledal**	**0.90**	**34**⇑	*eP*	x	07 43 37.6	
RBDL				eS	x	07 43 51.2	
BOQS	**Boqueron**	**0.97**	**68**⇑	*iP*	x	07 43 38.5	
BOQS				eS	x	07 43 51.6	
BOQS				eS	x	07 43 52.0	
SNET	**Serv Nac Est T**	**1.00**	**71**⇑	*eP*	x	07 43 38.5	
SNET				eS	x	07 43 52.1	
SNET				*i*		07 43 55.0	
	comp=Z,421nm,0.2s						
PCG	**Pacaya**	**1.09**	**339**	*eP*	Pn	07 43 41.2	+1.3
PCG				eS	Sn	07 43 55.5	+1.5
LFU	**La Fuente**	**1.13**	**70**	*eP*	x	07 43 40.8	
LBRS	**Las Brisas**	**1.19**	**72**⇑	*eP*	x	07 43 41.6	
LBRS				eS	x	07 43 58.4	
NBG	**Las Nubes**	**1.22**	**354**⇓	*eP*	Pn	07 43 43.7	+2.0
NBG				eS	Sn	07 44 00.9	+3.7
FUG	**Fuego 3**	**1.24**	**330**	*eP*	Pn	07 43 42.4	+0.4
FUG				eS	Sn	07 43 57.5	-0.1
MTO2	**Montecristo 2**	**1.32**	**39**⇑	*iP*	x	07 43 43.0	
SNVI	**San Vicente**	**1.35**	**79**⇑	*eP*	x	07 43 43.9	
SNVI				eS	x	07 44 01.6	
SNVI				eS	x	07 44 01.7	
FG6		**1.36**	**331**	*eP*	Pn	07 43 44.2	+0.6
FG6				eS	Sn	07 44 02.0	+1.5
VSM	**San Miguel**	**1.88**	**88**	*eP*	x	07 43 51.5	
VSM				eS	x	07 44 16.1	
BLLM	**Bellamira**	**1.92**	**87**	*eP*	x	07 43 51.6	
BLLM				eS	x	07 44 15.4	
CNCH	**Conchagua**	**2.31**	**92**⇑	*eP*	x	07 43 56.6	
CNCH				eS	x	07 44 25.4	

IDC 14 07:48:24.8±6.4,170S×10177E,h0km,mb3.2/2,mb1 3.4/2, mb1mx3.3/18,mbtmp3.2/2,Error ellipse: s-maj=364.6km s-min=86.0km az=47.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.63**	**122**	P	P	07 55 32.6	-0.7
	0.1nm,0.3s,baz=298,slow=8.3,SNR=1.4						
ASAR	**Alice Springs**	**38.02**	**128**	P	P	07 55 45.3	+0.3
	0.3nm,0.8s,baz=300,slow=7.6,SNR=5.4						
TXAR	**Lajitas Array**	**143.38**	**39**	PKP	PKPdf	08 08 02.1	+0.1
	0.2nm,0.5s,baz=199,slow=0.3,SNR=8.6						

*ISCJB **14** 07:50:36.5±0.9,1853S±008×178.18W±008,h427km±10km, mb4.2/26,Error ellipse: s-maj=15.7km s-min=7.9km az=138.1*
*MOS **14** 07:50:37.1±1.0,1854S×178.14W,h432km,mb4.4/8,Error ellipse: s-maj=21.2km s-min=11.9km az=144.3*
*IDC **14** 07:50:38.7±2.1,1861S×178.10W,h439km±24km,mb3.9/12, mb1 4.1/13,mb1mx3.9/20,mbtmp3.9/13,Error ellipse: s-maj=21.7km s-min=11.7km az=142.0*
*NEIC **14** 07:50:38.2±1.0,1852S×178.15W,h436km±11km,mb4.3/15, Error ellipse: s-maj=13.4km s-min=7.0km az=137.0*

ISC 14 07:50:38.2±1.1,1853S±008×17816W±008,h433km±12km, n65,σ0$89/59,mb4.2/26,5C-4D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.66**	**54**	P	P	07 52 29.8	0.0
	6.6nm,0.3s,baz=28,slow=20,SNR=6.9						
AFI				S	S	07 53 56.9	-4.3
	0.8nm,0.3s,baz=15,slow=20,SNR=2.0						
AFI	**Afiamalu**	**7.66**	**54**	P	P	07 52 29.8	0.0
AFI				S	S	07 53 56.9	-4.3
AFI				pmax	pmax		
	comp=Z,7.0nm,0.3s						
AFI				smax			
	comp=N,1.0nm,0.3s						
AFI	**Afiamalu**	**7.66**	**54**	*eP*	P	07 52 29.4	-0.5
AFI				S	S	07 53 56.9	-4.3
AFI				eS	S	07 54 01.3	+0.1
FUNA	**Funafuti**	**10.27**	**345**	*eP*	P	07 52 58.4	-0.1
	comp=N,162nm,1.1s						
URZ	**Urewera**	**20.09**	**191**	P	P	07 54 39.7	-1.6
	comp=N,6.9nm,0.3s,baz=292,slow=3.5,SNR=23						
RPZ	**Rata Peaks**	**26.71**	**198**	P	P	07 55 41.1	+0.4
	comp=N,4.9nm,0.8s,mb4.0,baz=80,slow=6.1,SNR=3.1						
CNB	**Canberra Magne**	**33.24**	**233**	*eP*	P	07 56 38.8	+1.1
CAN	**Canberra**	**33.52**	**233**	*eP*	P	07 56 41.1	+1.1
CTA	**Charters Tower**	**33.58**	**261**	*eP*	P	07 56 41.5	+0.7
	comp=N,14nm,0.8s,mb4.3						
CTA	**Charters Tower**	**33.58**	**261**	*eP*	P	07 56 41.5	+0.7
CTA				pmax	pmax		
	comp=Z,14nm,0.8s						
CTAO	**Charters Tower**	**33.58**	**261**	*eP*	P	07 56 40.8	0.0
CTAO				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.6						
CTAO	**Charters Tower**	**33.58**	**261**	*eP*	P	07 56 40.8	0.0
	comp=Z,27nm,0.8s,mb4.6						
TOO	**Toolangi**	**36.97**	**232**	*eP*	P	07 57 09.4	+0.5
STKA	**Stephens Creek**	**38.54**	**242**	⇑*iP*	P	07 57 23.2	+1.2
	comp=Z,8.3nm,0.3s,mb4.5						
STKA	**Stephens Creek**	**38.54**	**242**	P	P	07 57 23.2	+1.2
	comp=Z,13nm,0.3s,mb4.7,baz=84,slow=8.9,SNR=59						
STKA	**Stephens Creek**	**38.54**	**242**	*eP*	P	07 57 23.1	+1.1
	comp=Z,32nm,0.8s,mb4.7						
WB2	**Warramunga Arr**	**44.74**	**260**	*eP*	P	07 58 11.0	-0.6
WRAB	**Tennant Creek**	**44.75**	**260**⇑	*eP*	P	07 58 10.9	-0.7
WRAB	**Tennant Creek**	**44.75**	**260**	*eP*	P	07 58 10.8	-0.8
	comp=Z,6.2nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**44.76**	**260**	P	P	07 58 11.2	-0.5
	comp=Z,6.4nm,0.5s,mb4.2,baz=98,slow=6.5,SNR=246						
WRA				PcP	PcP	07 59 44.7	-0.5
	comp=Z,1.8nm,1.1s,baz=91,slow=3.5,SNR=5.4						
WRA				S	S	08 04 10.1	-5.9
	comp=Z,1.4nm,1.0s,baz=92,slow=14,SNR=7.0						
ASAR	**Alice Springs**	**44.85**	**255**	P	P	07 58 12.8	+0.3
	comp=Z,32nm,0.4s,mb5.0,baz=89,slow=8.6,SNR=1000						
ASAR				PcP	PcP	07 59 44.6	-0.9
	comp=Z,2.0nm,0.5s,baz=98,slow=4.3,SNR=5.8						
ASAR				S		08 04 13.4	-4.0
	comp=Z,1.4nm,0.9s,baz=93,slow=17,SNR=8.7						
FORT	**Forrest**	**49.96**	**245**	*eP*	P	07 58 50.6	-0.4
	comp=Z,32nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.16**	**261**	*eP*	P	07 59 14.8	+0.3
	comp=Z,7.7nm,0.5s,mb4.2						
FITZ	**Fitzroy Crossi**	**53.16**	**261**	P	P	07 59 15.0	+0.5
	comp=Z,3.9nm,0.5s,mb3.9,baz=122,slow=8.6						
MBWA	**Marble Bar**	**58.15**	**256**	*eP*	P	07 59 47.7	-1.8
	comp=Z,14nm,0.8s,mb4.3						
SBA	**Scott Base**	**59.82**	**184**	*eP*	P	08 00 01.0	+1.2
SBA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
SBA	**Scott Base**	**59.82**	**184**	*eP*	P	08 00 01.0	+1.3
	comp=Z,8.3nm,1.0s,mb4.1						
CASY	**Casey**	**65.68**	**205**	P	P	08 00 37.2	-0.7
KSM	**Kuching**	**73.00**	**277**	*eP*	P	08 01 22.7	-0.5
ISA	**Isabella**	**78.07**	**46**	*eP*	P	08 01 51.3	+0.2
ISA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
ISA	**Isabella**	**78.07**	**46**	*eP*	P	08 01 51.3	+0.2
	comp=Z,2.2nm,0.8s,mb3.8						
CMB	**Columbia Colle**	**78.13**	**43**	P	P	08 01 51.4	+0.1
CMB				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
CMB	**Columbia Colle**	**78.13**	**43**	*eP*	P	08 01 51.4	+0.1
	comp=Z,2.3nm,0.8s,mb3.9						
KDAK	**Kodiak Island**	**78.94**	**14**	P	P	08 01 55.3	+0.1
	comp=Z,3.5nm,0.6s,mb4.2,baz=179,slow=3.6,SNR=3.4						
NVAR	**Mina Array Bea**	**79.70**	**44**	P	P	08 02 00.7	+1.0
	comp=Z,1.6nm,0.7s,mb3.8,baz=223,slow=8.8,SNR=11						
MAW	**Mawson**	**83.36**	**200**	P	P	08 02 18.2	0.0
	comp=Z,0.8nm,0.4s,mb3.8,baz=121,slow=5.9,SNR=3.6						
TRF	**Thorofare Moun**	**84.56**	**12**	*eP*	P	08 02 23.0	-1.0
	comp=Z,12nm,0.7s,mb4.8						
MCK	**McKinley**	**85.09**	**13**	*eP*	P	08 02 25.6	-1.0
TXAR	**Lajitas Array**	**86.13**	**57**	P	P	08 02 33.6	+1.2
	comp=Z,5.2nm,0.7s,mb4.3,baz=219,slow=6.4,SNR=75						
ANMO	**Albuquerque**	**86.30**	**51**	P	P	08 02 32.8	-0.3
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANMO	**Albuquerque**	**86.30**	**51**	P	P	08 02 32.8	-0.3
	comp=Z,3.3nm,1.0s,mb4.0						
COLA	**College**	**86.32**	**12**	*eP*	P	08 02 31.1	-1.4
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
COLA	**College**	**86.32**	**12**	*eP*	P	08 02 31.1	-1.4
	comp=Z,4.9nm,0.7s,mb4.3						
MCMT	**McKenzie Canyo**	**86.55**	**40**	*eP*	P	08 02 34.5	+0.4
BILL	**Bilibino**	**87.07**	**354**	*eP*	P	08 02 35.6	-0.4
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
PDAR	**Pinedale Array**	**87.64**	**43**	P	P	08 02 39.6	+0.3
	comp=Z,1.6nm,0.8s,mb3.8,baz=215,slow=2.4,SNR=14						
WALA	**Waterton Lakes**	**88.09**	**36**	P	P	08 02 41.1	-0.2
	comp=Z,2.2nm,0.8s,mb3.9						
SDCO	**Great Sand Dun**	**88.19**	**49**	P	P	08 02 42.3	+0.3
CMAR	**Chiang Mai Arr**	**89.31**	**290**	P	P	08 02 48.9	+1.3
	comp=Z,1.0nm,0.3s,mb4.0,baz=116,slow=2.7,SNR=6.2						
SNAA	**Sanae**	**89.98**	**179**	P	P	08 02 47.8	-1.9
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SNAA	**Sanae**	**89.98**	**179**	P	P	08 02 47.8	-1.9
	comp=Z,5.8nm,1.4s,mb4.2						
TIXI	**Tiksi**	**96.81**	**345**⇓	*eP*	P	08 03 22.7	+1.9
TIXI				pmax	pmax		
	comp=Z,17nm,1.6s,mb4.9						
ZAK	**Zakamensk**	**97.02**	**321**	*eP*	P	08 03 17.2	-4.9
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
HVS	**Khovu-Aksy**	**103.05**	**320**⇓	*eP*	Pdif	08 03 49.7	+0.5
MKAR	**Makanchi Array**	**109.73**	**314**	PKiKP	PKiKP	08 08 16.7	-2.1
	comp=Z,0.3nm,0.5s,baz=93,slow=2.9,SNR=4.7						
ARU	**Arti**	**123.49**	**326**	*i* PKIKP	PKPdf	08 08 43.9	-1.0
ARU						08 10 29.2	
ARCES	**ARCESS Array B**	**126.96**	**350**	PKP	PKPdf	08 08 49.3	-1.9
	comp=Z,2.5nm,0.8s,baz=24,slow=4.1,SNR=4.6						
OBN	**Obninsk**	**134.95**	**332**	*e*PKIKP	PKPdf	08 09 05.3	-1.4
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLL	**Collm**	**146.12**	**347**⇑	*i* PKPbc	PKPbc	08 09 27.9	-0.7
	comp=Z,13nm,0.7s						
BRG	**Berggiesshubel**	**146.32**	**346**	*i* PKP	PKPdf	08 09 28.9	+1.7
	comp=Z,5.0nm,0.7s						
KHC	**Kasperske Hory**	**148.03**	**345**⇓	*i* PKP2	PKPbc	08 09 33.1	-0.7
GERES	**GERESS Array B**	**148.27**	**345**	PKPbc	PKPbc	08 09 33.8	-0.6
	comp=Z,2.4nm,0.7s,baz=14,slow=2.8,SNR=16						
CONA	**Conrad Observa**	**148.52**	**342**⇑	*i* P	PKPbc	08 09 34.8	-0.2
	comp=Z,9.1nm,1.0s						
CSNA	**Conrad Observa**	**148.52**	**342**⇓	*i* P	PKPbc	08 09 34.9	-0.2
	comp=Z,7.7nm,1.0s						
ABTA	**Abfaltersbach**	**150.51**	**345**⇑	*i* P	PKPbc	08 09 38.4	-1.5
	comp=Z,7.9nm,0.9s						

*CSEM **14** 07:54:25.0,3783N×5614E,h3km,ML3.6,After TEH*
*TEH **14** 07:54:25.0,3780N×5614E,h1km,ML3.6*
*ISCJB **14** 07:54:45.3±1.6,377N±01×5608E±004,h3km±8km,Error ellipse: s-maj=18.9km s-min=4.5km az=172.5*

ISC 14 07:54:45.4±1.7,378N±01×5613E±005,h0km±8km,n19, σ0$89/29,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHV	**Shirvan**	**1.28**	**102**	*eP*g	**Pg**	**07 55 08.9**	**-1.0**
ISHV	**Shirvan**	**1.28**	**102**	*eP*g	**Pg**	**07 55 08.7**	**-1.2**
ISHV				*e*		07 55 41.0	
ISFR	**Sfrayin**	**1.67**	**116**	*eP*n	**Pn**	**07 55 16.3**	**+0.5**
IEMG	**Emamgholi**	**2.04**	**100**	*eP*n	**Pn**	**07 55 21.0**	**+0.1**
IEMG				*e*		07 55 56.4	
IKRD	**Kardeh**	**2.16**	**118**	*eP*n	**Pg**	**07 55 33.5**	**+6.7**
IKRD				*e*		07 56 26.1	
IGLO	**Ghaloghah**	**2.25**	**235**	*eP*n	**Pn**	**07 55 22.0**	**-1.8**
IKIA	**Kiasar**	**2.52**	**232**	*eP*n	**Pn**	**07 55 27.5**	**-0.1**
IPAY	**Payeh**	**2.66**	**120**	*eP*n	**Pn**	**07 55 30.0**	**+0.6**
IPAY				*eS*n	**Sn**	**07 56 01.9**	**-0.5**
IPAY	**Payeh**	**2.66**	**120**	*eP*n	**Pn**	**07 55 30.0**	**+0.6**
IPAY				*eS*n	**Sn**	**07 56 01.9**	**-0.5**
IPAY				*e*	**Sg**	**07 56 16.0**	**+5.1**
IANJ	**Anjilo**	**2.94**	**218**	*eP*n	**Pn**	**07 55 32.7**	**-0.5**
ISHM	**Shahmirzad**	**3.03**	**230**	*eP*n	**Pn**	**07 55 34.2**	**-0.3**
MHI	**Mashad**	**3.06**	**118**	*eP*n	**Pn**	**07 55 36.3**	**+1.3**
MHI				*eS*n	**Sn**	**07 56 11.9**	**-0.4**
IMOG	**Moghan**	**3.08**	**122**	*eP*n	**Pn**	**07 55 35.8**	**+0.6**
IMOG				*e*	**Sg**	**07 55 42.2**	**-2.2**
IFIR	**Firoozkooh**	**3.47**	**232**	*eP*n	**Pn**	**07 55 40.3**	**-0.2**
IFIR				*eS*n	**Sn**	**07 56 21.7**	**-0.5**
IFIR	**Firoozkooh**	**3.47**	**232**	*eP*n	**Pn**	**07 55 40.3**	**-0.2**
IFIR				*eS*n	**Sn**	**07 56 21.7**	**-0.5**
IFIR				*e*	**Sg**	**07 56 36.0**	**-0.7**
IMYA	**Miami**	**3.50**	**113**	*eP*n	**Pn**	**07 55 41.0**	**+0.1**
IMYA	**Miami**	**3.50**	**113**	*eP*n	**Pn**	**07 55 41.5**	**+0.6**
IMYA				*e*		07 56 56.3	
IDMV	**Damavand**	**3.97**	**237**	*eP*n	**Pn**	**07 55 48.2**	**+0.7**
IDMV				*e*	**Sg**	**07 56 58.5**	**+5.4**
IVRN	**Varamin**	**4.52**	**233**	*eP*n	**Pn**	**07 55 55.7**	**+0.6**
IVRN				*e*	**Sg**	**07 57 12.3**	**+1.6**

IDC 14 08:30:18.7±3.8,329S×10031E,h0km,mb3.7/5,mb1 3.9/5, mb1mx3.7/19,mbtmp3.7/5,Error ellipse: s-maj=148.7km s-min=21.3km az=58.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.66**	**356**	P	P	08 35 12.0	+1.1
	1.3nm,0.4s,baz=184,slow=8.1,SNR=4.1						
WRA	**Warramunga Arr**	**37.09**	**119**	P	P	08 37 29.1	-1.9
	0.2nm,0.4s,baz=298,slow=10,SNR=6.5						
ASAR	**Alice Springs**	**38.25**	**125**	P	P	08 37 42.5	+1.7
	0.4nm,0.4s,baz=300,slow=7.7,SNR=11						
SONM	**Songino Array**	**51.19**	**5**	P	P	08 39 23.7	+0.1
	1.7nm,0.6s,baz=199,slow=7.5,SNR=8.9						
MKAR	**Makanchi Array**	**52.35**	**344**	P	P	08 39 31.9	-0.4
	0.6nm,0.5s,baz=149,slow=6.7,SNR=2.4						
TXAR	**Lajitas Array**	**145.52**	**39**	PKPbc	PKPbc	08 49 58.8	-0.8
	0.6nm,0.7s,baz=280,slow=1.0,SNR=8.2						

*ISCJB **14** 08:44:58.9±3.2,384N±03×76E±,h10km,Error ellipse: s-maj=134.7km s-min=5.8km az=158.2*
*BJI **14** 08:45:08.2,3909N×7693E,h15km,ML3.3*

ISC 14 08:45:01.6±2.0,385N±05×77E±,h10km,n9,σ0$41/10, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.11**	**336**	*eP*G	**Pg**	**08 45 22.3**	**-0.6**
KSH				SG	**Sg**	**08 45 37.8**	**+0.4**
KSH				Smax			
	comp=N,747nm,0.2s						
KSH				Smax			
	comp=E,1μm,0.5s						
DANN	**Dangsing**	**11.78**	**147**	*eP*	**Pn**	**08 47 49.5**	**-0.1**
KOLN	**Koldanda**	**12.22**	**149**	*eP*	**Pn**	**08 47 56.0**	**+0.3**
GKN	**Gorkha**	**12.46**	**145**	*eP*	**Pn**	**08 47 59.0**	**0.0**
KKN	**Kakani**	**12.94**	**143**	*eP*	**Pn**	**08 48 05.9**	**+0.4**
DMN	**Daman**	**13.01**	**144**	*eP*	**Pn**	**08 48 06.4**	**-0.1**
PKI	**Pulchoki**	**13.18**	**143**	*eP*	**Pn**	**08 48 09.0**	**+0.1**
JIRN	**Jiri**	**13.49**	**140**	*eP*	**Pn**	**08 48 13.4**	**+0.4**
RAMN	**Ramite**	**14.28**	**141**	*eP*	**Pn**	**08 48 23.0**	**-0.8**
	comp=E,15nm,0.6s						

JMA 14 08:52:17.7±0.1,4364N×14692E,h50km±3km,M3.6,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.90**	**253**	P	Pn	08 52 34.3	+0.3
NEM2				eS	Sn	08 52 46.4	+0.4
JRA	**Rausu**	**1.34**	**283**	P	Pn	08 52 40.2	+0.3
JRA				eS	Sn	08 52 56.8	+0.2
JNK	**Nakash**	**1.60**	**269**	P	Pn	08 52 43.9	+0.4
JNK				eS	Sn	08 53 02.9	-0.1
JAK	**Akkeshi**	**1.75**	**249**	P	Pn	08 52 46.1	+0.6
JAK				eS	Sn	08 53 07.0	+0.4
JTKR	**Abashiri--Toko**	**2.21**	**280**	P	Pn	08 52 52.6	+0.8
JAR	**Ashorobuto**	**2.32**	**263**	P	Pn	08 52 54.6	+1.2
JAR				eS	Sn	08 53 21.8	+1.2
JOB	**Onbets**	**2.37**	**253**	P	Pn	08 52 55.1	+1.0
JOB				eS	Sn	08 53 23.4	+1.5
JMP	**Maruseppu**	**2.60**	**279**	P	Pn	08 52 57.9	+0.7
JCH	**Churui**	**2.80**	**250**	P	Pn	08 53 01.3	+1.4
JCH				eS	Sn	08 53 33.3	+0.9

IDC 14 08:54:50.2±10.0,284S×12918E,h0km,mb4.3/2, mb1 4.3/4,mb1mx3.9/16,mbtmp4.1/4,ML3.8/2,Error ellipse: s-maj=158.8km s-min=102.3km az=140.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**15.56**	**193**	Pn	Pn	08 58 32.2	+1.1
	0.1nm,0.3s,baz=348,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**17.73**	**164**	P	Pn	08 58 58.1	-0.5
	0.6nm,0.3s,baz=345,slow=12,SNR=89						
WB2	**Warramunga Arr**	**17.74**	**164**	*eP*	Pn	08 58 56.7	-2.0
ASAR	**Alice Springs**	**21.21**	**168**	P	P	08 59 37.5	0.0
	15nm,0.6s,baz=349,slow=11,SNR=298						
STKA	**Stephens Creek**	**31.16**	**159**	P	P	09 01 11.0	+0.1
	3.0nm,1.0s,baz=320,slow=7.9,SNR=5.5						

IDC 14 09:02:29.6±3.6,249S×9905E,h0km,mb3.7/5,mb1 3.9/5, mb1mx3.7/19,mbtmp3.7/5,Error ellipse: s-maj=136.7km s-min=21.2km az=59.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.82**	**360**	P	P	09 07 14.4	+1.6
	1.1nm,0.3s,baz=224,slow=6.0,SNR=6.7						
WRA	**Warramunga Arr**	**38.57**	**119**	P	P	09 09 54.2	-0.3
	0.3nm,0.4s,baz=302,slow=9.5,SNR=10						
ASAR	**Alice Springs**	**39.74**	**125**	P	P	09 10 04.5	+0.2
	0.4nm,0.5s,baz=299,slow=7.7,SNR=9.1						
SONM	**Songino Array**	**50.53**	**6**	P	P	09 11 28.7	-0.9
	1.6nm,0.7s,baz=184,slow=9.1,SNR=10						
MKAR	**Makanchi Array**	**51.25**	**345**	P	P	09 11 34.9	-0.2
	1.3nm,0.7s,baz=149,slow=7.9,SNR=7.5						
TXAR	**Lajitas Array**	**145.66**	**37**	PKPbc	PKPbc	09 22 11.0	0.0
	0.8nm,0.7s,baz=240,slow=0.9,SNR=11						

*ISCJB **14** 09:06:55.2±0.6,2979S±004×14860E±006,h10km,

*CSEM **14** 09:22:05.1, 1225N×4283E, h11km, ML3.6, After DHMR*
DHMR 14 09:22:05.1±1.4, 1225N×4283E, h12km±15km, ML3.6, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	**At Turbah**	**1.59**	**52**	*i* P	Pn	09 22 34.5	+1.4
TRBA				*i* S	Sn	09 22 55.7	+2.2
TRBA				AML	AML	09 23 03.6	
	comp=E,883nm,0.3s						
TRBA	**At Turbah**	**1.59**	**52**	*i* P	Pn	09 22 34.5	+1.4
TRBA				*i* S	Sn	09 22 55.7	+2.2
	comp=E,442nm,0.3s						
UDYN	**Al 'Udayn**	**2.03**	**33**	*i* P	Pn	09 22 41.0	+1.8
UDYN				*i* S	Sn	09 23 09.0	+4.4
UDYN				AML	AML	09 23 20.8	
	comp=E,593nm,0.5s						
UDYN	**Al 'Udayn**	**2.03**	**33**	*i* P	Pn	09 22 41.0	+1.8
UDYN				*i* S	Sn	09 23 09.0	+4.5
	comp=E,297nm,0.5s						
DHBB	**Dhamar BB**	**2.76**	**33**	*i* P	Pn	09 22 52.4	+3.2
DHBB				*i* S	Sn	09 23 29.0	+6.5
LBOS		**2.85**	**55**	*i* P	Pn	09 22 52.9	+2.4
LBOS				*i* S	Sn	09 23 31.1	+6.2
BDHA	**Al Bayda'**	**3.17**	**57**	*i* P	Pn	09 22 57.8	+2.9
BDHA				*i* S	Sn	09 23 39.7	+7.1
BDHA				AML	AML	09 23 47.1	
	comp=E,248nm,0.5s						
BDHA	**Al Bayda'**	**3.17**	**57**	*i* P	Pn	09 22 57.8	+3.0
BDHA				*i* S	Sn	09 23 39.7	+7.1
	comp=E,124nm,0.5s						

MAN 14 09:51:41, 801N×12612E, h20km, mb3.7, ML2.4, MS2.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.30**	**54**↑	*i* P	Pb	09 51 48.6	+0.9
BIPH				*i* S	Sb	09 51 56.8	+4.6
BUKP	**Musuan**	**1.05**	**263**	*e*P	Pb	09 51 59.7	-0.8
BUKP				*e*S	Sb	09 52 15.6	+1.8
MATI	**Mati**	**1.06**	**172**	*e*P	Pb	09 52 00.2	-0.5
BUTP	**Butuan**	**1.07**	**333**	*e*P	Sb	09 52 20.2	+5.7

CASC 14 09:52:53.5±1.5, 967N×8515W, h26km±3km, MD4.0, ML2.7, 3C-4D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAO	**Cobano**	**0.05**	**56**↑	*i* P	Pb	09 52 57.4	-0.6
JCR	**Jicaral**	**0.18**	**11**↓	*i* P	Pb	09 52 58.5	-0.5
VCR	**Vista de Mar**	**0.66**	**313**	*e*P	Pb	09 53 06.1	-0.3
CGA2	**Cerro Gallo 2**	**0.75**	**63**↓	*e*P	Pb	09 53 08.0	0.0
CGA2				*e*S	Sb	09 53 18.6	+0.7
PRS1	**Puriscal**	**0.88**	**69**↑	*e*P	Pb	09 53 08.8	-1.3
FORC	**Fortuna**	**0.92**	**31**	*i* P	Pn	09 53 10.9	+0.1
FORC				*i* S	Sb	09 53 22.8	0.0
CUI		**0.99**	**358**	*i* P	Pn	09 53 11.4	-0.2
CUI				*i* S	Sb	09 53 24.5	-0.1
SJS	**Escuela Geolog**	**1.11**	**76**	*e*P	Pn	09 53 14.9	+1.6
LCR2	**La Lucha 2**	**1.13**	**86**↑	*e*P	Pn	09 53 13.7	+0.1
LCR2				*e*S	Sn	09 53 29.5	+1.2
BUS	**Buena Vista**	**1.37**	**95**↓	*e*P	Pn	09 53 17.1	+0.1
BAR1		**1.86**	**103**	*e*P	Pn	09 53 24.0	+0.3
BAR1				*e*S	Sn	09 53 46.6	+0.2
CONN	**Concepcion**	**1.94**	**346**	*e*P	Pn	09 53 27.9	+3.2
ACR	**Cerro Adams**	**2.20**	**117**↓	*e*P	Pn	09 53 28.5	+0.1
ACR				*e*S	Sn	09 53 54.0	-0.7
CTCR	**Cotoan**	**2.48**	**108**	*e*P	Pn	09 53 32.8	+0.6
LAPE	**La Pedrera**	**13.58**	**98**	*i* P		09 53 13.3	
LAPE				*i* S		09 53 29.1	

*BJI **14** 10:11:19.0, 183S×9998E, h42km, mB5.2, mb4.8, Ms4.4, Msz4.1*
*MOS **14** 10:11:19.8±0.8, 159S×9978E, h35km, mb4.8/10, Error ellipse: s-maj=17.1km s-min=9.2km az=100.1*
*ISCJB **14** 10:11:20.2±0.5, 160S±009×998E±0.1, h38km, mb4.6/35, MS4.0/6, Error ellipse: s-maj=17.7km s-min=6.7km az=141.0*
*IDC **14** 10:11:21.9±0.8, 167S×9973E, h38km±5km, mb4.1/14, mb1 4.2/14, mb1mx4.1/21, mbtmp4.1/14, MS3.9/3, Ms1 4.0/3, ms1mx3.2/38, Error ellipse: s-maj=26.2km s-min=12.1km az=58.0*
*NEIC **14** 10:11:21.1±0.4, 169S×9975E, h35km, mb4.5/9, Error ellipse: s-maj=15.6km s-min=6.8km az=54.0*
ISC 14 10:11:22.4±0.5, 161S±007×9985E±009, h40km, h40km±1.0km:pP-P, n70, σ0s88/59, mb4.6/35, MS4.0/6, 2C-4D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RGRI	**Rengat**	**2.78**	**63**	P	**Pn**	**10 12 12.0**	**+7.5**
	0.0nm,0.0s						
KSI	**Kapahiang**	**3.41**	**127**	P	**Pn**	**10 12 15.6**	**+2.5**
	0.0nm,0.0s						
TRSI	**Tarutung**	**3.72**	**346**	P	**Pn**	**10 12 25.6**	**+8.2**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**19.96**	**357**	P	**Pn**	**10 15 51.2**	**-2.0**
	3.9nm,0.7s,baz=189,slow=10.0,SNR=19						
CMAR				LR	LR	10 24 25.2	
	comp=Z,275nm,18.3s,baz=165,slow=39						
KAPI	**Kappang**	**20.15**	**100**	P	**P**	**10 15 51.6**	**-1.9**
	4.7nm,0.8s,baz=53,slow=15,SNR=3.1						
KAPI				LR	LR	10 24 45.8	
	comp=Z,278nm,19.0s,MS3.6,baz=298,slow=40						
KAPI	**Kappang**	**20.15**	**100**	P	**P**	**10 15 51.6**	**-1.9**
KAPI				LR	LR	10 24 45.8	
CHTO	**Chiang Mai**	**20.32**	**358**	*e*P	**P**	**10 15 56.9**	**+1.7**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	**Chiang Mai**	**20.32**	**358**	*e*P	**P**	**10 15 56.9**	**+1.8**
	comp=Z,4.8nm,0.8s						
QIZ	**Qiongzhong**	**22.74**	**25**	P	**P**	**10 16 20.3**	**-0.9**
QIZ				S	**S**	**10 20 28.0**	**+0.6**
QIZ				LR	LR		
	comp=E,332nm,13.5s						
QIZ				LR	LR		
	comp=Z,239nm,15.0s,MS3.8						
FITZ	**Fitzroy Crossi**	**30.15**	**125**	*e*P	**P**	**10 17 28.3**	**-0.6**
	comp=Z,5.4nm,0.9s,mb4.3						
ODAN	**Odare**	**30.75**	**338**	*e*P	**P**	**10 17 34.7**	**+0.7**
	comp=Z,32nm,0.9s,mb5.1						
TAPN	**Taplejung**	**31.08**	**339**	*e*P	**P**	**10 17 38.2**	**+1.3**
RAMN	**Ramite**	**31.14**	**337**	*e*P	**P**	**10 17 38.3**	**+0.9**
	comp=Z,10nm,0.6s,mb4.8						
JIRN	**Jiri**	**31.93**	**337**	*e*P	**P**	**10 17 45.2**	**+0.8**
	comp=Z,47nm,0.9s,mb5.3						
GUN	**Gumba**	**32.28**	**336**	*e*P	**P**	**10 17 48.1**	**+0.6**
	comp=Z,23nm,0.5s,mb5.2						
DMN	**Daman**	**32.33**	**335**	*e*P	**P**	**10 17 48.0**	**+0.1**
	comp=Z,19nm,0.9s,mb4.9						
KKN	**Kakani**	**32.42**	**335**	*e*P	**P**	**10 17 49.2**	**+0.5**
	comp=Z,20nm,0.9s,mb5.0						
DANN	**Dangsing**	**33.56**	**334**	*e*P	**P**	**10 17 59.1**	**+0.4**
WRA	**Warramunga Arr**	**38.31**	**121**	P	**P**	**10 18 39.2**	**-0.4**
	comp=Z,4.2nm,0.5s,mb4.4,baz=302,slow=9.2,SNR=46						
WRA				PcP	PcP	10 20 53.1	+0.1
	comp=Z,0.6nm,0.5s,baz=314,slow=2.6,SNR=5.7						
WRAB	**Tennant Creek**	**38.32**	**121**	*e*P	**P**	**10 18 39.4**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
WRAB	**Tennant Creek**	**38.32**	**121**	*e*P	**P**	**10 18 39.4**	**-0.2**
	comp=Z,5.5nm,0.7s,mb4.4						
WB2	**Warramunga Arr**	**38.33**	**121**	*i*P	**P**	**10 18 39.0**	**-0.6**
WB2	**Warramunga Arr**	**38.33**	**121**	*e*P	**P**	**10 18 38.3**	**-1.3**
FORT	**Forrest**	**39.43**	**140**	*e*P	**P**	**10 18 49.8**	**+1.1**
	comp=Z,6.8nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**39.60**	**126**	P	**P**	**10 18 50.6**	**+0.4**
	comp=Z,2.8nm,0.7s,mb4.1,baz=300,slow=7.3,SNR=37						
ASAR				pP	pP	10 19 01.6	0.0
	comp=Z,8.0nm,0.9s,baz=306,slow=8.0,SNR=20						
ASAR				PcP	PcP	10 20 57.2	+0.2
	comp=Z,1.3nm,0.8s,baz=289,slow=2.8,SNR=5.7						
WMQ	**Urumqi**	**46.52**	**348**	P	**P**	**10 19 47.3**	**+1.4**
WMQ				AP	pP	10 19 58.5	+1.1
WMQ				AMB	AMB		
	comp=Z,16nm,0.7s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,200nm,5.4s						
WMQ				LR	LR		
	comp=Z,186nm,19.6s,MS4.0						
KSRS	**Korea Array**	**46.76**	**31**	P	**P**	**10 19 48.4**	**+0.5**
	comp=Z,2.7nm,0.8s,mb4.2,baz=222,slow=8.3,SNR=8.7						
KSRS				pP	pP	10 19 59.0	-0.3
	comp=Z,4.2nm,0.8s,baz=222,slow=8.8,SNR=6.7						
KSRS	**Korea Array**	**46.76**	**31**	P	**P**	**10 19 48.4**	**+0.5**
KSRS				*PP	pP	10 19 59.1	-0.3
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CTA	**Charters Tower**	**48.89**	**115**	P	**P**	**10 20 04.9**	**+0.2**
	comp=Z,2.7nm,0.8s,mb4.3,baz=194,slow=4.2,SNR=3.0						
CTA				LR	LR	10 41 19.2	
	comp=Z,149nm,19.5s,MS4.0,baz=137,slow=37						
STKA	**Stephens Creek**	**49.52**	**132**	*e*P	**P**	**10 20 10.1**	**+0.8**
	comp=Z,3.4nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**49.52**	**132**	P	**P**	**10 20 09.6**	**+0.3**
	comp=Z,3.1nm,0.6s,mb4.5,baz=284,slow=18,SNR=8.8						
AML	**Almayashu**	**49.55**	**334**	*e*P	**P**	**10 20 08.1**	**-1.3**
	comp=Z,4.6nm,0.6s,mb4.7						
SONM	**Songino Array**	**49.57**	**6**	P	**P**	**10 20 10.4**	**+1.0**
	comp=Z,3.2nm,0.6s,mb4.5,baz=189,slow=8.9,SNR=18						
SONM				pP	pP	10 20 21.0	+0.1
	comp=Z,3.8nm,0.7s,baz=183,slow=8.6,SNR=9.8						
SONM				PcP	PcP	10 21 31.0	+0.3
	comp=Z,1.8nm,0.7s,baz=180,slow=4.4,SNR=3.1						
ULN	**Ulaanbaatar**	**49.67**	**6**	*e*P	**P**	**10 20 10.1**	**-0.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ULN	**Ulaanbaatar**	**49.67**	**6**	*e*P	**P**	**10 20 10.1**	**-0.1**
	comp=Z,1.8nm,0.6s,mb4.3						
EKS2	**Erkin-Say**	**49.95**	**335**	*e*P	**P**	**10 20 12.2**	**-0.2**
	comp=Z,7.4nm,0.8s,mb4.8						
MKAR	**Makanchi Array**	**50.62**	**344**	P	**P**	**10 20 17.2**	**-0.1**
	comp=Z,6.0nm,0.6s,mb4.7,baz=148,slow=8.1,SNR=29						
ZAK	**Zakamensk**	**51.88**	**3**	*e*P	**P**	**10 20 26.5**	**-0.2**
ZAK				*e*		10 21 38.5	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
MJAR	**Matsushiro Arr**	**52.07**	**39**	P	**P**	**10 20 27.7**	**-0.7**
	comp=Z,2.0nm,1.1s,mb4.0,baz=227,slow=6.3,SNR=5.1						
KURK	**Kurchatov**	**55.20**	**344**	*e*P	**P**	**10 20 51.0**	**0.0**
KURK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
KURK	**Kurchatov**	**55.20**	**344**	*e*P	**P**	**10 20 50.7**	**-0.4**
	comp=Z,0.9nm,0.9s,mb4.8						
ZALV	**Zalesovo Beam**	**56.76**	**349**	P	**P**	**10 21 02.0**	**-0.2**
	comp=Z,14nm,0.6s,mb5.2,baz=175,slow=6.3,SNR=18						
ZALV				pP	pP	10 21 12.8	-1.2
	comp=Z,14nm,0.7s,baz=165,slow=5.3,SNR=9.0						
ZALV				PcP	PcP	10 21 59.0	+1.3
	comp=Z,2.3nm,0.3s,baz=181,slow=5.8,SNR=3.5						
ZALV	**Zalesovo Beam**	**56.76**	**349**	P	**P**	**10 21 02.0**	**-0.2**
ZALV				pP	pP	10 21 12.8	-1.2
ZALV				PcP	PcP	10 21 59.0	+1.3
KLR	**Kul'dur**	**57.64**	**24**	*e*P	**P**	**10 21 05.0**	**-3.5**
NVS	**Novosibirsk**	**57.91**	**349**	*e*P	**P**	**10 21 09.0**	**-1.2**
BOD	**Bodaibo**	**60.32**	**9**	*e*P	**P**	**10 21 27.2**	**+0.3**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
YSS	**Yuzh-Sakhalins**	**61.23**	**32**↓	*e*P	**P**	**10 21 34.4**	**+1.1**
YSS				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.0						
SVE	**Sverdlovsk**	**66.27**	**338**	*e*P	**P**	**10 22 05.9**	**-0.4**
ARU	**Arti**	**66.79**	**336**	*d* iP	**P**	**10 22 08.6**	**-1.1**
ARU				*e*		10 24 36.6	
ARU				*e*S	S	10 30 59.3	+0.3
ARU				*e*SS	SS	10 35 18.5	+0.9
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
YAK	**Yakutsk**	**67.40**	**15**↓	*e*P	**P**	**10 22 13.1**	**-0.3**
YAK				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.3						
YAK				MLR	MLR		
	comp=Z,200nm,26.0s,MS4.2						
KIV	**Kislovodsk**	**68.15**	**319**	*e*P	**P**	**10 22 18.2**	**-0.3**
KIV				*e*		10 24 48.6	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
ASF	**Jabal al Asfar**	**68.25**	**306**	P	**P**	**10 22 18.7**	**-0.7**
	comp=Z,0.8nm,0.2s,mb4.3,baz=37,slow=1.8,SNR=4.2						
PETK	**Petropavlovsk-**	**72.63**	**32**	P	**P**	**10 22 46.3**	**+0.6**
	comp=Z,2.4nm,0.6s,mb4.3,baz=38,slow=2.4,SNR=6.9						
TIXI	**Tiksi**	**75.50**	**9**	*i* P	**P**	**10 23 02.1**	**0.0**
TIXI				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.6						
OBN	**Obninsk**	**76.39**	**328**↑	*e*P	**P**	**10 23 07.3**	**-0.2**
OBN				*e*		10 25 58.4	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.3						
BUR08	**Bucovina Ar. S**	**80.89**	**319**	*e*P	**P**	**10 23 32.0**	**-0.4**
ARCES	**ARCESS Array B**	**86.06**	**340**	P	**P**	**10 23 57.8**	**-0.7**
	comp=Z,4.4nm,0.9s,mb4.7,baz=98,slow=2.5,SNR=4.8						
ARCES				pP	pP	10 24 10.4	-0.4
	comp=Z,4.5nm,0.8s,baz=48,slow=7.3,SNR=4.2						
GERES	**GERESS Array B**	**88.66**	**319**	P	**P**	**10 24 11.0**	**-0.5**
	comp=Z,1.0nm,0.2s,mb4.8,baz=42,slow=2.2,SNR=5.0						
NVAR	**Mina Array Bea**	**129.39**	**39**	PKP	PKPdf	10 30 28.5	+1.4
	comp=Z,2.0nm,0.5s,baz=319,slow=3.8,SNR=3.2						
TXAR	**Lajitas Array**	**144.48**	**37**	PKP	PKPdf	10 30 54.5	-0.7
	comp=Z,4.1nm,0.6s,baz=272,slow=1.2,SNR=74						
CPUP	**Villa Florida**	**144.54**	**217**	PKP	PKPdf	10 30 53.0	-2.4
	comp=Z,4.6nm,0.7s,baz=131,slow=3.6,SNR=14						
CPUP	**Villa Florida**	**144.54**	**217**	PKP	PKPdf	10 30 53.0	-2.4
MIAR	**Mount Ida**	**144.92**	**19**	*e*PKIKP	PKPdf	10 30 54.4	-1.4
CFAA	**Coronel Fontan**	**145.09**	**198**	PKP	PKPdf	10 30 55.1	-1.1
	comp=Z,1.0nm,0.6s,baz=166,slow=2.8,SNR=21						
TZTN	**Tazewell**	**145.10**	**5**	*e*PKPdf	PKPdf	10 30 54.5	-1.6
JCT	**Junction City**	**145.77**	**31**	*e*PKP2	PKPab	10 30 57.5	-0.7
TKL	**Tuckaleechee C**	**145.96**	**5**	PKPbc	PKPbc	10 30 57.1	-1.2
	comp=Z,3.2nm,0.5s,baz=151,slow=3.9,SNR=8.4						
TKL	**Tuckaleechee C**	**145.96**	**5**	PKPbc	PKPbc	10 30 57.1	-1.2
TKL				*e*PKPdf	PKPdf	10 30 57.1	-0.4
SWET	**Sewanee**	**146.13**	**9**	*e*PKPdf	PKPdf	10 30 57.6	-0.3
SIV	**San Ignacio**	**154.29**	**226**	PKPbc	PKPbc	10 31 17.9	-1.5
	comp=Z,0.8nm,0.7s,baz=236,slow=7.3,SNR=4.7						

*ISCJB **14** 10:25:35.4±0.4, 1027N±004×7174W±004, h56km±6km, mb3.7/6, Error ellipse: s-maj=6.6km s-min=5.4km az=144.5*
*IDC **14** 10:25:35.7±0.7, 1025N×7170W, h38km±5km, mb3.6/6, mb1 3.8/8, mb1mx3.7/20, mbtmp3.8/8, ML3.4/2, Error ellipse: s-maj=19.7km s-min=15.0km az=41.0*
*NEIC **14** 10:25:35.8, 10.17N×7180W, h14km, MW4.0(CAR), After CAR.*
*FUNV **14** 10:25:36.2, 1023N×7180W, h23km, MW4.0*
ISC 14 10:25:36.4±0.5, 1026N±004×7178W±004, h44km±7km, n45, σ0s88/51, mb3.7/6, 8C-1D, Lake Maracaibo

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIRV	**Villa del Rosa**	**0.66**	**292**↓	*i* P	**Pn**	**10 25 48.9**	**-0.6**
VIRV				*e*S	**Sn**	**10 25 58.3**	**-0.5**
VIRV	**Villa del Rosa**	**0.66**	**292**	*e*P	**Pn**	**10 25 48.9**	**-0.5**
VIRV				*e*S	**Sn**	**10 25 58.3**	**-0.5**
QARV	**Quebrada Arrib**	**1.24**	**92**↑	*e*P	**Pn**	**10 25 58.4**	**+1.1**
QARV				*e*S	**Sn**	**10 26 15.0**	**+2.2**
QARV	**Quebrada Arrib**	**1.24**	**92**	*e*P	**Pn**	**10 25 58.4**	**+1.1**
QARV				*e*S	**Sn**	**10 26 16.6**	**+3.8**
DABV	**Dabajuro**	**1.31**	**60**	*e*P	**Pn**	**10 25 59.1**	**+0.9**
VIGV	**El Vigia**	**1.47**	**164**	*e*P	**Pn**	**10 26 00.1**	**-0.3**
VIGV				*e*S	**Sn**	**10 26 19.6**	**+1.1**
SDV	**Santo Domingo**	**1.77**	**140**	Pn	**Pn**	**10 26 04.1**	**-0.5**
	35nm,0.3s,baz=325,slow=11,SNR=19						
SDV				Sn	**Sn**	**10 26 30.4**	**+4.4**
	330nm,0.3s,baz=332,slow=21,SNR=18						
CURV	**Curarigua**	**1.81**	**98**↑	*e*P	**Pn**	**10 26 05.9**	**+0.8**
CURV	**Curarigua**	**1.81**	**98**	*e*P	**Pn**	**10 26 05.9**	**+0.8**
SIQV	**Siquisique**	**1.98**	**78**↑	*e*P	**Pn**	**10 26 08.1**	**+0.6**
SIQV	**Siquisique**	**1.98**	**78**	*e*P	**Pn**	**10 26 08.1**	**+0.6**
SOCV	**Socops**	**2.16**	**155**↑	*e*P	**Pn**	**10 26 10.0**	**0.0**
SOCV	**Socops**	**2.16**	**155**	*e*P	**Pn**	**10 26 10.0**	**0.0**
IMOV	**Isla Los Monje**	**2.26**	**22**	*e*P	**Pn**	**10 26 11.8**	**+0.5**
SANV	**Sanarito**	**2.34**	**109**	*e*P	**Pn**	**10 26 13.4**	**+1.0**
SANV	**Sanarito**	**2.34**	**109**	*e*P	**Pn**	**10 26 13.6**	**+1.2**
CAPV	**Capacho**	**2.43**	**193**	*e*P	**Pn**	**10 26 13.4**	**-0.3**
CAPV				*e*S	**Sn**	**10 26 41.5**	**-0.8**
CAPV	**Capacho**	**2.43**	**193**	*e*P	**Pn**	**10 26 13.1**	**-0.7**
CAPV				*e*S	**Sn**	**10 26 41.5**	**-0.8**
TEPV	**Terepaima**	**2.57**	**96**↑	*e*P	**Pn**	**10 26 16.4**	**+0.8**
JACV	**Jacura**	**3.02**	**74**	*e*P	**Pn**	**10 26 21.3**	**-0.4**
TURV	**Turiamo**	**3.88**	**87**↑	*e*P	**Pn**	**10 26 32.6**	**-1.0**
BAUV	**El Baul**	**3.91**	**109**↑	*e*P	**Pn**	**10 26 33.9**	**-0.1**
ELOV	**Elorza**	**3.95**	**145**↑	*i*P	**Pn**	**10 26 34.0**	**-0.6**
BIRV	**Birongo**	**5.43**	**87**	*e*P	**Pn**	**10 26 54.2**	**-0.6**
MERV	**Las Mercedes**	**5.50**	**100**	*e*P	**Pn**	**10 26 55.8**	**-0.1**
ORCV	**Isla La Orchil**	**5.70**	**74**	*e*P	**Pn**	**10 26 57.2**	**-1.4**
CUPV	**Cœpira**	**5.91**	**91**	*e*P	**Pn**	**10 27 01.2**	**-0.2**
ROSC	**El Rosal**	**5.93**	**205**	Pn	**Pn**	**10 27 03.8**	**+2.0**
	8.1nm,0.3s,baz=96,slow=20,SNR=8.1						
ROSC				Sn	**Sn**	**10 28 12.8**	**+4.3**
	5.2nm,0.3s,baz=87,slow=23,SNR=4.4						
CAOV	**Caicara del Or**	**6.13**	**118**	*e*P	**Pn**	**10 27 02.9**	**-1.7**
PCRV	**Puerto La Cruz**	**7.04**	**90**	Pn	**Pn**	**10 27 17.5**	**+0.6**
	2.3nm,0.3s,baz=230,slow=5.3,SNR=14						
PCRV				Sn	**Sn**	**10 28 35.5**	**-0.2**
	1.2nm,0.3s,baz=72,slow=20,SNR=2.4						
PCRV	**Puerto La Cruz**	**7.04**	**90**	*e*P	**Pn**	**10 27 16.7**	**-0.2**
PRGV	**PARIAGUAN**	**7.20**	**101**	*e*P	**Pn**	**10 27 18.4**	**-0.7**
MTP	**Monte Pirata**	**9.86**	**37**	*e*Pn	**Pn**	**10 27 55.0**	**-0.7**
LPAZ	**La Paz**	**26.62**	**172**	P	**P**	**10 31 11.7**	**+0.7**
	0.6nm,0.8s,mb3.1,baz=326,slow=10,SNR=3.2						
SIV	**San Ignacio**	**28.15**	**158**	P	**P**	**10 31 23.7**	**-1.0**
	1.6nm,0.5s,mb3.9,baz=330,slow=11,SNR=11						
SIV	**San Ignacio**	**28.15**	**158**	P	**P**	**10 31 23.7**	**-1.0**
TXAR	**Lajitas Array**	**35.32**	**307**	P	**P**	**10 32 28.7**	**+1.1**
	0.2nm,0.5s,mb3.3,baz=136,slow=6.8,SNR=2.4						
ULM	**Lac du Bonnet**	**44.56**	**338**	pP	pP	10 33 55.1	-1.0
	2.4nm,0.6s,baz=143,slow=11,SNR=2.1						
PDAR	**Pinedale Array**	**46.17**	**321**	P	**P**	**10 33 57.8**	**+1.0**
	0.5nm,0.6s,mb3.6,baz=115,slow=10,SNR=3.0						
PDAR				pP	pP	10 34 09.4	+0.4
	0.6nm,0.4s,baz=108,slow=7.9,SNR=3.7						
NVAR	**Mina Array Bea**	**50.10**	**312**	pP	pP	10 34 39.7	+0.1
	0.3nm,0.6s,baz=106,slow=6.7,SNR=2.3						
DBIC	**Dimbokro**	**66.20**	**87**	P	**P**	**10 36 19.7**	**-0.7**
	1.9nm,0.5s,mb4.4,baz=234,slow=6.6,SNR=3.8						
DBIC	**Dimbokro**	**66.20**	**87**	P	**P**	**10 36 19.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**71.78**	**79**	P	**P**	**10 36 54.4**	**-0.6**
	1.0nm,0.5s,mb4.0,baz=288,slow=6.8,SNR=28						
TORD				pP	pP	10 37 06.4	-1.4
	0.8nm,0.6s,baz=283,slow=6.8,SNR=4.3						
ASAR	**Alice Springs**	**152.11**	**238**	PKPbc	PKPbc	10 45 27.5	-0.4
	0.3nm,0.6s,baz=114,slow=2.9,SNR=8.6						
ASAR				pPKPbc	pPKPbc	10 45 39.5	-2.1
	0.6nm,0.6s,baz=118,slow=2.7,SNR=4.3						
WRA	**Warramunga Arr**	**153.04**	**246**	PKPbc	PKPbc	10 45 29.6	-0.5
	0.3nm,0.4s,baz=103,slow=2.9,SNR=21						
WRA				pPKPbc	pPKPbc	10 45 41.8	-1.9
	0.5nm,0.5s,baz=105,slow=2.9,SNR=5.4						

*IDC **14** 10:27:06.8±1.6, 192S×9938E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.7/21, mbtmp3.6/7, Error ellipse: s-maj=67.2km s-min=17.7km az=58.0*
*ISCJB **14** 10:27:09.2±1.9, 195S±003×993E±04, h33km, mb3.7/7, Error ellipse: s-maj=74.5km s-min=13.8km az=146.3*
*NEIC **14** 10:27:11.8±0.6, 190S×9938E, h35km, mb4.3/1, Error ellipse: s-maj=28.7km s-min=9.8km az=59.0*
ISC 14 10:27:11.4±1.8, 20S±003×993E±04, h35km, n13, σ0s35/9, mb3.7/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.30**	**359**	P	**P**	**10 31 43.9**	**-0.5**
	0.6nm,0.3s,baz=200,slow=10,SNR=4.0						
SHL	**Shillong**	**28.30**	**346**	*e*P	**P**	**10 32 56.0**	**-5.7**
FITZ	**Fitzroy Crossi**	**30.43**	**123**	P	**P**	**10 33 20.9**	**+0.2**
	0.9nm,1.0s,mb3.5,baz=331,slow=10,SNR=2.2						
WRA	**Warramunga Arr**	**38.63**	**120**	P	**P**	**10 34 31.3**	**-0.4**
	0.4nm,0.4s,mb3.5,baz=311,slow=8.7,SNR=13						
ASAR	**Alice Springs**	**39.85**	**126**	P	**P**	**10

NSTT				*e*S		**Sn**	**10 39 38.5**	**0.0**	
	baz=279								
CHKT	**Chengkung**	**1.50**	**226**	*e*P		**Pn**	**10 39 18.3**	**-1.7**	
	baz=223								
CHKT				*e*S		**Sn**	**10 39 35.3**	**-3.6**	
	baz=223								
SMLT	**Sun Moon Lake**	**1.52**	**261**	*e*P		**Pn**	**10 39 20.1**	**-0.2**	
	baz=258								
SMLT				*e*S		**Sn**	**10 39 38.5**	**-1.1**	
	baz=258								
TYC	**Yuchr**	**1.56**	**262**	*e*P		**Pn**	**10 39 20.6**	**-0.2**	
	baz=251								
TYC				*e*S		**Sn**	**10 39 38.9**	**-1.5**	
	baz=251								
YUS	**Yu-Shan**	**1.59**	**246**	P		**Pn**	**10 39 21.6**	**+0.4**	
	baz=243								
YUS				*e*S		**Sn**	**10 39 40.1**	**-1.1**	
	baz=243								
TWQ1	**Liyutan**	**1.63**	**278**	*e*P		**Pn**	**10 39 22.0**	**+0.2**	
	baz=276								
TWQ1				*e*S		**Sn**	**10 39 43.0**	**+1.0**	
	baz=276								
NSY	**Sanyi**	**1.65**	**280**	*e*P		**Pn**	**10 39 23.0**	**+1.0**	
	baz=278								
NSY				*e*S		**Sn**	**10 39 43.4**	**+0.8**	
	baz=278								
ELDTW	**Lidau**	**1.69**	**236**	P		**Pn**	**10 39 21.8**	**-0.8**	
	baz=233								
ELDTW				*e*S		**Sn**	**10 39 41.5**	**-2.1**	
	baz=233								
TCU	**Taichung**	**1.70**	**270**	*e*P		**Pn**	**10 39 23.4**	**+0.6**	
	baz=269								
ALS	**Alishan**	**1.71**	**249**	P		**Pn**	**10 39 23.4**	**+0.5**	
	baz=237								
ALS				*e*S		**Sn**	**10 39 43.6**	**-0.5**	
	baz=237								
WNT	**Mingjian**	**1.72**	**262**	*e*P		**Pn**	**10 39 24.0**	**+1.0**	
	baz=259								
WNT				*e*S		**Sn**	**10 39 45.4**	**+1.1**	
	baz=259								
CHN5	**Tsauling**	**1.79**	**253**	*e*P		**Pn**	**10 39 24.0**	**0.0**	
	baz=250								
CHN5				*e*S		**Sn**	**10 39 46.9**	**+0.8**	
	baz=250								
WGK	**Gukeng**	**1.87**	**256**	*e*P		**Pn**	**10 39 26.2**	**+1.1**	
	baz=242								
WGK				*e*S		**Sn**	**10 39 49.1**	**+1.1**	
	baz=242								
TWG	**Pinlang**	**1.89**	**226**	*e*P		**Pn**	**10 39 24.5**	**-0.8**	
	baz=233								
TWG				*e*S		**Sn**	**10 39 45.4**	**-3.0**	
	baz=233								
STYT	**Tauyuan**	**1.91**	**240**	*e*P		**Pn**	**10 39 25.2**	**-0.3**	
	baz=236								
STYT				*e*S		**Sn**	**10 39 48.4**	**-0.6**	
	baz=236								
CHN4	**Tsaushan**	**1.95**	**247**	*e*P		**Pn**	**10 39 27.8**	**+1.6**	
	baz=244								
CHN4				*e*S		**Sn**	**10 39 51.4**	**+1.3**	
	baz=244								
WTP	**Ta-pu**	**1.98**	**244**	*e*P		**Pn**	**10 39 27.7**	**+1.1**	
	baz=241								
WTP				*e*S		**Sn**	**10 39 52.5**	**+1.7**	
	baz=241								
JTJ	**Tarama**	**2.03**	**75**	P		**Pn**	**10 39 27.1**	**-0.2**	
JTJ				*e*S		**Sn**	**10 39 51.4**	**-0.6**	
TWK	**Hsinying**	**2.08**	**246**	*e*P		**Pn**	**10 39 29.2**	**+1.3**	
	baz=243								
TWK				*e*S		**Sn**	**10 39 54.5**	**+1.4**	
	baz=243								
CHN1	**Nanshi**	**2.08**	**243**	*e*P		**Pn**	**10 39 29.3**	**+1.4**	
	baz=240								
CHN1				*e*S		**Sn**	**10 39 54.6**	**+1.3**	
	baz=240								
SGST	**Jiashian**	**2.08**	**240**	*e*P		**Pn**	**10 39 29.5**	**+1.5**	
	baz=237								
SGST				*e*S		**Sn**	**10 39 54.7**	**+1.4**	
	baz=237								
ECL	**Taimali**	**2.12**	**224**	*e*P		**Pn**	**10 39 27.2**	**-1.3**	
	baz=221								
ECL				*e*S		**Sn**	**10 39 50.6**	**-3.6**	
	baz=221								
WSF	**Szhu**	**2.18**	**257**	*e*S		**Sn**	**10 39 57.5**	**+1.7**	
	baz=243								
SSD	**Sandimen**	**2.24**	**232**	*e*P		**Pn**	**10 39 31.7**	**+1.6**	
	baz=223								
LAY	**Lan-yu**	**2.29**	**204**	*e*P		**Pn**	**10 39 28.7**	**-2.1**	
	baz=201								
LAY				*e*S		**Sn**	**10 39 53.7**	**-4.6**	
	baz=201								
EAST	**Anshuo**	**2.34**	**222**	*e*P		**Pn**	**10 39 30.5**	**-1.1**	
	baz=219								
SCZT	**Fangliau**	**2.50**	**225**	*e*P		**Pn**	**10 39 35.5**	**+1.8**	
	baz=222								
TSEB	**Hengchuen, Pin**	**2.70**	**214**	*e*P		**Pn**	**10 39 38.4**	**+2.0**	
	baz=219								
TWK1	**Hengchun**	**2.71**	**216**	*e*P		**Pn**	**10 39 34.7**	**-1.9**	
	baz=219								

NEIC ***14*** *10:46:59.8, 24.23S×69.36W, h66km, MD3.4(GUC), After GUC.*
GUC ***14*** *10:46:59.8±0.8, 24.23S×69.36W, h66km±82km, MD3.4, ML3.5*
ISCJB ***14*** *10:47:00.5±0.6, 24.18S±0.04×69.5W±0.1, h91km±10km, mb3.5/2, Error ellipse: s-maj=15.7km s-min=5.6km az=10.8*
IDC ***14*** *10:47:01.4±2.7, 24.08S×69.34W, h71km±24km, mb3.3/2, mb1 3.6/5, mb1mx3.5/18, mbtmp3.5/5, Error ellipse: s-maj=36.0km s-min=25.5km az=87.0*

ISC 14 10:47:01.8±0.6, 2416S±004×6947W±010, h82km±10km, n16, σ0991/22, mb3.5/2, 1C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**0.97**	**241**	⇑*i*	P		**Pn**	**10 47 21.9**	**+1.3**
CPN1				*i*	S		**Sn**	**10 47 36.9**	**+2.2**
CPN1					AML	AML		10 47 37.4	
	comp=E,3μm,0.4s								
ANCH	**Antofagasta**	**0.98**	**299**	*e*P			**Pn**	**10 47 20.2**	**-0.5**
ANCH				*i*	S		**Sn**	**10 47 34.8**	**0.0**
CEN1	**Los Morros**	**1.01**	**319**	*e*P			**Pn**	**10 47 19.8**	**-1.4**
CEN1				*i*	S		**Sn**	**10 47 35.0**	**-0.6**
CEN1					AML	AML		10 47 36.9	
	comp=N,1μm,0.5s								
LVC	**Limon Verde**	**1.62**	**19**	P			**Pn**	**10 47 29.2**	**+0.4**
	comp=N,112nm,0.3s,baz=179,slow=8.2,SNR=79								
LVC					S		**Sn**	**10 47 49.4**	**+0.2**
	comp=N,184nm,0.3s,baz=190,slow=11,SNR=8.8								
CDCH	**Caldera**	**3.15**	**203**	*e*P			**Pn**	**10 47 48.4**	**-0.9**
CDCH				*i*	S		**Sn**	**10 48 24.3**	**-1.5**
CDCH					AML	AML		10 48 37.2	
	comp=N,168nm,0.1s								
CDCH	**Caldera**	**3.15**	**203**	*e*P			**Pn**	**10 47 48.4**	**-0.9**
CDCH				*i*	S		**Sn**	**10 48 24.3**	**-1.5**
LCO	**Las Campanas**	**4.96**	**193**	*e*P			**Pn**	**10 48 13.2**	**-0.6**
LCO				*i*	S		**Sn**	**10 49 09.8**	**0.0**
LCO	**Las Campanas**	**4.96**	**193**	*e*Pn			**Pn**	**10 48 12.1**	**-1.7**
TLL	**Tololo Astrono**	**6.10**	**191**	*i*	P		**Pn**	**10 48 29.4**	**-0.1**
TLL				*i*	S		**Sn**	**10 49 38.5**	**+0.7**
CFAA	**Coronel Fontan**	**7.50**	**172**	P			**Pn**	**10 48 49.1**	**+0.7**
	comp=N,0.2nm,0.3s,baz=2.2,slow=11,SNR=9.7								
LPAZ	**La Paz**	**7.93**	**9**	P			**Pn**	**10 48 54.8**	**+0.4**
	comp=N,0.5nm,0.3s,baz=185,slow=6.3,SNR=16								
SIV	**San Ignacio**	**11.32**	**46**	P			**Pn**	**10 49 36.6**	**-4.1**
	comp=N,0.9nm,0.3s,baz=249,slow=10,SNR=23								
TXAR	**Lajitas Array**	**62.52**	**326**	P			**P**	**10 57 17.5**	**+0.6**
	comp=N,0.1nm,0.6s,mb2.9,baz=157,slow=9.8,SNR=3.2								
TORD	**Torodi Ar. Bea**	**78.74**	**70**	P			**P**	**10 58 56.0**	**+0.1**
	comp=N,1.2nm,0.4s,mb4.0,baz=260,slow=5.1,SNR=15								
WRA	**Warramunga Ar**	**130.41**	**210**	PKP		PKPdf		11 06 03.8	+0.2
	comp=N,0.3nm,0.8s,baz=149,slow=1.6,SNR=5.4								
MKAR	**Makanchi Array**	**148.06**	**38**	PKPbc		PKPbc		11 06 38.6	+0.8
	comp=N,0.4nm,0.3s,baz=321,slow=1.8,SNR=3.9								

ISCJB ***14*** *10:54:22.1±2.3, 52N±04×1257E±06, h33km, mb4.0/4, Error ellipse: s-maj=99.2km s-min=19.8km az=147.5*
NEIC ***14*** *10:54:24.6±1.7, 5.15N×125.63E, h35km, mb4.3/1, Error ellipse: s-maj=75.2km s-min=15.0km az=57.0*
IDC ***14*** *10:54:45.0±7.8, 2.05N×125.42E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/18, mbtmp4.0/4, Error ellipse: s-maj=132.4km s-min=72.7km az=7.0*

ISC 14 10:54:24.6±2.3, 52N±04×1256E±06, h35km, n5, σ0842/5, mb4.0/4, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
QIZ	**Qiongzhong**	**20.67**	**313**	*e*P			**P**	**10 59 01.6**	**0.0**
	8.2nm,0.6s								
WRA	**Warramunga Arr**	**26.37**	**161**	P			**P**	**10 59 57.3**	**-0.5**
	0.6nm,0.3s,mb3.6,baz=334,slow=10,SNR=25								
ASAR	**Alice Springs**	**29.76**	**165**	P			**P**	**11 00 27.9**	**-0.1**
	0.6nm,0.5s,mb3.6,baz=340,slow=7.1,SNR=31								
NWAO	**Narrogin (SRO)**	**38.70**	**191**	P			**P**	**11 01 45.4**	**+0.1**
	16nm,1.0s,mb4.7,baz=56,slow=11,SNR=3.1								
STKA	**Stephens Creek**	**39.84**	**159**	P			**P**	**11 01 55.3**	**+0.5**
	2.2nm,0.8s,mb3.9,baz=339,slow=13,SNR=4.0								

IDC 14 10:59:40.9±5.8, 174S×10170E, h0km, mb3.5/2, mb1 3.7/2, mb1mx3.4/18, mbtmp3.5/2, MS3.2/1, Ms1 3.2/1, ms1mx2.9/16, Error ellipse: s-maj=294.8km s-min=82.4km az=47.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**25.38**	**70**	LR			LR	11 17 39.7	
	comp=Z,56nm,20.4s,baz=302,slow=42								
WRA	**Warramunga Arr**	**36.67**	**122**	P			P	11 06 49.8	+0.2
	0.4nm,0.4s,baz=301,slow=8.5,SNR=8.6								
ASAR	**Alice Springs**	**38.04**	**128**	P			P	11 07 00.9	-0.4
	0.2nm,0.4s,baz=298,slow=8.0,SNR=4.5								
TXAR	**Lajitas Array**	**143.45**	**39**	PKP		PKPdf		11 19 18.4	+0.1
	0.3nm,0.4s,baz=255,slow=0.5,SNR=24								

IDC ***14*** *11:06:39.1±1.0, 2.04S×99.93E, h0km, mb4.4/15, mb1 4.5/15, mb1mx4.3/24, mbtmp4.4/15, MS3.4/2, Ms1 3.5/2, ms1mx3.1/21, Error ellipse: s-maj=38.8km s-min=13.1km az=55.0*
ISCJB ***14*** *11:06:42.1±0.7, 2.05S±0.1×100.0E±0.1, h33km, mb4.6/25, MS3.8/4, Error ellipse: s-maj=23.0km s-min=8.2km az=141.9*
MOS ***14*** *11:06:42.7±0.8, 2.01S×99.96E, h37km, mb4.9/9, Error ellipse: s-maj=20.7km s-min=10.7km az=98.5*
BJI ***14*** *11:06:43.5, 2.07S×100.08E, h39km, mB5.1, mb4.8, Ms4.3, Msz4.1*
NEIC ***14*** *11:06:44.5±0.6, 2.00S×100.02E, h35km, mb4.6/6, Error ellipse: s-maj=22.9km s-min=6.1km az=50.0*

ISC 14 11:06:44.4±0.7, 205S±010×1000E±01, h35km, n46, σ0986/44, mb4.6/25, MS3.8/4, 2C-5D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**3.03**	**122**	P			**Pn**	**11 07 37.2**	**+7.3**
	0.0nm,0.0s								
KAPI	**Kappang**	**19.92**	**99**	P			**Pn**	**11 11 13.3**	**-1.9**
	19nm,0.7s,baz=282,slow=7.0,SNR=12								
KAPI	**Kappang**	**19.92**	**99**	P			**Pn**	**11 11 13.3**	**-1.9**
CMAR	**Chiang Mai Arr**	**20.40**	**357**	P			**P**	**11 11 17.4**	**-1.2**
	3.9nm,0.6s,baz=187,slow=9.7,SNR=27								
CMAR					LR		LR	11 19 04.8	
	comp=Z,99nm,21.1s,MS3.1,baz=185,slow=37								
CMAR	**Chiang Mai Arr**	**20.40**	**357**	*i*	P		**P**	**11 11 18.2**	**-0.3**
CMAR					pmax	pmax			
	comp=Z,4.0nm,0.6s								
QIZ	**Qiongzhong**	**23.06**	**24**	P			**P**	**11 11 46.3**	**-0.7**
QIZ					S		**S**	**11 15 58.8**	**+3.2**
QIZ					AMB	AMB			
	comp=Z,10.0nm,1.2s,mb4.1								
QIZ					LR	LR			
	comp=E,126nm,12.9s								
QIZ					LR	LR			
	comp=Z,125nm,15.3s,MS3.5								
FITZ	**Fitzroy Crossi**	**29.77**	**124**	⇓*i*	P		**P**	**11 12 48.4**	**+0.3**
	comp=Z,5.4nm,0.8s,mb4.3								
FITZ	**Fitzroy Crossi**	**29.77**	**124**	P			**P**	**11 12 47.9**	**-0.2**
	comp=Z,3.7nm,0.9s,mb4.1,baz=296,slow=7.8,SNR=7.8								
WRA	**Warramunga Arr**	**37.96**	**120**	P			**P**	**11 13 59.1**	**0.0**
	comp=Z,4.7nm,0.4s,mb4.6,baz=302,slow=9.2,SNR=99								
WRA					PcP	PcP		11 16 15.2	+0.7
	comp=Z,0.5nm,0.5s,baz=322,slow=2.6,SNR=5.1								
WRAB	**Tennant Creek**	**37.96**	**120**	*e*P			**P**	**11 13 58.8**	**-0.3**
WRAB					pmax	pmax			
	comp=Z,6.0nm,0.4s,mb4.7								
WRAB	**Tennant Creek**	**37.96**	**120**	*e*P			**P**	**11 13 58.8**	**-0.3**
	comp=Z,6.1nm,0.4s,mb4.7								
WB2	**Warramunga Arr**	**37.97**	**120**	⇓*i*	P		**P**	**11 13 59.0**	**-0.2**
ASAR	**Alice Springs**	**39.21**	**126**	P			**P**	**11 14 10.0**	**+0.4**
	comp=Z,4.1nm,0.6s,mb4.3,baz=301,slow=7.5,SNR=64								
ASAR					PcP	PcP		11 16 19.4	+0.9
	comp=Z,1.0nm,0.6s,baz=307,slow=2.6,SNR=6.5								
WMQ	**Urumqi**	**46.98**	**348**	P			**P**	**11 15 13.8**	**+1.8**
WMQ					AMB	AMB			
	comp=Z,33nm,1.0s,mb5.2								
WMQ					AMB	AMB			
	comp=Z,140nm,4.9s								
KSRS	**Korea Array**	**47.05**	**31**	P			**P**	**11 15 12.6**	**-0.1**
	comp=Z,3.1nm,0.7s,mb4.3,baz=226,slow=8.5,SNR=12								
KSRS					LR	LR		11 35 12.2	
	comp=Z,48nm,19.4s,MS3.5,baz=24,slow=36								
KSRS	**Korea Array**	**47.05**	**31**	P			**P**	**11 15 12.6**	**-0.1**
KSRS					pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3								
KSRS					MLR	MLR			
	comp=Z,48nm,19.4s,MS3.5								
STKA	**Stephens Creek**	**49.11**	**132**	⇓*i*	P		**P**	**11 15 29.8**	**+1.1**
	comp=Z,3.1nm,0.6s,mb4.5								
STKA	**Stephens Creek**	**49.11**	**132**	P			**P**	**11 15 29.4**	**+0.7**
	comp=Z,2.3nm,0.4s,mb4.5,baz=325,slow=9.3,SNR=9.2								
TKM2	**Tokmak 2**	**49.88**	**337**	*e*P			**P**	**11 15 35.1**	**+0.7**
TKM2					pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.7								
TKM2	**Tokmak 2**	**49.88**	**337**	*e*P			**P**	**11 15 35.1**	**+0.7**
	comp=Z,7.4nm,0.8s,mb4.8								
SONM	**Songino Array**	**49.99**	**6**	P			**P**	**11 15 36.0**	**+0.9**
	comp=Z,3.0nm,0.5s,mb4.5,baz=190,slow=9.3,SNR=18								
SONM					PcP	PcP		11 16 55.1	+0.3
	comp=Z,1.8nm,0.6s,baz=193,slow=3.9,SNR=3.9								
AML	**Almayashu**	**50.01**	**335**	*e*P			**P**	**11 15 35.8**	**+0.4**
	comp=Z,3.7nm,0.6s,mb4.6								
ULN	**Ulaanbaatar**	**50.08**	**6**	⇓*e*P			**P**	**11 15 37.0**	**+1.2**
EKS2	**Erkin-Say**	**50.41**	**335**	*e*P			**P**	**11 15 38.7**	**+0.3**
	comp=Z,8.2nm,0.8s,mb4.8								
MKAR	**Makanchi Array**	**51.08**	**344**	P			**P**	**11 15 43.8**	**+0.5**
	comp=Z,15nm,0.6s,mb5.1,baz=148,slow=8.1,SNR=104								
MKAR	**Makanchi Array**	**51.08**	**344**	*i*	P		**P**	**11 15 43.7**	**+0.4**
MKAR					pmax	pmax			
	comp=Z,15nm,0.6s								
ZAK	**Zakamensk**	**52.30**	**3**	*e*P			**P**	**11 15 52.5**	**+0.1**
ZAK					pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.0								
MJAR	**Matsushiro Arr**	**52.30**	**39**	P			**P**	**11 15 52.6**	**-0.1**
	comp=Z,1.6nm,0.5s,mb4.2,baz=216,slow=7.6,SNR=5.7								
KURK	**Kurchatov**	**55.65**	**344**	P			**P**	**11 16 16.6**	**-0.3**
	comp=Z,7.4nm,0.8s,mb4.8,baz=166,slow=6.9,SNR=20								
KURK	**Kurchatov**	**55.65**	**344**	*c*	P		**P**	**11 16 16.9**	**0.0**
KURK					pmax	pmax			
	comp=Z,13nm,0.9s,mb5.0								
ZALV	**Zalesovo Beam**	**57.21**	**349**	P			**P**	**11 16 27.2**	**-0.7**
	comp=Z,3.5nm,0.4s,mb4.8,baz=182,slow=4.5,SNR=7.2								
KLR	**Kul'dur**	**57.97**	**24**	*e*P			**P**	**11 16 29.2**	**-4.2**
BVAR	**Borovoye Array**	**60.23**	**340**	P			**P**	**11 16 48.5**	**-0.5**
	comp=Z,1.2nm,0.4s,mb4.2,baz=141,slow=12,SNR=5.8								
BOD	**Bodaibo**	**60.72**	**9**	*e*P			**P**	**11 16 52.4**	**+0.2**
BOD					pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.8								
YSS	**Yuzh-Sakhalins**	**61.51**	**32**	⇑*e*P			**P**	**11 16 59.0**	**+1.2**
YSS					pmax	pmax			
	comp=Z,16nm,1.0s,mb5.1								
AKTK	**Aktyubinsk**	**63.40**	**331**	P			**P**	**11 17 08.7**	**-1.7**
AKTO	**Aktyubinsk**	**63.40**	**331**	P			**P**	**11 17 08.7**	**-1.7**
	comp=Z,0.9nm,0.5s,mb4.2,baz=103,slow=20,SNR=3.7								
AKTO	**Aktyubinsk**	**63.40**	**331**	P			**P**	**11 17 08.7**	**-1.7**
AKTO					pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.2								
DZM	**Mont Dzumac**	**67.42**	**113**	*e*P			**P**	**11 17 38.0**	**+1.0**
YAK	**Yakutsk**	**67.78**	**15**	*d*	P		**P**	**11 17 38.0**	**-0.4**
YAK					pmax	pmax			
	comp=Z,33nm,1.3s,mb5.2								
OBN	**Obninsk**	**76.84**	**328**	*e*P			**P**	**11 18 32.4**	**-0.2**
OBN					pmax	pmax			
	comp=Z,6.0nm,1.2s,mb4.4								
BILL	**Bilibino**	**83.19**	**20**	*e*P			**P**	**11 19 06.1**	**-0.6**
BILL					pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.3								
ARCES	**ARCESS Array B**	**86.52**	**340**	P			**P**	**11 19 23.2**	**-0.2**
	comp=Z,3.4nm,0.9s,mb4.6,baz=108,slow=4.0,SNR=5.6								
RAR	**Rarotonga**	**98.78**	**112**	LR			LR	12 02 12.9	
	comp=Z,571nm,18.0s,MS5.1,baz=168,slow=34								
TXAR	**Lajitas Array**	**144.73**	**37**	PKP		PKPdf		11 26 18.2	-0.1
	comp=Z,5.6nm,0.7s,baz=205,slow=1.1,SNR=80								
TXAR	**Lajitas Array**	**144.73**	**37**	PKP		PKPdf		11 26 18.2	-0.1

ISCJB ***14*** *11:29:06.9±0.8, 2985N±004×3624E±006, h0km, Error ellipse: s-maj=7.2km s-min=5.7km az=151.3*
GII ***14*** *11:29:06.5±1.3, 2979N×3619E, h0km, ML2.0/3, EXPLOSION*
SGS ***14*** *11:29:07.0, 3006N×3622E, h7km*
CSEM ***14*** *11:29:07.0, 3006N×3622E, h7km, ML3.0, After SNSN*

ISC 14 11:29:07.1±0.8, 2984N±004×3627E±005, h0km, n16, σ0991/20, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.07**	**265**	Pg			**Pg**	**11 29 26.9**	**-0.6**
HRFI	**Mount Harif**	**1.09**	**281**	Pg			**Pg**	**11 29 27.5**	**-0.5**
EIL	**Elat**	**1.16**	**262**	Pg			**Pg**	**11 29 29.0**	**-0.3**
EIL				Sg			**Sg**	**11 29 45.8**	**+1.4**
HQLS		**1.18**	**243**	P			**Pg**	**11 29 28.8**	**-0.9**
HQLS		**1.18**	**243**	P			**Pg**	**11 29 28.8**	**-0.9**
HQLS				S			**Sg**	**11 29 45.6**	**+0.6**
MBRI	**Mt Berech**	**1.18**	**268**	Pg			**Pg**	**11 29 29.2**	**-0.5**
MBRI				Sg			**Sg**	**11 29 46.1**	**+1.0**
ZFRI	**Zfri**	**1.19**	**307**	Pg			**Pg**	**11 29 29.6**	**-0.2**
PRNI	**Paran**	**1.21**	**295**	Pg			**Pg**	**11 29 29.9**	**-0.5**
KRMI	**Paran Flat**	**1.37**	**282**	Pn			**Pn**	**11 29 32.0**	**-1.4**
RMNI	**Mount Ramon**	**1.51**	**301**	Pn			**Pn**	**11 29 34.5**	**-0.9**
TBKS	**Tabuk**	**1.63**	**172**	S			**Sn**	**11 29 60.0**	**+1.3**
TBKS	**Tabuk**	**1.63**	**172**	P			**Pn**	**11 29 37.4**	**+0.5**
MZDA	**Masada**	**1.67**	**332**	Pn			**Pn**	**11 29 37.8**	**+0.2**
BDAS	**Al Bad'**	**1.73**	**216**	P			**Pn**	**11 29 38.0**	**-0.5**
DSI	**Dead Sea**	**1.89**	**336**	Pn			**Pn**	**11 29 41.6**	**+0.9**
DSI				Sn			**Sn**	**11 30 08.4**	**+3.2**
RSHS		**2.00**	**221**	P			**Pn**	**11 29 41.2**	**-0.9**

IDC ***14*** *11:33:28.3±3.5, 4.07S×100.00E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/19, mbtmp3.7/5, Error ellipse: s-maj=150.8km s-min=21.4km az=57.0*
ISCJB ***14*** *11:33:31.5±3.8, 4.02S±0.06×1000E±0.09, h33km, mb3.7/6, Error ellipse: s-maj=149.7km s-min=19.3km az=146.2*
NEIC ***14*** *11:33:32.6±3.1, 4.20S×99.75E, h35km, mb4.0/1, Error ellipse: s-maj=134.0km s-min=19.2km az=56.0*

ISC 14 11:33:33.4±3.6, 41S±06×999E±08, h35km, n7, σ1967/6, mb3.7/6, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.07**	**118**	P			**P**	**11 40 40.5**	**0.0**
	0.3nm,0.5s,mb3.4,baz=281,slow=7.6,SNR=4.7								
WRAB	**Tennant Creek**	**37.08**	**118**	*e*P			**P**	**11 40 41.8**	**+1.2**
	2.0nm,0.8s,mb4.0								
ASAR	**Alice Springs**	**38.15**	**124**	P			**P**	**11 40 50.0**	**+0.4**
	0.3nm,0.3s,mb3.5,baz=298,slow=7.7,SNR=6.8								
STKA	**Stephens Creek**	**47.87**	**130**	P			**P**	**11 42 05.8**	**-2.4**
	9.8nm,1.3s,mb4.7,baz=84,slow=3.8,SNR=3.0								
SONM	**Songino Array**	**52.03**	**6**	P			**P**	**11 42 38.3**	**-1.1**
	0.2nm,0.5s,mb3.3,baz=218,slow=6.8,SNR=2.5								
MKAR	**Makanchi Array**	**53.01**	**345**	P			**P**	**11 42 47.7**	**+1.0**
	0.3nm,0.5s,mb3.5,baz=148,slow=8.5,SNR=2.9								
TXAR	**Lajitas Array**	**146.41**	**39**	PKPbc		PKPbc		11 53 11.4	-0.1
	0.4nm,0.4s,baz=252,slow=0.8,SNR=14								

MAN 14 11:34:42, 1142N×12444E, h3km, mb4.7, ML3.6, MS3.6, 3C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.40**	**155**	*e*P			Pg	11 34 51.7	+2.0
OCLP				*e*S			Sg	11 34 58.9	+4.0
PLP	**Palo**	**0.59**	**115**	⇓*e*P			Pg	11 34 54.5	+1.2
PLP				*i*	S		Sg	11 35 03.1	+2.3
BESP	**Borongan**	**1.00**	**79**	*e*P			Pg	11 35 01.4	+0.3
CNP	**Catarman**	**1.11**	**11**	*e*P			Pg	11 35 04.0	+0.7
LLP	**Lapu-Lapu**	**1.19**	**203**	⇑*e*P			Pg	11 35 05.2	+0.5
LLP				*e*S			Sg	11 35 22.1	+1.9
MSLP	**Maasin**	**1.34**	**162**	*e*P			Pn	11 35 08.4	+0.8
MSLP				*e*S			Sg	11 35 31.4	+6.3
RCP	**Roxas**	**1.67**	**275**	⇓*e*P			Pn	11 35 12.9	+0.8
RCP				*e*S			Sn	11 35 36.0	+2.0
TBP	**Tagbilaran**	**1.80**	**198**	*e*P			Pn	11 35 14.9	+0.9
SCPH	**Surigao**	**1.92**

44nm,0.3s,baz=16,slow=2.2,SNR=67
AFI S S 11 56 18.3 -13
44nm,0.3s,baz=30,slow=22,SNR=9.9
AFI Afiamalu 12.62 42 P P 11 54 10.5 -4.7
AFI S S 11 56 18.3 -13
KUZ Kuaotunu 13.51 194 P P 11 54 25.3 +1.2
OTAZ Otara 13.89 196 P P 11 54 30.2 +2.2
MXZ Matakaoa Point 13.94 184 P P 11 54 26.6 -1.9
MKAZ Moumakai 13.98 195 P P 11 54 30.3 +1.4
PUZ Puketiti 14.45 184 P P 11 54 31.0 -2.8
URZ Urewera 14.75 188 P P 11 54 33.2 -3.6
20nm,0.3s,baz=277,slow=2.9,SNR=115
URZ S S 11 57 05.9 -4.7
17nm,0.3s,baz=183,slow=22,SNR=14
URZ Urewera 14.75 188 P P 11 54 33.1 -3.7
MWZ Matawai 14.77 187 P P 11 54 34.2 -2.9
FUNA Funafuti 15.02 358 *eP* P 11 54 36.5 -3.6
960nm,0.8s
KNZ Kokohu 15.44 186 P P 11 54 42.7 -1.2
BKZ Black Stump Fm 15.72 189 P P 11 54 43.5 -3.3
WTVZ West Tongariro 15.82 192 P P 11 54 45.7 -2.2
FWVZ Far West T-bar 15.96 192 P P 11 54 47.2 -2.1
VRZ Vera Road 16.00 194 P P 11 54 51.0 +1.4
MOVZ Moawhango 16.07 191 P P 11 54 47.2 -3.1
RAEZ Rainy Point 16.24 195 P P 11 54 53.7 +1.9
PKE Pukeiti 16.25 196 P P 11 54 54.2 +2.3
NEZ North Egmont 16.29 196 P P 11 54 55.0 +2.7
NWEZ Newall Road 16.35 196 P P 11 54 56.4 +3.5
WAZ Wanganui 16.56 193 P P 11 54 54.0 -0.7
TSZ Takapari Road 16.68 190 P P 11 54 52.5 -3.3
MRZ Mangatainoka R 17.33 190 P P 11 54 59.5 -2.3
KIW Kapiti Island 17.64 192 P P 11 55 03.1 -1.6
MTW Mount Morrison 17.82 190 P P 11 55 04.2 -2.1
CAW Cannon Point 17.85 191 P P 11 55 04.8 -1.8
MRW Makara Radio 18.03 192 P P 11 55 07.4 -0.9
TCW Tory Channel 18.10 193 P P 11 55 08.9 0.0
SNZO South Karori 18.11 192 P P 11 55 07.9 -1.1
SNZO S S 11 58 07.5 +0.4
QRZ Quartz Range 18.16 198 P P 11 55 10.7 +1.3
NNZ Nelson 18.31 195 P P 11 55 11.9 +0.1
THZ Tophouse 18.94 196 P P 11 55 16.8 +0.3
RAR Raratonga 19.18 87 P P 11 55 17.0 -2.1
6.1nm,0.3s,baz=249,slow=8.0,SNR=14
DSZ Denniston Nort 19.22 198 P P 11 55 20.0 +0.9
KHZ Kahutara 19.41 194 P P 11 55 20.3 -0.5
LTZ Lake Taylor 20.06 196 P P 11 55 25.8 -0.9
WVZ Waitaha Valley 20.75 199 P P 11 55 33.1 +0.2
MQZ McQueen's Vall 20.84 194 P P 11 55 32.9 -0.8
RPZ Rata Peaks 21.25 197 P P 11 55 37.7 +0.3
58nm,0.6s,mb5.4,baz=29,slow=2.0,SNR=30
RPZ S S 11 58 54.9 -2.3
23nm,0.8s,baz=123,slow=4.7,SNR=3.7
RPZ ScP ScP 12 02 03.2 -1.3
14nm,0.7s,baz=312,slow=15,SNR=6.4
RPZ Rata Peaks 21.25 197 P P 11 55 37.6 +0.2
FOZ Fox Glacier 21.51 200 P P 11 55 38.9 -0.9
LBZ Lake Benmore 22.11 198 P P 11 55 43.7 -1.5
JCZ Jackson Bay 22.27 201 P P 11 55 46.9 +0.3
ODZ Otahua Downs 22.59 197 P P 11 55 48.7 -0.7
WKZ Wanaka 22.86 200 P P 11 55 51.1 -0.7
EAZ Earnscleugh 23.14 199 P P 11 55 54.5 +0.2
HNR Honiara 23.52 304 P P 11 55 57.0 -1.2
890nm,0.9s,mb6.4,baz=176,slow=3.8,SNR=39
HNR Honiara 23.52 304 P P 11 55 57.0 -1.2
HNR pmax pmax
comp=Z,890nm,0.9s,mb6.4
TUZ Tuapeka 23.70 198 P P 11 55 59.7 +0.4
WHZ Wether Hill Ro 24.15 200 P P 11 56 03.8 +0.5
RIV Riverview 26.89 241 *eP* P 11 56 30.1 +2.4
CNB Canberra Magne 28.70 239⇑ *iP* P 11 56 45.3 +1.8
CNB *eS* S 12 00 56.8 +2.3
CNB *e*ScP ScP 12 02 27.9 +1.8
CAN Canberra 28.99 239 *eP* P 11 56 47.7 +1.7
PAE Paea 29.37 84 *eP* P 11 56 48.9 -0.6
comp=Z,3μm,1.0s
PPT Papeete 29.40 84 *eP* P 11 56 49.3 -0.5
comp=Z,541nm,1.2s,mb6.1
PPT *e*ScP ScP 12 02 27.6 -1.1
comp=Z,104nm,1.2s
PPT Papeete 29.40 84 P P 11 56 49.1 -0.7
comp=Z,456nm,0.9s,mb6.1,baz=224,slow=3.7,SNR=22
TIAR Tiarei 29.62 84 *eP* P 11 56 51.2 -0.5
comp=Z,8μm,1.0s
TVO Taravao 29.64 85 *eP* P 11 56 51.2 -0.6
comp=Z,4μm,0.8s
MEH Mehetia 30.70 85 *eP* P 11 57 00.0 -0.9
comp=Z,22μm,1.2s
CTA Charters Tower 31.14 270⇑ *iP* P 11 57 05.8 +1.0
comp=Z,360nm,0.4s,mb6.2
CTA *eS* S 12 01 32.9 +0.5
CTA *e*SCP ScP 12 02 36.2 +1.8
CTA *e* 12 04 29.8
CTA Charters Tower 31.14 270 P P 11 57 05.9 +1.1
comp=Z,380nm,0.4s,mb6.3,baz=97,slow=10,SNR=685
CTA S S 12 01 32.6 +0.2
comp=Z,14nm,1.1s,baz=357,slow=24,SNR=11
CTA ScP ScP 12 02 35.6 +1.2
comp=Z,43nm,0.9s,baz=102,slow=2.9,SNR=10
CTA Charters Tower 31.14 270⇑ *iP* P 11 57 05.8 +1.0
CTA *eS* S 12 01 32.9 +0.5
CTA pmax pmax
comp=Z,360nm,0.4s
CTAO Charters Tower 31.14 270 *eP* P 11 57 06.1 +1.3
PMOR Pomariorio Ree 31.76 80 *eP* P 11 57 09.3 -0.8
comp=Z,1μm,1.1s,mb6.3
PMOR *e*ScP ScP 12 02 35.6 -1.0
comp=Z,334nm,1.2s
VAH Vaihoa 31.92 81 *eP* P 11 57 10.5 -0.9
comp=Z,655nm,1.0s,mb6.1
VAH *e*ScP ScP 12 02 36.0 -1.1
comp=Z,158nm,1.3s
TOO Toolangi 32.32 237⇑ *iP* P 11 57 15.9 +1.4
TOO *eS* S 12 01 51.0 +1.0
TAU Tasmania Unive 32.88 226 P P 11 57 20.2 +1.0
comp=Z,551nm,0.8s,mb6.1,SNR=23
TAU Tasmania Unive 32.88 226 *eP* P 11 57 20.6 +1.4
TAU pmax pmax
comp=Z,72nm,0.8s,mb5.2
TAU Tasmania Unive 32.88 226 *eP* P 11 57 20.6 +1.4
comp=Z,72nm,0.8s,mb5.2
XMAS Kiritimati 33.89 44⇑ *iP* P 11 57 27.3 -0.8
comp=Z,613nm,0.8s,mb6.2
PMG Port Moresby 34.09 289 *eP* P 11 57 30.3 +0.5
STKA Stephens Creek 34.52 248⇑ *iP* P 11 57 34.3 +1.1
comp=Z,61nm,0.8s,mb5.2
STKA *e* 11 59 53.3
STKA *eS* S 12 02 23.8 +0.4
STKA *e*SCP ScP 12 02 47.3 +1.2
STKA *e* 12 05 20.2
STKA Stephens Creek 34.52 248 P P 11 57 34.4 +1.2
comp=Z,63nm,0.5s,mb5.4,baz=93,slow=9.7,SNR=286
STKA PcP PcP 11 59 52.6 +0.2
comp=Z,24nm,0.5s,baz=65,slow=5.5,SNR=6.5
STKA S S 12 02 22.8 -0.6
comp=Z,7.1nm,0.8s,baz=244,slow=20,SNR=3.8
STKA ScP ScP 12 02 47.0 +0.9
comp=Z,33nm,1.0s,baz=71,slow=3.6,SNR=6.0
STKA PKiKP PKiKP 12 07 11.6 -2.4
comp=Z,1.3nm,0.5s,baz=270,slow=1.7,SNR=4.4
RKT Rikitea 41.53 99 *eP* P 11 58 30.2 -0.1
comp=Z,249nm,1.0s,mb5.7
ASAR Alice Springs 41.75 260 P P 11 58 32.4 +0.4
comp=Z,196nm,0.8s,mb5.7,baz=94,slow=8.0,SNR=611
ASAR ScP ScP 12 03 15.7 +1.7
comp=Z,44nm,0.7s,baz=112,slow=3.9,SNR=24
ASAR S S 12 04 09.7 -0.5
comp=Z,11nm,0.8s,baz=102,slow=13,SNR=7.6
ASAR PKiKP PKiKP 12 07 18.1 -2.0
comp=Z,0.8nm,0.4s,baz=93,slow=1.5,SNR=8.7
ASAR Alice Springs 41.75 260 P P 11 58 32.4 +0.4
ASAR ScP ScP 12 03 15.7 +1.7
ASAR S S 12 04 09.7 -0.5
WB2 Warramunga Arr 42.08 266⇑ *iP* P 11 58 34.2 -0.5
WB2 *e*SCP ScP 12 03 17.3 +1.9
WB2 *eS* S 12 04 10.0 -5.0
WB2 *e* 12 07 36.1
WRAB Tennant Creek 42.09 266 P P 11 58 34.0 -0.7
comp=Z,2μm,0.9s
WRAB Tennant Creek 42.09 266 *eP* P 11 58 34.6 -0.1
WRA Warramunga Ar 42.09 266 P P 11 58 34.3 -0.5
comp=Z,133nm,0.4s,mb5.8,baz=103,slow=8.3,SNR=752
WRA ScP ScP 12 03 17.2 +1.8
comp=Z,47nm,1.0s,baz=102,slow=4.2,SNR=16
WRA S S 12 04 12.1 -3.0
comp=Z,29nm,0.9s,baz=103,slow=14,SNR=10
WRA PKiKP PKiKP 12 07 17.9 -2.7
comp=Z,1.5nm,0.4s,baz=83,slow=0.4,SNR=14
WRA Warramunga Arr 42.09 266 P P 11 58 34.3 -0.5
WRA ScP ScP 12 03 17.2 +1.8
WRA S S 12 04 12.1 -3.0
FORT Forrest 46.10 249⇑ *iP* P 11 59 05.2 -0.4
comp=Z,497nm,0.6s,mb6.2
FORT *eS* S 12 05 09.4 -2.1
FORT *e* 12 07 55.1
STCH Steam Cracks 49.33 32 *eP* P 11 59 28.9 -0.8
POHA Pohakuloa 49.45 31 *eP* P 11 59 29.4 -1.3
comp=Z,108nm,0.7s,mb5.5
HON Honolulu 49.70 28 *eP* P 11 59 31.4 -1.1
GUMO Guam 50.24 314 P P 11 59 36.1 -0.5
comp=Z,660nm,0.9s,mb6.1,baz=165,slow=7.1,SNR=32
GUMO ScP ScP 12 03 48.8 -0.7
comp=Z,73nm,0.8s,baz=164,slow=7.6,SNR=4.2
GUMO Guam 50.24 314 *eP* P 11 59 36.1 -0.4
FITZ Fitzroy Crossi 50.52 266⇑ *iP* P 11 59 38.7 +0.1
comp=Z,419nm,1.3s,mb5.6
FITZ *e*pP pP 12 01 22.8 +1.6
FITZ *e*PP PP 12 01 31.3 -11
FITZ *e*SCP ScP 12 03 52.6 +1.8
FITZ *eS* S 12 06 12.0 -0.5
FITZ *e*SCS ScS 12 08 33.4 +1.8
FITZ Fitzroy Crossi 50.52 266 P P 11 59 38.8 +0.2
comp=Z,165nm,1.0s,mb5.3,baz=109,slow=9.5,SNR=174
FITZ ScP ScP 12 03 51.5 +0.7
comp=Z,19nm,1.1s,baz=93,slow=6.1,SNR=5.7
FITZ S S 12 06 12.0 -0.5
comp=Z,3.6nm,0.9s,baz=260,slow=22,SNR=7.6
MIDW Midway 51.62 3⇓ *eP* P 11 59 44.9 -1.4
comp=Z,906nm,1.6s,mb5.8
KLBR Kellerberrin 54.79 247⇑ *iP* P 12 00 08.6 -0.3
comp=Z,172nm,0.7s,mb5.4
KLBR *e*SCP pP 12 01 55.8 +1.9
BATI Baumata 54.88 274 P P 12 00 11.0 +1.2
comp=Z,108nm,0.5s,mb5.3,baz=74,slow=2.2,SNR=27
NWAO Narrogin (SRO) 55.05 245 *eP* P 12 00 10.5 -0.2
MBWA Marble Bar 55.09 260 *eP* P 12 00 10.7 -0.5
comp=Z,233nm,1.0s,mb5.4
MUN Mundaring 56.04 246 *eP* P 12 00 17.6 0.0
CASY Casey 60.21 206⇑ *iP* P 12 00 45.1 -0.1
KAPI Kappang 60.46 278 P P 12 00 46.6 -1.2
comp=Z,504nm,1.8s,mb5.5,SNR=10
KAPI Kappang 60.46 278 *eP* P 12 00 45.9 -1.9
DAV Davao City (W) 60.95 293 P P 12 00 50.9 -0.1
comp=Z,219nm,0.5s,mb5.7
BUKP Musuan 61.81 294 *eP* P 12 00 56.8 +0.2
MSLP Maasin 63.18 296 *eP* P 12 01 04.2 -1.2
RPN Rapa Nui 63.48 110 P P 12 01 08.9 +1.7
comp=Z,3μm,0.9s,SNR=6.5
PVCP Virac 65.66 298 *eP* P 12 01 19.2 -1.8
RCP Roxas 65.70 296‖ *eP* P 12 01 20.4 -0.9
KALP Kalibo 66.10 296 *eP* P 12 01 25.6 +1.8
MYLDM Lahad Datu 66.10 287 ⇓P P 12 01 24.7 +0.8
TSM Tawau 66.23 286 ⇓P P 12 01 25.5 +0.8
QSPA South Pole Qui 66.45 180 P P 12 01 26.5 +1.5
comp=Z,274nm,0.8s,mb5.9,baz=266,slow=0.4,SNR=913
OTRP Odiongan 66.72 296 *eP* P 12 01 26.1 -1.6
MIR Mirnyy 67.24 206⇑ *iP* P 12 01 32.0 +2.0
MIR pmax pmax
comp=Z,100nm,1.0s,mb5.3
SDKM Sandakan 67.46 287 ⇓P P 12 01 32.1 -0.1
SJMP San Jose 67.52 296 *eP* P 12 01 31.7 -0.8
KDM Kudat 68.38 288⇑ P P 12 01 38.9 +1.0
BATP Batarza 68.45 290 *eP* P 12 01 37.6 -0.6
KKM Kota Kinabalu 68.51 287 ⇓P P 12 01 38.9 +0.3
KKM Kota Kinabalu 68.51 287 *eP* P 12 01 38.3 -0.3
KKM *e*pP pP 12 03 30.1 -0.4
LUBP Lubang 68.91 296 *eP* P 12 01 38.6 -2.4
BALP Baler 68.91 299 *eP* P 12 01 39.5 -1.5
CAUP Cauayan 69.38 300 *eP* P 12 01 43.6 -0.2
BTM Bintulu 69.99 283⇑ P P 12 01 48.1 +0.6
SBUM Sibu 70.43 282⇑ P P 12 01 50.6 +0.5
MJAR Matsushiro Arr 71.48 326 P P 12 01 55.0 -0.7
comp=Z,113nm,0.9s,mb5.4,baz=162,slow=5.7,SNR=274
MJAR PKPPKP 12 29 35.4
comp=Z,0.6nm,0.7s,baz=34,slow=8.3,SNR=3.2
MJAR Matsushiro Arr 71.48 326 P P 12 01 55.0 -0.7
MJAR P'P' 12 29 35.4
MAJO Matsushiro 71.49 326 *eP* P 12 01 55.4 -0.4
MAJO pmax pmax
comp=Z,223nm,0.9s,mb5.7
MAJO Matsushiro 71.49 326 *eP* P 12 01 55.4 -0.4
comp=Z,223nm,0.9s,mb5.7
MAT Matsushiro 71.49 326 P P 12 01 56.0 +0.2
MAT S S 12 10 31.0 0.0
KSM Kuching 71.73 280⇑ P P 12 01 58.1 +0.3
KSM Kuching 71.73 280‖ *eP* P 12 01 57.2 -0.6
KSM *e*pP pP 12 03 48.4 -2.7
ERM Erimo 73.51 332 P P 12 02 08.0 +0.7
comp=Z,834nm,0.9s,mb6.2,SNR=13
ERM Erimo 73.51 332⇑ *iP* P 12 02 08.2 +0.9
NACB Ninganchiao 73.68 306⇓ *iP* P 12 02 07.5 -1.2
comp=Z,3μm,1.2s,mb6.5
NACB *e*pP pP 12 04 00.3 -2.4
YHNB Yeheng 74.13 306⇓ *iP* P 12 02 10.1 -1.2
comp=Z,392nm,1.1s,mb5.8
TATO Taipei 74.22 307 *eP* P 12 02 11.1 -0.7
AMKA Amchitka 74.68 360 *eP* P 12 02 12.2 -1.5
ADK Adak 75.25 2 *eP* P 12 02 15.8 -1.1
SMY Shemya 76.18 357 *eP* P 12 02 21.0 -1.0
QZH Quanzhou 76.35 305⇓ *iP* P 12 02 23.8 +0.2
QZH AP pP 12 04 17.0 -1.8
QZH S S 12 11 20.1 -4.6
QZH AMB AMB
comp=Z,390nm,1.1s,mb5.8
QZH AMB AMB
comp=Z,2μm,3.2s
SKR Severo-Kuril's 76.85 345 *eP* P 12 02 24.1 -1.6
NIKO Nikolski 76.93 7 *eP* P 12 02 25.1 -1.0
MYKOM Kota Tinggi 77.72 277⇓ P P 12 02 31.6 +0.2
YSS Yuzh-Sakhalins 77.75 335ĸ *iP* P 12 02 31.2 +0.5
YSS *e* 12 02 35.2
YSS *e* pP 12 04 27.0 +0.5
YSS *e* 12 05 35.0
YSS *eS* S 12 11 40.0 +1.5
YSS *e*SS SS 12 17 00.0 +5.0
YSS *e*SSS 12 20 17.0
YSS pmax pmax
comp=Z,290nm,1.0s,mb5.6
YSS pmax pmax
comp=Z,600nm,3.0s
YSS smax
comp=E,2μm,6.0s
YSS Yuzh-Sakhalins 77.75 335 *eP* P 12 02 30.9 +0.2
comp=E,302nm,1.1s,mb5.5
KSRS Korea Array 77.83 320 P P 12 02 31.8 +0.4
comp=E,69nm,0.8s,mb5.0,baz=137,slow=5.8,SNR=171
KSRS PP PP 12 05 29.2 -8.1
comp=E,3.8nm,0.9s,baz=137,slow=8.8,SNR=3.7
KSRS Korea Array 77.83 320 P P 12 02 31.8 +0.4
KSRS pmax pmax
comp=Z,69nm,0.9s,mb5.0
KSRS pmax pmax
comp=Z,4.0nm,1.0s
MAW Mawson 77.89 200⇑ *iP* P 12 02 31.9 +0.6
comp=Z,42nm,0.5s,mb5.0
MAW Mawson 77.89 200 P P 12 02 31.9 +0.7
comp=Z,58nm,0.6s,mb5.1,baz=132,slow=5.9,SNR=90
MAW Mawson 77.89 200 P P 12 02 31.9 +0.6
MAW pmax pmax
comp=Z,58nm,0.6s
MAW Mawson 77.89 200 *eP* P 12 02 31.4 +0.1
comp=Z,58nm,0.5s,mb5.2
SSE Sheshan 78.06 312 P P 12 02 32.5 -0.3
SSE AP pP 12 04 32.0 +3.4
SSE S S 12 11 41.4 -1.1
SSE AMB AMB
comp=Z,93nm,1.0s,mb5.1
SSE AMB AMB
comp=Z,310nm,8.5s
UNV Unalaska Valle 78.08 8 *eP* P 12 02 30.8 -1.5
KGM Kluang 78.30 277⇑ P P 12 02 34.9 +0.4
AKUT Akutan 78.46 9 *eP* P 12 02 31.9 -2.4
PET Petropavlovsk 78.48 347ĸ *iP* P 12 02 33.3 -1.2
PET *e* 12 02 41.7
PET *e* 12 05 36.1
PET *i* S S 12 11 43.0 -2.9
PET *e* 12 11 53.7
PET *e*SPP 12 12 28.2
PET pmax pmax
comp=Z,94nm,0.7s,mb5.2
PET pmax pmax
comp=Z,200nm,15.5s
PET pmax pmax
comp=Z,18nm,1.6s,mb4.2
PET pmax pmax
comp=Z,200nm,16.1s
PET pmax pmax
comp=Z,200nm,5.4s
PET Petropavlovsk 78.48 347 *eP* P 12 02 33.6 -0.8
INCN Inchon 78.61 320 *eP* P 12 02 35.9 +0.3
comp=Z,167nm,1.0s,mb5.3
PEA0B Petropavlovsk- 78.76 347⇓ *iP* P 12 02 35.5 -0.5
PETK Petropavlovsk- 78.76 347 P P 12 02 35.5 -0.4
comp=Z,129nm,0.9s,mb5.3,baz=106,slow=8.0,SNR=135
PMSA Palmer Station 79.29 157 P P 12 02 39.3 +0.5
comp=Z,69nm,0.7s,mb5.1,baz=231,slow=4.3,SNR=41
GZH Guangzhou 79.39 301 P P 12 02 41.0 +1.0
GZH S S 12 11 56.0 -0.6
GZH AMB AMB
comp=Z,214nm,1.1s,mb5.4
VLA Vladivostok 79.62 327 *eP* P 12 02 38.2 -2.6
VLA *eS* S 12 11 56.3 -1.8
VLA pmax pmax
comp=Z,144nm,1.2s,mb5.2
VLA Vladivostok 79.62 327⇑ *iP* P 12 02 41.3 +0.5
KTGM Kuala Trenggan 79.84 280⇓ P P 12 02 43.2 +0.6
QIZ Qiongzhong 80.18 296 P P 12 02 42.8 -1.5
QIZ AP pP 12 04 40.0 -0.9
QIZ XP sP 12 05 39.1 +2.4
QIZ PP PP 12 05 56.0 -0.9
QIZ S S 12 12 01.0 -3.9
QIZ AMB AMB
comp=Z,31nm,1.3s,mb4.5
QIZ AMB AMB
comp=Z,258nm,11.7s
QIZ Qiongzhong 80.18 296 *eP* P 12 02 43.6 -0.7
comp=Z,207nm,2.0s,mb5.1
NJ2 Nanjing 80.23 311 *eP* P 12 02 42.5 -1.7
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb4.6
FRIM Kepong 80.34 278⇓P P 12 02 44.8 -0.4
SDPT Sand Point 80.47 11 *eP* P 12 02 43.6 -1.3
SNCC San Nicolas Is 80.96 48⇑P P 12 02 48.5 +0.4
baz=81
BSC Santa Cruz Isl 81.33 47⇓P P 12 02 50.1 +0.2
baz=82,SNR=5.8
FARB Farallon Islan 81.39 42⇓P P 12 02 50.2 +0.1
baz=82,SNR=16
IPM Ipoh 81.39 279⇓P P 12 02 50.9 +0.2
V03C Hunter Liggett 81.48 45⇓P P 12 02 51.0 +0.4
baz=82,SNR=16
SBC Santa Barbara 81.53 47⇑P P 12 02 51.2 +0.3
baz=82
SAC San Andreas 81.68 43 *eP* P 12 02 51.8 +0.2
JRSC Jasper Ridge 81.68 43⇓P P 12 02 51.8 +0.2
baz=82,SNR=17
PKM Peak Mountain 81.73 46⇑P P 12 02 52.4 +0.5
baz=82,SNR=13
MCCM Marconi Confer 81.74 42⇓P P 12 02 51.7 -0.1
baz=82,SNR=9.0
MCCM Marconi Confer 81.74 42 *eP* P 12 02 51.9 0.0
comp=Z,553nm,2.3s,mb5.6
CHGN Chignik 81.76 12 *eP* P 12 02 51.7 +0.2
BLG Laguna Peak 81.78 47⇑P P 12 02 51.9 -0.3
baz=82
SAO San Andreas Ge 81.79 44 *eP* P 12 02 52.4 +0.2
CIS Catalina Islan 81.82 48⇑P P 12 02 52.2 -0.2
baz=82
MDJ Mudanjiang 81.85 326 P P 12 02 52.8 +0.5
MDJ AP pP 12 04 54.0 +4.4
MDJ PP PP 12 06 10.8 +0.7
MDJ S S 12 12 15.8 -4.9
MDJ SCS ScS 12 12 29.5 -3.4
MDJ SS SS 12 17 56.3 +0.6
MDJ AMB AMB
comp=Z,147nm,1.1s,mb5.3
MDJ AMB AMB
comp=Z,371nm,5.3s
MDJ Mudanjiang 81.85 326⇓ *iP* P 12 02 52.8 +0.5
comp=Z,166nm,1.0s,mb5.4
SMMC Simmler 81.86 46⇓P P 12 02 53.0 +0.4
baz=82,SNR=12
PKD Parkfield 81.88 45⇓P P 12 02 52.6 0.0
baz=82,SNR=21
PTRM Twissleman Ran 81.92 46 *eP* P 12 02 53.0 +0.1
U04C Hernandez Rese 81.97 45⇑P P 12 02 53.8 +0.6
baz=82,SNR=44
PACP Pacheco Peak 82.04 44⇓P P 12 02 54.0 +0.5
baz=82,SNR=57
FMP Fort Macarthur 82.07 48⇓P P 12 02 53.7 0.0
baz=82
WENL Wente Vineyard 82.12 43⇑P P 12 02 54.1 +0.3
baz=83,SNR=6.5
CVS Carmenet Viney 82.13 42⇑P P 12 02 53.7 -0.1
baz=82,SNR=46
NSHM Saint Helena R 82.14 42⇑ *iP* P 12 02 53.8 -0.1
HOPS Hopland 82.15 41⇓P P 12 02 54.4 +0.5
baz=82,SNR=37
HOPS Hopland 82.15 41 *eP* P 12 02 50.4 -3.6
V05C Boulder Hill, 82.25 45⇑P P 12 02 55.3 +0.8
baz=82
BDM Black Diamond 82.25 43⇑P P 12 02 54.8 +0.3
baz=82
KCPM Cahto Peak 82.28 41⇑ *iP* P 12 02 55.0 +0.5
OSI Osito Adit 82.30 47⇓P P 12 02 54.8 0.0
baz=82
DECC Green Verdugo 82.35 48⇓P P 12 02 54.8 -0.3
baz=82
U05C Westside ANR, 82.39 45⇑P P 12 02 55.3 +0.1
baz=82
109C Camp Elliot, M 82.42 49⇓P P 12 02 55.3 -0.2
baz=83,SNR=5.7
KIPM Iron Peak 82.42 41⇑ *iP* P 12 02 55.9 +0.6
O01C Eel River Cons 82.43 40⇓P P 12 02 56.1 +0.8
baz=83,SNR=21
MNRC McLaughlin Nat 82.47 42⇓P P 12 02 56.1 +0.5
baz=83,SNR=79
UBT Ubonrachathani 82.49 290⇓P P 12 02 57.0 +0.8
comp=Z,347nm,0.9s,mb5.8
MWC Mount Wilson 82.52 48 *eP* P 12 02 56.0 +0.1
ARVC Arvin 82.53 47⇓P P 12 02 55.8 -0.1
baz=83,SNR=17
DL2 Dalian 82.54 318 *i* P P 12 02 55.9 0.0
DL2 AP pP 12 04 53.1 -0.4
DL2 XP sP 12 05 53.9 +4.9
DL2 S S 12 12 21.8 -6.0
DL2 AMB AMB
comp=Z,50nm,0.9s,mb5.0
DL2 AMB AMB
comp=Z,370nm,4.9s
WHN Wuhan 82.57 308⇓P P 12 02 56.8 +0.5
WHN AP pP 12 04 53.1 -0.7
WHN S S 12 12 22.3 -6.2
WHN AMB AMB
comp=Z,428nm,1.1s,mb5.9
WHN AMB AMB
comp=Z,1μm,5.2s
Q03C Winters 82.58 42⇑P P 12 02 57.2 +1.0
baz=83,SNR=26
BAR Barrett 82.61 50 *eP* P 12 02 56.4 0.0
comp=Z,257nm,1.9s,mb5.4
USHA Ushuaia 82.71 147 P P 12 02 56.5 -0.1
comp=Z,46nm,1.0s,mb5.0,baz=250,slow=6.2,SNR=10
JCC Jacoby Creek 82.74 40⇑P P 12 02 57.4 +0.5
baz=83,SNR=7.0
MURC Murrieta 82.76 49⇓P P 12 02 57.1 0.0
baz=83,SNR=17
VES Vestal, Richgr 82.78 46⇑P P 12 02 56.7 -0.5
baz=83,SNR=42
GASB Alder Springs 82.78 41⇓P P 12 02 58.2 +1.1
baz=83,SNR=67
BFSC Mount Baldy St 82.80 48⇓P P 12 02 57.1 -0.2
baz=83,SNR=30
S05C Merced 82.85 44⇓P P 12 02 57.4 -0.1
baz=83,SNR=24
LPIG La Paz 82.87 60 P P 12 02 57.1 -0.8
comp=Z,91nm,0.8s,mb5.3,baz=358,slow=1.0,SNR=20
MONP Monument Peak 82.90 50⇑P P 12 02 58.2 +0.3
baz=83,SNR=18
EDW2 Edwards Air Fo 82.94 47⇑P P 12 02 58.1 +0.1
baz=83,SNR=49
RCTC Rector, Farmer 82.94 45⇓P P 12 02 57.1 -0.9
baz=83,SNR=5.7
DVTC Desert V Tower 83.00 50⇑P P 12 02 58.8 +0.4
baz=83,SNR=22

R04C **Big Horse Ranc** 83.02 43 ⇑P P 12 02 57.8 -0.6
baz=83,SNR=6.6
T06C **Millerton Lake** 83.05 45 ⇓P P 12 02 58.4 -0.1
baz=83,SNR=72
O02C **Red Bluff** 83.07 41 ⇑P P 12 02 59.5 +1.0
baz=83,SNR=132
ISA **Isabella** 83.07 46 eP P 12 02 59.1 +0.4
ISA pmax pmax
comp=Z,116nm,0.8s,mb5.5
ISA **Isabella** 83.07 46 ⇓P P 12 02 58.8 +0.2
baz=83,SNR=110
ISA **Isabella** 83.07 46 eP P 12 02 59.1 +0.4
comp=Z,116nm,0.8s,mb5.5
Q04C **Lincoln** 83.10 42 ⇑P P 12 02 58.6 -0.2
baz=83,SNR=13
N02C **Big Bar** 83.16 40 ⇓P P 12 02 59.4 +0.4
baz=83,SNR=74
SYO **Syowa Base** 83.20 193 ⇓iP P 12 02 56.8 -2.0
SNY **Shenyang** 83.23 321 P P 12 02 59.3 0.0
SNY AMB AMB
comp=Z,76nm,0.9s,mb5.2
CMB **Columbia Colle** 83.23 44 ⇓P P 12 02 59.2 -0.2
baz=83,SNR=83
CMB **Columbia Colle** 83.23 44 eP P 12 02 59.2 -0.1
PFO **Pinyon Flat Ob** 83.28 49 P P 12 02 59.4 -0.3
comp=Z,218nm,0.9s,mb5.7,SNR=13
PFO **Pinyon Flat Ob** 83.28 49 P P 12 02 59.9 +0.2
comp=Z,26nm,0.9s,mb4.8,baz=254,slow=3.3,SNR=22
PFO **Pinyon Flat Ob** 83.28 49 ⇑P P 12 02 59.7 0.0
baz=83,SNR=13
HELL **Mitchell Peak** 83.30 45 ⇑P P 12 02 59.2 -0.6
baz=84,SNR=62
BBRC **Big Bear Sol-O** 83.32 48 ⇑P P 12 03 00.2 +0.2
baz=84
M01C **Crescent City** 83.34 39 ⇓P P 12 03 00.5 +0.6
baz=84,SNR=18
SWSC **Sam W. Stewart** 83.36 50 ⇓P P 12 03 00.4 +0.2
baz=84,SNR=32
LAVA **Lava Cap Winer** 83.44 43 ⇑P P 12 03 00.1 -0.3
baz=84,SNR=36
ORV **Oroville** 83.46 42 ⇓P P 12 03 00.4 -0.1
baz=84,SNR=87
WDC **Whiskeytown Da** 83.47 40 ⇑P P 12 03 00.6 +0.1
baz=84,SNR=57
WDC **Whiskeytown Da** 83.47 40 eP P 12 03 00.8 +0.3
CN2 **Changchun** 83.47 324 eP P 12 03 00.6 +0.2
CN2 eAP pP 12 04 58.5 +0.1
CN2 SKS 12 12 29.6
CN2 eS S 12 12 37.6 +0.9
CN2 eSS SS 12 18 23.3 +3.8
CN2 AMB AMB
comp=Z,250nm,1.3s,mb5.6
CN2 AMB AMB
comp=Z,1μm,3.0s
S06C **San Francisco** 83.48 44 ⇑P P 12 03 00.4 -0.2
baz=84,SNR=71
KCC **Kaiser Creek** 83.49 45 ⇓P P 12 03 01.1 +0.4
baz=84
LRMC **Laurel Mountai** 83.49 47 ⇑P P 12 03 00.9 +0.1
baz=84,SNR=5.3
KBO **Bosley Butte** 83.52 38 eP P 12 03 01.8 +1.0
RRX **Edison Barstow** 83.61 48 ⇑P P 12 03 01.4 0.0
baz=84
K01A **Sixes** 83.76 38 ⇓P P 12 03 02.5 +0.6
baz=84,SNR=7.2
CWC **Cottonwood Cre** 83.78 46 ⇑P P 12 03 02.1 -0.1
baz=84,SNR=5.4
M02C **Callahan** 83.79 40 ⇑P P 12 03 03.0 +0.9
baz=84,SNR=86
TIA **Tai'an** 83.80 314 ⇓P P 12 03 02.8 +0.5
TIA AMB AMB
comp=Z,330nm,1.1s,mb5.8
BELC **Belle Mtn.** 83.81 49 ⇓P P 12 03 02.8 +0.5
baz=84,SNR=78
R05C **Kirkwood Meado** 83.83 43 ⇓P P 12 03 02.5 +0.2
baz=84
L02A **Cave Junction** 83.84 39 ⇓P P 12 03 02.8 +0.5
baz=84,SNR=23
P05C **Yuba Gap, Truc** 83.86 42 ⇑P P 12 03 02.7 +0.2
baz=84,SNR=61
KEBM **Edson Butte** 83.88 38 eP P 12 03 03.1 +0.6
MPMC **Manual Prospec** 83.95 46 ⇓P P 12 03 03.0 0.0
baz=84,SNR=52
MLAC **Mammoth Lakes** 83.98 45 ⇑P P 12 03 03.4 +0.3
baz=84,SNR=12
GSC **Goldstone** 83.98 47 eP P 12 03 03.4 +0.2
GSC pmax pmax
comp=Z,74nm,0.8s,mb5.3
GSC **Goldstone** 83.98 47 ⇓P P 12 03 03.2 0.0
baz=84,SNR=62
GSC **Goldstone** 83.98 47 eP P 12 03 03.4 +0.1
comp=Z,74nm,0.8s,mb5.3
BC3 **Big Chuckw Mtn** 84.00 49 ⇑P P 12 03 03.9 +0.6
baz=84,SNR=45
112A **Yuma** 84.00 51 ⇓P P 12 03 03.9 +0.6
baz=84
TIN **Tinemaha** 84.04 45 ⇓P P 12 03 03.5 +0.1
baz=84,SNR=11
HEC **Hector,Ludlow** 84.04 48 ⇓P P 12 03 03.5 0.0
baz=84,SNR=68
O05C **Quincy** 84.06 42 ⇓P P 12 03 03.6 +0.2
baz=84,SNR=15
YBH **Yreka Blue Hor** 84.08 39 P P 12 03 04.1 +0.5
comp=Z,28nm,0.8s,mb4.8,baz=184,slow=2.5,SNR=109
YBH pP pP 12 05 02.0 +0.4
comp=Z,2.0nm,0.9s,baz=160,slow=10,SNR=1.4
YBH **Yreka Blue Hor** 84.08 39 ⇓P P 12 03 04.1 +0.6
baz=84,SNR=61
YBH **Yreka Blue Hor** 84.08 39 eP P 12 03 04.1 +0.5
GLA **Glamis** 84.11 50 eP P 12 03 04.6 +0.7
GLA pmax pmax
comp=Z,163nm,0.8s,mb5.6
GLA **Glamis** 84.11 50 ⇓P P 12 03 04.6 +0.7
baz=84,SNR=74
GLA **Glamis** 84.11 50 eP P 12 03 04.5 +0.7
comp=Z,163nm,0.8s,mb5.6
WAKR **Walker** 84.11 44 eP P 12 03 04.1 +0.4
R06C **Coleville** 84.11 44 ⇑P P 12 03 04.0 +0.2
baz=84,SNR=54
R07C **Lee Vining** 84.11 44 ⇑P P 12 03 04.0 +0.2
baz=84,SNR=32
KLR **Kul'dur** 84.13 331 eP P 12 03 00.0 -3.6
KLR pmax pmax
comp=E,78nm,1.8s
KLR pmax pmax
comp=Z,300nm,1.8s,mb5.5
M03C **McCloud** 84.14 40 ⇑P P 12 03 04.1 +0.3
baz=84,SNR=20
O04C **Chester** 84.18 41 ⇑P P 12 03 04.3 +0.3
baz=84,SNR=15
K02A **Glendale** 84.29 38 ⇓P P 12 03 05.0 +0.5
baz=84,SNR=34
S08C **White Mtn Res** 84.33 45 ⇓P P 12 03 05.4 +0.6
baz=84,SNR=64
LBCM **Butte Creek Ri** 84.33 41 P P 12 03 05.0 +0.2
BEKR **Beckwourth** 84.35 42 ⇓P P 12 03 04.9 +0.1
baz=84,SNR=64
KDAK **Kodiak Island** 84.36 15 P P 12 03 04.2 -0.3
comp=Z,17nm,0.8s,mb4.6,baz=222,slow=1.7,SNR=13
KDAK pP pP 12 05 02.1 -0.6
comp=Z,9.2nm,1.1s,baz=244,slow=9.7,SNR=2.7
KDAK **Kodiak Island** 84.36 15 eP P 12 03 03.9 -0.6
WCN **Washoe City** 84.38 43 ⇓P P 12 03 05.4 +0.3
baz=84,SNR=25
GMRC **Granite Mounta** 84.47 48 ⇑P P 12 03 05.7 +0.1
baz=85,SNR=58
IRM **Iron Mountain** 84.48 49 ⇓P P 12 03 06.2 +0.5
baz=85,SNR=81
HUMO **Hull Mountain** 84.49 39 ⇑P P 12 03 06.2 +0.6
baz=85,SNR=51
HUMO **Hull Mountain** 84.49 39 eP P 12 03 06.3 +0.8
P06A **Stead Airport,** 84.52 42 ⇑P P 12 03 06.0 +0.2
baz=85,SNR=6.2
GRAC **Grapevine Rang** 84.57 46 ⇓P P 12 03 06.0 -0.1
baz=85,SNR=53
ELFS **Eagle Lake Fie** 84.58 41 ⇑P P 12 03 06.3 +0.4
baz=85
FURC **Furnace Creek,** 84.61 46 ⇓P P 12 03 05.8 -0.4
baz=85,SNR=8.2
J02A **Umpqua** 84.62 38 ⇓P P 12 03 06.6 +0.5
baz=85,SNR=25
M04C **Macdoel** 84.63 40 ⇑P P 12 03 06.5 +0.3
baz=85,SNR=21
TUQ **Turquoise Moun** 84.66 48 ⇓P P 12 03 06.5 0.0
baz=85,SNR=35
SHOC **Shoshone** 84.67 47 ⇑P P 12 03 06.3 -0.2
baz=85,SNR=11

Y12C **Blythe** 84.70 50 ⇓P P 12 03 07.0 +0.2
baz=85,SNR=37
113A **Mohawk Valley,** 84.70 51 ⇓P P 12 03 07.1 +0.3
baz=85,SNR=23
Q07A **Schurz** 84.76 44 ⇓P P 12 03 07.0 +0.1
baz=85
M05C **Lookout** 84.78 40 ⇓P P 12 03 07.0 +0.1
baz=85,SNR=57
NVAR **Mina Array Bea** 84.79 44 P P 12 03 07.0 0.0
comp=Z,25nm,0.8s,mb4.8,baz=224,slow=8.6,SNR=190
NVAR pP pP 12 05 06.8 +1.3
comp=Z,4.1nm,0.9s,baz=202,slow=12,SNR=1.9
NVAR PKKPbc PKKPbc 12 21 13.1 +0.1
comp=Z,0.9nm,0.6s,baz=59,slow=3.9,SNR=10
L04A **Klamath Falls** 84.84 40 ⇑P P 12 03 07.4 +0.1
baz=85,SNR=41
O06A **Flanigan** 84.85 42 ⇑P P 12 03 07.2 -0.2
baz=85,SNR=12
PAHR **Pah Rah Range** 84.85 43 eP P 12 03 07.5 +0.1
R08A **Mina** 84.87 44 ⇑P P 12 03 07.1 -0.3
baz=85,SNR=7.4
I02A **Mapleton** 84.89 37 ⇓P P 12 03 07.7 +0.3
baz=85,SNR=14
U10A **Ash Meadows, A** 84.93 47 ⇓P P 12 03 07.9 +0.1
baz=85,SNR=20
SNAA **Sanae** 84.94 179 c iP P 12 03 06.4 -0.9
SNAA **Sanae** 84.94 179 c eP P 12 03 06.3 -1.1
214A **Organ Pipe Nat** 84.96 52 ⇑P P 12 03 08.6 +0.5
baz=85,SNR=30
LDFC **Landfair** 85.01 48 eP P 12 03 09.0 +0.8
P07A **Fallon** 85.06 43 ⇓P P 12 03 08.5 +0.2
baz=85
S09A **Goldfield** 85.08 45 ⇑P P 12 03 08.0 -0.5
baz=85,SNR=30
M06C **Likely Place G** 85.08 41 ⇑P P 12 03 08.6 +0.1
baz=85,SNR=9.2
I03A **Eugene** 85.17 37 ⇓P P 12 03 09.0 +0.2
baz=85,SNR=19
NEE2 **Needles Airpor** 85.18 49 ⇑P P 12 03 09.2 +0.2
baz=85,SNR=5.4
N06A **Buffalo Meadow** 85.20 42 ⇓P P 12 03 09.0 0.0
baz=85,SNR=34
K04A **Chilquin** 85.20 39 ⇑P P 12 03 09.3 +0.3
baz=85
V11A **Goodsprings** 85.21 48 ⇓P P 12 03 09.3 +0.1
baz=85,SNR=16
Y13A **Salome** 85.22 50 ⇓P P 12 03 09.7 +0.5
baz=85
H02A **Toledo** 85.22 37 ⇓P P 12 03 09.8 +0.8
baz=85
PDMCI **Parker Dam,Lak** 85.26 49 ⇓P P 12 03 09.9 +0.4
baz=85,SNR=44
Q08A **Gabbs** 85.27 44 ⇓P P 12 03 09.1 -0.3
baz=85,SNR=68
TPH **Tonopah** 85.28 45 eP P 12 03 09.5 0.0
W12A **Cal Nev Ari** 85.30 48 ⇓P P 12 03 10.0 +0.3
baz=85,SNR=5.4
J04A **Umpqua Nationa** 85.38 39 ⇑P P 12 03 10.3 +0.5
baz=86,SNR=40
L05A **Lakeview** 85.38 40 ⇑P P 12 03 10.2 +0.3
baz=86,SNR=46
O07A **Toulon** 85.44 42 ⇓P P 12 03 10.0 -0.2
baz=86,SNR=67
R09A **Tonopah** 85.47 45 ⇓P P 12 03 10.4 0.0
baz=86,SNR=47
MAIT **Maiti** 85.47 184 eP P 12 03 09.8 -0.1
NVL **N'lazarevskaya** 85.47 184 eP P 12 03 09.3 -0.6
NVL e 12 12 52.4
NVL pmax pmax
comp=Z,95nm,1.4s,mb5.1
V12A **Nelson** 85.55 48 ⇓P P 12 03 10.8 0.0
baz=86,SNR=29
I04A **Tendick Farm,** 85.55 38 ⇑P P 12 03 10.4 -0.2
baz=86,SNR=30
COR **Corvallis** 85.55 37 eP P 12 03 10.8 +0.2
COR pmax pmax
comp=Z,27nm,0.8s,mb4.9
COR **Corvallis** 85.55 37 eP P 12 03 10.8 +0.2
comp=Z,27nm,0.8s,mb4.9
U11A **Corn Creek** 85.57 47 ⇓P P 12 03 10.9 0.0
baz=86,SNR=10
S10A **Tonopah Range,** 85.60 45 ⇓P P 12 03 10.9 -0.1
baz=86,SNR=176
Z14A **Wintersburg** 85.60 51 ⇑P P 12 03 11.7 +0.5
baz=86,SNR=30
MOD **Moc** 85.61 40 ⇑P P 12 03 11.0 0.0
baz=86,SNR=43
MOD **Modoc** 85.61 40 eP P 12 03 11.2 +0.2
H03A **Soap Creek Ran** 85.61 37 ⇓P P 12 03 11.2 +0.3
baz=86,SNR=19
X13A **Yucca** 85.64 49 ⇓P P 12 03 11.5 +0.2
baz=86,SNR=53
P08A **Dixie Valley** 85.66 43 ⇓P P 12 03 11.5 +0.2
baz=86,SNR=8.1
HEBO **Mount Hebo** 85.70 36 eP P 12 03 11.5 +0.2
comp=Z,96nm,1.2s,mb5.3
Q09A **Carvers** 85.74 44 ⇓P P 12 03 11.5 -0.2
baz=86,SNR=9.7
N07B **Gerlach** 85.74 42 ⇑P P 12 03 11.6 0.0
baz=86
K05A **Summer Lake** 85.76 40 ⇓P P 12 03 12.1 +0.5
baz=86,SNR=76
SHPR **Sheep Range** 85.76 47 eP P 12 03 12.1 +0.2
115A **Sonoran Desert** 85.77 52 ⇓P P 12 03 12.4 +0.4
baz=86,SNR=30
Y14A **Wickenburg** 85.86 50 ⇓P P 12 03 12.4 +0.1
baz=86,SNR=38
W13A **Hualapai Mount** 85.87 49 ⇑P P 12 03 12.6 +0.3
baz=86,SNR=45
J05A **Fort Rock** 85.90 39 ⇑P P 12 03 12.9 +0.6
baz=86,SNR=96
NNT **Nongplab** 85.95 286 ⇓P P 12 03 14.6 +1.4
comp=Z,549nm,1.1s,mb6.1
O08A **Rochester Mine** 85.96 43 ⇑P P 12 03 12.7 +0.1
baz=86,SNR=66
216A **Three Points,** 85.97 53 ⇑P P 12 03 13.8 +0.9
baz=86,SNR=62
M07A **Soldier Meadow** 85.98 41 ⇑P P 12 03 12.8 +0.1
baz=86,SNR=34
R10A **Warm Springs** 86.00 45 ⇓P P 12 03 13.1 +0.2
baz=86,SNR=58
S11A **Rachel** 86.00 46 ⇑P P 12 03 12.6 -0.3
baz=86,SNR=6.6
G03A **Yamhill** 86.03 36 ⇓P P 12 03 13.1 +0.3
baz=86
116A **Eloy** 86.08 52 ⇑P P 12 03 14.0 +0.5
baz=86,SNR=32
KMOR **Kings Mountain** 86.12 36 P P 12 03 13.6 +0.3
T11A **Corn Creek, Al** 86.13 47 ⇓P P 12 03 13.9 +0.4
baz=86,SNR=102
Z15A **Gila River Ind** 86.13 51 ⇓P P 12 03 13.9 +0.2
baz=86
U12A **Valley of Fire** 86.14 48 ⇑P P 12 03 13.9 +0.3
baz=86,SNR=40
P09A **Austin** 86.17 44 ⇑P P 12 03 13.5 -0.2
baz=86,SNR=10
K06A **Valley Falls** 86.18 40 ⇓P P 12 03 14.0 +0.3
baz=86,SNR=74
T12A **Moapa** 86.18 47 ⇓P P 12 03 13.8 0.0
baz=86
V13A **Grand Canyon W** 86.20 48 ⇑P P 12 03 14.1 +0.1
baz=86
X14A **Yava** 86.23 50 ⇓P P 12 03 14.5 +0.5
baz=86,SNR=41
H04A **Detroit Lake** 86.23 37 ⇓P P 12 03 13.5 -0.3
baz=86,SNR=29
Q10A **Clear Creek Ra** 86.23 45 ⇑P P 12 03 13.8 -0.2
baz=86,SNR=34
L07A **Adell** 86.25 41 ⇓P P 12 03 14.5 +0.5
baz=86,SNR=64
N08A **GE Springer Mi** 86.26 42 ⇓P P 12 03 14.2 +0.1
baz=86,SNR=64
F03A **Seaside** 86.27 36 ⇑P P 12 03 14.4 +0.5
baz=86
217A **Green Valley** 86.32 53 ⇑P P 12 03 15.6 +1.0
baz=86,SNR=143
GYA **Guiyang** 86.32 301 ⇓iP P 12 03 15.1 +0.4
GYA AP pP 12 05 13.6 0.0
GYA PP PP 12 06 48.8 +2.5
GYA SKS 12 12 45.9
GYA S S 12 13 02.4 -2.6
GYA AMB AMB
comp=Z,40nm,1.2s,mb4.9
GYA AMB AMB
comp=Z,440nm,6.9s
Y15A **Casa Rosa Ranc** 86.35 51 ⇑P P 12 03 15.1 +0.4
baz=86,SNR=73

G04A **Mulino** 86.40 37 ⇓P P 12 03 14.7 +0.1
baz=87,SNR=12
I05A **Bend** 86.42 38 ⇓P P 12 03 15.1 +0.3
baz=87,SNR=17
W14A **Seligman** 86.48 49 ⇓P P 12 03 15.9 +0.7
baz=87,SNR=52
M08A **Happy Creek Ra** 86.50 42 ⇓P P 12 03 15.4 +0.2
baz=87,SNR=38
R11A **Troy Canyon, C** 86.50 45 ⇑P P 12 03 14.8 -0.4
baz=87,SNR=15
J06A **Christmas Vall** 86.51 39 ⇑P P 12 03 15.2 0.0
baz=87,SNR=65
U13A **Pakoon Wash** 86.52 48 ⇓P P 12 03 15.9 +0.5
baz=87,SNR=142
S12A **Delamar Landin** 86.58 46 ⇑P P 12 03 16.2 +0.5
baz=87,SNR=70
BJT **Baijiatuau** 86.60 317 ⇓iP P 12 03 16.2 +0.5
BJT pmax pmax
comp=Z,178nm,1.4s
BJT **Baijiatuau** 86.60 317 ⇓iP P 12 03 16.1 +0.5
comp=Z,178nm,1.4s,mb5.5
BJI **Beijing** 86.61 317 P P 12 03 16.0 +0.3
BJI AMB AMB
comp=Z,85nm,1.5s,mb5.2
TUC **Tucson** 86.62 53 eP P 12 03 17.0 +1.0
BMN **Battle Mountai** 86.62 43 eP P 12 03 15.7 -0.1
P10A **Eureka** 86.64 44 ⇓P P 12 03 15.9 0.0
baz=87,SNR=27
E03A **Lebam** 86.66 35 ⇑P P 12 03 16.0 +0.2
baz=87,SNR=12
Z16A **Peralta Trail,** 86.68 51 ⇓P P 12 03 16.7 +0.5
baz=87,SNR=16
N09A **Rock Creek Ran** 86.68 43 ⇓P P 12 03 16.0 -0.1
baz=87,SNR=26
V14A **Boquillas Ranc** 86.69 49 ⇑P P 12 03 16.6 +0.4
baz=87,SNR=95
X15A **Humboldt** 86.69 50 ⇑P P 12 03 16.8 +0.5
baz=87,SNR=54
K07A **Rock Creek Ran** 86.71 40 ⇑P P 12 03 16.5 +0.4
baz=87,SNR=85
Q11A **Duckwater** 86.73 45 ⇓P P 12 03 16.3 0.0
baz=87,SNR=22
H05A **Madras** 86.75 38 ⇑P P 12 03 16.3 0.0
baz=87,SNR=24
318A **Bisbee** 86.76 54 ⇓P P 12 03 17.6 +0.9
baz=87,SNR=126
SVW2 **Sparrevohn** 86.78 12 eP P 12 03 14.8 -1.1
117A **Oracle** 86.78 52 ⇑P P 12 03 17.5 +0.7
baz=87,SNR=69
BMW **Boistfort Moun** 86.79 36 eP P 12 03 16.0 -0.4
F04A **Amboy** 86.89 36 ⇓P P 12 03 16.8 -0.1
baz=87,SNR=31
T13A **Saint George** 86.89 47 ⇑P P 12 03 17.4 +0.3
baz=87,SNR=27
I06A **Prineville** 86.89 39 ⇓P P 12 03 17.5 +0.6
baz=87,SNR=135
NST **Nakhon Sawan** 86.91 288 ⇑P P 12 03 19.0 +1.3
comp=Z,125nm,1.0s,mb5.5
D03A **Wishkah Elem.** 86.92 35 ⇓P P 12 03 17.8 +0.8
baz=87
Y16A **Circle Bar Ran** 86.92 51 ⇓P P 12 03 18.0 +0.7
baz=87,SNR=108
WVOR **Wild Horse Val** 86.92 41 ⇑iP P 12 03 17.2 +0.1
WVOR pmax pmax
comp=Z,71nm,1.0s,mb5.2
WVOR **Wild Horse Val** 86.92 41 ⇑iP P 12 03 17.2 +0.1
comp=Z,71nm,1.0s,mb5.2
L08A **Fields** 86.95 41 ⇓P P 12 03 17.6 +0.4
baz=87,SNR=81
218A **Dragoon** 86.99 53 ⇓P P 12 03 18.7 +1.0
baz=87,SNR=95
O10A **Cortez Mining,** 87.00 43 ⇑P P 12 03 17.6 0.0
baz=87,SNR=6.5
VIPM **Ingram Point** 87.00 38 P P 12 03 17.8 +0.3
W15A **Williams** 87.03 50 ⇑P P 12 03 18.5 +0.7
baz=87,SNR=14
NLWA **Neilton Lookou** 87.04 35 ⇑P P 12 03 18.0 +0.4
baz=87,SNR=15
NLWA **Neilton Lookou** 87.04 35 ⇑eP P 12 03 17.9 +0.3
comp=Z,29nm,0.9s,mb4.9
NLWA epP pP 12 05 20.3 +3.5
C03A **Quillayute Air** 87.04 34 ⇓P P 12 03 18.4 +0.8
baz=87,SNR=14
M09A **Marrel Ranch,** 87.05 42 ⇓P P 12 03 18.2 +0.5
baz=87,SNR=41
U14A **Mt Trumbull** 87.06 48 ⇑P P 12 03 18.5 +0.6
baz=87,SNR=98
P11A **Circle Ranch,** 87.06 44 ⇓P P 12 03 17.9 0.0
baz=87,SNR=16
G05A **Wamic** 87.06 37 ⇑P P 12 03 17.9 +0.1
baz=87,SNR=12
J07A **Hines** 87.08 40 ⇑P P 12 03 18.1 +0.3
baz=87,SNR=73
R12A **Pony Springs,** 87.13 46 ⇓P P 12 03 18.5 +0.3
baz=87,SNR=52
E04A **Onalaska** 87.14 36 ⇑P P 12 03 18.7 +0.7
baz=87,SNR=8.6
SEW **Seward** 87.17 15 eP P 12 03 16.7 -1.1
SEW epP pP 12 05 19.6 +2.5
K08A **Mann Creek Ran** 87.18 41 ⇑P P 12 03 18.7 +0.3
baz=87,SNR=148
S13A **Holt Ranch, En** 87.22 47 ⇓P P 12 03 19.0 +0.4
baz=87,SNR=40
X16A **Lo Mia Camp, P** 87.22 51 ⇓P P 12 03 19.5 +0.8
baz=87,SNR=84
N10A **Dunphy** 87.23 43 ⇑P P 12 03 18.8 +0.1
baz=87,SNR=8.8
319A **Douglas** 87.25 54 ⇓P P 12 03 20.2 +1.2
baz=87,SNR=93
TDL **Tradedollar La** 87.26 36 P P 12 03 19.1 +0.5
L09A **Wilkinson Ranc** 87.26 42 ⇓P P 12 03 19.0 +0.2
baz=87,SNR=16
Y17A **Roosevelt** 87.28 51 ⇑P P 12 03 19.4 +0.3
baz=87,SNR=30
H06A **Lindquist Farm** 87.30 38 ⇓P P 12 03 19.1 +0.2
baz=88,SNR=108
Z17A **San Carlos Hig** 87.34 52 ⇓P P 12 03 19.9 +0.6
baz=88,SNR=12
SLKM **Skilak Lake** 87.35 14 eP P 12 03 17.9 -0.8
Q12A **Willow Creek R** 87.37 45 ⇓P P 12 03 19.3 0.0
baz=88,SNR=44
F05A **White Salmon** 87.38 37 ⇑P P 12 03 19.2 0.0
baz=88,SNR=12
I07A **Izee** 87.39 39 ⇑P P 12 03 19.6 +0.3
baz=88,SNR=127
D04A **Dobbs Creek Ra** 87.42 35 ⇑P P 12 03 20.1 +0.8
baz=88
V15A **Kaibab Nationa** 87.43 49 ⇑P P 12 03 20.4 +0.7
baz=88,SNR=60
G06A **Carlson Farm,** 87.44 38 ⇓P P 12 03 19.4 -0.1
baz=88,SNR=40
O11A **Cowboy Ranch,** 87.44 44 ⇓P P 12 03 19.9 +0.2
baz=88,SNR=47
T14A **Hurricane** 87.46 48 ⇓P P 12 03 20.1 +0.2
baz=88,SNR=41
R13A **O'Grain Ranch,** 87.47 46 ⇑P P 12 03 20.3 +0.5
baz=88,SNR=23
W16A **Flagstaff** 87.51 50 ⇑P P 12 03 20.7 +0.7
baz=88,SNR=24
CCUT **Cedar City** 87.54 47 ⇑iP P 12 03 20.7 +0.6
Z18A **Geronimo** 87.55 52 ⇓P P 12 03 21.0 +0.7
baz=88
J08A **Circle Bar Ran** 87.56 40 ⇓P P 12 03 20.3 +0.1
baz=88,SNR=86
P12A **McGill** 87.56 45 ⇓P P 12 03 20.2 0.0
baz=88,SNR=29
219A **White Tail Can** 87.58 54 ⇓P P 12 03 21.2 +0.7
baz=88,SNR=63
ARUT **Antelope Range** 87.61 47 eP P 12 03 20.5 0.0
ARUT e*PP pP 12 05 15.5 -4.4
K09A **Rome** 87.62 41 ⇓P P 12 03 20.6 +0.2
baz=88,SNR=176
X17A **Forest Lakes** 87.63 51 ⇓P P 12 03 21.5 +0.8
baz=88,SNR=17
E05A **Randle** 87.63 36 ⇓P P 12 03 20.3 -0.1
baz=88,SNR=49
H07A **Lands Inn, Kim** 87.66 39 ⇑P P 12 03 20.7 +0.2
baz=88,SNR=188
B04A **Port Angeles** 87.66 34 ⇑P P 12 03 21.0 +0.5
baz=88,SNR=7.3
M10A **I.L. Ranch, Tu** 87.67 42 ⇑P P 12 03 21.2 +0.5
baz=88,SNR=101
U15A **North Rim** 87.67 48 ⇑P P 12 03 21.6 +0.7
baz=88,SNR=160
F06A **Goldendale** 87.68 37 ⇑P P 12 03 20.8 +0.2
baz=88,SNR=21
C04A **Brinnon** 87.72 35 ⇓P P 12 03 21.0 +0.3
baz=88,SNR=37

LON Longmire 87.72 36 eP P 12 03 20.5 -0.3
TIY Taiyuan 87.76 313 P P 12 03 23.8 +2.6
TIY AP pP 12 05 22.3 +1.6
TIY SKS 12 12 54.9
TIY S S 12 13 23.3 +5.4
TIY AMB AMB
comp=Z,657nm,2.2s,mb6.0
NANT Nan 87.76 292 ⇓P P 12 03 21.0 -0.6
comp=Z,728nm,1.0s,mb6.4
N11A Elko Archery C 87.78 43 ⇓P P 12 03 21.1 -0.1
baz=88,SNR=8.5
S14A Cedar City 87.78 47 ⇓P P 12 03 21.6 +0.3
baz=88,SNR=25
I08A Drewsey 87.83 40 ⇓P P 12 03 21.7 +0.3
baz=88,SNR=174
WUAZ Wupatki 87.83 50⇑eP P 12 03 21.6 0.0
comp=Z,78nm,1.2s,mb5.3
Q13A Wheeler Ranch, 87.85 46 ⇓P P 12 03 21.5 -0.1
baz=88,SNR=14
Y18A Canyon Day Jun 87.90 52 ⇑P P 12 03 22.9 +1.0
baz=88,SNR=141
D05A Enumclaw 87.90 36 ⇑P P 12 03 22.1 +0.5
baz=88,SNR=25
T15A Red Dirt Ranch 87.92 48 ⇑P P 12 03 22.4 +0.5
baz=88,SNR=68
119A Ashpeak Ranch, 87.93 53 ⇓P P 12 03 23.1 +0.9
baz=88,SNR=27
J09A Fry Pan Ranch, 87.98 40 ⇑P P 12 03 22.3 +0.2
baz=88,SNR=84
G07A Ruggs Ranch, H 88.00 38 ⇑P P 12 03 22.0 -0.1
baz=88,SNR=45
L10A Juniper Basin 88.03 42 ⇑P P 12 03 22.6 +0.3
baz=88,SNR=124
E06A Yakima 88.05 36 ⇓P P 12 03 22.4 +0.1
baz=88,SNR=39
ELK Elko 88.05 44⇑iP P 12 03 22.5 0.0
ELK pmax pmax
comp=Z,46nm,1.0s
ELK Elko 88.05 44⇑iP P 12 03 22.5 0.0
comp=Z,46nm,1.0s,mb5.2
PGC Sidney 88.06 34 eP P 12 03 22.5 +0.1
W17A Winslow 88.07 50 ⇓P P 12 03 23.3 +0.5
baz=88,SNR=6.0
M11A Holland Ranch, 88.08 43 ⇓P P 12 03 23.1 +0.5
baz=88,SNR=81
O12A Currie 88.10 44 ⇓P P 12 03 22.7 0.0
baz=88,SNR=14
H08A Prairie City 88.13 39 ⇓P P 12 03 22.7 -0.1
baz=88,SNR=56
P13A Bates Ranch, G 88.13 45 ⇓P P 12 03 23.2 +0.3
baz=88
R14A James Farms, M 88.16 47 ⇑P P 12 03 23.4 +0.3
baz=88,SNR=7.3
K10A MacKenzie Ranc 88.18 41 ⇑P P 12 03 23.3 +0.2
baz=88,SNR=112
Z19A T-Link Ranch, 88.21 52 ⇓P P 12 03 24.2 +0.7
baz=88,SNR=10
F07A Phinny Hill Vi 88.23 37 ⇑P P 12 03 23.1 -0.1
baz=88,SNR=15
N12A Clover Valley, 88.23 44 ⇓P P 12 03 23.5 +0.1
baz=88,SNR=53
S15A Panguitch 88.28 47 ⇑P P 12 03 24.9 +1.3
baz=88,SNR=68
XAN Xi'an 88.31 308 P P 12 03 24.5 +0.6
XAN AMB AMB
comp=Z,102nm,1.1s,mb5.5
XAN AMB AMB
comp=Z,259nm,6.0s
U16A Tuba City 88.33 49 ⇑P P 12 03 24.4 +0.5
baz=88,SNR=26
X18A Snowflake 88.34 51 ⇓P P 12 03 24.4 +0.4
baz=88,SNR=35
I09A Lost Marbles R 88.35 40 ⇑P P 12 03 23.7 -0.1
baz=88,SNR=57
Q14A Sevier Lake (B 88.36 46 ⇓P P 12 03 24.2 +0.2
baz=88,SNR=125
C05A Tolt Reservoir 88.38 35 ⇑P P 12 03 23.7 -0.1
baz=88,SNR=28
TTA Tatalina 88.40 11 eP P 12 03 23.6 +0.1
G08A Pilot Rock 88.42 38 ⇓P P 12 03 24.1 0.0
baz=89,SNR=82
CRAG Craig 88.45 25 eP P 12 03 23.9 -0.1
comp=Z,32nm,1.1s,mb5.0
A04A Legoe Bay, Lum 88.49 34 ⇓P P 12 03 24.7 +0.4
baz=89,SNR=7.1
EBG Ellensburg 88.50 36 P P 12 03 24.7 +0.3
T16A Glen Canyon Da 88.50 48 ⇓P P 12 03 25.2 +0.5
baz=89,SNR=40
L11A Cat Creek Ranc 88.52 42 ⇑P P 12 03 25.0 +0.4
baz=89,SNR=55
B05A Bryant 88.52 35 ⇑P P 12 03 24.7 +0.2
baz=89,SNR=27
D06A Cle Elum 88.52 36 ⇓P P 12 03 24.5 0.0
baz=89,SNR=27
Y19A Nutrioso 88.55 52 ⇑P P 12 03 26.0 +1.0
baz=89,SNR=88
BDT Bhumibol Dam 88.56 289 ⇑P P 12 03 26.0 +0.6
comp=Z,33nm,1.1s,mb5.1
JCW Jim Creek 88.56 35 eP P 12 03 24.5 -0.2
PMR Palmer 88.56 14 eP P 12 03 23.5 -0.8
PMR pmax pmax
comp=Z,49nm,1.0s,mb5.3
PMR Palmer 88.56 14 eP P 12 03 23.5 -0.8
comp=Z,49nm,1.0s,mb5.3
PMR epP pP 12 05 25.5 +1.4
CMW Cultus Mountai 88.61 35 P P 12 03 25.2 +0.3
J10A Berg Farm, Mel 88.61 41 ⇓P P 12 03 24.9 -0.1
baz=89,SNR=30
R15A Junction 88.61 47 ⇑P P 12 03 26.0 +0.8
baz=89,SNR=29
RAGM Ragged Mountai 88.62 17 eP P 12 03 24.6 -0.1
M12A Wells 88.62 43 ⇓P P 12 03 25.4 +0.2
baz=89,SNR=55
E07A Sunnyside 88.67 37 ⇓P P 12 03 25.4 +0.1
baz=89,SNR=38
K11A Parker Ranch, 88.69 42 ⇑P P 12 03 25.8 +0.4
baz=89,SNR=47
PLCA Paso Flores 88.69 134 P P 12 03 26.4 +0.7
comp=Z,23nm,0.8s,mb5.0,baz=236,slow=5.4,SNR=42
PLCA pP pP 12 05 27.4 +2.1
comp=Z,15nm,1.2s,baz=241,slow=8.5,SNR=5.5
PLCA PKKPbc PKKPbc 12 21 02.5 -0.9
comp=Z,0.9nm,0.6s,baz=42,slow=15,SNR=3.6
RSW Rattlesnake Hi 88.72 37 eP P 12 03 25.7 +0.2
HAWA Hanford 88.75 37⇑iP P 12 03 25.6 0.0
comp=Z,63nm,0.8s,mb5.5
X19A St. Johns 88.76 51 ⇑P P 12 03 26.6 +0.6
baz=89,SNR=24
N13A Wendover, West 88.77 44 ⇑P P 12 03 26.0 +0.2
baz=89,SNR=41
W18A Petrified Fore 88.78 51 ⇓P P 12 03 26.2 +0.1
baz=89
H09A Durkee 88.80 39 ⇑P P 12 03 26.0 +0.1
baz=89,SNR=52
P14A Drum Mountains 88.82 45 ⇓P P 12 03 26.1 0.0
baz=89,SNR=23
S16A Weppner Ranch, 88.82 48 ⇑P P 12 03 26.0 -0.1
baz=89,SNR=15
F08A Pendleton 88.82 38 ⇓P P 12 03 25.7 -0.3
baz=89,SNR=34
MSU Marysvale 88.84 47 eP P 12 03 26.9 +0.7
KMI Kunming 88.84 298 P P 12 03 27.6 +1.0
KMI AP pP 12 05 26.5 +0.2
KMI XP sP 12 06 22.3 +1.0
KMI PP PP 12 07 07.9 +1.7
KMI SKS 12 13 04.3
KMI S S 12 13 26.6 -1.8
KMI SS SS 12 19 35.8 -2.0
KMI AMB AMB
comp=Z,87nm,1.5s,mb5.4
KMI AMB AMB
comp=Z,352nm,3.1s
U17A Shonto 88.88 49 ⇑P P 12 03 26.8 +0.3
baz=89,SNR=15
RPW Rockport 88.94 35 epP pP 12 05 26.5 +0.3
C06A Tall Timber Ra 88.94 35 ⇓P P 12 03 25.9 -0.5
baz=89,SNR=15
V18A Ganado 88.94 50 ⇑P P 12 03 27.0 +0.3
baz=89,SNR=17
Q15A Fillmore 88.96 46 ⇓P P 12 03 27.0 +0.2
baz=89,SNR=12
L12A House Creek Ra 88.96 43 ⇑P P 12 03 27.1 +0.4
baz=89,SNR=104
DIV Divide 88.97 16 eP P 12 03 26.0 -0.3
comp=Z,25μm,1.2s
I10A Payette 88.97 40 ⇓P P 12 03 27.0 +0.4
baz=89

A05A Maple Falls 88.98 34 ⇑P P 12 03 26.2 -0.4
baz=89,SNR=9.0
T17A Navajo Res., N 88.99 49 ⇑P P 12 03 27.6 +0.6
baz=89,SNR=79
D07A Quincy 88.99 36 ⇓P P 12 03 26.5 -0.2
baz=89,SNR=23
B06A Marblemount 89.00 35 ⇓P P 12 03 26.3 -0.4
baz=89,SNR=14
CHRT Chiangrai 89.00 292 ⇑P P 12 03 27.0 -0.4
comp=Z,768nm,1.2s,mb6.4
W19A Sanders 89.03 51 ⇓P P 12 03 27.3 +0.1
baz=89,SNR=5.8
ETW Entiat 89.05 36⇑iP P 12 03 26.9 0.0
M13A Montello 89.06 44 ⇓P P 12 03 27.5 +0.3
baz=89,SNR=134
E08A Dider Farm, El 89.07 37 ⇓P P 12 03 27.0 -0.1
baz=89,SNR=14
PPLA Purkeypile 89.08 12 eP P 12 03 24.6 -2.1
comp=Z,17nm,1.1s,mb4.8
G09A Cove 89.08 39 ⇑P P 12 03 26.9 -0.3
baz=89,SNR=36
BMO Blue Mountains 89.11 39 eP P 12 03 26.6 -0.7
comp=Z,118nm,1.9s,mb5.4
CMAR Chiang Mai Arr 89.12 290 P P 12 03 29.4 +1.4
comp=Z,62nm,1.0s,mb5.4,baz=131,slow=3.1,SNR=217
CMAR pP pP 12 05 27.0 -0.8
comp=Z,9.4nm,0.9s,baz=128,slow=3.7,SNR=9.0
CMAR PP PP 12 07 06.1 -2.3
comp=Z,19nm,1.2s,baz=121,slow=5.7,SNR=7.0
CMAR PKKPbc PKKPbc 12 21 01.4 -0.4
comp=Z,5.2nm,0.8s,baz=288,slow=4.5,SNR=17
CMAR PKPPKP 12 29 09.1
comp=Z,0.7nm,0.5s,baz=288,slow=3.7,SNR=4.8
CMAR Chiang Mai Arr 89.12 290 P P 12 03 29.4 +1.4
CMAR *PP pP 12 05 27.0 -0.8
CMAR 12 07 06.1
BMRM Bremner River 89.13 17 eP P 12 03 26.8 -0.2
LNOR Lincton Mounta 89.14 38 eP P 12 03 26.8 -0.6
MFID Camanche 89.17 41 ⇓P P 12 03 27.7 +0.1
baz=89,SNR=64
R16A Teasdale 89.19 47 ⇓P P 12 03 28.4 +0.6
baz=89,SNR=64
C07A Waterville 89.24 36 ⇓P P 12 03 27.4 -0.5
baz=89,SNR=35
F09A S2 Ranch, Elgi 89.26 38 ⇓P P 12 03 28.0 0.0
baz=89,SNR=31
CHG Chiang Mai 89.27 291 ⇓P P 12 03 32.2 +3.5
comp=Z,124nm,1.1s,mb5.7
CHTO Chiang Mai 89.27 291 eP P 12 03 29.3 +0.7
H10A Noah's Angus R 89.29 40 ⇑P P 12 03 27.7 -0.5
baz=89,SNR=52
K12A Draper Farm, C 89.30 42 ⇑P P 12 03 28.4 +0.1
baz=89,SNR=50
DUG Dugway 89.31 45⇑iP P 12 03 27.9 -0.4
DUG pmax pmax
comp=Z,43nm,1.3s,mb5.1
DUG Dugway 89.31 45⇑iP P 12 03 27.9 -0.4
comp=Z,43nm,1.3s,mb5.1
S17A Black Ridge (B 89.31 48 ⇑P P 12 03 28.0 -0.4
baz=90,SNR=87
P15A Leamington 89.33 46 ⇓P P 12 03 28.6 +0.2
baz=90
U18A Rough Rock, Ch 89.34 49 ⇓P P 12 03 28.6 0.0
baz=90,SNR=17
A06A Chilliwack 89.36 34 ⇓P P 12 03 28.2 -0.2
baz=90,SNR=36
I11A Placerville 89.37 41 ⇑P P 12 03 28.4 -0.2
baz=90,SNR=82
N14A Grayback Hills 89.41 44 ⇑P P 12 03 28.6 -0.2
baz=90,SNR=27
WRAK Wrangell Islan 89.45 24 eP P 12 03 28.8 +0.2
G10A Bishop Farm, J 89.47 39 ⇑P P 12 03 28.5 -0.5
baz=90,SNR=35
D08A Wollman Farm, 89.49 37 ⇓P P 12 03 29.0 0.0
baz=90,SNR=29
J12A Stokes Ranch, 89.52 42 ⇑P P 12 03 29.7 +0.4
baz=90,SNR=81
BGU Big Grassy Mou 89.55 44 eP P 12 03 29.0 -0.4
V19A Window Rock 89.57 50 ⇑P P 12 03 29.9 +0.3
baz=90,SNR=12
O15A The Old Anders 89.57 45 ⇓P P 12 03 29.7 +0.1
baz=90,SNR=22
E09A Wood Farm, Sta 89.60 38 ⇑P P 12 03 29.0 -0.5
baz=90,SNR=32
L13A Double Diamond 89.60 43 ⇑P P 12 03 29.8 +0.2
baz=90,SNR=64
EFI East Falkland 89.62 148⇓eP P 12 03 29.6 -0.1
M14A Sheep Mountain 89.66 44 ⇑P P 12 03 30.0 0.0
baz=90,SNR=111
NLU North Lily Min 89.66 46 eP P 12 03 30.4 +0.4
B07A Winthrop 89.68 35 ⇓P P 12 03 29.5 -0.3
baz=90,SNR=46
T18A Mexican Hat 89.70 49 ⇑P P 12 03 30.3 +0.1
baz=90,SNR=126
Q16A Castle Valley 89.72 47 ⇑P P 12 03 30.9 +0.6
baz=90,SNR=80
P16A Fountain Green 89.75 46 ⇑P P 12 03 31.2 +0.8
baz=90,SNR=5.9
R17A Hanksville Air 89.78 47 ⇓P P 12 03 30.4 -0.2
baz=90,SNR=56
H11A Donnelly 89.78 40 ⇑P P 12 03 30.1 -0.3
baz=90,SNR=35
OD2 Odessa Site #2 89.80 37 eP P 12 03 29.9 -0.5
F10A Beach Ranch, E 89.80 38 ⇓P P 12 03 29.9 -0.6
baz=90,SNR=48
K13A Stover Farm, H 89.82 42 ⇑P P 12 03 30.9 +0.2
baz=90,SNR=60
D09A Jones Farm, Ri 89.83 37 ⇑P P 12 03 30.2 -0.4
baz=90,SNR=13
C08A Higginbotham F 89.85 36 ⇓P P 12 03 30.2 -0.4
baz=90,SNR=8.5
N15A Stansbury Isla 89.86 45 ⇓P P 12 03 30.8 -0.1
baz=90,SNR=11
TMUT Trail Mountain 89.89 46 eP P 12 03 32.0 +0.9
S18A Hurst Farm, Bl 89.89 48 ⇑P P 12 03 31.1 -0.1
baz=90,SNR=14
A07A Ashnola River, 89.90 35 ⇑P P 12 03 30.5 -0.3
baz=90,SNR=33
KTH Kantishna Hill 89.92 13 eP P 12 03 28.7 -1.9
comp=Z,29nm,0.9s,mb5.1
CHUM Lake Minchumin 89.95 12 eP P 12 03 28.3 -2.4
comp=Z,21nm,1.0s,mb4.9
TRF Thorofare Moun 89.96 13 eP P 12 03 29.5 -1.3
comp=Z,39nm,0.8s,mb5.3
MPU Maple Canyon 89.98 46 eP P 12 03 31.9 +0.4
HIA Hailar 89.99 325 eP P 12 03 30.0 -1.2
HIA pmax pmax
comp=Z,45nm,1.5s
HIA Hailar 89.99 325 eP P 12 03 30.0 -1.3
comp=Z,45nm,1.5s,mb5.1
HHC Hu-ho-hao-te 89.99 315⇓iP P 12 03 32.4 +0.9
HHC AP pP 12 05 37.5 +6.0
HHC PP PP 12 07 18.3 +3.4
HHC SKS 12 13 08.8
HHC S S 12 13 36.5 -1.6
HHC XS sS 12 17 17.4 +5.0
HHC SS SS 12 19 56.8 +3.1
HHC AMB AMB
comp=Z,79nm,0.9s,mb5.5
HHC AMB AMB
comp=Z,563nm,7.2s
NOQ North Oquirrh 90.00 45 eP P 12 03 31.7 +0.2
L14A Malta 90.01 43 ⇓P P 12 03 31.4 -0.1
baz=90,SNR=50
G11A Walters Elk Ra 90.03 39 ⇑P P 12 03 31.0 -0.5
baz=90,SNR=56
B08A Colville Reser 90.04 36 ⇓P P 12 03 30.8 -0.7
baz=90,SNR=20
HLID Haley 90.11 42 ⇓P P 12 03 32.2 +0.2
baz=90,SNR=46
HLID Hailey 90.11 42 eP P 12 03 32.2 +0.2
comp=Z,361nm,0.5s,mb6.5
SPUT South Promonto 90.13 44 eP P 12 03 32.5 +0.4
T19A Beclabito 90.14 49 ⇓P P 12 03 32.2 -0.1
baz=90,SNR=22
E10A Myers Farm, Un 90.16 38 ⇑P P 12 03 31.7 -0.4
baz=90,SNR=6.2
J13A Cove Ranch, Pi 90.17 42 ⇑P P 12 03 32.6 +0.4
baz=90,SNR=35
O16A Springville 90.17 46 ⇑P P 12 03 32.5 +0.2
baz=90,SNR=78
HVU Hansel Valley 90.17 44 eP P 12 03 32.5 +0.2
M15A Larsen Ranch, 90.21 44 ⇓P P 12 03 32.4 -0.1
baz=90,SNR=30
SRU San Rafael 90.25 47 ⇑P P 12 03 32.7 0.0
baz=90,SNR=154
SRU San Rafael 90.25 47 eP P 12 03 32.8 +0.1

CTU Camp Tracy 90.26 45 eP P 12 03 32.9 +0.2
C09A Chrisman Ranch 90.28 37 ⇑P P 12 03 32.2 -0.4
baz=90,SNR=8.8
P17A Butcher Ranch, 90.29 47 ⇓P P 12 03 33.1 +0.2
baz=90,SNR=38
Y22C IRIS PASSCAL I 90.30 53 ⇓P P 12 03 33.9 +0.8
baz=90
R18A Canyonlands Na 90.31 48 ⇑P P 12 03 32.8 -0.2
baz=90,SNR=57
K14A Jones Ranch, D 90.33 43 ⇑P P 12 03 33.1 +0.1
baz=90,SNR=41
F11A Grangeville 90.37 39 ⇑P P 12 03 31.5 -1.7
baz=90,SNR=11
H12A Diamond D Ranc 90.39 41 ⇓P P 12 03 32.9 -0.3
baz=90,SNR=70
D10A Wagner Farm, O 90.40 38 ⇑P P 12 03 32.4 -0.8
baz=90,SNR=58
BPAW Bear Paw Mtn. 90.40 12 eP P 12 03 30.1 -2.8
comp=Z,6μm,1.2s
JLU Jordanelle 90.41 45 eP P 12 03 33.6 +0.2
A08A Turner Farm, O 90.42 35 ⇓P P 12 03 33.0 -0.3
baz=91,SNR=25
DAU Daniels Canyon 90.43 46 eP P 12 03 33.8 +0.2
I13A Wildhorse Cree 90.48 41 ⇑P P 12 03 33.9 +0.2
baz=91,SNR=24
MCK McKinley 90.50 13 eP P 12 03 31.5 -1.8
MCK pmax pmax
comp=Z,19nm,0.8s,mb5.0
MCK McKinley 90.50 13 eP P 12 03 31.4 -1.8
comp=Z,19nm,0.8s,mb5.0
Q18A Rafter H Ranch 90.51 47 ⇑P P 12 03 33.7 -0.3
baz=91,SNR=53
S19A Harvey Farm, M 90.51 49 ⇑P P 12 03 33.8 -0.2
baz=91,SNR=28
J14A Carey 90.53 42 ⇓P P 12 03 34.4 +0.5
baz=91,SNR=47
L15A Malad City 90.53 44 ⇓P P 12 03 33.9 -0.1
baz=91,SNR=59
N16A Rees Ranch, Co 90.56 45 ⇑P P 12 03 34.5 +0.4
baz=91,SNR=31
TXAR Lajitas Array 90.57 58 P P 12 03 34.7 +0.3
comp=Z,39nm,0.7s,mb5.4,baz=213,slow=6.5,SNR=554
TXAR pP pP 12 05 35.2 +0.7
comp=Z,3.7nm,1.0s,baz=288,slow=8.1,SNR=2.4
TXAR PP PP 12 07 19.2 -0.4
comp=Z,1.7nm,0.8s,baz=219,slow=7.0,SNR=2.9
TXAR PKKPbc PKKPbc 12 20 58.3 -0.2
comp=Z,1.3nm,0.5s,baz=148,slow=2.3,SNR=22
TXAR Lajitas Array 90.57 58 P P 12 03 34.7 +0.2
TXAR *PP pP 12 05 35.2 +0.7
TXAR 12 07 19.2
TXAR Lajitas Array 90.57 58 P P 12 03 34.7 +0.3
TXAR pP pP 12 05 35.2 +0.7
TXAR PP PP 12 07 19.2 -0.4
TXAR PKKPbc PKKPbc 12 20 58.3 -0.2
E11A Bogner Ranch, 90.60 39 ⇑P P 12 03 32.5 -1.6
baz=91,SNR=6.2
CD2 Chengdu 90.65 304⇓iP P 12 03 35.8 +1.0
CD2 AP pP 12 05 35.1 +0.2
CD2 XP sP 12 06 28.4 -1.3
CD2 PP PP 12 07 18.9 -1.3
CD2 SKS 12 13 12.3
CD2 S S 12 13 45.8 +1.3
CD2 SS SS 12 20 01.8 -1.7
CD2 AMB AMB
comp=Z,210nm,1.2s,mb5.9
CD2 AMB AMB
comp=Z,360nm,7.2s
M16A Huntsville 90.66 45 ⇓P P 12 03 34.5 -0.1
baz=91,SNR=52
O17A Robinson Place 90.66 46 ⇑P P 12 03 35.1 +0.5
baz=91,SNR=338
SKAG Skagway 90.67 21 eP P 12 03 34.3 +0.2
MVCO Mesa Verde 90.69 49 eP P 12 03 34.5 -0.3
R19A Curley Farm, L 90.70 48 ⇑P P 12 03 34.6 -0.3
baz=91,SNR=43
P18A Preston Nutter 90.70 47 ⇑P P 12 03 34.9 +0.1
baz=91,SNR=50
B09A Rice 90.71 36 ⇑P P 12 03 33.9 -0.7
baz=91,SNR=18
H13A Challis 90.75 41 ⇓P P 12 03 34.9 0.0
baz=91,SNR=36
A09A Danville 90.80 35 ⇑P P 12 03 34.7 -0.3
baz=91,SNR=12
K15A Arbon 90.80 43 ⇑P P 12 03 35.3 +0.1
baz=91,SNR=51
F12A Elk City 90.82 39 ⇑P P 12 03 34.7 -0.5
baz=91,SNR=50
C10A Spilker Farm, 90.82 37 ⇓P P 12 03 34.6 -0.5
baz=91
HWUT Hardware Ranch 90.85 44 eP P 12 03 35.0 -0.4
BTO Baotou 90.87 314 eP P 12 03 35.8 +0.2
PV10 Paradox Valley 90.89 48 eP P 12 03 35.3 -0.4
I14A Mackay 90.89 42 ⇓P P 12 03 35.9 +0.3
baz=91,SNR=47
D11A Klaveano Farm, 90.92 38 ⇑P P 12 03 34.6 -1.1
baz=91,SNR=11
N17A Moffit Pass 90.98 45 ⇓P P 12 03 36.1 0.0
baz=91,SNR=40
E12A Beaver Dam Sad 91.00 39 ⇓P P 12 03 35.1 -0.9
baz=91
Q19A Hogan Spring (91.02 48 ⇓P P 12 03 36.1 -0.2
baz=91,SNR=32
ANMO Albuquerque 91.05 52 eP P 12 03 36.6 +0.1
G13A Cobalt 91.05 40 ⇑P P 12 03 35.7 -0.6
baz=91,SNR=19
PV01 Paradox Valley 91.09 49 eP P 12 03 36.1 -0.5
L16A Fish Haven 91.15 44 ⇓P P 12 03 36.4 -0.4
baz=91,SNR=37
NEW Newport 91.18 37 eP P 12 03 36.3 -0.5
O18A Roosevelt 91.18 46 ⇓P P 12 03 37.0 0.0
baz=91,SNR=24
J15A Blackfoot 91.24 43 ⇓P P 12 03 37.5 +0.3
baz=91,SNR=39
H14A Leadore 91.31 41 ⇓P P 12 03 37.7 +0.2
baz=92,SNR=16
A10A Northport 91.35 36 ⇑P P 12 03 36.8 -0.8
baz=92,SNR=8.1
F13A Darby 91.38 40 ⇓P P 12 03 36.9 -0.9
baz=92,SNR=24
C11A Tepee Creek (N 91.41 37 ⇓P P 12 03 37.6 -0.3
baz=92
K16A Soda Springs 91.47 43 ⇓P P 12 03 38.4 +0.1
baz=92,SNR=25
D12A Red Ives Fores 91.48 38 ⇑P P 12 03 37.4 -0.8
baz=92
I15A Monteview 91.52 42 ⇓P P 12 03 38.9 +0.4
baz=92,SNR=8.7
P19A Cripple Cowboy 91.55 47 ⇑P P 12 03 38.4 -0.3
baz=92,SNR=20
G14A Jackson 91.59 41 ⇑P P 12 03 38.4 -0.3
baz=92,SNR=10.0
J16A Bone 91.69 43 ⇓P P 12 03 39.5 +0.2
baz=92,SNR=36
B11A Sandpoint 91.69 37 ⇓P P 12 03 38.7 -0.5
baz=92,SNR=9.5
IMA2 Indian Mountai 91.69 11 eP P 12 03 38.5 -0.2
COLA College 91.73 13⇑iP P 12 03 37.8 -1.1
MCMT McKenzie Canyo 91.74 41 eP P 12 03 39.3 -0.1
MCMT epP pP 12 05 42.0 +2.4
MCMT esP sP 12 06 38.2 +3.8
AHID Auburn Hatcher 91.74 44 eP P 12 03 39.1 -0.4
comp=Z,38nm,1.3s,mb5.3
H15A Lima 91.75 41 ⇑P P 12 03 39.5 0.0
baz=92,SNR=14
N18A Larsen Ranch, 91.76 46 ⇓P P 12 03 39.1 -0.5
baz=92,SNR=28
DLBC Dease Lake 91.78 24 pP pP 12 05 41.3 +1.8
baz=220,slow=7.9
DLBC Dease Lake 91.78 24 eP P 12 03 39.6 +0.4
C12B Naegeli Ranch, 91.78 38 ⇓P P 12 03 39.1 -0.4
baz=92
O19A Miners Draw (B 91.78 46 ⇑P P 12 03 39.5 -0.3
baz=92,SNR=14
E13A Victor 91.81 39 ⇑P P 12 03 38.6 -1.1
baz=92,SNR=13
RRI2 Red Ridge 91.91 43 eP P 12 03 40.5 +0.2
BILL Bilibino 91.93 355diP P 12 03 39.1 -0.7
BILL pmax pmax
comp=Z,108nm,1.8s,mb5.6
BILL Bilibino 91.93 355 iP P 12 03 39.1 -0.7
F14A Wisdom 91.95 40 ⇓P P 12 03 39.7 -0.7
baz=92,SNR=11
A11A Hall Mountain, 91.99 36 ⇓P P 12 03 40.3 -0.2
baz=92,SNR=19
D13A Huson 92.01 39 ⇑P P 12 03 39.4 -1.3

baz=92
N19A John Jarvie Ra 92.04 46 ⇑P P 12 03 40.1 -0.8
baz=92,SNR=33
I16A Newdale 92.07 42 ⇑P P 12 03 41.5 +0.5
baz=92,SNR=13
DCID1 Drake Creek 92.12 43 eP P 12 03 40.4 -0.9
G15A Dillon 92.14 41 ⇑P P 12 03 41.1 -0.2
baz=92,SNR=15
B12A Libby 92.14 37 ⇑P P 12 03 40.9 -0.2
baz=92,SNR=11
MSO Missoula 92.17 39 eP P 12 03 40.5 -0.9
DLMT Dillon 92.17 41 eP P 12 03 41.3 -0.2
E14A Clinton 92.20 40 ⇑P P 12 03 40.9 -0.7
baz=92,SNR=13
REDW Red Top Meadow 92.21 43 eP P 12 03 41.8 +0.1
TPAW Teton Pass 92.21 43 eP P 12 03 42.0 +0.3
C13A Hot Springs 92.27 38 ⇑P P 12 03 41.1 -0.7
baz=92
SNOW Snow King Moun 92.32 43 eP P 12 03 42.3 +0.2
comp=Z,7.4nm,0.5s,mb5.0
A12A Yaak River Ran 92.36 37 ⇑P P 12 03 41.9 -0.3
baz=92,SNR=13
CLNS Chul'man 92.41 333 eP P 12 03 42.1 -0.1
CLNS pmax pmax
comp=Z,29nm,1.1s,mb5.2
CLNS pmax pmax
comp=E,11nm,1.3s
CLNS pmax pmax
comp=N,14nm,1.0s
IMW Indian Meadow 92.42 43 eP P 12 03 42.9 +0.2
F15A Butte 92.49 40 ⇓P P 12 03 42.4 -0.4
baz=93,SNR=7.7
LOHW Long Hollow 92.49 43 eP P 12 03 42.8 -0.2
comp=N,57nm,1.6s,mb5.3
LRM Limekiln Ridge 92.50 40 eP P 12 03 42.9 0.0
D14A Greenough 92.55 39 ⇑P P 12 03 42.1 -1.0
baz=93,SNR=8.8
QLMT Earthquake Lak 92.60 42 eP P 12 03 44.0 +0.6
CHMT Chamberlain Mo 92.61 39 eP P 12 03 42.5 -0.9
H16A Russell Place, 92.65 42 ⇓P P 12 03 44.0 +0.4
baz=93,SNR=16
FLWY Flagg Ranch 92.67 43 eP P 12 03 44.0 +0.3
B13A Whitefish 92.71 38 ⇑P P 12 03 42.7 -1.1
baz=93
E15A Deer Lodge 92.71 40 ⇓P P 12 03 43.1 -0.8
baz=93
BW06 Boulder Array 92.72 44 eP P 12 03 43.3 -0.8
PDAR Pinedale Array 92.72 44 P P 12 03 43.4 -0.6
comp=N,19nm,0.7s,mb5.2,baz=205,slow=2.6,SNR=91
PDAR pP pP 12 05 45.8 +1.5
comp=N,3.1nm,0.9s,baz=236,slow=16,SNR=3.4
PDAR PP PP 12 07 28.4 -7.7
comp=N,1.4nm,0.8s,baz=218,slow=6.5,SNR=2.9
PDAR PKKPbc PKKPbc 12 20 51.4 -2.3
comp=N,0.8nm,0.6s,baz=131,slow=4.1,SNR=5.5
C14A Swan Lake 92.79 38 ⇑P P 12 03 43.1 -1.1
baz=93
YMR Madison River 92.80 42 eP P 12 03 44.6 +0.2
comp=N,12nm,0.7s,mb5.0
BOZ Bozeman (W) 92.90 41 eP P 12 03 44.4 -0.4
LZH Lanzhou 92.95 308 ⇑P P 12 03 46.1 +0.9
LZH AP pP 12 05 51.6 +6.1
LZH PP PP 12 07 42.3 +4.4
LZH SKS 12 13 25.3
LZH S S 12 14 03.8 -0.6
LZH XS sS 12 17 44.6 +4.2
LZH SS SS 12 20 38.3 +2.4
LZH AMB AMB
comp=Z,71nm,1.1s,mb5.6
LZH AMB AMB
comp=Z,215nm,4.5s
SDCO Great Sand Dun 93.04 50 ⇑ iP P 12 03 45.2 -0.4
comp=Z,26nm,0.9s,mb5.3
DAWY Dawson 93.06 17 eP P 12 03 45.1 0.0
D15A Lincoln 93.10 39 ⇑P P 12 03 45.1 -0.6
baz=93,SNR=11
COLD Coldfoot 93.35 11 eP P 12 03 45.1 -1.2
comp=Z,6.3nm,1.0s,mb4.6
WALA Waterton Lakes 93.39 37 eP P 12 03 46.6 -0.3
comp=Z,158nm,2.8s,mb5.5
RWWY Rawlins 93.72 46 eP P 12 03 48.2 -0.5
ISCO Idaho Springs 93.91 48 eP P 12 03 49.2 -0.3
ISCO pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
ISCO Idaho Springs 93.91 48 eP P 12 03 49.2 -0.3
comp=Z,7.4nm,0.7s,mb4.9
RLMT Red Lodge 94.07 42 eP P 12 03 50.0 -0.2
comp=Z,4.7nm,0.8s,mb4.7
JCT Junction City 94.09 59 eP P 12 03 49.7 -0.9
GCMT Greycliff 94.16 41 eP P 12 03 50.2 -0.3
YAK Yakutsk 94.20 339 d iP P 12 03 49.1 -1.2
YAK e 12 14 07.0
YAK eSS SS 12 20 46.9 -5.5
YAK pmax pmax
comp=Z,32nm,0.9s,mb5.5
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK pmax pmax
comp=E,11nm,0.9s
YAK pmax pmax
comp=N,11nm,1.7s
YAK pmax pmax
comp=E,74nm,2.2s
YAK pmax pmax
comp=Z,213nm,3.8s
YAK Yakutsk 94.20 339 i P P 12 03 49.2 -1.1
LCO Las Campanas 94.47 124 eP P 12 03 52.6 +0.1
comp=Z,71nm,0.9s,mb5.8
AMTX Amarillo 94.53 54 eP P 12 03 50.6 -1.9
comp=Z,9.9nm,0.8s,mb5.0
PHWY Pilot Hill 94.71 47 eP P 12 03 53.1 0.0
EDM Edmonton 95.91 34 eP P 12 03 57.2 -1.1
ULN Ulaanbaatar 96.30 320 i P P 12 03 59.7 -0.5
SONM Songino Array 96.68 319 P P 12 04 01.2 -0.7
comp=Z,21nm,1.3s,mb5.2,baz=132,slow=3.5,SNR=38
SONM pP pP 12 06 02.2 -0.2
comp=Z,0.5nm,0.8s,baz=27,slow=34,SNR=1.7
SONM PP PP 12 07 54.4 -12
comp=Z,3.0nm,0.9s,baz=101,slow=5.7,SNR=3.6
SONM PKKPbc PKKPbc 12 20 42.5 -0.9
comp=Z,3.6nm,0.6s,baz=270,slow=2.7,SNR=18
LAO LASA Array 96.69 42 eP P 12 04 01.8 -0.1
comp=Z,9.2nm,0.7s,mb5.1
RSSD Black Hills 96.91 45 eP P 12 04 02.1 -0.9
RSSD pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
RSSD Black Hills 96.91 45 eP P 12 04 02.1 -0.9
comp=Z,8.9nm,0.8s,mb5.0
RSSD epP pP 12 06 03.7 +0.1
HKT Hockley 97.01 61 eP P 12 04 00.4 -3.4
HKT pmax pmax
comp=Z,23nm,1.6s,mb5.2
HKT Hockley 97.01 61 eP P 12 04 00.4 -3.4
comp=Z,23nm,1.6s,mb5.2
GTA Gaotai 97.27 310 ⇓P P 12 04 05.3 +0.6
GTA PP PP 12 08 17.5 +6.7
GTA SKS 12 13 45.3
GTA S S 12 14 38.0 -3.2
GTA AMB AMB
comp=Z,18nm,1.4s,mb5.1
GTA AMB AMB
comp=Z,125nm,5.7s
CBKS Cedar Bluff 97.59 51 eP P 12 04 06.0 -0.1
CBKS pmax pmax
comp=Z,10.0nm,0.6s,mb5.3
CBKS Cedar Bluff 97.59 51 eP P 12 04 06.0 -0.2
comp=Z,10nm,0.6s,mb5.3
BOD Bodaibo 97.71 331 eP Pdif 12 04 03.6 -3.0
LVC Limon Verde 99.07 119 PKKPbc PKKPbc 12 20 35.6 -0.5
comp=Z,1.8nm,0.4s,baz=287,slow=4.7,SNR=6.2
ZAK Zakamensk 99.65 321 eP Pdif 12 04 14.0 -1.3
ZAK pmax pmax
comp=Z,5.0nm,1.6s,mb4.7
TLY Talaya 100.00 322 i P Pdif 12 04 17.7 +0.9
TLY pmax pmax
comp=Z,5.0nm,1.3s
TLY Talaya 100.00 322 i P Pdif 12 04 17.8 +1.0
YKA Yellowknife Ar 100.26 25 PKiKP PKiKP 12 08 38.0 -3.0
comp=Z,1.5nm,0.7s,baz=240,slow=1.5,SNR=4.5
YKA PKKPbc PKKPbc 12 20 30.4 -3.5
comp=Z,1.1nm,0.4s,baz=34,slow=2.6,SNR=7.3
LPAZ La Paz 102.84 114 P Pdif 12 04 33.0 +3.6
comp=Z,1.5nm,0.7s,baz=204,slow=6.6,SNR=7.7
LPAZ PKiKP PKiKP 12 08 48.3 +1.2
comp=Z,1.9nm,1.0s,baz=45,slow=4.3,SNR=3.3
ULM Lac du Bonnet 104.42 41 PKKPbc PKKPbc 12 20 19.6 -1.8
comp=Z,3.1nm,0.5s,baz=97,slow=4.5,SNR=6.1
WMQ Urumqi 107.31 311 PDIF Pdif 12 04 50.8 +1.5
WMQ PP PP 12 09 29.0 +4.2
WMQ PP PP
comp=Z,192nm,6.2s
SIV San Ignacio 108.81 118 PKKPbc PKKPbc 12 20 05.8 -1.6
comp=Z,0.8nm,0.5s,baz=123,slow=4.7,SNR=6.8
SIV PKKPab PKKPab 12 20 20.9 -2.7
comp=Z,1.8nm,0.8s,baz=73,slow=8.5,SNR=6.4
SIV SKKPbc 12 22 57.2
comp=Z,2.8nm,1.0s,baz=96,slow=3.1,SNR=6.7
POO Poona 111.26 282 ex x 12 09 28.0
ZALV Zalesovo Beam 111.53 321 PKiKP PKiKP 12 09 01.9 -0.2
comp=Z,4.3nm,0.4s,baz=344,slow=2.4,SNR=4.6
ZALV SKiKP 12 11 44.0
comp=Z,5.1nm,0.7s,baz=207,slow=1.7,SNR=6.1
ZALV PKKPbc PKKPbc 12 19 55.8 -3.6
comp=Z,1.1nm,0.4s,baz=316,slow=3.4,SNR=3.8
ZALV PKKPab PKKPab 12 20 07.9 -0.5
comp=Z,0.9nm,0.4s,baz=285,slow=5.7,SNR=4.0
MK31 Makanchi Array 111.72 313 eP Pdif 12 05 09.5 +0.6
MKAR Makanchi Array 111.72 313 Pdiff Pdif 12 05 09.0 +0.1
comp=Z,1.8nm,0.8s,baz=114,slow=5.9,SNR=9.3
MKAR PKiKP PKiKP 12 09 01.1 -1.6
comp=Z,3.4nm,0.4s,baz=185,slow=0.6,SNR=19
MKAR SKiKP 12 11 45.3
comp=Z,6.3nm,0.8s,baz=67,slow=3.2,SNR=7.4
MKAR PKKPbc PKKPbc 12 19 56.8 -1.8
comp=Z,2.5nm,0.7s,baz=291,slow=3.8,SNR=9.0
MKAR PKKPab PKKPab 12 20 07.4 -0.4
comp=Z,5.5nm,0.6s,baz=283,slow=3.9,SNR=15
MKAR SKKPbc 12 22 47.0
comp=Z,0.7nm,0.6s,baz=290,slow=3.5,SNR=3.7
MKAR Makanchi Array 111.72 313 P Pdif 12 05 09.0 +0.1
MKAR 12 09 01.2
MKAR 12 19 56.8
MKAR Makanchi Array 111.72 313 Pdif Pdif 12 05 09.0 +0.1
MKAR PKiKP PKiKP 12 09 01.1 -1.6
MKAR PKKPbc PKKPbc 12 19 56.8 -1.8
MKAR PKKPab PKKPab 12 20 07.4 -0.4
MKAR SKKPbc 12 22 47.0
NVS Novosibirsk 112.60 321 ePKIKP PKiKP 12 09 00.1 -4.1
NVS e 12 11 44.9
NVS e 12 14 52.8
NVS ePS PS 12 19 52.5 +6.9
KURK Kurchatov 114.78 317 PKP PKPdf 12 09 06.7 -1.8
comp=Z,4.3nm,0.5s,baz=100,slow=1.8,SNR=25
KURK SKiKP 12 11 51.0
comp=Z,11nm,0.9s,baz=94,slow=1.9,SNR=11
KURK PKKPbc PKKPbc 12 19 46.9 -1.6
comp=Z,2.6nm,0.6s,baz=278,slow=3.8,SNR=9.1
KURK PKKPab PKKPab 12 19 53.6 -0.6
comp=Z,4.2nm,1.0s,baz=282,slow=5.0,SNR=6.0
KURK SKKPbc 12 22 38.3
comp=Z,1.5nm,0.6s,baz=279,slow=3.6,SNR=6.5
KURK Kurchatov 114.78 317 PKP PKPdf 12 09 06.7 -1.8
KURK PKKPbc PKKPbc 12 19 46.9 -1.6
KURK PKKPab PKKPab 12 19 53.6 -0.6
KURK SKKPbc 12 22 38.3
TKM2 Tokmak 2 115.71 308 P PKPdf 12 09 10.5 0.0
SNR=7.8
TKM2 Tokmak 2 115.71 308 P 12 11 54.1
SNR=6.3
KBK Karagaybulak 116.14 307 P PKPdf 12 09 11.6 +0.2
SNR=6.7
CHMS Chumysh 116.34 308 P PKPdf 12 09 10.2 -1.6
SNR=6.5
CHMS Chumysh 116.34 308 P 12 11 55.3
SNR=5.4
USP Ospenovka 116.56 308 P PKPdf 12 09 11.1 -1.0
SNR=8.6
USP Ospenovka 116.56 308 P 12 11 55.7
SNR=6.0
AML Almayashu 116.98 307 P PKPdf 12 09 12.7 -0.3
SNR=19
AML Almayashu 116.98 307 P 12 11 57.5
SNR=6.0
AML Almayashu 116.98 307 ePKPdf PKPdf 12 09 12.1 -0.9
EKS2 Erkin-Say 117.00 307 P PKPdf 12 09 12.1 -0.9
SNR=8.0
EKS2 Erkin-Say 117.00 307 P 12 11 57.1
SNR=5.1
EKS2 Erkin-Say 117.00 307 ePKPdf PKPdf 12 09 11.8 -1.3
EKS2 ePP PP 12 10 30.4 -2.5
SJG San Juan 118.74 82 SKiKP 12 11 57.7
comp=Z,24nm,0.3s,baz=326,slow=18,SNR=7.9
SJG San Juan 118.74 82 ePKIKP PKPdf 12 09 15.1 -2.0
HUMP Col San Antoni 119.02 82 ePKPdf PKPdf 12 09 15.6 -2.0
BDFB Brasilia 119.24 125 PKP PKPdf 12 09 16.7 -1.5
comp=Z,12nm,0.6s,baz=183,slow=2.4,SNR=15
BDFB SKiKP 12 11 59.4
comp=Z,1.7nm,0.5s,baz=203,slow=17,SNR=3.3
MTP Monte Pirata 119.28 82 ePKPdf PKPdf 12 09 16.0 -2.2
KBL Kabul 119.42 297 ePKIKP PKPdf 12 09 17.5 -0.5
BVAR Borovoye Array 120.02 319 PKP PKPdf 12 09 17.1 -1.4
comp=Z,15nm,0.4s,baz=125,slow=2.1,SNR=63
BVAR PP PP 12 10 44.0 -9.0
comp=Z,5.9nm,0.9s,baz=96,slow=7.4,SNR=5.4
BVAR SKiKP 12 12 01.2
comp=Z,16nm,0.9s,baz=106,slow=3.2,SNR=9.4
BVAR PKKPbc PKKPbc 12 19 28.9 -1.3
comp=Z,1.5nm,0.5s,baz=261,slow=2.7,SNR=6.3
BVAR Borovoye Array 120.02 319 PKP PKPdf 12 09 17.1 -1.4
BVAR PP PP 12 10 44.0 -9.0
BVAR PKKPbc PKKPbc 12 19 28.9 -1.3
BRVK Borovoye 120.08 319 ⇑ ePKP PKPdf 12 09 16.9 -1.7
SUR Sutherland 120.75 201 ePKPdf PKPdf 12 09 20.1 -0.6
SCHQ Schefferville 122.47 39 PKP PKPdf 12 09 21.2 -1.9
comp=Z,6.3nm,0.5s,baz=278,slow=4.1,SNR=16
SCHQ PKKPbc PKKPbc 12 19 19.3 -1.9
comp=Z,5.3nm,0.7s,baz=349,slow=1.1,SNR=5.3
BOSA Boshof 122.50 207 PKP PKPdf 12 09 23.1 -1.1
comp=Z,11nm,0.5s,baz=197,slow=2.1,SNR=27
SVE Sverdlovsk 125.27 324 ePKIKP PKPdf 12 09 27.4 -1.1
SVE pmax pmax
comp=Z,45nm,1.1s
ARU Arti 126.47 324 i PKIKP PKPdf 12 09 29.9 -0.9
ARU 12 11 34.5
ARU Arti 126.47 324 i PKP PKPdf 12 09 30.1 -0.7
SFJD Kangerlussuaq 126.65 22 PKP PKPdf 12 09 29.5 -1.3
comp=Z,14nm,0.4s,baz=140,slow=2.2,SNR=23
SFJD Kangerlussuaq 126.65 22 PKIKP PKPdf 12 09 29.5 -1.3
SFJD pmax pmax
comp=Z,15nm,0.4s
SUMG Summit 126.69 13 ePKPdf PKPdf 12 09 30.6 -0.2
AKTK Aktyubinsk 127.87 316 PKP PKPdf 12 09 32.7 -0.9
AKTK SKPbc 12 12 01.2
AKTO Aktyubinsk 127.87 316 PKP PKPdf 12 09 32.7 -0.9
comp=Z,6.3nm,0.5s,baz=95,slow=3.2,SNR=23
AKTO SKPbc 12 12 01.2
comp=Z,12nm,0.8s,baz=73,slow=9.0,SNR=7.6
KEV Kevo 131.08 348 ep 12 09 24.1
comp=Z,5.6nm,0.3s
KEV Kevo 131.08 348 ep SKPbc 12 12 11.2 -1.9
comp=Z,37nm,1.1s
KEV Kevo 131.08 348 ePKHKP 12 09 24.1
KEV pmax pmax
comp=Z,6.0nm,0.3s
APA Apatity 131.35 343 ⇓ ePKIKP PKPdf 12 09 39.3 -0.4
APA i 12 12 10.6
APA pmax pmax
comp=Z,13nm,0.6s
ARCES ARCESS Array B 131.55 348 PKhKP 12 09 29.2
comp=Z,3.5nm,0.8s,baz=0.0,slow=1.2,SNR=7.9
ARCES PKP PKPdf 12 09 38.7 -1.4
comp=Z,8.5nm,0.5s,baz=84,slow=2.7,SNR=41
ARCES pPKP pPKPdf 12 11 48.5 +0.5
comp=Z,4.8nm,0.9s,baz=318,slow=1.6,SNR=2.2
ARCES SKPbc SKPbc 12 12 13.7 -1.1
comp=Z,50nm,1.0s,baz=34,slow=3.2,SNR=14
ARCES ARCESS Array B 131.55 348 PKHKP 12 09 29.2
ARCES 12 09 38.7
ARCES 12 12 13.7
ARCES ARCESS Array B 131.55 348 PKP 12 09 29.2
ARCES PKP PKPdf 12 09 38.7 -1.4
ARCES pPKP pPKPdf 12 11 48.5 +0.5
ARCES SKPbc SKPbc 12 12 13.7 -1.1
LSZ Lusaka 132.31 219 SKPbc SKPbc 12 12 18.4 -0.6
comp=Z,18nm,0.8s,baz=142,slow=3.1,SNR=12
LSZ Lusaka 132.31 219 ePKIKP PKPdf 12 09 42.9 -0.3
TSUM Tsumeb 133.97 204 SKPbc SKPbc 12 12 23.4 -1.1
comp=Z,18nm,1.1s,baz=136,slow=5.7,SNR=3.4
TSUM Tsumeb 133.97 204 ePKPdf PKPdf 12 09 45.6 -0.6
JOF Joensuu 135.36 340 ep 12 09 32.9
comp=Z,14nm,0.4s
JOF Joensuu 135.36 340 ep SKPbc 12 12 26.0 -1.4
comp=Z,81nm,1.0s
JOF Joensuu 135.36 340 ePKHKP 12 09 32.9
JOF pmax pmax
comp=Z,14nm,0.4s
KMBO Kilima Mbogo 135.94 241 PKiKP PKiKP 12 09 50.9 -0.9
comp=Z,3.2nm,0.4s,baz=38,slow=5.3,SNR=4.7
KMBO SKPbc SKPbc 12 12 30.5 -0.3
comp=Z,26nm,1.0s,baz=38,slow=2.0,SNR=17
KAF Kangasniemi 137.48 342 ep 12 09 39.2
comp=Z,9.8nm,0.4s
KAF Kangasniemi 137.48 342 ep SKPbc 12 12 31.0 -2.7
comp=Z,19nm,0.5s
KAF Kangasniemi 137.48 342 ePKHKP 12 09 39.2
KAF pmax pmax
comp=Z,10.0nm,0.4s
MOS Moscow 137.52 329 ePKIKP PKPdf 12 09 50.9 -0.7
MOS pmax pmax
comp=Z,59nm,0.6s
OBN Obninsk 138.37 329 ePKHKP 12 09 45.8
OBN i 12 09 53.4
OBN pmax pmax
comp=Z,10.0nm,1.0s
OBN pmax pmax
comp=Z,19nm,0.9s
OBN Obninsk 138.37 329 i PKP PKPdf 12 09 53.4 +0.2
MTA Mtatsminda 138.46 307 P SKPbc 12 12 36.6 -0.5
TBLG Delisi 138.49 307 P SKPbc 12 12 37.8 +0.6
GNI Garni 138.78 305 i PKIKP PKPdf 12 09 54.2 -0.2
GOR Gori 138.90 307 P SKPbc 12 12 38.6 +0.3
ONI Oni 139.24 308 P SKPbc 12 12 40.0 +0.7
KIV Kislovodsk 139.44 311 i PKIKP PKPdf 12 09 55.2 -0.3
KIV Kislovodsk 139.44 311 i PKP PKPdf 12 09 55.3 -0.2
HAKT HAKKARI 139.96 301 i P SKPbc 12 12 42.4 +1.1
SOC Sochi 141.60 311 i PKHKP 12 09 55.5
SOC e 12 16 16.9
NB2 NORSAR Subarra 141.76 351 PKP 12 09 53.4
comp=Z,9.9nm,0.8s,baz=10,slow=3.2
NOA NORSAR Array B 141.76 351 PKhKP 12 09 53.6
comp=Z,24nm,0.9s,baz=16,slow=4.7,SNR=27
NA001 NORSAR Array S 142.00 351 ePKPdf 12 09 54.6
ANN Anapa 142.73 314 i PKHKP 12 09 56.4
ANN pmax pmax
comp=Z,293nm,1.6s
KONO Kongsberg 143.33 352 ⇑ ePKHKP 12 09 58.8
GRSN GIRESUNGRSN 143.41 307 i P PKPdf 12 10 00.2 -2.4
ELZG Elazig 143.47 303 i P PKPdf 12 10 02.0 -0.9
LRW Lerwick 143.51 1 eP PKPdf 12 09 59.5 -2.8
MALT Malatya 143.94 303 ⇑ iP PKPdf 12 10 00.8 -2.9
MALT Malatya 143.94 303 ⇑P PKPdf 12 10 00.8 -2.9
AKASG Malin Array Be 144.56 327 PKP PKPdf 12 10 03.0 -1.4
comp=Z,25nm,0.4s,baz=43,slow=4.2,SNR=76
AKASG pPKPbc 12 12 14.4
comp=Z,5.9nm,0.7s,baz=44,slow=4.1,SNR=2.8
AKASG SKPbc SKPbc 12 12 51.2 -0.9
comp=Z,61nm,0.9s,baz=47,slow=2.2,SNR=28
AKASG SKKPbc 12 20 54.4
comp=Z,0.7nm,0.4s,baz=238,slow=1.8,SNR=5.9
AKASG Malin Array Be 144.56 327 PKIKP PKPdf 12 10 03.0 -1.3
AKASG 12 12 51.2
AKASG Malin Array Be 144.56 327 PKP PKPdf 12 10 03.0 -1.4
AKASG pPKPbc 12 12 14.4
AKASG SKPbc SKPbc 12 12 51.2 -0.9
AKASG SKKPbc 12 20 54.4
KIEV Kiev 144.57 327 ePKIKP PKPdf 12 10 02.7 -1.7
KIEV e 12 12 51.2
SIM Simferopol' 144.83 316 ePKIKP PKPdf 12 10 05.4 +0.4
SIM pmax pmax
comp=Z,160nm,0.8s
SIM Simferopol' 144.83 316 ⇓ iPKP PKPdf 12 10 05.6 +0.6
SUW Suwalki 144.88 336 ePKP PKPdf 12 10 04.6 -0.2
SUW e 12 12 16.8
SUW e 12 12 52.0
SUW Suwalki 144.88 336 ePKP PKPdf 12 10 04.6 -0.2
SUW e 12 12 16.8
SUW e 12 12 52.0
ASCN Ascension 145.78 155 ePKPdf PKPdf 12 10 08.7 +1.1
KAC Achnashellach 145.97 5 eP PKPdf 12 10 07.1 +0.6
COBT Iskenderun 146.01 301 i P PKPdf 12 10 09.3 +2.1
MCD Coleburn Disti 146.01 3 eP PKPdf 12 10 07.9 +1.3
CTKT Corum 146.02 308 i P PKPdf 12 10 09.3 +2.2
MDO Dochfour 146.10 4 eP PKPdf 12 10 07.8 +1.1
KPL Plockton 146.10 5 eP PKPdf 12 10 07.3 +0.6
KSB Sheil Bridge 146.25 5 eP PKPdf 12 10 08.1 +1.1
YURE YUREGIR 146.44 301 i P PKPdf 12 10 10.6 +0.2
MUD Monsted U'grnd 146.47 350 i PKIKP PKPdf 12 10 08.5 +1.1
MUD pmax pmax
comp=Z,120nm,1.1s
MUD Monsted U'grnd 146.47 350 i P PKPdf 12 10 08.5 +1.1
comp=Z,118nm,1.1s
MUD i 12 10 28.8
MUD Monsted U'grnd 146.47 350 ⇑ iP SKPbc 12 12 21.8 -34
comp=Z,160nm,1.3s
RCY Rachaya 146.88 295 eP PKPbc 12 10 11.9 +0.2
BHL Bhannes 146.96 296 ⇑ eP PKPbc 12 10 11.7 -0.2
KIS Kishinev 147.00 322 i PKIKP PKPbc 12 10 11.0 -0.6
KIS i 12 10 15.0
KIS pmax pmax
comp=Z,280nm,1.3s
KIS Kishinev 147.00 322 i UNK PKPbc 12 10 11.0 -0.6
KIS XM 12 10 12.0
comp=Z,300nm,1.3s
BR131 Keskin Array S 147.15 307 ePKPdf PKPdf 12 10 08.0 -1.1
MMAI Mount Meron Ar 147.29 295 PKPbc PKPbc 12 10 13.1 +0.3
comp=Z,46nm,0.4s,baz=66,slow=5.0,SNR=17
MMAI pPKPbc pPKPbc 12 12 20.0 +1.1
comp=Z,6.1nm,0.6s,baz=64,slow=6.6,SNR=2.6
MMAI SKPbc SKPbc 12 12 58.6 -0.3
comp=Z,45nm,1.1s,baz=77,slow=5.2,SNR=3.8
MMAI SKKPbc 12 20 43.2
comp=Z,6.3nm,0.9s,baz=298,slow=1.8,SNR=4.1
EBH Black Hill 147.33 3 eP PKPdf 12 10 10.3 +1.5
EAB Aberfoyle 147.34 4 eP PKPbc 12 10 11.3 -0.8
GKP Gorka Klasztor 147.54 340 ePKP PKPbc 12 10 12.3 -0.4
GKP Gorka Klasztor 147.54 340 ePKP PKPbc 12 10 12.3 -0.5
LVV L'vov 147.64 330 ePKIKP PKPbc 12 10 12.1 -1.0
MEST Erdemli 147.65 302 i P PKPbc 12 10 13.2 -0.5
EDI Edinburgh 147.68 3 eP PKPbc 12 10 11.8 -1.2
ESY Stoneypath 147.71 2 eP PKPbc 12 10 12.1 -1.0
PGBU Glenifferbraes 147.71 4 eP PKPbc 12 10 12.2 -0.9
ANTO Ankara 147.72 308 P PKPbc 12 10 13.6 -0.1
EAU Auchinoon 147.74 3 eP PKPbc 12 10 11.9 -1.3
EBL Broad Law 147.83 3 eP PKPbc 12 10 12.3 -1.1
PHNC Paralimni 148.09 299 P PKPdf 12 10 10.9 +0.1
ESK Eskdalemuir 148.28 3 eP PKPdf 12 10 12.5 +2.1
ESK Eskdalemuir 148.28 3 ePKPdf PKPdf 12 10 09.4 -0.9
ESK ePKPbc PKPbc 12 10 13.2 -1.4
KWP Kalwaria 148.37 331 ePKP PKPbc 12 10 14.6 -0.4
KWP e 12 12 23.0
KWP Kalwaria 148.37 331 ⇓ iP PKPbc 12 10 14.8 -0.2
KWP Kalwaria 148.37 331 ePKP PKPbc 12 10 14.6 -0.4
KWP e 12 12 23.0
BUR08 Bucovina Ar. S 148.55 326 ePKPdf PKPdf 12 10 11.9 +0.8
BUR08 ePKPbc PKPbc 12 10 15.9 +0.4
BURAR Bucovina Array 148.56 326 ⇓ iP PKPbc 12 10 16.3 +0.8
BURAR Bucovina Array 148.56 326 ⇓P PKPbc 12 10 16.2 +0.7
GAL1 Galloway 148.63 5 eP PKPbc 12 10 14.1 -1.4
TIRR Tirgusor 148.63 319 ⇑ iP PKPbc 12 10 14.9 -0.9
TIRR Tirgusor 148.63 319 P PKPbc 12 10 15.6 -0.2
CSS Prodhromos 148.66 299 P PKPbc 12 10 15.6 -0.6
comp=Z,1.3nm,0.6s
CSS Prodhromos 148.66 299 ePKPdf PKPbc 12 10 15.2 -0.9
KDHN Kadinhani 148.66 306 i P PKPbc 12 10 14.4 -1.7
BSEG Bad Segeberg 148.68 348 ePKPbc PKPbc 12 10 15.1 -0.5
BSEG ePKPab PKPab 12 10 21.0 -0.4
MAMC Mammari 148.71 299 P PKPbc 12 10 15.8 -0.5
VRI Vrincioaia 148.83 322 ⇑ iP PKPbc 12 10 15.7 -0.5
VRI Vrincioaia 148.83 322 P PKPbc 12 10 16.0 -0.3
PLOR Plostina 148.88 322 ⇓ iP PKPbc 12 10 15.4 -1.0
KOLS Kolonicke sedl 149.07 330 ePKP PKPbc 12 10 16.6 -0.1
KOLS e 12 12 32.6
OJC Ojcow 149.15 334 ePKHKP PKPbc 12 10 15.8 -1.1
OJC e PKPab 12 10 23.1 -0.4
STHS Stebnicka Huta 149.17 332 ePKP PKPbc 12 10 16.8 -0.1
STHS e 12 12 28.1
STHS Stebnicka Huta 149.17 332 ePKP PKPbc 12 10 16.8 -0.1
STHS e 12 12 28.1
PSN Preselentsi 149.18 317 P PKPbc 12 10 16.3 -0.9
ALFC Alevga 149.21 299 P PKPbc 12 10 16.4 -1.1
comp=Z,2.8nm,0.4s
GIM North Isle of 149.22 5 eP PKPdf 12 10 13.2 +1.3
RUE Ruedersdorf 149.23 343 ePKPdf PKPbc 12 10 15.8 -1.1

UZH **Uzhgorod** 149.28 330 ⇑*i*PKHKP PKPbc 12 10 16.7 -0.5
UZH *e* PKPab 12 10 23.5 -0.6
DMUB Kingscourt 149.37 8 *e*P PKPbc 12 10 16.3 -1.0
CRVS Cervenica-Dubn 149.46 331 *e*PKP PKPdf 12 10 11.9 -0.6
CRVS *e* 12 10 17.0
CRVS *e* 12 12 30.9
PPCY Paphos 149.47 299 P PKPbc 12 10 17.1 -1.0
MLR Muntele Rosu 149.50 322 ⇑*i*P PKPbc 12 10 16.8 -1.1
MLR Muntele Rosu 149.50 322 P PKPbc 12 10 17.6 -0.3
NIE Niedzica 149.56 333 *e*PKP PKPbc 12 10 18.2 +0.3
NIE e 12 10 24.6
NIE Niedzica 149.56 333 *e*PKP PKPbc 12 10 18.2 +0.3
NIE *e* 12 10 24.6
HPK Haverah Park 149.70 1 *e*P PKPbc 12 10 16.9 -1.2
DCN Croghan 149.87 8 *e*P PKPbc 12 10 17.5 -1.0
KSP Ksiaz 149.91 339 *e*PKP PKPbc 12 10 18.4 -0.3
KSP *e* 12 12 24.8
KSP Ksiaz 149.91 339 ⇑*i*PKPdf PKPbc 12 10 18.4 -0.3
KSP *e*PKPab PKPab 12 10 26.2 -0.5
KSP *ep*PKPdf pPKPdf 12 12 24.3 +2.8
KSP *ep*PKPab pPKPab 12 12 31.7 +2.8
KSP *e*SS SS 12 32 26.0 -4.0
DLF Lyons Farm 150.01 7 *e*P PKPbc 12 10 17.5 -1.3
VOIR 150.03 323 PKHKP PKPdf 12 10 15.0 +1.5
VOIR 150.03 323 ⇓*i*P PKPbc 12 10 20.4 +1.3
VOIR 150.03 323 ⇓P PKPbc 12 10 20.4 +1.3
ISP Isparta 150.08 305 PKHKP PKPbc 12 10 18.6 -0.9
NRDL Niedersach Rie 150.09 347 *e*PKPbc PKPbc 12 10 18.3 -0.7
NRDL *e*PKPab PKPab 12 10 26.6 -0.7
OKC Ostrava-Krasne 150.09 336 *e*PKHKP PKPbc 12 10 18.1 -1.0
OKC *e* 12 10 26.0
OKC Ostrava-Krasne 150.09 336 ⇑*e*PKP PKPbc 12 10 18.1 -1.0
OKC *e*PKPAB PKPab 12 10 26.0 -1.4
OKC *ep*PKP pPKPdf 12 12 28.1 +6.3
LHO Holmfirth 150.10 2 *e*P PKPbc 12 10 17.3 -1.7
KECS Kecovo 150.20 332 *e*PKIKP PKPbc 12 10 18.9 -0.5
KECS *e* 12 10 27.3
KECS Kecovo 150.20 332 *e*PKP PKPbc 12 10 18.9 -0.5
KECS *e* 12 10 27.3
KECS *e* 12 12 27.6
UPC Upice 150.29 339 *e*PKIKP PKPdf 12 10 15.5 +1.8
UPC *e* 12 10 28.3
UPC Upice 150.29 339 *e*PKPDF PKPdf 12 10 15.5 +1.8
UPC ⇑*e*PKP PKPbc 12 10 19.3 -0.3
UPC *e*PKPAB PKPab 12 10 28.3 0.0
UPC *ep*PKP pPKPdf 12 12 29.0 +6.9
DPC Dobruska-Polom 150.32 338 *e*PKIKP PKPdf 12 10 14.4 +0.6
DPC *e* 12 10 27.7
DPC Dobruska-Polom 150.32 338 *e*PKPDF PKPdf 12 10 14.4 +0.6
DPC ⇑*e*PKP PKPbc 12 10 19.4 -0.2
DPC *e*PKPAB PKPab 12 10 27.7 -0.7
DPC *ep*PKP pPKPdf 12 12 29.3 +7.1
LIKS Likavka 150.35 334 *e*PKP PKPbc 12 10 20.6 +0.9
MORC Moravsky Berou 150.37 336 ⇑*i*P PKPbc 12 10 19.4 -0.4
MORC Moravsky Berou 150.37 336 *e*PKPdf PKPdf 12 10 12.9 -1.0
MORC *e*PKPbc PKPbc 12 10 19.3 -0.5
DRGR 150.38 327 ⇑*i*P PKPbc 12 10 19.0 -0.9
DRGR 150.38 327 P PKPbc 12 10 19.2 -0.7
GDZ Gediz 150.39 308 *i* P PKPbc 12 10 19.6 -0.5
KBI1 Birley Grange 150.40 1 *e*P PKPbc 12 10 18.1 -1.6
CLL Collm 150.50 343 ⇑*e*PKIKP PKPdf 12 10 14.0 0.0
CLL *i* 12 10 28.4
CLL pmax pmax
comp=Z,154nm,0.8s
CLL pmax pmax
comp=Z,101nm,1.3s
CLL Collm 150.50 343 *e*PKPab PKPab 12 10 28.1 -1.0
CLL *ep*PKPbc pPKPbc 12 12 33.4 +6.3
CLL Collm 150.50 343 *e*PKPdf PKPdf 12 10 14.0 0.0
CLL ⇑*i*PKPbc PKPbc 12 10 19.3 -0.7
comp=Z,154nm,0.8s
CLL *i* x x 12 10 23.9
CLL *i* PKPab PKPab 12 10 28.4 -0.7
comp=Z,101nm,1.3s
CLL *ex* x 12 10 34.0
CLL *ep*PKPbc pPKPbc 12 12 29.0 +1.9
CLL *i* pPKPab pPKPab 12 12 33.4 +2.1
CLL *i* x x 12 12 38.8
CLL *es*PKPdf 12 13 18.0
CLL *ex* x 12 13 53.0
CLL *ep*PP 12 15 58.0
CLL *e*SKSdf SKSdf 12 16 37.0 +7.0
CLL *ex* x 12 19 13.0
CLL *e*SKKSac SKKSac 12 19 56.0 -1.6
CLL *ex* x 12 20 54.0
CLL *e*SKSP 12 23 23.0
CLL *ex* x 12 24 55.0
CLL *e*PPS 12 27 03.0
CLL *ep*PPS 12 28 35.0
CLL *es*PPPPrev 12 30 20.0
CLL *e*SS SS 12 32 31.0 -5.2
CLL *e*SPS 12 33 24.0
CLL *e*SSS 12 38 36.0
CLL *e*SSSS 12 42 18.0
CLL *es*SPSrev 12 47 12.0
CLL Collm 150.50 343 *e*PKPdf PKPdf 12 10 14.0 0.0
CLL ⇑*i*PKP PKPbc 12 10 19.3 -0.7
CLL *i* PKP PKPab 12 10 28.4 -0.7
CLL *i* pPKP pPKPdf 12 12 33.4 +11
CLL *e*SKKS SKKSac 12 19 56.0 -1.6
BRG Berggiesshubel 150.62 341 *e*PKIKP PKPdf 12 10 14.1 -0.1
BRG *i* 12 10 25.8
BRG SS SS 12 32 32.0 -5.6
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG pmax pmax
comp=Z,106nm,1.2s
BRG pmax pmax
comp=Z,60nm,1.2s
BRG pmax pmax
comp=Z,4.0nm,0.9s
BRG pmax pmax
comp=Z,12nm,1.5s
BRG Berggiesshubel 150.62 341 *e*PKPbc PKPbc 12 10 19.8 -0.5
BRG *e*PKPab PKPab 12 10 29.1 -0.5
BRG *ep*PKPbc pPKPbc 12 12 34.1 +6.7
BRG Berggiesshubel 150.62 341 *e*PKP PKPdf 12 10 14.1 -0.1
comp=Z,9.0nm,1.1s
BRG *i* 12 10 19.8
comp=Z,177nm,1.2s
BRG *i* 12 10 25.8
comp=Z,101nm,1.2s
BRG pPKP pPKPdf 12 12 23.5 +0.8
comp=Z,6.5nm,0.9s
BRG *i* 12 13 28.0
BRG *i* 12 13 55.0
comp=Z,20nm,1.4s
BRG SKKS SKKSac 12 20 00.0 +1.7
BRG SS SS 12 32 32.0 -5.6
KWE Weaver Farm 150.63 2 *e*P PKPbc 12 10 18.7 -1.5
CLZ Clausthal 150.65 346 *e*PKPdf PKPdf 12 10 14.8 +0.6
CLZ *e*PKPbc PKPbc 12 10 19.8 -0.5
CLZ *e*PKPab PKPab 12 10 29.2 -0.5
SBD1 Bryn Du 150.68 4 *e*P PKPbc 12 10 19.2 -1.1
IBBN Ibbenburen 150.70 350 *e*PKPbc PKPbc 12 10 20.5 +0.1
IBBN *e*PKPab PKPab 12 10 29.2 -0.7
PVCC Panska Ves 150.74 340 *e*PKIKP PKPdf 12 10 15.2 +0.8
PVCC *e* 12 10 30.1
PVCC Panska Ves 150.74 340 *e*PKPDF PKPdf 12 10 15.2 +0.8
PVCC ⇑*e*PKP PKPbc 12 10 20.2 -0.4
PVCC *e*PKPAB PKPab 12 10 30.1 0.0
PVCC *ep*PKP pPKPab 12 12 30.8 -1.5
PSZ Piszkesteto 150.89 331 ⇓*e*PKP PKPdf 12 10 16.6 +1.9
PSZ Piszkesteto 150.89 331 ⇓*i*P PKPbc 12 10 20.1 -0.9
PSZ Piszkesteto 150.89 331 P PKPbc 12 10 20.2 -0.8
VYHS Vyhne 150.90 333 *e*PKIKP PKPbc 12 10 20.3 -0.7
VYHS *e* 12 10 31.1
VYHS Vyhne 150.90 333 *e*PKP PKPbc 12 10 20.3 -0.7
VYHS *e* 12 10 31.1
VYHS *e* 12 12 33.2
DURS Dursunbey 150.90 310 *i* P PKPbc 12 10 20.6 -0.8
CWF Charnwood Fore 150.93 1 *e*P PKPbc 12 10 19.4 -1.5
DEMI Demirci 150.95 309 *i* P PKPbc 12 10 21.0 -0.4
GOLH Golhisar 150.99 305 *i* P PKPbc 12 10 21.4 -0.2
KOLL Kolacno 151.00 334 *e*PKP PKPbc 12 10 21.1 -0.2
KOLL *e* 12 10 32.2
HLM1 Long Mynd 151.09 3 *e*P PKPbc 12 10 19.6 -1.8
VRAC Vranov 151.10 337 ⇑*i*P PKPbc 12 10 20.8 -0.7
VRAC Vranov 151.10 337 P PKPbc 12 10 21.1 -0.4
WTSB Winterswijk 151.18 351 *e*PKP PKPbc 12 10 20.5 -1.0
comp=Z,118nm,0.8s

WTSB Winterswijk 151.18 351 *ex* PKPab 12 10 30.9 -1.0
WTSB Winterswijk 151.18 351 *ep*PKP pPKPdf 12 12 28.5 +5.0
DNZL Cakiroluk 151.22 306 *i* P PKPbc 12 10 22.0 -0.1
PRU Pruhonice 151.22 340 *e*PKIKP PKPbc 12 10 21.0 -0.7
PRU *e* 12 10 32.0
PRU Pruhonice 151.22 340 ⇑*e*PKP PKPbc 12 10 21.0 -0.7
PRU *e*PKPAB PKPab 12 10 32.0 -0.2
PRU *ep*PKP pPKPdf 12 12 28.0 +4.4
GZR Gura Zlata 151.29 325 ⇓*i*P PKPbc 12 10 21.2 -0.8
GZR Gura Zlata 151.29 325 P PKPbc 12 10 21.2 -0.8
TANN Tannenbergstha 151.45 343 *e*PKPbc PKPbc 12 10 21.1 -1.1
MOX Moxa 151.47 344 *e*PKP PKPbc 12 10 21.3 -0.9
comp=Z,91nm,1.4s
MOX *e* 12 10 32.7
MOX *e* 12 12 31.9
MOX Moxa 151.47 344 *e*PKIKP PKPbc 12 10 21.3 -0.9
MOX *e* 12 10 32.7
MOX pmax pmax
comp=Z,91nm,1.4s
MOX Moxa 151.47 344 *e*PKPdf PKPdf 12 10 15.9 +0.4
MOX *e*PKPab PKPab 12 10 32.5 -0.7
MOX *ep*PKPbc pPKPbc 12 12 36.1 +6.7
HTR Trewern Hill 151.51 4 *e*P PKPbc 12 10 20.7 -1.6
TREC Trest 151.51 338 *e*PKIKP PKPbc 12 10 21.7 -0.7
TREC Trest 151.51 338 ⇑*e*PKP PKPbc 12 10 21.7 -0.7
TREC *ep*PKP pPKPab 12 12 31.7 -3.7
HAE Alders End 151.59 3 *e*P PKPbc 12 10 21.4 -1.1
BUD Budapest 151.60 332 ⇓*e*PKP PKPbc 12 10 21.9 -0.7
MCH1 Michaelchurch 151.60 3 *e*P PKPbc 12 10 20.5 -2.0
BUG Bochum--Univer 151.62 350 *e*PKPdf PKPdf 12 10 15.3 -0.4
BUG *e*PKPbc PKPbc 12 10 22.4 -0.1
BUG *e*PKPab PKPab 12 10 32.8 -1.0
MODS Modra-Piesok 151.62 335 *e*PKIKP PKPdf 12 10 16.0 +0.2
MODS *e* 12 10 34.5
MODS Modra-Piesok 151.62 335 *e*PKP PKPdf 12 10 16.0 +0.2
MODS *e* 12 10 22.5
MODS *e* 12 10 34.4
MODS *e* 12 12 23.4
MODS Modra-Piesok 151.62 335 *e*PKP PKPdf 12 10 16.0 +0.2
MODS *e* 12 10 22.5
MODS *e* 12 10 34.5
MODS *e* 12 12 23.4
NKC Novy Kostel 151.62 343 *e*PKIKP PKPbc 12 10 22.2 -0.4
NKC *e* 12 10 33.0
NKC Novy Kostel 151.62 343 ⇑*e*PKP PKPbc 12 10 22.2 -0.4
NKC *e*PKPAB PKPab 12 10 33.0 -0.8
NKC *ep*PKP pPKPdf 12 12 34.2 +10
UBBA Unterbreizbach 151.69 346 *e*PKPbc PKPbc 12 10 21.6 -1.1
UBBA *e*PKPab PKPab 12 10 32.8 -1.3
BZS Buzias 151.74 326 ⇑*i*P PKPbc 12 10 21.9 -1.1
BZS Buzias 151.74 326 P PKPbc 12 10 22.5 -0.5
ZST Bratislava 151.83 335 *e*PKP PKPbc 12 10 23.7 +0.6
ZST *e* 12 10 35.6
ZST *e* 12 12 28.5
MANZ Manzenberg 151.94 343 *e*PKPdf PKPdf 12 10 16.6 +0.4
MANZ *e*PKPbc PKPbc 12 10 22.6 -0.7
MANZ *e*PKPab PKPab 12 10 34.5 -0.7
MANZ *ep*PKPbc pPKPbc 12 12 37.1 +6.5
HGH Gray Hill 151.97 3 *e*P PKPbc 12 10 21.7 -1.7
ROTZ Rotzenmuhle 152.11 342 *e*PKPdf PKPdf 12 10 17.2 +0.7
ROTZ *e*PKPbc PKPbc 12 10 23.1 -0.6
ROTZ *e*PKPab PKPab 12 10 35.8 -0.1
ROTZ *ep*PKPbc pPKPbc 12 12 37.4 +6.4
KDAG Bornova 152.25 309 *i* P PKPbc 12 10 22.8 -1.6
PGB Panagyurishte 152.26 319 P PKPbc 12 10 24.0 -0.3
KHC Kasperske Hory 152.28 340 *e*PKIKP PKPdf 12 10 16.6 -0.2
KHC *e* 12 10 23.3
KHC *e* 12 10 36.4
KHC Kasperske Hory 152.28 340 *e*PKPDF PKPdf 12 10 16.6 -0.2
KHC ⇑*e*PKP PKPbc 12 10 23.3 -0.8
KHC *e*PKPAB PKPab 12 10 36.4 -0.3
KHC *ep*PKP pPKPdf 12 12 31.3 +6.0
RZN Rozhen 152.41 317 P PKPbc 12 10 23.6 -1.0
GRA1 Grafenberg Arr 152.44 344 *e*PKPbc PKPbc 12 10 24.2 -0.2
GRA1 *e*PKPab PKPab 12 10 37.1 -0.2
GRF Grafenberg Arr 152.44 344 *e*PKPbc PKPbc 12 10 24.2 -0.2
GRF *e*PKPab PKPab 12 10 37.1 -0.2
SOP Sopron 152.46 335 ⇓*e*PKP PKPbc 12 10 24.0 -0.5
HGN Heimansgroeve 152.47 351 *e*PKP PKPbc 12 10 24.1 -0.3
comp=Z,28nm,0.8s
HGN Heimansgroeve 152.47 351 *ex* PKPab 12 10 36.3 -1.2
HGN Heimansgroeve 152.47 351 *ep*PKP pPKPdf 12 12 32.0 +6.4
BEBN Eben Emael 152.47 352 PKPab PKPab 12 10 36.7 -0.7
WET Wettzell 152.48 341 *e*PKPdf PKPdf 12 10 17.5 +0.5
WET *e*PKPbc PKPbc 12 10 23.8 -0.7
WET *e*PKPab PKPab 12 10 37.3 -0.2
WET *ep*PKPbc pPKPbc 12 12 37.7 +5.8
GEC2 GERESS Array S 152.49 340 *e*PKPdf PKPdf 12 10 16.7 -0.4
GEC2 *e*PKPbc PKPbc 12 10 23.8 -0.7
GEC2 *e*PKPab PKPab 12 10 36.7 -0.9
GERES GERESS Array B 152.49 340 PKP PKPdf 12 10 16.9 -0.2
comp=Z,2.6nm,0.9s,baz=146,slow=0.5,SNR=9.5
GERES PKPbc PKPbc 12 10 23.9 -0.7
comp=Z,6.7nm,0.5s,baz=11,slow=1.7,SNR=33
GERES PKPab PKPab 12 10 37.0 -0.6
comp=Z,12nm,0.9s,baz=32,slow=4.6,SNR=3.6
GERES pPKPbc pPKPbc 12 12 32.9 +1.0
comp=Z,2.0nm,0.6s,baz=18,slow=4.2,SNR=3.1
GERES GERESS Array B 152.49 340 PKIKP PKPdf 12 10 16.9 -0.2
GERES 12 10 23.9
GERES 12 10 37.0
HTL Hartland 152.49 6 *e*P PKPbc 12 10 23.4 -1.1
CONA Conrad Observa 152.52 336 P PKPbc 12 10 24.4 -0.2
comp=Z,58nm,1.2s
CONA Conrad Observa 152.52 336 P PKPab 12 10 38.3 +0.5
comp=Z,104nm,1.1s
CONA Conrad Observa 152.52 336 ⇓*i*PKPdf PKPdf 12 10 16.4 -0.7
comp=Z,6.9nm,1.0s,SNR=10
CONA ⇓*i*PKiKP PKiKP 12 10 24.4 -0.3
comp=Z,58nm,1.2s
CONA ⇓*i*PKPab PKPab 12 10 38.3 +0.5
comp=Z,104nm,1.1s
CSNA Conrad Observa 152.52 336 P PKPbc 12 10 24.4 -0.3
comp=Z,56nm,1.2s
CSNA Conrad Observa 152.52 336 P PKPab 12 10 38.3 +0.5
comp=Z,97nm,1.1s
CSNA Conrad Observa 152.52 336 ⇑*i*PKPdf PKPdf 12 10 16.5 -0.6
comp=Z,6.3nm,1.1s
CSNA ⇓*i*PKiKP PKiKP 12 10 24.4 -0.4
comp=Z,56nm,1.2s
CSNA ⇓*i*PKPab PKPab 12 10 38.3 +0.5
comp=Z,97nm,1.1s
GRB3 Grafenberg Arr 152.60 343 *e*PKPbc PKPbc 12 10 24.0 -0.8
MEM Membach 152.61 351 PKPbc PKPbc 12 10 23.6 -1.1
MEM PKPab PKPab 12 10 37.1 -0.9
MEM APKP 12 12 38.1
UCC Uccle 152.63 353 PKPbc PKPbc 12 10 24.6 -0.2
UCC PKPab PKPab 12 10 37.1 -1.0
UCC APKP 12 12 38.0
PKSM Moragy 152.74 330 ⇓*i*P PKPdf 12 10 16.5 -1.0
PKSM Moragy 152.74 330 P PKPdf 12 10 16.8 -0.8
VTS Vitosha 152.81 320 ⇑*i*P PKPbc 12 10 24.1 -1.4
VTS Vitosha 152.81 320 P PKPbc 12 10 24.6 -0.9
VTS Vitosha 152.81 320 P PKPbc 12 10 25.1 -0.4
BCLA Clavier 152.89 352 PKPbc PKPbc 12 10 25.5 +0.1
BCLA PKPab PKPab 12 10 38.4 -0.9
SNF Seneffe 152.92 353 PKPbc PKPbc 12 10 25.0 -0.5
SNF PKPab PKPab 12 10 38.6 -0.7
ABH Alteburg 153.07 349 PKP PKPdf 12 10 18.0 +0.1
MMB Musomiste 153.08 317 P PKPbc 12 10 24.8 -1.3
TOD Tromm 153.09 347 PKIKP PKPdf 12 10 17.6 -0.3
MOA Molln 153.16 338 P PKPbc 12 10 25.2 -0.8
comp=Z,17nm,1.1s
MOA Molln 153.16 338 P PKPab 12 10 40.0 -0.5
comp=Z,53nm,1.1s
MOA Molln 153.16 338 ⇓*i*PKPdf PKPdf 12 10 16.2 -1.9
comp=Z,5.2nm,1.1s
MOA ⇓*i*PKPbc PKPbc 12 10 25.2 -0.8
comp=Z,17nm,1.1s
MOA ⇓*i*PKPab PKPab 12 10 40.0 -0.5
comp=Z,53nm,1.1s
DOU Dourbes 153.30 353 PKPbc PKPbc 12 10 25.9 -0.3
DOU PKPab PKPab 12 10 40.1 -0.9
DOU APKP 12 12 39.2
KKB Krupnik 153.31 319 P PKPbc 12 10 25.4 -1.2
RUP Ruppelstein 153.33 349 PKIKP PKPdf 12 10 17.8 -0.5
WLF Walferdange 153.51 350 PKPbc PKPbc 12 10 26.7 -0.1
WLF PKPab PKPab 12 10 41.6 -0.2
WLF APKP 12 12 38.4
WLF Walferdange 153.51 350 *e*PKPab PKPab 12 10 41.6 -0.3
WLF *ep*PKPbc pPKPbc 12 12 37.0 +2.8
WLF Walferdange 153.51 350 *e*PKPbc PKPbc 12 10 26.5 -0.2

WLF *e*PKPab PKPab 12 10 41.5 -0.4
RJOB Jochberg 153.75 340 *e*PKPbc PKPbc 12 10 26.8 -0.5
RJOB *e*PKPab PKPab 12 10 43.0 0.0
STU Stuttgart 153.79 346 *e*PKPdf PKPdf 12 10 19.2 +0.3
STU *e*PKPbc PKPbc 12 10 26.7 -0.6
STU *e*PKPab PKPab 12 10 42.6 -0.5
FUR Furstenfeldbru 153.82 342 *e*PKPab PKPab 12 10 43.3 0.0
FUR *ep*PKPbc pPKPab 12 12 42.8 -2.2
PERS Pernice 153.88 335 *i* PKPdf PKPdf 12 10 18.5 -0.7
PERS *i* PKPbc PKPbc 12 10 26.2 -1.4
PERS *i* PKPab PKPab 12 10 42.8 -0.8
LANF Langenberg 153.89 348 PKP PKPdf 12 10 18.9 -0.2
VAY Valandovo 153.94 318 *i* PKP PKPbc 12 10 25.4 -2.5
VAY *i* PKP PKPab 12 10 42.8 -1.3
STIP Stip 153.96 319 *i* PKP PKPbc 12 10 43.9 -0.2
SKO Skopje 154.23 320 *i* PKP PKPbc 12 10 28.9 +0.4
SKO *i* PKP PKPab 12 10 46.7 +1.4
SANT Santorini 154.37 306 *e*PKPab PKPab 12 10 44.4 -1.7
BFO Black Forest 154.40 347 *e*PKPbc PKPbc 12 10 27.7 -0.9
BFO *e*PKPab PKPab 12 10 44.7 -1.0
SPAK Spaichingen-Ko 154.51 346 PKP PKPdf 12 10 19.3 -0.7
CDF Champ du Feu 154.53 348 *e*PKIKP PKPdf 12 10 19.5 -0.5
MOTA Moosalm 154.62 342 P PKPbc 12 10 28.9 -0.2
comp=Z,21nm,1.2s
MOTA Moosalm 154.62 342 P PKPab 12 10 46.8 +0.1
comp=Z,72nm,1.1s
MOTA Moosalm 154.62 342 ⇑*i*PKPdf PKPdf 12 10 19.4 -0.7
comp=Z,12nm,1.1s
MOTA ⇑*i*PKPab PKPab 12 10 46.8 +0.1
comp=Z,72nm,1.1s
ABTA Abfaltersbach 154.71 339 P PKPdf 12 10 29.1 +8.9
comp=Z,9.9nm,0.6s
ABTA Abfaltersbach 154.71 339 P PKPab 12 10 46.5 -0.7
comp=Z,45nm,1.2s
ABTA Abfaltersbach 154.71 339 ⇓*i*PKPdf PKPdf 12 10 18.5 -1.8
comp=Z,21nm,1.1s
ABTA ⇑*i*PKPab PKPab 12 10 46.5 -0.7
comp=Z,45nm,1.2s
KRUS Krusevo 154.71 320 *i* PKP PKPdf 12 10 29.1 +8.6
KRUS *i* PKP PKPab 12 10 48.1 +0.7
PTCC Patocco-Chiusa 154.72 337 PKP PKPab 12 10 45.8 -1.4
ECH Echery 154.74 348 PKIKP PKPdf 12 10 19.1 -1.2
ECH *e* 12 10 45.8
BOJS Bojanci 154.76 334 *i* PKPdf PKPdf 12 10 18.8 -1.6
BOJS *i* PKPbc PKPdf 12 10 29.5 +9.1
BOJS *i* PKPab PKPab 12 10 46.7 -0.7
VOY Vojsko 154.85 336 *e*PKPdf PKPdf 12 10 18.5 -2.0
VOY *e*PKPbc PKPdf 12 10 28.9 +8.4
VOY *e*PKPab PKPab 12 10 46.2 -1.6
GMNA Gemona 154.88 337 PKP PKPab 12 10 46.8 -1.1
FELD Feldberg im Sc 154.90 347 PKP PKPdf 12 10 18.9 -1.6
JAVS Javornik 154.90 336 *i* PKPdf PKPdf 12 10 20.2 -0.3
JAVS *i* PKPbc PKPdf 12 10 30.2 +10
JAVS *i* PKPab PKPab 12 10 46.7 -1.3
FLN La Foliniere 154.91 0 *e*PKIKP PKPdf 12 10 20.0 -0.5
DAVA Damuels 155.01 343 P PKPbc 12 10 30.7 +10
comp=Z,16nm,1.4s
DAVA Damuels 155.01 343 P PKPab 12 10 48.6 +0.2
comp=Z,69nm,1.0s
DAVA Damuels 155.01 343 ⇓*i*PKPdf PKPdf 12 10 21.1 +0.4
comp=Z,4.8nm,0.8s,SNR=8.7
DAVA ⇑*i*PKPab PKPab 12 10 48.6 +0.2
comp=Z,69nm,1.0s
FETA Feichten 155.02 342 P PKPbc 12 10 30.5 +10
comp=Z,17nm,1.1s
FETA Feichten 155.02 342 P PKPab 12 10 48.8 +0.3
comp=Z,53nm,1.2s
FETA Feichten 155.02 342 *i* PKPdf PKPdf 12 10 19.9 -0.8
comp=Z,18nm,1.0s,SNR=12
FETA ⇑*i*PKPab PKPab 12 10 48.8 +0.3
comp=Z,53nm,1.2s
LDF La Druitiere 155.08 360 *e*PKIKP PKPdf 12 10 20.1 -0.6
comp=Z,56nm,1.3s
HAU Haudompre 155.09 349 *e*PKIKP PKPdf 12 10 20.5 -0.2
MOF Molkenrain 155.10 348 PKP PKPdf 12 10 19.3 -1.5
OHR Ohrid 155.14 320 *i* PKP PKPab 12 10 48.2 -1.0
HINF Hinteralfeld 155.19 348 *e*PKIKP PKPdf 12 10 20.4 -0.5
comp=Z,35nm,1.3s
GRR Gorron 155.29 1 *e*PKIKP PKPdf 12 10 20.7 -0.3
SGMF Saint Gilles 155.36 4 *e*PKIKP PKPdf 12 10 20.4 -0.7
TIR Tirane 155.54 321 *e*PKP2 PKPab 12 10 50.3 -0.6
CTI Castel Tesino 155.61 339 PKP2 PKPab 12 10 50.1 -0.9
BRMO Bormio 155.62 342 PKP PKPab 12 10 51.3 +0.3
LOMF Lomont 155.64 348 PKP PKPdf 12 10 21.7 +0.2
QUIF Quistinic 155.66 5 *e*PKIKP PKPdf 12 10 20.9 -0.6
comp=Z,49nm,1.4s
TUE Stuetta 155.90 343 *e*PKPdf PKPdf 12 10 21.0 -0.8
TUE *e*PKPab PKPab 12 10 52.3 0.0
LOR Lormes 156.17 353 *e*PKIKP PKPdf 12 10 22.0 -0.2
comp=Z,29nm,1.2s
SSF Saint Saulge 156.41 353 *e*PKIKP PKPdf 12 10 22.3 -0.2
CABF La Chapelle 156.49 349 *e*PKIKP PKPdf 12 10 22.9 +0.3
comp=Z,56nm,1.2s
AVF Avril sur Loir 156.69 354 *e*PKIKP PKPdf 12 10 22.2 -0.7
SMF Signal de Mont 156.78 353 *e*PKIKP PKPdf 12 10 22.5 -0.5
BGF Bois d'Agland 156.97 354 *e*PKIKP PKPdf 12 10 23.1 -0.1
comp=Z,42nm,1.2s
MFF Saint Martin d 157.08 360 *e*PKIKP PKPdf 12 10 23.1 -0.3
comp=Z,26nm,1.0s
TCF Toulx Ste Croi 157.29 355 *e*PKIKP PKPdf 12 10 23.4 -0.2
comp=Z,41nm,1.0s
LPL La Plagne 157.41 347 *e*PKIKP PKPdf 12 10 24.2 +0.4
SFI Santa Sofia 157.42 337 PKIKP PKPdf 12 10 23.4 -0.5
AGO Saint Agoulin 157.45 354 PKP PKPdf 12 10 20.5 -3.3
PLDF La Plantade 157.48 353 PKP PKPdf 12 10 23.9 0.0
BNI Bardonecchia 157.87 347 *e*PKIKP PKPdf 12 10 24.6 +0.2
ORIF Oris-en-Rattie 158.16 348 *e*PKIKP PKPdf 12 10 24.6 -0.1
MBDF Montbardon 158.16 346 *e*PKIKP PKPdf 12 10 24.5 -0.2
LBL Lubilhac 158.25 353 PKP PKPdf 12 10 25.1 +0.3
RJF Les Rejaudoux 158.32 356 *e*PKIKP PKPdf 12 10 24.6 -0.3
comp=Z,49nm,1.4s
VIVF Saint-Julien-l 158.43 350 *e*PKIKP PKPdf 12 10 25.2 +0.1
CAF Calviac 158.66 355 *e*PKIKP PKPdf 12 10 25.4 +0.1
SAOF Saorge 158.68 344 PKP PKPdf 12 10 25.1 -0.3
REVF Revere 158.95 344 PKP PKPdf 12 10 27.1 +1.4
SMRF Simiane la Rot 159.12 348 *e*PKIKP PKPdf 12 10 26.0 +0.1
LASF Ste Croix 159.31 351 *e*PKIKP PKPdf 12 10 26.1 0.0
TAVF Tavernes 159.37 347 PKP PKPdf 12 10 21.9 -4.3
TREF Trevaresse 159.50 348 PKP PKPdf 12 10 23.4 -2.9
PUYF Puyloubier 159.53 347 PKP PKPdf 12 10 23.2 -3.2
LMR La Mourre 159.54 346 *e*PKIKP PKPdf 12 10 25.9 -0.5
PGF Pioggiola 159.59 340 *e*PKIKP PKPdf 12 10 26.1 -0.4
MTLF Montolieu 160.22 354 *e*PKIKP PKPdf 12 10 27.1 0.0
comp=Z,22nm,1.1s
SJPF Ste Jean 160.55 2 *e*PKIKP PKPdf 12 10 26.9 -0.6
EPF Esparros 160.64 358 *e*PKIKP PKPdf 12 10 27.7 +0.1
comp=Z,24nm,1.0s
ETSF Etsaut 160.78 0 *e*PKIKP PKPdf 12 10 28.0 +0.2
comp=Z,17nm,1.0s
PCAB Cabril 160.86 18 *e*PKPdf PKPdf 12 10 27.1 -0.8
PCAB Cabril 160.86 18 *e*PKPab PKPab 12 11 13.9 -0.1
MVO Moncorvo 161.64 16 *e*PKPdf PKPdf 12 10 28.3 -0.4
MVO Moncorvo 161.64 16 *e*PKPab PKPab 12 11 17.6 +0.2
PVIS Viseu 161.82 19 *e*PKPdf PKPdf 12 10 28.1 -0.8
PVIS Viseu 161.82 19 *e*PKPab PKPab 12 11 17.5 -0.7
LIC Lamto 162.12 165 *e*PKIKP PKPdf 12 10 28.5 -1.5
comp=Z,48nm,1.0s
LIC Lamto 162.12 165 *e*PKIKP PKPdf 12 10 28.4 -1.6
comp=Z,62nm,1.0s
MTE Manteigas 162.22 18 *e*PKPdf PKPdf 12 10 28.6 -0.7
MTE Manteigas 162.22 18 *e*PKPdf PKPdf 12 10 29.2 -0.1
KIC Kosan Boka 162.32 166 *e*PKIKP PKPdf 12 10 28.9 -1.3
comp=Z,105nm,1.0s
TIC Toumodi 162.53 164 *e*PKIKP PKPdf 12 10 29.1 -1.3
comp=Z,104nm,1.0s
DBIC Dimbokro 162.59 165 PKP PKPdf 12 10 29.0 -1.5
comp=Z,10nm,0.6s,baz=161,slow=2.2,SNR=18
DBIC PKPab PKPab 12 11 21.3 -0.9
comp=Z,27nm,0.9s,baz=173,slow=5.3,SNR=12
PCBR Castelo Branco 162.75 19 *e*PKPdf PKPdf 12 10 29.2 -0.7
PMRV Marv??o 163.16 19 *e*PKPdf PKPdf 12 10 29.4 -0.9
PMRV Marv??o 163.16 19 *e*PKPab PKPab 12 11 23.5 -0.6
PESTR Estremoz 163.61 20 *e*PKPdf PKPdf 12 10 29.5 -1.2
ESDC Sonseca Array 163.71 10 PKPab PKPab 12 11 25.3 -1.3
comp=Z,14nm,0.9s,baz=345,slow=4.2,SNR=30
ESDC PP PP 12 15 13.1 +0.3
comp=Z,1.4nm,0.8s,baz=297,slow=37,SNR=4.2
ESLA Sonseca Array 163.71 10 *e*PKPdf PKPdf 12 10 27.4 -3.4
EVO Evora 163.77 22 *e*PKIKP PKPdf 12 10 30.1 -0.7
comp=Z,35nm,1.0s
PBEJ Beja 164.28 22 *e*PKPdf PKPdf 12 10 30.9 -0.4
PTEO Sao Teotonio 164.38 25 *e*PKPdf PKPdf 12 10 31.2 -0.2
PBAR Barrancos 164.42 20 *e*PKPdf PKPdf 12 10 30.4 -1.0

PBAR	**Barrancos**	**164.42**	**20**	*e*PKPab	PKPab	12 11 29.0	-0.7
MORF	**Marmelete**	**164.62**	**26**	*e*PKPdf	PKPdf	12 10 31.6	0.0
PFVI	**Vila Bisbo**	**164.70**	**26**	*e*PKPdf	PKPdf	12 10 31.5	-0.2
PVAQ	**Vaqueiros**	**164.88**	**23**	*e*PKPdf	PKPdf	12 10 30.8	-1.1
PVAQ	**Vaqueiros**	**164.88**	**23**	*e*PKPab	PKPab	12 11 31.0	-0.8
PBDV	**Barranco-do-Ve**	**164.95**	**24**	*e*PKPdf	PKPdf	12 10 31.4	-0.5
KEST	**Kesra**	**165.29**	**327**	PKPab	PKPab	12 11 33.8	+0.1
	comp=Z,11nm,1.0s,baz=317,slow=2.0,SNR=12						
TOA0	**Torodi Ar. Sit**	**169.40**	**191**	*e*PKPdf	PKPdf	12 10 34.1	-1.6
TORD	**Torodi Ar. Bea**	**169.40**	**191**	PKP	PKPdf	12 10 33.8	-1.9
	comp=Z,15nm,0.9s,baz=347,slow=0.7,SNR=39						
TORD				PKPab	PKPab	12 11 51.2	-0.9
	comp=Z,30nm,0.8s,baz=169,slow=2.9,SNR=32						
TORD				PP	PP	12 15 42.5	+0.9
	comp=Z,6.8nm,1.0s,baz=173,slow=5.0,SNR=5.6						
TORD	**Torodi Ar. Bea**	**169.40**	**191**	PKP	PKPdf	12 10 33.8	-1.9
TORD				PKPab	PKPab	12 11 51.2	-0.9
TORD				PP	PP	12 15 42.5	+0.9

CASC 14 12:04:54.3±2.4, 966N×8400W, h0km±3km, MD4.0, 6C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
BUS	**Buena Vista**	**0.26**	**113**	⇑	*i*P	Pg	12 05 01.1	+1.8
SJS	**Escuela Geolog**	**0.28**	**349**		*e*P	Pg	12 05 00.8	+1.0
PRS1	**Puriscal**	**0.45**	**317**	⇑	*i*P	Pg	12 05 03.4	+0.6
CGA2	**Cerro Gallo 2**	**0.58**	**308**		*i*P	Pg	12 05 06.1	+0.6
BAR1		**0.80**	**121**		*e*P	Pg	12 05 09.6	+0.1
LIO	**Limon**	**1.01**	**70**	⇑	*i*P	Pg	12 05 13.6	-0.2
LIO					eS	Sg	12 05 28.8	+1.9
FORC	**Fortuna**	**1.04**	**321**		*i*P	Pg	12 05 14.3	0.0
FORC					*i* S	Sg	12 05 28.3	+0.4
CAO	**Cobano**	**1.09**	**272**	⇓	*i*P	Pg	12 05 15.1	-0.1
CAO					eS	Sg	12 05 33.4	+4.1
JCR	**Jicaral**	**1.11**	**280**	⇑	*i*P	Pg	12 05 15.4	-0.3
JCR					eS	Sg	12 05 32.0	+1.9
ACR	**Cerro Adams**	**1.29**	**140**		*e*P	Pg	12 05 18.4	-0.7
ACR					eS	Sg	12 05 36.9	+1.0
CTCR	**Cotoan**	**1.44**	**122**	⇑	*e*P	Pn	12 05 21.4	-0.2
CNI	**Changuinola**	**1.48**	**99**	⇓	*e*P	Pn	12 05 18.0	-4.2
CNI					eS	Sg	12 05 43.5	+1.4
2RIO	**Dos Rios de Up**	**1.49**	**306**		*i* P	Pn	12 05 27.6	+5.2
CUI		**1.53**	**311**		*i* P	Pn	12 05 22.4	-0.5
BRU2	**Volcan**	**1.55**	**123**	⇑	*e*P	Pn	12 05 23.7	+0.5
BRU2					eS	Sn	12 05 44.9	+0.8
LAPE	**La Pedrera**	**12.46**	**99**		*i* P		12 05 26.9	
PTP	**Ponta Puerca**	**19.76**	**62**		*e*P		12 05 24.8	
PTP					eS		12 05 52.2	

IDC 14 12:27:38.0±3.4, 281S×10068E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/19, mbtmp3.5/4, Error ellipse: s-maj=142.1km s-min=25.3km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
WRA	**Warramunga Arr**	**37.00**	**120**	P		P	12 34 49.7	0.0
	0.4nm,1.0s,baz=303,slow=9.2,SNR=4.9							
ASAR	**Alice Springs**	**38.23**	**126**	P		P	12 35 00.0	0.0
	0.5nm,1.1s,baz=300,slow=8.1,SNR=4.0							
SONM	**Songino Array**	**50.68**	**5**	P		P	12 36 40.5	+1.3
	0.3nm,0.5s,baz=180,slow=11,SNR=3.3							
MKAR	**Makanchi Array**	**51.99**	**344**	P		P	12 36 48.2	-0.8
	0.4nm,0.4s,baz=145,slow=8.7,SNR=4.3							
TXAR	**Lajitas Array**	**144.92**	**39**	PKP		PKPdf	12 47 16.4	-1.6
	0.4nm,0.7s,baz=153,slow=0.6,SNR=4.6							

IDC ***14*** *12:34:54.5±3.1, 385S×10101E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/20, mbtmp3.9/8, Error ellipse: s-maj=130.1km s-min=16.8km az=58.0*

ISCJB ***14*** *12:34:56.5±2.7, 39S±04×1008E±07, h33km, mb3.8/8, Error ellipse: s-maj=111.0km s-min=13.9km az=148.1*

NEIC ***14*** *12:34:59.8±1.9, 380S×10108E, h35km, Error ellipse: s-maj=81.7km s-min=10.7km az=58.0*

ISC 14 12:34:59.5±2.6, 38S±04×1010E±06, h35km, n10, σ0§45/9, mb3.8/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
CMAR	**Chiang Mai Arr**	**22.25**	**355**	P		**P**	**12 39 53.3**	**-0.1**
	0.8nm,0.5s,mb3.4,baz=186,slow=12,SNR=5.2							
FITZ	**Fitzroy Crossi**	**27.96**	**122**	P		**P**	**12 40 46.8**	**-0.1**
	1.6nm,0.8s,mb3.7,baz=247,slow=7.7,SNR=4.2							
WRA	**Warramunga Arr**	**36.21**	**119**	P		**P**	**12 41 58.6**	**-0.6**
	0.7nm,0.5s,mb3.9,baz=303,slow=9.3,SNR=14							
ASAR	**Alice Springs**	**37.37**	**125**	P		**P**	**12 42 09.1**	**+0.1**
	0.7nm,0.6s,mb3.6,baz=298,slow=7.8,SNR=19							
STKA	**Stephens Creek**	**47.18**	**131**	P		**P**	**12 43 29.5**	**+0.7**
	4.0nm,1.0s,mb4.3,baz=309,slow=12,SNR=4.0							
STKA	**Stephens Creek**	**47.18**	**131**	P		**P**	**12 43 29.5**	**+0.6**
SONM	**Songino Array**	**51.67**	**5**	P		**P**	**12 44 03.6**	**+0.8**
	0.9nm,0.6s,mb3.9,baz=192,slow=9.0,SNR=7.7							
MKAR	**Makanchi Array**	**53.06**	**344**	P		**P**	**12 44 13.0**	**-0.2**
	0.4nm,0.4s,mb3.6,baz=158,slow=10.0,SNR=4.9							
ZALV	**Zalesovo Beam**	**59.15**	**349**	P		**P**	**12 44 56.1**	**-0.4**
	1.0nm,0.4s,mb4.2,baz=161,slow=6.3,SNR=3.8							
TXAR	**Lajitas Array**	**145.50**	**40**	PKPbc		PKPbc	12 54 36.1	+1.4
	1.4nm,0.6s,baz=319,slow=0.7,SNR=24							

ISCJB ***14*** *12:46:49.3±0.3, 37.14N±001×542W±001, h9km±2km, Error ellipse: s-maj=2.1km s-min=1.7km az=32.7*

MDD ***14*** *12:46:51.4±0.2, 3708N×541W, h5km±2km, mbLg3.5/39, Error ellipse: s-maj=1.9km s-min=1.7km az=174.0, PRIMO*

MDD EMS: III INTENSIDAD MIMA.

NEIC ***14*** *12:46:51.9, 3703N×542W, h13km, MN3.4(MDD), After MDD.*

NEIC Felt [II] in the epicentral area.

SFS ***14*** *12:46:51.0, 3700N×540W, h13km, ML3.4*

LDG ***14*** *12:46:51.8±0.1, 3706N×544W, h10km, Ml4.0/5, Error ellipse: s-maj=2.8km s-min=2.0km az=8.0*

INMG ***14*** *12:46:51.7±1.3, 3703N×539W, h16km±2km, ML3.8, Error ellipse: s-maj=1.9km s-min=1.5km az=18.0*

CSEM ***14*** *12:46:52.2±0.0, 3700N×538W, h15km, ML4.2/25, Error ellipse: s-maj=1.1km s-min=0.9km az=30.0*

CNRM ***14*** *12:46:52.8, 37.17N×564W, h32km, MD3.9*

IGIL ***14*** *12:46:53.3, 3703N×542W, h13km, ML3.7*

ISC 14 12:46:50.7±0.2, 3712N±001×541W±001, h12km±1km, n183, σ1§13/353, 5C-11D, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
LIJA	**Lijar**	**0.21**	**180**	⇓	P	**Pg**	**12 46 54.4**	**-0.9**
LIJA	**Lijar**	**0.21**	**180**		*i* P	**Pg**	**12 46 54.3**	**-1.0**
EXAO	**Algodonales**	**0.24**	**180**		Pg	**Pg**	**12 46 54.3**	**-1.4**
EXAO					Lg		12 46 57.3	
ESPR	**Espera**	**0.44**	**236**	⇓	Pg	**Pg**	**12 46 59.3**	**-0.1**
	224nm,0.2s,SNR=18							
ESPR					Lg		12 47 05.7	
	2µm,0.2s,SNR=5.0							
ESPR	**Espera**	**0.44**	**236**		Pg	**Pg**	**12 46 59.2**	**-0.2**
	674nm,0.4s,SNR=18							
ESPR	**Espera**	**0.44**	**236**	⇓	Pg	**Pg**	**12 46 59.2**	**-0.2**
ESPR					Lg		12 47 06.3	
GIBL	**Gibalbin**	**0.53**	**238**	⇓	P	**Pg**	**12 47 02.5**	**+1.4**
GIBL					S	**Sg**	**12 47 09.8**	**+1.5**
GIBL	**Gibalbin**	**0.53**	**238**		*i* P	**Pg**	**12 47 02.5**	**+1.3**
REAL	**Reales**	**0.65**	**166**		P	**Pg**	**12 47 02.6**	**-0.8**
REAL					S	**Sg**	**12 47 07.1**	**-4.9**
REAL	**Reales**	**0.65**	**166**		*e*P	**Pg**	**12 47 02.6**	**-0.8**
EJIF	**Jimena Fronter**	**0.67**	**184**		Pg	**Pg**	**12 47 02.0**	**-1.7**
	193nm,0.3s,SNR=7.9							
EMIJ	**Mijas**	**0.75**	**137**	⇓	Pg	**Pg**	**12 47 03.5**	**-1.7**
	435nm,0.3s,SNR=18							
EMIJ					Lg		12 47 13.8	
	2µm,0.5s,SNR=17							
SCRT	**Cerro San Cris**	**0.78**	**232**	⇑	P	**Pg**	**12 47 08.0**	**+2.1**
SCRT					S	**Sg**	**12 47 15.4**	**-0.8**
SCRT	**Cerro San Cris**	**0.78**	**232**		*i* P	**Pg**	**12 47 07.9**	**+2.0**
MOMI	**Momias**	**0.83**	**198**		P	**Pg**	**12 47 07.0**	**+0.3**
MOMI	**Momias**	**0.83**	**198**		*e*P	**Pg**	**12 47 07.0**	**+0.3**
EMAL	**Malaga-Limoner**	**0.86**	**114**		Pg	**Pg**	**12 47 11.1**	**+3.8**
	13nm,0.2s,SNR=7.9							
EMAL					Lg		12 47 18.6	
	105nm,0.4s,SNR=7.9							
EMAL	**Malaga-Limoner**	**0.86**	**114**		*e*P	**Pg**	**12 47 06.4**	**-0.9**
EMAL	**Malaga-Limoner**	**0.86**	**114**		Pg	**Pg**	**12 47 09.6**	**+2.3**
	130nm,0.4s,SNR=7.9							
EMAL					*e*S	**Sg**	**12 47 18.7**	**+0.2**
EMAL	**Malaga-Limoner**	**0.86**	**114**		Pg	**Pg**	**12 47 09.6**	**+2.3**
EMAL					Lg		12 47 18.9	
CNIL	**Conil**	**0.91**	**215**	⇑	P	**Pg**	**12 47 09.7**	**+1.4**
CNIL					S	**Sg**	**12 47 21.2**	**+1.1**
CNIL	**Conil**	**0.91**	**215**		*i* P	**Pg**	**12 47 09.7**	**+1.4**
CNIL					*e*S	**Sg**	**12 47 21.2**	**+1.0**
SFS	**San Fernando**	**0.92**	**225**		*e*P	**Pg**	**12 47 09.4**	**+1.0**
SFS					*e*S	**Sg**	**12 47 21.0**	**+0.7**
SFS	**San Fernando**	**0.92**	**225**		*e*P	**Pg**	**12 47 09.4**	**+1.0**
SFS					*e*S	**Sg**	**12 47 20.0**	**-0.3**
ECAB	**El Cabril**	**0.95**	**359**		Pg	**Pg**	**12 47 10.4**	**+1.2**
	354nm,0.1s,SNR=1235							
ECAB					Lg		12 47 23.9	
	743nm,0.2s,SNR=20							
ECAB	**El Cabril**	**0.95**	**359**		Pg	**Pg**	**12 47 10.5**	**+1.3**
	1µm,0.6s,SNR=1000							
ECAB	**El Cabril**	**0.95**	**359**		Pg	**Pg**	**12 47 10.5**	**+1.3**
ECAB					Lg		12 47 23.9	
ELOJ	**Sierra Loja**	**1.00**	**88**		Pg	**Pg**	**12 47 10.1**	**+0.1**
	49nm,0.3s,SNR=120							
ELOJ					Lg		12 47 25.1	
	425nm,0.4s,SNR=17							
ELOJ	**Sierra Loja**	**1.00**	**88**		Pg	**Pg**	**12 47 10.5**	**+0.5**
	133nm,0.4s,SNR=120							
ELOJ	**Sierra Loja**	**1.00**	**88**		Pg	**Pg**	**12 47 10.5**	**+0.5**
ELOJ					Lg		12 47 24.7	
EMIN	**Mina Concepcio**	**1.20**	**303**	⇓	Pg	**Pg**	**12 47 13.5**	**-0.3**
	320nm,0.4s,SNR=18							
EMIN					Lg		12 47 29.5	
	2µm,0.7s,SNR=54							
EMIN	**Mina Concepcio**	**1.20**	**303**		Pg	**Pg**	**12 47 13.5**	**-0.3**
	320nm,0.4s,SNR=18							
EMIN	**Mina Concepcio**	**1.20**	**303**	⇓	Pg	**Pg**	**12 47 13.5**	**-0.3**
EMIN					Lg		12 47 30.3	
EADA	**Adamuz**	**1.24**	**32**		Pg	**Pg**	**12 47 14.4**	**-0.1**
	1.2nm,0.0s,SNR=157							
EADA					Lg		12 47 32.1	
	1µm,0.5s,SNR=5.0							
EADA	**Adamuz**	**1.24**	**32**		Pg	**Pg**	**12 47 14.4**	**-0.1**
	56nm,0.3s,SNR=157							
EADA	**Adamuz**	**1.24**	**32**		Pg	**Pg**	**12 47 14.4**	**-0.1**
EADA					Lg		12 47 33.3	
ERON	**Agron**	**1.28**	**94**		Pg	**Pg**	**12 47 15.0**	**-0.4**
	58nm,0.5s,SNR=7.9							
ERON					Lg		12 47 30.6	
	276nm,0.5s,SNR=7.9							
ERON	**Agron**	**1.28**	**94**		Pg	**Pg**	**12 47 15.1**	**-0.3**
	58nm,0.5s,SNR=7.9							
ERON	**Agron**	**1.28**	**94**		Pg	**Pg**	**12 47 15.1**	**-0.2**
ERON					Lg		12 47 31.8	
ECOG	**Cogollos-Vega**	**1.48**	**83**	⇓	Pg	**Pg**	**12 47 18.1**	**-1.0**
	115nm,0.6s,SNR=18							
ECOG					Lg		12 47 40.1	
	337nm,0.4s,SNR=4.8							
ECOG	**Cogollos-Vega**	**1.48**	**83**		Pg	**Pg**	**12 47 18.1**	**-0.9**
ECOG					Lg		12 47 40.1	
ERIP	**Rio Piedras**	**1.50**	**280**	⇓	Pn	**Pn**	**12 47 17.2**	**-0.1**
	3.7nm,0.1s,SNR=18							
ERIP					Pg	**Pg**	**12 47 18.7**	**-0.7**
	196nm,0.2s,SNR=7.9							
ERIP					Sn	**Sn**	**12 47 36.4**	**-0.4**
	127nm,0.2s,SNR=7.9							
ERIP					Lg		12 47 38.9	
	560nm,0.1s,SNR=7.9							
ERIP	**Rio Piedras**	**1.50**	**280**		Pn	**Pn**	**12 47 17.2**	**-0.1**
ERIP					Pg	**Pg**	**12 47 18.7**	**-0.8**
ERIP					Lg		12 47 38.9	
EQUE	**Quentar**	**1.57**	**86**	⇑	Pg	**Pg**	**12 47 19.3**	**-1.6**
	117nm,0.4s,SNR=18							
EQUE					Lg		12 47 42.7	
	569nm,0.8s,SNR=6.8							
EQUE	**Quentar**	**1.57**	**86**		Pg	**Pg**	**12 47 19.4**	**-1.5**
	117nm,0.4s,SNR=96							
DKH	**Dar Kharkhour**	**1.63**	**179**		*i* P	**Pn**	**12 47 19.0**	**-0.1**
DKH					*i* S	**Sn**	**12 47 39.0**	**-1.0**
EBAN	**Banos Encina**	**1.66**	**50**	⇑	Pn	**Pn**	**12 47 20.0**	**+0.5**
	3.8nm,0.1s,SNR=18							
EBAN					Pg	**Pg**	**12 47 22.6**	**+0.1**
	20nm,0.1s,SNR=7.9							
EBAN					Sn	**Sn**	**12 47 41.5**	**+0.8**
	23nm,0.1s,SNR=11							
EBAN					Lg		12 47 44.8	
	92nm,0.2s,SNR=13							
EBAN	**Banos Encina**	**1.66**	**50**		Pn	**Pn**	**12 47 20.0**	**+0.5**
	24nm,0.3s,SNR=44							
EBAN					Sn	**Sn**	**12 47 41.5**	**+0.8**
	103nm,0.3s,SNR=11							
EBAN	**Banos Encina**	**1.66**	**50**		Pn	**Pn**	**12 47 20.0**	**+0.5**
EBAN					Sn	**Sn**	**12 47 41.5**	**+0.8**
EBAN					Lg		12 47 45.5	
PBAR	**Barrancos**	**1.67**	**310**		*e*Pn	**Pn**	**12 47 20.0**	**+0.2**
PBAR					*e*Sn	**Sn**	**12 47 41.5**	**+0.4**
PBAR					*e*Sg	**Sg**	**12 47 44.9**	**+0.4**
PBAR					A		12 47 53.2	
	734nm,0.5s							
PBAR	**Barrancos**	**1.67**	**310**		*e*Pn	**Pn**	**12 47 20.0**	**+0.2**
PBAR					*e*Sn	**Sn**	**12 47 41.5**	**+0.4**
PBAR					*e*Sg	**Sg**	**12 47 44.9**	**+0.4**
	734nm,0.5s							
EGRO	**El Granado**	**1.71**	**285**	⇓	Pn	**Pn**	**12 47 20.3**	**0.0**
	16nm,0.3s,SNR=18							
EGRO					Pg	**Pg**	**12 47 22.5**	**-1.0**
	51nm,0.2s,SNR=94							
EGRO					Sn	**Sn**	**12 47 41.1**	**-0.9**
	168nm,0.3s,SNR=7.9							
EGRO					Lg		12 47 45.2	
	654nm,0.3s,SNR=5.0							
EGRO	**El Granado**	**1.71**	**285**		Pn	**Pn**	**12 47 19.9**	**-0.3**
	138nm,0.4s,SNR=7.4							
EGRO	**El Granado**	**1.71**	**285**		Pg	**Pg**	**12 47 22.5**	**-1.0**
	121nm,0.3s,SNR=94							
EGRO	**El Granado**	**1.71**	**285**		Pn	**Pn**	**12 47 19.9**	**-0.4**
EGRO					Pg	**Pg**	**12 47 22.5**	**-1.0**
EGRO					Lg		12 47 44.8	
PVAQ	**Vaqueiros**	**1.87**	**279**		*e*Pn	**Pn**	**12 47 22.4**	**0.0**
PVAQ					*e*Sn	**Sn**	**12 47 44.9**	**-1.0**
PVAQ					*e*Sg	**Sg**	**12 47 50.3**	**-0.5**
PVAQ					A		12 47 52.1	
	580nm,0.3s							
PVAQ	**Vaqueiros**	**1.87**	**279**		*e*Pn	**Pn**	**12 47 22.4**	**0.0**
PVAQ					*e*Sn	**Sn**	**12 47 44.9**	**-1.0**
PVAQ					*e*Sg	**Sg**	**12 47 50.3**	**-0.5**
	580nm,0.3s							
EQES	**Quesada**	**1.98**	**69**	⇑	Pn	**Pn**	**12 47 24.5**	**+0.5**
	15nm,0.4s,SNR=18							
EQES					Pg	**Pg**	**12 47 28.7**	**0.0**
	4.7nm,0.1s,SNR=18							
EQES					Lg		12 47 56.0	
	338nm,0.6s,SNR=9.0							
EQES	**Quesada**	**1.98**	**69**		Pg	**Pg**	**12 47 28.7**	**0.0**
	107nm,0.4s,SNR=18							
PBDV	**Barranco-do-Ve**	**2.02**	**274**		*e*Pn	**Pn**	**12 47 24.8**	**+0.2**
PBDV					*e*Sn	**Sn**	**12 47 48.9**	**-0.8**
PBDV					*e*Sg	**Sg**	**12 47 55.8**	**+0.1**
PBDV					A		12 48 04.4	
	549nm,0.6s							
PBDV	**Barranco-do-Ve**	**2.02**	**274**		*e*Pn	**Pn**	**12 47 24.8**	**+0.2**
PBDV					*e*Sn	**Sn**	**12 47 48.9**	**-0.8**
PBDV					*e*Sg	**Sg**	**12 47 55.8**	**+0.1**
	549nm,0.6s							
EBER	**Berja**	**2.02**	**95**		Pn	**Pn**	**12 47 25.7**	**+1.1**
	1.6nm,0.2s,SNR=64							
EBER					Pg	**Pg**	**12 47 29.1**	**-0.4**
	114nm,0.4s,SNR=7.9							
EBER					Lg		12 47 55.3	
	407nm,0.5s,SNR=8.9							
EBER	**Berja**	**2.02**	**95**		Pg	**Pg**	**12 47 29.1**	**-0.5**
	SNR=7.9							
EBAD	**Badajoz**	**2.07**	**323**	⇓	Pn	**Pn**	**12 47 25.8**	**+0.5**
	17nm,0.2s,SNR=18							
EBAD					Pg	**Pg**	**12 47 30.0**	**-0.5**
	12nm,0.1s,SNR=12							
EBAD					Sn	**Sn**	**12 47 51.1**	**+0.2**
	172nm,0.2s,SNR=6.9							
EBAD					Lg		12 47 57.3	
	697nm,0.3s,SNR=17							
EBAD	**Badajoz**	**2.07**	**323**		Pn	**Pn**	**12 47 25.8**	**+0.6**
	26nm,0.3s,SNR=89							
EBAD	**Badajoz**	**2.07**	**323**		Pg	**Pg**	**12 47 30.0**	**-0.4**
	42nm,0.4s,SNR=12							
EBAD					Sn	**Sn**	**12 47 50.1**	**-0.8**
	36nm,0.3s,SNR=6.9							
EBAD	**Badajoz**	**2.07**	**323**		Pn	**Pn**	**12 47 25.8**	**+0.5**
EBAD					Pg	**Pg**	**12 47 30.0**	**-0.4**
EBAD					Sn	**Sn**	**12 47 50.1**	**-0.8**
EBAD					Lg		12 47 56.9	
PBEJ	**Beja**	**2.16**	**296**	*e*	Pn	**Pn**	**12 47 26.9**	**+0.5**
PBEJ					*e*Sg	**Sg**	**12 48 00.0**	**0.0**
PBEJ					A		12 48 07.3	
	341nm,0.8s							
PBEJ	**Beja**	**2.16**	**296**	*e*	Pn	**Pn**	**12 47 26.9**	**+0.5**
PBEJ					*e*Sg	**Sg**	**12 48 00.0**	**0.0**
	341nm,0.8s							
MPAL	**Palemas**	**2.23**	**148**	*i*	P	**Pn**	**12 47 28.0**	**+0.6**
MPAL				*i*	S	**Sn**	**12 47 55.0**	**+0.2**
EALB	**Alboran**	**2.24**	**121**		Pn	**Pn**	**12 47 27.9**	**+0.4**
	30nm,0.3s,SNR=14							
EALB					Pg	**Pg**	**12 47 31.4**	**-2.3**
	118nm,0.6s,SNR=7.9							
EALB					Sn	**Sn**	**12 47 53.8**	**-1.4**
	174nm,0.6s,SNR=5.0							
EALB	**Alboran**	**2.24**	**121**		Pn	**Pn**	**12 47 28.0**	**+0.4**
EALB					Sn	**Sn**	**12 47 53.8**	**-1.4**
	24nm,0.3s,SNR=5.0							
RSA	**Sarsar**	**2.26**	**189**	*i*	P	**Pn**	**12 47 28.0**	**+0.1**
RSA				*i*	S	**Sn**	**12 47 54.0**	**-1.7**
PESTR	**Estremoz**	**2.46**	**316**	*e*	Pn	**Pn**	**12 47 31.3**	**+0.8**
PESTR					*e*Sn	**Sn**	**12 48 01.2**	**+0.8**
PESTR					*e*Sn	**Sn**	**12 48 02.0**	**+1.6**
PESTR					*e*Sg	**Sg**	**12 48 08.6**	**-1.0**
PESTR					A		12 48 15.7	
	493nm,0.9s							
PESTR	**Estremoz**	**2.46**	**316**	*e*	Pn	**Pn**	**12 47 31.3**	**+0.8**
PESTR					*e*Sn	**Sn**	**12 48 01.2**	**+0.8**
PESTR					*e*Sg	**Sg**	**12 48 08.6**	**-1.0**
	493nm,0.9s							
EVO	**Evora**	**2.50**	**305**	*e*	Pn	**Pn**	**12 47 32.7**	**+1.5**
EVO	**Evora**	**2.50**	**305**	*e*	Pg	**Pg**	**12 47 39.9**	**+1.2**
EVO					*e*Sn	**Sn**	**12 48 02.4**	**+0.8**
EVO					*e*Sg	**Sg**	**12 48 13.2**	**+2.1**
	659nm,0.4s							
EVO	**Evora**	**2.50**	**305**	*e*	Pn	**Pn**	**12 47 31.7**	**+0.5**
EVO	**Evora**	**2.50**	**305**	*e*	Pg	**Pg**	**12 47 39.2**	**+0.5**
EVO					*e*Sn	**Sn**	**12 48 01.9**	**+0.3**
EVO					*e*Sn	**Sn**	**12 48 02.9**	**+1.3**
EVO					*e*Sg	**Sg**	**12 48 12.0**	**+0.9**
EVO					A		12 48 14.9	
	382nm,0.7s							
EVO	**Evora**	**2.50**	**305**		Pn	**Pn**	**12 47 31.7**	**+0.5**
EVO					Pg	**Pg**	**12 47 39.2**	**+0.5**
EVO					Sn	**Sn**	**12 48 01.9**	**+0.3**
EVO					Lg		12 48 12.0	
	191nm,0.7s							
EVO	**Evora**	**2.50**	**305**	*e*	Pg	**Pg**	**12 47 39.2**	**+0.5**
EVO					*e*Sn	**Sn**	**12 48 01.9**	**+0.3**
EVO					*e*Sg	**Sg**	**12 48 12.0**	**+0.9**
	382nm,0.7s							
TOU	**Touzarine**	**2.53**	**148**		P	**Pn**	**12 47 34.0**	**+2.4**
TOU					S	**Sn**	**12 48 03.0**	**+0.7**
PAB	**San Pablo**	**2.56**	**19**	*e*	Pn	**Pn**	**12 47 33.4**	**+1.4**
PAB					*e*Sn	**Sn**	**12 48 04.9**	**+1.9**
ENIJ	**Nijar**	**2.56**	**92**		Pn	**Pn**	**12 47 32.4**	**+0.4**
	2.8nm,0.2s,SNR=13							
ENIJ					Pg	**Pg**	**12 47 38.8**	**-1.0**
	15nm,0.4s,SNR=22							
ENIJ					Lg		12 48 12.9	
	47nm,0.5s,SNR=7.5							
ENIJ	**Nijar**	**2.56**	**92**		Pg	**Pg**	**12 47 40.0**	**+0.2**
	44nm,0.4s,SNR=22							
ENIJ	**Nijar**	**2.56**	**92**		Pn	**Pn**	**12 47 32.4**	**+0.4**
ENIJ					Pg	**Pg**	**12 47 40.0**	**+0.2**
ENIJ					Lg		12 48 11.6	
EVOP	**Sao Brissos**	**2.57**	**304**	*e*	Pn	**Pn**	**12 47 32.7**	**+0.6**
EVOP	**Sao Brissos**	**2.57**	**304**	*e*	Pg	**Pg**	**12 47 39.9**	**-0.1**
EVOP					*e*Sn	**Sn**	**12 48 02.4**	**-0.9**
EVOP					*e*Sg	**Sg**	**12 48 13.2**	**-0.2**
	330nm,0.4s							
MORF	**Marmelete**	**2.60**	**275**	*e*	Pn	**Pn**	**12 47 32.5**	**0.0**
MORF	**Marmelete**	**2.60**	**275**	*e*	Pg	**Pg**	**12 47 39.0**	**-1.5**
MORF					*e*Sn	**Sn**	**12 48 03.3**	**-0.6**
MORF					*e*Sg	**Sg**	**12 48 13.0**	**-1.2**
MORF					A		12 48 19.8	
	263nm,0.3s							
MORF	**Marmelete**	**2.60**	**275**		Pn	**Pn**	**12 47 32.5**	**0.0**
MORF					Pg	**Pg**	**12 47 39.0**

comp=E,1.9nm,0.1s,SNR=12
ETOB Sn **Sn** **12 48 24.4 +0.4**
comp=E,47nm,0.7s,SNR=5.0
ETOB Lg 12 48 40.8
comp=E,173nm,1.1s,SNR=5.9
ETOB Tobarra 3.41 62 Pn **Pn** **12 47 43.9 +0.2**
comp=E,7.0nm,0.4s,SNR=12
ETOB Sn **Sn** **12 48 24.0 0.0**
comp=E,74nm,0.5s,SNR=5.0
ETOB Tobarra 3.41 62 Pn **Pn** **12 47 43.9 +0.3**
ETOB Sn **Sn** **12 48 23.9 0.0**
ETOB Lg 12 48 39.0
PMAFR Mafra 3.57 302 *e*Pn **Pn** **12 47 46.5 +0.7**
PMAFR *e*Sn **Sn** **12 48 27.9 0.0**
PMAFR *e*Sg **Sg** **12 48 47.4 +2.1**
PMAFR A 12 48 51.7
comp=E,291nm,0.6s
PMAFR Mafra 3.57 302 *e*Pn **Pn** **12 47 46.5 +0.7**
PMAFR *e*Sn **Sn** **12 48 27.9 0.0**
PMAFR *e*Sg **Sg** **12 48 47.4 +2.1**
comp=E,291nm,0.6s
GUD Guadarrama 3.65 15 Pn **Pn** **12 47 48.9 +1.9**
comp=E,1.3nm,0.1s,SNR=5.9
GUD Pg **Pg** **12 48 00.4 -0.3**
comp=E,7.0nm,0.3s,SNR=4.9
GUD Sn **Sn** **12 48 29.5 -0.4**
comp=E,27nm,0.4s,SNR=6.1
GUD Lg 12 48 51.2
comp=E,38nm,0.4s,SNR=7.8
GUD Guadarrama 3.65 15 Pg **Pg** **12 47 59.1 -1.6**
comp=E,6.9nm,0.3s,SNR=4.9
GUD Sn **Sn** **12 48 30.3 +0.4**
comp=E,26nm,0.4s,SNR=6.1
GUD Guadarrama 3.65 15 Pn **Pn** **12 47 48.9 +1.9**
GUD Pg **Pg** **12 47 59.1 -1.6**
GUD Sn **Sn** **12 48 30.3 +0.3**
GUD Lg 12 48 46.7
MTE Manteigas 3.68 334 *e*Pn **Pn** **12 47 50.0 +2.7**
MTE *e*Sn **Sn** **12 48 31.1 +0.5**
MTE *e*Sg **Sg** **12 48 46.8 -2.0**
MTE A 12 48 52.6
comp=E,496nm,0.6s
MTE Manteigas 3.68 334 Pn **Pn** **12 47 50.0 +2.7**
MTE Sn **Sn** **12 48 31.1 +0.5**
MTE Lg 12 48 46.8
comp=E,248nm,0.6s
MTE Manteigas 3.68 334 *e*Pn **Pn** **12 47 48.2 +0.9**
MTE *e*Sn **Sn** **12 48 31.1 +0.5**
MTE *e*Sg **Sg** **12 48 46.8 -2.0**
comp=E,496nm,0.6s
MTE Manteigas 3.68 334 *e*Pn **Pn** **12 47 48.1 +0.8**
MTE *e*Sn **Sn** **12 48 31.4 +0.9**
MIF Mishlifen 3.70 178 *i* P **Pn** **12 47 48.0 +0.3**
MIF *i* S **Sn** **12 48 29.0 -2.2**
PVIS Viseu 4.08 332 *e*Pn **Pn** **12 47 54.4 +1.5**
PVIS *e*Sn **Sn** **12 48 40.2 -0.4**
PVIS *e*Sg **Sg** **12 48 59.9 -1.9**
PVIS A 12 49 06.0
comp=E,140nm,0.5s
PVIS Viseu 4.08 332 Pn **Pn** **12 47 54.4 +1.5**
PVIS Sn **Sn** **12 48 40.2 -0.4**
PVIS Lg 12 48 59.9
comp=E,70nm,0.5s
CZD Col de Zad 4.09 176 P **Pn** **12 47 54.0 +1.0**
CZD S **Sn** **12 48 38.0 -2.7**
MVO Moncorvo 4.23 343 *e*Pn **Pn** **12 47 55.9 +0.9**
MVO *e*Sn **Sn** **12 48 44.0 -0.3**
MVO *e*Sg **Sg** **12 49 04.8 -1.8**
MVO A 12 49 11.3
comp=E,161nm,0.5s
MVO Moncorvo 4.23 343 *e*Pn **Pn** **12 47 55.9 +0.9**
MVO *e*Sn **Sn** **12 48 44.0 -0.3**
MVO *e*Sg **Sg** **12 49 04.8 -1.8**
comp=E,161nm,0.5s
ECHE Chera 4.27 53 Pn **Pn** **12 47 56.7 +1.2**
comp=E,2.6nm,0.3s,SNR=6.2
ECHE Pg **Pg** **12 48 08.4 -4.1**
comp=E,6.4nm,0.6s,SNR=7.9
ECHE Lg 12 49 09.6
comp=E,40nm,0.7s,SNR=4.0
ECHE Chera 4.27 53 Pn **Pn** **12 47 56.7 +1.2**
ECHE Lg 12 49 09.6
EBEN Beniarda 4.39 67 Pn **Pn** **12 47 57.4 +0.3**
comp=E,23nm,0.8s,SNR=9.0
EBEN Sn **Sn** **12 48 47.2 -1.0**
comp=E,43nm,0.7s,SNR=5.0
EBEN Lg 12 49 11.9
comp=E,65nm,0.9s,SNR=7.9
EBEN Beniarda 4.39 67 Pn **Pn** **12 47 57.9 +0.8**
comp=E,25nm,0.9s,SNR=9.0
EBEN Sn **Sn** **12 48 45.1 -3.1**
comp=E,12nm,0.5s,SNR=5.0
EBEN Beniarda 4.39 67 Pn **Pn** **12 47 57.9 +0.8**
EBEN Sn **Sn** **12 48 45.1 -3.1**
ETOR Torete 4.52 34 Pn **Pn** **12 48 00.2 +1.3**
comp=E,17nm,0.2s,SNR=19
ETOR Sn **Sn** **12 48 51.9 +0.4**
comp=E,54nm,0.5s,SNR=6.9
ETOR Lg 12 49 16.6
comp=E,99nm,0.8s,SNR=5.0
ETOR Torete 4.52 34 Pn **Pn** **12 48 00.2 +1.2**
comp=E,19nm,0.3s,SNR=19
ETOR Sn **Sn** **12 48 52.5 +1.1**
comp=E,39nm,0.7s,SNR=6.9
ETOR Torete 4.52 34 Pn **Pn** **12 48 00.2 +1.3**
ETOR Sn **Sn** **12 48 52.5 +1.1**
ETOR Lg 12 49 13.3
KIB El Ksiba 4.56 187 P **Pn** **12 47 59.0 -0.5**
KIB S **Sn** **12 48 49.0 -3.4**
ECAL Calabor 4.93 348 Pn **Pn** **12 48 06.0 +1.5**
comp=E,4.0nm,0.4s,SNR=5.9
ECAL Sn **Sn** **12 48 59.5 -1.8**
comp=E,36nm,0.4s,SNR=5.6
ECAL Lg 12 49 27.8
comp=E,47nm,0.4s,SNR=5.0
ECAL Calabor 4.93 348 Pn **Pn** **12 48 06.9 +2.4**
comp=E,4.0nm,0.4s,SNR=5.9
ECAL Sn **Sn** **12 49 00.4 -0.9**
comp=E,18nm,0.4s,SNR=5.6
ECAL Calabor 4.93 348 Pn **Pn** **12 48 06.9 +2.4**
ECAL Sn **Sn** **12 49 00.4 -0.9**
ECAL Lg 12 49 26.4
PCAB Cabril 5.01 337 *e*Pn **Pn** **12 48 06.7 +1.0**
PCAB *e*Sn **Sn** **12 49 02.9 -0.6**
PCAB *e*Sg **Sg** **12 49 31.5 -0.2**
PCAB A 12 49 42.8
comp=E,136nm,0.6s
PCAB Cabril 5.01 337 *e*Pn **Pn** **12 48 06.7 +1.0**
PCAB *e*Sn **Sn** **12 49 02.9 -0.6**
PCAB *e*Sg **Sg** **12 49 31.5 -0.2**
comp=E,136nm,0.6s
EMOS Mosqueruela 5.04 48 Pn **Pn** **12 48 07.0 +1.0**
comp=E,0.1nm,0.0s,SNR=4.0
EMOS Sn **Sn** **12 49 03.1 -0.9**
comp=E,51nm,1.1s,SNR=7.9
EMOS Lg 12 49 32.3
comp=E,90nm,0.9s,SNR=5.0
EMOS Mosqueruela 5.04 48 Pn **Pn** **12 48 08.3 +2.3**
comp=E,10nm,0.9s,SNR=9.9
EMOS Sn **Sn** **12 49 02.2 -1.9**
SNR=7.9
EMOS Mosqueruela 5.04 48 Pn **Pn** **12 48 08.3 +2.3**
EMOS Sn **Sn** **12 49 02.2 -1.9**
EMOS Lg 12 49 28.0
TZC Tazercounte 5.04 191 P **Pn** **12 48 05.0 -1.0**
TZC S **Sn** **12 48 59.0 -5.1**
ZFT Errachidia 5.15 170 *i* P **Pn** **12 48 08.0 +0.5**
ZFT *i* S **Sn** **12 49 04.0 -2.8**
ELOB Lobios 5.17 337 Pn **Pn** **12 48 08.7 +0.9**
comp=E,1.5nm,0.2s,SNR=11
ELOB Sn **Sn** **12 49 05.2 -2.1**
comp=E,16nm,0.5s,SNR=6.8
ELOB Lg 12 49 36.3
comp=E,196nm,0.6s,SNR=5.0
ELOB Lobios 5.17 337 Pn **Pn** **12 48 08.7 +0.9**
comp=E,4.7nm,0.4s,SNR=11
ELOB Lobios 5.17 337 Pn **Pn** **12 48 08.7 +0.9**
ELOB Sn **Sn** **12 49 05.2 -2.1**
ELOB Lg 12 49 33.2
EARI Arriondas 6.18 1 Pn **Pn** **12 48 21.0 -0.7**
comp=E,0.1nm,0.1s,SNR=7.9
EARI Sn **Sn** **12 49 30.0 -2.2**
comp=E,24nm,0.8s,SNR=4.6
EARI Lg 12 50 04.5
comp=E,30nm,0.6s,SNR=8.0
CIA Chichaoua 6.20 208 P **Pn** **12 48 21.0 -0.9**
CIA S **Sn** **12 49 26.0 -6.7**
OUK Oukaimeden 6.24 200 P **Pn** **12 48 22.0 -0.5**
OUK S **Sn** **12 49 28.0 -5.7**
ELAN Lanestosa 6.29 13 Pn **Pn** **12 48 25.4 +2.2**
comp=E,0.7nm,0.2s,SNR=5.6
ELAN Sn **Sn** **12 49 32.7 -2.3**
comp=E,4.4nm,0.3s,SNR=4.6
ELAN Lg 12 50 07.3
comp=E,24nm,0.6s,SNR=5.0
ELAN Lanestosa 6.29 13 Pn **Pn** **12 48 24.4 +1.2**
comp=E,3.0nm,0.5s,SNR=5.6
ELAN Lanestosa 6.29 13 Pn **Pn** **12 48 24.4 +1.2**
ELAN Sn **Sn** **12 49 31.3 -3.6**
ELAN Lg 12 50 07.3
JHA Jbel Lahdid 6.33 213 P **Pn** **12 48 24.0 +0.3**
JHA S **Sn** **12 49 30.0 -5.9**
JHA Jbel Lahdid 6.33 213 *e*P **Pn** **12 48 24.0 +0.3**
EPON Pontenova 6.34 348 Pn **Pn** **12 48 25.6 +1.7**
comp=E,0.2nm,0.4s,SNR=7.9
EPON Sn **Sn** **12 49 34.0 -2.3**
comp=E,12nm,0.5s,SNR=7.9
EPON Lg 12 50 13.2
comp=E,57nm,0.5s,SNR=7.9
EPON Pontenova 6.34 348 Pn **Pn** **12 48 24.2 +0.3**
comp=E,0.2nm,0.4s,SNR=7.9
EPON Pontenova 6.34 348 Pn **Pn** **12 48 24.2 +0.3**
EPON Sn **Sn** **12 49 34.0 -2.3**
EPON Lg 12 50 08.7
EMAZ Mazaricos 6.44 336 Pn **Pn** **12 48 26.4 +1.2**
comp=E,1.4nm,0.1s,SNR=7.9
EMAZ Sn **Sn** **12 49 34.8 -3.7**
comp=E,7.7nm,0.4s,SNR=7.9
EMAZ Lg 12 50 16.3
comp=E,48nm,0.8s,SNR=7.9
EMAZ Mazaricos 6.44 336 Pn **Pn** **12 48 25.3 +0.1**
comp=E,0.8nm,0.1s,SNR=7.9
EMAZ Mazaricos 6.44 336 Pn **Pn** **12 48 25.3 +0.1**
EMAZ Lg 12 50 13.0
IZUN Zunzarren 6.49 27 Pn **Pn** **12 48 29.2 +3.3**
comp=E,0.4nm,0.2s,SNR=7.9
IZUN Lg 12 50 23.7
comp=E,15nm,0.6s,SNR=7.9
IZUN Zunzarren 6.49 27 Pn **Pn** **12 48 29.2 +3.3**
comp=E,0.1nm,0.2s,SNR=7.9
EORO Oroz-Betelu 6.57 27 Pn **Pn** **12 48 29.8 +2.8**
comp=E,6.0nm,0.4s,SNR=17
EORO Lg 12 50 21.1
comp=E,12nm,0.6s,SNR=7.9
EALK Alkurruntz 6.79 25 Pn **Pn** **12 48 31.9 +1.9**
comp=E,4.6nm,0.4s,SNR=6.7
EALK Sn **Sn** **12 49 45.1 -2.0**
comp=E,32nm,0.4s,SNR=5.7
EALK Alkurruntz 6.79 25 Pn **Pn** **12 48 33.3 +3.3**
EALK Sn **Sn** **12 49 45.6 -1.5**
EALK Alkurruntz 6.79 25 Pn **Pn** **12 48 33.3 +3.3**
EALK Sn **Sn** **12 49 45.6 -1.5**
SJPF Ste Jean 6.79 27 *e*Pn **Pn** **12 48 30.0 -0.1**
SJPF *e*Sn **Sn** **12 49 43.9 -3.3**
SJPF *e*Sg **Sg** **12 50 25.6 -3.0**
comp=E,63nm,1.0s
SJPF Ste Jean 6.79 27 Pn **Pn** **12 48 30.0 -0.1**
SJPF Sn **Sn** **12 49 43.9 -3.3**
SJPF Lg 12 50 25.6
comp=E,31nm,1.0s
ETSF Etsaut 6.87 31 *e*Pn **Pn** **12 48 31.3 +0.2**
ETSF *e*Sn **Sn** **12 49 46.0 -3.1**
ETSF *e*Sg **Sg** **12 50 27.9 -3.1**
comp=E,45nm,0.9s
ETSF Etsaut 6.87 31 Pn **Pn** **12 48 31.3 +0.2**
ETSF Sn **Sn** **12 49 46.0 -3.1**
ETSF Lg 12 50 27.9
comp=E,22nm,0.9s
EBIE Bielsa 7.01 36 Pn **Pn** **12 48 35.1 +2.0**
comp=E,11nm,0.4s,SNR=25
EBIE Sn **Sn** **12 49 51.0 -1.5**
comp=E,1.8nm,0.3s,SNR=5.0
EBIE Bielsa 7.01 36 Pn **Pn** **12 48 35.1 +2.1**
EBIE Sn **Sn** **12 49 51.0 -1.6**
EPF Esparros 7.37 35 *e*Pn **Pn** **12 48 38.3 +0.3**
EPF *e*Sn **Sn** **12 49 57.9 -3.5**
EPF *e*Sg **Sg** **12 50 43.1 +42**
comp=E,29nm,0.7s
EPF Esparros 7.37 35 Pn **Pn** **12 48 38.3 +0.3**
EPF Sn **Sn** **12 49 57.9 -3.5**
MTLF Montolieu 8.52 41 *e*Pn **Pn** **12 48 53.9 +0.1**
MTLF *e*Sg Sn 12 51 19.3 +50
comp=E,5.6nm,0.7s
MTLF Montolieu 8.52 41 *e*Pn **Pn** **12 48 53.9 +0.1**
MTLF *e*Sg Sn 12 51 19.3 +50
comp=E,2.8nm,0.7s

NEIC 14 12:52:41.8,3653S×17708E,h15km,ML3.9(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZ	**Kuaotunu**	**1.11**	**258**	P	Pb	12 53 01.4	-1.4
KUZ				P		12 53 02.2	
KUZ				S	Sb	12 53 16.0	-1.1
KUZ				S	Sb	12 53 16.3	-0.8
MXZ	**Matakaoa Point**	**1.42**	**137**	P	Pn	12 53 05.1	-2.0
MXZ				S	Sn	12 53 21.4	-4.2
MKAZ	**Moumakai**	**1.64**	**249**	P	Pn	12 53 09.1	-1.0
MKAZ				S	Sn	12 53 30.9	0.0
OTAZ	**Otara**	**1.78**	**256**	P	Pn	12 53 13.6	+1.6
WTAZ	**Waiatarua**	**2.05**	**258**	P	Pn	12 53 19.2	+3.4
WCZ	**Waipu Caves**	**2.29**	**284**	P	Pn	12 53 20.1	+1.1

IDC 14 12:58:00.1±4.1,233S×9942E,h0km,mb3.6/4,mb1 3.6/4, mb1mx3.4/19,mbtmp3.6/4,Error ellipse: s-maj=178.7km s-min=27.1km az=57.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**39.53**	**125**	P	P	13 05 32.4	-0.6
	0.2nm,0.8s,baz=303,slow=7.6,SNR=3.5						
SONM	**Songino Array**	**50.33**	**6**	P	P	13 06 58.7	+0.1
	0.8nm,0.6s,baz=184,slow=9.9,SNR=6.5						
MKAR	**Makanchi Array**	**51.20**	**345**	P	P	13 07 04.5	-0.6
	0.7nm,0.7s,baz=140,slow=7.9,SNR=6.7						
ZALV	**Zalesovo Beam**	**57.39**	**350**	P	P	13 07 49.8	-0.3
	1.0nm,0.6s,baz=163,slow=5.6,SNR=4.7						
TXAR	**Lajitas Array**	**145.32**	**37**	PKPbc	PKPbc	13 17 41.5	+1.0
	0.5nm,0.6s,baz=307,slow=1.4,SNR=8.2						

*IDC **14** 13:06:48.9±2.6,340S×10178E,h0km,mb4.0/8,mb1 4.1/8, mb1mx3.9/20,mbtmp4.0/8,MS4.8/1,Ms1 4.8/1, ms1mx3.8/15,Error ellipse: s-maj=125.5km s-min=16.3km az=55.0*
*ISCJB **14** 13:06:52.8±1.1,32S±02×102.1E±03,h33km,mb4.2/11, Error ellipse: s-maj=54.6km s-min=11.6km az=146.7*
*NEIC **14** 13:06:55.3±0.6,317S×102.17E,h35km,mb4.4/4,Error ellipse: s-maj=31.6km s-min=8.4km az=56.0*
*DJA **14** 13:07:06,281S×10047E,h0km,mb5.5/2*
ISC 14 13:06:55.4±1.1,32S±02×1021E±03,h35km,n17,σ0s67/13, mb4.2/11,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**22.47**	**109**	LR	LR	13 22 51.4	
	comp=Z,2μm,20.5s,baz=64,slow=42						
FITZ	**Fitzroy Crossi**	**27.38**	**124**	P	P	**13 12 38.2**	**+0.6**
	2.2nm,0.9s,mb3.7,baz=134,slow=21,SNR=2.0						
FITZ	**Fitzroy Crossi**	**27.38**	**124**	P	P	**13 12 37.5**	**-0.1**
	29nm,1.7s,mb4.5						
NWAO	**Narrogin (SRO)**	**32.79**	**156**	P	P	**13 13 25.5**	**+0.1**
	33nm,1.3s,mb5.1						
WRA	**Warramunga Arr**	**35.55**	**120**	P	P	**13 13 48.9**	**-0.6**
	0.9nm,0.8s,mb3.8,baz=288,slow=10,SNR=4.4						
WRAB	**Tennant Creek**	**35.56**	**120**	P	P	**13 13 49.3**	**-0.3**
	3.2nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**36.83**	**126**	P	P	**13 14 00.5**	**+0.1**
	3.2nm,0.8s,mb4.2,baz=297,slow=8.1,SNR=51						
STKA	**Stephens Creek**	**46.77**	**132**	P	P	**13 15 21.9**	**+0.4**
	2.0nm,0.7s,mb4.2,baz=206,slow=12,SNR=5.2						
STKA	**Stephens Creek**	**46.77**	**132**	P	P	**13 15 21.9**	**+0.4**
SONM	**Songino Array**	**50.95**	**4**	P	P	**13 15 54.5**	**+1.2**
	1.4nm,0.6s,mb4.1,baz=181,slow=9.6,SNR=12						
EKS2	**Erkin-Say**	**52.35**	**334**	*e*P	P	**13 16 04.9**	**+1.0**
	1.5nm,0.6s,mb4.1						
MKAR	**Makanchi Array**	**52.76**	**343**	P	P	**13 16 06.0**	**-0.9**
	0.7nm,0.7s,mb3.7,baz=151,slow=7.8,SNR=6.6						
KURK	**Kurchatov**	**57.36**	**342**	P	P	**13 16 39.3**	**-0.7**
	0.6nm,0.2s,mb4.2,baz=157,slow=6.9,SNR=2.7						
ZALV	**Zalesovo Beam**	**58.74**	**348**	P	P	**13 16 49.0**	**-0.6**
	0.8nm,0.5s,mb4.0,baz=161,slow=6.3,SNR=4.6						
TXAR	**Lajitas Array**	**144.27**	**41**	PKP	PKPdf	13 26 27.9	-0.5
	0.4nm,0.8s,baz=18,slow=1.7,SNR=4.4						
CPUP	**Villa Florida**	**144.57**	**213**	*e*PKPdf	PKPdf	13 26 29.3	+0.2
UTMT	**University of**	**145.48**	**16**	*e*PKPdf	PKPdf	13 26 30.1	-0.2

*BJI **14** 13:07:40.9,381S×102.14E,h35km,mB5.1,mb4.8,Ms5.2, Msz4.9*
*IDC **14** 13:07:43.0±0.4,304S×10232E,h0km,mb4.9/24, mb1 4.9/25,mb1mx4.9/27,mbtmp4.9/25,ML4.3/1,MS4.5/3, Ms1 4.5/3,ms1mx4.0/14,Error ellipse: s-maj=15.1km s-min=10.8km az=58.0*
*ISCJB **14** 13:07:46.8±0.2,309S±003×10207E±003,h34km, mb5.0/87,MS4.9/27,Error ellipse: s-maj=5.2km s-min=3.7km az=141.6*
*MOS **14** 13:07:46.6±0.9,297S×102.44E,h33km,mb5.2/33, MS4.6/9,Error ellipse: s-maj=12.2km s-min=6.4km az=116.6*
*GCMT **14** 13:07:48.3±0.2,3.18S×102.24E,h19km±1km,MW5.3/55, Moment Tensor Solution. s38,c53; s55,c83; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.51±.04; $M_{\theta\theta}$-0.51±.03; $M_{\phi\phi}$ 1.02±.03; $M_{r\theta}$ 0.64±.09; $M_{\theta\phi}$ 0.51±.03; $M_{\phi r}$ 0.10±.06; Best double couple: $M_0$1.20300×10^{17} NP1:ϕ_s340.00000°,δ53.00000°,λ-154.00000°. NP2: ϕ_s234.00000°,δ70.00000°,λ-39.00000°. Principal axes: T 1.2200, Plg10.0000°, Azm290.0000°; N -0.0310, Plg46.0000°, Azm31.0000°; P -1.1860, Plg42.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **14** 13:07:48.3±0.2,300S×10235E,h35km,mb5.0/28, MS4.8/1 Error ellipse: s-maj=7.9km s-min=5.0km az=48.0*
NEIC Felt [IV] at Bengkulu and [II] at Padang.
*DJA **14** 13:07:53,295S×10234E,h50km,Mw5.6/16*
ISC 14 13:07:48.8±0.2,309S±003×10210E±003,h36km, h36km±.9km:pP-P,n226,σ1s24/230,mb5.0/87,MS4.9/27, 23C-22D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSRI	**Dabo**	**3.58**	**44**	P	**Pn**	**13 08 41.4**	**-0.5**
	0.0nm,0.0s						
BLSI	**Bandar Lampung**	**3.87**	**126**	P	**Pn**	**13 08 47.8**	**+1.9**
	0.0nm,0.0s						
SBJI	**Serang**	**5.02**	**127**	P	**Pn**	**13 09 03.7**	**+2.0**
	1μm,1.1s						
MYKOM	**Kota Tinggi**	**5.15**	**20**	⇓P	**Pn**	**13 09 04.6**	**+1.1**
KGM	**Kluang**	**5.21**	**14**	⇑P	**Pn**	**13 09 05.6**	**+1.3**
DBJI	**Dramaga**	**5.77**	**127**	P	**Pn**	**13 09 13.4**	**+1.4**
	1μm,1.9s						
CBJI	**Citeko**	**5.78**	**125**	P	**Pn**	**13 09 16.8**	**+4.7**
	4μm,1.2s						
SKJI	**Sukabumi**	**5.90**	**131**	P	**Pn**	**13 09 18.2**	**+4.4**
	940nm,1.0s						
FRIM	**Kepong**	**6.30**	**356**	⇑P	**Pn**	**13 09 21.9**	**+2.6**
LEM	**Lembang**	**6.63**	**124**	P	**Pn**	**13 09 26.7**	**+2.8**
	759nm,1.6s						
JCJI	**Jatiwangi**	**7.01**	**119**	P	**Pn**	**13 09 35.5**	**+6.4**
	464nm,1.9s						
IPM	**Ipoh**	**7.59**	**352**	⇑P	**Pn**	**13 09 41.3**	**+4.2**
KTGM	**Kuala Trenggan**	**8.42**	**7**	⇓P	**Pn**	**13 09 51.4**	**+2.9**
BJII	**Banjamegara**	**8.67**	**119**	P	**Pn**	**13 09 55.5**	**+3.6**
	130nm,2.0s						
KSM	**Kuching**	**9.37**	**61**	⇑P	**Pn**	**13 09 59.2**	**-2.3**
KSM	**Kuching**	**9.37**	**61**	*e*Pn	**Pn**	**13 09 56.4**	**-5.0**
SNG	**Songkhla**	**10.30**	**352**	P	**Pn**	**13 10 16.0**	**+1.8**
	180nm,0.9s						
SJI	**Sawahan**	**10.67**	**116**	P	**Pn**	**13 10 20.8**	**+1.5**
	153nm,1.6s						
KRKI	**Karangkates**	**11.46**	**117**	P	**Pn**	**13 10 37.1**	**+6.9**
	346nm,2.2s						
SBUM	**Sibu**	**11.51**	**62**	⇑P	**Pn**	**13 10 34.4**	**+3.6**
BTM	**Bintulu**	**12.63**	**60**	⇑P	**Pn**	**13 10 48.0**	**+1.9**
KHKI	**Kahang-Kahang**	**14.42**	**112**	P	**Pn**	**13 11 14.3**	**+3.7**
	214nm,1.8s						
MTNI	**Mataram**	**15.04**	**112**	P	**Pn**	**13 11 20.4**	**+1.6**
	135nm,1.1s						
KKM	**Kota Kinabalu**	**16.76**	**57**	⇓P	**Pn**	**13 11 43.0**	**+2.0**
KKM	**Kota Kinabalu**	**16.76**	**57**	*e*Pn	**Pn**	**13 11 38.8**	**-2.2**
TSM	**Tawau**	**17.38**	**65**	⇑P	**Pn**	**13 11 50.2**	**+1.4**
SDKM	**Sandakan**	**17.39**	**60**	⇓P	**Pn**	**13 11 50.1**	**+1.2**
KAPI	**Kappang**	**17.71**	**97**	Pn	**Pn**	**13 11 52.7**	**-0.1**
	403nm,1.4s,SNR=11						
KAPI	**Kappang**	**17.71**	**97**	P	**Pn**	**13 11 49.8**	**-3.0**
	1.0nm,0.3s,baz=270,slow=10,SNR=15						
KAPI				LR	LR	13 20 10.9	
	comp=Z,2μm,18.3s,baz=30,slow=43						
KAPI	**Kappang**	**17.71**	**97**	*e*P	**Pn**	**13 11 51.5**	**-1.3**
KDM	**Kudat**	**17.75**	**56**	⇓P	**Pn**	**13 11 53.3**	**+0.1**
PCI	**Palu**	**17.85**	**83**	P	**Pn**	**13 11 58.2**	**+3.6**
	185nm,1.7s						
MYLDM	**Lahad Datu**	**18.32**	**63**	⇑P	**Pn**	**13 12 07.8**	**+7.4**
UBT	**Ubonrachathani**	**18.44**	**9**	P	**Pn**	**13 12 08.5**	**+6.8**
NST	**Nakhon Sawan**	**18.74**	**354**	P	**Pn**	**13 12 09.0**	**+3.7**
KKTK	**Khon Kaen**	**19.31**	**2**	P	**Pn**	**13 12 08.0**	**-4.2**
KDI	**Kendari**	**20.50**	**93**	P	**P**	**13 12 27.6**	**+3.6**
	177nm,2.0s						
CMAR	**Chiang Mai Arr**	**21.63**	**352**	P	**P**	**13 12 36.1**	**0.0**
	2.3nm,0.7s,baz=185,slow=9.5,SNR=4.8						
CMAR				PcP	PcP	13 16 37.3	+0.2
	3.0nm,0.7s,baz=206,slow=3.0,SNR=9.5						
NANT	**Nan**	**21.79**	**356**	⇑P	**P**	**13 12 38.0**	**+0.2**
	102nm,1.0s,mb5.2						
CHG	**Chiang Mai**	**21.98**	**352**	⇑P	**P**	**13 12 42.2**	**+2.3**
	11nm,0.9s,mb4.3						
CHTO	**Chiang Mai**	**21.98**	**352**	*e*P	**P**	**13 12 42.8**	**+2.9**
BATI	**Baumata**	**22.54**	**109**	P	**P**	**13 12 42.5**	**-3.4**
	28nm,0.8s,mb4.8,baz=266,slow=3.3,SNR=5.3						
CHRT	**Chiangrai**	**22.93**	**354**	P	**P**	**13 12 51.0**	**+1.1**
	105nm,1.1s,mb5.2						
QIZ	**Qiongzhong**	**23.26**	**19**	P	**P**	**13 12 50.8**	**-2.6**
QIZ				AP		13 12 59.9	
QIZ				S	**S**	**13 17 01.5**	**-1.6**
QIZ				XS	sS	13 17 16.3	-3.4
QIZ				AMB	AMB		
	comp=Z,26nm,1.9s,mb4.3						
QIZ				AMB	AMB		
	comp=Z,492nm,6.7s						
QIZ				LR	LR		
	comp=E,3μm,13.0s						
QIZ				LR	LR		
	comp=Z,2μm,17.6s,MS4.6						
QIZ	**Qiongzhong**	**23.26**	**19**	*e*P	**P**	**13 12 50.6**	**-2.8**
	comp=Z,34nm,1.1s,mb4.7						
MBWA	**Marble Bar**	**24.84**	**138**	*e*P	**P**	**13 13 07.8**	**-0.2**
	comp=Z,33nm,0.9s,mb4.9						
LBMI	**Labuha**	**25.50**	**85**	P	**P**	**13 13 17.3**	**+3.2**
	comp=Z,213nm,1.0s,mb5.6						
FITZ	**Fitzroy Crossi**	**27.47**	**125**	*e*P	**P**	**13 13 29.0**	**-2.9**
	comp=Z,56nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**27.47**	**125**	P	**P**	**13 13 29.9**	**-1.9**
	comp=Z,28nm,0.8s,mb4.8,baz=309,slow=10,SNR=23						
KMI	**Kunming**	**28.05**	**1**	P	**P**	**13 13 38.8**	**+1.9**
KMI				AP	pP	13 13 47.4	+0.3
KMI				XP	sP	13 13 52.6	+1.2
KMI				PP	PP	13 14 29.9	-11
KMI				S	**S**	**13 18 18.4**	**-0.8**
KMI				XS	sS	13 18 35.8	-0.3
KMI				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.3						
KMI				AMB	AMB		
	comp=Z,176nm,8.8s						
KMI				LR	LR		
	comp=N,568nm,18.5s,MS5.1						
KMI				LR	LR		
	comp=E,5μm,17.4s,MS5.1						
KMI				LR	LR		
	comp=Z,3μm,13.6s,MS5.0						
SWI	**Sorong**	**29.22**	**86**	P	**P**	**13 13 46.2**	**-1.4**
	comp=Z,106nm,1.0s,mb5.5						
GYA	**Guiyang**	**29.70**	**8**	⇓*i*P	**P**	**13 13 52.4**	**+0.8**
GYA				AP	pP	13 14 01.9	+0.1
GYA				XP	sP	13 14 06.3	+0.2
GYA				PP	PP	13 14 49.9	-9.2
GYA				PCP	PcP	13 16 56.3	+1.0
GYA				S	**S**	**13 18 48.8**	**+3.6**

GYA XS sS 13 19 02.0 -0.1
GYA SCP ScP 13 20 24.8 -10
GYA SCS ScS 13 24 28.3 -1.5
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,190nm,6.3s
GYA LR LR
comp=N,960nm,15.3s,MS5.3
GYA LR LR
comp=E,5μm,12.9s,MS5.3
GYA LR LR
comp=Z,4μm,12.9s,MS5.2
MUN Mundaring 31.66 157 *e*P **P 13 14 09.0 +0.2**
KLBR Kellerberrin 31.96 154 *e*P **P 13 14 10.8 -0.7**
comp=Z,16nm,0.6s,mb5.0
NWAO Narrogin (SRO) 32.90 156 P **P 13 14 18.7 -1.0**
comp=Z,21nm,0.7s,mb5.2,baz=322,slow=9.8,SNR=13
ODAN Odare 32.99 335 *e*P **P 13 14 19.1 -1.4**
TAPN Taplejung 33.29 336 *e*P **P 13 14 19.0 -4.2**
RAMN Ramite 33.40 334 *e*P **P 13 14 22.8 -1.4**
CD2 Chengdu 33.84 3⇑*i*P **P 13 14 27.8 -0.1**
CD2 AP pP 13 14 37.4 -0.8
CD2 XP sP 13 14 41.8 -0.7
CD2 PP PP 13 15 41.6 -3.4
CD2 PCP PcP 13 17 05.4 -1.0
CD2 S **S 13 19 49.8 0.0**
CD2 PCS PcS 13 20 50.4 -2.0
CD2 SCS ScS 13 24 47.0 -3.3
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CD2 AMB AMB
comp=Z,170nm,4.8s
CD2 LR LR
comp=N,3μm,15.6s,MS5.4
CD2 LR LR
comp=E,6μm,18.0s,MS5.4
CD2 LR LR
comp=Z,3μm,10.8s
JIRN Jiri 34.20 334 *e*P **P 13 14 28.7 -2.4**
LSA Lhasa 34.24 343 P **P 13 14 34.9 +3.5**
LSA S **S 13 20 00.4 +4.3**
LSA LR LR
comp=E,1μm,39.0s
LSA LR LR
comp=Z,1μm,21.8s
PKI Pulchoki 34.47 333 *e*P **P 13 14 33.6 +0.2**
GUN Gumba 34.55 334 *e*P **P 13 14 32.7 -1.4**
DMN Daman 34.63 333 *e*P **P 13 14 34.7 -0.1**
KKN Kakani 34.71 333 *e*P **P 13 14 35.2 -0.3**
comp=Z,27nm,0.7s,mb5.3
GKN Gorkha 35.19 333 *e*P **P 13 14 39.1 -0.5**
WHN Wuhan 35.43 18 P **P 13 14 41.8 +0.2**
WHN S **S 13 20 20.5 +6.3**
WHN LR LR
comp=N,2μm,13.6s,MS5.4
WHN LR LR
comp=E,4μm,15.0s,MS5.4
WHN LR LR
comp=Z,2μm,13.4s,MS5.1
KOLN Koldanda 35.48 331 *e*P **P 13 14 41.9 -0.2**
comp=Z,23nm,0.7s,mb5.2
WRA Warramunga Arr 35.64 121 P **P 13 14 40.2 -3.4**
comp=Z,18nm,0.9s,mb5.0,baz=290,slow=10,SNR=49
WRA PcP PcP 13 17 10.5 -1.3
comp=Z,4.9nm,0.6s,baz=311,slow=2.2,SNR=7.3
WRA ScP ScP 13 20 56.5 +1.1
comp=Z,1.4nm,0.9s,baz=286,slow=3.3,SNR=4.7
WRA Warramunga Arr 35.64 121 P **P 13 14 40.2 -3.4**
WRA 13 17 10.5
WRAB Tennant Creek 35.64 121 P **P 13 14 40.0 -3.7**
comp=Z,208nm,0.9s,mb6.1,SNR=9.7
WRAB Tennant Creek 35.64 121 *e*P **P 13 14 40.7 -3.0**
WRAB pmax pmax
comp=Z,25nm,0.8s,mb5.2
WRAB Tennant Creek 35.64 121 *e*P **P 13 14 40.7 -3.0**
comp=Z,25nm,0.8s,mb5.2
WB2 Warramunga Arr 35.65 121 *e*P **P 13 14 40.4 -3.3**
WB2 *e*PCS PcS 13 20 55.4 -3.9
DANN Dangsing 35.89 332 *e*P **P 13 14 45.3 -0.3**
comp=Z,35nm,0.6s,mb5.5
FORT Forrest 36.87 141 *e*P **P 13 14 52.8 -1.3**
comp=Z,37nm,0.7s,mb5.3
ASAR Alice Springs 36.92 126 P **P 13 14 52.5 -2.1**
comp=Z,62nm,0.8s,mb5.5,baz=298,slow=8.0,SNR=283
ASAR PcP PcP 13 17 14.7 -1.0
comp=Z,3.6nm,0.7s,baz=306,slow=2.5,SNR=4.7
ASAR S **S 13 20 33.3 -4.1**
comp=Z,1.6nm,1.0s,baz=291,slow=15,SNR=4.9
XAN Xi'an 37.48 9 P **P 13 14 58.8 -0.3**
XAN AP pP 13 15 09.5 +0.1
XAN XP sP 13 15 15.1 +1.4
XAN AMB AMB
comp=Z,21nm,1.3s,mb4.8
XAN AMB AMB
comp=Z,110nm,6.0s
NJ2 Nanjing 38.40 23 *e*P **P 13 15 06.8 -0.1**
NJ2 AP pP 13 15 17.4 +0.2
NJ2 XP sP 13 15 20.8 -0.7
NJ2 PP PP 13 16 37.3 +2.1
NJ2 S **S 13 20 55.5 -4.0**
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
NJ2 AMB AMB
comp=Z,140nm,5.1s
NJ2 LR LR
comp=N,870nm,17.0s,MS4.8
NJ2 LR LR
comp=E,1μm,16.6s,MS4.8
NJ2 LR LR
comp=Z,990nm,16.6s,MS4.7
SSE Sheshan 38.55 27 P **P 13 15 07.3 -0.9**
SSE S **S 13 21 01.8 0.0**
SSE SS SS 13 23 52.9 +0.3
SSE AMB AMB
comp=Z,52nm,0.7s,mb5.4
SSE AMB AMB
comp=Z,124nm,5.4s
SSE LR LR
comp=N,466nm,15.4s,MS4.6
SSE LR LR
comp=E,607nm,15.4s,MS4.6
SSE LR LR
comp=Z,1μm,14.9s,MS4.8
LZH Lanzhou 39.00 2 *e*P **P 13 15 12.0 +0.1**
LZH AP pP 13 15 22.6 +0.4
LZH XP sP 13 15 27.5 +1.0
LZH PP PP 13 16 46.4 +4.6
LZH *e*S **S 13 21 09.1 +0.6**
LZH XS sS 13 21 25.8 +0.2
LZH AMB AMB
comp=Z,59nm,1.2s,mb5.2
LZH AMB AMB
comp=Z,197nm,5.6s
LZH LR LR
comp=N,2μm,13.5s
LZH LR LR
comp=Z,3μm,15.6s,MS5.3
NDI New Delhi 39.61 325 *e*P **P 13 15 16.0 -1.1**
NDI *e*S **S 13 21 16.0 -1.9**
GTA Gaotai 42.34 357 ⇑⇑P **P 13 15 40.0 +0.6**
GTA AP pP 13 15 50.4 +0.6
GTA XP sP 13 15 54.5 +0.4
GTA PCP PcP 13 17 32.1 -0.4
GTA S **S 13 22 00.8 +2.7**
GTA XS sS 13 22 16.8 +1.5
GTA SS SS 13 25 04.9 -3.0
GTA AMB AMB
comp=Z,9.0nm,1.1s,mb4.3
GTA AMB AMB
comp=Z,56nm,5.4s
GTA LR LR
comp=N,1μm,15.9s,MS5.2
GTA LR LR
comp=E,3μm,17.4s,MS5.2
GTA LR LR
comp=Z,2μm,16.2s,MS5.0
HHC Hu-ho-hao-te 44.57 10 *e*P **P 13 15 58.4 +1.0**
HHC AP pP 13 16 08.8 +1.0
HHC XP sP 13 16 12.5 +0.4
HHC PCP PcP 13 17 41.6 +1.6
HHC PP PP 13 17 43.4 +1.5
HHC SCP ScP 13 21 29.5 -0.2
HHC PCS PcS 13 21 34.1 +0.8
HHC S **S 13 22 31.8 +1.1**
HHC XS sS 13 22 48.3 +0.3
HHC SCS ScS 13 25 50.9 -1.6
HHC AMB AMB
comp=Z,15nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,150nm,6.3s
HHC LR LR
comp=N,1μm,15.1s,MS5.1
HHC LR LR
comp=E,1μm,14.8s,MS5.1
HHC LR LR
comp=Z,1μm,14.3s,MS4.9
BJI Beijing 44.82 15 P **P 13 15 59.8 +0.5**
BJI S **S 13 22 34.4 +0.1**
BJI AMB AMB
comp=Z,9.0nm,1.4s,mb4.4
BJI AMB AMB
comp=Z,229nm,6.1s
BJI LR LR
comp=N,875nm,21.0s,MS4.9
BJI LR LR
comp=E,1μm,21.0s,MS4.9
BJI LR LR
comp=Z,790nm,16.9s,MS4.7
PMG Port Moresby 45.19 100 *i*P **P 13 16 00.2 -2.6**
CTA Charters Tower 46.24 115 *e*P **P 13 16 08.4 -2.6**
comp=Z,12nm,0.9s,mb4.8
CTA *e*PCP PcP 13 17 45.2 -1.1
CTA Charters Tower 46.24 115 LR LR 13 38 11.5
comp=Z,627nm,19.9s,MS4.6,baz=297,slow=40
CTA Charters Tower 46.24 115 *e*P **P 13 16 08.4 -2.6**
CTA *e* 13 17 45.2
CTA pmax pmax
comp=Z,12nm,0.9s
CTAO Charters Tower 46.24 115 *e*P **P 13 16 08.5 -2.5**
CTAO pmax pmax
comp=Z,18nm,0.9s,mb5.0
CTAO Charters Tower 46.24 115 *e*P **P 13 16 08.5 -2.5**
comp=Z,18nm,0.9s,mb5.0
STKA Stephens Creek 46.87 132 *e*P **P 13 16 14.1 -1.6**
comp=Z,33nm,0.7s,mb5.4
STKA Stephens Creek 46.87 132 P **P 13 16 14.3 -1.4**
comp=Z,40nm,0.7s,mb5.5,baz=304,slow=7.8,SNR=70
KSRS Korea Array 46.92 28 P **P 13 16 15.4 -0.6**
comp=Z,5.7nm,0.9s,mb4.5,baz=212,slow=7.9,SNR=13
WMQ Urumqi 48.46 346 P **P 13 16 28.4 +0.6**
WMQ AP pP 13 16 38.5 +0.1
WMQ XP sP 13 16 43.0 +0.4
WMQ PCP PcP 13 17 54.0 +0.4
WMQ PP PP 13 18 21.0 +0.2
WMQ S **S 13 23 25.0 -1.3**
WMQ XS sS 13 23 42.0 -1.7
WMQ AMB AMB
comp=Z,28nm,1.1s,mb5.2
WMQ AMB AMB
comp=Z,209nm,3.7s
WMQ LR LR
comp=N,1μm,15.4s,MS5.1
WMQ LR LR
comp=E,1μm,17.2s,MS5.1
WMQ LR LR
comp=Z,835nm,22.7s
KSH Kashi 48.73 333 *e*P **P 13 16 30.6 +0.6**
KSH *e*AP pP 13 16 41.1 +0.5
KSH *e*XP sP 13 16 45.1 +0.3
KSH *e*PCP PcP 13 17 56.0 +1.3
KSH *e*PP PP 13 18 25.1 +1.7
KSH *e*SCP ScP 13 21 47.1 0.0
KSH *e*PCS PcS 13 21 51.1 +0.3
KSH *e*S **S 13 23 28.3 -2.0**
KSH *e*XS sS 13 23 48.0 +0.3
KSH *e*SCS ScS 13 26 18.0 -1.8
KSH *e*SS SS 13 26 57.0 -4.2
KSH AMB AMB
comp=Z,473nm,3.2s
KSH LR LR
comp=N,817nm,7.1s
KSH LR LR
comp=E,766nm,5.2s
KSH LR LR
comp=Z,846nm,10.9s,MS5.0
SONM Songino Array 50.85 4 P **P 13 16 46.7 +0.8**
comp=Z,30nm,0.9s,mb5.2,baz=187,slow=9.3,SNR=92
ULN Ulaanbaatar 50.92 4 *e*P **P 13 16 46.7 +0.2**
ULN pmax pmax
comp=Z,25nm,1.0s,mb5.1
ULN Ulaanbaatar 50.92 4 *e*P **P 13 16 46.7 +0.2**
comp=Z,25nm,1.0s,mb5.1
CN2 Changchun 51.17 22 *e*P **P 13 16 47.6 -0.8**
CN2 *e*XP sP 13 17 02.0 -1.3
CN2 *e*S **S 13 24 03.0 -1.2**
CN2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CN2 AMB AMB
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,930nm,15.0s,MS5.1
CN2 LR LR
comp=E,970nm,15.0s,MS5.1
CN2 LR LR
comp=Z,760nm,17.0s,MS4.8
TKM2 Tokmak 2 51.67 335 *e*P **P 13 16 52.2 0.0**
TKM2 pmax pmax
comp=Z,28nm,0.8s,mb5.2
TKM2 Tokmak 2 51.67 335 *e*P **P 13 16 52.2 0.0**
comp=Z,28nm,0.8s,mb5.2
MAJO Matsushiro 51.83 37 *e*P **P 13 16 52.4 -1.1**
MAJO pmax pmax
comp=Z,19nm,1.1s,mb4.9
MAJO Matsushiro 51.83 37 *e*P **P 13 16 52.4 -1.1**
comp=Z,19nm,1.1s,mb4.9
MAT Matsushiro 51.83 37 P **P 13 16 52.9 -0.6**
MAT S **S 13 24 09.6 -3.9**
MJAR Matsushiro Arr 51.83 37 P **P 13 16 52.5 -1.0**
comp=Z,11nm,1.0s,mb4.8,baz=217,slow=7.6,SNR=24
AML Almayashu 51.86 333 *e*P **P 13 16 53.9 +0.3**
comp=Z,23nm,0.7s,mb5.2
FRU Bishkek 52.02 334 *e*P **P 13 16 55.0 +0.2**
EKS2 Erkin-Say 52.24 334⇓*i*P **P 13 16 56.9 +0.4**
comp=Z,39nm,0.8s,mb5.4
TOO Toolangi 52.48 137 *e*P **P 13 16 58.3 -0.1**
MK31 Makanchi Array 52.65 343 *i*P **P 13 16 58.2 -1.2**
MK31 pmax pmax
comp=Z,17nm,0.7s,mb5.1
MKAR Makanchi Array 52.65 343 P **P 13 16 58.6 -0.8**
comp=Z,7.0nm,0.7s,mb4.7,baz=147,slow=8.2,SNR=41
VLA Vladivostok 53.26 27 *e*P **P 13 16 59.0 -5.0**
VLA pmax pmax
comp=Z,21nm,1.7s,mb4.8
VLA MLR MLR
comp=Z,600nm,17.2s,MS4.7
MDJ Mudanjiang 53.47 24 P **P 13 17 05.0 -0.5**
MDJ AP pP 13 17 13.9 -2.3
MDJ XP sP 13 17 17.8 -2.6
MDJ PP PP 13 19 05.8 -0.5
MDJ SCP ScP 13 22 07.1 -0.3
MDJ PCS PcS 13 22 10.8 -0.2
MDJ S **S 13 24 35.8 +0.1**
MDJ AMB AMB
comp=Z,3.0nm,1.3s,mb4.1
MDJ AMB AMB
comp=Z,139nm,6.5s
MDJ LR LR
comp=N,626nm,16.0s,MS4.9
MDJ LR LR
comp=E,505nm,17.1s,MS4.9
MDJ LR LR
comp=Z,760nm,14.9s,MS4.9
KK31 Karatay Array 54.08 332 *i*P **P 13 17 10.3 +0.3**
KK31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
CNB Canberra Magne 54.20 132 *e*P **P 13 17 09.8 -1.2**
HVS Khovu-Aksy 54.49 354 *i*P **P 13 17 14.1 +1.3**
HVS pmax pmax
comp=Z,74nm,2.0s,mb5.3
TLY Talaya 54.57 1 *e*P **P 13 17 14.7 +1.3**
TLY pmax pmax
comp=Z,15nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,618nm,16.0s,MS4.8
KURK Kurchatov 57.25 342 P **P 13 17 31.7 -0.9**
comp=Z,141nm,0.8s,mb6.0,SNR=15
KURK Kurchatov 57.25 342 P **P 13 17 31.5 -1.1**
comp=Z,16nm,0.8s,mb5.1,baz=156,slow=7.6,SNR=9.0
KURK Kurchatov 57.25 342*d*i*P* **P 13 17 31.5 -1.1**
KURK pmax pmax
comp=Z,14nm,0.8s,mb5.0
KURK MLR MLR
comp=Z,300nm,13.0s,MS4.6
KURK Kurchatov 57.25 342 *e*P **P 13 17 31.4 -1.1**
KLR Kul'dur 58.09 22 *e*P **P 13 17 34.0 -4.5**
ZALV Zalesovo Beam 58.63 348 P **P 13 17 41.1 -1.1**
comp=Z,13nm,0.7s,mb5.0,baz=164,slow=4.9,SNR=39
ASAJ Asahikawa 59.34 33 P **P 13 17 44.9 -2.5**
comp=Z,5.6nm,0.7s,mb4.7,baz=252,slow=8.6,SNR=6.3
KRAR Krasnoyarsk 59.38 354 *i*P **P 13 17 47.7 +0.3**
NVS Novosibirsk 59.80 348 *e*P **P 13 17 52.5 +2.2**
UMR Umm Al-Rimmam 61.29 306 *e*P **P 13 18 01.4 +0.4**
baz=306
UMR AMb AMB 13 18 02.5
comp=Z,66nm,0.7s,mb5.9,baz=306
YSS Yuzh-Sakhalins 61.31 31 *e*P **P 13 18 00.0 -0.8**
YSS *e* 13 18 14.0
YSS MLR MLR
comp=Z,300nm,14.0s,MS4.6
YSS MLR MLR
comp=N,400nm,13.0s,MS4.8
YSS MLR MLR
comp=E,200nm,13.0s,MS4.8
YSS Yuzh-Sakhalins 61.31 31 *e*P **P 13 18 00.1 -0.7**
BOD Bodaibo 61.46 7 *e*P **P 13 18 00.4 -1.1**
BOD pmax pmax
comp=Z,13nm,1.0s,mb5.0
NAY Al-Naaiem 61.56 306 *e*P **P 13 18 03.1 +0.3**
baz=306
NAY AMb AMB 13 18 04.3
comp=Z,25nm,0.8s,mb5.4,baz=306
MIB Mutribah 61.69 306 *e*P **P 13 18 04.0 +0.4**
baz=306
MIB AMb AMB 13 18 10.0
comp=Z,92nm,0.8s,mb6.0,baz=306
RST Umm Al-Ruwaisa 61.85 306 *e*P **P 13 18 05.0 +0.2**
baz=306
RST AMb AMB 13 18 10.6
comp=Z,68nm,0.9s,mb5.8,baz=306
BRVK Borovoye 62.00 339 P **P 13 18 03.6 -1.6**
comp=Z,75nm,0.7s,mb5.9,SNR=5.0
BRVK Borovoye 62.00 339 *e*P **P 13 18 02.6 -2.6**
BRVK pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
BRVK Borovoye 62.00 339 *e*P **P 13 18 02.6 -2.6**
comp=Z,7.0nm,0.6s,mb5.0
AB31 Akbulak array 63.60 331 P **P 13 18 14.8 -1.2**
AB31 pmax pmax
comp=Z,31nm,0.7s,mb5.5
KMBO Kilima Mbogo 64.83 270 *e*P **P 13 18 28.2 +3.4**
GNI Garni 67.76 316 P **P 13 18 43.6 +0.6**
comp=Z,4.0nm,0.4s,mb4.8,baz=135,slow=5.1,SNR=3.3
GNI Garni 67.76 316 *i*P **P 13 18 44.0 +0.9**
GNI pmax pmax
comp=Z,16nm,1.2s
GNI MLR MLR
comp=Z,200nm,29.0s
YAK Yakutsk 68.27 14 *e*P **P 13 18 44.1 -1.7**
YAK pmax pmax
comp=N,16nm,1.3s
YAK pmax pmax
comp=E,13nm,1.2s
YAK pmax pmax
comp=Z,63nm,1.2s,mb5.5
YAK Yakutsk 68.27 14 *e*P **P 13 18 43.6 -2.2**
comp=Z,55nm,0.9s,mb5.6
SVE Sverdlovsk 68.49 337⇓*e*P **P 13 18 46.8 -0.4**
SVE pmax pmax
comp=Z,22nm,0.9s,mb5.2
ARU Arti 69.04 336*d*i*P* **P 13 18 49.8 -0.9**
ARU *e* 13 19 10.8
ARU *e* 13 21 21.6
ARU *e*S S 13 27 53.4 +0.2
ARU *e*SS SS 13 32 15.0 -4.6
ARU pmax pmax
comp=Z,18nm,1.2s,mb4.9
ARU Arti 69.04 336 *e*P **P 13 18 49.2 -1.5**
comp=Z,16nm,0.9s,mb5.0
MAW Mawson 69.77 195 *e*P **P 13 18 56.9 +1.9**
comp=Z,12nm,0.9s,mb4.8
MAW Mawson 69.77 195 P **P 13 18 55.7 +0.7**
comp=Z,12nm,0.8s,mb4.9,baz=34,slow=7.7,SNR=18
MAW Mawson 69.77 195 *e*P **P 13 18 56.9 +1.9**
MAW pmax pmax
comp=Z,12nm,0.9s
KIV Kislovodsk 70.73 319 *i*P **P 13 19 02.3 +0.9**
KIV *e* 13 19 21.2
KIV *e* 13 21 40.6
KIV pmax pmax
comp=Z,23nm,1.1s,mb5.0
KIV MLR MLR
comp=Z,200nm,24.0s,MS4.3
ASF Jabal al Asfar 70.92 305 P **P 13 19 03.4 +0.5**
comp=Z,8.9nm,1.0s,mb4.7,baz=359,slow=0.7,SNR=8.5
MALT Malatya 71.62 312 *e*P **P 13 19 05.3 -1.6**
MALT pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MALT Malatya 71.62 312 *e*P **P 13 19 05.3 -1.6**
comp=Z,8.3nm,1.0s,mb4.6
EIL Elat 71.87 302 P **P 13 19 09.9 +1.3**
comp=Z,9.3nm,0.8s,mb4.8,baz=64,slow=5.0,SNR=5.6
PETK Petropavlovsk- 72.69 31 P **P 13 19 11.8 -1.2**
comp=Z,6.8nm,0.8s,mb4.7,baz=245,slow=2.0,SNR=8.4
PET Petropavlovsk 73.15 32κ*i*P **P 13 19 14.4 -1.3**
PET *e*S S 13 28 42.5 +1.6
PET pmax pmax
comp=Z,32nm,0.7s,mb5.4
PET pmax pmax
comp=Z,200nm,8.3s
PET pmax pmax
comp=Z,200nm,10.0s
PET MLR MLR
comp=Z,200nm,18.0s,MS4.4
PET MLR MLR
comp=Z,200nm,21.0s
LSZ Lusaka 73.68 255 P **P 13 19 21.3 +1.8**
comp=Z,5.6nm,0.8s,mb4.5,baz=85,slow=6.5,SNR=4.7
ANN Anapa 74.54 318 *e*P **P 13 19 33.3 +9.3**
ANN *e**PP pP 13 19 43.8 +8.7
ANN pmax pmax
comp=Z,88nm,1.2s,mb5.6
BR131 Keskin Array S 75.60 312 *e*P **P 13 19 29.7 -0.5**
comp=Z,11nm,0.7s,mb4.9
VSR Storozhevoye 75.87 325 *e*P **P 13 19 30.4 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,7.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,1.1s
TIXI Tiksi 76.60 8⇑⇑*e*P **P 13 19 33.2 -2.1**
TIXI pmax pmax
comp=Z,20nm,1.8s,mb4.8
TIXI MLR MLR
comp=Z,500nm,12.0s,MS5.0
TIXI Tiksi 76.60 8 *e*P **P 13 19 32.0 -3.3**
comp=Z,14nm,1.0s,mb4.8
BOSA Boshof 76.98 241 P **P 13 19 38.9 +0.5**
comp=Z,14nm,1.1s,mb4.8,baz=91,slow=6.0,SNR=11
SYO Syowa Base 77.53 199⇑⇑*e*P **P 13 19 40.6 0.0**
SYO Syowa Base 77.53 199⇓*e*PcP PcP 13 19 51.3 +0.5
MOS Moscow 78.51 329 *e*P **P 13 19 50.8 +4.6**
OBN Obninsk 78.82 328⇑⇑*e*P **P 13 19 48.0 0.0**
OBN *e* 13 19 54.5
OBN *e* 13 22 47.9
OBN S S 13 29 44.3 +1.0
OBN pmax pmax
comp=Z,35nm,1.1s,mb5.2
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.7
TIRR Tirgusor 80.59 316⇑*i*P **P 13 19 58.0 +0.2**
TIRR Tirgusor 80.59 316 ⇑⇑P **P 13 19 58.0 +0.2**
AKASG Malin Array Be 81.62 322 P **P 13 20 01.5 -1.7**
comp=Z,4.4nm,0.6s,mb4.6,baz=88,slow=4.7,SNR=14
AKASG Malin Array Be 81.62 322 *i*P **P 13 20 02.2 -1.0**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
SBA Scott Base 81.79 169 *e*P **P 13 20 04.5 +0.9**
SBA pmax pmax
comp=Z,13nm,0.8s,mb4.9
SBA Scott Base 81.79 169 *e*P **P 13 20 04.5 +0.9**
comp=Z,13nm,0.8s,mb4.9
VRI Vrincioaia 82.07 317⇑*i*P **P 13 20 06.7 +1.1**
VRI Vrincioaia 82.07 317 ⇑⇑P **P 13 20 06.7 +1.0**
MLR Muntele Rosu 82.53 316⇑⇑*i*P **P 13 20 08.7 +0.7**

MLR	Muntele Rosu	82.53	316	⇑P		P	13 20 08.7	+0.6
BILL	Bilibino	83.45	20	⇓eP		P	13 20 10.9	-1.4
BILL				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.6							
BILL				MLR	MLR			
	comp=Z,500nm,18.0s,MS4.9							
BURAR	Bucovina Array	83.46	318	⇓iP		P	13 20 13.4	+0.6
DRGR		84.98	317	⇓iP		P	13 20 21.2	+0.6
DRGR		84.98	317	⇓P		P	13 20 21.2	+0.7
BZS	Buzias	85.54	316	⇓iP		P	13 20 22.9	-0.5
BZS	Buzias	85.54	316	⇓P		P	13 20 22.9	-0.5
KOLS	Kolonicke sedl	85.64	319	eP		P	13 20 25.0	+1.2
SUW	Suwalki	85.98	325	eP		P	13 20 25.6	+0.2
SUW	Suwalki	85.98	325	eP		P	13 20 25.5	+0.1
CRVS	Cervenica-Dubn	86.16	319	eP		P	13 20 26.5	+0.1
STHS	Stebnicka Huta	86.38	320	iP		P	13 20 28.4	+1.0
STHS				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb5.0							
STHS	Stebnicka Huta	86.38	320	iP		P	13 20 28.3	+0.9
STHS	Stebnicka Huta	86.38	320	iP		P	13 20 28.4	+1.0
	comp=Z,7.7nm,0.9s,mb4.9							
KECS	Kecovo	86.73	319	eP		P	13 20 28.9	-0.3
KECS				pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.5							
KECS	Kecovo	86.73	319	eP		P	13 20 28.9	-0.3
	comp=Z,4.3nm,1.2s,mb4.5							
PKSM	Moragy	87.68	316	⇑iP		P	13 20 33.2	-0.6
PKSM	Moragy	87.68	316	⇑P		P	13 20 33.2	-0.6
VYHS	Vyhne	87.82	319	eP		P	13 20 34.8	+0.3
ARCES	ARCESS Array B	88.20	340	P		P	13 20 35.0	-0.8
	comp=Z,10.0nm,0.9s,mb5.0,baz=97,slow=5.1,SNR=12							
MORC	Moravsky Berou	88.81	320	⇓iP		P	13 20 39.9	+0.8
MORC	Moravsky Berou	88.81	320	⇓P		P	13 20 39.9	+0.7
MODS	Modra-Piesok	88.84	318	eP		P	13 20 39.7	+0.4
ZST	Bratislava	88.94	318	eP		P	13 20 40.2	+0.4
ZST				pmax	pmax			
	comp=Z,11nm,1.1s,mb5.1							
ZST	Bratislava	88.94	318	eP		P	13 20 40.2	+0.4
	comp=Z,11nm,1.1s,mb5.1							
BRG	Berggiesshubel	91.20	321	eP		P	13 20 50.7	+0.4
BRG				pmax	pmax			
	comp=Z,7.0nm,1.1s,mb4.9							
BRG	Berggiesshubel	91.20	321	eP		P	13 20 50.7	+0.4
	comp=Z,11nm,1.1s,mb5.1							
GERES	GERESS Array B	91.25	319	P		P	13 20 50.7	+0.2
	comp=Z,2.5nm,0.8s,mb4.6,baz=100,slow=4.1,SNR=14							
SNAA	Sanae	91.76	198	⇓eP		P	13 20 53.9	+1.4
CLL	Collm	91.82	321	eP		P	13 20 54.0	+0.9
CLL				LmV			13 08 00.0	
	comp=N,200nm,22.0s							
CLL				LmV			13 08 00.0	
	comp=E,200nm,20.0s							
CLL				LmV			13 08 00.0	
	comp=Z,300nm,18.3s							
CLL				epP	pP		13 21 04.0	-0.4
CLL	Collm	91.82	321	eP		P	13 20 54.0	+0.9
CLL				e	pP		13 21 04.0	-0.4
CLL				LR	LR			
	comp=Z,300nm,18.3s,MS4.8							
GRA1	Grafenberg Arr	92.90	319	eP		P	13 20 58.6	+0.5
	comp=Z,6.0nm,0.9s,mb5.0							
GRF	Grafenberg Arr	92.90	319	eP		P	13 20 58.6	+0.5
GRF				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb5.0							
GRF	Grafenberg Arr	92.90	319	eP		P	13 20 58.6	+0.5
GRF				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb5.0							
GRF	Grafenberg Arr	92.90	319	eP		P	13 20 58.6	+0.5
	comp=Z,6.0nm,0.9s,mb5.0							
NB2	NORSAR Subarra	93.11	331	P		P	13 20 57.9	-0.9
	comp=Z,2.2nm,0.7s,mb4.7,baz=95,slow=5.3							
DAVOX	Davos/Dischmat	93.75	317	LR	LR		14 07 49.4	
	comp=Z,162nm,21.0s,MS4.5,baz=266,slow=38							
KEST	Kesra	94.02	305	P		P	13 21 05.5	+1.8
	comp=Z,2.4nm,1.0s,mb4.6,baz=58,slow=7.1,SNR=4.0							
TORD	Torodi Ar. Bea	100.83	283	P		Pdif	13 21 35.5	+1.6
	comp=Z,0.8nm,0.9s,baz=75,slow=6.3,SNR=3.7							
NVAR	Mina Array Bea	129.07	41	PKP	PKPdf		13 26 54.1	+0.6
	comp=Z,1.7nm,0.9s,baz=252,slow=2.4,SNR=8.7							
ULM	Lac du Bonnet	130.60	15	PKP	PKPdf		13 26 54.8	-1.2
	comp=Z,2.7nm,0.6s,baz=68,slow=4.4,SNR=3.8							
PDAR	Pinedale Array	131.46	31	PKP	PKPdf		13 26 56.4	-1.5
	comp=Z,0.5nm,0.6s,baz=259,slow=1.8,SNR=4.3							
TXAR	Lajitas Array	144.22	40	PKP	PKPdf		13 27 19.2	-2.5
	comp=Z,4.7nm,0.8s,baz=333,slow=0.1,SNR=24							
TXAR	Lajitas Array	144.22	40	PKP	PKPdf		13 27 19.2	-2.5
CFAA	Coronel Fontan	144.30	194	PKP	PKPdf		13 27 20.4	-1.4
	comp=Z,7.7nm,0.8s,baz=177,slow=3.1,SNR=79							
CPUP	Villa Florida	144.63	213	PKP	PKPdf		13 27 21.9	-0.6
	comp=Z,60nm,0.8s,baz=270,slow=20,SNR=89							
BDFB	Brasilia	145.07	237	PKPbc	PKPbc		13 27 23.9	+0.9
	comp=Z,12nm,0.6s,baz=80,slow=1.8,SNR=13							
LVC	Limon Verde	152.99	199	PKPbc	PKPbc		13 27 44.5	+1.1
	comp=Z,4.5nm,0.8s,baz=284,slow=3.9,SNR=4.8							
SIV	San Ignacio	154.78	221	PKP	PKPdf		13 27 38.0	-0.7
	comp=Z,1.6nm,0.9s,baz=91,slow=3.9,SNR=6.9							
LPAZ	La Paz	158.47	206	PKP	PKPdf		13 27 43.9	+0.4
	comp=Z,1.5nm,0.9s,baz=74,slow=1.2,SNR=5.0							
LPAZ				PKPab	PKPab		13 28 20.4	+2.3
	comp=Z,2.8nm,0.8s,baz=155,slow=5.7,SNR=7.9							

NEIC ***14*** *13:18:01.1±2.4, 331S×10021E, h35km, Error ellipse: s-maj=95.1km s-min=14.9km az=58.0*

IDC 14 13:17:55.5±3.2, 341S×10007E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.8/19, mbtmp3.9/6, Error ellipse: s-maj=130.3km s-min=19.4km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	Chiang Mai Arr	21.75	357	P		P	13 22 48.2	-0.5
	0.8nm,0.6s,baz=183,slow=7.9,SNR=5.3							
WRA	Warramunga Arr	37.24	119	P		P	13 25 08.6	-0.6
	0.6nm,0.5s,baz=304,slow=9.1,SNR=11							
ASAR	Alice Springs	38.39	125	P		P	13 25 18.7	-0.1
	0.7nm,0.6s,baz=301,slow=7.7,SNR=12							
SONM	Songino Array	51.33	5	P		P	13 27 02.1	+0.6
	1.6nm,0.6s,baz=188,slow=10,SNR=12							
MKAR	Makanchi Array	52.39	345	P		P	13 27 09.4	0.0
	1.9nm,0.7s,baz=150,slow=8.3,SNR=13							
ZALV	Zalesovo Beam	58.55	349	P		P	13 27 52.6	-1.1
	1.4nm,0.7s,baz=154,slow=3.4,SNR=5.3							
TXAR	Lajitas Array	145.76	39	PKPbc	PKPbc		13 37 38.0	+0.7
	1.5nm,0.6s,baz=283,slow=0.9,SNR=25							

TAP 14 13:28:27.6, 2110N×12203E, h173km, ML4.0, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LAY	Lan-yu	1.04	335	eP		Pn	13 28 55.2	+0.3
	baz=335							
LAY				eS		Sn	13 29 14.2	-1.7
	baz=335							
TSEB	Hengchuen, Pin	1.32	308	P		Pn	13 28 58.4	+1.2
	baz=307							
TSEB				S		Sn	13 29 20.6	+0.5
	baz=307							
TWK1	Hengchun	1.42	307	P		Pn	13 28 58.8	+0.7
	baz=307							
TWK1				S		Sn	13 29 21.2	-0.5
	baz=307							
HEN	Hengchun	1.50	307	eP		Pn	13 28 59.3	+0.3
	baz=303							
HEN				S		Sn	13 29 22.8	-0.4
	baz=303							
EAST	Anshuo	1.69	320	P		Pn	13 29 00.9	+0.2
	baz=315							
EAST				eS		Sn	13 29 25.2	-1.3
	baz=315							
ECL	Taimali	1.80	326	eP		Pn	13 29 02.0	0.0
	baz=331							
ECL				eS		Sn	13 29 26.3	-2.2
	baz=331							
SCZT	Fangliau	1.82	314	eP		Pn	13 29 02.5	+0.3
	baz=308							
SCZT				eS		Sn	13 29 28.5	-0.5
	baz=308							
TWG	Pinlang	1.93	333	eP		Pn	13 29 03.1	-0.2
	baz=328							
TWG				eS		Sn	13 29 29.6	-1.6
	baz=328							
TWP	Hsiaoliuchiu	1.99	309	eP		Pn	13 29 05.2	+1.2
	baz=309							
TWP				eS		Sn	13 29 33.7	+1.6
	baz=309							
CHKT	Chengkung	2.09	343	eP		Pn	13 29 34.0	-0.3
	baz=344							
SSD	Sandimen	2.09	322	eP		Pn	13 29 05.6	+0.5
	baz=322							
SSD				eS		Sn	13 29 32.7	-1.5
	baz=322							
TWM1	Shoushan	2.27	319	eP		Pn	13 29 08.7	+1.4
	baz=319							
TWM1				eS		Sn	13 29 36.6	-1.4
	baz=319							
ELDTW	Lidau	2.29	336	eP		Pn	13 29 08.4	+1.1
	baz=338							
TWF1	Yuli	2.35	343	eP		Pn	13 29 10.0	+2.0
	baz=334							
TWF1				eS		Sn	13 29 38.1	-1.4
	baz=334							
STYT	Tauyuan	2.37	330	eP		Pn	13 29 08.9	+0.6
	baz=330							
STYT				eS		Sn	13 29 39.5	-0.5
	baz=330							
SGST	Jiashian	2.39	326	eP		Pn	13 29 09.0	+0.5
	baz=319							
SGST				eS		Sn	13 29 40.5	+0.2
	baz=319							
CHN1	Nanshi	2.50	327	eP		Pn	13 29 09.8	0.0
	baz=332							
CHN1				eS		Sn	13 29 42.1	-0.5
	baz=332							
WTP	Ta-pu	2.51	329	eP		Pn	13 29 10.4	+0.5
	baz=329							
WTP				eS		Sn	13 29 41.5	-1.4
	baz=329							
YUS	Yu-Shan	2.58	338	eS		Sn	13 29 43.8	-0.6
	baz=337							
TWK	Hsinying	2.59	327	eP		Pn	13 29 11.8	+0.9
	baz=320							
TWK				eS		Sn	13 29 44.2	-0.4
	baz=320							
CHN4	Tsaushan	2.61	330	eS		Sn	13 29 44.7	-0.3
	baz=329							
ALS	Alishan	2.66	335	eS		Sn	13 29 46.2	+0.2
	baz=335							
SCLT	Jiali	2.68	321	eS		Sn	13 29 46.4	0.0
	baz=328							
CHN5	Tsauling	2.79	334	eP		Pn	13 29 13.8	+0.6
	baz=333							
CHN5				eS		Sn	13 29 47.8	-1.0
	baz=333							
CHN8	Yiju	2.80	323	eS		Sn	13 29 47.4	-1.7
	baz=323							
CHY	Chiayi	2.81	328	eP		Pn	13 29 14.5	+0.9
	baz=328							
TYC	Yuchr	3.00	339	eP		Pn	13 29 15.8	0.0
	baz=332							
TYC				eS		Sn	13 29 52.0	-1.4
	baz=332							
WHF	Hehuan Shan	3.12	347	eP		Pn	13 29 17.0	-0.2
	baz=351							
WHF				eS		Sn	13 29 56.4	+0.3
	baz=351							

ISCJB ***14*** *13:30:48.1±2.5, 187S±09×1733W±06, h33km, mb4.5/6, Error ellipse: s-maj=144.0km s-min=25.1km az=149.7*
NEIC ***14*** *13:30:50.0±2.0, 1872S×17321W, h35km, mb4.7/2, Error ellipse: s-maj=119.0km s-min=20.8km az=150.0*
IDC ***14*** *13:30:53.8±16.0, 1897S×17438W, h0km, mb4.5/5, mb1 4.6/5, mb1mx4.1/19, mbtmp4.5/5, Error ellipse: s-maj=307.4km s-min=143.4km az=81.0*

ISC 14 13:30:50.1±2.5, 187S±09×1732W±06, h35km, n10, σ0$46/10, mb4.5/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	Charters Tower	38.19	261	P		P	13 38 06.3	-0.3
	2.6nm,0.3s,mb4.4,baz=85,slow=12,SNR=7.7							
CTA	Charters Tower	38.19	261	P		P	13 38 06.3	-0.3
STKA	Stephens Creek	42.61	243	P		P	13 38 43.0	-0.1
	4.4nm,0.8s,mb4.2,baz=105,slow=8.7,SNR=5.2							
ASAR	Alice Springs	49.32	255	P		P	13 39 36.0	-0.1
	8.8nm,0.5s,mb5.0,baz=96,slow=7.5,SNR=264							
WB2	Warramunga Arr	49.32	260	eP		P	13 39 36.1	-0.1
WB2	Warramunga Arr	49.32	260	eP		P	13 39 35.6	-0.6
WRA	Warramunga Arr	49.33	260	P		P	13 39 36.2	-0.1
	1.9nm,0.4s,mb4.5,baz=96,slow=7.6,SNR=45							
FITZ	Fitzroy Crossi	57.75	260	eP		P	13 40 39.3	+1.2
	2.4nm,0.4s,mb4.6							
FITZ	Fitzroy Crossi	57.75	260	P		P	13 40 39.0	+0.9
	1.6nm,0.8s,mb4.1,baz=66,slow=4.7,SNR=14							
MOD	Modesc	77.63	38	eP		P	13 42 42.8	-0.1
	3.1nm,0.3s,mb4.7							

NEIC ***14*** *13:34:19.2±2.3, 344S×9945E, h35km, Error ellipse: s-maj=89.7km s-min=15.2km az=59.0*

IDC 14 13:34:14.1±3.5, 344S×9943E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.6/19, mbtmp3.5/6, Error ellipse: s-maj=136.1km s-min=20.9km az=58.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	Chiang Mai Arr	21.76	359	P		P	13 39 08.3	+0.8
	0.5nm,0.6s,baz=184,slow=8.0,SNR=4.4							
WRA	Warramunga Arr	37.78	119	P		P	13 41 32.7	+0.3
	0.2nm,0.4s,baz=308,slow=8.7,SNR=4.1							
ASAR	Alice Springs	38.89	124	P		P	13 41 41.9	+0.2
	0.4nm,0.4s,baz=299,slow=7.5,SNR=3.5							
SONM	Songino Array	51.42	6	P		P	13 43 20.3	-0.6
	0.6nm,0.5s,baz=195,slow=9.3,SNR=6.1							
MKAR	Makanchi Array	52.26	345	P		P	13 43 27.8	+0.7
	0.4nm,0.6s,baz=141,slow=9.0,SNR=4.3							
ZALV	Zalesovo Beam	58.47	350	P		P	13 44 11.9	+0.2
	0.8nm,0.7s,baz=147,slow=3.5,SNR=4.0							
TXAR	Lajitas Array	146.18	38	PKPbc	PKPbc		13 53 55.1	-2.0
	0.3nm,0.5s,baz=323,slow=0.6,SNR=5.0							

ISCJB ***14*** *14:10:59.8±0.9, 1142N±005×1258E±0.1, h67km±8km, mb3.6/4, Error ellipse: s-maj=17.8km s-min=6.9km az=167.9*
MAN ***14*** *14:11:02, 1131N×12554E, h32km, mb4.4, ML3.3, MS3.1*
IDC ***14*** *14:11:02.2±33.0, 1033N×12583E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/19, mbtmp3.8/4, Error ellipse: s-maj=572.0km s-min=134.7km az=160.0*

ISC 14 14:11:01.1±0.9, 1141N±005×1258E±01, h59km±9km, n19, σ0$93/25, mb3.7/4, 2C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BESP	Borongan	0.38	301	eP		Pn	14 11 11.6	-0.1
BESP				eS		Sn	14 11 18.9	-0.5
PLP	Palo	0.81	253	iP		Pn	14 11 14.4	-2.1
PLP				iS		Sn	14 11 23.7	-4.3
OCLP	Ormoc	1.19	253	eP		Pn	14 11 20.3	-1.3
CNP	Catarman	1.54	316	eP		Pn	14 11 26.5	+0.2
CNP				eS		Sn	14 11 45.9	+0.6
MSLP	Maasin	1.55	215	eP		Pn	14 11 26.6	+0.2
MSLP				eS		Sn	14 11 46.9	+1.5
SCPH	Surigao	1.64	190	⇓eP		Pn	14 11 27.0	-0.5
SCPH				eS		Sn	14 11 47.1	-0.5
BUTP	Butuan	2.42	183	eP		Pn	14 11 39.7	+1.4
BUTP				eS		Sn	14 12 12.0	+5.2
TBP	Tagbilaran	2.53	228	eP		Pn	14 11 39.3	-0.4
PVCP	Virac	2.69	324	eP		Pn	14 11 42.0	+0.1
RCP	Roxas	2.96	273	⇑eP		Pn	14 11 46.3	+0.7
GUIM	Jordan	3.21	256	eP		Pn	14 11 49.0	-0.1
BUKP	Musuan	3.57	191	eP		Pn	14 11 56.0	+2.0
OTRP	Odiongan	3.79	285	eP		Pn	14 11 57.0	+0.1
PAGZ	Pagadian	4.24	214	eP		Pn	14 12 03.0	-0.2
CAUP	Cauayan	6.70	326	eP		Pn	14 12 37.8	+0.9
FITZ	Fitzroy Crossi	29.32	180	P		P	14 16 57.2	-1.1
	0.4nm,0.4s,mb3.5,baz=2.6,slow=16,SNR=3.2							
WRA	Warramunga Arr	32.27	165	P		P	14 17 22.8	-1.5
	0.3nm,0.6s,mb3.3,baz=344,slow=9.2,SNR=5.2							
ASAR	Alice Springs	35.75	167	P		P	14 17 54.6	+0.2
	1.0nm,0.6s,mb4.0,baz=347,slow=7.3,SNR=24							
STKA	Stephens Creek	45.63	161	P		P	14 19 16.3	+0.6
	2.1nm,0.7s,mb4.2,baz=348,slow=10,SNR=4.9							

BJI ***14*** *14:15:12.4, 479S×10107E, h34km, mB5.3, mb5.2, Ms5.1, Msz4.9*
ISCJB ***14*** *14:15:16.5±0.3, 427S±004×10113E±003, h31km, mb5.3/97, MS4.8/43, Error ellipse: s-maj=5.9km s-min=3.4km az=36.4*
MOS ***14*** *14:15:17.4±1.1, 401S×10139E, h30km, mb5.4/34, MS4.8/10, Error ellipse: s-maj=11.2km s-min=6.2km az=107.7*
DJA ***14*** *14:15:17, 438S×10095E, h24km, Mw5.4/18*
NEIC ***14*** *14:15:18.9±0.2, 423S×10120E, h35km, mb5.1/20, MS4.8/2, Error ellipse: s-maj=9.1km s-min=5.6km az=220.0*
GCMT ***14*** *14:15:18.9±0.3, 485S×10094E, h36km±1km, MW5.1/64, Moment Tensor Solution. s46,c66; s64,c97; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr4.13±.26; Mθθ-3.52±.16; Mφφ-0.61±.21; Mrθ3.22±.18; Mθφ3.13±.13; Mφr-1.34±.25; Best double couple: Mo5.96600×10^16 NP1:φs313.00000°, δ28.00000°, λ106.00000°. NP2: φs115.00000°, δ63.00000°, λ82.00000°. Principal axes: T 5.3120, Plg71.0000°, Azm7.0000°; N 1.3070, Plg8.0000°, Azm119.0000°; P -6.6190, Plg18.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***14*** *14:15:22.3±2.4, 400S×10157E, h52km±20km, mb4.8/18, mb1 4.9/19, mb1mx4.8/22, mbtmp4.8/19, ML4.6/1, MS4.5/17, Ms1 4.5/17, ms1mx4.4/25 Error ellipse: s-maj=25.8km s-min=9.3km az=47.0*

ISC 14 14:15:18.7±0.3, 426S±004×10113E±003, h33km, h33km±.8km: pP-P, n426, σ1$09/241, mb5.3/97, MS4.8/43, 126C-94D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSI	Kapahiang	1.58	67	P		Pn	14 15 44.2	-0.2
	0.0nm,0.0s							
KLI	Kotabumi	3.76	99	P		Pn	14 16 15.8	+1.3
	0.0nm,0.0s							
PPI	Padang Panjang	3.85	349	P		Pn	14 16 15.4	-0.3
	0.0nm,0.0s							
SBJI	Serang	5.31	111	P		Pn	14 16 37.9	+2.1
	577nm,0.9s							
PPBI	Pangkal Pinang	5.42	67	P		Pn	14 16 38.5	+1.3
	178nm,1.2s							
DBJI	Dramaga	6.04	112	P		Pn	14 16 46.0	+0.2
	681nm,1.7s							
CBJI	Citeko	6.08	111	P		Pn	14 16 49.2	+2.8
	2μm,1.4s							
MYKOM	Kota Tinggi	6.60	24	⇑P		Pn	14 16 55.9	+2.5
KGM	Kluang	6.61	19	⇑P		Pn	14 16 56.0	+2.4
LEM	Lembang	6.94	112	P		Pn	14 16 59.2	+1.0
	730nm,1.1s							
JCJI	Jatiwangi	7.44	108	P		Pn	14 17 07.8	+2.7
	361nm,1.4s							
FRIM	Kepong	7.46	4	⇑P		Pn	14 16 56.0	-9.3
COCO	West Island	8.95	208	ePn		Pn	14 17 20.1	-5.7
BJII	Banjamegara	9.06	110	P		Pn	14 17 27.7	+0.4
	109nm,1.3s							
KTGM	Kuala Trenggan	9.73	12	⇑P		Pn	14 17 40.4	+3.9
KSM	Kuching	10.80	58	⇓P		Pn	14 17 54.9	+3.8
KSM	Kuching	10.80	58	ePn		Pn	14 17 52.5	+1.4
SJI	Sawahan	11.12	109	P		Pn	14 17 55.1	-0.5
	166nm,1.0s							
BSI	Banda Aceh	11.31	329	P		Pn	14 17 57.6	-0.5
	207nm,1.1s							
SNG	Songkhla	11.37	357	P		Pn	14 17 58.0	-1.0
	100nm,1.0s							
SBUM	Sibu	12.93	59	⇑P		Pn	14 18 25.6	+5.3
BTM	Bintulu	14.06	58	⇓P		Pn	14 18 40.5	+4.8
KKM	Kota Kinabalu	18.21	56	ePn		Pn	14 19 29.3	+0.2
KAPI	Kappang	18.57	93	P		Pn	14 19 31.1	-2.5
	474nm,1.1s,SNR=11							
KAPI	Kappang	18.57	93	P		Pn	14 19 31.4	-2.2
	2.0nm,0.3s,baz=276,slow=8.6,SNR=16							
KAPI				LR		LR	14 27 23.7	
	comp=Z,1μm,21.2s,baz=280,slow=40							
KAPI	Kappang	18.57	93	eP		Pn	14 19 32.2	-1.3
SDKM	Sandakan	18.82	59	⇑P		Pn	14 19 36.8	+0.3
KDM	Kudat	19.21	55	⇑P		Pn	14 19 36.8	-4.3
MYLDM	Lahad Datu	19.72	62	⇑P		Pn	14 19 46.9	-0.4
BATP	Bataraza	21.08	52	eP		P	14 19 59.8	-0.7
BBSI	Bau Bau	21.40	94	P		P	14 20 06.5	+2.6
	246nm,1.0s,mb5.5							
KDI	Kendari	21.43	90	P		P	14 20 05.5	+1.2
	204nm,1.3s,mb5.3							
BDT	Bhumibol Dam	21.47	354	P		P	14 20 03.0	-1.6
	18nm,1.0s,mb4.3							
CMAR	Chiang Mai Arr	22.68	355	P		P	14 20 15.5	-1.9
	42nm,0.9s,mb4.9,baz=185,slow=9.4,SNR=56							
CMAR				PcP		PcP	14 24 10.6	+1.1
	2.2nm,0.7s,baz=214,slow=3.5,SNR=5.9							
CMAR				LR		LR	14 29 38.7	
	comp=Z,1μm,20.9s,MS4.4,baz=182,slow=38							
CMAR	Chiang Mai Arr	22.68	355	P		P	14 20 15.5	-1.9
CMAR							14 24 10.6	
NANT	Nan	22.92	359	⇑P		P	14 20 16.5	-3.5
	112nm,1.0s,mb5.2							
CHG	Chiang Mai	23.03	355	⇑P		P	14 20 19.9	-1.3
	47nm,0.9s,mb4.9							
CHTO	Chiang Mai	23.03	355	eP		P	14 20 18.9	-2.3
BATI	Baumata	23.11	106	P		P	14 20 21.7	-0.4
	73nm,0.9s,mb5.1							
BATI	Baumata	23.11	106	P		P	14 20 19.9	-2.2
	41nm,0.5s,mb5.1,baz=205,slow=0.7,SNR=8.8							
BATI				S		S	14 24 23.9	-7.4
	45nm,0.9s,baz=195,slow=20,SNR=5.0							
CHRT	Chiangrai	24.02	357	⇑P		P	14 20 30.0	-0.7
	579nm,0.9s,mb6.0							
MBWA	Marble Bar	24.67	134	eP		P	14 20 35.8	-0.9
QIZ	Qiongzhong	24.68	20	P		P	14 20 37.0	+0.2
QIZ				AP			14 20 45.1	
QIZ				XP		sP	14 20 50.3	+0.1
QIZ				S		S	14 24 54.8	-1.8
QIZ				AMB		AMB		
	comp=Z,57nm,1.4s,mb4.9							
QIZ				AMB		AMB		
	comp=Z,463nm,7.6s							
QIZ				LR		LR		
	comp=E,1μm,17.9s							
QIZ				LR		LR		
	comp=Z,1μm,21.4s,MS4.4							
QIZ	Qiongzhong	24.68	20	eP		P	14 20 36.5	-0.3
	comp=Z,102nm,1.3s,mb5.2

comp=Z,30nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,230nm,6.6s
GYA LR LR
comp=N,1µm,20.0s,MS5.0
GYA LR LR
comp=E,3µm,18.2s,MS5.0
GYA LR LR
comp=Z,3µm,15.2s,MS5.1
NWAO Narrogin (SRO) 32.25 154 LR LR 14 34 18.8
comp=Z,1µm,19.7s,MS4.7,baz=329,slow=35
ODAN Odare 33.67 337 *eP* **P 14 21 57.7 +1.0**
comp=Z,196nm,0.8s,mb6.1
TAPN Taplejung 33.99 338 *eP* **P 14 22 01.0 +1.5**
comp=Z,287nm,0.9s,mb6.2
RAMN Ramite 34.06 336 *eP* **P 14 22 01.5 +1.4**
comp=Z,153nm,0.9s,mb5.9
JIRN Jiri 34.86 336 *eP* **P 14 22 08.3 +1.3**
comp=Z,251nm,0.9s,mb6.2
CD2 Chengdu 35.06 4⇑ *i*P **P 14 22 07.9 -0.8**
CD2 AP pP 14 22 17.6 -0.7
CD2 XP sP 14 22 21.3 -0.9
CD2 PP PP 14 23 28.0 -0.7
CD2 PCP PcP 14 24 37.5 -2.7
CD2 S **S 14 27 39.6 +0.5**
CD2 XS sS 14 27 56.0 +1.1
CD2 PCS PcS 14 28 23.5 -3.6
CD2 SS SS 14 29 58.4 -14
CD2 SCS ScS 14 32 22.8 -4.6
CD2 AMB AMB
comp=Z,110nm,0.7s,mb5.9
CD2 AMB AMB
comp=Z,190nm,7.2s
CD2 LR LR
comp=N,3µm,13.2s
CD2 LR LR
comp=E,4µm,21.6s
CD2 LR LR
comp=Z,3µm,12.0s,MS5.2
PKI Pulchoki 35.10 335 *eP* **P 14 22 09.7 +0.7**
comp=Z,80nm,1.1s,mb5.5
LSA Lhasa 35.10 345 P **P 14 22 08.3 -0.7**
LSA AP pP 14 22 18.8 +0.2
LSA S **S 14 27 37.8 -1.9**
LSA LR LR
comp=N,510nm,23.9s
LSA LR LR
comp=E,960nm,30.1s
LSA LR LR
comp=Z,960nm,19.7s,MS4.5
LSA Lhasa 35.10 345 *eP* **P 14 22 10.1 +1.1**
LSA pmax pmax
comp=Z,42nm,1.3s,mb5.2
LSA Lhasa 35.10 345 *eP* **P 14 22 10.1 +1.1**
comp=Z,42nm,1.3s,mb5.2
PKIN Phulchoki 35.11 335 *eP* **P 14 22 09.7 +0.6**
comp=Z,24nm,0.8s,mb5.2
GUN Gumba 35.20 336 *eP* **P 14 22 11.2 +1.2**
comp=Z,283nm,1.0s,mb6.1
DMN Daman 35.26 335 *eP* **P 14 22 11.1 +0.7**
comp=Z,58nm,0.9s,mb5.5
KKN Kakani 35.34 335 *eP* **P 14 22 11.9 +0.7**
comp=Z,110nm,0.9s,mb5.8
GKN Gorkha 35.80 335 *eP* **P 14 22 15.9 +0.8**
comp=Z,74nm,0.7s,mb5.7
WRA Warramunga Arr 35.90 119 P **P 14 22 15.0 -1.1**
comp=Z,25nm,1.1s,mb5.1,baz=293,slow=9.7,SNR=53
WRA S **S 14 27 49.0 -3.4**
comp=Z,3.3nm,0.9s,baz=295,slow=16,SNR=5.9
WRA LR LR 14 38 16.7
comp=Z,657nm,21.9s,MS4.4,baz=290,slow=39
WRA Warramunga Arr 35.90 119 P **P 14 22 15.0 -1.1**
WRA S **S 14 27 49.0 -3.4**
WRAB Tennant Creek 35.91 119 P **P 14 22 15.2 -1.0**
comp=Z,182nm,1.0s,mb6.0,SNR=24
WRAB Tennant Creek 35.91 119 *eP* **P 14 22 15.1 -1.1**
WRAB pmax pmax
comp=Z,30nm,1.0s,mb5.2
WRAB Tennant Creek 35.91 119 *eP* **P 14 22 15.1 -1.0**
comp=Z,30nm,1.0s,mb5.2
WB2 Warramunga Arr 35.91 119 *eP* **P 14 22 14.9 -1.3**
KOLN Koldanda 36.06 333 *eP* **P 14 22 18.2 +0.9**
comp=Z,81nm,0.8s,mb5.7
DANN Dangsing 36.48 334 *eP* **P 14 22 21.8 +0.9**
comp=Z,94nm,0.8s,mb5.8
WHN Wuhan 36.84 19⇓ P **P 14 22 24.0 0.0**
WHN XP sP 14 22 39.8 +2.2
WHN PP PP 14 23 52.6 +4.2
WHN S **S 14 28 15.3 +8.9**
WHN AMB AMB
comp=Z,478nm,7.8s
WHN LR LR
comp=N,3µm,12.9s,MS5.3
WHN LR LR
comp=E,3µm,17.4s,MS5.3
WHN LR LR
comp=Z,3µm,15.1s,MS5.2
ASAR Alice Springs 37.03 125 P **P 14 22 25.2 -0.5**
comp=Z,9.2nm,0.8s,mb4.7,baz=291,slow=7.7,SNR=85
ASAR PcP PcP 14 24 46.5 +0.2
comp=Z,2.9nm,0.7s,baz=290,slow=1.8,SNR=5.5
ASAR S **S 14 28 08.5 -1.0**
comp=Z,1.3nm,1.0s,baz=298,slow=18,SNR=4.7
XAN Xi'an 38.80 10 P **P 14 22 39.8 -0.6**
XAN AP pP 14 22 48.5 -1.6
XAN XP sP 14 22 52.9 -1.1
XAN AMB AMB
comp=Z,51nm,0.9s,mb5.2
XAN AMB AMB
comp=Z,172nm,7.2s
PTH Pithoragarh 39.15 330 *ex* **P 14 22 45.1 +1.6**
NJ2 Nanjing 39.85 24 *eP* **P 14 22 52.6 +3.3**
NJ2 AP pP 14 23 01.8 +2.8
NJ2 XP sP 14 23 05.3 +2.4
NJ2 S **S 14 28 56.0 +4.1**
NJ2 XS sS 14 29 13.5 +5.7
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
NJ2 AMB AMB
comp=Z,90nm,6.6s
NJ2 LR LR
comp=N,650nm,23.1s,MS4.7
NJ2 LR LR
comp=E,1µm,19.2s,MS4.7
NJ2 LR LR
comp=Z,1µm,19.5s,MS4.7
SSE Sheshan 40.03 27 P **P 14 22 51.5 +0.7**
SSE PP PP 14 24 25.3 +2.0
SSE S **S 14 28 57.9 +3.3**
SSE XS sS 14 29 17.1 +6.6
SSE AMB AMB
comp=Z,35nm,1.0s,mb5.0
SSE AMB AMB
comp=Z,243nm,9.8s
SSE LR LR
comp=N,2µm,15.3s,MS5.0
SSE LR LR
comp=E,1µm,15.3s,MS5.0
SSE LR LR
comp=Z,990nm,14.5s,MS4.8
LZH Lanzhou 40.22 3⇑ P **P 14 22 52.6 +0.4**
LZH AP pP 14 23 03.0 +1.1
LZH XP sP 14 23 07.3 +1.5
LZH PP PP 14 24 30.0 +4.8
LZH PCP PcP 14 24 54.0 -1.9
LZH S **S 14 29 00.0 +2.8**
LZH XS sS 14 29 16.3 +3.2
LZH SS SS 14 31 55.8 -0.4
LZH SCS ScS 14 32 54.0 -2.5
LZH AMB AMB
comp=Z,95nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,376nm,4.2s
LZH LR LR
comp=N,2µm,13.8s
LZH LR LR
comp=Z,3µm,17.6s,MS5.2
DDI Dehra Dun 40.87 329 *ex* **P 14 22 56.0 -1.7**
SMLA Simla 41.97 329 *i* P **P 14 23 06.0 -0.8**
SMLA *ex* x 14 23 08.1
comp=Z,102nm,1.7s
SMLA *i* x x 14 27 35.9
GTA Gaotai 43.47 359⇑ P **P 14 23 18.9 +0.1**
GTA AP pP 14 23 29.0 +0.5
GTA XP sP 14 23 33.3 +0.8
GTA PCP PcP 14 25 06.1 -0.5
GTA SCP ScP 14 28 56.6 +0.8
GTA S **S 14 29 45.8 +0.6**
GTA XS sS 14 30 02.5 +1.3
GTA SS SS 14 32 52.9 -7.6
GTA AMB AMB
comp=Z,38nm,1.8s,mb4.8
GTA AMB AMB
comp=Z,283nm,5.4s
GTA LR LR
comp=N,861nm,16.8s,MS5.2
GTA LR LR
comp=E,2µm,16.2s,MS5.2
GTA LR LR
comp=Z,1µm,16.2s,MS5.0
BTO Baotou 45.39 10 *eP* **P 14 23 34.0 -0.1**
HHC Hu-ho-hao-te 45.90 11⇑ P **P 14 23 38.9 +0.8**
HHC AP pP 14 23 49.4 +1.5
HHC XP sP 14 23 53.3 +1.5
HHC PCP PcP 14 25 14.5 -0.4
HHC PP PP 14 25 27.3 +1.1
HHC SCP ScP 14 29 03.8 -1.9
HHC PCS PcS 14 29 07.6 -1.5
HHC S **S 14 30 22.8 +2.4**
HHC XS sS 14 30 39.8 +3.3
HHC SCS ScS 14 33 29.1 -2.5
HHC SS SS 14 33 40.8 -4.8
HHC AMB AMB
comp=Z,30nm,1.1s,mb5.1
HHC AMB AMB
comp=Z,240nm,6.8s
HHC LR LR
comp=N,2µm,14.6s,MS5.3
HHC LR LR
comp=E,720nm,14.7s,MS5.3
HHC LR LR
comp=Z,2µm,14.5s,MS5.3
PMG Port Moresby 45.96 99 *ceP* **P 14 23 37.9 -1.2**
PMG Port Moresby 45.96 99 *eP* **P 14 23 38.3 -0.8**
BJT Baijiatuau 46.18 16 *eP* **P 14 23 40.1 -0.3**
BJT pmax pmax
comp=Z,31nm,0.7s
BJT Baijiatuau 46.18 16 *eP* **P 14 23 40.1 -0.3**
comp=Z,31nm,0.7s,mb5.3
BJI Beijing 46.20 16 P **P 14 23 41.1 +0.6**
BJI XP sP 14 23 54.4 +0.1
BJI PP PP 14 25 33.3 +3.9
BJI S **S 14 30 28.6 +3.8**
BJI XS sS 14 30 44.9 +4.0
BJI AMB AMB
comp=Z,39nm,0.8s,mb5.4
BJI AMB AMB
comp=Z,437nm,4.2s
BJI LR LR
comp=N,754nm,18.3s,MS5.0
BJI LR LR
comp=E,1µm,18.3s,MS5.0
BJI LR LR
comp=Z,923nm,18.5s,MS4.8
CTA Charters Tower 46.64 114⇑ *i*P **P 14 23 43.8 -0.5**
comp=Z,28nm,1.2s,mb5.1
CTA Charters Tower 46.64 114 P **P 14 23 44.5 +0.1**
comp=Z,54nm,1.2s,mb5.3,baz=291,slow=9.1,SNR=19
CTA LR LR 14 47 06.8
comp=Z,630nm,18.6s,MS4.6,baz=283,slow=41
CTA Charters Tower 46.64 114⇑ *i*P **P 14 23 43.8 -0.5**
CTA pmax pmax
comp=Z,28nm,1.2s
CTAO Charters Tower 46.64 114 *eP* **P 14 23 44.3 0.0**
STKA Stephens Creek 46.82 131 *eP* **P 14 23 45.9 +0.3**
comp=Z,14nm,0.7s,mb5.0
STKA Stephens Creek 46.82 131 P **P 14 23 46.0 +0.4**
comp=Z,15nm,0.7s,mb5.1,baz=297,slow=7.4,SNR=32
STKA LR LR 14 44 40.7
comp=Z,1µm,21.7s,MS4.8,baz=292,slow=38
DL2 Dalian 46.95 22⇑ P **P 14 23 46.1 -0.3**
DL2 *eS* **S 14 30 36.8 +1.3**
DL2 AMB AMB
comp=Z,30nm,1.2s,mb5.1
DL2 AMB AMB
comp=Z,100nm,3.9s
DL2 LR LR
comp=N,410nm,15.7s,MS4.6
DL2 LR LR
comp=E,430nm,17.8s,MS4.6
DL2 LR LR
comp=Z,490nm,18.3s,MS4.5
KSRS Korea Array 48.41 29 P **P 14 23 57.1 -0.7**
comp=Z,28nm,0.9s,mb5.3,baz=217,slow=7.9,SNR=56
KBL Kabul 49.02 324 *eP* **P 14 24 01.5 -1.0**
KBL pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KBL Kabul 49.02 324 *eP* **P 14 24 01.5 -1.0**
comp=Z,9.1nm,0.8s,mb4.9
KSH Kashi 49.35 334 *eP* **P 14 24 05.1 +0.2**
KSH *e*AP pP 14 24 15.1 +0.3
KSH *e*XP sP 14 24 19.3 +0.6
KSH *e*PCP PcP 14 25 27.1 -0.1
KSH *e*PP PP 14 26 01.0 +1.7
KSH *e*SCP ScP 14 29 19.1 -1.2
KSH *e*S **S 14 31 07.3 -2.1**
KSH *e*XS sS 14 31 27.1 +1.4
KSH *e*SCS ScS 14 33 52.1 -2.4
KSH *e*SS SS 14 34 39.0 -2.6
KSH AMB AMB
comp=Z,483nm,2.9s,mb6.0
KSH LR LR
comp=N,809nm,6.4s
KSH LR LR
comp=E,892nm,7.2s
KSH LR LR
comp=Z,1µm,9.7s
WMQ Urumqi 49.37 347⇑ *i*P **P 14 24 05.6 +0.6**
WMQ AP pP 14 24 15.5 +0.6
WMQ XP sP 14 24 19.5 +0.7
WMQ PCP PcP 14 25 28.0 +0.8
WMQ PP PP 14 26 00.0 +0.6
WMQ S **S 14 31 10.0 +0.4**
WMQ SCS ScS 14 33 52.0 -2.5
WMQ AMB AMB
comp=Z,109nm,0.9s,mb5.9
WMQ AMB AMB
comp=Z,400nm,4.5s
WMQ LR LR
comp=N,1µm,14.7s,MS5.3
WMQ LR LR
comp=E,2µm,18.4s,MS5.3
WMQ LR LR
comp=Z,1µm,22.0s,MS4.8
SNY Shenyang 50.22 22⇑ P **P 14 24 09.8 -1.7**
SNY AMB AMB
comp=Z,135nm,7.3s
SNY LR LR
comp=N,968nm,20.6s,MS4.9
SNY LR LR
comp=E,654nm,17.8s,MS4.9
SNY LR LR
comp=Z,971nm,16.2s,MS4.9
SONM Songino Array 52.08 4 P **P 14 24 26.1 +0.7**
comp=Z,45nm,0.8s,mb5.4,baz=184,slow=8.4,SNR=102
SONM PcP PcP 14 25 37.7 +0.5
comp=Z,12nm,0.9s,baz=181,slow=3.2,SNR=4.3
ULN Ulaanbaatar 52.17 5 *eP* **P 14 24 26.7 +0.7**
ULN pmax pmax
comp=Z,30nm,0.9s,mb5.2
ULN Ulaanbaatar 52.17 5 *eP* **P 14 24 26.7 +0.7**
comp=Z,30nm,0.9s,mb5.2
TKM2 Tokmak 2 52.34 336 *eP* **P 14 24 27.6 +0.2**
TKM2 pmax pmax
comp=Z,27nm,0.8s,mb5.2
TKM2 Tokmak 2 52.34 336 *eP* **P 14 24 27.6 +0.1**
comp=Z,27nm,0.8s,mb5.2
CN2 Changchun 52.62 22 *eP* **P 14 24 27.3 -2.1**
CN2 *e*AP pP 14 24 37.1 -2.3
CN2 *e*S **S 14 31 53.8 -0.8**
CN2 AMB AMB
comp=Z,70nm,1.1s,mb5.5
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,970nm,18.0s,MS5.0
CN2 LR LR
comp=E,790nm,18.0s,MS5.0
CN2 LR LR
comp=Z,820nm,20.0s,MS4.8
FRU Bishkek 52.67 336 *eP* **P 14 24 29.0 -0.8**
FRU pmax pmax
comp=Z,114nm,2.2s,mb5.4
EKS2 Erkin-Say 52.88 335 *eP* **P 14 24 31.8 +0.4**
comp=Z,35nm,0.8s,mb5.3
MAJO Matsushiro 53.34 37 *eP* **P 14 24 33.1 -1.9**
MAJO pmax pmax
comp=Z,34nm,1.0s,mb5.2
MAJO Matsushiro 53.34 37 *eP* **P 14 24 33.1 -1.8**
comp=Z,34nm,1.0s,mb5.2
MAT Matsushiro 53.34 37 P **P 14 24 33.9 -1.1**
MAT S **S 14 32 08.2 +3.5**
MJAR Matsushiro Arr 53.34 37 P **P 14 24 33.3 -1.7**
comp=Z,18nm,0.9s,mb5.0,baz=218,slow=7.4,SNR=46
MK31 Makanchi Array 53.50 344 *eP* **P 14 24 35.6 -0.3**
MKAR Makanchi Array 53.50 344 P **P 14 24 35.6 -0.2**
comp=Z,42nm,0.7s,mb5.5,baz=146,slow=7.6,SNR=96
ZAK Zakamensk 54.46 2 *eP* **P 14 24 42.8 0.0**
ZAK pmax pmax
comp=Z,14nm,0.9s,mb4.9
VLA Vladivostok 54.75 27 *eP* **P 14 24 44.8 -0.3**
VLA *e* pP 14 24 52.6 -2.4
VLA pmax pmax
comp=Z,97nm,2.2s,mb5.4
VLA MLR MLR
comp=Z,600nm,20.0s,MS4.7
VLA Vladivostok 54.75 27 *i* P **P 14 24 44.9 -0.2**
MDJ Mudanjiang 54.94 25 P **P 14 24 45.6 -0.8**
MDJ AP pP 14 24 54.8 -1.6
MDJ XP sP 14 24 58.5 -1.8
MDJ PP PP 14 26 49.4 -0.3
MDJ SCP ScP 14 29 43.0 -1.4
MDJ PCS PcS 14 29 46.8 -0.9
MDJ S **S 14 32 26.5 +0.6**
MDJ XS sS 14 32 42.1 -0.3
MDJ AMB AMB
comp=Z,15nm,1.6s,mb4.8
MDJ AMB AMB
comp=Z,103nm,4.6s
MDJ LR LR
comp=N,757nm,19.0s,MS4.9
MDJ LR LR
comp=E,561nm,15.4s,MS4.9
MDJ LR LR
comp=Z,872nm,14.5s,MS5.0
MDJ Mudanjiang 54.94 25 *eP* **P 14 24 45.0 -1.4**
comp=Z,18nm,1.0s,mb5.1
MOY Mondy 55.71 360 *eP* **P 14 24 51.9 +0.1**
MOY pmax pmax
comp=Z,44nm,2.4s,mb5.1
HIA Hailar 55.71 15 *eP* **P 14 24 50.6 -1.3**
HIA pmax pmax
comp=Z,7.0nm,0.5s
HIA Hailar 55.71 15 *eP* **P 14 24 50.6 -1.3**
comp=Z,6.5nm,0.5s,mb4.9
TLY Talaya 55.77 2 *eP* **P 14 24 53.0 +0.8**
TLY *eS* **S 14 32 35.1 -1.7**
TLY pmax pmax
comp=Z,29nm,0.9s,mb5.3
TLY MLR MLR
comp=Z,1µm,17.0s,MS5.1
TLY Talaya 55.77 2⇑ *i*P **P 14 24 52.8 +0.6**
IRK Irkutsk 56.35 2 *eP* **P 14 24 56.0 -0.4**
IRK pmax pmax
comp=Z,62nm,3.2s
CIT Chita 57.06 9 *eP* **P 14 24 58.7 -2.7**
CIT *e* pP 14 25 09.9 -1.5
CIT *e* 14 27 14.9
CIT pmax pmax
comp=Z,74nm,2.5s,mb5.3
KURK Kurchatov 58.08 343 P **P 14 25 08.8 +0.1**
comp=Z,310nm,1.0s,mb6.3,SNR=21
KURK Kurchatov 58.08 343 P **P 14 25 07.8 -0.9**
comp=Z,26nm,0.9s,mb5.3,baz=153,slow=7.2,SNR=40
KURK Kurchatov 58.08 343 *c iP* **P 14 25 08.2 -0.5**
KURK pmax pmax
comp=Z,37nm,0.7s,mb5.5
KURK MLR MLR
comp=Z,1µm,26.0s,MS4.8
KURK Kurchatov 58.08 343 *eP* **P 14 25 08.3 -0.4**
HNR Honiara 58.57 98 P **P 14 25 11.6 -1.2**
comp=Z,43nm,0.8s,mb5.5,baz=172,slow=5.1,SNR=6.8
KLR Kul'dur 59.55 23 *eP* **P 14 25 14.0 -4.9**
KLR pmax pmax
comp=E,53nm,1.8s
KLR pmax pmax
comp=Z,110nm,1.8s,mb5.6
ZALV Zalesovo Beam 59.59 349 P **P 14 25 18.4 -0.6**
comp=Z,39nm,0.8s,mb5.5,baz=188,slow=5.0,SNR=67
ZALV Zalesovo Beam 59.59 349 P **P 14 25 18.4 -0.6**
ERM Erimo 59.81 35⇑ *eP* **P 14 25 21.4 +0.5**
NVS Novosibirsk 60.74 348⇑ *i*P **P 14 25 25.3 -1.6**
NVS *e* 14 26 04.0
NVS pmax pmax
comp=Z,56nm,2.0s,mb5.3
NVS pmax pmax
comp=N,47nm,1.8s
NVS pmax pmax
comp=E,14nm,1.4s
RDF Al-Radifah 61.09 306 *eP* **P 14 25 29.6 -0.2**
baz=306
RDF AMb AMB 14 25 31.6
comp=Z,33nm,1.0s,mb5.4,baz=306
NAY Al-Naaiem 61.46 307 *eP* **P 14 25 31.2 -1.1**
baz=307
NAY AMb AMB 14 25 33.5
comp=Z,18nm,1.0s,mb5.2,baz=307
MIB Mutribah 61.61 307 *eP* **P 14 25 32.3 -1.1**
baz=307
MIB AMb AMB 14 25 34.8
comp=Z,57nm,1.0s,mb5.7,baz=307
RST Umm Al-Ruwaisa 61.76 307 *eP* **P 14 25 33.9 -0.5**
baz=307
RST AMb AMB 14 25 35.4
comp=Z,35nm,0.8s,mb5.5,baz=307
BOD Bodaibo 62.75 8 *eP* **P 14 25 39.1 -1.3**
BOD pmax pmax
comp=Z,26nm,1.0s,mb5.3
BRVK Borovoye 62.75 340 P **P 14 25 37.2 -3.3**
comp=Z,143nm,0.7s,mb6.2,SNR=7.5
BRVK Borovoye 62.75 340⇑ *eP* **P 14 25 39.7 -0.8**
YSS Yuzh-Sakhalins 62.81 31⇑ *i*P **P 14 25 40.0 -1.1**
YSS *e* pP 14 25 49.7 -1.5
YSS *e* 14 25 53.8
YSS pmax pmax
comp=Z,70nm,0.8s,mb5.8
YSS Yuzh-Sakhalins 62.81 31 *eP* **P 14 25 40.5 -0.5**
KMBO Kilima Mbogo 63.87 271 LR LR 14 51 50.6
comp=Z,202nm,19.4s,MS4.3,baz=116,slow=34
CLNS Chul'man 63.90 14 *eP* **P 14 25 48.1 +0.1**
CLNS pmax pmax
comp=Z,14nm,1.0s,mb5.0
CLNS pmax pmax
comp=E,7.0nm,1.1s
CLNS pmax pmax
comp=N,8.0nm,1.0s
CLNS MLR MLR
comp=N,522nm,18.0s,MS5.0
CLNS MLR MLR
comp=Z,383nm,19.0s,MS4.6
CLNS MLR MLR
comp=E,616nm,18.0s,MS5.0
MAW Mawson 68.39 195 P **P 14 26 23.8 +7.0**
comp=E,4.4nm,0.8s,mb4.5,baz=40,slow=8.3,SNR=6.2
MAW LR LR 14 48 52.7
comp=E,263nm,19.6s,MS4.5,baz=23,slow=29
SVE Sverdlovsk 69.19 338⇓ *eP* **P 14 26 21.6 -0.3**
SVE *e*PPP 14 30 36.2
SVE pmax pmax
comp=Z,55nm,1.0s,mb5.4
SVE MLR MLR
comp=Z,931nm,21.0s,MS5.0
YAK Yakutsk 69.64 14 *eP* **P 14 26 21.5 -3.0**
YAK pmax pmax
comp=Z,71nm,1.1s,mb5.5
YAK pmax pmax
comp=N,26nm,1.6s
YAK pmax pmax
comp=E,16nm,1.1s
YAK Yakutsk 69.64 14⇑ *i*P **P 14 26 23.0 -1.5**
ARU Arti 69.72 336 P **P 14 26 24.7 -0.4**
comp=E,130nm,0.8s,mb5.9,SNR=6.4
ARU Arti 69.72 336 *c iP* **P 14 26 24.4 -0.7**
ARU *e*PPP 14 30 41.4
ARU *e*S S 14 35 32.1 +0.5
ARU *e*SS SS 14 40 06.0 +5.5
ARU pmax pmax

comp=Z,38nm,1.2s,mb5.2
ARU Arti 69.72 336⇑ *i*P **P** **14 26 24.6 -0.5**
KIV Kislovodsk 70.98 319⇑ *e*P **P** **14 26 34.4 +1.3**
KIV *e* 14 26 49.6
KIV *e* 14 29 11.3
KIV pmax pmax
comp=Z,11nm,0.8s,mb4.8
KIV MLR MLR
comp=Z,200nm,19.0s,MS4.4
MALT Malatya 71.69 313⇑ *i*P **P** **14 26 36.5 -1.0**
MALT Malatya 71.69 313⇑ P **P** **14 26 36.5 -1.0**
RPZ Rata Peaks 72.60 134 P **P** **14 26 43.6 +0.7**
comp=Z,4.7nm,0.6s,mb4.6,baz=120,slow=2.7,SNR=5.6
RPZ Rata Peaks 72.60 134 P **P** **14 26 43.6 +0.6**
PETK Petropavlovsk- 74.19 32 P **P** **14 26 51.2 -0.9**
comp=Z,9.9nm,0.9s,mb4.8,baz=223,slow=3.1,SNR=9.4
PETK LR LR 15 04 33.7
comp=Z,183nm,18.4s,MS4.4,baz=256,slow=40
PET Petropavlovsk 74.65 32 *e*P **P** **14 26 53.6 -1.1**
PET pmax pmax
comp=Z,47nm,0.9s,mb5.4
PET Petropavlovsk 74.65 32⇑ *e*P **P** **14 26 53.9 -0.8**
ANN Anapa 74.77 319 *e*P pP 14 27 07.7 +1.8
ANN pmax pmax
comp=Z,109nm,1.5s,mb5.6
BOSA Boshof 75.57 242 P **P** **14 27 07.9 +7.3**
comp=Z,6.1nm,0.9s,mb4.5,baz=97,slow=7.9,SNR=4.3
BOSA LR LR 14 53 38.6
comp=Z,538nm,19.5s,MS4.9,baz=120,slow=30
SYO Syowa Base 76.11 199⇑ *e*pP pP 14 27 09.0 -4.1
URZ Urewera 76.37 128 LR LR 14 58 06.1
comp=Z,406nm,22.0s,MS4.7,baz=94,slow=34
TIXI Tiksi 77.90 9*c i*P **P** **14 27 11.0 -1.8**
TIXI *e* pP 14 27 19.4 -3.8
TIXI pmax pmax
comp=Z,48nm,1.4s,mb5.2
TIXI MLR MLR
comp=Z,815nm,18.0s,MS5.1
TIXI Tiksi 77.90 9⇑ *i*P **P** **14 27 11.6 -1.2**
OBN Obninsk 79.30 328⇓ *e*P **P** **14 27 21.3 +0.5**
OBN *e* 14 27 28.6
OBN *e* 14 30 20.6
OBN *e*S S 14 37 21.1 +2.2
OBN pmax pmax
comp=Z,24nm,0.7s,mb5.2
RAO Raoul Island 80.04 119 LR LR 15 03 37.2
comp=Z,261nm,19.1s,MS4.6,baz=44,slow=36
TIRR Tirgusor 80.76 316⇑ *i*P **P** **14 27 28.2 -0.8**
TIRR Tirgusor 80.76 316⇑ P **P** **14 27 28.2 -0.7**
AKASG Malin Array Be 81.95 322 P **P** **14 27 34.1 -1.1**
comp=Z,2.8nm,0.6s,mb4.4,baz=84,slow=4.1,SNR=9.4
AKASG Malin Array Be 81.95 322 *i* P **P** **14 27 34.7 -0.4**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
VRI Vrinceioaia 82.27 317⇓ *i*P **P** **14 27 38.4 +1.5**
VRI Vrinceioaia 82.27 317 ⇓P **P** **14 27 38.4 +1.5**
PLOR Plostina 82.32 317⇓ *i*P sP 14 27 57.0 +5.6
MLR Muntele Rosu 82.71 317⇓ *i*P **P** **14 27 39.3 +0.1**
MLR Muntele Rosu 82.71 317 ⇓P **P** **14 27 39.3 +0.1**
BURAR Bucovina Array 83.69 319⇑ *i*P **P** **14 27 45.7 +1.4**
BURAR Bucovina Array 83.69 319⇑ P **P** **14 27 45.6 +1.4**
BUR08 Bucovina Ar. S 83.71 319 *e*P **P** **14 27 44.8 +0.4**
VTS Vitosha 84.01 313⇑ *i*P **P** **14 27 46.0 0.0**
VTS Vitosha 84.01 313⇑ P **P** **14 27 46.0 0.0**
BILL Bilibino 84.88 20⇓ *e*P **P** **14 27 50.0 +0.2**
BILL *e*S S 14 38 11.8 -3.9
BILL pmax pmax
comp=Z,12nm,0.7s,mb5.1
BILL MLR MLR
comp=Z,300nm,20.0s,MS4.7
DRGR 85.19 318⇓ *i*P **P** **14 27 53.2 +1.4**
DRGR 85.19 318 ⇓P **P** **14 27 53.2 +1.3**
APA Apatity 85.59 339⇓ *e*P **P** **14 27 55.2 +1.8**
APA *i* pP 14 28 04.0 +0.2
APA pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
APA MLR MLR
comp=Z,800nm,18.0s,MS5.2
BZS Buzias 85.71 316⇑ *i*P **P** **14 27 55.5 +1.0**
BZS Buzias 85.71 316⇑ P **P** **14 27 55.5 +1.0**
KOLS Kolonicke sedl 85.89 320 *e*P **P** **14 27 55.7 +0.4**
CRVS Cervenica-Dubn 86.41 319 *e*P **P** **14 27 57.2 -0.7**
STHS Stebnicka Huta 86.65 320 *e*P **P** **14 27 59.8 +0.8**
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
STHS Stebnicka Huta 86.65 320 *e*P **P** **14 27 59.8 +0.8**
comp=Z,5.1nm,0.9s,mb4.8
KECS Kecovo 86.98 319 *e*P **P** **14 28 00.1 -0.5**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
KECS Kecovo 86.98 319 *e*P **P** **14 28 00.1 -0.5**
comp=Z,2.6nm,0.9s,mb4.5
PSZ Piszkesteto 87.27 318⇓ *i*P **P** **14 28 03.3 +1.2**
PSZ Piszkesteto 87.27 318 ⇓P **P** **14 28 03.3 +1.2**
PKSM Moragy 87.86 316⇑ *i*P **P** **14 28 04.2 -0.7**
PKSM Moragy 87.86 316⇑ P **P** **14 28 04.2 -0.7**
VYHS Vyhne 88.06 319 *e*P **P** **14 28 06.7 +0.8**
ARCES ARCESS Array B 88.97 340 P **P** **14 28 10.3 +0.6**
comp=Z,8.9nm,0.8s,mb5.2,baz=100,slow=5.0,SNR=16
ARCES LR LR 15 11 51.8
comp=Z,610nm,21.9s,MS5.0,baz=280,slow=38
ARCES ARCESS Array B 88.97 340 P **P** **14 28 10.3 +0.6**
ARCES LR LR 15 11 51.8
MODS Modra-Piesok 89.07 318 *e*P **P** **14 28 11.7 +1.1**
MORC Moravsky Berou 89.08 320⇑ *i*P **P** **14 28 11.0 +0.4**
ZST Bratislava 89.17 318 *e*P **P** **14 28 12.0 +0.9**
ZST pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
ZST Bratislava 89.17 318 *e*P **P** **14 28 12.0 +0.9**
comp=Z,6.3nm,0.7s,mb5.0
BOJS Bojanci 90.12 315 *i* P **P** **14 28 15.5 -0.1**
BOJS *i* pP pP 14 28 24.5 -1.6
SNAA Sanae 90.35 198 *e*P **P** **14 28 16.9 +0.7**
SNAA pmax pmax
comp=Z,6.0nm,0.9s
SNAA Sanae 90.35 198 *e*P **P** **14 28 16.9 +0.7**
comp=Z,5.8nm,0.9s,mb4.9
VISS Visnje 90.44 316 *i* P **P** **14 28 15.6 -1.5**
VISS *i* pP pP 14 28 25.3 -2.3
GERES GERESS Array B 91.48 319 P **P** **14 28 22.2 +0.4**
comp=Z,3.0nm,0.7s,mb4.7,baz=92,slow=4.5,SNR=16
GERES LR LR 15 16 27.7
comp=Z,269nm,18.7s,MS4.7,baz=294,slow=40
BRG Berggiesshubel 91.50 321 *e*P **P** **14 28 23.0 +1.1**
BRG *e* pP 14 28 31.4 -1.0
BRG pmax pmax
comp=Z,7.0nm,1.4s,mb4.8
BRG pmax pmax
comp=Z,6.0nm,1.3s,mb4.8
BRG Berggiesshubel 91.50 321 *e*P **P** **14 28 23.0 +1.2**
comp=Z,11nm,1.4s,mb5.0
BRG *e* pP 14 28 31.4 -1.0
comp=Z,9.5nm,1.3s
KHC Kasperske Hory 91.59 319 *i* P **P** **14 28 22.8 +0.5**
CLL Collm 92.12 321 *e*P **P** **14 28 25.0 +0.2**
CLL *ex* x 14 28 30.0
CLL *e*S S 14 39 25.0 +0.1
CLL *e*PS PS 14 40 36.0 -3.3
CLL *e*SS SS 14 45 54.0 +19
CLL *e*SSSS 14 52 48.0
CLL Collm 92.12 321 *e*P **P** **14 28 25.0 +0.2**
CLL *e* 14 28 30.0
CLL *e*S S 14 39 25.0 +0.1
CLL LR LR
comp=Z,300nm,18.6s,MS4.8
NOA NORSAR Array B 93.66 331 LR LR 15 17 16.6
comp=Z,201nm,18.1s,MS4.6,baz=50,slow=40
KEST Kesra 93.91 305 LR LR 15 10 38.9
comp=Z,103nm,20.0s,MS4.3,baz=279,slow=35
COLA College 102.68 24 *e*P Pdif 14 29 15.9 +3.5
COLA pmax pmax
comp=Z,2.0nm,0.7s
COLA College 102.68 24 *e*Pdif Pdif 14 29 15.9 +3.5
comp=Z,2.3nm,0.7s
PPT Papeete 106.99 110 *e*LR LR 15 05 08.2
comp=Z,274nm,22.0s
B05A Bryant 122.72 33 ⇓P PKPdf 14 34 11.5 +0.3
baz=123
A07A Ashnola River, 123.16 31 ⇑P PKPdf 14 34 12.2 +0.1
baz=123
B07A Winthrop 123.65 32 ⇓P PKPdf 14 34 13.4 +0.4
baz=124
A08A Turner Farm, O 123.79 31 ⇑P PKPdf 14 34 13.7 +0.4
baz=124
I02A Mapleton 124.08 38 ⇑P PKPdf 14 34 15.0 +1.0
baz=124
B08A Colville Reser 124.13 32 ⇑P PKPdf 14 34 14.2 +0.2
baz=124
C07A Waterville 124.16 33 ⇓P PKPdf 14 34 14.1 +0.1
baz=124
E06A Yakima 124.34 34 ⇑P PKPdf 14 34 15.5 +1.0
baz=124
I03A Eugene 124.43 38 ⇑P PKPdf 14 34 15.6 +0.9
baz=125
J02A Umpqua 124.57 39 ⇑P PKPdf 14 34 16.2 +1.2
baz=125
A10A Northport 124.64 30 ⇑P PKPdf 14 34 15.5 +0.6
baz=125
C08A Higginbotham F 124.64 32 ⇑P PKPdf 14 34 15.6 +0.6
baz=125
B09A Rice 124.70 31 ⇓P PKPdf 14 34 15.8 +0.7
baz=125
H04A Detroit Lake 124.70 37 ⇑P PKPdf 14 34 15.0 -0.2
baz=125
K02A Glendale 124.94 39 ⇓P PKPdf 14 34 15.0 -0.7
baz=125,SNR=5.2
I04A Tendick Farm, 125.06 38 ⇓P PKPdf 14 34 16.1 +0.2
baz=125
D08A Wollman Farm, 125.16 33 ⇓P PKPdf 14 34 16.9 +0.9
baz=125
L02A Cave Junction 125.18 40 ⇓P PKPdf 14 34 17.1 +0.9
baz=125
G06A Carlson Farm, 125.30 35 ⇑P PKPdf 14 34 16.7 +0.4
baz=125
HUMO Hull Mountain 125.36 39 ⇑P PKPdf 14 34 16.4 -0.1
baz=126,SNR=8.4
HUMO Hull Mountain 125.36 39 *e*PKPdf PKPdf 14 34 16.9 +0.3
E08A Dider Farm, El 125.43 33 ⇓P PKPdf 14 34 17.2 +0.6
baz=126
D09A Jones Farm, Ri 125.48 32 ⇑P PKPdf 14 34 17.2 +0.5
baz=126
J04A Umpqua Nationa 125.54 38 ⇓P PKPdf 14 34 16.5 -0.4
baz=126,SNR=5.6
H06A Lindquist Farm 125.76 36 ⇑P PKPdf 14 34 17.3 +0.1
baz=126
E09A Wood Farm, Sta 125.91 33 ⇓P PKPdf 14 34 17.7 +0.3
baz=126
YBH Yreka Blue Hor 125.97 40 PKP PKPdf 14 34 17.8 +0.1
comp=Z,0.6nm,0.2s,baz=131,slow=3.3,SNR=3.5
YBH Yreka Blue Hor 125.97 40 ⇓P PKPdf 14 34 18.1 +0.4
baz=126
D10A Wagner Farm, O 126.03 32 ⇓P PKPdf 14 34 18.1 +0.4
baz=126
C11A Tepee Creek (N 126.04 30 ⇓P PKPdf 14 34 18.1 +0.4
baz=126
N02C Big Bar 126.05 41 ⇑P PKPdf 14 34 19.0 +1.1
baz=126
J05A Fort Rock 126.05 37 ⇓P PKPdf 14 34 19.0 +1.2
baz=126
M02C Callahan 126.05 40 ⇓P PKPdf 14 34 18.8 +0.9
baz=126
A13A Flathead Natio 126.20 28 ⇓P PKPdf 14 34 18.6 +0.7
baz=126
G08A Pilot Rock 126.22 34 ⇓P PKPdf 14 34 18.9 +0.8
baz=126
LNOR Lincton Mounta 126.24 33 *e*PKIKP PKPdf 14 34 17.7 -0.4
H07A Lands Inn, Kim 126.29 35 ⇓P PKPdf 14 34 18.8 +0.6
baz=126
M04C Macdoel 126.50 39 ⇓P PKPdf 14 34 19.5 +0.8
baz=127
B13A Whitefish 126.56 29 ⇑P PKPdf 14 34 18.9 +0.3
baz=127
K05A Summer Lake 126.57 38 ⇓P PKPdf 14 34 18.5 -0.3
baz=127,SNR=7.8
I07A Izee 126.63 36 ⇓P PKPdf 14 34 19.5 +0.6
baz=127
WDC Whiskeytown Da 126.67 41 ⇓P PKPdf 14 34 19.2 +0.1
baz=127
O02C Red Bluff 126.72 42 ⇓P PKPdf 14 34 19.7 +0.5
baz=127
J06A Christmas Vall 126.72 37 ⇓P PKPdf 14 34 19.9 +0.7
baz=127,SNR=5.2
F10A Beach Ranch, E 126.75 33 ⇑P PKPdf 14 34 19.2 +0.1
baz=127
G09A Cove 126.88 34 ⇑P PKPdf 14 34 19.6 +0.2
baz=127
K06A Valley Falls 126.92 37 ⇑P PKPdf 14 34 20.8 +1.3
baz=127,SNR=5.1
L05A Lakeview 126.98 39 ⇑P PKPdf 14 34 20.8 +1.1
baz=127
C13A Hot Springs 126.99 30 ⇑P PKPdf 14 34 19.5 0.0
baz=127
GASB Alder Springs 127.03 42 ⇓P PKPdf 14 34 21.3 +1.5
baz=127
E11A Bogner Ranch, 127.04 32 ⇑P PKPdf 14 34 19.6 0.0
baz=127
HOPS Hopland 127.11 43 ⇑P PKPdf 14 34 20.8 +0.8
baz=127
M05C Lookout 127.16 39 ⇑P PKPdf 14 34 21.0 +1.0
baz=127
F11A Grangeville 127.38 32 ⇑P PKPdf 14 34 20.9 +0.6
baz=128
MOD Modoc 127.39 38 ⇑P PKPdf 14 34 21.3 +0.9
baz=128
MOD Modoc 127.39 38 *e*PKPdf PKPdf 14 34 19.9 -0.5
D13A Huson 127.45 30 ⇓P PKPdf 14 34 20.7 +0.4
baz=128
K07A Rock Creek Ran 127.59 37 ⇓P PKPdf 14 34 21.4 +0.6
baz=128,SNR=8.4
MNRC McLaughlin Nat 127.60 43 ⇑P PKPdf 14 34 22.9 +1.9
baz=128
J08A Circle Bar Ran 127.66 36 ⇑P PKPdf 14 34 22.3 +1.4
baz=128
L07A Adell 127.92 38 ⇑P PKPdf 14 34 22.9 +1.5
baz=128
D14A Greenough 127.93 30 ⇓P PKPdf 14 34 20.5 -0.8
baz=128
K08A Mann Creek Ran 128.02 37 ⇓P PKPdf 14 34 22.0 +0.4
baz=128,SNR=6.2
E13A Victor 128.03 30 ⇑P PKPdf 14 34 21.2 -0.3
baz=128
CHMT Chamberlain Mo 128.17 30 *e*PKPdf PKPdf 14 34 20.3 -1.4
N06A Buffalo Meadow 128.32 39 ⇑P PKPdf 14 34 23.1 +0.8
baz=128
M07A Soldier Meadow 128.38 38 ⇑P PKPdf 14 34 23.1 +0.7
baz=128
F13A Darby 128.40 31 ⇑P PKPdf 14 34 23.0 +0.8
baz=128
L08A Fields 128.42 37 ⇑P PKPdf 14 34 23.2 +0.8
baz=129,SNR=8.3
D15A Lincoln 128.43 29 ⇑P PKPdf 14 34 22.8 +0.6
baz=128
K09A Rome 128.49 36 ⇓P PKPdf 14 34 23.5 +1.0
baz=129,SNR=9.2
P05C Yuba Gap, Truc 128.61 41 ⇑P PKPdf 14 34 23.4 +0.5
baz=129
O06A Flanigan 128.65 40 ⇓P PKPdf 14 34 22.7 -0.2
baz=129
LAVA Lava Cap Winer 128.81 42 ⇓P PKPdf 14 34 24.1 +0.9
baz=129
M08A Happy Creek Ra 128.84 38 ⇑P PKPdf 14 34 24.8 +1.6
baz=129
N07B Gerlach 128.85 39 ⇑P PKPdf 14 34 24.0 +0.7
baz=129
K10A MacKenzie Ranc 128.94 36 ⇑P PKPdf 14 34 24.3 +0.9
baz=129,SNR=5.1
H12A Diamond D Ranc 128.95 33 ⇑P PKPdf 14 34 24.0 +0.6
baz=129
MFID Camas Ranch 129.14 34 ⇓P PKPdf 14 34 24.3 +0.6
baz=129
H13A Challis 129.26 32 ⇓P PKPdf 14 34 24.9 +1.0
baz=129
R05C Kirkwood Meado 129.27 42 ⇓P PKPdf 14 34 25.3 +1.1
baz=129
F15A Butte 129.29 30 ⇓P PKPdf 14 34 24.5 +0.5
baz=129
PACP Pacheco Peak 129.32 44 ⇓P PKPdf 14 34 25.2 +1.0
baz=130
K11A Parker Ranch, 129.43 35 ⇑P PKPdf 14 34 24.8 +0.5
baz=130
DLMT Dillon 129.58 31 *e*PKPdf PKPdf 14 34 25.6 +1.1
L10A Juniper Basin 129.61 36 ⇑P PKPdf 14 34 25.9 +1.2
baz=130
O08A Rochester Mine 129.64 39 ⇓P PKPdf 14 34 25.9 +1.2
baz=130
J12A Stokes Ranch, 129.66 34 ⇑P PKPdf 14 34 25.6 +0.8
baz=130
H14A Leadore 129.69 32 ⇓P PKPdf 14 34 25.0 +0.2
baz=130
I13A Wildhorse Cree 129.76 33 ⇓P PKPdf 14 34 25.9 +1.0
baz=130
G15A Dillon 129.77 31 ⇑P PKPdf 14 34 25.9 +1.0
baz=130
R06C Coleville 129.78 42 ⇑P PKPdf 14 34 26.1 +1.0
baz=130
MCMT McKenzie Canyo 129.82 31 *e*PKPdf PKPdf 14 34 26.1 +1.1
HLID Hailey 129.83 33 ⇓P PKPdf 14 34 26.0 +1.0
baz=130
S06C San Francisco 129.86 43 ⇓P PKPdf 14 34 26.2 +1.0
baz=130
H15A Lima 130.07 31 ⇑P PKPdf 14 34 26.7 +1.2
baz=130
J13A Cove Ranch, Pi 130.07 33 ⇓P PKPdf 14 34 26.2 +0.7
baz=130
T06C Millerton Lake 130.41 43 ⇓P PKPdf 14 34 26.5 +0.2
baz=131
L12A House Creek Ra 130.41 35 ⇑P PKPdf 14 34 27.1 +0.9
baz=130
J14A Carey 130.48 33 ⇓P PKPdf 14 34 26.6 +0.3
baz=131
QLMT Earthquake Lak 130.54 30 *e*PKPdf PKPdf 14 34 27.4 +1.1
NVAR Mina Array Bea 130.59 41 PKP PKPdf 14 34 27.1 +0.5
comp=Z,1.5nm,0.7s,baz=270,slow=2.0,SNR=12
H16A Russell Place, 130.72 30 ⇑P PKPdf 14 34 27.3 +0.6
baz=131
J15A Blackfoot 131.01 32 ⇓P PKPdf 14 34 28.6 +1.3
baz=131
ELK Elko 131.16 37 PKP PKPdf 14 34 29.3 +1.6
comp=Z,2.2nm,0.7s,baz=302,slow=4.5,SNR=11
K14A Jones Ranch, D 131.19 34 ⇑P PKPdf 14 34 28.6 +0.9
baz=131
S08C White Mtn Res 131.19 42 ⇓P PKPdf 14 34 28.9 +1.1
baz=131
M13A Montello 131.40 35 ⇑P PKPdf 14 34 29.2 +1.1
baz=132,SNR=5.2
L14A Malta 131.49 34 ⇑P PKPdf 14 34 29.2 +1.0
baz=132
S09A Goldfield 131.69 41 ⇓P PKPdf 14 34 29.3 +0.6
baz=132
M14A Sheep Mountain 131.78 35 ⇑P PKPdf 14 34 29.5 +0.7
baz=132
BSC Santa Cruz Isl 131.96 47 ⇓P PKPdf 14 34 30.3 +1.0
baz=132
ULM Lac du Bonnet 131.98 15 PKP PKPdf 14 34 28.2 -0.7
comp=Z,6.7nm,0.8s,baz=116,slow=3.2,SNR=6.9
L15A Malad City 131.98 34 ⇑P PKPdf 14 34 29.5 +0.4
baz=132
S10A Tonopah Range, 131.99 41 ⇑P PKPdf 14 34 30.2 +0.9
baz=132
Q11A Duckwater 132.05 39 ⇓P PKPdf 14 34 30.8 +1.4
baz=132
R11A Troy Canyon, C 132.39 40 ⇑P PKPdf 14 34 31.5 +1.4
baz=132
SNCC San Nicolas Is 132.40 48 ⇓P PKPdf 14 34 31.7 +1.4
baz=133
MPMC Manual Prospec 132.42 43 ⇑P PKPdf 14 34 31.8 +1.6
baz=133
P13A Bates Ranch, G 132.69 37 ⇑P PKPdf 14 34 32.1 +1.5
baz=133
EDW2 Edwards Air Fo 132.70 45 ⇑P PKPdf 14 34 32.2 +1.5
baz=133
R12A Pony Springs, 133.02 39 ⇑P PKPdf 14 34 32.8 +1.5
baz=133
P14A Drum Mountains 133.17 37 ⇓P PKPdf 14 34 33.0 +1.5
baz=133
T11A Corn Creek, Al 133.27 41 ⇓P PKPdf 14 34 33.4 +1.6
baz=133
S12A Delamar Landin 133.30 40 ⇓P PKPdf 14 34 34.0 +2.2
baz=133
Q14A Sevier Lake (B 133.43 37 ⇑P PKPdf 14 34 33.6 +1.6
baz=134
O17A Robinson Place 134.12 34 ⇑P PKPdf 14 34 34.7 +1.5
baz=134,SNR=9.0
GMRC Granite Mounta 134.37 44 ⇓P PKPdf 14 34 35.7 +1.8
baz=134
V12A Nelson 134.39 42 ⇓P PKPdf 14 34 35.2 +1.3
baz=134
MSU Marysvale 134.40 37 *e*PKIKP PKPdf 14 34 34.3 +0.5
O18A Roosevelt 134.48 34 ⇓P PKPdf 14 34 35.4 +1.5
baz=135
BELC Belle Mtn. 134.56 45 ⇓P PKPdf 14 34 36.3 +2.0
baz=135
P17A Butcher Ranch, 134.61 35 ⇑P PKPdf 14 34 35.9 +1.7
baz=135
P18A Preston Nutter 134.79 35 ⇑P PKPdf 14 34 36.8 +2.2
baz=135
MONP Monument Peak 134.84 46 ⇓P PKPdf 14 34 36.4 +1.6
baz=135
V13A Grand Canyon W 134.89 41 ⇑P PKPdf 14 34 36.5 +1.7
baz=135
R16A Teasdale 134.96 37 ⇑P PKPdf 14 34 36.6 +1.7
baz=135
IRM Iron Mountain 135.06 44 ⇑P PKPdf 14 34 37.5 +2.3
baz=135
U14A Mt Trumbull 135.08 40 ⇑P PKPdf 14 34 37.2 +2.0
baz=135
Q18A Rafter H Ranch 135.21 35 ⇑P PKPdf 14 34 36.8 +1.5
baz=135
S16A Weppner Ranch, 135.25 38 ⇓P PKPdf 14 34 37.4 +1.9
baz=135
R17A Hanksville Air 135.33 36 ⇓P PKPdf 14 34 37.4 +1.8
baz=136
W13A Hualapai Mount 135.40 42 ⇓P PKPdf 14 34 37.2 +1.4
baz=136
V14A Boquillas Ranc 135.60 41 ⇓P PKPdf 14 34 37.8 +1.6
baz=136
U15A North Rim 135.64 39 ⇑P PKPdf 14 34 37.9 +1.7
baz=136
S17A Black Ridge (B 135.79 37 ⇑P PKPdf 14 34 37.5 +1.1
baz=136
Q19A Hogan Spring (135.80 34 ⇑P PKPdf 14 34 36.9 +0.5
baz=136,SNR=14
R18A Canyonlands Na 135.83 36 ⇑P PKPdf 14 34 37.8 +1.3
baz=136
W14A Seligman 135.86 41 ⇓P PKPdf 14 34 37.9 +1.3
baz=136
V15A Kaibab Nationa 136.09 40 ⇓P PKPdf 14 34 39.0 +1.9
baz=136
T17A Navajo Res., N 136.21 38 ⇓P PKPdf 14 34 38.7 +1.4
baz=136
S18A Hurst Farm, Bl 136.24 36 ⇓P PKPdf 14 34 38.1 +0.8
baz=136
PV10 Paradox Valley 136.33 35 *e*PKPdf PKPdf 14 34 38.1 +0.7
X14A Yava 136.43 42 ⇑P PKPdf 14 34 38.7 +1.0
baz=137
U16A Tuba City 136.55 39 ⇓P PKPdf 14 34 38.5 +0.6
baz=137
T18A Mexican Hat 136.68 37 ⇓P PKPdf 14 34 39.0 +0.9
baz=137
S19A Harvey Farm, M 136.70 36 ⇑P PKPdf 14 34 39.3 +1.1
baz=137
Y15A Casa Rosa Ranc 137.10 42 ⇓P PKPdf 14 34 40.3 +1.3
baz=137
X16A Lo Mia Camp, P 137.42 41 ⇑P PKPdf 14 34 41.3 +1.7
baz=138
V18A Ganado 137.57 38 ⇓P PKPdf 14 34 41.3 +1.5
baz=138
W18A Petrified Fore 138.08 39 ⇓P PKPdf 14 34 41.8 +1.1
baz=138
V19A Window Rock 138.12 38 ⇓P PKPdf 14 34 40.8 0.0
baz=138
Y17A Roosevelt 138.25 42 ⇓P PKPdf 14 34 42.8 +1.7
baz=138
X19A St. Johns 138.80 39 ⇓P PKPdf 14 34 43.4 +1.3
baz=139
117A Oracle 139.00 43 ⇑P PKPdf 14 34 42.9 +0.4
baz=139
Y19A Nutrioso 139.12 40 ⇓P PKPdf 14 34 44.1 +1.4
baz=139
217A Green Valley 139.41 44 ⇓P PKPdf 14 34 43.8 +0.5
baz=140
118A Homack Ranch, 139.47 42 ⇑P PKPdf 14 34 43.9 +0.5
baz=140
219A White Tail Can 140.34 42 ⇑P PKPdf 14 34 45.6 +0.6
baz=140
CPUP Villa Florida 143.12 213 PKhKP 14 34 46.6
comp=Z,0.3nm,0.3s,baz=199,slow=12,SNR=3.1
ACSO Alum Creek Sta 144.00 5 *e*PKPdf PKPdf 14 34 48.6 -2.7
WMOK Wichita Mounta 144.50 29 *e*PKIKP PKPdf 14 34 49.9 -2.4
CCM Cathedral Cave 144.52 17 *e*PKIKP PKPdf 14 34 49.7 -2.5
OLIL Olney 144.68 13 *e*PKPdf PKPdf 14 34 50.6 -1.9
MCWV Mont Chateau 144.75 1 *e*PKPdf PKPdf 14 34 51.1 -1.5
FVM French Village 144.81 16 *e*PKIKP PKPdf 14 34 49.8 -3.0
SDMD Soldier's Deli 144.96 357 *e*PKPdf PKPdf 14 34 51.6 -1.3
SIUC Southern Illin 145.38 15 *e*PKPdf PKPdf 14 34 52.0 -1.8
USIN University of 145.51 12 *e*PKPdf PKPdf 14 34 54.2 +0.2
WCI Wyandotte Cave 145.52 10 *e*PKIKP PKPdf 14 34 53.1 -0.9
TXAR Lajitas Array 145.74 41 PKPbc PKPbc 14 34 55.5 +0.5
comp=Z,34nm,1.0s,baz=314,slow=0.9,SNR=130
URVA University of 146.83 358 *e*PKPdf PKPdf 14 34 57.8 +1.5

MIAR	**Mount Ida**	**146.92**	**23**	*e*PKP2	PKPbc	14 34 57.3	-1.0
UALR	**University of**	**147.17**	**21**	*e*PKPdf	PKPdf	14 34 58.4	+1.6
WVT	**Waverly**	**147.23**	**13**	*e*PKP2	PKPdf	14 34 57.1	+0.2
JCT	**Junction City**	**147.29**	**35**	*e*PKP2	PKPbc	14 34 57.6	-1.9
TZTN	**Tazewell**	**147.59**	**7**	*e*PKPdf	PKPbc	14 34 59.2	-0.9
OXF	**Oxford**	**148.35**	**17**	*e*PKIKP	PKPdf	14 34 58.9	+0.1
TKL	**Tuckaleechee C**	**148.43**	**8**	*e*PKP2	PKPbc	14 35 01.5	-0.9
SWET	**Sewanee**	**148.51**	**11**	*e*PKPdf	PKPbc	14 35 01.2	-1.4
CPCT	**Cooper Cave**	**148.53**	**9**	*e*PKPbc	PKPbc	14 35 01.9	-0.8
NATX	**Nacogdoches**	**148.88**	**27**	*e*PKPbc	PKPbc	14 35 04.1	+0.4
HKT	**Hockley**	**149.83**	**30**	*e*PKP2	PKPbc	14 35 06.4	+0.3
JSC	**Jenkinsville**	**150.05**	**4**	*e*PKP2	PKPbc	14 35 05.8	-0.7
VBMS	**Vicksburg**	**150.12**	**20**	*e*PKPbc	PKPbc	14 35 06.8	+0.1
LRAL	**Lakeview Retre**	**150.38**	**14**	*e*PKPbc	PKPbc	14 35 06.4	-0.9

*NNC **14** 14:15:58.3±3.7, 44.05N×86.43E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=33.5km s-min=20.7km az=120.0*
*ISCJB **14** 14:15:59.1±0.8, 44.1N±0.1×8609E±008, h10km, Error ellipse: s-maj=19.1km s-min=6.1km az=19.3*
*BJI **14** 14:15:59.6, 4374N×8606E, h14km, ML3.7*
ISC 14 14:16:04.0±0.7, **440N**±01×**8623E**±010, **h63**km±17km, **n10, σ1§32/13, 5C-7D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**1.08**	**101**	⇓*i*Pg	**Pn**	**14 16 23.5**	**+0.3**
WMQ				SG	**Sn**	**14 16 40.0**	**+3.2**
WMQ				Smax			
	comp=N,1μm,0.4s						
WMQ				Smax			
	comp=E,1μm,0.5s						
MK31	**Makanchi Array**	**3.91**	**316**	⇑Pn	**Pn**	**14 17 01.6**	**+0.2**
	comp=E,12nm,0.6s,baz=136,slow=14,SNR=128						
MK31				Pg	**Pn**	**14 17 10.7**	**+9.3**
	comp=E,38nm,0.5s,baz=133,slow=16,SNR=41						
MK31				⇑Lg		14 18 05.4	
	comp=E,48nm,0.6s,baz=130,slow=27,SNR=3.0						
TKM2	**Tokmak 2**	**7.81**	**265**	⇓Pn	**Pn**	**14 17 54.6**	**-0.3**
	comp=E,4.4nm,1.2s						
TKM2				⇑Lg		14 20 08.1	
	comp=E,17nm,1.1s						
KURBB	**Kurchatov Arra**	**8.40**	**324**	⇓Pn	**Pn**	**14 18 02.4**	**-0.5**
	comp=E,2.0nm,0.8s,baz=130,slow=14						
KURBB				⇓Lg		14 20 29.4	
	comp=E,14nm,0.7s,baz=145,slow=32						
KURK	**Kurchatov**	**8.44**	**325**	⇑Pn	**Pn**	**14 18 02.4**	**-0.9**
	comp=E,6.4nm,0.8s						
KURK				⇑Lg		14 20 27.5	
	comp=E,47nm,1.0s						
GTA	**Gaotai**	**11.15**	**110**	*e*P	**Pn**	**14 18 40.1**	**-0.5**
GTA				AP		14 18 47.0	
GTA				XP		14 18 49.5	
GTA				S	**Sn**	**14 20 41.4**	**-2.2**
KK31	**Karatay Array**	**11.45**	**271**	⇓P	**Pn**	**14 18 45.0**	**+0.5**
	comp=E,0.4nm,0.5s,baz=52,slow=6.3,SNR=3.9						
VOSK	**Vostochnaya**	**13.32**	**316**	⇓P	**Pn**	**14 19 07.6**	**-2.4**
	comp=E,3.6nm,0.7s						
BVA0	**Borovoye Array**	**13.79**	**316**	⇓P	**Pn**	**14 19 17.8**	**+1.5**
	comp=E,0.2nm,0.6s,baz=123,slow=13						
NB2	**NORSAR Subarra**	**45.90**	**319**	P	**P**	**14 24 21.4**	**+1.7**
	comp=Z,2.6nm,0.7s,baz=73,slow=7.9						

*IDC **14** 14:17:19.5±1.6, 689S×128.45E, h0km, mb4.3/3, mb1 4.0/5, mb1mx3.8/15, mbtmp3.9/5, ML3.2/2, Error ellipse: s-maj=179.0km s-min=28.1km az=68.0*
*ISCJB **14** 14:17:21.4±1.2, 76S±03×126.4E±0.5, h33km, mb4.8/11, Error ellipse: s-maj=77.0km s-min=15.3km az=148.7*
ISC 14 14:17:23.8±1.2, **76S**±03×**126.3E**±0.5, **h35**km, **n14**, **σ0§74**/14, **mb4.8**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.49**	**148**	Pn	**Pn**	**14 20 40.6**	**-5.8**
	0.1nm,0.3s,baz=330,slow=14,SNR=4.4						
ASAR	**Alice Springs**	**17.51**	**156**	P	**Pn**	**14 21 25.3**	**0.0**
	0.1nm,0.3s,baz=343,slow=11,SNR=18						
ODAN	**Odare**	**50.99**	**314**	*e*P	**P**	**14 26 21.5**	**-0.9**
	5.0nm,0.4s,mb4.8						
RAMN	**Ramite**	**51.61**	**313**	*e*P	**P**	**14 26 27.0**	**-0.1**
	14nm,0.5s,mb5.1						
JIRN	**Jiri**	**52.32**	**314**	*e*P	**P**	**14 26 31.8**	**-0.6**
	10nm,0.4s,mb5.1						
GUN	**Gumba**	**52.69**	**314**	*e*P	**P**	**14 26 34.6**	**-0.5**
	14nm,0.4s,mb5.3						
KKN	**Kakani**	**53.05**	**313**	*e*P	**P**	**14 26 37.5**	**-0.3**
DMN	**Daman**	**53.07**	**313**	*e*P	**P**	**14 26 37.9**	**0.0**
	6.6nm,0.6s,mb4.8						
GKN	**Gorkha**	**53.64**	**313**	*e*P	**P**	**14 26 42.2**	**+0.1**
	6.2nm,0.3s,mb5.0						
KOLN	**Koldanda**	**54.26**	**312**	*e*P	**P**	**14 26 47.8**	**+1.1**
	9.1nm,0.5s,mb5.0						
DANN	**Dangsing**	**54.47**	**313**	*e*P	**P**	**14 26 48.9**	**+0.7**
	22nm,0.5s,mb5.3						
SONM	**Songino Array**	**57.98**	**344**	P	**P**	**14 27 12.4**	**-0.4**
	1.6nm,0.6s,mb4.2,baz=164,slow=7.9,SNR=4.9						
MKAR	**Makanchi Array**	**66.82**	**329**	P	**P**	**14 28 15.3**	**+3.3**
	2.1nm,0.4s,mb4.5,baz=128,slow=6.2,SNR=11						
KURK	**Kurchatov**	**71.21**	**330**	P	**P**	**14 28 44.6**	**+5.5**
	2.0nm,0.4s,mb4.4,baz=134,slow=5.7,SNR=6.3						

*THR **14** 14:35:38.7±0.4, 2769N×5650E, h14km±4km, ML3.2*
*ISCJB **14** 14:35:41.4±0.8, 2756N±007×561E±0.1, h35km±16km, Error ellipse: s-maj=21.3km s-min=8.2km az=22.0*
ISC 14 14:35:42.5±0.9, **2751N**±006×**563E**±01, **h32**km±5km, **n9, σ1§11/11, 1C-2D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.15**	**223**	*e*Pg	**Pb**	**14 35 47.0**	**-1.4**
BNDS				*e*Sg	**Sb**	**14 35 53.4**	**+0.9**
BNDS				AML	AML	14 35 59.3	
	comp=N,2μm,0.2s						
BANOM	**Banah**	**1.58**	**180**	⇓P	**Pn**	**14 36 08.4**	**+0.2**
	SNR=53						
KRBR	**Kerman**	**2.50**	**9**	*e*Pn	**Pn**	**14 36 18.6**	**-2.3**
KRBR				*e*Sg	**Sn**	**14 36 51.1**	**+0.8**
KRBR				AML	AML	14 36 53.3	
	comp=E,138nm,0.4s						
KRBR				AML	AML	14 36 54.5	
	comp=N,124nm,0.6s						
HATD	**Hatta, Dubai**	**2.67**	**183**	⇓P	**Pn**	**14 36 23.8**	**+0.5**
ASHO	**Ashiyiah**	**2.82**	**184**	⇑P	**Pn**	**14 36 25.8**	**+0.5**
	SNR=14						
GHIR	**Ghir-Karzin**	**3.02**	**286**	*e*Pn	**Pn**	**14 36 30.3**	**+2.3**
GHIR				AML	AML	14 37 32.7	
	comp=E,53nm,0.6s						
BTHS		**5.99**	**236**	P	**Pn**	**14 37 08.5**	**-0.4**
HRDDS		**7.68**	**235**	S	**Sn**	**14 38 57.1**	**-0.9**
HRDDS		**7.68**	**235**	P	**Pn**	**14 37 31.9**	**-0.2**

*IDC **14** 14:43:06.0±3.3, 309S×100.19E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.6/19, mbtmp3.6/6, Error ellipse: s-maj=134.9km s-min=20.1km az=57.0*
*ISCJB **14** 14:43:09.6±2.0, 29S±03×1004E±0.3, h33km, mb3.6/6, Error ellipse: s-maj=61.7km s-min=15.5km az=141.1*
*NEIC **14** 14:43:11.7±1.5, 297S×10036E, h35km, mb3.9/1, Error ellipse: s-maj=47.7km s-min=12.3km az=52.0*
ISC 14 14:43:12.2±1.9, **29S**±03×**1005E**±03, **h35**km, **n8**, **σ0§67**/7, **mb3.6**/6, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**19.32**	**97**	P	**Pn**	**14 47 35.5**	**-0.2**
	2.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**21.27**	**356**	P	**P**	**14 47 54.9**	**-0.7**
	0.8nm,0.8s,mb3.1,baz=187,slow=9.4,SNR=5.3						
WRA	**Warramunga Arr**	**37.11**	**120**	P	**P**	**14 50 19.8**	**+0.2**
	0.4nm,0.6s,mb3.5,baz=306,slow=9.1,SNR=3.7						
ASAR	**Alice Springs**	**38.32**	**126**	P	**P**	**14 50 29.6**	**-0.2**
	0.2nm,0.5s,mb3.1,baz=298,slow=7.6,SNR=7.3						
SONM	**Songino Array**	**50.78**	**5**	P	**P**	**14 52 10.3**	**+1.5**
	0.9nm,0.6s,mb3.9,baz=182,slow=9.4,SNR=7.5						
MKAR	**Makanchi Array**	**52.02**	**344**	P	**P**	**14 52 17.6**	**-0.6**
	1.4nm,0.7s,mb4.0,baz=151,slow=8.1,SNR=14						
ZALV	**Zalesovo Beam**	**58.13**	**349**	P	**P**	**14 53 02.2**	**+0.1**
	1.4nm,0.8s,mb4.1,baz=158,slow=7.6,SNR=5.8						
TXAR	**Lajitas Array**	**145.09**	**39**	PKPbc	PKPbc	15 02 46.9	+0.8
	0.5nm,0.6s,baz=280,slow=1.6,SNR=7.6						

IDC 14 14:45:44.0±6.1, **057S×10213E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, Error ellipse: s-maj=345.4km s-min=28.4km az=53.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.94**	**123**	P	P	14 52 55.1	+0.1
	0.4nm,0.7s,baz=302,slow=8.8,SNR=6.2						
ASAR	**Alice Springs**	**38.43**	**129**	P	P	14 53 07.4	-0.2
	0.1nm,0.5s,baz=304,slow=7.9,SNR=4.3						
MKAR	**Makanchi Array**	**50.28**	**342**	P	P	14 54 42.1	0.0
	0.5nm,0.4s,baz=152,slow=7.1,SNR=5.8						

*IDC **14** 15:32:02.8±1.2, 3286N×139.15E, h0km, mb3.9/2, mb1 4.0/4, mb1mx3.6/22, mbtmp3.7/4, ML3.3/2, Error ellipse: s-maj=25.0km s-min=14.6km az=139.0*
*ISCJB **14** 15:32:04.3±0.8, 3348N±004×14046E±008, h67km±8km, mb4.0/2, Error ellipse: s-maj=10.5km s-min=6.5km az=0.2*
*JMA **14** 15:32:05.5±0.1, 3355N×14046E, h56km±3km, M3.4*
*NEIC **14** 15:32:05.6, 3355N×14046E, h56km, MG3.4(JMA), After JMA.*
ISC 14 15:32:05.5±0.8, **3349N**±004×**14047E**±008, **h57**km±9km, **n17, σ0§87/28, mb4.0/2, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.67**	**235**	P	**Pn**	**15 32 19.4**	**+0.3**
JHJ2				S	**Sn**	**15 32 29.3**	**+0.3**
JHJ	**Hachijo jima 2**	**0.68**	**237**	Pn	**Pn**	**15 32 19.6**	**+0.2**
	633nm,0.3s,baz=240,slow=9.0,SNR=658						
JHJ				Sn	**Sn**	**15 32 29.2**	**-0.2**
	2μm,0.3s,baz=66,slow=19,SNR=136						
JMY	**Miyakejima3**	**0.98**	**306**	P	**Pn**	**15 32 23.0**	**-0.1**
JMY				*e*S	**Sn**	**15 32 35.3**	**-0.9**
BSO1	**Boso 1**	**1.23**	**20**	P	**Pn**	**15 32 25.8**	**-0.7**
BSO1				S	**Sn**	**15 32 41.6**	**-0.5**
BSO3	**Boso 3**	**1.30**	**2**	P	**Pn**	**15 32 27.4**	**0.0**
JKO	**Kozu shima**	**1.30**	**302**	P	**Pn**	**15 32 27.4**	**0.0**
JKO				S	**Sn**	**15 32 43.8**	**-0.1**
JIM2	**Oshima 3**	**1.49**	**325**	P	**Pn**	**15 32 29.7**	**-0.3**
JIZS	**Izushimoda**	**1.80**	**313**	P	**Pn**	**15 32 34.4**	**+0.3**
JIZS				*e*S	**Sn**	**15 32 55.1**	**-0.7**
KTJJ	**Kamata 2**	**1.84**	**321**	P	**Pn**	**15 32 34.7**	**0.0**
KTJJ				S	**Sn**	**15 32 55.7**	**-1.2**
JOD2	**Odawara 2**	**2.10**	**327**	P	**Pn**	**15 32 38.3**	**+0.1**
JOD2				*e*S	**Sn**	**15 33 01.3**	**-1.9**
MJAR	**Matsushiro Arr**	**3.56**	**329**	Pn	**Pn**	**15 32 59.9**	**+1.7**
	3.6nm,0.3s,baz=166,slow=12,SNR=44						
MJAR				Sn	**Sn**	**15 33 40.0**	**+1.0**
	2.6nm,0.3s,baz=21,slow=31,SNR=7.8						
MAJO	**Matsushiro**	**3.56**	**329**	*e*Pn	**Pn**	**15 32 59.4**	**+1.2**
MAJO				*e*Sn	**Sn**	**15 33 43.9**	**+4.8**
MAT	**Matsushiro**	**3.56**	**329**	P	**Pn**	**15 32 59.5**	**+1.3**
MAT				S	**Sn**	**15 33 42.0**	**+3.0**
ASAJ	**Asahikawa**	**10.73**	**8**	Pn	**Pn**	**15 34 44.5**	**+8.1**
	0.2nm,0.3s,baz=184,slow=11,SNR=4.5						
KSRS	**Korea Array**	**10.96**	**295**	Pn	**Pn**	**15 34 33.3**	**-6.2**
	0.2nm,0.3s,baz=113,slow=13,SNR=5.8						
WRA	**Warramunga Arr**	**53.46**	**187**	P	**P**	**15 41 19.1**	**-0.8**
	1.0nm,0.5s,mb4.0,baz=3.2,slow=7.7,SNR=25						
ASAR	**Alice Springs**	**57.18**	**187**	P	**P**	**15 41 46.1**	**-0.5**
	0.7nm,0.5s,mb4.0,baz=2.1,slow=6.4,SNR=21						

MAN 14 15:39:25, 1129N×12456E, h28km, mb3.6, ML2.3, MS1.8, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.24**	**168**	*e*P	Pb	15 39 33.2	+1.7
OCLP				*e*S	Sb	15 39 40.5	+4.6
PLP	**Palo**	**0.43**	**107**	⇓*i*P	Pb	15 39 36.1	+1.9
PLP				*i* S	Sb	15 39 44.5	+4.0
BESP	**Borongan**	**0.92**	**70**	*e*P	Pn	15 39 43.1	+1.0
LLP	**Lapu-Lapu**	**1.13**	**211**	*e*S	Sn	15 40 03.4	+3.9
MSLP	**Maasin**	**1.19**	**165**	*e*P	Pn	15 39 50.5	+4.8
CNP	**Catarman**	**1.22**	**5**	*e*P	Pn	15 39 45.9	-0.3
CNP				*e*S	Sn	15 40 02.9	+1.1
GUIM	**Jordan**	**2.04**	**251**	*e*P	Pn	15 39 59.0	+1.5

*IDC **14** 15:46:24.7±1.8, 436S×10140E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.1/20, mbtmp4.2/11, Error ellipse: s-maj=60.9km s-min=14.7km az=59.0*
*ISCJB **14** 15:46:26.6±0.9, 45S±0.1×1012E±0.2, h33km, mb4.3/26, Error ellipse: s-maj=30.0km s-min=9.1km az=145.4*
*DJA **14** 15:46:26, 500S×10021E, h68km, MLv4.8/4*
*MOS **14** 15:46:27.0±0.7, 449S×10120E, h38km, mb4.7/10, Error ellipse: s-maj=19.0km s-min=11.1km az=100.4*
*BJI **14** 15:46:27.0, 440S×10130E, h35km, mB5.1, mb4.9*
*NEIC **14** 15:46:28.9±0.9, 442S×10128E, h35km, mb4.4/8, Error ellipse: s-maj=35.7km s-min=8.0km az=56.0*
ISC 14 15:46:29.0±0.9, **44S**±01×**1013E**±02, **h35**km, **n38**, **σ0§83**/35, **mb4.3**/26, **3C-3D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**22.87**	**354**	*e*P	**P**	**15 51 29.4**	**-0.1**
	3.4nm,0.6s,mb4.0						
CMAR	**Chiang Mai Arr**	**22.87**	**354**	P	**P**	**15 51 28.6**	**-0.8**
	6.7nm,0.8s,mb4.1,baz=187,slow=8.7,SNR=36						
CHTO	**Chiang Mai**	**23.22**	**354**	*e*P	**P**	**15 51 32.7**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
CHTO	**Chiang Mai**	**23.22**	**354**	*e*P	**P**	**15 51 32.7**	**-0.5**
	comp=Z,5.6nm,1.0s,mb4.0						
FITZ	**Fitzroy Crossi**	**27.45**	**122**	*e*P	**P**	**15 52 11.1**	**-0.7**
	comp=Z,7.0nm,1.0s,mb4.2						
FITZ	**Fitzroy Crossi**	**27.45**	**122**	P	**P**	**15 52 11.2**	**-0.7**
	comp=Z,1.0nm,0.5s,mb3.6,baz=193,slow=20,SNR=12						
WRA	**Warramunga Arr**	**35.71**	**118**	P	**P**	**15 53 24.1**	**-0.4**
	comp=Z,2.4nm,0.9s,mb4.1,baz=292,slow=9.8,SNR=9.9						
WRAB	**Tennant Creek**	**35.72**	**118**	*e*P	**P**	**15 53 24.0**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
WRAB	**Tennant Creek**	**35.72**	**118**	*e*P	**P**	**15 53 24.0**	**-0.5**
	comp=Z,4.4nm,0.7s,mb4.5						
ASAR	**Alice Springs**	**36.83**	**124**	P	**P**	**15 53 34.3**	**+0.3**
	comp=Z,0.5nm,0.7s,mb3.4,baz=294,slow=8.0,SNR=5.3						
GTA	**Gaotai**	**43.66**	**358**	*e*P	**P**	**15 54 31.5**	**+1.3**
GTA				AP	pP	15 54 36.3	-4.3
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb4.1						
CTA	**Charters Tower**	**46.46**	**114**	P	**P**	**15 54 53.6**	**+0.7**
	comp=Z,1.6nm,0.5s,mb4.2,baz=234,slow=8.7,SNR=2.7						
STKA	**Stephens Creek**	**46.61**	**131**	P	**P**	**15 54 54.5**	**+0.6**
	comp=Z,2.1nm,0.9s,mb4.1,baz=321,slow=13,SNR=2.4						
KSRS	**Korea Array**	**48.52**	**28**	P	**P**	**15 55 08.8**	**+0.3**
	comp=Z,3.4nm,0.8s,mb4.4,baz=220,slow=7.8,SNR=12						
KSRS	**Korea Array**	**48.52**	**28**	P	**P**	**15 55 08.9**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
SONM	**Songino Array**	**52.25**	**4**	P	**P**	**15 55 37.9**	**+1.3**
	comp=Z,7.9nm,0.8s,mb4.7,baz=184,slow=9.3,SNR=51						
ULN	**Ulaanbaatar**	**52.34**	**5**	*e*P	**P**	**15 55 38.2**	**+1.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
ULN	**Ulaanbaatar**	**52.34**	**5**	*e*P	**P**	**15 55 38.2**	**+1.0**
	comp=Z,6.0nm,1.0s,mb4.5						
TKM2	**Tokmak 2**	**52.56**	**336**	*e*P	**P**	**15 55 39.5**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
TKM2	**Tokmak 2**	**52.56**	**336**	*e*P	**P**	**15 55 39.5**	**+0.5**
	comp=Z,2.5nm,0.7s,mb4.2						
CN2	**Changchun**	**52.74**	**22**	*e*P	**P**	**15 55 39.5**	**-0.8**
CN2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
EKS2	**Erkin-Say**	**53.09**	**335**	*e*P	**P**	**15 55 43.3**	**+0.4**
	comp=Z,3.9nm,0.8s,mb4.4						
MJAR	**Matsushiro Arr**	**53.42**	**37**	P	**P**	**15 55 44.5**	**-1.0**
	comp=Z,2.4nm,0.7s,mb4.2,baz=223,slow=7.6,SNR=8.3						
MKAR	**Makanchi Array**	**53.70**	**344**	P	**P**	**15 55 48.0**	**+0.6**
	comp=Z,3.3nm,0.7s,mb4.3,baz=143,slow=8.3,SNR=24						
MKAR	**Makanchi Array**	**53.70**	**344**	P	**P**	**15 55 48.0**	**+0.6**
ZAK	**Zakamensk**	**54.63**	**2**	*e*P	**P**	**15 55 51.3**	**-2.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
HIA	**Hailar**	**55.86**	**15**	⇑*e*P	**P**	**15 56 03.4**	**+0.5**
KURK	**Kurchatov**	**58.29**	**343**	⇓*e*P	**P**	**15 56 20.6**	**+0.5**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
KURK	**Kurchatov**	**58.29**	**343**	*e*P	**P**	**15 56 18.7**	**-1.4**
	comp=Z,5.1nm,0.9s,mb4.5						
ZALV	**Zalesovo Beam**	**59.79**	**349**	P	**P**	**15 56 30.4**	**0.0**
	comp=Z,4.4nm,0.7s,mb4.6,baz=183,slow=5.1,SNR=19						
YSS	**Yuzh-Sakhalins**	**62.91**	**31**	⇓*e*P	**P**	**15 56 51.7**	**+0.1**
YSS				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.9						
YAK	**Yakutsk**	**69.79**	**14**	⇑*e*P	**P**	**15 57 35.2**	**-0.2**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
ARU	**Arti**	**69.93**	**336**	⇓*e*P	**P**	**15 57 36.4**	**0.0**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
PET	**Petropavlovsk**	**74.74**	**32**	⇑*e*P	**P**	**15 58 06.2**	**+1.0**
PET				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.0						
OBN	**Obninsk**	**79.52**	**328**	*e*P	**P**	**15 58 30.4**	**-1.5**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
WMOK	**Wichita Mounta**	**144.60**	**29**	*e*PKIKP	PKPdf	16 06 00.5	-1.9
TXAR	**Lajitas Array**	**145.80**	**41**	PKPbc	PKPbc	16 06 06.5	+1.4
	comp=Z,2.5nm,0.8s,baz=291,slow=0.9,SNR=29						
JCT	**Junction City**	**147.37**	**35**	*e*PKP2	PKPab	16 06 10.5	-1.0

IDC 14 15:46:33.2±3.5, **434S×10147E, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.0/20, mbtmp4.2/7, Error ellipse: s-maj=145.3km s-min=19.4km az=56.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.79**	**354**	P	P	15 51 37.8	+0.2
	2.4nm,0.8s,baz=183,slow=8.5,SNR=6.7						
FITZ	**Fitzroy Crossi**	**27.31**	**122**	P	P	15 52 19.2	-0.7
	2.3nm,0.6s,baz=309,slow=9.9,SNR=9.1						
WRA	**Warramunga Arr**	**35.57**	**119**	P	P	15 53 32.2	-0.3
	3.6nm,0.8s,baz=294,slow=9.7,SNR=12						
ASAR	**Alice Springs**	**36.71**	**125**	P	P	15 53 42.3	0.0
	3.0nm,0.8s,baz=300,slow=7.9,SNR=20						
CTA	**Charters Tower**	**46.30**	**114**	*e*P	P	15 55 01.1	0.0
	4.1nm,0.8s						
CTA	**Charters Tower**	**46.30**	**114**	P	P	15 55 01.3	+0.2
	5.3nm,0.8s,baz=306,slow=4.4,SNR=5.3						
STKA	**Stephens Creek**	**46.51**	**131**	P	P	15 55 03.0	+0.4
	2.3nm,0.6s,baz=308,slow=9.6,SNR=4.9						
MKAR	**Makanchi Array**	**53.67**	**344**	P	P	15 55 55.8	-0.8
	1.7nm,0.7s,baz=146,slow=8.8,SNR=4.9						
TXAR	**Lajitas Array**	**145.58**	**41**	PKPbc	PKPbc	16 06 14.8	+0.4
	1.7nm,0.7s,baz=266,slow=1.2,SNR=10						

*IDC **14** 16:17:51.6±0.9, 559S×15433E, h116km±6km, mb4.0/15, mb1 4.1/16, mb1mx4.1/21, mbtmp4.1/16, MS3.8/1, Ms1 3.8/1, ms1mx2.8/20, Error ellipse: s-maj=19.0km s-min=12.5km az=87.0*
*ISCJB **14** 16:17:55.8±2.5, 566S±008×1543E±0.1, h171km±23km, mb4.3/21, Error ellipse: s-maj=17.3km s-min=12.9km az=152.9*
*BJI **14** 16:17:56.3, 484S×154.16E, h140km, mB4.9, mb4.7*
*NEIC **14** 16:17:56.9±2.0, 566S×15426E, h167km±18km, mb4.6/8, Error ellipse: s-maj=12.2km s-min=9.7km az=60.0*
ISC 14 16:17:56.6±2.4, **567S**±008×**15429E**±010, **h163**km±22km, **n37, σ0§65/32, mb4.3/21, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.99**	**242**	*e*Pn	**Pn**	**16 19 50.0**	**+0.3**
	36nm,0.5s						
CTA	**Charters Tower**	**16.33**	**208**	*e*P	**Pn**	**16 21 37.8**	**+1.1**
	14nm,0.6s						
CTA	**Charters Tower**	**16.33**	**208**	P	**Pn**	**16 21 37.1**	**+0.4**
	1.2nm,0.3s,baz=26,slow=15,SNR=25						
CTAO	**Charters Tower**	**16.33**	**208**	*e*P	**Pn**	**16 21 37.2**	**+0.5**
	49nm,0.6s						
DZM	**Mont Dzumac**	**20.10**	**145**	*e*P	**P**	**16 22 17.1**	**-0.7**
DZM	**Mont Dzumac**	**20.10**	**145**	*e*P	**P**	**16 22 16.6**	**-1.2**
WRAB	**Tennant Creek**	**24.02**	**232**	*e*P	**P**	**16 22 56.5**	**-0.1**
	11nm,0.7s,mb4.5						
WB2	**Warramunga Arr**	**24.02**	**232**	*e*P	**P**	**16 22 56.4**	**-0.3**
WRA	**Warramunga Arr**	**24.03**	**232**	P	**P**	**16 22 57.1**	**+0.3**
	10nm,0.7s,mb4.5,baz=56,slow=9.6,SNR=117						
ASAR	**Alice Springs**	**26.56**	**226**	P	**P**	**16 23 19.6**	**0.0**
	1.7nm,0.5s,mb3.9,baz=56,slow=9.4,SNR=57						
STKA	**Stephens Creek**	**28.66**	**203**	P	**P**	**16 23 37.6**	**-0.4**
	1.8nm,0.7s,mb3.9,baz=51,slow=11,

NLC				*i* S	S	16 27 31.5	-2.3
SPN	**Mys Shipunski**	**3.81**	**58**	*e*P	P	16 26 37.8	+2.2
SPN				*i* S	S	16 27 35.1	-3.1
ZLN	**Zelenaya**	**6.05**	**35**	P	P	16 26 58.0	+2.5
KRSR	**Krestovskiy**	**6.13**	**32**	P	P	16 26 58.1	+1.9
KBTR	**Krutoberegovo**	**6.97**	**41**	P	P	16 27 05.8	+1.3
KBTR				*i* S	S	16 28 25.1	-6.1

IDC ***14*** *16:29:15.7±0.8, 334S×13108E, h0km, mb3.9/9, mb1 4.1/11, mb1mx4.1/16, mbtmp4.1/11, ML4.2/2, MS3.3/4, Ms1 3.3/4, ms1mx3.1/21, Error ellipse: s-maj=29.5km s-min=16.2km az=70.0*
ISCJB ***14*** *16:29:16.6±0.6, 367S±006×1312E±0.1, h33km, mb4.0/11, MS3.4/2, Error ellipse: s-maj=17.0km s-min=7.2km az=167.2*
NEIC ***14*** *16:29:18.5±0.5, 3705S×13119E, h35km, mb4.2/6, Error ellipse: s-maj=13.0km s-min=6.8km az=79.0*
DJA ***14*** *16:29:21, 3.15S×13091E, h109km, MLv4.2/4*
ISC 14 16:29:18.5±0.6, 3705S±005×1312E±01, h35km, n26, σ0°70/26, mb4.0/11, MS3.4/2, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**9.89**	**229**	Pn	**Pn**	**16 31 43.1**	**+4.8**
	6.0nm,0.3s,baz=7.8,slow=0.9,SNR=12						
BATI				LR	LR	16 35 45.1	
	comp=Z,181nm,21.3s,baz=252,slow=39						
KAPI	**Kappang**	**11.51**	**263**	Pn	**Pn**	**16 32 00.6**	**+0.2**
	0.5nm,0.3s,baz=68,slow=19,SNR=3.3						
FITZ	**Fitzroy Crossi**	**15.32**	**200**	*e*P	**Pn**	**16 32 51.9**	**-0.3**
	5.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**15.32**	**200**	Pn	**Pn**	**16 32 53.2**	**+1.0**
	0.6nm,0.3s,baz=46,slow=12,SNR=24						
FITZ				LR	LR	16 39 21.7	
	comp=Z,75nm,21.0s,baz=247,slow=39						
WRAB	**Tennant Creek**	**16.42**	**170**	*e*Pn	**Pn**	**16 33 06.3**	**-0.1**
	14nm,0.9s						
WRAB				*e*Sn	**Sn**	**16 35 56.7**	**-11**
WRA	**Warramunga Arr**	**16.43**	**170**	Pn	**Pn**	**16 33 06.9**	**+0.4**
	0.6nm,0.3s,baz=350,slow=13,SNR=17						
WRA				Sn	**Sn**	**16 36 06.8**	**-1.0**
	0.6nm,0.3s,baz=0.1,slow=22,SNR=5.5						
WB2	**Warramunga Arr**	**16.43**	**170**	*e*P	**Pn**	**16 33 06.3**	**-0.2**
ASAR	**Alice Springs**	**20.02**	**173**	P	**P**	**16 33 54.2**	**+5.8**
	14nm,0.6s,baz=350,slow=10,SNR=240						
ASAR				S	**S**	**16 37 32.9**	**+1.2**
	0.6nm,0.5s,baz=358,slow=29,SNR=4.6						
ASAR	**Alice Springs**	**20.02**	**173**	P	**P**	**16 33 54.2**	**+5.8**
ASAR				S	**S**	**16 37 32.9**	**+1.2**
MBWA	**Marble Bar**	**20.64**	**212**	*e*P	**P**	**16 33 55.4**	**+0.3**
CTA	**Charters Tower**	**21.91**	**139**	P	**P**	**16 34 15.4**	**+6.6**
	2.2nm,0.5s,mb3.9,baz=319,slow=13,SNR=4.3						
FORT	**Forrest**	**27.10**	**186**	*e*P	**P**	**16 35 02.4**	**+4.3**
	18nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**29.68**	**162**	*e*P	**P**	**16 35 26.0**	**+4.9**
	9.4nm,2.0s,mb4.2						
STKA	**Stephens Creek**	**29.68**	**162**	P	**P**	**16 35 26.0**	**+4.9**
	1.5nm,0.4s,mb4.0,baz=339,slow=9.8,SNR=12						
CMAR	**Chiang Mai Arr**	**38.67**	**306**	P	**P**	**16 36 38.6**	**-0.5**
	1.0nm,0.9s,mb3.5,baz=136,slow=7.0,SNR=7.9						
CHTO	**Chiang Mai**	**38.86**	**306**	*e*P	**P**	**16 36 40.0**	**-0.7**
	4.0nm,0.8s,mb4.2						
KSRS	**Korea Array**	**41.06**	**356**	P	**P**	**16 36 58.9**	**+0.2**
	0.4nm,0.3s,mb3.5,baz=176,slow=9.2,SNR=4.5						
KSRS				LR	LR	16 53 01.6	
	comp=Z,30nm,20.3s,MS3.1,baz=220,slow=35						
SONM	**Songino Array**	**55.74**	**340**	P	**P**	**16 38 53.1**	**+1.5**
	1.4nm,1.1s,mb3.9,baz=155,slow=8.2,SNR=4.9						
SONM				LR	LR	17 06 04.2	
	comp=Z,61nm,18.4s,MS3.7,baz=241,slow=40						
PETK	**Petropavlovsk-**	**60.83**	**18**	P	**P**	**16 39 27.2**	**+0.1**
	2.9nm,0.9s,mb4.4,baz=207,slow=7.2,SNR=2.7						
MKAR	**Makanchi Array**	**66.18**	**326**	P	**P**	**16 40 02.1**	**-0.4**
	0.6nm,0.6s,mb3.8,baz=112,slow=7.7,SNR=5.4						
ZALV	**Zalesovo Beam**	**69.20**	**333**	P	**P**	**16 40 20.3**	**-1.2**
	0.3nm,0.3s,mb3.8,baz=92,slow=3.7,SNR=4.4						
KURK	**Kurchatov**	**70.37**	**328**	*e*P	**P**	**16 40 29.1**	**+0.3**
	4.1nm,1.0s,mb4.3						
TORD	**Torodi Ar. Bea**	**129.28**	**284**	PKP	PKPdf	16 48 25.4	+1.2
	0.3nm,0.5s,baz=74,slow=0.9,SNR=2.5						
CPNY	**Central Park**	**136.62**	**21**	PKPdf	PKPdf	16 48 37.8	+0.4
LPAZ	**La Paz**	**152.43**	**137**	PKPbc	PKPbc	16 49 17.0	+5.0
	0.8nm,0.4s,baz=34,slow=6.4,SNR=6.2						
LPAZ	**La Paz**	**152.43**	**137**	PKPbc	PKPbc	16 49 17.0	+5.0

IDC 14 16:37:58.7±2.9, 617S×13101E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.4/14, mbtmp3.3/4, ML3.5/4, MS3.8/1, Ms1 3.8/1, ms1mx2.8/19, Error ellipse: s-maj=59.9km s-min=28.7km az=71.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**8.30**	**241**	Pn	Pn	16 40 02.6	+2.1
	4.7nm,0.3s,baz=127,slow=5.1,SNR=8.8						
FITZ	**Fitzroy Crossi**	**12.97**	**203**	*e*P	Pn	16 41 01.4	-3.0
	5.9nm,1.1s						
FITZ				*e*S	Sn	16 43 16.6	-13
FITZ	**Fitzroy Crossi**	**12.97**	**203**	Pn	Pn	16 41 02.9	-1.5
	0.2nm,0.3s,baz=26,slow=22,SNR=11						
WRA	**Warramunga Arr**	**14.07**	**167**	Pn	Pn	16 41 20.3	+0.9
	0.1nm,0.3s,baz=345,slow=9.6,SNR=8.5						
ASAR	**Alice Springs**	**17.62**	**171**	P	Pn	16 42 05.2	-0.6
	0.1nm,0.3s,baz=354,slow=9.0,SNR=3.8						
NWAO	**Narrogin (SRO)**	**29.55**	**204**	LR	LR	16 56 25.1	
	comp=Z,167nm,19.8s,baz=51,slow=37						
CMAR	**Chiang Mai Arr**	**39.98**	**308**	P	P	16 45 35.2	-0.3
	0.3nm,0.4s,baz=135,slow=7.2,SNR=4.0						

IDC ***14*** *17:36:08.4±2.8, 293S×10029E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.9/19, mbtmp4.0/7, Error ellipse: s-maj=119.4km s-min=17.4km az=58.0*
ISCJB ***14*** *17:36:11.4±1.2, 29S±02×1004E±03, h33km, mb4.2/16, Error ellipse: s-maj=44.8km s-min=10.6km az=147.9*
NEIC ***14*** *17:36:14.4±1.0, 275S×10061E, h35km, mb4.5/9, Error ellipse: s-maj=38.0km s-min=9.0km az=58.0*
ISC 14 17:36:14.7±1.2, 27S±02×1007E±03, h35km, n20, σ1°02/19, mb4.2/16, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.12**	**355**	P	**P**	**17 40 56.5**	**0.0**
	1.9nm,0.7s,mb3.5,baz=187,slow=8.9,SNR=17						
CHTO	**Chiang Mai**	**21.47**	**356**	P	**P**	**17 40 58.6**	**-1.8**
	1.8nm,0.8s,mb3.5						
QIZ	**Qiongzhong**	**23.43**	**22**	P	**P**	**17 41 22.1**	**+1.0**
	15nm,1.4s,mb4.2						
LSA	**Lhasa**	**33.50**	**345**	*e*P	**P**	**17 42 50.8**	**-0.1**
	2.5nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**37.06**	**120**	P	**P**	**17 43 22.2**	**+0.4**
	0.5nm,0.5s,mb3.6,baz=304,slow=9.0,SNR=16						
WRAB	**Tennant Creek**	**37.07**	**120**	*e*P	**P**	**17 43 22.2**	**+0.4**
	6.7nm,1.1s,mb4.4						
ASAR	**Alice Springs**	**38.30**	**126**	P	**P**	**17 43 32.0**	**-0.1**
	0.6nm,0.6s,mb3.5,baz=302,slow=8.2,SNR=10						
CTAO	**Charters Tower**	**47.70**	**115**	P	**P**	**17 44 46.5**	**-1.8**
	6.1nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**48.18**	**132**	P	**P**	**17 44 52.2**	**+0.3**
	2.4nm,0.9s,mb4.2,baz=296,slow=18,SNR=3.0						
STKA	**Stephens Creek**	**48.18**	**132**	P	**P**	**17 44 52.2**	**+0.3**
SONM	**Songino Array**	**50.60**	**5**	P	**P**	**17 45 11.1**	**+1.1**
	5.6nm,0.8s,mb4.6,baz=186,slow=9.4,SNR=32						
ULN	**Ulaanbaatar**	**50.70**	**6**	*e*P	**P**	**17 45 11.3**	**+0.7**
	6.2nm,0.9s,mb4.5						
TKM2	**Tokmak 2**	**50.76**	**336**	P	**P**	**17 45 13.2**	**+1.9**
	3.0nm,0.6s,mb4.4						
EKS2	**Erkin-Say**	**51.30**	**335**	*e*P	**P**	**17 45 18.6**	**+3.3**
	5.0nm,0.7s,mb4.5						
MK31	**Makanchi Array**	**51.90**	**344**	*e*P	**P**	**17 45 19.2**	**-0.6**
MKAR	**Makanchi Array**	**51.90**	**344**	P	**P**	**17 45 19.4**	**-0.4**
	1.8nm,0.5s,mb4.3,baz=151,slow=8.3,SNR=17						
MKAR	**Makanchi Array**	**51.90**	**344**	P	**P**	**17 45 19.4**	**-0.4**
KURK	**Kurchatov**	**56.49**	**343**	*e*P	**P**	**17 45 52.0**	**-1.1**
	4.7nm,0.8s,mb4.6						
ZALV	**Zalesovo Beam**	**58.00**	**349**	P	**P**	**17 46 03.0**	**-0.7**
	2.5nm,0.7s,mb4.4,baz=181,slow=5.7,SNR=11						
TXAR	**Lajitas Array**	**144.87**	**39**	PKPbc	PKPdf	17 55 48.8	0.0
	1.9nm,0.6s,baz=281,slow=0.8,SNR=24						

PRE ***14*** *17:39:00.3±0.8, 2068S×3321E, h5km, ML5.5*
ISCJB ***14*** *17:39:05.2±1.8, 2108S±004×3309E±006, h18km±13km, mb4.2/17, MS4.1/3, Error ellipse: s-maj=10.4km s-min=5.1km az=31.7*
IDC ***14*** *17:39:05.6±0.6, 2076S×3349E, h0km, mb4.1/13, mb1 4.3/15, mb1mx4.1/25, mbtmp4.2/15, ML4.2/2, MS3.8/6, Ms1 3.8/6, ms1mx3.4/26, Error ellipse: s-maj=21.4km s-min=18.9km az=35.0*
NEIC ***14*** *17:39:05.4±0.4, 2105S×3322E, h10km, mb4.6/4, Error ellipse: s-maj=11.0km s-min=8.0km az=154.0*
ISC 14 17:39:06.0±1.7, 2105S±004×3317E±005, h11km±11km, n53, σ1°16/76, mb4.2/17, MS4.1/3, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	**2.96**	**213**	*e*P	**Pn**	**17 39 53.3**	**+0.5**
MOPA				*e*S	**Sn**	**17 40 31.3**	**+3.1**
MOPA				AML	AML	17 40 45.5	
	comp=Z,6μm,0.6s						
MSNA	**Messina**	**3.20**	**246**	*e*P	**Pn**	**17 39 56.2**	**+0.1**
MSNA				*e*S	**Sn**	**17 40 35.7**	**+1.4**
MSNA				AML	AML	17 40 52.1	
	comp=Z,1μm,0.7s						
POGA	**Pongola**	**6.45**	**192**	*e*P	**Pn**	**17 40 41.0**	**+0.1**
POGA				*e*S	**Sn**	**17 41 55.3**	**+0.9**
POGA				AML	AML	17 42 47.6	
	comp=Z,315nm,0.7s						
SLR	**Silverton**	**6.47**	**223**	*e*P	**Pn**	**17 40 41.6**	**+0.4**
SLR				*e*S	**Sn**	**17 41 55.0**	**-0.1**
SLR				AML	AML	17 42 40.6	
	comp=Z,548nm,0.6s						
LSZ	**Lusaka**	**7.44**	**320**	Pn	**Pn**	**17 40 54.3**	**-0.2**
	comp=Z,3.6nm,0.3s,baz=151,slow=14,SNR=23						
LSZ				Sn	**Sn**	**17 42 14.9**	**-4.0**
	comp=Z,33nm,0.3s,baz=182,slow=9.6,SNR=12						
LSZ				Lg		17 42 55.2	
	comp=Z,57nm,0.3s,baz=232,slow=18,SNR=12						
LSZ	**Lusaka**	**7.44**	**320**	*e*Pn	**Pn**	**17 40 53.2**	**-1.3**
LSZ				*e*Sn	**Sn**	**17 42 10.7**	**-8.2**
LSZ				Lg		17 42 55.2	
KSR	**Koster**	**7.48**	**229**	*e*P	**Pn**	**17 40 54.8**	**-0.2**
KSR				*e*S	**Sn**	**17 42 18.8**	**-1.1**
KSR				AML	AML	17 43 06.7	
	comp=Z,322nm,0.9s						
PRYS	**Parys**	**7.90**	**221**	*e*P	**Pn**	**17 41 01.1**	**+0.3**
PRYS				*e*S	**Sn**	**17 42 29.5**	**-0.6**
PRYS				AML	AML	17 43 25.2	
	comp=Z,183nm,0.6s						
LBTB	**Lobatse**	**8.01**	**239**	Pn	**Pn**	**17 41 02.1**	**-0.2**
	comp=Z,8.6nm,0.3s,baz=65,slow=13,SNR=61						
LBTB				Sn	**Sn**	**17 42 31.1**	**-1.9**
	comp=Z,8.5nm,0.3s,baz=142,slow=17,SNR=3.3						
LBTB				Lg		17 43 11.0	
	comp=Z,20nm,0.3s,baz=137,slow=15,SNR=9.2						
LBTB				LR	LR	17 44 27.5	
	comp=Z,315nm,21.4s,baz=94,slow=38						
LBTB	**Lobatse**	**8.01**	**239**	*e*Pn	**Pn**	**17 41 01.8**	**-0.5**
LBTB				*e*Sn	**Sn**	**17 42 29.1**	**-3.9**
LBTB				Sn	**Sn**	**17 42 31.1**	**-1.9**
LBTB				*e*Sb	**Sb**	**17 43 10.9**	**+11**
LBTB				Lg		17 43 11.0	
LBTB				LR	LR	17 44 27.5	
LBTB	**Lobatse**	**8.01**	**239**	*e*P	**Pn**	**17 41 01.4**	**-0.9**
LBTB				*e*S	**Sn**	**17 42 30.7**	**-2.2**
LBTB				AML	AML	17 43 18.2	
	comp=Z,218nm,0.7s						
SWZ	**Schweizer**	**9.41**	**228**	*e*P	**Pn**	**17 41 21.6**	**+0.2**
SWZ				*e*S	**Sn**	**17 43 05.0**	**-2.2**
SWZ				AML	AML	17 44 03.2	
	comp=Z,260nm,0.7s						
KSD	**Kokstad**	**10.04**	**199**	*e*P	**Pn**	**17 41 31.7**	**+1.7**
KSD				*e*S	**Sn**	**17 43 22.3**	**-0.3**
KSD				AML	AML	17 44 31.8	
	comp=Z,298nm,0.7s						
BOSA	**Boshof**	**10.41**	**222**	Pn	**Pn**	**17 41 33.9**	**-1.2**
	comp=Z,3.6nm,0.3s,baz=54,slow=13,SNR=60						
BOSA				Sn	**Sn**	**17 43 24.7**	**-7.0**
	comp=Z,2.8nm,0.3s,baz=43,slow=18,SNR=3.8						
BOSA				Lg		17 44 28.3	
	comp=Z,7.3nm,0.3s,baz=134,slow=21,SNR=6.9						
BOSA				LR	LR	17 46 00.1	
	comp=Z,267nm,19.2s,baz=41,slow=38						
BOSA	**Boshof**	**10.41**	**222**	Pn	**Pn**	**17 41 33.9**	**-1.2**
BOSA				Sn	**Sn**	**17 43 24.7**	**-7.0**
BOSA				Lg		17 44 28.3	
BOSA				LR	LR	17 46 00.1	
HVD	**Gariep Dam**	**11.76**	**214**	*e*P	**Pn**	**17 41 54.6**	**+1.1**
HVD				*e*S	**Sn**	**17 44 02.5**	**-2.3**
HVD				AML	AML	17 45 40.0	
	comp=Z,73nm,0.7s						
PKA	**Prieska**	**12.73**	**226**	*e*P	**Pn**	**17 42 07.5**	**+0.6**
PKA				*e*S	**Sn**	**17 44 24.4**	**-4.3**
PKA				AML	AML	17 45 50.7	
	comp=Z,112nm,0.7s						
UPI	**Upington**	**13.05**	**234**	*e*P	**Pn**	**17 42 12.0**	**+0.8**
UPI				*e*S	**Sn**	**17 44 31.7**	**-4.7**
UPI				AML	AML	17 46 01.2	
	comp=Z,57nm,0.6s						
ABPO	**Ambohimpanom**	**13.37**	**84**	*e*Pn	**Pn**	**17 42 13.1**	**-2.5**
	comp=Z,13nm,0.9s						
ABPO				*e*Sn	**Sn**	**17 44 28.6**	**-16**
OPO	**Ambohidratompo**	**13.42**	**82**	Pn	**Pn**	**17 42 14.5**	**-1.9**
	comp=Z,1.3nm,0.3s,baz=243,slow=11,SNR=14						
OPO				Sn	**Sn**	**17 44 35.5**	**-10**
	comp=Z,1.8nm,0.3s,baz=142,slow=19,SNR=4.7						
TSUM	**Tsumeb**	**14.76**	**274**	Pn	**Pn**	**17 42 32.6**	**-2.0**
	comp=Z,1.5nm,0.3s,baz=105,slow=12,SNR=18						
TSUM				Sn	**Sn**	**17 45 22.7**	**+4.5**
	comp=Z,1.1nm,0.3s,baz=57,slow=20,SNR=3.5						
TSUM				Lg		17 46 45.3	
	comp=Z,2.2nm,0.3s,baz=175,slow=20,SNR=4.0						
TSUM	**Tsumeb**	**14.76**	**274**	*e*Pn	**Pn**	**17 42 32.3**	**-2.3**
TSUM				*e*Sn	**Sn**	**17 45 10.1**	**-8.1**
TSUM				Sn	**Sn**	**17 45 22.7**	**+4.5**
TSUM				*e*Lg		17 46 44.1	
TSUM				Lg		17 46 45.3	
SUR	**Sutherland**	**15.77**	**222**	Pn	**Pn**	**17 42 47.5**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=53,slow=13,SNR=26						
SUR				Sn	**Sn**	**17 45 43.8**	**+0.9**
	comp=Z,1.9nm,0.3s,baz=150,slow=24,SNR=4.1						
SUR				Lg		17 47 16.5	
	comp=Z,2.0nm,0.3s,baz=314,slow=20,SNR=5.7						
SUR				LR	LR	17 49 15.0	
	comp=Z,220nm,19.6s,baz=53,slow=38						
SUR	**Sutherland**	**15.77**	**222**	*e*Pn	**Pn**	**17 42 47.0**	**-1.0**
SUR				*e*Sn	**Sn**	**17 45 31.1**	**-12**
SUR				Sn	**Sn**	**17 45 43.8**	**+0.9**
SUR				*e*Lg		17 47 04.7	
SUR				Lg		17 47 16.5	
SUR				LR	LR	17 49 15.0	
KMBO	**Kilima Mbogo**	**20.20**	**12**	Sn	**S**	**17 47 19.2**	**-8.2**
	comp=Z,0.5nm,0.3s,baz=73,slow=19,SNR=7.5						
KMBO				Lg		17 49 32.6	
	baz=71,slow=21,SNR=6.3						
KMBO	**Kilima Mbogo**	**20.20**	**12**	*e*P	**P**	**17 43 43.8**	**+3.0**
TOA0	**Torodi Ar. Sit**	**45.95**	**315**	*e*P	**P**	**17 47 29.6**	**+0.5**
TORD	**Torodi Ar. Bea**	**45.95**	**315**	P	**P**	**17 47 29.6**	**+0.5**
	comp=Z,3.8nm,1.1s,mb4.2,baz=129,slow=6.6,SNR=8.8						
DBIC	**Dimbokro**	**46.40**	**302**	P	**P**	**17 47 34.0**	**+1.3**
	comp=Z,4.1nm,1.0s,mb4.3,baz=124,slow=11,SNR=2.6						
MAW	**Mawson**	**50.15**	**166**	P	**P**	**17 48 02.1**	**+1.1**
	comp=Z,4.5nm,0.6s,mb4.7,baz=323,slow=8.4,SNR=8.5						
SNAA	**Sanae**	**54.70**	**193**	*e*P	**P**	**17 48 36.7**	**+2.0**
	comp=Z,11nm,1.4s,mb4.7						
QSPA	**South Pole Qui**	**69.11**	**180**	P	**P**	**17 50 15.7**	**+4.3**
	comp=Z,1.4nm,0.8s,mb3.9,baz=259,slow=4.0,SNR=5.7						
QSPA	**South Pole Qui**	**69.11**	**180**	P	**P**	**17 50 15.7**	**+4.2**
GERES	**GERESS Array B**	**71.72**	**347**	P	**P**	**17 50 28.5**	**+0.8**
	comp=Z,0.4nm,0.6s,mb3.5,baz=139,slow=6.9,SNR=4.7						
TKM2	**Tokmak 2**	**74.68**	**31**	*e*P	**P**	**17 50 45.3**	**-0.1**
	comp=Z,4.4nm,0.9s,mb4.4						
LSA	**Lhasa**	**75.23**	**50**	*e*P	**P**	**17 50 49.3**	**+0.5**
	comp=Z,8.9nm,0.8s,mb4.8						
CMAR	**Chiang Mai Arr**	**75.43**	**63**	P	**P**	**17 50 49.6**	**-0.7**
	comp=Z,2.2nm,1.0s,mb4.1,baz=250,slow=7.0,SNR=14						
CHTO	**Chiang Mai**	**75.60**	**63**	*e*P	**P**	**17 50 50.7**	**-0.5**
	comp=Z,5.6nm,0.9s,mb4.5						
BDFB	**Brasilia**	**76.49**	**258**	P	**P**	**17 50 60.0**	**+3.5**
	comp=Z,5.4nm,0.6s,mb4.6,baz=124,slow=7.7,SNR=6.5						
BDFB				LR	LR	18 20 38.7	
	comp=Z,128nm,18.3s,MS4.3,baz=92,slow=32						
MK31	**Makanchi Array**	**80.76**	**32**	*e*P	**P**	**17 51 18.7**	**-0.5**
MKAR	**Makanchi Array**	**80.76**	**32**	P	**P**	**17 51 19.1**	**-0.1**
	comp=Z,1.5nm,0.8s,mb4.0,baz=227,slow=6.4,SNR=9.5						
CPUP	**Villa Florida**	**81.36**	**245**	LR	LR	18 26 03.4	
	comp=Z,68nm,19.1s,MS4.0,baz=284,slow=34						

SIV	**San Ignacio**	**88.21**	**254**	P	**P**	**17 52 02.7**	**+5.0**
	comp=Z,0.6nm,0.5s,mb4.1,baz=197,slow=4.3,SNR=4.8						
CFAA	**Coronel Fontan**	**88.36**	**237**	P	**P**	**17 52 03.2**	**+5.0**
	comp=Z,0.1nm,0.3s,mb3.5,baz=76,slow=3.9,SNR=4.5						
CFAA	**Coronel Fontan**	**88.36**	**237**	P	**P**	**17 52 03.2**	**+5.0**
ASAR	**Alice Springs**	**90.97**	**116**	P	**P**	**17 52 10.6**	**0.0**
	comp=Z,1.1nm,0.8s,mb4.3,baz=245,slow=4.1,SNR=6.0						
LPAZ	**La Paz**	**94.38**	**251**	P	**P**	**17 52 31.0**	**+4.7**
	comp=Z,1.8nm,0.9s,mb4.5,baz=122,slow=5.3,SNR=7.2						
LPAZ				LR	LR	18 32 26.9	
	comp=Z,40nm,18.6s,MS3.9,baz=253,slow=34						
LPAZ	**La Paz**	**94.38**	**251**	P	**P**	**17 52 31.0**	**+4.7**
LPAZ				LR	LR	18 32 26.9	
SONM	**Songino Array**	**94.72**	**40**	P	**P**	**17 52 27.0**	**-0.1**
	comp=Z,0.2nm,0.5s,mb3.8,baz=204,slow=3.3,SNR=3.7						
TXAR	**Lajitas Array**	**140.26**	**291**	PKP	PKPdf	17 58 35.0	-0.3
	comp=Z,0.5nm,0.8s,baz=85,slow=2.1,SNR=4.8						
PDAR	**Pinedale Array**	**142.09**	**313**	PKP	PKPdf	17 58 41.6	+3.4
	comp=Z,0.7nm,0.7s,baz=108,slow=4.8,SNR=3.8						
NVAR	**Mina Array Bea**	**149.95**	**311**	PKPbc	PKPbc	17 58 58.4	+1.9
	comp=Z,1.5nm,0.6s,baz=62,slow=3.6,SNR=4.8						
NVAR	**Mina Array Bea**	**149.95**	**311**	PKPbc	PKPbc	17 58 58.4	+1.9

MDD ***14*** *17:40:25.1±0.7, 3674N×974W, h39km±17km, mbLg3.5/28, Error ellipse: s-maj=7.9km s-min=4.5km az=78.0, PRIMO*
CSEM ***14*** *17:40:25.5±0.1, 3657N×934W, h25km, ML4.4/10, Error ellipse: s-maj=3.1km s-min=1.6km az=71.0*
CNRM ***14*** *17:40:25.4, 3649N×987W, h27km, MD3.7*
NEIC ***14*** *17:40:25.5, 3698N×950W, h0km, MN3.2(MDD), After MDD.*
IGIL ***14*** *17:40:27.3, 3678N×954W, h23km, ML3.5*
LDG ***14*** *17:40:27.0±0.3, 3681N×958W, h20km, Ml4.0/4, Error ellipse: s-maj=5.3km s-min=3.2km az=45.0*
INMG 14 17:40:27.3±1.1, 3679N×955W, h24km±3km, ML3.2, 8C-2D, Error ellipse: s-maj=5.0km s-min=4.2km az=24.0, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.67**	**59**	*i* Pg	Pb	17 40 39.8	-0.6
PFVI				*e*Sg	Sb	17 40 49.2	-0.1
PFVI				A		17 40 49.9	
	518nm,0.2s						
MORF	**Marmelete**	**0.89**	**54**	*e*P	Pb	17 40 42.8	-1.2
MORF				*e*S	Sb	17 40 54.5	-0.9
MORF				A		17 40 55.5	
	475nm,0.5s						
MORF	**Marmelete**	**0.89**	**54**	P	Pb	17 40 42.8	-1.1
MORF				S	Sb	17 40 54.4	-0.9
PTEO	**Sao Teotonio**	**1.00**	**41**	*i* P	Pn	17 40 44.4	-1.5
PTEO				*e*S	Sb	17 40 57.1	-1.7
PTEO				A		17 40 58.2	
	326nm,0.3s						
PTEO	**Sao Teotonio**	**1.00**	**41**	⇑P	Pn	17 40 44.4	-1.5
PTEO				S	Sb	17 40 57.1	-1.7
	163nm,0.3s						
PBDV	**Barranco-do-Ve**	**1.37**	**70**	*e*P	Pn	17 40 49.5	-1.4
PBDV				*e*S	Sn	17 41 06.2	-2.1
PBDV				A		17 41 15.5	
	109nm,0.5s						
PBDV	**Barranco-do-Ve**	**1.37**	**70**	*e*P	Pn	17 40 49.5	-1.4
PBDV				*e*S	Sn	17 41 06.2	-2.1
	109nm,0.5s						
PVAQ	**Vaqueiros**	**1.59**	**67**	*i* P	Pn	17 40 52.5	-1.4
PVAQ				*e*S	Sn	17 41 11.2	-2.5
PVAQ				A		17 41 18.5	
	83nm,0.1s						
PVAQ	**Vaqueiros**	**1.59**	**67**	⇑P	Pn	17 40 52.5	-1.4
PVAQ				S	Sn	17 41 11.2	-2.5
	42nm,0.1s						
EGRO	**El Granado**	**1.81**	**65**	⇑P	Pn	17 40 55.4	-1.6
	9.0nm,0.2s,SNR=18						
EGRO				S	Sn	17 41 17.4	-1.7
	61nm,0.1s						
EGRO	**El Granado**	**1.81**	**65**	P	Pn	17 40 55.4	-1.6
	20nm,0.3s,SNR=18						
EGRO				S	Sn	17 41 17.0	-2.1
	95nm,0.3s						
EGRO	**

ESPR S Sn 17 41 44.4 -3.1
comp=N,298nm,0.3s,SNR=11
ESPR Espera 2.96 87 P Pn 17 41 11.3 -1.5
comp=N,18nm,0.2s,SNR=18
ESPR S Sn 17 41 44.8 -2.8
comp=N,52nm,0.3s,SNR=11
ESPR Espera 2.96 87 ⇓P Pn 17 41 11.3 -1.5
ESPR S Sn 17 41 44.8 -2.8
PMRV Marv??o 3.14 32 *e*Pn Pn 17 41 13.5 -1.7
PMRV *e*Sn Sn 17 41 48.0 -3.9
PMRV A 17 41 50.6
comp=N,96nm,0.1s
PMRV Marv??o 3.14 32 *e*Pn Pn 17 41 13.5 -1.7
PMRV *e*Sn Sn 17 41 48.0 -3.9
comp=N,96nm,0.1s
EJIF Jimena Fronter 3.30 95 P Pn 17 41 16.9 -0.5
comp=N,2.0nm,0.2s,SNR=7.9
EJIF S Sn 17 41 53.4 -2.5
comp=N,8.1nm,0.3s,SNR=7.9
EJIF Jimena Fronter 3.30 95 P Pn 17 41 16.2 -1.2
comp=N,1.5nm,0.2s,SNR=7.9
EJIF S Sn 17 41 55.9 +0.1
comp=N,20nm,0.7s,SNR=7.9
EJIF Jimena Fronter 3.30 95 P Pn 17 41 16.2 -1.2
EJIF S Sn 17 41 55.9 0.0
PCBR Castelo Branco 3.46 27 *e*Pn Pn 17 41 18.1 -1.5
PCBR *e*Sn Sn 17 41 56.5 -3.3
PCBR A 17 41 58.3
comp=N,41nm,0.3s
PCBR Castelo Branco 3.46 27 *e*Pn Pn 17 41 18.1 -1.5
PCBR *e*Sn Sn 17 41 56.5 -3.3
comp=N,41nm,0.3s
ECEU Ceuta 3.48 104 P Pn 17 41 18.9 -1.0
comp=N,4.6nm,0.2s,SNR=8.1
ECEU S Sn 17 41 58.8 -1.5
comp=N,18nm,0.4s,SNR=5.2
ECEU Ceuta 3.48 104 P Pn 17 41 18.9 -1.0
comp=N,8.3nm,0.6s,SNR=8.1
ECEU S Sn 17 41 57.6 -2.8
comp=N,13nm,0.5s,SNR=5.2
DKH Dar Kharkhour 3.63 110 *i*P Pn 17 41 21.0 -0.9
DKH *i*S Sn 17 42 03.0 -1.0
EMIJ Mijas 3.84 92 P Pn 17 41 23.7 -1.3
comp=N,0.8nm,0.1s,SNR=6.3
EMIJ S Sn 17 42 06.1 -3.2
comp=N,15nm,0.7s,SNR=6.4
EMIJ Mijas 3.84 92 P Pn 17 41 23.5 -1.4
comp=N,2.3nm,0.3s,SNR=6.3
EMIJ S Sn 17 42 05.8 -3.5
comp=N,10nm,0.4s,SNR=6.4
EMIJ Mijas 3.84 92 P Pn 17 41 23.5 -1.4
EMIJ S Sn 17 42 05.8 -3.5
MTE Manteigas 3.94 23 *e*Pn Pn 17 41 24.7 -1.5
MTE Manteigas 3.94 23 *e*Pn Pn 17 41 24.4 -1.8
MTE *e*Sn Sn 17 42 06.3 -5.3
MTE Manteigas 3.94 23 *e*Pn Pn 17 41 24.4 -1.7
MTE *e*Sn Sn 17 42 06.3 -5.3
PVIS Viseu 4.13 18 *e*Pn Pn 17 41 27.1 -1.8
PVIS *e*Sn Sn 17 42 13.3 -3.1
PVIS A 17 42 15.2
comp=N,54nm,0.1s
PVIS Viseu 4.13 18 *e*Pn Pn 17 41 27.1 -1.8
PVIS *e*Sn Sn 17 42 13.3 -3.1
comp=N,54nm,0.1s
EADA Adamuz 4.19 69 P Pn 17 41 28.3 -1.3
comp=N,2.7nm,0.1s,SNR=28
EADA S Sn 17 42 14.2 -3.6
comp=N,6.7nm,0.2s,SNR=9.6
EADA Adamuz 4.19 69 P Pn 17 41 28.4 -1.2
comp=N,8.5nm,0.6s,SNR=28
EADA S Sn 17 42 14.2 -3.6
comp=N,17nm,0.3s,SNR=9.6
EADA Adamuz 4.19 69 P Pn 17 41 28.4 -1.3
EADA S Sn 17 42 14.2 -3.6
ELUQ Luque 4.29 78 P Pn 17 41 29.6 -1.4
comp=N,6.3nm,0.3s,SNR=6.0
ELUQ S Sn 17 42 15.3 -5.0
comp=N,14nm,0.2s,SNR=12
ELUQ Luque 4.29 78 P Pn 17 41 28.3 -2.7
comp=N,6.3nm,0.3s,SNR=6.0
ELUQ S Sn 17 42 15.8 -4.5
comp=N,15nm,0.2s,SNR=12
ELUQ Luque 4.29 78 P Pn 17 41 28.3 -2.7
ELUQ S Sn 17 42 15.8 -4.4
ELOJ Sierra Loja 4.33 84 P Pn 17 41 29.6 -2.0
comp=N,1.2nm,0.2s
ELOJ S Sn 17 42 17.6 -3.8
comp=N,7.1nm,0.2s,SNR=7.9
ELOJ Sierra Loja 4.33 84 P Pn 17 41 30.7 -1.0
comp=N,8.8nm,0.3s
ELOJ S Sn 17 42 18.4 -3.0
comp=N,7.5nm,0.3s,SNR=7.9
ELOJ Sierra Loja 4.33 84 P Pn 17 41 30.7 -0.9
ELOJ S Sn 17 42 18.4 -3.0
EBAN Banos Encina 4.78 72 P Pn 17 41 36.2 -1.7
comp=N,5.7nm,0.1s,SNR=11
EBAN S Sn 17 42 26.3 -6.2
comp=N,4.6nm,0.1s,SNR=11
EBAN Banos Encina 4.78 72 P Pn 17 41 36.2 -1.6
comp=N,6.9nm,0.2s,SNR=11
EBAN S Sn 17 42 25.7 -6.8
comp=N,13nm,0.3s,SNR=11
EBAN Banos Encina 4.78 72 P Pn 17 41 36.2 -1.6
EBAN S Sn 17 42 25.7 -6.8
MVO Moncorvo 4.79 23 *e*Pn Pn 17 41 36.2 -1.8
MVO *e*Sn Sn 17 42 27.5 -5.2
MVO A 17 42 29.6
comp=N,46nm,0.3s
MVO Moncorvo 4.79 23 *e*Pn Pn 17 41 36.2 -1.8
MVO *e*Sn Sn 17 42 27.5 -5.2
comp=N,46nm,0.3s
MIF Mishlifen 4.88 132 *i*P Pn 17 41 37.0 -2.3
MIF *i*S Sn 17 42 29.0 -6.0
EQUE Quentar 4.91 83 P Pn 17 41 37.2 -2.3
comp=N,0.5nm,0.1s,SNR=10
EQUE S Sn 17 42 33.1 -2.4
comp=N,9.6nm,0.3s,SNR=5.9
EQUE Quentar 4.91 83 P Pn 17 41 38.8 -0.7
comp=N,3.3nm,0.3s,SNR=10
EQUE S Sn 17 42 32.8 -2.7
comp=N,10nm,0.5s,SNR=5.9
JHA Jbel Lahdid 5.04 179 *e*P Pn 17 41 34.0 -7.4
PCAB Cabril 5.06 13 *e*Pn Pn 17 41 39.6 -2.0
PCAB *e*Sn Sn 17 42 34.1 -5.1
PCAB A 17 42 38.3
comp=N,49nm,0.1s
PCAB Cabril 5.06 13 *e*Pn Pn 17 41 39.6 -2.0
PCAB *e*Sn Sn 17 42 34.1 -5.1
comp=N,49nm,0.1s
KIB El Ksiba 5.10 144 *i*P Pn 17 41 38.5 -3.7
KIB *i*S Sn 17 42 32.0 -8.2
TZK Tazeka 5.14 120 *i*P Pn 17 41 40.0 -2.7
TZK *i*S Sn 17 42 37.0 -4.2
ELOB Lobios 5.20 12 P Pn 17 41 41.5 -2.1
comp=N,2.4nm,0.1s,SNR=30
ELOB S Sn 17 42 37.1 -5.8
comp=N,31nm,0.2s,SNR=18
ELOB Lobios 5.20 12 P Pn 17 41 41.5 -2.1
comp=N,5.5nm,0.3s,SNR=30
ELOB Lobios 5.20 12 P Pn 17 41 41.5 -2.1
ELOB S Sn 17 42 37.3 -5.6
CIA Chichaoua 5.25 173 P Pn 17 41 38.0 -6.2
CIA S Sn 17 42 32.0 -12
CIA Chichaoua 5.25 173 *i*P Pn 17 41 38.0 -6.2
ESDC Sonseca Array 5.26 55 P Pn 17 41 42.3 -2.1
comp=N,7.2nm,0.2s,baz=241,slow=13,SNR=114
ESDC S Sn 17 42 39.0 -5.1
comp=N,14nm,0.3s,baz=241,slow=24,SNR=72
ESDC Sonseca Array 5.26 55 P Pn 17 41 42.3 -2.0
comp=N,7.2nm,0.2s,SNR=114
ESDC S Sn 17 42 39.0 -5.2
comp=N,14nm,0.3s,SNR=72
EQES Quesada 5.26 77 P Pn 17 41 41.7 -2.7
comp=N,1.7nm,0.1s,SNR=6.3
EQES S Sn 17 42 39.0 -5.3
comp=N,15nm,0.2s,SNR=11
EQES Quesada 5.26 77 P Pn 17 41 42.6 -1.8
comp=N,14nm,0.5s,SNR=6.3
EQES S Sn 17 42 40.1 -4.2
comp=N,17nm,0.4s,SNR=11
EQES Quesada 5.26 77 P Pn 17 41 42.6 -1.8
EQES S Sn 17 42 40.1 -4.2
CZD Col de Zad 5.26 134 *i*P Pn 17 41 42.0 -2.4
CZD *i*S Sn 17 42 39.0 -5.3
TZC Tazercounte 5.27 151 *i*P Pn 17 41 39.0 -5.5
TZC *i*S Sn 17 42 35.0 -10
EBER Berja 5.34 87 P Pn 17 41 45.3 -0.2
comp=N,0.6nm,0.1s,SNR=4.6
EBER S Sn 17 42 43.1 -3.1
comp=N,9.3nm,0.3s,SNR=4.8
EBER Berja 5.34 87 P Pn 17 41 46.3 +0.8
comp=N,5.6nm,0.5s,SNR=4.6
EBER S Sn 17 42 43.3 -2.9
comp=N,16nm,0.7s,SNR=4.8
EBER Berja 5.34 87 P Pn 17 41 46.3 +0.8
EBER S Sn 17 42 43.3 -2.9
ECAL Calabor 5.59 22 P Pn 17 41 46.9 -2.1
comp=N,7.2nm,0.1s,SNR=42
ECAL S Sn 17 42 47.1 -5.3
comp=N,79nm,0.4s,SNR=15
ECAL Calabor 5.59 22 P Pn 17 41 47.5 -1.4
comp=N,9.2nm,0.3s,SNR=42
ECAL Calabor 5.59 22 P Pn 17 41 47.5 -1.4
ECAL S Sn 17 42 47.1 -5.3
EHUE Huescar 5.64 77 P Pn 17 41 47.6 -2.0
comp=N,0.4nm,0.1s,SNR=7.9
EHUE S Sn 17 42 49.2 -4.4
comp=N,5.5nm,0.2s,SNR=7.9
EHUE Huescar 5.64 77 P Pn 17 41 47.6 -2.0
comp=N,0.3nm,0.2s,SNR=7.9
EHUE S Sn 17 42 49.4 -4.2
comp=N,3.2nm,0.2s,SNR=7.9
EHUE Huescar 5.64 77 P Pn 17 41 47.6 -2.0
EHUE S Sn 17 42 49.4 -4.2
GUD Guadarrama 5.71 46 P Pn 17 41 48.2 -2.3
comp=N,6.2nm,0.2s,SNR=32
GUD S Sn 17 42 50.1 -5.2
comp=N,10nm,0.2s,SNR=10
GUD Guadarrama 5.71 46 P Pn 17 41 48.9 -1.7
comp=N,7.7nm,0.3s,SNR=32
GUD Guadarrama 5.71 46 P Pn 17 41 48.9 -1.7
GUD S Sn 17 42 50.1 -5.2
OUK Oukaimeden 5.73 165 P Pn 17 41 47.0 -3.9
OUK S Sn 17 42 44.0 -12
OUK Oukaimeden 5.73 165 *i*P Pn 17 41 47.0 -3.9
EVIA Vianos 5.88 70 P Pn 17 41 50.8 -2.2
comp=N,3.2nm,0.2s,SNR=11
EVIA S Sn 17 42 53.2 -6.3
comp=N,7.3nm,0.3s,SNR=6.8
EVIA Vianos 5.88 70 P Pn 17 41 50.8 -2.1
EVIA S Sn 17 42 53.2 -6.3
STS Santiago 6.14 7 S Sn 17 42 59.1 -6.8
comp=N,11nm,0.2s,SNR=5.6
TIO Tiouine 6.14 161 S Sn 17 43 00.0 -6.1
EMAZ Mazaricos 6.17 4 P Pn 17 41 53.9 -3.0
comp=N,6.9nm,0.2s,SNR=10
EMAZ S Sn 17 42 58.4 -8.2
comp=N,41nm,0.3s,SNR=9.9
EMAZ Mazaricos 6.17 4 P Pn 17 41 54.3 -2.6
EMAZ S Sn 17 42 59.0 -7.7
ZFT Errachidia 6.39 136 *i*P Pn 17 41 57.0 -3.0
ZFT *i*S Sn 17 43 05.0 -7.2
ETOB Tobarra 6.61 71 P Pn 17 42 00.7 -2.2
comp=N,1.7nm,0.2s,SNR=8.9
ETOB S Sn 17 43 10.8 -6.6
comp=N,2.7nm,0.1s
ETOB Tobarra 6.61 71 P Pn 17 42 00.7 -2.2
comp=N,7.8nm,0.8s,SNR=8.9
EPON Pontenova 6.79 15 P Pn 17 42 04.0 -1.4
comp=N,0.8nm,0.1s,SNR=7.9
EPON S Sn 17 43 16.2 -5.7
comp=N,11nm,0.3s,SNR=7.8
EPON Pontenova 6.79 15 P Pn 17 42 03.7 -1.6
comp=N,12nm,1.3s,SNR=7.9
EPON Pontenova 6.79 15 P Pn 17 42 03.7 -1.6
EPON S Sn 17 43 14.9 -6.9
ETOR Torete 7.10 53 P Pn 17 42 07.5 -2.1
comp=N,22nm,0.4s,SNR=26
ETOR S Sn 17 43 23.3 -6.2
comp=N,69nm,0.3s,SNR=6.0
ETOR Torete 7.10 53 P Pn 17 42 08.2 -1.5
comp=N,22nm,0.4s,SNR=26
ETOR Torete 7.10 53 P Pn 17 42 08.2 -1.4
ETOR S Sn 17 43 23.3 -6.2
EARI Arriondas 7.31 26 P Pn 17 42 11.2 -1.3
comp=N,1.0nm,0.2s,SNR=10
EARI S Sn 17 43 28.1 -6.5
comp=N,1.9nm,0.2s,SNR=7.9
EBEN Beniarda 7.63 73 P Pn 17 42 14.7 -2.2
comp=N,0.8nm,0.1s,SNR=7.9
EBEN S Sn 17 43 36.8 -5.8
comp=N,3.4nm,0.3s,SNR=7.9
EBEN Beniarda 7.63 73 P Pn 17 42 14.5 -2.4
SNR=7.9
EBEN S Sn 17 43 36.7 -5.9
comp=N,3.4nm,0.3s,SNR=7.9
EBEN Beniarda 7.63 73 P Pn 17 42 14.5 -2.4
EBEN S Sn 17 43 36.7 -5.9
EMOS Mosqueruela 7.95 61 P Pn 17 42 21.1 -0.3
comp=N,0.6nm,0.1s,SNR=8.0
EMOS S Sn 17 43 43.3 -7.3
comp=N,26nm,0.5s,SNR=7.9
EMOS Mosqueruela 7.95 61 P Pn 17 42 20.7 -0.7
comp=N,9.2nm,0.9s,SNR=8.0
EMOS Mosqueruela 7.95 61 P Pn 17 42 20.8 -0.6
EMOS S Sn 17 43 44.2 -6.4
ELAN Lanestosa 7.96 34 P Pn 17 42 19.6 -1.8
comp=N,2.0nm,0.2s,SNR=7.2
ELAN S Sn 17 43 43.4 -7.3
comp=N,4.7nm,0.4s,SNR=7.9
ELAN Lanestosa 7.96 34 P Pn 17 42 19.9 -1.6
comp=N,6.6nm,0.7s,SNR=7.2
ELAN Lanestosa 7.96 34 P Pn 17 42 19.9 -1.6
ELAN S Sn 17 43 44.1 -6.7
EFAM Famara 8.34 205 S Sn 17 43 46.5 -14
comp=N,7.4nm,0.3s,SNR=7.9
ESAC San Caprasio 8.59 52 S Sn 17 44 00.8 -5.4
comp=N,16nm,0.4s,SNR=7.9
IZUN Zunzarren 8.69 43 P Pn 17 42 30.4 -1.0
comp=N,0.3nm,0.1s,SNR=7.9
IZUN S Sn 17 44 01.5 -7.1
comp=N,0.3nm,0.2s,SNR=7.9
EORO Oroz-Betelu 8.79 44 P Pn 17 42 31.2 -1.6
comp=N,0.3nm,0.0s,SNR=6.2
EORO S Sn 17 44 03.5 -7.7
comp=N,0.6nm,0.1s,SNR=7.9
EORO Oroz-Betelu 8.79 44 P Pn 17 42 31.2 -1.6
comp=N,0.9nm,0.3s,SNR=6.2
ELIZ Elizondo 8.85 42 P Pn 17 42 32.2 -1.5
comp=N,4.1nm,0.3s,SNR=7.9
ELIZ S Sn 17 44 03.4 -9.2
comp=N,2.8nm,0.2s,SNR=7.9
ELIZ Elizondo 8.85 42 P Pn 17 42 31.8 -1.9
comp=N,1.5nm,0.2s,SNR=7.9
ELIZ Elizondo 8.85 42 P Pn 17 42 31.8 -1.9
ELIZ S Sn 17 44 03.4 -9.2
EALK Alkurruntz 8.90 41 P Pn 17 42 32.9 -1.5
comp=N,1.1nm,0.2s,SNR=7.9
EALK S Sn 17 44 07.7 -6.2
comp=N,23nm,0.6s,SNR=7.9
EALK Alkurruntz 8.90 41 P Pn 17 42 32.5 -1.9
EALK Alkurruntz 8.90 41 P Pn 17 42 32.5 -1.9
EALK S Sn 17 44 04.4 -9.5
SJPF Ste Jean 8.98 43 *e*Pn Pn 17 42 33.5 -2.0
SJPF *e*Sn Sn 17 44 07.5 -8.3
comp=N,7.5nm,0.5s
SJPF Ste Jean 8.98 43 *e*Pn Pn 17 42 33.5 -2.0
SJPF *e*Sn Sn 17 44 07.5 -8.3
comp=N,3.8nm,0.5s
ETSF Etsaut 9.22 46 *e*Pn Pn 17 42 36.6 -2.1
ETSF *e*Sn Sn 17 44 12.6 -9.0
comp=N,8.6nm,0.5s
ETSF Etsaut 9.22 46 *e*Pn Pn 17 42 36.6 -2.1
ETSF *e*Sn Sn 17 44 12.6 -9.0
comp=N,4.3nm,0.5s
EBIE Bielsa 9.51 49 P Pn 17 42 41.3 -1.3
comp=N,0.2nm,0.1s,SNR=12
EBIE S Sn 17 44 20.4 -8.2
comp=N,8.0nm,0.4s,SNR=7.9
EBIE Bielsa 9.51 49 P Pn 17 42 41.4 -1.2
EBIE Bielsa 9.51 49 P Pn 17 42 41.4 -1.2
EBIE S Sn 17 44 21.1 -7.6
EPF Esparros 9.82 48 *e*Pn Pn 17 42 45.5 -1.5
EPF *e*Sn Sn 17 44 28.1 -8.4
comp=N,11nm,0.4s
EPF Esparros 9.82 48 *e*Pn Pn 17 42 45.5 -1.5
EPF *e*Sn Sn 17 44 28.1 -8.4
comp=N,5.3nm,0.4s
LFF La Frestale 11.26 40 *e*Pn Pn 17 43 03.6 -3.1
CAF Calviac 11.96 44 *e*Pn Pn 17 43 13.3 -3.0
QUIF Quistinic 12.08 21 *e*Pn Pn 17 43 14.9 -2.9
QUIF *e*P 17 43 20.9
LASF Ste Croix 12.53 50 *e*Pn Pn 17 43 21.5 -2.5
SGMF Saint Gilles 12.56 22 *e*Pn Pn 17 43 21.6 -2.8

IDC 14 18:10:09.9±6.3, 1822N×14668E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.6/4, MS3.5/1, Ms1 3.5/1, ms1mx2.3/38, Error ellipse: s-maj=242.7km s-min=24.7km az=81.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**9.75**	**336**	LR	LR	18 15 26.2	
	comp=Z,234nm,18.7s,baz=145,slow=32						
WRA	**Warramunga Arr**	**39.81**	**198**	P	P	18 17 44.8	-0.2
	1.6nm,0.9s,baz=19,slow=8.4,SNR=7.3						
ASAR	**Alice Springs**	**43.46**	**197**	P	P	18 18 14.8	-0.1
	0.3nm,0.7s,baz=21,slow=9.8,SNR=7.6						
ZALV	**Zalesovo Beam**	**58.95**	**323**	P	P	18 20 10.0	-0.9
	0.2nm,0.3s,baz=93,slow=7.2,SNR=2.9						
MKAR	**Makanchi Array**	**59.46**	**314**	P	P	18 20 15.6	+1.0
	0.5nm,0.7s,baz=101,slow=7.5,SNR=3.3						

IDC 14 18:22:19.5±7.6, 717S×12317E, h142km±51km, mb1 2.7/3, mb1mx2.7/17, mbtmp2.5/3, Error ellipse: s-maj=91.7km s-min=60.3km az=44.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.05**	**171**	P	Pn	18 23 07.2	-0.1
	1.8nm,0.3s,baz=287,slow=23,SNR=3.3						
BATI				S	Sn	18 23 44.6	+0.4
	5.1nm,0.3s,baz=162,slow=19,SNR=9.0						
WRA	**Warramunga Arr**	**16.69**	**141**	P	Pn	18 26 06.7	+1.6
	0.1nm,0.3s,baz=310,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**19.37**	**149**	P	P	18 26 33.9	-0.4
	0.1nm,0.3s,baz=332,slow=11,SNR=8.3						
CPUP	**Vila Florida**	**146.69**	**179**	PKPbc	PKPbc	18 41 44.5	-0.8
	2.5nm,0.7s,baz=108,slow=8.1,SNR=9.4						

*CSEM **14** 18:27:14.4±0.1, 3698N×3060E, h80km, MD3.1, Error ellipse: s-maj=3.6km s-min=1.8km az=74.0*
*ISCJB **14** 18:27:15.5±0.4, 3697N±003×3067E±005, h97km±7km, Error ellipse: s-maj=6.7km s-min=5.1km az=13.2*
*HLW **14** 18:27:15.9, 3691N×3042E, h33km, Mb3.6*
*ISK **14** 18:27:16.8, 3706N×3062E, h78km, MD3.1*
*DDA **14** 18:27:16.1, 3693N×3080E, h7km±4km, Md3.1*

ISC 14 18:27:16.8±0.4, 3699N±003×3066E±005, h86km±6km, n35, σ1°07/47, 2C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.09**	**182**	*e*PG	**Pn**	**18 27 28.1**	**-0.9**
ANTB				*e*SG	**Sn**	**18 27 36.6**	**-1.4**
BCK	**Bucak**	**0.47**	**353**	*e*PG	**Pn**	**18 27 30.3**	**-0.7**
BCK				*e*SG	**Sn**	**18 27 40.1**	**-1.3**
ELL	**Elmali**	**0.65**	**248**	*e*PG	**Pn**	**18 27 32.7**	**+0.3**
ISP	**Isparta**	**0.86**	**352**	*e*PG	**Pn**	**18 27 33.8**	**-0.8**
GOLH	**Golhisar**	**0.91**	**286**	*i*P	**Pn**	**18 27 35.7**	**+0.5**
GOLH				*i*S	**Sn**	**18 27 51.7**	**+2.7**
AKAS	**Kas**	**1.13**	**229**	⇓*i*P	**Pn**	**18 27 38.5**	**+0.7**
AKAS				*i*S	**Sn**	**18 27 55.7**	**+2.2**
DNZL	**Cakiroluk**	**1.46**	**299**	⇑*i*P	**Pn**	**18 27 42.2**	**+0.3**
DNZL				*i*S	**Sn**	**18 28 02.4**	**+1.6**
HDMB	**Hadim**	**1.47**	**90**	*e*PN	**Pn**	**18 27 43.6**	**+1.7**
SHUT	**Suhut-Afyon**	**1.56**	**357**	*e*PN	**Pn**	**18 27 43.1**	**-0.1**
KHL	**Karahalli**	**1.61**	**326**	*e*PN	**Pn**	**18 27 43.7**	**-0.1**
KHL				*e*SN	**Sn**	**18 28 03.4**	**-0.8**
TURN	**Turunc**	**1.65**	**267**	⇓*i*P	**Pn**	**18 27 48.5**	**+4.2**
TURN				*i*P	**Sn**	**18 28 11.8**	**+6.6**
KONT	**Konya--Tatoy**	**1.66**	**54**	*e*PN	**Pn**	**18 27 45.2**	**+0.8**
LADK	**Ladik-KONYA**	**1.82**	**48**	*e*PN	**Pn**	**18 27 46.8**	**+0.4**
ERMK	**Ermenek**	**1.84**	**100**	*e*P	**Pn**	**18 27 49.4**	**+2.6**
ERMK				*e*S	**Sn**	**18 28 14.4**	**+4.8**
YER	**Yerkesik**	**1.91**	**275**	*e*PN	**Pn**	**18 27 48.4**	**+0.8**
KDHN	**Kadinhani**	**1.92**	**37**	⇓*i*P	**Pn**	**18 27 48.0**	**+0.2**
KDHN				*i*S	**Sn**	**18 28 11.2**	**-0.1**
ALT	**Altintas**	**2.11**	**348**	*e*PN	**Pn**	**18 27 49.2**	**-1.1**
KIZT	**Kizilcal**	**2.12**	**27**	*e*PN	**Pn**	**18 27 50.1**	**-0.3**
KULA	**Kula-Manisa**	**2.20**	**315**	*e*PN	**Pn**	**18 27 51.1**	**-0.3**
MLSB	**Milas**	**2.32**	**278**	*e*PN	**Pn**	**18 27 53.3**	**+0.2**
ESKT	**Eskisehir**	**2.53**	**3**	*e*P	**Pn**	**18 27 55.4**	**-0.5**
ESKT				*e*S	**Sn**	**18 28 25.9**	**0.0**
SEYT	**Eskypehyr**	**2.53**	**3**	*e*P	**Pn**	**18 27 55.4**	**-0.5**
SEYT				*e*S	**Sn**	**18 28 25.9**	**0.0**
IKL	**Isikli**	**2.55**	**106**	*e*PN	**Pn**	**18 27 58.4**	**+2.2**
RSH		**6.53**	**156**	P	**Pn**	**18 28 50.0**	**-0.2**
HMAT	**Matruh**	**6.58**	**208**	P	**Pn**	**18 28 49.2**	**-1.7**
HMAT				S	**Sn**	**18 29 56.5**	**-8.0**
SLUM		**7.10**	**221**	P	**Pn**	**18 28 55.4**	**-2.6**
KOT	**Kottamia**	**7.11**	**172**	P	**Pn**	**18 28 57.7**	**-0.5**
HHAG	**Hagoal**	**7.12**	**170**	P	**Pn**	**18 28 58.7**	**+0.4**
SUZ		**7.36**	**165**	P	**Pn**	**18 29 01.5**	**0.0**
HSAF	**As Saff**	**7.39**	**174**	P	**Pn**	**18 29 01.3**	**-0.7**
GLL	**Jalalah**	**7.44**	**173**	P	**Pn**	**18 29 02.5**	**-0.2**
HNKL	**Nakhl**	**7.57**	**158**	P	**Pn**	**18 29 04.4**	**0.0**
HKAT	**Jabal Katrina**	**8.90**	**161**	⇑P	**Pn**	**18 29 22.6**	**+0.2**
HKAT	**Jabal Katrina**	**8.90**	**161**	P	**Pn**	**18 29 22.6**	**+0.1**
HFRF	**Wahat Farafira**	**10.01**	**192**	P	**Pn**	**18 29 35.7**	**-2.0**

*NEIC **14** 18:28:25.3±3.1, 5415S×130.13E, h88km±34km, mb4.0/7, Error ellipse: s-maj=19.6km s-min=15.2km az=62.0*
*ISCJB **14** 18:28:27.9±2.1, 5535S±008×1301E±0.1, h137km±22km, mb3.8/9, Error ellipse: s-maj=23.0km s-min=10.3km az=157.4*
*IDC **14** 18:28:28.2±5.3, 5495S×130.13E, h115km±53km, mb3.5/6, mb1 3.8/10, mb1mx3.6/16, mbtmp3.6/10, MS3.2/1, Ms1 3.2/1, ms1mx2.4/19, Error ellipse: s-maj=46.2km s-min=19.6km az=57.0*

ISC 14 18:28:31.1±1.8, 567S±007×1301E±01, h157km±19km, n21, σ0°95/27, mb3.8/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**7.84**	**234**	P	**Pn**	**18 30 21.7**	**-0.7**
	6.2nm,0.3s,baz=98,slow=5.4,SNR=12						
FITZ	**Fitzroy Crossi**	**13.12**	**199**	*e*P	**Pn**	**18 31 31.6**	**0.0**
	7.1nm,0.8s						
FITZ				*e*S	**Sn**	**18 33 47.2**	**-10**
FITZ	**Fitzroy Crossi**	**13.12**	**199**	P	**Pn**	**18 31 30.4**	**-1.2**
	0.3nm,0.3s,baz=26,slow=15,SNR=19						
FITZ				S	**Sn**	**18 33 47.2**	**-10**
	0.4nm,0.3s,baz=101,slow=19,SNR=3.4						
WRAB	**Tennant Creek**	**14.76**	**164**	*e*Pn	**Pn**	**18 31 52.4**	**+0.1**
	5.4nm,0.8s						
WRAB				*e*Sn	**Sn**	**18 34 27.7**	**-8.7**
WRA	**Warramunga Arr**	**14.77**	**164**	P	**Pn**	**18 31 52.4**	**+0.1**
	0.5nm,0.3s,baz=347,slow=13,SNR=34						
WRA				S	**Sn**	**18 34 27.6**	**-8.9**
	1.6nm,0.3s,baz=331,slow=22,SNR=14						
WRA				LR	LR	18 37 23.2	
	comp=Z,82nm,18.0s,baz=215,slow=36						
WB2	**Warramunga Arr**	**14.77**	**164**	*e*P	**Pn**	**18 31 52.9**	**+0.5**
WB2				*e*S	**Sn**	**18 34 27.1**	**-10**
ASAR	**Alice Springs**	**18.26**	**169**	P	**P**	**18 32 36.4**	**+3.6**
	1.4nm,0.3s,baz=350,slow=11,SNR=139						
ASAR				S	**S**	**18 35 52.4**	**-1.2**
	0.4nm,0.3s,baz=0.0,slow=25,SNR=6.8						
MBWA	**Marble Bar**	**18.41**	**212**	*e*P	**P**	**18 32 35.0**	**+0.6**
	6.2nm,0.9s						
STKA	**Stephens Creek**	**28.20**	**159**	*e*P	**P**	**18 34 12.1**	**+3.1**
	1.6nm,0.8s,mb3.8						
STKA	**Stephens Creek**	**28.20**	**159**	P	**P**	**18 34 11.5**	**+2.5**
	0.6nm,0.3s,mb3.9,baz=339,slow=13,SNR=5.7						
CM31	**Chiang Mai Arr**	**39.00**	**309**	P	**P**	**18 35 35.0**	**-7.4**
CMAR	**Chiang Mai Arr**	**39.00**	**309**	P	**P**	**18 35 42.8**	**+0.3**
	0.9nm,0.4s,mb3.7,baz=134,slow=7.1,SNR=9.1						
CHTO	**Chiang Mai**	**39.20**	**309**	*e*P	**P**	**18 35 44.1**	**-0.1**
	1.5nm,0.7s,mb3.7						
MJAR	**Matsushiro Arr**	**42.66**	**10**	P	**P**	**18 36 12.1**	**-0.1**
	1.2nm,0.6s,mb3.7,baz=183,slow=9.3,SNR=4.9						
MAJO	**Matsushiro**	**42.66**	**10**	P	**P**	**18 36 11.3**	**-0.9**
	3.2nm,0.6s,mb4.1						
MK31	**Makanchi Array**	**67.19**	**326**	P	**P**	**18 39 07.8**	**-0.4**
MKAR	**Makanchi Array**	**67.19**	**326**	P	**P**	**18 39 09.2**	**+0.9**
	1.0nm,0.6s,mb3.9,baz=114,slow=8.2,SNR=8.2						
YAK	**Yakutsk**	**67.50**	**360**	*e*P	**P**	**18 39 07.8**	**-2.0**
	6.0nm,0.7s,mb4.5						
ZALV	**Zalesovo Beam**	**70.45**	**334**	P	**P**	**18 39 28.9**	**+0.7**
	0.3nm,0.5s,mb3.3,baz=116,slow=3.4,SNR=3.2						

KURK	**Kurchatov**	**71.46**	**328**	P	**P**	**18 39 35.1**	**+0.8**
	0.6nm,0.5s,mb3.6,baz=126,slow=4.5,SNR=4.3						
KURK	**Kurchatov**	**71.46**	**328**	*e*P	**P**	**18 39 35.0**	**+0.6**
	2.2nm,0.8s,mb3.9						

BJI **14** *18:37:18.6, 262S×9974E, h35km, mB5.2, mb4.6*
NEIC **14** *18:37:24.3±0.4, 208S×9978E, h35km, mb4.7/14, Error ellipse: s-maj=13.6km s-min=7.9km az=65.0*
NEIC Felt [III] in the Kepulauan Mentawai.
ISCJB **14** *18:37:25.0±0.4, 194S±006×9989E±007, h49km, mb4.6/37, MS3.6/8, Error ellipse: s-maj=11.4km s-min=6.7km az=138.1*
MOS **14** *18:37:24.2±0.9, 183S×9991E, h39km, mb4.8/12, Error ellipse: s-maj=19.6km s-min=9.2km az=103.1*
DJA **14** *18:37:24, 190S×9967E, h10km, MLv4.8/4*
IDC **14** *18:37:26.6±0.6, 194S×9989E, h48km±5km, mb4.0/18, mb1 4.1/18, mb1mx3.9/25, mbtmp4.0/18, MS3.6/7, Ms1 3.7/7, ms1mx3.3/41, Error ellipse: s-maj=23.4km s-min=10.5km az=51.0*

ISC 14 18:37:27.2±0.4, 192S±006×9993E±007, h51km, h51km±1.5km: pP-P, n89, σ0§93/82, mb4.6/37, MS3.6/8, 3C-7D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.52**	**18**	P	**Pn**	**18 37 51.9**	**-0.2**
	0.0nm,0.0s						
RGRI	**Rengat**	**2.86**	**57**	P	**Pn**	**18 38 12.4**	**+2.0**
	0.0nm,0.0s						
TRSI	**Tarutung**	**4.04**	**346**	P	**Pn**	**18 38 26.1**	**-0.4**
	0.0nm,0.0s						
DBJI	**Dramaga**	**8.21**	**124**	P	**Pn**	**18 39 25.4**	**+1.6**
	0.0nm,0.0s						
BSI	**Banda Aceh**	**8.70**	**328**	P	**Pn**	**18 39 26.8**	**-3.7**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**18.08**	**64**	*e*P	**Pn**	**18 41 38.6**	**+3.7**
KAPI	**Kappang**	**20.02**	**99**	P	**P**	**18 41 54.3**	**-1.7**
	2.5nm,0.3s,baz=179,slow=17,SNR=2.3						
KAPI				S	**S**	**18 45 44.8**	**+6.4**
	1.7nm,0.4s,baz=34,slow=14,SNR=1.8						
KAPI				LR	LR	18 50 29.6	
	comp=Z,102nm,19.8s,MS3.2,baz=45,slow=39						
CM31	**Chiang Mai Arr**	**20.27**	**357**	*e*P	**P**	**18 41 57.3**	**-1.3**
	2.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**20.27**	**357**	P	**P**	**18 41 57.6**	**-1.0**
	3.8nm,0.8s,baz=186,slow=9.7,SNR=35						
CMAR				LR	LR	18 49 57.7	
	comp=Z,132nm,19.4s,MS3.3,baz=185,slow=37						
CMAR	**Chiang Mai Arr**	**20.27**	**357**	⇑*e*P	**P**	**18 41 57.7**	**-0.9**
CHTO	**Chiang Mai**	**20.62**	**357**	*e*P	**P**	**18 42 00.4**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CHTO	**Chiang Mai**	**20.62**	**357**	*e*P	**P**	**18 42 00.3**	**-2.1**
	comp=Z,4.6nm,1.1s						
QIZ	**Qiongzhong**	**22.98**	**25**	P	**P**	**18 42 26.9**	**-0.7**
QIZ	**Qiongzhong**	**22.98**	**25**	*e*P	**P**	**18 42 27.4**	**-0.2**
	comp=Z,9.3nm,0.7s,mb4.3						
FITZ	**Fitzroy Crossi**	**29.91**	**124**	*e*P	pP	18 43 42.0	-1.6
	comp=Z,6.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**29.91**	**124**	P	**P**	**18 43 29.7**	**-0.8**
	comp=Z,2.4nm,1.0s,mb3.9,baz=302,slow=16,SNR=3.6						
FITZ				pP	pP	18 43 42.9	-0.7
	comp=Z,4.0nm,0.8s,baz=241,slow=5.7,SNR=5.6						
FITZ				LR	LR	18 55 02.1	
	comp=Z,62nm,19.6s,MS3.2,baz=262,slow=35						
FITZ	**Fitzroy Crossi**	**29.91**	**124**	P	**P**	**18 43 29.7**	**-0.8**
FITZ				*e*	pP	18 43 41.9	-1.8
FITZ				pP	pP	18 43 42.9	-0.7
FITZ				LR	LR	18 55 02.1	
ODAN	**Odare**	**31.06**	**338**	*e*P	**P**	**18 43 41.5**	**+1.0**
	comp=Z,16nm,0.6s,mb5.0						
TAPN	**Taplejung**	**31.39**	**339**	*e*P	**P**	**18 43 44.3**	**+0.9**
	comp=Z,18nm,0.8s,mb5.0						
RAMN	**Ramite**	**31.45**	**337**	*e*P	**P**	**18 43 45.3**	**+1.4**
JIRN	**Jiri**	**32.24**	**337**	*e*P	**P**	**18 43 52.0**	**+1.1**
	comp=Z,30nm,0.7s,mb5.2						
LSA	**Lhasa**	**32.54**	**346**	P	**P**	**18 43 54.3**	**+0.8**
LSA	**Lhasa**	**32.54**	**346**	*e*P	**P**	**18 43 54.6**	**+1.1**
LSA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
LSA	**Lhasa**	**32.54**	**346**	*e*P	**P**	**18 43 54.6**	**+1.2**
	comp=Z,13nm,1.0s,mb4.8						
GUN	**Gumba**	**32.59**	**336**	*e*P	**P**	**18 43 54.9**	**+1.0**
DMN	**Daman**	**32.64**	**335**	*e*P	**P**	**18 43 54.9**	**+0.5**
KKN	**Kakani**	**32.73**	**336**	*e*P	**P**	**18 43 55.4**	**+0.3**
	comp=Z,13nm,0.8s,mb4.9						
GKN	**Gorkha**	**33.19**	**335**	*e*P	**P**	**18 43 59.4**	**+0.3**
	comp=Z,5.9nm,0.4s,mb4.8						
KOLN	**Koldanda**	**33.44**	**333**	*e*P	**P**	**18 44 01.9**	**+0.6**
	comp=Z,7.1nm,0.6s,mb4.8						
DANN	**Dangsing**	**33.87**	**334**	*e*P	**P**	**18 44 05.3**	**+0.3**
WHN	**Wuhan**	**35.09**	**22**	P	**P**	**18 44 20.8**	**+5.3**
WRA	**Warramunga Arr**	**38.09**	**120**	P	**P**	**18 44 41.4**	**+0.1**
	comp=Z,1.6nm,0.4s,mb4.1,baz=303,slow=9.0,SNR=38						
WRA				pP	pP	18 44 53.6	-1.1
	comp=Z,2.9nm,0.5s,baz=302,slow=9.0,SNR=12						
WRA				PcP	PcP	18 46 55.0	-0.8
	comp=Z,1.0nm,1.1s,baz=283,slow=2.4,SNR=2.8						
WRA				pPcP		18 47 09.3	
	comp=Z,0.6nm,0.6s,baz=310,slow=2.4,SNR=5.1						
WRA	**Warramunga Arr**	**38.09**	**120**	P	**P**	**18 44 41.4**	**+0.1**
WRA				*PP	pP	18 44 53.7	-1.1
WRA						18 46 55.0	
WRAB	**Tennant Creek**	**38.10**	**120**	*e*P	**P**	**18 44 41.3**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	**38.10**	**120**	*e*P	**P**	**18 44 41.3**	**0.0**
	comp=Z,4.2nm,0.6s,mb4.3						
ASAR	**Alice Springs**	**39.35**	**126**	P	**P**	**18 44 51.8**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.6,baz=300,slow=7.2,SNR=28						
ASAR				pP	pP	18 45 04.8	-0.5
	comp=Z,5.1nm,0.6s,baz=302,slow=8.0,SNR=22						
ASAR				PcP	PcP	18 47 00.7	+1.0
	comp=Z,0.8nm,0.7s,baz=314,slow=3.2,SNR=4.4						
ASAR				pPcP		18 47 14.4	
	comp=Z,1.1nm,0.7s,baz=306,slow=3.0,SNR=5.2						
ASAR	**Alice Springs**	**39.35**	**126**	P	**P**	**18 44 51.8**	**-0.1**
ASAR				*PP	pP	18 45 04.8	-0.5
ASAR						18 47 00.7	
KSRS	**Korea Array**	**46.98**	**31**	P	**P**	**18 45 53.4**	**+0.1**
	comp=Z,1.9nm,0.7s,mb4.2,baz=220,slow=8.1,SNR=5.2						
KSRS				pP	pP	18 46 06.2	-0.8
	comp=Z,1.5nm,0.6s,baz=227,slow=7.8,SNR=4.0						
KSRS				LR	LR	19 10 44.2	
	comp=Z,24nm,18.2s,MS3.2,baz=225,slow=42						
KSRS	**Korea Array**	**46.98**	**31**	P	**P**	**18 45 53.4**	**+0.2**
KSRS				*PP	pP	18 46 06.3	-0.7
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
KSRS				MLR	MLR		
	comp=Z,24nm,18.2s,MS3.2						
STKA	**Stephens Creek**	**49.25**	**132**	P	**P**	**18 46 11.3**	**+0.4**
	comp=Z,0.9nm,0.5s,mb4.1,baz=326,slow=15,SNR=3.7						
STKA	**Stephens Creek**	**49.25**	**132**	*e*P	**P**	**18 46 10.9**	**0.0**
	comp=Z,7.2nm,1.0s,mb4.7						
TKM2	**Tokmak 2**	**49.73**	**337**	*e*P	**P**	**18 46 15.1**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
TKM2	**Tokmak 2**	**49.73**	**337**	*e*P	**P**	**18 46 15.1**	**+0.8**
	comp=Z,4.1nm,0.6s,mb4.6						
AML	**Almayashu**	**49.86**	**335**	*e*P	**P**	**18 46 15.4**	**+0.1**
	comp=Z,8.2nm,0.9s,mb4.8						
SONM	**Songino Array**	**49.87**	**6**	P	**P**	**18 46 16.0**	**+0.7**
	comp=Z,2.8nm,0.7s,mb4.4,baz=188,slow=9.5,SNR=17						
ULN	**Ulaanbaatar**	**49.97**	**6**	*e*P	**P**	**18 46 15.8**	**-0.2**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ULN	**Ulaanbaatar**	**49.97**	**6**	*e*P	**P**	**18 46 15.8**	**-0.2**
	comp=Z,2.2nm,0.5s,mb4.4						
EKS2	**Erkin-Say**	**50.26**	**335**	*e*P	**P**	**18 46 19.0**	**+0.7**
	comp=Z,8.9nm,0.8s,mb4.8						
MK31	**Makanchi Array**	**50.93**	**344**	*e*P	**P**	**18 46 23.5**	**+0.2**
MKAR	**Makanchi Array**	**50.93**	**344**	P	**P**	**18 46 23.7**	**+0.4**
	comp=Z,9.1nm,0.6s,mb4.9,baz=150,slow=8.0,SNR=10						
MKAR				pP	pP	18 46 36.8	-0.4
	comp=Z,5.7nm,0.7s,baz=153,slow=8.2,SNR=5.7						
MKAR				LR	LR	19 12 13.7	
	comp=Z,54nm,19.3s,MS3.6,baz=174,slow=41						
MKAR	**Makanchi Array**	**50.93**	**344**	P	**P**	**18 46 23.7**	**+0.4**
MKAR				*PP	pP	18 46 36.8	-0.4
MKAR	**Makanchi Array**	**50.93**	**344**	P	**P**	**18 46 23.7**	**+0.4**
MKAR				pP	pP	18 46 36.8	-0.4
MKAR				LR	LR	19 12 13.7	
KURK	**Kurchatov**	**55.51**	**344**	*d*iP	**P**	**18 46 56.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
KURK				MLR	MLR		
	comp=Z,100nm,25.0s,MS3.8						
KURK	**Kurchatov**	**55.51**	**344**	*e*P	**P**	**18 46 56.3**	**-0.6**
	comp=Z,14nm,0.8s,mb5.0						
ZALV	**Zalesovo Beam**	**57.08**	**349**	P	**P**	**18 47 07.8**	**-0.1**
	comp=Z,11nm,0.7s,mb5.0,baz=181,slow=6.1,SNR=13						
ZALV				pP	pP	18 47 20.9	-1.2
	comp=Z,8.1nm,0.6s,baz=177,slow=6.0,SNR=8.8						
BVAR	**Borovoye Array**	**60.08**	**340**	P	**P**	**18 47 28.1**	**-0.8**
	comp=Z,2.0nm,0.5s,mb4.4,baz=124,slow=13,SNR=4.6						
BOD	**Bodaibo**	**60.61**	**9**	*e*P	**P**	**18 47 32.0**	**-0.4**
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
YSS	**Yuzh-Sakhalins**	**61.45**	**32**	⇓*e*P	**P**	**18 47 38.9**	**+0.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
YSS	**Yuzh-Sakhalins**	**61.45**	**32**	P	**P**	**18 47 34.4**	**-3.9**
	comp=Z,12nm,0.9s,mb5.0						
AKTK	**Aktyubinsk**	**63.25**	**331**	P	**P**	**18 47 49.4**	**-1.0**
AKTO	**Aktyubinsk**	**63.25**	**331**	P	**P**	**18 47 49.4**	**-1.0**
	comp=Z,2.1nm,0.6s,mb4.4,baz=133,slow=7.0,SNR=7.2						
AKTO	**Aktyubinsk**	**63.25**	**331**	P	**P**	**18 47 49.4**	**-0.9**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
ARU	**Arti**	**67.11**	**337**	*d*iP	**P**	**18 48 14.8**	**-0.4**
ARU				*e*		18 50 39.6	
ARU				*e*S	S	18 57 07.7	+2.3
ARU				*e*SS	SS	19 01 18.1	-7.2
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
DZM	**Mont Dzumac**	**67.55**	**113**	*e*P	**P**	**18 48 13.8**	**-4.9**
DZM				*e*S	pP	18 48 38.6	+5.4
YAK	**Yakutsk**	**67.68**	**15**	*i* P	**P**	**18 48 17.7**	**-1.0**
YAK				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
YAK	**Yakutsk**	**67.68**	**15**	*e*P	**P**	**18 48 16.7**	**-2.0**
	comp=Z,20nm,0.8s,mb5.2						
KIV	**Kislovodsk**	**68.44**	**319**	⇑*e*P	**P**	**18 48 23.9**	**0.0**
KIV				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.9						
KIV	**Kislovodsk**	**68.44**	**319**	*e*P	**P**	**18 48 23.7**	**-0.2**
	comp=Z,16nm,1.1s,mb5.0						
EIL	**Elat**	**69.42**	**303**	P	**P**	**18 48 28.5**	**-1.8**
	comp=Z,3.3nm,0.9s,mb4.3,baz=255,slow=12,SNR=2.7						
EIL	**Elat**	**69.42**	**303**	P	**P**	**18 48 28.5**	**-1.8**
MMAI	**Mount Meron Ar**	**69.94**	**306**	P	**P**	**18 48 33.8**	**+0.4**
	comp=Z,1.3nm,0.5s,mb4.1,baz=81,slow=8.9,SNR=3.3						
PET	**Petropavlovsk**	**73.32**	**33**	⇓*e*P	**P**	**18 48 50.5**	**-2.8**
PET				pmax	pmax		
	comp=Z,97nm,1.6s,mb5.5						
BOSA	**Boshof**	**75.64**	**241**	P	**P**	**18 49 06.7**	**-0.7**
	comp=Z,2.7nm,0.9s,mb4.2,baz=225,slow=7.1,SNR=3.0						
OBN	**Obninsk**	**76.69**	**328**	*e*P	**P**	**18 49 12.6**	**-0.1**
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
TIRR	**Tirgusor**	**78.25**	**316**	⇓*i* P	**P**	**18 49 20.5**	**-1.1**
MLR	**Muntele Rosu**	**80.20**	**317**	⇓*i* P	**P**	**18 49 32.5**	**+0.3**
BURAR	**Bucovina Array**	**81.16**	**319**	⇓*i* P	**P**	**18 49 38.4**	**+1.1**
BUR08	**Bucovina Ar. S**	**81.17**	**319**	*e*P	**P**	**18 49 38.0**	**+0.5**
BUR08				*e*	pP	18 49 52.8	+0.6
TSUM	**Tsumeb**	**82.15**	**251**	LR	LR	19 24 07.2	
	comp=Z,106nm,18.0s,MS4.2,baz=141,slow=34						
BZS	**Buzias**	**83.20**	**316**	⇑*i* P	**P**	**18 49 48.3**	**+0.2**
ARCES	**ARCESS Array B**	**86.37**	**340**	P	**P**	**18 50 03.9**	**+0.3**
	comp=Z,4.0nm,0.8s,mb4.7,baz=99,slow=6.3,SNR=7.5						
VRAC	**Vranov**	**87.09**	**319**	LR	LR	19 31 27.2	
	comp=Z,126nm,18.7s,MS4.3,baz=56,slow=37						
GERES	**GERESS Array B**	**88.94**	**319**	P	**P**	**18 50 15.3**	**-1.0**
	comp=Z,1.0nm,0.7s,mb4.2,baz=88,slow=4.7,SNR=8.2						
GERES				pP	pP	18 50 31.4	+0.1
	comp=Z,0.7nm,0.7s,baz=90,slow=4.0,SNR=4.0						
KEST	**Kesra**	**91.59**	**306**	P	**P**	**18 50 30.1**	**+1.2**
	comp=Z,1.5nm,0.8s,mb4.4,baz=150,slow=0.9,SNR=4.0						
CPUP	**Villa Florida**	**144.35**	**217**	PKP	PKPdf	18 56 56.8	-1.7
	comp=Z,0.4nm,0.3s,baz=80,slow=3.8,SNR=6.7						
CPUP				pPKP	pPKPdf	18 57 13.0	-1.0
	comp=Z,1.1nm,0.5s,baz=122,slow=2.7,SNR=2.1						
TXAR	**Lajitas Array**	**144.68**	**37**	PKP	PKPdf	18 56 58.9	-0.1
	comp=Z,3.4nm,0.5s,baz=253,slow=0.9,SNR=59						
TXAR				pPKP	pPKPdf	18 57 12.2	-2.2
	comp=Z,2.2nm,0.6s,baz=209,slow=1.0,SNR=9.3						
MIAR	**Mount Ida**	**145.18**	**20**	*e*PKIKP	PKPdf	18 56 59.5	-0.2
MIAR				*e*		18 57 12.6	
WVT	**Waverly**	**145.21**	**11**	*e*PKIKP	PKPdf	18 56 58.8	-0.9
JCT	**Junction City**	**145.99**	**31**	*e*PKP2	PKPab	18 57 02.0	-0.5

ISCJB **14** *18:40:54.6±0.6, 501.9N±004×8798E±004, h10km, Error ellipse: s-maj=5.7km s-min=3.5km az=153.7*
NNC **14** *18:40:58.9±3.6, 500.8N×8767E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=28.9km s-min=18.1km az=65.0*
MOS **14** *18:40:58.2±2.2, 501.3N×8783E, h15km, mb4.2/1, Error ellipse: s-maj=21.1km s-min=11.1km az=92.2*

ISC 14 18:40:57.9±0.6, 501.8N±004×8795E±004, h10km, n16, σ1§42/31, 9C-8D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.25**	**304**	*i* PG	**Pg**	**18 41 02.4**	**-0.6**
ARTR	**Artybash**	**1.67**	**346**	*e*PN	**Pn**	**18 41 27.9**	**+0.8**
ARTR				*e*	**Sg**	**18 41 52.7**	**+1.1**
UKR	**Ust'-Kan**	**2.16**	**292**	*e*PN	**Pg**	**18 41 36.1**	**-3.1**
UKR				*e*	**Sg**	**18 42 04.9**	**-2.3**
TASR	**Tashtagol**	**2.58**	**359**	*e*PN	**Pg**	**18 41 45.2**	**-2.1**
TASR				*e*	**Sg**	**18 42 20.4**	**-0.4**
ELT	**Yel'tsovka**	**3.26**	**342**	*e*PN	**Pn**	**18 41 52.0**	**+3.0**
ELT				*e*	**Pg**	**18 42 02.2**	**+1.9**
ELT				*e*	**Sg**	**18 42 39.5**	**-3.0**
CERR	**Cheremushki**	**3.44**	**38**	*e*PN	**Pg**	**18 42 02.4**	**-1.4**
CERR				*e*	**Sg**	**18 42 47.9**	**-0.4**
HVS	**Khovu-Aksy**	**3.79**	**73**	*de*PN	**Pn**	**18 41 54.8**	**-1.4**
HVS				*e*		18 42 06.4	
HVS				*e*		18 42 54.9	
BLRR	**Bol'shaya Rech**	**4.00**	**43**	⇓*e*PN	**Pn**	**18 42 01.8**	**+2.7**
BLRR				*e*		18 42 12.9	
BLRR				*e*		18 42 49.9	
BLRR						18 43 05.0	
KZLR	**Kyzyl**	**4.39**	**67**	⇓*e*PN	**Pn**	**18 42 08.4**	**+3.9**
KZLR				*e*	**Pg**	**18 42 22.3**	**+0.4**
KZLR				*e*	**Sg**	**18 43 18.3**	**-0.4**
MK31	**Makanchi Array**	**5.06**	**230**	⇓Pn	**Pn**	**18 42 14.2**	**+0.4**
	31nm,0.8s,baz=58,slow=12						
MK31				⇓Sn	**Sn**	**18 43 10.6**	**-1.6**
	3.9nm,0.3s,baz=58,slow=21,SNR=2.8						
MK31				Lg		18 43 34.9	
	28nm,0.6s,baz=46,slow=29,SNR=5.0						
NVS	**Novosibirsk**	**5.48**	**330**	*e*PN	**Pn**	**18 42 21.9**	**+2.5**
NVS				*e*		18 42 37.0	
NVS				*e*	**Sn**	**18 43 23.0**	**+0.5**
KURK	**Kurchatov**	**5.98**	**279**	⇑Pn	**Pn**	**18 42 25.8**	**-0.5**
	4.6nm,0.4s						
KURK				⇑Sn	**Sn**	**18 43 35.0**	**+0.1**
	11nm,0.6s						
KURK				⇑Lg		18 44 01.7	
	55nm,0.6s						
KURBB	**Kurchatov Arra**	**6.04**	**278**	⇑Pn	**Pn**	**18 42 26.6**	**-0.5**
	2.0nm,0.6s						
KURBB				⇑Sn	**Sn**	**18 43 37.9**	**+1.7**
	8.0nm,0.7s						
KURBB				⇑Lg		18 44 06.1	
	14nm,0.7s						
VOSK	**Vostochnaya**	**10.89**	**290**	⇓Pn	**Pn**	**18 43 34.7**	**+1.1**
	1.5nm,0.8s						
VOSK				⇑Sn	**Sn**	**18 45 34.6**	**-0.7**
	2.9nm,0.7s						
BVA0	**Borovoye Array**	**11.28**	**291**	⇑Pn	**Pn**	**18 43 39.6**	**+0.6**
	0.4nm,0.8s,baz=113,slow=12,SNR=8.0						
BVA0				⇓Sn	**Sn**	**18 45 44.7**	**-0.2**
	0.4nm,0.5s,baz=105,slow=22,SNR=5.8						
KK31	**Karatay Array**	**13.89**	**246**	⇑Pn	**Pn**	**18 44 11.1**	**-3.6**
	0.3nm,0.3s,baz=50,slow=13,SNR=23						
KK31				⇓Sn	**Sn**	**18 46 52.0**	**+3.1**
	0.9nm,0.6s,baz=252,slow=32,SNR=6.1						

KRSC 14 18:48:06.0±1.4, 5071N×15735E, h5km±5km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.87**	**22**	*e*P	Pn	18 48 38.8	+0.2
RUS				*i* S	Sn	18 49 02.7	+0.1
PET	**Petropavlovsk**	**2.45**	**19**	P	Pn	18 48 47.7	+1.1
AVH	**Avacha**	**2.70**	**18**	*e*P	Pn	18 48 51.1	+1.1
NLC	**Nalytchevo**	**2.76**	**26**	P	Pn	18 48 50.3	-0.5
NLC				*i* S	Sn	18 49 22.8	-1.6
SPN	**Mys Shipunski**	**2.91**	**34**	*e*P	Pn	18 48 53.4	+0.5
SPN				*i* S	Sn	18 49 27.6	-0.6
GNL	**Ganaly**	**3.01**	**7**	*e*P	Pn	18 48 55.4	+1.1
KBTR	**Krutoberegovo**	**6.40**	**29**	*e*P	Pn	18 49 41.0	+0.2

IDC **14** *18:59:14.3±2.6, 304S×10081E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.7/20, mbtmp3.7/8, Error ellipse: s-maj=118.9km s-min=17.0km az=57.0*
ISCJB **14** *18:59:17.2±1.8, 30S±03×1009E±05, h33km, mb3.8/9, Error ellipse: s-maj=79.2km s-min=12.7km az=145.7*
NEIC **14** *18:59:19.0±1.4, 309S×10080E, h35km, mb4.3/1, Error ellipse: s-maj=67.0km s-min=11.9km az=56.0*

ISC 14 18:59:19.6±1.7, 30S±03×1009E±04, h35km, n13, σ0§88/10, mb3.8/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.43**	**355**	P	**P**	**19 04 06.0**	**+1.1**
	0.4nm,0.7s,mb2.9,baz=180,slow=8.0,SNR=4.4						
WRA	**Warramunga Arr**	**36.70**	**120**	P	**P**	**19 06 22.6**	**-1.0**
	0.4nm,0.5s,mb3.5,baz=304,slow=9.3,SNR=7.2						
WRAB	**Tennant Creek**	**36.70**	**120**	P	**P**	**19 06 22.4**	**-1.2**
ASAR	**Alice Springs**	**37.92**	**126**	P	**P**	**19 06 34.9**	**+0.9**
	0.5nm,0.4s,mb3.6,baz=302,slow=7.9,SNR=8.2						
STKA	**Stephens Creek**	**47.80**	**132**	P	**P**	**19 07 55.4**	**+1.5**
	2.8nm,1.0s,mb4.2,baz=324,slow=11,SNR=2.8						
SONM	**Songino Array**	**50.87**	**5**	P	**P**	**19 08 16.9**	**0.0**
	0.8nm,0.6s,mb3.9,baz=189,slow=9.5,SNR=5.8						
EKS2	**Erkin-Say**	**51.67**	**335**	P	**P**	**19 08 23.1**	**0.0**
	2.9nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**52.25**	**344**	P	**P**	**19 08 27.3**	**0.0**
	0.9nm,0.5s,mb3.9,baz=158,slow=8.7,SNR=12						
KURK	**Kurchatov**	**56.84**	**343**	P	**P**	**19 08 59.8**	**-0.7**
	0.3nm,0.4s,mb3.7,baz=174,slow=6.1,SNR=3.3						
ZALV	**Zalesovo Beam**	**58.34**	**349**	P	**P**	**19 09 10.5**	**-0.5**
	2.9nm,0.7s,mb4.4,baz=172,slow=5.1,SNR=15						
ACSO	**Alum Creek Sta**	**142.79**	**5**	*e*PKPdf	PKPdf	19 18 52.2	+2.4
MCWV	**Mont Chateau**	**143.53**	**1**	*e*PKPdf	PKPdf	19 18 55.8	+4.7
TXAR	**Lajitas Array**	**144.94**	**39**	PKPbc	PKPdf	19 18 52.2	-1.7
	0.3nm,0.6s,baz=348,slow=4.0,SNR=3.3						

IDC 14 19:03:09.9±1.5, 407S×12607E, h0km, mb3.3/3, mb1 3.5/5, mb1mx3.4/17, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=53.8km s-min=25.5km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.37**	**261**	P	Pn	19 04 45.3	+0.2
	4.3nm,0.3s,baz=181,slow=16,SNR=4.2						
WRA	**Warramunga Arr**	**17.72**	**154**	P	Pn	19 07 19.6	+1.3
	0.1nm,0.3s,baz=335,slow=9.1,SNR=4.8						
ASAR	**Alice Springs**	**20.90**	**159**	P	P	19 07 53.4	-0.6
	0.3nm,1.0s,baz=332,slow=9.7,SNR=3.6						
MKAR	**Makanchi Array**	**63.66**	**328**	P	P	19 13 41.5	-1.6
	0.5nm,0.6s,baz=127,slow=7.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**67.27**	**335**	P	P	19 14 08.0	+1.8
	0.3nm,0.4s,baz=130,slow=7.8,SNR=3.4						

MAN 14 19:05:40, 1383N×12064E, h186km, mb4.1, ML2.9, MS2.6, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.39**	**256**	*e*P	Pn	19 06 07.1	+2.0
LBPH	**Los Banos**	**0.61**	**59**	⇑*e*P	Pn	19 06 08.9	+2.9
NBP	**Mount Natib**	**0.93**	**347**	⇓*e*P	Pn	19 06 09.6	+1.7
SJMP	**San Jose**	**1.44**	**161**	*e*P	Pn	19 06 13.6	+1.6
BUSP	**Coron**	**1.87**	**193**	*e*P	Pn	19 06 18.1	+2.0
OTRP	**Odiongan**	**1.99**	**137**	*e*

GKN Gorkha 34.85 334 *e*P **P 19 12 36.3 +0.9**
comp=Z,28nm,0.6s,mb5.4
KOLN Koldanda 35.12 332 *e*P **P 19 12 39.0 +1.3**
comp=Z,51nm,0.6s,mb5.6
DANN Dangsing 35.54 333 *e*P **P 19 12 42.4 +1.1**
comp=Z,76nm,0.5s
WHN Wuhan 35.82 20 *e*P **P 19 12 43.5 -0.3**
WRA Warramunga Arr 36.40 120 P **P 19 12 48.1 -0.8**
comp=Z,7.6nm,0.4s,mb4.9,baz=304,slow=8.9,SNR=52
WRA PcP PcP 19 15 11.7 -1.2
comp=Z,1.0nm,0.8s,baz=304,slow=2.9,SNR=4.0
WRA S **S 19 18 23.3 -5.0**
comp=Z,0.4nm,0.7s,baz=292,slow=19,SNR=3.7
WRAB Tennant Creek 36.41 120 *e*P **P 19 12 48.5 -0.4**
WRAB pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
WRAB Tennant Creek 36.41 120 *e*P **P 19 12 48.5 -0.4**
comp=Z,6.3nm,0.4s,mb4.9
WB2 Warramunga Arr 36.41 120 *e*P **P 19 12 48.5 -0.5**
ASAR Alice Springs 37.62 126 P **P 19 12 59.0 -0.2**
comp=Z,4.7nm,0.5s,mb4.5,baz=300,slow=8.3,SNR=40
ASAR PcP PcP 19 15 16.9 +0.4
comp=Z,1.3nm,0.9s,baz=237,slow=1.2,SNR=5.3
ASAR S **S 19 18 43.6 -3.2**
comp=Z,0.9nm,0.7s,baz=298,slow=16,SNR=7.3
NDI New Delhi 39.15 326 *e*P **P 19 13 13.0 +1.0**
DDI Dehra Dun 39.97 328 *ex* x 19 13 17.0
THN Thein Dam 42.86 328 *e*P **P 19 13 41.5 -1.0**
CTA Charters Tower 47.05 115 *e*P **P 19 14 15.9 -0.1**
comp=Z,7.5nm,0.8s,mb4.7
CTA Charters Tower 47.05 115 P **P 19 14 15.2 -0.8**
comp=Z,8.5nm,0.7s,mb4.8,baz=274,slow=9.9,SNR=12
CTA Charters Tower 47.05 115 P **P 19 14 15.3 -0.7**
CTA pmax pmax
comp=Z,9.0nm,0.7s
CTAO Charters Tower 47.05 115 *e*P **P 19 14 15.0 -1.0**
CTAO pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CTAO Charters Tower 47.05 115 *e*P **P 19 14 15.0 -1.0**
comp=Z,10.0nm,0.8s,mb4.8
KSRS Korea Array 47.46 29 P **P 19 14 17.7 -1.2**
comp=Z,2.3nm,0.6s,mb4.3,baz=238,slow=8.5,SNR=8.7
KSRS LR LR 19 36 21.9
comp=Z,20nm,19.4s,MS3.1,baz=225,slow=39
KSRS Korea Array 47.46 29 P **P 19 14 17.7 -1.2**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KSRS MLR MLR
comp=Z,20nm,19.4s,MS3.1
STKA Stephens Creek 47.50 132 *e*P **P 19 14 20.0 +0.6**
comp=Z,7.7nm,0.6s,mb4.9
STKA Stephens Creek 47.50 132 P **P 19 14 19.7 +0.3**
comp=Z,4.0nm,0.5s,mb4.7,baz=301,slow=9.1,SNR=12
STKA LR LR 19 32 34.3
comp=Z,131nm,19.7s,MS3.9,baz=26,slow=34
KBL Kabul 48.16 324 *e*P **P 19 14 23.9 -0.6**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KBL Kabul 48.16 324 *e*P **P 19 14 23.9 -0.5**
comp=Z,3.6nm,0.6s,mb4.6
SONM Songino Array 51.01 5 P **P 19 14 45.9 +0.1**
comp=Z,5.6nm,0.6s,mb4.7,baz=189,slow=9.4,SNR=42
SONM PcP PcP 19 16 01.1 -0.5
comp=Z,1.4nm,0.4s,baz=187,slow=4.1,SNR=5.8
SONM LR LR 19 40 54.8
comp=Z,65nm,18.2s,MS3.7,baz=72,slow=42
SONM Songino Array 51.01 5 P **P 19 14 45.9 0.0**
SONM 19 16 01.1
ULN Ulaanbaatar 51.09 5 *e*P **P 19 14 46.2 -0.3**
ULN pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
ULN Ulaanbaatar 51.09 5 *e*P **P 19 14 46.2 -0.3**
comp=Z,2.4nm,0.4s,mb4.5
TKM2 Tokmak 2 51.37 336 *e*P **P 19 14 49.0 +0.3**
TKM2 *e* pP 19 15 01.8 +2.6
TKM2 pmax pmax
comp=Z,25nm,0.6s,mb5.3
TKM2 Tokmak 2 51.37 336 *e*P **P 19 14 49.0 +0.3**
comp=Z,25nm,0.6s,mb5.3
TKM2 *e* pP 19 15 01.8 +2.6
AML Almayashu 51.53 334 *e*P **P 19 14 50.3 +0.4**
comp=Z,135nm,0.6s
EKS2 Erkin-Say 51.92 334 *e*P **P 19 14 53.3 +0.5**
comp=Z,23nm,0.9s,mb5.1
EKS2 *e* 19 15 06.7
MJAR Matsushiro Arr 52.47 38 P **P 19 14 55.8 -1.2**
comp=Z,0.9nm,0.6s,mb3.9,baz=138,slow=32,SNR=4.7
MKAR Makanchi Array 52.48 344 P **P 19 14 56.5 -0.4**
comp=Z,6.6nm,0.5s,mb4.8,baz=156,slow=8.8,SNR=63
MKAR Makanchi Array 52.48 344 P **P 19 14 56.5 -0.4**
ZAK Zakamensk 53.38 2 *e*P **P 19 15 02.5 -0.9**
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KURK Kurchatov 57.06 343 P **P 19 15 29.1 -0.9**
comp=Z,6.4nm,0.6s,mb4.8,baz=158,slow=7.9,SNR=16
KURK LR LR 19 43 20.8
comp=Z,68nm,18.0s,MS3.8,baz=200,slow=40
KURK Kurchatov 57.06 343 *d* i P **P 19 15 29.7 -0.3**
KURK pmax pmax
comp=Z,12nm,1.0s,mb4.9
ZALV Zalesovo Beam 58.54 349 P **P 19 15 39.5 -0.8**
comp=Z,37nm,0.8s,mb5.5,baz=167,slow=5.1,SNR=150
KLR Kul'dur 58.54 23 *e*P **P 19 15 35.6 -4.8**
KRAR Krasnoyarsk 59.38 355‖ *e*P **P 19 15 45.9 -0.2**
KRAR pmax pmax
comp=Z,14nm,0.4s,mb5.3
NVS Novosibirsk 59.70 348 *e*P **P 19 15 46.2 -2.1**
NAY Al-Naaiem 60.85 306 *e*P **P 19 15 56.7 0.0**
baz=306
NAY AMb AMB 19 15 58.3
comp=Z,5.0nm,0.9s,mb4.6,baz=306
MIB Mutribah 60.99 307 *e*P **P 19 15 57.7 +0.1**
baz=307
MIB AMb AMB 19 15 58.8
comp=Z,14nm,0.9s,mb5.1,baz=307
RST Umm Al-Ruwaisa 61.15 306 *e*P **P 19 15 58.5 -0.2**
baz=306
RST AMb AMB 19 15 59.8
comp=Z,10.0nm,0.8s,mb5.0,baz=306
BOD Bodaibo 61.68 8 *e*P **P 19 16 00.7 -1.0**
BOD pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
BRVK Borovoye 61.75 339 *e*P **P 19 16 01.0 -1.3**
BRVK *e* 19 16 14.3
BRVK pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
BRVK Borovoye 61.75 339 *e*P **P 19 16 01.0 -1.3**
comp=Z,7.1nm,0.9s,mb4.8
BRVK *e* 19 16 14.3
YSS Yuzh-Sakhalins 61.88 31‖↓ *e*P **P 19 16 03.0 -0.3**
YSS pmax pmax
comp=Z,21nm,1.1s,mb5.2
YSS Yuzh-Sakhalins 61.88 31 *e*P **P 19 16 02.4 -0.9**
comp=Z,16nm,0.9s,mb5.1
SVE Sverdlovsk 68.21 337 *e*P **P 19 16 44.1 -0.1**
SVE pmax pmax
comp=Z,13nm,0.9s,mb5.0
YAK Yakutsk 68.59 14↑ *e*P **P 19 16 44.8 -1.7**
YAK pmax pmax
comp=Z,31nm,0.8s,mb5.3
YAK Yakutsk 68.59 14 *e*P **P 19 16 44.4 -2.1**
comp=Z,34nm,0.8s,mb5.3
ARU Arti 68.75 336 *d* i P **P 19 16 47.9 +0.3**
ARU *e*S S 19 25 48.5 0.0
ARU SS SS 19 30 09.4 -4.5
ARU pmax pmax
comp=Z,19nm,2.5s,mb4.6
ARU Arti 68.75 336 *e*P **P 19 16 46.2 -1.4**
comp=Z,3.6nm,0.8s,mb4.3
KIV Kislovodsk 70.19 319 *e*P **P 19 16 55.4 -1.4**
KIV pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
MALT Malatya 70.99 312 *e*P **P 19 16 59.9 -1.9**
MALT pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
MALT Malatya 70.99 312 *e*P **P 19 16 59.9 -1.8**
comp=Z,3.1nm,0.8s,mb4.3
PETK Petropavlovsk- 73.26 32 P **P 19 17 14.4 -0.7**
comp=Z,5.0nm,0.7s,mb4.5,baz=307,slow=0.6,SNR=9.4
RPZ Rata Peaks 73.33 135 P **P 19 17 16.2 +0.5**
comp=Z,3.3nm,0.5s,mb4.5,baz=0,slow=6.1,SNR=4.3
TIXI Tiksi 76.84 9‖ *e*P **P 19 17 32.7 -2.6**
TIXI pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
OBN Obninsk 78.40 328 *e*P **P 19 17 44.5 +0.1**
OBN pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
OBN Obninsk 78.40 328 P **P 19 17 44.5 +0.1**
comp=Z,12nm,0.8s,mb4.9
AKASG Malin Array Be 81.12 322 P **P 19 17 59.0 -0.2**
comp=Z,2.0nm,0.8s,mb4.1,baz=97,slow=3.3,SNR=6.5
AKASG Malin Array Be 81.12 322 *i* P **P 19 17 58.5 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.8s
VRI Vrincioaia 81.50 317‖↓ *i* P **P 19 18 02.8 +1.4**
BURAR Bucovina Array 82.91 319‖↑ *i* P **P 19 18 10.1 +1.4**
BUR08 Bucovina Ar. S 82.92 319 *e*P **P 19 18 09.9 +1.1**
BILL Bilibino 83.86 20 *e*P **P 19 18 11.3 -1.8**
BILL pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
BZS Buzias 84.96 316‖↓ *i* P **P 19 18 19.5 +0.3**
PKSM Moragy 87.10 316‖↑ *i* P **P 19 18 30.1 +0.3**
ARCES ARCESS Array B 87.97 340 P **P 19 18 33.1 -0.4**
comp=Z,2.2nm,0.6s,mb4.5,baz=101,slow=4.7,SNR=6.6
MORC Moravsky Berou 88.28 320‖↓ *i* P **P 19 18 36.3 +0.9**
GERES GERESS Array B 90.70 319 P **P 19 18 47.6 +0.9**
comp=Z,1.3nm,0.7s,mb4.4,baz=92,slow=4.5,SNR=16
KEST Kesra 93.31 305 P **P 19 19 02.9 +3.8**
comp=Z,0.9nm,0.8s,mb4.2,baz=98,slow=7.1,SNR=3.5
NVAR Mina Array Bea 129.76 40 PKP PKPdf 19 24 54.9 +1.3
comp=Z,0.5nm,0.5s,baz=287,slow=2.1,SNR=5.3
ULM Lac du Bonnet 130.93 14 PKP PKPdf 19 24 53.8 -1.6
comp=Z,3.0nm,0.6s,baz=246,slow=3.2,SNR=5.0
BDFB Brasilia 144.23 238 PKP PKPdf 19 25 22.0 +1.2
comp=Z,1.5nm,0.4s,baz=129,slow=6.5,SNR=2.3
TXAR Lajitas Array 144.90 40 PKP PKPdf 19 25 20.9 -0.7
comp=Z,5.8nm,0.6s,baz=293,slow=1.2,SNR=94
TXAR Lajitas Array 144.90 40 PKP PKPdf 19 25 20.9 -0.7
MIAR Mount Ida 145.91 22 *e*PKP2 PKPab 19 25 22.6 -1.7
JCT Junction City 146.38 34 *e*PKPdf PKPdf 19 25 24.3 +0.2
JCT *e* 19 25 39.2
TKL Tuckaleechee C 147.36 7 PKPbc PKPbc 19 25 25.9 -2.1
comp=Z,2.4nm,0.4s,baz=83,slow=7.8,SNR=3.8
TKL Tuckaleechee C 147.36 7 PKP2 PKPbc 19 25 25.9 -2.1
TKL pmax pmax
comp=Z,2.0nm,0.4s
SWET Sewanee 147.45 11 *e*PKPdf PKPdf 19 25 26.0 +0.2
CPCT Cooper Cave 147.46 9 *e*PKPdf PKPdf 19 25 23.8 -2.0

*ISCJB **14** 19:06:57.7±2.3, 522S±008×1509E±01, h144km±21km, mb4.0/14, Error ellipse: s-maj=23.8km s-min=13.7km az=178.7*
*NEIC **14** 19:06:59.1±2.1, 526S×1508E, h142km±18km, mb4.3/8, Error ellipse: s-maj=20.1km s-min=11.7km az=86.0*
*IDC **14** 19:07:00.6±3.1, 531S×1509E, h156km±28km, mb3.7/10, mb1 3.7/11, mb1mx3.6/17, mbtmp3.6/11, Error ellipse: s-maj=24.1km s-min=14.5km az=91.0*

ISC 14 19:06:59.2±2.2, 526S±008×1508E±01, h139km±20km, n25, σ0§96/24, mb4.0/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 78nm,0.6s	**5.50**	**221**	*e*Pn		**Pn**	**19 08 20.5**	**+1.4**
CTA	**Charters Tower** 0.3nm,0.3s,baz=132,slow=14,SNR=2.7	**15.40**	**196**	P		**Pn**	**19 10 28.2**	**-0.9**
CTA	**Charters Tower**	**15.40**	**196**	P		**Pn**	**19 10 28.2**	**-0.9**
CTAO	**Charters Tower** 23nm,1.8s	**15.40**	**196**	*e*Pn		**Pn**	**19 10 28.2**	**-0.9**
GUMO	**Guam** 114nm,1.1s	**19.64**	**343**	*e*P		**P**	**19 11 15.8**	**-1.3**
WRAB	**Tennant Creek** 3.0nm,0.6s,mb3.9	**21.68**	**226**	*e*P		**P**	**19 11 38.6**	**-0.4**
WB2	**Warramunga Arr**	**21.68**	**226**	*e*P		**P**	**19 11 38.6**	**-0.4**
WB2	**Warramunga Arr**	**21.68**	**226**	*e*P		**P**	**19 11 38.1**	**-0.9**
WRA	**Warramunga Arr** 2.9nm,0.4s,mb4.1,baz=50,slow=10,SNR=48	**21.69**	**226**	P		**P**	**19 11 39.4**	**+0.3**
WRA					ScP	ScP	19 18 56.6	-2.7
ASAR	**Alice Springs** 0.5nm,0.8s,baz=43,slow=2.6,SNR=4.6	**24.51**	**220**	P		**P**	**19 12 06.8**	**+1.0**
FITZ	**Fitzroy Crossi** 1.6nm,0.5s,mb3.8,baz=57,slow=8.4,SNR=40	**27.72**	**240**	*e*P		**P**	**19 12 34.1**	**-0.7**
FITZ	**Fitzroy Crossi** 9.8nm,1.0s,mb4.5	**27.72**	**240**	P		**P**	**19 12 34.2**	**-0.6**
STKA	**Stephens Creek** 3.9nm,0.4s,mb4.5,baz=63,slow=9.4,SNR=19	**27.86**	**197**	P		**P**	**19 12 35.1**	**-0.7**
MBWA	**Marble Bar** 1.0nm,0.6s,mb3.7,baz=287,slow=17,SNR=4.2 11nm,1.0s,mb4.5	**34.05**	**239**	P		**P**	**19 13 29.0**	**-1.3**
URZ	**Urewera** 4.0nm,0.5s,mb4.3,baz=130,slow=1.9,SNR=7.1	**40.62**	**148**	P		**P**	**19 14 25.1**	**-0.3**
KSM	**Kuching**	**41.03**	**278**	P		**P**	**19 14 28.1**	**-1.1**
KSRS	**Korea Array** 3.3nm,0.7s,mb4.1,baz=155,slow=8.2,SNR=9.8	**47.56**	**335**	P		**P**	**19 15 21.3**	**+0.6**
CM31	**Chiang Mai Arr** 1.5nm,0.7s,mb3.9	**56.31**	**296**	*e*P		**P**	**19 16 26.7**	**+0.9**
CMAR	**Chiang Mai Arr** 0.4nm,0.4s,mb3.6,baz=116,slow=4.8,SNR=7.7	**56.31**	**296**	P		**P**	**19 16 27.0**	**+1.1**
PETK	**Petropavlovsk-** 5.6nm,0.9s,mb4.4,baz=159,slow=6.6,SNR=6.8	**58.44**	**5**	P		**P**	**19 16 39.2**	**-1.0**
PETK	**Petropavlovsk-**	**58.44**	**5**	P		**P**	**19 16 39.2**	**-1.0**
SONM	**Songino Array** 0.6nm,0.5s,mb3.7,baz=142,slow=6.0,SNR=4.3	**65.68**	**329**	P		**P**	**19 17 29.8**	**+1.1**
SBA	**Scott Base** 2.0nm,0.9s,mb3.9	**73.03**	**177**	P		**P**	**19 18 15.0**	**+1.6**
MKAR	**Makanchi Array** 0.2nm,0.5s,mb3.0,baz=97,slow=4.4,SNR=2.7	**79.39**	**319**	P		**P**	**19 18 50.2**	**+0.4**
TORD	**Torodi Ar. Bea** 0.3nm,0.3s,baz=92,slow=2.9,SNR=15	**148.57**	**287**	PKPbc	PKPbc		19 26 28.7	-2.1

*ISCJB **14** 19:10:33.7±0.9, 26S±03×359E±04, h10km, mb3.7/4, Error ellipse: s-maj=70.9km s-min=10.3km az=38.0*
*NEIC **14** 19:10:35.4±0.9, 298S×3651E, h10km, Error ellipse: s-maj=128.0km s-min=13.5km az=120.0*
*IDC **14** 19:10:35.8±1.6, 256S×3614E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/21, mbtmp3.7/4, Error ellipse: s-maj=53.9km s-min=19.6km az=127.0*

ISC 14 19:10:35.8±0.9, 26S±03×360E±05, h10km, n9, σ1§07/11, mb3.7/4, Tanzania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo** 72nm,0.3s,baz=217,slow=18,SNR=550	**1.92**	**40**	Pg		**Pn**	**19 11 09.5**	**+0.9**
KMBO				Lg			19 11 32.7	
KMBO	**Kilima Mbogo** 553nm,0.3s,baz=80,slow=22,SNR=34	**1.92**	**40**	*e*Pn		**Pn**	**19 11 09.0**	**+0.4**
KMBO				Pg		**Pn**	**19 11 09.5**	**+0.9**
KMBO				*e*Sn		**Sn**	**19 11 31.4**	**-1.4**
KMBO				Lg			19 11 32.7	
LSZ	**Lusaka**	**14.76**	**211**	*e*Pn		**Pn**	**19 14 03.6**	**-1.1**
KBL	**Kabul**	**48.25**	**37**	*e*P		**P**	**19 19 15.8**	**-1.3**
MKAR	**Makanchi Array** 0.6nm,0.7s,mb3.6,baz=226,slow=6.3,SNR=4.2	**63.80**	**34**	P		**P**	**19 21 09.1**	**+1.0**
KURK	**Kurchatov** 0.7nm,0.8s,mb3.7,baz=232,slow=6.2,SNR=3.3	**64.37**	**29**	P		**P**	**19 21 11.5**	**-0.3**
CMAR	**Chiang Mai Arr** 0.7nm,0.9s,mb3.7,baz=250,slow=6.7,SNR=5.8	**65.33**	**68**	P		**P**	**19 21 19.7**	**+1.0**
CHTO	**Chiang Mai**	**65.41**	**68**	P		**P**	**19 21 10.0**	**-9.2**
ZALV	**Zalesovo Beam** 0.3nm,0.5s,mb3.5,baz=251,slow=7.0,SNR=2.6	**69.36**	**28**	P		**P**	**19 21 44.9**	**+1.3**

*ISCJB **14** 19:16:53.6±1.5, 1046S±007×120.16E±009, h55km±16km, mb3.8/6, Error ellipse: s-maj=16.3km s-min=9.0km az=146.7*
*NEIC **14** 19:16:55.3±1.4, 1040S×12021E, h47km±17km, mb3.7/1, Error ellipse: s-maj=23.3km s-min=10.2km az=68.0*
*IDC **14** 19:16:57.3±2.8, 1039S×12034E, h71km±30km, mb3.5/6, mb1 3.5/11, mb1mx3.5/20, mbtmp3.5/11, MS3.2/3, Ms1 3.2/3, ms1mx2.9/20, Error ellipse: s-maj=23.8km s-min=15.8km az=78.0*

ISC 14 19:16:55.6±1.3, 1052S±007×12021E±009, h57km±16km, n14, σ1§31/18, mb3.8/6, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	**Baumata** 13nm,0.3s,baz=95,slow=22,SNR=9.4	**3.41**	**85**	P		**Pn**	**19 17 48.2**	**+1.9**
BATI				S		**Sn**	**19 18 24.9**	**-0.7**
BATI	15nm,0.3s,baz=66,slow=4.4,SNR=3.2			LR		LR	19 19 37.4	
KAPI	**Kappang** 1.4nm,0.3s,baz=188,slow=6.1,SNR=8.2	**5.49**	**355**	P		**Pn**	**19 18 13.5**	**-1.3**
KAPI				LR		LR	19 20 36.5	
	comp=Z,116nm,21.4s,baz=66,slow=41							

FITZ Fitzroy Crossi 9.19 146 P **Pn 19 19 07.5 +2.0**
0.3nm,0.3s,baz=340,slow=14,SNR=13
FITZ S **Sn 19 20 44.7 -2.8**
1.0nm,0.3s,baz=185,slow=19,SNR=8.3
MBWA Marble Bar 10.59 182 *e*Pn **Pn 19 19 24.1 -0.5**
MBWA *e*Sn **Sn 19 21 16.7 -5.0**
WRA Warramunga Arr 16.53 126 P **Pn 19 20 43.6 -0.1**
0.2nm,0.3s,baz=299,slow=13,SNR=8.7
WRA S **Sn 19 23 37.1 -9.3**
0.2nm,0.3s,baz=295,slow=22,SNR=6.1
WRAB Tennant Creek 16.53 126 *e*Pn **Pn 19 20 45.2 +1.4**
6.3nm,1.0s
ASAR Alice Springs 18.48 137 P **Pn 19 21 09.1 +1.4**
0.1nm,0.3s,baz=320,slow=13,SNR=8.2
ASAR S **Sn 19 24 29.8 -3.7**
0.1nm,0.3s,baz=310,slow=22,SNR=6.8
NWAO Narrogin (SRO) 22.47 187 P **P 19 21 53.6 +3.6**
16nm,1.1s,mb4.4,baz=67,slow=15,SNR=2.2
CMAR Chiang Mai Arr 35.63 324 P **P 19 23 49.2 +1.0**
0.3nm,0.6s,mb3.4,baz=143,slow=6.4,SNR=4.3
CBIJ Chichi jima 43.04 29 LR LR 19 42 09.9
comp=Z,151nm,19.1s,baz=128,slow=35
SONM Songino Array 59.38 349 P **P 19 26 51.3 -0.6**
0.7nm,0.5s,mb3.9,baz=163,slow=7.0,SNR=4.9
MKAR Makanchi Array 66.34 333 P **P 19 27 38.8 +0.6**
0.4nm,0.5s,mb3.7,baz=148,slow=7.2,SNR=6.7
ZALV Zalesovo Beam 70.88 339 P **P 19 28 05.4 -0.9**
0.4nm,0.4s,mb3.7,baz=142,slow=7.3,SNR=3.0
KURK Kurchatov 70.88 333 P **P 19 28 05.7 -0.8**
0.4nm,0.8s,mb3.4,baz=139,slow=5.4,SNR=3.1

*IDC **14** 19:24:03.2±0.8, 081S×12135E, h0km, mb3.8/10, mb1 3.9/12, mb1mx3.8/20, mbtmp3.8/12, ML3.5/2, Error ellipse: s-maj=32.3km s-min=15.0km az=74.0*
*NEIC **14** 19:24:04.2±0.4, 083S×12132E, h10km, mb4.1/5, Error ellipse: s-maj=18.0km s-min=7.4km az=69.0*
*ISCJB **14** 19:24:05.6±0.5, 080S±005×1213E±0.1, h33km, mb3.9/15, Error ellipse: s-maj=15.1km s-min=6.9km az=174.4*

ISC 14 19:24:07.8±0.5, 081S±005×1214E±01, h35km, n19, σ1§02/20, mb3.9/15, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAPI	**Kappang** 7.7nm,0.3s,baz=13,slow=3.8,SNR=38	**4.47**	**201**	Pn		**Pn**	**19 25 11.7**	**-1.4**
KAPI				Sn		**Sn**	**19 26 05.3**	**+1.3**
	1.9nm,0.3s,baz=114,slow=20,SNR=3.6							
KKM	**Kota Kinabalu**	**8.54**	**323**	*e*Pn		**Pn**	**19 26 07.9**	**-1.2**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=357,slow=18,SNR=2.3	**17.68**	**167**	P		**Pn**	**19 28 10.9**	**-0.6**
WRAB	**Tennant Creek** 4.2nm,1.0s,mb3.8	**22.86**	**147**	*e*P		**P**	**19 29 06.3**	**-1.9**
WRA	**Warramunga Arr** 2.2nm,0.7s,mb3.7,baz=332,slow=9.3,SNR=7.8	**22.86**	**147**	P		**P**	**19 29 08.8**	**+0.5**
ASAR	**Alice Springs** 0.5nm,0.7s,mb3.1,baz=342,slow=13,SNR=8.3	**25.77**	**153**	P		**P**	**19 29 36.4**	**+0.9**
ASAR				PcP	PcP		19 33 06.0	+1.0
	0.3nm,0.6s,baz=343,slow=2.1,SNR=4.9							
CMAR	**Chiang Mai Arr** 0.8nm,0.6s,mb3.6,baz=139,slow=7.0,SNR=9.8	**29.20**	**312**	P		**P**	**19 30 07.0**	**+0.7**
CHTO	**Chiang Mai** 1.9nm,0.8s,mb3.9	**29.43**	**313**	P		**P**	**19 30 02.5**	**-5.8**
MJAR	**Matsushiro Arr** 1.0nm,0.6s,mb3.8,baz=201,slow=9.2,SNR=3.8	**40.33**	**21**	P		**P**	**19 31 41.3**	**-0.7**
LSA	**Lhasa** 2.4nm,0.5s,mb4.1	**41.86**	**319**	P		**P**	**19 31 52.8**	**-1.9**
ULN	**Ulaanbaatar** 1.6nm,0.5s,mb4.3	**50.06**	**347**	*e*P		**P**	**19 32 59.0**	**0.0**
SONM	**Songino Array** 0.8nm,0.6s,mb3.9,baz=164,slow=7.9,SNR=6.3	**50.18**	**347**	P		**P**	**19 33 01.8**	**+1.9**
MK31	**Makanchi Array**	**58.46**	**329**	*e*P		**P**	**19 33 59.9**	**-0.3**
MKAR	**Makanchi Array** 0.7nm,0.6s,mb3.9,baz=117,slow=5.9,SNR=5.9	**58.46**	**329**	P		**P**	**19 34 01.0**	**+0.7**
KBL	**Kabul** 3.2nm,0.7s,mb4.5	**60.23**	**311**	*e*P		**P**	**19 34 12.6**	**-0.1**
PETK	**Petropavlovsk-** 2.3nm,0.9s,mb4.3,baz=284,slow=13,SNR=3.2	**61.68**	**24**	P		**P**	**19 34 23.3**	**+1.2**
ZALV	**Zalesovo Beam** 0.2nm,0.3s,mb3.7,baz=124,slow=7.2,SNR=3.0	**62.39**	**337**	P		**P**	**19 34 27.3**	**+0.3**
KURK	**Kurchatov** 0.1nm,0.3s,mb3.4,baz=80,slow=4.6,SNR=3.1	**62.88**	**331**	P		**P**	**19 34 30.5**	**+0.2**
BVAR	**Borovoye Array** 0.6nm,0.6s,mb3.8,baz=116,slow=10,SNR=3.6	**68.34**	**330**	P		**P**	**19 35 05.8**	**+0.3**

IDC 14 19:48:39.6±4.2, 227S×10254E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/18, mbtmp3.3/3, Error ellipse: s-maj=225.2km s-min=29.9km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.7s,baz=299,slow=8.0,SNR=3.5	**35.68**	**122**	P		P	19 55 38.5	-1.5
ASAR	**Alice Springs** 0.3nm,0.5s,baz=296,slow=7.9,SNR=3.4	**37.06**	**128**	P		P	19 55 53.3	+1.6
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=150,slow=8.3,SNR=4.6	**52.01**	**342**	P		P	19 57 51.2	+0.5
TXAR	**Lajitas Array** 0.3nm,0.8s,baz=315,slow=1.5,SNR=3.1	**143.32**	**40**	PKP	PKPdf		20 08 14.0	-2.8

IDC 14 19:57:29.7±3.0, 189S×9998E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.5/19, mbtmp3.5/6, Error ellipse: s-maj=128.0km s-min=20.7km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.2nm,0.5s,baz=183,slow=10,SNR=3.8	**20.24**	**357**	P		P	20 02 05.8	-0.9
WRA	**Warramunga Arr** 0.3nm,0.4s,baz=303,slow=9.1,SNR=5.2	**38.07**	**121**	P		P	20 04 50.6	+0.2
ASAR	**Alice Springs** 0.4nm,0.8s,baz=301,slow=7.6,SNR=3.3	**39.34**	**126**	P		P	20 05 00.8	-0.3
SONM	**Songino Array** 0.5nm,0.5s,baz=186,slow=10.0,SNR=3.6	**49.83**	**6**	P		P	20 06 25.3	+0.9
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=156,slow=8.9,SNR=8.9	**50.91**	**344**	P		P	20 06 32.8	+0.1
ZALV	**Zalesovo Beam** 0.7nm,0.4s,baz=185,slow=5.6,SNR=6.2	**57.05**	**349**	P		P	20 07 17.3	-0.1
TXAR	**Lajitas Array** 0.6nm,0.6s,baz=355,slow=1.0,SNR=8.3	**144.63**	**37**	PKP	PKPdf		20 17 08.7	-0.5

*ISCJB **14** 19:58:16.0±0.3, 4190N±001×2294E±002, h3km±3km, Error ellipse: s-maj=2.8km s-min=2.1km az=163.7*
*SKO **14** 19:58:16.6, 4187N×2296E, h14km, M2.6, ML2.9*
*ATH **14** 19:58:16.8, 4183N×2289E, h9km±2km, MD3.7/7*
*CSEM **14** 19:58:16.5±0.1, 4194N×2297E, h8km, MD3.3, Error ellipse: s-maj=1.6km s-min=1.0km az=83.0*
*THE **14** 19:58:17.5, 4186N×2300E, h2km, ML3.7*
*SOF **14** 19:58:17.8, 4192N×2308E, h8km, MD3.3*
*NEIC **14** 19:58:17.5, 4186N×2300E, h2km, ML3.7(THE), ML3.7(ATH), After THE.*
*BEO **14** 19:58:18.7±0.6, 4191N×2300E, h15km±3km, ML3.3/5*

ISC 14 19:58:17.1±0.3, 4188N±001×2296E±002, h6km±2km, n88, σ1§04/138, 8C-14D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.09**	**98**	Pg		**Pg**	**19 58 20.4**	**+1.2**
STIP	**Stip**	**0.61**	**253**	*e*Pg		**Pg**	**19 58 28.9**	**+0.1**
STIP	**Stip**	**0.61**	**253**↑	*i*Pg		**Pg**	**19 58 28.9**	**0.0**
STIP				*i* Sg		**Sg**	**19 58 37.2**	**+0.4**
STIP				*e*Lg			19 58 37.5	
	comp=E,368nm,0.2s							
STIP				*e*Lg			19 58 37.5	
	comp=N,317nm,0.2s							
STIP	**Stip**	**0.61**	**253**	*e*Pg		**Pg**	**19 58 28.9**	**+0.1**
STIP				*i* Sg		**Sg**	**19 58 37.1**	**+0.4**
VAY	**Valandovo**	**0.63**	**208**	*e*Pg		**Pg**	**19 58 29.2**	**0.0**
VAY				*e*Sg		**Sg**	**19 58 38.3**	**+0.9**
VAY	**Valandovo**	**0.63**	**208**	*i* Pg		**Pg**	**19 58 29.7**	**+0.5**
VAY				*i* Sg		**Sg**	**19 58 37.6**	**+0.2**
VAY				*e*Lg			19 58 38.3	
	comp=E,390nm,0.3s							
V

KNT				*e*Sg	**Sg**	19 58 40.7	**+0.5**
VTS	**Vitosha**	**0.73**	**14**	*e*Pg	**Pg**	19 58 31.3	**0.0**
VTS				*e*Sg	**Sg**	19 58 41.0	**+0.2**
VTS	**Vitosha**	**0.73**	**14⇑**	*i*P	**Pg**	19 58 31.2	**-0.1**
VTS	**Vitosha**	**0.73**	**14**	Pg	**Pg**	19 58 31.4	**+0.1**
VTS				*e*Sg	**Sg**	19 58 41.0	**+0.2**
NVR	**Nevrokopi**	**0.86**	**128⇓**	*i*PB	**Pb**	19 58 33.3	**-1.1**
NVR				*e*SB	**Sb**	19 58 45.0	**-1.1**
GRG	**Griva**	**1.01**	**205**	*e*Pg	**Pg**	19 58 36.2	**-0.3**
GRG				*e*Sg	**Sg**	19 58 50.2	**+0.6**
GRG	**Griva**	**1.01**	**205**	*e*Pg	**Pg**	19 58 36.2	**-0.4**
GRG				*e*Sg	**Sg**	19 58 50.2	**+0.5**
SOH	**Sokhos**	**1.10**	**164**	*e*Pg	**Pg**	19 58 37.7	**-0.4**
SOH				*e*Sg	**Sg**	19 58 54.0	**+1.6**
PGB	**Panagyurishte**	**1.12**	**53**	*i*Pg	**Pg**	19 58 38.0	**-0.6**
SKO	**Skopje**	**1.14**	**275**	*i*Pg	**Pg**	19 58 38.9	**0.0**
THE	**Thessaloniki**	**1.25**	**180**	*e*Pg	**Pg**	19 58 40.6	**-0.5**
THE				*e*Sg	**Sg**	19 58 59.0	**+1.8**
BARS	**Barje**	**1.26**	**318⇓**	*i*Pg	**Pg**	19 58 41.3	**-0.1**
BARS				*e*Sg	**Sg**	19 58 58.5	**+0.7**
HORT	**Hortiatis**	**1.28**	**175**	*e*Pg	**Pg**	19 58 41.1	**-0.7**
HORT				*e*Sg	**Sg**	19 58 59.8	**+1.4**
PLD	**Plovdiv**	**1.32**	**80**	*e*Pg	**Pg**	19 58 42.3	**-0.1**
PLD				*e*Sg	**Sg**	19 59 00.7	**+1.2**
PLD	**Plovdiv**	**1.32**	**80**	*e*Pg	**Pg**	19 58 42.5	**+0.1**
PLD				*e*Sg	**Sg**	19 59 00.4	**+0.9**
PLD	**Plovdiv**	**1.32**	**80**	Pg	**Pg**	19 58 42.5	**+0.1**
PLD				*e*Sg	**Sg**	19 59 00.4	**+0.9**
RZN	**Rozhen**	**1.33**	**98**	*i*P	**Pn**	19 58 42.1	**0.0**
KRUS	**Krusevo**	**1.38**	**249**	*i*Pg	**Pg**	19 58 43.4	**-0.2**
KRUS				*i*Sg	**Sg**	19 59 01.8	**+0.3**
KRUS				*e*Lg		19 59 02.2	
	comp=N,23nm,0.3s						
KRUS				eLg		19 59 02.3	
	comp=E,21nm,0.3s						
KRUS	**Krusevo**	**1.38**	**249**	*i*Pg	**Pg**	19 58 43.3	**-0.3**
KRUS				*i*Sg	**Sg**	19 59 01.8	**+0.3**
ZAPS	**Zavoj**	**1.42**	**350**	*e*Pg	**Pg**	19 58 44.5	**+0.2**
ZAPS				*e*Sg	**Sg**	19 59 03.6	**+1.0**
BIA	**Bitola**	**1.50**	**236**	*e*Pg	**Pg**	19 58 44.7	**-1.2**
BIA				*e*Sg	**Sg**	19 59 06.6	**+1.3**
BIA	**Bitola**	**1.50**	**236**	*e*Pg	**Pg**	19 58 44.4	**-1.4**
PLG	**Polygyros**	**1.55**	**166**	*e*Pg	**Pg**	19 58 45.4	**-1.4**
PLG				*e*Sg	**Sg**	19 59 05.3	**-1.6**
PLG	**Polygyros**	**1.55**	**166⇑**	*i*PG	**Pg**	19 58 45.2	**-1.6**
PLG				*e*SB	**Sb**	19 59 05.6	**-0.4**
PLG	**Polygyros**	**1.55**	**166⇑**	*i*Pg	**Pg**	19 58 45.2	**-1.6**
PLG				*e*Sg	**Sg**	19 59 05.3	**-1.5**
PLG				*e*Sb	**Sb**	19 59 05.6	**-0.4**
FNA	**Florina**	**1.62**	**228**	*e*Pb	**Pb**	19 58 46.6	**-0.8**
FNA				*e*Sb	**Sb**	19 59 09.4	**+1.4**
OUR	**Ouranopolis**	**1.73**	**153**	*e*Pb	**Pb**	19 58 47.0	**-2.2**
OUR				*e*Sb	**Sb**	19 59 10.8	**-0.3**
KZN	**Kozani**	**1.81**	**210**	*e*PG	**Pg**	19 58 49.4	**-2.4**
LIT	**Litokhoron**	**1.81**	**191**	*e*Pb	**Pb**	19 58 48.8	**-1.8**
LIT				*e*Sb	**Sb**	19 59 13.0	**-0.6**
KDZ	**Kurdzhali**	**1.85**	**96**	P	**Pn**	19 58 49.8	**+0.4**
DIM	**Dimitrovgrad**	**1.93**	**84**	P	**Pn**	19 58 52.8	**+2.4**
PAIG	**Paliouri**	**2.02**	**164**	*e*Pn	**Pn**	19 58 51.3	**-0.5**
RDO	**Rodhopi**	**2.07**	**110**	*e*PN	**Pn**	19 58 54.9	**+2.5**
RDO				*e*SN	**Sn**	19 59 21.9	**+3.5**
BOLS	**Boljevac**	**2.08**	**340**	*e*Pg	**Pg**	19 58 56.0	**-1.1**
BOLS				*e*Sn	**Sn**	19 59 19.4	**+0.6**
BOLS	**Boljevac**	**2.08**	**340**	*e*Pn	**Pn**	19 58 52.5	**-0.1**
BOLS	**Boljevac**	**2.08**	**340**	*e*Pg	**Pg**	19 58 56.0	**-1.1**
BOLS				*e*Sn	**Sn**	19 59 19.4	**+0.6**
PVL	**Pavlikeni**	**2.21**	**52**	Pg	**Pg**	19 58 56.2	**-3.2**
THL	**Klokotos Trika**	**2.42**	**198**	*e*Pn	**Pn**	19 58 57.5	**+0.3**
THL	**Klokotos Trika**	**2.42**	**198**	*e*PN	**Pn**	19 58 57.7	**+0.5**
XOR	**Xorichti**	**2.52**	**176**	*e*Pn	**Pn**	19 58 58.2	**-0.3**
ALN	**Alexandroupoli**	**2.52**	**112**	*e*Pn	**Pn**	19 58 58.5	**0.0**
ALN				*e*Sn	**Sn**	19 59 30.2	**+0.6**
LOS	**Limnos**	**2.52**	**140**	*e*Pn	**Pn**	19 58 58.1	**-0.5**
GRUS	**Gruza**	**2.60**	**321**	*e*Pg	**Pg**	19 59 05.2	**-1.7**
GRUS				*e*Sn	**Sn**	19 59 32.1	**+0.6**
GRUS				*e*Sg	**Sg**	19 59 40.8	**+0.2**
GRUS	**Gruza**	**2.60**	**321**	*e*Pn	**Pn**	19 58 58.7	**-0.9**
GRUS	**Gruza**	**2.60**	**321**	*e*Pg	**Pg**	19 59 05.2	**-1.7**
GRUS				*e*Sn	**Sn**	19 59 32.1	**+0.6**
GRUS				*e*Sg	**Sg**	19 59 40.8	**+0.2**
LIA	**Limnos Island**	**2.60**	**139**	*e*Pn	**Pn**	19 58 58.9	**-0.8**
LIA	**Limnos Island**	**2.60**	**139**	*e*PN	**Pn**	19 59 01.5	**+1.9**
SVIS	**Svilajnac**	**2.71**	**332**	*e*Pn	**Pn**	19 59 01.0	**-0.1**
JMB	**Yambol**	**2.76**	**76**	*e*Pn	**Pn**	19 59 01.4	**-0.4**
AOS	**Alonnisos**	**2.79**	**165**	*e*Pn	**Pn**	19 59 01.5	**-0.8**
EVR	**Evrytania**	**3.09**	**197**	*e*PN	**Pn**	19 59 07.2	**+0.8**
DIVS	**Divibare**	**3.11**	**317⇓**	*i*Pn	**Pn**	19 59 06.4	**-0.2**
DIVS				*e*Sn	**Sn**	19 59 43.1	**-1.0**
DIVS	**Divibare**	**3.11**	**317**	*e*Pn	**Pn**	19 59 06.4	**-0.2**
DIVS				*e*Sn	**Sn**	19 59 43.1	**-1.0**
BBLS	**Lazići**	**3.28**	**308**	*e*Pg	**Pg**	19 59 19.0	**-1.0**
BBLS				*e*Sn	**Sn**	19 59 49.3	**+1.0**
BBLS	**Lazići**	**3.28**	**308**	*e*Pn	**Pn**	19 59 10.6	**+1.6**
BBLS	**Lazići**	**3.28**	**308**	*e*Pg	**Pg**	19 59 19.0	**-1.0**
BBLS				*e*Sn	**Sn**	19 59 49.3	**+1.0**
GZR	**Gura Zlata**	**3.52**	**358⇓**	*i*P	**Pn**	19 59 12.0	**-0.2**
GZR	**Gura Zlata**	**3.52**	**358**	⇓P	**Pn**	19 59 12.0	**-0.2**
GZR				S	**Sn**	19 59 53.1	**-1.0**
GZR	**Gura Zlata**	**3.52**	**358**	⇓P	**Pn**	19 59 12.0	**-0.2**
GZR				S	**Sn**	19 59 53.1	**-1.0**
TREB	**Trebinje**	**3.52**	**285**	*e*Sn	**Sn**	19 59 56.4	**+2.2**
BZS	**Buzias**	**3.86**	**346**	*e*Pn	**Pn**	19 59 16.5	**-0.5**
BZS	**Buzias**	**3.86**	**346⇓**	*i*P	**Pn**	19 59 16.4	**-0.6**
BZS	**Buzias**	**3.86**	**346**	⇓P	**Pn**	19 59 16.4	**-0.6**
BZS				S	**Sn**	19 59 59.3	**-3.3**
BZS	**Buzias**	**3.86**	**346**	⇓P	**Pn**	19 59 16.4	**-0.6**
BZS				S	**Sn**	19 59 59.3	**-3.3**
VOIR		**3.87**	**22⇓**	*i*P	**Pg**	19 59 31.7	**+0.5**
FGSL	**Fruska Gora**	**4.00**	**326**	*e*Pn	**Pn**	19 59 18.7	**-0.2**
FGSL				*e*Sn	**Sn**	20 00 00.2	**-5.8**
MLR	**Muntele Rosu**	**4.21**	**30⇑**	*i*P	**Pn**	19 59 24.8	**+3.0**
MLR	**Muntele Rosu**	**4.21**	**30**	⇑P	**Pn**	19 59 24.8	**+3.1**
DID	**Didima**	**4.37**	**177**	*e*Pn	**Pn**	19 59 24.0	**0.0**
VRI	**Vrincioaia**	**4.83**	**33⇑**	*i*P	**Pn**	19 59 31.7	**+1.4**
VRI	**Vrincioaia**	**4.83**	**33**	⇑P	**Pn**	19 59 31.7	**+1.5**
DRGR		**4.92**	**358⇓**	*i*P	**Pn**	19 59 31.9	**+0.4**
DRGR		**4.92**	**358**	⇓P	**Pn**	19 59 31.9	**+0.4**
BLY	**Banja Luka**	**5.10**	**306**	*e*Pn	**Pn**	19 59 35.0	**+1.0**
BLY				*e*Sn	**Sn**	20 00 29.8	**-3.3**
PKSM	**Moragy**	**5.33**	**326**	*e*Pn	**Pn**	19 59 36.8	**-0.4**
PKSM	**Moragy**	**5.33**	**326⇓**	*i*P	**Pn**	19 59 36.8	**-0.4**
PKSM	**Moragy**	**5.33**	**326**	⇓P	**Pn**	19 59 36.8	**-0.4**
BUR08	**Bucovina Ar. S**	**5.98**	**15**	*e*Pn	**Pn**	19 59 37.1	**-9.0**
BUR08				*e*Pb	**Pb**	19 59 53.2	**-8.4**
BUR08				*e*Pg	**Pg**	20 00 00.9	**-11**
VYHS	**Vyhne**	**7.23**	**338**	*e*	**Pn**	20 00 09.4	**+6.2**
VYHS	**Vyhne**	**7.23**	**338**	*e*P	**Pn**	20 00 09.4	**+6.2**
VYHS				*e*Sg	**Sn**	20 01 24.7	**-0.8**

ISCJB ***14*** *19:59:54.7±0.6, 2433S±004×67.13W±009, h170km±11km, mb3.6/3, Error ellipse: s-maj=13.6km s-min=6.9km az=10.9*

IDC ***14*** *19:59:55.5±1.0, 2430S×6706W, h156km±11km, mb3.4/3, mb1 3.5/9, mb1mx3.4/21, mbtmp3.4/9, Error ellipse: s-maj=15.2km s-min=11.2km az=81.0*

NEIC ***14*** *19:59:55.7±0.6, 2433S×6709W, h160km±8km, mb3.9/1, Error ellipse: s-maj=11.6km s-min=8.0km az=105.0*

ISC 14 19:59:55.5±0.6, 2433S±004×6708W±009, h158km±10km, n16, σ0°96/22, mb3.6/3, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.40**	**315**	P	**Pn**	**20 00 37.6**	**+1.9**
	14nm,0.3s,baz=140,slow=6.1,SNR=102						
LVC				S	**Sn**	**20 01 07.4**	**+0.6**
	42nm,0.3s,baz=260,slow=23,SNR=44						
LVC	**Limon Verde**	**2.40**	**315**	*e*Pn	**Pn**	**20 00 37.5**	**+1.7**
LVC				P		20 00 37.6	
LVC				*e*Sn	**Sn**	**20 01 01.8**	**-5.1**
LVC				S	**Sn**	**20 01 07.4**	**+0.6**
LCO	**Las Campanas**	**5.67**	**214**	Pn	**Pn**	**20 01 17.1**	**-0.8**
LCO				*e*Sn	**Sn**	**20 02 06.2**	**-16**
CFAA	**Coronel Fontan**	**7.32**	**188**	P	**Pn**	**20 01 40.6**	**+1.0**
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=2.4						
CFAA				S	**Sn**	**20 03 00.1**	**-1.5**
	0.1nm,0.3s,baz=209,slow=16,SNR=3.6						
LPAZ	**La Paz**	**8.06**	**353**	P	**Pn**	**20 01 49.9**	**+0.2**
	1.0nm,0.3s,baz=162,slow=8.7,SNR=24						
LPAZ				S	**Sn**	**20 03 16.4**	**-3.3**
	0.1nm,0.3s,baz=9.6,slow=16,SNR=2.5						
LPAZ	**La Paz**	**8.06**	**353**	P	**Pn**	**20 01 49.9**	**+0.2**
LPAZ				S	**Sn**	**20 03 16.4**	**-3.3**
CPUP	**Villa Florida**	**9.04**	**105**	P	**Pn**	**20 02 03.9**	**+1.2**
	0.4nm,0.3s,baz=270,slow=13,SNR=3.9						
SIV	**San Ignacio**	**10.03**	**35**	P	**Pn**	**20 02 15.2**	**-0.6**
	0.3nm,0.3s,baz=238,slow=13,SNR=8.3						
SIV				S	**Sn**	**20 04 06.6**	**-0.5**
	0.1nm,0.3s,baz=265,slow=21,SNR=3.2						
PLCA	**Paso Flores**	**16.61**	**189**	P	**Pn**	**20 03 40.0**	**+0.9**
	0.1nm,0.3s,baz=8.9,slow=9.8,SNR=4.4						
PLCA	**Paso Flores**	**16.61**	**189**	P	**Pn**	**20 03 38.1**	**-1.0**
	3.6nm,0.6s						
PLCA				*e*		20 03 48.3	
BDFB	**Brasilia**	**19.88**	**68**	P	**P**	**20 04 14.8**	**+0.2**
	1.2nm,0.3s,baz=237,slow=9.3,SNR=13						
PMSA	**Palmer Station**	**40.49**	**178**	P	**P**	**20 07 18.4**	**+0.1**
	2.6nm,0.4s,mb4.2,baz=166,slow=18,SNR=5.4						
TXAR	**Lajitas Array**	**63.90**	**325**	P	**P**	**20 10 11.7**	**+0.2**
	0.2nm,0.6s,mb3.1,baz=162,slow=9.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**76.75**	**69**	P	**P**	**20 11 30.0**	**+0.1**
	0.4nm,0.4s,mb3.4,baz=262,slow=5.6,SNR=12						
ASAR	**Alice Springs**	**128.13**	**205**	PKP	PKPdf	20 18 43.8	+0.3
	0.5nm,0.7s,baz=126,slow=1.8,SNR=6.0						
WRA	**Warramunga Arr**	**131.30**	**207**	PKP	PKPdf	20 18 50.6	+1.0
	0.4nm,0.5s,baz=156,slow=1.7,SNR=9.7						

MAN 14 20:08:41, 1358N×12035E, h91km, mb3.9, ML2.7, MS2.3, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBPH	**Los Banos**	**0.99**	**55⇑**	*e*P	Pn	20 09 02.1	+1.5
NBP	**Mount Natib**	**1.16**	**3⇑**	*e*P	Pn	20 09 03.3	+0.7
SJMP	**San Jose**	**1.34**	**146**	*e*P	Pn	20 09 06.6	+1.8
BUSP	**Coron**	**1.57**	**185**	*e*P	Pn	20 09 08.7	+0.9
BUSP				*e*S	Sn	20 09 28.9	+0.9
OTRP	**Odiongan**	**2.03**	**126**	*e*P	Pn	20 09 13.0	-0.7
OTRP				*e*S	Sn	20 09 26.9	-12
BALP	**Baler**	**2.46**	**29**	*e*P	Pn	20 09 24.9	+5.7
ENPP	**El Nido**	**2.52**	**201**	*e*P	Pn	20 09 22.1	+1.9
CUYO	**Cuyo Island**	**2.79**	**166**	*e*P	Pn	20 09 25.9	+2.1

NEIC ***14*** *20:19:15.9±7.0, 1830N×14755E, h10km±41km, mb4.6/6, Error ellipse: s-maj=36.2km s-min=8.3km az=86.0*

ISCJB ***14*** *20:19:18.0±3.4, 1833N±007×1477E±02, h42km±26km, mb4.2/15, MS3.5/5, Error ellipse: s-maj=39.7km s-min=11.2km az=0.4*

MOS ***14*** *20:19:18.9±0.9, 1833N×14760E, h46km, mb4.8/6, Error ellipse: s-maj=19.9km s-min=11.5km az=106.0*

IDC ***14*** *20:19:20.0±5.5, 1833N×14776E, h44km±42km, mb3.7/8, mb1 3.8/10, mb1mx3.7/21, mbtmp3.7/10, ML3.9/2, MS3.5/4, Ms1 3.5/4, ms1mx3.1/35, Error ellipse: s-maj=63.1km s-min=15.6km az=86.0*

ISC 14 20:19:19.1±2.9, 1835N±007×1477E±02, h37km±22km, n30, σ0°97/33, mb4.2/15, MS3.5/5, 2C-10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.48**	**211**	P	**Pn**	**20 20 38.9**	**+0.6**
	10nm,0.3s,baz=40,slow=21,SNR=8.8						
GUMO				S	**Sn**	**20 21 41.0**	**+1.0**
	17nm,0.3s,baz=198,slow=23,SNR=5.2						
GUMO	**Guam**	**5.48**	**211**	P	**Pn**	**20 20 38.9**	**+0.6**
GUMO				S	**Sn**	**20 21 41.0**	**+0.9**
GUMO				pmax	pmax		
	comp=Z,10.0nm,0.3s						
GUMO				smax			
	comp=N,17nm,0.3s						
GUMO	**Guam**	**5.48**	**211**	Pn	**Pn**	**20 20 35.3**	**-2.9**
GUMO				P		20 20 38.9	
GUMO				*e*Sn	**Sn**	**20 21 35.5**	**-4.6**
GUMO				S	**Sn**	**20 21 41.0**	**+1.0**
MJAR	**Matsushiro Arr**	**19.98**	**337**	P	**Pn**	**20 23 48.8**	**-1.4**
	comp=N,0.1nm,0.3s,baz=158,slow=8.9,SNR=3.4						
KSRS	**Korea Array**	**25.77**	**322**	P	**P**	**20 24 48.0**	**+1.5**
	comp=N,1.4nm,0.6s,mb3.7,baz=150,slow=8.6,SNR=5.7						
KSRS				LR	LR	20 34 51.6	
	comp=N,42nm,18.6s,MS3.0,baz=130,slow=36						
KSRS	**Korea Array**	**25.77**	**322**	P	**P**	**20 24 48.0**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
KSRS				MLR	MLR		
	comp=Z,42nm,18.6s,MS3.0						
WRAB	**Tennant Creek**	**40.25**	**200**	*e*P	**P**	**20 26 52.5**	**0.0**
WRAB				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.7						
WRAB	**Tennant Creek**	**40.25**	**200**	*e*P	**P**	**20 26 52.5**	**0.0**
	comp=Z,20nm,1.3s,mb4.7						
WB2	**Warramunga Arr**	**40.26**	**200**	*e*P	**P**	**20 26 52.4**	**-0.2**
WRA	**Warramunga Arr**	**40.26**	**200**	P	**P**	**20 26 52.6**	**0.0**
	comp=Z,8.0nm,1.0s,mb4.4,baz=20,slow=9.1,SNR=19						
KSM	**Kuching**	**40.37**	**250**	P	**P**	**20 26 52.1**	**-1.6**
FITZ	**Fitzroy Crossi**	**42.24**	**212**	P	**P**	**20 27 09.1**	**+0.2**
	comp=Z,1.0nm,0.8s,mb3.5,baz=36,slow=12,SNR=3.1						
ASAR	**Alice Springs**	**43.89**	**198**	P	**P**	**20 27 22.1**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.6,baz=20,slow=8.6,SNR=15						
ULN	**Ulaanbaatar**	**44.25**	**321**	P	**P**	**20 27 24.5**	**-0.4**
SONM	**Songino Array**	**44.63**	**321**	P	**P**	**20 27 27.9**	**-0.1**
	comp=Z,0.6nm,0.7s,mb3.6,baz=131,slow=10,SNR=6.8						
SONM				LR	LR	20 47 43.3	
	comp=Z,47nm,18.1s,MS3.5,baz=61,slow=38						
YAK	**Yakutsk**	**45.44**	**348**	*e*P	**P**	**20 27 33.3**	**-0.8**
YAK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.8						
CMAR	**Chiang Mai Arr**	**46.19**	**278**	P	**P**	**20 27 41.0**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=69,slow=7.8,SNR=6.6						
CMAR				LR	LR	20 46 58.0	
	comp=Z,20nm,18.9s,MS3.1,baz=215,slow=36						
MBWA	**Marble Bar**	**47.90**	**216**	*e*P	**P**	**20 27 52.2**	**-1.7**
	comp=Z,10nm,0.9s,mb4.9						
ZALV	**Zalesovo Beam**	**59.48**	**322**	P	**P**	**20 29 18.1**	**-0.1**
	comp=Z,2.2nm,0.8s,mb4.2,baz=98,slow=6.1,SNR=11						
MKAR	**Makanchi Array**	**60.31**	**314**	P	**P**	**20 29 23.1**	**+0.4**
	comp=Z,1.4nm,0.8s,mb4.1,baz=90,slow=8.4,SNR=7.4						
KURK	**Kurchatov**	**62.83**	**318⇓**	*e*P	**P**	**20 29 41.0**	**0.0**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.8						
KURK				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.0						
KURK	**Kurchatov**	**62.83**	**318**	*e*P	**P**	**20 29 39.7**	**-1.3**
	comp=Z,11nm,1.3s,mb4.8						
RAR	**Rarotonga**	**64.21**	**125**	LR	LR	20 55 01.1	
	comp=Z,150nm,19.5s,MS4.2,baz=306,slow=33						
TKM2	**Tokmak 2**	**64.77**	**309**	P	**P**	**20 29 55.2**	**+1.2**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
TKM2	**Tokmak 2**	**64.77**	**309**	P	**P**	**20 29 55.2**	**+1.3**
	comp=Z,2.3nm,0.8s,mb4.3						
BRVK	**Borovoye**	**68.04**	**321**	*e*P	**P**	**20 30 15.2**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
BRVK	**Borovoye**	**68.04**	**321**	*e*P	**P**	**20 30 15.2**	**+0.5**
	comp=Z,3.0nm,0.9s,mb4.3						
ARU	**Arti**	**74.47**	**325**	*c*P	**P**	**20 30 54.0**	**+0.5**
ARU				*e*		20 33 40.7	
ARU				*e*S	S	20 40 25.2	-0.5
ARU				*e*SS	SS	20 45 08.6	-3.6
ARU				pmax	pmax		
	comp=Z,12nm,2.0s,mb4.5						
ARU	**Arti**	**74.47**	**325**	P	**P**	**20 30 53.2**	**-0.3**
	comp=Z,4.7nm,1.0s,mb4.4						
KBS	**Kingsbay**	**79.90**	**352⇑**	*e*P	**P**	**20 31 26.3**	**+2.7**

NEIC ***14*** *20:21:42.7±2.0, 1845S×17554W, h119km±33km, mb4.5/4, Error ellipse: s-maj=36.7km s-min=16.7km az=99.0*

IDC ***14*** *20:21:43.5±3.1, 1847S×17539W, h134km±36km, mb4.1/5, mb1 4.2/6, mb1mx3.7/19, mbtmp4.0/6, Error ellipse: s-maj=44.3km s-min=28.5km az=118.0*

ISC 14 20:21:42.6±3.1, 185S±02×1756W±04, h116km±52km, n13, σ0°43/15, mb4.5/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.80**	**39**	P	**Pn**	**20 23 06.3**	**0.0**
	5.5nm,0.3s,baz=22,slow=22,SNR=8.5						
AFI				S	**Sn**	**20 24 03.9**	**-7.7**
	27nm,0.3s,baz=21,slow=23,SNR=8.0						
AFI	**Afiamalu**	**5.80**	**39**	P	**Pn**	**20 23 06.3**	**0.0**
AFI				S	**Sn**	**20 24 03.9**	**-7.7**
URZ	**Urewera**	**20.75**	**196**	P	**P**	**20 26 14.1**	**+0.1**
	2.4nm,0.3s,baz=224,slow=7.9,SNR=6.8						
CTA	**Charters Tower**	**36.03**	**261**	P	**P**	**20 28 33.3**	**+0.4**
	6.2nm,0.5s,mb4.8,baz=97,slow=11,SNR=10						
CTAO	**Charters Tower**	**36.03**	**261**	*e*P	**P**	**20 28 33.5**	**+0.6**
	6.4nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**40.76**	**242**	P	**P**	**20 29 12.5**	**+0.2**
	5.3nm,1.1s,mb4.3						
WB2	**Warramunga Arr**	**47.18**	**260**	*e*P	**P**	**20 30 03.9**	**0.0**
WRAB	**Tennant Creek**	**47.18**	**260**	*e*P	**P**	**20 30 03.6**	**-0.2**
	4.0nm,0.4s,mb4.5						
WRA	**Warramunga Arr**	**47.19**	**260**	P	**P**	**20 30 04.0**	**+0.1**
	4.4nm,0.4s,mb4.6,baz=98,slow=7.0,SNR=101						
WRA				PcP	PcP	20 31 32.6	-1.1
	0.8nm,0.7s,baz=95,slow=3.5,SNR=5.1						
ASAR	**Alice Springs**	**47.25**	**255**	P	**P**	**20 30 04.6**	**+0.3**
	7.7nm,0.6s,mb4.6,baz=87,slow=8.4,SNR=119						
ASAR				PcP	PcP	20 31 32.4	-1.5
	0.7nm,0.5s,baz=103,slow=3.6,SNR=5.5						
FITZ	**Fitzroy Crossi**	**55.60**	**260**	*e*P	**P**	**20 31 06.4**	**-0.3**
	2.5nm,0.5s,mb4.5						
MBWA	**Marble Bar**	**60.56**	**256**	*e*P	**P**	**20 31 40.1**	**-1.1**
CMAR	**Chiang Mai Arr**	**91.61**	**289**	P	**P**	**20 34 37.6**	**+0.6**
	0.8nm,0.7s,mb4.0,baz=82,slow=2.7,SNR=5.0						

IDC 14 20:35:51.0±27.0, 1599S×17344W, h0km, mb4.4/4, mb1 4.5/4, mb1mx4.1/17, mbtmp4.4/4, Error ellipse: s-maj=505.7km s-min=160.3km az=71.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.48**	**258**	P	P	20 43 15.3	+0.2
	1.3nm,0.6s,baz=75,slow=9.5,SNR=5.1						
STKA	**Stephens Creek**	**43.71**	**240**	*e*P	P	20 43 58.5	+0.4
	2.0nm,0.6s						
STKA	**Stephens Creek**	**43.71**	**240**	P	P	20 43 58.2	+0.1
	2.3nm,0.5s,baz=88,slow=11,SNR=13						
WRA	**Warramunga Arr**	**49.68**	**257**	P	P	20 44 44.8	-0.2
	1.2nm,0.5s,baz=90,slow=7.9,SNR=29						
ASAR	**Alice Springs**	**49.90**	**252**	P	P	20 44 46.5	-0.2
	12nm,0.6s,baz=88,slow=8.4,SNR=211						

ISCJB ***14*** *20:40:05.1±0.7, 34S±0.1×1008E±02, h30km, mb4.3/17, Error ellipse: s-maj=28.8km s-min=8.9km az=145.0*

IDC ***14*** *20:40:07.9±1.1, 343S×10074E, h31km±4km, mb4.0/13, mb1 4.1/13, mb1mx4.0/23, mbtmp4.0/13, Error ellipse: s-maj=44.8km s-min=12.4km az=54.0*

NEIC ***14*** *20:40:07.9±0.5, 346S×10081E, h35km, mb4.6/5, Error ellipse: s-maj=26.0km s-min=7.4km az=56.0*

ISC 14 20:40:07.6±0.6, 34S±01×1008E±02, h32km, h32km±4km: pP-P, n27, σ0°91/24, mb4.3/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.82**	**355**	P	**P**	**20 44 56.1**	**-1.2**
	0.9nm,0.5s,mb3.5,baz=184,slow=9.2,SNR=9.5						
FITZ	**Fitzroy Crossi**	**28.34**	**123**	P	**P**	**20 46 01.4**	**+2.5**
	1.3nm

NIED ***14*** *21:04:00, 32.50N×13190E, h38km, Mw3.7 Best double couple: M₀4.56000×10¹⁴ NP1:φ₀153.00000°, δ78.00000°, λ-99.00000°. NP2:φ₀9.00000°, δ15.00000°, λ-55.00000°.*

ISCJB ***14*** *21:04:42.3±0.7, 32.48N±0.05×131.85E±0.05, h45km±9km, Error ellipse: s-maj=9.4km s-min=5.8km az=148.2*

JMA ***14*** *21:04:42.6, 32.46N×131.87E, h32km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs235.00000°, δ6.00000°, λ166.00000°. NP2: φs339.00000°, δ88.00000°, λ84.00000°. Principal axes: T Plg46.0000°, Azm243.0000°; N Plg6.0000°, Azm339.0000°; P Plg43.0000°, Azm75.0000°;*

JMA Felt I J1.

IDC ***14*** *21:04:44.4±8.2, 32.48N×131.81E, h64km±67km, mb3.3/1, mb1 3.3/3, mb1mx3.1/23, mbtmp3.2/3, ML3.1/2, MS2.8/2, Ms1 2.8/2, ms1mx2.6/19 Error ellipse: s-maj=95.5km s-min=29.6km az=26.0*

ISC 14 21:04:42.6±0.7, 3245N±0.05×13189E±0.05, h29km±6km, n12, σ0°80/18, 3C-4D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTSN	**Tsuno**	**0.38**	**238**	⇓P	**Pb**	**21 04 51.0**	**-0.1**
JTSN				S	**Sb**	**21 04 57.2**	**+0.3**
JKIT	**Kitakata**	**0.41**	**296**	⇓P	**Pb**	**21 04 51.3**	**-0.2**
JKIT				S	**Sb**	**21 04 57.7**	**+0.1**
JUS	**Usuki**	**0.63**	**349**	⇑P	**Pb**	**21 04 54.6**	**-0.5**
JUS				S	**Sb**	**21 05 03.8**	**+0.3**
JTZ	**Takazaki**	**0.87**	**231**	⇑P	**Pn**	**21 04 58.7**	**-0.2**
JTZ				S	**Sb**	**21 05 11.3**	**+0.9**
JTO	**Tosashimizu**	**0.87**	**62**	⇓P	**Pn**	**21 04 58.0**	**-1.0**
JTO				S	**Sb**	**21 05 09.6**	**-0.9**
JIU2	**Izumi 2**	**0.91**	**276**	⇑P	**Pn**	**21 04 59.1**	**-0.4**
JIU2				S	**Sb**	**21 05 11.3**	**-0.3**
UWA2	**Uwa jima 2**	**0.98**	**39**	⇓P	**Pn**	**21 05 01.0**	**+0.5**
UWA2				S	**Sn**	**21 05 14.5**	**+1.1**
KSRS	**Korea Array**	**5.96**	**328**	P	**Pn**	**21 06 09.5**	**+0.6**
	0.4nm,0.3s,baz=147,slow=14,SNR=4.9						
KSRS				S	**Sn**	**21 07 16.2**	**+0.1**
	0.6nm,0.3s,baz=147,slow=25,SNR=5.6						
MJAR	**Matsushiro Arr**	**6.62**	**50**	P	**Pn**	**21 06 19.6**	**+1.6**
	0.5nm,0.3s,baz=241,slow=14,SNR=4.4						
ASAJ	**Asahikawa**	**14.35**	**33**	LR	LR	21 14 28.7	
	comp=Z,35nm,18.2s,baz=149,slow=41						
SONM	**Songino Array**	**24.66**	**316**	P	**P**	**21 09 58.5**	**-2.2**
	1.1nm,0.8s,baz=122,slow=11,SNR=8.9						
PETK	**Petropavlovsk-**	**27.76**	**34**	LR	LR	21 22 18.1	
	comp=Z,19nm,19.2s,baz=202,slow=38						

IDC ***14*** *21:06:41.7±3.0, 1163S×166.39E, h0km, mb4.0/5, mb1 4.0/6, mb1mx3.8/17, mbtmp4.0/6, ML4.4/1, Error ellipse: s-maj=78.8km s-min=37.4km az=128.0*

ISC 14 21:06:51.1±5.6, 115S±02×1660E±03, h54km±40km, n6, σ0°93/7, mb3.7/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.32**	**289**	Pn	**Pn**	**21 08 21.8**	**0.0**
	7.4nm,0.3s,baz=199,slow=18,SNR=4.0						
HNR				Sn	**Sn**	**21 09 32.5**	**-0.1**
	13nm,0.3s,baz=336,slow=19,SNR=3.1						
WRA	**Warramunga Arr**	**31.58**	**251**	P	**P**	**21 13 09.6**	**+0.8**
	0.3nm,0.7s,mb3.2,baz=79,slow=9.1,SNR=3.4						
ASAR	**Alice Springs**	**32.83**	**244**	P	**P**	**21 13 19.1**	**-0.7**
	0.7nm,0.9s,mb3.6,baz=70,slow=9.7,SNR=6.1						
SONM	**Songino Array**	**79.20**	**324**	P	**P**	**21 18 51.2**	**+0.9**
	0.3nm,0.7s,mb3.4,baz=123,slow=5.3,SNR=4.7						
MKAR	**Makanchi Array**	**94.04**	**317**	P	**P**	**21 20 03.6**	**+0.1**
	1.2nm,0.7s,mb4.5,baz=90,slow=5.6,SNR=7.3						
ZALV	**Zalesovo Beam**	**94.09**	**324**	P	**P**	**21 20 02.4**	**-1.1**
	0.3nm,0.4s,mb4.0,baz=116,slow=3.4,SNR=4.4						

ISCJB ***14*** *21:34:58.3±3.6, 477N±0.1×1546E±02, h26km±27km, mb3.7/7, Error ellipse: s-maj=25.9km s-min=8.8km az=37.5*

MOS ***14*** *21:34:59.8±1.8, 4767N×15457E, h43km, mb3.8/5, Error ellipse: s-maj=32.1km s-min=17.0km az=52.3*

IDC ***14*** *21:35:02.8±3.5, 4762N×15457E, h51km±34km, mb3.4/6, mb1 3.7/9, mb1mx3.5/24, mbtmp3.5/9, ML3.4/3, MS3.4/2, Ms1 3.4/2, ms1mx2.5/26, Error ellipse: s-maj=41.7km s-min=17.3km az=143.0*

ISC 14 21:35:01.4±3.8, 478N±01×1546E±02, h34km±28km, n18, σ1°21/17, mb3.7/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.11**	**18**	*e*PN	**Pn**	**21 35 47.0**	**-0.9**
SKR				*e*S	**Sn**	**21 36 22.5**	**-1.3**
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				smax			
	comp=N,360nm,1.0s						
SKR				smax			
	comp=E,220nm,1.0s						
PETK	**Petropavlovsk-**	**5.72**	**19**	P	**Pn**	**21 36 25.3**	**+1.4**
	comp=E,1.5nm,0.3s,baz=174,slow=12,SNR=21						
ASAJ	**Asahikawa**	**9.10**	**251**	P	**Pn**	**21 37 11.6**	**+1.3**
	comp=E,0.3nm,0.3s,baz=66,slow=12,SNR=3.1						
ERM	**Erimo**	**9.92**	**239**	*i* PN	**Pn**	**21 37 20.0**	**-1.4**
MJAR	**Matsushiro Arr**	**16.48**	**233**	P	**Pn**	**21 38 48.6**	**-1.2**
	comp=E,0.2nm,0.3s,baz=18,slow=9.7,SNR=3.6						
JHJ	**Hachijo jima 2**	**18.40**	**223**	LR	LR	21 45 29.2	
	comp=E,91nm,21.8s,baz=58,slow=34						
KSRS	**Korea Array**	**22.05**	**252**	P	**P**	**21 39 54.8**	**+1.8**
	comp=E,2.2nm,0.9s,mb3.6,baz=51,slow=10,SNR=3.8						
KSRS	**Korea Array**	**22.05**	**252**	P	**P**	**21 39 54.8**	**+1.8**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
MKAR	**Makanchi Array**	**47.37**	**297**	P	**P**	**21 43 31.0**	**-0.8**
	comp=Z,0.3nm,0.3s,mb3.8,baz=67,slow=8.6,SNR=4.5						
MKAR	**Makanchi Array**	**47.37**	**297**	*e*P	**P**	**21 43 32.2**	**+0.4**
KURK	**Kurchatov**	**47.64**	**303**	*i* P	**P**	**21 43 34.3**	**+0.4**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
KAPI	**Kappang**	**60.80**	**221**	LR	LR	22 10 28.6	
	comp=Z,41nm,19.1s,baz=310,slow=35						
NVAR	**Mina Array Bea**	**61.09**	**64**	P	**P**	**21 45 12.6**	**+0.7**
	comp=Z,0.5nm,0.5s,mb3.9,baz=297,slow=5.9,SNR=4.7						
PDAR	**Pinedale Array**	**63.36**	**55**	P	**P**	**21 45 27.6**	**+0.7**
	comp=Z,0.5nm,0.8s,mb3.7,baz=345,slow=3.4,SNR=4.3						
WRA	**Warramunga Arr**	**69.79**	**200**	P	**P**	**21 46 05.9**	**-2.2**
	comp=Z,0.6nm,1.0s,mb3.5,baz=19,slow=6.1,SNR=2.9						
WRA	**Warramunga Arr**	**69.79**	**200**	P	**P**	**21 46 05.9**	**-2.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TXAR	**Lajitas Array**	**76.14**	**62**	P	**P**	**21 46 45.9**	**+0.1**
	comp=Z,0.1nm,0.4s,mb3.1,baz=293,slow=4.4,SNR=7.2						
TXAR	**Lajitas Array**	**76.14**	**62**	*e*P	**P**	**21 46 46.8**	**+1.0**

NEIC ***14*** *21:46:35.2, 1668N×9497W, h89km, MD4.0(MEX), After MEX.*

MEX 14 21:46:35.2±1.3, 1668N×9497W, h89km±13km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.42**	**11**	*i* P	Pn	21 46 48.1	-1.2
CMIG				*i* S	Sn	21 46 58.3	-1.5
HUIG	**Huatulco**	**1.42**	**231**	*i* P	Pn	21 46 57.7	-2.3
HUIG				*i* S	Sn	21 47 17.1	-1.5
TUIG	**Tuzandepetl**	**1.44**	**21**	*i* P	Pn	21 46 58.5	-1.7
TUIG				*i* S	Sn	21 47 16.6	-2.6
OXX	**Oaxaca**	**1.73**	**284**	*i* P	Pn	21 47 04.2	+0.4
OXX				*i* S	Sn	21 47 25.3	-0.3
VHO	**Vista Hermosa**	**1.73**	**283**	*i* P	Pn	21 47 03.4	-0.5
VHO				*i* S	Sn	21 47 24.6	-1.2
TGIG		**1.77**	**87**	*i* P	Pn	21 47 04.6	+0.2
TGIG				*i* S	Sn	21 47 23.4	-3.2
CCIG	**Comitan**	**2.75**	**98**	*e*P	Pn	21 47 17.2	-0.1
CCIG				*i* S	Sn	21 47 47.9	-1.7

ISCJB ***14*** *21:53:25.1±0.7, 5032N±0.05×1898E±0.03, h0km, Error ellipse: s-maj=7.2km s-min=2.9km az=7.2*

IPEC ***14*** *21:53:26.5±0.2, 5028N×1907E, h0km±1km, ML1.6/3, Error ellipse: s-maj=2.7km s-min=0.9km az=172.0*

CSEM ***14*** *21:53:26.5±0.2, 5030N×1907E, h0km±1km, ML2.7/3, Error ellipse: s-maj=5.5km s-min=3.1km az=32.0*

PRU ***14*** *21:53:27.5, 5028N×1899E, h0km*

ISC 14 21:53:26.4±0.7, 5029N±005×1901E±003, h0km, n19, σ1°11/35, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.51**	**97**	*e*Pg	**Pg**	**21 53 35.5**	**-0.6**
OJC				*e*Sg	**Sg**	**21 53 41.3**	**-1.4**
OKC	**Ostrava-Krasne**	**0.72**	**231**	*e*PG	**Pg**	**21 53 39.8**	**-0.3**
OKC				*e*SG	**Sg**	**21 53 50.7**	**+1.3**
	comp=Z,8.0nm,0.2s						
MORC	**Moravsky Berou**	**1.08**	**242**	*e*Pg	**Pg**	**21 53 47.7**	**+0.6**
MORC				*e*Sg	**Sg**	**21 54 01.3**	**+0.3**
	comp=Z,11nm,0.1s						
NIE	**Niedzica**	**1.21**	**135**	*e*Pg	**Pg**	**21 53 49.1**	**-0.5**
NIE				*e*Sg	**Sg**	**21 54 04.1**	**-1.1**
STHS	**Stebnicka Huta**	**1.69**	**120**	*e*Pn	**Pn**	**21 53 57.5**	**+0.4**
STHS				*e*Sn	**Sn**	**21 54 21.4**	**+2.0**
DPC	**Dobruska-Polom**	**1.73**	**273**	Pg	**Pg**	**21 53 58.2**	**-1.3**
DPC				*e*Sg	**Sg**	**21 54 21.7**	**-0.2**
DPC	**Dobruska-Polom**	**1.73**	**273**	*e*PG	**Pg**	**21 53 58.2**	**-1.3**
DPC				*e*SG	**Sg**	**21 54 22.1**	**+0.2**
	comp=Z,5.7nm,0.3s						
KOLL	**Kolacno**	**1.76**	**193**	*e*PN	**Pn**	**21 53 59.5**	**+1.4**
KOLL				*e*SN	**Sn**	**21 54 20.5**	**-0.6**
KOLL	**Kolacno**	**1.76**	**193**	*e*Pn	**Pn**	**21 53 59.5**	**+1.4**
KOLL				*e*Sn	**Sn**	**21 54 20.5**	**-0.6**
VYHS	**Vyhne**	**1.80**	**184**	*e*PN	**Pn**	**21 53 57.5**	**-1.1**
VYHS				*e*SN	**Sn**	**21 54 20.0**	**-2.1**
VYHS	**Vyhne**	**1.80**	**184**	*e*Pn	**Pn**	**21 53 57.5**	**-1.1**
VYHS				*e*Sn	**Sn**	**21 54 20.0**	**-2.1**
VRAC	**Vranov**	**1.85**	**239**	*e*Pn	**Pn**	**21 53 59.7**	**+0.4**
VRAC				*e*Sg	**Sg**	**21 54 25.1**	**-0.7**
	comp=Z,5.6nm,0.2s						
KECS	**Kecovo**	**2.05**	**151**	*e*PN	**Pn**	**21 54 03.5**	**+1.5**
KECS				*e*SN	**Sn**	**21 54 27.5**	**-0.7**
KRUC	**Moravsky**	**2.10**	**235**	*e*Pn	**Pn**	**21 54 03.2**	**+0.5**
KRUC				*e*Sn	**Sn**	**21 54 31.1**	**+1.6**
	comp=Z,1.9nm,0.2s						
CRVS	**Cervenica-Dubn**	**2.11**	**130**	*e*PN	**Pn**	**21 54 06.6**	**+3.7**
CRVS				*e*SN	**Sn**	**21 54 31.9**	**+2.1**
CRVS	**Cervenica-Dubn**	**2.11**	**130**	*e*Pn	**Pn**	**21 54 06.6**	**+3.7**
CRVS				*e*Sn	**Sn**	**21 54 31.9**	**+2.1**
PRU	**Pruhonice**	**2.89**	**266**	*e*SG	**Sg**	**21 54 58.7**	**-0.6**
BRG	**Berggiesshubel**	**3.29**	**282**	SG	**Sg**	**21 55 12.0**	**+0.1**
	comp=Z,2.2nm,0.6s						
KHC	**Kasperske Hory**	**3.71**	**254**	*e*SG	**Sg**	**21 55 24.6**	**-1.0**

NEIC ***14*** *21:53:27.2±2.2, 3663N×9512E, h20km, mb4.3/3, Error ellipse: s-maj=41.5km s-min=17.0km az=201.0*

IDC ***14*** *21:53:28.4±12.0, 3689N×9530E, h0km, mb3.4/1, mb1 3.6/5, mb1mx3.4/26, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=176.4km s-min=57.0km az=170.0*

BJI ***14*** *21:53:37.4, 3737N×9540E, h15km, ML3.4*

ISC 14 21:53:27.0±1.8, 3688N±02×953E±01, h10km, n9, σ1°23/9, mb4.0/4, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**4.47**	**52**	*e*PG	**Pg**	**21 54 51.8**	**-0.7**
SONM	**Songino Array**	**13.79**	**33**	Pn	**Pn**	**21 56 43.6**	**+1.2**
	0.1nm,0.3s,baz=215,slow=17,SNR=4.3						
MKAR	**Makanchi Array**	**13.93**	**320**	Pn	**Pn**	**21 56 43.0**	**-1.3**
	0.4nm,0.3s,baz=130,slow=14,SNR=9.3						
KURK	**Kurchatov**	**18.37**	**325**	Pn	**Pn**	**21 57 39.7**	**-1.9**
	0.1nm,0.3s,baz=133,slow=11,SNR=6.2						
ZALV	**Zalesovo Beam**	**18.67**	**340**	P	**Pn**	**21 57 46.0**	**+0.8**
	0.1nm,0.3s,baz=156,slow=12,SNR=7.7						
BVAR	**Borovoye Array**	**23.81**	**321**	P	**P**	**21 58 41.8**	**+2.0**
	0.6nm,0.5s,mb3.3,baz=116,slow=11,SNR=7.4						
MAJO	**Matsushiro**	**34.24**	**77**	*e*P	**P**	**22 00 11.6**	**-1.3**
	1.6nm,0.4s,mb4.3						
NIKO	**Nikolski**	**64.87**	**42**	*e*P	**P**	**22 04 06.3**	**+0.3**
	3.0nm,1.0s,mb4.3						
BOZ	**Bozeman (W)**	**94.47**	**19**	*e*P	**P**	**22 06 48.1**	**+0.8**
	1.4nm,1.2s,mb4.3						

IDC ***14*** *21:56:46.9±2.5, 3584N×7127E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/24, mbtmp3.7/5, ML3.9/2, Error ellipse: s-maj=85.1km s-min=29.3km az=71.0*

ISCJB ***14*** *21:57:04.7±1.3, 364N±0.1×706E±0.2, h182km±13km, mb3.3/2, Error ellipse: s-maj=37.1km s-min=6.8km az=144.8*

NNC ***14*** *21:57:11.2±2.9, 3687N×6977E, h91km±72km, mb3.1, mpv3.3, Error ellipse: s-maj=52.8km s-min=22.0km az=88.0*

ISC 14 21:57:05.9±1.3, 364N±01×707E±02, h171km±13km, n23, σ1°34/27, mb3.3/2, 3C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.73**	**133**	*e*P	**Pn**	**21 58 29.8**	**+0.5**
THN				*e*S	**Sn**	**21 59 32.6**	**-2.1**
DLH	**Dalhousie**	**5.81**	**130**	*e*P	**Pn**	**21 58 31.0**	**+0.7**
DLH				*ex*	x	21 59 36.0	
KK31	**Karatay Array**	**6.68**	**359**	⇑Pn	**Pn**	**21 58 41.0**	**-0.5**
	1.0nm,0.3s,baz=189,slow=14,SNR=77						
KK31				Sn	**Sn**	**21 59 51.5**	**-5.5**
	8.6nm,0.5s,baz=189,slow=23,SNR=24						
SMLA	**Simla**	**7.53**	**133**	*i* P	**Pn**	**21 58 53.2**	**+0.3**
SMLA				*i* S	**Sn**	**22 00 12.0**	**-5.3**
SMLA				*ex*	x	22 00 16.4	
	comp=N,373nm,0.3s						
SMLA				*ex*	x	22 00 17.0	
	comp=E,352nm,0.3s						
KLP	**Kalpa**	**7.93**	**126**	*e*S	**Sn**	**22 00 24.7**	**-2.3**
KLP				AML	AML	22 00 34.9	
	comp=N,28nm,0.4s						
KLP				AML	AML	22 00 34.9	
	comp=E,48nm,0.7s						
KUDL	**Kundal**	**9.59**	**148**	*e*S	**Sn**	**22 01 01.5**	**-5.2**
KUDL				AML	AML	22 01 03.5	
	comp=N,9.8nm,0.4s						
SONA	**Sohna**	**9.76**	**145**	*e*S	**Sn**	**22 01 03.1**	**-7.8**
SONA				AML	AML	22 01 05.8	
	comp=E,8.4nm,0.1s						
SONA				AML	AML	22 01 06.0	
	comp=N,6.1nm,0.2s						
DANN	**Dangsing**	**13.63**	**122**	*e*P	**Pn**	**22 00 14.0**	**+1.6**
	comp=N,9.0nm,0.4s						
KOLN	**Koldanda**	**13.90**	**125**	*e*P	**Pn**	**22 00 13.6**	**-2.1**
	comp=N,2.7nm,0.3s						
GKN	**Gorkha**	**14.45**	**122**	*e*P	**Pn**	**22 00 23.6**	**+1.0**
	comp=N,15nm,0.4s						
DMN	**Daman**	**15.02**	**122**	*e*P	**Pn**	**22 00 30.6**	**+0.9**
KKN	**Kakani**	**15.03**	**121**	*e*P	**Pn**	**22 00 31.5**	**+1.8**
AB31	**Akbulak array**	**15.05**	**332**	⇑P	**Pn**	**22 00 28.5**	**-1.2**
	comp=N,1.3nm,0.7s,baz=146,slow=12,SNR=16						
AB31				⇓S	**S**	**22 03 08.1**	**-9.1**
	comp=N,0.5nm,0.5s,baz=152,slow=23,SNR=5.4						
PKI	**Pulchoki**	**15.25**	**121**	*e*P	**Pn**	**22 00 33.8**	**+1.3**
GUN	**Gumba**	**15.37**	**119**	*e*P	**Pn**	**22 00 37.7**	**+3.7**
JIRN	**Jiri**	**15.74**	**119**	*e*P	**Pn**	**22 00 41.4**	**+2.9**
	comp=N,9.4nm,0.3s						
RAMN	**Ramite**	**16.47**	**121**	*e*P	**Pn**	**22 00 46.4**	**-0.9**
BVAR	**Borovoye Array**	**16.60**	**359**	P	**Pn**	**22 00 49.1**	**+0.5**
	comp=N,0.2nm,0.3s,baz=173,slow=11,SNR=4.4						
AKTO	**Aktyubinsk**	**16.74**	**331**	⇑P	**Pn**	**22 00 50.8**	**+0.5**
	comp=N,0.6nm,0.6s						
AKTO	**Aktyubinsk**	**16.74**	**331**	P	**Pn**	**22 00 51.4**	**+1.1**
	comp=N,0.8nm,0.3s,baz=136,slow=10,SNR=8.0						
ZALV	**Zalesovo Beam**	**20.08**	**25**	P	**P**	**22 01 25.4**	**-0.5**
	comp=N,1.2nm,0.5s,baz=221,slow=11,SNR=7.0						
WRA	**Warramunga Arr**	**82.14**	**122**	P	**P**	**22 09 06.2**	**-1.5**
	comp=N,0.2nm,0.4s,mb3.1,baz=324,slow=5.0,SNR=6.5						
ASAR	**Alice Springs**	**84.39**	**125**	P	**P**	**22 09 17.9**	**-1.2**
	comp=N,0.6nm,0.8s,mb3.4,baz=319,slow=4.9,SNR=3.6						

CSEM ***14*** *22:00:45.9±0.3, 2733N×3462E, h30km, ML3.0, Error ellipse: s-maj=9.1km s-min=2.4km az=75.0*

SGS 14 22:00:45.1, 2728N×3442E, h24km, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDAS	**Al Bad'**	**1.30**	**28**	P	Pn	22 01 06.1	-1.7
DBAS	**Duba**	**1.39**	**92**	P	Pn	22 01 07.3	-1.7
JLOS		**1.74**	**33**	P	Pn	22 01 12.8	-1.1
JLOS		**1.74**	**33**	P	Pn	22 01 12.8	-1.0
JLOS				S	Sn	22 01 32.5	-2.8
WJHS		**1.85**	**107**	P	Pn	22 01 13.8	-1.6
BIDS	**Bi'r al Bayda'**	**2.30**	**100**	S	Sn	22 01 46.2	-3.0

ISCJB ***14*** *22:17:49.7±0.7, 3807N±0.03×2048E±0.04, h5km±4km, Error ellipse: s-maj=5.8km s-min=4.3km az=135.9*

CSEM ***14*** *22:17:50.7±0.1, 3808N×2049E, h2km, MD3.7, Error ellipse: s-maj=3.5km s-min=1.7km az=49.0*

THE ***14*** *22:17:50.7, 3807N×2044E, h6km, ML3.6*

NEIC ***14*** *22:17:51.6, 38.17N×2064E, h14km, ML3.6(THE), ML3.7(ATH), After ATH.*

ATH ***14*** *22:17:51.6, 38.17N×2064E, h14km±1km, MD3.7/16, ML3.7*

ISC 14 22:17:50.3±0.8, 3807N±003×2051E±004, h1km±5km, n53, σ0°95/66, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.13**	**31**	*e*Pg	**Pg**	**22 17 54.2**	**+1.4**
VLS				*e*Sg	**Sg**	**22 17 57.0**	**+2.5**
VLS	**Valsamata**	**0.13**	**31**	*e*PG	**Pg**	**22 17 54.6**	**+1.8**
VLS				*e*SG	**Sg**	**22 17 56.6**	**+2.1**
VLS	**Valsamata**	**0.13**	**31**	*e*Pg	**Pg**	**22 17 54.2**	**+1.4**
VLS				*e*Sg	**Sg**	**22 17 56.6**	**+2.1**
KFL	**Anninata**	**0.23**	**79**	*e*Pg	**Pg**	**22 17 55.5**	**+0.9**
LKD	**Levkas**	**0.65**	**10**	*e*Pg	**Pg**	**22 18 02.6**	**-0.2**
LKD				*e*Sg	**Sg**	**22 18 13.0**	**+1.9**
RLS	**Riolos of Patr**	**0.76**	**90**	*e*PB	**Pg**	**22 18 04.4**	**-0.4**
RLS				*e*SB	**Sg**	**22 18 13.4**	**-1.3**
EVR	**Evrytania**	**1.33**	**50**	*e*PB	**Pb**	**22 18 14.0**	**-2.0**
ITM	**Ithomi**	**1.43**	**128**	*e*PG	**Pg**	**22 18 17.7**	**-0.1**
IGT	**Igoumenitsa**	**1.47**	**355**	*e*Pg	**Pg**	**22 18 17.3**	**-1.2**
IGT				*e*Sg	**Sg**	**22 18 37.1**	**-0.4**
PYL	**PYLOS**	**1.53**	**140**	*e*Pg	**Pn**	**22 18 18.3**	**-0.4**
JAN	**Janina**	**1.61**	**10**	*e*PB	**Pb**	**22 18 20.0**	**-0.8**
VLX	**Vlachokerasia**	**1.64**	**115**	*e*Pb	**Pb**	**22 18 20.3**	**-1.0**
AGG	**Agios Georgios**	**1.72**	**56**	*e*Pb	**Pn**	**22 18 21.1**	**-0.2**
AGG				*e*Sb	**Sb**	**22 18 44.9**	**+0.2**
AGG	**Agios Georgios**	**1.72**	**56**	*e*Pb	**Pn**	**22 18 21.1**	**-0.2**
AGG				*e*Sb	**Sb**	**22 18 44.9**	**+0.2**
KEK	**Kerkira**	**1.73**	**342**	*e*PB	**Pb**	**22 18 21.9**	**-1.0**
MEV	**Metsovon**	**1.81**	**18**	*e*Pb	**Pn**	**22 18 21.4**	**-1.1**
THL	**Klokotos Trika**	**1.90**	**38**	*e*Pb	**Pb**	**22 18 24.4**	**-1.4**
THL				*e*Sb	**Sb**	**22 18 48.4**	**-1.6**
THL	**Klokotos Trika**	**1.90**	**38**	*e*Pg	**Pn**	**22 18 24.6**	**+0.7**
THL				*e*Sn	**Sn**	**22 18 47.7**	**-0.7**
LTK	**Loutraki**	**1.94**	**91**	*e*Pn	**Pn**	**22 18 24.6**	**+0.2**
LKR	**Lokris**	**2.04**	**73**	*e*Pn	**Pn**	**22 18 25.8**	**0.0**
LKR				*e*Sn	**Sn**	**22 18 53.6**	**+1.7**
LKR	**Lokris**	**2.04**	**73**	⇑*i*Pn	**Pn**	**22 18 26.0**	**+0.2**
LKR				*e*Sn	**Sn**	**22 18 53.6**	**+1.7**
DID	**Didima**	**2.23**	**104**	*e*Pn	**Pn**	**22 18 28.9**	**+0.5**
DID				*e*Sn	**Sn**	**22 18 57.3**	**+0.7**
VLI	**Veliai**	**2.36**	**124**	*e*PN	**Pn**	**22 18 32.5**	**+2.4**
NAIG	**Nisos Aigina**	**2.38**	**97**	*e*PN	**Pn**	**22 18 31.5**	**+1.1**
KZN	**Kozani**	**2.44**	**23**	*e*PB	**Pn**	**22 18 31.1**	**-0.2**
NEO	**Neokhori**	**2.46**	**59**	*e*PN	**Pn**	**22 18 31.3**	**-0.2**
XOR	**Xorichti**	**2.47**	**57**	*e*Pn	**Pn**	**22 18 31.7**	**+0.1**
ATH	**Athens Observa**	**2.54**	**91**	*e*PN	**Pn**	**22 18 33.5**	**+0.9**
LIT	**Litokhoron**	**2.55**	**37**	*e*Pn	**Pn**	**22 18 32.7**	**-0.1**
PTL	**Penteli**	**2.65**	**89**	*e*PN	**Pn**	**22 18 34.5**	**+0.4**
KYTH	**Kithira**	**2.69**	**131**	*e*PB	**Pb**	**22 18 37.5**	**-1.8**
FNA	**Florina**	**2.79**	**14**	*e*Pn	**Pn**	**22 18 36.5**	**+0.4**
AOS	**Alonnisos**	**2.86**	**66**	*e*Pn	**Pn**	**22 18 36.8**	**-0.3**
PAIG	**Paliouri**	**3.09**	**52**	*e*Pn	**Pn**	**22 18 39.5**	**-0.7**
TIP	**Timpagrande**	**3.14**	**292**	*e*Pn	**Pn**	**22 18 40.5**	**-0.3**
TIP	**Timpagrande**	**3.14**	**292**	*e*Pn	**Pn**	**22 18 40.5**	**-0.3**
HORT	**Hortiatis**	**3.23**	**38**	*e*Pn	**Pn**	**22 18 41.6**	**-0.5**
GRG	**Griva**	**3.24**	**26**	*e*Pn	**Pn**	**22 18 42.6**	**+0.5**
PLG	**Polygyros**	**3.24**	**44**	*e*Pn	**Pn**	**22 18 41.7**	**-0.5**
PLG	**Polygyros**	**3.24**	**44**	*e*PN	**Pn**	**22 18 41.5**	**-0.8**
KRUS	**Krusevo**	**3.35**	**10**	*e*Pn	**Pn**	**22 18 44.1**	**+0.4**
KRUS	**Krusevo**	**3.35**	**10**	*e*Pn	**Pn**	**22 18 44.0**	**+0.3**
OUR	**Ouranopolis**	**3.52**	**49**	*e*Pn	**Pn**	**22 18 45.8**	**-0.3**
SOK	**Sokhos**	**3.52**	**38**	*e*Pn	**Pn**	**22 18 45.5**	**+0.4**
KNT	**Kendrikon**	**3.60**	**30**	*e*Pn	**Pn**	**22 18 46.9**	**-0.2**
PE1	**Pezze di Greco**	**3.63**	**320**	*e*Pn	**Pn**	**22 18 47.2**	**-0.4**
SG1	**Sgolgore (BA)**	**4.05**	**314**	*e*Pn	**Pn**	**22 18 52.8**	**-0

BATI S **Sn** **22 49 37.7 -0.4**
35nm,0.3s,baz=98,slow=2.1,SNR=17
BATI LR LR 22 50 32.8
comp=Z,74nm,19.9s,baz=246,slow=34
FITZ **Fitzroy Crossi 11.64 198** *eP* **Pn** **22 49 32.5 -1.5**
13nm,0.3s
FITZ *eS* **Sn** **22 51 31.2 -11**
FITZ **Fitzroy Crossi 11.64 198** P **Pn** **22 49 32.9 -1.1**
1.4nm,0.3s,baz=38,slow=13,SNR=36
FITZ S **Sn** **22 51 31.1 -11**
4.1nm,0.3s,baz=88,slow=20,SNR=6.7
WRAB **Tennant Creek 13.70 160** *eP*n **Pn** **22 50 01.0 -0.3**
15nm,0.5s
WRA **Warramunga Arr 13.71 160** P **Pn** **22 50 00.9 -0.4**
5.7nm,0.3s,baz=328,slow=14,SNR=75
WRA S **Sn** **22 52 23.1 -9.2**
8.8nm,0.3s,baz=332,slow=24,SNR=13
WB2 **Warramunga Arr 13.71 160** *eP* **Pn** **22 50 00.8 -0.6**
WB2 *eS* **Sn** **22 52 21.7 -11**
ASAR **Alice Springs 17.11 166** P **Pn** **22 50 45.4 +1.3**
2.5nm,0.3s,baz=353,slow=9.0,SNR=68
ASAR S **S** **22 53 41.5 -14**
0.8nm,0.3s,baz=331,slow=16,SNR=5.7
FORT **Forrest 23.69 183** *eP* **P** **22 51 54.0 +0.3**
22nm,0.4s,mb4.8
KLBR **Kellerberrin 26.79 203** *eP* **P** **22 52 22.2 +0.4**
STKA **Stephens Creek 27.22 157** *eP* **P** **22 52 26.5 +0.9**
2.4nm,0.4s,mb4.1
STKA **Stephens Creek 27.22 157** P **P** **22 52 26.5 +0.9**
2.9nm,0.5s,mb4.0,baz=342,slow=11,SNR=7.9
MUN **Mundaring 27.75 205** *eP* **P** **22 52 29.9 -0.5**
CMAR **Chiang Mai Arr 39.32 310** P **P** **22 54 11.6 +0.8**
2.7nm,0.6s,mb4.2,baz=141,slow=7.6,SNR=16
CHTO **Chiang Mai 39.53 311** *eP* **P** **22 54 12.1 -0.4**
3.2nm,0.9s,mb4.2
MJAR **Matsushiro Arr 44.09 10** P **P** **22 54 49.4 0.0**
0.9nm,0.6s,mb3.7,baz=195,slow=9.1,SNR=5.3
ODAN **Odare 52.85 311** *eP* **P** **22 55 57.4 +0.6**
TAPN **Taplejung 52.88 312** *eP* **P** **22 55 56.9 -0.1**
17nm,0.5s,mb5.3
RAMN **Ramite 53.49 311** *eP* **P** **22 56 01.8 +0.3**
37nm,0.6s,mb5.6
GUN **Gumba 54.55 312** *eP* **P** **22 56 09.1 0.0**
24nm,0.5s,mb5.5
PKI **Pulchoki 54.72 311** *eP* **P** **22 56 10.1 -0.3**
12nm,0.5s,mb5.2
KKN **Kakani 54.93 311** *eP* **P** **22 56 11.8 -0.1**
15nm,0.5s,mb5.3
GKN **Gorkha 55.52 311** *eP* **P** **22 56 15.9 -0.3**
23nm,0.5s,mb5.5
KOLN **Koldanda 56.19 310** *eP* **P** **22 56 20.8 -0.1**
14nm,0.6s,mb5.2
DANN **Dangsing 56.36 311** *eP* **P** **22 56 22.1 -0.1**
8.6nm,0.4s,mb5.1
SONM **Songino Array 58.27 342** P **P** **22 56 35.1 -0.1**
0.8nm,0.6s,mb3.9,baz=148,slow=6.7,SNR=6.7
MKAR **Makanchi Array 67.93 327** P **P** **22 57 39.0 -0.1**
1.8nm,0.5s,mb4.2,baz=114,slow=8.8,SNR=20
ZALV **Zalesovo Beam 71.35 334** P **P** **22 57 58.8 -1.1**
2.3nm,0.5s,mb4.2,baz=129,slow=5.7,SNR=12

JMA 14 23:16:32.8±0.2, 3788N×14247E, h36km±3km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JIO	**Ouri**	**1.05**	**303**	P	P		**Pn**	23 16 51.6	+0.6
JIO				S	S		Sn	23 17 05.1	+0.6
JMM	**Marumori**	**1.33**	**270**	P	P		Pn	23 16 55.5	+0.7
JMM				*e*S	S		Sn	23 17 11.8	+0.6
JFK	**Kawauchi**	**1.37**	**248**	P	P		Pn	23 16 56.0	+0.7
JMK	**Ichinoseki**	**1.45**	**318**	P	P		Pn	23 16 57.5	+1.0
JOU	**Okura**	**1.50**	**289**	P	P		Pn	23 16 58.7	+1.5
JFT	**Otama**	**1.73**	**259**	P	P		Pn	23 17 02.2	+1.9
JFT				*e*S	S		Sn	23 17 24.0	+2.8
JOM	**Ohasama**	**1.84**	**330**	P	P		Pn	23 17 03.4	+1.6
JYK	**Kaneyama**	**1.96**	**303**	P	P		Pn	23 17 05.4	+2.0

*ISCJB **14** 23:26:02.6±0.9, 115S±0.1×164.28E±0.10, h33km, mb4.0/7, Error ellipse: s-maj=18.2km s-min=10.3km az=38.4*
*IDC **14** 23:26:03.7±1.4, 1140S×164.30E, h28km±6km, mb3.8/6, mb1 4.1/7, mb1mx3.9/17, mbtmp4.0/7, ML5.0/1, MS3.7/1, Ms1 3.7/1, ms1mx3.1/23, Error ellipse: s-maj=36.8km s-min=25.3km az=150.0*
*NEIC **14** 23:26:04.2±1.7, 1137S×164.40E, h35km, mb4.2/4, Error ellipse: s-maj=31.1km s-min=16.6km az=58.0*
ISC 14 23:26:04.5±0.9, 114S±01×16435E±010, h35km, (h31km±1.1km:pP-P), n16, σ0°78/16, mb4.0/7, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
HNR	**Honiara 4.75 294**			Pn	P		**Pn**	**23 27 13.0 -0.6**
71nm,0.3s,baz=145,slow=7.2,SNR=12								
HNR					S		**Sn**	**23 28 07.6 +0.1**
16nm,0.3s,baz=37,slow=20,SNR=2.1								
DZM	**Mont Dzumac 10.80 170**			*e*P	P		**Pn**	**23 28 36.7 -0.1**
DZM	**Mont Dzumac 10.80 170**			*e*Pn	P		**Pn**	**23 28 36.5 -0.3**
CTA	**Charters Tower 19.43 241**			*e*P	P		**Pn**	**23 30 32.1 +2.7**
7.5nm,0.7s								
CTA	**Charters Tower 19.43 241**			P	P		**Pn**	**23 30 30.7 +1.3**
0.3nm,0.3s,baz=71,slow=10,SNR=7.3								
CTAO	**Charters Tower 19.43 241**			*e*P	P		**Pn**	**23 30 31.1 +1.7**
9.5nm,0.8s								
COEN	**Coen 20.81 261**			*e*P	P		**P**	**23 30 44.0 +0.9**
15nm,1.1s								
WB2	**Warramunga Arr 30.07 250**			*e*P	P		**P**	**23 32 10.6 -0.1**
WRA	**Warramunga Arr 30.08 250**			P	P		**P**	**23 32 10.1 -0.7**
2.1nm,0.7s,mb4.0,baz=78,slow=9.2,SNR=20								
WRA					pP		pP	23 32 19.2 -1.7
1.2nm,0.7s,baz=80,slow=8.9,SNR=4.2								
WRA					PcP		PcP	23 35 13.1 +0.8
0.6nm,0.9s,baz=78,slow=3.1,SNR=3.5								
ASAR	**Alice Springs 31.41 243**			P	P		**P**	**23 32 21.9 -0.7**
1.3nm,0.8s,mb3.8,baz=75,slow=9.2,SNR=9.0								
ASAR					pP		pP	23 32 30.9 -1.8
1.1nm,0.7s,baz=66,slow=9.8,SNR=5.6								
ASAR					PcP		PcP	23 35 15.9 +0.2
0.8nm,0.9s,baz=88,slow=2.4,SNR=5.0								
FITZ	**Fitzroy Crossi 37.97 255**			*e*P	P		**P**	**23 33 18.7 -0.6**
6.0nm,0.6s,mb4.5								
CMAR	**Chiang Mai Arr 71.00 294**			P	P		**P**	**23 37 19.0 -0.2**
0.7nm,0.3s,mb4.0,baz=128,slow=3.9,SNR=2.9								
SONM	**Songino Array 78.14 324**			P	P		**P**	**23 38 01.3 +1.2**
0.4nm,0.4s,mb3.7,baz=148,slow=7.5,SNR=5.3								
NVAR	**Mina Array Bea 87.30 50**			P	P		**P**	**23 38 48.3 +0.4**
0.2nm,0.3s,mb3.9,baz=239,slow=11,SNR=3.9								
MKAR	**Makanchi Array 92.84 317**			P	P		**P**	**23 39 12.8 -0.8**
0.9nm,0.9s,mb4.2,baz=98,slow=8.0,SNR=4.1								
MKAR					pP		pP	23 39 22.0 -2.8
0.4nm,0.5s,baz=91,slow=4.9,SNR=2.7								
ARCES	**ARCESS Array B 116.32 345**			PKP	PKPdf		23 44 43.6	-0.2
1.2nm,0.8s,baz=54,slow=2.1,SNR=3.8								

*ISCJB **14** 23:31:09.6±0.6, 9.38S±0.05×79.12W±0.10, h56km, mb4.0/11, MS3.6/5, Error ellipse: s-maj=14.0km s-min=5.7km az=163.4*
*IDC **14** 23:31:11.4±0.6, 9.43S×79.09W, h58km±5km, mb3.7/10, mb1 4.0/14, mb1mx3.9/24, mbtmp3.8/14, MS3.6/7, Ms1 3.6/7, ms1mx3.4/22, Error ellipse: s-maj=13.8km s-min=7.0km az=78.0*
*NEIC **14** 23:31:11.2±0.4, 9.35S×79.10W, mb4.4/4, Error ellipse: s-maj=14.0km s-min=7.1km az=65.0*
NEIC Felt [III] at Chimbote and Samanco.
ISC 14 23:31:11.6±0.6, 9.36S±0.05×79.05W±0.10, h58km, h58km±2.1km:pP-P, n42, σ0°81/26, mb4.0/11, MS3.6/5, 1D, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ATAH	**Atahualpa 2.43 16**			P	P		**Pn**	**23 31 49.4 +0.4**
128nm,0.3s,baz=208,slow=5.2,SNR=408								
ATAH					S		**Sn**	**23 32 17.8 +0.2**
146nm,0.3s,baz=89,slow=21,SNR=15								
NNA	**Nana 3.40 140**			P	P		**Pn**	**23 32 02.0 -0.2**
77nm,0.3s,baz=321,slow=11,SNR=142								
NNA					S		**Sn**	**23 32 41.4 0.0**
212nm,0.3s,baz=170,slow=18,SNR=14								
OTAV	**Otavalo 9.55 4**			*e*Pn	P		**Pn**	**23 33 27.9 +1.4**
33nm,0.9s								
LPAZ	**La Paz 12.68 124**			P	P		**Pn**	**23 34 10.3 +1.1**
0.3nm,0.3s,baz=306,slow=11,SNR=11								
ROSC	**El Rosal 14.88 19**			P	P		**Pn**	**23 34 44.0 +5.2**
1.4nm,0.3s,baz=84,slow=22,SNR=4.7								
ROSC					LR		LR	23 41 01.2
comp=Z,273nm,21.0s,baz=205,slow=40								
LVC	**Limon Verde 16.38 145**			P	P		**Pn**	**23 34 58.8 +1.0**
0.3nm,0.3s,baz=312,slow=8.0,SNR=6.0								
LVC					LR		LR	23 40 18.6
comp=Z,106nm,21.3s,baz=315,slow=34								
LVC	**Limon Verde 16.38 145**			*e*P	P		**Pn**	**23 34 59.7 +1.8**
9.2nm,0.8s								
SIV	**San Ignacio 18.73 112**			P	P		**Pn**	**23 35 26.2 -0.6**
0.3nm,0.3s,baz=291,slow=15,SNR=8.2								
SDV	**Santo Domingo 19.97 25**			P	P		**Pn**	**23 35 40.2 -1.2**
6.0nm,0.3s,baz=219,slow=13,SNR=2.5								
SDV	**Santo Domingo 19.97 25**			*e*P	P		**Pn**	**23 35 38.6 -2.9**
8.1nm,0.5s								
PCRV	**Puerto La Cruz 24.13 37**			LR	LR			23 47 18.6
comp=Z,232nm,18.7s,MS3.7,baz=218,slow=40								
CFAA	**Coronel Fontan 24.31 157**			P	P		**P**	**23 36 24.0 +0.2**
1.1nm,0.9s,mb3.3,baz=340,slow=9.5,SNR=17								
CFAA					LR		LR	23 45 22.8
comp=Z,6.5nm,20.5s,baz=312,slow=35								
CPUP	**Villa Florida 26.62 132**			P	P		**P**	**23 36 44.2 -0.7**
1.3nm,0.6s,mb3.6,baz=312,slow=12,SNR=4.3								
CPUP					LR		LR	23 47 43.5
comp=Z,69nm,20.0s,MS3.2,baz=298,slow=37								
CPUP	**Villa Florida 26.62 132**			P	P		**P**	**23 36 44.2 -0.7**
CPUP					LR		LR	23 47 43.5
BDFB	**Brasilia 30.92 105**			LR	LR			23 50 23.8
comp=Z,198nm,18.8s,MS3.8,baz=277,slow=37								
PLCA	**Paso Flores 32.15 168**			P	P		**P**	**23 37 33.8 +0.2**
3.4nm,0.9s,mb4.2,baz=329,slow=12,SNR=6.5								
PLCA					PcP		PcP	23 40 21.7 +0.1
2.6nm,0.9s,baz=318,slow=12,SNR=3.4								
PLCA					LR		LR	23 47 51.1
comp=Z,68nm,20.9s,MS3.3,baz=267,slow=31								
PLCA	**Paso Flores 32.15 168**			P	P		**P**	**23 37 33.8 +0.2**
PLCA					PcP		PcP	23 40 21.7 +0.1
PLCA					LR		LR	23 47 51.1
GOGA	**Godfrey 42.74 355**			*e*P	pP			23 39 16.9 -1.2
LRAL	**Lakeview Retre 42.83 350**			*e*P	pP			23 39 17.9 -1.0
SWET	**Sewanee 44.80 352**			*e*P	pP			23 39 33.2 -1.6
TXAR	**Lajitas Array 45.19 329**			P	P		**P**	**23 39 23.3 +0.3**
0.9nm,0.9s,mb3.6,baz=152,slow=11,SNR=9.8								
TXAR					pP		pP	23 39 38.0 0.0
0.6nm,0.8s,baz=155,slow=6.9,SNR=4.8								
TXAR					PcP		PcP	23 41 02.1 -0.3
0.3nm,0.4s,baz=155,slow=5.9,SNR=4.1								
TXAR	**Lajitas Array 45.19 329**			P	P		**P**	**23 39 23.3 +0.3**
TXAR					pP		pP	23 39 38.0 0.0
TXAR					PcP		PcP	23 41 02.1 -0.3
MIAR	**Mount Ida 45.78 343**			*e*P	pP			23 39 42.5 -0.1
WVT	**Waverly 45.99 350**			*e*P	pP			23 39 42.1 -2.1
SIUC	**Southern Illin 47.78 349**			*e*P	pP			23 39 57.0 -1.3
FVM	**French Village 48.28 348**			*e*P	pP			23 40 00.3 -1.8
CCM	**Cathedral Cave 48.52 347**			*e*P	pP			23 40 02.7 -1.3
ANMO	**Albuquerque 51.13 331**			*e*P	pP			23 40 26.7 +2.7
HWUT	**Hardware Ranch 58.85 332**			*e*P	pP			23 41 20.6 +0.7
NVAR	**Mina Array Bea 59.98 325**			P	P		**P**	**23 41 13.1 +0.9**
1.2nm,0.6s,mb4.1,baz=146,slow=6.8,SNR=7.1								
NVAR					pP		pP	23 41 29.1 +1.2
2.3nm,0.8s,baz=133,slow=6.9,SNR=7.4								
MOD	**Modoc 63.48 327**			*e*P	pP			23 41 53.0 +1.6
YBH	**Yreka Blue Hor 64.70 325**			*e*P	pP			23 42 00.2 +0.7
DBIC	**Dimbokro 75.62 81**			P	P		**P**	**23 42 50.4 -0.8**
2.6nm,0.9s,mb4.2,baz=225,slow=7.1,SNR=3.5								
DBIC					pP		pP	23 43 06.9 -0.4
4.4nm,0.8s,baz=248,slow=6.4,SNR=3.0								
YKA	**Yellowknife Ar 76.72 344**			P	P		**P**	**23 42 55.5 -0.8**
1.8nm,0.7s,mb4.1,baz=142,slow=7.6,SNR=4.9								
SNAA	**Sanae 76.84 162**			*e*P	P		**P**	**23 42 56.7 -0.2**
3.5nm,0.6s,mb4.5								
SNAA					*e*pP		pP	23 43 10.0 -3.2
TORD	**Torodi Ar. Bea 83.22 76**			P	P		**P**	**23 43 31.8 -0.7**
1.8nm,0.8s,mb4.2,baz=272,slow=4.9,SNR=10								
TORD					pP		pP	23 43 47.6 -1.2
1.6nm,0.8s,baz=275,slow=5.8,SNR=6.3								
TORD					LR		LR	00 19 33.3
comp=Z,77nm,19.1s,MS4.1,baz=115,slow=35								
ESDC	**Sonseca Array 84.65 49**			P	P		**P**	**23 43 39.7 +0.5**
0.4nm,0.5s,mb3.8,baz=255,slow=4.8,SNR=5.0								
ESDC					pP		pP	23 43 55.0 -0.6
0.9nm,0.6s,baz=258,slow=4.5,SNR=4.1								
BPAW	**Bear Paw Mtn. 90.61 335**			*e*P	P		**P**	**23 44 06.3 -1.1**
3.6nm,0.6s,mb4.9								
BPAW					*e*pP		pP	23 44 24.1 +0.3
ZALV	**Zalesovo Beam 133.68 13**			PKP	PKPdf			23 50 20.3 -1.4
1.0nm,0.6s,baz=239,slow=5.1,SNR=5.7								
ZALV					pPKP		pPKPdf	23 50 37.9 -1.0
0.8nm,0.5s,baz=282,slow=3.6,SNR=2.8								
ASAR	**Alice Springs 134.01 224**			PKP	PKPdf			23 50 22.3 -1.0
1.1nm,0.7s,baz=121,slow=1.8,SNR=13								
ASAR					pPKP		pPKPdf	23 50 40.0 -0.5
0.7nm,0.8s,baz=121,slow=2.1,SNR=3.4								
WB2	**Warramunga Arr 136.08 228**							
WRA	**Warramunga Arr 136.09 228**			PKP	PKPdf			23 50 26.7 -0.6
2.6nm,0.6s,baz=124,slow=2.0,SNR=28								
WRA					pPKP		pPKPdf	23 50 43.8 -0.6
1.8nm,0.8s,baz=128,slow=1.6,SNR=6.2								

*DJA **14** 23:44:26, 1107S×169.12E, h10km, mb5.3/9*
*MOS **14** 23:44:32.7±0.9, 1199S×165.83E, h33km, mb5.3/13, Error ellipse: s-maj=14.5km s-min=11.6km az=25.3*
*ISCJB **14** 23:44:33.3±0.4, 1204S±006×165.81E±007, h35km, mb4.7/32, MS4.2/21, Error ellipse: s-maj=11.3km s-min=8.2km az=148.2*
*BJI **14** 23:44:35.2, 1200S×165.90E, h35km, mB5.1, mb4.9, Ms4.9, Msz4.6*
*IDC **14** 23:44:35.4±0.8, 1198S×165.87E, h40km±5km, mb4.3/13, mb1 4.4/14, mb1mx4.3/20, mbtmp4.4/14, ML4.9/1, MS4.1/15, Ms1 4.1/15, ms1mx4.0/28, Error ellipse: s-maj=19.1km s-min=15.3km az=65.0*
*GCMT **14** 23:44:35.2±0.3, 11.97S×165.86E, h20km, MW5.0/64, Moment Tensor Solution. s46,c56; s64,c89; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 3.87±.20; Mθθ -0.73±.13; Mφφ 3.14±.13; Mrθ 0.79±.30; Mrφ 1.23±.09; Mθφ -2.63±.25; Best double couple: M=4.65800×10^16 NP1: φs 334.00000°, δ 27.00000°, λ 84.00000°. NP2: φs 161.00000°, δ 63.00000°, λ 93.00000°. Principal axes: T 4.7720, Plg 72.0000°, Azm 77.0000°; N -0.2230, Plg 3.0000°, Azm 339.0000°; P -4.5450, Plg 18.0000°, Azm 248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **14** 23:44:35.2±0.8, 1198S×165.87E, h35km, mb4.7/6 Error ellipse: s-maj=17.0km s-min=10.5km az=68.0*
ISC 14 23:44:35.3±0.4, 1203S±006×165.87E±008, h37km, h37km±2.2km:pP-P, n97, σ1°12/56, mb4.7/32, MS4.2/21, 4C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
HNR	**Honiara 6.36 293**			P	P		**Pn**	**23 46 05.9 -0.7**
29nm,0.3s,baz=169,slow=2.4,SNR=15								
HNR					S		**Sn**	**23 47 17.5 -0.6**
14nm,0.3s,baz=24,slow=24,SNR=7.1								
DZM	**Mont Dzumac 10.00 177**			*e*P	P		**Pn**	**23 46 55.2 -1.4**
DZM				*e*S	S		Sn	23 49 12.6 +25
DZM	**Mont Dzumac 10.00 177**			*e*Pn	P		**Pn**	**23 46 56.5 -0.1**
CTA	**Charters Tower 20.46 244**			*e*P	P		**P**	**23 49 11.0 +1.1**
19nm,1.2s								
CTA					*e*S		**S**	**23 53 08.7 +12**
CTA	**Charters Tower 20.46 244**			P	P		**P**	**23 49 10.7 +0.7**
27nm,1.2s,baz=76,slow=13,SNR=10								
CTA					LR		LR	23 56 06.1
comp=Z,627nm,20.7s,MS4.0,baz=66,slow=34								
CTA	**Charters Tower 20.46 244**			*e*P	P		**P**	**23 49 11.0 +1.1**
CTA					pmax		pmax	
comp=Z,19nm,1.2s								
CTAO	**Charters Tower 20.46 244**			*e*P	P		**P**	**23 49 10.7 +0.8**
CTAO					pmax		pmax	
comp=Z,61nm,1.4s								
CTAO	**Charters Tower 20.46 244**			*e*P	P		**P**	**23 49 10.7 +0.8**
comp=Z,61nm,1.4s								
AFI	**Afiamalu 21.87 97**			LR	LR			23 56 20.6
comp=Z,668nm,20.6s,MS4.0,baz=249,slow=32								
URZ	**Urewera 27.99 161**			P	P		**P**	**23 50 24.0 +1.4**
comp=Z,4.9nm,0.8s,mb4.2,baz=313,slow=7.9,SNR=3.7								
STKA	**Stephens Creek 29.82 225**			*e*P	P		**P**	**23 50 41.4 +2.4**
comp=Z,8.6nm,1.9s,mb4.2								
STKA	**Stephens Creek 29.82 225**			P	P		**P**	**23 50 40.1 +1.1**
comp=Z,2.8nm,0.9s,mb4.0,baz=30,slow=10,SNR=3.5								
STKA					LR		LR	00 02 14.0
comp=Z,609nm,20.8s,MS4.2,baz=27,slow=36								
WRAB	**Tennant Creek 31.26 251**			*e*P	P		**P**	**23 50 50.7 -1.1**
WRA	**Warramunga Arr 31.27 251**			P	P		**P**	**23 50 51.1 -0.8**
comp=Z,5.9nm,1.2s,mb4.3,baz=78,slow=8.7,SNR=12								
WRA					PcP		PcP	23 53 46.1 +0.3
comp=Z,1.2nm,1.0s,baz=77,slow=3.0,SNR=4.6								
WRA					pPcP			23 53 57.5
comp=Z,4.9nm,0.9s,baz=79,slow=2.9,SNR=15								
WRA					LR		LR	00 03 06.0
comp=Z,441nm,18.4s,MS4.2,baz=100,slow=36								
WRA	**Warramunga Arr 31.27 251**			P	P		**P**	**23 50 51.1 -0.8**
WRA								23 53 46.1
WRA	**Warramunga Arr 31.27 251**			P	P		**P**	**23 50 51.1 -0.8**
WRA					PcP		PcP	23 53 46.1 +0.2
WRA					LR		LR	00 03 06.0
RPZ	**Rata Peaks 31.89 173**			P	P		**P**	**23 50 56.7 -0.4**
comp=Z,6.5nm,0.6s,mb4.6,baz=252,slow=2.7,SNR=7.9								
RPZ					LR		LR	00 00 23.3
comp=Z,142nm,20.1s,MS3.6,baz=354,slow=30								
ASAR	**Alice Springs 32.47 245**			P	P		**P**	**23 51 01.2 -1.2**
comp=Z,3.5nm,0.8s,mb4.2,baz=75,slow=9.5,SNR=24								
ASAR					PcP		PcP	23 53 49.4 +0.3
comp=Z,1.1nm,1.0s,baz=79,slow=5.8,SNR=3.4								
ASAR					pPcP			23 54 00.8
comp=Z,5.8nm,0.9s,baz=70,slow=2.8,SNR=21								
ASAR	**Alice Springs 32.47 245**			P	P		**P**	**23 51 01.2 -1.2**
ASAR					PcP		PcP	23 53 49.4 +0.3
GUMO	**Guam 32.88 320**			LR	LR			00 00 52.0
comp=Z,141nm,20.8s,MS3.6,baz=293,slow=30								
FITZ	**Fitzroy Crossi 39.25 256**			*e*P	P		**P**	**23 52 00.6 0.0**
comp=Z,10nm,1.1s,mb4.5								
PPT	**Papeete 43.36 103**			*e*S	S		**S**	**23 59 05.4 +5.4**
comp=Z,224nm,26.2s								
PPT					*e*LQ			00 02 50.7
comp=Z,1μm,27.0s								
PPT					*e*LR		LR	00 04 44.3
comp=Z,742nm,27.0s								
PPT	**Papeete 43.36 103**			LR	LR			00 08 03.2
comp=Z,597nm,18.8s,MS4.5,baz=296,slow=32								
KKM	**Kota Kinabalu 52.53 287**			*e*P	P		**P**	**23 53 46.5 +1.1**
TAOE	**Nuku Hiva Isla 53.12 92**			*e*LR	LR			00 09 13.6
comp=Z,2μm,25.0s								
MJAR	**Matsushiro Arr 54.89 333**			P	P		**P**	**23 54 01.0 -1.3**
comp=Z,5.2nm,0.9s,mb4.5,baz=164,slow=7.7,SNR=11								
RKT	**Rikitea 57.14 110**			*e*LR	LR			00 11 18.6
comp=Z,454nm,30.5s								
KSRS	**Korea Array 60.75 326**			P	P		**P**	**23 54 43.7 +0.3**
comp=Z,1.7nm,0.6s,mb4.3,baz=127,slow=8.3,SNR=5.8								
KSRS					PcP		PcP	23 55 27.4 +0.3
comp=Z,4.1nm,0.9s,baz=137,slow=4.6,SNR=5.3								
KSRS					LR		LR	00 16 37.7
comp=Z,95nm,21.8s,MS3.9,baz=323,slow=32								
KSRS	**Korea Array 60.75 326**			P	P		**P**	**23 54 43.7 +0.3**
KSRS								23 55 27.4
KSRS					pmax		pmax	
comp=Z,2.0nm,0.6s,mb4.4								
KSRS					pmax		pmax	
comp=Z,4.0nm,0.9s,mb4.5								
YSS	**Yuzh-Sakhalins 62.25 342**			*e*P	P		**P**	**23 54 52.7 -0.6**
YSS					pmax		pmax	
comp=Z,30nm,1.1s,mb5.3								
PETK	**Petropavlovsk- 65.25 355**			LR	LR			00 16 54.4
comp=Z,95nm,21.5s,MS4.0,baz=313,slow=30								
CN2	**Changchun 66.64 329**			*e*P	P		**P**	**23 55 21.9 -0.2**
CN2					AMB		AMB	
comp=Z,30nm,1.0s,mb5.3								
KLR	**Kul'dur 68.00 337**			*e*P	P		**P**	**23 55 26.2 -4.4**
KLR					pmax		pmax	
comp=E,24nm,1.4s								
KLR					pmax		pmax	
comp=Z,43nm,1.4s,mb5.3								
BJI	**Beijing 69.32 321**			P	P		**P**	**23 55 39.5 +0.5**
BJI					AMB		AMB	
comp=Z,9.0nm,1.5s,mb4.5								
XAN	**Xi'an 70.87 313**			P	P		**P**	**23 55 50.9 +2.2**
XAN					AP		pP	23 55 59.5 -0.5
XAN					XP		sP	23 56 03.8 -0.5
XAN					AMB		AMB	
comp=Z,7.0nm,1.7s,mb4.3								
XAN					AMB		AMB	
comp=Z,137nm,5.6s								
KMI	**Kunming 71.73 302**			P	P		**P**	**23 55 54.9 +0.8**
KMI					AP		pP	23 56 07.0 +1.6
KMI					XP		sP	23 56 12.3 +2.6
KMI					PP		PP	23 58 40.0 +6.2
KMI					AMB		AMB	
comp=Z,5.0nm,1.6s,mb4.2								
KMI					AMB		AMB	
comp=Z,88nm,6.4s								
KMI					LR		LR	
comp=N,130nm,20.2s								
KMI					LR		LR	
comp=E,108nm,26.3s								
KMI					LR		LR	
comp=Z,149nm,18.4s,MS4.3								
CMAR	**Chiang Mai Arr 72.61 294**			P	P		**P**	**23 56 00.1 +0.6**
comp=Z,1.8nm,0.5s,mb4.3,baz=117,slow=5.2,SNR=11								
CMAR					pP		pP	23 56 12.6 +1.8
comp=Z,3.9nm,0.8s,baz=115,slow=4.2,SNR=6.7								
CMAR					LR		LR	00 28 25.3
comp=Z,81nm,18.5s,MS4.0,baz=277,

comp=Z,2.5nm,0.8s,mb4.4,baz=82,slow=9.4,SNR=4.4
WMQ Urumqi 89.87 315 *e*P **P** **23 57 31.0 +0.6**
WMQ AP pP 23 57 42.0 -0.1
WMQ AMB AMB
comp=Z,10.0nm,1.4s,mb5.0
WMQ AMB AMB
comp=Z,135nm,4.2s
PDAR Pinedale Array 94.13 47 LR LR 00 35 22.7
comp=Z,196nm,19.4s,MS4.6,baz=141,slow=32
MKAR Makanchi Array 94.31 317 P **P** **23 57 51.2 +0.3**
comp=Z,6.9nm,0.8s,mb5.2,baz=94,slow=6.2,SNR=34
MKAR pP pP 23 58 02.3 -0.3
comp=Z,14nm,0.8s,baz=100,slow=6.2,SNR=20
ZALV Zalesovo Beam 94.42 324 P **P** **23 57 50.1 -1.2**
comp=Z,7.4nm,0.8s,mb5.1,baz=108,slow=4.8,SNR=34
ZALV pP pP 23 58 01.9 -0.9
comp=Z,4.8nm,0.9s,baz=108,slow=4.8,SNR=5.6
ZALV LR LR 00 39 13.0
comp=Z,78nm,21.5s,MS4.1,baz=286,slow=35
ZALV Zalesovo Beam 94.42 324 P **P** **23 57 50.1 -1.1**
ZALV *PP pP 23 58 02.0 -0.9
NVS Novosibirsk 95.53 325 *e*P **P** **23 57 53.0 -3.3**
NVS pmax pmax
comp=Z,20nm,1.7s,mb5.3
NVS pmax pmax
comp=E,13nm,1.4s
YKA Yellowknife Ar 95.79 27 LR LR 00 40 03.4
comp=E,94nm,18.7s,MS4.3,baz=100,slow=35
SNAA Sanae 96.15 184⇓ *e*P **P** **23 57 57.1 -1.8**
TXAR Lajitas Array 96.19 61 LR LR 00 36 13.2
comp=E,159nm,18.1s,MS4.5,baz=85,slow=32
KURK Kurchatov 97.47 320⇑ *e*P **P** **23 58 04.2 -1.0**
KURK pmax pmax
comp=Z,8.0nm,1.7s,mb4.9
ARCES ARCESS Array B 117.31 345 PKP PKPdf 00 03 14.3 -1.9
comp=Z,1.7nm,0.5s,baz=68,slow=2.0,SNR=12
ARCES ARCESS Array B 117.31 345 PKP PKPdf 00 03 14.3 -1.9
OBN Obninsk 121.70 328⇑ *i*PKIKP PKPdf 00 03 24.0 -1.0
OBN pmax pmax
comp=Z,10.0nm,1.1s
AKASG Malin Array Be 127.74 326 PKP PKPdf 00 03 34.3 -2.4
comp=Z,0.4nm,0.3s,baz=59,slow=1.9,SNR=6.2
GERES GERESS Array B 136.63 333 PKP PKPdf 00 03 52.6 -1.0
comp=Z,1.2nm,0.8s,baz=75,slow=1.5,SNR=7.8
GERES GERESS Array B 136.63 333 PKIKP PKPdf 00 03 52.6 -1.0
GERES pmax pmax
comp=Z,1.0nm,0.8s
DAVOX Davos/Dischmat 139.87 334 PKP PKPdf 00 03 58.7 -0.9
comp=Z,2.9nm,0.7s,baz=347,slow=3.7,SNR=3.5
LPG La Plagne 142.19 336 *e*PKP1 PKPdf 00 04 01.4 -2.4
ORIF Oris-en-Rattie 143.02 336 *e*PKP1 PKPdf 00 04 01.2 -4.1
ORIF comp=Z,11nm,0.9s
ORIF *e*MLR MLR
comp=Z,158nm,18.0s,MS4.5
SAOF Saorge 143.08 334 PKP PKPdf 00 04 00.5 -5.0
AUTN L'Aution 143.13 334 PKP PKPdf 00 04 01.3 -4.3
TOUF Mont Tournerai 143.19 334 PKP PKPdf 00 04 03.9 -1.8
SBF Sospel 143.23 334 *e*PKP1 PKPdf 00 04 01.2 -4.5
comp=Z,25nm,0.9s
LUCF Luceram 143.25 334 PKP PKPdf 00 04 02.0 -3.8
VIVF Saint-Julien-l 143.54 337 *e*PKP1 PKPdf 00 04 03.0 -3.2
comp=Z,39nm,1.4s
PGF Pioggiola 143.54 331 *e*PKP1 PKPdf 00 04 02.6 -3.7
comp=Z,38nm,1.2s
CALN Calern 143.56 334 PKP PKPdf 00 04 02.3 -4.0
MFF Saint Martin d 143.56 344 *e*PKP1 PKPdf 00 04 03.6 -2.6
comp=Z,15nm,1.0s
CORF Corte 143.66 330 PKP PKPdf 00 04 03.2 -3.3
FRF La Foret Royal 143.81 334 *e*PKP1 PKPdf 00 04 03.4 -3.4
comp=Z,47nm,1.2s
SMRF Simiane la Rot 143.92 336 *e*PKP1 PKPdf 00 04 04.4 -2.5
comp=Z,61nm,1.6s
LMR La Mourre 144.06 334 *e*PKP1 PKPdf 00 04 04.4 -2.8
comp=Z,54nm,1.1s
OSPF L'Ospedale 144.12 330 PKP PKPdf 00 04 04.2 -3.2
RJF Les Rejaudoux 144.25 341 *e*PKP1 PKPdf 00 04 05.0 -2.5
RJF *e*MLR MLR
comp=Z,174nm,17.0s,MS4.6
CAF Calviac 144.40 340 *e*PKP1 PKPdf 00 04 05.9 -1.9
comp=Z,19nm,1.2s
LASF Ste Croix 144.51 337 *e*PKP1 PKPdf 00 04 06.3 -1.7
comp=Z,55nm,1.2s
LFF La Frestale 144.82 342 *e*PKP1 PKPdf 00 04 06.9 -1.6
comp=Z,23nm,1.0s
MTLF Montolieu 145.74 339 *e*PKP1 PKPbc 00 04 10.1 -0.4
comp=Z,25nm,1.0s
SJPF Ste Jean 147.07 342 *e*PKP1 PKPbc 00 04 09.9 -4.6
KEST Kesra 148.26 322 PKPbc PKPbc 00 04 16.9 -1.1
comp=Z,5.6nm,0.8s,baz=299,slow=6.1,SNR=11
ESDC Sonseca Array 151.03 344 PKPbc PKPbc 00 04 23.7 -0.9
comp=Z,2.2nm,0.8s,baz=54,slow=1.3,SNR=9.4
TORD Torodi Ar. Bea 164.51 276 PKP PKPdf 00 04 34.4 -1.7
comp=Z,5.2nm,1.0s,baz=352,slow=1.4,SNR=23
TORD PKPab PKPab 00 05 29.6 -1.4
comp=Z,1.3nm,1.1s,baz=73,slow=3.6,SNR=2.7
DBIC Dimbokro 169.41 241 PKP PKPdf 00 04 38.1 -1.8
comp=Z,6.4nm,1.2s,baz=273,slow=2.5,SNR=3.3
DBIC Dimbokro 169.41 241 PKIKP PKPdf 00 04 38.1 -1.7
DBIC pmax pmax
comp=Z,6.0nm,1.2s

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*NEIC **14** 23:50:24.0±1.3, 5753N×3444W, h10km, mb4.5/16, Error ellipse: s-maj=22.8km s-min=12.5km az=78.0*
*IDC **14** 23:50:24.1±2.0, 5745N×3392W, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.8/27, mbtmp4.0/8, ML3.7/2, MS3.8/5, Ms1 3.8/5, ms1mx3.2/38, Error ellipse: s-maj=48.4km s-min=23.3km az=84.0*
*CSEM **14** 23:50:25.7±0.3, 5755N×3426W, h33km, mb4.5/16, Ms3.4, Error ellipse: s-maj=12.2km s-min=7.9km az=49.0*
ISC 14 23:50:24.3±1.5, 5753N±010×344W±03, h10km, n58, σ0 95/53, mb4.2/23, MS3.6/9, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**9.59**	**36**	Pn	**Pn**	**23 52 42.7**	**+0.6**
	0.6nm,0.3s,baz=225,slow=11,SNR=2.9						
EKA	**Eskdalemuir Ar**	**17.34**	**84**	P	**Pn**	**23 54 25.7**	**-0.3**
	0.2nm,0.3s,baz=294,slow=11,SNR=6.3						
SCHQ	**Scheffervill e**	**18.16**	**275**	LR	LR	00 00 18.6	
	comp=Z,318nm,20.5s,baz=67,slow=32						
ROSF	**Rostrenen**	**20.73**	**103**	*e*P	**P**	**23 55 05.5**	**+1.0**
QUIF	**Quistinic**	**21.04**	**104**	*e*P	**P**	**23 55 09.1**	**+1.1**
SGMF	**Saint Gilles**	**21.15**	**102**	*e*P	**P**	**23 55 09.9**	**+0.7**
FLN	**La Foliniere**	**21.95**	**99**	*e*P	**P**	**23 55 17.7**	**0.0**
	65nm,1.2s,mb4.6						
FLN				*e*MLR	MLR		
	comp=Z,204nm,18.8s,MS3.3						
FLN	**La Foliniere**	**21.95**	**99**	*e*P	**P**	**23 55 17.7**	**0.0**
	comp=Z,32nm,1.2s,mb4.6						
FLN				LR	LR		
	comp=Z,200nm,18.8s,MS3.5						
GRR	**Gorron**	**21.97**	**100**	*e*P	**P**	**23 55 17.4**	**-0.5**
	comp=Z,54nm,1.2s,mb4.5						
GRR	**Gorron**	**21.97**	**100**	*e*P	**P**	**23 55 17.4**	**-0.5**
	comp=Z,27nm,1.2s,mb4.5						
LDF	**La Druitiere**	**22.24**	**99**	*e*P	**P**	**23 55 21.4**	**+0.6**
	comp=Z,74nm,1.5s,mb4.6						
LDF	**La Druitiere**	**22.24**	**99**	*e*P	**P**	**23 55 21.4**	**+0.6**
	comp=Z,37nm,1.5s,mb4.6						
MFF	**Saint Martin d**	**23.46**	**103**	*e*P	**P**	**23 55 32.7**	**-1.1**
BAIF	**Baives**	**23.72**	**92**	*e*P	**P**	**23 55 34.0**	**-2.2**
	comp=Z,44nm,1.5s,mb4.4						
BAIF	**Baives**	**23.72**	**92**	*e*P	**P**	**23 55 34.0**	**-2.2**
	comp=Z,22nm,1.5s,mb4.4						
TCF	**Toulx Ste Croi**	**24.91**	**101**	*e*P	**P**	**23 55 46.8**	**-0.3**
	comp=Z,19nm,1.3s,mb4.2						
TCF	**Toulx Ste Croi**	**24.91**	**101**	*e*P	**P**	**23 55 46.8**	**-0.3**
	comp=Z,9.6nm,1.3s,mb4.2						
LFF	**La Frestale**	**25.03**	**105**	*e*P	**P**	**23 55 48.9**	**+0.7**
	comp=Z,46nm,1.4s,mb4.5						
LFF	**La Frestale**	**25.03**	**105**	*e*P	**P**	**23 55 48.9**	**+0.7**
	comp=Z,23nm,1.4s,mb4.5						
BGF	**Bois d'Agland**	**25.08**	**100**	*e*P	**P**	**23 55 47.7**	**-0.9**
SSF	**Saint Saulge**	**25.11**	**98**	*e*P	**P**	**23 55 47.9**	**-1.0**
	comp=Z,12nm,0.8s,mb4.2						
SSF	**Saint Saulge**	**25.11**	**98**	*e*P	**P**	**23 55 47.9**	**-1.0**
	comp=Z,5.9nm,0.8s,mb4.2						
LOR	**Lormes**	**25.17**	**97**	*e*P	**P**	**23 55 48.4**	**-1.0**
	comp=Z,30nm,1.1s,mb4.4						
LOR				*e*MLR	MLR		
	comp=Z,156nm,22.2s,MS3.2						
LOR	**Lormes**	**25.17**	**97**	*e*P	**P**	**23 55 48.4**	**-1.0**
	comp=Z,15nm,1.1s,mb4.4						
LOR				LR	LR		
	comp=Z,160nm,22.3s,MS3.5						
RJF	**Les Rejaudoux 25.19 103**			*e*P	**P**	**23 55 49.7**	**+0.1**
	comp=Z,37nm,1.4s,mb4.4						
RJF				*e*MLR	MLR		
	comp=Z,366nm,20.8s,MS3.6						
RJF	**Les Rejaudoux 25.19 103**			*e*P	**P**	**23 55 49.7**	**+0.1**
	comp=Z,19nm,1.4s,mb4.4						
RJF				LR	LR		
	comp=Z,370nm,20.8s,MS3.9						
AVF	**Avril sur Loir 25.20 99**			*e*P	**P**	**23 55 49.4**	**-0.3**
	comp=Z,36nm,1.4s,mb4.4						
AVF	**Avril sur Loir 25.20 99**			*e*P	**P**	**23 55 49.4**	**-0.3**
	comp=Z,18nm,1.4s,mb4.4						
SJPF	**Ste Jean 25.30 110**			*e*P	**P**	**23 55 52.0**	**+1.3**
SMF	**Signal de Mont 25.55 99**			*e*P	**P**	**23 55 52.2**	**-0.7**
	comp=Z,31nm,1.1s,mb4.4						
SMF	**Signal de Mont 25.55 99**			*e*P	**P**	**23 55 52.2**	**-0.7**
	comp=Z,15nm,1.1s,mb4.4						
CAF	**Calviac 25.73 104**			*e*P	**P**	**23 55 53.7**	**-0.9**
	comp=Z,16nm,1.2s,mb4.1						
CAF	**Calviac 25.73 104**			*e*P	**P**	**23 55 53.7**	**-0.9**
	comp=Z,8.0nm,1.2s,mb4.1						
ETSF	**Etsaut 25.80 110**			*e*P	**P**	**23 55 56.7**	**+1.6**
HAU	**Haudompre 26.06 94**			*e*P	**P**	**23 55 56.7**	**-0.7**
HAU				*e*MLR	MLR		
	comp=Z,216nm,21.0s,MS3.4						
HAU	**Haudompre 26.06 94**			*e*P	**P**	**23 55 56.7**	**-0.7**
HAU				LR	LR		
	comp=Z,220nm,21.0s,MS3.7						
EPF	**Esparros 26.16 109**			*e*P	**P**	**23 56 00.0**	**+1.6**
	comp=Z,14nm,1.1s,mb4.1						
EPF	**Esparros 26.16 109**			*e*P	**P**	**23 56 00.0**	**+1.6**
	comp=Z,7.0nm,1.1s,mb4.1						
CDF	**Champ du Feu 26.32 92**			*e*P	**P**	**23 55 58.6**	**-1.2**
ESDC	**Sonseca Array 26.57 119**			P	**P**	**23 56 01.2**	**-0.9**
	comp=Z,3.0nm,1.0s,mb3.8,baz=322,slow=8.9,SNR=11						
CABF	**La Chapelle 26.77 96**			*e*P	**P**	**23 56 04.0**	**+0.1**
	comp=Z,41nm,1.4s,mb4.5						
CABF	**La Chapelle 26.77 96**			*e*P	**P**	**23 56 04.0**	**+0.1**
	comp=Z,20nm,1.4s,mb4.5						
MTLF	**Montolieu 26.91 106**			*e*P	**P**	**23 56 07.1**	**+1.9**
	comp=Z,12nm,1.2s,mb4.0						
MTLF	**Montolieu 26.91 106**			*e*P	**P**	**23 56 07.1**	**+1.9**
	comp=Z,6.0nm,1.2s,mb4.0						
ORIF	**Oris-en-Rattie 27.76 100**			*e*P	**P**	**23 56 13.2**	**+0.4**
	comp=Z,9.6nm,1.1s,mb4.0						
ORIF				*e*MLR	MLR		
	comp=Z,184nm,22.0s,MS3.3						
ORIF	**Oris-en-Rattie 27.76 100**			*e*P	**P**	**23 56 13.2**	**+0.4**
	comp=Z,4.8nm,1.1s,mb4.0						
ARCES	**ARCESS Array B 27.95 40**			P	**P**	**23 56 13.2**	**-1.0**
	comp=Z,1.9nm,0.8s,mb3.8,baz=286,slow=8.7,SNR=4.7						
DAVOX	**Davos/Dischmat 28.70 93**			LR	LR	00 06 57.9	
	comp=Z,170nm,19.1s,MS3.7,baz=270,slow=35						
ULM	**Lac du Bonnet 35.81 285**			LR	LR	00 11 14.4	
	comp=Z,143nm,18.9s,MS3.8,baz=62,slow=35						
AKASG	**Malin Array Be 36.65 73**			P	**P**	**23 57 31.4**	**+0.9**
	comp=Z,0.4nm,0.4s,mb3.6,baz=301,slow=8.6,SNR=5.5						
YKA	**Yellowknife Ar 37.97 312**			LR	LR	00 13 07.5	
	comp=Z,185nm,19.6s,MS3.9,baz=120,slow=36						
TAM	**Tamanrasset 45.08 123**			*e*P	**P**	**23 58 40.9**	**+0.6**
TORD	**Torodi Ar. Bea 52.05 133**			P	**P**	**23 59 32.4**	**-1.7**
	comp=Z,1.8nm,0.9s,mb4.0,baz=336,slow=7.6,SNR=9.0						
DBIC	**Dimbokro 55.72 144**			P	**P**	**00 00 00.9**	**+0.1**
	comp=Z,3.6nm,0.9s,mb4.4,baz=266,slow=1.9,SNR=4.1						
DBIC				LR	LR	00 20 41.0	
	comp=Z,74nm,18.2s,MS3.8,baz=112,slow=33						
DBIC	**Dimbokro 55.72 144**			P	**P**	**00 00 00.9**	**+0.1**
DBIC				LR	LR	00 20 41.0	
MKAR	**Makanchi Array 63.55 43**			P	**P**	**00 00 54.6**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.7,baz=355,slow=3.4,SNR=3.0						
SONM	**Songino Array 70.08 27**			P	**P**	**00 01 36.8**	**+0.8**
	comp=Z,1.3nm,0.9s,mb3.8,baz=327,slow=7.1,SNR=5.0						
ASAR	**Alice Springs 145.12 19**			PKPbc	PKPbc	00 10 04.0	+2.9
	comp=Z,0.8nm,0.7s,baz=7.4,slow=2.0,SNR=7.5						

IDC 15 00:42:01.6±7.3, 181S×9925E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/19, mbtmp3.4/3, Error ellipse: s-maj=358.5km s-min=27.9km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.73**	**120**	P	P	00 49 28.1	+0.2
	0.2nm,0.5s,baz=304,slow=9.0,SNR=2.5						
ASAR	**Alice Springs**	**39.96**	**126**	P	P	00 49 38.1	-0.1
	0.2nm,0.3s,baz=301,slow=7.2,SNR=3.5						
MKAR	**Makanchi Array**	**50.65**	**345**	P	P	00 51 03.1	+0.6
	0.5nm,0.7s,baz=172,slow=8.9,SNR=5.1						
TXAR	**Lajitas Array**	**145.00**	**36**	PKPbc	PKPbc	01 01 39.1	-1.8
	0.5nm,0.7s,baz=251,slow=1.0,SNR=4.2						

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*CSEM **15** 00:42:13.9±0.1, 4049N×3299E, h2km, MD3.3, Error ellipse: s-maj=1.7km s-min=1.4km az=108.0*
*ISK **15** 00:42:14.5, 4050N×3299E, h4km, MD3.3*
*DDA **15** 00:42:14.9, 4046N×3302E, h7km±2km, Md3.1*
*ISCJB **15** 00:42:15.9±0.4, 4048N±003×3301E±004, h10km, Error ellipse: s-maj=4.5km s-min=3.3km az=138.7*
ISC 15 00:42:16.0±0.5, 4048N±003×3302E±004, h5km±6km, n21, σ0 878/31, 2C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CANT	**Cankiri**	**0.48**	**74**	*e*PG	**Pg**	**00 42 25.0**	**-0.2**
CANT				*e*SG	**Sg**	**00 42 32.7**	**+1.3**
LOD	**Lodumlu**	**0.62**	**198**	*e*PG	**Pg**	**00 42 27.0**	**-0.9**
LOD				*e*SG	**Sg**	**00 42 36.4**	**+0.5**
ANTO	**Ankara**	**0.63**	**196**	*e*PG	**Pg**	**00 42 28.3**	**+0.1**
SGKT	**Sivrigoynuk**	**0.74**	**278**⇑	*i*P	**Pg**	**00 42 29.6**	**-0.6**
SGKT				*i* S	**Sg**	**00 42 41.8**	**+2.0**
ILGA	**Ilgaz**	**0.78**	**43**⇑	*i*P	**Pg**	**00 42 30.2**	**-0.8**
ILGA				*i* S	**Sg**	**00 42 41.6**	**+0.4**
SAFT	**Safranbolu**	**0.80**	**342**	*e*PG	**Pg**	**00 42 29.9**	**-1.5**
TOS	**Tosya**	**0.94**	**54**	*e*PG	**Pg**	**00 42 33.1**	**-1.1**
TOS				*e*SG	**Sg**	**00 42 47.2**	**+0.7**
BALT	**Daday**	**1.09**	**15**⇓	*i*P	**Pg**	**00 42 36.2**	**-0.8**
BALT				*i* S	**Sg**	**00 42 51.8**	**+0.6**
KAMT	**Kaman**	**1.23**	**154**	*e*PN	**Pn**	**00 42 39.2**	**-0.7**
CORM	**Corum**	**1.27**	**103**	*e*PN	**Pn**	**00 42 39.5**	**-0.9**
CDAG	**Cicekdag**	**1.35**	**129**⇓	*i*P	**Pn**	**00 42 40.4**	**-1.1**
CDAG				*i* S	**Sb**	**00 42 59.2**	**0.0**
CTKT	**Corum**	**1.36**	**83**⇓	*i*P	**Pn**	**00 42 41.3**	**-0.4**
CTKT				*i* S	**Sb**	**00 42 59.9**	**+0.3**
MDU	**Mudurnu**	**1.38**	**270**	*e*PN	**Pn**	**00 42 41.8**	**-0.1**
BYBT	**Boyabat**	**1.65**	**53**	*e*PN	**Pn**	**00 42 45.9**	**+0.2**
ESKT	**Eskisehir**	**1.92**	**241**	*e*P	**Pn**	**00 42 49.7**	**+0.4**
ESKT				*e*S	**Sn**	**00 43 20.5**	**+6.6**
SEYT	**Eskypehyr**	**1.92**	**241**	*e*P	**Pn**	**00 42 49.7**	**+0.3**
DIKM	**Dikmen**	**2.06**	**55**	*e*PN	**Pn**	**00 42 51.4**	**+0.1**
KDHN	**Kadinhani**	**2.08**	**200**	*e*P	**Pn**	**00 42 51.9**	**+0.4**
KDHN				*e*S	**Sn**	**00 43 22.6**	**+4.9**
NIG	**Nigde**	**2.67**	**152**	*e*PN	**Pn**	**00 43 00.2**	**+0.6**
BNN	**Bunyan**	**2.72**	**126**	*e*PN	**Pn**	**00 43 00.7**	**+0.3**
SVSK	**Karacayir**	**3.10**	**99**	*e*PN	**Pn**	**00 43 06.8**	**+1.2**

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*BJI **15** 00:43:21.2, 355S×10091E, h42km, mB5.1, mb5.0, Ms4.5, Msz4.2*
*ISCJB **15** 00:43:24.4±0.3, 309S±004×10109E±004, h36km, mb5.0/67, MS4.1/17, Error ellipse: s-maj=7.0km s-min=5.1km az=33.7*
*MOS **15** 00:43:25.2±0.9, 273S×10130E, h33km, mb5.1/19, Error ellipse: s-maj=13.6km s-min=6.6km az=112.8*
*NEIC **15** 00:43:26.2±0.2, 302S×10106E, h35km, mb4.8/17, Error ellipse: s-maj=8.0km s-min=5.1km az=222.0*
*DJA **15** 00:43:30, 286S×10107E, h44km, MLv5.0/7*
*IDC **15** 00:43:31.4±2.1, 279S×10129E, h75km±17km, mb4.4/18, mb1 4.5/19, mb1mx4.4/25, mbtmp4.4/19, MS3.8/5, Ms1 3.9/5, ms1mx3.6/30, Error ellipse: s-maj=26.1km s-min=8.9km az=48.0*
ISC 15 00:43:26.4±0.3, 312S±004×10107E±004, h38km, h38km±1.5km: pP-P, n181, σ1 901/170, mb5.0/67, MS4.1/17, 27C-11D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KGM	**Kluang**	**5.57**	**24**	⇓P	**Pn**	**00 44 48.9**	**+2.1**
MYKOM	**Kota Tinggi**	**5.61**	**30**	⇓P	**Pn**	**00 44 48.9**	**+1.6**
GSI	**Gunungsitoli**	**5.61**	**321**⇑	*e*P	**Pn**	**00 44 50.0**	**+2.6**
FRIM	**Kepong**	**6.34**	**5**	⇓P	**Pn**	**00 45 01.2**	**+3.9**
IPM	**Ipoh**	**7.55**	**360**	⇓P	**Pn**	**00 45 18.5**	**+4.5**
KTGM	**Kuala Trenggan**	**8.64**	**14**	⇑P	**Pn**	**00 45 32.1**	**+3.2**
COCO	**West Island**	**9.94**	**205**	*e*Pn	**Pn**	**00 45 45.6**	**-1.2**
KSM	**Kuching**	**10.30**	**64**	*e*Pn	**Pn**	**00 45 51.8**	**+0.1**
SBUM	**Sibu**	**12.44**	**64**	⇑P	**Pn**	**00 46 20.4**	**-0.6**
KKM	**Kota Kinabalu**	**17.65**	**59**	*e*P	**Pn**	**00 47 30.4**	**+0.9**
SDKM	**Sandakan**	**18.30**	**62**	⇑P	**Pn**	**00 47 37.1**	**-0.4**
KAPI	**Kappang**	**18.73**	**96**	P	**Pn**	**00 47 43.0**	**+0.3**
	2.3nm,0.3s,baz=274,slow=11,SNR=25						
KAPI	**Kappang**	**18.73**	**96**	*e*P	**Pn**	**00 47 42.9**	**+0.3**
	51nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.54**	**354**	P	**P**	**00 48 09.4**	**-3.0**
	8.6nm,0.8s,mb4.2,baz=185,slow=10.0,SNR=31						
CMAR				PcP	PcP	00 52 13.8	-0.3
	1.1nm,0.6s,baz=186,slow=3.8,SNR=6.4						
CMAR				LR	LR	00 56 05.7	
	comp=Z,203nm,20.6s,MS3.5,baz=153,slow=36						
CMAR	**Chiang Mai Arr**	**21.54**	**354**	P	**P**	**00 48 09.5**	**-3.0**
CMAR						00 52 13.9	
CHTO	**Chiang Mai**	**21.89**	**355**	*e*P	**P**	**00 48 15.6**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1						
CHTO	**Chiang Mai**	**21.89**	**355**	*e*P	**P**	**00 48 15.6**	**-0.7**
	comp=Z,5.8nm,0.8s,mb4.1						
QIZ	**Qiongzhong**	**23.64**	**21**	P	**P**	**00 48 33.9**	**-0.4**
QIZ				S	**S**	**00 52 48.0**	**+1.7**
QIZ				LR	LR		
	comp=N,209nm,17.5s						
QIZ				LR	LR		
	comp=Z,213nm,21.0s,MS3.6						
MBWA	**Marble Bar**	**25.52**	**136**	P	**P**	**00 48 51.5**	**-0.1**
	comp=Z,64nm,1.9s,mb4.8						
DAV	**Davao City (W)**	**26.47**	**67**	LR	LR	00 59 39.6	
	comp=Z,186nm,19.9s,MS3.6,baz=174,slow=37						
KMI	**Kunming**	**28.12**	**3**	P	**P**	**00 49 17.8**	**+3.0**
KMI				AP	pP	00 49 28.8	+3.3
KMI				XP	sP	00 49 32.3	+2.2
KMI				PP	PP	00 50 09.8	-9.1
KMI				S	**S**	**00 54 01.8**	**+4.3**
KMI				XS	sS	00 54 18.3	+3.1
KMI				SS		00 55 24.9	
KMI				AMB	AMB		
	comp=Z,11nm,0.6s,mb4.7						
KMI				AMB	AMB		
	comp=Z,104nm,5.1s						
KMI				LR	LR		
	comp=N,276nm,19.3s,MS4.0						
KMI				LR	LR		
	comp=E,191nm,18.5s,MS4.0						
KMI				LR	LR		
	comp=Z,232nm,18.5s,MS3.8						
FITZ	**Fitzroy Crossi**	**28.30**	**123**	*e*P	**P**	**00 49 17.4**	**+0.8**
	comp=Z,13nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**28.30**	**123**	P	**P**	**00 49 18.0**	**+1.4**
	comp=Z,6.5nm,0.8s,mb4.3,baz=275,slow=6.5,SNR=9.4						
GYA	**Guiyang**	**29.89**	**10**⇑	*i*P	**P**	**00 49 29.8**	**-0.8**
GYA				AP	pP	00 49 39.0	-2.3
GYA				XP	sP	00 49 43.1	-2.8
GYA				PP	PP	00 50 30.8	-7.8
GYA				PCP	PcP	00 52 34.3	+1.3
GYA				S	**S**	**00 54 28.9**	**+3.5**
GYA				XS	sS	00 54 45.5	+2.3
GYA				SCP	ScP	00 56 10.8	-1.5
GYA				SS	SS	00 56 13.4	-20
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,170nm,5.4s						
GYA				LR	LR		
	comp=N,400nm,12.0s,MS4.4						
GYA				LR	LR		
	comp=E,300nm,12.5s,MS4.4						
GYA				LR	LR		
	comp=Z,610nm,12.1s,MS4.5						
ODAN	**Odare**	**32.60**	**337**	*e*P	**P**	**00 49 54.7**	**+0.3**
	comp=Z,129nm,0.7s,mb6.0						
TAPN	**Taplejung**	**32.92**	**338**	*e*P	**P**	**00 49 58.0**	**+0.8**
	comp=Z,192nm,0.8s,mb6.1						
RAMN	**Ramite**	**33.00**	**336**	*e*P	**P**	**00 49 58.7**	**+0.8**
	comp=Z,58nm,0.7s,mb5.6						
JIRN	**Jiri**	**33.79**	**336**	*e*P	**P**	**00 50 05.9**	**+1.1**
CD2	**Chengdu**	**33.93**	**4**	*e*P	**P**	**00 50 09.1**	**+3.1**
CD2				AP	pP	00 50 18.5	+1.7
CD2				XP	sP	00 50 22.8	+1.4
CD2				PP	PP	00 51 25.3	+1.9
CD2				S	**S**	**00 55 33.8**	**+5.5**
CD2				XS	sS	00 55 49.8	+3.6
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,6.2s						
CD2				LR	LR		
	comp=N,300nm,20.4s						
CD2				LR	LR		
	comp=E,320nm,14.4s						
CD2				LR	LR		
	comp=Z,310nm,19.2s,MS4.0						
PKI	**Pulchoki**	**34.04**	**335**	*e*P	**P**	**00 50 07.4**	**+0.4**
	comp=Z,36nm,0.7s,mb5.4						
PKIN	**Phulchoki**	**34.05**	**335**	*e*P	**P**	**00 50 07.3**	**+0.2**
	comp=Z,34nm,0.7s,mb5.4						
GUN	**Gumba**	**34.14**	**336**	*e*P	**P**	**00 50 08.7**	**+0.8**
	comp=Z,166nm,0.5s						
DMN	**Daman**	**34.21**	**334**	*e*P	**P**	**00 50 08.6**	**+0.2**
KKN	**Kakani**	**34.29**	**335**	*e*P	**P**	**00 50 09.5**	**+0.4**
	comp=Z,68nm,0.5s,mb5.8						
GKN	**Gorkha**	**34.75**	**334**	*e*P	**P**	**00 50 13.5**	**+0.4**
	comp=Z,56nm,0.5s,mb5.8						
KOLN	**Koldanda**	**35.02**	**332**	*e*P	**P**	**00 50 16.1**	**+0.6**
	comp=Z,52nm,0.6s,m

comp=Z,120nm,0.5s
GTA Gaotai 42.33 359⇑ *e*P **P 00 51 17.5 +0.9**
GTA AP pP 00 51 27.4 -0.2
GTA XP sP 00 51 30.6 -1.6
GTA S **S 00 57 38.1 +3.0**
GTA XS sS 00 57 53.8 +0.5
GTA AMB AMB
comp=Z,4.0nm,1.1s,mb4.0
GTA AMB AMB
comp=Z,97nm,4.5s
GTA LR LR
comp=N,143nm,16.2s,MS4.1
GTA LR LR
comp=E,132nm,15.3s,MS4.1
GTA LR LR
comp=Z,155nm,15.9s,MS4.0
THN Thein Dam 42.76 328 *e*P **P 00 51 19.1 -1.1**
HHC Hu-ho-hao-te 44.79 11 *e*P **P 00 51 36.5 +0.1**
HHC AP pP 00 51 47.0 -0.5
HHC XP sP 00 51 51.0 -1.0
HHC PCP PcP 00 53 18.3 +0.3
HHC PP PP 00 53 22.5 +0.9
HHC SCP ScP 00 57 05.9 -1.6
HHC PCS PcS 00 57 10.3 -1.2
HHC AMB AMB
comp=Z,14nm,0.7s,mb4.9
HHC AMB AMB
comp=Z,124nm,6.3s
HHC LR LR
comp=N,231nm,13.8s,MS4.3
HHC LR LR
comp=E,129nm,13.3s,MS4.3
HHC LR LR
comp=Z,125nm,12.1s,MS4.1
BJI Beijing 45.13 16 P **P 00 51 38.4 -0.7**
BJI S **S 00 58 20.8 +4.9**
BJI AMB AMB
comp=Z,8.0nm,0.5s,mb4.8
BJI LR LR
comp=N,207nm,17.0s,MS4.2
BJI LR LR
comp=E,122nm,14.6s,MS4.2
BJI LR LR
comp=Z,140nm,20.1s
CTA Charters Tower 47.16 115 *e*P **P 00 51 56.5 +1.1**
comp=Z,10nm,0.7s,mb4.9
CTA Charters Tower 47.16 115 P **P 00 51 56.3 +0.9**
comp=Z,12nm,0.7s,mb4.9,baz=286,slow=8.7,SNR=18
CTA Charters Tower 47.16 115 P **P 00 51 56.3 +0.9**
CTA pmax pmax
comp=Z,12nm,0.7s
CTAO Charters Tower 47.16 115 *e*P **P 00 51 55.8 +0.4**
CTAO pmax pmax
comp=Z,15nm,0.8s,mb5.0
CTAO Charters Tower 47.16 115 *e*P **P 00 51 55.8 +0.4**
comp=Z,15nm,0.8s,mb5.0
KSRS Korea Array 47.45 29 P **P 00 51 56.1 -1.2**
comp=Z,4.4nm,0.9s,mb4.4,baz=220,slow=8.1,SNR=7.2
KSRS Korea Array 47.45 29 P **P 00 51 56.2 -1.2**
KSRS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
STKA Stephens Creek 47.61 132 *e*P **P 00 52 00.8 +2.0**
comp=Z,8.6nm,0.8s,mb4.8
STKA Stephens Creek 47.61 132 P **P 00 52 00.5 +1.7**
comp=Z,7.2nm,0.7s,mb4.8,baz=296,slow=6.4,SNR=16
KBL Kabul 48.06 324 *e*P **P 00 52 01.5 -0.7**
KBL pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KBL Kabul 48.06 324 *e*P **P 00 52 01.5 -0.7**
comp=Z,4.9nm,0.6s,mb4.7
WMQ Urumqi 48.25 347⇑ *i*P **P 00 52 03.3 -0.2**
WMQ AP pP 00 52 14.0 -0.6
WMQ AMB AMB
comp=Z,95nm,0.8s,mb5.9
WMQ AMB AMB
comp=Z,230nm,5.7s
WMQ LR LR
comp=Z,194nm,17.6s,MS4.1
SONM Songino Array 50.95 5 P **P 00 52 23.9 -0.1**
comp=Z,29nm,0.8s,mb5.2,baz=183,slow=9.1,SNR=119
SONM PcP PcP 00 53 39.0 -0.9
comp=Z,1.7nm,0.5s,baz=191,slow=4.3,SNR=6.0
ULN Ulaanbaatar 51.04 5 *e*P **P 00 52 24.5 -0.1**
ULN pmax pmax
comp=Z,13nm,0.7s,mb5.0
ULN Ulaanbaatar 51.04 5 *e*P **P 00 52 24.5 -0.1**
comp=Z,12nm,0.7s,mb5.0
TKM2 Tokmak 2 51.28 336 *e*P **P 00 52 27.1 +0.6**
TKM2 pmax pmax
comp=Z,182nm,0.7s
TKM2 Tokmak 2 51.28 336 P **P 00 52 26.8 +0.2**
SNR=21
TKM2 Tokmak 2 51.28 336 *e*P **P 00 52 27.1 +0.6**
comp=Z,182nm,0.7s
KBK Karagaybulak 51.33 335 P **P 00 52 27.7 +0.9**
SNR=7.3
AML Almayashu 51.43 334 P **P 00 52 28.4 +0.8**
SNR=19
AML Almayashu 51.43 334 *e*P **P 00 52 28.2 +0.5**
comp=Z,125nm,0.4s
CN2 Changchun 51.59 22 *e*P **P 00 52 27.6 -1.2**
CN2 *e*AP pP 00 52 38.3 -1.7
CN2 *e*S **S 00 59 46.0 -1.0**
CN2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
CN2 AMB AMB
comp=Z,40nm,4.0s
CN2 LR LR
comp=N,300nm,17.0s,MS4.5
CN2 LR LR
comp=E,200nm,17.0s,MS4.5
CN2 LR LR
comp=Z,1μm,18.0s,MS4.9
CHMS Chumysh 51.69 336 P **P 00 52 29.5 -0.1**
SNR=6.4
EKS2 Erkin-Say 51.83 335 P **P 00 52 31.4 +0.7**
SNR=36
EKS2 Erkin-Say 51.83 335 *e*P **P 00 52 30.5 -0.1**
comp=Z,4.0nm,0.7s,mb4.5
USP Ospenovka 52.02 336 P **P 00 52 31.8 -0.2**
SNR=9.6
MKAR Makanchi Array 52.39 344 P **P 00 52 34.0 -0.7**
comp=Z,21nm,0.6s,mb5.2,baz=158,slow=8.8,SNR=86
MKAR LR LR 01 20 21.3
comp=Z,71nm,18.6s,MS3.7,baz=273,slow=42
MJAR Matsushiro Arr 52.48 38 P **P 00 52 33.9 -1.7**
comp=Z,2.5nm,0.7s,mb4.2,baz=208,slow=7.2,SNR=11
ZAK Zakamensk 53.32 2 *e*P **P 00 52 40.2 -1.3**
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
MOY Mondy 54.58 360 *e*P **P 00 52 50.7 0.0**
TLY Talaya 54.63 2*c* *i*P **P 00 52 51.0 -0.1**
TLY pmax pmax
comp=Z,22nm,1.2s,mb5.1
TLY MLR MLR
comp=Z,100nm,13.0s,MS4.1
KURK Kurchatov 56.98 343 P **P 00 53 07.7 -0.2**
comp=Z,142nm,0.6s,SNR=13
KURK Kurchatov 56.98 343 P **P 00 53 06.6 -1.3**
comp=Z,8.5nm,0.6s,mb4.9,baz=164,slow=7.1,SNR=61
KURK Kurchatov 56.98 343 *e*P **P 00 53 07.2 -0.8**
ZALV Zalesovo Beam 58.46 349 P **P 00 53 17.3 -1.0**
comp=Z,73nm,0.8s,mb5.8,baz=170,slow=5.3,SNR=250
ZALV Zalesovo Beam 58.46 349 P **P 00 53 17.3 -1.0**
KLR Kul'dur 58.52 23 *e*P **P 00 53 13.8 -5.0**
KRAR Krasnoyarsk 59.31 355⇓ *e*P **P 00 53 23.7 -0.4**
KRAR pmax pmax
comp=Z,33nm,0.4s,mb5.7
NVS Novosibirsk 59.62 348⇑ *i*P **P 00 53 24.6 -1.7**
NVS pmax pmax
comp=Z,17nm,0.9s,mb5.1
NVS pmax pmax
comp=N,16nm,1.2s
NVS pmax pmax
comp=E,11nm,1.1s
RDF Al-Radifah 60.37 306 *e*P **P 00 53 31.9 -0.1**
baz=306
RDF AMb AMB 00 53 33.4
comp=Z,23nm,0.9s,mb5.2,baz=306
UMR Umm Al-Rimmam 60.48 307 *e*P **P 00 53 32.8 +0.1**
baz=307
UMR AMb AMB 00 53 33.8
comp=Z,37nm,0.7s,mb5.5,baz=307
NAY Al-Naaiem 60.74 306 *e*P **P 00 53 34.1 -0.4**
baz=306
NAY AMb AMB 00 53 35.3
comp=Z,12nm,0.7s,mb5.1,baz=306
MIB Mutribah 60.88 307 *e*P **P 00 53 35.1 -0.3**
baz=307
MIB AMb AMB 00 53 37.0
comp=Z,29nm,1.1s,mb5.3,baz=307
RST Umm Al-Ruwaisa 61.04 306 *e*P **P 00 53 36.1 -0.4**
baz=306
RST AMb AMB 00 53 37.2
comp=Z,17nm,0.7s,mb5.3,baz=306
BVAR Borovoye Array 61.60 339 P **P 00 53 38.5 -1.3**
comp=Z,12nm,0.6s,mb5.2,baz=146,slow=8.2,SNR=57
BOD Bodaibo 61.63 8 *e*P **P 00 53 38.2 -1.7**
BOD pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
BRVK Borovoye 61.66 339 *e*P **P 00 53 38.9 -1.3**
YSS Yuzh-Sakhalins 61.87 31⇓ *e*P **P 00 53 41.0 -0.8**
YSS *e* pP 00 53 54.5 +1.3
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.5
AKTK Aktyubinsk 64.85 331 P **P 00 54 00.2 -1.1**
AKTO Aktyubinsk 64.85 331 P **P 00 54 00.2 -1.1**
comp=Z,4.2nm,0.6s,mb4.7,baz=129,slow=6.5,SNR=17
AKTO Aktyubinsk 64.85 331 P **P 00 54 00.3 -1.1**
AKTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
SVE Sverdlovsk 68.12 337⇓ *e*P **P 00 54 21.2 -1.0**
SVE pmax pmax
comp=Z,25nm,0.9s,mb5.2
YAK Yakutsk 68.55 14 *e*P **P 00 54 22.7 -2.1**
YAK *e* 00 54 44.7
YAK pmax pmax
comp=Z,51nm,0.9s,mb5.5
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.0s
ARU Arti 68.65 336*c* *i*P **P 00 54 24.3 -1.2**
ARU *e*S S 01 03 25.4 -0.2
ARU *e*SS SS 01 07 54.5 +3.8
ARU pmax pmax
comp=Z,17nm,1.0s,mb4.9
ARU Arti 68.65 336 *e*P **P 00 54 24.6 -1.0**
comp=Z,18nm,1.1s,mb4.9
KIV Kislovodsk 70.08 319 *e*P **P 00 54 34.5 -0.2**
KIV pmax pmax
comp=Z,11nm,1.2s,mb4.7
PETK Petropavlovsk- 73.26 32 P **P 00 54 52.3 -1.2**
comp=Z,2.3nm,0.6s,mb4.3,baz=8.1,slow=2.1,SNR=5.1
PETK LR LR 01 28 12.3
comp=Z,43nm,18.6s,MS3.8,baz=246,slow=37
PET Petropavlovsk 73.72 32⇓ *e*P **P 00 54 55.5 -0.8**
PET pmax pmax
comp=Z,49nm,1.0s,mb5.4
TIXI Tiksi 76.79 9⇑ *e*P **P 00 55 11.3 -2.3**
TIXI pmax pmax
comp=Z,17nm,1.0s,mb4.9
TIXI MLR MLR
comp=Z,200nm,29.0s,MS4.3
TIXI Tiksi 76.79 9 *e*P **P 00 55 11.4 -2.1**
comp=Z,13nm,0.8s,mb4.9
OBN Obninsk 78.30 328⇑ *e*P **P 00 55 22.7 +0.4**
OBN pmax pmax
comp=Z,16nm,0.9s,mb5.0
TIRR Tirgusor 79.90 316⇑ *i*P **P 00 55 31.2 -0.1**
TIRR Tirgusor 79.90 316⇑ P **P 00 55 31.2 -0.1**
RAO Raoul Island 80.64 119 *e*P **P 00 55 35.4 -0.3**
comp=Z,256nm,0.7s
AKASG Malin Array Be 81.02 322 P **P 00 55 35.8 -1.4**
comp=Z,0.5nm,0.3s,baz=98,slow=3.8,SNR=8.5
AKASG Malin Array Be 81.02 322 *i*P **P 00 55 35.7 -1.5**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
VRI Vrincioaia 81.39 317⇑ *i*P **P 00 55 40.2 +0.9**
VRI Vrincioaia 81.39 317⇑ P **P 00 55 40.2 +0.9**
MLR Muntele Rosu 81.84 317⇑ *i*P **P 00 55 42.4 +0.7**
MLR Muntele Rosu 81.84 317⇑ P **P 00 55 42.4 +0.7**
BURAR Bucovina Array 82.80 319⇓ *i*P **P 00 55 48.1 +1.5**
BURAR Bucovina Array 82.80 319⇓ P **P 00 55 48.1 +1.4**
BUR08 Bucovina Ar. S 82.82 319 *e*P **P 00 55 47.6 +0.9**
VTS Vitosha 83.19 313⇑ *i*P **P 00 55 49.1 +0.3**
VTS Vitosha 83.19 313⇑ P **P 00 55 49.1 +0.4**
JOF Joensuu 83.68 334 *e*p **P 00 55 50.1 -0.7**
comp=Z,5.0nm,0.7s,mb4.8
BZS Buzias 84.85 316⇑ *i*P **P 00 55 57.4 +0.2**
BZS Buzias 84.85 316⇑ P **P 00 55 57.4 +0.2**
KOLS Kolonicke sedl 84.99 320 *e*P **P 00 55 58.9 +1.1**
KOLS Kolonicke sedl 84.99 320 *e*P **P 00 55 58.9 +1.1**
KOLS Kolonicke sedl 84.99 320 *e*P **P 00 55 58.9 +1.1**
SUW Suwalki 85.41 325 *e*P **P 00 55 58.9 -0.9**
CRVS Cervenica-Dubn 85.51 319 *e*P **P 00 56 02.4 +2.0**
KAF Kangasniemi 85.66 333 *e*p **P 00 56 00.0 -0.8**
comp=Z,14nm,0.8s,mb5.2,baz=100,slow=4.5
KAF Kangasniemi 85.66 333 *e*P **P 00 56 00.0 -0.8**
KAF pmax pmax
comp=Z,14nm,0.8s,mb5.2
STHS Stebnicka Huta 85.74 320 *e*P **P 00 56 02.1 +0.6**
STHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
STHS Stebnicka Huta 85.74 320 *e*P **P 00 56 02.1 +0.6**
comp=Z,4.5nm,0.8s,mb4.8
KECS Kecovo 86.08 319 *e*P **P 00 56 03.1 -0.1**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.3
KECS Kecovo 86.08 319 *e*P **P 00 56 03.1 -0.1**
comp=Z,2.1nm,0.9s,mb4.4
PSZ Piszkesteto 86.39 318⇓ *i*P **P 00 56 05.3 +0.6**
PSZ Piszkesteto 86.39 318⇓ P **P 00 56 05.3 +0.6**
PKSM Moragy 86.99 316⇑ *i*P **P 00 56 08.0 +0.2**
PKSM Moragy 86.99 316⇑ P **P 00 56 08.0 +0.3**
VYHS Vyhne 87.17 319 *e*P **P 00 56 08.5 -0.1**
KOLL Kolacno 87.47 319 *e*P **P 00 56 08.8 -1.2**
ARCES ARCESS Array B 87.88 340 P **P 00 56 11.5 0.0**
comp=Z,7nm,0.8s,mb5.0,baz=70,slow=7.9,SNR=10
MORC Moravsky Berou 88.18 320⇑ *i*P **P 00 56 14.4 +1.1**
MORC Moravsky Berou 88.18 320⇑ P **P 00 56 14.4 +1.1**
MODS Modra-Piesok 88.18 318 *e*P **P 00 56 12.9 -0.5**
BOJS Bojanci 89.27 315 *i*P **P 00 56 19.1 +0.6**
PERS Pernice 89.46 317 *i*P **P 00 56 20.2 +0.8**
VISS Visnje 89.58 316 *i*P **P 00 56 20.8 +0.7**
JAVS Javornik 90.13 316 *i*P **P 00 56 22.9 +0.3**
BRG Berggiesshubel 90.58 321 *e*P **P 00 56 25.6 +1.0**
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
BRG Berggiesshubel 90.58 321 *e*P **P 00 56 25.6 +1.0**
comp=Z,3.8nm,0.7s,mb4.8
GERES GERESS Array B 90.59 319 P **P 00 56 25.7 +1.0**
comp=Z,1.7nm,0.7s,mb4.5,baz=90,slow=5.3,SNR=19
CLL Collm 91.20 321 *e*P **P 00 56 27.0 -0.5**
GRA1 Grafenberg Arr 92.26 319 *e*P **P 00 56 32.9 +0.5**
GRF Grafenberg Arr 92.26 319 *e*P **P 00 56 32.9 +0.5**
NB2 NORSAR Subarra 92.64 331 P **P 00 56 33.4 -0.5**
comp=Z,4.2nm,0.8s,mb4.9,baz=93,slow=4.8
NOA NORSAR Array B 92.64 331 LR LR 01 47 05.3
comp=Z,158nm,19.5s,MS4.5,baz=295,slow=41
NVAR Mina Array Bea 129.77 40 PKP PKPdf 01 02 33.6 +1.6
comp=Z,0.9nm,0.6s,baz=281,slow=2.2,SNR=5.6
NVAR SKPbc 01 05 47.7
comp=Z,0.5nm,0.6s,baz=283,slow=2.6,SNR=4.2
ULM Lac du Bonnet 130.89 14 PKP PKPdf 01 02 33.9 +0.1
comp=Z,2.8nm,0.6s,baz=344,slow=1.2,SNR=5.2
MVU Marysvale 133.50 36 *e*PKPdf PKPdf 01 02 38.6 -0.5
PV10 Paradox Valley 135.42 34 *e*PKPdf PKPdf 01 02 39.1 -3.6
CPUP Villa Florida 144.03 214 PKP PKPdf 01 02 59.1 +0.4
comp=Z,0.8nm,0.6s,baz=154,slow=4.7,SNR=3.2
CPUP Villa Florida 144.03 214 PKP PKPdf 01 02 59.1 +0.4
CPUP *e*PKPdf PKPdf 01 02 59.6 +0.9
BDFB Brasilia 144.19 238 PKP PKPdf 01 02 59.2 0.0
comp=Z,1.7nm,0.7s,baz=116,slow=6.2,SNR=3.3
TXAR Lajitas Array 144.91 39 PKP PKPdf 01 02 59.7 -0.4
comp=Z,8.8nm,0.6s,baz=283,slow=1.0,SNR=79
TXAR SKPbc SKPbc 01 06 33.6 -3.1
comp=Z,0.6nm,0.7s,baz=236,slow=0.6,SNR=4.2
TXAR Lajitas Array 144.91 39 PKP PKPdf 01 02 59.7 -0.4
TXAR SKPbc SKPbc 01 06 33.6 -3.1
URVA University of 145.69 358 *e*PKPdf PKPdf 01 03 00.9 -0.3
MIAR Mount Ida 145.89 22 *e*PKIKP PKPdf 01 03 01.0 -0.7
ELN Prospectdale 146.01 3 *e*PKPdf PKPdf 01 03 01.3 -0.5
ELN *e*SPKPdf 01 03 16.3
UALR University of 146.12 20 *e*PKPab PKPab 01 02 02.4 -1.2
WVT Waverly 146.14 13 *e*PKP2 PKPab 01 03 02.0 -1.6
JCT Junction City 146.38 34 *e*PKP2 PKPab 01 03 03.3 -1.4
TZTN Tazewell 146.47 7 *e*PKPdf PKPdf 01 03 02.8 +0.2
SWET Sewanee 147.41 11 *e*PKPdf PKPdf 01 03 04.4 +0.2
GOGA Godfrey 149.56 8 *e*PKP2 PKPbc 01 03 11.3 -1.0
LPAZ La Paz 157.96 209 PKP PKPdf 01 03 22.5 +2.4
comp=Z,0.5nm,0.7s,baz=23,slow=6.5,SNR=3.9

IDC ***15*** *00:52:02.1±0.9, 4090N×7812E, h0km, mb3.9/6, mb1 4.0/10, mb1mx3.9/27, mbtmp3.9/10, ML3.6/4, Error ellipse: s-maj=19.2km s-min=13.2km az=102.0*
NNC ***15*** *00:52:02.4±2.1, 4088N×7862E, h0km, mb4.3, mpv4.3, Error ellipse: s-maj=17.4km s-min=9.7km az=176.0*
ISCJB ***15*** *00:52:03.5±0.5, 4083N±004×7847E±006, h10km, mb4.0/8, MS3.8/2, Error ellipse: s-maj=6.5km s-min=5.5km az=165.8*
NEIC ***15*** *00:52:03.5±0.8, 4095N×7801E, h10km, Error ellipse: s-maj=17.2km s-min=11.9km az=118.0*
BJI ***15*** *00:52:03.1, 4098N×7818E, h16km, mB4.5, mb4.4, ML3.9, Ms4.0, Msz4.0*
MOS ***15*** *00:52:07.4±2.9, 4099N×7801E, h33km, mb4.2/4, Error ellipse: s-maj=14.5km s-min=7.5km az=87.4*
ISC 15 00:52:04.7±0.5, 4078N±004×7830E±005, h10km, n42, σ1§56/49, mb4.0/8, MS3.8/2, 8C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.18**	**236**	⇓P	**Pn**	**00 52 42.8**	**+1.8**
KSH				S	**Sg**	**00 53 14.1**	**-0.8**
KSH				Smax			
	comp=N,2μm,0.6s						
KSH				Smax			
	comp=E,3μm,0.6s						
KNDC	**Almaty**	**2.63**	**338**	⇑Pn	**Pn**	**00 52 47.5**	**+0.2**
	comp=E,287nm,0.6s						
KNDC				⇓Sn	**Sn**	**00 53 21.3**	**+2.1**
	comp=E,2μm,1.1s						
AAA	**Alma-Ata**	**2.69**	**338**	*e*PN	**Pn**	**00 52 46.9**	**-1.1**
AAA				*e*S	**Sn**	**00 53 20.9**	**+0.3**
AAA				pmax	pmax		
	comp=Z,566nm,1.2s						
TKM2	**Tokmak 2**	**2.94**	**318**	⇑Pn	**Pn**	**00 52 51.3**	**-0.2**
	comp=Z,89nm,0.5s						
TKM2				⇓Sn	**Sn**	**00 53 29.2**	**+2.3**
	comp=Z,282nm,0.7s						
TKM2	**Tokmak 2**	**2.94**	**318**	*i* PN	**Pn**	**00 52 51.2**	**-0.3**
TKM2				pmax	pmax		
	comp=Z,89nm,0.4s						
AAK	**Ala-Archa**	**3.40**	**304**	P	**Pn**	**00 53 01.3**	**+3.6**
	SNR=22						
KK31	**Karatay Array**	**6.26**	**294**	⇓Pg	**Pb**	**00 53 58.2**	**+4.6**
	comp=Z,11nm,0.6s,baz=111,slow=14,SNR=28						
KK31				⇓Lg		00 55 22.8	
	comp=Z,11nm,0.5s,baz=107,slow=27,SNR=5.1						
KK31	**Karatay Array**	**6.26**	**294**	*e*PN	**Pb**	**00 53 53.5**	**-0.1**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KK31				pmax	pmax		
	comp=Z,25nm,0.6s						
MK31	**Makanchi Array**	**6.67**	**24**	Pn	**Pn**	**00 53 42.6**	**0.0**
	comp=Z,5.3nm,0.5s,baz=122,slow=8.1,SNR=37						
MK31				⇑Sn	**Sn**	**00 54 58.4**	**-0.3**
	comp=Z,15nm,0.6s,baz=200,slow=21,SNR=2.6						
MK31				⇑Lg		00 55 26.3	
	comp=Z,25nm,0.7s,baz=206,slow=25,SNR=3.5						
MK31	**Makanchi Array**	**6.67**	**24**	*i* Pn	**Pn**	**00 53 42.6**	**0.0**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.2s						
MKAR	**Makanchi Array**	**6.67**	**24**	Pn	**Pn**	**00 53 42.3**	**-0.3**
	comp=Z,2.0nm,0.3s,baz=205,slow=14,SNR=22						
MKAR				Sn	**Sn**	**00 54 57.3**	**-1.3**
	comp=Z,2.4nm,0.3s,baz=206,slow=22,SNR=5.1						
MKAR				Lg		00 55 29.1	
	comp=Z,2.6nm,0.3s,baz=246,slow=8.8,SNR=3.4						
MKAR	**Makanchi Array**	**6.67**	**24**	PN	**Pn**	**00 53 42.3**	**-0.3**
MKAR						00 54 57.3	
KBL	**Kabul**	**9.62**	**233**	*e*P	**Pn**	**00 54 21.1**	**-2.1**
SMLA				*i* S		00 54 31.6	
SMLA	**Simla**	**9.67**	**186**	*i* S	**Pn**	**00 54 27.4**	**+3.5**
KURBB	**Kurchatov Arra**	**9.85**	**1**	⇓Pn	**Pn**	**00 54 24.6**	**-1.6**
	comp=Z,1.0nm,1.1s						
KURBB				⇑Lg		00 57 11.9	
	comp=Z,15nm,0.8s						
KURK	**Kurchatov**	**9.94**	**1**	⇑Pn	**Pn**	**00 54 25.0**	**-2.5**
	comp=Z,3.7nm,0.5s						
KURK				⇑Lg		00 57 14.1	
	comp=Z,75nm,1.1s						
KURK	**Kurchatov**	**9.94**	**1**	Pn	**Pn**	**00 54 23.0**	**-4.5**
	comp=Z,0.2nm,0.3s,baz=177,slow=16,SNR=7.9						
KURK				Lg		00 57 07.3	
	comp=Z,0.2nm,0.3s,baz=179,slow=30,SNR=6.3						
KURK	**Kurchatov**	**9.94**	**1**	Pn	**Pn**	**00 54 23.0**	**-4.5**
KURK				Lg		00 57 07.3	
VOSK	**Vostochnaya**	**12.95**	**340**	⇓Pn	**Pn**	**00 55 05.8**	**-2.9**
	comp=Z,8.2nm,1.2s						
BVA0	**Borovoye Array**	**13.38**	**339**	Pn	**Pn**	**00 55 11.9**	**-2.6**
	comp=Z,1.9nm,1.2s,baz=146,slow=13,SNR=5.0						
BVAR	**Borovoye Array**	**13.38**	**339**	Pn	**Pn**	**00 55 08.4**	**-6.1**
	comp=Z,0.4nm,0.3s,baz=144,slow=13,SNR=3.9						
BVAR				Lg		00 58 57.9	
	comp=Z,0.4nm,0.3s,baz=168,slow=28,SNR=8.3						
BRVK	**Borovoye**	**13.44**	**339**	*i* P	**Pn**	**00 55 16.9**	**+1.6**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZALV	**Zalesovo Beam**	**13.89**	**16**	Pn	**Pn**	**00 55 17.9**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=203,slow=11,SNR=3.5						
ZALV				Lg		00 59 18.1	
	comp=Z,0.1nm,0.3s,baz=190,slow=26,SNR=3.3						
NVS	**Novosibirsk**	**14.45**	**11**	*e*P	**Pn**	**00 55 33.7**	**+4.6**
NVS				*e*		00 58 15.7	
ZAK	**Zakamensk**	**19.86**	**53**	*e*P	**Pn**	**00 56 39.2**	**+1.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ARU	**Arti**	**20.27**	**327***c*	*i*P	**P**	**00 56 41.2**	**+1.1**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
LZH	**Lanzhou**	**20.52**	**95**	*e*P	**P**	**00 56 44.1**	**+1.1**
LZH				AP		00 56 53.3	
LZH				XP	sP	00 56 57.4	+10
LZH				PP		00 57 05.8	
LZH				AMB	AMB		
	comp=Z,21nm,1.0s						
LZH				AMB	AMB		
	comp=Z,52nm,4.3s						
LZH				LR	LR		
	comp=E,235nm,11.3s						
LZH				LR	LR		
	comp=Z,316nm,15.1s,MS3.8						
SONM	**Songino Array**	**21.23**	**61**	P	**P**	**00 56 51.2**	**+0.6**
	comp=Z,6.9nm,1.0s,mb4.0,baz=262,slow=11,SNR=12						
SONM	**Songino Array**	**21.23**	**61**	*e*P	**P**	**00 56 53.2**	**+2.6**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	**Ulaanbaatar**	**21.67**	**61**	*i* P	**P**	**00 56 56.8**	**+1.5**
CD2	**Chengdu**	**22.80**	**108**	*e*P	**P**	**00 57 06.0**	**-1.4**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
HHC	**Hu-ho-hao-te**	**25.09**	**79**	*e*P	**P**	**00 57 25.0**	**-4.4**
HHC				AP	pP	00 57 34.3	+1.9
HHC				XP	sP	00 57 38.5	+4.8
HHC				PP		00 58 02.6	
HHC				PCP	PcP	01 01 00.1	-3.5
HHC				S	**S**	**01 01 44.3**	**-10**
HHC				XS	sS	01 01 59.3	+0.5
HHC				SCP	ScP	01 04 35.6	-7.0
HHC				PCS	PcS	01 04 39.0	-4.8
HHC				SCS	ScS	01 08 22.5	-8.4
HHC				AMB	AMB		
	comp=Z,14nm,0.5s,mb4.8						
HHC				AMB	AMB		
	comp=Z,126nm,4.8s						
HHC				LR	LR		
	comp=N,156nm,12.1s,MS3.8						
HHC				LR	LR		
	comp=E,119nm,11.7s,MS3.8						
HHC				LR	LR		
	comp=Z,106nm,10.1s,MS3.6						
AKASG	**Malin Array Be**	**35.07**	**303**	*i* P	**P**	**00 59 00.2**	**+2.6**
ARCES	**ARCESS Array B**	**39.60**	**334**	P	**P**	**00 59 34.0**	**-1.8**
	comp=Z,4.5nm,1.0s,mb4.2,baz=98,slow=9.1,SNR=7.9						
GERES	**GERESS Array B**	**45.28**	**303**	P	**P**	**01 00 21.0**	**-1.2**
	comp=Z,0.8nm,0.7s,mb3.7,baz=76,slow=8.4,SNR=6.8						
YSS	**Yuzh-Sakhalins**	**45.71**	**60**	*e*P	**P**	**01 00 29.7**	**+4.0**
KMBO	**Kilima Mbogo**	**55.95**	**232**	*i* P	**P**	**01 01 44.0**	**+0.8**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TORD	**Torodi Ar. Bea**	**71.43**	**272**	P	**P**	**01 03 22.8**	**-2.7**
	comp=Z,2.0nm,0.7s,mb4.2,baz=46,slow=5.2,SNR=34						
WRA	**Warramunga Arr**	**79.72**	**128**	P	**P**	**01 04 13.2**	**+0.5**

comp=Z,0.6nm,0.8s,mb3.6,baz=324,slow=5.4,SNR=6.3
WRA Warramunga Arr 79.72 128 *e*P **P 01 04 16.2 +3.5**
WRA pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 82.32 130 P **P 01 04 25.6 -0.9**
comp=Z,0.3nm,0.5s,mb3.5,baz=310,slow=37,SNR=3.7
ASAR Alice Springs 82.32 130 *e*P **P 01 04 32.1 +5.6**
ASAR pmax pmax
comp=Z,1.0nm,0.8s

TRN ***15*** *00:56:26.3, 1940N×6431W, h92km*
RSPR ***15*** *00:56:27.8, 1948N×6433W, h86km±8km, MD3.6/7, MD3.6/7*
NEIC ***15*** *00:56:27.8, 1948N×6433W, h86km, MD3.6(RSPR), After RSPR.*

ISC 15 00:56:27.1±1.7, 195N±03×643W±01, h87km±40km, n12, σ0s51/20, 9C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.76**	**182⇓**	*e*P	**Pn**		**00 56 44.5**	**+0.6**
ABV				eS	**Sn**		**00 56 56.6**	**+0.2**
TBVI	**Tortola**	**1.11**	**196⇓**	*e*P	**Pn**		**00 56 47.8**	**-0.1**
TBVI				eS	**Sn**		**00 57 02.6**	**-0.8**
MTP	**Monte Pirata**	**1.82**	**221⇑**	*e*P	**Pn**		**00 56 57.2**	**+0.3**
MTP				eS	**Sn**		**00 57 20.7**	**+1.2**
MTP	**Monte Pirata**	**1.82**	**221⇑**	*e*P	**Pn**		**00 56 57.2**	**+0.3**
MTP				eS	**Sn**		**00 57 20.1**	**+0.6**
CBYP	**Canovanas**	**1.91**	**231**	eS	**Sn**		**00 57 21.7**	**+0.3**
CBYP	**Canovanas**	**1.91**	**231**	eS	**Sn**		**00 57 21.7**	**+0.3**
HUMP	**Col San Antoni**	**1.99**	**228⇓**	*e*P	**Pn**		**00 56 58.8**	**-0.2**
HUMP				eS	**Sn**		**00 57 22.8**	**-0.6**
CPD	**Cerro la Pandu**	**2.10**	**227⇑**	*e*P	**Pn**		**00 57 00.9**	**+0.3**
CPD				eS	**Sn**		**00 57 25.9**	**-0.3**
SJG	**San Juan**	**2.22**	**232⇑**	*e*P	**Pn**		**00 57 01.6**	**-0.6**
CELP	**Cerrillos**	**2.58**	**237⇑**	*e*P	**Pn**		**00 57 06.8**	**-0.1**
AOPR	**Arecibo Observ**	**2.58**	**244⇑**	*e*P	**Pn**		**00 57 06.3**	**-0.7**
AOPR				eS	**Sn**		**00 57 37.2**	**-0.4**
CRPR	**Cabo Rojo, PR**	**3.04**	**241⇑**	*e*P	**Pn**		**00 57 13.4**	**+0.3**
CRPR				eS	**Sn**		**00 57 49.5**	**+0.9**

ISCJB ***15*** *01:18:35.0±10.0, 3099S±009×596E±0.1, h6km±62km, mb4.1/16, MS4.1/6, Error ellipse: s-maj=20.8km s-min=14.6km az=157.4*
IDC ***15*** *01:18:35.9±0.6, 3092S×5963E, h0km, mb4.1/14, mb1 4.3/15, mb1mx4.1/28, mbtmp4.1/15, ML4.0/1, MS4.1/6, Ms1 4.1/6, ms1mx3.7/36, Error ellipse: s-maj=21.7km s-min=16.4km az=26.0*
NEIC ***15*** *01:18:37.2±0.4, 3092S×5965E, h10km, mb4.2/2, Error ellipse: s-maj=13.1km s-min=10.3km az=220.0*
GCMT ***15*** *01:18:37.2±0.3, 3092S×5914E, h13km±1km, MW4.9/64, Moment Tensor Solution. s21,c25; s64,c93; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-2.62±.19; Mθθ2.42±.13; Mφφ0.20±.11; Mrθ0.05±.25; Mθφ-0.18±.08; Mφr1.06±.35; Best double couple: Mo2.70500×10^16 NP1:φ257.00000°, δ47.00000°, λ-116.00000°. NP2: φ112.00000°, δ48.00000°, λ-65.00000°. Principal axes: T 2.4340, Plg0.0000°, Azm185.0000°; N 0.5420, Plg19.0000°, Azm275.0000°; P -2.9760, Plg71.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 15 01:18:37.7±10.0, 3096S±009×596E±01, h11km±63km, n29, σ0s74/19, mb4.1/16, MS4.1/6, 1C, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.71**	**315**	Pn		**Pn**	**01 22 32.0**	**+0.1**
	0.5nm,0.3s,baz=105,slow=14,SNR=5.0							
LBTB	**Lobatse**	**30.56**	**273**	P		**P**	**01 24 51.1**	**-0.3**
	4.2nm,1.0s,mb4.2,baz=315,slow=18,SNR=2.3							
LSZ	**Lusaka**	**32.72**	**291**	P		**P**	**01 25 10.2**	**-0.3**
	2.2nm,0.9s,mb4.1,baz=130,slow=6.7,SNR=5.3							
SUR	**Sutherland**	**32.95**	**257**	LR		LR	01 36 14.5	
	comp=Z,290nm,19.1s,MS4.0,baz=72,slow=32							
MAW	**Mawson**	**36.73**	**178**	P		**P**	**01 25 44.4**	**-0.2**
	3.4nm,0.9s,mb4.2,baz=9.5,slow=7.3,SNR=6.7							
MAW				LR		LR	01 37 17.5	
	comp=Z,435nm,18.2s,MS4.3,baz=36,slow=30							
TSUM	**Tsumeb**	**39.63**	**277**	P		**P**	**01 26 10.9**	**+1.3**
	8.7nm,1.1s,mb4.4,baz=93,slow=10,SNR=5.1							
SYO	**Syowa Base**	**39.80**	**191⇑**	*e*P		**P**	**01 26 09.3**	**-1.1**
SNAA	**Sanae**	**52.32**	**201**	*e*P		**P**	**01 27 49.0**	**0.0**
	16nm,1.3s,mb4.8							
QSPA	**South Pole Qui**	**59.20**	**180**	P		**P**	**01 28 38.6**	**+0.3**
	3.4nm,1.0s,mb4.3,baz=231,slow=4.0,SNR=7.5							
CMAR	**Chiang Mai Arr**	**61.98**	**43**	P		**P**	**01 28 57.6**	**-0.3**
	4.2nm,0.5s,mb4.8,baz=229,slow=7.3,SNR=20							
EIL	**Elat**	**64.71**	**336**	LR		LR	01 53 06.6	
	comp=Z,151nm,18.4s,MS4.2,baz=31,slow=32							
ASAR	**Alice Springs**	**65.30**	**104**	P		**P**	**01 29 20.9**	**+0.8**
	0.7nm,0.6s,mb3.9,baz=240,slow=6.1,SNR=18							
ASF	**Jabal al Asfar**	**66.38**	**339**	LR		LR	01 59 05.8	
	comp=Z,108nm,18.3s,MS4.1,baz=272,slow=37							
WRA	**Warramunga Arr**	**67.25**	**100**	P		**P**	**01 29 33.3**	**+0.8**
	1.0nm,0.6s,mb4.0,baz=243,slow=5.7,SNR=15							
MMAI	**Mount Meron Ar**	**67.63**	**338**	LR		LR	01 54 50.0	
	comp=Z,72nm,18.6s,MS3.9,baz=180,slow=32							
TOA0	**Torodi Ar. Sit**	**70.82**	**299**	*e*P		**P**	**01 29 55.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**70.82**	**299**	P		**P**	**01 29 55.0**	**+0.3**
	1.1nm,0.9s,mb3.8,baz=145,slow=3.6,SNR=5.5							
GNI	**Garni**	**72.09**	**348**	LR		LR	01 58 34.0	
	comp=Z,127nm,20.9s,MS4.2,baz=5.6,slow=33							
BR131	**Keskin Array S**	**74.36**	**339**	*e*P		**P**	**01 30 14.0**	**-1.2**
	0.3nm,0.3s,mb3.7							
MLR	**Muntele Rosu**	**82.01**	**337**	P		**P**	**01 30 56.8**	**-0.7**
	2.0nm,0.7s,mb4.2,baz=249,slow=21,SNR=3.8							
AKASG	**Malin Array Be**	**85.64**	**341**	P		**P**	**01 31 17.6**	**+1.7**
	0.2nm,0.3s,mb3.8,baz=328,slow=27,SNR=3.4							
ZALV	**Zalesovo Beam**	**87.33**	**15**	P		**P**	**01 31 23.2**	**-0.9**
	0.9nm,0.7s,mb4.1,baz=188,slow=7.5,SNR=4.1							
SONM	**Songino Array**	**88.95**	**29**	P		**P**	**01 31 31.6**	**-0.5**
	0.5nm,0.6s,mb4.0,baz=239,slow=4.5,SNR=3.1							
GERES	**GERESS Array B**	**89.40**	**332**	P		**P**	**01 31 34.2**	**+0.1**
	0.3nm,0.7s,mb3.8,baz=80,slow=7.1,SNR=3.3							
DAWY	**Dawson**	**144.77**	**14**	*e*PKPdf	PKPdf		01 38 13.3	-0.5
HYT	**Haines Junctio**	**148.04**	**16**	*e*PKPbc	PKPbc		01 38 21.9	-0.7
YKA	**Yellowknife Ar**	**148.24**	**355**	PKPbc	PKPbc		01 38 21.5	-1.6
	2.2nm,0.7s,baz=354,slow=2.1,SNR=5.9							
EYMN	**Ely**	**152.22**	**316**	*e*PKPbc	PKPbc		01 38 31.8	-1.3
EYMN				*e*PKPab	PKPab		01 38 43.7	+0.8
ULM	**Lac du Bonnet**	**153.43**	**323**	PKPbc	PKPbc		01 38 33.8	-2.0
	1.5nm,0.7s,baz=325,slow=10,SNR=3.4							
ULM				PKPab	PKPab		01 38 47.1	-0.8
	4.1nm,0.8s,baz=45,slow=4.5,SNR=4.5							

IDC ***15*** *01:24:41.5±2.1, 243S×9978E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.8/21, mbtmp3.9/9, Error ellipse: s-maj=93.4km s-min=19.2km az=54.0*
ISCJB ***15*** *01:24:45.4±1.5, 22S±03×1000E±04, h33km, mb3.9/10, Error ellipse: s-maj=65.0km s-min=15.4km az=144.1*
NEIC ***15*** *01:24:47.3±1.1, 231S×9996E, h35km, mb4.3/2, Error ellipse: s-maj=50.0km s-min=12.1km az=54.0*

ISC 15 01:24:47.4±1.4, 23S±03×1000E±04, h35km, n12, σ0s77/11, mb3.9/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.66**	**357**	P		**P**	**01 29 23.9**	**-0.3**
	2.3nm,0.4s,baz=187,slow=9.9,SNR=4.6							
WRA	**Warramunga Arr**	**37.85**	**120**	P		**P**	**01 32 00.4**	**-0.7**
	0.6nm,0.4s,mb3.6,baz=309,slow=9.0,SNR=8.5							
ASAR	**Alice Springs**	**39.09**	**126**	P		**P**	**01 32 12.1**	**+0.6**
	0.3nm,0.5s,mb3.3,baz=302,slow=8.3,SNR=5.5							
TKM2	**Tokmak 2**	**50.10**	**337**	*e*P		**P**	**01 33 40.4**	**+1.3**
	2.1nm,0.6s,mb4.3							
SONM	**Songino Array**	**50.25**	**6**	P		**P**	**01 33 40.9**	**+0.9**
	0.7nm,0.4s,mb4.0,baz=184,slow=9.2,SNR=6.5							
EKS2	**Erkin-Say**	**50.63**	**335**	*e*P		**P**	**01 33 42.8**	**-0.2**
	2.1nm,0.7s,mb4.2							
MKAR	**Makanchi Array**	**51.32**	**344**	P		**P**	**01 33 48.4**	**+0.3**
	1.2nm,0.5s,mb4.1,baz=158,slow=8.4,SNR=8.2							
KURK	**Kurchatov**	**55.89**	**344**	P		**P**	**01 34 20.1**	**-1.4**
	0.7nm,0.7s,mb3.8,baz=167,slow=7.0,SNR=3.9							
ZALV	**Zalesovo Beam**	**57.46**	**349**	P		**P**	**01 34 32.5**	**-0.2**
	0.9nm,0.6s,mb4.0,baz=183,slow=5.9,SNR=5.9							
BVAR	**Borovoye Array**	**60.46**	**340**	P		**P**	**01 34 52.7**	**-0.8**
	0.4nm,0.5s,mb3.7,baz=133,slow=11,SNR=5.0							
ARCES	**ARCESS Array B**	**86.75**	**340**	P		**P**	**01 37 27.8**	**+0.4**
	0.9nm,0.6s,mb4.2,baz=93,slow=5.2,SNR=6.9							
TXAR	**Lajitas Array**	**144.95**	**38**	PKPbc	PKPdf		01 44 21.6	0.0
	0.6nm,0.5s,baz=185,slow=1.5,SNR=6.6							

ISCJB ***15*** *01:26:34.3±0.6, 310S±0.1×594E±0.1, h10km, mb4.1/10, MS3.9/4, Error ellipse: s-maj=19.3km s-min=14.7km az=137.3*
IDC ***15*** *01:26:34.5±0.7, 3095S×5934E, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.0/27, mbtmp4.1/11, ML3.8/1, MS4.0/4, Ms1 3.9/4, ms1mx3.6/32, Error ellipse: s-maj=24.8km s-min=19.4km az=27.0*
NEIC ***15*** *01:26:36.0±0.5, 3095S×5936E, h10km, Error ellipse: s-maj=19.8km s-min=12.5km az=212.0*

ISC 15 01:26:36.3±0.6, 309S±01×594E±01, h10km, n21, σ0s75/13, mb4.1/10, MS3.9/4, 1D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.54**	**315**	Pn		**Pn**	**01 30 28.7**	**+0.3**
	0.3nm,0.3s,baz=154,slow=14,SNR=5.0							
BOSA	**Boshof**	**29.64**	**266**	LR		LR	01 42 19.5	
	comp=Z,149nm,21.0s,MS3.6,baz=171,slow=32							
LBTB	**Lobatse**	**30.33**	**273**	LR		LR	01 42 39.5	
	comp=Z,159nm,19.4s,MS3.7,baz=88,slow=32							
LSZ	**Lusaka**	**32.50**	**292**	P		**P**	**01 33 07.6**	**+0.3**
	1.7nm,0.7s,mb4.1,baz=126,slow=9.5,SNR=5.8							
LSZ				LR		LR	01 45 06.2	
	comp=Z,197nm,18.2s,MS3.8,baz=177,slow=34							
SYO	**Syowa Base**	**39.77**	**191⇓**	*e*P		**P**	**01 34 08.6**	**-0.3**
QSPA	**South Pole Qui**	**59.22**	**180**	P		**P**	**01 36 38.0**	**+0.9**
	6.0nm,0.8s,mb4.7,baz=264,slow=3.0,SNR=19							
FITZ	**Fitzroy Crossi**	**60.86**	**95**	LR		LR	02 00 31.2	
	comp=Z,335nm,20.2s,MS4.5,baz=296,slow=33							
CMAR	**Chiang Mai Arr**	**62.12**	**43**	P		**P**	**01 36 58.7**	**+1.1**
	4.7nm,0.8s,mb4.7,baz=231,slow=7.3,SNR=21							
ASAR	**Alice Springs**	**65.52**	**104**	P		**P**	**01 37 20.4**	**+0.2**
	1.7nm,0.7s,mb4.2,baz=239,slow=5.9,SNR=14							
WRA	**Warramunga Arr**	**67.47**	**100**	P		**P**	**01 37 31.9**	**-0.8**
	2.9nm,0.8s,mb4.4,baz=243,slow=5.5,SNR=16							
TORD	**Torodi Ar. Bea**	**70.62**	**299**	P		**P**	**01 37 51.2**	**-1.0**
	0.2nm,0.6s,mb3.2,baz=146,slow=6.7,SNR=3.7							
KURK	**Kurchatov**	**83.06**	**12**	P		**P**	**01 39 02.0**	**+0.5**
	1.0nm,0.6s,mb4.0,baz=213,slow=6.4,SNR=4.4							
BVAR	**Borovoye Array**	**84.16**	**7**	P		**P**	**01 39 07.4**	**+0.3**
	0.6nm,0.5s,mb4.0,baz=270,slow=39,SNR=3.7							
ZALV	**Zalesovo Beam**	**87.36**	**15**	P		**P**	**01 39 21.4**	**-1.6**
	0.8nm,0.5s,mb4.2,baz=232,slow=1.7,SNR=4.9							
ZALV	**Zalesovo Beam**	**87.36**	**15**	P		**P**	**01 39 21.4**	**-1.6**
SONM	**Songino Array**	**89.05**	**30**	P		**P**	**01 39 31.1**	**-0.1**
	0.6nm,0.6s,mb4.1,baz=251,slow=4.4,SNR=4.7							
YKA	**Yellowknife Ar**	**148.20**	**355**	PKPbc	PKPbc		01 46 20.8	-0.8
	3.8nm,0.8s,baz=3.1,slow=2.4,SNR=6.1							
YKA	**Yellowknife Ar**	**148.20**	**355**	PKPbc	PKPbc		01 46 20.8	-0.8
ULM	**Lac du Bonnet**	**153.28**	**323**	PKPbc	PKPbc		01 46 33.4	-0.8
	3.3nm,0.8s,baz=327,slow=5.9,SNR=3.6							
TXAR	**Lajitas Array**	**165.23**	**268**	PKPab	PKPab		01 47 38.0	-0.6
	0.4nm,0.7s,baz=129,slow=9.9,SNR=4.3							
PDAR	**Pinedale Array**	**165.26**	**326**	PKP	PKPdf		01 46 40.9	+0.1
	0.4nm,0.3s,baz=48,slow=2.2,SNR=3.9							

CSEM ***15*** *01:31:49.4±0.1, 3631N×2816E, h68km±2km, MD3.5, Error ellipse: s-maj=3.5km s-min=2.0km az=62.0*
HLW ***15*** *01:31:50.6, 3629N×2809E, h33km, Mb3.7*
ISCJB ***15*** *01:31:50.1±0.3, 3627N±003×2802E±004, h73km±6km, Error ellipse: s-maj=5.6km s-min=4.4km az=166.1*
ISK ***15*** *01:31:51.8, 3638N×2793E, h24km, MD3.0*
DDA ***15*** *01:31:51.3, 3643N×2800E, h7km±7km, Md3.0*
ATH ***15*** *01:31:52.5, 3637N×2784E, h46km±4km, MD3.5/6*
NEIC ***15*** *01:31:52.5, 3637N×2784E, h46km, MD3.5(ATH), After ATH.*

ISC 15 01:31:51.6±0.4, 3630N±002×2799E±004, h62km±7km, n36, σ0s96/52, 7C-6D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.14**	**126⇓**	*i*P		**Pn**	**01 32 01.9**	**+0.9**
ARG				eS		**Sn**	**01 32 08.1**	**+0.3**
TURN	**Turunc**	**0.76**	**41⇓**	*i*P		**Pn**	**01 32 04.2**	**-2.4**
TURN				*i* S		**Sn**	**01 32 13.0**	**-4.7**
YER	**Yerkesik**	**0.87**	**16**	*e*PG		**Pn**	**01 32 08.4**	**+0.4**
YER				eSG		**Sn**	**01 32 19.8**	**-0.3**
BDRM	**Kayabasi**	**0.88**	**330⇑**	*i*P		**Pn**	**01 32 07.8**	**-0.3**
BDRM				*i* S		**Sn**	**01 32 18.2**	**-2.1**
BODT	**Bodrum**	**0.94**	**325**	*e*PG		**Pn**	**01 32 08.7**	**-0.2**
BODT				eSG		**Sn**	**01 32 20.6**	**-1.0**
KARP	**Karpathos**	**1.01**	**222**	*e*P		**Pn**	**01 32 10.9**	**+1.2**
KARP				eS		**Sn**	**01 32 24.2**	**+1.0**
MLSB	**Milas**	**1.01**	**350**	*e*PG		**Pn**	**01 32 10.0**	**+0.2**
MLSB				eSG		**Sn**	**01 32 22.6**	**-0.7**
AKAS	**Kas**	**1.31**	**92⇓**	*i*P		**Pn**	**01 32 15.0**	**+1.3**
AKAS				*i* S		**Sn**	**01 32 29.6**	**-0.8**
AYDN	**Tasoluk**	**1.36**	**356⇓**	*i*P		**Pn**	**01 32 15.0**	**+0.5**
AYDN				*i* S		**Sn**	**01 32 30.9**	**-0.7**
GCAM	**G?zelcaml?**	**1.52**	**337**	*e*P		**Pn**	**01 32 16.9**	**+0.3**
GCAM				eS		**Sn**	**01 32 34.9**	**-0.5**
GOLH	**Golhisar**	**1.57**	**53⇓**	*i*P		**Pn**	**01 32 19.2**	**+1.9**
GOLH				*i* S		**Sn**	**01 32 41.8**	**+5.2**
ELL	**Elmali**	**1.61**	**73**	*e*PN		**Pn**	**01 32 19.6**	**+1.8**
DNZL	**Cakiroluk**	**1.63**	**31**	*e*P		**Pn**	**01 32 20.9**	**+3.0**
DNZL				eS		**Sn**	**01 32 43.2**	**+5.3**
SMG	**Samos**	**1.68**	**327⇑**	*i*P		**Pn**	**01 32 19.0**	**+0.3**
SMG				eS		**Sn**	**01 32 38.0**	**-1.2**
APE	**Apeiranthos**	**2.12**	**292**	*e*P		**Pn**	**01 32 25.4**	**+0.8**
NPS	**Neapolis**	**2.19**	**242⇓**	*i*P		**Pn**	**01 32 26.5**	**+0.9**
NPS				eS		**Sn**	**01 32 51.6**	**0.0**
BLCB	**Balcova**	**2.21**	**340**	*e*PN		**Pn**	**01 32 26.0**	**+0.1**
KULA	**Kula-Manisa**	**2.27**	**13**	*e*PN		**Pn**	**01 32 27.7**	**+1.0**
KHL	**Karahalli**	**2.36**	**31**	*e*PN		**Pn**	**01 32 29.2**	**+1.2**
AKS	**Akhisar**	**2.58**	**357**	*e*PN		**Pn**	**01 32 31.3**	**+0.4**
VAM	**Vamos**	**3.20**	**255**	*e*P		**Pn**	**01 32 41.1**	**+1.7**
HMAT	**Matruh**	**5.25**	**188**	P		**Pn**	**01 33 07.4**	**0.0**
HMAT				S		**Sn**	**01 34 02.5**	**-4.0**
SLUM		**5.32**	**206**	P		**Pn**	**01 33 08.2**	**-0.2**
SLUM		**5.32**	**206**	P		**Pn**	**01 33 08.2**	**-0.2**
HNAT	**Natroun**	**7.01**	**161**	P		**Pn**	**01 33 31.0**	**-0.5**
KOT	**Kottamia**	**7.12**	**152**	P		**Pn**	**01 33 32.7**	**-0.4**
KOT				S		**Sn**	**01 34 47.1**	**-5.5**
AMAG	**Maghara**	**7.13**	**141**	P		**Pn**	**01 33 31.9**	**-1.4**
HHAG	**Hagoal**	**7.21**	**150**	P		**Pn**	**01 33 33.3**	**-0.9**
HSAF	**As Saff**	**7.30**	**155**	P		**Pn**	**01 33 35.1**	**-0.5**
SWA2		**7.35**	**198**	P		**Pn**	**01 33 35.3**	**-0.9**
GLL	**Jalalah**	**7.40**	**154**	P		**Pn**	**01 33 36.4**	**-0.4**
SUZ		**7.62**	**146**	P		**Pn**	**01 33 39.3**	**-0.6**
AWBH		**7.99**	**174**	P		**Pn**	**01 33 44.8**	**-0.2**
HNKL	**Nakhl**	**8.10**	**140**	P		**Pn**	**01 33 45.9**	**-0.6**
HFRF	**Wahat Farafira**	**9.13**	**178**	P		**Pn**	**01 34 00.2**	**-0.3**
HKAT	**Jabal Katrina**	**9.27**	**145**	P		**Pn**	**01 34 01.8**	**-0.6**

IDC ***15*** *01:34:55.1±1.5, 278S×10084E, h0km, mb4.2/11, mb1 4.3/12, mb1mx4.1/23, mbtmp4.3/12, ML4.5/1, Error ellipse: s-maj=66.8km s-min=13.4km az=144.3*
ISCJB ***15*** *01:34:59.0±1.0, 26S±02×1011E±02, h33km, mb4.3/13, Error ellipse: s-maj=41.0km s-min=10.1km az=139.3*
NEIC ***15*** *01:35:00.7±1.0, 270S×10102E, h35km, mb4.6/3, Error ellipse: s-maj=41.5km s-min=10.0km az=51.0*

ISC 15 01:35:01.1±1.0, 26S±02×1011E±02, h35km, n19, σ1s96/18, mb4.3/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**18.73**	**98**	P		**Pn**	**01 39 16.9**	**-0.8**
	1.4nm,0.3s,baz=279,slow=9.6,SNR=3.9							
KAPI	**Kappang**	**18.73**	**98**	P		**Pn**	**01 39 16.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**21.08**	**354**	P		**P**	**01 39 43.9**	**+1.4**
	1.6nm,0.6s,mb3.6,baz=175,slow=9.9,SNR=9.5							
FITZ	**Fitzroy Crossi**	**28.52**	**124**	P		**P**	**01 40 56.0**	**+2.4**
	1.8nm,0.5s,mb4.0,baz=336,slow=5.6,SNR=9.9							
WRA	**Warramunga Arr**	**36.70**	**120**	P		**P**	**01 42 04.4**	**-0.7**
	2.3nm,0.5s,mb4.3,baz=300,slow=8.5,SNR=50							
WB2	**Warramunga Arr**	**36.71**	**120**	*e*P		**P**	**01 42 03.9**	**-1.2**
WB2	**Warramunga Arr**	**36.71**	**120**	*e*P		**P**	**01 42 04.1**	**-1.0**
ASAR	**Alice Springs**	**37.97**	**126**	P		**P**	**01 42 15.3**	**-0.4**
	1.0nm,0.4s,mb3.9,baz=303,slow=8.2,SNR=15							
STKA	**Stephens Creek**	**47.88**	**132**	P		**P**	**01 43 37.9**	**+1.9**
	2.1nm,0.7s,mb4.3,baz=303,slow=11,SNR=4.7							
SONM	**Songino Array**	**50.48**	**5**	P		**P**	**01 43 56.5**	**+1.0**
	2.9nm,0.5s,mb4.6,baz=184,slow=8.9,SNR=21							
TKM2	**Tokmak 2**	**50.87**	**336**	*e*P		**P**	**01 43 58.9**	**+0.4**
	5.4nm,0.7s,mb4.6							
TKM2				*e*pP		pP	01 44 12.0	+3.0
AML	**Almayashu**	**51.03**	**334**	*e*P		**P**	**01 44 00.1**	**+0.3**
	6.7nm,0.8s,mb4.6							
MKAR	**Makanchi Array**	**51.95**	**344**	P		**P**	**01 44 06.3**	**-0.2**
	1.9nm,0.4s,mb4.4,baz=158,slow=8.7,SNR=29							
KURK	**Kurchatov**	**56.54**	**343**	P		**P**	**01 44 39.2**	**-0.6**
	1.6nm,0.6s,mb4.2,baz=161,slow=7.1,SNR=6.9							
KURK	**Kurchatov**	**56.54**	**343**	*e*P		**P**	**01 44 39.3**	**-0.6**
	2.5nm,0.8s,mb4.3							
KURK				*e*pP		pP	01 44 52.0	+1.4
ZALV	**Zalesovo Beam**	**58.01**	**349**	P		**P**	**01 44 49.9**	**-0.3**
	5.8nm,0.8s,mb4.7,baz=162,slow=5.5,SNR=24							
BVAR	**Borovoye Array**	**61.17**	**339**	P		**P**	**01 45 10.4**	**-1.6**
	1.2nm,0.5s,mb4.3,baz=134,slow=11,SNR=5.7							
ARCES	**ARCESS Array B**	**87.46**	**340**	P		**P**	**01 47 44.1**	**-0.5**
	1.3nm,0.9s,mb4.2,baz=96,slow=9.2,SNR=3.9							
TXAR	**Lajitas Array**	**144.51**	**39**	PKP	PKPdf		01 54 33.4	-1.2
	1.2nm,0.4s,baz=244,slow=0.5,SNR=32							

IDC ***15*** *01:41:00.9±0.4, 290S×10039E, h0km, mb4.5/24, mb1 4.6/25, mb1mx4.5/28, mbtmp4.5/25, ML4.7/1, MS4.1/8, Ms1 4.1/8, ms1mx3.9/28, Error ellipse: s-maj=14.7km s-min=9.2km az=44.0*
BJI ***15*** *01:41:01.2, 326S×10037E, h33km, mB5.0, mb4.9, Ms4.7, Msz4.5*
MOS ***15*** *01:41:03.7±1.0, 276S×10029E, h27km, mb5.0/43, MS4.1/4, Error ellipse: s-maj=12.0km s-min=7.1km az=105.8*
ISCJB ***15*** *01:41:03.2±0.2, 288S±003×10023E±004, h26km, mb4.8/79, MS4.3/20, Error ellipse: s-maj=5.5km s-min=4.8km az=155.0*
NEIC ***15*** *01:41:06.5±1.2, 284S×10025E, h35km±10km, mb5.0/28, Error ellipse: s-maj=6.9km s-min=5.4km az=55.0*
DJA ***15*** *01:41:20, 178S×10072E, h30km, MLv5.1/7*

ISC 15 01:41:05.5±0.2, 288S±003×10025E±004, h27km, h27km±.7km:pP-P, n197, σ0s98/187, mb4.8/79, MS4.3/20, 19C-13D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.44**	**57**	P		**Pn**	**01 41 33.5**	**+3.6**
	0.0nm,0.0s							
GSI	**Gunungsitoli**	**4.94**	**327⇑**	*e*P		**Pn**	**01 42 17.0**	**-1.0**
KGM	**Kluang**	**5.75**	**32**	⇓P		**Pn**	**01 42 31.1**	**+2.0**
MYKOM	**Kota Tinggi**	**5.87**	**38**	⇓P		**Pn**	**01 42 33.1**	**+2.3**
FRIM	**Kepong**	**6.23**	**13**	⇑P		**Pn**	**01 42 37.1**	**+1.4**
IPM	**Ipoh**	**7.35**	**6**	⇑P		**Pn**	**01 42 49.0**	**-2.2**
KTGM	**Kuala Trenggan**	**8.65**	**19**	⇓P		**Pn**	**01 43 15.6**	**+6.6**
COCO	**West Island**	**9.85**	**200**	*e*Pn		**Pn**	**01 43 25.8**	**+0.5**
SBUM	**Sibu**	**13.09**	**66**	⇓P		**Pn**	**01 44 14.1**	**+4.4**
BTM	**Bintulu**	**14.18**	**65**	⇓P		**Pn**	**01 44 33.8**	**+9.1**
KKM	**Kota Kinabalu**	**18.24**	**61**	⇓P		**Pn**	**01 45 17.2**	**+0.3**
KKM	**Kota Kinabalu**	**18.24**	**61**	*e*Pn		**Pn**	**01 45 17.6**	**+0.7**
SDKM	**Sandakan**	**18.93**	**63**	⇓P		**Pn**	**01 45 26.1**	**+0.9**
TSM	**Tawau**	**19.00**	**68**	⇓P		**Pn**	**01 45 26.8**	**+0.7**
KDM	**Kudat**	**19.20**	**59**	⇑P		**Pn**	**01 45 28.8**	**+0.2**
KAPI	**

comp=E,930nm,14.4s
CD2 LR LR
comp=Z,800nm,16.8s,MS4.5
NWAO Narrogin (SRO) 33.86 154 LR LR 02 00 44.5
comp=Z,414nm,19.1s,MS4.2,baz=201,slow=35
GKN Gorkha 34.19 335 *e*P **P** **01 47 49.3 +0.6**
comp=Z,24nm,0.4s,mb5.5
KOLN Koldanda 34.44 333 *e*P **P** **01 47 50.5 -0.4**
WRA Warramunga Arr 37.34 120 P **P** **01 48 15.2 -0.7**
comp=Z,3.4nm,0.4s,mb4.5,baz=306,slow=9.0,SNR=61
WRA PcP PcP 01 50 35.6 +0.7
comp=Z,0.9nm,0.8s,baz=299,slow=9.0,SNR=2.8
WRA S **S** **01 53 59.6 -2.7**
comp=Z,2.3nm,0.8s,baz=293,slow=16,SNR=12
WRA Warramunga Arr 37.34 120 P **P** **01 48 15.2 -0.7**
WRA 01 50 35.6
WRA S **S** **01 53 59.6 -2.7**
WRA pmax pmax
comp=Z,3.0nm,0.4s
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA smax
comp=N,2.0nm,0.8s
WRAB Tennant Creek 37.34 120 P **P** **01 48 17.0 +1.0**
comp=N,164nm,0.7s,mb6.0,SNR=8.4
WRAB Tennant Creek 37.34 120 *e*P **P** **01 48 16.4 +0.4**
WRAB pmax pmax
comp=Z,27nm,1.0s,mb5.0
WRAB Tennant Creek 37.34 120 *e*P **P** **01 48 16.4 +0.4**
comp=Z,27nm,1.0s,mb5.0
WB2 Warramunga Arr 37.35 120 *e*P **P** **01 48 16.2 +0.2**
WB2 *e*S **S** **01 53 59.8 -2.7**
XAN Xi'an 37.62 12 P **P** **01 48 16.6 -1.5**
XAN AP pP 01 48 26.5 +0.3
XAN XP sP 01 48 31.4 +1.9
XAN AMB AMB
comp=Z,13nm,0.9s,mb4.7
ASAR Alice Springs 38.54 125 P **P** **01 48 25.6 -0.4**
comp=Z,12nm,0.9s,mb4.7,baz=301,slow=7.8,SNR=26
ASAR PcP PcP 01 50 39.6 +1.1
comp=Z,0.8nm,0.6s,baz=329,slow=2.2,SNR=2.9
ASAR S **S** **01 54 20.1 -0.4**
comp=Z,1.3nm,0.7s,baz=293,slow=17,SNR=8.4
ASAR Alice Springs 38.54 125 P **P** **01 48 25.7 -0.3**
ASAR 01 50 39.7
ASAR S **S** **01 54 20.1 -0.3**
ASAR pmax pmax
comp=Z,13nm,0.9s
ASAR pmax pmax
comp=Z,1.0nm,0.6s
ASAR smax
comp=N,1.0nm,0.7s
LZH Lanzhou 38.91 5 *e*P **P** **01 48 28.5 -0.4**
LZH AP pP 01 48 38.4 +1.4
LZH XP sP 01 48 42.5 +2.2
LZH PP PP 01 50 02.8 +4.3
LZH *e*S **S** **01 54 28.0 +2.3**
LZH XS sS 01 54 41.6 +2.6
LZH *e*SS SS 01 57 09.5 -8.5
LZH AMB AMB
comp=Z,26nm,1.3s,mb4.8
LZH AMB AMB
comp=Z,129nm,4.8s
LZH LR LR
comp=N,567nm,12.5s
LZH LR LR
comp=Z,837nm,17.6s
NJ2 Nanjing 38.98 26 *e*P **P** **01 48 29.3 -0.2**
NJ2 AP pP 01 48 35.8 -1.8
NJ2 XP sP 01 48 39.4 -1.5
NJ2 S **S** **01 54 26.5 -0.3**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
NJ2 AMB AMB
comp=Z,380nm,4.7s
NJ2 LR LR
comp=N,190nm,15.1s,MS4.3
NJ2 LR LR
comp=E,320nm,16.3s,MS4.3
NJ2 LR LR
comp=Z,320nm,16.4s,MS4.2
SSE Sheshan 39.24 29 P **P** **01 48 31.8 +0.1**
SSE XP sP 01 48 44.5 +1.4
SSE S **S** **01 54 32.4 +1.7**
SSE XS sS 01 54 47.6 +3.5
SSE AMB AMB
comp=Z,32nm,0.8s,mb5.1
SSE AMB AMB
comp=Z,306nm,4.7s
SSE LR LR
comp=N,272nm,15.7s,MS4.4
SSE LR LR
comp=E,324nm,15.7s,MS4.4
SSE LR LR
comp=Z,499nm,14.8s,MS4.5
GTA Gaotai 42.09 359⇑ *e*P **P** **01 48 55.3 +0.2**
GTA AP pP 01 49 03.0 -0.3
GTA XP sP 01 49 07.0 +0.4
GTA S **S** **01 55 12.3 -0.6**
GTA AMB AMB
comp=Z,9.0nm,0.9s,mb4.4
GTA AMB AMB
comp=Z,56nm,5.7s
GTA LR LR
comp=N,339nm,15.3s,MS4.5
GTA LR LR
comp=E,315nm,14.7s,MS4.5
GTA LR LR
comp=Z,463nm,16.8s,MS4.4
HHC Hu-ho-hao-te 44.73 12 *e*P **P** **01 49 17.6 +1.1**
HHC AP pP 01 49 25.4 +0.7
HHC XP sP 01 49 28.9 +1.0
HHC PCP PcP 01 50 59.9 +1.4
HHC PP PP 01 51 03.3 +2.0
HHC SCP ScP 01 54 48.9 -0.3
HHC PCS PcS 01 54 52.3 +0.4
HHC S **S** **01 55 53.1 +1.4**
HHC XS sS 01 56 05.9 +0.7
HHC SS SS 01 59 05.1 -7.8
HHC SCS ScS 01 59 11.3 -1.1
HHC AMB AMB
comp=Z,27nm,0.8s,mb5.1
HHC AMB AMB
comp=Z,194nm,9.4s
HHC LR LR
comp=N,361nm,14.4s,MS4.6
HHC LR LR
comp=E,349nm,14.4s,MS4.6
HHC LR LR
comp=Z,336nm,15.2s,MS4.4
BJT Baijiatuau 45.12 17 *e*P **P** **01 49 19.6 0.0**
BJT pmax pmax
comp=Z,29nm,1.0s
BJT Baijiatuau 45.12 17 *e*P **P** **01 49 19.6 +0.1**
comp=Z,29nm,1.0s,mb5.1
BJI Beijing 45.14 17 P **P** **01 49 19.8 +0.1**
BJI S **S** **01 56 04.9 +7.3**
BJI AMB AMB
comp=Z,27nm,1.0s,mb5.0
BJI LR LR
comp=N,741nm,16.4s,MS4.7
BJI LR LR
comp=E,273nm,15.7s,MS4.7
BJI LR LR
comp=Z,507nm,17.6s,MS4.5
KBL Kabul 47.39 324 *e*P **P** **01 49 35.9 -1.6**
KBL pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
KBL Kabul 47.39 324 *e*P **P** **01 49 35.9 -1.6**
comp=Z,9.8nm,0.6s,mb4.9
KSRS Korea Array 47.65 30 P **P** **01 49 38.4 -1.1**
comp=Z,6.7nm,0.9s,mb4.7,baz=228,slow=8.4,SNR=11
KSRS LR LR 02 11 19.7
comp=Z,145nm,19.7s,MS4.0,baz=93,slow=38
KSRS Korea Array 47.65 30 P **P** **01 49 38.4 -1.1**
KSRS pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KSRS MLR MLR
comp=Z,145nm,19.7s,MS4.0
WMQ Urumqi 47.84 348 P **P** **01 49 41.8 +0.9**
WMQ AP pP 01 49 49.0 -0.1
WMQ XP sP 01 49 52.5 +0.1
WMQ PCP PcP 01 51 11.0 +1.7
WMQ *e*S **S** **01 56 35.4 -0.8**
WMQ AMB AMB
comp=Z,42nm,0.8s,mb5.5
WMQ AMB AMB
comp=Z,264nm,4.3s
WMQ LR LR
comp=N,298nm,21.4s,MS4.3
WMQ LR LR
comp=E,239nm,20.7s,MS4.3
WMQ LR LR
comp=Z,255nm,24.0s,MS4.1
CTA Charters Tower 48.00 115 *e*P **P** **01 49 43.2 +0.7**
comp=Z,12nm,0.9s,mb4.9
CTA *e*pP pP 01 49 50.6 -0.2
CTA Charters Tower 48.00 115 LR LR 02 12 19.2
comp=Z,300nm,19.7s,MS4.3,baz=44,slow=39
CTA Charters Tower 48.00 115 *e*P **P** **01 49 43.2 +0.7**
CTA *e**PP pP 01 49 50.6 -0.2
CTA pmax pmax
comp=Z,12nm,0.9s
CTAO Charters Tower 48.00 115 *e*P **P** **01 49 42.7 +0.2**
CTAO *e**PP pP 01 49 50.6 -0.2
CTAO pmax pmax
comp=Z,34nm,1.0s,mb5.3
CTAO Charters Tower 48.00 115 *e*P **P** **01 49 42.7 +0.2**
comp=Z,34nm,1.0s,mb5.3
CTAO *e*pP pP 01 49 50.6 -0.2
STKA Stephens Creek 48.38 131 *e*P **P** **01 49 46.7 +1.4**
comp=Z,14nm,0.9s,mb5.0
STKA Stephens Creek 48.38 131 P **P** **01 49 45.2 -0.1**
comp=Z,6.9nm,0.4s,mb5.1,baz=287,slow=6.4,SNR=13
TKM2 Tokmak 2 50.74 337 *e*P **P** **01 50 03.9 +0.9**
TKM2 pmax pmax
comp=Z,30nm,0.9s,mb5.2
TKM2 Tokmak 2 50.74 337 *e*P **P** **01 50 03.9 +0.9**
comp=Z,30nm,0.9s,mb5.2
SONM Songino Array 50.79 5 P **P** **01 50 04.1 +0.8**
comp=Z,27nm,0.8s,mb5.2,baz=187,slow=8.7,SNR=117
SONM LR LR 02 15 05.5
comp=Z,299nm,18.9s,MS4.3,baz=194,slow=40
SONM Songino Array 50.79 5 P **P** **01 50 04.1 +0.8**
SONM pmax pmax
comp=Z,27nm,0.8s
SONM MLR MLR
comp=Z,299nm,18.9s
AML Almayashu 50.86 335 *e*P **P** **01 50 04.9 +0.9**
comp=Z,12nm,0.6s,mb5.0
ULN Ulaanbaatar 50.89 6 *e*P **P** **01 50 04.8 +0.8**
ULN pmax pmax
comp=Z,21nm,0.9s,mb5.1
ULN Ulaanbaatar 50.89 6 *e*P **P** **01 50 04.8 +0.8**
comp=Z,21nm,0.9s,mb5.1
EKS2 Erkin-Say 51.26 335 *e*P **P** **01 50 07.5 +0.5**
comp=Z,34nm,1.0s,mb5.2
CN2 Changchun 51.69 23⇑ P **P** **01 50 09.5 -0.7**
CN2 *e*AP pP 01 50 17.5 -1.0
CN2 *e*S **S** **01 57 28.8 -1.2**
CN2 AMB AMB
comp=Z,50nm,1.1s,mb5.4
CN2 AMB AMB
comp=Z,500nm,6.0s
CN2 LR LR
comp=N,1µm,17.0s,MS5.1
CN2 LR LR
comp=E,1µm,17.0s,MS5.1
CN2 LR LR
comp=Z,2µm,18.0s,MS5.2
MK31 Makanchi Array 51.94 344 *i* P **P** **01 50 11.3 -0.6**
MK31 pmax pmax
comp=Z,17nm,0.6s,mb5.2
MKAR Makanchi Array 51.94 344 P **P** **01 50 12.1 +0.1**
comp=Z,25nm,0.8s,mb5.2,baz=151,slow=7.8,SNR=91
MKAR Makanchi Array 51.94 344 P **P** **01 50 12.1 +0.2**
MKAR pmax pmax
comp=Z,25nm,0.8s
MAT Matsushiro 52.80 38 P **P** **01 50 17.8 -0.8**
MAJO Matsushiro 52.80 38 *e*P **P** **01 50 17.5 -1.1**
MAJO pmax pmax
comp=Z,20nm,1.0s,mb5.0
MAJO Matsushiro 52.80 38 *e*P **P** **01 50 17.5 -1.1**
comp=Z,20nm,1.0s,mb5.0
MJAR Matsushiro Arr 52.80 38 P **P** **01 50 17.8 -0.8**
comp=Z,10nm,0.9s,mb4.8,baz=221,slow=7.8,SNR=24
MJAR Matsushiro Arr 52.80 38 P **P** **01 50 17.8 -0.8**
MJAR pmax pmax
comp=Z,10.0nm,0.9s
ZAK Zakamensk 53.12 2 *e*P **P** **01 50 19.3 -1.3**
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
MDJ Mudanjiang 54.07 26 P **P** **01 50 27.3 -0.4**
MDJ AP pP 01 50 33.8 -2.2
MDJ XP sP 01 50 36.3 -3.0
MDJ PP PP 01 52 34.1 +4.6
MDJ SCP ScP 01 55 28.8 -0.1
MDJ S **S** **01 57 57.8 -4.6**
MDJ SCS ScS 02 00 13.9 -1.4
MDJ SS SS 02 01 45.3 +0.9
MDJ AMB AMB
comp=Z,11nm,1.0s,mb4.7
MDJ AMB AMB
comp=Z,51nm,4.4s
MDJ LR LR
comp=N,201nm,13.5s
MDJ LR LR
comp=E,139nm,21.2s
MDJ LR LR
comp=Z,263nm,18.3s,MS4.3
OPO Ambohidratompo 54.19 249 P **P** **01 50 29.5 +0.4**
comp=Z,2.8nm,0.7s,mb4.3,baz=37,slow=7.6,SNR=4.4
TLY Talaya 54.43 3 *e*P **P** **01 50 30.8 +0.6**
TLY pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
TLY MLR MLR
comp=Z,352nm,16.0s,MS4.5
HIA Hailar 54.62 16 *e*P **P** **01 50 31.5 -0.1**
HIA pmax pmax
comp=Z,7.0nm,0.8s
HIA Hailar 54.62 16 *e*P **P** **01 50 31.5 -0.1**
comp=Z,7.1nm,0.8s,mb4.8
CAN Canberra 55.44 132 *e*P **P** **01 50 38.3 +0.4**
KURK Kurchatov 56.52 344 P **P** **01 50 45.5 +0.3**
comp=Z,152nm,0.9s,mb6.0,SNR=13
KURK Kurchatov 56.52 344 P **P** **01 50 44.7 -0.6**
comp=Z,12nm,0.9s,mb4.9,baz=163,slow=7.0,SNR=22
KURK Kurchatov 56.52 344 *e*P **P** **01 50 45.0 -0.2**
KURK *e**PP pP 01 50 53.2 -0.4
KURK pmax pmax
comp=Z,23nm,0.9s,mb5.2
KURK Kurchatov 56.52 344 *e*P **P** **01 50 45.0 -0.2**
comp=Z,23nm,0.9s,mb5.2
KURK *e*pP pP 01 50 53.1 -0.5
ZALV Zalesovo Beam 58.08 349 P **P** **01 50 55.8 -0.4**
comp=Z,28nm,1.0s,mb5.3,baz=174,slow=5.5,SNR=53
ZALV Zalesovo Beam 58.08 349 P **P** **01 50 55.8 -0.4**
ZALV pmax pmax
comp=Z,28nm,1.0s,mb5.2
KLR Kul'dur 58.63 24 *e*P **P** **01 50 56.2 -4.0**
NVS Novosibirsk 59.22 349 *e*P **P** **01 51 02.3 -1.8**
RDF Al-Radifah 59.57 306 *e*P **P** **01 51 06.1 -0.9**
baz=306
RDF AMb AMB 01 51 16.5
comp=Z,40nm,1.2s,mb5.3,baz=306
NAY Al-Naaiem 59.94 306 *e*P **P** **01 51 08.6 -1.0**
baz=306
NAY AMb AMB 01 51 20.5
comp=Z,10.0nm,1.1s,mb4.8,baz=306
MIB Mutribah 60.08 307 *e*P **P** **01 51 10.4 -0.1**
baz=307
MIB AMb AMB 01 51 21.8
comp=Z,26nm,1.2s,mb5.1,baz=307
BVAR Borovoye Array 61.09 340 P **P** **01 51 15.7 -1.3**
comp=Z,1.9nm,0.5s,mb4.5,baz=139,slow=8.3,SNR=9.3
BVAR Borovoye Array 61.09 340 P **P** **01 51 15.7 -1.3**
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BRVK Borovoye 61.16 340 *e*P **P** **01 51 16.7 -0.7**
BRVK pmax pmax
comp=Z,9.0nm,0.9s,mb4.9
BRVK Borovoye 61.16 340 *e*P **P** **01 51 16.7 -0.7**
comp=Z,9.4nm,0.9s,mb4.9
BOD Bodaibo 61.51 8 *e*P **P** **01 51 19.3 -0.4**
BOD pmax pmax
comp=Z,16nm,1.1s,mb5.1
YSS Yuzh-Sakhalins 62.10 32⇑ *e*P **P** **01 51 23.6 -0.3**
YSS *e* pP 01 51 31.8 -0.6
YSS pmax pmax
comp=Z,50nm,1.0s,mb5.6
YSS Yuzh-Sakhalins 62.10 32 *e*P **P** **01 51 24.1 +0.3**
comp=Z,31nm,0.9s,mb5.4
YSS *e*pP pP 01 51 32.1 -0.3
AB31 Akbulak array 62.53 331 *i* P **P** **01 51 25.8 -0.9**
AB31 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KMBO Kilima Mbogo 62.98 270 P **P** **01 51 30.7 +0.3**
comp=Z,2.4nm,0.7s,mb4.4,baz=73,slow=10,SNR=5.4
KMBO LR LR 02 14 23.7
comp=Z,136nm,18.5s,MS4.2,baz=232,slow=32
KMBO Kilima Mbogo 62.98 270 *e*P **P** **01 51 31.3 +0.8**
KMBO *e**PP pP 01 51 39.6 +0.7
KMBO pmax pmax
comp=Z,5.0nm,1.0s
KMBO Kilima Mbogo 62.98 270 *e*P **P** **01 51 31.2 +0.8**
comp=Z,5.0nm,1.0s,mb4.6
KMBO *e*pP pP 01 51 39.6 +0.7
AKTK Aktyubinsk 64.25 331 P **P** **01 51 38.3 +0.2**
AKTO Aktyubinsk 64.25 331 P **P** **01 51 38.3 +0.2**
comp=Z,1.4nm,0.4s,mb4.4,baz=134,slow=15,SNR=4.5
AKTO Aktyubinsk 64.25 331 P **P** **01 51 38.3 +0.2**
AKTO pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
SVE Sverdlovsk 67.59 338⇓ *e*P **P** **01 52 05.1 +5.6**
SVE pmax pmax
comp=Z,21nm,1.3s,mb5.0
ARU Arti 68.11 337 *d i*P **P** **01 52 03.4 +0.6**
ARU *e* 01 54 32.1
ARU *e*S S 02 01 02.1 +1.3
ARU *e*SS SS 02 05 27.1 +3.3
ARU pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
ARU Arti 68.11 337 *e*P **P** **01 52 02.2 -0.5**
comp=Z,9.6nm,0.9s,mb4.8
YAK Yakutsk 68.53 14⇓ *e*P **P** **01 52 04.4 -0.9**
YAK pmax pmax
comp=Z,29nm,0.9s,mb5.2
KIV Kislovodsk 69.37 319 *i* P **P** **01 52 06.8 -4.1**
KIV pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
MAW Mawson 69.50 194 P **P** **01 52 12.2 +1.0**
comp=Z,1.9nm,0.5s,mb4.3,baz=281,slow=4.2,SNR=6.9
MAW Mawson 69.50 194 P **P** **01 52 12.2 +1.0**
MAW pmax pmax
comp=Z,2.0nm,0.5s
MALT Malatya 70.11 312 *e*P **P** **01 52 13.7 -1.9**
MALT *e**PP pP 01 52 21.6 -2.6
MALT pmax pmax
comp=Z,32nm,1.8s,mb5.0
MALT Malatya 70.11 312 *e*P **P** **01 52 13.7 -1.9**
comp=Z,32nm,1.8s,mb5.0
MALT *e*pP pP 01 52 21.6 -2.6
EIL Elat 70.21 303 P **P** **01 52 16.7 +0.3**
comp=Z,3.7nm,0.8s,mb4.4,baz=30,slow=7.4,SNR=3.4
EIL Elat 70.21 303 P **P** **01 52 16.7 +0.3**
MMAI Mount Meron Ar 70.76 306 P **P** **01 52 20.3 +0.6**
comp=Z,5.2nm,0.9s,mb4.5,baz=318,slow=54,SNR=2.8
CSS Prodhromos 72.96 308 *e*P **P** **01 52 32.5 -0.3**
comp=Z,10.0nm,0.8s,mb4.8
PETK Petropavlovsk- 73.49 32 P **P** **01 52 35.0 -0.6**
comp=Z,3.4nm,0.8s,mb4.3,baz=204,slow=3.3,SNR=4.1
PETK Petropavlovsk- 73.49 32 P **P** **01 52 35.0 -0.6**
PETK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
LBTB Lobatse 74.88 245 P **P** **01 52 43.6 -0.7**
comp=Z,3.0nm,0.8s,mb4.3,baz=94,slow=11,SNR=3.6
LBTB Lobatse 74.88 245 P **P** **01 52 43.6 -0.7**
LBTB pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BOSA Boshof 75.45 241 P **P** **01 52 47.5 0.0**
comp=Z,5.2nm,0.8s,mb4.5,baz=104,slow=5.6,SNR=8.5
BOSA LR LR 02 22 04.8
comp=Z,113nm,18.7s,MS4.2,baz=171,slow=33
TIXI Tiksi 76.68 9 *e*P **P** **01 52 52.3 -1.3**
TIXI pmax pmax
comp=Z,16nm,1.5s,mb4.7
SYO Syowa Base 77.12 199⇑ *e*P **P** **01 52 55.6 -0.5**
OBN Obninsk 77.67 328 *e*P **P** **01 53 06.8 +7.3**
OBN pmax pmax
comp=Z,11nm,0.9s,mb4.8
TIRR Tirgusor 79.16 316⇑ *i*P **P** **01 53 07.7 -0.3**
TIRR Tirgusor 79.16 316 ⇑P **P** **01 53 07.7 -0.3**
AKASG Malin Array Be 80.33 322 P **P** **01 53 14.0 -0.2**
comp=Z,0.5nm,0.4s,mb3.8,baz=88,slow=4.2,SNR=3.2
AKASG Malin Array Be 80.33 322 P **P** **01 53 14.0 -0.2**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KIEV Kiev 80.34 322 *e*P **P** **01 53 13.6 -0.6**
KIEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KIEV Kiev 80.34 322 *e*P **P** **01 53 13.6 -0.6**
comp=Z,2.7nm,0.6s,mb4.3
VRI Vrincioaia 80.67 317⇑ *i*P **P** **01 53 16.1 0.0**
VRI Vrincioaia 80.67 317 ⇑P **P** **01 53 16.1 +0.1**
MLR Muntele Rosu 81.11 317⇑ *i*P **P** **01 53 18.8 +0.3**
MLR Muntele Rosu 81.11 317 ⇑P **P** **01 53 18.8 +0.4**
BURAR Bucovina Array 82.08 319⇑ *i*P **P** **01 53 24.5 +0.9**
BURAR Bucovina Array 82.08 319 ⇑P **P** **01 53 24.5 +0.9**
BUR08 Bucovina Ar. S 82.10 319 *e*P **P** **01 53 23.9 +0.3**
BUR08 *e*pP pP 01 53 30.7 -1.6
SBA Scott Base 82.35 169 *e*P **P** **01 53 25.4 +1.0**
SBA pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
SBA Scott Base 82.35 169 *e*P **P** **01 53 25.4 +0.9**
comp=Z,3.0nm,0.7s,mb4.3
PSZ Piszkesteto 85.67 318 *e*P **P** **01 53 40.4 -1.4**
PSZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
PSZ Piszkesteto 85.67 318⇑ *i*P **P** **01 53 40.9 -0.9**
PSZ Piszkesteto 85.67 318 *e*P **P** **01 53 40.4 -1.4**
comp=Z,2.6nm,0.8s,mb4.5
PKSM Moragy 86.26 316⇓ *i*P **P** **01 53 44.7 -0.1**
ARCES ARCESS Array B 87.38 340 P **P** **01 53 50.0 +0.1**
comp=Z,2.0nm,0.7s,mb4.5,baz=104,slow=5.1,SNR=7.4
ARCES ARCESS Array B 87.38 340 P **P** **01 53 50.0 +0.2**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
MORC Moravsky Berou 87.47 320 *e*P **P** **01 53 51.0 +0.4**
MORC pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
MORC Moravsky Berou 87.47 320 *e*P **P** **01 53 51.0 +0.4**
comp=Z,1.7nm,0.7s,mb4.4
GERES GERESS Array B 89.87 319 P **P** **01 54 02.4 +0.4**
comp=Z,0.6nm,0.7s,mb4.1,baz=72,slow=4.3,SNR=5.3
GERES GERESS Array B 89.87 319 P **P** **01 54 02.4 +0.4**
GERES pmax pmax
comp=Z,1.0nm,0.7s
BRG Berggiesshubel 89.88 321 *e*P pP 01 54 12.0 +1.2
comp=Z,5.0nm,1.0s
CLL Collm 90.50 321 *e*(P) **P** **01 54 07.0 +2.1**
CLL *e*pP pP 01 54 16.0 +2.3
SNAA Sanae 91.38 198 *e*P **P** **01 54 09.8 +1.2**
SNAA pmax pmax
comp=Z,4.0nm,1.0s
SNAA Sanae 91.38 198 *e*P **P** **01 54 09.8 +1.2**
comp=Z,3.9nm,1.0s,mb4.7
CHMT Chamberlain Mo 127.40 28 *e*PKPdf PKPdf 02 00 08.2 +0.2
WVOR Wild Horse Val 127.53 36 *e*PKIKP PKPdf 02 00 06.7 -1.7
NVAR Mina Array Bea 130.12 40 PKP PKPdf 02 00 13.4 0.0
comp=Z,0.4nm,0.8s,baz=348,slow=4.0,SNR=2.2
NVAR SKPbc 02 03 34.9
comp=Z,0.6nm,0.7s,baz=273,slow=6.7,SNR=4.2
PV01 Paradox Valley 136.12 33 *e*PKPdf PKPdf 02 00 26.0 +1.3
WMOK Wichita Mounta 143.70 27 *e*PKIKP PKPdf 02 00 35.1 -3.5
CPUP Villa Florida 143.76 215 PKP PKPdf 02 00 36.6 -2.3
comp=Z,3.8nm,0.6s,baz=138,slow=2.7,SNR=14
CPUP Villa Florida 143.76 215 PKIKP PKPdf 02 00 36.6 -2.4
CPUP pmax pmax
comp=Z,4.0nm,0.6s
CFAA Coronel Fontan 144.00 197 PKP PKPdf 02 00 37.1 -2.1
comp=Z,0.2nm,0.5s,baz=167,slow=4.0,SNR=6.1
WCI Wyandotte Cave 144.32 9 *e*PKIKP PKPdf 02 00 41.0 +1.4
TXAR Lajitas Array 145.24 38 PKPbc PKPbc 02 00 41.9 +0.8
comp=Z,10nm,0.8s,baz=270,slow=1.3,SNR=74
TXAR Lajitas Array 145.24 38 PKIKP PKPdf 02 00 41.9 +0.5
TXAR pmax pmax
comp=Z,10.0nm,0.8s
TXAR Lajitas Array 145.24 38 PKPbc PKPbc 02 00 41.9 +0.8
URVA University of 145.42 357 *e*PKPbc PKPbc 02 00 41.6 +0.2
ELN Prospectdale 145.81 1 *e*PKPbc PKPbc 02 00 41.5 -1.2
MIAR Mount Ida 145.97 21 *e*PKP2 PKPab 02 00 43.0 -0.7
WVT Waverly 146.09 12 *e*PKP2 PKPab 02 00 42.7 -1.4
UALR University of 146.18 19 *e*PKPbc PKPbc 02 00 43.4 -0.5
TZTN Tazewell 146.32 6 *e*PKPbc PKPbc 02 00 43.3 -0.9
TKL Tuckaleechee C 147.18 6 *e*PKP2 PKPab 02 00 45.8 -2.5
OXF Oxford 147.27 15 *e*PKP2 PKPab 02 00 46.2 -2.5

CPCT	**Cooper Cave**	**147.30**	**7**	*e*PKPbc	PKPbc	02 00 46.5	-0.5
SWET	**Sewanee**	**147.32**	**9**	*e*PKPbc	PKPbc	02 00 46.4	-0.7
SIV	**San Ignacio**	**153.68**	**224**	PKP	PKPdf	02 00 56.0	+0.9
	comp=Z,1.9nm,0.6s,baz=249,slow=16,SNR=3.3						
SIV				PKPbc	PKPbc	02 01 02.8	-0.2
	comp=Z,1.9nm,0.6s,baz=95,slow=6.5,SNR=13						
LPAZ	**La Paz**	**157.76**	**211**	PKPab	PKPab	02 01 34.3	+1.4
	comp=Z,0.9nm,0.7s,baz=189,slow=12,SNR=5.8						
LPAZ	**La Paz**	**157.76**	**211**	PKP2	PKPab	02 01 34.3	+1.4
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						

NEIC ***15*** *01:45:21.6, 3021S×6945W, h3km, ML3.6(GUC), After GUC.*

GUC 15 01:45:21.6±0.7, 3021S×6945W, h3km±4km, MD4.1, ML3.6, 2C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	**1.18**	**272**	⇓*i*P	Pg	01 45 44.0	-0.2
TLL				*i* S	Sg	01 46 00.6	+1.1
TLL				AML	AML	01 46 01.4	
	comp=N,579nm,0.3s						
TLL	**Tololo Astrono**	**1.18**	**272**	⇓*i*P	Pg	01 45 44.0	-0.2
TLL				*i* S	Sg	01 46 00.6	+1.1
OVCH	**Ovalle**	**1.57**	**255**	*e*P	Pn	01 45 50.0	-0.3
OVCH				*i* S	Sn	01 46 12.0	+0.9
OVCH				AML	AML	01 46 15.2	
	comp=N,1μm,0.8s						
OVCH	**Ovalle**	**1.57**	**255**	*e*P	Pn	01 45 50.0	-0.3
OVCH				S	Sn	01 46 12.0	+0.9
LSCH	**La Serena**	**1.59**	**280**	⇑*i*P	Pn	01 45 49.9	-0.7
LSCH				*i* S	Sn	01 46 11.6	0.0
LCO	**Las Campanas**	**1.62**	**317**	*e*Pn	Pn	01 45 49.8	-1.2
LCO				*e*Sn	Sn	01 46 11.4	-0.9
VACH	**Vallenar**	**1.99**	**324**	*e*P	Pn	01 45 56.1	0.0
VACH				*i* S	Sn	01 46 22.7	+1.3
VACH				AML	AML	01 46 23.9	
	comp=N,2μm,0.3s						
VACH	**Vallenar**	**1.99**	**324**	*e*P	Pn	01 45 56.1	0.0
VACH				*i* S	Sn	01 46 22.7	+1.3
CHNG	**Los Chungos**	**2.43**	**226**	⇑*i*P	Pn	01 46 02.9	+0.7
CHNG				*i* S	Sn	01 46 34.5	+2.1
PEL	**Peldehue**	**3.11**	**200**	*e*P	Pn	01 46 12.8	+1.3
PEL				AML	AML	01 47 06.1	
	comp=E,236nm,0.6s						
FCH	**Farellones**	**3.19**	**193**	*i* S	Sn	01 46 54.7	+3.5
FCH				AML	AML	01 47 04.8	
	comp=E,84nm,0.6s						
CLCH	**Cerro Calan**	**3.31**	**196**	*i* S	Sn	01 46 56.6	+2.5
CLCH				AML	AML	01 47 11.8	
	comp=E,165nm,0.6s						
TACH	**Talagante**	**3.66**	**200**	*e*P	Pn	01 46 20.0	+0.9
SFDO	**San Fernando**	**4.59**	**196**	*e*P	Pn	01 46 32.7	+0.9

ISCJB ***15*** *02:01:38.1±0.8, 1973S×005×688W±0.1, h125km±8km, mb4.5/8, Error ellipse: s-maj=18.5km s-min=7.5km az=5.7*
IDC ***15*** *02:01:38.5±1.1, 1973S×6888W, h116km±9km, mb3.9/6, mb1 4.0/10, mb1mx3.8/21, mbtmp3.9/10, Error ellipse: s-maj=24.8km s-min=8.1km az=99.0*
NEIC ***15*** *02:01:38.4±0.9, 1968S×6890W, h116km±8km, mb4.1/2, Error ellipse: s-maj=14.1km s-min=8.8km az=97.0*

ISC 15 02:01:39.0±0.8, 1973S±005×689W±01, h121km±8km, n23, σ0 95/22, mb4.5/8, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.87**	**181**	P	**Pn**	**02 02 23.5**	**-0.2**
	36nm,0.3s,baz=336,slow=8.7,SNR=240						
LVC				S	**Sn**	**02 02 57.8**	**-0.3**
	58nm,0.3s,baz=72,slow=21,SNR=19						
LVC	**Limon Verde**	**2.87**	**181**	P	**Pn**	**02 02 23.5**	**-0.2**
LVC				S	**Sn**	**02 02 57.8**	**-0.3**
LPAZ	**La Paz**	**3.49**	**12**	P	**Pn**	**02 02 32.3**	**+0.4**
	15nm,0.3s,baz=208,slow=7.0,SNR=344						
LPAZ				S	**Sn**	**02 03 13.6**	**+0.9**
	2.5nm,0.3s,baz=146,slow=16,SNR=1.7						
SIV	**San Ignacio**	**8.31**	**65**	P	**Pn**	**02 03 35.0**	**-1.8**
	4.5nm,0.3s,baz=260,slow=11,SNR=122						
CFAA	**Coronel Fontan**	**11.84**	**177**	P	**Pn**	**02 04 24.2**	**+0.2**
	0.0nm,0.3s,baz=1.0,slow=13,SNR=5.1						
CPUP	**Villa Florida**	**12.49**	**124**	P	**Pn**	**02 04 32.7**	**0.0**
	0.4nm,0.3s,baz=284,slow=13,SNR=4.7						
BDFB	**Brasilia**	**20.28**	**82**	P	**P**	**02 06 06.3**	**+1.0**
	5.1nm,0.4s,baz=256,slow=10.0,SNR=12						
PLCA	**Paso Flores**	**20.99**	**184**	P	**P**	**02 06 14.1**	**+1.4**
	5.1nm,0.9s,baz=8.8,slow=14,SNR=7.7						
PLCA	**Paso Flores**	**20.99**	**184**	P	**P**	**02 06 14.1**	**+1.4**
OTAV	**Otavalo**	**21.95**	**334**	*e*P	**P**	**02 06 22.2**	**-0.9**
	2.9nm,0.7s,mb3.7						
LIC	**Lamto**	**67.87**	**74**	*e*P	**P**	**02 12 28.8**	**+3.8**
	71nm,1.9s,mb5.2						
TIC	**Toumodi**	**68.05**	**74**	*e*P	**P**	**02 12 26.1**	**0.0**
	113nm,1.4s,mb5.5						
KIC	**Kosan Boka**	**68.19**	**74**	*e*P	**P**	**02 12 26.4**	**-0.5**
	14nm,0.5s,mb5.1						
DBIC	**Dimbokro**	**68.21**	**74**	P	**P**	**02 12 26.7**	**-0.4**
	6.1nm,0.8s,mb4.5,baz=207,slow=6.6,SNR=8.6						
DBIC	**Dimbokro**	**68.21**	**74**	*e*P	**P**	**02 12 26.5**	**-0.6**
	5.9nm,0.8s,mb4.5						
TORD	**Torodi Ar. Bea**	**76.74**	**71**	P	**P**	**02 13 16.9**	**-0.7**
	2.1nm,0.5s,mb4.2,baz=254,slow=5.5,SNR=26						
ESDC	**Sonseca Array**	**84.55**	**45**	P	**P**	**02 14 00.6**	**+1.9**
	0.2nm,0.4s,mb3.4,baz=256,slow=4.8,SNR=4.0						
YKA	**Yellowknife Ar**	**89.53**	**341**	P	**P**	**02 14 21.1**	**-1.1**
	2.3nm,0.8s,mb4.4,baz=131,slow=4.8,SNR=4.9						
YKA	**Yellowknife Ar**	**89.53**	**341**	P	**P**	**02 14 21.1**	**-1.1**
ASAR	**Alice Springs**	**131.49**	**208**	PKP	PKPdf	02 20 37.0	-1.0
	0.5nm,0.5s,baz=118,slow=1.6,SNR=7.7						
WRA	**Warramunga Ar**	**134.49**	**211**	PKP	PKPdf	02 20 43.9	+0.1
	0.9nm,0.6s,baz=158,slow=1.7,SNR=11						
MKAR	**Makanchi Array**	**144.17**	**34**	PKP	PKPdf	02 21 01.2	+0.7
	0.4nm,0.7s,baz=284,slow=2.6,SNR=2.7						
SONM	**Songino Array**	**151.70**	**7**	PKPbc	PKPbc	02 21 19.2	0.0
	1.1nm,0.4s,baz=256,slow=0.7,SNR=6.2						

TAP 15 02:05:20.4, 2434N×12163E, h26km, ML3.9, 6C-5D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.11**	**105**	P	Pb	02 05 25.1	-0.1
	baz=106						
EHP				S	Sb	02 05 28.7	+0.3
	baz=106						
ENA	**Nanau**	**0.14**	**50**	⇓*i*P	Pb	02 05 25.5	0.0
	baz=49						
ENA				S	Sb	02 05 28.6	-0.2
	baz=49						
NNS	**Nan Shan**	**0.25**	**294**	⇑*i*P	Pb	02 05 27.1	+0.4
	baz=293						
NNS				S	Sb	02 05 31.3	+0.2
	baz=293						
TWD	**Chiawan**	**0.26**	**186**	⇓*i*P	Pb	02 05 26.7	-0.1
	baz=187						
TWD				*i* S	Sb	02 05 31.4	+0.2
	baz=187						
ENTT	**Nioudou**	**0.30**	**350**	*i* P	Pb	02 05 27.8	+0.3
	baz=353						
TWC	**Suao**	**0.34**	**37**	⇓*i*P	Pb	02 05 28.1	+0.1
	baz=36						
TWC				*i* S	Sb	02 05 33.3	+0.1
	baz=36						
HWA	**Hwalien**	**0.36**	**183**	P	Pb	02 05 28.5	+0.2
	baz=192						
HWA				*e*S	Sb	02 05 35.1	+1.3
	baz=192						
TWE	**Neicheng**	**0.38**	**5**	⇑*i*P	Pb	02 05 29.0	+0.3
	baz=4.0						
TWE				S	Sb	02 05 34.6	+0.2
	baz=4.0						
WHF	**Hehuan Shan**	**0.38**	**240**	⇓*i*P	Pb	02 05 29.3	+0.6
	baz=241						
WHF				S	Sb	02 05 35.2	+0.8
	baz=241						
NSK	**Sanguang**	**0.41**	**324**	⇑*i*P	Pb	02 05 29.5	+0.3
	baz=324						
TWT	**Tachien**	**0.42**	**258**	P	Pb	02 05 30.2	+0.9
	baz=256						
TWT				S	Sb	02 05 36.3	+0.9
	baz=256						
ILA	**Ilan**	**0.44**	**15**	P	Pb	02 05 30.2	+0.6
	baz=13						
ILA				S	Sb	02 05 36.4	+0.5
	baz=13						
ESF	**Shoufeng Towns**	**0.48**	**193**	*e*P	Pb	02 05 30.0	-0.3
	baz=195						
ESF				*e*S	Sb	02 05 37.6	+0.6
	baz=195						
ESL	**Shilin**	**0.55**	**199**	*e*P	Pb	02 05 30.8	-0.7
	baz=199						
ESL				*e*S	Sb	02 05 39.0	0.0
	baz=199						
NSTT	**Nanjuang**	**0.64**	**297**	⇑*i*P	Pb	02 05 33.8	+0.8
	baz=293						
NSTT				*i* S	Sb	02 05 42.5	+1.0
	baz=293						
TWA	**Mucha**	**0.64**	**356**	*e*P	Pb	02 05 33.2	+0.3
	baz=355						
TWA				*e*S	Sb	02 05 42.2	+0.6
	baz=355						
TAP1	**Taipei**	**0.70**	**352**	P	Pb	02 05 35.0	+0.9
	baz=351						
TAP1				S	Sb	02 05 44.3	+1.0
	baz=351						
NWF	**Wu-fen Shan**	**0.74**	**11**	*i* P	Pb	02 05 35.1	+0.4
	baz=9.0						
NWF				S	Sb	02 05 45.4	+1.0
	baz=9.0						
TWB1	**Santiao Chiao**	**0.74**	**26**	P	Pb	02 05 34.7	0.0
	baz=21						
TWB1				S	Sb	02 05 44.2	-0.2
	baz=21						
NCU	**National Centr**	**0.74**	**328**	*i* P	Pb	02 05 35.9	+1.1
	baz=327						
NCU				S	Sb	02 05 46.7	+2.2
	baz=327						
HSN	**Hsinchu**	**0.76**	**308**	*e*P	Pb	02 05 36.0	+1.1
	baz=319						
HSN				*e*S	Sb	02 05 47.7	+2.9
	baz=319						
TWQ1	**Liyutan**	**0.78**	**271**	⇑P	Pb	02 05 36.7	+1.4
	baz=271						
TWQ1				S	Sb	02 05 47.4	+1.9
	baz=271						
TWS1	**Kuangyinshan**	**0.78**	**346**	P	Pb	02 05 36.3	+0.9
	baz=345						
TWS1				S	Sb	02 05 47.8	+2.2
	baz=345						
NSY	**Sanyi**	**0.79**	**276**	P	Pb	02 05 37.0	+1.5
	baz=276						
NSY				*e*S	Sb	02 05 48.1	+2.3
	baz=276						
SMLT	**Sun Moon Lake**	**0.81**	**236**	*e*P	Pb	02 05 36.5	+0.8
	baz=240						
TYC	**Yuchr**	**0.83**	**239**	⇓*i*P	Pb	02 05 36.9	+0.8
	baz=234						
TYC				*e*S	Sb	02 05 47.3	+0.5
	baz=234						
EHY	**Hungye**	**0.88**	**199**	*e*P	Pb	02 05 35.7	-1.2
	baz=192						
EHY				*e*S	Sb	02 05 49.2	+1.0
	baz=192						
TCU	**Taichung**	**0.89**	**258**	*i* P	Pb	02 05 39.1	+2.0
	baz=272						
TCU				*e*S	Sb	02 05 52.0	+3.4
	baz=272						
TWY	**Chenhua**	**0.93**	**358**	P	Pb	02 05 38.7	+0.8
	baz=357						
TWY				*e*S	Sb	02 05 51.0	+1.1
	baz=357						
WNT	**Mingjian**	**0.98**	**242**	*e*P	Pn	02 05 40.1	+1.7
	baz=256						
WNT				*e*S	Sb	02 05 54.8	+3.7
	baz=256						
TWF1	**Yuli**	**1.03**	**197**	*e*P	Pn	02 05 39.0	-0.2
	baz=199						
TWF1				*e*S	Sb	02 05 54.2	+1.7
	baz=199						
YUS	**Yu-Shan**	**1.05**	**216**	⇑*i*P	Pn	02 05 39.9	+0.5
	baz=208						
YUS				*e*S	Sb	02 05 55.0	+1.8
	baz=208						
ALS	**Alishan**	**1.12**	**223**	*e*P	Pn	02 05 41.4	+1.0
	baz=217						
CHN5	**Tsauling**	**1.14**	**230**	*e*P	Pn	02 05 42.7	+2.0
	baz=231						
CHN5				*e*S	Sn	02 05 59.1	+3.6
	baz=231						
WGK	**Gukeng**	**1.17**	**236**	*e*P	Pn	02 05 43.5	+2.4
	baz=238						
WGK				*e*S	Sn	02 06 00.3	+4.0
	baz=238						
YOJ	**Yonaguni jima**	**1.27**	**84**	*e*P	Pn	02 05 42.2	-0.2
	baz=85						
ELDTW	**Lidau**	**1.27**	**206**	*e*P	Pn	02 05 41.7	-0.8
	baz=196						
CHN2	**Minshiung**	**1.32**	**233**	*e*P	Pn	02 05 46.0	+2.7
	baz=233						
PCYT	**Pengchaiyu**	**1.35**	**17**	*e*P	Pn	02 05 43.9	+0.4
	baz=15						
CHN4	**Tsaushan**	**1.36**	**224**	*e*P	Pn	02 05 46.3	+2.5
	baz=226						
CHN4				*e*S	Sn	02 06 05.2	+4.2
	baz=226						
CHY	**Chiayi**	**1.38**	**233**	*e*P	Pn	02 05 44.8	+0.8
	baz=234						
CHY				*e*S	Sn	02 06 04.4	+2.9
	baz=234						
STYT	**Tauyuan**	**1.42**	**214**	*e*P	Pn	02 05 45.5	+1.0
	baz=206						
STYT				*e*S	Sn	02 06 07.0	+4.7
	baz=206						
WTP	**Ta-pu**	**1.43**	**221**	P	Pn	02 05 46.7	+2.0
	baz=211						
WTP				*e*S	Sn	02 06 07.2	+4.6
	baz=211						
WSF	**Szhu**	**1.46**	**242**	*e*P	Pn	02 05 47.8	+2.6
	baz=257						
WSF				*e*S	Sn	02 06 07.1	+3.7
	baz=257						
TWK	**Hsinying**	**1.49**	**225**	*e*P	Pn	02 05 47.9	+2.4
	baz=227						
TWK				*e*S	Sn	02 06 08.3	+4.2
	baz=227						
CHN1	**Nanshi**	**1.53**	**221**	*e*P	Pn	02 05 48.5	+2.4
	baz=223						
CHN1				*e*S	Sn	02 06 09.7	+4.7
	baz=223						
SGST	**Jiashian**	**1.57**	**218**	*e*P	Pn	02 05 49.2	+2.5
	baz=209						
SGST				*e*S	Sn	02 06 10.8	+4.6
	baz=209						
TWG	**Pinlang**	**1.59**	**199**	*e*P	Pn	02 05 47.2	+0.2
	baz=183						
CHN8	**Yiju**	**1.63**	**233**	*e*P	Pn	02 05 50.3	+2.9
	baz=249						
SSD	**Sandimen**	**1.83**	**210**	*e*P	Pn	02 05 52.1	+2.0
	baz=208						
ECL	**Taimali**	**1.84**	**200**	*e*P	Pn	02 05 51.5	+1.2
	baz=186						
PNG	**Penghu**	**2.04**	**248**	*e*P	Pn	02 05 53.2	+0.1
	baz=247						
EAST	**Anshuo**	**2.07**	**200**	*e*P	Pn	02 05 55.6	+2.0
	baz=183						
SCZT	**Fangliau**	**2.17**	**205**	*e*P	Pn	02 05 56.7	+1.9
	baz=189						
TWK1	**Hengchun**	**2.50**	**198**	*e*P	Pn	02 06 00.1	+0.6
	baz=182						

IDC 15 02:15:55.1±4.2, 3035×10063E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, Error ellipse: s-maj=182.3km s-min=22.2km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.94**	**120**	P	P	02 23 05.9	-0.3
	0.6nm,0.4s,baz=302,slow=8.7,SNR=12						
ASAR	**Alice Springs**	**38.14**	**125**	P	P	02 23 16.4	+0.1
	0.3nm,0.4s,baz=302,slow=8.2,SNR=4.8						
SONM	**Songino Array**	**50.91**	**5**	P	P	02 24 58.0	+0.1
	0.8nm,0.5s,baz=195,slow=6.0,SNR=5.3						
MKAR	**Makanchi Array**	**52.19**	**344**	P	P	02 25 07.0	-0.5
	0.7nm,0.5s,baz=160,slow=7.8,SNR=6.1						
ZALV	**Zalesovo Beam**	**58.29**	**349**	P	P	02 25 51.8	+0.3
	0.8nm,0.3s,baz=140,slow=7.7,SNR=3.7						
TXAR	**Lajitas Array**	**145.12**	**39**	PKPbc	PKPbc	02 35 34.4	-0.4
	0.6nm,0.4s,baz=241,slow=1.0,SNR=17						

LDG ***15*** *02:21:26.2±0.1, 1987S×16901E, h10km, Mb5.9/4, Ms5.1/10, Error ellipse: s-maj=14.7km s-min=5.5km az=126.0*
GCMT ***15*** *02:21:28.9±0.1, 2014S×16881E, h40km, MW5.6/106, Moment Tensor Solution. s106,c194; s94,c186; Duration: 1§5 Moment tensor: Scale 10^17 Nm; Mrr2.68±.04; Mθθ-0.02±.03; Mφφ-2.67±.03; Mrθ0.26±.04; Mrφ1.20±.03; Mθφ-0.67±.04; Best double couple: Mo2.99200×10^17 NP1:φs339.00000°, δs38.00000°, λ90.00000°. NP2:φs159.00000°, δs52.00000°, λ90.00000°. Principal axes: T 2.7660, Plg83.0000°, Azm69.0000°; N 0.4450, Plg0.0000°, Azm339.0000°; P -3.2190, Plg7.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
MOS ***15*** *02:21:28.5±1.7, 2009S×16903E, h33km, mb5.6/49, MS5.1/42 Error ellipse: s-maj=8.2km s-min=7.6km az=46.7*
NEIC ***15*** *02:21:28.9±0.2, 2024S×16904E, mb5.4/68, MS5.2/178, Error ellipse: s-maj=8.8km s-min=5.0km az=152.0*
ISCJB ***15*** *02:21:28.2±0.1, 2012S±004×16905E±003, h31km, mb5.3/120, MS5.2/215, Error ellipse: s-maj=6.3km s-min=3.3km az=162.2*
BJI ***15*** *02:21:28.7, 1968S×169.12E, h25km, mB5.5, mb5.4, Ms5.2, Msz4.8*
SZGRF ***15*** *02:21:29.2, 1952S×17159E, h33km, mb5.2, Vanuatu Islands region*
IDC ***15*** *02:21:35.6±2.2, 2012S×16895E, h83km±19km, mb4.7/19, mb1 4.8/22, mb1mx4.8/24, mbtmp4.8/22, MS5.0/23, Ms1 4.9/23, ms1mx4.9/28, Error ellipse: s-maj=13.0km s-min=10.5km az=166.0*

ISC 15 02:21:30.0±0.1, 2015S±004×16910E±003, h33km, h33km±.4km: pP-P, n982, σ0 66/490, mb5.3/120, MS5.2/215, 167C-142D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.13**	**232**	*e*P	**Pn**	**02 22 15.4**	**-1.6**
DZM				*e*S	**Sn**	**02 22 47.7**	**-5.5**
HNR	**Honiara**	**13.84**	**319**	P	**Pn**	**02 24 46.7**	**+2.8**
	11nm,0.3s,baz=207,slow=8.8,SNR=1.9						
HNR				LR	LR	02 29 44.0	
	comp=Z,3μm,18.3s,baz=150,slow=36						
RAO	**Raoul Island**	**14.87**	**130**	LR	LR	02 29 39.4	
	comp=Z,6μm,21.5s,baz=125,slow=32						
AFI	**Afiamalu**	**19.30**	**74**	P	**Pn**	**02 25 55.8**	**+2.2**
	0.9nm,0.3s,baz=248,slow=16,SNR=2.8						
AFI				LR	LR	02 31 56.9	
	comp=Z,8μm,19.1s,baz=222,slow=32						
AFI	**Afiamalu**	**19.30**	**74**	P	**Pn**	**02 25 55.8**	**+2.2**
AFI				LR	LR	02 31 56.9	
URZ	**Urewera**	**19.34**	**161**	P	**Pn**	**02 25 55.2**	**+1.4**
	1.9nm,0.3s,baz=351,slow=6.5,SNR=27						
URZ				LR	LR	02 32 01.2	
	comp=Z,6μm,20.6s,baz=162,slow=32						
RIV	**Riverview**	**20.96**	**226**	*e*P	**P**	**02 26 13.7**	**+3.5**
CTA	**Charters Tower**	**21.45**	**266**	*e*P	**P**	**02 26 17.3**	**+1.7**
	64nm,1.0s,mb4.9						
CTA				*e*S	**S**	**02 30 16.4**	**+4.6**
CTA	**Charters Tower**	**21.45**	**266**	P	**P**	**02 26 15.7**	**+0.1**
	42nm,0.9s,mb4.8,baz=90,slow=11,SNR=46						
CTA				PcP	PcP	02 30 17.3	-0.9
	3.7nm,0.8s,baz=76,slow=8.3,SNR=6.8						
CTA	**Charters Tower**	**21.45**	**266**	*e*P	**P**	**02 26 17.3**	**+1.7**
CTA				*e*S	**S**	**02 30 16.4**	**+4.6**
CTA				pmax	pmax		
	comp=Z,64nm,1.0s						
CTAO	**Charters Tower**	**21.45**	**266**	*e*P	**P**	**02 26 17.4**	**+1.8**
CTAO				pmax	pmax		
	comp=Z,143nm,1.1s,mb5.2						
CTAO				MLR	MLR		
	comp=Z,5μm,22.0s,MS4.8						
CTAO	**Charters Tower**	**21.45**	**266**	*e*P	**P**	**02 26 17.4**	**+1.9**
	comp=Z,143nm,1.1s,mb5.2						
CTAO				LR	LR		
	comp=Z,5μm,22.0s,MS4.8						
SNZO	**South Karori**	**21.63**	**168**	PFAKE		02 26 30.0	+13
SNZO				LR	LR		
	comp=Z,7μm,21.0s,MS5.0						
CNB	**Canberra Magne**	**23.03**	**225**	*e*P	**P**	**02 26 34.1**	**+1.8**
CNB				*e*S	**S**	**02 30 35.8**	**-4.9**
CAN	**Canberra**	**23.27**	**225**	*e*P	**P**	**02 26 36.0**	**+1.2**
RPZ	**Rata Peaks**	**23.56**	**176**	P	**P**	**02 26 39.1**	**+1.6**
	comp=Z,17nm,0.8s,mb4.5,baz=80,slow=0.9,SNR=6.0						
RPZ				LR	LR	02 34 49.6	
	comp=Z,7μm,21.6s,MS5.1,baz=340,slow=34						
PMG	**Port Moresby**	**23.71**	**294**	*e*P	**P**	**02 26 40.0**	**+0.8**
PMG				pmax	pmax		
	comp=Z,103nm,0.9s						
PMG				MLR	MLR		
	comp=Z,4μm,20.0s						
PMG	**Port Moresby**	**23.71**	**294**	*e*P	**P**	**02 26 40.0**	**+0.8**
	comp=Z,103nm,0.9s,mb5.3						
PMG				LR	LR		
	comp=Z,4μm,20.0s,MS4.9						
COEN	**Coen**	**25.52**	**280**	*e*P	**P**	**02 26 57.0**	**+1.4**
	comp=Z,31nm,1.0s,mb4.8						
TOO	**Toolangi**	**26.88**	**225**	*e*P	**P**	**02 27 05.0**	**-2.7**
TOO				*e*S	**S**	**02 31 43.4**	**+1.1**
STKA	**Stephens Creek**	**27.26**	**239**	*e*P	**P**	**02 27 12.3**	**+1.1**
	comp=Z,43nm,1.0s,mb4.9						
STKA				*e*S	**S**	**02 31 48.0**	**-0.4**
STKA	**Stephens Creek**	**27.26**	**239**	P	**P**	**02 27 10.4**	**-0.8**
	comp=Z,5.2nm,0.7s,mb4.2,baz=78,slow=12,SNR=9.0						
STKA				PcP	PcP	02 30 29.3	-1.3
	comp=Z,12nm,0.9s,baz=116,slow=2.6,SNR=3.0						
STKA				LR	LR	02 37 24.9	
	comp=Z,5μm,20.6s,MS5.1,baz=72,slow=35						
RAR	**Rarotonga**	**29.12**	**98**	LR	LR	02 36 39.7	
	comp=Z,2μm,22.0s,MS4.8,baz=260,slow=31						
TAU	**Tasmania Unive**	**29.15**	**214**	PFAKE		02 27 40.0	+12
TAU				LR	LR		
	comp=Z,4μm,19.0s,MS5.1						
WB2	**Warramunga Arr**	**32.61**	**264**	*e*P	**P**	**02 27 57.2**	**-1.5**
WB2				*e*S	**S**	**02 33 10.1**	**-2.4**
WRAB	**Tennant Creek**	**32.61**	**264**	*e*P	**P**	**02 27 57.4**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,134nm,1.6s,mb5.6						
WRAB				MLR	MLR		
	comp=Z,4μm,20.0s,MS5.1						
WRAB	**Tennant Creek**	**32.61**	**264**	*e*P	**P**	**02 27 57.4**	**-1.4**
	comp=Z,134nm,1.6s,mb5.6						
WRAB				LR	LR		
	comp=Z,4μm,20.0s,MS5.1						
WRA	**Warramunga Arr**	**32.62**	**264**	P	**P**	**02 27 57.0**	**-1.8**
	comp=Z,10nm,0.8s,mb4.8,baz=99,slow=8.5,SNR=59						
WRA				PcP	PcP	02 30 43.5	-1.1
	comp=Z,6.5nm,1.0s,baz=99,slow=3.0,SNR=4.6						
WRA				S	**S**	**02 33 07.2**	**-5.5**
	comp=Z,2.1nm,1.2s,baz=90,slow=16,SNR=5.9						
WRA				LR	LR	02 41 22.7	
	comp=Z,3μm,19.2s,MS5.1,baz=95,slow=36						
WRA	**Warramunga Arr**	**32.62**	**264**	P	**P**	**02 27 57.0**	**-1.8**
WRA						02 30 43.5	
WRA				S	**S**	**02 33 07.2**	**-5.5**
ASAR	**Alice Springs**	**32.79**	**257**	P	**P**	**02 27 59.6**	**-0.6**
	comp=Z,36nm,0.7s,mb5.4,baz=85,slow=8.

comp=Z,893nm,21.5s,MS4.6,baz=242,slow=33
GUMO Guam 41.13 323 PFAKE 02 29 20.0 +8.8
GUMO LR LR
comp=Z,1μm,20.0s,MS4.8
BATI Baumata 44.82 276 P **P** **02 29 41.2 0.0**
comp=Z,14nm,0.2s,mb5.3,baz=58,slow=15,SNR=5.8
BATI LR LR 02 48 23.5
comp=Z,4μm,21.2s,MS5.3,baz=135,slow=36
MBWA Marble Bar 46.05 260 *e*P **P** **02 29 51.0 +0.1**
comp=Z,86nm,1.0s,mb5.6
MBWA LR LR
comp=Z,7μm,20.0s,MS5.6
KLBR Kellerberrin 47.21 245 *e*P **P** **02 29 58.7 -1.1**
comp=Z,88nm,1.0s,mb5.6
NWAO Narrogin (SRO) 47.68 243 P **P** **02 30 03.5 0.0**
comp=Z,36nm,0.8s,mb5.5,baz=101,slow=8.5,SNR=13
NWAO LR LR 02 50 15.5
comp=Z,6μm,19.7s,MS5.6,baz=73,slow=36
MUN Mundaring 48.53 245 *e*P **P** **02 30 07.8 -2.2**
MIDW Midway 49.83 16 PFAKE 02 30 30.0 +10
MIDW LR LR
comp=Z,3μm,22.0s,MS5.2
TAOE Nuku Hiva Isla 50.23 85 *e*S **S** **02 37 49.3 +16**
comp=Z,3μm,27.1s
TAOE *e*LR LR 02 44 57.4
comp=Z,7μm,25.8s,baz=258
KAPI Kappang 50.24 281 P **P** **02 30 23.0 -0.3**
comp=Z,337nm,1.1s,mb6.3,SNR=8.6
KAPI Kappang 50.24 281 P **P** **02 30 22.7 -0.7**
comp=Z,33nm,0.9s,mb5.4,baz=132,slow=4.7,SNR=17
KAPI Kappang 50.24 281 *e*P **P** **02 30 22.8 -0.5**
comp=Z,91nm,1.2s,mb5.7
KAPI LR LR
comp=Z,792nm,21.0s,MS4.7
DAV Davao City (W) 50.63 298 LR LR 02 51 36.4
comp=Z,446nm,20.0s,MS4.5,baz=111,slow=36
DAV Davao City (W) 50.63 298 *i*P **P** **02 30 23.4 -2.8**
DAV Davao City (W) 50.63 298 PFAKE 02 30 40.0 +14
DAV LR LR
comp=Z,762nm,19.0s,MS4.7
RKT Rikitea 51.81 104 *e*S **S** **02 38 08.3 +13**
comp=Z,864nm,25.5s
RKT *e*LR LR 02 45 50.7
comp=Z,2μm,26.2s
KIP Kipapa 52.35 40 PFAKE 02 30 50.0 +11
KIP LR LR
comp=Z,3μm,21.0s,MS5.2
POHA Pohakuloa 52.66 43 PFAKE 02 30 50.0 +8.7
POHA LR LR
comp=Z,1μm,19.0s,MS5.0
MYLDM Lahad Datu 55.72 291 ⇑P **P** **02 31 05.0 +1.3**
TSM Tawau 55.85 290 ⇑P **P** **02 31 06.0 +1.3**
SDKM Sandakan 57.08 291 ⇓P **P** **02 31 11.8 -1.6**
SBA Scott Base 57.76 181 *e*P **P** **02 31 17.8 +0.5**
SBA *e**PP pP 02 31 27.5 +0.1
SBA pmax pmax
comp=Z,69nm,1.0s,mb5.6
SBA Scott Base 57.76 181 *e*P **P** **02 31 17.8 +0.5**
comp=Z,69nm,1.0s,mb5.6
SBA *e*pP pP 02 31 27.5 +0.1
KKM Kota Kinabalu 58.12 291 ⇓P **P** **02 31 22.2 +1.5**
KKM Kota Kinabalu 58.12 291 *e*P **P** **02 31 21.5 +0.7**
CASY Casey 59.24 204 *e*P **P** **02 31 27.6 -0.2**
comp=Z,57nm,1.2s,mb5.5
CASY LR LR
comp=Z,2μm,22.0s,MS5.1
BTM Bintulu 59.64 286 ⇓P **P** **02 31 32.6 +1.2**
SBUM Sibu 60.10 285 ⇑P **P** **02 31 35.8 +1.3**
KSM Kuching 61.45 283 ⇓P **P** **02 31 44.6 +0.9**
KSM Kuching 61.45 283 *e*P **P** **02 31 43.4 -0.2**
MJAR Matsushiro Arr 63.49 332 P **P** **02 31 56.0 -0.8**
comp=Z,20nm,1.1s,mb5.1,baz=170,slow=7.4,SNR=20
MJAR LR LR 02 55 37.0
comp=Z,380nm,21.6s,MS4.5,baz=125,slow=32
MAJO Matsushiro 63.49 332 *e*P **P** **02 31 56.2 -0.6**
MAJO pmax pmax
comp=Z,29nm,0.9s,mb5.4
MAJO Matsushiro 63.49 332 *e*P **P** **02 31 56.2 -0.6**
comp=Z,29nm,0.9s,mb5.4
MAT Matsushiro 63.49 332 P **P** **02 31 56.3 -0.5**
MAT S **S** **02 40 27.0 -0.8**
NACB Ninganchiao 63.88 311 *e*P **P** **02 31 59.6 -0.1**
comp=Z,381nm,1.1s,mb6.3
YHNB Yeheng 64.34 312 *e*P **P** **02 32 03.0 +0.4**
comp=Z,96nm,1.0s,mb5.8
YHNB LR LR
comp=Z,749nm,20.0s,MS4.9
TATO Taipei 64.46 312 PFAKE 02 32 20.0 +17
TATO LR LR
comp=Z,984nm,22.0s,MS5.0
MIR Mirnyy 66.16 205 ⇓*i*P **P** **02 32 14.0 +0.2**
MIR *i* pP 02 32 23.0 -1.1
MIR *i* 02 32 27.0
MIR *i* 02 32 42.0
MIR pmax pmax
comp=Z,200nm,1.8s,mb5.8
ERM Erimo 66.34 339 PFAKE 02 32 30.0 +15
ERM LR LR
comp=Z,2μm,21.0s,MS5.3
QZH Quanzhou 66.49 310 P **P** **02 32 17.3 +0.7**
QZH S S 02 41 08.6 +3.4
QZH LR LR
comp=Z,1μm,21.4s,MS5.0
MYKOM Kota Tinggi 67.50 281 ⇑P **P** **02 32 24.6 +1.3**
KGM Kluang 68.08 281 ⇑P **P** **02 32 28.4 +1.4**
SSE Sheshan 68.64 317 P **P** **02 32 30.0 0.0**
SSE S S 02 41 33.1 +2.4
SSE AMB AMB
comp=Z,48nm,1.0s,mb5.4
SSE AMB AMB
comp=Z,318nm,4.8s
SSE LR LR
comp=N,460nm,25.0s,MS4.8
SSE LR LR
comp=E,454nm,25.0s,MS4.8
SSE LR LR
comp=Z,590nm,22.2s,MS4.8
KSRS Korea Array 69.18 326 P **P** **02 32 32.7 -0.5**
comp=Z,4.6nm,0.9s,mb4.4,baz=145,slow=6.4,SNR=10
KSRS LR LR 03 00 55.1
comp=Z,530nm,21.6s,MS4.7,baz=127,slow=34
GZH Guangzhou 69.30 306 P **P** **02 32 35.0 +0.7**
GZH S S 02 41 39.0 +0.1
GZH LR LR
comp=N,275nm,20.0s,MS4.8
GZH LR LR
comp=E,434nm,20.7s,MS4.8
GZH LR LR
comp=Z,726nm,26.5s
COCO West Island 69.41 264 PFAKE 02 32 50.0 +15
COCO LR LR
comp=Z,1μm,19.0s,MS5.2
KTGM Kuala Trenggan 69.54 284 ⇑P **P** **02 32 37.7 +1.6**
INCN Inchon 69.88 325 PFAKE 02 32 50.0 +12
INCN LR LR
comp=Z,462nm,21.0s,MS4.7
QSPA South Pole Qui 69.91 180 P **P** **02 32 37.0 -0.2**
comp=Z,50nm,0.9s,mb5.4,baz=21,slow=2.0,SNR=88
QIZ Qiongzhong 69.91 300 P **P** **02 32 38.1 -0.1**
QIZ XP sP 02 32 51.8 -0.5
QIZ PP PP 02 35 13.6 +0.3
QIZ S S 02 41 46.6 +0.4
QIZ XS sS 02 42 01.5 -1.7
QIZ AMB AMB
comp=Z,14nm,1.8s,mb4.6
QIZ AMB AMB
comp=Z,308nm,5.3s
QIZ LR LR
comp=N,170nm,27.1s,MS4.4
QIZ LR LR
comp=E,218nm,23.1s,MS4.4
QIZ LR LR
comp=Z,417nm,22.3s,MS4.6
FRIM Kepong 70.11 281 ⇓P **P** **02 32 39.3 -0.2**
NJ2 Nanjing 70.77 316 *e*P **P** **02 32 44.0 +0.9**
NJ2 AP pP 02 32 53.4 0.0
NJ2 XP sP 02 32 58.3 +1.0
NJ2 PCP PcP 02 33 05.3 +1.5
NJ2 S S 02 41 54.0 -1.7
NJ2 SKS 02 42 34.5
NJ2 AMB AMB
comp=Z,30nm,0.8s,mb5.3
NJ2 AMB AMB
comp=Z,300nm,7.8s
NJ2 LR LR
comp=N,490nm,26.6s,MS4.7
NJ2 LR LR
comp=E,330nm,26.2s,MS4.7
NJ2 LR LR
comp=Z,310nm,25.4s,MS4.5
YSS Yuzh-Sakhalins 70.89 341 ⇑*i*P **P** **02 32 44.0 +0.5**
YSS *e**PP pP 02 32 54.0 +0.2
YSS *e*S S 02 41 54.0 -2.5
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.5
YSS pmax pmax
comp=Z,300nm,8.0s
YSS MLR MLR
comp=N,300nm,18.0s
YSS MLR MLR
comp=Z,500nm,18.0s,MS4.8
YSS Yuzh-Sakhalins 70.89 341 *e*P **P** **02 32 44.9 +1.4**
comp=Z,10nm,0.4s,mb5.1
YSS *e*pP pP 02 32 54.6 +0.8
YSS LR LR
comp=Z,386nm,21.0s,MS4.6
IPM Ipoh 71.14 282 ⇓P **P** **02 32 46.1 +0.3**
VLA Vladivostok 71.65 332 *e*P **P** **02 32 48.4 +0.2**
VLA pmax pmax
comp=Z,142nm,2.0s,mb5.5
VLA Vladivostok 71.65 332 *i* P **P** **02 32 48.9 +0.7**
SMY Shemya 72.70 3 PFAKE 02 33 10.0 +16
SMY LR LR
comp=Z,1μm,21.0s,MS5.2
ADK Adak 72.79 9 *e*P **P** **02 32 54.2 -0.6**
ADK *e**PP pP 02 33 03.7 -1.5
ADK pmax pmax
comp=Z,52nm,1.3s,mb5.3
ADK Adak 72.79 9 *e*P **P** **02 32 54.2 -0.6**
comp=Z,52nm,1.3s,mb5.3
ADK *e*pP pP 02 33 03.7 -1.5
WHN Wuhan 72.86 313 P **P** **02 32 55.5 -0.2**
WHN S S 02 42 14.3 -5.5
WHN AMB AMB
comp=Z,106nm,1.0s,mb5.7
WHN LR LR
comp=N,947nm,25.0s,MS5.2
WHN LR LR
comp=E,1μm,26.6s,MS5.2
WHN LR LR
comp=Z,2μm,20.4s
PET Petropavlovsk 73.42 353 *e*P **P** **02 32 58.2 -0.3**
PET *e*S S 02 42 24.9 -0.4
PET pmax pmax
comp=Z,200nm,15.7s
PET Petropavlovsk 73.42 353 PFAKE 02 33 10.0 +11
PET LR LR
comp=Z,1μm,21.0s,MS5.1
PEA0B Petropavlovsk- 73.61 353 *e*P **P** **02 33 00.4 +0.8**
PEA0B *e*pP pP 02 33 09.6 -0.4
PETK Petropavlovsk- 73.61 353 P **P** **02 32 59.3 -0.3**
comp=Z,20nm,1.0s,mb5.0,baz=116,slow=6.9,SNR=14
PETK LR LR 03 00 09.6
comp=Z,846nm,20.9s,MS5.0,baz=160,slow=32
DL2 Dalian 73.66 323 ⇑*i*P **P** **02 33 00.8 +0.6**
DL2 AP pP 02 33 09.8 -0.8
DL2 XP sP 02 33 15.1 +0.7
DL2 S S 02 42 31.0 +2.5
DL2 AMB AMB
comp=Z,60nm,0.9s,mb5.5
DL2 AMB AMB
comp=Z,240nm,5.1s
DL2 LR LR
comp=N,330nm,22.8s,MS4.7
DL2 LR LR
comp=E,240nm,20.8s,MS4.7
DL2 LR LR
comp=Z,300nm,20.2s,MS4.6
MDJ Mudanjiang 73.85 332 P **P** **02 33 01.9 +0.6**
MDJ AP pP 02 33 11.4 -0.2
MDJ XP sP 02 33 14.9 -0.6
MDJ PCP PcP 02 33 16.8 +0.2
MDJ PP PP 02 35 45.8 -0.8
MDJ S S 02 42 31.3 +0.8
MDJ SCS ScS 02 43 08.8 +0.4
MDJ SS SS 02 47 16.8 +1.2
MDJ AMB AMB
comp=Z,53nm,1.2s,mb5.3
MDJ AMB AMB
comp=Z,285nm,5.3s
MDJ LR LR
comp=N,307nm,17.6s,MS4.7
MDJ LR LR
comp=E,168nm,16.1s,MS4.7
MDJ LR LR
comp=Z,458nm,19.2s,MS4.8
SNY Shenyang 74.66 326 ⇑P **P** **02 33 05.9 -0.1**
SNY S S 02 42 38.5 -1.2
SNY AMB AMB
comp=Z,23nm,1.4s,mb4.9
SNY LR LR
comp=N,376nm,20.1s
SNY LR LR
comp=E,183nm,12.0s
SNY LR LR
comp=Z,412nm,18.9s,MS4.8
CN2 Changchun 75.16 329 ⇑P **P** **02 33 08.9 0.0**
CN2 *e*XP sP 02 33 22.0 -1.1
CN2 *e*S S 02 42 45.3 +0.1
CN2 AMB AMB
comp=Z,70nm,1.3s,mb5.4
CN2 AMB AMB
comp=Z,600nm,6.0s
CN2 LR LR
comp=N,400nm,19.0s,MS4.8
CN2 LR LR
comp=E,300nm,19.0s,MS4.8
CN2 LR LR
comp=Z,400nm,21.0s,MS4.7
NIKO Nikolski 75.29 14 *e*P **P** **02 33 08.1 -1.3**
comp=Z,211nm,1.2s,mb5.9
NIKO *e*pP pP 02 33 18.3 -1.5
GYA Guiyang 76.23 305 ⇓*i*P **P** **02 33 15.5 +0.1**
GYA AP pP 02 33 25.8 0.0
GYA XP sP 02 33 29.5 -0.1
GYA PP PP 02 36 09.6 +2.5
GYA S S 02 42 59.4 +1.7
GYA XS sS 02 43 16.6 +1.7
GYA SKS 02 43 22.3
GYA AMB AMB
comp=Z,40nm,1.2s,mb5.2
GYA AMB AMB
comp=Z,260nm,5.4s
GYA LR LR
comp=N,390nm,12.3s,MS5.0
GYA LR LR
comp=E,350nm,14.0s,MS5.0
GYA LR LR
comp=Z,510nm,15.2s,MS5.0
UNV Unalaska Valle 76.63 15 *e*P **P** **02 33 16.0 -1.1**
comp=Z,66nm,1.2s,mb5.4
UNV *e*pP pP 02 33 25.9 -1.6
KLR Kul'dur 76.64 336 *e*P **P** **02 33 13.7 -3.5**
KLR *e* pP 02 33 22.4 -5.2
KLR pmax pmax
comp=E,56nm,1.8s
KLR pmax pmax
comp=Z,200nm,1.8s,mb5.8
NANT Nan 77.41 296 ⇓P **P** **02 33 20.0 -2.2**
comp=Z,112nm,1.0s,mb5.8
BJT Baijiatuau 77.55 321 *e*P **P** **02 33 22.7 +0.2**
BJT pmax pmax
comp=Z,45nm,0.8s
BJT MLR MLR
comp=Z,836nm,22.0s
BJT Baijiatuau 77.55 321 *e*P **P** **02 33 22.7 +0.2**
comp=Z,45nm,0.8s,mb5.5
BJT LR LR
comp=Z,836nm,22.0s,MS5.0
MAW Mawson 77.55 202 P **P** **02 33 23.3 +1.2**
comp=Z,11nm,0.8s,mb4.9,baz=122,slow=6.4,SNR=25
MAW LR LR 03 04 40.7
comp=Z,932nm,20.6s,MS5.1,baz=99,slow=33
BJI Beijing 77.56 321 P **P** **02 33 22.8 +0.3**
BJI AP pP 02 33 33.3 +0.3
BJI XP sP 02 33 37.5 +0.7
BJI S S 02 43 15.3 +3.7
BJI XS sS 02 43 28.5 -0.4
BJI SS SS 02 48 12.3 +0.4
BJI AMB AMB
comp=Z,65nm,1.2s,mb5.4
BJI AMB AMB
comp=Z,617nm,4.7s
BJI LR LR
comp=N,502nm,20.4s,MS5.0
BJI LR LR
comp=E,475nm,21.1s,MS5.0
BJI LR LR
comp=Z,758nm,29.0s
TIY Taiyuan 78.41 317 P **P** **02 33 29.8 +2.5**
TIY S S 02 43 24.8 +3.9
TIY LR LR
comp=Z,632nm,25.0s,MS4.8
XAN Xi'an 78.62 313 P **P** **02 33 29.6 +1.0**
XAN AP pP 02 33 38.4 -0.7
XAN XP sP 02 33 42.9 0.0
XAN AMB AMB
comp=Z,51nm,1.2s,mb5.3
XAN AMB AMB
comp=Z,411nm,8.0s
KMI Kunming 78.64 302 P **P** **02 33 30.3 +1.4**
KMI AP pP 02 33 40.1 +0.8
KMI XP sP 02 33 43.1 -0.1
KMI PP PP 02 36 30.4 +3.0
KMI S S 02 43 27.4 +3.5
KMI XS sS 02 43 43.8 +2.6
KMI AMB AMB
comp=Z,52nm,1.5s,mb5.2
KMI AMB AMB
comp=Z,445nm,6.2s
KMI LR LR
comp=N,178nm,17.5s,MS4.9
KMI LR LR
comp=E,431nm,18.6s,MS4.9
KMI LR LR
comp=Z,363nm,20.8s,MS4.7
CM31 Chiang Mai Arr 78.75 294 PFAKE 02 33 40.0 +10
CM31 LR LR
comp=Z,302nm,19.0s,MS4.7
CMAR Chiang Mai Arr 78.75 294 P **P** **02 33 30.0 +0.3**
comp=Z,12nm,0.8s,mb4.9,baz=131,slow=4.2,SNR=49
CHG Chiang Mai 78.91 295 ⇓P **P** **02 33 32.5 +2.0**
comp=Z,33nm,0.8s,mb5.3
CHTO Chiang Mai 78.91 295 *e*P **P** **02 33 31.6 +1.1**
CHTO pmax pmax
comp=Z,72nm,1.5s,mb5.4
CHTO Chiang Mai 78.91 295 *e*P **P** **02 33 31.6 +1.1**
comp=Z,72nm,1.5s,mb5.4
CD2 Chengdu 80.68 308 ⇑*i*P **P** **02 33 40.5 +0.6**
CD2 AP pP 02 33 50.9 +0.6
CD2 XP sP 02 33 54.8 +0.6
CD2 PP PP 02 36 46.9 +2.6
CD2 S S 02 43 44.8 -0.5
CD2 XS sS 02 44 02.3 -0.3
CD2 SS SS 02 49 01.8 +2.6
CD2 AMB AMB
comp=Z,40nm,1.3s,mb5.2
CD2 AMB AMB
comp=Z,360nm,6.0s
CD2 LR LR
comp=N,710nm,18.0s,MS5.4
CD2 LR LR
comp=E,1μm,19.2s,MS5.4
CD2 LR LR
comp=Z,570nm,22.8s,MS4.9
HHC Hu-ho-hao-te 80.82 320 ⇑*i*P **P** **02 33 41.3 +0.9**
HHC AP pP 02 33 50.8 0.0
HHC XP sP 02 33 55.0 +0.3
HHC PP PP 02 36 48.4 +3.2
HHC S S 02 43 46.6 +0.3
HHC SKS 02 43 52.4
HHC XS sS 02 44 03.3 -0.3
HHC AMB AMB
comp=Z,75nm,1.1s,mb5.5
HHC AMB AMB
comp=Z,529nm,7.0s
HHC LR LR
comp=N,338nm,19.6s,MS4.9
HHC LR LR
comp=E,412nm,18.1s,MS4.9
HHC LR LR
comp=Z,605nm,18.0s,MS5.0
BTO Baotou 81.62 319 *e*P **P** **02 33 45.1 +0.4**
HIA Hailar 81.83 330 *e*P **P** **02 33 45.7 +0.2**
HIA *e**PP pP 02 33 55.0 -1.0
HIA pmax pmax
comp=Z,29nm,1.3s
HIA MLR MLR
comp=Z,490nm,20.0s
HIA Hailar 81.83 330 *e*P **P** **02 33 45.7 +0.2**
comp=Z,29nm,1.3s,mb5.0
HIA *e*pP pP 02 33 55.0 -1.0
HIA LR LR
comp=Z,490nm,20.0s,MS4.9
LZH Lanzhou 83.23 312 ⇑P **P** **02 33 54.4 +1.2**
LZH AP pP 02 34 05.0 +1.3
LZH XP sP 02 34 09.5 +2.0
LZH PP PP 02 37 08.6 +3.4
LZH SKS 02 44 09.0
LZH S S 02 44 11.3 -0.1
LZH XS sS 02 44 27.3 -1.4
LZH SS SS 02 49 38.5 +1.5
LZH AMB AMB
comp=Z,48nm,1.2s,mb5.4
LZH AMB AMB
comp=Z,196nm,9.2s
LZH LR LR
comp=N,665nm,19.0s
LZH LR LR
comp=Z,893nm,20.1s,MS5.1
OHAK Old Harbor 83.25 20 *e*P **P** **02 33 52.8 0.0**
comp=Z,139nm,1.2s,mb5.9
OHAK *e*pP pP 02 34 02.0 -1.2
KDAK Kodiak Island 83.93 20 LR LR 03 05 09.6
comp=Z,2μm,20.1s,MS5.4,baz=228,slow=31
KDAK Kodiak Island 83.93 20 *e*P **P** **02 33 56.3 +0.1**
comp=Z,107nm,1.3s,mb5.8
KDAK *e*pP pP 02 34 06.2 -0.5
KDAK LR LR
comp=Z,378nm,20.0s,MS4.8
SYO Syowa Base 84.03 196 ⇑*i*P **P** **02 33 55.2 -1.6**
SYO Syowa Base 84.03 196 ⇓*i*P **P** **02 34 04.2 +7.4**
CLNS Chul'man 85.17 337 *c i*P **P** **02 34 02.8 +0.3**
CLNS *e**PP pP 02 34 11.9 -1.1
CLNS *e*S S 02 44 25.3 -4.5
CLNS pmax pmax
comp=Z,107nm,1.3s,mb5.8
CLNS pmax pmax
comp=N,75nm,1.5s
CLNS pmax pmax
comp=E,17nm,1.4s
CLNS smax
comp=N,143μm,17.3s
CLNS smax
comp=E,162μm,14.1s
SVW2 Sparrevohn 85.81 16 *e*P **P** **02 34 06.1 +0.5**
FARB Farallon Islan 85.88 47 ⇑P **P** **02 34 06.0 -0.5**
baz=86
PMSA Palmer Station 86.11 160 *e*P **P** **02 34 06.8 -0.4**
comp=E,144nm,1.7s,mb5.9
PMSA *e*pP pP 02 34 16.6 -1.2
MCCM Marconi Confer 86.18 47 ⇓P **P** **02 34 07.6 -0.4**
baz=86
MCCM Marconi Confer 86.18 47 PFAKE 02 34 20.0 +12
MCCM LR LR
comp=Z,722nm,20.0s,MS5.1
JRSC Jasper Ridge 86.27 48 ⇓P **P** **02 34 08.1 -0.3**
baz=86
SNCC San Nicolas Is 86.30 53 PFAKE 02 34 20.0 +11
SNCC LR LR
comp=Z,965nm,20.0s,MS5.2
V03C Hunter Liggett 86.32 50 ⇓P **P** **02 34 09.1 +0.4**
baz=86
KCPM Cahto Peak 86.46 46 *e*P **P** **02 34 10.1 +0.7**
KCPM *e*pP pP 02 34 20.4 +0.5
HOPS Hopland 86.46 46 ⇑P **P** **02 34 09.4 0.0**
baz=87
HOPS Hopland 86.46 46 *e*P **P** **02 34 09.9 +0.6**
comp=Z,37nm,1.1s,mb5.5
HOPS LR LR
comp=Z,696nm,19.0s,MS5.1
SAO San Andreas Ge 86.52 49 *e*P **P** **02 34 10.3 +0.6**
SAO pmax pmax
comp=Z,33nm,1.3s,mb5.4
SAO San Andreas Ge 86.52 49 *e*P **P** **02 34 10.3 +0.6**
comp=Z,33nm,1.3s,mb5.4

O01C Eel River Cons 86.53 45 ⇑P P 02 34 10.2 +0.6
baz=87
NSHM Saint Helena R 86.55 47 eP P 02 34 10.1 +0.3
CVS Carmenet Viney 86.57 47 ⇓P P 02 34 08.9 -1.0
baz=87
KIPM Iron Peak 86.59 45 eP P
KIPM epP pP 02 34 21.1 +0.6
WENL Wente Vineyard 86.71 48 ⇓P P 02 34 10.1 -0.5
baz=87
JCC Jacoby Creek 86.73 44 ⇓P P 02 34 10.3 -0.3
baz=87
PKD Parkfield 86.78 50 ⇓P P 02 34 10.7 -0.3
baz=87
BDM Black Diamond 86.79 48 ⇓P P 02 34 10.9 -0.1
baz=87
U04C Hernandez Rese 86.80 49 ⇑P P 02 34 11.1 0.0
baz=87
PKM Peak Mountain 86.83 51 ⇑P P 02 34 11.4 +0.2
baz=87
MNRC McLaughlin Nat 86.84 47 ⇑P P 02 34 11.5 +0.3
baz=87
SMMC Simmler 86.88 51 ⇑P P 02 34 11.9 +0.4
baz=87
Q03C Winters 87.01 47 ⇑P P 02 34 12.7 +0.6
baz=87
GASB Alder Springs 87.03 46 ⇓P P 02 34 12.7 +0.6
baz=87
KRMB Red Mountain 87.16 44 eP P 02 34 13.7 +1.0
KRMB epP pP 02 34 23.7 +0.4
M01C Crescent City 87.18 43 ⇑P P 02 34 13.1 +0.3
baz=87,SNR=9.9
N02C Big Bar 87.20 45 ⇓P P 02 34 13.1 +0.1
baz=87
V05C Boulder Hill, 87.21 50 ⇑P P 02 34 12.6 -0.5
baz=87
O02C Red Bluff 87.23 45 ⇑P P 02 34 13.2 +0.1
baz=87
TTA Tatalina 87.24 15 eP P 02 34 12.0 -0.6
TTA pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
TTA Tatalina 87.24 15 eP P 02 34 12.0 -0.6
comp=Z,4.2nm,0.8s,mb4.7
U05C Westside ANR, 87.27 50 ⇓P P 02 34 12.8 -0.5
baz=87
KBO Bosley Butte 87.30 43 eP P 02 34 14.2 +0.9
KBO epP pP 02 34 24.4 +0.5
K01A Sixes 87.44 42 ⇑P P 02 34 13.6 -0.5
baz=88,SNR=5.4
OSI Osito Adit 87.51 52 ⇓P P 02 34 13.8 -0.8
baz=88
ULN Ulaanbaatar 87.51 323 eP P 02 34 14.4 +0.2
ULN e*PP pP 02 34 24.7 -0.1
ULN pmax pmax
comp=Z,120nm,1.2s,mb6.0
ULN MLR MLR
comp=Z,355nm,20.0s,MS4.8
ULN Ulaanbaatar 87.51 323 eP P 02 34 14.4 +0.2
comp=Z,120nm,1.2s,mb6.0
ULN epP pP 02 34 24.7 0.0
ULN LR LR
comp=Z,355nm,20.0s,MS4.8
KEBM Edson Butte 87.56 42 eP P 02 34 15.7 +1.1
R04C Big Horse Ranc 87.58 48 ⇑P P 02 34 14.3 -0.5
baz=88
S05C Merced 87.58 49 ⇑P P 02 34 14.2 -0.6
baz=88
WDC Whiskeytown Da 87.59 45 eP P 02 34 15.0 +0.2
WDC e*PP pP 02 34 25.3 -0.1
WDC pmax pmax
comp=Z,66nm,1.4s,mb5.7
WDC MLR MLR
comp=Z,1μm,20.0s,MS5.3
WDC Whiskeytown Da 87.59 45 ⇑P P 02 34 14.6 -0.2
baz=88,SNR=20
WDC Whiskeytown Da 87.59 45 eP P 02 34 15.0 +0.2
comp=Z,66nm,1.4s,mb5.7
WDC epP pP 02 34 25.3 0.0
WDC LR LR
comp=Z,1μm,20.0s,MS5.3
DECC Green Verdugo 87.64 52 ⇑P P 02 34 14.5 -0.7
baz=88
L02A Cave Junction 87.67 43 ⇓P P 02 34 14.8 -0.4
baz=88,SNR=9.9
YAK Yakutsk 87.69 343 eP P 02 34 13.7 -1.1
YAK e pP 02 34 23.0 -2.3
YAK pmax pmax
comp=Z,56nm,1.6s,mb5.5
YAK pmax pmax
comp=N,38nm,1.9s
YAK pmax pmax
comp=E,20nm,1.8s
YAK Yakutsk 87.69 343 eP P 02 34 14.2 -0.5
YAK epP pP 02 34 23.9 -1.4
YAK LR LR
comp=Z,1μm,22.0s,MS5.2
M02C Callahan 87.78 44 P P 02 34 16.3 +0.6
baz=88,SNR=51
ORV Oroville 87.80 46 P P 02 34 15.4 -0.4
baz=88,SNR=22
MWC Mount Wilson 87.83 52 PFAKE 02 34 30.0 +14
MWC LR LR
comp=Z,1μm,22.0s,MS5.2
CMB Columbia Colle 87.86 48 eP P 02 34 15.9 -0.2
CMB pmax pmax
comp=Z,20nm,1.1s,mb5.3
CMB MLR MLR
comp=Z,1μm,20.0s,MS5.2
CMB Columbia Colle 87.86 48 ⇓P P 02 34 15.7 -0.4
baz=88
CMB Columbia Colle 87.86 48 eP P 02 34 15.9 -0.2
comp=Z,20nm,1.1s,mb5.3
CMB LR LR
comp=Z,1μm,20.0s,MS5.2
SONM Songino Array 87.86 323 P P 02 34 16.1 +0.2
comp=Z,38nm,0.9s,mb5.6,baz=139,slow=5.0,SNR=145
SONM LR LR 03 11 33.9
comp=Z,393nm,21.5s,MS4.8,baz=128,slow=34
T06C Millerton Lake 87.87 49 ⇑P P 02 34 15.8 -0.4
baz=88
NVL N'lazarevskaya 87.94 187 P P 02 34 08.1 -8.0
NVL e*PP pP 02 34 24.8 -1.8
NVL pmax pmax
comp=Z,39nm,1.1s,mb5.5
MAIT Maitri 87.95 187 eP P 02 34 15.6 -0.5
BILL Bilibino 87.95 359 eP P 02 34 15.6 -0.3
BILL pmax pmax
comp=Z,10.0nm,0.5s,mb5.3
BILL Bilibino 87.95 359 PFAKE 02 34 30.0 +14
BILL LR LR
comp=Z,588nm,21.0s,MS5.0
109C Camp Elliot, M 87.97 54 ⇑P P 02 34 15.9 -0.9
baz=88
PMR Palmer 88.03 19 eP P 02 34 12.5 -3.9
PMR pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
PMR MLR MLR
comp=Z,2μm,20.0s,MS5.4
PMR Palmer 88.03 19 eP P 02 34 12.4 -3.9
comp=Z,9.9nm,1.1s,mb5.0
PMR LR LR
comp=Z,2μm,20.0s,MS5.4
YBH Yreka Blue Hor 88.04 44 eP P 02 34 17.0 +0.1
YBH e*PP pP 02 34 28.0 +0.5
YBH pmax pmax
comp=Z,42nm,1.3s
YBH MLR MLR
comp=Z,1μm,20.0s
YBH Yreka Blue Hor 88.04 44 ⇓P P 02 34 17.1 +0.2
baz=88,SNR=32
YBH Yreka Blue Hor 88.04 44 eP P 02 34 17.0 +0.1
comp=Z,42nm,1.3s,mb5.5
YBH epP pP 02 34 28.0 +0.5
YBH LR LR
comp=Z,1μm,20.0s,MS5.2
K02A Glendale 88.05 43 ⇑P P 02 34 16.7 -0.2
baz=88,SNR=13
BFSC Mount Baldy St 88.13 53 ⇓P P 02 34 16.9 -0.7
baz=88
ISA Isabella 88.15 51 eP P 02 34 18.2 +0.6
ISA pmax pmax
comp=Z,23nm,1.0s,mb5.4
ISA MLR MLR
comp=Z,785nm,20.0s,MS5.1
ISA Isabella 88.15 51 ⇑P P 02 34 16.5 -1.1
baz=88
ISA Isabella 88.15 51 eP P 02 34 18.2 +0.6
comp=Z,23nm,1.0s,mb5.4
ISA LR LR
comp=Z,785nm,20.0s,MS5.1
EDW2 Edwards Air Fo 88.16 52 ⇓P P 02 34 17.3 -0.3
baz=88
S06C San Francisco 88.17 48 ⇓P P 02 34 17.2 -0.4
baz=88,SNR=18
BAR Barrett 88.20 54 PFAKE 02 34 30.0 +12
BAR LR LR
comp=Z,532nm,19.0s,MS5.0
M03C McCloud 88.21 45 ⇑P P 02 34 17.7 -0.1
baz=88,SNR=18
HELL Mitchell Peak 88.21 50 ⇑P P 02 34 17.2 -0.6
baz=88,SNR=16
SNAA Sanae 88.25 183 eP P 02 34 16.0 -1.5
SNAA e*PP pP 02 34 26.4 -1.7
SNAA pmax pmax
comp=Z,40nm,1.1s
SNAA Sanae 88.25 183 eP P 02 34 16.0 -1.5
comp=Z,40nm,1.1s,mb5.6
SNAA epP pP 02 34 26.4 -1.7
J02A Umpqua 88.29 42 ⇑P P 02 34 18.1 0.0
baz=88,SNR=16
P05C Yuba Gap, Truc 88.29 47 ⇓P P 02 34 18.1 -0.1
baz=88,SNR=14
HUMO Hull Mountain 88.31 43 ⇑P P 02 34 18.5 +0.4
baz=88,SNR=47
HUMO Hull Mountain 88.31 43 eP P 02 34 17.9 -0.3
comp=Z,28nm,1.0s,mb5.5
HUMO LR LR
comp=Z,1μm,20.0s,MS5.4
R05C Kirkwood Meado 88.38 48 ⇑P P 02 34 18.1 -0.5
baz=89
O05C Quincy 88.39 46 ⇑P P 02 34 18.4 -0.2
baz=89,SNR=5.2
O04C Chester 88.44 46 ⇓P P 02 34 18.8 0.0
baz=89
I02A Mapleton 88.45 42 ⇑P P 02 34 18.8 0.0
baz=89,SNR=11
MONP Monument Peak 88.49 54 ⇓P P 02 34 19.5 +0.3
baz=89
LBCM Butte Creek Ri 88.51 45 P P 02 34 19.0 -0.2
M04C Macdoel 88.64 44 ⇓P P 02 34 19.7 0.0
baz=89,SNR=20
BEKR Beckwourth 88.73 47 ⇑P P 02 34 19.8 -0.4
baz=89,SNR=21
R06C Coleville 88.74 48 ⇑P P 02 34 20.4 +0.1
baz=89,SNR=12
PFO Pinyon Flat Ob 88.76 54 ⇓P P 02 34 19.9 -0.6
baz=89
PFO Pinyon Flat Ob 88.76 54 PFAKE 02 34 30.0 +9.5
PFO LR LR
comp=Z,766nm,21.0s,MS5.1
MLAC Mammoth Lakes 88.77 49 ⇓P P 02 34 19.8 -0.7
baz=89
I03A Eugene 88.78 42 ⇑P P 02 34 20.2 -0.2
baz=89,SNR=7.6
CWC Cottonwood Cre 88.78 50 ⇑P P 02 34 20.5 -0.1
baz=89
L04A Klamath Falls 88.79 44 ⇓P P 02 34 20.3 -0.2
baz=89,SNR=6.8
ELFS Eagle Lake Fie 88.83 46 ⇑P P 02 34 21.1 +0.5
baz=89
R07C Lee Vining 88.83 49 ⇑P P 02 34 21.1 +0.4
baz=89
MTUM Tungsten Hills 88.84 49 eP P 02 34 20.8 0.0
MPOR Mary's Peak 88.87 41 P P 02 34 21.9 +1.1
M05C Lookout 88.89 45 P P 02 34 21.0 0.0
baz=89,SNR=22
RRX Edison Barstow 88.90 52 ⇑P P 02 34 21.2 +0.1
baz=89
P06A Stead Airport, 88.95 47 ⇑P P 02 34 21.1 -0.2
baz=89
MPMC Manual Prospec 89.05 51 ⇑P P 02 34 21.3 -0.5
baz=89,SNR=19
DAC Darwin (Calif) 89.06 51 PFAKE 02 34 30.0 +8.1
DAC LR LR
comp=Z,893nm,20.0s,MS5.2
COR Corvallis 89.07 41 PFAKE 02 34 30.0 +8.3
COR LR LR
comp=Z,1μm,19.0s,MS5.3
HEBO Mount Hebo 89.10 41 eP P 02 34 22.6 +0.8
comp=Z,107nm,1.4s,mb6.0
H03A Soap Creek Ran 89.12 41 ⇑P P 02 34 22.0 +0.1
baz=89,SNR=18
J04A Umpqua Nationa 89.16 43 ⇑P P 02 34 21.9 -0.2
baz=89,SNR=9.6
TRF Thorofare Moun 89.16 17 eP P 02 34 22.0 +0.3
comp=Z,6.7nm,0.8s,mb5.0
S08C White Mtn Res 89.18 49 ⇑P P 02 34 22.7 +0.3
baz=89,SNR=34
GSC Goldstone 89.22 52 eP P 02 34 23.0 +0.3
GSC e*PP pP 02 34 32.7 -0.5
GSC pmax pmax
comp=Z,14nm,1.3s,mb5.1
GSC MLR MLR
comp=Z,868nm,21.0s,MS5.2
GSC Goldstone 89.22 52 ⇑P P 02 34 22.2 -0.5
baz=89
GSC Goldstone 89.22 52 eP P 02 34 23.0 +0.4
comp=Z,14nm,1.3s,mb5.1
GSC epP pP 02 34 32.7 -0.5
GSC LR LR
comp=Z,868nm,21.0s,MS5.2
O06A Flanigan 89.22 46 ⇑P P 02 34 22.4 -0.1
baz=89,SNR=16
I04A Tendick Farm, 89.24 42 ⇑P P 02 34 22.1 -0.4
baz=89,SNR=17
M06C Likely Place G 89.27 45 ⇓P P 02 34 22.8 +0.1
baz=90,SNR=7.0
BELC Belle Mtn. 89.27 53 ⇑P P 02 34 22.8 -0.1
baz=89,SNR=20
PAHR Pah Rah Range 89.32 47 eP P 02 34 23.6 +0.6
comp=Z,46nm,1.4s,mb5.6
HEC Hector,Ludlow 89.38 52 ⇓P P 02 34 23.0 -0.4
baz=90
L05A Lakeview 89.42 44 ⇑P P 02 34 23.6 +0.1
baz=90,SNR=18
G03A Yamhill 89.44 41 ⇓P P 02 34 23.4 0.0
baz=90
KMOR Kings Mountain 89.47 40 P P 02 34 23.5 0.0
N06A Buffalo Meadow 89.49 46 ⇓P P 02 34 23.6 -0.2
baz=90,SNR=17
NVAR Mina Array Bea 89.50 49 P P 02 34 24.0 +0.1
comp=Z,13nm,0.9s,mb5.3,baz=225,slow=7.9,SNR=54
NVAR Mina Array Bea 89.50 49 P P 02 34 24.0 +0.1
GRAC Grapevine Rang 89.54 50 ⇑P P 02 34 24.0 -0.1
baz=90,SNR=8.6
BC3 Big Chuckw Mtn 89.54 54 ⇑P P 02 34 24.4 +0.2
baz=90,SNR=8.8
F03A Seaside 89.58 40 ⇑P P 02 34 24.0 -0.1
baz=90,SNR=10.0
P07A Fallon 89.59 47 ⇑P P 02 34 24.1 -0.1
baz=90
R08A Mina 89.60 49 ⇓P P 02 34 24.2 -0.2
baz=90,SNR=6.5
FURC Furnace Creek, 89.68 51 ⇑P P 02 34 24.2 -0.5
baz=90,SNR=7.3
K05A Summer Lake 89.70 44 ⇑P P 02 34 24.9 +0.2
baz=90,SNR=20
MOD Modoc 89.71 45 ⇓P P 02 34 24.6 -0.2
baz=90,SNR=12
MOD Modoc 89.71 45 eP P 02 34 24.6 -0.1
comp=Z,30nm,1.1s,mb5.5
MOD LR LR
comp=Z,976nm,19.0s,MS5.2
J05A Fort Rock 89.74 43 P P 02 34 25.2 +0.4
baz=90,SNR=54
112A Yuma 89.75 55 ⇓P P 02 34 25.1 0.0
baz=90
MCK McKinley 89.76 17 eP P 02 34 24.6 +0.1
MCK pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
MCK McKinley 89.76 17 eP P 02 34 24.6 +0.2
comp=Z,8.0nm,0.9s,mb5.0
GLA Glamis 89.77 55 eP P 02 34 26.1 +0.8
GLA e*PP pP 02 34 37.0 +1.1
GLA pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
GLA MLR MLR
comp=Z,536nm,19.0s,MS5.0
GLA Glamis 89.77 55 ⇓P P 02 34 25.5 +0.3
baz=90
GLA Glamis 89.77 55 eP P 02 34 26.1 +0.9
comp=Z,9.7nm,0.8s,mb5.2
GLA epP pP 02 34 37.0 +1.1
GLA LR LR
comp=Z,536nm,19.0s,MS5.0
SIT Sitka 89.80 27 PFAKE 02 34 40.0 +15
SIT LR LR
comp=Z,2μm,21.0s,MS5.5
H04A Detroit Lake 89.81 42 P P 02 34 24.7 -0.5
baz=90,SNR=26
GMRC Granite Mounta 89.85 53 ⇓P P 02 34 25.5 -0.2
baz=90,SNR=7.9
SHOC Shoshone 89.86 52 ⇓P P 02 34 25.5 -0.2
baz=90,SNR=7.6
O07A Toulon 89.87 47 ⇑P P 02 34 25.6 0.0
baz=90,SNR=16
E03A Lebam 89.88 40 ⇓P P 02 34 25.3 -0.2
baz=90,SNR=18
G04A Mulino 89.88 41 ⇑P P 02 34 25.6 +0.1
baz=90,SNR=11
LSA Lhasa 89.89 302 P P 02 34 27.0 +1.1
LSA Lhasa 89.89 302 eP P 02 34 27.4 +1.5
LSA pmax pmax
comp=Z,7.0nm,0.6s,mb5.2
LSA MLR MLR
comp=Z,374nm,22.0s,MS4.8
LSA Lhasa 89.89 302 eP P 02 34 27.4 +1.4
comp=Z,6.5nm,0.6s,mb5.1
LSA LR LR
comp=Z,374nm,22.0s,MS4.8
TUQ Turquoise Moun 89.93 52 ⇑P P 02 34 25.9 -0.1
baz=90,SNR=7.9
S09A Goldfield 89.96 50 ⇓P P 02 34 25.5 -0.5
baz=90,SNR=15
IRM Iron Mountain 89.98 53 ⇑P P 02 34 26.3 0.0
baz=90,SNR=7.8
D03A Wishkah Elem. 90.04 39 ⇑P P 02 34 26.6 +0.4
baz=90,SNR=10.0
BMW Boistfort Moun 90.05 40 eP P 02 34 26.6 +0.4
U10A Ash Meadows, A 90.05 51 ⇓P P 02 34 26.5 0.0
baz=90,SNR=20
BOD Bodaibo 90.09 334 eP P 02 34 24.3 -1.8
BOD e pP 02 34 35.1 -1.6
BOD pmax pmax
comp=Z,41nm,1.5s,mb5.5
BOD pmax pmax
comp=Z,52nm,1.3s,mb5.7
N07B Gerlach 90.09 46 ⇑P P 02 34 26.4 -0.1
baz=90
TPH Tonopah 90.11 49 eP P 02 34 27.0 +0.3
TPH pmax pmax
comp=Z,25nm,1.2s,mb5.4
TPH MLR MLR
comp=Z,899nm,21.0s,MS5.2
TPH Tonopah 90.11 49 eP P 02 34 27.0 +0.2
comp=Z,25nm,1.2s,mb5.4
TPH LR LR
comp=Z,899nm,21.0s,MS5.2
NLWA Neilton Lookou 90.12 39 ⇓P P 02 34 27.1 +0.6
baz=90,SNR=10
NLWA Neilton Lookou 90.12 39 eP P 02 34 27.0 +0.5
comp=Z,52nm,1.3s,mb5.7
NLWA epP pP 02 34 37.6 +0.5
NLWA LR LR
comp=Z,764nm,19.0s,MS5.2
I05A Bend 90.14 42 ⇑P P 02 34 27.1 +0.4
baz=90,SNR=5.5
K06A Valley Falls 90.16 44 ⇓P P 02 34 26.9 +0.1
baz=90,SNR=25
P08A Dixie Valley 90.21 47 ⇑P P 02 34 27.9 +0.7
baz=90
M07A Soldier Meadow 90.22 46 ⇑P P 02 34 27.1 0.0
baz=90,SNR=23
F04A Amboy 90.27 40 ⇓P P 02 34 26.8 -0.5
baz=90,SNR=14
Y12C Blythe 90.29 54 ⇓P P 02 34 27.4 -0.2
baz=90,SNR=9.4
R09A Tonopah 90.29 49 ⇓P P 02 34 27.0 -0.5
baz=90,SNR=18
VLMM Larch Mountain 90.31 41 P P 02 34 28.1 +0.7
TPNV Topopah Spring 90.33 51 eP P 02 34 27.9 +0.1
TPNV e*PP pP 02 34 38.5 +0.1
TPNV pmax pmax
comp=Z,21nm,0.9s,mb5.5
TPNV MLR MLR
comp=Z,1μm,21.0s,MS5.3
TPNV Topopah Spring 90.33 51 eP P 02 34 27.9 +0.1
comp=Z,21nm,0.9s,mb5.5
TPNV epP pP 02 34 38.5 +0.1
TPNV LR LR
comp=Z,1μm,21.0s,MS5.3
LDFC Landfair 90.39 53 eP P 02 34 29.2 +1.1
comp=Z,44nm,1.2s,mb5.7
L07A Adell 90.40 45 ⇓P P 02 34 28.3 +0.3
baz=91,SNR=33
O08A Rochester Mine 90.42 47 ⇑P P 02 34 28.3 +0.2
baz=91,SNR=18
J06A Christmas Vall 90.43 44 ⇑P P 02 34 27.7 -0.4
baz=91,SNR=19
OSD Olympics--Snow 90.44 38 P P 02 34 29.3 +1.3
V11A Goodsprings 90.46 52 ⇓P P 02 34 28.2 -0.2
baz=91,SNR=5.6
113A Mohawk Valley, 90.47 55 ⇑P P 02 34 28.2 -0.3
baz=91,SNR=6.9
S10A Tonopah Range, 90.49 50 ⇑P P 02 34 28.3 -0.2
baz=91,SNR=16
N08A GE Springer Mi 90.66 46 ⇑P P 02 34 29.3 +0.1
baz=91,SNR=6.4
B04A Port Angeles 90.67 38 ⇑P P 02 34 29.7 +0.6
baz=91
CROR Criterion Ridg 90.70 42 P P 02 34 29.8 +0.5
WRAK Wrangell Islan 90.70 28 eP P 02 34 29.0 -0.1
WRAK comp=Z,55nm,1.2s,mb5.8
WRAK LR LR
comp=Z,1μm,21.0s,MS5.4
I06A Prineville 90.71 43 ⇑P P 02 34 29.4 0.0
baz=91,SNR=30
K07A Rock Creek Ran 90.76 44 ⇑P P 02 34 30.2 +0.5
baz=91
M08A Happy Creek Ra 90.78 46 ⇓P P 02 34 29.8 0.0
baz=91,SNR=14
P09A Austin 90.81 48 ⇓P P 02 34 29.7 -0.2
baz=91
C04A Brinnon 90.81 39 ⇓P P 02 34 29.5 -0.2
baz=91,SNR=12
GNW Green Mountain 90.82 39 P P 02 34 29.6 -0.2
F05A White Salmon 90.84 41 ⇑P P 02 34 30.3 +0.4
baz=91,SNR=6.8
Y13A Salome 90.84 54 ⇑P P 02 34 30.3 +0.1
baz=91,SNR=20
V12A Nelson 90.85 52 ⇓P P 02 34 29.9 -0.3
baz=91,SNR=7.3
R10A Warm Springs 90.86 49 ⇓P P 02 34 29.8 -0.4
baz=91,SNR=23
214A Organ Pipe Nat 90.89 56 ⇓P P 02 34 30.4 -0.1
baz=91,SNR=10
COLA College 90.94 17 eP P 02 34 28.3 -1.7
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
COLA MLR MLR
comp=Z,1μm,22.0s,MS5.3
COLA College 90.94 17 eP P 02 34 28.3 -1.6
comp=Z,7.3nm,0.8s,mb5.1
COLA LR LR
comp=Z,1μm,22.0s,MS5.3
ZAK Zakamensk 90.95 324 eP P 02 34 29.9 -0.4
ZAK pmax pmax
comp=Z,42nm,1.5s,mb5.5
PALK Pallekele 90.97 277 PFAKE 02 34 40.0 +8.7
PALK LR LR
comp=Z,563nm,20.0s,MS5.0
E05A Randle 90.97 40 P P 02 34 29.9 -0.6
baz=91,SNR=21
S11A Rachel 90.98 50 ⇓P P 02 34 30.6 -0.2
baz=91,SNR=13
H06A Lindquist Farm 91.00 42 P P 02 34 30.5 -0.2
baz=91,SNR=43
Q10A Clear Creek Ra 91.02 49 ⇓P P 02 34 30.7 -0.3
baz=91
J07A Hines 91.03 44 ⇑P P 02 34 30.5 -0.4
baz=91,SNR=5.6
LON Longmire 91.03 40 eP P 02 34 29.8 -1.0
LON pmax pmax
comp=Z,23nm,1.3s,mb5.3
LON Longmire 91.03 40 eP P 02 34 29.8 -1.0
comp=Z,23nm,1.3s,mb5.3
G06A Carlson Farm, 91.04 42 ⇓P P 02 34 30.5 -0.4
baz=91,SNR=8.2
WVOR Wild Horse Val 91.05 45 eP P 02 34 30.8 -0.2
WVOR pmax pmax
comp=Z,18nm,0.9s,mb5.4
WVOR MLR MLR

comp=Z,992nm,20.0s,MS5.2
WVOR Wild Horse Val 91.05 45 *e*P P 02 34 30.8 -0.3
comp=Z,18nm,0.9s,mb5.4
WVOR LR LR
comp=Z,992nm,20.0s,MS5.2
N09A Rock Creek Ran 91.10 47 ⇑P P 02 34 31.3 0.0
baz=91,SNR=9.9
BMN Battle Mountai 91.13 47 *e*P P 02 34 32.0 +0.6
BMN pmax pmax
comp=Z,25nm,1.2s,mb5.4
BMN MLR MLR
comp=Z,633nm,19.0s,MS5.1
BMN Battle Mountai 91.13 47 *e*P P 02 34 32.0 +0.6
comp=Z,25nm,1.2s,mb5.4
BMN LR LR
comp=Z,633nm,19.0s,MS5.1
L08A Fields 91.14 45 P P 02 34 31.6 +0.2
baz=91,SNR=29
D05A Enumclaw 91.14 40 ⇑P P 02 34 31.1 -0.1
baz=91,SNR=9.9
X13A Yucca 91.15 54 ⇑P P 02 34 31.8 +0.1
baz=91,SNR=16
F06A Goldendale 91.20 41 ⇓P P 02 34 31.2 -0.4
baz=91,SNR=8.8
T11A Corn Creek, Al 91.20 51 ⇓P P 02 34 31.9 +0.1
baz=91,SNR=22
I07A Izee 91.23 43 ⇓P P 02 34 31.9 +0.1
baz=91,SNR=24
K08A Mann Creek Ran 91.28 45 ⇓P P 02 34 32.3 +0.2
baz=92,SNR=15
P10A Eureka 91.31 48 ⇓P P 02 34 32.4 +0.1
baz=92
W13A Hualapai Mount 91.31 53 ⇓P P 02 34 32.4 0.0
baz=92,SNR=5.8
SKAG Skagway 91.33 25 *e*P P 02 34 32.2 +0.4
comp=Z,51nm,1.6s,mb5.6
Z14A Wintersburg 91.34 55 ⇑P P 02 34 32.9 +0.3
baz=92,SNR=6.0
U12A Valley of Fire 91.37 52 ⇓P P 02 34 32.8 +0.1
baz=92
IRK Irkutsk 91.39 326 *e*P P 02 34 30.4 -1.9
IRK *e* pP 02 34 41.0 -1.9
IRK pmax pmax
comp=Z,54nm,2.3s,mb5.5
R11A Troy Canyon, C 91.39 50 ⇑P P 02 34 32.3 -0.4
baz=92,SNR=13
M09A Marrel Ranch, 91.40 46 ⇓P P 02 34 32.6 0.0
baz=92,SNR=5.2
H07A Lands Inn, Kim 91.42 43 ⇑P P 02 34 32.3 -0.4
baz=92,SNR=32
TLY Talaya 91.43 325 *c i*P P 02 34 32.0 -0.5
TLY *e* pP 02 34 40.9 -2.2
TLY *e* 02 45 27.6
TLY *e*PS PS 02 46 36.0 -6.6
TLY *e*SS SS 02 51 41.9 +5.8
TLY pmax pmax
comp=Z,32nm,1.0s,mb5.6
TLY MLR MLR
comp=Z,270nm,19.0s,MS4.7
TLY Talaya 91.43 325 ⇑*i*P P 02 34 32.2 -0.3
TLY LR LR
comp=Z,326nm,20.0s,MS4.8
Y14A Wickenburg 91.52 54 ⇓P P 02 34 33.6 +0.2
baz=92,SNR=7.3
V13A Grand Canyon W 91.54 52 ⇑P P 02 34 33.1 -0.4
baz=92,SNR=7.5
Q11A Duckwater 91.55 49 ⇑P P 02 34 33.0 -0.4
baz=92,SNR=14
C05A Tolt Reservoir 91.56 39 ⇓P P 02 34 32.9 -0.3
baz=92,SNR=5.2
O10A Cortez Mining, 91.57 47 ⇑P P 02 34 33.4 -0.1
baz=92
J08A Circle Bar Ran 91.57 44 ⇓P P 02 34 33.2 -0.2
baz=92,SNR=14
B05A Bryant 91.59 39 ⇑P P 02 34 33.2 -0.2
baz=92,SNR=7.5
S12A Delamar Landin 91.62 50 ⇑P P 02 34 33.9 +0.1
baz=92,SNR=20
JCW Jim Creek 91.66 39 *e*P P 02 34 33.3 -0.4
JCW *e*pP pP 02 34 43.8 -0.4
I08A Drewsey 91.75 44 ⇑P P 02 34 33.9 -0.4
baz=92,SNR=12
K09A Rome 91.77 45 ⇓P P 02 34 34.1 -0.2
baz=92,SNR=35
P11A Circle Ranch, 91.78 48 ⇓P P 02 34 33.9 -0.5
baz=92,SNR=5.1
U13A Pakoon Wash 91.78 52 ⇑P P 02 34 34.3 -0.2
baz=92,SNR=8.5
TAPN Taplejung 91.79 298 *e*P P 02 34 34.3 -0.5
comp=Z,72nm,1.2s,mb5.9
X14A Yava 91.82 54 P P 02 34 35.1 +0.4
baz=92,SNR=20
D06A Cle Elum 91.83 40 ⇓P P 02 34 34.4 -0.1
baz=92
EBG Ellensburg 91.86 40 P P 02 34 35.3 +0.6
ODAN Odare 91.88 298 *e*P P 02 34 35.3 +0.1
H08A Prairie City 91.96 43 ⇓P P 02 34 35.0 -0.1
baz=92,SNR=5.7
W14A Seligman 91.96 53 ⇑P P 02 34 35.6 +0.1
baz=92,SNR=9.2
216A Three Points, 91.97 57 ⇓P P 02 34 35.8 +0.2
baz=92,SNR=11
116A Eloy 91.99 56 ⇓P P 02 34 36.0 +0.4
baz=92,SNR=14
RPW Rockport 92.02 39 *e*P P 02 34 34.9 -0.4
J09A Fry Pan Ranch, 92.03 44 ⇑P P 02 34 35.5 0.0
baz=92,SNR=8.6
Y15A Casa Rosa Ranc 92.04 55 P P 02 34 35.9 0.0
baz=92,SNR=30
M10A I.L. Ranch, Tu 92.06 46 ⇑P P 02 34 35.6 -0.1
baz=92,SNR=12
B06A Marblemount 92.07 39 ⇓P P 02 34 35.2 -0.3
baz=92
O11A Cowboy Ranch, 92.08 48 ⇓P P 02 34 35.8 0.0
baz=92,SNR=9.0
R12A Pony Springs, 92.09 50 ⇓P P 02 34 36.0 +0.1
baz=92,SNR=6.9
V14A Boquillas Ranc 92.11 53 ⇓P P 02 34 36.2 +0.1
baz=92,SNR=12
E07A Sunnyside 92.14 41 ⇑P P 02 34 35.7 -0.2
baz=92
RSW Rattlesnake Hi 92.22 41 *e*P P 02 34 36.7 +0.3
RSW *e*pP pP 02 34 46.8 -0.1
HAWA Hanford 92.26 41 PFAKE 02 34 50.0 +14
HAWA LR LR
comp=Z,1μm,20.0s,MS5.3
N11A Elko Archery C 92.32 47 ⇓P P 02 34 36.5 -0.4
baz=92
I09A Lost Marbles R 92.32 44 ⇑P P 02 34 36.1 -0.7
baz=92
X15A Humboldt 92.32 54 ⇑P P 02 34 37.3 +0.2
baz=92,SNR=25
S13A Holt Ranch, En 92.33 51 ⇑P P 02 34 37.2 +0.2
baz=92,SNR=10
ETW Entiat 92.33 40 *e*P P 02 34 36.8 0.0
P12A McGill 92.34 49 ⇑P P 02 34 36.9 -0.2
baz=92,SNR=6.5
L10A Juniper Basin 92.34 46 ⇓P P 02 34 36.6 -0.4
baz=92,SNR=10
U14A Mt Trumbull 92.36 52 ⇑P P 02 34 37.3 0.0
baz=92,SNR=12
K10A MacKenzie Ranc 92.37 45 ⇓P P 02 34 37.0 -0.1
baz=93,SNR=7.0
217A Green Valley 92.39 57 ⇑P P 02 34 37.5 +0.1
baz=92,SNR=13
Z16A Peralta Trail, 92.50 55 P P 02 34 38.2 +0.2
baz=93,SNR=6.0
C07A Waterville 92.53 40 ⇓P P 02 34 37.8 0.0
baz=93
M11A Holland Ranch, 92.53 47 ⇑P P 02 34 38.0 +0.1
baz=93
RAMN Ramite 92.57 298 *e*P P 02 34 38.4 0.0
comp=Z,71nm,1.3s,mb5.9
TUC Tucson 92.61 57 *e*P P 02 34 38.4 -0.1
TUC *e**PP pP 02 34 49.8 +0.7
TUC pmax pmax
comp=Z,11nm,1.0s,mb5.2
TUC MLR MLR
comp=Z,657nm,20.0s,MS5.1
TUC Tucson 92.61 57 *e*P P 02 34 38.4 -0.1
comp=Z,11nm,1.0s,mb5.3
TUC *e*pP pP 02 34 49.8 +0.7
TUC LR LR
comp=Z,657nm,20.0s,MS5.1
ELK Elko 92.63 47 *e*P P 02 34 38.6 +0.2
ELK pmax pmax
comp=Z,4.0nm,0.8s
ELK MLR MLR
comp=Z,841nm,20.0s
ELK Elko 92.63 47 *e*P P 02 34 38.6 +0.3
comp=Z,3.5nm,0.8s,mb4.8
ELK LR LR
comp=Z,841nm,20.0s,MS5.2
H09A Durkee 92.67 43 ⇓P P 02 34 38.5 +0.1
baz=93
Y16A Circle Bar Ran 92.67 55 ⇓P P 02 34 38.9 +0.2
baz=93,SNR=18
CCUT Cedar City 92.68 51 *e*P P 02 34 39.3 +0.7
T14A Hurricane 92.69 52 ⇓P P 02 34 39.1 +0.4
baz=93,SNR=7.9
ARUT Antelope Range 92.71 51 *e*P P 02 34 39.5 +0.7
117A Oracle 92.75 56 P P 02 34 39.5 +0.4
baz=93,SNR=22
Q13A Wheeler Ranch, 92.76 49 ⇑P P 02 34 39.4 +0.3
baz=93,SNR=11
O12A Currie 92.78 48 ⇑P P 02 34 38.7 -0.3
baz=93,SNR=12
N12A Clover Valley, 92.81 47 ⇓P P 02 34 39.1 -0.1
baz=93,SNR=6.8
MOY Mondy 92.85 325 *e*P P 02 34 38.8 -0.3
MOY pmax pmax
comp=Z,105nm,2.5s,mb5.8
B07A Winthrop 92.85 39 ⇓P P 02 34 39.3 +0.1
baz=93
L11A Cat Creek Ranc 92.86 46 ⇓P P 02 34 39.1 -0.3
baz=93,SNR=10
DAWY Dawson 92.89 20 *e*P P 02 34 38.3 -0.6
X16A Lo Mia Camp, P 92.90 54 ⇑P P 02 34 40.2 +0.4
baz=93,SNR=21
DLBC Dease Lake 92.91 27 *e*P P 02 34 39.3 +0.1
DLBC *e*pP pP 02 34 49.1 -0.7
318A Bisbee 92.92 58 ⇓P P 02 34 40.0 0.0
baz=93,SNR=14
K11A Parker Ranch, 92.93 45 ⇓P P 02 34 39.0 -0.7
baz=93,SNR=5.3
A07A Ashnola River, 92.96 38 ⇓P P 02 34 39.2 -0.5
baz=93
P13A Bates Ranch, G 92.96 49 ⇓P P 02 34 40.6 +0.6
baz=93,SNR=13
BMO Blue Mountains 92.98 43 *e*P P 02 34 39.5 -0.4
BMO pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
BMO MLR MLR
comp=Z,1μm,20.0s,MS5.4
BMO Blue Mountains 92.98 43 *e*P P 02 34 39.5 -0.4
comp=Z,2.8nm,0.8s,mb4.7
BMO LR LR
comp=Z,1μm,20.0s,MS5.4
U15A North Rim 93.03 52 ⇑P P 02 34 40.6 +0.3
baz=93,SNR=8.1
218A Dragoon 93.07 57 ⇓P P 02 34 40.7 +0.1
baz=93,SNR=22
Y17A Roosevelt 93.09 55 ⇑P P 02 34 40.3 -0.4
baz=93,SNR=8.9
W16A Flagstaff 93.09 54 ⇑P P 02 34 40.7 +0.1
baz=93,SNR=6.1
M12A Wells 93.13 47 ⇓P P 02 34 41.1 +0.5
baz=93
T15A Red Dirt Ranch 93.19 52 ⇓P P 02 34 41.6 +0.5
baz=93
H10A Noah's Angus R 93.23 44 ⇑P P 02 34 39.8 -1.2
baz=93,SNR=10
B08A Colville Reser 93.27 39 ⇑P P 02 34 40.6 -0.5
baz=94
G10A Bishop Farm, J 93.29 43 ⇓P P 02 34 41.1 -0.2
baz=94,SNR=8.2
Q14A Sevier Lake (B 93.31 50 ⇑P P 02 34 41.6 +0.1
baz=94,SNR=5.9
D09A Jones Farm, Ri 93.31 41 ⇑P P 02 34 41.3 -0.1
baz=94
MFID Camas Ranch 93.33 45 ⇑P P 02 34 41.8 +0.3
baz=94,SNR=7.2
WUAZ Wupatki 93.37 53 *e*P P 02 34 42.9 +1.0
WUAZ comp=Z,9.8nm,0.9s,mb5.2
WUAZ LR LR
comp=Z,618nm,22.0s,MS5.0
118A Homack Ranch, 93.38 57 ⇑P P 02 34 42.0 0.0
baz=94,SNR=14
N13A Wendover, West 93.39 48 ⇑P P 02 34 41.5 -0.3
baz=94
319A Douglas 93.46 58 ⇑P P 02 34 43.3 +0.9
baz=94,SNR=13
GUN Gumma 93.51 298 *e*P P 02 34 42.2 -0.5
M13A Montello 93.62 47 ⇓P P 02 34 43.3 +0.3
baz=94,SNR=8.3
K12A Draper Farm, C 93.63 46 ⇓P P 02 34 43.0 +0.1
baz=94
DGAR Diego Garcia 93.67 261 PFAKE 02 34 50.0 +6.2
DGAR LR LR
comp=Z,2μm,19.0s,MS5.5
P14A Drum Mountains 93.69 49 ⇑P P 02 34 43.6 +0.3
baz=94
219A White Tail Can 93.70 57 ⇑P P 02 34 44.3 +0.8
baz=94,SNR=13
Y18A Canyon Day Jun 93.74 56 ⇑P P 02 34 44.6 +0.9
baz=94,SNR=6.9
H11A Donnelly 93.75 44 ⇓P P 02 34 43.1 -0.3
baz=94,SNR=11
J12A Stokes Ranch, 93.75 45 P P 02 34 43.6 +0.2
baz=94,SNR=12
PKI Phuhoki 93.78 298 *e*P P 02 34 43.5 -0.5
comp=Z,99nm,1.2s,mb6.1
U16A Tuba City 93.79 53 P P 02 34 44.6 +0.8
baz=94,SNR=7.2
PKIN Phulchoki 93.79 298 *e*P P 02 34 42.9 -1.1
comp=Z,56nm,1.1s,mb5.9
G11A Walters Elk Ra 93.88 43 ⇓P P 02 34 43.5 -0.5
baz=94
MVU Marysvale 93.88 50 PFAKE 02 35 00.0 +16
MVU LR LR
comp=Z,991nm,20.0s,MS5.3
MSU Marysvale 93.91 50 *e*P P 02 34 45.0 +0.7
119A Ashpeak Ranch, 93.95 57 ⇑P P 02 34 43.7 -1.0
baz=94,SNR=5.5
KKN Kakani 93.96 298 *e*P P 02 34 44.6 -0.2
comp=Z,49nm,1.1s,mb5.9
DMN Daman 94.05 298 *e*P P 02 34 45.1 -0.1
comp=Z,79nm,1.0s,mb6.1
X18A Snowflake 94.08 55 ⇑P P 02 34 45.5 +0.3
baz=94
N14A Grayback Hills 94.10 48 ⇓P P 02 34 44.8 -0.3
baz=94
DUG Dugway 94.11 49 *e*P P 02 34 45.3 +0.1
DUG pmax pmax
comp=Z,7.0nm,1.4s,mb4.9
DUG MLR MLR
comp=Z,1μm,20.0s,MS5.3
DUG Dugway 94.11 49 *e*P P 02 34 45.3 +0.1
comp=Z,7.0nm,1.4s,mb4.9
DUG LR LR
comp=Z,1μm,20.0s,MS5.3
M14A Sheep Mountain 94.24 47 ⇑P P 02 34 45.6 -0.1
baz=94,SNR=11
R16A Teasdale 94.33 51 ⇑P P 02 34 46.9 +0.6
baz=94,SNR=9.2
HLID Hailey 94.33 45 ⇑P P 02 34 46.5 +0.4
baz=94,SNR=6.5
HLID Hailey 94.33 45 *e*P P 02 34 46.4 +0.3
comp=Z,2.9nm,0.9s,mb4.7
HLID LR LR
comp=Z,1μm,20.0s,MS5.4
T17A Navajo Res., N 94.35 52 ⇓P P 02 34 47.0 +0.6
baz=94,SNR=5.5
J13A Cove Ranch, Pi 94.43 45 ⇑P P 02 34 47.0 +0.4
baz=95,SNR=6.6
L14A Malta 94.52 47 ⇑P P 02 34 47.4 +0.4
baz=95
NEW Newport 94.55 40 *e*P P 02 34 46.6 -0.4
NEW pmax pmax
comp=Z,1.0nm,0.5s
NEW MLR MLR
comp=Z,706nm,19.0s
NEW Newport 94.55 40 *e*P P 02 34 46.5 -0.5
comp=Z,1.4nm,0.5s,mb4.7
NEW LR LR
comp=Z,706nm,19.0s,MS5.2
GKN Gorkha 94.57 298 *e*P P 02 34 46.6 -1.0
comp=Z,48nm,1.1s,mb5.8
F12A Elk City 94.67 43 ⇑P P 02 34 46.8 -0.9
baz=95
I13A Wildhorse Cree 94.67 45 ⇓P P 02 34 47.9 +0.2
baz=95
HVU Hansel Valley 94.75 47 *e*P P 02 34 48.1 0.0
HVU pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
HVU Hansel Valley 94.75 47 *e*P P 02 34 48.0 0.0
comp=Z,5.5nm,0.8s,mb5.0
Q16A Castle Valley 94.79 50 ⇓P P 02 34 49.1 +0.8
baz=95
H13A Challis 94.84 44 ⇓P P 02 34 48.2 -0.3
baz=95
R17A Hanksville Air 94.94 51 P P 02 34 49.5 +0.5
baz=95,SNR=6.6
G13A Cobalt 95.06 44 ⇑P P 02 34 49.2 -0.2
baz=95
T18A Mexican Hat 95.09 52 ⇑P P 02 34 49.7 0.0
baz=95,SNR=10
F13A Darby 95.28 43 ⇓P P 02 34 49.4 -1.0
baz=96
SRU San Rafael 95.33 50 *e*P P 02 34 50.7 -0.1
SRU pmax pmax
comp=Z,3.0nm,0.6s,mb4.9
SRU San Rafael 95.33 50 *e*P P 02 34 50.7 -0.1
comp=Z,2.7nm,0.6s,mb4.8
KOLN Koldanda 95.35 297 *e*P P 02 34 51.0 -0.2
comp=Z,20nm,1.0s,mb5.5
DANN Dangsing 95.42 298 *e*P P 02 34 50.3 -1.2
comp=Z,57nm,1.1s,mb5.9
HWUT Hardware Ranch 95.52 48 *e*P P 02 34 51.1 -0.5
comp=Z,2.8nm,0.8s,mb4.7
HWUT LR LR
comp=Z,742nm,21.0s,MS5.1
O17A Robinson Place 95.58 49 ⇓P P 02 34 50.5 -1.4
baz=96
TIXI Tiksi 95.60 348 PFAKE 02 35 00.0 +8.7
TIXI LR LR
comp=Z,622nm,20.0s,MS5.1
MSO Missoula 95.94 42 PFAKE 02 35 00.0 +6.6
MSO LR LR
comp=Z,756nm,20.0s,MS5.2
MVCO Mesa Verde 96.14 53 PFAKE 02 35 10.0 +15
MVCO LR LR
comp=Z,764nm,20.0s,MS5.2
AHID Auburn Hatcher 96.27 47 PFAKE 02 35 10.0 +15
AHID LR LR
comp=Z,519nm,21.0s,MS5.0
TPAW Teton Pass 96.63 46 *e*P P 02 34 56.9 +0.2
comp=Z,1.9nm,0.9s,mb4.5
LOHW Long Hollow 96.91 46 *e*P P 02 34 57.9 0.0
comp=Z,1.0nm,0.6s,mb4.4
ANMO Albuquerque 96.92 55 *e*P P 02 34 58.3 +0.1
ANMO pmax pmax
comp=Z,2.0nm,0.8s
ANMO MLR MLR
comp=Z,645nm,20.0s
ANMO Albuquerque 96.92 55 *e*P P 02 34 58.3 +0.1
comp=Z,1.9nm,0.8s,mb4.6
ANMO LR LR
comp=Z,645nm,20.0s,MS5.1
BOZ Bozeman (W) 96.97 44 PFAKE 02 35 10.0 +12
BOZ LR LR
comp=Z,1μm,19.0s,MS5.4
TXAR Lajitas Array 97.32 62 P P 02 35 00.1 0.0
comp=Z,1.4nm,0.8s,mb4.4,baz=225,slow=5.6,SNR=14
TXAR PKKP PKKPbc 02 51 40.1 +1.3
comp=Z,0.9nm,0.9s,baz=90,slow=3.8,SNR=6.4
TXAR LR LR 03 13 36.8
comp=Z,840nm,18.0s,MS5.3,baz=55,slow=32
BW06 Boulder Array 97.33 47 PFAKE 02 35 10.0 +10
BW06 LR LR
comp=Z,616nm,19.0s,MS5.1
PDAR Pinedale Array 97.33 47 P P 02 34 59.0 -0.8
comp=Z,1.3nm,0.8s,mb4.4,baz=205,slow=3.1,SNR=7.4
PDAR PP PP 02 38 56.4 -0.7
comp=Z,0.5nm,0.3s,baz=251,slow=5.6,SNR=3.3
PDAR LR LR 03 16 31.3
comp=Z,384nm,18.1s,MS4.9,baz=240,slow=34
LKWY Lake 97.39 45 PFAKE 02 35 10.0 +10
LKWY LR LR
comp=Z,1μm,20.0s,MS5.3
WMQ Urumqi 97.73 314 P P 02 35 02.3 +0.7
WMQ AP pP 02 35 12.0 -0.2
WMQ XP sP 02 35 16.8 +0.8
WMQ PP PP 02 39 02.0 +1.8
WMQ SKS 02 45 36.0
WMQ *e*S S 02 46 22.0 -2.9
WMQ AMB AMB
comp=Z,27nm,1.2s,mb5.7
WMQ AMB AMB
comp=Z,390nm,7.1s
WMQ LR LR
comp=N,608nm,23.6s,MS5.3
WMQ LR LR
comp=E,1μm,22.8s,MS5.3
WMQ LR LR
comp=Z,1μm,22.8s,MS5.3
PLCA Paso Flores 97.95 139 LR LR 03 08 43.9
comp=Z,346nm,21.9s,MS4.8,baz=222,slow=29
RLMT Red Lodge 98.34 45 PFAKE 02 35 20.0 +16
RLMT LR LR
comp=Z,2μm,20.0s,MS5.5
SDCO Great Sand Dun 98.57 53 PFAKE 02 35 20.0 +14
SDCO LR LR
comp=Z,724nm,20.0s,MS5.2
EGMT Eagleton 99.02 42 PFAKE 02 35 20.0 +13
EGMT LR LR
comp=Z,693nm,20.0s,MS5.2
ISCO Idaho Springs 99.14 51 PFAKE 02 35 20.0 +12
ISCO LR LR
comp=Z,622nm,20.0s,MS5.1
AMTX Amarillo 100.63 57 PFAKE 02 35 30.0 +15
AMTX LR LR
comp=Z,656nm,19.0s,MS5.2
LAO LASA Array 100.86 44 PFAKE 02 35 30.0 +14
LAO LR LR
comp=Z,1μm,20.0s,MS5.5
JCT Junction City 100.86 62 PFAKE 02 35 30.0 +14
JCT LR LR
comp=Z,1μm,21.0s,MS5.3
KVTX Kingsville 101.61 65 PFAKE 02 35 30.0 +11
KVTX LR LR
comp=Z,731nm,19.0s,MS5.2
OGNE Ogallala 102.09 51 PFAKE 02 35 30.0 +9.0
OGNE LR LR
comp=Z,855nm,20.0s,MS5.3
MKAR Makanchi Array 102.29 315 P Pdif 02 35 19.9 -1.9
comp=Z,0.5nm,0.6s,baz=80,slow=36,SNR=4.8
MKAR PP PP 02 39 31.6 -3.1
comp=Z,2.9nm,1.0s,baz=108,slow=7.8,SNR=5.6
MKAR Makanchi Array 102.29 315 P Pdif 02 35 19.9 -2.0
MKAR PP PP 02 39 31.6 -3.1
DGMT Dagmar 102.69 43 PFAKE 02 35 30.0 +6.3
DGMT LR LR
comp=Z,696nm,22.0s,MS5.1
WMOK Wichita Mounta 102.88 58 PFAKE 02 35 40.0 +15
WMOK LR LR
comp=Z,735nm,19.0s,MS5.2
CBKS Cedar Bluff 103.22 53 PFAKE 02 35 40.0 +14
CBKS LR LR
comp=Z,490nm,20.0s,MS5.0
NVS Novosibirsk 103.89 324 *e*P Pdif 02 35 20.8 -8.2
NVS *e*PS Sdif 02 47 16.7 +0.3
NVS pmax pmax
comp=Z,28nm,2.3s
NVS pmax pmax
comp=Z,16nm,1.9s
HKT Hockley 104.01 63 PFAKE 02 35 40.0 +10
HKT LR LR
comp=Z,1μm,20.0s,MS5.4
LCO Las Campanas 104.41 129 PFAKE 02 35 40.0 +8.7
LCO LR LR
comp=Z,766nm,20.0s,MS5.2
TRQA Tornquist 104.82 141 PFAKE 02 35 40.0 +6.9
TRQA LR LR
comp=Z,346nm,19.0s,MS4.9
NATX Nacogdoches 105.45 61 PFAKE 02 40 00.0 +10
NATX LR LR
comp=Z,1μm,19.0s,MS5.4
FFC Flin Flon 105.59 37 PFAKE 02 40 00.0 +11
FFC LR LR
comp=Z,1μm,20.0s,MS5.4
KURK Kurchatov 105.62 319 Pdiff Pdif 02 35 34.9 -1.8
comp=Z,1.1nm,0.9s,baz=72,slow=2.7,SNR=3.0
KURK PP PP 02 39 56.7 -2.7
comp=Z,2.4nm,1.0s,baz=106,slow=8.2,SNR=7.3
KURK Kurchatov 105.62 319 Pdif Pdif 02 35 34.9 -1.8
KURK *e*PKP PKiKP 02 39 46.0 -3.6
KURK PP PP 02 39 56.7 -2.7
KURK LR LR
comp=Z,407nm,19.0s,MS5.0
KSU1 Kansas State U 105.65 54 PFAKE 02 40 00.0 +10

KSU1 LR LR
comp=Z,682nm,20.0s,MS5.2
TKM2 Tokmak 2 105.93 310 PFAKE 02 40 00.0 +10
TKM2 LR LR
comp=Z,379nm,20.0s,MS4.9
UCH Uchtor 106.56 309 PFAKE 02 40 00.0 +8.4
UCH LR LR
comp=Z,47nm,21.0s,MS4.0
ECSD EROS,Sioux Fal 106.67 49 PFAKE 02 40 00.0 +8.2
ECSD LR LR
comp=Z,1µm,20.0s,MS5.4
MIAR Mount Ida 106.99 59 PFAKE 02 40 00.0 +7.3
MIAR LR LR
comp=Z,692nm,19.0s,MS5.2
AML Almayashu 107.14 309 PFAKE 02 40 00.0 +7.3
AML LR LR
comp=Z,497nm,22.0s,MS5.0
EKS2 Erkin-Say 107.18 310 PFAKE 02 40 00.0 +7.2
EKS2 LR LR
comp=Z,343nm,21.0s,MS4.9
TGUH Tegucigalpa,Un 107.31 81 PFAKE 02 40 00.0 +6.2
TGUH LR LR
comp=Z,584nm,21.0s,MS5.1
NNA Nana 107.71 110 PFAKE 02 40 10.0 +15
NNA LR LR
comp=Z,615nm,20.0s,MS5.2
AGMN Agassiz Refuge 108.06 44 PFAKE 02 40 10.0 +16
AGMN LR LR
comp=Z,1µm,22.0s,MS5.4
TEIG Tepich 108.09 75 PFAKE 02 40 10.0 +15
TEIG LR LR
comp=Z,946nm,21.0s,MS5.3
JTS JuntasAbangare 108.35 86 PFAKE 02 40 10.0 +14
JTS LR LR
comp=Z,346nm,19.0s,MS4.9
SCIA State Center 108.77 51 PFAKE 02 40 10.0 +14
SCIA LR LR
comp=Z,798nm,19.0s,MS5.3
VBMS Vicksburg 108.98 62 PFAKE 02 40 10.0 +14
VBMS LR LR
comp=Z,1µm,20.0s,MS5.4
LVC Limon Verde 109.21 124 PFAKE 02 40 10.0 +13
LVC LR LR
comp=Z,571nm,20.0s,MS5.1
CCM Cathedral Cave 109.55 56 PFAKE 02 40 10.0 +13
CCM LR LR
comp=Z,810nm,20.0s,MS5.3
MSEY Mahe Island 110.33 257 PFAKE 02 40 10.0 +10
MSEY LR LR
comp=Z,1µm,19.0s,MS5.4
OXF Oxford 110.35 60 PFAKE 02 40 10.0 +11
OXF LR LR
comp=Z,454nm,20.0s,MS5.0
EYMN Ely 110.90 45 PFAKE 02 40 10.0 +10
EYMN LR LR
comp=Z,1µm,20.0s,MS5.5
ABPO Ambohimpanom 111.00 239 PFAKE 02 40 10.0 +9.3
ABPO LR LR
comp=Z,1µm,21.0s,MS5.4
BVAR Borovoye Array 111.03 320 PKiKP PKiKP 02 39 58.8 -0.8
comp=Z,2.1nm,0.7s,baz=64,slow=3.4,SNR=7.5
BVAR PP PP 02 40 32.3 -6.4
comp=Z,0.4nm,0.3s,baz=112,slow=2.3,SNR=2.7
BRVK Borovoye 111.09 320⇑ *e*PKIKP PKiKP 02 39 59.7 -0.1
BRVK MLR MLR
comp=Z,571nm,21.0s,MS5.1
JFWS Jewell Farm 111.10 51 PFAKE 02 40 10.0 +10
JFWS LR LR
comp=Z,1µm,20.0s,MS5.5
OTAV Otavalo 111.12 98 PFAKE 02 40 10.0 +8.9
OTAV LR LR
comp=Z,407nm,22.0s,MS5.0
BRAL Brewton 111.63 64 PFAKE 02 40 10.0 +8.5
BRAL LR LR
comp=Z,632nm,20.0s,MS5.2
WVT Waverly 111.91 58 PFAKE 02 40 10.0 +8.1
WVT LR LR
comp=Z,519nm,20.0s,MS5.1
LRAL Lakeview Retre 112.05 62 PFAKE 02 40 10.0 +7.7
LRAL LR LR
comp=Z,726nm,19.0s,MS5.3
COWI Conover 112.29 47 PFAKE 02 40 10.0 +7.7
COWI LR LR
comp=Z,1µm,19.0s,MS5.5
BCIP Isla Barro Col 112.81 88 PFAKE 02 40 20.0 +16
BCIP LR LR
comp=Z,448nm,22.0s,MS5.0
LPAZ La Paz 113.14 119 PKiKP PKiKP 02 40 05.0 +0.2
comp=Z,2.3nm,1.0s,baz=299,slow=2.5,SNR=5.9
LPAZ La Paz 113.14 119 PKPdf PKiKP 02 40 05.0 +0.2
LPAZ LR LR
comp=Z,104nm,19.0s,MS4.5
WCI Wyandotte Cave 113.43 56 PFAKE 02 40 20.0 +15
WCI LR LR
comp=Z,574nm,20.0s,MS5.2
GOGA Godfrey 115.03 62 PFAKE 02 40 20.0 +12
GOGA LR LR
comp=Z,799nm,19.0s,MS5.3
GLMI Grayling 115.34 49 PFAKE 02 40 20.0 +12
GLMI LR LR
comp=Z,934nm,20.0s,MS5.4
TZTN Tazewell 115.39 58 PFAKE 02 40 20.0 +11
TZTN LR LR
comp=Z,364nm,20.0s,MS5.0
CPUP Villa Florida 115.48 134 PKP PKPdf 02 40 08.0 -1.1
comp=Z,2.7nm,1.0s,baz=215,slow=9.9,SNR=3.5
CPUP Villa Florida 115.48 134 PKP PKPdf 02 40 08.0 -1.1
AAM Ann Arbor 115.87 52 PFAKE 02 40 20.0 +11
AAM LR LR
comp=Z,860nm,20.0s,MS5.4
DWPF Disney 115.92 68 PFAKE 02 40 20.0 +10
DWPF LR LR
comp=Z,532nm,20.0s,MS5.2
ACSO Alum Creek Sta 116.21 54 PFAKE 02 40 20.0 +10
ACSO LR LR
comp=Z,836nm,19.0s,MS5.4
NHSC New Hope 117.72 62 PFAKE 02 40 20.0 +6.9
NHSC LR LR
comp=Z,711nm,20.0s,MS5.3
ARU Arti 117.89 324 *i* PKIKP PKPdf 02 40 11.8 -0.9
ARU 02 41 23.5
ARU 02 47 01.3
ARU Arti 117.89 324 *e*PKPdf PKPdf 02 40 11.2 -1.4
ARU LR LR
comp=Z,443nm,20.0s,MS5.1
BLA Blacksburg 117.95 58 PFAKE 02 40 20.0 +6.6
BLA LR LR
comp=Z,562nm,20.0s,MS5.2
MCWV Mont Chateau 118.57 55 PFAKE 02 40 30.0 +15
MCWV LR LR
comp=Z,871nm,21.0s,MS5.4
AKTK Aktyubinsk 118.64 317 PKP PKPdf 02 40 12.7 -1.6
AKTO Aktyubinsk 118.64 317 PKP PKPdf 02 40 12.7 -1.6
comp=Z,4.4nm,0.9s,baz=116,slow=1.3,SNR=11
SIV San Ignacio 119.02 122 PKP PKPdf 02 40 15.4 -0.7
comp=Z,3.7nm,0.9s,baz=200,slow=2.9,SNR=13
CNNC Cliffs of the 119.83 60 PFAKE 02 40 30.0 +13
CNNC LR LR
comp=Z,850nm,20.0s,MS5.4
KBS Kingsbay 120.22 355 PFAKE 02 40 30.0 +13
KBS LR LR
comp=Z,319nm,19.0s,MS5.0
BOSA Boshof 120.25 217 PKP PKPdf 02 40 16.9 -1.3
comp=Z,5.5nm,1.0s,baz=332,slow=2.1,SNR=11
SDV Santo Domingo 121.37 92 PFAKE 02 40 30.0 +9.3
SDV LR LR
comp=Z,91nm,20.0s,MS4.4
BINY Binghamton 121.55 52 PFAKE 02 40 30.0 +10
BINY LR LR
comp=Z,906nm,20.0s,MS5.4
LONY Lake Ozonia 122.49 49 PFAKE 02 40 30.0 +8.1
LONY LR LR
comp=Z,1µm,19.0s,MS5.5
LBTB Lobatse 122.77 220 PFAKE 02 40 30.0 +6.8
LBTB LR LR
comp=Z,715nm,19.0s,MS5.3
NCB Newcomb 122.79 50 PFAKE 02 40 30.0 +7.5
NCB LR LR
comp=Z,1µm,20.0s,MS5.5
LBNH Lisbon 124.42 50 PFAKE 02 40 40.0 +14
LBNH LR LR
comp=Z,1µm,20.0s,MS5.6
LVZ Lovozero 124.47 341 PFAKE 02 40 40.0 +15
LVZ LR LR
comp=Z,881nm,21.0s,MS5.4

HRV Adam Dziewonsk 124.82 52 PFAKE 02 40 40.0 +14
HRV LR LR
comp=Z,819nm,19.0s,MS5.4
WES Weston 125.00 52 PFAKE 02 40 40.0 +13
WES LR LR
comp=Z,965nm,21.0s,MS5.4
SUMG Summit 125.27 10 *e*PKPdf PKPdf 02 40 25.8 -0.7
ARCES ARCESS Array B 125.91 345 PKP PKPdf 02 40 25.6 -2.1
comp=Z,12nm,0.8s,baz=63,slow=2.0,SNR=30
PKME Peaks-Kenny Pk 126.17 48 PFAKE 02 40 40.0 +11
PKME LR LR
comp=Z,1µm,20.0s,MS5.6
LSZ Lusaka 127.89 230 PKP PKPdf 02 40 33.3 +0.1
comp=Z,4.6nm,0.8s,baz=154,slow=2.5,SNR=10
LSZ Lusaka 127.89 230 *e*PKPdf PKPdf 02 40 33.8 +0.6
LSZ LR LR
comp=Z,909nm,21.0s,MS5.4
SJG San Juan 127.97 82 *e*PKIKP PKPdf 02 40 31.2 -2.0
SJG *e* 02 40 41.7
SJG MLR MLR
comp=Z,288nm,20.0s
CPD Cerro la Pandu 128.17 83 *e*PKIKP PKPdf 02 40 32.1 -1.5
CPD *e* 02 40 42.3
HUMP Col San Antoni 128.25 82 *e*PKPdf PKPdf 02 40 32.4 -1.4
KMBO Kilima Mbogo 128.31 252 PKP PKPdf 02 40 33.8 -0.3
comp=Z,4.7nm,1.0s,baz=97,slow=3.9,SNR=7.6
KMBO Kilima Mbogo 128.31 252 *e*PKPdf PKPdf 02 40 34.6 +0.5
KMBO *e* 02 40 45.8
KMBO LR LR
comp=Z,667nm,21.0s,MS5.3
JOF Joensuu 128.53 337 *ep* PKPdf 02 40 31.4 -1.5
comp=Z,17nm,1.0s
JOF Joensuu 128.53 337 *e*PKIKP PKPdf 02 40 31.4 -1.5
JOF pmax pmax
comp=Z,17nm,1.0s
GNI Garni 128.78 306⇑ *e*PKIKP PKPdf 02 40 34.8 +0.7
GNI pmax pmax
comp=Z,24nm,2.0s
GNI Garni 128.78 306⇑ *e*PKP PKPdf 02 40 36.1 +2.0
GNI LR LR
comp=Z,360nm,20.0s,MS5.1
BDFB Brasilia 129.06 132 PKP PKPdf 02 40 34.8 -0.6
comp=Z,15nm,0.9s,baz=187,slow=2.9,SNR=17
BDFB Brasilia 129.06 132 PKP PKPdf 02 40 34.8 -0.6
BDFB LR LR
comp=Z,889nm,22.0s,MS5.4
MOS Moscow 129.37 327 *e*PKHKP 02 40 21.8
KIV Kislovodsk 129.76 311 *e*PKIKP PKPdf 02 40 36.1 +0.2
KIV MLR MLR
comp=Z,448nm,21.0s,MS5.1
KIV Kislovodsk 129.76 311 *e*PKPdf PKPdf 02 40 36.1 +0.3
KIV LR LR
comp=Z,448nm,21.0s,MS5.1
OBN Obninsk 130.18 326⇑ *i*PKIKP PKPdf 02 40 35.6 -0.7
OBN *i* 02 40 46.2
OBN pmax pmax
comp=Z,35nm,1.3s
OBN MLR MLR
comp=Z,500nm,20.0s,MS5.2
OBN Obninsk 130.18 326⇓ *e*PKP PKPdf 02 40 35.7 -0.6
BBSR BB Station 130.70 64 PFAKE 02 40 50.0 +12
BBSR LR LR
comp=Z,430nm,21.0s,MS5.1
GRGR Grenville 130.76 91 PFAKE 02 40 50.0 +11
GRGR LR LR
comp=Z,337nm,21.0s,MS5.0
KAF Kangasniemi 130.85 338 *ep* PKPdf 02 40 35.4 -1.9
comp=Z,4.5nm,0.7s
KAF Kangasniemi 130.85 338 *e*PKIKP PKPdf 02 40 35.4 -1.9
KAF pmax pmax
comp=Z,5.0nm,0.7s
TSUM Tsumeb 131.95 217 PFAKE 02 40 50.0 +9.2
TSUM LR LR
comp=Z,617nm,20.0s,MS5.3
MALT Malatya 133.87 304⇓ *i*P PKPdf 02 40 43.3 -0.5
MALT Malatya 133.87 304 *e*PKPdf PKPdf 02 40 43.0 -0.8
MALT LR LR
comp=Z,636nm,21.0s,MS5.3
AKASG Malin Array Be 136.14 324 PKP PKPdf 02 40 46.9 -0.8
comp=Z,3.4nm,0.8s,baz=58,slow=1.8,SNR=9.4
KIEV Kiev 136.16 324 PFAKE 02 41 00.0 +12
KIEV LR LR
comp=Z,444nm,20.0s,MS5.2
NB2 NORSAR Subarra 136.28 345 PKPdf PKPdf 02 40 46.9 -0.7
comp=Z,2.2nm,0.8s,baz=31,slow=1.9
ANTO Ankara 137.85 308⇑ *i*P PKPdf 02 40 51.8 +0.6
ANTO Ankara 137.85 308 *e*PKPdf PKPdf 02 40 51.2 0.0
ANTO *e* 02 41 02.0
ANTO LR LR
comp=Z,380nm,20.0s,MS5.1
TIRR Tirgusor 139.42 316⇓ *i*P PKPdf 02 40 49.1 -4.8
TIRR Tirgusor 139.42 316⇓ P PKPdf 02 40 49.1 -4.8
LVV L'vov 139.44 325 *e*PKHKP 02 40 42.4
VRI Vrincioaia 139.90 319⇑ *i*P PKPdf 02 40 51.9 -2.8
VRI Vrincioaia 139.90 319⇑ P PKPdf 02 40 51.9 -2.8
BUR08 Bucovina Ar. S 139.96 322 *e*PKPdf PKPdf 02 40 51.4 -3.4
BURAR Bucovina Array 139.96 322⇓ *i*P PKPdf 02 40 48.7 -6.1
BURAR Bucovina Array 139.96 322⇓ P PKPdf 02 40 48.7 -6.1
ISP Isparta 140.09 305 PFAKE 02 41 10.0 +15
ISP LR LR
comp=Z,396nm,19.0s,MS5.2
KWP Kalwaria 140.26 326 *e*PKIKP PKPdf 02 40 54.5 -0.7
KWP *e* 02 41 05.0
MLR Muntele Rosu 140.56 318⇑ *i*P PKPdf 02 40 51.1 -4.8
MLR Muntele Rosu 140.56 318⇑ P PKPdf 02 40 51.1 -4.8
KOLS Kolonicke sedl 140.89 325 *e*PKP PKPdf 02 40 49.9 -6.5
UZH Uzhgorod 141.06 325 *e*PKHKP PKPdf 02 40 50.0 -6.7
STHS Stebnicka Huta 141.15 326 *e*PKP PKPdf 02 40 52.2 -4.7
STHS Stebnicka Huta 141.15 326 *e*PKP PKPdf 02 40 52.3 -4.6
CRVS Cervenica-Dubn 141.35 326 *e*PKP PKPdf 02 40 51.9 -5.3
NIE Niedzica 141.63 327 *e*PKP PKPdf 02 40 53.1 -4.6
DRGR 141.85 322⇑ *i*P PKPdf 02 40 53.9 -4.3
DRGR 141.85 322 P PKPdf 02 40 53.4 -4.8
KECS Kecovo 142.12 326 *e*PKP PKPdf 02 40 54.4 -4.2
OKC Ostrava-Krasne 142.44 329 *e*PKP PKPdf 02 40 56.9 -2.3
GZR Gura Zlata 142.55 320⇓ *i*P PKPdf 02 40 55.6 -3.9
GZR Gura Zlata 142.55 320⇓ P PKPdf 02 40 55.6 -3.9
BSEG Bad Segeberg 142.56 339 *e*PKPbc PKPdf 02 40 54.5 -4.7
KDZ Kurdzhali 142.56 313 P PKPdf 02 40 54.5 -5.2
KSP Ksiaz 142.62 331 *e*PKIKP PKPdf 02 40 55.1 -4.3
PSZ Piszkesteto 142.77 325⇑ *i*P PKPdf 02 40 57.1 -2.7
PSZ Piszkesteto 142.77 325 *e*PKPpre PKPdf 02 40 55.8 -4.0
PSZ LR LR
comp=Z,731nm,20.0s,MS5.4
MORC Moravsky Berou 142.78 329⇑ *i*P PKPdf 02 40 56.3 -3.5
MORC Moravsky Berou 142.78 329 *e*PKPpre PKPdf 02 40 56.0 -3.7
DPC Dobruska-Polom 142.95 331 *e*PKP PKPdf 02 40 56.0 -4.0
DPC *ex* x 02 41 06.7
VYHS Vyhne 142.97 327 *e*PKP PKPdf 02 40 56.1 -4.0
UPC Upice 142.98 331 *e*PKP PKPdf 02 40 56.6 -3.5
UPC *ex* x 02 41 03.3
RZN Rozhen 143.03 314 P PKPdf 02 40 55.6 -4.9
PGB Panagyurishte 143.03 315 P PKPdf 02 40 55.9 -4.5
BZS Buzias 143.12 321⇓ *i*P PKPdf 02 40 57.4 -3.1
BZS Buzias 143.12 321 P PKPdf 02 40 57.2 -3.3
KOLL Kolacno 143.14 327 *e*PKP PKPdf 02 40 57.4 -3.0
VRAC Vranov 143.55 329⇓ *i*P PKPdf 02 40 59.0 -2.1
VRAC Vranov 143.55 329 P PKPdf 02 40 59.2 -1.9
PVCC Panska Ves 143.61 332 *e*PKP PKPdf 02 40 58.2 -3.0
PVCC *ex* x 02 41 04.8
BRG Berggiesshubel 143.62 333 *i* PKIKP PKPdf 02 40 58.3 -2.9
BRG *i* 02 41 08.4
BRG MLR MLR
comp=Z,380nm,19.1s,MS5.2
BRG Berggiesshubel 143.62 333 *e*PKPbc PKPdf 02 40 57.6 -3.6
BRG *ep*PKPbc 02 41 07.6
BRG Berggiesshubel 143.62 333 *i* PKP PKPdf 02 40 58.2 -3.0
comp=Z,66nm,1.1s
BRG *i* 02 41 08.4
comp=Z,80nm,1.3s
BRG SKP 02 44 47.7
comp=Z,16nm,1.5s
BRG
comp=N,686nm,20.7s
BRG
comp=E,339nm,15.9s
BRG
comp=Z,383nm,19.1s
BRG Berggiesshubel 143.62 333 *i* PKP PKPdf 02 40 58.2 -3.0
BRG *i* 02 41 08.4
BRG SKP 02 44 47.7
BRG LR LR
comp=Z,380nm,19.1s,MS5.2

VTS Vitosha 143.64 316⇑ *i*P PKPdf 02 40 59.5 -2.0
VTS Vitosha 143.64 316 P PKPdf 02 40 59.0 -2.5
VTS Vitosha 143.64 316 P PKPdf 02 40 59.2 -2.3
CLL Collm 143.68 335⇓ *i*PKIKP PKPdf 02 40 58.4 -2.9
CLL *i* 02 41 08.2
CLL pmax pmax
comp=Z,46nm,1.1s
CLL MLR MLR
comp=Z,500nm,19.0s,MS5.3
CLL Collm 143.68 335 *e*PKPbc PKPdf 02 40 57.5 -3.8
CLL *ep*PKPbc 02 41 07.6
CLL Collm 143.68 335⇓ *i*PKPdf PKPdf 02 40 58.4 -2.9
comp=Z,46nm,1.1s
CLL *i* pPKPdf pPKPdf 02 41 08.2 -4.0
CLL *i* sPKPdf 02 41 15.2
CLL *e*PP PP 02 44 10.0 -3.5
CLL *i* (sSKPbc) 02 44 57.6
comp=Z,48nm,1.9s
CLL *e*PPP 02 47 18.0
CLL *e*PPS 02 56 48.0
CLL Lm 03 45 00.0
comp=Z,500nm,19.0s
CLL Collm 143.68 335⇓ *i*PKP PKPdf 02 40 58.4 -2.9
CLL *i* pPKP pPKPdf 02 41 08.2 -4.0
CLL *i* SKP 02 44 57.6
CLL LR LR
comp=Z,500nm,19.0s,MS5.3
MMB Musomiste 143.74 314 P PKPdf 02 40 58.1 -3.6
MODS Modra-Piesok 143.84 328 *e*PKP PKPdf 02 40 59.9 -1.8
MODS *e* 02 41 09.9
PRU Pruhonice 144.01 332 *e*PKP PKPdf 02 40 59.1 -2.8
PRU *ep*PKP pPKPdf 02 41 09.5 -3.3
PRU AMS AMS 03 41 10.0
comp=Z,1µm,21.1s
ZST Bratislava 144.05 328 *e*PKP PKPdf 02 41 01.1 -0.9
ZST *e* 02 41 10.6
ZST Bratislava 144.05 328 *e*PKP PKPdf 02 41 01.1 -0.9
ZST *e* 02 41 10.6
ZST LR LR
comp=Z,500nm,23.0s,MS5.2
KKB Krupnik 144.05 315 P PKPdf 02 40 59.3 -3.0
TREC Trest 144.08 330 *e*PKP PKPdf 02 40 59.2 -2.9
TREC *ep*PKP pPKPdf 02 41 10.4 -2.6
OUR Ouranopolis 144.09 312 *e*P PKPdf 02 41 00.1 -2.3
CLZ Clausthal 144.26 337 *e*PKPbc PKPdf 02 41 00.0 -2.3
CLZ *ep*PKPbc 02 41 10.1
SOH Sokhos 144.32 313 *e*P PKPdf 02 40 59.8 -3.0
SANT Santorini 144.37 305 *e*PKPdf PKPdf 02 41 00.6 -2.4
SANT *e* 02 41 10.0
SANT LR LR
comp=Z,240nm,20.0s,MS5.0
ESK Eskdalemuir 144.41 352 *e*PKIKP PKPdf 02 41 02.2 -0.2
PLG Polygyros 144.44 312 *e*P PKPdf 02 40 57.0 -6.0
PAIG Paliouri 144.46 311 *e*P PKPdf 02 41 00.3 -2.7
PKSM Moragy 144.49 324⇑ *i*P PKPdf 02 41 01.1 -1.8
KNT Kendrikon 144.49 314 *e*P PKPdf 02 41 01.2 -1.8
NPS Neapolis 144.56 303 *e*P PKPdf 02 41 00.0 -3.4
TANN Tannenbergstha 144.58 334 *e*PKPbc PKPdf 02 41 01.1 -1.8
TANN *ep*PKPbc 02 41 11.2
HORT Hortiatis 144.59 313 *e*P PKPdf 02 41 00.3 -2.9
VAY Valandovo 144.64 314⇑ *i*PKP PKPdf 02 41 00.4 -2.9
THE Thessaloniki 144.67 313 *e*P PKPdf 02 41 00.5 -2.8
STIP Stip 144.73 315⇑ *i*PKP PKPdf 02 41 00.5 -3.0
NKC Novy Kostel 144.73 334 *e*PKP PKPdf 02 41 01.7 -1.5
NKC *ep*PKP pPKPdf 02 41 12.5 -1.7
MOX Moxa 144.75 335 *e*PKP PKPdf 02 41 01.6 -1.6
comp=Z,326nm,1.6s
MOX *e* 02 41 12.1
MOX Moxa 144.75 335 *e*PKIKP PKPdf 02 41 01.6 -1.6
MOX *e* 02 41 12.1
MOX pmax pmax
comp=Z,326nm,1.6s
MOX Moxa 144.75 335 *e*PKPbc PKPdf 02 41 01.5 -1.7
MOX *ep*PKPbc 02 41 11.5
IBBN Ibbenburen 144.77 340 *e*PKPbc PKPdf 02 41 01.3 -1.9
IBBN *ep*PKPbc 02 41 11.3
CONA Conrad Observa 144.84 328⇓ *i*P PKPdf 02 41 02.7 -0.7
comp=Z,234nm,1.7s,SNR=67
CSNA Conrad Observa 144.84 328⇑ *i*P PKPdf 02 41 02.8 -0.7
comp=Z,220nm,1.7s
GRG Griva 144.91 314 *e*P PKPdf 02 41 01.6 -2.2
NEO Neokhori 145.03 311 *e*P PKPbc 02 41 00.6 -2.9
XOR Xorichti 145.03 311 *e*P PKPbc 02 41 02.4 -1.0
MANZ Manzenberg 145.06 334 *e*PKPbc PKPbc 02 41 02.8 -0.4
MANZ *ep*PKPbc pPKPbc 02 41 12.9 -1.0
KHC Kasperske Hory 145.07 332 *e*PKP PKPdf 02 41 02.7 -1.1
KHC *ep*PKP pPKPdf 02 41 12.5 -2.2
KHC *ex* x 02 41 24.0
KHC AMS AMS 03 43 40.0
comp=Z,1µm,21.9s
KHC Kasperske Hory 145.07 332 *e*PKP PKPdf 02 41 02.7 -1.1
KHC *e* 02 41 12.5
KHC LR LR
comp=Z,1µm,21.9s,MS5.6
SKO Skopje 145.09 316 *i* PKP PKPdf 02 41 03.8 -0.2
ATH Athens Observa 145.17 308 *e*P PKPbc 02 41 02.0 -2.0
KVR Kavouri 145.18 308 *e*P PKPbc 02 41 02.5 -1.5
ROTZ Rotzenmuhle 145.19 334 *e*PKPbc PKPbc 02 41 03.5 -0.1
ROTZ *ep*PKPbc pPKPbc 02 41 13.5 -0.9
GEC2 GERESS Array S 145.22 331 *e*PKPbc PKPbc 02 41 03.3 -0.5
GEC2 *ep*PKPbc pPKPbc 02 41 13.2 -1.3
GERES GERESS Array B 145.22 331 PKPbc PKPbc 02 41 03.4 -0.3
comp=Z,51nm,0.8s,baz=36,slow=3.3,SNR=274
LIT Litokhoron 145.22 312 *e*P PKPbc 02 41 02.8 -1.3
UBBA Unterbreizbach 145.23 337 *e*PKPbc PKPbc 02 41 03.1 -0.6
UBBA *ep*PKPbc pPKPbc 02 41 13.0 -1.5
WTSB Winterswijk 145.36 341 *e*PKP PKPdf 02 41 03.2 -1.0
comp=Z,203nm,1.7s
WTSB Winterswijk 145.36 341 *ex* x 02 41 13.8
comp=Z,279nm,1.3s
WET Wettzell 145.37 332 *e*PKPbc PKPbc 02 41 03.9 -0.3
WET *ep*PKPbc pPKPbc 02 41 14.0 -1.0
NAIG Nisos Aigina 145.41 308 *e*P PKPbc 02 41 03.0 -1.8
LKR Lokris 145.44 310 *e*P PKPdf 02 41 03.0 -1.8
LKR Lokris 145.44 310 *e*P PKPdf 02 41 01.7 -3.1
ARSA Arzberg 145.47 328⇑ *i*P PKPdf 02 41 04.4 -0.1
comp=Z,134nm,1.2s,SNR=51
KRUS Krusevo 145.50 315⇑ *i*PKP PKPdf 02 41 04.4 -0.4
BIA Bitola 145.62 314⇑ *i*PKP PKPdf 02 41 03.9 -1.1
IVA Berane 145.63 318⇓ *i*PKP PKPdf 02 41 05.7 +0.7
VAM Vamos 145.63 304 *e*P PKPdf 02 41 05.7 +0.5
KZN Kozani 145.63 313 *e*P PKPdf 02 41 02.7 -2.4
GRA1 Grafenberg Arr 145.65 334 *e*PKPbc PKPbc 02 41 05.0 -0.1
GRA1 *ep*PKPbc pPKPbc 02 41 15.0 -0.9
GRA1 *e*PP PP 02 44 26.5 +1.2
GRA1 LR LR
comp=Z,400nm,19.4s,MS5.2
GRF Grafenberg Arr 145.65 334 *e*PKPbc PKPbc 02 41 05.0 -0.1
GRF *ep*PKPbc pPKPbc 02 41 15.0 -0.9
GRF *e*PP PP 02 44 26.5 +1.2
GRF *eL* 03 46 35.9
comp=Z,370nm,19.4s
BUG Bochum--Univer 145.67 340 *e*PKPbc PKPbc 02 41 04.2 -0.9
BUG *ep*PKPbc pPKPbc 02 41 14.1 -1.8
MOA Molln 145.67 329⇑ *i*P PKPdf 02 41 05.0 +0.1
comp=Z,217nm,1.0s,SNR=97
FNA Florina 145.69 314 *e*P PKPdf 02 41 04.5 -0.6
DID Didima 145.69 308 *e*P PKPdf 02 41 02.7 -2.6
PLE Pljevlja 145.70 319⇓ *i*PKP PKPdf 02 41 06.2 +1.1
LTK Loutraki 145.70 309 *e*P PKPdf 02 41 03.2 -2.1
PVY Plav 145.72 318⇓ *i*PKP PKPdf 02 41 06.0 +0.9
AGG Agios Georgios 145.78 311 *e*P PKPdf 02 41 03.9 -1.5
THL Klokotos Trika 145.78 312 *e*P PKPdf 02 41 03.0 -2.3
THL Klokotos Trika 145.78 312 *e*P PKPdf 02 41 01.1 -4.2
GVD Gavdhos 145.88 303 *e*P PKPdf 02 41 05.5 -0.1
OHR Ohrid 145.92 315 *i* PKP PKPdf 02 41 04.2 -1.3
UPM Unac-Piva 146.06 319⇓ *i*PKP PKPdf 02 41 06.2 +0.5
PERS Pernice 146.09 327 *i* PKPdf PKPdf 02 41 05.9 +0.3
PERS *i* PKPbc pPKPbc 02 41 16.6 -0.8
SOKA Soboth 146.11 327⇑ *i*P PKPdf 02 41 06.0 +0.3
comp=Z,65nm,1.2s
SISC Sisak 146.19 325 P PKPdf 02 41 06.6 +0.8
EVR Evrytania 146.19 311 *e*P PKPdf 02 41 04.4 -1.7
NKY Niksic 146.22 319⇓ *i*PKP PKPdf 02 41 06.9 +0.9
KYTH Kithira 146.26 306 *e*P PKPdf 02 41 07.0 +0.8
TTG Podgorica 146.26 318⇓ *i*PKP PKPdf 02 41 07.0 +0.9
VLX Vlachokerasia 146.38 308 *e*P PKPdf 02 41 07.0 +0.6
TIR Tirane 146.43 316 *e*PKP2 PKPab 02 41 07.8 -0.8
TIR MLR MLR
comp=Z,589nm,22.0s,MS5.3
RJOB Jochberg 146.44 331 *e*PKPbc PKPbc 02 41 08.6 +1.1
RJOB *ep*PKPbc pPKPbc 02 41 17.0 -1.4

BRY	**Bratogost**	**146.45 319**	⇓	*i*PKP		PKPdf	02 41 06.8	+0.4
OBKA	**Obir**	**146.47 327**	⇑	*i*P		PKPdf	02 41 06.8	+0.5
	comp=Z,26nm,1.0s,SNR=18							
ULC	**Ulcinj**	**146.51 317**	⇓	*i*PKP		PKPdf	02 41 07.5	+1.0
JAN	**Janina**	**146.55 313**		*e*P		PKPdf	02 41 06.8	+0.2
BUM	**Brajici-Budva**	**146.56 318**	⇓	*i*PKP		PKPdf	02 41 07.4	+0.8
KBA	**Koelnbreinsper**	**146.66 329**	⇑	*i*P		PKPdf	02 41 07.2	+0.6
	comp=Z,59nm,1.1s,SNR=8.3							
TOD	**Tromm**	**146.67 336**		PKP2		PKPab	02 41 07.8	-1.5
HGN	**Heimansgroeve**	**146.68 340**		*e*PKP		PKPdf	02 41 07.2	+0.7
	comp=Z,109nm,1.1s							
HGN	**Heimansgroeve**	**146.68 340**		*ex*		x	02 41 18.2	
	comp=Z,190nm,2.6s							
BEBN	**Eben Emael**	**146.73 341**		PKP		PKPdf	02 41 07.5	+1.0
BEBN				APKP			02 41 18.2	
HCY	**Herceg Novi**	**146.73 319**	⇓	*i*PKP		PKPdf	02 41 07.6	+0.8
DLF	**Lyons Farm**	**146.74 355**		*e*P		PKPdf	02 41 07.6	+1.1
DLF	**Lyons Farm**	**146.74 355**		*e*P		pPKPdf	02 41 17.3	-0.1
DCN	**Croghan**	**146.75 356**		*e*P		PKPdf	02 41 07.8	+1.3
DCN	**Croghan**	**146.75 356**		*e*P		pPKPdf	02 41 17.4	0.0
BOJS	**Bojanci**	**146.77 326**		*e*PKPdf		PKPdf	02 41 08.4	+1.6
BOJS				*i* PKPbc		pPKPbc	02 41 19.0	-0.4
ITM	**Ithomi**	**146.78 308**		*e*P		PKPdf	02 41 02.7	-4.4
RLS	**Riolos of Patr**	**146.78 310**		*e*P		PKPdf	02 41 04.9	-2.2
MEM	**Membach**	**146.79 340**		PKPbc		PKPbc	02 41 08.0	-0.5
MEM				APKP			02 41 17.4	
LJU	**Ljubljana**	**146.79 327**		*e*PKPdf		PKPdf	02 41 07.7	+0.9
LJU				*i* PKPbc		pPKPbc	02 41 18.7	-0.7
FUR	**Furstenfeldbru**	**146.81 333**		*e*PKPbc		PKPbc	02 41 08.3	-0.3
FUR				*ep*PKPbc		pPKPbc	02 41 18.2	-1.2
MYKA	**Terra Mystica**	**146.83 328**	⇑	*i*P		PKPdf	02 41 07.1	+0.2
	comp=Z,35nm,0.8s							
ABH	**Alteburg**	**146.89 338**		PKP		PKPbc	02 41 08.3	-0.5
IGT	**Igoumenitsa**	**146.97 313**		*e*P		PKPbc	02 41 09.1	-0.2
STON	**Ston**	**146.99 320**		P		PKPdf	02 41 07.9	+0.7
PYL	**PYLOS**	**147.02 307**		*e*P		PKPdf	02 41 08.0	+0.5
LKD	**Levkas**	**147.10 311**		*e*P		PKPbc	02 41 09.1	-0.7
UCC	**Uccle**	**147.12 342**		PKP		PKPbc	02 41 08.8	-0.6
UCC				APKP			02 41 18.1	
VOY	**Vojsko**	**147.12 327**		*e*PKPdf		PKPdf	02 41 06.5	-0.9
VOY				*e*			02 41 09.3	
VOY				*e*PKPbc		pPKPbc	02 41 19.0	-1.4
JAVS	**Javornik**	**147.13 327**		*i* PKPdf		PKPbc	02 41 08.6	-1.0
JAVS				*i* PKPbc		pPKPbc	02 41 19.4	-1.0
PTCC	**Patocco-Chiusa**	**147.13 328**		PKP		PKPdf	02 41 06.1	-1.3
KTD	**Kalmit**	**147.17 337**		PKP2		PKPbc	02 41 09.5	-0.1
BCLA	**Clavier**	**147.18 341**		PKPbc		PKPbc	02 41 09.3	-0.2
BCLA				APKPbc			02 41 19.3	
STU	**Stuttgart**	**147.19 335**		*e*PKPbc		PKPbc	02 41 09.3	-0.3
STU				*ep*PKPbc		pPKPbc	02 41 19.1	-1.4
STU	**Stuttgart**	**147.19 335**		*e*PKPbc		PKPbc	02 41 09.5	-0.2
RUP	**Ruppelstein**	**147.22 338**		PKP2		PKPbc	02 41 09.4	-0.3
FVI	**Forni Avoltri**	**147.28 329**		PKIKP		PKPdf	02 41 07.7	+0.1
GMNA	**Gemona**	**147.28 328**		PKP		PKPdf	02 41 06.7	-0.9
ABTA	**Abfaltersbach**	**147.30 330**	⇓	*i*P		PKPdf	02 41 06.4	-1.2
	comp=Z,78nm,1.0s,SNR=57							
WATA	**Walderalm**	**147.30 331**	⇓	*i*P		PKPdf	02 41 06.8	-0.8
	comp=Z,57nm,1.1s,SNR=13							
WTTA	**Wattenberg**	**147.32 331**	⇑	*i*P		PKPdf	02 41 06.5	-1.2
	comp=Z,160nm,1.2s,SNR=41							
VLS	**Valsamata**	**147.37 310**		*e*P		PKPbc	02 41 09.3	-1.2
VLS	**Valsamata**	**147.37 310**		*e*P		PKPdf	02 41 08.5	+0.4
SNF	**Seneffe**	**147.40 342**		PKPbc		PKPbc	02 41 08.9	-1.3
SNF				PKPab		PKPab	02 41 10.3	-1.8
SNF				APKPbc			02 41 19.6	
MOTA	**Moosalm**	**147.50 332**	⇓	*i*P		PKPdf	02 41 07.0	-1.0
	comp=Z,130nm,1.1s,SNR=35							
RETA	**Reutte**	**147.55 332**	⇑	*i*P		PKPbc	02 41 09.9	-0.8
	comp=Z,32nm,0.8s,SNR=20							
LANF	**Langenberg**	**147.55 337**		PKP		PKPbc	02 41 10.4	-0.2
WLF	**Walferdange**	**147.56 339**		PKP		PKPbc	02 41 10.9	+0.3
WLF				APKP			02 41 20.7	
NVLJ	**Novalja**	**147.59 325**		P		PKPdf	02 41 08.7	+0.5
GIVF	**Givet**	**147.60 341**		*e*PKP1		PKPbc	02 41 10.1	-0.6
	comp=Z,459nm,1.1s							
DOU	**Dourbes**	**147.68 341**		PKPbc		PKPbc	02 41 10.4	-0.5
DOU				APKPbc			02 41 21.0	
BAIF	**Baives**	**147.82 342**		*e*PKP1		PKPbc	02 41 10.8	-0.5
	comp=Z,366nm,1.1s							
BFO	**Black Forest**	**147.89 336**		*e*PKPbc		PKPbc	02 41 10.8	-0.8
BFO				*ep*PKPbc		pPKPbc	02 41 20.8	-1.6
BFO	**Black Forest**	**147.89 336**		*e*PKPbc		PKPbc	02 41 10.8	-0.8
BFO				*ep*PKPbc		pPKPbc	02 41 20.8	-1.6
BFO				LR		LR		
	comp=Z,548nm,22.0s,MS5.3							
SPAK	**Spaichingen-Ko**	**147.89 335**		PKP		PKPbc	02 41 11.1	-0.5
STR	**Strasbourg**	**147.90 336**		PKP		PKPbc	02 41 11.6	0.0
FETA	**Feichten**	**147.91 332**	⇑	*i*P		PKPbc	02 41 11.4	-0.3
	comp=Z,131nm,1.1s,SNR=30							
MENF	**Mencas**	**147.94 344**		PKP		PKPbc	02 41 10.7	-0.9
DAVA	**Damuels**	**148.08 333**	⇑	*i*P		PKPbc	02 41 11.5	-0.6
	comp=Z,115nm,1.1s,SNR=22							
CTI	**Castel Tesino**	**148.22 330**		PKP2		PKPbc	02 41 11.5	-1.0
CDF	**Champ du Feu**	**148.22 337**		*e*PKP1		PKPbc	02 41 11.7	-0.7
	comp=Z,353nm,1.3s							
LIBD	**Limburg**	**148.31 336**		PKP2		PKPbc	02 41 12.3	-0.4
FELD	**Feldberg im Sc**	**148.38 335**		PKP		PKPbc	02 41 12.3	-0.6
ECH	**Echery**	**148.43 337**		PKP		PKPbc	02 41 12.3	-0.7
ECH	**Echery**	**148.43 337**		*e*PKPbc		PKPbc	02 41 11.9	-1.1
BRMO	**Bormio**	**148.49 331**		PKP		PKPdf	02 41 09.1	-0.5
FGMS	**Monte Sant'Ang**	**148.71 319**		PKP		PKPbc	02 41 13.2	-0.8
MOF	**Molkenrain**	**148.74 336**		PKP		PKPbc	02 41 13.0	-0.8
MABI	**Malga Bissina**	**148.74 331**		PKP		PKPbc	02 41 12.0	-1.9
THEF	**They Montfort**	**148.84 338**		PKP		PKPbc	02 41 13.2	-0.9
HINF	**Hinteralfeld**	**148.87 337**		*e*PKP1		PKPbc	02 41 13.2	-1.0
	comp=Z,380nm,1.5s							
HAU	**Haudompre**	**148.90 337**		*e*PKP1		PKPbc	02 41 13.4	-0.8
	comp=Z,286nm,1.1s							
HAU				*e*MLR		MLR		
	comp=Z,486nm,21.8s,MS5.0							
HAU	**Haudompre**	**148.90 337**		*e*PKP		PKPbc	02 41 13.4	-0.8
HAU				LR		LR		
	comp=Z,490nm,21.8s,MS5.3							
BBS	**Basel-Blauen**	**148.91 335**		PKP2		PKPbc	02 41 13.9	-0.4
MEZF	**Maizieres J'vi**	**148.93 339**		*e*PKP1		PKPbc	02 41 13.9	-0.4
	comp=Z,668nm,1.3s							
AOI	**Ancona**	**148.94 324**		PKP		PKPbc	02 41 13.9	-0.6
TUE	**Stuetta**	**148.95 332**		*e*PKPdf		PKPdf	02 41 09.6	-0.7
TUE				PKP		PKPbc	02 41 13.8	-0.6
TUE				*e*PKPbc		PKPbc	02 41 15.0	+0.6
TUE				LR		LR		
	comp=Z,642nm,22.0s,MS5.4							
RGNG	**Rignano Grg**	**148.96 320**		PKP		PKPbc	02 41 13.5	-1.1
LOMF	**Lomont**	**149.27 336**		PKP		PKPbc	02 41 14.9	-0.3
CING	**Cingoli**	**149.28 324**		PKP		PKPdf	02 41 09.8	-1.2
FSSB	**Fossombrone**	**149.30 325**		PKP		PKPbc	02 41 14.9	-0.5
FIU	**Minerbio Fiu**	**149.31 328**		PKP		PKPbc	02 41 15.9	+0.5
RSM	**Repubblica di**	**149.31 326**		PKP2		PKPbc	02 41 14.6	-0.8
FG4	**Candela**	**149.31 319**		PKP2		PKPbc	02 41 15.1	-0.4
PTRP	**Pietrapertosa**	**149.31 317**		PKP		PKPbc	02 41 15.4	-0.1
FG5	**Orsara di Pugl**	**149.38 319**		PKP2		PKPbc	02 41 15.4	-0.2
CIGN	**Sant'Elia a Pi**	**149.38 320**		PKP		PKPbc	02 41 14.2	-1.4
RAVA	**Ravarino**	**149.41 328**		PKP		PKPbc	02 41 16.2	+0.6
SNTG	**Esanatoglia**	**149.50 324**		PKP		PKPbc	02 41 16.0	+0.1
TERO	**Teramo**	**149.54 323**		PKP		PKPbc	02 41 13.6	-2.4
TIP	**Timpagrande**	**149.57 315**		*e*PKPdf		PKPdf	02 41 11.1	-0.6
TIP				PKP		PKPbc	02 41 15.5	-0.7
TIP				*e*PKPbc		PKPbc	02 41 16.5	+0.3
SFI	**Santa Sofia**	**149.64 326**		PKHKP		PKPdf	02 41 11.5	-0.1
VAI	**Varese**	**149.67 332**		PKIKP		PKPdf	02 41 10.2	-1.3
NRCA	**Norcia**	**149.68 324**		PKP		PKPbc	02 41 15.7	-0.6
PSB1	**Pescosannita**	**149.69 320**		PKP		PKPbc	02 41 15.4	-1.0
BADI	**Badiali**	**149.71 325**		PKP		PKPbc	02 41 15.8	-0.6
MURB	**Monte Urbino**	**149.72 325**		PKP		PKPbc	02 41 15.0	-1.4
CDCA	**Citt' di Caste**	**149.75 325**		PKP		PKPbc	02 41 16.3	-0.2
INTR	**Introdacqua**	**149.76 322**		PKP		PKPbc	02 41 15.3	-1.2
CUC	**Castrocucco**	**149.76 317**		*e*PKPbc		PKPbc	02 41 14.5	-2.1
CUC				LR		LR		
	comp=Z,963nm,22.0s,MS5.5							
VMG	**Vicchio**	**149.76 327**		PKP		PKPbc	02 41 15.9	-0.6
SGO	**Sicignano**	**149.77 318**		PKP2		PKPbc	02 41 15.6	-1.0
ZCCA	**Zocca**	**149.77 328**		PKP		PKPbc	02 41 16.9	+0.4
CSSN	**Cassano Irpino**	**149.77 319**		PKP		PKPbc	02 41 15.4	-1.2
MIDA	**Miranda**	**149.78 321**		PKP		PKPbc	02 41 15.3	-1.3
ASS	**Assisi**	**149.79 324**		PKP2		PKPbc	02 41 16.3	-0.3
SEI	**Scarperia**	**149.79 327**		PKP		PKPbc	02 41 16.1	-0.5
RNI2	**Rionero Sannit**	**149.80 321**		PKP		PKPbc	02 41 15.5	-1.2
AQU	**L'Aquila**	**149.83 323**		PKP2		PKPbc	02 41 16.5	-0.2
FNVD	**Fontana Vidola**	**149.83 328**		PKP		PKPdf	02 41 11.4	-0.5
SGG	**Gregorio Mates**	**149.86 320**		PKP		PKPbc	02 41 15.1	-1.7
GSCL	**Gusciola**	**149.97 328**		PKP		PKPbc	02 41 16.3	-0.7
GRI	**Girifalco**	**149.98 314**		PKP2		PKPbc	02 41 17.6	+0.4
SDI	**San Donato**	**150.00 321**		PKHKP		PKPbc	02 41 15.7	-1.5
ERBM	**Eremo**	**150.00 329**		PKP		PKPbc	02 41 16.8	-0.3
VVLD	**Villa Vallelon**	**150.01 322**		PKP		PKPbc	02 41 15.8	-1.4
PTQR	**Pietraquaria**	**150.04 322**		PKP		PKPbc	02 41 15.8	-1.4
FIAM	**Fiamignano**	**150.05 323**		PKP		PKPdf	02 41 11.6	-0.7
RFI	**Roccamonfina**	**150.15 320**		PKP		PKPbc	02 41 17.0	-0.5
CABF	**La Chapelle**	**150.17 336**		*e*PKP1		PKPbc	02 41 17.1	-0.3
	comp=Z,385nm,1.3s							
BDI	**Bagni Di Lucca**	**150.17 328**		PKIKP		PKPbc	02 41 15.7	-1.8
ORO	**Oropa**	**150.20 333**		PKIKP		PKPbc	02 41 15.0	-2.5
VLC	**Villacollemand**	**150.20 328**		*e*PKPbc		PKPbc	02 41 15.9	-1.6
VLC				LR		LR		
	comp=Z,892nm,20.0s,MS5.6							
BOB	**Bobbio (Coli)**	**150.21 330**		PKIKP		PKPbc	02 41 16.7	-0.8
CSNT	**Castellina Chi**	**150.23 326**		PKP		PKPdf	02 41 14.3	+1.8
FLN	**La Foliniere**	**150.25 346**		*e*PKP1		PKPbc	02 41 16.3	-1.2
	comp=Z,353nm,1.1s							
FLN				*e*MLR		MLR		
	comp=Z,749nm,22.8s,MS5.1							
FLN	**La Foliniere**	**150.25 346**		*e*PKP		PKPbc	02 41 16.3	-1.2
FLN				LR		LR		
	comp=Z,750nm,22.8s,MS5.4							
LDF	**La Druitiere**	**150.32 345**		*e*PKP1		PKPbc	02 41 16.4	-1.3
	comp=Z,254nm,1.3s							
CERT	**Cerreto**	**150.33 322**		PKP		PKPdf	02 41 10.3	-2.4
MAIM	**Mastiano**	**150.33 328**		PKP		PKPbc	02 41 15.7	-2.2
TRAV	**Traversella**	**150.39 333**		PKP		PKPbc	02 41 15.8	-2.2
LOR	**Lormes**	**150.40 339**		*e*PKP1		PKPbc	02 41 17.1	-0.8
	comp=Z,255nm,1.1s							
LOR				*e*MLR		MLR		
	comp=Z,912nm,22.8s,MS5.2							
LOR	**Lormes**	**150.40 339**		*e*PKP		PKPbc	02 41 17.1	-0.8
LOR				LR		LR		
	comp=Z,910nm,22.8s,MS5.5							
MTCE	**Montecelio**	**150.42 323**		PKP		PKPdf	02 41 10.1	-2.8
PII	**Pisa**	**150.45 328**		PKIKP		PKPbc	02 41 15.8	-2.4
SOI	**Samo**	**150.60 313**		PKIKP		PKPbc	02 41 18.0	-0.7
RDP	**Rocca di Papa**	**150.60 322**		PKIKP		PKPbc	02 41 17.4	-1.2
MA9	**Marino**	**150.63 322**		PKP		PKPbc	02 41 18.0	-0.7
GRR	**Gorron**	**150.68 346**		*e*PKP1		PKPbc	02 41 17.5	-1.1
	comp=Z,184nm,1.0s							
LSD	**Lago del Serru**	**150.69 334**		PKIKP		PKPbc	02 41 18.4	-0.3
SSF	**Saint Saulge**	**150.69 340**		*e*PKP1		PKPbc	02 41 17.8	-0.8
	comp=Z,234nm,1.1s							
SCLL	**Scilla**	**150.74 314**		PKP		PKPbc	02 41 18.0	-1.0
HYF	**Humbligny**	**150.78 341**		*e*PKP1		PKPbc	02 41 18.4	-0.4
PCP	**Piancastagn**	**150.79 331**		PKIKP		PKPbc	02 41 17.3	-1.7
TOLF	**Tolfa**	**150.81 324**		PKP		PKPbc	02 41 17.8	-1.3
LPL	**La Plagne**	**150.81 334**		*e*PKP1		PKPbc	02 41 18.6	-0.4
	comp=Z,91nm,0.9s							
LPG	**La Plagne**	**150.82 334**		*e*PKP1		PKPbc	02 41 18.8	-0.2
	comp=Z,114nm,0.9s							
MTTG	**Motta San Giov**	**150.88 313**		PKP		PKPbc	02 41 18.5	-0.9
RSP	**Reno Superiore**	**150.89 333**		PKIKP		PKPbc	02 41 17.6	-1.5
SMF	**Signal de Mont**	**150.95 339**		*e*PKP1		PKPbc	02 41 18.1	-1.1
	comp=Z,186nm,1.3s							
AVF	**Avril sur Loir**	**150.98 340**		*e*PKP1		PKPbc	02 41 18.1	-1.2
	comp=Z,84nm,1.2s							
SGMF	**Saint Gilles**	**151.16 348**		*e*PKP1		PKPbc	02 41 18.4	-1.3
	comp=Z,101nm,0.8s							
SLNA	**Salina**	**151.17 315**		PKP		PKPbc	02 41 18.9	-1.1
FIN	**Finale Ligure**	**151.21 331**		PKIKP		PKPbc	02 41 18.8	-1.1
BNI	**Bardonecchia**	**151.21 334**		*e*PKIKP		PKPdf	02 41 13.7	-0.3
BNI				*e*			02 41 19.5	
BNI				*e*			02 41 29.4	
BNI				MLR		MLR		
	comp=Z,801nm,20.0s,MS5.5							
ROSF	**Rostrenen**	**151.21 349**		*e*PKP1		PKPbc	02 41 18.3	-1.5
	comp=Z,91nm,0.9s							
NOV	**Novara**	**151.25 314**		PKP		PKPdf	02 41 15.5	+1.2
GDM	**Grand'Maison**	**151.32 334**		PKP		PKPbc	02 41 19.9	-0.3
BGF	**Bois d'Agland**	**151.35 340**		*e*PKP1		PKPbc	02 41 19.2	-1.0
	comp=Z,138nm,1.0s							
MBDF	**Montbardon**	**151.43 333**		*e*PKP1		PKPbc	02 41 19.4	-1.0
	comp=Z,46nm,0.8s							
GRN	**Grenoble**	**151.44 335**		PKP		PKPbc	02 41 20.2	-0.2
QUIF	**Quistinic**	**151.60 349**		*e*PKP1		PKPbc	02 41 19.2	-1.5
	comp=Z,84nm,1.0s							
PLDF	**La Plantade**	**151.61 338**		PKP		PKPbc	02 41 20.6	-0.2
SURF	**Saint Ours**	**151.61 333**		PKP		PKPbc	02 41 20.6	-0.3
ORIF	**Oris-en-Rattie**	**151.65 334**		*e*PKP1		PKPbc	02 41 20.1	-0.8
	comp=Z,92nm,0.8s							
ORIF				*e*MLR		MLR		
	comp=Z,461nm,20.8s,MS5.0							
SAOF	**Saorge**	**151.68 331**		PKP		PKPbc	02 41 20.1	-0.9
AGO	**Saint Agoulin**	**151.70 339**		PKP		PKPbc	02 41 19.9	-1.1
AUTN	**L'Aution**	**151.73 331**		PKP		PKPbc	02 41 20.8	-0.3
TOUF	**Mont Tournerai**	**151.79 332**		PKP		PKPbc	02 41 20.7	-0.6
TCF	**Toulx Ste Croi**	**151.79 341**		*e*PKP1		PKPbc	02 41 20.2	-1.0
	comp=Z,191nm,1.2s							
SBF	**Sospel**	**151.83 331**		*e*PKP1		PKPbc	02 41 20.0	-1.4
	comp=Z,180nm,1.1s							
LUCF	**Luceram**	**151.84 331**		PKP		PKPbc	02 41 20.5	-0.9
SSB	**Saint Sauveur**	**151.87 336**		*e*PKIKP		PKPbc	02 41 21.5	+0.1
SSB				*e*			02 41 31.2	
MVIF	**Mont Vial**	**151.93 332**		PKP		PKPbc	02 41 20.8	-0.8
REVF	**Revere**	**151.95 331**		PKP		PKPbc	02 41 20.4	-1.3
PYM	**Petit Puy Mans**	**152.01 339**		PKP		PKPbc	02 41 21.6	-0.1
PGF	**Pioggiola**	**152.07 328**		*e*PKP1		PKPbc	02 41 20.9	-1.1
	comp=Z,233nm,1.0s							
CALN	**Calern**	**152.16 332**		PKP		PKPbc	02 41 21.1	-1.0
USI	**Ustica**	**152.17 317**		PKP		PKPab	02 41 31.3	-0.7
CORF	**Corte**	**152.17 327**		PKP		PKPbc	02 41 21.8	-0.4
VIVF	**Saint-Julien-l**	**152.18 336**		*e*PKP1		PKPbc	02 41 21.3	-0.8
	comp=Z,145nm,1.3s							
MFF	**Saint Martin d**	**152.18 344**		*e*PKP1		PKPbc	02 41 20.9	-1.2
	comp=Z,131nm,1.2s							
RAFF	**Raffo Rosso**	**152.19 313**		PKP		PKPbc	02 41 21.2	-1.2
LBL	**Lubilhac**	**152.38 338**		PKP		PKPbc	02 41 22.5	-0.1
FRF	**La Foret Royal**	**152.42 332**		*e*PKP1		PKPbc	02 41 21.5	-1.2
	comp=Z,115nm,1.1s							
SMRF	**Simiane la Rot**	**152.55 334**		*e*PKP1		PKPbc	02 41 22.4	-0.6
	comp=Z,167nm,1.3s							
LMR	**La Mourre**	**152.66 332**		*e*PKP1		PKPbc	02 41 22.0	-1.3
	comp=Z,141nm,1.3s							
RJF	**Les Rejaudoux**	**152.89 341**		*e*PKP1		PKPbc	02 41 22.7	-1.0
	comp=Z,59nm,1.1s							
RJF				*e*MLR		MLR		
	comp=Z,592nm,20.0s,MS5.1							
RJF	**Les Rejaudoux**	**152.89 341**		*e*PKP		PKPbc	02 41 22.7	-1.0
RJF				LR		LR		
	comp=Z,590nm,20.0s,MS5.4							
ERC	**Erice**	**152.94 316**		PKP		PKPbc	02 41 23.6	-0.5
CAF	**Calviac**	**153.05 339**		*e*PKP1		PKPbc	02 41 23.3	-0.8
	comp=Z,33nm,1.2s							
LASF	**Ste Croix**	**153.15 336**		*e*PKP1		PKPbc	02 41 23.5	-0.8
	comp=Z,94nm,1.3s							
LFF	**La Frestale**	**153.46 341**		*e*PKP1		PKPbc	02 41 24.0	-1.0
	comp=Z,63nm,1.0s							
VSL	**Villasalto**	**154.00 322**		*e*PKPbc		PKPbc	02 41 24.7	-1.6
VSL				LR		LR		
	comp=Z,542nm,22.0s,MS5.3							
MTLF	**Montolieu**	**154.39 337**		*e*PKP1		PKPbc	02 41 25.9	-1.1
	comp=Z,33nm,1.3s							
EPF	**Esparros**	**155.30 340**		*e*PKP1		PKPdf	02 41 27.8	+7.8
	comp=Z,82nm,1.6s							
SJPF	**Ste Jean**	**155.70 343**		*e*PKP1		PKPdf	02 41 29.0	+8.5
	comp=Z,22nm,1.1s							
ETSF	**Etsaut**	**155.70 341**		*e*PKP1		PKPdf	02 41 29.3	+8.8
	comp=Z,16nm,1.0s							
KEST	**Kesra**	**156.38 315**		PKPbc		PKPdf	02 41 31.8	+10
	comp=Z,1.7nm,0.7s,baz=3.6,slow=5.6,SNR=5.0							
KEST				PKPab		PKPab	02 41 50.4	+0.3
	comp=Z,3.3nm,0.9s,baz=335,slow=5.9,SNR=6.5							
MTE	**Manteigas**	**159.61 353**		PFAKE			02 41 40.0	+15
MTE				LR		LR		
	comp=Z,712nm,21.0s,MS5.5							
ESDC	**Sonseca Array**	**159.64 344**		PKPab		PKPab	02 42 04.2	+0.3
	comp=Z,0.9nm,0.7s,baz=17,slow=3.1,SNR=4.8							
ESLA	**Sonseca Array**	**159.64 344**		PFAKE			02 41 40.0	+14
ESLA				LR		LR		
	comp=Z,3µm,20.0s,MS6.1							
PAB	**San Pablo**	**159.86 345**		PFAKE			02 41 40.0	+14
PAB				LR		LR		
	comp=Z,794nm,22.0s,MS5.5							
EVO	**Evora**	**161.51 353**		*e*PKIKP		PKPdf	02 41 26.0	-1.6
	comp=Z,37nm,1.4s							
EVO				*e*MLR		MLR		
	comp=Z,782nm,21.0s							
SFS	**San Fernando**	**163.23 347**		PFAKE			02 41 40.0	+11
SFS				LR		LR		
	comp=Z,1µm,19.0s							
TAM	**Tamanrasset**	**164.48 283**		*e*PKIKP		PKPdf	02 41 30.7	-0.2
TAM				*e*			02 42 26.9	
LIC	**Lamto**	**165.03 203**		*e*PKP2		PKPab	02 42 28.6	+0.5
	comp=Z,55nm,1.1s							
LIC				*e*MLR		MLR		
	comp=Z,1µm,22.0s							
LIC	**Lamto**	**165.03 203**		*e*P		PKPab	02 42 27.6	-0.5
	comp=Z,104nm,1.6s							
KIC	**Kosan Boka**	**165.04 204**		*e*P		PKPab	02 42 28.2	0.0
	comp=Z,252nm,1.8s							
DBIC	**Dimbokro**	**165.37 204**		PKPab		PKPab	02 42 29.8	+0.1
	comp=Z,6.6nm,0.9s,baz=124,slow=5.9,SNR=5.6							
DBIC	**Dimbokro**	**165.37 204**		PFAKE			02 41 40.0	+8.0
DBIC				LR		LR		
	comp=Z,982nm,21.0s							
TIC	**Toumodi**	**165.41 204**		*e*P		PKPab	02 42 29.9	+0.1
	comp=Z,111nm,1.0s							
RTC	**Rabat Centre**	**165.75 346**		PFAKE			02 41 40.0	+8.3
RTC				LR		LR		
	comp=Z,415nm,20.0s							
TORD	**Torodi Ar. Bea**	**166.07 242**		PKP		PKPdf	02 41 30.1	-2.3
	comp=Z,1.8nm,0.9s,baz=203,slow=0.4,SNR=9.1							
TORD				PKPab		PKPab	02 42 32.5	-0.4
	comp=Z,7.3nm,1.0s,baz=119,slow=3.4,SNR=11							
TORD				PKKPbc			02 46 40.0	
	comp=Z,4.4nm,1.3s,baz=167,slow=2.3,SNR=3.7							

IDC 15 02:29:50.9±5.5, 199S×10359E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=315.8km s-min=28.5km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.94**	**123**	P	P	P	02 36 45.5	+0.7
	0.

TXAR	**Lajitas Array**	**83.83**	**57**	P		**P**	**02 59 05.7**	**+0.3**
	0.3nm,0.6s,mb3.3,baz=210,slow=7.2,SNR=4.2							
CMAR	**Chiang Mai Arr**	**91.00**	**289**	P		**P**	**02 59 39.8**	**-0.2**
	0.8nm,0.3s,mb4.0,baz=128,slow=2.8,SNR=5.4							

IDC ***15*** *02:52:46.8±2.6, 687S×15065E, h0km, mb4.2/4, mb1 4.4/4, mb1mx4.0/15, mbtmp4.2/4, Error ellipse: s-maj=67.6km s-min=41.6km az=113.0*
NEIC ***15*** *02:52:51.6±1.2, 687S×15064E, h35km, mb4.4/2, Error ellipse: s-maj=37.6km s-min=17.8km az=128.0*

ISC 15 02:52:50.5±5.3, 67S±04×1507E±03, h44km±36km, n10, σ0§39/9, mb4.0/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**4.42**	**232**	*e*Pn		**Pn**	**02 53 55.1**	**0.0**
PMG				*e*Sn		**Sn**	**02 54 45.5**	**+0.2**
WRAB	**Tennant Creek**	**20.62**	**229**	*e*P		**P**	**02 57 25.9**	**-0.4**
	9.8nm,0.7s							
WB2	**Warramunga Arr**	**20.62**	**229**	*e*P		**P**	**02 57 26.0**	**-0.3**
WRA	**Warramunga Arr**	**20.63**	**229**	P		**P**	**02 57 26.2**	**-0.3**
	9.2nm,0.6s,baz=55,slow=11,SNR=39							
ASAR	**Alice Springs**	**25.35**	**222**	P		**P**	**02 57 55.0**	**-0.3**
	2.4nm,0.7s,mb3.7,baz=56,slow=9.3,SNR=13							
STKA	**Stephens Creek**	**26.48**	**198**	P		**P**	**02 58 24.1**	**+0.5**
	2.6nm,0.8s,mb3.8,baz=41,slow=11,SNR=3.0							
FITZ	**Fitzroy Crossi**	**26.92**	**243**	*e*P		**P**	**02 58 28.5**	**+0.6**
	5.6nm,0.4s,mb4.5							
FITZ	**Fitzroy Crossi**	**26.92**	**243**	P		**P**	**02 58 28.7**	**+0.8**
	3.7nm,0.4s,mb4.3,baz=62,slow=8.9,SNR=18							
TOA0	**Torodi Ar. Sit**	**148.79**	**284**	*e*PKPbc		PKPbc	03 12 36.8	+2.4
TORD	**Torodi Ar. Bea**	**148.79**	**284**	PKPbc		PKPbc	03 12 37.2	+2.8
	1.2nm,0.6s,baz=58,slow=2.8,SNR=20							

IDC 15 03:05:10.0±7.0, 117S×10340E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.2/17, mbtmp3.2/2, MS3.6/1, Ms1 3.6/1, ms1mx3.2/11, Error ellipse: s-maj=272.2km s-min=107.2km az=51.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**27.57**	**129**	LR		LR	03 21 37.6	
	comp=Z,121nm,19.2s,baz=57,slow=36							
WRA	**Warramunga Arr**	**35.55**	**124**	P		P	03 12 07.4	-1.8
	0.1nm,0.4s,baz=296,slow=11,SNR=4.6							
ASAR	**Alice Springs**	**37.07**	**129**	P		P	03 12 23.8	+1.7
	0.1nm,0.3s,baz=297,slow=7.4,SNR=4.1							
TXAR	**Lajitas Array**	**141.93**	**40**	PKP		PKPdf	03 24 44.5	-0.1
	0.4nm,0.5s,baz=224,slow=0.4,SNR=8.1							

IDC 15 03:11:08.0±5.0, 283S×10108E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/19, mbtmp3.7/3, Error ellipse: s-maj=188.2km s-min=28.8km az=61.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.64**	**120**	P		P	03 18 15.8	-0.8
	0.3nm,0.3s,baz=313,slow=9.0,SNR=7.6							
ASAR	**Alice Springs**	**37.89**	**126**	P		P	03 18 28.1	+0.9
	0.6nm,0.4s,baz=299,slow=7.8,SNR=16							
SONM	**Songino Array**	**50.67**	**5**	P		P	03 20 09.8	+0.7
	1.5nm,0.6s,baz=188,slow=9.0,SNR=7.6							
TXAR	**Lajitas Array**	**144.68**	**39**	PKP		PKPdf	03 30 45.2	-2.3
	1.0nm,0.8s,baz=296,slow=1.0,SNR=9.8							

IDC 15 03:12:41.5±1.8, 3068S×5923E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/22, mbtmp3.7/3, Error ellipse: s-maj=78.9km s-min=33.7km az=12.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**62.02**	**43**	P		P	03 23 03.9	+0.1
	0.9nm,0.6s,baz=222,slow=7.1,SNR=5.2							
WRA	**Warramunga Arr**	**67.64**	**101**	P		P	03 23 40.7	+0.1
	0.4nm,0.8s,baz=246,slow=6.5,SNR=5.5							
TORD	**Torodi Ar. Bea**	**70.38**	**299**	P		P	03 23 57.6	0.0
	0.3nm,0.7s,baz=112,slow=6.7,SNR=7.7							

IDC ***15*** *03:47:10.7±2.1, 3217N×49.10E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/26, mbtmp3.7/7, ML3.6/1, Error ellipse: s-maj=49.5km s-min=22.7km az=153.0*
TEH ***15*** *03:47:12.8, 3236N×4906E, h20km, ML3.6*
CSEM ***15*** *03:47:14.7±0.1, 3237N×4907E, h16km, ML3.5, Error ellipse: s-maj=1.7km s-min=1.5km az=112.0*
ISCJB ***15*** *03:47:15.8±0.7, 3234N±003×4905E±004, h26km±7km, mb3.6/6, Error ellipse: s-maj=5.9km s-min=4.9km az=39.9*
THR ***15*** *03:47:15.3±0.3, 3226N×4900E, h33km±2km, ML3.5*
NEIC ***15*** *03:47:15.3, 3226N×4900E, h34km, ML3.5(THR), MN3.6(TEH), After THR.*
SGS ***15*** *03:47:17.0, 3221N×4896E, h20km*

ISC 15 03:47:16.7±0.7, 3231N±003×4902E±004, h24km±7km, n51, σ1§22/65, mb3.6/6, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.27**	**223**	*e*Pg		**Pb**	**03 47 22.0**	**-1.2**
SHGR				AML		AML	03 47 32.7	
	comp=N,6μm,0.3s							
SHGR	**Shooshtar-Gavs**	**0.27**	**223**	*e*Pg		**Pb**	**03 47 22.0**	**-1.3**
	SNR=140							
SHGR				Sg		**Sb**	**03 47 27.0**	**-0.7**
IPIR	**Pirpir**	**1.62**	**76**	*e*Pn		**Pn**	**03 47 44.7**	**+0.8**
IKOM	**Komasi**	**2.25**	**326**	*e*Pn		**Pn**	**03 47 54.0**	**+1.6**
IKOM				*e*Sn		**Sn**	**03 48 20.8**	**+1.4**
IKOM	**Komasi**	**2.25**	**326**	*e*Pn		**Pn**	**03 47 54.0**	**+1.6**
IKOM				*e*Sn		**Sn**	**03 48 20.8**	**+1.4**
IKOM				*e*			03 48 32.3	
IKOM	**Komasi**	**2.25**	**326**	Pn		**Pn**	**03 47 54.0**	**+1.6**
IKOM				Sn		**Sn**	**03 48 20.7**	**+1.3**
IKLH	**Kolahrood**	**2.38**	**64**	*e*Pn		**Pn**	**03 47 55.5**	**+1.3**
IGAR	**Gharneh**	**2.56**	**87**	*e*Pn		**Pn**	**03 47 57.1**	**+0.4**
IZEF	**Zefreh**	**2.85**	**77**	*e*Pn		**Pn**	**03 48 01.6**	**+0.8**
IGHG	**Ghaleghazi**	**2.88**	**315**	*e*Pn		**Pn**	**03 48 02.5**	**+1.4**
IGHG				*e*Sn		**Sn**	**03 48 34.4**	**-0.5**
IGHG	**Ghaleghazi**	**2.88**	**315**	*e*Pn		**Pn**	**03 48 02.5**	**+1.4**
IGHG				*e*Sn		**Sn**	**03 48 34.4**	**-0.5**
IGHG				*e*			03 48 51.7	
MIB	**Mutribah**	**2.89**	**210**	*e*P		**Pn**	**03 48 02.9**	**+1.7**
	baz=211							
MIB					AML	AML	03 48 47.4	
	comp=Z,97nm,0.4s,baz=211							
SNGE	**Sanandaj**	**3.10**	**334**	*e*Pn		**Pn**	**03 48 05.0**	**+0.8**
SNGE				*e*Sg		**Sn**	**03 48 51.1**	**+11**
SNGE					AML	AML	03 49 00.4	
	comp=N,96nm,0.6s							
SNGE	**Sanandaj**	**3.10**	**334**	*e*Pn		**Pn**	**03 48 05.0**	**+0.8**
	SNR=54							
SNGE				Sg		**Sn**	**03 48 51.0**	**+10**
ILIN	**Lien**	**3.12**	**327**	*e*Pn		**Pn**	**03 48 04.8**	**+0.4**
ILIN				*e*			03 48 09.0	
ILIN				*e*Sn		**Sn**	**03 48 40.7**	**-0.1**
IRAZ	**Razeghan**	**3.18**	**14**	*e*Pn		**Pn**	**03 48 05.1**	**-0.1**
IRAZ				*e*			03 48 07.5	
IRAZ				*e*Sn		**Sn**	**03 48 40.9**	**-1.4**
IRAZ	**Razeghan**	**3.18**	**14**	Pn		**Pn**	**03 48 05.1**	**-0.1**
IRAZ				Sn		**Sn**	**03 48 40.8**	**-1.5**
NASN	**Na'in**	**3.23**	**80**	*e*Pn		**Pn**	**03 48 06.7**	**+0.6**
NASN				*e*Sg		**Sn**	**03 48 54.8**	**+11**
NASN	**Na'in**	**3.23**	**80**	*e*Pn		**Pn**	**03 48 06.7**	**+0.7**
	SNR=54							
NASN				Sg		**Sn**	**03 48 54.0**	**+10**
NASN	**Na'in**	**3.23**	**80**	Pn		**Pn**	**03 48 06.0**	**0.0**
NASN				Sg		**Sn**	**03 48 54.0**	**+10**
RST	**Umm Al-Ruwaisa**	**3.30**	**212**	*e*P		**Pn**	**03 48 08.2**	**+1.3**
	baz=212							
RST					AML	AML	03 48 58.0	
	comp=Z,72nm,0.5s,baz=212							
KBD	**Kabd**	**3.33**	**200**	*e*P		**Pn**	**03 48 08.6**	**+1.3**
	baz=201							
KBD					AML	AML	03 48 52.0	
	comp=Z,85nm,0.4s,baz=201							
NAY	**Al-Naaiem**	**3.41**	**207**	*e*P		**Pn**	**03 48 09.7**	**+1.2**
	baz=207							
NAY					AML	AML	03 49 04.5	
	comp=Z,34nm,0.4s,baz=207							
IVRN	**Varamin**	**3.50**	**39**	*e*Pn		**Pn**	**03 48 09.8**	**+0.1**
RDF	**Al-Radifah**	**3.60**	**201**	*e*P		**Pn**	**03 48 12.7**	**+1.6**
IMHD	**Mahdasht**	**3.63**	**22**	*e*Pn		**Pn**	**03 48 12.0**	**+0.5**
IMHD				*e*			03 49 18.1	
IDMV	**Damavand**	**4.11**	**37**	*e*Pn		**Pn**	**03 48 18.2**	**+0.2**
IDMV				*e*			03 48 38.7	
IAFJ	**Afjeh**	**4.18**	**32**	*e*Pn		**Pn**	**03 48 19.0**	**0.0**
IAFJ				*e*			03 49 33.6	
IPAR	**Pars**	**4.24**	**124**	*e*Pn		**Pn**	**03 48 20.2**	**+0.3**
IFIR	**Firoozkooh**	**4.54**	**42**	*e*Pn		**Pn**	**03 48 24.5**	**+0.5**
IFIR				*e*			03 48 31.5	
ICHK	**Chekchek**	**4.56**	**89**	*e*Pn		**Pn**	**03 48 24.4**	**+0.1**
ICHK				*e*			03 49 47.1	
ISRV	**Sarvestan**	**4.57**	**129**	*e*Pn		**Pn**	**03 48 25.7**	**+1.3**
IMEH	**Mehriz**	**4.85**	**99**	*e*Pn		**Pn**	**03 48 28.3**	**+0.1**
IMEH				*e*			03 49 25.7	
GHIR	**Ghir-Karzin**	**5.28**	**138**	*e*Pn		**Pn**	**03 48 33.8**	**-0.4**
GHIR					AML	AML	03 49 49.5	
	comp=N,38nm,0.4s							
GHIR					AML	AML	03 49 50.0	
	comp=E,25nm,0.5s							
GHIR	**Ghir-Karzin**	**5.28**	**138**	Pn		**Pn**	**03 48 33.0**	**-1.1**
IBAF	**Bafgh**	**5.61**	**96**	*e*Pn		**Pn**	**03 48 38.9**	**+0.2**
IBAF				*e*			03 49 39.5	
ISRB	**Sarab**	**5.61**	**349**	*e*Pn		**Pn**	**03 48 37.5**	**-1.2**
ISRB				*e*			03 49 38.8	
IAZR	**Azarshahr**	**5.91**	**336**	*e*Pn		**Pn**	**03 48 42.9**	**+0.2**
IAZR				*e*			03 48 56.7	
BOQSS		**6.43**	**177**	S		**Sn**	**03 49 56.0**	**-6.5**
BOQSS		**6.43**	**177**	P		**Pn**	**03 48 47.5**	**-2.4**
HRDDS		**9.36**	**177**	P		**Pn**	**03 49 28.2**	**-1.9**
LYLS		**10.35**	**189**	P		**Pn**	**03 49 41.9**	**-1.9**
AKTK	**Aktyubinsk**	**19.30**	**18**	P		**Pn**	**03 51 37.3**	**-3.6**
AKTO	**Aktyubinsk**	**19.30**	**18**	P		**Pn**	**03 51 37.3**	**-3.6**
	comp=E,0.2nm,0.3s,baz=192,slow=7.1,SNR=6.2							
MLR	**Muntele Rosu**	**22.17**	**313**	P		**P**	**03 52 11.8**	**+1.0**
	comp=E,1.2nm,0.6s,mb3.5,baz=64,slow=2.3,SNR=3.6							
AKASG	**Malin Array Be**	**23.48**	**327**	P		**P**	**03 52 22.3**	**-2.3**
	comp=E,1.4nm,0.5s,mb3.7,baz=119,slow=9.9,SNR=5.4							
BVAR	**Borovoye Array**	**25.81**	**30**	P		**P**	**03 52 44.1**	**-1.7**
	comp=E,1.1nm,0.7s,mb3.5,baz=243,slow=8.9,SNR=4.4							
KURK	**Kurchatov**	**28.52**	**41**	P		**P**	**03 53 08.1**	**-2.1**
	comp=E,0.6nm,0.8s,mb3.4,baz=246,slow=9.2,SNR=5.1							
ZALV	**Zalesovo Beam**	**33.38**	**39**	P		**P**	**03 53 51.2**	**-1.7**
	comp=E,1.0nm,0.4s,mb4.1,baz=241,slow=9.3,SNR=4.8							
TORD	**Torodi Ar. Bea**	**47.21**	**257**	P		**P**	**03 55 45.5**	**-2.4**
	comp=E,0.6nm,0.8s,mb3.6,baz=63,slow=7.7,SNR=14							
TORD	**Torodi Ar. Bea**	**47.21**	**257**	P		**P**	**03 55 45.5**	**-2.4**

IDC ***15*** *03:47:15.3±0.7, 203S×100.10E, h0km, mb4.2/16, mb1 4.4/17, mb1mx4.3/22, mbtmp4.2/17, ML4.6/1, MS3.5/6, Ms1 3.6/6, ms1mx3.3/34, Error ellipse: s-maj=23.5km s-min=13.3km az=58.0*
BJI ***15*** *03:47:17.9, 161S×9996E, h6km, mB5.3, mb4.8, Msz3.9*
DJA ***15*** *03:47:18, 212S×9982E, h20km, MLv4.7/5*
NEIC ***15*** *03:47:18.5±5.9, 205S×10015E, h22km±41km, mb4.7/10, Error ellipse: s-maj=16.9km s-min=7.2km az=58.0*
ISCJB ***15*** *03:47:22.8±1.4, 199S±008×10019E±010, h71km±11km, mb4.4/23, Error ellipse: s-maj=18.9km s-min=8.8km az=145.9*

ISC 15 03:47:23.8±1.4, 202S±008×1002E±01, h63km±11km, h42km±4.5km:pP-P, n48, σ0§91/40, mb4.5/23, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KRJI	**Kerinci**	**1.29**	**93**	P		**Pn**	**03 47 45.4**	**-0.4**
	0.0nm,0.0s							
PPI	**Padang Panjang**	**1.57**	**8**	P		**Pn**	**03 47 47.3**	**-2.2**
	0.0nm,0.0s							
RGRI	**Rengat**	**2.73**	**52**	P		**Pn**	**03 48 06.6**	**+1.4**
	0.0nm,0.0s							
KSI	**Kapahiang**	**2.91**	**124**	P		**Pn**	**03 48 08.9**	**+1.2**
	0.0nm,0.0s							
DSRI	**Dabo**	**4.66**	**71**	P		**Pn**	**03 48 32.5**	**+0.8**
	0.0nm,0.0s							
TPI	**Tanjungpandan**	**7.51**	**96**	P		**Pn**	**03 49 11.0**	**+0.3**
	0.0nm,0.0s							
KAPI	**Kappang**	**19.77**	**99**	P		**Pn**	**03 51 48.1**	**-2.9**
	1.6nm,0.3s,baz=239,slow=9.2,SNR=4.2							
KAPI					LR	LR	03 59 56.4	
	comp=Z,105nm,19.4s,baz=147,slow=38							
CMAR	**Chiang Mai Arr**	**20.39**	**357**	P		**P**	**03 51 52.5**	**-3.1**
	4.2nm,0.6s,baz=184,slow=10,SNR=22							
CMAR					LR	LR	03 59 52.1	
	comp=Z,151nm,18.7s,baz=175,slow=37							
KDI	**Kendari**	**22.50**	**95**	P		**P**	**03 52 18.9**	**+0.6**
	0.0nm,0.0s							
DAV	**Davao City (W)**	**26.92**	**70**	LR		LR	04 05 03.5	
	comp=Z,91nm,19.6s,baz=175,slow=40							
FITZ	**Fitzroy Crossi**	**29.66**	**124**	*e*P		**P**	**03 53 20.7**	**-3.0**
	7.1nm,1.0s,mb4.3							
FITZ	**Fitzroy Crossi**	**29.66**	**124**	P		**P**	**03 53 23.0**	**-0.7**
	2.0nm,0.9s,mb3.9,baz=328,slow=15,SNR=3.7							
WRA	**Warramunga Arr**	**37.83**	**121**	P		**P**	**03 54 33.9**	**-0.7**
	5.6nm,0.8s,mb4.3,baz=303,slow=9.1,SNR=45							
WRA					LR	LR	04 12 09.7	
	comp=Z,89nm,19.0s,baz=250,slow=39							
WRAB	**Tennant Creek**	**37.84**	**121**	*e*P		**P**	**03 54 33.6**	**-1.1**
	6.5nm,0.8s,mb4.4							
WB2	**Warramunga Arr**	**37.84**	**121**	*e*P		**P**	**03 54 34.3**	**-0.4**
ASAR	**Alice Springs**	**39.10**	**126**	P		**P**	**03 54 45.1**	**-0.1**
	2.9nm,0.5s,mb4.3,baz=303,slow=7.9,SNR=45							
ASAR					PcP	PcP	03 57 07.0	+13
	1.8nm,0.8s,baz=301,slow=3.0,SNR=6.9							
KSRS	**Korea Array**	**46.95**	**30**	P		**P**	**03 55 48.4**	**0.0**
	2.6nm,0.6s,mb4.3,baz=224,slow=8.6,SNR=7.6							
KSRS					LR	LR	04 14 20.0	
	comp=Z,43nm,21.3s,baz=131,slow=35							
WMQ	**Urumqi**	**46.99**	**348**	P		**P**	**03 55 49.6**	**+1.0**
WMQ					AP	pP	03 55 54.0	-11
WMQ					AMB	AMB		
	comp=Z,29nm,0.9s,mb5.2							
WMQ					AMB	AMB		
	comp=Z,295nm,6.0s							
WMQ					LR	LR		
	comp=Z,147nm,21.2s							
CTA	**Charters Tower**	**48.43**	**115**	LR		LR	04 18 22.4	
	comp=Z,79nm,21.2s,baz=46,slow=38							
STKA	**Stephens Creek**	**49.01**	**132**	*e*P		**P**	**03 56 05.2**	**+0.8**
	comp=Z,7.0nm,0.6s,mb4.9							
STKA	**Stephens Creek**	**49.01**	**132**	P		**P**	**03 56 05.2**	**+0.8**
	comp=Z,2.3nm,0.6s,mb4.4,baz=305,slow=7.8,SNR=9.3							
TKM2	**Tokmak 2**	**49.92**	**336**	*e*P		**P**	**03 56 11.7**	**+0.6**
	comp=Z,8.3nm,0.8s,mb4.8							
SONM	**Songino Array**	**49.95**	**5**	P		**P**	**03 56 11.5**	**+0.2**
	comp=Z,4.7nm,0.8s,mb4.5,baz=188,slow=9.4,SNR=21							
ULN	**Ulaanbaatar**	**50.04**	**6**	*e*P		**P**	**03 56 12.6**	**+0.6**
	comp=Z,1.6nm,0.6s,mb4.2							
AML	**Almayashu**	**50.06**	**334**	*e*P		**P**	**03 56 12.7**	**+0.5**
	comp=Z,5.7nm,0.7s,mb4.7							
EKS2	**Erkin-Say**	**50.45**	**335**	*e*P		**P**	**03 56 15.6**	**+0.4**
	comp=Z,8.0nm,0.8s,mb4.8							
MK31	**Makanchi Array**	**51.09**	**344**	*e*P		**P**	**03 56 19.7**	**-0.2**
MK31					*e*pP	pP	03 56 32.5	-3.7
MKAR	**Makanchi Array**	**51.09**	**344**	P		**P**	**03 56 20.0**	**0.0**
	comp=Z,5.9nm,0.6s,mb4.7,baz=147,slow=7.9,SNR=37							
MJAR	**Matsushiro Arr**	**52.18**	**39**	P		**P**	**03 56 28.3**	**0.0**
	comp=Z,1.3nm,0.6s,mb4.0,baz=215,slow=7.2,SNR=3.6							
TLY	**Talaya**	**53.58**	**3**	*e*P		**P**	**03 56 38.3**	**0.0**
	comp=Z,5.0nm,0.8s,mb4.5							
KURK	**Kurchatov**	**55.68**	**344**	P		**P**	**03 56 52.5**	**-0.9**
	comp=Z,4.8nm,0.8s,mb4.6,baz=165,slow=7.1,SNR=22							
KURK	**Kurchatov**	**55.68**	**344**	*e*P		**P**	**03 56 52.9**	**-0.6**
	comp=Z,12nm,0.9s,mb4.9							
KURK					*e*pP	pP	03 57 06.2	-3.7
ZAA0	**Zalesovo Array**	**57.22**	**349**	*e*P		**P**	**03 57 03.7**	**-0.7**
ZAA0					*e*pP	pP	03 57 15.7	-5.3
ZALV	**Zalesovo Beam**	**57.22**	**349**	P		**P**	**03 57 03.7**	**-0.7**
	comp=Z,4.3nm,0.7s,mb4.6,baz=163,slow=5.6,SNR=14							
YSS	**Yuzh-Sakhalins**	**61.41**	**32**	*e*P		**P**	**03 57 33.4**	**-0.1**
	comp=Z,12nm,0.6s,mb5.2							
MAW	**Mawson**	**70.31**	**194**	P		**P**	**03 58 30.8**	**+0.6**
	comp=Z,0.7nm,0.4s,mb4.0,baz=17,slow=11,SNR=3.9							
BOSA	**Boshof**	**75.80**	**241**	P		**P**	**03 59 02.5**	**-1.0**
	comp=Z,2.3nm,0.9s,mb4.1,baz=112,slow=11,SNR=3.7							
BOSA	**Boshof**	**75.80**	**241**	P		**P**	**03 59 02.5**	**-1.0**
AKASG	**Malin Array Be**	**79.61**	**322**	P		**P**	**03 59 25.2**	**+1.0**
	comp=Z,1.0nm,0.3s,mb4.2,baz=140,slow=10,SNR=6.3							
BUR08	**Bucovina Ar. S**	**81.41**	**319**	*e*P		**P**	**03 59 33.6**	**-0.3**
BUR08					*e*pP	pP	03 59 43.2	-8.1
ARCES	**ARCESS Array B**	**86.55**	**340**	P		**P**	**04 00 00.9**	**+1.2**
	comp=Z,3.0nm,0.9s,mb4.5,baz=50,slow=3.8,SNR=4.5							
GERES	**GERESS Array B**	**89.18**	**319**	P		**P**	**04 00 13.3**	**+0.6**
	comp=Z,0.5nm,0.7s,mb4.0,baz=8.0,slow=23,SNR=3.7							
CPUP	**Villa Florida**	**144.41**	**216**	PKP		PKPdf	04 06 52.3	-1.4
	comp=Z,2.7nm,0.6s,baz=112,slow=1.4,SNR=13							
CPUP	**Villa Florida**	**144.41**	**216**	*e*PKPdf		PKPdf	04 06 51.9	-1.8
CPUP				PKP		PKPdf	04 06 52.3	-1.4
CPUP				*e*			04 07 06.3	
TXAR	**Lajitas Array**	**144.62**	**38**	PKP		PKPdf	04 06 53.6	-0.4
	comp=Z,2.1nm,0.6s,baz=200,slow=1.0,SNR=37							
MIAR	**Mount Ida**	**145.20**	**20**	*e*PKPbc		PKPbc	04 06 54.1	-0.4
UALR	**University of**	**145.39**	**18**	*e*PKPbc		PKPbc	04 06 55.0	-0.1
JCT	**Junction City**	**145.95**	**32**	*e*PKPbc		PKPbc	04 06 57.2	+0.2
JCT				*e*			04 07 10.0	

ISCJB ***15*** *04:20:38.7±0.5, 3883N±002×2094E±003, h0km±5km, Error ellipse: s-maj=4.3km s-min=3.1km az=3.8*
ATH ***15*** *04:20:38.7, 3874N×2094E, h11km±1km, MD3.5/12*
NEIC ***15*** *04:20:38.7, 3874N×2094E, h11km, MD3.5(ATH), After ATH.*
THE ***15*** *04:20:39.4, 3885N×2090E, h0km, ML3.1*
CSEM ***15*** *04:20:39.7±0.1, 3882N×2086E, h2km, ML3.1, Error ellipse: s-maj=2.0km s-min=1.7km az=85.0*

ISC 15 04:20:39.4±0.4, 3882N±002×2095E±003, h2km±5km, n34, σ0§93/48, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LKD	**Levkas**	**0.26**	**245**	*e*Pg		**Pg**	**04 20 43.5**	**-0.9**
LKD				*e*Sg		**Sg**	**04 20 48.1**	**+0.3**
EVR	**Evrytania**	**0.68**	**81**	*e*PG		**Pg**	**04 20 51.9**	**-0.5**
VLS	**Valsamata**	**0.70**	**204**	*e*Pg		**Pg**	**04 20 51.6**	**-1.2**
VLS				*e*Sg		**Sg**	**04 21 03.0**	**+1.2**
VLS	**Valsamata**	**0.70**	**204**	*e*PB		**Pg**	**04 20 51.1**	**-1.7**
VLS				*e*SB			04 20 59.9	
VLS	**Valsamata**	**0.70**	**204**	*e*Pg		**Pg**	**04 20 51.6**	**-1.2**
VLS				*e*Sb			04 20 59.9	
VLS				*e*Sg		**Sg**	**04 21 03.0**	**+1.2**
KFL	**Anninata**	**0.72**	**190**	*e*Pg		**Pg**	**04 20 53.4**	**+0.3**
KFL				*e*Sg		**Sg**	**04 21 05.1**	**+2.7**
JAN	**Janina**	**0.84**	**355**	*e*PG		**Pg**	**04 20 55.6**	**0.0**
JAN				*e*SB		**Sg**	**04 21 09.2**	**+2.7**
RLS	**Riolos of Patr**	**0.86**	**152**	*e*PB		**Pg**	**04 20 54.0**	**-1.9**
IGT	**Igoumenitsa**	**0.86**	**326**	*e*Pg		**Pg**	**04 20 55.1**	**-0.9**
IGT				*e*Sg		**Sg**	**04 21 06.6**	**-0.5**
MEV	**Metsovon**	**0.99**	**12**	*e*Pg		**Pg**	**04 20 57.7**	**-0.7**
MEV				*e*Sg		**Sg**	**04 21 11.1**	**-0.2**
AGG	**Agios Georgios**	**1.09**	**79**	*e*Pg		**Pg**	**04 20 59.2**	**-1.2**
AGG				*e*Sg		**Sg**	**04 21 16.4**	**+1.8**
AGG	**Agios Georgios**	**1.09**	**79**	*e*Pg		**Pg**	**04 20 59.2**	**-1.2**
AGG				*e*Sg		**Sg**	**04 21 16.4**	**+1.8**
THL	**Klokotos Trika**	**1.11**	**48**	*e*Pg		**Pg**	**04 21 00.6**	**-0.2**
THL	**Klokotos Trika**	**1.11**	**48**	*e*PN		**Pn**	**04 21 00.6**	**-1.5**
THL				*e*SB		**Sb**	**04 21 17.4**	**+1.0**
KEK	**Kerkira**	**1.27**	**315**	*e*PB		**Pb**	**04 21 03.8**	**-0.2**
KEK				*e*SB		**Sg**	**04 21 21.4**	**+1.3**
LKR	**Lokris**	**1.61**	**95**	*e*PG		**Pn**	**04 21 08.7**	**-0.2**
KZN	**Kozani**	**1.62**	**23**	*e*PN		**Pg**	**04 21 10.5**	**+0.1**
LIT	**Litokhoron**	**1.75**	**42**	*e*Pb		**Pn**	**04 21 10.8**	**0.0**
LTK	**Loutraki**	**1.77**	**116**	*e*Pb		**Pn**	**04 21 11.1**	**0.0**
ITM	**Ithomi**	**1.81**	**154**	*e*PG		**Pn**	**04 21 11.9**	**+0.3**
ITM				*e*SN		**Sn**	**04 21 34.3**	**-0.7**
XOR	**Xorichti**	**1.83**	**72**	*e*Pb		**Pn**	**04 21 12.3**	**+0.4**
VLX	**Vlachokerasia**	**1.83**	**142**	*e*Pb		**Pb**	**04 21 12.9**	**-0.7**
VLX				*e*Sb		**S

VYHS	**Vyhne**	**2.57**	**18**	*e*Pn	**Pn**	04 40 15.5	-0.7
KOLL	**Kolacno**	**2.58**	**12**	*e*PN	**Pn**	04 40 15.9	-0.3
KOLL				*e*SN	**Sn**	04 40 44.9	-2.7
DIVS	**Divibare**	**2.59**	**138**	*e*Pn	**Pn**	04 40 17.4	+1.1
DIVS				*e*Sg	**Sg**	04 40 57.2	-0.3
DIVS	**Divibare**	**2.59**	**138**	*e*Pn	**Pn**	04 40 16.3	0.0
DIVS				*e*Sn	**Sn**	04 40 48.9	+1.1
DIVS				*e*Sg	**Sg**	04 40 57.2	-0.3
MOA	**Molln**	**2.91**	**309**	⇑*i*Pn	**Pn**	04 40 20.6	-0.2
MOA				⇑*i*Sn	**Sn**	04 40 56.3	+0.6
MORC	**Moravsky Berou**	**3.72**	**359**	*e*Pn	**Pn**	04 40 32.2	+0.3
KHC	**Kasperske Hory**	**4.11**	**320**	*e*PN	**Pn**	04 40 38.1	+0.8
KHC				*e*SN	**Sn**	04 41 23.5	-1.9
STHS	**Stebnicka Huta**	**4.16**	**35**	*e*PN	**Pn**	04 40 37.9	0.0
BARS	**Barje**	**4.42**	**136**	*e*Pn	**Pn**	04 40 41.9	+0.3

TAP 15 04:41:53.6, 2387N×12075E, h23km, ML4.0, 11C-14D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WNT	**Mingjian** baz=278	**0.06**	**278**	⇓*i*P	Pb	04 41 58.3	+0.6
WNT				S	Sb	04 42 01.6	+1.1
TYC	**Yuchr** baz=81	**0.10**	**71**	⇓*i*P	Pb	04 41 58.5	+0.5
TYC				*e*S	Sb	04 42 01.6	+0.6
SMLT	**Sun Moon Lake** baz=85	**0.14**	**85**	⇑*i*P	Pb	04 41 58.9	+0.6
SMLT				S	Sb	04 42 02.4	+0.9
WGK	**Gukeng** baz=223	**0.25**	**223**	⇑*i*P	Pb	04 42 00.5	+0.8
WGK				*e*S	Sb	04 42 05.6	+1.8
CHN5	**Tsauling** baz=193	**0.28**	**193**	⇓*i*P	Pb	04 42 00.8	+0.6
CHN5				*i* S	Sb	04 42 05.8	+1.2
TCU	**Taichung** baz=347	**0.28**	**347**	⇓*i*P	Pb	04 42 00.9	+0.7
TCU				*i* S	Sb	04 42 06.1	+1.3
ALS	**Alishan** baz=165	**0.36**	**172**	⇓*i*P	Pb	04 42 02.3	+0.8
ALS				*e*S	Sb	04 42 08.4	+1.7
CHN2	**Minshiung** baz=217	**0.42**	**217**	P	Pb	04 42 03.0	+0.6
CHN2				*e*S	Sb	04 42 10.2	+1.9
YUS	**Yu-Shan** baz=146	**0.42**	**154**	⇓*i*P	Pb	04 42 03.5	+1.0
YUS				S	Sb	04 42 10.1	+1.6
WTCT	**Ta-ch'eng** baz=269	**0.43**	**269**	⇑*i*P	Pb	04 42 02.9	+0.4
WTCT				*e*S	Sb	04 42 10.2	+1.6
CHY	**Chiayi** baz=219	**0.47**	**219**	P	Pb	04 42 03.8	+0.5
CHY				S	Sb	04 42 11.3	+1.4
TWQ1	**Liyutan** baz=3.0	**0.48**	**3**	⇓*i*P	Pb	04 42 04.2	+0.8
TWQ1				S	Sb	04 42 11.8	+1.8
WSF	**Szhu** baz=245	**0.53**	**245**	⇑P	Pb	04 42 04.6	+0.3
WSF				*e*S	Sb	04 42 13.3	+1.7
CHN4	**Tsaushan** baz=196	**0.54**	**195**	⇓*i*P	Pb	04 42 04.8	+0.4
CHN4				*e*S	Sb	04 42 13.5	+1.9
NSY	**Sanyi** baz=351	**0.54**	**1**	⇓*i*P	Pb	04 42 05.5	+1.1
NSY				S	Sb	04 42 14.1	+2.2
TWT	**Tachien** baz=51	**0.55**	**46**	P	Pb	04 42 04.7	+0.2
TWT				S	Sb	04 42 12.0	0.0
WHF	**Hehuan Shan** baz=67	**0.55**	**60**	⇑*i*P	Pb	04 42 05.5	+1.0
WHF				*i* S	Sb	04 42 13.4	+1.4
ESL	**Shilin** baz=95	**0.63**	**95**	⇑*i*P	Pb	04 42 06.6	+0.7
ESL				*i* S	Sb	04 42 15.4	+1.1
WTP	**Ta-pu** baz=192	**0.63**	**191**	⇓*i*P	Pb	04 42 06.2	+0.3
WTP				*e*S	Sb	04 42 15.4	+1.0
EHY	**Hungye** baz=133	**0.64**	**124**	⇑*i*P	Pb	04 42 06.8	+0.7
EHY				S	Sb	04 42 15.9	+1.3
TWK	**Hsinying** baz=202	**0.65**	**202**	⇓*i*P	Pb	04 42 06.7	+0.5
TWK				*e*S	Sb	04 42 16.2	+1.4
ESF	**Shoufeng Towns** baz=90	**0.69**	**90**	*e*P	Pb	04 42 07.2	+0.1
STYT	**Tauyuan** baz=175	**0.70**	**179**	⇓*i*P	Pb	04 42 07.5	+0.3
STYT				*e*S	Sb	04 42 18.4	+2.0
CHN1	**Nanshi** baz=197	**0.71**	**197**	⇓*i*P	Pb	04 42 07.5	+0.2
CHN1				S	Sb	04 42 18.2	+1.5
CHN8	**Yiju** baz=235	**0.72**	**223**	*e*P	Pb	04 42 07.6	+0.2
CHN8				S	Sb	04 42 18.6	+1.8
ELDTW	**Lidau** baz=150	**0.72**	**160**	⇓*i*P	Pb	04 42 07.8	+0.3
ELDTW				*e*S	Sb	04 42 19.1	+2.2
TWF1	**Yuli** baz=136	**0.72**	**136**	⇑*i*P	Pb	04 42 08.1	+0.6
TWF1				*e*S	Sb	04 42 17.8	+0.9
HWA	**Hwalien** baz=82	**0.79**	**82**	*i* P	Pb	04 42 09.4	+0.7
HWA				*e*S	Sb	04 42 20.0	+1.0
NSTT	**Nanjuang** baz=17	**0.79**	**17**	*e*P	Pb	04 42 08.7	0.0
NSTT				*e*S	Sb	04 42 19.5	+0.5
SGST	**Jiashian** baz=191	**0.80**	**191**	*i* P	Pb	04 42 09.3	+0.5
SGST				*e*S	Sb	04 42 21.2	+2.0
TWD	**Chiawan** baz=83	**0.80**	**75**	⇑*i*P	Pb	04 42 09.1	+0.2
TWD				S	Sb	04 42 20.5	+1.2
NNS	**Nan Shan** baz=45	**0.81**	**45**	*i* P	Pb	04 42 09.0	+0.1
NNS				*e*S	Sb	04 42 19.6	+0.3
SCLT	**Jiali** baz=229	**0.86**	**216**	*e*P	Pb	04 42 10.3	+0.5
SCLT				*e*S	Sb	04 42 23.4	+2.5
HSN	**Hsinchu** baz=12	**0.95**	**12**	*e*P	Pb	04 42 12.3	+0.9
HSN				*e*S	Sb	04 42 26.0	+2.4
CHKT	**Chengkung** baz=145	**0.95**	**143**	*e*P	Pb	04 42 12.2	+0.7
TAI1	**Yung-k'ang** baz=211	**0.95**	**210**	*e*P	Pb	04 42 11.8	+0.4
TAI1				*e*S	Sb	04 42 26.4	+2.8
ENA	**Nanau** baz=58	**1.06**	**58**	*e*P	Pn	04 42 13.6	+0.5
ENA				*e*S	Sb	04 42 28.2	+1.4
ENTT	**Nioudou** baz=44	**1.07**	**44**	P	Pn	04 42 13.5	+0.4
ENTT				*e*S	Sb	04 42 28.4	+1.4
TWM1	**Shoushan** baz=199	**1.08**	**196**	*e*P	Pn	04 42 14.4	+1.1
TWG	**Pinlang** baz=165	**1.09**	**164**	*i* P	Pn	04 42 14.1	+0.7
TWG				S	Sb	04 42 29.2	+1.7
SSD	**Sandimen** baz=187	**1.12**	**185**	⇑P	Pn	04 42 14.7	+0.8
SSD				*e*S	Sb	04 42 30.8	+2.3
PNG	**Penghu** baz=255	**1.13**	**255**	⇑*i*P	Pn	04 42 13.6	-0.5
PNG				*e*S	Sb	04 42 28.9	0.0
NCU	**National Centr** baz=18	**1.17**	**20**	*e*P	Pn	04 42 13.6	-0.9
TTN	**Taitung** baz=162	**1.17**	**162**	*e*P	Pn	04 42 16.7	+2.2
TTN				*e*S	Sn	04 42 34.0	+4.2
TWE	**Neicheng** baz=44	**1.19**	**45**	P	Pn	04 42 16.0	+1.2
TWE				S	Sn	04 42 31.7	+1.3
TWC	**Suao** baz=45	**1.25**	**54**	P	Pn	04 42 17.1	+1.5
TWC				S	Sn	04 42 33.1	+1.5
ILA	**Ilan** baz=31	**1.28**	**45**	*e*P	Pn	04 42 17.5	+1.5
ILA				*e*S	Sn	04 42 35.6	+3.2
ECL	**Taimali** baz=173	**1.28**	**171**	P	Pn	04 42 17.3	+1.2
ECL				*e*S	Sn	04 42 35.5	+2.9
TWA	**Mucha** baz=18	**1.34**	**34**	*e*P	Pn	04 42 17.5	+0.5
TAP1	**Taipei** baz=29	**1.36**	**31**	*e*P	Pn	04 42 18.1	+0.9
TWS1	**Kuangyinshan** baz=26	**1.37**	**26**	*e*P	Pn	04 42 18.3	+1.0
TWS1				*e*S	Sn	04 42 37.8	+3.1
EAST	**Anshuo** baz=179	**1.48**	**176**	*e*P	Pn	04 42 19.9	+1.1
EAST				*e*S	Sn	04 42 41.5	+4.0
SCZT	**Fangliau** baz=187	**1.50**	**185**	P	Pn	04 42 19.8	+0.7
SCZT				*e*S	Sn	04 42 40.4	+2.6
TAW	**Tawu** baz=177	**1.51**	**175**	*e*P	Pn	04 42 20.4	+1.2
TAW				*e*S	Sn	04 42 42.6	+4.4
NWF	**Wu-fen Shan** baz=21	**1.52**	**38**	*e*P	Pn	04 42 19.9	+0.5
TWP	**Hsiaoliuchiu** baz=198	**1.56**	**193**	*e*P	Pn	04 42 20.8	+0.9
TWY	**Chenhua** baz=27	**1.60**	**29**	*e*P	Pn	04 42 21.5	+1.0
TWB1	**Santiao Chiao** baz=27	**1.60**	**45**	*e*P	Pn	04 42 21.3	+0.8
TWK1	**Hengchun** baz=184	**1.92**	**178**	*e*P	Pn	04 42 25.6	+0.8
LAY	**Lan-yu** baz=178	**1.97**	**158**	*e*P	Pn	04 42 26.3	+0.7
YOJ	**Yonaguni jima** baz=71	**2.15**	**74**	*e*P	Pn	04 42 28.8	+0.8
KNM	**Kinmen** baz=282	**2.18**	**285**	*e*P	Pn	04 42 29.0	+0.5

ISCJB ***15*** *04:46:02.4±0.8, 5775S×1008×1580E±03, h10km, mb4.1/7, MS3.8/8, Error ellipse: s-maj=21.6km s-min=9.6km az=17.7*
IDC ***15*** *04:46:02.5±1.1, 5785S×15794E, h0km, mb4.2/6, mb1 4.3/7, mb1mx4.2/16, mbtmp4.2/7, ML4.1/1, MS3.8/9, Ms1 3.8/9, ms1mx3.7/17, Error ellipse: s-maj=34.0km s-min=19.5km az=96.0*
NEIC ***15*** *04:46:03.9±0.7, 5780S×15801E, h10km, mb4.3/1, Error ellipse: s-maj=18.6km s-min=11.1km az=112.0*

ISC 15 04:46:05.5±6.3, 5774S±008×1580E±03, h20km±42km, n15, σ0§80/10, mb4.1/7, MS3.8/8, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**3.29**	**9**	*e*Pn	**Pn**	**04 46 54.8**	**-1.1**
MCQ				*e*Sn	**Sn**	**04 47 33.7**	**-0.8**
RPZ	**Rata Peaks** 0.7nm,0.3s,baz=176,slow=14,SNR=2.8	**16.24**	**36**	Pn	**Pn**	**04 49 52.4**	**+0.1**
RPZ				LR	LR	04 54 48.4	
	comp=Z,385nm,20.5s,baz=146,slow=32						
URZ	**Urewera** 5.7nm,0.6s,mb4.2,baz=244,slow=5.2,SNR=6.9	**23.15**	**41**	P	**P**	**04 51 11.5**	**+1.1**
URZ				LR	LR	04 59 46.6	
	comp=Z,144nm,18.2s,MS3.5,baz=41,slow=35						
STKA	**Stephens Creek**	**28.21**	**329**	LR	LR	05 02 08.8	
	comp=Z,228nm,21.4s,MS3.7,baz=204,slow=34						
QSPA	**South Pole Qui** 1.1nm,0.7s,mb3.8,baz=40,slow=5.0,SNR=5.4	**32.36**	**180**	P	**P**	**04 52 32.3**	**-0.6**
ASAR	**Alice Springs** 4.3nm,0.9s,mb4.2,baz=159,slow=8.1,SNR=28	**38.22**	**323**	P	**P**	**04 53 24.6**	**+0.7**
CTA	**Charters Tower** 3.4nm,0.7s,mb4.2,baz=167,slow=11,SNR=5.3	**38.59**	**342**	P	**P**	**04 53 28.4**	**+1.5**
CTA				LR	LR	05 08 46.2	
	comp=Z,118nm,19.8s,MS3.7,baz=232,slow=35						
MAW	**Mawson** 2.1nm,0.8s,mb3.9,baz=129,slow=13,SNR=3.1	**40.44**	**216**	P	**P**	**04 53 41.3**	**-0.6**
WRA	**Warramunga Arr** 3.2nm,0.8s,mb4.0,baz=162,slow=7.0,SNR=17	**41.57**	**325**	P	**P**	**04 53 51.4**	**-0.3**
MBWA	**Marble Bar** 2.5nm,0.7s,mb4.2	**45.91**	**306**	*e*P	**P**	**04 54 26.6**	**0.0**
HNR	**Honiara**	**48.22**	**3**	LR	LR	05 09 59.6	
	comp=Z,110nm,20.1s,MS3.8,baz=162,slow=30						
AFI	**Afiamalu**	**49.33**	**40**	LR	LR	05 14 35.5	
	comp=Z,82nm,18.3s,MS3.8,baz=112,slow=35						
PPT	**Papeete**	**55.57**	**66**	LR	LR	05 14 40.3	
	comp=Z,175nm,18.8s,MS4.2,baz=133,slow=31						
BOSA	**Boshof**	**85.30**	**220**	LR	LR	05 32 18.8	
	comp=Z,137nm,18.2s,MS4.4,baz=356,slow=33						
KSRS	**Korea Array**	**98.16**	**336**	LR	LR	05 40 30.7	
	comp=Z,14nm,18.4s,MS3.5,baz=300,slow=33						

ISCJB ***15*** *05:26:24.9±0.3, 3362N±001×10892W±002, h10km, Error ellipse: s-maj=2.4km s-min=1.9km az=18.9*
NEIC ***15*** *05:26:24.3±0.9, 3340N×10884W, h5km, ML2.9, Error ellipse: s-maj=16.7km s-min=8.8km az=163.0*

ISC 15 05:26:25.2±0.2, 3363N±001×10894W±002, h10km, n59, σ1§08/107, 33C-41D, New Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Y19A	**Nutrioso** baz=0.7,SNR=424	**0.42**	**321**	⇑P	**Pg**	**05 26 33.2**	**-0.3**
Y19A				⇓S	**Sg**	**05 26 39.1**	**0.0**
	baz=0.7						
Z19A	**T-Link Ranch,** baz=0.4	**0.43**	**219**	⇓P	**Pg**	**05 26 33.6**	**-0.1**
Z19A				⇑S	**Sg**	**05 26 39.7**	**+0.3**
	baz=0.4						
X19A	**St. Johns** baz=1.1,SNR=129	**0.85**	**340**	⇓P	**Pg**	**05 26 41.0**	**-0.6**
X19A				⇓S	**Sg**	**05 26 52.0**	**-0.7**
	baz=1.1						
119A	**Ashpeak Ranch,** baz=0.7,SNR=396	**0.91**	**200**	⇑P	**Pg**	**05 26 42.1**	**-0.7**
119A				⇑S	**Sg**	**05 26 55.3**	**+0.7**
	baz=0.7						
Y18A	**Canyon Day Jun** baz=1.1,SNR=763	**0.93**	**280**	⇓P	**Pg**	**05 26 42.5**	**-0.5**
Y18A				⇓S	**Sg**	**05 26 54.8**	**-0.3**
	baz=1.1						
Z18A	**Geronimo** baz=1.1,SNR=70	**1.07**	**240**	⇓P	**Pg**	**05 26 45.6**	**-0.1**
Z18A				⇓S	**Sg**	**05 26 59.7**	**+0.1**
	baz=1.1						
X18A	**Snowflake** baz=1.5,SNR=417	**1.23**	**317**	⇓P	**Pn**	**05 26 48.1**	**-0.4**
X18A				⇓S	**Sb**	**05 27 03.9**	**-0.6**
	baz=1.5						
118A	**Homack Ranch,** baz=1.2,SNR=268	**1.31**	**222**	⇓P	**Pn**	**05 26 48.7**	**-0.8**
118A				⇓S	**Sb**	**05 27 06.9**	**+0.1**
	baz=1.2						
Z17A	**San Carlos Hig** baz=1.4,SNR=100	**1.32**	**256**	⇓Pg	**Pg**	**05 26 49.9**	**-0.8**
Z17A				⇓S	**Sb**	**05 27 06.9**	**-0.3**
	baz=1.4						
W19A	**Sanders** baz=1.8,SNR=119	**1.53**	**346**	⇑Pg	**Pg**	**05 26 53.7**	**-0.8**
W19A				⇓Sb	**Sb**	**05 27 12.8**	**-0.2**
	baz=1.8						
LAZ	**Ladron**	**1.68**	**62**	*e*Pn	**Pn**	**05 26 55.0**	**+0.3**
LAZ				*e*Sn	**Sn**	**05 27 17.5**	**+1.2**
X17A	**Forest Lakes** baz=1.9,SNR=73	**1.71**	**295**	⇓Pg	**Pg**	**05 26 56.8**	**-1.1**
X17A				⇓Sb	**Sb**	**05 27 18.5**	**+0.3**
	baz=1.9						
LENM	**Lemitar**	**1.72**	**71**	*e*Pn	**Pn**	**05 26 55.5**	**+0.2**
LENM				*e*Sn	**Sn**	**05 27 18.5**	**+1.2**
Y22C	**IRIS PASSCAL I** baz=1.7,SNR=5.3	**1.74**	**75**	⇑Pb	**Pb**	**05 26 56.2**	**-1.0**
117A	**Oracle** baz=1.8,SNR=26	**1.84**	**236**	⇓Pn	**Pn**	**05 26 56.3**	**-0.6**
117A				⇓Sn	**Sn**	**05 27 20.2**	**-0.1**
	baz=1.8						
218A	**Dragoon** baz=1.8,SNR=13	**1.90**	**210**	⇓Pn	**Pn**	**05 26 57.0**	**-0.6**
BNM	**Barren Site**	**1.99**	**74**	*e*Pn	**Pn**	**05 26 58.4**	**-0.5**
BNM				*e*Sg	**Sg**	**05 27 28.4**	**-0.8**
TUC	**Tucson**	**2.03**	**230**	*e*Pn	**Pn**	**05 26 58.8**	**-0.7**
TUC				Sn	**Sn**	**05 27 28.8**	**+3.8**
LPM	**Los Pinos Moun**	**2.04**	**70**	*e*Pn	**Pn**	**05 26 59.8**	**+0.3**
LPM				*e*Sg	**Sg**	**05 27 28.8**	**-1.8**
W17A	**Winslow** baz=2.3	**2.06**	**315**	⇑Pb	**Pb**	**05 27 01.5**	**-1.2**
W17A				⇑Sb	**Sb**	**05 27 29.1**	**+0.6**
	baz=2.3						
V19A	**Window Rock** baz=2.3	**2.08**	**358**	⇑Pn	**Pn**	**05 26 59.2**	**-1.0**
V19A				⇓Sb	**Sb**	**05 27 29.4**	**+0.3**
	baz=2.3						
Z16A	**Peralta Trail,** baz=2.2	**2.10**	**263**	⇓Sb	**Sb**	**05 27 30.4**	**+0.9**
Y16A	**Circle Bar Ran** baz=2.2,SNR=32	**2.13**	**277**	⇓Pb	**Pb**	**05 27 02.4**	**-1.5**
Y16A				⇓Pg	**Pg**	**05 27 04.9**	**-1.2**
	baz=2.2						
X16A	**Lo Mia Camp, P** baz=2.4	**2.22**	**291**	⇑Pb	**Pb**	**05 27 03.6**	**-1.8**
X16A				⇑Pg	**Pg**	**05 27 06.3**	**-1.6**
	baz=2.4						
X16A				⇓Sb	**Sb**	**05 27 33.9**	**+0.8**
	baz=2.4						
V18A	**Ganado** baz=2.5,SNR=21	**2.23**	**339**	⇓Pb	**Pb**	**05 27 03.7**	**-2.0**
319A	**Douglas** baz=2.1,SNR=47	**2.26**	**187**	⇓Pn	**Pn**	**05 27 02.2**	**-0.5**
319A				⇑Sn	**Sn**	**05 27 30.8**	**+0.2**
	baz=2.1						
319A				⇓Sb	**Sb**	**05 27 36.0**	**+1.7**
	baz=2.1						
318A	**Bisbee** baz=2.2,SNR=54	**2.36**	**202**	⇑Pn	**Pn**	**05 27 03.4**	**-0.6**
318A				⇓Sn	**Sn**	**05 27 33.0**	**+0.1**
	baz=2.2						
318A				⇓Sb	**Sb**	**05 27 38.7**	**+1.8**
	baz=2.2						
217A	**Green Valley** baz=2.3,SNR=29	**2.43**	**221**	⇓Pn	**Pn**	**05 27 04.4**	**-0.7**
ANMO	**Albuquerque**	**2.44**	**57**	*e*Pn	**Pn**	**05 27 05.4**	**+0.2**
ANMO				*e*Sn	**Sn**	**05 27 36.8**	**+1.8**
116A	**Eloy** baz=2.5	**2.55**	**246**	⇑Sb	**Sb**	**05 27 44.0**	**+1.4**
W16A	**Flagstaff** baz=2.8	**2.60**	**305**	⇑Pb	**Pb**	**05 27 11.0**	**-0.8**
W16A				⇓Sb	**Sb**	**05 27 44.8**	**+1.0**
	baz=2.8						
216A	**Three Points,** baz=2.6	**2.67**	**233**	⇑Sb	**Sb**	**05 27 47.4**	**+1.5**
Z15A	**Gila River Ind** baz=2.8	**2.71**	**264**	⇑Sn	**Sn**	**05 27 41.2**	**-0.5**
WUAZ	**Wupatki**	**2.75**	**314**	*e*Pn	**Pn**	**05 27 11.3**	**+1.9**
WUAZ				*e*Sn	**Sg**	**05 27 50.2**	**-3.5**
Y15A	**Casa Rosa Ranc** baz=3.0,SNR=18	**2.84**	**277**	⇑Pn	**Pn**	**05 27 11.0**	**+0.3**
X15A	**Humboldt** baz=3.0	**2.87**	**288**	⇑Pn	**Pn**	**05 27 12.2**	**+1.2**
X15A				⇑Pg	**Pg**	**05 27 18.3**	**-2.0**
	baz=3.0						
U18A	**Rough Rock, Ch** baz=3.1	**2.89**	**345**	⇑Pn	**Pn**	**05 27 12.5**	**+1.2**
U18A				⇓Sb	**Sb**	**05 27 53.2**	**+1.0**
	baz=3.1						
115A	**Sonoran Desert** baz=2.9,SNR=24	**2.91**	**252**	⇑Pn	**Pn**	**05 27 12.0**	**+0.4**
U16A	**Tuba City** baz=3.3	**3.09**	**325**	⇑Pn	**Pn**	**05 27 15.6**	**+1.6**
U16A				⇑Sb	**Sb**	**05 27 59.1**	**+1.2**
	baz=3.3						
W15A	**Williams** baz=3.3	**3.16**	**300**	⇑Pg	**Pg**	**05 27 22.7**	**-3.1**
W15A				⇓Sb	**Sb**	**05 28 01.1**	**+1.2**
	baz=3.3						
U17A	**Shonto** baz=3.5	**3.28**	**335**	⇑Pg	**Pg**	**05 27 26.6**	**-1.6**
U17A				⇓Sb	**Sb**	**05 28 04.9**	**+1.2**
	baz=3.5						
Z14A	**Wintersburg** baz=3.4,SNR=8.3	**3.36**	**267**	⇑Pn	**Pn**	**05 27 18.0**	**+0.3**
X14A	**Yava** baz=3.5	**3.39**	**285**	⇓Pn	**Pn**	**05 27 19.4**	**+1.2**
Y14A	**Wickenburg** baz=3.5,SNR=9.3	**3.40**	**276**	⇑Pn	**Pn**	**05 27 18.6**	**+0.3**
V15A	**Kaibab Nationa** baz=3.7	**3.45**	**310**	⇑Sb	**Sb**	**05 28 09.5**	**+1.2**
T18A	**Mexican Hat** baz=3.8	**3.58**	**348**	⇑Sb	**Sb**	**05 28 13.8**	**+1.6**
MVCO	**Mesa Verde**	**3.59**	**6**	*e*Pn	**Pn**	**05 27 25.1**	**+4.1**
MVCO				*e*Sn	**Sb**	**05 28 16.2**	**+3.7**
214A	**Organ Pipe Nat** baz=3.6,SNR=5.6	**3.66**	**244**	⇓Pn	**Pn**	**05 27 21.6**	**-0.4**
PV01	**Paradox Valley**	**4.51**	**4**	Pn	**Pb**	**05 27 45.9**	**+1.5**
PV01				*e*Sn	**Sb**	**05 28 42.2**	**+3.4**
SDCO	**Great Sand Dun**	**4.97**	**33**	Pn	**Pn**	**05 27 45.3**	**+5.4**
SDCO				Sn	**Sn**	**05 28 38.3**	**+0.9**
LDFC	**Landfair** 9.5nm,0.8s	**5.30**	**288**	Pn	**Pn**	**05 27 45.8**	**+1.3**
LDFC				*e*Sg	**Sg**	**05 29 16.7**	**+1.1**
CCUT	**Cedar City**	**5.32**	**319**	Pn	**Pn**	**05 27 42.5**	**-2.2**
CCUT				*e*Sg	**Sg**	**05 29 09.2**	**-6.8**
ARUT	**Antelope Range**	**5.54**	**320**	Pn	**Pn**	**05 27 50.4**	**+2.8**
ARUT				*e*Pg	**Pg**	**05 28 10.0**	**-1.2**
ARUT				*e*Sg	**Sg**	**05 29 17.0**	**-6.0**
MSU	**Marysvale**	**5.54**	**333**	Pn	**Pb**	**05 28 07.2**	**+5.3**
MSU				Sn	**Sg**	**05 29 17.4**	**-5.5**
SRU	**San Rafael** 2.4nm,0.5s	**5.62**	**347**	*e*Pg	**Pg**	**05 28 09.6**	**-3.3**
SRU				*e*Sg	**Sg**	**05 29 20.5**	**-5.1**
TMUT	**Trail Mountain**	**5.95**	**343**	Pn	**Pb**	**05 28 12.9**	**+3.9**

ISK ***15*** *05:26:51.9, 3784N×3700E, h4km, ML4.4*
NEIC ***15*** *05:26:51.7, 3787N×3699E, h5km, mb4.6/60, ML4.4(ISK), After ISK.*
CSEM ***15*** *05:26:51.4±0.0, 3783N×3699E, h2km, mb4.7/35, Ms3.4, Error ellipse: s-maj=1.2km s-min=1.0km az=8.0*
SZGRF ***15*** *05:26:52.2, 3727N×3663E, h10km, mb4.6, Turkey*
DDA ***15*** *05:26:52.3, 3782N×3693E, h24km±1km, Md4.1, Ml4.4*
IDC ***15*** *05:26:52.3±0.6, 3782N×3700E, h0km, mb4.2/16,*

mb1 4.2/22,mb1mx4.2/32,mbtmp4.2/22,ML3.9/6,MS3.7/9, Ms1 3.7/9,ms1mx3.3/41,Error ellipse: s-maj=12.3km s-min=11.1km az=123.0

MOS ***15*** *05:26:52.8±1.1,3779N×3696E,h15km,mb4.8/44,Error ellipse: s-maj=6.8km s-min=3.8km az=133.8*

ISCJB ***15*** *05:26:53.3±0.5,3782N±002×3699E±002,h15km±3km, mb4.5/72,MS3.7/12,Error ellipse: s-maj=3.4km s-min=2.5km az=159.0*

ISC 15 05:26:53.9±0.4,3782N±002×3698E±002,h9km±3km,n367, σ1§12/384,**mb4.5**/72,**MS3.7**/12,**91C-10D,Turkey**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KMRS	**Kahramanmaras**	**0.32**	**191**		PG		**Pg**	**05 26 59.1**	**-1.1**
KMRS					SG		**Sg**	**05 27 04.6**	**+0.1**
ANDN	**Andirin**	**0.56**	**245**	⇓*iP*			**Pg**	**05 27 01.8**	**-2.8**
ANDN					*i* S		**Sg**	**05 27 13.4**	**+1.4**
GZT	**Gaziantep**	**0.66**	**135**	⇑*iP*			**Pg**	**05 27 06.0**	**-0.6**
GZT					*i* S		**Sg**	**05 27 22.0**	**+6.9**
GAZ	**Gaziantep**	**0.67**	**164**	*e*PG			**Pg**	**05 27 05.9**	**-0.9**
GAZ	**Gaziantep**	**0.67**	**164**	Pg			**Pg**	**05 27 06.1**	**-0.8**
AKCD	**Akcadag**	**0.89**	**57**	⇓*iP*			**Pg**	**05 27 08.3**	**-2.7**
AKCD					*i* S		**Sg**	**05 27 22.2**	**-0.3**
SARI	**SarD1z-Kayseri**	**0.89**	**346**	*e*PG			**Pg**	**05 27 04.7**	**-6.4**
KOZT	**Kozan**	**0.97**	**250**	*e*PG			**Pg**	**05 27 12.5**	**-0.2**
KOZT					*e*SG		**Sg**	**05 27 25.7**	**+0.4**
ATAB	**Bozova**	**1.10**	**108**	⇑*iP*			**Pg**	**05 27 14.1**	**-1.0**
ATAB					*i* S		**Sg**	**05 27 30.8**	**+1.4**
MYA	**Malataya**	**1.25**	**66**	*e*Pn			**Pn**	**05 27 15.4**	**-2.2**
MYA					Sg		**Sg**	**05 27 34.4**	**+0.3**
BNN	**Bunyan**	**1.36**	**320**	Pn			**Pn**	**05 27 16.3**	**-2.9**
BNN	**Bunyan**	**1.36**	**320**	Pn			**Pn**	**05 27 16.3**	**-2.9**
COBT	**Iskenderun**	**1.42**	**204**	⇓*iP*			**Pn**	**05 27 18.4**	**-1.5**
COBT					*i* S		**Sn**	**05 27 39.1**	**+0.4**
YURE	**YUREGIR**	**1.46**	**228**	⇓*iP*			**Pn**	**05 27 18.3**	**-2.2**
URFA	**Urfa**	**1.51**	**104**	*e*PN			**Pn**	**05 27 20.4**	**-0.9**
KARA	**Karaisali**	**1.63**	**251**	*e*PN			**Pn**	**05 27 20.6**	**-2.2**
HTY	**Hatay**	**1.82**	**202**	*e*PN			**Pn**	**05 27 25.7**	**+0.3**
HTY	**Hatay**	**1.82**	**202**	Pn			**Pn**	**05 27 27.8**	**+2.4**
NIG	**Nigde**	**1.89**	**280**	*e*PN			**Pn**	**05 27 26.2**	**-0.2**
SVRC	**Sivrice-ELAZID**	**1.92**	**72**	*e*PN			**Pn**	**05 27 26.1**	**-0.7**
SVSK	**Karacayir**	**2.10**	**0**	*e*PN			**Pn**	**05 27 28.4**	**-0.9**
SVSK	**Karacayir**	**2.10**	**0**	Pn			**Pn**	**05 27 29.6**	**+0.3**
MERS	**Mersin**	**2.17**	**245**	*e*PN			**Pn**	**05 27 29.3**	**-1.0**
PTK	**Pertek**	**2.18**	**60**	*e*PN			**Pn**	**05 27 30.4**	**0.0**
YOZ	**Yozgat**	**2.23**	**325**	*e*PN			**Pn**	**05 27 30.4**	**-0.8**
YOZ	**Yozgat**	**2.23**	**325**	Pn			**Pn**	**05 27 31.6**	**+0.5**
TOKT	**Tokat**	**2.52**	**352**	*e*PN			**Pn**	**05 27 34.9**	**-0.2**
TOKT	**Tokat**	**2.52**	**352**	Pn			**Pn**	**05 27 35.4**	**+0.3**
RSDY	**Resadiye-TOKAT**	**2.59**	**6**	*e*PN			**Pn**	**05 27 35.5**	**-0.5**
RSDY	**Resadiye-TOKAT**	**2.59**	**6**	Pn			**Pn**	**05 27 37.0**	**+0.9**
CDAG	**Cicekdag**	**2.72**	**312**	⇓*iP*			**Pn**	**05 27 37.2**	**-0.6**
CDAG					*i* S		**Sn**	**05 28 11.4**	**+0.5**
CDAG	**Cicekdag**	**2.72**	**312**	*i* P			**Pn**	**05 27 37.2**	**-0.6**
CDAG					*i* S		**Sn**	**05 28 11.4**	**+0.5**
EZC	**Erzincan**	**2.94**	**48**	*e*PN			**Pn**	**05 27 37.1**	**-3.7**
EZC	**Erzincan**	**2.94**	**48**	Pn			**Pn**	**05 27 37.3**	**-3.5**
CORM	**Corum**	**2.98**	**323**	*e*PN			**Pn**	**05 27 41.8**	**+0.4**
KAMT	**Kaman**	**2.99**	**302**	*e*PN			**Pn**	**05 27 41.3**	**-0.3**
KAMT	**Kaman**	**2.99**	**302**	Pn			**Pn**	**05 27 41.6**	**+0.1**
MARD	**Mardin**	**3.06**	**98**	⇑*iP*			**Pn**	**05 27 41.5**	**-1.0**
MARD					*i* S		**Sg**	**05 28 33.1**	**+0.9**
IKL	**Isikli**	**3.07**	**240**	*e*PN			**Pn**	**05 27 43.5**	**+0.9**
IKL	**Isikli**	**3.07**	**240**	Pn			**Pn**	**05 27 42.4**	**-0.2**
EREN	**Erenkoy**	**3.21**	**226**	*e*PN			**Pn**	**05 27 45.6**	**+1.0**
EREN	**Erenkoy**	**3.21**	**226**	Pn			**Pn**	**05 27 46.6**	**+2.1**
CTKT	**Corum**	**3.28**	**329**	*i* P			**Pn**	**05 27 45.9**	**+0.5**
CTKT					*i* S		**Sg**	**05 28 36.8**	**-2.4**
GUMT	**Gumushane**	**3.28**	**36**	*e*PN			**Pn**	**05 27 45.6**	**+0.1**
GUMT	**Gumushane**	**3.28**	**36**	Pn			**Pn**	**05 27 45.9**	**+0.4**
KVT	**Kavak**	**3.34**	**348**	*e*PN			**Pn**	**05 27 46.6**	**+0.3**
KVT	**Kavak**	**3.34**	**348**	Pn			**Pn**	**05 27 45.7**	**-0.6**
ESPY	**Espiye-Giresun**	**3.38**	**23**	*e*PN			**Pn**	**05 27 46.9**	**0.0**
BEST	**Besiri**	**3.40**	**87**	*i* P			**Pn**	**05 27 47.2**	**0.0**
BEST					*i* S		**Sg**	**05 28 42.2**	**-0.8**
ERMK	**Ermenek**	**3.45**	**251**	*i* P			**Pn**	**05 27 49.4**	**+1.5**
ERMK					*i* S		**Sg**	**05 28 40.2**	**-4.5**
BNGL	**BINGOL**	**3.47**	**70**	*i* P			**Pn**	**05 27 49.9**	**+1.8**
BNGL					*i* S		**Sg**	**05 28 52.6**	**+7.2**
HWQ	**Hawqa**	**3.63**	**194**	*e*Pn			**Pn**	**05 27 52.2**	**+1.9**
KONT	**Konya--Tatoy**	**3.66**	**273**	*e*PN			**Pn**	**05 27 51.3**	**+0.6**
LADK	**Ladik-KONYA**	**3.66**	**277**	*e*PN			**Pn**	**05 27 51.7**	**+0.9**
LADK	**Ladik-KONYA**	**3.66**	**277**	Pn			**Pn**	**05 27 50.4**	**-0.4**
HDMB	**Hadim**	**3.68**	**258**	*e*PN			**Pn**	**05 27 52.2**	**+1.2**
PHNC	**Paralimni** 9.0nm,0.8s	**3.68**	**221**	P			**Pn**	**05 27 50.1**	**-0.9**
LFK	**Lefkose**	**3.76**	**229**	*e*PN			**Pn**	**05 27 52.7**	**+0.6**
LFK	**Lefkose**	**3.76**	**229**	Pn			**Pn**	**05 27 53.6**	**+1.5**
CANT	**Cankiri**	**3.81**	**318**	*e*PN			**Pn**	**05 27 53.2**	**+0.3**
KTUT	**Trabzon**	**3.83**	**33**	*e*PN			**Pn**	**05 27 53.2**	**+0.1**
ANTO	**Ankara**	**3.86**	**303**	*e*PN			**Pn**	**05 27 54.1**	**+0.7**
ANTO	**Ankara**	**3.86**	**303**	*e*Pn			**Pn**	**05 27 54.8**	**+1.3**
ANTO					*e*Sn		**Sg**	**05 28 56.0**	**-1.8**
LOD	**Lodumlu**	**3.88**	**303**	*e*PN			**Pn**	**05 27 54.4**	**+0.6**
LOD	**Lodumlu**	**3.88**	**303**	Pn			**Pn**	**05 27 55.0**	**+1.2**
TOS	**Tosya**	**3.94**	**325**	*e*PN			**Pn**	**05 27 54.9**	**+0.3**
TOS	**Tosya**	**3.94**	**325**	Pn			**Pn**	**05 27 56.0**	**+1.3**
EZM	**Erzurum**	**4.01**	**57**	*e*PN			**Pn**	**05 27 55.8**	**+0.3**
EZM	**Erzurum**	**4.01**	**57**	Pn			**Pn**	**05 27 57.4**	**+1.8**
DIKM	**Dikmen**	**4.05**	**341**	*e*PN			**Pn**	**05 27 56.9**	**+0.8**
BHL	**Bhannes**	**4.05**	**196**	*e*Pn			**Pn**	**05 27 56.6**	**+0.5**
CSS	**Prodhromos** 3.6nm,1.0s	**4.10**	**227**	P			**Pn**	**05 27 56.0**	**-0.8**
CSS	**Prodhromos**	**4.10**	**227**	*e*Pn			**Pn**	**05 27 57.5**	**+0.7**
CSS	**Prodhromos**	**4.10**	**227**	*e*Pn			**Pn**	**05 27 57.5**	**+0.8**
CSS					*e*Sn		**Sn**	**05 28 53.0**	**+8.2**
KIZT	**Kizilcal**	**4.15**	**286**	*e*PN			**Pn**	**05 27 58.2**	**+0.8**
KIZT	**Kizilcal**	**4.15**	**286**	Pn			**Pn**	**05 28 00.2**	**+2.7**
LEF	**Lefka**	**4.25**	**232**	Pn			**Pn**	**05 27 59.7**	**+0.8**
SIRT	**Sirnak**	**4.34**	**93**	*e*PN			**Pn**	**05 28 00.5**	**+0.3**
ALFC	**Alevga** 4.0nm,0.7s	**4.42**	**234**	P			**Pn**	**05 27 58.0**	**-3.1**
RCY	**Rachaya**	**4.43**	**193**	*e*Pn			**Pn**	**05 28 02.4**	**+1.1**
BZK	**Bozkurt**	**4.73**	**332**	*e*PN			**Pn**	**05 28 06.5**	**+1.0**
BZK	**Bozkurt**	**4.73**	**332**	Pn			**Pn**	**05 28 03.4**	**-2.0**
PPCY	**Paphos**	**4.75**	**233**	P			**Pn**	**05 28 06.6**	**-0.1**
SAFT	**Safranbolu**	**4.76**	**317**	*e*PN			**Pn**	**05 28 06.8**	**+0.9**
SAFT	**Safranbolu**	**4.76**	**317**	Pn			**Pn**	**05 28 06.7**	**+0.8**
MMAI	**Mount Meron Ar** 3.5nm,0.3s,baz=13,slow=15,SNR=17	**4.96**	**195**	Pn			**Pn**	**05 28 08.6**	**-0.1**
MMAI					Lg			05 29 28.8	
	8.0nm,0.3s,baz=24,slow=25,SNR=2.7								
BCK	**Bucak**	**5.08**	**268**	Pn			**Pn**	**05 28 11.8**	**+1.5**
BCK	**Bucak**	**5.08**	**268**	Pn			**Pn**	**05 28 11.8**	**+1.5**
MSL	**Mosul**	**5.10**	**104**	*ex*			x	05 28 09.0	
MSL				*ex*			x	05 28 30.0	
MSL				*ex*			x	05 29 09.0	
MSL				*ix*			x	05 29 41.0	
VANB	**Van**	**5.11**	**79**	Pn			**Pn**	**05 28 11.8**	**+1.1**
VANB	**Van**	**5.11**	**79**	Pn			**Pn**	**05 28 11.8**	**+1.2**
SHUT	**Suhut-Afyon**	**5.12**	**280**	*e*PN			**Pn**	**05 28 12.8**	**+2.0**
ISP	**Isparta**	**5.12**	**272**	*e*PN			**Pn**	**05 28 11.3**	**+0.5**
ISP	**Isparta**	**5.12**	**272**	*e*P			**Pn**	**05 28 10.5**	**-0.3**
ISP	**Isparta** 23nm,0.7s	**5.12**	**272**	*e*Pn			**Pn**	**05 28 12.0**	**+1.2**
ISP	**Isparta** 23nm,0.7s	**5.12**	**272**	*e*Pn			**Pn**	**05 28 12.0**	**+1.1**
MDU	**Mudurnu**	**5.20**	**302**	*e*PN			**Pn**	**05 28 12.8**	**+0.8**
MDU	**Mudurnu**	**5.20**	**302**	Pn			**Pn**	**05 28 14.2**	**+2.2**
HKR	**Hakkari**	**5.37**	**90**	*e*PN			**Pn**	**05 28 15.2**	**+1.0**
ASF	**Jabal al Asfar** 0.8nm,0.3s,baz=301,slow=1.7,SNR=7.3	**5.63**	**181**	Pn			**Pn**	**05 28 19.6**	**+1.7**
ASF					Lg			05 29 50.4	
	5.3nm,0.3s,baz=72,slow=17,SNR=4.1								
SOC	**Sochi**	**6.12**	**19**	*e*P			**Pn**	**05 28 31.6**	**+7.0**
SOC				*e*				05 29 36.0	
SOC	comp=Z,41nm,0.8s				pmax		pmax		
SOC	comp=Z,136nm,12.0s				MLR		MLR		
SOC	**Sochi** comp=Z,136nm,12.0s	**6.12**	**19**	*e*S			**Sn**	**05 29 36.0**	**+1.3**
GNI	**Garni** comp=Z,0.4nm,0.3s,baz=170,slow=22,SNR=3.7	**6.48**	**67**	Pn			**Pb**	**05 28 39.7**	**-7.2**
GNI	**Garni**	**6.48**	**67**	*i* P			**Pn**	**05 28 39.0**	**+10**
ONI	**Oni**	**6.87**	**44**	P			Px	05 28 50.2	
ONI				S			**Sg**	**05 30 36.6**	**+2.4**
ANN	**Anapa**	**6.98**	**3**	*e*P			**Pn**	**05 28 39.2**	**+2.8**
ANN				*e*S			**Sn**	**05 29 54.9**	**-1.0**
ANN	comp=Z,48nm,1.1s				pmax		pmax		
ANN	comp=Z,152nm,7.0s				MLR		MLR		
ANN	**Anapa** comp=Z,152nm,7.0s	**6.98**	**3**	*e*P			**Pn**	**05 28 39.2**	**+2.8**
MTA	**Mtatsminda**	**7.16**	**55**	S			**Sg**	**05 30 58.9**	**+15**
KIV	**Kislovodsk**	**7.50**	**33**	*i* P			**Pn**	**05 28 47.5**	**+4.0**
KIV	comp=Z,24nm,1.3s				pmax		pmax		
KIV	**Kislovodsk**	**7.50**	**33**	*e*Pn			**Pn**	**05 28 46.7**	**+3.2**
BHD	**Baghdad**	**7.55**	**125**	*ex*			x	05 28 42.0	
BHD				*ex*			x	05 30 09.0	
BHD				*i* x			x	05 30 58.0	
EIL	**Elat** comp=Z,0.2nm,0.3s,baz=340,slow=15,SNR=2.1	**8.30**	**192**	Pn			**Pn**	**05 28 56.5**	**+2.0**
EIL	comp=Z,151nm,21.0s,baz=13,slow=40				LR		LR	05 32 24.4	
TIRR	**Tirgusor**	**9.26**	**318**	*e*Pn			**Pn**	**05 29 08.3**	**+0.7**
TIRR	**Tirgusor**	**9.26**	**318**	*e*Pn			**Pn**	**05 29 08.3**	**+0.7**
IDI	**Anoyia** comp=Z,4.4nm,0.3s,baz=83,slow=16,SNR=13	**10.05**	**259**	Pn			**Pn**	**05 29 17.4**	**-1.1**
IDI	comp=Z,117nm,20.6s,baz=243,slow=42				LR		LR	05 33 53.8	
MLR	**Muntele Rosu** comp=Z,0.3nm,0.3s,baz=254,slow=18,SNR=3.2	**11.26**	**316**	Pn			**Pn**	**05 29 36.9**	**+1.9**
RST	**Umm Al-Ruwaisa**	**11.76**	**132**	*e*P			**Pn**	**05 29 37.8**	**-4.1**
RST	comp=Z,19nm,0.8s				AMb		AMB	05 29 45.0	
KRUS	**Krusevo**	**12.64**	**291**	*e*P			**Pn**	**05 29 59.5**	**+5.6**
KIEV	**Kiev**	**14.01**	**339**	*e*P			**Pn**	**05 30 19.6**	**+7.0**
KIEV	comp=Z,15nm,1.1s				pmax		pmax		
KIEV	**Kiev** comp=Z,15nm,1.1s	**14.01**	**339**	*e*Pn			**Pn**	**05 30 19.6**	**+7.0**
AKASG	**Malin Array Be** comp=Z,0.5nm,0.3s,baz=153,slow=13,SNR=4.2	**14.02**	**339**	Pn			**Pn**	**05 30 11.5**	**-1.1**
AKASG	**Malin Array Be**	**14.02**	**339**	*i* P			**Pn**	**05 30 19.6**	**+7.0**
AKASG	comp=Z,2.0nm,0.5s				pmax		pmax		
KOLS	**Kolonicke sedl**	**15.39**	**321**	*e*P			**Pn**	**05 30 36.7**	**+5.6**
CRVS	**Cervenica-Dubn**	**15.78**	**320**	*e*P			**Pn**	**05 30 40.1**	**+3.8**
TIP	**Timpagrande** comp=Z,28nm,1.2s	**15.89**	**281**	*e*Pn			**Pn**	**05 30 36.7**	**-1.1**
TIP	**Timpagrande** comp=Z,28nm,1.2s	**15.89**	**281**	*e*Pn			**Pn**	**05 30 36.7**	**-1.1**
KECS	**Kecovo**	**16.04**	**317**	*e*P			**Pn**	**05 30 42.1**	**+2.5**
KECS	comp=Z,7.0nm,1.0s				pmax		pmax		
KECS	**Kecovo**	**16.04**	**317**	*e*P			**Pn**	**05 30 42.1**	**+2.5**
KECS	**Kecovo** comp=Z,7.4nm,1.0s	**16.04**	**317**	*e*P			**Pn**	**05 30 42.1**	**+2.5**
PSZ	**Piszkesteto**	**16.05**	**314**	*e*P			**Pn**	**05 30 42.3**	**+2.5**
PSZ	comp=Z,6.0nm,0.9s				pmax		pmax		
PSZ	**Piszkesteto** comp=Z,6.0nm,0.9s	**16.05**	**314**	*e*P			**Pn**	**05 30 42.3**	**+2.5**
PSZ	**Piszkesteto** comp=Z,6.3nm,0.9s	**16.05**	**314**	*e*Pn			**Pn**	**05 30 42.3**	**+2.5**
STHS	**Stebnicka Huta** comp=Z,6.0nm,1.5s	**16.22**	**321**	*e*P			**Pn**	**05 30 46.0**	**+4.1**
STHS	comp=Z,6.1nm,1.5s				pmax		pmax		
STHS	**Stebnicka Huta**	**16.22**	**321**	*e*P			**Pn**	**05 30 46.0**	**+4.1**
CUC	**Castroucco** comp=Z,51nm,0.9s	**16.61**	**284**	⇑*i*Pn			**Pn**	**05 30 50.6**	**+3.6**
NIE	**Niedzica**	**16.69**	**319**	*e*P			**Pn**	**05 30 51.2**	**+3.3**
VYHS	**Vyhne**	**16.96**	**315**	*e*P			**Pn**	**05 30 52.6**	**+1.3**
VYHS	comp=Z,14nm,1.8s				pmax		pmax		
VYHS	**Vyhne** comp=Z,14nm,1.8s	**16.96**	**315**	*e*P			**Pn**	**05 30 52.6**	**+1.3**
OBN	**Obninsk**	**17.30**	**359**	⇓*e*P			**Pn**	**05 30 55.5**	**-0.1**
OBN				*e*S			**Sn**	**05 34 09.5**	**+1.4**
OBN	comp=Z,12nm,1.1s				pmax		pmax		
OBN	**Obninsk** comp=Z,12nm,1.1s	**17.30**	**359**	*e*P			**Pn**	**05 30 55.5**	**-0.1**
MODS	**Modra-Piesok**	**17.79**	**313**	*e*P			**Pn**	**05 31 03.9**	**+2.2**
ZST	**Bratislava**	**17.81**	**312**	*e*P			**Pn**	**05 31 03.5**	**+1.6**
ZST	comp=Z,15nm,1.3s				pmax		pmax		
ZST	**Bratislava**	**17.81**	**312**	*e*P			**Pn**	**05 31 03.5**	**+1.6**
ZST	**Bratislava** comp=Z,15nm,1.3s	**17.81**	**312**	*e*P			**Pn**	**05 31 03.5**	**+1.6**
MOS	**Moscow**	**17.93**	**1**	*e*P			**Pn**	**05 30 58.9**	**-4.5**
NRCA	**Norcia** comp=Z,5.2nm,0.7s	**18.85**	**293**	P			**Pn**	**05 31 15.9**	**+1.2**
SNTG	**Esanatoglia** comp=Z,25nm,1.0s	**19.03**	**294**	P			**Pn**	**05 31 17.6**	**+0.7**
FSSB	**Fossombrone** comp=Z,9.9nm,0.7s	**19.22**	**295**	P			**Pn**	**05 31 19.7**	**+0.6**
DPC	**Dobruska-Polom**	**19.34**	**317**	*e*P			**Pn**	**05 31 12.8**	**-7.7**
DPC				*ex*			x	05 31 21.5	
MOA	**Molln** comp=Z,17nm,1.4s,SNR=8.3	**19.38**	**308**	⇑*iP*			**Pn**	**05 31 20.3**	**-0.6**
PTCC	**Patocco-Chiusa** comp=Z,14nm,1.5s	**19.46**	**304**	P			**Pn**	**05 31 21.8**	**-0.2**
AKTK	**Aktyubinsk**	**19.59**	**43**	P			**Pn**	**05 31 21.3**	**-2.2**
AKTK	**Aktyubinsk**	**19.59**	**43**	P			**Pn**	**05 31 21.2**	**-2.3**
AKTK					LR		LR	05 41 01.2	
AKTO	**Aktyubinsk** comp=Z,0.1nm,0.3s,baz=252,slow=7.9,SNR=8.8	**19.59**	**43**	P			**Pn**	**05 31 21.2**	**-2.3**
AKTO	comp=Z,200nm,18.4s,baz=248,slow=43				LR		LR	05 41 01.2	
FVI	**Forni Avoltri**	**19.89**	**304**	P			**Pn**	**05 31 21.5**	**-5.7**
FVI	comp=Z,303nm,6.0s				pmax		pmax		
FVI	**Forni Avoltri** comp=Z,303nm,6.0s	**19.89**	**304**	P			**Pn**	**05 31 21.5**	**-5.7**
SFI	**Santa Sofia**	**19.92**	**296**	P			**Pn**	**05 31 27.4**	**-0.1**
SFI	comp=Z,21nm,1.5s				pmax		pmax		
SFI	**Santa Sofia** comp=Z,21nm,1.5s	**19.92**	**296**	P			**Pn**	**05 31 27.4**	**-0.1**
GEC2	**GERESS Array S**	**20.12**	**311**	*e*P			**P**	**05 31 27.7**	**-0.3**
GEC2	comp=Z,14nm,1.2s				pmax		pmax		
GEC2	**GERESS Array S** comp=Z,14nm,1.2s	**20.12**	**311**	*e*P			**P**	**05 31 27.7**	**-0.3**
GERES	**GERESS Array B** comp=Z,5.0nm,0.7s,baz=112,slow=10,SNR=22	**20.12**	**311**	P			**P**	**05 31 28.3**	**+0.3**
PRU	**Pruhonice**	**20.14**	**314**	*e*P			**P**	**05 31 28.4**	**+0.2**
VMG	**Vicchio** comp=Z,4.1nm,0.5s	**20.14**	**296**	P			**P**	**05 31 29.3**	**+1.0**
RJOB	**Jochberg** comp=Z,13nm,1.0s	**20.26**	**307**	*e*P			**P**	**05 31 31.2**	**+1.7**
SEI	**Scarperia** comp=Z,27nm,0.7s	**20.29**	**296**	P			**P**	**05 31 31.4**	**+1.5**
KHC	**Kasperske Hory**	**20.31**	**311**	⇑*e*P			**P**	**05 31 28.4**	**-1.7**
KHC				*i*				05 31 31.1	
KHC	**Kasperske Hory**	**20.31**	**311**	*e*P			**P**	**05 31 29.8**	**-0.3**
FNVD	**Fontana Vidola** comp=Z,31nm,1.4s	**20.48**	**296**	P			**P**	**05 31 33.3**	**+1.4**
WET	**Wettzell**	**20.74**	**311**	*e*P			**P**	**05 31 34.4**	**-0.3**
WET	comp=Z,33nm,1.5s				pmax		pmax		
WET	**Wettzell** comp=Z,33nm,1.5s	**20.74**	**311**	*e*P			**P**	**05 31 34.4**	**-0.3**
WTTA	**Wattenberg** comp=Z,44nm,1.1s,SNR=12	**20.84**	**305**	⇓*iP*			**P**	**05 31 37.1**	**+1.2**
GSCL	**Gusciola** comp=Z,9.5nm,0.9s	**20.88**	**297**	P			**P**	**05 31 37.7**	**+1.4**
BRG	**Berggiesshubel**	**20.91**	**316**	*e*P			**P**	**05 31 41.1**	**+4.6**
BRG	comp=Z,3.0nm,0.9s				pmax		pmax		
BRG	**Berggiesshubel** comp=Z,40nm,1.7s	**20.91**	**316**	*e*P			**P**	**05 31 38.4**	**+1.9**
BRG	**Berggiesshubel** comp=Z,5.3nm,0.9s	**20.91**	**316**	*e*P			**P**	**05 31 38.6**	**+2.1**
BRG	comp=Z,20nm,1.7s				*e*			05 31 41.1	
BRG	**Berggiesshubel** comp=Z,3.2nm,0.9s	**20.91**	**316**	*e*P			**P**	**05 31 41.1**	**+4.6**
MOTA	**Moosalm** comp=Z,43nm,1.0s,mb4.7,SNR=15	**21.21**	**305**	⇑*iP*			**P**	**05 31 40.1**	**+0.2**
FUR	**Furstenfeldbru**	**21.36**	**307**	*e*P			**P**	**05 31 41.2**	**-0.3**
FUR	comp=Z,44nm,0.8s,mb4.8				pmax		pmax		
FUR	**Furstenfeldbru** comp=Z,44nm,0.8s,mb4.8	**21.36**	**307**	*e*P			**P**	**05 31 41.2**	**-0.3**
FETA	**Feichten** comp=Z,22nm,1.0s,mb4.5	**21.37**	**304**	⇑*iP*			**P**	**05 31 42.3**	**+0.8**
ROTZ	**Rotzenmuhle** comp=Z,20nm,0.9s,mb4.5	**21.39**	**312**	*e*P			**P**	**05 31 41.8**	**0.0**
NKC	**Novy Kostel**	**21.45**	**313**	*e*P			**P**	**05 31 43.2**	**+0.8**
RETA	**Reutte** comp=Z,30nm,0.9s,mb4.6,SNR=11	**21.48**	**305**	⇑*iP*			**P**	**05 31 43.2**	**+0.5**
RETA	**Reutte** comp=Z,30nm,0.9s,mb4.6,SNR=11	**21.48**	**305**	P			**P**	**05 31 43.2**	**+0.5**
TANN	**Tannenbergstha** comp=Z,13nm,1.0s,mb4.3	**21.52**	**314**	*e*P			**P**	**05 31 43.4**	**+0.2**
MANZ	**Manzenberg** comp=Z,24nm,1.0s,mb4.6	**21.54**	**312**	*e*P			**P**	**05 31 45.2**	**+1.8**
CLL	**Collm**	**21.64**	**316**	*e*P			**P**	**05 31 43.0**	**-1.4**
CLL				*i* *PP				05 31 47.5	
CLL	comp=Z,18nm,1.5s,mb4.3				pmax		pmax		
CLL	**Collm** comp=Z,13nm,1.0s,mb4.3	**21.64**	**316**	*e*P			**P**	**05 31 47.0**	**+2.6**
CLL	**Collm** comp=Z,18nm,1.5s,mb4.3	**21.64**	**316**	*e*P			**P**	**05 31 43.0**	**-1.4**
CLL	comp=Z,13nm,1.0s			*i* (sP)			sP	05 31 47.5	-0.4
CLL				*i* x			x	05 31 49.9	
CLL				*i* PP				05 32 03.4	
CLL	**Collm** comp=Z,18nm,1.5s,mb4.3	**21.64**	**316**	*e*P			**P**	**05 31 43.0**	**-1.4**
CLL				*i* pP				05 31 47.5	
PGF	**Pioggiola** comp=Z,24nm,0.8s,mb4.4	**21.84**	**291**	⇑*iP*			**P**	**05 31 45.9**	**-0.8**
PGF	**Pioggiola**	**21.84**	**291**	⇑*iP*			**P**	**05 31 45.9**	**-0.8**
PGF	comp=Z,12nm,0.8s,mb4.4				pmax		pmax		
PGF	**Pioggiola** comp=Z,12nm,0.8s,mb4.4	**21.84**	**291**	⇑*iP*			**P**	**05 31 45.9**	**-0.8**
DAVOX	**Davos/Dischmat** comp=Z,7.6nm,0.8s,mb4.2,baz=124,slow=11,SNR=7.4	**21.87**	**303**	P			**P**	**05 31 46.9**	**+0.1**
DAVOS	**Davos**	**21.94**	**303**	P			**P**	**05 31 46.9**	**-0.7**
GRA1	**Grafenberg Arr** comp=Z,35nm,0.9s,mb4.8	**21.95**	**311**	*e*P			**P**	**05 31 47.7**	**0.0**
GRF	**Grafenberg Arr**	**21.95**	**311**	*e*P			**P**	**05 31 47.7**	**0.0**
GRF	comp=Z,35nm,0.9s,mb4.8				pmax		pmax		
GRF	**Grafenberg Arr** comp=Z,35nm,0.9s,mb4.8	**21.95**	**311**	*e*P			**P**	**05 31 47.7**	**0.0**
GRF	**Grafenberg Arr** comp=Z,35nm,0.9s,mb4.8	**21.95**	**311**	*e*P			**P**	**05 31 47.7**	**0.0**
DAVA	**Damuels** comp=Z,43nm,0.9s,mb4.9	**22.00**	**304**	⇑*iP*			**P**	**05 31 48.0**	**-0.3**
MOX	**Moxa** comp=Z,15nm,0.9s,mb4.4	**22.11**	**314**	*e*P			**P**	**05 31 51.1**	**+1.6**
MOX	**Moxa**	**22.11**	**314**	*e*P			**P**	**05 31 51.1**	**+1.6**
MOX	comp=Z,15nm,0.9s,mb4.4				pmax		pmax		
MOX	**Moxa** comp=Z,12nm,0.9s,mb4.3	**22.11**	**314**	*e*P			**P**	**05 31 49.5**	**0.0**
TUE	**Stuetta** comp=Z,5.6nm,0.7s,mb4.1	**22.15**	**302**	*e*P			**P**	**05 31 52.3**	**+2.4**
KEST	**Kesra** comp=Z,6.8nm,0.8s,mb4.1,baz=40,slow=7.9,SNR=12	**22.20**	**273**	P			**P**	**05 31 51.2**	**+0.6**
PCP	**Piancastagn**	**22.36**	**296**	P			**P**	**05 31 53.0**	**+0.8**
VAI	**Varese**	**22.42**	**300**	P			**P**	**05 31 52.5**	**-0.3**
SPAK	**Spaichingen-Ko**	**22

SMRF	Simiane la Rot	24.43	295	⇑	*i*	P	P	05 32 12.2	-0.6
	comp=Z,11nm,1.0s,mb4.2								
RUP	Ruppelstein	24.49	309		*e*	P	P	05 32 12.0	-1.2
HAU	Haudompre	24.49	304	⇑	*i*	P	P	05 32 13.0	-0.3
	comp=Z,49nm,0.8s,mb4.7								
HAU					*e*	MLR	MLR		
	comp=Z,94nm,18.0s,MS3.0								
HAU	Haudompre	24.49	304	⇑	*i*	P	P	05 32 13.0	-0.3
HAU						pmax	pmax		
	comp=Z,25nm,0.8s,mb4.7								
HAU						MLR	MLR		
	comp=Z,90nm,18.0s,MS3.3								
HAU	Haudompre	24.49	304	⇑	*i*	P	P	05 32 13.0	-0.3
	comp=Z,25nm,0.8s,mb4.7								
HAU						LR	LR		
	comp=Z,90nm,18.0s,MS3.3								
SVE	Sverdlovsk	24.66	32	⇓	*e*	P	P	05 32 15.0	+0.3
SVE						pmax	pmax		
	comp=Z,42nm,1.2s,mb4.8								
BUG	Bochum--Univer	24.94	313		*e*	P	P	05 32 17.7	+0.3
	comp=Z,98nm,2.1s,mb5.0								
IBBN	Ibbenburen	25.00	315		*e*	P	P	05 32 18.9	+1.0
	comp=Z,47nm,1.7s,mb4.7								
VIVF	Saint-Julien-l	25.14	297	⇑	*i*	P	P	05 32 18.6	-0.6
	comp=Z,63nm,0.8s,mb4.9								
VIVF	Saint-Julien-l	25.14	297	⇑	*i*	P	P	05 32 18.6	-0.6
VIVF						pmax	pmax		
	comp=Z,31nm,0.8s,mb4.9								
VIVF	Saint-Julien-l	25.14	297	⇑	*i*	P	P	05 32 18.6	-0.6
	comp=Z,31nm,0.8s,mb4.9								
SSB	Saint Sauveur	25.27	297		*e*	P	P	05 32 19.7	-0.7
MEZF	Maizieres J'vi	25.44	305	⇑	*i*	P	P	05 32 21.9	-0.1
	comp=Z,74nm,0.8s,mb5.0								
MEZF	Maizieres J'vi	25.44	305	⇑	*i*	P	P	05 32 21.9	-0.1
	comp=Z,37nm,0.8s,mb5.0								
LASF	Ste Croix	25.67	295	⇑	*i*	P	P	05 32 23.6	-0.5
SMF	Signal de Mont	25.92	300	⇑	*i*	P	P	05 32 25.9	-0.4
	comp=Z,48nm,0.8s,mb4.8								
SMF	Signal de Mont	25.92	300	⇑	*i*	P	P	05 32 25.9	-0.4
SMF						pmax	pmax		
	comp=Z,24nm,0.8s,mb4.8								
SMF	Signal de Mont	25.92	300	⇑	*i*	P	P	05 32 25.9	-0.4
	comp=Z,24nm,0.8s,mb4.8								
PLDF	La Plantade	25.98	299		*e*	P	P	05 32 26.6	-0.3
GIVF	Givet	25.99	309		*e*	P	P	05 32 26.6	-0.3
	comp=Z,19nm,0.7s,mb4.4								
GIVF	Givet	25.99	309		*e*	P	P	05 32 26.6	-0.3
GIVF						pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5								
GIVF	Givet	25.99	309		*e*	P	P	05 32 26.6	-0.3
	comp=Z,9.6nm,0.7s,mb4.4								
LOR	Lormes	26.00	302	⇑	*i*	P	P	05 32 26.4	-0.6
	comp=Z,21nm,0.8s,mb4.4								
LOR					*e*	MLR	MLR		
	comp=Z,148nm,17.1s,MS3.3								
LOR	Lormes	26.00	302	⇑	*i*	P	P	05 32 26.4	-0.6
LOR						pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4								
LOR						MLR	MLR		
	comp=Z,150nm,17.1s,MS3.6								
LOR	Lormes	26.00	302	⇑	*i*	P	P	05 32 26.4	-0.6
	comp=Z,11nm,0.8s,mb4.4								
LOR						LR	LR		
	comp=Z,150nm,17.1s,MS3.6								
LBL	Lubilhac	26.18	297		*e*	P	P	05 32 28.1	-0.5
SSF	Saint Saulge	26.20	301	⇑	*i*	P	P	05 32 28.5	-0.4
	comp=Z,23nm,0.8s,mb4.5								
SSF	Saint Saulge	26.20	301	⇑	*i*	P	P	05 32 28.5	-0.4
SSF						pmax	pmax		
	comp=Z,12nm,0.8s,mb4.5								
SSF	Saint Saulge	26.20	301	⇑	*i*	P	P	05 32 28.5	-0.4
	comp=Z,12nm,0.8s,mb4.5								
AVF	Avril sur Loir	26.27	301	⇑	*i*	P	P	05 32 28.9	-0.6
	comp=Z,27nm,0.8s,mb4.5								
AVF	Avril sur Loir	26.27	301	⇑	*i*	P	P	05 32 28.9	-0.6
AVF						pmax	pmax		
	comp=Z,13nm,0.8s,mb4.5								
AVF	Avril sur Loir	26.27	301	⇑	*i*	P	P	05 32 28.9	-0.6
	comp=Z,13nm,0.8s,mb4.5								
AGO	Saint Agoulin	26.33	299		*e*	P	P	05 32 27.1	-2.9
BAIF	Baives	26.36	308	⇑	*i*	P	P	05 32 30.2	0.0
	comp=Z,20nm,0.9s,mb4.4								
BAIF	Baives	26.36	308	⇑	*i*	P	P	05 32 30.2	0.0
BAIF						pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3								
BAIF	Baives	26.36	308	⇑	*i*	P	P	05 32 30.2	0.0
	comp=Z,10nm,0.9s,mb4.4								
PYM	Petit Puy Mans	26.39	298		*e*	P	P	05 32 28.6	-1.9
BGF	Bois d'Agland	26.59	300	⇑	*i*	P	P	05 32 31.8	-0.5
	comp=Z,20nm,0.9s,mb4.4								
BGF	Bois d'Agland	26.59	300	⇑	*i*	P	P	05 32 31.8	-0.5
BGF						pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3								
BGF	Bois d'Agland	26.59	300	⇑	*i*	P	P	05 32 31.8	-0.5
	comp=Z,9.9nm,0.9s,mb4.4								
HFS	Hagfors	26.79	334		P		P	05 32 34.3	+0.3
	comp=Z,3.8nm,0.5s,mb4.2,baz=132,slow=8.6,SNR=13								
MTLF	Montolieu	26.84	293		*e*	P	P	05 32 33.2	-1.5
CAF	Calviac	26.99	296	⇑	*i*	P	P	05 32 35.8	-0.2
	comp=Z,24nm,1.4s,mb4.2								
CAF	Calviac	26.99	296	⇑	*i*	P	P	05 32 35.8	-0.2
CAF						pmax	pmax		
	comp=Z,12nm,1.4s,mb4.2								
CAF	Calviac	26.99	296	⇑	*i*	P	P	05 32 35.8	-0.2
	comp=Z,12nm,1.4s,mb4.2								
TCF	Toulx Ste Croi	26.99	299	⇑	*i*	P	P	05 32 35.9	-0.1
	comp=Z,35nm,1.0s,mb4.5								
TCF	Toulx Ste Croi	26.99	299	⇑	*i*	P	P	05 32 35.9	-0.1
TCF						pmax	pmax		
	comp=Z,17nm,1.0s,mb4.5								
TCF	Toulx Ste Croi	26.99	299	⇑	*i*	P	P	05 32 35.9	-0.1
	comp=Z,17nm,1.0s,mb4.5								
RJF	Les Rejaudoux	27.40	297	⇑	*i*	P	P	05 32 39.8	+0.1
	comp=Z,22nm,0.8s,mb4.4								
RJF					*e*	MLR	MLR		
	comp=Z,117nm,19.5s,MS3.2								
RJF	Les Rejaudoux	27.40	297	⇑	*i*	P	P	05 32 39.8	+0.1
RJF						pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4								
RJF						MLR	MLR		
	comp=Z,120nm,19.5s,MS3.5								
RJF	Les Rejaudoux	27.40	297	⇑	*i*	P	P	05 32 39.8	+0.1
	comp=Z,11nm,0.8s,mb4.4								
RJF						LR	LR		
	comp=Z,120nm,19.5s,MS3.5								
BRVK	Borovoye	27.59	46		*e*	P	P	05 32 41.4	+0.2
BRVK						pmax	pmax		
	comp=Z,1μm,1.3s								
BRVK	Borovoye	27.59	46		*e*	P	P	05 32 41.4	+0.2
	comp=Z,1μm,1.3s								
BVAR	Borovoye Array	27.63	46		P		P	05 32 42.2	+0.6
	comp=Z,3.9nm,1.0s,mb4.0,baz=238,slow=8.4,SNR=12								
BVAR						LR	LR	05 45 32.9	
	comp=Z,153nm,18.3s,MS3.6,baz=60,slow=41								
BVAR	Borovoye Array	27.63	46		P		P	05 32 42.2	+0.6
BVAR						LR	LR	05 45 32.9	
EPF	Esparros	28.22	292		*e*	P	P	05 32 45.5	-1.5
MFF	Saint Martin d	28.64	300	⇑	*i*	P	P	05 32 50.0	-0.8
	comp=Z,40nm,1.1s,mb4.8								
MFF	Saint Martin d	28.64	300	⇑	*i*	P	P	05 32 50.0	-0.8
MFF						pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8								
MFF	Saint Martin d	28.64	300	⇑	*i*	P	P	05 32 50.0	-0.8
	comp=Z,20nm,1.1s,mb4.7								
LDF	La Druitiere	28.84	304		*e*	P	P	05 32 51.4	-1.1
ETSF	Etsaut	28.89	292		*e*	P	P	05 32 52.5	-0.4
	comp=Z,7.4nm,0.8s,mb4.1								
ETSF	Etsaut	28.89	292		*e*	P	P	05 32 52.5	-0.4
ETSF						pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2								
ETSF	Etsaut	28.89	292		*e*	P	P	05 32 52.5	-0.4
	comp=Z,3.7nm,0.8s,mb4.1								
FLN	La Foliniere	29.10	304		*e*	P	P	05 32 53.8	-1.0
FLN						MLR	MLR		
	comp=Z,122nm,19.0s,MS3.2								
FLN	La Foliniere	29.10	304		*e*	P	P	05 32 53.8	-1.0
FLN						LR	LR		
	comp=Z,120nm,19.0s,MS3.5								
GRR	Gorron	29.30	303		*e*	P	P	05 32 55.3	-1.3
	comp=Z,21nm,0.7s,mb4.7								
GRR	Gorron	29.30	303		*e*	P	P	05 32 55.3	-1.3
GRR						pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7								
GRR	Gorron	29.30	303		*e*	P	P	05 32 55.3	-1.3
	comp=Z,11nm,0.7s,mb4.7								
SJPF	Ste Jean	29.36	293		*e*	P	P	05 32 56.7	-0.5
SGMF	Saint Gilles	30.41	303		*e*	P	P	05 33 05.4	-1.0
	comp=Z,56nm,1.1s,mb4.9								
SGMF	Saint Gilles	30.41	303		*e*	P	P	05 33 05.4	-1.0
SGMF						pmax	pmax		
	comp=Z,28nm,1.1s,mb4.9								
SGMF	Saint Gilles	30.41	303		*e*	P	P	05 33 05.4	-1.0
	comp=Z,28nm,1.1s,mb4.9								
QUIF	Quistinic	30.79	302	⇑	*i*	P	P	05 33 08.6	-1.2
	comp=Z,25nm,0.9s,mb4.8								
QUIF	Quistinic	30.79	302	⇑	*i*	P	P	05 33 08.6	-1.2
QUIF						pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8								
QUIF	Quistinic	30.79	302	⇑	*i*	P	P	05 33 08.6	-1.2
	comp=Z,13nm,0.9s,mb4.8								
TAM	Tamanrasset	30.84	250		*e*	P	P	05 33 11.7	+1.3
ROSF	Rostrenen	30.90	303	⇑	*i*	P	P	05 33 09.5	-1.2
	comp=Z,25nm,0.9s,mb4.7								
ROSF	Rostrenen	30.90	303	⇑	*i*	P	P	05 33 09.5	-1.2
ROSF						pmax	pmax		
	comp=Z,12nm,0.9s,mb4.7								
ROSF	Rostrenen	30.90	303	⇑	*i*	P	P	05 33 09.5	-1.2
	comp=Z,12nm,0.9s,mb4.7								
ESDC	Sonseca Array	31.79	286		P		P	05 33 17.6	-1.1
	comp=Z,2.8nm,0.7s,mb4.2,baz=59,slow=9.7,SNR=9.3								
KURK	Kurchatov	32.05	53		P		P	05 33 18.5	-2.3
	comp=Z,1.5nm,0.5s,mb4.1,baz=268,slow=9.0,SNR=6.8								
KURK	Kurchatov	32.05	53	⇓	*e*	P	P	05 33 21.5	+0.7
KURK						pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.3								
KURK						MLR	MLR		
	comp=Z,200nm,13.0s,MS4.0								
EKA	Eskdalemuir Ar	32.11	316		P		P	05 33 19.9	-1.3
	comp=Z,4.9nm,0.8s,mb4.4,baz=110,slow=8.8,SNR=13								
ARCES	ARCESS Array B	32.38	352		P		P	05 33 22.6	-0.8
	comp=Z,1.9nm,0.8s,mb4.0,baz=156,slow=9.3,SNR=6.1								
MDT	Midelt	34.10	274		P		P	05 33 40.3	+1.4
	comp=Z,1.2nm,0.9s,mb3.8,baz=98,slow=5.6,SNR=3.7								
MKAR	Makanchi Array	34.28	60		P		P	05 33 40.9	+0.6
	comp=Z,3.0nm,0.9s,mb4.2,baz=280,slow=7.1,SNR=8.4								
MKAR						LR	LR	05 49 41.1	
	comp=Z,137nm,18.4s,MS3.7,baz=189,slow=40								
MKAR	Makanchi Array	34.28	60		P		P	05 33 40.9	+0.6
MKAR						LR	LR	05 49 41.1	
NVS	Novosibirsk	35.43	46		*e*	P	P	05 33 50.2	0.0
ZALV	Zalesovo Beam	36.23	48		LR		LR	05 51 07.8	
	comp=Z,66nm,18.9s,MS3.4,baz=73,slow=40								
TOA0	Torodi Ar. Sit	39.85	241		*e*	P	P	05 34 27.9	0.0
TORD	Torodi Ar. Bea	39.85	241		P		P	05 34 27.4	-0.5
	comp=Z,5.8nm,0.9s,mb4.3,baz=47,slow=6.2,SNR=26								
ZAK	Zakamensk	47.72	52		*e*	P	P	05 35 32.2	+1.4
ZAK						pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.9								
DBIC	Dimbokro	48.96	241		P		P	05 35 40.9	0.0
	comp=Z,4.6nm,0.9s,mb4.5,baz=48,slow=6.4,SNR=4.3								
TIC	Toumodi	49.09	242		*e*	P	P	05 35 40.3	-1.6
	comp=Z,150nm,1.6s,mb5.8								
TIC	Toumodi	49.09	242		*e*	P	P	05 35 40.3	-1.6
TIC						pmax	pmax		
	comp=Z,151nm,1.6s,mb5.8								
KIC	Kosan Boka	49.10	241		*e*	P	P	05 35 41.1	-0.9
	comp=Z,167nm,1.7s,mb5.8								
LIC	Lamto	49.40	241		*e*	P	P	05 35 43.7	-0.5
	comp=Z,15nm,0.9s,mb4.7								
LIC	Lamto	49.40	241		*e*	P	P	05 35 43.6	-0.6
	comp=Z,42nm,1.4s,mb5.3								
LIC	Lamto	49.40	241		*e*	P	P	05 35 43.7	-0.5
	comp=Z,7.3nm,0.9s,mb4.7								
SONM	Songino Array	50.30	55		P		P	05 35 51.4	+0.7
	comp=Z,1.2nm,0.9s,mb3.9,baz=298,slow=8.7,SNR=6.6								
SONM						LR	LR	05 59 40.2	
	comp=Z,369nm,18.5s,MS4.4,baz=145,slow=39								
ULN	Ulaanbaatar	50.72	55		*i*	P	P	05 35 55.0	+1.1
BOD	Bodaibo	52.34	41		*e*	P	P	05 36 03.9	-2.0
BOD						pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3								
CMAR	Chiang Mai Arr	56.94	92		P		P	05 36 38.5	-1.3
	comp=Z,0.9nm,0.3s,mb4.3,baz=294,slow=8.4,SNR=8.0								
CMAR	Chiang Mai Arr	56.94	92	⇓	*e*	P	P	05 36 39.5	-0.3
BOSA	Boshof	66.99	191		P		P	05 37 47.3	+0.3
	comp=Z,2.9nm,0.7s,mb4.4,baz=6.1,slow=9.1,SNR=6.0								
BOSA						LR	LR	06 09 31.3	
	comp=Z,87nm,19.7s,MS4.0,baz=6,slow=38								
BOSA	Boshof	66.99	191		P		P	05 37 47.3	+0.3
BOSA						LR	LR	06 09 31.3	
KSRS	Korea Array	68.94	59		P		P	05 37 58.7	-0.7
	comp=Z,2.4nm,0.8s,mb4.2,baz=290,slow=4.8,SNR=4.1								
KSRS						LR	LR	06 11 38.7	
	comp=Z,84nm,18.9s,MS4.0,baz=300,slow=39								
KSRS	Korea Array	68.94	59		P		P	05 37 58.7	-0.7
KSRS						pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1								
KSRS						MLR	MLR		
	comp=Z,84nm,18.9s,MS4.0								

BJI ***15*** *06:02:12.9, 384S×100.67E, h35km, mB5.0, mb4.9, Ms4.7, Msz4.4*
IDC ***15*** *06:02:15.8±0.7, 294S×100.96E, h0km, mb4.6/14, mb1 4.8/15, mb1mx4.6/21, mbtmp4.7/15, ML4.9/1, MS3.5/7, Ms1 3.5/7, ms1mx3.2/30, Error ellipse: s-maj=26.0km s-min=13.3km az=59.0*
ISCJB ***15*** *06:02:18.6±0.3, 3.18S±004×10082E±004, h34km, mb4.8/58, MS3.8/14, Error ellipse: s-maj=6.3km s-min=4.6km az=135.6*
MOS ***15*** *06:02:19.5±1.1, 279S×101.12E, h33km, mb5.1/18, Error ellipse: s-maj=16.2km s-min=7.6km az=102.9*
NEIC ***15*** *06:02:20.8±0.3, 302S×100.94E, h35km, mb4.8/14, Error ellipse: s-maj=11.3km s-min=5.7km az=62.0*
DJA ***15*** *06:02:36, 180S×100.95E, h28km, MLv4.7/4*
ISC 15 06:02:21.0±0.3, 316S±004×10083E±004, h36km, h36km±2.9km:pP-P, n125, σ1°21/117, mb4.8/58, MS3.8/14, 12C-7D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRJI	Kerinci	1.23	31	P		Pn	06 02 40.4	-1.3
	0.0nm,0.0s							
PPI	Padang Panjang	2.72	351	P		Pn	06 03 02.8	+0.6
	0.0nm,0.0s							
KLI	Kotabumi	4.36	113	P		Pn	06 03 27.7	+3.0
	0.0nm,0.0s							
DSRI	Dabo	4.59	55	P		Pn	06 03 26.6	-1.4
	0.0nm,0.0s							
PPBI	Pangkal Pinang	5.39	80	P		Pn	06 03 39.3	+0.4
	0.0nm,0.0s							
KGM	Kluang	5.71	26	⇓	P	Pn	06 03 43.7	+0.4
MYKOM	Kota Tinggi	5.77	32	⇑	P	Pn	06 03 44.1	0.0
FRIM	Kepong	6.40	7	⇓	P	Pn	06 03 55.2	+2.4
TPI	Tanjungpandan	6.82	87	P		Pn	06 03 58.0	-0.6
	0.0nm,0.0s							
IPM	Ipoh	7.59	1	⇓	P	Pn	06 04 13.5	+4.3
XMIS	Christmas Isla	8.71	147	*e*	Pn	Pn	06 04 25.6	+1.1
KTGM	Kuala Trenggan	8.74	15	⇓	P	Pn	06 04 26.3	+1.4
COCO	West Island	9.81	204	*e*	Pn	Pn	06 04 39.5	-0.1
KSM	Kuching	10.53	64	⇑	P	Pn	06 04 50.7	+1.2
SJI	Sawahan	11.79	113	P		Pn	06 05 08.5	+1.7
	0.0nm,0.0s							
SBUM	Sibu	12.67	64	⇑	P	Pn	06 05 18.3	-0.6
SDKM	Sandakan	18.53	62	⇑	P	Pn	06 06 35.7	+0.7
TSM	Tawau	18.57	67	⇓	P	Pn	06 06 37.0	+1.6
KDM	Kudat	18.85	58	⇑	P	Pn	06 06 39.5	+0.7
KAPI	Kappang	18.96	96	P		Pn	06 06 38.3	-1.9
	3.7nm,0.3s,baz=278,slow=11,SNR=14							
KAPI				LR		LR	06 13 09.0	
	comp=Z,101nm,21.4s,baz=262,slow=35							
KAPI	Kappang	18.96	96	*e*	P	Pn	06 06 38.9	-1.3
	51nm,0.9s							
MYLDM	Lahad Datu	19.50	65	⇓	P	Pn	06 06 48.4	+1.8
CMAR	Chiang Mai Arr	21.56	355	P		P	06 07 03.5	-3.9
	6.2nm,0.8s,mb4.1,baz=185,slow=10,SNR=22							
CMAR				LR		LR	06 16 09.4	
	comp=Z,106nm,18.3s,MS3.3,baz=144,slow=39							
CHTO	Chiang Mai	21.91	355	*e*	P	P	06 07 09.3	-1.9
CHTO					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0							
CHTO	Chiang Mai	21.91	355	*e*	P	P	06 07 09.3	-1.9
	comp=Z,5.1nm,0.8s,mb4.0							
QIZ	Qiongzhong	23.76	22	P		P	06 07 30.9	+0.6
QIZ				S		S	06 11 43.4	+0.1
QIZ				LR		LR		
	comp=N,195nm,13.7s							
QIZ				LR		LR		
	comp=Z,158nm,20.1s							
MBWA	Marble Bar	25.66	136	*e*	P	P	06 07 48.1	+0.5
	comp=Z,10nm,1.0s,mb4.3							

AAI	Ambon	27.32	92		P		P	06 08 01.0	-1.7
	comp=Z,0.0nm,0.0s								
KMI	Kunming	28.17	4		P		P	06 08 12.8	+2.7
KMI					AP	pP		06 08 21.3	+0.9
KMI					XP	sP		06 08 24.1	-0.7
KMI					PP	PP		06 09 04.8	-9.4
KMI					S	S		06 12 55.3	+2.1
KMI					XS	sS		06 13 12.9	+2.6
KMI					SS			06 14 20.4	
KMI					AMB	AMB			
	comp=Z,8.0nm,0.7s,mb4.5								
KMI					AMB	AMB			
	comp=Z,118nm,3.8s								
KMI					LR	LR			
	comp=N,186nm,16.3s,MS3.9								
KMI					LR	LR			
	comp=E,164nm,17.9s,MS3.9								
KMI					LR	LR			
	comp=Z,158nm,17.9s,MS3.6								
FITZ	Fitzroy Crossi	28.48	123		*e*	P	P	06 08 12.8	-0.2
	comp=Z,12nm,0.8s,mb4.6								
FITZ	Fitzroy Crossi	28.48	123		P		P	06 08 13.0	0.0
	comp=Z,6.1nm,0.7s,mb4.3,baz=302,slow=7.7,SNR=13								
FITZ					LR	LR	06 20 32.4		
	comp=Z,19nm,20.6s,MS2.7,baz=296,slow=38								
GYA	Guiyang	29.98	11		P		P	06 08 27.6	+1.5
GYA					AP	pP		06 08 37.9	+1.5
GYA					XP	sP		06 08 42.6	+1.8
GYA					PP	PP		06 09 28.3	-6.0
GYA					PCP	PcP		06 11 28.4	+0.3
GYA					S	S		06 13 21.8	+0.2
GYA					XS	sS		06 13 40.6	+1.9
GYA					SCP	ScP		06 15 05.9	-1.7
GYA					SCS	ScS		06 19 01.4	-1.7
GYA					AMB	AMB			
	comp=Z,20nm,0.8s,mb4.9								
GYA					AMB	AMB			
	comp=Z,120nm,4.8s								
GYA					LR	LR			
	comp=N,650nm,12.6s,MS4.5								
GYA					LR	LR			
	comp=E,430nm,12.5s,MS4.5								
GYA					LR	LR			
	comp=Z,580nm,13.7s,MS4.4								
ODAN	Odare	32.54	337		*e*	P	P	06 08 49.5	+0.8
TAPN	Taplejung	32.87	338		*e*	P	P	06 08 52.4	+0.9
	comp=Z,175nm,0.9s								
RAMN	Ramite	32.94	336		*e*	P	P	06 08 53.0	+0.8
	comp=Z,32nm,0.4s,mb5.6								
JIRN	Jiri	33.73	336		*e*	P	P	06 09 00.3	+1.2
LSA	Lhasa	33.96	345		*e*	P	P	06 09 01.5	+0.4
LSA						pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8								
LSA	Lhasa	33.96	345		*e*	P	P	06 09 01.5	+0.4
	comp=Z,5.2nm,0.4s,mb4.8								
PKI	Pulchoki	33.98	335		*e*	P	P	06 09 01.9	+0.7
PKIN	Phulchoki	33.99	335		*e*	P	P	06 09 01.7	+0.4
CD2	Chengdu	33.99	5		*e*	P	P	06 09 02.5	+1.2
CD2					AP	pP		06 09 13.5	+1.8
CD2					XP	sP		06 09 16.5	+0.4
CD2					PP	PP		06 10 16.8	-2.0
CD2					S	S		06 14 25.6	+1.5
CD2					XS	sS		06 14 41.0	-0.3
CD2					AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.9								
CD2					AMB	AMB			
	comp=Z,20nm,4.2s								
CD2					LR	LR			
	comp=N,330nm,16.8s,MS4.3								
CD2					LR	LR			
	comp=E,280nm,13.2s,MS4.3								
CD2					LR	LR			
	comp=Z,210nm,14.4s,MS4.0								
GUN	Gumba	34.08	336		*e*	P	P	06 09 02.8	+0.7
	comp=Z,148nm,0.4s								
DMN	Daman	34.14	335		*e*	P	P	06 09 03.3	+0.7
	comp=Z,18nm,0.3s,mb5.5								
KKN	Kakani	34.22	335		*e*	P	P	06 09 04.0	+0.7
	comp=Z,69nm,0.4s,mb5.9								
GKN	Gorkha	34.68	334		*e*	P	P	06 09 07.8	+0.5
	comp=Z,54nm,0.4s,mb5.9								
KOLN	Koldanda	34.94	333		*e*	P	P	06 09 10.6	+1.0
	comp=Z,31nm,0.5s,mb5.5								
DANN	Dangsing	35.37	333		*e*	P	P	06 09 14.0	+0.8
	comp=Z,180nm,0.4s								
WRA	Warramunga Arr	36.70	120		P		P	06 09 24.2	-0.6
	comp=Z,9.6nm,0.4s,mb5.0,baz=303,slow=9.0,SNR=

comp=Z,6.6nm,0.6s,mb4.7
KSRS Korea Array 47.60 29 P **P 06 10 51.2 -2.1**
comp=Z,3.4nm,0.5s,mb4.6,baz=233,slow=8.2,SNR=7.4
KSRS LR LR 06 30 17.0
comp=Z,44nm,21.8s,MS3.4,baz=322,slow=36
KSRS Korea Array 47.60 29 P **P 06 10 51.2 -2.2**
KSRS pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
KSRS MLR MLR
comp=Z,44nm,21.8s,MS3.4
STKA Stephens Creek 47.77 131 *e*P **P 06 10 55.9 +1.1**
comp=Z,4.6nm,0.6s,mb4.7
STKA Stephens Creek 47.77 131 P **P 06 10 55.9 +1.1**
comp=Z,6.1nm,0.6s,mb4.8,baz=311,slow=8.0,SNR=15
WMQ Urumqi 48.23 347 P **P 06 10 58.5 +0.4**
WMQ AP pP 06 11 04.0 -4.9
WMQ AMB AMB
comp=Z,57nm,0.8s,mb5.7
WMQ AMB AMB
comp=Z,311nm,5.5s
WMQ LR LR
comp=Z,137nm,15.7s,MS4.0
SONM Songino Array 51.01 5 P **P 06 11 18.4 -0.8**
comp=Z,32nm,1.1s,mb5.2,baz=183,slow=9.0,SNR=104
SONM PcP PcP 06 12 34.3 -0.6
comp=Z,2.0nm,0.5s,baz=191,slow=4.1,SNR=9.2
ULN Ulaanbaatar 51.10 5 *e*P **P 06 11 19.0 -0.9**
ULN pmax pmax
comp=Z,12nm,0.8s,mb4.9
ULN Ulaanbaatar 51.10 5 *e*P **P 06 11 19.0 -0.9**
comp=Z,12nm,0.8s,mb4.9
TKM2 Tokmak 2 51.22 336 *e*P **P 06 11 21.4 +0.5**
TKM2 *e**PP pP 06 11 31.3 -0.4
TKM2 pmax pmax
comp=Z,37nm,0.9s,mb5.3
TKM2 Tokmak 2 51.22 336 *e*P **P 06 11 21.4 +0.5**
comp=Z,36nm,0.9s,mb5.3
TKM2 *e*pP pP 06 11 31.2 -0.4
AML Almayashu 51.36 334 *e*P **P 06 11 22.7 +0.7**
comp=Z,14nm,0.8s,mb5.0
CN2 Changchun 51.72 23 *e*P **P 06 11 27.8 +3.2**
EKS2 Erkin-Say 51.76 335 *e*P **P 06 11 25.8 +0.9**
comp=Z,27nm,0.8s,mb5.2
MK31 Makanchi Array 52.36 344 *i* P **P 06 11 28.6 -0.7**
MK31 pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
MKAR Makanchi Array 52.36 344 P **P 06 11 28.6 -0.7**
comp=Z,16nm,0.6s,mb5.2,baz=159,slow=8.7,SNR=73
MKAR LR LR 06 35 45.3
comp=Z,70nm,18.4s,MS3.7,baz=359,slow=38
MJAR Matsushiro Arr 52.66 38 P **P 06 11 29.1 -2.7**
comp=Z,1.0nm,0.5s,mb4.0,baz=211,slow=7.4,SNR=6.0
ZAK Zakamensk 53.37 2 *e*P **P 06 11 35.4 -1.3**
ZAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KK31 Karatay Array 53.56 333 *i* P **P 06 11 37.2 -1.0**
KK31 pmax pmax
comp=Z,1.0nm,0.2s,mb4.4
TLY Talaya 54.68 2 *e*P **P 06 11 45.7 -0.5**
TLY pmax pmax
comp=Z,11nm,0.9s,mb4.9
TLY Talaya 54.68 2 *e*P **P 06 11 45.6 -0.6**
comp=Z,9.4nm,0.9s,mb4.8
TLY *e*pP pP 06 11 50.5 -6.6
KURK Kurchatov 56.95 343 *i* P **P 06 12 00.4 -2.1**
KURK pmax pmax
comp=Z,12nm,1.0s,mb4.9
ZAA0 Zalesovo Array 58.45 349 *e*P **P 06 12 11.7 -1.3**
ZALV Zalesovo Beam 58.45 349 P **P 06 12 11.9 -1.1**
comp=Z,69nm,0.9s,mb5.7,baz=160,slow=4.7,SNR=95
KLR Kul'dur 58.65 23 *e*P **P 06 12 08.8 -5.7**
HNR Honiara 59.03 99 LR LR 06 39 27.3
comp=Z,40nm,20.0s,MS3.5,baz=215,slow=38
ERM Erimo 59.09 36 *e*P **P 06 12 15.2 -2.5**
NVS Novosibirsk 59.61 348⇑ *i*P **P 06 12 19.3 -1.7**
NVS pmax pmax
comp=Z,14nm,1.0s,mb5.0
NVS pmax pmax
comp=N,14nm,1.3s
NVS pmax pmax
comp=E,9.0nm,1.1s
NAY Al-Naaiem 60.57 306 *e*P **P 06 12 29.3 +1.2**
NAY AMb AMB 06 12 30.3
comp=Z,13nm,1.1s,mb5.0
RST Umm Al-Ruwaisa 60.87 306 *e*P **P 06 12 30.7 +0.6**
RST AMb AMB 06 12 31.1
comp=Z,18nm,1.5s,mb5.0
BVA0 Borovoye Array 61.55 340 *i* P **P 06 12 32.8 -1.5**
BVA0 pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
BOD Bodaibo 61.70 8 *e*P **P 06 12 33.5 -1.7**
BOD pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
YSS Yuzh-Sakhalins 62.02 31⇑ *e*P **P 06 12 35.4 -2.2**
YSS *e* pP 06 12 48.6 0.0
YSS pmax pmax
comp=Z,20nm,0.8s,mb5.3
AB31 Akbulak array 63.05 331 *i* P **P 06 12 43.7 -0.7**
AB31 pmax pmax
comp=Z,11nm,0.4s,mb5.3
AKTO Aktyubinsk 64.76 331 *i* P **P 06 12 54.4 -1.3**
AKTO pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
SVE Sverdlovsk 68.06 338⇓ *e*P **P 06 13 16.2 -0.4**
SVE pmax pmax
comp=Z,22nm,0.9s,mb5.2
ARU Arti 68.59 336 *c i*P **P 06 13 19.1 -0.9**
ARU *e* 06 15 49.0
ARU *e*PPP 06 17 26.5
ARU *e*S S 06 22 21.3 +1.5
ARU *e*SS SS 06 26 42.6 -2.1
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.7
YAK Yakutsk 68.65 14⇑ *e*P **P 06 13 17.5 -2.7**
YAK pmax pmax
comp=Z,21nm,0.8s,mb5.1
MAW Mawson 69.38 195 P **P 06 13 25.8 +1.1**
comp=Z,3.4nm,0.8s,mb4.3,baz=2.3,slow=8.6,SNR=8.0
BOSA Boshof 75.83 241 LR LR 06 41 12.4
comp=Z,100nm,18.2s,MS4.2,baz=172,slow=31
TIXI Tiksi 76.86 9⇑ *e*P **P 06 14 06.4 -2.4**
TIXI pmax pmax
comp=Z,13nm,1.2s,mb4.7
SYO Syowa Base 77.05 199⇑ *e*PcP PcP 06 14 22.4 +1.7
OBN Obninsk 78.21 328⇑ *e*P **P 06 14 16.9 +0.2**
OBN *e* 06 14 21.5
OBN pmax pmax
comp=Z,15nm,0.9s,mb4.9
AKASG Malin Array Be 80.90 322 P **P 06 14 30.5 -0.9**
comp=Z,0.7nm,0.4s,mb3.9,baz=81,slow=4.1,SNR=5.4
BUR08 Bucovina Ar. S 82.69 319 *e*P **P 06 14 42.4 +1.5**
JOF Joensuu 83.61 334 *e*p **P 06 14 45.2 -0.1**
comp=Z,5.7nm,0.7s,mb4.8
KAF Kangasniemi 85.58 333 *e*p **P 06 14 55.0 -0.3**
comp=Z,10nm,0.8s,mb5.1
KAF Kangasniemi 85.58 333 *e*P **P 06 14 55.0 -0.3**
KAF pmax pmax
comp=Z,11nm,0.8s,mb5.1
ARCES ARCESS Array B 87.84 340 P **P 06 15 06.3 +0.2**
comp=Z,6.0nm,0.8s,mb4.9,baz=102,slow=5.2,SNR=18
ARCES ARCESS Array B 87.84 340 P **P 06 15 06.3 +0.2**
GERES GERESS Array B 90.46 319 P **P 06 15 20.4 +1.5**
comp=Z,1.1nm,0.7s,mb4.3,baz=73,slow=4.5,SNR=10
WVOR Wild Horse Val 127.40 36 *e*PKIKP PKPdf 06 21 23.2 +1.0
NVAR Mina Array Bea 129.95 40 PKP PKPdf 06 21 28.6 +1.4
comp=Z,0.7nm,0.5s,baz=274,slow=2.9,SNR=6.0
CPUP Villa Florida 143.87 214 PKP PKPdf 06 21 54.0 +0.8
comp=Z,1.3nm,0.7s,baz=120,slow=4.4,SNR=4.7
BDFB Brasilia 143.96 238 PKP PKPdf 06 21 54.2 +0.5
comp=Z,1.7nm,0.7s,baz=82,slow=7.5,SNR=4.8
TXAR Lajitas Array 145.09 39 PKP PKPdf 06 21 54.5 -0.8
comp=Z,5.3nm,0.5s,baz=265,slow=1.0,SNR=106
TXAR Lajitas Array 145.09 39 PKP PKPdf 06 21 54.5 -0.8
URVA University of 145.72 358 *e*PKPbc PKPbc 06 21 55.7 -0.7
MIAR Mount Ida 146.01 22 *e*PKP2 PKPab 06 21 56.3 -1.7
WVT Waverly 146.23 13 *e*PKP2 PKPab 06 21 56.7 -2.1
TZTN Tazewell 146.53 6 *e*PKPbc PKPbc 06 21 57.7 -1.3
JCT Junction City 146.54 33 *e*PKP2 PKPab 06 21 58.7 -1.5
CPCT Cooper Cave 147.49 8 *e*PKPbc PKPbc 06 22 00.7 -1.0
LRAL Lakeview Retre 149.39 13 *e*PKPbc PKPbc 06 22 05.2 -1.5

IDC 15 06:13:36.8±1.1,3098S×5939E,h0km,mb3.9/6,mb1 4.1/6, mb1mx3.8/24,mbtmp3.9/6,MS3.7/4,Ms1 3.8/4, ms1mx3.4/24,Error ellipse: s-maj=37.9km s-min=28.4km az=106.0,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**59.18**	**180**	P	P	06 23 39.6	+0.7
	2.0nm,1.1s,baz=51,slow=1.6,SNR=3.3						
CMAR	**Chiang Mai Arr**	**62.14**	**43**	P	P	06 24 00.0	+0.2
	5.5nm,0.7s,baz=230,slow=6.8,SNR=28						
CMAR				LR	LR	06 46 08.9	
	comp=Z,59nm,19.1s,baz=62,slow=31						
ASAR	**Alice Springs**	**65.50**	**104**	P	P	06 24 22.4	+0.2
	0.5nm,0.9s,baz=244,slow=5.6,SNR=3.6						
WRA	**Warramunga Arr**	**67.45**	**100**	P	P	06 24 34.2	-0.4
	1.0nm,0.9s,baz=239,slow=5.0,SNR=5.2						
MKAR	**Makanchi Array**	**80.13**	**16**	LR	LR	06 57 31.7	
	comp=Z,43nm,19.1s,baz=172,slow=33						
KEST	**Kesra**	**81.32**	**321**	LR	LR	07 01 55.0	
	comp=Z,37nm,19.7s,baz=186,slow=36						
KURK	**Kurchatov**	**83.10**	**12**	P	P	06 26 03.7	-0.2
	0.6nm,0.6s,baz=214,slow=5.7,SNR=3.8						
SONM	**Songino Array**	**89.08**	**30**	P	P	06 26 33.6	+0.1
	0.4nm,0.5s,baz=224,slow=6.0,SNR=3.2						
KSRS	**Korea Array**	**93.44**	**48**	LR	LR	07 08 59.5	
	comp=Z,33nm,18.3s,baz=20,slow=36						
TXAR	**Lajitas Array**	**165.25**	**268**	PKPab	PKPab	06 34 40.1	-0.7
	0.1nm,0.5s,baz=123,slow=4.6,SNR=4.2						

IDC 15 06:14:03.3±0.9,3096S×5936E,h0km,mb4.0/6,mb1 4.2/6, mb1mx3.9/24,mbtmp4.0/6,Error ellipse: s-maj=32.6km s-min=28.6km az=98.0,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**59.20**	**180**	P	P	06 24 06.2	+0.5
	2.2nm,0.8s,baz=133,slow=4.7,SNR=6.2						
CMAR	**Chiang Mai Arr**	**62.14**	**43**	P	P	06 24 26.8	+0.4
	5.4nm,0.7s,baz=232,slow=7.2,SNR=12						
ASAR	**Alice Springs**	**65.53**	**104**	P	P	06 24 48.8	-0.1
	1.1nm,0.8s,baz=238,slow=6.1,SNR=11						
WRA	**Warramunga Arr**	**67.48**	**100**	P	P	06 25 01.5	+0.1
	1.2nm,0.7s,baz=242,slow=5.3,SNR=7.4						
KURK	**Kurchatov**	**83.09**	**12**	P	P	06 26 29.9	-0.5
	0.6nm,0.6s,baz=213,slow=6.0,SNR=3.2						
SONM	**Songino Array**	**89.07**	**30**	P	P	06 27 00.0	0.0
	0.6nm,0.8s,baz=224,slow=4.0,SNR=2.9						
YKA	**Yellowknife Ar**	**148.22**	**355**	PKPbc	PKPbc	06 33 49.5	-0.9
	1.2nm,0.6s,baz=354,slow=2.5,SNR=5.3						
TXAR	**Lajitas Array**	**165.22**	**268**	PKPab	PKPab	06 35 07.2	-0.2
	0.2nm,0.7s,baz=125,slow=7.8,SNR=3.4						
PDAR	**Pinedale Array**	**165.27**	**326**	PKP	PKPdf	06 34 09.7	+0.1
	0.2nm,0.3s,baz=17,slow=0.9,SNR=3.8						

TAP 15 06:38:14.7,2490N×12219E,h127km,ML3.6,C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.21**	**301**	P	Pn	06 38 32.5	+0.3
	baz=304						
TWB1				S	Sn	06 38 44.8	-0.6
	baz=304						
NWF	**Wu-fen Shan**	**0.41**	**295**	P	Pn	06 38 33.4	+0.4
	baz=292						
NWF				S	Sn	06 38 46.5	-0.2
	baz=292						
TWC	**Suao**	**0.42**	**227**	*i* P	Pn	06 38 33.2	+0.2
	baz=230						
TWC				*e*S	Sn	06 38 46.1	-0.7
	baz=230						
TWE	**Neicheng**	**0.51**	**250**	*e*P	Pn	06 38 34.1	+0.6
	baz=252						
TWA	**Mucha**	**0.56**	**279**	*e*P	Pn	06 38 34.0	+0.3
	baz=276						
TWA				*e*S	Sn	06 38 47.2	-1.0
	baz=276						
ENA	**Nanau**	**0.62**	**221**	P	Pn	06 38 34.8	+0.6
	baz=215						
ENA				*e*S	Sn	06 38 49.3	+0.3
	baz=215						
ENTT	**Nioudou**	**0.62**	**246**	P	Pn	06 38 35.1	+0.8
	baz=246						
ENTT				S	Sn	06 38 49.6	+0.6
	baz=246						
TWS1	**Kuangyinshan**	**0.73**	**286**	*e*P	Pn	06 38 35.9	+0.9
	baz=289						
TWS1				*e*S	Sn	06 38 49.8	-0.5
	baz=289						
PCYT	**Pengchaiyu**	**0.74**	**352**	*e*P	Pn	06 38 34.6	-0.4
	baz=356						
NNS	**Nan Shan**	**0.87**	**239**	*e*P	Pn	06 38 36.8	+0.6
	baz=238						
NNS				*e*S	Sn	06 38 52.5	+0.1
	baz=238						
TWD	**Chiawan**	**0.98**	**214**	P	Pn	06 38 37.2	+0.1
	baz=223						
TWD				*e*S	Sn	06 38 53.4	-0.8
	baz=223						
NSTT	**Nanjuang**	**1.11**	**256**	P	Pn	06 38 38.8	+0.3
	baz=251						
NSTT				*e*S	Sn	06 38 55.5	-1.0
	baz=251						
TWT	**Tachien**	**1.12**	**235**	*e*P	Pn	06 38 39.8	+1.2
	baz=239						
WHF	**Hehuan Shan**	**1.13**	**229**	P	Pn	06 38 39.6	+1.0
	baz=231						
WHF				*e*S	Sn	06 38 57.6	+0.9
	baz=231						
ESL	**Shilin**	**1.28**	**213**	*e*P	Pn	06 38 39.6	-0.6
	baz=215						
TWQ1	**Liyutan**	**1.40**	**247**	*e*P	Pn	06 38 42.0	+0.5
	baz=246						
SMLT	**Sun Moon Lake**	**1.55**	**230**	P	Pn	06 38 44.2	+1.1
	baz=234						
SMLT				*e*S	Sn	06 39 05.4	+0.5
	baz=234						
TYC	**Yuchr**	**1.57**	**231**	P	Pn	06 38 44.3	+0.9
	baz=241						
TYC				S	Sn	06 39 05.8	+0.6
	baz=241						
EHY	**Hungye**	**1.60**	**210**	*e*P	Pn	06 38 44.4	+0.6
	baz=208						
TWF1	**Yuli**	**1.74**	**208**	*e*P	Pn	06 38 44.8	-0.6
	baz=209						
YUS	**Yu-Shan**	**1.80**	**219**	*e*P	Pn	06 38 48.2	+2.1
	baz=211						
YUS				*e*S	Sn	06 39 12.0	+1.9
	baz=211						
ALS	**Alishan**	**1.87**	**223**	P	Pn	06 38 48.2	+1.2
	baz=231						
ALS				*e*S	Sn	06 39 12.6	+0.9
	baz=231						
CHN5	**Tsauling**	**1.89**	**227**	*e*P	Pn	06 38 48.1	+0.8
	baz=227						
CHN5				*e*S	Sn	06 39 11.9	-0.1
	baz=227						
ELDTW	**Lidau**	**2.01**	**213**	*e*P	Pn	06 38 48.4	-0.3
	baz=203						
CHN4	**Tsaushan**	**2.12**	**224**	*e*P	Pn	06 38 51.4	+1.4
	baz=223						
CHN4				*e*S	Sn	06 39 16.9	-0.1
	baz=223						
CHN1	**Nanshi**	**2.28**	**222**	*e*P	Pn	06 38 52.0	-0.1
	baz=221						
CHN1				*e*S	Sn	06 39 20.6	-0.1
	baz=221						

*ISCJB **15** 06:54:40.9±0.8,4568N±004×1600E±006,h10km,Error ellipse: s-maj=6.8km s-min=4.6km az=155.5*
*LJU **15** 06:54:40.8,4566N×1599E,h0km*
*VIE **15** 06:54:42.0±0.7,4564N×1591E,h8km,mb1.7/1,ML2.5/1, Error ellipse: s-maj=4.2km s-min=3.9km az=88.0 19 km SSW of Zagreb*
*CSEM **15** 06:54:41.7±0.1,4563N×1598E,h0km±1km,ML2.5/2,Error ellipse: s-maj=1.5km s-min=1.2km az=64.0*
ISC 15 06:54:41.6±0.8,4568N±004×1601E±007,h10km,n11, σ0§86/16,3C-1D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SISC	**Sisak**	**0.32**	**129**	Sg	**Sg**	**06 54 51.9**	**-0.4**
GCIS	**Gornji Cirnik**	**0.33**	**306**	*i* Pg	**Pg**	**06 54 47.6**	**-0.7**
CRES	**Cresnjev**	**0.42**	**291**	*i* Pg	**Pg**	**06 54 48.9**	**-0.9**
LEGS	**Legarje**	**0.56**	**300**	*i* Pg	**Pg**	**06 54 51.8**	**-0.6**
BOJS	**Bojanci**	**0.56**	**253**	*i* Pg	**Pg**	**06 54 51.7**	**-0.9**
BOJS				*i* Sg	**Sg**	**06 54 58.9**	**-1.0**
PDKS	**Podkum**	**0.81**	**299**	*i* Pg	**Pg**	**06 54 56.4**	**-0.8**
GROS	**Grobnik**	**0.86**	**336**	*i* Pg	**Pg**	**06 54 59.1**	**+0.8**
SOKA	**Soboth**	**1.21**	**326**⇑	*i*Pg	**Pg**	**06 55 05.3**	**+0.3**
SOKA			⇑	*i*Sg	**Sg**	**06 55 21.6**	**+0.9**
	6.5nm,0.5s						
OBKA	**Obir**	**1.32**	**310**⇑	*i*Pg	**Pg**	**06 55 07.2**	**+0.2**
OBKA			⇓	*i*Sg	**Sg**	**06 55 24.7**	**+0.6**
	13nm,0.4s						
NVLJ	**Novalja**	**1.38**	**216**	*e*Pg	**Pg**	**06 55 08.8**	**+0.8**
NVLJ				Sg	**Sg**	**06 55 27.8**	**+1.9**
NVLJ	**Novalja**	**1.38**	**216**	*e*Pg	**Pg**	**06 55 08.8**	**+0.8**
NVLJ				Sg	**Sg**	**06 55 27.7**	**+1.9**

*IDC **15** 07:06:58.4±1.3,309S×10032E,h0km,mb4.3/12, mb1 4.4/13,mb1mx4.2/23,mbtmp4.3/13,ML4.6/1,MS3.5/3, Ms1 3.5/3,ms1mx3.1/32,Error ellipse: s-maj=54.7km s-min=13.8km az=52.0*
*BJI **15** 07:06:58.5,3675×10052E,h44km,mB5.0,mb5.0*
*ISCJB **15** 07:07:03.3±0.8,29S±02×1008E±02,h33km,mb4.7/21, MS3.5/3,Error ellipse: s-maj=32.0km s-min=8.4km az=138.7*
*NEIC **15** 07:07:04.2±0.9,296S×10047E,h35km,mb4.5/5,Error ellipse: s-maj=35.8km s-min=8.4km az=51.0*
ISC 15 07:07:05.4±0.8,29S±01×1007E±02,h35km,n35,σ1§52/33, mb4.7/21,MS3.5/3,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**19.09**	**97**	P	**Pn**	**07 11 26.8**	**+0.5**
	1.8nm,0.3s,baz=262,slow=10.0,SNR=5.2						
CMAR	**Chiang Mai Arr**	**21.30**	**355**	P	**P**	**07 11 47.5**	**-1.8**
	3.3nm,0.5s,mb4.0,baz=187,slow=10,SNR=21						
FITZ	**Fitzroy Crossi**	**28.71**	**123**	P	**P**	**07 12 59.2**	**-0.4**
	3.8nm,0.7s,mb4.2						
FITZ	**Fitzroy Crossi**	**28.71**	**123**	P	**P**	**07 12 59.7**	**+0.1**
	1.4nm,0.6s,mb3.9,baz=240,slow=22,SNR=3.4						
FITZ				LR	LR	07 24 34.0	
	comp=Z,64nm,20.9s,MS3.2,baz=137,slow=36						
ODAN	**Odare**	**32.27**	**337**	*e*P	**P**	**07 13 32.8**	**+1.9**
	14nm,0.4s,mb5.1						
TAPN	**Taplejung**	**32.59**	**338**	*e*P	**P**	**07 13 32.7**	**-1.0**
	15nm,0.4s,mb5.2						
RAMN	**Ramite**	**32.66**	**336**	*e*P	**P**	**07 13 37.2**	**+2.8**
JIRN	**Jiri**	**33.46**	**336**	*e*P	**P**	**07 13 42.9**	**+1.6**
PKI	**Pulchoki**	**33.70**	**335**	*e*P	**P**	**07 13 46.4**	**+3.0**
GUN	**Gumba**	**33.81**	**336**	*e*P	**P**	**07 13 45.7**	**+1.4**
	43nm,0.4s,mb5.7						
DMN	**Daman**	**33.87**	**335**	*e*P	**P**	**07 13 47.9**	**+3.0**
KKN	**Kakani**	**33.95**	**335**	*e*P	**P**	**07 13 48.3**	**+2.7**
GKN	**Gorkha**	**34.41**	**334**	*e*P	**P**	**07 13 52.0**	**+2.4**
KOLN	**Koldanda**	**34.67**	**333**	*e*P	**P**	**07 13 56.4**	**+4.6**
	34nm,0.8s,mb5.3						
DANN	**Dangsing**	**35.10**	**333**	*e*P	**P**	**07 13 58.5**	**+3.0**
	46nm,0.7s,mb5.5						
WRA	**Warramunga Arr**	**36.91**	**120**	P	**P**	**07 14 10.8**	**-0.4**
	1.6nm,0.4s,mb4.2,baz=302,slow=9.0,SNR=21						
WRA				LR	LR	07 30 39.3	
	comp=Z,77nm,20.2s,MS3.5,baz=265,slow=38						
WB2	**Warramunga Arr**	**36.92**	**120**	*e*P	**P**	**07 14 12.1**	**+0.8**
XAN	**Xi'an**	**37.55**	**11**	P	**P**	**07 14 16.0**	**-0.3**
XAN				AP	pP	07 14 25.3	-1.3
XAN				XP	sP	07 14 29.9	-0.9
XAN				AMB	AMB		
	comp=Z,21nm,0.8s,mb4.9						
ASAR	**Alice Springs**	**38.13**	**126**	P	**P**	**07 14 21.4**	**-0.2**
	comp=Z,1.8nm,0.6s,mb4.0,baz=298,slow=7.9,SNR=18						
STKA	**Stephens Creek**	**48.01**	**132**	*e*P	**P**	**07 15 43.6**	**+2.3**
	comp=Z,4.4nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**48.01**	**132**	P	**P**	**07 15 41.2**	**-0.1**
	comp=Z,1.5nm,0.4s,mb4.4,baz=338,slow=5.0,SNR=4.6						
SONM	**Songino Array**	**50.77**	**5**	P	**P**	**07 16 02.9**	**+0.9**
	comp=Z,5.0nm,0.6s,mb4.6,baz=187,slow=8.9,SNR=26						
ULN	**Ulaanbaatar**	**50.86**	**5**	*e*P	**P**	**07 16 03.4**	**+0.7**
	comp=Z,8.7nm,1.1s,mb4.6						
TKM2	**Tokmak 2**	**50.95**	**336**	*e*P	**P**	**07 16 02.4**	**-1.1**
	comp=Z,3.9nm,0.6s,mb4.5						
AML	**Almayashu**	**51.09**	**334**	*e*P	**P**	**07 16 02.9**	**-1.7**
	comp=Z,3.8nm,0.6s,mb4.5						
MK31	**Makanchi Array**	**52.09**	**344**	*e*P	**P**	**07 16 10.8**	**-1.1**
MKAR	**Makanchi Array**	**52.09**	**344**	P	**P**	**07 16 10.8**	**-1.1**
	comp=Z,8.3nm,0.7s,mb4.8,baz=148,slow=8.1,SNR=56						
KURK	**Kurchatov**	**56.67**	**343**	P	**P**	**07 16 43.3**	**-1.9**
	comp=Z,3.9nm,0.8s,mb4.5,baz=168,slow=6.7						
ZAA0	**Zalesovo Array**	**58.19**	**349**	*e*P	**P**	**07 16 54.6**	**-1.2**
ZALV	**Zalesovo Beam**	**58.19**	**349**	P	**P**	**07 16 54.8**	**-1.0**
	comp=Z,24nm,1.1s,mb5.1,baz=163,slow=5.7,SNR=14						
BVAR	**Borovoye Array**	**61.28**	**340**	P	**P**	**07 17 14.7**	**-2.4**
	comp=Z,1.4nm,0.4s,mb4.4,baz=132,slow=8.6,SNR=3.5						
EIL	**Elat**	**70.62**	**303**	LR	LR	07 48 32.6	
	comp=Z,45nm,19.3s,MS3.7,baz=60,slow=35						
ARCES	**ARCESS Array B**	**87.57**	**340**	P	**P**	**07 19 48.3**	**-1.2**
	comp=Z,2.2nm,0.8s,mb4.5,baz=97,slow=7.4,SNR=2.6						
GERES	**GERESS Array B**	**90.20**	**319**	P	**P**	**07 20 00.4**	**-2.0**
	comp=Z,0.2nm,0.4s,mb3.8,baz=78,slow=6.3,SNR=3.5						
TXAR	**Lajitas Array**	**144.96**	**39**	PKPbc	PKPdf	07 26 39.2	-0.5
	comp=Z,5.4nm,0.8s,baz=302,slow=0.9,SNR=66						

*IDC **15** 07:27:30.9±0.8,153S×9981E,h0km,mb4.4/12, mb1 4.4/13,mb1mx4.3/22,mbtmp4.3/13,ML4.3/1,Error ellipse: s-maj=32.7km s-min=14.2km az=61.0*
*ISCJB **15** 07:27:33.9±0.8,15S±01×999E±02,h33km,mb4.3/12, Error ellipse: s-maj=26.7km s-min=10.1km az=148.1*
*NEIC **15** 07:27:35.8±0.5,155S×9979E,h35km,mb4.6/2,Error ellipse: s-maj=21.1km s-min=8.4km az=56.0*
*DJA **15** 07:27:36,149S×9972E,h0km,ML4.4/4*
ISC 15 07:27:36.2±0.8,15S±01×999E±02,h35km,n21,σ0§89/17, mb4.3/12,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.81**	**357**	P	**Pn**	**07 32 03.9**	**-1.6**
	0.4nm,0.3s,baz=184,slow=11,SNR=3.5						
KAPI	**Kappang**	**20.14**	**101**	P	**P**	**07 32 09.2**	**+1.7**
	15nm,0.7s,baz=290,slow=3.7,SNR=9.8						
FITZ	**Fitzroy Crossi**	**30.21**	**125**	P	**P**	**07 33 42.1**	**-1.5**
	2.5nm,0.7s,mb4.0,baz=260,slow=5.6,SNR=7.5						
WRA	**Warramunga Arr**	**38.36**	**121**	P	**P**	**07 34 53.9**	**-0.3**
	5.0nm,0.6s,mb4.5,baz=303,slow=9.1,SNR=68						
WRA				PcP	PcP	07 37 08.1	+0.6
	0.4nm,0.5s,baz=317,slow=2.5,SNR=5.7						
WRAB	**Tennant Creek**	**38.37**	**121**	*e*P	**P**	**07 34 53.8**	**-0.4**
	5.0nm,0.5s,mb4.5						
WB2	**Warramunga Arr**	**38.37**	**121**	*e*P	**P**	**07 34 53.6**	**-0.7**
ASAR	**Alice Springs**	**39.66**	**127**	P	**P**	**07 35 05.3**	**+0.3**
	4.0nm,0.6s,mb4.3,baz=302,slow=8.0,SNR=64						
KSRS	**Korea Array**	**46.61**	**31**	P	**P**	**07 36 00.6**	**-0.4**
	1.9nm,0.7s,mb4.1,baz=227,slow=8.7,SNR=5.4						
SONM	**Songino Array**	**49.41**	**6**	P	**P**	**07 36 23.9**	**+1.5**
	1.4nm,0.7s,mb4.1,baz=190,slow=9.2,SNR=8.8						
STKA	**Stephens Creek**	**49.59**	**132**	*e*P	**P**	**07 36 24.9**	**+0.7**
	5.7nm,1.1s,mb4.5						
STKA	**Stephens Creek**	**49.59**	**132**	P	**P**	**07 36 24.4**	**+0.2**
	3.1nm,0.7s,mb4.5,baz=272,slow=8.9,SNR=6.0						
MKAR	**Makanchi Array**	**50.48**	**344**	P	**P**	**07 36 31.4**	**+0.8**
	3.0nm,0.6s,mb4.5,baz=149,slow=8.2,SNR=23						
KURK	**Kurchatov**	**55.05**	**344**	P	**P**	**07 37 04.3**	**0.0**
	2.5nm

TBVI				eS	Sb	07 29 18.5	+0.5	
TBVI	**Tortola**	**0.73**	**134**⇓	*e*P	**Pb**	**07 29 07.7**	**-0.6**	
TBVI				eS	**Sb**	**07 29 18.1**	**0.0**	
MTP	**Monte Pirata**	**0.91**	**204**⇓	*e*P	**Pn**	**07 29 11.3**	**+0.4**	
MTP				eS	**Sb**	**07 29 23.1**	**+0.2**	
CBYP	**Canovanas**	**0.92**	**225**⇑	*e*P	**Pn**	**07 29 11.3**	**+0.2**	
CBYP				eS	**Sb**	**07 29 23.3**	**-0.1**	
HUMP	**Col San Antoni**	**1.01**	**219**⇑	*e*P	**Pn**	**07 29 12.4**	**0.0**	
HUMP				eS	**Sn**	**07 29 25.5**	**-0.2**	
HUMP	**Col San Antoni**	**1.01**	**219**⇑	*e*P	**Pn**	**07 29 12.4**	**0.0**	
HUMP				eS	**Sn**	**07 29 25.1**	**-0.7**	
SJG	**San Juan**	**1.24**	**229**⇑	*e*P	**Pn**	**07 29 15.6**	**+0.2**	
SJG	**San Juan**	**1.24**	**229**⇑	*e*P	**Pn**	**07 29 15.7**	**+0.3**	
SJG	**San Juan**	**1.24**	**229**⇑	*e*P	**Pn**	**07 29 15.7**	**+0.3**	
SJG				eS	**Sn**	**07 29 31.1**	**-0.1**	
SJG	**San Juan**	**1.24**	**229**⇑	*e*P	**Pn**	**07 29 15.6**	**+0.2**	
SJG				eS	**Sn**	**07 29 31.0**	**-0.2**	
AOPR	**Arecibo Observ**	**1.61**	**249**	eS	**Sn**	**07 29 40.4**	**0.0**	
AOPR	**Arecibo Observ**	**1.61**	**249**	eS	**Sn**	**07 29 40.4**	**0.0**	

BJI ***15*** *07:29:56.1,231N×65.74E,h10km,mB5.2,mb4.8,Ms4.8, Msz4.6*

MOS ***15*** *07:29:59.8±0.9,270N×6607E,h10km,mb5.1/41,MS4.4/7, Error ellipse: s-maj=10.2km s-min=5.5km az=122.5*

ISCJB ***15*** *07:29:59.6±0.3,261N±005×6606E±003,h10km,mb4.8/97, MS4.5/43,Error ellipse: s-maj=7.2km s-min=4.1km az=164.1*

IDC ***15*** *07:30:00.6±0.5,260N×6623E,h0km,mb4.3/23, mb1 4.4/23,mb1mx4.4/28,mbtmp4.3/23,MS4.4/22, Ms1 4.4/22,ms1mx4.3/30,Error ellipse: s-maj=15.5km s-min=12.6km az=18.0*

NEIC ***15*** *07:30:02.0±0.3,274N×66.14E,h10km,mb5.0/45,Error ellipse: s-maj=7.9km s-min=6.3km az=205.0*

GCMT ***15*** *07:30:02.0±0.2,253N×6624E,h12km,MW5.0/93, Moment Tensor Solution. s38,c46; s93,c150; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.46±.09; Mθθ-4.00±.09; Mϕϕ-0.45±.09; Mrθ-0.41±.31; Mθϕ1.47±.08; Mϕr1.03±.38; Best double couple: M₀4.63000×10¹⁶ NP1:ϑs100.00000°,δ41.00000°,λ75.00000°. NP2: ϕs300.00000°,δ51.00000°,λ103.00000°. Principal axes: T 4.6690, Plg79.0000°, Azm266.0000°; N -0.0750, Plg10.0000°, Azm112.0000°; P -4.5920, Plg5.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

SZGRF ***15*** *07:30:08.5,216N×6399E,h33km,mb5.1,Carlsberg Ridge*

ISC 15 07:30:01.7±0.3,260N±005×6610E±003,h10km, (h16km±2.0km:pP-P),n313,σ1ϑ06/260,mb4.8/97,MS4.5/43, 30C-36D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	**12.84**	**236**	*e*Pn		**Pn**	**07 33 08.9**	**+4.5**
MSEY				Sn		**Sn**	**07 35 26.3**	**-1.1**
PALK	**Pallekele**	**15.27**	**72**	*e*Pn		**Pn**	**07 33 36.3**	**-1.2**
	49nm,1.7s							
MDRS	**Chennai**	**17.44**	**53**⇓	*e*P		**Pn**	**07 34 04.0**	**-1.2**
MDRS				*ex*		x	07 38 30.0	
POO	**Poona**	**17.56**	**25**	*e*P		**Pn**	**07 34 03.5**	**-3.3**
LATR	**Latur**	**18.77**	**32**	*e*P		**Pn**	**07 34 19.8**	**-1.7**
HYB	**Hyderabad**	**19.14**	**39**	*i* P		**Pn**	**07 34 24.5**	**-1.6**
HYB				eS		**Sn**	**07 38 14.0**	**+13**
HYB				LR		LR	07 40 48.0	
	3.0nm,14.0s							
BHJ	**Bhuj**	**20.82**	**9**	*e*P		**P**	**07 34 42.2**	**-1.3**
AKL	**Akola**	**20.91**	**30**	*e*P		**P**	**07 34 43.6**	**-0.8**
AKL				AMb		AMB	07 34 56.9	
	comp=Z,38nm,0.5s							
SMDO	**Samad**	**21.79**	**340**	⇑P		**P**	**07 34 57.3**	**+3.4**
	SNR=7.6							
BSY	**Bisya**	**21.81**	**337**	⇑P		**P**	**07 34 57.5**	**+3.4**
	SNR=13							
BIDO	**Bidbid**	**22.19**	**340**	P		**P**	**07 35 01.7**	**+3.5**
	SNR=7.2							
NGP	**Nagpur**	**22.34**	**33**	*e*P		**P**	**07 35 00.7**	**+0.9**
HOQ	**Hoqain**	**22.53**	**339**	P		**P**	**07 35 05.2**	**+3.4**
	SNR=8.6							
ARQ	**Araqi**	**22.61**	**337**	P		**P**	**07 35 06.0**	**+3.3**
	SNR=11							
VIS	**Vishakhapatnam**	**22.62**	**47**	*e*P		**P**	**07 35 01.5**	**-1.4**
VIS				AMb		AMB	07 35 12.6	
	comp=Z,80nm,1.5s,mb4.9							
ASHO	**Ashiyiah**	**24.00**	**337**	⇑P		**P**	**07 35 20.6**	**+3.9**
	SNR=9.2							
HATD	**Hatta, Dubai**	**24.10**	**337**	⇓P		**P**	**07 35 21.7**	**+4.1**
	SNR=8.3							
JBP	**Jabalpur**	**24.48**	**32**	*e*P		**P**	**07 35 21.0**	**-0.1**
JBP				*ex*		x	07 39 55.0	
AJM	**Ajmer**	**25.12**	**18**	*e*P		**P**	**07 35 26.6**	**-0.3**
NDI	**New Delhi**	**28.02**	**21**	*ex*		x	07 34 31.0	
ABPO	**Ambohimpanom**	**28.39**	**220**	*e*P		**P**	**07 35 58.5**	**+2.1**
	comp=Z,9.5nm,1.1s,mb4.3							
BOK	**Bokaro**	**28.47**	**41**	*e*P		**P**	**07 35 57.0**	**-0.1**
BOK				AMb		AMB	07 36 05.5	
	comp=Z,9.9nm,0.5s,mb4.7							
KMBO	**Kilima Mbogo**	**29.08**	**263**	P		**P**	**07 36 05.6**	**+2.9**
	comp=Z,3.1nm,0.9s,mb4.0,baz=65,slow=20,SNR=6.0							
KMBO				LR		LR	07 45 56.4	
	comp=Z,378nm,19.9s,MS4.0,baz=91,slow=33							
KMBO	**Kilima Mbogo**	**29.08**	**263**	*e*P		**P**	**07 36 04.9**	**+2.2**
KMBO				pmax		pmax		
	comp=Z,59nm,2.5s							
KMBO	**Kilima Mbogo**	**29.08**	**263**	*e*P		**P**	**07 36 04.9**	**+2.2**
	comp=Z,59nm,2.5s,mb4.9							
KOLN	**Koldanda**	**30.11**	**32**	*e*P		**P**	**07 36 12.7**	**+1.1**
	comp=Z,70nm,1.4s,mb5.2							
DANN	**Dangsing**	**30.65**	**32**	*e*P		**P**	**07 36 17.5**	**+1.1**
DMN	**Daman**	**30.80**	**34**	*e*P		**P**	**07 36 19.1**	**+1.3**
	comp=Z,58nm,0.9s,mb5.4							
GKN	**Gorkha**	**30.85**	**33**	*e*P		**P**	**07 36 19.3**	**+1.1**
	comp=Z,93nm,1.2s,mb5.5							
PKIN	**Phulchoki**	**30.94**	**35**	*e*P		**P**	**07 36 19.8**	**+0.8**
PKI	**Pulchoki**	**30.95**	**35**	*e*P		**P**	**07 36 19.8**	**+0.8**
KKN	**Kakani**	**31.04**	**34**	*e*P		**P**	**07 36 21.3**	**+1.4**
	comp=Z,50nm,0.9s,mb5.3							
RAMN	**Ramite**	**31.18**	**37**	*e*P		**P**	**07 36 22.7**	**+1.6**
	comp=Z,117nm,1.5s,mb5.5							
GUN	**Gumba**	**31.47**	**35**	*e*P		**P**	**07 36 24.9**	**+1.2**
	comp=Z,76nm,0.9s,mb5.5							
ODAN	**Odare**	**31.60**	**38**	*e*P		**P**	**07 36 26.3**	**+1.5**
	comp=Z,44nm,0.9s,mb5.3							
TAPN	**Taplejung**	**32.15**	**38**	*e*P		**P**	**07 36 30.9**	**+1.3**
	comp=Z,254nm,2.0s,mb5.7							
CMAR	**Chiang Mai Arr**	**35.82**	**62**	P		**P**	**07 37 02.7**	**+1.0**
	comp=Z,1.1nm,0.3s,mb4.3,baz=249,slow=9.1,SNR=18							
CMAR				LR		LR	07 51 09.8	
	comp=Z,468nm,18.9s,MS4.3,baz=256,slow=36							
LSA	**Lhasa**	**35.94**	**39**	*e*P		**P**	**07 37 04.5**	**+1.9**
LSA				pmax		pmax		
	comp=Z,24nm,0.9s,mb5.1							
LSA	**Lhasa**	**35.94**	**39**	*e*P		**P**	**07 37 04.5**	**+2.0**
	comp=Z,24nm,0.9s,mb5.1							
EIL	**Elat**	**39.98**	**316**	P		**P**	**07 37 38.8**	**+2.1**
	comp=Z,5.1nm,0.9s,mb4.3,baz=3.1,slow=8.5,SNR=3.8							
ASF	**Jabal al Asfar**	**40.24**	**320**	P		**P**	**07 37 41.7**	**+3.0**
	comp=Z,6.0nm,1.0s,mb4.3,baz=347,slow=3.3,SNR=4.9							
ASF				LR		LR	07 52 10.6	
	comp=Z,184nm,21.6s,MS3.9,baz=234,slow=33							
EKS2	**Erkin-Say**	**40.48**	**9**	*e*P		**P**	**07 37 42.3**	**+1.7**
	comp=Z,39nm,1.6s,mb4.9							
FRU	**Bishkek**	**40.78**	**10**	*e*P		**P**	**07 37 44.5**	**+1.4**
FRU				pmax		pmax		
	comp=Z,150nm,2.6s,mb5.2							
LSZ	**Lusaka**	**41.51**	**243**	LR		LR	07 53 10.0	
	comp=Z,1μm,18.4s,MS4.8,baz=75,slow=33							
MMAI	**Mount Meron Ar**	**41.74**	**320**	P		**P**	**07 37 54.1**	**+3.0**
	comp=Z,8.1nm,0.8s,mb4.4,baz=122,slow=11,SNR=6.1							
KMI	**Kunming**	**41.79**	**54**	P		**P**	**07 37 52.3**	**+0.6**
KMI				AP		pP	07 37 57.3	+2.5
KMI				XP		sP	07 37 58.9	+2.9
KMI				PP		PP	07 39 33.8	+5.4
KMI				S		**S**	**07 44 12.0**	**+2.7**
KMI				XS		sS	07 44 18.1	+3.6
KMI				SS		SS	07 47 09.8	-5.6
KMI				AMB		AMB		
	comp=Z,17nm,1.1s,mb4.6							
KMI				AMB		AMB		
	comp=Z,167nm,3.3s							
KMI				LR		LR		
	comp=N,395nm,19.3s,MS4.4							
KMI				LR		LR		
	comp=E,304nm,22.8s,MS4.4							
KMI				LR		LR		
	comp=Z,453nm,14.5s							
GNI	**Garni**	**42.09**	**335**⇑	*e*P		**P**	**07 37 54.2**	**+0.3**
GNI				pmax		pmax		
	comp=Z,11nm,1.3s							
GNI	**Garni**	**42.09**	**335**	*e*P		**P**	**07 37 56.6**	**+2.6**
	comp=Z,61nm,1.5s,mb5.0							
MALT	**Malatya**	**43.63**	**328**⇑	*i*P		**P**	**07 38 06.3**	**-0.1**
WMQ	**Urumqi**	**45.30**	**22**	P		**P**	**07 38 19.9**	**+0.2**
WMQ				AP		pP	07 38 24.5	+1.7
WMQ				XP		sP	07 38 27.0	+2.9
WMQ				PP		PP	07 40 05.5	-0.2
WMQ				S		**S**	**07 45 01.0**	**+0.8**
WMQ				SCS		ScS	07 48 13.0	-3.8
WMQ				AMB		AMB		
	comp=Z,10.0nm,1.4s,mb4.5							
WMQ				AMB		AMB		
	comp=Z,256nm,6.0s							
WMQ				LR		LR		
	comp=N,2μm,16.0s,MS5.2							
WMQ				LR		LR		
	comp=E,1μm,12.0s,MS5.2							
WMQ				LR		LR		
	comp=Z,1μm,24.2s							
CD2	**Chengdu**	**45.35**	**48**	*e*P		**P**	**07 38 20.1**	**-0.2**
CD2				AP		pP	07 38 24.6	+1.1
CD2				XP		sP	07 38 27.5	+2.8
CD2				PP		PP	07 40 06.6	+0.1
CD2				S		**S**	**07 44 58.9**	**-2.5**
CD2				AMB		AMB		
	comp=Z,10.0nm,1.7s,mb4.4							
CD2				AMB		AMB		
	comp=Z,30nm,6.2s							
CD2				LR		LR		
	comp=N,630nm,16.8s,MS4.7							
CD2				LR		LR		
	comp=E,530nm,18.0s,MS4.7							
CD2				LR		LR		
	comp=Z,700nm,20.4s,MS4.6							
GYA	**Guiyang**	**45.55**	**55**⇑	*i*P		**P**	**07 38 21.9**	**-0.1**
GYA				PCP		PcP	07 40 03.6	+2.9
GYA				PP		PP	07 40 08.8	+0.1
GYA				SCP		ScP	07 43 53.4	-0.4
GYA				S		**S**	**07 45 01.8**	**-2.6**
GYA				AMB		AMB		
	comp=Z,30nm,1.2s,mb5.1							
GYA				AMB		AMB		
	comp=Z,280nm,5.4s							
GYA				LR		LR		
	comp=N,480nm,15.6s,MS4.7							
GYA				LR		LR		
	comp=E,380nm,15.6s,MS4.7							
GYA				LR		LR		
	comp=Z,730nm,15.0s,MS4.7							
QIZ	**Qiongzhong**	**45.79**	**66**	P		**P**	**07 38 24.5**	**+0.6**
QIZ				PP		PP	07 40 09.5	-1.8
QIZ				S		**S**	**07 45 07.1**	**-0.8**
QIZ				LR		LR		
	comp=E,393nm,15.8s							
QIZ				LR		LR		
	comp=Z,444nm,18.9s,MS4.4							
MKAR	**Makanchi Array**	**46.22**	**15**	P		**P**	**07 38 26.6**	**-0.3**
	comp=Z,1.6nm,0.9s,mb3.9,baz=203,slow=8.9,SNR=4.0							
MKAR				PcP		PcP	07 40 03.0	+0.4
	comp=Z,1.9nm,0.9s,baz=267,slow=2.3,SNR=4.4							
MKAR				LR		LR	07 58 39.8	
	comp=Z,452nm,20.8s,MS4.4,baz=193,slow=37							
MKAR	**Makanchi Array**	**46.22**	**15**	P		**P**	**07 38 26.6**	**-0.3**
MKAR							07 40 03.0	
MKAR	**Makanchi Array**	**46.22**	**15**	P		**P**	**07 38 26.6**	**-0.3**
MKAR				PcP		PcP	07 40 03.0	+0.4
MKAR				LR		LR	07 58 39.8	
GTA	**Gaotai**	**47.76**	**36**	*e*P		**P**	**07 38 39.3**	**+0.2**
GTA				AP		pP	07 38 43.8	+1.6
GTA				XP		sP	07 38 46.1	+2.6
GTA				S		**S**	**07 45 35.4**	**-0.2**
GTA				XS		sS	07 45 43.8	+3.0
GTA				SS		SS	07 49 00.0	-4.2
GTA				AMB		AMB		
	comp=Z,8.0nm,1.7s,mb4.5							
GTA				AMB		AMB		
	comp=Z,132nm,5.1s							
GTA				LR		LR		
	comp=N,556nm,18.0s,MS4.7							
GTA				LR		LR		
	comp=E,583nm,17.7s,MS4.7							
GTA				LR		LR		
	comp=Z,565nm,20.4s,MS4.5							
LBTB	**Lobatse**	**47.91**	**233**	P		**P**	**07 38 42.9**	**+2.4**
	comp=Z,3.1nm,0.8s,mb4.4,baz=78,slow=12,SNR=3.5							
LBTB	**Lobatse**	**47.91**	**233**	P		**P**	**07 38 42.9**	**+2.4**
LZH	**Lanzhou**	**48.22**	**42**	*e*P		**P**	**07 38 42.5**	**-0.2**
LZH				AP		pP	07 38 52.6	+6.7
LZH				XP		sP	07 38 56.8	+10
LZH				PP		PP	07 40 34.4	-0.8
LZH				*eS*		**S**	**07 45 38.8**	**-3.5**
LZH				XS		sS	07 45 57.3	+10
LZH				AMB		AMB		
	comp=Z,26nm,1.4s,mb5.1							
LZH				LR		LR		
	comp=N,556nm,16.5s							
LZH				LR		LR		
	comp=Z,932nm,19.2s,MS4.8							
KURK	**Kurchatov**	**49.10**	**11**	P		**P**	**07 38 49.9**	**+0.7**
	comp=Z,48nm,1.1s,mb5.4,SNR=6.2							
KURK	**Kurchatov**	**49.10**	**11**	P		**P**	**07 38 48.1**	**-1.1**
	comp=Z,5.8nm,1.0s,mb4.5,baz=206,slow=8.1,SNR=9.9							
KURK				PcP		PcP	07 40 13.2	+0.5
	comp=Z,1.4nm,0.8s,baz=213,slow=3.7,SNR=3.9							
KURK	**Kurchatov**	**49.10**	**11**⇑	*e*P		**P**	**07 38 46.8**	**-2.4**
KURK				pmax		pmax		
	comp=Z,14nm,1.4s,mb4.8							
KURK	**Kurchatov**	**49.10**	**11**	*e*P		**P**	**07 38 48.3**	**-0.9**
	comp=Z,12nm,1.1s,mb4.8							
BOSA	**Boshof**	**49.98**	**229**	P		**P**	**07 38 58.5**	**+2.1**
	comp=Z,3.4nm,0.8s,mb4.4,baz=66,slow=6.6,SNR=5.0							
BOSA				LR		LR	07 58 20.7	
	comp=Z,790nm,18.8s,MS4.7,baz=60,slow=34							
BOSA	**Boshof**	**49.98**	**229**	P		**P**	**07 38 58.5**	**+2.1**
BOSA				LR		LR	07 58 20.7	
XAN	**Xi'an**	**50.69**	**47**	P		**P**	**07 39 01.0**	**-0.6**
XAN				AP		pP	07 39 11.8	+7.0
XAN				AMB		AMB		
	comp=Z,22nm,1.8s,mb4.8							
TSUM	**Tsumeb**	**52.36**	**243**	LR		LR	07 59 27.3	
	comp=Z,1μm,19.8s,MS4.9,baz=139,slow=34							
TIRR	**Tirgusor**	**53.30**	**327**⇓	*i*P		**P**	**07 39 21.6**	**+0.7**
TIRR	**Tirgusor**	**53.30**	**327**⇓	P		**P**	**07 39 21.6**	**+0.7**
KDZ	**Kurdzhali**	**53.31**	**322**	*e*P		**P**	**07 39 21.7**	**+0.7**
WHN	**Wuhan**	**53.37**	**53**	P		**P**	**07 39 21.5**	**-0.2**
WHN				S		**S**	**07 46 53.9**	**0.0**
WHN				LR		LR		
	comp=N,736nm,26.0s,MS4.8							
WHN				LR		LR		
	comp=E,788nm,22.5s,MS4.8							
WHN				LR		LR		
	comp=Z,1μm,15.0s							
ZAA0	**Zalesovo Array**	**53.45**	**14**	*e*P		**P**	**07 39 20.7**	**-1.1**
ZALV	**Zalesovo Beam**	**53.45**	**14**	P		**P**	**07 39 21.1**	**-0.7**
	comp=Z,7.4nm,0.8s,mb4.7,baz=216,slow=7.3,SNR=14							
ZALV				LR		LR	08 01 48.5	
	comp=Z,402nm,21.6s,MS4.4,baz=65,slow=36							
NVS	**Novosibirsk**	**53.92**	**12**	*e*P		**P**	**07 39 23.6**	**-1.6**
NVS				pmax		pmax		
	comp=Z,56nm,2.5s,mb5.0							
NVS				pmax		pmax		
	comp=N,37nm,2.4s							
ARU	**Arti**	**54.01**	**355**	*c i*P		**P**	**07 39 25.5**	**-0.4**
ARU				*e*			07 40 28.5	
ARU				*e*			07 41 22.6	
ARU				eS		**S**	**07 46 59.6**	**-2.1**
ARU				eSS		SS	07 50 37.2	-6.0
ARU				pmax		pmax		
	comp=Z,22nm,1.7s,mb4.8							
ARU	**Arti**	**54.01**	**355**	*e*P		**P**	**07 39 25.6**	**-0.3**
	comp=Z,26nm,1.4s,mb5.0							
MMB	**Musomiste**	**54.31**	**322**	*e*P		**P**	**07 39 28.6**	**+0.3**
KKB	**Krupnik**	**54.87**	**321**	*e*P		**P**	**07 39 32.7**	**+0.3**
PLOR	**Plostina**	**55.16**	**327**⇓	*i*P		**P**	**07 39 35.8**	**+1.4**
VTS	**Vitosha**	**55.19**	**322**⇓	*i*P		**P**	**07 39 35.8**	**+1.1**
VTS	**Vitosha**	**55.19**	**322**	*e*P		**P**	**07 39 35.3**	**+0.6**
MLR	**Muntele Rosu**	**55.31**	**327**⇓	*i*P		**P**	**07 39 37.1**	**+1.6**
KRUS	**Krusevo**	**55.76**	**320**	*e*P		**P**	**07 39 39.1**	**+0.3**
HHC	**Hu-ho-hao-te**	**55.89**	**41**	*e*P		**P**	**07 39 37.5**	**-2.2**
HHC				PCP		PcP	07 40 35.9	-2.6
HHC				PP		PP	07 41 44.1	-0.4
HHC				SCP		ScP	07 44 32.9	-5.0
HHC				PCS		PcS	07 44 34.8	-3.9
HHC				S		**S**	**07 47 23.3**	**-4.1**
HHC				SCS		ScS	07 49 23.1	-6.2
HHC				AMB		AMB		
	comp=Z,14nm,0.6s,mb5.2							
HHC				AMB		AMB		
	comp=Z,172nm,7.2s							
HHC				LR		LR		
	comp=N,501nm,16.7s,MS4.8							
HHC				LR		LR		
	comp=E,477nm,17.2s,MS4.8							
HHC				LR		LR		
	comp=Z,673nm,17.1s,MS4.8							
SONM	**Songino Array**	**56.86**	**31**	P		**P**	**07 39 47.6**	**+1.0**
	comp=Z,3.3nm,1.0s,mb4.3,baz=227,slow=8.0,SNR=17							
SONM				LR		LR	08 04 15.7	
	comp=Z,989nm,20.3s,MS4.9,baz=224,slow=36							
BURAR	**Bucovina Array**	**57.03**	**328**⇓	*i*P		**P**	**07 39 46.6**	**-1.2**
ZAK	**Zakamensk**	**57.03**	**27**	*e*P		**P**	**07 39 47.8**	**+0.1**
ZAK				pmax		pmax		
	comp=Z,4.0nm,1.8s,mb4.2							
BUR08	**Bucovina Ar. S**	**57.06**	**328**	*e*P		**P**	**07 39 46.5**	**-1.4**
AKASG	**Malin Array Be**	**57.12**	**333**	P		**P**	**07 39 47.3**	**-1.0**
	comp=Z,0.2nm,0.2s,mb3.7,baz=140,slow=5.4,SNR=4.6							
AKASG	**Malin Array Be**	**57.12**	**333**	*i* P		**P**	**07 39 47.7**	**-0.6**
ULN	**Ulaanbaatar**	**57.23**	**32**⇑	*e*P		**P**	**07 39 49.0**	**-0.1**
NJ2	**Nanjing**	**57.51**	**53**	*e*P		**P**	**07 39 53.4**	**+2.0**
NJ2				AMB		AMB		
	comp=Z,20nm,0.6s,mb5.3							
OBN	**Obninsk**	**57.57**	**340**	*e*P		**P**	**07 39 53.5**	**+2.1**
OBN				pmax		pmax		
	comp=Z,20nm,1.8s,mb4.8							
BZS	**Buzias**	**57.84**	**324**⇓	*i*P		**P**	**07 39 53.9**	**+0.4**
DRGR		**57.89**	**326**⇓	*i*P		**P**	**07 39 55.2**	**+1.3**
DRGR		**57.89**	**326**	⇓P		**P**	**07 39 55.2**	**+1.3**
TLY	**Talaya**	**58.10**	**27**	*e*P		**P**	**07 39 56.0**	**+0.8**
TLY				*e*PPP			07 43 32.5	
TLY				*eS*		**S**	**07 47 57.6**	**+1.3**
TLY				pmax		pmax		
	comp=Z,8.0nm,0.9s,mb4.8							
TLY				MLR		MLR		
	comp=Z,557nm,21.0s,MS4.7							
BJI	**Beijing**	**58.60**	**44**	P		**P**	**07 39 59.0**	**+0.1**
BJI				S		**S**	**07 48 02.9**	**-0.3**
BJI				SS		SS	07 51 57.3	+1.2
BJI				AMB		AMB		
	comp=Z,11nm,1.8s,mb4.6							
BJI				AMB		AMB		
	comp=Z,192nm,3.5s							
BJI				LR		LR		
	comp=N,191nm,16.8s,MS4.4							
BJI				LR		LR		
	comp=E,175nm,15.9s,MS4.4							
BJI				LR		LR		
	comp=Z,112nm,37.5s							
CUC	**Castrocucco**	**58.72**	**316**	*e*P		**P**	**07 40 00.1**	**+0.3**
	comp=Z,20nm,1.1s,mb5.1							
SSE	**Sheshan**	**59.10**	**55**	P		**P**	**07 40 01.3**	**-1.3**
SSE				AP		pP	07 40 04.5	-1.3
SSE				S		**S**	**07 48 09.8**	**-0.2**
SSE				AMB		AMB		
	comp=Z,44nm,0.7s,mb5.6							
SSE				AMB		AMB		
	comp=Z,369nm,4.5s							
SSE				LR		LR		
	comp=N,121nm,25.3s,MS4.1							
SSE				LR		LR		
	comp=E,143nm,25.3s,MS4.1							
SSE				LR		LR		
	comp=Z,196nm,19.1s							
KOLS	**Kolonicke sedl**	**59.40**	**328**	*e*P		**P**	**07 40 04.7**	**+0.4**
CRVS	**Cervenica-Dubn**	**59.81**	**328**	*e*P		**P**	**07 40 07.5**	**+0.4**
PKSM	**Moragy**	**59.91**	**324**⇓	*i*P		**P**	**07 40 07.9**	**0.0**
PKSM	**Moragy**	**59.91**	**324**⇓	P		**P**	**07 40 07.9**	**0.0**
STHS	**Stebnicka Huta**	**60.23**	**328**	*e*P		**P**	**07 40 09.6**	**-0.4**
STHS				pmax		pmax		
	comp=Z,5.0nm,1.3s,mb4.4							
STHS	**Stebnicka Huta**	**60.23**	**328**	*e*P		**P**	**07 40 09.6**	**-0.4**
	comp=Z,5.4nm,1.3s,mb4.4							
SDI	**San Donato**	**60.83**	**317**	P		**P**	**07 40 14.3**	**0.0**
SDI				pmax		pmax		
	comp=Z,17nm,1.1s,mb5.1							
SDI	**San Donato**	**60.83**	**317**	P		**P**	**07 40 14.3**	**0.0**
	comp=Z,17nm,1.1s,mb5.1							
VYHS	**Vyhne**	**61.02**	**326**	*e*P		**P**	**07 40 15.0**	**-0.4**
VVLD	**Villa Vallelon**	**61.03**	**317**	P		**P**	**07 40 15.7**	**+0.1**
	comp=Z,30nm,0.8s,mb5.5							
PTQR	**Pietraguaria**	**61.24**	**317**	P		**P**	**07 40 17.6**	**+0.5**
	comp=Z,48nm,1.1s,mb5.6							
NRCA	**Norcia**	**61.78**	**318**	P		**P**	**07 40 21.3**	**+0.6**
	comp=Z,13nm,0.9s,mb5.1							
KEST	**Kesra**	**61.85**	**309**	LR		LR	08 04 57.6	
	comp=Z,49nm,18.8s,MS3.7,baz=253,slow=34							
FITZ	**Fitzroy Crossi**	**62.11**	**112**	P		**P**	**07 40 22.9**	**-0.4**
	comp=Z,2.6nm,1.1s,mb4.3,baz=70,slow=23,SNR=2.8							
FITZ	**Fitzroy Crossi**	**62.11**	**112**	*e*P		**P**	**07 40 23.2**	**-0.1**
FSSB	**Fossombrone**	**62.37**	**319**	P		**P**	**07 40 25.2**	**+0.6**
MORC	**Moravsky Berou**	**62.42**	**327**⇑	*i*P		**P**	**07 40 28.9**	**+4.0**
MORC	**Moravsky Berou**	**62.42**	**327**	*e*P		**P**	**07 40 25.2**	**+0.4**
VRAC	**Vranov**	**62.70**	**326**⇑

FRF pmax pmax
comp=Z,18nm,1.3s,mb4.9
FRF La Foret Royal 66.42 317 *e*P **P 07 40 50.7 -0.5**
comp=Z,18nm,1.3s,mb5.0
CN2 Changchun 66.43 43 *e*P **P 07 40 53.6 +2.3**
CN2 *e*XP sP 07 41 00.0 +4.3
CN2 *e*S S 07 49 41.8 +0.1
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.0
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,200nm,18.0s,MS4.6
CN2 LR LR
comp=E,300nm,18.0s,MS4.6
CN2 LR LR
comp=Z,400nm,19.0s,MS4.7
MBDF Montbardon 66.75 318 *e*P **P 07 40 52.2 -1.0**
comp=Z,9.3nm,1.0s,mb4.5
MBDF Montbardon 66.75 318 *e*P **P 07 40 52.2 -1.0**
MBDF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
MBDF Montbardon 66.75 318 *e*P **P 07 40 52.2 -1.0**
comp=Z,4.7nm,1.0s,mb4.5
LPG La Plagne 67.03 319 *e*P **P 07 40 54.0 -1.1**
comp=Z,13nm,0.9s,mb4.7
LPG La Plagne 67.03 319 *e*P **P 07 40 54.0 -1.1**
LPG pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
LPG La Plagne 67.03 319 *e*P **P 07 40 54.0 -1.1**
comp=Z,6.7nm,0.9s,mb4.7
BFO Black Forest 67.10 322 *e*P **P 07 40 55.3 -0.1**
BFO pmax pmax
comp=Z,13nm,1.1s,mb4.9
BFO Black Forest 67.10 322 *e*P **P 07 40 55.3 -0.1**
comp=Z,13nm,1.1s,mb4.9
SMRF Simiane la Rot 67.29 317 *e*P **P 07 40 56.6 -0.1**
comp=Z,12nm,1.1s,mb4.5
SMRF Simiane la Rot 67.29 317 *e*P **P 07 40 56.6 -0.1**
comp=Z,12nm,1.1s,mb4.8
ORIF Oris-en-Rattie 67.41 318 *e*P **P 07 40 56.8 -0.6**
comp=Z,22nm,1.2s,mb4.7
ORIF *e*MLR MLR
comp=Z,261nm,18.0s,MS4.2
ORIF Oris-en-Rattie 67.41 318 *e*P **P 07 40 56.8 -0.6**
ORIF pmax pmax
comp=Z,11nm,1.2s,mb4.8
ORIF Oris-en-Rattie 67.41 318 *e*P **P 07 40 56.8 -0.6**
comp=Z,11nm,1.2s,mb4.8
ECH Echery 67.78 322 *e*P **P 07 40 59.5 -0.2**
CDF Champ du Feu 67.78 322 *e*P **P 07 40 59.0 -0.7**
comp=Z,16nm,0.9s,mb4.8
CDF Champ du Feu 67.78 322 *e*P **P 07 40 59.0 -0.7**
CDF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
CDF Champ du Feu 67.78 322 *e*P **P 07 40 59.0 -0.7**
comp=Z,8.3nm,0.9s,mb4.8
HINF Hinteralfeld 67.82 321 *e*P **P 07 40 58.8 -1.2**
CABF La Chapelle 67.86 320 *e*P **P 07 41 00.1 -0.2**
comp=Z,54nm,1.1s,mb5.2
CABF La Chapelle 67.86 320 *e*P **P 07 41 00.1 -0.2**
CABF pmax pmax
comp=Z,27nm,1.1s,mb5.2
CABF La Chapelle 67.86 320 *e*P **P 07 41 00.1 -0.2**
comp=Z,27nm,1.1s,mb5.2
VIVF Saint-Julien-l 68.19 318 *e*P **P 07 41 01.7 -0.7**
comp=Z,12nm,1.1s,mb4.5
VIVF Saint-Julien-l 68.19 318 *e*P **P 07 41 01.7 -0.7**
VIVF pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
VIVF Saint-Julien-l 68.19 318 *e*P **P 07 41 01.7 -0.7**
comp=Z,5.8nm,1.1s,mb4.5
HAU Haudompre 68.20 321 *e*P **P 07 41 01.2 -1.2**
HAU *e*MLR MLR
comp=Z,238nm,21.5s,MS4.1
HAU Haudompre 68.20 321 *e*P **P 07 41 01.2 -1.2**
HAU LR LR
comp=Z,240nm,21.5s,MS4.4
LASF Ste Croix 68.50 317 *e*P **P 07 41 04.3 0.0**
comp=Z,22nm,1.1s,mb4.8
WLF Walferdange 68.94 323 P **P 07 41 07.9 +0.9**
MEZF Maizieres J'vi 69.19 321 *e*P **P 07 41 07.8 -0.8**
SMF Signal de Mont 69.33 319 *e*P **P 07 41 08.3 -1.1**
comp=Z,26nm,1.2s,mb4.7
SMF Signal de Mont 69.33 319 *e*P **P 07 41 08.3 -1.1**
SMF pmax pmax
comp=Z,13nm,1.2s,mb4.7
SMF Signal de Mont 69.33 319 *e*P **P 07 41 08.3 -1.1**
comp=Z,13nm,1.2s,mb4.7
MEM Membach 69.39 324 P **P 07 41 10.4 +0.7**
MTLF Montolieu 69.41 316 *e*P **P 07 41 08.8 -1.2**
MDJ Mudanjiang 69.52 43 P **P 07 41 11.1 +0.4**
MDJ XP sP 07 41 16.0 +0.9
MDJ S S 07 50 21.5 +3.0
MDJ SS SS 07 54 46.1 -0.1
MDJ AMB AMB
comp=Z,13nm,1.8s,mb4.6
MDJ AMB AMB
comp=Z,87nm,3.2s
MDJ LR LR
comp=N,64nm,14.4s,MS4.3
MDJ LR LR
comp=E,115nm,17.0s,MS4.3
MDJ LR LR
comp=Z,136nm,15.7s,MS4.3
LOR Lormes 69.52 320 *e*P **P 07 41 09.6 -1.0**
comp=Z,26nm,1.2s,mb4.7
LOR *e*MLR MLR
comp=Z,120nm,22.8s,MS3.8
LOR Lormes 69.52 320 *e*P **P 07 41 09.6 -1.0**
LOR pmax pmax
comp=Z,13nm,1.2s,mb4.7
LOR MLR MLR
comp=Z,120nm,22.8s,MS4.1
LOR Lormes 69.52 320 *e*P **P 07 41 09.6 -1.0**
comp=Z,13nm,1.2s,mb4.7
LOR LR LR
comp=Z,120nm,22.8s,MS4.1
SSF Saint Saulge 69.68 320 *e*P **P 07 41 10.6 -1.0**
comp=Z,19nm,1.0s,mb4.7
SSF Saint Saulge 69.68 320 *e*P **P 07 41 10.6 -1.0**
SSF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SSF Saint Saulge 69.68 320 *e*P **P 07 41 10.6 -1.0**
comp=Z,9.7nm,1.0s,mb4.7
AVF Avril sur Loir 69.69 319 *e*P **P 07 41 10.5 -1.2**
BCLA Clavier 69.73 323 P **P 07 41 12.1 +0.2**
comp=Z,15nm,1.7s,mb4.7
BCLA AP pP 07 41 16.1 +1.0
GIVF Givet 69.90 323 *e*P **P 07 41 12.5 -0.4**
BGF Bois d'Agland 69.95 319 *e*P **P 07 41 12.7 -0.6**
comp=Z,30nm,1.0s,mb4.9
BGF Bois d'Agland 69.95 319 *e*P **P 07 41 12.7 -0.6**
BGF pmax pmax
comp=Z,15nm,1.0s,mb4.9
BGF Bois d'Agland 69.95 319 *e*P **P 07 41 12.7 -0.6**
comp=Z,15nm,1.0s,mb4.9
CAF Calviac 69.98 317 *e*P **P 07 41 13.0 -0.5**
MAW Mawson 70.08 181 P **P 07 41 13.9 +0.2**
comp=Z,2.0nm,0.8s,mb4.1,baz=288,slow=11,SNR=3.6
MAW LR LR 08 06 52.3
comp=Z,190nm,19.4s,MS4.3,baz=51,slow=32
BAIF Baives 70.26 323 *e*P **P 07 41 14.6 -0.5**
comp=Z,43nm,1.3s,mb4.9
BAIF Baives 70.26 323 *e*P **P 07 41 14.6 -0.5**
BAIF pmax pmax
comp=Z,22nm,1.3s,mb4.9
BAIF Baives 70.26 323 *e*P **P 07 41 14.6 -0.5**
comp=Z,22nm,1.3s,mb4.9
TCF Toulx Ste Croi 70.29 319 *e*P **P 07 41 14.8 -0.6**
RJF Les Rejaudoux 70.46 317 *e*P **P 07 41 16.3 -0.1**
comp=Z,13nm,0.9s,mb4.5
RJF *e*MLR MLR
comp=Z,166nm,18.5s,MS4.0
RJF Les Rejaudoux 70.46 317 *e*P **P 07 41 16.3 -0.1**
RJF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
RJF MLR MLR
comp=Z,170nm,18.5s,MS4.3
RJF Les Rejaudoux 70.46 317 *e*P **P 07 41 16.3 -0.1**
comp=Z,6.7nm,0.9s,mb4.6
RJF LR LR
comp=Z,170nm,18.5s,MS4.3
WRA Warramunga Arr 70.54 112 P **P 07 41 17.0 -0.4**
comp=Z,8.0nm,0.8s,mb4.7,baz=290,slow=5.7,SNR=62
WRA LR LR 08 05 34.4
comp=Z,98nm,19.2s,MS4.1,baz=250,slow=30
WRAB Tennant Creek 70.55 112 P **P 07 41 17.9 +0.4**
comp=Z,101nm,0.9s,mb5.8,SNR=7.9
WRAB Tennant Creek 70.55 112 *e*P **P 07 41 17.1 -0.4**
WRAB pmax pmax
comp=Z,14nm,0.8s,mb4.9
WRAB Tennant Creek 70.55 112 *e*P **P 07 41 17.1 -0.4**
comp=Z,14nm,0.8s,mb4.9
WB2 Warramunga Arr 70.55 112 *e*P **P 07 41 17.1 -0.4**
DBIC Dimbokro 70.79 276 P **P 07 41 18.8 -0.3**
comp=Z,4.3nm,1.0s,mb4.3,baz=342,slow=20,SNR=3.0
DBIC LR LR 08 10 13.5
comp=Z,140nm,20.9s,MS4.2,baz=74,slow=34
DBIC Dimbokro 70.79 276 P **P 07 41 18.8 -0.3**
DBIC LR LR 08 10 13.5
ASAR Alice Springs 70.85 116 P **P 07 41 18.8 -0.5**
comp=Z,5.4nm,0.7s,mb4.6,baz=288,slow=5.5,SNR=49
LFF La Frestale 70.88 317 *e*P **P 07 41 19.0 0.0**
CLNS Chul'man 71.21 30 *e*P **P 07 41 13.6 -7.2**
CLNS pmax pmax
comp=Z,20nm,1.4s,mb4.8
CLNS pmax pmax
comp=N,4.0nm,0.6s
CLNS pmax pmax
comp=E,7.0nm,0.9s
ETSF Etsaut 71.25 315 *e*P **P 07 41 20.6 -0.7**
comp=E,17nm,1.1s,mb4.6
ETSF Etsaut 71.25 315 *e*P **P 07 41 20.6 -0.7**
ETSF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
ETSF Etsaut 71.25 315 *e*P **P 07 41 20.6 -0.7**
comp=Z,8.5nm,1.1s,mb4.6
NOA NORSAR Array B 71.40 335 LR LR 08 10 53.6
comp=Z,231nm,18.3s,MS4.5,baz=120,slow=34
SJPF Ste Jean 71.78 315 *e*P **P 07 41 23.9 -0.6**
comp=Z,26nm,1.1s,mb4.8
SJPF Ste Jean 71.78 315 *e*P **P 07 41 23.9 -0.6**
SJPF pmax pmax
comp=Z,13nm,1.1s,mb4.8
SJPF Ste Jean 71.78 315 *e*P **P 07 41 23.9 -0.6**
comp=Z,13nm,1.1s,mb4.8
MFF Saint Martin d 71.94 318 *e*P **P 07 41 24.7 -0.7**
ARCES ARCESS Array B 72.00 346 LR LR 08 14 34.4
comp=Z,309nm,18.8s,MS4.6,baz=107,slow=37
KLR Kul'dur 72.30 39 *e*P **P 07 41 23.0 -4.5**
LDF La Druitiere 72.48 320 *e*P **P 07 41 27.5 -1.1**
comp=Z,34nm,1.2s,mb4.9
LDF La Druitiere 72.48 320 *e*P **P 07 41 27.5 -1.1**
LDF pmax pmax
comp=Z,17nm,1.2s,mb4.8
LDF La Druitiere 72.48 320 *e*P **P 07 41 27.5 -1.1**
comp=Z,17nm,1.2s,mb4.8
FLN La Foliniere 72.75 321 *e*P **P 07 41 29.2 -1.0**
FLN *e*MLR MLR
comp=Z,163nm,19.5s,MS4.0
FLN La Foliniere 72.75 321 *e*P **P 07 41 29.2 -1.0**
FLN LR LR
comp=Z,160nm,19.5s,MS4.3
GRR Gorron 72.89 320 *e*P **P 07 41 30.0 -1.0**
comp=Z,93nm,1.7s,mb5.1
GRR Gorron 72.89 320 *e*P **P 07 41 30.0 -1.0**
GRR pmax pmax
comp=Z,46nm,1.7s,mb5.1
GRR Gorron 72.89 320 *e*P **P 07 41 30.0 -1.0**
comp=Z,46nm,1.7s,mb5.1
ESDC Sonseca Array 73.05 311 P **P 07 41 32.8 +0.6**
comp=Z,5.6nm,0.8s,mb4.5,baz=85,slow=6.0,SNR=14
SGMF Saint Gilles 73.95 320 *e*P **P 07 41 36.2 -1.1**
comp=Z,50nm,1.3s,mb5.0
SGMF Saint Gilles 73.95 320 *e*P **P 07 41 36.2 -1.1**
SGMF pmax pmax
comp=Z,25nm,1.3s,mb5.0
SGMF Saint Gilles 73.95 320 *e*P **P 07 41 36.2 -1.1**
comp=Z,25nm,1.3s,mb5.0
MJAR Matsushiro Arr 74.11 53 P **P 07 41 38.9 +0.5**
comp=Z,0.9nm,0.5s,mb4.0,baz=290,slow=6.3,SNR=4.0
MJAR LR LR 08 15 27.4
comp=Z,157nm,20.7s,MS4.3,baz=245,slow=37
QUIF Quistinic 74.26 319 *e*P **P 07 41 37.9 -1.2**
ROSF Rostrenen 74.43 320 *e*P **P 07 41 38.9 -1.2**
comp=Z,42nm,1.2s,mb4.8
ROSF Rostrenen 74.43 320 *e*P **P 07 41 38.9 -1.2**
ROSF pmax pmax
comp=Z,21nm,1.3s,mb4.9
ROSF Rostrenen 74.43 320 *e*P **P 07 41 38.9 -1.2**
comp=Z,21nm,1.3s,mb4.9
YSS Yuzh-Sakhalins 79.00 43⇑ *e*P **P 07 42 05.0 -1.0**
YSS pmax pmax
comp=Z,20nm,1.0s,mb5.0
YSS MLR MLR
comp=E,300nm,16.0s
YSS MLR MLR
comp=Z,300nm,16.0s,MS4.7
STKA Stephens Creek 79.09 123 *e*P **P 07 42 06.3 -0.5**
comp=Z,3.8nm,0.9s,mb4.3
STKA Stephens Creek 79.09 123 P **P 07 42 06.6 -0.2**
comp=Z,3.4nm,0.8s,mb4.3,baz=295,slow=12,SNR=4.6
STKA LR LR 08 13 06.7
comp=Z,233nm,18.4s,MS4.5,baz=206,slow=33
TIXI Tiksi 79.19 17 *e*P **P 07 42 05.9 -0.6**
TIXI pmax pmax
comp=Z,19nm,1.5s,mb4.8
TIXI MLR MLR
comp=Z,250nm,16.0s,MS4.7
TIXI Tiksi 79.19 17 *e*P **P 07 42 05.7 -0.8**
comp=Z,28nm,1.8s,mb4.9
CTA Charters Tower 81.65 111 *e*P **P 07 42 20.4 -0.4**
comp=Z,4.7nm,0.9s,mb4.4
CTA Charters Tower 81.65 111 P **P 07 42 20.6 -0.2**
comp=Z,4.6nm,0.7s,mb4.5,baz=315,slow=4.2,SNR=8.1
CTA Charters Tower 81.65 111 *e*P **P 07 42 20.4 -0.4**
CTA pmax pmax
comp=Z,5.0nm,0.9s
CTAO Charters Tower 81.65 111 *e*P **P 07 42 20.5 -0.3**
CTAO pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
CTAO Charters Tower 81.65 111 *e*P **P 07 42 20.4 -0.3**
comp=Z,9.9nm,1.5s,mb4.5
PETK Petropavlovsk- 88.91 37 LR LR 08 25 16.6
comp=Z,441nm,18.5s,MS4.9,baz=258,slow=37
EDM Edmonton 124.38 360 *e*PKIKP PKPdf 07 49 01.0 0.0
B11A Sandpoint 129.13 2 ⇓P PKPdf 07 49 11.2 +1.0
baz=129
EGMT Eagleton 129.46 356 *e*PKPdf PKPdf 07 49 12.6 +1.7
MSO Missoula 130.78 0 *e*PKPdf PKPdf 07 49 14.0 +0.6
F13A Darby 131.82 0 ⇑P PKPdf 07 49 15.8 +0.4
baz=132
G15A Dillon 132.43 359 ⇓P PKPdf 07 49 17.3 +0.7
baz=132
H11A Donnelly 132.87 2 ⇓P PKPdf 07 49 17.1 -0.4
baz=132
DCID1 Drake Creek 133.95 357 *e*PKPdf PKPdf 07 49 14.0 -5.5
J06A Christmas Vall 134.01 6 ⇓P PKPdf 07 49 19.8 +0.2
baz=134
TPAW Teton Pass 134.05 357 *e*PKPdf PKPdf 07 49 21.7 +2.0
REDW Red Top Meadow 134.17 357 *e*PKPdf PKPdf 07 49 22.1 +2.1
J12A Stokes Ranch, 134.35 1 ⇑P PKPdf 07 49 21.2 +0.9
baz=134
PDAR Pinedale Array 134.68 356 PKP PKPdf 07 49 22.0 +1.1
comp=Z,1.6nm,0.9s,baz=43,slow=2.1,SNR=10
YBH Yreka Blue Hor 135.16 9 PKP PKPdf 07 49 24.3 +2.5
comp=Z,0.5nm,0.7s,baz=319,slow=9.3,SNR=3.0
L10A Juniper Basin 135.47 3 ⇑P PKPdf 07 49 21.6 -0.8
baz=135
HWUT Hardware Ranch 135.95 357 *e*PKPdf PKPdf 07 49 26.2 +2.9
U17A Shonto 140.89 356 ⇑P PKPdf 07 49 29.0 -3.5
baz=141
U18A Rough Rock, Ch 141.00 355 ⇓P PKPdf 07 49 28.1 -4.6
baz=141
U13A Pakoon Wash 141.19 0 ⇑P PKPdf 07 49 30.0 -3.0
baz=141
U16A Tuba City 141.38 356 ⇓P PKPdf 07 49 29.5 -3.9
baz=141
V13A Grand Canyon W 141.75 0 ⇓P PKPdf 07 49 31.1 -3.0
baz=141
V12A Nelson 141.87 1 ⇓P PKPdf 07 49 30.8 -3.5
baz=142
V14A Boquillas Ranc 141.96 359 ⇓P PKPdf 07 49 31.3 -3.2
baz=142
ANMO Albuquerque 142.00 350 *e*PKIKP PKPdf 07 49 36.8 +2.2
W14A Seligman 142.38 359 ⇑P PKPdf 07 49 32.8 -2.5
baz=142
W13A Hualapai Mount 142.50 360 ⇓P PKPdf 07 49 33.0 -2.5
baz=142
LAZ Ladron 142.65 351 *e*PKPdf PKPdf 07 49 32.8 -3.0
BNM Barren Site 142.81 350 *e*PKPdf PKPdf 07 49 34.0 -2.1
X13A Yucca 143.01 360 ⇓P PKPdf 07 49 34.3 -2.1
baz=143
X15A Humboldt 143.08 358 ⇑P PKPdf 07 49 34.8 -1.7
baz=143,SNR=7.5
X16A Lo Mia Camp, P 143.11 357 ⇓P PKPdf 07 49 34.7 -1.9
baz=143
X14A Yava 143.12 359 ⇓P PKPdf 07 49 34.8 -1.8
baz=143
X17A Forest Lakes 143.15 356 ⇓P PKPdf 07 49 35.1 -1.6
baz=143
Y19A Nutrioso 143.38 354 ⇑P PKPdf 07 49 35.8 -1.3
baz=143
IRM Iron Mountain 143.42 2 ⇓P PKPdf 07 49 35.7 -1.4
baz=143
Y15A Casa Rosa Ranc 143.62 358 ⇓P PKPdf 07 49 35.5 -2.0
baz=143
Y18A Canyon Day Jun 143.64 355 ⇓P PKPdf 07 49 36.4 -1.1
baz=143
Y16A Circle Bar Ran 143.65 357 ⇓P PKPdf 07 49 36.4 -1.2
baz=143,SNR=8.0
Y13A Salome 143.78 360 ⇑P PKPdf 07 49 36.5 -1.3
baz=144
Y17A Roosevelt 143.79 356 P PKPdf 07 49 36.4 -1.4
baz=144,SNR=12
Y12C Blythe 143.84 1 ⇑P PKPdf 07 49 36.9 -1.0
baz=144
Z14A Wintersburg 144.22 359 ⇓P PKPdf 07 49 37.7 -0.9
baz=144
OTAV Otavalo 144.45 274 *e*PKPdf PKPdf 07 49 41.0 +1.5
JCT Junction City 144.46 339 *e*PKIKP PKPdf 07 49 39.9 +0.8
GLA Glamis 144.53 1 *e*PKIKP PKPdf 07 49 39.3 +0.2
118A Homack Ranch, 144.76 354 ⇑P PKPdf 07 49 39.4 -0.1
baz=144,SNR=13
115A Sonoran Desert 144.86 358 ⇓P PKPdf 07 49 40.2 +0.5
baz=144,SNR=9.1
DVTC Desert V Tower 144.88 3 ⇓P PKPdf 07 49 40.2 +0.5
baz=145
117A Oracle 144.90 355 ⇓P PKPdf 07 49 39.9 +0.1
baz=145,SNR=13
116A Eloy 144.97 357 ⇑P PKPdf 07 49 40.2 +0.3
baz=145,SNR=6.6
TUC Tucson 145.16 355 *e*PKIKP PKPdf 07 49 41.4 +1.2
219A White Tail Can 145.31 353 ⇑P PKPbc 07 49 41.2 +1.0
baz=145,SNR=10
218A Dragoon 145.43 354 ⇓P PKPbc 07 49 40.7 +0.2
baz=145
216A Three Points, 145.51 356 ⇑P PKPdf 07 49 41.6 +0.8
baz=145,SNR=6.5
214A Organ Pipe Nat 145.62 358 ⇑P PKPdf 07 49 42.5 +1.5
baz=145,SNR=9.2
217A Green Valley 145.69 355 P PKPdf 07 49 42.9 +1.7
baz=145,SNR=27
318A Bisbee 145.95 354 ⇑P PKPdf 07 49 43.5 +1.9
baz=146,SNR=11
TXAR Lajitas Array 146.77 344 PKPbc PKPbc 07 49 44.5 -0.2
comp=Z,7.0nm,0.9s,baz=53,slow=1.9,SNR=36
TGUH Tegucigalpa,Un 148.84 303 *e*PKPbc PKPbc 07 49 52.2 +1.5

IDC 15 07:45:18.2±4.0, 324S×10237E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/18, mbtmp3.6/4, MS3.4/1, Ms1 3.4/1, ms1mx2.9/28, Error ellipse: s-maj=166.7km s-min=24.6km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**27.16**	**125**	LR	LR	08 00 42.6	
	comp=Z,90nm,21.4s,baz=284,slow=34						
WRA	**Warramunga Arr**	**35.33**	**121**	P	P	07 52 14.8	-0.7
	0.5nm,0.7s,baz=300,slow=9.1,SNR=5.2						
ASAR	**Alice Springs**	**36.62**	**126**	P	P	07 52 26.9	+0.4
	0.5nm,0.5s,baz=298,slow=7.7,SNR=9.2						
SONM	**Songino Array**	**50.98**	**3**	P	P	07 54 22.4	+0.8
	0.6nm,0.6s,baz=178,slow=9.8,SNR=6.2						
MKAR	**Makanchi Array**	**52.87**	**343**	P	P	07 54 35.1	-0.6
	0.6nm,0.7s,baz=126,slow=7.3,SNR=3.7						

*ISK **15** 08:14:22.8, 3858N×4086E, h4km, MD3.5, ML3.6*
*ISCJB **15** 08:14:24.0±0.3, 3859N±002×4086E±003, h10km, Error ellipse: s-maj=3.3km s-min=2.8km az=35.2*
*DDA **15** 08:14:23.0, 3862N×4087E, h20km±1km, Md3.7*
*CSEM **15** 08:14:23.3±0.1, 3857N×4087E, h10km, MD3.7, Error ellipse: s-maj=2.0km s-min=1.7km az=9.0*

ISC 15 08:14:23.2±0.4, 3858N±002×4085E±002, h0km±4km, n39, σ1§19/59, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNGL	**BINGOL**	**0.44**	**32**	*i* P	**Pg**	**08 14 31.1**	**-0.6**
BNGL				*i* S	**Sg**	**08 14 37.8**	**+0.4**
BEST	**Besiri**	**0.76**	**154**	*i* P	**Pg**	**08 14 38.5**	**+0.7**
BEST				*i* S	**Sg**	**08 14 50.1**	**+2.4**
DIYA	**Diyarbakir**	**0.87**	**222**	*i* P	**Pg**	**08 14 40.8**	**+0.8**
DIYA				*i* S	**Sg**	**08 14 54.0**	**+2.7**
PTK	**Pertek**	**1.19**	**286**	*e*PN	**Pn**	**08 14 44.7**	**-2.3**
SVRC	**Sivrice-ELAZID**	**1.23**	**261**	*e*PN	**Pn**	**08 14 46.9**	**-0.7**
SVRC				*e*SN	**Sn**	**08 15 04.0**	**-0.9**
MARD	**Mardin**	**1.26**	**183**	*i* P	**Pg**	**08 14 46.8**	**-0.6**
MARD				*i* S	**Sg**	**08 15 04.3**	**+0.4**
EZM	**Erzurum**	**1.38**	**16**	*e*PN	**Pn**	**08 14 48.5**	**-1.2**
ERZM	**Erzurum**	**1.38**	**17**	*i* P	**Pn**	**08 14 48.2**	**-1.6**
ERZM				*i* S	**Sg**	**08 15 12.5**	**+4.8**
EZC	**Erzincan**	**1.42**	**326**	*e*PN	**Pg**	**08 14 53.8**	**+3.3**
EZC				*e*SN	**Sg**	**08 15 16.1**	**+7.3**
KOPT	**Kop Dagi**	**1.46**	**349**	*i* P	**Pn**	**08 14 50.0**	**-0.9**
KOPT				*i* S	**Sg**	**08 15 12.9**	**+2.6**
ELZG	**Elazig**	**1.47**	**267**	*i* P	**Pn**	**08 14 50.5**	**-0.5**
ELZG				*i* S	**Sg**	**08 15 13.0**	**+2.6**
SIRT	**Sirnak**	**1.65**	**130**	*e*PN	**Pn**	**08 14 53.3**	**-0.1**
SIRT				*e*SN	**Sn**	**08 15 15.4**	**+0.1**
HOMI	**Horasan**	**1.68**	**29**	*i* P	**Pn**	**08 14 53.6**	**-0.2**
HOMI				*i* S	**Sg**	**08 15 19.2**	**+2.1**
MYA	**Malataya**	**1.92**	**263**	*e*PN	**Pn**	**08 14 58.0**	**+0.8**
AGRB	**Hanur-Agry**	**1.94**	**58**	*e*PN	**Pn**	**08 14 57.3**	**-0.1**
URFA	**Urfa**	**1.97**	**235**	*e*PN	**Pn**	**08 14 58.0**	**+0.2**
VANB	**Van**	**1.99**	**89**	*e*PN	**Pn**	**08 14 58.0**	**-0.1**
VANT	**Van**	**1.99**	**93**	*e*PN	**Pn**	**08 14 56.5**	**-1.6**
TVAN	**Van**	**2.00**	**91**	*i* P	**Pn**	**08 14 59.3**	**+1.1**
TVAN				*i* S	**Sg**	**08 15 26.7**	**-0.9**
GUMT	**Gumushane**	**2.16**	**331**	*e*PN	**Pn**	**08 15 00.8**	**+0.4**
ATAB	**Bozova**	**2.30**	**242**	*i* P	**Pg**	**08 15 05.5**	**-1.9**
ATAB				*i* S	**Sg**	**08 15 37.4**	**+0.1**
ATAB	**Bozova**	**2.30**	**242**	*i* P	**Pg**	**08 15 05.5**	**-1.9**
ATAB				*i* S	**Sg**	**08 15 37.3**	**0.0**
AKCD	**Akcadag**	**2.32**	**264**	*i* P	**Pn**	**08 15 03.5**	**+0.8**
AKCD				*i* S	**Sg**	**08 15 37.9**	**+0.2**
DARE	**Darende-Malaty**	**2.41**	**280**	*e*PN	**Pg**	**08 15 07.7**	**-1.7**
CLDR	**Caldiran**	**2.46**	**76**	*e*PN	**Pn**	**08 15 04.9**	**+0.4**
HAKT	**HAKKARI**	**2.47**	**113**	*i* P	**Pn**	**08 15 04.3**	**-0.4**
HAKT				*i* S	**Sg**	**08 15 41.2**	**-1.5**
HKR	**Hakkari**	**2.49**	**113**	*e*PN	**Pn**	**08 15 05.1**	**+0.1**
KTUT	**Trabzon**	**2.55**	**341**	*e*PN	**Pn**	**08 15 06.0**	**+0.3**
ARTV	**Artvin**	**2.73**	**17**	*i* P	**Pn**	**08 15 08.8**	**+0.5**
ARTV				*i* S	**Sg**	**08 15 49.3**	**-1.7**
ESPY	**Espiye-Giresun**	**2.85**	**326**	*e*PN	**Pn**	**08 15 11.2**	**+1.2**
GZT	**Gaziantep**	**2.87**	**246**	*i* P	**Pg**	**08 15 16.8**	**-1.5**
GZT				*i* S	**Sg**	**08 15 54.3**	**-1.2**
BCA	**Borcka**	**2.92**	**11**	*e*PN	**Pn**	**08 15 11.3**	**+0.4**
GRSN	**GIRESUNGRSN**	**3.08**	**320**	*i* P	**Pg**	**08 15 19.8**	**-2.4**
GRSN				*i* S	**Sg**	**08 16 02.2**	**+0.1**
GAZ	**Gaziantep**	**3.21**	**245**	*e*PN	**Pn**	**08 15 15.0**	**+0.1**
SARI	**SarD1z-Kayseri**	**3.26**	**273**	*e*PN	**Pn**	**08 15 19.4**	**+3.9**
SVSK	**Karacayir**	**3.28**	**295**	*e*PN	**Pn**	**08 15 17.4**	**+1.6**
KMRS	**Kahramanmaras**	**3.30**	**252**	*e*PN	**Pn**	**08 15 17.3**	**+1.2**
GNI	**Garni**	**3.40**	**61**	*e*PN	**Pn**	**08 15 18.7**	**+1.3**
ANDN	**Andirin**	**3.69**	**256**	*i* P	**Pg**	**08 15 29.0**	**-5.0**
ANDN				*i* S	**Sg**	**08 16 21.0**	**-1.0**

*IDC **15** 08:16:30.7±1.7, 1674S×16789E, h0km, mb4.4/7, mb1 4.6/7, mb1mx4.2/18, mbtmp4.4/7, MS3.4/2, Ms1 3.4/2, ms1mx2.7/25, Error ellipse: s-maj=80.8km s-min=27.0km az=150.0*
*ISCJB **15** 08:16:37.9±4.8, 172S±02×1678E±02, h68km±46km, mb4.3/6, Error ellipse: s-maj=38.3km s-min=26.6km az=158.2*
*NEIC **15** 08:16:37.1±4.5, 1692S×16790E, h47km±44km, mb4.3/3, Error ellipse: s-maj=46.5km s-min=18.0km az=173.0*

ISC 15 08:16:38.9±4.4, 171S±02×1679E±02, h62km±43km, n15, σ0§74/14, mb4.3/5, Vanuatu Islands

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

DZM	**Mont Dzumac**	**5.13**	**195**	*e*P	**Pn**	08 17 53.2 0.0
DZM				*e*S	**Sn**	08 18 50.7 -0.4
DZM	**Mont Dzumac**	**5.13**	**195**	*e*Pn	**Pn**	08 17 53.7 +0.5
CTA	**Charters Tower**	**20.72**	**258**	*e*P	**P**	08 21 15.0 +0.6
	5.0nm,0.4s					
CTA	**Charters Tower**	**20.72**	**258**	P	**P**	08 21 15.2 +0.8
	6.9nm,0.5s,baz=84,slow=12,SNR=17					
CTA				LR	LR	08 28 14.1
	comp=Z,72nm,21.0s,baz=71,slow=34					
CTAO	**Charters Tower**	**20.72**	**258**	*e*P	**P**	08 21 14.7 +0.3
	7.5nm,0.6s					
STKA	**Stephens Creek**	**27.99**	**233**	*e*P	**P**	08 22 25.4 +1.4
	8.7nm,0.6s,mb4.6					
STKA	**Stephens Creek**	**27.99**	**233**	P	**P**	08 22 25.6 +1.7
	10nm,0.7s,mb4.6,baz=58,slow=6.8,SNR=21					
WB2	**Warramunga Arr**	**31.90**	**260**	*e*P	**P**	08 22 57.8 -0.9
WRA	**Warramunga Arr**	**31.91**	**260**	P	**P**	08 22 57.7 -1.1
	1.2nm,0.5s,mb4.0,baz=84,slow=8.0,SNR=32					
ASAR	**Alice Springs**	**32.47**	**253**	P	**P**	08 23 03.5 -0.1
	31nm,0.6s,mb5.3,baz=80,slow=8.6,SNR=662					
FITZ	**Fitzroy Crossi**	**40.23**	**262**	P	**P**	08 24 10.1 +0.3
	1.7nm,0.8s,mb3.9,baz=79,slow=10,SNR=3.5					
FITZ				LR	LR	08 39 47.3
	comp=Z,73nm,18.2s,baz=49,slow=35					
NVAR	**Mina Array Bea**	**88.36**	**49**	P	**P**	08 29 23.9 -0.1
	0.8nm,0.9s,mb4.0,baz=236,slow=6.1,SNR=5.1					
NVAR	**Mina Array Bea**	**88.36**	**49**	P	**P**	08 29 23.9 -0.1
ZALV	**Zalesovo Beam**	**99.65**	**323**	P	Pdif	08 30 14.9 -0.7
	0.6nm,0.5s,baz=108,slow=4.7,SNR=2.5					
TORD	**Torodi Ar. Bea**	**166.11**	**255**	PKPab	PKPab	08 37 38.9 +0.2
	0.6nm,0.9s,baz=119,slow=4.4,SNR=3.0					

IDC 15 08:23:34.7±2.1, 258N×6635E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/21, mbtmp3.8/5, MS3.8/2, Ms1 3.8/2, ms1mx3.1/33, Error ellipse: s-maj=72.5km s-min=27.0km az=68.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**46.17**	**15**	P	P	08 32 00.5	-0.6
	0.2nm,0.2s,baz=207,slow=6.0,SNR=3.8						
MKAR				LR	LR	08 53 05.4	
	comp=Z,46nm,18.2s,baz=352,slow=38						
ZALV	**Zalesovo Beam**	**53.41**	**13**	P	P	08 32 55.9	-0.2
	0.5nm,0.3s,baz=202,slow=6.2,SNR=3.8						
SONM	**Songino Array**	**56.75**	**31**	P	P	08 33 21.1	+0.8
	0.2nm,0.5s,baz=253,slow=9.8,SNR=2.4						
NWAO	**Narrogin (SRO)**	**59.61**	**131**	LR	LR	08 55 06.3	
	comp=Z,139nm,19.0s,baz=118,slow=32						
WRA	**Warramunga Arr**	**70.30**	**112**	P	P	08 34 50.9	+0.3
	1.3nm,0.7s,baz=290,slow=5.6,SNR=14						
ASAR	**Alice Springs**	**70.61**	**116**	P	P	08 34 52.3	-0.2
	1.0nm,0.7s,baz=290,slow=5.5,SNR=14						
PDAR	**Pinedale Array**	**134.71**	**356**	PKP	PKPdf	08 42 56.1	+0.4
	0.4nm,0.6s,baz=46,slow=5.2,SNR=3.6						
TXAR	**Lajitas Array**	**146.86**	**344**	PKPbc	PKPbc	08 43 19.1	-0.6
	0.6nm,0.8s,baz=35,slow=3.3,SNR=5.2						

IDC 15 08:28:01.4±1.4, 275S×10048E, h0km, mb4.0/11, mb1 4.1/11, mb1mx4.0/21, mbtmp4.0/11, Error ellipse: s-maj=61.1km s-min=15.8km az=56.0
ISCJB 15 08:28:04.7±1.2, 27S±02×1006E±03, h33km, mb4.1/12, Error ellipse: s-maj=47.3km s-min=13.0km az=144.9
NEIC 15 08:28:06.7±0.9, 270S×10056E, h35km, mb4.6/1, Error ellipse: s-maj=39.8km s-min=11.2km az=56.0
ISC 15 08:28:06.9±1.2, 27S±02×1006E±03, h35km, n16, σ0s95/14, mb4.1/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.08**	**356**	P	**P**	08 32 46.4	-1.9
	1.7nm,0.3s,mb3.8,baz=184,slow=10.0,SNR=8.1						
WRA	**Warramunga Arr**	**37.16**	**120**	P	**P**	08 35 14.9	+0.2
	0.6nm,0.4s,mb3.8,baz=312,slow=8.8,SNR=14						
ASAR	**Alice Springs**	**38.39**	**126**	P	**P**	08 35 24.9	-0.2
	0.6nm,0.5s,mb3.6,baz=302,slow=8.2,SNR=10.0						
STKA	**Stephens Creek**	**48.27**	**132**	P	**P**	08 36 44.2	-0.5
	0.6nm,0.4s,mb4.0,baz=295,slow=9.5,SNR=2.3						
SONM	**Songino Array**	**50.58**	**5**	P	**P**	08 37 03.4	+1.4
	3.2nm,0.7s,mb4.3,baz=186,slow=9.3,SNR=23						
SONM				PcP	PcP	08 38 19.7	+0.3
	0.5nm,0.6s,baz=168,slow=4.9,SNR=2.1						
AML	**Almayashu**	**50.83**	**334**	*e*P	**P**	08 37 04.8	+0.7
	4.9nm,0.7s,mb4.5						
MK31	**Makanchi Array**	**51.84**	**344**	*e*P	**P**	08 37 11.8	+0.2
MKAR	**Makanchi Array**	**51.84**	**344**	P	**P**	08 37 11.3	-0.2
	4.0nm,0.7s,mb4.5,baz=149,slow=8.3,SNR=20						
MKAR	**Makanchi Array**	**51.84**	**344**	P	**P**	08 37 11.3	-0.2
MJAR	**Matsushiro Arr**	**52.46**	**38**	P	**P**	08 37 16.9	+0.6
	1.7nm,0.8s,mb4.0,baz=213,slow=7.6,SNR=4.3						
KURK	**Kurchatov**	**56.43**	**343**	P	**P**	08 37 43.5	-1.3
	1.3nm,0.9s,mb3.9,baz=161,slow=6.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**57.55**	**349**	P	**P**	08 37 55.2	-0.3
	3.1nm,0.8s,mb4.4,baz=160,slow=4.7,SNR=10						
BVAR	**Borovoye Array**	**61.02**	**340**	P	**P**	08 38 18.6	+1.8
	0.4nm,0.3s,mb4.0,baz=132,slow=5.7,SNR=3.3						
ARCES	**ARCESS Array B**	**87.31**	**340**	P	**P**	08 40 49.0	-0.6
	2.2nm,0.8s,mb4.4,baz=116,slow=4.1,SNR=3.5						
TXAR	**Lajitas Array**	**144.90**	**39**	PKP	PKPdf	08 47 40.7	-0.3
	3.0nm,0.8s,baz=215,slow=1.0,SNR=36						
JCT	**Junction City**	**146.31**	**33**	*e*PKPbc	PKPbc	08 47 44.4	-0.1

IDC 15 08:29:47.2±14.0, 140N×9936E, h170km±131km, mb3.7/9, mb1 3.8/9, mb1mx3.5/21, mbtmp3.7/9, Error ellipse: s-maj=104.9km s-min=15.0km az=58.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.33**	**124**	P	P	08 37 08.3	0.0
	4.4nm,0.4s,baz=301,slow=9.2,SNR=40						
ASAR	**Alice Springs**	**41.81**	**129**	P	P	08 37 20.1	-0.3
	0.6nm,0.5s,baz=302,slow=7.8,SNR=7.0						
SONM	**Songino Array**	**46.65**	**7**	P	P	08 37 58.4	0.0
	0.9nm,0.4s,baz=190,slow=8.9,SNR=4.7						
SONM				PcP	PcP	08 39 29.6	+0.2
	0.3nm,0.4s,baz=193,slow=4.4,SNR=3.2						
MKAR	**Makanchi Array**	**47.60**	**344**	P	P	08 38 06.2	+0.5
	1.4nm,0.3s,baz=156,slow=8.5,SNR=5.9						
STKA	**Stephens Creek**	**51.91**	**133**	P	P	08 38 38.6	+0.1
	1.5nm,0.8s,baz=287,slow=12,SNR=2.8						
KURK	**Kurchatov**	**52.19**	**343**	P	P	08 38 40.0	-0.2
	0.5nm,0.5s,baz=165,slow=6.1,SNR=2.9						
ZALV	**Zalesovo Beam**	**53.73**	**349**	P	P	08 38 51.2	-0.3
	3.3nm,0.4s,baz=152,slow=6.9,SNR=6.8						
BVAR	**Borovoye Array**	**56.79**	**340**	P	P	08 39 13.1	-0.4
	1.0nm,0.4s,baz=139,slow=9.0,SNR=4.8						
ARCES	**ARCESS Array B**	**83.08**	**340**	P	P	08 41 53.3	0.0
	4.8nm,0.9s,baz=106,slow=6.7,SNR=6.4						

ISCJB 15 08:32:06.8±1.1, 1827S±006×6331W±006, h39km±14km, mb3.4/4, Error ellipse: s-maj=10.9km s-min=8.7km az=42.5
IDC 15 08:32:08.4±2.2, 1812S×6326W, h29km±16km, mb3.3/4, mb1 3.7/9, mb1mx3.6/23, mbtmp3.4/9, ML4.2/4, Error ellipse: s-maj=18.9km s-min=13.5km az=167.0
NEIC 15 08:32:09.3±0.9, 1817S×6326W, h38km±11km, Error ellipse: s-maj=11.7km s-min=10.8km az=140.0
ISC 15 08:32:09.2±0.9, 1823S±006×6329W±006, h40km±12km, n11, σ0s96/16, mb3.4/4, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIV	**San Ignacio**	**3.08**	**44**	Pn	**Pn**	08 32 54.9	-0.4
	6.4nm,0.3s,baz=239,slow=11,SNR=79						
SIV				Pg	**Pn**	08 33 03.5	+8.1
	16nm,0.3s,baz=236,slow=16,SNR=28						
SIV				Sn	**Sn**	08 33 30.6	-0.3
	15nm,0.3s,baz=258,slow=21,SNR=8.9						
SIV				Lg		08 33 41.2	
	23nm,0.3s,baz=139,slow=23,SNR=9.1						
LPAZ	**La Paz**	**5.01**	**292**	Pn	**Pn**	08 33 22.7	+0.8
	3.2nm,0.3s,baz=85,slow=13,SNR=102						
LPAZ				Pg	**Pn**	08 33 39.2	+17
	1.8nm,0.3s,baz=125,slow=23,SNR=7.9						
LPAZ				Sn	**Sn**	08 34 17.9	-0.7
	1.4nm,0.3s,baz=66,slow=20,SNR=2.1						
LPAZ				Lg		08 34 50.2	
	1.8nm,0.3s,baz=25,slow=18,SNR=3.6						
LVC	**Limon Verde**	**6.84**	**229**	Pn	**Pn**	08 33 47.7	+0.7
	1.5nm,0.3s,baz=344,slow=4.2,SNR=12						
CPUP	**Villa Florida**	**9.77**	**147**	Pn	**Pn**	08 34 26.8	-0.3
	0.5nm,0.3s,baz=315,slow=11,SNR=3.7						
CPUP				Lg		08 37 21.6	
	1.1nm,0.3s,baz=232,slow=16,SNR=3.4						
CFAA	**Coronel Fontan**	**14.04**	**198**	Pn	**Pn**	08 35 28.2	+2.5
	0.0nm,0.3s,baz=24,slow=5.2,SNR=2.3						
CFAA				Sn	**Sn**	08 37 58.2	-2.0
	0.0nm,0.3s,baz=352,slow=22,SNR=12						
CFAA	**Coronel Fontan**	**14.04**	**198**	Pn	**Pn**	08 35 28.2	+2.5
CFAA				Sn	**Sn**	08 37 58.2	-2.0
TXAR	**Lajitas Array**	**61.27**	**320**	P	**P**	08 42 20.3	-0.3
	0.1nm,0.5s,mb3.2,baz=137,slow=9.4,SNR=3.4						
TORD	**Torodi Ar. Bea**	**71.27**	**69**	P	**P**	08 43 25.1	+0.2
	0.7nm,0.7s,mb3.7,baz=254,slow=4.9,SNR=5.0						
PDAR	**Pinedale Array**	**74.13**	**326**	P	**P**	08 43 41.7	+0.3
	0.4nm,0.6s,mb3.5,baz=140,slow=7.1,SNR=3.1						
NVAR	**Mina Array Bea**	**76.38**	**319**	P	**P**	08 43 54.5	+0.1
	0.2nm,0.6s,mb3.2,baz=154,slow=5.0,SNR=3.8						
SONM	**Songino Array**	**149.29**	**14**	PKPbc	PKPbc	08 51 54.9	+1.3
	0.3nm,0.4s,baz=254,slow=0.9,SNR=4.4						

IDC 15 08:40:43.2±5.8, 952S×12902E, h0km, mb3.8/1, mb1 3.5/4, mb1mx3.3/15, mbtmp3.3/4, ML2.8/2, Error ellipse: s-maj=68.0km s-min=51.7km az=147.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.14**	**201**	Pn	Pn	08 42 56.1	-0.4
	0.1nm,0.3s,baz=25,slow=13,SNR=4.5						
FITZ				Sn	Sn	08 44 42.6	+2.4
	0.2nm,0.3s,baz=98,slow=19,SNR=4.4						
WRA	**Warramunga Arr**	**11.57**	**154**	Pn	Pn	08 43 27.7	-2.0
	0.1nm,0.3s,baz=329,slow=15,SNR=10						
WRA				Sn	Sn	08 45 42.4	+2.7
	0.4nm,0.3s,baz=330,slow=22,SNR=9.5						
ASAR	**Alice Springs**	**14.82**	**162**	Pn	Pn	08 44 14.9	+0.7
	0.0nm,0.3s,baz=344,slow=12,SNR=3.0						
ASAR				Sn	Sn	08 47 01.2	+1.9
	0.1nm,0.3s,baz=346,slow=27,SNR=3.1						
STKA	**Stephens Creek**	**25.12**	**154**	P	P	08 46 10.3	+0.5
	0.9nm,0.5s,baz=326,slow=11,SNR=3.2						

IDC 15 08:52:34.7±17.0, 1917S×17438W, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.8/19, mbtmp4.0/5, Error ellipse: s-maj=320.8km s-min=142.8km az=80.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.03**	**262**	P	P	08 59 47.4	+0.9
	1.7nm,0.4s,baz=81,slow=11,SNR=8.0						
STKA	**Stephens Creek**	**41.43**	**243**	P	P	09 00 23.4	+0.3
	0.7nm,0.5s,baz=104,slow=12,SNR=3.0						
ASAR	**Alice Springs**	**48.15**	**255**	P	P	09 01 16.6	-0.3
	1.9nm,0.8s,baz=93,slow=8.4,SNR=16						
WRA	**Warramunga Arr**	**48.17**	**260**	P	P	09 01 16.2	-0.9
	0.5nm,0.3s,baz=97,slow=8.6,SNR=26						
FITZ	**Fitzroy Crossi**	**56.59**	**261**	P	P	09 02 19.7	0.0
	1.1nm,0.7s,baz=79,slow=5.2,SNR=4.3						

NEIC 15 09:01:17.8, 1725N×9556W, h110km, MD4.1(MEX), After MEX.
MEX 15 09:01:17.8±0.7, 1725N×9556W, h110km±8km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.66**	**104**	*i* P	Pn	09 01 34.7	-1.1
CMIG				*i* S	Sn	09 01 47.7	-1.7
OXX	**Oaxaca**	**1.12**	**262**	*i* P	Pn	09 01 39.7	-0.6
OXX				*i* S	Sn	09 01 56.8	-0.5
VHO	**Vista Hermosa**	**1.14**	**261**	*e*P	Pn	09 01 39.3	-1.1
VHO				*i* S	Sn	09 01 56.5	-1.0
TUIG	**Tuzandepetl**	**1.33**	**54**	*i* P	Pn	09 01 41.0	-1.7
TUIG				*i* S	Sn	09 01 58.9	-2.6
HUIG	**Huatulco**	**1.56**	**200**	*e*P	Pn	09 01 43.8	-1.6
HUIG				*i* S	Sn	09 02 05.2	-1.1
TGIG		**2.38**	**101**	*i* P	Pn	09 01 55.4	-0.2
TGIG				*i* S	Sn	09 02 22.7	-2.0
CCIG	**Comitan**	**3.42**	**106**	*e*P	Pn	09 02 09.4	0.0
CCIG				*i* S	Sn	09 02 49.3	+0.2
TEIG	**Tepich**	**7.51**	**66**	*e*Pn	Pn	09 03 04.4	-0.3
TEIG				*e*Sn	Sn	09 04 20.3	-7.9

ISCJB 15 09:27:38.2±1.5, 3707N±009×709E±02, h33km, Error ellipse: s-maj=23.4km s-min=10.6km az=160.6
NNC 15 09:27:46.3±6.4, 3785N×7108E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=50.1km s-min=44.0km az=15.0
ISC 15 09:27:40.2±1.6, 3703N±009×708E±02, h35km, n9, σ0s91/13, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.57**	**23**	P	**Pn**	09 29 00.9	+0.4
	SNR=25						
KK31	**Karatay Array**	**6.07**	**358**	⇓Pn	**Pn**	09 29 09.5	+2.0
	3.3nm,0.3s,baz=179,slow=13,SNR=74						
KK31				⇑Sn	**Sn**	09 30 14.7	-1.0
	2.5nm,0.3s,baz=180,slow=24,SNR=6.4						
EKS2	**Erkin-Say**	**6.08**	**21**	P	**Pn**	09 29 08.2	+0.7
	SNR=7.6						
THN	**Thein Dam**	**6.12**	**137**	*e*P	**Pn**	09 29 07.6	-0.5
THN				*e*S	**Sn**	09 30 11.7	-5.1
AAK	**Ala-Archa**	**6.28**	**26**	P	**Pn**	09 29 10.8	+0.5
	SNR=6.2						
CHMS	**Chumysh**	**6.69**	**26**	P	**Pn**	09 29 15.7	-0.3
	SNR=5.2						
TKM2	**Tokmak 2**	**6.95**	**31**	⇑Pn	**Pn**	09 29 18.4	-1.0
TKM2	2.5nm,0.7s						
				⇑Sn	**Sn**	09 30 27.4	-10
TKM2	3.7nm,0.8s						
TKM2	**Tokmak 2**	**6.95**	**31**	P	**Pn**	09 29 18.5	-0.9
	SNR=5.5						
AB31	**Akbulak array**	**14.54**	**331**	Pn	**Pn**	09 31 03.0	-0.3
	0.3nm,0.3s,baz=139,slow=13,SNR=13						
AB31				⇓Sn	**Sn**	09 33 39.2	-4.1
	0.8nm,0.6s,baz=145,slow=22,SNR=3.3						

IDC 15 09:29:37.5±3.4, 327S×10005E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.8/20, mbtmp3.9/6, Error ellipse: s-maj=148.7km s-min=19.6km az=54.0
ISCJB 15 09:29:39.8±0.8, 330S±010×1000E±02, h33km, mb3.9/6, Error ellipse: s-maj=26.2km s-min=13.8km az=170.3
NEIC 15 09:29:42.3±0.6, 329S×10005E, h35km, Error ellipse: s-maj=19.7km s-min=10.5km az=80.0
ISC 15 09:29:42.4±0.8, 329S±010×1000E±02, h35km, n10, σ0s43/9, mb3.9/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COCO	**West Island**	**9.40**	**200**	*e*Pn	**Pn**	09 31 55.4	0.0
WRA	**Warramunga Arr**	**37.32**	**119**	P	**P**	09 36 52.0	+0.4
	0.5nm,0.5s,mb3.6,baz=308,slow=9.3,SNR=15						
ASAR	**Alice Springs**	**38.47**	**125**	P	**P**	09 37 00.9	-0.4
	0.3nm,0.5s,mb3.3,baz=302,slow=7.8,SNR=5.1						
SONM	**Songino Array**	**51.21**	**5**	P	**P**	09 38 42.5	+0.1
	2.2nm,0.7s,mb4.2,baz=187,slow=9.4,SNR=12						
MK31	**Makanchi Array**	**52.27**	**345**	*e*P	**P**	09 38 50.5	+0.3
MKAR	**Makanchi Array**	**52.27**	**345**	P	**P**	09 38 50.9	+0.7
	3.1nm,0.7s,mb4.3,baz=145,slow=8.1,SNR=18						
KURK	**Kurchatov**	**56.85**	**344**	P	**P**	09 39 22.7	-0.7
	1.2nm,0.8s,mb4.0,baz=158,slow=7.2,SNR=5.3						
ZALV	**Zalesovo Beam**	**58.44**	**350**	P	**P**	09 39 34.0	-0.4
	1.1nm,0.5s,mb4.2,baz=165,slow=6.2,SNR=5.9						
ZALV	**Zalesovo Beam**	**58.44**	**350**	P	**P**	09 39 34.0	-0.4
TXAR	**Lajitas Array**	**145.69**	**39**	PKPbc	PKPbc	09 49 19.6	+1.4
	1.6nm,0.7s,baz=272,slow=0.7,SNR=20						

CRAAG 15 09:34:10.5, 3651N×535E, Ml3.6
ISCJB 15 09:34:13.8±0.5, 3676N±004×527E±003, h10km, Error ellipse: s-maj=5.4km s-min=3.8km az=178.7
MDD 15 09:34:13.9±0.4, 3652N×536E, h0km, mb4.3/7, Error ellipse: s-maj=5.3km s-min=4.0km az=35.0, PRIMO
NEIC 15 09:34:14.2±0.4, 3653N×541E, h15km, MG4.2(MDD), Error ellipse: s-maj=5.2km s-min=3.8km az=205.0
CSEM 15 09:34:14.8±0.2, 3672N×516E, h10km, ML3.3/9, Error ellipse: s-maj=3.5km s-min=2.2km az=146.0
LDG 15 09:34:18.1±0.3, 3671N×538E, h10km, Ml3.4/13, Error ellipse: s-maj=6.4km s-min=3.6km az=156.0
ISC 15 09:34:15.2±0.5, 3668N±004×529E±003, h10km, n76, σ1s11/125, 1C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SET	**Setif**	**0.49**	**169**	P	**Pg**	09 34 19.5	-5.2
DFRA	**Djebel Bou Aff**	**0.49**	**106**	P	**Pg**	09 34 22.0	-2.8
AKF	**Akfadou**	**0.58**	**266**	P	**Pg**	09 34 26.3	-0.2
CKHR	**Kef el Ahmar**	**0.69**	**164**	P	**Pg**	09 34 24.0	-4.5
CASM	**Ain Smara**	**1.06**	**113**	P	**Pg**	09 34 31.0	-4.5
CAEH	**`Ain El Ouahch**	**1.26**	**85**	P	**Pn**	09 34 36.0	-2.9
AKET	**Djebel Ketaf**	**1.30**	**241**	P	**Pn**	09 34 41.3	+1.9
ABMS	**Boumerdes**	**1.45**	**273**	P	**Pn**	09 34 38.7	-2.8
ADJB	**Djebel Djouab**	**1.58**	**251**	P	**Pn**	09 34 42.1	-1.1
CMAH	**Djebel Manchou**	**1.72**	**91**	P	**Pn**	09 34 44.0	-1.1
EMHD	**Djebel Mahouad**	**1.94**	**256**	P	**Pn**	09 34 52.5	+4.3
EBNR	**Beni Rached**	**3.05**	**264**	P	**Pn**	09 34 58.4	-5.1
ECHA	**Ech Chlef**	**3.21**	**262**	P	**Pn**	09 34 59.8	-5.8
ECHF	**Ech Chlef**	**3.23**	**262**	P	**Pn**	09 34 59.8	-6.1
EANR	**`Ain N'Sour**	**3.46**	**259**	P	**Pn**	09 35 08.0	-1.1
ETRT	**Tiaret**	**3.48**	**249**	P	**Pn**	09 35 09.5	+0.2
ETOS	**Mallorca**	**3.65**	**328**	⇑P	**Pn**	09 35 12.6	+1.0
	12nm,0.2s,SNR=18						
ETOS				S	**Sn**	09 35 53.7	-1.0
	21nm,0.3s,SNR=5.9						
ETOS	**Mallorca**	**3.65**	**328**	P	**Pn**	09 35 12.6	+1.0
	12nm,0.2s,SNR=18						
ETOS				S	**Sn**	09 35 53.7	-1.0
	21nm,0.3s,SNR=5.9						
EIBI	**Ibiza**	**3.90**	**308**	P	**Pn**	09 35 16.3	+1.1
	3.8nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	09 36 00.6	-0.4
	6.4nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.90**	**308**	P	**Pn**	09 35 16.3	+1.1
	3.8nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	09 36 00.6	-0.4
	6.4nm,0.2s,SNR=7.9						
VSL	**Villasalto**	**4.28**	**48**	*e*Pn	**Pn**	09 35 20.2	-0.2
VSL				*e*Sn	**Sn**	09 36 10.8	+0.4
VSL	**Villasalto**	**4.28**	**48**	*e*Pn	**Pn**	09 35 20.2	-0.2
VSL				*e*Sn	**Sn**	09 36 10.8	+0.5
EBEN	**Beniarda**	**4.81**	**296**	P	**Pn**	09 35 27.8	+0.1
	1.2nm,0.2s,SNR=6.0						
EBEN				S	**Sn**	09 36 23.3	-0.2
	13nm,0.6s,SNR=7.9						
EBEN	**Beniarda**	**4.81**	**296**	P	**Pn**	09 35 27.4	-0.3
	1.2nm,0.2s,SNR=6.0						
EBEN				S	**Sn**	09 36 23.5	0.0
	1.6nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**4.81**	**296**	P	**Pn**	09 35 27.4	-0.3
EBEN				S	**Sn**	09 36 23.5	0.0
CART	**Cartagena**	**5.10**	**282**	*e*Pn	**Pn**	09 35 31.3	-0.4
CART	**Cartagena**	**5.10**	**282**	*e*Pn	**Pn**	09 35 31.3	-0.4
EPOB	**Poblet**	**5.70**	**326**	P	**Pn**	09 35 40.8	+0.9
	0.9nm,0.1s,SNR=6.9						
EPOB				S	**Sn**	09 36 41.9	-3.5
	4.6nm,0.3s,SNR=7.9						
ECHE	**Chera**	**5.72**	**302**	P	**Pn**	09 35 41.6	+1.4
	1.2nm,0.2s,SNR=7.9						
ECHE	**Chera**	**5.72**	**302**	P	**Pn**	09 35 41.2	+1.0
	1.2nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**5.76**	**292**	P	**Pn**	09 35 41.8	+1.1
	2.8nm,0.3s,SNR=7.4						
ETOB				S	**Sn**	09 36 46.5	-0.5
	31nm,1.2s,SNR=7.9						
ETOB	**Tobarra**	**5.76**	**292**	P	**Pn**	09 35 42.6	+1.8
	2.8nm,0.3s,SNR=7.4						
ETOB				S	**Sn**	09 36 46.5	-0.5
	3.2nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**5.76**	**292**	P	**Pn**	09 35 42.6	+1.9
ETOB				S	**Sn**	09 36 46.5	-0.5
EMOS	**Mosqueruela**	**5.82**	**311**	P	**Pn**	09 35 43.1	+1.5
	0.5nm,0.2s,SNR=7.9						
EMOS				S	**Sn**	09 36 47.0	-1.3
	54nm,1.4s,SNR=7.9						
EMOS	**Mosqueruela**	**5.82**	**311**	P	**Pn**	09 35 43.1	+1.5
	0.5nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.99**	**332**	P	**Pn**	09 35 44.4	+0.6
	2.8nm,0.1s,SNR=5.5						
EMIR	**Miracle**	**5.99**	**332**	P	**Pn**	09 35 44.4	+0.6
	2.8nm,0.1s,SNR=5.5						
PGF	**Pioggiola**	**6.52**	**25**	*e*Pn	**Pn**	09 35 51.4	+0.2
PGF				*e*Sn	**Sn**	09 37 00.3	-5.3
	8.5nm,0.5s						
PGF	**Pioggiola**	**6.52**	**25**	*e*Pn	**Pn**	09 35 51.4	+0.2
PGF				*e*Sn	**Sn**	09 37 00.3	-5.3
	4.2nm,0.5s						
LMR	**La

SJPF	**Ste Jean**	**8.14**	**324**	*e*Pn	**Pn**	**09 36 13.9**	**+0.5**
SJPF				*e*Sn	**Sn**	**09 37 40.0**	**-5.4**
	1.5nm,0.4s						
VIVF	**Saint-Julien-l**	**8.18**	**357**	*e*Pn	**Pn**	**09 36 14.3**	**+0.4**
VIVF				*e*Sn	**Sn**	**09 37 39.2**	**-7.2**
	2.8nm,0.4s						
VIVF	**Saint-Julien-l**	**8.18**	**357**	*e*Pn	**Pn**	**09 36 14.3**	**+0.4**
VIVF				*e*Sn	**Sn**	**09 37 39.2**	**-7.2**
	1.4nm,0.4s						
ORIF	**Oris-en-Rattie**	**8.24**	**3**	*e*Pn	**Pn**	**09 36 15.4**	**+0.6**
ORIF				*e*Sn	**Sn**	**09 37 42.0**	**-5.9**
	1.4nm,0.4s						
ORIF	**Oris-en-Rattie**	**8.24**	**3**	*e*Pn	**Pn**	**09 36 15.4**	**+0.6**
ORIF				*e*Sn	**Sn**	**09 37 42.0**	**-5.9**
	0.7nm,0.4s						
EALK	**Alkurruntz**	**8.36**	**323**	P	**Pn**	**09 36 17.9**	**+1.6**
	0.9nm,0.2s,SNR=7.9						
EALK				S	**Sn**	**09 37 48.4**	**-2.3**
	2.5nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**8.36**	**323**	P	**Pn**	**09 36 18.2**	**+1.9**
	0.9nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**8.36**	**323**	P	**Pn**	**09 36 18.2**	**+1.8**
EALK				S	**Sn**	**09 37 48.4**	**-2.3**
CAF	**Calviac**	**8.59**	**344**	*e*Pn	**Pn**	**09 36 19.8**	**+0.3**
CAF				*e*Sn	**Sn**	**09 37 50.2**	**-6.2**
	1.0nm,0.2s						
CAF	**Calviac**	**8.59**	**344**	*e*Pn	**Pn**	**09 36 19.8**	**+0.3**
CAF				*e*Sn	**Sn**	**09 37 50.2**	**-6.2**
	0.5nm,0.2s						

IDC 15 09:45:24.6±1.2, 5576S×11857W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.8/14, mbtmp3.7/3, MS3.8/8, Ms1 3.7/8, ms1mx3.5/23, Error ellipse: s-maj=92.1km s-min=37.8km az=149.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**27.64**	**131**	LR	LR	09 59 08.2	
	comp=Z,380nm,19.1s,baz=31,slow=30						
USHA	**Ushuaia**	**28.06**	**109**	LR	LR	09 59 28.2	
	comp=Z,111nm,21.5s,baz=14,slow=30						
PLCA	**Paso Flores**	**34.56**	**85**	LR	LR	10 02 28.9	
	comp=Z,121nm,21.5s,baz=110,slow=30						
PPT	**Papeete**	**44.79**	**316**	*e*LR	LR	10 05 46.4	
	190nm,24.8s						
PPT	**Papeete**	**44.79**	**316**	LR	LR	10 08 56.5	
	comp=Z,167nm,18.0s,baz=136,slow=32						
PMOR	**Pomariorio Ree**	**46.49**	**319**	*e*T		10 42 08.0	
	6.7nm,0.3s						
CPUP	**Villa Florida**	**52.56**	**82**	LR	LR	10 14 24.1	
	comp=Z,81nm,20.4s,baz=45,slow=33						
LPAZ	**La Paz**	**54.85**	**65**	LR	LR	10 13 58.2	
	comp=Z,31nm,19.3s,baz=315,slow=31						
BDFB	**Brasilia**	**66.28**	**83**	LR	LR	10 22 31.0	
	comp=Z,73nm,18.0s,baz=0.2,slow=34						
STKA	**Stephens Creek**	**69.43**	**244**	LR	LR	10 19 40.0	
	comp=Z,56nm,18.8s,baz=206,slow=30						
ASAR	**Alice Springs**	**80.03**	**243**	P	P	09 57 35.7	-0.2
	0.3nm,0.9s,baz=157,slow=5.0,SNR=2.9						
WRA	**Warramunga Arr**	**82.91**	**245**	P	P	09 57 51.4	+0.2
	2.5nm,0.7s,baz=149,slow=5.1,SNR=10						
TXAR	**Lajitas Array**	**85.70**	**13**	P	P	09 58 05.0	+0.1
	0.5nm,1.0s,baz=180,slow=7.5,SNR=4.0						
GERES	**GERESS Array B**	**150.51**	**83**	PKPbc	PKPbc	10 05 17.6	+0.5
	0.6nm,0.5s,baz=260,slow=2.8,SNR=3.2						
GERES				PKPab	PKPab	10 05 23.0	-0.8
	0.7nm,0.5s,baz=224,slow=3.7,SNR=4.6						

IDC 15 09:48:10.2±31.0, 577N×12697E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/18, mbtmp3.8/4, Error ellipse: s-maj=531.1km s-min=102.4km az=158.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**23.76**	**183**	P	P	09 53 26.0	+1.5
	0.6nm,0.4s,baz=16,slow=9.4,SNR=5.8						
WRA	**Warramunga Arr**	**26.56**	**164**	P	P	09 53 49.1	-0.9
	1.1nm,0.3s,baz=342,slow=10,SNR=37						
WB2	**Warramunga Arr**	**26.56**	**164**	*e*P	P	09 53 50.0	0.0
ASAR	**Alice Springs**	**30.03**	**167**	P	P	09 54 20.9	-0.1
	0.8nm,0.5s,baz=352,slow=7.8,SNR=31						
STKA	**Stephens Creek**	**39.95**	**160**	P	P	09 55 46.3	-0.1
	0.9nm,0.3s,baz=354,slow=10,SNR=6.8						

*NSSP **15** 10:07:52.9, 41.18N×42.12E, h5km, ML3.2*
*CSEM **15** 10:07:52.6±0.2, 4138N×4227E, h2km, MD3.2, Error ellipse: s-maj=5.3km s-min=2.1km az=19.0*
*DDA **15** 10:07:53.1, 4133N×42.12E, h7km±7km, Md3.2*
*ISCJB **15** 10:07:54.5±0.3, 4129N±003×4221E±002, h10km, Error ellipse: s-maj=4.1km s-min=2.2km az=166.7*
*ISK **15** 10:07:54.7, 4125N×42.17E, h5km, ML3.7*
*TIF **15** 10:07:55.5, 41.17N×42.13E, h13km±2km*

ISC 15 10:07:55.3±0.4, 4125N±003×4218E±002, h2km±4km, n32, σ1°03/50, 1C-1D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARTV	**Artvin**	**0.20**	**251**	*i* P	**Pg**	**10 07 58.9**	**-0.3**
ARTV				*i* S	**Sg**	**10 08 01.9**	**+0.1**
BCA	**Borcka**	**0.46**	**295**	PG	**Pg**	**10 08 04.1**	**-0.1**
BCA				*e*SG	**Sg**	**10 08 11.0**	**+0.8**
KARS	**Kars**	**0.94**	**132**	*e*PG	**Pg**	**10 08 13.2**	**-0.1**
KARS				*e*SG	**Sg**	**10 08 26.5**	**+1.0**
PZAR	**Pazar-Rize**	**0.97**	**266**	*e*PG	**Pg**	**10 08 13.2**	**-0.7**
PZAR				*e*SG	**Sg**	**10 08 27.0**	**+0.6**
HOMI	**Horasan**	**1.22**	**190**	*i* P	**Pg**	**10 08 16.4**	**-2.3**
HOMI				*i* S	**Sg**	**10 08 35.3**	**+0.8**
ERZM	**Erzurum**	**1.48**	**205**	*i* P	**Pn**	**10 08 22.4**	**-0.5**
ERZM				*i* S	**Sg**	**10 08 44.3**	**+1.5**
EZM	**Erzurum**	**1.48**	**205**	*e*PN	**Pn**	**10 08 22.7**	**-0.3**
EZM				*e*SN	**Sn**	**10 08 43.3**	**+0.4**
GOR	**Gori**	**1.62**	**62**	P	**Pg**	**10 08 26.1**	**-0.2**
GOR				S	**Sg**	**10 08 49.6**	**+2.3**
ONI	**Oni**	**1.63**	**35**	P	**Pg**	**10 08 26.3**	**-0.3**
ONI				S	**Sg**	**10 08 49.7**	**+2.0**
STE	**Stepanavan**	**1.67**	**98**	⇑P	**Pn**	**10 08 21.1**	**-4.5**
STE				S	**Sn**	**10 08 44.9**	**-2.7**
KOPT	**Kop Dagi**	**1.78**	**227**	*i* P	**Pg**	**10 08 27.5**	**-1.8**
KOPT				*i* S	**Sg**	**10 08 52.5**	**+0.2**
AGRB	**Hanur-Agry**	**1.78**	**159**	*e*PN	**Pn**	**10 08 27.1**	**0.0**
KTUT	**Trabzon**	**1.84**	**263**	*e*PN	**Pn**	**10 08 27.6**	**-0.4**
KTUT				*e*SN	**Sn**	**10 08 50.9**	**-0.9**
MACK	**Trabzon**	**1.85**	**261**	*i* P	**Pn**	**10 08 27.2**	**-0.8**
MACK				*i* S	**Sn**	**10 08 51.3**	**-0.7**
TBLG	**Delisi**	**1.98**	**75**	P	**Pg**	**10 08 32.1**	**-1.1**
TBLG				S	**Sg**	**10 08 58.4**	**-0.5**
MTA	**Mtatsminda**	**2.01**	**76**	P	**Pg**	**10 08 32.3**	**-1.5**
MTA				S	**Sg**	**10 08 59.5**	**-0.4**
GUMT	**Gumushane**	**2.19**	**250**	*e*PN	**Pn**	**10 08 33.2**	**+0.4**
GNI	**Garni**	**2.24**	**119**	*e*PN	**Pn**	**10 08 33.6**	**+0.3**
GNI	**Garni**	**2.24**	**119**	⇓P	**Pn**	**10 08 34.2**	**+0.9**
EZC	**Erzincan**	**2.35**	**231**	*e*PN	**Pg**	**10 08 39.3**	**-1.0**
DGRG	**David-gareji**	**2.41**	**84**	P	**Pg**	**10 08 40.0**	**-1.5**
DGRG				S	**Sg**	**10 09 14.5**	**+1.7**
CLDR	**Caldiran**	**2.49**	**147**	*e*PN	**Pn**	**10 08 37.1**	**+0.3**
ESPY	**Espiye-Giresun**	**2.63**	**264**	*e*PN	**Pn**	**10 08 38.9**	**+0.1**
GRSN	**GIRESUNGRSN**	**2.98**	**265**	*i* P	**Pn**	**10 08 42.3**	**-1.2**
GRSN				*i* S	**Sn**	**10 09 20.2**	**+0.5**
GRSN	**GIRESUNGRSN**	**2.98**	**265**	*i* P	**Pn**	**10 08 42.3**	**-1.2**
GRSN				*i* S	**Sn**	**10 09 20.2**	**+0.5**
PTK	**Pertek**	**3.18**	**223**	*e*PN	**Pn**	**10 08 46.7**	**+0.4**
DARE	**Darende-Malaty**	**4.07**	**237**	*e*PN	**Pg**	**10 09 06.0**	**-7.2**
MYA	**Malataya**	**4.11**	**226**	*e*PN	**Pn**	**10 09 00.6**	**+1.5**
MALT	**Malatya**	**4.12**	**226**	*e*PN	**Pn**	**10 09 00.9**	**+1.7**
SVSK	**Karacayir**	**4.17**	**255**	*e*PN	**Pn**	**10 09 01.1**	**+1.2**
SARI	**SarD1z-Kayseri**	**4.93**	**240**	*e*PN	**Pn**	**10 09 16.7**	**+6.3**
DIKM	**Dikmen**	**5.22**	**277**	*e*PN	**Pn**	**10 09 14.7**	**+0.4**

*ISCJB **15** 10:09:06.7±0.9, 3347N±004×14079E±008, h70km±9km, mb3.9/2, Error ellipse: s-maj=11.4km s-min=6.5km az=13.2*
*JMA **15** 10:09:06.9±0.2, 3350N×14084E, h63km±4km, M2.7*
*IDC **15** 10:09:10.4±2.7, 3336N×14036E, h75km±18km, mb3.4/2, mb1 3.5/3, mb1mx3.2/21, mbtmp3.3/3, Error ellipse: s-maj=58.4km s-min=11.8km az=79.0*

ISC 15 10:09:07.8±0.9, 3347N±004×14079E±009, h59km±11km, n13, σ0°77/23, mb3.8/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.89**	**247**	P	**Pn**	**10 09 24.5**	**+0.2**
JHJ2				S	**Sn**	**10 09 37.4**	**+0.9**
JHJ	**Hachijo jima 2**	**0.91**	**248**	P	**Pn**	**10 09 24.6**	**0.0**
	282nm,0.3s,baz=70,slow=17,SNR=509						
JHJ				S	**Sn**	**10 09 35.7**	**-1.4**
	139nm,0.3s,baz=250,slow=23,SNR=19						
BSO1	**Boso 1**	**1.19**	**8**	P	**Pn**	**10 09 27.2**	**-1.1**
BSO1				S	**Sn**	**10 09 44.1**	**+0.5**
BSO3	**Boso 3**	**1.35**	**350**	P	**Pn**	**10 09 29.9**	**-0.5**
BSO3				S	**Sn**	**10 09 47.8**	**+0.5**
JKO	**Kozu shima**	**1.55**	**298**	P	**Pn**	**10 09 33.3**	**+0.2**
BSO4	**Boso 4**	**1.56**	**346**	P	**Pn**	**10 09 33.2**	**-0.1**
BSO4				S	**Sn**	**10 09 51.9**	**-0.6**
JIM2	**Oshima 3**	**1.68**	**318**	P	**Pn**	**10 09 34.9**	**+0.1**
JIM2				S	**Sn**	**10 09 54.3**	**-1.0**
JIZS	**Izushimoda**	**2.02**	**309**	P	**Pn**	**10 09 40.0**	**+0.6**
JIZS				*e*S	**Sn**	**10 10 04.8**	**+1.3**
KTJJ	**Kamata 2**	**2.04**	**316**	P	**Pn**	**10 09 39.9**	**+0.2**
KTJJ				S	**Sn**	**10 10 03.3**	**-0.7**
JOD2	**Odawara 2**	**2.27**	**322**	P	**Pn**	**10 09 43.4**	**+0.4**
JOD2				S	**Sn**	**10 10 09.0**	**-0.8**
MJAR	**Matsushiro Arr**	**3.72**	**326**	P	**Pn**	**10 10 05.2**	**+2.4**
	0.6nm,0.3s,baz=155,slow=12,SNR=6.8						
MJAR				S	**Sn**	**10 10 45.3**	**0.0**
	0.3nm,0.3s,baz=213,slow=29,SNR=4.4						
WRA	**Warramunga Arr**	**53.47**	**188**	P	**P**	**10 18 21.7**	**-0.3**
	1.0nm,0.3s,mb4.2,baz=5.2,slow=7.5,SNR=44						
ASAR	**Alice Springs**	**57.20**	**188**	P	**P**	**10 18 48.6**	**-0.2**
	0.2nm,0.4s,mb3.5,baz=6.9,slow=7.0,SNR=5.6						

*HLW **15** 10:13:57.7, 2997N×3675E, h18km, Mb2.6*
*CSEM **15** 10:13:58.4±0.8, 2990N×3645E, h10km, ML2.6, Error ellipse: s-maj=18.0km s-min=9.4km az=61.0*
*ISCJB **15** 10:14:00.5±0.7, 2985N±003×3621E±004, h0km, Error ellipse: s-maj=5.4km s-min=3.7km az=158.1*
*SGS **15** 10:14:00.2, 3008N×3619E, h7km*
*GII **15** 10:14:01.0±0.9, 2987N×3609E, h0km, ML2.2/5, EXPLOSION*

ISC 15 10:14:00.6±0.7, 2985N±003×3625E±004, h0km, n25, σ0°82/39, 2C, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.05**	**264**	Pg	**Pg**	**10 14 20.2**	**-0.5**
HRFI	**Mount Harif**	**1.06**	**280**	Pg	**Pg**	**10 14 20.2**	**-0.9**
HRFI				Sg	**Sg**	**10 14 35.1**	**+0.2**
EIL	**Elat**	**1.14**	**261**	Pg	**Pg**	**10 14 21.9**	**-0.6**
EIL				Sg	**Sg**	**10 14 37.9**	**+0.6**
MBRI	**Mt Berech**	**1.16**	**268**	Pg	**Pg**	**10 14 22.2**	**-0.6**
MBRI				Sg	**Sg**	**10 14 37.9**	**0.0**
ZFRI	**Zfri**	**1.16**	**308**	Pg	**Pg**	**10 14 22.1**	**-0.8**
ZFRI				Sg	**Sg**	**10 14 38.4**	**+0.5**
HQLS		**1.17**	**242**	P	**Pg**	**10 14 22.2**	**-0.8**
PRNI	**Paran**	**1.19**	**295**	Pg	**Pg**	**10 14 22.2**	**-1.2**
PRNI				Sg	**Sg**	**10 14 39.0**	**+0.2**
JLOS		**1.29**	**211**	P	**Pg**	**10 14 25.2**	**-0.2**
JLOS		**1.29**	**211**	P	**Pg**	**10 14 25.2**	**-0.2**
JLOS				S	**Sg**	**10 14 44.1**	**+2.0**
KRMI	**Paran Flat**	**1.35**	**282**	Pg	**Pg**	**10 14 25.4**	**-1.1**
KRMI				Sg	**Sg**	**10 14 44.4**	**+0.5**
HBST	**Basata**	**1.46**	**245**	⇑P	**Pn**	**10 14 28.4**	**+0.2**
RMNI	**Mount Ramon**	**1.48**	**300**	Pn	**Pn**	**10 14 27.6**	**-1.0**
RMNI				Sn	**Sn**	**10 14 48.0**	**-0.6**
MZDA	**Masada**	**1.64**	**333**	Pn	**Pn**	**10 14 30.5**	**-0.3**
MZDA				Sn	**Sn**	**10 14 53.4**	**+0.8**
TBKS	**Tabuk**	**1.64**	**171**	S	**Sn**	**10 14 53.0**	**+0.4**
TBKS	**Tabuk**	**1.64**	**171**	P	**Pn**	**10 14 30.9**	**+0.2**
RTMI	**Retamim**	**1.80**	**312**	Pn	**Pn**	**10 14 31.8**	**-1.1**
RTMI				Sn	**Sn**	**10 14 56.0**	**-0.5**
DSI	**Dead Sea**	**1.87**	**337**	Pn	**Pn**	**10 14 34.4**	**+0.5**
DSI				Sn	**Sn**	**10 15 00.2**	**+2.0**
KZIT	**Kziot**	**1.91**	**304**	Pn	**Pn**	**10 14 34.5**	**0.0**
KZIT				Sn	**Sn**	**10 15 00.0**	**+0.8**
HNKL	**Nakhl**	**1.97**	**273**	P	**Pn**	**10 14 35.2**	**-0.1**
HNKL				S	**Sn**	**10 15 02.2**	**+1.6**
HNKL	**Nakhl**	**1.97**	**273**	P	**Pn**	**10 14 35.2**	**0.0**
HNKL				S	**Sn**	**10 15 02.2**	**+1.6**
HKAT	**Jabal Katrina**	**2.37**	**237**	⇑P	**Pn**	**10 14 40.6**	**-0.2**
HMDT	**Nahal Hemdat**	**2.47**	**346**	Pn	**Pn**	**10 14 43.7**	**+1.5**
TR2		**2.65**	**237**	P	**Pn**	**10 14 44.1**	**-0.4**
AMAG	**Maghara**	**2.74**	**288**	P	**Pn**	**10 14 44.8**	**-1.1**
SUZ		**2.96**	**271**	P	**Pn**	**10 14 49.3**	**+0.4**

*NEIC **15** 10:22:47.2±1.1, 2.94S×101.01E, h35km, mb4.3/1, Error ellipse: s-maj=38.1km s-min=9.2km az=53.0*
*ISCJB **15** 10:22:50.7±3.4, 2.8S±0.2×1013E±0.2, h75km±29km, mb4.7/21, Error ellipse: s-maj=41.7km s-min=9.6km az=136.9*
*IDC **15** 10:22:53.6±3.8, 2.94S×101.12E, h92km±33km, mb4.1/10, mb1 4.1/11, mb1mx3.8/21, mbtmp4.1/11, Error ellipse: s-maj=48.4km s-min=12.1km az=55.0*

ISC 15 10:22:53.3±3.1, 29S±0.2×1013E±0.2, h83km±27km, n25, σ0°57/25, mb4.7/21, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**18.58**	**97**	P	**Pn**	**10 27 05.5**	**+0.4**
	0.7nm,0.3s,baz=274,slow=13,SNR=4.4						
CMAR	**Chiang Mai Arr**	**21.32**	**354**	P	**P**	**10 27 30.2**	**-3.3**
	1.1nm,0.3s,mb3.6,baz=181,slow=9.0,SNR=7.2						
FITZ	**Fitzroy Crossi**	**28.29**	**124**	P	**P**	**10 28 38.8**	**-0.4**
	1.3nm,0.6s,mb3.7,baz=285,slow=12,SNR=3.7						
TAPN	**Taplejung**	**32.76**	**337**	*e*P	**P**	**10 29 18.9**	**+0.5**
	29nm,0.8s,mb5.2						
RAMN	**Ramite**	**32.85**	**335**	*e*P	**P**	**10 29 19.8**	**+0.6**
	6.8nm,0.4s,mb4.8						
JIRN	**Jiri**	**33.65**	**335**	*e*P	**P**	**10 29 26.9**	**+0.8**
	9.3nm,0.2s,mb5.3						
GUN	**Gumba**	**34.00**	**335**	*e*P	**P**	**10 29 29.7**	**+0.5**
	31nm,0.4s,mb5.5						
DMN	**Daman**	**34.07**	**334**	*e*P	**P**	**10 29 29.8**	**0.0**
	3.7nm,0.3s,mb4.8						
KKN	**Kakani**	**34.15**	**334**	*e*P	**P**	**10 29 30.3**	**-0.2**
	20nm,0.5s,mb5.2						
GKN	**Gorkha**	**34.61**	**334**	*e*P	**P**	**10 29 34.4**	**-0.1**
	16nm,0.3s,mb5.3						
KOLN	**Koldanda**	**34.89**	**332**	*e*P	**P**	**10 29 36.8**	**-0.1**
	5.7nm,0.3s,mb4.9						
DANN	**Dangsing**	**35.31**	**333**	*e*P	**P**	**10 29 40.7**	**+0.2**
	29nm,0.4s,mb5.5						
WRA	**Warramunga Arr**	**36.48**	**120**	P	**P**	**10 29 50.5**	**-0.2**
	2.2nm,0.4s,mb4.4,baz=302,slow=8.9,SNR=62						
WB2	**Warramunga Arr**	**36.49**	**120**	*e*P	**P**	**10 29 50.0**	**-0.7**
ASAR	**Alice Springs**	**37.73**	**126**	P	**P**	**10 30 01.5**	**+0.3**
	1.0nm,0.5s,mb3.9,baz=302,slow=7.9,SNR=21						
ASAR				S	**S**	**10 35 46.2**	**+0.4**
	0.3nm,0.8s,baz=298,slow=15,SNR=4.4						
STKA	**Stephens Creek**	**47.64**	**132**	P	**P**	**10 31 21.6**	**+0.3**
	2.4nm,0.6s,mb4.2,baz=303,slow=9.5,SNR=5.3						
SONM	**Songino Array**	**50.70**	**4**	P	**P**	**10 31 44.8**	**+0.5**
	8.3nm,1.1s,mb4.7,baz=183,slow=8.5,SNR=17						
TKM2	**Tokmak 2**	**51.13**	**336**	*e*P	**P**	**10 31 47.7**	**0.0**
	1.8nm,0.5s,mb4.4						
MKAR	**Makanchi Array**	**52.21**	**344**	P	**P**	**10 31 55.0**	**-0.6**
	3.6nm,0.6s,mb4.6,baz=149,slow=8.2,SNR=21						
ZAA0	**Zalesovo Array**	**58.26**	**349**	*e*P	**P**	**10 32 38.2**	**-0.8**
ZALV	**Zalesovo Beasy**	**58.26**	**349**	P	**P**	**10 32 38.3**	**-0.7**
	16nm,0.9s,mb5.1,baz=168,slow=5.1,SNR=24						
ASAJ	**Asahikawa**	**59.64**	**33**	P	**P**	**10 32 49.4**	**+0.6**
	2.2nm,0.4s,mb4.5,baz=259,slow=8.7,SNR=8.5						
PETK	**Petropavlovsk-**	**72.96**	**32**	P	**P**	**10 34 13.3**	**-0.4**
	28nm,1.4s,mb4.9,baz=214,slow=3.7,SNR=3.6						
ARCES	**ARCESS Array B**	**87.72**	**340**	P	**P**	**10 35 32.1**	**-0.2**
	3.4nm,0.9s,mb4.3,baz=114,slow=4.4,SNR=4.6						
TXAR	**Lajitas Array**	**144.61**	**39**	PKP	PKPdf	10 42 20.6	-0.3
	1.2nm,0.5s,baz=233,slow=0.6,SNR=14						

*MOS **15** 10:30:47.6±0.8, 1759N×9446W, h148km, mb4.9/70, Error ellipse: s-maj=6.2km s-min=4.1km az=99.7*
*IDC **15** 10:30:48.2±0.3, 1753N×9458W, h144km±2km, mb4.4/29, mb1 4.6/33, mb1mx4.6/34, mbtmp4.5/33, MS4.1/16, Ms1 4.1/16, ms1mx3.8/35, Error ellipse: s-maj=10.3km s-min=6.3km az=57.0*
*ISCJB **15** 10:30:48.2±0.1, 1758N±002×9452W±002, h153km, mb4.9/204, Error ellipse: s-maj=3.3km s-min=1.6km az=27.3*
*MEX **15** 10:30:48.8±1.0, 1741N×9470W, h150km±7km, MD5.0*
*BJI **15** 10:30:48.9, 1760N×9440W, h147km, mB5.2*
*NEIC **15** 10:30:49.0±0.3, 1758N×9445W, h147km±2km, mb5.0/159, Error ellipse: s-maj=3.7km s-min=2.4km az=216.0*
NEIC Felt at Oaxaca, Tuxtepec, Tuxtla Gutierrez and Villahermosa.
*GCMT **15** 10:30:49.0±0.2, 1759N×9462W, h144km, MW5.4/90, Moment Tensor Solution. s87,c127; s90,c173; Duration: 1ś2 Moment tensor: Scale 10^17 Nm; Mrr-1.07±.02; Mθθ0.29±.02; Mφφ0.78±.03; Mrθ0.64±.02; Mθφ-0.71±.02; Mφr-0.32±.02; Best double couple: M0 1.38800×10^17 NP1:φs162.00000°, δ33.00000°, λ-61.00000°. NP2:φs309.00000°, δ61.00000°, λ-108.00000°. Principal axes: T 1.4500, Plg14.0000°, Azm51.0000°; N -0.1200, Plg15.0000°, Azm317.0000°; P -1.3260, Plg69.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **15** 10:31:05.1, 1888N×9081W, h147km, mb5.4, Yucatan Peninsula, Mexico*
*BGS **15** 10:31:33.6±1.8, 2238N×8754W, h147km, mb5.0*

ISC 15 10:30:50.0±0.1, 1760N±002×9445W±002, h155km, h155km±7km; pP-P, n967, σ0°84/944, mb4.9/204, 307C-230D, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUIG	**Tuzandepetl**	**0.43**	**4**	*i* P	**Pn**	**10 31 09.6**	**-2.2**
TUIG				*i* S	**Sn**	**10 31 25.8**	**-2.5**
CMIG	**Matias Romero**	**0.65**	**219**	P	**Pn**	**10 31 08.4**	**-4.4**
	3µm,0.3s,baz=55,slow=1.5						
CMIG				S	**Sn**	**10 31 21.5**	**-8.7**
	8µm,0.3s,baz=166,slow=19,SNR=58						
CMIG	**Matias Romero**	**0.65**	**219**	*e*P	**Pn**	**10 31 08.1**	**-4.7**
CMIG				*i* S	**Sn**	**10 31 23.1**	**-7.1**
CMIG	**Matias Romero**	**0.65**	**219**	S	**Sn**	**10 31 21.5**	**-8.7**
CMIG				*i* S	**Sn**	**10 31 23.1**	**-7.1**
TGIG		**1.51**	**122**	*i* P	**Pn**	**10 31 19.1**	**-1.0**
TGIG				*i* S	**Sn**	**10 31 41.4**	**-1.7**
SCIX	**San Cristobal**	**1.94**	**116**	*i* P	**Pn**	**10 31 23.5**	**-1.3**
SCIX				*i* S	**Sn**	**10 31 49.9**	**-1.6**
SCIX	**San Cristobal**	**1.94**	**116**	*i* P	**Pn**	**10 31 24.2**	**-0.5**
SCIX				*i* S	**Sn**	**10 31 38.2**	**-13**
OXX	**Oaxaca**	**2.23**	**257**	*e*P	**Pn**	**10 31 22.1**	**-6.1**
OXX				*i* S	**Sn**	**10 31 49.6**	**-7.9**
VHO	**Vista Hermosa**	**2.24**	**257**	*i* P	**Pn**	**10 31 22.8**	**-5.5**
VHO				*i* S	**Sn**	**10 31 49.6**	**-8.1**
HUIG	**Huatulco**	**2.42**	**221**	*i* P	**Pn**	**10 31 22.4**	**-8.0**
HUIG				*i* S	**Sn**	**10 31 51.7**	**-10**
CCIG	**Comitan**	**2.57**	**120**	*i* P	**Pn**	**10 31 31.9**	**-0.4**
CCIG				*i* S	**Sn**	**10 32 03.5**	**-1.4**
CCIG	**Comitan**	**2.57**	**120**	*i* P	**Pn**	**10 31 31.9**	**-0.4**
CCIG				*i* S	**Sn**	**10 31 59.5**	**-5.4**
LVIG	**Laguna Verde**	**2.82**	**319**	*i* P	**Pn**	**10 31 30.9**	**-4.4**
LVIG				*i* S	**Sn**	**10 32 03.3**	**-7.1**
TPIG	**Tehuac#an**	**2.89**	**287**	*i* P	**Pn**	**10 31 32.1**	**-4.1**
TPIG				*i* S	**Sn**	**10 32 04.8**	**-7.1**
SCIG	**Sabancuy**	**3.39**	**66**	*i* P	**Pn**	**10 31 42.6**	**+0.1**
SCIG				*i* S	**Sn**	**10 32 24.0**	**+0.7**
THIG		**3.40**	**142**	*e*P	**Pn**	**10 31 41.6**	**-1.1**
THIG				*i* S	**Sn**	**10 32 20.1**	**-3.4**
PNIG	**Pinotepa**	**3.72**	**252**	*i* P	**Pn**	**10 31 38.5**	**-8.2**
PNIG				*i* S	**Sn**	**10 32 13.3**	**-18**
PNIG				*i* S	**Sn**	**10 32 18.9**	**-12**
PPM	**Popocatepetl**	**4.23**	**291**	*e*P	**Pn**	**10 31 49.9**	**-3.5**
PPM				*i* P		10 31 51.1	
PPM				*i* S	**Sn**	**10 32 35.9**	**-6.8**
PPM	**Popocatepetl**	**4.23**	**291**	*i* P	**Pn**	**10 31 51.1**	**-2.2**
PPM				*i* S	**Sn**	**10 32 26.0**	**-17**
IIO	**Organos**	**4.51**	**297**	*e*P	**Pn**	**10 31 54.7**	**-2.4**
IIO				*i* S	**Sn**	**10 32 45.0**	**-4.3**
IIO	**Organos**	**4.51**	**297**	*e*P	**Pn**	**10 31 54.7**	**-2.4**
IIO				*i* S	**Sn**	**10 32 32.9**	**-16**
YAIG	**Yautepec**	**4.56**	**287**	*i* P	**Pn**	**10 31 54.2**	**-3.6**
YAIG				*i* S	**Sn**	**10 32 42.7**	**-7.9**
YAIG	**Yautepec**	**4.56**	**287**	*i* P	**Pn**	**10 31 54.2**	**-3.6**
YAIG				*i* S	**Sn**	**10 32 35.9**	**-15**
PBVM	**Pinon**

CUI 11.33 126⇑eP Pn 10 33 27.8 +0.3
VCR Vista de Mar 11.33 130⇓eP Pn 10 33 27.2 -0.4
2RIO Dos Rios de Up 11.37 127 eP Pn 10 33 23.2 -4.8
JTS JuntasAbangare 11.73 127 Pn Pn 10 33 32.5 -0.3
comp=E,410nm,0.6s,SNR=42
JTS JuntasAbangare 11.73 127 P Pn 10 33 32.4 -0.4
comp=E,13nm,0.3s,baz=321,slow=14,SNR=62
JTS S Sn 10 35 35.9 -6.8
comp=E,5.8nm,0.3s,baz=306,slow=19,SNR=3.1
JTS JuntasAbangare 11.73 127 ePn Pn 10 33 33.2 +0.5
JTS eSn Sn 10 35 45.0 +2.3
JCR Jicaral 11.90 129⇓eP Pn 10 33 34.1 -0.8
SOR Soroa 11.92 62 eP Pn 10 33 33.6 -1.5
SOR eS Sn 10 35 44.0 -3.0
comp=N,688nm,3.9s
SOR e
comp=E,427nm,2.2s
CGA2 Cerro Gallo 2 12.28 127 eP Pn 10 33 39.6 -0.3
HKT Hockley 12.36 354 eP Pn 10 33 39.4 -1.4
HKT pmax pmax
comp=Z,500nm,1.6s
HKT Hockley 12.36 354 ePn Pn 10 33 39.4 -1.4
comp=Z,500nm,1.6s
JCT Junction City 13.72 340 ePn Pn 10 33 57.4 -0.7
JCT eSn Sn 10 36 40.6 +10
HPIG 13.92 314 i P Pn 10 34 00.9 +0.2
NATX Nacogdoches 14.10 359 ePn Pn 10 34 01.8 -1.1
NATX eSn Sn 10 36 43.6 +4.2
MGV Manicaragua 14.33 69 eP Pn 10 34 06.9 +0.9
MGV eS Sn 10 36 44.2 -0.9
comp=N,415nm,2.9s
MGV e
comp=E,274nm,3.0s
TXAR Lajitas Array 14.41 326 P Pn 10 34 06.7 -0.2
comp=E,0.8nm,0.3s,baz=149,slow=13,SNR=147
TXAR sP 10 34 40.9
comp=E,1.4nm,0.3s,baz=147,slow=12,SNR=3.9
BRAL Brewton 14.95 25 ePn Pn 10 34 16.6 +3.0
VBMS Vicksburg 14.98 13 ePn Pn 10 34 13.4 -0.6
DWPF Disney 15.90 47 ePn Pn 10 34 26.1 +0.7
DWPF eSn Sn 10 37 30.6 +7.9
MCJ Malvern 15.97 86⇓iP Pn 10 34 28.2 +1.9
CVJ Coleyville 16.11 85⇓iP Pn 10 34 29.9 +1.9
LPIG La Paz 16.16 296 P Pn 10 34 27.7 -0.9
comp=E,1.6nm,0.3s,baz=134,slow=5.8,SNR=5.9
LPIG La Paz 16.16 296 iP Pn 10 34 29.4 +0.9
PCJ Portland Cotta 16.48 87⇓iP Pn 10 34 33.8 +1.3
BCIP Isla Barro Col 16.49 119 ePn Pn 10 34 32.8 +0.1
comp=E,417nm,2.3s
LMGC Las Mercedes 16.70 79 eP Pn 10 34 37.9 +2.8
LMGC eS S 10 37 40.2 -0.6
comp=N,47nm,1.9s
LMGC e
comp=N,88nm,1.4s
LRAL Lakeview Retre 16.77 22 ePn Pn 10 34 36.2 +0.3
LRAL eSn Sn 10 37 37.8 -5.6
STH Stony Hill 16.80 86⇓eP Pn 10 34 37.9 +1.5
MIAR Mount Ida 16.90 2 ePn Pn 10 34 37.1 -0.3
MIAR eSn Sn 10 37 52.7 +6.4
GDL2 Guadalupe Moun 17.08 330 ePn Pn 10 34 39.7 +0.2
UALR University of 17.21 6⇑iPn Pn 10 34 41.0 -0.1
UALR eSn Sn 10 37 54.0 +0.2
OXF Oxford 17.44 14 eP Pn 10 34 42.6 -1.2
OXF eS S 10 37 57.0 +1.0
OXF pmax pmax
comp=Z,233nm,0.6s
OXF Oxford 17.44 14 eP Pn 10 34 42.6 -1.2
comp=Z,233nm,0.6s
OXF eS S 10 37 57.0 +1.1
WMOK Wichita Mounta 17.50 348⇑iP Pn 10 34 43.2 -1.4
WMOK eS S 10 37 58.0 +0.7
WMOK pmax pmax
comp=Z,77nm,0.8s
WMOK Wichita Mounta 17.50 348⇑iPn Pn 10 34 43.1 -1.4
comp=Z,77nm,0.8s
WMOK eS S 10 37 58.0 +0.7
HLGC Holguin 17.67 76 eP Pn 10 34 48.3 +1.6
CGIG 17.71 318 eP Pn 10 34 46.1 -0.9
RCC Rio Carpintero 17.92 79 eP Pn 10 34 50.4 +0.8
RCC eS S 10 37 55.7 -10
comp=N,292nm,20.7s
RCC e
comp=E,220nm,19.9s
HBAR Harrisburg 18.20 10⇓iP P 10 34 52.1 +1.1
AMTX Amarillo 18.38 341 eP P 10 34 53.2 +0.1
GOGA Godfrey 18.59 30 eP P 10 34 55.7 +0.4
GOGA eS S 10 38 24.7 +5.7
PAYG Puerto Ayora 18.61 167 eP P 10 34 56.5 +0.7
comp=E,171nm,1.3s
MOAC Moa 18.67 78 eP P 10 34 56.7 +0.4
HALT Halls 18.80 13⇓iP P 10 34 57.8 +0.3
HSIG 18.92 310 eP P 10 34 57.8 -1.1
SWET Sewanee 19.12 22⇑iP P 10 35 00.5 -0.5
SWET eS S 10 38 30.8 +1.2
GLAT Glass 19.15 13⇓iP P 10 35 01.7 +0.3
319A Douglas 19.21 318 ⇑P P 10 35 02.8 +0.7
baz=19,SNR=43
MASC Masc 19.30 79 eS S 10 38 35.7 +2.2
UTMT University of 19.32 14 eP P 10 35 03.0 -0.2
WVT Waverly 19.37 16 eP P 10 35 03.0 -0.7
WVT pmax pmax
comp=Z,115nm,1.0s
WVT Waverly 19.37 16 eP P 10 35 03.0 -0.7
comp=Z,115nm,1.0s
WVT eS S 10 38 42.0 +7.5
PARMO Parma 19.44 11⇑iP P 10 35 04.5 0.0
219A White Tail Can 19.62 320 P P 10 35 07.2 +0.7
baz=20,SNR=56
318A Bisbee 19.71 317 ⇓P P 10 35 07.9 +0.5
baz=20,SNR=42
BNM Barren Site 19.76 329⇓iP P 10 35 09.1 +1.1
Y22C IRIS PASSCAL I 19.85 328 ⇓P P 10 35 10.4 +1.4
baz=20,SNR=7.7
CPCT Cooper Cave 19.85 24⇑iP P 10 35 08.4 -0.5
CPCT eS S 10 38 51.6 +7.6
LPM Los Pinos Moun 19.89 329 eP P 10 35 10.8 +1.4
LENM Lemitar 19.95 328⇓iP P 10 35 11.0 +1.0
COW Cow Castle Cre 19.99 36 eP P 10 35 10.7 +0.2
NHSC New Hope 20.09 37 eP P 10 35 11.7 +0.2
comp=Z,386nm,1.4s
218A Dragoon 20.10 318 ⇓P P 10 35 12.2 +0.5
baz=20,SNR=16
119A Ashpeak Ranch, 20.18 321 ⇓P P 10 35 13.3 +0.8
baz=20,SNR=47
LAZ Ladron 20.22 328 eP P 10 35 14.2 +1.3
ANMO Albuquerque 20.33 331 P P 10 35 14.8 +0.7
comp=Z,23nm,0.8s,baz=146,slow=12,SNR=67
ANMO Albuquerque 20.33 331⇓iP P 10 35 14.6 +0.5
ANMO pmax pmax
comp=Z,38nm,0.8s
ANMO Albuquerque 20.33 331⇓iP P 10 35 14.6 +0.5
comp=Z,38nm,0.8s
TKL Tuckaleechee C 20.34 26 P P 10 35 13.6 -0.6
comp=Z,69nm,0.7s,baz=205,slow=9.2,SNR=62
JSC Jenkinsville 20.38 33 eP P 10 35 14.2 -0.4
217A Green Valley 20.46 317 ⇑P P 10 35 16.0 +0.4
baz=20,SNR=60
118A Homack Ranch, 20.50 320 P P 10 35 16.4 +0.5
baz=20,SNR=64
Z19A T-Link Ranch, 20.53 322 ⇓P P 10 35 17.2 +0.9
baz=21,SNR=9.6
SIUC Southern Illin 20.56 12 eP P 10 35 16.1 -0.4
comp=Z,305nm,1.5s
SIUC eS S 10 39 00.2 +2.4
SIUC ePcP PcP 10 39 21.4 +0.3
CCM Cathedral Cave 20.57 7⇑iP P 10 35 15.8 -0.9
CCM eS S 10 38 58.4 +0.3
CCM pmax pmax
comp=Z,276nm,1.3s
CCM Cathedral Cave 20.57 7⇑iP P 10 35 15.8 -0.8
comp=Z,276nm,1.3s
CCM eS S 10 38 58.4 +0.4
FVM French Village 20.61 9 eP P 10 35 15.7 -1.4
FVM pmax pmax
comp=Z,189nm,1.8s
FVM French Village 20.61 9 eP P 10 35 15.7 -1.4
comp=Z,189nm,1.8s
TUC Tucson 20.79 318⇓iP P 10 35 19.2 +0.2
TUC e 10 39 21.7
TUC pmax pmax
comp=Z,51nm,1.1s
TUC Tucson 20.79 318⇓iP P 10 35 19.2 +0.2
comp=Z,51nm,1.1s
TUC ePcP PcP 10 39 21.7 0.0
Z18A Geronimo 20.84 321 ⇓P P 10 35 20.3 +0.7
baz=21,SNR=31
117A Oracle 20.93 318 P P 10 35 20.9 +0.4
baz=21,SNR=43
Y19A Nutrioso 21.01 324 ⇓P P 10 35 22.3 +1.0
baz=21,SNR=52
216A Three Points, 21.03 316 ⇑P P 10 35 21.5 0.0
baz=21,SNR=33
USIN University of 21.15 15⇓iP P 10 35 22.2 -0.5
comp=Z,142nm,1.0s,mb5.2
TZTN Tazewell 21.19 25⇑iP P 10 35 22.5 -0.8
Z17A San Carlos Hig 21.25 320 ⇑P P 10 35 24.3 +0.3
baz=21,SNR=21
SLM Saint Louis 21.28 9 eP P 10 35 23.4 -0.8
SLM e*PP 10 35 55.0
Y18A Canyon Day Jun 21.33 322 P P 10 35 25.2 +0.5
baz=21,SNR=96
X19A St. Johns 21.37 324 ⇑P P 10 35 25.9 +0.7
baz=21,SNR=42
KSU1 Kansas State U 21.51 355⇑iP P 10 35 24.9 -1.6
comp=Z,121nm,0.9s,mb5.3
116A Eloy 21.54 317 ⇓P P 10 35 26.9 -0.2
baz=22,SNR=29
CBKS Cedar Bluff 21.64 349 eP P 10 35 27.6 -0.3
CBKS pmax pmax
comp=Z,394nm,1.6s,mb5.6
CBKS Cedar Bluff 21.64 349 eP P 10 35 27.6 -0.3
comp=Z,394nm,1.6s,mb5.6
Y17A Roosevelt 21.75 321 P P 10 35 29.4 +0.2
baz=22,SNR=35
WCI Wyandotte Cave 21.76 18⇑iP P 10 35 28.0 -1.2
WCI pmax pmax
comp=Z,190nm,0.9s,mb5.5
WCI Wyandotte Cave 21.76 18⇑iP P 10 35 28.0 -1.3
comp=Z,190nm,0.9s,mb5.5
OLIL Olney 21.78 13⇑iP P 10 35 28.5 -0.9
comp=Z,165nm,0.8s,mb5.5
X18A Snowflake 21.82 324 ⇓P P 10 35 30.6 +0.7
baz=22,SNR=24
Z16A Peralta Trail, 21.87 319 ⇑P P 10 35 30.5 0.0
baz=22,SNR=46
214A Organ Pipe Nat 21.91 314 ⇑P P 10 35 30.9 0.0
baz=22,SNR=27
W19A Sanders 21.94 326 ⇓P P 10 35 31.8 +0.7
baz=22,SNR=5.4
W18A Petrified Fore 22.13 325 ⇓P P 10 35 33.8 +0.6
baz=22,SNR=22
X17A Forest Lakes 22.18 322 P P 10 35 34.5 +0.8
baz=22,SNR=57
V19A Window Rock 22.21 327 ⇓P P 10 35 34.7 +0.7
baz=22,SNR=14
Y16A Circle Bar Ran 22.27 320 ⇓P P 10 35 34.4 -0.1
baz=22,SNR=20
SDCO Great Sand Dun 22.29 336 eP P 10 35 35.5 +0.7
BLO Bloomington 22.58 16⇑iP P 10 35 36.4 -1.0
BLO pmax pmax
comp=Z,441nm,1.3s,mb5.7
BLO Bloomington 22.58 16⇑iP P 10 35 36.4 -1.0
comp=Z,441nm,1.3s,mb5.7
X16A Lo Mia Camp, P 22.61 321 P P 10 35 38.5 +0.8
baz=23,SNR=124
W17A Winslow 22.65 323 ⇓P P 10 35 38.5 +0.4
baz=23,SNR=11
V18A Ganado 22.68 326 ⇑P P 10 35 38.7 +0.4
baz=23,SNR=37
Y15A Casa Rosa Ranc 22.84 319 ⇑P P 10 35 39.6 -0.3
baz=23,SNR=72
Z14A Wintersburg 22.86 317 ⇑P P 10 35 39.9 -0.1
baz=23,SNR=15
ELN Prospectdale 22.98 29 eP P 10 35 40.9 -0.1
113A Mohawk Valley, 23.04 315 ⇑P P 10 35 41.5 -0.2
baz=23,SNR=24
T19A Beclabito 23.07 329 P P 10 35 42.1 +0.2
baz=23,SNR=26
BLA Blacksburg 23.12 30 eP P 10 35 41.7 -0.6
BLA pmax pmax
comp=Z,85nm,0.8s,mb5.2
BLA Blacksburg 23.12 30 eP P 10 35 41.7 -0.6
comp=Z,85nm,0.8s,mb5.2
MVCO Mesa Verde 23.12 330⇓iP P 10 35 43.0 +0.6
comp=Z,70nm,1.0s,mb5.0
W16A Flagstaff 23.13 322 ⇑P P 10 35 43.1 +0.7
baz=23,SNR=32
X15A Humboldt 23.14 320 ⇓P P 10 35 42.7 +0.1
baz=23,SNR=65
X15A ⇑P 10 36 13.8
baz=23
U18A Rough Rock, Ch 23.18 327 ⇓P P 10 35 43.1 +0.2
baz=23,SNR=68
Y14A Wickenburg 23.26 318 ⇑P P 10 35 43.3 -0.3
baz=23,SNR=36
Y14A ⇓P 10 36 13.1
baz=23,SNR=7.8
WUAZ Wupatki 23.34 323 ⇓P P 10 35 45.0 +0.6
baz=23
WUAZ ⇑P 10 36 15.9
baz=23
WUAZ Wupatki 23.34 323⇓iP P 10 35 44.9 +0.6
comp=Z,95nm,1.0s,mb5.2
OTAV Otavalo 23.36 136⇓iP P 10 35 46.9 +2.2
comp=Z,141nm,1.5s,mb5.2
ROSC El Rosal 23.41 120 P P 10 35 45.9 +0.7
comp=Z,6.4nm,0.5s,mb4.3,baz=89,slow=17,SNR=4.5
112A Yuma 23.47 313 ⇑P P 10 35 45.4 -0.2
baz=24,SNR=9.8
112A ⇑P 10 36 15.3
baz=24
X14A Yava 23.53 319 ⇓P P 10 35 46.3 +0.1
baz=24,SNR=28
W15A Williams 23.62 321 ⇓P P 10 35 46.8 -0.2
baz=24,SNR=16
W15A ⇓P 10 36 18.4
baz=24
U16A Tuba City 23.65 325 ⇓P P 10 35 47.5 +0.3
baz=24,SNR=68
Y13A Salome 23.71 317 ⇓P P 10 35 47.9 +0.1
baz=24,SNR=29
Y13A ⇑P 10 36 18.2
baz=24
U17A Shonto 23.74 326 ⇑P P 10 35 48.3 +0.3
baz=24,SNR=27
T18A Mexican Hat 23.74 328 ⇑P P 10 35 47.9 -0.1
baz=24,SNR=26
S19A Harvey Farm, M 23.86 330 ⇑P P 10 35 48.7 -0.3
baz=24,SNR=16
PV01 Paradox Valley 23.91 332⇑iP P 10 35 50.9 +1.4
GLA Glamis 23.93 314⇓iP P 10 35 49.9 +0.1
GLA pmax pmax
comp=Z,65nm,0.9s,mb5.2
GLA Glamis 23.93 314 ⇓P P 10 35 49.6 -0.2
baz=24,SNR=43
GLA Glamis 23.93 314⇓iP P 10 35 49.9 +0.1
comp=Z,65nm,0.9s,mb5.2
V15A Kaibab Nationa 24.01 323 ⇑P P 10 35 51.0 +0.6
baz=24,SNR=21
V15A ⇑P 10 36 21.8
baz=24,SNR=5.5
CHI2 24.02 120 eP Px 10 32 54.3
T17A Navajo Res., N 24.11 327 ⇑P P 10 35 51.4 0.0
baz=24,SNR=25
Y12C Blythe 24.14 316 ⇓P P 10 35 52.1 +0.4
baz=24,SNR=6.0
Y12C ⇑P 10 36 22.7
baz=24
W14A Seligman 24.14 320 ⇓P P 10 35 51.6 0.0
baz=24,SNR=41
W14A ⇓P 10 36 22.9
baz=24
ISCO Idaho Springs 24.15 339 eP P 10 35 52.5 +0.8
ISCO pmax pmax
comp=Z,46nm,1.1s,mb4.9
ISCO Idaho Springs 24.15 339 eP P 10 35 52.5 +0.8
comp=Z,46nm,1.1s,mb4.9
OGNE Ogallala 24.17 346 eP P 10 35 52.7 +0.9
comp=Z,84nm,0.8s,mb5.3
X13A Yucca 24.20 318 ⇑P P 10 35 52.0 -0.3
baz=24,SNR=17
X13A ⇑P 10 36 22.6
baz=24,SNR=8.2
PDMCI Parker Dam,Lak 24.22 317 P P 10 35 52.6 +0.2
baz=24,SNR=10
PDMCI ⇓P 10 36 23.5
baz=24,SNR=9.1
S18A Hurst Farm, Bl 24.23 329 ⇑P P 10 35 52.7 +0.3
baz=24,SNR=25
SCIA State Center 24.25 2⇑iP P 10 35 51.7 -0.8
comp=Z,153nm,0.6s,mb5.7
PV10 Paradox Valley 24.32 331⇑iP P 10 35 53.4 +0.2
R19A Curley Farm, L 24.35 331 ⇓P P 10 35 53.9 +0.3
baz=24,SNR=12
LAPE La Pedrera 24.43 111 eP Px 10 33 24.1
V14A Boquillas Ranc 24.43 321 ⇓P P 10 35 54.7 +0.3
baz=24,SNR=33
V14A ⇑P 10 36 25.3
baz=24,SNR=8.9
T16A Glen Canyon Da 24.47 325 ⇑P P 10 35 55.1 +0.4
baz=24,SNR=12
U15A North Rim 24.51 323 ⇓P P 10 35 55.5 +0.6
baz=24,SNR=20
SWSC Sam W. Stewart 24.54 313 ⇓P P 10 35 55.4 0.0
baz=25,SNR=6.1
W13A Hualapai Mount 24.56 319 ⇑P P 10 35 55.7 +0.2
baz=25
W13A ⇓P 10 36 26.7
baz=25
S17A Black Ridge (B 24.59 328 ⇑P P 10 35 55.9 +0.2
baz=25,SNR=12
S17A ⇑P 10 36 26.9
baz=25
DVTC Desert V Tower 24.61 312 ⇑P P 10 35 56.2 +0.3
baz=25,SNR=18
ACSO Alum Creek Sta 24.64 21⇑iP P 10 35 54.8 -1.4
comp=Z,296nm,1.3s,mb5.7
ACSO epP 10 36 29.4
BC3 Big Chuckw Mtn 24.71 314 ⇓P P 10 35 56.7 -0.1
baz=25,SNR=22
SDV Santo Domingo 24.73 107 P P 10 35 57.5 +0.3
comp=Z,29nm,0.7s,mb4.9,baz=272,slow=4.4,SNR=10
SDV pP 10 36 28.1
comp=Z,72nm,0.8s,baz=314,slow=5.2,SNR=4.7
SDV Santo Domingo 24.73 107 eP P 10 35 57.9 +0.7
comp=Z,212nm,1.2s,mb5.5
R18A Canyonlands Na 24.73 330 ⇓P P 10 35 57.0 0.0
baz=25,SNR=25
IRM Iron Mountain 24.80 316 ⇑P P 10 35 57.6 -0.1
baz=25,SNR=8.2
URVA University of 24.84 33 P P 10 35 57.2 -0.7
Q19A Hogan Spring (24.89 332 ⇓P P 10 35 58.8 +0.4
baz=25,SNR=27
Q19A ⇓P 10 36 29.6
baz=25
T15A Red Dirt Ranch 24.98 324 ⇓P P 10 35 59.9 +0.6
baz=25,SNR=22
U14A Mt Trumbull 25.01 322 ⇑P P 10 35 59.3 -0.3
baz=25,SNR=23
BAR Barrett 25.03 311 eP P 10 36 00.2 +0.4
S16A Weppner Ranch, 25.07 327 ⇑P P 10 36 00.3 +0.2
baz=25,SNR=33
V13A Grand Canyon W 25.11 320 ⇑P P 10 36 01.0 +0.5
baz=25,SNR=13
R17A Hanksville Air 25.15 329 ⇑P P 10 36 01.0 +0.2
baz=25,SNR=28
BELC Belle Mtn. 25.28 314 ⇑P P 10 36 01.7 -0.3
baz=25,SNR=9.3
LDFC Landfair 25.33 317 eP P 10 36 03.7 +1.3
comp=Z,68nm,1.1s,mb5.1
LDFC epP pP 10 36 35.5 +0.9
PFO Pinyon Flat Ob 25.37 313 P P 10 36 03.1 +0.2
comp=Z,96nm,1.0s,mb5.3,SNR=6.4
PFO Pinyon Flat Ob 25.37 313 P P 10 36 03.2 +0.3
comp=Z,12nm,1.0s,mb4.4,baz=119,slow=7.5,SNR=10
PFO pP pP 10 36 34.5 -0.6
comp=Z,9.8nm,0.8s,baz=116,slow=9.6,SNR=5.1
PFO LR LR 10 47 54.5
comp=Z,351nm,19.3s,baz=134,slow=40
PFO Pinyon Flat Ob 25.37 313 eP P 10 36 03.2 +0.3
PFO pmax pmax
comp=Z,34nm,1.3s,mb4.7
PFO Pinyon Flat Ob 25.37 313 ⇑P P 10 36 03.0 +0.2
baz=25,SNR=7.0
PFO Pinyon Flat Ob 25.37 313 eP P 10 36 03.2 +0.4
comp=Z,34nm,1.3s,mb4.7
MCWV Mont Chateau 25.38 27 eP P 10 36 02.1 -0.7
comp=Z,74nm,1.0s,mb5.2
MCWV epP pP 10 36 31.5 -3.5
T14A Hurricane 25.41 323 ⇓P P 10 36 03.0 -0.1
baz=25,SNR=18
T14A ⇑P pP 10 36 34.0 -1.4
baz=25,SNR=5.5
Q18A Rafter H Ranch 25.41 331 ⇓P P 10 36 03.4 +0.3
baz=25,SNR=17
R16A Teasdale 25.43 328 ⇓P P 10 36 04.1 +0.7
baz=26,SNR=14
S15A Panguitch 25.45 325 ⇓P P 10 36 03.4 0.0
baz=26,SNR=7.2
109C Camp Elliot, M 25.45 311 ⇓P P 10 36 03.5 -0.1
baz=26
PHWY Pilot Hill 25.45 340 eP P 10 36 04.5 +1.1
comp=Z,70nm,1.3s,mb5.0
PHWY epP pP 10 36 38.8 +3.1
PHWY ePcP PcP 10 39 31.1 -0.1
U13A Pakoon Wash 25.48 321 ⇓P P 10 36 04.2 +0.5
baz=26,SNR=9.4
JFWS Jewell Farm 25.49 7 eP P 10 36 03.1 -0.7
JFWS e*PP pP 10 36 37.9 +1.9
JFWS pmax pmax
comp=Z,243nm,0.8s,mb5.8
JFWS Jewell Farm 25.49 7 eP P 10 36 03.1 -0.6
comp=Z,243nm,0.8s,mb5.8
JFWS epP pP 10 36 37.9 +1.9
GMRC Granite Mounta 25.50 316 P P 10 36 04.3 +0.3
baz=26,SNR=14
GMRC ⇓P pP 10 36 34.2 -2.0
baz=26,SNR=6.6
V12A Nelson 25.57 319 ⇓P P 10 36 04.9 +0.3
baz=26,SNR=30
SRU San Rafael 25.60 330 eP P 10 36 05.3 +0.5
SRU pmax pmax
comp=Z,45nm,1.7s,mb4.8
SRU San Rafael 25.60 330 ⇓P P 10 36 05.1 +0.3
baz=26,SNR=13
SRU San Rafael 25.60 330 eP P 10 36 05.3 +0.5
comp=Z,45nm,1.7s,mb4.8
Q16A Castle Valley 25.76 329 ⇓P P 10 36 06.9 +0.6
baz=26,SNR=21
U12A Valley of Fire 25.83 321 ⇑P P 10 36 07.1 +0.1
baz=26,SNR=9.6
T13A Saint George 25.85 322 ⇓P P 10 36 07.6 +0.5
baz=26,SNR=18
T13A ⇑P pP 10 36 37.8 -1.6
baz=26,SNR=6.2
P18A Preston Nutter 25.88 331 ⇓P P 10 36 08.3 +0.9
baz=26,SNR=14
MURC Murrieta 25.89 312 P P 10 36 07.9 +0.4
baz=26,SNR=11
CCUT Cedar City 25.91 324⇓iP P 10 36 08.7 +1.1
CCUT ePcP PcP 10 39 33.4 +1.0
O19A Miners Draw (B 25.94 334 ⇑P P 10 36 07.7 -0.1
baz=26
S14A Cedar City 25.95 324 ⇓P P 10 36 08.6 +0.6
baz=26,SNR=15
MSU Marysvale 25.96 327 eP P 10 36 09.2 +1.1
MSU e 10 39 33.0
MSU Marysvale 25.96 327 eP P 10 36 09.2 +1.1
MSU ePcP PcP 10 39 33.0 +0.5
MSU S S 10 40 12.4 -15
MSU eScP ScP 10 42 51.8 -6.0
HEC Hector,Ludlow 25.98 316 ⇑P P 10 36 08.7 +0.4
baz=26,SNR=5.5
HEC ⇓P pP 10 36 39.6 -0.9
baz=26,SNR=5.4
P17A Butcher Ranch, 25.99 330 ⇓P P 10 36 08.7 +0.4
baz=26,SNR=8.3
V11A Goodsprings 26.00 318 ⇓P P 10 36 08.6 +0.1
baz=26,SNR=14
V11A ⇑P pP 10 36 40.2 -0.6
baz=26,SNR=12
TUQ Turquoise Moun 26.07 317 P P 10 36 09.6 +0.4
baz=26,SNR=14
TUQ ⇑P pP 10 36 41.0 -0.5
baz=26,SNR=12
TMUT Trail Mountain 26.07 329 eP P 10 36 09.9 +0.8
TMUT ePcP PcP 10 39 32.8 +0.1
ARUT Antelope Range 26.12 324⇑iP P 10 36 11.0 +1.5
ARUT e*PP pP 10 36 42.8 +1.0
ECSD EROS,Sioux Fal 26.12 356⇓iP P 10 36 08.8 -0.6
comp=Z,49nm,0.7s,mb5.2
T12A Moapa 26.13 321 ⇑P P 10 36 09.7 0.0
baz=26
T12A ⇑P pP 10 36 41.5 -0.5
baz=26,SNR=5.0
S13A Holt Ranch, En 26.21 323 ⇑P P 10 36 11.5 +1.1
baz=26,SNR=37
S13A ⇑P pP 10 36 42.2 -0.5
baz=26,SNR=6.4

R14A James Farms, M 26.25 325 ⇑P P **10 36 10.6 -0.2**
baz=26
SHPR Sheep Range 26.26 320 *e*P P **10 36 11.3 +0.5**
O18A Roosevelt 26.29 332 ⇑P P **10 36 11.3 +0.2**
baz=26,SNR=11
O18A ⇑P pP 10 36 43.9 +0.5
baz=26,SNR=5.7
RWWY Rawlins 26.38 338 ⇑*i*P P **10 36 13.5 +1.6**
comp=Z,165nm,1.8s,mb5.4
Q15A Fillmore 26.43 327 P P **10 36 13.0 +0.7**
baz=26,SNR=10.0
N19A John Jarvie Ra 26.46 334 ⇓P P **10 36 12.7 +0.2**
baz=26
P16A Fountain Green 26.54 329 ⇑P P **10 36 14.1 +0.9**
baz=27
BFSC Mount Baldy St 26.55 313 ⇑P P **10 36 13.3 -0.2**
baz=27,SNR=7.5
O17A Robinson Place 26.56 331 ⇑P P **10 36 14.1 +0.6**
baz=27,SNR=15
GSC Goldstone 26.57 316 ⇑P P **10 36 13.9 +0.3**
baz=27
GSC Goldstone 26.57 316 *e*P P **10 36 13.8 +0.2**
SDMD Soldier's Deli 26.58 32 *e*P P **10 36 12.8 -0.8**
comp=Z,43nm,1.1s,mb5.0
SDMD *e*pP pP 10 36 47.7 +1.6
SHOC Shoshone 26.58 318 ⇑P P **10 36 13.7 0.0**
baz=27
CIS Catalina Islan 26.65 311 ⇑P P **10 36 14.0 -0.3**
baz=27
R13A O'Grain Ranch, 26.69 324 ⇓P P **10 36 15.3 +0.7**
baz=27,SNR=15
N18A Larsen Ranch, 26.73 334 ⇑P P **10 36 14.7 -0.3**
baz=27,SNR=5.7
T11A Corn Creek, Al 26.77 321 ⇑P P **10 36 15.6 +0.2**
baz=27,SNR=10.0
T11A ⇑P pP 10 36 47.2 -0.6
baz=27,SNR=6.2
S12A Delamar Landin 26.80 322 ⇓P P **10 36 15.9 +0.2**
baz=27,SNR=8.1
MWC Mount Wilson 26.82 313 ⇓*i*P P **10 36 16.3 +0.4**
MWC *e**PP pP 10 36 50.3 +2.0
MWC pmax pmax
comp=Z,29nm,1.0s,mb4.9
MWC Mount Wilson 26.82 313 ⇓*i*P P **10 36 16.2 +0.3**
comp=Z,29nm,1.0s,mb4.9
MWC *e*pP pP 10 36 50.3 +2.0
MPU Maple Canyon 26.84 330 *e*P P **10 36 16.8 +0.9**
comp=Z,51nm,1.4s,mb5.0
Q14A Sevier Lake (B 26.89 326 ⇓P P **10 36 16.9 +0.4**
baz=27,SNR=12
O16A Springville 26.93 330 ⇑P P **10 36 17.1 +0.3**
baz=27,SNR=15
U10A Ash Meadows, A 26.93 318 ⇑P P **10 36 16.9 0.0**
baz=27,SNR=13
U10A ⇑P pP 10 36 49.3 +0.1
baz=27,SNR=6.3
SJG San Juan 26.93 85 P P **10 36 19.1 +2.0**
comp=Z,3.7nm,0.3s,mb4.5,baz=231,slow=6.5,SNR=2.6
SJG pP pP 10 36 48.8 -0.6
comp=Z,29nm,0.8s,baz=300,slow=3.5,SNR=3.8
DAU Daniels Canyon 26.98 331 *e*P P **10 36 18.2 +1.0**
DAU *e**PP pP 10 36 52.9 +3.3
NLU North Lily Min 27.01 329 *e*P P **10 36 18.2 +0.7**
NLU *e*pP pP 10 36 53.1 +3.2
NLU *e*PcP PcP 10 39 35.5 +0.6
EDW2 Edwards Air Fo 27.13 314 ⇓P P **10 36 18.5 -0.1**
baz=27
R12A Pony Springs, 27.15 324 ⇓P P **10 36 19.6 +0.8**
baz=27,SNR=16
N17A Moffit Pass 27.21 332 ⇑P P **10 36 20.0 +0.7**
baz=27
TPNV Topopah Spring 27.21 319 *e*P P **10 36 20.3 +1.0**
TPNV *e**PP pP 10 36 52.6 +0.8
TPNV *e* 10 39 36.5
TPNV pmax pmax
comp=Z,153nm,2.1s,mb5.3
TPNV Topopah Spring 27.21 319 ⇑P P **10 36 20.0 +0.6**
baz=27
TPNV Topopah Spring 27.21 319 *e*P P **10 36 20.3 +1.0**
comp=Z,153nm,2.1s,mb5.3
TPNV *e*pP pP 10 36 52.6 +0.8
TPNV *e*PcP PcP 10 39 36.5 +1.0
JLU Jordanelle 27.21 331 *e*P P **10 36 19.8 +0.5**
JLU *e*pP pP 10 36 54.7 +2.9
P14A Drum Mountains 27.23 327 ⇑P P **10 36 20.5 +1.0**
baz=27,SNR=8.5
Q13A Wheeler Ranch, 27.27 325 ⇑P P **10 36 20.7 +0.9**
baz=27,SNR=16
S11A Rachel 27.36 321 ⇓P P **10 36 21.5 +0.9**
baz=27,SNR=12
CTU Camp Tracy 27.43 331 *e*P P **10 36 22.2 +1.1**
comp=Z,30nm,1.2s,mb4.8
CTU *e*pP pP 10 36 56.5 +2.8
O15A The Old Anders 27.45 329 ⇓P P **10 36 22.1 +0.7**
baz=28
MPMC Manual Prospec 27.46 317 ⇓P P **10 36 21.5 -0.1**
baz=28,SNR=20
MPMC ⇓P pP 10 36 53.0 -1.1
baz=28,SNR=7.3
DUG Dugway 27.55 329 *e*P P **10 36 22.9 +0.6**
DUG *e**PP pP 10 36 58.2 +3.4
DUG *e**SP sP 10 37 16.6 +3.7
DUG pmax pmax
comp=Z,23nm,1.1s,mb4.8
DUG Dugway 27.55 329 ⇓P P **10 36 22.4 +0.1**
baz=28
DUG Dugway 27.55 329 *e*P P **10 36 22.9 +0.6**
comp=Z,23nm,1.1s,mb4.8
DUG *e*pP pP 10 36 58.2 +3.3
DUG *es*P sP 10 37 16.6 +3.7
P13A Bates Ranch, G 27.63 326 ⇓P P **10 36 23.7 +0.8**
baz=28,SNR=12
RSSD Black Hills 27.65 345 *e*P P **10 36 25.0 +1.9**
RSSD pmax pmax
comp=Z,27nm,1.1s,mb4.9
RSSD Black Hills 27.65 345 *e*P P **10 36 25.0 +1.9**
comp=Z,27nm,1.1s,mb4.9
R11A Troy Canyon, C 27.73 322 ⇑P P **10 36 24.2 +0.3**
baz=28,SNR=16
Q12A Willow Creek R 27.77 324 ⇓P P **10 36 24.7 +0.4**
baz=28,SNR=6.5
Q12A ⇓P pP 10 36 57.5 +0.7
baz=28
ARVC Arvin 27.84 314 ⇑P P **10 36 25.1 +0.1**
baz=28,SNR=8.4
M16A Huntsville 27.86 332 ⇑P P **10 36 24.9 -0.2**
baz=28
ISA Isabella 27.89 315 *e*P P **10 36 26.3 +0.9**
ISA *e* 10 39 37.8
ISA pmax pmax
comp=Z,111nm,2.6s,mb5.1
ISA Isabella 27.89 315 ⇑P P **10 36 25.3 -0.1**
baz=28,SNR=6.9
ISA Isabella 27.89 315 *e*P P **10 36 26.3 +0.9**
comp=Z,111nm,2.6s,mb5.1
ISA *e*PcP PcP 10 39 37.8 +0.6
GRAC Grapevine Rang 27.95 318 ⇓P P **10 36 26.6 +0.7**
baz=28,SNR=6.7
S10A Tonopah Range, 28.05 321 ⇑P P **10 36 27.4 +0.6**
baz=28,SNR=28
S10A ⇓P pP 10 36 59.9 +0.6
baz=28,SNR=6.1
HWUT Hardware Ranch 28.07 332 *e*P P **10 36 27.4 +0.6**
comp=Z,28nm,1.3s,mb4.8
HWUT *e*PcP PcP 10 39 37.5 0.0
R10A Warm Springs 28.11 322 ⇓P P **10 36 28.5 +1.2**
baz=28,SNR=9.9
P12A McGill 28.12 325 ⇑P P **10 36 28.0 +0.6**
baz=28,SNR=7.8
BW06 Boulder Array 28.19 336 *e*P P **10 36 28.1 +0.2**
PDAR Pinedale Array 28.19 336 P P **10 36 28.0 +0.1**
comp=Z,1.8nm,0.6s,mb4.0,baz=144,slow=9.7,SNR=18
PDAR pP pP 10 36 58.5 -2.0
comp=Z,2.0nm,0.8s,baz=123,slow=12,SNR=3.7
PDAR PcP PcP 10 39 36.6 -1.1
comp=Z,1.2nm,0.6s,baz=108,slow=2.9,SNR=4.4
BGU Big Grassy Mou 28.22 329 *e*P P **10 36 28.9 +0.6**
BGU *e*PcP PcP 10 39 37.9 0.0
N14A Grayback Hills 28.24 329 ⇑P P **10 36 28.8 +0.4**
baz=28,SNR=10
S09A Goldfield 28.30 320 ⇓P P **10 36 29.4 +0.4**
baz=28,SNR=11
S09A ⇓P pP 10 37 01.4 -0.2
baz=28,SNR=5.2
L16A Fish Haven 28.34 333 ⇑P P **10 36 29.1 -0.2**
baz=28,SNR=7.7
VES Vestal, Richgr 28.40 315 ⇓P P **10 36 30.5 +0.6**
baz=28,SNR=10
VES ⇑P pP 10 37 02.3 -0.2
baz=28
PKM Peak Mountain 28.41 312 ⇓P P **10 36 30.3 +0.3**
baz=28,SNR=7.4
Q10A Clear Creek Ra 28.52 322 ⇑P P **10 36 32.0 +1.1**
baz=29,SNR=18
R09A Tonopah 28.54 321 ⇑P P **10 36 31.5 +0.4**
baz=29,SNR=19
O12A Currie 28.60 326 ⇓P P **10 36 32.0 +0.4**
baz=29,SNR=12
N13A Wendover, West 28.75 328 ⇓P P **10 36 33.8 +0.8**
baz=29,SNR=6.7
SMMC Simmler 28.75 313 ⇑P P **10 36 33.5 +0.4**
baz=29,SNR=5.4
SMMC ⇓P pP 10 37 06.6 +0.9
baz=29,SNR=5.8
L15A Malad City 28.76 332 ⇑P P **10 36 32.9 -0.1**
baz=29,SNR=13
L15A ⇑P pP 10 37 06.8 +1.2
baz=29
HVU Hansel Valley 28.76 331 *e*P P **10 36 34.1 +1.1**
HVU *e**PP pP 10 37 08.5 +2.9
HVU pmax pmax
comp=Z,39nm,1.3s,mb5.0
HVU Hansel Valley 28.76 331 *e*P P **10 36 34.1 +1.1**
comp=Z,39nm,1.3s,mb5.0
HVU *e*pP pP 10 37 08.5 +2.9
S08C White Mtn Res 28.76 318 ⇓P P **10 36 34.0 +1.0**
baz=29,SNR=36
S08C ⇑P pP 10 37 05.6 -0.1
baz=29,SNR=5.3
COWI Conover 28.76 8 *e*P P **10 36 31.8 -1.2**
comp=Z,67nm,1.3s,mb5.2
RCTC Rector, Farmer 28.77 315 ⇓P P **10 36 33.7 +0.5**
baz=29,SNR=17
AHID Aun Hatcher 28.81 334 *e*P P **10 36 33.9 +0.5**
comp=Z,69nm,1.4s,mb5.2
AHID *e*pP pP 10 37 08.2 +2.1
M14A Sheep Mountain 28.82 330 ⇓P P **10 36 34.1 +0.6**
baz=29,SNR=5.8
HELL Mitchell Peak 28.83 316 ⇑P P **10 36 34.4 +0.7**
baz=29,SNR=22
HELL ⇓P pP 10 37 06.3 -0.1
baz=29
O11A Cowboy Ranch, 28.99 325 ⇓P P **10 36 36.0 +0.9**
baz=29,SNR=17
O11A ⇓P pP 10 37 07.5 -0.3
baz=29,SNR=5.4
PTRM Twissleman Ran 29.08 313 *e*P P **10 36 36.6 +0.7**
PTRM *e*PcP PcP 10 39 41.0 +0.8
P10A Eureka 29.09 323 ⇓P P **10 36 37.1 +1.1**
baz=29,SNR=13
M13A Montello 29.11 329 ⇓P P **10 36 36.3 +0.2**
baz=29,SNR=15
ATAH Atahualpa 29.14 146 P P **10 36 40.2 +3.6**
comp=Z,44nm,0.9s,mb5.2,baz=339,slow=5.1,SNR=28
ATAH pP pP 10 37 08.7 -0.7
comp=Z,16nm,0.7s,baz=316,slow=7.3,SNR=3.7
BINY Binghamton 29.15 29 *e*P P **10 36 35.3 -1.2**
comp=Z,69nm,1.1s,mb5.3
BINY *e*pP pP 10 37 10.6 +1.4
L14A Malta 29.17 331 ⇓P P **10 36 37.0 +0.4**
baz=29,SNR=26
L14A ⇓P pP 10 37 10.0 +0.6
baz=29
N12A Clover Valley, 29.18 327 ⇑P P **10 36 37.2 +0.5**
baz=29,SNR=6.0
N12A ⇓P pP 10 37 10.2 +0.8
baz=29
REDW Red Top Meadow 29.20 335 *e*P P **10 36 37.6 +0.7**
comp=Z,131nm,1.6s,mb5.4
ELK Elko 29.21 326 P P **10 36 37.9 +0.9**
comp=Z,5.9nm,0.7s,mb4.4,baz=130,slow=6.2,SNR=30
ELK pP pP 10 37 06.7 -2.9
comp=Z,7.8nm,1.1s,baz=137,slow=9.9,SNR=3.7
ELK PcP PcP 10 39 40.6 +0.2
comp=Z,5.0nm,0.8s,baz=186,slow=2.7,SNR=4.5
ELK pPcP 10 40 18.6
comp=Z,7.2nm,1.1s,baz=110,slow=5.6,SNR=4.3
ELK LR LR 10 50 14.9
comp=Z,131nm,21.1s,baz=262,slow=40
ELK Elko 29.21 326 ⇓*i*P P **10 36 38.0 +1.0**
ELK *e**PP pP 10 37 12.9 +3.2
ELK *e* 10 39 40.7
ELK pmax pmax
comp=Z,16nm,1.1s
ELK Elko 29.21 326 ⇓*i*P P **10 36 38.0 +1.0**
comp=Z,16nm,1.1s,mb4.7
ELK *e*pP pP 10 37 12.9 +3.2
ELK *e*PcP PcP 10 39 40.7 +0.3
R08A Mina 29.24 320 ⇓P P **10 36 38.4 +1.1**
baz=29,SNR=7.4
R08A ⇓P pP 10 37 10.6 +0.6
baz=29
SNOW Snow King Moun 29.25 335 *e*P P **10 36 38.1 +0.8**
comp=Z,44nm,0.9s,mb5.2
LOHW Long Hollow 29.31 336 *e*P P **10 36 38.3 +0.5**
comp=Z,66nm,1.5s,mb5.1
TPAW Teton Pass 29.35 335 *e*P P **10 36 38.9 +0.7**
comp=Z,65nm,1.2s,mb5.2
K15A Arbon 29.36 332 ⇑P P **10 36 38.6 +0.3**
baz=29,SNR=14
RRI2 Red Ridge 29.38 334 *e*P P **10 36 39.9 +1.4**
comp=Z,110nm,1.6s,mb5.3
RRI2 *e*pP pP 10 37 13.2 +2.1
NVAR Mina Array Bea 29.41 320 P P **10 36 39.8 +1.0**
comp=Z,31nm,0.8s,mb5.1,baz=131,slow=9.7,SNR=214
NVAR pP pP 10 37 11.2 -0.3
comp=Z,24nm,1.0s,baz=134,slow=9.5,SNR=6.3
NVAR PcP PcP 10 39 41.2 +0.3
comp=Z,5.7nm,0.8s,baz=149,slow=4.1,SNR=4.8
NVAR pPcP 10 40 19.7
comp=Z,3.2nm,0.7s,baz=152,slow=4.1,SNR=4.0
Q08A Gabbs 29.45 321 ⇓P P **10 36 39.3 +0.1**
baz=30,SNR=12
PKD Parkfield 29.46 313 ⇓P P **10 36 39.3 +0.1**
baz=30,SNR=12
T06C Millerton Lake 29.47 316 P P **10 36 38.6 -0.7**
baz=30,SNR=7.6
MOOW Moose Ponds 29.48 336 *e*P P **10 36 39.7 +0.4**
comp=Z,18nm,1.1s,mb4.7
M12A Wells 29.53 328 ⇓P P **10 36 40.2 +0.4**
baz=30,SNR=20
DCID1 Drake Creek 29.53 335 *e*P P **10 36 40.9 +1.2**
comp=Z,35nm,0.4s,mb5.4
K14A Jones Ranch, D 29.54 331 ⇑P P **10 36 39.9 0.0**
baz=30
L13A Double Diamond 29.55 330 ⇓P P **10 36 40.6 +0.6**
baz=30,SNR=7.7
L13A ⇑P pP 10 37 13.3 +0.6
baz=30
O10A Cortez Mining, 29.57 324 ⇑P P **10 36 41.1 +0.9**
baz=30,SNR=7.2
R07C Lee Vining 29.67 318 ⇑P P **10 36 41.4 +0.3**
baz=30
IMW Indian Meadow 29.68 336 *e*P P **10 36 41.8 +0.7**
comp=Z,94nm,2.1s,mb5.2
IMW *e*PcP PcP 10 39 42.0 +0.5
PCRV Puerto La Cruz 29.84 100 pP pP 10 37 14.7 -0.9
comp=Z,24nm,0.8s,baz=136,slow=2.1,SNR=9.5
U04C Hernandez Rese 29.84 314 ⇑P P **10 36 42.5 -0.2**
baz=30,SNR=13
N10A Dunphy 29.87 325 ⇓P pP 10 37 15.2 -0.4
baz=30
I16A Newdale 29.89 335 P P **10 36 43.6 +0.7**
baz=30,SNR=5.8
J15A Blackfoot 29.89 333 ⇑P P **10 36 43.2 +0.2**
baz=30,SNR=7.8
SADO Sadowa 29.98 22 P P **10 36 42.0 -1.8**
baz=218,slow=8.4
V03C Hunter Liggett 29.98 313 ⇓P P **10 36 44.1 +0.2**
baz=30
M11A Holland Ranch, 29.99 327 ⇓P P **10 36 44.4 +0.5**
baz=30,SNR=12
S06C San Francisco 30.06 317 ⇑P P **10 36 44.7 +0.1**
baz=30,SNR=14
BMN Battle Mountai 30.07 324 *e*P P **10 36 45.4 +0.8**
BMN *e**PP pP 10 37 19.6 +2.3
BMN *e* 10 39 42.4
BMN pmax pmax
comp=Z,20nm,1.1s,mb4.8
BMN Battle Mountai 30.07 324 *e*P P **10 36 45.4 +0.8**
comp=Z,20nm,1.1s,mb4.8
BMN *e*pP pP 10 37 19.6 +2.2
BMN *e*PcP PcP 10 39 42.4 -0.2
P08A Dixie Valley 30.07 322 ⇓P P **10 36 45.1 +0.4**
baz=30,SNR=5.2
RLMT Red Lodge 30.11 339 *e*P P **10 36 45.6 +0.6**
comp=Z,25nm,0.9s,mb4.9
RLMT *e*pP pP 10 37 19.2 +1.5
L12A House Creek Ra 30.12 329 ⇓P P **10 36 45.5 +0.5**
baz=30,SNR=6.7
WAKR Walker 30.16 319 *e*P P **10 36 46.6 +1.1**
R06C Coleville 30.18 319 ⇑P P **10 36 46.6 +1.0**
baz=30,SNR=13
J14A Carey 30.31 332 ⇓P P **10 36 47.1 +0.4**
baz=30,SNR=7.7
YMR Madison River 30.34 336 *e*P P **10 36 48.5 +1.5**
comp=Z,30nm,1.0s,mb5.0
EYMN Ely 30.36 4 *e*P P **10 36 46.0 -1.1**
comp=Z,29nm,0.6s,mb5.2
I15A Monteview 30.40 334 ⇑P P **10 36 47.2 -0.2**
baz=30
K12A Draper Farm, C 30.43 329 ⇑P P **10 36 48.0 +0.3**
baz=30
M10A I.L. Ranch, Tu 30.45 326 ⇑P P **10 36 48.7 +0.8**
baz=30,SNR=12
H16A Russell Place, 30.48 336 ⇑P P **10 36 48.1 -0.1**
baz=30
CMB Columbia Colle 30.50 317 *e*P P **10 36 47.6 -0.8**
CMB *e* 10 39 43.9
CMB pmax pmax
comp=Z,15nm,1.1s,mb4.6
CMB Columbia Colle 30.50 317 ⇓P P **10 36 48.4 0.0**
baz=30,SNR=13
CMB Columbia Colle 30.50 317 *e*P P **10 36 47.6 -0.8**
comp=Z,15nm,1.1s,mb4.6
CMB *e*PcP PcP 10 39 43.9 +0.1
L11A Cat Creek Ranc 30.50 328 ⇑P P **10 36 48.3 -0.1**
baz=30,SNR=24
L11A ⇑P pP 10 37 21.2 0.0
baz=30,SNR=7.2
O08A Rochester Mine 30.51 323 ⇑P P **10 36 48.8 +0.3**
baz=30,SNR=11
SAO San Andreas Ge 30.51 314 *e*P P **10 36 48.6 +0.1**
N09A Rock Creek Ran 30.52 324 ⇑P P **10 36 48.7 +0.1**
baz=30,SNR=25
N09A ⇑P pP 10 37 20.9 -0.5
baz=30,SNR=6.1
PACP Pacheco Peak 30.53 315 P P **10 36 48.9 +0.2**
baz=31,SNR=6.6
LAO LASA Array 30.60 344 *e*P P **10 36 49.8 +0.7**
comp=Z,28nm,1.2s,mb4.9
AGMN Agassiz Refuge 30.64 358 ⇑*i*P P **10 36 48.6 -0.9**
comp=Z,211nm,0.8s,mb5.9
AGMN *e*pP pP 10 37 25.8 +3.4
AGMN *eS* **S 10 41 40.5 +0.3**
QLMT Earthquake Lak 30.66 336 *e*P P **10 36 51.4 +1.7**
QLMT *e*pP pP 10 37 22.3 -0.2
QLMT *e*PcP PcP 10 39 45.0 +1.0
R05C Kirkwood Meado 30.68 318 ⇑P P **10 36 50.5 +0.5**
baz=31
L10A Juniper Basin 30.81 327 ⇓P P **10 36 51.3 +0.3**
baz=31,SNR=18
N08A GE Springer Mi 30.82 323 ⇓P P **10 36 51.0 -0.2**
baz=31,SNR=6.3
N08A ⇑P pP 10 37 23.2 -0.8
baz=31
GCMT Greycliff 30.84 339 *e*P P **10 36 52.3 +1.0**
GCMT *e*pP pP 10 37 25.4 +1.4
GCMT *es*P sP 10 37 44.8 +2.8
WCN Washoe City 30.84 320 ⇓P P **10 36 51.6 +0.2**
baz=31,SNR=9.9
O07A Toulon 30.84 322 ⇑P P **10 36 51.7 +0.2**
baz=31,SNR=16
PAHR Pah Rah Range 30.86 321 *e*P P **10 36 51.3 -0.3**
comp=Z,22nm,1.1s,mb4.8
PAHR *e*pP pP 10 37 25.0 +0.6
PAHR *es*P sP 10 37 45.7 +3.4
M09A Marrel Ranch, 30.87 325 ⇑P P **10 36 51.6 0.0**
baz=31,SNR=17
HLID Hailey 30.90 331 ⇑P P **10 36 52.1 +0.2**
baz=31,SNR=18
HLID Hailey 30.90 331 *e*P P **10 36 52.3 +0.4**
comp=Z,20nm,0.8s,mb4.9
HLID *e*pP pP 10 37 30.6 +5.9
H15A Lima 30.97 334 ⇑P P **10 36 53.2 +0.7**
baz=31,SNR=9.9
R04C Big Horse Ranc 30.98 317 ⇓P P **10 36 53.2 +0.6**
baz=31,SNR=10
J12A Stokes Ranch, 30.99 330 ⇑P P **10 36 52.8 +0.2**
baz=31
I13A Wildhorse Cree 31.04 332 ⇑P P **10 36 53.4 +0.3**
baz=31,SNR=6.3
K11A Parker Ranch, 31.09 328 ⇑P P **10 36 53.4 -0.1**
baz=31,SNR=6.0
LAVA Lava Cap Winer 31.14 318 ⇑P P **10 36 54.4 +0.3**
baz=31,SNR=17
P06A Stead Airport, 31.16 320 ⇑P P **10 36 55.0 +0.8**
baz=31,SNR=5.3
WENL Wente Vineyard 31.17 315 ⇑P P **10 36 55.1 +0.7**
baz=31
MCMT McKenzie Canyo 31.22 334 ⇓*i*P P **10 36 56.2 +1.5**
H14A Leadore 31.27 334 ⇓P P **10 36 56.2 +1.1**
baz=31,SNR=6.1
H14A ⇓P pP 10 37 30.7 +2.8
baz=31,SNR=6.9
N07B Gerlach 31.30 323 ⇓P P **10 36 55.8 +0.4**
baz=31,SNR=14
NCB Newcomb 31.34 29 *e*P P **10 36 54.7 -1.0**
comp=Z,29nm,1.0s,mb5.0
NCB *e*pP pP 10 37 29.8 +1.2
G15A Dillon 31.35 335 ⇓P P **10 36 56.9 +1.1**
baz=31,SNR=18
P05C Yuba Gap, Truc 31.37 319 ⇑P P **10 36 56.8 +0.8**
baz=31,SNR=7.3
L09A Wilkinson Ranc 31.40 326 ⇓P P **10 36 56.6 +0.3**
baz=31,SNR=5.2
M08A Happy Creek Ra 31.40 324 ⇓P P **10 36 56.1 -0.2**
baz=31,SNR=11
O06A Flanigan 31.41 321 ⇑P P **10 36 57.1 +0.7**
baz=31,SNR=29
BOZ Bozeman (W) 31.42 337 *e*P P **10 36 57.0 +0.6**
BOZ *e**PP pP 10 37 32.5 +3.3
BOZ pmax pmax
comp=Z,12nm,1.0s,mb4.6
BOZ Bozeman (W) 31.42 337 *e*P P **10 36 57.0 +0.6**
comp=Z,12nm,1.0s,mb4.6
BOZ *e*pP pP 10 37 32.5 +3.2
BOZ *e*PP PP 10 38 15.6 +5.1
MFID Camas Ranch 31.46 329 ⇑P P **10 36 56.9 +0.2**
baz=32,SNR=5.3
K10A MacKenzie Ranc 31.52 328 ⇓P P **10 36 57.1 -0.2**
baz=32,SNR=9.9
DLMT Dillon 31.56 335 *e*P P **10 36 58.6 +1.0**
comp=Z,28nm,1.0s,mb5.0
DLMT *e*pP pP 10 37 33.5 +3.0
Q04C Lincoln 31.59 318 ⇑P P **10 36 58.9 +0.9**
baz=32,SNR=8.2
Q04C ⇓P pP 10 37 31.6 +0.7
baz=32
H13A Challis 31.61 332 ⇓P P **10 36 58.7 +0.6**
baz=32,SNR=21
LONY Lake Ozonia 31.69 28 ⇑*i*P P **10 36 57.4 -1.3**
comp=Z,30nm,0.9s,mb5.0
LONY *e*pP pP 10 37 32.4 +0.8
LONY *e*PP PP 10 38 09.8 -3.6
N06A Buffalo Meadow 31.78 322 P P **10 37 00.1 +0.5**
baz=32,SNR=38
DGMT Dagmar 31.80 348 *e*P P **10 37 01.4 +1.7**
comp=Z,36nm,0.8s,mb5.2
M07A Soldier Meadow 31.81 323 ⇑P P **10 36 59.4 -0.4**
baz=32,SNR=12
MDV Middlebury 31.85 30 *e*P P **10 36 58.8 -1.4**
MDV *e*pP pP 10 37 34.0 +1.0
H12A Diamond D Ranc 31.87 332 ⇑P P **10 37 00.8 +0.5**
baz=32,SNR=29
H12A ⇓P pP 10 37 33.5 +0.3
baz=32,SNR=5.0
L08A Fields 31.88 325 P P **10 37 00.8 +0.3**
baz=32,SNR=26
L08A ⇑P pP 10 37 34.2 +0.8
baz=32
LRM Limekiln Ridge 31.88 336 *e*P P **10 37 01.2 +0.8**
I11A Placerville 31.89 330 P P **10 37 01.0 +0.4**
baz=32,SNR=28
K09A Rome 31.90 327 P P **10 37 01.0 +0.3**
baz=32,SNR=43
K09A ⇓P pP 10 37 34.5 +0.9
baz=32,SNR=5.7
F15A Butte 31.91 336 P P **10 37 01.6 +0.9**
baz=32,SNR=22
O05C Quincy 31.95 320 ⇑P P **10 37 01.4 +0.3**

baz=32,SNR=8.4
G13A Cobalt 32.02 333 ⇑P P **10 37 02.0 +0.3**
baz=32,SNR=9.5
CVS Carmenet Viney 32.03 316 ⇑P P **10 37 02.2 +0.4**
baz=32
ORV Oroville 32.08 319 ⇓P P **10 37 02.7 +0.5**
baz=32,SNR=8.2
MCCM Marconi Confer 32.20 315 ⇓P P **10 37 04.2 +0.9**
baz=32,SNR=5.3
MCCM ⇓P pP 10 37 34.3 -2.0
baz=32
MCCM Marconi Confer 32.20 315 *e*P P **10 37 04.0 +0.6**
comp=Z,51nm,1.3s,mb5.1
WVOR Wild Horse Val 32.21 325 *e*P P **10 37 03.9 +0.6**
WVOR *e**PP pP 10 37 38.9 +2.6
WVOR *e**SP sP 10 37 57.5 +3.4
WVOR *e* 10 39 49.2
WVOR pmax pmax
comp=Z,25nm,1.0s,mb4.9
WVOR Wild Horse Val 32.21 325 *e*P P **10 37 03.9 +0.6**
comp=Z,24nm,1.0s,mb4.9
WVOR *e*pP pP 10 37 38.9 +2.7
WVOR *e*sP sP 10 37 57.5 +3.4
WVOR *e*PcP PcP 10 39 49.2 +0.9
NSHM Saint Helena R 32.22 316 *e*P P **10 37 04.0 +0.5**
NSHM *e*PcP PcP 10 39 48.6 +0.2
ELFS Eagle Lake Fie 32.23 321 ⇑P P **10 37 03.2 -0.4**
baz=32,SNR=6.2
F14A Wisdom 32.24 335 ⇓P P **10 37 03.8 +0.2**
baz=32,SNR=8.6
O04C Chester 32.27 320 ⇓P P **10 37 04.1 +0.2**
baz=32,SNR=14
O04C ⇑P pP 10 37 35.6 -1.2
baz=32
FRNY Flat Rock 32.30 28 *e*P P **10 37 02.8 -1.3**
comp=Z,18nm,0.8s,mb4.8
FRNY *e*pP pP 10 37 38.0 +1.0
MNRC McLaughlin Nat 32.30 317 ⇑P P **10 37 04.0 -0.2**
baz=32,SNR=7.2
L07A Adell 32.32 324 ⇑P P **10 37 04.6 +0.3**
baz=32,SNR=36
K08A Mann Creek Ran 32.33 326 ⇑P P **10 37 04.6 +0.2**
baz=32,SNR=18
J09A Fry Pan Ranch, 32.38 327 ⇓P P **10 37 04.8 0.0**
baz=32,SNR=9.7
I10A Payette 32.43 329 ⇑P P **10 37 05.9 +0.6**
baz=32,SNR=8.5
M06C Likely Place G 32.45 322 ⇑P P **10 37 05.6 +0.2**
baz=32,SNR=18
E15A Deer Lodge 32.46 336 ⇑P P **10 37 05.5 +0.1**
baz=32,SNR=9.0
H11A Donnelly 32.52 331 ⇑P P **10 37 05.9 -0.1**
baz=32,SNR=34
ULM Lac du Bonnet 32.59 358 P P **10 37 04.9 -1.7**
comp=Z,52nm,0.8s,mb5.3,baz=180,slow=9.0,SNR=52
F13A Darby 32.62 334 ⇑P P **10 37 06.5 -0.3**
baz=33,SNR=15
LBNH Lisbon 32.63 31 *e*P P **10 37 06.5 -0.5**
LBNH *e**PP pP 10 37 41.3 +1.3
LBNH pmax pmax
comp=Z,88nm,1.5s,mb5.3
LBNH Lisbon 32.63 31 *e*P P **10 37 06.5 -0.5**
comp=Z,88nm,1.5s,mb5.3
LBNH *e*pP pP 10 37 41.3 +1.4
K07A Rock Creek Ran 32.71 325 ⇑P P **10 37 07.7 0.0**
baz=33,SNR=34
J08A Circle Bar Ran 32.76 327 ⇓P P **10 37 08.4 +0.3**
baz=33,SNR=48
H10A Noah's Angus R 32.78 330 ⇓P P **10 37 07.9 -0.4**
baz=33,SNR=15
HOPS Hopland 32.78 316 *e*P P **10 37 09.5 +1.1**
comp=Z,110nm,2.5s,mb5.1
E14A Clinton 32.78 335 ⇑P P **10 37 08.4 +0.1**
baz=33,SNR=9.5
MOD Modoc 32.79 323 ⇓P P **10 37 08.0 -0.4**
baz=33,SNR=18
MOD ⇑P pP 10 37 39.8 -1.6
baz=33
MOD Modoc 32.79 323 *e*P P **10 37 08.2 -0.2**
comp=Z,26nm,1.3s,mb4.8
MOD *e*pP pP 10 37 42.9 +1.5
MOD *e*PcP PcP 10 39 50.3 +0.4
C17A Wharram Farm, 32.81 339 ⇑P P **10 37 08.6 +0.1**
baz=33,SNR=18
C17A ⇓P pP 10 37 41.7 +0.2
baz=33,SNR=8.7
I09A Lost Marbles R 32.81 328 ⇓P P **10 37 08.6 0.0**
baz=33,SNR=39
I09A ⇑P pP 10 37 43.8 +2.2
baz=33,SNR=7.7
EGMT Eagleton 32.83 341 *e*P P **10 37 09.3 +0.6**
comp=Z,31nm,0.9s,mb5.0
EGMT *e*pP pP 10 37 42.8 +1.1
GASB Alder Springs 32.91 318 ⇑P P **10 37 10.0 +0.5**
baz=33,SNR=16
D15A Lincoln 32.93 337 ⇑P P **10 37 09.9 +0.3**
baz=33,SNR=7.3
M05C Lookout 32.94 322 ⇑P P **10 37 09.7 0.0**
baz=33,SNR=19
F12A Elk City 32.99 333 ⇑P P **10 37 10.1 0.0**
baz=33,SNR=25
F12A ⇓P pP 10 37 43.5 +0.4
baz=33
E13A Victor 33.08 335 ⇑P P **10 37 10.8 -0.1**
baz=33,SNR=15
CHMT Chamberlain Mo 33.10 336 *e*P P **10 37 11.4 +0.4**
G11A Walters Elk Ra 33.16 331 ⇓P P **10 37 11.2 -0.4**
baz=33,SNR=27
G11A ⇑P pP 10 37 43.1 -1.5
baz=33,SNR=7.0
L05A Lakeview 33.18 323 ⇑P P **10 37 11.8 0.0**
baz=33,SNR=20
L05A ⇓P pP 10 37 42.7 -2.1
baz=33
I08A Drewsey 33.19 327 ⇑P P **10 37 11.7 -0.2**
baz=33,SNR=13
J07A Hines 33.21 326 ⇑P P **10 37 11.7 -0.3**
baz=33,SNR=12
BMO Blue Mountains 33.24 330 *e*P P **10 37 11.9 -0.4**
comp=Z,28nm,1.5s,mb4.8
BMO *e*pP pP 10 37 45.9 +0.6
O02C Red Bluff 33.25 318 ⇑P P **10 37 10.1 -2.3**
baz=33,SNR=5.6
C16A Fuhringer Ranc 33.29 339 ⇑P pP 10 37 45.9 +0.2
baz=33
MSO Missoula 33.30 335 *e*P P **10 37 13.0 +0.2**
comp=Z,21nm,1.3s,mb4.7
MSO *e*pP pP 10 37 48.8 +3.0
MSO *e*sP sP 10 38 06.4 +2.7
MSO *e*PcP PcP 10 39 51.5 +0.3
WDC Whiskeytown Da 33.32 319 ⇓P P **10 37 11.0 -2.0**
baz=33,SNR=5.2
WDC Whiskeytown Da 33.32 319 *e*P P **10 37 11.2 -1.8**
K06A Valley Falls 33.34 324 ⇓P P **10 37 12.0 -1.1**
baz=33,SNR=9.8
M03C McCloud 33.47 321 ⇑P P **10 37 13.9 -0.5**
baz=34,SNR=5.7
G10A Bishop Farm, J 33.48 330 ⇓P P **10 37 14.0 -0.4**
baz=34,SNR=19
G10A ⇓P pP 10 37 47.7 +0.3
baz=34,SNR=5.9
KCPM Cahto Peak 33.49 317 *e*P P **10 37 15.5 +1.0**
KCPM *e*PcP PcP 10 39 52.8 +0.9
KIPM Iron Peak 33.49 317 *e*P P **10 37 15.4 +0.9**
KIPM *e*PcP PcP 10 39 53.1 +1.2
F11A Grangeville 33.49 332 ⇓P P **10 37 12.7 -1.7**
baz=34,SNR=7.3
C15A Salmond Ranch, 33.58 338 ⇑P P **10 37 15.1 -0.1**
baz=34,SNR=9.0
J06A Christmas Vall 33.58 325 ⇓P P **10 37 14.4 -0.9**
baz=34,SNR=9.8
M04C Macdoel 33.61 322 ⇑P P **10 37 15.4 -0.2**
baz=34,SNR=39
E12A Beaver Dam Sad 33.64 333 ⇓P P **10 37 15.0 -0.7**
baz=34,SNR=12
H08A Prairie City 33.67 328 ⇑P P **10 37 15.4 -0.6**
baz=34,SNR=12
D13A Huson 33.72 335 ⇓P P **10 37 15.9 -0.6**
baz=34,SNR=15
G09A Cove 33.78 330 ⇓P P **10 37 16.1 -0.8**
baz=34,SNR=22
I07A Izee 33.80 327 ⇓P P **10 37 16.4 -0.7**
baz=34,SNR=9.1
I07A ⇓P pP 10 37 51.4 +1.2
baz=34,SNR=6.7
E11A Bogner Ranch, 33.87 333 ⇑P P **10 37 17.1 -0.7**
baz=34,SNR=9.0
L04A Klamath Falls 33.88 322 ⇓P P **10 37 17.3 -0.6**
baz=34,SNR=9.2
O01C Eel River Cons 33.88 318 ⇑P P **10 37 18.5 +0.6**
baz=34,SNR=11
N02C Big Bar 33.94 319 ⇑P P **10 37 17.0 -1.4**
baz=34,SNR=12
M02C Callahan 33.98 320 ⇑P P **10 37 17.0 -1.8**
baz=34
B15A Bradely Ranch, 34.01 338 ⇑P P **10 37 18.3 -0.6**
baz=34
F10A Beach Ranch, E 34.04 331 ⇓P P **10 37 18.7 -0.5**
baz=34,SNR=28
D12A Red Ives Fores 34.05 334 ⇓P P **10 37 18.6 -0.7**
baz=34
D12A ⇑P pP 10 37 51.3 -1.1
baz=34
I06A Prineville 34.08 326 ⇑P P **10 37 19.0 -0.5**
baz=34,SNR=7.4
YBH Yreka Blue Hor 34.10 321 P P **10 37 17.8 -2.0**
comp=Z,3.7nm,0.9s,mb4.1,baz=107,slow=6.3,SNR=17
YBH pP pP 10 37 52.9 0.0
comp=Z,5.5nm,0.7s,baz=87,slow=6.5,SNR=8.7
YBH PcP PcP 10 39 52.5 -1.2
comp=Z,2.6nm,0.8s,baz=82,slow=4.2,SNR=3.8
YBH LR LR 10 53 00.1
comp=Z,151nm,19.6s,baz=138,slow=39
YBH Yreka Blue Hor 34.10 321 *e*P P **10 37 18.0 -1.8**
YBH *e**PP pP 10 37 54.0 +1.1
YBH *e* 10 39 52.9
YBH pmax pmax
comp=Z,5.0nm,0.8s
YBH Yreka Blue Hor 34.10 321 ⇓P P **10 37 17.9 -1.9**
baz=34,SNR=8.2
YBH ⇓P pP 10 37 52.8 0.0
baz=34,SNR=5.4
YBH Yreka Blue Hor 34.10 321 *e*P P **10 37 18.0 -1.7**
comp=Z,5.5nm,0.8s,mb4.3
YBH *e*pP pP 10 37 54.0 +1.1
YBH *e*PcP PcP 10 39 52.9 -0.7
NNA Nana 34.16 148 P P **10 37 21.1 +0.5**
comp=Z,55nm,1.2s,mb5.2,baz=320,slow=7.1,SNR=5.4
F09A S2 Ranch, Elgi 34.16 330 ⇓P P **10 37 19.5 -0.7**
baz=34,SNR=14
F09A ⇓P pP 10 37 53.9 +0.6
baz=34,SNR=8.5
H07A Lands Inn, Kim 34.18 327 ⇑P P **10 37 19.6 -0.8**
baz=34,SNR=22
H07A ⇑P pP 10 37 55.3 +1.8
baz=34,SNR=8.7
J05A Fort Rock 34.20 324 ⇓P P **10 37 19.3 -1.3**
baz=34,SNR=7.5
G08A Pilot Rock 34.37 329 ⇓P P **10 37 21.6 -0.4**
baz=34
E10A Myers Farm, Un 34.37 332 ⇑P P **10 37 21.2 -0.8**
baz=34
JCC Jacoby Creek 34.39 318 ⇑P P **10 37 22.7 +0.4**
baz=34,SNR=6.3
LNOR Lincton Mounta 34.46 330 *e*P P **10 37 25.2 +2.4**
LNOR *e**PP pP 10 37 57.4 +1.4
D11A Klaveano Farm, 34.46 333 ⇓P P **10 37 22.1 -0.7**
baz=34
D11A ⇓P pP 10 37 55.3 -0.7
baz=34
C12B Naegeli Ranch, 34.62 335 ⇑P P **10 37 23.7 -0.5**
baz=35,SNR=10
J04A Umpqua Nationa 34.67 323 ⇓P P **10 37 23.7 -1.0**
baz=35,SNR=15
H06A Lindquist Farm 34.68 327 ⇓P P **10 37 24.1 -0.6**
baz=35,SNR=7.6
G07A Ruggs Ranch, H 34.70 328 ⇑P P **10 37 24.1 -0.8**
baz=35
B13A Whitefish 34.77 336 ⇑P P **10 37 24.5 -0.9**
baz=35,SNR=16
I05A Bend 34.79 325 ⇑P P **10 37 24.7 -1.0**
baz=35,SNR=14
I05A ⇓P pP 10 37 59.0 +0.1
baz=35,SNR=5.7
E09A Wood Farm, Sta 34.87 331 P P **10 37 25.3 -1.0**
baz=35,SNR=6.0
A14A Double T Ranch 34.88 338 ⇓P P **10 37 26.7 +0.4**
baz=35,SNR=16
A14A ⇓P pP 10 37 60.0 +0.4
baz=35,SNR=9.5
D10A Wagner Farm, O 34.88 332 ⇓P P **10 37 25.6 -0.8**
baz=35
L02A Cave Junction 34.88 321 ⇑P P **10 37 25.1 -1.5**
baz=35
M01C Crescent City 35.02 320 ⇑P P **10 37 26.8 -0.9**
baz=35,SNR=6.2
C11A Tepee Creek (N 35.05 334 ⇑P P **10 37 27.3 -0.6**
baz=35,SNR=11
WALA Waterton Lakes 35.13 338 *e*P P **10 37 29.2 +0.7**
WALA *e*pP pP 10 38 02.8 +1.0
K02A Glendale 35.18 322 ⇑P P **10 37 27.5 -1.6**
baz=35
I04A Tendick Farm, 35.19 324 ⇓P P **10 37 28.6 -0.5**
baz=35,SNR=5.7
B12A Libby 35.28 335 ⇓P P **10 37 29.2 -0.6**
baz=35,SNR=11
KBO Bosley Butte 35.30 320 *e*P P **10 37 31.1 +1.0**
KBO *e*pP pP 10 38 04.1 +0.8
D09A Jones Farm, Ri 35.35 331 ⇑P pP 10 38 04.1 +0.4
baz=35,SNR=5.6
HAWA Hanford 35.43 330 *e*P P **10 37 31.1 0.0**
comp=Z,8.8nm,1.0s,mb4.3
C10A Spiker Farm, 35.48 333 ⇓P P **10 37 31.2 -0.3**
baz=36
G05A Wamic 35.53 327 ⇑P P **10 37 32.3 +0.2**
baz=36,SNR=6.7
B11A Sandpoint 35.57 335 ⇑P P **10 37 31.8 -0.4**
baz=36,SNR=6.4
J02A Umpqua 35.59 322 ⇓P P **10 37 31.9 -0.6**
baz=36,SNR=10
F06A Goldendale 35.61 328 ⇑P P **10 37 32.3 -0.4**
baz=36,SNR=6.3
D08A Wollman Farm, 35.63 331 ⇓P pP 10 38 06.4 +0.3
baz=36,SNR=6.7
H04A Detroit Lake 35.63 325 ⇓P P **10 37 32.0 -0.8**
baz=36,SNR=33
A12A Yaak River Ran 35.68 336 ⇓P P **10 37 32.7 -0.6**
baz=36,SNR=6.7
KEBM Edson Butte 35.74 321 *e*P P **10 37 34.6 +0.8**
KEBM *e*pP pP 10 38 09.1 +1.9
NEW Newport 35.74 334 ⇑*i*P P **10 37 33.8 0.0**
NEW *e**PP pP 10 38 08.3 +1.2
NEW *e* 10 39 57.7
NEW pmax pmax
comp=Z,11nm,0.9s
NEW Newport 35.74 334 ⇑*i*P P **10 37 33.8 0.0**
comp=Z,11nm,0.9s,mb4.5
NEW *e*pP pP 10 38 08.3 +1.2
NEW *e*PcP PcP 10 39 57.7 -0.6
OD2 Odessa Site #2 35.78 331 *e*P P **10 37 34.6 +0.6**
OD2 *e*pP pP 10 38 09.6 +2.2
OD2 *e*PcP PcP 10 39 58.1 -0.3
I03A Eugene 35.79 323 ⇓P P **10 37 33.7 -0.5**
baz=36,SNR=25
I03A ⇓P pP 10 38 07.3 -0.3
baz=36,SNR=7.1
K01A Sixes 35.79 321 ⇑P P **10 37 33.5 -0.7**
baz=36,SNR=9.0
C09A Chrisman Ranch 35.89 332 ⇑P P **10 37 34.5 -0.5**
baz=36,SNR=10
A11A Hall Mountain, 35.98 335 ⇑P P **10 37 35.4 -0.4**
baz=36,SNR=21
F05A White Salmon 36.04 327 ⇓P P **10 37 35.3 -1.1**
baz=36,SNR=10
F05A ⇓P pP 10 38 10.0 +0.3
baz=36,SNR=5.4
I02A Mapleton 36.12 323 ⇑P P **10 37 36.2 -0.8**
baz=36,SNR=6.5
I02A ⇓P pP 10 38 11.3 +0.9
baz=36
G04A Mulino 36.12 326 ⇑P P **10 37 36.1 -0.9**
baz=36,SNR=8.3
G04A ⇑P pP 10 38 11.5 +1.0
baz=36,SNR=7.7
COR Corvallis 36.18 324 *e*P P **10 37 37.6 0.0**
COR *e*SP 10 38 12.3
COR *e**SP sP 10 38 30.1 +1.4
COR pmax pmax
comp=Z,33nm,1.0s,mb4.9
COR Corvallis 36.18 324 *e*P P **10 37 37.6 +0.1**
comp=Z,33nm,1.0s,mb4.9
COR *e*SP 10 38 12.3
COR *e*sP sP 10 38 30.1 +1.4
D07A Quincy 36.22 330 ⇓P P **10 37 36.9 -1.0**
baz=36
D07A ⇑P pP 10 38 12.6 +1.3
baz=36,SNR=5.2
C08A Higginbotham F 36.22 332 ⇓P P **10 37 37.1 -0.8**
baz=36,SNR=19
C08A ⇑P pP 10 38 12.6 +1.4
baz=36,SNR=6.5
H03A Soap Creek Ran 36.23 324 P P **10 37 37.7 -0.3**
baz=36,SNR=15
E06A Yakima 36.25 329 ⇑P P **10 37 38.0 -0.1**
baz=36,SNR=14
E06A ⇑P pP 10 38 12.3 +0.8
baz=36,SNR=6.8
B09A Rice 36.30 333 ⇓P P **10 37 38.0 -0.6**
baz=36,SNR=20
B09A ⇑P pP 10 38 09.1 -2.8
baz=36,SNR=8.0
C07A Waterville 36.62 331 ⇑P P **10 37 40.6 -0.6**
baz=37
G03A Yamhill 36.63 325 ⇓P P **10 37 41.3 -0.1**
baz=37,SNR=24
G03A ⇓P pP 10 38 13.8 -1.0
baz=37,SNR=7.4
D06A Cle Elum 36.64 329 ⇑P P **10 37 41.3 0.0**
baz=37,SNR=5.4
D06A ⇑P pP 10 38 15.9 +1.0
baz=37,SNR=6.3
E05A Randle 36.65 328 ⇓P P **10 37 40.4 -1.1**
baz=37,SNR=28
E05A ⇑P pP 10 38 16.1 +1.2
baz=37,SNR=12
ETW Entiat 36.68 330 ⇑*i*P P **10 37 42.1 +0.3**
ETW *e*pP pP 10 38 17.7 +2.5
ETW *e*sP sP 10 38 35.2 +2.2
LON Longmire 36.81 328 ⇓*i*P P **10 37 42.7 -0.1**
LON *e**PP pP 10 38 18.4 +2.1
LON pmax pmax
comp=Z,24nm,1.3s,mb4.7
LON Longmire 36.81 328 ⇓*i*P P **10 37 42.7 -0.1**
comp=Z,24nm,1.3s,mb4.7
LON *e*pP pP 10 38 18.4 +2.1
HEBO Mount Hebo 36.82 325 *e*P P **10 37 43.8 +0.8**
comp=Z,82nm,1.6s,mb5.1
HEBO *e*pP pP 10 38 19.3 +2.9
HEBO *e*sP sP 10 38 35.9 +1.7
A09A Danville 36.91 333 ⇑P P **10 37 41.8 -1.9**
baz=37
E04A Onalaska 37.16 327 ⇓P P **10 37 45.2 -0.6**
baz=37,SNR=7.4
F03A Seaside 37.17 326 ⇓P P **10 37 45.2 -0.7**
baz=37,SNR=10
F03A ⇓P pP 10 38 19.6 +0.2
baz=37,SNR=5.0
A08A Turner Farm, O 37.19 333 ⇑P P **10 37 45.5 -0.5**
baz=37
D05A Enumclaw 37.20 329 ⇑P P **10 37 45.7 -0.4**
baz=37,SNR=9.0
D05A ⇑P pP 10 38 19.6 0.0
baz=37,SNR=5.6
B07A Winthrop 37.21 332 ⇓P P **10 37 45.6 -0.6**
baz=37
C05A Tolt Reservoir 37.40 329 ⇓P P **10 37 46.7 -1.1**
baz=37
C05A ⇑P pP 10 38 21.4 0.0
baz=37
FFC Flin Flon 37.51 353 P P **10 37 48.0 -0.6**
comp=Z,264nm,0.5s,mb6.1,SNR=11
FFC Flin Flon 37.51 353 *e*P P **10 37 48.2 -0.4**
FFC *e**SP sP 10 38 40.8 +0.9
FFC pmax pmax
comp=Z,24nm,0.6s,mb5.0
FFC Flin Flon 37.51 353 *e*P P **10 37 48.2 -0.3**
comp=Z,24nm,0.6s,mb5.0
FFC *e*pP pP 10 38 25.9 +3.7
FFC *e*sP sP 10 38 40.8 +0.9
E03A Lebam 37.57 327 ⇓P P **10 37 49.2 -0.1**
baz=38,SNR=14
E03A ⇑P pP 10 38 24.1 +1.3
baz=38
A07A Ashnola River, 37.76 332 ⇓P P **10 37 51.4 +0.6**
baz=38,SNR=8.4
A07A ⇓P pP 10 38 22.3 -2.1
baz=38
RPW Rockport 37.84 330 *e*P P **10 37 50.6 -0.9**
RPW *e*pP pP 10 38 26.5 +1.4
JCW Jim Creek 37.86 330 *e*P P **10 37 50.5 -1.2**
JCW *e*pP pP 10 38 26.0 +0.7
GNW Green Mountain 37.87 328 *e*P P **10 37 50.5 -1.2**
comp=Z,27nm,1.0s,mb4.8
GNW *e*pP pP 10 38 26.2 +0.8
B05A Bryant 37.99 330 ⇑P P **10 37 51.4 -1.4**
baz=38
C04A Brinnon 38.04 328 ⇑P P **10 37 52.4 -0.8**
baz=38,SNR=5.5
C04A ⇓P pP 10 38 26.0 -0.9
baz=38,SNR=5.4
D03A Wishkah Elem. 38.05 327 ⇑P P **10 37 52.6 -0.7**
baz=38,SNR=8.0
NLWA Neilton Lookou 38.28 327 ⇑P P **10 37 54.9 -0.3**
baz=38,SNR=17
NLWA ⇑P pP 10 38 29.7 +0.9
baz=38,SNR=6.4
NLWA Neilton Lookou 38.28 327 ⇓*i*P P **10 37 55.3 +0.1**
comp=Z,44nm,1.1s,mb5.0
NLWA *e*pP pP 10 38 30.6 +1.7
NLWA *e*sP sP 10 38 49.4 +2.8
A06A Chilliwack 38.29 331 ⇑P P **10 37 54.5 -0.8**
baz=38,SNR=5.5
EDM Edmonton 38.49 342 *e*P P **10 37 56.5 -0.4**
A05A Maple Falls 38.50 331 ⇑P P **10 37 56.0 -0.9**
baz=38,SNR=5.2
PGC Sidney 38.91 329 ⇓*i*P P **10 37 59.8 -0.6**
comp=Z,73nm,1.0s,mb5.3
PGC *e*pP pP 10 38 33.9 -0.3
LPAZ La Paz 42.50 141 P P **10 38 30.4 +0.2**
comp=Z,27nm,0.8s,mb4.9,baz=331,slow=7.4,SNR=104
LPAZ La Paz 42.50 141 P P **10 38 30.4 +0.2**
SCHQ Schefferville 42.77 23 P P **10 38 30.1 -1.8**
comp=Z,19nm,0.8s,mb4.8,baz=222,slow=6.5,SNR=12
SCHQ pP pP 10 39 04.5 -1.7
comp=Z,19nm,0.9s,baz=244,slow=6.3,SNR=5.0
SCHQ LR LR 10 59 16.5
comp=Z,415nm,19.4s,baz=273,slow=40
SIV San Ignacio 46.86 134 P P **10 39 03.8 -1.0**
comp=Z,74nm,0.9s,mb5.3,baz=318,slow=9.4,SNR=154
SIV pP pP 10 39 36.9 -2.7
comp=Z,10nm,0.8s,baz=341,slow=11,SNR=2.3
SIV sP sP 10 39 53.2 -3.8
comp=Z,9.4nm,0.6s,baz=282,slow=6.5,SNR=2.8
YKA Yellowknife Ar 47.01 347 P P **10 39 04.5 -0.8**
comp=Z,7.0nm,0.5s,mb4.5,baz=151,slow=7.4,SNR=20
YKA pP pP 10 39 38.8 -1.4
comp=Z,13nm,0.8s,baz=152,slow=7.4,SNR=7.2
YKA sP sP 10 39 53.5 -4.0
comp=Z,12nm,0.8s,baz=151,slow=7.5,SNR=3.5
YKA Yellowknife Ar 47.01 347 P P **10 39 04.5 -0.8**
YKA pP pP 10 39 38.8 -1.4
YKA sP sP 10 39 53.5 -4.0
LVC Limon Verde 47.13 147 P P **10 39 07.5 +0.8**
comp=Z,21nm,0.8s,mb4.8,baz=301,slow=7.0,SNR=23
LVC Limon Verde 47.13 147 ⇓*i*P P **10 39 07.5 +0.7**
comp=Z,13nm,0.7s,mb4.7
DLBC Dease Lake 48.42 336 ⇓*i*P P **10 39 17.9 +1.7**
DLBC *e*pP pP 10 39 53.0 +1.7
DLBC *e*sP sP 10 40 09.6 +0.9
LCO Las Campanas 51.71 153 ⇓*i*P P **10 39 41.7 +0.4**
LCO Las Campanas 51.71 153 ⇓*i*P P **10 39 41.6 +0.2**
comp=Z,90nm,1.0s,mb5.3
TLL Tololo Astrono 52.67 154 ⇓*i*P P **10 39 49.0 +0.6**
CFAA Coronel Fontan 55.01 153 P P **10 40 05.4 0.0**
comp=Z,4.0nm,0.9s,mb4.2,baz=329,slow=6.5,SNR=67
CFAA pP pP 10 40 38.3 -3.0
comp=Z,1.7nm,0.7s,baz=336,slow=5.7,SNR=4.6
CFAA sP sP 10 40 53.3 -5.1
comp=Z,1.9nm,0.8s,baz=318,slow=9.4,SNR=4.3
DAWY Dawson 55.48 338 *e*P P **10 40 08.1 -0.2**
DAWY *e*pP pP 10 40 44.4 +0.1
CLCH Cerro Calan 55.61 156 ⇓*i*P P **10 40 09.8 +0.1**
FCH Farellones 55.65 155 ⇓*i*P P **10 40 10.0 +0.1**
BMRM Bremner River 55.91 333 *e*P P **10 40 12.4 +0.9**
LMEL Las Melosas 56.14 156 ⇓*i*P P **10 40 13.8 +0.4**
BDFB Brasilia 56.44 123 P P **10 40 15.9 0.0**
comp=Z,18nm,0.9s,mb4.9,baz=299,slow=8.0,SNR=22
BDFB LR LR 11 06 07.3
comp=Z,139nm,19.0s,baz=147,slow=38
CPUP Villa Florida 56.64 140 P P **10 40 15.5 -1.6**

comp=Z,9.5nm,0.8s,mb4.7,baz=306,slow=7.4,SNR=20
PMR Palmer 58.16 333 *eP* **P 10 40 26.9 -0.3**
PMR pmax pmax
comp=Z,49nm,1.5s,mb5.1
PMR Palmer 58.16 333 *eP* **P 10 40 26.9 -0.3**
comp=Z,49nm,1.5s,mb5.1
MCK McKinley 58.96 335 *eP* **P 10 40 32.7 -0.1**
MCK *e*PP pP 10 41 08.5 -0.6
MCK pmax pmax
comp=Z,10µm,0.9s
MCK McKinley 58.96 335 *eP* **P 10 40 32.7 0.0**
comp=Z,17µm,0.9s
MCK *ep*P pP 10 41 08.5 -0.6
CHUM Lake Minchumin 60.40 334⇑ *eP* **P 10 40 42.2 -0.4**
comp=Z,16nm,0.9s,mb4.8
SVW2 Sparrevohn 60.90 331 *eP* **P 10 40 44.6 -1.4**
COLD Coldfoot 60.94 338 *eP* **P 10 40 46.5 +0.3**
comp=Z,22nm,0.9s,mb5.0
COLD *ep*P pP 10 41 22.4 -0.3
IMA2 Indian Mountai 61.75 337 *eP* **P 10 40 51.3 -0.4**
IMA2 *ep*P pP 10 41 27.2 -1.1
PLCA Paso Flores 62.14 160 P **P 10 40 54.2 -0.3**
comp=Z,54nm,0.9s,mb5.4,baz=330,slow=8.1,SNR=103
PLCA pP pP 10 41 28.7 -2.6
comp=Z,16nm,0.9s,baz=347,slow=8.5,SNR=3.9
PLCA LR LR 11 03 56.8
comp=Z,68nm,18.9s,baz=91,slow=32
PLCA Paso Flores 62.14 160 P **P 10 40 54.3 -0.2**
PLCA *PP pP 10 41 28.7 -2.6
PLCA Paso Flores 62.14 160 P **P 10 40 54.2 -0.3**
PLCA pP pP 10 41 28.7 -2.6
PLCA LR LR 11 03 56.8
BORG Borgarnes 67.03 26 LR LR 11 07 52.0
comp=Z,217nm,21.4s,baz=274,slow=33
JMIC Jan Mayen 72.18 20 LR LR 11 18 11.7
comp=Z,182nm,19.6s,baz=74,slow=39
AMKA Amchitka 74.14 319 *eP* **P 10 42 08.4 -0.9**
comp=Z,42nm,1.1s,mb5.1
DCN Croghan 74.42 38 *eP* **P 10 42 09.6 -1.3**
KPL Plockton 74.73 34 *eP* **P 10 42 11.7 -0.9**
KPL AMb AMB 10 42 12.2
comp=Z,57nm,1.0s,mb5.1
DLF Lyons Farm 74.86 38 *eP* **P 10 42 11.3 -2.2**
MDO Dochfour 75.41 34 *eP* **P 10 42 15.4 -1.1**
EAB Aberfoyle 75.63 35 *eP* **P 10 42 16.6 -1.2**
GAL1 Galloway 75.66 37 *eP* **P 10 42 15.8 -2.2**
GAL1 AMb AMB 10 42 17.1
comp=Z,50nm,1.4s,mb5.0
MCD Coleburn Disti 75.97 34 *eP* **P 10 42 18.8 -0.9**
PTEO Sao Teotonio 76.18 55 *eP* **P 10 42 21.3 0.0**
comp=Z,62nm,1.8s,mb4.9
PVIS Viseu 76.19 51 *eP* **P 10 42 20.9 -0.3**
comp=Z,36nm,1.7s,mb4.7
MORF Marmelete 76.29 55 *eP* **P 10 42 22.2 +0.3**
comp=Z,20nm,1.1s,mb4.7
EDI Edinburgh 76.32 35 *eP* **P 10 42 20.9 -0.8**
EDI AMb AMB 10 42 21.7
comp=Z,53nm,0.9s,mb5.2
ERUA La Rua 76.41 50 P **P 10 42 21.6 -0.9**
ERUA pmax pmax
comp=Z,16nm,1.4s,mb4.5
ERUA La Rua 76.41 50 P **P 10 42 21.6 -0.9**
comp=Z,16nm,1.4s,mb4.5
ESK Eskdalemuir 76.43 36 P **P 10 42 21.0 -1.3**
comp=Z,217nm,0.9s,mb5.8,SNR=5.6
ESK Eskdalemuir 76.43 36 *eP* **P 10 42 21.5 -0.8**
ESK AMb AMB 10 42 22.7
comp=Z,51nm,1.5s,mb4.9
EBL Broad Law 76.43 36 *eP* **P 10 42 22.3 0.0**
ECK Cauldkaine Hil 76.50 36 *eP* **P 10 42 21.8 -0.9**
MTE Manteigas 76.51 52 *eP* **P 10 42 22.8 -0.3**
comp=Z,36nm,1.8s,mb4.7
HTL Hartland 76.51 41 *eP* **P 10 42 20.6 -2.2**
HTL AMb AMB 10 42 22.4
comp=Z,52nm,1.5s,mb4.9
EVO Evora 76.53 54⇑ *iP* **P 10 42 22.7 -0.6**
comp=Z,52nm,1.1s,mb4.8
EVO *e*MLR MLR
comp=Z,247nm,18.5s
EVO Evora 76.53 54 *eP* **P 10 42 23.0 -0.3**
comp=Z,28nm,1.6s,mb4.6
ESY Stoneypath 76.64 35 *eP* **P 10 42 22.6 -0.8**
MVO Moncorvo 76.74 51 *eP* **P 10 42 24.3 0.0**
comp=Z,34nm,1.5s,mb4.8
PBEJ Beja 76.75 54 *eP* **P 10 42 24.4 -0.1**
comp=Z,30nm,1.9s,mb4.6
ECAL Calabor 76.79 50 P **P 10 42 23.7 -0.9**
comp=Z,78nm,2.5s,mb4.9
PMRV Marv??o 76.82 53 *eP* **P 10 42 23.8 -1.1**
comp=Z,24nm,1.1s,mb4.7
PBDV Barranco-do-Ve 76.86 55 *eP* **P 10 42 25.4 +0.3**
comp=Z,36nm,1.5s,mb4.8
XSO Sourhope Farm 76.92 36 *eP* **P 10 42 24.7 -0.4**
PVAQ Vaqueiros 77.00 55 *eP* **P 10 42 25.5 -0.4**
comp=Z,20nm,1.2s,mb4.6
HTR Trewern Hill 77.04 39 *eP* **P 10 42 24.6 -1.2**
SPITS Spitsbergen Ar 77.05 11 LR LR 11 17 59.1
comp=Z,155nm,19.2s,baz=215,slow=37
XAL Allendale 77.08 36 *eP* **P 10 42 25.2 -0.7**
EGRO El Granado 77.15 55 P **P 10 42 25.9 -0.8**
comp=Z,54nm,2.7s,mb4.7
HLM1 Long Mynd 77.18 39 *eP* **P 10 42 25.6 -1.0**
MCH1 Michaelchurch 77.22 39 *eP* **P 10 42 24.7 -2.1**
MCH1 AMb AMB 10 42 26.3
comp=Z,46nm,1.4s,mb4.9
BILL Bilibino 77.26 338 *eP* **P 10 42 25.6 -1.1**
BILL *i* pP 10 43 03.9 -1.0
BILL pmax pmax
comp=Z,22nm,1.2s,mb4.7
PBAR Barrancos 77.36 54 *eP* **P 10 42 27.9 0.0**
comp=Z,29nm,1.6s,mb4.7
HGH Gray Hill 77.41 40 *eP* **P 10 42 26.9 -1.0**
LHO Holmfirth 77.56 38 *eP* **P 10 42 27.9 -0.8**
EMIN Mina Concepcio 77.73 54 P **P 10 42 29.6 -0.4**
comp=Z,87nm,3.0s
ROSF Rostrenen 77.83 43⇑ *iP* **P 10 42 30.1 -0.2**
comp=Z,25nm,1.0s,mb4.5
ROSF Rostrenen 77.83 43⇑ *iP* **P 10 42 30.1 -0.2**
ROSF pmax pmax
comp=Z,12nm,1.0s,mb4.5
ROSF Rostrenen 77.83 43⇑ *iP* **P 10 42 30.1 -0.2**
comp=Z,12nm,1.0s,mb4.5
QUIF Quistinic 78.00 43 *eP* **P 10 42 30.4 -0.8**
comp=Z,66nm,1.4s,mb4.8
QUIF *ep*P pP 10 43 07.7 -1.8
QUIF Quistinic 78.00 43 *eP* **P 10 42 30.4 -0.8**
QUIF *e*PP pP 10 43 07.7 -1.8
QUIF pmax pmax
comp=Z,33nm,1.4s,mb4.8
QUIF Quistinic 78.00 43 *eP* **P 10 42 30.4 -0.8**
comp=Z,33nm,1.4s,mb4.8
QUIF *ep*P pP 10 43 07.7 -1.8
SGMF Saint Gilles 78.32 43 *eP* **P 10 42 31.8 -1.2**
ESPR Espera 78.56 55 P **P 10 42 34.2 -0.3**
comp=Z,49nm,1.5s,mb4.9
EJIF Jimena Fronter 78.97 55 P **P 10 42 37.2 +0.4**
EJIF pmax pmax
comp=Z,15nm,1.0s,mb4.6
EJIF Jimena Fronter 78.97 55 P **P 10 42 37.2 +0.4**
comp=Z,15nm,1.0s,mb4.6
GUD Guadarrama 78.98 51 P **P 10 42 37.1 +0.4**
GUD pmax pmax
comp=Z,21nm,0.8s,mb4.8
GUD Guadarrama 78.98 51 P **P 10 42 37.1 +0.4**
comp=Z,21nm,0.8s,mb4.8
PAB San Pablo 79.09 52⇑ *iP* **P 10 42 37.4 0.0**
PAB *e*PP pP 10 43 14.8 -0.9
PAB pmax pmax
comp=Z,48nm,1.5s,mb4.9
PAB San Pablo 79.09 52⇑ *iP* **P 10 42 37.4 0.0**
comp=Z,48nm,1.5s,mb4.9
PAB *ep*P pP 10 43 14.8 -0.9
EADA Adamuz 79.25 53 P **P 10 42 38.0 -0.2**
comp=Z,45nm,1.2s,mb5.0
ESDC Sonseca Array 79.35 52 P **P 10 42 38.9 +0.1**
comp=Z,7.3nm,0.8s,mb4.3,baz=290,slow=5.3,SNR=35
ESDC pP pP 10 43 15.6 -1.6
comp=Z,4.0nm,0.8s,baz=293,slow=5.2,SNR=5.3
ESDC LR LR 11 15 12.0
comp=Z,82nm,18.4s,baz=260,slow=34
ESDC Sonseca Array 79.35 52 P **P 10 42 38.6 -0.2**
comp=Z,23nm,1.0s,mb4.8
GRR Gorron 79.39 43⇑ *iP* **P 10 42 38.0 -0.8**
comp=Z,23nm,0.8s,mb4.5
GRR Gorron 79.39 43⇑ *iP* **P 10 42 38.0 -0.8**
GRR pmax pmax
comp=Z,11nm,0.8s,mb4.5
GRR Gorron 79.39 43⇑ *iP* **P 10 42 38.0 -0.8**
comp=Z,11nm,0.8s,mb4.5
EMIJ Mijas 79.48 55 P **P 10 42 39.1 -0.5**
comp=Z,37nm,1.3s,mb4.8
FLN La Foliniere 79.54 42⇑ *iP* **P 10 42 39.1 -0.5**
FLN *ep*P pP 10 43 16.5 -1.5
FLN *e*MLR MLR
comp=Z,233nm,21.5s
FLN La Foliniere 79.54 42⇑ *iP* **P 10 42 39.1 -0.5**
FLN *ep*P pP 10 43 16.5 -1.5
FLN LR LR
comp=Z,230nm,21.5s
LDF La Druitiere 79.81 42 *eP* **P 10 42 40.4 -0.7**
comp=Z,23nm,1.0s,mb4.5
LDF La Druitiere 79.81 42 *eP* **P 10 42 40.4 -0.7**
LDF pmax pmax
comp=Z,11nm,1.0s,mb4.4
LDF La Druitiere 79.81 42 *eP* **P 10 42 40.4 -0.7**
comp=Z,11nm,1.0s,mb4.5
EBAN Banos Encina 79.85 53 P **P 10 42 41.3 -0.2**
EBAN pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
EBAN Banos Encina 79.85 53 P **P 10 42 41.3 -0.2**
comp=Z,6.0nm,0.6s,mb4.4
ERON Agron 80.12 54 P **P 10 42 43.3 +0.3**
comp=Z,4.3nm,1.0s,mb4.0
ECOG Cogollos-Vega 80.24 54 P **P 10 42 43.9 +0.2**
ECOG pmax pmax
comp=Z,30nm,0.9s,mb4.9
ECOG Cogollos-Vega 80.24 54 P **P 10 42 43.9 +0.3**
comp=Z,30nm,0.9s,mb4.9
MFF Saint Martin d 80.31 44 *eP* **P 10 42 42.9 -0.9**
comp=Z,24nm,1.2s,mb4.4
MFF Saint Martin d 80.31 44 *eP* **P 10 42 42.9 -0.9**
MFF pmax pmax
comp=Z,12nm,1.3s,mb4.4
MFF Saint Martin d 80.31 44 *eP* **P 10 42 42.9 -0.9**
comp=Z,12nm,1.3s,mb4.4
ETOR Torete 80.48 50 P **P 10 42 45.2 +0.4**
ETOR pmax pmax
comp=Z,12nm,1.3s,mb4.4
ETOR Torete 80.48 50 P **P 10 42 45.2 +0.3**
comp=Z,12nm,1.3s,mb4.4
SJPF Ste Jean 80.48 48 *eP* **P 10 42 44.6 -0.2**
comp=Z,59nm,1.4s,mb4.7
SJPF *ep*P pP 10 43 21.7 -1.6
SJPF Ste Jean 80.48 48 *eP* **P 10 42 44.6 -0.2**
SJPF *e*PP pP 10 43 21.7 -1.6
SJPF pmax pmax
comp=Z,29nm,1.4s,mb4.7
SJPF Ste Jean 80.48 48 *eP* **P 10 42 44.6 -0.2**
comp=Z,30nm,1.4s,mb4.7
SJPF *ep*P pP 10 43 21.7 -1.6
EQES Quesada 80.49 53 P **P 10 42 45.1 +0.1**
comp=Z,24nm,1.0s,mb4.8
MDT Midelt 80.54 59 LR LR 11 14 49.3
comp=Z,199nm,19.4s,baz=139,slow=33
EVIA Vianos 80.71 52 P **P 10 42 46.6 +0.5**
EVIA pmax pmax
comp=Z,34nm,1.0s,mb4.9
EVIA Vianos 80.71 52 P **P 10 42 46.6 +0.5**
comp=Z,34nm,1.0s,mb4.9
EHUE Huescar 80.85 53 P **P 10 42 47.3 +0.4**
EHUE pmax pmax
comp=Z,13nm,0.9s,mb4.6
EHUE Huescar 80.85 53 P **P 10 42 47.2 +0.4**
comp=Z,13nm,0.9s,mb4.5
EBER Berja 80.86 54 P **P 10 42 47.5 +0.5**
comp=Z,38nm,0.7s,mb5.1
ETSF Etsaut 81.01 48⇑ *iP* **P 10 42 47.4 -0.2**
comp=Z,12nm,0.8s,mb4.3
ETSF *ep*P pP 10 43 24.6 -1.5
ETSF Etsaut 81.01 48⇑ *iP* **P 10 42 47.4 -0.2**
ETSF *e*PP pP 10 43 24.6 -1.5
ETSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
ETSF Etsaut 81.01 48⇑ *iP* **P 10 42 47.4 -0.2**
comp=Z,6.1nm,0.8s,mb4.3
ETSF *ep*P pP 10 43 24.6 -1.5
LFF La Frestale 81.36 46 *eP* **P 10 42 48.6 -0.8**
comp=Z,28nm,0.9s,mb4.6
LFF *ep*P pP 10 43 26.0 -1.9
LFF La Frestale 81.36 46 *eP* **P 10 42 48.6 -0.8**
LFF *e*PP pP 10 43 26.0 -1.9
LFF pmax pmax
comp=Z,14nm,0.9s,mb4.6
LFF La Frestale 81.36 46 *eP* **P 10 42 48.6 -0.8**
comp=Z,14nm,0.9s,mb4.6
LFF *ep*P pP 10 43 26.0 -1.9
ETOB Tobarra 81.43 52 P **P 10 42 50.4 +0.5**
comp=Z,38nm,1.2s,mb4.9
EPF Esparros 81.61 48 *eP* **P 10 42 50.3 -0.5**
comp=Z,29nm,1.1s,mb4.5
EPF Esparros 81.61 48 *eP* **P 10 42 50.3 -0.5**
EPF pmax pmax
comp=Z,15nm,1.1s,mb4.5
EPF Esparros 81.61 48 *eP* **P 10 42 50.3 -0.5**
comp=Z,15nm,1.1s,mb4.5
RJF Les Rejaudoux 81.78 45⇑ *iP* **P 10 42 50.7 -0.9**
comp=Z,17nm,0.8s,mb4.4
RJF *e*MLR MLR
comp=Z,315nm,17.5s
RJF Les Rejaudoux 81.78 45⇑ *iP* **P 10 42 50.7 -0.9**
RJF pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
RJF MLR MLR
comp=Z,320nm,17.5s
RJF Les Rejaudoux 81.78 45⇑ *iP* **P 10 42 50.7 -0.9**
comp=Z,8.4nm,0.8s,mb4.4
RJF LR LR
comp=Z,320nm,17.5s
EMUR La Murta 81.88 53 P **P 10 42 52.3 0.0**
comp=Z,49nm,1.2s,mb5.0
HYF Humbligny 81.96 43 *eP* **P 10 42 52.0 -0.5**
TCF Toulx Ste Croi 81.97 44⇑ *iP* **P 10 42 51.6 -1.0**
comp=Z,11nm,0.9s,mb4.2
TCF *ep*P pP 10 43 29.0 -2.1
TCF Toulx Ste Croi 81.97 44⇑ *iP* **P 10 42 51.6 -1.0**
TCF *e*PP pP 10 43 29.0 -2.1
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
TCF Toulx Ste Croi 81.97 44⇑ *iP* **P 10 42 51.6 -1.0**
comp=Z,5.5nm,0.9s,mb4.2
TCF *ep*P pP 10 43 29.0 -2.1
UCC Uccle 81.98 39 P **P 10 42 51.5 -1.1**
comp=Z,36nm,1.6s,mb4.8
UCC AP pP 10 43 29.9 -1.3
SNF Seneffe 82.02 40 P **P 10 42 52.9 +0.1**
comp=Z,26nm,1.9s,mb4.5
SNF AP pP 10 43 29.9 -1.5
BAIF Baives 82.11 40 *eP* **P 10 42 52.7 -0.6**
comp=Z,9.0nm,0.8s,mb4.1
BAIF *ep*P pP 10 43 30.3 -1.6
BAIF Baives 82.11 40 *eP* **P 10 42 52.7 -0.6**
BAIF *e*PP pP 10 43 30.3 -1.6
BAIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
BAIF Baives 82.11 40 *eP* **P 10 42 52.7 -0.6**
comp=Z,4.5nm,0.8s,mb4.2
BAIF *ep*P pP 10 43 30.3 -1.6
NB2 NORSAR Subarra 82.12 28 P **P 10 42 53.5 +0.5**
comp=Z,7.7nm,0.8s,mb4.4,baz=292,slow=5.3
NOA NORSAR Array B 82.12 28 P **P 10 42 53.7 +0.7**
comp=Z,11nm,0.8s,mb4.5,baz=292,slow=5.3,SNR=28
NOA pP pP 10 43 30.9 -0.7
comp=Z,22nm,0.8s,baz=292,slow=5.2,SNR=13
NOA LR LR 11 17 14.1
comp=Z,171nm,19.8s,baz=115,slow=34
NOA NORSAR Array B 82.12 28 P **P 10 42 53.7 +0.7**
NOA *PP pP 10 43 30.9 -0.7
CAF Calviac 82.27 45⇑ *iP* **P 10 42 53.2 -0.9**
comp=Z,10.0nm,0.8s,mb4.2
CAF Calviac 82.27 45⇑ *iP* **P 10 42 53.2 -0.9**
CAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
CAF Calviac 82.27 45⇑ *iP* **P 10 42 53.2 -0.9**
comp=Z,5.0nm,0.8s,mb4.2
BGF Bois d'Agland 82.31 44⇑ *iP* **P 10 42 53.4 -0.9**
comp=Z,20nm,0.9s,mb4.5
BGF *ep*P pP 10 43 30.8 -2.1
BGF Bois d'Agland 82.31 44⇑ *iP* **P 10 42 53.4 -0.9**
BGF *e*PP pP 10 43 30.8 -2.1
BGF pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
BGF Bois d'Agland 82.31 44⇑ *iP* **P 10 42 53.4 -0.9**
comp=Z,10.0nm,0.9s,mb4.5
BGF *ep*P pP 10 43 30.8 -2.1
DOU Dourbes 82.34 40 P **P 10 42 54.2 -0.2**
comp=Z,16nm,1.4s,mb4.5
DOU AP pP 10 43 30.7 -2.4
GIVF Givet 82.48 40 *eP* **P 10 42 54.6 -0.5**
AVF Avril sur Loir 82.57 43⇑ *iP* **P 10 42 54.4 -1.3**
comp=Z,20nm,1.0s,mb4.5
AVF *ep*P pP 10 43 31.9 -2.4
AVF Avril sur Loir 82.57 43⇑ *iP* **P 10 42 54.4 -1.3**
AVF *e*PP pP 10 43 31.9 -2.4
AVF pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
AVF Avril sur Loir 82.57 43⇑ *iP* **P 10 42 54.4 -1.3**
comp=Z,10nm,1.0s,mb4.5
AVF *ep*P pP 10 43 31.9 -2.4
SSF Saint Saulge 82.59 43⇑ *iP* **P 10 42 54.6 -1.2**
comp=Z,14nm,0.9s,mb4.4
SSF Saint Saulge 82.59 43⇑ *iP* **P 10 42 54.6 -1.2**
SSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
SSF Saint Saulge 82.59 43⇑ *iP* **P 10 42 54.6 -1.2**
comp=Z,7.0nm,0.9s,mb4.4
AGO Saint Agoulin 82.65 44 *eP* **P** 10 43 32.9 -1.8
PYM Petit Puy Mans 82.66 44 *eP* **P** 10 43 32.9 -1.9
BCLA Clavier 82.67 39 P **P 10 42 55.8 -0.3**
comp=Z,30nm,1.6s,mb4.8
BCLA AP pP 10 43 33.6 -1.2
LOR Lormes 82.75 43⇑ *iP* **P 10 42 55.8 -0.8**
comp=Z,24nm,1.1s,mb4.5
LOR *ep*P pP 10 43 33.3 -2.0
LOR *e*MLR MLR
comp=Z,224nm,18.5s
LOR Lormes 82.75 43⇑ *iP* **P 10 42 55.8 -0.8**
LOR *e*PP pP 10 43 33.3 -2.0
LOR pmax pmax
comp=Z,12nm,1.1s,mb4.5
LOR MLR MLR
comp=Z,220nm,18.5s
LOR Lormes 82.75 43⇑ *iP* **P 10 42 55.8 -0.8**
comp=Z,12nm,1.1s,mb4.5
LOR *ep*P pP 10 43 33.3 -2.0
LOR LR LR
comp=Z,220nm,18.5s
MTLF Montolieu 82.84 47⇑ *iP* **P 10 42 56.5 -0.6**
comp=Z,10nm,0.9s,mb4.3
MTLF *ep*P pP 10 43 33.7 -2.1
MTLF Montolieu 82.84 47⇑ *iP* **P 10 42 56.5 -0.6**
MTLF *e*PP pP 10 43 33.7 -2.1
MTLF pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
MTLF Montolieu 82.84 47⇑ *iP* **P 10 42 56.5 -0.6**
comp=Z,5.2nm,0.9s,mb4.3
MTLF *ep*P pP 10 43 33.7 -2.1
SMF Signal de Mont 82.93 43⇑ *iP* **P 10 42 56.3 -1.3**
comp=Z,12nm,0.9s,mb4.3
SMF Signal de Mont 82.93 43⇑ *iP* **P 10 42 56.3 -1.3**
SMF pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
SMF Signal de Mont 82.93 43⇑ *iP* **P 10 42 56.3 -1.3**
comp=Z,6.2nm,0.9s,mb4.3
LBL Lubilhac 82.97 45 *eP* **P** 10 43 34.8 -1.7
MEM Membach 83.03 39 P **P 10 42 58.6 +0.6**
MEM AP pP 10 43 35.4 -1.2
MEZF Maizieres J'vi 83.13 41 *eP* **P 10 42 58.0 -0.5**
comp=Z,25nm,0.9s,mb4.7
MEZF *ep*P pP 10 43 35.5 -1.7
MEZF Maizieres J'vi 83.13 41 *eP* **P 10 42 58.0 -0.5**
comp=Z,25nm,0.9s,mb4.9
MEZF *ep*P pP 10 43 35.5 -1.7
WLF Walferdange 83.43 40 P **P 10 43 00.9 +0.8**
comp=Z,14nm,1.3s,mb4.5
WLF AP pP 10 43 36.9 -1.8
ARCES ARCESS Array B 83.47 18 P **P 10 43 00.0 +0.2**
comp=Z,5.5nm,0.6s,mb4.5,baz=292,slow=4.4,SNR=23
ARCES pP pP 10 43 36.7 -1.9
comp=Z,9.6nm,0.8s,baz=299,slow=5.0,SNR=4.9
ARCES ARCESS Array B 83.47 18 P **P 10 43 00.0 +0.2**
ARCES pP pP 10 43 36.7 -1.9
IBBN Ibbenburen 83.49 37 *eP* **P 10 43 00.6 +0.3**
comp=Z,106nm,1.8s,mb5.3
IBBN *ep*P pP 10 43 37.4 -1.6
BUG Bochum--Univer 83.51 38 *epP* pP 10 43 38.4 -0.7
LASF Ste Croix 83.75 46⇑ *iP* **P 10 43 01.6 -0.2**
comp=Z,44nm,1.3s,mb4.7
THEF They Montfort 83.81 41 *eP* **P** 10 43 38.9 -1.8
SSB Saint Sauveur 83.83 45 *eP* **P 10 43 02.4 +0.2**
SSB *e*PP pP 10 43 39.6 -1.3
VIVF Saint-Julien-l 84.05 45 *eP* **P 10 43 03.7 +0.4**
comp=Z,12nm,0.9s,mb4.3
VIVF *ep*P pP 10 43 40.7 -1.4
VIVF Saint-Julien-l 84.05 45 *eP* **P 10 43 03.7 +0.4**
VIVF *e*PP pP 10 43 40.7 -1.4
VIVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
VIVF Saint-Julien-l 84.05 45 *eP* **P 10 43 03.7 +0.4**
comp=Z,5.9nm,0.9s,mb4.3
VIVF *ep*P pP 10 43 40.7 -1.4
HAU Haudompre 84.11 42⇑ *iP* **P 10 43 03.0 -0.5**
comp=Z,10nm,0.6s,mb4.5
HAU *e*MLR MLR
comp=Z,121nm,17.5s
HAU Haudompre 84.11 42⇑ *iP* **P 10 43 03.0 -0.5**
HAU pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
HAU MLR MLR
comp=Z,120nm,17.5s
HAU Haudompre 84.11 42⇑ *iP* **P 10 43 03.0 -0.5**
comp=Z,5.3nm,0.6s,mb4.5
HAU LR LR
comp=Z,120nm,17.5s
BSEG Bad Segeberg 84.34 35 *eP* **P 10 43 04.9 +0.3**
BSEG *e*PP pP 10 43 42.6 -0.8
BSEG pmax pmax
comp=Z,31nm,1.0s,mb5.0
BSEG Bad Segeberg 84.34 35 *eP* **P 10 43 04.9 +0.3**
comp=Z,31nm,1.0s,mb5.0
BSEG *ep*P pP 10 43 42.6 -0.8
CABF La Chapelle 84.41 43 *eP* **P 10 43 04.7 -0.4**
CABF *ep*P pP 10 43 42.2 -1.7
HINF Hinteralfeld 84.49 42⇑ *iP* **P 10 43 04.7 -0.8**
comp=Z,15nm,1.1s,mb4.3
HINF Hinteralfeld 84.49 42⇑ *iP* **P 10 43 04.7 -0.8**
HINF pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
HINF Hinteralfeld 84.49 42⇑ *iP* **P 10 43 04.7 -0.8**
comp=Z,7.5nm,1.1s,mb4.3
ECH Echery 84.55 41 *eP* **P** 10 43 42.7 -1.8
ECH Echery 84.55 41 *eP* **P 10 43 05.8 +0.1**
ECH *e*PP pP 10 43 43.4 -1.1
CDF Champ du Feu 84.55 41⇑ *iP* **P 10 43 05.2 -0.6**
comp=Z,10nm,0.8s,mb4.3
CDF *ep*P pP 10 43 42.9 -1.7
CDF Champ du Feu 84.55 41⇑ *iP* **P 10 43 05.2 -0.6**
CDF *e*PP pP 10 43 42.9 -1.7
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
CDF Champ du Feu 84.55 41⇑ *iP* **P 10 43 05.2 -0.6**
comp=Z,5.2nm,0.8s,mb4.3
CDF *ep*P pP 10 43 42.9 -1.7
LOMF Lomont 84.64 42 *eP* **P** 10 43 43.4 -1.6
MOF Molkenrain 84.66 42 *eP* **P** 10 43 42.9 -2.2
LANF Langenberg 84.68 40 *eP* **P** 10 43 43.6 -1.6
ORIF Oris-en-Rattie 84.84 45⇑ *iP* **P 10 43 07.2 -0.1**
comp=Z,7.9nm,0.9s,mb4.2
ORIF *e*MLR MLR
comp=Z,205nm,19.0s
ORIF Oris-en-Rattie 84.84 45⇑ *iP* **P 10 43 07.2 -0.1**
ORIF pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
ORIF Oris-en-Rattie 84.84 45⇑ *iP* **P 10 43 07.2 -0.1**
comp=Z,4.0nm,0.9s,mb4.2
SMRF Simiane la Rot 84.95 46 *eP* **P 10 43 06.6 -1.2**
comp=Z,16nm,0.9s,mb4.5
SMRF Simiane la Rot 84.95 46 *eP* **P 10 43 06.6 -1.2**
comp=Z,16nm,0.9s,mb4.8
CLZ Clausthal 85.17 37 *eP* **P 10 43 09.4 +0.7**
CLZ *e*PP pP 10 43 46.5 -1.1
CLZ pmax pmax
comp=Z,66nm,1.7s,mb5.1
CLZ Clausthal 85.17 37 *eP* **P 10 43 09.4 +0.7**
comp=Z,66nm,1.7s,mb5.1
CLZ *ep*P pP 10 43 46.5 -1.1
LPL La Plagne 85.20 44 *eP* **P 10 43 09.5 +0.4**
LPG La Plagne 85.22 44 *eP* **P 10 43 09.9 +0.7**

LPG					*e*pP	pP	10 43 47.3	-0.7	
BFO	**Black Forest**	**85.24**	**41**	*e*P	**P**	**10 43 08.5**	**-0.7**		
BFO				*e**PP	pP	10 43 45.8	-2.3		
BFO				pmax	pmax				
	comp=Z,37nm,1.3s,mb5.0								
BFO	**Black Forest**	**85.24**	**41**	*e*P	**P**	**10 43 08.5**	**-0.7**		
	comp=Z,37nm,1.3s,mb5.0								
BFO				*e*pP	pP	10 43 45.8	-2.3		
BNI	**Bardonecchia**	**85.33**	**44**	*e*P	**P**	**10 43 10.6**	**+0.9**		
BNI				pmax	pmax				
	comp=Z,35nm,1.3s,mb4.9								
BNI	**Bardonecchia**	**85.33**	**44**	*e*P	**P**	**10 43 10.6**	**+0.9**		
	comp=Z,35nm,1.3s,mb4.9								
UBBA	**Unterbreizbach**	**85.34**	**38**	*e*P	**P**	**10 43 09.8**	**+0.2**		
	comp=Z,48nm,1.8s,mb4.9								
UBBA				*e*pP	pP	10 43 47.2	-1.3		
MBDF	**Montbardon**	**85.50**	**45**	⇑*i*P	**P**	**10 43 10.6**	**0.0**		
	comp=Z,9.4nm,0.8s,mb4.3								
MBDF				*e*pP	pP	10 43 48.2	-1.3		
MBDF	**Montbardon**	**85.50**	**45**	⇑*i*P	**P**	**10 43 10.6**	**0.0**		
MBDF				*e**PP	pP	10 43 48.2	-1.3		
MBDF				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.3								
MBDF	**Montbardon**	**85.50**	**45**	⇑*i*P	**P**	**10 43 10.6**	**0.0**		
	comp=Z,4.7nm,0.8s,mb4.3								
MBDF				*e*pP	pP	10 43 48.2	-1.3		
STU	**Stuttgart**	**85.61**	**40**	*e*P	**P**	**10 43 12.8**	**+1.8**		
	comp=Z,52nm,1.3s,mb5.1								
STU				*e*pP	pP	10 43 48.2	-1.7		
LMR	**La Mourre**	**85.81**	**46**	⇑*i*P	**P**	**10 43 11.7**	**-0.4**		
	comp=Z,28nm,0.9s,mb4.7								
LMR	**La Mourre**	**85.81**	**46**	⇑*i*P	**P**	**10 43 11.7**	**-0.4**		
LMR				pmax	pmax				
	comp=Z,14nm,0.9s,mb4.7								
LMR	**La Mourre**	**85.81**	**46**	⇑*i*P	**P**	**10 43 11.7**	**-0.4**		
	comp=Z,14nm,0.9s,mb4.7								
FRF	**La Foret Royal**	**85.82**	**46**	*e*P	**P**	**10 43 11.8**	**-0.4**		
	comp=Z,48nm,1.4s,mb4.7								
FRF				*e*pP	pP	10 43 49.3	-1.8		
FRF	**La Foret Royal**	**85.82**	**46**	*e*P	**P**	**10 43 11.8**	**-0.4**		
FRF				*e**PP	pP	10 43 49.3	-1.8		
FRF				pmax	pmax				
	comp=Z,24nm,1.4s,mb4.7								
FRF	**La Foret Royal**	**85.82**	**46**	*e*P	**P**	**10 43 11.8**	**-0.4**		
	comp=Z,24nm,1.4s,mb4.7								
FRF				*e*pP	pP	10 43 49.3	-1.8		
PET	**Petropavlovsk**	**85.87**	**325**	*e*P	**P**	**10 43 15.0**	**+2.8**		
PET				*e*S	S	10 53 34.4	+2.1		
PET				*e*SP		10 54 35.2			
PET				pmax	pmax				
	comp=Z,100nm,17.7s								
PET				MLR	MLR				
	comp=Z,100nm,16.0s								
CALN	**Calern**	**85.92**	**45**	*e*P	pP	10 43 49.7	-1.9		
MVIF	**Mont Vial**	**86.05**	**45**	*e*P	pP	10 43 50.4	-1.8		
TOUF	**Mont Tournerai**	**86.07**	**45**	*e*P	pP	10 43 50.4	-1.9		
LUCF	**Luceram**	**86.18**	**45**	*e*P	pP	10 43 50.4	-2.5		
AUTN	**L'Aution**	**86.20**	**45**	*e*P	pP	10 43 49.9	-3.1		
REVF	**Revere**	**86.25**	**45**	*e*P	pP	10 43 51.2	-2.0		
SBF	**Sospel**	**86.25**	**45**	*e*P	**P**	**10 43 13.9**	**-0.4**		
TIXI	**Tiksi**	**86.26**	**347**	*d i*P	**P**	**10 43 12.4**	**-1.4**		
TIXI				*e**PP	pP	10 43 51.1	-1.6		
TIXI				*e*S	S	10 53 21.9	-14		
TIXI				*e**SS	sS	10 54 35.6	-7.4		
TIXI				pmax	pmax				
	comp=Z,17nm,1.5s,mb4.5								
TIXI	**Tiksi**	**86.26**	**347**	⇓*i*P	**P**	**10 43 12.4**	**-1.4**		
	comp=Z,7.6nm,0.8s,mb4.5								
TIXI				*e*pP	pP	10 43 51.7	-1.0		
SAOF	**Saorge**	**86.29**	**45**	*e*P	pP	10 43 51.0	-2.4		
MOX	**Moxa**	**86.35**	**38**	*e*P	pP	10 43 52.6	-1.0		
	comp=Z,77nm,2.2s								
MOX	**Moxa**	**86.35**	**38**	*e*P	**P**	**10 43 15.4**	**+0.8**		
	comp=Z,35nm,1.5s,mb4.9								
MOX				*e*pP	pP	10 43 52.2	-1.4		
PETK	**Petropavlovsk-**	**86.36**	**325**	P	**P**	**10 43 12.7**	**-1.9**		
	comp=Z,14nm,1.0s,mb4.7,baz=87,slow=7.6,SNR=11								
PETK				pP	pP	10 43 50.5	-3.1		
	comp=Z,9.7nm,0.9s,baz=116,slow=6.8,SNR=4.7								
PETK				sP	sP	10 44 04.5	-5.5		
	comp=Z,13nm,0.9s,baz=60,slow=8.8,SNR=7.1								
GRA1	**Grafenberg Arr**	**86.49**	**39**	*e*P	**P**	**10 43 15.7**	**+0.4**		
	comp=Z,103nm,1.9s,mb5.2								
GRA1				*e*pP	pP	10 43 53.2	-1.1		
GRF	**Grafenberg Arr**	**86.49**	**39**	*e*P	**P**	**10 43 15.7**	**+0.4**		
GRF				*e**PP	pP	10 43 53.2	-1.1		
GRF				pmax	pmax				
	comp=Z,103nm,1.9s,mb5.2								
GRF	**Grafenberg Arr**	**86.49**	**39**	*e*P	**P**	**10 43 15.7**	**+0.4**		
GRF				*e**PP	pP	10 43 53.2	-1.1		
GRF				pmax	pmax				
	comp=Z,103nm,1.9s,mb5.2								
GRF	**Grafenberg Arr**	**86.49**	**39**	*e*P	**P**	**10 43 15.7**	**+0.4**		
	comp=Z,103nm,1.9s,mb5.2								
GRF				*e*pP	pP	10 43 53.2	-1.1		
TUE	**Stuetta**	**86.56**	**42**	*e*P	**P**	**10 43 17.1**	**+1.3**		
	comp=Z,43nm,1.5s,mb5.1								
TUE				*e*pP	pP	10 43 54.2	-0.5		
WERD	**Werda**	**86.83**	**38**	*e*pP	pP	10 43 54.3	-1.7		
GUNZ	**Gunzen**	**86.88**	**38**	*e*P	**P**	**10 43 17.5**	**+0.3**		
	comp=Z,26nm,1.3s,mb4.9								
GUNZ				*e*pP	pP	10 43 54.8	-1.4		
CLL	**Collm**	**86.89**	**37**	*e*P	**P**	**10 43 18.0**	**+0.8**		
CLL				*i* *PP	pP	10 43 55.2	-1.0		
CLL	**Collm**	**86.89**	**37**	*e*P	**P**	**10 43 18.2**	**+1.0**		
	comp=Z,18nm,1.3s,mb4.7								
CLL				*e*pP	pP	10 43 55.1	-1.1		
CLL	**Collm**	**86.89**	**37**	*e*P	**P**	**10 43 18.0**	**+0.8**		
CLL				*i* pP	pP	10 43 55.2	-1.0		
	comp=Z,51nm,1.9s								
CLL				*e*ScS	ScS	10 53 51.0	+1.6		
CLL				*ex*	x	11 01 54.0			
CLL	**Collm**	**86.89**	**37**	*e*P	**P**	**10 43 18.0**	**+0.8**		
CLL				*i* pP	pP	10 43 55.2	-1.0		
CLL				*s*	S	10 53 51.0	+8.8		
MANZ	**Manzenberg**	**86.90**	**38**	*e*P	**P**	**10 43 17.9**	**+0.6**		
MANZ				*e*pP	pP	10 43 55.0	-1.3		
TANN	**Tannenbergstha**	**86.94**	**38**	*e*P	**P**	**10 43 18.4**	**+0.9**		
	comp=Z,33nm,1.4s,mb5.0								
TANN				*e*pP	pP	10 43 55.3	-1.2		
WERN	**Wernitzgruen**	**86.94**	**38**	*e*pP	pP	10 43 55.6	-0.9		
NKC	**Novy Kostel**	**87.00**	**38**	*e*pP	pP	10 43 56.0	-0.8		
ROTZ	**Rotzenmuhle**	**87.05**	**38**	*e*pP	pP	10 43 55.3	-1.7		
FUR	**Furstenfeldbru**	**87.13**	**40**	*e*pP	pP	10 43 55.3	-2.2		
FBE	**Freiberg**	**87.25**	**37**	*e*P	**P**	**10 43 19.9**	**+0.9**		
	comp=Z,77nm,2.1s,mb5.2								
FBE				*e*pP	pP	10 43 56.7	-1.3		
TIC	**Toumodi**	**87.48**	**84**	*e*P	**P**	**10 43 20.4**	**-0.4**		
	comp=Z,9.8nm,0.2s,mb5.3								
LIC	**Lamto**	**87.60**	**84**	⇑*i*P	**P**	**10 43 21.4**	**0.0**		
	comp=Z,40nm,1.2s,mb4.8								
LIC				*e*MLR	MLR				
	comp=Z,140nm,22.2s								
LIC	**Lamto**	**87.60**	**84**	*e*P	**P**	**10 43 21.1**	**-0.3**		
	comp=Z,45nm,1.2s,mb5.2								
LIC	**Lamto**	**87.60**	**84**	⇑*i*P	**P**	**10 43 21.4**	**0.0**		
	comp=Z,20nm,1.2s,mb4.8								
LIC				LR	LR				
	comp=Z,70nm,22.3s								
BRG	**Berggiesshubel**	**87.61**	**37**	*e*pP	pP	10 43 59.6	-0.1		
BRG	**Berggiesshubel**	**87.61**	**37**	*e*P	pP	10 43 59.5	-0.3		
	comp=Z,36nm,1.7s								
DBIC	**Dimbokro**	**87.63**	**84**	P	**P**	**10 43 21.6**	**0.0**		
	comp=Z,3.0nm,0.5s,mb4.4,baz=267,slow=5.3,SNR=7.7								
DBIC				LR	LR	11 20 03.6			
	comp=Z,119nm,19.6s,baz=267,slow=34								
WET	**Wettzell**	**87.70**	**39**	*e*P	**P**	**10 43 22.0**	**+0.8**		
WET				*e**PP	pP	10 43 58.2	-2.1		
WET				pmax	pmax				
	comp=Z,18nm,1.2s,mb4.8								
WET	**Wettzell**	**87.70**	**39**	*e*P	**P**	**10 43 22.0**	**+0.8**		
	comp=Z,18nm,1.2s,mb4.8								
WET				*e*pP	pP	10 43 58.2	-2.1		
PGF	**Pioggiola**	**87.79**	**46**	⇑*i*P	**P**	**10 43 21.1**	**-0.6**		
	comp=Z,24nm,0.9s,mb4.7								
PGF				*e*pP	pP	10 43 58.6	-2.2		
PGF	**Pioggiola**	**87.79**	**46**	⇑*i*P	**P**	**10 43 21.1**	**-0.6**		
PGF				*e**PP	pP	10 43 58.6	-2.2		
PGF				pmax	pmax				
	comp=Z,12nm,0.9s,mb4.7								
PGF	**Pioggiola**	**87.79**	**46**	⇑*i*P	**P**	**10 43 21.1**	**-0.6**		
	comp=Z,12nm,0.9s,mb4.7								
PGF				*e*pP	pP	10 43 58.6	-2.2		
KIC	**Kosan Boka**	**87.83**	**84**	*e*P	**P**	**10 43 22.6**	**+0.1**		
	comp=Z,76nm,0.9s,mb5.5								
KHC	**Kasperske Hory**	**88.13**	**39**	*e*P	**P**	**10 43 22.6**	**-0.6**		
KHC	**Kasperske Hory**	**88.13**	**39**	*e*pP	pP	10 44 01.5	-0.8		
RJOB	**Jochberg**	**88.23**	**40**	*e*pP	pP	10 44 00.5	-2.3		
GEC2	**GERESS Array S**	**88.32**	**39**	*e*P	**P**	**10 43 25.3**	**+1.2**		
GEC2				*e**PP	pP	10 44 01.2	-2.0		
GEC2				pmax	pmax				
	comp=Z,77nm,2.6s,mb5.1								
GEC2	**GERESS Array S**	**88.32**	**39**	*e*P	**P**	**10 43 25.3**	**+1.2**		
	comp=Z,77nm,2.6s,mb5.1								
GEC2				*e*pP	pP	10 44 01.2	-2.0		
GERES	**GERESS Array B**	**88.32**	**39**	P	**P**	**10 43 24.4**	**+0.3**		
	comp=Z,1.6nm,0.8s,mb3.9,baz=302,slow=3.0,SNR=5.1								
GERES				pP	pP	10 44 01.2	-2.1		
	comp=Z,2.0nm,0.8s,baz=320,slow=3.5,SNR=5.4								
GERES				sP	sP	10 44 16.0	-3.5		
	comp=Z,2.2nm,0.8s,baz=342,slow=6.2,SNR=4.0								
PRU	**Pruhonice**	**88.33**	**38**	*e*P	pP	10 44 01.7	-1.5		
UPC	**Upice**	**88.95**	**37**	*e*P	pP	10 44 04.7	-1.5		
DPC	**Dobruska-Polom**	**89.20**	**37**	*e*pP	pP	10 44 05.6	-1.7		
KEST	**Kesra**	**90.59**	**52**	P	**P**	**10 43 35.9**	**+0.9**		
	comp=Z,3.0nm,0.9s,mb4.3,baz=325,slow=2.5,SNR=7.2								
KEST				pP	pP	10 44 12.2	-2.1		
	comp=Z,3.8nm,1.0s,baz=255,slow=5.1,SNR=4.4								
KEST				LR	LR	11 22 46.4			
	comp=Z,51nm,18.4s,baz=351,slow=34								
ZST	**Bratislava**	**90.64**	**38**	*e*pP	pP	10 44 13.0	-1.1		
MODS	**Modra-Piesok**	**90.66**	**38**	*e*pP	pP	10 44 12.9	-1.3		
VYHS	**Vyhne**	**91.52**	**38**	*e*pP	pP	10 44 16.5	-1.7		
TORD	**Torodi Ar. Bea**	**91.81**	**76**	P	**P**	**10 43 40.0**	**-1.0**		
	comp=Z,2.0nm,0.8s,mb4.2,baz=291,slow=4.4,SNR=11								
TORD				pP	pP	10 44 17.6	-2.6		
	comp=Z,0.9nm,0.9s,baz=304,slow=6.4,SNR=3.2								
TORD				PKKPbc	PKKPbc	11 00 57.6	-0.4		
	comp=Z,0.8nm,0.7s,baz=103,slow=2.1,SNR=5.2								
TORD				LR	LR	11 26 24.3			
	comp=Z,106nm,18.6s,baz=265,slow=36								
KECS	**Kecovo**	**92.48**	**37**	*e*pP	pP	10 44 21.2	-1.5		
CRVS	**Cervenica-Dubn**	**92.82**	**36**	*e*	pP	10 44 16.9	-7.4		
KOLS	**Kolonicke sedl**	**93.27**	**36**	*e*pP	pP	10 44 25.1	-1.2		
YAK	**Yakutsk**	**93.31**	**341**	*e*P	**P**	**10 43 47.2**	**+0.2**		
YAK				pmax	pmax				
	comp=Z,10.0nm,0.8s,mb5.0								
CUC	**Castrocucco**	**93.52**	**46**	⇑*i*P	**P**	**10 43 47.4**	**-1.0**		
	comp=Z,7.5nm,0.8s,mb4.9								
CUC				*e*pP	pP	10 44 25.6	-2.1		
AKASG	**Malin Array Be**	**95.99**	**32**	pP	pP	10 44 35.3	-3.5		
	comp=Z,0.9nm,0.4s,baz=304,slow=3.6,SNR=3.3								
OBN	**Obninsk**	**96.53**	**26**	*e*P	**P**	**10 44 02.5**	**+0.7**		
OBN				pmax	pmax				
	comp=Z,3.0nm,0.7s,mb4.7								
YSS	**Yuzh-Sakhalins**	**97.76**	**324**	*e*P	**P**	**10 44 06.8**	**-0.7**		
YSS				pmax	pmax				
	comp=Z,7.0nm,0.8s,mb5.1								
DZM	**Mont Dzumac**	**104.61**	**251**	*e*P	PKiKP	10 48 55.1	+1.4		
DZM				*e*S	PP	10 49 20.1	+20		
SONM	**Songino Array**	**112.24**	**345**	PKiKP	PKiKP	10 49 06.1	-1.2		
	comp=Z,0.6nm,0.8s,baz=114,slow=0.7,SNR=4.0								
SONM				PKKPbc	PKKPbc	10 59 56.5	-3.4		
	comp=Z,1.1nm,0.8s,baz=222,slow=3.5,SNR=5.3								
MKAR	**Makanchi Array**	**115.84**	**2**	PKP	PKPdf	10 49 12.7	-1.6		
	comp=Z,0.3nm,0.2s,baz=48,slow=1.8,SNR=5.1								
MKAR				pPKP	pPKPdf	10 49 50.5	-4.8		
	comp=Z,0.8nm,0.6s,baz=357,slow=2.4,SNR=2.8								
MKAR				PKKPbc	PKKPbc	10 59 44.0	-3.7		
	comp=Z,0.4nm,0.4s,baz=165,slow=5.0,SNR=4.3								
HHC	**Hu-ho-hao-te**	**117.03**	**338**	*e*PKP	PKPdf	10 49 11.0	-5.7		
HHC				XPKP		10 50 11.3			
HHC				PKS		10 52 46.8			
HHC				PP	PP				
	comp=Z,116nm,8.5s								
HHC				LR	LR				
	comp=N,275nm,18.8s								
HHC				LR	LR				
	comp=E,192nm,19.9s								
HHC				LR	LR				
	comp=Z,172nm,18.3s								
WMQ	**Urumqi**	**118.85**	**358**	*e*PKP	PKPdf	10 49 20.8	+0.6		
WMQ				XPKP		10 50 20.0			
WMQ				*e*PP	PP	10 50 46.0	+6.5		
WMQ				PKS		10 52 55.8			
WMQ				SKS	SKSdf	10 56 19.0	+1.2		
WMQ				PP	PP				
	comp=Z,167nm,4.0s								
WMQ				LR	LR				
	comp=N,285nm,20.8s								
WMQ				LR	LR				
	comp=E,252nm,28.4s								
WMQ				LR	LR				
	comp=Z,188nm,22.6s								
NJ2	**Nanjing**	**121.21**	**327**	*e*PKP	PKPdf	10 49 24.3	-0.7		
SYO	**Syowa Base**	**121.28**	**162**	⇑*eX*		10 49 20.8			
GTA	**Gaotai**	**121.74**	**347**	*e*PKP	PKPdf	10 49 24.8	-1.0		
GTA				XPKP		10 50 24.0			
GTA				PP	PP	10 50 59.3	-0.1		
GTA				SKS	SKSdf	10 56 20.5	-3.0		
GTA				PP	PP				
	comp=Z,211nm,5.1s								
GTA				LR	LR				
	comp=N,96nm,16.2s								
GTA				LR	LR				
	comp=E,155nm,16.8s								
GTA				LR	LR				
	comp=Z,166nm,17.4s								
CTA	**Charters Tower**	**122.77**	**257**	*e*PKP	PKPdf	10 49 26.7	-1.5		
	comp=Z,3.2nm,0.8s								
CTA	**Charters Tower**	**122.77**	**257**	PKP	PKPdf	10 49 27.1	-1.1		
	comp=Z,3.6nm,0.8s,baz=60,slow=5.1,SNR=6.1								
BOSA	**Boshof**	**123.97**	**113**	PKP	PKPdf	10 49 29.4	-0.9		
	comp=Z,15nm,0.8s,baz=328,slow=0.9,SNR=21								
BOSA				pPKP	pPKPdf	10 50 06.7	-4.7		
	comp=Z,5.4nm,0.8s,baz=255,slow=2.1,SNR=2.9								
STKA	**Stephens Creek**	**127.67**	**243**	*e*PKP	PKPdf	10 49 35.9	-1.4		
	comp=Z,11nm,0.8s								
STKA				*e*		10 50 13.9			
STKA	**Stephens Creek**	**127.67**	**243**	PKP	PKPdf	10 49 35.9	-1.4		
	comp=Z,14nm,0.8s,baz=64,slow=2.0,SNR=23								
STKA				pPKP	pPKPdf	10 50 14.3	-4.0		
	comp=Z,6.8nm,0.8s,baz=60,slow=1.6,SNR=5.4								
MAW	**Mawson**	**127.94**	**169**	*e*PKP	PKPdf	10 49 35.8	-0.9		
	comp=Z,12nm,0.9s								
MAW	**Mawson**	**127.94**	**169**	PKP	PKPdf	10 49 35.9	-0.8		
	comp=Z,13nm,0.8s,baz=217,slow=3.6,SNR=30								
MAW				pPKP	pPKPdf	10 50 14.0	-3.8		
	comp=Z,3.4nm,0.7s,baz=204,slow=9.6,SNR=3.0								
CD2	**Chengdu**	**128.69**	**340**	*e*PKP	PKPdf	10 49 38.5	-0.9		
CD2				XPKP		10 50 37.4			
CD2				PP	PP	10 51 49.5	+3.7		
CD2				PKS		10 53 13.8			
CD2				SKS	SKSdf	10 56 32.4	-4.4		
CD2				SKKS	SKKSac	10 58 23.6	-5.5		
CD2				SS	SS	11 08 48.9	-1.3		
CD2				PP	PP				
	comp=Z,150nm,10.2s								
WRA	**Warramunga Arr**	**133.87**	**259**	PKP	PKPdf	10 49 48.1	-1.2		
	comp=Z,3.7nm,0.7s,baz=84,slow=1.6,SNR=15								
WRA				pPKP	pPKPdf	10 50 27.2	-3.3		
	comp=Z,3.2nm,0.8s,baz=81,slow=2.4,SNR=4.0								
KMI	**Kunming**	**134.35**	**338**	PKP	PKPdf	10 49 48.6	-1.6		
KMI				APKP		10 50 29.8			
KMI				XPKP		10 50 48.3			
KMI				PP	PP	10 52 25.6	+3.3		
KMI				SS	SS	11 09 59.3	+0.1		
KMI				PP	PP				
	comp=Z,81nm,4.0s								
KMI				LR	LR				
	comp=N,118nm,23.9s								
KMI				LR	LR				
	comp=E,107nm,19.9s								
KMI				LR	LR				
	comp=Z,115nm,17.9s								
ASAR	**Alice Springs**	**134.51**	**254**	PKP	PKPdf	10 49 49.1	-1.4		
	comp=Z,4.6nm,0.9s,baz=104,slow=1.9,SNR=8.2								
ASAR				pPKP	pPKPdf	10 50 28.8	-2.8		
	comp=Z,3.0nm,0.7s,baz=100,slow=2.1,SNR=4.4								
CMAR	**Chiang Mai Arr**	**141.83**	**339**	PKhKP		10 49 58.0			
	comp=Z,3.2nm,0.7s,baz=331,slow=2.6,SNR=8.8								
CMAR				PKP	PKPdf	10 50 02.9	-1.2		
	comp=Z,2.6nm,0.6s,baz=326,slow=2.2,SNR=17								
CMAR				pPKP	pPKPdf	10 50 38.8	-6.4		
	comp=Z,1.7nm,0.6s,baz=338,slow=3.4,SNR=1.9								
CMAR	**Chiang Mai Arr**	**141.83**	**339**	PKP	PKPdf	10 50 02.9	-1.2		
CMAR				pPKP	pPKPdf	10 50 38.8	-6.4		
FITZ	**Fitzroy Crossi**	**141.89**	**263**	*e*PKP		10 49 57.2			
	comp=Z,15nm,0.9s								
FITZ	**Fitzroy Crossi**	**141.89**	**263**	PKhKP		10 49 58.3			
	comp=Z,8.5nm,0.9s,baz=2.8,slow=4.5,SNR=4.8								
FITZ				PKP	PKPdf	10 50 02.6	-1.5		
	comp=Z,8.5nm,0.9s,baz=226,slow=2.4,SNR=9.6								
FITZ				pPKP	pPKPdf	10 50 42.1	-3.1		
	comp=Z,5.6nm,0.9s,baz=0.0,slow=3.0,SNR=3.8								
FITZ	**Fitzroy Crossi**	**141.89**	**263**	PKP	PKPdf	10 50 02.6	-1.5		
FITZ				pPKP	pPKPdf	10 50 42.1	-3.1		
KAPI	**Kappang**	**144.29**	**286**	PKP	PKPdf	10 50 05.2	-3.4		
	comp=Z,19nm,0.9s,baz=56,slow=2.8,SNR=5.8								
KAPI				pPKP	pPKPdf	10 50 43.3	-6.4		
	comp=Z,23nm,1.0s,baz=227,slow=4.3,SNR=3.1								
HYB	**Hyderabad**	**144.53**	**12**	*i* PKP	PKPdf	10 50 06.5	-2.4		
HYB				*e*		10 50 45.0			
MUN	**Mundaring**	**148.83**	**237**	*e*PKP	PKPbc	10 50 18.0	-1.7		

CSEM ***15*** *10:43:46.3±0.1,4103N×3067E,h2km,MD2.8, Error ellipse: s-maj=2.7km s-min=1.7km az=168.0*
DDA ***15*** *10:43:46.8,4107N×3065E,h7km±6km, Md2.8*
ISCJB ***15*** *10:43:47.5±0.5,4102N±004×3068E±003,h10km, Error ellipse: s-maj=5.5km s-min=3.7km az=170.9*
ISK ***15*** *10:43:47.0,4101N×3068E,h9km, MD2.8*

ISC 15 10:43:47.6±0.6, 4105N±004×3066E±004, h6km±5km, n22, σ0°93/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HENT	**Hendek**	**0.29**	**142**	*i* P	**Pg**	**10 43 52.6**	**-0.7**
HENT				*i* S	**Sg**	**10 43 56.7**	**-0.3**
KDZE	**Karadeniz Ereo**	**0.64**	**66**	*e*PG	**Pg**	**10 43 59.9**	**-0.1**
KDZE				*e*SG	**Sg**	**10 44 09.3**	**+1.0**
KDZE	**Karadeniz Ereo**	**0.64**	**66**	*e*Pg	**Pg**	**10 43 59.9**	**-0.1**
KDZE				*e*Sg	**Sg**	**10 44 09.3**	**+0.9**
MDU	**Mudurnu**	**0.72**	**144**	*e*PG	**Pg**	**10 44 00.8**	**-0.6**
SILT	**Sile**	**0.78**	**278**	*e*PG	**Pg**	**10 44 03.5**	**+1.0**
HRT	**Hereke**	**0.79**	**253**	*e*PG	**Pg**	**10 44 02.9**	**+0.2**
HRT				*e*SG	**Sg**	**10 44 13.9**	**+0.9**
GPA	**Golpazari**	**0.81**	**200**	*e*PG	**Pg**	**10 44 02.3**	**-0.8**
GPA				*e*SG	**Sg**	**10 44 13.4**	**-0.1**
ADVT	**Abdulvahap**	**0.94**	**229**	*e*PG	**Pg**	**10 44 05.0**	**-0.6**
YLV	**Yalova**	**1.09**	**244**	*e*PN	**Pn**	**10 44 07.6**	**-1.8**
SGKT	**Sivrigoynuk**	**1.16**	**114**	*i* P	**Pg**	**10 44 08.9**	**-0.9**
SGKT				*i* S	**Sg**	**10 44 27.8**	**+2.9**
BORA	**Eskisehir**	**1.18**	**188**	*i* P	**Pg**	**10 44 09.4**	**-0.9**
BORA				*i* S	**Sg**	**10 44 28.3**	**+2.7**
ISK	**Istanbul-Kandi**	**1.21**	**271**	*e*PN	**Pn**	**10 44 10.6**	**-0.5**
KLYT	**Kilyos**	**1.24**	**280**	*e*PN	**Pn**	**10 44 11.2**	**-0.3**
GEMT	**Gemlik**	**1.28**	**242**	*e*PN	**Pn**	**10 44 11.6**	**-0.4**
BGKT	**Bogazkoy**	**1.43**	**276**	*e*PN	**Pn**	**10 44 14.4**	**+0.3**
ULDT	**Uludag**	**1.48**	**233**	*i* P	**Pn**	**10 44 15.0**	**+0.3**
ULDT				*i* S	**Sn**	**10 44 34.8**	**+0.5**
ESKT	**Eskisehir**	**1.54**	**175**	*i* P	**Pn**	**10 44 16.0**	**+0.5**
ESKT				*i* S	**Sn**	**10 44 39.0**	**+3.3**
SEYT	**Eskypehyr**	**1.54**	**175**	*i* P	**Pn**	**10 44 16.0**	**+0.5**
SAFT	**Safranbolu**	**1.54**	**82**	*e*PN	**Pn**	**10 44 15.3**	**-0.3**
SLVT	**Silivri**	**1.86**	**276**	*e*PN	**Pn**	**10 44 20.7**	**+0.7**
ALT	**Altintas**	**2.04**	**192**	*e*PN	**Pn**	**10 44 21.6**	**-0.8**
GDZ	**Gediz**	**2.16**	**205**	*i* P	**Pn**	**10 44 23.7**	**-0.4**

RSHS		**1.94 219**	P	**Pn**	**11 28 43.3**	**-1.3**
HMDT	**Nahal Hemdat**	**2.49 347**	Pn	**Pn**	**11 28 53.0**	**+1.0**
HMDT			Sn	**Sn**	**11 29 24.7**	**+1.6**

IDC ***15*** *11:34:30.6±0.5, 11 95S×16 595E, h0km, mb4.8/23, mb1 4.8/24, mb1mx4.8/27, mbtmp4.8/24, ML5.1/1, MS4.8/10, Ms1 4.8/10, ms1mx4.5/18, Error ellipse: s-maj=15.1km s-min=14.2km az=167.0*

BJI ***15*** *11:34:31.6, 12 36S×16 638E, h33km, mB5.4, mb4.9, Ms5.0, Msz4.7*

ISCJB ***15*** *11:34:34.6±0.3, 12 04S±0.04×16 583E±0.04, h31km, mb4.9/54, MS4.7/26, Error ellipse: s-maj=6.6km s-min=6.1km az=41.9*

MOS ***15*** *11:34:34.8±1.2, 11 92S×16 583E, h33km, mb5.2/17, Error ellipse: s-maj=10.7km s-min=9.2km az=174.7*

GCMT ***15*** *11:34:35.9±0.4, 11 91S×16 574E, h13km±2km, MW5.1/46, Moment Tensor Solution. s39,c52; s46,c60; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.32±.16; Mθθ 0.04±.12; Mϕϕ -1.36±.13; Mrθ 1.68±.48; Mϕθ 0.39±.10; Mϕr -5.86±1.51; Best double couple: M0 6.25300×10^16 NP1 ζ/θs 347.00000°, δ 6.00000°, λ 93.00000°. NP2: ϕs 164.00000°, δ 84.00000°, λ 90.00000°. Principal axes: T 6.1830, Plg 51.0000°, Azm 74.0000°; N 0.1410, Plg 0.0000°, Azm 164.0000°; P -6.3230, Plg 39.0000°, Azm 254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***15*** *11:34:35.9±0.3, 11 92S×16 594E, h35km, mb5.0/18 Error ellipse: s-maj=9.4km s-min=7.7km az=151.0*

DJA ***15*** *11:35:09, 12 87S×16 430E, h212km, Mw5.3/7*

ISC 15 11:34:33.2±1.9, 11 98S±0.05×16 590E±0.04, h11km±11km, h34km±.7km: pP-P, n144, σ1s 11/118, mb4.9/54, MS4.7/26, 6C-6D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.37 293**		Pn		**Pn**	**11 36 07.5**	**+0.4**
	44nm,0.3s,baz=54,slow=2.2,SNR=13							
HNR				Sn		**Sn**	**11 37 20.0**	**0.0**
	3.1nm,0.3s,baz=90,slow=20,SNR=2.7							
HNR	**Honiara**	**6.37 293**		P		**Pn**	**11 36 07.5**	**+0.4**
HNR							11 37 20.0	
HNR				pmax		pmax		
	comp=Z,44nm,0.3s							
HNR				smax				
	comp=N,3.0nm,0.3s							
HNR	**Honiara**	**6.37 293**		*e*Pn		**Pn**	**11 36 08.0**	**+0.9**
	comp=N,359nm,0.7s							
DZM	**Mont Dzumac**	**10.05 177**		*e*P		**Pn**	**11 36 58.4**	**+0.7**
DZM	**Mont Dzumac**	**10.05 177**		*e*Pn		**Pn**	**11 36 58.4**	**+0.7**
PMG	**Port Moresby**	**18.59 276**		*d* iP		**Pn**	**11 38 52.0**	**+1.1**
PMG	**Port Moresby**	**18.59 276**		*e*Pn		**Pn**	**11 38 53.5**	**+2.6**
EIDS	**Eidsvold**	**19.32 224**		*e*Pn		**Pn**	**11 39 08.1**	**+8.4**
CTA	**Charters Tower**	**20.51 244**		⇓ *i*P		**P**	**11 39 13.2**	**+1.5**
	comp=N,43nm,1.1s							
CTA				*e*S		**S**	**11 43 16.0**	**+15**
CTA	**Charters Tower**	**20.51 244**		P		**P**	**11 39 12.7**	**+1.0**
	comp=N,77nm,1.1s,baz=68,slow=13,SNR=30							
CTA				LR		LR	11 46 08.0	
	comp=N,3μm,20.3s,MS4.7,baz=67,slow=34							
CTA	**Charters Tower**	**20.51 244**		⇓ *i*P		**P**	**11 39 13.2**	**+1.5**
CTA				*e*S		**S**	**11 43 16.0**	**+15**
CTA				pmax		pmax		
	comp=Z,43nm,1.1s							
CTAO	**Charters Tower**	**20.51 244**		*e*P		**P**	**11 39 13.5**	**+1.8**
CTAO				pmax		pmax		
	comp=Z,150nm,1.4s							
CTAO	**Charters Tower**	**20.51 244**		*e*P		**P**	**11 39 13.5**	**+1.8**
	comp=Z,150nm,1.4s							
AFI	**Afiamalu**	**21.84 97**		P		**P**	**11 39 23.7**	**-2.4**
	comp=Z,86nm,1.1s,mb5.1,baz=141,slow=7.7,SNR=3.4							
AFI				LR		LR	11 46 22.2	
	comp=Z,3μm,19.5s,MS4.6,baz=269,slow=33							
AFI	**Afiamalu**	**21.84 97**		*e*P		**P**	**11 39 24.8**	**-1.2**
AFI				pmax		pmax		
	comp=Z,318nm,1.9s,mb5.4							
AFI	**Afiamalu**	**21.84 97**		*e*P		**P**	**11 39 24.8**	**-1.3**
	comp=Z,318nm,1.9s,mb5.4							
COEN	**Coen**	**22.23 262**		*e*P		**P**	**11 39 31.0**	**+0.9**
	comp=Z,50nm,1.3s,mb4.8							
MGCD	**Mangrove Creek**	**25.10 210**		*e*P		**P**	**11 39 53.3**	**-4.8**
	comp=Z,56nm,1.0s,mb5.0							
RIV	**Riverview**	**25.58 209**		*e*P		**P**	**11 40 03.4**	**+0.9**
URZ	**Urewera**	**28.02 161**		P		**P**	**11 40 23.8**	**-0.7**
	comp=Z,2.2nm,0.4s,mb4.1,baz=278,slow=6.3,SNR=2.4							
STKA	**Stephens Creek**	**29.88 225**		*e*P		**P**	**11 40 41.0**	**0.0**
	comp=Z,9.2nm,0.7s,mb4.6							
STKA	**Stephens Creek**	**29.88 225**		P		**P**	**11 40 40.5**	**-0.5**
	comp=Z,5.4nm,0.9s,mb4.3,baz=42,slow=7.7,SNR=8.6							
STKA				LR		LR	11 52 15.9	
	comp=Z,3μm,19.5s,MS4.9,baz=39,slow=36							
SNZO	**South Karori**	**30.23 167**		*e*P		**P**	**11 40 44.2**	**+0.3**
	comp=Z,5.4nm,0.6s,mb4.5							
WRAB	**Tennant Creek**	**31.30 251**		P		**P**	**11 40 53.0**	**-0.7**
	comp=Z,118nm,1.3s,mb5.6,SNR=9.2							
WRAB	**Tennant Creek**	**31.30 251**		*e*P		**P**	**11 40 52.8**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,22nm,1.0s,mb4.9							
WRAB	**Tennant Creek**	**31.30 251**		*e*P		**P**	**11 40 52.8**	**-0.9**
	comp=Z,22nm,1.0s,mb5.0							
WB2	**Warramunga Arr**	**31.30 251**		⇓ *i*P		**P**	**11 40 52.7**	**-1.0**
WRA	**Warramunga Arr**	**31.32 251**		P		**P**	**11 40 53.1**	**-0.7**
	comp=Z,9.9nm,0.7s,mb4.7,baz=83,slow=9.2,SNR=81							
WRA				ScP		ScP	11 47 31.6	+0.3
	comp=Z,6.8nm,1.2s,baz=72,slow=3.3,SNR=6.5							
WRA				LR		LR	11 53 07.3	
	comp=Z,2μm,18.0s,MS4.8,baz=70,slow=36							
WRA	**Warramunga Arr**	**31.32 251**		P		**P**	**11 40 53.1**	**-0.7**
WRA				ScP		ScP	11 47 31.6	+0.3
TOO	**Toolangi**	**31.36 212**		*e*P		**P**	**11 40 54.6**	**+0.6**
RPZ	**Rata Peaks**	**31.94 173**		P		**P**	**11 40 58.8**	**-0.2**
	comp=Z,38nm,0.8s,mb5.3,baz=183,slow=5.1,SNR=8.6							
RPZ				LR		LR	11 52 30.6	
	comp=Z,1μm,19.3s,MS4.6,baz=333,slow=34							
ASAR	**Alice Springs**	**32.52 245**		P		**P**	**11 41 03.2**	**-1.1**
	comp=Z,17nm,1.0s,mb4.9,baz=70,slow=9.2,SNR=98							
ASAR				PcP		PcP	11 43 48.9	-2.4
	comp=Z,2.1nm,0.8s,baz=78,slow=2.6,SNR=7.9							
ASAR				ScP		ScP	11 47 35.5	+0.1
	comp=Z,5.9nm,1.3s,baz=94,slow=3.6,SNR=6.5							
ASAR	**Alice Springs**	**32.52 245**		P		**P**	**11 41 03.3**	**-1.1**
ASAR							11 43 48.9	
RAR	**Rarotonga**	**34.09 110**		LR		LR	11 52 21.8	
	comp=Z,1μm,21.6s,MS4.6,baz=172,slow=32							
FITZ	**Fitzroy Crossi**	**39.29 256**		⇓ *i*P		**P**	**11 42 01.4**	**-1.1**
	comp=Z,21nm,1.0s,mb4.8							
FITZ	**Fitzroy Crossi**	**39.29 256**		P		**P**	**11 42 02.0**	**-0.6**
	comp=Z,19nm,1.1s,mb4.7,baz=87,slow=8.6,SNR=11							
FITZ				LR		LR	11 57 52.5	
	comp=Z,2μm,18.9s,MS4.9,baz=70,slow=36							
FORT	**Forrest**	**39.64 236**		*e*P		**P**	**11 42 05.0**	**-0.3**
	comp=Z,38nm,0.9s,mb5.1							
BATI	**Baumata**	**41.45 268**		P		**P**	**11 42 20.4**	**-0.1**
	comp=Z,31nm,0.5s,mb5.2,baz=280,slow=3.2,SNR=4.6							
PPT	**Papeete**	**43.34 103**		*e*S		**S**	**11 49 05.0**	**+1.3**
	comp=Z,366nm,25.0s							
PPT				*e*LQ			11 52 56.1	
	comp=Z,1μm,24.5s							
PPT				*e*LR		LR	11 54 42.6	
	comp=Z,2μm,24.5s,baz=277							
PPT	**Papeete**	**43.34 103**		LR		LR	11 58 14.5	
	comp=Z,2μm,18.2s,MS5.0,baz=283,slow=33							
DAV	**Davao City (W)**	**44.33 293**		P		**P**	**11 42 42.8**	**-1.0**
	comp=Z,248nm,0.4s,baz=30,slow=8.1,SNR=3.5							
DAV	**Davao City (W)**	**44.33 293**		P		**P**	**11 42 42.8**	**-1.0**
MBWA	**Marble Bar**	**45.05 252**		*e*P		**P**	**11 42 49.9**	**+0.4**
	comp=Z,37nm,0.9s,mb5.2							
KAPI	**Kappang**	**46.11 275**		P		**P**	**11 42 56.7**	**-1.3**
	comp=Z,20nm,0.8s,mb5.1,baz=152,slow=3.8,SNR=4.3							
KAPI	**Kappang**	**46.11 275**		*e*P		**P**	**11 42 57.5**	**-0.5**
NWAO	**Narrogin (SRO)**	**49.07 237**		P		**P**	**11 43 19.8**	**-1.0**
	comp=Z,40nm,1.2s,mb5.3,baz=65,slow=7.5,SNR=3.6							
NWAO	**Narrogin (SRO)**	**49.07 237**		P		**P**	**11 43 19.8**	**-1.0**
KKM	**Kota Kinabalu**	**52.55 287**		*e*P		**P**	**11 43 47.2**	**-0.1**
KKM				*e*PP		PP	11 45 48.4	+2.0
TAOE	**Nuku Hiva Isla**	**53.09 92**		*e*LR		LR	11 59 05.5	
	comp=Z,5μm,23.2s,baz=263							
MJAR	**Matsushiro Arr**	**54.86 333**		P		**P**	**11 44 01.3**	**-2.4**
	comp=Z,2.5nm,1.0s,mb4.2,baz=131,slow=7.6,SNR=4.3							
MAT	**Matsushiro**	**54.86 333**		P		**P**	**11 44 02.1**	**-1.7**
MAT				S		**S**	**11 51 42.0**	**-3.0**
KSM	**Kuching**	**56.80 280**		*e*P		**P**	**11 44 17.9**	**-0.3**
RKT	**Rikitea**	**57.13 110**		*e*LR		LR	12 01 00.2	
	comp=Z,1μm,24.8s							
SSE	**Sheshan**	**60.62 316**		P		**P**	**11 44 45.1**	**+0.7**
SSE				S		**S**	**11 53 01.0**	**+0.2**
SSE				AMB		AMB		
	comp=Z,36nm,0.8s,mb5.5							
SSE				AMB		AMB		
	comp=Z,589nm,4.5s							
SSE				LR		LR		
	comp=N,97nm,21.5s,MS4.1							
SSE				LR		LR		
	comp=E,114nm,21.5s,MS4.1							
SSE				LR		LR		
	comp=Z,248nm,22.9s,MS4.3							
KSRS	**Korea Array**	**60.72 326**		P		**P**	**11 44 43.8**	**-1.2**
	comp=Z,1.1nm,0.7s,mb4.1,baz=135,slow=7.6,SNR=3.8							
KSRS	**Korea Array**	**60.72 326**		P		**P**	**11 44 43.8**	**-1.2**
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.7s,mb4.0							
YSS	**Yuzh-Sakhalins**	**62.21 342**		*e*P		**P**	**11 44 55.0**	**+0.2**
YSS				*e*			11 45 02.5	
YSS				*e*S		**S**	**11 53 20.0**	**-0.4**
NJ2	**Nanjing**	**62.78 316**		*e*P		**P**	**11 45 00.5**	**+1.5**
NJ2				AP		pP	11 45 09.5	+7.1
NJ2				XP		sP	11 45 14.3	+11
NJ2				PCP		PcP	11 45 38.6	+1.1
NJ2				S		**S**	**11 53 30.0**	**+1.8**
NJ2				XS		sS	11 53 42.0	+8.1
NJ2				AMB		AMB		
	comp=Z,20nm,1.0s,mb5.2							
NJ2				AMB		AMB		
	comp=Z,770nm,4.8s							
NJ2				LR		LR		
	comp=N,430nm,25.8s							
NJ2				LR		LR		
	comp=E,280nm,19.2s							
NJ2				LR		LR		
	comp=Z,280nm,18.2s							
QIZ	**Qiongzhong**	**63.25 298**		P		**P**	**11 45 01.4**	**-0.9**
QIZ				XP		sP	11 45 15.6	+8.5
QIZ				S		**S**	**11 53 34.3**	**-0.2**
QIZ				XS		sS	11 53 50.0	+10
QIZ				AMB		AMB		
	comp=Z,198nm,9.0s							
QIZ				LR		LR		
	comp=E,335nm,20.0s							
QIZ				LR		LR		
	comp=Z,375nm,22.4s,MS4.5							
PETK	**Petropavlovsk-**	**65.20 355**		LR		LR	12 10 09.4	
	comp=Z,206nm,19.0s,MS4.3,baz=167,slow=33							
DL2	**Dalian**	**65.31 323**		P		**P**	**11 45 19.1**	**+3.7**
DL2				S		S	11 54 03.6	+4.3
DL2				AMB		AMB		
	comp=Z,20nm,1.3s,mb5.0							
DL2				AMB		AMB		
	comp=Z,190nm,5.3s							
DL2				LR		LR		
	comp=N,290nm,14.4s,MS4.7							
DL2				LR		LR		
	comp=E,160nm,12.7s,MS4.7							
DL2				LR		LR		
	comp=Z,280nm,17.8s							
SBA	**Scott Base**	**65.88 180**		*e*P		**P**	**11 45 20.1**	**+1.6**
CN2	**Changchun**	**66.61 329**		*e*P		**P**	**11 45 22.4**	**-1.3**
CN2				*e*XP		sP	11 45 37.5	+9.0
CN2				*e*S		S	11 54 10.9	-4.0
CN2				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.9							
CN2				AMB		AMB		
	comp=Z,700nm,4.0s							
CN2				LR		LR		
	comp=N,800nm,17.0s,MS5.2							
CN2				LR		LR		
	comp=E,1μm,17.0s,MS5.2							
CN2				LR		LR		
	comp=Z,2μm,19.0s,MS5.4							
KLR	**Kul'dur**	**67.96 337**		*e*P		**P**	**11 45 34.0**	**+1.8**
KLR				pmax		pmax		
	comp=Z,50nm,1.6s,mb5.3							
GYA	**Guiyang**	**69.06 304**		⇑ *i*P		**P**	**11 45 39.9**	**+0.4**
GYA				AP		pP	11 45 50.3	+7.3
GYA				XP		sP	11 45 54.5	+10
GYA				PCP		PcP	11 46 03.8	+0.2
GYA				PP		PP	11 48 15.3	+3.0
GYA				S		S	11 54 42.8	-2.2
GYA				XS		sS	11 54 58.8	+8.1
GYA				SKS			11 55 35.0	
GYA				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.7							
GYA				AMB		AMB		
	comp=Z,110nm,6.0s							
GYA				LR		LR		
	comp=N,320nm,19.0s,MS4.7							
GYA				LR		LR		
	comp=E,310nm,18.0s,MS4.7							
GYA				LR		LR		
	comp=Z,510nm,19.1s,MS4.8							
BJI	**Beijing**	**69.29 321**		P		**P**	**11 45 39.4**	**-1.3**
BJI				XP		sP	11 45 53.4	+7.9
BJI				S		S	11 54 46.0	-1.2
BJI				XS		sS	11 55 04.8	+12
BJI				AMB		AMB		
	comp=Z,10.0nm,1.1s,mb4.7							
BJI				LR		LR		
	comp=N,328nm,19.0s,MS4.8							
BJI				LR		LR		
	comp=E,363nm,18.5s,MS4.8							
BJI				LR		LR		
	comp=Z,319nm,28.0s							
XAN	**Xi'an**	**70.85 313**		P		**P**	**11 45 54.3**	**+3.9**
XAN				AP		pP	11 46 03.8	+10
XAN				XP		sP	11 46 08.5	+13
XAN				AMB		AMB		
	comp=Z,11nm,1.4s,mb4.6							
KMI	**Kunming**	**71.73 302**		P		**P**	**11 45 57.9**	**+2.0**
KMI				AP		pP	11 46 08.3	+8.9
KMI				XP		sP	11 46 12.4	+12
KMI				PP		PP	11 48 40.1	+4.7
KMI				S		S	11 55 14.3	-2.0
KMI				XS		sS	11 55 33.1	+11
KMI				SS		SS	11 59 50.6	-1.8
KMI				AMB		AMB		
	comp=Z,12nm,1.4s,mb4.6							
KMI				AMB		AMB		
	comp=Z,267nm,5.2s							
KMI				LR		LR		
	comp=N,303nm,20.2s,MS4.8							
KMI				LR		LR		
	comp=E,353nm,15.9s,MS4.8							
KMI				LR		LR		
	comp=Z,421nm,20.2s,MS4.7							
MIR	**Mirnyy**	**72.29 204**		*e*P		**P**	**11 46 00.0**	**+1.5**
MIR				pmax		pmax		
	comp=Z,200nm,1.8s,mb5.8							
CMAR	**Chiang Mai Arr**	**72.62 294**		P		**P**	**11 46 01.9**	**+0.6**
	comp=Z,3.6nm,0.6s,mb4.5,baz=125,slow=4.9,SNR=21							
HHC	**Hu-ho-hao-te**	**72.63 320**		*e*P		**P**	**11 46 02.8**	**+1.8**
HHC				AP		pP	11 46 13.6	+9.1
HHC				XP		sP	11 46 17.8	+12
HHC				PCP		PcP	11 46 20.1	+1.7
HHC				PP		PP	11 48 47.0	+4.2
HHC				S		S	11 55 25.3	-0.7
HHC				XS		sS	11 55 43.4	+12
HHC				SKS			11 56 00.6	
HHC				SCS		ScS	11 56 04.3	-4.0
HHC				SS		SS	12 00 07.3	+1.6
HHC				AMB		AMB		
	comp=Z,11nm,0.7s,mb4.9							
HHC				AMB		AMB		
	comp=Z,172nm,7.8s							
HHC				LR		LR		
	comp=N,325nm,19.2s,MS4.8							
HHC				LR		LR		
	comp=E,350nm,19.5s,MS4.8							
HHC				LR		LR		
	comp=Z,484nm,19.2s,MS4.8							
HIA	**Hailar**	**73.25 330**		*e*P		**P**	**11 46 03.7**	**-0.7**
CD2	**Chengdu**	**73.28 307**		*e*P		**P**	**11 46 06.6**	**+1.6**
CD2				AP		pP	11 46 16.9	+8.4
CD2				XP		sP	11 46 22.0	+12
CD2				PP		PP	11 48 52.3	+3.8
CD2				S		S	11 55 32.3	-1.5
CD2				XS		sS	11 55 49.3	+10
CD2				SS		SS	12 00 17.1	+1.1
CD2				AMB		AMB		
	comp=Z,30nm,1.2s,mb5.1							
CD2				AMB		AMB		
	comp=Z,330nm,7.2s							
CD2				LR		LR		
	comp=N,380nm,18.0s,MS4.8							
CD2				LR		LR		
	comp=E,220nm,16.8s,MS4.8							
CD2				LR		LR		
	comp=Z,280nm,18.0s,MS4.6							
LZH	**Lanzhou**	**75.49 312**		⇑ P		**P**	**11 46 18.5**	**+0.7**
LZH				AP		pP	11 46 28.8	+7.5
LZH				XP		sP	11 46 32.6	+10
LZH				PP		PP	11 49 10.5	+3.3
LZH				*e*S		S	11 55 56.0	-2.3
LZH				XS		sS	11 56 13.6	+9.5
LZH				SKS			11 56 21.0	
LZH				*e*SS		SS	12 00 51.8	+2.4
LZH				AMB		AMB		
	comp=Z,36nm,1.5s,mb5.1							
LZH				AMB		AMB		
	comp=Z,237nm,6.7s							
LZH				LR		LR		
	comp=E,527nm,16.5s							
LZH				LR		LR		
	comp=Z,819nm,18.1s,MS5.1							
CIT	**Chita**	**78.03 330**		*e*P		**P**	**11 46 23.7**	**-8.1**
CIT				*e*			11 46 38.2	
QSPA	**South Pole Qui**	**78.03 180**		P		**P**	**11 46 30.9**	**-0.5**
	comp=Z,21nm,0.9s,mb5.0,baz=326,slow=1.5,SNR=27							
SVW2	**Sparrevohn**	**78.95 18**		*e*P		**P**	**11 46 37.2**	**+0.6**
YAK	**Yakutsk**	**79.02 344**		⇑ *e*P		**P**	**11 46 38.0**	**+1.0**
YAK				pmax		pmax		
	comp=Z,20nm,1.7s,mb4.8							
ULN	**Ulaanbaatar**	**79.14 324**		*e*P		**P**	**11 46 37.9**	**-0.1**
ULN				pmax		pmax		
	comp=Z,35nm,1.2s,mb5.2							
ULN	**Ulaanbaatar**	**79.14 324**		*e*P		**P**	**11 46 37.9**	**-0.1**
	comp=Z,35nm,1.2s,mb5.2							
SONM	**Songino Array**	**79.50 324**		P		**P**	**11 46 40.0**	**+0.1**
	comp=Z,7.0nm,1.0s,mb4.5,baz=141,slow=4.7,SNR=17							
BILL	**Bilibino**	**79.80 0**		*e*P		**P**	**11 46 43.5**	**+2.4**
BILL				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
GTA	**Gaotai**	**79.81 314**		P		**P**	**11 46 42.9**	**+1.1**
GTA				AP		pP	11 46 52.4	+7.1
GTA				XP		sP	11 46 56.8	+10
GTA				S		S	11 56 45.8	+0.8
GTA				SKS			11 56 53.6	
GTA				XS		sS	11 57 03.1	+12
GTA				SS		SS	12 02 00.3	+5.9
GTA				AMB		AMB		
	comp=Z,18nm,1.7s,mb4.7							
GTA				AMB		AMB		
	comp=Z,164nm,5.7s							
GTA				LR		LR		
	comp=N,302nm,17.7s,MS4.9							
GTA				LR		LR		
	comp=E,460nm,19.2s,MS4.9							
GTA				LR		LR		
	comp=Z,457nm,20.4s,MS4.8							
BOD	**Bodaibo**	**81.43 335**		*e*P		**P**	**11 46 55.1**	**+5.0**
BOD				pmax		pmax		
	comp=Z,10.0nm,1.5s,mb4.5							
ZAK	**Zakamensk**	**82.54 325**		*e*P		**P**	**11 46 53.7**	**-2.4**
ZAK				pmax		pmax		
	comp=Z,13nm,1.6s,mb4.7							
TLY	**Talaya**	**82.97 326**		*e*P		**P**	**11 46 54.2**	**-4.1**
TLY				*e*			11 47 02.5	
TLY				*e*S		S	11 57 12.3	-5.0
TLY				pmax		pmax		
	comp=Z,24nm,1.8s,mb4.9							
TLY				MLR		MLR		
	comp=Z,153nm,17.0s,MS4.4							
KIPM	**Iron Peak**	**83.19 47**		P		**P**	**11 47 00.3**	**+0.5**
MAW	**Mawson**	**83.92 202**		*e*P		**P**	**11 47 03.0**	**0.0**
	comp=Z,6.2nm,1.2s,mb4.6							
MAW	**Mawson**	**83.92 202**		P		**P**	**11 47 02.4**	**-0.6**
	comp=Z,4.9nm,1.0s,mb4.6,baz=50,slow=4.7,SNR=8.0							
MAW	**Mawson**	**83.92 202**		*e*P		**P**	**11 47 03.0**	**0.0**
MAW				pmax		pmax		
	comp=Z,6.0nm,1.2s							
MOY	**Mondy**	**84.42 325**		*e*P		**P**	**11 47 12.4**	**+6.6**
YBH	**Yreka Blue Hor**	**84.44 45**		P		**P**	**11 47 06.0**	**-0.1**
	comp=Z,2.8nm,1.0s,mb4.4,baz=280,slow=3.1,SNR=5.9							
HUMO	**Hull Mountain**	**84.58 45**		*e*P		**P**	**11 47 07.8**	**+1.0**
	comp=Z,31nm,2.4s,mb5.0							
CMB	**Columbia Colle**	**84.83 50**		*e*P		**P**	**11 47 09.2**	**+1.1**
CMB				pmax		pmax		
	comp=Z,5.0nm,1.4s,mb4.5							
CMB	**Columbia Colle**	**84.83 50**		*e*P		**P**	**11 47 09.2**	**+1.0**
	comp=Z,4.7nm,1.4s,mb4.4							
WAKR	**Walker**	**85.69 49**		*e*P		**P**	**11 47 12.8**	**+0.4**
NVAR	**Mina Array Bea**	**86.51 50**		P		**P**	**11 47 16.2**	**-0.3**
	comp=Z,0.7nm,0.6s,mb4.0,baz=238,slow=8.3,SNR=6.1							
NVAR	**Mina Array Bea**	**86.51 50**		P		**P**	**11 47 16.2**	**-0.3**
BMO	**Blue Mountains**	**89.19 44**		P		**P**	**11 47 28.1**	**-1.1**
BMO				pmax		pmax		
	comp=Z,16nm,1.9s,mb5.0							
BMO	**Blue Mountains**	**89.19 44**		P		**P**	**11 47 28.1**	**-1.1**
	comp=Z,16nm,1.9s,mb5.0							
WMQ	**Urumqi**	**89.85 315**		*e*P		**P**	**11 47 32.4**	**+0.1**
WMQ				AP		pP	11 47 43.0	+7.1
WMQ				XP		sP	11 47 47.0	+10
WMQ				PP		PP	11 51 07.0	+2.0
WMQ				SKS			11 57 58.5	
WMQ				*e*S		S	11 58 20.0	-4.6
WMQ				AMB		AMB		
	comp=Z,33nm,1.3s,mb5.5							
WMQ				AMB		AMB		
	comp=Z,328nm,4.9s							
WMQ				LR		LR		
	comp=N,283nm,19.2s,MS4.9							
WMQ				LR		LR		
	comp=E,305nm,19.3s,MS4.9							
WMQ				LR		LR		
	comp=Z,275nm,20.5s,MS4.7							
HLID	**Hailey**	**90.82 46**		*e*P		**P**	**11 47 37.9**	**+1.1**
	comp=Z,50nm,2.8s,mb5.4							
SYO	**Syowa Base**	**90.94 197**		⇓ *e*P		**P**	**11 47 35.2**	**-1.8**
MSU	**Marysvale**	**91.15 51**		*e*P		**P**	**11 47 39.6**	**+1.1**
PDAR	**Pinedale Array**	**94.07 47**		P		**P**	**11 47 50.2**	**-1.7**
	comp=Z,0.2nm,0.7s,baz=223,slow=13,SNR=2.3							
MKAR	**Makanchi Array**	**94.30 317**		P		**P**	**11 47 52.1**	**-0.7**
	comp=Z,9.3nm,0.7s,mb5.3,baz=92,slow=

	comp=Z,12nm,1.1s						
LOR				*e*MLR	MLR		
	comp=Z,296nm,17.2s,MS4.8						
SSF	**Saint Saulge**	**142.01**	**340**	*e*PKIKP	PKPdf	11 54 03.1	-2.4
	comp=Z,33nm,1.5s						
MBDF	**Montbardon**	**142.78**	**335**	*e*PKIKP	PKPdf	11 54 04.7	-2.3
ORIF	**Oris-en-Rattie**	**142.98**	**336**	*e*PKIKP	PKPdf	11 54 04.0	-3.3
	comp=Z,12nm,0.9s						
ORIF				*e*MLR	MLR		
	comp=Z,258nm,17.5s,MS4.8						
SBF	**Sospel**	**143.20**	**334**	*e*PKIKP	PKPdf	11 54 05.4	-2.4
VIVF	**Saint-Julien-l**	**143.50**	**337**	*e*PKIKP	PKPdf	11 54 05.9	-2.3
FRF	**La Foret Royal**	**143.78**	**334**	*e*PKIKP	PKPdf	11 54 06.1	-2.7
	comp=Z,32nm,1.2s						
SMRF	**Simiane la Rot**	**143.89**	**336**	*e*PKIKP	PKPdf	11 54 06.1	-2.9
	comp=Z,54nm,1.5s						
LMR	**La Mourre**	**144.02**	**334**	*e*PKIKP	PKPdf	11 54 06.5	-2.7
	comp=Z,81nm,1.4s						
RJF	**Les Rejaudoux**	**144.21**	**341**	*e*PKIKP	PKPdf	11 54 06.5	-3.0
	comp=Z,52nm,1.4s						
RJF				*e*MLR	MLR		
	comp=Z,391nm,19.0s,MS4.9						
LASF	**Ste Croix**	**144.47**	**338**	*e*PKIKP	PKPdf	11 54 07.7	-2.3
	comp=Z,72nm,1.3s						
LFF	**La Frestale**	**144.78**	**342**	*e*PKIKP	PKPdf	11 54 06.8	-3.7
	comp=Z,43nm,1.2s						
MTLF	**Montolieu**	**145.70**	**339**	*e*PKIKP	PKPdf	11 54 10.0	-2.1
	comp=Z,43nm,1.2s						
EPF	**Esparros**	**146.62**	**341**	*e*PKIKP	PKPdf	11 54 11.3	-2.4
	comp=Z,30nm,1.4s						
ETSF	**Etsaut**	**147.02**	**342**	*e*PKIKP	PKPdf	11 54 11.7	-2.7
SJPF	**Ste Jean**	**147.03**	**343**	*e*PKIKP	PKPdf	11 54 11.3	-3.1
KEST	**Kesra**	**148.24**	**322**	PKPbc	PKPbc	11 54 18.6	-1.4
	comp=Z,2.8nm,0.6s,baz=51,slow=1.9,SNR=6.5						
ESDC	**Sonseca Array**	**150.99**	**344**	PKPbc	PKPbc	11 54 24.1	-2.5
	comp=Z,0.2nm,0.4s,baz=345,slow=3.5,SNR=1.3						
ESDC				PKPab	PKPab	11 54 35.0	+1.1
	comp=Z,2.9nm,1.0s,baz=8.4,slow=3.1,SNR=5.3						
TORD	**Torodi Ar. Bea**	**164.53**	**276**	PKP	PKPdf	11 54 36.3	-1.9
	comp=Z,3.1nm,1.1s,baz=36,slow=1.5,SNR=7.0						
TORD				PKPab	PKPab	11 55 32.7	-0.4
	comp=Z,1.3nm,1.0s,baz=98,slow=4.9,SNR=3.0						
TORD	**Torodi Ar. Bea**	**164.53**	**276**	PKP	PKPdf	11 54 36.3	-1.9
TORD				PKPab	PKPab	11 55 32.7	-0.4

IDC ***15*** *11:36:30.6±0.9, 1200S×16621E, h0km, mb4.5/11, mb1 4.6/12, mb1mx4.4/19, mbtmp4.5/12, ML4.9/1, Error ellipse: s-maj=28.0km s-min=23.4km az=125.0*
ISCJB ***15*** *11:36:32.7±9.5, 1215.0±0.1×166.1E±0.2, h22km±62km, mb4.5/10, Error ellipse: s-maj=41.5km s-min=22.6km az=10.1*

ISC 15 11:36:35.7±9.9, 120S±01×1662E±03, h32km±65km, n23, σ0§85/12, mb4.5/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.62**	**292**		**Pn**	**11 38 11.3**	**+0.4**
	23nm,0.3s,baz=167,slow=5.2,SNR=4.2						
CTA	**Charters Tower**	**20.71**	**245**	P	**P**	**11 41 14.0**	**+0.5**
	10nm,0.6s,baz=68,slow=13,SNR=5.3						
STKA	**Stephens Creek**	**30.01**	**225**	P	**P**	**11 42 41.1**	**-0.6**
	5.4nm,0.8s,mb4.3,baz=0.0,slow=20,SNR=2.5						
WRA	**Warramunga Arr**	**31.53**	**251**	P	**P**	**11 42 54.2**	**-1.0**
	5.0nm,0.7s,mb4.5,baz=83,slow=9.1,SNR=7.6						
ASAR	**Alice Springs**	**32.72**	**245**	P	**P**	**11 43 04.3**	**-1.3**
	4.4nm,0.7s,mb4.5,baz=68,slow=9.7,SNR=5.4						
ASAR				PcP	PcP	11 45 52.3	+1.5
	0.9nm,0.7s,baz=104,slow=3.0,SNR=4.4						
CMAR	**Chiang Mai Arr**	**72.87**	**294**	P	**P**	**11 48 03.0**	**+1.0**
	2.9nm,0.7s,mb4.3,baz=126,slow=5.1,SNR=5.2						
QSPA	**South Pole Qui**	**77.98**	**180**	P	**P**	**11 48 31.6**	**+1.3**
	5.7nm,1.0s,mb4.5,baz=302,slow=14,SNR=2.6						
SONM	**Songino Array**	**79.69**	**324**	P	**P**	**11 48 40.8**	**+0.6**
	3.7nm,0.9s,mb4.3,baz=146,slow=6.8,SNR=4.8						
MAW	**Mawson**	**83.96**	**202**	P	**P**	**11 49 03.1**	**+0.7**
	1.9nm,0.8s,mb4.3,baz=280,slow=6.8,SNR=3.8						
NVAR	**Mina Array Bea**	**86.36**	**50**	P	**P**	**11 49 13.6**	**-1.2**
	1.0nm,1.1s,mb4.0,baz=225,slow=7.5,SNR=2.3						
MKAR	**Makanchi Array**	**94.51**	**317**	P	**P**	**11 49 52.9**	**0.0**
	7.2nm,0.7s,mb5.2,baz=93,slow=5.9,SNR=10.0						
ZALV	**Zalesovo Beam**	**94.58**	**324**	P	**P**	**11 49 52.6**	**-0.5**
	2.2nm,0.7s,mb4.7,baz=90,slow=3.0,SNR=4.6						
MBDF	**Montbardon**	**142.94**	**335**	*e*PKIKP	PKPdf	11 56 05.1	-1.2
	7.4nm,1.0s						
ORIF	**Oris-en-Rattie**	**143.13**	**336**	*e*PKIKP	PKPdf	11 56 05.0	-1.6
	10nm,1.0s						
SBF	**Sospel**	**143.36**	**334**	*e*PKIKP	PKPdf	11 56 06.7	-0.4
	19nm,0.9s						
FRF	**La Foret Royal**	**143.94**	**334**	*e*PKIKP	PKPdf	11 56 06.7	-1.4
	38nm,1.4s						
SMRF	**Simiane la Rot**	**144.04**	**336**	*e*PKIKP	PKPdf	11 56 06.9	-1.4
LMR	**La Mourre**	**144.18**	**334**	*e*PKIKP	PKPdf	11 56 06.2	-2.3
	24nm,1.1s						
LASF	**Ste Croix**	**144.62**	**338**	*e*PKIKP	PKPdf	11 56 08.7	-0.6
	16nm,1.0s						
LFF	**La Frestale**	**144.91**	**342**	*e*PKIKP	PKPdf	11 56 08.1	-1.6
MTLF	**Montolieu**	**145.85**	**339**	*e*PKIKP	PKPdf	11 56 10.5	-0.9
	11nm,0.9s						
EPF	**Esparros**	**146.75**	**341**	*e*PKIKP	PKPdf	11 56 11.4	-1.6
	16nm,1.2s						
ETSF	**Etsaut**	**147.16**	**342**	*e*PKIKP	PKPdf	11 56 12.0	-1.6
	12nm,1.0s						

ISCJB ***15*** *11:50:20.0±1.2, 3551N±005×2779E±005, h8km±6km, Error ellipse: s-maj=9.3km s-min=5.1km az=150.3*
CSEM ***15*** *11:50:20.7±0.2, 3551N×2791E, h20km, MD3.6, Error ellipse: s-maj=5.8km s-min=3.2km az=153.0*
ATH ***15*** *11:50:21.1, 3562N×2772E, h18km±1km, MD3.6/5*
NEIC ***15*** *11:50:21.1, 3562N×2772E, h18km, MD3.6(ATH), After ATH.*
DDA ***15*** *11:50:23.1, 3571N×2800E, h26km, Md3.5*

ISC 15 11:50:20.0±1.2, 3551N±005×2779E±005, h8km±6km, n11, σ0§79/21, 1C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.51**	**274**	⇑*i*PB	**Pg**	**11 50 29.9**	**0.0**
KARP				*e*SB	**Sg**	**11 50 37.3**	**+0.7**
ARG	**Arkhangelos**	**0.76**	**21**	*e*PN	**Pg**	**11 50 35.1**	**+0.5**
ARG				*e*SN	**Sg**	**11 50 43.9**	**-0.5**
BDRM	**Kayabasi**	**1.58**	**350**	*i* P	**Pn**	**11 50 48.4**	**+0.1**
BDRM				*i* S	**Sg**	**11 51 11.6**	**+0.9**
AKAS	**Kas**	**1.64**	**63**	*i* P	**Pn**	**11 50 48.0**	**-1.2**
AKAS				*i* S	**Sn**	**11 51 10.7**	**+0.1**
NPS	**Neapolis**	**1.79**	**263**	*e*PN	**Pn**	**11 50 52.3**	**+1.0**
NPS				*e*SN	**Sg**	**11 51 16.0**	**-1.6**
AYDN	**Tasoluk**	**2.15**	**2**	*i* P	**Pn**	**11 50 56.2**	**+0.1**
AYDN				*i* S	**Sg**	**11 51 27.4**	**-1.6**
AYDN	**Tasoluk**	**2.15**	**2**	*i* P	**Pn**	**11 50 56.2**	**0.0**
AYDN				*i* S	**Sg**	**11 51 27.4**	**-1.6**
SMG	**Samos**	**2.32**	**341**	*e*PB	**Pn**	**11 50 58.8**	**+0.2**
SMG				*e*SN	**Sn**	**11 51 27.3**	**0.0**
APE	**Apeiranthos**	**2.40**	**311**	*e*PB	**Pn**	**11 50 59.9**	**+0.3**
APE				*e*SN	**Sn**	**11 51 28.5**	**-0.6**
DNZL	**Cakiroluk**	**2.40**	**25**	*i* P	**Pn**	**11 50 59.3**	**-0.3**
DNZL				*i* S	**Sg**	**11 51 38.2**	**+1.1**
VLI	**Veliai**	**4.11**	**288**	*e*PN	**Pn**	**11 51 23.8**	**+0.7**

IDC 15 11:54:48.1±2.0, 401S×10147E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.7/18, mbtmp3.7/6, Error ellipse: s-maj=62.7km s-min=19.7km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.46**	**354**	P	P	11 59 50.9	+1.9
	1.4nm,0.6s,baz=183,slow=8.7,SNR=11						
DAV	**Davao City (W)**	**26.46**	**65**	P	P	12 00 25.9	-1.3
	188nm,0.4s,baz=286,slow=3.9,SNR=2.7						
WRA	**Warramunga Arr**	**35.73**	**119**	P	P	12 01 50.4	+1.5
	0.2nm,0.4s,baz=303,slow=8.8,SNR=5.6						
ASAR	**Alice Springs**	**36.90**	**125**	P	P	12 01 58.1	-0.7
	0.4nm,0.8s,baz=303,slow=7.6,SNR=3.8						
SONM	**Songino Array**	**51.80**	**4**	P	P	12 03 59.1	+1.4
	1.7nm,0.8s,baz=183,slow=7.7,SNR=6.9						
MKAR	**Makanchi Array**	**53.35**	**344**	P	P	12 04 08.7	-0.5
	0.7nm,0.4s,baz=170,slow=8.4,SNR=9.1						
ZALV	**Zalesovo Beam**	**59.41**	**349**	P	P	12 04 50.7	-1.6
	0.8nm,0.3s,baz=170,slow=4.4,SNR=3.0						
TXAR	**Lajitas Array**	**145.33**	**41**	PKPbc	PKPbc	12 14 28.3	-0.2
	0.9nm,0.9s,baz=253,slow=2.0,SNR=8.1						

SZGRF ***15*** *11:55:40.6, 2047S×16976E, h33km, Vanuatu Islands*
ISCJB ***15*** *11:55:41.1±2.6, 202S±01×16902E±009, h39km±23km, mb4.4/16, Error ellipse: s-maj=21.4km s-min=14.1km az=176.7*
LDG ***15*** *11:55:42.0, 1988S×16882E, h30km*
NEIC ***15*** *11:55:42.1±0.4, 2012S×16909E, h35km, mb4.4/7, Error ellipse: s-maj=15.5km s-min=10.8km az=156.0*
IDC ***15*** *11:55:46.8±5.3, 2021S×16901E, h76km±47km, mb4.1/12, mb1 4.1/13, mb1mx4.0/20, mbtmp4.1/13, ML4.2/1, Error ellipse: s-maj=27.0km s-min=16.1km az=179.0*

ISC 15 11:55:42.8±2.5, 202S±01×16902E±009, h40km±24km, n85, σ0§97/26, mb4.4/16, 20C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.03**	**232**	*e*P	**Pn**	**11 56 27.5**	**-0.7**
DZM				*e*S	**Sn**	**11 57 00.9**	**-2.3**
DZM	**Mont Dzumac**	**3.03**	**232**	*e*Pn	**Pn**	**11 56 27.8**	**-0.4**
DZM				*e*Sn	**Sn**	**11 57 03.6**	**+0.4**
URZ	**Urewera**	**19.29**	**160**	P	**Pn**	**12 00 06.7**	**+1.2**
	0.7nm,0.3s,baz=352,slow=8.7,SNR=5.7						
CTA	**Charters Tower**	**21.37**	**266**	*e*P	**P**	**12 00 29.6**	**+2.6**
	4.6nm,0.6s,mb4.0						
CTA	**Charters Tower**	**21.37**	**266**	P	**P**	**12 00 29.6**	**+2.6**
	7.3nm,0.8s,mb4.1,baz=102,slow=11,SNR=11						
CTAO	**Charters Tower**	**21.37**	**266**	*e*P	**P**	**12 00 29.7**	**+2.7**
	5.0nm,0.6s,mb4.0						
RAR	**Rarotonga**	**29.18**	**97**	P	**P**	**12 01 41.1**	**+0.5**
	30nm,1.0s,mb5.0,baz=134,slow=5.5,SNR=2.9						
WRA	**Warramunga Arr**	**32.54**	**264**	P	**P**	**12 02 09.9**	**-0.4**
	1.4nm,0.5s,mb4.2,baz=90,slow=8.4,SNR=24						
WRA				PcP	PcP	12 04 55.7	-0.7
	0.4nm,0.5s,baz=93,slow=3.0,SNR=4.7						
ASAR	**Alice Springs**	**32.70**	**257**	P	**P**	**12 02 12.0**	**+0.3**
	5.6nm,0.7s,mb4.6,baz=81,slow=9.1,SNR=56						
ASAR				PcP	PcP	12 04 55.7	-1.1
	0.5nm,0.6s,baz=87,slow=3.2,SNR=4.1						
FITZ	**Fitzroy Crossi**	**40.95**	**265**	*e*P	**P**	**12 03 22.3**	**+0.4**
	5.2nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**40.95**	**265**	P	**P**	**12 03 21.6**	**-0.2**
	2.1nm,0.8s,mb3.9,baz=160,slow=10.0,SNR=5.3						
PETK	**Petropavlovsk-**	**73.68**	**353**	P	**P**	**12 07 10.1**	**-1.9**
	2.8nm,0.9s,mb4.2,baz=126,slow=4.9,SNR=5.4						
MAW	**Mawson**	**77.45**	**202**	P	**P**	**12 07 33.3**	**-0.3**
	1.5nm,0.6s,mb4.1,baz=100,slow=4.3,SNR=5.1						
CMAR	**Chiang Mai Arr**	**78.72**	**294**	P	**P**	**12 07 42.2**	**+0.8**
	1.5nm,0.7s,mb4.0,baz=135,slow=4.2,SNR=7.8						
KDAK	**Kodiak Island**	**84.03**	**20**	P	**P**	**12 08 10.2**	**+1.5**
	2.0nm,0.4s,mb4.6,baz=277,slow=19,SNR=3.4						
KCPM	**Cahto Peak**	**86.56**	**46**	*e*P	**P**	**12 08 21.8**	**-0.1**
ULN	**Ulaanbaatar**	**87.53**	**323**	*e*P	**P**	**12 08 26.6**	**+0.3**
	6.7nm,1.1s,mb4.8						
SONM	**Songino Array**	**87.88**	**323**	P	**P**	**12 08 28.6**	**+0.6**
	3.3nm,0.8s,mb4.6,baz=134,slow=5.1,SNR=15						
YBH	**Yreka Blue Hor**	**88.14**	**44**	P	**P**	**12 08 28.9**	**-0.5**
	1.0nm,0.5s,mb4.3,baz=178,slow=3.8,SNR=8.3						
SNAA	**Sanae**	**88.17**	**183**	*e*P	**P**	**12 08 28.2**	**-1.0**
	1.4nm,0.6s,mb4.4						
NVAR	**Mina Array Bea**	**89.60**	**49**	P	**P**	**12 08 36.2**	**-0.1**
	1.5nm,0.8s,mb4.3,baz=226,slow=7.7,SNR=10						
NVAR	**Mina Array Bea**	**89.60**	**49**	P	**P**	**12 08 36.2**	**-0.1**
MOD	**Modoc**	**89.81**	**45**	*e*P	**P**	**12 08 36.0**	**-1.3**
	1.7nm,0.7s,mb4.5						
GNW	**Green Mountain**	**90.93**	**39**	*e*P	**P**	**12 08 41.9**	**-0.4**
	2.9nm,0.7s,mb4.7						
ARCES	**ARCESS Array B**	**125.96**	**345**	PKP	PKPdf	12 14 38.8	-1.0
	2.2nm,0.7s,baz=50,slow=2.0,SNR=13						
DPC	**Dobrinska-Polom**	**142.99**	**331**	*e*PKP	PKPdf	12 15 08.8	-3.3
CLL	**Collm**	**143.72**	**334**	*e*(PKPdf)	PKPdf	12 15 15.0	+1.7
MODS	**Modra-Piesok**	**143.87**	**328**	*e*PKP	PKPdf	12 15 13.1	-0.6
MODS	**Modra-Piesok**	**143.87**	**328**	*e*PKP	PKPdf	12 15 13.1	-0.6
PRU	**Pruhonice**	**144.05**	**332**	*e*PKP	PKPdf	12 15 11.5	-2.4
CLZ	**Clausthal**	**144.31**	**337**	*e*PKPbc	PKPdf	12 15 12.8	-1.5
EKA	**Eskdalemuir Ar**	**144.45**	**352**	PKP	PKPdf	12 15 11.4	-3.1
	1.1nm,0.6s,baz=358,slow=2.7,SNR=3.9						
TANN	**Tannenbergstha**	**144.62**	**334**	*e*PKPbc	PKPdf	12 15 13.6	-1.3
WERD	**Werda**	**144.66**	**334**	*e*PKPbc	PKPdf	12 15 13.4	-1.6
WERD				*ep*PKPbc		12 15 23.4	
GUNZ	**Gunzen**	**144.72**	**334**	*e*PKPbc	PKPdf	12 15 14.0	-1.1
GUNZ				*ep*PKPbc		12 15 23.9	
WERN	**Wernitzgruen**	**144.75**	**334**	*e*PKPbc	PKPdf	12 15 14.2	-1.0
WERN				*ep*PKPbc		12 15 23.9	
NKC	**Novy Kostel**	**144.77**	**334**	*e*PKP	PKPdf	12 15 14.2	-1.0
NKC				*ex*	x	12 15 23.7	
MOX	**Moxa**	**144.79**	**335**	*e*P	PKPdf	12 15 13.9	-1.3
	16nm,1.1s						
MOX				*e*		12 15 23.7	
MOX	**Moxa**	**144.79**	**335**	*e*PKPbc	PKPdf	12 15 14.0	-1.2
MOX				*ep*PKPbc		12 15 23.8	
MANZ	**Manzenberg**	**145.10**	**334**	*e*PKPbc	PKPbc	12 15 15.3	0.0
MANZ				*ep*PKPbc	pPKPbc	12 15 24.8	-2.9
KHC	**Kasperske Hory**	**145.10**	**332**	*e*PKP	PKPdf	12 15 15.3	-0.5
KHC				*ex*	x	12 15 24.6	
IDI	**Anoyia**	**145.10**	**303**	PKPbc	PKPbc	12 15 14.8	-1.0
	13nm,1.1s,baz=35,slow=11,SNR=7.3						
ROTZ	**Rotzenmuhle**	**145.22**	**333**	*e*PKPbc	PKPbc	12 15 15.7	0.0
ROTZ				*ep*PKPbc	pPKPbc	12 15 25.6	-2.5
GEC2	**GERESS Array S**	**145.25**	**331**	*e*PKPbc	PKPbc	12 15 15.6	-0.2
GEC2				*ep*PKPbc	pPKPbc	12 15 26.0	-2.3
GERES	**GERESS Array B**	**145.25**	**331**	PKPbc	PKPbc	12 15 15.7	-0.1
	6.1nm,0.7s,baz=31,slow=4.2,SNR=24						
UBBA	**Unterbreizbach**	**145.27**	**337**	*e*PKPbc	PKPbc	12 15 15.4	-0.4
WET	**Wettzell**	**145.40**	**332**	*e*PKPbc	PKPbc	12 15 16.0	-0.3
GRA1	**Grafenberg Arr**	**145.69**	**334**	*e*PKPbc	PKPbc	12 15 16.9	-0.3
GRA1				*ep*PKPbc	pPKPbc	12 15 27.0	-2.6
GRF	**Grafenberg Arr**	**145.69**	**334**	*e*PKPbc	PKPbc	12 15 16.9	-0.3
GRF				*ep*PKPbc	pPKPbc	12 15 27.0	-2.6
RJOB	**Jochberg**	**146.48**	**330**	*e*PKPbc	PKPbc	12 15 19.6	0.0
STU	**Stuttgart**	**147.23**	**335**	*e*PKPbc	PKPbc	12 15 21.9	+0.2
GIVF	**Givet**	**147.65**	**341**	⇑*i*PKP1	PKPbc	12 15 22.5	-0.3
	26nm,0.7s						
BAIF	**Baives**	**147.88**	**341**	⇑*i*PKP1	PKPbc	12 15 23.2	-0.2
	42nm,1.2s						
BFO	**Black Forest**	**147.93**	**335**	*e*PKPbc	PKPbc	12 15 23.3	-0.3
CDF	**Champ du Feu**	**148.26**	**337**	⇑*i*PKP1	PKPbc	12 15 24.1	-0.4
	11nm,0.8s						
DAVOX	**Davos/Dischmat**	**148.51**	**332**	PKPbc	PKPbc	12 15 25.3	+0.1
	10nm,0.4s,baz=256,slow=1.1,SNR=11						
HINF	**Hinteralfeld**	**148.92**	**336**	⇑*i*PKP1	PKPbc	12 15 25.5	-0.7
	4.5nm,0.6s						
HAU	**Haidommpre**	**148.94**	**337**	⇑*i*PKP1	PKPbc	12 15 25.8	-0.5
	13nm,0.8s						
MEZF	**Maizieres J'vi**	**148.97**	**339**	⇑*i*PKP1	PKPbc	12 15 26.2	-0.1
	22nm,0.8s						
TUE	**Stuetta**	**148.98**	**332**	PKPdf	PKPdf	12 15 21.9	-0.5
TUE				*e*PKPbc	PKPbc	12 15 26.0	-0.4
CABF	**La Chapelle**	**150.21**	**336**	⇑*i*PKP1	PKPbc	12 15 29.4	0.0
	14nm,0.7s						
FLN	**La Foliniere**	**150.30**	**346**	⇑*i*PKP1	PKPbc	12 15 28.7	-0.9
	13nm,0.6s						
LDF	**La Druziere**	**150.38**	**345**	⇑*i*PKP1	PKPbc	12 15 28.8	-1.0
	7.8nm,0.6s						
LOR	**Lormes**	**150.44**	**339**	⇑*i*PKP1	PKPbc	12 15 29.5	-0.5
	12nm,0.8s						
GRR	**Gorron**	**150.74**	**346**	⇑*i*PKP1	PKPbc	12 15 29.9	-0.7
	13nm,0.6s						
SSF	**Saint Saulge**	**150.74**	**340**	⇑*i*PKP1	PKPbc	12 15 30.2	-0.5
	16nm,1.0s						
LPL	**La Plagne**	**150.85**	**334**	*e*PKP1	PKPbc	12 15 31.0	0.0
LPG	**La Plagne**	**150.86**	**334**	⇑*i*PKP1	PKPbc	12 15 31.1	+0.1
	11nm,0.6s						
AVF	**Avril sur Loir**	**151.03**	**339**	*e*PKP1	PKPbc	12 15 30.5	-0.9
SGMF	**Saint Gilles**	**151.22**	**348**	⇑*i*PKP1	PKPbc	12 15 30.7	-1.1
	12nm,0.7s						
BNI	**Bardonecchia**	**151.25**	**333**	*e*PKPbc	PKPbc	12 15 31.8	-0.1
ROSF	**Rostrenen**	**151.27**	**349**	⇑*i*PKP1	PKPbc	12 15 30.7	-1.2
	6.2nm,0.5s						
MBDF	**Montbardon**	**151.47**	**333**	⇑*i*PKP1	PKPbc	12 15 32.4	-0.1
	3.5nm,0.6s						
QUIF	**Quistinic**	**151.66**	**349**	⇑*i*PKP1	PKPbc	12 15 31.6	-1.2
ORIF	**Oris-en-Rattie**	**151.69**	**334**	⇑*i*PKP1	PKPbc	12 15 32.5	-0.5
	11nm,0.7s						
TCF	**Toulx Ste Croi**	**151.84**	**340**	⇑*i*PKP1	PKPbc	12 15 32.5	-0.8
	16nm,1.1s						
VAE	**Valguarnera**	**152.03**	**313**	PKPbc	PKPbc	12 15 31.1	-2.8
	4.5nm,0.3s,baz=353,slow=1.6,SNR=2.5						
PGF	**Pioggiola**	**152.10**	**327**	⇑*i*PKP1	PKPbc	12 15 33.3	-0.7
	20nm,0.7s						
VIVF	**Saint-Julien-l**	**152.22**	**336**	*e*PKP1	PKPbc	12 15 33.6	-0.6
MFF	**Saint Martin d**	**152.24**	**344**	*e*PKP1	PKPbc	12 15 33.3	-0.8
FRF	**La Foret Royal**	**152.45**	**332**	*e*PKP1	PKPbc	12 15 33.7	-1.0
SMRF	**Simiane la Rot**	**152.58**	**333**	*e*PKP1	PKPbc	12 15 34.8	-0.2
LMR	**La Mourre**	**152.69**	**331**	*e*PKP1	PKPbc	12 15 34.4	-0.9
RJF	**Les Rejaudoux**	**152.94**	**340**	*e*PKP1	PKPbc	12 15 35.9	+0.1
LASF	**Ste Croix**	**153.19**	**336**	*e*PKP1	PKPbc	12 15 35.7	-0.7
	12nm,1.1s						

ISCJB ***15*** *12:18:45.0±0.7, 9.14S±008×11873E±006, h103km±9km, mb3.9/4, Error ellipse: s-maj=14.2km s-min=6.7km az=28.9*
NEIC ***15*** *12:18:44.9±1.4, 9.14S×11857E, h78km±15km, Error ellipse: s-maj=26.1km s-min=10.1km az=71.0*
DJA ***15*** *12:18:46, 9695S×11868E, h111km, MLv5.0/3*
IDC ***15*** *12:18:55.0±3.0, 858S×11952E, h165km±22km, mb3.5/5, mb1 3.4/8, mb1mx3.3/19, mbtmp3.4/8, Error ellipse: s-maj=47.5km s-min=7.6km az=53.0*

ISC 15 12:18:46.3±0.7, 916S±008×11873E±006, h94km±9km, n14, σ0§92/24, mb3.9/4, 2C, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**1.63**	**108**	⇑*e*P	**Pn**	**12 19 13.6**	**-0.3**
WSI				*e*S	**Sn**	**12 19 26.5**	**-8.3**
KAPI	**Kappang**	**4.24**	**14**	P	**Pn**	**12 19 48.0**	**-0.6**
	4.8nm,0.3s,baz=162,slow=4.6,SNR=28						
KAPI				S	**Sn**	**12 20 32.6**	**-4.4**
	94nm,0.3s,baz=126,slow=23,SNR=76						
BATI	**Baumata**	**4.98**	**103**	P	**Pn**	**12 19 59.4**	**+0.8**
	20nm,0.3s,baz=249,slow=2.1,SNR=13						
BATI				S	**Sn**	**12 20 55.3**	**+0.3**
	32nm,0.3s,baz=32,slow=18,SNR=6.0						
TRT	**Tretes**	**6.20**	**283**	⇑*e*P	**Pn**	**12 20 17.0**	**+1.8**
TRT				*e*S	**Sn**	**12 21 24.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**11.14**	**144**	*e*P	**Pn**	**12 21 20.9**	**-1.7**
	7.5nm,0.6s						
FITZ				*e*S	**Sn**	**12 23 17.4**	**-7.8**
FITZ	**Fitzroy Crossi**	**11.14**	**144**	P	**Pn**	**12 21 20.9**	**-1.6**
	0.6nm,0.3s,baz=343,slow=9.7,SNR=26						
FITZ				S	**Sn**	**12 23 19.2**	**-6.0**
	1.2nm,0.3s,baz=186,slow=18,SNR=9.0						
MBWA	**Marble Bar**	**11.97**	**175**	*e*Pn	**Pn**	**12 21 33.8**	**+0.1**
MBWA				*e*Sn	**Sn**	**12 23 37.0**	**-8.4**
WRA	**Warramunga Arr**	**18.51**	**127**	P	**Pn**	**12 22 56.4**	**-0.1**
	0.2nm,0.3s,baz=303,slow=14,SNR=11						
WRA				S	**S**	**12 26 14.6**	**-7.0**
	0.3nm,0.3s,baz=303,slow=25,SNR=4.4						
WB2	**Warramunga Arr**	**18.52**	**127**	*e*P	**Pn**	**12 22 56.6**	**0.0**
WB2				*e*S	**S**	**12 26 12.1**	**-10**
ASAR	**Alice Springs**	**20.47**	**137**	P	**P**	**12 23 19.2**	**+2.8**
	2.0nm,0.7s,baz=321,slow=12,SNR=36						
ASAR				S	**S**	**12 26 59.9**	**-0.6**
	1.0n

SNR=7.9
EJIF S Sb 12 31 24.4 -1.2
85nm,0.2s,SNR=7.9
EJIF Jimena Fronter 1.40 93 P Pn 12 31 08.5 +1.5
EJIF *e* 12 31 21.5
EJIF S Sb 12 31 24.4 -1.2
PFVI Vila Bisbo 1.43 295 *e*P Pn 12 31 06.9 -0.7
PFVI *e*S Sn 12 31 23.8 -2.6
PFVI A 12 31 29.8
494nm,0.3s
LIJA Lijar 1.48 76 ⇓P Pn 12 31 09.8 +1.5
LIJA S Sn 12 31 13.9 -14
LIJA Lijar 1.48 76 *i*P Pn 12 31 09.8 +1.5
PBEJ Beja 1.57 340 *i*P Pn 12 31 10.2 +0.7
PBEJ *e*S Sn 12 31 28.2 -1.6
PBEJ A 12 31 29.4
275nm,0.2s
PBEJ Beja 1.57 340 ⇓P Pn 12 31 10.2 +0.7
PBEJ S Sn 12 31 28.2 -1.6
138nm,0.2s
PTEO Sao Teotonio 1.57 310 *i*P Pn 12 31 09.8 +0.2
PTEO *e*S Sn 12 31 27.7 -2.3
PTEO A 12 31 29.5
679nm,0.5s
PTEO Sao Teotonio 1.57 310 ⇓P Pn 12 31 09.8 +0.2
PTEO S Sn 12 31 27.7 -2.3
340nm,0.5s
REAL Reales 1.60 92 ⇑P Pn 12 31 11.6 +1.6
REAL S Sn 12 31 26.4 -4.3
REAL Reales 1.60 92 *i*P Pn 12 31 11.6 +1.7
ECEU Ceuta 1.61 113 ⇑P Pn 12 31 11.2 +1.2
21nm,0.1s,SNR=18
ECEU UNK 12 31 24.7
SNR=9.9
ECEU S Sn 12 31 31.6 +0.8
163nm,0.2s,SNR=8.4
ECEU Ceuta 1.61 113 P Pn 12 31 11.2 +1.2
21nm,0.1s,SNR=37
ECEU S Sn 12 31 31.6 +0.8
163nm,0.2s,SNR=8.4
PBAR Barrancos 1.63 4 *i*Pn Pn 12 31 11.5 +1.2
PBAR *e*Sn Sn 12 31 31.3 0.0
PBAR A 12 31 38.1
252nm,0.2s
PBAR Barrancos 1.63 4 ⇓Pn Pn 12 31 11.5 +1.2
PBAR Sn Sn 12 31 31.3 0.0
126nm,0.2s
DKH Dar Kharkhour 1.83 125 P Pn 12 31 14.0 +1.0
DKH S Sn 12 31 31.0 -5.2
DKH Dar Kharkhour 1.83 125 *i*P Pn 12 31 14.0 +1.0
EMIJ Mijas 1.95 89 P Pn 12 31 15.2 +0.5
16nm,0.2s,SNR=72
EMIJ UNK 12 31 31.4
SNR=8.8
EMIJ S Sn 12 31 37.2 -2.1
208nm,0.4s
EMIJ Mijas 1.95 89 P Pn 12 31 15.2 +0.5
16nm,0.2s,SNR=72
EMIJ S Sn 12 31 38.7 -0.6
208nm,0.4s
EMIJ Mijas 1.95 89 P Pn 12 31 15.2 +0.5
EMIJ *e* 12 31 31.4
EMIJ S Sn 12 31 38.7 -0.6
RSA Sarsar 2.01 146 P Pn 12 31 15.0 -0.5
RSA S Sn 12 31 33.0 -7.6
RSA Sarsar 2.01 146 *i*P Pn 12 31 15.0 -0.5
EVO Evora 2.08 342 *e*Pn Pn 12 31 17.7 +1.2
EVO *e*Sn Sn 12 31 42.3 -0.2
351nm,0.2s
EVO Evora 2.08 342 *i*Pn Pn 12 31 17.6 +1.1
EVO *e*Sn Sn 12 31 40.7 -1.8
EVO A 12 31 42.6
512nm,0.1s
EVO Evora 2.08 342 ⇓Pn Pn 12 31 17.6 +1.1
EVO Sn Sn 12 31 40.7 -1.8
256nm,0.1s
EVOP Sao Brissos 2.11 340 *e*Pn Pn 12 31 17.7 +0.8
EVOP *e*Sn Sn 12 31 42.3 -0.8
176nm,0.2s
MOE Montemor 2.17 335 *i*Pn Pn 12 31 18.7 +0.9
MOE *e*Sn Sn 12 31 42.9 -1.8
EBAD Badajoz 2.21 4 ⇓P Pn 12 31 19.2 +1.0
30nm,0.1s,SNR=18
EBAD S Sn 12 31 45.0 -0.6
149nm,0.1s,SNR=4.7
EBAD Badajoz 2.21 4 P Pn 12 31 19.2 +0.9
30nm,0.1s,SNR=18
EBAD S Sn 12 31 44.5 -1.1
149nm,0.1s,SNR=4.7
EBAD Badajoz 2.21 4 ⇓P Pn 12 31 19.2 +1.0
EBAD S Sn 12 31 44.5 -1.1
EMAL Malaga-Limoner 2.24 84 ⇓P Pn 12 31 24.3 +5.7
10nm,0.2s,SNR=18
EMAL S Sn 12 31 50.4 +4.2
33nm,0.2s,SNR=7.9
EMAL Malaga-Limoner 2.24 84 *i*P Pn 12 31 20.2 +1.6
EMAL *e*S Sn 12 31 46.4 +0.1
ELOJ Sierra Loja 2.51 75 ⇑P Pn 12 31 24.1 +1.6
16nm,0.2s,SNR=18
ELOJ UNK 12 31 50.3
ELOJ S Sn 12 31 53.2 0.0
86nm,0.3s,SNR=6.6
ELOJ Sierra Loja 2.51 75 ⇑P Pn 12 31 24.1 +1.6
ELOJ *e* 12 31 50.3
ELOJ S Sn 12 31 53.2 0.0
RTC Rabat Centre 2.57 174 P Pn 12 31 21.5 -1.7
RTC S Sn 12 31 48.0 -6.5
EADA Adamuz 2.64 51 ⇑P Pn 12 31 25.6 +1.4
4.8nm,0.1s,SNR=18
EADA S Sn 12 31 54.8 -1.5
87nm,0.2s
EADA Adamuz 2.64 51 P Pn 12 31 25.6 +1.4
4.8nm,0.1s,SNR=18
EADA S Sn 12 31 54.8 -1.5
122nm,0.2s
LIS Lisbon 2.66 325 *e*P Pn 12 31 25.1 +0.6
LIS AML AML 12 31 53.6
comp=N,263nm,0.5s
LIS *e*S Sn 12 31 53.7 -3.1
LIS *e*S Sn 12 31 54.1 -2.7
LIS Lisbon 2.66 325 *e*P Pn 12 31 25.1 +0.6
LIS *e*S Sn 12 31 53.7 -3.1
ERON Agron 2.76 79 P Pn 12 31 27.9 +2.0
comp=N,14nm,0.2s,SNR=7.9
ERON S Sn 12 31 56.8 -2.5
comp=N,33nm,0.2s,SNR=7.9
ERON Agron 2.76 79 P Pn 12 31 27.9 +2.0
comp=N,14nm,0.2s,SNR=7.9
ERON S Sn 12 31 56.7 -2.6
comp=N,33nm,0.2s,SNR=7.9
ALMR Almeirim 2.82 338 *e*P Pn 12 31 27.7 +1.0
ALMR *e*S Sn 12 31 58.2 -2.5
ALMR *e*S Sn 12 31 58.3 -2.5
ALMR AML AML 12 32 04.4
comp=N,394nm,1.1s
ALMR Almeirim 2.82 338 *e*P Pn 12 31 27.7 +1.0
ALMR *e*S Sn 12 31 58.2 -2.5
PMRV Marv??o 2.88 357 *e*Pn Pn 12 31 28.5 +1.0
PMRV *e*Sn Sn 12 32 00.9 -1.3
PMRV A 12 32 03.3
comp=N,182nm,0.3s
PMAFR Mafra 2.92 326 *i*Pn Pn 12 31 28.9 +0.9
PMAFR *e*Sn Sn 12 32 00.5 -2.6
PMAFR A 12 32 03.5
comp=N,403nm,0.2s
MPAL Palemas 2.96 116 P Pn 12 31 28.0 -0.5
MPAL S Sn 12 31 59.0 -5.0
MPAL Palemas 2.96 116 *e*P Pn 12 31 28.0 -0.5
ECOG Cogollos-Vega 3.00 75 P Pn 12 31 30.9 +1.8
comp=N,41nm,0.4s,SNR=38
ECOG S Sn 12 32 03.1 -2.0
comp=N,67nm,0.2s
TGT Taghat 3.03 144 P Pn 12 31 28.0 -1.6
TGT S Sn 12 31 59.0 -6.9
TGT Taghat 3.03 144 *i*P Pn 12 31 28.0 -1.6
EQUE Quentar 3.08 77 ⇑P Pn 12 31 32.1 +1.8
comp=N,12nm,0.1s,SNR=18
EQUE S Sn 12 32 04.7 -2.5
comp=N,157nm,0.3s,SNR=6.1
EBAN Banos Encina 3.16 58 ⇑P Pn 12 31 32.5 +1.1
comp=N,23nm,0.1s,SNR=18
EBAN S Sn 12 32 06.2 -2.9
comp=N,101nm,0.2s
EBAN Banos Encina 3.16 58 ⇑P Pn 12 31 32.5 +1.2
EBAN S Sn 12 32 06.2 -2.9

TOU Touzarine 3.22 118 P Pn 12 31 31.0 -1.1
TOU S Sn 12 32 06.0 -4.5
TOU Touzarine 3.22 118 *i*P Pn 12 31 31.0 -1.1
EALB Alboran 3.42 99 P Pn 12 31 35.3 +0.4
comp=N,6.4nm,0.2s,SNR=7.9
EALB S Sn 12 32 11.5 -4.0
comp=N,154nm,0.5s,SNR=6.1
EALB Alboran 3.42 99 P Pn 12 31 35.3 +0.4
comp=N,6.4nm,0.2s,SNR=7.9
EALB S Sn 12 32 11.5 -4.0
comp=N,154nm,0.5s,SNR=6.1
EBER Berja 3.48 83 P Pn 12 31 36.9 +1.2
comp=N,6.5nm,0.2s,SNR=18
EBER S Sn 12 32 16.0 -1.0
comp=N,84nm,0.4s
EBER Berja 3.48 83 P Pn 12 31 36.9 +1.2
comp=N,6.5nm,0.2s,SNR=18
EBER S Sn 12 32 16.0 -0.9
comp=N,84nm,0.4s
TZK Tazeka 3.48 134 P Pn 12 31 34.5 -1.2
TZK S Sn 12 32 10.0 -6.9
TZK Tazeka 3.48 134 *i*P Pn 12 31 34.5 -1.2
EQES Quesada 3.52 68 ⇑P Pn 12 31 37.3 +1.0
comp=N,5.4nm,0.1s,SNR=18
EQES S Sn 12 32 16.4 -1.7
comp=N,35nm,0.1s
EQES Quesada 3.52 68 P Pn 12 31 37.3 +0.9
comp=N,5.4nm,0.1s,SNR=18
EQES S Sn 12 32 16.4 -1.7
comp=N,52nm,0.2s
MIF Mishlifen 3.52 152 P Pn 12 31 35.0 -1.4
MIF S Sn 12 32 12.0 -6.1
MIF Mishlifen 3.52 152 *i*P Pn 12 31 35.0 -1.4
PAB San Pablo 3.74 36 *e*Pn Pn 12 31 41.0 +1.6
PAB *e*Sn Sn 12 32 23.1 -0.4
PAB San Pablo 3.74 36 *e*Pn Pn 12 31 41.0 +1.6
PAB *e*Sn Sn 12 32 23.1 -0.4
MTE Manteigas 3.85 356 *i*Pn Pn 12 31 41.9 +1.0
MTE *e*Sn Sn 12 32 24.4 -1.8
MTE A 12 32 27.6
comp=N,140nm,0.4s
MTE Manteigas 3.85 356 ⇓Pn Pn 12 31 41.9 +1.0
MTE Sn Sn 12 32 24.4 -1.8
comp=N,70nm,0.4s
MTE Manteigas 3.85 356 ⇓*i*Pn Pn 12 31 41.8 +0.9
MTE *e*Sn Sn 12 32 24.4 -1.8
comp=N,140nm,0.4s
MTE Manteigas 3.85 356 ⇓*i*Pn Pn 12 31 41.8 +0.9
MTE *e*Sn Sn 12 32 24.4 -1.8
EHUE Huescar 3.89 70 ⇑P Pn 12 31 42.2 +0.8
comp=N,12nm,0.2s,SNR=18
EHUE S Sn 12 32 25.6 -1.5
comp=N,35nm,0.2s,SNR=7.9
CZD Col de Zad 3.93 153 P Pn 12 31 41.0 -0.9
CZD S Sn 12 32 21.0 -7.1
CZD Col de Zad 3.93 153 *i*P Pn 12 31 41.0 -0.9
ZAI Zaio 3.95 112 P Pn 12 31 42.0 -0.2
ZAI S Sn 12 32 24.0 -4.5
ZAI Zaio 3.95 112 *e*P Pn 12 31 42.0 -0.2
ENIJ Nijar 4.03 83 P Pn 12 31 44.0 +0.7
comp=N,4.7nm,0.2s,SNR=7.9
ENIJ S Sn 12 32 28.8 -1.7
comp=N,12nm,0.2s,SNR=7.9
ESDC Sonseca Array 4.03 38 ⇓P Pn 12 31 44.9 +1.6
comp=N,60nm,0.2s,baz=224,slow=13,SNR=18
ESDC S Sn 12 32 27.7 -2.8
comp=N,123nm,0.3s,baz=225,slow=16,SNR=39
ESDC Sonseca Array 4.03 38 P Pn 12 31 44.9 +1.6
comp=N,60nm,0.2s,SNR=18
ESDC S Sn 12 32 27.7 -2.8
comp=N,123nm,0.3s,SNR=39
ESLA Sonseca Array 4.03 38 ⇓*i*Pn Pn 12 31 44.9 +1.6
ESLA *e*Sn Sn 12 32 29.3 -1.2
ESLA Sonseca Array 4.03 38 ⇓*i*Pn Pn 12 31 44.9 +1.6
ESLA *e*Sn Sn 12 32 29.3 -1.2
KIB El Ksiba 4.08 166 P Pn 12 31 42.5 -1.5
KIB S Sn 12 32 25.0 -6.7
PVIS Viseu 4.20 353 *e*Pn Pn 12 31 46.4 +0.8
PVIS *e*Sn Sn 12 32 32.3 -2.3
PVIS A 12 32 35.8
comp=N,49nm,0.2s
PVIS Viseu 4.20 353 *e*Pn Pn 12 31 46.4 +0.8
PVIS *e*Sn Sn 12 32 32.3 -2.3
comp=N,49nm,0.2s
EVIA Vianos 4.27 59 ⇑P Pn 12 31 47.1 +0.4
comp=N,6.8nm,0.1s,SNR=18
EVIA S Sn 12 32 32.4 -4.1
comp=N,44nm,0.2s
TZC Tazercounte 4.43 172 P Pn 12 31 47.0 -1.8
TZC S Sn 12 32 32.0 -8.4
MVO Moncorvo 4.61 2 *e*Pn Pn 12 31 52.2 +0.9
MVO *e*Sn Sn 12 32 41.9 -3.0
MVO A 12 32 44.6
comp=N,158nm,0.3s
MVO Moncorvo 4.61 2 *e*Pn Pn 12 31 52.2 +0.9
MVO *e*Sn Sn 12 32 41.9 -3.0
comp=N,158nm,0.3s
PTO Porto 4.71 347 *e*Sn Sn 12 32 43.9 -3.5
PTO A 12 32 47.3
comp=N,261nm,0.1s
PTO Porto 4.71 347 *e*Sn Sn 12 32 43.9 -3.5
comp=N,261nm,0.1s
GUD Guadarrama 4.73 29 ⇓P Pn 12 31 54.5 +1.6
comp=N,32nm,0.2s,SNR=18
GUD S Sn 12 32 45.6 -2.3
comp=N,28nm,0.3s
PVRL Vila Real 4.74 355 *e*Pn Pn 12 31 53.8 +0.8
PVRL *e*Sn Sn 12 32 44.9 -3.1
PVRL A 12 32 48.7
comp=N,69nm,0.2s
PVRL Vila Real 4.74 355 *e*Pn Pn 12 31 53.8 +0.8
PVRL *e*Sn Sn 12 32 44.9 -3.1
comp=N,69nm,0.2s
EMUR La Murta 4.93 73 P Pn 12 31 56.7 +1.0
comp=N,4.7nm,0.2s,SNR=14
EMUR S Sn 12 32 49.1 -3.6
comp=N,35nm,0.3s,SNR=13
EMUR La Murta 4.93 73 P Pn 12 31 56.7 +1.1
comp=N,4.7nm,0.2s,SNR=14
EMUR S Sn 12 32 49.1 -3.6
comp=N,35nm,0.3s,SNR=13
ETOB Tobarra 4.95 63 ⇑P Pn 12 31 56.5 +0.6
comp=N,8.3nm,0.1s,SNR=18
ETOB S Sn 12 32 50.4 -2.8
comp=N,32nm,0.1s
ETOB Tobarra 4.95 63 P Pn 12 31 56.5 +0.6
comp=N,8.3nm,0.1s,SNR=18
ETOB S Sn 12 32 50.4 -2.8
comp=N,32nm,0.1s
ZFT Errachidia 5.08 152 P Pn 12 31 56.5 -1.3
ZFT S Sn 12 32 49.0 -7.5
ZFT Errachidia 5.08 152 *i*P Pn 12 31 56.5 -1.3
CIA Chichaoua 5.14 195 P Pn 12 31 57.0 -1.5
CIA S Sn 12 32 50.5 -7.4
JHA Jbel Lahdid 5.15 202 P Pn 12 31 57.0 -1.7
JHA S Sn 12 32 51.0 -7.2
PCAB Cabril 5.19 353 *e*Pn Pn 12 32 00.0 +0.7
PCAB *e*Sn Sn 12 32 55.7 -3.5
PCAB A 12 32 59.0
comp=N,33nm,0.1s
PCAB Cabril 5.19 353 *e*Pn Pn 12 32 00.0 +0.7
PCAB *e*Sn Sn 12 32 55.7 -3.5
comp=N,33nm,0.1s
ELOB Lobios 5.35 353 ⇓P Pn 12 32 02.2 +0.7
comp=N,22nm,0.2s,SNR=18
ELOB S Sn 12 32 58.7 -4.5
comp=N,29nm,0.2s
ELOB Lobios 5.35 353 P Pn 12 32 02.2 +0.7
comp=N,22nm,0.2s,SNR=18
OUK Oukaimeden 5.36 186 P Pn 12 31 59.5 -2.0
OUK S Sn 12 32 55.0 -8.3
ECAL Calabor 5.40 4 P Pn 12 32 03.0 +0.9
comp=N,22nm,0.1s,SNR=125
ECAL S Sn 12 33 01.9 -2.3
comp=N,120nm,0.3s
ECAL Calabor 5.40 4 P Pn 12 32 03.0 +0.9
comp=N,22nm,0.1s,SNR=125
ECAL S Sn 12 33 01.9 -2.3
comp=N,120nm,0.3s
ECHE Chera 5.78 56 P Pn 12 32 08.1 +0.8
comp=N,2.5nm,0.2s,SNR=13
ECHE S Sn 12 33 10.8 -2.8
comp=N,9.3nm,0.2s
ERUA La Rua 5.84 0 P Pn 12 32 08.9 +0.8
comp=N,35nm,0.2s,SNR=7.9

ERUA S Sn 12 33 12.1 -2.9
comp=N,8.8nm,0.2s,SNR=7.9
ETOR Torete 5.86 42 ⇓P Pn 12 32 10.2 +1.7
comp=N,40nm,0.4s,SNR=18
ETOR S Sn 12 33 11.9 -3.8
comp=N,132nm,0.3s
ETOR Torete 5.86 42 ⇓P Pn 12 32 09.6 +1.1
ETOR S Sn 12 33 11.9 -3.8
EBEN Beniarda 5.94 67 P Pn 12 32 09.6 +0.1
comp=N,2.4nm,0.1s,SNR=20
EBEN S Sn 12 33 13.0 -4.6
comp=N,22nm,0.3s
STS Santiago 6.41 351 P Pn 12 32 16.7 +0.7
comp=N,12nm,0.1s,SNR=8.6
STS S Sn 12 33 22.9 -6.4
comp=N,8.4nm,0.1s
EMOS Mosqueruela 6.51 52 P Pn 12 32 19.3 +1.9
comp=N,2.3nm,0.2s,SNR=14
EMOS S Sn 12 33 26.8 -4.8
comp=N,22nm,0.3s,SNR=7.9
EMOS Mosqueruela 6.51 52 P Pn 12 32 19.3 +1.9
EMOS S Sn 12 33 26.8 -4.8
EMAZ Mazaricos 6.54 348 P Pn 12 32 18.4 +0.6
comp=N,23nm,0.2s,SNR=46
EMAZ S Sn 12 33 27.7 -4.6
comp=N,20nm,0.2s,SNR=4.9
EPON Pontenova 6.77 0 P Pn 12 32 22.3 +1.4
comp=N,7.7nm,0.3s,SNR=15
EPON S Sn 12 33 34.0 -4.0
comp=N,8.0nm,0.3s
EARI Arriondas 6.92 12 P Pn 12 32 24.2 +1.3
comp=N,4.4nm,0.2s,SNR=31
EARI S Sn 12 33 37.9 -3.7
comp=N,5.1nm,0.2s,SNR=7.1
YBT Youssef Ben Ta 7.00 198 P Pn 12 32 21.0 -3.1
YBT S Sn 12 33 32.0 -12
EIBI Ibiza 7.20 67 P Pn 12 32 27.1 +0.2
comp=N,5.3nm,0.2s,SNR=8.0
EIBI S Sn 12 33 43.1 -5.6
comp=N,21nm,0.2s,SNR=7.9
ELAN Lanestosa 7.27 22 P Pn 12 32 29.2 +1.3
comp=N,4.3nm,0.1s,SNR=7.8
ELAN S Sn 12 33 44.8 -5.7
comp=N,9.0nm,0.2s,SNR=5.0
ERTA Horta de San J 7.35 51 P Pn 12 32 30.7 +1.9
comp=N,2.9nm,0.3s,SNR=7.9
ERTA S Sn 12 33 48.7 -3.5
comp=N,12nm,0.5s,SNR=7.9
ESAC San Caprasio 7.35 43 P Pn 12 32 31.2 +2.3
comp=N,12nm,0.3s,SNR=8.2
ESAC S Sn 12 33 47.2 -5.1
comp=N,41nm,0.3s
ESAC San Caprasio 7.35 43 P Pn 12 32 31.2 +2.3
ESAC S Sn 12 33 49.0 -3.3
EARA Aranguren 7.58 33 P Pn 12 32 33.8 +1.8
comp=N,34nm,0.3s,SNR=18
EARA S Sn 12 33 53.7 -4.2
comp=N,80nm,0.4s,SNR=5.0
IUNC Unciti 7.60 34 P Pn 12 32 34.5 +2.2
comp=N,8.2nm,0.2s,SNR=17
IUNC S Sn 12 33 54.4 -4.0
comp=N,25nm,0.3s,SNR=8.6
IZUN Zunzarren 7.70 33 ⇓P Pn 12 32 36.1 +2.4
comp=N,15nm,0.2s,SNR=18
IZUN S Sn 12 33 55.1 -5.8
comp=N,24nm,0.5s,SNR=7.9
IPRE Itoiz 7.70 34 P Pn 12 32 35.9 +2.2
comp=N,5.2nm,0.2s,SNR=5.6
IPRE S Sn 12 33 56.4 -4.6
comp=N,11nm,0.4s,SNR=6.2
IUSE Utxeti 7.73 33 P Pn 12 32 36.6 +2.5
comp=N,21nm,0.3s,SNR=34
IUSE S Sn 12 33 55.5 -6.2
comp=N,3.9nm,0.2s,SNR=4.6
EORO Oroz-Betelu 7.79 34 P Pn 12 32 37.2 +2.3
comp=N,8.5nm,0.2s,SNR=82
EORO S Sn 12 33 57.6 -5.5
comp=N,18nm,0.3s,SNR=10
ELIZ Elizondo 7.91 32 P Pn 12 32 38.2 +1.6
comp=N,34nm,0.2s,SNR=116
ELIZ S Sn 12 33 56.1 -10
comp=N,20nm,0.3s,SNR=11
EALK Alkurruntz 7.97 32 P Pn 12 32 38.9 +1.5
comp=N,28nm,0.2s,SNR=97
EALK S Sn 12 33 59.5 -8.1
comp=N,118nm,0.4s,SNR=13
EALK Alkurruntz 7.97 32 P Pn 12 32 38.9 +1.5
EALK S Sn 12 33 59.2 -8.3
SJPF Ste Jean 8.00 33 *e*Pn Pn 12 32 39.4 +1.5
SJPF *e*Sn Sn 12 33 58.4 -10
comp=N,77nm,0.5s
SJPF Ste Jean 8.00 33 Pn Pn 12 32 39.4 +1.5
SJPF Sn Sn 12 33 58.4 -10
comp=N,38nm,0.5s
EPOB Poblet 8.04 51 P Pn 12 32 39.5 +1.2
comp=N,0.4nm,0.1s,SNR=7.9
EPOB S Sn 12 34 02.9 -6.3
comp=N,5.0nm,0.3s,SNR=7.9
EPOB Poblet 8.04 51 P Pn 12 32 39.5 +1.2
EPOB S Sn 12 34 03.4 -5.8
EPOB Poblet 8.04 51 P Pn 12 32 39.5 +1.2
EPOB S Sn 12 34 03.4 -5.8
OSSF Osses 8.10 32 P Pn 12 32 40.8 +1.6
ETSF Etsaut 8.14 37 *e*Pn Pn 12 32 41.5 +1.7
ETSF *e*Sn Sn 12 34 04.2 -7.7
comp=N,43nm,0.5s
ETSF Etsaut 8.14 37 Pn Pn 12 32 41.5 +1.7
ETSF Sn Sn 12 34 04.2 -7.7
comp=N,22nm,0.5s
ORDF Ordiarp 8.21 34 P Pn 12 32 42.5 +1.8
ORDF S Sn 12 34 07.0 -6.5
EBIE Bielsa 8.34 40 P Pn 12 32 44.3 +1.8
comp=N,8.7nm,0.2s,SNR=53
EBIE S Sn 12 34 11.3 -5.4
comp=N,8.7nm,0.4s,SNR=4.9
EBIE Bielsa 8.34 40 P Pn 12 32 44.3 +1.8
EBIE S Sn 12 34 10.6 -6.1
EBIE Bielsa 8.34 40 P Pn 12 32 44.3 +1.8
EBIE S Sn 12 34 10.6 -6.1
REYF Montagne du Re 8.35 37 P Pn 12 32 44.2 +1.5
ETOS Mallorca 8.52 65 P Pn 12 32 45.6 +0.8
comp=N,0.5nm,0.1s,SNR=7.9
ETOS S Sn 12 34 14.0 -7.0
comp=N,3.3nm,0.3s,SNR=5.8
ETOS Mallorca 8.52 65 P Pn 12 32 45.2 +0.3
ETOS S Sn 12 34 14.4 -6.6
ETOS Mallorca 8.52 65 P Pn 12 32 45.2 +0.3
ETOS S Sn 12 34 14.3 -6.7
LABF Labassere 8.57 39 P Pn 12 32 47.1 +1.5
LABF S Sn 12 34 15.7 -6.5
EMIR Miracle 8.63 49 P Pn 12 32 48.2 +1.7
comp=N,3.2nm,0.2s,SNR=6.2
EMIR S Sn 12 34 18.8 -5.0
comp=N,4.0nm,0.5s
EMIR Miracle 8.63 49 P Pn 12 32 48.2 +1.8
EMIR S Sn 12 34 18.8 -5.0
EPF Esparros 8.69 40 *e*Pn Pn 12 32 49.4 +2.1
EPF *e*Sn Sn 12 34 16.2 -9.1
comp=N,25nm,0.4s
EPF Esparros 8.69 40 Pn Pn 12 32 49.4 +2.1
EPF Sn Sn 12 34 16.2 -9.1
comp=N,13nm,0.4s
EFAM Famara 9.12 218 P Pn 12 32 48.5 -4.7
comp=N,4.1nm,0.3s,SNR=7.9
EFAM S Sn 12 34 21.2 -15
comp=N,5.6nm,0.5s,SNR=9.5
EFAM Famara 9.12 218 P Pn 12 32 48.2 -5.0
EFAM S Sn 12 34 21.2 -15
EFAM Famara 9.12 218 P Pn 12 32 48.2 -5.0
EFAM S Sn 12 34 21.2 -15
CFUE Fuerteventura 9.71 218 S Sn 12 34 36.2 -14
comp=N,7.9nm,0.2s,SNR=7.9
MTLF Montolieu 9.91 44 *e*Pn Pn 12 33 05.2 +1.2
MTLF *e*Sn Sn 12 34 44.9 -10
comp=N,4.7nm,0.5s
MTLF Montolieu 9.91 44 *e*Pn Pn 12 33 05.2 +1.2
MTLF *e*Sn Sn 12 34 44.9 -10
comp=N,2.3nm,0.5s
CFTV Fuerteventura 9.98 218 S Sn 12 34 41.5 -15
comp=N,3.4nm,0.6s,SNR=7.9
LFF La Frestale 10.31 33 *e*Pn Pn 12 33 10.2 +0.7
LFF *e*Sn Sn 12 34 54.3 -11
comp=N,19nm,0.5s
LFF La Frestale 10.31 33 *e*Pn Pn 12 33 10.2 +0.7
LFF *e*Sn Sn 12 34 54.3 -11
comp=N,9.6nm,0.5s

CAF	**Calviac**	**10.92**	**37**	*e*Pn		**Pn**	**12 33 18.3**	**+0.5**
CAF				*e*Sn		**Sn**	**12 35 08.8**	**-11**
	comp=N,31nm,0.6s							
CAF	**Calviac**	**10.92**	**37**	*e*Pn		**Pn**	**12 33 18.3**	**+0.5**
CAF				*e*Sn		**Sn**	**12 35 08.8**	**-11**
	comp=N,15nm,0.6s							
RJF	**Les Rejaudoux**	**10.95**	**34**	*e*Pn		**Pn**	**12 33 18.3**	**+0.2**
RJF				*e*Sn		**Sn**	**12 35 09.7**	**-11**
	comp=N,26nm,0.5s							
RJF	**Les Rejaudoux**	**10.95**	**34**	*e*Pn		**Pn**	**12 33 18.3**	**+0.2**
RJF				*e*Sn		**Sn**	**12 35 09.7**	**-11**
	comp=N,13nm,0.5s							
EBAJ	**Bajamar**	**11.10**	**227**	S		**Sn**	**12 35 09.8**	**-15**
	comp=N,1.7nm,0.2s,SNR=7.9							
LASF	**Ste Croix**	**11.29**	**45**	*e*Pn		**Pn**	**12 33 23.7**	**+0.8**
LASF				*e*Sn		**Sn**	**12 35 17.7**	**-11**
	comp=N,5.2nm,0.7s							
LASF	**Ste Croix**	**11.29**	**45**	*e*Pn		**Pn**	**12 33 23.7**	**+0.8**
LASF				*e*Sn		**Sn**	**12 35 17.7**	**-11**
	comp=N,2.6nm,0.7s							
MFF	**Saint Martin d**	**11.34**	**25**	*e*Pn		**Pn**	**12 33 24.2**	**+0.6**
MFF				*e*Sn		**Sn**	**12 35 19.0**	**-11**
	comp=N,9.6nm,0.6s							
MFF	**Saint Martin d**	**11.34**	**25**	*e*Pn		**Pn**	**12 33 24.2**	**+0.6**
MFF				*e*Sn		**Sn**	**12 35 19.0**	**-11**
	comp=N,4.8nm,0.6s							
QUIF	**Quistinic**	**11.74**	**13**	*e*Pn		**Pn**	**12 33 28.8**	**-0.3**
QUIF				*e*Sn		**Sn**	**12 35 30.4**	**-10**
	comp=N,8.8nm,0.5s							
QUIF	**Quistinic**	**11.74**	**13**	*e*Pn		**Pn**	**12 33 28.8**	**-0.3**
QUIF				*e*Sn		**Sn**	**12 35 30.4**	**-10**
	comp=N,4.4nm,0.5s							
EGOM	**La Gomera**	**11.89**	**228**	S		**Sn**	**12 35 26.4**	**-18**
	comp=N,40nm,0.5s,SNR=4.0							
TCF	**Toulx Ste Croi**	**12.01**	**33**	*e*Pn		**Pn**	**12 33 32.4**	**-0.3**
TCF				*e*Sn		**Sn**	**12 35 35.0**	**-12**
	comp=N,15nm,0.6s							
TCF	**Toulx Ste Croi**	**12.01**	**33**	*e*Pn		**Pn**	**12 33 32.4**	**-0.3**
TCF				*e*Sn		**Sn**	**12 35 35.0**	**-12**
	comp=N,7.4nm,0.6s							
ROSF	**Rostrenen**	**12.13**	**13**	*e*Pn		**Pn**	**12 33 34.2**	**-0.1**
SGMF	**Saint Gilles**	**12.19**	**15**	*e*Pn		**Pn**	**12 33 35.0**	**-0.1**
SGMF				*e*Sn		**Sn**	**12 35 39.5**	**-11**
	comp=N,1.5nm,0.3s							
SGMF	**Saint Gilles**	**12.19**	**15**	*e*Pn		**Pn**	**12 33 35.0**	**-0.1**
SGMF				*e*Sn		**Sn**	**12 35 39.5**	**-11**
	comp=N,0.8nm,0.3s							
VIVF	**Saint-Julien-l**	**12.24**	**44**	*e*Pn		**Pn**	**12 33 36.3**	**+0.5**
BGF	**Bois d'Agland**	**12.50**	**34**	*e*Pn		**Pn**	**12 33 39.4**	**0.0**
BGF				*e*Sn		**Sn**	**12 35 47.2**	**-11**
	comp=N,50nm,0.6s							
BGF	**Bois d'Agland**	**12.50**	**34**	*e*Pn		**Pn**	**12 33 39.4**	**0.0**
BGF				*e*Sn		**Sn**	**12 35 47.2**	**-11**
	comp=N,25nm,0.6s							
GRR	**Gorron**	**12.72**	**20**	*e*Sn		**Sn**	**12 35 53.5**	**-10**
	comp=N,3.2nm,0.3s							
GRR	**Gorron**	**12.72**	**20**	*e*Sn		**Sn**	**12 35 53.5**	**-10**
	comp=N,1.6nm,0.3s							
AVF	**Avril sur Loir**	**12.91**	**34**	*e*Pn		**Pn**	**12 33 45.0**	**+0.1**
AVF				*e*Sn		**Sn**	**12 35 57.5**	**-11**
	comp=N,9.2nm,0.7s							
AVF	**Avril sur Loir**	**12.91**	**34**	*e*Pn		**Pn**	**12 33 45.0**	**+0.1**
AVF				*e*Sn		**Sn**	**12 35 57.5**	**-11**
	comp=N,4.6nm,0.7s							
HYF	**Humbligny**	**12.96**	**31**	*e*Pn		**Pn**	**12 33 45.6**	**-0.1**
SMF	**Signal de Mont**	**13.02**	**36**	*e*Pn		**Pn**	**12 33 46.5**	**-0.1**
SMF				*e*Sn		**Sn**	**12 36 00.0**	**-11**
	comp=N,6.2nm,0.7s							
SMF	**Signal de Mont**	**13.02**	**36**	*e*Pn		**Pn**	**12 33 46.5**	**-0.1**
SMF				*e*Sn		**Sn**	**12 36 00.0**	**-11**
	comp=N,3.1nm,0.7s							
LDF	**La Druitiere**	**13.11**	**21**	*e*Pn		**Pn**	**12 33 47.6**	**-0.1**
LDF				*e*Sn		**Sn**	**12 36 02.4**	**-11**
	comp=N,7.3nm,0.6s							
LDF	**La Druitiere**	**13.11**	**21**	*e*Pn		**Pn**	**12 33 47.6**	**-0.1**
LDF				*e*Sn		**Sn**	**12 36 02.4**	**-11**
	comp=N,3.7nm,0.6s							
FLN	**La Foliniere**	**13.16**	**20**	*e*Pn		**Pn**	**12 33 48.5**	**+0.1**
	baz=200							
FLN				*e*Sn		**Sn**	**12 36 04.0**	**-11**
	comp=N,1.3nm,0.3s							
FLN	**La Foliniere**	**13.16**	**20**	*e*Pn		**Pn**	**12 33 48.5**	**+0.1**
FLN				*e*Sn		**Sn**	**12 36 04.0**	**-11**
	comp=N,0.6nm,0.3s							
SSF	**Saint Saulge**	**13.18**	**34**	*e*Pn		**Pn**	**12 33 48.4**	**-0.3**
SSF				*e*Sn		**Sn**	**12 36 03.0**	**-12**
	comp=N,9.6nm,0.6s							
SSF	**Saint Saulge**	**13.18**	**34**	*e*Pn		**Pn**	**12 33 48.4**	**-0.3**
SSF				*e*Sn		**Sn**	**12 36 03.0**	**-12**
	comp=N,4.8nm,0.6s							
LOR	**Lormes**	**13.49**	**34**	*e*Pn		**Pn**	**12 33 52.6**	**-0.4**
	baz=220							
LOR				*e*Sn		**Sn**	**12 36 10.1**	**-13**
	comp=N,2.8nm,0.5s							
LOR	**Lormes**	**13.49**	**34**	*e*Pn		**Pn**	**12 33 52.6**	**-0.4**
LOR				*e*Sn		**Sn**	**12 36 10.1**	**-13**
	comp=N,1.4nm,0.5s							
BAIF	**Baives**	**15.82**	**28**	*e*Pn		**Pn**	**12 34 22.9**	**-1.4**
CDF	**Champ du Feu**	**15.92**	**37**	*e*Pn		**Pn**	**12 34 24.4**	**-1.2**

SKHL 15 12:43:41.4±0.2, 5418N×12668E, h7km±1km, mb3.9/5, 2C-1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KROS	**Kirovskiy**	**0.31**	**34**	⇓ *i*Pg	Pg	Pg	12 43 47.5	+0.1
KROS					AMB	AMB	12 43 47.7	
	90nm,0.3s							
KROS					AMB	AMB	12 43 47.7	
	100nm,0.3s							
KROS					AMB	AMB	12 43 47.7	
	98nm,0.3s							
KROS					pPg		12 43 49.3	
KROS				*i* Sg	Sg	Sg	12 43 52.1	+0.7
KROS					A		12 43 53.1	
	592nm,0.4s							
ZEA	**Zeya**	**0.56**	**143**	⇑ *i*Pg	Pg	Pg	12 43 52.0	-0.1
ZEA					AMB	AMB	12 43 52.3	
	238nm,0.3s							
ZEA				*i* Sg	Sg	Sg	12 43 59.6	+0.3
ZEA					A		12 43 59.8	
	680nm,0.3s							
BMKR	**Bomnak**	**1.37**	**66**	⇑ *i*Pg	Pg	Pg	12 44 05.6	-2.0
BMKR					AMB	AMB	12 44 06.0	
	43nm,0.3s							
BMKR					pPg		12 44 07.5	
BMKR					*e*Sg	Sg	12 44 23.8	-1.6
BMKR					A		12 44 26.0	
	140nm,0.4s							
BMKR					A		12 44 26.0	
	110nm,0.4s							
CLNS	**Chul'man**	**2.85**	**340**	*e*Pn		Pn	12 44 30.5	+3.3
CLNS				*e*Pg		Pg	12 44 35.8	-0.2
CLNS					AMB	AMB	12 44 37.9	
	6.0nm,0.2s							
CLNS					*e*Sn	Sn	12 45 03.4	+1.6
CLNS					*e*Sg	Sg	12 45 12.6	-0.3
CLNS					A		12 45 14.6	
	43nm,0.4s							
CLNS					A		12 45 17.8	
	71nm,0.5s							
EKMR	**Ekimchan**	**3.90**	**104**	*e*Pn		Pn	12 44 41.0	-0.6
EKMR				*e*Pg		Pg	12 44 51.1	-4.9
EKMR					AMB	AMB	12 44 55.4	
	4.0nm,0.3s							
EKMR					*e*Sg	Sg	12 45 42.7	-3.7
EKMR					A		12 45 55.3	
	16nm,0.6s							
EKMR					A		12 45 55.3	
	14nm,0.6s							
EKMR					A		12 45 55.3	
	11nm,0.6s							
CRS	**Chara**	**5.50**	**303**	*e*Pg		Pg	12 45 21.7	-4.9
CRS				*e*Sg		Sg	12 46 34.2	-3.6

*ISCJB **15** 12:47:43.6±0.9, 26N±02×66.1E±0.1, h10km, mb4.2/11, MS3.5/2, Error ellipse: s-maj=25.9km s-min=16.7km az=38.9*
*IDC **15** 12:47:44.1±0.9, 262N×6607E, h0km, mb4.1/10, mb1 4.3/10, mb1mx4.0/23, mbtmp4.1/10, MS3.5/2, Ms1 3.6/2, ms1mx3.1/25, Error ellipse: s-maj=30.7km s-min=19.4km az=33.0*

*NEIC **15** 12:47:45.8±0.7, 265N×6608E, h10km, mb4.7/1, Error ellipse: s-maj=23.2km s-min=15.6km az=215.0*
ISC 15 12:47:45.6±0.9, 26N±02×661E±01, h10km, n17, σ0s71/14, mb4.2/11, MS3.5/2, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**35.85**	**62**	P	P	P	**12 54 46.9**	**+1.1**
	0.7nm,0.3s,mb4.0,baz=233,slow=7.5,SNR=5.7							
CMAR				LR	LR	LR	13 09 30.8	
	comp=Z,35nm,18.6s,MS3.2,baz=210,slow=36							
LSZ	**Lusaka**	**41.48**	**243**	LR	LR	LR	13 10 03.2	
	comp=Z,115nm,20.1s,MS3.8,baz=216,slow=32							
AKTK	**Aktyubinsk**	**48.13**	**353**	P	P	P	**12 56 26.0**	**+0.3**
AKTO	**Aktyubinsk**	**48.13**	**353**	P	P	P	**12 56 26.0**	**+0.3**
	4.1nm,0.7s,mb4.6,baz=155,slow=6.3,SNR=8.5							
ZAA0	**Zalesovo Array**	**53.44**	**14**	*e*P	P	P	**12 57 04.9**	**-0.6**
ZALV	**Zalesovo Beam**	**53.44**	**14**	P	P	P	**12 57 04.6**	**-1.0**
	0.8nm,0.3s,mb4.1,baz=251,slow=4.5,SNR=8.0							
ZALV	**Zalesovo Beam**	**53.44**	**14**	P	P	P	**12 57 04.6**	**-1.0**
SONM	**Songino Array**	**56.87**	**31**	P	P	P	**12 57 31.3**	**+0.8**
	0.4nm,0.5s,mb3.7,baz=232,slow=35,SNR=3.6							
TORD	**Torodi Ar. Bea**	**64.45**	**283**	P	P	P	**12 58 23.1**	**+0.3**
	0.5nm,1.0s,mb3.5,baz=93,slow=8.7,SNR=3.2							
HFS	**Hagfors**	**69.84**	**335**	P	P	P	**12 58 55.7**	**-0.5**
	4.0nm,0.6s,mb4.5,baz=123,slow=11,SNR=8.0							
WRA	**Warramunga Arr**	**70.58**	**112**	P	P	P	**12 59 01.2**	**-0.4**
	3.2nm,0.7s,mb4.4,baz=291,slow=5.7,SNR=42							
WRAB	**Tennant Creek**	**70.59**	**112**	*e*P	P	P	**12 59 01.4**	**-0.2**
	3.4nm,0.6s,mb4.5							
ASAR	**Alice Springs**	**70.89**	**116**	P	P	P	**12 59 03.2**	**-0.1**
	1.9nm,0.6s,mb4.2,baz=288,slow=5.8,SNR=42							
ARCES	**ARCESS Array B**	**71.98**	**346**	P	P	P	**12 59 07.9**	**-1.1**
	3.2nm,0.9s,mb4.3,baz=116,slow=6.1,SNR=3.2							
ESDC	**Sonseca Array**	**73.0**	**311**	P	P	P	**12 59 16.9**	**+1.1**
	2.0nm,0.8s,mb4.1,baz=79,slow=5.4,SNR=4.7							
NVAR	**Mina Array Bea**	**138.96**	**5**	PKP	PKPdf	PKPdf	13 07 15.2	+2.3
	0.7nm,0.7s,baz=300,slow=2.8,SNR=5.1							
TXAR	**Lajitas Array**	**146.74**	**344**	PKPbc	PKPbc	PKPbc	13 07 30.1	+1.6
	1.8nm,0.8s,baz=61,slow=2.4,SNR=15							

*IDC **15** 12:50:28.4±0.6, 1489S×17343W, h0km, mb4.2/11, mb1 4.4/11, mb1mx4.2/20, mbtmp4.2/11, MS3.8/7, Ms1 3.8/7, ms1mx3.5/20, Error ellipse: s-maj=34.3km s-min=14.4km az=137.0*
*NEIC **15** 12:50:30.5±0.5, 1504S×17335W, h10km, mb4.5/7, Error ellipse: s-maj=27.4km s-min=11.2km az=137.0*
*ISCJB **15** 12:50:33.0±0.4, 1513S±01×1736W±01, h33km, mb4.3/17, MS3.8/5, Error ellipse: s-maj=22.9km s-min=10.0km az=43.3*
ISC 15 12:50:35.1±0.4, 1513S±01×1735W±01, h35km, n42, σ1s26/27, mb4.3/17, MS3.8/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.05**	**55**	Pn	P	**Pn**	**12 51 00.6**	**-6.6**
	141nm,0.3s,baz=33,slow=2.6,SNR=160							
AFI					Sn	**Sn**	**12 51 21.9**	**-10**
	509nm,0.3s,baz=174,slow=20,SNR=13							
AFI	**Afiamalu**	**2.05**	**55**	Pn	P	**Pn**	**12 51 00.6**	**-6.6**
AFI					Sn	**Sn**	**12 51 21.9**	**-10**
RAR	**Rarotonga**	**14.40**	**117**	LR	LR	LR	12 58 37.4	
	comp=Z,213nm,19.0s,baz=154,slow=34							
RAO	**Raoul Island**	**14.66**	**195**	LR	LR	LR	12 58 33.7	
	comp=Z,354nm,20.5s,baz=25,slow=33							
DZM	**Mont Dzumac**	**20.22**	**247**	P	P	P	**12 55 09.2**	**+2.0**
PPT	**Papeete**	**23.09**	**99**	*e*LQ			12 59 58.6	
	669nm,27.8s							
PPT				*e*LR	LR	LR	13 00 46.9	
	142nm,26.8s							
PPT	**Papeete**	**23.09**	**99**	*e*T			13 18 58.8	
	6.8nm,0.3s							
PPT	**Papeete**	**23.09**	**99**	LR	LR	LR	13 02 35.4	
	comp=Z,111nm,19.8s,MS3.3,baz=3.4,slow=32							
PAE	**Paea**	**23.10**	**100**	*e*T			13 19 04.6	
	122nm,0.4s							
TIAR	**Tiarei**	**23.31**	**99**	*e*T			13 19 07.4	
	79nm,0.3s							
URZ	**Urewera**	**24.52**	**198**	P	P	P	**12 55 52.0**	**+0.7**
	2.0nm,0.3s,mb4.1,baz=45,slow=17,SNR=2.8							
URZ				LR	LR	LR	13 03 56.3	
	comp=Z,312nm,19.4s,MS3.8,baz=230,slow=33							
URZ	**Urewera**	**24.52**	**198**	P	P	P	**12 55 52.0**	**+0.7**
URZ				LR	LR	LR	13 03 56.3	
PMOR	**Pomariorio Ree**	**24.73**	**93**	*e*T			13 21 14.9	
	3.4nm,0.3s							
HNR	**Honiara**	**26.53**	**279**	LR	LR	LR	13 04 52.5	
	comp=Z,147nm,18.3s,MS3.6,baz=112,slow=32							
RPZ	**Rata Peaks**	**31.42**	**202**	P	P	P	**12 56 53.9**	**+1.0**
	9.4nm,0.8s,mb4.7,baz=197,slow=23,SNR=2.4							
RKT	**Rikitea**	**37.19**	**108**	*e*T			13 36 25.8	
	8.0nm,0.3s							
STKA	**Stephens Creek**	**44.10**	**240**	P	P	P	**12 58 39.4**	**-0.8**
	4.9nm,0.8s,mb4.3,baz=66,slow=7.7,SNR=7.6							
WRAB	**Tennant Creek**	**49.80**	**257**	*e*P	P	P	**12 59 24.2**	**-0.6**
	3.1nm,0.9s,mb4.3							
WRA	**Warramunga Arr**	**49.81**	**257**	P	P	P	**12 59 24.0**	**-1.0**
	2.0nm,0.8s,mb4.2,baz=94,slow=6.7,SNR=23							
ASAR	**Alice Springs**	**50.10**	**252**	P	P	P	**12 59 26.4**	**-0.7**
	3.6nm,0.5s,mb4.6,baz=87,slow=8.2,SNR=84							
MJAR	**Matsushiro Arr**	**68.64**	**320**	LR	LR	LR	13 25 14.2	
	comp=Z,107nm,21.8s,MS4.0,baz=50,slow=30							
YBH	**Yreka Blue Hor**	**73.42**	**37**	P	P	P	**13 02 02.5**	**-1.2**
	2.5nm,1.0s,mb4.1,baz=264,slow=3.1,SNR=4.6							
NVAR	**Mina Array Bea**	**74.17**	**42**	P	P	P	**13 02 06.8**	**-1.4**
	0.4nm,0.6s,mb3.5,baz=234,slow=7.6,SNR=3.1							
QSPA	**South Pole Qui**	**74.95**	**180**	P	P	P	**13 02 12.1**	**0.0**
	10nm,1.0s,mb4.7,baz=107,slow=5.2,SNR=4.8							
MOD	**Modoc**	**74.95**	**38**	*e*P	P	P	**13 02 14.2**	**+1.5**
	4.5nm,1.1s,mb4.3							
MSU	**Marysvale**	**78.28**	**45**	*e*P	P	P	**13 02 34.6**	**+3.0**
HLID	**Hailey**	**79.46**	**39**	*e*P	P	P	**13 02 38.9**	**+1.0**
	2.5nm,1.0s,mb4.1							
PV10	**Paradox Valley**	**80.38**	**46**	*e*P	P	P	**13 02 45.3**	**+2.3**
TXAR	**Lajitas Array**	**80.53**	**56**	P	P	P	**13 02 41.3**	**-2.8**
	0.2nm,1.0s,baz=283,slow=9.2,SNR=3.5							
MCK	**McKinley**	**80.84**	**11**	*e*P	P	P	**13 02 45.3**	**+0.3**
	6.4nm,0.9s,mb4.5							
MCMT	**McKenzie Canyo**	**81.08**	**39**	*e*P	P	P	**13 02 47.8**	**+1.2**
IMW	**Indian Meadow**	**81.79**	**40**	*e*P	P	P	**13 02 51.2**	**+0.8**
	5.1nm,1.2s,mb4.3							
COLA	**College**	**82.08**	**11**	*e*P	P	P	**13 02 51.7**	**+0.2**
	5.1nm,0.8s,mb4.5							
PDAR	**Pinedale Array**	**82.11**	**42**	P	P	P	**13 02 50.5**	**-1.7**
	0.5nm,0.7s,mb3.6,baz=197,slow=2.8,SNR=4.0							
MAW	**Mawson**	**88.05**	**199**	P	P	P	**13 03 21.2**	**-0.3**
	4.6nm,0.9s,mb4.7,baz=138,slow=1.7,SNR=6.5							
PLCA	**Paso Flores**	**89.79**	**132**	LR	LR	LR	13 33 25.6	
	comp=Z,83nm,19.9s,MS4.2,baz=193,slow=29							
SNAA	**Sanae**	**93.21**	**177**	*e*P	P	P	**13 03 44.1**	**-1.4**
	4.2nm,1.1s,mb4.8							
KMBO	**Kilima Mbogo**	**145.57**	**245**	PKPbc	PKPbc	PKPbc	13 10 11.6	+0.6
	0.8nm,0.5s,baz=280,slow=11,SNR=2.4							
KMBO	**Kilima Mbogo**	**145.57**	**245**	PKPbc	PKPbc	PKPbc	13 10 11.6	+0.6
GERES	**GERESS Array B**	**145.83**	**352**	PKPbc	PKPbc	PKPbc	13 10 07.7	-2.9
	0.7nm,0.7s,baz=64,slow=9.1,SNR=6.0							
TORD	**Torodi Ar. Bea**	**174.96**	**112**	PKP	PKPdf	PKPdf	13 10 40.5	-1.8
	1.1nm,1.0s,baz=342,slow=1.0,SNR=4.1							
TORD	**Torodi Ar. Bea**	**174.96**	**112**	PKP	PKPdf	PKPdf	13 10 40.5	-1.8

*IDC **15** 12:52:03.0±0.6, 5219S×28.19E, h0km, mb4.2/16, mb1 4.3/16, mb1mx4.2/21, mbtmp4.2/16, MS3.7/3, Ms1 3.8/3, ms1mx3.4/24, Error ellipse: s-maj=21.0km s-min=14.3km az=77.0*
*ISCJB **15** 12:52:03.2±0.5, 5216S±007×28.1E±02, h10km, mb4.1/16, MS3.8/3, Error ellipse: s-maj=17.5km s-min=10.3km az=172.5*
*NEIC **15** 12:52:04.6±0.4, 5219S×28.19E, h10km, mb4.3/2, Error ellipse: s-maj=14.6km s-min=8.5km az=81.0*
ISC 15 12:52:04.8±0.5, 5219S±007×282E±02, h10km, n26, σ0s73/21, mb4.1/16, MS3.8/3, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.52**	**342**	P	P	P	**12 56 44.6**	**+1.6**
	9.2nm,1.1s,baz=152,slow=18,SNR=4.4							
SUR	**Sutherland**	**20.52**	**342**	P	P	P	**12 56 44.6**	**+1.6**
MAW	**Mawson**	**22.79**	**146**	*e*P	P	P	**12 57 07.8**	**+0.7**
	12nm,0.9s,mb4.3							
MAW	**Mawson**	**22.79**	**146**	P	P	P	**12 57 08.0**	**+0.9**
	17nm,0.9s,mb4.5,baz=292,slow=8.8,SNR=31							
BOSA	**Boshof**	**23.66**	**354**	P	P	P	**12 57 16.4**	**0.0**
	4.0nm,0.6s,mb4.0,baz=174,slow=11,SNR=11							

SNAA	**Sanae**	**23.87**	**204**	*e*P		**P**	**12 57 18.4**	**+0.4**
	7.0nm,0.8s,mb4.1							
LBTB	**Lobatse**	**27.21**	**355**	P		P	**12 57 46.8**	**-1.8**
	4.6nm,0.9s,mb4.0,baz=168,slow=8.8,SNR=5.2							
LBTB				LR		LR	13 07 33.6	
	comp=Z,130nm,19.1s,MS3.5,baz=265,slow=34							
TSUM	**Tsumeb**	**33.96**	**342**	P		P	**12 58 48.6**	**+0.4**
	1.4nm,0.6s,mb4.0,baz=139,slow=12,SNR=4.1							
LSZ	**Lusaka**	**36.83**	**360**	P		P	**12 59 12.9**	**0.0**
	1.6nm,0.5s,mb4.1,baz=159,slow=12,SNR=4.9							
QSPA	**South Pole Qui**	**38.03**	**180**	P		P	**12 59 22.5**	**-0.1**
	2.5nm,0.5s,mb4.2,baz=158,slow=1.2,SNR=23							
PMSA	**Palmer Station**	**45.44**	**217**	P		P	**13 00 23.3**	**+0.1**
	3.7nm,0.7s,mb4.3,baz=91,slow=0.7,SNR=4.9							
PLCA	**Paso Flores**	**63.83**	**237**	P		P	**13 02 36.7**	**-0.3**
	1.3nm,0.7s,mb4.1,baz=114,slow=9.4,SNR=5.7							
PLCA	**Paso Flores**	**63.83**	**237**	P		P	**13 02 36.7**	**-0.3**
CPUP	**Villa Florida**	**67.01**	**256**	P		P	**13 02 58.1**	**+0.3**
	7.5nm,0.6s,mb4.9,baz=118,slow=5.3,SNR=32							
CPUP				LR		LR	13 27 56.2	
	comp=Z,89nm,19.8s,MS4.0,baz=59,slow=32							
TORD	**Torodi Ar. Bea**	**68.99**	**332**	P		P	**13 03 10.8**	**+0.5**
	0.3nm,0.4s,mb3.5,baz=162,slow=6.3,SNR=4.2							
BDFB	**Brasilia**	**69.37**	**271**	P		P	**13 03 12.8**	**+0.1**
	4.6nm,0.8s,mb4.5,baz=86,slow=6.5,SNR=4.2							
STKA	**Stephens Creek**	**78.10**	**127**	P		P	**13 04 04.0**	**+0.2**
	2.0nm,1.1s,mb4.0,baz=302,slow=15,SNR=2.5							
ASAR	**Alice Springs**	**80.69**	**117**	P		P	**13 04 17.6**	**-0.4**
	0.8nm,0.6s,mb3.8,baz=216,slow=4.9,SNR=12							
LPAZ	**La Paz**	**81.12**	**255**	P		P	**13 04 19.0**	**-1.4**
	0.7nm,0.8s,mb3.6,baz=59,slow=5.9,SNR=2.4							
LPAZ	**La Paz**	**81.12**	**255**	P		P	**13 04 19.0**	**-1.4**
WRA	**Warramunga Arr**	**83.90**	**115**	P		P	**13 04 34.4**	**-0.5**
	1.5nm,0.9s,mb4.1,baz=211,slow=3.8,SNR=5.2							
ASF	**Jabal al Asfar**	**84.35**	**7**	LR		LR	13 38 17.1	
	comp=Z,37nm,20.5s,MS3.8,baz=276,slow=33							
TXAR	**Lajitas Array**	**137.98**	**256**	PKP		PKPdf	13 11 28.7	-0.6
	0.4nm,0.8s,baz=121,slow=1.6,SNR=3.7							
TXAR	**Lajitas Array**	**137.98**	**256**	PKP		PKPdf	13 11 28.7	-0.7
PDAR	**Pinedale Array**	**150.32**	**268**	PKPbc		PKPbc	13 11 53.5	-2.0
	0.7nm,0.5s,baz=114,slow=3.7,SNR=6.8							
PDAR				PKPab		PKPab	13 12 01.8	-0.1
	1.1nm,0.7s,baz=123,slow=6.0,SNR=5.7							
NVAR	**Mina Array Bea**	**153.00**	**253**	PKP		PKPdf	13 11 55.2	+0.8
	0.3nm,0.6s,baz=186,slow=2.7,SNR=3.2							
NVAR				PKPbc		PKPbc	13 12 02.0	+0.3
	1.0nm,0.5s,baz=138,slow=2.1,SNR=11							

*SKHL **15** 12:54:40.3±1.8, 4501N×14965E, h104km±3km, mb5.2/3, msh6.0/1*
*MOS **15** 12:54:40.2±1.4, 4542N×14966E, h122km, mb4.3/8, Error ellipse: s-maj=11.3km s-min=9.1km az=62.3*
*NEIC **15** 12:54:42.0±0.9, 4540N×14966E, h118km±8km, mb4.3/1, Error ellipse: s-maj=14.7km s-min=7.8km az=137.0*
*IDC **15** 12:54:42.5±2.1, 4543N×14954E, h119km±19km, mb3.6/15, mb1 3.8/19, mb1mx3.8/25, mbtmp3.6/19, Error ellipse: s-maj=17.3km s-min=12.6km az=151.0*
*ISCJB **15** 12:54:42.0±0.8, 4516N±005×14956E±008, h141km±7km, mb3.9/20, Error ellipse: s-maj=10.2km s-min=7.5km az=39.6*
*JMA **15** 12:54:44.3±0.5, 4479N×14962E, h125km, M4.0*
ISC 15 12:54:41.4±0.6, 4523N±005×14971E±007, h117km±5km, n79, σ1s42/103, mb4.0/20, 7C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.30**	**271**	⇑ *i*PN		**Pn**	**12 55 03.5**	**-2.8**
KUR				*i* S		**Sn**	**12 55 22.5**	**-2.7**
KUR				pmax	pmax			
	comp=N,490nm,0.4s							
KUR				pmax	pmax			
	comp=E,160nm,0.4s							
KUR				pmax	pmax			
	comp=Z,2µm,0.4s							
KUR				smax				
	comp=N,36µm,1.0s							
KUR				smax				
	comp=E,15µm,1.0s							
KUR				smax				
	comp=N,7µm,0.5s							
KUR				smax				
	comp=E,7µm,0.5s						

JEM	**Erimo**	**5.74**	**238**	P	**Pn**	**12 56 05.0**	**+0.8**
ERM	**Erimo**	**5.74**	**238**	*e*PN	**Pn**	**12 56 06.0**	**+1.8**
ERM				*e*		12 57 07.5	
ERM				pmax	pmax		
	comp=Z,23nm,0.4s						
ERM	**Erimo**	**5.74**	**238**	*e*Pn	**Pn**	**12 56 06.0**	**+1.8**
	comp=Z,23nm,0.4s						
ERM				*e*Sn	**Sn**	**12 57 07.5**	**-1.3**
JBT2	**Biratori 2**	**5.83**	**248**	P	**Pn**	**12 56 06.6**	**+1.1**
JBNK	**Urakawa-nobuka**	**5.83**	**242**	P	**Pn**	**12 56 05.5**	**0.0**
JNBK				*e*S	**Sn**	**12 57 10.0**	**-1.1**
JNB	**Noboribetsu**	**6.85**	**249**	P	**Pn**	**12 56 21.1**	**+1.9**
JNB				*e*S	**Sn**	**12 57 35.2**	**-0.4**
SKR	**Severo-Kuril's**	**6.95**	**36**	*e*PN	**Pn**	**12 56 16.9**	**-3.6**
SKR				pmax	pmax		
	comp=N,30nm,0.5s						
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
JKB	**Kayabe**	**7.13**	**245**	P	**Pn**	**12 56 22.7**	**-0.3**
JKB				*e*S	**Sn**	**12 57 38.9**	**-3.5**
TYV	**Tymovskoe**	**7.35**	**323**	*e*P	**Pn**	**12 56 31.0**	**+5.0**
JYM2	**Yakumo 2**	**7.45**	**249**	P	**Pn**	**12 56 28.3**	**+1.0**
JSR	**Shiriuchi**	**7.71**	**245**	*e*S	**Sn**	**12 57 52.7**	**-3.8**
JTM	**Tenmabayashi**	**7.73**	**238**	P	**Pn**	**12 56 30.2**	**-1.0**
JTM				*e*S	**Sn**	**12 57 51.1**	**-5.9**
JANG	**Nango**	**7.73**	**234**	P	**Pn**	**12 56 29.3**	**-1.9**
JANG				*e*S	**Sn**	**12 57 51.0**	**-6.1**
JTH	**Tanohata**	**7.83**	**230**	P	**Pn**	**12 56 30.3**	**-2.3**
JTH				*e*S	**Sn**	**12 57 52.9**	**-6.7**
OFUJ	**Ofunato**	**8.56**	**227**	P	**Pn**	**12 56 41.0**	**-1.5**
OFUJ				*e*S	**Sn**	**12 58 12.4**	**-4.8**
JRG	**Rokugo**	**8.89**	**232**	P	**Pn**	**12 56 45.5**	**-1.4**
JRG				*e*S	**Sn**	**12 58 20.8**	**-4.4**
JIO	**Ouri**	**9.20**	**226**	P	**Pn**	**12 56 49.4**	**-1.7**
JIO				*e*S	**Sn**	**12 58 26.8**	**-5.9**
PEA0B	**Petropavlovsk-**	**9.46**	**31**	*e*Pn	**Pn**	**12 56 51.9**	**-2.6**
PETK	**Petropavlovsk-**	**9.46**	**31**	P	**Pn**	**12 56 52.6**	**-1.9**
	comp=Z,2.4nm,0.3s,baz=205,slow=11,SNR=69						
PET	**Petropavlovsk**	**9.75**	**34**	*e*PN	**Pn**	**12 56 57.8**	**-0.6**
JYA	**Atsumi**	**9.97**	**232**	P	**Pn**	**12 57 00.0**	**-1.4**
JYA				*e*S	**Sn**	**12 58 47.0**	**-4.3**
MAJO	**Matsushiro**	**12.28**	**229**	*e*PN	**Pn**	**12 57 33.5**	**+1.3**
MAT	**Matsushiro**	**12.28**	**229**	P	**Pn**	**12 57 32.4**	**+0.2**
MJAR	**Matsushiro Arr**	**12.28**	**229**	P	**Pn**	**12 57 32.2**	**0.0**
	comp=Z,0.4nm,0.3s,baz=34,slow=13,SNR=8.2						
KSRS	**Korea Array**	**18.07**	**252**	P	**P**	**12 58 43.0**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=60,slow=10,SNR=2.7						
YAK	**Yakutsk**	**20.45**	**332**⇑	*e*P	**P**	**12 59 07.3**	**-1.9**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ULN	**Ulaanbaatar**	**29.18**	**291**⇑	*e*P	**P**	**13 00 32.6**	**+1.2**
SONM	**Songino Array**	**29.62**	**291**	P	**P**	**13 00 36.5**	**+1.1**
	comp=Z,0.9nm,0.8s,mb3.5,baz=80,slow=8.1,SNR=4.7						
ZALV	**Zalesovo Beam**	**41.58**	**306**	P	**P**	**13 02 14.4**	**-2.8**
	comp=Z,0.6nm,0.4s,mb3.7,baz=82,slow=8.2,SNR=3.2						
MKAR	**Makanchi Array**	**45.53**	**297**	P	**P**	**13 02 49.0**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.0,baz=73,slow=7.9,SNR=20						
MKAR	**Makanchi Array**	**45.53**	**297**	*i* P	**P**	**13 02 50.0**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov**	**46.23**	**304**	*e*P	**P**	**13 02 53.4**	**-1.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
KURK	**Kurchatov**	**46.23**	**304**	*e*P	**P**	**13 02 53.4**	**-1.0**
	comp=Z,2.1nm,0.4s,mb4.2						
CMAR	**Chiang Mai Arr**	**49.69**	**255**	P	**P**	**13 03 22.3**	**+0.9**
	comp=Z,0.3nm,0.3s,mb3.6,baz=44,slow=7.4,SNR=3.1						
YKA	**Yellowknife Ar**	**53.55**	**35**	P	**P**	**13 03 51.2**	**+1.7**
	comp=Z,1.6nm,0.8s,mb4.1,baz=309,slow=7.0,SNR=3.1						
ARU	**Arti**	**54.52**	**317**	*c* P	**P**	**13 03 54.3**	**-2.3**
ARU				*e*		13 04 53.8	
ARU				*e*		13 05 55.7	
ARU				*e*S	**S**	**13 11 31.0**	**+4.7**
ARU				pmax	pmax		
	comp=Z,23nm,2.5s,mb4.8						
AKTK	**Aktyubinsk**	**57.95**	**311**	P	**P**	**13 04 20.5**	**-0.6**
AKTO	**Aktyubinsk**	**57.95**	**311**	P	**P**	**13 04 20.5**	**-0.7**
	comp=Z,1.3nm,0.5s,mb4.2,baz=81,slow=5.5,SNR=4.4						
ARCES	**ARCESS Array B**	**58.49**	**340**	P	**P**	**13 04 23.4**	**-1.2**
	comp=Z,1.8nm,0.8s,mb4.2,baz=39,slow=8.8,SNR=9.9						
JOF	**Joensuu**	**61.62**	**333**	*e*p	**P**	**13 04 43.9**	**-2.1**
	comp=Z,2.7nm,0.3s,mb4.8						
JOF	**Joensuu**	**61.62**	**333**	*e*P	**P**	**13 04 43.9**	**-2.1**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.8						
OBN	**Obninsk**	**65.19**	**324**	*e*P	**P**	**13 05 08.1**	**-1.5**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
NVAR	**Mina Array Bea**	**65.25**	**60**	P	**P**	**13 05 11.9**	**+1.6**
	comp=Z,0.8nm,0.7s,mb3.7,baz=295,slow=7.7,SNR=4.9						
WRA	**Warramunga Arr**	**66.35**	**196**	P	**P**	**13 05 18.5**	**+1.1**
	comp=Z,0.4nm,0.9s,mb3.3,baz=10,slow=6.7,SNR=4.7						
PDAR	**Pinedale Array**	**67.56**	**52**	P	**P**	**13 05 25.7**	**+0.8**
	comp=Z,0.9nm,0.9s,mb3.6,baz=347,slow=2.8,SNR=3.8						
NB2	**NORSAR Subarra**	**68.87**	**340**	P	**P**	**13 05 31.7**	**-1.1**
	comp=Z,1.4nm,0.6s,mb4.0,baz=28,slow=6.2						
NOA	**NORSAR Array B**	**68.87**	**340**	P	**P**	**13 05 31.7**	**-1.1**
	comp=Z,1.7nm,0.6s,mb4.1,baz=29,slow=6.5,SNR=8.5						
NOA	**NORSAR Array B**	**68.87**	**340**	P	**P**	**13 05 31.7**	**-1.1**
ASAR	**Alice Springs**	**70.06**	**195**	P	**P**	**13 05 42.5**	**+2.1**
	comp=Z,0.4nm,0.5s,mb3.5,baz=13,slow=5.8,SNR=4.8						
KIV	**Kislovodsk**	**70.12**	**313**⇑	*e*P	**P**	**13 05 41.9**	**+1.1**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
AKASG	**Malin Array Be**	**71.45**	**325**	P	**P**	**13 05 48.1**	**-0.6**
	comp=Z,2.3nm,0.4s,mb4.3,baz=40,slow=6.0,SNR=9.9						
AKASG	**Malin Array Be**	**71.45**	**325**	*i* P	**P**	**13 05 48.0**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BUR08	**Bucovina Ar. S**	**75.49**	**325**	*e*P	**P**	**13 06 13.3**	**+0.9**
CLL	**Collm**	**76.82**	**334**	*e*P	**P**	**13 06 20.0**	**+0.1**
KHC	**Kasperske Hory**	**78.53**	**332**⇑	*e*P	**P**	**13 06 25.1**	**-4.3**
GERES	**GERESS Array B**	**78.73**	**332**	P	**P**	**13 06 30.4**	**-0.1**
	comp=Z,1.4nm,0.6s,mb4.0,baz=36,slow=5.3,SNR=9.9						
TXAR	**Lajitas Array**	**80.31**	**58**	P	**P**	**13 06 40.4**	**+0.9**
	comp=Z,0.8nm,0.4s,mb3.9,baz=299,slow=4.4,SNR=31						
PLCA	**Paso Flores**	**150.43**	**96**	PKPbc	PKPbc	13 14 19.8	+1.3
	comp=Z,1.7nm,1.1s,baz=268,slow=17,SNR=4.5						

*ISCJB **15** 13:26:44.8±2.7, 48S±04×1008E±06, h33km, mb3.6/8, Error ellipse: s-maj=105.4km s-min=14.1km az=144.7*
*IDC **15** 13:26:48.2±2.8, 455S×101.15E, h29km±6km, mb3.5/8, mb1 3.6/8, mb1mx3.5/20, mbtmp3.5/8, Error ellipse: s-maj=115.1km s-min=15.4km az=54.0*
*NEIC **15** 13:26:49.2±2.2, 449S×10123E, h35km, Error ellipse: s-maj=90.9km s-min=11.7km az=56.0*
ISC 15 13:26:48.4±2.5, 46S±04×1011E±06, h35km, n11, σ0s52/9, mb3.6/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**23.00**	**355**	P		**P**	**P**	**13 31 49.6**	**-0.6**
	0.9nm,0.4s,mb3.6,baz=181,slow=8.1,SNR=9.1								
FITZ	**Fitzroy Crossi**	**27.53**	**121**	P		**P**	**P**	**13 32 31.8**	**-0.2**
	0.8nm,0.9s,mb3.3,baz=333,slow=14,SNR=2.7								
WRA	**Warramunga Arr**	**35.80**	**118**	P		**P**	**P**	**13 33 44.4**	**-0.2**
	0.4nm,0.6s,mb3.6,baz=304,slow=9.2,SNR=3.8								
WRA					pP		pP	13 33 52.7	-2.1
	0.7nm,0.7s,baz=305,slow=8.9,SNR=4.0								
ASAR	**Alice Springs**	**36.90**	**124**	P		**P**	**P**	**13 33 54.2**	**+0.2**
	0.4nm,0.6s,mb3.4,baz=299,slow=7.7,SNR=6.2								
ASAR					pP		pP	13 34 02.7	-1.5
	0.5nm,0.7s,baz=303,slow=8.1,SNR=4.1								
CTA	**Charters Tower**	**46.57**	**113**	pP		pP	pP	13 35 21.9	-1.6
	2.1nm,0.6s,baz=286,slow=7.4,SNR=2.7								
SONM	**Songino Array**	**52.42**	**5**	P		**P**	**P**	**13 35 58.3**	**+1.0**
	1.5nm,0.7s,mb4.1,baz=181,slow=10,SNR=8.4								
MKAR	**Makanchi Array**	**53.80**	**344**	P		**P**	**P**	**13 36 08.0**	**+0.6**
	0.8nm,0.7s,mb3.8,baz=149,slow=8.5,SNR=8.4								
MKAR	**Makanchi Array**	**53.80**	**344**	P		**P**	**P**	**13 36 08.0**	**+0.6**
KURK	**Kurchatov**	**58.38**	**343**	P		**P**	**P**	**13 36 39.7**	**-0.4**
	0.2nm,0.4s,mb3.5,baz=152,slow=6.6,SNR=3.0								
ZALV	**Zalesovo Beam**	**59.90**	**349**	P		**P**	**P**	**13 36 50.3**	**-0.3**
	0.6nm,0.4s,mb4.0,baz=157,slow=4.7,SNR=3.5								
TXAR	**Lajitas Array**	**146.04**	**41**	PKPbc	PKPbc	PKPbc	PKPbc	13 46 26.4	+1.1
	0.4nm,0.5s,baz=259,slow=2.2,SNR=7.1								
TXAR					pPKPbc	pPKPbc	pPKPbc	13 46 35.1	-1.5
	0.4nm,0.7s,baz=194,slow=0.7,SNR=4.3								

*BJI **15** 13:36:12.4, 878S×14731E, h16km, mB5.4, mb4.9, Ms4.9, Msz4.6*
*ISCJB **15** 13:36:13.1±0.9, 878S±004×14693E±004, h10km±6km, mb5.2/87, MS4.6/31, Error ellipse: s-maj=7.0km s-min=6.0km az=178.4*
*NEIC **15** 13:36:14.3±0.2, 878S×14699E, h10km, mb5.4/31, MS4.8/3, Error ellipse: s-maj=6.9km s-min=4.2km az=100.0*
NEIC Felt [IV] at Port Moresby.
*GCMT **15** 13:36:14.3±0.2, 895S×14704E, h20km, MW5.2/80, Moment Tensor Solution. s70,c115; s80,c132; Duration: 1ᵗ0 Moment tensor: Scale 10¹⁷Nm; M_{rr}0.75±.02; $M_{\theta\theta}$-0.23±.01; $M_{\phi\phi}$-0.51±.01; $M_{r\theta}$0.34±.03; $M_{\theta\phi}$0.39±.01; $M_{\phi r}$-0.28±.03; Best double couple: M_o0.89100×10¹⁷ NP1:φ333.00000°, δ31.00000°, λ104.00000°. NP2:φ137.00000°, δ60.00000°, λ82.00000°. Principal axes: T 0.8770, Plg74.0000°, Azm26.0000°; N 0.0280, Plg7.0000°, Azm141.0000°; P -0.9040, Plg15.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **15** 13:36:16.4±1.1, 884S×14689E, h35km, mb5.4/18, MS4.7/4 Error ellipse: s-maj=11.2km s-min=6.8km az=87.4*
*IDC **15** 13:36:18.1±5.2, 884S×14698E, h33km±38km, mb4.7/18, mb1 4.7/21, mb1mx4.7/22, mbtmp4.7/21, ML4.8/3, MS4.6/14, Ms1 4.6/14, ms1mx4.3/25, Error ellipse: s-maj=21.2km s-min=11.9km az=84.0*
*DJA **15** 13:36:20, 918S×14699E, h22km, Mw5.5/15*
ISC 15 13:36:16.2±1.0, 884S±003×14700E±004, h22km±7km, h19km±3.2km:pP-P, n186, σ1s90/179, mb5.2/87, MS4.6/31, 9C-4D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**0.58**	**164**	*e*Pg		**Pb**	**Pb**	**13 36 27.1**	**-0.6**
PMG				*e*Sg		**Sb**	**Sb**	**13 36 37.5**	**+2.0**
COEN	**Coen**	**6.32**	**216**	*e*Pn		**Pn**	**Pn**	**13 37 46.9**	**-1.2**
	33nm,0.6s								
COEN				*e*Sn		**Sn**	**Sn**	**13 38 56.9**	**-2.8**
CTA	**Charters Tower**	**11.20**	**184**	*e*P		**Pn**	**Pn**	**13 38 56.2**	**+1.0**
	88nm,1.7s								
CTA	**Charters Tower**	**11.20**	**184**	Pn		**Pn**	**Pn**	**13 38 56.5**	**+1.3**
	2.7nm,0.3s,baz=0.5,slow=14,SNR=16								
CTA					LR	LR		13 42 57.6	
	comp=Z,3μm,20.9s,baz=7.6,slow=36								
CTA	**Charters Tower**	**11.20**	**184**	*e*P		**Pn**	**Pn**	**13 38 56.2**	**+1.0**
CTA				pmax		pmax			
	comp=Z,88nm,1.7s								
CTAO	**Charters Tower**	**11.20**	**184**	*e*P		**Pn**	**Pn**	**13 38 56.2**	**+1.0**
HNR	**Honiara**	**12.80**	**94**	LR		LR		13 43 42.6	
	comp=Z,3μm,19.6s,baz=274,slow=35								
HNR	**Honiara**	**12.80**	**94**	*e*P		**Pn**	**Pn**	**13 39 21.0**	**+4.0**
WRAB	**Tennant Creek**	**16.47**	**227**	Pn		**Pn**	**Pn**	**13 40 05.0**	**-1.1**
	comp=Z,484nm,0.7s,SNR=32								
WRAB	**Tennant Creek**	**16.47**	**227**	*e*Pn		**Pn**	**Pn**	**13 40 05.1**	**-0.9**
WRAB				*e*Sn		**Sn**	**Sn**	**13 42 58.9**	**-9.4**
WB2	**Warramunga Arr**	**16.47**	**227**	*e*P		**Pn**	**Pn**	**13 40 05.4**	**-0.7**
WRA	**Warramunga Arr**	**16.48**	**227**	Pn		**Pn**	**Pn**	**13 40 05.5**	**-0.8**
	comp=Z,4.3nm,0.3s,baz=54,slow=12,SNR=69								
WRA					Sn		**Sn**	**13 43 00.9**	**-7.8**
	comp=Z,1.0nm,0.3s,baz=50,slow=23,SNR=6.3								
WRA					LR	LR		13 46 59.8	
	comp=Z,3μm,20.0s,baz=55,slow=39								
WRA	**Warramunga Arr**	**16.48**	**227**	P		**Pn**	**Pn**	**13 40 05.5**	**-0.8**
WRA								13 43 00.9	
ASAR	**Alice Springs**	**19.35**	**219**	P		**Pn**	**Pn**	**13 40 41.9**	**+0.3**
	comp=Z,2.4nm,0.3s,baz=54,slow=9.4,SNR=124								
GUMO	**Guam**	**22.39**	**355**	P		**P**	**P**	**13 41 12.4**	**-0.8**
	comp=Z,85nm,0.9s,mb5.2,baz=198,slow=11,SNR=4.7								
GUMO					LR	LR		13 50 12.2	
	comp=Z,1μm,18.0s,MS4.3,baz=166,slow=37								
FITZ	**Fitzroy Crossi**	**22.70**	**244**	*e*P		**P**	**P**	**13 41 15.7**	**-0.9**
	comp=Z,118nm,1.3s,mb5.2								
FITZ					eS		**S**	**13 45 25.1**	**+0.7**
FITZ	**Fitzroy Crossi**	**22.70**	**244**	P		**P**	**P**	**13 41 15.6**	**-1.0**
	comp=Z,6.2nm,0.6s,mb4.2,baz=67,slow=13,SNR=30								
FITZ					LR	LR		13 50 45.6	
	comp=Z,3μm,21.8s,MS4.6,baz=43,slow=38								
FITZ	**Fitzroy Crossi**	**22.70**	**244**	*e*P		**P**	**P**	**13 41 15.5**	**-1.1**
	comp=Z,206nm,1.3s,mb5.4								
DZM	**Mont Dzumac**	**22.86**	**127**	*e*P		**P**	**P**	**13 41 19.0**	**+0.7**
DZM	**Mont Dzumac**	**22.86**	**127**	*e*P		**P**	**P**	**13 41 18.1**	**-0.1**
BATI	**Bupheta**	**23.05**	**265**	P		**P**	**P**	**13 41 23.4**	**+3.0**
	comp=Z,83nm,1.0s,mb5.1,baz=36,slow=2.1,SNR=6.6								
STKA	**Stephens Creek**	**23.46**	**192**	*e*P		**P**	**P**	**13 41 23.8**	**-0.7**
	comp=Z,38nm,0.9s,mb4.8								
STKA					eS		**S**	**13 45 35.7**	**-0.9**
STKA	**Stephens Creek**	**23.46**	**192**	P		**P**	**P**	**13 41 23.9**	**-0.6**
	comp=Z,18nm,0.8s,mb4.5,baz=354,slow=8.6,SNR=29								
STKA					LR	LR		13 51 07.3	
	comp=Z,4μm,18.8s,MS4.8,baz=122,slow=38								
CAN	**Canberra**	**26.42**	**176**	*e*P		**P**	**P**	**13 41 52.8**	**+1.4**
CNB	**Canberra Magne**	**26.44**	**176**	*e*P		**P**	**P**	**13 41 54.1**	**+2.6**
KAPI	**Kappang**	**27.31**	**276**	P		**P**	**P**	**13 41 59.7**	**0.0**
	comp=Z,15nm,0.8s,mb4.6,baz=100,slow=11,SNR=3.8								
KAPI	**Kappang**	**27.31**	**276**	*e*P		**P**	**P**	**13 42 00.2**	**+0.5**
TOO	**Toolangi**	**28.63**	**183**	*e*P		**P**	**P**	**13 42 12.4**	**+1.2**
KLBR	**Kellerberrin**	**35.37**	**226**	*e*P		**P**	**P**	**13 43 10.0**	**-0.4**
	comp=Z,31nm,0.8s,mb5.3								
NWAO	**Narrogin (SRO)**	**36.47**	**225**	P		**P**	**P**	**13 43 21.0**	**+1.1**
	comp=Z,29nm,1.0s,mb5.2,baz=69,slow=8.6,SNR=3.9								
KSM	**Kuching**	**37.97**	**284**	*e*P		**P**	**P**	**13 43 31.6**	**-1.3**
JOW	**Kunigami**	**39.85**	**333**	P		**P**	**P**	**13 43 49.1**	**+0.8**
	comp=Z,84nm,0.7s,mb5.5,baz=150,slow=9.3,SNR=18								
RPZ	**Rata Peaks**	**40.58**	**153**	P		**P**	**P**	**13 43 55.4**	**+1.2**
	comp=Z,7.7nm,0.5s,mb4.6,baz=256,slow=3.1,SNR=9.0								
NACB	**Ninganchiao**	**41.14**	**323**	*e*P		**P**	**P**	**13 43 57.6**	**-1.4**
	comp=Z,165nm,0.9s,mb5.7								
YHNB	**Yeheng**	**41.64**	**324**	*e*P		**P**	**P**	**13 44 02.2**	**-1.0**
	comp=Z,37nm,0.9s,mb5.0								
TATO	**Taipei**	**41.81**	**324**	*e*P		**P**	**P**	**13 44 04.0**	**-0.6**
MJAR	**Matsushiro Arr**	**45.89**	**350**	P		**P**	**P**	**13 44 36.5**	**-0.7**
	comp=Z,18nm,0.9s,mb5.0,baz=180,slow=8.9,SNR=35								
MJAR	**Matsushiro Arr**	**45.89**	**350**	P		**P**	**P**	**13 44 36.5**	**-0.7**
MAJO	**Matsushiro**	**45.90**	**350**	*e*P		**P**	**P**	**13 44 36.4**	**-0.8**
MAJO				pmax		pmax			
	comp=Z,27nm,0.7s,mb5.3								
MAJO	**Matsushiro**	**45.90**	**350**	*e*P		**P**	**P**	**13 44 36.4**	**-0.8**
	comp=Z,27nm,0.7s,mb5.3								
MAT	**Matsushiro**	**45.90**	**350**	P		**P**	**P**	**13 44 36.7**	**-0.5**
MAT				S		**S**	**S**	**13 51 19.0**	**-1.4**
QIZ	**Qiongzhong**	**45.92**	**307**	P		**P**	**P**	**13 44 37.4**	**-0.3**
QIZ				S		**S**	**S**	**13 51 22.3**	**+0.9**
QIZ				AMB		AMB			
	comp=Z,24nm,1.2s,mb5.0								
QIZ				AMB		AMB			
	comp=Z,142nm,6.2s								
QIZ				LR		LR			
	comp=E,305nm,18.1s								
QIZ				LR		LR			
	comp=Z,378nm,18.6s,MS4.4								
SSE	**Sheshan**	**46.79**	**329**	P		**P**	**P**	**13 44 44.1**	**-0.2**
SSE				PP		PP		13 46 34.0	-0.6
SSE				S		**S**	**S**	**13 51 35.3**	**+1.8**
SSE				XS		sS		13 51 40.5	-4.1
SSE				AMB		AMB			
	comp=Z,75nm,1.2s,mb5.5								
SSE				AMB		AMB			
	comp=Z,814nm,4.5s								
SSE				LR		LR			
	comp=N,238nm,20.0s,MS4.2								
SSE				LR		LR			
	comp=E,151nm,20.0s,MS4.2								
SSE				LR		LR			
	comp=Z,390nm,19.2s,MS4.4								
NJ2	**Nanjing**	**48.75**	**328**	*e*P		**P**	**P**	**13 45 00.4**	**+0.9**
NJ2				AP		pP		13 45 04.8	-1.6
NJ2				XP		sP		13 45 08.0	-1.0
NJ2				PCP		PcP		13 46 27.3	+2.9
NJ2				S		**S**	**S**	**13 52 01.5**	**+0.2**
NJ2				AMB		AMB			
	comp=Z,30nm,1.2s,mb5.2								
NJ2				AMB		AMB			
	comp=Z,610nm,4.3s								
NJ2				LR		LR			
	comp=N,290nm,22.4s,MS4.6								
NJ2				LR		LR			
	comp=E,630nm,23.3s,MS4.6								
NJ2				LR		LR			
	comp=Z,480nm,22.7s,MS4.4								
KSRS	**Korea Array**	**49.40**	**340**	P		**P**	**P**	**13 45 05.0**	**+0.6**
	comp=Z,27nm,0.9s,mb5.3,baz=159,slow=9.1,SNR=36								
KSRS				LR		LR		14 03 26.6	
	comp=Z,495nm,21.2s,MS4.5,baz=146,slow=33								
INCN	**Inchon**	**49.87**	**339**	*e*P		**P**	**P**	**13 45 08.7**	**+0.7**
WHN	**Wuhan**	**50.16**	**323**	P		**P**	**P**	**13 45 11.5**	**+1.2**
WHN				S		**S**	**S**	**13 52 28.6**	**+7.5**
WHN				AMB		AMB			
	comp=Z,72nm,1.0s,mb5.7								
WHN				LR		LR			
	comp=Z,1μm,15.1s,MS5.0								
NST	**Nakhon Sawan**	**52.42**	**297**	P		**P**	**P**	**13 45 28.1**	**+0.6**
GYA	**Guiyang**	**52.58**	**313**⇑	*i* P		**P**	**P**	**13 45 29.8**	**+1.2**
GYA				PCP		PcP		13 46 41.4	+2.7
GYA				PP		PP		13 47 30.0	+2.2
GYA				SCP		ScP		13 50 37.6	+2.7
GYA				S		**S**	**S**	**13 52 57.3**	**+2.6**
GYA				SS		SS		13 56 30.0	-3.4
GYA				AMB		AMB			
	comp=Z,20nm,0.8s,mb5.1								
GYA				AMB		AMB			
	comp=Z,120nm,5.8s								
GYA				LR		LR			
	comp=N,350nm,18.2s,MS4.6								
GYA				LR		LR			
	comp=E,380nm,19.5s,MS4.6								
GYA				LR		LR			
	comp=Z,510nm,19.8s,MS4.6								
CHRT	**Chiangrai**	**54.54**	**302**	⇑P		**P**	**P**	**13 45 44.0**	**+1.0**
	comp=Z,197nm,1.0s,mb6.1								
CMAR	**Chiang Mai Arr**	**54.62**	**300**	P		**P**	**P**	**13 45 44.6**	**+1.0**
	comp=Z,16nm,0.9s,mb5.0,baz=127,slow=5.8,SNR=69								
KMI	**Kunming**	**54.75**	**309**	P		**P**	**P**	**13 45 46.1**	**+1.6**
KMI				AP		pP		13 45 52.3	+0.9
KMI				XP		sP		13 45 55.3	+1.2
KMI				PP		PP		13 47 51.9	+4.5
KMI				S		**S**	**S**	**13 53 25.6**	**+1.4**
KMI				XS		sS		13 53 35.5	0.0
KMI				SS		SS		13 57 09.3	+1.6
KMI				AMB		AMB			
	comp=Z,14nm,1.1s,mb4.9								
KMI				AMB		AMB			
	comp=Z,170nm,3.8s								
KMI				LR		LR			
	comp=N,356nm,21.9s,MS4.5								
KMI				LR		LR			
	comp=E,275nm,25.9s,MS4.5								
KMI				LR		LR			
	comp=Z,370nm,21.1s,MS4.4								
CHG	**Chiang Mai**	**54.78**	**300**	⇑P		**P**	**P**	**13 45 45.6**	**+0.8**
	comp=Z,38nm,1.0s,mb5.4								
SNY	**Shenyang**	**54.81**	**339**	⇑P		**P**	**P**	**13 45 43.8**	**-0.8**
SNY				S		**S**	**S**	**13 53 24.5**	**+0.1**
SNY				AMB		AMB			
	comp=Z,21nm,1.8s,mb4.9								
SNY				LR		LR			
	comp=N,475nm,21.9s,MS4.7								
SNY				LR		LR			
	comp=E,396nm,19.2s,MS4.7								
SNY				LR		LR			
	comp=Z,646nm,24.0s,MS4.6								
MDJ	**Mudanjiang**	**55.49**	**345**	P		**P**	**P**	**13 45 49.8**	**+0.4**
MDJ				PP		PP		13 47 53.6	-0.1
MDJ				AMB		AMB			
	comp=Z,13nm,1.2s,mb4.8								
MDJ				AMB		AMB			
	comp=Z,139nm,5.7s								
MDJ				LR		LR			
	comp=N,231nm,20.2s								
MDJ				LR		LR			
	comp=Z,313nm,20.5s,MS4.4								
YSS	**Yuzh-Sakhalins**	**55.68**

comp=Z,62nm,1.1s,mb5.5
BJI Beijing 56.38 332 P **P** **13 45 56.0 +0.1**
BJI PP PP 13 48 01.4 -0.3
BJI S **S** **13 53 48.0 +2.6**
BJI SS SS 13 57 36.5 +3.6
BJI AMB AMB
comp=Z,35nm,1.2s,mb5.3
BJI LR LR
comp=N,201nm,4.4s
BJI LR LR
comp=E,281nm,4.7s
BJI LR LR
comp=Z,148nm,20.6s,MS4.1
CD2 Chengdu 57.27 316⇑*i*P **P** **13 46 03.0 +0.6**
CD2 AP pP 13 46 07.5 -1.9
CD2 XP sP 13 46 10.4 -1.6
CD2 PCP PcP 13 46 56.6 0.0
CD2 PCS PcS 13 50 56.3 -1.4
CD2 S **S** **13 53 57.6 +0.1**
CD2 XS sS 13 54 05.4 -3.5
CD2 SCS ScS 13 55 48.1 -2.8
CD2 SS SS 13 57 48.4 +1.2
CD2 AMB AMB
comp=Z,20nm,1.1s,mb5.1
CD2 AMB AMB
comp=Z,170nm,8.4s
CD2 LR LR
comp=N,310nm,15.6s,MS4.7
CD2 LR LR
comp=E,430nm,16.8s,MS4.7
CD2 LR LR
comp=Z,540nm,19.2s,MS4.7
HHC Hu-ho-hao-te 59.25 329 *e*P **P** **13 46 16.4 +0.3**
HHC AP pP 13 46 19.8 -3.2
HHC XP sP 13 46 21.8 -3.8
HHC PCP PcP 13 47 04.3 +0.1
HHC PP PP 13 48 28.8 +1.6
HHC SCP ScP 13 51 03.4 -0.5
HHC PCS PcS 13 51 04.8 -1.3
HHC S **S** **13 54 23.1 +0.2**
HHC SCS ScS 13 56 03.0 -2.0
HHC SS SS 13 58 18.9 +0.9
HHC AMB AMB
comp=Z,23nm,0.8s,mb5.3
HHC AMB AMB
comp=Z,216nm,7.4s
HHC LR LR
comp=N,303nm,17.1s,MS4.7
HHC LR LR
comp=E,365nm,17.5s,MS4.7
HHC LR LR
comp=Z,447nm,17.9s,MS4.6
KLR Kul'dur 59.36 348 *e*P **P** **13 46 11.7 -4.9**
BTO Baotou 59.86 328 *e*P **P** **13 46 20.6 +0.3**
LZH Lanzhou 60.37 320 ⇑P **P** **13 46 24.8 +0.9**
LZH PP PP 13 48 40.1 +2.8
LZH S **S** **13 54 36.1 -1.5**
LZH XS sS 13 54 52.5 +3.4
LZH *e*SS SS 13 58 35.0 -0.8
LZH AMB AMB
comp=Z,33nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,257nm,6.8s
LZH LR LR
comp=N,468nm,15.0s
LZH LR LR
comp=Z,589nm,18.3s,MS4.8
PPT Papeete 62.12 105 *e*S **S** **13 54 59.3 -1.3**
comp=Z,384nm,28.8s
PPT *e*LQ 14 02 29.3
comp=Z,2µm,33.0s
PPT *e*LR LR 14 04 56.0
comp=Z,1µm,23.8s
PPT Papeete 62.12 105 LR LR 14 07 36.8
comp=Z,652nm,19.7s,MS4.8,baz=173,slow=30
PETK Petropavlovsk- 62.38 7 P **P** **13 46 37.6 +0.6**
comp=Z,10.0nm,0.8s,mb5.0,baz=163,slow=7.6,SNR=22
PETK LR LR 14 09 42.5
comp=Z,465nm,21.9s,MS4.6,baz=191,slow=32
PET Petropavlovsk 62.42 8 *e*P **P** **13 46 40.3 +2.9**
PET *e*S **S** **13 55 02.3 -0.7**
PET *e*PPS 13 55 24.1
PET pmax pmax
comp=Z,100nm,13.8s
HIA Hailar 62.61 340 *e*P **P** **13 46 38.8 +0.1**
HIA pmax pmax
comp=Z,27nm,1.1s
HIA Hailar 62.61 340 *e*P **P** **13 46 38.8 +0.1**
comp=Z,27nm,1.1s,mb5.3
GTA Gaotai 64.93 321 P **P** **13 46 55.4 +1.2**
GTA AP pP 13 47 05.9 +4.6
GTA XP sP 13 47 09.9 +6.0
GTA S **S** **13 55 40.1 +5.4**
GTA XS sS 13 55 47.6 +1.3
GTA AMB AMB
comp=Z,8.0nm,1.8s,mb4.5
GTA AMB AMB
comp=Z,254nm,5.7s
GTA LR LR
comp=N,202nm,19.8s,MS4.5
GTA LR LR
comp=E,162nm,17.4s,MS4.5
GTA LR LR
comp=Z,306nm,19.8s,MS4.5
LSA Lhasa 65.96 308 P **P** **13 47 02.8 +1.7**
LSA Lhasa 65.96 308 *e*P **P** **13 47 02.5 +1.4**
LSA pmax pmax
comp=Z,14nm,0.7s,mb5.1
LSA Lhasa 65.96 308 *e*P **P** **13 47 02.5 +1.4**
comp=Z,14nm,0.7s,mb5.1
ULN Ulaanbaatar 66.59 332 *e*P **P** **13 47 05.9 +1.1**
SONM Songino Array 66.88 332 P **P** **13 47 07.9 +1.3**
comp=Z,12nm,1.0s,mb4.9,baz=150,slow=5.5,SNR=47
SONM LR LR 14 16 40.0
comp=Z,495nm,19.5s,MS4.7,baz=321,slow=36
TAPN Taplejung 67.72 304 *e*P **P** **13 47 13.1 +0.7**
comp=Z,113nm,1.2s,mb5.8
ODAN Odare 67.79 304 *e*P **P** **13 47 13.3 +0.4**
comp=Z,75nm,1.2s,mb5.6
BOK Bokaro 67.91 300 *e*P **P** **13 47 13.1 -0.6**
BOK *i*x x 13 47 21.3
MIR Mirnyy 68.13 200⇓*i*P **P** **13 47 23.0 +8.7**
MIR pmax pmax
comp=Z,200nm,2.0s,mb5.8
RAMN Ramite 68.48 303 *e*P **P** **13 47 17.1 -0.1**
GUN Gumba 69.44 304 *e*P **P** **13 47 23.9 +0.8**
comp=Z,111nm,1.1s,mb5.7
PKI Pulchoki 69.69 304 *e*P **P** **13 47 25.0 +0.3**
comp=Z,73nm,1.2s,mb5.5
SBA Scott Base 69.74 176 *e*P **P** **13 47 31.8 +7.7**
SBA pmax pmax
comp=Z,45nm,1.7s,mb5.1
SBA Scott Base 69.74 176 *e*P **P** **13 47 31.8 +7.7**
comp=Z,45nm,1.7s,mb5.1
KKN Kakani 69.88 304 *e*P **P** **13 47 26.1 +0.2**
comp=Z,48nm,1.0s,mb5.4
DMN Daman 69.96 304 *e*P **P** **13 47 27.0 +0.7**
comp=Z,78nm,0.9s,mb5.6
GKN Gorkha 70.49 304 *e*P **P** **13 47 29.7 +0.1**
comp=Z,83nm,1.0s,mb5.6
TLY Talaya 70.86 333 *e*P **P** **13 47 32.2 +0.9**
TLY *e*S S 13 56 42.3 -2.9
TLY *e*SS SS 14 01 11.9 -6.4
TLY pmax pmax
comp=Z,16nm,1.6s,mb4.7
TLY MLR MLR
comp=Z,447nm,19.0s,MS4.7
TLY Talaya 70.86 333 *e*P **P** **13 47 31.1 -0.2**
comp=Z,7.7nm,0.8s,mb4.7
KOLN Koldanda 71.26 303 *e*P **P** **13 47 34.2 -0.1**
comp=Z,55nm,0.8s,mb5.6
DANN Dangsing 71.33 304 *e*P **P** **13 47 34.8 +0.1**
comp=Z,52nm,0.9s,mb5.5
BOD Bodaibo 71.67 342 *e*P **P** **13 47 33.6 -2.4**
BOD pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
YAK Yakutsk 71.93 352 *e*P **P** **13 47 36.3 -1.3**
YAK pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
YAK pmax pmax
comp=N,3.0nm,1.2s
MOY Mondy 72.06 332 *e*P **P** **13 47 39.7 +1.1**
MOY pmax pmax
comp=Z,55nm,2.5s,mb5.0
HYB Hyderabad 72.47 291 *i*P **P** **13 47 41.0 -0.7**
NGP Nagpur 73.05 295 *e*P **P** **13 47 43.5 -1.6**
LATR Latur 74.56 292 *e*P **P** **13 47 53.7 -0.3**
LATR AMb AMB 13 48 05.8
comp=Z,24nm,1.0s,mb5.1
AKL Akola 74.75 294 *e*P **P** **13 47 54.5 -0.6**
WMQ Urumqi 74.94 320 P **P** **13 47 56.3 +0.6**
WMQ AP pP 13 48 01.0 -1.8
WMQ XP sP 13 48 03.5 -1.9
WMQ PCP PcP 13 48 11.0 +1.5
WMQ PP PP 13 50 46.0 +2.3
WMQ S S 13 57 32.0 -0.1
WMQ XS sS 13 57 40.0 -3.8
WMQ AMB AMB
comp=Z,25nm,1.2s,mb5.0
WMQ AMB AMB
comp=Z,297nm,4.2s
WMQ LR LR
comp=N,210nm,18.2s,MS4.6
WMQ LR LR
comp=E,135nm,16.8s,MS4.6
WMQ LR LR
comp=Z,184nm,25.6s
RKT Rikitea 75.62 112 *e*LR LR 14 11 09.5
comp=Z,678nm,23.8s
KAD Karad 76.48 290 *i*P **P** **13 48 04.5 -0.5**
KAD AMb AMB 13 48 06.4
comp=Z,18nm,0.8s,mb5.1
KAD *i*x x 13 48 11.8
NDI New Delhi 76.87 302 *e*P **P** **13 48 05.0 -2.1**
POO Poona 77.08 291 *e*P **P** **13 48 08.0 -0.4**
SDPT Sand Point 77.40 28 *e*P **P** **13 48 07.9 -1.5**
comp=Z,43nm,1.0s,mb5.3
SDPT LR LR
comp=Z,400nm,19.0s,MS4.8
SMLA Simla 77.67 305 *e*P **P** **13 48 11.4 -0.1**
SMLA AMb AMB 13 48 23.6
comp=Z,46nm,0.6s,mb5.6
BILL Bilibino 77.91 7⇓*i*P **P** **13 48 12.7 +0.7**
BILL *i* 13 48 22.2
BILL pmax pmax
comp=Z,26nm,0.9s,mb5.2
AJM Ajmer 78.42 299⇑*i*P **P** **13 48 14.9 -0.8**
AJM *i*x x 13 48 21.4
AJM AMb AMB 13 48 23.9
comp=Z,39nm,1.4s,mb5.2
THN Thein Dam 79.24 305 *e*P **P** **13 48 18.6 -1.6**
MAW Mawson 79.64 203 P **P** **13 48 21.3 -0.3**
comp=Z,4.7nm,0.8s,mb4.5,baz=70,slow=4.7,SNR=12
MAW LR LR 14 21 48.9
comp=Z,228nm,20.7s,MS4.5,baz=348,slow=34
MKAR Makanchi Array 79.68 321 P **P** **13 48 22.4 +0.2**
comp=Z,7.5nm,0.8s,mb4.7,baz=100,slow=6.7,SNR=30
MKAR LR LR 14 28 33.8
comp=Z,139nm,18.1s,MS4.3,baz=258,slow=39
TIXI Tiksi 81.22 354 *e*P **P** **13 48 30.4 +0.4**
TIXI pmax pmax
comp=Z,11nm,1.1s,mb4.7
TIXI MLR MLR
comp=Z,217nm,18.0s,MS4.5
TIXI Tiksi 81.22 354 *e*P **P** **13 48 30.1 +0.1**
ZAA0 Zalesovo Array 81.41 328 *e*P **P** **13 48 29.9 -1.4**
ZALV Zalesovo Beam 81.41 328 P **P** **13 48 30.3 -1.0**
comp=Z,3.6nm,0.6s,mb4.5,baz=116,slow=5.0,SNR=17
ZALV LR LR 14 25 31.7
comp=Z,238nm,20.1s,MS4.5,baz=198,slow=36
KDAK Kodiak Island 82.39 28 LR LR 14 18 56.0
comp=Z,405nm,21.9s,MS4.8,baz=288,slow=31
NVS Novosibirsk 82.64 328⇑*i*P **P** **13 48 36.8 -1.0**
NVS *e*S S 13 58 53.5 -0.3
NVS pmax pmax
comp=N,27nm,2.1s
NVS pmax pmax
comp=E,40nm,2.1s
NVS pmax pmax
comp=Z,57nm,2.1s,mb5.2
NVS smax
comp=N,15nm,2.2s
NVS smax
comp=E,35nm,2.2s
TKM2 Tokmak 2 82.65 315 *e*P **P** **13 48 37.0 -1.1**
TKM2 pmax pmax
comp=Z,17nm,1.3s,mb4.9
TKM2 Tokmak 2 82.65 315 *e*P **P** **13 48 37.0 -1.1**
comp=Z,17nm,1.3s,mb4.9
SVW2 Sparrevohn 82.82 24 *e*P **P** **13 48 39.0 +0.5**
KURK Kurchatov 83.48 323 P **P** **13 48 42.6 +0.4**
comp=Z,61nm,1.4s,mb5.4,SNR=6.6
KURK Kurchatov 83.48 323 P **P** **13 48 42.2 0.0**
comp=Z,3.7nm,0.8s,mb4.4,baz=114,slow=5.6,SNR=16
KURK Kurchatov 83.48 323 *e*P **P** **13 48 42.2 0.0**
TTA Tatalina 83.65 23 *e*P **P** **13 48 42.9 +0.1**
AML Almayashu 83.74 314 *e*P **P** **13 48 44.6 +0.9**
comp=Z,129nm,0.9s,mb6.1
EKS2 Erkin-Say 83.84 315 *e*P **P** **13 48 44.8 +0.5**
comp=Z,9.3nm,1.0s,mb4.9
SLKM Skilak Lake 84.78 26 *e*P **P** **13 48 48.3 -0.3**
SEW Seward 84.93 27 *e*P **P** **13 48 48.6 -0.7**
PPLA Purkeypile 85.12 24 *e*P **P** **13 48 49.8 -0.5**
comp=Z,50nm,1.5s,mb5.4
RC01 Rabbit Creek A 85.26 26 *e*P **P** **13 48 50.2 -0.8**
comp=Z,21nm,0.6s,mb5.4
CHUM Lake Minchumin 85.57 23 *e*P **P** **13 48 52.1 -0.4**
comp=Z,58nm,1.1s,mb5.7
PMR Palmer 85.75 26 *e*P **P** **13 48 51.6 -1.8**
PMR pmax pmax
comp=Z,53nm,1.4s,mb5.6
PMR MLR MLR
comp=Z,400nm,21.0s,MS4.8
PMR Palmer 85.75 26 *e*P **P** **13 48 51.6 -1.8**
comp=Z,52nm,1.4s,mb5.6
PMR LR LR
comp=Z,400nm,21.0s,MS4.8
KTH Kantishna Hill 85.95 23 *e*P **P** **13 48 53.0 -1.4**
comp=Z,32nm,1.2s,mb5.4
TRF Thorofare Moun 86.15 24 *e*P **P** **13 48 53.5 -1.8**
comp=Z,9.0nm,0.8s,mb5.0
BPAW Bear Paw Mtn. 86.19 23 *e*P **P** **13 48 53.9 -1.7**
comp=Z,12nm,1.0s,mb5.1
IMA2 Indian Mountai 86.20 21 *e*P **P** **13 48 54.4 -1.1**
MCK McKinley 86.82 24 *e*P **P** **13 48 57.5 -1.1**
MCK pmax pmax
comp=Z,37nm,1.0s,mb5.6
MCK McKinley 86.82 24 *e*P **P** **13 48 57.5 -1.1**
comp=Z,37nm,1.0s,mb5.6
DIV Divide 87.01 27 *e*P **P** **13 48 59.7 0.0**
comp=Z,80nm,1.1s,mb5.9
BMRM Bremner River 87.47 27 *e*P **P** **13 49 02.0 +0.2**
COLA College 87.75 23 *e*P **P** **13 49 01.3 -1.8**
COLA pmax pmax
comp=Z,30nm,1.0s,mb5.5
COLA College 87.75 23 *e*P **P** **13 49 01.2 -1.9**
comp=Z,30nm,1.0s,mb5.5
SYO Syowa Base 87.94 200⇓*e*X 13 49 02.0
SYO Syowa Base 87.94 200⇓*e*sP sP 13 49 09.4 -4.5
COLD Coldfoot 87.98 20 *e*P **P** **13 49 04.5 +0.3**
comp=Z,48nm,0.6s,mb5.9
BVAR Borovoye Array 89.05 324 P **P** **13 49 08.7 -0.8**
comp=Z,2.2nm,0.8s,mb4.6,baz=107,slow=5.1,SNR=7.8
HYT Haines Junctio 90.68 28 *e*P **P** **13 49 17.5 +0.5**
DAWY Dawson 90.83 25 *e*P **P** **13 49 18.4 +0.7**
HUMO Hull Mountain 95.94 48 *e*P **P** **13 49 42.1 +0.4**
comp=Z,10nm,1.0s,mb5.2
WDC Whiskeytown Da 96.03 50 *e*P **P** **13 49 41.4 -0.7**
WDC pmax pmax
comp=Z,32nm,1.8s,mb5.5
WDC Whiskeytown Da 96.03 50 *e*P **P** **13 49 41.4 -0.7**
comp=Z,32nm,1.8s,mb5.5
YBH Yreka Blue Hor 96.03 49 *e*P **P** **13 49 43.1 +1.0**
YBH pmax pmax
comp=Z,8.0nm,1.3s
YBH Yreka Blue Hor 96.03 49 *e*P **P** **13 49 43.1 +1.0**
comp=Z,8.5nm,1.3s,mb5.0
SNAA Sanae 97.21 189 *e*P **P** **13 49 46.4 -0.5**
CMB Columbia Colle 97.43 53 *e*P **P** **13 49 49.4 +0.9**
CMB pmax pmax
comp=Z,11nm,1.6s,mb5.0
CMB Columbia Colle 97.43 53 *e*P **P** **13 49 49.4 +0.9**
comp=Z,11nm,1.6s,mb5.0
ETW Entiat 98.25 43 *e*P **P** **13 49 52.4 +0.4**
HAWA Hanford 98.72 44 *e*P **P** **13 49 54.5 +0.4**
comp=Z,4.3nm,1.0s,mb4.9
NVAR Mina Array Bea 99.10 52 P **P** **13 49 56.5 +0.6**
comp=Z,4.0nm,1.1s,mb4.9,baz=245,slow=6.4,SNR=12
OD2 Odessa Site #2 99.34 43 *e*P **P** **13 49 56.8 -0.1**
BMO Blue Mountains 100.20 46 *e*P Pdif 13 50 01.3 +0.7
NEW Newport 100.44 43 *e*P Pdif 13 50 02.2 +0.6
YKA Yellowknife Ar 101.67 28 P Pdif 13 50 06.7 -0.4
comp=Z,2.1nm,0.8s,baz=278,slow=5.0,SNR=5.8
YKA Yellowknife Ar 101.67 28 *i*P Pdif 13 50 06.6 -0.5
YKA pmax pmax
comp=Z,2.0nm,0.8s
PDAR Pinedale Array 105.81 48 Pdiff Pdif 13 50 26.1 +0.6
comp=Z,0.5nm,0.7s,baz=202,slow=1.6,SNR=4.0
TXAR Lajitas Array 111.11 62 PKiKP PKiKP 13 54 48.9 +0.1
comp=Z,0.5nm,0.9s,baz=273,slow=2.1,SNR=3.6
TXAR Lajitas Array 111.11 62 PKPdf PKiKP 13 54 48.9 +0.1
ULM Lac du Bonnet 113.98 39 PKiKP PKiKP 13 54 52.1 -1.5
comp=Z,1.6nm,0.5s,baz=306,slow=7.6,SNR=4.3
JCT Junction City 114.40 61 *e*P Pdif 13 51 04.1 +0.4
PLCA Paso Flores 119.74 148 PKP PKPdf 13 55 05.7 +0.6
comp=Z,1.3nm,0.6s,baz=209,slow=5.6,SNR=6.1
CLL Collm 123.35 327 *e*PKPdf PKPdf 13 55 10.0 -1.6
CLL LmV 14 50 00.0
comp=Z,300nm,19.0s
GERES GERESS Array B 124.22 324 PKP PKPdf 13 55 13.1 -0.3
comp=Z,0.4nm,0.6s,baz=116,slow=2.3,SNR=2.6
LPAZ La Paz 137.19 126 PKhKP 13 55 36.1
comp=Z,1.8nm,0.8s,baz=266,slow=4.1,SNR=6.0
LPAZ PKP PKPdf 13 55 40.2 +1.4
comp=Z,1.8nm,0.8s,baz=264,slow=5.2,SNR=6.0
CPUP Villa Florida 137.80 147 PKP PKPdf 13 55 40.5 +0.8
comp=Z,0.3nm,0.3s,baz=225,slow=4.3,SNR=3.8
SIV San Ignacio 142.83 131 PKP PKPdf 13 55 47.5 -1.6
comp=Z,1.3nm,0.5s,baz=244,slow=4.7
TORD Torodi Ar. Bea 145.69 280 PKPbc PKPbc 13 55 54.2 -0.2
comp=Z,20nm,1.0s,baz=88,slow=3.4,SNR=59
SJG San Juan 146.52 71 PKPbc PKPbc 13 55 56.0 -0.9
comp=Z,16nm,0.5s,baz=16,slow=22,SNR=7.5
BDFB Brasilia 151.49 148 PKP PKPdf 13 56 02.9 -0.5
comp=Z,3.1nm,0.7s,baz=174,slow=6.1,SNR=4.3
BDFB PKPbc PKPbc 13 56 09.4 -0.2
comp=Z,11nm,0.6s,baz=205,slow=0.6,SNR=16
KIC Kosan Boka 151.89 267 *e*PKP1 PKPdf 13 56 06.9 +2.7
comp=Z,152nm,1.5s
DBIC Dimbokro 152.03 268 PKPbc PKPbc 13 56 10.4 -0.5
comp=Z,4.0nm,0.9s,baz=142,slow=6.1,SNR=5.6
LIC Lamto 152.15 267 *e*PKP1 PKPdf 13 56 06.4 +1.8
comp=Z,37nm,0.9s
TIC Toumodi 152.19 267 *e*PKP1 PKPdf 13 56 05.8 +1.2
comp=Z,72nm,1.0s

NNC 15 13:38:48.5±5.5, 3763N×6999E, h0km, mb4.1, mpv3.8, 3C-2D, Error ellipse: s-maj=50.8km s-min=43.7km az=102.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.48**	**4**	⇓Pn	Pn	13 40 14.9	+3.5
	5.2nm,0.5s,baz=200,slow=15,SNR=49						
KK31				⇓Sn	Sn	13 41 21.4	+6.4
	17nm,0.4s,baz=190,slow=30,SNR=9.2						
TKM2	**Tokmak 2**	**6.80**	**37**	⇑Pn	Pn	13 40 27.3	-2.2
	5.4nm,0.6s						
TKM2				⇑Sn	Sn	13 41 49.7	+2.1
	20nm,0.8s						
AB31	**Akbulak array**	**13.70**	**331**	⇑Pn	Pn	13 42 02.2	-1.8
	1.2nm,0.5s,baz=122,slow=7.0,SNR=22						

*NEIC **15** 13:52:43.6±0.4, 2.92N×78.27W, h10km, mb4.2/6, Error ellipse: s-maj=11.4km s-min=8.3km az=65.0*
NEIC Felt at El Charco.
*ISCJB **15** 13:52:47.6±1.2, 3.08N±0.05×78.14W±0.08, h50km±13km, mb4.0/18, Error ellipse: s-maj=13.7km s-min=8.8km az=166.9*
*IDC **15** 13:52:51.3±2.3, 2.98N×77.99W, h71km±21km, mb3.6/12, mb1 4.0/17, mb1mx3.9/24, mbtmp3.8/17, MS3.4/3, Ms1 3.4/3, ms1mx2.9/26, Error ellipse: s-maj=19.8km s-min=13.3km az=69.0*

ISC 15 13:52:47.5±0.9, 296N±0.05×7820W±0.08, h37km±10km, n36, σ1 8 15/35, mb4.0/18, 1C, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTAV	**Otavalo**	**2.72**	**185**⇑	*e*Pn	**Pn**	**13 53 28.1**	**-0.7**
OTAV				*e*Sn	**Sn**	**13 54 00.2**	**-0.1**
ROSC	**El Rosal**	**4.29**	**64**	P	**Pn**	**13 53 52.7**	**+2.3**
	27nm,0.3s,baz=259,slow=2.8,SNR=50						
ROSC				S	**Sn**	**13 54 44.5**	**+5.2**
	8.3nm,0.3s,baz=249,slow=23,SNR=9.5						
BCIP	**Isla Barro Col**	**6.38**	**345**	*e*Pn	**Pn**	**13 54 17.7**	**-1.4**
SDV	**Santo Domingo**	**9.55**	**52**	P	**Pn**	**13 55 03.4**	**+0.8**
	3.1nm,0.3s,baz=297,slow=6.8,SNR=3.8						
SDV				S	**Sn**	**13 56 43.5**	**-5.3**
	3.4nm,0.3s,baz=56,slow=7.3,SNR=2.0						
SDV				LR	LR	13 59 13.9	
	comp=Z,320nm,18.6s,baz=136,slow=41						
ATAH	**Atahualpa**	**9.90**	**181**	P	**Pn**	**13 55 13.4**	**+6.1**
	0.8nm,0.3s,baz=17,slow=11,SNR=5.6						
JTS	**JuntasAbangare**	**9.90**	**318**	LR	LR	13 59 19.9	
	comp=Z,56nm,18.6s,baz=191,slow=39						
TGUH	**Tegucigalpa,Un**	**14.21**	**321**	*e*P	**Pn**	**13 56 12.3**	**+5.9**
	45nm,1.3s						
NNA	**Nana**	**14.91**	**175**	P	**Pn**	**13 56 20.3**	**+4.4**
	1.6nm,0.3s,baz=13,slow=15,SNR=4.4						
SJG	**San Juan**	**19.14**	**37**	P	**Pn**	**13 57 07.8**	**-1.0**
	baz=276,slow=9.2,SNR=3.6						
TEIG	**Tepich**	**19.78**	**331**	*e*P	**Pn**	**13 57 13.7**	**-2.8**
	2.8nm,0.4s						
LPAZ	**La Paz**	**21.56**	**153**	P	**P**	**13 57 34.8**	**+0.8**
	6.4nm,0.9s,mb4.0,baz=329,slow=10,SNR=9.6						
LVC	**Limon Verde**	**26.98**	**161**	P	**P**	**13 58 29.6**	**+3.6**
	6.8nm,0.9s,mb4.2,baz=358,slow=6.4,SNR=2.7						
LVC	**Limon Verde**	**26.98**	**161**	P	**P**	**13 58 29.6**	**+3.5**
BDFB	**Brasilia**	**35.12**	**123**	P	**P**	**13 59 35.0**	**-2.8**
	3.4nm,0.7s,mb4.4,baz=312,slow=12,SNR=3.7						
BDFB				LR	LR	14 14 25.8	
	comp=Z,110nm,19.8s,baz=278,slow=37						
CPUP	**Villa Florida**	**35.43**	**147**	P	**P**	**13 59 39.0**	**-1.4**
	0.4nm,0.4s,mb3.7,baz=315,slow=9.7,SNR=4.2						
TXAR	**Lajitas Array**	**35.68**	**320**	P	**P**	**13 59 43.8**	**+1.3**
	1.0nm,0.7s,mb3.8,baz=134,slow=7.3,SNR=12						
ANMO	**Albuquerque**	**41.25**	**324**	*e*P	**P**	**14 00 28.7**	**-0.6**
	3.1nm,0.8s,mb4.0						
LAZ	**Ladron**	**41.28**	**323**	*e*P	**P**	**14 00 29.7**	**+0.2**
SDCO	**Great Sand Dun**	**42.72**	**328**	*e*P	**P**	**14 00 41.5**	**+0.4**
	4.2nm,1.2s,mb4.0						
PLCA	**Paso Flores**	**44.04**	**172**	P	**P**	**14 00 53.1**	**+1.4**
	5.3nm,0.9s,mb4.3,baz=341,slow=9.6,SNR=9.5						
PV10	**Paradox Valley**	**45.12**	**325**	*e*P	**P**	**14 01 00.8**	**+0.4**
RSSD	**Black Hills**	**46.93**	**335**	*e*P	**P**	**14 01 14.7**	**+0.2**
	4.1nm,0.9s,mb4.4						
PDAR	**Pinedale Array**	**48.49**	**329**	P	**P**	**14 01 27.5**	**+0.7**
	0.4nm,0.6s,mb3.6,baz=105,slow=6.8,SNR=3.4						
IMW	**Indian Meadow**	**50.01**	**329**	*e*P	**P**	**14 01 38.3**	**0.0**
	2.7nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	**50.83**	**319**	P	**P**	**14 01 46.2**	**+1.6**
	0.8nm,0.7s,mb3.7,baz=132,slow=7.0,SNR=5.5						
NVAR				PcP	PcP	14 03 02.4	+1.3
	0.3nm,0.5s,baz=125,slow=4.7,SNR=2.6						
NVAR	**Mina Array Bea**	**50.83**	**319**	P	**P**	**14 01 46.2**	**+1.6**
NVAR				PcP	PcP	14 03 02.4	+1.3
WVOR	**Wild Horse Val**	**53.33**	**323**	*e*P	**P**	**14 02 03.7**	**+0.5**
	10nm,1.4s,mb4.6						
YKA	**Yellowknife Ar**	**65.25**	**342**	P	**P**	**14 03 24.0**	**-1.1**
	1.7nm,0.8s,mb4.1,baz=130,slow=5.5,SNR=4.4						
DBIC	**Dimbokro**	**73.12**	**84**	P	**P**	**14 04 14.3**	**-0.7**
	2.8nm,0.7s,mb4.3,baz=251,slow=8.1,SNR=5.4						
ESDC	**Sonseca Array**	**75.99**	**50**	P	**P**	**14 04 31.2**	**+0.1**
	0.1nm,0.3s,mb3.2,baz=269,slow=4.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**79.49**	**77**	P	**P**	**14 04 49.5**	**-1.6**
	0.5nm,0.6s,mb3.8,baz=298,slow=5.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**79.49**	**77**	P	**P**	**14 04 49.5**	**-1.6**
GERES	**GERESS Array B**	**89.05**	**41**	P	**P**	**14 05 39.2**	**+0.3**
	0.4nm,0.2s,mb4.4,baz=316,slow=7.6,SNR=4.3						
ASAR	**Alice Springs**	**142.76**	**234**	PKhKP		14 12 13.7	
	1.0nm,0.8s,baz=112,slow=3.7,SNR=5.5						
WRA	**Warramunga Arr**	**144.04**	**240**	PKP	PKPdf	14 12 18.2	-2.0
	3.4nm,0.8s,baz=113,slow=3.2,SNR=9.4						
FITZ	**Fitzroy Crossi**	**152.21**	**236**	PKPbc	PKPbc	14 12 40.2	-0.1
	2.9nm,0.5s,baz=194,slow=16,SNR=11						

*BJI **15** 13:58:04.9, 9.00S×147.41E, h10km, mB5.3, mb5.0, Ms5.0, Msz4.7*
*ISCJB **15** 13:58:09.3±0.2, 8.84S±0.03×146.91E±0.04, h18km, mb5.1/83, MS4.4/18, Error ellipse: s-maj=5.7km s-min=4.0km az=177.7*
*NEIC **15** 13:58:09.6±0.1, 8.80S×146.93E, h10km, mb5.2/30, Error ellipse: s-maj=5.3km s-min=3.5km az=102.0*

NEIC Felt [III] at Port Moresby.
*MOS **15** 13:58:10.4±1.1, 883S×14686E, h24km, mb5.3/20, Error ellipse: s-maj=12.7km s-min=6.8km az=88.3*
*IDC **15** 13:58:11.2±0.5, 883S×14693E, h18km±2km, mb4.8/16, mb1 4.8/19, mb1mx4.8/20, mbtmp4.8/19, ML4.7/3, MS4.3/9, Ms1 4.3/9, ms1mx3.9/27, Error ellipse: s-maj=16.2km s-min=11.3km az=82.0*
*DJA **15** 13:58:21, 943S×14645E, h21km, Mw5.4/8*
ISC 15 13:58:11.1±0.2, 886S±003×14698E±004, h19km, h19km±1.0km:pP-P, n188, σ0s87/174, mb5.1/83, MS4.4/18, 10C-6D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**0.57**	**162**	*e*Pg	**Pg**	**13 58 22.1**	**-0.4**
PMG				*e*Sg	**Sg**	**13 58 31.4**	**+1.2**
COEN	**Coen**	**6.29**	**216**	*e*Pn	**Pn**	**13 59 41.5**	**-1.3**
	31nm,0.6s						
COEN				*e*Sn	**Sn**	**14 00 49.0**	**-5.1**
CTA	**Charters Tower**	**11.18**	**184**	*e*P	**Pn**	**14 00 51.3**	**+1.3**
	18nm,0.4s						
CTA				*e*S	**Sn**	**14 02 49.4**	**-5.2**
CTA	**Charters Tower**	**11.18**	**184**	Pn	**Pn**	**14 00 51.2**	**+1.2**
	5.6nm,0.3s,baz=358,slow=13,SNR=26						
CTA				Sn	**Sn**	**14 02 52.5**	**-2.1**
	1.7nm,0.3s,baz=58,slow=15,SNR=3.2						
CTA	**Charters Tower**	**11.18**	**184**	*e*P	**Pn**	**14 00 51.3**	**+1.3**
CTA				*e*S	**Sn**	**14 02 49.4**	**-5.2**
CTA				pmax	pmax		
	comp=Z,18nm,0.4s						
CTAO	**Charters Tower**	**11.18**	**184**	*e*P	**Pn**	**14 00 51.4**	**+1.4**
WRAB	**Tennant Creek**	**16.44**	**227**	Pn	**Pn**	**14 02 00.0**	**-0.8**
	comp=Z,335nm,0.6s,SNR=29						
WRAB	**Tennant Creek**	**16.44**	**227**	*e*Pn	**Pn**	**14 02 00.2**	**-0.7**
WB2	**Warramunga Arr**	**16.44**	**227**	*e*P	**Pn**	**14 01 59.5**	**-1.4**
WB2				*e*S	**Sn**	**14 04 52.0**	**-11**
WRA	**Warramunga Arr**	**16.45**	**227**	Pn	**Pn**	**14 02 00.2**	**-0.8**
	comp=Z,2.5nm,0.3s,baz=44,slow=14,SNR=115						
WRA				Sn	**Sn**	**14 04 53.5**	**-10**
	comp=Z,1.7nm,0.3s,baz=50,slow=24,SNR=13						
WRA				LR	LR	14 08 55.4	
	comp=Z,1μm,18.1s,baz=40,slow=39						
WRA	**Warramunga Arr**	**16.45**	**227**	P	**Pn**	**14 02 00.2**	**-0.8**
WRA						14 04 53.5	
EIDS	**Eidsvold**	**16.88**	**167**	*e*P	sP	14 02 19.2	+3.1
ASAR	**Alice Springs**	**19.32**	**219**	P	**Pn**	**14 02 36.8**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=35,slow=13,SNR=158						
ASAR				S	**Sn**	**14 06 06.1**	**-6.5**
	comp=Z,0.9nm,0.3s,baz=45,slow=25,SNR=5.0						
FITZ	**Fitzroy Crossi**	**22.67**	**244**	*e*P	**P**	**14 03 10.9**	**-0.6**
	comp=Z,35nm,0.9s,mb4.8						
FITZ				*e*S	**S**	**14 07 18.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**22.67**	**244**	P	**P**	**14 03 11.0**	**-0.5**
	comp=Z,4.4nm,0.6s,mb4.1,baz=62,slow=8.2,SNR=15						
FITZ				LR	LR	14 12 29.7	
	comp=Z,455nm,19.1s,MS3.9,baz=68,slow=38						
DZM	**Mont Dzumac**	**22.86**	**127**	*e*P	**P**	**14 03 13.0**	**-0.5**
DZM	**Mont Dzumac**	**22.86**	**127**	*e*P	**P**	**14 03 13.4**	**-0.1**
BATI	**Baumata**	**23.03**	**265**	P	**P**	**14 03 17.6**	**+2.3**
	comp=Z,27nm,0.8s,mb4.7,baz=43,slow=6.7,SNR=5.7						
STKA	**Stephens Creek**	**23.44**	**192**	*e*P	**P**	**14 03 18.9**	**-0.6**
	comp=Z,14nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**23.44**	**192**	P	**P**	**14 03 19.1**	**-0.4**
	comp=Z,18nm,0.5s,mb4.8,baz=359,slow=8.9,SNR=73						
STKA				LR	LR	14 12 53.1	
	comp=Z,978nm,18.9s,MS4.3,baz=132,slow=38						
CAN	**Canberra**	**26.40**	**176**	*e*P	**P**	**14 03 47.5**	**+1.1**
CNB	**Canberra Magne**	**26.42**	**176**	*e*P	**P**	**14 03 47.7**	**+1.1**
KAPI	**Kappang**	**27.29**	**276**	P	**P**	**14 03 54.0**	**-0.7**
	comp=Z,41nm,1.1s,mb4.9,baz=160,slow=10,SNR=5.2						
KAPI	**Kappang**	**27.29**	**276**	*e*P	**P**	**14 03 54.0**	**-0.7**
TOO	**Toolangi**	**28.61**	**182**	*e*P	**P**	**14 04 07.3**	**+1.1**
KLBR	**Kellerberrin**	**35.34**	**226**	*e*P	**P**	**14 05 04.7**	**-0.6**
	comp=Z,28nm,0.9s,mb5.2						
NWAO	**Narrogin (SRO)**	**36.45**	**225**	P	**P**	**14 05 14.7**	**-0.2**
	comp=Z,9.3nm,0.8s,mb4.8,baz=103,slow=20,SNR=6.2						
NWAO				LR	LR	14 19 33.5	
	comp=Z,394nm,18.7s,MS4.2,baz=188,slow=35						
KSM	**Kuching**	**37.95**	**284**	*e*P	**P**	**14 05 28.0**	**+0.1**
URZ	**Urewera**	**39.90**	**142**	P	**P**	**14 05 44.2**	**+0.4**
	comp=Z,7.5nm,0.9s,mb4.4,baz=243,slow=2.3,SNR=3.1						
RPZ	**Rata Peaks**	**40.57**	**153**	P	**P**	**14 05 50.1**	**+0.8**
	comp=Z,13nm,0.5s,mb4.8,baz=336,slow=5.2,SNR=15						
RPZ				LR	LR	14 20 47.1	
	comp=Z,366nm,19.6s,MS4.2,baz=284,slow=33						
AFI	**Afiamalu**	**40.71**	**101**	LR	LR	14 19 55.1	
	comp=Z,353nm,20.4s,MS4.2,baz=331,slow=32						
NACB	**Ninganchiao**	**41.14**	**323**	*e*P	**P**	**14 05 53.7**	**-0.6**
	comp=Z,353nm,1.2s,mb5.9						
YHNB	**Yeheng**	**41.64**	**324**	*e*P	**P**	**14 05 58.9**	**+0.6**
	comp=Z,39nm,0.9s,mb5.0						
TATO	**Taipei**	**41.81**	**324**	*e*P	**P**	**14 05 58.5**	**-1.3**
MJAR	**Matsushiro Arr**	**45.91**	**350**	P	**P**	**14 06 31.6**	**-0.9**
	comp=Z,11nm,0.9s,mb4.8,baz=181,slow=9.2,SNR=31						
MJAR				pP	pP	14 06 37.2	-1.3
	comp=Z,15nm,1.0s,baz=183,slow=10.0,SNR=13						
MAJO	**Matsushiro**	**45.91**	**350**	*e*P	**P**	**14 06 31.6**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.2						
MAJO	**Matsushiro**	**45.91**	**350**	*e*P	**P**	**14 06 31.6**	**-0.9**
	comp=Z,29nm,0.9s,mb5.2						
MAT	**Matsushiro**	**45.91**	**350**	P	**P**	**14 06 32.2**	**-0.3**
MAT				S	**S**	**14 13 13.0**	**-3.1**
QIZ	**Qiongzhong**	**45.91**	**307**	P	**P**	**14 06 32.8**	**-0.1**
NJ2	**Nanjing**	**48.76**	**328**	*e*P	**P**	**14 06 55.8**	**+1.0**
NJ2				AP	pP	14 07 00.0	-0.8
NJ2				XP	sP	14 07 03.4	+0.2
NJ2				PCP	PcP	14 08 19.3	-0.4
NJ2				S	**S**	**14 13 55.5**	**-1.3**
NJ2				XS	sS	14 14 06.0	-0.7
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,720nm,4.6s						
NJ2				LR	LR		
	comp=N,360nm,26.2s						
NJ2				LR	LR		
	comp=E,890nm,38.0s						
NJ2				LR	LR		
	comp=Z,610nm,29.8s,MS4.4						
KSRS	**Korea Array**	**49.41**	**340**	P	**P**	**14 06 59.8**	**+0.1**
	comp=Z,16nm,1.0s,mb5.0,baz=160,slow=8.9,SNR=22						
KSRS				pP	pP	14 07 05.6	-0.1
	comp=Z,12nm,0.8s,baz=155,slow=8.4,SNR=10						
KSRS				PcP	PcP	14 08 22.4	+0.6
	comp=Z,3.5nm,1.0s,baz=166,slow=6.7,SNR=2.8						
KSRS				pPcP		14 08 27.8	
	comp=Z,2.6nm,0.7s,baz=187,slow=3.6,SNR=4.3						
KSRS				LR	LR	14 25 08.8	
	comp=Z,130nm,19.8s,MS3.9,baz=1.0,slow=33						
WHN	**Wuhan**	**50.16**	**323**	⇑P	**P**	**14 07 06.3**	**+0.8**
WHN				AP	pP	14 07 12.8	+1.2
NST	**Nakhon Sawan**	**52.41**	**298**	P	**P**	**14 07 24.0**	**+1.4**
GYA	**Guiyang**	**52.58**	**313**	⇑P	**P**	**14 07 24.8**	**+1.1**
GYA				PCP	PcP	14 08 34.8	+0.9
GYA				PP	PP	14 09 25.0	+2.0
GYA				SCP	ScP	14 12 32.6	+2.2
GYA				S	**S**	**14 14 49.0**	**-1.1**
GYA				SS	SS	14 18 27.3	-1.4
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=N,330nm,19.3s,MS4.5						
GYA				LR	LR		
	comp=E,310nm,18.9s,MS4.5						
GYA				LR	LR		
	comp=Z,470nm,19.0s,MS4.5						
RAR	**Rarotonga**	**52.65**	**110**	LR	LR	14 25 14.2	
	comp=Z,374nm,18.8s,MS4.5,baz=340,slow=31						
VLA	**Vladivostok**	**53.53**	**346**	*i* P	**P**	**14 07 32.2**	**+1.8**
CMAR	**Chiang Mai Arr**	**54.61**	**300**	P	**P**	**14 07 39.9**	**+1.0**
	comp=Z,14nm,0.8s,mb5.0,baz=126,slow=5.8,SNR=100						
CMAR				pP	pP	14 07 45.5	+0.6
	comp=Z,38nm,0.9s,baz=115,slow=5.7,SNR=50						
KMI	**Kunming**	**54.74**	**309**	P	**P**	**14 07 41.4**	**+1.7**
KMI				AP	pP	14 07 45.5	-0.3
KMI				XP	sP	14 07 46.8	-1.3
KMI				PP	PP	14 09 46.5	+3.9
KMI				S	**S**	**14 15 21.6**	**+2.0**
KMI				XS	sS	14 15 29.3	-0.3
KMI				AMB	AMB		
	comp=Z,16nm,0.9s,mb5.0						
KMI				AMB	AMB		
	comp=Z,200nm,4.0s						
KMI				LR	LR		
	comp=Z,100nm,23.6s,MS3.8						
CHG	**Chiang Mai**	**54.77**	**300**	⇓P	**P**	**14 07 39.8**	**-0.1**
	comp=Z,40nm,0.7s,mb5.6						
SNY	**Shenyang**	**54.82**	**339**	⇓P	**P**	**14 07 40.0**	**+0.1**
SNY				AMB	AMB		
	comp=Z,23nm,1.0s,mb5.2						
MDJ	**Mudanjiang**	**55.50**	**345**	P	**P**	**14 07 44.9**	**+0.2**
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,163nm,5.5s						
YSS	**Yuzh-Sakhalins**	**55.69**	**357**	⇑*e*P	**P**	**14 07 46.5**	**+0.4**
YSS				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
YSS	**Yuzh-Sakhalins**	**55.69**	**357**	*e*P	**P**	**14 07 46.1**	**0.0**
	comp=Z,12nm,0.8s,mb5.0						
XAN	**Xi'an**	**55.88**	**322**	P	**P**	**14 07 47.6**	**-0.1**
XAN				AP	pP	14 07 56.4	+2.6
XAN				XP	sP	14 08 00.8	+4.7
XAN				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.1						
CN2	**Changchun**	**55.94**	**341**	*e*P	**P**	**14 07 51.0**	**+3.1**
CN2				*e*XP	sP	14 07 58.0	+1.7
CN2				*e*S	**S**	**14 15 37.8**	**+2.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,17.0s,MS4.7						
CN2				LR	LR		
	comp=E,500nm,17.0s,MS4.7						
CN2				LR	LR		
	comp=Z,800nm,21.0s,MS4.8						
BJT	**Baijiatuau**	**56.37**	**332**	*e*P	**P**	**14 07 51.3**	**+0.2**
BJT				pmax	pmax		
	comp=Z,28nm,0.8s						
BJT	**Baijiatuau**	**56.37**	**332**	*e*P	**P**	**14 07 51.2**	**+0.2**
	comp=Z,28nm,0.8s,mb5.3						
BJI	**Beijing**	**56.38**	**332**	P	**P**	**14 07 51.3**	**+0.1**
BJI				S	**S**	**14 15 44.8**	**+3.9**
BJI				AMB	AMB		
	comp=Z,29nm,0.9s,mb5.3						
BJI				LR	LR		
	comp=N,305nm,15.9s,MS4.6						
BJI				LR	LR		
	comp=E,192nm,15.2s,MS4.6						
BJI				LR	LR		
	comp=Z,176nm,21.2s						
CD2	**Chengdu**	**57.27**	**316**	⇑*i*P	**P**	**14 07 58.0**	**+0.4**
CD2				AP	pP	14 08 02.8	-0.9
CD2				XP	sP	14 08 05.3	-0.8
CD2				PP	PP	14 10 07.3	+2.3
CD2				PCS	PcS	14 12 51.3	-1.6
CD2				S	**S**	**14 15 52.6**	**-0.3**
CD2				XS	sS	14 16 01.3	-1.7
CD2				SCS	ScS	14 17 43.3	-3.1
CD2				SS	SS	14 19 43.3	+0.7
CD2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.3						
CD2				AMB	AMB		
	comp=Z,180nm,7.2s						
CD2				LR	LR		
	comp=N,280nm,18.0s						
CD2				LR	LR		
	comp=Z,260nm,19.2s,MS4.3						
HHC	**Hu-ho-hao-te**	**59.25**	**329**	*e*P	**P**	**14 08 11.4**	**+0.1**
HHC				AP	pP	14 08 14.6	-2.8
HHC				XP	sP	14 08 16.6	-3.2
HHC				PCP	PcP	14 08 59.3	-0.2
HHC				PP	PP	14 10 24.3	+1.8
HHC				SCP	ScP	14 12 57.8	-1.6
HHC				PCS	PcS	14 12 59.8	-1.5
HHC				S	**S**	**14 16 17.9**	**-0.6**
HHC				SCS	ScS	14 17 57.8	-2.8
HHC				SS	SS	14 20 13.8	+0.3
HHC				AMB	AMB		
	comp=Z,23nm,0.9s,mb5.2						
HHC				AMB	AMB		
	comp=Z,228nm,7.5s						
HHC				LR	LR		
	comp=N,144nm,14.2s,MS4.5						
HHC				LR	LR		
	comp=E,195nm,13.9s,MS4.5						
HHC				LR	LR		
	comp=Z,156nm,13.9s,MS4.3						
KLR	**Kul'dur**	**59.37**	**348**	*e*P	**P**	**14 08 16.2**	**+4.3**
LZH	**Lanzhou**	**60.37**	**320**	⇑P	**P**	**14 08 20.0**	**+0.9**
LZH				AP	pP	14 08 25.3	+0.1
LZH				XP	sP	14 08 27.1	-0.5
LZH				PP	PP	14 10 35.3	+2.9
LZH				*e*S	**S**	**14 16 33.1**	**0.0**
LZH				*e*SS	SS	14 20 31.6	+0.4
LZH				AMB	AMB		
	comp=Z,29nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,257nm,6.8s						
LZH				LR	LR		
	comp=N,1μm,14.4s						
LZH				LR	LR		
	comp=Z,2μm,18.6s,MS5.2						
PPT	**Papeete**	**62.14**	**105**	*e*S	**S**	**14 16 49.7**	**-6.6**
	comp=Z,141nm,23.8s						
PPT	**Papeete**	**62.14**	**105**	*e*LR	LR	14 26 52.7	
PPT	**Papeete**	**62.14**	**105**	LR	LR	14 30 02.7	
	comp=Z,339nm,18.8s,MS4.5,baz=322,slow=31						
PEA0B	**Petropavlovsk-**	**62.40**	**7**	*e*P	**P**	**14 08 32.1**	**-0.3**
PETK	**Petropavlovsk-**	**62.40**	**7**	P	**P**	**14 08 32.6**	**+0.1**
	comp=Z,64nm,1.4s,mb5.6,baz=158,slow=6.4,SNR=9.7						
HIA	**Hailar**	**62.62**	**340**	*e*P	**P**	**14 08 32.8**	**-1.2**
HIA				pmax	pmax		
	comp=Z,29nm,1.4s						
HIA	**Hailar**	**62.62**	**340**	*e*P	**P**	**14 08 32.8**	**-1.2**
	comp=Z,29nm,1.4s,mb5.2						
GTA	**Gaotai**	**64.93**	**321**	P	**P**	**14 08 50.5**	**+1.0**
GTA				AP	pP	14 08 55.1	-0.6
GTA				XP	sP	14 08 57.5	-0.5
GTA				S	**S**	**14 17 35.1**	**+4.9**
GTA				XS	sS	14 17 42.9	+2.5
GTA				SS	SS	14 21 51.0	+8.6
GTA				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.7						
GTA				AMB	AMB		
	comp=Z,149nm,3.9s						
GTA				LR	LR		
	comp=N,141nm,15.6s,MS4.4						
GTA				LR	LR		
	comp=E,151nm,15.3s,MS4.4						
GTA				LR	LR		
	comp=Z,71nm,17.1s,MS3.9						
LSA	**Lhasa**	**65.95**	**308**	*e*P	**P**	**14 08 57.2**	**+0.9**
LSA				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.4						
LSA	**Lhasa**	**65.95**	**308**	*e*P	**P**	**14 08 57.2**	**+0.9**
	comp=Z,26nm,0.7s,mb5.4						
ULN	**Ulaanbaatar**	**66.60**	**332**	⇑*e*P	**P**	**14 09 01.0**	**+1.0**
ULN	**Ulaanbaatar**	**66.60**	**332**	*e*P	**P**	**14 09 00.9**	**+0.8**
SONM	**Songino Array**	**66.88**	**332**	P	**P**	**14 09 02.3**	**+0.4**
	comp=Z,10nm,1.0s,mb4.8,baz=152,slow=6.1,SNR=41						
SONM				pP	pP	14 09 08.8	+0.7
	comp=Z,13nm,0.7s,baz=152,slow=4.4,SNR=20						
CIT	**Chita**	**67.09**	**338**	*e*P	**P**	**14 09 03.2**	**+0.1**
TAPN	**Taplejung**	**67.71**	**304**	*e*P	**P**	**14 09 07.7**	**+0.1**
	comp=Z,105nm,1.1s,mb5.8						
ODAN	**Odare**	**67.78**	**304**	*e*P	**P**	**14 09 08.6**	**+0.6**
	comp=Z,55nm,0.9s,mb5.6						
BOK	**Bokaro**	**67.90**	**300**	*ex*	x	14 09 06.0	
BOK				AMb	AMB	14 09 10.8	
	comp=Z,9.0nm,1.6s,mb4.5						
MIR	**Mirnyy**	**68.10**	**200**	⇑*i*P	**P**	**14 09 10.0**	**+0.7**
MIR				*i*	pP	14 09 16.0	+0.4
MIR				*i*		14 09 31.0	
MIR				pmax	pmax		
	comp=Z,200nm,1.2s,mb6.0						
RAMN	**Ramite**	**68.47**	**303**	*e*P	**P**	**14 09 12.2**	**-0.1**
	comp=Z,24nm,0.6s,mb5.4						
GUN	**Gumba**	**69.42**	**304**	*e*P	**P**	**14 09 19.0**	**+0.7**
	comp=Z,94nm,0.8s,mb5.8						
PKI	**Pulchoki**	**69.68**	**304**	*e*P	**P**	**14 09 19.9**	**0.0**
	comp=Z,61nm,0.9s,mb5.5						
PKIN	**Phulchoki**	**69.69**	**304**	*e*P	**P**	**14 09 19.8**	**-0.1**
SBA	**Scott Base**	**69.72**	**176**	*e*P	**P**	**14 09 18.1**	**-1.2**
SBA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
SBA	**Scott Base**	**69.72**	**176**	*e*P	**P**	**14 09 18.1**	**-1.2**
	comp=Z,7.5nm,1.1s,mb4.5						
KKN	**Kakani**	**69.87**	**304**	*e*P	**P**	**14 09 21.5**	**+0.5**
	comp=Z,68nm,0.8s,mb5.6						
DMN	**Daman**	**69.94**	**304**	*e*P	**P**	**14 09 22.2**	**+0.7**
	comp=Z,125nm,0.9s,mb5.8						
GKN	**Gorkha**	**70.48**	**304**	*e*P	**P**	**14 09 25.2**	**+0.5**
	comp=Z,87nm,0.8s,mb5.7						
TLY	**Talaya**	**70.86**	**333**	*c i*P	**P**	**14 09 26.0**	**-0.6**
TLY				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.5						
KOLN	**Koldanda**	**71.25**	**303**	*e*P	**P**	**14 09 29.9**	**+0.5**
	comp=Z,90nm,0.8s,mb5.8						
DANN	**Dangsing**	**71.32**	**304**	*e*P	**P**	**14 09 29.9**	**0.0**
	comp=Z,87nm,0.8s,mb5.7						
BOD	**Bodaibo**	**71.67**	**342**	*e*P	**P**	**14 09 30.1**	**-1.2**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
YAK	**Yakutsk**	**71.95**	**352**	*e*P	**P**	**14 09 31.8**	**-1.1**
YAK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
MOY	**Mondy**	**72.06**	**332**	*e*P	**P**	**14 09 34.8**	**+1.0**
MOY				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.0						
HYB	**Hyderabad**	**72.46**	**291**	*i* P	**P**	**14 09 36.5**	**-0.4**
UNV	**Unalaska Valle**	**73.76**	**27**	*e*P	**P**	**14 09 43.1**	**-0.7**
	comp=Z,24nm,1.2s,mb5.0						
PTH	**Pithoragarh**	**74.65**	**304**	*e*P	**P**	**14 09 50.9**	**+1.3**
WMQ	**Urumqi**	**74.94**	**320**	P	**P**	**14 09 51.6**	**+0.7**
WMQ				AP	pP	14 09 57.5	+0.3
WMQ				XP	sP	14 10 00.0	+0.5
WMQ				PCP	PcP	14 10 06.0	+1.3
WMQ				PP	PP	14 12 42.0	+3.1
WMQ				*e*S	S	14 19 27.0	-0.6
WMQ				AMB	AMB		
	comp=Z,26nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,332nm,5.7s						
WMQ				LR	LR		
	comp=N,181nm,19.2s,MS4.6						
WMQ				LR	LR		
	comp=E,254nm,18.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,194nm,18.0s,MS4.4						
JOSI	**Joshimath**	**75.53**	**305**	*e*P	**P**	**14 09 54.5**	**-0.1**
KAD	**Karad**	**76.47**	**290**	*e*P	**P**	**14 09 59.5**	**-0.7**
KAD				AMb	AMB	14 10 01.4	
	comp=Z,23nm,1.0s,mb5.0						
SONA	**Sohna**	**76.84**	**302**	*e*P	**P**	**14 10 01.4**	**-0.7**
SONA				AMb	AMB	14 10 08.8	
	comp=Z,36nm,0.9s,mb5.3						
AYAN	**Aya Nagar**	**76.87**	**302**	*e*P	**P**	**14 10 01.8**	**-0.5**
AYAN				*i* x	x	14 10 07.3	
AYAN				AMb	AMB	14 10 07.9	
	comp=Z,28nm,0.8s,mb5.3						
KLP	**Kalpa**	**76.91**	**305**	*e*P	**P**	**14 10 03.3**	**+0.8**
KLP				AMb	AMB	14 10 10.7	
	comp=Z,50nm,1.1s,mb5.4						
POO	**Poona**	**77.07**	**291**	*e*P	**P**	**14 10 02.5**	**-1.1**
KHET	**Khetri**	**77.86**	**301**	*e*P	**P**	**14 10 06.9**	**-1.0**
KHET				AMb	AMB	14 10 08.6	
	comp=Z,25nm,0.8s,mb5.2						
KHET				*i* x	x	14 10 13.5	
BILL	**Bilibino**	**77.93**	**7**	⇓*i*P	**P**	**14 10 07.7**	**+0.3**
BILL				*i*	pP	14 10 14.8	+1.1
BILL				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1						
BILL	**Bilibino**	**77.93**	**7**	*e*P	**P**	**14 10 07.5**	**+0.1**
	comp=Z,19nm,0.8s,mb5.1						
AJM	**Ajmer**	**78.41**	**299**	*e*P	**P**	**14 10 10.3**	**-0.6**
AJM				AMb	AMB	14 10 12.2	
	comp=Z,21nm,0.8s,mb5.1						
MAW	**Mawson**	**79.62**	**203**	*e*P	**P**	**14 10 17.3**	**+0.5**
	comp=Z,10nm,0.8s,mb4.8						
MAW	**Mawson**	**79.62**	**203**	P	**P**	**14 10 16.8**	**+0.1**
	comp=Z,11nm,0.7s,mb4.9,baz=94,slow=5.6,SNR=32						
MAW	**Mawson**	**79.62**	**203**	*e*P	**P**	**14 10 17.3**	**+0.5**
MAW				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MKAR	**Makanchi Array**	**79.68**	**321**	P	**P**	**14 10 17.6**	**+0.2**
	comp=Z,6.1nm,0.8s,mb4.6,baz=104,slow=6.8,SNR=37						
MKAR				pP	pP	14 10 23.4	-0.4
	comp=Z,6.3nm,0.7s,baz=96,slow=6.8,SNR=15						
TIXI	**Tiksi**	**81.24**	**354**	*i* P	**P**	**14 10 25.9**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
ZAA0	**Zalesovo Array**	**81.41**	**328**	*e*P	**P**	**14 10 25.5**	**-1.0**
ZALV	**Zalesovo Beam**	**81.41**	**328**	P	**P**	**14 10 25.6**	**-0.9**
	comp=Z,5.1nm,0.7s,mb4.6,baz=110,slow=4.7,SNR=25						
ZALV				pP	pP	14 10 31.1	-1.8
	comp=Z,10nm,0.7s,baz=107,slow=5.1,SNR=18						
KDAK	**Kodiak Island**	**82.42**	**28**	P	**P**	**14 10 32.4**	**+0.7**
	comp=Z,21nm,0.8s,mb5.1,baz=100,slow=4.5,SNR=5.8						
KDAK	**Kodiak Island**	**82.42**	**28**	P	**P**	**14 10 32.4**	**+0.6**
NVS	**Novosibirsk**	**82.64**	**328**	⇑*i*P	**P**	**14 10 31.5**	**-1.5**
NVS				pmax	pmax		
	comp=N,9.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,17nm,1.6s						
NVS				pmax	pmax		
	comp=Z,25nm,1.6s,mb5.0						
SVW2	**Sparrevohn**	**82.84**	**24**	*e*P	**P**	**14 10 34.1**	**+0.2**
KURK	**Kurchatov**	**83.48**	**324**	*e*P	**P**	**14 10 37.3**	**-0.1**
KURK				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.9						
KURK	**Kurchatov**	**83.48**	**324**	*e*P	**P**	**14 10 37.3**	**-0.1**
	comp=Z,16nm,1.2s,mb4.9						
TTA	**Tatalina**	**83.68**	**23**	*e*P	**P**	**14 10 38.1**	**-0.1**
AML	**Almayashu**	**83.73**	**314**	*e*P	**P**	**14 10 39.5**	**+0.5**
	comp=Z,12nm,1.0s,mb5

comp=Z,9.0nm,1.5s,mb5.0
CMB Columbia Colle 97.46 53 *e*P **P 14 11 44.4 +0.5**
comp=Z,9.3nm,1.5s,mb5.0
MOD Modoc 97.87 49 *e*P **P 14 11 45.9 +0.3**
ETW Entiat 98.28 43 *e*P **P 14 11 47.4 0.0**
RSW Rattlesnake Hi 98.71 44 *e*P **P 14 11 48.6 -0.7**
HAWA Hanford 98.75 44 *e*P **P 14 11 49.5 0.0**
NVAR Mina Array Bea 99.13 52 P **P 14 11 53.0 +1.6**
comp=Z,2.8nm,1.0s,mb4.8,baz=246,slow=6.8,SNR=14
WVOR Wild Horse Val 99.14 48 *e*P **P 14 11 50.9 -0.4**
WVOR pmax pmax
comp=Z,2.0nm,0.6s,mb4.8
WVOR Wild Horse Val 99.14 48 *e*P **P 14 11 50.9 -0.5**
comp=Z,2.3nm,0.6s,mb4.9
BMO Blue Mountains 100.23 46 *e*P Pdif 14 11 56.5 +0.6
NEW Newport 100.47 43 *e*P Pdif 14 11 57.5 +0.5
YKA Yellowknife Ar 101.70 28 P Pdif 14 12 02.2 -0.3
comp=Z,2.7nm,0.9s,baz=261,slow=3.9,SNR=5.1
YKA pP 14 12 09.2
comp=Z,1.3nm,0.7s,baz=274,slow=4.5,SNR=3.4
YKA Yellowknife Ar 101.70 28 P Pdif 14 12 02.2 -0.3
YKA pP 14 12 09.2
BW06 Boulder Array 105.84 48 *e*Pdif Pdif 14 12 30.0 +9.2
PDAR Pinedale Array 105.84 48 Pdiff Pdif 14 12 21.3 +0.4
comp=Z,0.4nm,0.3s,baz=286,slow=6.0,SNR=5.6
PDAR pPdiff 14 12 29.1
comp=Z,2.0nm,1.0s,baz=299,slow=1.5,SNR=7.4
LPM Los Pinos Moun 108.47 57 *e*Pdif Pdif 14 12 36.8 +4.3
TXAR Lajitas Array 111.14 62 PKiKP PKiKP 14 16 44.4 +0.3
comp=Z,0.7nm,0.9s,baz=225,slow=0.4,SNR=6.3
TXAR pPKiKP 14 16 50.7
comp=Z,0.9nm,0.9s,baz=222,slow=1.7,SNR=7.8
TXAR PKKPbc PKKPbc 14 27 41.4 +0.4
comp=Z,0.2nm,0.7s,baz=105,slow=5.7,SNR=3.5
PLCA Paso Flores 119.74 148 PKP PKPdf 14 17 00.7 +0.3
comp=Z,2.8nm,0.8s,baz=207,slow=2.9,SNR=6.0
GERES GERESS Array B 124.22 324 PKP PKPdf 14 17 08.1 -0.5
comp=Z,0.3nm,0.2s,baz=339,slow=2.5,SNR=3.2
GERES pPKP pPKPdf 14 17 14.0 -1.1
comp=Z,0.3nm,0.2s,baz=112,slow=1.4,SNR=2.5
LVC Limon Verde 132.95 132 PKP PKPdf 14 17 27.5 +1.5
comp=Z,3.0nm,0.7s,baz=221,slow=11,SNR=3.4
LPAZ La Paz 137.20 126 PKP PKPdf 14 17 35.3 +1.2
comp=Z,3.5nm,0.9s,baz=320,slow=7.9,SNR=6.1
CPUP Villa Florida 137.79 147 PKP PKPdf 14 17 35.4 +0.4
comp=Z,0.4nm,0.3s,baz=313,slow=2.2,SNR=3.7
TORD Torodi Ar. Bea 145.67 280 PKPbc PKPbc 14 17 49.3 -0.3
comp=Z,26nm,1.0s,baz=86,slow=3.9,SNR=92
TORD pPKPbc pPKPbc 14 17 55.9 -0.3
comp=Z,38nm,1.0s,baz=83,slow=3.7,SNR=28
AOPR Arecibo Observ 145.94 70 *e*PKPdf PKPdf 14 17 48.1 -1.5
SJG San Juan 146.55 71 *e*PKP2 PKPdf 14 17 50.8 +0.1
CPD Cerro la Pandu 146.79 71 *e*PKP2 PKPdf 14 17 51.9 +0.8
HUMP Col San Antoni 146.83 70 *e*PKPdf PKPdf 14 17 52.1 +1.0
MTP Monte Pirata 147.11 70 *e*PKPdf PKPdf 14 17 52.6 +1.0
BDFB Brasilia 151.49 149 PKP PKPdf 14 17 59.5 +0.8
comp=Z,32nm,0.8s,baz=240,slow=3.1,SNR=6.4
BDFB PKPbc PKPbc 14 18 04.7 -0.2
comp=Z,29nm,0.8s,baz=212,slow=2.2,SNR=28
BDFB PKPab PKPab 14 18 13.8 +0.8
comp=Z,12nm,0.8s,baz=178,slow=7.4,SNR=5.5
KIC Kosan Boka 151.86 267 *e*P PKPdf 14 17 59.4 0.0
comp=Z,65nm,1.2s
FDF Fort de France 151.87 75 *e*PKIKP PKPbc 14 18 04.7 -1.1
DBIC Dimbokro 152.01 268 PKPbc PKPbc 14 18 05.9 -0.3
comp=Z,3.2nm,0.7s,baz=64,slow=7.0,SNR=4.9
DBIC PKPab PKPab 14 18 16.0 +0.5
comp=Z,4.2nm,0.6s,baz=113,slow=6.6,SNR=7.5
DBIC Dimbokro 152.01 268 PKPbc PKPbc 14 18 05.9 -0.3
DBIC PKPab PKPab 14 18 16.0 +0.5
LIC Lamto 152.13 267 *e*P PKPdf 14 17 58.7 -1.1
comp=Z,51nm,1.3s
TIC Toumodi 152.17 267 *e*P PKPdf 14 18 00.7 +0.9
comp=Z,148nm,1.6s

BJI ***15*** *14:26:55.0,4.69S×101.24E,h39km,mB5.4,mb5.3,Ms5.0, Msz4.8*
ISCJB ***15*** *14:26:56.7±0.2,4.29S±003×101.14E±002,h27km, mb5.4/134,MS4.7/27,Error ellipse: s-maj=4.7km s-min=3.0km az=28.8*
DJA ***15*** *14:26:56,4.41S×100.93E,h16km,Mw5.6/8*
MOS ***15*** *14:26:58.1±1.1,4.12S×101.30E,h33km,mb5.5/39, MS4.7/6,Error ellipse: s-maj=9.9km s-min=5.5km az=111.3*
IDC ***15*** *14:26:58.1±0.4,4.23S×101.24E,h23km±2km,mb4.9/26, mb1 5.0/27,mb1mx5.0/28,mbtmp5.0/27,ML4.5/1,MS4.4/5, Ms1 4.5/5,ms1mx4.0/34,Error ellipse: s-maj=12.7km s-min=9.1km az=59.0*
NEIC ***15*** *14:26:59.6±0.1,4.23S×101.22E,h35km,mb5.2/35,Error ellipse: s-maj=5.9km s-min=4.0km az=216.0*
NEIC Felt [III] at Bengkulu and Lais. Felt at Padang.
GCMT ***15*** *14:26:59.6±0.4,4.79S×101.02E,h29km±1km,MW5.0/53, Moment Tensor Solution. s41,c55; s53,c72; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.20±.18; $M_{\theta\theta}$-1.78±.11; $M_{\phi\phi}$-1.42±.16; $M_{r\theta}$3.35±.23; $M_{\theta\phi}$1.54±.09; $M_{\phi r}$-0.49±.24; Best double couple: M_o4.61700×10^{16} NP1:ϕ_s327.00000°,δ26.00000°,λ125.00000°. NP2: ϕ_s109.00000°,δ69.00000°,λ74.00000°. Principal axes: T 4.8950, Plg63.0000°, Azm355.0000°; N -0.5560, Plg15.0000°, Azm115.0000°; P -4.3390, Plg22.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 15 14:26:58.8±0.2,431S±003×10113E±002,h28km, h28km±.5km:pP-P,n397,σ0.97/332,mb5.4/134,MS4.7/27, 38C-25D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang** 0.0nm,0.0s	**1.60**	**66**	P	**Pn**	**14 27 25.0**	**-0.2**
JMBI	**JAMBI** 0.0nm,0.0s	**3.66**	**43**	P	**Pn**	**14 27 56.3**	**+2.8**
KLI	**Kotabumi** 0.0nm,0.0s	**3.76**	**99**	P	**Pn**	**14 27 57.2**	**+2.3**
PPI	**Padang Panjang** 0.0nm,0.0s	**3.90**	**349**	P	**Pn**	**14 27 56.6**	**-0.2**
DSRI	**Dabo** 882nm,0.9s	**5.14**	**42**	P	**Pn**	**14 28 15.1**	**+1.3**
SBJI	**Serang** 654nm,0.8s	**5.30**	**110**	P	**Pn**	**14 28 17.8**	**+1.7**
PPBI	**Pangkal Pinang** 312nm,0.9s	**5.44**	**67**	P	**Pn**	**14 28 18.7**	**+0.7**
DBJI	**Dramaga** 864nm,0.9s	**6.03**	**112**	P	**Pn**	**14 28 25.8**	**-0.3**
SKJI	**Sukabumi** 655nm,1.3s	**6.03**	**117**	P	**Pn**	**14 28 27.6**	**+1.5**
MYKOM	**Kota Tinggi**	**6.64**	**24**	⇑P	**Pn**	**14 28 33.8**	**-0.7**
KGM	**Kluang**	**6.66**	**19**	⇑P	**Pn**	**14 28 35.9**	**+1.1**
TPI	**Tanjungpandan** 114nm,0.9s	**6.70**	**77**	P	**Pn**	**14 28 42.7**	**+7.4**
LEM	**Lembang** 749nm,1.0s	**6.93**	**111**	P	**Pn**	**14 28 39.6**	**+1.1**
JCJI	**Jatiwangi** 417nm,0.8s	**7.43**	**107**	P	**Pn**	**14 28 46.7**	**+1.3**
FRIM	**Kepong**	**7.51**	**4**	⇑P	**Pn**	**14 28 46.9**	**+0.4**
IPM	**Ipoh**	**8.73**	**359**	⇑P	**Pn**	**14 29 05.1**	**+1.9**
COCO	**West Island** 4μm,0.6s,SNR=6.4	**8.90**	**208**	Pn	**Pn**	**14 29 01.4**	**-4.2**
COCO	**West Island** 340nm,0.9s	**8.90**	**208**	*e*Pn	**Pn**	**14 29 01.0**	**-4.6**
BJII	**Banjamegara** 170nm,1.2s	**9.05**	**110**	P	**Pn**	**14 29 07.8**	**+0.2**
KTGM	**Kuala Trenggan**	**9.78**	**12**	⇑P	**Pn**	**14 29 17.8**	**+0.1**
KSM	**Kuching**	**10.83**	**58**	⇓P	**Pn**	**14 29 33.9**	**+2.0**
KSM	**Kuching**	**10.83**	**58**	*e*Pn	**Pn**	**14 29 32.2**	**+0.3**
SJI	**Sawahan** 216nm,0.8s	**11.12**	**108**	P	**Pn**	**14 29 35.4**	**-0.5**
STKI	**Sintang** 80nm,0.9s	**11.22**	**67**	P	**Pn**	**14 29 41.8**	**+4.4**
BSI	**Banda Aceh** 356nm,1.0s	**11.35**	**329**	P	**Pn**	**14 29 38.2**	**-0.9**
TRT	**Tretes**	**11.93**	**107**	⇑*e*P	**Pn**	**14 29 41.0**	**-6.1**
SBUM	**Sibu**	**12.96**	**59**	⇑P	**Pn**	**14 30 05.4**	**+4.2**
KMMI	**Kalianget** 226nm,1.4s	**13.06**	**103**	P	**Pn**	**14 30 12.5**	**+10**
BBKI	**Banjar Baru** 187nm,1.1s	**13.71**	**87**	P	**Pn**	**14 30 15.7**	**+4.3**
BTM	**Bintulu**	**14.09**	**58**	⇓P	**Pn**	**14 30 20.2**	**+3.6**
KHKI	**Kahang-Kahang** 112nm,1.1s	**14.95**	**106**	P	**Pn**	**14 30 35.7**	**+7.5**
MTNI	**Mataram**	**15.55**	**107**	P	**Pn**	**14 30 38.6**	**+2.4**
	148nm,0.9s						
SMKI	**Samarinda** 345nm,1.1s	**16.52**	**77**	P	**Pn**	**14 30 50.9**	**+2.3**
KKM	**Kota Kinabalu**	**18.24**	**56**	⇓P	**Pn**	**14 31 11.4**	**+1.4**
KKM	**Kota Kinabalu**	**18.24**	**56**	*e*Pn	**Pn**	**14 31 10.7**	**+0.6**
KAPI	**Kappang** 548nm,1.0s,SNR=6.0	**18.58**	**93**	P	**Pn**	**14 31 12.9**	**-1.3**
KAPI	**Kappang** 1.4nm,0.3s,baz=293,slow=10,SNR=15	**18.58**	**93**	P	**Pn**	**14 31 12.0**	**-2.2**
KAPI	**Kappang**	**18.58**	**93**	*e*Pn	**Pn**	**14 31 11.9**	**-2.3**
TSM	**Tawau**	**18.79**	**63**	⇓P	**Pn**	**14 31 17.4**	**+0.7**
SDKM	**Sandakan**	**18.85**	**59**	⇑P	**Pn**	**14 31 17.7**	**+0.2**
PCI	**Palu** 702nm,1.5s	**18.99**	**80**	P	**Pn**	**14 31 18.7**	**-0.5**
KDM	**Kudat**	**19.24**	**55**	⇓P	**Pn**	**14 31 23.3**	**+1.1**
MYLDM	**Lahad Datu**	**19.75**	**62**	⇓P	**Pn**	**14 31 28.5**	**+0.3**
UBT	**Ubonrachathani**	**19.81**	**11**	⇓P	**Pn**	**14 31 27.0**	**-1.9**
NST	**Nakhon Sawan**	**19.88**	**357**	P	**Pn**	**14 31 29.0**	**-0.7**
KKTK	**Khon Kaen** 1μm,0.5s	**20.58**	**5**	⇓P	**P**	**14 31 35.0**	**-0.6**
BBSI	**Bau Bau** 400nm,1.0s,mb5.7	**21.40**	**94**	P	**P**	**14 31 43.9**	**-0.6**
KDI	**Kendari** 264nm,1.2s,mb5.4	**21.44**	**90**	P	**P**	**14 31 44.5**	**-0.5**
BDT	**Bhumibol Dam** 42nm,0.9s,mb4.9	**21.52**	**354**	P	**P**	**14 31 44.0**	**-1.7**
CMAR	**Chiang Mai Arr** 98nm,0.9s,mb5.2,baz=185,slow=9.4,SNR=80	**22.73**	**355**	P	**P**	**14 31 56.2**	**-2.3**
CMAR	4.1nm,0.8s,baz=211,slow=3.2,SNR=6.7			PcP	PcP	14 35 51.5	+1.2
CMAR	3.6nm,0.8s,baz=210,slow=3.1,SNR=5.8			pPcP		14 35 59.2	
CMAR	comp=Z,2μm,18.4s,MS4.5,baz=180,slow=42			LR	LR	14 42 44.9	
CMAR	**Chiang Mai Arr**	**22.73**	**355**	P	**P**	**14 31 56.3**	**-2.3**
CMAR	288nm,0.9s,mb5.7					14 35 51.6	
CMAR						14 35 59.3	
CHG	**Chiang Mai** 103nm,0.9s,mb5.3	**23.08**	**355**	⇓P	**P**	**14 32 00.3**	**-2.0**
BATI	**Baumata** 86nm,0.9s,mb5.2	**23.10**	**106**	P	**P**	**14 32 01.4**	**-1.2**
BATI	**Baumata** 60nm,0.6s,mb5.2,baz=326,slow=1.1,SNR=13	**23.10**	**106**	P	**P**	**14 32 00.6**	**-2.1**
BATI	82nm,0.8s,baz=120,slow=18,SNR=5.1			S	**S**	**14 36 07.5**	**-4.7**
MNI	**Manado** 288nm,0.9s,mb5.7	**24.38**	**77**	P	**P**	**14 32 15.6**	**+0.8**
MBWA	**Marble Bar**	**24.64**	**134**	*e*P	**P**	**14 32 18.1**	**+1.0**
QIZ	**Qiongzhong**	**24.73**	**20**	P	**P**	**14 32 17.8**	**-0.1**
QIZ				AP		14 32 26.8	
QIZ				XP	sP	14 32 32.1	+2.5
QIZ				S	**S**	**14 36 38.8**	**+0.4**
QIZ				XS	sS	14 36 51.6	-0.4
QIZ				AMB	AMB		
	comp=Z,72nm,1.1s,mb5.1						
QIZ				AMB	AMB		
	comp=Z,275nm,8.2s						
QIZ				LR	LR		
	comp=E,902nm,16.5s						
QIZ				LR	LR		
	comp=Z,954nm,22.6s						
KALP	**Kalibo**	**26.41**	**53**	*e*P	**P**	**14 32 28.3**	**-4.9**
LBMI	**Labuha** comp=Z,208nm,1.0s,mb5.6	**26.60**	**83**	P	**P**	**14 32 35.4**	**+0.4**
RCP	**Roxas**	**26.67**	**54**	‖*e*P	**P**	**14 32 35.6**	**+0.1**
FITZ	**Fitzroy Crossi** comp=Z,51nm,0.9s,mb5.2	**27.62**	**122**	*e*P	**P**	**14 32 43.2**	**-0.9**
FITZ	**Fitzroy Crossi** comp=Z,29nm,0.8s,mb5.0,baz=289,slow=6.7,SNR=59	**27.62**	**122**	P	**P**	**14 32 43.3**	**-0.8**
FITZ	comp=Z,249nm,19.4s,MS3.8,baz=136,slow=38			LR	LR	14 44 32.1	
VIS	**Vishakhapatnam**	**28.07**	**322**	*e*P	**P**	**14 32 48.3**	**+0.3**
VIS	comp=Z,41nm,1.7s,mb4.8			AMb	AMB	14 32 54.9	
KMI	**Kunming**	**29.30**	**3**	P	**P**	**14 33 00.1**	**+1.2**
KMI				AP	pP	14 33 07.4	+0.2
KMI				XP	sP	14 33 10.9	+0.2
KMI				PP	PP	14 33 59.9	-5.5
KMI				S	**S**	**14 37 58.5**	**+8.1**
KMI				XS	sS	14 38 10.5	+6.3
KMI				AMB	AMB		
	comp=Z,82nm,1.0s,mb5.4						
KMI				AMB	AMB		
	comp=Z,264nm,3.6s						
KMI				LR	LR		
	comp=N,1μm,17.7s,MS4.8						
KMI				LR	LR		
	comp=E,2μm,16.4s,MS4.8						
KMI				LR	LR		
	comp=Z,1μm,15.8s,MS4.6						
IMP	**Imphal**	**29.75**	**347**	*e*P	**P**	**14 33 03.0**	**+0.1**
SWI	**Sorong** comp=Z,77nm,0.8s,mb5.5	**30.29**	**84**	P	**P**	**14 33 06.1**	**-1.8**
HYB	**Hyderabad**	**31.03**	**315**	*i* P	**P**	**14 33 15.0**	**+0.7**
GYA	**Guiyang**	**31.05**	**10**	⇑*i*P	**P**	**14 33 14.3**	**-0.1**
GYA				AP	pP	14 33 23.8	+1.0
GYA				XP	sP	14 33 28.0	+1.8
GYA				PP	PP	14 34 16.8	-8.1
GYA				S	**S**	**14 38 18.4**	**+0.5**
GYA				XS	sS	14 38 31.8	+0.1
GYA				SS	SS	14 40 01.5	-30
GYA				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.3						
GYA				AMB	AMB		
	comp=Z,220nm,5.4s						
GYA				LR	LR		
	comp=N,2μm,13.2s,MS5.0						
GYA				LR	LR		
	comp=E,910nm,13.8s,MS5.0						
GYA				LR	LR		
	comp=Z,2μm,13.8s,MS5.0						
BOK	**Bokaro**	**31.64**	**333**	*e*P	**P**	**14 33 20.5**	**+0.9**
BOK	comp=Z,80nm,0.2s,mb6.3			AMb	AMB	14 33 22.8	
NWAO	**Narrogin (SRO)** comp=Z,23nm,1.1s,mb4.9,baz=304,slow=11,SNR=2.6	**32.20**	**154**	P	**P**	**14 33 25.3**	**+0.8**
NWAO	comp=Z,977nm,20.2s,MS4.5,baz=330,slow=35			LR	LR	14 45 58.4	
LATR	**Latur**	**33.11**	**314**	*e*P	**P**	**14 33 33.2**	**+0.6**
LATR	comp=Z,36nm,1.0s,mb5.3			AMb	AMB	14 33 43.2	
NGP	**Nagpur**	**33.30**	**320**	*e*P	**P**	**14 33 33.7**	**-0.5**
NGP	comp=Z,34nm,1.3s,mb5.1			AMb	AMB	14 33 42.6	
ODAN	**Odare** comp=Z,308nm,0.9s,mb6.2	**33.72**	**338**	*e*P	**P**	**14 33 38.8**	**+1.1**
TAPN	**Taplejung** comp=Z,402nm,0.9s,mb6.4	**34.04**	**338**	*e*P	**P**	**14 33 42.2**	**+1.7**
RAMN	**Ramite** comp=Z,198nm,0.9s,mb6.0	**34.10**	**336**	*e*P	**P**	**14 33 42.7**	**+1.6**
KAD	**Karad**	**34.19**	**310**	*e*P	**P**	**14 33 43.1**	**+1.1**
KAD	comp=Z,17nm,1.4s,mb4.8			AMb	AMB	14 33 52.0	
AKL	**Akola**	**34.32**	**317**	*e*P	**P**	**14 33 43.1**	**0.0**
AKL	comp=Z,21nm,0.6s,mb5.2			AMb	AMB	14 33 52.7	
JIRN	**Jiri** comp=Z,352nm,0.8s,mb6.3	**34.90**	**336**	*e*P	**P**	**14 33 49.6**	**+1.6**
BAKI	**Biak** comp=Z,529nm,1.1s,mb6.4	**35.07**	**86**	P	**P**	**14 33 48.7**	**-1.1**
CD2	**Chengdu**	**35.11**	**4**	⇑*i*P	**P**	**14 33 49.1**	**-0.7**
CD2				AP	pP	14 33 58.8	+0.6
CD2				XP	sP	14 34 03.8	+2.1
CD2				PP	PP	14 35 09.3	-0.5
CD2				PCP	PcP	14 36 18.9	-2.2
CD2				S	**S**	**14 39 20.8**	**-0.1**
CD2				XS	sS	14 39 36.8	+2.1
CD2				PCS	PcS	14 40 04.8	-3.2
CD2				SS	SS	14 41 39.6	-15
CD2				SCS	ScS	14 44 03.9	-5.0
CD2				AMB	AMB		
	comp=Z,170nm,0.9s,mb6.0						
CD2				AMB	AMB		
	comp=Z,480nm,9.6s						
CD2				LR	LR		
	comp=N,2μm,14.4s,MS5.2						
CD2				LR	LR		
	comp=E,2μm,16.8s,MS5.2						
CD2				LR	LR		
	comp=Z,2μm,14.4s,MS5.0						
PKI	**Pulchoki** comp=Z,88nm,0.9s,mb5.7	**35.14**	**335**	*e*P	**P**	**14 33 51.0**	**+0.9**
LSA	**Lhasa**	**35.14**	**345**	P	**P**	**14 33 51.8**	**+1.7**
LSA	**Lhasa**	**35.14**	**345**	*e*P	**P**	**14 33 51.3**	**+1.2**
LSA				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.4						
LSA	**Lhasa** comp=Z,46nm,1.0s,mb5.4	**35.14**	**345**	*e*P	**P**	**14 33 51.2**	**+1.2**
PKIN	**Phulchoki**	**35.15**	**335**	*e*P	**P**	**14 33 50.8**	**+0.6**
POO	**Poona**	**35.18**	**311**	*e*P	**P**	**14 33 50.5**	**0.0**
GUN	**Gumba** comp=Z,427nm,0.9s,mb6.4	**35.25**	**336**	*e*P	**P**	**14 33 52.5**	**+1.5**
DMN	**Daman** comp=Z,84nm,0.9s,mb5.7	**35.30**	**335**	*e*P	**P**	**14 33 52.4**	**+0.9**
KKN	**Kakani** comp=Z,266nm,1.1s,mb6.1	**35.38**	**335**	*e*P	**P**	**14 33 53.2**	**+1.0**
GKN	**Gorkha** comp=Z,264nm,1.0s,mb6.1	**35.84**	**335**	*e*P	**P**	**14 33 57.1**	**+1.0**
WRA	**Warramunga Arr** comp=Z,26nm,0.8s,mb5.2,baz=292,slow=10,SNR=103	**35.88**	**118**	P	**P**	**14 33 55.6**	**-1.0**
WRA	comp=Z,3.6nm,0.8s,baz=292,slow=3.2,SNR=3.9			PcP	PcP	14 36 22.9	-0.7
WRA	comp=Z,4.2nm,0.9s,baz=295,slow=16,SNR=3.6			S	**S**	**14 39 33.4**	**+0.3**
WRA	comp=Z,365nm,18.4s,MS4.2,baz=285,slow=38			LR	LR	14 49 22.8	
WRA	**Warramunga Arr**	**35.88**	**118**	P	**P**	**14 33 55.6**	**-1.0**
WRA						14 36 22.9	
WRA				S	**S**	**14 39 33.4**	**+0.3**
WRAB	**Tennant Creek** comp=Z,287nm,0.9s,mb6.2,SNR=23	**35.89**	**118**	P	**P**	**14 33 56.0**	**-0.7**
WRAB	**Tennant Creek**	**35.89**	**118**	*e*P	**P**	**14 33 56.0**	**-0.7**
WRAB	comp=Z,41nm,0.9s,mb5.4			pmax	pmax		
WRAB	**Tennant Creek** comp=Z,41nm,0.9s,mb5.4	**35.89**	**118**	*e*P	**P**	**14 33 56.0**	**-0.7**
WB2	**Warramunga Arr**	**35.90**	**118**	*e*P	**P**	**14 33 55.6**	**-1.1**
KOLN	**Koldanda** comp=Z,132nm,0.8s,mb5.9	**36.10**	**333**	*e*P	**P**	**14 33 59.5**	**+1.2**
DANN	**Dangsing** comp=Z,191nm,1.1s,mb5.8	**36.52**	**334**	*e*P	**P**	**14 34 02.9**	**+1.0**
WHN	**Wuhan**	**36.89**	**19**	⇑P	**P**	**14 34 04.8**	**-0.3**
WHN				*e*S	S	**14 39 56.1**	**+7.9**
WHN				AMB	AMB		
	comp=Z,94nm,0.8s,mb5.7						
WHN				LR	LR		
	comp=Z,2μm,13.1s,MS5.1						
ASAR	**Alice Springs** comp=Z,12nm,0.7s,mb4.8,baz=294,slow=8.0,SNR=130	**37.01**	**124**	P	**P**	**14 34 05.8**	**-0.4**
ASAR	comp=Z,5.1nm,0.8s,baz=290,slow=2.4,SNR=6.5			PcP	PcP	14 36 27.0	+0.1
ASAR	comp=Z,4.6nm,0.9s,baz=302,slow=2.2,SNR=4.5			pPcP		14 36 34.5	
ASAR	**Alice Springs**	**37.01**	**124**	P	**P**	**14 34 05.8**	**-0.4**
ASAR						14 36 27.0	
XAN	**Xi'an**	**38.85**	**10**	P	**P**	**14 34 20.5**	**-1.0**
XAN				AP	pP	14 34 29.8	-0.2
XAN				XP	sP	14 34 34.4	+1.0
XAN				AMB	AMB		
	comp=Z,76nm,1.2s,mb5.3						
PTH	**Pithoragarh**	**39.19**	**331**	*e*P	**P**	**14 34 24.9**	**+0.4**
SONA	**Sohna**	**39.80**	**326**	*e*P	**P**	**14 34 29.3**	**-0.3**
SONA				AMb	AMB	14 34 38.0	
	comp=Z,61nm,0.9s,mb5.3						
ASOR	**Ausora**	**39.81**	**327**	*e*P	**P**	**14 34 29.9**	**+0.2**
NJ2	**Nanjing**	**39.90**	**24**	*e*P	**P**	**14 34 30.6**	**+0.3**
NJ2				AP	pP	14 34 39.4	+0.6
NJ2				XP	sP	14 34 44.3	+2.0
NJ2				PP	PP	14 36 08.6	+6.2
NJ2				S	**S**	**14 40 36.0**	**+2.4**
NJ2				XS	sS	14 40 49.0	+1.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,530nm,4.5s						
NJ2				LR	LR		
	comp=N,640nm,22.6s,MS4.7						
NJ2				LR	LR		
	comp=E,1μm,24.3s,MS4.7						
NJ2				LR	LR		
	comp=Z,1μm,24.3s,MS4.6						
AJM	**Ajmer**	**39.92**	**321**	*e*P	**P**	**14 34 31.3**	**+0.6**
AJM				AMb	AMB	14 34 32.2	
	comp=Z,29nm,1.5s,mb4.8						
AYAN	**Aya Nagar**	**39.96**	**326**	*e*P	**P**	**14 34 30.5**	**-0.4**
AYAN				AMb	AMB	14 34 39.6	
	comp=Z,53nm,1.0s,mb5.2						
NDI	**New Delhi**	**40.06**	**326**	*e*P	**P**	**14 34 31.0**	**-0.7**
SSE	**Sheshan**	**40.08**	**27**	P	**P**	**14 34 32.4**	**+0.6**
SSE				SP	sP	14 34 48.8	+5.0
SSE				S	**S**	**14 40 39.6**	**+3.3**
SSE				XS	sS	14 40 58.8	+8.5
SSE				AMB	AMB		
	comp=Z,53nm,1.2s,mb5.2						
SSE				AMB	AMB		
	comp=Z,658nm,4.5s						
SSE				LR	LR		
	comp=N,320nm,23.3s,MS4.1						
SSE				LR	LR		
	comp=E,141nm,23.3s,MS4.1						
SSE				LR	LR		
	comp=Z,302nm,22.1s,MS4.1						
LZH	**Lanzhou**	**40.27**	**3**	⇑P	**P**	**14 34 33.9**	**+0.6**
LZH				AP	pP	14 34 44.3	+2.5
LZH				XP	sP	14 34 48.1	+2.9
LZH				PP	PP	14 36 11.0	+4.6
LZH				PCP	PcP	14 36 37.0	+0.2
LZH				S	**S**	**14 40 40.0**	**+1.1**
LZH				XS	sS	14 40 57.3	+4.4
LZH				SS	SS	14 43 37.3	-0.8
LZH				SCS	ScS	14 44 36.5	-1.4
LZH				AMB	AMB		
	comp=Z,190nm,1.3s,mb5.7						
LZH				AMB	AMB		
	comp=Z,384nm,5.0s						
LZH				LR	LR		
	comp=N,1μm,14.5s						
LZH				LR	LR		
	comp=Z,2μm,16.7s,MS5.0						
JOSI	**Joshimath**	**40.34**	**331**	*e*P	**P**	**14 34 34.6**	**+0.6**
JOSI				AMb	AMB	14 34 36.2	
	comp=Z,326nm,1.1s,mb6.0						
KHET	**Khetri**	**40.40**	**324**	*ex*	x	14 34 30.0	
KHET				AMb	AMB	14 34 33.8	
	comp=Z,31nm,0.4s,mb5.4						
KKR	**Kurukshetra**	**41.27**	**327**	*e*P	**P**	**14 34 42.0**	**+0.3**
KKR				AMb	AMB	14 34 43.2	
	comp=Z,154nm,0.5s,mb5.9						
KLP	**Kalpa**	**41.78**	**330**	*e*P	**P**	**14 34 46.8**	**+1.0**
KLP				AMb	AMB	14 34 51.6	
	comp=Z,50nm,0.9s,mb5.1						
SMLA	**Simla**	**42.01**	**329**	*i* P	**P**	**14 34 47.5**	**-0.3**
SMLA				AMb	AMB	14 34 58.2	
	comp=Z,168nm,1.7s,mb5.4						
COEN	**Coen** comp=Z,9.0nm,0.9s,mb4.5	**42.54**	**106**	*e*P	**P**	**14 34 50.2**	**-2.1**
JASL	**Jaisalmer**	**42.63**	**318**	*e*P	**P**	**14 34 52.9**	**0.0**
TIA	**Tai'an**	**43.00**	**19**	*e*P	**P**	**14 34 54.3**	**-1.4**
GTA	**Gaotai**	**43.52**	**359**	⇑P	**P**	**14 35 00.4**	**+0.6**
GTA				AP	pP	14 35 08.3	-0.1
GTA				XP	sP	14 35 11.6	-0.2
GTA				S	**S**	**14 41 27.5**	**+0.5**
GTA				XS	sS	14 41 45.3	+4.2
GTA				AMB	AMB		
	comp=Z,41nm,0.8s,mb5.2						
G

comp=N,2µm,14.6s,MS5.2
HHC LR LR
comp=E,697nm,14.2s,MS5.2
HHC LR LR
comp=Z,2µm,14.1s,MS5.1
PMG Port Moresby 45.95 99 *e*P **P 14 35 16.6 -3.1**
PMG Port Moresby 45.95 99 *e*P **P 14 35 19.5 -0.2**
BJT Baijiatuau 46.23 16 *e*P **P 14 35 20.6 -0.8**
BJT pmax pmax
comp=Z,48nm,0.8s
BJT Baijiatuau 46.23 16 *e*P **P 14 35 20.6 -0.9**
comp=Z,48nm,0.8s,mb5.5
BJI Beijing 46.25 16 P **P 14 35 21.5 -0.1**
BJI AP pP 14 35 32.9 +2.7
BJI XP sP 14 35 37.4 +3.8
BJI S **S 14 42 10.8 +4.2**
BJI AMB AMB
comp=Z,69nm,0.8s,mb5.6
BJI LR LR
comp=N,573nm,18.0s,MS4.9
BJI LR LR
comp=E,1µm,18.7s,MS4.9
BJI LR LR
comp=Z,459nm,25.3s
CTA Charters Tower 46.63 114 *e*P **P 14 35 24.4 -0.5**
comp=Z,33nm,1.1s,mb5.2
CTA Charters Tower 46.63 114 P **P 14 35 24.6 -0.3**
comp=Z,42nm,1.1s,mb5.3,baz=291,slow=8.8,SNR=28
CTA Charters Tower 46.63 114 *e*P **P 14 35 24.4 -0.5**
CTA pmax pmax
comp=Z,33nm,1.1s
CTAO Charters Tower 46.63 114 *e*P **P 14 35 24.6 -0.3**
STKA Stephens Creek 46.79 131 *e*P **P 14 35 25.7 -0.3**
comp=Z,17nm,0.6s,mb5.1
STKA Stephens Creek 46.79 131 P **P 14 35 26.4 +0.3**
comp=Z,20nm,0.8s,mb5.1,baz=301,slow=7.6,SNR=37
DL2 Dalian 46.99 22 P **P 14 35 27.0 -0.4**
DL2 *e*S **S 14 42 18.8 +1.6**
DL2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
DL2 AMB AMB
comp=Z,100nm,6.3s
DL2 LR LR
comp=N,380nm,16.7s,MS4.6
DL2 LR LR
comp=E,380nm,16.4s,MS4.6
DL2 LR LR
comp=Z,410nm,14.3s,MS4.5
KSRS Korea Array 48.46 29 P **P 14 35 38.2 -0.6**
comp=Z,60nm,0.9s,mb5.6,baz=217,slow=8.1,SNR=82
KSRS PcP PcP 14 37 05.0 +0.2
comp=Z,5.0nm,0.9s,baz=234,slow=3.3,SNR=3.6
KBL Kabul 49.05 325 *e*P **P 14 35 43.0 -0.5**
KBL pmax pmax
comp=Z,11nm,0.7s,mb5.0
KBL Kabul 49.05 325 *e*P **P 14 35 43.0 -0.4**
comp=Z,10nm,0.7s,mb5.0
KSH Kashi 49.39 334 P **P 14 35 46.0 +0.1**
KSH *e*AP pP 14 35 55.3 +0.7
KSH *e*XP sP 14 35 59.0 +1.0
KSH *e*PCP PcP 14 37 09.0 +0.9
KSH *e*PP PP 14 37 40.3 0.0
KSH *e*SCP ScP 14 41 00.1 -1.6
KSH *e*PCS PcS 14 41 04.1 -0.5
KSH *e*S **S 14 42 47.8 -3.3**
KSH *e*SCS ScS 14 45 32.0 -4.0
KSH *e*SS SS 14 46 15.1 -8.2
KSH AMB AMB
comp=Z,820nm,2.8s,mb6.3
KSH LR LR
comp=N,755nm,5.8s
KSH LR LR
comp=E,963nm,7.2s
KSH LR LR
comp=Z,482nm,5.1s
WMQ Urumqi 49.42 347⇑ *i*P **P 14 35 47.0 +0.9**
WMQ AP pP 14 35 57.0 +2.3
WMQ XP sP 14 36 01.0 +2.9
WMQ PCP PcP 14 37 09.0 +0.9
WMQ S **S 14 42 51.0 -0.3**
WMQ SCS ScS 14 45 33.0 -3.0
WMQ AMB AMB
comp=Z,147nm,1.0s,mb6.0
WMQ AMB AMB
comp=Z,298nm,5.0s
WMQ LR LR
comp=N,1µm,18.9s,MS5.1
WMQ LR LR
comp=E,1µm,22.7s,MS5.1
WMQ LR LR
comp=Z,954nm,19.4s,MS4.8
SNY Shenyang 50.27 22 ⇓P **P 14 35 51.6 -1.0**
SNY AMB AMB
comp=Z,40nm,1.3s,mb5.3
SNY LR LR
comp=N,703nm,17.1s,MS4.9
SNY LR LR
comp=E,713nm,15.0s,MS4.9
SNY LR LR
comp=Z,570nm,19.2s,MS4.6
SONM Songino Array 52.13 4 P **P 14 36 07.2 +0.8**
comp=Z,83nm,0.8s,mb5.7,baz=183,slow=8.8,SNR=364
SONM PcP PcP 14 37 18.1 +0.1
comp=Z,15nm,0.8s,baz=184,slow=4.5,SNR=4.3
ULN Ulaanbaatar 52.22 5 *e*P **P 14 36 07.8 +0.7**
ULN pmax pmax
comp=Z,67nm,1.0s,mb5.5
ULN Ulaanbaatar 52.22 5 *e*P **P 14 36 07.8 +0.8**
comp=Z,67nm,1.0s,mb5.5
EIDS Eidsvold 52.25 119 *e*P **P 14 36 14.2 +6.4**
comp=Z,59nm,0.9s,mb5.5
TKM2 Tokmak 2 52.38 336 *e*P **P 14 36 08.4 0.0**
TKM2 pmax pmax
comp=Z,47nm,0.7s,mb5.5
TKM2 Tokmak 2 52.38 336 P **P 14 36 08.7 +0.2**
SNR=33
TKM2 Tokmak 2 52.38 336 *e*P **P 14 36 08.4 0.0**
comp=Z,47nm,0.7s,mb5.5
KBK Karagaybulak 52.43 336 P **P 14 36 09.8 +1.1**
SNR=13
AML Almayashu 52.52 334 P **P 14 36 10.2 +0.7**
SNR=28
AML Almayashu 52.52 334 *e*P **P 14 36 10.0 +0.6**
comp=Z,28nm,0.8s,mb5.2
AAK Ala-Archa 52.59 335 P **P 14 36 10.8 +0.8**
SNR=8.1
CN2 Changchun 52.67 22 ⇑P **P 14 36 09.0 -1.5**
CN2 *e*XP sP 14 36 24.8 +2.2
CN2 *e*S **S 14 43 35.6 -0.7**
CN2 AMB AMB
comp=Z,120nm,0.9s,mb5.8
CN2 AMB AMB
comp=Z,900nm,6.0s
CN2 LR LR
comp=N,3µm,16.0s,MS5.6
CN2 LR LR
comp=E,3µm,16.0s,MS5.6
CN2 LR LR
comp=Z,6µm,18.0s,MS5.7
FRU Bishkek 52.71 336⇑ *e*P **P 14 36 11.0 +0.2**
FRU pmax pmax
comp=Z,90nm,2.2s,mb5.3
FRU MLR MLR
comp=Z,1µm,21.0s,MS4.8
CHMS Chumysh 52.79 336 P **P 14 36 11.6 +0.2**
SNR=6.9
EKS2 Erkin-Say 52.92 335 P **P 14 36 13.2 +0.8**
SNR=97
EKS2 Erkin-Say 52.92 335 *e*P **P 14 36 13.0 +0.7**
comp=Z,78nm,0.9s,mb5.6
USP Ospenovka 53.12 336 P **P 14 36 14.1 +0.2**
SNR=8.1
MAJO Matsushiro 53.39 37 *e*P **P 14 36 14.2 -1.8**
MAJO pmax pmax
comp=Z,45nm,1.0s,mb5.3
MAJO Matsushiro 53.39 37 *e*P **P 14 36 14.2 -1.7**
comp=Z,45nm,1.0s,mb5.3
MAT Matsushiro 53.39 37 P **P 14 36 14.7 -1.3**
MAT S **S 14 43 52.0 +5.6**
MJAR Matsushiro Arr 53.39 37 P **P 14 36 14.3 -1.7**
comp=Z,33nm,0.9s,mb5.3,baz=216,slow=7.4,SNR=101
MJAR pP pP 14 36 21.9 -2.7
comp=Z,20nm,0.9s,baz=210,slow=6.7,SNR=13
MJAR PcP PcP 14 37 23.4 +0.3
comp=Z,6.0nm,0.8s,baz=212,slow=4.4,SNR=2.9
MK31 Makanchi Array 53.54 344 *i* P **P 14 36 16.3 -0.6**
MKAR Makanchi Array 53.54 344 P **P 14 36 16.8 -0.1**
comp=Z,61nm,0.8s,mb5.6,baz=148,slow=8.2,SNR=444
MKAR pP pP 14 36 24.4 -1.2
comp=Z,52nm,0.7s,baz=143,slow=8.2,SNR=20
OPO Ambohidratompo 54.52 250 P **P 14 36 26.4 +1.8**
comp=Z,1.3nm,0.6s,baz=39,slow=6.5,SNR=3.6
OPO pP pP 14 36 33.8 +0.5
comp=Z,12nm,1.0s,baz=65,slow=8.4,SNR=10
ABPO Ambohimpanom 54.54 250 *e*P **P 14 36 25.9 +1.1**
comp=Z,15nm,1.0s,mb5.0
VLA Vladivostok 54.79 27 *e*P **P 14 36 25.4 -0.7**
VLA pmax pmax
comp=Z,108nm,1.6s,mb5.6
VLA Vladivostok 54.79 27 *i* P **P 14 36 25.6 -0.5**
MDJ Mudanjiang 54.98 25 P **P 14 36 26.9 -0.5**
MDJ AP pP 14 36 35.8 -0.4
MDJ XP sP 14 36 39.6 0.0
MDJ SCP ScP 14 41 16.6 -9.2
MDJ S **S 14 44 12.5 +4.8**
MDJ SCS ScS 14 46 13.5 -1.2
MDJ AMB AMB
comp=Z,40nm,0.9s,mb5.5
MDJ AMB AMB
comp=Z,108nm,3.5s
MDJ LR LR
comp=N,164nm,23.8s,MS4.4
MDJ LR LR
comp=E,334nm,18.9s,MS4.4
MDJ LR LR
comp=Z,343nm,21.4s,MS4.4
MOY Mondy 55.76 360 *e*P **P 14 36 33.6 +0.7**
HIA Hailar 55.76 15⇑ *i*P **P 14 36 32.1 -0.8**
TLY Talaya 55.82 2 P **P 14 36 34.6 +1.3**
comp=Z,264nm,0.9s,mb6.3,SNR=12
TLY Talaya 55.82 2 *e*P **P 14 36 34.1 +0.8**
TLY *e* pP 14 36 41.6 -0.4
TLY *e*S **S 14 44 31.1 +13**
TLY pmax pmax
comp=Z,52nm,1.0s,mb5.5
TLY MLR MLR
comp=Z,821nm,16.0s,MS4.9
TLY Talaya 55.82 2⇑ *i*P **P 14 36 33.8 +0.5**
IRK Irkutsk 56.40 2 *e*P **P 14 36 37.5 0.0**
IRK *e* 14 37 30.9
IRK *e*S **S 14 44 29.2 +2.9**
IRK pmax pmax
comp=Z,58nm,2.1s,mb5.2
CIT Chita 57.11 9 *e*P **P 14 36 42.9 +0.4**
CIT *e* 14 37 01.8
CIT pmax pmax
comp=Z,99nm,2.5s,mb5.4
ABKT Ailbek 57.93 320 P **P 14 36 48.0 -0.6**
comp=Z,165nm,0.9s,mb6.1,SNR=7.9
KURK Kurchatov 58.13 343 P **P 14 36 49.0 -0.6**
comp=Z,38nm,0.9s,mb5.4,baz=162,slow=6.7,SNR=19
KURK pP pP 14 36 56.7 -1.7
comp=Z,28nm,0.8s,baz=160,slow=6.4,SNR=8.0
KURK Kurchatov 58.13 343 *i* P **P 14 36 48.7 -1.0**
KURK pmax pmax
comp=Z,93nm,1.0s,mb5.8
KURK Kurchatov 58.13 343 *e*P **P 14 36 49.1 -0.6**
HNR Honiara 58.57 98 P **P 14 36 51.9 -1.6**
comp=Z,114nm,0.9s,mb5.9,baz=157,slow=5.1,SNR=6.7
KLR Kul'dur 59.59 23⇓ *e*P **P 14 36 55.0 -4.9**
KLR pmax pmax
comp=E,40nm,1.0s
KLR pmax pmax
comp=Z,84nm,1.0s,mb5.7
ZAA0 Zalesovo Array 59.63 349⇑ *i*P **P 14 36 59.4 -0.6**
ZALV Zalesovo Beam 59.63 349 P **P 14 36 59.6 -0.5**
comp=Z,65nm,0.9s,mb5.7,baz=180,slow=4.4,SNR=227
ZALV pP pP 14 37 07.5 -1.4
comp=Z,67nm,0.8s,baz=180,slow=4.9,SNR=18
ERM Erimo 59.85 35 *i* P **P 14 37 01.3 -0.6**
ERM Erimo 59.85 35 *i* P **P 14 37 01.3 -0.6**
KRAR Krasnoyarsk 60.50 355*d* *i*P **P 14 37 06.0 0.0**
KRAR pmax pmax
comp=Z,84nm,1.0s,mb5.7
NVS Novosibirsk 60.79 348⇑ *i*P **P 14 37 06.4 -1.6**
NVS *e*S **S 14 45 21.7 -1.6**
NVS pmax pmax
comp=N,32nm,1.4s
NVS pmax pmax
comp=E,19nm,1.4s
NVS pmax pmax
comp=Z,37nm,1.4s,mb5.3
NVS smax
comp=N,16nm,1.8s
NVS smax
comp=E,12nm,1.8s
RDF Al-Radifah 61.11 306 *e*P **P 14 37 09.7 -1.1**
baz=306
RDF AMb AMB 14 37 21.1
comp=Z,68nm,1.2s,mb5.7,baz=306
NAY Al-Naaiem 61.49 307 *e*P **P 14 37 12.2 -1.0**
baz=307
NAY AMb AMB 14 37 13.6
comp=Z,22nm,0.9s,mb5.3,baz=307
MIB Mutribah 61.63 307 *e*P **P 14 37 13.0 -1.2**
baz=307
MIB AMb AMB 14 37 15.4
comp=Z,68nm,0.9s,mb5.8,baz=307
RST Umm Al-Ruwaisa 61.78 307 *e*P **P 14 37 14.0 -1.2**
baz=307
RST AMb AMB 14 37 32.0
comp=Z,52nm,0.8s,mb5.7,baz=307
BVA0 Borovoye Array 62.73 340 *i* P **P 14 37 19.6 -1.5**
BVA0 pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
BVAR Borovoye Array 62.73 340 P **P 14 37 20.2 -0.9**
comp=Z,27nm,0.7s,mb5.5,baz=144,slow=8.6,SNR=137
BVAR pP pP 14 37 28.0 -1.9
comp=Z,30nm,0.8s,baz=139,slow=9.0,SNR=19
BRVK Borovoye 62.79 340 P **P 14 37 20.7 -0.8**
comp=Z,216nm,0.7s,mb6.4,SNR=14
BRVK Borovoye 62.79 340 *e*P **P 14 37 20.7 -0.8**
BOD Bodaibo 62.80 8 *e*P **P 14 37 20.8 -0.6**
BOD pmax pmax
comp=Z,38nm,1.0s,mb5.5
YSS Yuzh-Sakhalins 62.86 31α *i*P **P 14 37 21.0 -1.1**
YSS *e* pP 14 37 29.0 -1.9
YSS pmax pmax
comp=N,60nm,1.0s
YSS pmax pmax
comp=E,50nm,1.0s
YSS pmax pmax
comp=Z,160nm,1.0s,mb6.1
YSS Yuzh-Sakhalins 62.86 31 *e*P **P 14 37 21.0 -1.1**
KMBO Kilima Mbogo 63.86 271 *e*P pP 14 37 38.3 0.0
comp=Z,3.7nm,0.9s,baz=49,slow=10,SNR=5.0
KMBO Kilima Mbogo 63.86 271 *e*P pP 14 37 38.1 -0.2
CLNS Chul'man 63.95 14 *e*P **P 14 37 28.4 -0.7**
CLNS *e**PP pP 14 37 35.4 -2.5
CLNS *e* 14 38 01.2
CLNS *e* 14 47 20.5
CLNS pmax pmax
comp=Z,37nm,1.0s,mb5.4
CLNS pmax pmax
comp=E,13nm,1.0s
CLNS pmax pmax
comp=N,19nm,1.0s
CLNS MLR MLR
comp=Z,577nm,15.0s,MS4.9
CLNS MLR MLR
comp=E,482nm,17.0s,MS4.9
CLNS MLR MLR
comp=N,407nm,17.0s,MS4.9
AB31 Akbulak array 64.19 331 *i* P **P 14 37 29.8 -1.0**
AB31 pmax pmax
comp=Z,29nm,0.7s,mb5.4
AB31 Akbulak array 64.19 331⇑ *e*P **P 14 37 29.9 -0.9**
AKTK Aktyubinsk 65.91 331 P **P 14 37 41.1 -0.9**
AKTO Aktyubinsk 65.91 331 P **P 14 37 41.1 -0.9**
comp=Z,9.4nm,0.9s,mb4.8,baz=134,slow=6.9,SNR=19
GNI Garni 67.96 316 P **P 14 37 54.9 -0.4**
comp=Z,4.3nm,0.4s,mb4.8,baz=173,slow=9.2,SNR=3.2
GNI Garni 67.96 316*d* *i*P **P 14 37 54.1 -1.2**
GNI pmax pmax
comp=Z,8.0nm,0.8s
DGRG David-gareji 68.12 318 P **P 14 37 57.3 +1.1**
MAW Mawson 68.34 195 *e*P **P 14 37 57.7 +0.5**
comp=Z,8.9nm,0.9s,mb4.8
MAW Mawson 68.34 195 P **P 14 37 57.8 +0.7**
comp=Z,2.6nm,0.8s,mb4.3,baz=16,slow=7.4,SNR=7.2
MAW pP pP 14 38 05.5 -0.6
comp=Z,9.9nm,0.8s,baz=45,slow=7.9,SNR=16
MAW Mawson 68.34 195 *e*P **P 14 37 57.7 +0.5**
MAW pmax pmax
comp=Z,9.0nm,0.9s
SVE Sverdlovsk 69.23 338⇓ *e*P **P 14 38 02.4 -0.4**
SVE pmax pmax
comp=Z,83nm,0.9s,mb5.7
YAK Yakutsk 69.69 14 *e*P **P 14 38 04.0 -1.5**
YAK *e**PP pP 14 38 11.6 -2.9
YAK *e* 14 38 27.5
YAK *e* 14 40 33.7
YAK *e*S S 14 47 11.1 -1.1
YAK *e* 14 47 57.6
YAK pmax pmax
comp=Z,98nm,0.9s,mb5.7
YAK pmax pmax
comp=E,23nm,1.2s
YAK pmax pmax
comp=N,33nm,1.1s
YAK pmax pmax
comp=N,127nm,3.7s
YAK pmax pmax
comp=Z,83nm,3.7s
YAK pmax pmax
comp=E,49nm,2.9s
YAK smax
comp=N,110µm,3.3s
YAK smax
comp=E,52µm,2.7s
YAK Yakutsk 69.69 14 *e*P **P 14 38 04.1 -1.5**
ARU Arti 69.76 336 P **P 14 38 05.4 -0.7**
comp=E,235nm,1.0s,mb6.1,SNR=12
ARU Arti 69.76 336*c* *i*P **P 14 38 05.5 -0.6**
ARU *e* 14 38 26.9
ARU *e* 14 40 34.9
ARU *e*S S 14 47 15.0 +1.8
ARU *e*SS SS 14 51 41.1 -1.1
ARU pmax pmax
comp=Z,47nm,1.0s,mb5.4
ARU Arti 69.76 336 *e*P **P 14 38 05.6 -0.5**
comp=Z,44nm,1.0s,mb5.3
ONI Oni 69.91 318 P **P 14 38 08.0 +0.6**
KIV Kislovodsk 71.02 319⇑ *e*P **P 14 38 13.9 -0.2**
KIV *i* pP 14 38 22.6 -0.4
KIV *e* 14 38 33.2
KIV *e* 14 40 54.4
KIV *e*S S 14 47 34.6 +6.2
KIV pmax pmax
comp=Z,19nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.1
KIV Kislovodsk 71.02 319 *e*P **P 14 38 14.0 -0.1**
comp=Z,19nm,0.9s,mb5.0
MALT Malatya 71.72 313⇑ *i*P **P 14 38 16.4 -2.0**
MALT Malatya 71.72 313 *e*P **P 14 38 16.6 -1.9**
SKR Severo-Kuril's 72.16 33 *e*P **P 14 38 17.9 -2.9**
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.0
LSZ Lusaka 72.42 255 *e*P **P 14 38 23.5 +0.4**
PETK Petropavlovsk- 74.24 32 P **P 14 38 31.9 -1.1**
comp=Z,15nm,0.8s,mb5.0,baz=200,slow=3.6,SNR=12
CSS Prodhromos 74.52 308 *e*P **P 14 38 35.2 +0.1**
comp=Z,36nm,1.1s,mb5.2
PET Petropavlovsk 74.70 32 *e*P **P 14 38 34.7 -1.0**
PET *e*S S 14 48 09.6 -0.4
PET pmax pmax
comp=Z,77nm,1.0s,mb5.6
PET pmax pmax
comp=Z,200nm,12.8s
PET MLR MLR
comp=Z,400nm,18.0s,MS4.8
PET Petropavlovsk 74.70 32 *e*P **P 14 38 34.3 -1.4**
comp=Z,57nm,0.9s,mb5.5
BOSA Boshof 75.55 242 P **P 14 38 41.1 0.0**
comp=Z,3.1nm,1.0s,mb4.2,baz=90,slow=4.0,SNR=2.9
BOSA pP pP 14 38 48.7 -1.5
comp=Z,9.0nm,0.8s,baz=83,slow=5.8,SNR=7.7
SYO Syowa Base 76.06 199⇑ *e*X 14 38 49.8
VSR Storozhevoye 76.30 325 *e*P **P 14 38 44.1 -0.8**
VSR pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.0s
TIXI Tiksi 77.95 9*c* *i*P **P 14 38 52.2 -1.6**
TIXI pmax pmax
comp=Z,57nm,1.5s,mb5.3
TIXI MLR MLR
comp=Z,615nm,18.0s,MS5.0
TIXI Tiksi 77.95 9 *e*P **P 14 38 52.3 -1.5**
comp=Z,74nm,1.4s,mb5.4
OBN Obninsk 79.34 328⇑ *e*P **P 14 39 01.4 -0.3**
OBN *i* pP 14 39 10.0 -0.8
OBN *e*S S 14 49 05.3 +4.9
OBN pmax pmax
comp=Z,40nm,0.9s,mb5.3
OBN MLR MLR
comp=Z,200nm,21.0s,MS4.4
OBN Obninsk 79.34 328 *e*P **P 14 39 01.4 -0.4**
comp=Z,37nm,0.9s,mb5.3
SBA Scott Base 80.78 169 *e*P pP 14 39 18.7 +0.4
SBA pmax pmax
comp=Z,54nm,2.0s,mb5.1
SBA Scott Base 80.78 169 *e*P pP 14 39 18.7 +0.3
comp=Z,54nm,2.0s
TIRR Tirgusor 80.79 316⇑ *i*P **P 14 39 09.4 -0.4**
TIRR Tirgusor 80.79 316⇑ P **P 14 39 09.4 -0.4**
IDI Anoyia 81.31 307 P **P 14 39 13.4 +0.6**
comp=Z,74nm,0.8s,mb4.7,baz=99,slow=7.5,SNR=5.5
AKASG Malin Array Be 81.99 322 P **P 14 39 15.1 -1.0**
comp=Z,6.5nm,0.8s,mb4.6,baz=81,slow=4.5,SNR=15
AKASG pP pP 14 39 22.6 -2.6
comp=Z,5.1nm,0.7s,baz=81,slow=4.2,SNR=5.2
AKASG PP PP 14 42 31.6 +7.6
comp=Z,0.5nm,0.4s,baz=104,slow=6.4,SNR=5.8
KIEV Kiev 82.00 322 *e*P **P 14 39 14.6 -1.5**
KIEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIEV Kiev 82.00 322 *e*P **P 14 39 14.6 -1.5**
comp=Z,4.9nm,0.8s,mb4.5
VRI Vrincioaia 82.30 317⇓ *i*P **P 14 39 18.5 +0.7**
VRI Vrincioaia 82.30 317 ⇓P **P 14 39 18.5 +0.7**
MLR Muntele Rosu 82.74 317⇓ *i*P **P 14 39 20.8 +0.7**
MLR Muntele Rosu 82.74 317 ⇓P **P 14 39 20.8 +0.7**
BURAR Bucovina Array 83.73 319⇓ *i*P **P 14 39 26.1 +1.0**
BURAR Bucovina Array 83.73 319 ⇓P **P 14 39 26.1 +0.9**
BUR08 Bucovina Ar. S 83.74 319 *e*P **P 14 39 25.9 +0.7**
VTS Vitosha 84.04 313⇑ *i*P **P 14 39 27.2 +0.3**
VTS Vitosha 84.04 313⇑ P **P 14 39 27.2 +0.3**
JOF Joensuu 84.77 334 *e*p **P 14 39 28.9 -1.2**
comp=Z,12nm,0.8s,mb5.1
JOF Joensuu 84.77 334 *e*P **P 14 39 28.9 -1.2**
JOF pmax pmax
comp=Z,12nm,0.8s,mb5.1
BILL Bilibino 84.92 20 *e*P **P 14 39 30.0 -0.8**
BILL pmax pmax
comp=Z,61nm,2.5s,mb5.3
BILL Bilibino 84.92 20 *e*P **P 14 39 30.1 -0.7**
DRGR 85.22 318⇓ *i*P **P 14 39 33.2 +0.5**
DRGR 85.22 318 ⇓P **P 14 39 33.2 +0.5**
BZS Buzias 85.74 316⇑ *i*P **P 14 39 35.3 -0.1**
BZS Buzias 85.74 316 ⇑P **P 14 39 35.3 0.0**
KWP Kalwaria 85.79 320 *e*P **P 14 39 36.1 +0.6**
KWP Kalwaria 85.79 320 *e*P **P 14 39 36.1 +0.6**
KOLS Kolonicke sedl 85.93 320 *e*P **P 14 39 37.0 +0.8**
KOLS *e*pP pP 14 39 47.4 +2.0
SUW Suwalki 86.41 325 *e*P **P 14 39 38.3 -0.1**
SUW Suwalki 86.41 325 *e*P **P 14 39 38.3 -0.1**
CRVS Cervenica-Dubn 86.45 319 *e*P **P 14 39 39.0 +0.2**
STHS Stebnicka Huta 86.68 320 *e*P **P 14 39 40.3 +0.4**
STHS *e* pP 14 39 49.1 0.0
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
STHS Stebnicka Huta 86.68 320 *e*P **P 14 39 40.3 +0.4**
comp=Z,7.0nm,0.9s,mb4.9
STHS *e* pP 14 39 49.1 0.0
KAF Kangasniemi 86.74 333 *e*p **P 14 39 38.7 -1.2**
comp=Z,22nm,0.9s,mb5.4,baz=100,slow=4.5
KAF Kangasniemi 86.74 333 *e*P **P 14 39 38.7 -1.2**
KAF pmax pmax
comp=Z,23nm,0.9s,mb5.4
KECS Kecovo 87.01 319 *e*P **P 14 39 41.9 +0.4**
KECS *e* pP 14 39 49.4 -1.3
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.5

KECS	**Kecovo**	**87.01**	**319**	*e*P	**P**	**14 39 41.9**	**+0.4**
	comp=Z,2.7nm,0.9s,mb4.5						
KECS				*e*	pP	14 39 49.4	-1.3
PKSM	**Moragy**	**87.89**	**316**	⇑*i*P	**P**	**14 39 45.7**	**-0.1**
PKSM	**Moragy**	**87.89**	**316**	⇑P	**P**	**14 39 45.7**	**-0.1**
VYHS	**Vyhne**	**88.09**	**319**	*e*P	**P**	**14 39 47.3**	**+0.6**
TIP	**Timpagrande**	**88.33**	**309**	*e*P	**P**	**14 39 48.5**	**+0.4**
KOLL	**Kolacno**	**88.39**	**319**	*e*P	**P**	**14 39 46.0**	**-2.1**
OKC	**Ostrava-Krasne**	**88.74**	**320**	*e*P	**P**	**14 39 50.3**	**+0.6**
OKC				*e*pP	pP	14 39 58.6	-0.3
ARCES	**ARCESS Array B**	**89.01**	**340**	P	**P**	**14 39 50.8**	**+0.2**
	comp=Z,15nm,0.8s,mb5.4,baz=97,slow=5.0,SNR=25						
ARCES				pP	pP	14 39 58.5	-1.4
	comp=Z,15nm,0.9s,baz=88,slow=3.9,SNR=6.0						
MODS	**Modra-Piesok**	**89.11**	**318**	*e*P	**P**	**14 39 51.8**	**+0.3**
MODS				*e*	pP	14 39 59.8	-0.9
MODS				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.0						
MODS	**Modra-Piesok**	**89.11**	**318**	*e*P	**P**	**14 39 51.8**	**+0.3**
	comp=Z,8.9nm,1.1s,mb5.0						
MODS				*e*	pP	14 39 59.8	-0.9
MORC	**Moravsky Berou**	**89.12**	**320**	⇓*i*P	**P**	**14 39 52.3**	**+0.8**
MORC	**Moravsky Berou**	**89.12**	**320**	⇓P	**P**	**14 39 52.3**	**+0.7**
ZST	**Bratislava**	**89.20**	**318**	*e*P	**P**	**14 39 52.3**	**+0.3**
ZST				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.2						
ZST	**Bratislava**	**89.20**	**318**	*e*P	**P**	**14 39 52.3**	**+0.3**
	comp=Z,9.9nm,0.8s,mb5.2						
DPC	**Dobruska-Polom**	**89.97**	**320**	*e*P	**P**	**14 39 56.0**	**+0.5**
DPC				*e*pP	pP	14 40 04.5	-0.2
BOJS	**Bojanci**	**90.15**	**315**	*i* P	**P**	**14 39 56.6**	**+0.2**
BOJS				*i* pP	pP	14 40 04.8	-0.9
UPC	**Upice**	**90.18**	**320**	*e*P	**P**	**14 39 56.7**	**+0.2**
UPC				*e*pP	pP	14 40 05.5	-0.2
SNAA	**Sanae**	**90.30**	**198**	*e*P	**P**	**14 39 59.0**	**+2.3**
SNAA				pmax	pmax		
	comp=Z,15nm,1.2s						
SNAA	**Sanae**	**90.30**	**198**	*e*P	**P**	**14 39 59.0**	**+2.3**
	comp=Z,15nm,1.2s,mb5.2						
PERS	**Pernice**	**90.36**	**317**	*i* P	**P**	**14 39 57.5**	**+0.1**
PERS				*i* pP	pP	14 40 06.3	-0.3
VISS	**Visnje**	**90.47**	**316**	*i* P	**P**	**14 39 58.2**	**+0.2**
VISS				*i* pP	pP	14 40 06.8	-0.3
JAVS	**Javornik**	**91.02**	**316**	*i* P	**P**	**14 40 00.1**	**-0.4**
PRU	**Pruhonice**	**91.07**	**320**	*e*P	**P**	**14 40 01.3**	**+0.7**
PRU				*e*pP	pP	14 40 08.8	-1.0
GEC2	**GERESS Array S**	**91.52**	**319**	*e*P	**P**	**14 40 02.7**	**0.0**
GEC2				*e**PP	pP	14 40 11.0	-0.9
GEC2				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.0						
GEC2	**GERESS Array S**	**91.52**	**319**	*e*P	**P**	**14 40 02.7**	**0.0**
	comp=Z,8.0nm,1.0s,mb5.0						
GEC2				*e*pP	pP	14 40 11.0	-0.9
GEC2	**GERESS Array S**	**91.52**	**319**	*e*P	**P**	**14 40 03.1**	**+0.3**
GERES	**GERESS Array B**	**91.52**	**319**	P	**P**	**14 40 03.2**	**+0.5**
	comp=Z,3.7nm,0.8s,mb4.8,baz=85,slow=4.6,SNR=22						
GERES				pP	pP	14 40 11.5	-0.4
	comp=Z,4.1nm,0.7s,baz=94,slow=4.4,SNR=8.1						
BRG	**Berggiesshubel**	**91.53**	**321**	*e*P	**P**	**14 40 03.2**	**+0.4**
BRG				*e*	pP	14 40 11.6	-0.4
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.7						
BRG	**Berggiesshubel**	**91.53**	**321**	*e*P	**P**	**14 40 02.8**	**0.0**
	comp=Z,7.0nm,1.0s,mb5.0						
BRG				*e*pP	pP	14 40 11.3	-0.7
BRG	**Berggiesshubel**	**91.53**	**321**	*e*P	**P**	**14 40 03.1**	**+0.4**
	comp=Z,6.8nm,1.0s,mb4.9						
BRG				*e*	pP	14 40 11.6	-0.4
	comp=Z,9.4nm,1.0s						
KHC	**Kasperske Hory**	**91.62**	**319**	*e*P	**P**	**14 40 03.4**	**+0.2**
KHC				*e*pP	pP	14 40 11.4	-1.0
RJOB	**Jochberg**	**92.03**	**318**	*e*P	**P**	**14 40 04.2**	**-1.0**
	comp=Z,67nm,2.5s,mb5.5						
WET	**Wettzell**	**92.08**	**319**	*e*P	**P**	**14 40 05.3**	**0.0**
WET				*e**PP	pP	14 40 13.5	-1.0
WET				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
WET	**Wettzell**	**92.08**	**319**	*e*P	**P**	**14 40 05.3**	**0.0**
	comp=Z,7.0nm,1.0s,mb5.0						
WET				*e*pP	pP	14 40 13.5	-1.0
CLL	**Collm**	**92.16**	**321**	*e*P	**P**	**14 40 05.0**	**-0.6**
	comp=Z,12nm,1.4s,mb5.0						
CLL				*e*(pP)	pP	14 40 13.0	-1.8
CLL				L		15 25 00.0	
	comp=Z,200nm,21.0s						
CLL	**Collm**	**92.16**	**321**	*e*P	**P**	**14 40 05.0**	**-0.6**
	comp=Z,12nm,1.4s,mb5.0						
CLL				*e*pP	pP	14 40 13.0	-1.8
NKC	**Novy Kostel**	**92.43**	**320**	*e*P	**P**	**14 40 06.7**	**-0.2**
GUNZ	**Gunzen**	**92.52**	**320**	*e*pP	pP	14 40 15.8	-0.7
WERD	**Werda**	**92.54**	**320**	*e*pP	pP	14 40 15.8	-0.8
ROTZ	**Rotzenmuhle**	**92.56**	**320**	*e*pP	pP	14 40 16.2	-0.5
MANZ	**Manzenberg**	**92.64**	**320**	*e*P	**P**	**14 40 08.2**	**+0.3**
	comp=Z,6.0nm,0.9s,mb5.0						
MANZ				*e*pP	pP	14 40 16.5	-0.6
GRA1	**Grafenberg Arr**	**93.19**	**319**	*e*P	**P**	**14 40 11.1**	**+0.6**
	comp=Z,7.0nm,0.9s,mb5.1						
GRF	**Grafenberg Arr**	**93.19**	**319**	*e*P	**P**	**14 40 11.1**	**+0.6**
GRF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
GRF	**Grafenberg Arr**	**93.19**	**319**	*e*P	**P**	**14 40 11.1**	**+0.6**
GRF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
GRF	**Grafenberg Arr**	**93.19**	**319**	*e*P	**P**	**14 40 11.1**	**+0.6**
	comp=Z,7.0nm,0.9s,mb5.1						
NIKO	**Nikolski**	**93.42**	**37**	*e*P	**P**	**14 40 10.7**	**-0.7**
KEST	**Kesra**	**93.93**	**305**	P	**P**	**14 40 15.3**	**+1.1**
	comp=Z,0.9nm,0.8s,mb4.3,baz=94,slow=14,SNR=2.9						
KEST				pP	pP	14 40 23.4	0.0
	comp=Z,1.5nm,0.9s,baz=7.0,slow=7.8,SNR=3.6						
RAR	**Rarotonga**	**96.91**	**112**	LR	LR	15 24 39.3	
	comp=Z,223nm,18.1s,MS4.7,baz=351,slow=36						
IMA2	**Indian Mountai**	**100.06**	**24**	*e*Pdif	Pdif	14 40 40.0	-1.5
MID	**Middleton Isla**	**105.04**	**29**	*e*P	Pdif	14 41 04.2	+0.6
PPT	**Papeete**	**106.98**	**110**	*e*LR	LR	15 17 00.0	
	comp=Z,254nm,24.5s						
YKA	**Yellowknife Ar**	**116.23**	**18**	PKP	PKPdf	14 45 37.9	-1.3
	comp=Z,1.4nm,0.8s,baz=316,slow=3.5,SNR=2.8						
JCW	**Jim Creek**	**122.89**	**33**	*e*PKPdf	PKPdf	14 45 52.7	+0.3
ETW	**Entiat**	**124.11**	**33**	*e*PKPdf	PKPdf	14 45 54.8	+0.1
OD2	**Odessa Site #2**	**125.11**	**32**	*e*PKPdf	PKPdf	14 45 56.8	+0.2
RSW	**Rattlesnake Hi**	**125.24**	**34**	*e*PKPdf	PKPdf	14 45 57.8	+0.8
HAWA	**Hanford**	**125.28**	**34**	*e*PKPdf	PKPdf	14 45 57.2	+0.2
HUMO	**Hull Mountain**	**125.40**	**39**	*e*PKPdf	PKPdf	14 45 58.3	+0.9
LNOR	**Lincton Mounta**	**126.28**	**33**	*e*PKIKP	PKPdf	14 45 58.9	0.0
MOD	**Modoc**	**127.43**	**38**	*e*PKPdf	PKPdf	14 46 01.6	+0.3
MSO	**Missoula**	**127.93**	**30**	*e*PKPdf	PKPdf	14 46 01.7	-0.4
WVOR	**Wild Horse Val**	**128.15**	**37**	*e*PKIKP	PKPdf	14 46 03.2	+0.6
CHMT	**Chamberlain Mo**	**128.21**	**30**	*e*PKPdf	PKPdf	14 46 02.3	-0.3
EGMT	**Eagleton**	**129.04**	**26**	*e*PKPdf	PKPdf	14 46 04.6	+0.4
CMB	**Columbia Colle**	**129.46**	**43**	*e*PKIKP	PKPdf	14 46 04.9	-0.4
DLMT	**Dillon**	**129.62**	**31**	*e*PKPdf	PKPdf	14 46 05.8	+0.5
MCMT	**McKenzie Canyo**	**129.86**	**31**	*e*PKPdf	PKPdf	14 46 06.5	+0.7
BOZ	**Bozeman (W)**	**129.91**	**30**	*e*PKIKP	PKPdf	14 46 06.1	+0.2
QLMT	**Earthquake Lak**	**130.58**	**30**	*e*PKPdf	PKPdf	14 46 07.6	+0.4
NVAR	**Mina Array Bea**	**130.63**	**41**	PKP	PKPdf	14 46 08.2	+0.8
	comp=Z,3.1nm,0.7s,baz=252,slow=2.2,SNR=19						
NVAR				SKPbc	SKPbc	14 49 29.8	+0.4
	comp=Z,1.1nm,0.9s,baz=309,slow=2.8,SNR=4.9						
NVAR	**Mina Array Bea**	**130.63**	**41**	PKP	PKPdf	14 46 08.2	+0.8
NVAR				SKPbc	SKPbc	14 49 29.8	+0.4
ELK	**Elko**	**131.20**	**37**	*e*PKIKP	PKPdf	14 46 08.8	+0.3
RRI2	**Red Ridge**	**131.68**	**32**	*e*PKPdf	PKPdf	14 46 09.1	-0.3
REDW	**Red Top Meadow**	**131.91**	**31**	*e*PKPdf	PKPdf	14 46 08.9	-0.8
ULM	**Lac du Bonnet**	**132.03**	**15**	PKP	PKPdf	14 46 09.6	-0.1
	comp=Z,8.4nm,0.8s,baz=344,slow=5.7,SNR=9.6						
HWUT	**Hardware Ranch**	**132.75**	**33**	*e*PKPdf	PKPdf	14 46 10.9	-0.4
DUG	**Dugway**	**132.98**	**36**	*e*PKIKP	PKPdf	14 46 13.1	+1.2
PDAR	**Pinedale Array**	**133.00**	**31**	PKhKP		14 46 06.5	
	comp=Z,0.9nm,0.7s,baz=349,slow=0.8,SNR=5.3						
PDAR				SKP		14 49 47.5	
	comp=Z,0.8nm,0.8s,baz=45,slow=0.6,SNR=4.0						
GSC	**Goldstone**	**133.34**	**44**	*e*PKIKP	PKPdf	14 46 13.8	+1.1
MSU	**Marysvale**	**134.44**	**37**	*e*PKIKP	PKPdf	14 46 16.0	+1.3
TMUT	**Trail Mountain**	**134.50**	**36**	*e*PKPdf	PKPdf	14 46 14.8	+0.1
RSSD	**Black Hills**	**134.58**	**25**	*e*PKPdf	PKPdf	14 46 09.4	-5.4
RSSD				*e*SKPdf	SKPdf	14 49 47.1	-1.0
LDFC	**Landfair**	**134.62**	**43**	*e*PKPdf	PKPdf	14 46 14.9	-0.2
RWWY	**Rawlins**	**134.98**	**30**	*e*PKPdf	PKPdf	14 46 15.4	-0.2
PHWY	**Pilot Hill**	**136.14**	**29**	*e*PKPdf	PKPdf	14 46 17.6	-0.1
PV10	**Paradox Valley**	**136.37**	**35**	*e*PKPdf	PKPdf	14 46 16.6	-1.7
PV01	**Paradox Valley**	**136.81**	**35**	*e*PKPdf	PKPdf	14 46 19.5	+0.4
WUAZ	**Wupatki**	**136.83**	**40**	*e*PKPdf	PKPdf	14 46 20.8	+1.6
TUC	**Tucson**	**139.16**	**43**	*e*PKHKP		14 46 16.6	
ANMO	**Albuquerque**	**140.23**	**36**	*e*PKHKP		14 46 18.0	
CPUP	**Villa Florida**	**143.08**	**213**	PKP	PKPdf	14 46 30.3	-0.5
	comp=Z,1.0nm,0.5s,baz=124,slow=3.6,SNR=2.7						
BDFB	**Brasilia**	**143.58**	**236**	PKP	PKPdf	14 46 31.1	-0.8
	comp=Z,1.5nm,0.6s,baz=72,slow=3.2,SNR=2.4						
ACSO	**Alum Creek Sta**	**144.05**	**5**	*e*PKPdf	PKPdf	14 46 28.8	-3.3
WMOK	**Wichita Mounta**	**144.54**	**29**	*e*PKIKP	PKPdf	14 46 31.1	-2.0
CCM	**Cathedral Cave**	**144.57**	**17**	*e*PKIKP	PKPdf	14 46 30.5	-2.6
OLIL	**Olney**	**144.72**	**13**	*e*PKPdf	PKPdf	14 46 31.9	-1.4
MCWV	**Mont Chateau**	**144.80**	**1**	*e*PKPdf	PKPdf	14 46 31.6	-1.8
FVM	**French Village**	**144.86**	**16**	*e*PKIKP	PKPdf	14 46 31.6	-2.0
SDMD	**Soldier's Deli**	**145.01**	**357**	*e*PKPdf	PKPdf	14 46 31.8	-2.0
SIUC	**Southern Illin**	**145.43**	**15**	*e*PKPdf	PKPdf	14 46 33.9	-0.7
USIN	**University of**	**145.56**	**12**	*e*PKPdf	PKPdf	14 46 34.4	-0.4
WCI	**Wyandotte Cave**	**145.57**	**10**	*e*PKIKP	PKPdf	14 46 34.1	-0.7
TXAR	**Lajitas Array**	**145.78**	**41**	PKPbc	PKPbc	14 46 36.0	+0.1
	comp=Z,54nm,0.9s,baz=288,slow=1.3,SNR=321						
UTMT	**University of**	**146.82**	**15**	*e*PKPdf	PKPdf	14 46 36.5	-0.5
URVA	**University of**	**146.88**	**358**	*e*PKPdf	PKPdf	14 46 38.5	+1.4
MIAR	**Mount Ida**	**146.97**	**23**	*e*PKPdf	PKPdf	14 46 37.7	+0.4
MIAR				*e*PKPbc	PKPbc	14 46 38.9	-0.3
HBAR	**Harrisburg**	**147.06**	**18**	*e*PKPbc	PKPbc	14 46 38.3	-1.2
HALT	**Halls**	**147.11**	**16**	*e*PKPdf	PKPdf	14 46 39.1	+1.6
ELN	**Prospectdale**	**147.19**	**3**	*e*PKPdf	PKPdf	14 46 38.4	+0.8
UALR	**University of**	**147.22**	**21**	*e*PKPdf	PKPdf	14 46 37.8	+0.1
UALR				*e*PKPbc	PKPbc	14 46 39.2	-0.7
BLA	**Blacksburg**	**147.23**	**2**	*e*PKP2	PKPdf	14 46 37.7	+0.1
WVT	**Waverly**	**147.28**	**13**	*e*PKIKP	PKPdf	14 46 36.9	-0.9
WVT				*e*		14 46 39.6	
JCT	**Junction City**	**147.33**	**35**	*e*PKP2	PKPdf	14 46 38.1	+0.1
TZTN	**Tazewell**	**147.64**	**7**	*e*PKPbc	PKPbc	14 46 40.1	-0.9
OXF	**Oxford**	**148.40**	**17**	*e*PKP2	PKPbc	14 46 41.8	-1.3
TKL	**Tuckaleechee C**	**148.48**	**8**	*e*PKP2	PKPbc	14 46 42.5	-0.8
SWET	**Sewanee**	**148.56**	**11**	*e*PKPbc	PKPbc	14 46 42.5	-1.0
CPCT	**Cooper Cave**	**148.58**	**9**	⇑*i*PKPbc	PKPbc	14 46 43.2	-0.3
NATX	**Nacogdoches**	**148.93**	**27**	*e*PKPbc	PKPbc	14 46 44.7	+0.1
HKT	**Hockley**	**149.88**	**30**	*e*PKP2	PKPbc	14 46 46.9	-0.1
JSC	**Jenkinsville**	**150.10**	**4**	*e*PKP2	PKPbc	14 46 46.5	-0.9
LRAL	**Lakeview Retre**	**150.43**	**14**	*e*PKPbc	PKPbc	14 46 46.7	-1.5
GOGA	**Godfrey**	**150.73**	**8**	*e*PKIKP	PKPbc	14 46 48.3	-0.6
LVC	**Limon Verde**	**151.52**	**200**	*e*PKPbc	PKPbc	14 46 51.9	+0.8
BRAL	**Brewton**	**152.34**	**15**	*e*PKPbc	PKPbc	14 46 52.5	-0.2
OTAV	**Otavalo**	**175.93**	**186**	*e*PKPdf	PKPdf	14 47 07.0	-0.5

*ISCJB **15** 14:30:02.7±0.9, 3847N±004×735E±02, h137km±31km, Error ellipse: s-maj=23.5km s-min=7.2km az=4.4*
*NNC **15** 14:30:08.1±4.4, 3908N×7322E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=35.8km s-min=21.6km az=175.0*

ISC 15 14:30:04.0±1.0, 3846N±004×736E±02, h119km±36km, n6, σ0s76/10, 3C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**4.72**	**19**	⇑Pn	**Pn**	**14 31 13.6**	**+0.5**
	3.4nm,0.5s						
TKM2				⇓Sn	**Sn**	**14 32 06.0**	**-0.9**
	2.8nm,0.5s						
CHCP	**Chirah Chowk**	**4.79**	**183**	P	**Pn**	**14 31 14.2**	**+0.1**
CEP	**Cherat**	**4.81**	**197**	P	**Pn**	**14 31 14.8**	**+0.4**
CEP				S	**Sn**	**14 32 08.0**	**-1.1**
KK31	**Karatay Array**	**5.19**	**335**	⇓Pn	**Pn**	**14 31 20.9**	**+1.5**
	2.3nm,0.3s,baz=146,slow=14,SNR=142						
KK31				⇑Sn	**Sn**	**14 32 17.6**	**-0.5**
	3.7nm,0.4s,baz=152,slow=22,SNR=8.0						
THW	**Thamme Wali**	**5.84**	**195**	P	**Pn**	**14 31 28.7**	**+0.5**
AB31	**Akbulak array**	**14.57**	**322**	⇓Pn	**Pn**	**14 33 23.6**	**-0.5**
	0.3nm,0.4s,baz=131,slow=13,SNR=10						
AB31				⇑Sn	**Sn**	**14 35 59.0**	**-6.0**
	0.3nm,0.5s						

IDC 15 14:32:01.8±8.9, 627S×13057E, h135km±90km, mb3.7/1, mb1 3.9/5, mb1mx3.5/15, mbtmp3.8/5, Error ellipse: s-maj=73.6km s-min=29.0km az=40.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**7.87**	**240**	P	Pn	14 33 54.8	+1.1
	18nm,0.3s,baz=66,slow=3.0,SNR=11						
BATI				S	Sn	14 35 21.3	0.0
	3.7nm,0.3s,baz=253,slow=19,SNR=6.3						
FITZ	**Fitzroy Crossi**	**12.71**	**202**	*e*P	Pn	14 34 56.4	-1.4
	9.7nm,0.5s						
FITZ				*e*S	Sn	14 37 04.8	-13
FITZ	**Fitzroy Crossi**	**12.71**	**202**	P	Pn	14 34 56.2	-1.6
	1.1nm,0.3s,baz=36,slow=11,SNR=26						
FITZ				S	Sn	14 37 08.0	-10
	0.5nm,0.3s,baz=72,slow=20,SNR=4.0						
WRA	**Warramunga Arr**	**14.08**	**165**	P	Pn	14 35 15.2	-0.2
	baz=349,slow=14,SNR=3.3						
WRA				S	Sn	14 37 41.4	-10
	1.2nm,0.3s,baz=332,slow=22,SNR=8.2						
ASAR	**Alice Springs**	**17.59**	**170**	P	Pn	14 35 59.1	+0.4
	0.4nm,0.3s,baz=348,slow=9.6,SNR=4.4						
ASAR				S	S	14 39 03.7	-10
	0.2nm,0.3s,baz=346,slow=26,SNR=4.8						
MKAR	**Makanchi Array**	**67.93**	**326**	P	P	14 42 46.0	0.0
	1.0nm,0.5s,baz=114,slow=8.1,SNR=17						

IDC 15 14:39:14.4±4.2, 418S×10102E, h23km±5km, mb4.0/3, mb1 4.0/3, mb1mx3.6/18, mbtmp4.0/3, Error ellipse: s-maj=172.9km s-min=44.7km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**52.01**	**5**	P	P	14 48 22.2	+0.3
	2.4nm,0.8s,baz=183,slow=9.4,SNR=8.4						
MKAR	**Makanchi Array**	**53.39**	**344**	P	P	14 48 32.3	+0.2
	1.7nm,0.7s,baz=149,slow=8.8,SNR=6.7						
MKAR				pP	pP	14 48 39.8	+0.4
	3.3nm,0.7s,baz=146,slow=8.5,SNR=8.7						
ZALV	**Zalesovo Beam**	**59.48**	**349**	P	P	14 49 15.1	-0.4
	1.4nm,0.7s,baz=176,slow=4.3,SNR=4.5						
ZALV				pP	pP	14 49 22.2	-0.6
	3.1nm,0.8s,baz=181,slow=5.4,SNR=5.5						
TXAR	**Lajitas Array**	**145.75**	**40**	PKPbc	PKPbc	14 58 51.5	-0.8
	1.9nm,1.0s,baz=355,slow=3.0,SNR=10						
TXAR				pPKPbc	pPKPbc	14 58 59.3	-0.7
	1.3nm,0.8s,baz=319,slow=1.2,SNR=9.4						

*NEIC **15** 14:39:50.2±0.8, 682S×13050E, h35km, mb3.9/1, Error ellipse: s-maj=16.2km s-min=12.0km az=64.0*
*IDC **15** 14:39:55.4±6.9, 704S×13056E, h96km±66km, mb3.5/2, mb1 4.1/6, mb1mx3.6/16, mbtmp4.0/6, ML4.5/4, Error ellipse: s-maj=57.8km s-min=21.5km az=43.0*
*ISCJB **15** 14:39:58.4±1.9, 735S±008×13048E±007, h132km±24km, mb3.6/2, Error ellipse: s-maj=14.6km s-min=10.1km az=36.9*

ISC 15 14:39:58.7±1.9, 743S±009×13058E±007, h85km±27km, n12, σ0s86/20, mb3.6/2, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**7.37**	**248**	P	**Pn**	**14 41 44.0**	**+0.3**
	20nm,0.3s,baz=87,slow=3.0,SNR=37						
BATI				S	**Sn**	**14 43 05.6**	**-0.2**
	14nm,0.3s,baz=86,slow=16,SNR=4.7						
FITZ	**Fitzroy Crossi**	**11.65**	**204**	*e*P	**Pn**	**14 42 41.9**	**-0.1**
	18nm,0.4s						
FITZ				*e*S	**Sn**	**14 44 48.9**	**-1.3**
FITZ	**Fitzroy Crossi**	**11.65**	**204**	P	**Pn**	**14 42 42.1**	**+0.1**
	3.5nm,0.3s,baz=35,slow=13,SNR=70						
FITZ				S	**Sn**	**14 44 48.3**	**-1.9**
	1.4nm,0.3s,baz=174,slow=21,SNR=7.8						
WRAB	**Tennant Creek**	**12.96**	**164**	*e*Pn	**Pn**	**14 42 59.4**	**-0.1**
	4.8nm,0.5s						
WRAB				*e*Sn	**Sn**	**14 45 22.8**	**+0.8**
WRA	**Warramunga Arr**	**12.96**	**164**	P	**Pn**	**14 43 00.0**	**+0.4**
	1.4nm,0.3s,baz=348,slow=14,SNR=45						
WRA				S	**Sn**	**14 45 21.1**	**-1.1**
	4.1nm,0.3s,baz=345,slow=21,SNR=16						
WB2	**Warramunga Arr**	**12.97**	**164**	*e*P	**Pn**	**14 43 00.1**	**+0.4**
WB2				*e*S	**Sn**	**14 45 23.1**	**+0.9**
COEN	**Coen**	**13.97**	**119**	*e*Pn	**Pn**	**14 43 11.6**	**-1.3**
	6.7nm,0.6s						
COEN				*e*Sn	**Sn**	**14 45 37.3**	**-9.3**
ASAR	**Alice Springs**	**16.46**	**169**	P	**Pn**	**14 43 46.1**	**+1.7**
	1.2nm,0.3s,baz=354,slow=8.5,SNR=43						
ASAR				S	**S**	**14 46 47.4**	**-6.2**
	0.7nm,0.3s,baz=346,slow=20,SNR=11						
MBWA	**Marble Bar**	**17.21**	**216**	*e*P	**Pn**	**14 43 54.7**	**+0.9**
	6.8nm,0.6s						
CTA	**Charters Tower**	**19.73**	**131**	P	**Pn**	**14 44 23.6**	**-0.3**
	0.2nm,0.3s,baz=303,slow=12,SNR=4.4						
STKA	**Stephens Creek**	**26.41**	**159**	P	**P**	**14 45 26.6**	**-0.7**
	1.1nm,0.8s,mb3.4,baz=331,slow=10,SNR=1.7						
MKAR	**Makanchi Array**	**68.90**	**327**	P	**P**	**14 50 47.8**	**-6.6**
	0.6nm,0.4s,mb3.7,baz=126,slow=8.0,SNR=9.1						

*ISCJB **15** 14:40:35.5±0.3, 4189N±001×2293E±002, h6km±3km, Error ellipse: s-maj=3.1km s-min=2.5km az=172.1*
*SKO **15** 14:40:35.8, 4187N×2294E, h15km, M2.5, ML2.9*
*SOF **15** 14:40:35.4, 4188N×2298E, h20km, MD3.1*
*CSEM **15** 14:40:36.4±0.1, 4190N×2296E, h5km, MD3.1, Error ellipse: s-maj=1.3km s-min=1.3km az=66.0*
*ATH **15** 14:40:37.4, 4176N×2296E, h19km±2km, MD3.5/4*
*NEIC **15** 14:40:37.1, 4186N×2296E, h3km, MD3.5(ATH), ML3.7(THE), After THE.*
*THE **15** 14:40:37.4, 4186N×2296E, h2km, ML3.7*
*BEO **15** 14:40:38.2±1.0, 4195N×2299E, h14km±4km, ML3.0/5*

ISC 15 14:40:36.5±0.3, 4188N±002×2294E±002, h7km±3km, n54, σ0s96/82, 7C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKB	**Krupnik**	**0.11**	**98**	Pg	**Pg**	**14 40 39.7**	**+0.8**
STIP	**Stip**	**0.59**	**252**	*e*Pg	**Pg**	**14 40 48.3**	**+0.3**
STIP	**Stip**	**0.59**	**252**	⇑*i*Pg	**Pg**	**14 40 48.3**	**+0.3**
STIP				*e*Lg		14 40 56.9	
	comp=E,359nm,0.2s						
STIP				*i* Sg	**Sg**	**14 40 56.9**	**+1.1**
STIP				*e*Lg		14 40 57.1	
	comp=N,234nm,0.2s						
STIP	**Stip**	**0.59**	**252**	⇑*i*Pg	**Pg**	**14 40 48.2**	**+0.2**
STIP				*i* Sg	**Sg**	**14 40 56.8**	**+1.1**
VAY	**Valandovo**	**0.62**	**207**	⇑*i*Pg	**Pg**	**14 40 48.5**	**0.0**
VAY				*e*Lg		14 40 57.0	
	comp=N,410nm,0.3s						
VAY				*i* Sg	**Sg**	**14 40 57.3**	**+0.6**
VAY				*e*Lg		14 40 57.6	
	comp=E,399nm,0.2s						
VAY	**Valandovo**	**0.62**	**207**	*e*Pg	**Pg**	**14 40 48.9**	**+0.3**
VAY				*e*Sg	**Sg**	**14 40 57.2**	**+0.5**
MMB	**Musomiste**	**0.66**	**116**	Pg	**Pg**	**14 40 49.3**	**+0.1**
KNT	**Kendrikon**	**0.72**	**183**	*e*Pg	**Pg**	**14 40 50.4**	**+0.1**
KNT				*e*Sg	**Sg**	**14 41 00.1**	**+0.4**
VTS	**Vitosha**	**0.74**	**16**	⇑*i*P	**Pg**	**14 40 50.4**	**-0.3**
VTS	**Vitosha**	**0.74**	**16**	Pg	**Pg**	**14 40 50

LZH				PP			14 45 32.0	
SONM	**Songino Array**	**25.02**	**9**	P		**P**	**14 47 41.6**	**+0.8**
	comp=E,0.9nm,0.6s,mb3.6,baz=188,slow=12,SNR=5.0							
MKAR	**Makanchi Array**	**27.89**	**332**	P		**P**	**14 48 07.8**	**+1.0**
	comp=E,1.8nm,0.5s,mb4.2,baz=139,slow=9.8,SNR=36							
KURK	**Kurchatov**	**32.47**	**333**	P		**P**	**14 48 47.8**	**+0.5**
	comp=E,1.3nm,0.6s,mb4.1,baz=145,slow=10,SNR=5.4							
ZALV	**Zalesovo Beam**	**33.02**	**343**	P		**P**	**14 48 52.9**	**+0.9**
	comp=E,2.1nm,0.7s,mb4.2,baz=141,slow=8.4,SNR=8.2							
ZALV				PcP		PcP	14 51 33.2	-2.6
	comp=E,0.4nm,0.4s,baz=114,slow=3.6,SNR=2.7							
ZALV	**Zalesovo Beam**	**33.02**	**343**	P		**P**	**14 48 52.9**	**+0.9**
ZALV				PcP		PcP	14 51 33.2	-2.6
BVAR	**Borovoye Array**	**37.71**	**330**	P		**P**	**14 49 33.2**	**+0.8**
	comp=E,3.2nm,0.6s,mb4.2,baz=128,slow=10,SNR=15							
ASAJ	**Asahikawa**	**40.04**	**48**	P		**P**	**14 49 51.4**	**-0.7**
	comp=E,3.3nm,0.6s,mb4.1,baz=204,slow=12,SNR=4.7							
WRA	**Warramunga Arr**	**53.91**	**140**	P		**P**	**14 51 39.2**	**-1.5**
	comp=E,0.8nm,0.7s,mb3.9,baz=332,slow=8.3,SNR=4.3							
ASAR	**Alice Springs**	**56.58**	**143**	P		**P**	**14 51 59.0**	**-0.9**
	comp=E,0.7nm,0.6s,mb3.9,baz=319,slow=6.7,SNR=5.7							
AKASG	**Malin Array Be**	**60.87**	**316**	P		**P**	**14 52 29.0**	**-0.6**
	comp=E,0.3nm,0.3s,mb3.9,baz=79,slow=5.6,SNR=3.2							

BJI ***15*** *14:45:24.6, 3.10S×101.01E, h30km, mB5.6, mb5.7, Ms5.3, Msz5.2*

MOS ***15*** *14:45:28.9±0.9, 2.68S×101.21E, h41±4km, mb5.9/77, MS4.8/18, Error ellipse: s-maj=8.0km s-min=3.9km az=122.5*

GCMT ***15*** *14:45:29.2±0.1, 3.13S×100.87E, h51±4km, MW5.5/93, Moment Tensor Solution. s89,c170; s93,c191; Duration: 1s4 Moment tensor: Scale 10^17 Nm; Mrr=1.76±.04; Mθθ=-1.07±.03; Mφφ=-0.69±.03; Mrθ=1.13±.03; Mθφ=1.17±.03; Mrφ=-0.62±.03; Best double couple: M=2.30900×10^17 NP1:φ=319.00000°, δ=29.00000°, λ=104.00000°. NP2:φ=123.00000°, δ=62.00000°, λ=82.00000°. Principal axes: T 2.1720, Plg72.0000°, Azm15.0000°; N 0.2720, Plg7.0000°, Azm127.0000°; P -2.4460, Plg17.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***15*** *14:45:29.2±0.1, 2.79S×101.19E, h35±4km, mb5.6/98 Error ellipse: s-maj=4.7km s-min=2.8km az=216.0*

NEIC Felt [IV] at Bengkulu and Sungaipenuh; [III] at Kapahiang.

ISCJB ***15*** *14:45:31.3±0.1, 2.82S±0.02×101.12E±0.02, h64±4km, mb5.7/237, Error ellipse: s-maj=3.6km s-min=2.3km az=21.0*

IDC ***15*** *14:45:31.6±0.7, 2.77S×101.23E, h55±4km±4km, mb5.4/27, mb1 5.4/28, mb1mx5.4/28, mbtmp5.4/28, MS4.8/33, Ms1 4.8/33, ms1mx4.7/41, Error ellipse: s-maj=10.9km s-min=6.2km az=44.0*

DJA ***15*** *14:45:32, 2.90S×100.82E, h50km, Mw5.9/13*

SZGRF ***15*** *14:45:36.7, 2.73S×100.44E, h71±4km, mb5.7, Southern Sumatera, Indonesia*

ISC 15 14:45:33.0±0.1, 2.86S±0.02×101.10E±0.02, h66±4km, h66±4km±1.7km: pP-P, n=933, σ=0.89/785, mb 5.6/235, 192C-39D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.69**	**118**	P	**Pn**	**14 45 58.0**	**-2.3**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**2.48**	**344**	P	**Pn**	**14 46 10.1**	**-1.0**
	0.0nm,0.0s						
JMBI	**JAMBI**	**2.81**	**64**	P	**Pn**	**14 46 16.0**	**+0.4**
	0.0nm,0.0s						
KLI	**Kotabumi**	**4.25**	**118**	P	**Pn**	**14 46 35.8**	**+0.6**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.08**	**82**	P	**Pn**	**14 46 46.6**	**0.0**
	57.1nm,1.1s						
KGM	**Kluang**	**5.32**	**25**	⇑P	**Pn**	**14 46 51.3**	**+1.3**
MYKOM	**Kota Tinggi**	**5.37**	**31**	⇓P	**Pn**	**14 46 51.7**	**+1.1**
SBJI	**Serang**	**5.97**	**123**	P	**Pn**	**14 47 01.6**	**+2.8**
	1μm,1.2s						
FRIM	**Kepong**	**6.08**	**5**	⇓P	**Pn**	**14 47 01.2**	**+1.0**
TNG	**Tangerang**	**6.43**	**121**	P	**Pn**	**14 47 09.0**	**+3.8**
	3μm,1.2s						
TPI	**Tanjungpandan**	**6.55**	**89**	P	**Pn**	**14 47 08.3**	**+1.6**
	259nm,1.4s						
DBJI	**Dramaga**	**6.72**	**123**	P	**Pn**	**14 47 09.0**	**-0.1**
	1μm,1.1s						
SKJI	**Sukabumi**	**6.82**	**127**	P	**Pn**	**14 47 16.6**	**+6.1**
	1μm,0.9s						
IPM	**Ipoh**	**7.29**	**359**	⇑P	**Pn**	**14 47 18.9**	**+2.1**
LEM	**Lembang**	**7.60**	**122**	P	**Pn**	**14 47 22.3**	**+1.2**
	1μm,1.2s						
JCJI	**Jatiwangi**	**8.01**	**117**	P	**Pn**	**14 47 34.4**	**+7.7**
	651nm,1.2s						
KTGM	**Kuala Trenggan**	**8.38**	**14**	⇑P	**Pn**	**14 47 33.5**	**+1.7**
XMIS	**Christmas Isla**	**8.82**	**149**	*e*Pn	**Pn**	**14 47 29.2**	**-8.6**
XMIS				*e*Sn	**Sn**	**14 48 58.8**	**-17**
BJII	**Banjamegara**	**9.66**	**118**	P	**Pn**	**14 47 49.9**	**+0.6**
	257nm,1.6s						
SNG	**Songkhla**	**9.98**	**357**	P	**Pn**	**14 47 53.0**	**-0.6**
	642nm,1.0s						
BSI	**Banda Aceh**	**10.12**	**325**	P	**Pn**	**14 47 54.2**	**-1.4**
	280nm,1.0s						
KSM	**Kuching**	**10.16**	**65**	⇑P	**Pn**	**14 47 58.4**	**+2.2**
KSM	**Kuching**	**10.16**	**65**	*e*Pn	**Pn**	**14 47 56.6**	**+0.5**
COCO	**West Island**	**10.19**	**204**	*e*Pn	**Pn**	**14 47 50.5**	**-6.0**
STKI	**Sintang**	**10.77**	**75**	P	**Pn**	**14 48 07.5**	**+3.0**
	352nm,1.1s						
SJI	**Sawahan**	**11.67**	**115**	P	**Pn**	**14 48 15.7**	**-1.1**
	596nm,0.7s						
SBUM	**Sibu**	**12.30**	**65**	⇑P	**Pn**	**14 48 29.3**	**+3.9**
TRT	**Tretes**	**12.45**	**113**	⇓*e*P	**Pn**	**14 48 26.5**	**-0.9**
TRT	**Tretes**	**12.45**	**113**	⇓*e*P	**Pn**	**14 48 26.0**	**-1.4**
KRKI	**Karangkates**	**12.46**	**115**	P	**Pn**	**14 48 29.4**	**+1.8**
	565nm,1.1s						
BTM	**Bintulu**	**13.40**	**63**	⇑P	**Pn**	**14 48 44.3**	**+3.9**
KMMI	**Kalianget**	**13.48**	**108**	P	**Pn**	**14 48 42.5**	**+1.2**
	608nm,1.3s						
BBKI	**Banjar Baru**	**13.73**	**93**	P	**Pn**	**14 48 47.0**	**+2.2**
	950nm,0.9s						
NNT	**Nongplab**	**15.40**	**355**	P	**Pn**	**14 49 05.4**	**-1.1**
	658nm,0.9s						
KHKI	**Kahang-Kahang**	**15.44**	**111**	P	**Pn**	**14 49 08.0**	**+1.1**
	209nm,0.8s						
MTNI	**Mataram**	**16.05**	**112**	P	**Pn**	**14 49 15.3**	**+0.6**
	246nm,0.8s						
SMKI	**Samarinda**	**16.28**	**82**	P	**Pn**	**14 49 22.8**	**+5.2**
	654nm,1.2s						
KKM	**Kota Kinabalu**	**17.49**	**60**	⇓P	**Pn**	**14 49 35.0**	**+2.4**
KKM	**Kota Kinabalu**	**17.49**	**60**	*e*Pn	**Pn**	**14 49 33.5**	**+0.9**
SDKM	**Sandakan**	**18.16**	**62**	⇓P	**Pn**	**14 49 42.7**	**+2.0**
TSM	**Tawau**	**18.20**	**67**	⇓P	**Pn**	**14 49 43.0**	**+1.7**
UBT	**Ubonrachathani**	**18.40**	**12**	⇓P	**Pn**	**14 49 42.0**	**-1.6**
	590nm,0.8s						
NST	**Nakhon Sawan**	**18.43**	**357**	P	**Pn**	**14 49 39.8**	**-4.2**
KDM	**Kudat**	**18.46**	**58**	⇓P	**Pn**	**14 49 46.2**	**+1.7**
KAPI	**Kappang**	**18.73**	**97**	Pn	**Pn**	**14 49 46.1**	**-1.6**
	5μm,1.0s,SNR=60						
KAPI	**Kappang**	**18.73**	**97**	⇓P	**Pn**	**14 49 45.3**	**-2.3**
	SNR=55						
KAPI	**Kappang**	**18.73**	**97**	P	**Pn**	**14 49 44.0**	**-3.6**
	15nm,0.3s,baz=278,slow=11,SNR=48						
KAPI				S	**S**	**14 53 15.4**	**-1.2**
	baz=195,slow=20,SNR=3.9						
KAPI				LR	LR	14 57 45.7	
	comp=Z,4μm,18.0s,baz=279,slow=39						
KAPI	**Kappang**	**18.73**	**97**	*e*Pn	**Pn**	**14 49 46.0**	**-1.6**
PCI	**Palu**	**18.82**	**84**	P	**Pn**	**14 49 48.9**	**+0.1**
	950nm,1.4s						
MYLDM	**Lahad Datu**	**19.13**	**65**	⇓P	**Pn**	**14 49 54.2**	**+1.8**
KKTK	**Khon Kaen**	**19.15**	**5**	P	**Pn**	**14 49 48.6**	**-4.0**
	2μm,0.6s						
BDT	**Bhumibol Dam**	**20.08**	**354**	P	**P**	**14 49 58.0**	**-3.2**
	42nm,0.9s						
WSI	**Waingapu**	**20.24**	**110**	⇓*e*P	**P**	**14 50 02.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**21.29**	**354**	P	**P**	**14 50 11.2**	**-3.1**
	102nm,0.8s,mb5.2,baz=185,slow=10.0,SNR=179						
CMAR				PcP	PcP	14 54 17.6	+0.7
	16nm,0.8s,baz=214,slow=3.0,SNR=12						
CMAR				ScP	ScP	14 57 50.2	+1.8
	10.0nm,0.9s,baz=210,slow=3.9,SNR=16						
CMAR				LR	LR	14 59 19.1	
	comp=Z,3μm,18.5s,baz=179,slow=39						
CMAR				PKiKP	PKiKP	15 02 03.4	-0.9
	1.1nm,0.8s,baz=283,slow=2.1,SNR=5.6						
CMAR	**Chiang Mai Arr**	**21.29**	**354**	P	**P**	**14 50 11.2**	**-3.0**
CMAR						14 54 17.7	

CMAR	**Chiang Mai Arr**	**21.29**	**354**	P		**P**	**14 50 11.2**	**-3.1**
CMAR				PcP		PcP	14 54 17.6	+0.7
CMAR				ScP		ScP	14 57 50.2	+1.8
CMAR				LR		LR	14 59 19.1	
KDI	**Kendari**	**21.51**	**94**	P		**P**	**14 50 17.8**	**+1.1**
	280nm,1.1s,mb5.5							
BBSI	**Bau Bau**	**21.57**	**98**	P		**P**	**14 50 18.1**	**+0.7**
	587nm,1.0s,mb5.9							
PPR	**Puerto Princes**	**21.58**	**54**	⇑*e*P		**P**	**14 50 17.9**	**+0.4**
CHG	**Chiang Mai**	**21.64**	**354**	⇑P		**P**	**14 50 14.6**	**-3.4**
	104nm,0.8s,mb5.2							
CHRT	**Chiangrai**	**22.62**	**357**	⇓P		**P**	**14 50 24.0**	**-4.4**
	2μm,1.0s,mb6.4							
PALK	**Pallekele**	**22.71**	**296**	⇓P		**P**	**14 50 29.5**	**0.0**
	SNR=6.5							
PALK	**Pallekele**	**22.71**	**296**	*e*P		**P**	**14 50 29.4**	**0.0**
	1μm,2.4s,mb5.7							
ENPP	**El Nido**	**22.97**	**52**	*e*P		**P**	**14 50 32.8**	**+0.7**
QIZ	**Qiongzhong**	**23.39**	**21**	P		**P**	**14 50 35.1**	**-1.0**
QIZ				XP		sP	14 50 48.9	-10
QIZ				PP			14 51 07.3	
QIZ				S		**S**	**14 54 48.6**	**+4.3**
QIZ				XS		sS	14 55 03.8	-7.1
QIZ				AMB		AMB		
	comp=Z,204nm,1.4s,mb5.3							
QIZ				AMB		AMB		
	comp=Z,673nm,7.9s							
QIZ				LR		LR		
	comp=N,3μm,23.7s							
QIZ				LR		LR		
	comp=Z,4μm,22.8s							
BATI	**Baumata**	**23.56**	**109**	P		**P**	**14 50 35.6**	**-2.2**
	comp=Z,160nm,1.0s,mb5.3							
BATI	**Baumata**	**23.56**	**109**	P		**P**	**14 50 35.2**	**-2.6**
	comp=Z,82nm,0.4s,mb5.4,baz=258,slow=1.1,SNR=26							
BATI				S		**S**	**14 54 37.4**	**-10**
	comp=Z,52nm,0.6s,baz=108,slow=13,SNR=3.7							
IPIL	**Ipil**	**23.89**	**64**	*e*P		**P**	**14 50 41.4**	**+0.6**
CUYO	**Cuyo Island**	**24.05**	**55**	*e*P		**P**	**14 50 42.9**	**+0.7**
BUSP	**Coron**	**24.05**	**52**	*e*P		**P**	**14 50 42.8**	**+0.6**
MNI	**Manado**	**24.11**	**80**	P		**P**	**14 50 43.9**	**+1.0**
	comp=Z,1μm,1.1s,mb6.1							
PAGZ	**Pagadian**	**24.64**	**64**	*e*P		**P**	**14 50 48.6**	**+1.0**
SJMP	**San Jose**	**25.04**	**52**	*e*P		**P**	**14 50 52.0**	**+0.7**
LUBP	**Lubang**	**25.15**	**49**	*e*P		**P**	**14 50 52.4**	**+0.1**
GUIM	**Jordan**	**25.24**	**58**	*e*P		**P**	**14 50 54.0**	**+0.9**
MBWA	**Marble Bar**	**25.69**	**137**	⇓P		**P**	**14 50 59.2**	**+2.1**
	SNR=7.3							
MBWA	**Marble Bar**	**25.69**	**137**	*e*P		**P**	**14 50 56.3**	**-0.8**
OTRP	**Odiongan**	**25.70**	**54**	*e*P		**P**	**14 50 58.0**	**+0.7**
RCP	**Roxas**	**25.85**	**56**	⇓*e*P		**P**	**14 50 59.8**	**+1.1**
TBP	**Tagbilaran**	**25.88**	**61**	*e*P		**P**	**14 50 59.2**	**+0.4**
NBP	**Mount Natib**	**25.92**	**47**	⇑*e*P		**P**	**14 50 59.3**	**+0.1**
LBPH	**Los Banos**	**26.11**	**49**	⇑*e*P		**P**	**14 51 01.7**	**+0.7**
BUKP	**Musuan**	**26.17**	**66**	*e*P		**P**	**14 51 02.0**	**+0.4**
SCZP	**Santa Cruz**	**26.25**	**45**	*e*P		**P**	**14 51 01.8**	**-0.4**
LLP	**Lapu-Lapu**	**26.26**	**60**	⇓*e*P		**P**	**14 51 03.3**	**+0.9**
DAV	**Davao City (W)**	**26.35**	**68**	⇓P		**P**	**14 51 01.6**	**-1.5**
	SNR=7.1							
DAV	**Davao City (W)**	**26.35**	**68**	P		**P**	**14 51 04.3**	**+1.1**
	comp=Z,310nm,0.7s,mb5.9,baz=30,slow=6.0,SNR=7.0							
DAV				LR		LR	15 02 18.3	
	comp=Z,4μm,21.7s,baz=268,slow=38							
DAV	**Davao City (W)**	**26.35**	**68**	⇑*i*P		**P**	**14 51 01.0**	**-2.2**
DAV	**Davao City (W)**	**26.35**	**68**	*e*P		**P**	**14 51 05.1**	**+1.9**
LBMI	**Labuha**	**26.48**	**86**	P		**P**	**14 51 04.0**	**-0.4**
	comp=Z,656nm,0.9s,mb6.1							
BOLP	**Bolinao**	**26.66**	**44**	*e*P		**P**	**14 51 05.6**	**-0.3**
AUQP	**San Andres**	**26.77**	**53**	*e*P		**P**	**14 51 05.3**	**-1.7**
VIS	**Vishakhapatnam**	**26.93**	**320**	⇑*i*P		**P**	**14 51 08.8**	**+0.5**
VIS				AMb		AMB	14 51 13.0	
	comp=Z,228nm,1.1s,mb5.6							
GQP	**Guinayangan**	**26.93**	**51**	⇓*e*P		**P**	**14 51 07.5**	**-0.9**
AAI	**Ambon**	**27.06**	**92**	P		**P**	**14 51 17.0**	**+7.4**
	comp=Z,140nm,1.1s,mb5.4							
AAI	**Ambon**	**27.06**	**92**	P		**P**	**14 51 17.0**	**+7.4**
	comp=Z,203nm,1.2s,mb5.5							
OCLP	**Ormoc**	**27.16**	**59**	*e*P		**P**	**14 51 10.9**	**+0.4**
BALP	**Baler**	**27.42**	**47**	*e*P		**P**	**14 51 12.3**	**-0.4**
BWNR	**Bhubaneshwar**	**27.47**	**328**	*e*P		**P**	**14 51 09.0**	**-4.1**
BWNR				*e*S		**S**	**14 55 49.0**	**-0.3**
KMI	**Kunming**	**27.86**	**3**	P		**P**	**14 51 16.3**	**-0.2**
KMI				AP		pP	14 51 25.9	-6.4
KMI				XP		sP	14 51 31.0	-9.1
KMI				PP		PP	14 52 09.6	-11
KMI				PCP		PcP	14 54 32.0	+0.8
KMI				S		**S**	**14 56 00.8**	**+5.5**
KMI				XS		sS	14 56 18.3	-4.1
KMI				SCP		ScP	14 58 08.5	+2.0
KMI				AMB		AMB		
	comp=Z,55nm,0.8s,mb5.1							
KMI				AMB		AMB		
	comp=Z,423nm,7.1s							
KMI				LR		LR		
	comp=N,4μm,18.5s							
KMI				LR		LR		
	comp=E,3μm,16.4s							
KMI				LR		LR		
	comp=Z,5μm,18.9s							
CNP	**Catarman**	**27.95**	**56**	*e*P		**P**	**14 51 16.9**	**-0.6**
ABRA	**Dolores**	**28.09**	**43**	*e*P		**P**	**14 51 18.1**	**-0.6**
PVCP	**Virac**	**28.11**	**54**	*e*P		**P**	**14 51 18.1**	**-0.8**
IMP	**Imphal**	**28.34**	**346**	*e*P		**P**	**14 51 20.0**	**-0.8**
CAUP	**Cauayan**	**28.38**	**45**	*e*P		**P**	**14 51 20.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**28.43**	**124**	*e*P		**P**	**14 51 20.5**	**-1.2**
	comp=Z,78nm,0.9s,mb5.2							
FITZ				*e*			14 51 25.3	
FITZ				*e*PCP		PcP	14 54 33.1	+0.3
FITZ				*e*S		**S**	**14 56 00.6**	**-3.8**
FITZ				*e*SCS		ScS	15 02 01.8	0.0
FITZ	**Fitzroy Crossi**	**28.43**	**124**	P		**P**	**14 51 20.6**	**-1.1**
	comp=Z,47nm,0.9s,mb5.0,baz=306,slow=7.9,SNR=53							
FITZ				PcP		PcP	14 54 33.5	+0.8
	comp=Z,11nm,0.8s,baz=288,slow=6.4,SNR=2.9							
FITZ				S		**S**	**14 56 00.8**	**-3.7**
	comp=Z,8.9nm,0.9s,baz=214,slow=16,SNR=3.3							
FITZ				LR		LR	15 02 37.4	
	comp=Z,1μm,21.8s,baz=301,slow=36							
APYP	**Conner**	**28.60**	**43**	*e*P		**P**	**14 51 22.4**	**-0.9**
PALP	**Palanan**	**28.89**	**46**	*e*P		**P**	**14 51 19.1**	**-6.8**
GYA	**Guiyang**	**29.63**	**10**	⇑*i*P		**P**	**14 51 31.6**	**-0.7**
GYA				AP		pP	14 51 41.8	-6.4
GYA				XP		sP	14 51 45.6	-10
GYA				PP		PP	14 52 33.8	-6.5
GYA				PCP		PcP	14 54 35.6	0.0
GYA				S		**S**	**14 56 34.6**	**+11**
GYA				SS		SS	14 58 02.1	-30
GYA				SCP		ScP	14 58 15.3	+3.2
GYA				AMB		AMB		
	comp=Z,90nm,0.7s,mb5.5							
GYA				AMB		AMB		
	comp=Z,450nm,5.1s							
GYA				LR		LR		
	comp=N,4μm,13.3s							
GYA				LR		LR		
	comp=E,2μm,14.0s							
GYA				LR		LR		
	comp=Z,4μm,13.7s							
HYB	**Hyderabad**	**30.01**	**313**	*i* P		**P**	**14 51 36.0**	**+0.3**
HYB				*e*pP		pP	14 51 48.0	-3.6
HYB				*e*PcP		PcP	14 54 37.5	+0.7
HYB				*e*S		**S**	**14 56 32.0**	**+2.7**
SWI	**Sorong**	**30.21**	**87**	P		**P**	**14 51 36.6**	**-1.0**
	comp=Z,282nm,1.2s,mb5.8							
BOK	**Bokaro**	**30.35**	**332**	⇑*i*P		**P**	**14 51 39.2**	**+0.5**
BOK				AMb		AMB	14 51 41.6	
	comp=Z,292nm,0.9s,mb5.9							
BOK				*i* x		x	14 51 52.9	
LATR	**Latur**	**32.11**	**312**	*e*P		**P**	**14 51 54.5**	**+0.2**
LATR				AMb		AMB	14 51 55.9	
	comp=Z,84nm,0.8s,mb5.5							
NGP	**Nagpur**	**32.18**	**319**	*e*P		**P**	**14 51 52.8**	**-2.1**
NGP				AMb		AMB	14 51 54.4	
	comp=Z,111nm,1.3s,mb5.4							
MUN	**Mundaring**	**32.27**	**155**	*e*P		**P**	**14 51 56.2**	**+0.7**
ODAN	**Odare**	**32.37**	**337**	*e*P		**P**	**14 51 57.2**	**+0.8**
	comp=Z,2μm,0.9s,mb6.8							
ODAN	**Odare**	**32.37**	**337**	*e*P		**P**	**14 51 56.9**	**+0.5**
	comp=Z,2μm,0.9s,mb6.8							
QZH	**Quanzhou**	**32.43**	**31**	⇑*i*P		**P**	**14 51 57.1**	**+0.1**
QZH				AP		pP	14 52 06.3	-6.6
QZH				S		**S**	**14 57 07.6**	**+0.6**
QZH				AMB		AMB		
	comp=Z,340nm,1.1s,mb6.0							

QZH				LR		LR		
	comp=N,2μm,13.4s							
QZH				LR		LR		
	comp=E,3μm,16.8s							
QZH				LR		LR		
	comp=Z,6μm,25.6s							
KLBR	**Kellerberrin**	**32.61**	**153**	*e*P		**P**	**14 51 58.9**	**+0.4**
	comp=Z,46nm,1.3s,mb5.2							
TAPN	**Taplejung**	**32.69**	**338**	*e*P		**P**	**14 52 00.5**	**+1.3**
	comp=Z,2μm,0.9s,mb7.0							
TAPN	**Taplejung**	**32.69**	**338**	*e*P		**P**	**14 52 00.3**	**+1.1**
	comp=Z,2μm,0.9s,mb7.0							
RAMN	**Ramite**	**32.77**	**336**	*e*P		**P**	**14 52 01.0**	**+1.1**
	comp=Z,868nm,0.9s,mb6.6							
RAMN	**Ramite**	**32.77**	**336**	*e*P		**P**	**14 52 01.0**	**+1.1**
	comp=Z,868nm,0.9s,mb6.6							
JBP	**Jabalpur**	**33.06**	**323**	*e*P		**P**	**14 52 03.0**	**+0.5**
JBP				*ex*		x	14 57 17.1	
AKL	**Akola**	**33.25**	**316**	*e*P		**P**	**14 52 03.2**	**-1.0**
AKL				AMb		AMB	14 52 07.4	
	comp=Z,81nm,0.8s,mb5.6							
KAD	**Karad**	**33.27**	**308**	⇑*i*P		**P**	**14 52 04.3**	**-0.1**
KAD				AMb		AMB	14 52 06.9	
	comp=Z,118nm,1.4s,mb5.5							
NACB	**Ninganchiao**	**33.45**	**35**	*e*P		**P**	**14 52 05.5**	**-0.4**
	comp=Z,495nm,0.8s,mb6.4							
NWAO	**Narrogin (SRO)**	**33.52**	**155**	P		**P**	**14 52 07.2**	**+0.8**
	comp=Z,50nm,1.1s,mb5.2,baz=317,slow=7.7,SNR=6.3							
NWAO				LR		LR	15 03 49.4	
	comp=Z,3μm,20.8s,baz=330,slow=33							
NWAO	**Narrogin (SRO)**	**33.52**	**155**	P		**P**	**14 52 07.2**	**+0.8**
NWAO				LR		LR	15 03 49.4	
JIRN	**Jiri**	**33.57**	**336**	*e*P		**P**	**14 52 08.1**	**+1.2**
	comp=Z,2μm,1.0s,mb7.0							
JIRN	**Jiri**	**33.57**	**336**	*e*P		**P**	**14 52 08.0**	**+1.1**
	comp=Z,2μm,1.0s,mb7.0							
CD2	**Chengdu**	**33.67**	**4**	⇑*i*P		**P**	**14 52 06.3**	**-1.4**
CD2				AP		pP	14 52 12.1	-12
CD2				XP		sP	14 52 15.8	-16
CD2				PP		PP	14 53 19.5	-5.6
CD2				PCP		PcP	14 54 45.3	-1.1
CD2				S		**S**	**14 57 28.1**	**+2.0**
CD2				PCS		PcS	14 58 30.1	-2.3
CD2				SS		SS	14 59 34.1	-20
CD2				SCS		ScS	15 02 27.9	+0.8
CD2				AMB		AMB		
	comp=Z,120nm,0.7s,mb5.8							
CD2				LR		LR		
	comp=N,5μm,22.8s							
CD2				LR		LR		
	comp=E,4μm,16.8s							
CD2				LR		LR		
	comp=Z,6μm,21.6s							
YHNB	**Yeheng**	**33.71**	**35**	*e*P		**P**	**14 52 08.5**	**+0.3**
	comp=Z,123nm,1.0s,mb5.7							
LSA	**Lhasa**	**33.74**	**344**	P		**P**	**14 52 08.8**	**+0.4**
LSA	**Lhasa**	**33.74**	**344**	*e*P		**P**	**14 52 08.5**	**+0.1**
LSA				pmax		pmax		
	comp=Z,181nm,1.0s,mb5.9							
LSA	**Lhasa**	**33.74**	**344**	*e*P		**P**	**14 52 08.5**	**+0.1**
	comp=Z,181nm,1.0s,mb5.9							
PKI	**Pulchoki**	**33.82**	**334**	*e*P		**P**	**14 52 09.7**	**+0.7**
PKI	**Pulchoki**	**33.82**	**334**	*e*P		**P**	**14 52 09.5**	**+0.5**
PKIN	**Phulchoki**	**33.83**	**334**	*e*P		**P**	**14 52 09.5**	**+0.4**
PKIN	**Phulchoki**	**33.83**	**334**	*e*P		**P**	**14 52 09.6**	**+0.5**
GUN	**Gumba**	**33.92**	**335**	*e*P		**P**	**14 52 11.1**	**+1.2**
GUN	**Gumba**	**33.92**	**335**	*e*P		**P**	**14 52 10.9**	**+1.0**
DMN	**Daman**	**33.98**	**334**	*e*P		**P**	**14 52 11.1**	**+0.6**
	comp=Z,625nm,1.0s,mb6.4							
DMN	**Daman**	**33.98**	**334**	*e*P		**P**	**14 52 11.1**	**+0.6**
	comp=Z,634nm,1.0s,mb6.4							
KKN	**Kakani**	**34.07**	**334**	*e*P		**P**	**14 52 11.9**	**+0.7**
	comp=Z,1μm,1.2s,mb6.7							
KKN	**Kakani**	**34.07**	**334**	*e*P		**P**	**14 52 11.8**	**+0.6**
POO	**Poona**	**34.23**	**309**	⇑*i*P		**P**	**14 52 12.5**	**-0.2**
	comp=Z,160nm,1.0s,mb5.8							
GKN	**Gorkha**	**34.53**	**334**	*e*P		**P**	**14 52 15.9**	**+0.7**
GKN	**Gorkha**	**34.53**	**334**	*e*P		**P**	**14 52 15.8**	**+0.6**
KOLN	**

SSE AMB AMB
comp=Z,890nm,5.3s
SSE LR LR
comp=N,2μm,25.2s
SSE LR LR
comp=E,994nm,25.2s
SSE LR LR
comp=Z,2μm,23.8s
LZH Lanzhou 38.83 4 ⇑P **P 14 52 51.1 -0.5**
LZH AP pP 14 53 01.5 -6.4
LZH XP sP 14 53 05.3 -10
LZH PP PP 14 54 25.3 +3.5
LZH PCP PcP 14 55 02.0 +0.3
LZH SCP ScP 14 58 45.3 +0.8
LZH S **S** **14 58 48.1 +3.4**
LZH XS sS 14 59 04.5 -7.8
LZH SS SS 15 01 33.6 -4.7
LZH SCS ScS 15 02 55.0 -0.4
LZH AMB AMB
comp=Z,126nm,1.0s,mb5.7
LZH AMB AMB
comp=Z,853nm,8.2s
LZH LR LR
comp=N,5μm,17.3s
LZH LR LR
comp=Z,6μm,18.6s
NDI New Delhi 38.85 325 *i* P **P 14 52 49.5 -2.4**
comp=Z,45nm,0.7s,mb5.4
NDI *ex* x 14 58 44.0
JOSI Joshimath 39.07 330 *eP* **P 14 52 54.0 +0.2**
KHET Khetri 39.22 323 *eP* **P 14 52 55.3 +0.3**
JOW Kunigami 39.49 40 P **P 14 52 57.6 +0.3**
comp=Z,31nm,0.4s,mb5.5,baz=255,slow=7.7,SNR=23
JOW LR LR 15 08 34.4
comp=Z,766nm,21.6s,baz=244,slow=35
JAY Jayapura 39.56 90 P **P 14 52 55.5 -2.6**
comp=Z,139nm,2.1s,mb5.4
KLP Kalpa 40.52 329 *eP* **P 14 53 06.2 +0.4**
KLP AMb AMB 14 53 07.1
comp=Z,237nm,0.6s,mb6.2
SMLA Simla 40.77 328 ⇓*i*P **P 14 53 07.2 -0.6**
SMLA *ex* x 14 53 11.4
comp=Z,209nm,0.2s
SMLA *i* x x 14 59 12.1
SDNR Sundarnagar 41.16 328 *eP* **P 14 53 11.8 +0.8**
JASL Jaisalmer 41.55 317 *eP* **P 14 53 15.4 +1.1**
TIA Tai'an 41.65 20 *eP* **P 14 53 13.8 -1.1**
TIA AMB AMB
comp=Z,60nm,1.2s,mb5.2
GTA Gaotai 42.08 359 ⇑P **P 14 53 17.8 -0.6**
GTA AP pP 14 53 28.0 -6.8
GTA XP sP 14 53 32.1 -10
GTA S **S** **14 59 35.8 +2.8**
GTA XS sS 14 59 52.0 -8.9
GTA SS SS 15 02 37.1 -5.7
GTA AMB AMB
comp=Z,32nm,1.1s,mb5.0
GTA AMB AMB
comp=Z,392nm,4.2s
GTA LR LR
comp=N,2μm,19.5s
GTA LR LR
comp=E,2μm,17.7s
GTA LR LR
comp=Z,3μm,21.6s
DLH Dalhousie 42.50 328 *eP* **P 14 53 23.0 +1.0**
DLH *ex* x 14 53 43.0
THN Thein Dam 42.55 328 *eP* **P 14 53 21.4 -1.0**
THN *ex* x 14 59 48.8
COEN Coen 42.98 107 *eP* **P 14 53 22.2 -4.0**
comp=Z,10nm,0.9s,mb4.5
BTO Baotou 44.02 10 *eP* **P 14 53 33.6 -0.4**
HHC Hu-ho-hao-te 44.53 11 *i* P **P 14 53 38.8 +0.6**
HHC AP pP 14 53 49.3 -5.4
HHC XP sP 14 53 52.9 -9.4
HHC PCP PcP 14 55 20.5 +0.1
HHC PP PP 14 55 24.1 +0.8
HHC SCP ScP 14 59 09.3 +2.2
HHC PCS PcS 14 59 13.3 -0.5
HHC S **S** **15 00 13.4 +4.5**
HHC XS sS 15 00 30.6 -6.4
HHC SS SS 15 03 25.4 -5.4
HHC SCS ScS 15 03 31.1 +1.1
HHC AMB AMB
comp=Z,109nm,1.1s,mb5.5
HHC AMB AMB
comp=Z,709nm,7.2s
HHC LR LR
comp=N,2μm,14.2s
HHC LR LR
comp=E,2μm,15.8s
HHC LR LR
comp=Z,2μm,14.5s
BJT Baijiatuau 44.85 16 *eP* **P 14 53 40.4 -0.3**
BJT pmax pmax
comp=Z,34nm,0.6s
BJT Baijiatuau 44.85 16 *eP* **P 14 53 40.4 -0.4**
comp=Z,34nm,0.6s,mb5.2
BJI Beijing 44.87 16 P **P 14 53 40.9 0.0**
BJI XP sP 14 53 53.6 -11
BJI PP PP 14 55 22.0 -4.9
BJI S **S** **15 00 20.3 +6.4**
BJI AMB AMB
comp=Z,72nm,1.1s,mb5.3
BJI LR LR
comp=N,4μm,18.3s
BJI LR LR
comp=E,2μm,16.2s
BJI LR LR
comp=Z,3μm,18.8s
DL2 Dalian 45.66 22 ⇑*i*P **P 14 53 47.1 -0.1**
DL2 XP pP 14 53 58.8 -5.0
DL2 PP PP 14 55 33.5 -1.8
DL2 *eS* **S** **15 00 28.5 +3.1**
DL2 AMB AMB
comp=Z,30nm,0.5s,mb5.3
DL2 AMB AMB
comp=Z,270nm,4.4s
DL2 LR LR
comp=N,1μm,20.8s
DL2 LR LR
comp=E,760nm,23.1s
DL2 LR LR
comp=Z,1μm,20.4s
PMG Port Moresby 46.22 100 *eP* **P 14 53 50.5 -1.5**
GUMO Guam 46.39 68 P **P 14 53 50.3 -3.0**
comp=Z,104nm,0.6s,mb5.7,baz=183,slow=6.1,SNR=17
GUMO LR LR 15 12 35.1
comp=Z,594nm,21.1s,baz=240,slow=35
GUMO Guam 46.39 68 P **P 14 53 50.3 -3.0**
GUMO pmax pmax
comp=Z,104nm,0.6s,mb5.7
GUMO MLR MLR
comp=Z,594nm,21.1s
GUMO Guam 46.39 68 *eP* **P 14 53 50.4 -2.9**
comp=Z,103nm,0.7s,mb5.7
INCN Inchon 46.61 28 *eP* **P 14 53 53.2 -1.4**
comp=Z,200nm,1.8s,mb5.5
KSRS Korea Array 47.21 29 P **P 14 53 58.9 -0.5**
comp=Z,72nm,1.0s,mb5.3,baz=226,slow=7.7,SNR=63
KSRS pP pP 14 54 11.1 -4.9
comp=Z,73nm,1.1s,baz=225,slow=8.8,SNR=11
KSRS PcP PcP 14 55 29.1 -0.8
comp=Z,8.6nm,0.9s,baz=228,slow=3.6,SNR=3.8
KSRS pPcP 14 55 44.4
comp=Z,9.7nm,0.8s,baz=223,slow=4.0,SNR=4.9
KSRS ScP ScP 14 59 18.4 +0.1
comp=Z,2.8nm,0.8s,baz=208,slow=4.8,SNR=5.0
KSRS LR LR 15 16 02.2
comp=Z,945nm,18.6s,baz=236,slow=39
KSRS Korea Array 47.21 29 P **P 14 53 58.9 -0.4**
KSRS *PP pP 14 54 11.1 -4.9
KSRS 14 55 29.1
KSRS 14 55 44.4
KSRS pmax pmax
comp=Z,72nm,1.0s,mb5.4
KSRS pmax pmax
comp=Z,73nm,1.1s,mb5.3
KSRS MLR MLR
comp=Z,945nm,18.6s
CTA Charters Tower 47.24 115 *eP* **P 14 53 59.0 -0.9**
comp=Z,115nm,0.8s,mb5.7
CTA *eS* ScP ScP 14 59 20.3 +1.4
CTA *eS* **S** **15 00 47.4 -1.1**
CTA Charters Tower 47.24 115 P **P 14 53 59.1 -0.8**
comp=Z,135nm,0.8s,mb5.7,baz=287,slow=9.1,SNR=177
CTA ScP ScP 14 59 20.2 +1.4
comp=Z,6.4nm,0.9s,baz=318,slow=5.3,SNR=4.0
CTA S **S** **15 00 47.4 -1.2**
comp=Z,0.8nm,0.3s,baz=7.1,slow=16,SNR=5.0
CTA LR LR 15 15 46.8
comp=Z,941nm,22.0s,baz=288,slow=38
CTA Charters Tower 47.24 115 P **P 14 53 59.1 -0.8**
CTA S **S** **15 00 47.4 -1.1**
CTA pmax pmax
comp=Z,135nm,0.8s
CTA smax
comp=N,1.0nm,0.3s
CTA MLR MLR
comp=Z,941nm,22.0s
CTAO Charters Tower 47.24 115 *eP* **P 14 53 59.1 -0.8**
STKA Stephens Creek 47.76 132 *eP* **P 14 54 03.5 -0.3**
comp=Z,60nm,0.6s,mb5.6
STKA *eS* **S** **15 00 54.8 -0.8**
STKA Stephens Creek 47.76 132 P **P 14 54 03.6 -0.2**
comp=Z,81nm,0.9s,mb5.6,baz=307,slow=7.7,SNR=94
STKA PcP PcP 14 55 32.1 +0.1
comp=Z,19nm,0.7s,baz=213,slow=2.7,SNR=1.6
STKA S **S** **15 00 55.0 -0.6**
comp=Z,9.8nm,1.0s,baz=186,slow=19,SNR=3.2
STKA LR LR 15 14 27.3
comp=Z,2μm,21.7s,baz=295,slow=36
WMQ Urumqi 48.00 347 ⇑*i*P **P 14 54 06.1 +0.8**
WMQ AP pP 14 54 12.0 -10
WMQ XP sP 14 54 15.0 -15
WMQ PCP PcP 14 55 34.0 +1.5
WMQ S **S** **15 01 02.0 +3.5**
WMQ SCS ScS 15 03 55.0 +2.5
WMQ AMB AMB
comp=Z,838nm,4.5s
WMQ LR LR
comp=N,2μm,21.2s
WMQ LR LR
comp=E,2μm,16.5s
WMQ LR LR
comp=Z,2μm,27.2s
KSH Kashi 48.08 334 ⇑*i*P **P 14 54 06.8 +0.8**
KSH *e*AP pP 14 54 15.8 -6.9
KSH *e*XP sP 14 54 19.8 -10
KSH *e*PCP PcP 14 55 34.8 +1.9
KSH *e*PP PP 14 55 57.9 -0.9
KSH *e*SCP ScP 14 59 24.9 +3.0
KSH *e*PCS PcS 14 59 28.5 -0.1
KSH *eS* **S** **15 01 00.4 +0.6**
KSH *e*XS sS 15 01 17.5 -11
KSH *e*SCS ScS 15 03 53.8 +0.6
KSH *e*SS SS 15 04 24.8 -5.0
KSH AMB AMB
comp=Z,2μm,2.2s,mb6.6
KSH LR LR
comp=N,1μm,6.7s
KSH LR LR
comp=E,1μm,6.2s
KSH LR LR
comp=Z,1μm,9.7s
WBK Wadi Bani Khal 48.28 304 P **P 14 54 09.3 +1.5**
SNR=9.9
JMDO Jabal Madar 48.90 303 P **P 14 54 13.6 +1.0**
SNR=7.3
SMDO Samad 49.24 304 P **P 14 54 16.2 +1.0**
SNR=15
BIDO Bidbid 49.37 304 P **P 14 54 17.4 +1.2**
SNR=19
CBIJ Chichi jima 49.55 50 LR LR 15 13 55.4
comp=Z,555nm,21.4s,baz=222,slow=34
BSY Bisya 49.81 303 P **P 14 54 20.7 +1.1**
SNR=16
HOQ Hoqain 50.07 304 P **P 14 54 22.7 +1.1**
SNR=14
ULHL Ulahol 50.23 336 P **P 14 54 22.9 +0.5**
SNR=76
RBK Rabkut 50.47 295 P **P 14 54 26.1 +1.5**
SNR=6.6
KZA Kyzart 50.50 335 P **P 14 54 25.4 +1.0**
SNR=182
ARQ Araqi 50.62 303 P **P 14 54 26.7 +0.9**
SNR=14
SONM Songino Array 50.69 5 P **P 14 54 26.4 +0.6**
comp=Z,354nm,0.8s,mb6.4,baz=183,slow=8.1,SNR=1105
SONM PcP PcP 14 55 42.6 +0.3
comp=Z,13nm,0.5s,baz=193,slow=4.5,SNR=11
SONM ScP ScP 14 59 34.2 +1.3
comp=Z,8.2nm,1.0s,baz=190,slow=3.3,SNR=6.8
SONM LR LR 15 18 41.9
comp=Z,2μm,18.1s,baz=186,slow=39
SONM Songino Array 50.69 5 P **P 14 54 26.4 +0.6**
SONM 14 55 42.6
ULN Ulaanbaatar 50.78 5 P **P 14 54 27.3 +0.9**
SNR=91
ULN Ulaanbaatar 50.78 5 *eP* **P 14 54 27.1 +0.7**
ULN pmax pmax
comp=Z,231nm,0.9s,mb6.2
ULN Ulaanbaatar 50.78 5 *eP* **P 14 54 27.1 +0.7**
comp=Z,230nm,0.9s,mb6.2
WHFO Wadi Hawf 51.00 296 P **P 14 54 29.4 +0.8**
SNR=8.2
TKM2 Tokmak 2 51.05 336 ⇑*i*P **P 14 54 28.9 +0.3**
TKM2 pmax pmax
comp=Z,250nm,0.8s,mb6.3
TKM2 Tokmak 2 51.05 336 P **P 14 54 29.2 +0.7**
SNR=188
TKM2 Tokmak 2 51.05 336 ⇑*i*P **P 14 54 28.9 +0.3**
comp=Z,250nm,0.8s,mb6.3
KBK Karagaybulak 51.10 335 P **P 14 54 30.1 +1.2**
SNR=100
JHJ Hachijo jima 2 51.14 42 LR LR 15 14 34.9
comp=Z,402nm,22.0s,baz=268,slow=34
AML Almayashu 51.21 334 P **P 14 54 30.7 +0.9**
SNR=23
AML Almayashu 51.21 334 ⇑*i*P **P 14 54 30.6 +0.9**
comp=Z,203nm,0.7s,mb6.3
ABTO Aybut 51.24 295 P **P 14 54 31.7 +1.2**
SNR=7.2
AAK Ala-Archa 51.27 335 P **P 14 54 31.0 +0.7**
SNR=62
CN2 Changchun 51.34 22 ⇑P **P 14 54 29.9 -0.8**
CN2 *e*XP sP 14 54 45.3 -10
CN2 *eS* **S** **15 01 48.0 +2.9**
CN2 AMB AMB
comp=Z,130nm,0.8s,mb6.0
CN2 AMB AMB
comp=Z,1μm,5.0s
CN2 LR LR
comp=N,8μm,17.0s
CN2 LR LR
comp=E,9μm,17.0s
CN2 LR LR
comp=Z,16μm,19.0s
FRU Bishkek 51.38 335 ⇑*i*P **P 14 54 31.0 -0.1**
FRU *i* 14 54 42.4
FRU *eS* **S** **15 01 48.0 +2.2**
FRU pmax pmax
comp=Z,1μm,2.8s,mb6.4
FRU smax
comp=N,500nm,3.4s
FRU MLR MLR
comp=Z,1μm,20.0s
CHMS Chumysh 51.46 335 P **P 14 54 31.8 +0.2**
SNR=76
ASHO Ashiyiah 51.58 305 P **P 14 54 33.6 +0.7**
SNR=12
HATD Hatta, Dubai 51.58 305 P **P 14 54 33.7 +0.8**
SNR=11
EKS2 Erkin-Say 51.60 334 P **P 14 54 33.5 +0.8**
SNR=27
EKS2 Erkin-Say 51.60 334 ⇑*i*P **P 14 54 33.4 +0.7**
comp=Z,495nm,0.8s,mb6.6
USP Ospenovka 51.79 335 P **P 14 54 34.4 +0.3**
SNR=75
MK31 Makanchi Array 52.15 344 *i* P **P 14 54 36.1 -0.6**
MKAR Makanchi Array 52.15 344 P **P 14 54 36.4 -0.3**
comp=Z,232nm,0.8s,mb6.3,baz=147,slow=7.8,SNR=892
MKAR S **S** **15 01 55.6 -0.5**
comp=Z,2.5nm,1.0s,baz=164,slow=11,SNR=3.6
MKAR LR LR 15 21 34.0
comp=Z,864nm,21.6s,baz=156,slow=42
MKAR PKPPKP 15 24 58.7
comp=Z,0.6nm,0.8s,baz=5.7,slow=1.4,SNR=4.4
MKAR Makanchi Array 52.15 344 P **P 14 54 36.4 -0.3**
MKAR S **S** **15 01 55.7 -0.5**
MKAR Makanchi Array 52.15 344 P **P 14 54 36.4 -0.3**
MKAR S **S** **15 01 55.6 -0.5**
MKAR LR LR 15 21 34.0
MKAR P'P' 15 24 58.7
MAJO Matsushiro 52.26 38 *eP* **P 14 54 36.5 -1.2**
MAT Matsushiro 52.26 38 P **P 14 54 37.1 -0.6**
MAT S **S** **15 02 06.0 +8.0**
MJAR Matsushiro Arr 52.26 38 P **P 14 54 36.8 -0.9**
comp=Z,31nm,0.7s,mb5.4,baz=204,slow=7.4,SNR=121
MJAR PcP PcP 14 55 48.6 +0.3
comp=Z,8.8nm,0.8s,baz=222,slow=3.6,SNR=2.6
MJAR pPcP 14 56 02.8
comp=Z,13nm,1.0s,baz=223,slow=3.8,SNR=4.8
MJAR ScP ScP 14 59 40.9 +0.9
comp=Z,9.9nm,1.0s,baz=225,slow=5.4,SNR=14
MJAR LR LR 15 16 46.7
comp=Z,500nm,21.2s,baz=230,slow=36
MJAR Matsushiro Arr 52.26 38 P **P 14 54 36.8 -0.9**
MJAR 14 55 48.6
EIDS Eidsvold 52.98 120 *eP* **P 14 54 38.0 -5.3**
comp=Z,188nm,0.9s,mb6.1
TOO Toolangi 53.33 136 *eP* **P 14 54 46.7 +1.0**
KK31 Karatay Array 53.41 332 *i* P **P 14 54 45.1 -1.0**
KK31 pmax pmax
comp=Z,10.0nm,0.3s,mb5.3
KK31 Karatay Array 53.41 332 *i* P **P 14 54 45.2 -0.9**
VLA Vladivostok 53.52 28 *i* P **P 14 54 45.1 -1.8**
VLA *i* *PP pP 14 54 59.4 -4.5
VLA *e* 14 55 50.1
VLA pmax pmax
comp=Z,189nm,1.8s,mb5.8
VLA MLR MLR
comp=Z,900nm,18.0s
VLA Vladivostok 53.52 28 *eP* **P 14 54 46.0 -0.9**
MDJ Mudanjiang 53.68 25 P **P 14 54 47.8 -0.2**
MDJ AP pP 14 54 56.5 -8.5
MDJ XP sP 14 55 00.6 -12
MDJ PP PP 14 56 51.4 +1.8
MDJ PCS PcS 14 59 51.8 -0.8
MDJ S **S** **15 02 19.8 +2.7**
MDJ AMB AMB
comp=Z,33nm,0.6s,mb5.5
MDJ AMB AMB
comp=Z,364nm,5.2s
MDJ LR LR
comp=N,781nm,21.6s
MDJ LR LR
comp=E,1μm,21.6s
MDJ LR LR
comp=Z,2μm,22.2s
MOY Mondy 54.31 360 *eP* **P 14 54 52.7 +0.2**
MOY pmax pmax
comp=Z,202nm,2.3s,mb5.7
HIA Hailar 54.37 15 ⇑*i*P **P 14 54 51.3 -1.7**
TLY Talaya 54.37 2*c i*P **P 14 54 53.6 +0.7**
TLY *e* pP 14 55 11.4 +1.5
TLY pmax pmax
comp=Z,251nm,0.9s,mb6.2
TLY MLR MLR
comp=Z,3μm,17.0s
TLY Talaya 54.37 2 ⇑*i*P **P 14 54 53.3 +0.4**
CAN Canberra 54.83 132 *eP* **P 14 54 55.7 -0.9**
IRK Irkutsk 54.96 2 ⇑*i*P **P 14 54 57.3 +0.1**
IRK pmax pmax
comp=Z,303nm,1.9s,mb6.0
CNB Canberra Magne 55.09 132 *eP* **P 14 54 58.4 -0.1**
CIT Chita 55.68 9 *eP* **P 14 55 02.4 0.0**
CIT *e* 14 55 13.6
CIT *e* 14 56 01.1
CIT pmax pmax
comp=Z,269nm,2.5s,mb5.8
KURK Kurchatov 56.74 343 P **P 14 55 09.8 -0.1**
SNR=93
KURK Kurchatov 56.74 343 P **P 14 55 09.1 -0.9**
comp=Z,7.9nm,0.7s,mb4.9,baz=160,slow=6.9,SNR=42
KURK S **S** **15 02 57.2 -0.5**
comp=Z,1.0nm,0.9s,baz=143,slow=16,SNR=3.3
KURK LR LR 15 22 55.8
comp=Z,956nm,18.8s,baz=170,slow=40
KURK PKPPKP 15 24 56.2
comp=Z,0.3nm,0.5s,baz=317,slow=2.1,SNR=4.2
KURK PKP2bc 15 25 13.4
comp=Z,1.0nm,0.7s,baz=338,slow=2.4,SNR=4.7
KURK Kurchatov 56.74 343 P **P 14 55 09.1 -0.8**
KURK S **S** **15 02 57.2 -0.5**
KURK pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KURK smax
comp=N,1.0nm,0.9s
KURK MLR MLR
comp=Z,956nm,18.8s
KURK pmax pmax
comp=Z,1.0nm,0.7s
KURK Kurchatov 56.74 343 *eP* **P 14 55 09.0 -0.9**
ABKT Ailbek 56.80 320 P **P 14 55 10.3 -0.4**
comp=Z,565nm,0.9s,mb6.6,SNR=28
ZAA0 Zalesovo Array 58.21 349 ⇑*i*P **P 14 55 19.8 -0.4**
ZALV Zalesovo Beam 58.21 349 P **P 14 55 19.8 -0.5**
comp=Z,891nm,0.8s,mb6.8,baz=160,slow=4.7,SNR=1893
ZALV S **S** **15 03 16.5 -0.5**
comp=Z,12nm,1.0s,baz=152,slow=9.5,SNR=12
ZALV LR LR 15 23 38.4
comp=Z,725nm,21.8s,baz=162,slow=39
ZALV PKPPKP 15 25 03.2
comp=Z,1.6nm,0.8s,baz=294,slow=1.5,SNR=4.5
ZALV Zalesovo Beam 58.21 349 P **P 14 55 19.8 -0.4**
ZALV S **S** **15 03 16.5 -0.4**
ZALV Zalesovo Beam 58.21 349 P **P 14 55 19.8 -0.5**
ZALV S **S** **15 03 16.5 -0.5**
ZALV LR LR 15 23 38.4
ZALV P'P' 15 25 03.2
KLR Kul'dur 58.27 23 ⇓*eP* **P 14 55 16.5 -4.2**
KLR *e* pP 14 55 29.0 -8.9
KLR pmax pmax
comp=E,62nm,1.6s
KLR pmax pmax
comp=Z,200nm,1.6s,mb5.9
ERM Erimo 58.69 36 *eP* **P 14 55 23.6 -0.2**
ERM pmax pmax
comp=Z,35nm,0.9s,mb5.4
ERM Erimo 58.69 36 *eP* **P 14 55 23.6 -0.2**
comp=Z,35nm,0.9s,mb5.4
HNR Honiara 58.81 99 P **P 14 55 22.9 -2.3**
comp=Z,208nm,0.8s,mb6.2,baz=163,slow=4.6,SNR=20
KRAR Krasnoyarsk 59.06 355*c i*P **P 14 55 25.8 -0.2**
KRAR pmax pmax
comp=Z,1μm,1.3s,mb6.7
NVS Novosibirsk 59.37 348 ⇑*i*P **P 14 55 26.9 -1.3**
NVS *eS* **S** **15 03 29.5 -2.4**
NVS *e* 15 05 08.8
NVS pmax pmax
comp=Z,290nm,1.0s,mb6.3
NVS pmax pmax
comp=N,234nm,1.3s
NVS pmax pmax
comp=E,117nm,1.0s
NVS smax
comp=N,54nm,1.9s
NVS smax
comp=E,48nm,1.3s
ASAJ Asahikawa 59.70 34 P **P 14 55 30.6 -0.1**
comp=E,40nm,0.4s,mb5.8,baz=241,slow=11,SNR=118
ASAJ Asahikawa 59.70 34 P **P 14 55 30.7 -0.1**
ASAJ pmax pmax
comp=Z,40nm,0.4s
BVA0 Borovoye Array 61.36 339 *i* P **P 14 55 40.5 -1.4**
BVA0 pmax pmax
comp=Z,32nm,0.8s,mb5.4
BVAR Borovoye Array 61.36 339 P **P 14 55 40.9 -1.0**
comp=Z,110nm,0.7s,mb6.0,baz=141,slow=7.6,SNR=183
BVAR PKPPKP 15 24 59.5
comp=Z,0.3nm,0.3s,baz=168,slow=1.3,SNR=3.9
BVAR LR LR 15 26 26.7
comp=Z,533nm,20.7s,baz=30,slow=40
BRVK Borovoye 61.43 339 P **P 14 55 41.6 -0.7**
SNR=42
BRVK Borovoye 61.43 339 *eP* **P 14 55 41.3 -1.0**
YSS Yuzh-Sakhalins 61.63 31α*i*P **P 14 55 43.8 0.0**
YSS *e**PP pP 14 55 55.7 -5.4
YSS *e**SP sP 14 56 02.0 -6.5
YSS *eS* **S** **15 04 03.0 +1.9**
YSS pmax pmax
comp=N,110nm,0.9s
YSS pmax pmax
comp=E,80nm,0.9s
YSS pmax pmax

comp=Z,330nm,0.9s,mb6.4
YSS MLR MLR
comp=N,300nm,16.0s
YSS MLR MLR
comp=E,500nm,16.0s
YSS MLR MLR
comp=Z,500nm,16.0s
YSS Yuzh-Sakhalins 61.63 31 *e*P **P 14 55 42.5 -1.3**
CLNS Chul'man 62.55 14 *e*P **P 14 55 49.0 -0.8**
CLNS *e**PP pP 14 55 56.4 -11
CLNS *e* 14 56 27.5
CLNS *e*S S 15 04 35.3 +23
CLNS *e* 15 05 37.4
CLNS *e*SS SS 15 08 15.9 -1.8
CLNS pmax pmax
comp=Z,104nm,1.0s,mb5.7
CLNS pmax pmax
comp=E,46nm,0.9s
CLNS pmax pmax
comp=N,51nm,0.9s
CLNS MLR MLR
comp=Z,3μm,18.0s
CLNS MLR MLR
comp=E,1μm,17.0s
CLNS MLR MLR
comp=N,2μm,18.0s
AB31 Akbulak array 62.91 331⇑ *e*P **P 14 55 51.1 -1.2**
KMBO Kilima Mbogo 63.83 270 P **P 14 56 00.1 +0.9**
comp=N,2.9nm,0.8s,mb4.2,baz=48,slow=11,SNR=7.9
KMBO LR LR 15 18 08.7
comp=N,979nm,22.0s,baz=297,slow=31
KMBO Kilima Mbogo 63.83 270 *e*P **P 14 56 00.3 +1.2**
MIR Mirnyy 63.83 184⇓ *i*P pP 14 56 14.0 -1.5
MIR *i* sP 14 56 22.0 -0.8
MIR *i* PcP 14 56 35.0 +1.6
MIR pmax pmax
comp=Z,200nm,1.8s,mb5.7
BHD Baghdad 64.40 309 *ex* x 14 55 56.0
BHD *ex* x 15 04 34.0
BHD *ex* x 15 04 57.0
AKTK Aktyubinsk 64.63 331 P **P 14 56 02.7 -0.9**
AKTK S **S 15 04 35.5 -2.9**
AKTO Aktyubinsk 64.63 331 P **P 14 56 02.7 -0.9**
comp=Z,105nm,1.0s,mb5.6,baz=129,slow=7.2,SNR=176
AKTO S **S 15 04 35.5 -2.9**
comp=Z,1.6nm,0.9s,baz=321,slow=21,SNR=6.2
DZM Mont Dzumac 66.11 113 *e*P **P 14 56 13.4 -0.4**
DZM Mont Dzumac 66.11 113⇑ *e*P **P 14 56 13.3 -0.5**
MAK Makhachkala 66.33 320 *e*P **P 14 56 10.8 -3.9**
MAK *i* *PP pP 14 56 26.9 -5.3
MAK *i* *SP sP 14 56 37.3 -2.3
MAK *e* 14 58 40.7
MAK *e*S S 15 04 54.6 -4.9
MAK *i* 15 05 17.5
MAK *i* 15 06 06.6
MAK pmax pmax
comp=Z,67nm,0.4s,mb5.8
MAK MLR MLR
comp=Z,524nm,20.0s
MSL Mosul 66.55 312 *ex* x 14 56 18.5
MSL *ex* x 14 56 34.0
MSL *ex* x 15 05 03.0
MSL *ex* x 15 05 30.0
HAKT HAKKARI 66.57 313⇑ *i*P **P 14 56 16.4 0.0**
GNI Garni 66.90 316 P **P 14 56 19.4 +1.0**
SNR=17
GNI Garni 66.90 316 P **P 14 56 18.7 +0.3**
comp=Z,25nm,0.8s,mb5.1,baz=313,slow=8.8,SNR=21
GNI Garni 66.90 316 *e*P **P 14 56 19.0 +0.5**
GNI pmax pmax
comp=Z,82nm,1.0s
GNI Garni 66.90 316 *e*P **P 14 56 19.0 +0.6**
comp=Z,82nm,1.0s,mb5.5
DGRG David-gareji 67.03 318 P **P 14 56 16.9 -2.4**
MTA Mtatsminda 67.53 318 P **P 14 56 22.7 +0.2**
TBLG Delisi 67.59 318 P **P 14 56 23.2 +0.4**
SVE Sverdlovsk 67.89 337⇓ *e*P **P 14 56 24.2 -0.1**
SVE *e*S S 15 05 18.5 +0.8
SVE pmax pmax
comp=Z,378nm,0.9s,mb6.2
GOR Gori 68.12 318 P **P 14 56 26.7 +0.6**
YAK Yakutsk 68.29 14*c* *i*P **P 14 56 25.5 -1.3**
YAK *e**PP pP 14 56 38.1 -6.3
YAK *e* 14 56 53.8
YAK *e* 14 58 57.6
YAK *e*S S 15 05 24.5 +2.1
YAK pmax pmax
comp=Z,500nm,0.9s,mb6.3
YAK pmax pmax
comp=E,98nm,1.2s
YAK pmax pmax
comp=N,126nm,1.1s
YAK pmax pmax
comp=N,78nm,2.8s
YAK pmax pmax
comp=Z,74nm,3.1s
YAK pmax pmax
comp=E,51nm,2.4s
YAK smax
comp=N,231μm,4.1s
YAK smax
comp=E,145μm,3.6s
YAK MLR MLR
comp=N,2μm,21.0s
YAK MLR MLR
comp=N,2μm,20.0s
YAK MLR MLR
comp=Z,3μm,20.0s
YAK Yakutsk 68.29 14 *e*P **P 14 56 25.6 -1.2**
ARU Arti 68.43 336*c* *i*P **P 14 56 26.9 -0.8**
ARU *e* 14 56 51.9
ARU *e*PPP 15 00 33.6
ARU *e*S S 15 05 24.6 +0.4
ARU *e*SS SS 15 09 46.0 -3.1
ARU pmax pmax
comp=Z,234nm,1.0s,mb6.0
ARU Arti 68.43 336 *e*P **P 14 56 27.0 -0.7**
ONI Oni 68.82 318 P **P 14 56 31.0 +0.6**
HOMI Horasan 68.84 315⇑ *i*P **P 14 56 31.1 +0.5**
ERZM Erzurum 69.17 315 *i* P **P 14 56 33.3 +0.6**
DRV Dumont d'Urvil 69.21 164 P pP 14 56 45.0 -5.0
DRV S S 15 05 42.0 +8.9
DRV R 15 18 00.0
ARTV Artvin 69.28 316⇑ *i*P **P 14 56 33.6 +0.3**
DIYA Diyarbakir 69.34 312⇑ *i*P **P 14 56 34.3 +0.6**
MAW Mawson 69.73 195 *e*P **P 14 56 36.6 +1.0**
comp=Z,7.4nm,1.6s,mb4.3
MAW *e* 14 56 48.7
MAW Mawson 69.73 195 P **P 14 56 37.1 +1.5**
comp=Z,5.3nm,0.8s,mb4.4,baz=21,slow=6.7,SNR=15
MAW LR LR 15 20 38.9
comp=Z,2μm,18.5s,baz=42,slow=30
MAW PKP2bc 15 24 37.7
comp=Z,8.8nm,1.0s,baz=245,slow=5.8,SNR=14
MAW Mawson 69.73 195 *e*P **P 14 56 36.6 +1.0**
MAW *e* 14 56 48.7
MAW pmax pmax
comp=Z,7.0nm,1.6s
KIV Kislovodsk 69.91 319 P **P 14 56 37.5 +0.4**
SNR=25
KIV Kislovodsk 69.91 319⇑ *e*P **P 14 56 36.7 -0.4**
KIV *e* pP 14 56 51.0 -3.8
KIV *i* 15 05 43.7
KIV pmax pmax
comp=Z,208nm,1.4s,mb5.8
KIV MLR MLR
comp=Z,400nm,24.0s
KIV Kislovodsk 69.91 319⇑ *i*P **P 14 56 37.1 0.0**
KIV Kislovodsk 69.91 319⇑ *e*P **P 14 56 36.8 -0.3**
ELZG Elazig 70.38 313⇑ *i*P **P 14 56 41.0 +0.8**
ATAB Bozova 70.54 311⇑ *i*P **P 14 56 41.9 +0.8**
MALT Malatya 70.72 312 *e*P **P 14 56 40.5 -1.8**
MALT pmax pmax
comp=Z,74nm,1.0s,mb5.5
MALT Malatya 70.72 312⇑ *i*P **P 14 56 40.4 -1.9**
MALT Malatya 70.72 312 *e*P **P 14 56 40.5 -1.7**
comp=Z,74nm,1.0s,mb5.5
SKR Severo-Kuril's 70.97 33 *e*P **P 14 56 41.6 -1.9**
SKR pmax pmax
comp=E,110nm,1.0s
SKR pmax pmax
comp=Z,600nm,1.0s,mb6.4
GZT Gaziantep 71.05 311⇑ *i*P **P 14 56 45.0 +0.7**
AKCD Akcadag 71.09 312⇑ *i*P **P 14 56 45.0 +0.5**

RCY Rachaya 71.22 307 *e*P **P 14 56 46.7 +1.3**
HWQ Hawqa 71.35 308⇓ *e*P **P 14 56 46.1 -0.1**
BHL Bhannes 71.48 307⇓ *e*P **P 14 56 46.8 -0.2**
SOC Sochi 71.72 318*c* *i*P **P 14 56 47.4 -0.8**
SOC *e**PP pP 14 57 02.0 -3.9
SOC *e* pP 14 57 04.9 -1.0
SOC *e**SP sP 14 57 09.1 -4.1
SOC *e*PPP 15 01 09.9
SOC *e*S S 15 06 01.6 -1.6
SOC *e**SS sS 15 06 28.8 -4.4
SOC *e* 15 06 47.5
SOC *e*SS SS 15 10 44.5 +4.2
SOC pmax pmax
comp=Z,123nm,0.8s,mb5.8
SOC pmax pmax
comp=Z,101nm,4.3s
SOC Sochi 71.72 318 *i* P **P 14 56 47.8 -0.4**
COBT Iskenderun 71.78 310⇑ *i*P **P 14 56 49.3 +0.6**
ANDN Andirin 72.04 311⇑ *i*P **P 14 56 50.5 +0.3**
LSZ Lusaka 72.77 255 LR LR 15 23 07.2
comp=Z,1μm,21.7s,baz=95,slow=31
LSZ Lusaka 72.77 255 *e*P **P 14 56 55.6 +0.6**
PEA0B Petropavlovsk- 73.02 32 *e*P **P 14 56 54.2 -1.5**
PETK Petropavlovsk- 73.02 32 P **P 14 56 55.1 -0.6**
comp=Z,56nm,0.7s,mb5.5,baz=326,slow=1.3,SNR=98
PETK LR LR 15 33 41.3
comp=Z,384nm,18.7s,baz=253,slow=40
MEST Erdemli 73.42 309⇑ *i*P **P 14 56 58.0 -0.4**
PET Petropavlovsk 73.48 32*a* *i*P **P 14 56 58.1 -0.3**
PET *e*S S 15 06 24.5 +1.6
PET *e*PS 15 07 01.4
PET pmax pmax
comp=Z,600nm,6.4s
PET pmax pmax
comp=Z,361nm,0.9s,mb6.2
PET pmax pmax
comp=Z,300nm,13.3s
PET MLR MLR
comp=Z,700nm,13.0s
PET MLR MLR
comp=Z,700nm,18.0s
PET Petropavlovsk 73.48 32⇑ *e*P **P 14 56 57.0 -1.4**
RPZ Rata Peaks 73.60 135 LR LR 15 28 28.2
comp=Z,738nm,20.5s,baz=283,slow=35
CSS Prodhromos 73.61 308 ⇑P **P 14 56 59.8 +0.2**
comp=Z,2.0nm,1.1s
CSS Prodhromos 73.61 308⇑ *i*P **P 14 56 59.8 +0.2**
comp=Z,109nm,0.9s,mb5.6
VRHR Novokhopersk 73.65 326 *e*P **P 14 56 58.7 -0.8**
VRHR *e*S S 15 06 21.8 -3.1
VRHR pmax pmax
comp=Z,280nm,0.7s,mb6.1
VRHR pmax pmax
comp=N,100nm,0.9s
VRHR pmax pmax
comp=E,230nm,1.0s
VRHR smax
comp=N,130nm,1.3s
VRHR smax
comp=Z,70nm,1.7s
VRHR smax
comp=E,90nm,1.4s
ANN Anapa 73.70 318 *e*P **P 14 56 59.0 -0.9**
ANN *e**PP pP 14 57 14.8 -2.9
ANN *e*S S 15 06 26.4 +0.7
ANN pmax pmax
comp=Z,47nm,1.4s,mb5.0
MAMC Mammari 73.76 308 P **P 14 57 01.5 +1.1**
CTKT Corum 74.14 314 *i* P **P 14 57 03.0 +0.5**
CDAG Cicekdag 74.14 312⇑ *i*P **P 14 57 01.6 -1.0**
ALFC Alevga 74.24 308 P **P 14 57 03.2 -0.1**
comp=Z,1.9nm,0.8s
PPCY Paphos 74.38 307 P **P 14 57 04.0 -0.1**
VSR Storozhevoye 75.10 325 *e*P **P 14 57 06.7 -1.2**
VSR *e*S S 15 06 38.1 -3.0
VSR pmax pmax
comp=N,30nm,0.8s
VSR pmax pmax
comp=Z,80nm,0.8s,mb5.5
VSR pmax pmax
comp=E,150nm,0.9s
VSR smax
comp=E,50nm,2.7s
VSR smax
comp=Z,8.0nm,3.0s
VSR smax
comp=N,30nm,1.3s
VOR Voronezh 75.30 325⇑ *i*P **P 14 57 08.0 -1.0**
VOR pmax pmax
comp=Z,500nm,1.4s,mb6.0
ANTO Ankara 75.37 312 P **P 14 57 09.6 -0.1**
SNR=16
ANTO Ankara 75.37 312⇑ *i*P **P 14 57 09.1 -0.6**
BALT Daday 75.42 314⇑ *i*P **P 14 57 10.0 0.0**
KDHN Kadinhani 75.51 311 *i* P **P 14 57 08.8 -1.7**
LBTB Lobatse 75.66 245 *e*P **P 14 57 12.1 +0.4**
LBTB pmax pmax
comp=Z,69nm,1.4s,mb5.2
LBTB Lobatse 75.66 245 *e*P **P 14 57 12.1 +0.4**
comp=Z,69nm,1.4s,mb5.2
SNZO South Karori 75.82 132 *e*P **P 14 57 12.2 -0.1**
comp=Z,105nm,1.2s,mb5.4
SIM Simferopol' 75.97 318*ce*P **P 14 57 12.7 -0.3**
SIM *e**PP pP 14 57 28.0 -2.9
SIM *e* 15 00 05.0
SIM pmax pmax
comp=Z,83nm,0.9s,mb5.5
SGKT Sivrigoynuk 76.11 313 *i* P **P 14 57 13.6 -0.3**
BOSA Boshof 76.21 241 P **P 14 57 15.3 +0.6**
comp=Z,2.3nm,0.5s,mb4.2,baz=86,slow=4.7,SNR=12
BOSA LR LR 15 27 31.8
comp=Z,671nm,18.1s,baz=87,slow=33
BOLV Bolvadin 76.44 311⇑ *i*P **P 14 57 15.2 -0.6**
TIXI Tiksi 76.53 9*c* *i*P **P 14 57 14.1 -1.5**
TIXI *e**PP pP 14 57 32.6 -0.9
TIXI *e*S S 15 06 51.0 -5.1
TIXI *e**SS sS 15 07 19.8 -6.6
TIXI pmax pmax
comp=E,10.0nm,0.5s
TIXI pmax pmax
comp=Z,229nm,1.0s,mb5.9
TIXI pmax pmax
comp=N,47nm,1.1s
TIXI MLR MLR
comp=Z,3μm,20.0s
TIXI Tiksi 76.53 9⇑ *e*P **P 14 57 14.1 -1.5**
ISP Isparta 76.55 310⇓ *i*P **P 14 57 15.0 -1.5**
ISP Isparta 76.55 310 ⇓P **P 14 57 15.0 -1.5**
TKTP Tekketepe 76.75 310⇑ *i*P **P 14 57 16.7 -0.9**
HENT Hendek 77.03 313 *i* P **P 14 57 18.0 -1.0**
URZ Urewera 77.25 128 LR LR 15 29 39.6
comp=Z,549nm,22.0s,baz=287,slow=34
SYO Syowa Base 77.42 199⇓ *e*P **P 14 57 21.4 +0.7**
MOS Moscow 77.79 329*c* *i*P **P 14 57 22.7 -0.3**
MOS *e* 14 57 33.7
MOS *e* pP 14 57 41.6 +0.7
MOS *e* 15 00 15.1
MOS *e*S S 15 07 06.9 -3.5
MOS pmax pmax
comp=Z,406nm,1.2s,mb6.0
MOS pmax pmax
comp=Z,600μm,1.5s
MOS Moscow 77.79 329 *e*P **P 14 57 21.0 -2.0**
ARG Arkhangelos 78.03 308 *e*P **P 14 57 24.8 0.0**
OBN Obninsk 78.10 328⇑ *i*P **P 14 57 24.4 -0.3**
OBN *i* pP 14 57 39.1 -3.5
OBN *i* pP 14 57 43.5 +0.9
OBN *i* 15 00 20.9
OBN *i* 15 07 13.0
OBN pmax pmax
comp=Z,408nm,1.4s,mb6.0
OBN MLR MLR
comp=Z,600nm,22.0s
OBN Obninsk 78.10 328⇑ *e*P **P 14 57 24.5 -0.2**
OBN LR LR
comp=Z,700nm,25.0s
AYDN Tasoluk 78.54 309⇑ *i*P **P 14 57 27.8 +0.2**
KARP Karpathos 78.66 307 *e*P **P 14 57 28.7 +0.5**
BDRM Kayabasi 78.75 308 *i* P **P 14 57 27.4 -1.4**
AKHS Akhisar 78.86 310⇑ *i*P **P 14 57 29.1 -0.2**
KDAG Bornova 79.17 310 *i*P **P 14 57 31.1 +0.1**
TLCR 79.64 317 P **P 14 57 33.6 +0.2**
TIRR Tirgusor 79.73 316⇑ *i*P **P 14 57 33.6 -0.3**
TIRR Tirgusor 79.73 316 P **P 14 57 34.0 +0.1**

NPS Neapolis 79.84 306 *e*P **P 14 57 35.2 +0.5**
KIS Kishinev 80.10 319⇑ *i*P **P 14 57 35.0 -0.8**
KIS *e* pP 14 57 50.0 -3.8
KIS pmax pmax
comp=Z,200nm,2.0s,mb5.6
KIS Kishinev 80.10 319⇑ *i*P **P 14 57 35.0 -0.8**
comp=Z,800nm,2.0s,mb6.2
PRK Paraskevi 80.11 310 *e*P **P 14 57 35.6 -0.5**
PRK Paraskevi 80.11 310 *e*P **P 14 57 35.8 -0.3**
PRD Provadia 80.14 315 P **P 14 57 35.9 -0.2**
SANT Santorini 80.17 307 *e*P **P 14 57 35.8 -0.6**
APE Apeiranthos 80.25 308⇓ *i*P **P 14 57 36.5 -0.4**
APE Apeiranthos 80.25 308 ⇓P **P 14 57 36.5 -0.4**
SUR Sutherland 80.28 238 *e*P **P 14 57 40.1 +2.9**
comp=Z,157nm,1.4s,mb5.7
ALN Alexandroupoli 80.62 312 *e*P **P 14 57 38.4 -0.4**
AKASG Malin Array Be 80.83 322 P **P 14 57 38.8 -0.9**
comp=Z,26nm,0.9s,mb5.1,baz=86,slow=4.2,SNR=94
AKASG PP PP 15 00 41.6 -3.1
comp=Z,7.5nm,0.8s,baz=93,slow=6.7,SNR=5.6
AKASG LR LR 15 37 06.1
comp=Z,319nm,21.7s,baz=110,slow=38
AKASG Malin Array Be 80.83 322 *i* P **P 14 57 38.7 -1.0**
AKASG pmax pmax
comp=Z,26nm,0.9s
KIEV Kiev 80.84 322 *e*P **P 14 57 38.6 -1.1**
KIEV pmax pmax
comp=Z,52nm,1.1s,mb5.3
KIEV Kiev 80.84 322 *e*P **P 14 57 38.6 -1.1**
comp=Z,52nm,1.1s,mb5.3
LIA Limnos Island 81.06 311 *e*P **P 14 57 40.1 -1.1**
LIA Limnos Island 81.06 311 *e*P **P 14 57 40.7 -0.5**
LOS Limnos 81.15 311 *e*P **P 14 57 41.1 -0.5**
VRI Vrincioaia 81.22 317⇑ *i*P **P 14 57 42.6 +0.7**
VRI Vrincioaia 81.22 317 P **P 14 57 42.6 +0.8**
KDZ Kurdzhali 81.24 313 P **P 14 57 41.8 -0.3**
PLOR Plostina 81.27 317⇓ *i*P **P 14 57 43.0 +0.9**
MLR Muntele Rosu 81.67 317⇓ *i*P **P 14 57 44.8 +0.5**
MLR Muntele Rosu 81.67 317 P **P 14 57 44.7 +0.5**
ZIMR 81.69 315 P **P 14 57 44.8 +0.4**
PTL Penteli 81.73 309 *e*P **P 14 57 44.0 -0.7**
RZN Rozhen 81.76 313 P **P 14 57 44.6 -0.2**
OUR Ouranopolis 82.05 311 *e*P **P 14 57 45.8 -0.6**
DID Didima 82.13 308 *e*P **P 14 57 45.4 -1.5**
PAIG Paliouri 82.20 311 *e*P **P 14 57 46.7 -0.4**
SBA Scott Base 82.21 169 *e*P **P 14 57 47.6 +1.1**
SBA pmax pmax
comp=Z,293nm,1.9s,mb5.8
SBA Scott Base 82.21 169 *e*P **P 14 57 47.6 +1.1**
comp=Z,293nm,1.9s,mb5.8
VLI Veliai 82.23 307 *e*P **P 14 57 44.1 -3.3**
VOIR 82.28 316 P **P 14 57 47.4 0.0**
NVR Nevrokopi 82.33 312 *e*P **P 14 57 47.3 -0.5**
PGB Panagyurishte 82.33 313 P **P 14 57 47.3 -0.5**
LTK Loutraki 82.42 309 *e*P **P 14 57 46.8 -1.5**
PLG Polygyros 82.46 311 *e*P **P 14 57 48.0 -0.5**
PLG Polygyros 82.46 311 *e*P **P 14 57 47.9 -0.6**
XOR Xorichti 82.48 310 *e*P **P 14 57 47.5 -1.2**
LKR Lokris 82.50 309 *e*P **P 14 57 47.1 -1.6**
LKR Lokris 82.50 309 *e*P **P 14 57 47.2 -1.6**
SOH Sokhos 82.61 312 *e*P **P 14 57 48.3 -1.0**
BURAR Bucovina Array 82.62 319⇓ *i*P **P 14 57 50.2 +1.0**
BURAR Bucovina Array 82.62 319 ⇓P **P 14 57 50.2 +1.0**
BUR08 Bucovina Ar. S 82.64 319⇑ *i*P **P 14 57 50.2 +0.9**
HORT Hortiatis 82.76 311 *e*P **P 14 57 49.2 -0.8**
VLX Vlachokerasia 82.78 308 *e*P **P 14 57 49.6 -0.6**
THE Thessaloniki 82.87 311 *e*P **P 14 57 49.5 -1.1**
PUL Pulkovo 82.90 331⇑ *e*P **P 14 57 50.8 +0.5**
TSUM Tsumeb 82.95 251 *e*P **P 14 57 51.0 -0.4**
comp=Z,24nm,1.1s,mb4.9
KKB Krupnik 82.99 313 P **P 14 57 50.6 -0.6**
VTS Vitosha 83.03 313⇓ *i*P **P 14 57 51.1 -0.3**
VTS Vitosha 83.03 313 P **P 14 57 51.3 -0.1**
VTS Vitosha 83.03 313 P **P 14 57 51.3 -0.1**
AGG Agios Georgios 83.08 310 *e*P **P 14 57 49.5 -2.3**
ITM Ithomi 83.11 308 *e*P **P 14 57 51.5 -0.4**
LIT Litokhoron 83.14 311 *e*P **P 14 57 51.2 -0.8**
VAY Valandovo 83.28 312⇑ *i*P **P 14 57 51.3 -1.4**
GRG Griva 83.34 312 *e*P **P 14 57 52.4 -0.7**
THL Klokotos Trika 83.41 310 *e*P **P 14 57 51.7 -1.8**
THL Klokotos Trika 83.41 310 *e*P **P 14 57 51.7 -1.7**
JOF Joensuu 83.46 334 *e*p **P 14 57 51.8 -1.3**
comp=Z,91nm,0.9s,mb5.6
JOF Joensuu 83.46 334 *e*P **P 14 57 51.8 -1.3**
JOF pmax pmax
comp=Z,91nm,0.9s,mb5.6
EVR Evrytania 83.47 310 *e*P **P 14 57 53.2 -0.5**
IDID Didziasalis 83.49 326 *e*P **P 14 57 54.0 +0.5**
BILL Bilibino 83.58 20*c* *i*P **P 14 57 52.6 -1.1**
BILL pmax pmax
comp=Z,46nm,1.0s,mb5.3
BILL MLR MLR
comp=Z,400nm,21.0s
BILL Bilibino 83.58 20⇑ *i*P **P 14 57 52.7 -1.0**
RLS Riolos of Patr 83.60 309 *e*P **P 14 57 54.8 +0.4**
GZR Gura Zlata 83.84 316⇑ *i*P **P 14 57 56.4 +0.9**
GZR Gura Zlata 83.84 316 P **P 14 57 56.0 +0.5**
LVV L'vov 83.85 321 *e*P **P 14 57 55.4 -0.1**
LVZ Lovozero 83.96 340⇑ *e*P **P 14 57 54.8 -0.8**
LVZ pmax pmax
comp=Z,114nm,1.0s,mb5.7
LVZ Lovozero 83.96 340⇑ *e*P **P 14 57 54.9 -0.7**
FNA Florina 84.08 311 *e*P **P 14 57 55.6 -1.3**
DRGR 84.14 317⇑ *i*P **P 14 57 57.5 +0.5**
DRGR 84.14 317 P **P 14 57 57.6 +0.6**
SKO Skopje 84.22 312⇓ *e*P **P 14 57 55.6 -1.9**
KRUS Krusevo 84.27 312⇑ *i*P **P 14 57 57.3 -0.5**
APA Apatity 84.27 339⇓ *i*P **P 14 57 56.5 -0.7**
APA *i* pP 14 58 16.2 +0.8
APA pmax pmax
comp=Z,100nm,1.0s,mb5.6
APA pmax pmax
comp=Z,2μm,5.0s
APA MLR MLR
comp=Z,2μm,26.0s
VSU Vasula 84.30 329⇑ *i*P **P 14 57 57.4 -0.1**
JAN Janina 84.31 310 *e*P **P 14 57 58.1 +0.1**
OHR Ohrid 84.56 312⇑ *i*P **P 14 57 57.0 -2.3**
KWP Kalwaria 84.66 320 *e*P **P 14 58 00.0 +0.5**
KWP Kalwaria 84.66 320 *e*P **P 14 58 00.0 +0.4**
BZS Buzias 84.68 316⇓ *i*P **P 14 58 00.0 +0.2**
BZS Buzias 84.68 316 P **P 14 57 59.9 +0.1**
IGT Igoumenitsa 84.69 310 *e*P **P 14 58 00.2 +0.2**
UZH Uzhgorod 84.75 319⇓ *i*P **P 14 58 00.0 0.0**
UZH *e*S S 15 08 23.0 +0.3
KOLS Kolonicke sedl 84.81 319 *e*P **P 14 58 01.3 +1.0**
KOLS *e*sP sP 14 58 21.4 -4.3
AMKA Amchitka 84.87 38 *e*P **P 14 57 59.6 -1.0**
comp=Z,30nm,0.9s,mb5.2
KEK Kerkira 85.12 310 *e*P **P 14 58 01.9 -0.2**
SUW Suwalki 85.22 325 *i* P **P 14 58 02.2 -0.1**
SUW Suwalki 85.22 325⇑ *i*P **P 14 58 02.2 0.0**
CRVS Cervenica-Dubn 85.33 319 *e*P **P 14 58 03.2 +0.2**
KAF Kangasniemi 85.44 333 *e*p **P 14 58 01.7 -1.5**
comp=Z,95nm,0.9s,mb5.7,baz=102,slow=4.9
KAF Kangasniemi 85.44 333 *e*P **P 14 58 01.7 -1.5**
KAF pmax pmax
comp=Z,95nm,0.9s,mb5.7
STHS Stebnicka Huta 85.56 320 *e*P **P 14 58 04.9 +0.8**
STHS *e* pP 14 58 24.8 +2.5
STHS pmax pmax
comp=Z,48nm,0.9s,mb5.4
STHS Stebnicka Huta 85.56 320 *e*P **P 14 58 04.8 +0.7**
STHS *e*sP sP 14 58 24.8 -4.6
STHS Stebnicka Huta 85.56 320 *e*P **P 14 58 04.9 +0.8**
comp=Z,48nm,0.9s,mb5.4
STHS *e* pP 14 58 24.8 +2.5
KECS Kecovo 85.91 319 *i* P **P 14 58 06.0 +0.2**
KECS *e* pP 14 58 25.9 +1.9
KECS pmax pmax
comp=Z,22nm,1.0s,mb5.0
KECS Kecovo 85.91 319 *i* P **P 14 58 06.0 +0.2**
comp=Z,22nm,1.0s,mb5.0
KECS *e* pP 14 58 25.9 +1.9
NIE Niedzica 86.16 320 *e*P **P 14 58 07.8 +0.8**
PSZ Piszkesteto 86.21 318⇑ *i*P **P 14 58 07.6 +0.3**
PSZ Piszkesteto 86.21 318 P **P 14 58 07.8 +0.5**
OJC Ojcow 86.61 320 *e*P **P 14 58 08.5 -0.7**
PKSM Moragy 86.82 316 P **P 14 58 10.5 +0.1**
VYHS Vyhne 86.99 319 *e*P **P 14 58 11.1 0.0**
VYHS *e* pP 14 58 31.2 +1.8
VYHS pmax pmax

comp=Z,14nm,1.5s,mb4.7
VYHS Vyhne 86.99 319 *e*P **P** **14 58 11.1 0.0**
comp=Z,14nm,1.5s,mb4.7
VYHS *e* pP 14 58 31.2 +1.8
NVL N'lazarevskaya 87.08 199 P **P** **14 58 13.2 +2.1**
NVL *e* pP 14 58 28.1 -1.3
NVL pmax pmax
comp=Z,13nm,1.1s,mb4.8
QSPA South Pole Qui 87.11 180 PKKP PKKPbc 15 16 01.1 -5.2
comp=Z,3.0nm,0.7s,baz=184,slow=2.0,SNR=10
QSPA PKPPKP 15 24 01.8
comp=Z,2.4nm,1.0s,baz=255,slow=1.0,SNR=4.7
QSPA LR LR 15 31 39.5
comp=Z,852nm,18.2s,baz=316,slow=32
MAIT Maitri 87.11 199 *e*P **P** **14 58 18.8 +7.5**
KEV Kevo 87.20 340 *e*p **P** **14 58 10.1 -1.6**
comp=Z,92nm,0.9s,mb5.7
KEV Kevo 87.20 340 *e*P **P** **14 58 10.1 -1.6**
KEV pmax pmax
comp=Z,92nm,0.9s,mb5.7
KOLL Kolacno 87.29 319 *e*P **P** **14 58 12.6 0.0**
TIP Timpagrande 87.40 309⇑ *i*P **P** **14 58 14.0 +0.7**
comp=Z,64nm,1.3s,mb5.4
OKC Ostrava-Krasne 87.61 320 *e*P **P** **14 58 14.5 +0.4**
OKC *ex* x 14 58 29.4
RAC Raciborz 87.62 320 *e*P **P** **14 58 15.1 +1.0**
ARCES ARCESS Array B 87.65 340 P **P** **14 58 13.9 0.0**
comp=Z,99nm,0.9s,mb5.9,baz=101,slow=5.1,SNR=112
ARCES PP PP 15 01 39.6 -0.2
comp=Z,20nm,0.9s,baz=88,slow=8.6,SNR=6.8
ARCES LR LR 15 41 08.9
comp=Z,552nm,21.4s,baz=111,slow=38
ARCES ARCESS Array B 87.65 340 P **P** **14 58 13.9 +0.1**
ARCES 15 01 39.6
ORI Oriolo Calabro 87.72 310 P **P** **14 58 16.1 +1.2**
ORI pmax pmax
comp=Z,315nm,1.5s,mb6.1
ORI Oriolo Calabro 87.72 310 P **P** **14 58 16.1 +1.2**
comp=Z,315nm,1.5s,mb6.1
SOI Samo 87.84 308 P **P** **14 58 16.0 +0.5**
MORC Moravsky Berou 88.00 320⇑ *i*P **P** **14 58 16.6 +0.7**
MORC Moravsky Berou 88.00 320 P **P** **14 58 16.7 +0.8**
MODS Modra-Piesok 88.01 318 *i* P **P** **14 58 16.7 +0.7**
MODS *es*P sP 14 58 35.8 -5.6
PTRP Pietrapertosa 88.06 311 P **P** **14 58 17.8 +1.3**
comp=Z,116nm,1.2s,mb5.8
ZST Bratislava 88.10 318 *e*P **P** **14 58 17.4 +0.9**
ZST *e* pP 14 58 36.6 +1.9
ZST pmax pmax
comp=Z,47nm,0.9s,mb5.5
ZST Bratislava 88.10 318 *e*P **P** **14 58 17.4 +0.9**
comp=Z,47nm,0.9s,mb5.5
ZST *e* pP 14 58 36.6 +1.9
SCLL Scilla 88.12 308 P **P** **14 58 17.4 +0.6**
CUC Castrocucco 88.20 310 *e*P **P** **14 58 16.6 -0.5**
comp=Z,94nm,1.3s,mb5.7
FGMS Monte Sant'Ang 88.25 312 P **P** **14 58 17.6 +0.3**
RGNG Rignano Grg 88.53 312 P **P** **14 58 18.9 +0.3**
FG4 Candela 88.53 311 P **P** **14 58 19.6 +1.0**
VRAC Vranov 88.56 319⇑ *i*P **P** **14 58 19.0 +0.4**
VRAC Vranov 88.56 319 P **P** **14 58 19.1 +0.5**
GKP Gorka Klasztor 88.59 323 *e*P **P** **14 58 19.0 +0.3**
GKP Gorka Klasztor 88.59 323⇑ *e*P **P** **14 58 19.0 +0.4**
FG5 Orsara di Pugl 88.73 311 P **P** **14 58 20.6 +1.0**
DPC Dobruska-Polom 88.84 320 *e*P **P** **14 58 21.1 +1.2**
DPC *ex* x 14 58 36.9
FG2 Serracapriola 88.85 312 P **P** **14 58 20.7 +0.5**
CSSN Cassano Irpino 88.88 311 P **P** **14 58 20.6 +0.3**
comp=Z,14nm,1.0s,mb5.0
CONA Conrad Observa 88.90 318⇑ *i*P **P** **14 58 20.4 +0.2**
comp=Z,24nm,1.0s,mb5.2,SNR=14
CSNA Conrad Observa 88.91 318⇑ *i*P **P** **14 58 20.4 +0.2**
comp=Z,22nm,1.0s,mb5.2
KSP Ksiaz 88.91 321 *e*P **P** **14 58 21.1 +1.0**
KSP Ksiaz 88.91 321⇑ *e*P **P** **14 58 21.1 +0.9**
KSP *ep*P pP 14 58 36.0 -2.5
CIGN Sant'Elia a Pi 89.03 312 P **P** **14 58 21.2 +0.2**
UPC Upice 89.05 320 *e*P **P** **14 58 21.7 +0.8**
PSB1 Pescosannita 89.07 311 P **P** **14 58 20.8 -0.4**
ARSA Arzberg 89.07 317⇑ *i*P **P** **14 58 21.5 +0.4**
comp=Z,80nm,1.6s,mb5.5,SNR=32
ARSA Arzberg 89.07 317⇑ *i*PcP **P** **14 58 21.5 +0.4**
comp=Z,80nm,1.6s,mb5.5,SNR=32
BOJS Bojanci 89.10 315 *i* P **P** **14 58 21.8 +0.5**
BOJS *ep*P pP 14 58 36.2 -3.3
TREC Trest 89.28 319 *e*P **P** **14 58 22.5 +0.5**
TREC *ex* x 14 58 38.4
PERS Pernice 89.29 317 *i* P **P** **14 58 22.5 +0.4**
PERS *i* pP pP 14 58 42.1 +1.7
SOKA Soboth 89.35 317⇑ *i*P **P** **14 58 22.9 +0.6**
comp=Z,77nm,1.0s,mb5.7
SOKA Soboth 89.35 317⇑ *i*PcP **P** **14 58 22.9 +0.6**
comp=Z,77nm,1.0s,mb5.7
CSLB Castelbuono 89.40 308 P **P** **14 58 22.6 -0.2**
SGG Gregorio Mates 89.41 311 P **P** **14 58 22.3 -0.5**
VISS Visnje 89.42 316 *i* P **P** **14 58 23.1 +0.4**
VISS *ep*P pP 14 58 38.5 -2.4
MIDA Miranda 89.52 312 P **P** **14 58 23.2 -0.1**
comp=Z,63nm,1.0s,mb5.7
RNI2 Rionero Sannit 89.60 312 P **P** **14 58 24.1 +0.5**
comp=Z,204nm,1.8s,mb6.0
LJU Ljubljana 89.65 316 *e*P **P** **14 58 24.5 +0.7**
OBKA Obir 89.67 316⇑ *i*P **P** **14 58 24.5 +0.6**
comp=Z,74nm,1.6s,mb5.6,SNR=18
OBKA Obir 89.67 316⇑ *i*PcP **P** **14 58 24.5 +0.6**
comp=Z,74nm,1.6s,mb5.6,SNR=18
RFI Roccamonfina 89.69 311 P **P** **14 58 24.0 -0.1**
comp=Z,16nm,1.6s,mb4.9
SDI San Donato 89.85 312 P **P** **14 58 24.5 -0.3**
SDI pmax pmax
comp=Z,15nm,1.0s,mb5.1
SDI San Donato 89.85 312 P **P** **14 58 24.5 -0.3**
comp=Z,15nm,1.0s,mb5.1
PRU Pruhonice 89.95 320 *e*P **P** **14 58 25.6 +0.5**
PRU *ex* x 14 58 45.2
PRU AMS AMS 15 45 20.0
comp=Z,500nm,15.0s
JAVS Javornik 89.96 316 *i* P **P** **14 58 25.4 +0.1**
JAVS *ep*P pP 14 58 40.1 -3.4
MOA Molln 89.97 318⇑ *i*P **P** **14 58 25.3 +0.1**
comp=Z,29nm,1.0s,mb5.4,SNR=14
PVCC Panska Ves 89.97 320 *e*P **P** **14 58 26.0 +0.8**
PVCC *ex* x 14 58 45.6
PVCC AMS AMS 15 45 00.0
comp=Z,600nm,16.6s
VVLD Villa Vallelon 90.00 312 P **P** **14 58 25.3 -0.2**
comp=Z,53nm,1.2s,mb5.5
VOY Vojsko 90.09 316 *e*P **P** **14 58 26.2 +0.4**
VOY *e* 14 58 30.2
VOY *e* pP 14 58 42.3 -1.8
VOY *e* pP 14 58 45.7 +1.6
VOY *e* 14 58 57.3
AQU L'Aquila 90.20 312 P **P** **14 58 27.0 +0.6**
AQU pmax pmax
comp=Z,42nm,1.1s,mb5.5
AQU L'Aquila 90.20 312 P **P** **14 58 27.0 +0.6**
comp=Z,42nm,1.1s,mb5.5
MYKA Terra Mystica 90.31 316⇑ *i*P **P** **14 58 27.1 +0.3**
comp=Z,175nm,1.6s,mb5.9
MYKA Terra Mystica 90.31 316⇑ *i*PcP **P** **14 58 27.1 +0.3**
comp=Z,175nm,1.6s,mb5.9
BRG Berggiesshubel 90.40 321⇑ *i*P **P** **14 58 27.9 +0.8**
BRG *i* pP 14 58 47.0 +1.6
BRG 15 02 02.7
BRG pmax pmax
comp=Z,40nm,1.0s,mb5.5
BRG MLR MLR
comp=Z,420nm,19.1s
BRG Berggiesshubel 90.40 321 *e*P **P** **14 58 27.9 +0.8**
comp=Z,66nm,1.0s,mb5.7
BRG *ep*P pP 14 58 47.4 +1.9
BRG Berggiesshubel 90.40 321⇑ *e*P **P** **14 58 27.9 +0.8**
comp=Z,66nm,1.0s,mb5.7
BRG *i* pP 14 58 47.0 +1.6
comp=Z,62nm,1.0s
BRG PP PP 15 02 02.7 +0.5
comp=Z,12nm,1.1s
BRG
comp=N,463nm,17.4s
BRG
comp=E,414nm,19.1s
BRG
comp=Z,695nm,19.1s
BRG Berggiesshubel 90.40 321⇑ *i*P **P** **14 58 27.9 +0.8**
comp=Z,40nm,1.0s,mb5.5
BRG *i* pP 14 58 47.0 +1.6
BRG PP PP 15 02 02.7 +0.5
BRG LR LR
comp=Z,420nm,19.1s
GEC2 GERESS Array S 90.41 319 *e*P **P** **14 58 28.0 +0.7**
GEC2 *e*PP pP 14 58 47.0 +1.4
GEC2 pmax pmax
comp=Z,202nm,1.7s,mb6.0
GEC2 GERESS Array S 90.41 319 *e*P **P** **14 58 28.0 +0.7**
comp=Z,202nm,1.7s,mb6.0
GEC2 *ep*P pP 14 58 47.0 +1.4
GERES GERESS Array B 90.41 319 P **P** **14 58 27.9 +0.6**
comp=Z,24nm,0.8s,mb5.4,baz=92,slow=4.5,SNR=128
GERES PP PP 15 02 02.4 0.0
comp=Z,2.8nm,0.9s,baz=93,slow=5.9,SNR=4.3
CING Cingoli 90.42 313 P **P** **14 58 28.0 +0.6**
comp=Z,48nm,1.8s,mb5.3
PTCC Patocco-Chiusa 90.49 316 P **P** **14 58 27.9 +0.2**
comp=Z,4.6nm,0.6s,mb4.8
KHC Kasperske Hory 90.51 319 *e*P **P** **14 58 28.1 +0.4**
KHC *ex* x 14 58 47.9
KHC AMS AMS 15 48 00.0
comp=Z,600nm,25.0s
KBA Koelnbreinsper 90.54 317‖ *i*P **P** **14 58 27.7 -0.2**
comp=Z,47nm,1.6s,mb5.4,SNR=9.9
GMNA Gemona 90.56 316 P **P** **14 58 28.4 +0.4**
comp=Z,60nm,0.9s,mb5.7
SNTG Esanatoglia 90.59 313 P **P** **14 58 28.1 -0.2**
comp=Z,7.1nm,0.6s,mb5.0
RDP Rocca di Papa 90.67 312 P **P** **14 58 28.7 0.0**
FSSB Fossombrone 90.74 314 P **P** **14 58 29.7 +0.8**
comp=Z,42nm,0.8s,mb5.6
FBE Freiberg 90.77 321 *e*P **P** **14 58 29.6 +0.7**
comp=Z,82nm,1.1s,mb5.8
FBE *ep*P pP 14 58 49.3 +2.1
MURB Monte Urbino 90.90 313 P **P** **14 58 29.6 -0.1**
comp=Z,17nm,1.1s,mb5.1
RJOB Jochberg 90.95 318 *e*P **P** **14 58 29.6 -0.2**
comp=Z,34nm,1.0s,mb5.4
WET Wettzell 90.97 319 *e*P **P** **14 58 30.5 +0.6**
WET *e*PP pP 14 58 50.1 +1.9
WET *e* 15 02 06.2
WET pmax pmax
comp=Z,72nm,1.1s,mb5.7
WET Wettzell 90.97 319 *e*P **P** **14 58 30.5 +0.6**
comp=Z,72nm,1.1s,mb5.7
WET *ep*P pP 14 58 50.1 +1.9
WET *e*PP PP 15 02 06.2 -0.6
RSM Repubblica di 90.99 314 P **P** **14 58 31.1 +1.0**
RSM pmax pmax
comp=Z,71nm,1.6s,mb5.5
RSM Repubblica di 90.99 314 P **P** **14 58 31.1 +1.0**
comp=Z,70nm,1.6s,mb5.5
CLL Collm 91.02 321⇑ *i*P **P** **14 58 30.2 +0.2**
CLL *i* pP 14 58 49.6 +1.3
CLL *e*S S 15 09 22.0 -0.3
CLL pmax pmax
comp=Z,53nm,1.2s,mb5.5
CLL MLR MLR
comp=Z,500nm,21.0s
CLL Collm 91.02 321 *e*P **P** **14 58 30.3 +0.3**
comp=Z,54nm,1.2s,mb5.5
CLL *ep*P pP 14 58 49.9 +1.6
CLL Collm 91.02 321⇑ *i*P **P** **14 58 30.2 +0.2**
comp=Z,53nm,1.2s,mb5.5
CLL *i* x x 14 58 49.6
comp=Z,40nm,1.1s
CLL *e*PP PP 15 02 10.0 +2.9
CLL *e*S S 15 09 22.0 -0.3
CLL LmV 15 46 00.0
comp=Z,500nm,21.0s
CLL Collm 91.02 321⇑ *i*P **P** **14 58 30.2 +0.2**
comp=Z,53nm,1.2s,mb5.5
CLL *i* pP 14 58 49.6 +1.3
CLL *e*S S 15 09 22.0 -0.3
CLL LR LR
comp=Z,500nm,21.0s
ABTA Abfaltersbach 91.09 317⇑ *i*P **P** **14 58 30.2 -0.3**
comp=Z,34nm,1.1s,mb5.4,SNR=13
NKC Novy Kostel 91.31 320 *e*P **P** **14 58 31.9 +0.5**
NKC *ex* x 14 58 49.6
TANN Tannenbergstha 91.31 320 *e*P **P** **14 58 32.0 +0.6**
comp=Z,56nm,1.5s,mb5.5
WERN Wernitzgruen 91.36 320 *e*P **P** **14 58 32.4 +0.8**
comp=Z,35nm,1.1s,mb5.4
WERN *ep*P pP 14 58 51.9 +2.0
GUNZ Gunzen 91.39 320 *e*P **P** **14 58 32.5 +0.7**
comp=Z,47nm,1.1s,mb5.5
GUNZ *ep*P pP 14 58 52.1 +2.0
WERD Werda 91.41 320 *e*P **P** **14 58 32.4 +0.5**
comp=Z,44nm,1.2s,mb5.5
WERD *ep*P pP 14 58 52.1 +1.9
WERD *e*PP PP 15 02 08.8 -1.5
SFI Santa Sofia 91.42 314 P **P** **14 58 33.2 +1.1**
ROTZ Rotzenmuhle 91.44 320 *e*P **P** **14 58 33.1 +1.1**
comp=Z,50nm,1.2s,mb5.5
ROTZ *ep*P pP 14 58 52.8 +2.5
MANZ Manzenberg 91.52 320 *e*P **P** **14 58 33.4 +1.0**
comp=Z,95nm,1.2s,mb5.9
MANZ *ep*P pP 14 58 52.7 +2.0
CTI Castel Tesino 91.65 316 P **P** **14 58 33.8 +0.7**
SNAA Sanae 91.67 198 *e*P **P** **14 58 33.3 +0.6**
SNAA pmax pmax
comp=Z,8.0nm,1.0s
SNAA Sanae 91.67 198 *e*P **P** **14 58 33.2 +0.6**
comp=Z,7.7nm,1.0s,mb4.9
WTTA Wattenberg 91.71 317 *i* P **P** **14 58 33.3 -0.1**
comp=Z,54nm,0.8s,mb5.8,SNR=20
WATA Walderalm 91.76 317‖ *i*P **P** **14 58 33.3 -0.3**
comp=Z,21nm,0.7s,mb5.5,SNR=10
MOX Moxa 91.86 320 *e*P **P** **14 58 34.3 +0.4**
comp=Z,60nm,1.4s,mb5.6
MOX *e* pP 14 58 54.0 +1.7
MOX *e* 15 02 13.1
MOX Moxa 91.86 320 *e*P **P** **14 58 34.3 +0.4**
MOX *e* pP 14 58 54.0 +1.7
MOX *e* 15 02 13.1
MOX pmax pmax
comp=Z,60nm,1.4s,mb5.6
MOX Moxa 91.86 320 *e*P **P** **14 58 34.5 +0.6**
comp=Z,59nm,1.4s,mb5.6
MOX *ep*P pP 14 58 54.6 +2.3
MOX *e*PP PP 15 02 12.4 -1.4
FUR Furstenfeldbru 91.99 318 *e*P **P** **14 58 34.6 0.0**
FUR *e*PP pP 14 58 54.8 +1.9
FUR pmax pmax
comp=Z,48nm,1.1s,mb5.6
FUR Furstenfeldbru 91.99 318 *e*P **P** **14 58 34.6 0.0**
comp=Z,48nm,1.1s,mb5.6
FUR *ep*P pP 14 58 54.8 +1.9
MOTA Moosalm 92.08 317⇑ *i*P **P** **14 58 34.9 -0.1**
comp=Z,37nm,0.8s,mb5.7,SNR=17
GRA1 Grafenberg Arr 92.08 319 *e*P **P** **14 58 35.9 +0.9**
comp=Z,59nm,1.1s,mb5.7
GRA1 *ep*P pP 14 58 55.4 +2.1
GRF Grafenberg Arr 92.08 319 *e*P **P** **14 58 35.9 +0.9**
GRF *e*PP pP 14 58 55.4 +2.1
GRF pmax pmax
comp=Z,59nm,1.1s,mb5.7
GRF Grafenberg Arr 92.08 319 *e*P **P** **14 58 35.9 +0.9**
GRF *e*PP pP 14 58 55.4 +2.1
GRF pmax pmax
comp=Z,59nm,1.1s,mb5.7
GRF Grafenberg Arr 92.08 319 *e*P **P** **14 58 35.9 +0.9**
comp=Z,59nm,1.1s,mb5.7
GRF *ep*P pP 14 58 55.3 +2.0
GRF Grafenberg Arr 92.08 319 *e*P **P** **14 58 35.9 +0.9**
comp=Z,59nm,1.1s,mb5.7
GRF *ep*P pP 14 58 55.4 +2.1
NIKO Nikolski 92.29 37 *e*P **P** **14 58 34.5 -1.3**
comp=Z,186nm,0.9s,mb6.3
RETA Reutte 92.31 317⇑ *i*P **P** **14 58 36.2 +0.1**
comp=Z,43nm,0.8s,mb5.7,SNR=20
RETA Reutte 92.31 317⇑ *i*PcP PcP 14 58 36.2 -0.6
comp=Z,43nm,0.8s,SNR=20
FETA Feichten 92.32 317 *i* P **P** **14 58 36.5 +0.4**
comp=Z,31nm,0.9s,mb5.5,SNR=19
FETA Feichten 92.32 317 *i* PcP PcP 14 58 36.5 -0.3
comp=Z,31nm,0.9s,SNR=19
GSCL Gusciola 92.34 314 P **P** **14 58 37.1 +0.8**
NOA NORSAR Array B 92.42 331 P **P** **14 58 35.7 -0.6**
comp=Z,22nm,0.8s,mb5.4,baz=95,slow=5.0,SNR=48
NOA LR LR 15 44 54.6
comp=Z,542nm,19.2s,baz=80,slow=39
BRMO Bormio 92.55 316 P **P** **14 58 37.7 +0.4**
KBS Kingsbay 92.62 349⇑ *e*P **P** **14 58 36.5 -0.4**
CLZ Clausthal 92.68 322 *e*P **P** **14 58 38.2 +0.5**
CLZ *e**PP pP 14 58 57.7 +1.7
CLZ *e* 15 02 18.7
CLZ pmax pmax
comp=Z,44nm,1.1s,mb5.7
CLZ Clausthal 92.68 322 *e*P **P** **14 58 38.2 +0.5**
comp=Z,44nm,1.1s,mb5.7
CLZ *ep*P pP 14 58 57.7 +1.7
CLZ *e*PP PP 15 02 18.7 -1.5
BSEG Bad Segeberg 92.75 324 *e*P **P** **14 58 38.4 +0.4**
BSEG *e**PP pP 14 58 58.3 +2.0
BSEG pmax pmax
comp=Z,52nm,1.1s,mb5.8
BSEG Bad Segeberg 92.75 324 *e*P **P** **14 58 38.4 +0.4**
comp=Z,52nm,1.1s,mb5.8
BSEG *ep*P pP 14 58 58.3 +2.0
NRDL Niedersach Rie 92.85 322 *e*P **P** **14 58 39.1 +0.6**
comp=Z,48nm,1.1s,mb5.7
NRDL *ep*P pP 14 58 58.8 +2.0
UBBA Unterbreizbach 92.89 321 *e*P **P** **14 58 38.9 +0.2**
comp=Z,53nm,1.7s,mb5.6
DAVA Damuels 92.91 317⇑ *i*P **P** **14 58 39.4 +0.5**
comp=Z,63nm,1.0s,mb5.9,SNR=21
DAVA Damuels 92.91 317⇑ *i*PcP PcP 14 58 39.4 -0.1
comp=Z,63nm,1.0s,SNR=21
KEST Kesra 93.08 305 P **P** **14 58 41.5 +1.5**
comp=Z,12nm,1.0s,mb5.2,baz=90,slow=1.2,SNR=27
KEST LR LR 15 38 26.9
comp=Z,216nm,22.0s,baz=3.5,slow=34
KONO Kongsberg 93.21 329⇑ *e*P **P** **14 58 40.4 +0.4**
TUE Stuetta 93.26 316 *e*P **P** **14 58 40.1 -0.4**
comp=Z,18nm,1.0s,mb5.4
STU Stuttgart 93.39 319 *e*P **P** **14 58 41.6 +0.6**
STU pmax pmax
comp=Z,45nm,1.3s,mb5.6
STU Stuttgart 93.39 319 *e*P **P** **14 58 41.2 +0.2**
comp=Z,172nm,2.2s,mb6.0
STU Stuttgart 93.39 319 *e*P **P** **14 58 41.6 +0.5**
comp=Z,45nm,1.3s,mb5.6
PGF Pioggiola 93.46 312⇑ *i*P **P** **14 58 41.6 +0.1**
comp=Z,46nm,1.1s,mb5.4
PGF Pioggiola 93.46 312⇑ *i*P **P** **14 58 41.6 +0.1**
PGF pmax pmax
comp=Z,23nm,1.1s,mb5.4
PGF Pioggiola 93.46 312⇑ *i*P **P** **14 58 41.6 +0.1**
comp=Z,23nm,1.1s,mb5.4
TOD Tromm 93.65 319 *e*P **P** **14 58 42.0 -0.2**
SPAK Spaichingen-Ko 93.66 318 *e*P **P** **14 58 42.2 -0.1**
BFO Black Forest 93.96 318 *e*P **P** **14 58 43.5 -0.2**
BFO *e**PP pP 14 59 03.0 +1.0
BFO pmax pmax
comp=Z,21nm,1.0s,mb5.4
BFO Black Forest 93.96 318 *e*P **P** **14 58 43.5 -0.2**
comp=Z,21nm,1.0s,mb5.4
BFO *ep*P pP 14 59 03.0 +1.0
FIN Finale Ligure 94.05 314 P **P** **14 58 44.1 -0.1**
FELD Feldberg im Sc 94.18 318 *e*P **P** **14 58 43.8 -0.9**
IBBN Ibbenburen 94.29 322 *e*P **P** **14 58 45.3 +0.2**
comp=Z,47nm,1.1s,mb5.7
IBBN *ep*P pP 14 59 05.2 +1.8
LANF Langenberg 94.31 319 *e*P **P** **14 58 45.0 -0.3**
LIBD Limburg 94.45 318 *e*P **P** **14 58 46.4 +0.5**
ABH Alteburg 94.46 320 *e*P **P** **14 58 46.0 0.0**
SAOF Saorge 94.52 314 *e*P **P** **14 58 45.1 -1.3**
SBF Sospel 94.61 314⇑ *i*P **P** **14 58 46.5 -0.3**
comp=Z,68nm,1.2s,mb5.7
SBF Sospel 94.61 314⇑ *i*P **P** **14 58 46.5 -0.3**
SBF pmax pmax
comp=Z,34nm,1.2s,mb5.7
SBF Sospel 94.61 314⇑ *i*P **P** **14 58 46.5 -0.3**
comp=Z,34nm,1.2s,mb5.7
BUG Bochum--Univer 94.61 321 *e*P **P** **14 58 46.6 0.0**
comp=Z,36nm,1.2s,mb5.7
BUG *ep*P pP 14 59 07.0 +2.1
REVF Revere 94.66 313 *e*P **P** **14 58 46.5 -0.5**
CDF Champ du Feu 94.66 318⇑ *i*P **P** **14 58 46.5 -0.4**
comp=Z,30nm,1.1s,mb5.3
CDF Champ du Feu 94.66 318⇑ *i*P **P** **14 58 46.5 -0.4**
CDF pmax pmax
comp=Z,15nm,1.1s,mb5.3
CDF Champ du Feu 94.66 318⇑ *i*P **P** **14 58 46.5 -0.4**
comp=Z,15nm,1.1s,mb5.3
TOUF Mont Tournerai 94.74 314 *e*P **P** **14 58 46.7 -0.7**
ECH Echery 94.75 318 *e*P **P** **14 58 46.9 -0.4**
MOF Molkenrain 94.77 318 *e*P **P** **14 58 46.9 -0.5**
RUP Ruppelstein 94.78 319 *e*P **P** **14 58 47.4 0.0**
MVIF Mont Vial 94.81 314 *e*P **P** **14 58 46.4 -1.3**
HINF Hinterafield 94.96 318 *e*P **P** **14 58 47.5 -0.8**
LOMF Lomont 94.98 317 *e*P **P** **14 58 47.3 -1.1**
CALN Calern 95.01 313 *e*P **P** **14 58 48.3 -0.3**
LPG La Plagne 95.08 315⇑ *i*P **P** **14 58 49.0 +0.1**
comp=Z,26nm,0.8s,mb5.4
LPG La Plagne 95.08 315⇑ *i*P **P** **14 58 49.0 +0.1**
LPG pmax pmax
comp=Z,13nm,0.8s,mb5.4
LPG La Plagne 95.08 315⇑ *i*P **P** **14 58 49.0 +0.1**
comp=Z,13nm,0.8s,mb5.4
MBDF Montbardon 95.08 314 *e*P **P** **14 58 48.1 -0.8**
comp=Z,11nm,0.9s,mb5.0
MBDF Montbardon 95.08 314 *e*P **P** **14 58 48.1 -0.8**
MBDF pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
MBDF Montbardon 95.08 314 *e*P **P** **14 58 48.1 -0.8**
comp=Z,5.7nm,0.9s,mb5.0
LPL La Plagne 95.09 315⇑ *i*P **P** **14 58 49.0 +0.1**
comp=Z,30nm,0.8s,mb5.5
LPL La Plagne 95.09 315⇑ *i*P **P** **14 58 49.0 +0.1**
LPL pmax pmax
comp=Z,15nm,0.8s,mb5.5
LPL La Plagne 95.09 315⇑ *i*P **P** **14 58 49.0 +0.1**
comp=Z,15nm,0.8s,mb5.5
BNI Bardonecchia 95.14 315 *e*P **P** **14 58 48.3 -0.9**
BNI pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
BNI Bardonecchia 95.14 315 *e*P **P** **14 58 48.3 -0.9**
comp=Z,5.8nm,0.8s,mb5.1
FRF La Foret Royal 95.19 313⇑ *i*P **P** **14 58 49.3 -0.1**
comp=Z,34nm,1.0s,mb5.4
FRF La Foret Royal 95.19 313⇑ *i*P **P** **14 58 49.3 -0.1**
FRF pmax pmax
comp=Z,17nm,1.0s,mb5.4
FRF La Foret Royal 95.19 313⇑ *i*P **P** **14 58 49.3 -0.1**
comp=Z,17nm,1.0s,mb5.4
LMR La Mourre 95.29 313⇑ *i*P **P** **14 58 49.7 -0.2**
comp=Z,32nm,1.1s,mb5.3
LMR La Mourre 95.29 313⇑ *i*P **P** **14 58 49.7 -0.2**
LMR pmax pmax
comp=Z,16nm,1.1s,mb5.4
LMR La Mourre 95.29 313⇑ *i*P **P** **14 58 49.7 -0.2**
comp=Z,16nm,1.1s,mb5.4
HAU Haudompre 95.29 318⇑ *i*P **P** **14 58 49.4 -0.4**
comp=Z,41nm,0.8s,mb5.6
HAU *e*MLR MLR
comp=Z,460nm,21.8s
HAU Haudompre 95.29 318⇑ *i*P **P** **14 58 49.4 -0.4**
HAU pmax pmax
comp=Z,21nm,0.8s,mb5.6
HAU MLR MLR
comp=Z,460nm,21.8s
HAU Haudompre 95.29 318⇑ *i*P **P** **14 58 49.4 -0.4**
comp=Z,21nm,0.8s,mb5.6
HAU LR LR
comp=Z,460nm,21.8s
WLF Walferdange 95.37 319 P **P** **14 58 50.6 +0.5**
comp=Z,21nm,1.7s,mb5.3
MEM Membach 95.43 320 P **P** **14 58 50.3 0.0**
CABF La Chapelle 95.51 316⇑ *i*P **P** **14 58 50.9 +0.1**
comp=Z,40nm,1.1s,mb5.5
CABF La Chapelle 95.51 316⇑ *i*P **P** **14 58 50.9 +0.1**
CABF pmax pmax
comp=Z,20nm,1.1s,mb5.5
CABF La Chapelle 95.51 316⇑ *i*P **P** **14 58 50.9 +0.1**
comp=Z,20nm,1.1s,mb5.5
THEF They Montfort 95.53 318 *e*P **P** **14 58 50.2 -0.7**
ORIF Oris-en-Rattie 95.70 315⇑ *i*P **P** **14 58 51.7 -0.1**
comp=Z,21nm,1.0s,mb5.2
ORIF *e*MLR MLR
comp=Z,522nm,21.8s
ORIF Oris-en-Rattie 95.70 315⇑ *i*P **P** **14 58 51.7 -0.1**
ORIF pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
ORIF Oris-en-Rattie 95.70 315⇑ *i*P **P** **14 58 51.7 -0.1**
comp=Z,10nm,1.0s,mb5.2
BCLA Clavier 95.89 320 P **P** **14 58 52.2 -0.2**
comp=Z,10nm,1.4s,mb5.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SMRF	**Simiane la Rot**	**95.95**	**314**	⇑*i*P	**P**	**14 58 53.3**	**+0.4**
	comp=Z,11nm,1.0s,mb5.0						
SMRF	**Simiane la Rot**	**95.95**	**314**	⇑*i*P	**P**	**14 58 53.3**	**+0.4**
	comp=Z,11nm,1.0s,mb5.3						
MEZF	**Maizieres J'vi**	**96.14**	**318**	*e*P	**P**	**14 58 53.5**	**-0.2**
	comp=Z,26nm,0.8s,mb5.4						
MEZF	**Maizieres J'vi**	**96.14**	**318**	*e*P	**P**	**14 58 53.5**	**-0.2**
	comp=Z,26nm,0.8s,mb5.7						
GIVF	**Givet**	**96.21**	**320**	*e*P	**P**	**14 58 53.7**	**-0.2**
TAM	**Tamanrasset**	**96.24**	**292**	*e*P	**P**	**14 58 55.3**	**+0.6**
DOU	**Dourbes**	**96.36**	**320**	P	**P**	**14 58 54.4**	**-0.3**
UCC	**Uccle**	**96.47**	**321**	P	**P**	**14 58 54.8**	**-0.3**
	comp=Z,16nm,1.7s,mb5.2						
VIVF	**Saint-Julien-l**	**96.56**	**315**	⇑*i*P	**P**	**14 58 55.5**	**-0.2**
	comp=Z,11nm,0.9s,mb5.0						
VIVF	**Saint-Julien-l**	**96.56**	**315**	⇑*i*P	**P**	**14 58 55.5**	**-0.2**
VIVF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
VIVF	**Saint-Julien-l**	**96.56**	**315**	⇑*i*P	**P**	**14 58 55.5**	**-0.2**
	comp=Z,5.3nm,0.9s,mb5.0						
BAIF	**Baives**	**96.61**	**320**	⇑*i*P	**P**	**14 58 55.8**	**+0.1**
	comp=Z,37nm,1.0s,mb5.5						
BAIF	**Baives**	**96.61**	**320**	⇑*i*P	**P**	**14 58 55.8**	**+0.1**
BAIF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.5						
BAIF	**Baives**	**96.61**	**320**	⇑*i*P	**P**	**14 58 55.8**	**+0.1**
	comp=Z,18nm,1.0s,mb5.5						
SSB	**Saint Sauveur**	**96.64**	**315**	*e*P	**P**	**14 58 55.6**	**-0.4**
LOR	**Lormes**	**97.01**	**317**	⇑*i*P	**P**	**14 58 57.3**	**-0.3**
	comp=Z,38nm,1.0s,mb5.5						
LOR				*e*MLR	MLR		
	comp=Z,422nm,23.0s						
LOR	**Lormes**	**97.01**	**317**	⇑*i*P	**P**	**14 58 57.3**	**-0.3**
LOR				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.5						
LOR				MLR	MLR		
	comp=Z,420nm,23.0s						
LOR	**Lormes**	**97.01**	**317**	⇑*i*P	**P**	**14 58 57.3**	**-0.3**
	comp=Z,19nm,1.0s,mb5.5						
LOR				LR	LR		
	comp=Z,420nm,23.0s						
SMF	**Signal de Mont**	**97.06**	**316**	⇑*i*P	**P**	**14 58 57.4**	**-0.4**
	comp=Z,38nm,1.1s,mb5.4						
SMF	**Signal de Mont**	**97.06**	**316**	⇑*i*P	**P**	**14 58 57.4**	**-0.4**
SMF				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.4						
SMF	**Signal de Mont**	**97.06**	**316**	⇑*i*P	**P**	**14 58 57.4**	**-0.4**
	comp=Z,19nm,1.1s,mb5.4						
LASF	**Ste Croix**	**97.19**	**314**	⇑*i*P	**P**	**14 58 58.4**	**-0.1**
	comp=Z,35nm,1.3s,mb5.3						
SSF	**Saint Saulge**	**97.26**	**317**	*e*P	**P**	**14 58 58.5**	**-0.3**
	comp=Z,51nm,1.6s,mb5.4						
SSF	**Saint Saulge**	**97.26**	**317**	*e*P	**P**	**14 58 58.5**	**-0.3**
SSF				pmax	pmax		
	comp=Z,26nm,1.6s,mb5.4						
SSF	**Saint Saulge**	**97.26**	**317**	*e*P	**P**	**14 58 58.5**	**-0.3**
	comp=Z,26nm,1.6s,mb5.4						
AVF	**Avril sur Loir**	**97.38**	**317**	*e*P	**P**	**14 58 58.9**	**-0.4**
	comp=Z,12nm,0.9s,mb5.0						
AVF	**Avril sur Loir**	**97.38**	**317**	*e*P	**P**	**14 58 58.9**	**-0.4**
AVF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb5.0						
AVF	**Avril sur Loir**	**97.38**	**317**	*e*P	**P**	**14 58 58.9**	**-0.4**
	comp=Z,6.2nm,0.9s,mb5.0						
BGF	**Bois d'Agland**	**97.75**	**316**	⇑*i*P	**P**	**14 59 01.0**	**0.0**
	comp=Z,42nm,1.2s,mb5.5						
BGF	**Bois d'Agland**	**97.75**	**316**	⇑*i*P	**P**	**14 59 01.0**	**0.0**
BGF				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.5						
BGF	**Bois d'Agland**	**97.75**	**316**	⇑*i*P	**P**	**14 59 01.0**	**0.0**
	comp=Z,21nm,1.2s,mb5.5						
MENF	**Mencas**	**97.89**	**320**	*e*P	**P**	**14 59 00.3**	**-1.2**
TCF	**Toulx Ste Croi**	**98.20**	**316**	⇑*i*P	**P**	**14 59 03.0**	**0.0**
	comp=Z,16nm,1.2s,mb5.1						
TCF	**Toulx Ste Croi**	**98.20**	**316**	⇑*i*P	**P**	**14 59 03.0**	**0.0**
TCF				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb5.1						
TCF	**Toulx Ste Croi**	**98.20**	**316**	⇑*i*P	**P**	**14 59 03.0**	**0.0**
	comp=Z,8.1nm,1.2s,mb5.1						
TTA	**Tatalina**	**98.39**	**27**	*e*P	**P**	**14 59 03.4**	**-0.1**
TTA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb5.2						
TTA	**Tatalina**	**98.39**	**27**	*e*P	**P**	**14 59 03.4**	**-0.1**
	comp=Z,4.9nm,0.6s,mb5.2						
CAF	**Calviac**	**98.41**	**315**	⇑*i*P	**P**	**14 59 04.1**	**+0.1**
	comp=Z,19nm,1.3s,mb5.2						
CAF	**Calviac**	**98.41**	**315**	⇑*i*P	**P**	**14 59 04.1**	**+0.1**
CAF				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb5.1						
CAF	**Calviac**	**98.41**	**315**	⇑*i*P	**P**	**14 59 04.1**	**+0.1**
	comp=Z,9.4nm,1.3s,mb5.2						
MTLF	**Montolieu**	**98.42**	**313**	⇑*i*P	**P**	**14 59 03.9**	**-0.2**
	comp=Z,19nm,1.2s,mb5.2						
MTLF	**Montolieu**	**98.42**	**313**	⇑*i*P	**P**	**14 59 03.9**	**-0.2**
MTLF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.2						
MTLF	**Montolieu**	**98.42**	**313**	⇑*i*P	**P**	**14 59 03.9**	**-0.2**
	comp=Z,9.6nm,1.2s,mb5.2						
IMA2	**Indian Mountai**	**98.75**	**23**	*e*P	**P**	**14 59 04.8**	**-0.2**
RJF	**Les Rejaudoux**	**98.77**	**315**	*e*P	**P**	**14 59 06.0**	**+0.4**
	comp=Z,20nm,1.2s,mb5.2						
RJF				*e*MLR	MLR		
	comp=Z,255nm,20.2s						
RJF	**Les Rejaudoux**	**98.77**	**315**	*e*P	**P**	**14 59 06.0**	**+0.4**
RJF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.2						
RJF				MLR	MLR		
	comp=Z,260nm,20.3s						
RJF	**Les Rejaudoux**	**98.77**	**315**	*e*P	**P**	**14 59 06.0**	**+0.4**
	comp=Z,10nm,1.2s,mb5.2						
RJF				LR	LR		
	comp=Z,260nm,20.3s						
SVW2	**Sparrevohn**	**98.92**	**29**	*e*P	**P**	**14 59 05.5**	**-0.4**
JMIC	**Jan Mayen**	**99.01**	**342**	LR	LR	15 50 38.9	
	comp=Z,659nm,18.5s,baz=287,slow=40						
LFF	**La Frestale**	**99.35**	**315**	*e*P	**P**	**14 59 08.6**	**+0.4**
LDF	**La Druitiere**	**99.56**	**319**	⇑*i*P	Pdif	14 59 08.7	-0.2
	comp=Z,12nm,0.9s						
LDF	**La Druitiere**	**99.56**	**319**	⇑*i*P	Pdif	14 59 08.7	-0.2
LDF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb5.2						
LDF	**La Druitiere**	**99.56**	**319**	⇑*i*P	Pdif	14 59 08.7	-0.2
	comp=Z,6.2nm,0.9s						
FLN	**La Foliniere**	**99.78**	**319**	⇑*i*P	Pdif	14 59 09.6	-0.2
	comp=Z,34nm,1.2s						
FLN				*e*MLR	MLR		
	comp=Z,390nm,20.5s						
FLN	**La Foliniere**	**99.78**	**319**	⇑*i*P	Pdif	14 59 09.6	-0.2
FLN				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.5						
FLN				MLR	MLR		
	comp=Z,390nm,20.5s						
FLN	**La Foliniere**	**99.78**	**319**	⇑*i*P	Pdif	14 59 09.6	-0.2
	comp=Z,17nm,1.2s						
FLN				LR	LR		
	comp=Z,390nm,20.5s						
MFF	**Saint Martin d**	**99.80**	**317**	*e*P	Pdif	14 59 09.8	-0.1
	comp=Z,13nm,1.0s						
MFF	**Saint Martin d**	**99.80**	**317**	*e*P	Pdif	14 59 09.8	-0.1
MFF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb5.2						
MFF	**Saint Martin d**	**99.80**	**317**	*e*P	Pdif	14 59 09.8	-0.1
	comp=Z,6.3nm,1.0s						
TORD	**Torodi Ar. Bea**	**99.80**	**283**	P	Pdif	14 59 10.4	+0.5
	comp=Z,2.3nm,0.9s,baz=74,slow=4.5,SNR=13						
TORD				PP	PP	15 03 21.5	+5.2
	comp=Z,0.8nm,0.9s,baz=84,slow=7.4,SNR=4.3						
TORD				PKiKP	PKiKP	15 03 39.5	+0.2
	comp=Z,2.2nm,0.8s,baz=69,slow=2.7,SNR=6.7						
TORD				PKKP	PKKPbc	15 15 31.6	+0.6
	comp=Z,0.7nm,0.7s,baz=298,slow=3.2,SNR=3.7						
TORD				LR	LR	15 40 06.0	
	comp=Z,510nm,21.5s,baz=90,slow=33						
TORD	**Torodi Ar. Bea**	**99.80**	**283**	P	Pdif	14 59 10.4	+0.5
TORD				PP	PP	15 03 21.5	+5.2
COLD	**Coldfoot**	**99.80**	**22**	*e*Pdif	Pdif	14 59 08.9	-1.0
	comp=Z,31nm,1.7s						
EPF	**Esparros**	**99.81**	**313**	*e*P	Pdif	14 59 10.1	+0.1
KDAK	**Kodiak Island**	**101.08**	**32**	P	Pdif	14 59 15.6	0.0
	comp=Z,11nm,0.8s,baz=276,slow=9.2,SNR=3.9						
MCK	**McKinley**	**101.31**	**25**	*e*P	Pdif	14 59 14.3	-2.4
MCK				pmax	pmax		
	comp=Z,17nm,1.0s						
MCK	**McKinley**	**101.31**	**25**	*e*Pdif	Pdif	14 59 14.3	-2.4
	comp=Z,17nm,1.0s						
ESDC	**Sonseca Array**	**103.40**	**310**	PP	PP	15 03 42.4	-0.3
	comp=Z,3.4nm,0.9s,baz=74,slow=6.8,SNR=7.3						
ESDC				PKKPbc	PKKPbc	15 15 20.4	-0.9
	comp=Z,0.1nm,0.4s,baz=270,slow=5.1,SNR=4.5						
MID	**Middleton Isla**	**103.79**	**29**	*e*P	Pdif	14 59 31.6	+3.9
EVO	**Evora**	**106.69**	**309**	*e*PKIKP	PKiKP	15 03 49.8	-1.4
	comp=Z,63nm,1.9s						
EVO				*e*MLR	MLR		
	comp=Z,349nm,23.0s						
PPT	**Papeete**	**107.48**	**109**	*e*LR	LR	15 35 11.6	
	comp=Z,424nm,23.5s						
DLBC	**Dease Lake**	**111.83**	**26**	PKiKP	PKiKP	15 04 00.2	0.0
	baz=307,slow=6.7						
YKA	**Yellowknife Ar**	**114.86**	**17**	PKP	PKiKP	15 04 04.3	-1.6
	comp=Z,3.9nm,0.8s,baz=326,slow=2.4,SNR=7.2						
YKA	**Yellowknife Ar**	**114.86**	**17**	⇑*i*PKIKP	PKiKP	15 04 04.8	-1.1
YKA	**Yellowknife Ar**	**114.86**	**17**	PKP	PKiKP	15 04 04.3	-1.6
OBC	**Olympics--Boni**	**120.61**	**34**	P	PKPdf	15 04 18.3	+0.8
NLWA	**Neilton Lookou**	**121.09**	**34**	*e*PKPdf	PKPdf	15 04 18.4	0.0
GNW	**Green Mountain**	**121.57**	**33**	*e*PKPdf	PKPdf	15 04 18.9	-0.4
GNW				*e*		15 04 34.1	
JCW	**Jim Creek**	**121.69**	**32**	*e*PKPdf	PKPdf	15 04 19.5	0.0
RPW	**Rockport**	**121.76**	**32**	*e*PKPdf	PKPdf	15 04 18.7	-0.9
KMOR	**Kings Mountain**	**122.30**	**36**	P	PKPdf	15 04 21.3	+0.5
EDM	**Edmonton**	**122.33**	**24**	*e*PKIKP	PKPdf	15 04 19.2	-1.4
HEBO	**Mount Hebo**	**122.38**	**36**	*e*PKPdf	PKPdf	15 04 21.2	+0.3
LON	**Longmire**	**122.61**	**34**	*e*PKIKP	PKPdf	15 04 20.4	-0.9
ETW	**Entiat**	**122.90**	**32**	*e*PKPdf	PKPdf	15 04 21.3	-0.5
OD2	**Odessa Site #2**	**123.89**	**32**	*e*PKPdf	PKPdf	15 04 23.1	-0.7
IRO	**Indian Ridge**	**123.94**	**37**	P	PKPdf	15 04 23.7	-0.2
RSW	**Rattlesnake Hi**	**124.05**	**33**	*e*PKPdf	PKPdf	15 04 24.2	+0.1
HAWA	**Hanford**	**124.08**	**33**	*e*PKPdf	PKPdf	15 04 23.9	-0.3
NEW	**Newport**	**124.13**	**30**	*e*PKIKP	PKPdf	15 04 23.5	-0.7
HUMO	**Hull Mountain**	**124.28**	**38**	P	PKPdf	15 04 25.0	+0.4
YBH	**Yreka Blue Hor**	**124.91**	**39**	PKP	PKPdf	15 04 25.7	-0.2
	comp=Z,5.6nm,0.7s,baz=342,slow=2.1,SNR=21						
YBH				PP	PP	15 06 13.0	-1.3
	comp=Z,3.2nm,1.1s,baz=304,slow=3.6,SNR=2.1						
FFC	**Flin Flon**	**124.98**	**16**	*e*PKIKP	PKPdf	15 04 24.6	-1.0
LNOR	**Lincton Mounta**	**125.08**	**33**	*e*PKIKP	PKPdf	15 04 25.7	-0.4
WALA	**Waterton Lakes**	**125.13**	**27**	*e*PKPdf	PKPdf	15 04 25.3	-0.8
HOG	**Hogback Mounta**	**125.26**	**38**	P	PKPdf	15 04 27.2	+0.6
LHEM	**Herd Peak**	**125.28**	**39**	P	PKPdf	15 04 27.1	+0.5
KIPM	**Iron Peak**	**125.42**	**42**	*e*PKPdf	PKPdf	15 04 27.4	+0.5
KIPM				*e*		15 04 42.0	
WDC	**Whiskeytown Da**	**125.63**	**40**	*e*PKIKP	PKPdf	15 04 26.4	-0.9
HOPS	**Hopland**	**126.11**	**42**	*e*PKPdf	PKPdf	15 04 28.6	+0.3
BMO	**Blue Mountains**	**126.26**	**33**	*e*PKIKP	PKPdf	15 04 26.5	-1.9
MOD	**Modoc**	**126.31**	**38**	*e*PKPdf	PKPdf	15 04 28.9	+0.3
MOD				*e*		15 04 43.5	
NSHM	**Saint Helena R**	**126.66**	**43**	*e*PKPdf	PKPdf	15 04 29.8	+0.5
NSHM				*e*		15 04 45.2	
MSO	**Missoula**	**126.69**	**29**	*e*PKPdf	PKPdf	15 04 28.7	-0.5
MSO				*e*		15 04 43.8	
CHMT	**Chamberlain Mo**	**126.96**	**29**	*e*PKPdf	PKPdf	15 04 29.1	-0.6
WVOR	**Wild Horse Val**	**127.00**	**36**	PKIKP	PKPdf	15 04 30.2	+0.3
SCHQ	**Schefferville**	**127.26**	**351**	PKP	PKPdf	15 04 29.6	-0.4
	comp=Z,19nm,0.9s,baz=46,slow=3.5,SNR=10						
SCHQ				PP	PP	15 06 25.2	-3.8
	comp=Z,9.0nm,0.8s,baz=14,slow=8.6,SNR=3.6						
SCHQ	**Schefferville**	**127.26**	**351**	PKP	PKPdf	15 04 29.6	-0.4
SCHQ				PP	PP	15 06 25.2	-3.9
EGMT	**Eagleton**	**127.75**	**26**	*e*PKPdf	PKPdf	15 04 31.4	+0.2
PAHR	**Pah Rah Range**	**128.13**	**40**	*e*PKPdf	PKPdf	15 04 32.7	+0.6
DLMT	**Dillon**	**128.38**	**30**	*e*PKPdf	PKPdf	15 04 32.3	-0.1
CMB	**Columbia Colle**	**128.40**	**42**	*e*PKIKP	PKPdf	15 04 32.4	-0.3
CMB				*e*		15 04 47.6	
MCMT	**McKenzie Canyo**	**128.63**	**31**	*e*PKPdf	PKPdf	15 04 33.0	+0.1
BOZ	**Bozeman (W)**	**128.66**	**29**	*e*PKIKP	PKPdf	15 04 33.0	+0.1
BOZ				*e*		15 04 48.7	
HLID	**Hailey**	**128.68**	**33**	*e*PKPdf	PKPdf	15 04 33.4	+0.3
QLMT	**Earthquake Lak**	**129.34**	**30**	*e*PKPdf	PKPdf	15 04 35.0	+0.8
QLMT				*e*		15 04 48.6	
GCMT	**Greycliff**	**129.48**	**28**	*e*PKPdf	PKPdf	15 04 34.9	+0.4
NVAR	**Mina Array Bea**	**129.55**	**40**	PKhKP		15 04 21.9	
	comp=Z,0.5nm,0.7s,baz=306,slow=3.8,SNR=4.2						
NVAR				PKP	PKPdf	15 04 35.5	+0.6
	comp=Z,9.3nm,0.7s,baz=276,slow=1.9,SNR=44						
NVAR				pPKP	pPKPdf	15 04 50.8	-3.1
	comp=Z,9.5nm,0.8s,baz=274,slow=2.1,SNR=9.6						
NVAR				PP	PP	15 06 44.4	-0.6
	comp=Z,2.3nm,0.8s,baz=286,slow=6.6,SNR=4.4						
NVAR				SKPbc		15 07 52.8	
	comp=Z,8.0nm,0.9s,baz=275,slow=4.5,SNR=10						
YMR	**Madison River**	**129.69**	**29**	*e*PKPdf	PKPdf	15 04 35.6	+0.7
PTRM	**Twissleman Ran**	**129.77**	**44**	*e*PKPdf	PKPdf	15 04 36.2	+0.8
MTUM	**Tungsten Hills**	**129.98**	**42**	*e*PKPdf	PKPdf	15 04 36.5	+0.8
MTUM				*e*		15 04 51.9	
LKWY	**Lake**	**130.04**	**29**	*e*PKIKP	PKPdf	15 04 34.7	-0.9
ELK	**Elko**	**130.05**	**36**	*e*PKIKP	PKPdf	15 04 36.6	+0.9
RLMT	**Red Lodge**	**130.17**	**28**	*e*PKPdf	PKPdf	15 04 33.0	-2.9
IMW	**Indian Meadow**	**130.26**	**30**	*e*PKPdf	PKPdf	15 04 36.4	+0.4
LAO	**LASA Array**	**130.30**	**24**	*e*PKPdf	PKPdf	15 04 37.3	+1.3
TPH	**Tonopah**	**130.45**	**40**	*e*PKIKP	PKPdf	15 04 37.7	+1.1
RRI2	**Red Ridge**	**130.46**	**31**	*e*PKPdf	PKPdf	15 04 37.0	+0.6
MOOW	**Moose Ponds**	**130.46**	**30**	*e*PKPdf	PKPdf	15 04 36.3	-0.1
TPAW	**Teton Pass**	**130.54**	**31**	*e*PKPdf	PKPdf	15 04 36.7	+0.1
LOHW	**Long Hollow**	**130.63**	**30**	*e*PKPdf	PKPdf	15 04 36.0	-0.7
ULM	**Lac du Bonnet**	**130.63**	**14**	PKP	PKPdf	15 04 35.2	-1.4
	comp=Z,27nm,0.7s,baz=2.4,slow=3.1,SNR=25						
ULM				SKPab		15 07 54.0	
	comp=Z,13nm,0.8s,baz=334,slow=4.2,SNR=7.4						
ULM	**Lac du Bonnet**	**130.63**	**14**	PKP	PKPdf	15 04 35.2	-1.4
ULM				SKPab		15 07 54.0	
SNOW	**Snow King Moun**	**130.66**	**30**	*e*PKPdf	PKPdf	15 04 37.6	+0.7
REDW	**Red Top Meadow**	**130.69**	**31**	*e*PKPdf	PKPdf	15 04 37.4	+0.5
HVU	**Hansel Valley**	**130.77**	**33**	*e*PKIKP	PKPdf	15 04 36.5	-0.6
ISA	**Isabella**	**130.97**	**43**	*e*PKIKP	PKPdf	15 04 36.5	-1.1
BGU	**Big Grassy Mou**	**131.21**	**34**	*e*PKPdf	PKPdf	15 04 38.0	0.0
HWUT	**Hardware Ranch**	**131.55**	**33**	*e*PKPdf	PKPdf	15 04 38.3	-0.3
TPNV	**Topopah Spring**	**131.74**	**41**	*e*PKIKP	PKPdf	15 04 38.8	-0.3
PDAR	**Pinedale Array**	**131.77**	**30**	PKhKP		15 04 23.1	
	comp=Z,0.4nm,0.3s,baz=352,slow=3.6,SNR=6.5						
PDAR				PKP	PKPdf	15 04 38.2	-0.7
	comp=Z,4.5nm,0.7s,baz=220,slow=0.7,SNR=21						
PDAR				pPKP	pPKPdf	15 04 53.7	-4.2
	comp=Z,4.0nm,0.7s,baz=31,slow=0.9,SNR=6.1						
PDAR				PP	PP	15 06 59.4	+0.4
	comp=Z,3.1nm,0.9s,baz=318,slow=2.0,SNR=4.4						
PDAR				SKPbc	SKPbc	15 07 59.5	+0.2
	comp=Z,12nm,1.0s,baz=338,slow=1.6,SNR=16						
PDAR				SKP		15 08 07.6	
	comp=Z,5.5nm,0.8s,baz=46,slow=1.3,SNR=4.4						
DUG	**Dugway**	**131.81**	**35**	*e*PKIKP	PKPdf	15 04 39.7	+0.6
NOQ	**North Oquirrh**	**131.90**	**34**	*e*PKPdf	PKPdf	15 04 39.4	+0.1
MWC	**Mount Wilson**	**132.02**	**45**	*e*PKIKP	PKPdf	15 04 35.2	-4.5
CTU	**Camp Tracy**	**132.08**	**34**	*e*PKPdf	PKPdf	15 04 38.4	-1.2
GSC	**Goldstone**	**132.30**	**43**	*e*PKIKP	PKPdf	15 04 41.3	+1.1
JLU	**Jordanelle**	**132.31**	**34**	*e*PKPdf	PKPdf	15 04 40.3	+0.3
JLU				*e*SKPbc	SKPbc	15 08 02.4	+1.2
NLU	**North Lily Min**	**132.40**	**35**	*e*PKPdf	PKPdf	15 04 40.7	+0.5
AGMN	**Agassiz Refuge**	**132.44**	**15**	*e*PKPdf	PKPdf	15 04 38.6	-1.4
DAU	**Daniels Canyon**	**132.54**	**34**	*e*PKIKP	PKPdf	15 04 41.1	+0.6
MPU	**Maple Canyon**	**132.60**	**34**	*e*PKPdf	PKPdf	15 04 41.3	+0.7
ARUT	**Antelope Range**	**133.00**	**38**	*e*PKIKP	PKPdf	15 04 42.5	+1.1
CCUT	**Cedar City**	**133.20**	**38**	*e*PKPdf	PKPdf	15 04 42.1	+0.3
RSSD	**Black Hills**	**133.28**	**25**	*e*PKIKP	PKPdf	15 04 41.4	-0.3
MSU	**Marysvale**	**133.29**	**36**	*e*PKIKP	PKPdf	15 04 42.5	+0.6
TMUT	**Trail Mountain**	**133.33**	**35**	*e*PKPdf	PKPdf	15 04 42.8	+0.8
PFO	**Pinyon Flat Ob**	**133.48**	**45**	*e*PKIKP	PKPdf	15 04 43.0	+0.6
LDFC	**Landfair**	**133.57**	**42**	*e*PKPdf	PKPdf	15 04 43.3	+0.7
RWWY	**Rawlins**	**133.74**	**29**	*e*PKPdf	PKPdf	15 04 42.2	-0.5
SRU	**San Rafael**	**133.85**	**34**	*e*PKIKP	PKPdf	15 04 42.1	-0.9
SRU				*e*		15 07 09.6	
PHWY	**Pilot Hill**	**134.88**	**28**	*e*PKPdf	PKPdf	15 04 44.2	-0.6
GLA	**Glamis**	**134.92**	**44**	*e*PKIKP	PKPdf	15 04 45.3	+0.1
PV10	**Paradox Valley**	**135.19**	**34**	*e*PKPdf	PKPdf	15 04 46.2	+0.7
PV01	**Paradox Valley**	**135.62**	**34**	*e*PKPdf	PKPdf	15 04 46.3	-0.1
WUAZ	**Wupatki**	**135.73**	**39**	*e*PKPdf	PKPdf	15 04 46.4	-0.2
PLCA	**Paso Flores**	**135.96**	**189**	SKP	SKPdf	15 08 14.9	-1.6
	comp=Z,2.5nm,0.8s,baz=167,slow=9.7,SNR=4.1						
PLCA	**Paso Flores**	**135.96**	**189**	*e*PKIKP	PKPdf	15 04 42.5	-4.4
ISCO	**Idaho Springs**	**135.96**	**30**	*e*PKIKP	PKPdf	15 04 47.1	+0.2
MVCO	**Mesa Verde**	**136.31**	**35**	*e*PKPdf	PKPdf	15 04 48.6	+0.9
ECSD	**EROS,Sioux Fal**	**136.37**	**19**	*e*PKPdf	PKPdf	15 04 43.3	-4.2
SDCO	**Great Sand Dun**	**137.57**	**32**	*e*PKPdf	PKPdf	15 04 48.9	-1.1
TUC	**Tucson**	**138.11**	**42**	*e*PKHKP		15 04 42.6	
JFWS	**Jewell Farm**	**138.85**	**13**	*e*PKIKP	PKPdf	15 04 49.7	-2.4
SCIA	**State Center**	**139.05**	**16**	*e*PKPdf	PKPdf	15 04 51.9	-0.7
LAZ	**Ladron**	**139.06**	**37**	*e*PKPdf	PKPdf	15 04 52.7	-0.1
ANMO	**Albuquerque**	**139.07**	**35**	*e*PKHKP		15 04 46.0	
LENM	**Lemitar**	**139.32**	**37**	*e*PKPdf	PKPdf	15 04 53.6	+0.4
LPM	**Los Pinos Moun**	**139.42**	**36**	*e*PKPdf	PKPdf	15 04 53.1	-0.3
BNM	**Barren Site**	**139.54**	**36**	*e*PKPdf	PKPdf	15 04 48.7	-4.9
KSU1	**Kansas State U**	**140.48**	**22**	*e*PKPdf	PKPdf	15 04 54.8	-0.4
BINY	**Binghamton**	**140.74**	**357**	*e*PKPdf	PKPdf	15 04 50.4	-5.2
AMTX	**Amarillo**	**141.74**	**31**	*e*PKPdf	PKPdf	15 04 53.4	-4.2
ACSO	**Alum Creek Sta**	**142.61**	**5**	*e*PKPdf	PKPdf	15 04 53.8	-5.2
SLM	**Saint Louis**	**142.91**	**15**	*e*PKIKP	PKPdf	15 04 55.0	-4.6
MVL	**Millersville**	**142.96**	**357**	*e*PKPdf	PKPdf	15 04 50.4	-9.2
CCM	**Cathedral Cave**	**143.19**	**16**	*e*PKHKP	PKPdf	15 04 55.4	-4.7
WMOK	**Wichita Mounta**	**143.28**	**28**	*e*PKIKP	PKPdf	15 04 55.9	-4.5
WMOK				*e*		15 08 05.2	
OLIL	**Olney**	**143.32**	**12**	*e*PKPdf	PKPdf	15 04 55.7	-4.6
MCWV	**Mont Chateau**	**143.36**	**1**	*e*PKPdf	PKPdf	15 04 55.6	-4.7
FVM	**French Village**	**143.48**	**15**	*e*PKHKP		15 04 55.9	
SIUC	**Southern Illin**	**144.04**	**14**	*e*PKPdf	PKPdf	15 04 58.2	-3.4
WCI	**Wyandotte Cave**	**144.15**	**10**	*e*PKIKP	PKPdf	15 04 58.9	-2.9
CPUP	**Villa Florida**	**144.26**	**214**	PKP	PKPdf	15 05 01.1	-1.2
	comp=Z,14nm,0.8s,baz=112,slow=3.2,SNR=31						
BDFB	**Brasilia**	**144.35**	**238**	PKP	PKPdf	15 05 01.7	-1.0
	comp=Z,12nm,0.7s,baz=116,slow=3.4,SNR=14						
TXAR	**Lajitas Array**	**144.69**	**39**	PKP	PKPdf	15 05 02.2	-0.7
	comp=Z,98nm,0.7s,baz=287,slow=1.2,SNR=959						
TXAR				pPKP	pPKPdf	15 05 17.3	-4.7
	comp=Z,89nm,0.7s,baz=260,slow=2.7,SNR=18						
TXAR				PP	PP	15 08 19.0	-0.5
	comp=Z,3.1nm,0.8s,baz=300,slow=7.2,SNR=5.0						
TXAR				SKPbc	SKPbc	15 08 37.6	+0.9
	comp=Z,7.2nm,0.7s,baz=222,slow=1.2,SNR=5.5						
TXAR	**Lajitas Array**	**144.69**	**39**	PKIKP	PKPdf	15 05 02.3	-0.7
TXAR						15 05 17.3	
TXAR						15 08 19.0	
PARMO	**Parma**	**144.90**	**15**	*e*PKPdf	PKPdf	15 05 01.4	-1.8
GLAT	**Glass**	**145.39**	**15**	*e*PKPdf	PKPdf	15 05 02.8	-1.2
URVA	**University of**	**145.43**	**358**	*e*PKPdf	PKPdf	15 05 03.2	-0.9
UTMT	**University of**	**145.43**	**14**	*e*PKPdf	PKPdf	15 05 03.2	-0.8
MIAR	**Mount Ida**	**145.64**	**22**	*e*PKIKP	PKPdf	15 05 04.1	-0.4
HBAR	**Harrisburg**	**145.69**	**17**	*e*PKPdf	PKPdf	15 05 04.1	-0.4
HALT	**Halls**	**145.72**	**15**	*e*PKPdf	PKPdf	15 05 03.3	-1.3
HALT				*e*		15 05 16.3	
ELN	**Prospectdale**	**145.75**	**3**	*e*PKPdf	PKPdf	15 05 03.4	-1.1
BLA	**Blacksburg**	**145.78**	**2**	*e*PKP2	PKPab	15 05 04.0	-1.5
UALR	**University of**	**145.87**	**20**	*e*PKPdf	PKPdf	15 05 04.6	-0.2
WVT	**Waverly**	**145.88**	**13**	*e*PKIKP	PKPdf	15 05 03.7	-1.1
WVT				*e*		15 05 18.6	
JCT	**Junction City**	**146.15**	**34**	*e*PKPdf	PKPdf	15 05 05.3	-0.1
JCT				*e*		15 05 20.3	
TZTN	**Tazewell**	**146.20**	**7**	*e*PKPdf	PKPdf	15 05 03.8	-1.5
TLL	**Tololo Astrono**	**146.26**	**193**	⇑*i*P	PKPdf	15 05 07.2	+1.6
OXF	**Oxford**	**147.02**	**16**	*e*PKIKP	PKPdf	15 05 06.2	-0.6
TKL	**Tuckaleechee C**	**147.05**	**7**	*e*PKIKP	PKPdf	15 05 06.7	-0.1
SWET	**Sewanee**	**147.15**	**11**	*e*PKPdf	PKPdf	15 05 06.0	-0.9
CPCT	**Cooper Cave**	**147.15**	**8**	*e*PKPdf	PKPdf	15 05 06.8	-0.2
LCO	**Las Campanas**	**147.35**	**193**	*e*P	PKPdf	15 05 08.0	+0.5
NATX	**Nacogdoches**	**147.64**	**26**	*e*PKPdf	PKPdf	15 05 07.8	-0.1
BBSR	**BB Station**	**147.75**	**337**	*e*PKPdf	PKPdf	15 05 07.3	-0.7
CNNC	**Cliffs of the**	**147.77**	**358**	*e*PKPdf	PKPdf	15 05 08.1	+0.1
CNNC				*e*PKPbc	PKPbc	15 05 10.6	-0.3
HKT	**Hockley**	**148.63**	**29**	*e*PKIKP	PKPdf	15 05 09.3	-0.3
HKT				*e*		15 05 13.7	
JSC	**Jenkinsville**	**148.66**	**4**	*e*PKIKP	PKPdf	15 05 09.7	+0.2
JSC				*e*		15 05 12.7	
VBMS	**Vicksburg**	**148.82**	**19**	*e*PKPbc	PKPbc	15 05 13.3	-0.4
LRAL	**Lakeview Retre**	**149.03**	**13**	*e*PKPdf	PKPdf	15 05 09.7	-0.5
LRAL				*e*PKPbc	PKPbc	15 05 13.3	-1.0
GOGA	**Godfrey**	**149.30**	**7**	*e*PKIKP	PKPdf	15 05 10.4	-0.2
GOGA				*e*		15 05 14.4	
COW	**Cow Castle Cre**	**149.59**	**3**	*e*PKPdf	PKPdf	15 05 11.7	+0.7
COW				*e*PKPbc	PKPbc	15 05 15.3	-0.4
NHSC	**New Hope**	**149.88**	**2**	*e*PKPbc	PKPbc	15 05 15.3	-1.0
BRAL	**Brewton**	**150.96**	**15**	*e*PKPdf	PKPdf	15 05 13.7	+0.4
BRAL				*e*PKPbc	PKPbc	15 05 18.8	-0.2
LVC	**Limon Verde**	**152.87**	**201**	*e*PKPdf	PKPdf	15 05 17.7	+1.3
LVC				*e*PKPbc	PKPbc	15 05 25.0	+1.4
DWPF	**Disney**	**154.77**	**5**	*e*PKPbc	PKPbc	15 05 27.0	-0.5
DWPF				*e*PKPab	PKPab	15 05 42.1	-0.4
LPAZ	**La Paz**	**158.20**	**209**	PKP	PKPdf	15 05 24.3	+0.6
	comp=Z,7.1nm,0.9s,baz=50,slow=2.8,SNR=26						
LPAZ	**La Paz**	**158.20**	**209**	PKP	PKPdf	15 05 24.3	+0.6
ROSC	**El Rosal**	**175.03**	**294**	PKP	PKPdf	15 05 36.7	+0.2
	comp=Z,5.5nm,0.3s,baz=104,slow=21,SNR=9.4						
OTAV	**Otavalo**	**177.36**	**190**	*e*PKPdf	PKPdf	15 05 36.9	-0.1

*BJI **15** 15:04:39.5, 3.68S×100.86E, h40km, mB5.4, mb4.8, Ms4.8, Msz4.5*

*ISCJB **15** 15:04:44.9±0.3, 3.13S±0.04×100.89E±0.04, h45km, mb4.8/78, MS4.4/22, Error ellipse: s-maj=6.1km s-min=4.6km az=32.0*

*DJA **15** 15:04:44, 2.99S×100.54E, h10km, Mw5.3/5*

*MOS **15** 15:04:44.4±0.9, 2.73S×101.31E, h33km, mb5.2/26, Error ellipse: s-maj=13.8km s-min=6.7km az=114.3*

*GCMT **15** 15:04:46.3±0.4, 3.35S×101.01E, h62km±2km, MW5.0/55, Moment Tensor Solution. s21,c31; s55,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.32±.21; $M_{\theta\theta}$-2.61±.16; $M_{\phi\phi}$0.29±.21; $M_{r\theta}$1.09±.10; $M_{\theta\phi}$2.41±.12; $M_{\phi r}$-0.96±.12; Best double couple: $M_0$3.49300×10^{16} NP1:ϕ_s281.00000°, δ35.00000°, λ63.00000°. NP2: ϕ_s133.00000°, δ59.00000°, λ108.00000°. Principal axes: T 2.7070, Plg71.0000°, Azm83.0000°; N 1.5730, Plg15.0000°, Azm303.0000°; P -4.2790, Plg12.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **15** 15:04:46.3±0.2, 2.80S×101.24E, h35km, mb5.0/24, MS4.7/1 Error ellipse: s-maj=9.6km s-min=5.5km az=52.0*

NEIC Felt [II] at Bengkulu.

*IDC **15** 15:04:47.8±0.4, 2.82S×101.36E, h49km±3km, mb4.2/24, mb1 4.3/24, mb1mx4.3/26, mbtmp4.2/24, MS4.3/11, Ms1 4.3/11, ms1mx3.9/41, Error ellipse: s-maj=12.3km s-min=7.9km az=46.0*

ISC 15 15:04:47.2±0.3**, 3.11S**±0.04×**100.89E**±0.03**, h47**km**, h47**km±2.1km**:pP-P, n192,** σ1.**27**/184**, mb4.8**/78**, MS4.4**/22**, 16C-15D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLI	**Kotabumi**	**4.32**	**114**	P	**Pn**	**15 05 53.0**	**+2.6**
	0.0nm,0.0s						
KGM	**Kluang**	**5.64**	**26**	⇑P	**Pn**	**15 06 09.0**	**+0.4**
MYKOM	**Kota Tinggi**	**5.70**	**31**	⇓P	**Pn**	**15 06 09.7**	**+0.3**
FRIM	**Kepong**	**6.35**	**7**	⇓P	**Pn**	**15 06 20.2**	**+1.9**
DBJI	**Dramaga**	**6.76**	**121**	P	**Pn**	**15 06 28.2**	**+4.2**
	272nm,0.9s						
IPM	**Ipoh**	**7.54**	**1**	⇑P	**Pn**	**15 06 37.2**	**+2.6**
LEM	**Lembang**	**7.65**	**119**	P	**Pn**	**15 06 47.3**	**+11**
	299nm,0.9s						
KTGM	**Kuala Trenggan**	**8.68**	**15**	⇑P	**Pn**	**15 06 52.5**	**+2.2**
COCO	**West Island**	**9.87**	**204**	Pn	**Pn**	**15 07 07.1**	**+0.5**
	3µm,0.6s,SNR=7.5						
COCO	**West Island**	**9.87**	**204**	*e*Pn	**Pn**	**15 07 05.8**	**-0.8**
KSM	**Kuching**	**10.46**	**64**	*e*Pn	**Pn**	**15 07 13.7**	**-1.0**
SJI	**Sawahan**	**11.76**	**113**	P	**Pn**	**15 07 33.0**	**+0.6**
	182nm,0.8s						
SBUM	**Sibu**	**12.60**	**64**	⇓P	**Pn**	**15 07 46.4**	**+2.5**
BTM	**Bintulu**	**13.70**	**63**	⇑P	**Pn**	**15 08 01.7**	**+2.7**
BBKI	**Banjar Baru**	**13.93**	**92**	P	**Pn**	**15 08 09.3**	**+7.2**
	178nm,1.1s						
KKM	**Kota Kinabalu**	**17.80**	**59**	⇑P	**Pn**	**15 08 54.3**	**+2.6**
KKM	**Kota Kinabalu**	**17.80**	**59**	*e*Pn	**Pn**	**15 08 53.4**	**+1.7**
SDKM	**Sandakan**	**18.46**	**62**	⇓P	**Pn**	**15 09 00.1**	**+0.4**
TSM	**Tawau**	**18.49**	**67**	⇓P	**Pn**	**15 09 00.4**	**+0.2**
KDM	**Kudat**	**18.77**	**58**	⇓P	**Pn**	**15 09 04.8**	**+1.2**
KAPI	**Kappang**	**18.91**	**96**	P	**Pn**	**15 09 04.7**	**-0.5**
	2.4nm,0.3s,baz=275,slow=11,SNR=4.5						
KAPI	**Kappang**	**18.91**	**96**	*e*P	**Pn**	**15 09 04.6**	**-0.5**
PCI	**Palu**	**19.06**	**84**	P	**Pn**	**15 09 07.3**	**+0.3**
	111nm,1.3s						
MYLDM	**Lahad Datu**	**19.42**	**65**	⇓P	**Pn**	**15 09 11.6**	**+0.2**
CM31	**Chiang Mai Arr**	**21.52**	**355**	*e*P	**P**	**15 09 28.6**	**-3.8**
	15nm,1.0s,mb4.4						
CMAR	**Chiang Mai Arr**	**21.52**	**355**	P	**P**	**15 09 28.5**	**-3.9**
	3.9nm,0.8s,mb3.9,baz=184,slow=10,SNR=20						
CMAR				LR	LR	15 17 57.0	
	comp=Z,533nm,18.2s,MS4.0,baz=330,slow=37						
KDI	**Kendari**	**21.70**	**93**	P	**P**	**15 09 36.2**	**+1.7**
	34nm,1.0s,mb4.7						
BATI	**Baumata**	**23.68**	**108**	P	**P**	**15 09 50.8**	**-4.1**
	8.6nm,0.5s,mb4.5,baz=82,slow=7.1,SNR=2.6						
BATI				S	**S**	**15 13 59.8**	**-6.8**
	12nm,0.6s,baz=336,slow=20,SNR=3.9						
QIZ	**Qiongzhong**	**23.70**	**21**	P	**P**	**15 09 52.5**	**-2.4**
QIZ				S	**S**	**15 14 14.8**	**+8.1**

QIZ AMB AMB
comp=Z,19nm,1.9s,mb4.2
QIZ LR LR
comp=E,518nm,16.4s
QIZ LR LR
comp=Z,650nm,18.0s,MS4.1
MNI Manado 24.36 80 P **P** **15 10 07.6 +6.5**
comp=Z,195nm,1.0s,mb5.5
DAV Davao City (W) 26.64 68 LR LR 15 21 34.9
comp=Z,643nm,21.3s,MS4.2,baz=135,slow=39
KMI Kunming 28.12 4 P **P** **15 10 39.8 +4.9**
KMI AP pP 15 10 47.8 +0.6
KMI XP sP 15 10 51.3 -1.5
KMI PP PP 15 11 30.9 -8.3
KMI S **S** **15 15 21.4 +4.5**
KMI XS sS 15 15 38.8 +1.2
KMI SS 15 16 47.0
KMI AMB AMB
comp=Z,4.0nm,0.7s,mb4.2
KMI AMB AMB
comp=Z,201nm,7.6s
KMI LR LR
comp=N,679nm,20.5s,MS4.3
KMI LR LR
comp=E,489nm,17.9s,MS4.3
KMI LR LR
comp=Z,712nm,20.5s,MS4.2
FITZ Fitzroy Crossi 28.46 123 *e*P **P** **15 10 37.1 -0.9**
comp=Z,18nm,0.6s,mb4.9
FITZ Fitzroy Crossi 28.46 123 P **P** **15 10 36.8 -1.2**
comp=Z,3.4nm,0.7s,mb4.1,baz=274,slow=7.7,SNR=7.3
FITZ LR LR 15 21 52.0
comp=Z,202nm,20.7s,MS3.7,baz=148,slow=36
GYA Guiyang 29.92 10 P **P** **15 10 49.9 -0.9**
GYA AP pP 15 10 59.8 -3.4
GYA XP sP 15 11 04.0 -4.8
GYA PP PP 15 11 48.3 -11
GYA S **S** **15 15 43.1 -2.1**
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.7
GYA AMB AMB
comp=Z,100nm,4.8s
GYA LR LR
comp=N,1μm,10.9s,MS4.9
GYA LR LR
comp=E,980nm,11.6s,MS4.9
GYA LR LR
comp=Z,1μm,12.0s,MS4.8
ODAN Odare 32.52 337 *e*P **P** **15 11 14.0 +0.2**
comp=Z,76nm,0.8s,mb5.7
TAPN Taplejung 32.84 338 *e*P **P** **15 11 16.7 +0.1**
comp=Z,242nm,1.1s,mb6.1
RAMN Ramite 32.92 336 *e*P **P** **15 11 17.7 +0.5**
comp=Z,22nm,0.4s,mb5.4
NWAO Narrogin (SRO) 33.38 155 LR LR 15 22 40.4
comp=Z,900nm,20.7s,MS4.5,baz=265,slow=32
JIRN Jiri 33.71 336 *e*P **P** **15 11 24.7 +0.5**
LSA Lhasa 33.93 345 *e*P **P** **15 11 25.2 -0.8**
LSA pmax pmax
comp=Z,13nm,0.8s,mb4.9
LSA Lhasa 33.93 345 *e*P **P** **15 11 25.2 -0.8**
comp=Z,13nm,0.8s,mb4.9
CD2 Chengdu 33.94 4 *e*P **P** **15 11 27.3 +1.2**
CD2 AP pP 15 11 36.9 -1.6
CD2 XP sP 15 11 41.0 -3.0
CD2 PP PP 15 12 42.4 -1.3
CD2 S **S** **15 16 50.6 +2.8**
CD2 XS sS 15 17 06.6 -2.0
CD2 SS SS 15 19 00.4 -16
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CD2 LR LR
comp=N,760nm,21.6s
CD2 LR LR
comp=E,1μm,15.6s
CD2 LR LR
comp=Z,1μm,16.8s,MS4.6
PKI Pulchoki 33.96 335 *e*P **P** **15 11 27.0 +0.7**
comp=Z,6.1nm,0.3s,mb5.1
PKIN Phulchoki 33.97 335 *e*P **P** **15 11 26.2 -0.2**
GUN Gumba 34.06 336 *e*P **P** **15 11 27.9 +0.7**
comp=Z,83nm,0.4s,mb6.0
DMN Daman 34.12 335 *e*P **P** **15 11 27.7 0.0**
KKN Kakani 34.20 335 *e*P **P** **15 11 28.7 +0.3**
GKN Gorkha 34.67 334 *e*P **P** **15 11 32.7 +0.3**
comp=Z,25nm,0.4s,mb5.5
KOLN Koldanda 34.93 333 *e*P **P** **15 11 35.2 +0.5**
DANN Dangsing 35.35 333 *e*P **P** **15 11 39.3 +1.0**
comp=Z,55nm,0.4s,mb5.8
WHN Wuhan 35.85 20 *e*P **P** **15 11 41.3 -1.3**
WRA Warramunga Arr 36.67 120 P **P** **15 11 48.1 -1.6**
comp=Z,11nm,0.6s,mb4.8,baz=306,slow=9.0,SNR=140
WRA S **S** **15 17 25.6 -4.5**
comp=Z,1.4nm,1.0s,baz=293,slow=17,SNR=3.1
WRAB Tennant Creek 36.67 120 P **P** **15 11 48.6 -1.2**
comp=Z,205nm,0.5s,SNR=20
WRAB Tennant Creek 36.67 120 *e*P **P** **15 11 48.4 -1.4**
WB2 Warramunga Arr 36.68 120 *e*P **P** **15 11 48.2 -1.6**
XAN Xi'an 37.72 11 P **P** **15 11 55.5 -2.9**
XAN AP pP 15 12 06.0 -4.9
XAN XP sP 15 12 11.3 -5.2
ASAR Alice Springs 37.88 126 P **P** **15 11 59.3 -0.7**
comp=Z,6.5nm,0.8s,mb4.4,baz=298,slow=7.9,SNR=65
ASAR PcP PcP 15 14 15.9 +0.3
comp=Z,2.0nm,0.7s,baz=358,slow=1.7,SNR=4.2
ASAR S **S** **15 17 43.9 -4.6**
comp=Z,1.9nm,1.0s,baz=295,slow=17,SNR=6.4
NJ2 Nanjing 38.91 25 *e*P **P** **15 12 09.3 +0.8**
NJ2 AP pP 15 12 18.1 -2.9
NJ2 XP sP 15 12 23.3 -3.3
NJ2 S **S** **15 18 05.0 +1.4**
NJ2 XS sS 15 18 21.0 -3.7
NJ2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
NJ2 AMB AMB
comp=Z,750nm,5.2s
NJ2 LR LR
comp=N,220nm,13.2s,MS4.5
NJ2 LR LR
comp=E,410nm,15.5s,MS4.5
NJ2 LR LR
comp=Z,410nm,15.4s,MS4.4
NDI New Delhi 38.94 326 *e*P **P** **15 12 08.0 -0.8**
LZH Lanzhou 39.09 4 *e*P **P** **15 12 11.5 +1.6**
LZH AP pP 15 12 21.6 -0.9
LZH XP sP 15 12 25.8 -2.2
LZH *e*PP PP 15 13 46.5 +6.2
LZH AMB AMB
comp=Z,21nm,1.2s,mb4.7
LZH AMB AMB
comp=Z,64nm,5.6s
LZH LR LR
comp=N,459nm,15.3s
LZH LR LR
comp=Z,672nm,17.9s,MS4.5
JOW Kunigami 39.82 40 LR LR 15 25 38.9
comp=Z,243nm,21.4s,MS4.0,baz=116,slow=32
GTA Gaotai 42.32 359 *e*P **P** **15 12 38.4 +1.9**
GTA AP pP 15 12 48.4 -0.8
GTA XP sP 15 12 52.4 -2.3
GTA S **S** **15 18 59.3 +5.0**
GTA XS sS 15 19 15.1 -0.4
GTA AMB AMB
comp=Z,4.0nm,1.2s,mb3.9
GTA LR LR
comp=N,432nm,17.4s,MS4.5
GTA LR LR
comp=E,312nm,17.4s,MS4.5
GTA LR LR
comp=Z,610nm,19.2s,MS4.5
HHC Hu-ho-hao-te 44.82 11 *e*P **P** **15 12 56.9 +0.3**
HHC AP pP 15 13 07.1 -2.3
HHC XP sP 15 13 11.5 -3.4
HHC PCP PcP 15 14 37.6 -0.3
HHC PP PP 15 14 43.3 +1.2
HHC SCP ScP 15 18 26.4 -0.2
HHC PCS PcS 15 18 30.3 -1.1
HHC S **S** **15 19 33.3 +2.5**
HHC XS sS 15 19 50.1 -2.0
HHC SS SS 15 22 47.3 -5.9
HHC SCS ScS 15 22 48.8 -1.3
HHC AMB AMB
comp=Z,17nm,0.8s,mb4.9
HHC LR LR
comp=N,467nm,14.0s,MS4.6
HHC LR LR
comp=E,308nm,14.4s,MS4.6
HHC LR LR
comp=Z,321nm,13.7s,MS4.4
CTA Charters Tower 47.33 115 *e*P **P** **15 13 15.6 -1.1**
comp=Z,12nm,0.6s,mb5.0
CTA Charters Tower 47.33 115 P **P** **15 13 15.7 -1.1**
comp=Z,13nm,0.8s,mb4.9,baz=290,slow=9.1,SNR=17
CTA Charters Tower 47.33 115 *e*P **P** **15 13 15.6 -1.1**
CTA pmax pmax
comp=Z,12nm,0.6s
CTAO Charters Tower 47.33 115 *e*P **P** **15 13 15.5 -1.2**
CTAO pmax pmax
comp=Z,16nm,0.7s,mb5.1
CTAO Charters Tower 47.33 115 *e*P **P** **15 13 15.5 -1.2**
comp=Z,16nm,0.7s,mb5.1
KSRS Korea Array 47.53 29 P **P** **15 13 15.6 -2.4**
comp=Z,3.7nm,1.0s,mb4.4,baz=221,slow=8.5,SNR=7.2
KSRS pP pP 15 13 28.7 -2.1
comp=Z,7.9nm,1.0s,baz=217,slow=9.7,SNR=8.5
STKA Stephens Creek 47.75 131 *e*P **P** **15 13 19.8 0.0**
comp=Z,12nm,0.5s,mb5.2
STKA Stephens Creek 47.75 131 P **P** **15 13 20.1 +0.3**
comp=Z,6.9nm,0.6s,mb4.9,baz=318,slow=7.9,SNR=14
STKA pP pP 15 13 33.2 +0.5
comp=Z,13nm,0.6s,baz=308,slow=7.1,SNR=9.7
STKA LR LR 15 34 15.1
comp=Z,462nm,18.2s,MS4.5,baz=118,slow=37
WMQ Urumqi 48.20 347 P **P** **15 13 23.3 +0.2**
WMQ AP pP 15 13 33.5 -2.4
WMQ XP sP 15 13 37.0 -4.4
WMQ PCP PcP 15 14 51.0 +1.3
WMQ *e*S **S** **15 20 19.0 0.0**
WMQ AMB AMB
comp=Z,35nm,0.9s,mb5.4
WMQ AMB AMB
comp=Z,558nm,4.6s
WMQ LR LR
comp=N,418nm,17.7s,MS4.6
WMQ LR LR
comp=E,455nm,20.6s,MS4.6
WMQ LR LR
comp=Z,386nm,19.0s,MS4.4
SONM Songino Array 50.96 5 P **P** **15 13 43.5 -0.5**
comp=Z,13nm,0.8s,mb4.9,baz=183,slow=8.7,SNR=56
SONM LR LR 15 37 59.9
comp=Z,241nm,18.2s,MS4.3,baz=188,slow=39
ULN Ulaanbaatar 51.05 5 *e*P **P** **15 13 44.0 -0.7**
ULN pmax pmax
comp=Z,13nm,0.9s,mb4.9
ULN Ulaanbaatar 51.05 5 *e*P **P** **15 13 44.0 -0.7**
comp=Z,13nm,0.9s,mb4.8
TKM2 Tokmak 2 51.20 336 *e*P **P** **15 13 45.9 0.0**
TKM2 pmax pmax
comp=Z,23nm,0.8s,mb5.2
TKM2 Tokmak 2 51.20 336 *e*P **P** **15 13 45.9 0.0**
comp=Z,23nm,0.8s,mb5.2
AML Almayashu 51.34 334 *e*P **P** **15 13 47.4 +0.4**
comp=Z,20nm,0.9s,mb5.0
FRU Bishkek 51.53 335 *e*P **P** **15 13 48.5 +0.2**
CN2 Changchun 51.65 23 *e*P **P** **15 13 52.9 +3.7**
CN2 *e*XP sP 15 14 08.0 +0.3
CN2 *e*S **S** **15 21 12.3 +5.1**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CN2 AMB AMB
comp=Z,300nm,3.0s
CN2 LR LR
comp=N,600nm,17.0s,MS4.9
CN2 LR LR
comp=E,700nm,17.0s,MS4.9
CN2 LR LR
comp=Z,1μm,19.0s,MS4.9
EKS2 Erkin-Say 51.74 335 *e*P **P** **15 13 50.3 +0.4**
comp=Z,40nm,0.8s,mb5.4
MK31 Makanchi Array 52.33 344 *i* P **P** **15 13 53.3 -1.0**
MK31 pmax pmax
comp=Z,28nm,0.9s,mb5.2
MKAR Makanchi Array 52.33 344 P **P** **15 13 53.2 -1.0**
comp=Z,6.3nm,0.4s,mb4.9,baz=158,slow=9.1,SNR=82
MKAR pP pP 15 14 07.0 -0.3
comp=Z,13nm,0.6s,baz=145,slow=7.7,SNR=16
MAT Matsushiro 52.59 38 P **P** **15 13 54.1 -2.2**
MAT S **S** **15 21 23.0 +2.8**
MJAR Matsushiro Arr 52.59 38 P **P** **15 13 54.0 -2.4**
comp=Z,1.1nm,0.7s,mb3.9,baz=209,slow=8.0,SNR=9.5
MJAR pP pP 15 14 07.1 -2.2
comp=Z,4.8nm,0.9s,baz=219,slow=7.5,SNR=9.8
MJAR Matsushiro Arr 52.59 38 P **P** **15 13 54.0 -2.4**
MJAR pP pP 15 14 07.1 -2.2
KK31 Karatay Array 53.54 333 *i* P **P** **15 14 02.8 -0.5**
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
MOY Mondy 54.57 0 *e*P **P** **15 14 09.4 -1.2**
TLY Talaya 54.63 2 *e*P **P** **15 14 10.2 -0.8**
TLY pmax pmax
comp=Z,13nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,276nm,17.0s,MS4.4
TLY Talaya 54.63 2 *e*P **P** **15 14 10.8 -0.2**
comp=Z,12nm,1.0s,mb4.9
OPO Ambohidratompo 54.71 250 P **P** **15 14 16.3 +4.1**
comp=Z,0.6nm,0.4s,mb4.0,baz=74,slow=15,SNR=2.6
CAN Canberra 54.81 132 *e*P **P** **15 14 12.5 -0.2**
KURK Kurchatov 56.92 343 P **P** **15 14 26.1 -1.3**
comp=Z,99nm,0.7s,mb6.0,SNR=5.4
KURK Kurchatov 56.92 343 P **P** **15 14 25.8 -1.6**
comp=Z,5.1nm,0.6s,mb4.7,baz=156,slow=7.6,SNR=11
KURK pP pP 15 14 39.8 -0.8
comp=Z,6.7nm,0.8s,baz=155,slow=7.2,SNR=7.8
KURK Kurchatov 56.92 343 *e*P **P** **15 14 26.4 -1.0**
ZAA0 Zalesovo Array 58.42 349 *e*P **P** **15 14 36.4 -1.5**
ZALV Zalesovo Beam 58.42 349 P **P** **15 14 36.5 -1.4**
comp=Z,36nm,0.8s,mb5.5,baz=181,slow=5.1,SNR=101
ZALV pP pP 15 14 50.6 -0.4
comp=Z,43nm,0.9s,baz=179,slow=4.8,SNR=16
NVS Novosibirsk 59.57 348 *e*P **P** **15 14 43.7 -2.2**
NVS pmax pmax
comp=N,17nm,1.4s
NVS pmax pmax
comp=E,11nm,1.4s
NVS pmax pmax
comp=Z,22nm,1.4s,mb5.0
RDF Al-Radifah 60.22 306 *e*P **P** **15 14 51.0 +0.1**
baz=306
RDF AMb AMB 15 15 11.0
comp=Z,46nm,1.2s,mb5.4,baz=306
NAY Al-Naaiem 60.59 306 *e*P **P** **15 14 53.4 0.0**
baz=306
NAY AMb AMB 15 15 14.7
comp=Z,14nm,1.1s,mb5.0,baz=306
MIB Mutribah 60.73 307 *e*P **P** **15 14 54.5 +0.2**
baz=307
MIB AMb AMB 15 14 56.5
comp=Z,35nm,1.3s,mb5.3,baz=307
RST Umm Al-Ruwaisa 60.88 306 *e*P **P** **15 14 55.2 -0.2**
baz=306
RST AMb AMB 15 14 56.7
comp=Z,16nm,0.9s,mb5.2,baz=306
BVA0 Borovoye Array 61.53 340 *i* P **P** **15 14 57.7 -1.5**
BVA0 pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
BVAR Borovoye Array 61.53 340 P **P** **15 14 57.7 -1.5**
comp=Z,5.2nm,0.6s,mb4.8,baz=148,slow=8.9,SNR=21
BVAR pP pP 15 15 11.6 -1.0
comp=Z,4.3nm,0.6s,baz=139,slow=9.2,SNR=9.0
BRVK Borovoye 61.59 340 *e*P **P** **15 14 57.8 -1.9**
BRVK pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
BRVK Borovoye 61.59 340 *e*P **P** **15 14 57.8 -1.9**
comp=Z,3.0nm,0.5s,mb4.7
BOD Bodaibo 61.65 8 *e*P **P** **15 14 58.8 -1.1**
BOD pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
YSS Yuzh-Sakhalins 61.96 31 *e*P **P** **15 15 01.0 -1.3**
YSS *e* pP 15 15 14.0 -1.5
YSS pmax pmax
comp=Z,30nm,0.9s,mb5.4
YSS Yuzh-Sakhalins 61.96 31 *e*P **P** **15 15 01.7 -0.6**
comp=Z,13nm,0.8s,mb5.1
AB31 Akbulak array 63.03 331 *i* P **P** **15 15 07.7 -1.7**
AB31 pmax pmax
comp=Z,12nm,0.6s,mb5.2
KMBO Kilima Mbogo 63.62 270 P **P** **15 15 17.6 +3.6**
comp=Z,1.0nm,0.6s,mb4.0,baz=31,slow=11,SNR=2.6
KMBO pP pP 15 15 32.0 +4.6
comp=Z,3.6nm,0.9s,baz=57,slow=8.2,SNR=4.4
KMBO LR LR 15 39 18.2
comp=Z,218nm,18.0s,MS4.4,baz=128,slow=32
KMBO Kilima Mbogo 63.62 270 P **P** **15 15 17.6 +3.6**
KMBO *PP pP 15 15 32.0 +4.7
AKTK Aktyubinsk 64.75 331 P **P** **15 15 20.4 -0.2**
AKTO Aktyubinsk 64.75 331 P **P** **15 15 20.4 -0.2**
comp=Z,1.6nm,0.3s,mb4.5,baz=130,slow=7.0,SNR=9.1
AKTO Aktyubinsk 64.75 331 *i* P **P** **15 15 16.5 -4.2**
AKTO pmax pmax
comp=Z,3.0nm,1.3s,mb4.2
SVE Sverdlovsk 68.04 337⇓ *e*P **P** **15 15 41.9 +0.3**
SVE pmax pmax
comp=Z,31nm,1.1s,mb5.2
ARU Arti 68.58 336 *c i*P **P** **15 15 44.3 -0.6**
ARU *e* 15 18 12.9
ARU *e*PPP 15 19 53.5
ARU *e*S S 15 24 45.6 +1.8
ARU *e*SS SS 15 29 10.2 +1.3
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.8
ARU Arti 68.58 336 *e*P **P** **15 15 43.3 -1.6**
comp=Z,6.3nm,0.8s,mb4.6
YAK Yakutsk 68.59 14 *e*P **P** **15 15 41.0 -3.9**
YAK *e* pP 15 15 56.6 -1.8
YAK pmax pmax
comp=Z,23nm,1.0s,mb5.1
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK Yakutsk 68.59 14 *e*P **P** **15 15 42.2 -2.8**
comp=N,24nm,0.8s,mb5.2
MAW Mawson 69.44 195 P **P** **15 15 54.3 +4.2**
comp=N,3.0nm,0.8s,mb4.3,baz=54,slow=12,SNR=8.3
MAW LR LR 15 39 43.5
comp=N,404nm,21.6s,MS4.6,baz=63,slow=30
KIV Kislovodsk 69.96 319⇓ *i*P **P** **15 15 54.3 +0.5**
KIV *i* pP 15 16 08.7 +1.4
KIV pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
MALT Malatya 70.74 312⇑ *i*P **P** **15 15 56.7 -2.0**
MALT Malatya 70.74 312 *e*P **P** **15 15 57.3 -1.4**
LSZ Lusaka 72.50 255 pP pP 15 16 27.6 +4.3
comp=Z,4.5nm,0.8s,baz=77,slow=6.8,SNR=3.4
PETK Petropavlovsk- 73.35 32 P **P** **15 16 11.7 -2.2**
comp=Z,3.6nm,0.8s,mb4.3,baz=255,slow=7.6,SNR=12
ANN Anapa 73.75 318 *e*P **P** **15 16 18.4 +1.9**
ANN pmax pmax
comp=Z,29nm,1.5s,mb5.0
PET Petropavlovsk 73.81 32⇑ *e*P **P** **15 16 14.7 -2.0**
PET pmax pmax
comp=Z,53nm,1.9s,mb5.2
BR131 Keskin Array S 74.72 312 *e*P **P** **15 16 22.1 -0.3**
comp=Z,4.9nm,0.7s,mb4.5
BOSA Boshof 75.91 241 P **P** **15 16 32.3 +2.9**
comp=Z,3.0nm,0.6s,mb4.4,baz=276,slow=7.8,SNR=6.9
BOSA pP pP 15 16 46.3 +3.3
comp=Z,6.5nm,0.7s,baz=84,slow=2.6,SNR=5.2
BOSA LR LR 15 42 12.9
comp=Z,347nm,20.7s,MS4.7,baz=20,slow=29
BOSA Boshof 75.91 241 P **P** **15 16 32.3 +2.9**
BOSA *PP pP 15 16 46.3 +3.3
TIXI Tiksi 76.81 9 *e*P **P** **15 16 30.8 -2.8**
TIXI *e* 15 16 49.7
TIXI pmax pmax
comp=Z,22nm,1.5s,mb4.9
TIXI Tiksi 76.81 9 *e*P **P** **15 16 31.2 -2.4**
comp=Z,13nm,1.0s,mb4.8
SYO Syowa Base 77.11 199⇑ *e*P **P** **15 16 37.8 +2.5**
SYO Syowa Base 77.11 199⇑ *es*P sP 15 16 52.2 -2.1
OBN Obninsk 78.20 328⇑ *e*P **P** **15 16 40.9 -0.7**
OBN *i* pP 15 16 57.3 +2.0
OBN pmax pmax
comp=Z,13nm,1.1s,mb4.8
AKASG Malin Array Be 80.90 322 P **P** **15 16 56.4 -0.1**
comp=Z,0.4nm,0.3s,mb3.8,baz=88,slow=5.1,SNR=7.5
VRI Vrincioaia 81.27 317⇓ *i*P **P** **15 17 00.4 +1.9**
MLR Muntele Rosu 81.71 317⇓ *i*P **P** **15 17 02.0 +1.1**
MLR Muntele Rosu 81.71 317 ⇓P **P** **15 17 02.0 +1.1**
BURAR Bucovina Array 82.68 319⇓ *i*P **P** **15 17 06.9 +1.1**
BUR08 Bucovina Ar. S 82.69 319 *e*P **P** **15 17 06.6 +0.7**
VTS Vitosha 83.05 313⇓ *i*P **P** **15 17 09.3 +1.4**
VTS Vitosha 83.05 313 ⇓P **P** **15 17 09.3 +1.4**
JOF Joensuu 83.60 334 *ep* **P** **15 17 10.2 0.0**
comp=Z,2.3nm,0.6s,mb4.5
JOF Joensuu 83.60 334 *e*P **P** **15 17 10.2 0.0**
JOF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
KRUS Krusevo 84.28 312 *i* P **P** **15 17 13.7 -0.5**
BZS Buzias 84.72 316⇑ *i*P **P** **15 17 16.5 +0.1**
BZS Buzias 84.72 316 ⇑P **P** **15 17 16.5 +0.2**
KOLS Kolonicke sedl 84.87 320 *e*P **P** **15 17 18.0 +1.0**
KOLS *es*P sP 15 17 38.7 +2.6
KAF Kangasniemi 85.57 333 *ep* **P** **15 17 20.1 -0.1**
comp=Z,4.8nm,0.7s,mb4.8
KAF Kangasniemi 85.57 333 *e*P **P** **15 17 20.1 -0.1**
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
STHS Stebnicka Huta 85.62 320 *e*P **P** **15 17 22.2 +1.4**
STHS *e* pP 15 17 37.5 +2.9
STHS pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
STHS Stebnicka Huta 85.62 320 *e*P **P** **15 17 22.2 +1.4**
comp=Z,5.6nm,0.8s,mb4.8
STHS *e* pP 15 17 37.5 +2.9
KECS Kecovo 85.96 319 *e*P **P** **15 17 21.4 -1.1**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
KECS Kecovo 85.96 319 *e*P **P** **15 17 21.4 -1.1**
comp=Z,2.2nm,0.8s,mb4.4
QSPA South Pole Qui 86.86 180 P **P** **15 17 29.7 +3.4**
comp=Z,1.0nm,0.8s,mb4.1,baz=166,slow=1.4,SNR=4.3
ARCES ARCESS Array B 87.81 340 P **P** **15 17 30.7 -0.4**
comp=Z,7.3nm,0.9s,mb4.9,baz=104,slow=4.5,SNR=10
ARCES ARCESS Array B 87.81 340 P **P** **15 17 30.7 -0.4**
MORC Moravsky Berou 88.06 320⇑ *i*P **P** **15 17 34.0 +1.4**
MORC Moravsky Berou 88.06 320 ⇑P **P** **15 17 34.0 +1.4**
MODS Modra-Piesok 88.06 318 *e*P **P** **15 17 31.9 -0.8**
BRG Berggiesshubel 90.46 321 *e*P **P** **15 17 45.3 +1.4**
BRG pmax pmax
comp=Z,10.0nm,1.5s,mb4.9
BRG Berggiesshubel 90.46 321 *e*P **P** **15 17 45.2 +1.3**
comp=Z,16nm,1.5s,mb5.1
BRG Berggiesshubel 90.46 321 *e*P **P** **15 17 45.2 +1.4**
comp=Z,16nm,1.5s,mb5.2
GEC2 GERESS Array S 90.47 319 *e*P **P** **15 17 44.3 +0.4**
GEC2 pmax pmax
comp=Z,17nm,1.6s,mb5.1
GEC2 GERESS Array S 90.47 319 *e*P **P** **15 17 44.3 +0.4**
comp=Z,17nm,1.6s,mb5.1
GERES GERESS Array B 90.47 319 P **P** **15 17 45.2 +1.3**
comp=Z,1.6nm,0.7s,mb4.5,baz=96,slow=4.0,SNR=11
CLL Collm 91.08 321 *e*(P) **P** **15 17 51.0 +4.3**
CLL LmV 15 57 00.0
comp=Z,300nm,19.6s
SNAA Sanae 91.37 198⇑ *e*P **P** **15 17 49.4 +1.7**
MANZ Manzenberg 91.58 320 *e*P **P** **15 17 50.5 +1.4**
comp=Z,68nm,2.5s,mb5.5
SPITS Spitsbergen Ar 91.90 348 LR LR 16 04 13.0
comp=Z,149nm,18.6s,MS4.5,baz=345,slow=39
GRA1 Grafenberg Arr 92.14 319 *e*P **P** **15 17 52.3 +0.6**
comp=Z,8.0nm,0.9s,mb5.0
GRF Grafenberg Arr 92.14 319 *e*P **P** **15 17 52.3 +0.6**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
GRF Grafenberg Arr 92.14 319 *e*P **P** **15 17 52.3 +0.6**
GRF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
GRF Grafenberg Arr 92.14 319 *e*P **P** **15 17 52.3 +0.6**
comp=Z,8.0nm,0.9s,mb5.0
NB2 NORSAR Subarra 92.54 331 P pP 15 18 12.1 +4.9
comp=Z,2.4nm,0.7s,baz=92,slow=5.1
NVAR Mina Array Bea 129.89 40 PKP PKPdf 15 23 52.8 +0.7
comp=Z,0.9nm,0.8s,baz=265,slow=2.2,SNR=6.2
PDAR Pinedale Array 132.10 30 PKP PKPdf 15 23 56.0 -0.1
comp=Z,0.3nm,0.4s,baz=272,slow=2.6,SNR=2.0
WMOK Wichita Mounta 143.60 28 *e*PKHKP 15 24 12.3
CPUP Villa Florida 143.94 214 PKP PKPdf 15 24 18.5 +0.2
comp=Z,0.4nm,0.4s,baz=135,slow=1.4,SNR=6.0
CPUP pPKP pPKPdf 15 24 33.1 +0.4
comp=Z,8.7nm,0.9s,baz=118,slow=5.3,SNR=6.2
CFAA Coronel Fontan 143.96 196 PKP PKPdf 15 24 18.1 -0.1
comp=Z,0.2nm,0.3s,baz=223,slow=4.8,SNR=4.2
CFAA pPKP pPKPdf 15 24 32.5 -0.1
comp=Z,0.4nm,0.4s,baz=185,slow=2.3,SNR=4.2

CFAA	**Coronel Fontan**	**143.96**	**196**	PKP	PKPdf	15 24 18.1	-0.1
CFAA				pPKP	pPKPdf	15 24 32.5	-0.1
BDFB	**Brasilia**	**144.03**	**238**	PKP	PKPdf	15 24 18.9	+0.2
	comp=Z,2.4nm,0.5s,baz=315,slow=1.6,SNR=4.0						
BDFB				pPKP	pPKPdf	15 24 33.7	+0.6
	comp=Z,14nm,1.1s,baz=135,slow=2.5,SNR=4.9						
TXAR	**Lajitas Array**	**145.02**	**39**	PKP	PKPdf	15 24 18.8	-1.3
	comp=Z,5.2nm,0.6s,baz=280,slow=1.2,SNR=76						
TXAR				pPKP	pPKPdf	15 24 33.0	-1.4
	comp=Z,9.5nm,0.7s,baz=294,slow=1.6,SNR=15						
MIAR	**Mount Ida**	**145.95**	**22**	*e*PKIKP	PKPdf	15 24 21.2	-0.3
ELN	**Prospectdale**	**146.01**	**2**	*e*PKPbc	PKPdf	15 24 19.7	-1.8
JCT	**Junction City**	**146.47**	**34**	*e*PKP2	PKPbc	15 24 22.0	-1.9
TZTN	**Tazewell**	**146.48**	**6**	*e*PKPbc	PKPbc	15 24 22.6	-1.2
CPCT	**Cooper Cave**	**147.43**	**8**	*e*PKPdf	PKPdf	15 24 24.8	+0.8
HKT	**Hockley**	**148.96**	**29**	*e*PKP2	PKPbc	15 24 30.8	+0.1

*IDC **15** 15:21:33.7±3.2, 308S×10082E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.8/19, mbtmp4.0/6, Error ellipse: s-maj=144.5km s-min=18.5km az=56.0*

*ISCJB **15** 15:21:36.7±2.5, 30S±05×1009E±07, h33km, mb4.0/6, Error ellipse: s-maj=116.6km s-min=13.6km az=145.3*

*NEIC **15** 15:21:38.7±1.6, 3.10S×10083E, h35km, Error ellipse: s-maj=77.8km s-min=10.3km az=55.0*

ISC 15 15:21:39.2±2.5, 30S±05×1009E±07, h35km, n12, σ0§48/10, mb4.0/6, Southern Satellites

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.67**	**120**	P	**P**	**15 28 42.6**	**-0.3**
	0.9nm,0.4s,mb3.9,baz=303,slow=9.0,SNR=32						
WB2	**Warramunga Arr**	**36.68**	**120**	*e*P	**P**	**15 28 42.5**	**-0.5**
ASAR	**Alice Springs**	**37.90**	**126**	P	**P**	**15 28 53.4**	**+0.1**
	0.3nm,0.4s,mb3.4,baz=298,slow=8.4,SNR=9.0						
STKA	**Stephens Creek**	**47.77**	**132**	P	**P**	**15 30 14.0**	**+0.8**
	1.0nm,0.6s,mb4.1,baz=326,slow=7.3,SNR=3.1						
STKA	**Stephens Creek**	**47.77**	**132**	P	**P**	**15 30 14.0**	**+0.8**
SONM	**Songino Array**	**50.87**	**5**	P	**P**	**15 30 37.4**	**+0.8**
	2.0nm,0.7s,mb4.2,baz=186,slow=8.7,SNR=11						
MK31	**Makanchi Array**	**52.27**	**344**	*e*P	**P**	**15 30 47.3**	**+0.3**
MKAR	**Makanchi Array**	**52.27**	**344**	P	**P**	**15 30 46.9**	**-0.1**
	1.3nm,0.4s,mb4.2,baz=159,slow=9.0,SNR=20						
ZAA0	**Zalesovo Array**	**58.35**	**349**	*e*P	**P**	**15 31 30.2**	**-0.5**
ZALV	**Zalesovo Beam**	**58.35**	**349**	P	**P**	**15 31 30.3**	**-0.4**
	1.8nm,0.4s,mb4.5,baz=174,slow=4.2,SNR=19						
TXAR	**Lajitas Array**	**144.92**	**39**	PKPbc	PKPdf	15 41 12.4	-1.0
	0.7nm,0.6s,baz=267,slow=0.5,SNR=13						
TXAR	**Lajitas Array**	**144.92**	**39**	PKPbc	PKPdf	15 41 12.4	-1.0

*ISCJB **15** 15:22:00.5±0.9, 490S±0.1×1236E±06, h10km, mb3.9/6, Error ellipse: s-maj=55.2km s-min=15.6km az=16.4*

*IDC **15** 15:22:00.8±1.1, 4905S×12377E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.8/13, mbtmp3.8/5, Error ellipse: s-maj=59.3km s-min=21.0km az=105.0*

*NEIC **15** 15:22:02.4±0.7, 4906S×12373E, h10km, mb4.8/1, Error ellipse: s-maj=46.0km s-min=13.0km az=106.0*

ISC 15 15:22:02.5±0.9, 490S±01×1237E±06, h10km, n9, σ0§50/7, mb3.9/6, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**26.58**	**21**	P	**P**	**15 27 39.9**	**-0.8**
	1.5nm,1.0s,mb3.5,baz=196,slow=9.5,SNR=7.1						
WRA	**Warramunga Arr**	**30.27**	**20**	P	**P**	**15 28 14.4**	**+0.8**
	0.3nm,0.8s,mb3.1,baz=183,slow=13,SNR=3.4						
WRA	**Warramunga Arr**	**30.27**	**20**	P	**P**	**15 28 14.3**	**+0.7**
MAW	**Mawson**	**35.06**	**216**	P	**P**	**15 28 55.1**	**0.0**
	2.6nm,0.9s,mb4.2,baz=85,slow=5.0,SNR=4.5						
QSPA	**South Pole Qui**	**41.08**	**180**	P	**P**	**15 29 46.0**	**+0.3**
	2.5nm,1.0s,mb3.8,baz=312,slow=6.5,SNR=5.0						
SNAA	**Sanae**	**53.81**	**198**	*e*P	**P**	**15 31 24.4**	**-0.4**
	11nm,1.1s,mb4.7						
CMAR	**Chiang Mai Arr**	**70.71**	**335**	P	**P**	**15 33 18.6**	**+0.1**
	2.2nm,1.1s,mb4.0,baz=186,slow=5.4,SNR=12						
TXAR	**Lajitas Array**	**139.15**	**101**	PKP	PKPdf	15 41 27.7	-1.6
	0.8nm,0.6s,baz=212,slow=4.3,SNR=9.1						
TXAR	**Lajitas Array**	**139.15**	**101**	PKP	PKPdf	15 41 27.7	-1.6

*RSPR **15** 15:29:27.2, 1951N×6577W, h58km±10km, MD3.3/11, MD3.3/11*

*NEIC **15** 15:29:27.2, 1951N×6577W, h58km, MD3.3(RSPR), After RSPR.*

ISC 15 15:29:26.0±2.0, 195N±01×6582W±010, h19km±25km, n48, σ0§47/82, 45C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBYP	**Canovanas**	**1.20**	**182**	*e*P	**Pn**	**15 29 47.1**	**-0.6**
CBYP	**Canovanas**	**1.20**	**182**	*e*P	**Pn**	**15 29 48.0**	**+0.3**
CBYP	**Canovanas**	**1.20**	**182**	*e*S	**Sb**	**15 30 03.1**	**0.0**
CBYP	**Canovanas**	**1.20**	**182**	*e*P	**Pn**	**15 29 48.0**	**+0.3**
CBYP				*e*S	**Sb**	**15 30 03.8**	**+0.7**
CBYP	**Canovanas**	**1.20**	**182**	*e*P	**Pn**	**15 29 47.1**	**-0.6**
CBYP				⇑*e*P		15 29 48.0	
CBYP				*e*S	**Sb**	**15 30 03.1**	**0.0**
HUMP	**Col San Antoni**	**1.32**	**181**	⇑*e*P	**Pn**	**15 29 49.0**	**-0.5**
HUMP	**Col San Antoni**	**1.32**	**181**	*e*S	**Sn**	**15 30 06.5**	**0.0**
HUMP	**Col San Antoni**	**1.32**	**181**	⇓*e*P	**Pn**	**15 29 49.0**	**-0.5**
HUMP				*e*S	**Sn**	**15 30 06.5**	**0.0**
HUMP	**Col San Antoni**	**1.32**	**181**	⇑*e*P	**Pn**	**15 29 49.0**	**-0.5**
HUMP				*e*S	**Sn**	**15 30 06.5**	**0.0**
SJG	**San Juan**	**1.39**	**193**	⇑*e*P	**Pn**	**15 29 50.2**	**-0.2**
SJG	**San Juan**	**1.39**	**193**	*e*S	**Sn**	**15 30 07.9**	**-0.3**
SJG	**San Juan**	**1.39**	**193**	⇑*e*P	**Pn**	**15 29 50.2**	**-0.2**
SJG				*e*S	**Sn**	**15 30 08.3**	**+0.1**
SJG	**San Juan**	**1.39**	**193**	⇑*e*P	**Pn**	**15 29 50.1**	**-0.3**
SJG	**San Juan**	**1.39**	**193**	*e*S	**Sn**	**15 30 07.9**	**-0.5**
SJG	**San Juan**	**1.39**	**193**	⇑*e*P	**Pn**	**15 29 50.1**	**-0.2**
SJG				*e*S	**Sn**	**15 30 08.2**	**0.0**
SJG	**San Juan**	**1.39**	**193**	⇑*e*P	**Pn**	**15 29 50.2**	**-0.2**
SJG	**San Juan**	**1.39**	**193**	⇑*e*P	**Pn**	**15 29 50.2**	**-0.2**
SJG	**San Juan**	**1.39**	**193**	⇑*e*P	**Pn**	**15 29 50.9**	**+0.5**
SJG				*e*S	**Sn**	**15 30 07.7**	**-0.5**
SJG				*e*S	**Sn**	**15 30 07.9**	**-0.3**
SJG				*e*S	**Sn**	**15 30 08.2**	**0.0**
SJG				*e*S	**Sn**	**15 30 08.3**	**+0.1**
SJG	**San Juan**	**1.39**	**193**	⇑*e*P	**Pn**	**15 29 50.1**	**-0.3**
SJG				*e*S	**Sn**	**15 30 07.7**	**-0.5**
SJG				*e*S	**Sn**	**15 30 07.9**	**-0.3**
MTP	**Monte Pirata**	**1.39**	**170**	⇑*e*P	**Pn**	**15 29 50.0**	**-0.4**
MTP	**Monte Pirata**	**1.39**	**170**	*e*S	**Sn**	**15 30 08.9**	**+0.7**
MTP	**Monte Pirata**	**1.39**	**170**	⇓*e*P	**Pn**	**15 29 50.2**	**-0.2**
MTP				*e*S	**Sn**	**15 30 08.9**	**+0.7**
MTP	**Monte Pirata**	**1.39**	**170**	⇑*e*P	**Pn**	**15 29 50.0**	**-0.4**
MTP				⇓*e*P		15 29 50.2	
MTP				*e*S	**Sn**	**15 30 08.9**	**+0.7**
AOPR	**Arecibo Observ**	**1.43**	**218**	⇑*e*P	**Pn**	**15 29 49.9**	**-0.9**
AOPR	**Arecibo Observ**	**1.43**	**218**	⇑*e*P	**Pn**	**15 29 50.7**	**-0.2**
AOPR				*e*S	**Sn**	**15 30 08.4**	**-0.7**
AOPR	**Arecibo Observ**	**1.43**	**218**	⇑*e*P	**Pn**	**15 29 49.9**	**-0.9**
AOPR				⇑*e*P		15 29 50.7	
AOPR				*e*S	**Sn**	**15 30 08.4**	**-0.7**
CPD	**Cerro la Pandu**	**1.43**	**184**	⇑*e*P	**Pn**	**15 29 51.4**	**+0.4**
CPD				*e*S	**Sn**	**15 30 09.0**	**-0.2**
LRS	**Lares**	**1.53**	**220**	⇑*e*P	**Pn**	**15 29 52.2**	**0.0**
LRS	**Lares**	**1.53**	**220**	⇑*e*P	**Pn**	**15 29 52.2**	**0.0**
LRS				*e*S	**Sn**	**15 30 11.3**	**-0.2**
LRS	**Lares**	**1.53**	**220**	⇑*e*P	**Pn**	**15 29 52.2**	**0.0**
LRS				*e*S	**Sn**	**15 30 11.3**	**-0.2**
LRS	**Lares**	**1.53**	**220**	⇑*e*P	**Pn**	**15 29 52.2**	**0.0**
LRS				*e*S	**Sn**	**15 30 11.3**	**-0.2**
CELP	**Cerrillos**	**1.57**	**207**	⇑*e*P	**Pn**	**15 29 52.5**	**-0.3**
CELP	**Cerrillos**	**1.57**	**207**	⇑*e*P	**Pn**	**15 29 53.0**	**+0.2**
CELP				*e*S	**Sn**	**15 30 12.2**	**-0.4**
CELP	**Cerrillos**	**1.57**	**207**	⇑*e*P	**Pn**	**15 29 53.0**	**+0.2**
CELP				*e*S	**Sn**	**15 30 12.2**	**-0.4**
CELP	**Cerrillos**	**1.57**	**207**	⇑*e*P	**Pn**	**15 29 52.5**	**-0.3**
CELP				⇑*e*P		15 29 53.0	
CELP				*e*S	**Sn**	**15 30 12.2**	**-0.4**
OBIP	**Obispado Ponce**	**1.61**	**208**	⇑*e*P	**Pn**	**15 29 53.8**	**+0.4**
OBIP				*e*S	**Sn**	**15 30 13.3**	**-0.2**
ICM	**Isla Caja Muer**	**1.71**	**203**	⇑*e*P	**Pn**	**15 29 54.5**	**-0.2**
ICM	**Isla Caja Muer**	**1.71**	**203**	⇑*e*P	**Pn**	**15 29 54.6**	**-0.2**
ICM	**Isla Caja Muer**	**1.71**	**203**	⇑*e*P	**Pn**	**15 29 54.6**	**-0.2**
ICM				*e*S	**Sn**	**15 30 15.7**	**-0.3**
ICM				*e*S	**Sn**	**15 30 16.5**	**+0.5**
ICM	**Isla Caja Muer**	**1.71**	**203**	⇑*e*P	**Pn**	**15 29 54.5**	**-0.2**
ICM				*e*S	**Sn**	**15 30 15.7**	**-0.3**
ICM				*e*S	**Sn**	**15 30 16.5**	**+0.5**
LSP	**Las Mesas**	**1.76**	**223**	⇑*e*P	**Pn**	**15 29 55.5**	**0.0**
LSP	**Las Mesas**	**1.76**	**223**	⇑*e*P	**Pn**	**15 29 56.3**	**+0.8**
LSP	**Las Mesas**	**1.76**	**223**	⇑*e*P	**Pn**	**15 29 56.3**	**+0.8**
LSP				*e*S	**Sn**	**15 30 17.9**	**+0.5**
LSP				*e*S	**Sn**	**15 30 18.4**	**+1.0**
LSP	**Las Mesas**	**1.76**	**223**	⇑*e*P	**Pn**	**15 29 55.5**	**0.0**
LSP				⇑*e*P		15 29 56.3	
LSP				*e*S	**Sn**	**15 30 17.1**	**-0.3**
LSP				*e*S	**Sn**	**15 30 18.4**	**+1.0**
CRPR	**Cabo Rojo, PR**	**1.91**	**220**	⇑*e*P	**Pn**	**15 29 57.8**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.91**	**220**	*e*S	**Sn**	**15 30 21.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.91**	**220**	⇑*e*P	**Pn**	**15 29 58.7**	**+1.2**
CRPR				*e*S	**Sn**	**15 30 21.5**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.91**	**220**	⇑*e*P	**Pn**	**15 29 57.8**	**+0.3**
CRPR				⇑*e*P		15 29 58.7	
CRPR				*e*S	**Sn**	**15 30 21.5**	**+0.6**

*NEIC **15** 15:56:58.1±0.4, 932S×11543E, h35km, mb4.4/4, Error ellipse: s-maj=15.6km s-min=8.9km az=61.0*

NEIC Felt [III] at Denpasar and Kuta. Also felt [III] at Mataram, Lombok.

*IDC **15** 15:57:00.8±2.0, 9.11S×11580E, h59km±17km, mb4.0/14, mb1 4.1/16, mb1mx4.0/21, mbtmp4.1/16, MS2.9/2, Ms1 3.0/2, ms1mx2.5/25, Error ellipse: s-maj=19.2km s-min=8.8km az=45.0*

*DJA **15** 15:57:02, 952S×11570E, h33km, MLv4.9/11*

*ISCJB **15** 15:57:03.2±0.5, 9.17S±006×11574E±006, h100km±5km, mb4.1/15, Error ellipse: s-maj=11.2km s-min=7.5km az=39.9*

ISC 15 15:57:03.6±0.5, 925S±006×11579E±005, h89km±5km, n49, σ1§15/48, mb4.1/15, 1D, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTNI	**Mataram**	**0.72**	**31**	P	**Pn**	**15 57 21.1**	**+0.9**
	0.0nm,0.0s						
DNP	**Denpasar**	**0.81**	**315**	P	**Pn**	**15 57 20.2**	**-1.0**
	0.0nm,0.0s						
KHKI	**Kahang-Kahang**	**0.90**	**348**	P	**Pn**	**15 57 22.3**	**+0.1**
	0.0nm,0.0s						
NBBI	**Negara**	**1.45**	**307**	P	**Pn**	**15 57 28.6**	**-0.1**
	0.0nm,0.0s						
KMMI	**Kalianget**	**2.84**	**320**	P	**Pn**	**15 57 48.6**	**+1.6**
	0.0nm,0.0s						
KRKI	**Karangkates**	**3.48**	**288**	P	**Pn**	**15 57 54.8**	**-0.8**
	0.0nm,0.0s						
TRT	**Tretes**	**3.48**	**296**	⇓*e*P	**Pn**	**15 57 50.0**	**-5.6**
SJI	**Sawahan**	**4.26**	**290**	P	**Pn**	**15 58 04.4**	**-1.8**
	0.0nm,0.0s						
KAPI	**Kappang**	**5.76**	**43**	P	**Pn**	**15 58 28.4**	**+1.7**
	9.6nm,0.3s,baz=200,slow=6.3,SNR=18						
KAPI				LR	LR	16 01 30.8	
	comp=Z,73nm,21.4s,baz=167,slow=48						
KAPI	**Kappang**	**5.76**	**43**	P	**Pn**	**15 58 28.4**	**+1.7**
KAPI				LR	LR	16 01 30.8	
BJII	**Banjamegara**	**6.32**	**287**	P	**Pn**	**15 58 34.9**	**+0.7**
	0.0nm,0.0s						
BATI	**Baumata**	**7.82**	**98**	P	**Pn**	**15 58 53.3**	**-1.4**
	8.7nm,0.3s,baz=74,slow=14,SNR=8.8						
BATI				S	**Sn**	**16 00 19.6**	**-2.0**
	baz=32,slow=19						
LEM	**Lembang**	**8.45**	**286**	P	**Pn**	**15 59 03.0**	**-0.2**
	0.0nm,0.0s						
KSM	**Kuching**	**11.97**	**333**	*e*Pn	**Pn**	**15 59 52.0**	**+0.7**
MBWA	**Marble Bar**	**12.43**	**163**	*e*Pn	**Pn**	**15 59 51.0**	**-6.4**
	12nm,0.4s						
FITZ	**Fitzroy Crossi**	**12.99**	**134**	*e*P	**Pn**	**16 00 02.5**	**-2.3**
	46nm,0.6s						
FITZ				*e*S	**Sn**	**16 02 16.1**	**-12**
FITZ	**Fitzroy Crossi**	**12.99**	**134**	P	**Pn**	**16 00 02.4**	**-2.4**
	baz=315,slow=9.7						
FITZ				S	**Sn**	**16 02 17.8**	**-10**
	2.4nm,0.3s,baz=169,slow=17,SNR=7.3						
WRA	**Warramunga Arr**	**20.83**	**123**	P	**P**	**16 01 39.1**	**+0.8**
	7.0nm,0.8s,baz=298,slow=12,SNR=28						
WRA				S	**S**	**16 05 26.1**	**+0.2**
	1.9nm,0.9s,baz=295,slow=22,SNR=4.1						
WRAB	**Tennant Creek**	**20.84**	**123**	*e*P	**P**	**16 01 40.3**	**+2.0**
	5.4nm,0.4s						
WB2	**Warramunga Arr**	**20.84**	**123**	*e*P	**P**	**16 01 39.0**	**+0.6**
WB2				*e*S	**S**	**16 05 24.8**	**-1.3**
WB2	**Warramunga Arr**	**20.84**	**123**	*e*P	**P**	**16 01 39.2**	**+0.9**
KLBR	**Kellerberrin**	**22.30**	**176**	*e*P	**P**	**16 01 54.4**	**+0.6**
	62nm,1.5s,mb4.7						
KLBR				*e*S	**S**	**16 05 48.4**	**-4.8**
ASAR	**Alice Springs**	**22.48**	**132**	P	**P**	**16 01 56.4**	**+0.7**
	4.0nm,0.7s,mb3.9,baz=304,slow=8.4,SNR=53						
ASAR				PcP	PcP	16 05 48.5	+1.5
	1.6nm,0.4s,baz=314,slow=1.7,SNR=7.4						
ASAR				S	**S**	**16 06 04.0**	**+7.7**
	4.2nm,0.8s,baz=292,slow=20,SNR=8.1						
MUN	**Mundaring**	**22.62**	**179**	*e*P	pP	16 02 10.5	-4.4
MUN				*e*S	**S**	**16 05 56.1**	**-2.2**
NWAO	**Narrogin (SRO)**	**23.60**	**177**	P	**P**	**16 02 06.7**	**+0.3**
	20nm,1.1s,mb4.4,baz=356,slow=14,SNR=3.5						
FORT	**Forrest**	**24.28**	**154**	*e*P	**P**	**16 02 13.2**	**+0.5**
	11nm,0.6s,mb4.4						
FORT				*e*S	**S**	**16 06 42.1**	**+17**
CMAR	**Chiang Mai Arr**	**32.16**	**329**	P	**P**	**16 03 23.4**	**+0.3**
	1.7nm,0.9s,mb3.8,baz=162,slow=6.6,SNR=14						
CMAR				ScP	ScP	16 09 46.5	+0.4
	0.4nm,0.7s,baz=190,slow=3.2,SNR=4.5						
CMAR				LR	LR	16 16 38.8	
	comp=Z,34nm,19.9s,baz=125,slow=37						
STKA	**Stephens Creek**	**32.85**	**137**	*e*P	**P**	**16 03 30.7**	**+1.7**
	4.0nm,1.1s,mb4.2						
STKA	**Stephens Creek**	**32.85**	**137**	P	**P**	**16 03 30.6**	**+1.5**
	2.8nm,0.7s,mb4.2,baz=308,slow=10,SNR=5.2						
STKA				PcP	PcP	16 06 13.5	+1.5
	5.0nm,0.6s,baz=6.3,slow=3.8,SNR=6.2						
SONM	**Songino Array**	**57.44**	**352**	P	**P**	**16 06 42.7**	**-0.3**
	0.9nm,0.7s,mb3.9,baz=173,slow=9.0,SNR=6.7						
MK31	**Makanchi Array**	**63.29**	**335**	*e*P	**P**	**16 07 22.5**	**-0.4**
MKAR	**Makanchi Array**	**63.29**	**335**	P	**P**	**16 07 22.2**	**-0.7**
	1.0nm,0.4s,mb4.1,baz=148,slow=7.0,SNR=14						
MAW	**Mawson**	**67.94**	**199**	P	**P**	**16 07 53.2**	**+0.6**
	1.6nm,0.6s,mb4.0,baz=68,slow=8.3,SNR=7.7						
ZALV	**Zalesovo Beam**	**68.19**	**341**	P	**P**	**16 07 53.1**	**-1.2**
	1.6nm,0.5s,mb4.2,baz=138,slow=4.3,SNR=8.1						
PETK	**Petropavlovsk-**	**71.61**	**25**	P	**P**	**16 08 15.7**	**+0.4**
	5.9nm,1.0s,mb4.4,baz=207,slow=1.9,SNR=9.0						
AKTK	**Aktyubinsk**	**77.65**	**326**	P	**P**	**16 08 48.5**	**-1.7**
AKTO	**Aktyubinsk**	**77.65**	**326**	P	**P**	**16 08 48.5**	**-1.7**
	1.3nm,0.5s,mb3.9,baz=81,slow=6.0,SNR=5.6						
BOSA	**Boshof**	**86.10**	**242**	P	**P**	**16 09 36.1**	**+0.9**
	1.6nm,0.7s,mb4.1,baz=85,slow=6.2,SNR=6.8						
MMAI	**Mount Meron Ar**	**87.03**	**304**	P	**P**	**16 09 41.4**	**+1.9**
	0.9nm,0.5s,mb4.0,baz=120,slow=8.7,SNR=3.6						
AKASG	**Malin Array Be**	**94.92**	**320**	P	**P**	**16 10 15.2**	**-0.7**
	0.5nm,0.4s,mb4.3,baz=90,slow=4.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**115.39**	**280**	PKP	PKPdf	16 15 36.2	+0.1
	0.5nm,0.5s,baz=48,slow=2.0,SNR=7.6						
TORD	**Torodi Ar. Bea**	**115.39**	**280**	PKP	PKPdf	16 15 36.2	+0.1
DBIC	**Dimbokro**	**121.22**	**272**	PKP	PKPdf	16 15 47.0	-0.4
	3.1nm,1.0s,baz=255,slow=5.1,SNR=4.6						
DBIC	**Dimbokro**	**121.22**	**272**	PKP	PKPdf	16 15 47.0	-0.4
NVAR	**Mina Array Bea**	**123.61**	**50**	PKP	PKPdf	16 15 53.7	+2.5
	0.5nm,0.7s,baz=318,slow=2.0,SNR=4.8						
TXAR	**Lajitas Array**	**138.02**	**56**	PKhKP		16 16 15.7	
	0.2nm,0.6s,baz=311,slow=4.2,SNR=3.3						
CPUP	**Villa Florida**	**144.00**	**191**	PKP	PKPdf	16 16 29.3	-0.3
	0.2nm,0.3s,baz=129,slow=6.5,SNR=2.7						
BDFB	**Brasilia**	**150.52**	**213**	PKPbc	PKPbc	16 16 47.8	+1.7
	9.0nm,0.5s,baz=142,slow=2.5,SNR=13						
LPAZ	**La Paz**	**154.33**	**171**	PKPbc	PKPbc	16 16 57.2	+2.6
	0.6nm,0.6s,baz=270,slow=1.0,SNR=4.0						
LPAZ				PKPab	PKPab	16 17 11.7	+3.0
	1.3nm,0.7s,baz=189,slow=4.8,SNR=5.6						

*MOS **15** 16:00:13.6±0.9, 5163N×16.15E, h8km, mb3.7/1, Error ellipse: s-maj=8.1km s-min=4.5km az=88.7*

*ISCJB **15** 16:00:14.2±0.3, 5141N±002×16.11E±002, h0km, mb3.5/2, Error ellipse: s-maj=2.9km s-min=1.6km az=10.2*

*NEIC **15** 16:00:14.5±0.4, 5159N×16.18E, h5km, ML3.4(SZGRF), Error ellipse: s-maj=4.9km s-min=4.1km az=202.0*

*IDC **15** 16:00:15.9±0.6, 5148N×1601E, h0km, mb3.7/2, mb1 3.6/9, mb1mx3.5/28, mbtmp3.5/9, ML3.4/7, Error ellipse: s-maj=9.9km s-min=6.5km az=107.0*

*LDG **15** 16:00:15.2±0.2, 5148N×1604E, h1km, Ml3.8/11, Error ellipse: s-maj=5.2km s-min=2.2km az=7.0, Suspected Mining induced.*

*BGR **15** 16:00:15.6±0.4, 5150N×16.15E, h1km, ML3.4/17, Error ellipse: s-maj=5.6km s-min=2.2km az=16.0*

*PRU **15** 16:00:16.9, 5143N×1608E, h0km, Felt In Harrachov*

*CSEM **15** 16:00:16.4±0.1, 5146N×16.13E, h1km, ML3.8/18, Error ellipse: s-maj=1.6km s-min=1.0km az=13.0*

*WAR **15** 16:00:16.6, 5148N×16.11E, ML3.1, Mining Induced*

*IPEC **15** 16:00:16.1±0.3, 5149N×16.17E, h8km±1km, ML3.0/4, Error ellipse: s-maj=1.8km s-min=0.6km az=20.4*

*VIE **15** 16:00:18.0±0.5, 5129N×1602E, h0km, mb2.9/6, ML3.3/7, Error ellipse: s-maj=3.2km s-min=2.6km az=27.0, Suspected Mining induced.*

*STR **15** 16:00:35.0±0.6, 5254N×1577E, h2km, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 15 16:00:15.0±0.3, 5149N±002×1613E±002, h0km, n136, σ1§07/223, mb3.5/2, 11C-8D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**171**	*i* Pg	**Pg**	**16 00 28.4**	**+0.9**
KSP				*e*Sg	**Sg**	**16 00 37.0**	**+1.1**
KSP	**Ksiaz**	**0.66**	**171**	*e*Pg	**Pg**	**16 00 28.4**	**+0.9**
KSP				*e*Sg	**Sg**	**16 00 36.9**	**+0.9**
KSP	**Ksiaz**	**0.66**	**171**	⇓*i*P	**Pg**	**16 00 28.4**	**+0.9**
KSP				*e*		16 00 36.9	
KSP	**Ksiaz**	**0.66**	**171**	*e*Pg	**Pg**	**16 00 28.4**	**+0.9**
KSP				*e*Sg	**Sg**	**16 00 36.6**	**+0.6**
KSP	**Ksiaz**	**0.66**	**171**	⇓*i*Pg	**Pg**	**16 00 28.4**	**+0.9**
KSP				*e*Sg	**Sg**	**16 00 36.9**	**+0.9**
KSP				*e*		16 00 40.3	
UPC	**Upice**	**0.99**	**184**	*e*Pg	**Pg**	**16 00 34.4**	**+0.6**
DPC	**Dobruska-Polom**	**1.15**	**174**	*e*Pg	**Pg**	**16 00 37.2**	**+0.3**
DPC				*e*Sg	**Sg**	**16 00 51.8**	**0.0**
DPC	**Dobruska-Polom**	**1.15**	**174**	*e*P	**Pg**	**16 00 37.2**	**+0.3**
DPC				*e*		16 00 51.6	
DPC				smax			
	comp=N,133nm,0.4s						
DPC	**Dobruska-Polom**	**1.15**	**174**	*e*PG	**Pg**	**16 00 37.2**	**+0.3**
DPC				*e*SG	**Sg**	**16 00 51.6**	**-0.2**
	comp=Z,133nm,0.4s						
PVCC	**Panska Ves**	**1.38**	**226**	*e*P	**Pg**	**16 00 41.4**	**0.0**
PVCC				*e*		16 00 59.0	
PVCC				smax			
	comp=N,351nm,0.3s						
PVCC	**Panska Ves**	**1.38**	**226**	*e*PG	**Pg**	**16 00 41.4**	**0.0**
PVCC				*e*SG	**Sg**	**16 00 59.0**	**-0.2**
	comp=Z,351nm,0.3s						
BRG	**Berggiesshubel**	**1.51**	**247**	*e*Pn	**Pn**	**16 00 42.7**	**-0.5**
BRG				*e*Sg	**Sg**	**16 01 04.3**	**+0.8**
BRG	**Berggiesshubel**	**1.51**	**247**	PN	**Pn**	**16 00 42.6**	**-0.6**
BRG				PG	**Pg**	**16 00 44.1**	**+0.2**
BRG				SG	**Sg**	**16 01 04.3**	**+0.9**
	comp=Z,190nm,0.4s						
PRU	**Pruhonice**	**1.81**	**215**	*e*P	**Pn**	**16 00 47.2**	**-0.2**
PRU				*e*		16 01 11.7	
PRU				smax			
	comp=N,90nm,0.7s						
PRU	**Pruhonice**	**1.81**	**215**	Pg	**Pg**	**16 00 48.8**	**-0.9**
PRU				*e*Sg	**Sg**	**16 01 12.1**	**-1.0**
PRU	**Pruhonice**	**1.81**	**215**	*e*PN	**Pn**	**16 00 47.2**	**-0.2**
PRU				*e*PG	**Pg**	**16 00 48.8**	**

GERES	**GERESS Array B**	**3.07 211**	P		**Pn**	**16 01 05.2**	**+0.5**
GERES						16 01 41.1	
GERES	**GERESS Array B**	**3.07 211**	Pg		**Pg**	**16 01 11.9**	**-2.0**
GERES			S		**Sn**	**16 01 41.1**	**-1.0**
WET	**Wettzell**	**3.14 223**	*e*Pn		**Pn**	**16 01 05.9**	**+0.3**
WET	**Wettzell**	**3.14 223**	*e*Pn		**Pn**	**16 01 05.9**	**+0.3**
MODS	**Modra-Piesok**	**3.21 166**	*e*PN		**Pn**	**16 01 08.0**	**+1.5**
MODS			*e*PG		**Pg**	**16 01 16.2**	**-0.2**
MODS			*e*SG		**Sg**	**16 01 56.6**	**-1.3**
KOLL	**Kolacno**	**3.26 152**	*e*SG		**Sg**	**16 01 59.6**	**-0.1**
KOLL	**Kolacno**	**3.26 152**	*e*Sg		**Sg**	**16 01 59.6**	**-0.1**
ZST	**Bratislava**	**3.36 169**	*e*P		**Pg**	**16 01 19.6**	**+0.3**
ZST			pmax	pmax			
	comp=N,26nm,0.6s						
ZST	**Bratislava**	**3.36 169**	*e*PG		**Pg**	**16 01 19.6**	**+0.3**
ZST			*e*SG		**Sg**	**16 02 02.5**	**-0.2**
NIE	**Niedzica**	**3.38 126**	*e*P		**Pg**	**16 01 19.6**	**-0.1**
NIE			*e*S		**Sg**	**16 02 03.5**	**0.0**
VYHS	**Vyhne**	**3.47 149**	*e*P		**Pn**	**16 01 10.1**	**0.0**
VYHS			pmax	pmax			
	comp=N,9.0nm,0.8s						
VYHS	**Vyhne**	**3.47 149**	*e*PN		**Pn**	**16 01 10.1**	**0.0**
VYHS			*e*PG		**Pg**	**16 01 19.4**	**-2.0**
VYHS			*e*SG		**Sg**	**16 02 09.8**	**+3.4**
CONA	**Conrad Observa**	**3.57 183**	⇑*i*Pn		**Pn**	**16 01 12.4**	**+0.8**
	SNR=11						
CONA			⇑*i*Sg		**Sg**	**16 02 10.2**	**+0.7**
	comp=N,31nm,0.4s						
CSNA	**Conrad Observa**	**3.57 183**	⇑*i*Pn		**Pn**	**16 01 12.5**	**+0.9**
CSNA			⇓*i*Sg		**Sg**	**16 02 09.5**	**-0.1**
	comp=N,22nm,0.3s						
CLZ	**Clausthal**	**3.60 278**	*e*Pn		**Pn**	**16 01 12.8**	**+0.8**
CLZ			*e*Sg		**Sg**	**16 02 12.6**	**+2.0**
CLZ	**Clausthal**	**3.60 278**	*e*Pn		**Pn**	**16 01 12.8**	**+0.8**
CLZ			*e*Sg		**Sg**	**16 02 12.6**	**+1.9**
GRA1	**Grafenberg Arr**	**3.61 242**	Pn		**Pn**	**16 01 12.5**	**+0.4**
GRA1			Sg		**Sg**	**16 02 10.4**	**-0.5**
GRA1	**Grafenberg Arr**	**3.61 242**	*e*Pn		**Pn**	**16 01 12.5**	**+0.4**
GRA1			*e*Sg		**Sg**	**16 02 10.4**	**-0.5**
GRF	**Grafenberg Arr**	**3.61 242**	*e*Pn		**Pn**	**16 01 12.5**	**+0.4**
GRF			*e*Sg		**Sg**	**16 02 10.4**	**-0.5**
MOA	**Molln**	**3.84 199**	⇑*i*Pn		**Pn**	**16 01 16.1**	**+0.8**
	SNR=13						
MOA			⇑*i*Sg		**Sg**	**16 02 17.9**	**-0.4**
	comp=N,49nm,0.5s						
STHS	**Stebnicka Huta**	**3.87 120**	*e*P		**Pn**	**16 01 16.3**	**+0.7**
STHS			pmax	pmax			
	comp=N,27nm,0.6s						
STHS	**Stebnicka Huta**	**3.87 120**	*e*PN		**Pn**	**16 01 16.3**	**+0.7**
STHS			*e*PG		**Pg**	**16 01 29.8**	**+0.7**
STHS			*e*SG		**Sg**	**16 02 24.3**	**+5.1**
KECS	**Kecovo**	**4.12 135**	*e*P		**Pn**	**16 01 18.8**	**-0.2**
KECS			pmax	pmax			
	comp=N,12nm,1.0s						
KECS	**Kecovo**	**4.12 135**	*e*PN		**Pn**	**16 01 18.8**	**-0.2**
KECS			*e*PG		**Pg**	**16 01 34.9**	**+1.1**
KECS			*e*			16 02 25.4	
ARSA	**Arzberg**	**4.26 186**	⇑*i*Pn		**Pn**	**16 01 22.2**	**+1.2**
ARSA			⇓*i*Sg		**Sg**	**16 02 32.1**	**+0.3**
	comp=N,41nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.29 125**	*e*PN		**Pn**	**16 01 25.0**	**+3.5**
CRVS			*e*PG		**Pg**	**16 01 37.6**	**+0.4**
CRVS			*e*SG		**Sg**	**16 02 32.9**	**+0.1**
CRVS	**Cervenica-Dubn**	**4.29 125**	*e*Pn		**Pn**	**16 01 25.1**	**+3.6**
CRVS			*e*Pg		**Pg**	**16 01 37.6**	**+0.4**
CRVS			*e*Sg		**Sg**	**16 02 32.9**	**+0.1**
PSZ	**Piszkesteto**	**4.33 144**	*e*Pn		**Pn**	**16 01 20.2**	**-1.8**
PSZ	**Piszkesteto**	**4.33 144**	*e*Pn		**Pn**	**16 01 20.2**	**-1.8**
KWP	**Kalwaria**	**4.59 111**	⇑*i*P		**Pg**	**16 01 40.6**	**-2.2**
KWP	**Kalwaria**	**4.59 111**	Pn		**Pn**	**16 01 25.6**	**+0.1**
KWP	**Kalwaria**	**4.59 111**	Pn		**Pn**	**16 01 25.6**	**+0.1**
KOLS	**Kolonicke sedl**	**4.70 121**	*e*PN		**Pn**	**16 01 27.5**	**+0.4**
KOLS			*e*PG		**Pg**	**16 01 45.6**	**+0.6**
KOLS	**Kolonicke sedl**	**4.70 121**	*e*Pn		**Pn**	**16 01 27.5**	**+0.4**
KOLS			*e*Pg		**Pg**	**16 01 45.7**	**+0.7**
KBA	**Koelnbreinsper**	**4.78 204**	⇑*i*Pn		**Pn**	**16 01 29.1**	**+1.0**
KBA			⇑*i*Sg		**Sg**	**16 02 48.9**	**+0.6**
	comp=N,42nm,0.8s						
UZH	**Uzhgorod**	**4.89 123**	*e*P		**Pn**	**16 01 32.4**	**+2.7**
UZH			*e*S		**Sn**	**16 02 30.0**	**+3.0**
UZH			smax				
	comp=N,15μm,0.8s						
UZH			smax				
	comp=E,62μm,0.8s						
UZH	**Uzhgorod**	**4.89 123**	*e*P		**Pn**	**16 01 32.4**	**+2.7**
UZH			*e*S		**Sn**	**16 02 30.0**	**+3.0**
TOD	**Tromm**	**5.04 251**	P		**Pg**	**16 01 54.1**	**+2.6**
TOD			S		**Sg**	**16 02 59.8**	**+3.1**
MOTA	**Moosalm**	**5.29 220**	⇑*i*Pn		**Pn**	**16 01 35.4**	**+0.2**
MOTA			⇓*i*Sg		**Sg**	**16 03 05.5**	**+0.8**
	comp=E,9.6nm,0.4s						
MOTA	**Moosalm**	**5.29 220**	Pn		**Pn**	**16 01 35.4**	**+0.3**
MOTA			Sg		**Sg**	**16 03 05.5**	**+0.7**
	comp=E,9.6nm,0.4s						
PDKS	**Podkum**	**5.49 188**	*i* Pn		**Pn**	**16 01 39.0**	**+1.1**
PKSM	**Moragy**	**5.54 162**	⇑*i*P		**Pn**	**16 01 39.5**	**+1.0**
SPAK	**Spaichingen-Ko**	**5.84 237**	P		**Pg**	**16 02 08.5**	**+1.7**
SPAK			S		**Sg**	**16 03 27.1**	**+4.6**
LANF	**Langenberg**	**5.90 248**	P		**Pg**	**16 02 07.4**	**-0.6**
BFO	**Black Forest**	**5.95 241**	*e*P		**Pn**	**16 01 44.9**	**+0.7**
BFO			pmax	pmax			
	comp=Z,5.0nm,0.6s						
BFO	**Black Forest**	**5.95 241**	*e*Pn		**Pn**	**16 01 44.9**	**+0.7**
	comp=Z,5.3nm,0.6s						
BFO	**Black Forest**	**5.95 241**	*e*Pn		**Pn**	**16 01 44.9**	**+0.7**
	comp=Z,5.3nm,0.6s						
RUP	**Ruppelstein**	**6.05 256**	P		**Pg**	**16 02 06.9**	**-3.9**
RUP			S		**Sg**	**16 03 23.6**	**-5.5**
DAVOS	**Davos**	**6.24 224**	P		**Pn**	**16 01 49.8**	**+1.6**
DAVOS						16 02 57.3	
DAVOX	**Davos/Dischmat**	**6.25 223**	Pn		**Pn**	**16 01 49.8**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=16,slow=18,SNR=4.9						
DAVOX			Sn		**Sn**	**16 02 57.3**	**-3.0**
	comp=Z,0.5nm,0.3s,baz=305,slow=19,SNR=2.6						
DAVOX			Lg			16 03 32.3	
	comp=Z,0.6nm,0.3s,baz=172,slow=19,SNR=3.0						
DAVOX	**Davos/Dischmat**	**6.25 223**	Pn		**Pn**	**16 01 49.8**	**+1.5**
DAVOX			Sn		**Sn**	**16 02 57.3**	**-3.0**
FELD	**Feldberg im Sc**	**6.39 239**	P		**Pg**	**16 02 15.9**	**-1.5**
FELD			S		**Sg**	**16 03 39.4**	**-0.8**
CDF	**Champ du Feu**	**6.49 245**	*e*Pn		**Pn**	**16 01 48.9**	**-2.8**
CDF			*e*Sg		**Sg**	**16 03 36.6**	**-6.7**
	comp=Z,36nm,0.8s						
CDF	**Champ du Feu**	**6.49 245**	*e*Pn		**Pn**	**16 01 48.9**	**-2.8**
CDF			*e*Sg		**Sg**	**16 03 36.6**	**-6.7**
	comp=Z,18nm,0.8s						
BUR08	**Bucovina Ar. S**	**7.04 120**	*e*Pn		**Pn**	**16 01 58.3**	**-0.9**
HINF	**Hinteralfeld**	**7.06 242**	*e*Sg		**Sg**	**16 03 54.2**	**-7.2**
	comp=Z,30nm,0.9s						
HINF	**Hinteralfeld**	**7.06 242**	*e*Sg		**Sg**	**16 03 54.2**	**-7.2**
	comp=Z,15nm,0.9s						
BURAR	**Bucovina Array**	**7.07 120**	⇓*i*P		**Pn**	**16 02 00.2**	**+0.7**
BAIF	**Baives**	**7.70 264**	*e*Sg		**Sg**	**16 04 14.3**	**-7.7**
	comp=Z,31nm,1.3s						
BAIF	**Baives**	**7.70 264**	*e*Sg		**Sg**	**16 04 14.3**	**-7.7**
	comp=Z,16nm,1.3s						
MEZF	**Maizieres J'vi**	**7.74 252**	*e*Sg		**Sg**	**16 04 15.5**	**-7.9**
	comp=Z,9.9nm,0.5s						
MEZF	**Maizieres J'vi**	**7.74 252**	*e*Sg		**Sg**	**16 04 15.5**	**-7.9**
	comp=Z,4.9nm,0.5s						
CABF	**La Chapelle**	**8.21 237**	*e*Sg		**Sg**	**16 04 29.9**	**-8.4**
	comp=Z,60nm,1.3s						
CABF	**La Chapelle**	**8.21 237**	*e*Sg		**Sg**	**16 04 29.9**	**-8.4**
	comp=Z,30nm,1.3s						
AKASG	**Malin Array Be**	**8.28 90**	Pn		**Pn**	**16 02 15.1**	**-1.1**
	comp=Z,2.1nm,0.3s,baz=279,slow=12,SNR=9.6						
AKASG			Sn		**Sn**	**16 03 46.2**	**-4.1**
	comp=Z,1.3nm,0.3s,baz=271,slow=25,SNR=4.2						
HFS	**Hagfors**	**8.77 352**	Pn		**Pn**	**16 02 22.3**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=167,slow=14,SNR=5.0						
HFS			Sn		**Sn**	**16 03 57.5**	**-4.8**
	comp=Z,0.3nm,0.3s,baz=167,slow=27,SNR=3.5						
LOR	**Lormes**	**9.05 247**	*e*Pn		**Pn**	**16 02 23.9**	**-2.8**
LOR			*e*Sg		**Sg**	**16 04 56.5**	**-8.8**
	comp=Z,9.7nm,0.8s						
LOR	**Lormes**	**9.05 247**	*e*Pn		**Pn**	**16 02 23.9**	**-2.8**
LOR			*e*Sg		**Sg**	**16 04 56.5**	**-8.8**
	comp=Z,4.8nm,0.8s						
SSF	**Saint Saulge**	**9.37 247**	*e*Sg		Sx	16 05 06.2	
	comp=Z,9.2nm,0.9s						
SSF	**Saint Saulge**	**9.37 247**	*e*Sg		Sx	16 05 06.2	
	comp=Z,4.6nm,0.9s						
NOA	**NORSAR Array B**	**9.95 346**	Pn		**Pn**	**16 02 36.7**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=168,slow=13,SNR=4.8						
FRF	**La Foret Royal**	**10.19 223**	*e*Pn		**Pn**	**16 02 39.2**	**-3.2**
FRF			*e*Sg		Sn	16 05 31.7	+54
	comp=Z,7.9nm,1.0s						
LMR	**La Mourre**	**10.44 222**	*e*Pn		**Pn**	**16 02 42.7**	**-3.0**
LMR			*e*Sg		Sn	16 05 39.7	+56
	comp=Z,21nm,1.1s						
TCF	**Toulx Ste Croi**	**10.54 246**	*e*Pn		**Pn**	**16 02 43.7**	**-3.4**
KAF	**Kangasniemi**	**12.00 24**	*e*p		**Pn**	**16 03 04.8**	**-2.2**
	comp=Z,7.3nm,0.9s						
KAF	**Kangasniemi**	**12.00 24**	*e*P		**Pn**	**16 03 04.8**	**-2.2**
KAF			pmax	pmax			
	comp=Z,7.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**12.13 296**	Pn		**Pn**	**16 03 04.8**	**-4.0**
	comp=Z,0.2nm,0.3s,baz=100,slow=13,SNR=3.4						
ARCES	**ARCESS Array B**	**18.64 10**	Pn		**Pn**	**16 04 29.6**	**-4.4**
	comp=Z,0.5nm,0.3s,baz=195,slow=11,SNR=12						
AKTK	**Aktyubinsk**	**26.15 76**	P		**P**	**16 05 50.3**	**-0.2**
AKTO	**Aktyubinsk**	**26.15 76**	P		**P**	**16 05 50.3**	**-0.2**
	comp=Z,1.4nm,0.5s,mb3.9,baz=297,slow=6.8,SNR=5.5						
TORD	**Torodi Ar. Bea**	**39.99 202**	P		**P**	**16 07 51.7**	**+0.5**
	comp=Z,0.4nm,0.8s,mb3.1,baz=7.6,slow=9.9,SNR=3.8						
TORD	**Torodi Ar. Bea**	**39.99 202**	P		**P**	**16 07 51.7**	**+0.5**

*ISCJB **15** 16:21:53.0±1.7,216N±0.1×1430E±0.3,h323km±16km, mb3.2/7, Error ellipse: s-maj=39.3km s-min=18.4km az=179.7*
*IDC **15** 16:21:53.4±1.9,2159N×143.18E,h313km±18km,mb3.1/7, mb1 3.3/10,mb1mx3.1/23,mbtmp3.2/10, Error ellipse: s-maj=30.5km s-min=13.1km az=89.0*
*NEIC **15** 16:21:54.7±3.9,2157N×143.18E,h331km±40km, Error ellipse: s-maj=32.5km s-min=15.0km az=89.0*

ISC 15 16:21:53.6±1.6, 2159N±010×1431E±03, h313km±15km, n13,σ0s27/14, mb3.2/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.54**	**352**	P	**Pn**	**16 23 18.3**	**+0.4**
	5.8nm,0.3s,baz=272,slow=19,SNR=4.4						
CBIJ				S	**S**	**16 24 25.7**	**-0.1**
	7.7nm,0.3s,baz=103,slow=23,SNR=6.0						
JHJ	**Hachijo jima 2**	**11.85**	**346**	P	**Pn**	**16 24 33.4**	**-0.7**
	3.6nm,0.3s,baz=186,slow=14,SNR=12						
JHJ				S	**S**	**16 26 46.0**	**+0.1**
	2.8nm,0.3s,baz=252,slow=20,SNR=3.3						
MJAR	**Matsushiro Ar**	**15.49**	**345**	P	**P**	**16 25 15.6**	**+0.4**
	0.5nm,0.3s,baz=164,slow=10,SNR=7.9						
WRA	**Warramunga Arr**	**42.16**	**192**	P	**P**	**16 29 16.3**	**+0.1**
	0.4nm,0.3s,mb3.1,baz=15,slow=9.3,SNR=28						
ASAR	**Alice Springs**	**45.86**	**192**	P	**P**	**16 29 45.4**	**-0.1**
	0.1nm,0.3s,mb2.6,baz=12,slow=6.7,SNR=7.9						
ZALV	**Zalesovo Beam**	**54.24**	**322**	P	**P**	**16 30 47.5**	**-0.1**
	0.6nm,0.4s,mb3.2,baz=107,slow=7.3,SNR=3.4						
MKAR	**Makanchi Array**	**54.71**	**313**	P	**P**	**16 30 51.1**	**0.0**
	0.2nm,0.2s,mb3.1,baz=81,slow=9.1,SNR=4.3						
YKA	**Yellowknife Ar**	**76.59**	**28**	P	**P**	**16 33 09.5**	**-0.1**
	0.6nm,0.4s,mb3.6,baz=293,slow=6.1,SNR=3.2						
ARCES	**ARCESS Array B**	**79.00**	**341**	P	**P**	**16 33 23.0**	**+0.3**
	2.5nm,0.8s,mb4.0,baz=74,slow=8.8,SNR=10						
ARCES	**ARCESS Array B**	**79.00**	**341**	P	**P**	**16 33 23.0**	**+0.3**
NVAR	**Mina Array Bea**	**83.28**	**51**	P	**P**	**16 33 45.7**	**0.0**
	0.2nm,0.2s,mb3.1,baz=251,slow=4.5,SNR=3.6						
NVAR	**Mina Array Bea**	**83.28**	**51**	P	**P**	**16 33 45.7**	**0.0**
PLCA	**Paso Flores**	**145.75**	**132**	PKPbc	PKPbc	16 40 53.5	-2.6
	0.9nm,0.8s,baz=182,slow=3.2,SNR=2.9						

*TRN **15** 16:24:11.9, 1889N×6438W, h61km*
*RSPR **15** 16:24:13.2, 1891N×6431W, h66km±2km, MD3.2/14, MD3.2/14*
*NEIC **15** 16:24:13.2, 1891N×6431W, h66km, MD3.5(RSPR), After RSPR.*

ISC 15 16:24:12.9±1.3, 189N±02×6433W±010, h65km±14km, n59, σ0s60/104, 56C-7D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
ABV	**Anegada**	**0.18**	**182**	⇓*e*P	**Pn**	**16 24 22.8**	**0.0**
ABV	**Anegada**	**0.18**	**182**	*e*S	**Sn**	**16 24 29.7**	**-0.3**
ABV	**Anegada**	**0.18**	**182**	⇓*e*P	**Pn**	**16 24 22.8**	**0.0**
ABV	**Anegada**	**0.18**	**182**	⇓*e*P	**Pn**	**16 24 22.9**	**0.0**
ABV				*e*S	**Sn**	**16 24 29.7**	**-0.3**
ABV				*e*S	**Sn**	**16 24 30.1**	**+0.1**
TBVI	**Tortola**	**0.56**	**210**	⇓*e*P	**Pn**	**16 24 26.1**	**+0.2**
TBVI				*e*S	**Sn**	**16 24 35.4**	**-0.1**
TBVI	**Tortola**	**0.56**	**210**	*e*S	**Sn**	**16 24 36.4**	**+1.0**
TBVI	**Tortola**	**0.56**	**210**	⇓*e*P	**Pn**	**16 24 26.7**	**+0.8**
TBVI				*e*S	**Sn**	**16 24 35.4**	**-0.1**
TBVI				*e*S	**Sn**	**16 24 36.4**	**+1.0**
TBVI	**Tortola**	**0.56**	**210**	⇓*e*P	**Pn**	**16 24 26.1**	**+0.2**
TBVI				*e*S	**Sn**	**16 24 35.4**	**-0.1**
TBVI				*e*S	**Sn**	**16 24 36.4**	**+1.0**
MTP	**Monte Pirata**	**1.42**	**235**	*e*S	**Sn**	**16 24 54.4**	**0.0**
MTP	**Monte Pirata**	**1.42**	**235**	⇑*e*P	**Pn**	**16 24 36.4**	**-0.2**
MTP	**Monte Pirata**	**1.42**	**235**	*e*S	**Sn**	**16 24 54.0**	**-0.4**
MTP	**Monte Pirata**	**1.42**	**235**	⇑*e*P	**Pn**	**16 24 36.6**	**0.0**
MTP				*e*S	**Sn**	**16 24 54.0**	**-0.4**
MTP				*e*S	**Sn**	**16 24 54.4**	**0.0**
MTP	**Monte Pirata**	**1.42**	**235**	⇑*e*P	**Pn**	**16 24 36.4**	**-0.2**
MTP				⇑*e*P		16 24 36.5	
MTP				*e*S	**Sn**	**16 24 54.0**	**-0.4**
MTP				*e*S	**Sn**	**16 24 54.4**	**0.0**
CBYP	**Canovanas**	**1.58**	**247**	⇑*e*P	**Pn**	**16 24 38.1**	**-0.7**
CBYP				*e*S	**Sn**	**16 24 59.2**	**+0.7**
CBYP	**Canovanas**	**1.58**	**247**	⇑*e*P	**Pn**	**16 24 37.9**	**-0.9**
CBYP	**Canovanas**	**1.58**	**247**	⇑*e*P	**Pn**	**16 24 38.1**	**-0.7**
CBYP				*e*S	**Sn**	**16 24 59.2**	**+0.7**
CBYP	**Canovanas**	**1.58**	**247**	⇑*e*P	**Pn**	**16 24 37.9**	**-0.9**
CBYP				⇑*e*P		16 24 38.1	
CBYP				*e*S	**Sn**	**16 24 59.2**	**+0.7**
HUMP	**Col San Antoni**	**1.64**	**242**	⇑*e*P	**Pn**	**16 24 38.9**	**-0.6**
HUMP	**Col San Antoni**	**1.64**	**242**	⇑*e*P	**Pn**	**16 24 40.0**	**+0.5**
HUMP				*e*S	**Sn**	**16 24 58.4**	**-1.2**
HUMP				*e*S	**Sn**	**16 24 59.2**	**-0.4**
HUMP	**Col San Antoni**	**1.64**	**242**	⇑*e*P	**Pn**	**16 24 38.9**	**-0.6**
HUMP				⇑*e*P		16 24 40.0	
HUMP				*e*S	**Sn**	**16 24 58.4**	**-1.2**
HUMP				*e*S	**Sn**	**16 24 59.2**	**-0.4**
CPD	**Cerro la Pandu**	**1.74**	**240**	⇑*e*P	**Pn**	**16 24 40.7**	**-0.2**
CPD	**Cerro la Pandu**	**1.74**	**240**	*e*S	**Sn**	**16 25 01.2**	**-0.9**
CPD	**Cerro la Pandu**	**1.74**	**240**	⇑*e*P	**Pn**	**16 24 41.2**	**+0.3**
CPD				*e*S	**Sn**	**16 25 01.2**	**-0.9**
CPD	**Cerro la Pandu**	**1.74**	**240**	⇑*e*P	**Pn**	**16 24 40.7**	**-0.2**
CPD				⇑*e*P		16 24 41.2	
CPD				*e*S	**Sn**	**16 25 01.2**	**-0.9**
SJG	**San Juan**	**1.90**	**246**	⇑*e*P	**Pn**	**16 24 42.7**	**-0.4**
SJG	**San Juan**	**1.90**	**246**	⇑*e*P	**Pn**	**16 24 42.8**	**-0.3**
SJG				*e*S	**Sn**	**16 25 06.1**	**0.0**
SJG	**San Juan**	**1.90**	**246**	⇑*e*P	**Pn**	**16 24 42.7**	**-0.4**
SJG	**San Juan**	**1.90**	**246**	⇑*e*P	**Pn**	**16 24 42.5**	**-0.6**
SJG				*e*S	**Sn**	**16 25 05.7**	**-0.4**
SJG	**San Juan**	**1.90**	**246**	⇑*e*P	**Pn**	**16 24 42.7**	**-0.4**
SJG	**San Juan**	**1.90**	**246**	⇑*e*P	**Pn**	**16 24 42.7**	**-0.4**
SJG	**San Juan**	**1.90**	**246**	⇑*e*P	**Pn**	**16 24 42.8**	**-0.3**
SJG				*e*S	**Sn**	**16 25 05.7**	**-0.5**
SJG				*e*S	**Sn**	**16 25 05.7**	**-0.4**
SJG				*e*S	**Sn**	**16 25 06.2**	**+0.1**
SJG				*e*S	**Sn**	**16 25 06.9**	**+0.8**
SJG	**San Juan**	**1.90**	**246**	⇑*e*P	**Pn**	**16 24 42.7**	**-0.4**
SJG				*e*S	**Sn**	**16 25 05.7**	**-0.5**
SJG				*e*S	**Sn**	**16 25 06.2**	**+0.1**
CELP	**Cerrillos**	**2.29**	**249**	⇑*e*P	**Pn**	**16 24 47.9**	**-0.5**
CELP				*e*S	**Sn**	**16 25 14.9**	**-0.7**
CELP	**Cerrillos**	**2.29**	**249**	⇑*e*P	**Pn**	**16 24 48.2**	**-0.2**
CELP				*e*S	**Sn**	**16 25 14.9**	**-0.7**
CELP				*e*S	**Sn**	**16 25 16.5**	**+0.9**
CELP	**Cerrillos**	**2.29**	**249**	⇑*e*P	**Pn**	**16 24 47.9**	**-0.5**
CELP				⇑*e*P		16 24 48.2	
CELP				*e*S	**Sn**	**16 25 14.9**	**-0.7**
CELP				*e*S	**Sn**	**16 25 16.5**	**+0.9**
ICM	**Isla Caja Muer**	**2.32**	**245**	⇑*e*P	**Pn**	**16 24 48.7**	**0.0**
ICM	**Isla Caja Muer**	**2.32**	**245**	⇑*e*P	**Pn**	**16 24 49.1**	**+0.4**
ICM	**Isla Caja Muer**	**2.32**	**245**	⇑*e*P	**Pn**	**16 24 49.1**	**+0.4**
ICM				*e*S	**Sn**	**16 25 16.1**	**0.0**
ICM				*e*S	**Sn**	**16 25 16.7**	**+0.6**
ICM	**Isla Caja Muer**	**2.32**	**245**	⇑*e*P	**Pn**	**16 24 48.7**	**0.0**
ICM				⇑*e*P		16 24 49.1	
ICM				*e*S	**Sn**	**16 25 16.1**	**0.0**
ICM				*e*S	**Sn**	**16 25 16.7**	**+0.6**
OBIP	**Obispado Ponce**	**2.33**	**249**	⇑*e*P	**Pn**	**16 24 49.0**	**+0.1**
OBIP	**Obispado Ponce**	**2.33**	**249**	⇑*e*P	**Pn**	**16 24 49.2**	**+0.3**
OBIP				*e*S	**Sn**	**16 25 17.3**	**+0.8**
OBIP	**Obispado Ponce**	**2.33**	**249**	⇑*e*P	**Pn**	**16 24 48.9**	**0.0**
OBIP				⇑*e*P		16 24 49.0	
OBIP				*e*S	**Sn**	**16 25 17.3**	**+0.8**
AOPR	**Arecibo Observ**	**2.37**	**257**	⇑*e*P	**Pn**	**16 24 49.2**	**-0.2**
AOPR	**Arecibo Observ**	**2.37**	**257**	*e*S	**Sn**	**16 25 17.6**	**+0.2**
AOPR	**Arecibo Observ**	**2.37**	**257**	⇑*e*P	**Pn**	**16 24 49.0**	**-0.4**
AOPR	**Arecibo Observ**	**2.37**	**257**	⇑*e*P	**Pn**	**16 24 49.5**	**+0.1**
AOPR				*e*S	**Sn**	**16 25 17.6**	**+0.2**
AOPR	**Arecibo Observ**	**2.37**	**257**	⇑*e*P	**Pn**	**16 24 49.0**	**-0.4**
AOPR				⇑*e*P		16 24 49.2	
AOPR				*e*S	**Sn**	**16 25 17.6**	**+0.2**
LRS	**Lares**	**2.47**	**256**	⇑*e*P	**Pn**	**16 24 50.4**	**-0.4**
LRS	**Lares**	**2.47**	**256**	⇑*e*P	**Pn**	**16 24 50.2**	**-0.6**
LRS	**Lares**	**2.47**	**256**	⇑*e*P	**Pn**	**16 24 50.4**	**-0.4**
LRS	**Lares**	**2.47**	**256**	⇑*e*P	**Pn**	**16 24 50.2**	**-0.6**
LRS				⇑*e*P		16 24 50.4	
GBPR	**Guanica, Bosqu**	**2.60**	**249**	⇑*e*P	**Pn**	**16 24 53.6**	**+1.1**
AGPR	**Aguadilla, PR**	**2.68**	**261**	⇑*e*P	**Pn**	**16 24 53.0**	**-0.6**
LSP	**Las Mesas**	**2.72**	**255**	⇑*e*P	**Pn**	**16 24 55.1**	**+0.9**
LSP	**Las Mesas**	**2.72**	**255**	⇑*e*P	**Pn**	**16 24 55.8**	**+1.6**
CRPR	**Cabo Rojo, PR**	**2.79**	**252**	⇓*i*P	**Pn**	**16 24 55.6**	**+0.5**
CRPR	**Cabo Rojo, PR**	**2.79**	**252**	⇑*e*P	**Pn**	**16 24 55.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**2.79**	**252**	⇑*e*P	**Pn**	**16 24 55.9**	**+0.7**
CRPR				*e*S	**Sn**	**16 25 27.2**	**-0.5**
CRPR				*e*S	**Sn**	**16 25 28.1**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.79**	**252**	⇑*e*P	**Pn**	**16 24 55.1**	**-0.1**
CRPR				⇓*i*P		16 24 55.6	
CRPR				*e*S	**Sn**	**16 25 27.2**	**-0.5**
CRPR				*e*S	**Sn**	**16 25 28.1**	**+0.4**

*ISCJB **15** 17:12:53.8±0.4,3654N±002×7121E±005,h218km±5km, mb3.9/33, Error ellipse: s-maj=6.5km s-min=3.2km az=160.8*
*BJI **15** 17:12:55.0,3674N×7114E,h220km,mB4.9,mb4.2*
*MOS **15** 17:12:55.8±0.8,3664N×7120E,h236km,mb3.8/18, Error ellipse: s-maj=9.7km s-min=7.5km az=100.4*
*NEIC **15** 17:12:56.2±1.4,3665N×7124E,h226km±14km,mb3.9/16, Error ellipse: s-maj=13.5km s-min=7.6km az=204.0*
*IDC **15** 17:12:58.4±1.0,3659N×7125E,h253km±9km,mb3.5/14, mb1 3.5/19,mb1mx3.5/27,mbtmp3.4/19, Error ellipse: s-maj=14.4km s-min=9.9km az=10.0*
*NNC **15** 17:13:01.5±3.4,3712N×7125E,h235km±31km,mb3.0, mpv4.6, Error ellipse: s-maj=32.0km s-min=16.6km az=4.0*

**ISC 15 17:12:54.6±0.4, 3654N±002×7120E±005, h209km±5km, n140,σ0s99/160, mb3.9/

KURBB Kurchatov Arra 15.03 18 ⇓P Pn 17 16 15.0 -1.6
comp=E,0.5nm,0.8s
GUN Gumba 15.10 121 *e*P Pn 17 16 18.1 +0.4
comp=E,89nm,0.4s
AB31 Akbulak array 15.13 331 P Pn 17 16 16.7 -1.0
comp=E,3.3nm,0.5s,baz=145,slow=12,SNR=68
AB31 ⇑Sn S 17 19 06.5 +1.1
comp=E,3.3nm,0.5s
KURK Kurchatov 15.14 18 ⇓P Pn 17 16 16.5 -1.4
comp=E,7.3nm,2.0s
KURK Kurchatov 15.14 18 P Pn 17 16 16.1 -1.8
comp=E,0.1nm,0.3s,baz=214,slow=8.9,SNR=20
KURK sP sP 17 17 21.6 +3.2
comp=E,0.0nm,0.3s,baz=210,slow=10,SNR=4.6
KURK Kurchatov 15.14 18 *e*P Pn 17 16 14.9 -3.0
KURK pmax pmax
comp=Z,3.0nm,1.0s
KURK Kurchatov 15.14 18 *e*Pn Pn 17 16 14.9 -3.0
comp=Z,3.0nm,1.0s
KURK sP sP 17 17 21.6 +3.2
JIRN Jiri 15.47 121 *e*P Pn 17 16 23.0 +0.9
comp=Z,123nm,0.4s
VOSK Vostochnaya 16.18 360 ⇓P P 17 16 30.0 +0.3
comp=Z,1.7nm,0.7s
RAMN Ramite 16.20 122 *e*P P 17 16 31.5 +1.3
comp=Z,42nm,0.4s
BVAR Borovoye Array 16.49 358 P P 17 16 33.0 -0.1
comp=Z,0.7nm,0.3s,baz=165,slow=12,SNR=9.1
TAPN Taplejung 16.72 119 *e*P P 17 16 38.5 +2.6
comp=Z,44nm,0.4s
ODAN Odare 16.80 120 *e*P P 17 16 39.3 +2.5
comp=Z,91nm,0.7s
AKTK Aktyubinsk 16.83 330 P P 17 16 37.8 +1.1
AKTO Aktyubinsk 16.83 330 ⇓P P 17 16 37.8 +1.0
comp=Z,1.5nm,0.7s
AKTO ⇑Sn S 17 19 40.7 -0.7
comp=Z,2.2nm,1.9s
AKTO Aktyubinsk 16.83 330 P P 17 16 37.8 +1.0
comp=Z,1.2nm,0.3s,baz=136,slow=9.5,SNR=26
LSA Lhasa 18.03 106 *e*P P 17 16 53.8 +3.6
LSA pmax pmax
comp=Z,24nm,0.9s
LSA Lhasa 18.03 106 *e*P P 17 16 53.8 +3.6
comp=Z,24nm,0.9s
ZAA0 Zalesovo Array 19.81 24 *e*P P 17 17 08.5 -0.6
ZALV Zalesovo Beam 19.81 24 P P 17 17 08.7 -0.4
comp=Z,1.6nm,0.3s,baz=215,slow=11,SNR=21
ZALV pP 17 17 49.5
comp=Z,0.1nm,0.3s,baz=218,slow=9.4,SNR=2.0
ZALV sP sP 17 18 17.6 +7.5
comp=Z,0.3nm,0.3s,baz=231,slow=8.8,SNR=1.9
NVS Novosibirsk 20.09 21 *e*P P 17 17 12.0 0.0
NVS *e*S S 17 20 41.8 -4.0
NVS pmax pmax
comp=N,2.0nm,0.6s
NVS pmax pmax
comp=Z,3.0nm,0.6s
NVS pmax pmax
comp=E,4.0nm,1.6s
NVS smax
comp=N,6.0nm,1.3s
NVS smax
comp=E,12nm,1.7s
MIB Mutribah 21.04 258 *e*P P 17 17 22.7 +0.3
baz=258
MIB AMb AMB 17 17 25.2
comp=Z,67nm,0.9s,baz=258
RDF Al-Radifah 21.26 256 *e*P P 17 17 24.7 0.0
baz=256
RDF AMb AMB 17 17 25.5
comp=Z,30nm,0.8s,mb4.9,baz=256
NAY Al-Naaiem 21.36 257 *e*P P 17 17 25.9 +0.2
baz=257
NAY AMb AMB 17 17 27.9
comp=Z,29nm,0.4s,baz=257
RST Umm Al-Ruwaisa 21.44 258 *e*P P 17 17 26.4 -0.2
baz=258
RST AMb AMB 17 17 28.8
comp=Z,64nm,0.6s,baz=258
GTA Gaotai 22.70 74 *e*P P 17 17 40.4 +2.1
GTA AMB AMB
comp=Z,4.0nm,0.5s,mb4.2
KRAR Krasnoyarsk 24.38 30 *e*P P 17 17 53.6 +0.2
KRAR pmax pmax
comp=Z,3.0nm,0.3s,mb4.4
ANN Anapa 26.76 298 *e*P P 17 18 08.7 -6.2
ANN pmax pmax
comp=Z,212nm,5.5s
SONM Songino Array 28.18 55 P P 17 18 27.3 -0.2
comp=Z,1.4nm,0.8s,mb3.7,baz=256,slow=9.3,SNR=11
SONM pP pP 17 19 15.9 +6.3
comp=Z,1.1nm,0.8s,baz=259,slow=9.9,SNR=5.3
ULN Ulaanbaatar 28.62 55 *e*P P 17 18 31.7 +0.3
CMAR Chiang Mai Arr 30.33 119 P P 17 18 47.5 +0.7
comp=Z,2.4nm,0.8s,mb3.9,baz=301,slow=8.6,SNR=24
AKASG Malin Array Be 33.05 309 P P 17 19 10.7 +0.5
comp=Z,2.6nm,0.5s,mb4.0,baz=74,slow=6.9,SNR=6.2
AKASG Malin Array Be 33.05 309 *i*P P 17 19 10.6 +0.5
AKASG pmax pmax
comp=Z,3.0nm,0.5s
JOF Joensuu 35.91 330 *e*p P 17 19 34.1 -0.4
comp=Z,3.1nm,0.5s,mb4.1
JOF Joensuu 35.91 330 *e*P P 17 19 34.1 -0.4
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.1
HIA Hailar 37.14 54 *e*P P 17 19 45.6 +0.5
IDI Anoyia 37.25 282 P P 17 19 46.0 -0.2
comp=Z,2.9nm,0.4s,mb4.2,baz=234,slow=22,SNR=8.3
ARCES ARCESS Array B 41.17 338 P P 17 20 18.1 0.0
comp=Z,1.5nm,0.6s,mb3.6,baz=112,slow=8.5,SNR=9.5
GERES GERESS Array B 43.04 305 P P 17 20 34.0 +0.5
comp=Z,0.3nm,0.5s,mb3.0,baz=72,slow=8.6,SNR=5.1
YAK Yakutsk 43.84 35 *e*P P 17 20 38.7 -1.0
YAK pmax pmax
comp=Z,4.0nm,0.8s,mb3.8
NB2 NORSAR Subarra 44.45 323 P P 17 20 44.0 -0.5
comp=Z,1.7nm,0.4s,mb3.7,baz=100,slow=7.9
KSRS Korea Array 44.72 71 P P 17 20 47.2 +0.3
comp=Z,0.9nm,0.6s,mb3.3,baz=283,slow=6.2,SNR=3.4
KSRS Korea Array 44.72 71 P P 17 20 47.2 +0.2
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.3
PGF Pioggiola 47.40 297 *e*P P 17 21 07.2 -0.6
comp=Z,7.3nm,0.7s,mb3.8
PGF Pioggiola 47.40 297 *e*P P 17 21 07.2 -0.6
PGF pmax pmax
comp=Z,4.0nm,0.7s,mb3.9
PGF Pioggiola 47.40 297 *e*P P 17 21 07.2 -0.6
comp=Z,3.7nm,0.7s,mb3.8
HAU Haudompre 48.01 305 *e*P P 17 21 12.1 -0.3
comp=Z,4.0nm,0.5s,mb3.7
HAU Haudompre 48.01 305 *e*P P 17 21 12.1 -0.3
HAU pmax pmax
comp=Z,2.0nm,0.5s,mb3.7
HAU Haudompre 48.01 305 *e*P P 17 21 12.1 -0.3
comp=Z,2.0nm,0.5s,mb3.7
SBF Sospel 48.18 299 *e*P P 17 21 13.7 0.0
comp=Z,53nm,1.2s,mb4.4
SBF Sospel 48.18 299 *e*P P 17 21 13.7 0.0
SBF pmax pmax
comp=Z,26nm,1.2s,mb4.4
SBF Sospel 48.18 299 *e*P P 17 21 13.7 0.0
comp=Z,26nm,1.2s,mb4.4
LPG La Plagne 48.26 302 *e*P P 17 21 14.8 +0.4
comp=Z,4.9nm,0.6s,mb3.7
LPG La Plagne 48.26 302 *e*P P 17 21 14.8 +0.4
LPG pmax pmax
comp=Z,2.0nm,0.6s,mb3.6
LPG La Plagne 48.26 302 *e*P P 17 21 14.8 +0.4
comp=Z,2.5nm,0.6s,mb3.7
MBDF Montbardon 48.43 301 *e*P P 17 21 15.2 -0.5
comp=Z,9.2nm,0.7s,mb3.9
MBDF Montbardon 48.43 301 *e*P P 17 21 15.2 -0.5
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.0
MBDF Montbardon 48.43 301 *e*P P 17 21 15.2 -0.5
comp=Z,4.6nm,0.7s,mb3.9
CABF La Chapelle 48.47 303 *e*P P 17 21 15.8 -0.1
comp=Z,6.3nm,0.6s,mb3.8
CABF La Chapelle 48.47 303 *e*P P 17 21 15.8 -0.1
CABF pmax pmax
comp=Z,3.0nm,0.6s,mb3.8
CABF La Chapelle 48.47 303 *e*P P 17 21 15.8 -0.1
comp=Z,3.2nm,0.6s,mb3.8
FRF La Foret Royal 48.80 299 *e*P P 17 21 18.0 -0.5
KMBO Kilima Mbogo 48.98 228 *i*P P 17 21 21.9 +1.7
comp=Z,1.6nm,0.5s,mb3.6,baz=36,slow=12,SNR=5.7
KMBO Kilima Mbogo 48.98 228 *i*P P 17 21 22.2 +2.0
KMBO pmax pmax
comp=Z,2.0nm,0.5s
KEST Kesra 49.17 289 P P 17 21 22.5 +1.0
comp=Z,1.0nm,0.5s,mb3.4,baz=351,slow=1.2,SNR=7.0
VIVF Saint-Julien-l 49.84 301 *e*P P 17 21 26.3 -0.1
comp=Z,6.4nm,0.7s,mb3.8
VIVF Saint-Julien-l 49.84 301 *e*P P 17 21 26.3 -0.1
VIVF pmax pmax
comp=Z,3.0nm,0.7s,mb3.7
VIVF Saint-Julien-l 49.84 301 *e*P P 17 21 26.3 -0.1
comp=Z,3.2nm,0.7s,mb3.8
SMF Signal de Mont 49.97 304 *e*P P 17 21 27.0 -0.3
comp=Z,7.0nm,0.6s,mb3.9
SMF Signal de Mont 49.97 304 *e*P P 17 21 27.0 -0.3
SMF pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
SMF Signal de Mont 49.97 304 *e*P P 17 21 27.0 -0.3
comp=Z,3.5nm,0.6s,mb3.9
SSF Saint Saulge 50.09 304 *e*P P 17 21 27.6 -0.6
AVF Avril sur Loir 50.26 304 *e*P P 17 21 29.1 -0.3
comp=Z,7.8nm,0.7s,mb3.9
AVF Avril sur Loir 50.26 304 *e*P P 17 21 29.1 -0.3
AVF pmax pmax
comp=Z,4.0nm,0.7s,mb3.9
AVF Avril sur Loir 50.26 304 *e*P P 17 21 29.1 -0.3
comp=Z,3.9nm,0.7s,mb3.9
LASF Ste Croix 50.62 301 *e*P P 17 21 32.4 +0.2
TCF Toulx Ste Croi 51.15 304 *e*P P 17 21 36.1 0.0
comp=Z,4.9nm,0.7s,mb3.7
TCF Toulx Ste Croi 51.15 304 *e*P P 17 21 36.1 0.0
TCF pmax pmax
comp=Z,2.0nm,0.7s,mb3.7
TCF Toulx Ste Croi 51.15 304 *e*P P 17 21 36.1 0.0
comp=Z,2.5nm,0.7s,mb3.8
CAF Calviac 51.61 302 *e*P P 17 21 39.7 +0.1
comp=Z,5.8nm,0.8s,mb3.8
CAF Calviac 51.61 302 *e*P P 17 21 39.7 +0.1
CAF pmax pmax
comp=Z,3.0nm,0.8s,mb3.8
CAF Calviac 51.61 302 *e*P P 17 21 39.7 +0.1
comp=Z,2.9nm,0.8s,mb3.8
MTLF Montolieu 51.97 300 *e*P P 17 21 42.0 -0.2
comp=Z,2.0nm,0.6s,mb3.5
MTLF Montolieu 51.97 300 *e*P P 17 21 42.0 -0.2
MTLF pmax pmax
comp=Z,1.0nm,0.6s,mb3.4
MTLF Montolieu 51.97 300 *e*P P 17 21 42.0 -0.2
comp=Z,1.0nm,0.6s,mb3.4
GRR Gorron 52.61 307 *e*P P 17 21 46.2 -0.6
MFF Saint Martin d 52.63 305 *e*P P 17 21 47.2 +0.2
ETSF Etsaut 54.03 300 *e*P P 17 21 57.3 0.0
comp=Z,8.8nm,0.7s,mb4.1
ETSF Etsaut 54.03 300 *e*P P 17 21 57.3 0.0
ETSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.1
ETSF Etsaut 54.03 300 *e*P P 17 21 57.3 0.0
comp=Z,4.4nm,0.6s,mb4.2
ESDC Sonseca Array 57.58 298 P P 17 22 22.3 -0.2
comp=Z,2.3nm,0.8s,mb3.9,baz=64,slow=7.8,SNR=7.4
TORD Torodi Ar. Bea 65.88 269 P P 17 23 15.8 -2.4
comp=Z,1.9nm,0.5s,mb4.0,baz=50,slow=5.9,SNR=22
DBIC Dimbokro 74.86 267 P P 17 24 11.1 -1.5
comp=Z,2.7nm,0.9s,mb3.9,baz=35,slow=6.6,SNR=4.1
DBIC Dimbokro 74.86 267 P P 17 24 11.1 -1.5
WRA Warramunga Arr 81.88 122 P P 17 24 48.8 -1.9
comp=Z,1.3nm,0.5s,mb3.8,baz=323,slow=4.9,SNR=43
WRA Warramunga Arr 81.88 122 *i*P P 17 24 48.4 -2.3
WRA pmax pmax
comp=Z,1.0nm,0.5s
ASAR Alice Springs 84.14 125 P P 17 25 01.1 -1.1
comp=Z,1.4nm,0.6s,mb3.9,baz=311,slow=5.1,SNR=43
ASAR Alice Springs 84.14 125 *e*P P 17 25 01.1 -1.2
ASAR pmax pmax
comp=Z,1.0nm,0.6s

*BJI **15** 17:33:58.2, 320S×100.50E, h15km, mB5.0, mb4.8*
*IDC **15** 17:33:59.2± 1.3, 302S×100.66E, h0km, mb4.3/13, mb1 4.4/14, mb1mx4.2/23, mbtmp4.3/14, ML4.4/1, Error ellipse: s-maj=46.5km s-min=13.5km az=54.0*
*NEIC **15** 17:34:03.3± 0.6, 318S×100.46E, h35km, mb4.6/5, Error ellipse: s-maj=20.7km s-min=8.2km az=48.0*
*ISCJB **15** 17:34:05.5± 2.4, 30S±0.1×100.8E±0.1, h61km±19km, mb4.5/23, Error ellipse: s-maj=30.9km s-min=9.0km az=135.8*

ISC 15 17:34:06.5±2.4, 30S±0.1×100.8E±0.1, h51km±19km, n43, σ18/16/40, mb4.5/23, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPI	**Padang Panjang**	**2.60**	**352**	P	**Pn**	**17 34 44.9**	**-1.1**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**17.86**	**60**	*e*Pn	**Pn**	**17 38 14.0**	**+2.5**
KAPI	**Kappang**	**19.03**	**97**	P	**Pn**	**17 38 25.6**	**0.0**
	1.2nm,0.3s,baz=312,slow=22,SNR=5.1						
CMAR	**Chiang Mai Arr**	**21.44**	**355**	P	**P**	**17 38 48.5**	**-2.1**
	3.6nm,0.8s,mb3.8,baz=186,slow=10.0,SNR=22						
BATI	**Baumata**	**23.80**	**108**	P	**P**	**17 39 15.3**	**+0.4**
	13nm,0.8s,mb4.4,baz=301,slow=8.0,SNR=4.7						
FITZ	**Fitzroy Crossi**	**28.59**	**123**	*e*P	**P**	**17 39 57.6**	**-0.4**
	3.9nm,0.8s,mb4.2						
FITZ	**Fitzroy Crossi**	**28.59**	**123**	P	**P**	**17 39 57.5**	**-0.6**
	1.9nm,0.8s,mb3.9,baz=84,slow=2.6,SNR=5.0						
ODAN	**Odare**	**32.42**	**337**	*e*P	**P**	**17 40 31.7**	**0.0**
	9.2nm,0.4s,mb5.0						
TAPN	**Taplejung**	**32.74**	**338**	*e*P	**P**	**17 40 34.5**	**0.0**
RAMN	**Ramite**	**32.81**	**336**	*e*P	**P**	**17 40 36.6**	**+1.4**
JIRN	**Jiri**	**33.61**	**336**	*e*P	**P**	**17 40 42.3**	**+0.2**
LSA	**Lhasa**	**33.84**	**345**	*e*P	**P**	**17 40 44.1**	**+0.1**
	3.9nm,0.5s,mb4.6						
GUN	**Gumba**	**33.95**	**336**	*e*P	**P**	**17 40 45.2**	**+0.1**
	23nm,0.5s,mb5.4						
DMN	**Daman**	**34.01**	**335**	*e*P	**P**	**17 40 47.5**	**+1.9**
KKN	**Kakani**	**34.10**	**335**	*e*P	**P**	**17 40 48.4**	**+2.1**
	11nm,0.5s,mb5.0						
GKN	**Gorkha**	**34.56**	**334**	*e*P	**P**	**17 40 53.2**	**+2.9**
KOLN	**Koldanda**	**34.82**	**333**	*e*P	**P**	**17 40 55.2**	**+2.6**
	8.0nm,0.5s,mb4.9						
DANN	**Dangsing**	**35.24**	**333**	*e*P	**P**	**17 40 59.3**	**+3.1**
WRA	**Warramunga Arr**	**36.80**	**120**	P	**P**	**17 41 09.4**	**-0.3**
	2.3nm,0.4s,mb4.4,baz=303,slow=9.0,SNR=56						
WB2	**Warramunga Arr**	**36.81**	**120**	*e*P	**P**	**17 41 08.8**	**-1.0**
ASAR	**Alice Springs**	**38.01**	**126**	P	**P**	**17 41 19.9**	**-0.1**
	3.2nm,0.5s,mb4.3,baz=301,slow=7.6,SNR=45						
GTA	**Gaotai**	**42.25**	**359**	*e*P	**P**	**17 41 55.0**	**+0.2**
GTA				AP	pP	17 41 58.6	-10
GTA				XP	sP	17 41 59.9	-14
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.1						
KSRS	**Korea Array**	**47.53**	**29**	P	**P**	**17 42 35.8**	**-1.0**
	comp=Z,1.6nm,0.6s,mb4.2,baz=233,slow=7.4,SNR=6.4						
STKA	**Stephens Creek**	**47.88**	**131**	*e*P	**P**	**17 42 45.9**	**+6.2**
	comp=Z,9.0nm,1.4s,mb4.6						
STKA	**Stephens Creek**	**47.88**	**131**	P	**P**	**17 42 41.7**	**+2.1**
	comp=Z,1.5nm,0.6s,mb4.2,baz=156,slow=21,SNR=2.2						
STKA	**Stephens Creek**	**47.88**	**131**	P	**P**	**17 42 41.7**	**+2.1**
WMQ	**Urumqi**	**48.11**	**347**	P	**P**	**17 42 41.3**	**+0.1**
WMQ				AP	pP	17 42 47.5	-7.4
WMQ				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,117nm,5.0s						
SONM	**Songino Array**	**50.90**	**5**	P	**P**	**17 43 03.4**	**+1.1**
	comp=Z,8.0nm,0.5s,mb4.9,baz=187,slow=9.6,SNR=74						
ULN	**Ulaanbaatar**	**50.99**	**5**	*e*P	**P**	**17 43 03.4**	**+0.3**
	comp=Z,9.8nm,1.0s,mb4.7						
TKM2	**Tokmak 2**	**51.09**	**336**	*e*P	**P**	**17 43 02.4**	**-1.5**
	comp=Z,4.8nm,0.7s,mb4.5						
AML	**Almayashu**	**51.24**	**334**	*e*P	**P**	**17 43 04.3**	**-0.7**
EKS2	**Erkin-Say**	**51.63**	**335**	*e*P	**P**	**17 43 07.1**	**-0.8**
	comp=Z,4.6nm,0.7s,mb4.5						
MK31	**Makanchi Array**	**52.24**	**344**	*e*P	**P**	**17 43 11.5**	**-0.9**
MKAR	**Makanchi Array**	**52.24**	**344**	P	**P**	**17 43 11.7**	**-0.6**
	comp=Z,5.5nm,0.5s,mb4.7,baz=154,slow=8.2,SNR=56						
MJAR	**Matsushiro Arr**	**52.60**	**38**	P	**P**	**17 43 15.1**	**-0.1**
	comp=Z,0.8nm,0.6s,mb3.9,baz=217,slow=8.3,SNR=5.2						
KURK	**Kurchatov**	**56.82**	**343**	P	**P**	**17 43 44.1**	**-1.4**
	comp=Z,4.7nm,0.8s,mb4.5,baz=165,slow=7.1,SNR=21						
ZAA0	**Zalesovo Array**	**58.33**	**349**	*e*P	**P**	**17 43 54.9**	**-1.2**
ZALV	**Zalesovo Beam**	**58.33**	**349**	P	**P**	**17 43 55.2**	**-0.9**
	comp=Z,7.0nm,0.8s,mb4.7,baz=176,slow=4.5,SNR=30						
ZALV	**Zalesovo Beam**	**58.33**	**349**	P	**P**	**17 43 55.2**	**-0.9**
ARCES	**ARCESS Array B**	**87.71**	**340**	P	**P**	**17 46 48.9**	**-0.5**
	comp=Z,2.5nm,0.8s,mb4.5,baz=95,slow=5.4,SNR=7.7						
TXAR	**Lajitas Array**	**145.03**	**39**	PKPbc	PKPbc	17 53 39.1	+0.8
	comp=Z,5.7nm,0.5s,baz=273,slow=0.8,SNR=88						
JCT	**Junction City**	**146.48**	**33**	*e*PKPbc	PKPbc	17 53 42.4	-0.3
GOGA	**Godfrey**	**149.53**	**7**	*e*PKPbc	PKPbc	17 53 48.7	-2.1

*IDC **15** 17:50:21.9± 1.2, 42.39N×84.88E, h0km, mb3.7/4, mb1 3.8/9, mb1mx3.6/28, mbtmp3.7/9, ML3.6/5, MS2.9/4, Ms1 2.9/4, ms1mx2.6/36, Error ellipse: s-maj=28.4km s-min=13.0km az=63.0*
*ISCJB **15** 17:50:21.9± 0.4, 42.44N±004×84.72E±006, h10km, mb4.2/17, Error ellipse: s-maj=7.2km s-min=4.7km az=143.4*
*LDG **15** 17:50:22.0± 0.1, 42.15N×84.30E, h10km, Mb4.4/12, Ms2.8/1, Error ellipse: s-maj=5.1km s-min=4.0km az=87.0*
*MOS **15** 17:50:23.0± 1.1, 42.43N×84.88E, h23km, mb4.5/11, Error ellipse: s-maj=14.9km s-min=7.2km az=122.0*
*NEIC **15** 17:50:23.3± 0.5, 42.36N×84.79E, h10km, mb4.3/12, Error ellipse: s-maj=8.9km s-min=8.3km az=147.0*
*BJI **15** 17:50:24.2, 42.14N×84.76E, h16km, mB4.1, mb4.2, ML4.1, Ms4.3, Msz4.2*
*NNC **15** 17:50:24.5± 2.5, 42.51N×84.81E, h0km, mb4.0, mpv4.4, Error ellipse: s-maj=25.0km s-min=15.1km az=127.0*

ISC 15 17:50:22.9±1.2, 4236N±004×8476E±007, h4km±7km, n84, σ0991/100, mb4.2/17, 9C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**2.60**	**55**	⇑*i*P	**Pn**	**17 51 10.8**	**+5.1**
WMQ				S	**Sn**	**17 51 48.9**	**+11**
WMQ				Smax			
	comp=N,1μm,0.5s						
WMQ				Smax			
	comp=E,717nm,0.5s						
MK31	**Makanchi Array**	**4.78**	**339**	⇑Pn	**Pn**	**17 51 37.9**	**+2.4**
	comp=E,21nm,0.5s,baz=155,slow=13,SNR=280						
MK31				⇑Lg		17 52 50.8	
	comp=E,89nm,0.5s,baz=157,slow=29,SNR=13						
MK31	**Makanchi Array**	**4.78**	**339**	*e*P	**Pn**	**17 51 37.7**	**+2.2**
MK31				*e*		17 52 32.6	
MK31	**Makanchi Array**	**4.78**	**339**	*e*Pn	**Pn**	**17 51 37.7**	**+2.2**
MK31				*e*Pg	**Pg**	**17 51 53.5**	**-0.8**
MK31				*e*Sn	**Sn**	**17 52 32.6**	**+1.4**
MK31				*e*Sg	**Sg**	**17 52 55.2**	**-0.9**
MKAR	**Makanchi Array**	**4.78**	**339**	Pn	**Pn**	**17 51 36.0**	**+0.5**
	comp=E,1.3nm,0.3s,baz=170,slow=14,SNR=32						
MKAR				Pg	**Pg**	**17 51 47.1**	**-7.2**
	comp=E,3.0nm,0.3s,baz=153,slow=14,SNR=20						
MKAR				Sn	**Sn**	**17 52 31.5**	**+0.3**
	comp=E,15nm,0.3s,baz=135,slow=19,SNR=5.9						
MKAR				Lg		17 52 53.6	
	comp=E,13nm,0.3s,baz=124,slow=29,SNR=4.1						
MKAR	**Makanchi Array**	**4.78**	**339**	P	**Pn**	**17 51 36.0**	**+0.5**
MKAR						17 52 31.5	
MKAR	**Makanchi Array**	**4.78**	**339**	Pn	**Pn**	**17 51 36.0**	**+0.5**
MKAR				Pg	**Pg**	**17 51 47.1**	**-7.2**
MKAR				Sn	**Sn**	**17 52 31.5**	**+0.3**
MKAR				Lg		17 52 53.6	
KNDC	**Almaty**	**5.80**	**281**	⇓Pn	**Pn**	**17 51 53.6**	**+4.0**
	comp=E,35nm,0.5s						
KNDC				⇑Lg		17 53 25.2	
	comp=E,153nm,0.7s						
TKM2	**Tokmak 2**	**6.78**	**278**	⇑Pn	**Pn**	**17 52 05.1**	**+2.0**
	comp=E,11nm,0.6s						
TKM2				⇓Lg		17 54 03.3	
	comp=E,55nm,0.6s						
TKM2	**Tokmak 2**	**6.78**	**278**	*e*P	**Pn**	**17 52 04.5**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,16nm,0.5s						
TKM2	**Tokmak 2**	**6.78**	**278**	*e*Pn	**Pn**	**17 52 04.5**	**+1.4**
	comp=Z,16nm,0.5s						
EKS2	**Erkin-Say**	**8.12**	**276**	*e*Pn	**Pn**	**17 52 21.1**	**-0.3**
	comp=Z,21nm,0.8s						
EKS2				*e*Pg	**Pg**	**17 52 58.2**	**-0.1**
KURBB	**Kurchatov Arra**	**9.31**	**335**	⇑Pn	**Pn**	**17 52 39.4**	**+1.6**
	comp=Z,1.1nm,1.1s						
KURBB				⇓Lg		17 55 19.0	
	comp=Z,15nm,0.7s						
KURK	**Kurchatov**	**9.37**	**335**	⇓Pn	**Pn**	**17 52 40.9**	**+2.4**
	comp=Z,1.9nm,0.5s						
KURK				⇓Lg		17 55 18.8	
	comp=Z,106nm,0.9s						
KURK	**Kurchatov**	**9.37**	**335**	Pn	**Pn**	**17 52 37.2**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=148,slow=13,SNR=8.7						
KURK				Sn	**Sn**	**17 54 20.2**	**-4.0**
	comp=Z,0.4nm,0.3s,baz=141,slow=25,SNR=4.0						
KURK				Lg		17 55 19.4	
	comp=Z,0.8nm,0.3s,baz=357,slow=8.7,SNR=5.3						
KURK				LR	LR	17 56 49.0	
	comp=Z,45nm,20.4s,baz=235,slow=42						
KURK	**Kurchatov**	**9.37**	**335**	P	**Pn**	**17 52 37.2**	**-1.3**
KURK				SN	**Sn**	**17 54 20.2**	**-4.0**
KURK	**Kurchatov**	**9.37**	**335**	*e*Pn	**Pn**	**17 52 35.8**	**-2.7**
	comp=Z,4.0nm,0.5s						
KURK				Pn	**Pn**	**17 52 37.2**	**-1.3**
KURK				Sn	**Sn**	**17 54 20.2**	**-4.0**
KURK				*e*Sn	**Sn**	**17 54 29.4**	**+5.2**
KURK				Lg		17 55 19.4	
KURK				LR	LR	17 56 49.0	
KK31	**Karatay Array**	**10.51**	**279**	Pn	**Pn**	**17 53 00.1**	**+5.9**
	comp=Z,2.6nm,0.7s,baz=83,slow=12,SNR=3.8						
KK31				⇓Lg		17 55 50.5	
	comp=Z,24nm,1.1s,baz=87,slow=30,SNR=6.6						
ZAA0	**Zalesovo Array**	**11.60**	**0**	*e*Pn	**Pn**	**17 53 08.6**	**-0.4**
ZAA0				*e*Sn	**Sn**	**17 55 13.3**	**-5.7**
ZALV	**Zalesovo Beam**	**11.60**	**0**	Pn	**Pn**	**17 53 08.5**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=178,slow=14,SNR=25						
ZALV				Sn	**Sn**	**17 55 17.7**	**-1.2**
	comp=Z,2.2nm,0.3s,baz=189,slow=23,SNR=9.4						
ZALV				Lg		17 56 30.2	
	baz=198,slow=23,SNR=2.4						
ZALV				LR	LR	17 58 04.8	
	comp=Z,51nm,18.0s,baz=151,slow=40						
ZALV	**Zalesovo Beam**	**11.60**	**0**	P	**Pn**	**17 53 08.5**	**-0.6**
ZALV						17 55 17.8	
GTA	**Gaotai**	**11.77**	**99**	*e*P	**Pn**	**17 53 16.5**	**+5.0**
GTA				AP		17 53 21.3	
GTA				XP		17 53 23.6	
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s						
CEP	**Cherat**	**13.21**	**234**	P	**Pn**	**17 53 30.5**	**-0.7**
VOSK	**Vostochnaya**	**13.91**	**323**	⇑Pn	**Pn**	**17 53 41.6**	**+1.0**
	comp=Z,4.2nm,0.9s						
VOSK				⇑Lg		17 57 42.5	
	comp=Z,17nm,1.1s						
BVA0	**Borovoye Array**	**14.38**	**323**	⇓Pn	**Pn**	**17 53 48.3**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=222,slow=41,SNR=5.5						
BVAR	**Borovoye Array**	**14.38**	**323**	Pn	**Pn**	**17 53 46.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=132,slow=13,SNR=4.6						
BVAR				Lg		17 58 00.3	
	comp=Z,0.4nm,0.3s,baz=135,slow=27,SNR=5.0						
BVAR				LR	LR	17 59 25.2	
	comp=Z,121nm,18.8s,baz=138,slow=38						
ZAK	**Zakamensk**	**15.07**	**51**	*e*P	**Pn**	**17 53 52.3**	**-4.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LZH	**Lanzhou**	**16.05**	**107**	*e*P	**Pn**	**17 54 10.5**	**+1.2**
LZH				AP	pP	17 54 13.9	0.0
LZH				XP	sP	17 54 17.6	+3.1
LZH				PP		17 54 23.5	
LZH				AMB	AMB		
	comp=Z,24nm,1.3s						
LZH				AMB	AMB		
	comp=Z,63nm,4.0s						
LZH				LR	LR		
	comp=N,376nm,8.2s						
LZH				LR	LR		
	comp=Z,512nm,11.5s						
SONM	**Songino Array**	**16.21**	**63**	Pn	**Pn**	**17 54 11.5**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=254,slow=11,SNR=17						
SONM				Lg		17 58 54.4	
	comp=Z,0.1nm,0.3s,baz=249,slow=24,SNR=3.4						
AB31	**Akbulak array**	**18.57**	**300**	Pn	**Pn**	**17

CD2					AMB	AMB			
	comp=Z,20nm,4.2s								
CD2					LR	LR			
	comp=N,600nm,9.6s								
CD2					LR	LR			
	comp=E,780nm,10.6s								
CD2					LR	LR			
	comp=Z,650nm,9.6s								
AKTK	**Aktyubinsk**	**20.05**	**303**		P	**P**		**17 54 57.2**	**+0.4**
AKTO	**Aktyubinsk**	**20.05**	**303**	⇑	Pn	**P**		**17 54 58.3**	**+1.5**
	comp=Z,0.6nm,1.3s								
AKTO	**Aktyubinsk**	**20.05**	**303**		P	**P**		**17 54 57.2**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=80,slow=15,SNR=4.5								
ARU	**Arti**	**21.93**	**319**		P	**P**		**17 55 17.4**	**+0.4**
ARU	**Arti**	**21.93**	**319**		*e*P	**P**		**17 55 17.2**	**+0.2**
	comp=Z,4.9nm,0.6s,mb4.1								
CMAR	**Chiang Mai Arr**	**26.70**	**149**		P	**P**		**17 56 02.3**	**-0.9**
	comp=Z,1.0nm,0.8s,mb3.4,baz=322,slow=8.8,SNR=16								
KSRS	**Korea Array**	**33.20**	**84**		LR	LR		18 10 15.6	
	comp=Z,18nm,21.9s,baz=235,slow=36								
JOF	**Joensuu**	**36.98**	**322**		*e*p	**P**		**17 57 32.2**	**-0.7**
	comp=Z,4.6nm,0.9s,mb4.3								
JOF	**Joensuu**	**36.98**	**322**		*e*P	**P**		**17 57 32.2**	**-0.7**
JOF					pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.3								
AKASG	**Malin Array Be**	**38.30**	**302**		P	**P**		**17 57 44.3**	**+0.1**
	comp=Z,0.8nm,0.4s,mb3.8,baz=68,slow=8.0,SNR=4.8								
ARCES	**ARCESS Array B**	**40.33**	**332**		P	**P**		**17 58 01.6**	**+0.2**
	comp=Z,1.3nm,0.5s,mb3.9,baz=92,slow=7.5,SNR=12								
CDF	**Champ du Feu**	**52.58**	**305**		*e*P	**P**		**17 59 36.9**	**-0.5**
BAIF	**Baives**	**53.73**	**308**		*e*P	**P**		**17 59 45.2**	**-0.6**
	comp=Z,5.7nm,0.9s,mb4.2								
BAIF	**Baives**	**53.73**	**308**		*e*P	**P**		**17 59 45.2**	**-0.6**
BAIF					pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.2								
BAIF	**Baives**	**53.73**	**308**		*e*P	**P**		**17 59 45.2**	**-0.6**
	comp=Z,2.8nm,0.9s,mb4.2								
CABF	**La Chapelle**	**54.08**	**303**		*e*P	**P**		**17 59 49.8**	**+1.4**
LPG	**La Plagne**	**54.16**	**302**		*e*P	**P**		**17 59 49.6**	**+0.6**
	comp=Z,10nm,0.6s,mb4.7								
LPG	**La Plagne**	**54.16**	**302**		*e*P	**P**		**17 59 49.6**	**+0.6**
LPG					pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.6								
LPG	**La Plagne**	**54.16**	**302**		*e*P	**P**		**17 59 49.6**	**+0.6**
	comp=Z,5.3nm,0.6s,mb4.7								
LPL	**La Plagne**	**54.17**	**302**		*e*P	**P**		**17 59 49.5**	**+0.5**
	comp=Z,17nm,0.6s,mb4.9								
LPL	**La Plagne**	**54.17**	**302**		*e*P	**P**		**17 59 49.5**	**+0.5**
LPL					pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.8								
LPL	**La Plagne**	**54.17**	**302**		*e*P	**P**		**17 59 49.5**	**+0.5**
	comp=Z,8.4nm,0.6s,mb4.8								
SBF	**Sospel**	**54.47**	**300**		*e*P	**P**		**17 59 51.7**	**+0.4**
MBDF	**Montbardon**	**54.50**	**301**		*e*P	**P**		**17 59 51.2**	**-0.3**
ORIF	**Oris-en-Rattie**	**54.97**	**302**		*e*P	**P**		**17 59 54.4**	**-0.5**
	comp=Z,7.4nm,0.6s,mb4.6								
ORIF	**Oris-en-Rattie**	**54.97**	**302**		*e*P	**P**		**17 59 54.4**	**-0.5**
ORIF					pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.6								
ORIF	**Oris-en-Rattie**	**54.97**	**302**		*e*P	**P**		**17 59 54.4**	**-0.5**
	comp=Z,3.7nm,0.6s,mb4.6								
FRF	**La Foret Royal**	**55.12**	**300**		*e*P	**P**		**17 59 55.2**	**-0.8**
	comp=Z,3.6nm,0.7s,mb4.2								
FRF	**La Foret Royal**	**55.12**	**300**		*e*P	**P**		**17 59 55.2**	**-0.8**
FRF					pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.3								
FRF	**La Foret Royal**	**55.12**	**300**		*e*P	**P**		**17 59 55.2**	**-0.8**
	comp=Z,1.8nm,0.7s,mb4.2								
SMF	**Signal de Mont**	**55.45**	**304**		*e*P	**P**		**17 59 57.6**	**-0.7**
	comp=Z,5.8nm,0.6s,mb4.5								
SMF	**Signal de Mont**	**55.45**	**304**		*e*P	**P**		**17 59 57.6**	**-0.7**
SMF					pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.5								
SMF	**Signal de Mont**	**55.45**	**304**		*e*P	**P**		**17 59 57.6**	**-0.7**
	comp=Z,2.9nm,0.6s,mb4.5								
SSF	**Saint Saulge**	**55.46**	**305**		*e*P	**P**		**17 59 57.4**	**-1.0**
AVF	**Avril sur Loir**	**55.68**	**305**		*e*P	**P**		**17 59 59.3**	**-0.7**
	comp=Z,1.6nm,0.5s,mb4.0								
AVF	**Avril sur Loir**	**55.68**	**305**		*e*P	**P**		**17 59 59.3**	**-0.7**
AVF					pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.1								
AVF	**Avril sur Loir**	**55.68**	**305**		*e*P	**P**		**17 59 59.3**	**-0.7**
	comp=Z,0.8nm,0.5s,mb4.0								
VIVF	**Saint-Julien-l**	**55.76**	**302**		*e*P	**P**		**18 00 00.1**	**-0.5**
	comp=Z,4.3nm,0.6s,mb4.3								
VIVF	**Saint-Julien-l**	**55.76**	**302**		*e*P	**P**		**18 00 00.1**	**-0.5**
VIVF					pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.3								
VIVF	**Saint-Julien-l**	**55.76**	**302**		*e*P	**P**		**18 00 00.1**	**-0.5**
	comp=Z,2.2nm,0.6s,mb4.4								
TCF	**Toulx Ste Croi**	**56.61**	**305**		*e*P	**P**		**18 00 06.3**	**-0.4**
	comp=Z,4.2nm,0.5s,mb4.4								
TCF	**Toulx Ste Croi**	**56.61**	**305**		*e*P	**P**		**18 00 06.3**	**-0.4**
TCF					pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4								
TCF	**Toulx Ste Croi**	**56.61**	**305**		*e*P	**P**		**18 00 06.3**	**-0.4**
	comp=Z,2.1nm,0.5s,mb4.4								
LASF	**Ste Croix**	**56.65**	**302**		*e*P	**P**		**18 00 06.8**	**-0.1**
	comp=Z,4.5nm,0.7s,mb4.3								
RJF	**Les Rejaudoux**	**57.51**	**304**		*e*P	**P**		**18 00 13.1**	**+0.1**
	comp=Z,4.2nm,0.7s,mb4.2								
RJF	**Les Rejaudoux**	**57.51**	**304**		*e*P	**P**		**18 00 13.1**	**+0.1**
RJF					pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.3								
RJF	**Les Rejaudoux**	**57.51**	**304**		*e*P	**P**		**18 00 13.1**	**+0.1**
	comp=Z,2.1nm,0.7s,mb4.3								
MTLF	**Montolieu**	**58.04**	**302**		*e*P	**P**		**18 00 16.4**	**-0.4**
EPF	**Esparros**	**59.38**	**302**		*e*P	**P**		**18 00 25.1**	**-1.1**
	comp=Z,2.9nm,0.6s,mb4.2								
EPF	**Esparros**	**59.38**	**302**		*e*P	**P**		**18 00 25.1**	**-1.1**
EPF					pmax	pmax			
	comp=Z,1.0nm,0.6s,mb4.0								
EPF	**Esparros**	**59.38**	**302**		*e*P	**P**		**18 00 25.1**	**-1.1**
	comp=Z,1.5nm,0.6s,mb4.2								
ETSF	**Etsaut**	**60.02**	**302**		*e*P	**P**		**18 00 30.5**	**0.0**
SJPF	**Ste Jean**	**60.32**	**303**		*e*P	**P**		**18 00 31.9**	**-0.7**

IDC 15 17:59:38.6±0.7,1517N×8680W,h0km,mb4.0/13, mb1 4.3/15,mb1mx4.2/27,mbtmp4.1/15,ML4.2/2,2C-1D, Error ellipse: s-maj=26.6km s-min=13.2km az=59.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**1.20**	**202**	*e*Pg	Pg	17 59 57.1	-4.5
TGUH				*e*Sg	Sg	18 00 06.9	-10
LEON	**Leon**	**2.74**	**182**⇓	*e*P	Pn	18 00 24.2	+0.4
HUEN		**2.88**	**168**	*e*P	Pn	18 00 31.0	+5.2
COPN	**Copaltepe**	**2.98**	**176**	*e*P	Pn	18 00 27.5	+0.4
CSAN		**2.99**	**173**	*e*P	Pn	18 00 29.2	+1.9
CRUN	**El Crucero**	**3.21**	**171**	*e*P	Pn	18 00 36.4	+6.2
MASN	**Masaya**	**3.23**	**169**	*e*P	Pn	18 00 38.4	+7.9
APON	**Apoyo**	**3.31**	**167**⇑	*e*P	Pn	18 00 35.5	+3.8
VCR	**Vista de Mar**	**5.14**	**167**	*e*P	Pn	18 01 06.0	+9.1
JTS	**JuntasAbangare**	**5.18**	**159**	Pn	Pn	18 00 57.5	+0.1
	2.2nm,0.3s,baz=331,slow=11,SNR=13						
JTS	**JuntasAbangare**	**5.18**	**159**	Pn	Pn	18 01 05.7	+8.3
	14nm,0.3s,baz=335,slow=16,SNR=16						
JTS				Lg		18 02 37.5	
	81nm,0.3s,baz=238,slow=21,SNR=4.3						
JTS	**JuntasAbangare**	**5.18**	**159**	*e*Pn	Pn	18 00 56.8	-0.5
TEIG	**Tepich**	**5.22**	**345**	Pn	Pn	18 00 57.3	-0.6
	32nm,0.3s,baz=340,slow=18,SNR=65						
TEIG	**Tepich**	**5.22**	**345**	*e*Pn	Pn	18 00 57.0	-1.0
	982nm,1.0s						
JCR	**Jicaral**	**5.54**	**162**	*e*P	Pn	18 01 11.0	+8.7
CGA2	**Cerro Gallo 2**	**5.61**	**156**	*e*P	Pn	18 01 10.9	+7.6
PRS1	**Puriscal**	**5.70**	**154**	*e*P	Pn	18 01 14.4	+10
SJS	**Escuela Geolog**	**5.85**	**152**	*e*P	Pn	18 01 17.4	+11
LCR2	**La Lucha 2**	**6.05**	**153**	*e*P	Pn	18 01 19.2	+10
LIO	**Limon**	**6.32**	**144**	*e*P	Pn	18 01 21.6	+8.6
BUS	**Buena Vista**	**6.33**	**152**	*e*P	Pn	18 01 23.1	+10
BAR1		**6.81**	**150**	*e*P	Pn	18 01 29.5	+10
ACR	**Cerro Adams**	**7.39**	**151**	*e*P	Pn	18 01 36.4	+8.6
CMIG	**Matias Romero**	**8.00**	**285**	Pn	Pn	18 01 31.3	-4.8
	5.9nm,0.3s,baz=114,slow=8.6,SNR=28						
CMIG	**Matias Romero**	**8.00**	**285**	Pn	Pn	18 01 31.3	-4.7
SOR	**Soroa**	**8.39**	**25**	*e*P	Pn	18 01 45.9	+4.5
BCIP	**Isla Barro Col**	**9.05**	**130**	*e*Pn	Pn	18 01 54.0	+3.3
	294nm,0.8s						
CVJ	**Coleyville**	**9.39**	**70**	*e*P	Pn	18 02 02.1	+6.9
MGV	**Manicaragua**	**9.46**	**42**	*e*P	Pn	18 01 59.5	+3.3
PCJ	**Portland Cotta**	**9.60**	**73**	*e*P	Pn	18 02 07.2	+9.1
STH	**Stony Hill**	**10.01**	**72**⇓	*e*P	Pn	18 02 08.4	+4.7
LMGC	**Las Mercedes**	**10.53**	**61**	*e*P	Pn	18 02 17.4	+6.5
DWPF	**Disney**	**13.80**	**20**	*e*Pn	Pn	18 03 02.9	+7.3
	66nm,0.8s						
DWPF				*e*Sn	Sn	18 05 35.4	+5.7
ROSC	**El Rosal**	**15.99**	**129**	Pn	Pn	18 03 35.4	+10
	0.5nm,0.3s,baz=94,slow=22,SNR=5.4						
OTAV	**Otavalo**	**16.98**	**150**	*e*Pn	Pn	18 03 41.3	+3.6
	441nm,1.8s						
SDV	**Santo Domingo**	**17.00**	**110**	Pn	Pn	18 03 48.4	+11
	4.8nm,0.3s,baz=18,slow=18,SNR=6.4						
SDV				LR	LR	18 10 46.2	
	comp=Z,2μm,20.7s,baz=304,slow=38						
SDV	**Santo Domingo**	**17.00**	**110**	Pn	Pn	18 03 43.8	+5.9
	408nm,1.1s						
AOPR	**Arecibo Observ**	**19.46**	**78**	P	Pn	18 04 16.2	+8.1
	198nm,1.4s						
JSC	**Jenkinsville**	**19.67**	**14**	*e*P	Pn	18 04 12.0	+1.5
SJG	**San Juan**	**20.00**	**79**	P	P	18 04 17.2	+4.3
	120nm,1.0s						
CPD	**Cerro la Pandu**	**20.22**	**79**	P	P	18 04 21.6	+6.3
	51nm,0.8s						
HUMP	**Col San Antoni**	**20.29**	**79**	P	P	18 04 22.6	+6.5
	103nm,1.2s						
TKL	**Tuckaleechee C**	**20.58**	**7**	P	P	18 04 19.5	+0.5
	4.1nm,0.4s,baz=338,slow=22,SNR=7.5						
TKL	**Tuckaleechee C**	**20.58**	**7**	*e*P	P	18 04 19.2	+0.1
TXAR	**Lajitas Array**	**20.99**	**315**	P	P	18 04 23.9	+0.4
	7.2nm,0.9s,baz=136,slow=10,SNR=36						
PCRV	**Puerto La Cruz**	**22.18**	**100**	P	P	18 04 37.9	+1.4
	7.0nm,0.8s,baz=52,slow=19,SNR=1.8						
ATAH	**Atahualpa**	**23.55**	**159**	P	P	18 04 54.2	+3.2
	3.8nm,0.7s,baz=49,slow=2.8,SNR=3.7						
FDF	**Fort de France**	**24.79**	**88**	*e*P	P	18 05 07.0	+4.6
ANMO	**Albuquerque**	**26.45**	**322**	P	P	18 05 18.9	+1.6
	1.0nm,0.6s,baz=141,slow=11,SNR=4.3						
PDAR	**Pinedale Array**	**33.73**	**329**	P	P	18 06 23.6	+2.0
	0.6nm,0.8s,baz=127,slow=9.8,SNR=4.2						
ELK	**Elko**	**35.49**	**321**	P	P	18 06 38.3	+1.3
	1.8nm,0.8s,baz=125,slow=6.5,SNR=7.4						
LPAZ	**La Paz**	**36.29**	**149**	P	P	18 06 44.4	+0.4
	0.3nm,0.5s,baz=1.9,slow=5.3,SNR=3.7						
LPAZ	**La Paz**	**36.29**	**149**	P	P	18 06 44.4	+0.4
LVC	**Limon Verde**	**41.44**	**155**	P	P	18 07 27.9	+0.7
	58nm,1.2s						
TRQA	**Tornquist**	**57.85**	**157**	P	P	18 09 32.8	+0.8
	33nm,1.0s						
MTE	**Manteigas**	**72.22**	**52**	*e*P	P	18 11 07.0	+1.3
	58nm,1.0s						
PAB	**San Pablo**	**74.75**	**53**	P	P	18 11 21.3	+0.6
PAB				pmax	pmax		
	comp=Z,39nm,1.1s						
PAB	**San Pablo**	**74.75**	**53**	P	P	18 11 21.3	+0.7
	comp=Z,39nm,1.1s						
ESDC	**Sonseca Array**	**75.03**	**52**	P	P	18 11 22.6	+0.3
	comp=Z,2.6nm,0.7s,baz=282,slow=5.4,SNR=14						
ESLA	**Sonseca Array**	**75.03**	**52**	*e*P	P	18 11 23.4	+1.1
	comp=Z,12nm,1.0s						
SSB	**Saint Sauveur**	**80.32**	**46**	P	P	18 11 51.5	-0.2
ARCES	**ARCESS Array B**	**83.42**	**19**	P	P	18 12 07.4	-0.1
	comp=Z,3.2nm,0.8s,baz=61,slow=22,SNR=5.3						
ARCES	**ARCESS Array B**	**83.42**	**19**	P	P	18 12 07.4	-0.1
BRG	**Berggiesshubel**	**85.00**	**39**	*e*P	P	18 12 14.2	-1.7
BRG	**Berggiesshubel**	**85.00**	**39**	*e*	P	18 12 14.2	-1.8
	comp=Z,13nm,1.3s						
TORD	**Torodi Ar. Bea**	**85.22**	**78**	P	P	18 12 17.0	-0.7
	comp=Z,1.2nm,1.1s,baz=286,slow=5.4,SNR=4.4						
TORD	**Torodi Ar. Bea**	**85.22**	**78**	P	P	18 12 17.0	-0.7
GEC2	**GERESS Array S**	**85.47**	**41**	P	P	18 12 21.1	+2.7
GERES	**GERESS Array B**	**85.47**	**41**	P	P	18 12 18.2	-0.2
	comp=Z,1.1nm,0.9s,baz=342,slow=2.1,SNR=7.5						
GERES	**GERESS Array B**	**85.47**	**41**	P	P	18 12 18.2	-0.1
GERES	**GERESS Array B**	**85.47**	**41**	P	P	18 12 18.2	-0.2
PETK	**Petropavlovsk-**	**92.47**	**327**	P	P	18 12 49.8	-1.7
	comp=Z,2.3nm,0.9s,baz=136,slow=17,SNR=6.3						
HHC	**Hu-ho-hao-te**	**121.72**	**344**	*e*PKP	PKPdf	18 18 29.0	-5.8
HHC				XPKP		18 18 43.6	
HHC				PKS		18 22 04.8	
HHC				SKS	SKSdf	18 25 35.8	-13
HHC				PP	PP		
	comp=Z,79nm,9.3s						
HHC				LR	LR		
	comp=N,191nm,19.0s						
HHC				LR	LR		
	comp=E,191nm,19.1s						
HHC				LR	LR		
	comp=Z,183nm,19.5s						
WRAB	**Tennant Creek**	**140.55**	**257**	*e*PKHKP	PKPdf	18 19 09.4	-1.4
WRA	**Warramunga Arr**	**140.56**	**257**	PKhKP		18 19 02.3	
	comp=Z,0.8nm,0.9s,baz=86,slow=3.3,SNR=7.7						
WRA				PKP	PKPdf	18 19 09.6	-1.2
	comp=Z,5.8nm,0.9s,baz=85,slow=2.8,SNR=19						
WRA	**Warramunga Arr**	**140.56**	**257**	PKP		18 19 02.3	
WRA				PKP	PKPdf	18 19 09.6	-1.2
ASAR	**Alice Springs**	**140.80**	**251**	PKhKP		18 19 02.1	
	comp=Z,0.6nm,0.7s,baz=108,slow=3.0,SNR=11						
ASAR				PKP	PKPdf	18 19 09.2	-2.0
	comp=Z,2.1nm,0.9s,baz=95,slow=2.3,SNR=16						
ASAR	**Alice Springs**	**140.80**	**251**	PKP		18 19 02.1	
ASAR				PKP	PKPdf	18 19 09.2	-2.0
HYB	**Hyderabad**	**144.54**	**25**	*i* PKP	PKPdf	18 19 14.5	-3.5
CMAR	**Chiang Mai Arr**	**146.11**	**350**	PKPbc	PKPbc	18 19 20.4	-1.0
	comp=Z,3.0nm,0.8s,baz=333,slow=3.3,SNR=20						
CMAR	**Chiang Mai Arr**	**146.11**	**350**	PKPbc	PKPbc	18 19 20.4	-1.0
FITZ	**Fitzroy Crossi**	**148.80**	**260**	PKPbc	PKPbc	18 19 26.6	-2.4
	comp=Z,3.7nm,0.8s,baz=91,slow=3.6,SNR=9.1						
FITZ	**Fitzroy Crossi**	**148.80**	**260**	*e*PKPbc	PKPbc	18 19 27.1	-1.9

*NEIC **15** 17:59:41.9±0.4, 1483N×87.12W, mb5.3/133, MS4.6/5, Error ellipse: s-maj=8.6km s-min=7.4km az=205.0*

NEIC Felt [VI] at Yoro; [III] at San Pedro Sula and Tegucigalpa; [II] at La Ceiba and Roatan. Felt at Comayagua, San Juan Pueblo, Santa Lucia and Siguatepeque. Felt at San Francisco, El Salvador and Guatemala City, Guatemala.

*BJI **15** 17:59:41.8, 1480N×87.10W, h32km, mB5.4, Ms5.6, Msz5.2*

*GCMT **15** 17:59:41.9±0.1, 1518N×87.16W, h12km, MW5.3/101, Moment Tensor Solution. s79,c118; s101,c192; Duration: 1s1 Moment tensor: Scale 10^17Nm; Mrr-0.87±.01; Mθθ 0.14±.01; Mφφ 0.72±.02; Mrθ 0.27±.03; Mθφ 0.42±.01; Mrφ 0.34±.04; Best double couple: M=1.00800×10^17 NP1:φ≈22.00000°, δ≈33.00000°, λ=-99.00000°. NP2:φ≈212.00000°, δ≈58.00000°, λ=-85.00000°. Principal axes: T 1.0410, Plg13.0000°, Azm298.0000°; N -0.0660, Plg5.0000°, Azm30.0000°; P -0.9740, Plg76.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **15** 17:59:49.5±0.2, 1549N×004×8799W×002, h33km, mb5.2/208, MS4.7/18 Error ellipse: s-maj=5.4km s-min=2.8km az=23.0*

*SZGRF **15** 17:59:50.1, 1429N×8713W, h33km, mb5.2, MS4.6, Honduras*

*MOS **15** 17:59:53.0±1.0, 1597N×8767W, h33km, mb5.4/43, Error ellipse: s-maj=8.2km s-min=5.4km az=94.3*

*IDC **15** 17:59:53.6±2.8, 1502N×8693W, h33km±21km, mb4.8/33, mb1 4.9/36, mb1mx4.9/38, mbtmp4.8/36, ML4.4/1, MS4.5/3, Ms1 4.5/3, ms1mx3.8/13, Error ellipse: s-maj=14.2km s-min=7.5km az=55.0*

*CASC **15** 17:59:55.1±3.5, 1415N×8770W, h44km±999km, MD5.2*

ISC 15 17:59:51.3±0.2,1546N±004×8796W±003,h35km,n949, σ1909/620,mb5.2/208,MS4.7/18,158C-147D,Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBRS	**Las Brisas**	**2.01**	**212**	*e*P	x	18 00 16.9	
BLLM	**Bellamira**	**2.02**	**188**	*e*P	x	18 00 12.6	
SNVI	**San Vicente**	**2.03**	**205**	*e*P	x	18 00 17.1	
LFRS	**El Faro**	**2.12**	**210**	*e*P	x	18 00 16.9	
BOQS	**Boqueron**	**2.14**	**217**	*e*P	x	18 00 21.4	
SNJE	**San Jose**	**2.25**	**225**	*e*P	x	18 00 24.1	
RTR	**El Retiro**	**2.25**	**227**	*e*P	x	18 00 24.5	
SBLS	**San Blas**	**2.28**	**225**	*e*P	x	18 00 25.4	
NBG	**Las Nubes**	**2.46**	**250**	*e*P	**Pn**	**18 00 35.1**	**+6.1**
FUG	**Fuego 3**	**2.96**	**250**	*e*P	**Pn**	**18 00 43.6**	**+7.7**
FG6		**2.96**	**253**	*e*P	**Pn**	**18 00 43.0**	**+7.1**
CCIG	**Comitan**	**4.10**	**282**	*e*P	Px	18 01 10.6	
TEIG	**Tepich**	**4.75**	**356**	Pn	**Pn**	**18 01 07.9**	**+7.4**
	59nm,0.3s,baz=147,slow=4.2,SNR=35						
TEIG				Sn	**Sn**	**18 02 07.3**	**+13**
	116nm,0.3s,baz=78,slow=23,SNR=12						
TEIG				Lg		18 02 39.1	
	138nm,0.3s,baz=328,slow=21,SNR=2.4						
TEIG				Lg		18 02 39.1	
TEIG	**Tepich**	**4.75**	**356**	Sn	**Sn**	**18 02 07.3**	**+13**
JTS	**JuntasAbangare**	**5.92**	**150**	Lg		18 02 24.9	
	72nm,0.3s,baz=206,slow=4.4,SNR=4.0						
CMIG	**Matias Romero**	**6.84**	**285**	Pn	Px	18 01 41.2	
	13nm,0.3s,baz=107,slow=9.3,SNR=18						
CMIG				Sn	Sx	18 03 11.7	
	18nm,0.3s,baz=37,slow=21,SNR=4.8						
CMIG				Lg		18 03 52.2	
	baz=38,slow=6.6,SNR=4.2						
CMIG				Lg		18 03 52.2	
CMIG	**Matias Romero**	**6.84**	**285**	Sn	Sx	18 03 11.7	
VHO	**Vista Hermosa**	**8.58**	**282**	*i* P	Px	18 02 06.9	
PNIG	**Pinotepa**	**9.82**	**277**	*i* P	Px	18 02 24.5	
PPM	**Popocatepetl**	**10.80**	**291**	*i* P	Px	18 02 35.8	
CCCC	**Cccc**	**11.23**	**58**	*e*P	**Pn**	**18 02 27.3**	**-2.1**
CAIG	**El Cayaco**	**11.93**	**279**	*i* P	Px	18 02 48.0	
HLGC	**Holguin**	**12.53**	**63**	*e*P	**Pn**	**18 02 41.8**	**-5.4**
ZIIG	**Zihuatanejo**	**13.13**	**281**	*i* P	Px	18 03 05.2	
MOIG	**Morelia**	**13.29**	**290**	*i* P	Px	18 03 13.2	
MOAC	**Moa**	**13.40**	**65**	*e*P	**Pn**	**18 02 52.9**	**-6.1**
MASC	**Masc**	**13.88**	**68**	*e*P	**Pn**	**18 03 02.3**	**-3.4**
BRAL	**Brewton**	**15.50**	**3**	*e*Pn	**Pn**	**18 03 26.9**	**-0.4**
	168nm,1.0s						
HKT	**Hockley**	**16.14**	**335**	*e*P	**Pn**	**18 03 37.7**	**+2.2**
HKT				pmax	pmax		
	comp=Z,579nm,1.6s						
HKT	**Hockley**	**16.14**	**335**	*e*Pn	**Pn**	**18 03 37.7**	**+2.2**
	comp=Z,579nm,1.6s						
PAYG	**Puerto Ayora**	**16.20**	**188**	P	**Pn**	**18 03 36.6**	**+0.2**
VBMS	**Vicksburg**	**16.84**	**352**	Pn	**Pn**	**18 03 49.6**	**+5.2**
	comp=Z,613nm,1.1s						
NATX	**Nacogdoches**	**17.34**	**341**	*e*Pn	**Pn**	**18 03 53.1**	**+2.5**
	comp=Z,938nm,1.4s						
LRAL	**Lakeview Retre**	**17.52**	**3**	*e*Pn	**Pn**	**18 03 54.2**	**+1.4**
	comp=Z,204nm,1.4s						
LRAL				*e*Sn	**Sn**	**18 07 06.9**	**0.0**
GOGA	**Godfrey**	**18.33**	**12**	*e*P	**Pn**	**18 04 00.4**	**-2.4**
GOGA				pmax	pmax		
	comp=Z,140nm,1.3s						
GOGA	**Godfrey**	**18.33**	**12**	*e*P	**Pn**	**18 04 00.4**	**-2.4**
	comp=Z,140nm,1.3s						
JCT	**Junction City**	**18.48**	**326**	*e*P	**Pn**	**18 04 04.7**	**+0.1**
JCT				pmax	pmax		
	comp=Z,108nm,0.9s						
JCT	**Junction City**	**18.48**	**326**	*e*P	**Pn**	**18 04 04.7**	**+0.1**
	comp=Z,108nm,0.9s						
NHSC	**New Hope**	**18.93**	**21**	*e*P	**Pn**	**18 04 13.2**	**+3.1**
	comp=Z,418nm,1.1s						
COW	**Cow Castle Cre**	**19.01**	**19**	*e*P	**Pn**	**18 04 15.0**	**+3.9**
OXF	**Oxford**	**19.01**	**356**	*e*P	**Pn**	**18 04 09.2**	**-1.9**
OXF				pmax	pmax		
	comp=Z,359nm,1.0s						
OXF	**Oxford**	**19.01**	**356**	*e*P	**Pn**	**18 04 09.2**	**-1.9**
	comp=Z,359nm,1.0s						
MAIG	**Mazatlaan**	**19.03**	**297**	*i* P	pP	18 04 24.8	+5.1
UALR	**University of**	**19.63**	**349**	*e*P	**Pn**	**18 04 18.7**	**+0.3**
	comp=Z,520nm,1.6s						
MIAR	**Mount Ida**	**19.66**	**346**	*e*P	**Pn**	**18 04 19.1**	**+0.3**
MIAR				pmax	pmax		
	comp=Z,426nm,1.3s						
MIAR	**Mount Ida**	**19.66**	**346**	*e*P	**Pn**	**18 04 19.1**	**+0.2**
	comp=Z,426nm,1.3s						
MIAR				*e*S	**S**	**18 08 03.1**	**+5.8**
JSC	**Jenkinsville**	**19.69**	**17**	*e*pP	**Pn**	**18 04 22.8**	**+3.7**

SLM Saint Louis 23.17 355 e*SP pP 18 05 05.1 +0.8
OLIL Olney 23.18 360 eP **P** **18 04 52.2 -2.8**
comp=Z,479nm,1.2s,mb5.8
OLIL Olney 23.18 360 epP pP 18 05 02.5 -1.9
OLIL Olney 23.18 360 esP pP 18 05 05.3 +0.9
PCRV Puerto La Cruz 23.33 100 P **P** **18 04 49.5 -7.2**
comp=Z,36nm,0.8s,mb4.8,baz=5.9,slow=4.2,SNR=14
BLO Bloomington 23.65 3 e*PP pP 18 05 06.6 -2.7
BLO pmax pmax
comp=Z,130nm,1.0s,mb5.3
BLO Bloomington 23.65 3 P **P** **18 04 58.6 -1.0**
comp=Z,130nm,1.0s,mb5.3
BLO Bloomington 23.65 3 epP pP 18 05 06.6 -2.8
BLO Bloomington 23.65 3 P **P** **18 04 58.6 -0.9**
URVA University of 23.88 21 P **P** **18 04 58.5 -3.1**
URVA University of 23.88 21 epP pP 18 05 05.2 -6.4
URVA University of 23.88 21 esP **P** **18 05 09.3 +7.7**
ATAH Atahualpa 24.25 156 P **P** **18 05 02.8 -2.4**
comp=Z,74nm,1.2s,mb5.0,baz=326,slow=6.2,SNR=15
KSU1 Kansas State U 24.75 344 eP pP 18 05 16.5 -3.0
comp=Z,152nm,1.3s
ACSO Alum Creek Sta 25.06 9 P **P** **18 05 07.3 -5.1**
comp=Z,83nm,1.0s,mb5.2
ACSO Alum Creek Sta 25.06 9 epP pP 18 05 15.2 -7.2
BNM Barren Site 25.09 321 eP **P** **18 05 14.3 +1.5**
BNM Barren Site 25.09 321 esP pP 18 05 27.9 +5.2
319A Douglas 25.10 313 ⇓P **P** **18 05 14.2 +1.3**
baz=26,SNR=10
319A Douglas 25.10 313 ⇑P PcP 18 08 52.7 +5.9
baz=26
MCWV Mont Chateau 25.13 15 eP pP 18 05 15.4 -7.6
comp=Z,158nm,1.3s
LPM Los Pinos Moun 25.20 322 P **P** **18 05 18.8 +5.0**
LPM Los Pinos Moun 25.20 322 esP pP 18 05 27.3 +3.6
LENM Lemitar 25.31 321 eP **P** **18 05 16.9 +2.2**
LENM Lemitar 25.31 321 epP pP 18 05 27.8 +3.1
219A White Tail Can 25.44 314 ⇓P **P** **18 05 19.4 +3.4**
baz=26,SNR=19
219A White Tail Can 25.44 314 ⇓P PcP 18 08 54.6 +7.1
baz=26
CBKS Cedar Bluff 25.47 338 e*SP pP 18 05 28.6 +2.5
CBKS pmax pmax
comp=Z,57nm,0.9s,mb5.1
CBKS Cedar Bluff 25.47 338 P **P** **18 05 13.4 -2.6**
comp=Z,57nm,0.9s,mb5.1
CBKS Cedar Bluff 25.47 338 esP pP 18 05 28.6 +2.5
CBKS Cedar Bluff 25.47 338 P **P** **18 05 13.4 -2.7**
ANMO Albuquerque 25.55 323 P pP 18 05 29.8 +2.9
comp=Z,9.8nm,0.9s,baz=140,slow=11,SNR=12
ANMO PcP PcP 18 08 51.8 +4.1
comp=Z,9.7nm,1.0s,baz=125,slow=4.5,SNR=2.2
ANMO LR LR 18 19 33.5
comp=Z,698nm,18.4s,MS4.2,baz=356,slow=44
ANMO Albuquerque 25.55 323 e*PP pP 18 05 28.1 +1.3
ANMO 18 08 51.8
ANMO pmax pmax
comp=Z,3.0nm,1.3s
ANMO Albuquerque 25.55 323 P **P** **18 05 18.4 +1.6**
comp=Z,3.2nm,1.3s
ANMO PcP PcP 18 08 51.8 +4.1
ANMO LR LR 18 19 33.5
ANMO Albuquerque 25.55 323 epP pP 18 05 28.1 +1.3
ANMO Albuquerque 25.55 323 P **P** **18 05 18.4 +1.6**
LAZ Ladron 25.57 321 eP **P** **18 05 18.0 +0.9**
LAZ Ladron 25.57 321 esP pP 18 05 32.2 +5.1
318A Bisbee 25.64 312 ⇑P **P** **18 05 18.4 +0.7**
baz=27,SNR=14
318A Bisbee 25.64 312 ⇓P PcP 18 08 53.3 +5.3
baz=27
GRGR Grenville 25.75 94 eP **P** **18 05 14.1 -4.8**
SDMD Soldier's Deli 25.77 20 P **P** **18 05 14.7 -4.1**
comp=Z,61nm,1.1s,mb5.0
SDMD Soldier's Deli 25.77 20 epP pP 18 05 23.1 -5.7
FDF Fort de France 25.89 88 epP **P** **18 05 15.3 -4.9**
119A Ashpeak Ranch, 25.92 315 ⇑P **P** **18 05 21.1 +0.8**
baz=27,SNR=14
119A Ashpeak Ranch, 25.92 315 ⇓P PcP 18 08 54.1 +5.5
baz=27
218A Dragoon 25.98 313 ⇓P **P** **18 05 21.8 +1.0**
baz=27
218A Dragoon 25.98 313 ⇓P PcP 18 08 53.7 +5.0
baz=27
Z19A T-Link Ranch, 26.21 316 ⇑P **P** **18 05 24.1 +1.2**
baz=27
118A Homack Ranch, 26.30 314 ⇓P **P** **18 05 25.1 +1.4**
baz=27,SNR=8.9
118A Homack Ranch, 26.30 314 ⇓P PcP 18 08 54.3 +4.8
baz=27
217A Green Valley 26.41 312 ⇑P **P** **18 05 25.3 +0.6**
baz=27,SNR=14
217A Green Valley 26.41 312 ⇓P PcP 18 08 53.7 +4.0
baz=27
Y19A Nutrioso 26.61 318 ⇑P **P** **18 05 27.5 +1.0**
baz=28,SNR=16
Y19A Nutrioso 26.61 318 ⇑P PcP 18 08 58.2 +8.1
baz=28
TUC Tucson 26.68 313 e*SP pP 18 05 40.7 +3.5
TUC e 18 08 55.7
TUC pmax pmax
comp=Z,20nm,1.2s,mb4.5
TUC Tucson 26.68 313 P **P** **18 05 28.6 +1.4**
comp=Z,20nm,1.2s,mb4.5
TUC epPcP PcP 18 08 55.7 +5.3
TUC Tucson 26.68 313 esP pP 18 05 40.7 +3.6
TUC Tucson 26.68 313 P **P** **18 05 28.6 +1.4**
SCIA State Center 26.74 351 P **P** **18 05 26.6 -1.0**
comp=Z,50nm,0.9s,mb5.0
SCIA State Center 26.74 351 epP pP 18 05 34.1 -3.5
117A Oracle 26.80 314 ⇑P **P** **18 05 28.6 +0.4**
baz=28,SNR=9.5
117A Oracle 26.80 314 ⇑P PcP 18 08 56.2 +5.6
baz=28
X19A St. Johns 26.93 318 ⇑P **P** **18 05 30.7 +1.3**
baz=28,SNR=17
X19A St. Johns 26.93 318 ⇓P PcP 18 08 56.2 +5.3
baz=28
ALLY Alegheny Colle 26.96 13 P **P** **18 05 24.4 -5.1**
comp=Z,73nm,1.3s,mb5.0
ALLY Alegheny Colle 26.96 13 epP pP 18 05 36.1 -3.4
Y18A Canyon Day Jun 27.01 316 ⇑P **P** **18 05 31.5 +1.3**
baz=28,SNR=13
Y18A Canyon Day Jun 27.01 316 ⇑P PcP 18 08 58.2 +7.1
baz=28
SDCO Great Sand Dun 27.08 328 eP **P** **18 05 30.7 0.0**
comp=Z,57nm,1.5s,mb4.9
SDCO Great Sand Dun 27.08 328 epP pP 18 05 41.7 +1.0
X18A Snowflake 27.42 318 ⇑P PcP 18 08 59.3 +7.2
baz=28
W19A Sanders 27.43 319 ⇑P **P** **18 05 34.9 +1.0**
baz=28,SNR=8.2
W19A Sanders 27.43 319 ⇓P PcP 18 08 59.2 +7.1
baz=28
JFWS Jewell Farm 27.43 356 e*PP pP 18 05 39.3 -4.5
JFWS pmax pmax
comp=Z,70nm,1.2s,mb5.1
JFWS Jewell Farm 27.43 356 P **P** **18 05 32.0 -1.7**
comp=Z,70nm,1.2s,mb5.1
JFWS Jewell Farm 27.43 356 epP pP 18 05 39.3 -4.5
JFWS Jewell Farm 27.43 356 P **P** **18 05 32.0 -1.7**
116A Eloy 27.47 313 ⇑P PcP 18 08 58.3 +6.1
baz=28
Y17A Roosevelt 27.51 315 ⇑P PcP 18 08 58.4 +6.1
baz=28
W18A Petrified Fore 27.65 319 ⇑P **P** **18 05 37.6 +1.8**
baz=29
Y16A Circle Bar Ran 28.05 315 ⇑P PcP 18 09 00.6 +7.0
baz=29
V18A Ganado 28.15 320 ⇑P PcP 18 09 00.9 +7.0
baz=29
OGNE Ogallala 28.18 337 P **P** **18 05 40.9 +0.4**
comp=Z,278nm,1.6s,mb5.6
OGNE Ogallala 28.18 337 epP pP 18 05 50.0 -0.6
MVCO Mesa Verde 28.30 324 P **P** **18 05 43.7 +2.0**
comp=Z,148nm,1.8s,mb5.3
MVCO Mesa Verde 28.30 324 epP pP 18 05 53.9 +2.2
T19A Beclabito 28.35 323 ⇓P **P** **18 05 42.9 +0.9**
baz=29,SNR=11
T19A Beclabito 28.35 323 ⇑P PcP 18 08 58.9 +4.6
baz=29
U18A Rough Rock, Ch 28.57 321 ⇑P PcP 18 09 00.9 +6.0
baz=30
ISCO Idaho Springs 28.74 331 e*SP pP 18 05 59.3 +3.7
ISCO pmax pmax
comp=Z,57nm,1.7s,mb5.0
ISCO Idaho Springs 28.74 331 P **P** **18 05 48.0 +2.5**
comp=Z,57nm,1.7s,mb5.0
ISCO Idaho Springs 28.74 331 epP pP 18 05 55.6 0.0
ISCO Idaho Springs 28.74 331 P **P** **18 05 48.0 +2.5**
ISCO Idaho Springs 28.74 331 esP pP 18 05 59.3 +3.7
Z14A Wintersburg 28.78 313 ⇑P PcP 18 09 01.0 +5.5
baz=30
X15A Humboldt 28.91 315 ⇑P PcP 18 09 01.1 +5.4
baz=30
WUAZ Wupatki 28.95 318 P **P** **18 05 53.4 +6.0**
comp=Z,25nm,1.0s,mb4.9
PV01 Paradox Valley 29.00 325 P **P** **18 05 50.9 +3.1**
T18A Mexican Hat 29.05 322 ⇓P **P** **18 05 49.3 +1.0**
baz=30,SNR=8.2
T18A Mexican Hat 29.05 322 ⇓P PcP 18 09 02.2 +6.1
baz=30
113A Mohawk Valley, 29.06 311 ⇓P PcP 18 09 01.4 +5.2
baz=30
ECSD EROS,Sioux Fal 29.13 347 eP **P** **18 05 44.9 -4.0**
comp=Z,28nm,1.1s,mb4.9
ECSD EROS,Sioux Fal 29.13 347 epP pP 18 05 54.7 -4.2
Y14A Wickenburg 29.13 314 ⇓P PcP 18 09 00.3 +4.0
baz=30
U16A Tuba City 29.18 319 ⇓P **P** **18 05 50.6 +1.2**
baz=30,SNR=6.9
NNA Nana 29.41 157 P **P** **18 05 47.8 -3.8**
comp=Z,8.9nm,0.5s,mb4.8,baz=1.2,slow=9.0,SNR=4.9
NNA Nana 29.41 157 P **P** **18 05 47.8 -3.8**
PV10 Paradox Valley 29.43 325 eP **P** **18 05 48.5 -3.1**
PV10 Paradox Valley 29.43 325 esP pP 18 06 02.7 +1.1
R19A Curley Farm, L 29.49 325 ⇑P PcP 18 09 02.8 +5.7
baz=30
S18A Hurst Farm, Bl 29.50 323 ⇓P PcP 18 09 04.0 +6.8
baz=30
T17A Navajo Res., N 29.52 321 ⇓P **P** **18 05 53.0 +0.6**
baz=30,SNR=8.0
T17A Navajo Res., N 29.52 321 ⇑P PcP 18 09 02.0 +4.8
baz=30
V15A Kaibab Nationa 29.65 318 ⇑P PcP 18 09 01.1 +3.5
baz=31
PHWY Pilot Hill 29.88 333 P **P** **18 05 59.1 +3.5**
comp=Z,79nm,1.9s,mb5.1
W14A Seligman 29.89 316 ⇓P PcP 18 09 02.5 +4.3
baz=31
R18A Canyonlands Na 29.91 324 ⇓P **P** **18 05 56.2 +0.2**
baz=31,SNR=5.1
R18A Canyonlands Na 29.91 324 ⇑P PcP 18 09 01.0 +2.8
baz=31
Q19A Hogan Spring (29.96 325 ⇑P **P** **18 05 57.2 +0.9**
baz=31,SNR=5.3
GLA Glamis 29.98 311 e*SP pP 18 06 10.9 +4.3
GLA pmax pmax
comp=Z,22nm,1.5s,mb4.7
GLA Glamis 29.98 311 ⇓P PcP 18 09 03.6 +5.1
baz=31
GLA Glamis 29.98 311 P **P** **18 06 00.6 +4.1**
comp=Z,22nm,1.5s,mb4.7
GLA Glamis 29.98 311 esP pP 18 06 10.9 +4.2
GLA Glamis 29.98 311 P **P** **18 06 00.6 +4.0**
X13A Yucca 30.06 314 ⇓P **P** **18 05 58.1 +0.8**
baz=31
X13A Yucca 30.06 314 ⇓P PcP 18 09 05.4 +6.7
baz=31
Y12C Blythe 30.11 312 ⇑P PcP 18 09 05.1 +6.3
baz=31
PDMCI Parker Dam,Lak 30.12 313 ⇑P PcP 18 09 05.4 +6.5
baz=31
V14A Boquillas Ranc 30.15 316 ⇑P PcP 18 09 04.5 +5.6
baz=31
SADO Sadowa 30.15 13 P **P** **18 06 02.4 +4.5**
baz=244,slow=12
P19A Cripple Cowboy 30.30 327 ⇑P **P** **18 05 59.6 +0.3**
baz=31
W13A Hualapai Mount 30.37 315 ⇓P PcP 18 09 06.5 +7.0
baz=31
R17A Hanksville Air 30.41 323 ⇓P **P** **18 06 00.8 +0.5**
baz=31,SNR=18
Q18A Rafter H Ranch 30.55 325 ⇓P **P** **18 06 01.9 +0.4**
baz=32,SNR=5.9
Q18A Rafter H Ranch 30.55 325 ⇑P PcP 18 09 06.4 +6.5
baz=32
COWI Conover 30.56 358 eP **P** **18 06 01.3 -0.2**
comp=Z,15nm,0.9s,mb4.8
SWSC Sam W. Stewart 30.64 310 ⇑P PcP 18 09 07.2 +7.0
baz=32
BC3 Big Chuckw Mtn 30.73 311 ⇑P PcP 18 09 06.6 +6.2
baz=32
IRM Iron Mountain 30.76 312 ⇑P PcP 18 09 06.2 +5.7
baz=32
R16A Teasdale 30.77 322 ⇑P **P** **18 06 03.9 +0.5**
baz=32,SNR=7.6
SRU San Rafael 30.77 324 ⇓P **P** **18 06 03.7 +0.2**
baz=32,SNR=6.0
V13A Grand Canyon W 30.86 316 ⇓P PcP 18 09 08.8 +8.0
baz=32
P18A Preston Nutter 30.98 325 ⇑P PcP 18 09 07.0 +6.0
baz=32
RWWY Rawlins 30.98 331 P pP 18 06 13.8 -1.5
comp=Z,61nm,1.4s
MONP Monument Peak 31.08 309 ⇑P PcP 18 09 07.6 +6.2
baz=32
P17A Butcher Ranch, 31.14 325 ⇓P **P** **18 06 06.7 -0.1**
baz=32,SNR=9.8
LONY Lake Ozonia 31.20 19 P **P** **18 06 06.6 -0.6**
comp=Z,46nm,1.3s,mb5.2
TMUT Trail Mountain 31.29 324 P **P** **18 06 07.1 -0.9**
TMUT Trail Mountain 31.29 324 esPcP PcP 18 09 08.8 +7.0
BELC Belle Mtn. 31.29 311 ⇓P PcP 18 09 08.4 +6.5
baz=32
MSU Marysvale 31.33 322 P **P** **18 06 13.1 +4.7**
GMRC Granite Mounta 31.44 313 ⇑P PcP 18 09 08.0 +5.7
baz=32
PFO Pinyon Flat Ob 31.44 310 P pP 18 06 22.2 +2.7
comp=Z,4.4nm,0.8s,baz=101,slow=7.3,SNR=5.6
PFO PcP PcP 18 09 06.3 +4.0
comp=Z,14nm,0.9s,baz=16,slow=4.4,SNR=3.0
PFO Pinyon Flat Ob 31.44 310 e*PP pP 18 06 20.8 +1.3
PFO 18 09 06.3
PFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
PFO Pinyon Flat Ob 31.44 310 ⇑P PcP 18 09 07.5 +5.2
baz=32
PFO Pinyon Flat Ob 31.44 310 P **P** **18 06 11.6 +2.1**
comp=Z,7.7nm,1.0s,mb4.5
PFO PcP PcP 18 09 06.3 +4.0
PFO epPcP 18 09 08.1
PFO Pinyon Flat Ob 31.44 310 epP pP 18 06 20.8 +1.2
PFO Pinyon Flat Ob 31.44 310 P **P** **18 06 11.6 +2.1**
CCUT Cedar City 31.45 319 P **P** **18 06 05.3 -4.2**
S14A Cedar City 31.46 320 ⇑P PcP 18 09 08.1 +5.8
baz=32
T13A Saint George 31.48 318 ⇓P **P** **18 06 10.1 +0.3**
baz=32,SNR=5.7
O17A Robinson Place 31.64 326 ⇓P **P** **18 06 11.2 0.0**
baz=33,SNR=7.0
O17A Robinson Place 31.64 326 ⇓P PcP 18 09 08.7 +6.0
baz=33
ARUT Antelope Range 31.65 319 e*PP pP 18 06 22.7 +1.4
ARUT Antelope Range 31.65 319 eP **P** **18 06 13.5 +2.3**
RSSD Black Hills 31.67 338 e*PP pP 18 06 21.0 -0.4
RSSD pmax pmax
comp=Z,13nm,1.1s,mb4.7
RSSD Black Hills 31.67 338 eP **P** **18 06 11.0 -0.3**
comp=Z,13nm,1.1s,mb4.7
RSSD Black Hills 31.67 338 epP pP 18 06 21.0 -0.4
RSSD Black Hills 31.67 338 eP **P** **18 06 11.0 -0.3**
Q15A Fillmore 31.77 322 ⇑P **P** **18 06 12.7 +0.5**
baz=33,SNR=6.0
S13A Holt Ranch, En 31.79 319 ⇑P PcP 18 09 09.5 +6.3
baz=33
V11A Goodsprings 31.83 315 ⇓P PcP 18 09 09.3 +5.9
baz=33
TUQ Turquoise Moun 31.96 314 ⇓P **P** **18 06 13.9 -0.2**
baz=33,SNR=7.2
TUQ Turquoise Moun 31.96 314 ⇑P PcP 18 09 09.5 +5.8
baz=33
MPU Maple Canyon 32.02 324 P **P** **18 06 14.7 +0.3**
comp=Z,26nm,1.1s,mb5.0
MPU Maple Canyon 32.02 324 epP pP 18 06 25.4 +0.9
NLU North Lily Min 32.22 324 eP **P** **18 06 16.6 +0.3**
NLU esPcP PcP 18 09 09.4 +5.1
NLU North Lily Min 32.22 324 epP pP 18 06 27.6 +1.3
Q14A Sevier Lake (B 32.29 321 ⇑P **P** **18 06 17.2 +0.3**
baz=33,SNR=10.0
T11A Corn Creek, Al 32.47 317 ⇓P **P** **18 06 18.9 +0.5**
baz=33,SNR=9.1
T11A Corn Creek, Al 32.47 317 ⇓P PcP 18 09 12.8 +7.8
baz=33
GSC Goldstone 32.51 313 P pP 18 06 30.2 +1.2
EYMN Ely 32.52 356 P **P** **18 06 15.6 -3.2**
comp=Z,86nm,1.6s,mb5.4
EYMN esPcP PcP 18 09 11.1 +6.1
EYMN Ely 32.52 356 epP **P** **18 06 24.0 +5.3**
CTU Camp Tracy 32.55 325 P **P** **18 06 23.6 +4.5**
comp=Z,39nm,1.4s,mb5.2
P14A Drum Mountains 32.56 322 ⇓P **P** **18 06 19.5 +0.3**
baz=34,SNR=13
NOQ North Oquirrh 32.72 325 P pP 18 06 29.9 -0.8
comp=Z,118nm,1.5s
Q13A Wheeler Ranch, 32.72 321 ⇑P **P** **18 06 19.8 -0.9**
baz=34,SNR=7.9
U10A Ash Meadows, A 32.76 315 ⇑P **P** **18 06 21.1 +0.1**
baz=34,SNR=8.5
U10A Ash Meadows, A 32.76 315 ⇓P PcP 18 09 12.8 +6.9
baz=34
DUG Dugway 32.80 324 e*PP pP 18 06 32.5 +1.0
DUG pmax pmax
comp=Z,22nm,1.2s,mb5.0
DUG Dugway 32.80 324 ⇓P PcP 18 09 12.8 +6.9
baz=34
DUG Dugway 32.80 324 P **P** **18 06 23.1 +1.8**
comp=Z,22nm,1.2s,mb5.0
DUG Dugway 32.80 324 epP pP 18 06 32.5 +1.0
DUG Dugway 32.80 324 P **P** **18 06 23.1 +1.8**
PDAR Pinedale Array 32.92 330 P pP 18 06 32.1 -0.2
comp=Z,3.8nm,1.0s,baz=102,slow=12,SNR=15
TPNV Topopah Spring 32.99 316 e*PP pP 18 06 36.4 +3.3
TPNV pmax pmax
comp=Z,17nm,1.0s,mb4.9
TPNV Topopah Spring 32.99 316 ⇓P PcP 18 09 12.6 +6.1
baz=34
TPNV Topopah Spring 32.99 316 eP **P** **18 06 27.7 +4.7**
comp=Z,18nm,1.0s,mb4.9
TPNV Topopah Spring 32.99 316 epP pP 18 06 36.4 +3.3
TPNV Topopah Spring 32.99 316 eP **P** **18 06 27.7 +4.7**
P13A Bates Ranch, G 33.03 321 ⇓P **P** **18 06 22.9 -0.5**
baz=34,SNR=13
P13A Bates Ranch, G 33.03 321 ⇑P PcP 18 09 13.2 +6.7
baz=34
HWUT Hardware Ranch 33.08 327 P pP 18 06 32.9 -1.0
comp=Z,76nm,1.6s
EDW2 Edwards Air Fo 33.16 311 ⇑P PcP 18 09 12.4 +5.4
baz=34
LRMC Laurel Mountai 33.23 312 ⇑P PcP 18 09 12.4 +5.2
baz=34
L16A Fish Haven 33.30 327 ⇓P **P** **18 06 25.9 +0.2**
baz=34
R11A Troy Canyon, C 33.34 318 ⇑pP pP 18 06 35.9 -0.3
baz=34,SNR=9.6
SPUT South Promonto 33.35 325 P **P** **18 06 29.6 +3.5**
MPMC Manual Prospec 33.38 313 ⇑P **P** **18 06 26.5 +0.1**
baz=34
MPMC ⇓P PcP 18 09 13.2 +5.6
baz=34
MPMC Manual Prospec 33.38 313 ⇓sP pP 18 06 41.1 +4.6
baz=34
AGMN Agassiz Refuge 33.38 350 P **P** **18 06 29.2 +2.9**
comp=Z,22nm,1.0s,mb5.0
BGU Big Grassy Mou 33.41 324 eP **P** **18 06 28.2 +1.5**
BGU Big Grassy Mou 33.41 324 epP pP 18 06 37.4 +0.7
N14A Grayback Hills 33.45 324 ⇑P **P** **18 06 27.2 +0.2**
baz=34,SNR=15
P12A McGill 33.59 321 ⇑P **P** **18 06 28.7 +0.5**
baz=34,SNR=8.5
PKME Peaks-Kenny Pk 33.62 24 eP **P** **18 06 32.1 +3.8**
AHID Auburn Hatcher 33.67 329 P **P** **18 06 36.0 +7.1**
comp=Z,25nm,1.2s,mb5.0
S10A Tonopah Range, 33.75 317 ⇑P **P** **18 06 30.3 +0.6**
baz=35,SNR=11
S10A Tonopah Range, 33.75 317 ⇑P PcP 18 09 15.7 +7.0
baz=35
L15A Malad City 33.80 326 ⇑P **P** **18 06 30.1 +0.1**
baz=35
HVU Hansel Valley 33.85 326 P **P** **18 06 34.9 +4.4**
HVU pmax pmax
comp=Z,95nm,1.7s,mb5.5
HVU Hansel Valley 33.85 326 P **P** **18 06 34.9 +4.4**
comp=Z,95nm,1.7s,mb5.5
ISA Isabella 33.88 312 e PcP 18 09 15.2 +6.2
ISA pmax pmax
comp=Z,14nm,0.9s,mb4.9
ISA Isabella 33.88 312 ⇑P **P** **18 06 31.0 +0.3**
baz=35,SNR=11
ISA Isabella 33.88 312 P **P** **18 06 28.8 -2.0**
comp=Z,14nm,0.9s,mb4.9
ISA Isabella 33.88 312 ⇑P PcP 18 09 14.7 +5.7
baz=35
ISA Isabella 33.88 312 epPcP PcP 18 09 15.2 +6.2
ISA Isabella 33.88 312 P **P** **18 06 28.8 -2.0**
M14A Sheep Mountain 33.98 325 ⇑P **P** **18 06 32.0 +0.4**
baz=35,SNR=18
O12A Currie 33.98 322 ⇓P **P** **18 06 32.2 +0.6**
baz=35,SNR=12
O12A Currie 33.98 322 ⇑P PcP 18 09 17.2 +8.0
baz=35
REDW Red Top Meadow 33.99 330 eP **P** **18 06 31.0 -0.6**
comp=Z,87nm,1.1s,mb5.6
REDW Red Top Meadow 33.99 330 epP pP 18 06 42.1 +0.3
SNOW Snow King Moun 34.02 330 eP **P** **18 06 32.1 +0.2**
comp=Z,79nm,1.0s,mb5.6
SNOW Snow King Moun 34.02 330 epP pP 18 06 42.9 +0.9
LOHW Long Hollow 34.06 330 eP **P** **18 06 31.6 -0.6**
comp=Z,89nm,1.6s,mb5.4
LOHW Long Hollow 34.06 330 epP pP 18 06 42.4 +0.1
TPAW Teton Pass 34.13 330 eP **P** **18 06 34.4 +1.5**
comp=Z,72nm,1.2s,mb5.5
Q10A Clear Creek Ra 34.13 318 ⇑P PcP 18 09 17.8 +8.2
baz=35
RRI2 Red Ridge 34.21 329 eP **P** **18 06 33.2 -0.4**
comp=Z,126nm,1.6s,mb5.6
RRI2 Red Ridge 34.21 329 epP pP 18 06 44.0 +0.3
MOOW Moose Ponds 34.23 330 P **P** **18 06 33.4 -0.2**
comp=Z,27nm,0.9s,mb5.2
MOOW Moose Ponds 34.23 330 epP pP 18 06 44.0 +0.2
R09A Tonopah 34.24 317 ⇓P PcP 18 09 18.0 +8.0
baz=35
TPH Tonopah 34.25 317 P pP 18 06 47.2 +3.1
L14A Malta 34.28 326 ⇓P **P** **18 06 34.3 +0.1**
baz=35,SNR=11
J16A Bone 34.30 329 ⇓P **P** **18 06 34.4 0.0**
baz=35,SNR=16
M13A Montello 34.34 324 ⇑P **P** **18 06 35.1 +0.3**
baz=35,SNR=9.8
IMW Indian Meadow 34.43 330 eP **P** **18 06 35.2 -0.2**
comp=Z,32nm,1.1s,mb5.2
IMW Indian Meadow 34.43 330 epP pP 18 06 46.0 +0.4
O11A Cowboy Ranch, 34.44 321 ⇓P PcP 18 09 17.0 +6.4
baz=35
N12A Clover Valley, 34.52 322 ⇓P **P** **18 06 36.3 0.0**
baz=35,SNR=8.9
ELK Elko 34.57 322 P pP 18 06 48.3 +1.4
comp=Z,17nm,0.9s,baz=130,slow=5.9,SNR=18
ELK PcP PcP 18 09 15.8 +4.9
comp=Z,11nm,1.0s,baz=95,slow=4.3,SNR=3.1
ELK Elko 34.57 322 eP **P** **18 06 38.7 +2.0**
ELK PcP PcP 18 09 15.8 +4.9
ELK Elko 34.57 322 epP pP 18 06 48.2 +1.3
S08C White Mtn Res 34.58 315 ⇑P **P** **18 06 36.5 -0.3**
baz=36,SNR=15
RLMT Red Lodge 34.60 333 P **P** **18 06 34.2 -2.7**
comp=Z,64nm,1.2s,mb5.4
RLMT Red Lodge 34.60 333 epP pP 18 06 46.5 -0.6
LAO LASA Array 34.66 338 P pP 18 06 44.7 -2.8
comp=Z,42nm,1.2s
LKWY Lake 34.68 331 P **P** **18 06 32.6 -5.0**
LKWY pmax pmax
comp=Z,31nm,1.1s,mb5.2
LKWY Lake 34.68 331 P **P** **18 06 32.6 -5.0**
comp=Z,31nm,1.1s,mb5.2
HELL Mitchell Peak 34.76 313 ⇓P **P** **18 06 38.8 +0.4**
baz=36,SNR=16
HELL Mitchell Peak 34.76 313 ⇑P PcP 18 09 17.1 +5.6
baz=36
MTUM Tungsten Hills 34.77 315 P **P** **18 06 41.2 +2.7**
YFT Old Faithful 34.80 331 P **P** **18 06 38.1 -0.5**
YFT Old Faithful 34.80 331 epP pP 18 06 47.8 -1.0
J15A Blackfoot 34.81 328 ⇓P **P** **18 06 38.8 +0.1**
baz=36,SNR=9.2
J15A Blackfoot 34.81 328 ⇑P PcP 18 09 17.7 +6.2
baz=36
M12A Wells 34.81 323 ⇓P **P** **18 06 38.7 -0.1**
baz=36,SNR=6.6
M12A Wells 34.81 323 ⇑P PcP 18 09 17.8 +6.2
baz=36
YNR Norris Junctio 34.92 331 P **P** **18 06 46.8 +7.1**
R08A Mina 34.98 316 ⇑P PcP 18 09 19.5 +7.3

baz=36
YMR **Madison River** 35.02 331 P P 18 06 44.8 +4.3
comp=Z,62nm,1.1s,mb5.5
O10A **Cortez Mining,** 35.06 320 ⇑P PcP 18 09 20.7 +8.4
baz=36
NVAR **Mina Array Bea** 35.16 316 P pP 18 06 53.6 +1.6
comp=Z,5.1nm,0.4s,baz=121,slow=7.1,SNR=3.8
NVAR PcP PcP 18 09 18.6 +6.0
comp=Z,13nm,0.9s,baz=135,slow=3.8,SNR=9.4
H16A **Russell Place,** 35.18 331 ⇑sP pP 18 06 55.7 +3.6
baz=36
KCC **Kaiser Creek** 35.28 314 ⇑P P 18 06 43.0 +0.2
baz=36
ULM **Lac du Bonnet** 35.29 351 P P 18 06 51.4 +8.7
comp=Z,4.9nm,0.7s,mb4.6,baz=169,slow=8.9,SNR=7.4
ULM PcP PcP 18 09 16.1 +3.3
comp=Z,13nm,0.9s,baz=164,slow=3.1,SNR=4.7
GCMT **Greycliff** 35.30 333 *e*P P 18 06 41.7 -1.2
GCMT **Greycliff** 35.30 333 *ep*P P 18 06 52.2 +9.3
J14A **Carey** 35.32 327 ⇑P PcP 18 09 19.5 +6.5
baz=36
M11A **Holland Ranch,** 35.33 323 ⇓P PcP 18 09 19.1 +6.0
baz=36
QLMT **Earthquake Lak** 35.36 331 P P 18 06 40.8 -2.6
T06C **Milleton Lake** 35.40 313 ⇑P P 18 06 43.9 0.0
baz=36,SNR=6.1
T06C **Milleton Lake** 35.40 313 ⇓P PcP 18 09 19.0 +5.7
baz=36
R07C **Lee Vining** 35.48 315 ⇑P PcP 18 09 20.5 +6.9
baz=36
DGMT **Dagmar** 35.52 341 P P 18 06 42.7 -2.1
comp=Z,22nm,0.7s,mb5.2
BMN **Battle Mountai** 35.58 320 P P 18 06 46.6 +1.2
BMN pmax pmax
comp=Z,134nm,1.7s,mb5.6
BMN **Battle Mountai** 35.58 320 P P 18 06 46.6 +1.2
comp=Z,134nm,1.7s,mb5.6
K12A **Draper Farm, C** 35.60 325 ⇑P PcP 18 09 19.8 +5.9
baz=36
I14A **Mackay** 35.70 328 ⇓P P 18 06 46.9 +0.5
baz=37,SNR=7.5
L11A **Cat Creek Ranc** 35.77 324 ⇓P PcP 18 09 20.8 +6.5
baz=37
H15A **Lima** 35.79 329 ⇓P P 18 06 47.4 +0.3
baz=37,SNR=9.2
M10A **I.L. Ranch, Tu** 35.83 322 ⇓P PcP 18 09 22.4 +7.8
baz=37
S06C **San Francisco** 35.92 315 ⇑P PcP 18 09 22.3 +7.4
baz=37
HLID **Hailey** 35.95 327 ⇑P P 18 06 48.6 +0.1
baz=37,SNR=5.1
HLID **Hailey** 35.95 327 *e*P P 18 06 49.3 +0.7
comp=Z,67nm,1.9s,mb5.2
HLID **Hailey** 35.95 327 *ep*P pP 18 06 58.6 -0.2
HLID **Hailey** 35.95 327 ⇓P PcP 18 09 21.4 +6.5
baz=37
R06C **Coleville** 35.97 316 ⇑P P 18 06 48.0 -0.8
baz=37,SNR=9.9
R06C **Coleville** 35.97 316 ⇓P PcP 18 09 24.3 +9.3
baz=37
S05C **Merced** 35.99 313 ⇑P PcP 18 09 23.5 +8.3
baz=37
N09A **Rock Creek Ran** 36.02 320 ⇓P P 18 06 49.2 +0.1
baz=37,SNR=17
I13A **Wildhorse Cree** 36.04 327 ⇑P P 18 06 49.6 +0.3
baz=37,SNR=7.5
I13A **Wildhorse Cree** 36.04 327 ⇓P PcP 18 09 22.1 +7.0
baz=37
MCMT **McKenzie Canyo** 36.04 329 *e*P P 18 06 50.3 +1.0
MCMT **McKenzie Canyo** 36.04 329 *ep*P pP 18 07 00.4 +1.0
BOZ **Bozeman (W)** 36.07 331 *e**PP pP 18 06 58.7 -1.0
BOZ pmax pmax
comp=Z,23nm,1.0s,mb5.1
BOZ **Bozeman (W)** 36.07 331 ⇑P P 18 06 48.9 -0.6
baz=37
BOZ **Bozeman (W)** 36.07 331 *e*P P 18 06 48.9 -0.6
comp=Z,22nm,1.0s,mb5.0
BOZ **Bozeman (W)** 36.07 331 *ep*P pP 18 06 58.7 -0.9
BOZ **Bozeman (W)** 36.07 331 *e*P P 18 06 48.9 -0.6
O08A **Rochester Mine** 36.08 319 ⇓P PcP 18 09 21.6 +6.3
baz=37
J12A **Stokes Ranch,** 36.11 326 ⇑P P 18 06 50.2 +0.3
baz=37,SNR=15
J12A ⇓P 18 09 19.9
baz=37
G15A **Dillon** 36.12 330 ⇓P P 18 06 49.4 -0.6
baz=37,SNR=17
H14A **Leadore** 36.15 329 ⇑P P 18 06 49.9 -0.3
baz=37,SNR=12
M09A **Marrel Ranch,** 36.31 321 ⇓P PcP 18 09 22.3 +6.3
baz=37
DLMT **Dillon** 36.31 330 *e*P P 18 06 51.6 +0.1
comp=Z,71nm,1.3s,mb5.4
DLMT **Dillon** 36.31 330 *ep*P pP 18 07 02.2 +0.5
K11A **Parker Ranch,** 36.32 324 ⇑P P 18 06 51.7 0.0
baz=37,SNR=14
K11A **Parker Ranch,** 36.32 324 ⇑P PcP 18 09 21.9 +5.9
baz=37
N08A **GE Springer Mi** 36.35 320 ⇓P P 18 06 52.0 0.0
baz=37,SNR=11
CMB **Columbia Colle** 36.37 314 P pP 18 07 05.0 +2.7
CMB **Columbia Colle** 36.37 314 ⇑P P 18 06 52.0 -0.2
baz=37,SNR=9.1
O07A **Toulon** 36.47 319 ⇓P PcP 18 09 22.9 +6.4
baz=37
PACP **Pacheco Peak** 36.51 312 ⇓P P 18 06 53.5 +0.1
baz=37,SNR=6.7
PAHR **Pah Rah Range** 36.55 318 P pP 18 07 01.1 -2.8
comp=Z,75nm,1.8s
H13A **Challis** 36.56 328 ⇓P P 18 06 53.5 -0.2
baz=38,SNR=24
F15A **Butte** 36.62 331 ⇑P P 18 06 53.7 -0.5
baz=38,SNR=19
MFID **Camas Ranch** 36.62 325 ⇓P P 18 06 53.8 -0.5
baz=38,SNR=5.9
H12A **Diamond D Ranc** 36.86 327 ⇑P P 18 06 55.7 -0.6
baz=38,SNR=11
M08A **Happy Creek Ra** 36.89 321 ⇑P P 18 06 55.9 -0.7
baz=38,SNR=16
G13A **Cobalt** 36.92 329 ⇓P P 18 06 55.8 -1.0
baz=38,SNR=12
O06A **Flanigan** 37.08 318 ⇑P P 18 06 57.9 -0.4
baz=38,SNR=12
O06A **Flanigan** 37.08 318 ⇑P PcP 18 09 26.6 +8.2
baz=38
E15A **Deer Lodge** 37.12 331 ⇑P P 18 06 57.4 -1.1
baz=38,SNR=14
EGMT **Eagleton** 37.12 336 ⇓P P 18 06 57.5 -1.0
baz=38
EGMT **Eagleton** 37.12 336 *e*P P 18 06 58.1 -0.4
comp=Z,100nm,1.4s,mb5.5
EGMT **Eagleton** 37.12 336 *ep*P pP 18 07 07.8 -0.9
LPAZ **La Paz** 37.13 147 P P 18 06 55.0 -3.8
comp=Z,13nm,0.9s,mb4.7,baz=323,slow=9.3,SNR=34
LPAZ PcP PcP 18 09 18.5 -0.3
comp=Z,7.7nm,1.1s,baz=25,slow=4.9,SNR=3.3
P05C **Yuba Gap, Truc** 37.15 316 ⇓P P 18 06 58.4 -0.4
baz=38,SNR=12
C17A **Wharram Farm,** 37.22 334 ⇓P P 18 06 58.2 -1.0
baz=38,SNR=8.5
K09A **Rome** 37.24 323 ⇓P P 18 06 58.9 -0.7
baz=38,SNR=12
BEKR **Beckwourth** 37.27 317 ⇓P P 18 06 59.4 -0.4
baz=38,SNR=10.0
L08A **Fields** 37.30 322 ⇑P P 18 07 00.0 -0.1
baz=38,SNR=11
L08A **Fields** 37.30 322 ⇑P PcP 18 09 27.6 +8.6
baz=38
M07A **Soldier Meadow** 37.34 320 ⇓P P 18 07 00.3 -0.1
baz=38,SNR=12
N06A **Buffalo Meadow** 37.40 319 ⇑P P 18 07 00.4 -0.6
baz=38
N06A **Buffalo Meadow** 37.40 319 ⇑P PcP 18 09 27.1 +7.8
baz=38
F13A **Darby** 37.46 329 ⇓P P 18 07 00.9 -0.4
baz=38,SNR=7.7
E14A **Clinton** 37.51 331 ⇑P P 18 07 01.2 -0.5
baz=38,SNR=12
D15A **Lincoln** 37.52 332 ⇑P P 18 07 00.8 -1.1
baz=38,SNR=14
H11A **Donnelly** 37.57 327 ⇓P P 18 07 01.7 -0.6
baz=38,SNR=8.1
I10A **Payette** 37.59 325 ⇑P P 18 07 01.8 -0.7
baz=38,SNR=6.4
WVOR **Wild Horse Val** 37.62 322 *e*P P 18 07 03.6 +0.8
WVOR pmax pmax
comp=Z,49nm,1.0s,mb5.2
WVOR **Wild Horse Val** 37.62 322 *e*P P 18 07 03.6 +0.8
comp=Z,50nm,1.0s,mb5.2
J09A **Fry Pan Ranch,** 37.66 324 ⇓P P 18 07 02.5 -0.6
baz=39,SNR=12
O05C **Quincy** 37.69 317 ⇑P P 18 07 03.1 -0.3
baz=39,SNR=7.0
K08A **Mann Creek Ran** 37.71 322 ⇓P P 18 07 03.3 -0.2
baz=39
CHMT **Chamberlain Mo** 37.76 331 P pP 18 07 13.2 -0.9
C16A **Fuhringer Ranc** 37.76 334 ⇓P P 18 07 03.2 -0.7
baz=39
L07A **Adell** 37.80 321 ⇑P P 18 07 03.9 -0.4
baz=39,SNR=23
L07A **Adell** 37.80 321 ⇑P PcP 18 09 27.8 +7.2
baz=39
E13A **Victor** 37.86 330 ⇓P P 18 07 04.2 -0.5
baz=39,SNR=14
ORV **Oroville** 37.87 316 ⇑P P 18 07 05.3 +0.4
baz=39,SNR=8.0
H10A **Noah's Angus R** 37.89 326 ⇓P P 18 07 04.7 -0.3
baz=39,SNR=6.3
F12A **Elk City** 37.90 328 ⇓P P 18 07 04.4 -0.6
baz=39,SNR=6.4
ELFS **Eagle Lake Fie** 37.91 318 ⇑P P 18 07 05.4 +0.2
baz=39,SNR=14
D14A **Greenough** 38.00 331 ⇑P P 18 07 06.1 +0.2
baz=39
MSO **Missoula** 38.02 331 *e*P P 18 07 06.1 0.0
comp=Z,35nm,1.4s,mb4.9
MSO **Missoula** 38.02 331 *ep*P pP 18 07 15.8 -0.5
I09A **Lost Marbles R** 38.04 324 ⇑P P 18 07 06.4 +0.1
baz=39,SNR=7.8
M06C **Likely Place G** 38.06 319 ⇓P PcP 18 09 30.3 +9.0
baz=39
J08A **Circle Bar Ran** 38.08 323 ⇑P P 18 07 07.2 +0.5
baz=39,SNR=7.7
C15A **Salmond Ranch,** 38.12 333 ⇓P P 18 07 06.4 -0.4
baz=39
K07A **Rock Creek Ran** 38.14 322 ⇓P P 18 07 07.3 +0.1
baz=39
G11A **Walters Elk Ra** 38.17 327 ⇓P P 18 07 07.2 -0.2
baz=39,SNR=10
G11A **Walters Elk Ra** 38.17 327 ⇓P PcP 18 09 29.1 +7.5
baz=39
MOD **Modoc** 38.33 320 *e*P P 18 07 09.8 +1.0
comp=Z,82nm,1.7s,mb5.2
MOD **Modoc** 38.33 320 *ep*P pP 18 07 19.2 +0.2
H09A **Durkee** 38.44 325 ⇑P P 18 07 09.2 -0.4
baz=39,SNR=6.4
F11A **Grangeville** 38.45 328 ⇑P P 18 07 08.7 -1.0
baz=39,SNR=6.6
D13A **Huson** 38.46 331 ⇑P P 18 07 09.4 -0.4
baz=39,SNR=17
B15A **Bradely Ranch,** 38.51 333 ⇓P P 18 07 09.0 -1.1
baz=39,SNR=13
G10A **Bishop Farm, J** 38.55 327 ⇑P P 18 07 10.3 -0.3
baz=40,SNR=7.8
J07A **Hines** 38.58 323 ⇓P P 18 07 09.9 -1.0
baz=40,SNR=6.5
HOPS **Hopland** 38.67 314 ⇑P PcP 18 09 29.5 +6.2
baz=40
GASB **Alder Springs** 38.74 315 ⇑P P 18 07 12.8 +0.6
baz=40,SNR=14
E11A **Bogner Ranch,** 38.79 328 ⇓P P 18 07 10.6 -2.0
baz=40,SNR=17
E11A **Bogner Ranch,** 38.79 328 ⇑pP pP 18 07 21.7 -1.1
baz=40
K06A **Valley Falls** 38.80 321 ⇑P P 18 07 12.6 -0.1
baz=40,SNR=10
D12A **Red Ives Fores** 38.86 330 ⇑P P 18 07 12.1 -1.0
baz=40
G09A **Cove** 38.90 326 ⇑P P 18 07 13.2 -0.3
baz=40,SNR=7.2
H08A **Prairie City** 38.91 324 ⇓P P 18 07 12.8 -0.8
baz=40,SNR=8.6
C13A **Hot Springs** 38.94 331 ⇓pP pP 18 07 22.9 -1.1
baz=40
J06A **Christmas Vall** 39.00 322 ⇑P P 18 07 13.7 -0.7
baz=40,SNR=11
O02C **Red Bluff** 39.04 316 ⇓sP pP 18 07 28.1 +3.1
baz=40
F10A **Beach Ranch, E** 39.06 327 ⇓P P 18 07 13.6 -1.2
baz=40
WDC **Whiskeytown Da** 39.07 317 P P 18 07 17.3 +2.3
WDC pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
WDC **Whiskeytown Da** 39.07 317 P P 18 07 17.2 +2.2
comp=Z,6.3nm,1.1s,mb4.3
I07A **Izee** 39.11 323 ⇓P P 18 07 14.9 -0.4
baz=40,SNR=14
M03C **McCloud** 39.15 318 ⇓P P 18 07 15.7 0.0
baz=40,SNR=5.4
M04C **Macdoel** 39.23 319 ⇑P P 18 07 16.2 -0.2
baz=40,SNR=7.9
F09A **S2 Ranch, Elgi** 39.24 326 ⇓P P 18 07 16.2 -0.2
baz=40,SNR=7.5
D11A **Klaveano Farm,** 39.33 329 ⇓P P 18 07 14.8 -2.3
baz=40,SNR=7.3
KIPM **Iron Peak** 39.33 315 P P 18 07 21.8 +4.6
KCPM **Cahto Peak** 39.34 315 P pP 18 07 27.5 -0.1
A14A **Double T Ranch** 39.38 333 ⇑P P 18 07 16.6 -0.9
baz=40,SNR=15
B13A **Whitefish** 39.40 332 ⇑P P 18 07 17.1 -0.4
baz=40,SNR=5.3
I06A **Prineville** 39.44 323 ⇑P PcP 18 09 33.7 +8.1
baz=40
H07A **Lands Inn, Kim** 39.45 324 ⇑P PcP 18 09 34.0 +8.4
baz=40
LNOR **Lincton Mounta** 39.55 326 P P 18 07 23.4 +4.5
WALA **Waterton Lakes** 39.66 333 *e*P P 18 07 19.0 -0.8
comp=Z,75nm,1.3s,mb5.3
WALA **Waterton Lakes** 39.66 333 *ep*P pP 18 07 29.1 -0.9
J05A **Fort Rock** 39.67 321 ⇑P P 18 07 19.6 -0.4
baz=41,SNR=10
M02C **Callahan** 39.68 318 ⇓P P 18 07 19.7 -0.4
baz=41,SNR=6.3
O01C **Eel River Cons** 39.72 315 ⇓pP pP 18 07 29.5 -1.2
baz=41,SNR=6.0
BUOR **Burton Butte** 39.75 319 P pP 18 07 31.6 +0.7
YBH **Yreka Blue Hor** 39.76 318 P pP 18 07 30.7 -0.3
comp=Z,4.5nm,0.9s,baz=125,slow=4.9,SNR=12
YBH PcP PcP 18 09 32.7 +6.0
comp=Z,6.5nm,1.2s,baz=165,slow=7.6,SNR=3.4
YBH **Yreka Blue Hor** 39.76 318 P P 18 07 26.7 +5.9
YBH 18 09 32.7
YBH pmax pmax
comp=Z,12nm,1.3s
YBH **Yreka Blue Hor** 39.76 318 P P 18 07 26.7 +5.9
comp=Z,12nm,1.3s,mb4.5
YBH PcP PcP 18 09 32.7 +6.0
F08A **Pendleton** 39.77 326 ⇓P P 18 07 20.5 -0.2
baz=41,SNR=6.3
A13A **Flathead Natio** 39.78 333 ⇓P P 18 07 20.0 -0.8
baz=41
C11A **Tepee Creek (N** 39.84 330 ⇓P P 18 07 21.3 0.0
baz=41,SNR=20
E09A **Wood Farm, Sta** 39.89 327 ⇑pP pP 18 07 31.1 -0.9
baz=41,SNR=6.1
H06A **Lindquist Farm** 39.98 324 ⇓P P 18 07 22.2 -0.3
baz=41,SNR=7.3
JCC **Jacoby Creek** 40.18 316 ⇓P P 18 07 23.8 -0.4
baz=41,SNR=7.8
J04A **Umpqua Nationa** 40.18 321 ⇑sP pP 18 07 37.8 +3.3
baz=41
D09A **Jones Farm, Ri** 40.34 328 ⇓P P 18 07 24.2 -1.3
baz=41,SNR=5.9
D09A **Jones Farm, Ri** 40.34 328 ⇓P PcP 18 09 36.6 +8.2
baz=41
BBOR **Butler Butte** 40.34 320 P pP 18 07 38.1 +2.2
HUMO **Hull Mountain** 40.37 319 P P 18 07 29.5 +3.7
comp=Z,6.9nm,0.9s,mb4.4
H2OWA **Water** 40.49 326 P pP 18 07 39.8 +2.8
HAWA **Hanford** 40.55 326 P P 18 07 29.5 +2.2
comp=Z,19nm,1.1s,mb4.7
NEW **Newport** 40.56 330 *e**PP pP 18 07 35.7 -1.8
NEW pmax pmax
comp=Z,28nm,1.4s
NEW **Newport** 40.56 330 P P 18 07 26.9 -0.4
comp=Z,28nm,1.4s,mb4.7
NEW **Newport** 40.56 330 *ep*P pP 18 07 35.7 -1.8
NEW **Newport** 40.56 330 P P 18 07 26.9 -0.3
RSW **Rattlesnake Hi** 40.58 326 P P 18 07 31.2 +3.7
D08A **Wollman Farm,** 40.65 327 ⇓P P 18 07 27.5 -0.5
baz=42,SNR=6.5
D08A **Wollman Farm,** 40.65 327 ⇓pP pP 18 07 37.2 -1.1
baz=42
I04A **Tendick Farm,** 40.67 321 ⇓P P 18 07 26.8 -1.4
baz=42,SNR=12
I04A **Tendick Farm,** 40.67 321 ⇓pP pP 18 07 37.7 -0.8
baz=42
A11A **Hall Mountain,** 40.69 331 ⇑P P 18 07 27.6 -0.7
baz=42,SNR=14
FRIS **Frissel Point** 40.71 322 P pP 18 07 38.9 0.0
OD2 **Odessa Site #2** 40.76 328 P pP 18 07 38.8 -0.4
K02A **Glendale** 40.79 319 ⇑pP pP 18 07 37.7 -1.9
baz=42,SNR=8.0
K02A ⇓P PcP 18 09 37.7 +7.8
baz=42
E07A **Sunnyside** 40.83 326 ⇑P P 18 07 28.0 -1.5
baz=42,SNR=8.4
E07A **Sunnyside** 40.83 326 ⇑pP pP 18 07 38.6 -1.2
baz=42
G05A **Wamic** 40.84 324 ⇓pP pP 18 07 39.0 -0.9
baz=42,SNR=6.8
F06A **Goldendale** 40.85 325 ⇓pP pP 18 07 39.3 -0.7
baz=42,SNR=6.3
KBO **Bosley Butte** 40.98 318 P P 18 07 30.3 -0.6
H04A **Detroit Lake** 41.03 322 ⇓P P 18 07 30.3 -0.8
baz=42
J02A **Umpqua** 41.15 320 ⇓P P 18 07 30.9 -1.3
baz=42
B09A **Rice** 41.17 329 ⇑P P 18 07 31.0 -1.2
baz=42,SNR=14
B09A **Rice** 41.17 329 ⇑pP pP 18 07 41.5 -1.0
baz=42
VLL **Laurance Lake** 41.18 324 P pP 18 07 43.6 +0.9
C08A **Higginbotham F** 41.19 328 ⇓pP pP 18 07 42.0 -0.8
baz=42,SNR=5.7
I03A **Eugene** 41.29 321 ⇑P P 18 07 32.3 -1.0
baz=42
F05A **White Salmon** 41.30 324 ⇓pP pP 18 07 44.1 +0.5
baz=42
KEBM **Edson Butte** 41.38 319 *e*P P 18 07 33.5 -0.6
KEBM **Edson Butte** 41.38 319 *ep*P pP 18 07 44.7 +0.3
COR **Corvallis** 41.64 322 P pP 18 07 46.1 -0.4
I02A **Mapleton** 41.65 320 ⇑P P 18 07 33.8 -2.5
baz=43,SNR=7.0
I02A ⇓P PcP 18 09 41.2 +8.5
baz=43
I02A **Mapleton** 41.65 320 ⇑pP pP 18 07 45.1 -1.4
baz=43
H03A **Soap Creek Ran** 41.68 322 ⇑P P 18 07 35.0 -1.6
baz=43,SNR=7.4
H03A **Soap Creek Ran** 41.68 322 ⇓P PcP 18 09 41.5 +8.7
baz=43
B08A **Colville Reser** 41.71 329 ⇑pP pP 18 07 45.8 -1.2
baz=43
ETW **Entiat** 41.74 327 P P 18 07 33.8 -3.2
A09A **Danville** 41.75 330 ⇑P P 18 07 35.8 -1.3
baz=43
A09A ⇓P PcP 18 09 37.3 +4.3
baz=43
A09A **Danville** 41.75 330 ⇓pP pP 18 07 46.0 -1.4
baz=43
WPW **White Pass** 41.84 325 P pP 18 07 48.2 +0.2
E05A **Randle** 41.87 325 ⇑P P 18 07 36.6 -1.5
baz=43,SNR=5.7
E05A ⇓P PcP 18 09 39.8 +6.4
baz=43
E05A **Randle** 41.87 325 ⇓pP pP 18 07 47.1 -1.3
baz=43
F04A **Amboy** 41.87 324 ⇓P PcP 18 09 39.1 +5.7
baz=43
LON **Longmire** 42.01 325 *e**PP pP 18 07 48.8 -0.7
LON pmax pmax
comp=Z,18nm,0.8s,mb4.8
LON **Longmire** 42.01 325 *e*P P 18 07 38.0 -1.2
comp=Z,18nm,0.8s,mb4.7
LON **Longmire** 42.01 325 *ep*P pP 18 07 48.8 -0.7
LON **Longmire** 42.01 325 *e*P P 18 07 38.1 -1.1
G03A **Yamhill** 42.02 322 ⇑P P 18 07 38.2 -1.1
baz=43,SNR=5.9
G03A **Yamhill** 42.02 322 ⇑pP pP 18 07 48.8 -0.8
baz=43
A08A **Turner Farm, O** 42.08 329 ⇑P P 18 07 38.7 -1.0
baz=43,SNR=13
A08A **Turner Farm, O** 42.08 329 ⇓pP pP 18 07 49.9 -0.1
baz=43
LVC **Limon Verde** 42.19 153 P P 18 07 36.5 -4.3
comp=Z,38nm,1.1s,mb5.0,baz=323,slow=6.1,SNR=6.2
LVC **Limon Verde** 42.19 153 *ep*P P 18 07 38.2 -2.7
HEBO **Mount Hebo** 42.25 322 P P 18 07 44.6 +3.4
comp=Z,56nm,1.1s,mb5.1
RMW **Rattlesnake Mo** 42.44 326 P pP 18 07 55.4 +2.4
PNT **Penticton** 42.49 329 P pP 18 07 52.6 -0.7
SCHQ **Schefferville** 42.57 18 P P 18 07 47.5 +3.9
comp=Z,30nm,1.1s,mb5.0,baz=216,slow=7.8,SNR=6.6
SCHQ PcP PcP 18 09 39.0 +3.5
comp=Z,19nm,0.9s,baz=221,slow=2.8,SNR=5.5
EDM **Edmonton** 42.65 338 P P 18 07 45.9 +1.6
RPW **Rockport** 42.89 327 P P 18 07 46.5 +0.2
B06A **Marblemount** 42.92 327 ⇑P P 18 07 44.6 -2.0
baz=44,SNR=5.2
B06A **Marblemount** 42.92 327 ⇓pP pP 18 07 59.1 +2.3
baz=44
JCW **Jim Creek** 42.95 327 P P 18 07 48.7 +1.9
GNW **Green Mountain** 43.05 325 P P 18 07 46.5 -1.1
comp=Z,15nm,0.8s,mb4.8
B05A **Bryant** 43.08 327 ⇓P P 18 07 45.9 -2.0
baz=44
B05A **Bryant** 43.08 327 ⇓pP pP 18 07 56.7 -1.4
baz=44
C04A **Brinnon** 43.22 326 ⇓P P 18 07 47.0 -2.0
baz=44,SNR=7.7
C04A ⇑P PcP 18 09 46.4 +8.5
baz=44
C04A **Brinnon** 43.22 326 ⇑pP pP 18 07 58.0 -1.3
baz=44
D03A **Wishkah Elem.** 43.32 324 ⇑P PcP 18 09 45.7 +7.5
baz=44
A05A **Maple Falls** 43.53 328 ⇑P PcP 18 09 46.3 +7.4
baz=44
NLWA **Neilton Lookou** 43.53 325 ⇓pP pP 18 08 01.5 -0.3
baz=44
NLWA ⇓P PcP 18 09 44.4 +5.4
baz=44
NLWA **Neilton Lookou** 43.53 325 *e*P pP 18 08 00.8 -1.0
NLWA *e*PP PP 18 09 41.9 +8.8
B04A **Port Angeles** 43.71 326 ⇑P P 18 07 50.5 -2.4
baz=45,SNR=10
PGC **Sidney** 44.03 326 P P 18 08 02.3 +6.7
comp=Z,68nm,1.1s,mb5.3
LCO **Las Campanas** 47.25 159 P P 18 08 11.8 -9.4
comp=Z,85nm,1.3s,mb5.5
BDFB **Brasilia** 50.11 126 P P 18 08 36.9 -6.5
comp=Z,20nm,1.0s,mb5.1,baz=284,slow=9.2,SNR=14
BDFB PcP PcP 18 10 02.4 -0.3
comp=Z,10nm,0.9s,baz=341,slow=5.4,SNR=4.4
YKA **Yellowknife Ar** 50.59 344 P P 18 08 52.4 +6.0
comp=Z,14nm,0.8s,mb4.9,baz=139,slow=7.8,SNR=19
YKA PcP PcP 18 10 08.7 +5.0
comp=Z,6.6nm,0.8s,baz=143,slow=3.5,SNR=7.5
YKA **Yellowknife Ar** 50.59 344 P P 18 08 52.4 +6.0
YKA PcP PcP 18 10 08.7 +5.0
CPUP **Villa Florida** 51.12 144 P P 18 08 44.6 -6.2
comp=Z,9.8nm,0.9s,mb4.8,baz=309,slow=8.2,SNR=18
CPUP PcP PcP 18 10 06.2 +0.1
comp=Z,13nm,0.9s,baz=324,slow=4.1,SNR=6.7
FCH **Farellones** 51.36 161 *e*P P 18 08 50.4 -2.1
LMEL **Las Melosas** 51.87 161 *e*P P 18 08 53.7 -2.6
DLBC **Dease Lake** 53.00 334 P pP 18 09 13.1 -1.9
DLBC **Dease Lake** 53.00 334 *e*P P 18 09 03.0 -1.4
DLBC *es*P pP 18 09 16.4 +1.5
DLBC **Dease Lake** 53.00 334 *ep*P pP 18 09 13.3 -1.6
SFJD **Kangerlussuaq** 56.98 17 P P 18 09 35.9 +2.9
comp=Z,33nm,1.0s,mb5.3,baz=189,slow=6.9,SNR=6.7
SFJD **Kangerlussuaq** 56.98 17 P 18 09 35.9 +2.9
SFJD pmax pmax
comp=Z,33nm,1.0s,mb5.3
SFJD **Kangerlussuaq** 56.98 17 *i*P P 18 09 37.9 +4.9
comp=Z,42nm,1.0s,mb5.4
SFJD **Kangerlussuaq** 56.98 17 P P 18 09 28.9 -4.1
comp=Z,33nm,1.0s,mb5.3
SFJD **Kangerlussuaq** 56.98 17 P P 18 09 35.9 +2.9
SFJD **Kangerlussuaq** 56.98 17 P P 18 09 28.9 -4.1
TAOE **Nuku Hiva Isla** 57.06 248 *e*LR LR 18 26 42.8
comp=Z,1µm,26.3s
HYT **Haines Junctio** 57.49 334 P pP 18 09 44.5 -2.8
PLCA **Paso Flores** 58.20 164 P P 18 09 39.2 -2.7
comp=Z,41nm,1.0s,mb5.4,baz=342,slow=8.2,SNR=16
PLCA PcP PcP 18 10 33.0 0.0
comp=Z,12nm,1.0s,baz=348,slow=5.0,SNR=4.5
DAWY **Dawson** 59.85 337 P P 18 09 59.7 +6.6
BMRM **Bremner River** 60.67 332 P P 18 09 57.4 -1.3

RC01 **Rabbit Creek A** 63.05 331 *e*P pP 18 10 22.0 -3.5
COLA **College** 63.51 336 *e*P **P** **18 10 19.2 +1.5**
MCK **McKinley** 63.55 334 *e**PP **P** **18 10 24.3 +6.3**
MCK pmax pmax
comp=Z,53nm,1.0s,mb5.5
MCK **McKinley** 63.55 334 P **P** **18 10 14.9 -3.1**
comp=Z,53nm,1.0s,mb5.5
MCK **McKinley** 63.55 334 *e*pP **P** **18 10 24.3 +6.3**
MCK **McKinley** 63.55 334 P **P** **18 10 14.9 -3.1**
KDAK **Kodiak Island** 57.57 327 P pP 18 10 27.3 -1.7
comp=Z,28nm,0.9s,baz=83,slow=4.3,SNR=8.4
SUMG **Summit** 63.81 15 *e*P **P** **18 10 12.6 -7.0**
comp=Z,39nm,1.0s,mb5.4
SUMG **Summit** 63.81 15 *e*pP **P** **18 10 23.5 +3.9**
TRF **Thorofare Moun** 64.03 334 *e*P **P** **18 10 18.1 -3.1**
comp=Z,74nm,0.9s,mb5.7
TRF **Thorofare Moun** 64.03 334 *e*pP pP 18 10 28.4 -3.6
TRF **Thorofare Moun** 64.03 334 *e*sP pP 18 10 31.5 -0.4
KTH **Kantishna Hill** 64.33 334 *e*P **P** **18 10 19.1 -4.0**
comp=Z,43nm,0.9s,mb5.5
KTH **Kantishna Hill** 64.33 334 *e*pP **P** **18 10 30.0 +6.9**
KTH **Kantishna Hill** 64.33 334 *e*sP pP 18 10 33.1 -0.8
BPAW **Bear Paw Mtn.** 64.53 334 *e*P **P** **18 10 20.6 -3.8**
comp=Z,84nm,0.9s,mb5.8
BPAW **Bear Paw Mtn.** 64.53 334 *e*pP **P** **18 10 31.3 +6.9**
BPAW **Bear Paw Mtn.** 64.53 334 *e*sP pP 18 10 34.1 -1.0
PPLA **Purkeypile** 64.69 333 *e*P **P** **18 10 21.7 -3.8**
comp=Z,28nm,0.8s,mb5.3
PPLA **Purkeypile** 64.69 333 *e*pP **P** **18 10 32.4 +6.9**
CHUM **Lake Minchumin** 65.02 334 *e*P **P** **18 10 24.0 -3.6**
comp=Z,33nm,1.0s,mb5.3
COLD **Coldfoot** 65.24 338 *e*P **P** **18 10 26.0 -3.0**
comp=Z,31nm,1.0s,mb5.5
COLD **Coldfoot** 65.24 338 *e*pP pP 18 10 36.1 -3.7
SVW2 **Sparrevohn** 65.80 330 P **P** **18 10 39.1 +6.4**
IMA2 **Indian Mountai** 66.20 336 P **P** **18 10 41.9 +6.6**
BORG **Borgarnes** 66.21 25 P **P** **18 10 37.2 +1.9**
comp=Z,61nm,1.0s,mb5.6,baz=174,slow=2.4,SNR=3.3
TTA **Tatalina** 66.39 332 *e**PP **P** **18 10 43.2 +6.7**
TTA pmax pmax
comp=Z,89nm,1.1s,mb5.7
TTA **Tatalina** 66.39 332 P **P** **18 10 32.5 -4.1**
comp=Z,88nm,1.1s,mb5.7
TTA **Tatalina** 66.39 332 *e*pP **P** **18 10 43.2 +6.7**
TTA **Tatalina** 66.39 332 P **P** **18 10 32.5 -4.0**
ALE **Alert** 67.86 4 P **P** **18 10 50.0 +4.4**
comp=Z,283nm,1.1s,mb6.2,SNR=13
PPT **Papeete** 69.04 244 *e*S S 18 20 07.2 +10
comp=Z,116nm,27.5s
PPT **Papeete** 69.04 244 *e*LR LR 18 32 14.4
comp=Z,419nm,27.5s,baz=68
UNV **Unalaska Valle** 70.92 322 *e*P **P** **18 11 01.3 -3.6**
comp=Z,65nm,1.1s,mb5.5
UNV **Unalaska Valle** 70.92 322 *e*pP pP 18 11 12.1 -3.7
EMAZ **Mazaricos** 71.63 49 P **P** **18 11 08.2 -1.3**
comp=Z,28nm,0.8s,mb5.2
STS **Santiago** 71.95 49 P **P** **18 11 11.2 -0.1**
JMIC **Jan Mayen** 72.05 20 P **P** **18 11 15.9 +4.5**
comp=Z,54nm,0.4s,mb5.8,baz=201,slow=10,SNR=3.4
PFVI **Vila Bisbo** 72.27 55 *e*P **P** **18 11 14.0 +0.6**
comp=Z,98nm,1.1s,mb5.7
PTEO **Sao Teotonio** 72.31 55 *e*P **P** **18 11 13.3 -0.3**
comp=Z,96nm,1.2s,mb5.6
NIKO **Nikolski** 72.35 321 P **P** **18 11 17.0 +3.5**
comp=Z,52nm,0.9s,mb5.5
MORF **Marmelete** 72.39 55 *e*P **P** **18 11 14.4 +0.3**
comp=Z,92nm,1.2s,mb5.6
ELOB **Lobios** 72.39 50 P **P** **18 11 12.4 -1.6**
comp=Z,5.4nm,0.6s,mb4.7
PCAB **Cabril** 72.43 51 *e*P **P** **18 11 17.0 +2.7**
comp=Z,30nm,1.3s,mb5.1
PVIS **Viseu** 72.63 52 *e*P **P** **18 11 15.5 +0.1**
comp=Z,62nm,1.0s,mb5.5
PVRL **Vila Real** 72.71 51 *e*P **P** **18 11 18.9 +3.0**
comp=Z,32nm,1.3s,mb5.1
EVO **Evora** 72.76 54 *e*P **P** **18 11 15.4 -0.9**
comp=Z,88nm,1.0s,mb5.4
EVO *e*MLR MLR
comp=Z,223nm,22.8s,MS4.1
EVO **Evora** 72.76 54 *e*P **P** **18 11 16.2 -0.1**
comp=Z,39nm,1.0s,mb5.3
MTE **Manteigas** 72.92 52 *e*P **P** **18 11 17.3 +0.1**
comp=Z,89nm,1.1s,mb5.6
MTE **Manteigas** 72.92 52 *e*pP **P** **18 11 17.3 +0.1**
MTE **Manteigas** 72.92 52 *e*sP **P** **18 11 20.1 +2.9**
PBEJ **Beja** 72.93 54 *e*P **P** **18 11 17.7 +0.4**
comp=Z,27nm,1.0s,mb5.1
EPON **Pontenova** 72.93 49 P **P** **18 11 16.9 -0.3**
comp=Z,20nm,0.9s,mb5.0
PBDV **Barranco-do-Ve** 72.97 55 *e*P **P** **18 11 18.0 +0.5**
comp=Z,67nm,1.1s,mb5.5
ERUA **La Rua** 73.02 50 P **P** **18 11 17.6 -0.2**
PVAQ **Vaqueiros** 73.12 55 *e*P **P** **18 11 18.7 +0.3**
comp=Z,56nm,1.3s,mb5.3
PMRV **Marv??o** 73.14 53 *e*P **P** **18 11 18.2 -0.3**
comp=Z,66nm,1.0s,mb5.5
MVO **Moncorvo** 73.23 51 *e*P **P** **18 11 19.3 +0.3**
comp=Z,51nm,1.0s,mb5.4
EGRO **El Granado** 73.29 55 P **P** **18 11 19.1 -0.3**
ECAL **Calabor** 73.37 50 P **P** **18 11 20.1 +0.3**
EBAD **Badajoz** 73.51 54 P **P** **18 11 20.2 -0.6**
PBAR **Barrancos** 73.56 54 *e*P **P** **18 11 21.0 0.0**
comp=Z,50nm,1.1s,mb5.4
EMIN **Mina Concepcio** 73.90 55 P **P** **18 11 22.6 -0.5**
EARI **Arriondas** 74.34 49 P **P** **18 11 26.3 +0.8**
ESPR **Espera** 74.66 55 P **P** **18 11 27.2 -0.2**
EJIF **Jimena Fronter** 75.03 56 P **P** **18 11 31.0 +1.4**
ROSF **Rostrenen** 75.11 43 *e*P **P** **18 11 29.2 -0.6**
comp=Z,78nm,1.1s,mb5.2
QUIF **Quistinic** 75.23 44 *e*P **P** **18 11 30.0 -0.5**
comp=Z,105nm,1.0s,mb5.4
GUD **Guadarrama** 75.46 51 P **P** **18 11 32.4 +0.4**
EADA **Adamuz** 75.48 54 P **P** **18 11 31.9 -0.3**
EMIJ **Mijas** 75.57 56 P **P** **18 11 32.7 0.0**
SGMF **Saint Gilles** 75.60 43 *e*P **P** **18 11 31.7 -0.9**
comp=Z,58nm,1.2s,mb5.1
ELAN **Lanestosa** 75.64 49 P **P** **18 11 33.4 +0.4**
ESDC **Sonseca Array** 75.74 52 P **P** **18 11 33.8 +0.2**
comp=Z,26nm,0.9s,mb5.2,baz=288,slow=5.7,SNR=45
ESDC LR LR 18 40 49.1
comp=Z,278nm,18.1s,MS4.6,baz=285,slow=33
ESLA **Sonseca Array** 75.74 52 *e*pP **P** **18 11 34.0 +0.4**
ELOJ **Sierra Loja** 75.97 55 P **P** **18 11 35.6 +0.6**
EBAN **Banos Encina** 76.10 54 P **P** **18 11 36.2 +0.5**
ERON **Agron** 76.26 55 P **P** **18 11 37.4 +0.8**
ECOG **Cogollos-Vega** 76.41 55 P **P** **18 11 38.2 +0.7**
GRR **Gorron** 76.70 43 *e*P **P** **18 11 38.3 -0.6**
comp=Z,88nm,1.0s,mb5.3
EQES **Quesada** 76.72 54 P **P** **18 11 39.1 -0.1**
FLN **La Foliniere** 76.90 43 *e*P **P** **18 11 39.5 -0.5**
comp=Z,78nm,1.1s,mb5.3
FLN *e*MLR MLR
comp=Z,414nm,19.0s,MS4.5
EBER **Berja** 77.01 55 P **P** **18 11 40.7 -0.1**
ETOR **Torete** 77.01 51 P **P** **18 11 41.3 +0.5**
EVIA **Vianos** 77.02 53 P **P** **18 11 39.8 -1.1**
EVIA pmax pmax
comp=Z,21nm,1.3s,mb4.9
EVIA **Vianos** 77.02 53 P **P** **18 11 39.8 -1.2**
comp=Z,21nm,1.3s,mb4.9
EALK **Alkurruntz** 77.03 48 P **P** **18 11 39.1 -1.8**
comp=Z,12nm,0.9s,mb4.8
EHUE **Huescar** 77.09 54 P **P** **18 11 42.0 +0.7**
LDF **La Druitiere** 77.16 43 *e*P **P** **18 11 40.9 -0.6**
comp=Z,80nm,1.1s,mb5.3
SJPF **Ste Jean** 77.25 49 *e*P **P** **18 11 42.0 -0.1**
comp=Z,105nm,1.1s,mb5.4
MFF **Saint Martin d** 77.45 45 *e*P **P** **18 11 42.5 -0.7**
comp=Z,58nm,1.1s,mb5.1
ETOB **Tobarra** 77.76 53 P **P** **18 11 45.8 +0.8**
ETSF **Etsaut** 77.77 49 *e*P **P** **18 11 44.9 -0.1**
comp=Z,46nm,1.1s,mb5.0
REYF **Montagne du Re** 77.86 48 *e*P **P** **18 11 45.8 +0.3**
ECHE **Chera** 78.04 52 P **P** **18 11 47.7 +1.1**
ESAC **San Caprasio** 78.04 50 P **P** **18 11 47.0 +0.4**
EMUR **La Murta** 78.14 54 P **P** **18 11 46.4 -0.8**
comp=Z,12nm,1.1s,mb4.7
EMOS **Mosqueruela** 78.28 51 P **P** **18 11 47.9 0.0**
EBIE **Bielsa** 78.32 49 P **P** **18 11 49.0 +1.0**
LFF **La Frestale** 78.34 46 *e*P **P** **18 11 47.6 -0.5**
comp=Z,84nm,1.1s,mb5.3
EPF **Esparros** 78.40 48 *e*P **P** **18 11 48.1 -0.4**
comp=Z,71nm,1.1s,mb5.2
ERTA **Horta de San J** 78.77 51 P **P** **18 11 49.3 -1.2**
comp=Z,13nm,1.2s,mb4.7

RJF **Les Rejaudoux** 78.82 46 *e*P **P** **18 11 50.0 -0.8**
comp=Z,72nm,1.2s,mb5.2
RJF *e*MLR MLR
comp=Z,262nm,21.2s,MS4.2
MLS **Moulis** 78.95 48 *e*P **P** **18 11 50.5 -1.1**
SALF **Salau** 79.06 49 *e*P **P** **18 11 52.3 +0.2**
TCF **Toulx Ste Croi** 79.11 45 *e*P **P** **18 11 51.3 -1.0**
comp=Z,40nm,1.1s,mb5.0
HYF **Humbligny** 79.21 44 *e*P **P** **18 11 52.2 -0.7**
EPOB **Poblet** 79.25 50 P **P** **18 11 53.2 0.0**
CAF **Calviac** 79.27 46 *e*P **P** **18 11 52.5 -0.7**
comp=Z,55nm,1.1s,mb5.1
EMIR **Miracle** 79.47 49 P **P** **18 11 54.7 +0.3**
BGF **Bois d'Agland** 79.49 45 *e*P **P** **18 11 53.4 -1.0**
comp=Z,40nm,1.0s,mb5.0
BAIF **Baives** 79.69 41 *e*P **P** **18 11 54.8 -0.6**
comp=Z,42nm,1.3s,mb4.9
MTLF **Montolieu** 79.69 48 *e*P **P** **18 11 54.8 -0.7**
comp=Z,53nm,1.1s,mb5.1
LOR *e*MLR MLR
comp=Z,215nm,21.2s,MS4.2
AVF **Avril sur Loir** 79.79 44 *e*P **P** **18 11 54.7 -1.3**
comp=Z,23nm,1.1s,mb4.7
SSF **Saint Saulge** 79.83 44 *e*P **P** **18 11 55.0 -1.3**
comp=Z,22nm,1.0s,mb4.7
LRDF **Laroque-de-Fa** 80.00 48 *e*P **P** **18 11 57.1 -0.1**
LOR **Lormes** 80.03 44 *e*P **P** **18 11 56.3 -1.0**
comp=Z,54nm,1.1s,mb5.1
LOR *e*MLR MLR
comp=Z,215nm,21.2s,MS4.2
GIVF **Givet** 80.06 41 *e*P **P** **18 11 57.0 -0.4**
comp=Z,40nm,1.0s,mb5.0
SMF **Signal de Mont** 80.14 44 *e*P **P** **18 11 56.5 -1.4**
comp=Z,24nm,1.0s,mb4.8
EJON **La Jonquera** 80.35 49 P **P** **18 11 59.2 +0.1**
MEZF **Maizieres J'vi** 80.55 42 *e*P **P** **18 11 59.5 -0.6**
comp=Z,50nm,1.0s,mb5.1
HGN **Heimansgroeve** 80.61 40 *e*P **P** **18 12 02.9 +2.5**
comp=Z,27nm,1.5s,mb5.0
LASF **Ste Croix** 80.70 47 *e*P **P** **18 12 00.8 -0.2**
comp=Z,41nm,1.1s,mb5.0
WTSB **Winterswijk** 80.87 39 *e*P **P** **18 12 04.6 +2.9**
comp=Z,59nm,1.3s,mb5.4
SSB **Saint Sauveur** 80.91 46 *e**PP **P** **18 12 02.4 +0.3**
VIVF **Saint-Julien-l** 81.10 46 *e*P **P** **18 12 03.0 -0.1**
comp=Z,79nm,1.1s,mb5.3
MUD **Monsted U'grnd** 81.15 34 *e*P **P** **18 12 08.2 +5.1**
MUD pmax pmax
comp=Z,83nm,1.3s,mb5.5
MUD **Monsted U'grnd** 81.15 34 *i* P **P** **18 12 08.2 +5.1**
comp=Z,83nm,1.3s,mb5.5
THEF **They Montfort** 81.22 42 *e*P **P** **18 12 03.7 0.0**
BUG **Bochum--Univer** 81.28 39 *e*P **P** **18 12 04.3 +0.4**
IBBN **Ibbenburen** 81.36 38 *e*P **P** **18 12 05.0 +0.7**
comp=Z,48nm,1.1s,mb5.3
TIC **Toumodi** 81.48 85 *e*PKP1 **P** **18 12 02.5 -3.2**
comp=Z,106nm,1.0s,mb5.7
HAU **Haudompre** 81.51 43 *e*P **P** **18 12 04.3 -0.9**
comp=Z,57nm,1.1s,mb5.1
HAU *e*MLR MLR
comp=Z,287nm,17.0s,MS4.4
BILL **Bilibino** 81.55 339 ||*e*P **P** **18 12 10.9 +5.9**
BILL pmax pmax
comp=Z,80nm,1.2s,mb5.5
BILL **Bilibino** 81.55 339 *e*P **P** **18 12 01.9 -3.1**
RUP **Ruppelstein** 81.56 41 *e*P **P** **18 12 06.1 +0.6**
LIC **Lamto** 81.58 86 *e*P **P** **18 12 02.5 -3.7**
comp=Z,114nm,1.2s,mb5.4
LIC *e*MLR MLR
comp=Z,320nm,22.0s,MS4.3
LIC **Lamto** 81.58 86 *e*PKP1 **P** **18 12 03.0 -3.2**
comp=Z,125nm,1.2s,mb5.7
LIC **Lamto** 81.58 86 *e*P **P** **18 12 02.5 -3.7**
comp=Z,57nm,1.2s,mb5.4
LIC LR LR
comp=Z,160nm,22.0s,MS4.3
DBIC **Dimbokro** 81.63 85 P **P** **18 12 03.5 -3.0**
comp=Z,17nm,1.0s,mb4.9,baz=264,slow=3.8,SNR=12
CABF **La Chapelle** 81.66 44 *e*P **P** **18 12 05.5 -0.5**
comp=Z,59nm,1.3s,mb5.0
KIC **Kosan Boka** 81.82 86 *e*PKP1 **P** **18 12 03.7 -3.8**
comp=Z,115nm,1.0s,mb5.8
ABH **Alteburg** 81.83 41 *e*P **P** **18 12 07.3 +0.5**
HINF **Hinteralfeld** 81.88 43 *e*P **P** **18 12 06.2 -1.0**
comp=Z,51nm,1.4s,mb5.0
ORIF **Oris-en-Rattie** 81.92 46 *e*P **P** **18 12 07.3 -0.1**
comp=Z,17nm,1.0s,mb4.6
ORIF *e*MLR MLR
comp=Z,191nm,21.5s,MS4.1
SMRF **Simiane la Rot** 81.93 47 *e*P **P** **18 12 07.5 0.0**
comp=Z,27nm,1.1s,mb4.8
LOMF **Lomont** 81.98 43 *e*P **P** **18 12 08.9 +1.2**
ECH **Echery** 81.98 42 *e*P **P** **18 12 08.2 +0.5**
ECH **Echery** 81.98 42 P **P** **18 12 07.2 -0.6**
CDF **Champ du Feu** 82.01 42 *e*P **P** **18 12 07.3 -0.6**
comp=Z,46nm,1.2s,mb5.0
MOF **Molkenrain** 82.06 43 *e*P **P** **18 12 08.8 +0.7**
LANF **Langenberg** 82.21 41 *e*P **P** **18 12 09.8 +0.9**
LPL **La Plagne** 82.36 45 *e*P **P** **18 12 09.9 +0.2**
comp=Z,25nm,1.1s,mb4.8
LPG **La Plagne** 82.38 45 *e*P **P** **18 12 10.1 +0.3**
comp=Z,54nm,1.3s,mb5.0
BBS **Basel-Blauen** 82.40 43 *e*P **P** **18 12 09.7 -0.2**
BNI **Bardonecchia** 82.44 45 P **P** **18 12 07.4 -2.8**
BNI pmax pmax
comp=Z,15nm,1.1s,mb4.8
BNI **Bardonecchia** 82.44 45 P **P** **18 12 07.3 -2.8**
comp=Z,15nm,1.1s,mb4.8
BSEG **Bad Segeberg** 82.44 36 *e*P **P** **18 12 11.2 +1.2**
BSEG pmax pmax
comp=Z,49nm,1.1s,mb5.3
BSEG **Bad Segeberg** 82.44 36 *e*P **P** **18 12 11.2 +1.2**
comp=Z,49nm,1.1s,mb5.3
MBDF **Montbardon** 82.58 46 *e*P **P** **18 12 10.6 -0.3**
FELD **Feldberg im Sc** 82.62 42 *e*P **P** **18 12 11.2 +0.2**
TOD **Tromm** 82.69 41 *e*P **P** **18 12 11.3 0.0**
NRDL **Niedersach Rie** 82.71 38 *e*P **P** **18 12 12.6 +1.2**
comp=Z,33nm,1.1s,mb5.3
BFO **Black Forest** 82.71 42 *e*P **P** **18 12 11.4 -0.1**
BFO pmax pmax
comp=Z,21nm,1.3s,mb5.0
BFO **Black Forest** 82.71 42 *e*P **P** **18 12 11.4 -0.1**
comp=Z,21nm,1.3s,mb5.0
LMR **La Mourre** 82.74 47 *e*P **P** **18 12 11.0 -0.8**
comp=Z,40nm,1.4s,mb5.0
FRF **La Foret Royal** 82.78 47 *e*P **P** **18 12 11.3 -0.7**
comp=Z,64nm,1.5s,mb5.1
CALN **Calern** 82.91 47 *e*P **P** **18 12 12.6 0.0**
CLZ **Clausthal** 83.05 38 *e*P **P** **18 12 14.3 +1.1**
CLZ pmax pmax
comp=Z,42nm,1.0s,mb5.4
CLZ **Clausthal** 83.05 38 *e*P **P** **18 12 14.3 +1.1**
comp=Z,42nm,1.0s,mb5.4
MVIF **Mont Vial** 83.05 46 *e*P **P** **18 12 14.3 +0.9**
SPAK **Spaichingen-Ko** 83.07 42 *e*P **P** **18 12 13.2 -0.2**
TOUF **Mont Tournerai** 83.09 46 *e*P **P** **18 12 14.5 +0.9**
UBBA **Unterbreizbach** 83.10 39 *e*P **P** **18 12 14.0 +0.5**
comp=Z,36nm,1.9s,mb5.1
STU **Stuttgart** 83.15 41 P **P** **18 12 13.9 +0.1**
STU pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
STU **Stuttgart** 83.15 41 *e*P **P** **18 12 14.0 +0.2**
comp=Z,22nm,1.1s,mb5.1
STU **Stuttgart** 83.15 41 P **P** **18 12 13.9 +0.1**
comp=Z,8.6nm,0.7s,mb4.9
LUCF **Luceram** 83.19 46 *e*P **P** **18 12 14.3 +0.2**
REVF **Revere** 83.24 47 *e*P **P** **18 12 14.1 -0.3**
SBF **Sospel** 83.26 46 *e*P **P** **18 12 13.8 -0.6**
comp=Z,57nm,1.1s,mb5.2
SAOF **Saorge** 83.31 46 *e*P **P** **18 12 14.2 -0.5**
ARCES **ARCESS Array B** 83.51 19 P **P** **18 12 19.2 +4.0**
comp=Z,32nm,1.0s,mb5.4,baz=288,slow=4.8,SNR=21
ARCES **ARCESS Array B** 83.51 19 P **P** **18 12 19.2 +4.0**
ARE0 **ARCESS Array S** 83.51 19 *e*P **P** **18 12 11.3 -3.9**
ARE0 **ARCESS Array S** 83.51 19 *e*pP **P** **18 12 20.8 +5.6**
VAI **Varese** 83.65 44 P **P** **18 12 15.6 -0.8**
TUE **Stuetta** 83.87 44 P **P** **18 12 18.8 +1.3**
DAVA **Damuels** 84.00 43 ||*i*P **P** **18 12 19.5 +1.3**
comp=Z,23nm,1.1s,mb5.2
MOX **Moxa** 84.14 39 *e*P **P** **18 12 19.4 +0.6**
comp=Z,9.0nm,0.6s,mb5.1
MOX **Moxa** 84.14 39 *e*P **P** **18 12 19.4 +0.6**
MOX pmax pmax
comp=Z,9.0nm,0.6s,mb5.1
MOX **Moxa** 84.14 39 *e*P **P** **18 12 19.6 +0.8**
comp=Z,15nm,1.1s,mb5.0
GRA1 **Grafenberg Arr** 84.17 40 *e*P **P** **18 12 19.7 +0.7**
comp=Z,29nm,1.2s,mb5.3

GRA1 *e* 18 12 22.9
GRA1 LR LR
comp=Z,300nm,20.5s,MS4.7
GRF **Grafenberg Arr** 84.17 40 *e*P **P** **18 12 19.7 +0.7**
GRF pmax pmax
comp=Z,29nm,1.2s,mb5.3
GRF MLR MLR
comp=Z,300nm,20.5s,MS4.7
GRF **Grafenberg Arr** 84.17 40 *e*P **P** **18 12 19.7 +0.7**
comp=Z,29nm,1.2s,mb5.3
GRF *e* 18 12 22.9
GRF *e*L 18 46 11.6
comp=Z,269nm,20.5s
RETA **Reutte** 84.52 42 *i* P **P** **18 12 21.7 +0.9**
comp=Z,43nm,1.3s,mb5.4,SNR=6.0
FETA **Feichten** 84.63 43 ||*i*P **P** **18 12 22.3 +0.9**
comp=Z,18nm,1.1s,mb5.1,SNR=5.8
MANZ **Manzenberg** 84.63 40 *e*P **P** **18 12 22.3 +1.0**
comp=Z,15nm,1.1s,mb5.0
FUR **Furstenfeldbru** 84.65 42 *e*P **P** **18 12 22.1 +0.6**
FUR pmax pmax
comp=Z,24nm,1.2s,mb5.2
FUR **Furstenfeldbru** 84.65 42 *e*P **P** **18 12 22.1 +0.6**
comp=Z,24nm,1.2s,mb5.2
PGF **Pioggiola** 84.71 47 *e*P **P** **18 12 21.0 -0.9**
comp=Z,54nm,1.2s,mb5.2
TANN **Tannenbergstha** 84.72 39 *e*P **P** **18 12 22.9 +1.2**
comp=Z,29nm,1.1s,mb5.3
ROTZ **Rotzenmuhle** 84.76 40 *e*P **P** **18 12 23.3 +1.3**
comp=Z,16nm,1.1s,mb5.1
ROTZ *e*pP pP 18 12 25.8 -7.2
NKC **Novy Kostel** 84.77 39 *e*pP **P** **18 12 23.0 +1.0**
CLL **Collm** 84.77 38 *e*P **P** **18 12 22.9 +0.9**
comp=Z,23nm,1.1s,mb5.2
CLL **Collm** 84.77 38 *e*pP **P** **18 12 22.0 0.0**
CLL *i* pPcP PcP 18 12 25.3 -0.1
comp=Z,23nm,1.1s
CLL *e*sP sP 18 12 27.0 -10
CLL **Collm** 84.77 38 *e*P **P** **18 12 22.0 0.0**
CLL *i* 18 12 25.3
CLL LR LR
comp=Z,200nm,19.1s,MS4.5
WET **Wettzell** 85.37 40 *e*P **P** **18 12 26.3 +1.3**
WET pmax pmax
comp=Z,47nm,1.2s,mb5.5
WET **Wettzell** 85.37 40 *e*P **P** **18 12 26.3 +1.3**
comp=Z,47nm,1.2s,mb5.5
BRG **Berggiesshubel** 85.47 38 *e*P **P** **18 12 26.7 +1.2**
comp=Z,21nm,1.2s,mb5.1
BRG **Berggiesshubel** 85.47 38 *e*P **P** **18 12 27.1 +1.6**
comp=Z,21nm,1.2s,mb5.2
CTI **Castel Tesino** 85.53 44 P **P** **18 12 26.2 +0.3**
CTI pmax pmax
comp=Z,14nm,1.0s,mb5.2
CTI **Castel Tesino** 85.53 44 P **P** **18 12 26.2 +0.3**
comp=Z,14nm,1.0s,mb5.2
RJOB **Jochberg** 85.76 42 *e*P **P** **18 12 27.8 +0.8**
comp=Z,28nm,1.1s,mb5.4
KHC **Kasperske Hory** 85.81 40 *e*pP **P** **18 12 28.6 +1.4**
KHC *ex* x 18 12 31.0
VSL **Villasalto** 85.84 50 P **P** **18 12 28.1 +0.5**
ABTA **Abfaltersbach** 85.88 43 ⇑*i*P **P** **18 12 28.5 +0.9**
comp=Z,32nm,1.1s,mb5.5,SNR=12
PVCC **Panska Ves** 85.96 39 *e*pP **P** **18 12 28.9 +1.0**
GEC2 **GERESS Array S** 85.98 40 *e*P **P** **18 12 29.1 +1.0**
comp=Z,40nm,1.2s,mb5.5
GEC2 **GERESS Array S** 85.98 40 *e*pP **P** **18 12 29.1 +1.0**
GERES **GERESS Array B** 85.98 40 P **P** **18 12 29.0 +1.0**
comp=Z,16nm,1.0s,mb5.2,baz=270,slow=2.7,SNR=40
GERES PKKPbc PKKPbc 18 30 34.3 +5.0
comp=Z,0.4nm,1.0s,baz=79,slow=2.9,SNR=4.0
GERES PKKPbc PKKPbc 18 30 34.3 +5.0
GERES **GERESS Array B** 85.98 40 P **P** **18 12 29.0 +1.0**
GERES **GERESS Array B** 85.98 40 **P** **18 12 29.0 +0.9**
PRU **Pruhonice** 86.12 39 *e*pP **P** **18 12 29.2 +0.5**
PRU AMS AMS 18 49 40.0
comp=Z,400nm,18.7s
TORD **Torodi Ar. Bea** 86.24 77 P **P** **18 12 27.2 -2.8**
comp=Z,6.3nm,0.9s,mb4.8,baz=293,slow=4.7,SNR=23
TORD PP PP 18 15 48.0 -3.1
comp=Z,2.9nm,1.1s,baz=284,slow=5.7,SNR=4.8
TORD PKKPbc PKKPbc 18 30 33.3 +5.6
comp=Z,0.6nm,0.8s,baz=70,slow=3.0,SNR=3.7
TORD PP PP 18 15 48.0 -3.1
TORD PKKPbc PKKPbc 18 30 33.3 +5.6
TORD **Torodi Ar. Bea** 86.24 77 P **P** **18 12 27.2 -2.8**
SFI **Santa Sofia** 86.31 46 P **P** **18 12 30.0 +0.2**
SFI pmax pmax
comp=Z,5.0nm,0.2s,mb5.4
SFI **Santa Sofia** 86.31 46 P **P** **18 12 30.0 +0.2**
comp=Z,5.4nm,0.2s,mb5.4
GMNA **Gemona** 86.50 43 P **P** **18 12 31.1 +0.4**
comp=Z,176nm,1.0s,mb6.2
PTCC **Petco-Chiusa** 86.54 43 P **P** **18 12 31.2 +0.3**
comp=Z,22nm,1.0s,mb5.3
MOA **Molln** 86.66 41 ||*i*P **P** **18 12 32.1 +0.6**
comp=Z,20nm,1.1s,mb5.3
UPC **Upice** 86.83 38 *e*pP **P** **18 12 33.1 +0.9**
KEST **Kesra** 86.89 54 P **P** **18 12 33.0 +0.1**
comp=Z,4.9nm,1.0s,mb4.7,baz=255,slow=2.6,SNR=7.8
VOY **Vojsko** 87.02 43 *e*P **P** **18 12 34.2 +1.0**
VOY *e* 18 12 36.4
DPC **Dobruska-Polom** 87.08 38 *e*pP **P** **18 12 34.8 +1.4**
TAM **Tamanrasset** 87.25 67 P **P** **18 12 34.5 -0.3**
OBKA **Obir** 87.29 42 *i* P **P** **18 12 35.4 +0.8**
comp=Z,38nm,1.2s,mb5.5,SNR=16
SOKA **Soboth** 87.54 42 ⇑*i*P **P** **18 12 36.3 +0.6**
comp=Z,33nm,1.1s,mb5.5
VRAC **Vranov** 87.61 39 ⇑*i*P **P** **18 12 40.4 +4.4**
ARSA **Arzberg** 87.66 42 ⇑*i*P **P** **18 12 37.2 +0.9**
comp=Z,25nm,1.1s,mb5.3
MORC **Moravsky Berou** 88.02 39 ⇑*i*P **P** **18 12 39.7 +1.8**
MORC **Moravsky Berou** 88.02 39 P **P** **18 12 39.1 +1.1**
ZST **Bratislava** 88.32 40 *e*P **P** **18 12 41.1 +1.7**
ZST pmax pmax
comp=Z,40nm,1.1s,mb5.6
ZST **Bratislava** 88.32 40 *e*P **P** **18 12 41.1 +1.7**
OKC **Ostrava-Krasne** 88.36 38 *e*pP **P** **18 12 40.9 +1.4**
MODS **Modra-Piesok** 88.37 40 *e*P **P** **18 12 39.1 -0.5**
VYHS **Vyhne** 89.28 40 *e*P **P** **18 12 45.5 +1.5**
TIXI **Tiksi** 89.61 349 *e*P **P** **18 12 49.2 +4.2**
TIXI pmax pmax
comp=Z,24nm,0.9s,mb5.5
PKSM **Moragy** 90.04 42 ||*i*P **P** **18 12 48.2 +0.7**
PSZ **Piszkesteto** 90.16 40 P **P** **18 12 49.3 +1.2**
KECS **Kecovo** 90.30 39 *e*P **P** **18 12 50.0 +1.3**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
KECS **Kecovo** 90.30 39 *e*P **P** **18 12 50.0 +1.3**
STHS **Stebnicka Huta** 90.37 38 *e*P **P** **18 12 54.1 +5.1**
STHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.7
STHS **Stebnicka Huta** 90.37 38 *e*P **P** **18 12 54.1 +5.1**
CUC **Castrocucco** 90.39 48 P **P** **18 12 48.7 -0.6**
comp=Z,18nm,0.9s,mb5.4
CRVS **Cervenica-Dubn** 90.72 38 *e*P **P** **18 12 54.9 +4.3**
KOLS **Kolonicke sedl** 91.19 38 *e*P **P** **18 12 56.4 +3.6**
UZH **Uzhgorod** 91.33 39 *e*P **P** **18 12 54.0 +0.5**
UZH *e* 18 13 10.2
TIP **Timpagrande** 91.36 49 P **P** **18 12 53.1 -0.7**
comp=Z,12nm,1.1s,mb5.1
PETK **Petropavlovsk-** 91.62 327 P **P** **18 13 01.6 +6.9**
comp=Z,5.2nm,1.0s,mb4.8,baz=74,slow=5.3,SNR=3.8
LVV **L'vov** 91.84 37 *e*P **P** **18 12 56.8 +1.0**
BZS **Buzias** 92.18 41 ⇑*i*P **P** **18 12 58.8 +1.3**
DRGR 92.37 40 ||*i*P **P** **18 12 59.6 +1.3**
GZR **Gura Zlata** 93.01 41 ||*i*P **P** **18 13 03.0 +1.7**
AKASG **Malin Array Be** 94.34 35 P **P** **18 13 08.9 +1.6**
comp=Z,0.5nm,0.5s,mb4.2,baz=313,slow=2.9,SNR=5.8
MLR **Muntele Rosu** 94.97 40 ⇑*i*P **P** **18 13 12.0 +1.7**
OBN **Obninsk** 95.58 28 ||*e*P **P** **18 13 16.3 +3.4**
OBN pmax pmax
comp=Z,35nm,1.7s,mb5.5
AKTO **Aktyubinsk** 107.90 22 PP PP 18 18 37.7 +1.5
comp=Z,0.7nm,0.4s,baz=341,slow=9.1,SNR=3.6
ZALV **Zalesovo Beam** 110.60 5 PP PP 18 18 57.6 +2.2
comp=Z,0.6nm,0.3s,baz=332,slow=8.4,SNR=4.5
CN2 **Changchun** 113.59 334 *e*PKP PKiKP 18 18 19.0 -7.1
SONM **Songino Array** 115.70 349 PKP PKPdf 18 18 34.0 +3.9
comp=Z,2.4nm,0.9s,baz=264,slow=1.3,SNR=9.1
SONM PP PP 18 19 39.3 +7.5
comp=Z,1.9nm,0.8s,baz=354,slow=4.6,SNR=4.8
SONM PKKPbc PKKPbc 18 29 04.2 +0.3
comp=Z,2.1nm,0.9s,baz=201,slow=3.9,SNR=6.5
BOSA **Boshof** 117.41 114 PKP PKPdf 18 18 34.7 +0.8

comp=Z,14nm,0.9s,baz=227,slow=4.1,SNR=12
BOSA Boshof 117.41 114 PKP PKPdf 18 18 34.7 +0.8
MKAR Makanchi Array 117.42 8 PKP PKPdf 18 18 35.3 +1.9
comp=Z,2.5nm,1.0s,baz=22,slow=1.3,SNR=6.6
MKAR PP PP 18 19 48.6 +4.8
comp=Z,2.3nm,1.0s,baz=324,slow=6.0,SNR=3.7
MKAR PKKPbc PKKPbc 18 28 58.5 +0.7
comp=Z,2.2nm,0.9s,baz=141,slow=5.9,SNR=5.9
MKAR Makanchi Array 117.42 8 PKIKP PKPdf 18 18 35.3 +1.9
MKAR 18 19 48.6
KSRS Korea Array 117.47 328 PKP PKPdf 18 18 37.1 +3.4
comp=Z,4.8nm,0.9s,baz=17,slow=1.2,SNR=12
WMQ Urumqi 120.88 4 *e*PKP PKPdf 18 18 33.0 -7.2
WMQ XPKP 18 18 47.0
WMQ *e*PP PP 18 20 09.0 +1.4
WMQ PP PP
comp=Z,254nm,5.4s
WMQ LR LR
comp=N,266nm,20.6s,MS5.0
WMQ LR LR
comp=E,240nm,22.2s,MS5.0
WMQ LR LR
comp=Z,252nm,23.6s,MS4.8
MAW Mawson 124.57 167 PKP PKPdf 18 18 47.1 +0.7
comp=Z,5.9nm,1.1s,baz=348,slow=4.4,SNR=9.4
GTA Gaotai 124.94 353 *e*PKP PKPdf 18 18 39.4 -8.7
GTA XPKP 18 18 53.8
GTA PP PP
comp=Z,86nm,5.7s
GTA LR LR
comp=N,279nm,20.4s,MS5.1
GTA LR LR
comp=E,391nm,21.9s,MS5.1
GTA LR LR
comp=Z,184nm,18.9s,MS4.8
CNB Canberra Magne 125.33 238 *e*PKP PKPdf 18 18 54.8 +6.0
NJ2 Nanjing 126.22 332 *e*PKP PKPdf 18 18 43.3 -7.5
NJ2 PP PP 18 20 46.0 +1.8
NJ2 PP PP
comp=Z,730nm,8.6s
NJ2 LR LR
comp=N,560nm,27.2s,MS5.3
NJ2 LR LR
comp=E,670nm,28.8s,MS5.3
NJ2 LR LR
comp=Z,660nm,28.8s,MS5.2
LZH Lanzhou 127.53 348 *e*PKP PKPdf 18 18 50.0 -3.1
LZH XPKP 18 19 04.5
LZH SKS SKSdf 18 25 56.5 -6.0
LZH PP PP
comp=Z,357nm,8.7s
LZH LR LR
comp=N,1μm,18.5s
LZH LR LR
comp=Z,2μm,20.5s,MS5.7
TOO Toolangi 128.11 234 *e*PKP PKPdf 18 18 57.5 +3.4
CTA Charters Tower 128.35 256 *e*PKP PKPdf 18 18 59.4 +4.4
comp=Z,9.4nm,1.0s
CTAO Charters Tower 128.35 256 PKIKP PKPdf 18 18 59.0 +4.0
COEN Coen 130.61 265 PKPdf PKPdf 18 19 00.5 +1.0
STKA Stephens Creek 132.18 241 *e*PKP PKPdf 18 19 05.6 +3.6
comp=Z,11nm,0.9s
STKA Stephens Creek 132.18 241 PKP PKPdf 18 19 05.2 +3.2
comp=Z,15nm,1.0s,baz=83,slow=3.1,SNR=11
CD2 Chengdu 132.54 346 *e*PKP PKPdf 18 18 55.0 -7.8
CD2 XPKP 18 19 10.3
CD2 PP PP 18 21 24.8 -0.2
CD2 PKS 18 22 30.3
CD2 SKS SKSdf 18 26 00.9 -11
CD2 SKKS SKKSac 18 28 11.8 -8.3
CD2 PP PP
comp=Z,160nm,10.2s
CD2 LR LR
comp=E,210nm,21.6s
CD2 LR LR
comp=Z,110nm,16.8s,MS4.6
LSA Lhasa 135.09 1 PKHKP 18 19 01.8
GYA Guiyang 135.97 341 PDIF Pdif 18 16 06.4 -6.3
GYA XPKP 18 19 15.6
GYA PP PP
comp=Z,150nm,6.6s
GYA LR LR
comp=N,1μm,20.9s,MS5.7
GYA LR LR
comp=E,880nm,21.6s,MS5.7
GYA LR LR
comp=Z,1μm,22.0s,MS5.5
KMI Kunming 138.34 345 PKP PKPdf 18 19 05.8 -8.0
KMI XPKP 18 19 20.9
KMI PP PP 18 22 01.0 -0.6
KMI PP PP
comp=Z,89nm,4.3s
KMI LR LR
comp=N,203nm,22.7s,MS4.9
KMI LR LR
comp=E,204nm,26.0s,MS4.9
KMI LR LR
comp=Z,194nm,22.7s,MS4.8
WB2 Warramunga Arr 139.52 257 *e*PKP PKPdf 18 19 20.1 +4.1
WRA Warramunga Arr 139.53 257 PKP PKPdf 18 19 18.6 +2.6
comp=Z,21nm,0.9s,baz=87,slow=2.8,SNR=17
WRA Warramunga Arr 139.53 257 PKP PKPdf 18 19 18.6 +2.6
ASAR Alice Springs 139.84 252 PKP PKPdf 18 19 20.4 +3.9
comp=Z,14nm,0.9s,baz=100,slow=2.0,SNR=21
ASAR Alice Springs 139.84 252 PKP PKPdf 18 19 20.4 +3.9
FORT Forrest 143.72 239 *e*PKP PKPdf 18 19 26.1 +2.9
comp=Z,91nm,1.1s
FORT Forrest 143.72 239 PKPdf PKPdf 18 19 19.8 -3.4
FORT Forrest 143.72 239 *e*PKP PKPdf 18 19 26.1 +2.9
CHG Chiang Mai 145.27 348 ⇓P PKPbc 18 19 29.2 +3.3
comp=Z,54nm,1.4s
CMAR Chiang Mai Arr 145.62 348 PKPbc PKPbc 18 19 30.1 +3.1
comp=Z,36nm,0.9s,baz=336,slow=3.8,SNR=33
CMAR Chiang Mai Arr 145.62 348 PKPbc PKPbc 18 19 30.1 +3.1
KKTK Khon Kaen 146.66 341 P PKPbc 18 19 34.4 +4.2
comp=Z,679nm,0.8s
FITZ Fitzroy Crossi 147.75 261 *e*PKP PKPbc 18 19 37.8 +4.5
comp=Z,67nm,0.9s
FITZ Fitzroy Crossi 147.75 261 PKPbc PKPbc 18 19 38.2 +4.9
comp=Z,41nm,0.9s,baz=101,slow=4.0,SNR=20
FITZ *e*PKP PKPbc 18 19 37.8 +4.5
FITZ Fitzroy Crossi 147.75 261 *ep*PKPbc PKPbc 18 19 36.9 +3.6
KKM Kota Kinabalu 147.91 310 PKPbc PKPbc 18 19 36.8 +3.0
NST Nakhon Sawan 148.05 345 P PKPbc 18 19 38.9 +4.8
BATI Baumata 148.75 276 PKPbc PKPbc 18 19 41.8 +5.7
comp=Z,58nm,1.0s,baz=220,slow=12,SNR=7.2
KAPI Kappang 150.86 288 PKPbc PKPbc 18 19 45.3 +4.0
comp=Z,28nm,1.0s,baz=308,slow=2.2,SNR=6.9
NNT Nongplab 151.11 344 P PKPbc 18 19 46.5 +4.8
NWAO Narrogin (SRO) 151.30 228 *e*PKP PKPbc 18 19 44.5 +2.8
comp=Z,474nm,1.1s
MUN Mundaring 152.53 229 *e*PKP PKPbc 18 19 47.5 +3.0

JMA 15 18:00:29.5±0.4, 3092N×14203E, h0km, M3.9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.88**	**320**	P	Pn	18 01 17.9	+1.2
JHJ2				S	Sn	18 01 53.5	+1.4
BSO1	**Boso 1**	**3.83**	**347**	P	Pn	18 01 30.6	+0.9
BSO1				*e*S	Sn	18 02 17.4	+2.0
BSO3	**Boso 3**	**4.08**	**342**	P	Pn	18 01 35.5	+2.4
JHU	**Hanno**	**5.43**	**336**	P	Pn	18 01 54.0	+2.3
JHU				*e*S	Sn	18 02 57.9	+3.1
JYT	**Yasato**	**5.51**	**344**	P	Pn	18 01 55.3	+2.5
JYT				S	Sn	18 02 59.9	+3.0
JRY	**Ryogami san**	**5.71**	**334**	P	Pn	18 01 58.2	+2.6
JRY				*e*S	Sn	18 03 05.8	+3.9
JHO	**Hitachi**	**5.80**	**348**	P	Pn	18 01 57.2	+0.4
JHO				*e*S	Sn	18 03 03.7	-0.4
MAT	**Matsushiro**	**6.45**	**331**	P	Pn	18 02 09.3	+3.6
MAT				S	Sn	18 03 24.1	+4.1

*ISCJB **15** 18:00:47.0±0.4, 2304N×003×10110E×007, h10km, mb3.8/7, Error ellipse: s-maj=9.1km s-min=3.5km az=14.7*
*NEIC **15** 18:00:50.1±0.6, 2308N×10089E, h10km, Error ellipse: s-maj=21.0km s-min=11.4km az=80.0*
*BJI **15** 18:00:51.9, 2322N×101.19E, h25km, mB4.8, mb4.6, ML4.0, Ms3.9, Msz3.8*
*IDC **15** 18:00:53.6±6.6, 2301N×10087E, h33km±57km, mb3.7/7, mb1 3.8/8, mb1mx3.5/23, mbtmp3.6/8, ML3.6/1, MS3.0/2,*
Ms1 3.1/2, ms1mx2.8/33, Error ellipse: s-maj=50.3km s-min=15.9km az=69.0
ISC 15 18:00:49.4±0.4, 2312N×003×10090E±007, h10km, n21, σ1♀43/31, mb3.8/7, 2C, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.61**	**40**	P	**Pn**	**18 01 30.8**	**-0.9**
KMI				PG	**Pg**	**18 01 37.9**	**-1.6**
KMI				SG	**Sg**	**18 02 12.0**	**-1.3**
KMI				Smax			
	comp=N,394nm,1.2s						
KMI				Smax			
	comp=E,601nm,1.2s						
CHRT	**Chiangrai**	**3.40**	**198**	⇑PN	**Pn**	**18 01 43.5**	**+1.0**
CHRT				PG	**Pg**	**18 01 53.0**	**-1.6**
CHRT				SG	**Sg**	**18 02 37.0**	**-1.6**
NANT	**Nan**	**4.30**	**183**	⇑P	**Pn**	**18 01 52.5**	**-2.5**
	comp=E,1μm,1.0s						
CHG	**Chiang Mai**	**4.66**	**203**	PG	**Pg**	**18 02 17.9**	**-0.8**
CHG				SG	**Sg**	**18 03 24.3**	**+5.2**
CMAR	**Chiang Mai Arr**	**4.99**	**202**	Pn	**Pn**	**18 02 05.5**	**+1.1**
	comp=E,0.6nm,0.3s,baz=12,slow=13,SNR=28						
CMAR				Pg	**Pg**	**18 02 23.4**	**-1.6**
	comp=E,3.8nm,0.3s,baz=22,slow=16,SNR=61						
CMAR				Sn	**Sn**	**18 02 59.1**	**-3.1**
	comp=E,1.8nm,0.3s,baz=21,slow=16,SNR=4.4						
CMAR				Lg		18 03 28.1	
	comp=E,3.8nm,0.3s,baz=278,slow=16,SNR=10						
CMAR				LR	LR	18 04 20.6	
	comp=E,224nm,19.0s,baz=156,slow=42						
BDT	**Bhumibol Dam**	**6.11**	**197**	P	**Pg**	**18 02 43.0**	**-3.6**
	comp=E,42nm,0.9s						
KKTK	**Khon Kaen**	**6.99**	**165**	PN	**Pn**	**18 02 33.0**	**+1.1**
KKTK				PG	**Pg**	**18 03 05.0**	**+1.7**
KKTK				SG	**Sg**	**18 04 36.0**	**+2.1**
NST	**Nakhon Sawan**	**7.45**	**186**	P	**Pg**	**18 03 07.3**	**-4.8**
CD2	**Chengdu**	**8.16**	**18**	*e*P	**Pn**	**18 02 47.9**	**-0.1**
CD2				S	**Sn**	**18 04 18.6**	**-1.8**
CD2				Smax			
	comp=N,70nm,1.6s						
CD2				Smax			
	comp=E,70nm,1.7s						
CD2				LR	LR		
	comp=N,600nm,9.6s						
CD2				LR	LR		
	comp=E,780nm,10.8s						
CD2				LR	LR		
	comp=Z,660nm,10.8s						
LZH	**Lanzhou**	**13.17**	**11**	*e*P	**Pn**	**18 03 56.5**	**-0.1**
LZH				AP		18 04 00.0	
LZH				*e*PP		18 04 07.3	
LZH				AMB	AMB		
	comp=Z,23nm,1.0s						
LZH				AMB	AMB		
	comp=Z,51nm,4.2s						
LZH				LR	LR		
	comp=N,259nm,8.3s						
LZH				LR	LR		
	comp=Z,312nm,10.8s						
SONM	**Songino Array**	**25.05**	**9**	P	**P**	**18 06 16.1**	**+2.3**
	comp=Z,0.8nm,0.7s,mb3.4,baz=184,slow=9.6,SNR=4.5						
MK31	**Makanchi Array**	**27.97**	**332**	*e*P	**P**	**18 06 40.1**	**-0.1**
MKAR	**Makanchi Array**	**27.97**	**332**	P	**P**	**18 06 41.6**	**+1.4**
	comp=Z,1.2nm,0.7s,mb3.7,baz=135,slow=11,SNR=8.9						
KURK	**Kurchatov**	**32.55**	**333**	P	**P**	**18 07 22.4**	**+1.8**
	comp=Z,0.8nm,0.8s,mb3.7,baz=138,slow=8.4,SNR=5.8						
ZALV	**Zalesovo Beam**	**33.09**	**343**	P	**P**	**18 07 27.1**	**+1.9**
	comp=Z,1.4nm,0.8s,mb4.0,baz=145,slow=9.0,SNR=5.9						
ZALV				LR	LR	18 20 42.9	
	comp=Z,14nm,18.6s,baz=82,slow=36						
ZALV	**Zalesovo Beam**	**33.09**	**343**	P	**P**	**18 07 27.1**	**+1.9**
ZALV				LR	LR	18 20 42.9	
BVAR	**Borovoye Array**	**37.79**	**330**	P	**P**	**18 08 06.6**	**+0.9**
	comp=Z,1.2nm,0.6s,mb3.8,baz=132,slow=10,SNR=8.3						
YSS	**Yuzh-Sakhalins**	**41.05**	**44**	*e*P	**P**	**18 08 34.1**	**+1.2**
WRA	**Warramunga Arr**	**53.82**	**140**	P	**P**	**18 10 12.5**	**-0.2**
	comp=Z,1.5nm,0.7s,mb4.0,baz=329,slow=7.9,SNR=5.8						
ASAR	**Alice Springs**	**56.49**	**143**	P	**P**	**18 10 32.1**	**+0.3**
	comp=Z,1.4nm,0.8s,mb4.1,baz=324,slow=6.6,SNR=6.4						
GSCL	**Gusciola**	**74.43**	**312**	P	**P**	**18 12 26.6**	**-1.2**

*IDC **15** 18:01:20.6±0.9, 2905N×10096E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.1/24, mbtmp4.3/13, ML4.5/1, MS3.6/3, Ms1 3.7/3, ms1mx3.0/31, Error ellipse: s-maj=33.4km s-min=13.6km az=57.0*
*ISCJB **15** 18:01:24.4±0.6, 29S×01×1012E±01, h33km, mb4.7/25, MS3.7/2, Error ellipse: s-maj=23.9km s-min=7.1km az=140.0*
*NEIC **15** 18:01:25.9±0.6, 287S×10105E, h35km, mb4.5/7, Error ellipse: s-maj=25.6km s-min=8.7km az=51.0*
*DJA **15** 18:01:26, 303S×10098E, h22km, MLv4.6/4*
ISC 15 18:01:26.8±0.6, 29S×01×1012E±01, h35km, n39, σ1♀03/35, mb4.7/25, MS3.7/2, 1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**6.10**	**338**	⇓*e*P	**Pn**	**18 02 55.2**	**+0.8**
KAPI	**Kappang**	**18.64**	**97**	P	**Pn**	**18 05 43.9**	**+1.8**
	1.6nm,0.3s,baz=272,slow=10,SNR=7.0						
KAPI				LR	LR	18 12 42.9	
	comp=Z,107nm,20.6s,baz=297,slow=36						
CMAR	**Chiang Mai Arr**	**21.34**	**354**	LR	LR	18 14 06.3	
	comp=Z,87nm,20.9s,MS3.1,baz=175,slow=36						
FITZ	**Fitzroy Crossi**	**28.33**	**124**	P	**P**	**18 07 17.6**	**+0.1**
	1.6nm,0.8s,mb3.7,baz=204,slow=13,SNR=4.2						
ODAN	**Odare**	**32.45**	**337**	*e*P	**P**	**18 07 53.4**	**-0.4**
	33nm,0.9s,mb5.2						
TAPN	**Taplejung**	**32.76**	**337**	*e*P	**P**	**18 07 58.0**	**+1.5**
	56nm,0.9s,mb5.5						
RAMN	**Ramite**	**32.85**	**336**	*e*P	**P**	**18 07 57.3**	**0.0**
	11nm,0.6s,mb4.9						
JIRN	**Jiri**	**33.64**	**336**	*e*P	**P**	**18 08 05.3**	**+1.1**
GUN	**Gumba**	**33.99**	**335**	*e*P	**P**	**18 08 08.2**	**+0.9**
	30nm,0.4s,mb5.6						
DMN	**Daman**	**34.06**	**334**	*e*P	**P**	**18 08 08.8**	**+0.9**
KKN	**Kakani**	**34.14**	**334**	*e*P	**P**	**18 08 09.2**	**+0.6**
	9.9nm,0.4s,mb5.1						
GKN	**Gorkha**	**34.61**	**334**	*e*P	**P**	**18 08 13.8**	**+1.2**
	9.9nm,0.3s,mb5.2						
KOLN	**Koldanda**	**34.88**	**332**	*e*P	**P**	**18 08 15.4**	**+0.4**
	16nm,0.7s,mb5.1						
DANN	**Dangsing**	**35.30**	**333**	*e*P	**P**	**18 08 19.7**	**+1.1**
	19nm,0.4s,mb5.4						
WRA	**Warramunga Arr**	**36.52**	**120**	P	**P**	**18 08 29.4**	**+0.2**
	2.5nm,0.4s,mb4.4,baz=302,slow=9.0,SNR=46						
WRAB	**Tennant Creek**	**36.52**	**120**	*e*P	**P**	**18 08 28.1**	**-1.1**
	4.7nm,0.8s,mb4.4						
WB2	**Warramunga Arr**	**36.53**	**120**	*e*P	**P**	**18 08 29.4**	**+0.1**
ASAR	**Alice Springs**	**37.77**	**126**	P	**P**	**18 08 40.8**	**+1.1**
	1.2nm,0.4s,mb3.9,baz=298,slow=7.8,SNR=35						
ASAR				S	**S**	**18 14 23.3**	**-5.0**
	1.4nm,1.0s,baz=299,slow=16,SNR=6.8						
CTA	**Charters Tower**	**47.15**	**115**	P	**P**	**18 09 56.0**	**-0.1**
	1.6nm,0.3s,mb4.5,baz=310,slow=7.0,SNR=4.4						
KSRS	**Korea Array**	**47.20**	**29**	P	**P**	**18 09 54.9**	**-1.3**
	0.9nm,0.8s,mb3.8,baz=298,slow=43,SNR=2.6						
STKA	**Stephens Creek**	**47.67**	**132**	*e*P	**P**	**18 10 01.1**	**+1.1**
	3.4nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**47.67**	**132**	P	**P**	**18 10 00.7**	**+0.7**
	1.0nm,0.4s,mb4.2,baz=290,slow=9.9,SNR=6.2						
SONM	**Songino Array**	**50.73**	**5**	P	**P**	**18 10 22.1**	**-0.9**
	7.1nm,0.9s,mb4.6,baz=181,slow=8.1,SNR=33						
AML	**Almayashu**	**51.28**	**334**	*e*P	**P**	**18 10 27.7**	**+0.4**
	4.4nm,0.7s,mb4.5						
EKS2	**Erkin-Say**	**51.68**	**334**	*e*P	**P**	**18 10 30.8**	**+0.5**
	8.5nm,0.8s,mb4.7						
MK31	**Makanchi Array**	**52.21**	**344**	*e*P	**P**	**18 10 33.4**	**-0.7**
MKAR	**Makanchi Array**	**52.21**	**344**	P	**P**	**18 10 33.2**	**-0.9**
	2.9nm,0.6s,mb4.4,baz=160,slow=8.9,SNR=34						
KURK	**Kurchatov**	**56.80**	**343**	P	**P**	**18 11 06.7**	**-0.8**
	0.6nm,0.5s,mb3.9,baz=181,slow=6.5,SNR=5.3						
KURK	**Kurchatov**	**56.80**	**343**	*e*P	**P**	**18 11 06.5**	**-0.9**
	6.1nm,0.8s,mb4.7						
ZAA0	**Zalesovo Array**	**58.27**	**349**	*e*P	**P**	**18 11 16.7**	**-1.0**
ZALV	**Zalesovo Beam**	**58.27**	**349**	P	**P**	**18 11 17.1**	**-0.6**
	12nm,0.8s,mb5.0,baz=160,slow=4.7,SNR=53						
BVAR	**Borovoye Array**	**61.43**	**339**	P	**P**	**18 11 37.0**	**-2.5**
	2.3nm,0.7s,mb4.4,baz=147,slow=8.9,SNR=12						
BRVK	**Borovoye**	**61.50**	**339**	P	**P**	**18 11 37.0**	**-2.9**
	1.5nm,0.5s,mb4.4						
YAK	**Yakutsk**	**68.31**	**14**	P	**P**	**18 12 22.6**	**-1.4**
	15nm,1.0s,mb5.0						
MAW	**Mawson**	**69.72**	**195**	P	**P**	**18 12 31.5**	**-1.2**
	1.9nm,0.8s,mb4.1,baz=26,slow=9.2,SNR=5.2						
RAO	**Raoul Island**	**80.65**	**119**	LR	LR	18 50 03.3	
	comp=Z,150nm,20.3s,MS4.3,baz=354,slow=36						
TXAR	**Lajitas Array**	**144.66**	**39**	PKP	PKPdf	18 20 59.6	**-0.9**
	0.8nm,0.4s,baz=238,slow=0.9,SNR=27						
MIAR	**Mount Ida**	**145.64**	**22**	*e*PKPdf	PKPdf	18 20 59.8	**-2.2**
JCT	**Junction City**	**146.13**	**34**	*e*PKPbc	PKPbc	18 21 03.5	**-0.4**

*NEIC **15** 18:17:54.3, 1723N×9462W, h140km, MD4.2(MEX), After MEX.*
MEX 15 18:17:54.0±1.2, 1723N×9462W, h142km±14km, MD4.2, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUIG	**Tuzandepetl**	**0.82**	**13**	*i* P	Pn	18 18 14.9	-1.6
TUIG				*i* S	Sn	18 18 31.3	-2.4
TGIG		**1.50**	**107**	*i* P	Pn	18 18 22.3	-0.7
TGIG				*i* S	Sn	18 18 43.4	-1.8
OXX	**Oaxaca**	**2.02**	**266**	*i* P	Pn	18 18 28.8	-0.1
OXX				*i* S	Sn	18 18 55.5	-0.1
VHO	**Vista Hermosa**	**2.03**	**266**	*i* P	Pn	18 18 28.4	-0.5
VHO				*i* S	Sn	18 18 55.5	-0.3
HUIG	**Huatulco**	**2.04**	**225**	*i* P	Pn	18 18 26.5	-2.7
HUIG				*i* S	Sn	18 18 54.5	-1.6
CCIG	**Comitan**	**2.56**	**111**	*i* P	Pn	18 18 35.0	-0.5
CCIG				*i* S	Sn	18 19 05.6	-1.8
TPIG	**Tehuac#an**	**2.87**	**295**	*i* P	Pn	18 18 38.1	-1.2
TPIG				*i* S	Sn	18 19 12.3	-2.1
PNIG	**Pinotepa**	**3.46**	**257**	*i* P	Pn	18 18 44.0	-3.0
PNIG				*i* S	Sn	18 19 25.3	-2.8
PNIG	**Pinotepa**	**3.46**	**257**	*i* P	Pn	18 18 44.0	-3.0
PNIG				*i* S	Sn	18 19 24.5	-3.6
PPM	**Popocatepetl**	**4.22**	**296**	*i* P	Pn	18 18 57.4	+0.4
PPM				*i* S	Sn	18 19 44.7	-1.3
PPM	**Popocatepetl**	**4.22**	**296**	*i* P	Pn	18 18 59.7	+2.7
PPM				*i* S	Sn	18 19 48.0	+2.1
PLIG	**Platanillo**	**4.79**	**285**	*i* P	Pn	18 19 03.8	-0.7
PLIG				*i* S	Sn	18 19 56.2	-3.3

IDC 15 18:19:04.3±4.0, 318S×10096E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/19, mbtmp3.6/4, Error ellipse: s-maj=168.6km s-min=24.0km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.58**	**120**	P	P	18 26 13.0	+0.7
	0.2nm,0.4s,baz=304,slow=8.6,SNR=7.8						
ASAR	**Alice Springs**	**37.80**	**126**	P	P	18 26 22.4	-0.2
	0.3nm,0.4s,baz=294,slow=7.9,SNR=11						
SONM	**Songino Array**	**51.02**	**5**	P	P	18 28 09.9	+1.9
	0.3nm,0.4s,baz=182,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**52.41**	**344**	P	P	18 28 18.5	0.0
	0.7nm,0.9s,baz=170,slow=8.6,SNR=5.5						
TXAR	**Lajitas Array**	**145.02**	**39**	PKPbc	PKPbc	18 38 40.9	-2.8
	1.1nm,1.0s,baz=308,slow=4.1,SNR=6.9						

*SZGRF **15** 18:27:30.7, 428S×9960E, h27km, mb5.3, Southwest of Sumatera, Indonesia*
*BJI **15** 18:27:32.8, 233S×9966E, h32km, mB5.2, mb4.8, Ms4.9, Msz4.7*
*IDC **15** 18:27:33.6±0.4, 189S×9979E, h0km, mb4.8/27, mb1 4.9/27, mb1mx4.9/28, mbtmp4.8/27, MS4.3/1, Ms1 4.3/1, ms1mx3.6/26, Error ellipse: s-maj=13.3km s-min=9.1km az=41.0*
*ISCJB **15** 18:27:36.3±0.2, 183S±003×9958E±002, h27km, mb5.2/154, MS4.5/22, Error ellipse: s-maj=4.4km s-min=3.1km az=33.9*
*MOS **15** 18:27:37.6±0.9, 167S×9979E, h35km, mb5.4/69, MS4.3/5, Error ellipse: s-maj=10.0km s-min=4.6km az=121.5*
*DJA **15** 18:27:37, 191S×9932E, h34km, Mw5.4/14*
*GCMT **15** 18:27:38.9±0.5, 194S×9956E, h29km, MW5.0/53, Moment Tensor Solution. s36,c47; s53,c70; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_r3.58±.18; $M_{\theta\theta}$-1.78±.11; $M_{\phi\phi}$-1.80±.15; $M_{r\theta}$0.34±.18; $M_{\theta\phi}$1.48±.08; $M_{\phi r}$0.76±.26; Best double couple: M_o3.51200×10^{16} NP1:ϕ_s125.00000°, δ44.00000°, λ74.00000°. NP2: ϕ_s326.00000°, δ48.00000°, λ105.00000°. Principal axes: T 3.7420, Plg79.0000°, Azm303.0000°; N -0.4590, Plg11.0000°, Azm136.0000°; P -3.2830, Plg3.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **15** 18:27:38.9±0.1, 176S×9973E, h35km, mb5.2/71 Error ellipse: s-maj=6.6km s-min=4.0km az=222.0*
NEIC Felt [II] at Padang, Sumatra.
ISC 15 18:27:38.4±0.2, 183S±003×9956E±002, h28km, h28km±.7km:pP-P, n432, σ0♀99/413, mb5.2/154, MS4.5/22, 57C-16D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPI	**Padang Panjang**	**1.60**	**32**	P	**Pn**	**18 28 03.7**	**-1.1**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.14**	**62**	P	**Pn**	**18 28 26.9**	**+0.9**
	0.0nm,0.0s						
TRSI	**Tarutung**	**3.88**	**351**	P	**Pn**	**18 28 39.7**	**+3.6**
	0.0nm,0.0s						
JMBI	**JAMBI**	**4.09**	**87**	P	**Pn**	**18 28 41.2**	**+2.2**
	0.0nm,0.0s						
PSI	**Prapat**	**4.64**	**352**	⇑*e*P	**Pn**	**18 28 45.6**	**-1.1**
KGM	**Kluang**	**5.36**	**45**	⇓P	**Pn**	**18 28 58.6**	**+2.1**
FRIM	**Kepong**	**5.44**	**22**	⇑P	**Pn**	**18 28 59.1**	**+1.4**
MYKOM	**Kota Tinggi**	**5.60**	**50**	⇑P	**Pn**	**18 29 02.4**	**+2.5**
KLI	**Kotabumi**	**6.09**	**120**	P	**Pn**	**18 29 07.5**	**+0.9**
	549nm,0.9s						
IPM	**Ipoh**	**6.44**	**13**	⇑P	**Pn**	**18 29 02.4**	**-9.0**
PPBI	**Pangkal Pinang**	**6.59**	**93**	P	**Pn**	**18 29 16.2**	**+2.8**
	49nm,1.2s						
SBJI	**Serang**	**7.82**	**123**	P	**Pn**	**18 29 30.9**	**+0.6**
	306nm,1.2s						
KTGM	**Kuala Trenggan**	**7.96**	**27**	⇓P	**Pn**	**18 29 36.1**	**+3.8**
DBJI	**Dramaga**	**8.57**	**123**	P	**Pn**	**18 29 40.4**	**-0.3**
	369nm,1.2s						
CBJI	**Citeko**	**8.59**	**122**	P	**Pn**	**18 29 43.3**	**+2.5**
	1μm,0.9s						
SNG	**Songkhla**	**9.01**	**7**	P	**Pn**	**18 29 49.0**	**+2.3**
	450nm,1.0s						
LEM	**Lembang**	**9.45**	**122**	P	**Pn**	**18 29 54.5**	**+1.8**
	366nm,1.0s						
JCJI	**Jatiwangi**	**9.85**	**118**	P	**Pn**	**18 30 03.4**	**+5.3**
	261nm,0.9s						
KSM	**Kuching**	**11.24**	**73**	⇑P	**Pn**	**18 30 19.1**	**+1.8**
KSM	**Kuching**	**11.24**	**73**	P	**Pn**	**18 30 12.5**	**-4.8**
BJII	**Banjamegara**	**11.50**	**119**	P	**Pn**	**18 30 21.5**	**+0.7**
	82nm,1.5s						
STKI	**Sintang**	**12.07**	**81**	P	**Pn**	**18 30 34.2**	**+5.6**
	52nm,1.4s						
SJI	**Sawahan**	**13.50**	**116**	P	**Pn**	**18 30 47.0**	**-1.2**
	106nm,1.0s						
PLKI	**Palangkaraya**	**14.39**	**92**	P	**Pn**	**18 31 07.2**	**+6.9**
	212nm,0.7s						
KMMI	**Kalianget**	**15.27**	**110**	P	**Pn**	**18 31 13.5**	**+1.4**
	207nm,1.5s						
BBKI	**Banjar Baru**	**15.36**	**96**	P	**Pn**	**18 31 22.0**	**+8.8**
	145nm,0.8s						
KHKI	**Kahang-Kahang**	**17.25**	**113**	P	**Pn**	**18 31 43.4**	**+6.0**
	88nm,0.8s						
NST	**Nakhon Sawan**	**17.40**	**2**	P	**Pn**	**18 31 37.2**	**-2.0**
**KK

PALK Pallekele 20.87 296 P **P** **18 32 15.9 -2.5**
CHRT Chiangrai 21.57 1 ⇓P **P** **18 32 25.5 -0.3**
158nm,0.9s,mb5.4
QIZ Qiongzhong 23.07 26 P **P** **18 32 41.0 -0.8**
QIZ AP 18 32 49.8
QIZ S **S** **18 36 47.1 -3.9**
QIZ XS sS 18 37 01.0 -3.6
QIZ AMB AMB
comp=Z,19nm,0.8s,mb4.6
QIZ AMB AMB
comp=Z,211nm,3.4s
QIZ LR LR
comp=E,1μm,13.8s
QIZ LR LR
comp=Z,1μm,16.3s,MS4.5
KDI Kendari 23.13 96 P **P** **18 32 42.9 +0.3**
comp=Z,76nm,1.2s,mb5.0
VIS Vishakhapatnam 25.16 321 *e*P **P** **18 33 03.0 +1.5**
BATI Baumata 25.36 110 P **P** **18 32 59.7 -3.6**
comp=Z,20nm,0.7s,mb4.7,baz=322,slow=2.4,SNR=4.3
MNI Manado 25.49 83 P **P** **18 33 05.5 +1.0**
comp=Z,521nm,0.9s,mb6.1
KMI Kunming 26.97 6 P **P** **18 33 17.9 +0.2**
KMI AP pP 18 33 27.9 +1.8
KMI XP sP 18 33 32.9 +3.4
KMI PP 18 34 05.8
KMI AMB AMB
comp=Z,6.0nm,1.0s,mb4.1
KMI AMB AMB
comp=Z,151nm,4.2s
KMI LR LR
comp=N,566nm,19.2s,MS4.4
KMI LR LR
comp=E,809nm,17.3s,MS4.4
KMI LR LR
comp=Z,735nm,14.9s,MS4.4
IMP Imphal 27.01 349 *e*P **P** **18 33 20.0 +1.9**
MBWA Marble Bar 27.49 136 *e*P **P** **18 33 21.8 -0.7**
comp=Z,15nm,0.8s,mb4.6
BOK Bokaro 28.73 333 *e*P **P** **18 33 35.2 +1.7**
BOK AMb AMB 18 33 36.9
comp=Z,56nm,1.1s,mb5.2
GYA Guiyang 28.95 13⇑*i*P **P** **18 33 33.5 -1.9**
GYA AP pP 18 33 43.1 -0.7
GYA XP sP 18 33 47.3 +0.1
GYA PP PP 18 34 25.6 -16
GYA S **S** **18 38 16.9 -7.6**
GYA AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
GYA AMB AMB
comp=Z,90nm,4.8s
GYA LR LR
comp=N,1μm,13.2s,MS4.8
GYA LR LR
comp=E,1μm,12.6s,MS4.8
GYA LR LR
comp=Z,2μm,14.6s,MS4.8
FITZ Fitzroy Crossi 30.27 124 *e*P **P** **18 33 45.7 -1.6**
comp=Z,30nm,0.9s,mb5.0
FITZ Fitzroy Crossi 30.27 124 P **P** **18 33 45.7 -1.5**
comp=Z,19nm,0.9s,mb4.8,baz=318,slow=8.9,SNR=27
LATR Latur 30.28 313 *e*P **P** **18 33 48.2 +0.9**
LATR AMb AMB 18 33 57.3
comp=Z,23nm,0.7s,mb5.0
ODAN Odare 30.84 338 *e*P **P** **18 33 53.1 +0.9**
comp=Z,111nm,1.1s,mb5.6
TAPN Taplejung 31.18 339 *e*P **P** **18 33 56.3 +1.2**
comp=Z,136nm,1.0s,mb5.7
RAMN Ramite 31.22 337 *e*P **P** **18 33 56.8 +1.3**
KAD Karad 31.42 308 *e*P **P** **18 33 58.7 +1.3**
JIRN Jiri 32.02 337 *e*P **P** **18 34 03.7 +1.2**
comp=Z,141nm,0.9s,mb5.8
PKI Pulchoki 32.25 336 *e*P **P** **18 34 05.1 +0.6**
GUN Gumba 32.36 337 *e*P **P** **18 34 06.7 +1.2**
comp=Z,81nm,0.5s,mb5.8
LSA Lhasa 32.37 346 P **P** **18 34 07.0 +1.5**
LSA Lhasa 32.37 346 *e*P **P** **18 34 06.6 +1.1**
LSA pmax pmax
comp=Z,29nm,0.9s,mb5.1
LSA Lhasa 32.37 346 *e*P **P** **18 34 06.6 +1.0**
comp=Z,29nm,0.9s,mb5.1
POO Poona 32.39 310⇑*i*P **P** **18 34 06.0 +0.1**
comp=Z,40nm,1.0s,mb5.2
POO *e*P 18 34 06.8
POO AMb AMB 18 34 07.8
comp=Z,27nm,0.7s,mb5.2
POO *i* x x 18 34 14.6
POO *ex* x 18 35 35.0
DMN Daman 32.41 336 *e*P **P** **18 34 06.5 +0.6**
comp=Z,44nm,0.8s,mb5.3
KKN Kakani 32.49 336 *e*P **P** **18 34 07.3 +0.6**
comp=Z,56nm,0.8s,mb5.4
CD2 Chengdu 32.80 7 *e*P **P** **18 34 12.8 +3.4**
CD2 AP pP 18 34 22.3 +4.6
CD2 XP sP 18 34 26.4 +5.2
CD2 PP PP 18 35 23.5 -0.4
CD2 PCP PcP 18 36 56.3 +2.2
CD2 S **S** **18 39 27.8 +3.0**
CD2 XS sS 18 39 43.8 +5.2
CD2 PCS PcS 18 40 40.5 +1.0
CD2 SS SS 18 41 28.6 -18
CD2 SCS ScS 18 44 35.4 -0.9
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CD2 AMB AMB
comp=Z,40nm,4.8s
CD2 LR LR
comp=N,780nm,10.8s,MS4.9
CD2 LR LR
comp=E,1μm,12.0s,MS4.9
CD2 LR LR
comp=Z,121nm,14.4s,MS3.7
GKN Gorkha 32.95 335 *e*P **P** **18 34 11.5 +0.8**
comp=Z,76nm,0.9s,mb5.6
KOLN Koldanda 33.19 334 *e*P **P** **18 34 13.7 +0.9**
comp=Z,68nm,0.7s,mb5.7
DANN Dangsing 33.62 334 *e*P **P** **18 34 17.1 +0.5**
comp=Z,109nm,0.9s,mb5.8
NWAO Narrogin (SRO) 35.11 154 P **P** **18 34 28.1 -1.2**
comp=Z,14nm,0.7s,mb5.0,baz=322,slow=12,SNR=6.6
NWAO LR LR 18 46 15.2
comp=Z,454nm,20.1s,MS4.2,baz=333,slow=32
NWAO Narrogin (SRO) 35.11 154 *e*P **P** **18 34 29.0 -0.4**
NWAO pmax pmax
comp=Z,74nm,1.4s
NWAO Narrogin (SRO) 35.11 154 *e*P **P** **18 34 29.0 -0.4**
comp=Z,74nm,1.4s,mb5.4
XAN Xi'an 36.75 13 P **P** **18 34 40.9 -2.5**
XAN AP pP 18 34 49.8 -2.1
XAN XP sP 18 34 54.3 -1.0
XAN AMB AMB
comp=Z,16nm,0.9s,mb4.8
AJM Ajmer 37.02 321 *e*P **P** **18 34 46.8 +1.0**
NDI New Delhi 37.14 326 *ex* x 18 34 53.0
LZH Lanzhou 37.93 6 *e*P **P** **18 34 52.5 -0.9**
LZH AP pP 18 35 02.6 +0.7
LZH XP sP 18 35 06.8 +1.5
LZH AMB AMB
comp=Z,24nm,1.2s,mb4.8
LZH AMB AMB
comp=Z,136nm,5.3s
LZH LR LR
comp=N,596nm,14.8s
LZH LR LR
comp=Z,1μm,19.5s,MS4.7
NJ2 Nanjing 38.34 27 *e*P **P** **18 34 57.8 +0.9**
NJ2 AP pP 18 35 06.8 +1.4
NJ2 XP sP 18 35 11.5 +2.6
NJ2 PP PP 18 36 30.3 +5.3
NJ2 S **S** **18 40 44.0 -5.8**
NJ2 XS sS 18 41 04.5 +0.7
NJ2 AMB AMB
comp=Z,20nm,1.2s,mb4.7
NJ2 AMB AMB
comp=Z,860nm,6.4s
NJ2 LR LR
comp=N,330nm,15.9s,MS4.5
NJ2 LR LR
comp=E,490nm,16.5s,MS4.5
NJ2 LR LR
comp=Z,480nm,16.5s,MS4.4
WRA Warramunga Ar 38.46 120 P **P** **18 34 56.2 -1.9**
comp=Z,45nm,0.9s,mb5.2,baz=296,slow=9.5,SNR=146
WRA S **S** **18 40 48.7 -3.2**
comp=Z,1.6nm,1.1s,baz=293,slow=17,SNR=4.1

WRAB Tennant Creek 38.47 120 P **P** **18 34 56.6 -1.6**
comp=Z,392nm,0.9s,mb6.1,SNR=22
WRAB Tennant Creek 38.47 120 *e*P **P** **18 34 56.5 -1.7**
WRAB pmax pmax
comp=Z,56nm,0.9s,mb5.3
WRAB Tennant Creek 38.47 120 *e*P **P** **18 34 56.5 -1.6**
comp=Z,56nm,0.9s,mb5.3
WB2 Warramunga Arr 38.47 120 *e*P **P** **18 34 56.1 -2.1**
WB2 *e*S **S** **18 40 46.3 -5.8**
SSE Sheshan 38.67 30 P **P** **18 35 00.0 +0.3**
SSE XP sP 18 35 16.1 +4.4
SSE PP PP 18 36 30.0 +1.3
SSE S **S** **18 40 55.8 +1.0**
SSE AMB AMB
comp=Z,39nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,873nm,4.5s
SSE LR LR
comp=N,468nm,17.6s,MS4.4
SSE LR LR
comp=E,152nm,17.6s,MS4.4
SSE LR LR
comp=Z,524nm,18.5s,MS4.4
SMLA Simla 39.09 329 *e*P **P** **18 35 03.3 +0.1**
SMLA AMb AMB 18 35 05.8
comp=Z,61nm,1.2s,mb5.2
FORT Forrest 39.46 140 *e*P **P** **18 35 06.8 +0.5**
comp=Z,55nm,0.7s,mb5.4
ASAR Alice Springs 39.71 126 P **P** **18 35 07.5 -1.0**
comp=Z,14nm,0.7s,mb4.8,baz=298,slow=7.7,SNR=203
ASAR PcP PcP 18 37 14.4 -0.6
comp=Z,9.2nm,0.8s,baz=318,slow=2.8,SNR=7.4
ASAR S **S** **18 41 07.5 -3.1**
comp=Z,2.0nm,0.9s,baz=297,slow=15,SNR=5.4
THN Thein Dam 40.87 329 *e*P **P** **18 35 16.6 -1.4**
GTA Gaotai 41.04 0⇑P **P** **18 35 19.1 -0.2**
GTA AP pP 18 35 29.4 +1.6
GTA XP sP 18 35 33.3 +2.1
GTA AMB AMB
comp=Z,8.0nm,1.3s,mb4.2
GTA AMB AMB
comp=Z,74nm,4.2s
GTA LR LR
comp=N,681nm,15.6s,MS4.7
GTA LR LR
comp=E,394nm,17.4s,MS4.7
GTA LR LR
comp=Z,728nm,16.2s,MS4.6
HHC Hu-ho-hao-te 43.87 13 *e*P **P** **18 35 42.9 +0.7**
HHC AP pP 18 35 53.3 +2.5
HHC XP sP 18 35 57.1 +2.8
HHC PP PP 18 37 27.1 +2.3
HHC PCP PcP 18 37 28.8 +0.6
HHC SCP ScP 18 41 16.3 -1.9
HHC PCS PcS 18 41 20.8 -0.3
HHC S **S** **18 42 12.5 +0.9**
HHC XS sS 18 42 29.4 +3.6
HHC SS SS 18 45 21.4 -7.3
HHC SCS ScS 18 45 36.6 -2.8
HHC AMB AMB
comp=Z,16nm,0.7s,mb4.9
HHC AMB AMB
comp=Z,82nm,7.4s
HHC LR LR
comp=N,1μm,13.7s,MS5.0
HHC LR LR
comp=E,727nm,15.2s,MS5.0
HHC LR LR
comp=Z,1μm,14.9s,MS4.9
BJT Baijiatuao 44.34 18 *e*P **P** **18 35 44.2 -1.8**
BJT pmax pmax
comp=Z,15nm,0.8s
BJT Baijiatuao 44.34 18 *e*P **P** **18 35 44.2 -1.9**
comp=Z,15nm,0.8s,mb4.8
BJI Beijing 44.36 18 P **P** **18 35 46.3 +0.1**
BJI PP PP 18 37 26.8 -3.3
BJI S **S** **18 42 20.0 +1.1**
BJI AMB AMB
comp=Z,7.0nm,0.9s,mb4.4
BJI LR LR
comp=N,457nm,18.5s,MS4.5
BJI LR LR
comp=E,354nm,17.2s,MS4.5
BJI LR LR
comp=Z,420nm,17.7s,MS4.4
KBL Kabul 46.14 324 *e*P **P** **18 35 58.5 -1.9**
KBL pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KBL Kabul 46.14 324 *e*P **P** **18 35 58.5 -2.0**
comp=Z,9.3nm,0.9s,mb4.7
WMQ Urumqi 46.68 348⇑*i*P **P** **18 36 05.3 +0.8**
WMQ AP pP 18 36 15.0 +1.9
WMQ XP sP 18 36 19.0 +2.5
WMQ PCP PcP 18 37 36.0 -1.9
WMQ S **S** **18 42 51.0 -1.1**
WMQ XS sS 18 43 07.5 +1.2
WMQ SCS ScS 18 45 55.0 -2.4
WMQ AMB AMB
comp=Z,75nm,0.8s,mb5.7
WMQ AMB AMB
comp=Z,232nm,4.0s
WMQ LR LR
comp=N,528nm,16.0s,MS4.8
WMQ LR LR
comp=E,721nm,17.0s,MS4.8
WMQ LR LR
comp=Z,614nm,21.8s,MS4.5
KSRS Korea Array 47.10 31 P **P** **18 36 07.3 -0.6**
comp=Z,5.9nm,0.8s,mb4.6,baz=226,slow=7.0,SNR=14
CTA Charters Tower 49.07 115 *e*P **P** **18 36 22.1 -1.4**
comp=Z,17nm,0.8s,mb5.1
CTA Charters Tower 49.07 115 *e*P **P** **18 36 22.1 -1.4**
CTA pmax pmax
comp=Z,17nm,0.8s
CTAO Charters Tower 49.07 115 *e*P **P** **18 36 21.9 -1.6**
CTAO pmax pmax
comp=Z,28nm,0.9s,mb5.3
CTAO Charters Tower 49.07 115 *e*P **P** **18 36 21.9 -1.5**
comp=Z,28nm,0.9s,mb5.3
TKM2 Tokmak 2 49.50 337 *e*P **P** **18 36 27.4 +1.0**
TKM2 pmax pmax
comp=Z,29nm,0.9s,mb5.3
TKM2 Tokmak 2 49.50 337 P **P** **18 36 27.3 +1.0**
SNR=16
TKM2 Tokmak 2 49.50 337 *e*P **P** **18 36 27.4 +1.0**
comp=Z,29nm,0.9s,mb5.3
KBK Karagaybulak 49.54 336 P **P** **18 36 28.0 +1.4**
SNR=16
STKA Stephens Creek 49.59 132 *e*P **P** **18 36 27.0 -0.3**
comp=Z,31nm,1.1s,mb5.2
STKA Stephens Creek 49.59 132 P **P** **18 36 26.5 -0.8**
comp=Z,40nm,1.0s,mb5.4,baz=310,slow=7.6,SNR=35
AML Almayashu 49.62 335 P **P** **18 36 28.5 +1.2**
SNR=10
AML Almayashu 49.62 335 *e*P **P** **18 36 28.2 +0.9**
comp=Z,19nm,0.8s,mb5.2
FRU Bishkek 49.82 336 *e*P **P** **18 36 29.0 +0.2**
FRU pmax pmax
comp=Z,70nm,2.0s,mb5.3
SONM Songino Array 49.82 6 P **P** **18 36 29.2 +0.6**
comp=Z,4.2nm,0.8s,mb4.5,baz=186,slow=9.2,SNR=20
SONM PcP PcP 18 37 48.6 -0.5
comp=Z,6.1nm,0.8s,baz=178,slow=3.4,SNR=4.7
CHMS Chumysh 49.90 336 P **P** **18 36 29.9 +0.5**
SNR=12
ULN Ulaanbaatar 49.92 7 *e*P **P** **18 36 29.5 0.0**
EKS2 Erkin-Say 50.02 335 P **P** **18 36 31.6 +1.2**
SNR=40
EKS2 Erkin-Say 50.02 335 *e*P **P** **18 36 31.2 +0.9**
comp=Z,27nm,0.8s,mb5.3
USP Ospenovka 50.23 336 P **P** **18 36 32.4 +0.5**
SNR=35
MK31 Makanchi Array 50.75 345 *i* P **P** **18 36 35.5 -0.2**
MK31 pmax pmax
comp=Z,15nm,0.5s,mb5.2
MKAR Makanchi Array 50.75 345 P **P** **18 36 36.0 +0.3**
comp=Z,21nm,0.7s,mb5.2,baz=148,slow=8.0,SNR=121
CN2 Changchun 51.01 24 *e*P **P** **18 36 36.9 -0.9**
CN2 *e*XP sP 18 36 52.0 +2.1
CN2 *e*S **S** **18 43 51.0 -2.2**
CN2 AMB AMB
comp=Z,20nm,0.7s,mb5.2
CN2 AMB AMB
comp=Z,700nm,5.0s
CN2 LR LR
comp=N,700nm,17.0s,MS5.0
CN2 LR LR
comp=E,900nm,17.0s,MS5.0
CN2 LR LR
comp=Z,1μm,19.0s,MS5.0
KK31 Karatay Array 51.80 333 *i* P **P** **18 36 43.2 -0.5**
KK31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
ZAK Zakamensk 52.11 3 *e*P **P** **18 36 45.5 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
MAJO Matsushiro 52.43 39 *e*P **P** **18 36 47.1 -1.4**
MAT Matsushiro 52.43 39 P **P** **18 36 47.4 -1.1**
MAT S **S** **18 44 14.0 +1.1**
MJAR Matsushiro Ar 52.43 39 P **P** **18 36 47.3 -1.2**
comp=Z,5.8nm,0.8s,mb4.6,baz=227,slow=7.3,SNR=27
TLY Talaya 53.42 3 *e*P **P** **18 36 56.1 +0.6**
TLY *e* pP 18 37 04.8 +0.5
TLY pmax pmax
comp=Z,11nm,1.0s,mb4.7
TLY MLR MLR
comp=Z,273nm,14.0s,MS4.5
TLY Talaya 53.42 3 *e*P **P** **18 36 55.9 +0.3**
comp=Z,22nm,1.1s,mb5.0
MDJ Mudanjiang 53.43 26 P **P** **18 36 55.3 -0.5**
MDJ AP pP 18 37 04.3 -0.2
MDJ XP sP 18 37 08.1 +0.2
MDJ PP PP 18 38 59.3 +2.8
MDJ AMB AMB
comp=Z,7.0nm,1.0s,mb4.5
MDJ AMB AMB
comp=Z,161nm,3.9s
MDJ LR LR
comp=N,557nm,15.9s
MDJ LR LR
comp=Z,567nm,15.9s,MS4.7
HIA Hailar 53.80 16 P **P** **18 36 57.6 -0.8**
OPO Ambohidratompo 53.92 248 P **P** **18 37 01.0 +1.2**
comp=Z,7.4nm,1.0s,mb4.6,baz=73,slow=8.9,SNR=5.3
ABKT Ailbek 55.03 320 P **P** **18 37 07.5 -0.1**
comp=Z,159nm,0.9s,mb6.0,SNR=6.3
ABKT Ailbek 55.03 320 P **P** **18 37 07.1 -0.5**
comp=Z,159nm,0.9s,mb6.0,SNR=6.3
TOO Toolangi 55.14 136 *e*P **P** **18 37 05.7 -2.7**
KURK Kurchatov 55.32 344 P **P** **18 37 09.1 -0.3**
comp=Z,248nm,0.9s,mb6.2,SNR=32
KURK Kurchatov 55.32 344 *i* P **P** **18 37 08.8 -0.6**
KURK pmax pmax
comp=Z,55nm,1.1s,mb5.5
KURK Kurchatov 55.32 344 *e*P **P** **18 37 09.3 -0.1**
CAN Canberra 56.65 132 *e*P **P** **18 37 19.6 +0.3**
CNB Canberra Magne 56.92 132 *e*P **P** **18 37 21.6 +0.4**
ZAA0 Zalesovo Array 56.92 350 *e*P **P** **18 37 20.5 -0.2**
ZALV Zalesovo Beam 56.92 350 P **P** **18 37 20.6 -0.1**
comp=Z,67nm,0.8s,mb5.7,baz=174,slow=4.5,SNR=241
KLR Kul'dur 57.96 24 *e*P **P** **18 37 23.8 -4.4**
KLR pmax pmax
comp=Z,56nm,1.8s,mb5.3
NVS Novosibirsk 58.06 349⇑*i*P **P** **18 37 27.7 -1.1**
NVS *e*S **S** **18 45 26.9 -0.8**
NVS pmax pmax
comp=N,28nm,1.1s
NVS pmax pmax
comp=E,22nm,1.1s
NVS pmax pmax
comp=Z,42nm,1.1s,mb5.4
NVS smax
comp=N,12nm,1.6s
NVS smax
comp=E,12nm,1.6s
RDF Al-Radifah 58.39 306 *e*P **P** **18 37 30.7 -0.9**
baz=306
RDF AMb AMB 18 37 40.6
comp=Z,100nm,1.1s,mb5.8,baz=306
UMR Umm Al-Rimmam 58.50 307 *e*P **P** **18 37 32.1 -0.2**
baz=306
UMR AMb AMB 18 37 33.3
comp=Z,75nm,0.8s,mb5.8,baz=306
NAY Al-Naaiem 58.76 306 *e*P **P** **18 37 33.1 -1.1**
baz=306
NAY AMb AMB 18 37 34.9
comp=Z,32nm,0.9s,mb5.3,baz=306
ERM Erimo 58.79 37 *e*P **P** **18 37 34.6 +0.5**
MIB Mutribah 58.90 307 *e*P **P** **18 37 34.5 -0.6**
baz=307
MIB AMb AMB 18 37 44.3
comp=Z,118nm,1.0s,mb5.9,baz=307
RST Umm Al-Ruwaisa 59.06 306 *e*P **P** **18 37 34.9 -1.3**
baz=306
RST AMb AMB 18 37 36.8
comp=Z,46nm,0.8s,mb5.6,baz=306
ASAJ Asahikawa 59.73 35 P **P** **18 37 41.0 +0.5**
comp=Z,6.2nm,0.6s,mb4.8,baz=234,slow=15,SNR=10.0
BVA0 Borovoye Array 59.87 340 *i* P **P** **18 37 40.3 -1.1**
BVA0 pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BRVK Borovoye 59.94 340 P **P** **18 37 41.6 -0.2**
comp=Z,115nm,0.7s,mb6.0,SNR=9.1
BRVK Borovoye 59.94 340 *e*P **P** **18 37 41.0 -0.8**
HNR Honiara 60.50 100 *e*P **P** **18 37 44.0 -2.5**
HNR pmax pmax
comp=Z,49nm,0.8s,mb5.7
HNR Honiara 60.50 100 *e*P **P** **18 37 44.0 -2.4**
comp=Z,49nm,0.8s,mb5.7
BOD Bodaibo 60.58 9 *e*P **P** **18 37 44.7 -1.4**
BOD pmax pmax
comp=Z,23nm,1.0s,mb5.3
AB31 Akbulak array 61.28 332 *i* P **P** **18 37 49.5 -1.6**
AB31 pmax pmax
comp=Z,36nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 61.58 32⇑*e*P **P** **18 37 52.7 -0.4**
YSS pmax pmax
comp=Z,29nm,0.8s,mb5.5
YSS Yuzh-Sakhalins 61.58 32 *e*P **P** **18 37 52.3 -0.8**
comp=Z,32nm,0.9s,mb5.4
KMBO Kilima Mbogo 62.28 270 P **P** **18 38 00.4 +1.8**
comp=Z,8.8nm,0.7s,mb5.0,baz=56,slow=10,SNR=15
KMBO Kilima Mbogo 62.28 270 *e*P **P** **18 38 00.6 +2.1**
KMBO pmax pmax
comp=Z,14nm,0.9s
KMBO Kilima Mbogo 62.28 270 *e*P **P** **18 38 00.6 +2.1**
comp=Z,14nm,0.9s,mb5.1
AKTO Aktyubinsk 63.00 332 *i* P **P** **18 38 00.9 -1.6**
AKTO pmax pmax
comp=Z,4.0nm,1.1s,mb4.5
CASY Casey 64.79 175 P **P** **18 38 14.4 +0.4**
GNI Garni 65.10 316 P **P** **18 38 16.5 -0.1**
comp=Z,7.0nm,0.9s,mb4.7,baz=203,slow=22,SNR=3.1
GNI Garni 65.10 316 P **P** **18 38 14.0 -2.5**
DGRG David-gareji 65.24 318 P **P** **18 38 18.4 +0.9**
MTA Mtatsminda 65.74 318 P **P** **18 38 20.7 0.0**
TBLG Delisi 65.79 318 P **P** **18 38 21.2 +0.2**
SVE Sverdlovsk 66.36 338⇓*e*P **P** **18 38 23.8 -0.6**
SVE *e*S S 18 47 01.1 -11
SVE *e* 18 48 12.9
SVE pmax pmax
comp=Z,55nm,1.0s,mb5.5
ARU Arti 66.88 337 P **P** **18 38 26.7 -1.0**
comp=Z,173nm,0.8s,mb6.1,SNR=10
ARU Arti 66.88 337*c i*P **P** **18 38 26.8 -0.9**
ARU *e* 18 38 54.5
ARU *e* 18 40 49.7
ARU *e*S S 18 47 18.1 -0.4
ARU *e*SS SS 18 51 32.6 -4.6
ARU pmax pmax
comp=Z,54nm,1.7s,mb5.3
ARU Arti 66.88 337 *e*P **P** **18 38 26.8 -0.9**
comp=Z,26nm,0.9s,mb5.3
ONI Oni 67.03 318 P **P** **18 38 28.5 -0.4**
YAK Yakutsk 67.69 15 *e*P **P** **18 38 30.6 -2.1**
YAK *e* pP 18 38 39.3 -2.4
YAK pmax pmax
comp=Z,80nm,1.1s,mb5.7
YAK pmax pmax
comp=E,18nm,1.3s
YAK pmax pmax
comp=N,27nm,1.3s
YAK Yakutsk 67.69 15 *e*P **P** **18 38 31.3 -1.4**
DZM Mont Dzumac 67.93 113 *e*P **P** **18 38 34.4 -0.7**
KIV Kislovodsk 68.12 319 P **P** **18 38 36.7 +0.9**
comp=N,210nm,0.8s,mb6.2,SNR=8.2
KIV Kislovodsk 68.12 319⇑*e*P **P** **18 38 35.8 0.0**
KIV *i* pP 18 38 44.1 -0.7
KIV pmax pmax
comp=Z,52nm,1.2s,mb5.4
KIV Kislovodsk 68.12 319⇓*i*P **P** **18 38 35.7 -0.1**

KIV Kislovodsk 68.12 319 *e*P **P 18 38 35.6 -0.2**
comp=Z,39nm,1.0s,mb5.4
ASF Jabal al Asfar 68.13 306 P **P 18 38 37.0 +0.9**
comp=Z,9.4nm,0.9s,mb4.8,baz=345,slow=2.4,SNR=12
GOF Gofitskoye 68.38 321 *e*P **P 18 38 35.7 -1.7**
GOF pmax pmax
comp=Z,50nm,1.3s,mb5.4
MALT Malatya 68.90 312⇑*i*P **P 18 38 38.6 -2.2**
MALT Malatya 68.90 312 *e*P **P 18 38 38.7 -2.1**
SOC Sochi 69.93 318 *e*P **P 18 38 44.5 -2.6**
SOC *e* pP 18 38 52.6 -3.5
SOC *e*S S 18 47 58.9 +3.5
SOC pmax pmax
comp=Z,28nm,0.6s,mb5.4
SOC Sochi 69.93 318 *i* P **P 18 38 46.9 -0.2**
MAW Mawson 70.34 194 P **P 18 38 50.4 +1.3**
comp=Z,12nm,0.9s,mb4.8,baz=20,slow=6.3,SNR=25
DRV Dumont d'Urvil 70.61 164 S S 18 47 50.0 -12
DRV R 19 02 00.0
LSZ Lusaka 71.55 255 P **P 18 38 58.6 +1.1**
comp=Z,5.3nm,0.8s,mb4.5,baz=88,slow=5.6,SNR=12
LSZ Lusaka 71.55 255 *e*P **P 18 38 58.1 +0.6**
LSZ pmax pmax
comp=Z,28nm,1.5s,mb5.0
LSZ Lusaka 71.55 255 *e*P **P 18 38 58.1 +0.6**
comp=Z,28nm,1.5s,mb5.0
ANN Anapa 71.91 319 *e*P **P 18 38 57.1 -2.0**
ANN pmax pmax
comp=Z,271nm,6.7s
PETK Petropavlovsk- 72.98 32 P **P 18 39 04.8 -0.5**
comp=Z,6.2nm,0.7s,mb4.7,baz=50,slow=1.9,SNR=15
VSR Storozhevoye 73.39 325 *e*P **P 18 39 05.9 -1.8**
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=E,30nm,0.9s
PET Petropavlovsk 73.45 33 *e*P **P 18 39 07.1 -1.0**
PET *e* 18 48 41.0
PET pmax pmax
comp=Z,36nm,0.8s,mb5.3
PET MLR MLR
comp=Z,100nm,19.0s,MS4.1
ANTO Ankara 73.55 312 *e*P **P 18 39 08.0 -0.9**
ANTO pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
ANTO Ankara 73.55 312 *e*P **P 18 39 08.0 -0.9**
comp=Z,5.6nm,0.6s,mb4.7
SIM Simferopol' 74.18 318*ce*P **P 18 39 11.8 -0.7**
SIM S S 18 48 52.0 +7.9
SIM pmax pmax
comp=Z,23nm,0.9s,mb5.1
BOSA Boshof 75.35 241 P **P 18 39 19.6 0.0**
comp=Z,7.7nm,0.9s,mb4.6,baz=126,slow=7.6,SNR=6.3
TIXI Tiksi 75.76 9⇑*e*P **P 18 39 18.9 -2.2**
TIXI pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
TIXI Tiksi 75.76 9 *e*P **P 18 39 20.1 -0.9**
comp=Z,33nm,1.4s,mb5.1
MOS Moscow 76.12 329 *e*P **P 18 39 22.2 -1.3**
MOS pmax pmax
comp=Z,73nm,1.2s,mb5.5
OBN Obninsk 76.42 328⇑*e*P **P 18 39 24.7 -0.4**
OBN *i* pP 18 39 33.0 -1.2
OBN pmax pmax
comp=Z,79nm,1.5s,mb5.4
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.2
OBN Obninsk 76.42 328 *e*P **P 18 39 24.6 -0.5**
SYO Syowa Base 77.88 199⇓*e*P **P 18 39 32.5 -0.6**
SYO Syowa Base 77.88 199⇓*e*pP pP 18 39 40.4 -1.8
TIRR Tirgusor 77.92 316 *e*P **P 18 39 33.0 -0.8**
TIRR pmax pmax
comp=Z,20nm,0.9s,mb5.0
TIRR Tirgusor 77.92 316⇑*i*P **P 18 39 33.5 -0.3**
TIRR Tirgusor 77.92 316 *e*P **P 18 39 33.0 -0.9**
comp=Z,20nm,0.9s,mb5.0
KIS Kishinev 78.31 319 *e*P **P 18 39 37.0 +1.1**
KIS *e* pP 18 39 44.0 -1.0
AKASG Malin Array Be 79.08 322 P **P 18 39 39.4 -0.7**
comp=Z,4.3nm,0.7s,mb4.5,baz=86,slow=4.4,SNR=18
KIEV Kiev 79.09 322 *e*P **P 18 39 38.7 -1.4**
KIEV pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KIEV Kiev 79.09 322 *e*P **P 18 39 38.7 -1.5**
comp=Z,9.2nm,0.9s,mb4.7
VRI Vrincioaia 79.43 317⇑P **P 18 39 42.4 +0.3**
VRI Vrincioaia 79.43 317⇑*i*P **P 18 39 42.3 +0.2**
VRI Vrincioaia 79.43 317 P **P 18 39 42.9 +0.9**
SUR Sutherland 79.51 238 *e*P **P 18 39 44.2 +1.3**
MLR Muntele Rosu 79.87 317⇑*i*P **P 18 39 44.8 +0.3**
MLR Muntele Rosu 79.87 317 P **P 18 39 44.8 +0.3**
ZIMR 79.87 315 P **P 18 39 44.8 +0.2**
BURAR Bucovina Array 80.84 319⇑*i*P **P 18 39 50.5 +0.8**
BURAR Bucovina Array 80.84 319⇑P **P 18 39 50.5 +0.8**
BUR08 Bucovina Ar. S 80.86 319 *e*P **P 18 39 50.1 +0.4**
VTS Vitosha 81.21 313⇑*i*P **P 18 39 51.3 -0.5**
VTS Vitosha 81.21 313⇑P **P 18 39 51.3 -0.4**
TSUM Tsumeb 81.82 251 *e*P **P 18 39 56.8 +1.3**
JOF Joensuu 81.87 335 *e*p **P 18 39 53.2 -1.6**
comp=Z,14nm,0.8s,mb5.0
JOF Joensuu 81.87 335 *e*P **P 18 39 53.2 -1.6**
JOF pmax pmax
comp=Z,15nm,0.8s,mb5.0
LVV L'vov 82.09 321 *e*P **P 18 39 55.6 -0.6**
DRGR 82.34 318⇓*i*P **P 18 39 58.3 +0.7**
DRGR 82.34 318 P **P 18 39 58.0 +0.4**
KRUS Krusevo 82.44 312 *i* P **P 18 39 57.6 -0.7**
LVZ Lovozero 82.47 340⇑*e*P **P 18 39 57.2 -0.6**
APA Apatity 82.77 339⇑*e*P **P 18 39 57.0 -2.4**
APA *i* 18 40 10.6
APA pmax pmax
comp=Z,18nm,1.2s,mb5.0
BZS Buzias 82.88 316⇓*i*P **P 18 40 00.4 0.0**
BZS Buzias 82.88 316 P **P 18 40 00.2 -0.2**
UZH Uzhgorod 82.97 319 *e*P **P 18 40 00.0 -0.8**
UZH *e* pP 18 40 09.0 -1.0
KOLS Kolonicke sedl 83.04 320 *e*P **P 18 40 01.8 +0.6**
SUW Suwalki 83.49 325 *e*P **P 18 40 03.4 0.0**
SUW *e* pP 18 40 11.7 -0.8
SUW Suwalki 83.49 325 *e*P **P 18 40 03.4 0.0**
SUW *e* pP 18 40 11.7 -0.9
SBA Scott Base 83.51 169 *e*P **P 18 40 04.0 +0.9**
SBA pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
SBA Scott Base 83.51 169 *e*P **P 18 40 04.0 +0.9**
comp=Z,7.2nm,0.9s,mb4.8
CRVS Cervenica-Dubn 83.56 319 *e*P **P 18 40 04.1 +0.2**
STHS Stebnicka Huta 83.79 320 *i* P **P 18 40 06.2 +1.2**
STHS pmax pmax
comp=Z,12nm,1.0s,mb5.0
STHS Stebnicka Huta 83.79 320 *i* P **P 18 40 06.2 +1.2**
comp=Z,12nm,1.0s,mb5.0
KAF Kangasniemi 83.83 333 *ep* **P 18 40 04.7 -0.3**
comp=Z,26nm,0.7s,mb5.5,baz=102,slow=4.8
KAF Kangasniemi 83.83 333 *e*P **P 18 40 04.7 -0.3**
KAF pmax pmax
comp=Z,26nm,0.7s,mb5.5
KECS Kecovo 84.12 319 *e*P **P 18 40 06.6 -0.2**
KECS *e* pP 18 40 14.5 -1.4
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
KECS Kecovo 84.12 319 *e*P **P 18 40 06.6 -0.2**
KECS *ep*P pP 18 40 14.5 -1.4
KECS Kecovo 84.12 319 *e*P **P 18 40 06.6 -0.2**
comp=Z,4.1nm,0.9s,mb4.6
KECS *e* pP 18 40 14.5 -1.4
PSZ Piszkesteto 84.42 318 *e*P **P 18 40 08.3 0.0**
PSZ pmax pmax
comp=Z,20nm,1.3s,mb5.1
PSZ Piszkesteto 84.42 318⇑*i*P **P 18 40 08.4 +0.1**
PSZ Piszkesteto 84.42 318 *e*P **P 18 40 08.3 0.0**
comp=Z,20nm,1.3s,mb5.1
OJC Ojcow 84.84 321 *e*P **P 18 40 10.3 -0.1**
PKSM Moragy 85.02 317⇑*i*P **P 18 40 11.0 -0.4**
PKSM Moragy 85.02 317⇑P **P 18 40 11.0 -0.4**
VYHS Vyhne 85.21 319 *e*P **P 18 40 12.1 -0.2**
VYHS pmax pmax
comp=Z,337nm,6.4s
VYHS Vyhne 85.21 319 *e*P **P 18 40 12.1 -0.2**
comp=Z,337nm,6.4s
KOLL Kolacno 85.51 319 *e*P **P 18 40 12.2 -1.5**
TIP Timpagrande 85.56 309 *e*P **P 18 40 14.6 +0.4**

OKC Ostrava-Krasne 85.84 320 *e*P **P 18 40 15.5 +0.1**
OKC *ep*P pP 18 40 23.5 -1.1
ARCES ARCESS Array B 86.16 340 P **P 18 40 17.1 +0.5**
comp=Z,20nm,0.9s,mb5.4,baz=102,slow=5.1,SNR=24
MODS Modra-Piesok 86.22 319 *e*P **P 18 40 17.7 +0.4**
MODS *e* pP 18 40 26.0 -0.5
MODS Modra-Piesok 86.22 319 *e*P **P 18 40 17.7 +0.4**
MODS *ep*P pP 18 40 26.0 -0.5
MODS *e* 18 41 35.0
MORC Moravsky Berou 86.22 320 *e*P **P 18 40 17.0 -0.3**
MORC *e**PP pP 18 40 25.6 -0.8
MORC pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
MORC Moravsky Berou 86.22 320⇓*i*P **P 18 40 17.9 +0.6**
MORC Moravsky Berou 86.22 320 *e*P **P 18 40 17.0 -0.2**
comp=Z,7.8nm,1.0s,mb4.9
MORC *ep*P pP 18 40 25.6 -0.8
CUC Castrocucco 86.36 310 *e*P **P 18 40 17.5 -0.7**
comp=Z,15nm,1.0s,mb5.2
CUC *ep*P pP 18 40 25.7 -1.7
FG4 Candela 86.70 311 P **P 18 40 20.3 +0.5**
FG4 pmax pmax
comp=Z,22nm,0.2s,mb6.0
FG4 Candela 86.70 311 P **P 18 40 20.3 +0.5**
comp=Z,22nm,0.2s,mb6.0
FG5 Orsara di Pugl 86.90 311 P **P 18 40 21.0 +0.2**
CSSN Cassano Irpino 87.04 311 P **P 18 40 21.9 +0.4**
comp=Z,17nm,0.9s,mb5.3
DPC Dobruska-Polom 87.07 320 *e*P **P 18 40 22.3 +0.9**
DPC *ep*P pP 18 40 29.6 -1.0
KSP Ksiaz 87.14 321 *e*P **P 18 40 22.4 +0.6**
UPC Upice 87.29 321 *e*P **P 18 40 23.4 +1.0**
UPC *ep*P pP 18 40 31.1 -0.5
BOJS Bojanci 87.29 316 *i* P **P 18 40 22.7 +0.1**
BOJS *i* pP pP 18 40 30.9 -0.9
PERS Pernice 87.49 317 *i* P **P 18 40 23.8 +0.3**
PERS *i* pP pP 18 40 31.7 -1.1
TREC Trest 87.50 319 *e*P **P 18 40 24.1 +0.6**
LJU Ljubljana 87.85 316 *i* P **P 18 40 25.7 +0.5**
LJU *i* pP pP 18 40 33.8 -0.6
JAVS Javornik 88.16 316 *i* P **P 18 40 26.6 -0.2**
PRU Pruhonice 88.18 320 *e*P **P 18 40 27.0 +0.3**
PRU *ep*P pP 18 40 34.8 -1.1
PVCC Panska Ves 88.20 320 *e*P **P 18 40 27.7 +0.9**
PVCC *ep*P pP 18 40 34.8 -1.2
PTQR Pietraguaria 88.35 312 P **P 18 40 27.8 +0.1**
comp=Z,24nm,0.6s,mb5.6
AQU L'Aquila 88.37 312 P **P 18 40 28.3 +0.5**
AQU pmax pmax
comp=Z,45nm,1.0s,mb5.7
AQU L'Aquila 88.37 312 P **P 18 40 28.3 +0.5**
comp=Z,44nm,1.0s,mb5.7
NRCA Norcia 88.62 313 P **P 18 40 29.3 +0.3**
comp=Z,18nm,1.0s,mb5.4
GEC2 GERESS Array S 88.63 319 *e*P **P 18 40 29.2 +0.3**
GEC2 pmax pmax
comp=Z,34nm,1.5s,mb5.5
GEC2 GERESS Array S 88.63 319 *e*P **P 18 40 29.2 +0.3**
comp=Z,34nm,1.5s,mb5.5
GERES GERESS Array B 88.63 319 P **P 18 40 29.5 +0.6**
comp=Z,5.0nm,0.9s,mb4.8,baz=97,slow=4.6,SNR=33
BRG Berggiesshubel 88.63 321 *e*P **P 18 40 29.0 +0.2**
BRG *e* pP 18 40 37.6 -0.4
BRG pmax pmax
comp=Z,14nm,1.4s,mb5.1
BRG Berggiesshubel 88.63 321 *e*P **P 18 40 29.1 +0.3**
comp=Z,23nm,1.4s,mb5.3
BRG Berggiesshubel 88.63 321 *e*P **P 18 40 29.0 +0.2**
comp=Z,23nm,1.4s,mb5.3
BRG *e* pP 18 40 37.6 -0.4
comp=Z,19nm,1.4s
PTCC Patocco-Chiusa 88.69 316 P **P 18 40 29.1 -0.1**
comp=Z,13nm,0.9s,mb5.2
KHC Kasperske Hory 88.73 319 *e*P **P 18 40 29.3 -0.1**
KHC *ep*P pP 18 40 36.9 -1.7
FSSB Fossombrone 88.92 314 P **P 18 40 30.9 +0.5**
comp=Z,22nm,1.0s,mb5.5
RJOB Jochberg 89.16 318 *e*P **P 18 40 30.6 -0.8**
comp=Z,7.0nm,1.0s,mb5.0
WET Wettzell 89.19 319 *e*P **P 18 40 31.9 +0.4**
WET pmax pmax
comp=Z,26nm,1.5s,mb5.3
WET Wettzell 89.19 319 *e*P **P 18 40 31.9 +0.4**
comp=Z,26nm,1.5s,mb5.3
CLL Collm 89.25 321⇓*i*P **P 18 40 32.2 +0.4**
CLL *i* *PP pP 18 40 40.6 -0.4
CLL pmax pmax
comp=Z,13nm,1.1s,mb5.2
CLL MLR MLR
comp=Z,200nm,14.5s,MS4.7
CLL Collm 89.25 321 *e*P **P 18 40 32.1 +0.3**
comp=Z,12nm,1.1s,mb5.1
CLL Collm 89.25 321⇓*i*P **P 18 40 32.2 +0.4**
comp=Z,13nm,1.1s,mb5.2
CLL *i* pP pP 18 40 40.6 -0.4
CLL *es*P sP 18 40 45.0 +0.7
CLL Collm 89.25 321⇓*i*P **P 18 40 32.2 +0.4**
comp=Z,13nm,1.1s,mb5.2
CLL *i* pP pP 18 40 40.6 -0.4
CLL LR LR
comp=Z,200nm,14.5s,MS4.7
NKC Novy Kostel 89.54 320 *e*P **P 18 40 33.5 +0.4**
TANN Tannenbergstha 89.54 320 *e*P **P 18 40 33.3 +0.2**
comp=Z,55nm,2.4s,mb5.5
SFI Santa Sofia 89.60 314 P **P 18 40 34.5 +0.9**
SFI pmax pmax
comp=Z,53nm,1.2s,mb5.8
SFI Santa Sofia 89.60 314 P **P 18 40 34.5 +0.9**
comp=Z,53nm,1.2s,mb5.8
ROTZ Rotzenmuhle 89.67 320 *e*P **P 18 40 34.6 +0.9**
comp=Z,61nm,2.2s,mb5.5
MANZ Manzenberg 89.74 320 *e*P **P 18 40 34.9 +0.8**
comp=Z,18nm,1.1s,mb5.3
CTI Castel Tesino 89.85 316 P **P 18 40 35.3 +0.6**
CTI pmax pmax
comp=Z,33nm,1.0s,mb5.6
CTI Castel Tesino 89.85 316 P **P 18 40 35.3 +0.6**
comp=Z,33nm,1.0s,mb5.6
MOX Moxa 90.09 320 *e*P **P 18 40 36.4 +0.7**
comp=Z,21nm,1.5s,mb5.2
MOX *e* pP 18 40 44.3 -0.6
MOX Moxa 90.09 320 *e*P **P 18 40 36.4 +0.7**
MOX *e* pP 18 40 44.3 -0.6
MOX pmax pmax
comp=Z,21nm,1.5s,mb5.2
MOX Moxa 90.09 320 *e*P **P 18 40 35.9 +0.2**
comp=Z,12nm,1.2s,mb5.1
FUR Furstenfeldbru 90.20 318 *e*P **P 18 40 37.0 +0.7**
FUR pmax pmax
comp=Z,12nm,0.9s,mb5.2
FUR Furstenfeldbru 90.20 318 *e*P **P 18 40 37.0 +0.7**
comp=Z,12nm,0.9s,mb5.2
GRA1 Grafenberg Arr 90.30 320 *e*P **P 18 40 37.5 +0.8**
comp=Z,24nm,1.1s,mb5.4
GRA1 *ep*P pP 18 40 45.3 -0.6
GRF Grafenberg Arr 90.30 320 *e*P **P 18 40 37.5 +0.8**
GRF *e**PP pP 18 40 45.3 -0.6
GRF pmax pmax
comp=Z,24nm,1.1s,mb5.4
GRF Grafenberg Arr 90.30 320 *e*P **P 18 40 37.5 +0.8**
GRF *e**PP pP 18 40 45.3 -0.6
GRF pmax pmax
comp=Z,24nm,1.1s,mb5.4
GRF Grafenberg Arr 90.30 320 *e*P **P 18 40 37.5 +0.8**
comp=Z,24nm,1.1s,mb5.4
GRF *ep*P pP 18 40 45.3 -0.6
GSCL Gusciola 90.53 314 P **P 18 40 38.8 +0.9**
comp=Z,14nm,0.8s,mb5.3
NB2 NORSAR Subarra 90.78 331 P **P 18 40 38.4 -0.3**
comp=Z,5.3nm,1.0s,mb4.8,baz=91,slow=5.1
CLZ Clausthal 90.92 322 *e*P **P 18 40 39.8 +0.3**
CLZ pmax pmax
comp=Z,16nm,1.2s,mb5.2
CLZ Clausthal 90.92 322 *e*P **P 18 40 39.8 +0.3**
comp=Z,16nm,1.2s,mb5.2
NRDL Niedersach Rie 91.10 322 *e*P **P 18 40 41.0 +0.6**
comp=Z,22nm,1.4s,mb5.3
KEST Kesra 91.23 306 P **P 18 40 42.9 +1.5**
comp=Z,8.4nm,0.9s,mb5.1,baz=28,slow=0.7,SNR=26
STU Stuttgart 91.60 319 *e*P **P 18 40 42.9 +0.1**
comp=Z,21nm,1.4s,mb5.3
PGF Pioggiola 91.64 312⇑*i*P **P 18 40 43.1 0.0**
comp=Z,41nm,1.4s,mb5.3
PGF Pioggiola 91.64 312⇑*i*P **P 18 40 43.1 0.0**
PGF pmax pmax
comp=Z,21nm,1.4s,mb5.3
PGF Pioggiola 91.64 312⇑*i*P **P 18 40 43.1 0.0**
comp=Z,21nm,1.4s,mb5.3
SNAA Sanae 92.16 198⇑*e*P **P 18 40 46.3 +1.4**
SNAA Sanae 92.16 198 *e*P **P 18 40 45.8 +0.9**
BFO Black Forest 92.17 318 *e*P **P 18 40 44.8 -0.6**
BFO pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
BFO Black Forest 92.17 318 *e*P **P 18 40 44.8 -0.6**
comp=Z,9.0nm,1.1s,mb5.0
SBF Sospel 92.79 314 *e*P **P 18 40 48.2 -0.2**
comp=Z,23nm,0.9s,mb5.3
SBF Sospel 92.79 314 *e*P **P 18 40 48.2 -0.2**
SBF pmax pmax
comp=Z,11nm,0.9s,mb5.3
SBF Sospel 92.79 314 *e*P **P 18 40 48.2 -0.2**
comp=Z,11nm,0.9s,mb5.3
CDF Champ du Feu 92.88 318⇑*i*P **P 18 40 48.3 -0.4**
comp=Z,15nm,1.3s,mb5.0
CDF Champ du Feu 92.88 318⇑*i*P **P 18 40 48.3 -0.4**
CDF pmax pmax
comp=Z,8.0nm,1.3s,mb5.0
CDF Champ du Feu 92.88 318⇑*i*P **P 18 40 48.3 -0.4**
comp=Z,7.5nm,1.3s,mb5.0
ECH Echery 92.95 318 *e*P **P 18 40 49.4 +0.4**
ECH *e* pP 18 40 56.8 -1.5
HINF Hinteralfeld 93.17 318 *e*P **P 18 40 49.2 -0.8**
MBDF Montbardon 93.26 315 *e*P **P 18 40 51.3 +0.8**
LPG La Plagne 93.27 315 *e*P **P 18 40 50.6 +0.1**
comp=Z,11nm,1.0s,mb4.9
LPG La Plagne 93.27 315 *e*P **P 18 40 50.6 +0.1**
LPG pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
LPG La Plagne 93.27 315 *e*P **P 18 40 50.6 +0.1**
comp=Z,5.6nm,1.0s,mb5.0
LPL La Plagne 93.28 315 *e*P **P 18 40 50.6 0.0**
comp=Z,8.3nm,0.7s,mb5.0
LPL La Plagne 93.28 315 *e*P **P 18 40 50.6 0.0**
LPL pmax pmax
comp=Z,4.0nm,0.7s,mb5.0
LPL La Plagne 93.28 315 *e*P **P 18 40 50.6 0.0**
comp=Z,4.2nm,0.7s,mb5.0
FRF La Foret Royal 93.36 313⇑*i*P **P 18 40 50.9 -0.1**
comp=Z,18nm,1.0s,mb5.2
FRF La Foret Royal 93.36 313⇑*i*P **P 18 40 50.9 -0.1**
FRF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
FRF La Foret Royal 93.36 313⇑*i*P **P 18 40 50.9 -0.1**
comp=Z,9.1nm,1.0s,mb5.2
LMR La Mourre 93.47 313 *e*P **P 18 40 51.3 -0.2**
comp=Z,22nm,1.2s,mb5.2
LMR La Mourre 93.47 313 *e*P **P 18 40 51.3 -0.2**
LMR pmax pmax
comp=Z,11nm,1.2s,mb5.2
LMR La Mourre 93.47 313 *e*P **P 18 40 51.3 -0.2**
comp=Z,11nm,1.2s,mb5.2
HAU Haudompre 93.50 318 *e*P **P 18 40 51.1 -0.5**
comp=Z,30nm,1.2s,mb5.3
HAU Haudompre 93.50 318 *e*P **P 18 40 51.1 -0.5**
HAU pmax pmax
comp=Z,15nm,1.2s,mb5.3
HAU Haudompre 93.50 318 *e*P **P 18 40 51.1 -0.5**
comp=Z,15nm,1.2s,mb5.3
CABF La Chapelle 93.71 316 *e*P **P 18 40 52.6 +0.1**
comp=Z,50nm,1.5s,mb5.4
CABF La Chapelle 93.71 316 *e*P **P 18 40 52.6 +0.1**
CABF pmax pmax
comp=Z,25nm,1.5s,mb5.4
CABF La Chapelle 93.71 316 *e*P **P 18 40 52.6 +0.1**
comp=Z,25nm,1.5s,mb5.4
ORIF Oris-en-Rattie 93.89 315⇑*i*P **P 18 40 53.5 +0.1**
comp=Z,11nm,1.2s,mb4.9
ORIF *e*MLR MLR
comp=Z,189nm,18.8s,MS4.3
ORIF Oris-en-Rattie 93.89 315⇑*i*P **P 18 40 53.5 +0.1**
ORIF pmax pmax
comp=Z,6.0nm,1.2s,mb4.9
ORIF Oris-en-Rattie 93.89 315⇑*i*P **P 18 40 53.5 +0.1**
comp=Z,5.7nm,1.2s,mb4.9
SMRF Simiane la Rot 94.13 314 *e*P **P 18 40 54.8 +0.2**
comp=Z,13nm,1.0s,mb5.0
SMRF Simiane la Rot 94.13 314 *e*P **P 18 40 54.8 +0.2**
comp=Z,13nm,1.0s,mb5.3
MEZF Maizieres J'vi 94.35 318 *e*P **P 18 40 55.2 -0.3**
GIVF Givet 94.44 320 *e*P **P 18 40 55.6 -0.2**
BAIF Baives 94.84 320 *e*P **P 18 40 57.6 0.0**
comp=Z,27nm,1.3s,mb5.2
BAIF Baives 94.84 320 *e*P **P 18 40 57.6 0.0**
BAIF pmax pmax
comp=Z,14nm,1.3s,mb5.2
BAIF Baives 94.84 320 *e*P **P 18 40 57.6 0.0**
comp=Z,14nm,1.3s,mb5.2
LOR Lormes 95.21 317⇑*i*P **P 18 40 59.0 -0.4**
comp=Z,11nm,1.0s,mb4.9
LOR *e*MLR MLR
comp=Z,111nm,17.0s,MS4.1
LOR Lormes 95.21 317⇑*i*P **P 18 40 59.0 -0.4**
LOR pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
LOR MLR MLR
comp=Z,110nm,17.0s,MS4.4
LOR Lormes 95.21 317⇑*i*P **P 18 40 59.0 -0.4**
comp=Z,5.6nm,1.0s,mb5.0
LOR LR LR
comp=Z,110nm,17.0s,MS4.4
SMF Signal de Mont 95.25 316 *e*P **P 18 40 59.1 -0.5**
comp=Z,12nm,1.1s,mb5.0
SMF Signal de Mont 95.25 316 *e*P **P 18 40 59.1 -0.5**
SMF pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
SMF Signal de Mont 95.25 316 *e*P **P 18 40 59.1 -0.5**
comp=Z,6.2nm,1.1s,mb5.0
LASF Ste Croix 95.37 314 *e*P **P 18 41 00.1 -0.1**
SSF Saint Saulge 95.46 317 *e*P **P 18 41 00.3 -0.3**
AVF Avril sur Loir 95.58 317 *e*P **P 18 41 00.7 -0.4**
comp=Z,14nm,1.4s,mb4.9
AVF Avril sur Loir 95.58 317 *e*P **P 18 41 00.7 -0.4**
AVF pmax pmax
comp=Z,7.0nm,1.4s,mb4.9
AVF Avril sur Loir 95.58 317 *e*P **P 18 41 00.7 -0.4**
comp=Z,6.8nm,1.4s,mb4.9
BGF Bois d'Agland 95.94 316 *e*P **P 18 41 02.5 -0.3**
TCF Toulx Ste Croi 96.40 316⇑*i*P **P 18 41 04.7 -0.2**
MTLF Montolieu 96.59 313 *e*P **P 18 41 05.6 -0.2**
comp=Z,7.3nm,1.0s,mb4.8
MTLF Montolieu 96.59 313 *e*P **P 18 41 05.6 -0.2**
MTLF pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
MTLF Montolieu 96.59 313 *e*P **P 18 41 05.6 -0.2**
comp=Z,3.7nm,1.0s,mb4.8
CAF Calviac 96.80 315 *e*P **P 18 41 05.8 0.0**
RJF Les Rejaudoux 96.96 315 *e*P **P 18 41 07.3 -0.1**
comp=Z,24nm,1.5s,mb5.1
RJF *e*MLR MLR
comp=Z,126nm,20.0s,MS4.1
RJF Les Rejaudoux 96.96 315 *e*P **P 18 41 07.3 -0.1**
RJF pmax pmax
comp=Z,12nm,1.5s,mb5.1
RJF MLR MLR
comp=Z,130nm,20.0s,MS4.4
RJF Les Rejaudoux 96.96 315 *e*P **P 18 41 07.3 -0.1**
comp=Z,12nm,1.5s,mb5.1
RJF LR LR
comp=Z,130nm,20.0s,MS4.4
LDF La Druitiere 97.78 319⇑*i*P **P 18 41 11.3 +0.3**
comp=Z,16nm,1.2s,mb5.1
LDF La Druitiere 97.78 319⇑*i*P **P 18 41 11.3 +0.3**
LDF pmax pmax
comp=Z,8.0nm,1.2s,mb5.1
LDF La Druitiere 97.78 319⇑*i*P **P 18 41 11.3 +0.3**
comp=Z,8.1nm,1.2s,mb5.1
FLN La Foliniere 97.99 319 *e*P **P 18 41 12.4 +0.4**
FLN *e*MLR MLR
comp=Z,106nm,17.0s,MS4.1
FLN La Foliniere 97.99 319 *e*P **P 18 41 12.4 +0.4**
FLN LR LR
comp=Z,110nm,17.0s,MS4.4
TOA0 Torodi Ar. Sit 98.07 283 P **P 18 41 16.8 +3.7**
TORD Torodi Ar. Bea 98.07 283 P **P 18 41 13.3 +0.2**
comp=Z,1.0nm,0.9s,mb4.4,baz=91,slow=5.6,SNR=25
TORD Torodi Ar. Bea 98.07 283 P **P 18 41 13.3 +0.2**
GRR Gorron 98.28 319 *e*P **P 18 41 13.7 +0.4**
QUIF Quistinic 99.88 318⇑*i*P Pdif 18 41 20.4 +0.1
comp=Z,100nm,1.9s
QUIF Quistinic 99.88 318⇑*i*P Pdif 18 41 20.4 +0.1
QUIF pmax pmax

comp=Z,50nm,1.9s,mb5.6
QUIF **Quistinic** **99.88** **318** ⇑ *i*P Pdif 18 41 20.4 +0.1
comp=Z,50nm,1.9s
SLKM **Skilak Lake** **101.45** **28** P Pdif 18 41 24.5 -2.8
PPT **Papeete** **109.28** **109** *e*LR LR 19 17 49.1
comp=Z,129nm,24.0s
LNOR **Lincton Mounta** **125.04** **32** *e*PKIKP PKPdf 18 46 36.2 0.0
WVOR **Wild Horse Val** **127.08** **35** *e*PKIKP PKPdf 18 46 40.8 +0.6
DLMT **Dillon** **128.25** **29** *e*PKPdf PKPdf 18 46 43.0 +0.7
NVAR **Mina Array Bea** **129.75** **39** PKP PKPdf 18 46 47.1 +1.7
comp=Z,1.9nm,0.8s,baz=282,slow=1.9,SNR=13
LAO **LASA Array** **129.99** **23** *e*PKPdf PKPdf 18 46 46.8 +1.2
ULM **Lac du Bonnet** **130.01** **13** PKP PKPdf 18 46 45.6 +0.1
comp=Z,3.6nm,0.7s,baz=308,slow=6.6,SNR=3.6
PDAR **Pinedale Array** **131.65** **29** PKP PKPdf 18 46 48.4 -0.5
comp=Z,1.3nm,1.0s,baz=26,slow=3.8,SNR=5.2
WMOK **Wichita Mounta** **143.07** **26** *e*PKIKP PKPdf 18 47 05.4 -4.8
BDFB **Brasilia** **143.54** **240** PKP PKPdf 18 47 10.5 -1.0
comp=Z,9.7nm,1.0s,baz=65,slow=0.6,SNR=6.1
CPUP **Villa Florida** **144.19** **217** PKP PKPdf 18 47 10.9 -1.5
comp=Z,33nm,0.8s,baz=108,slow=2.9,SNR=81
CPUP **Villa Florida** **144.19** **217** *e*PKPdf PKPdf 18 47 10.1 -2.3
CFAA **Coronel Fontan** **144.78** **198** PKP PKPdf 18 47 12.6 -0.7
comp=Z,5.8nm,0.7s,baz=169,slow=2.7,SNR=29
CFAA **Coronel Fontan** **144.78** **198** PKP PKPdf 18 47 12.6 -0.7
TXAR **Lajitas Array** **144.84** **37** PKP PKPdf 18 47 12.8 -0.7
comp=Z,19nm,0.8s,baz=277,slow=1.3,SNR=205
WVT **Waverly** **145.19** **11** *e*PKIKP PKPdf 18 47 12.0 -1.8
MIAR **Mount Ida** **145.22** **19** *e*PKIKP PKPdf 18 47 12.9 -1.0
UALR **University of** **145.40** **17** *e*PKPdf PKPdf 18 47 13.1 -1.1
JCT **Junction City** **146.11** **31** *e*PKP2 PKPab 18 47 15.6 -1.5
TKL **Tuckaleechee C** **146.20** **5** *e*PKIKP PKPdf 18 47 13.1 -2.5
OXF **Oxford** **146.43** **13** *e*PKP2 PKPbc 18 47 15.4 -1.9
LCO **Las Campanas** **147.94** **196** ⇓ *e*PKPdf PKPdf 18 47 19.7 +1.0
HKT **Hockley** **148.44** **26** *e*PKIKP PKPdf 18 47 18.3 -1.2
LVC **Limon Verde** **153.23** **204** *e*PKPdf PKPdf 18 47 26.1 -1.0
SIV **San Ignacio** **153.92** **227** PKP PKPdf 18 47 28.4 +0.3
comp=Z,1.6nm,0.8s,baz=230,slow=5.1,SNR=5.6
SIV PKPbc PKPbc 18 47 35.9 -0.2
comp=Z,5.2nm,0.8s,baz=119,slow=5.2,SNR=21
LPAZ **La Paz** **158.27** **214** PKP PKPdf 18 47 34.3 +0.4
comp=Z,1.1nm,0.3s,baz=242,slow=0.8,SNR=7.0
LPAZ PKPab PKPab 18 48 08.6 +0.7
comp=Z,2.1nm,0.7s,baz=76,slow=2.9,SNR=4.5

*ISCJB **15** 18:29:04.1±2.2, 180.5°±005.4°9960.5±005, h18km±15km, mb5.0/49, MS4.4/9, Error ellipse: s-maj=9.9km s-min=7.1km az=39.5*
*BJI **15** 18:29:05.4, 205.5°×9967.6E, h40km, mB5.1, mb5.1, Ms4.7, Msz4.5*
*NEIC **15** 18:29:07.6±3.1, 180.5°×9954.6E, h31km±21km, mb5.0/28, Error ellipse: s-maj=8.4km s-min=5.7km az=48.0*
*MOS **15** 18:29:07.3±0.8, 177.5°×9964.6E, h42km, mb5.2/22, Error ellipse: s-maj=12.1km s-min=7.9km az=110.2*
*IDC **15** 18:29:09.2±2.8, 182.5°×9959.6E, h41km±24km, mb4.6/19, mb1 4.7/19, mb1mx4.6/23, mbtmp4.6/19, MS4.3/6, Ms1 4.3/6, ms1mx3.9/26, Error ellipse: s-maj=17.4km s-min=11.6km az=50.0*
ISC 15 18:29:08.2±2.2, 182.5°±005.4°×9957.6E±005.4, h34km±15km, h34km±3.2km:pP-P,n127,σ0.6=89/120, mb5.0/49, MS4.4/9, 2C-2D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
XMIS	**Christmas Isla**	**10.52**	**145**	*e*Pn	**Pn**		**18 31 30.7**	**-5.9**
XMIS				*e*Sn	**Sn**		**18 33 19.1**	**-14**
KSM	**Kuching**	**11.23**	**73**	*e*Pn	**Pn**		**18 31 45.7**	**-0.6**
KKM	**Kota Kinabalu**	**18.37**	**65**	*e*P	**Pn**		**18 33 21.8**	**+1.4**
CMAR	**Chiang Mai Arr**	**20.16**	**358**	P	**P**		**18 33 38.2**	**-1.5**
	17nm,0.5s,baz=187,slow=10,SNR=19							
KAPI	**Kappang**	**20.39**	**99**	P	**P**		**18 33 42.2**	**-0.2**
	49nm,0.9s,baz=278,slow=11,SNR=5.3							
PALK	**Palikekoe**	**20.88**	**296**	P	**P**		**18 33 47.2**	**-0.4**
	20nm,1.0s							
BATI	**Baumata**	**25.35**	**110**	LR	LR		18 45 40.6	
	comp=Z,1μm,21.2s,MS4.3,baz=87,slow=39							
KMI	**Kunming**	**26.96**	**6**	P	**P**		**18 34 47.3**	**+0.6**
KMI				AP	pP		18 34 59.8	+3.4
KMI				AMB	AMB			
	comp=Z,14nm,1.2s,mb4.4							
FITZ	**Fitzroy Crossi**	**30.27**	**124**	*e*P	**P**		**18 35 16.6**	**+0.3**
	comp=Z,12nm,0.7s,mb4.8							
FITZ	**Fitzroy Crossi**	**30.27**	**124**	P	**P**		**18 35 15.5**	**-0.9**
	comp=Z,8.0nm,0.9s,mb4.5,baz=350,slow=5.1,SNR=3.1							
LSA	**Lhasa**	**32.36**	**346**	*e*P	**P**		**18 35 35.7**	**+1.2**
YHNB	**Yeheng**	**33.78**	**37**	*e*P	**P**		**18 35 48.0**	**+1.0**
	comp=Z,76nm,1.3s,mb5.5							
LZH	**Lanzhou**	**37.92**	**6**	P	**P**		**18 36 22.5**	**+0.1**
LZH				AP	pP		18 36 32.4	+0.2
LZH				XP	sP		18 36 36.5	+0.2
LZH				PP	PP		18 37 53.6	+4.1
LZH				*e*S	**S**		**18 42 13.5**	**+1.6**
LZH				XS	sS		18 42 29.3	+1.1
LZH				*e*SS	SS		18 44 52.8	-6.7
LZH				AMB	AMB			
	comp=Z,25nm,1.2s,mb4.8							
LZH				AMB	AMB			
	comp=Z,113nm,5.4s							
LZH				LR	LR			
	comp=N,612nm,15.0s							
LZH				LR	LR			
	comp=Z,1μm,19.2s,MS4.7							
WRA	**Warramunga Arr**	**38.46**	**120**	P	**P**		**18 36 26.7**	**-0.5**
	comp=Z,30nm,0.8s,mb5.1,baz=296,slow=9.7,SNR=13							
WRA				S	**S**		**18 42 19.6**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=295,slow=16,SNR=4.0							
WRAB	**Tennant Creek**	**38.46**	**120**	*e*P	**P**		**18 36 26.6**	**-0.6**
WRAB				pmax	pmax			
	comp=Z,51nm,0.9s,mb5.2							
WRAB	**Tennant Creek**	**38.46**	**120**	*e*P	**P**		**18 36 26.6**	**-0.6**
	comp=Z,51nm,0.9s,mb5.3							
WB2	**Warramunga Ar**	**38.47**	**120**	*e*P	**P**		**18 36 26.5**	**-0.7**
WB2				*e*S	**S**		**18 42 07.7**	**-13**
FORT	**Forrest**	**39.46**	**140**	*e*P	**P**		**18 36 37.3**	**+1.9**
	comp=Z,27nm,0.9s,mb5.0							
ASAR	**Alice Springs**	**39.71**	**126**	P	**P**		**18 36 37.5**	**0.0**
	comp=Z,8.2nm,0.6s,mb4.7,baz=301,slow=7.7,SNR=6.0							
ASAR				S	**S**		**18 42 39.0**	**-0.2**
	comp=Z,3.3nm,1.0s,baz=293,slow=15,SNR=7.0							
JOW	**Kunigami**	**39.72**	**42**	LR	LR		18 51 53.2	
	comp=Z,230nm,20.9s,MS4.0,baz=126,slow=34							
GTA	**Gaotai**	**41.03**	**0**	⇑ P	**P**		**18 36 49.0**	**+0.8**
GTA				XS	sS		18 43 19.8	+5.0
GTA				AMB	AMB			
	comp=Z,28nm,1.0s,mb4.8							
GTA				AMB	AMB			
	comp=Z,144nm,3.6s							
GTA				LR	LR			
	comp=N,681nm,16.2s,MS4.7							
GTA				LR	LR			
	comp=E,369nm,16.8s,MS4.7							
GTA				LR	LR			
	comp=Z,728nm,16.2s,MS4.6							
BJT	**Baijiatuau**	**44.33**	**18**	*e*P	**P**		**18 37 13.6**	**-1.4**
BJT				pmax	pmax			
	comp=Z,12nm,0.8s							
BJT	**Baijiatuau**	**44.33**	**18**	*e*P	**P**		**18 37 13.6**	**-1.4**
	comp=Z,12nm,0.8s,mb4.7							
KSRS	**Korea Array**	**47.09**	**31**	P	**P**		**18 37 36.8**	**-0.1**
	comp=Z,11nm,0.8s,mb4.9,baz=226,slow=7.9,SNR=9.1							
CTA	**Charters Tower**	**49.06**	**115**	*e*P	**P**		**18 37 52.5**	**0.0**
	comp=Z,17nm,0.9s,mb5.1							
CTA	**Charters Tower**	**49.06**	**115**	*e*P	**P**		**18 37 52.5**	**0.0**
CTA				pmax	pmax			
	comp=Z,17nm,0.9s							
CTAO	**Charters Tower**	**49.06**	**115**	*e*P	**P**		**18 37 52.1**	**-0.4**
CTAO				pmax	pmax			
	comp=Z,23nm,0.9s,mb5.2							
CTAO	**Charters Tower**	**49.06**	**115**	*e*P	**P**		**18 37 52.1**	**-0.3**
	comp=Z,23nm,0.9s,mb5.2							
TKM2	**Tokmak 2**	**49.50**	**337**	*e*P	**P**		**18 37 56.0**	**+0.6**
STKA	**Stephens Creek**	**49.59**	**132**	*e*P	**P**		**18 37 57.2**	**+0.9**
	comp=Z,25nm,0.8s,mb5.3							
STKA	**Stephens Creek**	**49.59**	**132**	P	**P**		**18 37 57.2**	**+0.9**
	comp=Z,28nm,0.7s,mb5.4,baz=307,slow=7.2,SNR=8.0							
STKA				LR	LR		18 58 09.2	
	comp=Z,367nm,18.4s,MS4.4,baz=115,slow=35							
STKA	**Stephens Creek**	**49.59**	**132**	*e*P	**P**		**18 37 57.0**	**+0.7**
	comp=Z,31nm,0.8s,mb5.4							
SONM	**Songino Array**	**49.81**	**6**	P	**P**		**18 37 58.9**	**+1.3**
	comp=Z,34nm,0.8s,mb5.4,baz=186,slow=8.8,SNR=19							
SONM				PcP	PcP		18 39 18.4	+0.4
	comp=Z,7.8nm,0.8s,baz=191,slow=4.3,SNR=3.5							
ULN	**Ulaanbaatar**	**49.91**	**7**	*e*P	**P**		**18 37 59.7**	**+1.3**
ULN				pmax	pmax			
	comp=Z,32nm,0.8s,mb5.4							
ULN	**Ulaanbaatar**	**49.91**	**7**	*e*P	**P**		**18 37 59.7**	**+1.2**
	comp=Z,32nm,0.8s,mb5.4							
MKAR	**Makanchi Array**	**50.74**	**345**	P	**P**		**18 38 05.4**	**+0.7**
	comp=Z,30nm,0.7s,mb5.3,baz=150,slow=8.1,SNR=11							
JHJ	**Hachijo jima 2**	**51.44**	**44**	LR	LR		18 57 16.3	
	comp=Z,256nm,22.0s,MS4.2,baz=85,slow=33							
MAJO	**Matsushiro**	**52.41**	**39**	*e*P	**P**		**18 38 16.4**	**-1.0**
MAJO				pmax	pmax			
	comp=Z,18nm,0.9s,mb5.0							
MAJO	**Matsushiro**	**52.41**	**39**	*e*P	**P**		**18 38 16.4**	**-1.0**
	comp=Z,18nm,0.9s,mb5.0							
MAT	**Matsushiro**	**52.41**	**39**	P	**P**		**18 38 17.1**	**-0.3**
MJAR	**Matsushiro Arr**	**52.41**	**39**	P	**P**		**18 38 16.9**	**-0.5**
	comp=Z,12nm,0.9s,mb4.8,baz=211,slow=8.3,SNR=19							
MJAR				LR	LR		19 00 32.3	
	comp=Z,192nm,20.0s,MS4.1,baz=225,slow=36							
TLY	**Talaya**	**53.41**	**3**	*e*P	**P**		**18 38 26.2**	**+1.7**
TLY				pmax	pmax			
	comp=Z,21nm,0.9s,mb5.1							
TLY	**Talaya**	**53.41**	**3**	*e*P	**P**		**18 38 25.8**	**+1.3**
	comp=Z,15nm,0.8s,mb5.0							
HIA	**Hailar**	**53.79**	**16**	*e*P	**P**		**18 38 27.6**	**+0.3**
OPO	**Ambohidratompo**	**53.93**	**248**	P	**P**		**18 38 28.9**	**0.0**
	comp=Z,2.9nm,0.8s,mb4.3,baz=106,slow=20,SNR=2.8							
KURK	**Kurchatov**	**55.31**	**344**	*e*P	**P**		**18 38 38.4**	**0.0**
KURK				pmax	pmax			
	comp=Z,50nm,0.9s,mb5.5							
KURK	**Kurchatov**	**55.31**	**344**	*e*P	**P**		**18 38 38.4**	**0.0**
	comp=Z,50nm,0.9s,mb5.5							
CAN	**Canberra**	**56.65**	**132**	*e*P	**P**		**18 38 49.4**	**+1.1**
ZALV	**Zalesovo Beam**	**56.91**	**350**	P	**P**		**18 38 50.2**	**+0.5**
	comp=Z,74nm,0.8s,mb5.8,baz=180,slow=5.4,SNR=13							
ZALV	**Zalesovo Beam**	**56.91**	**350**	P	**P**		**18 38 50.2**	**+0.5**
KLR	**Kul'dur**	**57.95**	**24**	*e*P	**P**		**18 38 53.8**	**-3.3**
KLR				pmax	pmax			
	comp=E,40nm,1.6s							
KLR				pmax	pmax			
	comp=Z,80nm,1.6s,mb5.5							
NVS	**Novosibirsk**	**58.05**	**349**	*e*P	**P**		**18 38 57.3**	**-0.5**
NVS				*e*S	**S**		**18 47 15.4**	**+19**
NVS				pmax	pmax			
	comp=N,22nm,1.0s							
NVS				pmax	pmax			
	comp=E,13nm,1.0s							
NVS				pmax	pmax			
	comp=Z,32nm,1.0s,mb5.3							
NVS				smax				
	comp=N,26nm,2.5s							
NVS				smax				
	comp=E,15nm,2.1s							
ASAJ	**Asahikawa**	**59.71**	**35**	P	**P**		**18 39 10.3**	**+0.9**
	comp=E,15nm,0.7s,mb5.1,baz=230,slow=8.4,SNR=12							
BRVK	**Borovoye**	**59.93**	**340**	*e*P	**P**		**18 39 09.8**	**-1.0**
BRVK				*e*	pP		18 39 17.9	-3.2
BRVK				pmax	pmax			
	comp=Z,11nm,0.7s,mb5.0							
BRVK	**Borovoye**	**59.93**	**340**	*e*P	**P**		**18 39 09.8**	**-1.0**
	comp=Z,11nm,0.7s,mb5.0							
BRVK				*e*	pP		18 39 17.9	-3.2
HNR	**Honiara**	**60.49**	**100**	*e*P	**P**		**18 39 14.4**	**-1.0**
HNR				pmax	pmax			
	comp=Z,66nm,0.9s,mb5.7							
HNR	**Honiara**	**60.49**	**100**	*e*P	**P**		**18 39 14.4**	**-1.1**
	comp=Z,66nm,0.9s,mb5.7							
BOD	**Bodaibo**	**60.57**	**9**	*e*P	**P**		**18 39 15.2**	**+0.1**
BOD				pmax	pmax			
	comp=Z,33nm,0.9s,mb5.5							
YSS	**Yuzh-Sakhalins**	**61.56**	**32**	⇑ *i*P	**P**		**18 39 22.5**	**+0.5**
YSS				pmax	pmax			
	comp=E,30nm,1.0s							
YSS				pmax	pmax			
	comp=Z,90nm,1.0s,mb5.8							
YSS	**Yuzh-Sakhalins**	**61.56**	**32**	*e*P	**P**		**18 39 22.8**	**+0.7**
KMBO	**Kilima Mbogo**	**62.30**	**270**	LR	LR		19 02 06.2	
	comp=Z,497nm,21.1s,MS4.7,baz=109,slow=32							
KMBO	**Kilima Mbogo**	**62.30**	**270**	P	**P**		**18 39 28.5**	**+0.9**
KMBO				pmax	pmax			
	comp=Z,7.0nm,1.1s							
KMBO	**Kilima Mbogo**	**62.30**	**270**	P	**P**		**18 39 28.4**	**+0.8**
	comp=Z,6.6nm,1.1s,mb4.7							
ARU	**Arti**	**66.87**	**337**	*e*P	**P**		**18 39 53.9**	**-2.8**
ARU				*e*	pP		18 40 04.4	-2.7
ARU	**Arti**	**66.87**	**337**	*e*P	**P**		**18 39 53.9**	**-2.7**
ARU				*e*	pP		18 40 04.4	-2.7
YAK	**Yakutsk**	**67.68**	**15**	*e*P	**P**		**18 40 01.2**	**-0.5**
YAK				*e*	pP		18 40 10.2	-1.9
YAK				pmax	pmax			
	comp=E,13nm,1.3s							
YAK				pmax	pmax			
	comp=N,15nm,0.9s							
YAK				pmax	pmax			
	comp=Z,49nm,0.7s,mb5.7							
YAK				MLR	MLR			
	comp=Z,381nm,17.0s,MS4.7							
YAK				MLR	MLR			
	comp=N,244nm,17.0s,MS4.5							
YAK				MLR	MLR			
	comp=E,146nm,18.0s,MS4.5							
YAK	**Yakutsk**	**67.68**	**15**	*e*P	**P**		**18 40 00.7**	**-0.9**
	comp=E,108nm,0.9s,mb5.9							
KIV	**Kislovodsk**	**68.12**	**319**	⇓ *e*P	**P**		**18 40 04.9**	**0.0**
KIV				pmax	pmax			
	comp=Z,15nm,0.9s,mb5.0							
KIV	**Kislovodsk**	**68.12**	**319**	*e*P	**P**		**18 40 04.3**	**-0.6**
	comp=Z,14nm,0.9s,mb5.0							
MALT	**Malatya**	**68.90**	**312**	*e*P	**P**		**18 40 07.0**	**-2.8**
MALT				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4							
MALT	**Malatya**	**68.90**	**312**	*e*P	**P**		**18 40 07.0**	**-2.8**
	comp=Z,4.4nm,0.8s,mb4.4							
MAW	**Mawson**	**70.35**	**194**	P	**P**		**18 40 18.9**	**+0.7**
	comp=Z,1.1nm,0.7s,mb3.9,baz=58,slow=17,SNR=2.3							
MAW	**Mawson**	**70.35**	**194**	P	**P**		**18 40 17.6**	**-0.6**
LSZ	**Lusaka**	**71.56**	**255**	P	**P**		**18 40 30.1**	**+3.5**
	comp=Z,5.5nm,1.1s,mb4.4,baz=75,slow=10,SNR=1.7							
LSZ	**Lusaka**	**71.56**	**255**	*e*P	**P**		**18 40 26.6**	**0.0**
LSZ				pmax	pmax			
	comp=Z,14nm,1.3s,mb4.7							
LSZ	**Lusaka**	**71.56**	**255**	*e*P	**P**		**18 40 26.6**	**0.0**
	comp=Z,14nm,1.3s,mb4.7							
PETK	**Petropavlovsk-**	**72.96**	**32**	P	**P**		**18 40 34.5**	**+0.4**
	comp=Z,11nm,0.6s,mb4.9,baz=144,slow=1.3,SNR=16							
PET	**Petropavlovsk**	**73.44**	**33**	*e*P	**P**		**18 40 37.3**	**+0.3**
PET				pmax	pmax			
	comp=Z,50nm,0.7s,mb5.5							
PET	**Petropavlovsk**	**73.44**	**33**	*e*P	**P**		**18 40 36.0**	**-1.0**
	comp=Z,38nm,1.0s,mb5.3							
LBTB	**Lobatse**	**74.71**	**245**	*e*P	**P**		**18 40 45.2**	**+0.2**
LBTB				pmax	pmax			
	comp=Z,13nm,1.2s,mb4.7							
LBTB	**Lobatse**	**74.71**	**245**	*e*P	**P**		**18 40 45.2**	**+0.1**
	comp=Z,13nm,1.2s,mb4.7							
OBN	**Obninsk**	**76.41**	**328**	⇓ *e*P	**P**		**18 40 53.5**	**-0.6**
OBN				pmax	pmax			
	comp=Z,41nm,1.5s,mb5.1							
OBN	**Obninsk**	**76.41**	**328**	*e*P	**P**		**18 40 53.5**	**-0.6**
AKASG	**Malin Array Be**	**79.08**	**322**	P	**P**		**18 41 07.7**	**-1.3**
	comp=Z,2.8nm,0.6s,mb4.4,baz=88,slow=3.9,SNR=7.0							
AKASG	**Malin Array Be**	**79.08**	**322**	P	**P**		**18 41 07.7**	**-1.4**
SUR	**Sutherland**	**79.53**	**238**	*e*P	**P**		**18 41 13.1**	**+1.1**
KOLS	**Kolonicke sedl**	**83.03**	**320**	*e*P	**P**		**18 41 30.7**	**+0.5**
CRVS	**Cervenica-Dubn**	**83.56**	**319**	*e*P	**P**		**18 41 33.0**	**+0.1**
STHS	**Stebnicka Huta**	**83.79**	**320**	*e*P	**P**		**18 41 34.8**	**+0.8**
KECS	**Kecovo**	**84.12**	**319**	*e*P	**P**		**18 41 34.6**	**-1.2**
VYHS	**Vyhne**	**85.21**	**319**	*e*P	**P**		**18 41 40.6**	**-0.7**
ARCES	**ARCESS Array B**	**86.16**	**340**	P	**P**		**18 41 43.9**	**-1.6**
	comp=Z,11nm,0.8s,mb5.1,baz=93,slow=6.1,SNR=8.1							
GERES	**GERESS Array B**	**88.63**	**319**	P	**P**		**18 41 57.9**	**+0.1**
	comp=Z,1.8nm,0.7s,mb4.5,baz=90,slow=3.8,SNR=5.7							
CLL	**Collm**	**89.25**	**321**	*e*P	**P**		**18 42 01.0**	**+0.2**
CLL				*e*sP	sP		18 42 13.0	-2.4
KEST	**Kesra**	**91.23**	**306**	P	**P**		**18 42 11.7**	**+1.4**
	comp=Z,3.9nm,0.9s,mb4.8,baz=291,slow=2.0,SNR=5.1							
SBF	**Sospel**	**92.79**	**314**	*e*P	**P**		**18 42 17.1**	**-0.3**
HINF	**Hinteralfeld**	**93.16**	**318**	*e*P	**P**		**18 42 18.3**	**-0.7**
	comp=Z,5.3nm,0.8s,mb4.8							
HINF	**Hinteralfeld**	**93.16**	**318**	*e*P	**P**		**18 42 18.3**	**-0.7**
HINF				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.8							
HINF	**Hinteralfeld**	**93.16**	**318**	*e*P	**P**		**18 42 18.3**	**-0.7**
	comp=Z,2.7nm,0.8s,mb4.7							
MBDF	**Montbardon**	**93.26**	**315**	*e*P	**P**		**18 42 20.8**	**+1.3**
	comp=Z,5.6nm,0.9s,mb4.7							
MBDF	**Montbardon**	**93.26**	**315**	*e*P	**P**		**18 42 20.8**	**+1.3**
MBDF				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.7							
MBDF	**Montbardon**	**93.26**	**315**	*e*P	**P**		**18 42 20.8**	**+1.3**
	comp=Z,2.8nm,0.9s,mb4.7							
LPG	**La Plagne**	**93.27**	**315**	*e*P	**P**		**18 42 19.6**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.6							
LPG	**La Plagne**	**93.27**	**315**	*e*P	**P**		**18 42 19.6**	**+0.1**
LPG				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.6							
LPG	**La Plagne**	**93.27**	**315**	*e*P	**P**		**18 42 19.6**	**+0.1**
	comp=Z,2.0nm,0.8s,mb4.6							
LPL	**La Plagne**	**93.28**	**315**	*e*P	**P**		**18 42 19.6**	**0.0**
	comp=Z,5.8nm,0.7s,mb4.8							
LPL	**La Plagne**	**93.28**	**315**	*e*P	**P**		**18 42 19.6**	**0.0**
LPL				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.9							
LPL	**La Plagne**	**93.28**	**315**	*e*P	**P**		**18 42 19.6**	**0.0**
	comp=Z,2.9nm,0.6s,mb4.9							
FRF	**La Foret Royal**	**93.36**	**313**	*e*P	**P**		**18 42 19.8**	**-0.2**
	comp=Z,5.4nm,0.8s,mb4.8							
FRF	**La Foret Royal**	**93.36**	**313**	*e*P	**P**		**18 42 19.8**	**-0.2**
FRF				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.8							
FRF	**La Foret Royal**	**93.36**	**313**	*e*P	**P**		**18 42 19.8**	**-0.2**
	comp=Z,2.7nm,0.8s,mb4.7							
HAU	**Haudompre**	**93.50**	**318**	*e*P	**P**		**18 42 20.2**	**-0.4**
CABF	**La Chapelle**	**93.71**	**316**	*e*P	**P**		**18 42 21.6**	**+0.1**
BAIF	**Baives**	**94.83**	**320**	*e*P	**P**		**18 42 26.9**	**+0.3**
LOR	**Lormes**	**95.21**	**317**	*e*P	**P**		**18 42 28.0**	**-0.4**
SMF	**Signal de Mont**	**95.25**	**316**	*e*P	**P**		**18 42 28.1**	**-0.5**
	comp=Z,8.0nm,1.1s,mb4.8							
SMF	**Signal de Mont**	**95.25**	**316**	*e*P	**P**		**18 42 28.1**	**-0.5**
SMF				pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.8							
SMF	**Signal de Mont**	**95.25**	**316**	*e*P	**P**		**18 42 28.1**	**-0.5**
	comp=Z,4.0nm,1.0s,mb4.8							
NVAR	**Mina Array Bea**	**129.73**	**39**	PKP	PKPdf		18 48 16.3	+2.0
	comp=Z,1.4nm,0.7s,baz=283,slow=1.9,SNR=6.6							
CFAA	**Coronel Fontan**	**144.80**	**198**	PKP	PKPdf		18 48 41.8	-0.5
	comp=Z,1.1nm,0.6s,baz=214,slow=3.2,SNR=3.7							
TXAR	**Lajitas Array**	**144.82**	**37**	PKP	PKPdf		18 48 42.6	+0.2
	comp=Z,28nm,0.7s,baz=284,slow=1.2,SNR=25							
TZTN	**Tazewell**	**145.33**	**4**	*e*PKPdf	PKPdf		18 48 42.1	-0.9
TZTN				*e*			18 48 51.0	
UALR	**University of**	**145.38**	**17**	*e*PKPdf	PKPdf		18 48 42.8	-0.4
JCT	**Junction City**	**146.09**	**31**	*e*PKP2	PKPab		18 48 45.6	-0.4
NATX	**Nacogdoches**	**147.33**	**23**	*e*PKPbc	PKPbc		18 48 48.3	-0.7
JSC	**Jenkinsville**	**147.70**	**1**	*e*PKP2	PKPab		18 48 49.4	-2.7
HKT	**Hockley**	**148.43**	**26**	*e*PKP2	PKPab		18 48 52.2	-2.9

*IDC **15** 18:29:45.7±1.2, 1352.5°×7678W, h0km, mb3.9/3, mb1 3.9/6, mb1mx3.8/19, mbtmp3.8/6, ML3.2/2, MS3.7/4, Ms1 3.7/4, ms1mx3.2/26, Error ellipse: s-maj=37.3km s-min=12.9km az=76.0*
*NEIC **15** 18:29:46.7±0.7, 1341.5°×7679W, h10km, Error ellipse: s-maj=23.2km s-min=9.8km az=63.0*
*ISCJB **15** 18:29:48.7±1.0, 1357.5°±007.7°×768W±0.1, h33km, mb3.8/3, MS3.7/2, Error ellipse: s-maj=22.1km s-min=7.0km az=158.4*
ISC 15 18:29:47.2±1.4, 1358.5°±006.7°×773W±02, h35km, n21, σ0.6=95/19, mb3.9/3, MS3.7/2, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
NNA	**Nana**	**1.64**	**15**	Pg	**Pn**		**18 30 14.0**	**+0.4**
	91nm,0.3s,baz=170,slow=13,SNR=95							
NNA				Lg			18 30 34.2	
	483nm,0.3s,baz=223,slow=11,SNR=37							
NNA	**Nana**	**1.64**	**15**	*e*Pn	**Pn**		**18 30 13.8**	**+0.3**
NNA				Pg	**Pn**		**18 30 14.0**	**+0.4**
NNA				*e*Sn	**Sn**		**18 30 34.0**	**+0.6**
NNA				Lg			18 30 34.2	
ARE	**Arequipa**	**6.29**	**118**	*e*P	**Pn**		**18 31 23.0**	**+5.5**
ARE				*e*S	**Sn**		**18 32 38.0**	**+10**
**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.31**	**266**	P	Pn	18 46 59.7	+0.5
ALID				*i* S	Sn	18 47 17.1	+1.1
MIPR	**Malaya Ipel'ka**	**1.41**	**338**	*eP*	Pn	18 47 01.2	+0.9
RUS	**Russkaya**	**1.56**	**21**	*eP*	Pn	18 47 04.8	+2.4
RUS				*eS*	Sn	18 47 25.1	+3.4
PET	**Petropavlovsk**	**2.14**	**17**	*eP*	Pn	18 47 12.8	+2.6
PET				*i* S	Sn	18 47 39.2	+3.4
AVH	**Avacha**	**2.39**	**16**	P	Pn	18 47 16.3	+2.8
AVH				*i* S	Sn	18 47 45.1	+3.3
NLC	**Nalytchevo**	**2.44**	**25**	P	Pn	18 47 15.3	+1.1
NLC				*i* S	Sn	18 47 43.5	+0.6
SPN	**Mys Shipunski**	**2.59**	**34**	P	Pn	18 47 18.1	+1.9
SPN				*i* S	Sn	18 47 48.8	+2.2
GNL	**Ganaly**	**2.73**	**4**	*eP*	Pn	18 47 20.1	+2.0
KBTR	**Krutoberegovo**	**6.08**	**29**	P	Pn	18 48 06.6	+2.8

IDC 15 19:11:07.8±6.3, 371S×10136E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/18, mbtmp3.4/3, Error ellipse: s-maj=313.0km s-min=26.7km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.96**	**119**	P	P	19 18 10.9	+0.3
	0.2nm,0.3s,baz=309,slow=9.0,SNR=9.5						
ASAR	**Alice Springs**	**37.15**	**125**	P	P	19 18 20.5	-0.2
	0.3nm,0.4s,baz=299,slow=8.1,SNR=18						
MKAR	**Makanchi Array**	**53.04**	**344**	P	P	19 20 26.9	+0.3
	0.3nm,0.5s,baz=168,slow=8.9,SNR=5.6						
TXAR	**Lajitas Array**	**145.17**	**40**	PKPbc	PKPbc	19 30 46.6	-1.1
	0.3nm,0.5s,baz=16,slow=0.2,SNR=7.8						

*ISCJB **15** 19:16:38.1±1.0, 3286S±004×6873W±005, h25km±9km, mb3.3/2, Error ellipse: s-maj=8.6km s-min=3.9km az=41.0*
*NEIC **15** 19:16:38.8, 3284S×6902W, h1km, MD4.1(SJA), ML3.5(GUC), After GUC.*
NEIC Felt [IV] at Mendoza.
*GUC **15** 19:16:38.8±0.8, 3284S×6902W, h1km±5km, MD4.2, ML3.5*
*IDC **15** 19:16:44.1±2.1, 3244S×6880W, h61km±17km, mb3.1/2, mb1 3.4/5, mb1mx3.3/17, mbtmp3.1/5, Error ellipse: s-maj=39.9km s-min=28.9km az=102.0*

ISC 15 19:16:37.4±1.4, 3291S±003×6876W±005, h11km±11km, n38, σ1°18/66, mb3.3/2, 15C-4D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YECH	**El Yeso**	**1.35**	**235**	↓*iP*	Pn	19 17 01.5	-0.6
YECH				*i* S	Sb	19 17 19.3	-0.6
YECH				AML	AML	19 17 20.4	
	comp=N,4μm,0.3s						
FCH	**Farellones**	**1.36**	**252**	↓*iP*	Pn	19 17 01.1	-1.2
FCH				*i* S	Sb	19 17 18.4	-1.8
FCH				AML	AML	19 17 19.0	
	comp=N,2μm,0.2s						
CFAA	**Coronel Fontan**	**1.37**	**19**	P	Pn	19 17 01.5	-1.0
	comp=N,9.9nm,0.3s,baz=204,slow=15,SNR=214						
CFAA				S	Sb	19 17 20.6	+0.1
	comp=N,77nm,0.3s,baz=259,slow=4.5,SNR=40						
SJCH	**San Jose de Ma**	**1.53**	**241**	*eP*	Pn	19 17 04.0	-0.7
SJCH				*i* S	Sn	19 17 23.8	-0.7
SJCH				AML	AML	19 17 24.9	
	comp=N,675nm,0.3s						
SJCH	**San Jose de Ma**	**1.53**	**241**	*eP*	Pn	19 17 04.0	-0.7
SJCH				*i* S	Sn	19 17 23.8	-0.7
LMEL	**Las Melosas**	**1.53**	**232**	*eP*	Pn	19 17 04.8	+0.1
LMEL				*i* S	Sn	19 17 25.0	+0.3
LMEL				AML	AML	19 17 28.4	
	comp=E,790nm,0.5s						
LMEL	**Las Melosas**	**1.53**	**232**	*eP*	Pn	19 17 04.8	+0.1
LMEL				*i* S	Sn	19 17 25.0	+0.3
JACH	**Jahuel**	**1.56**	**278**	↑*iP*	Pn	19 17 03.8	-1.3
JACH				*i* S	Sn	19 17 23.1	-2.3
CLCH	**Cerro Calan**	**1.57**	**251**	↓*iP*	Pn	19 17 04.9	-0.4
CLCH				*i* S	Sn	19 17 24.2	-1.4
CLCH				AML	AML	19 17 31.5	
	comp=N,2μm,0.6s						
FSR	**Penalolen**	**1.59**	**249**	*eP*	Pn	19 17 05.4	-0.2
FSR				*i* S	Sn	19 17 26.2	0.0
FSR				AML	AML	19 17 26.8	
	comp=E,763nm,0.3s						
FSR	**Penalolen**	**1.59**	**249**	*eP*	Pn	19 17 05.4	-0.2
FSR				S	Sn	19 17 26.2	0.0
PCH	**Pirque**	**1.64**	**244**	↑*iP*	Pn	19 17 06.5	+0.3
PCH				*i* S	Sn	19 17 27.0	-0.3
PEL	**Peldehue**	**1.64**	**261**	↑*iP*	Pn	19 17 05.4	-0.8
PEL				*i* S	Sn	19 17 25.6	-1.7
PEL				AML	AML	19 17 26.7	
	comp=N,2μm,0.3s						
ANTU	**Antumapu**	**1.71**	**247**	↑*iP*	Pn	19 17 07.6	+0.4
ANTU				*i* S	Sn	19 17 29.2	+0.2
ANTU				AML	AML	19 17 30.8	
	comp=E,2μm,0.4s						
ANTU	**Antumapu**	**1.71**	**247**	↑*iP*	Pn	19 17 07.6	+0.4
ANTU				*i* S	Sn	19 17 29.2	+0.2
RCDM	**Rinconada Maip**	**1.82**	**251**	↑*iP*	Pn	19 17 09.3	+0.7
RCDM				*i* S	Sn	19 17 32.4	+0.7
RCDM				AML	AML	19 17 34.3	
	comp=N,768nm,0.5s						
RCDM	**Rinconada Maip**	**1.82**	**251**	↑*iP*	Pn	19 17 09.3	+0.7
RCDM				*i* S	Sn	19 17 32.4	+0.7
CHCH	**Chadas Angostu**	**1.89**	**237**	↑*iP*	Pn	19 17 11.2	+1.6
ROCH	**El Roble**	**1.90**	**267**	↓*iP*	Pn	19 17 09.8	0.0
ROCH				*i* S	Sn	19 17 33.7	+0.1
PTCH	**Petorca**	**1.94**	**289**	↑*iP*	Pn	19 17 10.3	-0.1
PTCH				*i* S	Sn	19 17 34.5	-0.4
PTCH				AML	AML	19 17 35.4	
	comp=N,605nm,0.3s						
PTCH	**Petorca**	**1.94**	**289**	↑*iP*	Pn	19 17 10.3	-0.1
PTCH				*i* S	Sn	19 17 34.5	-0.4
CACH	**El Canelo**	**1.96**	**231**	*eP*	Pn	19 17 12.8	+2.2
CACH				*i* S	Sn	19 17 38.9	+3.7
TACH	**Talagante**	**1.98**	**247**	↑*iP*	Pn	19 17 11.8	+1.0
TACH				*i* S	Sn	19 17 36.8	+1.3
CICH	**Cipreses**	**1.98**	**224**	↑*iP*	Pn	19 17 13.6	+2.7
IHA	**Instituto Hidr**	**2.43**	**266**	↑*iP*	Pn	19 17 17.1	0.0
IHA				*i* S	Sn	19 17 48.7	+1.9
LNV	**Longovilo**	**2.46**	**244**	*i* S	Sn	19 17 51.2	+3.8
CHNG	**Los Chungos**	**2.54**	**293**	↑*iP*	Pn	19 17 19.9	+1.4
CHNG				*i* S	Sn	19 17 52.0	+2.6
CHNG				AML	AML	19 17 56.1	
	comp=N,607nm,0.6s						
SFDO	**San Fernando**	**2.54**	**227**	↑*iP*	Pb	19 17 23.0	0.0
SFDO				*i* S	Sb	19 17 56.0	+1.8
OVCH	**Ovalle**	**3.10**	**317**	*i* S	Sn	19 18 09.7	+6.4
LCO	**Las Campanas**	**4.23**	**336**	*ePn*	Pn	19 17 42.1	+0.3
LCO				*eSn*	Sn	19 18 30.4	-0.7
PLCA	**Paso Flores**	**7.94**	**190**	P	Pn	19 18 43.5	+11
	comp=N,0.0nm,0.3s,baz=13,slow=18,SNR=2.4						
PLCA				S	Sb	19 20 27.9	-1.8
	comp=N,0.3nm,0.3s,baz=4.6,slow=13,SNR=3.8						
LVC	**Limon Verde**	**10.26**	**359**	*ePn*	Pn	19 19 03.7	-0.9
LVC				*eSn*	Sn	19 21 01.7	+2.1
CPUP	**Villa Florida**	**11.90**	**60**	P	Pn	19 19 29.0	+1.9
	comp=N,0.5nm,0.3s,baz=239,slow=16,SNR=3.4						
CPUP	**Villa Florida**	**11.90**	**60**	P	Pn	19 19 29.0	+1.9
CPUP				*ePn*	Pn	19 19 30.8	+3.8
LPAZ	**La Paz**	**16.55**	**2**	P	Pn	19 20 28.9	-0.8
	comp=N,0.0nm,0.3s,baz=171,slow=13,SNR=1.5						
TXAR	**Lajitas Array**	**70.19**	**328**	P	P	19 27 47.9	-2.3
	comp=N,0.2nm,0.7s,mb3.2,baz=156,slow=7.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**81.26**	**68**	P	P	19 28 53.1	-0.8
	comp=N,0.4nm,0.9s,mb3.4,baz=234,slow=5.3,SNR=4.2						
ZALV	**Zalesovo Beam**	**151.81**	**34**	PKPbc	PKPbc	19 36 30.5	-1.2
	comp=N,1.3nm,0.6s,baz=323,slow=2.2,SNR=5.6						

IDC 15 19:20:37.2±6.0, 506S×14816E, h0km, mb3.3/1, mb1 3.8/2, mb1mx3.4/14, mbtmp3.5/2, Error ellipse: s-maj=250.8km s-min=48.3km az=111.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**19.99**	**221**	*eP*	Pn	19 25 11.4	-1.7
WRA	**Warramunga Arr**	**20.00**	**221**	P	Pn	19 25 11.3	-1.9
	0.4nm,0.3s,baz=46,slow=12,SNR=29						
ASAR	**Alice Springs**	**23.04**	**215**	P	P	19 25 44.4	+0.1
	1.1nm,0.8s,baz=47,slow=8.7,SNR=25						
TORD	**Torodi Ar. Bea**	**145.96**	**286**	PKPbc	PKPbc	19 40 19.3	-0.7
	0.4nm,0.8s,baz=57,slow=3.4,SNR=5.0						

IDC 15 19:25:32.2±10.0, 1145S×16793E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.8/18, mbtmp3.9/5, Error ellipse: s-maj=258.2km s-min=53.2km az=117.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**22.54**	**245**	P	P	19 30 35.3	+1.4
	1.4nm,0.6s,baz=76,slow=13,SNR=3.9						
WB2	**Warramunga Arr**	**33.36**	**251**	*eP*	P	19 32 11.6	-0.8
WRA	**Warramunga Arr**	**33.37**	**251**	P	P	19 32 11.9	-0.6
	1.7nm,0.5s,baz=83,slow=9.1,SNR=34						
ASAR	**Alice Springs**	**34.54**	**245**	P	P	19 32 22.9	+0.3
	1.1nm,0.9s,baz=67,slow=10,SNR=14						
FITZ	**Fitzroy Crossi**	**41.35**	**256**	P	P	19 33 19.6	-0.7
	3.8nm,0.7s,baz=94,slow=8.2,SNR=12						
CMAR	**Chiang Mai Arr**	**74.24**	**293**	P	P	19 37 11.9	+0.3
	0.4nm,0.7s,baz=106,slow=3.3,SNR=3.9						

*IDC **15** 19:26:52.5±0.8, 176S×9976E, h0km, mb4.1/13, mb1 4.2/13, mb1mx4.1/22, mbtmp4.2/13, Error ellipse: s-maj=32.4km s-min=13.8km az=59.0*
*ISCJB **15** 19:26:53.3±6.0, 17S±01×998E±02, h17km±41km, mb4.1/12, Error ellipse: s-maj=33.9km s-min=10.7km az=144.4*
*NEIC **15** 19:26:56.4±7.1, 178S×9975E, h27km±49km, Error ellipse: s-maj=24.4km s-min=7.4km az=58.0*

ISC 15 19:26:54.3±8.8, 18S±01×998E±02, h11km±53km, n25, σ0°70/22, mb4.1/12, 1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.61**	**350**	↓*eP*	Pn	19 28 03.8	-0.2
CMAR	**Chiang Mai Arr**	**20.11**	**358**	P	P	19 31 27.6	-0.6
	0.5nm,0.5s,baz=189,slow=9.9,SNR=4.6						
KAPI	**Kappang**	**20.21**	**100**	P	P	19 31 30.9	+1.5
	6.5nm,0.6s,baz=226,slow=16,SNR=4.2						
FITZ	**Fitzroy Crossi**	**30.14**	**124**	P	P	19 33 03.2	-1.2
	2.2nm,0.9s,mb3.9,baz=217,slow=8.5,SNR=3.9						
LSA	**Lhasa**	**32.35**	**346**	*eP*	P	19 33 24.8	+1.0
WRA	**Warramunga Arr**	**38.31**	**121**	P	P	19 34 14.6	-0.6
	3.8nm,0.7s,mb4.2,baz=301,slow=9.1,SNR=28						
WRA				PcP	PcP	19 36 29.4	+0.1
	0.7nm,0.5s,baz=315,slow=2.5,SNR=10.0						
WB2	**Warramunga Arr**	**38.33**	**121**	*eP*	P	19 34 15.2	-0.1
ASAR	**Alice Springs**	**39.58**	**126**	P	P	19 34 26.1	+0.2
	1.5nm,0.6s,mb3.9,baz=299,slow=7.7,SNR=29						
ASAR				PcP	PcP	19 36 33.7	+0.5
	1.4nm,0.8s,baz=302,slow=2.9,SNR=8.4						
CTA	**Charters Tower**	**48.91**	**115**	P	P	19 35 40.2	-0.4
	1.4nm,0.8s,mb4.0,baz=285,slow=12,SNR=3.6						
STKA	**Stephens Creek**	**49.48**	**132**	P	P	19 35 45.5	+0.7
	2.3nm,0.7s,mb4.3,baz=318,slow=2.2,SNR=4.4						
SONM	**Songino Array**	**49.74**	**6**	P	P	19 35 47.6	+1.1
	0.5nm,0.5s,mb3.8,baz=183,slow=8.4,SNR=3.6						
MK31	**Makanchi Array**	**50.74**	**345**	*eP*	P	19 35 54.1	0.0
MKAR	**Makanchi Array**	**50.74**	**345**	P	P	19 35 54.5	+0.3
	2.4nm,0.6s,mb4.3,baz=148,slow=8.1,SNR=26						
MJAR	**Matsushiro Arr**	**52.24**	**39**	P	P	19 36 04.9	-0.7
	0.6nm,0.5s,mb3.8,baz=228,slow=7.7,SNR=4.8						
KURK	**Kurchatov**	**55.32**	**344**	P	P	19 36 27.0	-0.8
	2.3nm,0.8s,mb4.2,baz=166,slow=7.0,SNR=9.0						
ZAA0	**Zalesovo Array**	**56.90**	**350**	*eP*	P	19 36 38.9	-0.1
ZAA0				*e*		19 36 50.1	
ZALV	**Zalesovo Beam**	**56.90**	**350**	P	P	19 36 38.4	-0.7
	3.6nm,0.5s,mb4.7,baz=184,slow=4.5,SNR=25						
ZALV	**Zalesovo Beam**	**56.90**	**350**	P	P	19 36 38.4	-0.6
MAW	**Mawson**	**70.45**	**194**	P	P	19 38 08.5	+0.2
	1.6nm,0.8s,mb4.0,baz=9.9,slow=5.6,SNR=4.3						
BUR08	**Bucovina Ar. S**	**80.95**	**319**	*eP*	P	19 39 08.6	-0.2
ARCES	**ARCESS Array B**	**86.17**	**340**	P	P	19 39 36.0	+0.8
	2.6nm,0.9s,mb4.4,baz=182,slow=8.4,SNR=3.5						
ARCES	**ARCESS Array B**	**86.17**	**340**	P	P	19 39 36.0	+0.8
CPUP	**Villa Florida**	**144.37**	**217**	PKP	PKPdf	19 46 29.6	-1.8
	3.5nm,0.9s,baz=131,slow=3.9,SNR=8.7						
TXAR	**Lajitas Array**	**144.66**	**37**	PKP	PKPdf	19 46 31.3	-0.5
	2.6nm,0.7s,baz=277,slow=1.2,SNR=37						
JCT	**Junction City**	**145.95**	**31**	*eP*	PKPdf	19 46 34.7	+0.7

KRSC 15 19:29:35.5±0.2, 5483N×16180E, h22km±22km, ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**1.05**	**296**	*eP*	Pn	19 29 55.7	+0.8
KMNR	**Kamenistaya**	**1.29**	**317**	*eP*	Pn	19 29 59.2	+1.1
KMNR				*eS*	Sn	19 30 16.4	+1.7
ZLN	**Zelenaya**	**1.32**	**335**	*eP*	Pn	19 29 59.7	+1.2
ZLN				*eS*	Sn	19 30 17.7	+2.3
BZMR	**Bezymyannaya**	**1.34**	**327**	*eP*	Pn	19 29 59.5	+0.7
BZMR				*eS*	Sn	19 30 17.8	+1.9
KIRR	**Kirishev**	**1.40**	**324**	*eS*	Sn	19 30 19.5	+2.1
KPT	**Kopyto**	**1.45**	**322**	*eP*	Pn	19 30 01.9	+1.5
KPT				*eS*	Sn	19 30 20.5	+1.8
KBTR	**Krutoberegovo**	**1.50**	**22**	*eP*	Pn	19 30 02.3	+1.3
KBTR				*eS*	Sn	19 30 21.8	+2.0
KRSR	**Krestovskiy**	**1.56**	**334**	*eP*	Pn	19 30 02.5	+0.7
KRSR				*eS*	Sn	19 30 21.5	+0.2
KLY	**Klyuchi**	**1.62**	**337**	*eP*	Pn	19 30 03.3	+0.6
KLY				*eS*	Sn	19 30 22.9	0.0
KOZ	**Kozyrevsk**	**1.65**	**319**	*eP*	Pn	19 30 04.8	+1.7
KOZ				*eS*	Sn	19 30 26.2	+2.6
SRKR	**Sorokina**	**1.86**	**349**	*eS*	Sn	19 30 30.9	+2.1
SRDR	**Sredinnyy**	**1.90**	**322**	*eP*	Pn	19 30 07.5	+0.9
SRDR				*eS*	Sn	19 30 31.2	+1.4
SPN	**Mys Shipunski**	**2.03**	**212**	*eP*	Pn	19 30 09.1	+0.8
SPN				*eS*	Sn	19 30 34.5	+1.6
NLC	**Nalytchevo**	**2.21**	**222**	*eP*	Pn	19 30 12.2	+1.5
NLC				*eS*	Sn	19 30 39.1	+1.8
AVH	**Avacha**	**2.39**	**230**	*eP*	Pn	19 30 15.8	+2.5
AVH				*eS*	Sn	19 30 44.7	+2.8
GNL	**Ganaly**	**2.53**	**245**	*eP*	Pn	19 30 17.6	+2.4
PET	**Petropavlovsk**	**2.60**	**227**	*eP*	Pn	19 30 18.0	+1.9
PET				*eS*	Sn	19 30 49.5	+2.6
RUS	**Russkaya**	**3.10**	**221**	*eP*	Pn	19 30 24.4	+1.4
RUS				*eS*	Sn	19 31 00.6	+1.3
GRL	**Gorelyy**	**3.18**	**226**	*eP*	Pn	19 30 24.7	+0.6

*ISCJB **15** 19:49:46.1±6.2, 193S±01×1763W±02, h188km±59km, mb3.9/4, Error ellipse: s-maj=37.2km s-min=20.9km az=14.2*
*IDC **15** 19:49:54.8±3.9, 1949S×17626W, h263km±36km, mb3.6/4, mb1 3.9/5, mb1mx3.4/18, mbtmp3.6/5, Error ellipse: s-maj=24.9km s-min=15.1km az=100.0*

ISC 15 19:49:53.7±5.1, 195S±01×1763W±02, h249km±51km, n6, σ0°36/6, mb3.7/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**19.59**	**196**	P	P	19 54 03.4	0.0
	2.4nm,0.3s,baz=322,slow=2.9,SNR=15						
URZ				S	S	19 57 30.8	0.0
	0.2nm,0.3s,baz=278,slow=12,SNR=3.3						
CTA	**Charters Tower**	**35.20**	**263**	P	P	19 56 25.0	+0.3
	2.0nm,0.4s,mb4.0,baz=82,slow=9.5,SNR=5.9						
ASAR	**Alice Springs**	**46.33**	**256**	P	P	19 57 55.3	+0.1
	5.9nm,0.5s,mb4.2,baz=90,slow=8.5,SNR=156						
ASAR				PcP	PcP	19 59 26.0	-0.2
	0.4nm,0.8s,baz=96,slow=4.7,SNR=3.6						
WRA	**Warramunga Arr**	**46.34**	**261**	P	P	19 57 55.0	-0.4
	1.6nm,0.5s,mb3.6,baz=98,slow=6.1,SNR=78						
WRA				PcP	PcP	19 59 25.3	-0.9
	0.2nm,0.5s,baz=94,slow=3.2,SNR=2.9						
NVAR	**Mina Array Bea**	**79.17**	**43**	P	P	20 01 31.1	0.0
	0.1nm,0.3s,mb3.0,baz=216,slow=7.3,SNR=5.2						
GERES	**GERESS Array B**	**149.59**	**347**	PKPbc	PKPbc	20 09 12.9	-0.7
	0.1nm,0.5s,baz=48,slow=1.5,SNR=4.1						

*IDC **15** 20:10:40.8±3.3, 537S×15165E, h34km±22km, mb4.2/12, mb1 4.4/12, mb1mx4.2/17, mbtmp4.2/12, MS3.3/7, Ms1 3.3/7, ms1mx3.1/28, Error ellipse: s-maj=27.7km s-min=18.2km az=110.0*
*ISCJB **15** 20:10:45.6±3.4, 54S±01×1514E±02, h84km±28km, mb4.2/14, Error ellipse: s-maj=27.5km s-min=20.3km az=9.5*
*NEIC **15** 20:10:47.1±2.2, 5405S×15144E, h87km±18km, mb4.7/4, Error ellipse: s-maj=19.4km s-min=12.7km az=90.0*

ISC 15 20:10:46.9±3.1, 54S±01×1515E±02, h84km±25km, n29, σ0°76/22, mb4.2/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.85**	**227**	*ePn*	Pn	20 12 10.5	-0.6
	80nm,0.8s						
PMG				*eSn*	Sn	20 13 17.3	+0.5
HNR	**Honiara**	**9.28**	**116**	LR	LR	20 16 01.7	
	comp=Z,134nm,21.6s,baz=131,slow=35						
CTA	**Charters Tower**	**15.45**	**199**	*Pn*	Pn	20 14 21.3	+1.1
	0.3nm,0.3s,baz=30,slow=12,SNR=7.2						
CTA				LR	LR	20 19 31.0	
	comp=Z,188nm,20.2s,baz=42,slow=34						
CTA	**Charters Tower**	**15.45**	**199**	*Pn*	Pn	20 14 21.3	+1.1
CTA				LR	LR	20 19 31.0	
GUMO	**Guam**	**19.99**	**341**	LR	LR	20 20 25.1	
	comp=Z,24nm,20.6s,baz=249,slow=29						
WRAB	**Tennant Creek**	**22.05**	**228**	*eP*	P	20 15 34.4	-0.5
	41nm,0.7s,mb4.9						
WB2	**Warramunga Arr**	**22.06**	**228**	*eP*	P	20 15 34.3	-0.7
WB2	**Warramunga Arr**	**22.06**	**228**	*eP*	P	20 15 33.8	-1.2
WRA	**Warramunga Arr**	**22.07**	**228**	P	P	20 15 34.2	-0.9
	44nm,0.7s,mb4.9,baz=58,slow=9.8,SNR=191						
WRA				ScP	ScP	20 23 05.2	+5.0
	1.4nm,1.0s,baz=48,slow=2.9,SNR=9.1						
WRA				LR	LR	20 23 20.4	
	comp=Z,65nm,20.8s,baz=240,slow=34						
ASAR	**Alice Springs**	**24.82**	**221**	P	P	20 16 01.6	+0.1
	38nm,0.7s,mb4.9,baz=58,slow=8.4,SNR=209						
ASAR				ScP	ScP	20 23 12.4	+4.9
	0.5nm,0.7s,baz=38,slow=2.9,SNR=7.2						
STKA	**Stephens Creek**	**27.91**	**198**	*eP*	P	20 16 29.3	+0.2
	5.0nm,1.0s,mb4.0						
STKA	**Stephens Creek**	**27.91**	**198**	P	P	20 16 28.1	-1.0
	2.7nm,0.6s,mb4.0,baz=26,slow=11,SNR=8.1						
STKA				LR	LR	20 26 39.3	
	comp=Z,124nm,19.3s,baz=29,slow=34						
BATI	**Baumata**	**27.97**	**258**	P	P	20 16 31.0	+1.1
	13nm,0.8s,mb4.5,baz=237,slow=20,SNR=4.7						
FITZ	**Fitzroy Crossi**	**28.22**	**241**	*eP*	P	20 16 32.0	-0.1
	18nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**28.22**	**241**	P	P	20 16 32.1	0.0
	10nm,0.6s,mb4.5,baz=72,slow=9.0,SNR=42						
MJAR	**Matsushiro Arr**	**43.55**	**344**	LR	LR	20 35 35.6	
	comp=Z,48nm,19.7s,baz=200,slow=34						
CMAR	**Chiang Mai Arr**	**56.97**	**296**	P	P	20 20 25.3	+1.2
	1.1nm,0.8s,mb3.9,baz=122,slow=6.0,SNR=7.8						
PETK	**Petropavlovsk-**	**58.54**	**4**	LR	LR	20 43 17.7	
	comp=Z,19nm,19.4s,baz=342,slow=34						
SONM	**Songino Array**	**66.16**	**329**	P	P	20 21 25.0	-0.4
	0.9nm,0.5s,mb3.9,baz=148,slow=5.1,SNR=4.7						
MKAR	**Makanchi Array**	**79.94**	**319**	P	P	20 22 46.5	-0.3
	0.3nm,0.3s,mb3.6,baz=99,slow=6.2,SNR=5.4						
ZALV	**Zalesovo Beam**	**80.94**	**327**	P	P	20 22 51.1	-0.9
	0.7nm,0.4s,mb3.8,baz=91,slow=2.9,SNR=5.6						
KURK	**Kurchatov**	**83.45**	**322**	P	P	20 23 04.5	-0.7
	1.1nm,1.0s,mb3.6,baz=105,slow=4.2,SNR=4.4						
MAW	**Mawson**	**84.50**	**203**	P	P	20 23 10.4	+0.1
	1.0nm,0.6s,mb4.0,baz=87,slow=4.5,SNR=4.4						
AML	**Almayashu**	**84.61**	**313**	*eP*	P	20 23 12.5	+1.2
	6.5nm,1.0s,mb4.5						
NVAR	**Mina Array Bea**	**93.49**	**52**	P	P	20 23 54.1	+0.6
	2.0nm,0.8s,mb4.5,baz=255,slow=6.2,SNR=12						
PDAR	**Pinedale Array**	**100.22**	**48**	P	Pdif	20 24 23.6	0.0
	0.3nm,0.5s,baz=232,slow=4.4,SNR=2.9						
GERES	**GERESS Array B**	**123.89**	**328**	PKP	PKPdf	20 29 35.3	0.0
	0.4nm,0.5s,baz=95,slow=1.5,SNR=6.8						
TORD	**Torodi Ar. Bea**	**149.25**	**287**	PKPbc	PKPbc	20 30 26.4	-0.6
	2.6nm,0.6s,baz=87,slow=3.1,SNR=20						
BDFB	**Brasilia**	**151.53**	**138**	PKPbc	PKPbc	20 30 31.9	-0.4
	5.1nm,0.8s,baz=232,slow=1.0,SNR=8.1						

JMA 15 20:16:18.3±0.3, 4400N×14805E, h0km, M3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.79**	**250**	P	Pn	20 16 50.7	+0.3
NEM2				*eS*	Sn	20 17 14.1	+0.3
JRA	**Rausu**	**2.12**	**269**	P	Pn	20 16 55.5	+0.6
JRA				*eS*	Sn	20 17 22.9	+1.0
JNK	**Nakash**	**2.45**	**261**	P	Pn	20 17 00.2	+0.7
JNK				*eS*	Sn	20 17 31.1	+1.0
JAK	**Akkeshi**	**2.64**	**249**	P	Pn	20 17 02.8	+0.7
JAK				*eS*	Sn	20 17 35.7	+0.9
JTKR	**Abashiri--Toko**	**2.99**	**271**	P	Pn	20 17 09.1	+2.2
JAR	**Ashorobuto**	**3.19

KURK	**Kurchatov**		**43.33 315**	P		**P**		**20 39 27.3**	**0.0**
	1.1nm,0.5s,mb3.8,baz=101,slow=9.1,SNR=14								
BVAR	**Borovoye Array**		**48.73 317**	P		**P**		**20 40 09.9**	**+0.4**
	0.7nm,0.4s,mb3.7,baz=85,slow=11,SNR=4.0								
BVAR				PcP		PcP		20 41 31.1	-1.4
	1.2nm,0.7s,baz=104,slow=6.3,SNR=5.7								
BRVK	**Borovoye**		**48.80 317**	P		**P**		**20 40 07.5**	**-2.5**
GERES	**GERESS Array B**		**83.50 323**	P		**P**		**20 43 50.6**	**-0.9**
	0.4nm,0.7s,mb3.3,baz=25,slow=3.5,SNR=5.1								

NEIC ***15*** *20:36:02.6±6.2, 7.245S×129.09E, h117km±72km, mb4.4/2, Error ellipse: s-maj=44.2km s-min=21.7km az=183.0*
ISCJB ***15*** *20:36:09.3±1.7, 7.70S±0.009×129.01E±0.008, h217km±19km, mb3.5/5, Error ellipse: s-maj=17.6km s-min=8.2km az=43.1*
IDC ***15*** *20:36:15.0±6.4, 7.645S×128.58E, h237km±64km, mb3.2/5, mb1 3.5/7, mb1mx3.3/15, mbtmp3.4/7, Error ellipse: s-maj=70.2km s-min=15.3km az=55.0*
ISC 15 20:36:08.4±1.5, 761S±009×12903E±009, h185km±16km, n15, σ0§93/23, mb3.5/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
BATI	**Baumata**	**5.90**	**244**	P		**Pn**	**20 37 36.5**	**+2.4**
	34nm,0.3s,baz=77,slow=4.0,SNR=71							
BATI				S		**Sn**	**20 38 41.2**	**-0.5**
	15nm,0.3s,baz=76,slow=2.6,SNR=10							
FITZ	**Fitzroy Crossi**	**10.94**	**197**	*e*P		**Pn**	**20 38 41.2**	**+1.2**
	7.3nm,0.6s							
FITZ				*e*S		**Sn**	**20 40 37.1**	**-4.6**
FITZ	**Fitzroy Crossi**	**10.94**	**197**	P		**Pn**	**20 38 40.3**	**+0.3**
	0.8nm,0.3s,baz=31,slow=12,SNR=20							
FITZ				S		**Sn**	**20 40 39.4**	**-2.4**
	0.9nm,0.3s,baz=87,slow=18,SNR=6.3							
WRAB	**Tennant Creek**	**13.29**	**158**	*e*Pn		**Pn**	**20 39 09.9**	**-0.2**
	5.4nm,0.6s							
WRAB				*e*Sn		**Sn**	**20 41 30.5**	**-7.5**
WRA	**Warramunga Arr**	**13.29**	**158**	P		**Pn**	**20 39 09.9**	**-0.2**
	1.2nm,0.3s,baz=340,slow=12,SNR=35							
WRA				S		**Sn**	**20 41 33.4**	**-4.8**
	2.9nm,0.3s,baz=339,slow=22,SNR=12							
WB2	**Warramunga Arr**	**13.30**	**158**	*e*P		**Pn**	**20 39 10.3**	**+0.1**
WB2				*e*S		**Sn**	**20 41 33.2**	**-5.1**
COEN	**Coen**	**15.25**	**116**	*e*Pn		**Pn**	**20 39 34.3**	**-0.1**
COEN				*e*Sn		**Sn**	**20 42 13.6**	**-11**
ASAR	**Alice Springs**	**16.64**	**164**	P		**Pn**	**20 39 55.0**	**+3.9**
	2.2nm,0.3s,baz=339,slow=9.5,SNR=187							
ASAR				S		**S**	**20 42 55.4**	**+0.8**
	0.5nm,0.3s,baz=347,slow=26,SNR=6.0							
STKA	**Stephens Creek**	**26.83**	**156**	*e*P		**P**	**20 41 35.8**	**+4.2**
	1.5nm,0.4s,mb4.0							
STKA	**Stephens Creek**	**26.83**	**156**	P		**P**	**20 41 35.6**	**+4.0**
	1.7nm,0.4s,mb4.0,baz=345,slow=6.9,SNR=8.7							
CMAR	**Chiang Mai Arr**	**39.40**	**311**	P		**P**	**20 43 20.2**	**-0.2**
	0.5nm,0.6s,mb3.3,baz=132,slow=6.2,SNR=3.3							
MKAR	**Makanchi Array**	**68.21**	**327**	P		**P**	**20 46 48.5**	**-0.3**
	0.5nm,0.5s,mb3.5,baz=118,slow=8.0,SNR=10							
ZALV	**Zalesovo Beam**	**71.71**	**334**	P		**P**	**20 47 09.1**	**-0.8**
	0.3nm,0.3s,mb3.6,baz=140,slow=4.9,SNR=2.2							
ZALV	**Zalesovo Beam**	**71.71**	**334**	P		**P**	**20 47 09.1**	**-0.8**
KURK	**Kurchatov**	**72.54**	**329**	P		**P**	**20 47 15.2**	**+0.3**
	0.4nm,0.5s,mb3.4,baz=134,slow=4.2,SNR=3.8							

IDC 15 20:42:31.7±3.4, 367S×10002E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/20, mbtmp3.4/6, Error ellipse: s-maj=150.0km s-min=21.4km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.01**	**357**	P		P	20 47 28.2	+0.5
	0.3nm,0.5s,baz=192,slow=8.9,SNR=4.6							
WRA	**Warramunga Arr**	**37.16**	**119**	P		P	20 49 43.8	-0.8
	0.2nm,0.5s,baz=288,slow=9.6,SNR=4.3							
ASAR	**Alice Springs**	**38.28**	**124**	P		P	20 49 54.4	+0.4
	0.5nm,0.7s,baz=291,slow=7.2,SNR=4.6							
MKAR	**Makanchi Array**	**52.63**	**345**	P		P	20 51 47.9	+0.5
	0.7nm,0.5s,baz=156,slow=9.2,SNR=12							
KURK	**Kurchatov**	**57.20**	**344**	P		P	20 52 20.1	-0.4
	0.2nm,0.6s,baz=162,slow=7.5,SNR=2.4							
ZALV	**Zalesovo Beam**	**58.80**	**350**	P		P	20 52 29.9	-1.7
	0.3nm,0.3s,baz=191,slow=7.0,SNR=4.3							
TXAR	**Lajitas Array**	**145.99**	**39**	PKPbc		PKPbc	21 02 14.8	+0.7
	0.1nm,0.5s,baz=281,slow=1.0,SNR=4.4							

IDC 15 20:45:34.8±3.5, 210S×10217E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/18, mbtmp3.6/5, Error ellipse: s-maj=155.5km s-min=21.5km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.09**	**122**	P		P	20 52 38.9	+0.4
	0.3nm,0.4s,baz=301,slow=9.0,SNR=6.4							
ASAR	**Alice Springs**	**37.46**	**128**	P		P	20 52 49.8	-0.5
	0.3nm,0.6s,baz=302,slow=7.7,SNR=3.0							
SONM	**Songino Array**	**49.86**	**4**	P		P	20 54 30.1	+0.4
	0.8nm,0.7s,baz=161,slow=9.2,SNR=2.6							
MKAR	**Makanchi Array**	**51.73**	**343**	P		P	20 54 43.6	-0.3
	0.4nm,0.5s,baz=156,slow=8.7,SNR=5.2							
ZALV	**Zalesovo Beam**	**57.69**	**348**	P		P	20 55 26.9	0.0
	1.2nm,0.6s,baz=160,slow=4.6,SNR=6.6							

ISCJB ***15*** *20:51:50.6±5.2, 16.36N±0.008×4.1W±0.1, h3km±37km, mb3.7/8, MS3.8/2, Error ellipse: s-maj=16.6km s-min=13.1km az=176.6*
IDC ***15*** *20:51:51.7±1.2, 16.40N×4.06W, h0km, mb3.7/7, mb1 3.9/10, mb1mx3.7/27, mbtmp3.7/10, ML4.0/4, MS3.5/3, Ms1 3.6/3, ms1mx2.9/40, Error ellipse: s-maj=26.3km s-min=18.7km az=53.0*
NEIC ***15*** *20:51:53.5±0.5, 16.42N×4.03W, h10km, Error ellipse: s-maj=13.8km s-min=7.9km az=102.0*
ISC 15 20:51:53.3±2.0, 1637N±005×374W±008, h5km±13km, n21, σ0§93/29, mb3.7/8, MS3.8/2, Mali

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**6.16**	**121**	Pn		**Pn**	**20 53 28.9**	**+4.0**
	1.8nm,0.3s,baz=308,slow=13,SNR=180							
TORD				Pg		**Pg**	**20 53 51.0**	**-0.2**
	3.4nm,0.3s,baz=301,slow=17,SNR=17							
TORD				Sn		**Sn**	**20 54 35.2**	**-0.6**
	4.0nm,0.3s,baz=301,slow=25,SNR=5.2							
TORD				Lg			20 55 16.3	
	12nm,0.3s,baz=301,slow=32,SNR=17							
TORD	**Torodi Ar. Bea**	**6.16**	**121**	Pn		**Pn**	**20 53 28.9**	**+4.0**
TORD				Pg		**Pg**	**20 53 51.0**	**-0.2**
TORD				Sn		**Sn**	**20 54 35.2**	**-0.6**
TORD				Lg			20 55 16.3	
DBIC	**Dimbokro**	**9.70**	**187**	Pn		**Pn**	**20 54 13.0**	**-0.6**
	1.0nm,0.3s,baz=340,slow=12,SNR=28							
DBIC				Sn		**Sn**	**20 55 53.6**	**-9.4**
	3.4nm,0.3s,baz=69,slow=19,SNR=7.3							
DBIC				Lg			20 56 55.4	
	2.0nm,0.3s,baz=96,slow=23,SNR=3.3							
DBIC	**Dimbokro**	**9.70**	**187**	*e*Pn		**Pn**	**20 54 12.8**	**-0.7**
DBIC				*e*Sn		**Sn**	**20 55 54.5**	**-8.6**
DBIC				*e*Lg			20 56 55.9	
TIC	**Toumodi**	**9.74**	**188**	*e*P		**Pn**	**20 54 14.6**	**+0.4**
	49nm,0.2s							
KIC	**Kosan Boka**	**9.99**	**186**	*e*P		**Pn**	**20 54 18.4**	**+0.8**
	35nm,0.2s							
LIC	**Lamto**	**10.16**	**187**	*e*P		**Pn**	**20 54 19.9**	**0.0**
	30nm,0.3s							
TAM	**Tamanrasset**	**10.82**	**52**	*e*Pn		**Pn**	**20 54 28.9**	**0.0**
TAM				*e*Sn		**Sn**	**20 56 23.5**	**-6.9**
BBTS	**Babate**	**12.45**	**264**	Pn		**Pn**	**20 54 45.9**	**-5.3**
	8.0nm,0.3s,baz=224,slow=1.7,SNR=21							
BBTS				Sn		**Sn**	**20 56 53.7**	**-17**
	2.3nm,0.3s,baz=263,slow=23,SNR=7.7							
BBTS				Lg			20 58 26.2	
	2.1nm,0.3s,baz=116,slow=22,SNR=2.2							
BBTS	**Babate**	**12.45**	**264**	Pn		**Pn**	**20 54 45.9**	**-5.3**
BBTS				Sn		**Sn**	**20 56 53.7**	**-17**
BBTS				Lg			20 58 26.2	
MDT	**Midelt**	**16.40**	**357**	Pn		**Pn**	**20 55 43.5**	**-0.7**
	0.1nm,0.3s,baz=293,slow=6.5,SNR=6.6							
MDT				Lg			21 00 24.9	
	0.2nm,0.3s,baz=58,slow=16,SNR=3.7							
MDT				LR		LR	21 02 26.5	
	comp=Z,51nm,19.8s,baz=294,slow=39							
KEST	**Kesra**	**22.54**	**29**	P		**P**	**20 56 54.5**	**+0.3**
	0.4nm,0.4s,mb3.2,baz=128,slow=3.8,SNR=12							
ESDC	**Sonseca Array**	**23.22**	**360**	P		**P**	**20 57 01.1**	**-0.2**
	0.5nm,0.6s,mb3.1,baz=182,slow=11,SNR=6.8							
GERES	**GERESS Array B**	**35.39**	**20**	P		**P**	**20 58 50.3**	**+0.4**
	0.3nm,0.5s,mb3.5,baz=203,slow=8.8,SNR=10							
ARCES	**ARCESS Array B**	**56.17**	**12**	P		**P**	**21 01 33.6**	**0.0**
	2.6nm,0.9s,mb4.3,baz=228,slow=6.6,SNR=3.4							
ARCES				LR		LR	21 24 49.5	
	comp=Z,108nm,18.6s,MS4.0,baz=146,slow=35							
AKTK	**Aktyubinsk**	**59.61**	**41**	P		**P**	**21 02 01.0**	**+2.8**
AKTO	**Aktyubinsk**	**59.61**	**41**	P		**P**	**21 02 01.0**	**+2.8**
	0.4nm,0.5s,mb3.8,baz=247,slow=14,SNR=4.1							
LVC	**Limon Verde**	**74.61**	**240**	LR		LR	21 33 17.6	
	comp=Z,40nm,20.0s,MS3.7,baz=28,slow=33							
MKAR	**Makanchi Array**	**75.57**	**45**	P		**P**	**21 03 38.3**	**-0.8**
	0.4nm,0.6s,mb3.5,baz=306,slow=3.6,SNR=2.4							
ZALV	**Zalesovo Beam**	**76.10**	**37**	P		**P**	**21 03 41.9**	**-0.1**
	0.4nm,0.3s,mb3.8,baz=297,slow=6.3,SNR=2.7							
YKA	**Yellowknife Ar**	**84.88**	**334**	P		**P**	**21 04 27.5**	**-1.4**
	1.3nm,0.7s,mb4.1,baz=72,slow=5.9,SNR=3.6							

SKHL ***15*** *20:56:16.4±0.3, 53.41N×132.39E, h12km±5km, mb5.0/5, Ms4.1/3*
SKHL Felt (II-III) at Tokur, Ekimchan.
ISCJB ***15*** *20:56:16.5±0.4, 53.66N±0.007×132.32E±0.007, h10km, mb4.3/18, Error ellipse: s-maj=11.2km s-min=4.4km az=26.0*
MOS ***15*** *20:56:17.2±1.0, 53.98N×132.76E, h12km, mb4.4/6, Error ellipse: s-maj=18.6km s-min=12.5km az=119.6*
IDC ***15*** *20:56:17.6±0.8, 53.87N×132.58E, h0km, mb3.8/10, mb1 4.0/12, mb1mx3.9/23, mbtmp3.8/12, ML3.5/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/38, Error ellipse: s-maj=24.8km s-min=18.8km az=40.0*
NEIC ***15*** *20:56:18.1±0.9, 53.61N×132.42E, h10km, mb4.8/4, Error ellipse: s-maj=26.6km s-min=15.0km az=172.0*
BJI ***15*** *20:56:18.1, 53.60N×132.40E, h10km, mB4.9, mb4.5, ML4.9*
ISC 15 20:56:18.7±0.4, 5368N±006×13226E±006, h10km, n53, σ1§45/68, mb4.3/18, 1C-1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
EKMR	**Ekimchan**	**0.74**	**146**	*i*Pg		**Pg**	**20 56 24.9**	**-8.0**
EKMR				AMB	AMB		20 56 27.0	
	470nm,0.2s							
EKMR				AMB	AMB		20 56 27.0	
	620nm,0.2s							
EKMR				AMB	AMB		20 56 27.0	
	640nm,0.2s							
EKMR				*e*Sg		**Sg**	**20 56 30.6**	**-12**
BMKR	**Bomnak**	**2.26**	**299**	*e*Pn		**Pn**	**20 56 55.5**	**-0.6**
BMKR				pPn			20 56 58.6	
BMKR				*e*Pg		**Pg**	**20 57 00.0**	**-2.0**
BMKR				AMB	AMB		20 57 03.3	
	240nm,0.5s							
BMKR				AMB	AMB		20 57 03.3	
	141nm,0.5s							
BMKR				AMB	AMB		20 57 03.3	
	481nm,0.5s							
BMKR				*e*Sn		**Sn**	**20 57 26.0**	**+2.1**
BMKR				*e*Sg		**Sg**	**20 57 32.0**	**+0.8**
ZEA	**Zeya**	**2.98**	**273**	*e*Pg		**Pn**	**20 57 12.1**	**+6.2**
ZEA				AMB	AMB		20 57 13.5	
	500nm,0.5s							
ZEA				AMB	AMB		20 57 13.8	
	220nm,0.4s							
ZEA				AMB	AMB		20 57 13.8	
	390nm,0.4s							
ZEA				AMB	AMB		20 57 13.8	
	490nm,0.4s							
ZEA				pPg			20 57 15.8	
ZEA				sPg			20 57 18.2	
ZEA				*e*Sn		**Sn**	**20 57 41.4**	**-0.3**
ZEA				*e*Sg		**Sg**	**20 57 53.0**	**-1.3**
ZEA				A			20 57 56.0	
	1μm,1.0s							
ZEA				A			20 57 57.2	
	1μm,0.7s							
ZEA				AMS	AMS		20 58 36.0	
	800nm,3.0s							
ZEA				AMS	AMS		20 58 36.0	
	1μm,3.0s							
ZEA				AMS	AMS		20 58 36.0	
	700nm,3.0s							
KROS	**Kirovskiy**	**3.21**	**286**	*e*Pn		**Pn**	**20 57 07.9**	**-1.2**
KROS				pPn			20 57 10.0	
KROS				sPn			20 57 13.7	
KROS				*e*Pg		**Pg**	**20 57 16.4**	**-3.7**
KROS				AMB	AMB		20 57 17.5	
	92nm,0.5s							
KROS				AMB	AMB		20 57 17.5	
	170nm,0.5s							
KROS				AMB	AMB		20 57 17.5	
	230nm,0.5s							
KROS				*e*Sg		**Sg**	**20 58 00.5**	**-1.2**
KROS				A			20 58 03.0	
	720nm,0.9s							
KROS				A			20 58 03.0	
	650nm,0.9s							
GRNR	**Gornyy**	**3.88**	**137**	*e*Pn		**Pn**	**20 57 11.0**	**-7.3**
GRNR				pPn			20 57 13.7	
GRNR				*e*Pg		**Pg**	**20 57 22.0**	**-11**
GRNR				AMB	AMB		20 57 25.5	
	126nm,0.5s							
GRNR				A			20 58 09.2	
	2μm,0.4s							
GRNR				*e*Sg		**Sg**	**20 58 09.4**	**-14**
KLR	**Kul'dur**	**4.47**	**184**	*e*Pn		**Pn**	**20 57 20.0**	**-6.4**
KLR				*e*Sg		**Sg**	**20 58 29.7**	**-12**
KLR				AMS	AMS		20 58 52.0	
	1μm,6.0s							
CLNS	**Chul'man**	**5.27**	**310**	*e*P		**Pn**	**20 57 40.1**	**+2.7**
CLNS				*e*S		**Sn**	**20 58 47.1**	**+9.0**
CLNS				pmax	pmax			
	comp=Z,41nm,0.3s							
CLNS				pmax	pmax			
	comp=N,30nm,0.3s							
CLNS				pmax	pmax			
	comp=E,19nm,0.3s							
CLNS				pmax	pmax			
	comp=Z,81nm,0.4s							
CLNS				pmax	pmax			
	comp=N,33nm,0.3s							
CLNS				pmax	pmax			
	comp=E,28nm,0.3s							
CLNS				smax				
	comp=N,224nm,0.5s							
CLNS				smax				
	comp=E,340nm,1.3s							
CLNS				smax				
	comp=N,1.0nm,0.4s							
CLNS				smax				
	comp=E,2.0nm,1.2s							
CLNS				MLR	MLR			
	comp=Z,173nm,12.0s							
CLNS	**Chul'man**	**5.27**	**310**	*e*Pn		**Pn**	**20 57 40.1**	**+2.7**
CLNS				*e*rx		rx	20 58 01.9	
CLNS				*e*Sg		**Sg**	**20 59 08.7**	**+1.0**
CLNS				A			20 59 19.2	
	comp=Z,1μm,0.4s							
OKH	**Okha**	**6.36**	**87**	*e*Sg		**Sg**	**20 59 34.0**	**-8.5**
OKH				A			20 59 41.0	
	comp=Z,970nm,1.0s							
TYV	**Tymovskoe**	**6.97**	**110**	*e*Pn		**Pn**	**20 58 00.0**	**-0.8**
TYV				*e*Pg		**Pg**	**20 58 20.5**	**-12**
TYV				pPg			20 58 25.0	
TYV				*e*Sg		**Sg**	**20 59 50.5**	**-12**
TYV				A			20 59 57.0	
	comp=Z,120nm,0.8s							
UGL	**Uglegorsk**	**7.67**	**123**	*e*rx		**Pg**	**20 58 54.0**	**+8.5**
UGL				*e*Sg		**Sg**	**21 00 09.2**	**-15**
UGL				A			21 00 16.0	
	comp=Z,160nm,0.6s							
UGL				A			21 00 16.0	
	comp=Z,310nm,0.6s							
UGL				AMS	AMS		21 01 12.0	
	comp=Z,600nm,12.0s							
UGL				AMS	AMS		21 01 12.0	
	comp=Z,800nm,12.0s							
YAK	**Yakutsk**	**8.49**	**352**	*e*P		**Pn**	**20 58 18.4**	**-3.1**
CRS	**Chara**	**8.61**	**298**	*e*Pn		**Pn**	**20 58 28.0**	**+4.8**
CRS				*e*Sg		Sn	21 00 54.5	+54

HIA	**Hailar**		**8.97**	**246**	*e*P		**Pn**	**20 58 33.2**	**+5.0**
HIA	**Hailar**		**8.97**	**246**	*e*Pn		**Pn**	**20 58 25.3**	**-2.9**
MDJ	**Mudanjiang**		**9.24**	**192**	P		**Pn**	**20 58 35.1**	**+3.3**
YSS	**Yuzh-Sakhalins**		**9.50**	**131**	*e*P		**Pn**	**20 58 37.0**	**+1.6**
YSS					*e*S		**Sn**	**21 00 24.0**	**+1.8**
YSS					MLR	MLR			
	comp=Z,200nm,12.0s								
YSS					MLR	MLR			
	comp=N,300nm,13.0s								
YSS	**Yuzh-Sakhalins**		**9.50**	**131**	*e*S		**Sn**	**21 00 23.0**	**+0.8**
YSS					AMS	AMS		21 02 44.0	
	comp=N,300nm,13.0s								
YSS					AMS	AMS		21 02 44.0	
	comp=N,200nm,13.0s								
CN2	**Changchun**		**10.85**	**207**	*e*P		**Pn**	**20 58 55.5**	**+1.5**
CN2					AMB	AMB			
	comp=Z,10.0nm,0.6s								
ASAJ	**Asahikawa**		**11.73**	**141**	LR	LR		21 03 13.9	
	comp=Z,88nm,20.4s,baz=156,slow=35								
PEA0B	**Petropavlovsk-**		**15.17**	**82**	P		**Pn**	**20 59 56.4**	**+3.7**
PETK	**Petropavlovsk-**		**15.17**	**82**	Pn		**Pn**	**20 59 51.3**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=317,slow=12,SNR=3.5								
PETK					LR	LR		21 06 26.3	
	comp=Z,59nm,18.6s,baz=157,slow=41								
ULN	**Ulaanbaatar**		**16.92**	**260**	*e*P		**Pn**	**21 00 19.5**	**+4.1**
SONM	**Songino Array**		**17.32**	**261**	P		**Pn**	**21 00 24.4**	**+4.0**
	comp=Z,0.3nm,0.3s,baz=57,slow=12,SNR=3.4								
ZAK	**Zakamensk**		**18.07**	**271**	*e*P		**Pn**	**21 00 34.2**	**+4.5**
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.4s								
ZALV	**Zalesovo Beam**		**27.60**	**290**	PcP	PcP		21 05 21.9	-1.0
	comp=Z,0.6nm,0.5s,baz=8.7,slow=1.9,SNR=2.8								
ZALV					LR	LR		21 12 19.7	
	comp=Z,36nm,18.4s,baz=47,slow=35								
MKAR	**Makanchi Array**		**32.12**	**278**	P		**P**	**21 02 47.8**	**+1.9**
	comp=Z,3.6nm,0.8s,mb4.2,baz=67,slow=8.6,SNR=9.9								
MKAR	**Makanchi Array**		**32.12**	**278**	*e*P		**P**	**21 02 50.9**	**+5.0**
MKAR					pmax	pmax			
	comp=Z,4.0nm,0.8s								
KURK	**Kurchatov**		**32.36**	**287**	P		**P**	**21 02 50.6**	**+2.7**
	comp=Z,1.9nm,0.8s,mb4.0,baz=67,slow=8.7,SNR=21								
KURK					PcP	PcP		21 05 34.6	-0.7
	comp=Z,0.5nm,0.8s,baz=61,slow=4.4,SNR=3.5								
KURK	**Kurchatov**		**32.36**	**287**	*e*P		**P**	**21 02 49.7**	**+1.7**
KURK					pP		P	21 02 50.7	-0.3
KURK					*e*			21 02 57.4	
KURK								21 05 34.7	
KURK					pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.6								
KURK	**Kurchatov**		**32.36**	**287**	*e*P		**P**	**21 02 49.7**	**+1.8**
	comp=Z,9.5nm,1.0s,mb4.6								
KURK					P	pP		21 02 50.6	-0.4
KURK					*e*			21 02 57.4	
KURK					PcP	PcP		21 05 34.6	-0.7
NIKO	**Nikolski**		**34.30**	**67**	*e*P		**P**	**21 02 57.9**	**-7.0**
	comp=Z,31nm,0.9s,mb5.2								
BVAR	**Borovoye Array**		**35.90**	**295**	P		**P**	**21 03 20.6**	**+2.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=69,slow=7.9,SNR=6.2								
BRVK	**Borovoye**		**35.95**	**295**	P		**P**	**21 03 20.1**	**+1.1**
BRVK					*e*			21 03 28.9	
BRVK					pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.1								
BRVK	**Borovoye**		**35.95**	**295**	P		**P**	**21 03 20.1**	**+1.1**
	comp=Z,1.8nm,0.8s,mb4.0								
BRVK					*e*			21 03 28.9	
JOF	**Joensuu**		**48.48**	**323**	*e*p		**P**	**21 05 00.6**	**-0.3**
	comp=Z,2.5nm,0.8s,mb4.3								
JOF	**Joensuu**		**48.48**	**323**	*e*P		**P**	**21 05 00.6**	**-0.3**
JOF					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.4								
NB2	**NORSAR Subarra**		**56.44**	**330**	P		**P**	**21 06 00.6**	**+0.7**
	comp=Z,2.0nm,0.8s,mb4.2,baz=36,slow=6.9								
NOA	**NORSAR Array B**		**56.44**	**330**	P		**P**	**21 06 00.7**	**+0.7**
	comp=Z,0.9nm,0.6s,mb4.0,baz=37,slow=6.7,SNR=4.9								
AKASG	**Malin Array Be**		**57.66**	**313**	P		**P**	**21 06 08.7**	**-0.1**
	comp=Z,0.8nm,0.4s,mb4.1,baz=40,slow=8.6,SNR=7.5								
AKASG	**Malin Array Be**		**57.66**	**313**	*e*P		**P**	**21 06 09.1**	**+0.4**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.4s								
MIB	**Mutribah**		**63.69**	**285**	*e*P		**P**	**21 06 50.6**	**+0.5**
	baz=297								
MIB					AMb	AMB		21 06 59.3	
	comp=Z,10.0nm,0.6s,mb5.0,baz=297								
CLL	**Collm**		**63.69**	**322**	*e*P		**P**	**21 06 50.0**	**+0.2**
RST	**Umm Al-Ruwaisa**		**64.11**	**285**	*e*P		**P**	**21 06 52.9**	**-0.1**
	baz=296								
RST					AMb	AMB		21 07 02.0	
	comp=Z,12nm,0.6s,mb5.1,baz=296								
NAY	**Al-Naaiem**		**64.16**	**285**	*e*P		**P**	**21 06 51.6**	**-1.6**
	baz=296								
NAY					AMb	AMB		21 07 02.5	
	comp=Z,8.0nm,0.8s,mb4.8,baz=296								
RDF	**Al-Radifah**		**64.22**	**284**	*e*P		**P**	**21 06 51.0**	**-2.7**
	baz=296								
RDF					AMb	AMB		21 07 00.7	
	comp=Z,34nm,1.2s,mb5.2,baz=296								
GERES	**GERESS Array B**		**65.45**	**320**	P		**P**	**21 07 01.3**	**0.0**
	comp=Z,0.4nm,0.6s,mb3.7,baz=46,slow=5.8,SNR=4.8								
LAO	**LASA Array**		**68.35**	**39**	*e*P		**P**	**21 07 16.9**	**-3.0**
	comp=Z,5.7nm,0.5s,mb4.9								
NVAR	**Mina Array Bea**		**70.00**	**52**	P		**P**	**21 07 29.6**	**-0.6**
	comp=Z,0.5nm,0.8s,mb3.5,baz=317,slow=5.0,SNR=3.1								
WRA	**Warramunga Arr**		**73.33**	**178**	P		**P**	**21 07 51.3**	**+1.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=355,slow=6.

MKAR	**Makanchi Array**	**55.65**	**325**	P		**P**	**21 22 23.0**	**-1.2**
	1.0nm,0.4s,mb4.2,baz=117,slow=7.4,SNR=10.0							
ZALV	**Zalesovo Beam**	**58.60**	**333**	P		**P**	**21 22 46.1**	**+1.2**
	1.6nm,0.5s,mb4.3,baz=113,slow=6.8,SNR=9.2							
COLD	**Coldfoot**	**82.27**	**23**	*e*P		**P**	**21 25 09.6**	**+0.9**
	5.7nm,1.3s,mb4.2							
ARCES	**ARCESS Array B**	**88.42**	**340**	P		**P**	**21 25 37.8**	**-1.4**
	2.1nm,0.9s,mb4.2,baz=80,slow=6.0,SNR=9.1							
KMBO	**Kilima Mbogo**	**89.09**	**269**	*e*P		**P**	**21 25 41.9**	**-1.6**
TORD	**Torodi Ar. Bea**	**121.81**	**289**	PKP		PKPdf	21 31 40.7	-1.4
	0.5nm,0.4s,baz=59,slow=1.7,SNR=17							

IDC ***15*** *21:16:42.9±3.9, 1407N×9363W, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.8/23, mbtmp3.8/7, ML4.3/3, Error ellipse: s-maj=72.7km s-min=40.8km az=12.0*
NEIC ***15*** *21:16:44.6±1.7, 1412N×9351W, h10km, mb4.2/1, Error ellipse: s-maj=31.6km s-min=20.2km az=197.0*
ISCJB ***15*** *21:17:01.3±0.6, 1545N±006×9352W±004, h85km±6km, mb3.5/5, Error ellipse: s-maj=9.2km s-min=5.7km az=7.0*
MEX ***15*** *21:17:04.3±1.2, 1545N×9358W, h55km±42km, MD4.2*
ISC 15 21:17:02.4±0.6, 1544N±005×9352W±003, h76km±6km, n21, σ1§17/30, mb3.5/5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
THIG		**1.32**	**113**	*e*P		**Pn**	**21 17 25.5**	**+0.3**
THIG				*i* S		**Sn**	**21 17 42.0**	**-0.4**
TGIG		**1.38**	**16**	*i* P		**Pn**	**21 17 26.7**	**+0.7**
TGIG				*i* S		**Sn**	**21 17 42.8**	**-1.0**
CCIG	**Comitan**	**1.57**	**58**	*e*P		**Pn**	**21 17 29.9**	**+1.5**
CCIG				*i* S		**Sn**	**21 17 48.5**	**+0.3**
CMIG	**Matias Romero**	**2.10**	**322**	Pn		**Pn**	**21 17 36.9**	**+1.4**
	23nm,0.3s,baz=136,slow=11,SNR=195							
CMIG				Sn		**Sn**	**21 18 02.4**	**+1.6**
	70nm,0.3s,baz=116,slow=15,SNR=21							
HUIG	**Huatulco**	**2.52**	**278**	*e*P		**Pn**	**21 17 41.3**	**+0.2**
HUIG				*i* S		**Sn**	**21 18 08.3**	**-2.5**
TUIG	**Tuzandepetl**	**2.72**	**342**	*e*P		**Pn**	**21 17 43.6**	**-0.3**
TUIG				*i* S		**Sn**	**21 18 14.9**	**-0.9**
VHO	**Vista Hermosa**	**3.49**	**298**	*i* P		**Pn**	**21 17 54.3**	**0.0**
VHO				*i* S		**Sn**	**21 18 34.4**	**0.0**
SCIG	**Sabancuy**	**4.16**	**32**	*i* P		**Pn**	**21 18 03.4**	**0.0**
SCIG				*i* S		**Sn**	**21 18 49.9**	**-0.8**
PNIG	**Pinotepa**	**4.53**	**283**	*i* P		**Pn**	**21 18 09.9**	**+1.3**
PNIG				*i* S		**Sn**	**21 18 58.2**	**-1.8**
TEIG	**Tepich**	**6.90**	**46**	Pn		**Pn**	**21 18 38.8**	**-2.0**
	23nm,0.3s,baz=245,slow=2.1,SNR=67							
TEIG				Sn		**Sn**	**21 19 52.3**	**-5.5**
	20nm,0.3s,baz=324,slow=21,SNR=15							
TXAR	**Lajitas Array**	**16.70**	**328**	P		**Pn**	**21 20 54.0**	**+2.4**
	0.1nm,0.3s,baz=153,slow=11,SNR=11							
AMTX	**Amarillo**	**20.70**	**341**	*e*P		**P**	**21 21 37.3**	**+0.8**
	4.2nm,0.4s							
ANMO	**Albuquerque**	**22.64**	**331**	P		**P**	**21 21 57.9**	**+0.9**
	1.4nm,0.7s,mb3.4,baz=147,slow=14,SNR=5.5							
ANMO	**Albuquerque**	**22.64**	**331**	P		**P**	**21 21 57.9**	**+0.8**
PDAR	**Pinedale Array**	**30.51**	**336**	P		**P**	**21 23 09.0**	**+0.7**
	0.2nm,0.4s,mb3.2,baz=127,slow=6.9,SNR=2.5							
NVAR	**Mina Array Bea**	**31.63**	**321**	P		**P**	**21 23 15.2**	**-3.0**
	0.1nm,0.3s,mb3.0,baz=137,slow=9.4,SNR=2.3							
MCMT	**McKenzie Canyo**	**33.55**	**335**	*e*P		**P**	**21 23 35.6**	**+0.8**
YKA	**Yellowknife Ar**	**49.30**	**347**	P		**P**	**21 25 42.2**	**-1.1**
	0.8nm,0.4s,mb4.0,baz=151,slow=7.9,SNR=4.7							
ARCES	**ARCESS Array B**	**85.23**	**18**	P		**P**	**21 29 29.2**	**-1.1**
	2.3nm,0.9s,mb4.1,baz=302,slow=5.2,SNR=5.5							
BUR08	**Bucovina Ar. S**	**96.80**	**37**	*e*P		**P**	**21 30 20.4**	**-4.5**
CM31	**Chiang Mai Arr**	**144.15**	**340**	*e*PKPbc		PKPdf	21 36 24.4	-6.0

ISCJB ***15*** *21:21:57.9±0.7, 606S±0.1×249W±03, h10km, mb4.0/9, MS3.7/4, Error ellipse: s-maj=26.0km s-min=12.5km az=42.6*
IDC ***15*** *21:21:59.0±1.1, 6036S×2486W, h0km, mb4.0/9, mb1 4.1/9, mb1mx4.0/17, mbtmp4.0/9, MS3.7/4, Ms1 3.7/4, ms1mx3.4/17, Error ellipse: s-maj=38.8km s-min=19.5km az=20.0*
NEIC ***15*** *21:22:02.5±0.7, 6059S×2489W, h30km, Error ellipse: s-maj=26.4km s-min=12.4km az=224.0*
ISC 15 21:21:59.9±0.7, 606S±01×249W±03, h10km, n13, σ0§99/12, mb4.0/9, MS3.7/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SNAA	**Sanae**	**14.15**	**151**	*e*Pn		**Pn**	**21 25 18.6**	**-1.4**
	33nm,1.1s							
PLCA	**Paso Flores**	**34.16**	**284**	P		**P**	**21 28 45.2**	**+0.4**
	1.5nm,0.6s,mb4.1,baz=138,slow=9.5,SNR=7.0							
PLCA				LR		LR	21 41 22.5	
	comp=Z,86nm,20.9s,MS3.5,baz=12,slow=34							
MAW	**Mawson**	**35.85**	**139**	P		**P**	**21 29 00.8**	**+1.7**
	1.7nm,0.8s,mb4.0,baz=253,slow=10,SNR=4.1							
CPUP	**Villa Florida**	**40.74**	**312**	P		**P**	**21 29 39.9**	**-0.8**
	0.3nm,0.4s,mb3.3,baz=225,slow=17,SNR=2.8							
CPUP				LR		LR	21 44 20.0	
	comp=Z,56nm,19.0s,MS3.4,baz=315,slow=33							
BOSA	**Boshof**	**46.15**	**69**	P		**P**	**21 30 24.2**	**0.0**
	2.1nm,0.8s,mb4.1,baz=169,slow=5.2,SNR=2.9							
BDFB	**Brasilia**	**47.88**	**329**	P		**P**	**21 30 36.9**	**-0.9**
	1.1nm,0.3s,mb4.3,baz=143,slow=10,SNR=2.4							
BDFB				LR		LR	21 48 01.1	
	comp=Z,88nm,18.1s,MS3.8,baz=86,slow=33							
LVC	**Limon Verde**	**48.66**	**301**	P		**P**	**21 30 44.8**	**+1.0**
	2.1nm,0.6s,mb4.3,baz=102,slow=7.3,SNR=3.7							
LVC	**Limon Verde**	**48.66**	**301**	P		**P**	**21 30 44.8**	**+1.0**
SIV	**San Ignacio**	**51.58**	**314**	P		**P**	**21 31 04.8**	**-1.2**
	0.5nm,0.4s,mb3.8,baz=169,slow=16,SNR=3.7							
LPAZ	**La Paz**	**53.99**	**306**	P		**P**	**21 31 24.9**	**+1.0**
	1.4nm,0.7s,mb4.0,baz=135,slow=5.0,SNR=8.6							
TORD	**Torodi Ar. Bea**	**76.47**	**27**	P		**P**	**21 33 49.9**	**+0.4**
	1.6nm,0.8s,mb4.0,baz=203,slow=6.4,SNR=21							
TORD	**Torodi Ar. Bea**	**76.47**	**27**	P		**P**	**21 33 49.9**	**+0.4**
WRA	**Warramunga Arr**	**98.03**	**160**	LR		LR	22 17 21.7	
	comp=Z,101nm,20.4s,MS4.3,baz=250,slow=34							

IDC ***15*** *21:31:25.1±1.9, 433S×10168E, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.0/19, mbtmp4.2/8, Error ellipse: s-maj=71.2km s-min=16.9km az=56.0*
ISCJB ***15*** *21:31:27.5±1.5, 44S±02×1016E±03, h33km, mb4.2/10, Error ellipse: s-maj=55.6km s-min=12.9km az=143.8*
NEIC ***15*** *21:31:30.2±0.9, 433S×10169E, h35km, mb4.4/2, Error ellipse: s-maj=37.4km s-min=9.3km az=55.0*
ISC 15 21:31:30.2±1.5, 43S±02×1017E±03, h35km, n15, σ0§60/12, mb4.2/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.80**	**353**	P		**P**	**21 36 29.2**	**-0.9**
	5.6nm,0.7s,mb4.1,baz=184,slow=8.3,SNR=44							
FITZ	**Fitzroy Crossi**	**27.12**	**122**	P		**P**	**21 37 10.3**	**0.0**
	2.0nm,0.6s,mb3.7,baz=246,slow=11,SNR=3.7							
WRA	**Warramunga Arr**	**35.37**	**119**	P		**P**	**21 38 22.6**	**-0.2**
	0.9nm,0.4s,mb4.0,baz=306,slow=9.1,SNR=16							
ASAR	**Alice Springs**	**36.53**	**125**	P		**P**	**21 38 32.7**	**0.0**
	0.5nm,0.4s,mb3.7,baz=299,slow=7.8,SNR=12							
SONM	**Songino Array**	**52.11**	**4**	P		**P**	**21 40 38.4**	**+1.5**
	5.8nm,0.7s,mb4.6,baz=185,slow=9.1,SNR=22							
ULN	**Ulaanbaatar**	**52.19**	**5**	*e*P		**P**	**21 40 38.2**	**+0.8**
	5.1nm,1.0s,mb4.4							
MJAR	**Matsushiro Arr**	**53.06**	**37**	P		**P**	**21 40 43.6**	**-0.5**
	1.9nm,0.7s,mb4.2,baz=216,slow=7.0,SNR=8.8							
EKS2	**Erkin-Say**	**53.18**	**334**	*e*P		**P**	**21 40 45.0**	**+0.1**
	3.1nm,0.8s,mb4.3							
MK31	**Makanchi Array**	**53.72**	**344**	*e*P		**P**	**21 40 48.6**	**-0.2**
MKAR	**Makanchi Array**	**53.72**	**344**	P		**P**	**21 40 48.6**	**-0.2**
	3.2nm,0.7s,mb4.4,baz=146,slow=8.2,SNR=22							
ZAA0	**Zalesovo Array**	**59.76**	**349**	*e*P		**P**	**21 41 31.5**	**0.0**
ZALV	**Zalesovo Beam**	**59.76**	**349**	P		**P**	**21 41 31.1**	**-0.4**
	2.2nm,0.4s,mb4.5,baz=176,slow=4.5,SNR=12							
TXAR	**Lajitas Array**	**145.42**	**41**	PKPbc		PKPbc	21 51 06.2	+1.0
	2.1nm,0.6s,baz=315,slow=1.0,SNR=29							
JCT	**Junction City**	**147.01**	**36**	*e*PKPbc		PKPbc	21 51 10.7	+0.7
TKL	**Tuckaleechee C**	**148.42**	**9**	PKPbc		PKPbc	21 51 12.9	-0.7
	5.1nm,0.7s,baz=178,slow=1.7,SNR=8.5							

NEIC ***15*** *21:36:15.2±4.4, 2760N×112.18W, h10km, Error ellipse: s-maj=54.2km s-min=16.4km az=206.0*
IDC ***15*** *21:36:19.1±3.8, 2784N×111.78W, h0km, mb1 3.9/6, mb1mx3.7/26, mbtmp3.6/6, ML3.6/6, Error ellipse: s-maj=52.8km s-min=11.9km az=17.0*

ISC 15 21:36:21.0±3.4, 279N±03×1118W±01, h10km, n12, σ1§21/16, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TUC	**Tucson**	**4.48**	**11**	*e*Pn		**Pn**	**21 37 27.1**	**-1.8**
GLA	**Glamis**	**5.77**	**334**	*e*Pn		**Pn**	**21 37 42.5**	**-4.2**
	9.5nm,0.6s							
PFO	**Pinyon Flat Ob**	**6.97**	**326**	Pn		**Pn**	**21 38 03.5**	**+0.3**
	0.2nm,0.3s,baz=7.6,slow=14,SNR=2.8							
PFO	**Pinyon Flat Ob**	**6.97**	**326**	Pn		**Pn**	**21 38 03.5**	**+0.3**
TXAR	**Lajitas Array**	**7.27**	**77**	Pn		**Pn**	**21 38 07.2**	**-0.1**
	0.3nm,0.3s,baz=247,slow=13,SNR=28							
TXAR				Pg		**Pg**	**21 38 39.1**	**-1.1**
	0.2nm,0.3s,baz=256,slow=15,SNR=4.0							
TXAR				Sn		**Sn**	**21 39 30.9**	**+0.9**
	baz=270,slow=28,SNR=3.4							
TXAR				Lg			21 40 07.5	
	0.2nm,0.3s,baz=251,slow=11,SNR=3.6							
TXAR	**Lajitas Array**	**7.27**	**77**	Pn		**Pn**	**21 38 07.2**	**-0.1**
TXAR				Pg		**Pg**	**21 38 39.1**	**-1.1**
TXAR				Sn		**Sn**	**21 39 30.9**	**+0.9**
LAZ	**Ladron**	**7.60**	**30**	*e*Pn		**Pn**	**21 38 11.8**	**0.0**
ANMO	**Albuquerque**	**8.37**	**32**	Pn		**Pn**	**21 38 23.8**	**+1.5**
	0.3nm,0.3s,baz=221,slow=16,SNR=6.4							
ARUT	**Antelope Range**	**9.96**	**352**	*e*Pn		**Pn**	**21 38 42.7**	**-1.5**
NVAR	**Mina Array Bea**	**11.83**	**334**	Pn		**Pn**	**21 39 13.3**	**+3.5**
	0.1nm,0.3s,baz=172,slow=14,SNR=6.2							
ELK	**Elko**	**13.13**	**348**	Pn		**Pn**	**21 39 28.6**	**+1.2**
	0.1nm,0.3s,baz=182,slow=11,SNR=14							
PDAR	**Pinedale Array**	**14.95**	**6**	Pn		**Pn**	**21 39 57.0**	**+4.8**
	0.2nm,0.3s,baz=178,slow=9.6,SNR=23							

CSEM ***15*** *21:37:24.1±0.2, 3752N×2994E, h0km±1km, MD3.3, Error ellipse: s-maj=1.6km s-min=1.3km az=12.0*
DDA ***15*** *21:37:24.9, 3761N×2990E, h6km±7km, Md3.3*
ISK ***15*** *21:37:24.1, 3752N×2995E, h5km, MD3.3*
ISCJB ***15*** *21:37:25.8±0.4, 3750N±003×2997E±003, h10km, Error ellipse: s-maj=4.3km s-min=3.0km az=151.0*
ISC 15 21:37:25.7±0.5, 3752N±003×2995E±003, h1km±5km, n26, σ1§09/38, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.41**	**228**	*i* P		**Pg**	**21 37 33.2**	**-0.4**
GOLH				*i* S		**Sg**	**21 37 41.4**	**+2.5**
BCK	**Bucak**	**0.52**	**96**	*e*PG		**Pg**	**21 37 35.2**	**-0.3**
BCK				*e*SG		**Sg**	**21 37 43.4**	**+1.1**
ISP	**Isparta**	**0.56**	**54**	*e*PG		**Pg**	**21 37 35.4**	**-0.9**
ISP				*e*SG		**Sg**	**21 37 44.3**	**+0.7**
TKTP	**Tekketepe**	**0.60**	**29**	*i* P		**Pg**	**21 37 36.3**	**-1.0**
TKTP				*i* S		**Sg**	**21 37 48.3**	**+3.3**
DNZL	**Cakiroluk**	**0.73**	**284**	*i* P		**Pg**	**21 37 38.3**	**-1.5**
DNZL				*i* S		**Sg**	**21 37 49.5**	**+0.2**
ELL	**Elmali**	**0.77**	**182**	*e*PG		**Pg**	**21 37 40.0**	**-0.3**
ANTB	**Antalya**	**0.83**	**137**	*e*PG		**Pg**	**21 37 41.4**	**-0.3**
KHL	**Karahalli**	**0.87**	**338**	*e*PG		**Pg**	**21 37 41.9**	**-0.6**
SHUT	**Suhut-Afyon**	**1.14**	**25**	*e*PN		**Pn**	**21 37 46.5**	**-2.2**
SHUT				*e*SN		**Sn**	**21 38 03.5**	**-1.5**
AKAS	**Kas**	**1.31**	**192**	*i* P		**Pg**	**21 37 51.5**	**+0.7**
AKAS				*i* S		**Sg**	**21 38 16.9**	**+9.2**
YER	**Yerkesik**	**1.38**	**255**	*e*PN		**Pn**	**21 37 51.5**	**-0.4**
YER				*e*SN		**Sn**	**21 38 11.4**	**+0.5**
KULA	**Kula-Manisa**	**1.42**	**315**	*e*PN		**Pn**	**21 37 52.0**	**-0.6**
BOLV	**Bolvadin**	**1.44**	**33**	*i* P		**Pn**	**21 37 52.1**	**-0.7**
BOLV				*i* S		**Sg**	**21 38 13.6**	**+1.6**
ALT	**Altintas**	**1.54**	**5**	*e*PN		**Pn**	**21 37 54.1**	**-0.1**
GDZ	**Gediz**	**1.61**	**347**	*i* P		**Pn**	**21 37 53.8**	**-1.4**
GDZ				*i* S		**Sn**	**21 38 18.7**	**+2.0**
AYDN	**Tasoluk**	**1.65**	**276**	*i* P		**Pn**	**21 37 54.7**	**-1.0**
AYDN				*i* S		**Sn**	**21 38 18.2**	**+0.7**
MLSB	**Milas**	**1.74**	**263**	*e*PN		**Pn**	**21 37 56.6**	**-0.4**
DEMI	**Demirci**	**1.81**	**328**	*i* P		**Pn**	**21 37 55.1**	**-2.8**
DEMI				*i* S		**Sn**	**21 38 24.0**	**+2.6**
KONT	**Konya--Tatoy**	**1.96**	**77**	*e*PN		**Pn**	**21 38 00.3**	**+0.3**
LADK	**Ladik-KONYA**	**2.03**	**70**	*e*PN		**Pn**	**21 38 01.2**	**+0.2**
BODT	**Bodrum**	**2.15**	**259**	*e*PN		**Pn**	**21 38 02.6**	**0.0**
DST	**Dursunbey**	**2.33**	**334**	*e*PN		**Pn**	**21 38 04.9**	**-0.2**
BALB	**Balikesir**	**2.67**	**323**	*e*PN		**Pn**	**21 38 10.0**	**+0.2**
ADVT	**Abdulvahap**	**2.92**	**357**	*e*PN		**Pn**	**21 38 14.0**	**+0.8**
GULT	**Gulveren**	**2.95**	**8**	*e*PN		**Pn**	**21 38 14.1**	**+0.6**
YLV	**Yalova**	**3.08**	**352**	*e*PN		**Pn**	**21 38 16.3**	**+0.9**

IDC ***15*** *21:50:10.9±0.8, 4666N×15324E, h0km, mb3.9/10, mb1 4.1/11, mb1mx4.0/21, mbtmp3.8/11, ML3.3/1, MS2.8/1, Ms1 2.8/1, ms1mx2.0/29, Error ellipse: s-maj=24.9km s-min=19.5km az=148.0*
NEIC ***15*** *21:50:12.5±0.7, 4665N×15320E, h10km, Error ellipse: s-maj=20.6km s-min=14.4km az=146.0*
ISCJB ***15*** *21:50:15.9±1.5, 469N±0.1×1533E±02, h42km±12km, mb3.8/10, Error ellipse: s-maj=25.3km s-min=8.5km az=135.7*
MOS ***15*** *21:50:17.3±1.5, 4691N×153.16E, h54km, mb3.9/3, Error ellipse: s-maj=23.7km s-min=14.5km az=52.1*
ISC 15 21:50:18.8±1.3, 469N±01×1532E±02, h49km±11km, n25, σ0§99/26, mb3.8/10, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.09**	**248**	*e*PN		**Pn**	**21 51 13.6**	**-5.0**
KUR				pmax		pmax		
	comp=N,60nm,0.5s							
KUR				pmax		pmax		
	comp=E,30nm,0.5s							
KUR				pmax		pmax		
	comp=Z,110nm,0.5s							
SKR	**Severo-Kuril's**	**4.25**	**26**	*e*PN		**Pn**	**21 51 20.9**	**+0.1**
SKR				*e*S		**Sn**	**21 52 08.2**	**-0.9**
SKR				pmax		pmax		
	comp=N,20nm,0.5s							
SKR				pmax		pmax		
	comp=Z,40nm,0.5s							
SKR				smax				
	comp=N,90nm,0.5s							
SKR				smax				
	comp=E,80nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**5.92**	**244**	*e*PN		**Pn**	**21 51 41.9**	**-1.9**
PETK	**Petropavlovsk-**	**6.86**	**23**	Pn		**Pn**	**21 51 57.3**	**+0.8**
	comp=E,0.6nm,0.3s,baz=176,slow=11,SNR=12							
PETK				Sn		**Sn**	**21 53 20.4**	**+7.2**
	comp=E,0.1nm,0.3s,baz=239,slow=45,SNR=2.1							
PETK				LR		LR	21 54 49.4	
	comp=E,66nm,18.2s,baz=211,slow=39							
ASAJ	**Asahikawa**	**7.97**	**254**	Pn		**Pn**	**21 52 13.1**	**+1.2**
	comp=E,1.8nm,0.3s,baz=91,slow=19,SNR=15							
ASAJ	**Asahikawa**	**7.97**	**254**	PN		**Pn**	**21 52 13.1**	**+1.2**
ASAJ				pmax		pmax		
	comp=Z,2.0nm,0.3s							
MJAR	**Matsushiro Arr**	**15.23**	**233**	Pn		**Pn**	**21 53 52.5**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=32,slow=8.7,SNR=3.8							
KSRS	**Korea Array**	**20.92**	**252**	P		**P**	**21 54 57.3**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=51,slow=12,SNR=2.5							
KSRS	**Korea Array**	**20.92**	**252**	P		**P**	**21 54 57.3**	**+0.3**
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.7s							
ZALV	**Zalesovo Beam**	**42.60**	**306**	P		**P**	**21 58 08.6**	**-1.1**
	comp=Z,0.7nm,0.4s,mb3.7,baz=64,slow=8.8,SNR=4.5							
MKAR	**Makanchi Array**	**46.95**	**297**	P		**P**	**21 58 43.6**	**-0.8**
	comp=Z,0.6nm,0.4s,mb3.9,baz=66,slow=8.5,SNR=5.4							
MKAR	**Makanchi Array**	**46.95**	**297**	*e*P		**P**	**21 58 43.5**	**-0.8**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.4s							
CMAR	**Chiang Mai Arr**	**52.48**	**256**	P		**P**	**21 59 27.2**	**+0.5**
	comp=Z,0.5nm,0.7s,mb3.6,baz=38,slow=7.7,SNR=6.2							
NVAR	**Mina Array Bea**	**62.30**	**62**	P		**P**	**22 00 35.9**	**+0.2**
	comp=Z,0.2nm,0.4s,mb3.6,baz=287,slow=7.5,SNR=4.1							
PDAR	**Pinedale Array**	**64.60**	**54**	P		**P**	**22 00 51.1**	**+0.4**
	comp=Z,0.5nm,0.7s,mb3.6,baz=207,slow=0.7,SNR=4.2							
NB2	**NORSAR Subarra**	**69.12**	**341**	P		**P**	**22 01 14.0**	**+1.0**
	comp=Z,1.8nm,0.6s,mb4.3,baz=26,slow=6.5							
NOA	**NORSAR Array B**	**68.12**	**341**	P		**P**	**22 01 13.6**	**+0.6**
	comp=Z,2.3nm,0.5s,mb4.5,baz=28,slow=6.3,SNR=15							
AKASG	**Malin Array Be**	**71.48**	**326**	P		**P**	**22 01 33.7**	**0.0**
	comp=Z,1.7nm,0.5s,mb4.2,baz=32,slow=6.7,SNR=7.0							
AKASG	**Malin Array Be**	**71.48**	**326**	P		**P**	**22 01 33.7**	**0.0**
ASAR	**Alice Springs**	**72.37**	**199**	P		**P**	**22 01 37.2**	**-2.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=10,slow=5.3,SNR=14							
ASAR	**Alice Springs**	**72.37**	**199**	*e*P		**P**	**22 01 37.5**	**-1.8**
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
TXAR	**Lajitas Array**	**77.35**	**61**	P		**P**	**22 02 08.3**	**0.0**
	comp=Z,1.1nm,0.6s,mb4.0,baz=295,slow=3.9,SNR=19							
TXAR	**Lajitas Array**	**77.35**	**61**	P		**P**	**22 02 08.3**	**0.0**
GERES	**GERESS Array B**	**78.37**	**334**	P		**P**	**22 02 14.5**	**+0.9**
	comp=Z,0.4nm,0.5s,mb3.6,baz=34,slow=5.5,SNR=4.7							
TORD	**Torodi Ar. Bea**	**115.02**	**329**	PKP		PKiKP	22 08 53.1	-1.4
	comp=Z,0.1nm,0.4s,baz=0.0,slow=1.6,SNR=3.1							

JMA ***15*** *22:24:54.5±0.2, 2467N×12245E, h25km±2km, M3.0*
ISCJB ***15*** *22:24:55.8±1.1, 2462N±003×12259E±002, h7km±8km, Error ellipse: s-maj=5.4km s-min=2.5km az=9.9*
TAP ***15*** *22:24:57.0, 2463N×12251E, h15km, ML3.3, C*
ISC 15 22:24:56.2±0.5, 2464N±003×12259E±002, h11km±3km, n39, σ0§87/63, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.42**	**114**	P		**Pg**	**22 25 05.3**	**+0.8**
YOJ				S		**Sg**	**22 25 12.9**	**+2.8**
TWB1	**Santiao Chiao**	**0.66**	**304**	*i* P		**Pg**	**22 25 09.4**	**+0.5**
	baz=308							
TWB1				S		**Sg**	**22 25 18.0**	**+0.4**
	baz=308							
TWC	**Suao**	**0.67**	**268⇑**	*i* P		**Pg**	**22 25 08.7**	**-0.5**
	baz=268							
TWC				*e*S		**Sg**	**22 25 17.6**	**-0.4**
	baz=268							
ILA	**Ilan**	**0.77**	**280**	*e*P		**Pg**	**22 25 11.0**	**-0.2**
	baz=280							
ILA				*e*S		**Sg**	**22 25 23.2**	**+2.0**
	baz=280							
ENA	**Nanau**	**0.80**	**255**	*e*P		**Pg**	**22 25 11.2**	**-0.4**
	baz=253							
ENA				*e*S		**Sg**	**22 25 21.6**	**-0.4**
	baz=253							
TWE	**Neicheng**	**0.84**	**276**	*i* P		**Pg**	**22 25 12.0**	**-0.4**
	baz=268							
TWE				*e*S		**Sg**	**22 25 22.8**	**-0.6**
	baz=268							
NWF	**Wu-fen Shan**	**0.85**	**301**	P		**Pg**	**22 25 12.9**	**+0.3**
	baz=302							
NWF				S		**Sg**	**22 25 23.4**	**-0.3**
	baz=302							
ENTT	**Nioudou**	**0.93**	**271**	*e*P		**Pg**	**22 25 13.7**	**-0.4**
	baz=269							
ENTT				*e*S		**Sg**	**22 25 25.9**	**-0.3**
	baz=269							
TWA	**Mucha**	**0.97**	**291**	P		**Pg**	**22 25 15.0**	**+0.1**
	baz=291							
TWA				S		**Sg**	**22 25 27.3**	**-0.4**
	baz=291							
TWD	**Chiawan**	**1.06**	**239**	*e*P		**Pb**	**22 25 16.2**	**-0.3**
	baz=245							
TWD				*e*S		**Sg**	**22 25 29.6**	**-0.7**
	baz=245							
IRIF	**Iriomote-Funau**	**1.08**	**106**	P		**Pb**	**22 25 15.9**	**-1.1**
IRIF				S		**Sb**	**22 25 32.3**	**+1.2**
TWY	**Chenhua**	**1.10**	**306**	*e*P		**Pb**	**22 25 17.3**	**0.0**
	baz=306							
TWY				*e*S		**Sb**	**22 25 31.5**	**-0.1**
	baz=306							
NSK	**Sanguang**	**1.12**	**272**	*e*P		**Pb**	**22 25 17.3**	**-0.2**
	baz=271							
NNS	**Nan Shan**	**1.12**	**260**	P		**Pb**	**22 25 17.4**	**-0.3**
	baz=248							
NNS				S		**Sb**	**22 25 31.6**	**-0.6**
	baz=248							
TWS1	**Kuangyinshan**	**1.16**	**294**	*e*P		**Pb**	**22 25 18.6**	**+0.3**
	baz=294							
TWS1				*e*S		**Sb**	**22 25 33.0**	**-0.3**
	baz=294							
HATJ	**Hateruma jima**	**1.25**	**117**	P		**Pn**	**22 25 18.6**	**-1.1**
HATJ		

ISC 15 22:53:17.9±0.3, 307S±006×10099E±005, h35km, n126, σ1§12/112, mb4.8/59, MS3.6/11, 8C-9D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSI	Kapahiang	1.70	110	P		Pn	22 53 46.7	+1.6
	0.0nm,0.0s							
PPI	Padang Panjang	2.66	347	P		Pn	22 53 59.9	+1.6
	0.0nm,0.0s							
JMBI	JAMBI	3.01	62	P		Pn	22 54 14.2	+11
	0.0nm,0.0s							
KLI	Kotabumi	4.25	115	P		Pn	22 54 29.8	+10
	0.0nm,0.0s							
KGM	Kluang	5.56	25	⇓P		Pn	22 54 40.5	+2.3
MYKOM	Kota Tinggi	5.61	31	⇓P		Pn	22 54 40.5	+1.6
PSI	Prapat	6.19	340	⇓eP		Pn	22 54 45.9	-0.9
FRIM	Kepong	6.30	6	⇓P		Pn	22 54 52.5	+4.2
DBJI	Dramaga	6.70	121	P		Px	22 55 10.9	
	93nm,1.3s							
CBJI	Citeko	6.72	120	P		Pn	22 55 04.8	+11
	334nm,0.6s							
IPM	Ipoh	7.50	0	⇓P		Pn	22 55 10.5	+5.7
KTGM	Kuala Trenggan	8.61	14	⇑P		Pn	22 55 24.5	+4.4
SJI	Sawahan	11.69	114	P		Pn	22 56 05.6	+3.4
	70nm,0.9s							
SBUM	Sibu	12.49	64	⇓P		Pn	22 56 18.6	+5.3
BBKI	Banjar Baru	13.84	92	P		Pn	22 56 40.7	+9.1
	73nm,0.8s							
SDKM	Sandakan	18.35	62	⇓P		Pn	22 57 31.8	+2.0
KAPI	Kappang	18.82	97	P		Pn	22 57 34.4	-1.0
	2.2nm,0.3s,baz=280,slow=12,SNR=14							
KAPI				LR		LR	23 05 33.1	
	comp=Z,136nm,18.4s,baz=148,slow=40							
KAPI	Kappang	18.82	97	P		Pn	22 57 34.4	-1.0
KAPI				LR		LR	23 05 33.1	
PCI	Palu	18.96	84	P		pP	22 57 50.9	+5.4
	44nm,1.0s							
MYLDM	Lahad Datu	19.32	65	⇑P		Pn	22 57 43.2	+1.7
CMAR	Chiang Mai Arr	21.49	355	P		P	22 58 00.8	-2.9
	4.5nm,0.7s,mb3.9,baz=186,slow=10,SNR=19							
CMAR				PcP		PcP	23 02 06.5	+0.6
	0.8nm,0.5s,baz=215,slow=3.3,SNR=5.1							
CMAR				LR		LR	23 05 58.0	
	comp=Z,121nm,21.9s,MS3.2,baz=148,slow=36							
CMAR	Chiang Mai Arr	21.49	355	P		P	22 58 00.8	-2.8
CMAR							23 02 06.6	
BATI	Baumata	23.60	109	P		P	22 58 24.8	-1.1
	13nm,0.4s,mb4.7,baz=219,slow=6.8,SNR=3.6							
MNI	Manado	24.26	80	P		P	22 58 37.7	+5.7
	96nm,1.0s,mb5.2							
FITZ	Fitzroy Crossi	28.40	123	eP		P	22 59 08.8	-0.5
	8.1nm,0.6s,mb4.5							
FITZ	Fitzroy Crossi	28.40	123	P		P	22 59 08.3	-1.0
	3.0nm,0.7s,mb4.0,baz=255,slow=5.5,SNR=9.6							
FITZ				LR		LR	23 10 32.2	
	comp=Z,54nm,21.2s,MS3.1,baz=138,slow=37							
ODAN	Odare	32.52	337	eP		P	22 59 46.5	+0.9
	69nm,0.7s,mb5.7							
TAPN	Taplejung	32.84	338	eP		P	22 59 49.7	+1.3
	108nm,0.8s,mb5.8							
RAMN	Ramite	32.92	336	eP		P	22 59 50.0	+1.0
	32nm,0.6s,mb5.4							
LSA	Lhasa	33.92	345	eP		P	22 59 58.1	+0.4
LSA				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb4.4							
LSA	Lhasa	33.92	345	eP		P	22 59 58.1	+0.4
	comp=Z,3.1nm,0.6s,mb4.4							
PKI	Pulchoki	33.96	335	eP		P	22 59 58.9	+0.8
GUN	Gumba	34.06	336	eP		P	23 00 00.0	+1.0
	comp=Z,96nm,0.5s,mb6.0							
DMN	Daman	34.13	334	eP		P	23 00 00.4	+0.9
KKN	Kakani	34.21	335	eP		P	23 00 01.1	+0.8
GKN	Gorkha	34.67	334	eP		P	23 00 05.1	+0.8
	comp=Z,26nm,0.4s,mb5.5							
KOLN	Koldanda	34.94	332	eP		P	23 00 07.7	+1.1
	comp=Z,34nm,0.7s,mb5.4							
DANN	Dangsing	35.36	333	eP		P	23 00 11.3	+1.1
	comp=Z,70nm,0.5s,mb5.8							
WRA	Warramunga Arr	36.60	120	P		P	23 00 20.5	-0.5
	comp=Z,7.7nm,0.5s,mb4.8,baz=305,slow=9.0,SNR=134							
WRA				PcP		PcP	23 02 44.0	+0.1
	comp=Z,1.7nm,0.7s,baz=303,slow=2.2,SNR=4.7							
WRAB	Tennant Creek	36.61	120	eP		P	23 00 20.8	-0.2
WRAB				pmax		pmax		
	comp=Z,9.0nm,0.5s,mb4.9							
WRAB	Tennant Creek	36.61	120	eP		P	23 00 20.8	-0.3
	comp=Z,9.5nm,0.5s,mb4.9							
WB2	Warramunga Arr	36.62	120	eP		P	23 00 20.5	-0.6
ASAR	Alice Springs	37.83	126	P		P	23 00 31.7	+0.4
	comp=Z,4.0nm,0.7s,mb4.3,baz=300,slow=8.1,SNR=38							
ASAR				PcP		PcP	23 02 48.1	+0.6
	comp=Z,2.2nm,0.7s,baz=302,slow=2.9,SNR=8.1							
NJ2	Nanjing	38.83	25	eP		P	23 00 36.8	-2.8
NJ2				AP		pP	23 00 46.5	-3.4
NJ2				XP		sP	23 00 50.3	-3.8
NJ2				S		S	23 06 28.5	-6.7
NJ2				AMB		AMB		
	comp=Z,70nm,1.0s,mb5.3							
NJ2				AMB		AMB		
	comp=Z,550nm,4.4s							
NJ2				LR		LR		
	comp=N,250nm,13.6s,MS4.4							
NJ2				LR		LR		
	comp=E,370nm,17.1s,MS4.4							
NJ2				LR		LR		
	comp=Z,370nm,17.1s,MS4.3							
NDI	New Delhi	38.96	326	eP		P	23 00 40.0	-0.8
CTA	Charters Tower	47.25	115	eP		P	23 01 48.0	0.0
	comp=Z,8.5nm,0.7s,mb4.8							
CTA	Charters Tower	47.25	115	eP		P	23 01 48.0	0.0
CTA				pmax		pmax		
	comp=Z,9.0nm,0.7s							
CTAO	Charters Tower	47.25	115	eP		P	23 01 47.7	-0.3
CTAO				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.8							
CTAO	Charters Tower	47.25	115	eP		P	23 01 47.7	-0.3
	comp=Z,11nm,0.8s,mb4.8							
KSRS	Korea Array	47.45	29	P		P	23 01 47.5	-1.7
	comp=Z,2.9nm,0.9s,mb4.2,baz=225,slow=8.0,SNR=6.7							
KSRS				LR		LR	23 25 39.6	
	comp=Z,31nm,19.2s,MS3.3,baz=335,slow=41							
KSRS	Korea Array	47.45	29	P		P	23 01 47.5	-1.7
KSRS				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.2							
KSRS				MLR		MLR		
	comp=Z,31nm,19.2s,MS3.3							
STKA	Stephens Creek	47.70	132	eP		P	23 01 52.2	+0.9
	comp=Z,10.0nm,0.6s,mb5.0							
STKA	Stephens Creek	47.70	132	P		P	23 01 52.3	+1.0
	comp=Z,7.1nm,0.6s,mb4.9,baz=311,slow=7.2,SNR=19							
WMQ	Urumqi	48.19	347	P		P	23 01 55.3	+0.5
WMQ				AP		pP	23 02 00.0	-5.2
WMQ				AMB		AMB		
	comp=Z,40nm,0.8s,mb5.5							
WMQ				AMB		AMB		
	comp=Z,224nm,4.9s							
WMQ				LR		LR		
	comp=Z,128nm,18.4s,MS3.9							
SONM	Songino Array	50.91	5	P		P	23 02 15.7	+0.2
	comp=Z,15nm,0.8s,mb5.0,baz=182,slow=9.1,SNR=52							
SONM				LR		LR	23 25 19.5	
	comp=Z,56nm,20.5s,MS3.6,baz=248,slow=38							
ULN	Ulaanbaatar	51.00	5	eP		P	23 02 16.1	-0.1
ULN				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.7							
ULN	Ulaanbaatar	51.00	5	eP		P	23 02 16.1	0.0
	comp=Z,8.2nm,0.8s,mb4.7							
TKM2	Tokmak 2	51.20	336	eP		P	23 02 18.3	+0.5
TKM2				pmax		pmax		
	comp=Z,15nm,0.9s,mb4.9							
TKM2	Tokmak 2	51.20	336	eP		P	23 02 18.2	+0.5
	comp=Z,15nm,0.9s,mb4.9							
AML	Almayashu	51.35	334	eP		P	23 02 19.8	+0.8
	comp=Z,132nm,0.6s							
EKS2	Erkin-Say	51.75	335	eP		P	23 02 22.7	+0.8
	comp=Z,58nm,0.6s,mb5.7							
MK31	Makanchi Array	52.32	344	i P		P	23 02 25.3	-0.8
MK31				pmax		pmax		
	comp=Z,5.0nm,0.4s,mb4.8							
MKAR	Makanchi Array	52.32	344	P		P	23 02 25.7	-0.4
	comp=Z,16nm,0.7s,mb5.0,baz=145,slow=8.1,SNR=89							
MKAR				LR		LR	23 26 58.3	
	comp=Z,30nm,21.2s,MS3.3,baz=175,slow=39							
MJAR	Matsushiro Arr	52.49	38	P		P	23 02 25.6	-1.9
	comp=Z,1.6nm,0.6s,mb4.1,baz=222,slow=25,SNR=9.9							
MJAR				LR		LR	23 24 24.2	
	comp=Z,70nm,20.9s,MS3.7,baz=270,slow=36							
ZAK	Zakamensk	53.28	2	eP		P	23 02 32.1	-1.0
ZAK				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.3							
KK31	Karatay Array	53.55	332	i P		P	23 02 35.4	+0.2
KK31				pmax		pmax		
	comp=Z,1.0nm,0.3s,mb4.2							
TLY	Talaya	54.59	2	d iP		P	23 03 43.1	+0.5
TLY				pmax		pmax		
	comp=Z,12nm,0.8s,mb5.0							
KURK	Kurchatov	56.91	343	eP		P	23 02 58.1	-1.2
KURK				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb5.0							
KURK	Kurchatov	56.91	343	eP		P	23 02 58.1	-1.1
	comp=Z,9.0nm,0.6s,mb5.0							
ZAA0	Zalesovo Array	58.40	349	eP		P	23 03 08.8	-0.9
ZALV	Zalesovo Beam	58.40	349	P		P	23 03 08.9	-0.7
	comp=Z,43nm,0.8s,mb5.6,baz=172,slow=4.5,SNR=175							
ZALV				LR		LR	23 30 13.0	
	comp=Z,29nm,20.4s,MS3.4,baz=338,slow=38							
NVS	Novosibirsk	59.55	348	⇑i P		P	23 03 16.1	-1.6
NVS				e			23 12 53.7	
NVS				pmax		pmax		
	comp=N,7.0nm,1.0s							
NVS				pmax		pmax		
	comp=E,7.0nm,1.0s							
NVS				pmax		pmax		
	comp=Z,12nm,1.0s,mb4.9							
NAY	Al-Naaiem	60.65	306	eP		P	23 03 25.3	-0.4
	baz=306							
NAY				AMb		AMB	23 03 27.3	
	comp=Z,8.0nm,0.8s,mb4.9,baz=306							
MIB	Mutribah	60.78	307	eP		P	23 03 26.9	+0.2
	baz=307							
MIB				AMb		AMB	23 03 28.2	
	comp=Z,25nm,0.9s,mb5.3,baz=307							
RST	Umm Al-Ruwaisa	60.94	306	eP		P	23 03 27.3	-0.4
	baz=306							
RST				AMb		AMB	23 03 29.1	
	comp=Z,21nm,0.9s,mb5.3,baz=306							
BVA0	Borovoye Array	61.52	340	i P		P	23 03 29.8	-1.4
BVA0				pmax		pmax		
	comp=Z,1.0nm,0.3s,mb4.4							
BOD	Bodaibo	61.59	8	eP		P	23 03 30.6	-0.9
BOD				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.7							
YSS	Yuzh-Sakhalins	61.87	31	⇑eP		P	23 03 32.5	-1.1
YSS				pmax		pmax		
	comp=Z,15nm,1.2s,mb5.0							
AB31	Akbulak array	63.05	331	P		P	23 03 40.5	-0.9
AB31				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.2							
AKTO	Aktyubinsk	64.76	331	i P		P	23 03 50.4	-2.3
AKTO				pmax		pmax		
	comp=Z,1.0nm,1.0s							
SVE	Sverdlovsk	68.04	337	eP		P	23 04 13.3	-0.3
YAK	Yakutsk	68.53	14	⇑eP		P	23 04 13.7	-2.8
YAK				pmax		pmax		
	comp=Z,35nm,1.3s,mb5.1							
ARU	Arti	68.58	336	d iP		P	23 04 14.9	-2.0
ARU				e			23 04 36.3	
ARU				eS		S	23 13 15.3	-1.5
ARU				eSS		SS	23 17 36.8	-4.8
ARU				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
ARU	Arti	68.58	336	eP		P	23 04 15.9	-1.0
	comp=Z,9.7nm,1.0s,mb4.7							
MAW	Mawson	69.50	195	P		P	23 04 26.3	+3.8
	comp=Z,1.1nm,0.6s,mb4.0,baz=336,slow=8.3,SNR=3.7							
MAW				LR		LR	23 27 04.1	
	comp=Z,162nm,21.1s,MS4.2,baz=251,slow=29							
KIV	Kislovodsk	69.99	319	eP		P	23 04 25.8	-0.2
KIV				e			23 04 42.2	
KIV				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.3							
PETK	Petropavlovsk-	73.26	32	P		P	23 04 44.3	-1.1
	comp=Z,4.0nm,0.6s,mb4.5,baz=262,slow=1.6,SNR=8.2							
PET	Petropavlovsk	73.72	32	⇑eP		P	23 04 46.4	-1.8
PET				pmax		pmax		
	comp=Z,16nm,1.1s,mb4.9							
BR131	Keskin Array S	74.77	312	eP		P	23 04 54.7	+0.1
	comp=Z,2.3nm,0.7s,mb4.2							
BOSA	Boshof	76.01	241	P		P	23 05 04.5	+2.5
	comp=Z,2.4nm,0.9s,mb4.1,baz=110,slow=16,SNR=5.9							
BOSA	Boshof	76.01	241	P		P	23 05 04.5	+2.5
OBN	Obninsk	78.22	328	⇑eP		P	23 05 13.1	-0.6
OBN				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
RAO	Raoul Island	80.74	119	eP		P	23 05 28.1	0.0
AKASG	Malin Array Be	80.93	322	P		P	23 05 28.3	-0.3
	comp=Z,0.7nm,0.5s,mb3.9,baz=84,slow=4.5,SNR=5.9							
BUR08	Bucovina Ar. S	82.73	319	eP		P	23 05 39.5	+1.4
JOF	Joensuu	83.60	334	ep		P	23 05 41.4	-0.9
	comp=Z,5.8nm,0.7s,mb4.8							
KOLS	Kolonicke sedl	84.90	320	eP		P	23 05 50.6	+1.4
KAF	Kangasniemi	85.58	333	ep		P	23 05 51.9	-0.4
	comp=Z,4.2nm,0.6s,mb4.8							
KAF	Kangasniemi	85.58	333	eP		P	23 05 51.9	-0.4
KAF				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.8							
STHS	Stebnicka Huta	85.65	320	eP		P	23 05 53.8	+0.8
STHS				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.5							
STHS	Stebnicka Huta	85.65	320	eP		P	23 05 53.8	+0.8
	comp=Z,2.6nm,0.9s,mb4.5							
KECS	Kecovo	85.99	319	eP		P	23 05 53.4	-1.3
KECS				pmax		pmax		
	comp=Z,1.0nm,0.8s,mb4.1							
KECS	Kecovo	85.99	319	eP		P	23 05 53.4	-1.3
	comp=Z,1.2nm,0.8s,mb4.2							
ARCES	ARCESS Array B	87.81	340	P		P	23 06 03.1	+0.1
	comp=Z,6.0nm,0.8s,mb4.8,baz=100,slow=5.1,SNR=12							
ZST	Bratislava	88.19	318	eP		P	23 06 05.4	+0.1
ZST				pmax		pmax		
	comp=Z,5.0nm,0.6s,mb4.9							
ZST	Bratislava	88.19	318	eP		P	23 06 05.4	+0.1
	comp=Z,4.6nm,0.6s,mb4.9							
BRG	Berggiesshubel	90.49	321	eP		P	23 06 16.4	+0.4
BRG				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.6							
BRG	Berggiesshubel	90.49	321	eP		P	23 06 16.4	+0.3
	comp=Z,5.0nm,0.9s,mb4.8							
GERES	GERESS Array B	90.50	319	P		P	23 06 17.0	+0.9
	comp=Z,1.4nm,0.7s,mb4.4,baz=76,slow=5.6,SNR=18							
GERES				LR		LR	23 50 47.4	
	comp=Z,46nm,18.4s,MS4.0,baz=290,slow=38							
SNAA	Sanae	91.44	198	⇑eP		P	23 06 21.2	+1.2
GRA1	Grafenberg Arr	92.17	319	eP		P	23 06 24.7	+0.8
GRF	Grafenberg Arr	92.17	319	eP		P	23 06 24.7	+0.8
NB2	NORSAR Subarra	92.55	331	P		P	23 06 24.6	-0.8
	comp=Z,3.1nm,0.9s,mb4.7,baz=95,slow=6.5							
NVAR	Mina Array Bea	129.79	40	PKP		PKPdf	23 12 24.9	+0.9
	comp=Z,0.6nm,0.6s,baz=272,slow=0.1,SNR=5.0							
ULM	Lac du Bonnet	130.87	14	PKP		PKPdf	23 12 23.9	-1.7
	comp=Z,2.7nm,0.7s,baz=270,slow=1.0,SNR=3.8							
ULM	Lac du Bonnet	130.87	14	PKP		PKPdf	23 12 23.9	-1.7
PDAR	Pinedale Array	132.01	30	PKP		PKPdf	23 12 26.9	-1.1
	comp=Z,0.3nm,0.4s,baz=28,slow=4.1,SNR=2.6							
CPUP	Villa Florida	144.03	214	PKP		PKPdf	23 12 51.1	+0.5
	comp=Z,1.3nm,0.7s,baz=102,slow=4.5,SNR=5.0							
BDFB	Brasilia	144.14	238	PKP		PKPdf	23 12 51.1	+0.1
	comp=Z,1.6nm,0.4s,baz=189,slow=7.3,SNR=3.5							
TXAR	Lajitas Array	144.92	39	PKP		PKPdf	23 12 51.3	-0.8
	comp=Z,6.6nm,0.6s,baz=288,slow=1.2,SNR=119							
TXAR	Lajitas Array	144.92	39	PKIKP		PKPdf	23 12 51.3	-0.7
TXAR				pmax		pmax		
	comp=Z,7.0nm,0.6s							
MIAR	Mount Ida	145.88	22	ePKIKP		PKPdf	23 12 53.3	-0.2
WVT	Waverly	146.11	13	ePKP2		PKPab	23 12 53.6	-1.8
JCT	Junction City	146.39	34	ePKP2		PKPab	23 12 55.0	-1.6
SWET	Sewanee	147.38	11	ePKPdf		PKPdf	23 12 56.5	+0.5
CPCT	Cooper Cave	147.38	8	ePKPdf		PKPdf	23 12 56.6	+0.6

NNC 15 22:55:56.9±1.7, 4257N×7561E, h0km, mb3.1, mpv3.1, Error ellipse: s-maj=32.3km s-min=8.5km az=93.0
KNET 15 22:55:57.4±0.7, 4263N×7573E, h11km±3km, ml2.3, Error ellipse: s-maj=4.3km s-min=2.2km az=99.0

ISC 15 22:55:56.2±1.8, 4262N±005×759E±01, h2km±8km, n12, σ0§67/17, 7C-13D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TKM2	Tokmak 2	0.36	327	⇑P		Pg	22 56 03.9	+0.8
	57nm,0.2s							
TKM2				⇑S		Sg	22 56 08.8	+1.0
	236nm,0.3s							
TKM2	Tokmak 2	0.36	327	⇓P		Pg	22 56 04.0	+0.8
	253nm,0.1s,SNR=49							
TKM2				⇑S		Sg	22 56 08.9	+1.0
	508nm,0.1s							
KBK	Karagaybulak	0.68	274	P		Pg	22 56 09.4	+0.2
	49nm,0.1s,SNR=195							
KBK				⇓S		Sg	22 56 18.6	+0.5
	137nm,0.1s							
KZA	Kyzart	0.71	220	⇑P			22 56 10.3	
	30nm,0.1s,SNR=9.2							
KZA				⇓S		Sg	22 56 19.8	+0.9
	168nm,0.2s							
CHMS	Chumysh	0.91	295	⇓P		Pg	22 56 13.1	-0.4
	17nm,0.1s,SNR=8.7							
CHMS				⇑S		Sg	22 56 24.7	-0.6
	103nm,0.2s							
AAK	Ala-Archa	1.01	271	⇑P		Pg	22 56 15.1	-0.5
	33nm,0.2s,SNR=29							
AAK				⇓S		Sg	22 56 28.3	-0.4
	41nm,0.2s							
USP	Ospenovka	1.20	303	⇓P		Pg	22 56 18.3	-0.8
	28nm,0.2s,SNR=23							
USP				⇓S		Sg	22 56 33.8	-0.8
	58nm,0.1s							
EKS2	Erkin-Say	1.54	272	⇓P		Pn	22 56 24.9	+0.2
	15nm,0.2s,SNR=46							
EKS2				⇓S		Sn	22 56 46.0	+0.7
	33nm,0.2s							
AML	Almayashu	1.68	254	⇓P		Pn	22 56 27.5	+0.9
	23nm,0.2s,SNR=19							
KK31	Karatay Array	3.97	279	⇑Pg		Pg	22 57 07.0	-5.2
	0.6nm,0.3s,baz=99,slow=16							
KK31				⇓Lg			22 57 54.7	
	9.4nm,0.5s,baz=102,slow=27							
KURBB	Kurchatov Arra	8.21	12	⇓Lg			23 00 19.4	
	1.0nm,0.7s							
KURK	Kurchatov	8.32	12	⇓Lg			23 00 23.6	
	9.3nm,1.4s							

CASC 15 23:10:42.5±2.6, 1367N×9154W, h37km±24km, MD3.9, ML3.6, 1C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	1.03	41	eP		Pn	23 11 00.7	+0.3
FG6		1.09	36	eP		Pn	23 11 01.8	+0.5
FG6				eS		Sn	23 11 17.4	+2.2
PCG	Pacaya	1.16	52	eP		Pn	23 11 02.7	+0.5
NBG	Las Nubes	1.48	52	eP		Pn	23 11 09.2	+2.6
RBDL	Robledal	1.85	76	⇓eP		x	23 11 12.2	
RTR	El Retiro	1.86	83	eP		x	23 11 12.3	
RTR				eS		x	23 11 34.1	
SBLS	San Blas	1.87	85	eP		x	23 11 11.8	
SBLS				eS		x	23 11 35.0	
SNJE	San Jose	1.89	84	eP		x	23 11 12.4	
SNJE				eS		x	23 11 34.8	
BOQS	Boqueron	2.20	88	eP		x	23 11 17.2	
BOQS				eS		x	23 11 44.9	
MTO2	Montecristo 2	2.24	71	⇑eP		x	23 11 17.7	
SNET	Serv Nac Est T	2.25	89	eP		x	23 11 17.8	
SNET				eS		x	23 11 43.1	
SNET				i			23 11 52.8	
	comp=Z,576nm,0.5s							
LFRS	El Faro	2.41	91	eP		x	23 11 20.0	
LFRS				eS		x	23 11 48.7	
LBRS	Las Brisas	2.43	88	eP		x	23 11 20.2	
SNVI	San Vicente	2.63	91	eP		x	23 11 23.5	
SNVI				eS		x	23 11 54.1	
BLLM	Bellamira	3.22	94	eP		x	23 11 33.3	

MOS 15 23:28:47.8±1.1, 3778N×3687E, h10km, mb4.7/42, Error ellipse: s-maj=6.4km s-min=4.1km az=126.0
ISK 15 23:28:47.6, 3783N×3695E, h4km, ML4.2
DDA 15 23:28:48.0, 3784N×3688E, h15km±2km, Md4.2, Ml4.4
NEIC 15 23:28:48.0, 3783N×3698E, h6km, mb4.5/51, ML4.2(ISK), After ISK.
IDC 15 23:28:48.4±0.6, 3777N×3693E, h0km, mb4.0/16, mb1 4.1/24, mb1mx4.0/33, mbtmp4.0/24, ML4.0/7, MS3.7/2, Ms1 3.6/2, ms1mx2.6/36, Error ellipse: s-maj=14.0km s-min=10.4km az=152.0
CSEM 15 23:28:48.1±0.1, 3782N×3693E, h10km, mb4.5/33, Ms3.0, Error ellipse: s-maj=1.4km s-min=1.4km az=102.0
ISCJB 15 23:28:49.6±0.4, 3780N±002×3694E±002, h22km±4km, mb4.3/65, MS3.2/7, Error ellipse: s-maj=3.3km s-min=2.8km az=41.4
SZGRF 15 23:28:54.6, 3732N×3636E, h33km, mb4.4, Turkey

ISC 15 23:28:49.9±0.5, 3779N±002×3694E±002, h11km±3km, n306, σ1§16/319, mb4.3/65, MS3.2/7, 21C-12D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KMRS	Kahramanmaras	0.29	186	ePG		Pg	23 28 54.5	-1.2
KMRS				eSG		Sg	23 29 00.1	+0.5
ANDN	Andirin	0.52	246	⇓iP		Pg	23 28 57.7	-2.3
ANDN				i S		Sg	23 29 11.9	+5.2
ANDN	Andirin	0.52	246	i P		Pg	23 28 57.7	-2.3
ANDN				i S		Sg	23 29 11.9	+5.1
GAZ	Gaziantep	0.66	161	ePG		Pg	23 29 02.3	-0.3
GAZ				eSG		Sg	23 29 11.6	+0.4
GZT	Gaziantep	0.66	131	⇑iP		Pg	23 29 02.1	-0.5
SARI	SarD1z-Kayseri	0.91	348	ePG		Pg	23 29 00.4	-6.9
AKCD	Akcadag	0.92	57	⇓iP		Pg	23 29 04.5	-3.2
AKCD				i S		Sg	23 29 19.1	-0.7
KOZT	Kozan	0.94	251	ePG		Pg	23 29 07.2	-0.

LEF Lefka 4.21 232 *e*PN **Pn** **23 29 55.4 +1.3**
ALFC Alevga 4.38 234 P **Pn** **23 29 54.2 -2.1**
2.8nm,0.4s
RCY Rachaya 4.39 192 *e*Pn **Pn** **23 29 57.3 +0.7**
AKMC Akamas 4.63 235 P **Pn** **23 30 02.0 +2.2**
PPCY Paphos 4.71 233 P **Pn** **23 30 02.2 +1.3**
SAFT Safranbolu 4.76 318 *e*PN **Pn** **23 30 02.4 +0.9**
MMAI Mount Meron Ar 4.93 195 Pn **Pn** **23 30 04.5 +0.7**
6.9nm,0.3s,baz=10,slow=14,SNR=20
MMAI Pg **Pg** **23 30 13.2 -11**
22nm,0.3s,baz=24,slow=14,SNR=19
MMAI Sn **Sn** **23 31 01.8 +0.9**
16nm,0.3s,baz=14,slow=24,SNR=4.5
MMAI Lg 23 31 30.7
11nm,0.3s,baz=15,slow=28,SNR=3.0
SHUT Suhut-Afyon 5.09 281 *e*PN **Pn** **23 30 06.8 +0.7**
SHUT Suhut-Afyon 5.09 281 *e*Pn **Pn** **23 30 06.8 +0.7**
ISP Isparta 5.09 273 *e*P **Pn** **23 30 05.0 -1.1**
MSL Mosul 5.14 105 *ex* x 23 30 07.0
MSL *ex* x 23 30 19.0
MSL *ex* x 23 30 29.0
MSL *ex* x 23 31 09.0
MSL *i* x 23 31 41.0
MDU Mudurnu 5.19 303 *e*PN **Pn** **23 30 08.3 +0.8**
HKR Hakkari 5.40 90 *e*PN **Pn** **23 30 10.7 +0.4**
ASF Jabal al Asfar 5.61 180 Pn **Pn** **23 30 14.7 +1.5**
0.6nm,0.3s,baz=312,slow=3.1,SNR=5.4
SOC Sochi 6.16 19 *e*P **Pn** **23 30 22.1 +1.4**
SOC *e* 23 31 34.7
SOC MLR MLR
comp=Z,98nm,10.0s
SOC Sochi 6.16 19 *e*P **Pn** **23 30 22.1 +1.4**
comp=Z,98nm,10.0s
SOC *e*S **Sn** **23 31 34.7 +3.6**
GNI Garni 6.52 66 Pn **Pn** **23 30 29.3 +3.6**
comp=Z,0.6nm,0.3s,baz=241,slow=18,SNR=3.2
ONI Oni 6.91 44 P **Pn** **23 30 34.7 +3.7**
ONI S **Sg** **23 32 36.1 +4.6**
GOR Gori 6.92 51 P **Pn** **23 30 31.0 -0.2**
GOR S **Sg** **23 32 34.5 +2.6**
ANN Anapa 7.01 3 *e*P **Pn** **23 30 31.3 -1.2**
ANN *e*S **Sn** **23 31 51.4 -0.7**
ANN pmax pmax
comp=Z,28nm,1.0s
ANN MLR MLR
comp=Z,179nm,10.0s
SNN Anapa 7.01 3 *e*P **Pn** **23 30 31.3 -1.2**
comp=Z,28nm,1.0s
ANN *e*S **Sn** **23 31 51.4 -0.7**
comp=Z,179nm,10.0s
YAL Yalta 7.01 343 *e*P **Pn** **23 30 32.7 +0.3**
YAL pmax pmax
comp=Z,26nm,0.9s
YAL Yalta 7.01 343 *e*P **Pn** **23 30 32.7 +0.3**
comp=Z,26nm,0.9s
ALU Alushta 7.14 345 *e*P **Pn** **23 30 34.2 -0.1**
ALU pmax pmax
comp=Z,19nm,0.6s
ALU Alushta 7.14 345 *e*P **Pn** **23 30 34.2 -0.1**
comp=Z,19nm,0.6s
TBLG Delisi 7.18 54 P **Pn** **23 30 36.5 +1.8**
TBLG S Sg 23 33 00.4 +20
MTA Mtatsminda 7.20 55 P **Pn** **23 30 32.1 -2.9**
MTA *S* **Sg** **23 32 55.2 +14**
SIM Simferopol' 7.46 344 *e*P **Pn** **23 30 39.6 +1.0**
SIM *e*S **Sn** **23 32 04.4 +1.3**
SIM pmax pmax
comp=Z,56nm,1.0s
SIM Simferopol' 7.46 344 *e*P **Pn** **23 30 39.6 +1.0**
SIM *e*S **Sn** **23 32 04.4 +1.3**
DGRG David-gareji 7.46 58 P **Pn** **23 30 44.0 +5.4**
DGRG S Sg 23 33 22.3 +33
KIV Kislovodsk 7.54 33⇑ *e*P **Pn** **23 30 43.9 +4.2**
KIV pmax pmax
comp=Z,23nm,1.5s
BHD Baghdad 7.56 124 *ex* x 23 30 40.0
BHD *ex* x 23 32 08.0
BHD *i* x 23 33 01.0
EIL Elat 8.27 192 Pn **Pn** **23 30 50.7 +1.0**
comp=Z,0.8nm,0.3s,baz=76,slow=12,SNR=3.2
IDI Anoyia 10.01 259 Pn **Pn** **23 31 13.7 0.0**
comp=Z,4.7nm,0.3s,baz=91,slow=11,SNR=30
MIB Mutribah 11.75 130 *e*P **Pn** **23 31 38.6 +1.1**
MIB AMb AMB 23 31 54.1
comp=Z,27nm,1.0s
RST Umm Al-Ruwaisa 11.77 132 *e*P **Pn** **23 31 34.6 -3.0**
RST AMb AMB 23 31 48.9
comp=Z,16nm,0.8s
DRGR 13.83 315⇓ *i*P **Pn** **23 32 09.0 +3.2**
BZS Buzias 13.85 309⇓ *i*P **Pn** **23 32 08.1 +2.1**
KIEV Kiev 14.03 339 *e*P **Pn** **23 32 08.0 -0.4**
KIEV pmax pmax
comp=Z,13nm,1.3s
KIEV Kiev 14.03 339 *e*Pn **Pn** **23 32 08.0 -0.4**
comp=Z,13nm,1.3s
KIEV Kiev 14.03 339 *e*Pn **Pn** **23 32 08.0 -0.5**
comp=Z,13nm,1.3s
AKASG Malin Array Be 14.03 339 Pn **Pn** **23 32 08.6 +0.2**
comp=Z,0.3nm,0.3s,baz=153,slow=14,SNR=3.1
KWP Kalwaria 15.65 324 *e*P **Pn** **23 32 35.9 +5.7**
KWP pmax pmax
comp=Z,16nm,0.9s
KWP Kalwaria 15.65 324 *e*Pn **Pn** **23 32 35.9 +5.6**
comp=Z,16nm,0.9s
TIP Timpagrande 15.87 281 *e*Pn **Pn** **23 32 32.6 -0.5**
comp=Z,11nm,1.0s
TIP Timpagrande 15.87 281 *e*Pn **Pn** **23 32 32.6 -0.5**
comp=Z,11nm,1.0s
PKSM Moragy 15.97 308⇑ *i*P **Pn** **23 32 36.4 +2.0**
CUC Castrocucco 16.59 284 *e*Pn **Pn** **23 32 41.5 -0.9**
comp=Z,20nm,0.8s
CUC Castrocucco 16.59 284 *e*Pn **Pn** **23 32 41.5 -0.9**
comp=Z,20nm,0.8s
FGMS Monte Sant'Ang 16.60 290 P **Pn** **23 32 45.0 +2.5**
comp=Z,15nm,1.0s
RGNG Rignano Grg 16.87 290 P **Pn** **23 32 47.3 +1.4**
CSSN Cassano Irpino 17.23 287 P **Pn** **23 32 55.2 +4.8**
comp=Z,4.1nm,0.5s
OBN Obninsk 17.33 359⇑ *e*P **Pn** **23 32 52.3 +0.7**
OBN pmax pmax
comp=Z,6.0nm,0.9s
OBN Obninsk 17.33 359 *e*P **Pn** **23 32 52.3 +0.7**
comp=Z,6.0nm,0.9s
SDI San Donato 18.20 290 P **Pn** **23 33 05.0 +2.6**
SDI pmax pmax
comp=Z,10.0nm,1.2s
SDI San Donato 18.20 290 P **Pn** **23 33 05.0 +2.6**
comp=Z,9.7nm,1.2s
PTQR Pietraguaria 18.53 291 P **Pn** **23 33 09.0 +2.5**
comp=Z,4.4nm,0.6s
VRAC Vranov 18.64 315 P **Pn** **23 33 06.9 -0.8**
comp=Z,0.5nm,0.3s,baz=135,slow=7.1,SNR=2.6
NRCA Norcia 18.83 293 P **Pn** **23 33 11.8 +1.7**
comp=Z,4.8nm,1.2s
CING Cingoli 18.85 295 P **Pn** **23 33 11.5 +1.1**
comp=Z,18nm,1.0s
FSSB Fossombrone 19.20 295 P **Pn** **23 33 15.3 +0.7**
comp=Z,2.7nm,0.8s
PTCC Patocco-Chiusa 19.45 304 P **Pn** **23 33 17.2 -0.3**
BADI Badiali 19.56 295 P **Pn** **23 33 18.9 +0.1**
comp=Z,122nm,3.8s
UPC Upice 19.59 317 *e*P **Pn** **23 33 21.4 +2.2**
AKTK Aktyubinsk 19.63 43 P **Pn** **23 33 17.5 -2.2**
AKTK Aktyubinsk 19.63 43 P **Pn** **23 33 17.5 -2.1**
AKTO Aktyubinsk 19.63 43 P **Pn** **23 33 17.5 -2.1**
comp=Z,0.2nm,0.3s,baz=221,slow=9.5,SNR=6.9
KBA Koelnbreinsper 19.67 306⇓ *i*P **Pn** **23 33 20.6 +0.4**
comp=Z,13nm,1.1s,SNR=6.2
SFI Santa Sofia 19.90 296 P **Pn** **23 33 23.1 +0.2**
GEC2 GERESS Array S 20.11 311 *e*P **P** **23 33 24.3 +0.7**
GEC2 pmax pmax
comp=Z,154nm,3.2s
GEC2 GERESS Array S 20.11 311 *e*P **P** **23 33 24.3 +0.7**
comp=Z,154nm,3.2s
GERES GERESS Array B 20.11 311 P **P** **23 33 24.1 +0.5**
comp=Z,3.7nm,0.7s,baz=113,slow=10,SNR=24
VMG Vicchio 20.13 296 P **P** **23 33 25.2 +1.4**
PRU Pruhonice 20.14 314 *e*P **P** **23 33 24.6 +0.8**
PRU *ep*P 23 33 25.3
PRU Pruhonice 20.14 314 *e*P **P** **23 33 25.3 +1.5**
RJOB Jochberg 20.25 307 *e*P **P** **23 33 26.1 +1.1**
comp=Z,7.0nm,0.9s
SEI Scarperia 20.28 296 P **P** **23 33 26.9 +1.5**
KHC Kasperske Hory 20.31 311⇑ *e*P **P** **23 33 23.8 -1.9**
KHC Kasperske Hory 20.31 311 *e*P **P** **23 33 26.2 +0.5**

PVCC Panska Ves 20.39 316 *e*P **P** **23 33 27.8 +1.3**
CTI Castel Tesino 20.48 302 P **P** **23 33 28.0 +0.4**
WET Wettzell 20.73 311 *e*P **P** **23 33 30.0 -0.3**
WET pmax pmax
comp=Z,17nm,1.1s
WET Wettzell 20.73 311 *e*P **P** **23 33 30.0 -0.3**
comp=Z,17nm,1.1s
WTTA Wattenberg 20.84 305 *i*P **P** **23 33 32.6 +1.2**
comp=Z,30nm,1.0s,SNR=9.9
WTTA Wattenberg 20.84 305 P **P** **23 33 32.6 +1.2**
comp=Z,30nm,1.0s,SNR=9.9
GSCL Gusciola 20.87 297 P **P** **23 33 33.6 +1.8**
WATA Walderalm 20.90 305⇑ *i*P **P** **23 33 33.3 +1.2**
comp=Z,17nm,1.1s,SNR=8.2
BRG Berggiesshubel 20.91 316 *e*P **P** **23 33 35.6 +3.5**
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG Berggiesshubel 20.91 316 *e*P **P** **23 33 33.8 +1.7**
comp=Z,7.0nm,1.0s
BRG Berggiesshubel 20.91 316 *e*P **P** **23 33 35.6 +3.4**
comp=Z,8.7nm,1.1s
MOTA Moosalm 21.20 305⇑ *i*P **P** **23 33 35.6 +0.2**
comp=Z,29nm,1.0s,mb4.5,SNR=18
MOTA Moosalm 21.20 305⇑ *i*pP pP 23 33 35.6 -2.8
comp=Z,29nm,1.0s,SNR=18
MABI Malga Bissina 21.25 301 P **P** **23 33 37.9 +2.0**
FUR Furstenfeldbru 21.35 307 *e*P **P** **23 33 37.0 0.0**
FUR pmax pmax
comp=Z,33nm,1.0s,mb4.6
FUR Furstenfeldbru 21.35 307 *e*P **P** **23 33 37.0 0.0**
comp=Z,33nm,1.0s,mb4.6
FETA Feichten 21.36 304⇑ *i*P **P** **23 33 36.3 -0.7**
comp=Z,8.8nm,0.9s,mb4.1,SNR=9.8
FETA Feichten 21.36 304⇑ *i*pP pP 23 33 36.3 -3.8
comp=Z,8.8nm,0.9s,SNR=9.8
ROTZ Rotzenmuhle 21.39 312 *e*P **P** **23 33 37.9 +0.5**
comp=Z,13nm,0.9s,mb4.3
NKC Novy Kostel 21.45 313 *e*P **P** **23 33 39.4 +1.4**
RETA Reutte 21.47 305⇑ *i*P **P** **23 33 38.0 -0.3**
comp=Z,29nm,1.2s,mb4.5,SNR=16
RETA Reutte 21.47 305⇑ *i*pP pP 23 33 38.0 -3.3
comp=Z,29nm,1.2s,SNR=16
TANN Tannenbergstha 21.52 314 *e*P **P** **23 33 39.2 +0.4**
comp=Z,16nm,1.1s,mb4.4
MANZ Manzenberg 21.54 312 *e*P **P** **23 33 41.7 +2.7**
comp=Z,17nm,1.0s,mb4.4
CLL Collm 21.64 316⇑ *i*P **P** **23 33 40.7 +0.7**
CLL *i* 23 33 43.4
CLL pmax pmax
comp=Z,15nm,1.5s,mb4.2
CLL Collm 21.64 316 *e*P **P** **23 33 40.3 +0.3**
comp=Z,10.0nm,1.0s,mb4.2
CLL Collm 21.64 316⇑ *i*P **P** **23 33 40.7 +0.7**
comp=Z,15nm,1.5s,mb4.2
CLL *i* sP sP 23 33 43.4 -1.1
comp=Z,10.0nm,1.0s
PGF Pioggiola 21.83 291 *e*P **P** **23 33 40.7 -1.4**
comp=Z,38nm,1.1s,mb4.4
PGF Pioggiola 21.83 291 *e*P **P** **23 33 40.7 -1.4**
PGF pmax pmax
comp=Z,19nm,1.1s,mb4.4
PGF Pioggiola 21.83 291 *e*P **P** **23 33 40.7 -1.4**
comp=Z,19nm,1.1s,mb4.4
DAVOX Davos/Dischmat 21.86 303 P **P** **23 33 43.5 +1.1**
comp=Z,3.1nm,0.7s,mb3.9,baz=115,slow=19,SNR=5.5
DAVOS Davos 21.93 303 P **P** **23 33 43.5 +0.3**
GRA1 Grafenberg Arr 21.94 311 *e*P **P** **23 33 45.1 +1.8**
comp=Z,23nm,0.9s,mb4.6
GRF Grafenberg Arr 21.94 311 *e*P **P** **23 33 45.1 +1.8**
GRF pmax pmax
comp=Z,23nm,0.9s,mb4.6
GRF Grafenberg Arr 21.94 311 *e*P **P** **23 33 45.1 +1.8**
GRF pmax pmax
comp=Z,23nm,0.9s,mb4.6
GRF Grafenberg Arr 21.94 311 *e*P **P** **23 33 45.1 +1.8**
comp=Z,23nm,0.9s,mb4.6
DAVA Damuels 21.99 304⇓ *i*P **P** **23 33 43.3 -0.5**
comp=Z,16nm,1.1s,mb4.4
DAVA Damuels 21.99 304⇓ *i*pP pP 23 33 43.3 -3.6
comp=Z,16nm,1.1s
MOX Moxa 22.11 314 *e*P **P** **23 33 45.5 +0.5**
comp=Z,19nm,1.4s,mb4.3
MOX Moxa 22.11 314 *e*P **P** **23 33 45.5 +0.5**
MOX pmax pmax
comp=Z,19nm,1.4s,mb4.3
MOX Moxa 22.11 314 *e*P **P** **23 33 47.5 +2.5**
comp=Z,15nm,1.2s,mb4.3
KEST Kesra 22.18 273 P **P** **23 33 47.1 +1.2**
comp=Z,6.3nm,1.0s,mb4.0,baz=356,slow=2.9,SNR=18
VAI Varese 22.40 300 P **P** **23 33 48.1 -0.2**
SBF Sospel 23.06 295 *e*P **P** **23 33 54.4 -0.8**
comp=Z,18nm,0.8s,mb4.2
SBF Sospel 23.06 295 *e*P **P** **23 33 54.4 -0.8**
SBF pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
SBF Sospel 23.06 295 *e*P **P** **23 33 54.4 -0.8**
comp=Z,9.2nm,0.8s,mb4.2
UBBA Unterbreizbach 23.11 313 *e*P **P** **23 33 56.8 +1.1**
comp=Z,12nm,1.3s,mb4.2
BFO Black Forest 23.28 306 *e*P **P** **23 33 56.8 -0.7**
BFO pmax pmax
comp=Z,52nm,1.3s,mb4.8
BFO Black Forest 23.28 306 *e*P **P** **23 33 56.8 -0.7**
comp=Z,52nm,1.3s,mb4.8
CLZ Clausthal 23.34 316 *e*P **P** **23 33 58.7 +0.6**
CLZ pmax pmax
comp=Z,16nm,1.0s,mb4.4
CLZ Clausthal 23.34 316 *e*P **P** **23 33 58.7 +0.6**
comp=Z,16nm,1.0s,mb4.4
ARU Arti 23.57 31*c* *i*P **P** **23 34 01.2 +0.7**
ARU *e* 23 34 28.5
ARU *e*S **S** **23 38 16.1 +2.1**
ARU *e*SS 23 38 52.8
ARU pmax pmax
comp=Z,14nm,1.7s,mb4.1
ARU Arti 23.57 31 *e*P **P** **23 33 59.2 -1.3**
comp=Z,14nm,1.2s,mb4.3
FRF La Foret Royal 23.61 294 *e*P **P** **23 33 59.2 -1.7**
comp=Z,37nm,1.1s,mb4.4
FRF La Foret Royal 23.61 294 *e*P **P** **23 33 59.2 -1.7**
FRF pmax pmax
comp=Z,19nm,1.1s,mb4.4
FRF La Foret Royal 23.61 294 *e*P **P** **23 33 59.2 -1.7**
comp=Z,19nm,1.1s,mb4.4
MBDF Montbardon 23.62 297 *e*P **P** **23 33 59.9 -1.1**
comp=Z,42nm,0.9s,mb4.5
MBDF Montbardon 23.62 297 *e*P **P** **23 33 59.9 -1.1**
MBDF pmax pmax
comp=Z,21nm,0.9s,mb4.6
MBDF Montbardon 23.62 297 *e*P **P** **23 33 59.9 -1.1**
comp=Z,21nm,0.9s,mb4.5
LMR La Mourre 23.70 293 *e*P **P** **23 33 58.9 -2.8**
comp=Z,39nm,1.2s,mb4.4
LMR La Mourre 23.70 293 *e*P **P** **23 33 58.9 -2.8**
LMR pmax pmax
comp=Z,19nm,1.2s,mb4.4
LMR La Mourre 23.70 293 *e*P **P** **23 33 58.9 -2.8**
comp=Z,19nm,1.2s,mb4.4
BNI Bardonecchia 23.73 297 *e*P **P** **23 34 01.1 -0.9**
BNI pmax pmax
comp=Z,18nm,1.0s,mb4.5
BNI Bardonecchia 23.73 297 *e*P **P** **23 34 01.1 -0.9**
comp=Z,18nm,1.0s,mb4.5
LPG La Plagne 23.74 299 *e*P **P** **23 34 01.8 -0.2**
comp=Z,49nm,1.2s,mb4.5
LPG La Plagne 23.74 299 *e*P **P** **23 34 01.8 -0.2**
LPG pmax pmax
comp=Z,24nm,1.2s,mb4.5
LPG La Plagne 23.74 299 *e*P **P** **23 34 01.8 -0.2**
comp=Z,24nm,1.2s,mb4.5
LPL La Plagne 23.75 299 *e*P **P** **23 34 01.5 -0.7**
comp=Z,14nm,0.8s,mb4.2
LPL La Plagne 23.75 299 *e*P **P** **23 34 01.5 -0.7**
LPL pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
LPL La Plagne 23.75 299 *e*P **P** **23 34 01.5 -0.7**
comp=Z,7.2nm,0.8s,mb4.2
CDF Champ du Feu 23.98 306 *e*P **P** **23 34 02.9 -1.3**
comp=Z,29nm,1.2s,mb4.3
CDF Champ du Feu 23.98 306 *e*P **P** **23 34 02.9 -1.3**
CDF pmax pmax
comp=Z,14nm,1.2s,mb4.3
CDF Champ du Feu 23.98 306 *e*P **P** **23 34 02.9 -1.3**
comp=Z,14nm,1.2s,mb4.3
ECH Echery 24.00 305 *e*P **P** **23 34 03.5 -1.0**
HINF Hinteralfeld 24.11 304 *e*P **P** **23 34 04.4 -1.0**
comp=Z,42nm,1.1s,mb4.5

HINF Hinteralfeld 24.11 304 *e*P **P** **23 34 04.4 -1.0**
HINF pmax pmax
comp=Z,21nm,1.1s,mb4.5
HINF Hinteralfeld 24.11 304 *e*P **P** **23 34 04.4 -1.0**
comp=Z,21nm,1.1s,mb4.5
ORIF Oris-en-Rattie 24.27 297 *e*P **P** **23 34 06.1 -0.9**
comp=Z,32nm,0.9s,mb4.5
ORIF *e*MLR MLR
comp=Z,48nm,21.9s,MS2.6
ORIF Oris-en-Rattie 24.27 297 *e*P **P** **23 34 06.1 -0.9**
ORIF pmax pmax
comp=Z,16nm,0.9s,mb4.5
ORIF Oris-en-Rattie 24.27 297 *e*P **P** **23 34 06.1 -0.9**
comp=Z,16nm,0.9s,mb4.5
CABF La Chapelle 24.37 301 *e*P **P** **23 34 06.0 -1.8**
comp=Z,39nm,1.1s,mb4.5
CABF La Chapelle 24.37 301 *e*P **P** **23 34 06.0 -1.8**
CABF pmax pmax
comp=Z,20nm,1.1s,mb4.5
CABF La Chapelle 24.37 301 *e*P **P** **23 34 06.0 -1.8**
comp=Z,20nm,1.1s,mb4.5
SMRF Simiane la Rot 24.41 295 *e*P **P** **23 34 06.8 -1.4**
comp=Z,20nm,1.1s,mb4.2
SMRF Simiane la Rot 24.41 295 *e*P **P** **23 34 06.8 -1.4**
comp=Z,10nm,1.1s,mb4.2
HAU Haudompre 24.48 304 *e*P **P** **23 34 07.8 -1.0**
comp=Z,37nm,0.9s,mb4.5
HAU *e*MLR MLR
comp=Z,83nm,17.0s,MS3.0
HAU Haudompre 24.48 304 *e*P **P** **23 34 07.8 -1.0**
HAU pmax pmax
comp=Z,18nm,0.9s,mb4.5
HAU MLR MLR
comp=Z,80nm,17.0s,MS3.3
HAU Haudompre 24.48 304 *e*P **P** **23 34 07.8 -1.0**
comp=Z,18nm,0.9s,mb4.5
HAU LR LR
comp=Z,80nm,17.0s,MS3.3
SVE Sverdlovsk 24.70 32⇑ *e*P **P** **23 34 11.8 +1.1**
SVE *e*PPP 23 35 04.0
SVE *e*S **S** **23 38 30.8 -1.3**
SVE pmax pmax
comp=Z,24nm,1.3s,mb4.6
VIVF Saint-Julien-l 25.12 297 *e*P **P** **23 34 13.3 -1.4**
comp=Z,51nm,0.9s,mb4.8
VIVF Saint-Julien-l 25.12 297 *e*P **P** **23 34 13.3 -1.4**
VIVF pmax pmax
comp=Z,26nm,0.9s,mb4.8
VIVF Saint-Julien-l 25.12 297 *e*P **P** **23 34 13.3 -1.4**
comp=Z,26nm,0.9s,mb4.8
SSB Saint Sauveur 25.25 298 *e*P **P** **23 34 14.9 -1.0**
MEZF Maizieres J'vi 25.43 305 *e*P **P** **23 34 16.8 -0.7**
comp=Z,58nm,0.9s,mb4.8
MEZF Maizieres J'vi 25.43 305 *e*P **P** **23 34 16.8 -0.7**
comp=Z,29nm,0.9s,mb4.8
LASF Ste Croix 25.65 295 *e*P **P** **23 34 18.6 -0.9**
comp=Z,13nm,1.0s,mb4.1
LASF Ste Croix 25.65 295 *e*P **P** **23 34 18.6 -0.9**
comp=Z,6.6nm,1.0s,mb4.1
SMF Signal de Mont 25.90 301 *e*P **P** **23 34 20.6 -1.2**
comp=Z,29nm,0.9s,mb4.5
SMF Signal de Mont 25.90 301 *e*P **P** **23 34 20.6 -1.2**
SMF pmax pmax
comp=Z,15nm,0.9s,mb4.5
SMF Signal de Mont 25.90 301 *e*P **P** **23 34 20.6 -1.2**
comp=Z,15nm,0.9s,mb4.5
GIVF Givet 25.98 309 *e*P **P** **23 34 21.4 -1.0**
comp=Z,24nm,0.9s,mb4.4
GIVF Givet 25.98 309 *e*P **P** **23 34 21.4 -1.0**
GIVF pmax pmax
comp=Z,12nm,0.9s,mb4.4
GIVF Givet 25.98 309 *e*P **P** **23 34 21.4 -1.0**
comp=Z,12nm,0.9s,mb4.4
LOR Lormes 25.98 302 *e*P **P** **23 34 21.2 -1.3**
comp=Z,20nm,1.1s,mb4.2
LOR *e*MLR MLR
comp=Z,62nm,22.3s,MS2.8
LOR Lormes 25.98 302 *e*P **P** **23 34 21.2 -1.3**
LOR pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
LOR MLR MLR
comp=Z,60nm,22.3s,MS3.1
LOR Lormes 25.98 302 *e*P **P** **23 34 21.2 -1.3**
comp=Z,9.8nm,1.1s,mb4.2
LOR LR LR
comp=Z,60nm,22.3s,MS3.1
SSF Saint Saulge 26.19 301 *e*P **P** **23 34 23.3 -1.1**
comp=Z,20nm,1.0s,mb4.3
SSF Saint Saulge 26.19 301 *e*P **P** **23 34 23.3 -1.1**
SSF pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
SSF Saint Saulge 26.19 301 *e*P **P** **23 34 23.3 -1.1**
comp=Z,9.8nm,1.0s,mb4.3
AVF Avril sur Loir 26.26 301 *e*P **P** **23 34 23.7 -1.3**
comp=Z,23nm,1.0s,mb4.4
AVF Avril sur Loir 26.26 301 *e*P **P** **23 34 23.7 -1.3**
AVF pmax pmax
comp=Z,12nm,1.0s,mb4.4
AVF Avril sur Loir 26.26 301 *e*P **P** **23 34 23.7 -1.3**
comp=Z,12nm,1.0s,mb4.4
BAIF Baives 26.35 308 *e*P **P** **23 34 25.0 -0.8**
comp=Z,22nm,1.0s,mb4.3
BAIF Baives 26.35 308 *e*P **P** **23 34 25.0 -0.8**
BAIF pmax pmax
comp=Z,11nm,1.0s,mb4.3
BAIF Baives 26.35 308 *e*P **P** **23 34 25.0 -0.8**
comp=Z,11nm,1.0s,mb4.3
BGF Bois d'Agland 26.57 300 *e*P **P** **23 34 26.6 -1.2**
HFS Hagfors 26.80 334 P **P** **23 34 31.7 +2.0**
comp=Z,4.8nm,0.9s,mb4.0,baz=133,slow=10,SNR=6.8
MTLF Montolieu 26.82 293 *e*P **P** **23 34 28.8 -1.3**
CAF Calviac 26.98 296 *e*P **P** **23 34 29.4 -2.1**
comp=Z,13nm,1.1s,mb4.1
CAF Calviac 26.98 296 *e*P **P** **23 34 29.4 -2.1**
CAF pmax pmax
comp=Z,7.0nm,1.1s,mb4.1
CAF Calviac 26.98 296 *e*P **P** **23 34 29.4 -2.1**
comp=Z,6.5nm,1.1s,mb4.1
TCF Toulx Ste Croi 26.98 299 *e*P **P** **23 34 30.7 -0.8**
comp=Z,34nm,1.1s,mb4.5
TCF Toulx Ste Croi 26.98 299 *e*P **P** **23 34 30.7 -0.8**
TCF pmax pmax
comp=Z,17nm,1.1s,mb4.5
TCF Toulx Ste Croi 26.98 299 *e*P **P** **23 34 30.7 -0.8**
comp=Z,17nm,1.1s,mb4.5
RJF Les Rejaudoux 27.39 297 *e*P **P** **23 34 34.6 -0.5**
comp=Z,34nm,1.2s,mb4.5
RJF *e*MLR MLR
comp=Z,91nm,17.8s,MS3.1
RJF Les Rejaudoux 27.39 297 *e*P **P** **23 34 34.6 -0.5**
RJF pmax pmax
comp=Z,17nm,1.2s,mb4.5
RJF MLR MLR
comp=Z,90nm,17.8s,MS3.4
RJF Les Rejaudoux 27.39 297 *e*P **P** **23 34 34.6 -0.5**
comp=Z,17nm,1.2s,mb4.5
RJF LR LR
comp=Z,90nm,17.8s,MS3.4
BVAR Borovoye Array 27.67 46 P **P** **23 34 38.1 +0.5**
comp=Z,1.7nm,0.9s,mb3.7,baz=235,slow=5.2,SNR=7.4
LFF La Frestale 27.92 296 *e*P **P** **23 34 39.2 -0.7**
comp=Z,29nm,1.2s,mb4.5
LFF La Frestale 27.92 296 *e*P **P** **23 34 39.2 -0.7**
LFF pmax pmax
comp=Z,14nm,1.2s,mb4.5
LFF La Frestale 27.92 296 *e*P **P** **23 34 39.2 -0.7**
comp=Z,14nm,1.2s,mb4.5
MFF Saint Martin d 28.63 300 *e*P **P** **23 34 44.9 -1.3**
comp=Z,28nm,1.2s,mb4.6
MFF Saint Martin d 28.63 300 *e*P **P** **23 34 44.9 -1.3**
MFF pmax pmax
comp=Z,14nm,1.2s,mb4.6
MFF Saint Martin d 28.63 300 *e*P **P** **23 34 44.9 -1.3**
comp=Z,14nm,1.2s,mb4.6
FLN La Foliniere 29.09 304 *e*P **P** **23 34 48.8 -1.5**
FLN *e*MLR MLR
comp=Z,56nm,18.4s,MS2.9
FLN La Foliniere 29.09 304 *e*P **P** **23 34 48.8 -1.5**
FLN LR LR
comp=Z,60nm,18.4s,MS3.2
GRR Gorron 29.29 303 *e*P **P** **23 34 50.1 -2.0**
comp=Z,18nm,0.8s,mb4.5
GRR Gorron 29.29 303 *e*P **P** **23 34 50.1 -2.0**
GRR pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
GRR Gorron 29.29 303 *e*P **P** **23 34 50.1 -2.0**
comp=Z,8.8nm,0.8s,mb4.5

SGMF	**Saint Gilles**		**30.40**	**303**	*eP*		**P**		**23 35 00.3**	**-1.6**
	comp=Z,24nm,1.1s,mb4.5									
SGMF	**Saint Gilles**		**30.40**	**303**	*eP*		**P**		**23 35 00.3**	**-1.6**
SGMF					pmax	pmax				
	comp=Z,12nm,1.1s,mb4.5									
SGMF	**Saint Gilles**		**30.40**	**303**	*eP*		**P**		**23 35 00.3**	**-1.6**
	comp=Z,10nm,1.1s,mb4.5									
QUIF	**Quistinic**		**30.78**	**302**	*eP*		**P**		**23 35 03.3**	**-2.0**
	comp=Z,40nm,1.4s,mb4.7									
QUIF	**Quistinic**		**30.78**	**302**	*eP*		**P**		**23 35 03.3**	**-2.0**
QUIF					pmax	pmax				
	comp=Z,20nm,1.4s,mb4.8									
QUIF	**Quistinic**		**30.78**	**302**	*eP*		**P**		**23 35 03.3**	**-2.0**
	comp=Z,20nm,1.4s,mb4.7									
TAM	**Tamanrasset**		**30.80**	**250**	*eP*		**P**		**23 35 06.7**	**+1.0**
ROSF	**Rostrenen**		**30.89**	**303**	*eP*		**P**		**23 35 04.2**	**-2.0**
	comp=Z,17nm,1.0s,mb4.5									
ROSF	**Rostrenen**		**30.89**	**303**	*eP*		**P**		**23 35 04.2**	**-2.0**
ROSF					pmax	pmax				
	comp=Z,8.0nm,1.0s,mb4.5									
ROSF	**Rostrenen**		**30.89**	**303**	*eP*		**P**		**23 35 04.2**	**-2.0**
	comp=Z,8.4nm,1.0s,mb4.5									
ESDC	**Sonseca Array**		**31.77**	**286**	P		**P**		**23 35 13.4**	**-0.7**
	comp=Z,1.4nm,0.7s,mb3.9,baz=70,slow=9.3,SNR=14									
KURK	**Kurchatov**		**32.09**	**53**	P		**P**		**23 35 16.6**	**-0.2**
	comp=Z,2.5nm,0.9s,mb4.0,baz=267,slow=8.5,SNR=12									
KURK	**Kurchatov**		**32.09**	**53**⇑	*eP*		**P**		**23 35 17.0**	**+0.2**
KURK					pmax	pmax				
	comp=Z,5.0nm,1.0s,mb4.3									
ARCES	**ARCESS Array B**		**32.40**	**353**	P		**P**		**23 35 19.0**	**-0.3**
	comp=Z,2.5nm,1.0s,mb4.0,baz=153,slow=8.2,SNR=4.1									
ARCES					LR	LR			23 50 23.5	
	comp=Z,54nm,18.9s,MS3.3,baz=245,slow=40									
MKAR	**Makanchi Array**		**34.32**	**60**	P		**P**		**23 35 37.0**	**+0.7**
	comp=Z,3.4nm,1.0s,mb4.2,baz=278,slow=6.5,SNR=12									
MKAR	**Makanchi Array**		**34.32**	**60**	P		**P**		**23 35 37.0**	**+0.7**
EVO	**Evora**		**35.09**	**285**	*eP*		**P**		**23 35 41.3**	**-1.7**
	comp=Z,22nm,1.5s,mb4.6									
EVOP	**Sao Brisson**		**35.17**	**285**	*eP*		**P**		**23 35 41.3**	**-2.4**
	comp=Z,11nm,1.5s,mb4.6									
ZALV	**Zalesovo Beam**		**36.27**	**48**	P		**P**		**23 35 52.6**	**-0.3**
	comp=Z,0.9nm,0.4s,mb4.0,baz=277,slow=9.6,SNR=4.6									
TOA0	**Torodi Ar. Sit**		**39.81**	**241**	*eP*		**P**		**23 36 22.6**	**-0.6**
TORD	**Torodi Ar. Bea**		**39.81**	**241**	P		**P**		**23 36 22.6**	**-0.7**
	comp=Z,4.1nm,1.0s,mb4.1,baz=56,slow=5.4,SNR=21									
DBIC	**Dimbokro**		**48.92**	**241**	P		**P**		**23 37 34.3**	**-1.9**
	comp=Z,3.4nm,1.0s,mb4.3,baz=56,slow=15,SNR=3.2									
SONM	**Songino Array**		**50.34**	**55**	P		**P**		**23 37 46.7**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.9,baz=306,slow=9.9,SNR=2.5									
SONM					LR	LR			00 01 36.0	
	comp=Z,153nm,20.1s,MS4.0,baz=244,slow=39									
ULN	**Ulaanbaatar**		**50.76**	**55**⇑	*eP*		**P**		**23 37 51.4**	**+1.7**
BOD	**Bodaibo**		**52.38**	**41**	*eP*		**P**		**23 38 01.0**	**-0.7**
CMAR	**Chiang Mai Arr**		**56.97**	**92**	P		**P**		**23 38 35.1**	**-0.5**
	comp=Z,0.6nm,0.4s,mb4.0,baz=300,slow=8.3,SNR=4.9									
CMAR	**Chiang Mai Arr**		**56.97**	**92**⇑	*iP*		**P**		**23 38 35.0**	**-0.6**
CMAR					*e*				23 38 35.0	
CMAR					pmax	pmax				
	comp=Z,1.0nm,0.4s									
BOSA	**Boshof**		**66.96**	**191**	P		**P**		**23 39 43.2**	**+0.8**
	comp=Z,4.9nm,1.0s,mb4.5,baz=8.3,slow=3.0,SNR=6.0									
BOSA	**Boshof**		**66.96**	**191**	P		**P**		**23 39 43.2**	**+0.8**
KSRS	**Korea Array**		**68.98**	**58**	P		**P**		**23 39 56.0**	**+0.7**
	comp=Z,1.4nm,0.8s,mb4.0,baz=285,slow=5.6,SNR=3.7									
KSRS	**Korea Array**		**68.98**	**58**	P		**P**		**23 39 56.0**	**+0.8**
KSRS					pmax	pmax				
	comp=Z,1.0nm,0.8s,mb3.8									

*BJI **15** 23:42:57.1,271S×.9974E,h30km,mB5.1,mb4.8*
*IDC **15** 23:43:01.9±1.0,171S×.9962E,h0km,mb4.5/14,*
mb1 4.6/14,mb1mx4.4/21,mbtmp4.5/14,MS4.0/4,
Ms1 4.1/4,ms1mx3.3/29, Error ellipse: s-maj=35.3km
s-min=14.6km az=56.0
*ISCJB **15** 23:43:04.0±0.5,195E×.006×.9931E×.005,h33km,mb4.8/35,*
MS4.0/4, Error ellipse: s-maj=9.4km s-min=5.8km az=35.7
*MOS **15** 23:43:05.9±1.2,156S×.9973E,h36km,mb4.9/11, Error*
ellipse: s-maj=18.6km s-min=9.8km az=94.5
*NEIC **15** 23:43:06.9±0.5,177S×.9958E,h35km,mb4.8/7, Error*
ellipse: s-maj=17.6km s-min=7.6km az=49.0
*DJA **15** 23:43:13,174S×.9985E,h66km,MLv4.8/5*
ISC 15 23:43:06.0±0.5,**200S**×.006×**9934E**×.005,**h35**km,**n76,**
σ1°06/70,mb4.8/35,MS4.0/4,8C-8D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.86**	**35**	P		P	**Pn**	**23 43 34.5**	**-0.9**
	0.0nm,0.0s								
KSI	**Kapahiang**	**3.64**	**117**	P		P	**Pn**	**23 44 01.3**	**+1.4**
	0.0nm,0.0s								
TRSI	**Tarutung**	**4.01**	**355**	P		P	**Pn**	**23 44 07.4**	**+2.3**
	0.0nm,0.0s								
KGM	**Kluang**	**5.63**	**45**	P	⇓	P	**Pn**	**23 44 27.9**	**+0.5**
FRIM	**Kepong**	**5.68**	**24**	P	⇓	P	**Pn**	**23 44 28.0**	**0.0**
MYKOM	**Kota Tinggi**	**5.87**	**50**	P	⇑	P	**Pn**	**23 44 31.2**	**+0.5**
IPM	**Ipoh**	**6.65**	**15**	P	⇑	P	**Pn**	**23 44 42.4**	**+1.0**
KTGM	**Kuala Trenggan**	**8.21**	**27**	P	⇓	P	**Pn**	**23 45 03.2**	**+0.5**
CBJI	**Citeko**	**8.68**	**121**	P		P	**Pn**	**23 45 13.2**	**+4.0**
	0.0nm,0.0s								
KSM	**Kuching**	**11.50**	**73**	P	⇓	P	**Pn**	**23 45 49.9**	**+2.1**
KKM	**Kota Kinabalu**	**18.65**	**65**	P	⇑	P	**Pn**	**23 47 21.2**	**-0.4**
KKM	**Kota Kinabalu**	**18.65**	**65**	*eP*		P	**Pn**	**23 47 20.4**	**-1.2**
SDKM	**Sandakan**	**19.38**	**67**	P	⇑	P	**Pn**	**23 47 29.9**	**-0.5**
TSM	**Tawau**	**19.55**	**71**	P	⇓	P	**Pn**	**23 47 31.6**	**-0.7**
KDM	**Kudat**	**19.58**	**63**	P	⇓	P	**Pn**	**23 47 33.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**20.33**	**359**	P		P	**P**	**23 47 36.1**	**-3.2**
	6.9nm,0.6s,baz=188,slow=10,SNR=32								
CMAR						LR	LR	23 56 18.9	
	comp=Z,365nm,18.1s,MS3.8,baz=179,slow=40								
MYLDM	**Lahad Datu**	**20.43**	**70**	P	⇓	P	**P**	**23 47 43.0**	**+2.6**
PCI	**Palu**	**20.52**	**87**	P		P	**P**	**23 47 41.1**	**-0.4**
	0.0nm,0.0s								
KAPI	**Kappang**	**20.59**	**99**	P		P	**P**	**23 47 39.5**	**-2.8**
	17nm,1.0s,baz=311,slow=6.0,SNR=4.6								
KAPI	**Kappang**	**20.59**	**99**	P		P	**P**	**23 47 39.5**	**-2.8**
MNI	**Manado**	**25.73**	**83**	P		P	**P**	**23 48 34.9**	**+1.4**
	0.0nm,0.0s								
FITZ	**Fitzroy Crossi**	**30.36**	**124**	*eP*		P	**P**	**23 49 14.3**	**-0.5**
	3.8nm,0.8s,mb4.2								
ODAN	**Odare**	**30.92**	**339**	*eP*		P	**P**	**23 49 20.2**	**+0.6**
	29nm,0.8s,mb5.1								
TAPN	**Taplejung**	**31.25**	**340**	*eP*		P	**P**	**23 49 23.4**	**+0.8**
	52nm,0.9s,mb5.3								
RAMN	**Ramite**	**31.29**	**338**	*eP*		P	**P**	**23 49 24.0**	**+1.1**
	21nm,0.7s,mb5.1								
PKI	**Pulchoki**	**32.31**	**336**	*eP*		P	**P**	**23 49 32.1**	**+0.2**
GUN	**Gumba**	**32.43**	**337**	*eP*		P	**P**	**23 49 33.8**	**+0.9**
	31nm,0.6s,mb5.3								
DMN	**Daman**	**32.47**	**336**	*eP*		P	**P**	**23 49 33.2**	**-0.1**
KKN	**Kakani**	**32.56**	**336**	*eP*		P	**P**	**23 49 34.5**	**+0.4**
	21nm,0.9s,mb5.1								
GKN	**Gorkha**	**33.01**	**336**	*eP*		P	**P**	**23 49 38.3**	**+0.3**
	23nm,0.9s,mb5.1								
KOLN	**Koldanda**	**33.25**	**334**	*eP*		P	**P**	**23 49 40.4**	**+0.3**
	22nm,0.7s,mb5.2								
DANN	**Dangsing**	**33.68**	**335**	*eP*		P	**P**	**23 49 43.9**	**+0.1**
	22nm,0.7s,mb5.2								
WRA	**Warramunga Arr**	**38.56**	**120**	P		P	**P**	**23 50 24.9**	**-0.8**
	9.8nm,0.8s,mb4.6,baz=300,slow=9.0,SNR=55								
WRAB	**Tennant Creek**	**38.57**	**120**	*eP*		P	**P**	**23 50 26.0**	**+0.2**
WRAB					pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.4								
WRAB	**Tennant Creek**	**38.57**	**120**	*eP*		P	**P**	**23 50 26.0**	**+0.2**
	comp=Z,5.4nm,0.6s,mb4.5								
WB2	**Warramunga Arr**	**38.57**	**120**	*eP*		P	**P**	**23 50 25.8**	**-0.1**
ASAR	**Alice Springs**	**39.79**	**126**	P		P	**P**	**23 50 36.7**	**+0.7**
	comp=Z,3.5nm,0.7s,mb4.2,baz=300,slow=7.8,SNR=48								
ASAR					PcP	PcP			23 52 43.1	+1.3
	comp=Z,0.9nm,0.8s,baz=264,slow=3.5,SNR=4.0									
GTA	**Gaotai**	**41.21**	**1**	*eP*		P	**P**	**23 50 47.3**	**-0.1**
GTA					AP	pP			23 50 51.8	-5.9
GTA					AMB	AMB				
	comp=Z,13nm,1.0s,mb4.5									
WMQ	**Urumqi**	**46.80**	**348**	*iP*			**P**	**23 51 33.4**	**+1.2**
WMQ					AP	pP			23 51 41.5	-1.1
WMQ					AMB	AMB				
	comp=Z,20nm,1.0s,mb5.0									
WMQ					AMB	AMB				
	comp=Z,189nm,5.0s									
KSRS	**Korea Array**	**47.36**	**31**	P		P	**P**	**23 51 34.6**	**-2.0**
	comp=Z,4.4nm,0.9s,mb4.4,baz=224,slow=7.9,SNR=8.1									
KSRS	**Korea Array**	**47.36**	**31**	P		P	**P**	**23 51 34.7**	**-2.0**
KSRS					pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.3									

STKA	**Stephens Creek**		**49.64**	**131**	*eP*		**P**		**23 51 56.3**	**+1.9**
	comp=Z,7.2nm,0.8s,mb4.8									
STKA	**Stephens Creek**		**49.64**	**131**	P		**P**		**23 51 56.4**	**+2.0**
	comp=Z,7.9nm,0.7s,mb4.9,baz=305,slow=7.1,SNR=11									
AML	**Almayashu**		**49.68**	**335**	*eP*		**P**		**23 51 55.1**	**+0.6**
	comp=Z,188nm,0.8s									
SONM	**Songino Array**		**50.01**	**6**	P		**P**		**23 51 57.4**	**+0.5**
	comp=Z,13nm,0.8s,mb5.0,baz=187,slow=8.8,SNR=41									
SONM					PcP	PcP			23 53 17.1	+0.7
	comp=Z,1.1nm,0.5s,baz=166,slow=3.0,SNR=2.5									
EKS2	**Erkin-Say**		**50.09**	**335**	*eP*		**P**		**23 51 58.2**	**+0.7**
	comp=Z,7.6nm,0.8s,mb4.8									
ULN	**Ulaanbaatar**		**50.11**	**7**	*eP*		**P**		**23 51 57.5**	**-0.2**
ULN					pmax	pmax				
	comp=Z,11nm,0.8s,mb4.9									
ULN	**Ulaanbaatar**		**50.11**	**7**	*eP*		**P**		**23 51 57.5**	**-0.1**
	comp=Z,11nm,0.8s,mb5.0									
MKAR	**Makanchi Array**		**50.85**	**345**	P		**P**		**23 52 03.3**	**+0.1**
	comp=Z,8.6nm,0.8s,mb4.7,baz=149,slow=8.0,SNR=54									
ZAK	**Zakamensk**		**52.29**	**3**	*eP*		**P**		**23 52 13.6**	**-0.3**
ZAK					pmax	pmax				
	comp=Z,4.0nm,1.3s,mb4.2									
MJAR	**Matsushiro Arr**		**52.69**	**39**	P		**P**		**23 52 15.7**	**-1.5**
	comp=Z,2.8nm,0.8s,mb4.2,baz=219,slow=7.2,SNR=7.9									
KURK	**Kurchatov**		**55.42**	**344**	*eP*		**P**		**23 52 36.5**	**-0.3**
KURK					pmax	pmax				
	comp=Z,11nm,0.8s,mb4.9									
KURK	**Kurchatov**		**55.42**	**344**	*eP*		**P**		**23 52 36.5**	**-0.4**
	comp=Z,11nm,0.8s,mb4.9									
ZAA0	**Zalesovo Array**		**57.05**	**350**	*eP*		**P**		**23 52 48.1**	**-0.3**
ZALV	**Zalesovo Beam**		**57.05**	**350**	P		**P**		**23 52 48.2**	**-0.2**
	comp=Z,22nm,0.8s,mb5.3,baz=182,slow=4.5,SNR=91									
NVS	**Novosibirsk**		**58.19**	**349**	*eP*		**P**		**23 52 55.2**	**-1.2**
NVS					pmax	pmax				
	comp=N,7.0nm,1.0s									
NVS					pmax	pmax				
	comp=E,5.0nm,1.0s									
NVS					pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.8									
KLR	**Kul'dur**		**58.20**	**24**	*eP*		**P**		**23 52 52.2**	**-4.4**
BVAR	**Borovoye Array**		**59.96**	**340**	P		**P**		**23 53 07.7**	**-1.0**
	comp=Z,4.0nm,0.7s,mb4.5,baz=141,slow=9.2,SNR=22									
BOD	**Bodaibo**		**60.78**	**9**	*eP*		**P**		**23 53 13.4**	**-0.8**
BOD					pmax	pmax				
	comp=Z,12nm,0.9s,mb5.0									
YSS	**Yuzh-Sakhalins**		**61.83**	**32**	*eP*		**P**		**23 53 20.4**	**-1.2**
KMBO	**Kilima Mbogo**		**62.07**	**270**	LR		LR		00 15 35.3	
	comp=Z,100nm,21.7s,MS3.9,baz=278,slow=31									
ARU	**Arti**		**66.94**	**337**⇓	*eP*		**P**		**23 53 54.2**	**-0.6**
ARU					pmax	pmax				
	comp=Z,6.0nm,1.3s,mb4.5									
YAK	**Yakutsk**		**67.91**	**15**⇑	*eP*		**P**		**23 53 58.8**	**-2.0**
YAK					pmax	pmax				
	comp=Z,29nm,1.1s,mb5.2									
PETK	**Petropavlovsk-**		**73.23**	**32**	P		**P**		**23 54 31.3**	**-2.1**
	comp=Z,2.9nm,0.6s,mb4.4,baz=269,slow=2.3,SNR=5.8									
PET	**Petropavlovsk**		**73.71**	**33**⇑	*eP*		**P**		**23 54 33.8**	**-2.5**
PET					pmax	pmax				
	comp=Z,18nm,1.4s,mb4.8									
RPZ	**Rata Peaks**		**75.45**	**135**	LR		LR		00 25 43.0	
	comp=Z,392nm,20.4s,MS4.7,baz=24,slow=34									
OBN	**Obninsk**		**76.44**	**328**⇑	*eP*		**P**		**23 54 51.2**	**-0.8**
OBN					pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.5									
BUR08	**Bucovina Ar. S**		**80.84**	**319**	*eP*		**P**		**23 55 17.1**	**+0.7**
KAF	**Kangasniemi**		**83.88**	**333**	*ep*		**P**		**23 55 31.1**	**-0.8**
	comp=Z,4.6nm,0.6s,mb4.8									
KAF	**Kangasniemi**		**83.88**	**333**	*eP*		**P**		**23 55 31.1**	**-0.8**
KAF					pmax	pmax				
	comp=Z,5.0nm,0.6s,mb4.8									
ARCES	**ARCESS Array B**		**86.25**	**340**	P		**P**		**23 55 44.0**	**+0.3**
	comp=Z,1.8nm,0.8s,mb4.3,baz=104,slow=3.9,SNR=4.9									
GERES	**GERESS Array B**		**88.61**	**319**	P		**P**		**23 55 56.3**	**+0.8**
	comp=Z,0.6nm,0.7s,mb4.0,baz=90,slow=3.1,SNR=6.4									
NOA	**NORSAR Array B**		**90.82**	**331**	LR		LR		00 45 02.6	
	comp=Z,27nm,18.7s,MS3.7,baz=50,slow=41									
CPUP	**Villa Florida**		**143.93**	**217**	PKP		PKPdf		00 02 41.5	+2.9
	comp=Z,1.2nm,0.6s,baz=204,slow=0.8,SNR=5.0									
CPUP	**Villa Florida**		**143.93**	**217**	PKP		PKPdf		00 02 41.5	+2.9
TXAR	**Lajitas Array**		**145.10**	**37**	PKP		PKPdf		00 02 40.9	+0.4
	comp=Z,9.5nm,0.7s,baz=265,slow=1.0,SNR=142									

*IDC **15** 23:55:18.3±0.8,1183N×144.97E,h0km,mb4.1/11,*
mb1 4.2/11,mb1mx4.1/20,mbtmp4.1/11, Error ellipse:
s-maj=31.0km s-min=15.3km az=83.0
*ISCJB **15** 23:55:21.3±0.7,1188N±.006×1450E±.02,h33km,mb4.2/15,*
Error ellipse: s-maj=22.9km s-min=8.8km az=178.7
*NEIC **15** 23:55:21.0±0.6,1185N×14507E,h20km,mb4.8/3, Error*
ellipse: s-maj=21.6km s-min=10.0km az=81.0
ISC 15 23:55:18.2±7.0,**1187N**±.008×**1451E**±.02,**h1**km±43km,**n23,**
σ1°03/21,mb4.3/15,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.71**	**354**	Pn			**Pn**	**23 55 49.7**	**+0.5**
	136nm,0.3s,baz=165,slow=9.7,SNR=64								
GUMO				Sn			**Sn**	**23 56 08.1**	**-3.7**
	126nm,0.3s,baz=351,slow=23,SNR=7.7								
JOW	**Kunigami**	**21.68**	**316**	P			**P**	**00 00 10.8**	**+0.3**
	14nm,0.6s,mb4.6,baz=133,slow=12,SNR=5.8								
MJAR	**Matsushiro Arr**	**25.32**	**347**	P			**P**	**00 00 45.2**	**-1.3**
	2.5nm,0.7s,mb4.0,baz=168,slow=8.3,SNR=9.5								
MAT	**Matsushiro**	**25.33**	**347**	P			**P**	**00 00 46.9**	**+0.4**
KSRS	**Korea Array**	**29.74**	**332**	P			**P**	**00 01 23.9**	**-2.3**
	1.2nm,0.6s,mb3.9,baz=140,slow=9.7,SNR=5.1								
CTA	**Charters Tower**	**31.78**	**178**	P			**P**	**00 01 44.2**	**0.0**
	0.5nm,0.6s,mb4.0,baz=337,slow=20,SNR=4.1								
CTA	**Charters Tower**	**31.78**	**178**	P			**P**	**00 01 44.2**	**0.0**
WRA	**Warramunga Arr**	**33.33**	**199**	P			**P**	**00 01 57.0**	**-0.8**
	1.9nm,0.8s,mb4.1,baz=20,slow=9.4,SNR=12								
ASAR	**Alice Springs**	**36.96**	**197**	P			**P**	**00 02 28.1**	**-1.0**
	0.5nm,0.5s,mb3.5,baz=14,slow=8.4,SNR=10								
CMAR	**Chiang Mai Arr**	**44.88**	**284**	P			**P**	**00 03 35.5**	**+0.8**
	0.8nm,0.3s,mb4.1,baz=88,slow=6.3,SNR=10								
SONM	**Songino Array**	**48.23**	**326**	P			**P**	**00 04 01.2**	**+0.7**
	1.2nm,0.6s,mb4.2,baz=154,slow=7.1,SNR=4.4								
MKAR	**Makanchi Array**	**62.84**	**317**	P			**P**	**00 05 46.2**	**+0.5**
	1.2nm,0.4s,mb4.4,baz=91,slow=8.6,SNR=11								
ZALV	**Zalesovo Beam**	**63.12**	**325**	P			**P**	**00 05 46.2**	**-1.1**
	0.8nm,0.6s,mb4.1,baz=116,slow=4.9,SNR=4.1								
ZALV	**Zalesovo Beam**	**63.12**	**325**	P			**P**	**00 05 46.2**	**-1.2**
KURK	**Kurchatov**	**66.00**	**320**	*eP*			**P**	**00 06 06.3**	**0.0**
	11nm,1.1s,mb5.0								
AML	**Almayashu**	**68.32**	**311**	*eP*			**P**	**00 06 23.0**	**+1.7**
	5.4nm,1.0s,mb4.7								
NVAR	**Mina Array Bea**	**87.85**	**51**	P			**P**	**00 08 10.9**	**+1.2**
	1.1nm,0.9s,mb4.2,baz=260,slow=5.2,SNR=5.5								
ARCES	**ARCESS Array B**	**88.76**	**342**	P			**P**	**00 08 14.5**	**+1.2**
	1.8nm,0.7s,mb4.4,baz=73,slow=8.1,SNR=6.7								
ARCES	**ARCESS Array B**	**88.76**	**342**	P			**P**	**00 08 14.5**	**+1.2**
ELK	**Elko**	**89.58**	**48**	*eP*			**P**	**00 08 17.4**	**-0.3**
	2.1nm,0.4s,mb4.7								
DBIC	**Dimbokro**	**144.85**	**300**	PKP		PKPdf		00 14 57.0	-1.2
	4.7nm,1.1s,baz=163,slow=4.9								
DBIC	**Dimbokro**	**144.85**	**300**	PKP		PKPdf		00 14 57.0	-1.2
LPAZ	**La Paz**	**147.54**	**102**	PKPbc		PKPbc		00 15 07.0	+1.8
	1.3nm,0.6s,baz=346,slow=1.6,SNR=7.1								

*DDA **16** 00:08:37.7,3794N×3690E,h7km±2km,Md2.9*
*CSEM **16** 00:08:38.8±0.2,3786N×3702E,h8km,MD2.8, Error*
ellipse: s-maj=5.0km s-min=3.8km az=53.0
*ISCJB **16** 00:08:39.5±0.6,3789N±.004×.3688E±.004,h10km, Error*
ellipse: s-maj=6.7km s-min=4.3km az=150.1
*ISK **16** 00:08:39.4,3776N×.3710E,h6km,MD2.8*
ISC 16 00:08:39.7±0.7,**3787N**±.006×**3687E**±.006,**h17**km±11km,**n9,**
σ1°36/17,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMRS	**Kahramanmaras**	**0.36**	**176**	*eP*	G		**Pg**	**00 08 45.9**	**-1.3**
KMRS				*eS*	G		**Sg**	**00 08 50.4**	**-1.8**
ANDN	**Andirin**	**0.51**	**235**	*iP*			**Pg**	**00 08 48.6**	**-1.2**
ANDN				*iS*			**Sg**	**00 08 57.7**	**+1.1**
GZT	**Gaziantep**	**0.75**	**133**	*iP*			**Pg**	**00 08 55.2**	**+0.8**
GZT				*iS*			**Sg**	**00 09 06.9**	**+2.5**
SARI	**SarD1z-Kayseri**	**0.82**	**351**	*eP*	G		**Pg**	**00 08 56.0**	**+0.3**
KOZT	**Kozan**	**0.91**	**245**	*eP*	G		**Pg**	**00 09 00.1**	**+2.7**
KOZT				*eS*	G		**Sg**	**00 09 14.7**	**+5.3**
AKCD	**Akcadag**	**0.94**	**63**	*iP*			**Pb**	**00 08 56.4**	**-1.1**
AKCD				*iS*			**Sb**	**00 09 10.4**	**+0.8**
AKCD	**Akcadag**	**0.94**	**63**	*iP*			**Pb**	**00 08 56.4**	**-1.1**
AKCD				*iS*			**Sb**	**00 09 10.4**	**+0.8**
ATAB	**Bozova**	**1.20**	**109**	*iP*			**Pn**	**00 09 01.1**	**-0.7**
ATAB				*iS*			**Sb**	**00 09 19.4**	**+2.2**
MYA	**Malataya**	**1.31**	**69**	*ePN*			**Pn**	**00 09 02.5**	**-0.8**
MYA				*eSN*			**Sn**	**00 09 19.4**	**-1.0**

IDC 16 00:09:11.7±3.6,**555S**×**15192E,h0km,mb3.2/2,mb1 3.6/2,**
mb1mx3.4/14,mbtmp3.3/2, Error ellipse:
s-maj=150.6km s-min=48.7km az=119.0, New Britain
region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.29**	**229**	P		P	P	00 14 11.3	+0.5
	0.3nm,0.4s,baz=54,slow=10.0,SNR=5.4								
ASAR	**Alice Springs**	**25.00**	**222**	P		P	P	00 14 37.0	-0.5
	0.7nm,0.6s,baz=56,slow=10,SNR=6.6								
TORD	**Torodi Ar. Bea**	**149.69**	**287**	PKPbc		PKPbc		00 29 04.4	-0.2
	0.2nm,0.6s,baz=80,slow=2.3,SNR=5.2								

*ISCJB **16** 00:10:32.1±2.8,261S±0.1×177.7W±0.1,h74km±25km,*
mb4.2/12, Error ellipse: s-maj=23.0km s-min=16.9km
az=174.2
*IDC **16** 00:10:33.6±3.8,2613S×17759W,h78km±34km,mb4.0/10,*
mb1 4.3/12,mb1mx4.1/18,mbtmp4.1/12,MS3.9/14,
Ms1 3.9/14,ms1mx3.7/23, Error ellipse: s-maj=27.9km
s-min=19.0km az=180.0
*GCMT **16** 00:10:34.1±0.4,2607S×17765W,h22km±1km,MW4.9/65,*
Moment Tensor Solution. s24,c25; s65,c88; Duration:
0 Moment tensor: Scale 10^16Nm; Mrr-0.72±.14;
Mθθ0.98±.12; Mϕϕ-0.25±.12; Mrθ1.11±.21; Mrϕ2.49±.09;
Mθϕ-0.35±.19; Best double couple: Mo2.86900×10^16
NP1:ϕs9.00000°,δ63.00000°,λ-168.00000°. NP2:
ϕs274.00000°,δ79.00000°,λ-27.00000°. Principal axes:
T 3.0440, Plg10.0000°, Azm324.0000°; N -0.3490,
Plg61.0000°, Azm73.0000°; P -2.6950, Plg27.0000°,
Azm229.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s.
*NEIC **16** 00:10:34.1±2.1,2611S×17761W,h84km±19km,mb4.7/3*
Error ellipse: s-maj=20.8km s-min=12.0km az=171.0
ISC 16 00:10:33.5±2.6,**261S**±01×**1776W**±01,**h74**km±23km,**n35,**
σ0°55/21,mb4.2/12,2C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.16**	**184**	P			**Pn**	**00 11 21.3**	**+0.5**
	222nm,0.3s,baz=275,slow=22,SNR=5.2								
RAO				S			**Sn**	**00 11 56.9**	**-0.4**
	53nm,0.3s,baz=90,slow=20,SNR=3.0								
RAO	

KUR				*e*S		**Sn**	**00 18 10.8**	**-13**	
KUR				pmax	pmax				
	comp=N,60nm,0.6s								
KUR				pmax	pmax				
	comp=Z,210nm,0.6s								
KUR				smax					
	comp=N,100nm,0.5s								
KUR				smax					
	comp=E,80nm,0.5s								
YSS	**Yuzh-Sakhalins**	**9.43**	**274**	*e*P		**Pn**	**00 17 54.4**	**-0.9**	
ASAJ	**Asahikawa**	**10.22**	**258**	Pn		**Pn**	**00 18 02.9**	**-3.3**	
	comp=E,1.4nm,0.3s,baz=104,slow=18,SNR=8.5								
ASAJ				LR	LR		00 21 54.9		
	comp=E,24nm,21.4s,baz=249,slow=37								
ASAJ	**Asahikawa**	**10.22**	**258**	P		**Pn**	**00 18 02.9**	**-3.2**	
ASAJ				pmax	pmax				
	comp=Z,1.0nm,0.3s								
ASAJ				MLR	MLR				
	comp=Z,24nm,21.4s								
MJAR	**Matsushiro Arr**	**17.22**	**239**	Pn		**Pn**	**00 19 35.2**	**-4.4**	
	comp=Z,0.2nm,0.3s,baz=35,slow=11,SNR=4.1								
YAK	**Yakutsk**	**21.38**	**324**	*e*P		**P**	**00 20 27.7**	**+1.6**	
YAK				pmax	pmax				
	comp=Z,9.0nm,0.8s,mb4.2								
BILL	**Bilibino**	**21.60**	**10**⇓	*e*P		**P**	**00 20 33.0**	**+4.6**	
BILL				*e*'PP			00 20 49.4		
BILL				*e*S		**S**	**00 24 22.9**	**-2.5**	
BILL				pmax	pmax				
	comp=Z,11nm,1.2s,mb4.2								
KSRS	**Korea Array**	**23.16**	**256**	P		**P**	**00 20 45.1**	**-0.1**	
	comp=Z,3.0nm,0.8s,mb3.8,baz=50,slow=11,SNR=7.0								
KSRS	**Korea Array**	**23.16**	**256**	P		**P**	**00 20 45.2**	**0.0**	
KSRS				pmax	pmax				
	comp=Z,3.0nm,0.8s,mb3.8								
HIA	**Hailar**	**24.49**	**289**	*e*P		**P**	**00 20 59.3**	**+1.6**	
SONM	**Songino Array**	**33.44**	**290**	P		**P**	**00 22 17.5**	**+0.2**	
	comp=Z,0.9nm,0.8s,mb3.8,baz=77,slow=9.6,SNR=2.6								
ZALV	**Zalesovo Beam**	**44.32**	**307**	P		**P**	**00 23 48.4**	**+0.2**	
	comp=Z,0.7nm,0.5s,mb3.6,baz=63,slow=6.9,SNR=4.3								
MKAR	**Makanchi Array**	**48.87**	**299**	P		**P**	**00 24 24.9**	**+0.9**	
	comp=Z,5.2nm,0.8s,mb4.6,baz=64,slow=8.2,SNR=19								
MKAR	**Makanchi Array**	**48.87**	**299**	*e*P		**P**	**00 24 24.8**	**+0.9**	
MKAR				pmax	pmax				
	comp=Z,5.0nm,0.8s								
KURK	**Kurchatov**	**49.13**	**305**	*e*P		**P**	**00 24 26.3**	**+0.4**	
KURK				pmax	pmax				
	comp=Z,1.0nm,0.6s,mb4.0								
KURK	**Kurchatov**	**49.13**	**305**	*e*P		**P**	**00 24 26.3**	**+0.4**	
	comp=Z,1.3nm,0.6s,mb4.1								
CMAR	**Chiang Mai Arr**	**54.75**	**259**	P		**P**	**00 25 08.9**	**+0.9**	
	comp=Z,1.9nm,0.7s,mb4.2,baz=35,slow=7.3,SNR=11								
CMAR	**Chiang Mai Arr**	**54.75**	**259**	*e*P		**P**	**00 25 08.9**	**+0.8**	
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.7s								
KRMB	**Red Mountain**	**54.88**	**65**	*e*P		**P**	**00 25 06.8**	**-2.0**	
ARU	**Arti**	**56.34**	**319**	*d i*P		**P**	**00 25 19.4**	**+0.4**	
ARU				*e*S		**S**	**00 33 00.7**	**-5.9**	
ARU				pmax	pmax				
	comp=Z,4.0nm,0.6s,mb4.6								
ARU	**Arti**	**56.34**	**319**	*e*P		**P**	**00 25 19.9**	**+0.9**	
	comp=Z,1.0nm,0.5s,mb4.1								
WRA	**Warramunga Arr**	**69.65**	**202**	P		**P**	**00 26 45.5**	**-2.2**	
	comp=Z,1.0nm,0.8s,mb3.8,baz=16,slow=6.9,SNR=6.7								
WRA	**Warramunga Arr**	**69.65**	**202**	*e*P		**P**	**00 26 46.8**	**-0.9**	
WRA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
ASAR	**Alice Springs**	**73.33**	**202**	P		**P**	**00 27 09.7**	**-0.2**	
	comp=Z,0.6nm,0.7s,mb3.6,baz=16,slow=5.0,SNR=5.5								
ASAR	**Alice Springs**	**73.33**	**202**	*e*P		**P**	**00 27 09.6**	**-0.2**	
ASAR				pmax	pmax				
	comp=Z,1.0nm,0.7s								
TXAR	**Lajitas Array**	**75.26**	**63**	P		**P**	**00 27 23.6**	**+2.3**	
	comp=Z,0.4nm,0.6s,mb3.5,baz=304,slow=3.8,SNR=6.3								
TXAR	**Lajitas Array**	**75.26**	**63**	*e*P		**P**	**00 27 24.5**	**+3.2**	
TAOE	**Nuku Hiva Isla**	**78.94**	**116**	*e*LR		LR	00 28 05.1		
	comp=Z,839nm,30.4s								
KMBO	**Kilima Mbogo**	**110.41**	**292**	*i* PKIKP		PKiKP	00 34 04.5	-6.2	
PLCA	**Paso Flores**	**145.90**	**97**	*e*PKP2		PKPab	00 35 20.2	+2.5	
PLCA				pmax	pmax				
	comp=Z,2.0nm,0.9s								

NIED **16** *00:34:00, 46.70N×15.290E, h32km, Mw3.9 Best double couple: M07.03000×1014 NP1:φs306.00000°, δ88.00000°, λ29.00000°. NP2:φs215.00000°, δ61.00000°, λ178.00000°.*
SKHL **16** *00:34:33.5±0.1, 46.50N×15.290E, h51km±19km, mb4.5/2*
JMA **16** *00:34:35.2±0.7, 46.74N×15.294E, h30km, M4.5*
MOS **16** *00:34:37.3±1.7, 46.81N×15.259E, h55km, mb4.0/7, Error ellipse: s-maj=16.1km s-min=12.3km az=66.7*
ISCJB **16** *00:34:37.5±1.0, 46.78N±0.09N×15.25E±0.1, h58km±8km, mb4.0/14, Error ellipse: s-maj=19.9km s-min=6.8km az=136.5*
IDC **16** *00:34:40.6±2.9, 46.86N×15.259E, h75km±24km, mb3.5/11, mb1 3.7/14, mb1mx3.6/24, mbtmp3.5/14, MS2.7/1, Ms1 2.7/1, ms1mx2.0/35, Error ellipse: s-maj=25.5km s-min=16.7km az=112.0*

ISC 16 00:34:39.6±0.9, 4677N±0.09N×1525E±0.1, h60km±7km, n60, σ1°29/69, mb4.0/14, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.56**	**246**	*e*PN	**Pn**	**00 35 30.3**	**-1.9**
KUR				*e*S	**Sn**	**00 36 13.0**	**+0.1**
KUR				pmax	pmax		
	comp=Z,90nm,0.5s						
KUR				smax			
	comp=N,240nm,0.5s						
KUR				smax			
	comp=E,380nm,0.5s						
KUR	**Kuril'sk**	**3.56**	**246**	*e*P	**Pn**	**00 35 30.3**	**-1.9**
KUR				AMB	AMB	00 35 32.0	
	comp=E,90nm,0.5s						
KUR				*e*S	**Sn**	**00 36 13.0**	**+0.1**
KUR				A		00 36 30.2	
	comp=E,240nm,0.5s						
KUR				A		00 36 30.2	
	comp=E,380nm,0.5s						
SKR	**Severo-Kuril's**	**4.60**	**30**	*e*PN	**Pn**	**00 35 45.1**	**-1.4**
SKR				*e*S	**Sn**	**00 36 33.2**	**-5.3**
SKR				pmax	pmax		
	comp=Z,30nm,0.5s						
SKR				smax			
	comp=N,100nm,0.5s						
SKR				smax			
	comp=E,60nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.39**	**242**	*e*P	**Pn**	**00 35 59.0**	**+1.6**
YUK				*e*S	**Sn**	**00 37 03.0**	**+4.9**
YUK				A		00 37 25.0	
	comp=E,700nm,0.8s						
YUK				A		00 37 26.0	
	comp=E,250nm,0.5s						
YUK				A		00 37 26.0	
	comp=E,360nm,0.5s						
NEM2	**Nemuro 2**	**5.85**	**237**	P	**Pn**	**00 36 02.8**	**-0.9**
NEM2				*e*S	**Sn**	**00 37 07.7**	**-1.7**
JRA	**Rausu**	**5.90**	**244**	P	**Pn**	**00 36 06.6**	**+2.3**
JNK	**Nakash**	**6.33**	**243**	P	**Pn**	**00 36 11.7**	**+1.4**
JNK				*e*S	**Sn**	**00 37 21.3**	**+0.1**
JTKR	**Abashiri--Toko**	**6.65**	**248**	P	**Pn**	**00 36 17.1**	**+2.6**
YSS	**Yuzh-Sakhalins**	**6.66**	**275**	*e*PN	**Pn**	**00 36 25.3**	**+11**
YSS	**Yuzh-Sakhalins**	**6.66**	**275**	*e*P	**Pn**	**00 36 15.5**	**+0.8**
JAK	**Akkeshi**	**6.69**	**238**	P	**Pn**	**00 36 14.4**	**-0.7**
JAK				*e*S	**Sn**	**00 37 27.6**	**-2.2**
JMP	**Maruseppu**	**6.98**	**250**	P	**Pn**	**00 36 22.5**	**+3.4**
JAR	**Ashorobuto**	**7.07**	**244**	P	**Pn**	**00 36 22.0**	**+1.6**
PETK	**Petropavlovsk-**	**7.18**	**26**	P	**Pn**	**00 36 21.2**	**-0.6**
	comp=E,0.3nm,0.3s,baz=179,slow=11,SNR=9.5						
JOB	**Onbets**	**7.25**	**241**	*e*S	**Sn**	**00 37 43.1**	**-0.6**
ASAJ	**Asahikawa**	**7.43**	**253**	P	**Pn**	**00 36 27.4**	**+2.1**
	comp=E,1.9nm,0.3s,baz=88,slow=14,SNR=13						
ASAJ				LR	LR	00 39 12.7	
	comp=E,54nm,19.6s,baz=334,slow=36						
ASAJ	**Asahikawa**	**7.43**	**253**	PN	**Pn**	**00 36 27.4**	**+2.1**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,54nm,19.6s						
JKK2	**Kamakawa 2**	**7.44**	**251**	P	**Pn**	**00 36 28.5**	**+3.2**
JCH	**Churui**	**7.70**	**241**	P	**Pn**	**00 36 28.8**	**-0.2**
JCH				*e*S	**Sn**	**00 37 52.5**	**-2.2**
JEM	**Erimo**	**8.19**	**238**	*e*S	**Sn**	**00 37 59.8**	**-6.8**
JNBK	**Urakawa-nobuka**	**8.26**	**241**	*e*S	**Sn**	**00 38 03.7**	**-4.8**
JKB	**Kayabe**	**9.53**	**243**	P	**Pn**	**00 36 53.3**	**-0.7**
JYM2	**Yakumo 2**	**9.82**	**246**	P	**Pn**	**00 36 58.2**	**+0.3**
JTM	**Tenmabayashi**	**10.18**	**238**	*e*S	**Sn**	**00 38 47.9**	**-7.5**
JANG	**Nango**	**10.19**	**235**	P	**Pn**	**00 36 59.6**	**-3.5**
JANG				*e*S	**Sn**	**00 38 47.2**	**-8.5**
JTH	**Tanohata**	**10.30**	**232**	*e*S	**Sn**	**00 38 47.6**	**-11**
MJAR	**Matsushiro Arr**	**14.74**	**231**	P	**Pn**	**00 38 08.4**	**+3.8**
	comp=Z,0.3nm,0.3s,baz=36,slow=8.3,SNR=5.5						
MJAR	**Matsushiro Arr**	**14.74**	**231**	*e*P	**Pn**	**00 38 10.7**	**+6.1**
YAK	**Yakutsk**	**20.06**	**328**	*e*P	**P**	**00 39 11.8**	**+4.2**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
KSRS	**Korea Array**	**20.38**	**252**	P	**P**	**00 39 12.8**	**+1.6**
	comp=N,2.4nm,0.8s,baz=55,slow=9.5,SNR=5.5						
KSRS	**Korea Array**	**20.38**	**252**	*e*P	**P**	**00 39 16.1**	**+4.9**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL	**Bilibino**	**22.47**	**14**⇑	*e*P	**P**	**00 39 38.6**	**+5.3**
BILL				*e*'PP		00 40 19.3	
BILL				*e*S	**S**	**00 43 28.5**	**-7.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
ULN	**Ulaanbaatar**	**30.47**	**289**	*e*P	**P**	**00 40 47.8**	**+1.4**
ZALV	**Zalesovo Beam**	**42.23**	**306**	P	**P**	**00 42 24.9**	**-1.6**
	comp=Z,0.5nm,0.4s,mb3.5,baz=91,slow=8.6,SNR=2.7						
ZALV				PcP	PcP	00 44 19.0	-0.3
	comp=Z,0.3nm,0.3s,baz=17,slow=1.5,SNR=3.4						
ZALV	**Zalesovo Beam**	**42.23**	**306**	P	**P**	**00 42 24.9**	**-1.5**
ZALV						00 44 19.0	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
MKAR	**Makanchi Array**	**46.53**	**297**	P	**P**	**00 43 00.3**	**-0.5**
	comp=Z,0.5nm,0.6s,mb3.6,baz=66,slow=9.4,SNR=4.2						
MKAR				PcP	PcP	00 44 33.6	-0.6
	comp=Z,0.8nm,0.7s,baz=64,slow=3.4,SNR=3.1						
MKAR	**Makanchi Array**	**46.53**	**297**	*e*P	**P**	**00 43 03.3**	**+2.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**51.94**	**256**	P	**P**	**00 43 44.0**	**+1.5**
	comp=Z,0.5nm,0.3s,mb3.9,baz=42,slow=7.8,SNR=4.7						
CMAR	**Chiang Mai Arr**	**51.94**	**256**	*e*P	**P**	**00 43 44.7**	**+2.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**57.68**	**341**	P	**P**	**00 44 22.4**	**-0.8**
	comp=Z,5.4nm,1.1s,mb4.5,baz=94,slow=11,SNR=4.2						
ARCES	**ARCESS Array B**	**57.68**	**341**	P	**P**	**00 44 22.4**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.1s						
JOF	**Joensuu**	**61.11**	**333**	*e*p	**P**	**00 44 47.3**	**+0.3**
KAF	**Kangasniemi**	**63.23**	**335**	*e*p	**P**	**00 45 01.3**	**+0.2**
NB2	**NORSAR Subarra**	**68.06**	**341**	P	**P**	**00 45 31.4**	**-0.9**
	comp=Z,1.5nm,0.6s,mb4.2,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**68.06**	**341**	P	**P**	**00 45 31.5**	**-0.7**
	comp=Z,2.6nm,0.7s,mb4.3,baz=28,slow=6.4,SNR=7.0						
NOA	**NORSAR Array B**	**68.06**	**341**	P	**P**	**00 45 31.5**	**-0.8**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WRA	**Warramunga Arr**	**68.39**	**198**	P	**P**	**00 45 33.8**	**-1.0**
	comp=Z,0.2nm,0.6s,mb3.3,baz=18,slow=6.9,SNR=5.4						
WRA	**Warramunga Arr**	**68.39**	**198**	*e*P	**P**	**00 45 35.0**	**+0.3**
AKASG	**Malin Array Be**	**71.28**	**326**	P	**P**	**00 45 51.2**	**-1.0**
	comp=Z,1.6nm,0.3s,mb4.4,baz=35,slow=6.0,SNR=11						
AKASG	**Malin Array Be**	**71.28**	**326**	P	**P**	**00 45 51.2**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAR	**Alice Springs**	**72.09**	**198**	P	**P**	**00 45 57.5**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.7,baz=11,slow=5.5,SNR=11						
ASAR	**Alice Springs**	**72.09**	**198**	P	**P**	**00 45 57.5**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**77.87**	**60**	P	**P**	**00 46 30.6**	**-0.2**
	comp=Z,0.1nm,0.4s,mb3.1,baz=312,slow=6.0,SNR=3.6						
TXAR	**Lajitas Array**	**77.87**	**60**	*e*P	**P**	**00 46 32.3**	**+1.5**
GERES	**GERESS Array B**	**78.24**	**334**	P	**P**	**00 46 32.1**	**-0.4**
	comp=Z,0.2nm,0.5s,mb3.3,baz=32,slow=5.5,SNR=3.8						
MIB	**Mutribah**	**78.27**	**301**	*e*P	**P**	**00 46 33.1**	**+0.2**
	baz=320						
MIB				AMb	AMB	00 46 34.1	
	comp=Z,20nm,1.2s,mb4.9,baz=320						
RST	**Umm Al-Ruwaisa**	**78.69**	**301**	*e*P	**P**	**00 46 35.2**	**-0.1**
	baz=320						
RST				AMb	AMB	00 46 35.3	
	comp=Z,17nm,1.3s,mb4.8,baz=320						
NAY	**Al-Naaiem**	**78.73**	**301**	*e*P	**P**	**00 46 35.0**	**-0.5**
	baz=320						
NAY				AMb	AMB	00 46 44.0	
	comp=Z,8.0nm,1.5s,mb4.4,baz=320						
RDF	**Al-Radifah**	**78.79**	**300**	*e*P	**P**	**00 46 36.0**	**+0.1**
	baz=320						
TORD	**Torodi Ar. Bea**	**114.84**	**328**	PKP	PKiKP	00 53 11.1	-2.5
	comp=Z,0.2nm,0.7s,baz=11,slow=2.9,SNR=3.8						

IDC 16 00:52:27.6±4.0, 423S×101.44E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/19, mbtmp3.7/6, Error ellipse: s-maj=155.7km s-min=18.9km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.68**	**354**	P	P	00 57 30.7	-0.1
	2.2nm,0.8s,baz=183,slow=8.4,SNR=12						
FITZ	**Fitzroy Crossi**	**27.39**	**122**	P	P	00 58 15.9	+0.9
	1.4nm,1.0s,baz=237,slow=17,SNR=1.9						
WRA	**Warramunga Arr**	**35.65**	**119**	P	P	00 59 25.8	-1.8
	0.3nm,0.4s,baz=305,slow=9.3,SNR=5.5						
ASAR	**Alice Springs**	**36.79**	**125**	P	P	00 59 38.0	+0.5
	0.2nm,0.5s,baz=293,slow=7.5,SNR=3.4						
SONM	**Songino Array**	**52.03**	**4**	P	P	01 01 39.5	+0.6
	1.9nm,0.8s,baz=188,slow=8.9,SNR=8.3						
MKAR	**Makanchi Array**	**53.55**	**344**	P	P	01 01 49.8	-0.4
	1.0nm,0.8s,baz=140,slow=9.6,SNR=6.7						
TXAR	**Lajitas Array**	**145.51**	**41**	PKPbc	PKPbc	01 12 08.3	-0.2
	0.7nm,0.8s,baz=197,slow=3.9,SNR=4.6						

IDC **16** *00:57:22.2±1.5, 283S×100.86E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.1/20, mbtmp4.2/10, Error ellipse: s-maj=68.9km s-min=15.9km az=54.0*
NEIC **16** *00:57:28.0±0.8, 269S×101.07E, h35km, mb4.4/4, Error ellipse: s-maj=39.0km s-min=8.9km az=53.0*
ISCJB **16** *00:57:32.7±7.6, 24S±03×1015E±03, h85km±68km, mb4.5/18, Error ellipse: s-maj=69.2km s-min=12.1km az=140.3*

ISC 16 00:57:33.1±6.9, 26S±03×1013E±03, h75km±62km, n24, σ0°76/23, mb4.4/19, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.03**	**354**	P	P	**01 02 08.6**	**-2.3**
	2.0nm,0.6s,mb3.7,baz=185,slow=9.1,SNR=6.6						
ODAN	**Odare**	**32.20**	**336**	*e*P	**P**	**01 03 54.5**	**+0.4**
	24nm,1.0s,mb4.9						
TAPN	**Taplejung**	**32.51**	**337**	*e*P	**P**	**01 03 57.4**	**+0.6**
	48nm,0.9s,mb5.3						
RAMN	**Ramite**	**32.60**	**335**	*e*P	**P**	**01 03 58.3**	**+0.7**
	7.3nm,0.6s,mb4.7						
GUN	**Gumba**	**33.75**	**335**	*e*P	**P**	**01 04 08.3**	**+0.7**
KKN	**Kakani**	**33.90**	**334**	*e*P	**P**	**01 04 09.0**	**+0.1**
GKN	**Gorkha**	**34.37**	**333**	*e*P	**P**	**01 04 13.0**	**0.0**
	5.5nm,0.3s,mb4.9						
KOLN	**Koldanda**	**34.65**	**332**	*e*P	**P**	**01 04 15.5**	**+0.1**
DANN	**Dangsing**	**35.06**	**332**	*e*P	**P**	**01 04 19.1**	**+0.1**
	26nm,0.8s,mb5.1						
WRA	**Warramunga Arr**	**36.59**	**121**	P	P	**01 04 31.3**	**-0.9**
	3.8nm,0.8s,mb4.3,baz=293,slow=9.9,SNR=11						
ASAR	**Alice Springs**	**37.88**	**126**	P	**P**	**01 04 43.5**	**+0.5**
	1.8nm,0.8s,mb4.0,baz=309,slow=8.4,SNR=9.3						
CTA	**Charters Tower**	**47.19**	**115**	P	**P**	**01 05 59.5**	**+0.9**
	2.2nm,0.9s,mb3.9,baz=278,slow=10,SNR=7.5						
STKA	**Stephens Creek**	**47.81**	**132**	P	**P**	**01 06 02.9**	**-0.3**
	3.4nm,0.7s,mb4.3,baz=327,slow=11,SNR=3.0						
SONM	**Songino Array**	**50.41**	**4**	P	**P**	**01 06 24.7**	**+2.0**
	3.7nm,0.7s,mb4.4,baz=186,slow=8.5,SNR=17						
TKM2	**Tokmak 2**	**50.88**	**336**	*e*P	**P**	**01 06 26.4**	**0.0**
	2.4nm,0.6s,mb4.4						
AML	**Almayashu**	**51.05**	**334**	*e*P	**P**	**01 06 27.7**	**+0.1**
	4.7nm,0.7s,mb4.6						
EKS2	**Erkin-Say**	**51.44**	**334**	*e*P	**P**	**01 06 30.6**	**0.0**
	3.1nm,0.6s,mb4.5						
MKAR	**Makanchi Array**	**51.94**	**344**	P	**P**	**01 06 33.8**	**-0.4**
	2.5nm,0.7s,mb4.3,baz=151,slow=8.0,SNR=12						
KURK	**Kurchatov**	**56.53**	**343**	*e*P	**P**	**01 07 06.8**	**-0.7**
	0.6nm,0.3s,mb4.1						
ZAA0	**Zalesovo Array**	**57.98**	**349**	*e*P	**P**	**01 07 17.2**	**-0.4**
ZALV	**Zalesovo Beam**	**57.98**	**349**	P	**P**	**01 07 17.2**	**-0.4**
	7.8nm,0.8s,mb4.8,baz=160,slow=4.7,SNR=30						
ARCES	**ARCESS Array B**	**87.45**	**340**	P	**P**	**01 10 11.0**	**-0.9**
	1.8nm,0.8s,mb4.0,baz=100,slow=5.4,SNR=5.1						
GERES	**GERESS Array B**	**90.33**	**319**	P	**P**	**01 10 25.5**	**-0.3**
	0.4nm,0.7s,mb3.6,baz=94,slow=5.4,SNR=5.3						
TXAR	**Lajitas Array**	**144.36**	**39**	PKP	PKPdf	01 17 00.9	-0.4
	0.9nm,0.5s,baz=224,slow=0.9,SNR=10.0						

IDC 16 00:59:09.3±1.7, 864S×12154E, h178km±15km, mb3.2/1, mb1 3.2/6, mb1mx3.1/18, mbtmp3.1/6, Error ellipse: s-maj=69.1km s-min=11.5km az=53.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.61**	**127**	P	Pn	00 59 52.4	-0.8
	30nm,0.3s,baz=315,slow=2.9,SNR=39						
BATI				S	Sn	01 00 27.7	+0.5
	44nm,0.3s,baz=18,slow=20,SNR=15						
KAPI	**Kappang**	**4.02**	**334**	P	Pn	01 00 10.9	+0.3
	1.8nm,0.3s,baz=174,slow=10,SNR=7.5						
FITZ	**Fitzroy Crossi**	**10.21**	**157**	*e*P	Pn	01 01 31.6	0.0
	11nm,1.7s						
FITZ				*e*S	Sn	01 03 22.6	-2.7
FITZ	**Fitzroy Crossi**	**10.21**	**157**	P	Pn	01 01 32.2	+0.6
	0.5nm,0.3s,baz=358,slow=12,SNR=25						
FITZ				S	Sn	01 03 21.5	-3.7
	0.6nm,0.3s,baz=229,slow=20,SNR=4.9						
WRA	**Warramunga Arr**	**16.72**	**134**	P	Pn	01 02 52.1	-1.3
	0.3nm,0.3s,baz=306,slow=14,SNR=12						
WRA				S	S	01 05 48.0	-10
	0.3nm,0.3s,baz=306,slow=24,SNR=4.2						
WB2	**Warramunga Arr**	**16.73**	**134**	*e*P	Pn	01 02 52.6	-0.9
ASAR	**Alice Springs**	**19.06**	**143**	P	P	01 03 19.9	+1.8
	0.3nm,0.3s,baz=315,slow=11,SNR=14						
ASAR				S	S	01 06 45.1	+0.1
	0.1nm,0.3s,baz=320,slow=24,SNR=4.3						
MKAR	**Makanchi Array**	**65.31**	**331**	P	P	01 09 32.0	-0.1
	0.3nm,0.4s,baz=126,slow=7.3,SNR=2.0						

IDC **16** *01:09:00.3±0.5, 11.10N×95.08E, h0km, mb4.4/17, mb1 4.5/18, mb1mx4.3/27, mbtmp4.3/18, Error ellipse: s-maj=27.3km s-min=12.4km az=58.0*
BJI **16** *01:09:01.7, 1093N×9499E, h34km, mB4.5, mb4.3, Ms4.5, Msz4.2*
ISCJB **16** *01:09:02.2±0.3, 11.12N±0.05N×95.16E±0.06, h26km, mb4.4/40, Error ellipse: s-maj=9.2km s-min=6.0km az=141.2*
NEIC **16** *01:09:03.8±0.2, 11.06N×95.03E, mb4.5/22, Error ellipse: s-maj=10.3km s-min=5.4km az=59.0*

ISC 16 01:09:04.2±0.3, 1109N±0.05N×9510E±0.06, h28km, h28km±2.3km: pP-P, n83, σ0°87/82, mb4.4/40, 2D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNT	**Nongplab**	**4.78**	**71**	P	**Pn**	**01 10 12.5**	**-1.9**
NST	**Nakhon Sawan**	**6.69**	**47**	P	**Pn**	**01 10 37.4**	**-3.3**
SNG	**Songkhla**	**6.70**	**125**	P	**Pn**	**01 10 39.0**	**-1.8**
	198nm,0.9s						
BDT	**Bhumibol Dam**	**7.19**	**31**	P	**Pn**	**01 10 47.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**8.21**	**26**	Pn	**Pn**	**01 11 02.1**	**+0.6**
	baz=214,slow=15,SNR=23						
NANT	**Nan**	**9.38**	**35**	P	**Sn**	**01 13 20.0**	**+18**
KMI	**Kunming**	**15.72**	**26**	P	**Pn**	**01 12 47.8**	**+4.0**
KMI				AMB	AMB		
	comp=Z,11nm,1.3s						
ODAN	**Odare**	**17.28**	**336**	*e*P	**Pn**	**01 13 04.3**	**+0.7**
	comp=Z,29nm,0.5s						
TAPN	**Taplejung**	**17.60**	**338**	*e*P	**Pn**	**01 13 06.3**	**-1.2**
RAMN	**Ramite**	**17.69**	**334**	*e*P	**Pn**	**01 13 10.3**	**+1.7**
	comp=Z,52nm,0.9s						
PKI	**Pulchoki**	**18.75**	**332**	*e*P	**Pn**	**01 13 20.6**	**-1.0**
PKIN	**Phulchoki**	**18.76**	**332**	*e*P	**Pn**	**01 13 20.9**	**-0.8**
GYA	**Guiyang**	**18.78**	**34**	P	**Pn**	**01 13 23.1**	**+1.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s						
GUN	**Gumba**	**18.83**	**334**	*e*P	**Pn**	**01 13 20.8**	**-1.8**
LSA	**Lhasa**	**18.88**	**349**	P	**Pn**	**01 13 23.0**	**-0.1**
LSA	**Lhasa**	**18.88**	**349**	*e*P	**Pn**	**01 13 23.1**	**0.0**
	comp=Z,9.0nm,0.7s						
DMN	**Daman**	**

comp=Z,3.0nm,0.8s,mb4.3,baz=66,slow=4.5,SNR=9.1
VRAC Vranov 74.18 318 P **P** **01 20 38.5 +0.1**
comp=Z,1.6nm,0.6s,mb4.1,baz=104,slow=17,SNR=3.1
GERES GERESS Array B 76.08 318 P **P** **01 20 49.8 +0.5**
comp=Z,3.0nm,0.7s,mb4.4,baz=86,slow=5.9,SNR=30
HFS Hagfors 76.17 329 P **P** **01 20 49.7 +0.1**
comp=Z,3.9nm,1.0s,mb4.3,baz=132,slow=6.6,SNR=4.9
DAVOX Davos/Dischmat 78.75 316 P **P** **01 21 05.1 +0.8**
comp=Z,2.0nm,0.6s,mb4.2,baz=134,slow=8.3,SNR=4.1
PGF Pioggiola 79.74 311 *eP* **P** **01 21 09.0 -0.8**
comp=Z,22nm,1.4s,mb4.6
PGF Pioggiola 79.74 311 *eP* **P** **01 21 09.0 -0.8**
comp=Z,11nm,1.4s,mb4.6
KEST Kesra 80.19 305 P **P** **01 21 12.3 -0.1**
comp=Z,1.2nm,0.8s,mb3.9,baz=255,slow=5.7,SNR=7.0
CDF Champ du Feu 80.36 318 *eP* **P** **01 21 12.3 -0.7**
SBF Sospel 80.74 313 *eP* **P** **01 21 14.9 -0.3**
comp=Z,8.9nm,0.8s,mb4.4
SBF Sospel 80.74 313 *eP* **P** **01 21 14.9 -0.3**
comp=Z,4.4nm,0.8s,mb4.4
HAU Haudompre 81.02 317 *eP* **P** **01 21 16.0 -0.6**
LPG La Plagne 81.03 315 *eP* **P** **01 21 16.8 +0.1**
comp=Z,6.9nm,0.8s,mb4.4
LPG La Plagne 81.03 315 *eP* **P** **01 21 16.8 +0.1**
comp=Z,3.5nm,0.8s,mb4.3
LPL La Plagne 81.05 315 *eP* **P** **01 21 16.9 +0.1**
comp=Z,8.9nm,0.7s,mb4.5
LPL La Plagne 81.05 315 *eP* **P** **01 21 16.9 +0.1**
comp=Z,4.4nm,0.7s,mb4.5
FRF La Foret Royal 81.34 313 *eP* **P** **01 21 18.2 -0.2**
comp=Z,7.6nm,0.8s,mb4.4
FRF La Foret Royal 81.34 313 *eP* **P** **01 21 18.2 -0.2**
comp=Z,3.8nm,0.8s,mb4.4
CABF La Chapelle 81.36 316 *eP* **P** **01 21 18.3 -0.1**
comp=Z,5.6nm,0.8s,mb4.2
CABF La Chapelle 81.36 316 *eP* **P** **01 21 18.3 -0.1**
comp=Z,2.8nm,0.8s,mb4.2
LMR La Mourre 81.47 312 *eP* **P** **01 21 18.7 -0.4**
comp=Z,6.6nm,0.8s,mb4.3
LMR La Mourre 81.47 312 *eP* **P** **01 21 18.7 -0.4**
comp=Z,3.3nm,0.8s,mb4.3
MAW Mawson 81.86 192 P **P** **01 21 22.4 +1.9**
comp=Z,2.9nm,0.7s,mb4.3,baz=8.2,slow=7.2,SNR=9.3
SMRF Simiane la Rot 82.06 313 *eP* **P** **01 21 22.3 +0.2**
comp=Z,8.6nm,1.0s,mb4.4
SMRF Simiane la Rot 82.06 313 *eP* **P** **01 21 22.3 +0.2**
comp=Z,8.6nm,1.0s,mb4.6
BAIF Baives 82.16 319 *eP* **P** **01 21 22.6 0.0**
comp=Z,9.7nm,1.1s,mb4.3
BAIF Baives 82.16 319 *eP* **P** **01 21 22.6 0.0**
comp=Z,4.8nm,1.1s,mb4.3
VIVF Saint-Julien-l 82.58 314 *eP* **P** **01 21 24.5 -0.3**
SMF Signal de Mont 82.89 316 *eP* **P** **01 21 25.7 -0.7**
comp=Z,5.0nm,0.8s,mb4.3
SMF Signal de Mont 82.89 316 *eP* **P** **01 21 25.7 -0.7**
comp=Z,2.5nm,0.8s,mb4.3
AVF Avril sur Loir 83.20 316 *eP* **P** **01 21 27.4 -0.6**
comp=Z,4.9nm,0.9s,mb4.2
AVF Avril sur Loir 83.20 316 *eP* **P** **01 21 27.4 -0.6**
comp=Z,2.5nm,0.9s,mb4.2
MTLF Montolieu 84.56 313 *eP* **P** **01 21 34.7 -0.4**
comp=Z,6.6nm,1.2s,mb4.3
MTLF Montolieu 84.56 313 *eP* **P** **01 21 34.7 -0.4**
comp=Z,3.3nm,1.2s,mb4.3
MFF Saint Martin d 85.61 316 *eP* **P** **01 21 37.9 -2.3**
comp=Z,4.7nm,0.9s,mb4.4
MFF Saint Martin d 85.61 316 *eP* **P** **01 21 37.9 -2.3**
comp=Z,2.3nm,0.9s,mb4.4
TORD Torodi Ar. Bea 90.78 283 P **P** **01 22 05.9 +0.3**
comp=Z,0.7nm,0.8s,mb4.0,baz=77,slow=4.8,SNR=3.6
PLCA Paso Flores 147.88 201 PKPbc PKPbc 01 28 47.6 +0.6
comp=Z,2.5nm,0.8s,baz=158,slow=5.7,SNR=5.7

ISCJB ***16*** *01:14:58.3±0.2, 35.64N±0.002×24.97E±0.002, h56km±3km, mb3.7/12, Error ellipse: s-maj=3.2km s-min=2.3km az=40.4*
IDC ***16*** *01:14:58.1±5.6, 35.76N×2.502E, h27km±43km, mb3.7/9, mb1 3.7/11,mb1mx3.7/28,mbtmp3.7/11, ML3.8/2, Error ellipse: s-maj=18.8km s-min=11.9km az=109.0*
HLW ***16*** *01:14:58.6, 35.83N×0.2515E, h33km, Mb3.8*
ATH ***16*** *01:14:58.3, 35.76N×0.2495E, h40km±1km, MD3.9/21, ML3.8*
MOS ***16*** *01:14:58.8±0.8, 35.75N×0.2495E, h48km, mb3.8/5, Error ellipse: s-maj=11.1km s-min=5.1km az=124.9*
CSEM ***16*** *01:14:58.5±0.0, 35.65N×0.2493E, h49km, mb3.7/4, Error ellipse: s-maj=1.4km s-min=1.0km az=23.0*
NEIC ***16*** *01:14:58.3, 35.77N×0.2495E, h40km, mb3.6/9, MD3.9(ATH), After ATH.*
THE ***16*** *01:15:01.1, 35.75N×0.2496E, h35km, ML3.8*
GII ***16*** *01:15:04.9±0.9, 35.10N×0.2586E, h0km, ML3.7/1*
DDA ***16*** *01:15:10.2, 36.14N×0.2582E, h29km±92km, Md3.5*
ISC 16 01:14:59.8±0.2,3567N±002×2496E±002,h46km±4km, n171,σ1§03/206,mb3.7/12,6C,Crete

Code	Station Name	Δ°	AZ°	Phase ID	Time h m s	Res ISC
IDI	**Anoyia**	**0.39**	**189**	Pn	**01 15 09.2**	**-0.3**
	648nm,0.3s,baz=351,slow=12					
IDI				Sn	**01 15 15.4**	**-0.9**
	5μm,0.3s,baz=284,slow=19,SNR=477					
NPS	**Neapolis**	**0.67**	**127**	*eP*	**Pn**	**01 15 13.1 +0.1**
NPS				*eS*	**Sn**	**01 15 23.4 +0.9**
VAM	**Vamos**	**0.68**	**247**	*eP*	**Pn**	**01 15 13.3 +0.3**
VAM				*eS*	**Sn**	**01 15 23.2 +0.6**
THR6	**Thira Island,**	**0.77**	**27**	*ePg*	**Pn**	**01 15 14.3 0.0**
SANT	**Santorini**	**0.81**	**30**	*ePg*	**Pn**	**01 15 14.8 0.0**
SANT				*eSg*	**Sn**	**01 15 25.7 +0.1**
SANT	**Santorini**	**0.81**	**30**	P	**Pn**	**01 15 14.9 +0.1**
THR1	**Thera Island**	**0.81**	**30**	*ePg*	**Pn**	**01 15 14.8 +0.1**
THR1				*eSg*	**Sn**	**01 15 25.1 -0.5**
THR5	**Thira Island,**	**0.81**	**23**	*ePg*	**Pn**	**01 15 14.5 -0.3**
THR3	**Thira Island,**	**0.82**	**26**	*ePg*	**Pn**	**01 15 15.0 +0.1**
THR4	**Thira Island,**	**0.86**	**24**	*ePg*	**Pn**	**01 15 15.4 -0.1**
GVD	**Gavdhos**	**1.10**	**221**	*eP*	**Pn**	**01 15 20.0 +1.3**
APE	**Apeiranthos**	**1.47**	**18**	*ePg*	**Pn**	**01 15 23.3 -0.5**
APE				*eSg*	**Sn**	**01 15 41.0 -0.8**
APE	**Apeiranthos**	**1.47**	**18**	*eP*	**Pn**	**01 15 23.0 -0.8**
KYTH	**Kithira**	**1.68**	**292**	*eP*	**Pn**	**01 15 25.9 -0.7**
KARP	**Karpathos**	**1.80**	**93**	*eP*	**Pn**	**01 15 28.7 +0.4**
KARP				*eS*	**Sn**	**01 15 50.6 +0.7**
VLI	**Veliai**	**1.94**	**303**	⇑*iP*	**Pn**	**01 15 29.7 -0.6**
VLI				*eS*	**Sn**	**01 15 52.3 -1.1**
VLI	**Veliai**	**1.94**	**303**	⇑*iP*	**Pn**	**01 15 28.7 -1.6**
VLI				*eS*	**Sn**	**01 15 52.3 -1.1**
DID	**Didima**	**2.30**	**323**	*ePn*	**Pn**	**01 15 34.9 -0.3**
DID				*eSn*	**Sn**	**01 16 01.6 -0.6**
BODT	**Bodrum**	**2.35**	**53**	*ePN*	**Pn**	**01 15 37.2 +1.4**
KVR	**Kavouri**	**2.35**	**336**	*eP*	**Pn**	**01 15 35.0 -0.9**
NAIG	**Nisos Aigina**	**2.40**	**331**	*eP*	**Pn**	**01 15 36.2 -0.3**
BDRM	**Kayabasi**	**2.44**	**55**	*iP*	**Pn**	**01 15 37.2 +0.1**
BDRM				*iS*	**Sn**	**01 16 05.0 -0.7**
BDRM	**Kayabasi**	**2.44**	**55**	*iP*	**Pn**	**01 15 37.2 +0.1**
BDRM				*iS*	**Sn**	**01 16 04.9 -0.8**
ATH	**Athens Observa**	**2.50**	**337**	*eP*	**Pn**	**01 15 37.1 -0.9**
PTL	**Penteli**	**2.53**	**340**	*eP*	**Pn**	**01 15 37.5 -0.8**
PTL	**Penteli**	**2.53**	**340**	*eP*	**Pn**	**01 15 38.0 -0.3**
ARG	**Arkhangelos**	**2.62**	**77**	*eP*	**Pn**	**01 15 40.3 +0.7**
ARG				*eS*	**Sn**	**01 16 10.1 -0.1**
VLX	**Vlachokerasia**	**2.68**	**310**	*ePn*	**Pn**	**01 15 41.0 +0.5**
VLX				*eSn*	**Sn**	**01 16 11.6 0.0**
GCAM	**G?zelcaml?**	**2.73**	**41**	*iP*	**Pn**	**01 15 41.2 +0.2**
GCAM				*iS*	**Sn**	**01 16 13.8 +1.1**
MLSB	**Milas**	**2.79**	**54**	*ePN*	**Pn**	**01 15 43.4 +1.6**
LTK	**Loutraki**	**2.84**	**326**	*ePn*	**Pn**	**01 15 43.0 +0.4**
CHOS	**Chios island**	**2.85**	**18**	*ePn*	**Pn**	**01 15 42.7 0.0**
ITM	**Ithomi**	**2.87**	**302**	*eP*	**Pn**	**01 15 42.5 -0.5**
YER	**Yerkesik**	**3.05**	**60**	*ePN*	**Pn**	**01 15 47.4 +1.9**
AYDN	**Tasoluk**	**3.07**	**49**	*iP*	**Pn**	**01 15 45.8 +0.1**
AYDN				*iS*	**Sn**	**01 16 20.0 -1.2**
TURN	**Turunc**	**3.18**	**67**	*iP*	**Pn**	**01 15 44.8 -2.4**
TURN				*iS*	**Sn**	**01 16 18.6 -5.2**
BLCB	**Balcova**	**3.18**	**31**	*ePN*	**Pn**	**01 15 47.4 +0.2**
LKR	**Lokris**	**3.36**	**333**	*ePn*	**Pn**	**01 15 50.3 +0.6**
LKR				*eSn*	**Sn**	**01 16 28.9 +0.6**
LKR	**Lokris**	**3.36**	**333**	*eP*	**Pn**	**01 15 49.9 +0.2**
LKR	**Lokris**	**3.36**	**333**	*ePn*	**Pn**	**01 15 50.3 +0.6**
LKR				*eSn*	**Sn**	**01 16 29.0 +0.7**
RLS	**Riolos of Patr**	**3.68**	**311**	*eP*	**Pn**	**01 15 54.2 +0.1**
PRK	**Paraskevi**	**3.72**	**16**	*ePn*	**Pn**	**01 15 54.1 -0.5**
AKAS	**Kas**	**3.81**	**80**	*iP*	**Pn**	**01 15 57.4 +1.5**
AKAS				*iS*	**Sn**	**01 16 41.4 +2.0**
AGG	**Agios Georgios**	**3.95**	**329**	*ePn*	**Pn**	**01 15 59.0 +1.3**
AGG				*eSn*	**Sn**	**01 16 43.2 +0.5**
AGG	**Agios Georgios**	**3.95**	**329**	*ePn*	**Pn**	**01 15 59.0 +1.2**
AGG				*eSn*	**Sn**	**01 16 43.2 +0.4**
GOLH	**Golhisar**	**4.02**	**66**	*iP*	**Pn**	**01 16 01.7 +2.9**
GOLH				*iS*	**Sn**	**01 16 49.6 +4.9**
KULA	**Kula-Manisa**	**4.10**	**45**	*ePN*	**Pn**	**01 16 00.8 +0.9**
EVR	**Evrytania**	**4.10**	**323**	*eP*	**Pn**	**01 15 59.9 0.0**
ELL	**Elmali**	**4.14**	**74**	*ePN*	**Pn**	**01 16 04.0 +3.5**
ELL	**Elmali**	**4.14**	**74**	*ePN*	**Pn**	**01 16 04.0 +3.5**
SLUM		**4.17**	**177**	P	**Pn**	**01 16 02.0 +1.1**
SLUM				S	**Sn**	**01 16 49.2 +0.7**
EZN	**Ezine**	**4.29**	**14**	*ePN*	**Pn**	**01 16 01.2 -1.2**
VLS	**Valsamata**	**4.30**	**307**	*eP*	**Pn**	**01 16 03.3 +0.6**
VLS				*eS*	**Sn**	**01 16 49.9 -1.6**
KHL	**Karahalli**	**4.51**	**53**	*ePN*	**Pn**	**01 16 08.6 +3.1**
THL	**Klokotos Trika**	**4.54**	**330**	*ePn*	**Pn**	**01 16 07.3 +1.4**
THL	**Klokotos Trika**	**4.54**	**330**	*eP*	**Pn**	**01 16 05.6 -0.2**
THL	**Klokotos Trika**	**4.54**	**330**	*ePn*	**Pn**	**01 16 07.3 +1.5**
LIT	**Litokhoron**	**4.83**	**337**	*ePn*	**Pn**	**01 16 11.6 +1.6**
PLG	**Polygyros**	**4.84**	**346**	*eP*	**Pn**	**01 16 09.6 -0.5**
BCK	**Bucak**	**4.87**	**67**	*ePN*	**Pn**	**01 16 14.6 +4.2**
DST	**Dursunbey**	**4.89**	**35**	*ePN*	**Pn**	**01 16 11.9 +1.3**
HMAT	**Matruh**	**4.90**	**158**	P	**Pn**	**01 16 11.7 +0.8**
HMAT				S	**Sn**	**01 17 04.7 -1.7**
JAN	**Janina**	**5.14**	**322**	*eP*	**Pn**	**01 16 13.9 -0.3**
KZN	**Kozani**	**5.27**	**332**	*eP*	**Pn**	**01 16 16.2 +0.3**
SHUT	**Suhut-Afyon**	**5.31**	**56**	*ePN*	**Pn**	**01 16 19.2 +2.7**
KEK	**Kerkira**	**5.75**	**316**	*eP*	**Pn**	**01 16 22.6 +0.1**
HDMB	**Hadim**	**6.21**	**76**	*ePN*	**Pn**	**01 16 33.0 +4.2**
HDMB	**Hadim**	**6.21**	**76**	*ePN*	**Pn**	**01 16 33.5 +4.6**
KONT	**Konya--Tatoy**	**6.36**	**67**	*ePN*	**Pn**	**01 16 34.4 +3.6**
SWA2		**6.42**	**176**	P	**Pn**	**01 16 33.4 +1.6**
SWA2				S	**Sn**	**01 17 42.3 -1.5**
LADK	**Ladik-KONYA**	**6.44**	**65**	*ePN*	**Pn**	**01 16 36.2 +4.2**
TIP	**Timpagrande**	**7.41**	**301**	P	**Pn**	**01 16 46.4 +1.2**
HNAT	**Natroun**	**7.68**	**140**	P	**Pn**	**01 16 49.2 +0.2**
PE1	**Pezze di Greco**	**7.84**	**313**	*ePn*	**Pn**	**01 16 49.9 -1.2**
AWBH		**8.06**	**154**	P	**Pn**	**01 16 55.4 +1.2**
KOT	**Kottamia**	**8.14**	**133**	P	**Pn**	**01 16 55.9 +0.6**
HSAF	**As Saff**	**8.20**	**136**	⇑P	**Pn**	**01 16 56.6 +0.4**
HHAG	**Hagoal**	**8.28**	**132**	P	**Pn**	**01 16 56.9 -0.3**
SG1	**Sgolgore (BA)**	**8.31**	**311**	*ePn*	**Pn**	**01 16 57.1 -0.5**
GLL	**Jalalah**	**8.32**	**135**	⇑P	**Pn**	**01 16 58.0 +0.2**
CUC	**Castrocucco**	**8.42**	**304**	P	**Pn**	**01 17 00.8 +1.7**
AMAG	**Maghara**	**8.54**	**124**	P	**Pn**	**01 17 00.4 -0.4**
VAE	**Valguarnera**	**8.68**	**285**	Pn	**Pn**	**01 17 05.0 +2.4**
	0.6nm,0.3s,baz=124,slow=3.6,SNR=5.5					
SUZ		**8.81**	**129**	P	**Pn**	**01 17 04.3 -0.2**
OFRI	**'Ofer**	**8.85**	**107**	Sn	**Sn**	**01 18 36.6 -6.7**
HFRF	**Wahat Farafira**	**8.96**	**160**	⇑P	**Pn**	**01 17 07.4 +0.8**
MMA0	**Mount Meron ar**	**9.03**	**104**	Pn	**Pn**	**01 17 06.1 -1.4**
MMAI	**Mount Meron Ar**	**9.03**	**104**	Pn	**Pn**	**01 17 06.0 -1.5**
	1.8nm,0.3s,baz=307,slow=11,SNR=12					
MMAI				Sn	**Sn**	**01 18 42.9 -4.9**
	5.2nm,0.3s,baz=280,slow=23,SNR=7.3					
MMA1	**Mount Meron ar**	**9.03**	**104**	Pn	**Pn**	**01 17 06.4 -1.1**
SLTI	**Sal'it**	**9.04**	**109**	Pn	**Pn**	**01 17 06.7 -1.0**
KZIT	**Kziot**	**9.22**	**118**	Pn	**Pn**	**01 17 08.5 -1.5**
MMLI	**Mount Malkishu**	**9.26**	**107**	Pn	**Pn**	**01 17 09.5 -1.1**
MS1	**Monte Sant'Ang**	**9.27**	**313**	*ePn*	**Pn**	**01 17 09.4 -1.3**
RTMI	**Retamim**	**9.35**	**117**	Pn	**Pn**	**01 17 09.9 -1.9**
HMDT	**Nahal Hemdat**	**9.41**	**108**	Pn	**Pn**	**01 17 11.7 -1.0**
HMDT				Sn	**Sn**	**01 18 51.5 -5.7**
HNKL	**Nakhl**	**9.51**	**125**	P	**Pn**	**01 17 14.1 0.0**
MZDA	**Masada**	**9.71**	**114**	Pn	**Pn**	**01 17 15.2 -1.7**
MZDA				Sn	**Sn**	**01 18 58.5 -6.1**
KRMI	**Paran Flat**	**9.90**	**121**	Pn	**Pn**	**01 17 17.9 -1.5**
KRMI				Sn	**Sn**	**01 19 01.3 -7.8**
PRNI	**Paran**	**9.96**	**119**	Pn	**Pn**	**01 17 18.8 -1.4**
PRNI				Sn	**Sn**	**01 19 03.1 -7.5**
HRFI	**Mount Harif**	**10.16**	**121**	Pn	**Pn**	**01 17 21.9 -1.1**
MBRI	**Mt Berech**	**10.22**	**122**	Pn	**Pn**	**01 17 22.9 -1.0**
MBRI				Sn	**Sn**	**01 19 09.3 -7.8**
EIL	**Elat**	**10.33**	**123**	Pn	**Pn**	**01 17 24.6 -0.7**
	0.5nm,0.3s,baz=328,slow=8.6,SNR=8.4					
EIL				Sn	**Sn**	**01 19 11.1 -8.5**
	1.9nm,0.3s,baz=117,slow=23,SNR=8.3					
EIL	**Elat**	**10.33**	**123**	Pn	**Pn**	**01 17 24.6 -0.7**
EIL				Sn	**Sn**	**01 19 11.1 -8.5**
EIL	**Elat**	**10.33**	**123**	Pn	**Pn**	**01 17 24.4 -0.9**
TR2		**10.39**	**132**	P	**Pn**	**01 17 26.1 0.0**
HKAT	**Jabal Katrina**	**10.46**	**130**	⇑P	**Pn**	**01 17 26.8 -0.3**
GTR	**Jabal at Tayr**	**11.21**	**153**	P	**Pn**	**01 17 38.9 +1.5**
PGF	**Pioggiola**	**14.16**	**304**	*eP*	**Pn**	**01 18 16.1 -1.4**
	6.9nm,0.9s					
PGF	**Pioggiola**	**14.16**	**304**	*eP*	**Pn**	**01 18 16.1 -1.4**
PGF				pmax	pmax	
	comp=Z,3.0nm,0.9s					
PGF	**Pioggiola**	**14.16**	**304**	*eP*	**Pn**	**01 18 16.1 -1.4**
	comp=Z,3.5nm,0.9s					
VRAC	**Vranov**	**14.95**	**338**	Pn	**Pn**	**01 18 31.7 +3.9**
	comp=Z,0.0nm,0.3s,baz=175,slow=4.0,SNR=3.7					
AKASG	**Malin Array Be**	**15.34**	**10**	Pn	**Pn**	**01 18 36.6 +3.7**
	comp=Z,3.5nm,0.3s,baz=198,slow=11,SNR=12					
GERES	**GERESS Array B**	**15.56**	**331**	Pn	**Pn**	**01 18 39.9 +4.1**
	comp=Z,0.1nm,0.3s,baz=144,slow=12,SNR=6.9					
SBF	**Sospel**	**15.74**	**307**	*eP*	**Pn**	**01 18 37.5 -0.7**
	comp=Z,6.2nm,0.7s					
SBF	**Sospel**	**15.74**	**307**	*eP*	**Pn**	**01 18 37.5 -0.7**
SBF				pmax	pmax	
	comp=Z,3.0nm,0.7s					
SBF	**Sospel**	**15.74**	**307**	*eP*	**Pn**	**01 18 37.5 -0.7**
	comp=Z,3.1nm,0.7s					
FRF	**La Foret Royal**	**16.14**	**305**	*eP*	**Pn**	**01 18 43.5 +0.2**
MBDF	**Montbardon**	**16.55**	**309**	*eP*	**Pn**	**01 18 48.8 +0.3**
	comp=Z,6.7nm,1.0s					
MBDF	**Montbardon**	**16.55**	**309**	*eP*	**Pn**	**01 18 48.8 +0.3**
MBDF				pmax	pmax	
	comp=Z,3.0nm,1.0s					
MBDF	**Montbardon**	**16.55**	**309**	*eP*	**Pn**	**01 18 48.8 +0.3**
	comp=Z,3.3nm,1.0s					
LPG	**La Plagne**	**16.93**	**311**	*eP*	**Pn**	**01 18 53.6 +0.5**
LPL	**La Plagne**	**16.95**	**311**	*eP*	**Pn**	**01 18 54.1 +0.7**
ORIF	**Oris-en-Rattie**	**17.20**	**308**	*eP*	**Pn**	**01 18 59.1 +2.5**
CABF	**La Chapelle**	**17.88**	**313**	*eP*	**Pn**	**01 19 05.5 +0.6**
CDF	**Champ du Feu**	**18.24**	**320**	*eP*	**Pn**	**01 19 09.4 +0.2**
SMF	**Signal de Mont**	**19.25**	**311**	*eP*	**Pn**	**01 19 21.7 +0.2**
LOR	**Lormes**	**19.54**	**313**	*eP*	**Pn**	**01 19 23.8 -1.0**
	comp=Z,2.1nm,0.5s					
LOR	**Lormes**	**19.54**	**313**	*eP*	**Pn**	**01 19 23.8 -1.0**
LOR				pmax	pmax	
	comp=Z,1.0nm,0.5s					
LOR	**Lormes**	**19.54**	**313**	*eP*	**Pn**	**01 19 23.8 -1.0**
	comp=Z,1.0nm,0.5s					
RST	**Umm Al-Ruwaisa**	**19.54**	**102**	*eP*	**Pn**	**01 19 25.6 +0.5**
	comp=Z,9.4nm,1.0s					
RST	**Umm Al-Ruwaisa**	**19.54**	**102**	*eP*	**Pn**	**01 19 25.6 +0.5**
	baz=96					
RST				AMb	AMB	01 19 30.1
	comp=Z,9.0nm,1.0s,baz=96					
AVF	**Avril sur Loir**	**19.62**	**311**	*eP*	**Pn**	**01 19 25.0 -0.8**
SSF	**Saint Saulge**	**19.65**	**312**	*eP*	**Pn**	**01 19 24.3 -1.9**
	comp=Z,2.0nm,0.5s					
SSF	**Saint Saulge**	**19.65**	**312**	*eP*	**Pn**	**01 19 24.3 -1.9**
SSF				pmax	pmax	
	comp=Z,1.0nm,0.5s					
SSF	**Saint Saulge**	**19.65**	**312**	*eP*	**Pn**	**01 19 24.3 -1.9**
	comp=Z,1.0nm,0.5s					
MIB	**Mutribah**	**19.70**	**101**	*eP*	**Pn**	**01 19 26.4 -0.5**
	comp=Z,11nm,1.1s					
MIB	**Mutribah**	**19.70**	**101**	*eP*	**Pn**	**01 19 26.4 -0.5**
	baz=95					
MIB				AMb	AMB	01 19 30.1
	comp=Z,11nm,1.1s,baz=95					
BGF	**Bois d'Agland**	**19.83**	**310**	*eP*	**Pn**	**01 19 28.0 -0.3**
	comp=Z,3.7nm,0.6s					
BGF	**Bois d'Agland**	**19.83**	**310**	*eP*	**Pn**	**01 19 28.0 -0.3**
BGF				pmax	pmax	
	comp=Z,2.0nm,0.6s					
BGF	**Bois d'Agland**	**19.83**	**310**	*eP*	**Pn**	**01 19 28.0 -0.3**
	comp=Z,1.9nm,0.6s					
NAY	**Al-Naaiem**	**19.84**	**103**	*eP*	**Pn**	**01 19 28.9 +0.3**
	comp=Z,8.2nm,1.4s					
NAY	**Al-Naaiem**	**19.84**	**103**	*eP*	**Pn**	**01 19 28.9 +0.3**
	baz=96					
NAY				AMb	AMB	01 19 34.5
	comp=Z,8.0nm,1.5s,baz=96					
RDF	**Al-Radifah**	**20.22**	**103**	*eP*	**P**	**01 19 31.7 +0.8**
BAIF	**Baives**	**20.83**	**320**	*eP*	**P**	**01 19 37.1 -0.2**
	comp=Z,2.4nm,0.4s					
BAIF	**Baives**	**20.83**	**320**	*eP*	**P**	**01 19 37.1 -0.2**
BAIF				pmax	pmax	
	comp=Z,1.0nm,0.4s					
BAIF	**Baives**	**20.83**	**320**	*eP*	**P**	**01 19 37.1 -0.2**
	comp=Z,1.2nm,0.4s					
ETSF	**Etsaut**	**20.98**	**298**	*eP*	**P**	**01 19 39.9 +0.9**
MFF	**Saint Martin d**	**21.74**	**308**	*eP*	**P**	**01 19 47.4 +0.3**
LDF	**La Druitiere**	**22.52**	**313**	*eP*	**P**	**01 19 54.2 -1.2**
	comp=Z,3.3nm,0.5s,mb3.7					
LDF	**La Druitiere**	**22.52**	**313**	*eP*	**P**	**01 19 54.2 -1.2**
LDF				pmax	pmax	
	comp=Z,2.0nm,0.5s,mb3.8					
LDF	**La Druitiere**	**22.52**	**313**	*eP*	**P**	**01 19 54.2 -1.2**
	comp=Z,1.6nm,0.5s,mb3.7					
FLN	**La Foliniere**	**22.81**	**313**	*eP*	**P**	**01 19 58.1 -0.3**
	comp=Z,2.4nm,0.4s,mb3.7					
FLN	**La Foliniere**	**22.81**	**313**	*eP*	**P**	**01 19 58.1 -0.3**
FLN				pmax	pmax	
	comp=Z,1.0nm,0.4s,mb3.6					
FLN	**La Foliniere**	**22.81**	**313**	*eP*	**P**	**01 19 58.1 -0.3**
	comp=Z,1.2nm,0.4s,mb3.7					
GRR	**Gorron**	**22.88**	**312**	*eP*	**P**	**01 19 58.0 -1.1**
	comp=Z,1.6nm,0.3s,mb3.6					
GRR	**Gorron**	**22.88**	**312**	*eP*	**P**	**01 19 58.0 -1.1**
GRR				pmax	pmax	
	comp=Z,1.0nm,0.3s,mb3.7					
GRR	**Gorron**	**22.88**	**312**	*eP*	**P**	**01 19 58.0 -1.1**
	comp=Z,0.8nm,0.3s,mb3.6					
ESDC	**Sonseca Array**	**23.19**	**289**	P	**P**	**01 20 02.8 +0.2**
	comp=Z,0.6nm,0.5s,mb3.3,baz=81,slow=9.2,SNR=6.0					
SGMF	**Saint Gilles**	**23.87**	**310**	*eP*	**P**	**01 20 08.1 -0.7**
QUIF	**Quistinic**	**24.13**	**309**	*eP*	**P**	**01 20 10.5 -0.6**
ROSF	**Rostrenen**	**24.35**	**310**	*eP*	**P**	**01 20 12.9 -0.2**
MDT	**Midelt**	**24.57**	**272**	P	**P**	**01 20 17.2 +1.8**
	comp=Z,1.3nm,0.9s,mb3.5,baz=88,slow=4.4,SNR=3.5					
HFS	**Hagfors**	**25.54**	**347**	P	**P**	**01 20 22.1 -1.7**
	comp=Z,2.8nm,0.9s,mb3.8,baz=159,slow=10.0,SNR=4.0					
HFS	**Hagfors**	**25.54**	**347**	P	**P**	**01 20 22.1 -1.7**
HFS				pmax	pmax	
	comp=Z,3.0nm,0.9s					
EKA	**Eskdalemuir Ar**	**27.53**	**324**	P	**P**	**01 20 41.6 -0.1**
	comp=Z,0.8nm,0.4s,mb3.7,baz=125,slow=10,SNR=7.0					
TORD	**Torodi Ar. Bea**	**30.70**	**229**	P	**P**	**01 21 12.5 +2.2**
	comp=Z,0.6nm,0.6s,mb3.6,baz=34,slow=8.8,SNR=15					
ARCES	**ARCESS Array B**	**33.92**	**0**	P	**P**	**01 21 36.0 -1.9**
	comp=Z,0.3nm,0.5s,mb3.5,baz=182,slow=9.0,SNR=5.0					
MKAR	**Makanchi Array**	**43.63**	**57**	P	**P**	**01 23 00.1 +0.6**
	comp=Z,0.8nm,0.4s,mb3.8,baz=270,slow=8.9,SNR=8.1					
NVS	**Novosibirsk**	**43.84**	**45**	*eP*	**P**	**01 23 01.5 +0.4**
ZALV	**Zalesovo Beam**	**44.77**	**47**	P	**P**	**01 23 08.3 -0.2**
	comp=Z,2.2nm,0.4s,mb4.3,baz=270,slow=8.7,SNR=9.5					
PDAR	**Pinedale Array**	**91.58**	**328**	P	**P**	**01 28 03.0 +1.4**
	comp=Z,0.2nm,0.5s,mb3.7,baz=52,slow=1.5,SNR=3.7					

SZGRF ***16*** *01:15:25.2, 61.56S×102.98E, h48km, mb5.5, Southern Sumatera, Indonesia*
BJI ***16*** *01:15:36.0, 27.75S×101.14E, h35km, mB5.3, mb5.3, Ms5.0, Msz4.8*
MOS ***16*** *01:15:37.0±0.8, 26.2S×101.17E, h30km, mb5.5/73, MS4.5/12, Error ellipse: s-maj=9.1km s-min=4.3km az=120.4*
GCMT ***16*** *01:15:38.9±0.2, 30.3S×100.79E, h50km±1km, MW5.2/80, Moment Tensor Solution. s67,c104; s80,c120; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=5.81±.19; Mθθ=-2.82±.14; Mφφ=-2.99±.18; Mrθ=3.74±.14; Mrφ=3.18±.11; Mθφ=-2.24±.15; Best double couple: Mo=7.37800×10^16 NP1:φs325.00000°,δ28.00000°,λ106.00000°. NP2:

24nm,0.7s,mb4.7,baz=185,slow=9.9,SNR=84
CMAR PcP PcP 01 24 27.1 +0.6
8.0nm,0.9s,baz=206,slow=3.3,SNR=9.0
CMAR ScP ScP 01 27 59.0 -1.0
2.1nm,0.5s,baz=215,slow=3.4,SNR=8.8
CMAR LR LR 01 29 25.3
comp=Z,990nm,18.5s,MS4.2,baz=179,slow=39
CMAR Chiang Mai Arr 21.25 355 P **P** **01 20 20.1 -2.5**
CMAR 01 24 27.1
NANT Nan 21.50 359 P **P** **01 20 23.0 -2.2**
231nm,1.0s,mb5.6
CHG Chiang Mai 21.61 355 ⇓P **P** **01 20 23.3 -3.1**
51nm,0.8s,mb5.0
KDI Kendari 21.63 94 P **P** **01 20 28.3 +1.6**
112nm,1.1s,mb5.2
BBSI Bau Bau 21.69 98 P **P** **01 20 30.7 +3.3**
179nm,1.0s,mb5.5
PALK Pallekele 22.59 296 *e*P **P** **01 20 34.8 -2.2**
88nm,1.4s,mb5.0
CHRT Chiangrai 22.60 357 ⇓P **P** **01 20 34.5 -2.4**
697nm,0.8s,mb6.1
BATI Baumata 23.68 109 P **P** **01 20 45.9 -2.0**
70nm,0.8s,mb5.1
BATI Baumata 23.68 109 P **P** **01 20 45.2 -2.7**
46nm,0.5s,mb5.2,baz=145,slow=1.3,SNR=12
BATI S **S** **01 24 51.2 -8.5**
36nm,0.6s,baz=162,slow=21,SNR=7.0
MNI Manado 24.23 80 P **P** **01 20 54.9 +2.0**
565nm,0.9s,mb6.0
MBWA Marble Bar 25.78 136 *e*P **P** **01 21 06.6 -0.4**
146nm,1.4s,mb5.3
DAV Davao City (W) 26.45 68 LR LR 01 32 28.2
comp=Z,1μm,21.7s,MS4.4,baz=344,slow=38
DAV Davao City (W) 26.45 68⇑ *e*P **P** **01 21 10.9 -2.1**
TRD Trivandrum 26.47 295 *ex* x 01 21 30.0
TRD AMb AMB 01 21 38.1
comp=Z,97nm,1.2s,mb5.2
LBMI Labuha 26.59 86 P **P** **01 21 14.6 +0.2**
comp=Z,222nm,0.9s,mb5.7
VIS Vishakhapatnam 26.84 320 *e*P **P** **01 21 17.5 +1.0**
VIS AMb AMB 01 21 20.9
comp=Z,80nm,0.7s,mb5.3
BWNR Bhubaneshwar 27.39 328 *e*P **P** **01 21 22.0 +0.5**
BWNR *ex* x 01 25 47.0
KMI Kunming 27.84 3 P **P** **01 21 25.6 +0.2**
KMI AP pP 01 21 34.3 -3.1
KMI XP sP 01 21 38.8 -4.1
KMI PP PP 01 22 15.8 -13
KMI S **S** **01 26 04.3 -1.4**
KMI XS sS 01 26 21.4 -4.4
KMI SS 01 27 26.8
KMI AMB AMB
comp=Z,29nm,0.7s,mb5.0
KMI LR LR
comp=N,1μm,15.8s,MS4.7
KMI LR LR
comp=E,887nm,14.2s,MS4.7
KMI LR LR
comp=Z,1μm,17.9s,MS4.6
FITZ Fitzroy Crossi 28.53 124⇑ *i*P **P** **01 21 30.6 -1.1**
comp=Z,56nm,0.9s,mb5.3
FITZ Fitzroy Crossi 28.53 124 P **P** **01 21 30.7 -1.0**
comp=Z,19nm,0.8s,mb4.9,baz=297,slow=7.8,SNR=37
FITZ PcP PcP 01 24 41.9 -0.8
comp=Z,7.1nm,0.8s,baz=333,slow=4.5,SNR=3.8
GYA Guiyang 29.64 10⇑ *i*P **P** **01 21 40.0 -1.4**
GYA AP pP 01 21 50.0 -3.4
GYA XP sP 01 21 53.9 -4.9
GYA PP PP 01 22 35.8 -13
GYA PCP PcP 01 24 45.0 -0.2
GYA S **S** **01 26 32.8 -1.0**
GYA XS sS 01 26 47.3 -6.7
GYA SS SS 01 28 03.8 -37
GYA AMB AMB
comp=Z,30nm,0.9s,mb5.0
GYA AMB AMB
comp=Z,580nm,5.8s
GYA LR LR
comp=N,1μm,14.0s,MS4.8
GYA LR LR
comp=E,1μm,13.3s,MS4.8
GYA LR LR
comp=Z,1μm,13.8s,MS4.7
HYB Hyderabad 29.91 313 *i* P **P** **01 21 45.0 +1.1**
BOK Bokaro 30.28 332 *e*P **P** **01 21 48.5 +1.4**
BOK AMb AMB 01 21 50.9
comp=Z,194nm,0.7s,mb5.9
SWI Sorong 30.32 87 P **P** **01 21 46.9 -0.8**
comp=Z,91nm,1.2s,mb5.4
LATR Latur 32.01 312 *e*P **P** **01 22 03.0 +0.6**
LATR AMb AMB 01 22 24.5
comp=Z,44nm,1.5s,mb5.1
NGP Nagpur 32.09 319 *e*P **P** **01 22 01.5 -1.6**
NGP AMb AMB 01 22 02.5
comp=Z,44nm,1.7s,mb5.0
ODAN Odare 32.31 337 *e*P **P** **01 22 05.9 +1.0**
comp=Z,672nm,0.7s,mb6.6
QZH Quanzhou 32.48 31 P **P** **01 22 06.4 0.0**
QZH *e*S **S** **01 27 18.8 +0.5**
QZH LR LR
comp=Z,2μm,23.7s,MS4.8
TAPN Taplejung 32.63 338 *e*P **P** **01 22 09.1 +1.4**
comp=Z,1μm,0.9s,mb6.9
RAMN Ramite 32.71 336 *e*P **P** **01 22 09.7 +1.3**
comp=Z,168nm,0.4s,mb6.4
KAD Karad 33.16 308 *e*P **P** **01 22 13.6 +1.0**
KAD AMb AMB 01 22 15.0
comp=Z,43nm,0.9s,mb5.4
JIRN Jiri 33.50 336 *e*P **P** **01 22 17.0 +1.6**
comp=Z,296nm,0.3s,mb6.7
NACB Ninganchiao 33.51 36 *e*P **P** **01 22 15.7 +0.2**
comp=Z,225nm,0.9s,mb6.1
NWAO Narrogin (SRO) 33.59 155 LR LR 01 35 26.9
comp=Z,335nm,20.3s,MS4.0,baz=332,slow=35
NWAO Narrogin (SRO) 33.59 155 *e*P **P** **01 22 16.0 -0.1**
NWAO pmax pmax
comp=Z,177nm,1.8s
NWAO Narrogin (SRO) 33.59 155 *e*P **P** **01 22 16.0 0.0**
comp=Z,177nm,1.8s,mb5.7
CD2 Chengdu 33.66 4⇑ *i*P **P** **01 22 14.9 -1.8**
CD2 AP pP 01 22 24.6 -4.2
CD2 PP PP 01 23 28.8 -4.8
CD2 PCP PcP 01 24 53.8 -2.2
CD2 S **S** **01 27 35.5 -1.1**
CD2 XS sS 01 27 55.5 -1.4
CD2 PCS PcS 01 28 38.6 -3.3
CD2 SS SS 01 29 42.3 -21
CD2 SCS ScS 01 32 34.9 -3.7
CD2 AMB AMB
comp=Z,50nm,0.7s,mb5.5
CD2 AMB AMB
comp=Z,220nm,5.8s
CD2 LR LR
comp=N,2μm,21.6s,MS4.8
CD2 LR LR
comp=E,860nm,18.0s,MS4.8
CD2 LR LR
comp=Z,2μm,19.2s,MS4.8
LSA Lhasa 33.69 344 P **P** **01 22 19.0 +2.0**
LSA Lhasa 33.69 344 *e*P **P** **01 22 17.2 +0.2**
LSA pmax pmax
comp=Z,91nm,0.8s,mb5.8
LSA Lhasa 33.69 344 *e*P **P** **01 22 17.2 +0.2**
comp=Z,91nm,0.8s,mb5.8
PKI Pulchoki 33.75 335 *e*P **P** **01 22 18.3 +0.8**
comp=Z,78nm,0.5s,mb5.9
PKIN Phulchoki 33.76 335 *e*P **P** **01 22 18.2 +0.6**
comp=Z,78nm,0.5s,mb5.9
YHNB Yeheng 33.76 35 *e*P **P** **01 22 17.2 -0.4**
comp=Z,45nm,0.9s,mb5.4
GUN Gumba 33.85 336 *e*P **P** **01 22 19.8 +1.4**
comp=Z,739nm,0.4s
DMN Daman 33.91 334 *e*P **P** **01 22 19.8 +0.8**
comp=Z,290nm,1.0s,mb6.2
KKN Kakani 34.00 335 *e*P **P** **01 22 20.5 +0.8**
comp=Z,187nm,0.4s,mb6.4
POO Poona 34.12 310 *e*P **P** **01 22 22.0 +1.1**
POO AMb AMB 01 22 23.2
comp=Z,44nm,0.9s,mb5.4
GKN Gorkha 34.46 334 *e*P **P** **01 22 24.5 +0.8**
comp=Z,402nm,0.8s,mb6.4
KOLN Koldanda 34.73 332 *e*P **P** **01 22 27.2 +1.2**
comp=Z,409nm,0.7s,mb6.4
DANN Dangsing 35.15 333 *e*P **P** **01 22 30.6 +1.0**
comp=Z,489nm,0.5s,mb6.7
WRA Warramunga Arr 36.73 120 P **P** **01 22 42.0 -1.3**
comp=Z,45nm,0.4s,mb5.6,baz=302,slow=8.9,SNR=577
WRA PcP PcP 01 25 04.9 -0.3
comp=Z,10nm,0.7s,baz=308,slow=2.3,SNR=6.6
WRA S **S** **01 28 18.8 -5.3**
comp=Z,8.7nm,0.9s,baz=292,slow=16,SNR=12
WRAB Tennant Creek 36.73 120 *e*P **P** **01 22 41.7 -1.6**
WRAB pmax pmax
comp=Z,149nm,1.3s,mb5.7
WRAB Tennant Creek 36.73 120 *e*P **P** **01 22 41.7 -1.6**
comp=Z,149nm,1.3s,mb5.7
WB2 Warramunga Arr 36.74 120⇑ *i*P **P** **01 22 42.1 -1.3**
WB2 *e*S **S** **01 28 18.3 -5.9**
XAN Xi'an 37.43 11 P **P** **01 22 47.3 -1.7**
XAN AP pP 01 22 57.3 -4.0
XAN XP sP 01 23 01.8 -4.8
XAN PP PP 01 24 13.1 -2.1
XAN PCP PcP 01 25 08.8 +1.7
XAN S **S** **01 28 29.4 -5.0**
XAN SCP ScP 01 28 50.6 -0.2
XAN PCS PcS 01 28 55.0 -0.6
XAN SS SS 01 30 59.6 -20
XAN SCS ScS 01 32 58.3 -0.7
XAN AMB AMB
comp=Z,125nm,8.0s
XAN LR LR
comp=N,173nm,22.7s,MS4.3
XAN LR LR
comp=E,557nm,22.4s,MS4.3
XAN LR LR
comp=Z,1μm,17.1s
FORT Forrest 37.77 140 *e*P **P** **01 23 00.1 +8.1**
comp=Z,42nm,0.6s,mb5.3
FORT Forrest 37.77 140 *e*P **P** **01 22 51.9 -0.1**
comp=Z,4.6nm,0.6s,mb4.4
PTH Pithoragarh 37.85 330 *e*P **P** **01 22 54.1 +1.5**
PTH *e*P 01 22 54.1
PTH *ex* x 01 28 52.3
ASAR Alice Springs 37.97 126 P **P** **01 22 53.2 -0.5**
comp=Z,24nm,0.6s,mb5.1,baz=298,slow=7.7,SNR=150
ASAR PcP PcP 01 25 09.1 +0.1
comp=Z,12nm,0.8s,baz=309,slow=2.8,SNR=9.7
ASAR S **S** **01 28 38.0 -4.9**
comp=Z,6.7nm,0.8s,baz=299,slow=17,SNR=13
SONA Sohna 38.51 325 *e*P **P** **01 22 57.9 -0.3**
SONA AMb AMB 01 22 59.3
comp=Z,60nm,0.8s,mb5.3
NJ2 Nanjing 38.62 25 *e*P **P** **01 22 59.9 +0.8**
NJ2 AP pP 01 23 08.8 -2.6
NJ2 XP sP 01 23 12.1 -4.6
NJ2 S **S** **01 28 54.5 +2.0**
NJ2 XS sS 01 29 06.0 -7.0
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
NJ2 AMB AMB
comp=Z,540nm,4.6s
NJ2 LR LR
comp=N,560nm,23.0s
NJ2 LR LR
comp=E,810nm,28.9s
NJ2 LR LR
comp=Z,710nm,25.7s,MS4.4
AYAN Aya Nagar 38.67 325 *e*P **P** **01 22 59.0 -0.5**
AYAN AMb AMB 01 23 00.6
comp=Z,53nm,1.3s,mb5.1
AJM Ajmer 38.70 320 *e*P **P** **01 22 59.1 -0.7**
AJM AMb AMB 01 23 20.4
comp=Z,90nm,1.6s,mb5.3
NDI New Delhi 38.77 326 *e*P **P** **01 22 58.5 -1.9**
comp=Z,20nm,0.7s,mb5.0
NDI *e*S **S** **01 28 57.0 +2.3**
KUDL Kundal 38.78 324 *e*P **P** **01 22 59.9 -0.6**
KUDL AMb AMB 01 23 01.5
comp=Z,36nm,0.9s,mb5.1
LZH Lanzhou 38.81 4 *e*P **P** **01 23 01.0 +0.4**
LZH AP pP 01 23 11.5 -1.4
LZH XP sP 01 23 14.8 -3.4
LZH *e*PP PP 01 24 36.1 +5.8
LZH *e*S **S** **01 28 56.1 +0.9**
LZH XS sS 01 29 13.1 -2.6
LZH AMB AMB
comp=Z,50nm,1.6s,mb5.0
LZH AMB AMB
comp=Z,200nm,4.9s
LZH LR LR
comp=N,1μm,16.3s
LZH LR LR
comp=Z,2μm,16.4s,MS5.0
SSE Sheshan 38.85 28 P **P** **01 23 01.1 +0.1**
SSE PP PP 01 24 31.5 +0.8
SSE S **S** **01 28 58.9 +3.0**
SSE AMB AMB
comp=Z,48nm,1.2s,mb5.1
SSE AMB AMB
comp=Z,694nm,4.7s
SSE LR LR
comp=N,363nm,25.0s,MS4.2
SSE LR LR
comp=E,289nm,25.0s,MS4.2
SSE LR LR
comp=Z,599nm,22.0s,MS4.4
JOSI Joshimath 39.00 330 *e*P **P** **01 23 02.6 +0.3**
KHET Khetri 39.13 323 *e*P **P** **01 23 03.4 0.0**
KHET AMb AMB 01 23 04.5
comp=Z,32nm,1.0s,mb5.0
DDI Dehra Dun 39.58 328 *e*P **P** **01 23 06.0 -1.2**
DDI ⇑ *i*P 01 23 06.3
DDI *ex* x 01 29 05.0
BHJ Bhuj 40.06 312 *ex* x 01 23 25.4
BHJ AMb AMB 01 23 34.7
comp=Z,92nm,1.2s,mb5.4
KLP Kalpa 40.44 329 *e*P **P** **01 23 14.9 +0.6**
KLP AMb AMB 01 23 15.9
comp=Z,107nm,0.4s,mb5.9
SMLA Simla 40.69 328⇓ *i*P **P** **01 23 16.9 +0.6**
SMLA *ex* x 01 23 22.0
comp=Z,367nm,0.4s
SMLA *i* x x 01 29 20.7
SDNR Sundarnagar 41.08 328 *e*P **P** **01 23 21.0 +1.5**
GTA Gaotai 42.05 359⇑ *i*P **P** **01 23 26.8 -0.6**
GTA AP pP 01 23 37.8 -1.9
GTA XP sP 01 23 41.1 -3.9
GTA PCP PcP 01 25 21.6 -0.1
GTA SCP ScP 01 29 07.6 -1.0
GTA S **S** **01 29 45.8 +2.4**
GTA SS SS 01 32 46.8 -5.4
GTA SCS ScS 01 33 22.9 -3.1
GTA AMB AMB
comp=Z,12nm,0.6s,mb4.7
GTA AMB AMB
comp=Z,145nm,5.1s
GTA LR LR
comp=N,717nm,18.9s,MS4.7
GTA LR LR
comp=E,497nm,16.8s,MS4.7
GTA LR LR
comp=Z,996nm,22.2s
DLH Dalhousie 42.42 328 *e*P **P** **01 23 31.0 +0.5**
THN Thein Dam 42.47 328 *e*P **P** **01 23 30.0 -0.9**
COEN Coen 43.09 107 *e*P **P** **01 23 35.0 -1.3**
comp=Z,4.8nm,0.9s,mb4.2
HHC Hu-ho-hao-te 44.54 11 *i* P **P** **01 23 47.6 +0.2**
HHC AP pP 01 23 58.0 -1.8
HHC XP sP 01 24 02.3 -2.8
HHC PCP PcP 01 25 30.0 0.0
HHC PP PP 01 25 33.0 +0.9
HHC SCP ScP 01 29 18.5 -0.2
HHC PCS PcS 01 29 22.4 -0.9
HHC S **S** **01 30 21.5 +1.7**
HHC XS sS 01 30 38.3 -2.3
HHC SS SS 01 33 33.3 -7.5
HHC SCS ScS 01 33 40.4 -1.1
HHC AMB AMB
comp=Z,54nm,0.9s,mb5.4
HHC AMB AMB
comp=Z,274nm,7.4s
HHC LR LR
comp=N,840nm,13.8s,MS4.9
HHC LR LR
comp=E,617nm,13.7s,MS4.9
HHC LR LR
comp=Z,645nm,13.2s,MS4.7
BJT Baijiatuau 44.86 17 *e*P **P** **01 23 49.7 -0.3**
BJT pmax pmax
comp=Z,27nm,0.8s
BJT Baijiatuau 44.86 17 *e*P **P** **01 23 49.6 -0.4**
comp=Z,27nm,0.8s,mb5.1
BJI Beijing 44.89 17 P **P** **01 23 49.5 -0.7**
BJI AP pP 01 24 00.8 -1.8
BJI XP sP 01 24 04.4 -3.6
BJI AMB AMB
comp=Z,35nm,0.8s,mb5.2
BJI AMB AMB
comp=Z,159nm,3.7s
BJI LR LR
comp=E,648nm,19.5s,MS4.9
BJI LR LR
comp=N,1μm,19.9s,MS4.9
BJI LR LR
comp=Z,1μm,20.9s,MS4.8
DL2 Dalian 45.69 23 P **P** **01 23 56.8 +0.2**
DL2 *e*S **S** **01 30 38.5 +2.0**
DL2 AMB AMB
comp=Z,20nm,0.5s,mb5.3
DL2 LR LR
comp=N,340nm,17.6s,MS4.6
DL2 LR LR
comp=E,450nm,16.6s,MS4.6
DL2 LR LR
comp=Z,540nm,18.8s,MS4.5
PMG Port Moresby 46.34 100 *e*P **P** **01 24 00.4 -1.7**
PMG pmax pmax
comp=Z,18nm,0.8s
PMG Port Moresby 46.34 100 *e*P **P** **01 24 00.4 -1.7**
comp=Z,18nm,0.8s,mb5.0
GUMO Guam 46.49 68 LR LR 01 43 49.8
comp=Z,36nm,20.9s,MS3.3,baz=252,slow=36
KSRS Korea Array 47.25 29 P **P** **01 24 08.2 -0.6**
comp=Z,7.2nm,0.5s,mb4.8,baz=222,slow=7.9,SNR=40
KSRS PcP PcP 01 25 39.1 -0.5
comp=Z,5.3nm,0.8s,baz=210,slow=3.6,SNR=5.0
KSRS LR LR 01 46 10.9
comp=Z,259nm,21.4s,MS4.2,baz=235,slow=39
CTA Charters Tower 47.35 115⇑ *i*P **P** **01 24 08.9 -1.1**
comp=Z,47nm,0.9s,mb5.4
CTA Charters Tower 47.35 115 P **P** **01 24 09.1 -0.9**
comp=Z,55nm,0.8s,mb5.5,baz=287,slow=9.2,SNR=75
CTA Charters Tower 47.35 115⇑ *i*P **P** **01 24 08.9 -1.1**
CTA pmax pmax
comp=Z,47nm,0.9s
CTAO Charters Tower 47.35 115 *e*P **P** **01 24 08.9 -1.1**
CTAO pmax pmax
comp=Z,60nm,0.9s,mb5.5
CTAO Charters Tower 47.35 115 *e*P **P** **01 24 08.9 -1.1**
comp=Z,60nm,0.9s,mb5.5
STKA Stephens Creek 47.86 132⇑ *i*P **P** **01 24 13.7 0.0**
comp=Z,32nm,0.6s,mb5.5
STKA *e*S **S** **01 31 06.3 -1.6**
STKA Stephens Creek 47.86 132 P **P** **01 24 13.8 +0.1**
comp=Z,34nm,0.7s,mb5.5,baz=309,slow=7.7,SNR=40
WMQ Urumqi 47.96 347⇑ *i*P **P** **01 24 14.6 +0.4**
WMQ AP pP 01 24 24.5 -2.3
WMQ XP sP 01 24 28.0 -4.0
WMQ PCP PcP 01 25 43.0 +1.1
WMQ *e*S **S** **01 31 09.0 +0.3**
WMQ SCS ScS 01 34 02.0 -1.6
WMQ AMB AMB
comp=Z,784nm,4.4s
WMQ LR LR
comp=N,689nm,18.4s,MS4.8
WMQ LR LR
comp=E,558nm,16.5s,MS4.8
WMQ LR LR
comp=Z,580nm,24.6s
KSH Kashi 48.01 334 P **P** **01 24 15.4 +0.7**
KSH *e*AP pP 01 24 24.0 -3.3
KSH *e*XP sP 01 24 28.1 -4.4
KSH *e*PCP PcP 01 25 44.1 +1.9
KSH *e*PP PP 01 26 06.1 -1.1
KSH *e*SCP ScP 01 29 34.0 +0.8
KSH *e*PCS PcS 01 29 38.0 +0.1
KSH *e*S **S** **01 31 08.0 -1.6**
KSH *e*XS sS 01 31 25.0 -5.6
KSH *e*SCS ScS 01 34 03.0 -1.2
KSH *e*SS SS 01 34 31.1 -8.1
KSH LR LR
comp=N,559nm,4.4s
KSH LR LR
comp=E,516nm,4.6s
KSH LR LR
comp=Z,463nm,5.2s
SONM Songino Array 50.68 5 P **P** **01 24 35.2 +0.3**
comp=Z,152nm,0.9s,mb5.9,baz=184,slow=8.6,SNR=386
SONM PcP PcP 01 25 51.4 -0.4
comp=Z,16nm,0.7s,baz=183,slow=4.7,SNR=8.9
SONM ScP ScP 01 29 42.4 -2.0
comp=Z,3.5nm,1.1s,baz=187,slow=4.7,SNR=4.2
SONM LR LR 01 48 39.9
comp=Z,564nm,19.6s,MS4.6,baz=183,slow=39
SONM Songino Array 50.68 5 P **P** **01 24 35.2 +0.3**
SONM 01 25 51.4
ULN Ulaanbaatar 50.77 5 *e*P **P** **01 24 35.4 -0.2**
ULN *e* 01 25 51.3
ULN pmax pmax
comp=Z,78nm,0.8s,mb5.7
ULN Ulaanbaatar 50.77 5 *e*P **P** **01 24 35.4 -0.2**
comp=Z,78nm,0.8s,mb5.7
ULN *e*PcP PcP 01 25 51.3 -0.8
TKM2 Tokmak 2 50.99 336 *e*P **P** **01 24 37.9 +0.6**
TKM2 pmax pmax
comp=Z,80nm,0.5s,mb5.9
TKM2 MLR MLR
comp=Z,199nm,21.0s,MS4.1
TKM2 Tokmak 2 50.99 336 P **P** **01 24 38.0 +0.6**
SNR=55
TKM2 Tokmak 2 50.99 336 *e*P **P** **01 24 37.9 +0.5**
comp=Z,80nm,0.5s,mb5.9
TKM2 LR LR
comp=Z,199nm,21.0s,MS4.1
KBK Karagaybulak 51.03 335 P **P** **01 24 38.9 +1.2**
SNR=38
AML Almayashu 51.14 334 P **P** **01 24 39.5 +1.0**
SNR=150
AML Almayashu 51.14 334⇑ *i*P **P** **01 24 39.4 +0.9**
comp=Z,111nm,0.7s,mb5.9
AAK Ala-Archa 51.20 335 P **P** **01 24 39.9 +0.9**
SNR=28
FRU Bishkek 51.32 335⇑ *i*P **P** **01 24 40.0 +0.2**
FRU *i* pP 01 24 53.0 +0.5
FRU *e* 01 31 57.0
FRU pmax pmax
comp=Z,130nm,1.6s,mb5.6
CN2 Changchun 51.36 23 ⇑P **P** **01 24 38.9 -1.2**
CN2 *e*XP sP 01 24 54.0 -4.1
CN2 *e*S **S** **01 31 55.5 -0.9**
CN2 AMB AMB
comp=Z,50nm,0.7s,mb5.5
CN2 AMB AMB
comp=Z,116nm,6.0s
CN2 LR LR
comp=N,1μm,16.0s,MS5.0
CN2 LR LR
comp=E,610nm,16.0s,MS5.0
CN2 LR LR
comp=Z,880nm,17.0s,MS4.8
CHMS Chumysh 51.40 335 P **P** **01 24 40.6 +0.2**
SNR=32
EKS2 Erkin-Say 51.53 334 P **P** **01 24 42.4 +1.0**
SNR=41
EKS2 Erkin-Say 51.53 334⇑ *i*P **P** **01 24 42.2 +0.8**
comp=Z,210nm,0.8s,mb6.1
USP Ospenovka 51.72 335 P **P** **01 24 43.1 +0.3**
SNR=48
MK31 Makanchi Array 52.10 344 *i* P **P** **01 24 45.1 -0.4**
MK31 pmax pmax
comp=Z,59nm,0.4s,mb5.9
MK31 Makanchi Array 52.10 344 *i* P **P** **01 24 45.2 -0.3**
MKAR Makanchi Array 52.10 344 P **P** **01 24 45.2 -0.3**
comp=Z,106nm,0.6s,mb5.9,baz=141,slow=7.8,SNR=294
MKAR S **S** **01 32 10.9 +4.6**
comp=Z,1.6nm,0.8s,baz=164,slow=16,SNR=3.6
MKAR LR LR 01 51 40.4
comp=Z,291nm,20.6s,MS4.3,baz=164,slow=42
MKAR Makanchi Array 52.10 344 P **P** **01 24 45.2 -0.3**
MKAR S **S** **01 32 10.9 +4.6**
MKAR Makanchi Array 52.10 344 P **P** **01 24 45.2 -0.3**
MKAR S **S** **01 32 10.9 +4.6**
MKAR LR LR 01 51 40.4
MAJO Matsushiro 52.31 38 *e*P **P** **01 24 45.5 -1.9**
MAJO pmax pmax
comp=Z,24nm,0.9s,mb5.1
MAJO Matsushiro 52.31 38 *e*P **P** **01 24 45.5 -1.9**

comp=Z,24nm,0.9s,mb5.1
MAT Matsushiro 52.31 38 P **P** **01 24 46.5 -0.9**
MJAR Matsushiro Arr 52.31 38 P **P** **01 24 45.9 -1.5**
comp=Z,13nm,0.8s,mb4.9,baz=210,slow=7.4,SNR=37
MJAR PcP PcP 01 25 57.9 -0.2
comp=Z,5.8nm,0.8s,baz=192,slow=4.0,SNR=4.5
MJAR ScP ScP 01 29 49.0 -2.8
comp=Z,0.4nm,0.3s,baz=206,slow=3.9,SNR=4.6
MJAR LR LR 01 47 45.6
comp=Z,162nm,19.0s,MS4.1,baz=240,slow=37
MJAR Matsushiro Arr 52.31 38 P **P** **01 24 45.9 -1.5**
MJAR 01 25 57.9
MJAR Matsushiro Arr 52.31 38 P **P** **01 24 45.9 -1.5**
MJAR PcP PcP 01 25 57.9 -0.2
MJAR ScP ScP 01 29 49.0 -2.8
MJAR LR LR 01 47 45.6
ZAK Zakamensk 53.05 2⇓*iP* **P** **01 24 51.6 -0.9**
ZAK *e* 01 25 56.6
ZAK pmax pmax
comp=Z,28nm,1.1s,mb5.1
KK31 Karatay Array 53.34 332 *i* P **P** **01 24 53.9 -0.9**
KK31 pmax pmax
comp=Z,14nm,0.4s,mb5.2
KK31 Karatay Array 53.34 332 *i* P **P** **01 24 53.0 -1.8**
TOO Toolangi 53.43 136 *eP* **P** **01 24 56.8 +1.2**
VLA Vladivostok 53.56 28 *eP* **P** **01 24 54.9 -1.5**
VLA pmax pmax
comp=Z,13nm,0.8s,mb4.9
VLA Vladivostok 53.56 28 *eP* **P** **01 24 54.0 -2.4**
MDJ Mudanjiang 53.71 25 P **P** **01 24 57.0 -0.5**
MDJ AP pP 01 25 05.9 -4.3
MDJ XP sP 01 25 09.8 -5.7
MDJ PCP PcP 01 26 03.3 +0.1
MDJ PP PP 01 26 57.6 -1.3
MDJ S **S** **01 32 24.4 -4.0**
MDJ SCS ScS 01 34 41.4 -1.8
MDJ SS SS 01 36 06.4 -3.5
MDJ AMB AMB
comp=Z,17nm,0.8s,mb5.0
MDJ AMB AMB
comp=Z,176nm,6.0s
MDJ LR LR
comp=N,444nm,20.3s,MS4.7
MDJ LR LR
comp=E,511nm,22.4s,MS4.7
MDJ LR LR
comp=Z,681nm,21.7s,MS4.7
MOY Mondy 54.30 0 *eP* **P** **01 25 01.6 0.0**
MOY pmax pmax
comp=Z,62nm,2.1s,mb5.2
TLY Talaya 54.36 2 *eP* **P** **01 25 02.4 +0.3**
TLY *eS* **S** **01 32 55.8 +19**
TLY pmax pmax
comp=Z,93nm,0.9s,mb5.7
TLY MLR MLR
comp=Z,789nm,17.0s,MS4.8
TLY Talaya 54.36 2⇑*iP* **P** **01 25 02.3 +0.2**
HIA Hailar 54.38 15 *eP* **P** **01 25 00.8 -1.5**
CAN Canberra 54.92 132 *eP* **P** **01 25 07.1 +0.5**
ABPO Ambohimpanom 54.93 249 *eP* **P** **01 25 04.1 -2.8**
ABPO LR LR
comp=Z,878nm,20.0s,MS4.8
IRK Irkutsk 54.94 2 *eP* **P** **01 25 05.6 -0.7**
IRK pmax pmax
comp=Z,122nm,2.7s,mb5.5
ARMA Armidale 55.12 125 *eP* **P** **01 25 09.0 +0.9**
CIT Chita 55.68 9 *eP* **P** **01 25 08.2 -3.4**
KURK Kurchatov 56.68 343 S **S** **01 33 12.6 +4.7**
comp=Z,1.4nm,0.8s,baz=157,slow=14,SNR=4.9
KURK LR LR 01 53 02.4
comp=Z,310nm,19.5s,MS4.4,baz=165,slow=40
KURK Kurchatov 56.68 343⇑*iP* **P** **01 25 18.2 -0.6**
KURK pmax pmax
comp=Z,98nm,1.0s,mb5.8
KURK Kurchatov 56.68 343⇑*iP* **P** **01 25 18.2 -0.6**
comp=Z,98nm,1.0s,mb5.8
ABKT Ailbek 56.71 320 P **P** **01 25 19.6 +0.3**
comp=Z,182nm,1.0s,mb6.1,SNR=16
ZAA0 Zalesovo Array 58.17 349 *eP* **P** **01 25 28.5 -0.8**
ZALV Zalesovo Beam 58.17 349 P **P** **01 25 28.6 -0.6**
comp=Z,289nm,0.8s,mb6.4,baz=160,slow=4.7,SNR=828
ZALV S **S** **01 33 24.5 -2.9**
comp=Z,1.7nm,0.7s,baz=163,slow=10,SNR=5.0
ZALV LR LR 01 53 56.3
comp=Z,196nm,21.1s,MS4.2,baz=340,slow=40
ZALV PKP2bc 01 55 26.1
comp=Z,0.7nm,0.7s,baz=288,slow=1.4,SNR=3.9
ZALV Zalesovo Beam 58.17 349 P **P** **01 25 28.6 -0.6**
ZALV S **S** **01 33 24.5 -2.9**
ZALV Zalesovo Beam 58.17 349 P **P** **01 25 28.6 -0.6**
ZALV S **S** **01 33 24.5 -2.9**
ZALV LR LR 01 53 56.3
ZALV ⇑*e* 01 55 26.1
KLR Kul'dur 58.30 23⇓*iP* **P** **01 25 25.5 -4.7**
KLR *e* pP 01 25 37.8 -5.3
KLR pmax pmax
comp=E,28nm,0.8s
KLR pmax pmax
comp=Z,56nm,0.8s,mb5.7
KRAR Krasnoyarsk 59.02 355*c iP* **P** **01 25 34.8 -0.3**
KRAR pmax pmax
comp=Z,274nm,1.0s,mb6.2
NVS Novosibirsk 59.33 348⇑*iP* **P** **01 25 35.9 -1.3**
NVS *eS* **S** **01 33 38.3 -4.0**
NVS pmax pmax
comp=N,67nm,1.0s
NVS pmax pmax
comp=E,43nm,1.0s
NVS pmax pmax
comp=Z,101nm,1.0s,mb5.8
NVS smax
comp=N,18nm,1.8s
NVS smax
comp=E,19nm,1.4s
ASAJ Asahikawa 59.75 34 LR LR 01 55 16.3
comp=E,123nm,18.4s,MS4.1,baz=352,slow=40
KBD Kabd 60.11 306 *eP* **P** **01 25 43.0 -0.1**
KBD baz=306
AMb AMb 01 26 01.2
comp=Z,90nm,1.4s,mb5.6,baz=306
RDF Al-Radifah 60.13 306 *eP* **P** **01 25 43.6 +0.2**
RDF baz=306
AMb AMb 01 25 59.5
comp=Z,182nm,1.3s,mb6.0,baz=306
UMR Umm Al-Rimmam 60.24 306 *eP* **P** **01 25 44.2 +0.1**
UMR baz=306
AMb AMb 01 25 45.6
comp=Z,152nm,0.9s,mb6.0,baz=306
NAY Al-Naaiem 60.51 306 *eP* **P** **01 25 45.6 -0.2**
NAY baz=306
AMb AMb 01 26 01.4
comp=Z,70nm,1.0s,mb5.8,baz=306
MIB Mutribah 60.64 307 *eP* **P** **01 25 46.9 +0.1**
MIB baz=306
AMb AMb 01 26 03.1
comp=Z,185nm,1.1s,mb6.1,baz=306
RST Umm Al-Ruwaisa 60.80 306 *eP* **P** **01 25 47.4 -0.4**
RST baz=306
AMb AMb 01 26 03.7
comp=Z,97nm,1.3s,mb5.8,baz=306
BVA0 Borovoye Array 61.30 339 *i* P **P** **01 25 49.3 -1.5**
BVA0 pmax pmax
comp=Z,12nm,0.9s,mb5.0
BVAR Borovoye Array 61.30 339 P **P** **01 25 49.8 -1.0**
comp=Z,52nm,0.8s,mb5.7,baz=139,slow=9.0,SNR=7.8
BVAR LR LR 01 56 32.8
comp=Z,166nm,20.1s,MS4.2,baz=249,slow=40
BOD Bodaibo 61.36 8 *eP* **P** **01 25 50.4 -0.7**
BOD pmax pmax
comp=Z,50nm,0.9s,mb5.6
BRVK Borovoye 61.37 339⇑*iP* **P** **01 25 50.1 -1.1**
BRVK pmax pmax
comp=Z,51nm,0.9s,mb5.7
BRVK Borovoye 61.37 339⇑*iP* **P** **01 25 50.1 -1.2**
comp=Z,51nm,0.9s,mb5.7
YSS Yuzh-Sakhalins 61.67 31⇑*iP* **P** **01 25 52.3 -1.1**
YSS *e* pP 01 26 05.0 -1.4
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.8
YSS pmax pmax
comp=E,30nm,0.9s
YSS Yuzh-Sakhalins 61.67 31 *eP* **P** **01 25 52.9 -0.5**
comp=E,51nm,0.8s,mb5.7
CLNS Chul'man 62.56 15 *eP* **P** **01 25 56.9 -2.3**
CLNS *e**PP pP 01 26 11.5 -0.6
CLNS *e* 01 26 36.1
CLNS *e*PPP 01 29 43.0
CLNS *eS* **S** **01 34 17.3 -6.2**
CLNS pmax pmax
comp=Z,39nm,0.9s,mb5.5
CLNS pmax pmax
comp=E,17nm,0.7s
CLNS pmax pmax
comp=N,19nm,0.8s
CLNS smax
comp=E,199μm,14.1s
CLNS smax
comp=N,57μm,15.5s
CLNS MLR MLR
comp=E,229nm,15.0s,MS4.9
CLNS MLR MLR
comp=Z,754nm,17.0s,MS4.9
CLNS MLR MLR
comp=N,562nm,17.0s,MS4.9
CLNS Chul'man 62.56 15 *eP* **P** **01 25 56.8 -2.4**
AB31 Akbulak array 62.84 331⇑*eP* **P** **01 26 00.3 -0.9**
KMBO Kilima Mbogo 63.71 270 P **P** **01 26 08.9 +1.3**
comp=N,2.0nm,0.9s,mb4.2,baz=38,slow=10,SNR=5.5
KMBO LR LR 01 48 17.2
comp=N,297nm,21.1s,MS4.4,baz=100,slow=31
KMBO PKP2bc 01 55 04.4
comp=N,3.4nm,0.3s,baz=246,slow=22,SNR=12
KMBO Kilima Mbogo 63.71 270 *eP* **P** **01 26 09.3 +1.6**
KMBO pmax pmax
comp=Z,15nm,1.1s
KMBO Kilima Mbogo 63.71 270 *eP* **P** **01 26 09.3 +1.6**
comp=Z,16nm,1.1s,mb5.0
MIR Mirnyy 63.84 184⇑*iP* pP 01 26 23.0 +2.5
MIR pmax pmax
comp=Z,100nm,1.0s,mb5.8
AKTK Aktyubinsk 64.56 331 P **P** **01 26 11.6 -0.9**
AKTO Aktyubinsk 64.56 331 P **P** **01 26 11.6 -0.9**
comp=Z,21nm,0.6s,mb5.4,baz=125,slow=7.6,SNR=78
DZM Mont Dzumac 66.22 113 *eP* **P** **01 26 23.2 -0.7**
MAK Makhachkala 66.23 320 *eP* **P** **01 26 23.9 +0.4**
MAK *eS* S 01 35 07.1 -2.3
MAK pmax pmax
comp=Z,153nm,1.1s,mb5.9
GNI Garni 66.81 316 P **P** **01 26 27.8 +0.6**
comp=Z,8.6nm,0.6s,mb5.0,baz=286,slow=5.6,SNR=10
GNI Garni 66.81 316 *eP* **P** **01 26 27.8 +0.6**
GNI pmax pmax
comp=Z,41nm,0.9s
GNI MLR MLR
comp=Z,160nm,22.0s
GNI Garni 66.81 316 *eP* **P** **01 26 27.8 +0.5**
comp=Z,41nm,0.9s,mb5.5
GNI LR LR
comp=Z,160nm,22.0s,MS4.2
DGRG David-gareji 66.94 318 P **P** **01 26 29.3 +1.2**
DGRG S pP 01 26 48.6 +7.5
MTA Mtatsminda 67.44 318 P **P** **01 26 31.7 +0.5**
MTA S pP 01 26 47.5 +3.2
TBLG Delisi 67.49 318 P **P** **01 26 32.1 +0.6**
TBLG S pP 01 26 47.9 +3.3
SVE Sverdlovsk 67.83 337⇓*eP* **P** **01 26 32.8 -0.5**
SVE *eS* S 01 35 52.8 +25
SVE pmax pmax
comp=Z,148nm,0.9s,mb6.0
SVE MLR MLR
comp=Z,320nm,19.0s,MS4.6
GOR Gori 68.03 318 P **P** **01 26 35.7 +0.8**
YAK Yakutsk 68.30 14*c iP* **P** **01 26 34.4 -1.8**
YAK *e**PP pP 01 26 45.6 -3.7
YAK *e* 01 27 01.7
YAK pmax pmax
comp=Z,144nm,0.9s,mb6.0
YAK pmax pmax
comp=E,30nm,1.2s
YAK pmax pmax
comp=N,39nm,1.1s
YAK MLR MLR
comp=Z,1μm,20.0s,MS5.0
YAK MLR MLR
comp=E,433nm,19.0s,MS4.9
YAK MLR MLR
comp=N,608nm,22.0s,MS4.9
YAK Yakutsk 68.30 14⇑*iP* **P** **01 26 34.2 -1.9**
comp=N,191nm,0.8s,mb6.2
ARU Arti 68.36 336*c iP* **P** **01 26 35.8 -0.9**
ARU *e* 01 26 59.2
ARU *e* 01 29 02.7
ARU *e*PPP 01 30 50.2
ARU *eS* S 01 35 36.1 +1.6
ARU *e*SS SS 01 39 55.5 -3.2
ARU pmax pmax
comp=Z,82nm,1.0s,mb5.7
ARU Arti 68.36 336⇑*iP* **P** **01 26 35.5 -1.1**
comp=Z,66nm,0.9s,mb5.7
ONI Oni 68.72 318 P **P** **01 26 40.0 +0.8**
ONI S pP 01 27 03.6 +11
DRV Dumont d'Urvil 69.26 164 S S 01 35 55.0 +10
DRV R 01 48 00.0
MAW Mawson 69.72 195 *eP* **P** **01 26 47.1 +2.1**
MAW Z,3.4nm,0.8s,mb4.3 *e* pP 01 27 00.7 +2.6
MAW Mawson 69.72 195 P **P** **01 26 47.2 +2.2**
comp=Z,3.2nm,0.6s,mb4.4,baz=30,slow=8.1,SNR=12
MAW PKP2bc 01 54 48.2
comp=Z,3.1nm,0.8s,baz=245,slow=6.7,SNR=7.1
MAW Mawson 69.72 195 *eP* **P** **01 26 47.1 +2.1**
MAW *e* pP 01 27 00.7 +2.6
MAW pmax pmax
comp=Z,3.0nm,0.8s
KIV Kislovodsk 69.81 319⇑*iP* **P** **01 26 46.0 0.0**
KIV *e* pP 01 27 00.0 +0.9
KIV pmax pmax
comp=Z,76nm,1.0s,mb5.6
KIV Kislovodsk 69.81 319⇓*iP* **P** **01 26 46.1 +0.1**
KIV Kislovodsk 69.81 319⇑*iP* **P** **01 26 46.0 +0.1**
comp=Z,76nm,1.0s,mb5.6
KIV *e* pP 01 26 60.0 +0.9
ASF Jabal al Asfar 69.87 306 P **P** **01 26 48.1 +1.5**
comp=Z,20nm,0.8s,mb5.1,baz=341,slow=4.8,SNR=34
MALT Malatya 70.62 312⇑*iP* **P** **01 26 49.2 -1.8**
MALT pmax pmax
comp=Z,28nm,1.0s,mb5.2
MALT Malatya 70.62 312⇑*iP* **P** **01 26 49.3 -1.7**
MALT Malatya 70.62 312⇑*iP* **P** **01 26 49.2 -1.8**
comp=Z,28nm,1.0s,mb5.2
EIL Elat 70.80 303 P **P** **01 26 53.2 +0.9**
comp=Z,33nm,0.7s,mb5.4,baz=100,slow=1.7,SNR=36
SKR Severo-Kuril's 71.02 34 *eP* **P** **01 26 52.6 -0.5**
SKR pmax pmax
comp=N,40nm,1.0s
SKR pmax pmax
comp=E,70nm,1.0s
SKR pmax pmax
comp=Z,200nm,1.0s,mb6.0
MMAI Mount Meron Ar 71.32 306 P **P** **01 26 56.9 +1.5**
comp=Z,23nm,0.6s,mb5.3,baz=94,slow=8.4,SNR=42
SOC Sochi 71.63 318 *eP* **P** **01 26 56.4 -0.6**
SOC *e* pP 01 27 10.4 +0.2
SOC *e* 01 27 14.7
SOC pmax pmax
comp=Z,64nm,0.8s,mb5.6
SOC Sochi 71.63 318 *i* P **P** **01 26 56.9 -0.1**
LSZ Lusaka 72.66 255 *eP* **P** **01 27 04.0 +0.2**
LSZ pmax pmax
comp=Z,17nm,1.1s,mb4.9
LSZ Lusaka 72.66 255 *eP* **P** **01 27 04.0 +0.2**
comp=Z,17nm,1.1s,mb4.9
PETK Petropavlovsk- 73.07 32 P **P** **01 27 04.3 -1.1**
comp=Z,22nm,0.8s,mb5.2,baz=295,slow=1.0,SNR=41
PETK LR LR 02 04 06.7
comp=Z,135nm,18.4s,MS4.3,baz=251,slow=40
CSS Prodhromos 73.51 308⇑*iP* **P** **01 27 08.8 +0.4**
comp=Z,83nm,1.2s,mb5.5
PET Petropavlovsk 73.53 32⇑*iP* **P** **01 27 07.1 -1.0**
PET *e* 01 29 46.4
PET *eS* S 01 36 33.1 -1.5
PET *e*SS SS 01 41 23.0 +4.8
PET pmax pmax
comp=Z,99nm,0.7s,mb5.8
PET MLR MLR
comp=Z,200nm,20.0s,MS4.4
PET Petropavlovsk 73.53 32⇑*iP* **P** **01 27 06.9 -1.2**
comp=Z,84nm,0.8s,mb5.7
VSR Storozhevoye 75.02 325 *eP* **P** **01 27 15.7 -1.1**
VSR pmax pmax
comp=Z,50nm,1.0s,mb5.4
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,60nm,0.9s
ANTO Ankara 75.27 312⇑*iP* **P** **01 27 17.9 -0.6**
ANTO *e* pP 01 27 29.5 -2.3
ANTO pmax pmax
comp=Z,15nm,0.8s,mb5.0
ANTO Ankara 75.27 312⇓*iP* **P** **01 27 18.2 -0.3**
ANTO Ankara 75.27 312⇑*iP* **P** **01 27 17.9 -0.6**
comp=Z,15nm,0.8s,mb5.0
ANTO *e* pP 01 27 29.5 -2.4
SIM Simferopol' 75.88 318*c iP* **P** **01 27 22.0 +0.1**
SIM *i* pP 01 27 35.0 -0.2
SIM pmax pmax
comp=Z,34nm,0.7s,mb5.4
SIM MLR MLR
comp=Z,70nm,18.3s,MS4.0
BOSA Boshof 76.12 241 P **P** **01 27 24.6 +0.9**
comp=Z,2.5nm,0.7s,mb4.3,baz=84,slow=7.0,SNR=8.3
BOSA LR LR 01 57 24.7
comp=Z,319nm,18.6s,MS4.7,baz=160,slow=33
TIXI Tiksi 76.53 9*c iP* **P** **01 27 23.2 -1.8**
TIXI pmax pmax
comp=Z,75nm,0.9s,mb5.6
TIXI MLR MLR
comp=Z,728nm,18.0s,MS5.0
TIXI Tiksi 76.53 9⇑*iP* **P** **01 27 23.2 -1.9**
comp=Z,80nm,1.0s,mb5.6
MOS Moscow 77.72 329 *eP* **P** **01 27 29.5 -2.5**
MOS *e* pP 01 27 40.0 -5.3
MOS pmax pmax
comp=Z,129nm,0.9s,mb5.9
OBN Obninsk 78.02 328⇑*eP* **P** **01 27 33.4 -0.3**
OBN *e* 01 30 28.0
OBN *eS* S 01 37 20.4 -3.6
OBN pmax pmax
comp=Z,127nm,1.1s,mb5.8
OBN MLR MLR
comp=Z,200nm,21.0s,MS4.4
OBN Obninsk 78.02 328⇑*iP* **P** **01 27 33.4 -0.3**
comp=Z,104nm,0.8s,mb5.8
TLCR 79.54 317⇓*iP* **P** **01 27 42.2 -0.1**
TIRR Tirgusor 79.63 316⇑*iP* **P** **01 27 42.5 -0.3**
TIRR pmax pmax
comp=Z,41nm,1.0s,mb5.3
TIRR Tirgusor 79.63 316⇑*iP* **P** **01 27 42.9 +0.1**
TIRR Tirgusor 79.63 316⇑*iP* **P** **01 27 42.5 -0.3**
comp=Z,41nm,1.0s,mb5.3
KIS Kishinev 80.01 319 *eP* **P** **01 27 44.0 -0.8**
PRD Provadia 80.04 315 P **P** **01 27 45.0 -0.1**
SUR Sutherland 80.19 238 *eP* **P** **01 27 47.8 +1.7**
comp=Z,36nm,1.0s,mb5.3
IDI Anoyia 80.32 306 P **P** **01 27 47.4 +0.7**
comp=Z,27nm,0.6s,mb5.3,baz=84,slow=7.1,SNR=23
ALN Alexandroupoli 80.52 312 *eP* **P** **01 27 47.6 -0.1**
AKASG Malin Array Be 80.74 322 P **P** **01 27 47.8 -0.8**
comp=Z,5.9nm,0.6s,mb4.7,baz=89,slow=4.1,SNR=29
AKASG PP PP 01 30 52.3 -0.8
comp=Z,0.5nm,0.3s,baz=84,slow=6.6,SNR=4.2
KIEV Kiev 80.75 322 *eP* **P** **01 27 47.6 -1.1**
KIEV pmax pmax
comp=Z,13nm,0.8s,mb4.9
KIEV Kiev 80.75 322 *eP* **P** **01 27 47.6 -1.1**
comp=Z,13nm,0.8s,mb4.9
VAM Vamos 80.90 306 *eP* **P** **01 27 51.5 +1.7**
VRI Vrincioaia 81.13 317⇓*iP* **P** **01 27 51.9 +1.1**
PLOR Plostina 81.18 317⇓*iP* **P** **01 27 51.7 +0.6**
MLR Muntele Rosu 81.58 317 P **P** **01 27 53.8 +0.6**
comp=Z,22nm,0.8s,mb5.1,baz=162,slow=4.3,SNR=29
MLR Muntele Rosu 81.58 317⇓*iP* **P** **01 27 54.2 +1.0**
MLR Muntele Rosu 81.58 317 ⇓P **P** **01 27 54.2 +1.0**
PTL Penteli 81.63 309 *eP* **P** **01 27 52.5 -1.1**
RZN Rozhen 81.66 313 P **P** **01 27 53.7 0.0**
DID Didima 82.02 308 *eP* **P** **01 27 54.5 -1.2**
PAIG Paliouri 82.10 311 *eP* **P** **01 27 55.3 -0.8**
VLI Veliai 82.13 307 *eP* **P** **01 27 55.0 -1.3**
VOIR 82.18 316⇑*iP* **P** **01 27 59.4 +3.0**
PGB Panagyurishte 82.23 313 P **P** **01 27 56.3 -0.4**
PLG Polygyros 82.36 311 *eP* **P** **01 27 56.5 -0.9**
SOH Sokhos 82.51 312 *eP* **P** **01 27 57.5 -0.7**
BURAR Bucovina Array 82.53 319⇑*iP* **P** **01 27 59.2 +1.0**
BURAR Bucovina Array 82.53 319⇑P **P** **01 27 59.2 +1.0**
BUR08 Bucovina Ar. S 82.55 319⇑*iP* **P** **01 27 59.1 +0.8**
MNK Minsk 82.59 326 *eP* **P** **01 27 55.0 -3.3**
MNK pmax pmax
comp=Z,170nm,1.0s,mb6.0
VLX Vlachokerasia 82.67 308 *eP* **P** **01 27 58.9 -0.2**
PUL Pulkovo 82.82 331⇑*eP* **P** **01 28 00.1 +0.7**
TSUM Tsumeb 82.84 251 LR LR 02 02 34.2
comp=Z,420nm,18.9s,MS4.8,baz=131,slow=34
TSUM Tsumeb 82.84 251 *eP* **P** **01 28 01.8 +1.4**
comp=Z,19nm,1.2s,mb5.0
TSUM LR LR
comp=Z,428nm,21.0s,MS4.8
KKB Krupnik 82.89 313 P **P** **01 27 59.6 -0.6**
KNT Kendrikon 82.91 312 *eP* **P** **01 27 59.6 -0.6**
VTS Vitosha 82.93 313*i iP* **P** **01 28 00.7 +0.3**
VTS Vitosha 82.93 313 P **P** **01 28 00.4 0.0**
VTS Vitosha 82.93 313 ⇑P **P** **01 28 00.7 +0.3**
LIT Litokhoron 83.03 311 *eP* **P** **01 28 00.5 -0.7**
PYL PYLOS 83.10 308 *eP* **P** **01 28 00.8 -0.6**
VAY Valandovo 83.18 312⇑*iP* **P** **01 28 00.4 -1.2**
EVR Evrytania 83.36 310 *eP* **P** **01 28 02.0 -0.7**
JOF Joensuu 83.39 334 *ep* **P** **01 28 01.4 -0.9**
comp=Z,32nm,0.7s,mb5.5
JOF Joensuu 83.39 334 *eP* **P** **01 28 01.4 -0.9**
JOF pmax pmax
comp=Z,33nm,0.7s,mb5.5
BILL Bilibino 83.60 20⇓*eP* **P** **01 28 01.5 -1.7**
BILL *e* 01 31 11.8
BILL *eS* S 01 38 14.1 -7.6
BILL pmax pmax
comp=Z,57nm,2.5s,mb5.3
BILL Bilibino 83.60 20 *eP* **P** **01 28 00.9 -2.3**
LVV L'vov 83.77 321*d iP* **P** **01 28 04.7 +0.2**
LVV *e* 01 31 21.9
LVZ Lovozero 83.90 340⇑*eP* **P** **01 28 04.2 -0.6**
LVZ pmax pmax
comp=Z,28nm,0.9s,mb5.4
LVZ Lovozero 83.90 340⇑*eP* **P** **01 28 04.3 -0.5**
DRGR 84.04 317⇑*iP* **P** **01 28 06.8 +0.8**
DRGR 84.04 317 ⇑P **P** **01 28 06.8 +0.8**
KRUS Krusevo 84.17 312⇑*iP* **P** **01 28 05.3 -1.4**
VSU Vasula 84.22 329⇑*iP* **P** **01 28 06.3 -0.3**
KWP Kalwaria 84.57 320 *eP* **P** **01 28 09.4 +0.8**
KWP Kalwaria 84.57 320 *eP* **P** **01 28 09.4 +0.8**
BZS Buzias 84.59 316⇓*iP* **P** **01 28 09.1 +0.3**
BZS Buzias 84.59 316 ⇓P **P** **01 28 09.1 +0.4**
IGT Igoumenitsa 84.59 310 *eP* **P** **01 28 08.9 0.0**
UZH Uzhgorod 84.65 319 *eP* **P** **01 28 09.0 0.0**
KOLS Kolonicke sedl 84.72 320 *i* P **P** **01 28 10.3 +0.9**
KOLS Kolonicke sedl 84.72 320 *i* P **P** **01 28 10.3 +0.9**
KOLS *e* 01 28 30.2
SUW Suwalki 85.13 325 *i* P **P** **01 28 11.2 -0.1**
SUW Suwalki 85.13 325⇑*iP* **P** **01 28 11.2 -0.1**
CRVS Cervenica-Dubn 85.24 319 *eP* **P** **01 28 12.4 +0.4**
KAF Kangasniemi 85.37 333 *ep* **P** **01 28 12.2 -0.1**
comp=Z,53nm,0.8s,mb5.7,baz=99,slow=4.5
KAF Kangasniemi 85.37 333 *eP* **P** **01 28 12.2 -0.1**
KAF pmax pmax
comp=Z,53nm,0.8s,mb5.7
STHS Stebnicka Huta 85.47 320 *eP* **P** **01 28 13.6 +0.5**
STHS pmax pmax
comp=Z,25nm,0.9s,mb5.3
STHS Stebnicka Huta 85.47 320 *eP* **P** **01 28 13.6 +0.5**
comp=Z,25nm,0.9s,mb5.3
STHS *e* 01 28 33.1
KECS Kecovo 85.81 319 *i* P **P** **01 28 15.0 +0.2**
KECS *e* pP 01 28 32.9 +4.6
KECS pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
KECS Kecovo 85.81 319 *i* P **P** **01 28 15.0 +0.2**
comp=Z,10nm,1.0s,mb5.0
KECS *e* pP 01 28 32.9 +4.6
NIE Niedzica 86.07 320 *eP* **P** **01 28 16.8 +0.7**
PSZ Piszkesteto 86.12 318⇑*iP* **P** **01 28 16.4 +0.1**
PSZ pmax pmax
comp=Z,22nm,1.0s,mb5.3
PSZ Piszkesteto 86.12 318⇑*eP* **P** **01 28 16.8 +0.5**
PSZ Piszkesteto 86.12 318⇑*iP* **P** **01 28 16.8 +0.5**

PSZ Piszkesteto 86.12 318⇑ *iP* **P 01 28 16.4 +0.1**
comp=Z,22nm,1.0s,mb5.3
OJC Ojcow 86.52 321 *eP* **P 01 28 18.5 +0.2**
PKSM Moragy 86.73 316⇑ *iP* **P 01 28 19.6 +0.2**
PKSM Moragy 86.73 316⇑ *iP* **P 01 28 19.6 +0.2**
VYHS Vyhne 86.90 319 *eP* **P 01 28 20.3 +0.1**
QSPA South Pole Qui 87.13 180 LR LR 02 02 46.3
comp=Z,298nm,21.6s,MS4.7,baz=133,slow=32
KEV Kevo 87.14 340 *ep* **P 01 28 19.6 -1.3**
comp=Z,41nm,0.9s,mb5.7
KEV Kevo 87.14 340 *eP* **P 01 28 19.6 -1.3**
KEV pmax pmax
comp=Z,41nm,0.9s,mb5.7
KOLL Kolacno 87.20 319 *i* P **P 01 28 21.8 +0.2**
KOLL *es*P sP 01 28 40.4 +0.2
TIP Timpagrande 87.30 309⇑ *iP* **P 01 28 22.9 +0.6**
comp=Z,52nm,1.6s,mb5.5
OKC Ostrava-Krasne 87.52 320⇑ *iP* **P 01 28 23.6 +0.4**
OKC *ep*P pP 01 28 35.1 -1.6
RAC Raciborz 87.53 320 *eP* **P 01 28 24.2 +1.0**
ARCES ARCESS Array B 87.59 340 P **P 01 28 23.0 -0.1**
comp=Z,28nm,0.7s,mb5.6,baz=98,slow=6.0,SNR=132
ARCES PP PP 01 31 50.5 +2.0
comp=Z,10.0nm,1.0s,baz=85,slow=5.4,SNR=6.1
ARCES LR LR 02 11 26.1
comp=Z,186nm,20.7s,MS4.5,baz=14,slow=38
ARCES ARCESS Array B 87.59 340 P **P 01 28 23.0 0.0**
ARCES 01 31 50.5
ARE0 ARCESS Array S 87.59 340 *eP* **P 01 28 22.6 -0.4**
MORC Moravsky Berou 87.91 320 *eP* **P 01 28 25.2 +0.2**
MORC pmax pmax
comp=Z,21nm,0.9s,mb5.4
MORC Moravsky Berou 87.91 320⇑ *iP* **P 01 28 25.8 +0.8**
MORC Moravsky Berou 87.91 320 *eP* **P 01 28 25.2 +0.2**
comp=Z,21nm,0.9s,mb5.4
MODS Modra-Piesok 87.92 318 *eP* **P 01 28 25.2 +0.1**
MODS pmax pmax
comp=Z,15nm,1.2s,mb5.1
MODS Modra-Piesok 87.92 318 *eP* **P 01 28 25.2 +0.1**
comp=Z,15nm,1.2s,mb5.1
MODS *e* 01 28 44.2
ZST Bratislava 88.01 318 *eP* **P 01 28 26.2 +0.7**
ZST pmax pmax
comp=Z,22nm,1.1s,mb5.3
ZST Bratislava 88.01 318 *eP* **P 01 28 26.2 +0.7**
comp=Z,22nm,1.1s,mb5.3
ZST *e* 01 28 45.0
CUC Castrocucco 88.10 310 *eP* **P 01 28 25.8 -0.3**
comp=Z,37nm,1.3s,mb5.5
SOP Sopron 88.32 318⇑ *eP* **P 01 28 27.0 0.0**
VRAC Vranov 88.47 319 P **P 01 28 27.9 +0.3**
comp=Z,4.8nm,1.0s,mb4.7,baz=122,slow=7.4,SNR=6.4
GKP Gorka Klasztor 88.51 323 *eP* **P 01 28 28.1 +0.4**
GKP Gorka Klasztor 88.51 323 *eP* **P 01 28 28.1 +0.4**
DPC Dobruska-Polom 88.75 320⇑ *iP* **P 01 28 29.8 +0.8**
DPC *ep*P pP 01 28 44.9 +2.4
CONA Conrad Observa 88.81 318 *i* P **P 01 28 29.4 +0.1**
comp=Z,9.2nm,1.1s,mb5.0,SNR=5.5
KSP Ksiaz 88.82 321 *eP* **P 01 28 30.2 +1.0**
KSP *e* 01 28 49.7
KSP Ksiaz 88.82 321⇑ *eP* **P 01 28 30.1 +0.8**
KSP *ep*P pP 01 28 43.6 +0.8
UPC Upice 88.96 320⇑ *iP* **P 01 28 30.4 +0.4**
ARSA Arzberg 88.98 317⇓ *iP* **P 01 28 30.5 +0.4**
comp=Z,16nm,0.9s,mb5.3,SNR=15
ARSA Arzberg 88.98 317⇓ *iPcP* PcP 01 28 30.5 -1.1
comp=Z,16nm,0.9s,SNR=15
VAE Valguarnera 88.98 307 P **P 01 28 31.4 +1.1**
comp=Z,13nm,1.0s,mb5.2,baz=159,slow=1.4,SNR=4.6
BOJS Bojanci 89.01 315 *eP* **P 01 28 30.5 +0.3**
BOJS *e* pP 01 28 45.3 +1.4
TREC Trest 89.19 319⇑ *iP* **P 01 28 31.2 +0.2**
TREC *ep*P pP 01 28 46.4 +1.8
PERS Pernice 89.20 317 *i* P **P 01 28 31.7 +0.5**
PERS *e* pP 01 28 49.5 +4.8
SOKA Soboth 89.26 317⇑ *iP* **P 01 28 32.1 +0.6**
comp=Z,29nm,1.1s,mb5.5
SOKA Soboth 89.26 317⇑ *iPcP* PcP 01 28 32.1 -0.8
comp=Z,29nm,1.1s
VISS Visnje 89.32 316 *i* P **P 01 28 32.2 +0.4**
VISS *i* 01 28 51.6
LJU Ljubljana 89.56 316 *eP* **P 01 28 33.5 +0.7**
OBKA Obir 89.58 316⇑ *iP* **P 01 28 33.5 +0.6**
comp=Z,18nm,1.2s,mb5.2,SNR=8.9
OBKA Obir 89.58 316⇑ *iPcP* PcP 01 28 33.5 -0.7
comp=Z,18nm,1.2s,SNR=8.9
PRU Pruhonice 89.86 320⇑ *iP* **P 01 28 34.6 +0.4**
PRU *ep*P pP 01 28 46.1 -1.6
JAVS Javornik 89.87 316 *i* P **P 01 28 34.3 0.0**
JAVS *i* pP 01 28 49.4 +1.5
MOA Molln 89.87 318⇑ *iP* **P 01 28 34.2 -0.1**
comp=Z,10.0nm,0.8s,mb5.2,SNR=9.9
PVCC Panska Ves 89.88 320⇑ *iP* **P 01 28 35.1 +0.8**
PVCC *ep*P pP 01 28 48.1 +0.3
VOY Vojsko 90.00 316 *eP* **P 01 28 35.2 +0.3**
VOY *e* pP 01 28 50.2 +1.7
VOY *e* 01 28 54.4
MYKA Terra Mystica 90.21 316⇑ *iP* **P 01 28 36.1 +0.2**
comp=Z,14nm,1.0s,mb5.2
MYKA Terra Mystica 90.21 316⇑ *iPcP* PcP 01 28 36.1 -0.9
comp=Z,14nm,1.0s
BRG Berggiesshubel 90.31 321 *i* P **P 01 28 37.0 +0.8**
BRG *i* pP 01 28 51.9 +2.1
BRG pmax pmax
comp=Z,15nm,1.1s,mb5.2
BRG pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
BRG pmax pmax
comp=Z,5.0nm,1.1s,mb4.8
BRG Berggiesshubel 90.31 321 *eP* **P 01 28 36.8 +0.6**
comp=Z,26nm,1.1s,mb5.5
BRG Berggiesshubel 90.31 321 *i* P **P 01 28 37.0 +0.8**
comp=Z,26nm,1.1s,mb5.5
BRG *i* pP 01 28 51.9 +2.1
comp=Z,13nm,1.0s
BRG *e* 01 32 27.0
comp=Z,8.2nm,1.1s
GEC2 GERESS Array S 90.32 319 *eP* **P 01 28 36.9 +0.6**
GEC2 pmax pmax
comp=Z,46nm,1.5s,mb5.6
GEC2 GERESS Array S 90.32 319 *eP* **P 01 28 36.9 +0.6**
comp=Z,46nm,1.5s,mb5.6
GERES GERESS Array B 90.32 319 P **P 01 28 37.0 +0.6**
comp=Z,8.6nm,0.8s,mb5.1,baz=84,slow=5.5,SNR=75
KHC Kasperske Hory 90.42 319⇑ *iP* **P 01 28 37.0 +0.2**
KHC *ep*P pP 01 28 50.6 +0.2
KBA Koelnbreinsper 90.44 317⇑ *iP* **P 01 28 36.8 -0.1**
comp=Z,12nm,1.2s,mb5.1
WET Wettzell 90.88 319 *eP* **P 01 28 39.5 +0.6**
WET pmax pmax
comp=Z,21nm,1.0s,mb5.4
WET Wettzell 90.88 319 *eP* **P 01 28 39.5 +0.6**
comp=Z,21nm,1.0s,mb5.4
CLL Collm 90.93 321⇑ *iP* **P 01 28 39.2 +0.1**
CLL *eS* S 01 39 35.0 +2.2
CLL pmax pmax
comp=Z,17nm,1.1s,mb5.3
CLL Collm 90.93 321 *eP* **P 01 28 39.0 -0.1**
comp=Z,17nm,1.1s,mb5.3
CLL Collm 90.93 321⇑ *iP* **P 01 28 39.2 +0.1**
comp=Z,17nm,1.1s,mb5.3
CLL *ep*P pP 01 28 51.0 -1.7
CLL *ex* x 01 28 58.0
CLL *eS* S 01 39 35.0 +2.2
CLL *es*S sS 01 40 00.0 +4.4
CLL L 02 16 00.0
comp=Z,100nm,21.5s
CLL Collm 90.93 321⇑ *iP* **P 01 28 39.2 +0.1**
comp=Z,17nm,1.1s,mb5.3
CLL *eS* S 01 39 35.0 +2.2
HFS Hagfors 91.08 330 P **P 01 28 39.8 +0.1**
comp=Z,30nm,0.8s,mb5.7,baz=121,slow=2.6,SNR=28
HFS PP PP 01 32 14.5 -2.1
comp=Z,5.9nm,0.7s,baz=98,slow=11,SNR=4.1
NKC Novy Kostel 91.22 320⇑ *iP* **P 01 28 41.2 +0.7**
NKC *ep*P pP 01 28 54.0 -0.1
TANN Tannenbergstha 91.22 320 *eP* **P 01 28 40.8 +0.3**
ROTZ Rotzenmuhle 91.35 320 *eP* **P 01 28 42.0 +0.9**
WTTA Wattenberg 91.62 317⇑ *iP* **P 01 28 42.3 -0.1**
comp=Z,22nm,0.8s,mb5.5
SPITS Spitsbergen Ar 91.65 348 P **P 01 28 40.2 -1.7**
comp=Z,15nm,0.7s,mb5.4,baz=318,slow=2.6,SNR=7.6
SNAA Sanae 91.65 198 *eP* **P 01 28 42.8 +0.7**
SNAA pmax pmax
comp=Z,5.0nm,1.0s
SNAA Sanae 91.65 198 *eP* **P 01 28 42.8 +0.7**
comp=Z,4.5nm,1.0s,mb4.8
WATA Walderalm 91.66 317⇑ *iP* **P 01 28 42.3 -0.3**
comp=Z,20nm,1.1s,mb5.4
MOX Moxa 91.77 320 *eP* **P 01 28 43.4 +0.4**
comp=Z,25nm,1.5s,mb5.3
MOX *e* pP 01 28 58.8 +2.2
MOX Moxa 91.77 320 *eP* **P 01 28 43.4 +0.4**
MOX *e* pP 01 28 58.8 +2.2
MOX pmax pmax
comp=Z,25nm,1.5s,mb5.3
FUR Furstenfeldbru 91.90 318 *eP* **P 01 28 43.5 -0.2**
FUR pmax pmax
comp=Z,16nm,1.0s,mb5.3
FUR Furstenfeldbru 91.90 318 *eP* **P 01 28 43.5 -0.2**
comp=Z,16nm,1.0s,mb5.3
MOTA Moosalm 91.98 317⇑ *iP* **P 01 28 43.9 -0.2**
comp=Z,15nm,0.8s,mb5.3,SNR=18
GRA1 Grafenberg Arr 91.99 319 *eP* **P 01 28 44.8 +0.7**
comp=Z,19nm,1.0s,mb5.4
GRA1 *es*P sP 01 29 03.8 +1.1
GRF Grafenberg Arr 91.99 319 *eP* **P 01 28 44.8 +0.7**
GRF pmax pmax
comp=Z,19nm,1.0s,mb5.4
GRF Grafenberg Arr 91.99 319 *eP* **P 01 28 44.8 +0.7**
GRF pmax pmax
comp=Z,19nm,1.0s,mb5.4
GRF Grafenberg Arr 91.99 319 *eP* **P 01 28 44.8 +0.7**
comp=Z,19nm,1.0s,mb5.4
GRF *es*P sP 01 29 03.8 +1.1
RETA Reutte 92.22 317⇑ *iP* **P 01 28 45.2 0.0**
comp=Z,16nm,0.7s,mb5.4,SNR=18
RETA Reutte 92.22 317⇑ *iPcP* PcP 01 28 45.2 -0.7
comp=Z,16nm,0.7s,SNR=18
FETA Feichten 92.23 317 *i* P **P 01 28 45.5 +0.3**
comp=Z,12nm,0.9s,mb5.2,SNR=11
FETA Feichten 92.23 317 *i PcP* PcP 01 28 45.5 -0.5
comp=Z,12nm,0.9s,SNR=11
NOA NORSAR Array B 92.35 331 P **P 01 28 44.5 -1.0**
comp=Z,11nm,0.8s,mb5.2,baz=93,slow=4.7,SNR=28
NOA LR LR 02 14 40.0
comp=Z,182nm,18.1s,MS4.6,baz=105,slow=38
KBS Kingsbay 92.58 349⇑ *eP* **P 01 28 43.8 -2.4**
CLZ Clausthal 92.59 322 *eP* **P 01 28 47.2 +0.4**
CLZ pmax pmax
comp=Z,15nm,1.0s,mb5.4
CLZ Clausthal 92.59 322 *eP* **P 01 28 47.2 +0.4**
comp=Z,15nm,1.0s,mb5.4
BSEG Bad Segeberg 92.67 324 *eP* **P 01 28 47.3 +0.2**
BSEG pmax pmax
comp=Z,13nm,0.9s,mb5.4
BSEG Bad Segeberg 92.67 324 *eP* **P 01 28 47.3 +0.2**
comp=Z,13nm,0.9s,mb5.4
NRDL Niedersach Rie 92.76 322 *eP* **P 01 28 48.2 +0.6**
UBBA Unterbreizbach 92.80 321 *eP* **P 01 28 47.9 +0.1**
DAVOX Davos/Dischmat 92.80 317 P **P 01 28 48.5 +0.6**
comp=Z,9.3nm,0.6s,mb5.4,baz=128,slow=4.5,SNR=23
DAVA Damuels 92.81 317⇑ *iP* **P 01 28 48.3 +0.3**
comp=Z,23nm,0.9s,mb5.6,SNR=10
DAVA Damuels 92.81 317⇑ *iPcP* PcP 01 28 48.3 -0.3
comp=Z,23nm,0.9s,SNR=10
DAVOS Davos 92.86 317 P **P 01 28 48.6 +0.4**
KEST Kesra 92.97 305 P **P 01 28 50.5 +1.6**
comp=Z,4.9nm,1.0s,mb4.9,baz=337,slow=2.5,SNR=14
KEST LR LR 02 14 10.9
comp=Z,46nm,18.1s,MS4.0,baz=262,slow=38
STU Stuttgart 93.30 319 *eP* **P 01 28 50.2 +0.1**
STU pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
STU Stuttgart 93.30 319 *eP* **P 01 28 50.3 +0.2**
STU Stuttgart 93.30 319 *eP* **P 01 28 50.2 +0.1**
comp=Z,5.7nm,0.8s,mb5.0
PGF Pioggiola 93.36 312⇑ *iP* **P 01 28 50.6 0.0**
comp=Z,12nm,1.0s,mb5.0
PGF Pioggiola 93.36 312⇑ *iP* **P 01 28 50.6 0.0**
PGF pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
PGF Pioggiola 93.36 312⇑ *iP* **P 01 28 50.6 0.0**
comp=Z,6.3nm,1.0s,mb5.0
BFO Black Forest 93.87 318 *eP* **P 01 28 52.4 -0.4**
BFO pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
BFO Black Forest 93.87 318 *eP* **P 01 28 52.4 -0.4**
comp=Z,7.0nm,0.9s,mb5.1
IBBN Ibbenburen 94.20 322 *eP* **P 01 28 54.5 +0.3**
SBF Sospel 94.51 314⇑ *iP* **P 01 28 55.6 -0.2**
comp=Z,14nm,0.8s,mb5.2
SBF Sospel 94.51 314⇑ *iP* **P 01 28 55.6 -0.2**
SBF pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
SBF Sospel 94.51 314⇑ *iP* **P 01 28 55.6 -0.2**
comp=Z,7.1nm,0.8s,mb5.2
BUG Bochum--Univer 94.52 321 *eP* **P 01 28 55.7 0.0**
CDF Champ du Feu 94.57 318⇑ *iP* **P 01 28 55.5 -0.5**
comp=Z,8.6nm,1.0s,mb4.8
CDF Champ du Feu 94.57 318⇑ *iP* **P 01 28 55.5 -0.5**
CDF pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
CDF Champ du Feu 94.57 318⇑ *iP* **P 01 28 55.5 -0.5**
comp=Z,4.3nm,1.0s,mb4.8
ECH Echery 94.65 318 *eP* **P 01 28 55.7 -0.7**
HINF Hinteralfeld 94.86 318 *eP* **P 01 28 57.6 +0.2**
MBDF Montbardon 94.98 314 *eP* **P 01 28 57.1 -0.9**
comp=Z,5.7nm,0.8s,mb4.8
MBDF Montbardon 94.98 314 *eP* **P 01 28 57.1 -0.9**
MBDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
MBDF Montbardon 94.98 314 *eP* **P 01 28 57.1 -0.9**
comp=Z,2.8nm,0.8s,mb4.7
LPG La Plagne 94.98 315⇑ *iP* **P 01 28 57.9 0.0**
comp=Z,11nm,0.8s,mb5.0
LPG La Plagne 94.98 315⇑ *iP* **P 01 28 57.9 0.0**
LPG pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
LPG La Plagne 94.98 315⇑ *iP* **P 01 28 57.9 0.0**
comp=Z,5.3nm,0.8s,mb5.0
LPL La Plagne 94.99 315⇑ *iP* **P 01 28 58.0 0.0**
comp=Z,11nm,0.8s,mb5.1
LPL La Plagne 94.99 315⇑ *iP* **P 01 28 58.0 0.0**
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
LPL La Plagne 94.99 315⇑ *iP* **P 01 28 58.0 0.0**
comp=Z,5.5nm,0.8s,mb5.0
BNI Bardonecchia 95.04 315 *eP* **P 01 28 57.8 -0.4**
BNI pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
BNI Bardonecchia 95.04 315 *eP* **P 01 28 57.8 -0.5**
comp=Z,3.9nm,0.9s,mb4.8
FRF La Foret Royal 95.09 313⇑ *iP* **P 01 28 58.3 -0.2**
comp=Z,10nm,1.0s,mb4.9
FRF La Foret Royal 95.09 313⇑ *iP* **P 01 28 58.3 -0.2**
FRF pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
FRF La Foret Royal 95.09 313⇑ *iP* **P 01 28 58.3 -0.2**
comp=Z,5.1nm,1.0s,mb4.9
LMR La Mourre 95.19 313⇑ *iP* **P 01 28 58.6 -0.4**
comp=Z,5.2nm,0.8s,mb4.7
LMR La Mourre 95.19 313⇑ *iP* **P 01 28 58.6 -0.4**
LMR pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
LMR La Mourre 95.19 313⇑ *iP* **P 01 28 58.6 -0.4**
comp=Z,2.6nm,0.8s,mb4.7
HAU Haudompre 95.20 318⇑ *iP* **P 01 28 58.4 -0.5**
comp=Z,15nm,0.8s,mb5.2
HAU *e*MLR MLR
comp=Z,152nm,22.0s,MS4.1
HAU Haudompre 95.20 318⇑ *iP* **P 01 28 58.4 -0.5**
HAU pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
HAU MLR MLR
comp=Z,150nm,22.0s,MS4.4
HAU Haudompre 95.20 318⇑ *iP* **P 01 28 58.4 -0.5**
comp=Z,7.6nm,0.8s,mb5.2
HAU LR LR
comp=Z,150nm,22.0s,MS4.4
WLF Walferdange 95.28 319 P **P 01 28 58.6 -0.6**
comp=Z,18nm,3.0s
MEM Membach 95.34 320 P **P 01 28 58.2 -1.2**
comp=Z,9.2nm,2.8s,mb4.7
CABF La Chapelle 95.42 316⇑ *iP* **P 01 28 59.9 0.0**
comp=Z,16nm,1.0s,mb5.1
CABF La Chapelle 95.42 316⇑ *iP* **P 01 28 59.9 0.0**
CABF pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
CABF La Chapelle 95.42 316⇑ *iP* **P 01 28 59.9 0.0**
comp=Z,8.3nm,1.0s,mb5.1
ORIF Oris-en-Rattie 95.61 315 *eP* **P 01 29 00.8 0.0**
comp=Z,5.6nm,0.8s,mb4.8
ORIF *e*MLR MLR
comp=Z,140nm,22.8s,MS4.1
ORIF Oris-en-Rattie 95.61 315 *eP* **P 01 29 00.8 0.0**
ORIF pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
ORIF Oris-en-Rattie 95.61 315 *eP* **P 01 29 00.8 0.0**
comp=Z,2.8nm,0.8s,mb4.7
MEZF Maizieres J'vi 96.05 318⇑ *iP* **P 01 29 02.4 -0.3**
comp=Z,7.4nm,0.6s,mb5.0
MEZF Maizieres J'vi 96.05 318⇑ *iP* **P 01 29 02.4 -0.3**
comp=Z,7.4nm,0.6s,mb5.3
TAM Tamanrasset 96.12 292 *eP* **P 01 29 04.5 +0.8**
VIVF Saint-Julien-l 96.47 315 *eP* **P 01 29 04.4 -0.3**
BAIF Baives 96.52 320⇑ *iP* **P 01 29 04.7 -0.1**
comp=Z,18nm,1.1s,mb5.1
BAIF Baives 96.52 320⇑ *iP* **P 01 29 04.7 -0.1**
BAIF pmax pmax
comp=Z,9.0nm,1.1s,mb5.1
BAIF Baives 96.52 320⇑ *iP* **P 01 29 04.7 -0.1**
comp=Z,9.2nm,1.1s,mb5.1
LOR Lormes 96.91 317⇑ *iP* **P 01 29 06.2 -0.5**
comp=Z,7.4nm,0.8s,mb4.9
LOR *e*MLR MLR
comp=Z,126nm,21.5s,MS4.1
LOR Lormes 96.91 317⇑ *iP* **P 01 29 06.2 -0.5**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
LOR MLR MLR
comp=Z,130nm,21.5s,MS4.4
LOR Lormes 96.91 317⇑ *iP* **P 01 29 06.2 -0.5**
comp=Z,3.7nm,0.8s,mb4.9
LOR LR LR
comp=Z,130nm,21.5s,MS4.4
SMF Signal de Mont 96.96 316⇑ *iP* **P 01 29 06.4 -0.5**
comp=Z,14nm,1.0s,mb5.0
SMF Signal de Mont 96.96 316⇑ *iP* **P 01 29 06.4 -0.5**
SMF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
SMF Signal de Mont 96.96 316⇑ *iP* **P 01 29 06.4 -0.5**
comp=Z,7.1nm,1.0s,mb5.0
SSF Saint Saulge 97.17 317⇑ *iP* **P 01 29 07.5 -0.3**
AVF Avril sur Loir 97.29 317⇑ *iP* **P 01 29 07.9 -0.5**
comp=Z,9.5nm,1.2s,mb4.8
AVF Avril sur Loir 97.29 317⇑ *iP* **P 01 29 07.9 -0.5**
AVF pmax pmax
comp=Z,5.0nm,1.2s,mb4.8
AVF Avril sur Loir 97.29 317⇑ *iP* **P 01 29 07.9 -0.5**
comp=Z,4.8nm,1.2s,mb4.8
BGF Bois d'Agland 97.65 316 *eP* **P 01 29 09.9 -0.1**
TCF Toulx Ste Croi 98.11 316 *eP* **P 01 29 11.8 -0.3**
MTLF Montolieu 98.32 313⇑ *iP* **P 01 29 13.0 -0.1**
comp=Z,11nm,1.3s,mb4.9
MTLF Montolieu 98.32 313⇑ *iP* **P 01 29 13.0 -0.1**
MTLF pmax pmax
comp=Z,6.0nm,1.3s,mb5.0
MTLF Montolieu 98.32 313⇑ *iP* **P 01 29 13.0 -0.1**
comp=Z,5.5nm,1.3s,mb4.9
IMA2 Indian Mountai 98.78 23 *eP* **P 01 29 14.0 -0.7**
LFF La Frestale 99.25 315 *eP* **P 01 29 17.5 +0.2**
LDF La Druitiere 99.47 319 *eP* **P 01 29 17.5 -0.6**
TORD Torodi Ar. Bea 99.68 283 P Pdif 01 29 20.0 +1.1
comp=Z,1.2nm,0.9s,baz=101,slow=5.3,SNR=6.9
TORD PKiKP PKiKP 01 33 48.1 -0.5
comp=Z,0.7nm,0.7s,baz=82,slow=1.8,SNR=3.8
TORD PKKPbc PKKPbc 01 45 40.0 -1.0
comp=Z,0.7nm,0.4s,baz=303,slow=3.5,SNR=34
TORD LR LR 02 08 27.2
comp=Z,178nm,21.6s,MS4.5,baz=100,slow=32
FLN La Foliniere 99.68 319 *eP* Pdif 01 29 18.6 -0.3
comp=Z,22nm,1.2s
FLN *e*MLR MLR
comp=Z,176nm,21.2s,MS4.2
FLN La Foliniere 99.68 319 *eP* Pdif 01 29 18.6 -0.3
FLN pmax pmax
comp=Z,11nm,1.2s,mb5.2
FLN MLR MLR
comp=Z,180nm,21.3s,MS4.5
FLN La Foliniere 99.68 319 *eP* Pdif 01 29 18.6 -0.3
comp=Z,11nm,1.2s
FLN LR LR
comp=Z,180nm,21.3s,MS4.5
MFF Saint Martin d 99.70 317 *eP* Pdif 01 29 18.7 -0.3
comp=Z,7.6nm,1.0s
MFF Saint Martin d 99.70 317 *eP* Pdif 01 29 18.7 -0.3
MFF pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
MFF Saint Martin d 99.70 317 *eP* Pdif 01 29 18.7 -0.3
comp=Z,3.8nm,1.0s
GRR Gorron 99.98 319 *eP* Pdif 01 29 20.9 +0.6
SGMF Saint Gilles 101.12 319 *eP* Pdif 01 29 25.0 -0.3
MCK McKinley 101.34 25 *eP* Pdif 01 29 24.7 -1.6
ESDC Sonseca Array 103.30 310 PP PP 01 33 52.3 +1.2
comp=Z,0.3nm,0.7s,baz=63,slow=8.0,SNR=5.7
MDT Midelt 104.63 303 PP PP 01 34 02.2 +0.9
comp=Z,2.5nm,0.9s,baz=114,slow=6.0,SNR=6.0
DAWY Dawson 105.14 23 *e*PKP PKiKP 01 33 56.4 -0.8
EVO Evora 106.59 309 *e*PKiKP PKiKP 01 33 58.3 -2.4
comp=Z,18nm,1.3s
EVO *e*MLR MLR
comp=Z,118nm,21.8s,MS4.1
GNW Green Mountain 121.62 33 *e*PKPdf PKPdf 01 34 28.8 -0.2
JCW Jim Creek 121.73 32 *e*PKPdf PKPdf 01 34 28.8 -0.5
RPW Rockport 121.80 32 *e*PKPdf PKPdf 01 34 28.2 -1.1
EDM Edmonton 122.36 24 *e*PKIKP PKPdf 01 34 29.3 -1.0
LON Longmire 122.66 34 *e*PKIKP PKPdf 01 34 30.3 -0.7
MPOR Mary's Peak 122.94 37 P PKPdf 01 34 32.0 +0.3
TWW Teanaway 122.94 33 P PKPdf 01 34 31.6 0.0
ETW Entiat 122.95 32 *e*PKPdf PKPdf 01 34 30.8 -0.7
TBM Table Mountain 123.07 33 P PKPdf 01 34 31.7 -0.2
EBG Ellensburg 123.25 33 P PKPdf 01 34 32.0 -0.1
EPH Ephrata 123.49 32 P PKPdf 01 34 32.0 -0.6
OD2 Odessa Site #2 123.94 32 *e*PKPdf PKPdf 01 34 32.5 -1.0
RSW Rattlesnake Hi 124.09 33 *e*PKPdf PKPdf 01 34 33.8 0.0
HAWA Hanford 124.13 33 *e*PKPdf PKPdf 01 34 33.5 -0.4
NEW Newport 124.17 30 *e*PKIKP PKPdf 01 34 32.8 -1.1
H2OWA Water 124.18 33 P PKPdf 01 34 34.1 +0.1
HUMO Hull Mountain 124.34 38 *e*PKPdf PKPdf 01 34 34.1 -0.3
VIPM Ingram Point 124.66 35 PKIKP PKPdf 01 34 35.4 +0.4
BUOR Burton Butte 124.96 38 P PKPdf 01 34 35.6 0.0
YBH Yreka Blue Hor 124.97 39 PKP PKPdf 01 34 35.4 -0.2
comp=Z,2.3nm,0.7s,baz=319,slow=5.5,SNR=9.7
FFC Flin Flon 125.00 16 *e*PKIKP PKPdf 01 34 33.8 -1.5
LNOR Lincton Mounta 125.13 33 *e*PKIKP PKPdf 01 34 34.9 -0.9
WDC Whiskeytown Da 125.69 40 *e*PKIKP PKPdf 01 34 36.1 -1.0
LASM Arnica Sink 125.75 39 P PKPdf 01 34 37.4 +0.2
LTIM Timbered Crate 126.04 39 P PKPdf 01 34 37.9 +0.2
MOD Modoc 126.37 38 *e*PKPdf PKPdf 01 34 37.2 -1.1
MSO Missoula 126.73 29 *e*PKPdf PKPdf 01 34 37.8 -1.0
WVOR Wild Horse Val 127.06 36 *e*PKIKP PKPdf 01 34 39.0 -0.6
SCHQ Schefferville 127.22 351 PKPdf 01 34 38.6 -1.0
comp=Z,7.4nm,0.8s,baz=40,slow=6.2,SNR=6.7
DLMT Dillon 128.43 30 *e*PKPdf PKPdf 01 34 41.6 -0.5
CMB Columbia Colle 128.47 42 *e*PKIKP PKPdf 01 34 42.4 0.0
MCMT McKenzie Canyo 128.68 30 *e*PKPdf PKPdf 01 34 42.5 -0.1
BOZ Bozeman (W) 128.70 29 *e*PKIKP PKPdf 01 34 42.7 +0.1
HLID Hailey 128.73 33 *e*PKPdf PKPdf 01 34 42.1 -0.7
QLMT Earthquake Lak 129.38 30 *e*PKPdf PKPdf 01 34 44.9 +0.9
GCMT Greycliff 129.52 28 *e*PKPdf PKPdf 01 34 44.2 0.0
NVAR Mina Array Bea 129.61 40 PKP PKPdf 01 34 44.8 +0.1
comp=Z,3.8nm,0.6s,baz=286,slow=2.2,SNR=27
NVAR SKPbc 01 38 02.0
comp=Z,3.0nm,0.7s,baz=270,slow=4.0,SNR=12
MTUM Tungsten Hills 130.05 42 *e*PKPdf PKPdf 01 34 45.9 +0.4
ELK Elko 130.10 36 *e*PKPdf PKPdf 01 34 45.6 +0.1
ELK *e* 01 38 03.6
RLMT Red Lodge 130.21 28 *e*PKPdf PKPdf 01 34 45.7 +0.2
LAO LASA Array 130.33 24 *e*PKPdf PKPdf 01 34 46.1 +0.4
RRI2 Red Ridge 130.50 31 *e*PKPdf PKPdf 01 34 46.3 +0.1
MOOW Moose Ponds 130.50 30 *e*PKPdf PKPdf 01 34 46.2 0.0
TPAW Teton Pass 130.59 30 *e*PKPdf PKPdf 01 34 46.7 +0.4
TPAW *e*SKPbc SKPbc 01 38 05.3 -1.1
ULM Lac du Bonnet 130.64 14 PKP PKPdf 01 34 44.5 -1.7
comp=Z,11nm,0.7s,baz=344,slow=2.1,SNR=19
ULM SKPbc SKPbc 01 38 03.0 -3.4
comp=Z,2.7nm,0.6s,baz=83,slow=3.2,SNR=4.0
ULM Lac du Bonnet 130.64 14 PKP PKPdf 01 34 44.5 -1.7
ULM SKPbc SKPbc 01 38 03.0 -3.4
LOHW Long Hollow 130.67 30 *e*PKPdf PKPdf 01 34 46.4 -0.1
SNOW Snow King Moun 130.71 30 *e*PKPdf PKPdf 01 34 46.2 -0.3
REDW Red Top Meadow 130.73 31 *e*PKPdf PKPdf 01 34 45.8 -0.8
HVU Hansel Valley 130.82 33 *e*PKIKP PKPdf 01 34 47.0 +0.2
ISA Isabella 131.03 43 *e*PKIKP PKPdf 01 34 46.5 -0.9
BGU Big Grassy Mou 131.25 34 *e*PKPdf PKPdf 01 34 47.7 0.0

BGU					eSKPbc	SKPbc	01 38 07.7	-1.3
SPUT	**South Promonto**	**131.32**	**34**	ePKPdf	PKPdf	01 34 47.4	-0.4
HWUT	**Hardware Ranch**	**131.60**	**33**	ePKPdf	PKPdf	01 34 47.5	-0.7
HWUT				eSKPbc	SKPbc	01 38 08.9	-1.3
TPNV	**Topopah Spring**	**131.80**	**41**	ePKPdf	PKPdf	01 34 48.2	-0.6
TPNV				eSKPbc	SKPbc	01 38 09.4	-1.6
BW06	**Boulder Array**	**131.81**	**30**	ePKPbc	PKPdf	01 34 47.7	-1.0
PDAR	**Pinedale Array**	**131.81**	**30**	PKP	PKPdf	01 34 48.0	-0.7
	comp=Z,2.2nm,0.6s,baz=207,slow=1.1,SNR=17							
PDAR				PP	PP	01 37 09.3	+0.7
	comp=Z,1.0nm,0.9s,baz=339,slow=3.7,SNR=4.0							
PDAR				SKPbc	SKPbc	01 38 08.6	-2.4
	comp=Z,3.5nm,0.9s,baz=333,slow=1.7,SNR=14							
DUG	**Dugway**	**131.87**	**35**	ePKPdf	PKPdf	01 34 49.5	+0.7
DUG				eSKPbc	SKPbc	01 38 09.6	-1.6
JLU	**Jordanelle**	**132.35**	**34**	ePKPdf	PKPdf	01 34 50.0	+0.2
GSC	**Goldstone**	**132.37**	**43**	ePKPdf	PKPdf	01 34 50.5	+0.6
GSC				eSKPbc	SKPbc	01 38 12.2	-1.0
AGMN	**Agassiz Refuge**	**132.45**	**15**	ePKPdf	PKPdf	01 34 48.3	-1.3
DAU	**Daniels Canyon**	**132.59**	**34**	ePKIKP	PKPdf	01 34 50.2	0.0
RSSD	**Black Hills**	**133.31**	**25**	ePKIKP		01 34 43.4	
RSSD				e		01 34 50.0	
RSSD	**Black Hills**	**133.31**	**25**	ePKPpre		01 34 43.4	
RSSD				ePKPdf	PKPdf	01 34 50.0	-1.4
RSSD				eSKPbc	SKPbc	01 38 14.3	-1.8
MSU	**Marysvale**	**133.35**	**36**	ePKPdf	PKPdf	01 34 52.0	+0.4
MSU				eSKPbc	SKPbc	01 38 15.7	-0.7
TMUT	**Trail Mountain**	**133.38**	**35**	ePKPdf	PKPdf	01 34 51.9	+0.2
TMUT				eSKPbc	SKPbc	01 38 15.8	-0.7
PFO	**Pinyon Flat Ob**	**133.54**	**44**	PKP	PKPdf	01 34 51.4	-0.8
	comp=Z,4.9nm,0.8s,baz=8.7,slow=2.8							
PFO				SKPbc	SKPbc	01 38 15.6	-1.6
	comp=Z,9.0nm,1.0s,baz=0.1,slow=2.0,SNR=9.0							
PFO	**Pinyon Flat Ob**	**133.54**	**44**	ePKPdf	PKPdf	01 34 51.2	-1.0
SRU	**San Rafael**	**133.90**	**34**	ePKPdf	PKPdf	01 34 52.0	-0.7
SRU				eSKPbc	SKPbc	01 38 16.8	-1.4
PHWY	**Pilot Hill**	**134.92**	**28**	ePKPdf	PKPdf	01 34 53.2	-1.3
PHWY				eSKPbc	SKPbc	01 38 19.1	-2.3
PV01	**Paradox Valley**	**135.67**	**34**	ePKPdf	PKPdf	01 34 56.1	+0.1
WUAZ	**Wupatki**	**135.78**	**39**	ePKIKP	PKPdf	01 34 57.1	+0.8
PLCA	**Paso Flores**	**135.96**	**189**	PKP	PKPdf	01 34 56.9	+0.4
	comp=Z,1.7nm,0.9s,baz=165,slow=1.7,SNR=2.5							
PLCA				SKPbc	SKPbc	01 38 22.2	-2.5
	comp=Z,1.2nm,0.7s,baz=304,slow=6.0,SNR=3.5							
ECSD	**EROS,Sioux Fal**	**136.38**	**19**	ePKPpre		01 34 51.9		
ECSD				ePKPdf	PKPdf	01 34 56.4	-0.8	
ECSD				eSKPbc	SKPbc	01 38 24.1	-1.9	
SDCO	**Great Sand Dun**	**137.62**	**32**	ePKPdf	PKPdf	01 34 59.1	-0.5	
TUC	**Tucson**	**138.18**	**42**	ePKIKP	PKPdf	01 35 01.0	+0.1	
MDV	**Middlebury**	**138.69**	**354**	ePKPdf	PKPdf	01 35 00.7	-0.7	
LAZ	**Ladron**	**139.11**	**37**	ePKPdf	PKPdf	01 35 02.5	0.0	
ANMO	**Albuquerque**	**139.13**	**35**	SKPbc	SKPbc	01 38 34.5	+0.3	
	comp=Z,5.1nm,1.0s,baz=294,slow=3.4,SNR=10.0							
ANMO	**Albuquerque**	**139.13**	**35**	ePKHKP		01 34 55.1		
AMTX	**Amarillo**	**141.78**	**31**	ePKPdf	PKPdf	01 35 07.9	+0.6	
ACSO	**Alum Creek Sta**	**142.60**	**5**	ePKPpre		01 35 02.6		
WMOK	**Wichita Mounta**	**143.32**	**28**	ePKHKP		01 35 05.3		
OLIL	**Olney**	**143.32**	**12**	ePKPdf	PKPdf	01 35 09.7	-0.2	
SDMD	**Soldier's Deli**	**143.54**	**357**	ePKPdf	PKPdf	01 35 06.0	-4.3	
SIUC	**Southern Illin**	**144.05**	**14**	ePKPdf	PKPdf	01 35 08.3	-2.9	
WCI	**Wyandotte Cave**	**144.15**	**10**	ePKIKP	PKPdf	01 35 08.0	-3.4	
CPUP	**Villa Florida**	**144.22**	**215**	PKP	PKPdf	01 35 10.4	-1.4	
	comp=Z,4.9nm,0.7s,baz=121,slow=2.1,SNR=23							
CFAA	**Coronel Fontan**	**144.25**	**196**	PKP	PKPdf	01 35 10.8	-1.0	
	comp=Z,1.4nm,0.6s,baz=165,slow=3.1,SNR=26							
CFAA	**Coronel Fontan**	**144.25**	**196**	PKP	PKPdf	01 35 10.8	-1.0	
BDFB	**Brasilia**	**144.26**	**238**	PKP	PKPdf	01 35 11.3	-0.8	
	comp=Z,7.1nm,0.6s,baz=109,slow=1.4,SNR=12							
TXAR	**Lajitas Array**	**144.75**	**39**	PKP	PKPdf	01 35 11.7	-1.0	
	comp=Z,36nm,0.6s,baz=273,slow=1.0,SNR=370							
TXAR				SKPbc	SKPbc	01 38 46.8	-1.7	
	comp=Z,1.6nm,0.7s,baz=199,slow=1.9,SNR=5.0							
PARMO	**Parma**	**144.91**	**15**	ePKPdf	PKPdf	01 35 10.6	-2.2	
GLAT	**Glass**	**145.40**	**15**	ePKPdf	PKPdf	01 35 12.3	-1.4	
URVA	**University of**	**145.41**	**358**	ePKPbc	PKPbc	01 35 12.2	-1.3	
UTMT	**University of**	**145.44**	**14**	ePKPbc	PKPbc	01 35 12.3	-1.4	
MIAR	**Mount Ida**	**145.66**	**22**	ePKIKP	PKPdf	01 35 13.5	-0.6	
HBAR	**Harrisburg**	**145.70**	**17**	ePKPbc	PKPbc	01 35 13.5	-1.0	
HALT	**Halls**	**145.73**	**15**	ePKPbc	PKPbc	01 35 13.4	-1.2	
ELN	**Prospectdale**	**145.74**	**2**	ePKPdf	PKPdf	01 35 12.7	-1.5	
BLA	**Blacksburg**	**145.77**	**2**	ePKP2	PKPab	01 35 12.9	-2.1	
WVT	**Waverly**	**145.88**	**13**	ePKP2	PKPab	01 35 13.5	-2.0	
WVT				e		01 38 31.9		
UALR	**University of**	**145.89**	**20**	ePKPbc	PKPbc	01 35 13.8	-1.3	
JCT	**Junction City**	**146.19**	**33**	ePKP2	PKPab	01 35 15.2	-1.7	
TZTN	**Tazewell**	**146.20**	**7**	ePKPbc	PKPbc	01 35 14.4	-1.6	
OXF	**Oxford**	**147.03**	**16**	ePKP2	PKPab	01 35 17.1	-2.9	
TKL	**Tuckaleechee C**	**147.05**	**7**	ePKIKP	PKPdf	01 35 15.1	-1.3	
TKL				e		01 35 17.1		
SWET	**Sewanee**	**147.15**	**10**	ePKPbc	PKPbc	01 35 16.7	-2.1	
CPCT	**Cooper Cave**	**147.15**	**8**	ePKPbc	PKPbc	01 35 16.4	-2.4	
NATX	**Nacogdoches**	**147.68**	**25**	ePKPdf	PKPdf	01 35 17.3	-0.3	
NATX				ePKPbc	PKPbc	01 35 19.7	-0.6	
CNNC	**Cliffs of the**	**147.74**	**358**	ePKPbc	PKPbc	01 35 19.6	-0.9	
JSC	**Jenkinsville**	**148.65**	**4**	ePKP2	PKPbc	01 35 21.6	-1.2	
HKT	**Hockley**	**148.67**	**29**	ePKIKP	PKPdf	01 35 19.2	-0.1	
HKT				e		01 35 23.0		
LRAL	**Lakeview Retre**	**149.04**	**13**	ePKPbc	PKPbc	01 35 22.2	-1.7	
GOGA	**Godfrey**	**149.30**	**7**	ePKPbc	PKPbc	01 35 23.4	-1.2	
GOGA				ePKPab	PKPab	01 35 27.8	-1.2	
BRAL	**Brewton**	**150.97**	**14**	ePKPdf	PKPdf	01 35 23.1	+0.2	
BRAL				ePKPbc	PKPbc	01 35 28.1	-0.5	
LVC	**Limon Verde**	**152.85**	**201**	ePKPdf	PKPdf	01 35 24.8	-1.1	
LVC				ePKPab	PKPab	01 35 44.6	+0.5	
SIV	**San Ignacio**	**154.22**	**223**	PKP	PKPdf	01 35 28.5	+0.5	
	comp=Z,2.8nm,0.9s,baz=146,slow=4.4,SNR=12							
SIV				PKPbc	PKPbc	01 35 35.9	-0.3	
	comp=Z,4.4nm,0.8s,baz=117,slow=4.3,SNR=16							
LPAZ	**La Paz**	**158.16**	**209**	PKP	PKPdf	01 35 34.4	+1.2	
	comp=Z,3.9nm,1.0s,baz=15,slow=0.5,SNR=11							
CMIG	**Matias Romero**	**158.94**	**47**	PKP	PKPdf	01 35 33.1	-1.0	
	comp=Z,2.8nm,0.6s,baz=54,slow=11,SNR=4.1							
ROSC	**El Rosal**	**174.91**	**293**	PKP	PKPdf	01 35 45.7	-0.5	
	comp=Z,3.9nm,0.6s,baz=121,slow=22,SNR=4.8							
OTAV	**Otavalo**	**177.36**	**192**	ePKPdf	PKPdf	01 35 47.2	+0.5	

IDC **16** *01:32:12.4±1.2, 5230N×169.35W, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.7/26, mbtmp3.8/9, Error ellipse: s-maj=40.0km s-min=24.1km az=3.0*

ISCJB **16** *01:32:13.9±2.1, 521N±0.1×1694W±0.1, h25km±13km, mb3.7/8, Error ellipse: s-maj=21.4km s-min=10.4km az=143.3*

NEIC **16** *01:32:15.9, 52.14N×169.17W, h4km, ML3.4(AEIC), After AEIC.*

ISC 16 01:32:13.2±2.9, 5212N±008×1694W±01, h8km±17km, n17, σ098/20, mb3.7/8, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NIKO	**Nikolski**	**0.92**	**21**	P		**Pb**	**01 32 31.1**	**-0.2**
NIKO				S		**Sb**	**01 32 44.4**	**+0.7**
OKCE	**Okmok Cone E**	**1.51**	**29**	P		**Pn**	**01 32 40.5**	**0.0**
OKCE				S		**Sn**	**01 33 01.3**	**+1.0**
OKCD	**Okmok Cone D**	**1.53**	**30**	P		**Pn**	**01 32 40.9**	**+0.1**
UNV	**Unalaska Vale**	**2.46**	**44**	P		**Pn**	**01 32 52.9**	**-0.6**
UNV				S		**Sn**	**01 33 22.3**	**-1.5**
AKGG	**Akutan Green G**	**2.92**	**43**	P		**Pn**	**01 33 00.8**	**+0.9**
KDAK	**Kodiak Island**	**11.20**	**53**	Pn		**Pn**	**01 34 50.7**	**-2.6**
	0.6nm,0.3s,baz=289,slow=11,SNR=3.8							
KDAK	**Kodiak Island**	**11.20**	**53**	Pn		**Pn**	**01 34 50.7**	**-2.6**
HYT	**Haines Junctio**	**19.17**	**51**	eP		**Pn**	**01 36 42.6**	**+1.3**
PETK	**Petropavlovsk-**	**19.91**	**286**	P		**Pn**	**01 36 45.6**	**-0.9**
	0.3nm,0.3s,baz=83,slow=14,SNR=9.6							
PDAR	**Pinedale Array**	**40.47**	**79**	P		**P**	**01 39 53.2**	**+1.2**
	0.5nm,0.6s,mb3.4,baz=347,slow=3.7,SNR=2.3							
TXAR	**Lajitas Array**	**52.77**	**89**	P		**P**	**01 41 28.7**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=282,slow=4.5,SNR=3.5							
KURK	**Kurchatov**	**62.55**	**318**	P		**P**	**01 42 37.6**	**+0.5**
	0.2nm,0.3s,mb3.8,baz=9.8,slow=9.1,SNR=4.2							
NOA	**NORSAR Array B**	**67.19**	**360**	P		**P**	**01 43 06.6**	**-0.5**
	1.0nm,0.7s,mb4.0,baz=0.2,slow=6.4,SNR=3.4							
HFS	**Hagfors**	**68.07**	**358**	P		**P**	**01 43 11.5**	**-1.2**
	2.2nm,0.7s,mb4.3,baz=54,slow=7.5,SNR=8.0							
CMAR	**Chiang Mai Arr**	**76.65**	**283**	P		**P**	**01 44 06.0**	**+1.5**
	0.3nm,0.3s,mb3.7,baz=33,slow=5.3,SNR=3.2							
ESDC	**Sonseca Array**	**87.71**	**11**	P		**P**	**01 45 01.4**	**-0.8**
	0.2nm,0.5s,mb3.6,baz=7.6,slow=3.9,SNR=4.0							
ASAR	**Alice Springs**	**90.22**	**230**	P		**P**	**01 45 14.1**	**+0.1**
	0.2nm,0.9s,mb3.5,baz=32,slow=4.3,SNR=3.3							

IDC **16** *02:20:40.7±0.5, 2025N×146.59E, h0km, mb4.7/21, mb1 4.8/25, mb1mx4.8/28, mbtmp4.7/25, ML4.3/4, MS4.4/26, Ms1 4.4/26, ms1mx4.3/40, Error ellipse: s-maj=17.1km s-min=11.6km az=75.0*

BJI **16** *02:20:43.1, 2026N×146.89E, h39km, mB5.3, mb5.0, Ms4.9, Msz4.6*

ISCJB **16** *02:20:44.4±0.2, 2028N±003×146.49E±003, h33km, mb5.0/137, MS4.5/45, Error ellipse: s-maj=4.1km s-min=3.4km az=29.0*

NEIC **16** *02:20:44.6±2.6, 2028N×146.49E, h25km±18km, mb5.1/73, Error ellipse: s-maj=6.1km s-min=4.5km az=100.0*

GCMT **16** *02:20:44.6±0.2, 2041N×146.78E, h12km, MW5.0/83, Moment Tensor Solution. s28,c37; s83,c133; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 3.17±.14; Mθθ -1.31±.11; Mφφ -1.86±.13; Mrθ -1.23±.41; Mθφ 3.70±.09; Mφr 1.16±.38; Best double couple: Mo 4.56100×10^16 NP1:φ143.00000°, δ34.00000°, λ98.00000°. NP2: φ313.00000°, δ56.00000°, λ85.00000°. Principal axes: T 3.5030, Plg78.0000°, Azm204.0000°; N 2.1160, Plg4.0000°, Azm316.0000°; P -5.6190, Plg11.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS **16** *02:20:44.3±1.1, 2027N×146.41E, h33km, mb5.2/50, MS4.5/7 Error ellipse: s-maj=9.1km s-min=5.5km az=96.7*

DJA **16** *02:21:56, 1201N×143.87E, h10km, mb5.4/9*

ISC 16 02:20:46.4±0.2, 2030N±003×146.52E±003, h35km, (h35km±1.5km: pP-P), n334, σ1§03/329, mb5.0/137, MS4.5/45, 4C-5D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**6.85**	**194**	Pn		**Pn**	**02 22 25.7**	**+1.2**
	57nm,0.3s,baz=105,slow=2.9,SNR=25							
GUMO				Sn		**Sn**	**02 23 46.2**	**+4.9**
	39nm,0.3s,baz=181,slow=21,SNR=2.5							
GUMO				LR		LR	02 25 03.1	
	comp=Z,6µm,18.2s,baz=17,slow=38							
GUMO	**Guam**	**6.85**	**194**	ePn		**Pn**	**02 22 26.1**	**+1.7**
CBIJ	**Chichi jima**	**7.85**	**330**	Pn		**Pn**	**02 22 37.2**	**-0.8**
	24nm,0.3s,baz=311,slow=22,SNR=8.8							
CBIJ				Sn		**Sn**	**02 24 02.7**	**-3.0**
	11nm,0.3s,baz=115,slow=23,SNR=3.8							
CBIJ	**Chichi jima**	**7.85**	**330**	P		**Pn**	**02 22 37.9**	**-0.2**
JHJ	**Hachijo jima 2**	**14.11**	**336**	Pn		**Pn**	**02 24 01.8**	**-2.0**
	4.6nm,0.3s,baz=248,slow=21,SNR=2.8							
JOD2	**Odawara 2**	**16.29**	**338**	P		**Pn**	**02 24 33.1**	**+0.7**
JRY	**Ryogami san**	**17.03**	**338**	P		**Pn**	**02 24 41.1**	**-0.7**
JGF	**Kuroka**	**17.25**	**334**	P		**Pn**	**02 24 44.0**	**-0.5**
MJAR	**Matsushiro Arr**	**17.75**	**338**	P		**Pn**	**02 24 48.5**	**-2.2**
	0.4nm,0.3s,baz=162,slow=10.0,SNR=25							
MAJO	**Matsushiro**	**17.75**	**338**	eP		**Pn**	**02 24 48.5**	**-2.2**
MAT	**Matsushiro**	**17.75**	**338**	P		**Pn**	**02 24 48.7**	**-2.0**
MAT				S		**S**	**02 28 03.0**	**-11**
MAT	**Matsushiro**	**17.75**	**338**	P		**Pn**	**02 24 49.1**	**-1.6**
JWT	**Wachi**	**17.86**	**329**	P		**Pn**	**02 24 53.7**	**+1.6**
JOW	**Kunigami**	**17.94**	**295**	P		**Pn**	**02 24 53.6**	**+0.5**
	1.9nm,0.3s,baz=126,slow=19,SNR=4.9							
JOW				LR		LR	02 31 09.8	
	comp=Z,3µm,18.1s,baz=133,slow=35							
JMM	**Marumori**	**18.20**	**345**	P		**Pn**	**02 24 55.6**	**-0.7**
JAD	**Aida**	**18.21**	**326**	P		**Pn**	**02 24 57.9**	**+1.5**
JHS	**Saijyo**	**18.82**	**324**	P		**Pn**	**02 25 03.9**	**0.0**
JNU	**Nakatsue**	**18.90**	**316**	P		**Pn**	**02 25 07.0**	**+2.2**
JSD	**Sado**	**19.08**	**340**	P		**Pn**	**02 25 05.6**	**-1.3**
JOM	**Ohasama**	**19.64**	**348**	P		**Pn**	**02 25 12.5**	**-1.0**
JTM	**Tenmabayashi**	**20.95**	**348**	P		**P**	**02 25 26.9**	**+0.7**
JOT	**Ohata**	**21.53**	**349**	P		**P**	**02 25 32.5**	**+0.1**
KSRS	**Korea Array**	**23.54**	**321**	P		**P**	**02 25 55.4**	**+1.8**
	20nm,0.7s,mb4.7,baz=146,slow=9.1,SNR=42							
KSRS				LR		LR	02 34 46.8	
	comp=Z,1µm,19.7s,MS4.3,baz=128,slow=36							
YHNB	**Yeheng**	**23.62**	**285**	eP		**P**	**02 25 54.5**	**-0.1**
	26nm,0.7s,mb4.8							
JMP	**Maruseppu**	**23.79**	**354**	P		**P**	**02 25 55.4**	**-0.4**
ASAJ	**Asahikawa**	**23.98**	**353**	P		**P**	**02 25 58.1**	**+0.6**
	16nm,0.8s,mb4.5,baz=206,slow=11,SNR=8.8							
ASAJ				LR		LR	02 34 53.4	
	comp=Z,670nm,18.3s,MS4.2,baz=170,slow=36							
ASAJ	**Asahikawa**	**23.98**	**353**	P		**P**	**02 25 57.3**	**-0.2**
DAV	**Davao City (W)**	**24.18**	**240**	LR		LR	02 35 34.6	
	comp=Z,543nm,19.5s,MS4.0,baz=83,slow=37							
INCN	**Inchon**	**24.34**	**319**	eP		**P**	**02 26 00.4**	**-0.5**
	81nm,1.0s,mb5.1							
SSE	**Sheshan**	**25.18**	**300**	P		**P**	**02 26 08.3**	**-0.3**
SSE				AP		pP	02 26 19.0	+0.4
SSE				S		**S**	**02 30 31.9**	**+0.3**
SSE				AMB		AMB		
	comp=Z,57nm,0.8s,mb5.2							
SSE				AMB		AMB		
	comp=Z,590nm,4.5s							
SSE				LR		LR		
	comp=N,469nm,22.9s,MS4.2							
SSE				LR		LR		
	comp=E,643nm,22.9s,MS4.2							
SSE				LR		LR		
	comp=Z,690nm,19.6s,MS4.2							
VLA	**Vladivostok**	**25.86**	**335**	eP		**P**	**02 26 14.3**	**-0.4**
VLA				eS		**S**	**02 30 49.1**	**+7.1**
VLA				pmax		pmax		
	comp=Z,104nm,1.4s,mb5.2							
VLA				MLR		MLR		
	comp=Z,1µm,17.0s,MS4.5							
YSS	**Yuzh-Sakhalins**	**26.77**	**354**	eP		**P**	**02 26 21.0**	**-1.8**
YSS				e			02 27 09.0	
YSS				MLR		MLR		
	comp=Z,500nm,15.0s,MS4.2							
YSS	**Yuzh-Sakhalins**	**26.77**	**354**	eP		**P**	**02 26 21.3**	**-1.5**
	comp=Z,12nm,0.6s,mb4.6							
NJ2	**Nanjing**	**27.37**	**301**	eP		**P**	**02 26 29.3**	**+0.9**
NJ2				AP		pP	02 26 38.8	+0.3
NJ2				XP		sP	02 26 42.1	-0.6
NJ2				PP			02 27 14.3	
NJ2				S		**S**	**02 31 04.0**	**-2.2**
NJ2				AMB		AMB		
	comp=Z,20nm,0.6s,mb4.8							
NJ2				AMB		AMB		
	comp=Z,630nm,4.7s							
NJ2				LR		LR		
	comp=N,730nm,16.4s,MS4.5							
NJ2				LR		LR		
	comp=E,1µm,18.5s,MS4.5							
NJ2				LR		LR		
	comp=Z,1µm,20.0s,MS4.4							
MDJ	**Mudanjiang**	**28.03**	**334**	P		**P**	**02 26 34.4**	**+0.2**
MDJ				AP		pP	02 26 43.1	-1.1
MDJ				XP		sP	02 26 47.0	-1.5
MDJ				S		**S**	**02 31 13.9**	**-2.4**
MDJ				AMB		AMB		
	comp=Z,8.0nm,1.1s,mb4.3							
MDJ				AMB		AMB		
	comp=Z,115nm,3.7s							
MDJ				LR		LR		
	comp=N,771nm,14.0s,MS4.7							
MDJ				LR		LR		
	comp=E,1µm,14.0s,MS4.7							
MDJ				LR		LR		
	comp=Z,1µm,17.8s,MS4.5							
DL2	**Dalian**	**28.36**	**316**	P		**P**	**02 26 40.9**	**+3.8**
DL2				eS		**S**	**02 31 27.3**	**+5.8**
DL2				AMB		AMB		
	comp=Z,30nm,0.6s,mb5.1							
DL2				LR		LR		
	comp=N,400nm,11.8s,MS4.5							
DL2				LR		LR		
	comp=E,750nm,13.1s,MS4.5							
DL2				LR		LR		
	comp=Z,870nm,14.1s,MS4.5							
SNY	**Shenyang**	**28.94**	**323**	||P	**P**	**02 26 46.8**	**+4.5**
SNY				AMB		AMB		
	comp=Z,18nm,1.7s,mb4.5							
SNY				AMB		AMB		
	comp=Z,295nm,5.2s							
SNY				LR		LR		
	comp=N,899nm,7.5s							
SNY				LR		LR		
	comp=E,945nm,9.9s							
SNY				LR		LR		
	comp=Z,1µm,13.6s,MS4.6							
CN2	**Changchun**	**29.30**	**328**	eP		**P**	**02 26 46.8**	**+1.3**
CN2				eS		**S**	**02 31 37.3**	**+1.0**
CN2				AMB		AMB		
	comp=Z,10.0nm,0.5s,mb4.8							
CN2				LR		LR		
	comp=N,1µm,15.0s,MS4.8							
CN2				LR		LR		
	comp=E,1µm,15.0s,MS4.8							
CN2				LR		LR		
	comp=Z,709nm,18.0s,MS4.3							
PMG	**Port Moresby**	**29.52**	**179**	eP		**P**	**02 26 46.9**	**-0.8**
PMG				pmax		pmax		
	comp=Z,48nm,0.8s							
PMG	**Port Moresby**	**29.52**	**179**	eP		**P**	**02 26 46.9**	**-0.8**
	comp=Z,48nm,0.8s,mb5.3							
KLR	**Kul'dur**	**31.20**	**341**	eP		**P**	**02 26 58.2**	**-4.0**
KLR				e			02 34 08.5	
BJI	**Beijing**	**32.56**	**314**	P		**P**	**02 27 13.8**	**-0.5**
BJI				AMB		AMB		
	comp=Z,5.0nm,0.7s,mb4.5							
KKM	**Kota Kinabalu**	**32.65**	**248**	eP		**P**	**02 27 14.6**	**-0.8**
PETK	**Petropavlovsk-**	**33.87**	**12**	P		**P**	**02 27 25.1**	**-0.5**
	comp=Z,7.5nm,0.9s,mb4.6,baz=194,slow=5.5,SNR=6.9							
PETK				LR		LR	02 38 46.2	
	comp=Z,578nm,22.0s,MS4.3,baz=291,slow=32							
PET	**Petropavlovsk**	**33.99**	**13**	eP		**P**	**02 27 25.5**	**-1.0**
PET				eS		**S**	**02 32 50.0**	**+0.8**
PET				pmax		pmax		
	comp=Z,14nm,1.2s,mb4.8							
PET	**Petropavlovsk**	**33.99**	**13**	eP		**P**	**02 27 25.9**	**-0.6**
	comp=Z,16nm,0.9s,mb5.0							
COEN	**Coen**	**34.20**	**186**	eP		**P**	**02 27 29.1**	**+0.4**
	comp=Z,9.1nm,0.9s,mb4.7							
QIZ	**Qiongzhong**	**34.52**	**274**	P		**P**	**02 27 31.9**	**+0.3**
QIZ				XP		sP	02 27 43.4	-2.5
QIZ				S		**S**	**02 32 57.8**	**-0.4**
QIZ				AMB		AMB		
	comp=Z,8.0nm,1.6s,mb4.4							
QIZ				LR		LR		
	comp=N,490nm,14.3s,MS4.5							
QIZ				LR		LR		
	comp=E,382nm,15.1s,MS4.5							
QIZ				LR		LR		
	comp=Z,487nm,15.4s,MS4.3							
HIA	**Hailar**	**35.95**	**330**	eP		**P**	**02 27 43.2**	**-0.4**
HIA				pmax		pmax		
	comp=Z,34nm,1.1s							
HIA	**Hailar**	**35.95**	**330**	eP		**P**	**02 27 43.2**	**-0.3**
	comp=Z,34nm,1.1s,mb5.2							
HHC	**Hu-ho-hao-te**	**36.07**	**312**	eP		**P**	**02 27 45.3**	**+0.6**
HHC				AP		pP	02 27 55.8	+0.9
HHC				XP		sP	02 28 00.0	+0.9
HHC				PP		PP	02 29 07.4	+0.4
HHC				PCP		PcP	02 30 11.8	+1.4

HHC S **S** **02 33 20.9 -0.7**
HHC XS sS 02 33 37.6 -0.8
HHC PCS PcS 02 33 57.8 0.0
HHC SS SS 02 35 44.9 -15
HHC AMB AMB
comp=Z,34nm,0.6s,mb5.5
HHC AMB AMB
comp=Z,197nm,6.2s
HHC LR LR
comp=N,910nm,12.9s,MS4.9
HHC LR LR
comp=E,800nm,12.4s,MS4.9
HHC LR LR
comp=Z,607nm,12.9s,MS4.6
GYA Guiyang 36.99 287⇑ *i*P **P** **02 27 54.4 +1.7**
GYA AP pP 02 28 04.3 +1.4
GYA PP PP 02 29 21.5 +4.2
GYA PCP PcP 02 30 14.9 +1.5
GYA S **S** **02 33 35.1 -0.9**
GYA SS SS 02 36 07.8 -11
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
GYA AMB AMB
comp=Z,120nm,5.2s
GYA LR LR
comp=N,780nm,13.7s,MS4.8
GYA LR LR
comp=E,700nm,13.7s,MS4.8
GYA LR LR
comp=Z,810nm,13.1s,MS4.7
CD2 Chengdu 39.77 294 P **P** **02 28 15.9 -0.2**
CD2 AP pP 02 28 27.4 +1.1
CD2 XP sP 02 28 31.4 +0.9
CD2 PP PP 02 29 51.8 +4.0
CD2 PCP PcP 02 30 23.5 +1.5
CD2 S **S** **02 34 16.4 -1.6**
CD2 AMB AMB
comp=Z,30nm,1.1s,mb4.9
CD2 AMB AMB
comp=Z,120nm,5.8s
CD2 LR LR
comp=N,1μm,15.6s,MS5.0
CD2 LR LR
comp=E,1μm,14.4s,MS5.0
CD2 LR LR
comp=Z,2μm,15.6s,MS5.0
CLNS Chul'man 39.86 342 *e*P **P** **02 28 17.0 +0.6**
CLNS *e**PP pP 02 28 25.0 -1.6
CLNS *e* 02 29 47.6
CLNS *e* 02 30 18.2
CLNS *e*S **S** **02 34 17.1 -1.4**
CLNS *e*SSS 02 37 46.4
CLNS pmax pmax
comp=E,7.0nm,0.8s
CLNS pmax pmax
comp=N,17nm,0.9s
CLNS pmax pmax
comp=Z,20nm,0.9s,mb4.8
CLNS smax
comp=N,147μm,13.3s
CLNS smax
comp=E,131μm,12.6s
CLNS MLR MLR
comp=N,592nm,17.0s,MS4.6
CLNS MLR MLR
comp=Z,395nm,14.0s,MS4.4
CLNS MLR MLR
comp=E,470nm,14.0s,MS4.6
KSM Kuching 40.01 247 *e*P **P** **02 28 15.8 -2.4**
CTA Charters Tower 40.13 180 *e*P **P** **02 28 16.1 -3.0**
comp=E,8.3nm,0.9s,mb4.5
CTA Charters Tower 40.13 180 *e*P **P** **02 28 16.1 -3.0**
CTA pmax pmax
comp=Z,8.0nm,0.9s
CTAO Charters Tower 40.13 180 *e*P **P** **02 28 18.2 -0.9**
CTAO pmax pmax
comp=Z,16nm,1.0s,mb4.7
CTAO Charters Tower 40.13 180 *e*P **P** **02 28 18.2 -0.8**
comp=Z,16nm,1.0s,mb4.7
LZH Lanzhou 40.43 302 *e*P **P** **02 28 22.0 +0.5**
LZH AP pP 02 28 32.0 +0.3
LZH XP sP 02 28 34.5 -1.4
LZH PP PP 02 29 59.1 +4.2
LZH *e*S **S** **02 34 28.5 +0.8**
LZH SS SS 02 37 25.0 -2.6
LZH AMB AMB
comp=Z,35nm,1.3s,mb4.9
LZH AMB AMB
comp=Z,140nm,4.0s
LZH LR LR
comp=N,1μm,13.8s
LZH LR LR
comp=Z,2μm,15.7s,MS5.1
KMI Kunming 40.54 285 P **P** **02 28 22.8 +0.3**
KMI AP pP 02 28 32.9 +0.1
KMI XP sP 02 28 37.3 +0.3
KMI PP PP 02 29 56.0 -0.3
KMI S **S** **02 34 27.8 -1.8**
KMI XS sS 02 34 46.1 -0.4
KMI AMB AMB
comp=Z,7.0nm,0.5s,mb4.5
KMI LR LR
comp=N,523nm,14.0s,MS4.7
KMI LR LR
comp=E,597nm,14.6s,MS4.7
KMI LR LR
comp=Z,444nm,13.0s,MS4.5
CIT Chita 40.73 329 *e*P **P** **02 28 23.6 -0.1**
CIT *e* 02 28 30.2
WRAB Tennant Creek 41.72 197 P **P** **02 28 31.0 -1.1**
comp=Z,161nm,0.7s,mb5.8,SNR=16
WRAB Tennant Creek 41.72 197 *e*P **P** **02 28 31.3 -0.8**
WRAB pmax pmax
comp=Z,25nm,0.8s,mb4.9
WRAB Tennant Creek 41.72 197 *e*P **P** **02 28 31.3 -0.8**
comp=Z,25nm,0.8s,mb4.9
WB2 Warramunga Arr 41.73 197 *e*P **P** **02 28 30.8 -1.4**
WRA Warramunga Arr 41.73 197 P **P** **02 28 30.7 -1.5**
comp=Z,5.2nm,0.6s,mb4.4,baz=23,slow=8.9,SNR=44
WRA PcP PcP 02 30 28.5 +0.2
comp=Z,4.3nm,0.8s,baz=13,slow=3.4,SNR=4.9
WRA LR LR 02 45 22.9
comp=Z,522nm,19.0s,MS4.4,baz=25,slow=36
WRA Warramunga Arr 41.73 197 P **P** **02 28 30.7 -1.5**
WRA 02 30 28.5
ULN Ulaanbaatar 42.02 320 *e*P **P** **02 28 35.1 +0.7**
ULN pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
ULN Ulaanbaatar 42.02 320 *e*P **P** **02 28 35.1 +0.7**
comp=Z,5.5nm,0.7s,mb4.3
SONM Songino Array 42.41 320 P **P** **02 28 37.2 -0.2**
comp=Z,4.7nm,0.7s,mb4.2,baz=139,slow=9.2,SNR=18
SONM LR LR 02 45 32.3
comp=Z,580nm,20.0s,MS4.5,baz=207,slow=35
FITZ Fitzroy Crossi 43.31 210 *e*P **P** **02 28 43.7 -1.4**
comp=Z,8.8nm,0.5s,mb4.8
YAK Yakutsk 43.31 349 *e*P **P** **02 28 43.5 -1.1**
YAK *e**PP pP 02 28 51.9 -3.0
YAK *e*S **S** **02 35 02.2 -7.3**
YAK *e* 02 38 44.6
YAK pmax pmax
comp=Z,14nm,0.9s,mb4.7
YAK pmax pmax
comp=E,2.0nm,1.2s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK smax
comp=E,221μm,16.8s
YAK smax
comp=N,58μm,16.1s
YAK MLR MLR
comp=Z,660nm,18.0s,MS4.6
YAK MLR MLR
comp=N,547nm,20.0s,MS4.5
YAK MLR MLR
comp=E,114nm,16.0s,MS4.5
YAK Yakutsk 43.31 349 *e*P **P** **02 28 44.1 -0.5**
GTA Gaotai 44.22 306 *e*P **P** **02 28 53.0 +0.8**
GTA AP pP 02 29 03.0 +0.4
GTA XP sP 02 29 07.1 +0.3
GTA PP PP 02 30 37.6 +2.0
GTA S **S** **02 35 24.4 +1.0**
GTA SS SS 02 38 35.8 -6.2
GTA AMB AMB
comp=Z,6.0nm,1.5s,mb4.1
GTA AMB AMB
comp=Z,188nm,5.1s
GTA LR LR
comp=N,589nm,14.7s,MS4.8
GTA LR LR
comp=E,612nm,16.8s,MS4.8
GTA LR LR
comp=Z,760nm,15.9s,MS4.7
NST Nakhon Sawan 44.25 272 P **P** **02 28 52.7 -0.1**
BOD Bodaibo 44.37 336 *e*P **P** **02 28 52.4 -0.7**
BOD pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
CHG Chiang Mai 44.74 277 ⇓P **P** **02 28 56.7 0.0**
comp=Z,14nm,1.0s,mb4.8
CMAR Chiang Mai Arr 44.80 276 P **P** **02 28 57.3 +0.1**
comp=Z,13nm,1.0s,mb4.7,baz=65,slow=6.7,SNR=49
CMAR LR LR 02 45 59.7
comp=Z,109nm,19.1s,MS3.8,baz=257,slow=34
CMAR Chiang Mai Arr 44.80 276 *i* P **P** **02 28 58.2 +1.0**
CMAR pmax pmax
comp=Z,13nm,1.0s
ZAK Zakamensk 45.36 322⇑ *i*P **P** **02 29 01.1 0.0**
ZAK pmax pmax
comp=Z,9.0nm,1.4s,mb4.4
ASAR Alice Springs 45.39 196 P **P** **02 29 00.5 -1.2**
comp=Z,3.3nm,0.7s,mb4.3,baz=17,slow=7.2,SNR=31
ASAR PcP PcP 02 30 40.9 +0.2
comp=Z,2.7nm,0.9s,baz=25,slow=4.6,SNR=3.7
TLY Talaya 45.72 324 *e*P **P** **02 29 02.0 -2.0**
TLY *e* 02 30 40.9
TLY *e*S **S** **02 35 42.4 -2.4**
TLY *e*SS SS 02 39 02.7 -6.6
TLY pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
DZM Mont Dzumac 46.39 154 *e*P **P** **02 29 09.6 0.0**
NIKO Nikolski 47.26 35 *e*P **P** **02 29 14.8 -1.3**
comp=Z,34nm,1.0s,mb5.2
MBWA Marble Bar 48.82 214 *e*P **P** **02 29 27.6 -0.9**
comp=Z,86nm,1.9s,mb5.5
BILL Bilibino 49.32 10⇑ *e*P **P** **02 29 33.9 +2.2**
BILL *e* 02 31 27.2
BILL pmax pmax
comp=Z,18nm,1.2s,mb5.0
BILL MLR MLR
comp=Z,700nm,20.0s,MS4.7
LSA Lhasa 50.65 292 P **P** **02 29 46.0 +3.6**
LSA Lhasa 50.65 292 *e*P **P** **02 29 45.0 +2.6**
LSA pmax pmax
comp=Z,20nm,0.6s,mb5.2
LSA Lhasa 50.65 292 *e*P **P** **02 29 45.0 +2.5**
comp=Z,20nm,0.6s,mb5.2
ARMA Armidale 50.66 174 *e*P **P** **02 29 42.1 -0.2**
STKA Stephens Creek 52.09 185 *e*P **P** **02 29 51.6 -1.4**
comp=Z,6.2nm,0.6s,mb4.7
STKA Stephens Creek 52.09 185 P **P** **02 29 51.9 -1.1**
comp=Z,5.1nm,0.5s,mb4.7,baz=9.5,slow=9.0,SNR=10
STKA LR LR 02 52 31.7
comp=Z,379nm,21.8s,MS4.4,baz=10,slow=37
TIXI Tiksi 52.38 353⇑ *e*P **P** **02 30 00.3 +5.6**
TIXI pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
TAPN Taplejung 53.85 290 *e*P **P** **02 30 07.8 +1.6**
comp=Z,67nm,0.7s,mb5.7
WMQ Urumqi 53.87 310 P **P** **02 30 07.6 +1.5**
WMQ AP pP 02 30 17.5 +0.8
WMQ XP sP 02 30 21.5 +0.7
WMQ PCP PcP 02 31 13.0 +1.6
WMQ *e*S **S** **02 37 38.0 -0.8**
WMQ XS sS 02 37 55.0 -1.2
WMQ SCS ScS 02 39 51.0 -1.9
WMQ SS SS 02 41 22.0 +2.0
WMQ AMB AMB
comp=Z,38nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,247nm,3.7s
WMQ LR LR
comp=N,1μm,16.5s,MS5.2
WMQ LR LR
comp=E,1μm,18.0s,MS5.2
WMQ LR LR
comp=Z,838nm,20.0s,MS4.8
ODAN Odare 54.18 289 *e*P **P** **02 30 09.7 +1.0**
comp=Z,89nm,0.8s,mb5.7
RAMN Ramite 54.87 289 *e*P **P** **02 30 14.3 +0.6**
comp=Z,61nm,0.7s,mb5.7
JIRN Jiri 55.16 290 *e*P **P** **02 30 17.4 +1.7**
CAN Canberra 55.36 178 *e*P **P** **02 30 15.9 -0.9**
CNB Canberra Magne 55.37 177 *e*P **P** **02 30 16.3 -0.6**
GUN Gumba 55.40 290 *e*P **P** **02 30 18.6 +1.1**
comp=Z,212nm,1.2s,mb6.0
PKI Pulchoki 55.85 290 *e*P **P** **02 30 21.6 +0.9**
comp=Z,80nm,0.9s,mb5.7
PKIN Phulchoki 55.86 290 *e*P **P** **02 30 21.3 +0.5**
comp=Z,44nm,0.6s,mb5.7
KKN Kakani 55.94 290 *e*P **P** **02 30 22.3 +0.9**
comp=Z,120nm,0.8s,mb6.0
DMN Daman 56.12 290 *e*P **P** **02 30 23.3 +0.7**
comp=Z,172nm,1.2s,mb6.0
GKN Gorkha 56.48 291 *e*P **P** **02 30 25.9 +0.7**
comp=Z,192nm,1.0s,mb6.1
DANN Dangsing 57.21 291 *e*P **P** **02 30 31.8 +1.4**
comp=Z,446nm,0.7s
ZAA0 Zalesovo Array 57.24 322 *e*P **P** **02 30 29.4 -0.7**
ZALV Zalesovo Beam 57.24 322 P **P** **02 30 30.1 -0.1**
comp=Z,11nm,0.6s,mb5.0,baz=110,slow=7.5,SNR=30
ZALV LR LR 02 54 03.1
comp=Z,259nm,21.7s,MS4.3,baz=276,slow=35
KOLN Koldanda 57.42 291 *e*P **P** **02 30 32.9 +1.0**
comp=Z,106nm,0.8s,mb6.0
TTA Tatalina 57.48 27 *e*P **P** **02 30 30.8 -0.9**
TOO Toolangi 57.56 181 *e*P **P** **02 30 32.1 -0.4**
MK31 Makanchi Array 57.93 313 *i* P **P** **02 30 35.4 +0.3**
MK31 pmax pmax
comp=Z,23nm,0.9s,mb5.2
MK31 Makanchi Array 57.93 313 *e*P **P** **02 30 35.8 +0.7**
MKAR Makanchi Array 57.93 313 P **P** **02 30 35.8 +0.7**
comp=Z,10nm,0.7s,mb5.0,baz=90,slow=8.7,SNR=34
MKAR LR LR 02 58 00.8
comp=Z,326nm,18.3s,MS4.5,baz=76,slow=39
NVS Novosibirsk 58.31 323 *e*P **P** **02 30 36.8 -0.8**
NVS *e*S **S** **02 38 38.8 +1.4**
NVS pmax pmax
comp=N,14nm,1.5s
NVS pmax pmax
comp=E,36nm,1.5s
NVS pmax pmax
comp=Z,48nm,1.5s,mb5.3
NVS smax
comp=N,25nm,2.3s
NVS smax
comp=E,13nm,2.3s
CHUM Lake Minchumin 59.37 27 *e*P **P** **02 30 44.3 -0.5**
comp=E,18μm,0.8s
IMA2 Indian Mountai 59.50 24 *e*P **P** **02 30 45.5 -0.3**
MUN Mundaring 59.54 210 *e*P **P** **02 30 45.6 -0.8**
KTH Kantishna Hill 59.87 27 *e*P **P** **02 30 47.0 -1.3**
comp=E,5μm,1.1s
NWAO Narrogin (SRO) 59.87 208 P **P** **02 30 48.3 -0.3**
comp=E,27nm,1.0s,mb5.2,baz=16,slow=8.8
NWAO LR LR 02 55 45.7
comp=E,180nm,20.0s,MS4.2,baz=30,slow=35
RAO Raoul Island 60.02 144 LR LR 02 54 42.3
comp=E,320nm,19.1s,MS4.5,baz=39,slow=34
TRF Thorofare Moun 60.11 28 *e*P **P** **02 30 48.6 -1.4**
comp=E,3μm,1.0s
PTH Pithoragarh 60.14 293 *e*P **P** **02 30 52.8 +2.0**
PMR Palmer 60.19 30 *e*P **P** **02 30 53.0 +2.5**
KURK Kurchatov 60.62 317 P **P** **02 30 53.5 -0.1**
comp=E,239nm,0.8s,mb6.4,SNR=26
KURK Kurchatov 60.62 317 P **P** **02 30 53.8 +0.2**
baz=90,slow=8.3
KURK Kurchatov 60.62 317 P **P** **02 30 52.9 -0.7**
KURK pmax pmax
comp=Z,74nm,1.8s,mb5.5
KURK Kurchatov 60.62 317 *e*P **P** **02 30 52.8 -0.9**
comp=Z,30nm,0.8s,mb5.5
MCK McKinley 60.77 27 *e*P **P** **02 30 54.7 +0.3**
MCK pmax pmax
comp=Z,10μm,0.6s
MCK McKinley 60.77 27 *e*P **P** **02 30 54.7 +0.3**
comp=Z,10μm,0.6s
COLD Coldfoot 61.19 23 *e*P **P** **02 30 56.9 -0.4**
comp=Z,17nm,1.1s,mb5.1
COLA College 61.50 26 *e*P **P** **02 31 00.9 +1.5**
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
COLA College 61.50 26 *e*P **P** **02 31 00.9 +1.6**
comp=Z,8.3nm,0.8s,mb4.9
BMRM Bremner River 62.22 31 *e*P **P** **02 31 03.6 -0.7**
TKM2 Tokmak 2 62.66 309 *e*P **P** **02 31 08.4 +0.9**
TKM2 pmax pmax
comp=Z,15nm,0.9s,mb5.1
TKM2 Tokmak 2 62.66 309 *e*P **P** **02 31 08.4 +0.9**
comp=Z,15nm,0.9s,mb5.1
NDI New Delhi 62.86 293 *e*P **P** **02 31 08.5 -0.7**
NDI *e*S **S** **02 39 37.0 +0.4**
HYB Hyderabad 63.98 280 *i* P **P** **02 31 17.5 +0.8**
EKS2 Erkin-Say 64.01 308 *e*P **P** **02 31 17.5 +1.0**
comp=Z,7.5nm,0.9s,mb4.7
AML Almayashu 64.11 308 *e*P **P** **02 31 18.7 +1.5**
comp=Z,18nm,1.0s,mb5.1
URZ Urewera 64.94 154 LR LR 02 56 44.4
comp=Z,467nm,19.3s,MS4.7,baz=141,slow=33
DAWY Dawson 64.99 28 *e*P **P** **02 31 22.1 -0.3**
VOSK Vostochnaya 65.40 320 P **P** **02 31 25.1 -0.3**
VOSK pmax pmax
comp=Z,63nm,1.9s,mb5.3
HYT Haines Junctio 65.67 31 *e*P **P** **02 31 27.0 +0.1**
BVA0 Borovoye Array 65.75 320 *i* P **P** **02 31 27.6 0.0**
BVA0 pmax pmax
comp=Z,15nm,1.4s,mb4.8
BVAR Borovoye Array 65.75 320 P **P** **02 31 28.4 +0.7**
baz=96,slow=8.1
BVAR LR LR 03 01 01.9
comp=Z,344nm,18.8s,MS4.6,baz=79,slow=37
BRVK Borovoye 65.81 320 P **P** **02 31 28.6 +0.6**
comp=Z,216nm,0.7s,mb6.3,SNR=9.5
BRVK Borovoye 65.81 320 *e*P **P** **02 31 28.3 +0.3**
BRVK pmax pmax
comp=Z,25nm,0.7s,mb5.3
BRVK Borovoye 65.81 320 *e*P **P** **02 31 28.3 +0.3**
comp=Z,25nm,0.7s,mb5.3
KK31 Karatay Array 66.36 309 *i* P **P** **02 31 31.8 +0.1**
KK31 pmax pmax
comp=Z,15nm,0.7s,mb5.1
RPZ Rata Peaks 67.56 161 P **P** **02 31 38.4 -0.7**
comp=Z,10nm,0.7s,mb4.9,baz=175,slow=11,SNR=3.7
DLBC Dease Lake 69.54 34 *e*P **P** **02 31 51.4 -0.1**
SVE Sverdlovsk 71.03 325⇓ *e*P **P** **02 32 00.5 -0.1**
SVE *e*PPP 02 36 22.1
SVE *e*S S 02 41 15.6 +1.5
SVE pmax pmax
comp=Z,33nm,1.3s,mb5.1
SVE MLR MLR
comp=Z,545nm,17.0s,MS4.9
ARU Arti 72.22 324 P **P** **02 32 08.6 +0.8**
comp=Z,148nm,0.8s,mb6.0,SNR=8.3
ARU Arti 72.22 324 *d i*P **P** **02 32 07.9 +0.1**
ARU *e* 02 32 23.0
ARU *e* 02 34 42.7
ARU *e*S S 02 41 30.7 +2.8
ARU *e*SS SS 02 46 04.2 -1.3
ARU pmax pmax
comp=Z,46nm,1.6s,mb5.2
ARU Arti 72.22 324 *e*P **P** **02 32 07.2 -0.5**
comp=Z,19nm,0.8s,mb5.1
AB31 Akbulak array 72.71 317 *i* P **P** **02 32 10.3 -0.5**
AB31 pmax pmax
comp=Z,17nm,0.9s,mb5.0
AKTK Aktyubinsk 73.69 318 P **P** **02 32 15.8 -0.8**
AKTO Aktyubinsk 73.69 318 P **P** **02 32 15.8 -0.8**
comp=Z,2.8nm,0.7s,mb4.3,baz=80,slow=9.9
AKTO Aktyubinsk 73.69 318 *i* P **P** **02 32 15.2 -1.4**
AKTO pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
NLWA Neilton Lookou 75.09 45 *e*P **P** **02 32 24.7 -0.1**
comp=Z,18nm,1.0s,mb5.0
GNW Green Mountain 75.73 44 *e*P **P** **02 32 27.9 -0.6**
comp=Z,20nm,1.0s,mb5.0
KEBM Edson Butte 75.88 49 *e*P **P** **02 32 28.1 -1.2**
CMW Cultus Mountai 75.98 43 P **P** **02 32 30.1 +0.2**
JCW Jim Creek 76.16 44 P **P** **02 32 30.9 0.0**
YKA Yellowknife Ar 76.22 28 P **P** **02 32 30.4 -0.6**
comp=Z,7.2nm,0.7s,mb4.7,baz=288,slow=5.7,SNR=8.1
YKA LR LR 03 03 24.9
comp=Z,279nm,21.5s,MS4.5,baz=205,slow=34
RPW Rockport 76.36 43 *e*P **P** **02 32 31.2 -0.8**
TDL Tradedollar La 76.45 45 P **P** **02 32 32.7 +0.2**
KHMM Horse Mountain 76.83 51 *e*P **P** **02 32 37.3 +2.5**
HUMO Hull Mountain 76.92 49 *e*P **P** **02 32 34.9 -0.4**
comp=Z,24nm,1.4s,mb4.9
TWW Teanaway 77.13 44 P **P** **02 32 39.4 +3.0**
KCPM Cahto Peak 77.25 52 *e*P **P** **02 32 37.0 -0.2**
KIPM Iron Peak 77.30 52 *e*P **P** **02 32 37.9 +0.4**
TBM Table Mountain 77.30 44 P **P** **02 32 37.0 -0.3**
YBH Yreka Blue Hor 77.34 50 LR LR 03 07 18.0
comp=Z,181nm,18.2s,MS4.4,baz=303,slow=36
YBH Yreka Blue Hor 77.34 50 *e*P **P** **02 32 37.7 0.0**
YBH pmax pmax
comp=Z,16nm,1.2s
YBH Yreka Blue Hor 77.34 50 *e*P **P** **02 32 37.7 0.0**
comp=Z,16nm,1.2s,mb4.8
ETW Entiat 77.35 44 *e*P **P** **02 32 37.0 -0.6**
EBG Ellensburg 77.39 45 P **P** **02 32 37.6 -0.3**
SPITS Spitsbergen Ar 77.72 351 LR LR 03 06 51.0
comp=Z,201nm,20.2s,MS4.4,baz=65,slow=36
WDC Whiskeytown Da 77.78 51 *e*P **P** **02 32 40.0 -0.1**
WDC pmax pmax
comp=Z,14nm,1.1s,mb4.8
WDC Whiskeytown Da 77.78 51 *e*P **P** **02 32 40.0 -0.1**
comp=Z,14nm,1.1s,mb4.8
RSW Rattlesnake Hi 78.18 45 *e*P **P** **02 32 41.3 -1.0**
GBL Gable Mountain 78.21 45 P **P** **02 32 42.0 -0.4**
HAWA Hanford 78.22 45 *e*P **P** **02 32 42.1 -0.4**
comp=Z,17nm,1.1s,mb4.9
NSHM Saint Helena R 78.31 53 *e*P **P** **02 32 42.8 -0.3**
LTIM Timbered Crate 78.37 50 P **P** **02 32 45.7 +2.3**
MOD Modoc 79.01 49 *e*P **P** **02 32 47.7 +0.8**
comp=Z,11nm,1.0s,mb4.8
LNOR Lincton Mounta 79.20 45 *e*P **P** **02 32 48.4 +0.5**
NEW Newport 79.22 43 *e*P **P** **02 32 47.1 -0.8**
NEW pmax pmax
comp=Z,24nm,1.3s
NEW Newport 79.22 43 *e*P **P** **02 32 47.1 -0.9**
comp=Z,24nm,1.3s,mb5.0
LVZ Lovozero 79.23 339 *e*P **P** **02 32 48.0 +0.4**
LVZ pmax pmax
comp=Z,18nm,0.8s,mb5.0
EDM Edmonton 79.85 37 *e*P **P** **02 32 50.1 -1.2**
WVOR Wild Horse Val 80.03 49 *e*P **P** **02 32 51.2 -1.3**
WVOR pmax pmax
comp=Z,25nm,1.1s,mb5.1
WVOR Wild Horse Val 80.03 49 *e*P **P** **02 32 51.2 -1.3**
comp=Z,25nm,1.1s,mb5.1
CMB Columbia Colle 80.12 53 *e*P **P** **02 32 52.4 -0.7**
CMB pmax pmax
comp=Z,33nm,1.4s,mb5.1
CMB Columbia Colle 80.12 53 *e*P **P** **02 32 52.4 -0.6**
comp=Z,33nm,1.4s,mb5.1
BMO Blue Mountains 80.18 46 *e*P **P** **02 32 52.8 -0.4**
PAHR Pah Rah Range 80.35 51 *e*P **P** **02 32 53.4 -0.8**
comp=Z,14nm,1.1s,mb4.8
WAKR Walker 80.69 52 *e*P **P** **02 32 56.1 0.0**
WALA Waterton Lakes 80.96 41 *e*P **P** **02 32 57.2 -0.2**
comp=Z,34nm,1.1s,mb5.2
ARCES ARCESS Array B 81.22 342 P **P** **02 32 57.7 -0.6**
comp=Z,5.9nm,0.7s,mb4.6,baz=62,slow=5.8,SNR=11
ARCES LR LR 03 14 15.9
comp=Z,444nm,18.1s,MS4.9,baz=271,slow=40
NVAR Mina Array Bea 81.55 52 P **P** **02 33 00.3 -0.4**
comp=Z,6.4nm,0.7s,mb4.7,baz=265,slow=6.1,SNR=26
NVAR Mina Array Bea 81.55 52 P **P** **02 33 00.3 -0.4**
BMN Battle Mountai 81.68 50 *e*P **P** **02 33 03.9 +2.6**
MTUM Tungsten Hills 81.71 53 *e*P **P** **02 33 04.1 +2.6**
MSO Missoula 81.73 43 *e*P **P** **02 33 03.8 +2.4**
CHMT Chamberlain Mo 82.14 43 *e*P **P** **02 33 04.9 +1.3**
ISA Isabella 82.33 55 *e*P **P** **02 33 06.5 +1.6**
TPH Tonopah 82.47 52 *e*P **P** **02 33 05.6 +0.1**
TPH pmax pmax
comp=Z,23nm,1.2s,mb5.0
TPH Tonopah 82.47 52 *e*P **P** **02 33 05.6 +0.1**
comp=Z,23nm,1.2s,mb5.0
HLID Hailey 82.57 46 *e*P **P** **02 33 05.8 -0.1**
comp=Z,7.4nm,1.1s,mb4.6
MAK Makhachkala 82.75 313 *e*P **P** **02 33 16.2 +9.3**
MAK pmax pmax
comp=Z,97nm,1.2s,mb5.7
JOF Joensuu 82.90 335 *e*pkp **P** **02 33 06.3 -0.9**
ELK Elko 83.00 49 *e*P **P** **02 33 07.8 -0.4**
ELK pmax pmax
comp=Z,27nm,1.0s

ELK	**Elko**	**83.00**	**49**	*e*P		**P**	**02 33 07.8**	**-0.4**
	comp=Z,27nm,1.0s,mb5.2							
LRM	**Limekiln Ridge**	**83.06**	**44**	*e*P		**P**	**02 33 07.8**	**-0.6**
MCMT	**McKenzie Canyo**	**83.16**	**45**	*e*P		**P**	**02 33 09.4**	**+0.4**
MOS	**Moscow**	**83.54**	**327**	*e*P		**P**	**02 33 09.5**	**-1.2**
MOS					pmax	pmax		
	comp=Z,136nm,1.7s,mb5.8							
TPNV	**Topopah Spring**	**83.58**	**53**	*e*P		**P**	**02 33 10.5**	**-0.8**
TPNV					pmax	pmax		
	comp=Z,37nm,1.5s,mb5.3							
TPNV	**Topopah Spring**	**83.58**	**53**	*e*P		**P**	**02 33 10.5**	**-0.8**
	comp=Z,38nm,1.5s,mb5.3							
BOZ	**Bozeman (W)**	**83.65**	**44**	*e*P		**P**	**02 33 11.1**	**-0.4**
BOZ					pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5							
BOZ	**Bozeman (W)**	**83.65**	**44**	*e*P		**P**	**02 33 11.1**	**-0.4**
	comp=Z,3.3nm,0.7s,mb4.6							
GSC	**Goldstone**	**83.73**	**55**	*e*P		**P**	**02 33 13.2**	**+1.1**
QLMT	**Earthquake Lak**	**84.10**	**44**	*e*P		**P**	**02 33 15.1**	**+1.3**
HVU	**Hansel Valley**	**84.35**	**48**	*e*P		**P**	**02 33 15.8**	**+0.7**
OBN	**Obninsk**	**84.36**	**327**	][*i*P		**P**	**02 33 14.5**	**-0.4**
OBN				*i*			02 36 31.6	
OBN					pmax	pmax		
	comp=Z,53nm,1.7s,mb5.4							
OBN					MLR	MLR		
	comp=Z,500nm,16.0s,MS5.0							
OBN	**Obninsk**	**84.36**	**327**	*e*P		**P**	**02 33 14.7**	**-0.2**
	comp=Z,96nm,1.4s,mb5.7							
YMR	**Madison River**	**84.47**	**44**	*e*P		**P**	**02 33 16.4**	**+0.8**
	comp=Z,29nm,1.0s,mb5.4							
BGU	**Big Grassy Mou**	**84.49**	**48**	*e*P		**P**	**02 33 15.1**	**-0.8**
SHPR	**Sheep Range**	**84.56**	**53**	*e*P		**P**	**02 33 18.5**	**+2.2**
PFO	**Pinyon Flat Ob**	**84.60**	**56**	*e*P		**P**	**02 33 18.2**	**+1.7**
PFO					pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8							
PFO	**Pinyon Flat Ob**	**84.60**	**56**	*e*P		**P**	**02 33 18.2**	**+1.7**
	comp=Z,9.0nm,1.0s,mb4.8							
YNR	**Norris Junctio**	**84.64**	**44**	*e*P		**P**	**02 33 18.0**	**+1.5**
YFT	**Old Faithful**	**84.64**	**45**	*e*P		**P**	**02 33 16.1**	**-0.4**
RRI2	**Red Ridge**	**84.74**	**46**	*e*P		**P**	**02 33 16.8**	**-0.3**
	comp=Z,12nm,1.0s,mb5.0							
BAR	**Barrett**	**84.75**	**57**	*e*P		**P**	**02 33 19.2**	**+1.8**
SPUT	**South Promonto**	**84.75**	**48**	*e*P		**P**	**02 33 18.6**	**+1.4**
DGRG	**David-gareji**	**84.78**	**312**	P		**P**	**02 33 16.2**	**-1.1**
IMW	**Indian Meadow**	**84.78**	**45**	*e*P		**P**	**02 33 17.4**	**+0.1**
	comp=Z,16nm,1.0s,mb5.1							
GCMT	**Greycliff**	**84.86**	**43**	*e*P		**P**	**02 33 17.9**	**+0.3**
FLWY	**Flagg Ranch**	**84.87**	**45**	*e*P		**P**	**02 33 17.7**	**0.0**
	comp=Z,15nm,0.7s,mb5.2							
LKWY	**Lake**	**84.88**	**44**	*e*P		**P**	**02 33 17.9**	**+0.2**
LKWY					pmax	pmax		
	comp=Z,12nm,0.9s,mb5.0							
LKWY	**Lake**	**84.88**	**44**	*e*P		**P**	**02 33 17.9**	**+0.2**
	comp=Z,12nm,0.9s,mb5.0							
DUG	**Dugway**	**84.92**	**49**	*e*P		**P**	**02 33 17.2**	**-0.8**
DUG					pmax	pmax		
	comp=Z,22nm,1.2s,mb5.2							
DUG	**Dugway**	**84.92**	**49**	*e*P		**P**	**02 33 17.2**	**-0.8**
	comp=Z,22nm,1.2s,mb5.2							
TPAW	**Teton Pass**	**84.94**	**46**	*e*P		**P**	**02 33 19.0**	**+0.9**
	comp=Z,13nm,1.1s,mb5.0							
MOOW	**Moose Ponds**	**84.97**	**45**	*e*P		**P**	**02 33 18.2**	**-0.1**
REDW	**Red Top Meadow**	**85.05**	**46**	*e*P		**P**	**02 33 20.0**	**+1.4**
SNOW	**Snow King Moun**	**85.08**	**45**	*e*P		**P**	**02 33 18.3**	**-0.5**
MTA	**Mtatsminda**	**85.09**	**313**	P		**P**	**02 33 21.7**	**+2.9**
TBLG	**Delisi**	**85.11**	**313**	P		**P**	**02 33 19.4**	**+0.5**
LOHW	**Long Hollow**	**85.12**	**45**	*e*P		**P**	**02 33 19.0**	**0.0**
	comp=Z,9.6nm,1.3s,mb4.8							
HWUT	**Hardware Ranch**	**85.25**	**47**	*e*P		**P**	**02 33 18.8**	**-0.9**
	comp=Z,30nm,1.2s,mb5.3							
KAF	**Kangasniemi**	**85.28**	**336**	*e*pkp		**P**	**02 33 17.8**	**-1.6**
FFC	**Flin Flon**	**85.34**	**33**	*e*P		**P**	**02 33 18.6**	**-1.2**
FFC					pmax	pmax		
	comp=Z,33nm,1.1s,mb5.4							
FFC	**Flin Flon**	**85.34**	**33**	*e*P		**P**	**02 33 18.6**	**-1.2**
	comp=Z,33nm,1.1s,mb5.4							
ARUT	**Antelope Range**	**85.37**	**52**	*e*P		**P**	**02 33 20.4**	**+0.1**
RLMT	**Red Lodge**	**85.39**	**44**	*e*P		**P**	**02 33 20.8**	**+0.5**
	comp=Z,22nm,0.9s,mb5.3							
CTU	**Camp Tracy**	**85.48**	**48**	*e*P		**P**	**02 33 23.1**	**+2.3**
CCUT	**Cedar City**	**85.51**	**52**	*e*P		**P**	**02 33 21.8**	**+0.8**
NLU	**North Lily Min**	**85.53**	**49**	*e*P		**P**	**02 33 22.6**	**+1.5**
KIV	**Kislovodsk**	**85.62**	**315**	*e*P		**P**	**02 33 22.5**	**+1.1**
KIV					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7							
KIV	**Kislovodsk**	**85.62**	**315**	*e*P		**P**	**02 33 22.9**	**+1.5**
ONI	**Oni**	**85.66**	**314**	P		**P**	**02 33 29.0**	**+7.3**
GNI	**Garni**	**85.72**	**311**	*e*P		**P**	**02 33 22.9**	**+0.9**
GNI					pmax	pmax		
	comp=Z,4.0nm,0.8s							
GNI	**Garni**	**85.72**	**311**	*e*P		**P**	**02 33 20.5**	**-1.5**
	comp=Z,57nm,1.6s,mb5.5							
JLU	**Jordanelle**	**85.72**	**48**	*e*P		**P**	**02 33 21.5**	**-0.5**
MPU	**Maple Canyon**	**85.82**	**49**	*e*P		**P**	**02 33 21.7**	**-0.9**
	comp=Z,25nm,1.5s,mb5.2							
DAU	**Daniels Canyon**	**85.93**	**48**	*e*P		**P**	**02 33 23.3**	**+0.2**
MSU	**Marysvale**	**86.02**	**50**	*e*P		**P**	**02 33 23.5**	**0.0**
BW06	**Boulder Array**	**86.16**	**46**	*e*P		**P**	**02 33 24.1**	**-0.1**
	comp=Z,5.9nm,1.0s,mb4.8							
PDAR	**Pinedale Array**	**86.16**	**46**	P		**P**	**02 33 23.4**	**-0.7**
	comp=Z,1.1nm,0.5s,mb4.4,baz=270,slow=2.7,SNR=8.3							
PDAR					LR	LR	03 06 49.1	
	comp=Z,183nm,19.1s,MS4.5,baz=344,slow=32							
TMUT	**Trail Mountain**	**86.41**	**49**	*e*P		**P**	**02 33 25.6**	**+0.2**
LAO	**LASA Array**	**86.65**	**41**	*e*P		**P**	**02 33 25.4**	**-1.1**
	comp=Z,32nm,0.9s,mb5.5							
SRU	**San Rafael**	**86.97**	**49**	*e*P		**P**	**02 33 27.1**	**-1.1**
SRU					pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.9							
SRU	**San Rafael**	**86.97**	**49**	*e*P		**P**	**02 33 27.1**	**-1.1**
	comp=Z,4.6nm,0.6s,mb4.9							
DGMT	**Dagmar**	**87.07**	**39**	*e*P		**P**	**02 33 28.2**	**-0.3**
	comp=Z,6.9nm,0.6s,mb5.1							
SUMG	**Summit**	**87.30**	**1**	*e*P		**P**	**02 33 27.3**	**-1.8**
	comp=Z,6.2nm,1.1s,mb4.8							
WUAZ	**Wupatki**	**87.78**	**53**	*e*P		**P**	**02 33 31.7**	**-0.5**
	comp=Z,20nm,1.1s,mb5.2							
RWWY	**Rawlins**	**88.19**	**46**	*e*P		**P**	**02 33 33.8**	**-0.3**
	comp=Z,24nm,1.3s,mb5.3							
PV10	**Paradox Valley**	**88.33**	**50**	*e*P		**P**	**02 33 34.7**	**0.0**
PV01	**Paradox Valley**	**88.76**	**50**	*e*P		**P**	**02 33 36.3**	**-0.5**
RSSD	**Black Hills**	**89.19**	**43**	*e*P		**P**	**02 33 38.5**	**-0.1**
RSSD					pmax	pmax		
	comp=Z,14nm,1.3s,mb5.1							
RSSD	**Black Hills**	**89.19**	**43**	*e*P		**P**	**02 33 38.5**	**-0.2**
	comp=Z,14nm,1.3s,mb5.1							
MVCO	**Mesa Verde**	**89.20**	**50**	*e*P		**P**	**02 33 39.4**	**+0.5**
	comp=Z,23nm,1.4s,mb5.3							
TUC	**Tucson**	**89.50**	**56**	*e*P		**P**	**02 33 40.9**	**+0.5**
TUC					pmax	pmax		
	comp=Z,12nm,1.4s,mb5.0							
TUC	**Tucson**	**89.50**	**56**	*e*P		**P**	**02 33 40.9**	**+0.6**
	comp=Z,12nm,1.4s,mb5.0							
ISCO	**Idaho Springs**	**90.12**	**47**	*e*P		**P**	**02 33 43.5**	**+0.4**
ISCO					pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0							
ISCO	**Idaho Springs**	**90.12**	**47**	*e*P		**P**	**02 33 43.5**	**+0.5**
	comp=Z,8.6nm,1.0s,mb5.0							
AKASG	**Malin Array Be**	**90.44**	**326**	P		**P**	**02 33 42.9**	**-1.5**
	comp=Z,1.2nm,0.7s,mb4.4,baz=50,slow=4.9,SNR=8.2							
ULM	**Lac du Bonnet**	**90.85**	**35**	P		**P**	**02 33 46.1**	**-0.2**
	comp=Z,3.9nm,0.8s,mb4.8,baz=342,slow=4.0,SNR=4.1							
ULM					LR	LR	03 11 19.7	
	comp=Z,229nm,19.7s,MS4.6,baz=298,slow=34							
MALT	**Malatya**	**90.94**	**312**	*e*P		**P**	**02 33 44.0**	**-3.0**
MALT					pmax	pmax		
	comp=Z,21nm,1.4s,mb5.3							
MALT	**Malatya**	**90.94**	**312**	*e*P		**P**	**02 33 44.0**	**-2.9**
	comp=Z,21nm,1.4s,mb5.3							
SDCO	**Great Sand Dun**	**91.12**	**49**	*e*P		**P**	**02 33 47.5**	**-0.2**
	comp=Z,6.4nm,1.2s,mb4.8							
NOA	**NORSAR Array B**	**91.35**	**340**	LR		LR	03 18 55.1	
	comp=Z,198nm,18.2s,MS4.6,baz=0.0,slow=38							
LAZ	**Ladron**	**91.40**	**53**	*e*P		**P**	**02 33 51.0**	**+1.8**
SUW	**Suwalki**	**91.50**	**330**	*e*P		**P**	**02 33 45.4**	**-3.8**
SUW					pmax	pmax		
	comp=Z,59nm,1.3s,mb5.8							
SUW	**Suwalki**	**91.50**	**330**	*e*P		**P**	**02 33 45.4**	**-3.8**
	comp=Z,59nm,1.3s,mb5.8							
ANMO	**Albuquerque**	**91.67**	**52**	*e*P		**P**	**02 33 51.3**	**+0.9**
ANMO					pmax	pmax		
	comp=Z,10.0nm,1.4s							
ANMO	**Albuquerque**	**91.67**	**52**	*e*P		**P**	**02 33 51.3**	**+0.9**
	comp=Z,10nm,1.4s,mb5.0							
BNM	**Barren Site**	**91.89**	**53**	*e*P		**P**	**02 33 51.6**	**+0.1**
AGMN	**Agassiz Refuge**	**91.94**	**36**	*e*P		**P**	**02 33 48.3**	**-3.1**
	comp=Z,14nm,0.9s,mb5.3							
TXAR	**Lajitas Array**	**96.30**	**56**	P		**P**	**02 34 12.2**	**+0.5**
	comp=Z,0.4nm,0.7s,mb4.0,baz=268,slow=3.5,SNR=5.1							
TXAR					LR	LR	03 10 29.8	
	comp=Z,134nm,21.3s,MS4.4,baz=265,slow=31							
MORC	**Moravsky Berou**	**96.91**	**329**	*e*P		**P**	**02 34 13.2**	**-0.9**
DPC	**Dobruska-Polom**	**97.09**	**330**	*e*PP		PP	02 38 11.7	+1.4
UPC	**Upice**	**97.12**	**331**	*e*PP		PP	02 38 12.6	+2.1
WMOK	**Wichita Mounta**	**97.32**	**49**	*e*P		**P**	**02 34 17.2**	**+0.9**
WMOK					pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0							
WMOK	**Wichita Mounta**	**97.32**	**49**	*e*P		**P**	**02 34 17.2**	**+0.9**
	comp=Z,6.8nm,1.0s,mb5.0							
CLL	**Collm**	**97.89**	**333**	*e*P		**P**	**02 34 20.0**	**+1.5**
CLL				L			02 23 00.0	
	comp=Z,200nm,18.5s							
PRU	**Pruhonice**	**98.16**	**331**	*e*PP		PP	02 38 20.8	+2.3
TREC	**Trest**	**98.21**	**330**	*e*PP		PP	02 38 20.5	+1.6
JCT	**Junction City**	**98.71**	**53**	*e*P		**P**	**02 34 22.8**	**+0.2**
KHC	**Kasperske Hory**	**99.21**	**331**	*e*PP		PP	02 38 29.7	+3.2
GERES	**GERESS Array B**	**99.36**	**331**	P		**P**	**02 34 26.2**	**+1.1**
	comp=Z,0.4nm,0.9s,mb4.0,baz=57,slow=7.2,SNR=2.9							
GERES					LR	LR	03 22 01.6	
	comp=Z,186nm,18.5s,MS4.6,baz=245,slow=37							
SCHQ	**Schefferville**	**99.93**	**19**	LR		LR	03 17 03.7	
	comp=Z,215nm,20.4s,MS4.6,baz=218,slow=34							
LSZ	**Lusaka**	**121.35**	**264**	*e*PKIKP		PKPdf	02 39 37.0	+0.3
TAM	**Tamanrasset**	**122.71**	**316**	*e*PKIKP		PKPdf	02 39 39.8	+0.5
SNAA	**Sanae**	**125.64**	**191**	*e*PKIKP		PKPdf	02 39 42.9	-0.4
TORD	**Torodi Ar. Bea**	**132.03**	**311**	PKP		PKPdf	02 39 57.0	-0.2
	comp=Z,1.2nm,0.9s,baz=14,slow=1.9,SNR=7.5							
TORD					PP	PP	02 42 20.4	+2.4
	comp=Z,2.2nm,0.9s,baz=48,slow=4.8,SNR=4.2							
DBIC	**Dimbokro**	**141.14**	**311**	PKhKP			02 40 06.8	
	comp=Z,3.5nm,1.0s,baz=56,slow=4.0,SNR=4.5							
DBIC	**Dimbokro**	**141.14**	**311**	PKP			02 40 06.8	
PLCA	**Paso Flores**	**142.49**	**131**	PKP		PKPdf	02 40 14.8	-0.9
	comp=Z,0.9nm,0.5s,baz=332,slow=4.4,SNR=2.8							
LCO	**Las Campanas**	**145.19**	**112**	*e*PKPbc		PKPbc	02 40 21.4	+0.9
LPAZ	**La Paz**	**146.90**	**89**	PKPbc		PKPbc	02 40 26.8	+0.8
	comp=Z,6.0nm,0.6s,baz=329,slow=4.3,SNR=25							
LPAZ	**La Paz**	**146.90**	**89**	PKPbc		PKPbc	02 40 26.8	+0.8
CFAA	**Coronel Fontan**	**146.91**	**117**	PKPbc		PKPbc	02 40 24.8	-0.8
	comp=Z,1.9nm,0.9s,baz=265,slow=4.5,SNR=24							
CFAA	**Coronel Fontan**	**146.91**	**117**	PKPbc		PKPbc	02 40 24.8	-0.8
LVC	**Limon Verde**	**146.99**	**100**	PKPbc		PKPbc	02 40 26.7	+0.7
	comp=Z,8.4nm,0.7s,baz=281,slow=2.1,SNR=7.4							
LVC	**Limon Verde**	**146.99**	**100**	*e*PKPbc		PKPbc	02 40 27.3	+1.2
TRQA	**Tornquist**	**149.64**	**132**	*e*PKPbc		PKPbc	02 40 32.8	+0.2
SIV	**San Ignacio**	**153.45**	**85**	PKP		PKPdf	02 40 35.1	+0.8
	comp=Z,2.1nm,1.1s,baz=274,slow=14,SNR=5.0							
SIV					PKPbc	PKPbc	02 40 41.6	-0.3
	comp=Z,2.0nm,0.7s,baz=240,slow=3.3,SNR=6.2							

***IDC* 16 02:29:43.6±8.7, 157S×10087E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/18, mbtmp3.5/4, Error ellipse: s-maj=443.9km s-min=23.8km az=54.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.47**	**121**	P	P	02 36 59.4	+0.3
	0.3nm,0.4s,baz=300,slow=10,SNR=8.7						
ASAR	**Alice Springs**	**38.81**	**127**	P	P	02 37 10.1	-0.3
	0.5nm,0.8s,baz=302,slow=7.6,SNR=5.9						
MKAR	**Makanchi Array**	**50.86**	**344**	P	P	02 38 46.4	+0.2
	0.3nm,0.3s,baz=156,slow=8.6,SNR=5.6						
ZALV	**Zalesovo Beam**	**56.91**	**349**	P	P	02 39 30.0	-0.3
	0.3nm,0.3s,baz=177,slow=5.8,SNR=3.8						

IDC **16** *02:40:38.2±0.6, 206S×121.17E, h0km, mb4.3/11, mb1 4.3/12, mb1mx4.2/20, mbtmp4.2/12, ML3.0/1, MS3.8/1, Ms1 3.8/1, ms1mx2.7/32, Error ellipse: s-maj=50.6km s-min=13.3km az=60.0*

NEIC **16** *02:40:38.9±8.1, 227S×12085E, h6km±51km, mb4.7/5, Error ellipse: s-maj=27.5km s-min=9.8km az=50.0*

BJI **16** *02:40:39.6, 2.10S×12158E, h12km, mB5.4, mb4.7, Ms5.1, Msz4.7*

ISCJB **16** *02:40:42.7±0.8, 229S±005×12095E±006, h48km±8km, mb4.4/15, Error ellipse: s-maj=10.7km s-min=7.3km az=157.1*

DJA **16** *02:40:45, 229S×121.14E, h10km, MLv5.0/8*

ISC 16 02:40:44.2±0.7, 231S±005×12094E±006, h43km±8km, n31, σ1°02/30, mb4.4/15, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**1.78**	**322**	P	**Pn**	**02 41 12.4**	**-0.1**
	0.0nm,0.0s						
KDI	**Kendari**	**2.34**	**134**	P	**Pn**	**02 41 18.5**	**-1.7**
	0.0nm,0.0s						
KAPI	**Kappang**	**2.94**	**204**	Pn	**Pn**	**02 41 25.4**	**-3.0**
	21nm,0.3s,baz=41,slow=7.9,SNR=27						
KAPI				Sn	**Sn**	**02 42 02.4**	**0.0**
	51nm,0.3s,baz=231,slow=19,SNR=15						
BBSI	**Bau Bau**	**3.55**	**153**	P	**Pn**	**02 41 37.0**	**+0.2**
	0.0nm,0.0s						
SMKI	**Samarinda**	**4.17**	**296**	P	**Pn**	**02 41 46.4**	**+1.1**
	0.0nm,0.0s						
MNI	**Manado**	**5.39**	**46**	P	**Pn**	**02 42 03.5**	**+1.3**
	0.0nm,0.0s						
LBMI	**Labuha**	**6.76**	**76**	P	**Pn**	**02 42 20.5**	**-0.5**
	0.0nm,0.0s						
BATI	**Baumata**	**8.30**	**161**	P	**Pn**	**02 42 37.6**	**-4.4**
	0.0nm,0.0s						
BATI	**Baumata**	**8.30**	**161**	Pn	**Pn**	**02 42 44.9**	**+2.9**
	2.9nm,0.3s,baz=259,slow=1.6,SNR=13						
BATI				LR	LR	02 46 08.3	
	comp=Z,583nm,20.1s,baz=298,slow=39						
FITZ	**Fitzroy Crossi**	**16.36**	**164**	Pn	**Pn**	**02 44 31.7**	**+0.8**
	0.1nm,0.3s,baz=331,slow=13,SNR=2.7						
WRAB	**Tennant Creek**	**21.87**	**144**	*e*P	**P**	**02 45 33.9**	**+0.4**
	18nm,1.0s,mb4.5						
WRA	**Warramunga Arr**	**21.87**	**144**	P	**P**	**02 45 32.8**	**-0.8**
	8.3nm,0.8s,mb4.2,baz=326,slow=9.9,SNR=17						
WB2	**Warramunga Arr**	**21.88**	**144**	*e*P	**P**	**02 45 33.0**	**-0.6**
ASAR	**Alice Springs**	**24.66**	**150**	P	**P**	**02 46 01.3**	**+0.2**
	3.6nm,0.6s,mb4.1,baz=336,slow=9.7,SNR=21						
ASAR				PcP	PcP	02 49 38.7	+0.8
	0.9nm,0.5s,baz=344,slow=1.8,SNR=10						
CMAR	**Chiang Mai Arr**	**29.91**	**315**	P	**P**	**02 46 48.6**	**+0.3**
	2.9nm,0.7s,mb4.1,baz=137,slow=7.4,SNR=12						
STKA	**Stephens Creek**	**35.26**	**149**	*e*P	**P**	**02 47 35.9**	**+1.0**
	7.8nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**35.26**	**149**	P	**P**	**02 47 35.8**	**+0.9**
	10.0nm,0.6s,mb4.9,baz=317,slow=9.1,SNR=15						
GTA	**Gaotai**	**45.83**	**337**	*e*P	**P**	**02 49 03.8**	**+1.7**
GTA				AP	pP	02 49 14.5	+0.4
GTA				XP	sP	02 49 18.5	-0.6
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
SONM	**Songino Array**	**51.53**	**348**	P	**P**	**02 49 45.3**	**-0.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=184,slow=7.8,SNR=4.2						
MKAR	**Makanchi Array**	**59.53**	**330**	P	**P**	**02 50 42.9**	**-0.4**
	comp=Z,2.4nm,0.6s,mb4.4,baz=127,slow=7.0,SNR=17						
KBL	**Kabul**	**60.90**	**312**	*e*P	**P**	**02 50 52.1**	**-0.7**
	comp=Z,8.6nm,0.7s,mb5.0						
AML	**Almayashu**	**61.46**	**322**	*e*P	**P**	**02 50 55.8**	**-0.7**
	comp=Z,2.6nm,0.8s,mb4.4						
URZ	**Urewera**	**62.44**	**132**	P	**P**	**02 51 03.8**	**+0.6**
	comp=Z,5.2nm,0.9s,mb4.7,baz=322,slow=19,SNR=2.2						
ZALV	**Zalesovo Beam**	**63.59**	**337**	P	**P**	**02 51 08.7**	**-1.7**
	comp=Z,1.4nm,0.7s,mb4.1,baz=111,slow=6.8,SNR=5.2						
KURK	**Kurchatov**	**63.98**	**332**	P	**P**	**02 51 12.5**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.2,baz=141,slow=5.7,SNR=4.1						
KURK	**Kurchatov**	**63.98**	**332**	*e*P	**P**	**02 51 13.3**	**+0.3**
	comp=Z,8.3nm,1.1s,mb4.7						
AKTK	**Aktyubinsk**	**74.93**	**324**	P	**P**	**02 52 20.1**	**-0.6**
AKTO	**Aktyubinsk**	**74.93**	**324**	P	**P**	**02 52 20.1**	**-0.6**
	comp=Z,2.0nm,0.8s,mb4.1,baz=98,slow=10,SNR=3.9						
MAW	**Mawson**	**76.14**	**200**	P	**P**	**02 52 29.6**	**+2.2**
	comp=Z,1.0nm,0.6s,mb3.9,baz=37,slow=5.1,SNR=3.2						
TORD	**Torodi Ar. Bea**	**118.99**	**284**	PKP	PKPdf	02 59 28.6	-0.7
	comp=Z,0.4nm,0.8s,baz=143,slow=1.5,SNR=3.2						
CPUP	**Villa Florida**	**151.48**	**183**	PKPbc	PKPbc	03 00 36.5	+2.1
	comp=Z,0.6nm,0.5s,baz=0.1,slow=12,SNR=2.1						

ISCJB **16** *02:44:27.3±0.9, 1187N±007×1448E±0.3, h33km, mb4.0/7, Error ellipse: s-maj=39.4km s-min=9.0km az=7.0*

NEIC **16** *02:44:29.1±0.6, 1185N×144.88E, mb4.2/2, Error ellipse: s-maj=28.0km s-min=10.8km az=93.0*

IDC **16** *02:44:29.3±1.1, 1183N×144.86E, h34km±6km, mb3.7/6, mb1 3.9/6, mb1mx3.6/21, mbtmp3.7/6, Error ellipse: s-maj=41.2km s-min=16.3km az=88.0*

ISC 16 02:44:29.1±0.9, 1190N±007×1449E±03, h35km, (h37km±1.4km: pP-P), n10, σ0°90/10, mb4.0/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.68**	**359**	Pn	**Pn**	**02 44 55.6**	**-0.4**
	42nm,0.3s,baz=168,slow=11,SNR=16						
GUMO				Sn	**Sn**	**02 45 15.0**	**-1.2**
	109nm,0.3s,baz=326,slow=21,SNR=10						
WRAB	**Tennant Creek**	**33.29**	**198**	*e*P	**P**	**02 51 03.1**	**-0.4**
	1.5nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**33.31**	**198**	P	**P**	**02 51 02.4**	**-1.2**
	1.3nm,0.8s,mb3.9,baz=21,slow=9.5,SNR=10						
WRA				pP	pP	02 51 13.3	-0.5
	0.6nm,0.8s,baz=21,slow=9.6,SNR=6.7						
ASAR	**Alice Springs**	**36.95**	**197**	P	**P**	**02 51 34.5**	**-0.5**
	0.6nm,0.6s,mb3.6,baz=7.1,slow=10,SNR=7.0						
MKAR	**Makanchi Array**	**62.71**	**317**	P	**P**	**02 54 51.1**	**+0.5**
	0.5nm,0.5s,mb3.9,baz=92,slow=8.0,SNR=3.6						
MKAR				pP	pP	02 55 01.9	+0.6
	0.4nm,0.3s,baz=93,slow=8.5,SNR=2.2						
KURK	**Kurchatov**	**65.88**	**320**	P	**P**	**02 55 12.4**	**+1.2**
	0.6nm,0.4s,mb4.0,baz=104,slow=6.5,SNR=3.2						
KURK				pP	pP	02 55 22.6	+0.6
	1.0nm,0.4s,baz=104,slow=6.5,SNR=2.2						
KURK	**Kurchatov**	**65.88**	**320**	*e*P	**P**	**02 55 12.0**	**+0.8**
	2.3nm,0.8s,mb4.3						
KURK				pP	pP	02 55 22.6	+0.6
BVAR	**Borovoye Array**	**71.25**	**322**	P	**P**	**02 55 45.8**	**+1.1**
	3.2nm,0.6s,mb4.4,baz=108,slow=8.1,SNR=14						
BVAR				pP	pP	02 55 56.0	+0.4
	2.2nm,0.6s,baz=101,slow=8.0,SNR=5.9						
NVAR	**Mina Array Bea**	**87.95**	**51**	P	**P**	**02 57 16.9**	**+1.2**
	0.9nm,0.6s,mb3.7,baz=258,slow=3.6,SNR=3.3						
LPAZ	**La Paz**	**147.71**	**102**	PKPbc	PKPbc	03 04 11.9	+0.9
	0.8nm,0.8s,baz=134,slow=4.6,SNR=3.5						

ISCJB **16** *02:47:35.9±1.0, 2361N±0.10×144.1E±0.2, h33km, mb4.0/6, Error ellipse: s-maj=31.1km s-min=10.4km az=161.9*

IDC **16** *02:47:38.2±6.0, 2363N×144.13E, h37km±51km, mb3.8/6, mb1 4.0/8, mb1mx3.7/23, mbtmp3.9/8, ML3.7/2, Error ellipse: s-maj=38.4km s-min=20.3km az=81.0*

ISC 16 02:47:36.1±6.6, 236N±01×1442E±0.2, h22km±47km, n8, σ0°38/9, mb4.0/6, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.90**	**333**	Pn	**Pn**	**02 48 34.5**	**-0.2**
	10nm,0.3s,baz=286,slow=20,SNR=7.7

	1.8nm,0.3s,baz=13,slow=20,SNR=17							
IDI				Sn		**Sn**	02 50 09.6	**+2.3**
	6.9nm,0.3s,baz=349,slow=21,SNR=4.6							
SMG	**Samos**	**3.87**	**95**	P		**Pn**	02 49 28.3	**+2.2**
TIP	**Timpagrande**	**4.21**	**286**	P		**Pn**	02 49 32.9	**+2.2**
PE1	**Pezze di Greco**	**4.40**	**308**	*e*Pn		**Pn**	02 49 34.7	**+1.3**
SG1	**Sgolgore (BA)**	**4.89**	**305**	*e*Pn		**Pn**	02 49 40.5	**+0.3**
CUC	**Castrocucco**	**5.13**	**293**	P		**Pn**	02 49 47.1	**+3.7**
TREB	**Trebinje**	**5.33**	**330**	*e*Pn		**Pn**	02 49 46.5	**+0.4**
TREB				*e*Sn		**Sn**	02 50 46.5	**-0.9**
VAE	**Valguarnera**	**6.03**	**266**	Pn		**Pn**	02 50 00.3	**+4.6**
	0.3nm,0.3s,baz=75,slow=20,SNR=2.3							
VAE				Sn		**Sn**	02 51 13.4	**+8.8**
	1.2nm,0.3s,baz=57,slow=14,SNR=4.1							
DIVS	**Divibare**	**6.12**	**346**	*e*Pn		**Pn**	02 49 57.2	**+0.2**
DIVS				*e*Sn		**Sn**	02 51 06.0	**-1.0**
BZS	**Buzias**	**7.46**	**358**	⇑*i*P		**Pn**	02 50 20.2	**+4.8**
BLY	**Banja Luka**	**7.50**	**333**	*e*Pn		**Pn**	02 50 15.7	**-0.3**
BLY				*e*Sn		**Sn**	02 51 39.1	**-1.9**
MLR	**Muntele Rosu**	**7.91**	**21**	Pn		**Pn**	02 50 24.3	**+2.8**
	0.2nm,0.3s,baz=140,slow=18,SNR=2.2							
MLR	**Muntele Rosu**	**7.91**	**21**	⇓*i*P		**Pn**	02 50 21.7	**+0.2**
PKSM	**Moragy**	**8.42**	**344**	⇑*i*P		**Pn**	02 50 27.4	**-1.2**
PLOR	**Plostina**	**8.44**	**23**	⇑*i*P		**Pn**	02 50 34.9	**+6.1**
CRES	**Cresnjev**	**9.07**	**330**	*e*Pn		**Pn**	02 50 36.7	**-0.7**
CEY	**Cerknica**	**9.43**	**326**	*e*Pn		**Pn**	02 50 41.7	**-0.7**
KEST	**Kesra**	**10.39**	**260**	Pn		**Pn**	02 50 59.6	**+4.0**
	0.0nm,0.3s,baz=221,slow=6.8,SNR=4.2							
PGF	**Pioggiola**	**10.83**	**298**	*e*P		**Pn**	02 51 00.2	**-1.4**
	8.3nm,0.9s							
PGF	**Pioggiola**	**10.83**	**298**	*e*P		**Pn**	02 51 00.2	**-1.4**
PGF				pmax		pmax		
	comp=Z,4.0nm,0.9s							
PGF	**Pioggiola**	**10.83**	**298**	*e*P		**Pn**	02 51 00.2	**-1.4**
	comp=Z,4.2nm,0.9s							
GERES	**GERESS Array B**	**12.25**	**333**	Pn		**Pn**	02 51 23.6	**+2.6**
	comp=Z,0.1nm,0.3s,baz=65,slow=32,SNR=3.3							
MBDF	**Montbardon**	**13.15**	**305**	*e*P		**Pn**	02 51 33.1	**-0.2**
LPG	**La Plagne**	**13.50**	**308**	*e*P		**Pn**	02 51 40.5	**+2.4**
	comp=Z,5.8nm,0.9s							
LPG	**La Plagne**	**13.50**	**308**	*e*P		**Pn**	02 51 40.5	**+2.4**
LPG				pmax		pmax		
	comp=Z,3.0nm,0.9s							
LPG	**La Plagne**	**13.50**	**308**	*e*P		**Pn**	02 51 40.5	**+2.4**
	comp=Z,2.9nm,0.9s							
CABF	**La Chapelle**	**14.45**	**311**	*e*P		**Pn**	02 51 50.1	**-0.8**
HAU	**Haudompre**	**15.05**	**316**	*e*P		**Pn**	02 52 05.8	**+6.7**
	comp=Z,6.0nm,0.8s							
HAU	**Haudompre**	**15.05**	**316**	*e*P		**Pn**	02 52 05.8	**+6.7**
HAU				pmax		pmax		
	comp=Z,3.0nm,0.8s							
HAU	**Haudompre**	**15.05**	**316**	*e*P		**Pn**	02 52 05.8	**+6.7**
	comp=Z,3.0nm,0.8s							
SMF	**Signal de Mont**	**15.83**	**308**	⇑*i*P		**Pn**	02 52 13.5	**+4.2**
	comp=Z,7.7nm,0.9s							
SMF	**Signal de Mont**	**15.83**	**308**	⇑*i*P		**Pn**	02 52 13.5	**+4.2**
SMF				pmax		pmax		
	comp=Z,4.0nm,0.9s							
SMF	**Signal de Mont**	**15.83**	**308**	⇑*i*P		**Pn**	02 52 13.5	**+4.2**
	comp=Z,3.8nm,0.9s							
MEZF	**Maizieres J'vi**	**16.04**	**316**	*e*P		**Pn**	02 52 17.1	**+5.0**
LOR	**Lormes**	**16.10**	**310**	*e*P		**Pn**	02 52 16.2	**+3.4**
AVF	**Avril sur Loir**	**16.19**	**308**	⇑*i*P		**Pn**	02 52 18.2	**+4.1**
	comp=Z,16nm,1.1s							
AVF	**Avril sur Loir**	**16.19**	**308**	⇑*i*P		**Pn**	02 52 18.2	**+4.1**
AVF				pmax		pmax		
	comp=Z,8.0nm,1.1s							
AVF	**Avril sur Loir**	**16.19**	**308**	⇑*i*P		**Pn**	02 52 18.2	**+4.1**
	comp=Z,7.9nm,1.1s							
SSF	**Saint Saulge**	**16.22**	**309**	⇑*i*P		**Pn**	02 52 18.6	**+4.2**
	comp=Z,30nm,1.0s							
SSF	**Saint Saulge**	**16.22**	**309**	⇑*i*P		**Pn**	02 52 18.6	**+4.2**
SSF				pmax		pmax		
	comp=Z,15nm,1.0s							
SSF	**Saint Saulge**	**16.22**	**309**	⇑*i*P		**Pn**	02 52 18.6	**+4.2**
	comp=Z,15nm,1.0s							
BGF	**Bois d'Agland**	**16.41**	**307**	⇑*i*P		**Pn**	02 52 19.8	**+2.9**
	comp=Z,25nm,1.2s							
BGF	**Bois d'Agland**	**16.41**	**307**	⇑*i*P		**Pn**	02 52 19.8	**+2.9**
BGF				pmax		pmax		
	comp=Z,12nm,1.2s							
BGF	**Bois d'Agland**	**16.41**	**307**	⇑*i*P		**Pn**	02 52 19.8	**+2.9**
	comp=Z,12nm,1.2s							
BAIF	**Baives**	**17.39**	**319**	*e*P		**Pn**	02 52 28.8	**-0.4**
	comp=Z,7.2nm,0.8s							
BAIF	**Baives**	**17.39**	**319**	*e*P		**Pn**	02 52 28.8	**-0.4**
BAIF				pmax		pmax		
	comp=Z,4.0nm,0.8s							
BAIF	**Baives**	**17.39**	**319**	*e*P		**Pn**	02 52 28.8	**-0.4**
	comp=Z,3.6nm,0.8s							
MFF	**Saint Martin d**	**18.35**	**304**	*e*P		**Pn**	02 52 42.6	**+1.6**
LDF	**La Druitiere**	**19.09**	**310**	*e*P		**Pn**	02 52 50.2	**+0.3**
FLN	**La Foliniere**	**19.37**	**310**	*e*P		**Pn**	02 52 54.2	**+0.8**
GRR	**Gorron**	**19.45**	**309**	*e*P		**Pn**	02 52 54.4	**+0.1**
ESDC	**Sonseca Array**	**20.22**	**282**	P		**P**	02 53 01.5	**-0.1**
	comp=Z,1.3nm,0.8s,baz=75,slow=11,SNR=9.8							
QUIF	**Quistinic**	**20.72**	**306**	*e*P		**P**	02 53 08.1	**+1.2**
ROSF	**Rostrenen**	**20.93**	**307**	*e*P		**P**	02 53 09.0	**-0.2**
MIB	**Mutribah**	**22.57**	**104**	*e*P		**P**	02 53 30.3	**+3.4**
	baz=28							
MIB				AMb		AMB	02 53 32.0	
	comp=Z,24nm,0.7s,mb4.7,baz=28							
HFS	**Hagfors**	**22.62**	**349**	P		**P**	02 53 27.3	**+0.1**
	comp=Z,1.4nm,0.7s,mb3.5,baz=176,slow=40,SNR=4.5							
NAY	**Al-Naaiem**	**22.77**	**105**	*e*P		**P**	02 53 31.0	**+2.0**
	comp=Z,11nm,1.2s,mb4.1							
NAY	**Al-Naaiem**	**22.77**	**105**	*e*P		**P**	02 53 31.1	**+2.0**
	baz=28							
NAY				AMb		AMB	02 53 35.0	
	comp=Z,11nm,1.2s,mb4.2,baz=28							
RDF	**Al-Radifah**	**23.16**	**106**	*e*P		**P**	02 53 31.8	**-1.4**
NB2	**NORSAR Subarra**	**23.88**	**347**	P		**P**	02 53 39.1	**-0.8**
	comp=Z,3.3nm,0.9s,mb3.8,baz=156,slow=10							
NOA	**NORSAR Array B**	**23.88**	**347**	P		**P**	02 53 39.6	**-0.3**
	comp=Z,0.9nm,0.6s,mb3.4,baz=148,slow=9.4,SNR=3.8							
EKA	**Eskdalemuir Ar**	**24.12**	**324**	P		**P**	02 53 41.0	**-1.1**
	comp=Z,3.9nm,0.6s,mb4.0,baz=129,slow=8.8,SNR=17							
TORD	**Torodi Ar. Bea**	**30.75**	**221**	P		**P**	02 54 41.5	**-0.5**
	comp=Z,1.3nm,0.7s,mb3.9,baz=33,slow=9.0,SNR=20							
DBIC	**Dimbokro**	**39.67**	**225**	P		**P**	02 55 58.7	**-0.1**
	comp=Z,1.8nm,0.7s,mb3.9,baz=36,slow=14,SNR=3.2							
DBIC	**Dimbokro**	**39.67**	**225**	P		**P**	02 55 58.7	**-0.1**
LIC	**Lamto**	**40.13**	**224**	*e*P		**P**	02 56 02.5	**-0.1**
	comp=Z,5.3nm,0.6s,mb4.2							
LIC	**Lamto**	**40.13**	**224**	*e*P		**P**	02 56 02.5	**-0.1**
	comp=Z,2.7nm,0.6s,mb4.2							
KURK	**Kurchatov**	**41.37**	**53**	P		**P**	02 56 11.1	**-1.4**
	comp=Z,1.5nm,0.6s,mb3.8,baz=280,slow=8.7,SNR=5.8							
MKAR	**Makanchi Array**	**44.34**	**59**	P		**P**	02 56 35.5	**-1.1**
	comp=Z,1.1nm,0.6s,mb3.8,baz=280,slow=6.8,SNR=8.7							
ZALV	**Zalesovo Beam**	**44.85**	**48**	P		**P**	02 56 38.9	**-1.7**
	comp=Z,2.5nm,0.7s,mb4.2,baz=278,slow=9.3,SNR=6.1							
ASAR	**Alice Springs**	**121.03**	**97**	PKP		PKPdf	03 07 20.1	+0.6
	comp=Z,0.2nm,0.4s,baz=318,slow=1.2,SNR=3.3							

*ISCJB **16** 02:59:11.5±0.4, 290S×005×3608E±008, h10km, mb4.1/16, Error ellipse: s-maj=12.1km s-min=7.0km az=9.4*
*IDC **16** 02:59:12.5±0.7, 280S×3602E, h0km, mb4.0/12, mb1 4.1/13, mb1mx4.0/24, mbtmp4.0/13, ML4.8/1, MS3.7/2, Ms1 3.7/2, ms1mx3.2/26, Error ellipse: s-maj=23.1km s-min=13.7km az=116.0*
*NEIC **16** 02:59:14.1±0.5, 274S×3596E, h10km, mb4.2/1, Error ellipse: s-maj=15.2km s-min=10.3km az=106.0*

ISC 16 02:59:13.6±0.4, 287S±006×360E±01, h10km, n30, σ1§08/34, mb4.1/17, Tanzania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**2.15**	**37**	Pn		**Pn**		**02 59 47.4**	**-2.1**
	324nm,0.3s,baz=206,slow=16,SNR=478								
KMBO				Pg		**Pg**		**02 59 50.1**	**-4.8**
	324nm,0.3s,baz=220,slow=20,SNR=359								
KMBO				Lg				03 00 14.6	
	1µm,0.3s,baz=292,slow=19,SNR=22								
KMBO	**Kilima Mbogo**	**2.15**	**37**	Pn		**Pn**		**02 59 47.4**	**-2.1**
KMBO				Pg		**Pg**		**02 59 50.1**	**-4.8**
KMBO				Lg				03 00 14.6	
KMBO	**Kilima Mbogo**	**2.15**	**37**	*e*P		**Pn**		**02 59 47.6**	**-2.0**
LSZ	**Lusaka**	**14.52**	**211**	Pn		**Pn**		**03 02 37.7**	**-1.6**
	1.2nm,0.3s,baz=22,slow=14,SNR=22								
LSZ				Sn		**Sn**		**03 05 13.4**	**-7.1**
	1.6nm,0.3s,baz=76,slow=18,SNR=3.4								
LSZ				Lg				03 06 48.4	
	3.5nm,0.3s,baz=123,slow=18,SNR=13								
LSZ				LR		LR		03 08 52.9	
	comp=Z,154nm,18.9s,baz=34,slow=40								
LSZ	**Lusaka**	**14.52**	**211**	*e*P		**Pn**		**03 02 38.1**	**-1.2**
LSZ				AMb		AMB		03 02 48.4	
	comp=Z,79nm,1.4s								
OPO	**Ambohidratompo**	**19.08**	**146**	P		**Pn**		**03 03 40.2**	**+2.9**
	comp=Z,0.4nm,0.3s,baz=306,slow=9.6,SNR=6.7								
OPO				S		**Sn**		**03 07 03.1**	**-8.2**
	comp=Z,0.3nm,0.3s,baz=79,slow=12,SNR=2.3								
MSNA	**Messina**	**20.20**	**196**	*e*P		**P**		**03 03 48.6**	**-0.1**
MSNA				AMb		AMB		03 04 02.7	
	comp=Z,18nm,2.4s								
MOPA	**Mopani**	**21.00**	**192**	*e*P		**P**		**03 03 57.0**	**-0.3**
MOPA				AMb		AMB		03 04 05.5	
	comp=Z,18nm,2.1s,mb4.0								
SLR	**Silverton**	**23.91**	**197**	*e*P		**P**		**03 04 27.9**	**+0.2**
SLR				AMb		AMB		03 04 39.7	
	comp=Z,43nm,1.8s,mb4.6								
LBTB	**Lobatse**	**24.18**	**204**	P		**P**		**03 04 31.3**	**+1.0**
	comp=Z,3.7nm,0.7s,mb3.9,baz=34,slow=12,SNR=8.4								
LBTB				Lg				03 11 45.7	
	comp=Z,7.6nm,0.9s,baz=304,slow=11,SNR=4.2								
LBTB	**Lobatse**	**24.18**	**204**	P		**P**		**03 04 31.3**	**+1.0**
LBTB				Lg				03 11 45.7	
TSUM	**Tsumeb**	**24.23**	**227**	P		**P**		**03 04 32.6**	**+1.9**
	comp=Z,1.1nm,0.6s,mb3.5,baz=100,slow=22,SNR=3.6								
TSUM				Lg				03 12 02.6	
	comp=Z,5.3nm,1.0s,baz=135,slow=23,SNR=3.1								
TSUM				LR		LR		03 14 49.7	
	comp=Z,251nm,18.6s,baz=216,slow=39								
TSUM	**Tsumeb**	**24.23**	**227**	*e*P		**P**		**03 04 31.9**	**+1.1**
	comp=Z,6.4nm,1.0s,mb4.0								
TSUM				Lg				03 12 02.6	
TSUM				LR		LR		03 14 49.7	
TSUM	**Tsumeb**	**24.23**	**227**	*e*P		**P**		**03 04 30.4**	**-0.3**
TSUM				AMb		AMB		03 04 35.4	
	comp=Z,141nm,1.9s,mb5.1								
ERPM	**east rand prop**	**24.40**	**197**	*e*P		**P**		**03 04 30.2**	**-2.0**
ERPM				AMb		AMB		03 04 36.0	
	comp=Z,29nm,1.7s,mb4.4								
PRYS	**Parys**	**25.30**	**198**	*e*P		**P**		**03 04 41.0**	**+0.5**
PRYS				AMb		AMB		03 05 01.0	
	comp=Z,21nm,1.8s,mb4.4								
SWZ	**Schweizer**	**26.24**	**202**	*e*P		**P**		**03 04 47.6**	**-1.3**
SWZ				AMb		AMB		03 05 15.6	
	comp=Z,61nm,2.0s,mb4.8								
BOSA	**Boshof**	**27.56**	**201**	P		**P**		**03 05 01.9**	**+1.0**
	comp=Z,8.2nm,0.7s,mb4.5,baz=13,slow=7.6,SNR=22								
BOSA				Lg				03 13 36.5	
	comp=Z,9.0nm,1.0s,baz=119,slow=20,SNR=3.1								
BOSA	**Boshof**	**27.56**	**201**	P		**P**		**03 05 01.9**	**+1.0**
BOSA				Lg				03 13 36.5	
BOSA	**Boshof**	**27.56**	**201**	*e*P		**P**		**03 04 59.6**	**-1.3**
BOSA				AMb		AMB		03 05 03.4	
	comp=Z,24nm,1.9s,mb4.5								
TORD	**Torodi Ar. Bea**	**37.56**	**296**	P		**P**		**03 06 28.4**	**0.0**
	comp=Z,3.4nm,1.3s,mb3.9,baz=118,slow=6.4,SNR=5.1								
TORD				PcP		PcP		03 08 46.6	+0.1
	comp=Z,0.6nm,0.8s,baz=102,slow=3.3,SNR=4.1								
AKASG	**Malin Array Be**	**53.67**	**355**	P		**P**		**03 08 36.6**	**+1.2**
	comp=Z,0.2nm,0.3s,mb3.6,baz=188,slow=7.0,SNR=4.4								
GERES	**GERESS Array B**	**55.02**	**342**	P		**P**		**03 08 45.4**	**+0.2**
	comp=Z,1.1nm,0.9s,mb3.9,baz=134,slow=4.2,SNR=3.9								
ESDC	**Sonseca Array**	**55.98**	**323**	P		**P**		**03 08 52.3**	**-0.1**
	comp=Z,0.4nm,0.8s,mb3.5,baz=139,slow=6.7,SNR=4.4								
AKTK	**Aktyubinsk**	**56.37**	**17**	P		**P**		**03 08 54.8**	**-0.1**
AKTO	**Aktyubinsk**	**56.37**	**17**	P		**P**		**03 08 54.8**	**-0.1**
	comp=Z,1.5nm,0.8s,mb4.1,baz=212,slow=7.7,SNR=6.0								
MKAR	**Makanchi Array**	**64.03**	**34**	P		**P**		**03 09 48.5**	**+1.0**
	comp=Z,1.7nm,0.9s,mb4.1,baz=207,slow=6.2,SNR=5.8								
CMAR	**Chiang Mai Arr**	**65.47**	**68**	P		**P**		**03 09 57.3**	**-0.1**
	comp=Z,2.2nm,0.7s,mb4.3,baz=265,slow=7.1,SNR=7.3								
MAW	**Mawson**	**67.22**	**169**	P		**P**		**03 10 09.5**	**+1.8**
	comp=Z,1.1nm,0.6s,mb4.0,baz=310,slow=10,SNR=5.5								
WRA	**Warramunga Arr**	**96.89**	**110**	P		**P**		**03 12 45.3**	**-0.5**
	comp=Z,0.4nm,0.6s,mb4.0,baz=274,slow=2.5,SNR=5.8								

*IDC **16** 03:01:42.8±1.0, 1486S×17361W, h0km, mb3.9/5, mb1 4.2/5, mb1mx4.0/15, mbtmp3.9/5, MS3.8/9, Ms1 3.8/9, ms1mx3.5/25, Error ellipse: s-maj=69.8km s-min=23.9km az=150.0*
*ISCJB **16** 03:01:46.4±0.9, 146S±04×1738W±03, h33km, mb3.8/6, MS3.8/8, Error ellipse: s-maj=64.0km s-min=21.5km az=150.8*

ISC 16 03:01:48.2±0.9, 147S±04×1737W±03, h35km, n32, σ0§28/8, mb3.8/6, MS3.8/8, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.06**	**67**	Pn		**Pn**		**03 02 11.1**	**-9.2**
	95nm,0.3s,baz=36,slow=4.0,SNR=57								
AFI				Sn		**Sn**		**03 02 29.0**	**-16**
	313nm,0.3s,baz=194,slow=22,SNR=25								
RAR	**Rarotonga**	**14.74**	**118**	LR		LR		03 09 39.6	
	comp=Z,324nm,19.2s,baz=22,slow=33								
PPT	**Papeete**	**23.36**	**100**	*e*LQ				03 11 15.1	
	592nm,28.8s								
PPT				*e*LR		LR		03 12 04.0	
	341nm,26.5s,baz=258								
PPT	**Papeete**	**23.36**	**100**	LR		LR		03 12 31.3	
	comp=Z,224nm,20.7s,MS3.6,baz=275,slow=28								
HNR	**Honiara**	**26.27**	**279**	LR		LR		03 15 30.9	
	comp=Z,159nm,19.8s,MS3.6,baz=47,slow=31								
TAOE	**Nuku Hiva Isla**	**33.35**	**84**	*e*LR		LR		03 16 52.2	
	887nm,25.7s								
CTA	**Charters Tower**	**38.49**	**256**	LR		LR		03 21 39.0	
	comp=Z,95nm,19.2s,MS3.6,baz=51,slow=31								
WRA	**Warramunga Arr**	**49.70**	**256**	P		**P**		**03 10 36.8**	**-0.3**
	1.0nm,0.7s,mb4.0,baz=92,slow=7.1,SNR=14								
GUMO	**Guam**	**49.72**	**303**	LR		LR		03 28 14.4	
	comp=Z,46nm,19.4s,MS3.5,baz=100,slow=32								
ASAR	**Alice Springs**	**50.02**	**251**	P		**P**		**03 10 40.0**	**+0.3**
	5.5nm,0.7s,mb4.7,baz=86,slow=8.1,SNR=85								
NVAR	**Mina Array Bea**	**74.05**	**42**	P		**P**		**03 13 25.4**	**+4.8**
	comp=Z,0.7s,mb3.4,baz=215,slow=8.6,SNR=3.2								
KDAK	**Kodiak Island**	**74.34**	**12**	LR		LR		03 41 00.1	
	comp=Z,75nm,18.6s,MS4.0,baz=40,slow=32								
KSRS	**Korea Array**	**75.47**	**316**	LR		LR		03 42 20.7	
	comp=Z,40nm,18.1s,MS3.8,baz=100,slow=32								
TXAR	**Lajitas Array**	**80.50**	**56**	P		**P**		**03 13 56.8**	**-0.2**
	0.2nm,0.8s,mb3.1,baz=270,slow=3.3,SNR=3.0								
TXAR				LR		LR		03 43 10.9	
	comp=Z,92nm,19.6s,MS4.1,baz=0.0,slow=31								
PDAR	**Pinedale Array**	**81.98**	**42**	P		**P**		**03 14 04.8**	**+0.2**
	0.2nm,0.6s,mb3.2,baz=236,slow=4.2,SNR=2.6								
MAW	**Mawson**	**88.32**	**199**	P		**P**		**03 14 35.9**	**0.0**
	0.9nm,0.6s,mb4.2,baz=160,slow=6.7,SNR=3.3								
ULM	**Lac du Bonnet**	**93.61**	**39**	LR		LR		03 55 26.8	
	comp=Z,78nm,19.0s,MS4.2,baz=24,slow=34								
GERES	**GERESS Array B**	**145.44**	**351**	PKPbc		PKPbc		03 21 23.9	+1.4
	0.4nm,0.6s,baz=335,slow=6.6,SNR=4.4								
CDF	**Champ du Feu**	**146.41**	**359**	*e*PKIKP		PKPab		03 21 30.6	+4.2
	5.2nm,0.8s								
HAU	**Haudompre**	**146.83**	**360**	*e*PKIKP		PKPab		03 21 32.2	+4.2
LOR	**Lormes**	**147.50**	**3**	*e*PKIKP		PKPab		03 21 35.2	+4.5
SSF	**Saint Saulge**	**147.69**	**4**	*e*PKIKP		PKPab		03 21 35.5	+4.1
	11nm,1.2s								
AVF	**Avril sur Loir**	**147.95**	**4**	*e*PKIKP		PKPab		03 21 35.8	+3.3
SMF	**Signal de Mont**	**148.12**	**3**	*e*PKIKP		PKPab		03 21 36.0	+2.8
BGF	**Bois d'Agland**	**148.15**	**4**	*e*PKIKP		PKPab		03 21 36.6	+3.3
	6.6nm,0.9s								
CABF	**La Chapelle**	**148.22**	**0**	*e*PKIKP		PKPab		03 21 34.5	+0.9
	15nm,1.1s								
ORIF	**Oris-en-Rattie**	**149.92**	**1**	*e*PKIKP		PKPbc		03 21 35.8	+0.9
	8.4nm,1.1s								
MBDF	**Montbardon**	**150.11**	**359**	*e*PKIKP		PKPbc		03 21 35.6	+0.2
SMRF	**Simiane la Rot**	**150.85**	**1**	*e*PKIKP		PKPbc		03 21 36.7	-0.5
	27nm,1.6s								
FRF	**La Foret Royal**	**151.27**	**359**	*e*PKIKP		PKPbc		03 21 36.1	-2.1
LMR	**La Mourre**	**151.50**	**360**	*e*PKIKP		PKPbc		03 21 37.0	-1.7
PGF	**Pioggiola**	**152.19**	**356**	*e*PKIKP		PKPdf		03 21 35.1	+1.5
	24nm,1.4s								

*ISCJB **16** 03:07:55.7±0.4, 3870N±005×14035E±007, h131km±3km, mb3.3/7, Error ellipse: s-maj=10.1km s-min=5.8km az=38.5*
*JMA **16** 03:07:56.9±0.1, 3867N×14036E, h124km±1km, M3.2*
*IDC **16** 03:07:56.6±1.8, 3866N×14025E, h122km±17km, mb3.2/7, mb1 3.4/10, mb1mx3.3/23, mbtmp3.3/10, Error ellipse: s-maj=26.0km s-min=15.6km az=98.0*
*NEIC **16** 03:07:58.4±1.6, 3863N×140.14E, h141km±15km, MG3.2(JMA), Error ellipse: s-maj=25.2km s-min=16.6km az=77.0*

ISC 16 03:07:56.8±0.4, 3870N±005×14036E±007, h125km±3km, n25, σ0§80/34, mb3.5/7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYK	**Kaneyama**	**0.22**	**0**	P		**Pn**		**03 08 14.1**	**+0.1**
JYK				S		**Sn**		**03 08 27.0**	**-0.1**
JOU	**Okura**	**0.41**	**144**	P		**Pn**		**03 08 15.0**	**+0.2**
JOU				*e*S		**Sn**		**03 08 28.7**	**+0.3**
JYA	**Atsumi**	**0.52**	**258**	P		**Pn**		**03 08 15.4**	**+0.1**
JYA				*e*S		**Sn**		**03 08 29.3**	**-0.1**
JYS	**Shirataka**	**0.53**	**206**	P		**Pn**		**03 08 15.4**	**-0.1**
JMK	**Ichinoseki**	**0.72**	**69**	P		**Pn**		**03 08 16.9**	**+0.2**
JIO	**Ouri**	**0.81**	**107**	P		**Pn**		**03 08 17.3**	**-0.2**
JIO				S		**Sn**		**03 08 32.7**	**-0.6**
JMM	**Marumori**	**0.90**	**158**	P		**Pn**		**03 08 18.1**	**-0.2**
JMM				S		**Sn**		**03 08 34.3**	**-0.3**
JAW	**Awa shima**	**0.90**	**255**	*e*S		**Sn**		**03 08 34.3**	**-0.3**
JOM	**Ohasama**	**1.06**	**43**	P		**Pn**		**03 08 20.5**	**+0.7**
JOM				S		**Sn**		**03 08 38.3**	**+1.0**
JNS	**Sasagawa**	**1.20**	**223**	P		**Pn**		**03 08 21.2**	**-0.1**
JNS				S		**Sn**		**03 08 39.0**	**-0.8**
JSD	**Sado**	**1.78**	**249**	P		**Pn**		**03 08 27.4**	**-0.3**
JANG	**Nango**	**1.90**	**28**	P		**Pn**		**03 08 30.0**	**+0.9**
MAJO	**Matsushiro**	**2.75**	**219**	*e*Pn		**Pn**		**03 08 40.1**	**+0.1**
MAT	**Matsushiro**	**2.75**	**219**	P		**Pn**		**03 08 41.2**	**+1.2**
MAT				*e*S		**Sn**		**03 09 14.8**	**+1.6**
MJAR	**Matsushiro Arr**	**2.75**	**219**	P		**Pn**		**03 08 40.3**	**+0.3**
	5.7nm,0.3s,baz=26,slow=17,SNR=77								
JHJ	**Hachijo jima 2**	**5.59**	**185**	P		**Pn**		**03 09 15.4**	**-2.3**
	11nm,0.3s,baz=30,slow=16,SNR=10								
JHJ				S		**Sn**		**03 10 15.3**	**-5.5**
	8.7nm,0.3s,baz=75,slow=21,SNR=5.2								
ASAJ	**Asahikawa**	**5.67**	**17**	P		**Pn**		**03 09 18.1**	**-0.5**
	1.9nm,0.3s,baz=212,slow=10,SNR=20								
ASAJ				S		**Sn**		**03 10 20.9**	**-1.6**
	0.2nm,0.3s,baz=254,slow=30,SNR=2.1								
MKAR	**Makanchi Array**	**42.54**	**300**	P		**P**		**03 15 40.0**	**+0.2**
	0.3nm,0.2s,mb3.6,baz=101,slow=7.5,SNR=3.1								
WRA	**Warramunga Arr**	**58.60**	**187**	P		**P**		**03 17 39.5**	**-1.0**
	0.2nm,0.5s,mb3.4,baz=2.8,slow=7.3,SNR=6.1								
ARCES	**ARCESS Array B**	**62.14**	**339**	P		**P**		**03 18 03.9**	**-0.1**
	2.7nm,0.9s,mb

GUN	**Gumba**	**33.96**	**336**	*e*P		**P**	**04 00 24.9**	**+1.0**	
	49nm,0.4s								
KKN	**Kakani**	**34.10**	**335**	*e*P		**P**	**04 00 25.7**	**+0.5**	
	25nm,0.7s,mb5.2								
GKN	**Gorkha**	**34.56**	**334**	*e*P		**P**	**04 00 29.6**	**+0.4**	
	9.3nm,0.4s,mb5.1								
KOLN	**Koldanda**	**34.83**	**332**	*e*P		**P**	**04 00 32.2**	**+0.7**	
	23nm,0.7s,mb5.2								
DANN	**Dangsing**	**35.25**	**333**	*e*P		**P**	**04 00 36.4**	**+1.3**	
	24nm,0.4s,mb5.5								
WRA	**Warramunga Arr**	**36.70**	**120**	P		**P**	**04 00 47.3**	**-0.4**	
	2.7nm,0.4s,mb4.5,baz=303,slow=8.9,SNR=67								
WRAB	**Tennant Creek**	**36.70**	**120**	*e*P		**P**	**04 00 47.0**	**-0.7**	
	3.3nm,0.4s,mb4.5								
WB2	**Warramunga Arr**	**36.71**	**120**	*e*P		**P**	**04 00 47.0**	**-0.7**	
ASAR	**Alice Springs**	**37.93**	**126**	P		**P**	**04 00 58.5**	**+0.5**	
	1.1nm,0.6s,mb3.8,baz=299,slow=8.0,SNR=19								
ASAR				PcP		PcP	04 03 13.6	+0.5	
	0.6nm,0.8s,baz=300,slow=2.5,SNR=4.2								
CTA	**Charters Tower**	**47.34**	**115**	P		**P**	**04 02 14.1**	**-0.4**	
	1.9nm,0.9s,mb4.0,baz=275,slow=9.5,SNR=4.4								
STKA	**Stephens Creek**	**47.81**	**132**	P		**P**	**04 02 18.6**	**+0.8**	
	1.9nm,0.5s,mb4.3,baz=222,slow=12,SNR=3.7								
SONM	**Songino Array**	**50.82**	**5**	P		**P**	**04 02 39.7**	**-0.8**	
	17nm,1.1s,mb4.9,baz=186,slow=8.7,SNR=32								
SONM				PcP		PcP	04 03 56.2	-0.3	
	0.8nm,0.5s,baz=174,slow=4.8,SNR=3.5								
ULN	**Ulaanbaatar**	**50.91**	**5**	*e*P		**P**	**04 02 41.2**	**+0.1**	
	4.0nm,0.9s,mb4.3								
TKM2	**Tokmak 2**	**51.09**	**336**	*e*P		**P**	**04 02 43.0**	**+0.3**	
	4.9nm,0.5s,mb4.7								
TKM2				*e*pP		pP	04 02 55.3	-3.3	
AML	**Almayashu**	**51.24**	**334**	*e*P		**P**	**04 02 43.9**	**+0.1**	
	5.2nm,0.8s,mb4.5								
EKS2	**Erkin-Say**	**51.64**	**335**	*e*P		**P**	**04 02 47.5**	**+0.8**	
	13nm,0.8s,mb4.9								
MKAR	**Makanchi Array**	**52.21**	**344**	P		**P**	**04 02 50.4**	**-0.5**	
	4.4nm,0.4s,mb4.7,baz=151,slow=8.3,SNR=40								
KURK	**Kurchatov**	**56.80**	**343**	*e*P		**P**	**04 03 22.3**	**-1.8**	
	4.2nm,0.9s,mb4.5								
ZAA0	**Zalesovo Array**	**58.29**	**349**	*e*P		**P**	**04 03 33.4**	**-1.1**	
ZALV	**Zalesovo Beam**	**58.29**	**349**	P		**P**	**04 03 33.3**	**-1.3**	
	7.5nm,0.4s,mb5.0,baz=174,slow=4.5,SNR=28								
AKTK	**Aktyubinsk**	**64.65**	**331**	P		**P**	**04 04 16.0**	**-1.5**	
AKTO	**Aktyubinsk**	**64.65**	**331**	P		**P**	**04 04 16.0**	**-1.5**	
	1.0nm,0.4s,mb4.2,baz=98,slow=6.1,SNR=5.4								
PETK	**Petropavlovsk-**	**73.21**	**32**	P		**P**	**04 05 09.1**	**-1.5**	
	2.6nm,0.8s,mb4.2,baz=233,slow=1.4,SNR=3.0								
ARCES	**ARCESS Array B**	**87.70**	**340**	P		**P**	**04 06 27.6**	**-0.3**	
	2.5nm,0.7s,mb4.5,baz=98,slow=6.3,SNR=10								
GERES	**GERESS Array B**	**90.39**	**319**	P		**P**	**04 06 41.1**	**+0.2**	
	0.1nm,0.3s,mb3.6,baz=75,slow=5.7,SNR=3.5								
TXAR	**Lajitas Array**	**144.88**	**39**	PKP		PKPdf	04 13 15.9	-1.3	
	1.3nm,0.4s,baz=229,slow=2.3,SNR=49								
MIAR	**Mount Ida**	**145.81**	**22**	*e*PKPbc		PKPbc	04 13 18.6	-0.5	

BJI **16** *04:00:46.3, 153.0S×173.4±0.4W, h10km, mB5.5, mb5.1, Ms5.2, Msz4.8*

IDC **16** *04:00:47.6±0.7, 152.6S×173.34W, h0km, mb4.3/12, mb1 4.5/12, mb1mx4.5/19, mbtmp4.3/12, MS4.5/23, Ms1 4.5/23, ms1mx4.4/29, Error ellipse: s-maj=30.6km s-min=19.6km az=156.0*

NEIC **16** *04:00:49.3±0.3, 153.2S×173.4±0.4W, h10km, mb4.9/36, Error ellipse: s-maj=18.6km s-min=6.9km az=154.0*

GCMT **16** *04:00:49.3±0.2, 149.0S×173.08W, h12km, MW5.2/87, Moment Tensor Solution. s52,c79; s87,c153; Duration: 1±0 Moment tensor: Scale 10^{16}Nm; Mrr0.95±.11; Mθθ3.16±.11; Mϕϕ-4.11±.10; Mrθ1.68±.30; Mθϕ3.96±.09; Mϕr5.77±.26; Best double couple: M₀8.08400×10^{16} NP1:ϕs112.00000°, δ41.00000°, λ6.00000°. NP2: ϕs17.00000°, δ86.00000°, λ131.00000°. Principal axes: T 7.7470, Plg36.0000°, Azm322.0000°; N 0.6770, Plg41.0000°, Azm194.0000°; P -8.4200, Plg29.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS **16** *04:00:51.9±1.6, 143.4S×173.30W, h10km, mb5.1/16, MS4.8/7 Error ellipse: s-maj=17.7km s-min=11.6km az=65.4*

ISCJB **16** *04:00:51.3±0.5, 154.5S±0.1×173.39W±0.06, h33km, mb4.8/54, MS4.6/32, Error ellipse: s-maj=18.9km s-min=8.0km az=166.3*

ISC 16 04:00:53.1±0.4, 154.5S±0.1×173.37W±0.006, h35km, (h8km±3.4km:pP-P), n198, σ0.994/106, mb4.8/54, MS4.6/32, 10C-15D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
AFI	**Afiamalu**	**2.13**	**47**	Pn		**Pn**	**04 01 15.6**	**-11**	
	220nm,0.3s,baz=109,slow=1.0,SNR=138								
AFI				Sn		**Sn**	**04 01 34.0**	**-17**	
	873nm,0.3s,baz=17,slow=19,SNR=31								
AFI	**Afiamalu**	**2.13**	**47**	P		**Pn**	**04 01 15.6**	**-11**	
AFI							04 01 34.1		
AFI					pmax	pmax			
	comp=Z,221nm,0.3s								
AFI					smax				
	comp=N,873nm,0.3s								
AFI	**Afiamalu**	**2.13**	**47**	*e*Pn		**Pn**	**04 01 15.3**	**-11**	
AFI				*e*Sn		**Sn**	**04 01 34.7**	**-17**	
RAR	**Rarotonga**	**14.15**	**116**	LR		LR	04 08 04.3		
	comp=N,2μm,20.6s,baz=316,slow=31								
DZM	**Mont Dzumac**	**20.23**	**248**	*e*P		**P**	**04 05 32.3**	**+7.1**	
PPT	**Papeete**	**22.92**	**99**	*e*LQ			04 10 17.4		
	comp=N,6μm,28.2s								
PPT				*e*LR		LR	04 11 23.1		
	comp=N,4μm,25.0s,baz=263								
PPT	**Papeete**	**22.92**	**99**	LR		LR	04 12 12.2		
	comp=N,1μm,20.2s,MS4.4,baz=148,slow=30								
URZ	**Urewera**	**24.28**	**198**	LR		LR	04 14 31.4		
	comp=N,1μm,20.9s,MS4.3,baz=18,slow=34								
PMOR	**Pomariorio Ree**	**24.59**	**92**	*e*P		**P**	**04 06 08.8**	**-1.3**	
	comp=N,386nm,1.5s,mb5.7								
HNR	**Honiara**	**26.71**	**280**	LR		LR	04 15 21.9		
	comp=N,2μm,18.4s,MS4.7,baz=126,slow=33								
TAOE	**Nuku Hiva Isla**	**33.09**	**83**	*e*LR		LR	04 15 55.5		
	comp=N,9μm,26.3s,baz=261								
RKT	**Rikitea**	**36.97**	**108**	*e*LR		LR	04 17 44.6		
	comp=N,2μm,24.8s								
STKA	**Stephens Creek**	**44.06**	**240**	LR		LR	04 25 02.8		
	comp=N,664nm,21.6s,MS4.5,baz=53,slow=33								
WRAB	**Tennant Creek**	**49.86**	**257**	*e*P		**P**	**04 09 40.7**	**-2.6**	
WRAB	**Tennant Creek**	**49.86**	**257**	*e*P		**P**	**04 09 42.2**	**-1.1**	
	comp=N,20nm,1.3s,mb5.0								
WRA	**Warramunga Arr**	**49.87**	**257**	P		**P**	**04 09 42.0**	**-1.3**	
	comp=N,2.7nm,0.6s,mb4.4,baz=88,slow=7.2,SNR=34								
WRA				LR		LR	04 28 29.7		
	comp=N,643nm,20.7s,MS4.6,baz=85,slow=33								
ASAR	**Alice Springs**	**50.14**	**252**	P		**P**	**04 09 44.9**	**-0.4**	
	comp=N,16nm,0.6s,mb5.2,baz=86,slow=8.1,SNR=153								
GUMO	**Guam**	**50.35**	**303**	LR		LR	04 29 05.5		
	comp=N,351nm,20.1s,MS4.4,baz=85,slow=34								
FITZ	**Fitzroy Crossi**	**58.24**	**258**	P		**P**	**04 10 45.0**	**+0.5**	
	comp=N,1.2nm,1.0s,mb3.9,baz=64,slow=18,SNR=3.3								
FITZ				LR		LR	04 33 57.2		
	comp=N,541nm,18.1s,MS4.7,baz=96,slow=34								
BATI	**Baumata**	**61.44**	**267**	LR		LR	04 36 39.3		
	comp=N,373nm,19.8s,MS4.5,baz=128,slow=35								
MBWA	**Marble Bar**	**63.39**	**254**	*e*P		**P**	**04 11 18.4**	**-1.0**	
MJAR	**Matsushiro Arr**	**68.95**	**320**	P		**P**	**04 11 54.3**	**-0.4**	
	comp=N,4.0nm,1.0s,mb4.3,baz=162,slow=6.8,SNR=11								
MJAR				LR		LR	04 36 27.4		
	comp=N,503nm,21.5s,MS4.7,baz=110,slow=31								
MAJO	**Matsushiro**	**68.95**	**320**	*e*P		**P**	**04 11 54.5**	**-0.2**	
MAJO					pmax	pmax			
	comp=Z,47nm,1.8s,mb5.1								
MAJO	**Matsushiro**	**68.95**	**320**	*e*P		**P**	**04 11 54.5**	**-0.2**	
	comp=Z,47nm,1.8s,mb5.1								
MAT	**Matsushiro**	**68.95**	**320**	P		**P**	**04 11 54.1**	**-0.6**	
MAT				S		S	04 20 56.0	-1.0	
JOW	**Kunigami**	**70.50**	**306**	LR		LR	04 38 14.5		
	comp=Z,362nm,19.4s,MS4.6,baz=134,slow=32								
PET	**Petropavlovsk**	**72.28**	**343**	*e*P		**P**	**04 12 10.9**	**-3.7**	
PET				*e*			04 14 58.3		
PET				*e*S		S	04 21 35.6	+0.6	
PET					pmax	pmax			
	comp=Z,100nm,4.6s								
PET					pmax	pmax			
	comp=Z,200nm,4.5s								
PET					MLR	MLR			
	comp=Z,300nm,17.0s,MS4.6								
PETK	**Petropavlovsk-**	**72.63**	**342**	P		**P**	**04 12 15.8**	**-0.9**	
	comp=Z,4.0nm,0.9s,mb4.4,baz=93,slow=8.9,SNR=4.6								
PETK				LR		LR	04 45 08.8		
	comp=Z,98nm,18.6s,MS4.1,baz=158,slow=37								
YBH	**Yreka Blue Hor**	**73.57**	**37**	*e*P		**P**	**04 12 22.5**	**-0.1**	
YBH					pmax	pmax			
	comp=Z,7.0nm,1.1s								
YBH	**Yreka Blue Hor**	**73.57**	**37**	*e*P		**P**	**04 12 22.5**	**-0.1**	
	comp=Z,6.7nm,1.1s,mb4.5								
HUMO	**Hull Mountain**	**73.98**	**36**	*e*P		**P**	**04 12 26.0**	**+1.1**	
	comp=Z,57nm,2.5s,mb5.1								
NVAR	**Mina Array Bea**	**74.30**	**42**	P		**P**	**04 12 26.1**	**-0.9**	
	comp=Z,0.4nm,0.6s,baz=231,slow=9.9,SNR=3.0								
TPNV	**Topopah Spring**	**74.83**	**44**	*e*P		**P**	**04 12 30.8**	**+0.8**	
TPNV					pmax	pmax			
	comp=Z,49nm,2.5s,mb5.0								
TPNV	**Topopah Spring**	**74.83**	**44**	*e*P		**P**	**04 12 30.8**	**+0.8**	
	comp=Z,49nm,2.5s,mb5.0								
MOD	**Modoc**	**75.10**	**38**	*e*P		**P**	**04 12 30.8**	**-0.6**	
	comp=Z,13nm,1.4s,mb4.7								
SHPR	**Sheep Range**	**75.33**	**45**	*e*P		**P**	**04 12 33.4**	**+0.5**	
KSRS	**Korea Array**	**76.17**	**316**	P		**P**	**04 12 39.3**	**+1.6**	
	comp=Z,3.1nm,1.0s,mb4.2,baz=131,slow=5.3,SNR=5.7								
KSRS				LR		LR	04 39 39.3		
	comp=Z,280nm,19.7s,MS4.6,baz=122,slow=31								
TUC	**Tucson**	**76.36**	**51**	*e*P		**P**	**04 12 39.0**	**+0.1**	
TUC					pmax	pmax			
	comp=Z,16nm,1.7s,mb4.7								
TUC	**Tucson**	**76.36**	**51**	*e*P		**P**	**04 12 39.0**	**0.0**	
	comp=Z,16nm,1.7s,mb4.7								
WVOR	**Wild Horse Val**	**76.41**	**38**	*e*P		**P**	**04 12 40.1**	**+1.2**	
WVOR					pmax	pmax			
	comp=Z,10.0nm,1.3s,mb4.6								
WVOR	**Wild Horse Val**	**76.41**	**38**	*e*P		**P**	**04 12 40.1**	**+1.2**	
	comp=Z,9.8nm,1.3s,mb4.6								
WUAZ	**Wupatki**	**77.47**	**48**	*e*P		**P**	**04 12 45.8**	**+0.7**	
	comp=Z,33nm,1.9s,mb4.9								
ELK	**Elko**	**77.56**	**41**	*e*P		**P**	**04 12 45.5**	**+0.1**	
RSW	**Rattlesnake Hi**	**78.22**	**35**	*e*P		**P**	**04 12 48.5**	**-0.5**	
HAWA	**Hanford**	**78.25**	**35**	*e*P		**P**	**04 12 48.6**	**-0.5**	
	comp=Z,33nm,1.8s,mb5.0								
MSU	**Marysvale**	**78.40**	**45**	*e*P		**P**	**04 12 50.8**	**+0.6**	
BMO	**Blue Mountains**	**78.60**	**37**	*e*P		**P**	**04 12 49.0**	**-2.1**	
	comp=Z,14nm,1.5s,mb4.7								
DUG	**Dugway**	**78.83**	**43**	*e*P		**P**	**04 12 53.0**	**+0.5**	
DUG					pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.4								
DUG	**Dugway**	**78.83**	**43**	*e*P		**P**	**04 12 53.0**	**+0.4**	
	comp=Z,4.6nm,1.1s,mb4.3								
MDJ	**Mudanjiang**	**79.03**	**322**	P		**P**	**04 12 54.0**	**+0.5**	
MDJ					AP	pP	04 12 57.3	-7.2	
MDJ					XP	sP	04 12 58.5	-10	
MDJ					PP	PP	04 15 50.6	-2.5	
MDJ					S	S	04 22 54.8	+4.7	
MDJ					SS	SS	04 28 00.1	+3.4	
MDJ					AMB	AMB			
	comp=Z,6.0nm,1.5s,mb4.3								
MDJ					AMB	AMB			
	comp=Z,179nm,6.0s								
MDJ					LR	LR			
	comp=N,355nm,15.4s,MS5.0								
MDJ					LR	LR			
	comp=E,333nm,15.1s,MS5.0								
MDJ					LR	LR			
	comp=Z,602nm,16.2s,MS5.0								
BGU	**Big Grassy Mou**	**79.07**	**42**	*e*P		**P**	**04 12 53.0**	**-0.8**	
TMUT	**Trail Mountain**	**79.45**	**44**	*e*P		**P**	**04 12 56.8**	**+0.9**	
HLID	**Hailey**	**79.60**	**39**	*e*P		**P**	**04 12 56.5**	**-0.2**	
	comp=Z,5.3nm,1.0s,mb4.4								
SRU	**San Rafael**	**79.82**	**45**	*e*P		**P**	**04 12 58.2**	**+0.3**	
LAZ	**Ladron**	**80.03**	**50**	*e*P		**P**	**04 12 60.0**	**+0.8**	
BNM	**Barren Site**	**80.30**	**51**	*e*P		**P**	**04 12 59.6**	**-1.1**	
HWUT	**Hardware Ranch**	**80.37**	**42**	*e*P		**P**	**04 13 01.1**	**+0.3**	
	comp=Z,1.2nm,0.5s,mb4.1								
PV10	**Paradox Valley**	**80.48**	**46**	*e*P		**P**	**04 13 01.9**	**+0.4**	
TXAR	**Lajitas Array**	**80.58**	**56**	P		**P**	**04 13 01.3**	**-1.0**	
	comp=Z,0.2nm,0.5s,baz=207,slow=5.2,SNR=9.6								
TXAR				LR		LR	04 40 46.9		
	comp=Z,418nm,20.5s,baz=250,slow=30								
PV01	**Paradox Valley**	**80.69**	**46**	*e*P		**P**	**04 13 02.2**	**-0.5**	
ANMO	**Albuquerque**	**80.77**	**50**	*e*P		**P**	**04 13 01.9**	**-1.3**	
ANMO					pmax	pmax			
	comp=Z,18nm,1.6s								
ANMO	**Albuquerque**	**80.77**	**50**	*e*P		**P**	**04 13 01.9**	**-1.3**	
	comp=Z,18nm,1.6s,mb4.8								
CN2	**Chungchun**	**81.09**	**320**	*e*P		**P**	**04 13 05.8**	**+1.1**	
MCK	**McKinley**	**81.11**	**11**	*e*P		**P**	**04 13 03.4**	**-0.9**	
MCK					pmax	pmax			
	comp=Z,11nm,0.9s,mb4.8								
MCK	**McKinley**	**81.11**	**11**	*e*P		**P**	**04 13 03.4**	**-0.8**	
	comp=Z,11nm,0.9s,mb4.8								
GDL2	**Guadalupe Moun**	**81.19**	**53**	*e*P		**P**	**04 13 06.5**	**+1.0**	
MCMT	**McKenzie Canyo**	**81.23**	**39**	*e*P		**P**	**04 13 05.1**	**-0.3**	
RRI2	**Red Ridge**	**81.41**	**41**	*e*P		**P**	**04 13 06.3**	**-0.1**	
	comp=Z,10.0nm,1.1s,mb4.7								
DCID1	**Drake Creek**	**81.62**	**41**	*e*P		**P**	**04 13 08.3**	**+0.9**	
MSO	**Missoula**	**81.66**	**37**	*e*P		**P**	**04 13 06.6**	**-0.9**	
	comp=Z,15nm,1.5s,mb4.7								
DLMT	**Dillon**	**81.66**	**38**	*e*P		**P**	**04 13 07.6**	**0.0**	
REDW	**Red Top Meadow**	**81.71**	**41**	*e*P		**P**	**04 13 07.8**	**-0.1**	
	comp=Z,12nm,1.4s,mb4.7								
TPAW	**Teton Pass**	**81.71**	**41**	*e*P		**P**	**04 13 07.4**	**-0.5**	
	comp=Z,11nm,1.2s,mb4.7								
SNOW	**Snow King Moun**	**81.82**	**41**	*e*P		**P**	**04 13 07.6**	**-0.9**	
	comp=Z,7.3nm,0.9s,mb4.6								
IMW	**Indian Meadow**	**81.92**	**40**	*e*P		**P**	**04 13 09.1**	**+0.1**	
	comp=Z,10nm,1.1s,mb4.7								
MOOW	**Moose Ponds**	**81.97**	**41**	*e*P		**P**	**04 13 09.9**	**+0.6**	
	comp=Z,12nm,1.5s,mb4.6								
LOHW	**Long Hollow**	**81.99**	**41**	*e*P		**P**	**04 13 09.6**	**+0.2**	
	comp=Z,16nm,1.5s,mb4.7								
QLMT	**Earthquake Lak**	**82.09**	**39**	*e*P		**P**	**04 13 11.2**	**+1.3**	
CHMT	**Chamberlain Mo**	**82.10**	**37**	*e*P		**P**	**04 13 11.6**	**+1.7**	
FLWY	**Flagg Ranch**	**82.17**	**40**	*e*P		**P**	**04 13 10.4**	**+0.1**	
	comp=Z,17nm,1.2s,mb4.8								
BW06	**Boulder Array**	**82.24**	**42**	*e*P		**P**	**04 13 11.3**	**+0.6**	
	comp=Z,32nm,1.9s,mb4.9								
PDAR	**Pinedale Array**	**82.24**	**42**	P		**P**	**04 13 08.7**	**-2.1**	
	comp=Z,0.6nm,0.9s,baz=237,slow=3.1,SNR=4.0								
PDAR				LR		LR	04 44 49.9		
	comp=Z,332nm,18.2s,baz=249,slow=32								
COLA	**College**	**82.35**	**11**	*e*P		**P**	**04 13 10.4**	**-0.4**	
COLA					pmax	pmax			
	comp=Z,12nm,0.9s,mb4.8								
COLA	**College**	**82.35**	**11**	*e*P		**P**	**04 13 10.4**	**-0.4**	
	comp=Z,12nm,0.9s,mb4.8								
BOZ	**Bozeman (W)**	**82.39**	**39**	*e*P		**P**	**04 13 11.5**	**0.0**	
LKWY	**Lake**	**82.59**	**40**	*e*P		**P**	**04 13 14.8**	**+2.3**	
LKWY					pmax	pmax			
	comp=Z,11nm,1.3s,mb4.7								
LKWY	**Lake**	**82.59**	**40**	*e*P		**P**	**04 13 14.8**	**+2.3**	
	comp=Z,10nm,1.3s,mb4.7								
SDCO	**Great Sand Dun**	**82.69**	**48**	*e*P		**P**	**04 13 13.2**	**0.0**	
	comp=Z,17nm,1.6s,mb4.8								
QIZ	**Qiongzhong**	**82.93**	**292**	P		**P**	**04 13 14.0**	**-0.8**	
QIZ				PP		PP	04 16 24.3	-1.6	
QIZ				S		S	04 23 33.6	+1.9	
QIZ				AMB		AMB			
	comp=Z,127nm,6.7s								
QIZ				LR		LR			
	comp=E,304nm,19.8s								
QIZ				LR		LR			
	comp=Z,281nm,24.6s,MS4.5								
RWWY	**Rawlins**	**83.27**	**44**	*e*P		**P**	**04 13 11.7**	**-4.4**	
DAWY	**Dawson**	**83.40**	**14**	*e*P		**P**	**04 13 16.2**	**-0.1**	
ISCO	**Idaho Springs**	**83.50**	**46**	*e*P		**P**	**04 13 18.7**	**+1.3**	
ISCO					pmax	pmax			
	comp=Z,20nm,1.8s,mb5.0								
ISCO	**Idaho Springs**	**83.50**	**46**	*e*P		**P**	**04 13 18.7**	**+1.4**	
	comp=Z,20nm,1.8s,mb5.0								
RLMT	**Red Lodge**	**83.57**	**40**	*e*P		**P**	**04 13 16.4**	**-1.1**	
	comp=Z,17nm,1.4s,mb5.0								
JCT	**Junction City**	**84.12**	**56**	*e*P		**P**	**04 13 19.7**	**-1.1**	
JCT					pmax	pmax			
	comp=Z,9.0nm,0.6s,mb5.1								
JCT	**Junction City**	**84.12**	**56**	*e*P		**P**	**04 13 19.7**	**-1.1**	
	comp=Z,8.9nm,0.6s,mb5.1								
AMTX	**Amarillo**	**84.32**	**52**	*e*P		**P**	**04 13 21.2**	**-0.5**	
BILL	**Bilibino**	**84.50**	**352**	*e*P		**P**	**04 13 19.9**	**-1.9**	
BILL					pmax	pmax			
	comp=Z,8.0nm,0.5s,mb5.1								
BJI	**Beijing**	**85.48**	**313**	P		**P**	**04 13 26.3**	**-1.1**	
BJI				S		S	04 23 58.3	+1.9	
BJI				AMB		AMB			
	comp=Z,18nm,1.7s,mb4.9								
BJI				AMB		AMB			
	comp=Z,417nm,4.4s								
BJI				LR		LR			
	comp=N,307nm,5.0s								
BJI				LR		LR			
	comp=E,290nm,6.0s								
BJI				LR		LR			
	comp=Z,245nm,25.5s,MS4.5								
LAO	**LASA Array**	**86.18**	**39**	*e*P		**P**	**04 13 32.1**	**+1.4**	
	comp=Z,22nm,1.4s,mb5.2								
RSSD	**Black Hills**	**86.43**	**42**	*e*P		**P**	**04 13 31.5**	**-0.5**	
RSSD					pmax	pmax			
	comp=Z,13nm,1.4s,mb5.0								
RSSD	**Black Hills**	**86.43**	**42**	*e*P		**P**	**04 13 31.5**	**-0.5**	
	comp=Z,13nm,1.4s,mb5.0								
WMOK	**Wichita Mounta**	**86.47**	**53**	*e*P		**P**	**04 13 31.8**	**-0.6**	
WMOK					pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.4								
WMOK	**Wichita Mounta**	**86.47**	**53**	*e*P		**P**	**04 13 31.8**	**-0.6**	
	comp=Z,1.5nm,0.8s,mb4.3								
HKT	**Hockley**	**87.15**	**58**	*e*P		**P**	**04 13 36.9**	**+1.0**	
HKT					pmax	pmax			
	comp=Z,19nm,1.5s,mb5.1								
HKT	**Hockley**	**87.15**	**58**	*e*P		**P**	**04 13 36.9**	**+1.0**	
	comp=Z,19nm,1.5s,mb5.1								
MAW	**Mawson**	**87.81**	**199**	P		**P**	**04 13 40.2**	**+1.9**	
	comp=Z,6.5nm,1.1s,mb4.8,baz=130,slow=6.3,SNR=7.2								
MAW				LR		LR	04 49 32.1		
	comp=Z,320nm,21.5s,MS4.7,baz=107,slow=33								
GYA	**Guiyang**	**88.06**	**298**	P		**P**	**04 13 41.8**	**+1.5**	
GYA					AMB	AMB			
	comp=Z,10.0nm,1.0s,mb5.0								
GYA					AMB	AMB			
	comp=Z,100nm,5.1s								
GYA					LR	LR			
	comp=N,210nm,10.2s,MS5.0								
GYA					LR	LR			
	comp=E,260nm,11.5s,MS5.0								
GYA					LR	LR			
	comp=Z,350nm,13.0s,MS5.0								
HHC	**Hu-ho-hao-te**	**89.04**	**313**	*e*P		**P**	**04 13 44.8**	**+0.2**	
HHC					AP	pP	04 13 48.3	-7.4	
HHC					XP	sP	04 13 50.3	-9.4	
HHC					SKS		04 24 12.4		
HHC					S	S	04 24 31.3	+0.7	
HHC					XS	sS	04 24 37.3	-12	
HHC					SS	SS	04 30 27.6	+2.8	
HHC					AMB	AMB			
	comp=Z,13nm,0.6s,mb5.4								
HHC					AMB	AMB			
	comp=Z,144nm,6.6s								
HHC					LR	LR			
	comp=N,192nm,16.8s,MS4.8								
HHC					LR	LR			
	comp=E,290nm,17.2s,MS4.8								
HHC					LR	LR			
	comp=Z,227nm,18.1s,MS4.6								
PLCA	**Paso Flores**	**89.50**	**132**	LR		LR	04 46 07.8		
	comp=Z,374nm,19.0s,MS4.8,baz=80,slow=30								
YKA	**Yellowknife Ar**	**90.08**	**23**	LR		LR	04 47 01.6		
	comp=Z,96nm,18.5s,MS4.3,baz=195,slow=31								
KMI	**Kunming**	**91.05**	**296**	P		**P**	**04 13 57.3**	**+3.0**	
KMI					AMB	AMB			
	comp=Z,7.0nm,0.5s,mb5.2								
JTS	**JuntasAbangare**	**91.18**	**80**	*e*P		**P**	**04 13 55.0**	**-0.2**	
CD2	**Chengdu**	**91.83**	**301**	*e*P		**P**	**04 13 58.3**	**+0.5**	
CD2					AP	pP	04 14 03.0	-5.9	
CD2					XP	sP	04 14 05.9	-7.0	
CD2					PP	PP	04 17 40.9	+3.5	
CD2					SKS		04 24 28.9		
CD2					S	S	04 24 56.4	-0.3	
CD2					XS	sS	04 25 04.9	-10	
CD2					SS	SS	04 31 09.0	+3.4	
CD2					AMB

VOIR		**146.27**	**336**	⇑*iP*		PKPab	04 20 31.4	+0.6
VOIR		**146.27**	**336**	⇑P		PKPab	04 20 31.4	+0.7
SGMF	**Saint Gilles**	**146.36**	**11**	*e*PKP1		PKPdf	04 20 27.9	-1.0
	comp=Z,38nm,1.3s							
LDF	**La Druitiere**	**146.43**	**8**	*e*PKP1		PKPdf	04 20 28.1	-0.9
QUIF	**Quistinic**	**146.57**	**12**	*e*PKP1		PKPdf	04 20 28.6	-0.7
	comp=Z,44nm,1.3s							
ANTO	**Ankara**	**146.58**	**322**	⇑*iP*		PKPbc	04 20 33.5	+2.4
ANTO	**Ankara**	**146.58**	**322**	*e*PKPbc		PKPbc	04 20 32.2	+1.1
CONA	**Conrad Observa**	**146.67**	**349**	⇓*iP*		PKPbc	04 20 31.9	+0.8
	comp=Z,25nm,1.9s							
CONA	**Conrad Observa**	**146.67**	**349**	⇓*i*PKPdf		PKPbc	04 20 31.9	+0.8
	comp=Z,25nm,1.9s							
CSNA	**Conrad Observa**	**146.67**	**349**	⇓*iP*		PKPbc	04 20 31.9	+0.8
	comp=Z,23nm,1.9s							
CSNA	**Conrad Observa**	**146.67**	**349**	⇓*i*PKPdf		PKPbc	04 20 31.9	+0.8
	comp=Z,23nm,1.9s							
MEZF	**Maizieres J'vi**	**146.96**	**2**	*e*PKP1		PKPbc	04 20 31.9	0.0
	comp=Z,34nm,1.3s							
CDF	**Champ du Feu**	**147.07**	**359**	*e*PKP1		PKPbc	04 20 32.0	-0.2
	comp=Z,28nm,1.2s							
BFO	**Black Forest**	**147.12**	**358**	*e*PKP2		PKPab	04 20 33.5	-0.5
BZS	**Buzias**	**147.33**	**340**	⇓*iP*		PKPab	04 20 34.2	-0.7
BZS	**Buzias**	**147.33**	**340**	⇓P		PKPab	04 20 34.2	-0.7
HAU	**Haudompre**	**147.48**	**0**	*e*PKP1		PKPbc	04 20 33.1	-0.3
	comp=Z,32nm,1.1s							
HAU				*e*MLR		MLR		
	comp=Z,151nm,19.5s,MS4.5							
HAU	**Haudompre**	**147.48**	**0**	*e*PKP		PKPbc	04 20 33.1	-0.3
HAU				LR		LR		
	comp=Z,150nm,19.5s,MS4.8							
PKSM	**Moragy**	**147.66**	**344**	⇓*iP*		PKPab	04 20 39.2	+3.0
PKSM	**Moragy**	**147.66**	**344**	⇓P		PKPab	04 20 39.1	+3.0
HINF	**Hinteralfeld**	**147.67**	**360**	*e*PKP1		PKPbc	04 20 33.5	-0.4
	comp=Z,51nm,1.8s							
ASF	**Jabal al Asfar**	**147.81**	**307**	PKPbc		PKPbc	04 20 33.6	-1.2
	comp=Z,1.1nm,0.8s,baz=216,slow=3.9,SNR=5.1							
SOKA	**Soboth**	**148.03**	**349**	⇓*iP*		PKPbc	04 20 35.1	+0.2
	comp=Z,17nm,1.6s							
SOKA	**Soboth**	**148.03**	**349**	⇓*i*PKPdf		PKPbc	04 20 35.1	+0.2
	comp=Z,17nm,1.6s							
LOR	**Lormes**	**148.13**	**4**	*e*PKP1		PKPbc	04 20 33.8	-1.4
	comp=Z,15nm,0.9s							
LOR				*e*MLR		MLR		
	comp=Z,290nm,20.0s,MS4.8							
LOR	**Lormes**	**148.13**	**4**	*e*PKP		PKPdf	04 20 33.8	+1.9
LOR				LR		LR		
	comp=Z,290nm,20.0s,MS5.1							
SSF	**Saint Saulge**	**148.31**	**4**	*e*PKP1		PKPbc	04 20 35.5	-0.1
	comp=Z,27nm,1.2s							
AVF	**Avril sur Loir**	**148.57**	**4**	*e*PKP1		PKPbc	04 20 35.8	-0.5
	comp=Z,30nm,1.2s							
SMF	**Signal de Mont**	**148.75**	**4**	*e*PKP1		PKPbc	04 20 36.4	-0.4
	comp=Z,70nm,1.8s							
BGF	**Bois d'Agland**	**148.76**	**5**	*e*PKP1		PKPbc	04 20 36.5	-0.3
	comp=Z,43nm,1.3s							
CABF	**La Chapelle**	**148.87**	**1**	*e*PKP1		PKPbc	04 20 37.6	+0.5
	comp=Z,48nm,1.2s							
TCF	**Toulx Ste Croi**	**148.97**	**6**	*e*PKP1		PKPbc	04 20 36.7	-0.7
	comp=Z,21nm,1.4s							
VIVF	**Saint-Julien-l**	**150.58**	**3**	*e*PKP1		PKPbc	04 20 41.7	+0.4
LASF	**Ste Croix**	**151.31**	**4**	*e*PKP1		PKPbc	04 20 43.3	+0.2
	comp=Z,37nm,1.4s							
SMRF	**Simiane la Rot**	**151.49**	**2**	*e*PKP1		PKPbc	04 20 42.7	-0.8
	comp=Z,40nm,1.5s							
FRF	**La Foret Royal**	**151.92**	**360**	*e*PKP1		PKPbc	04 20 41.8	-2.7
	comp=Z,19nm,1.2s							
ESDC	**Sonseca Array**	**154.09**	**19**	PKPbc		PKPbc	04 20 51.0	+1.6
	comp=Z,0.1nm,0.4s,baz=337,slow=2.9,SNR=3.7							
ESDC				PKPab		PKPab	04 21 02.8	-0.1
	comp=Z,0.6nm,0.7s,baz=330,slow=3.3,SNR=4.7							
TORD	**Torodi Ar. Bea**	**174.72**	**114**	PKP		PKPdf	04 20 60.0	-0.2
	comp=Z,0.9nm,1.1s,baz=150,slow=3.2,SNR=3.1							
TORD				PKPab		PKPab	04 22 35.2	+1.0
	comp=Z,0.8nm,1.0s,baz=273,slow=2.6,SNR=3.1							

IDC ***16*** *04:08:33.6±1.7,2823N×143.10E,h0km,mb3.9/6, mb1 4.0/7,mb1mx3.8/23,mbtmp3.8/7,ML3.4/1,Error ellipse: s-maj=46.6km s-min=17.1km az=87.0*
NEIC ***16*** *04:08:35.6±5.2,2849N×143.97E,h35km,MG3.8(JMA), Error ellipse: s-maj=201.0km s-min=13.8km az=75.0*
ISCJB ***16*** *04:08:36.3±1.0,2840N±0.003×1429E±0.02,h33km,mb3.9/6, Error ellipse: s-maj=22.4km s-min=4.7km az=1.6*
JMA ***16*** *04:08:38.2±0.2,2835N×142.72E,h60km,M3.8*
ISC 16 04:08:39.0±1.1,2834N±004×1428E±02,h35km,n18, σ1$00/22,mb3.9/6,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.36**	**204**	Pn	**Pn**	**04 09 01.0**	**-0.5**
	14nm,0.3s,baz=260,slow=21,SNR=9.6						
CBIJ				Sn	**Sn**	**04 09 18.4**	**0.0**
	54nm,0.3s,baz=273,slow=22,SNR=13						
CBIJ	**Chichi jima**	**1.36**	**204**	P	**Pn**	**04 09 01.2**	**-0.3**
CBIJ				*e*S	**Sn**	**04 09 17.8**	**-0.5**
JHJ2	**Mitsune**	**5.41**	**332**	*e*S	**Sn**	**04 10 57.7**	**-0.4**
BSO2	**Boso 2**	**6.63**	**345**	*e*S	**Sn**	**04 11 27.2**	**-0.9**
JOD2	**Odawara 2**	**7.59**	**336**	P	**Pn**	**04 10 28.3**	**+1.2**
JHJ	**Hanno**	**8.06**	**339**	P	**Pn**	**04 10 33.7**	**+0.2**
JRY	**Ryogami san**	**8.34**	**338**	P	**Pn**	**04 10 38.3**	**+1.0**
JHO	**Hitachi**	**8.46**	**348**	P	**Pn**	**04 10 38.5**	**-0.4**
JHO				*e*S	**Sn**	**04 12 06.3**	**-6.9**
JAG	**Ashikaga**	**8.54**	**341**	P	**Pn**	**04 10 39.5**	**-0.6**
JAG				*e*S	**Sn**	**04 12 12.1**	**-3.2**
MJAR	**Matsushiro Arr**	**9.05**	**336**	Pn	**Pn**	**04 10 46.9**	**-0.2**
	0.4nm,0.3s,baz=147,slow=15,SNR=5.8						
KSRS	**Korea Array**	**15.45**	**310**	Pn	**Pn**	**04 12 19.9**	**+5.8**
	0.3nm,0.3s,baz=120,slow=10.0,SNR=7.5						
SONM	**Songino Array**	**34.22**	**315**	P	**P**	**04 15 24.7**	**+3.5**
	0.7nm,0.7s,mb3.7,baz=103,slow=7.7,SNR=4.1						
WRA	**Warramunga Arr**	**48.70**	**191**	P	**P**	**04 17 19.4**	**-0.5**
	2.3nm,0.6s,mb4.4,baz=12,slow=8.4,SNR=22						
FITZ	**Fitzroy Crossi**	**49.07**	**202**	P	**P**	**04 17 22.6**	**-0.2**
	1.5nm,0.7s,mb4.1,baz=17,slow=14,SNR=5.3						
ASAR	**Alice Springs**	**52.42**	**190**	P	**P**	**04 17 47.1**	**-0.9**
	0.1nm,0.4s,mb3.1,baz=8.5,slow=7.5,SNR=3.2						
KURK	**Kurchatov**	**52.52**	**314**	P	**P**	**04 17 49.9**	**+1.4**
	1.8nm,0.7s,mb4.1,baz=90,slow=8.0,SNR=5.2						
KURK	**Kurchatov**	**52.52**	**314**	P	**P**	**04 17 49.9**	**+1.4**
BVAR	**Borovoye Array**	**57.51**	**317**	P	**P**	**04 18 26.3**	**+1.7**
	0.8nm,0.6s,mb4.0,baz=70,slow=9.9,SNR=4.2						

IDC 16 04:43:52.9±4.4,307S×10017E,h0km,mb3.6/5,mb1 3.7/5, mb1mx3.6/19,mbtmp3.6/5,MS3.7/3,Ms1 3.7/3, ms1mx3.3/32,Error ellipse: s-maj=186.9km s-min=22.4km az=55.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.32**	**119**	P	P	04 51 06.7	-0.6
	0.4nm,0.4s,baz=302,slow=8.8,SNR=9.8						
ASAR	**Alice Springs**	**38.50**	**125**	P	P	04 51 17.3	+0.1
	0.2nm,0.4s,baz=304,slow=8.1,SNR=4.9						
KSRS	**Korea Array**	**47.85**	**30**	LR	LR	05 13 38.6	
	comp=Z,44nm,18.3s,baz=315,slow=37						
SONM	**Songino Array**	**50.98**	**5**	P	P	04 52 56.5	+0.2
	0.8nm,0.5s,baz=188,slow=9.4,SNR=5.0						
MKAR	**Makanchi Array**	**52.09**	**344**	P	P	04 53 04.3	-0.3
	0.4nm,0.4s,baz=145,slow=8.3,SNR=3.2						
ZALV	**Zalesovo Beam**	**58.24**	**349**	P	P	04 53 48.6	-0.4
	0.4nm,0.4s,baz=130,slow=6.2,SNR=3.1						
ASF	**Jabal al Asfar**	**69.34**	**306**	LR	LR	05 25 07.2	
	comp=Z,68nm,21.4s,baz=157,slow=36						
MMAI	**Mount Meron Ar**	**70.80**	**306**	LR	LR	05 27 29.4	
	comp=Z,87nm,19.4s,baz=85,slow=37						
TXAR	**Lajitas Array**	**145.43**	**38**	PKPbc	PKPbc	05 03 34.1	+0.5
	0.3nm,0.5s,baz=265,slow=0.5,SNR=6.0						

IDC ***16*** *04:45:29.9±1.3,208S×100.04E,h0km,mb4.2/12, mb1 4.4/12,mb1mx4.1/21,mbtmp4.3/12,Error ellipse: s-maj=49.9km s-min=14.7km az=60.0*
ISCJB ***16*** *04:45:33.1±0.9,20S±0.1×100.1E±0.2,h33km,mb4.3/15, Error ellipse: s-maj=32.0km s-min=10.0km az=146.7*
NEIC ***16*** *04:45:35.8±4.2,200S×100.19E,h38km±36km,mb4.6/4, Error ellipse: s-maj=27.8km s-min=6.4km az=57.0*
ISC 16 04:45:35.6±0.9,20S±01×1002E±02,h35km, (h42km±2.6km:pP-P),n19,σ0$52/18,mb4.3/15,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.39**	**357**	P	**P**	**04 50 08.9**	**-0.6**
	2.4nm,0.6s,baz=184,slow=10,SNR=12						
QIZ	**Qiongzhong**	**22.98**	**24**	*e*P	**P**	**04 50 37.0**	**-0.3**
	7.8nm,0.9s,mb4.1						
FITZ	**Fitzroy Crossi**	**29.66**	**124**	P	**P**	**04 51 38.0**	**-0.1**
	1.7nm,0.9s,mb3.8,baz=126,slow=21,SNR=4.1						
WRA	**Warramunga Arr**	**37.83**	**121**	P	**P**	**04 52 48.6**	**-0.5**
	4.6nm,0.8s,mb4.3,baz=303,slow=9.0,SNR=34						
WRA				PcP	PcP	04 55 05.7	+0.4
	0.6nm,0.9s,baz=307,slow=2.7,SNR=5.4						
WB2	**Warramunga Arr**	**37.84**	**121**	*e*P	**P**	**04 52 49.1**	**-0.1**
ASAR	**Alice Springs**	**39.10**	**126**	P	**P**	**04 53 00.1**	**+0.4**
	2.1nm,0.6s,mb4.0,baz=302,slow=8.0,SNR=26						
ASAR				PcP	PcP	04 55 09.9	+0.8
	0.7nm,0.8s,baz=295,slow=2.0,SNR=4.8						
KSRS	**Korea Array**	**46.96**	**30**	P	**P**	**04 54 04.0**	**+0.9**
	1.0nm,0.6s,mb3.9,baz=223,slow=7.4,SNR=3.8						
CTA	**Charters Tower**	**48.43**	**115**	P	**P**	**04 54 14.8**	**-0.1**
	2.9nm,0.9s,mb4.3,baz=257,slow=9.3,SNR=4.9						
STKA	**Stephens Creek**	**49.00**	**132**	P	**P**	**04 54 19.2**	**+0.2**
	1.9nm,0.7s,mb4.2,baz=301,slow=12,SNR=3.9						
TKM2	**Tokmak 2**	**49.92**	**336**	*e*P	**P**	**04 54 26.7**	**+0.9**
	6.5nm,0.8s,mb4.7						
TKM2				*e*pP	pP	04 54 39.1	+2.7
SONM	**Songino Array**	**49.95**	**5**	P	**P**	**04 54 26.8**	**+0.8**
	1.2nm,0.4s,mb4.3,baz=187,slow=9.2,SNR=10.0						
EKS2	**Erkin-Say**	**50.46**	**335**	*e*P	**P**	**04 54 30.2**	**+0.3**
	6.2nm,0.9s,mb4.6						
MKAR	**Makanchi Array**	**51.10**	**344**	P	**P**	**04 54 34.8**	**+0.2**
	5.7nm,0.6s,mb4.7,baz=150,slow=8.0,SNR=28						
MJAR	**Matsushiro Arr**	**52.19**	**39**	P	**P**	**04 54 43.0**	**0.0**
	0.4nm,0.4s,mb3.7,baz=208,slow=6.8,SNR=4.2						
KURK	**Kurchatov**	**55.68**	**344**	*e*P	**P**	**04 55 08.0**	**-0.2**
	6.2nm,0.9s,mb4.6						
KURK				*e*pP	pP	04 55 18.3	-0.5
ZAA0	**Zalesovo Array**	**57.23**	**349**	*e*P	**P**	**04 55 18.9**	**-0.3**
ZAA0				*e*pP	pP	04 55 30.7	+1.0
ZALV	**Zalesovo Beam**	**57.23**	**349**	P	**P**	**04 55 18.1**	**-1.0**
	2.1nm,0.6s,mb4.4,baz=193,slow=6.1,SNR=6.6						
ARCES	**ARCESS Array B**	**86.56**	**340**	P	**P**	**04 58 14.2**	**-0.4**
	3.5nm,0.9s,mb4.6,baz=95,slow=7.5,SNR=5.9						
TXAR	**Lajitas Array**	**144.62**	**38**	PKP	PKPdf	05 05 08.9	-0.3
	1.5nm,0.5s,baz=190,slow=1.4,SNR=28						

TEH ***16*** *05:19:09.6,38.12N×46.37E,h12km,ML4.4*
NSSP ***16*** *05:19:57.4,38.12N×46.30E,h15km,ML3.6*
ISCJB ***16*** *05:20:00.5±0.3,38.11N±002×46.38E±003,h10km,Error ellipse: s-maj=3.7km s-min=2.9km az=21.5*
CSEM ***16*** *05:20:00.6±0.1,38.11N×46.33E,h16km,ML4.4,Error ellipse: s-maj=1.9km s-min=1.5km az=51.0*
THR ***16*** *05:20:00.2±0.5,38.20N×46.36E,h18km,ML3.9*
ISC 16 05:20:01.4±0.4,3812N±002×4634E±003,h10km,n45, σ1$33/65,9D,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITBZ	**Tabriz**	**0.19**	**308**	*e*Pg	**Pg**	**05 20 04.5**	**-0.9**
ITBZ				*e*Sg	**Sg**	**05 20 08.1**	**-0.1**
ITBZ	**Tabriz**	**0.19**	**308**	*e*Pg	**Pg**	**05 20 04.5**	**-0.9**
ITBZ				*e*Sg	**Sg**	**05 20 08.1**	**-0.1**
ITBZ				*e*		05 20 08.5	
IAZR	**Azarshahr**	**0.52**	**213**	*e*Pg	**Pg**	**05 20 10.5**	**-1.0**
IAZR				*e*Sg	**Sg**	**05 20 18.3**	**-0.1**
IAZR	**Azarshahr**	**0.52**	**213**	*e*Pg	**Pg**	**05 20 10.5**	**-1.0**
IAZR				*e*Sg	**Sg**	**05 20 18.3**	**-0.1**
IAZR				*e*		05 20 19.8	
IHRS	**Heris**	**0.59**	**70**	*e*Pg	**Pg**	**05 20 11.1**	**-1.7**
IHRS				*e*		05 20 11.3	
IHRS				*e*Sg	**Sg**	**05 20 19.9**	**-0.7**
ISHB	**Shabestar**	**0.59**	**287**	*e*Pg	**Pg**	**05 20 11.8**	**-1.1**
ISHB				*e*Sg	**Sg**	**05 20 20.5**	**-0.1**
ISHB	**Shabestar**	**0.59**	**287**	*e*Pg	**Pg**	**05 20 11.8**	**-1.1**
ISHB				*e*Sg	**Sg**	**05 20 20.5**	**-0.1**
ISHB				*e*		05 20 21.3	
IBST	**Bostanabad**	**0.60**	**133**	*e*Pg	**Pg**	**05 20 10.6**	**-2.5**
IMRD	**Marand**	**0.78**	**320**	*e*Pg	**Pg**	**05 20 14.6**	**-1.8**
IMRD				*e*Sg	**Sg**	**05 20 25.7**	**-0.8**
IMRD				*e*		05 20 26.7	
ISRB	**Sarab**	**1.09**	**105**	*e*Pg	**Pg**	**05 20 20.0**	**-2.3**
ISRB				*e*		05 20 22.4	
NAX	**Nakhchivan**	**1.25**	**328**	P	**Pn**	**05 20 23.3**	**-1.5**
	SNR=203						
NAX				S	**Sb**	**05 20 40.7**	**-0.4**
GRS	**Goris**	**1.38**	**360**	⇓P	**Pn**	**05 20 26.0**	**-0.7**
GRS				S	**Sb**	**05 20 45.0**	**0.0**
MAKU	**Maku**	**1.79**	**314**	*e*Pg	**Pn**	**05 20 32.0**	**-0.3**
MAKU				*e*Sg	**Sn**	**05 20 55.9**	**+0.8**
MAKU				AML	AML	05 20 59.5	
	comp=E,1μm,0.3s						
MAKU	**Maku**	**1.79**	**314**	*e*Pg	**Pn**	**05 20 32.0**	**-0.3**
	SNR=91						
MAKU				*e*Sg	**Sn**	**05 20 55.8**	**+0.7**
	SNR=91						
GLBA	**Clilabad**	**1.96**	**54**	P	**Pn**	**05 20 36.3**	**+1.6**
	SNR=98						
GLBA				S	**Sg**	**05 21 03.6**	**-0.9**
HAKT	**HAKKARI**	**2.16**	**256**	*i* P	**Pn**	**05 20 37.7**	**+0.4**
BRDA	**Brd**	**2.24**	**17**	P	**Pn**	**05 20 40.7**	**+2.2**
	SNR=31						
TVAN	**Van**	**2.34**	**281**	*i* P	**Pn**	**05 20 41.1**	**+1.2**
TVAN	**Van**	**2.34**	**281**	*i* P	**Pn**	**05 20 41.1**	**+1.2**
TVAN				*i* S	**Sn**	**05 21 11.7**	**+3.0**
GNI	**Garni**	**2.38**	**329**	⇓P	**Pn**	**05 20 43.8**	**+3.4**
DYDN	**Diyadin**	**2.51**	**305**	*i* P	**Pn**	**05 20 46.5**	**+4.2**
GANJ	**Ganja**	**2.53**	**360**	P	**Pn**	**05 20 45.1**	**+2.6**
	SNR=11						
PAAR	**P'arak'ar**	**2.54**	**324**	⇓P	**Pn**	**05 20 42.3**	**-0.3**
PAAR				S	**Sn**	**05 21 14.9**	**+1.3**
KAPZ	**Kaputan**	**2.54**	**330**	⇓P	**Pn**	**05 20 43.2**	**+0.5**
KAPZ				S	**Sn**	**05 21 17.8**	**+4.1**
ARUZ	**Aruch**	**2.78**	**322**	⇓P	**Pn**	**05 20 46.0**	**+0.1**
AMBZ	**Amberd**	**2.78**	**325**	⇓P	**Pn**	**05 20 48.8**	**+2.8**
VNNZ	**Vanand**	**2.79**	**316**	⇓P	**Pn**	**05 20 47.0**	**+1.0**
SNGE	**Sanandaj**	**3.12**	**165**	*e*Pn	**Pn**	**05 20 52.0**	**+1.3**
SEKA	**Sheki**	**3.16**	**12**	P	**Pn**	**05 20 52.1**	**+0.9**
	SNR=22						
PQL	**Pirkuli**	**3.19**	**32**	P	**Pn**	**05 20 53.4**	**+1.8**
	SNR=8.8						
DGRG	**David-gareji**	**3.41**	**348**	P	**Pg**	**05 21 02.3**	**-4.4**
DGRG				S	**Sg**	**05 21 50.5**	**-0.4**
MTA	**Mtatsminda**	**3.77**	**342**	P	**Pg**	**05 21 07.2**	**-6.3**
MTA				S	**Sg**	**05 21 57.2**	**-5.1**
TBLG	**Delisi**	**3.81**	**342**	P	**Pg**	**05 21 08.7**	**-5.8**
TBLG				S	**Sg**	**05 21 58.2**	**-5.7**
HOMI	**Horasan**	**3.95**	**301**	*i* P	**Pg**	**05 21 13.6**	**-3.5**
BEST	**Besiri**	**4.01**	**268**	*e*P	**Pn**	**05 21 06.5**	**+3.7**
GOR	**Gori**	**4.23**	**337**	P	**Pg**	**05 21 16.0**	**-6.3**
GOR				S	**Sg**	**05 22 18.3**	**+1.3**
ERZM	**Erzurum**	**4.26**	**296**	*i* P	**Pg**	**05 21 19.7**	**-3.4**
ERZM	**Erzurum**	**4.26**	**296**	*i* S	**Sn**	**05 21 53.8**	**-2.3**
CHTH	**Charan**	**4.42**	**118**	*e*Pn	**Pn**	**05 21 09.2**	**+0.7**
CHTH				AML	AML	05 22 22.5	
	comp=N,117nm,0.7s						
CHTH				AML	AML	05 22 25.0	
	comp=E,111nm,0.5s						
MARD	**Mardin**	**4.48**	**261**	*e*P	**Pb**	**05 21 20.3**	**+0.2**
ASAO	**Ashtian**	**4.64**	**139**	*e*Pn	**Pn**	**05 21 12.3**	**+0.8**
ONI	**Oni**	**4.97**	**335**	P	**Pg**	**05 21 29.2**	**-7.4**
ONI				S	**Sg**	**05 22 37.7**	**-3.3**
BHD	**Baghdad**	**5.09**	**199**	*ex*	x	05 21 18.0	
BHD				*ex*	x	05 22 18.0	
GHVR	**GHOM**	**5.40**	**131**	*e*Pn	**Pn**	**05 21 22.5**	**+0.5**
GHVR				AML	AML	05 22 54.7	
	comp=E,50nm,0.7s						
GHVR				AML	AML	05 23 03.5	
	comp=N,50nm,0.7s						
MRVT	**Maraveh tapeh**	**7.73**	**90**	*e*Pn	**Pn**	**05 21 54.0**	**+0.1**

IDC 16 05:23:19.7±2.9,2433N×10964W,h0km,mb1 3.7/3, mb1mx3.5/21,mbtmp3.2/3,ML3.5/3,Error ellipse: s-maj=57.3km s-min=9.3km az=146.0,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**0.65**	**250**	Pg	Pg	05 23 32.8	+0.7
	815nm,0.3s,baz=161,slow=0.5,SNR=447						
LPIG				Lg		05 23 40.6	
	2μm,0.3s,baz=53,slow=20,SNR=75						
TXAR	**Lajitas Array**	**7.30**	**46**	Pn	Pn	05 25 07.5	0.0
	0.2nm,0.3s,baz=221,slow=12,SNR=9.5						
TXAR				Sn	Sn	05 26 30.6	-0.6
	0.1nm,0.3s,baz=208,slow=21,SNR=2.9						
TXAR				Lg		05 27 10.8	
	0.1nm,0.3s,baz=238,slow=23,SNR=2.7						
PFO	**Pinyon Flat Ob**	**11.00**	**329**	Pn	Pn	05 26 03.8	+5.6
	0.1nm,0.3s,baz=177,slow=10.0,SNR=3.6						
NVAR	**Mina Array Bea**	**15.87**	**334**	Pn	Pn	05 27 08.3	+4.0
	0.1nm,0.3s,baz=146,slow=13,SNR=3.6						
PDAR	**Pinedale Array**	**18.39**	**0**	P	Pn	05 27 35.8	-0.2
	0.0nm,0.3s,baz=168,slow=11,SNR=5.9						

SZGRF ***16*** *05:28:09.9,1937S×17731W,h33km,Fiji Islands region*
BJI ***16*** *05:29:14.0,1780S×17860W,h581km,mB4.8,mb4.4*
NEIC ***16*** *05:29:16.0±0.8,1783S×17856W,h581km±9km,mb4.5/37, Error ellipse: s-maj=14.2km s-min=5.8km az=147.0*
BGS ***16*** *05:29:16.3±2.9,1783S×17856W,h581km,mb4.5(NEIC)*
ISCJB ***16*** *05:29:16.5±0.8,1790S±009×17859W±006,h603km±10km, mb4.4/57,Error ellipse: s-maj=14.8km s-min=5.9km az=150.7*
MOS ***16*** *05:29:17.7±1.9,1698S×17887W,h572km,mb4.5/27, MS4.4/4,Error ellipse: s-maj=13.6km s-min=10.1km az=141.0*
IDC ***16*** *05:29:17.0±1.1,1791S×17855W,h596km±13km,mb3.9/20, mb1 4.1/21,mb1mx4.0/24,mbtmp3.9/21,Error ellipse: s-maj=17.3km s-min=7.7km az=149.0*
ISC 16 05:29:16.9±0.8,1789S±009×17856W±006,h592km±9km, h559km±5.3km:pP-P,n288,σ0$80/140,mb4.4/57,43C-15D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.63**	**60**	P	**P**	**05 31 11.9**	**-0.6**
	8.7nm,0.3s,baz=22,slow=4.5,SNR=9.8						
AFI				S	**S**	**05 32 46.9**	**-0.2**
	1.5nm,0.3s,baz=72,slow=20,SNR=2.1						
AFI	**Afiamalu**	**7.63**	**60**	P	**P**	**05 31 11.9**	**-0.6**
AFI				S	**S**	**05 32 46.9**	**-0.2**
AFI				pmax	pmax		
	comp=Z,9.0nm,0.3s						
AFI				smax			
	comp=N,2.0nm,0.3s						
AFI	**Afiamalu**	**7.63**	**60**	*e*P	**P**	**05 31 11.4**	**-1.0**
	comp=N,165nm,1.0s						
AFI				S	**S**	**05 32 41.3**	**-5.8**
DZM	**Mont Dzumac**	**14.70**	**251**	*e*P	**P**	**05 32 22.1**	**-0.5**
DZM	**Mont Dzumac**	**14.70**	**251**	*e*P	**P**	**05 32 22.1**	**-0.5**
URZ	**Urewera**	**20.65**	**190**	P	**P**	**05 33 16.9**	**+0.3**
	comp=N,6.7nm,0.5s,baz=336,slow=19,SNR=3.8						
ARMA	**Armidale**	**29.83**	**240**	*e*P	**P**	**05 34 38.4**	**+0.9**
CTA	**Charters Tower**	**33.31**	**261**	⇓*i*P	**P**	**05 35 07.4**	**+0.2**
	comp=N,16nm,0.5s,mb4.9						
CTA	**Charters Tower**	**33.31**	**261**	P	**P**	**05 35 07.5**	**+0.3**
	comp=Z,13nm,0.6s,mb5.0,baz=90,slow=10,SNR=72						
CTA	**Charters Tower**	**33.31**	**261**	P	**P**	**05 35 07.5**	**+0.3**
CTA				pmax	pmax		
	comp=Z,21nm,0.6s						
CTAO	**Charters Tower**	**33.31**	**261**	*e*P	**P**	**05 35 07.3**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.8						
CTAO	**Charters Tower**	**33.31**	**261**	*e*P	**P**	**05 35 07.3**	**0.0**
	comp=Z,19nm,0.7s,mb4.8						
CNB	**Canberra Magne**	**33.33**	**232**	*e*P	**P**	**05 35 07.8**	**+0.6**
PMG	**Port Moresby**	**34.32**	**280**	*e*P	**P**	**05 35 17.5**	**+1.8**
PMG				pmax	pmax		
	comp=Z,84nm,0.9s						
PMG	**Port Moresby**	**34.32**	**280**	*e*P	**P**	**05 35 17.5**	**+1.8**
	comp=Z,84nm,0.9s,mb5.4						
COEN	**Coen**	**36.96**	**270**	*e*P	**P**	**05 35 38.6**	**+1.1**
	comp=Z,30nm,0.7s,mb4.9						
TOO	**Toolangi**	**37.07**	**231**	*e*P	**P**

comp=Z,4.0nm,0.6s
MAJO Matsushiro 67.81 323 *e*P P 05 39 16.4 -0.5
MAJO pmax pmax
comp=Z,7.0nm,1.0s,mb4.0
MAJO Matsushiro 67.81 323 *e*P P 05 39 16.4 -0.5
comp=Z,6.8nm,1.0s,mb4.0
MAT Matsushiro 67.81 323 P P 05 39 17.6 +0.7
NIKO Nikolski 71.06 6 *e*P P 05 39 34.7 -1.2
comp=Z,11nm,1.1s,mb4.0
YSS Yuzh-Sakhalins 73.33 333 *e*P P 05 39 47.9 -1.2
YSS pmax pmax
comp=Z,37nm,2.3s,mb4.5
PEA0B Petropavlovsk- 73.62 345 *e*P P 05 39 49.3 -1.3
PETK Petropavlovsk- 73.62 345 P P 05 39 50.5 -0.1
comp=Z,11nm,0.6s,mb4.5,baz=121,slow=7.5,SNR=19
PETK Petropavlovsk- 73.62 345 P P 05 39 50.5 -0.1
PETK pmax pmax
comp=Z,11nm,0.6s,mb4.6
PETK Petropavlovsk- 73.62 345 P P 05 39 50.5 -0.2
KSRS Korea Array 74.59 318 P P 05 39 57.0 +0.5
comp=Z,0.8nm,0.6s,mb3.5,baz=118,slow=5.2,SNR=3.7
KSRS Korea Array 74.59 318 P P 05 39 57.0 +0.5
KSRS pmax pmax
comp=Z,1.0nm,0.6s,mb3.5
SAO San Andreas Ge 76.51 44 *e*P P 05 40 07.6 +0.5
SAO pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
SAO San Andreas Ge 76.51 44 *e*P P 05 40 07.6 +0.5
comp=Z,8.4nm,0.9s,mb4.2
MWC Mount Wilson 77.43 48 *e*P P 05 40 12.6 +0.5
MWC pmax pmax
comp=Z,13nm,0.7s,mb4.5
MWC Mount Wilson 77.43 48 *e*P P 05 40 12.6 +0.4
comp=Z,13nm,0.7s,mb4.5
NJ2 Nanjing 77.82 310 *e*P P 05 40 15.8 +1.5
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.4
ISA Isabella 77.91 46 *e*P P 05 40 15.3 +0.6
ISA pmax pmax
comp=Z,15nm,0.9s,mb4.4
ISA Isabella 77.91 46 *e*P P 05 40 15.3 +0.7
comp=Z,15nm,0.9s,mb4.4
CMB Columbia Colle 77.92 43 *e*P P 05 40 14.8 +0.1
CMB pmax pmax
comp=Z,13nm,1.0s,mb4.3
CMB Columbia Colle 77.92 43 *e*P P 05 40 14.8 +0.1
comp=Z,13nm,1.0s,mb4.3
WDC Whiskeytown Da 78.02 40 *e*P P 05 40 15.4 +0.2
WDC pmax pmax
comp=Z,13nm,1.4s,mb4.2
WDC Whiskeytown Da 78.02 40 *e*P P 05 40 15.3 +0.2
comp=Z,13nm,1.4s,mb4.2
MDJ Mudanjiang 78.09 325 P P 05 40 16.0 +0.6
MDJ AP pP 05 42 12.4 -6.8
MDJ S S 05 49 21.4 -0.6
MDJ XS sS 05 52 54.1 -8.5
MDJ SS SS 05 54 38.3 -3.4
MDJ AMB AMB
comp=Z,15nm,1.0s,mb4.4
MDJ AMB AMB
comp=Z,147nm,4.9s
KDAK Kodiak Island 78.42 14 P P 05 40 16.6 -0.3
comp=Z,8.7nm,0.7s,mb4.3,baz=252,slow=3.2,SNR=4.0
KDAK Kodiak Island 78.42 14 P P 05 40 16.6 -0.2
KDAK pmax pmax
comp=Z,9.0nm,0.7s,mb4.3
YBH Yreka Blue Hor 78.60 39 P P 05 40 18.9 +0.6
comp=Z,13nm,0.8s,mb4.3,baz=182,slow=1.6,SNR=44
YBH Yreka Blue Hor 78.60 39 *e*P P 05 40 19.3 +1.1
YBH *e* 05 40 25.4
YBH pmax pmax
comp=Z,8.0nm,0.9s
YBH Yreka Blue Hor 78.60 39 *e*P P 05 40 19.3 +1.1
comp=Z,8.1nm,0.9s,mb4.0
YBH *e*PcP PcP 05 40 25.4 +0.7
LBCM Butte Creek Ri 78.90 41 P P 05 40 20.2 +0.3
HUMO Hull Mountain 78.97 38 *e*P P 05 40 20.9 +0.7
comp=Z,11nm,1.0s,mb4.2
NVAR Mina Array Bea 79.51 44 P P 05 40 23.4 +0.4
comp=Z,8.4nm,0.7s,mb4.2,baz=224,slow=8.9,SNR=65
CN2 Changchun 79.92 322 *e*P P 05 40 27.1 +2.0
TPH Tonopah 80.04 45 *e*P P 05 40 26.4 +0.5
TPH pmax pmax
comp=Z,14nm,1.4s,mb4.1
TPH Tonopah 80.04 45 *e*P P 05 40 26.4 +0.5
comp=Z,14nm,1.4s,mb4.1
HEBO Mount Hebo 80.09 36 *e*P P 05 40 26.6 +0.6
comp=Z,25nm,1.1s,mb4.5
SVW2 Sparrevohn 80.85 11 *e*P P 05 40 28.9 -0.6
SVW2 *e*pP pP 05 42 29.6 -4.9
NLWA Neilton Lookou 81.37 34 *e*P P 05 40 33.0 +0.4
comp=Z,9.6nm,0.9s,mb4.2
NLWA *e*PcP PcP 05 40 37.0 +0.3
VIPM Ingram Point 81.47 38 P P 05 40 33.4 +0.3
WVOR Wild Horse Val 81.48 40 *e*P P 05 40 33.5 +0.3
WVOR pmax pmax
comp=Z,17nm,1.0s,mb4.4
WVOR Wild Horse Val 81.48 40 *e*P P 05 40 33.5 +0.2
comp=Z,18nm,1.0s,mb4.4
TDL Tradedollar La 81.64 36 P P 05 40 34.5 +0.5
TUC Tucson 81.80 52 *e*P P 05 40 36.0 +0.9
TUC pmax pmax
comp=Z,11nm,1.1s,mb4.3
TUC Tucson 81.80 52 *e*P P 05 40 36.0 +0.9
comp=Z,11nm,1.1s,mb4.3
LON Longmire 82.10 35 *e*P P 05 40 35.9 -0.4
LON pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
LON Longmire 82.10 35 *e*P P 05 40 35.9 -0.4
comp=Z,2.5nm,0.8s,mb3.8
PGC Sidney 82.37 33 *e*P P 05 40 36.6 -1.0
comp=Z,15nm,0.9s,mb4.5
PGC *e*PcP PcP 05 40 41.2 +0.2
ARUT Antelope Range 82.46 46 *e*P P 05 40 38.3 0.0
ELK Elko 82.74 43 P P 05 40 39.9 +0.3
comp=Z,5.4nm,0.8s,mb4.2,baz=247,slow=4.7,SNR=26
ELK Elko 82.74 43 P P 05 40 39.9 +0.3
ELK pmax pmax
comp=Z,5.0nm,0.8s
ELK Elko 82.74 43 *e*P P 05 40 39.8 +0.2
comp=Z,9.8nm,1.1s,mb4.2
EBG Ellensburg 82.89 36 P P 05 40 40.5 +0.3
JCW Jim Creek 82.90 34 *e*P P 05 40 40.6 +0.3
RSW Rattlesnake Hi 83.14 37 *e*P P 05 40 41.6 +0.2
BMRM Bremner River 83.18 16 *e*P P 05 40 40.8 -0.5
RPW Rockport 83.28 34 *e*P P 05 40 41.6 -0.5
ETW Entiat 83.42 35 *e*P P 05 40 43.1 +0.3
LNOR Lincton Mounta 83.60 38 *e*P P 05 40 43.5 -0.2
WTV Waterville 83.69 35 P P 05 40 43.9 -0.3
MAW Mawson 83.83 200 P P 05 40 43.9 -0.7
comp=Z,1.5nm,0.6s,mb3.7,baz=192,slow=3.9,SNR=12
MAW Mawson 83.83 200 P P 05 40 43.9 -0.7
MAW pmax pmax
comp=Z,2.0nm,0.6s
KTH Kantishna Hill 83.99 12 *e*P P 05 40 43.8 -1.4
comp=Z,18nm,1.0s,mb4.6
TRF Thorofare Moun 84.02 12 *e*P P 05 40 44.8 -0.7
comp=Z,29nm,0.7s,mb4.9
OD2 Odessa Site #2 84.20 36 *e*P P 05 40 46.5 -0.2
BPAW Bear Paw Mtn. 84.47 12 *e*P P 05 40 46.0 -1.5
comp=Z,3.3nm,0.7s,mb4.0
MCK McKinley 84.55 13 *e*P P 05 40 46.9 -1.1
MCK pmax pmax
comp=Z,22nm,1.0s,mb4.7
MCK McKinley 84.55 13 *e*P P 05 40 46.9 -1.1
comp=Z,22nm,1.0s,mb4.7
GYA Guiyang 84.90 300 P P 05 40 49.3 -1.3
GYA AP pP 05 42 51.3 -5.9
GYA XP sP 05 43 46.9 -10
GYA PP PP 05 44 18.3 -0.5
GYA SKS 05 50 17.9
GYA S S 05 50 31.4 +0.4
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
LAZ Ladron 85.46 52 *e*P P 05 40 53.6 +0.5
HWUT Hardware Ranch 85.57 44 *e*P P 05 40 53.3 -0.1
comp=Z,2.3nm,0.8s,mb3.9
HWUT *e*PcP PcP 05 40 55.5 +0.2
BNM Barren Site 85.73 52 *e*P P 05 40 54.9 +0.4
COLA College 85.78 13 *e*P P 05 40 52.6 -1.3
COLA pmax pmax
comp=Z,9.0nm,1.3s,mb4.2
COLA College 85.78 13 *e*P P 05 40 52.5 -1.4
comp=Z,8.8nm,1.3s,mb4.2
PV01 Paradox Valley 86.03 48 *e*P P 05 40 55.8 +0.1

TXAR Lajitas Array 86.10 58 P P 05 40 57.2 +0.9
comp=Z,9.3nm,0.8s,mb4.5,baz=219,slow=6.2,SNR=123
TXAR Lajitas Array 86.10 58 P P 05 40 57.2 +0.9
TXAR pmax pmax
comp=Z,9.0nm,0.8s
ANMO Albuquerque 86.19 52⇑ *i*P P 05 40 55.6 -1.0
MCMT McKenzie Canyo 86.31 41 *e*P P 05 40 57.5 +0.6
DAWY Dawson 87.11 16 *e*P P 05 41 00.1 0.0
HHC Hu-ho-hao-te 87.16 315 *e*P P 05 40 59.8 -1.2
HHC AP pP 05 43 04.3 -4.2
HHC XP sP 05 43 58.8 -9.0
HHC PP PP 05 44 35.6 -0.8
HHC S S 05 50 52.9 +1.2
HHC AMB AMB
comp=Z,20nm,0.8s,mb4.9
HHC AMB AMB
comp=Z,112nm,8.5s
COLD Coldfoot 87.42 11 *e*P P 05 41 01.5 -0.1
comp=Z,11nm,1.0s,mb4.6
PDAR Pinedale Array 87.44 43 P P 05 41 01.9 -0.3
comp=Z,6.2nm,0.6s,mb4.5,baz=218,slow=3.1,SNR=63
KMI Kunming 87.70 297 P P 05 41 06.8 +2.9
KMI AMB AMB
comp=Z,13nm,1.0s,mb4.6
SDCO Great Sand Dun 88.06 49 *e*P P 05 41 05.5 +0.2
comp=Z,1.8nm,1.4s,mb3.6
CMAR Chiang Mai Arr 88.75 290 P P 05 41 09.8 +0.9
comp=Z,0.9nm,0.3s,mb4.0,baz=99,slow=3.0,SNR=6.7
CMAR Chiang Mai Arr 88.75 290 P P 05 41 09.8 +0.9
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CD2 Chengdu 88.94 303 *e*P P 05 41 10.3 +0.8
CD2 AP pP 05 43 09.8 -7.8
CD2 PP PP 05 44 52.3 +1.7
CD2 SKS 05 50 47.8
CD2 S S 05 51 11.5 +3.0
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
CD2 AMB AMB
comp=Z,20nm,6.8s
YAK Yakutsk 89.51 338 *e*P P 05 41 10.9 -0.5
YAK pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
EDM Edmonton 90.22 33 *e*P P 05 41 14.0 -0.9
SNAA Sanae 90.62 179 *e*P P 05 41 15.3 -1.2
LZH Lanzhou 90.77 308 *e*P P 05 41 19.6 +1.8
LZH AP pP 05 43 24.0 -2.3
LZH AMB AMB
comp=Z,32nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,190nm,4.8s
LAO LASA Array 91.29 41 *e*P P 05 41 20.8 +0.8
comp=Z,10nm,0.9s,mb4.8
SONM Songino Array 93.44 319 P P 05 41 31.0 +1.1
comp=Z,0.6nm,0.6s,mb3.8,baz=140,slow=5.2,SNR=2.8
SONM Songino Array 93.44 319 P P 05 41 31.0 +1.2
SONM pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 94.37 25 P P 05 41 32.8 -0.9
comp=Z,1.2nm,0.7s,mb4.2,baz=237,slow=4.8,SNR=4.5
YKA Yellowknife Ar 94.37 25 P P 05 41 32.8 -0.9
YKA pmax pmax
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 108.13 322 PKiKP PKiKP 05 46 36.4 -1.6
comp=Z,0.4nm,0.3s,baz=169,slow=1.3,SNR=4.1
MKAR Makanchi Array 109.02 314 PKiKP PKiKP 05 46 38.0 -1.9
comp=Z,1.2nm,0.5s,baz=209,slow=0.6,SNR=6.7
MKAR Makanchi Array 109.02 314 PKPdf PKiKP 05 46 38.0 -1.9
KURK Kurchatov 111.72 318 PKiKP PKiKP 05 46 43.5 -1.4
comp=Z,1.3nm,0.6s,baz=87,slow=1.6,SNR=8.3
KURK Kurchatov 111.72 318 *i* PKIKP PKiKP 05 46 43.5 -1.4
KURK pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 116.74 321 PKP PKPdf 05 46 53.3 -1.2
comp=Z,2.6nm,0.4s,baz=107,slow=1.5,SNR=12
BVAR Borovoye Array 116.74 321 PKIKP PKPdf 05 46 53.3 -1.2
BVAR pmax pmax
comp=Z,3.0nm,0.4s
ARU Arti 122.75 326 *i* PKIKP PKPdf 05 47 04.7 -1.2
ARU 05 48 53.6
ARU Arti 122.75 326 *e*PKPdf PKPdf 05 47 05.1 -0.8
AKTK Aktyubinsk 124.76 319 PKP PKPdf 05 47 09.3 -0.7
AKTO Aktyubinsk 124.76 319 PKP PKPdf 05 47 09.3 -0.7
comp=Z,2.1nm,0.6s,baz=131,slow=1.9,SNR=7.6
AKTO Aktyubinsk 124.76 319 PKIKP PKPdf 05 47 09.3 -0.7
AKTO pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 126.27 350 PKP PKPdf 05 47 11.2 -1.1
comp=Z,3.3nm,0.6s,baz=22,slow=1.9,SNR=12
ARCES ARCESS Array B 126.27 350 PKIKP PKPdf 05 47 11.2 -1.1
ARCES pmax pmax
comp=Z,3.0nm,0.6s
JOF Joensuu 130.50 343 *e*pkp PKPdf 05 47 19.0 -1.5
KAF Kangasniemi 132.51 344 *e*pkp PKPdf 05 47 22.7 -1.6
AKASG Malin Array Be 140.48 332 PKhKP 05 47 31.1
comp=Z,0.8nm,0.4s,baz=42,slow=4.0,SNR=8.4
AKASG PKP PKPdf 05 47 40.0 +0.6
comp=Z,1.5nm,0.4s,baz=39,slow=2.9,SNR=8.4
AKASG Malin Array Be 140.48 332 PKHKP 05 47 31.2
AKASG 05 47 40.0
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 140.48 332 PKP 05 47 31.1
AKASG PKP PKPdf 05 47 40.0 +0.6
LVV L'vov 143.33 335 *i* PKHKP 05 47 41.8
BSEG Bad Segeberg 143.37 351 *e*PKPbc PKPdf 05 47 42.3 -2.1
HPK Haverah Park 143.92 3 *e*P PKPdf 05 47 43.8 -1.6
KWP Kalwaria 144.00 336 *e*PKIKP PKPdf 05 47 45.3 -0.3
LHO Hohnfirth 144.32 3 *e*P PKPdf 05 47 43.8 -2.2
BUR08 Bucovina Ar. S 144.52 332 *e*PKPbc PKPdf 05 47 47.0 +0.5
BURAR Bucovina Array 144.53 332⇑ *i*P PKPdf 05 47 47.6 +1.0
BURAR Bucovina Array 144.53 332⇑ P PKPdf 05 47 47.6 +0.9
OJC Ojcow 144.54 340 *e*PKIKP PKPdf 05 47 46.2 -0.4
KBI1 Birley Grange 144.63 3 *e*P PKPdf 05 47 46.2 -0.4
STHS Stebnicka Huta 144.72 337 *e*PKP PKPdf 05 47 47.7 +0.8
KOLS Kolonicke sedl 144.73 336 *e*PKP PKPdf 05 47 47.4 +0.5
KWE Weaver Farm 144.85 3 *e*P PKPdf 05 47 47.2 +0.2
UZH Uzhgorod 144.97 336⇑ *i*PKIKP PKPdf 05 47 48.4 +1.1
UZH *e**PP 05 49 59.0
ASF Jabal al Asfar 145.05 301 PKPbc PKPbc 05 47 48.8 -0.1
comp=Z,4.0nm,0.9s,baz=33,slow=5.3,SNR=5.1
ASF Jabal al Asfar 145.05 301 PKIKP PKPdf 05 47 48.8 +0.8
ASF pmax pmax
comp=Z,4.0nm,0.9s
NIE Niedzica 145.05 338 *e*PKP PKPdf 05 47 48.6 +1.1
KSP Ksiaz 145.05 344 *e*PKP PKPdf 05 47 48.4 +1.0
KSP Ksiaz 145.05 344 *e*PKP PKPdf 05 47 48.3 +0.9
CRVS Cervenica-Dubn 145.06 337 *e*PKP PKPdf 05 47 48.1 +0.6
VRI Vrincioaia 145.09 329⇑ *i*P PKPdf 05 47 48.8 +1.2
VRI Vrincioaia 145.09 329⇑ P PKPdf 05 47 48.8 +1.2
CWF Charnwood Fore 145.16 3 *e*P PKPdf 05 47 47.6 +0.1
IBBN Ibbenburen 145.30 353 *e*PKPbc PKPbc 05 47 48.5 -0.5
CLZ Clausthal 145.39 350 *e*PKPbc PKPbc 05 47 49.1 -0.2
CLL Collm 145.41 347 *e*PKPbc PKPbc 05 47 48.9 -0.5
CLL Collm 145.41 347⇑ *i*PKPbc PKPbc 05 47 49.0 -0.4
comp=Z,31nm,0.9s
UPC Upice 145.43 344 *e*PKP PKPdf 05 47 49.5 +1.4
DPC Dobruska-Polom 145.49 343 *e*PKP PKPdf 05 47 49.9 +1.7
BRG Berggiesshubel 145.61 346 *e*PKPbc PKPbc 05 47 49.7 -0.3
BRG Berggiesshubel 145.61 346 *i* PKP PKPdf 05 47 49.7 +1.3
comp=Z,13nm,0.7s
BRG *i* 05 47 56.0
comp=Z,4.5nm,0.8s
BRG pPKP pPKPdf 05 50 03.5 -2.3
comp=Z,3.3nm,0.9s
BRG sPKP 05 51 01.7
comp=Z,2.8nm,1.0s
MORC Moravsky Berou 145.65 341⇓ *i*P PKPdf 05 47 50.0 +1.5
MORC Moravsky Berou 145.65 341 *e*PKPbc PKPbc 05 47 50.2 +0.1
MLR Muntele Rosu 145.74 329⇓ *i*P PKPbc 05 47 50.7 +0.2
MLR Muntele Rosu 145.74 329⇓ P PKPbc 05 47 50.7 +0.2
KECS Kecovo 145.77 337 *i* PKP PKPdf 05 47 50.3 +1.6
PVCC Panska Ves 145.78 345 *e*PKP PKPdf 05 47 50.5 +1.8
MCH1 Michaelchurch 145.79 5 *e*P PKPdf 05 47 49.0 +0.4
BUG Bochum--Univer 146.21 353 *e*PKPbc PKPbc 05 47 50.7 -0.9
VOIR 146.22 330⇑ *i*P PKPbc 05 47 52.0 +0.2
DRGR 146.26 333⇓ *i*P PKPbc 05 47 51.8 -0.1
DRGR 146.26 333⇓ P PKPbc 05 47 51.8 -0.1
PRU Pruhonice 146.29 345 *e*PKP PKPbc 05 47 51.7 -0.2
PRU *ex* x 05 47 54.3
MOX Moxa 146.32 348 *e*PKP PKPdf 05 47 51.3 +1.7
comp=Z,14nm,1.1s

VRAC Vranov 146.35 342⇓ *i*P PKPbc 05 47 52.5 +0.4
VRAC Vranov 146.35 342⇓ P PKPbc 05 47 52.5 +0.5
VYHS Vyhne 146.35 339 *e*PKP PKPbc 05 47 51.9 -0.2
TANN Tannenbergstha 146.37 347 *e*PKPbc PKPbc 05 47 52.0 -0.1
PSZ Piszkesteto 146.46 337⇓ *i*P PKPbc 05 47 52.3 -0.1
PSZ Piszkesteto 146.46 337 *e*PKPbc PKPbc 05 47 52.5 0.0
NKC Novy Kostel 146.55 347 *e*PKP PKPbc 05 47 52.4 -0.2
NKC *ex* x 05 47 55.1
WOL Wolverton 146.59 3 *e*P PKPdf 05 47 51.6 +1.6
TREC Trest 146.68 343 *e*PKP PKPbc 05 47 52.6 -0.3
MODS Modra-Piesok 146.97 341 *e*PKP PKPbc 05 47 54.1 +0.3
ROTZ Rotzenmuhle 147.04 347 *e*PKPbc PKPbc 05 47 53.8 -0.1
UCC Uccle 147.09 357 PKPbc PKPbc 05 47 53.4 -0.5
MEM Membach 147.15 355 PKPbc PKPbc 05 47 53.6 -0.5
GRA1 Grafenberg Arr 147.31 348 *e*PKPbc PKPbc 05 47 54.2 -0.4
GRA1 *e*PKPab PKPab 05 47 58.1 -0.4
GRF Grafenberg Arr 147.31 348 *e*PKPbc PKPbc 05 47 54.2 -0.4
GRF *e*PKPab PKPab 05 47 58.1 -0.4
KHC Kasperske Hory 147.32 345 *e*PKP PKPdf 05 47 54.6 +3.3
KHC *ex* x 05 47 57.8
SNF Seneffe 147.38 357 PKPbc PKPbc 05 47 54.3 -0.4
BCLA Clavier 147.40 355 PKPbc PKPab 05 47 57.9 -0.9
GEC2 GERESS Array S 147.56 345 *e*PKPbc PKPbc 05 47 54.9 -0.4
GERES GERESS Array B 147.56 345 PKIKP PKPbc 05 47 55.1 -0.2
comp=Z,10nm,0.7s,baz=18,slow=2.7,SNR=34
GERES GERESS Array B 147.56 345 PKIKP PKPbc 05 47 55.1 -0.2
GERES pmax pmax
comp=Z,10.0nm,0.7s
BZS Buzias 147.65 333⇑ *i*P PKPbc 05 47 55.0 -0.6
BZS Buzias 147.65 333⇑ P PKPbc 05 47 55.0 -0.6
GIVF Givet 147.75 356⇑ *i*PKP1 PKPbc 05 47 55.4 -0.3
comp=Z,25nm,0.6s
DOU Dourbes 147.77 356 PKPbc PKPbc 05 47 55.4 -0.4
CONA Conrad Observa 147.80 342 *i* P PKPbc 05 47 56.0 +0.1
comp=Z,13nm,0.8s,SNR=12
CSNA Conrad Observa 147.80 342⇑ *i*P PKPbc 05 47 55.9 0.0
comp=Z,18nm,1.1s
BAIF Baives 147.83 357⇑ *i*PKP1 PKPbc 05 47 55.7 -0.2
comp=Z,24nm,0.7s
WLF Walferdange 148.08 354 PKPbc PKPbc 05 47 56.8 +0.2
PKSM Moragy 148.36 337⇓ *i*P PKPbc 05 47 56.5 -0.9
PKSM Moragy 148.36 337⇓ P PKPbc 05 47 56.5 -0.9
STU Stuttgart 148.56 350 *e*PKPbc PKPbc 05 47 57.5 -0.3
STU *e*PKPab PKPab 05 48 02.8 -0.8
JSA Saint Aubin 148.64 5 *e*P PKPdf 05 47 54.1 +0.7
FUR Furstenfeldbru 148.75 347 *e*PKPbc PKPbc 05 47 57.9 -0.4
FUR *e*PKPab PKPab 05 48 04.2 -0.2
RJOB Jochberg 148.81 345 *e*PKPab PKPab 05 48 05.0 +0.3
BFO Black Forest 149.12 351 *e*PKPbc PKPbc 05 47 58.7 -0.5
BFO *e*PKPab PKPab 05 48 05.3 -0.7
FLN La Foliniere 149.17 2⇑ *i*PKP1 PKPbc 05 47 58.5 -0.7
comp=Z,51nm,0.9s
FLN *e*MLR MLR
comp=Z,111nm,18.0s
FLN La Foliniere 149.17 2⇑ *i*PKP PKPbc 05 47 58.5 -0.7
FLN LR LR
comp=Z,110nm,18.0s
SOKA Soboth 149.17 342⇑ *i*P PKPbc 05 47 58.3 -1.0
comp=Z,9.3nm,0.9s
CDF Champ du Feu 149.19 352 *e*PKP1 PKPbc 05 47 59.0 -0.3
comp=Z,26nm,0.9s
VTS Vitosha 149.20 328⇓ *i*P PKPbc 05 47 59.6 +0.1
VTS Vitosha 149.20 328⇓ P PKPbc 05 47 59.6 0.0
KBA Boelnbreinsper 149.28 344⇓ *i*P PKPbc 05 47 58.5 -1.1
comp=Z,11nm,0.9s
MEZF Maizieres J'vi 149.32 355⇑ *i*PKP1 PKPbc 05 47 59.3 -0.3
comp=Z,16nm,0.7s
LDF La Druitiere 149.35 2⇑ *i*PKP1 PKPbc 05 47 58.8 -0.9
comp=Z,15nm,0.5s
ROSF Rostrenen 149.39 6⇑ *i*PKP1 PKPbc 05 47 58.7 -1.1
comp=Z,30nm,1.2s
WATA Walderalm 149.47 346⇑ *i*P PKPbc 05 47 59.4 -0.7
comp=Z,7.3nm,0.6s,SNR=7.4
GRR Gorron 149.52 3⇑ *i*PKP1 PKPbc 05 47 59.4 -0.7
comp=Z,17nm,0.5s
WTTA Wattenberg 149.53 346⇑ *i*P PKPbc 05 47 59.7 -0.5
comp=Z,22nm,0.6s
SGMF Saint Gilles 149.54 5⇑ *i*PKP1 PKPbc 05 47 59.2 -1.0
comp=Z,29nm,0.9s
MOTA Moosalm 149.57 347⇑ *i*P PKPbc 05 47 59.5 -0.8
comp=Z,14nm,0.9s
MYKA Terra Mystica 149.62 343⇑ *i*P PKPbc 05 47 59.0 -1.4
comp=Z,10nm,0.6s
MYKA Terra Mystica 149.62 343⇑ *i*PKPbc PKPbc 05 47 59.2 -1.2
comp=Z,10nm,0.6s
HAU Haudompre 149.70 353⇑ *i*PKP1 PKPbc 05 48 00.0 -0.5
comp=Z,23nm,0.8s
HAU *e*MLR MLR
comp=Z,61nm,20.5s
HAU Haudompre 149.70 353⇑ *i*PKP PKPbc 05 48 00.0 -0.5
HAU LR LR
comp=Z,60nm,20.5s
ABTA Abfaltersbach 149.80 345⇑ *i*P PKPbc 05 47 59.7 -1.1
comp=Z,19nm,0.7s,SNR=12
QUIF Quistinic 149.81 6 *e*PKP1 PKPbc 05 47 59.9 -0.9
HINF Hinteralfeld 149.82 353⇑ *i*PKP1 PKPbc 05 48 00.2 -0.6
comp=Z,13nm,0.7s
DAVA Damuels 149.87 349⇑ *i*P PKPbc 05 48 00.6 -0.4
comp=Z,21nm,1.1s
FETA Feichten 149.96 347 *i* P PKPbc 05 48 00.8 -0.4
comp=Z,19nm,1.0s,SNR=7.8
LOR Lormes 150.63 357⇑ *i*PKP1 PKPbc 05 48 02.3 -0.4
comp=Z,21nm,0.6s
LOR *e*MLR MLR
comp=Z,71nm,17.2s
LOR Lormes 150.63 357⇑ *i*PKP PKPbc 05 48 02.3 -0.4
LOR LR LR
comp=Z,70nm,17.3s
HYF Humbligny 150.68 358 *e*PKP1 PKPbc 05 48 02.8 -0.1
TUE Stuetta 150.75 349 *e*PKPbc PKPbc 05 48 03.4 +0.3
SSF Saint Saulge 150.86 357⇑ *i*PKP1 PKPbc 05 48 02.8 -0.5
comp=Z,16nm,0.6s
CABF La Chapelle 151.10 353⇑ *i*PKP1 PKPbc 05 48 03.9 +0.1
comp=Z,27nm,1.0s
AVF Avril sur Loir 151.14 357⇑ *i*PKP1 PKPbc 05 48 03.0 -0.9
comp=Z,11nm,0.9s
SMF Signal de Mont 151.26 357 *e*PKP1 PKPbc 05 48 03.5 -0.7
MFF Saint Martin d 151.34 2⇑ *i*PKP1 PKPbc 05 48 03.6 -0.8
comp=Z,24nm,0.8s
BGF Bois d'Agland 151.39 358⇑ *i*PKP1 PKPbc 05 48 03.9 -0.6
comp=Z,23nm,0.8s
TCF Toulx Ste Croi 151.67 359⇑ *i*PKP1 PKPbc 05 48 04.4 -0.7
comp=Z,14nm,0.8s
LPL La Plagne 152.10 352⇑ *i*PKP1 PKPbc 05 48 06.4 +0.3
comp=Z,9.6nm,0.9s
LPG La Plagne 152.12 352⇑ *i*PKP1 PKPbc 05 48 06.5 +0.4
comp=Z,8.2nm,0.8s
RJF Les Rejaudoux 152.66 360 *e*PKP1 PKPbc 05 48 06.7 -0.6
comp=Z,6.2nm,0.7s
RJF *e*MLR MLR
comp=Z,82nm,17.8s
RJF Les Rejaudoux 152.66 360 *e*PKP PKPbc 05 48 06.7 -0.6
RJF LR LR
comp=Z,80nm,17.8s
ORIF Oris-en-Rattie 152.80 353 *e*PKP1 PKPbc 05 48 07.3 -0.3
comp=Z,6.7nm,0.8s
ORIF *e*MLR MLR
comp=Z,85nm,20.8s
MBDF Montbardon 152.87 352⇑ *i*PKP1 PKPbc 05 48 07.5 -0.3
comp=Z,9.3nm,0.7s
VIVF Saint-Julien-l 152.98 355 *e*PKP1 PKPbc 05 48 07.8 -0.2
LFF La Frestale 153.02 1 *e*PKP1 PKPbc 05 48 07.4 -0.7
CAF Calviac 153.04 359⇑ *i*PKP1 PKPbc 05 48 07.7 -0.4
comp=Z,7.1nm,0.8s
SMRF Simiane la Rot 153.76 353 *e*PKP1 PKPbc 05 48 09.6 -0.1
comp=Z,12nm,1.0s
LASF Ste Croix 153.81 356 *e*PKP1 PKPbc 05 48 09.7 -0.1
comp=Z,10.0nm,1.0s
FRF La Foret Royal 154.03 351 *e*PKP1 PKPbc 05 48 09.7 -0.6
LMR La Mourre 154.28 351 *e*PKP1 PKPbc 05 48 09.2 -1.6
PCAB Cabril 154.91 17 *e*PKPab PKPab 05 48 30.1 -0.6
PVRL Vila Real 155.40 17 *e*PKPab PKPab 05 48 32.7 -0.1
MVO Moncorvo 155.69 16 *e*PKPbc PKPdf 05 48 03.6 -0.4
MVO Moncorvo 155.69 16 *e*PKPab PKPab 05 48 34.2 +0.1
MTE Manteigas 156.26 17 *e*PKPab PKPab 05 48 36.7 +0.1
PMAFR Mafra 157.02 22 *e*PKPab PKPab 05 48 39.5 -0.4
ESDC Sonseca Array 157.79 11 PKP PKPdf 05 48 05.9 -0.8
comp=Z,0.1nm,0.3s,baz=339,slow=2.4,SNR=3.4
ESDC PKPab PKPab 05 48 42.1 -1.1
comp=Z,1.0nm,0.6s,baz=339,slow=3.5,SNR=10
PBEJ Beja 158.34 20 *e*PKPab PKPab 05 48 45.2 -0.5
TORD Torodi Ar. Bea 175.28 183 PKP PKPdf 05 48 18.6 -1.8
comp=Z,1.2nm,0.9s,baz=307,slow=0.8,SNR=6.1
TORD PKPab PKPab 05 49 58.8 -2.1
comp=Z,0.5nm,1.1s,baz=199,slow=2.6,SNR=3.0

ISCJB ***16*** *05:36:45.9±0.6, 3224N×005E×10473E×006, h10km, mb3.9/6, Error ellipse: s-maj=8.7km s-min=5.0km az=37.0*
IDC ***16*** *05:36:46.3±1.0, 3224N×10475E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.8/22, mbtmp3.9/7, ML3.5/1, MS3.9/1, Ms1 3.9/1, ms1mx2.7/43, Error ellipse: s-maj=51.2km s-min=18.7km az=55.0*
BJI ***16*** *05:36:52.1, 3235N×10463E, h22km, ML3.9, Ms3.4, Msz3.3*
ISC 16 05:36:46.8±0.9, 3227N±003×10470E±007, h0km±7km, n15, σ1§08/22, mb3.9/6, 2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.57**	**211**	⇓*i*PG		**Pg**	**05 37 17.3**	**+0.4**
CD2				SG		**Sg**	**05 37 36.8**	**-0.5**
CD2				Smax				
	comp=N,8μm,0.6s							
CD2				Smax				
	comp=E,6μm,0.6s							
LZH	**Lanzhou**	**3.87**	**350**	P		**Pn**	**05 37 53.1**	**+5.6**
LZH				SG		**Sg**	**05 38 50.6**	**-0.6**
LZH				Smax				
	comp=N,282nm,1.0s							
LZH				Smax				
	comp=E,325nm,0.7s							
LZH				LR	LR			
	comp=E,460nm,7.9s							
LZH				LR	LR			
	comp=Z,330nm,7.1s							
XAN	**Xi'an**	**3.96**	**62**	P		**Pn**	**05 37 51.8**	**+3.1**
XAN				PG		**Pg**	**05 38 02.8**	**+0.1**
XAN				SG		**Sg**	**05 38 58.4**	**+4.4**
XAN				Smax				
	comp=N,433nm,0.8s							
XAN				Smax				
	comp=E,311nm,0.8s							
GYA	**Guiyang**	**6.04**	**163**	P		**Pn**	**05 38 18.3**	**+1.0**
GYA				PG		**Pg**	**05 38 38.5**	**-4.0**
GYA				S		**Sn**	**05 39 26.8**	**-0.3**
GYA				SG		**Sg**	**05 39 56.3**	**-4.5**
GYA				Smax				
	comp=N,80nm,0.8s							
GYA				Smax				
	comp=E,100nm,0.7s							
KMI	**Kunming**	**7.32**	**194**	PG		**Pg**	**05 39 06.8**	**-0.3**
CMAR	**Chiang Mai Arr**	**14.70**	**202**	Pn		**Pn**	**05 40 18.2**	**+2.3**
	comp=E,0.6nm,0.3s,baz=20,slow=11,SNR=3.3							
SONM	**Songino Array**	**15.60**	**4**	Pn		**Pn**	**05 40 31.8**	**+4.0**
	comp=E,0.1nm,0.3s,baz=185,slow=10,SNR=6.1							
KSRS	**Korea Array**	**19.73**	**68**	P		**Pn**	**05 41 16.9**	**-2.5**
	comp=E,0.1nm,0.3s,baz=251,slow=10,SNR=3.0							
MKAR	**Makanchi Array**	**22.45**	**317**	P		**P**	**05 41 48.0**	**+0.8**
	comp=E,0.4nm,0.4s,mb3.2,baz=119,slow=12,SNR=2.7							
ZALV	**Zalesovo Beam**	**25.91**	**333**	P		**P**	**05 42 20.6**	**+0.4**
	comp=E,1.9nm,0.5s,mb4.0,baz=136,slow=9.8,SNR=9.2							
ZALV				pP			05 42 25.2	
	comp=E,1.8nm,0.7s,baz=132,slow=8.9,SNR=4.0							
ARCES	**ARCESS Array B**	**56.41**	**335**	P		**P**	**05 46 29.5**	**-0.1**
	comp=E,1.1nm,0.5s,mb4.1,baz=82,slow=8.7,SNR=7.6							
WRA	**Warramunga Arr**	**59.17**	**147**	P		**P**	**05 46 48.7**	**-0.8**
	comp=E,0.8nm,0.3s,mb4.2,baz=328,slow=9.0,SNR=38							
WRA				LR	LR		06 14 00.1	
	comp=E,97nm,20.9s,baz=225,slow=38							
WB2	**Warramunga Arr**	**59.17**	**147**	⇓*i*P		**P**	**05 46 49.0**	**-0.5**
ASAR	**Alice Springs**	**62.23**	**150**	P		**P**	**05 47 09.8**	**-0.5**
	comp=E,0.9nm,1.0s,mb4.0,baz=334,slow=8.2,SNR=4.3							
NOA	**NORSAR Array B**	**63.95**	**327**	P		**P**	**05 47 20.4**	**-1.0**
	comp=E,0.7nm,0.6s,mb4.0,baz=64,slow=4.2,SNR=4.3							

DJA ***16*** *05:48:14, 632S×99.43E, h50km, Mw5.3/4*
BJI ***16*** *05:48:19.5, 503S×101.18E, h35km, mB5.1, mb5.0, Ms4.8, Msz4.4*
IDC ***16*** *05:48:21.2±0.6, 4.36S×101.21E, h0km, mb4.5/19, mb1 4.6/19, mb1mx4.5/24, mbtmp4.5/19, MS4.0/10, Ms1 4.1/10, ms1mx3.7/29, Error ellipse: s-maj=21.6km s-min=12.4km az=59.0*
ISCJB ***16*** *05:48:23.6±0.3, 4.50S±004×101.12E±004, h31km, mb4.9/68, MS4.3/24, Error ellipse: s-maj=6.4km s-min=4.3km az=40.4*
MOS ***16*** *05:48:24.3±0.9, 4.36S×101.26E, h34km, mb5.2/31, MS4.3/7, Error ellipse: s-maj=14.5km s-min=7.9km az=101.4*
NEIC ***16*** *05:48:26.2±0.2, 4.43S×101.22E, h35km, mb4.9/19, Error ellipse: s-maj=9.9km s-min=5.7km az=57.0*
ISC 16 05:48:26.0±0.3, 449S±004×10112E±004, h33km, h33km±.8km: pP-P, n186, σ1§10/154, mb4.9/68, MS4.3/24, 7C-13D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.69**	**60**	P		**Pn**	**05 48 52.0**	**-1.1**
	0.0nm,0.0s							
JMBI	**JAMBI**	**3.79**	**42**	P		**Pn**	**05 49 22.7**	**+0.6**
	0.0nm,0.0s							
PPI	**Padang Panjang**	**4.07**	**350**	P		**Pn**	**05 49 25.4**	**-0.6**
	0.0nm,0.0s							
BLSI	**Bandar Lampung**	**4.20**	**102**	P		**Pn**	**05 49 29.2**	**+1.5**
	0.0nm,0.0s							
RGRI	**Rengat**	**4.29**	**16**	P		**Pn**	**05 49 29.0**	**0.0**
	0.0nm,0.0s							
SBJI	**Serang**	**5.24**	**108**	P		**Pn**	**05 49 45.2**	**+3.1**
	0.0nm,0.0s							
DSRI	**Dabo**	**5.27**	**41**	P		**Pn**	**05 49 42.5**	**0.0**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.51**	**65**	P		**Pn**	**05 49 45.2**	**-0.6**
	0.0nm,0.0s							
DBJI	**Dramaga**	**5.96**	**110**	P		**Pn**	**05 49 51.1**	**-0.9**
	0.0nm,0.0s							
CBJI	**Citeko**	**6.01**	**109**	P		**Pn**	**05 49 55.4**	**+2.7**
	0.0nm,0.0s							
TPI	**Tanjungpandan**	**6.74**	**75**	P		**Pn**	**05 50 03.3**	**+0.6**
	0.0nm,0.0s							
MYKOM	**Kota Tinggi**	**6.81**	**24**	⇓P		**Pn**	**05 50 05.1**	**+1.5**
KGM	**Kluang**	**6.83**	**19**	⇓P		**Pn**	**05 50 04.6**	**+0.7**
LEM	**Lembang**	**6.87**	**110**	P		**Pn**	**05 50 05.4**	**+1.0**
	0.0nm,0.0s							
XMIS	**Christmas Isla**	**7.45**	**143**	Pn		**Pn**	**05 50 10.5**	**-1.9**
FRIM	**Kepong**	**7.69**	**4**	⇓P		**Pn**	**05 50 16.1**	**+0.3**
IPM	**Ipoh**	**8.91**	**359**	⇓P		**Pn**	**05 50 34.5**	**+2.0**
SJI	**Sawahan**	**11.06**	**107**	P		**Pn**	**05 51 01.6**	**-0.4**
	0.0nm,0.0s							
BSI	**Banda Aceh**	**11.50**	**330**	P		**Pn**	**05 51 05.5**	**-2.5**
	0.0nm,0.0s							
SBUM	**Sibu**	**13.06**	**58**	⇓P		**Pn**	**05 51 31.9**	**+2.6**
BTM	**Bintulu**	**14.18**	**58**	⇑P		**Pn**	**05 51 54.9**	**+10**
KKM	**Kota Kinabalu**	**18.35**	**55**	Pn		**Pn**	**05 52 37.4**	**-0.7**
KAPI	**Kappang**	**18.57**	**92**	LR		LR	05 59 55.7	
	comp=Z,457nm,21.7s,baz=281,slow=38							
TSM	**Tawau**	**18.87**	**63**	⇓P		**Pn**	**05 52 44.9**	**+0.5**
SDKM	**Sandakan**	**18.95**	**58**	⇓P		**Pn**	**05 52 46.7**	**+1.4**
PCI	**Palu**	**19.03**	**80**	P		**Pn**	**05 52 46.3**	**0.0**
	0.0nm,0.0s							
KDM	**Kudat**	**19.35**	**54**	⇓P		**Pn**	**05 52 51.9**	**+1.8**
MYLDM	**Lahad Datu**	**19.84**	**61**	⇑P		**Pn**	**05 52 53.7**	**-2.3**
KDI	**Kendari**	**21.44**	**89**	P		**P**	**05 53 13.8**	**+2.2**
	0.0nm,0.0s							
BDT	**Bhumibol Dam**	**21.70**	**355**	P		**P**	**05 53 12.0**	**-2.3**
CMAR	**Chiang Mai Arr**	**22.91**	**355**	P		**P**	**05 53 24.8**	**-2.3**
	25nm,0.9s,mb4.6,baz=183,slow=8.6,SNR=98							
CMAR				LR		LR	06 04 06.2	
	comp=Z,559nm,18.4s,MS4.0,baz=19,slow=42							
CMAR	**Chiang Mai Arr**	**22.91**	**355**	P		**P**	**05 53 24.8**	**-2.3**
CMAR				pmax	pmax			
	comp=Z,25nm,0.9s							
CMAR				MLR	MLR			
	comp=Z,559nm,18.5s							
NANT	**Nan**	**23.15**	**359**	P		**P**	**05 53 30.0**	**+0.3**
	comp=E,65nm,1.0s,mb5.0							
CHG	**Chiang Mai**	**23.26**	**355**	⇑P		**P**	**05 53 29.8**	**-1.0**
	comp=E,26nm,1.0s,mb4.6							
QIZ	**Qiongzhong**	**24.90**	**20**	P		**P**	**05 53 45.5**	**-0.5**
QIZ				AP			05 53 54.9	
QIZ				S		**S**	**05 58 09.3**	**+2.0**
QIZ				AMB	AMB			
	comp=Z,19nm,1.2s,mb4.5							
QIZ				AMB	AMB			
	comp=Z,145nm,5.5s							
QIZ	**Qiongzhong**	**24.90**	**20**	*e*P		**P**	**05 53 46.0**	**0.0**
	comp=Z,30nm,1.2s,mb4.7							
QIZ				*ep*P			05 53 54.9	
QIZ				*eS*		**S**	**05 58 11.7**	**+4.5**
FITZ	**Fitzroy Crossi**	**27.53**	**121**	*e*P		**P**	**05 54 09.3**	**-0.5**
	comp=Z,12nm,1.0s,mb4.5							
FITZ	**Fitzroy Crossi**	**27.53**	**121**	P		**P**	**05 54 09.1**	**-0.7**
	comp=Z,2.0nm,0.5s,mb4.0,baz=311,slow=14,SNR=17							
KMI	**Kunming**	**29.48**	**3**	P		**P**	**05 54 27.8**	**+0.7**
KMI				AP		pP	05 54 38.1	+1.4
KMI				XP		sP	05 54 43.9	+3.2
KMI				PP		PP	05 55 27.0	-7.1
KMI				PCP		PcP	05 57 34.4	+2.1
KMI				S		**S**	**05 59 21.8**	**+2.4**
KMI				XS		sS	05 59 38.8	+3.5
KMI				SS		SS	06 00 56.3	-29
KMI				SCS		ScS	06 05 05.5	-1.0
KMI				AMB		AMB		
	comp=Z,18nm,0.8s,mb4.8							
KMI				AMB		AMB		
	comp=Z,275nm,4.0s							
KMI				LR		LR		
	comp=N,475nm,14.3s,MS4.4							
KMI				LR		LR		
	comp=E,589nm,15.6s,MS4.4							
KMI				LR		LR		
	comp=Z,456nm,15.5s,MS4.2							
GYA	**Guiyang**	**31.23**	**10**	⇓*i*P		**P**	**05 54 41.3**	**-1.3**
GYA				AP		pP	05 54 51.1	-1.1
GYA				XP		sP	05 54 55.8	-0.4
GYA				PP		PP	05 55 43.3	-10
GYA				AMB		AMB		
	comp=Z,20nm,1.1s,mb4.9							
GYA				AMB		AMB		
	comp=Z,80nm,4.8s							
GYA				LR		LR		
	comp=N,350nm,11.2s,MS4.4							
GYA				LR		LR		
	comp=E,330nm,11.8s,MS4.4							
GYA				LR		LR		
	comp=Z,480nm,12.0s,MS4.4							
ODAN	**Odare**	**33.88**	**338**	*e*P		**P**	**05 55 06.9**	**+1.1**
	comp=Z,84nm,0.9s,mb5.7							
TAPN	**Taplejung**	**34.20**	**338**	*e*P		**P**	**05 55 10.1**	**+1.5**
	comp=Z,118nm,0.9s,mb5.8							
RAMN	**Ramite**	**34.27**	**337**	*e*P		**P**	**05 55 10.2**	**+1.1**
	comp=Z,59nm,0.9s,mb5.5							
JIRN	**Jiri**	**35.06**	**337**	*e*P		**P**	**05 55 17.5**	**+1.5**
CD2	**Chengdu**	**35.29**	**4**	⇓*i*P		**P**	**05 55 17.3**	**-0.6**
CD2				AP		pP	05 55 26.9	-0.7
CD2				XP		sP	05 55 31.3	-0.3
CD2				PP		PP	05 56 37.3	-1.2
CD2				S		**S**	**06 00 48.9**	**-0.9**
CD2				XS		sS	06 01 04.9	-0.9
CD2				SS		SS	06 03 17.8	-6.4
CD2				AMB		AMB		
	comp=Z,30nm,0.9s,mb5.2							
CD2				AMB		AMB		
	comp=Z,120nm,6.2s							
CD2				LR		LR		
	comp=N,510nm,16.8s,MS4.7							
CD2				LR		LR		
	comp=E,1μm,18.0s,MS4.7							
CD2				LR		LR		
	comp=Z,660nm,19.2s,MS4.4							
PKI	**Pulchoki**	**35.30**	**335**	*e*P		**P**	**05 55 18.6**	**+0.5**
	comp=Z,36nm,1.0s,mb5.2							
PKIN	**Phulchoki**	**35.31**	**335**	*e*P		**P**	**05 55 18.7**	**+0.6**
	comp=Z,13nm,0.8s,mb4.9							
LSA	**Lhasa**	**35.32**	**345**	P		**P**	**05 55 19.0**	**+0.8**
LSA	**Lhasa**	**35.32**	**345**	*e*P		**P**	**05 55 19.2**	**+1.0**
LSA				*e*PP		pP	05 55 28.8	+0.9
LSA				*e*SP		sP	05 55 32.5	+0.6
LSA				pmax		pmax		
	comp=Z,19nm,1.2s,mb4.9							
LSA	**Lhasa**	**35.32**	**345**	*e*P		**P**	**05 55 19.2**	**+1.0**
	comp=Z,19nm,1.2s,mb4.9							
LSA				*ep*P		pP	05 55 28.8	+1.0
LSA				*es*P		sP	05 55 32.5	+0.6
GUN	**Gumba**	**35.41**	**336**	*e*P		**P**	**05 55 20.4**	**+1.4**
	comp=Z,130nm,0.9s,mb5.9							
DMN	**Daman**	**35.46**	**335**	*e*P		**P**	**05 55 20.1**	**+0.7**
	comp=Z,33nm,0.9s,mb5.3							
KKN	**Kakani**	**35.55**	**335**	*e*P		**P**	**05 55 20.6**	**+0.4**
	comp=Z,62nm,1.0s,mb5.5							
WRA	**Warramunga Arr**	**35.80**	**118**	P		**P**	**05 55 21.8**	**-0.7**
	comp=Z,1.5nm,0.4s,mb4.3,baz=304,slow=9.1,SNR=32							
WRA	**Warramunga Arr**	**35.80**	**118**	P		**P**	**05 55 21.8**	**-0.7**
WRA				pmax		pmax		
	comp=Z,2.0nm,0.4s							
WRAB	**Tennant Creek**	**35.81**	**118**	*e*P		**P**	**05 55 21.9**	**-0.7**
WRAB				*e*PP		pP	05 55 31.1	-1.2
WRAB				*e*SP		sP	05 55 36.3	0.0
WRAB				pmax		pmax		
	comp=Z,7.0nm,0.8s,mb4.6							
WRAB	**Tennant Creek**	**35.81**	**118**	*e*P		**P**	**05 55 21.9**	**-0.7**
	comp=Z,6.9nm,0.8s,mb4.6							
WRAB				*ep*P		pP	05 55 31.1	-1.2
WRAB				*es*P		sP	05 55 36.3	0.0
WB2	**Warramunga Arr**	**35.81**	**118**	*e*P		**P**	**05 55 21.8**	**-0.8**
GKN	**Gorkha**	**36.01**	**335**	*e*P		**P**	**05 55 24.8**	**+0.7**
	comp=Z,83nm,1.0s,mb5.6							
KOLN	**Koldanda**	**36.26**	**333**	*e*P		**P**	**05 55 27.0**	**+0.8**
	comp=Z,29nm,0.8s,mb5.2							
DANN	**Dangsing**	**36.69**	**334**	*e*P		**P**	**05 55 30.9**	**+1.0**
	comp=Z,96nm,1.0s,mb5.6							
ASAR	**Alice Springs**	**36.91**	**124**	P		**P**	**05 55 31.8**	**-0.1**
	comp=Z,0.6nm,0.4s,mb3.8,baz=299,slow=8.2,SNR=8.2							
ASAR	**Alice Springs**	**36.91**	**124**	P		**P**	**05 55 31.8**	**-0.1**
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.4s							
XAN	**Xi'an**	**39.02**	**10**	P		**P**	**05 55 48.3**	**-1.3**
XAN				AP		pP	05 55 58.8	-0.5
XAN				PP		PP	05 57 21.6	+2.1
XAN				PCP		PcP	05 57 59.8	+0.4
XAN				S		**S**	**06 01 42.6**	**-3.9**
XAN				SCP		ScP	06 01 45.6	+0.1
XAN				PCS		PcS	06 01 47.6	-1.4
XAN				SCS		ScS	06 05 54.4	-2.3
XAN				AMB		AMB		
	comp=Z,26nm,1.2s,mb4.8							
XAN				AMB		AMB		
	comp=Z,136nm,5.1s							
XAN				LR		LR		
	comp=N,109nm,14.1s,MS4.3							
XAN				LR		LR		
	comp=E,287nm,15.2s,MS4.3							
XAN				LR		LR		
	comp=Z,427nm,14.5s,MS4.4							
LZH	**Lanzhou**	**40.45**	**3**	*e*P		**P**	**05 56 01.8**	**+0.4**
LZH				AP		pP	05 56 10.8	-0.4
LZH				XP		sP	05 56 16.0	+0.8
LZH				PP		PP	05 57 39.4	+4.4
LZH				XS		sS	06 02 26.3	+2.4
LZH				SS		SS	06 05 04.3	-3.7
LZH				AMB		AMB		
	comp=Z,44nm,1.6s,mb4.9							
LZH				AMB		AMB		
	comp=Z,240nm,5.6s							
LZH				LR		LR		
	comp=N,404nm,13.8s							
LZH				LR		LR		
	comp=Z,611nm,15.8s,MS4.5							
DDI	**Dehra Dun**	**41.06**	**329**	*ex*		x	05 56 04.3	
GTA	**Gaotai**	**43.70**	**359**	P		**P**	**05 56 28.0**	**+0.1**
GTA				AP		pP	05 56 38.5	+0.8
GTA				XP		sP	05 56 42.8	+1.1
GTA				S		**S**	**06 02 56.1**	**+0.4**
GTA				AMB		AMB		
	comp=Z,14nm,1.1s,mb4.6							
GTA				AMB		AMB		
	comp=Z,112nm,4.2s							
GTA				LR		LR		
	comp=N,238nm,17.7s,MS4.6							
GTA				LR		LR		
	comp=E,622nm,17.7s,MS4.6							
GTA				LR		LR		
	comp=Z,210nm,15.0s,MS4.2							
HHC	**Hu-ho-hao-te**	**46.12**	**11**	*e*P		**P**	**05 56 47.5**	**+0.4**
HHC				AP		pP	05 56 58.0	+0.9
HHC				XP		sP	05 57 01.6	+0.6
HHC				PCP		PcP	05 58 23.0	+0.1
HHC				PP		PP	05 58 36.1	+0.3
HHC				SCP		ScP	06 02 12.8	-1.0
HHC				PCS		PcS	06 02 16.4	-0.8
HHC				S		**S**	**06 03 31.0**	**+0.2**
HHC				XS		sS	06 03 48.3	+1.1
HHC				SCS		ScS	06 06 37.5	-2.7
HHC				SS		SS	06 06 48.1	-8.4
HHC				AMB		AMB		
	comp=Z,24nm,0.9s,mb5.1							
HHC				AMB		AMB		
	comp=Z,207nm,7.0s							
HHC				LR		LR		
	comp=N,327nm,13.5s,MS4.6							
HHC				LR		LR		
	comp=E,378nm,13.8s,MS4.6							
HHC				LR		LR		
	comp=Z,326nm,14.6s,MS4.4							
BJT	**Baijiatuao**	**46.40**	**16**	*e*P		**P**	**05 56 49.0**	**-0.3**
BJT				*e*PP		pP	05 56 58.2	-1.1
BJT				*e*SP		sP	05 57 02.9	-0.4
BJT				pmax		pmax		
	comp=Z,23nm,0.9s							
BJT	**Baijiatuao**	**46.40**	**16**	*e*P		**P**	**05 56 49.0**	**-0.4**
	comp=Z,23nm,0.9s,mb5.1							
BJT				*ep*P		pP	05 56 58.2	-1.1
BJT				*es*P		sP	05 57 02.9	-0.3
BJI	**Beijing**	**46.43**	**16**	P		**P**	**05 56 48.6**	**-0.9**
BJI				S		**S**	**06 03 37.8**	**+2.6**
BJI				AMB		AMB		
	comp=Z,28nm,1.1s,mb5.1							
BJI				AMB		AMB		
	comp=Z,126nm,5.4s							
BJI				LR		LR		
	comp=N,469nm,13.3s,MS4.7							
BJI				LR		LR		
	comp=E,384nm,16.6s,MS4.7							
BJI				LR		LR		
	comp=Z,215nm,21.3s,MS4.1							
CTA	**Charters Tower**	**46.55**	**113**	*e*P		**P**	**05 56 51.4**	**+0.5**
	comp=Z,7.6nm,1.1s,mb4.5							
CTA	**Charters Tower**	**46.55**	**113**	P		**P**	**05 56 50.5**	**-0.4**
	comp=Z,11nm,1.2s,mb4.7,baz=270,slow=9.7,SNR=7.0							
CTA	**Charters Tower**	**46.55**	**113**	P		**P**	**05 56 50.6**	**-0.3**
CTA				pmax		pmax		
	comp=Z,11nm,1.2s							
CTAO	**Charters Tower**	**46.55**	**113**	*e*P		**P**	**05 56 49.9**	**-1.0**
CTAO				*e*PP		pP	05 56 59.8	-1.1
CTAO				*e*SP		sP	05 57 05.2	+0.4
CTAO				pmax		pmax		
	comp=Z,18nm,1.2s,mb4.9							
CTAO	**Charters Tower**	**46.55**	**113**	*e*P		**P**	**05 56 49.9**	**-1.0**
	comp=Z,18nm,1.2s,mb4.9							
CTAO				*ep*P		pP	05 56 59.8	-1.1
CTAO				*es*P		sP	05 57 05.2	+0.4
STKA	**Stephens Creek**	**46.67**	**131**	P		**P**	**05 56 53.6**	**+1.9**
	comp=Z,1.3nm,0.3s,mb4.3,baz=161,slow=18,SNR=2.2							
KSRS	**Korea Array**	**48.62**	**29**	P		**P**	**05 57 06.0**	**-0.7**
	comp=Z,15nm,0.9s,mb5.0,baz=214,slow=8.2,SNR=30							
KSRS	**Korea Array**	**48.62**	**29**	P		**P**	**05 57 06.0**	**-0.6**
KSRS				pmax		pmax		
	comp=Z,15nm,0.9s,mb5.0							
WMQ	**Urumqi**	**49.59**	**347**	⇑*i*P		**P**	**05 57 14.8**	**+0.9**
WMQ				AP		pP	05 57 25.0	+1.1
WMQ				XP		sP	05 57 28.8	+0.9
WMQ				PCP		PcP	05 58 36.0	+0.8
WMQ				*e*S		**S**	**06 04 19.0**	**-0.9**
WMQ				SCS		ScS	06 07 01.0	-2.1
WMQ				AMB		AMB		
	comp=Z,40nm,1.0s,mb5.4							
WMQ				AMB		AMB		
	comp=Z,165nm,5.2s							
WMQ				LR		LR		
	comp=N,303nm,19.4s,MS4.5							
WMQ				LR		LR		
	comp=E,420nm,23.0s,MS4.5							
WMQ				LR		LR		
	comp=Z,230nm,22.2s,MS4.1							
SONM	**Songino Array**	**52.31**	**4**	P		**P**	**05 57 34.9**	**+0.6**
	comp=Z,26nm,0.9s,mb5.2,baz=186,slow=7.3,SNR=101							
SONM				PcP		PcP	05 58 45.1	-0.1
	comp=Z,2.4nm,0.5s,baz=187,slow=4.8,SNR=10							
SONM	**Songino Array**	**52.31**	**4**	P		**P**	**05 57 34.9**	**+0.6**
SONM							05 58 45.1	
SONM				pmax		pmax		
	comp=Z,26nm,0.9s							
SONM				pmax		pmax		
	comp=Z,2.0nm,0.5s							
ULN	**Ulaanbaatar**	**52.40**	**5**	*e*P		**P**	**05 57 35.4**	**+0.5**
ULN				*e*			05 58 44.1	
ULN				pmax		pmax		
	comp=Z,20nm,1.0s,mb5.0							
ULN	**Ulaanbaatar**	**52.40**	**5**	*e*P		**P**	**05 57 35.4**	**+0.4**
	comp=Z,20nm,1.0s,mb5.0							
ULN				*e*PcP		PcP	05 58 44.1	-1.4
TKM2	**Tokmak 2**	**52.55**	**336**	*e*P		**P**	**05 57 36.7**	**+0.5**
TKM2				*e*PP		pP	05 57 45.0	-1.3
TKM2				*e*SP		sP	05 57 51.0	+0.8
TKM2				pmax		pmax		
	comp=Z,16nm,1.0s,mb4.9							
TKM2	**Tokmak 2**	**52.55**	**336**	*e*P		**P**	**05 57 36.7**	**+0.5**
	comp=Z,16nm,1.0s,mb4.9							
TKM2				*ep*P		pP	05 57 45.0	-1.3
TKM2				*es*P		sP	05 57 51.0	+0.8
AML	**Almayashu**	**52.68**	**334**	*e*P		**P**	**05 57 37.9**	**+0.7**
	comp=Z,5.3nm,0.6s,mb4.7							
CN2	**Changchun**	**52.83**	**22**	⇓P		**P**	**05 57 37.4**	**-0.9**
CN2				*e*XP		sP	05 57 52.5	+0.2
CN2				*eS*		**S**	**06 05 03.0**	**-1.7**
CN2				AMB		AMB		
	comp=Z,40nm,0.9s,mb5.3							
CN2				AMB		AMB		
	comp=Z,118nm,5.0s							
CN2				LR		LR		
	comp=N,894nm,16.0s,MS5.0							
CN2				LR		LR		
	comp=E,506nm,16.0s,MS5.0							
CN2				LR		LR		
	comp=Z,646nm,17.0s,MS4.7							
EKS2	**Erkin-Say**	**53.08**	**335**	*e*P		**P**	**05 57 40.6**	**+0.5**
	comp=Z,22nm,0.9s,mb5.1							
EKS2				*ep*P		pP	05 57 49.1	-1.1
MAJO	**Matsushiro**	**53.53**	**37**	*e*P		**P**	**05 57 41.7**	**-1.9**
MAJO				pmax		pmax		
	comp=Z,19nm,1.2s,mb4.9							
MAJO	**Matsushiro**	**53.53**	**37**	*e*P		**P**	**05 57 41.7**	**-1.9**
	comp=Z,19nm,1.2s,mb4.9							
MAT	**Matsushiro**	**53.53**	**37**	P		**P**	**05 57 42.1**	**-1.5**
MJAR	**Matsushiro Arr**	**53.53**	**37**	P		**P**	**05 57 41.8**	**-1.8**
	comp=Z,9.5nm,0.9s,mb4.7,baz=219,slow=7.5,SNR=23							
MJAR	**Matsushiro Arr**	**53.53**	**37**	P		**P**	**05 57 41.8**	**-1.8**
MJAR				pmax		pmax		
	comp=Z,10.0nm,0.9s							
MK31	**Makanchi Array**	**53.72**	**344**	*i*P		**P**	**05 57 44.2**	**-0.5**
MK31				pmax		pmax		

comp=Z,15nm,0.9s,mb5.0,baz=158,slow=6.9,SNR=31
KURK Kurchatov 58.30 343 *e*P **P** **05 58 17.1 -0.3**
KURK *e**PP pP 05 58 26.0 -1.6
KURK *e*SP sP 05 58 29.6 -1.9
KURK pmax pmax
comp=Z,27nm,1.0s,mb5.2
KURK Kurchatov 58.30 343 *e*P **P** **05 58 17.1 -0.3**
comp=Z,27nm,1.0s,mb5.2
KURK *e*pP pP 05 58 26.0 -1.6
KURK *e*SP sP 05 58 29.6 -1.9
KLR Kul'dur 59.76 23 *e*P **P** **05 58 22.8 -4.8**
KLR pmax pmax
comp=Z,34nm,1.2s,mb5.2
ZALV Zalesovo Beam 59.81 349 P **P** **05 58 27.3 -0.6**
comp=Z,9.4nm,0.5s,mb5.1,baz=160,slow=4.7,SNR=47
ZALV LR LR 06 28 13.2
comp=Z,97nm,19.5s,MS4.0,baz=195,slow=40
ZALV Zalesovo Beam 59.81 349 P **P** **05 58 27.3 -0.5**
ZALV pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
ZALV MLR MLR
comp=Z,97nm,19.5s,MS4.0
ZALV Zalesovo Beam 59.81 349 P **P** **05 58 27.3 -0.6**
ZALV LR LR 06 28 13.2
BVA0 Borovoye Array 62.89 340 *i* P **P** **05 58 47.6 -1.1**
BVA0 pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
BVAR Borovoye Array 62.89 340 P **P** **05 58 47.6 -1.1**
comp=Z,8.8nm,0.8s,mb5.0,baz=146,slow=8.2,SNR=28
BVAR Borovoye Array 62.89 340 P **P** **05 58 47.6 -1.1**
BVAR pmax pmax
comp=Z,9.0nm,0.8s
BOD Bodaibo 62.97 8 *e*P **P** **05 58 48.1 -1.0**
BOD pmax pmax
comp=Z,14nm,1.1s,mb5.0
YSS Yuzh-Sakhalins 63.01 31 *e*P **P** **05 58 48.7 -0.9**
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 63.01 31 *e*P **P** **05 58 49.1 -0.5**
comp=Z,37nm,1.1s,mb5.4
AB31 Akbulak array 64.35 331 *i* P **P** **05 58 57.7 -0.7**
AB31 pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
AKTK Aktyubinsk 66.07 331 P **P** **05 59 08.5 -1.0**
AKTO Aktyubinsk 66.07 331 P **P** **05 59 08.5 -1.0**
comp=Z,3.0nm,0.9s,mb4.3,baz=140,slow=4.8,SNR=8.3
AKTO Aktyubinsk 66.07 331 P **P** **05 59 08.5 -1.0**
AKTO pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
MAW Mawson 68.17 195 P **P** **05 59 22.9 +0.3**
comp=Z,2.7nm,0.9s,mb4.3,baz=32,slow=8.2,SNR=6.8
MAW LR LR 06 23 19.4
comp=Z,162nm,21.8s,MS4.2,baz=60,slow=31
MAW Mawson 68.17 195 P **P** **05 59 22.9 +0.3**
MAW LR LR 06 23 19.4
SVE Sverdlovsk 69.40 338⇑ *e*P **P** **05 59 30.8 +0.4**
SVE *e*S S 06 08 26.6 -8.4
SVE pmax pmax
comp=Z,29nm,0.9s,mb5.2
YAK Yakutsk 69.86 14 *e*P **P** **05 59 30.9 -2.3**
YAK pmax pmax
comp=Z,30nm,0.9s,mb5.2
YAK pmax pmax
comp=N,10.0nm,1.2s
YAK pmax pmax
comp=E,10.0nm,1.4s
YAK MLR MLR
comp=N,204nm,20.0s,MS4.4
YAK MLR MLR
comp=Z,287nm,20.0s,MS4.5
YAK MLR MLR
comp=E,102nm,20.0s,MS4.4
YAK Yakutsk 69.86 14 *e*P **P** **05 59 32.0 -1.2**
comp=E,54nm,1.2s,mb5.3
ARU Arti 69.92 336*c i*P **P** **05 59 33.0 -0.6**
ARU *e* 05 59 48.6
ARU *e*S S 06 08 42.5 +1.3
ARU *e*SS SS 06 13 11.7 +0.8
ARU pmax pmax
comp=Z,16nm,1.0s,mb4.9
ARU Arti 69.92 336 *e*P **P** **05 59 33.1 -0.5**
comp=Z,13nm,1.1s,mb4.8
ARU *e*sP sP 05 59 47.9 0.0
ASF Jabal al Asfar 70.95 306 LR LR 06 30 14.8
comp=Z,97nm,20.2s,MS4.0,baz=174,slow=35
MALT Malatya 71.84 313 P **P** **05 59 44.3 -1.4**
MALT pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
MALT Malatya 71.84 313 P **P** **05 59 44.3 -1.4**
comp=Z,4.9nm,1.1s,mb4.3
PETK Petropavlovsk- 74.39 31 P **P** **05 59 59.6 -0.8**
comp=Z,2.8nm,0.9s,mb4.2,baz=255,slow=1.6,SNR=4.9
PETK Petropavlovsk- 74.39 31 P **P** **05 59 59.6 -0.8**
PETK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
LBTB Lobatse 75.00 245 LR LR 06 26 37.6
comp=Z,145nm,19.6s,MS4.3,baz=105,slow=31
BOSA Boshof 75.46 242 LR LR 06 27 06.9
comp=Z,185nm,18.1s,MS4.4,baz=150,slow=31
TIXI Tiksi 78.13 9 *e*P **P** **06 00 19.5 -1.8**
TIXI pmax pmax
comp=Z,13nm,1.0s,mb4.8
TIXI MLR MLR
comp=Z,255nm,19.0s,MS4.6
TIXI Tiksi 78.13 9 *e*P **P** **06 00 19.8 -1.5**
comp=Z,19nm,1.2s,mb4.9
OBN Obninsk 79.49 328⇓ *e*P **P** **06 00 29.3 +0.2**
OBN *e* 06 03 30.1
OBN *e*S S 06 10 22.0 -6.1
OBN pmax pmax
comp=Z,15nm,1.2s,mb4.8
BUR08 Bucovina Ar. S 83.88 319 *e*P **P** **06 00 53.5 +1.1**
BUR08 *e*pP pP 06 01 02.2 -0.8
BILL Bilibino 85.09 20⇓ *e*P **P** **06 00 58.7 +0.6**
BILL *e* 06 04 15.0
BILL *e*S S 06 11 15.3 -10
BILL pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
BILL MLR MLR
comp=Z,200nm,20.0s,MS4.5
UZH Uzhgorod 85.99 319 *e*P **P** **06 01 03.4 +0.4**
UZH *e* pP 06 01 13.0 -0.6
ARCES ARCESS Array B 89.18 340 P **P** **06 01 17.8 -0.1**
comp=Z,5.9nm,0.9s,mb4.9,baz=145,slow=4.4,SNR=8.6
ARCES LR LR 06 45 14.1
comp=Z,135nm,18.7s,MS4.4,baz=282,slow=38
ARCES ARCESS Array B 89.18 340 P **P** **06 01 17.8 -0.1**
ARCES pmax pmax
comp=Z,6.0nm,0.9s
ARCES MLR MLR
comp=Z,135nm,18.7s
ARCES ARCESS Array B 89.18 340 P **P** **06 01 17.8 -0.1**
ARCES LR LR 06 45 14.1
DPC Dobruska-Polom 90.11 320 *e*P **P** **06 01 32.2 +10**
DPC Dobruska-Polom 90.11 320 *e*pP pP 06 01 32.2 -1.1
SNAA Sanae 90.13 198 *e*P **P** **06 01 22.8 +0.4**
SNAA *e**PP pP 06 01 33.3 +0.3
SNAA pmax pmax
comp=Z,9.0nm,1.3s
SNAA Sanae 90.13 198 *e*P **P** **06 01 22.8 +0.4**
comp=Z,9.2nm,1.3s,mb5.0
SNAA *e*pP pP 06 01 33.3 +0.2
BOJS Bojanci 90.28 315 *i* P pP 06 01 32.3 -1.9
VISS Visnje 90.60 316 *i* P **P** **06 01 31.8 +6.7**
PRU Pruhonice 91.21 320 *e*P pP 06 01 36.7 -1.7
PRU Pruhonice 91.21 320 *e*pP pP 06 01 36.7 -1.7
GERES GERESS Array B 91.65 319 P **P** **06 01 30.9 +1.0**
comp=Z,0.8nm,0.8s,mb4.1,baz=92,slow=4.1,SNR=6.1
GERES GERESS Array B 91.65 319 P **P** **06 01 30.9 +1.0**
GERES pmax pmax
comp=Z,1.0nm,0.8s
NOA NORSAR Array B 93.85 331 LR LR 06 50 20.5
comp=Z,45nm,21.4s,MS3.9,baz=45,slow=40
MOD Modoc 127.58 39 *e*PKPdf PKPdf 06 07 30.4 +2.4
DLMT Dillon 129.78 31 *e*PKPdf PKPdf 06 07 34.1 +1.9
NVAR Mina Array Bea 130.77 41 PKP PKPdf 06 07 35.5 +1.3
comp=Z,0.8nm,0.8s,baz=258,slow=2.8,SNR=4.0
HWUT Hardware Ranch 132.90 34 *e*PKPdf PKPdf 06 07 35.2 -2.9
MSU Marysvale 134.58 37 *e*PKIKP PKPdf 06 07 44.4 +3.0
MSU *e* 06 07 53.4
PV10 Paradox Valley 136.52 35⇑ *i*PKIKP PKPdf 06 07 48.5 +3.5
ANMO Albuquerque 140.38 37 *i*PKIKP PKPdf 06 07 49.7 -2.5
WMOK Wichita Mounta 144.70 29 *e*PKIKP PKPdf 06 07 58.3 -1.6
CCM Cathedral Cave 144.74 17 *e*PKIKP PKPdf 06 07 58.3 -1.6
BLO Bloomington 144.79 10 *e*PKIKP PKPdf 06 07 58.7 -1.2
OLIL Olney 144.90 13 *e*PKPdf PKPdf 06 07 59.1 -1.0
MCWV Mont Chateau 144.98 1 *e*PKPab PKPdf 06 07 59.7 -0.6
FVM French Village 145.04 16 *e*PKIKP PKPdf 06 07 59.0 -1.4
SDMD Soldier's Deli 145.19 357 *e*PKPbc PKPbc 06 07 60.0 -0.2
SIUC Southern Illin 145.61 15 *e*PKPbc PKPbc 06 08 01.5 -0.1
WCI Wyandotte Cave 145.75 10 *e*PKPbc PKPbc 06 08 01.7 -0.3
WCI *ep*PKPdf pPKPdf 06 08 10.5 -2.0
TXAR Lajitas Array 145.92 41 PKPbc PKPbc 06 08 03.8 +1.0
comp=Z,17nm,1.0s,baz=267,slow=1.8,SNR=104
TXAR Lajitas Array 145.92 41 PKP2 PKPab 06 08 03.8 +0.5
TXAR pmax pmax
comp=Z,17nm,1.0s
URVA University of 147.06 358 *e*PKPbc PKPbc 06 08 06.0 +0.1
MIAR Mount Ida 147.13 23 *e*PKPbc PKPbc 06 08 06.5 +0.4
MIAR *ep*PKPdf pPKPdf 06 08 14.7 -0.3
ELN Prospectdale 147.37 3 *e*PKPbc PKPbc 06 08 06.5 -0.3
ELN *ep*PKPdf pPKPdf 06 08 15.1 -0.2
UALR University of 147.38 21 *e*PKPbc PKPbc 06 08 06.8 0.0
UALR *ep*PKPdf pPKPdf 06 08 15.4 -0.1
WVT Waverly 147.45 14 *e*PKPbc PKPbc 06 08 06.6 -0.4
WVT *ep*PKPdf pPKPdf 06 08 15.4 -0.1
JCT Junction City 147.48 35 *e*PKP2 PKPab 06 08 07.8 -1.5
TZTN Tazewell 147.81 7 *e*PKPbc PKPbc 06 08 08.0 0.0
OXF Oxford 148.57 17 *e*PKPbc PKPbc 06 08 09.7 -0.4
OXF *ep*PKPdf pPKPdf 06 08 18.3 +0.9
TKL Tuckaleechee C 148.66 8 PKPbc PKPbc 06 08 09.9 -0.3
comp=Z,16nm,1.0s,baz=63,slow=2.0,SNR=12
TKL Tuckaleechee C 148.66 8 *e*PKPbc PKPbc 06 08 10.3 +0.1
TKL *ep*PKPdf pPKPdf 06 08 18.0 +0.5
SWET Sewanee 148.74 11 *e*PKPbc PKPbc 06 08 10.2 -0.2
SWET *ep*PKPdf pPKPdf 06 08 18.3 +0.7
CPCT Cooper Cave 148.76 9 *e*PKPbc PKPbc 06 08 10.2 -0.3
CPCT *ep*PKPdf pPKPdf 06 08 19.1 +1.4
NATX Nacogdoches 149.09 27 *e*PKPbc PKPbc 06 08 12.2 +0.7
SIV San Ignacio 153.08 221 PKPbc PKPbc 06 08 23.0 +1.8
comp=Z,0.5nm,0.7s,baz=279,slow=4.6,SNR=3.8
MTP Monte Pirata 161.22 317 *e*PKPdf PKPdf 06 08 24.5 +0.4

IDC ***16*** *06:01:41.1±0.6,203S×100.10E,h0km,mb4.4/14, mb1 4.5/15,mb1mx4.4/21,mbtmp4.4/15,ML4.4/1,MS3.9/10, Ms1 3.9/10,ms1mx3.5/34,Error ellipse: s-maj=24.3km s-min=13.9km az=58.0*
ISCJB ***16*** *06:01:44.3±0.4,216S±005×10003E±006,h35km, mb4.6/28,MS4.0/14,Error ellipse: s-maj=9.6km s-min=6.4km az=156.0*
BJI ***16*** *06:01:46.6,210S×100.10E,h37km,mB4.9,mb4.8,Ms4.5, Msz4.2*
NEIC ***16*** *06:01:46.6±0.3,205S×100.12E,mb4.7/11,Error ellipse: s-maj=7.6km s-min=5.1km az=64.0*
DJA ***16*** *06:01:47,191S×99.83E,h33km,MLv4.8/5*
ISC 16 06:01:46.7±0.4,213S±005×10006E±006,h37km, h37km±1.4km:pP-P,n60,σ1°15/55,mb4.6/28,MS4.0/14, 1C-2D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**1.40**	**88**	P		**Pn**	**06 02 11.9**	**+2.2**
	0.0nm,0.0s							
PPI	**Padang Panjang**	**1.69**	**11**	P		**Pn**	**06 02 13.5**	**-0.3**
	0.0nm,0.0s							
RGRI	**Rengat**	**2.88**	**52**	P		**Pn**	**06 02 33.2**	**+3.1**
	0.0nm,0.0s							
KSI	**Kapahiang**	**2.94**	**121**	P		**Pn**	**06 02 35.5**	**+4.5**
	0.0nm,0.0s							
DSRI	**Dabo**	**4.80**	**70**	P		**Pn**	**06 02 59.0**	**+2.5**
	0.0nm,0.0s							
TPI	**Tanjungpandan**	**7.61**	**95**	P		**Pn**	**06 03 39.3**	**+4.2**
	0.0nm,0.0s							
COCO	**West Island**	**10.49**	**198**	*e*Pn		**Pn**	**06 04 15.3**	**+0.6**
KKM	**Kota Kinabalu**	**18.06**	**63**	*e*Pn		**Pn**	**06 05 54.1**	**-0.8**
KAPI	**Kappang**	**19.86**	**99**	P		**Pn**	**06 06 13.6**	**-3.0**
	1.0nm,0.3s,baz=243,slow=11,SNR=2.9							
KAPI				LR		LR	06 14 52.5	
	comp=Z,271nm,18.5s,baz=101,slow=40							
KAPI	**Kappang**	**19.86**	**99**	*e*P		**Pn**	**06 06 14.1**	**-2.4**
	17nm,0.8s							
CMAR	**Chiang Mai Arr**	**20.49**	**357**	P		**P**	**06 06 20.1**	**-1.4**
	3.0nm,0.4s,baz=186,slow=10.0,SNR=26							
CMAR				PcP		PcP	06 10 32.6	0.0
	0.5nm,0.4s,baz=215,slow=3.0,SNR=3.3							
CMAR				LR		LR	06 14 25.6	
	comp=Z,252nm,18.9s,MS3.6,baz=172,slow=38							
QIZ	**Qiongzhong**	**23.12**	**24**	P		**P**	**06 06 48.8**	**-0.9**
QIZ	**Qiongzhong**	**23.12**	**24**	*e*P		**P**	**06 06 48.4**	**-1.3**
	9.6nm,0.8s,mb4.3							
QIZ				*ep*P			06 06 58.7	
DAV	**Davao City (W)**	**27.05**	**70**	LR		LR	06 19 40.3	
	comp=Z,233nm,19.1s,MS3.8,baz=269,slow=40							
KMI	**Kunming**	**27.21**	**5**	P		**P**	**06 07 32.8**	**+5.6**
KMI				AMB		AMB		
	comp=Z,8.0nm,0.6s,mb4.4							
GYA	**Guiyang**	**29.13**	**12**	P		**P**	**06 07 45.9**	**+1.7**
GYA				AP		pP	06 07 55.6	+0.9
GYA				XP		sP	06 08 02.4	+3.3
GYA				PP		PP	06 08 42.6	-7.9
GYA				S		**S**	**06 12 34.8**	**+1.0**
GYA				XS		sS	06 12 51.4	+0.2
GYA				SS		SS	06 14 05.8	-33
GYA				AMB		AMB		
	comp=Z,20nm,0.8s,mb4.9							
GYA				AMB		AMB		
	comp=Z,80nm,4.8s							
GYA				LR		LR		
	comp=N,350nm,11.6s,MS4.3							
GYA				LR		LR		
	comp=E,330nm,11.7s,MS4.3							
GYA				LR		LR		
	comp=Z,480nm,12.3s,MS4.3							
FITZ	**Fitzroy Crossi**	**29.69**	**124**⇓	*i*P		**P**	**06 07 49.5**	**+0.2**
	comp=Z,8.1nm,0.9s,mb4.5							
FITZ	**Fitzroy Crossi**	**29.69**	**124**	P		**P**	**06 07 48.8**	**-0.6**
	comp=Z,5.4nm,0.9s,mb4.3,baz=307,slow=6.5,SNR=10.0							
LSA	**Lhasa**	**32.78**	**346**	P		**P**	**06 08 18.0**	**+1.6**
LSA	**Lhasa**	**32.78**	**346**	*e*P		**P**	**06 08 16.2**	**-0.2**
	comp=Z,8.5nm,0.7s,mb4.8							
CD2	**Chengdu**	**33.04**	**6**	*e*P		**P**	**06 08 20.8**	**+2.1**
CD2				AP		pP	06 08 31.4	+2.2
CD2				XP		sP	06 08 35.8	+2.2
CD2				PP		PP	06 09 32.4	-1.5
CD2				XS		sS	06 13 53.3	+0.9
CD2				SS		SS	06 15 37.3	-21
CD2				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.8							
CD2				LR		LR		
	comp=N,420nm,16.8s,MS4.4							
CD2				LR		LR		
	comp=E,350nm,12.4s,MS4.4							
CD2				LR		LR		
	comp=Z,390nm,15.6s,MS4.2							
WRA	**Warramunga Arr**	**37.87**	**120**	P		**P**	**06 09 00.3**	**-0.1**
	comp=Z,6.5nm,0.6s,mb4.6,baz=303,slow=9.0,SNR=73							
WRA				PcP		PcP	06 11 16.5	+0.2
	comp=Z,1.2nm,0.9s,baz=316,slow=2.2,SNR=4.8							
WRA				S		**S**	**06 14 46.4**	**-3.2**
	comp=Z,0.5nm,0.8s,baz=297,slow=17,SNR=3.1							
WRAB	**Tennant Creek**	**37.88**	**120**	*e*P		**P**	**06 08 60.0**	**-0.5**
WRAB				*e*P			06 09 00.3	
WB2	**Warramunga Arr**	**37.88**	**120**⇓	*i*P		**P**	**06 09 00.2**	**-0.3**
ASAR	**Alice Springs**	**39.12**	**126**	P		**P**	**06 09 11.7**	**+0.8**
	comp=Z,4.5nm,0.6s,mb4.3,baz=302,slow=8.0,SNR=48							
ASAR				PcP		PcP	06 11 21.2	+1.1
	comp=Z,1.4nm,0.7s,baz=295,slow=2.2,SNR=6.1							
ASAR				S		**S**	**06 15 06.3**	**-2.0**
	comp=Z,0.5nm,0.8s,baz=300,slow=14,SNR=3.7							
HHC	**Hu-ho-hao-te**	**44.04**	**13**	*e*P		**P**	**06 09 50.3**	**-0.5**
HHC				AP		pP	06 10 01.5	-0.1
HHC				PP		PP	06 11 34.8	+0.8
HHC				PCP		PcP	06 11 35.8	-0.1
HHC				SCP		ScP	06 15 23.4	-1.7
HHC				PCS		PcS	06 15 27.3	-1.6
HHC				S		**S**	**06 16 20.1**	**-0.6**
HHC				SS		SS	06 19 29.4	-9.5
HHC				SCS		ScS	06 19 43.3	-3.5
HHC				AMB		AMB		
	comp=Z,12nm,0.7s,mb4.7							
HHC				AMB		AMB		
	comp=Z,107nm,6.6s							
HHC				LR		LR		
	comp=N,242nm,14.3s,MS4.5							
HHC				LR		LR		
	comp=E,412nm,14.8s,MS4.5							
HHC				LR		LR		
	comp=Z,188nm,13.2s,MS4.2							
BJI	**Beijing**	**44.49**	**18**	P		**P**	**06 09 53.3**	**-1.1**
BJI				AMB		AMB		
	comp=Z,10.0nm,1.5s,mb4.3							
WMQ	**Urumqi**	**47.07**	**348**⇑	*i*P		**P**	**06 10 15.8**	**+1.0**
WMQ				AP		pP	06 10 26.0	+0.4
WMQ				XP		sP	06 10 30.0	0.0
WMQ				*e*S		**S**	**06 17 04.0**	**-0.2**
WMQ				AMB		AMB		
	comp=Z,42nm,0.8s,mb5.4							
WMQ				AMB		AMB		
	comp=Z,158nm,4.8s							
WMQ				LR		LR		
	comp=N,166nm,18.2s,MS4.2							
WMQ				LR		LR		
	comp=E,221nm,23.2s,MS4.2							
WMQ				LR		LR		
	comp=Z,164nm,21.8s,MS4.0							
GUMO	**Guam**	**47.09**	**69**	LR		LR	06 29 32.0	
	comp=Z,58nm,21.1s,MS3.5,baz=189,slow=36							
KSRS	**Korea Array**	**47.10**	**31**	P		**P**	**06 10 13.7**	**-1.4**
	comp=Z,2.3nm,0.9s,mb4.1,baz=232,slow=6.2,SNR=6.2							
KSRS				LR		LR	06 30 01.2	
	comp=Z,99nm,18.8s,MS3.8,baz=215,slow=36							
CTAO	**Charters Tower**	**48.48**	**115**	*e*P		**P**	**06 10 26.2**	**0.0**
	comp=Z,5.4nm,0.9s,mb4.6							
STKA	**Stephens Creek**	**49.02**	**132**	P		**P**	**06 10 30.4**	**+0.3**
	comp=Z,5.7nm,0.8s,mb4.7,baz=329,slow=9.7,SNR=5.5							
TKM2	**Tokmak 2**	**49.98**	**337**	*e*P		**P**	**06 10 37.4**	**+0.3**
	comp=Z,13nm,0.8s,mb5.0							
SONM	**Songino Array**	**50.06**	**6**	P		**P**	**06 10 37.7**	**0.0**
	comp=Z,5.2nm,0.9s,mb4.6,baz=183,slow=9.0,SNR=15							
ULN	**Ulaanbaatar**	**50.16**	**6**	*e*P		**P**	**06 10 38.0**	**-0.4**
ULN				*ep*P		pP	06 10 48.9	-0.4
EKS2	**Erkin-Say**	**50.51**	**335**	*e*P		**P**	**06 10 42.0**	**+0.8**
	comp=Z,12nm,0.9s,mb4.8							
MKAR	**Makanchi Array**	**51.17**	**344**	P		**P**	**06 10 46.0**	**-0.1**
	comp=Z,13nm,0.7s,mb5.0,baz=155,slow=8.8,SNR=75							
MJAR	**Matsushiro Arr**	**52.34**	**39**	P		**P**	**06 10 53.6**	**-1.4**
	comp=Z,1.2nm,0.5s,mb4.0,baz=224,slow=8.0,SNR=5.5							
MDJ	**Mudanjiang**	**53.48**	**26**	P		**P**	**06 11 04.8**	**+1.6**
MDJ				AP		pP	06 11 13.6	-0.6
MDJ				XP		sP	06 11 17.5	-1.1
MDJ				PP		PP	06 13 05.3	+1.2
MDJ				S		**S**	**06 18 36.3**	**+2.9**
MDJ				XS		sS	06 18 52.3	+0.8
MDJ				SCS		ScS	06 20 46.4	-3.5
MDJ				SS		SS	06 22 13.8	-0.3
MDJ				AMB		AMB		
	comp=Z,7.0nm,0.9s,mb4.6							
MDJ				AMB		AMB		
	comp=Z,75nm,4.1s							
MDJ				LR		LR		
	comp=N,95nm,21.0s,MS4.0							
MDJ				LR		LR		
	comp=E,82nm,18.6s,MS4.0							
MDJ				LR		LR		
	comp=Z,121nm,22.0s,MS3.9							
TLY	**Talaya**	**53.69**	**3**	*e*P		**P**	**06 11 02.8**	**-1.9**
	comp=Z,38nm,1.8s,mb5.0							
KURK	**Kurchatov**	**55.75**	**344**	*e*P		**P**	**06 11 19.3**	**-0.3**
	comp=Z,16nm,1.0s,mb5.0							
ZALV	**Zalesovo Beam**	**57.31**	**349**	P		**P**	**06 11 29.2**	**-1.4**
	comp=Z,4.2nm,0.6s,mb4.7,baz=163,slow=5.4,SNR=12							
ZALV	**Zalesovo Beam**	**57.31**	**349**	P		**P**	**06 11 29.2**	**-1.4**
ASAJ	**Asahikawa**	**59.68**	**34**	LR		LR	06 38 27.3	
	comp=Z,54nm,19.5s,MS3.7,baz=3.2,slow=37							
YSS	**Yuzh-Sakhalins**	**61.56**	**32**	*e*P		**P**	**06 12 00.7**	**+0.6**
KMBO	**Kilima Mbogo**	**62.79**	**270**	P		**P**	**06 12 10.4**	**+1.3**
	comp=Z,0.4nm,0.2s,mb4.1,baz=250,slow=24,SNR=3.6							
KMBO				LR		LR	06 35 06.0	
	comp=Z,127nm,18.0s,MS4.1,baz=240,slow=32							
ARU	**Arti**	**67.35**	**336**	*e*P		**P**	**06 12 37.7**	**-0.1**
	comp=Z,10nm,1.5s,mb4.6							
ARU				*ep*P		pP	06 12 48.5	-0.6
YAK	**Yakutsk**	**67.85**	**15**	*e*P		**P**	**06 12 40.4**	**-0.4**
MAW	**Mawson**	**70.17**	**194**	P		**P**	**06 12 55.0**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=79,slow=10,SNR=4.1							
MAW				LR		LR	06 36 34.3	
	comp=Z,84nm,20.9s,MS4.0,baz=250,slow=30							
LSZ	**Lusaka**	**71.96**	**255**	LR		LR	06 38 46.0	
	comp=Z,90nm,21.2s,MS4.0,baz=162,slow=31							
BOSA	**Boshof**	**75.65**	**241**	LR		LR	06 44 28.0	
	comp=Z,118nm,19.3s,MS4.2,baz=165,slow=34							
ARCES	**ARCESS Array B**	**86.61**	**340**	P		**P**	**06 14 25.2**	**-0.7**
	comp=Z,2.2nm,0.8s,mb4.4,baz=92,slow=3.6,SNR=6.6							
ARCES	**ARCESS Array B**	**86.61**	**340**	P		**P**	**06 14 25.2**	**-0.7**
GERES	**GERESS Array B**	**89.19**	**319**	P		**P**	**06 14 38.9**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.8,baz=64,slow=4.6,SNR=6.6							
NVAR	**Mina Array Bea**	**129.66**	**39**	PKP		PKPdf	06 20 53.5	+1.2
	comp=Z,0.3nm,0.6s,baz=270,slow=2.2,SNR=3.7							
CFAA	**Coronel Fontan**	**144.66**	**197**	PKP		PKPdf	06 21 19.7	-0.4
	comp=Z,0.3nm,0.6s,baz=180,slow=4.2,SNR=8.0							
TXAR	**Lajitas Array**	**144.77**	**38**	PKP		PKPdf	06 21 19.7	-0.7
	comp=Z,5.1nm,0.9s,baz=264,slow=1.2,SNR=44							
MIAR	**Mount Ida**	**145.33**	**20**	*e*PKKPbc		PKPbc	06 21 20.5	-0.5
WVT	**Waverly**	**145.39**	**11**	*e*PKKPbc		PKPbc	06 21 20.2	-0.9
TKL	**Tuckaleechee C**	**146.45**	**6**	PKPbc		PKPbc	06 21 23.2	-1.1
	comp=Z,3.2nm,0.9s,baz=167,slow=5.1,SNR=5.1							

ISCJB ***16*** *06:06:38.1±0.3,1172N±003×6186W±003,h138km±2km, mb3.7/15,Error ellipse: s-maj=5.3km s-min=3.7km az=30.0*
TRN ***16*** *06:06:38.9,1173N×6177W,h133km,MD4.1,M4.6(FDF)*
TRN Felt III Trinidad.
NEIC ***16*** *06:06:39.7,1175N×6178W,h135km,MD3.9(TRN), MW4.2(CAR),After TRN.*
FUNV ***16*** *06:06:41.6,1155N×6181W,h124km,MW4.1*
IDC ***16*** *06:06:42.1±0.8,1178N×6217W,h168km±7km,mb3.4/14, mb1 3.6/16,mb1mx3.6/23,mbtmp3.4/16,Error ellipse: s-maj=13.2km s-min=9.1km az=93.0*
ISC 16 06:06:39.2±0.3,1171N±003×6187W±003,h134km±2km, h169km±2.2km:pP-P,n55,σ0°99/73,mb3.7/15,9C-8D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GRGR	**Grenville**	**0.46**	**26**	*e*Pn		**Pn**	**06 06 58.6**	**0.0**
GRGR				*e*Sn		**Sn**	**06 07 12.4**	**-0.9**
GRW	**Mount Saint Ca**	**0.49**	**24**⇓	*i*P		**Pn**	**06 06 58.8**	**+0.1**
GRHS	**Sauteurs**	**0.55**	**23**	*e*P		**Pn**	**06 06 59.9**	**+0.9**
GRHS				*e*S		**Sn**	**06 07 13.5**	**-0.6**
GRIC	**Isle de Caille**	**0.63**	**26**	*e*P		**Pn**	**06 07 00.2**	**+0.6**
GRIC				*e*S		**Sn**	**06 07 15.5**	**+0.5**
GRSS	**Sisters**	**0.63**	**23**	*e*P		**Pn**	**06 06 59.7**	**+0.1**
GRSS				*e*S		**Sn**	**06 07 15.1**	**+0.1**
TCE	**Chacachacare**	**1.02**	**174**⇓	*i*P		**Pn**	**06 07 03.1**	**+0.5**
TCE				*e*S		**Sn**	**06 07 21.0**	**+0.5**
GUIV	**Guiria**	**1.12**	**198**⇑	*i*P		**Pn**	**06 07 03.6**	**0.0**
GUIV				*e*S		**Sn**	**06 07 19.8**	**-2.4**
TRN	**Trinidad (W)**	**1.15**	**157**⇓	*i*P		**Pn**	**06 07 04.4**	**+0.4**
TRN				*e*S		**Sn**	**06 07 22.9**	**+0.2**
TPR	**Prospect**	**1.19**	**116**⇑	*i*P		**Pn**	**06 07 04.1**	**-0.2**
TPR				*e*S		**Sn**	**06 07 22.8**	**-0.6**
BOT	**Bacolet**	**1.25**	**116**⇑	*e*P		**Pn**	**06 07 04.5**	**-0.4**
ITEV	**Isla Los Testi**	**1.29**	**254**	*e*P		**Pn**	**06 07 05.9**	**+0.5**
ITEV				⇑ *i*P			06 07 06.0	
ITEV				*e*S		**Sn**	**06 07 25.5**	**+0

17nm,0.3s,baz=354,slow=21,SNR=18
DSHT Scott's Head 3.51 8 *e*P **Pn 06 07 32.4 -0.3**
DPMT Pointe Michel 3.56 8 *e*P **Pn 06 07 33.7 +0.4**
TBG Guadaloupe-3 4.12 3 *e*P **Pn 06 07 41.0 +0.3**
CUPV Cœpira 4.19 247 *e*P **Pn 06 07 43.1 +1.5**
CUPV *e*S **Sn 06 08 28.0 -2.0**
MGG Marie-Galante 4.21 7 *e*P **Pn 06 07 43.0 +1.1**
SCG Saint Claude 4.29 2 *e*P **Pn 06 07 43.8 +0.8**
LZG Guadaloupe-1 4.40 1 *e*P **Pn 06 07 45.1 +0.7**
BIRV Birongo 4.50 255 *e*P **Pn 06 07 46.8 +1.1**
CAOV Caicara del Or 6.19 226 *e*P **Pn 06 08 07.3 -1.1**
CAOV *e*S **Sn 06 09 10.2 -7.9**
SJG San Juan 7.59 327 P **Pn 06 08 28.4 +1.2**
1.5nm,0.3s,baz=124,slow=13,SNR=7.2
SJG San Juan 7.59 327 *e*Pn **Pn 06 08 28.1 +0.9**
SIV San Ignacio 27.54 178 P **P 06 12 14.6 +1.0**
3.1nm,0.8s,mb4.1,baz=3.2,slow=9.7,SNR=19
LPAZ La Paz 28.50 193 P **P 06 12 23.8 +1.7**
1.1nm,0.7s,mb3.7,baz=354,slow=10.0,SNR=7.5
LPAZ pP pP 06 12 57.6 +6.8
0.7nm,0.9s,baz=26,slow=10,SNR=2.3
LPAZ La Paz 28.50 193 P **P 06 12 23.8 +1.7**
LPAZ pP pP 06 12 57.6 +6.8
BDFB Brasilia 30.44 153 P **P 06 12 40.6 +1.3**
2.7nm,0.7s,mb4.1,baz=310,slow=12,SNR=5.6
TXAR Lajitas Array 42.62 301 P **P 06 14 20.2 -2.3**
0.2nm,0.5s,mb3.0,baz=113,slow=9.8,SNR=7.0
TXAR pP pP 06 14 57.1 +4.6
1.3nm,0.9s,baz=123,slow=8.4,SNR=7.3
TXAR PcP PcP 06 16 10.9 -1.3
1.1nm,0.6s,baz=126,slow=5.8,SNR=13
TXAR Lajitas Array 42.62 301 P **P 06 14 20.2 -2.3**
TXAR pP pP 06 14 57.1 +4.6
TXAR PcP PcP 06 16 10.9 -1.3
SCHQ Schefferville 43.19 356 P **P 06 14 26.1 -0.5**
18nm,0.5s,mb4.9,baz=173,slow=6.8,SNR=47
CFAA Coronel Fontan 43.50 188 P **P 06 14 28.6 -0.8**
0.6nm,0.8s,mb3.3,baz=354,slow=6.3,SNR=15
CFAA pP pP 06 15 04.7 +5.1
0.4nm,0.8s,baz=357,slow=8.2,SNR=4.3
ULM Lac du Bonnet 47.48 331 P **P 06 14 57.5 -3.0**
1.8nm,0.5s,mb3.9,baz=149,slow=11,SNR=5.7
PDAR Pinedale Array 51.54 316 P **P 06 15 27.9 -3.6**
1.3nm,0.7s,mb3.6,baz=119,slow=9.7,SNR=11
PDAR pP pP 06 16 07.0 +4.4
1.4nm,0.8s,baz=104,slow=9.3,SNR=5.7
PDAR PcP PcP 06 16 41.2 -2.4
0.5nm,0.6s,baz=126,slow=4.6,SNR=2.9
PLCA Paso Flores 52.80 188 P **P 06 15 40.1 -0.5**
1.7nm,0.7s,mb3.9,baz=27,slow=8.1,SNR=5.4
NVAR Mina Array Bea 56.62 308 P **P 06 16 06.7 -1.7**
0.3nm,0.6s,mb3.3,baz=103,slow=7.7,SNR=3.5
ESDC Sonseca Array 58.00 50 P **P 06 16 18.8 +0.8**
1.1nm,0.7s,mb3.8,baz=265,slow=7.0,SNR=11
TORD Torodi Ar. Bea 61.94 81 P **P 06 16 46.0 +0.7**
0.1nm,0.5s,mb3.0,baz=301,slow=6.4,SNR=3.2
YKA Yellowknife Ar 63.00 335 P **P 06 16 48.6 -2.9**
1.4nm,0.7s,mb3.9,baz=106,slow=7.2,SNR=3.6
GERES GERESS Array B 71.78 42 P **P 06 17 46.7 -0.3**
0.2nm,0.3s,mb3.3,baz=258,slow=4.9,SNR=4.1
ARCES ARCESS Array B 78.19 21 P **P 06 18 22.9 -0.6**
3.5nm,0.7s,mb4.1,baz=290,slow=5.0,SNR=9.8
CMAR Chiang Mai Ar 144.54 33 PKP PKPdf 06 25 59.5 -1.2
9.1nm,0.7s,baz=309,slow=4.5,SNR=37
WRA Warramunga Arr 162.41 240 PKP PKPdf 06 26 23.3 -2.6
1.4nm,1.2s,baz=135,slow=0.1,SNR=3.7
WRA PKPab PKPab 06 27 11.0 -3.1
0.5nm,0.9s,baz=107,slow=4.2,SNR=4.4

IDC ***16*** *06:13:20.2±1.5, 301S×101 00E, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.0/22, mbtmp4.1/11, ML4.1/1, Error ellipse: s-maj=61.1km s-min=15.0km az=53.0*
ISCJB ***16*** *06:13:24.0±1.0, 29S±02×1012E±02, h33km, mb4.2/12, Error ellipse: s-maj=37.5km s-min=9.9km az=139.2*
NEIC ***16*** *06:13:25.8±0.6, 294S×101.14E, h35km, mb4.5/2, Error ellipse: s-maj=25.3km s-min=6.7km az=50.0*
ISC 16 06:13:26.2±1.0, 29S±02×1012E±02, h35km, n17, σ0°50/15, mb4.2/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**18.61**	**97**	P		P	**Pn**	**06 17 41.3**	**0.0**
	0.6nm,0.3s,baz=298,slow=16,SNR=3.7								
CMAR	**Chiang Mai Arr**	**21.33**	**354**	P		P	**P**	**06 18 09.7**	**-0.6**
	0.8nm,0.3s,mb3.5,baz=183,slow=9.1,SNR=6.0								
FITZ	**Fitzroy Crossi**	**28.31**	**124**	P		P	**P**	**06 19 16.6**	**-0.2**
	1.3nm,0.7s,mb3.6,baz=332,slow=12,SNR=2.1								
WRA	**Warramunga Arr**	**36.50**	**120**	P		P	**P**	**06 20 28.1**	**-0.4**
	1.7nm,0.4s,mb4.4,baz=304,slow=9.0,SNR=41								
WB2	**Warramunga Arr**	**36.51**	**120**	*e*P		P	**P**	**06 20 28.3**	**-0.2**
ASAR	**Alice Springs**	**37.75**	**126**	P		P	**P**	**06 20 39.6**	**+0.6**
	0.6nm,0.6s,mb3.5,baz=299,slow=8.0,SNR=9.9								
CTA	**Charters Tower**	**47.12**	**115**	P		P	**P**	**06 21 55.3**	**0.0**
	1.1nm,0.3s,mb4.3,baz=267,slow=4.5,SNR=4.8								
STKA	**Stephens Creek**	**47.66**	**132**	P		P	**P**	**06 21 59.7**	**+0.4**
	2.2nm,0.7s,mb4.3,baz=311,slow=10,SNR=2.6								
SONM	**Songino Array**	**50.72**		P		P	**P**	**06 22 22.8**	**+0.4**
	3.0nm,0.7s,mb4.3,baz=184,slow=9.4,SNR=14								
TKM2	**Tokmak 2**	**51.13**	**336**	*e*P		P	**P**	**06 22 26.2**	**+0.6**
	2.2nm,0.4s,mb4.4								
EKS2	**Erkin-Say**	**51.68**	**334**	*e*P		P	**P**	**06 22 30.6**	**+0.8**
	4.2nm,0.7s,mb4.5								
EKS2				*e*pP		pP	pP	06 22 44.0	+3.8
MKAR	**Makanchi Array**	**52.21**	**344**	P		P	**P**	**06 22 33.8**	**+0.1**
	2.5nm,0.6s,mb4.3,baz=144,slow=8.3,SNR=17								
ZAA0	**Zalesovo Array**	**58.27**	**349**	*e*P		P	**P**	**06 23 17.0**	**-0.1**
ZALV	**Zalesovo Beam**	**58.27**	**349**	P		P	**P**	**06 23 17.0**	**-0.1**
	8.9nm,0.8s,mb4.9,baz=169,slow=5.1,SNR=33								
GERES	**GERESS Array B**	**90.52**	**319**	P		P	**P**	**06 26 23.4**	**-1.2**
	0.3nm,0.5s,mb3.8,baz=90,slow=5.3,SNR=4.3								
TXAR	**Lajitas Array**	**144.64**	**39**	PKP		PKPdf		06 32 59.0	-0.9
	1.4nm,0.6s,baz=291,slow=1.1,SNR=24								
JCT	**Junction City**	**146.12**	**34**	*e*PKPdf		PKPdf		06 33 02.3	-0.1

IDC 16 06:22:05.9±5.8, 230S×10153E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.7/3, Error ellipse: s-maj=294.5km s-min=30.1km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.53**	**121**	P		P		06 29 13.5	0.0
	0.5nm,0.3s,baz=297,slow=8.8,SNR=14								
ASAR	**Alice Springs**	**37.85**	**127**	P		P		06 29 24.8	+0.2
	0.2nm,0.3s,baz=304,slow=8.0,SNR=5.8								
ZALV	**Zalesovo Beam**	**57.75**	**348**	P		P		06 31 58.8	+0.3
	0.8nm,0.5s,baz=160,slow=4.6,SNR=3.3								
TXAR	**Lajitas Array**	**143.99**	**39**	PKP		PKPdf		06 41 42.4	-1.8
	0.2nm,0.4s,baz=210,slow=1.8,SNR=10.0								

ISCJB ***16*** *06:27:44.3±1.3, 87S±01×1593E±01, h93km±13km, mb4.0/11, Error ellipse: s-maj=24.1km s-min=15.8km az=34.9*
IDC ***16*** *06:27:45.7±0.6, 881S×19551E, h99km±6km, mb3.9/11, mb1 4.0/12, mb1mx3.9/17, mbtmp3.9/12, MS3.3/2, Ms1 3.3/2, ms1mx2.7/22, Error ellipse: s-maj=16.2km s-min=14.8km az=9.0*
NEIC ***16*** *06:27:45.7±0.5, 865S×15956E, mb4.1/4, Error ellipse: s-maj=16.0km s-min=10.9km az=116.0*
ISC 16 06:27:45.4±1.3, 87S±01×1594E±01, h90km±13km, h100km±2.7km:pP-P, n26, σ0°80/23, mb4.0/11, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.91**	**145**	P		P	**Pn**	**06 28 04.2**	**+0.1**
	228nm,0.3s,baz=265,slow=0.9,SNR=52								
HNR				S			**Sn**	**06 28 17.9**	**-0.3**
	1μm,0.3s,baz=49,slow=20,SNR=35								
CTA	**Charters Tower**	**17.06**	**227**	*e*P		P	**Pn**	**06 31 41.6**	**+3.3**
	5.4nm,0.8s								
CTA	**Charters Tower**	**17.06**	**227**	P		P	**Pn**	**06 31 39.7**	**+1.4**
	0.4nm,0.3s,baz=50,slow=9.3,SNR=9.2								
CTA				LR		LR	LR	06 35 51.9	
	comp=Z,57nm,21.3s,baz=246,slow=29								
CTAO	**Charters Tower**	**17.06**	**227**	*e*Pn		P	**Pn**	**06 31 41.9**	**+3.6**
	7.9nm,0.8s								
ARMA	**Armidale**	**22.83**	**198**	*e*P		P	**P**	**06 32 41.1**	**+0.1**
WB2	**Warramunga Arr**	**26.71**	**243**	*e*P		P	**P**	**06 33 16.5**	**+0.1**
WRA	**Warramunga Arr**	**26.72**	**243**	P		P	**P**	**06 33 16.7**	**+0.1**
	2.2nm,0.4s,mb4.0,baz=69,slow=9.3,SNR=64								
WRA				pP		pP		06 33 38.9	+2.0
	2.0nm,0.6s,baz=68,slow=9.4,SNR=4.1								
WRA				PcP		PcP		06 36 36.8	-1.2
	0.7nm,0.6s,baz=70,slow=2.6,SNR=8.1								
CNB	**Canberra Magne**	**28.07**	**198**	*e*P		P	**P**	**06 33 28.8**	**+0.4**
CAN	**Canberra**	**28.18**	**198**	*e*P		P	**P**	**06 33 29.9**	**+0.5**
STKA	**Stephens Creek**	**28.41**	**213**	*e*P		P	**P**	**06 33 31.3**	**-0.2**
	4.5nm,0.7s,mb4.1								
STKA	**Stephens Creek**	**28.41**	**213**	P		P	**P**	**06 33 30.6**	**-1.0**
	3.7nm,0.5s,mb4.2,baz=39,slow=14,SNR=9.2								
STKA				LR		LR	LR	06 45 09.2	
	comp=Z,110nm,19.8s,baz=18,slow=37								
ASAR	**Alice Springs**	**28.61**	**236**	P		P	**P**	**06 33 32.8**	**-0.6**
	0.8nm,0.4s,mb3.7,baz=64,slow=10,SNR=14								
ASAR				pP		pP	pP	06 33 55.5	+1.5
	0.7nm,0.6s,baz=62,slow=12,SNR=2.8								
TOO	**Toolangi**	**31.41**	**202**	*e*P		P	**P**	**06 33 58.5**	**+0.6**
FITZ	**Fitzroy Crossi**	**34.12**	**251**	*e*P		P	**P**	**06 34 20.7**	**-1.1**
	5.8nm,1.5s,mb4.2								
FITZ	**Fitzroy Crossi**	**34.12**	**251**	P		P	**P**	**06 34 20.3**	**-1.5**
	1.5nm,0.6s,mb4.0,baz=58,slow=20,SNR=10.0								
CMAR	**Chiang Mai Arr**	**65.47**	**295**	P		P	**P**	**06 38 20.1**	**+0.7**
	0.5nm,0.3s,mb3.8,baz=122,slow=5.4,SNR=5.8								
SONM	**Songino Array**	**73.15**	**326**	P		P	**P**	**06 39 07.4**	**+1.2**
	2.0nm,0.8s,mb4.0,baz=146,slow=5.9,SNR=7.9								
SONM				pP		pP	pP	06 39 31.5	+2.0
	1.1nm,0.7s,baz=144,slow=5.2,SNR=4.0								
MAW	**Mawson**	**84.54**	**202**	P		P	**P**	**06 40 07.1**	**-1.1**
	2.3nm,0.5s,mb4.2,baz=85,slow=8.5,SNR=8.5								
MKAR	**Makanchi Array**	**87.57**	**318**	P		P	**P**	**06 40 23.2**	**-0.2**
	2.2nm,0.6s,mb4.4,baz=98,slow=6.2,SNR=12								
ZALV	**Zalesovo Beam**	**88.04**	**325**	P		P	**P**	**06 40 24.0**	**-1.4**
	0.7nm,0.5s,mb4.0,baz=146,slow=8.7,SNR=2.9								
NVAR	**Mina Array Bea**	**89.33**	**51**	P		P	**P**	**06 40 32.8**	**+0.9**
	0.3nm,0.6s,mb3.5,baz=240,slow=7.1,SNR=3.3								
PDAR	**Pinedale Array**	**96.56**	**48**	P		P	**P**	**06 41 04.8**	**-0.3**
	0.4nm,0.6s,mb4.0,baz=100,slow=1.7,SNR=3.6								
LPAZ	**La Paz**	**126.80**	**118**	PKP		PKPdf		06 46 38.6	-0.9
	1.0nm,0.7s,baz=34,slow=4.2,SNR=6.5								
GERES	**GERESS Array B**	**130.71**	**331**	PKP		PKPdf		06 46 45.3	-0.7
	0.3nm,0.4s,baz=91,slow=8.5,SNR=3.5								
ESDC	**Sonseca Array**	**145.74**	**337**	PKPbc		PKPbc		06 47 13.6	-0.7
	0.3nm,0.4s,baz=7.6,slow=6.1,SNR=7.2								
TORD	**Torodi Ar. Bea**	**157.69**	**283**	PKPab		PKPab		06 48 03.4	-1.7
	0.4nm,0.5s,baz=91,slow=4.1,SNR=6.2								

IDC ***16*** *06:53:34.4±1.7, 1206S×16599E, h0km, mb4.2/9, mb1 4.3/9, mb1mx4.2/18, mbtmp4.2/9, MS3.8/3, Ms1 3.8/3, ms1mx3.1/21, Error ellipse: s-maj=64.4km s-min=24.3km az=141.0*
ISCJB ***16*** *06:53:38.2±0.9, 120S±0.1×1659E±02, h33km, mb4.1/9, MS3.6/3, Error ellipse: s-maj=22.1km s-min=14.8km az=10.2*
NEIC ***16*** *06:53:40.2±0.7, 1194S×16596E, h35km, mb4.3/3, Error ellipse: s-maj=19.0km s-min=12.5km az=110.0*
ISC 16 06:53:41.2±6.0, 120S±03×1660E±02, h46km±63km, n19, σ0°77/16, mb4.1/9, MS3.6/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.02**	**177**	*e*P		P	**Pn**	**06 56 02.2**	**-0.4**
DZM	**Mont Dzumac**	**10.02**	**177**	*e*P		P	**Pn**	**06 56 02.4**	**-0.2**
CTA	**Charters Tower**	**20.56**	**245**	*e*P		P	**P**	**06 58 17.3**	**+1.1**
	6.7nm,1.0s								
CTA	**Charters Tower**	**20.56**	**245**	P		P	**P**	**06 58 15.9**	**-0.2**
	7.4nm,0.9s,baz=65,slow=12,SNR=9.4								
CTA				LR		LR	LR	07 05 04.2	
	comp=Z,188nm,20.5s,MS3.4,baz=83,slow=34								
CTAO	**Charters Tower**	**20.56**	**245**	*e*P		P	**P**	**06 58 17.1**	**+0.9**
	27nm,1.4s								
AFI	**Afiamalu**	**21.77**	**97**	LR		LR	LR	07 06 07.1	
	comp=Z,227nm,18.3s,MS3.6,baz=83,slow=35								
ARMA	**Armidale**	**22.63**	**214**	*e*P		P	**P**	**06 58 39.7**	**+1.4**
WRA	**Warramunga Arr**	**31.37**	**251**	P		P	**P**	**06 59 56.8**	**-1.0**
	2.7nm,1.0s,mb4.0,baz=83,slow=9.1,SNR=12								
ASAR	**Alice Springs**	**32.57**	**245**	P		P	**P**	**07 00 07.5**	**-0.7**
	2.0nm,0.8s,mb4.1,baz=74,slow=9.5,SNR=16								
ASAR				PcP		PcP	PcP	07 02 53.6	-0.5
	0.4nm,0.8s,baz=58,slow=3.8,SNR=3.3								
FITZ	**Fitzroy Crossi**	**39.35**	**256**	P		P	**P**	**07 01 05.7**	**-0.7**
	1.4nm,0.9s,mb3.7,baz=85,slow=14,SNR=2.9								
PPT	**Papeete**	**43.27**	**103**	LR		LR	LR	07 15 31.2	
	comp=Z,143nm,20.0s,MS3.9,baz=273,slow=30								
CMAR	**Chiang Mai Arr**	**72.69**	**294**	P		P	**P**	**07 05 05.2**	**+0.4**
	1.3nm,0.3s,mb4.3,baz=116,slow=4.2,SNR=4.3								
ULN	**Ulaanbaatar**	**79.20**	**324**	*e*P		P	**P**	**07 05 41.9**	**+0.6**
	2.6nm,0.8s,mb4.2								
SONM	**Songino Array**	**79.56**	**324**	P		P	**P**	**07 05 44.2**	**+1.0**
	1.1nm,0.8s,mb3.8,baz=131,slow=4.1,SNR=6.5								
NVAR	**Mina Array Bea**	**86.47**	**50**	P		P	**P**	**07 06 18.9**	**-0.3**
	0.1nm,0.3s,mb3.5,baz=243,slow=4.0,SNR=3.1								
MKAR	**Makanchi Array**	**94.37**	**317**	P		P	**P**	**07 06 55.9**	**-0.1**
	2.2nm,0.7s,mb4.7,baz=101,slow=6.5,SNR=10								
ZALV	**Zalesovo Beam**	**94.46**	**324**	P		P	**P**	**07 06 55.4**	**-0.8**
	0.8nm,0.4s,mb4.5,baz=163,slow=1.5,SNR=5.5								
ZALV	**Zalesovo Beam**	**94.46**	**324**	P		P	**P**	**07 06 55.4**	**-0.8**
ESDC	**Sonseca Array**	**151.03**	**344**	PKPbc		PKPbc		07 13 31.6	+2.2
	0.1nm,0.3s,baz=52,slow=2.8,SNR=3.6								

BJI ***16*** *07:00:49.5, 580S×12455E, h35km, mB5.1, mb4.9, Ms4.8, Msz4.4*
IDC ***16*** *07:00:51.8±0.5, 5.13S×124.14E, h0km, mb4.6/12, mb1 4.6/15, mb1mx4.6/18, mbtmp4.6/15, ML4.0/3, MS3.7/11, Ms1 3.7/11, ms1mx3.6/19, Error ellipse: s-maj=26.3km s-min=13.6km az=70.0*
ISCJB ***16*** *07:00:52.3±1.1, 5.14S±004×12427E±005, h15km±7km, mb5.0/50, MS4.0/16, Error ellipse: s-maj=8.6km s-min=5.3km az=148.4*
MOS ***16*** *07:00:53.3±1.1, 509S×12429E, h22km, mb5.0/18, Error ellipse: s-maj=22.3km s-min=8.4km az=112.8*
NEIC ***16*** *07:00:56.6±0.3, 523S×12415E, h35km, mb4.9/12, Error ellipse: s-maj=12.7km s-min=6.4km az=59.0*
DJA ***16*** *07:01:01, 504S×12441E, h62km, Mw5.3/6*
ISC 16 07:00:55.9±1.1, 526S±003×12420E±004, h30km±7km, h35km±1.2km:pP-P, n131, σ1°04/134, mb5.0/50, MS4.0/16, 7C-4D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BBSI	**Bau Bau**	**1.64**	**262**	P		P	**Pn**	**07 01 23.8**	**+1.0**
	0.0nm,0.0s								
AAI	**Ambon**	**4.28**	**69**	P		P	**Pn**	**07 02 02.0**	**+2.9**
	0.0nm,0.0s								
KAPI	**Kappang**	**4.44**	**273**	Pn		P	**Pn**	**07 02 00.3**	**-1.0**
	34nm,0.3s,baz=120,slow=7.1,SNR=142								
KAPI				Sn			**Sn**	**07 02 49.6**	**-2.4**
	25nm,0.3s,baz=270,slow=22,SNR=8.0								
KAPI				LR		LR	LR	07 03 52.7	
	comp=Z,1μm,18.2s,baz=112,slow=41								
KAPI	**Kappang**	**4.44**	**273**	*e*Pn		P	**Pn**	**07 02 00.0**	**-1.3**
KAPI				*e*Sn		P	**Sn**	**07 02 51.4**	**-0.7**
BATI	**Baumata**	**4.94**	**186**	P		P	**Pb**	**07 02 21.1**	**-0.7**
	166nm,1.2s								
BATI	**Baumata**	**4.94**	**186**	Pn		P	**Pn**	**07 02 13.6**	**+5.3**
	7.1nm,0.3s,baz=56,slow=7.3,SNR=3.7								
BATI				LR		LR	LR	07 04 23.1	
	comp=Z,5μm,19.5s,baz=191,slow=42								
PCI	**Palu**	**6.14**	**315**	P		P	**Pn**	**07 02 29.6**	**+4.9**
	148nm,1.0s								
MNI	**Manado**	**6.69**	**5**	P		P	**Pn**	**07 02 33.5**	**+1.3**
	465nm,1.0s								
SWI	**Sorong**	**8.29**	**58**	P		P	**Pn**	**07 02 53.3**	**-0.9**
	169nm,0.7s								
MTNI	**Mataram**	**8.65**	**247**	P		P	**Pn**	**07 03 07.6**	**+8.5**
	127nm,1.3s								
DAV	**Davao City (W)**	**12.32**	**6**	LR		LR	LR	07 08 48.7	
	comp=Z,414nm,19.9s,baz=158,slow=39								
SJI	**Sawahan**	**12.60**	**258**	P		P	**Pn**	**07 04 02.4**	**+9.1**
	51nm,1.6s								
FITZ	**Fitzroy Crossi**	**12.84**	**174**	*e*P		P	**Pn**	**07 03 55.8**	**-0.8**
	21nm,0.8s								
FITZ	**Fitzroy Crossi**	**12.84**	**174**	Pn		P	**Pn**	**07 03 56.0**	**-0.6**
	0.3nm,0.3s,baz=2.1,slow=11,SNR=15								
FITZ				Sn			**Sn**	**07 06 16.9**	**-1.7**
	0.3nm,0.3s,baz=268,slow=23,SNR=4.2								
FITZ				LR		LR	LR	07 09 45.7	
	comp=Z,165nm,20.4s,baz=354,slow=41								
KKM	**Kota Kinabalu**	**13.77**	**325**	Pn		P	**Pn**	**07 04 08.2**	**-1.1**
BJII	**Banjamegara**	**14.55**	**261**	P		pP		07 04 30.9	-3.1
	66nm,1.6s								
MBWA	**Marble Bar**	**16.39**	**195**	*e*P		P	**Pn**	**07 04 47.1**	**+3.2**
	34nm,1.2s								
LEM	**Lembang**	**16.57**	**264**	P		P	**Pn**	**07 04 52.0**	**+5.8**
	210nm,0.9s								
DBJI	**Dramaga**	**17.41**	**265**	P		P	**Pn**	**07 05 02.1**	**+5.3**
	107nm,1.0s								
WRAB	**Tennant Creek**	**17.61**	**147**	*e*P		P	**Pn**	**07 04 59.1**	**-0.2**
WRAB				pmax		pmax			
	comp=Z,15nm,0.8s								
WRAB	**Tennant Creek**	**17.61**	**147**	*e*P		P	**Pn**	**07 04 59.1**	**-0.2**
	comp=Z,15nm,0.8s								
WRA	**Warramunga Arr**	**17.62**	**147**	P		P	**Pn**	**07 04 58.8**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=324,slow=12,SNR=58								
WRA				S			**Sn**	**07 08 15.3**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=105,slow=29,SNR=5.4								
WRA				LR		LR		07 12 42.1	
	comp=Z,124nm,19.0s,baz=250,slow=40								
WRA	**Warramunga Arr**	**17.62**	**147**	P		P	**Pn**	**07 04 58.8**	**-0.5**
WRA				S			**Sn**	**07 08 15.3**	**+0.5**
WRA				LR		LR		07 12 42.1	
WB2	**Warramunga Arr**	**17.62**	**147**	*e*P		P	**Pn**	**07 04 58.1**	**-1.3**
XMIS	**Christmas Isla**	**19.09**	**253**	*e*P		P	**Pn**	**07 05 15.5**	**-1.8**
XMIS				*e*pP		pP		07 05 23.8	-0.5
DSRI	**Dabo**	**20.16**	**283**	P		P	**P**	**07 05 29.8**	**+1.7**
	comp=Z,118nm,1.1s								
ASAR	**Alice Springs**	**20.55**	**154**	P		P	**P**	**07 05 35.0**	**+2.8**
	comp=Z,34nm,0.9s,baz=324,slow=8.4,SNR=150								
ASAR				S			**S**	**07 09 19.7**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=310,slow=19,SNR=2.6								
ASAR				PcP		PcP		07 09 42.5	-0.5
	comp=Z,1.4nm,0.8s,baz=356,slow=0.8,SNR=4.4								
ASAR	**Alice Springs**	**20.55**	**154**	P		P	**P**	**07 05 35.1**	**+2.9**
ASAR				S			**S**	**07 09 19.7**	**-1.0**
ASAR								07 09 42.5	
ASAR				pmax		pmax			
	comp=Z,34nm,0.9s								
ASAR				smax					
	comp=N,1.0nm,0.7s								
ASAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								
KSI	**Kapahiang**	**21.60**	**273**	P		P	**P**	**07 05 47.1**	**+3.4**
	comp=Z,89nm,1.0s,mb5.2								
PPI	**Padang Panjang**	**24.24**	**281**	P		P	**P**	**07 06 11.5**	**+0.9**
	comp=Z,114nm,1.1s,mb5.2								
CTA	**Charters Tower**	**26.02**	**126**	*e*P		P	**P**	**07 06 28.7**	**+2.0**
	comp=Z,5.3nm,1.0s,mb4.0								
CTA	**Charters Tower**	**26.02**	**126**	P		P	**P**	**07 06 28.1**	**+1.4**
	comp=Z,6.5nm,1.0s,mb4.1,baz=302,slow=12,SNR=7.9								
CTA				PcP		PcP		07 09 56.4	+1.8
	comp=Z,3.6nm,0.9s,baz=253,slow=7.9,SNR=3.6								
CTA	**Charters Tower**	**26.02**	**126**	P		P	**P**	**07 06 28.1**	**+1.4**
CTA								07 09 56.4	
CTA				pmax		pmax			
	comp=Z,7.0nm,1.0s								
CTA				pmax		pmax			
	comp=Z,4.0nm,0.9s								
QIZ	**Qiongzhong**	**27.97**	**330**	P		P	**P**	**07 06 45.0**	**+0.8**
QIZ				S		S	**S**	**07 11 26.4**	**-0.2**
QIZ				AMB		AMB			
	comp=Z,78nm,5.2s								
QIZ				LR		LR			
	comp=N,164nm,5.0s								
QIZ				LR		LR			
	comp=Z,154nm,11.7s,MS3.8								
STKA	**Stephens Creek**	**31.09**	**150**	*e*P		P	**P**	**07 07 13.8**	**+2.1**
	comp=Z,11nm,2.0s,mb4.3								
STKA	**Stephens Creek**	**31.09**	**150**	P		P	**P**	**07 07 13.4**	**+1.7**
	comp=Z,3.5nm,0.6s,mb4.3,baz=322,slow=9.8,SNR=4.4								
STKA				PcP		PcP		07 10 07.9	+1.0
	comp=Z,4.3nm,1.0s,baz=169,slow=11,SNR=3.0								
STKA				LR		LR		07 19 04.2	
	comp=Z,127nm,21.2s,MS3.6,baz=171,slow=35								
CMAR	**Chiang Mai Arr**	**34.29**	**314**	PcP		PcP		07 10 17.7	+1.8
	comp=Z,3.7nm,0.7s,baz=163,slow=2.9,SNR=9.6								
GYA	**Guiyang**	**35.82**	**333**	⇑*i*P		P	**P**	**07 07 52.8**	**-0.1**
GYA				AP		pP		07 08 03.0	+1.4
GYA				XP		sP		07 08 06.4	+1.2
GYA				PP		PP		07 09 13.3	-1.4
GYA				S		S		**07 13 28.4**	**-0.3**
GYA				XS		sS		07 13 43.9	+0.8
GYA				A

LZH AMB AMB
comp=Z,42nm,1.2s,mb5.1
LZH AMB AMB
comp=Z,420nm,4.0s
LZH LR LR
comp=N,381nm,14.3s
LZH LR LR
comp=Z,557nm,15.0s,MS4.6
BJI Beijing 45.68 351 P **P** **07 09 13.0 -1.0**
BJI S **S** **07 15 58.9 +3.7**
BJI AMB AMB
comp=Z,17nm,1.2s,mb4.8
BJI LR LR
comp=N,222nm,15.7s,MS4.5
BJI LR LR
comp=E,322nm,15.7s,MS4.5
BJI LR LR
comp=Z,100nm,19.7s,MS3.8
LSA Lhasa 47.05 320 P **P** **07 09 27.0 +2.0**
LSA Lhasa 47.05 320 *e*P **P** **07 09 26.4 +1.4**
LSA pmax pmax
comp=Z,22nm,1.0s,mb5.0
LSA Lhasa 47.05 320 *e*P **P** **07 09 26.4 +1.4**
comp=Z,22nm,1.0s,mb5.0
HHC Hu-ho-hao-te 47.33 347 *e*P **P** **07 09 26.8 -0.2**
HHC AP pP 07 09 37.1 +1.2
HHC XP sP 07 09 41.3 +1.9
HHC PCP PcP 07 10 57.3 -0.3
HHC PP PP 07 11 17.4 -1.0
HHC SCP ScP 07 14 47.0 -2.7
HHC PCS PcS 07 14 51.0 -1.8
HHC S **S** **07 16 18.5 -0.3**
HHC XS sS 07 16 35.4 +2.0
HHC SCS ScS 07 19 14.8 -4.2
HHC SS SS 07 19 40.0 -6.8
HHC AMB AMB
comp=Z,14nm,0.7s,mb5.0
HHC AMB AMB
comp=Z,84nm,7.3s
HHC LR LR
comp=N,160nm,14.5s,MS4.4
HHC LR LR
comp=E,272nm,14.9s,MS4.4
HHC LR LR
comp=Z,133nm,14.3s,MS4.0
ODAN Odare 47.83 314 *e*P **P** **07 09 31.1 -0.1**
comp=Z,40nm,1.0s,mb5.4
TAPN Taplejung 47.89 315 *e*P **P** **07 09 31.6 0.0**
comp=Z,48nm,0.9s,mb5.5
RAMN Ramite 48.45 313 *e*P **P** **07 09 36.4 +0.4**
comp=Z,89nm,0.9s,mb5.8
CN2 Changchun 48.84 1 *e*P **P** **07 09 41.8 +3.1**
GUN Gumba 49.53 314 *e*P **P** **07 09 44.6 +0.4**
comp=Z,66nm,0.7s,mb5.8
PKI Pulchoki 49.68 313 *e*P **P** **07 09 45.0 -0.3**
comp=Z,37nm,0.9s,mb5.4
PKIN Phulchoki 49.69 313 *e*P **P** **07 09 45.0 -0.4**
comp=Z,26nm,0.8s,mb5.3
GTA Gaotai 49.83 335 ⇑P **P** **07 09 47.0 +0.7**
GTA AP pP 07 09 57.3 +2.1
GTA XP sP 07 10 02.1 +3.3
GTA PP PP 07 11 44.6 +3.3
GTA S **S** **07 16 55.4 +1.3**
GTA XS sS 07 17 12.3 +3.4
GTA AMB AMB
comp=Z,17nm,1.0s,mb5.0
GTA AMB AMB
comp=Z,118nm,4.2s
GTA LR LR
comp=N,146nm,14.7s,MS4.3
GTA LR LR
comp=E,167nm,15.6s,MS4.3
GTA LR LR
comp=Z,80nm,14.4s,MS3.9
MDJ Mudanjiang 49.88 5 P **P** **07 09 46.1 -0.5**
MDJ AP pP 07 09 54.9 -0.6
MDJ XP sP 07 09 58.8 -0.3
MDJ PCP PcP 07 11 06.0 -0.8
MDJ PP PP 07 11 41.1 -0.6
MDJ S **S** **07 16 54.3 -0.4**
MDJ SCS ScS 07 19 34.8 -1.1
MDJ SS SS 07 20 28.5 +0.6
MDJ AMB AMB
comp=Z,18nm,1.0s,mb5.1
MDJ AMB AMB
comp=Z,118nm,4.5s
MDJ LR LR
comp=Z,58nm,26.9s,MS3.5
KKN Kakani 49.90 313 *e*P **P** **07 09 46.7 -0.3**
comp=Z,39nm,0.8s,mb5.5
DMN Daman 49.92 313 *e*P **P** **07 09 47.2 0.0**
comp=Z,51nm,0.9s,mb5.6
GKN Gorkha 50.48 313 *e*P **P** **07 09 51.2 -0.3**
KOLN Koldanda 51.11 312 *e*P **P** **07 09 56.2 0.0**
comp=Z,55nm,0.8s,mb5.5
DANN Dangsing 51.32 313 *e*P **P** **07 09 57.7 0.0**
comp=Z,114nm,0.8s,mb5.9
KLR Kul'dur 54.66 6 *e*P **P** **07 10 16.9 -5.1**
ULN Ulaanbaatar 55.01 346 *e*P **P** **07 10 24.7 +0.2**
ULN pmax pmax
comp=Z,23nm,1.3s,mb5.0
ULN Ulaanbaatar 55.01 346 *e*P **P** **07 10 24.7 +0.1**
comp=Z,23nm,1.3s,mb5.0
SONM Songino Array 55.14 345 P **P** **07 10 25.3 -0.2**
comp=Z,6.1nm,0.9s,mb4.6,baz=162,slow=8.1,SNR=22
SONM PcP PcP 07 11 27.0 +0.5
comp=Z,1.0nm,0.7s,baz=159,slow=3.7,SNR=4.6
SONM Songino Array 55.14 345 P **P** **07 10 25.3 -0.2**
SONM 07 11 27.0
SONM pmax pmax
comp=Z,6.0nm,0.9s
SONM pmax pmax
comp=Z,1.0nm,0.7s
WMQ Urumqi 58.90 330 P **P** **07 10 52.8 +0.6**
WMQ AP pP 07 11 03.0 +1.7
WMQ XP sP 07 11 07.0 +2.2
WMQ *e*S **S** **07 18 54.0 -2.2**
WMQ XS sS 07 19 12.0 +0.8
WMQ AMB AMB
comp=Z,16nm,0.8s,mb5.1
WMQ AMB AMB
comp=Z,181nm,4.5s
WMQ LR LR
comp=N,162nm,28.0s,MS4.3
WMQ LR LR
comp=E,310nm,30.0s,MS4.3
WMQ LR LR
comp=Z,142nm,29.8s,MS3.9
RAO Raoul Island 59.54 121 *e*P **P** **07 10 57.3 +0.3**
RAO pmax pmax
comp=Z,570nm,0.4s
RAO Raoul Island 59.54 121 *e*P **P** **07 10 57.3 +0.3**
comp=Z,570nm,0.4s
MOY Mondy 60.08 344 *e*P **P** **07 11 00.7 +0.5**
BOD Bodaibo 63.41 354 ⇑*i*P **P** **07 11 22.0 -0.5**
BOD pmax pmax
comp=Z,13nm,1.2s,mb4.9
MK31 Makanchi Array 63.70 329 *e*P **P** **07 11 25.0 +0.4**
MKAR Makanchi Array 63.70 329 *e*P **P** **07 11 24.8 +0.2**
comp=Z,18nm,0.8s,mb5.2,baz=134,slow=8.0,SNR=77
MKAR PcP PcP 07 12 00.9 +0.3
comp=Z,5.1nm,0.8s,baz=115,slow=5.5,SNR=4.1
MKAR LR LR 07 41 28.6
comp=Z,44nm,20.0s,MS3.6,baz=357,slow=38
MKAR Makanchi Array 63.70 329 P **P** **07 11 24.8 +0.2**
MKAR 07 12 00.9
MKAR pmax pmax
comp=Z,18nm,0.8s
MKAR pmax pmax
comp=Z,5.0nm,0.8s
MKAR MLR MLR
comp=Z,44nm,20.0s
PETK Petropavlovsk- 64.66 22 P **P** **07 11 31.8 +1.0**
comp=Z,5.1nm,0.9s,mb4.6,baz=157,slow=6.0,SNR=4.9
PETK LR LR 07 38 34.0
comp=Z,28nm,19.5s,MS3.5,baz=221,slow=35
PETK Petropavlovsk- 64.66 22 P **P** **07 11 31.8 +1.0**
PETK LR LR 07 38 34.0
TKM2 Tokmak 2 65.04 323 *e*P **P** **07 11 34.0 +0.5**
TKM2 pmax pmax
comp=Z,21nm,1.3s,mb5.0
TKM2 Tokmak 2 65.04 323 P **P** **07 11 34.2 +0.6**
SNR=12
TKM2 Tokmak 2 65.04 323 *e*P **P** **07 11 34.0 +0.5**
comp=Z,21nm,1.3s,mb5.0
KBK Karagaybulak 65.29 322 P **P** **07 11 36.2 +1.1**
SNR=6.6
AAK Ala-Archa 65.56 322 P **P** **07 11 37.9 +1.1**
SNR=7.2
AML Almayashu 65.78 321 P **P** **07 11 39.5 +1.2**
SNR=8.2
AML Almayashu 65.78 321 *e*P **P** **07 11 39.4 +1.1**
comp=Z,15nm,0.9s,mb5.0
USP Osenovka 65.90 322 P **P** **07 11 39.4 +0.3**
SNR=7.0
EKS2 Erkin-Say 66.01 322 P **P** **07 11 40.6 +0.8**
SNR=14
EKS2 Erkin-Say 66.01 322 *e*P **P** **07 11 40.4 +0.6**
comp=Z,14nm,1.1s,mb4.9
YAK Yakutsk 67.23 3*c i*P **P** **07 11 46.6 -0.5**
YAK pmax pmax
comp=Z,38nm,0.8s,mb5.5
ZAA0 Zalesovo Array 67.57 336 *e*P **P** **07 11 47.6 -1.8**
ZALV Zalesovo Beam 67.57 336 P **P** **07 11 48.0 -1.4**
comp=Z,10nm,1.0s,mb4.8,baz=129,slow=4.2,SNR=24
ZALV LR LR 07 42 32.7
comp=Z,31nm,19.0s,MS3.5,baz=246,slow=37
ZALV Zalesovo Beam 67.57 336 P **P** **07 11 48.0 -1.5**
ZALV pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ZALV MLR MLR
comp=Z,31nm,19.0s,MS3.5
KURK Kurchatov 68.11 331 P **P** **07 11 52.5 -0.4**
comp=Z,113nm,0.9s,mb5.9,SNR=6.3
KURK Kurchatov 68.11 331 *e*P **P** **07 11 52.7 -0.2**
KURK *e**PP pP 07 12 04.9 +2.7
KURK pmax pmax
comp=Z,25nm,1.1s,mb5.2
KURK Kurchatov 68.11 331 *e*P **P** **07 11 52.6 -0.3**
comp=Z,25nm,1.1s,mb5.2
KURK *e*pP pP 07 12 04.9 +2.7
NVS Novosibirsk 68.86 336 *e*P **P** **07 11 55.7 -1.8**
NVS pmax pmax
comp=N,11nm,1.4s
NVS pmax pmax
comp=E,8.0nm,1.4s
NVS pmax pmax
comp=Z,16nm,1.4s,mb4.8
MAW Mawson 74.50 200 P **P** **07 12 32.8 +1.5**
comp=Z,1.7nm,0.7s,mb4.1,baz=35,slow=9.7,SNR=4.6
MAW Mawson 74.50 200 P **P** **07 12 32.8 +1.5**
MAW pmax pmax
comp=Z,2.0nm,0.7s
TIXI Tiksi 76.82 2⇑*e*P **P** **07 12 43.8 -0.6**
TIXI pmax pmax
comp=Z,13nm,1.4s,mb4.7
SVE Sverdlovsk 80.35 330 *e*P **P** **07 13 02.7 -1.5**
SVE pmax pmax
comp=Z,19nm,1.4s,mb4.8
ARU Arti 81.23 329*d i*P **P** **07 13 08.2 -0.7**
ARU *e*S S 07 23 18.3 +1.2
ARU *e*SS SS 07 28 28.8 -4.2
ARU pmax pmax
comp=Z,11nm,1.2s,mb4.7
MIB Mutribah 81.27 301 *e*P **P** **07 13 09.8 +0.1**
MIB AMb AMB 07 13 10.3
comp=Z,30nm,0.7s,mb5.3
RST Umm Al-Ruwaisa 81.51 301 *e*P **P** **07 13 09.9 -1.0**
RST AMb AMB 07 13 10.7
comp=Z,23nm,0.8s,mb5.2
SYO Syowa Base 83.19 201⇑*e*P **P** **07 13 19.3 +0.3**
SYO Syowa Base 83.19 201‖*e*PcP PcP 07 13 20.7 -2.8
GNI Garni 85.34 311 *e*P **P** **07 13 31.1 +0.6**
GNI pmax pmax
comp=Z,11nm,1.3s
KMBO Kilima Mbogo 86.86 269 *i* P **P** **07 13 46.5 +7.9**
KMBO pmax pmax
comp=Z,2.0nm,0.8s
OHAK Old Harbor 90.33 33 *e*P **P** **07 13 50.2 -3.8**
comp=Z,35nm,1.2s,mb5.6
OBN Obninsk 92.92 325‖*e*P **P** **07 14 05.3 -0.7**
OBN pmax pmax
comp=Z,8.0nm,0.5s,mb5.4
BOSA Boshof 95.32 241 LR LR 07 52 20.2
comp=Z,72nm,18.1s,MS4.2,baz=164,slow=32
AKASG Malin Array Be 97.19 320 P **P** **07 14 24.3 -1.4**
comp=Z,0.9nm,0.6s,mb4.4,baz=94,slow=2.9,SNR=5.4
AKASG Malin Array Be 97.19 320 P **P** **07 14 24.3 -1.4**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 97.94 339 P **P** **07 14 29.4 +0.7**
comp=Z,2.2nm,0.9s,mb4.7,baz=91,slow=3.6,SNR=3.1
ARCES ARCESS Array B 97.94 339 P **P** **07 14 29.4 +0.7**
ARCES pmax pmax
comp=Z,2.0nm,0.9s
NVAR Mina Array Bea 114.67 50 PKP PKiKP 07 19 34.5 +0.6
comp=Z,0.2nm,0.6s,baz=299,slow=1.9,SNR=3.2
PDAR Pinedale Array 119.68 43 PKKPbc PKKPbc 07 29 57.2 +2.1
comp=Z,0.8nm,0.8s,baz=112,slow=6.6,SNR=6.7
ESDC Sonseca Array 122.20 314 PKP PKPdf 07 19 48.9 +0.7
comp=Z,0.2nm,0.4s,baz=14,slow=2.7,SNR=6.3
TORD Torodi Ar. Bea 122.81 282 PKP PKPdf 07 19 50.0 -0.1
comp=Z,2.6nm,0.7s,baz=68,slow=1.8,SNR=17
ULM Lac du Bonnet 123.99 30 PKP PKPdf 07 19 50.7 -0.7
comp=Z,2.3nm,0.8s,baz=271,slow=3.2,SNR=3.0
TXAR Lajitas Array 128.88 56 PKP PKPdf 07 20 01.9 +0.5
comp=Z,0.2nm,0.6s,baz=251,slow=2.3,SNR=4.0
DBIC Dimbokro 129.33 274 PKP PKPdf 07 20 02.8 +0.1
comp=Z,1.4nm,0.5s,baz=36,slow=14,SNR=4.1
DBIC Dimbokro 129.33 274 PKIKP PKPdf 07 20 02.8 +0.1
DBIC pmax pmax
comp=Z,1.0nm,0.5s
LPAZ La Paz 155.36 151 PKP PKPdf 07 20 48.8 +1.2
comp=Z,0.7nm,0.9s,baz=20,slow=3.3,SNR=3.6
LPAZ La Paz 155.36 151 PKIKP PKPdf 07 20 48.8 +1.3
LPAZ pmax pmax
comp=Z,1.0nm,0.9s

*NEIC **16** 07:35:19.8±2.0, 1841N×14782E, h35km, Error ellipse: s-maj=62.0km s-min=12.8km az=90.0*
*ISCJB **16** 07:35:23.5±5.5, 183N±0.1×1472E±05, h66km±40km, mb3.7/6, Error ellipse: s-maj=76.4km s-min=20.0km az=177.1*
*IDC **16** 07:35:25.0±9.2, 1829N×14726E, h63km±65km, mb3.7/6, mb1 3.8/7, mb1mx3.6/19, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=107.8km s-min=18.7km az=82.0*
ISC 16 07:35:24.2±5.4, 183N±01×1474E±05, h60km±39km, n8, σ0s54/9, mb3.7/6, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.26**	**208**	P	**Pn**	**07 36 40.2**	**-0.1**
	2.6nm,0.3s,baz=313,slow=19,SNR=4.4						
GUMO				S	**Sn**	**07 37 39.6**	**-0.1**
	2.6nm,0.3s,baz=357,slow=11,SNR=2.7						
KSRS	**Korea Array**	**25.60**	**322**	P	**P**	**07 40 49.0**	**+1.0**
	2.5nm,0.9s,mb3.7,baz=150,slow=8.6,SNR=5.1						
WRA	**Warramunga Arr**	**40.09**	**199**	P	**P**	**07 42 54.3**	**+0.2**
	2.8nm,0.9s,mb4.0,baz=22,slow=9.1,SNR=11						
ASAR	**Alice Springs**	**43.72**	**198**	P	**P**	**07 43 23.9**	**+0.1**
	0.4nm,0.6s,mb3.3,baz=21,slow=9.0,SNR=9.5						
SONM	**Songino Array**	**44.46**	**321**	P	**P**	**07 43 29.4**	**0.0**
	0.3nm,0.4s,mb3.4,baz=147,slow=8.1,SNR=3.1						
ZALV	**Zalesovo Beam**	**59.31**	**322**	P	**P**	**07 45 18.7**	**-1.1**
	0.9nm,0.5s,mb4.1,baz=90,slow=5.9,SNR=4.7						
ZALV	**Zalesovo Beam**	**59.31**	**322**	P	**P**	**07 45 18.7**	**-1.1**
MKAR	**Makanchi Array**	**59.89**	**314**	P	**P**	**07 45 23.7**	**-0.2**
	0.8nm,0.7s,mb3.9,baz=125,slow=7.6,SNR=5.1						

*IDC **16** 07:59:10.7±1.1, 2971N×95.14E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.5/24, mbtmp3.5/7, ML3.4/1, Error ellipse: s-maj=52.0km s-min=20.6km az=62.0*
*ISCJB **16** 07:59:15.6±0.8, 2998N±006×948E±01, h33km, mb3.6/5, Error ellipse: s-maj=12.6km s-min=8.0km az=12.1*
ISC 16 07:59:15.1±3.6, 3001N±006×950E±01, h20km±24km, n16, σ1s08/17, mb3.6/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**5.28**	**190**	*e*PN	**Pb**	**08 00 48.0**	**+1.2**
IMP				*e*SN	**Sn**	**08 01 34.0**	**+0.7**
ODAN	**Odare**	**7.38**	**247**	*e*P	**Pn**	**08 01 01.6**	**-0.1**
RAMN	**Ramite**	**7.98**	**250**	*e*P	**Pn**	**08 01 10.0**	**+0.1**
	14nm,0.4s						
JIRN	**Jiri**	**8.05**	**255**	*e*P	**Pn**	**08 01 12.2**	**+1.2**
	8.0nm,0.2s						
GUN	**Gumba**	**8.24**	**258**	*e*P	**Pn**	**08 01 13.7**	**+0.2**
	8.2nm,0.2s						
PKI	**Pulchoki**	**8.74**	**256**	*e*P	**Pn**	**08 01 20.1**	**-0.3**
	12nm,0.4s						
KKN	**Kakani**	**8.78**	**258**	*e*P	**Pn**	**08 01 20.3**	**-0.7**
GKN	**Gorkha**	**9.27**	**260**	*e*P	**Pn**	**08 01 26.6**	**-1.1**
	8.8nm,0.4s						
KOLN	**Koldanda**	**10.22**	**260**	*e*P	**Pn**	**08 01 38.3**	**-2.4**
	19nm,0.6s						
MKAR	**Makanchi Array**	**19.45**	**333**	P	**Pn**	**08 03 42.4**	**+0.8**
	0.1nm,0.3s,baz=144,slow=12,SNR=2.3						
SONM	**Songino Array**	**19.86**	**23**	P	**Pn**	**08 03 45.4**	**-1.0**
	0.6nm,0.5s,baz=193,slow=6.1,SNR=3.5						
KURK	**Kurchatov**	**24.05**	**334**	P	**P**	**08 04 30.2**	**+1.4**
	1.2nm,0.8s,mb3.4,baz=142,slow=10.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**25.04**	**346**	P	**P**	**08 04 39.2**	**+1.5**
	0.8nm,0.4s,mb3.6,baz=163,slow=7.1,SNR=3.8						
WRA	**Warramunga Arr**	**62.47**	**138**	P	**P**	**08 09 35.4**	**-1.8**
	0.4nm,0.7s,mb3.6,baz=324,slow=7.5,SNR=5.0						
ASAR	**Alice Springs**	**65.16**	**141**	P	**P**	**08 09 50.4**	**-4.5**
	0.3nm,0.5s,mb3.5,baz=322,slow=7.0,SNR=5.3						
TORD	**Torodi Ar. Bea**	**86.33**	**283**	P	**P**	**08 11 56.0**	**-0.2**
	0.5nm,0.8s,mb3.8,baz=87,slow=3.7,SNR=3.5						

*NEIC **16** 08:03:43.9, 1839N×6876W, h122km, MD3.6(RSPR), After RSPR.*
RSPR 16 08:03:43.9, 1839N×6875W, h122km±6km, MD3.5/5, MD3.5/5, 6C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**1.56**	**87**⇑*e*P		Pn	08 04 11.9	-0.3
AGPR				*e*S	Sn	08 04 33.1	-0.6
LSP	**Las Mesas**	**1.60**	**98**	*e*S	Sn	08 04 35.4	+0.8
CRPR	**Cabo Rojo, PR**	**1.61**	**104**⇑*e*P		Pn	08 04 12.3	-0.5
CRPR				*e*S	Sn	08 04 34.2	-0.6
AOPR	**Arecibo Observ**	**1.90**	**91**⇑*e*P		Pn	08 04 16.4	+0.1
AOPR				*e*S	Sn	08 04 41.9	+0.9
SJG	**San Juan**	**2.49**	**96**⇑*e*P		Pn	08 04 23.5	-0.2
SJG				*e*S	Sn	08 04 54.9	+0.6
CPD	**Cerro la Pandu**	**2.72**	**97**	*e*S	Sn	08 05 00.5	+0.9
CBYP	**Canovanas**	**2.75**	**92**⇑*e*P		Pn	08 04 26.7	-0.4
CBYP				*e*S	Sn	08 05 00.6	+0.3
MTP	**Monte Pirata**	**3.06**	**95**⇑*e*P		Pn	08 04 31.7	+0.6
MTP				*e*S	Sn	08 05 07.0	-0.4

*NEIC **16** 08:22:44.1, 1806N×6606W, h0km, MD1.1(RSPR), After RSPR.*
NEIC Felt [II] at Guayama.
RSPR 16 08:22:44.1, 1806N×6606W, h0km±1km, 11C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	**0.10**	**302**⇑*e*P		Pg	08 22 47.1	+0.9
SJG				*e*S	Sg	08 22 48.9	+1.4
SJG	**San Juan**	**0.10**	**302**⇑*e*P		Pg	08 22 47.0	+0.8
SJG	**San Juan**	**0.10**	**302**⇑*e*P		Pg	08 22 47.1	+0.9
SJG				*e*S	Sg	08 22 48.9	+1.3
SJG	**San Juan**	**0.10**	**302**⇑*e*P		Pg	08 22 46.6	+0.4
SJG	**San Juan**	**0.10**	**302** *e*S		Sg	08 22 48.8	+1.2
SJG	**San Juan**	**0.10**	**302**⇑*e*P		Pg	08 22 46.6	+0.4
SJG				⇑*e*P		08 22 47.0	
SJG				*e*S	Sg	08 22 48.8	+1.2
CPD	**Cerro la Pandu**	**0.14**	**98**⇑*e*P		Pg	08 22 47.9	+1.2
CPD	**Cerro la Pandu**	**0.14**	**98** *e*S		Sg	08 22 50.0	+1.5
CPD	**Cerro la Pandu**	**0.14**	**98**⇑*e*P		Pg	08 22 47.8	+1.0
CPD	**Cerro la Pandu**	**0.14**	**98** *e*S		Sg	08 22 50.0	+1.5
CPD	**Cerro la Pandu**	**0.14**	**98**⇑*e*P		Pg	08 22 47.8	+1.0
CPD				⇑*e*P		08 22 47.9	
CPD				*e*S	Sg	08 22 50.0	+1.5
HUMP	**Col San Antoni**	**0.21**	**66** *e*S		Sg	08 22 52.6	+1.6
HUMP	**Col San Antoni**	**0.21**	**66** *e*S		Sg	08 22 52.6	+1.6
CBYP	**Canovanas**	**0.29**	**41** *e*S		Sg	08 22 55.4	+2.0
MTP	**Monte Pirata**	**0.48**	**85** *e*S		Sg	08 23 02.5	+2.9
MTP	**Monte Pirata**	**0.48**	**85**⇑*e*P		Pg	08 22 54.6	+1.2
MTP	**Monte Pirata**	**0.48**	**85** *e*S		Sg	08 23 02.3	+2.7
MTP	**Monte Pirata**	**0.48**	**85**⇑*e*P		Pg	08 22 54.6	+1.2
MTP				*e*S	Sg	08 23 02.3	+2.7

*BJI **16** 08:30:58.2, 323S×10071E, h35km, mB5.1, mb5.0*
*ISCJB **16** 08:31:07.1±0.4, 240S±006×10044E±006, h45km, mb4.7/28, MS3.4/3, Error ellipse: s-maj=10.3km s-min=6.2km az=40.2*
*NEIC **16** 08:31:07.7±0.2, 235S×10053E, h35km, mb4.8/7, Error ellipse: s-maj=10.0km s-min=5.5km az=52.0*
*IDC **16** 08:31:09.3±0.8, 232S×10055E, h48km±7km, mb4.1/15, mb1 4.2/16, mb1mx4.1/23, mbtmp4.1/16, MS3.4/3, Ms1 3.5/3, ms1mx3.0/35, Error ellipse: s-maj=20.9km s-min=11.1km az=56.0*
ISC 16 08:31:09.3±0.4, 239S±006×10046E±006, h47km, h47km±5.0km:pP-P, n52, σ0s96/46, mb4.7/28, MS3.4/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPI	**Padang Panjang**	**1.93**	**358**	P	**Pn**	**08 31 39.7**	**+0.1**
	0.0nm,0.0s						
KSI	**Kapahiang**	**2.47**	**121**	P	**Pn**	**08 31 50.8**	**+3.8**
	0.0nm,0.0s						
RGRI	**Rengat**	**2.76**	**43**	P	**Pn**	**08 31 52.5**	**+1.4**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.53**	**65**	P	**Pn**	**08 32 15.8**	**+0.4**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.67**	**88**	P	**Pn**	**08 32 31.4**	**+0.3**
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**7.19**	**93**	P	**Pn**	**08 32 54.2**	**+2.3**
	0.0nm,0.0s						
BSI	**Banda Aceh**	**9.38**	**327**	P	**Pn**	**08 33 18.8**	**-3.2**
	0.0nm,0.0s						
SJI	**Sawahan**	**12.44**	**116**	P	**Pn**	**08 34 06.2**	**+2.3**
	0.0nm,0.0s						
KAPI	**Kappang**	**19.42**	**98**	P	**Pn**	**08 35 32.0**	**-1.4**
	1.3nm,0.3s,baz=265,slow=11,SNR=5.4						
CMAR	**Chiang Mai Arr**	**20.77**	**356**	P	**P**	**08 35 45.4**	**-1.1**
	2.2nm,0.4s,baz=186,slow=10,SNR=10						
CMAR				pP		08 35 57.0	
	4.4nm,0.7s,baz=187,slow=9.9,SNR=4.2						
CMAR				LR	LR	08 44 32.4	
	comp=Z,59nm,19.1s,MS3.0,baz=175,slow=39						
FITZ	**Fitzroy Crossi**	**29.21**	**124**	*e*P	**P**	**08 37 05.7**	**-1.0**
	6.0nm,1.0s,mb4.3						
FITZ	**Fitzroy Crossi**	**29.21**	**124**	P	**P**	**08 37 05.6**	**-1.1**
	2.6nm,0.8s,mb4.0,baz=209,slow=4.2,SNR=5.9						
FITZ				LR	LR	08 48 49.8	
	comp=Z,101nm,20.8s,MS3.4,baz=121,slow=36						
ODAN	**Odare**	**31.70**	**337**	*e*P	**P**	**08 37 29.4**	**+0.8**
	22nm,0.7s,mb5.1						
TAPN	**Taplejung**	**32.02**	**338**	*e*P	**P**	**08 37 32.3**	**+0.9**
	32nm,0.9s,mb5.2						
RAMN	**Ramite**	**32.09**	**336**	*e*P	**P**	**08 37 33.0**	**+0.9**
	19nm,0.7s,mb5.0						
LSA	**Lhasa**	**33.13**	**345**	P	**P**	**08 37 42.0**	**+0.9**
LSA	**Lhasa**	**33.13**	**345**	*e*P	**P**	**08 37 41.6**	**+0.5**
	14nm,0.6s,mb5.1						
GUN	**Gumba**	**33.24**	**336**	*e*P	**P**	**08 37 42.7**	**+0.6**
	60nm,0.7s,mb5.7						
KKN	**Kakani**	**33.38**	**335**	*e*P	**P**	**08 37 43.4**	**+0.1**
KOLN	**Koldanda**	**34.10**	**333**	*e*P	**P**	**08 37 50.0**	**+0.4**
	14nm,0.6s,mb5.1						
DANN	**Dangsing**	**34.52**	**333**	*e*P	**P**	**08 37 53.6**	**+0.4**
	14nm,0.4s,mb5.2						
XAN	**Xi'an**	**37.10**	**12**	P	**P**	**08 38 13.5**	**-1.7**
XAN				AP	pP	08 38 21.3	-6.6
XAN				XP	sP	08 38 25.3	-8.2
XAN				AMB	AMB		
	comp=Z,13nm,0.7s,mb4.9						
XAN				AMB	AMB		
	comp=Z,144nm,4.9s						
WRA	**Warramunga Arr**	**37.39**	**120**	P	**P**	**08 38 17.0**	**-1.0**
	comp=Z,8.0nm,0.8s,mb4.6,baz=302,slow=9.0,SNR=54						
WRA				pP	pP	08 38 30.1	-0.5
	comp=Z,4.8nm,0.8s,baz=294,slow=9.9,SNR=8.8						
WRA				PcP	PcP	08 40 36.0	-0.2
	comp=Z,0.5nm,0.5s,baz=309,slow=2.3,SNR=4.9						
WRAB	**Tennant Creek**	**37.40**	**120**	*e*P	**P**	**08 38 16.5**	**-1.5**
	comp=Z,8.2nm,0.7s,mb4.7						
WB2	**Warramunga Arr**	**37.41**	**120**	*e*P	**P**	**08 38 16.8**	**-1.2**
ASAR	**Alice Springs**	**38.65**	**126**	P	**P**	**08 38 27.9**	**-0.5**
	comp=Z,4.5nm,0.7s,mb4.3,baz=302,slow=8.0,SNR=62						
ASAR				pP	pP	08 38 41.2	+0.1
	comp=Z,7.0nm,0.8s,baz=305,slow=8.1,SNR=14						
ASAR				PcP	PcP	08 40 40.2	+0.2
	comp=Z,0.9nm,0.6s,baz=313,slow=2.2,SNR=5.6						

ASAR pPcP 08 40 53.0
comp=Z,1.1nm,0.8s,baz=284,slow=2.0,SNR=5.9
WMQ Urumqi 47.41 347 P **P** **08 39 39.8 +0.8**
WMQ AMB AMB
comp=Z,25nm,0.7s,mb5.2
WMQ AMB AMB
comp=Z,159nm,5.8s
STKA Stephens Creek 48.54 132 P **P** **08 39 48.1 +0.1**
comp=Z,4.3nm,0.7s,mb4.6,baz=270,slow=11,SNR=4.1
SONM Songino Array 50.29 5 P **P** **08 40 01.3 +0.4**
comp=Z,5.9nm,0.7s,mb4.7,baz=190,slow=8.7,SNR=20
ULN Ulaanbaatar 50.38 6 *eP* **P** **08 40 01.3 -0.4**
comp=Z,4.9nm,1.0s,mb4.5
EKS2 Erkin-Say 50.91 335 *eP* **P** **08 40 06.2 +0.4**
comp=Z,68nm,0.6s,mb5.8
MK31 Makanchi Array 51.53 344 *eP* **P** **08 40 09.8 -0.6**
MKAR Makanchi Array 51.53 344 P **P** **08 40 09.9 -0.4**
comp=Z,3.2nm,0.4s,mb4.6,baz=149,slow=8.1,SNR=36
MKAR pP pP 08 40 22.9 -0.5
comp=Z,1.9nm,0.4s,baz=145,slow=7.8,SNR=6.5
KURK Kurchatov 56.11 343 P **P** **08 40 42.7 -1.0**
comp=Z,2.3nm,0.7s,mb4.3,baz=168,slow=6.3,SNR=4.6
ZAA0 Zalesovo Array 57.64 349 *eP* **P** **08 40 53.9 -0.6**
ZALV Zalesovo Beam 57.64 349 P **P** **08 40 53.3 -1.2**
comp=Z,3.9nm,0.5s,mb4.7,baz=168,slow=6.5,SNR=18
KMBO Kilima Mbogo 63.19 270 P **P** **08 41 34.3 +1.1**
comp=Z,0.4nm,0.3s,mb4.0,baz=227,slow=21,SNR=3.7
ARU Arti 57.75 336 *eP* **P** **08 42 00.9 -1.0**
comp=Z,3.5nm,0.3s,mb4.9
MAW Mawson 70.02 194 P **P** **08 42 16.9 +1.2**
comp=Z,2.5nm,0.9s,mb4.2,baz=29,slow=7.3,SNR=8.2
EIL Elat 70.12 303 LR LR 09 10 15.8
comp=Z,37nm,18.5s,MS3.7,baz=266,slow=33
LSZ Lusaka 72.28 255 P **P** **08 42 30.9 +0.4**
comp=Z,1.8nm,0.7s,mb4.1,baz=57,slow=3.0,SNR=3.5
BOSA Boshof 75.88 241 P **P** **08 42 51.5 +0.2**
comp=Z,2.9nm,0.8s,mb4.2,baz=49,slow=18,SNR=3.5
BUR08 Bucovina Ar. S 81.88 319 *eP* **P** **08 43 24.3 +0.6**
JOF Joensuu 82.77 334 *ep* **P** **08 43 27.5 -0.5**
KAF Kangasniemi 84.74 333 *ep* **P** **08 43 38.0 -0.1**
comp=Z,3.9nm,0.6s,mb4.7
ARCES ARCESS Array B 87.00 340 P **P** **08 43 49.1 0.0**
comp=Z,2.4nm,0.7s,mb4.5,baz=104,slow=5.1,SNR=14
GERES GERESS Array B 89.65 319 P **P** **08 44 02.1 -0.1**
comp=Z,0.8nm,0.7s,mb4.2,baz=96,slow=4.0,SNR=7.7
CFAA Coronel Fontan 144.53 197 PKP PKPdf 08 50 40.8 -0.4
comp=Z,0.9nm,0.7s,baz=87,slow=8.6,SNR=8.6
TXAR Lajitas Array 144.73 38 PKP PKPdf 08 50 40.6 -1.0
comp=Z,7.6nm,0.6s,baz=212,slow=1.1,SNR=111
MIAR Mount Ida 145.44 21 *eP* PKPbc 08 50 41.9 -0.8
WVT Waverly 145.56 12 *e*PKPdf PKPdf 08 50 41.9 -1.0
JCT Junction City 146.11 32 *eP* PKPdf 08 50 44.2 +0.2

ISCJB ***16*** *08:33:51.6±0.9, 3584N±005×3147E±006, h10km, Error ellipse: s-maj=8.2km s-min=5.6km az=36.7*
ISK ***16*** *08:33:53.6, 3586N×3178E, h5km, MD3.2*
CSEM ***16*** *08:33:54.2±0.3, 3582N×3145E, h30km, MD3.2, Error ellipse: s-maj=9.2km s-min=5.6km az=34.0*
DDA ***16*** *08:33:58.5, 3674N×3146E, h7km±6km, Md3.2*
ISC 16 08:33:52.3±1.4**, 3584N**±006×**3162E**±006**, h2**km±7km**, n12,** σ1§**29**/19**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LEF	**Lefka**	**1.26**	**124**		*e*PN		**Pn**	**08 34 16.6**	**-0.3**
LEF					*e*SN		**Sn**	**08 34 33.3**	**-1.1**
ERMK	**Ermenek**	**1.31**	**52**		*i* P		**Pg**	**08 34 19.7**	**+2.2**
ERMK					*i* S		**Sg**	**08 34 38.6**	**+4.1**
HDMB	**Hadim**	**1.32**	**32**		*e*PN		**Pn**	**08 34 16.9**	**-0.9**
HDMB					*e*SN		**Sn**	**08 34 36.8**	**+0.9**
LFK	**Lefkose**	**1.66**	**109**		*e*PN		**Pn**	**08 34 23.6**	**+1.3**
IKL	**Isikli**	**1.72**	**76**		*e*PN		**Pg**	**08 34 24.4**	**-0.8**
IKL					*e*SN		**Sg**	**08 34 46.8**	**-0.7**
BCK	**Bucak**	**1.82**	**333**		*e*PN		**Pg**	**08 34 27.9**	**+0.8**
EREN	**Erenkoy**	**2.10**	**98**		*e*PN		**Pn**	**08 34 29.5**	**+1.1**
GOLH	**Golhisar**	**2.17**	**311**		*i* P		**Pn**	**08 34 28.2**	**-1.2**
GOLH					*i* S		**Sn**	**08 34 51.8**	**-5.0**
MEST	**Erdemli**	**2.17**	**69**		*i* P		**Pg**	**08 34 31.6**	**-2.3**
MEST					*i* S		**Sg**	**08 35 01.6**	**-0.5**
MERS	**Mersin**	**2.56**	**65**		*e*PN		**Pn**	**08 34 36.2**	**+1.5**
KDHN	**Kadinhani**	**2.71**	**8**		*i* P		**Pn**	**08 34 33.1**	**-3.7**
KDHN					*i* S		**Sn**	**08 35 08.7**	**-1.3**
KARA	**Karaisali**	**3.11**	**62**		*e*PN		**Pn**	**08 34 43.9**	**+1.6**

IDC ***16*** *08:50:46.4±1.0, 3205×10041E, h0km, mb4.4/13, mb1 4.5/14, mb1mx4.3/22, mbtmp4.4/14, ML4.0/1, MS3.8/3, Ms1 3.8/3, ms1mx3.3/33, Error ellipse: s-maj=39.0km s-min=13.9km az=55.0*
BJI ***16*** *08:50:49.7, 3315×10045E, h39km, mB5.5, mb5.0*
NEIC ***16*** *08:50:51.6±0.7, 3.19S×10049E, h35km, mb4.7/7, Error ellipse: s-maj=26.4km s-min=7.5km az=50.0*
DJA ***16*** *08:50:53, 329S×9979E, h53km, MLv4.9/8*
ISCJB ***16*** *08:50:57.8±2.1, 30S±01×1007E±02, h103km±16km, mb4.5/20, Error ellipse: s-maj=30.9km s-min=9.8km az=147.8*
ISC 16 08:50:59.6±1.8**, 30S**±01×**1008E**±02**, h102**km±14km**, n40,** σ1§**05**/33**, mb4.5**/20**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.92**	**109**		P		**Pn**	**08 51 31.9**	**+0.7**
	0.0nm,0.0s								
PPI	**Padang Panjang**	**2.59**	**352**		P		**Pn**	**08 51 33.6**	**-6.4**
	0.0nm,0.0s								
DSRI	**Dabo**	**4.58**	**56**		P		**Pn**	**08 52 05.1**	**-1.6**
	0.0nm,0.0s								
DBJI	**Dramaga**	**6.91**	**121**		P		**Pn**	**08 52 38.1**	**-0.2**
	116nm,1.2s								
LEM	**Lembang**	**7.79**	**119**		P		**Pn**	**08 52 52.1**	**+1.8**
	0.0nm,0.0s								
KAPI	**Kappang**	**19.04**	**97**		P		**Pn**	**08 55 13.5**	**-2.2**
	0.5nm,0.3s,baz=266,slow=7.6,SNR=5.5								
CMAR	**Chiang Mai Arr**	**21.44**	**355**		P		**P**	**08 55 36.5**	**-3.2**
	4.8nm,0.8s,mb3.9,baz=186,slow=9.8,SNR=19								
CMAR					LR		LR	09 05 14.6	
	comp=Z,269nm,18.0s,baz=180,slow=40								
FITZ	**Fitzroy Crossi**	**28.60**	**123**		P		**P**	**08 56 45.3**	**-1.2**
	3.7nm,0.9s,mb4.0,baz=304,slow=5.9,SNR=4.4								
LSA	**Lhasa**	**33.83**	**345**		P		**P**	**08 57 34.0**	**+1.7**
WRA	**Warramunga Arr**	**36.81**	**120**		P		**P**	**08 57 57.8**	**-0.2**
	1.3nm,0.4s,mb4.3,baz=298,slow=10,SNR=30								
WRA					PcP		PcP	09 00 19.5	+1.4
	0.4nm,0.8s,baz=300,slow=2.9,SNR=2.6								
WRA					LR		LR	09 14 24.7	
	comp=Z,91nm,19.2s,baz=210,slow=38								
WRAB	**Tennant Creek**	**36.81**	**120**		*e*P		**P**	**08 57 57.1**	**-0.9**
	11nm,1.3s,mb4.6								
WB2	**Warramunga Arr**	**36.82**	**120**		*e*P		**P**	**08 57 58.2**	**+0.1**
XAN	**Xi'an**	**37.67**	**11**		P		**P**	**08 58 05.0**	**-0.1**
XAN					AP		pP	08 58 16.0	-12
XAN					XP		sP	08 58 21.3	-19
XAN					AMB		AMB		
	comp=Z,22nm,0.8s,mb5.0								
XAN					AMB		AMB		
	comp=Z,66nm,4.1s								
ASAR	**Alice Springs**	**38.02**	**126**		P		**P**	**08 58 08.7**	**+0.5**
	comp=Z,4.7nm,0.7s,mb4.4,baz=300,slow=7.9,SNR=35								
ASAR					PcP		PcP	09 00 23.4	+1.6
	comp=Z,0.5nm,0.7s,baz=322,slow=3.9,SNR=3.6								
GTA	**Gaotai**	**42.25**	**359**		*e*P		**P**	**08 58 43.3**	**+0.5**
GTA					AMB		AMB		
	comp=Z,7.0nm,1.2s,mb4.3								
CTA	**Charters Tower**	**47.46**	**115**		*e*P		**P**	**08 59 25.6**	**+1.0**
	comp=Z,4.2nm,1.0s,mb4.1								
CTA	**Charters Tower**	**47.46**	**115**		P		**P**	**08 59 25.3**	**+0.7**
	comp=Z,3.9nm,0.8s,mb4.2,baz=258,slow=10,SNR=6.2								
CTAO	**Charters Tower**	**47.46**	**115**		*e*P		**P**	**08 59 25.2**	**+0.6**
	comp=Z,7.3nm,1.0s,mb4.4								
KSRS	**Korea Array**	**47.53**	**29**		P		**P**	**08 59 26.4**	**+1.6**
	comp=Z,6.1nm,1.1s,mb4.3,baz=222,slow=7.5,SNR=8.7								
STKA	**Stephens Creek**	**47.89**	**131**		P		**P**	**08 59 27.8**	**+0.1**
	comp=Z,3.7nm,0.7s,mb4.3,baz=310,slow=7.5,SNR=3.0								
SONM	**Songino Array**	**50.90**	**5**		P		**P**	**08 59 52.2**	**+2.0**
	comp=Z,17nm,1.0s,mb5.0,baz=189,slow=8.6,SNR=51								
SONM					PcP		PcP	09 01 06.8	+1.4
	comp=Z,1.6nm,0.8s,baz=202,slow=3.1,SNR=3.6								
ULN	**Ulaanbaatar**	**50.99**	**5**		*e*P		**P**	**08 59 52.4**	**+1.5**
	comp=Z,17nm,1.1s,mb5.0								
TKM2	**Tokmak 2**	**51.09**	**336**		*e*P		**P**	**08 59 51.5**	**-0.2**
	comp=Z,54nm,0.9s,mb5.6								
EKS2	**Erkin-Say**	**51.62**	**335**		*e*P		**P**	**08 59 55.7**	**-0.1**
	comp=Z,7.7nm,0.9s,mb4.7								
MK31	**Makanchi Array**	**52.23**	**344**		*e*P		**P**	**09 00 00.0**	**-0.2**
MKAR	**Makanchi Array**	**52.23**	**344**		P		**P**	**08 59 59.5**	**-0.7**
	comp=Z,15nm,0.8s,mb5.0,baz=141,slow=7.8,SNR=45								
MJAR	**Matsushiro Arr**	**52.60**	**38**		P		**P**	**09 00 03.9**	**+0.7**
	comp=Z,3.1nm,1.0s,mb4.3,baz=223,slow=6.1,SNR=6.8								
KURK	**Kurchatov**	**56.82**	**343**		*e*P		**P**	**09 00 33.1**	**-0.1**
	comp=Z,14nm,1.0s,mb5.0								
ZAA0	**Zalesovo Array**	**58.33**	**349**		*e*P		**P**	**09 00 43.4**	**-0.5**
ZALV	**Zalesovo Beam**	**58.33**	**349**		P		**P**	**09 00 43.1**	**-0.7**
	comp=Z,12nm,0.8s,mb5.0,baz=163,slow=5.4,SNR=25								
ASF	**Jabal al Asfar**	**69.82**	**306**		LR		LR	09 33 22.6	
	comp=Z,52nm,18.1s,baz=114,slow=37								
AKASG	**Malin Array Be**	**80.77**	**322**		P		**P**	**09 03 00.5**	**-1.4**
	comp=Z,0.4nm,0.4s,mb3.6,baz=106,slow=3.3,SNR=4.7								
ARCES	**ARCESS Array B**	**87.71**	**340**		P		**P**	**09 03 36.2**	**-0.4**
	comp=Z,2.5nm,0.9s,mb4.2,baz=79,slow=7.5,SNR=4.9								
ARCES	**ARCESS Array B**	**87.71**	**340**		P		**P**	**09 03 36.2**	**-0.4**
NVAR	**Mina Array Bea**	**129.90**	**40**		PKP		PKPdf	09 09 59.8	+2.1
	comp=Z,0.2nm,0.7s,baz=270,slow=4.4,SNR=4.0								
WMOK	**Wichita Mounta**	**143.60**	**28**	*e*PKPdf			PKPdf	09 10 20.9	-2.2
TXAR	**Lajitas Array**	**145.04**	**39**		PKPbc		PKPbc	09 10 27.6	+2.3
	comp=Z,14nm,0.9s,baz=291,slow=1.0,SNR=120								
MIAR	**Mount Ida**	**145.93**	**21**	*e*PKPbc			PKPbc	09 10 29.0	+1.0
JCT	**Junction City**	**146.48**	**33**	*e*PKPdf			PKPdf	09 10 29.9	+1.7
TKL	**Tuckaleechee C**	**147.27**	**7**		PKPbc		PKPbc	09 10 32.1	+0.3
	comp=Z,3.0nm,0.7s,baz=97,slow=4.5,SNR=6.0								

SZGRF ***16*** *09:10:04.4, 589S×10283E, h33km, mb5.2, Southern Sumatera, Indonesia*
BJI ***16*** *09:10:14.6, 3.17S×10092E, h35km, mB5.2, mb5.1, Ms4.9, Msz4.8*
MOS ***16*** *09:10:17.8±1.0, 2.60S×10122E, h29km, mb5.4/49, MS4.7/16, Error ellipse: s-maj=10.6km s-min=5.1km az=116.8*
ISCJB ***16*** *09:10:18.9±0.2, 2.86S±003×10102E±003, h41km, mb5.2/121, MS4.5/54, Error ellipse: s-maj=4.9km s-min=3.8km az=36.3*
GCMT ***16*** *09:10:19.8±0.2, 3.00S×10086E, h53km±1km, MW5.2/79, Moment Tensor Solution. s67,c100; s79,c124; Duration: 1§0 Moment tensor: Scale 10¹⁶Nm; Mrr5.97±.21; Mθθ-2.89±.16; Mϕϕ-3.08±.20; Mrθ4.28±.14; Mθϕ3.28±.13; Mϕr-2.61±.16; Best double couple: M₀7.91300×10¹⁶ NP1:ϕs325.00000°, δ26.00000°, λ107.00000°. NP2:ϕs127.00000°, δ65.00000°, λ82.00000°. Principal axes: T 7.8470, Plg69.0000°, Azm20.0000°; N 0.1320, Plg7.0000°, Azm130.0000°; P -7.9790, Plg19.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***16*** *09:10:19.8±0.1, 2.72S×10117E, h35km, mb5.2/43, MS4.7/11 Error ellipse: s-maj=6.9km s-min=3.9km az=222.0*
IDC ***16*** *09:10:22.6±1.4, 2.74S×10124E, h58km±10km, mb4.7/22, mb1 4.8/23, mb1mx4.7/25, mbtmp4.7/23, MS4.3/27, Ms1 4.3/27, ms1mx4.3/32, Error ellipse: s-maj=14.6km s-min=9.7km az=42.0*
DJA ***16*** *09:10:28, 259S×10152E, h30km, Mw5.5/4*
ISC 16 09:10:20.8±0.2**, 288S**±003×**10100E**±003**, h43**km**, h43**km±2.0km**: pP-P, n405,** σ1§**11**/355**, mb5.3**/120**, MS4.5**/54**, 45C-26D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**2.48**	**346**		P		**Pn**	**09 10 59.9**	**+1.1**
	0.0nm,0.0s								
RGRI	**Rengat**	**2.85**	**28**		P		**Pn**	**09 11 05.3**	**+1.5**
	0.0nm,0.0s								
JMBI	**JAMBI**	**2.92**	**65**		P		**Pn**	**09 11 07.3**	**+2.6**
	0.0nm,0.0s								
DSRI	**Dabo**	**4.30**	**56**		P		**Pn**	**09 11 24.5**	**+0.8**
	0.0nm,0.0s								
KLI	**Kotabumi**	**4.32**	**117**		P		**Pn**	**09 11 27.3**	**+3.3**
	0.0nm,0.0s								
PPBI	**Pangkal Pinang**	**5.18**	**82**		P		**Pn**	**09 11 38.5**	**+2.7**
	146nm,0.8s								
TRSI	**Tarutung**	**5.29**	**337**		P		**Pn**	**09 11 47.9**	**+11**
	1µm,0.9s								
KGM	**Kluang**	**5.39**	**25**	⇓	P		**Pn**	**09 11 41.3**	**+2.6**
MYKOM	**Kota Tinggi**	**5.45**	**32**	⇑	P		**Pn**	**09 11 41.8**	**+2.3**
SBJI	**Serang**	**6.04**	**122**		P		**Pn**	**09 11 54.3**	**+6.7**
	277nm,1.0s								
FRIM	**Kepong**	**6.11**	**6**	⇑	P		**Pn**	**09 11 51.5**	**+2.9**
TPI	**Tanjungpandan**	**6.65**	**89**		P		**Pn**	**09 12 01.2**	**+5.2**
	71nm,0.7s								
DBJI	**Dramaga**	**6.79**	**123**		P		**Pn**	**09 12 02.3**	**+4.4**
	247nm,1.0s								
IPM	**Ipoh**	**7.31**	**0**	⇑	P		**Pn**	**09 12 10.3**	**+5.2**
LEM	**Lembang**	**7.67**	**121**		P		**Pn**	**09 12 15.1**	**+5.1**
	239nm,1.0s								
KTGM	**Kuala Trenggan**	**8.43**	**15**	⇓	P		**Pn**	**09 12 24.0**	**+3.5**
BJII	**Banjamegara**	**9.73**	**117**		P		**Pn**	**09 12 43.4**	**+5.1**
	89nm,1.1s								
SNG	**Songkhla**	**10.00**	**358**		P		**Pn**	**09 12 44.0**	**+2.0**
	476nm,1.0s								
COCO	**West Island**	**10.13**	**204**		Pn		**Pn**	**09 12 39.1**	**-4.6**
	5µm,0.5s,SNR=5.6								
COCO	**West Island**	**10.13**	**204**		*e*Pn		**Pn**	**09 12 39.6**	**-4.1**
KSM	**Kuching**	**10.26**	**65**	⇑	P		**Pn**	**09 12 50.2**	**+4.6**
KSM	**Kuching**	**10.26**	**65**		*e*Pn		**Pn**	**09 12 46.4**	**+0.8**
KSM					Sn		**Sn**	**09 14 59.1**	**+20**
STKI	**Sintang**	**10.87**	**75**		P		**Pn**	**09 12 49.7**	**-4.2**
	86nm,1.1s								
SJI	**Sawahan**	**11.75**	**115**		P		**Pn**	**09 13 07.1**	**+1.2**
	167nm,0.7s								
SBUM	**Sibu**	**12.40**	**65**	⇑	P		**Pn**	**09 13 20.2**	**+5.3**
TRT	**Tretes**	**12.53**	**113**	‖	*e*P		**Pn**	**09 13 15.0**	**-1.6**
BTM	**Bintulu**	**13.50**	**64**	⇓	P		**Pn**	**09 13 35.7**	**+5.8**
BBKI	**Banjar Baru**	**13.83**	**93**		P		**Pn**	**09 13 41.9**	**+7.5**
	243nm,0.9s								
KKM	**Kota Kinabalu**	**17.59**	**60**	⇓	P		**Pn**	**09 14 29.5**	**+6.6**
KKM	**Kota Kinabalu**	**17.59**	**60**		*e*P		**Pn**	**09 14 23.4**	**+0.5**
SDKM	**Sandakan**	**18.26**	**62**	⇓	P		**Pn**	**09 14 33.5**	**+2.4**
TSM	**Tawau**	**18.30**	**67**	⇑	P		**Pn**	**09 14 33.6**	**+2.0**
UBT	**Ubonrachathani**	**18.45**	**12**	⇓	P		**Pn**	**09 14 33.0**	**-0.3**
KDM	**Kudat**	**18.56**	**58**	⇓	P		**Pn**	**09 14 37.8**	**+3.0**
KAPI	**Kappang**	**18.82**	**97**		Pn		**Pn**	**09 14 37.1**	**-0.9**
	1µm,0.9s,SNR=6.6								
KAPI	**Kappang**	**18.82**	**97**		P		**Pn**	**09 14 36.7**	**-1.2**
	4.7nm,0.3s,baz=274,slow=11,SNR=17								
KAPI					LR		LR	09 22 37.5	
	comp=Z,1µm,18.0s,baz=281,slow=40								
KAPI	**Kappang**	**18.82**	**97**	*e*P			**Pn**	**09 14 36.9**	**-1.1**
PCI	**Palu**	**18.93**	**84**		P		**Pn**	**09 14 44.7**	**+5.5**
	142nm,1.0s								
MYLDM	**Lahad Datu**	**19.23**	**65**	⇓	P		**Pn**	**09 14 44.7**	**+1.9**
CMAR	**Chiang Mai Arr**	**21.30**	**355**		P		**P**	**09 15 01.0**	**-2.9**
	30nm,0.8s,mb4.7,baz=185,slow=10.0,SNR=88								
CMAR					PcP		PcP	09 19 07.8	+0.3
	2.5nm,0.6s,baz=211,slow=3.5,SNR=5.6								
CMAR					ScP		ScP	09 22 39.6	-1.5
	3.2nm,0.8s,baz=207,slow=3.1,SNR=12								
CMAR					LR		LR	09 24 07.5	
	comp=Z,1µm,18.9s,MS4.3,baz=179,slow=39								
CMAR	**Chiang Mai Arr**	**21.30**	**355**		P		**P**	**09 15 01.0**	**-2.9**
CMAR								09 19 07.8	
NANT	**Nan**	**21.55**	**359**	⇑	P		**P**	**09 15 04.0**	**-2.6**
	156nm,0.9s,mb5.4								
KDI	**Kendari**	**21.61**	**93**		P		**P**	**09 15 10.4**	**+3.1**
	70nm,1.2s,mb5.0								
CHG	**Chiang Mai**	**21.66**	**355**	⇑	P		**P**	**09 15 04.8**	**-2.9**
	30nm,0.7s,mb4.8								
PALK	**Pallekele**	**22.63**	**297**		*e*P		**P**	**09 15 20.6**	**+2.4**
QIZ	**Qiongzhong**	**23.45**	**21**		P		**P**	**09 15 25.4**	**-1.1**
QIZ					AP			09 15 35.3	
QIZ					S		**S**	**09 19 38.9**	**+2.1**
QIZ					AMB		AMB		
	comp=Z,19nm,1.1s,mb4.4								
QIZ					LR		LR		
	comp=N,945nm,22.3s								
QIZ					LR		LR		
	comp=Z,1µm,22.1s,MS4.4								
QIZ	**Qiongzhong**	**23.45**	**21**	*e*P			**P**	**09 15 25.4**	**-1.1**
	comp=Z,22nm,1.0s,mb4.5								
BATI	**Baumata**	**23.65**	**109**		P		**P**	**09 15 27.1**	**-1.3**
	comp=Z,29nm,0.5s,mb5.0,baz=348,slow=7.5,SNR=3.5								
BATI					S		**S**	**09 19 36.3**	**-3.9**
	comp=Z,54nm,0.7s,baz=313,slow=19,SNR=3.7								
MNI	**Manado**	**24.22**	**80**		P		**P**	**09 15 38.0**	**+4.3**
	comp=Z,522nm,1.0s,mb5.9								
MBWA	**Marble Bar**	**25.74**	**136**	*e*P			**P**	**09 15 47.4**	**-0.1**
	comp=Z,56nm,1.0s,mb5.0								
DAV	**Davao City (W)**	**26.45**	**68**		LR		LR	09 27 08.9	
	comp=Z,1µm,21.9s,MS4.4,baz=265,slow=38								
VIS	**Vishakhapatnam**	**26.89**	**320**	*e*P			**P**	**09 15 57.8**	**-0.1**
VIS					AMb		AMB	09 16 14.3	
	comp=Z,64nm,1.7s,mb4.9								
KMI	**Kunming**	**27.89**	**3**		P		**P**	**09 16 06.3**	**-0.4**
KMI					AP		pP	09 16 18.9	+0.5
KMI					XP		sP	09 16 22.8	-0.8
KMI					PP		PP	09 17 00.3	-10
KMI					PCP		PcP	09 19 23.8	+2.0
KMI					S		**S**	**09 20 47.3**	**-0.1**
KMI					XS		sS	09 21 06.5	-0.4
KMI					SS			09 22 13.8	
KMI					AMB		AMB		
	comp=Z,20nm,0.7s,mb4.9								
KMI					LR		LR		
	comp=N,1µm,17.1s,MS4.7								
KMI					LR		LR		
	comp=E,895nm,14.0s,MS4.7								
KMI					LR		LR		
	comp=Z,2µm,17.7s,MS4.6								
FITZ	**Fitzroy Crossi**	**28.49**	**124**	*e*P			**P**	**09 16 11.2**	**-1.0**
	comp=Z,39nm,0.9s,mb5.0								
FITZ				*e*PCP			PcP	09 19 23.7	+0.2
FITZ				*e*S			**S**	**09 20 52.0**	**-5.1**
FITZ	**Fitzroy Crossi**	**28.49**	**124**		P		**P**	**09 16 11.3**	**-1.0**
	comp=Z,19nm,0.9s,mb4.7,baz=306,slow=6.1,SNR=14								
FITZ					PcP		PcP	09 19 23.5	0.0
	comp=Z,3.5nm,0.7s,baz=286,slow=5.5,SNR=3.1								
GYA	**Guiyang**	**29.68**	**10**	⇑	*i*P		**P**	**09 16 21.6**	**-1.0**
GYA					AP		pP	09 16 31.0	-3.3
GYA					XP		sP	09 16 35.8	-3.7
GYA					PP		PP	09 17 17.9	-12
GYA					PCP		PcP	09 19 25.6	-0.7
GYA					S		**S**	**09 21 10.8**	**-4.7**
GYA					XS		sS	09 21 29.0	-6.1
GYA					SCP		ScP	09 23 04.6	-0.3
GYA					AMB		AMB		
	comp=Z,30nm,0.8s,mb5.1								
GYA					AMB		AMB		
	comp=Z,290nm,6.3s								
GYA					LR		LR		
	comp=N,2µm,15.6s,MS4.9								
GYA					LR		LR		
	comp=E,1µm,14.8s,MS4.9								
GYA					LR		LR		
	comp=Z,2µm,14.1s,MS4.9								
BOK	**Bokaro**	**30.33**	**332**	*e*P			**P**	**09 16 27.9**	**-0.5**
BOK					AMb		AMB	09 16 32.0	
	comp=Z,162nm,0.4s,mb6.2								
LATR	**Latur**	**32.05**	**312**	*ex*			x	09 16 36.6	
LATR					AMb		AMB	09 16 40.3	
	comp=Z,23nm,2.0s,mb4.7								
NGP	**Nagpur**	**32.14**	**319**	*e*P			**P**	**09 16 43.2**	**-1.2**
NGP					AMb		AMB	09 17 02.9	
	comp=Z,34nm,0.7s,mb5.3								
MUN	**Mundaring**	**32.29**	**155**	*e*P			**P**	**09 16 48.0**	**+2.4**
ODAN	**Odare**	**32.36**	**337**	*e*P			**P**	**09 16 46.9**	**+0.7**
	comp=Z,381nm,0.6s,mb6.4								
TAPN	**Taplejung**	**32.68**	**338**	*e*P			**P**	**09 16 50.1**	**+1.1**
	comp=Z,624nm,0.9s								
RAMN	**Ramite**	**32.76**	**336**	*e*P			**P**	**09 16 50.8**	**+1.1**
	comp=Z,141nm,0.5s,mb6.1								
KAD	**Karad**	**33.21**	**308**	*e*P			**P**	**09 16 54.4**	**+0.6**
KAD					AMb		AMB	09 17 16.1	
	comp=Z,51nm,1.1s,mb5.4								
NWAO	**Narrogin (SRO)**	**33.54**	**155**		LR		LR	09 29 38.0	
	comp=Z,759nm,22.0s,MS4.4,baz=333,slow=34								
JIRN	**Jiri**	**33.55**	**336**	*e*P			**P**	**09 16 58.1**	**+1.4**
	comp=Z,69nm,0.4s,mb6.0								
CD2	**Chengdu**	**33.71**	**4**	⇑	*i*P		**P**	**09 16 55.8**	**-2.2**
CD2					AP		pP	09 17 05.5	-4.2
CD2					XP		sP	09 17 09.8	-5.1
CD2					PP		PP	09 18 10.4	-4.5
CD2					PCP		PcP	09 19 32.8	-4.3
CD2					S		**S**	**09 22 17.8**	**-0.5**
CD2					XS		sS	09 22 33.8	-4.1
CD2					PCS		PcS	09 23 18.5	-4.5
CD2					SS		SS	09 24 26.1	-19
CD2					SCS	

SONA Sohna 38.56 325 *e*P **P** **09 17 39.1 -0.4**
SONA AMb AMB 09 17 43.7
comp=Z,66nm,0.8s,mb5.4
NJ2 Nanjing 38.66 25 *e*P **P** **09 17 41.3 +1.0**
NJ2 AP pP 09 17 50.4 -1.8
NJ2 XP sP 09 17 55.0 -2.3
NJ2 PP PP 09 19 11.9 +2.4
NJ2 S **S** **09 23 33.5 -0.5**
NJ2 AMB AMB
comp=Z,20nm,1.2s,mb4.7
NJ2 AMB AMB
comp=Z,570nm,4.8s
NJ2 LR LR
comp=N,680nm,21.6s,MS4.7
NJ2 LR LR
comp=E,1µm,24.0s,MS4.7
NJ2 LR LR
comp=Z,830nm,21.0s,MS4.5
AYAN Aya Nagar 38.71 325 *e*P **P** **09 17 40.1 -0.7**
AYAN AMb AMB 09 17 44.4
comp=Z,68nm,0.3s,mb5.8
NDI New Delhi 38.82 326 *e*P **P** **09 17 41.0 -0.7**
NDI *ex* x 09 23 42.0
LZH Lanzhou 38.86 4 *e*P **P** **09 17 41.3 -0.6**
LZH AP pP 09 17 50.5 -3.3
LZH XP sP 09 17 53.8 -5.1
LZH PP PP 09 19 17.0 +5.4
LZH *e*S **S** **09 23 37.1 +0.2**
LZH XS sS 09 23 54.0 -2.7
LZH SS SS 09 26 21.3 -8.3
LZH AMB AMB
comp=Z,32nm,1.1s,mb5.0
LZH AMB AMB
comp=Z,200nm,4.0s
LZH LR LR
comp=N,1µm,15.7s
LZH LR LR
comp=Z,2µm,18.2s,MS5.0
SSE Sheshan 38.88 28 P **P** **09 17 42.9 +0.8**
SSE AP pP 09 17 53.9 -0.1
SSE PP PP 09 19 13.1 +1.2
SSE S **S** **09 23 40.8 +3.4**
SSE XS sS 09 23 59.3 +2.1
SSE AMB AMB
comp=Z,47nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,472nm,4.6s
SSE LR LR
comp=N,431nm,27.2s,MS4.2
SSE LR LR
comp=E,359nm,27.2s,MS4.2
SSE LR LR
comp=Z,697nm,27.8s,MS4.3
JOSI Joshimath 39.05 330 *e*P **P** **09 17 43.7 +0.2**
KHET Khetri 39.18 323 *e*P **P** **09 17 44.2 -0.5**
KHET AMb AMB 09 17 54.0
comp=Z,15nm,0.9s,mb4.7
DDI Dehra Dun 39.63 328 *e*P **P** **09 17 47.0 -1.4**
KKR Kurukshetra 40.02 326 *e*P **P** **09 17 51.9 +0.2**
KLP Kalpa 40.49 329 *e*P **P** **09 17 55.6 0.0**
SMLA Simla 40.73 328⇑ *i*P **P** **09 17 57.8 +0.2**
SMLA *ex* x 09 17 58.7
comp=Z,319nm,0.7s
SMLA *i* S **S** **09 24 06.3 +1.1**
SMLA *i* S **S** **09 24 08.8 +3.6**
SDNR Sundarnagar 41.13 328 *e*P **P** **09 18 02.2 +1.4**
GTA Gaotai 42.10 359 *e*P **P** **09 18 07.8 -0.8**
GTA AP pP 09 18 18.3 -2.3
GTA XP sP 09 19 22.6 -3.1
GTA PP PP 09 19 49.5 +2.7
GTA PCP PcP 09 20 02.6 -0.1
GTA SCP ScP 09 23 48.3 -1.6
GTA S **S** **09 24 25.4 +0.3**
GTA XS sS 09 24 42.1 -3.0
GTA SCS ScS 09 28 05.1 -2.3
GTA AMB AMB
comp=Z,9.0nm,0.6s,mb4.6
GTA AMB AMB
comp=Z,168nm,3.9s
GTA LR LR
comp=N,846nm,20.1s,MS4.7
GTA LR LR
comp=E,367nm,17.4s,MS4.7
GTA LR LR
comp=Z,1µm,22.2s,MS4.7
DLH Dalhousie 42.47 328 *e*P **P** **09 18 13.0 +1.2**
THN Thein Dam 42.52 328 *e*P **P** **09 18 11.6 -0.6**
HHC Hu-ho-hao-te 44.58 11 *e*P **P** **09 18 29.0 +0.4**
HHC AP pP 09 18 39.5 -1.2
HHC XP sP 09 18 43.5 -2.3
HHC PCP PcP 09 20 11.6 +0.5
HHC PP PP 09 20 14.3 +0.9
HHC SCP ScP 09 23 59.0 -1.0
HHC PCS PcS 09 24 03.8 -0.6
HHC S **S** **09 25 03.3 +1.9**
HHC XS sS 09 25 20.4 -1.1
HHC SS SS 09 28 15.3 -7.2
HHC SCS ScS 09 28 21.8 -1.1
HHC AMB AMB
comp=Z,50nm,0.6s,mb5.5
HHC AMB AMB
comp=Z,254nm,7.4s
HHC LR LR
comp=N,859nm,14.1s,MS4.9
HHC LR LR
comp=E,674nm,14.2s,MS4.9
HHC LR LR
comp=Z,775nm,13.4s,MS4.8
BJI Beijing 44.93 17 P **P** **09 18 30.5 -0.9**
BJI S **S** **09 25 08.3 +1.8**
BJI AMB AMB
comp=Z,18nm,0.6s,mb5.1
BJI LR LR
comp=E,654nm,21.3s,MS4.9
BJI LR LR
comp=N,1µm,22.0s,MS4.9
BJI LR LR
comp=Z,1µm,21.3s,MS4.8
DL2 Dalian 45.73 23 P **P** **09 18 37.4 -0.4**
DL2 *e*S **S** **09 25 18.5 +0.4**
DL2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
DL2 LR LR
comp=N,400nm,15.8s,MS4.6
DL2 LR LR
comp=E,400nm,16.4s,MS4.6
DL2 LR LR
comp=Z,630nm,19.8s,MS4.6
GUMO Guam 46.49 68 LR LR 09 37 15.5
comp=Z,206nm,21.9s,MS4.0,baz=242,slow=35
KSRS Korea Array 47.28 29 P **P** **09 18 48.9 -1.1**
comp=Z,13nm,0.9s,mb4.9,baz=226,slow=7.9,SNR=29
KSRS LR LR 09 40 51.9
comp=Z,308nm,19.1s,MS4.3,baz=85,slow=39
CTA Charters Tower 47.32 115 *e*P **P** **09 18 49.5 -1.1**
comp=Z,18nm,0.7s,mb5.1
CTA *es*P sP 09 19 04.3 -3.5
CTA Charters Tower 47.32 115 LR LR 09 40 38.9
comp=Z,286nm,21.9s,MS4.2,baz=283,slow=38
CTA Charters Tower 47.32 115 *e*P **P** **09 18 49.5 -1.1**
CTA *e**SP sP 09 19 04.3 -3.5
CTA pmax pmax
comp=Z,18nm,0.7s
CTAO Charters Tower 47.32 115 *e*P **P** **09 18 49.6 -1.0**
CTAO pmax pmax
comp=Z,26nm,0.8s,mb5.2
CTAO MLR MLR
comp=Z,477nm,19.0s,MS4.5
CTAO Charters Tower 47.32 115 *e*P **P** **09 18 49.6 -1.0**
comp=Z,26nm,0.8s,mb5.2
CTAO LR LR
comp=Z,477nm,19.0s,MS4.5
STKA Stephens Creek 47.82 132 *e*P **P** **09 18 54.2 -0.1**
comp=Z,47nm,0.7s,mb5.6
STKA Stephens Creek 47.82 132 P **P** **09 18 54.6 +0.3**
comp=Z,26nm,0.9s,mb5.3,baz=302,slow=7.7,SNR=42
STKA LR LR 09 39 32.1
comp=Z,453nm,21.6s,MS4.4,baz=118,slow=37
WMQ Urumqi 48.01 347⇑ *i*P **P** **09 18 55.8 +0.3**
WMQ AP pP 09 19 06.0 -1.6
WMQ XP sP 09 19 10.0 -2.7
WMQ PCP PcP 09 20 24.0 +1.0
WMQ *e*S **S** **09 25 51.0 +0.5**
WMQ XS sS 09 26 07.0 -3.7
WMQ AMB AMB
comp=Z,227nm,0.9s,mb6.2
WMQ AMB AMB
comp=Z,462nm,4.1s
WMQ LR LR
comp=N,548nm,25.4s,MS4.6
WMQ LR LR
comp=E,554nm,22.4s,MS4.6
WMQ LR LR
comp=Z,585nm,22.4s,MS4.5
KSH Kashi 48.06 334 *e*P **P** **09 18 56.4 +0.4**
KSH *e*AP pP 09 19 07.0 -1.1
KSH *e*XP sP 09 19 11.0 -2.2
KSH *e*PCP PcP 09 20 25.1 +1.8
KSH *e*PP PP 09 20 49.0 +0.5
KSH *e*SCP ScP 09 24 15.0 +0.5
KSH *e*PCS PcS 09 24 19.1 +0.1
KSH *e*S **S** **09 25 50.1 -1.3**
KSH *e*XS sS 09 26 10.1 -1.5
KSH *e*SCS ScS 09 28 45.0 -0.6
KSH *e*SS SS 09 29 18.1 -2.9
KSH LR LR
comp=N,616nm,4.4s
KSH LR LR
comp=E,741nm,4.7s
KSH LR LR
comp=Z,571nm,5.1s
SONM Songino Array 50.73 5 P **P** **09 19 16.2 0.0**
comp=Z,80nm,0.8s,mb5.7,baz=183,slow=8.2,SNR=233
SONM PcP PcP 09 20 32.2 -0.6
comp=Z,9.9nm,0.7s,baz=192,slow=4.4,SNR=5.8
SONM ScP ScP 09 24 23.6 -2.1
comp=Z,3.2nm,1.0s,baz=190,slow=4.0,SNR=4.5
SONM LR LR 09 43 31.0
comp=Z,571nm,18.3s,MS4.6,baz=206,slow=39
SONM Songino Array 50.73 5 P **P** **09 19 16.2 0.0**
SONM 09 20 32.2
ULN Ulaanbaatar 50.81 5 *e*P **P** **09 19 16.4 -0.4**
ULN MLR MLR
comp=Z,611nm,20.0s,MS4.6
TKM2 Tokmak 2 51.04 336 *e*P **P** **09 19 18.9 +0.3**
TKM2 pmax pmax
comp=Z,52nm,0.7s,mb5.6
TKM2 Tokmak 2 51.04 336 P **P** **09 19 19.1 +0.5**
SNR=99
TKM2 Tokmak 2 51.04 336 *e*P **P** **09 19 18.9 +0.3**
comp=Z,52nm,0.7s,mb5.6
KBK Karagaybulak 51.08 335 P **P** **09 19 20.0 +1.1**
SNR=14
AML Almayashu 51.19 334 P **P** **09 19 20.7 +0.9**
SNR=26
AML Almayashu 51.19 334 *e*P **P** **09 19 20.2 +0.4**
comp=Z,54nm,0.7s,mb5.6
AAK Ala-Archa 51.26 335 P **P** **09 19 20.6 +0.4**
SNR=13
FRU Bishkek 51.37 335 *i* P **P** **09 19 21.0 -0.1**
FRU *i* pP 09 19 34.0 +0.7
FRU *e* 09 26 37.0
FRU pmax pmax
comp=Z,45nm,1.0s,mb5.3
CN2 Changchun 51.40 23⇓ P **P** **09 19 20.0 -1.3**
CN2 *e*XP sP 09 19 35.0 -3.6
CN2 *e*S **S** **09 26 36.5 -1.4**
CN2 AMB AMB
comp=Z,30nm,0.8s,mb5.3
CN2 AMB AMB
comp=Z,120nm,4.0s
CN2 LR LR
comp=N,931nm,17.0s,MS5.0
CN2 LR LR
comp=E,718nm,17.0s,MS5.0
CN2 LR LR
comp=Z,490nm,21.0s,MS4.5
CHMS Chumysh 51.45 335 P **P** **09 19 21.6 0.0**
SNR=16
EKS2 Erkin-Say 51.58 334 P **P** **09 19 23.6 +0.9**
SNR=211
EKS2 Erkin-Say 51.58 334 *e*P **P** **09 19 23.2 +0.6**
comp=Z,124nm,0.7s,mb6.0
USP Ospenovka 51.77 335 P **P** **09 19 23.8 -0.3**
SNR=60
MK31 Makanchi Array 52.15 344 *i* P **P** **09 19 26.2 -0.6**
MKAR Makanchi Array 52.15 344 P **P** **09 19 26.3 -0.5**
comp=Z,86nm,0.7s,mb5.8,baz=151,slow=7.9,SNR=389
MKAR LR LR 09 46 22.1
comp=Z,296nm,20.3s,MS4.3,baz=159,slow=42
MAJO Matsushiro 52.34 38 *e*P **P** **09 19 26.8 -1.6**
MAT Matsushiro 52.34 38 P **P** **09 19 27.4 -1.0**
MJAR Matsushiro Arr 52.34 38 P **P** **09 19 26.8 -1.7**
comp=Z,8.5nm,0.9s,mb4.7,baz=214,slow=7.2,SNR=20
MJAR ScP ScP 09 24 30.9 -2.0
comp=Z,2.9nm,1.0s,baz=220,slow=5.2,SNR=5.3
MJAR LR LR 09 41 57.1
comp=Z,151nm,20.1s,MS4.0,baz=250,slow=36
ZAK Zakamensk 53.09 2⇓ *i*P **P** **09 19 32.4 -1.3**
ZAK pmax pmax
comp=Z,14nm,1.1s,mb4.8
KK31 Karatay Array 53.39 332 *i* P **P** **09 19 35.4 -0.7**
KK31 pmax pmax
comp=Z,11nm,0.5s,mb5.0
KK31 Karatay Array 53.39 332 *i* P **P** **09 19 35.5 -0.6**
VLA Vladivostok 53.59 28 *e*P **P** **09 19 37.8 +0.2**
VLA pmax pmax
comp=Z,29nm,1.0s,mb5.2
MDJ Mudanjiang 53.75 25 P **P** **09 19 37.8 -0.9**
MDJ AP pP 09 19 46.6 -4.4
MDJ XP sP 09 19 50.5 -5.5
MDJ PP PP 09 21 36.6 -3.5
MDJ S **S** **09 27 13.8 +3.8**
MDJ SCS ScS 09 29 21.0 -3.5
MDJ SS SS 09 30 51.3 -0.1
MDJ AMB AMB
comp=Z,9.0nm,0.9s,mb4.7
MDJ AMB AMB
comp=Z,162nm,5.1s
MDJ LR LR
comp=N,519nm,23.6s,MS4.7
MDJ LR LR
comp=E,504nm,21.8s,MS4.7
MDJ LR LR
comp=Z,783nm,22.4s,MS4.7
MOY Mondy 54.34 360 *e*P **P** **09 19 42.5 -0.4**
MOY pmax pmax
comp=Z,57nm,3.1s
TLY Talaya 54.40 2 P **P** **09 19 43.6 +0.3**
comp=Z,299nm,0.7s,mb6.3,SNR=7.3
TLY Talaya 54.40 2 *e*P **P** **09 19 43.4 +0.1**
TLY *e* 09 20 43.0
TLY pmax pmax
comp=Z,45nm,0.9s,mb5.4
TLY MLR MLR
comp=Z,833nm,17.0s,MS4.9
TLY Talaya 54.40 2⇑ *i*P **P** **09 19 43.6 +0.3**
HIA Hailar 54.42 15 *e*P **P** **09 19 41.9 -1.6**
CAN Canberra 54.88 132 *e*P **P** **09 19 47.5 +0.4**
ARMA Armidale 55.08 125 *e*P **P** **09 19 50.1 +1.4**
KURK Kurchatov 56.73 343 P **P** **09 19 59.9 -0.2**
comp=Z,279nm,0.6s,SNR=22
KURK Kurchatov 56.73 343 LR LR 09 47 43.7
comp=Z,240nm,19.1s,MS4.3,baz=150,slow=40
KURK Kurchatov 56.73 343 *e*P **P** **09 19 59.2 -0.9**
KURK pmax pmax
comp=Z,25nm,0.6s,mb5.4
KURK MLR MLR
comp=Z,353nm,20.0s,MS4.5
KURK Kurchatov 56.73 343 *e*P **P** **09 19 59.2 -0.9**
comp=Z,25nm,0.6s,mb5.4
KURK LR LR
comp=Z,353nm,20.0s,MS4.5
ZALV Zalesovo Beam 58.22 349 P **P** **09 20 09.6 -0.9**
comp=Z,153nm,0.7s,mb6.2,baz=168,slow=5.3,SNR=344
ZALV LR LR 09 48 26.9
comp=Z,243nm,21.6s,MS4.3,baz=164,slow=39
KLR Kul'dur 58.34 23 *e*P **P** **09 20 06.4 -5.0**
KLR pmax pmax
comp=Z,40nm,0.9s,mb5.5
HNR Honiara 58.91 99 LR LR 09 45 40.1
comp=Z,109nm,21.0s,MS4.0,baz=272,slow=36
NVS Novosibirsk 59.38 348⇑ *i*P **P** **09 20 16.8 -1.7**
NVS *e*S **S** **09 28 20.2 -3.8**
NVS pmax pmax
comp=N,27nm,0.9s
NVS pmax pmax
comp=E,24nm,0.9s
NVS pmax pmax
comp=Z,41nm,0.9s,mb5.5
NVS smax
comp=N,14nm,1.4s
NVS smax
comp=E,19nm,1.7s
VOSK Vostochnaya 60.90 340 P **P** **09 20 27.2 -1.8**
VOSK pmax pmax
comp=Z,58nm,1.0s,mb5.7
BVA0 Borovoye Array 61.35 339 *i* P **P** **09 20 30.3 -1.7**
BVA0 pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
BVAR Borovoye Array 61.35 339 LR LR 09 51 14.6
comp=Z,193nm,20.7s,MS4.2,baz=246,slow=40
BOD Bodaibo 61.41 8 *e*P **P** **09 20 31.1 -1.2**
BOD pmax pmax
comp=Z,35nm,0.8s,mb5.5
BRVK Borovoye 61.42 339 P **P** **09 20 29.5 -3.0**
BRVK pmax pmax
comp=Z,1.0nm,1.3s
BRVK Borovoye 61.42 339⇑ *e*P **P** **09 20 31.5 -1.0**
YSS Yuzh-Sakhalins 61.70 31⇑ *e*P **P** **09 20 33.2 -1.3**
YSS *e* pP 09 20 48.0 +0.9
YSS pmax pmax
comp=Z,40nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 61.70 31 *e*P **P** **09 20 33.7 -0.8**
comp=Z,33nm,0.9s,mb5.5
CLNS Chul'man 62.60 15 *e*P **P** **09 20 39.0 -1.3**
CLNS pmax pmax
comp=Z,25nm,0.9s,mb5.3
CLNS pmax pmax
comp=E,9.0nm,1.0s
CLNS pmax pmax
comp=N,9.0nm,0.7s
CLNS MLR MLR
comp=Z,763nm,16.0s,MS5.0
CLNS MLR MLR
comp=E,456nm,15.0s,MS4.9
CLNS MLR MLR
comp=N,448nm,14.0s,MS4.9
AB31 Akbulak array 62.89 331⇑ *e*P **P** **09 20 41.3 -1.1**
KMBO Kilima Mbogo 63.73 270 P **P** **09 20 50.9 +2.2**
comp=N,3.1nm,0.8s,mb4.4,baz=45,slow=19,SNR=8.4
KMBO LR LR 09 42 59.3
comp=N,318nm,21.5s,MS4.5,baz=105,slow=31
KMBO Kilima Mbogo 63.73 270 *e*P **P** **09 20 50.9 +2.2**
KMBO pmax pmax
comp=Z,4.0nm,0.8s
KMBO MLR MLR
comp=Z,335nm,20.0s
KMBO Kilima Mbogo 63.73 270 *e*P **P** **09 20 50.9 +2.2**
comp=Z,3.7nm,0.8s,mb4.5
KMBO LR LR
comp=Z,335nm,20.0s,MS4.5
AKTO Aktyubinsk 64.61 331 LR LR 09 54 30.8
comp=Z,213nm,20.5s,MS4.3,baz=140,slow=41
DZM Mont Dzumac 66.19 113 *e*P **P** **09 21 03.9 -0.7**
GNI Garni 66.85 316 P **P** **09 21 09.6 +1.2**
comp=Z,3.3nm,0.4s,mb4.7,baz=315,slow=12,SNR=4.4
GNI Garni 66.85 316 P **P** **09 21 08.7 +0.3**
GNI pmax pmax
comp=Z,16nm,0.8s
GNI Garni 66.85 316 P **P** **09 21 08.7 +0.2**
comp=Z,16nm,0.8s,mb5.1
DGRG David-gareji 66.99 318 P **P** **09 21 10.6 +1.3**
MTA Mtatsminda 67.49 318 P **P** **09 21 12.9 +0.5**
TBLG Delisi 67.54 318 P **P** **09 21 13.2 +0.5**
SVE Sverdlovsk 67.88 337⇓ *e*P **P** **09 21 14.1 -0.4**
SVE pmax pmax
comp=Z,61nm,0.9s,mb5.6
SVE MLR MLR
comp=Z,391nm,22.0s,MS4.6
YAK Yakutsk 68.34 14*c* *i*P **P** **09 21 15.3 -2.0**
YAK *e**PP pP 09 21 28.2 -1.8
YAK *e* 09 21 40.3
YAK *e*S S 09 30 12.3 -2.8
YAK pmax pmax
comp=Z,96nm,0.9s,mb5.8
YAK pmax pmax
comp=E,10.0nm,0.9s
YAK pmax pmax
comp=N,21nm,1.1s
YAK smax
comp=N,46µm,2.6s
YAK smax
comp=E,28µm,2.5s
YAK MLR MLR
comp=Z,1µm,21.0s,MS5.1
YAK MLR MLR
comp=N,551nm,18.0s,MS4.9
YAK MLR MLR
comp=E,440nm,20.0s,MS4.9
YAK Yakutsk 68.34 14 *e*P **P** **09 21 15.2 -2.1**
YAK LR LR
comp=Z,842nm,19.0s,MS5.0
ARU Arti 68.41 336 P **P** **09 21 17.1 -0.8**
comp=Z,218nm,0.6s,mb6.4,SNR=8.4
ARU Arti 68.41 336*d* *i*P **P** **09 21 17.2 -0.7**
ARU *e* 09 21 37.1
ARU *e* 09 23 43.2
ARU *e*S S 09 30 17.7 +1.6
ARU *e*SS SS 09 34 39.5 -1.0
ARU pmax pmax
comp=Z,31nm,1.0s,mb5.3
ARU Arti 68.41 336 *e*P **P** **09 21 16.7 -1.2**
comp=Z,24nm,0.8s,mb5.3
ONI Oni 68.77 318 P **P** **09 21 19.0 -1.4**
DRV Dumont d'Urvil 69.21 164 PP PP 09 24 02.0 +6.0
DRV L 09 38 00.0
DRV R 09 42 00.0
MAW Mawson 69.68 195 *e*P **P** **09 21 27.5 +1.9**
comp=Z,7.4nm,0.9s,mb4.6
MAW Mawson 69.68 195 P **P** **09 21 27.6 +2.0**
comp=Z,8.5nm,0.8s,mb4.7,baz=35,slow=7.6,SNR=27
MAW LR LR 09 45 54.8
comp=Z,445nm,19.9s,MS4.7,baz=53,slow=30
MAW Mawson 69.68 195 *e*P **P** **09 21 27.5 +1.9**
MAW pmax pmax
comp=Z,7.0nm,0.9s
KIV Kislovodsk 69.86 319⇓ *e*P **P** **09 21 27.6 +0.5**
KIV pmax pmax
comp=Z,16nm,0.7s,mb5.1
KIV Kislovodsk 69.86 319 *e*P **P** **09 21 27.8 +0.6**
comp=Z,27nm,1.1s,mb5.1
KIV LR LR
comp=Z,127nm,20.0s,MS4.2
ASF Jabal al Asfar 69.91 306 P **P** **09 21 29.3 +1.6**
comp=Z,4.1nm,0.5s,mb4.7,baz=344,slow=5.9,SNR=9.6
MALT Malatya 70.67 312 *e*P **P** **09 21 30.1 -2.1**
MALT pmax pmax
comp=Z,12nm,0.9s,mb4.8
MALT Malatya 70.67 312 *e*P **P** **09 21 30.1 -2.1**
comp=Z,12nm,0.9s,mb4.8
SKR Severo-Kuril's 71.05 33 *e*P **P** **09 21 33.5 -0.7**
SKR pmax pmax
comp=N,110nm,1.0s
SKR pmax pmax
comp=Z,130nm,1.0s,mb5.8
SOC Sochi 71.68 318 *e*P **P** **09 21 37.5 -0.7**
SOC *e*S S 09 30 54.8 -0.1
SOC pmax pmax
comp=Z,21nm,0.6s,mb5.2
LSZ Lusaka 72.67 255 LR LR 09 51 18.2
comp=Z,316nm,18.3s,MS4.6,baz=147,slow=34
PETK Petropavlovsk- 73.10 32 P **P** **09 21 45.1 -1.4**
comp=Z,16nm,0.8s,mb5.0,baz=199,slow=0.2,SNR=30
PETK LR LR 09 58 21.5
comp=Z,113nm,18.6s,MS4.2,baz=249,slow=40
PET Petropavlovsk 73.56 32 *e*P **P** **09 21 48.3 -0.9**
PET pmax pmax
comp=Z,62nm,0.7s,mb5.7
PET MLR MLR
comp=Z,300nm,20.0s,MS4.6
PET Petropavlovsk 73.56 32⇑ *i*P **P** **09 21 48.0 -1.2**
RPZ Rata Peaks 73.65 135 P **P** **09 21 50.0 0.0**
comp=Z,11nm,0.6s,mb5.0,baz=309,slow=5.1,SNR=7.2
RPZ LR LR 09 52 58.7
comp=Z,227nm,18.1s,MS4.5,baz=278,slow=35
VSR Storozhevoye 75.07 325 *e*P **P** **09 21 56.6 -1.4**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.8s
BOSA Boshof 76.11 241 P **P** **09 22 05.8 +1.2**
comp=E,8.0nm,0.8s,mb4.7,baz=98,slow=3.4,SNR=14
BOSA LR LR 09 48 26.7
comp=E,424nm,21.9s,MS4.7,baz=68,slow=30

TIXI	**Tiksi**	**76.57**	**9**	*c iP*	**P**	**09 22 04.1**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
TIXI	**Tiksi**	**76.57**	**9**	*e*	**P**	**09 22 03.9**	**-2.3**
	comp=Z,27nm,0.6s,mb5.3						
SYO	**Syowa Base**	**77.36 199⇑**		*eP*	**P**	**09 22 10.6**	**-0.1**
SYO	**Syowa Base**	**77.36 199⇑**		*eX*	pP	09 22 17.5	-6.1
SYO	**Syowa Base**	**77.36 199⇑**		*es*	sP	09 22 25.8	-2.7
MOS	**Moscow**	**77.76 329**		*eP*	**P**	**09 22 11.5**	**-1.7**
MOS				*e*	pP	09 22 25.0	-1.1
OBN	**Obninsk**	**78.07 328⇑**		*eP*	**P**	**09 22 14.5**	**-0.4**
OBN				*e*	P	09 25 13.2	
OBN				*eS*	S	09 32 03.2	-2.4
OBN				pmax	pmax		
	comp=Z,42nm,0.7s,mb5.5						
OBN				MLR	MLR		
	comp=Z,200nm,23.0s,MS4.4						
OBN	**Obninsk**	**78.07 328**		*eP*	**P**	**09 22 14.3**	**-0.6**
	comp=Z,45nm,0.8s,mb5.5						
TIRR	**Tirgusor**	**79.68 316⇑**		*iP*	**P**	**09 22 23.6**	**-0.4**
TIRR	**Tirgusor**	**79.68 316**	⇑	*P*	**P**	**09 22 23.6**	**-0.3**
SUR	**Sutherland**	**80.18 238**		*eP*	**P**	**09 22 29.3**	**+2.4**
IDI	**Anoyia**	**80.36 306**		P	**P**	**09 22 28.4**	**+0.5**
	comp=Z,15nm,0.8s,mb5.0,baz=76,slow=10,SNR=9.2						
AKASG	**Malin Array Be**	**80.79 322**		P	**P**	**09 22 28.9**	**-1.0**
	comp=Z,2.4nm,0.5s,mb4.4,baz=78,slow=4.5,SNR=9.8						
AKASG				PP	PP	09 25 34.1	-0.3
	comp=Z,2.6nm,0.8s,baz=82,slow=5.7,SNR=5.1						
AKASG				LR	LR	10 04 35.0	
	comp=Z,97nm,21.9s,MS4.1,baz=70,slow=40						
AKASG	**Malin Array Be**	**80.79 322**		*i* P	**P**	**09 22 28.8**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KIEV	**Kiev**	**80.80 322**		*eP*	**P**	**09 22 28.1**	**-1.7**
KIEV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
KIEV	**Kiev**	**80.80 322**		*eP*	**P**	**09 22 28.1**	**-1.8**
	comp=Z,6.7nm,0.8s,mb4.6						
VRI	**Vrincioaia**	**81.17 317⇓**		*iP*	**P**	**09 22 32.6**	**+0.6**
VRI	**Vrincioaia**	**81.17 317**	⇓	*P*	**P**	**09 22 32.6**	**+0.6**
PLOR	**Plostina**	**81.22 317⇑**		*iP*	**P**	**09 22 33.0**	**+0.8**
MLR	**Muntele Rosu**	**81.62 317⇓**		*iP*	**P**	**09 22 35.0**	**+0.6**
MLR	**Muntele Rosu**	**81.62 317**	⇓	*P*	**P**	**09 22 35.0**	**+0.7**
BURAR	**Bucovina Array**	**82.58 319⇑**		*iP*	**P**	**09 22 40.4**	**+1.1**
BUR08	**Bucovina Ar. S**	**82.60 319**		*eP*	**P**	**09 22 40.3**	**+0.9**
PUL	**Pulkovo**	**82.87 331⇑**		*eP*	**P**	**09 22 40.4**	**-0.2**
JOF	**Joensuu**	**83.44 334**		*ep*	**P**	**09 22 42.7**	**-0.7**
	comp=Z,19nm,0.7s,mb5.2						
JOF	**Joensuu**	**83.44 334**		*eP*	**P**	**09 22 42.7**	**-0.7**
JOF				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.2						
BILL	**Bilibino**	**83.63**	**20⇓**	*eP*	**P**	**09 22 43.3**	**-1.0**
BILL				*i*		09 25 52.8	
BILL				*eS*	S	09 33 02.6	-0.6
BILL				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.2						
LVV	**L'vov**	**83.81 321**		*eP*	**P**	**09 22 45.0**	**-0.6**
LVZ	**Lovozero**	**83.95 340**		P	**P**	**09 22 45.6**	**-0.4**
	comp=Z,278nm,0.6s,mb6.6,SNR=12						
LVZ	**Lovozero**	**83.95 340⇓**		*eP*	**P**	**09 22 45.4**	**-0.6**
LVZ				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.5						
LVZ	**Lovozero**	**83.95 340⇓**		*eP*	**P**	**09 22 45.5**	**-0.5**
DRGR		**84.09 317⇑**		*iP*	**P**	**09 22 47.4**	**+0.3**
DRGR		**84.09 317**	⇑	*P*	**P**	**09 22 47.4**	**+0.3**
APA	**Apatity**	**84.26 339⇓**		*iP*	**P**	**09 22 46.8**	**-0.7**
APA				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.3						
APA				MLR	MLR		
	comp=Z,700nm,20.0s,MS5.0						
BZS	**Buzias**	**84.63 316⇑**		*iP*	**P**	**09 22 50.0**	**+0.1**
BZS	**Buzias**	**84.63 316**	⇑	*P*	**P**	**09 22 50.0**	**+0.1**
UZH	**Uzhgorod**	**84.70 319**		*eP*	**P**	**09 22 50.0**	**-0.2**
KOLS	**Kolonicke sedl**	**84.77 320**		*eP*	**P**	**09 22 51.5**	**+1.0**
SUW	**Suwalki**	**85.18 325**		*eP*	**P**	**09 22 52.4**	**0.0**
SUW	**Suwalki**	**85.18 325**		*eP*	**P**	**09 22 52.4**	**0.0**
CRVS	**Cervenica-Dubn**	**85.29 319**		*eP*	**P**	**09 22 53.4**	**+0.3**
KAF	**Kangasniemi**	**85.42 333**		*ep*	**P**	**09 22 52.6**	**-0.9**
	comp=Z,24nm,0.8s,mb5.4,baz=98,slow=4.6						
KAF	**Kangasniemi**	**85.42 333**		*eP*	**P**	**09 22 52.6**	**-0.9**
KAF				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.4						
STHS	**Stebnicka Huta**	**85.52 320**		*eP*	**P**	**09 22 55.1**	**+0.9**
STHS				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.9						
STHS	**Stebnicka Huta**	**85.52 320**		*eP*	**P**	**09 22 55.1**	**+0.9**
	comp=Z,6.8nm,0.9s,mb4.9						
KECS	**Kecovo**	**85.86 319**		*eP*	**P**	**09 22 55.9**	**-0.1**
KECS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
KECS	**Kecovo**	**85.86 319**		*eP*	**P**	**09 22 55.9**	**-0.1**
	comp=Z,3.3nm,0.8s,mb4.6						
PSZ	**Piszkesteto**	**86.16 318⇓**		*iP*	**P**	**09 22 57.7**	**+0.2**
PSZ	**Piszkesteto**	**86.16 318**	⇓	*P*	**P**	**09 22 57.7**	**+0.2**
PKSM	**Moragy**	**86.78 316⇑**		*iP*	**P**	**09 23 00.5**	**0.0**
PKSM	**Moragy**	**86.78 316**	⇑	*P*	**P**	**09 23 00.5**	**0.0**
VYHS	**Vyhne**	**86.95 319**		*eP*	**P**	**09 23 02.1**	**+0.8**
MAIT	**Maitri**	**87.06 199**		*eP*	**P**	**09 23 04.2**	**+2.8**
KEV	**Kevo**	**87.19 340**		*ep*	**P**	**09 23 01.0**	**-1.0**
	comp=Z,22nm,0.9s,mb5.4						
KEV	**Kevo**	**87.19 340**		*eP*	**P**	**09 23 01.0**	**-1.0**
KEV				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.4						
ARCES	**ARCESS Array B**	**87.64 340**		P	**P**	**09 23 03.9**	**-0.3**
	comp=Z,19nm,0.8s,mb5.4,baz=101,slow=5.6,SNR=57						
ARCES				LR	LR	10 05 57.4	
	comp=Z,222nm,21.9s,MS4.5,baz=2.9,slow=38						
MORC	**Moravsky Berou**	**87.95 320**		*eP*	**P**	**09 23 06.2**	**+0.1**
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
MORC	**Moravsky Berou**	**87.95 320**	⇑	*iP*	**P**	**09 23 07.2**	**+1.1**
MORC	**Moravsky Berou**	**87.95 320**		*eP*	**P**	**09 23 06.2**	**+0.1**
	comp=Z,5.8nm,0.8s,mb4.9						
MODS	**Modra-Piesok**	**87.96 318**		*eP*	**P**	**09 23 06.5**	**+0.3**
ZST	**Bratislava**	**88.06 318**		*eP*	**P**	**09 23 07.3**	**+0.7**
ZST				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.1						
ZST	**Bratislava**	**88.06 318**		*eP*	**P**	**09 23 07.3**	**+0.7**
	comp=Z,10nm,0.8s,mb5.1						
CUC	**Castrocucco**	**88.14 310**		*eP*	**P**	**09 23 06.9**	**-0.4**
	comp=Z,8.7nm,0.9s,mb5.0						
DPC	**Dobruska-Polom**	**88.80 320**		*eP*	**P**	**09 23 11.0**	**+0.9**
DPC				*ep*	pP	09 23 26.4	+3.2
UPC	**Upice**	**89.01 320**		*eP*	**P**	**09 23 11.6**	**+0.5**
UPC				*ep*	pP	09 23 23.3	-0.9
BOJS	**Bojanci**	**89.05 315**		*iP*	**P**	**09 23 11.9**	**+0.5**
BOJS				*i*	pP	09 23 26.9	+2.4
TRC	**Trest**	**89.23 319**		*eP*	**P**	**09 23 12.8**	**+1.6**
PERS	**Pernice**	**89.24 317**		*iP*	**P**	**09 23 12.9**	**+0.6**
PERS				*i*	pP	09 23 28.1	+2.7
SOKA	**Soboth**	**89.31 317⇓**		*iP*	**P**	**09 23 13.5**	**+0.9**
	comp=Z,7.0nm,0.9s,mb5.0						
SOKA	**Soboth**	**89.31 317⇓**		*i* PcP	PcP	09 23 13.5	-0.5
	comp=Z,7.0nm,0.9s						
VISS	**Visnje**	**89.37 316**		*i* P	**P**	**09 23 13.2**	**+0.3**
VISS				*i*	pP	09 23 28.8	+2.8
PRU	**Pruhonice**	**89.91 320**		*eP*	**P**	**09 23 15.4**	**+0.1**
PRU				*es*	sP	09 23 31.1	-2.2
JAVS	**Javornik**	**89.91 316**		*iP*	**P**	**09 23 15.7**	**+0.2**
PVCC	**Panska Ves**	**89.93 320**		*eP*	**P**	**09 23 17.0**	**+1.6**
PVCC				*es*	sP	09 23 31.0	-2.4
BRG	**Berggiesshubel**	**90.35 321**		*eP*	**P**	**09 23 18.0**	**+0.6**
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.8						
BRG	**Berggiesshubel**	**90.35 321**		*eP*	**P**	**09 23 18.1**	**+0.7**
	comp=Z,12nm,1.0s,mb5.2						
BRG	**Berggiesshubel**	**90.35 321**		*eP*	**P**	**09 23 18.0**	**+0.6**
	comp=Z,8.7nm,0.9s,mb5.1						
GEC2	**GERESS Array S**	**90.37 319**		*eP*	**P**	**09 23 18.1**	**+0.6**
GEC2				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
GEC2	**GERESS Array S**	**90.37 319**		*eP*	**P**	**09 23 18.1**	**+0.6**
	comp=Z,9.0nm,1.0s,mb5.0						
GERES	**GERESS Array B**	**90.37 319**		P	**P**	**09 23 18.3**	**+0.8**
	comp=Z,3.8nm,0.8s,mb4.8,baz=84,slow=4.7,SNR=25						
KHC	**Kasperske Hory**	**90.47 319**		*eP*	**P**	**09 23 18.2**	**+0.3**
KHC				*es*	sP	09 23 34.3	-1.6
RJOB	**Jochberg**	**90.90 318**		*eP*	**P**	**09 23 19.9**	**-0.1**
WET	**Wettzell**	**90.93 319**		*eP*	**P**	**09 23 20.6**	**+0.5**
WET				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
WET	**Wettzell**	**90.93 319**		*eP*	**P**	**09 23 20.6**	**+0.5**
	comp=Z,9.0nm,1.0s,mb5.0						
CLL	**Collm**	**90.97 321**	⇑	*iP*	**P**	**09 23 20.3**	**+0.1**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
CLL	**Collm**	**90.97 321**		*eP*	**P**	**09 23 20.4**	**+0.2**
CLL	**Collm**	**90.97 321**	⇑	*iP*	**P**	**09 23 20.3**	**+0.1**
	comp=Z,6.0nm,1.0s,mb4.9						
CLL				*i* sP	sP	09 23 36.5	-1.7
HFS	**Hagfors**	**91.13 330**		P	**P**	**09 23 20.8**	**+0.1**
	comp=Z,12nm,0.7s,mb5.3,baz=132,slow=2.2,SNR=15						
ROTZ	**Rotzenmuhle**	**91.40 320**		*eP*	**P**	**09 23 23.1**	**+0.9**
SNAA	**Sanae**	**91.61 198⇑**		*eP*	**P**	**09 23 26.4**	**+3.6**
WTTA	**Wattenberg**	**91.66 317⇑**		*iP*	**P**	**09 23 23.4**	**-0.1**
	comp=Z,9.9nm,0.8s,mb5.2,SNR=7.6						
MOX	**Moxa**	**91.82 320**		*eP*	**P**	**09 23 24.7**	**+0.5**
MOX	**Moxa**	**91.82 320**		*eP*	**P**	**09 23 24.6**	**+0.4**
MOTA	**Moosalm**	**92.03 317⇑**		*iP*	**P**	**09 23 25.0**	**-0.2**
	comp=Z,7.9nm,0.8s,mb5.1,SNR=6.7						
GRA1	**Grafenberg Arr**	**92.03 319**		*eP*	**P**	**09 23 26.3**	**+1.1**
	comp=Z,14nm,1.0s,mb5.2						
GRF	**Grafenberg Arr**	**92.03 319**		*eP*	**P**	**09 23 26.3**	**+1.1**
GRF				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2						
GRF	**Grafenberg Arr**	**92.03 319**		*eP*	**P**	**09 23 26.3**	**+1.1**
GRF				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2						
GRF	**Grafenberg Arr**	**92.03 319**		*eP*	**P**	**09 23 26.3**	**+1.1**
	comp=Z,14nm,1.0s,mb5.2						
RETA	**Reutte**	**92.27 317⇑**		*iP*	**P**	**09 23 26.5**	**+0.1**
	comp=Z,6.6nm,0.6s,mb5.1						
RETA	**Reutte**	**92.27 317⇑**		*i* PcP	**P**	**09 23 26.5**	**+0.1**
	comp=Z,6.6nm,0.6s,mb5.1						
NIKO	**Nikolski**	**92.37**	**37**	P	**P**	**09 23 24.7**	**-2.0**
	comp=Z,66nm,0.9s,mb6.0						
NOA	**NORSAR Array B**	**92.40 331**		LR	LR	10 08 38.4	
	comp=Z,172nm,18.9s,MS4.5,baz=80,slow=38						
CLZ	**Clausthal**	**92.64 322**		*eP*	**P**	**09 23 28.7**	**+0.8**
BSEG	**Bad Segeberg**	**92.71 324**		*eP*	**P**	**09 23 28.9**	**+0.7**
NRDL	**Niedersach Rie**	**92.81 322**		*eP*	**P**	**09 23 29.5**	**+0.8**
DAVA	**Damuels**	**92.86 317⇑**		*iP*	**P**	**09 23 29.7**	**+0.6**
	comp=Z,6.9nm,0.8s,mb5.2						
DAVA	**Damuels**	**92.86 317⇑**		*i* PcP	**P**	**09 23 29.7**	**+0.6**
	comp=Z,6.9nm,0.8s,mb5.2						
PGF	**Pioggiola**	**93.41 312**		*eP*	**P**	**09 23 29.9**	**-1.8**
IBBN	**Ibbenburen**	**94.25 322**		*eP*	**P**	**09 23 35.4**	**+0.1**
SBF	**Sospel**	**94.56 314**		*eP*	**P**	**09 23 36.3**	**-0.7**
	comp=Z,26nm,1.0s,mb5.3						
SBF	**Sospel**	**94.56 314**		*eP*	**P**	**09 23 36.3**	**-0.7**
SBF				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.3						
SBF	**Sospel**	**94.56 314**		*eP*	**P**	**09 23 36.3**	**-0.7**
	comp=Z,13nm,1.0s,mb5.3						
BUG	**Bochum--Univer**	**94.57 321**		*eP*	**P**	**09 23 37.1**	**+0.3**
CDF	**Champ du Feu**	**94.62 318**		*eP*	**P**	**09 23 35.9**	**-1.2**
MBDF	**Montbardon**	**95.02 314**		*eP*	**P**	**09 23 39.1**	**0.0**
	comp=Z,7.7nm,1.0s,mb4.8						
MBDF	**Montbardon**	**95.02 314**		*eP*	**P**	**09 23 39.1**	**0.0**
MBDF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.8						
MBDF	**Montbardon**	**95.02 314**		*eP*	**P**	**09 23 39.1**	**0.0**
	comp=Z,3.8nm,1.0s,mb4.8						
LPG	**La Plagne**	**95.02 315**		*eP*	**P**	**09 23 39.3**	**+0.2**
	comp=Z,13nm,0.8s,mb5.1						
LPG	**La Plagne**	**95.02 315**		*eP*	**P**	**09 23 39.3**	**+0.2**
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.1						
LPG	**La Plagne**	**95.02 315**		*eP*	**P**	**09 23 39.3**	**+0.2**
	comp=Z,6.3nm,0.8s,mb5.1						
LPL	**La Plagne**	**95.04 315**		*eP*	**P**	**09 23 39.3**	**+0.2**
	comp=Z,16nm,0.9s,mb5.2						
LPL	**La Plagne**	**95.04 315**		*eP*	**P**	**09 23 39.3**	**+0.2**
LPL				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.2						
LPL	**La Plagne**	**95.04 315**		*eP*	**P**	**09 23 39.3**	**+0.2**
	comp=Z,7.9nm,0.9s,mb5.1						
FRF	**La Foret Royal**	**95.13 313**		*eP*	**P**	**09 23 38.9**	**-0.7**
	comp=Z,26nm,1.2s,mb5.2						
FRF	**La Foret Royal**	**95.13 313**		*eP*	**P**	**09 23 38.9**	**-0.7**
FRF				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.2						
FRF	**La Foret Royal**	**95.13 313**		*eP*	**P**	**09 23 38.9**	**-0.7**
	comp=Z,13nm,1.2s,mb5.2						
HAU	**Haudompre**	**95.25 318**		*eP*	**P**	**09 23 38.8**	**-1.2**
	comp=Z,6.0nm,0.6s,mb4.9						
HAU	**Haudompre**	**95.25 318**		*eP*	**P**	**09 23 38.8**	**-1.2**
HAU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.9						
HAU	**Haudompre**	**95.25 318**		*eP*	**P**	**09 23 38.8**	**-1.2**
	comp=Z,3.0nm,0.6s,mb4.9						
CABF	**La Chapelle**	**95.46 316**		*eP*	**P**	**09 23 39.2**	**-1.8**
ORIF	**Oris-en-Rattie**	**95.65 315**		*eP*	**P**	**09 23 40.3**	**-1.6**
LOR	**Lormes**	**96.96 317**		*eP*	**P**	**09 23 47.6**	**-0.2**
	comp=Z,7.2nm,0.8s,mb4.9						
LOR	**Lormes**	**96.96 317**		*eP*	**P**	**09 23 47.6**	**-0.2**
LOR				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.9						
LOR	**Lormes**	**96.96 317**		*eP*	**P**	**09 23 47.6**	**-0.2**
	comp=Z,3.6nm,0.8s,mb4.8						
SMF	**Signal de Mont**	**97.01 316**		*eP*	**P**	**09 23 47.6**	**-0.4**
AVF	**Avril sur Loir**	**97.33 317**		*eP*	**P**	**09 23 48.3**	**-1.2**
IMA2	**Indian Mountai**	**98.81**	**23**	*eP*	**P**	**09 23 54.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**99.71 283**		P	Pdif	09 24 01.4	+1.5
	comp=Z,0.2nm,0.4s,baz=89,slow=4.8,SNR=4.6						
TORD				PKKPbc	PKKPbc	09 40 20.7	-1.1
	comp=Z,0.2nm,0.4s,baz=301,slow=3.0,SNR=4.6						
TORD				LR	LR	10 04 10.0	
	comp=Z,159nm,21.7s,MS4.5,baz=120,slow=32						
TORD	**Torodi Ar. Bea**	**99.71 283**		P	Pdif	09 24 01.4	+1.5
TORD				PKKPbc	PKKPbc	09 40 20.7	-1.1
TORD				LR	LR	10 04 10.0	
BPAW	**Bear Paw Mtn.**	**100.40**	**25**	*e* Pdif	Pdif	09 24 01.9	-1.2
	comp=Z,2µm,0.6s						
GNW	**Green Mountain**	**121.65**	**33**	*e* PKPdf	PKPdf	09 29 09.5	-0.5
TDL	**Tradedollar La**	**122.70**	**34**	P	PKPdf	09 29 11.9	-0.1
REDWA	**Red Mountain**	**124.27**	**33**	P	PKPdf	09 29 15.4	+0.3
HUMO	**Hull Mountain**	**124.37**	**38**	*e* PKPdf	PKPdf	09 29 15.4	0.0
LHEM	**Herd Peak**	**125.36**	**39**	P	PKPdf	09 29 17.0	-0.3
LBCM	**Butte Creek Ri**	**126.34**	**39**	P	PKPdf	09 29 19.3	+0.1
MOD	**Modoc**	**126.39**	**38**	*e* PKPdf	PKPdf	09 29 19.1	-0.2
WVOR	**Wild Horse Val**	**127.08**	**36**	*e* PKIKP	PKPdf	09 29 20.9	+0.3
DLMT	**Dillon**	**128.46**	**30**	*e* PKPdf	PKPdf	09 29 23.3	+0.2
MCMT	**McKenzie Canyo**	**128.71**	**31**	*e* PKPdf	PKPdf	09 29 23.7	+0.1
BOZ	**Bozeman (W)**	**128.73**	**29**	*e* PKIKP	PKPdf	09 29 24.0	+0.4
BOZ				MLR	MLR		
	comp=Z,208nm,20.0s,MS4.8						
NVAR	**Mina Array Bea**	**129.64**	**40**	PKP	PKPdf	09 29 26.1	+0.5
	comp=Z,1.5nm,0.6s,baz=296,slow=2.3,SNR=15						
NVAR				SKPbc		09 32 41.7	
	comp=Z,3.1nm,0.9s,baz=273,slow=4.1,SNR=11						
ELK	**Elko**	**130.13**	**36**	*e* PKIKP	PKPdf	09 29 27.2	+0.8
ELK				MLR	MLR		
	comp=Z,199nm,20.0s						
RRI2	**Red Ridge**	**130.53**	**31**	*e* PKPdf	PKPdf	09 29 27.2	+0.1
RRI2				*es*	SKPbc	09 32 45.5	-1.8
ULM	**Lac du Bonnet**	**130.68**	**14**	PKP	PKPdf	09 29 26.3	-0.9
	comp=Z,5.8nm,0.6s,baz=22,slow=1.4,SNR=12						
ULM				SKPbc	SKPbc	09 32 44.0	-3.6
	comp=Z,5.4nm,0.9s,baz=31,slow=5.7,SNR=3.7						
SNOW	**Snow King Moun**	**130.74**	**30**	*e* PKPdf	PKPdf	09 29 27.7	+0.2
REDW	**Red Top Meadow**	**130.76**	**31**	*e* PKPdf	PKPdf	09 29 27.6	0.0
HWUT	**Hardware Ranch**	**131.63**	**33**	*e* PKPdf	PKPdf	09 29 29.0	-0.3
TPNV	**Topopah Spring**	**131.82**	**41**	*e* PKIKP	PKPdf	09 29 30.4	+0.6
TPNV				MLR	MLR		
	comp=Z,217nm,20.0s,MS4.8						
PDAR	**Pinedale Array**	**131.85**	**30**	PKP	PKPdf	09 29 29.2	-0.4
	comp=Z,1.0nm,0.7s,baz=91,slow=0.7,SNR=9.8						
PDAR				PP	PP	09 31 50.3	+0.6
	comp=Z,0.9nm,0.9s,baz=316,slow=4.1,SNR=3.8						
PDAR				SKPbc	SKPbc	09 32 49.6	-2.6
	comp=Z,5.7nm,1.0s,baz=5.7,slow=1.5,SNR=17						
DUG	**Dugway**	**131.89**	**35**	*e* PKIKP	PKPdf	09 29 30.8	+1.0
RSSD	**Black Hills**	**133.34**	**25**	*e* PKIKP	PKPdf	09 29 32.5	+0.1
MSU	**Marysvale**	**133.38**	**36**	*e* PKIKP	PKPdf	09 29 33.5	+0.8
EYMN	**Ely**	**133.83**	**12**	*e* PKPdf	PKPdf	09 29 33.4	+0.1
PV01	**Paradox Valley**	**135.70**	**34**	*e* PKPdf	PKPdf	09 29 38.3	+1.2
PLCA	**Paso Flores**	**135.91**	**189**	PKP	PKPdf	09 29 38.6	+1.3
	comp=Z,1.5nm,0.8s,baz=198,slow=12,SNR=4.8						
PLCA				SKPbc	SKPbc	09 33 04.4	-1.3
	comp=Z,1.3nm,0.9s,baz=28,slow=8.8,SNR=3.3						
ECSD	**EROS,Sioux Fal**	**136.42**	**19**	*e* PKPpre		09 29 34.1	
ANMO	**Albuquerque**	**139.16**	**35**	*e* PKIKP	PKPdf	09 29 43.9	+0.4
ANMO				MLR	MLR		
	comp=Z,221nm,20.0s						
BLO	**Bloomington**	**143.24**	**10**	*e* PKHKP		09 29 45.5	
CCM	**Cathedral Cave**	**143.24**	**16**	*e* PKHKP		09 29 45.8	
WMOK	**Wichita Mounta**	**143.35**	**28**	*e* PKHKP		09 29 46.1	
WMOK				MLR	MLR		
	comp=Z,288nm,19.0s,MS5.1						
SIUC	**Southern Illin**	**144.09**	**14**	*e* PKP	PKPdf	09 29 49.3	-2.9
WCI	**Wyandotte Cave**	**144.19**	**10**	*e* PKIKP	PKPdf	09 29 48.9	-3.5
BDFB	**Brasilia**	**144.25 238**		PKP	PKPdf	09 29 52.6	-0.5
	comp=Z,5.1nm,0.4s,baz=112,slow=2.8,SNR=21						
TXAR	**Lajitas Array**	**144.77**	**39**	PKP	PKPdf	09 29 52.3	-1.4
	comp=Z,24nm,0.8s,baz=284,slow=1.3,SNR=298						
TXAR				SKPbc	SKPbc	09 33 27.6	-2.1
	comp=Z,2.1nm,0.9s,baz=336,slow=2.0,SNR=6.8						
PARMO	**Parma**	**144.95**	**15**	*e* PKP	PKPdf	09 29 51.4	-2.4
URVA	**University of**	**145.45 358**		*e* PKP	PKPdf	09 29 53.8	-0.8
UTMT	**University of**	**145.48**	**14**	*e* PKP	PKPdf	09 29 53.4	-1.3
MIAR	**Mount Ida**	**145.70**	**22**	*e* PKIKP	PKPdf	09 29 54.2	-0.9
HALT	**Halls**	**145.77**	**15**	*e* PKPdf	PKPdf	09 29 54.2	-1.0
ELN	**Prospectdale**	**145.78**	**2**	*e* PKP	PKPdf	09 29 53.4	-1.8
BLA	**Blacksburg**	**145.81**	**2**	*e* PKP2	PKPdf	09 29 53.5	-1.7
WVT	**Waverly**	**145.93**	**13**	*e* PKP	PKPdf	09 29 54.3	-1.2
WVT				*e*		09 30 09.1	
UALR	**University of**	**145.93**	**20**	*e* PKP	PKPdf	09 29 54.7	-0.8
JCT	**Junction City**	**146.22**	**33**	*e* PKP2	PKPdf	09 29 55.2	-0.9
TZTN	**Tazewell**	**146.24**	**7**	*e* PKPdf	PKPdf	09 29 55.2	-0.7
OXF	**Oxford**	**147.07**	**16**	*e* PKIKP	PKPdf	09 29 56.7	-0.7
TKL	**Tuckaleechee C**	**147.09**	**7**	*e* PKIKP	PKPdf	09 29 56.8	-0.6
SWET	**Sewanee**	**147.19**	**11**	*e* PKPdf	PKPdf	09 29 57.2	-0.4
CPCT	**Cooper Cave**	**147.19**	**8**	*e* PKPdf	PKPdf	09 29 57.0	-0.6
CPCT				*e* PKPbc	PKPbc	09 29 58.5	-1.3
JSC	**Jenkinsville**	**148.69**	**4**	*e* PKP2	PKPbc	09 30 02.9	-1.0
HKT	**Hockley**	**148.70**	**29**	*e* PKP2	PKPbc	09 30 03.5	-0.6
VBMS	**Vicksburg**	**148.87**	**19**	*e* PKPbc	PKPbc	09 30 03.4	-1.0
LRAL	**Lakeview Retre**	**149.08**	**13**	*e* PKPbc	PKPbc	09 30 03.2	-1.8
GOGA	**Godfrey**	**149.34**	**7**	*e* PKP2	PKPbc	09 30 04.3	-1.3
COW	**Cow Castle Cre**	**149.62**	**3**	*e* PKPbc	PKPbc	09 30 05.5	-0.7
LPAZ	**La Paz**	**158.13 209**		PKP	PKPdf	09 30 15.2	+1.1
	comp=Z,1.0nm,0.7s,baz=64,slow=6.7,SNR=5.8						
TGUH	**Tegucigalpa,Un**	**166.22**	**36**	*e* PKPab	PKPab	09 31 23.6	+0.

FITZ **Fitzroy Crossi** 53.14 262 P P 10 29 06.9 0.0
0.5nm,0.3s,baz=80,slow=12,SNR=6.0

IDC 16 10:35:28.6±3.5, 321S×10025E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/20, mbtmp3.6/4, Error ellipse: s-maj=155.6km s-min=26.4km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**38.35**	**125**	P	P	10 42 51.3	-0.3
	0.3nm,0.5s,baz=302,slow=7.9,SNR=8.1						
SONM	**Songino Array**	**51.12**	**5**	P	P	10 44 33.3	+0.2
	0.6nm,0.5s,baz=190,slow=8.9,SNR=2.2						
MKAR	**Makanchi Array**	**52.26**	**344**	P	P	10 44 41.4	-0.2
	0.9nm,0.5s,baz=170,slow=8.6,SNR=6.5						
KURK	**Kurchatov**	**56.83**	**344**	P	P	10 45 14.1	-0.7
	0.2nm,0.3s,baz=173,slow=7.2,SNR=2.5						
TXAR	**Lajitas Array**	**145.50**	**39**	PKPbc	PKPbc	10 55 09.6	0.0
	0.7nm,0.5s,baz=281,slow=1.1,SNR=15						

*IDC **16** 10:37:14.2±1.1, 321N×12690E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.9/20, mbtmp4.0/8, Error ellipse: s-maj=104.2km s-min=15.0km az=70.0*
*ISCJB **16** 10:37:17.2±0.9, 32N±02×1267E±05, h33km, mb4.0/9, Error ellipse: s-maj=77.0km s-min=10.6km az=159.2*
*NEIC **16** 10:37:19.2±0.6, 320N×12698E, h35km, mb4.3/3, Error ellipse: s-maj=47.9km s-min=7.2km az=70.0*
ISC 16 10:37:19.3±0.8, 32N±02×1270E±05, h35km, n15, σ0s38/14, mb4.0/9, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.20**	**183**	*eP*	**P**	**10 42 02.4**	**+0.5**
	10nm,1.7s,mb3.9						
FITZ	**Fitzroy Crossi**	**21.20**	**183**	P	**P**	**10 42 02.4**	**+0.4**
	1.3nm,0.4s,mb3.6,baz=6.0,slow=11,SNR=13						
WRAB	**Tennant Creek**	**24.10**	**163**	*eP*	**P**	**10 42 31.5**	**-0.3**
	4.7nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**24.11**	**163**	P	**P**	**10 42 31.7**	**-0.1**
	5.1nm,0.5s,mb4.2,baz=338,slow=11,SNR=80						
WB2	**Warramunga Arr**	**24.11**	**163**	*eP*	**P**	**10 42 31.4**	**-0.4**
WB2	**Warramunga Arr**	**24.11**	**163**	*eP*	**P**	**10 42 31.5**	**-0.3**
ASAR	**Alice Springs**	**27.54**	**166**	P	**P**	**10 43 02.8**	**-0.1**
	0.5nm,0.6s,mb3.4,baz=343,slow=8.2,SNR=14						
STKA	**Stephens Creek**	**37.55**	**159**	⇓*iP*	**P**	**10 44 30.7**	**+0.5**
	2.9nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**37.55**	**159**	P	**P**	**10 44 30.8**	**+0.6**
	3.9nm,0.4s,mb4.5,baz=335,slow=11,SNR=14						
SONM	**Songino Array**	**47.87**	**341**	P	**P**	**10 45 54.5**	**+0.8**
	0.9nm,0.7s,mb3.9,baz=158,slow=12,SNR=2.9						
MK31	**Makanchi Array**	**58.12**	**325**	*eP*	**P**	**10 47 09.1**	**-0.3**
MKAR	**Makanchi Array**	**58.12**	**325**	P	**P**	**10 47 09.3**	**0.0**
	1.1nm,0.5s,mb4.2,baz=126,slow=8.1,SNR=8.3						
KURK	**Kurchatov**	**62.31**	**328**	P	**P**	**10 47 37.6**	**-0.3**
	0.9nm,0.6s,mb4.1,baz=129,slow=6.3,SNR=6.4						
BVAR	**Borovoye Array**	**67.89**	**327**	P	**P**	**10 48 13.9**	**-0.2**
	0.5nm,0.4s,mb3.9,baz=127,slow=9.3,SNR=3.0						
TORD	**Torodi Ar. Bea**	**123.29**	**288**	PKP	PKPdf	10 56 14.2	+0.7
	0.3nm,0.6s,baz=112,slow=0.9,SNR=9.3						

*IDC **16** 10:43:28.8±10.0, 3736N×72.11E, h90km±92km, mb3.1/3, mb1 3.4/7, mb1mx3.2/25, mbtmp3.3/7, ML4.1/3, Error ellipse: s-maj=55.3km s-min=29.9km az=11.0*
*ISCJB **16** 10:43:31.8±0.8, 3747N±005×722E±0.1, h140km±10km, mb3.4/3, Error ellipse: s-maj=15.9km s-min=4.6km az=156.8*
*NEIC **16** 10:43:33.9±2.9, 3758N×72.12E, h138km±25km, mb4.4/2, Error ellipse: s-maj=30.7km s-min=19.8km az=209.0*
*NNC **16** 10:43:37.5±2.2, 3829N×7150E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=24.5km s-min=15.7km az=62.0*
ISC 16 10:43:32.5±0.7, 3745N±004×722E±01, h130km±9km, n40, σ1s22/50, mb3.4/3, 2C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.82**	**13**	P	**Pn**	**10 44 43.7**	**+0.5**
	SNR=38						
AML	**Almayashu**	**4.82**	**13**	*eP*	**Pn**	**10 44 43.6**	**+0.4**
AML				*eS*	**Sn**	**10 45 35.5**	**-2.6**
KZA	**Kyzart**	**5.19**	**26**	P	**Pn**	**10 44 49.2**	**+1.0**
	SNR=5.1						
EKS2	**Erkin-Say**	**5.35**	**13**	P	**Pn**	**10 44 50.7**	**+0.5**
	SNR=20						
EKS2	**Erkin-Say**	**5.35**	**13**	*eP*	**Pn**	**10 44 50.6**	**+0.3**
	60nm,0.6s						
AAK	**Ala-Archa**	**5.47**	**18**	P	**Pn**	**10 44 53.0**	**+1.1**
	SNR=12						
THN	**Thein Dam**	**5.78**	**149**	*eP*	**Pn**	**10 44 58.8**	**+2.7**
THN				*eS*	**Sn**	**10 46 01.9**	**+0.7**
DLH	**Dalhousie**	**5.79**	**147**	*eP*	**Pn**	**10 44 59.0**	**+2.7**
DLH				*ex*	x	10 46 04.0	
KK31	**Karatay Array**	**5.79**	**348**	⇓Pn	**Pn**	**10 44 55.3**	**-0.9**
	15nm,0.3s,baz=170,slow=13						
KK31				⇑Sn	**Sn**	**10 45 55.7**	**-5.8**
	12nm,0.2s,baz=166,slow=22						
CHMS	**Chumysh**	**5.88**	**19**	P	**Pn**	**10 44 58.2**	**+0.8**
	SNR=6.4						
TKM2	**Tokmak 2**	**6.06**	**24**	⇓Pn	**Pn**	**10 45 01.0**	**+1.2**
	3.4nm,0.6s						
TKM2	**Tokmak 2**	**6.06**	**24**	P	**Pn**	**10 45 01.3**	**+1.5**
	SNR=5.1						
TKM2	**Tokmak 2**	**6.06**	**24**	*eP*	**Pn**	**10 45 01.1**	**+1.3**
	3.7nm,0.5s						
SDNR	**Sundarnagar**	**7.12**	**145**	*eP*	**Pn**	**10 45 15.0**	**+0.8**
SDNR				*eS*	**Sn**	**10 46 31.0**	**-2.7**
SMLA	**Simla**	**7.53**	**145**	*iP*	**Pn**	**10 45 20.8**	**+1.1**
SMLA				*iS*	**Sn**	**10 46 40.4**	**-3.0**
SMLA				*ex*	x	10 46 44.6	
	comp=N,830nm,0.3s						
SMLA				*ex*	x	10 46 45.6	
	comp=E,695nm,0.3s						
KLP	**Kalpa**	**7.73**	**138**	*eP*	**Pn**	**10 45 24.5**	**+2.1**
KLP				*eS*	**Sn**	**10 46 47.9**	**-0.6**
KLP				AML	AML	10 46 58.3	
	comp=N,126nm,1.0s						
KLP				AML	AML	10 47 00.9	
	comp=E,182nm,0.4s						
DDI	**Dehra Dun**	**8.62**	**144**	*ex*	x	10 47 14.0	
JOSI	**Joshimath**	**9.20**	**136**	*eS*	**Sn**	**10 47 18.7**	**-5.2**
JOSI				AML	AML	10 47 25.4	
	comp=E,107nm,0.4s						
JOSI				AML	AML	10 47 28.2	
	comp=N,156nm,0.5s						
KHET	**Khetri**	**9.83**	**161**	*eS*	**Sn**	**10 47 34.2**	**-4.9**
SONA	**Sohna**	**10.05**	**154**	*eP*	**Pn**	**10 45 54.4**	**+0.9**
SONA				*eS*	**Sn**	**10 47 39.2**	**-5.3**
DANN	**Dangsing**	**13.29**	**130**	*eP*	**Pn**	**10 46 35.7**	**-0.4**
	comp=N,26nm,0.4s						
DANN				*eS*	**Sn**	**10 48 52.2**	**-10**
KOLN	**Koldanda**	**13.61**	**132**	*eP*	**Pn**	**10 46 40.1**	**-0.2**
	comp=N,8.3nm,0.3s						
KURK	**Kurchatov**	**14.04**	**17**	P	**Pn**	**10 46 42.4**	**-3.1**
	baz=197,slow=12,SNR=2.9						
GKN	**Gorkha**	**14.07**	**128**	*eP*	**Pn**	**10 46 44.9**	**-1.3**
	comp=N,13nm,0.3s						
GKN				*eS*	**Sn**	**10 49 10.9**	**-11**
DMN	**Daman**	**14.65**	**128**	*eP*	**Pn**	**10 46 52.5**	**-0.9**
	comp=N,4.2nm,0.2s						
AB31	**Akbulak array**	**14.76**	**327**	⇓Pn	**Pn**	**10 46 52.5**	**-2.2**
	comp=N,1.9nm,0.4s,baz=140,slow=13						
AB31				⇑Sn	**Sn**	**10 49 27.1**	**-11**
	comp=N,2.2nm,0.4s,baz=134,slow=24						
PKI	**Pulchoki**	**14.86**	**128**	*eP*	**Pn**	**10 46 55.5**	**-0.6**
	comp=N,10nm,0.3s						
GUN	**Gumba**	**14.93**	**126**	*eP*	**Pn**	**10 46 55.8**	**-1.1**
JIRN	**Jiri**	**15.30**	**126**	*eP*	**Pn**	**10 47 01.3**	**-0.3**
	comp=N,31nm,0.4s						
BVAR	**Borovoye Array**	**15.63**	**356**	P	**Pn**	**10 47 05.3**	**-0.1**
	comp=N,0.8nm,0.3s,baz=168,slow=8.4,SNR=8.6						
RAMN	**Ramite**	**16.05**	**127**	*eP*	**Pn**	**10 47 11.4**	**+0.5**
	comp=N,10nm,0.4s						
AKTK	**Aktyubinsk**	**16.48**	**326**	P	**Pn**	**10 47 14.7**	**-1.1**
AKTO	**Aktyubinsk**	**16.48**	**326**	⇓Pn	**Pn**	**10 47 16.1**	**+0.2**
	comp=N,0.3nm,0.4s						
AKTO				⇓Sn	**Sn**	**10 50 09.1**	**-10**
	comp=N,0.7nm,0.7s						
AKTO	**Aktyubinsk**	**16.48**	**326**	P	**Pn**	**10 47 14.7**	**-1.1**
	comp=N,1.1nm,0.3s,baz=121,slow=13,SNR=12						
ODAN	**Odare**	**16.62**	**125**	*eP*	**Pn**	**10 47 18.1**	**+0.2**
	comp=N,9.0nm,0.5s						

ZALV	**Zalesovo Beam**	**18.66**	**24**	P	**P**	**10 47 40.9**	**+0.8**
	comp=N,0.4nm,0.3s,baz=237,slow=9.8,SNR=3.2						
ARCES	**ARCESS Array B**	**40.64**	**337**	P	**P**	**10 50 59.7**	**+0.4**
	comp=N,7.8nm,1.2s,mb4.2,baz=104,slow=8.9,SNR=5.2						
TORD	**Torodi Ar. Bea**	**66.69**	**269**	P	**P**	**10 54 10.0**	**+0.3**
	comp=N,0.1nm,0.4s,mb3.0,baz=50,slow=5.9,SNR=2.9						
WRA	**Warramunga Arr**	**81.69**	**123**	P	**P**	**10 55 37.4**	**+0.9**
	comp=N,0.1nm,0.3s,mb2.9,baz=324,slow=4.7,SNR=6.7						
WB2	**Warramunga Arr**	**81.70**	**123**	*eP*	**P**	**10 55 37.6**	**+1.1**

*NIED **16** 10:44:00, 40.40N×142.30E, h41km, Mw3.5 Best double couple: M0 1.99000×10^14 NP1:φs75.00000°, δ90.00000°, λ149.00000°. NP2:φs165.00000°, δ59.00000°, λ0.00000°.*
*JMA **16** 10:44:16.6±0.1, 4037N×14227E, h40km±1km, M3.5*
JMA Felt I J1.
ISC 16 10:44:16.9±1.7, 4038N±006×1423E±01, h39km±38km, n7, σ0s22/14, 1C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.53**	**214**	⇑P	**Pn**	**10 44 27.7**	**-0.3**
JTH				*eS*	**Sn**	**10 44 35.8**	**0.0**
JANG	**Nango**	**0.56**	**270**	⇓P	**Pn**	**10 44 28.4**	**0.0**
JANG				S	**Sn**	**10 44 36.7**	**+0.1**
JKZ	**Kuzumaki**	**0.81**	**241**	⇓P	**Pn**	**10 44 32.0**	**+0.2**
JKZ				S	**Sn**	**10 44 42.7**	**+0.1**
JTM	**Tenmabayashi**	**0.99**	**295**	⇓P	**Pn**	**10 44 34.0**	**-0.3**
JTM				*eS*	**Sn**	**10 44 46.8**	**-0.2**
JOM	**Ohasama**	**1.17**	**219**	⇓P	**Pn**	**10 44 37.0**	**+0.3**
JOM				*eS*	**Sn**	**10 44 51.3**	**-0.1**
JAH	**Hinai**	**1.25**	**262**	⇓P	**Pn**	**10 44 38.1**	**+0.2**
JAH				*eS*	**Sn**	**10 44 53.2**	**-0.2**
JOT	**Ohata**	**1.35**	**318**	P	**Pn**	**10 44 39.1**	**-0.2**
JOT				*eS*	**Sn**	**10 44 56.4**	**+0.3**

*ISCJB **16** 11:08:52.6±0.7, 24.13S±005×668W±0.1, h193km±8km, mb3.7/9, Error ellipse: s-maj=15.1km s-min=8.3km az=174.2*
*NEIC **16** 11:08:53.5±0.6, 2409S×6676W, h185km±6km, mb4.2/4, Error ellipse: s-maj=11.6km s-min=7.2km az=93.0*
*IDC **16** 11:08:54.1±1.2, 2405S×6679W, h187km±9km, mb3.6/7, mb1 3.7/13, mb1mx3.7/20, mbtmp3.5/13, Error ellipse: s-maj=16.9km s-min=14.7km az=27.0*
ISC 16 11:08:53.7±0.7, 2412S±006×6676W±010, h186km±8km, n30, σ0s88/30, mb3.8/9, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.48**	**307**	P	**Pn**	**11 09 37.3**	**+0.8**
	118nm,0.3s,baz=128,slow=5.7,SNR=660						
LVC				S	**Sn**	**11 10 10.1**	**+0.3**
	30nm,0.3s,baz=266,slow=20,SNR=11						
LVC	**Limon Verde**	**2.48**	**307**	P	**Pn**	**11 09 37.3**	**+0.8**
LVC				S	**Sn**	**11 10 10.1**	**+0.3**
LCO	**Las Campanas**	**6.02**	**215**	*ePn*	**Pn**	**11 10 19.7**	**-1.2**
	36nm,0.3s						
CFAA	**Coronel Fontan**	**7.57**	**190**	P	**Pn**	**11 10 41.9**	**+0.7**
	0.4nm,0.3s,baz=3.8,slow=12,SNR=62						
CFAA				S	**Sn**	**11 12 02.7**	**-3.8**
	1.3nm,0.3s,baz=260,slow=19,SNR=20						
LPAZ	**La Paz**	**7.90**	**350**	P	**Pn**	**11 10 45.7**	**0.0**
	0.7nm,0.3s,baz=158,slow=9.0,SNR=13						
LPAZ				S	**Sn**	**11 12 09.6**	**-4.9**
	0.7nm,0.3s,baz=77,slow=14,SNR=4.1						
LPAZ	**La Paz**	**7.90**	**350**	P	**Pn**	**11 10 45.7**	**0.0**
LPAZ				S	**Sn**	**11 12 09.6**	**-4.9**
SIV	**San Ignacio**	**9.69**	**34**	P	**Pn**	**11 11 07.9**	**-1.2**
	2.0nm,0.3s,baz=235,slow=11,SNR=40						
TRQA	**Tornquist**	**14.48**	**165**	*eP*	**Pn**	**11 12 09.9**	**-0.1**
	6.5nm,0.6s						
PLCA	**Paso Flores**	**16.87**	**190**	P	**Pn**	**11 12 39.2**	**+0.2**
	0.1nm,0.3s,baz=4.6,slow=14,SNR=3.8						
PLCA	**Paso Flores**	**16.87**	**190**	P	**Pn**	**11 12 39.2**	**+0.2**
BDFB	**Brasilia**	**19.52**	**68**	P	**P**	**11 13 08.0**	**+1.0**
	1.0nm,0.3s,baz=232,slow=12,SNR=9.2						
BDFB	**Brasilia**	**19.52**	**68**	*eP*	**P**	**11 13 07.7**	**+0.7**
LRAL	**Lakeview Retre**	**60.02**	**340**	*eP*	**P**	**11 18 39.4**	**-1.3**
	2.6nm,0.5s,mb4.3						
SWET	**Sewanee**	**61.75**	**342**	*eP*	**P**	**11 18 50.9**	**-1.4**
TXAR	**Lajitas Array**	**63.90**	**324**	P	**P**	**11 19 06.6**	**-0.1**
	0.6nm,0.6s,mb3.6,baz=154,slow=8.7,SNR=11						
TOA0	**Torodi Ar. Sit**	**76.40**	**69**	*eP*	**P**	**11 20 22.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**76.40**	**69**	P	**P**	**11 20 23.0**	**+0.1**
	0.5nm,0.5s,mb3.4,baz=261,slow=5.6,SNR=11						
TORD	**Torodi Ar. Bea**	**76.40**	**69**	P	**P**	**11 20 23.0**	**0.0**
PDAR	**Pinedale Array**	**77.36**	**329**	P	**P**	**11 20 28.1**	**+0.3**
	0.6nm,0.5s,mb3.5,baz=127,slow=8.1,SNR=7.9						
ULM	**Lac du Bonnet**	**78.41**	**341**	P	**P**	**11 20 32.2**	**-1.0**
	3.5nm,0.6s,mb4.2,baz=146,slow=6.5,SNR=9.0						
NVAR	**Mina Array Bea**	**78.77**	**321**	P	**P**	**11 20 36.4**	**+0.8**
	0.5nm,0.7s,mb3.3,baz=163,slow=7.5,SNR=4.7						
HLID	**Hailey**	**80.31**	**327**	*eP*	**P**	**11 20 45.2**	**+1.5**
	2.9nm,0.9s,mb3.9						
ESDC	**Sonseca Array**	**86.33**	**43**	P	**P**	**11 21 16.0**	**+1.4**
	0.5nm,0.7s,mb3.3,baz=253,slow=3.9,SNR=3.4						
YKA	**Yellowknife Ar**	**94.31**	**340**	P	**P**	**11 21 51.0**	**-0.3**
	1.3nm,0.5s,mb4.3,baz=133,slow=4.5,SNR=5.9						
YKA	**Yellowknife Ar**	**94.31**	**340**	P	**P**	**11 21 51.0**	**-0.3**
ASAR	**Alice Springs**	**128.44**	**204**	PKP	PKPdf	11 27 39.2	+0.4
	0.4nm,0.7s,baz=132,slow=2.0,SNR=7.6						
WRA	**Warramunga Arr**	**131.62**	**207**	PKP	PKPdf	11 27 45.1	+0.1
	0.4nm,0.5s,baz=162,slow=1.6,SNR=4.3						
WRA				SKPbc	SKPbc	11 30 52.6	-0.5
	0.9nm,0.9s,baz=156,slow=3.7,SNR=5.9						
ZALV	**Zalesovo Beam**	**143.39**	**28**	PKP	PKPdf	11 28 04.1	-1.4
	1.7nm,0.6s,baz=316,slow=4.1,SNR=5.3						
ZALV	**Zalesovo Beam**	**143.39**	**28**	PKP	PKPdf	11 28 04.1	-1.4
MKAR	**Makanchi Array**	**146.47**	**40**	PKPbc	PKPbc	11 28 13.0	+0.3
	2.6nm,0.6s,baz=306,slow=2.9,SNR=13						

*KRSC **16** 11:14:53.0±1.1, 4991N×157.12E, h5km±5km, ML4.1*
*ISCJB **16** 11:14:54.2±1.5, 4975N±010×1570E±0.1, h57km±18km, mb3.2/2, Error ellipse: s-maj=18.8km s-min=9.8km az=143.8*
*MOS **16** 11:14:55.0±0.8, 4997N×15650E, h75km, mb4.3/1, Error ellipse: s-maj=77.9km s-min=13.4km az=72.9*
*IDC **16** 11:14:57.8±7.9, 4994N×15636E, h85km±89km, mb3.1/2, mb1 3.4/3, mb1mx3.1/22, mbtmp3.1/3, ML3.2/1, Error ellipse: s-maj=166.9km s-min=39.2km az=135.0*
ISC 16 11:14:55.6±1.6, 498N±01×1569E±01, h53km±20km, n15, σ0s95/23, mb3.2/2, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.07**	**331**	⇓*i*PN	**Pn**	**11 15 12.5**	**-1.7**
SKR				*i* S	**Sn**	**11 15 27.0**	**-1.1**
SKR				pmax	pmax		
	comp=N,50nm,0.2s						
SKR				pmax	pmax		
	comp=E,40nm,0.2s						
SKR				pmax	pmax		
	comp=Z,90nm,0.2s						
SKR				smax			
	comp=N,3μm,0.2s						
SKR				smax			
	comp=E,150nm,0.5s						
ALID	**Alaid**	**1.43**	**322**	P	**Pn**	**11 15 18.7**	**-0.4**
ALID				*i* S	**Sn**	**11 15 37.7**	**+1.0**
MIPR	**Malaya Ipel'ka**	**2.53**	**358**	*eP*	**Pn**	**11 15 34.5**	**+0.4**
MIPR				*i* S	**Sn**	**11 16 04.4**	**+0.7**
RUS	**Russkaya**	**2.87**	**20**	*eP*	**Pn**	**11 15 38.2**	**-0.5**
RUS				*i* S	**Sn**	**11 16 10.6**	**-1.3**
GRL	**Gorelyy**	**2.90**	**14**	P	**Pn**	**11 15 39.8**	**+0.7**
PETK	**Petropavlovsk-**	**3.40**	**8**	P	**Pn**	**11 15 47.0**	**+1.1**
	comp=E,2.5nm,0.3s,baz=167,slow=15,SNR=133						
PET	**Petropavlovsk**	**3.45**	**18**	*ePN*	**Pn**	**11 15 47.3**	**+0.6**
PET				*eS*	**Sn**	**11 16 27.6**	**+1.3**
PET				pmax	pmax		
	comp=Z,16nm,0.4s						
PET				smax			
	comp=N,78nm,0.4s						
PET				smax			
	comp=E,81nm,0.5s						
PET	**Petropavlovsk**	**3.45**	**18**	*eP*	**Pn**	**11 15 46.9**	**+0.2**
PET				*i* S	**Sn**	**11 16 26.3**	**0.0**
NLC	**Nalytchevo**	**3.74**	**23**	*eP*	**Pn**	**11 15 50.1**	**-0.6**
NLC				*i* S	**Sn**	**11 16 31.6**	**-1.9**
SPN	**Mys Shipunski**	**3.87**	**29**	P	**Pn**	**11 15 53.0**	**+0.5**
SPN				*i* S	**Sn**	**11 16 36.3**	**-0.3**
GNL	**Ganaly**	**4.00**	**9**	*eP*	**Pn**	**11 15 55.5**	**+1.3**

KMNR	**Kamenistaya**	**6.34**	**17**	P	**Pn**	**11 16 27.7**	**+1.4**
KBTR	**Krutoberegovo**	**7.38**	**27**	P	**Pn**	**11 16 40.4**	**-0.1**
TXAR	**Lajitas Array**	**73.84**	**64**	P	**P**	**11 26 24.8**	**+0.3**
	comp=E,0.2nm,0.6s,mb3.2,baz=298,slow=4.1,SNR=5.3						
ASAR	**Alice Springs**	**75.90**	**202**	P	**P**	**11 26 35.2**	**-1.0**
	comp=E,0.2nm,0.6s,mb3.3,baz=15,slow=6.1,SNR=4.4						

IDC 16 11:23:03.1±5.8, 071S×10194E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/17, mbtmp3.5/3, Error ellipse: s-maj=326.3km s-min=28.6km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.01**	**123**	P	P	11 30 14.9	+0.1
	0.3nm,0.9s,baz=302,slow=9.1,SNR=4.9						
ASAR	**Alice Springs**	**38.48**	**129**	P	P	11 30 27.1	-0.1
	0.4nm,0.5s,baz=302,slow=8.0,SNR=13						
MKAR	**Makanchi Array**	**50.36**	**343**	P	P	11 32 01.9	0.0
	0.6nm,0.6s,baz=145,slow=7.1,SNR=4.8						

*CSEM **16** 11:28:41.3, 3025N×3637E, h6km, ML2.9, After SNSN*
*SGS **16** 11:28:41.3, 3025N×3637E, h6km*
*ISCJB **16** 11:28:44.9±1.3, 2986N±006×3625E±0.1, h0km, Error ellipse: s-maj=15.0km s-min=6.3km az=150.6*
*GII **16** 11:28:46.3±0.3, 2987N×3608E, h0km, EXPLOSION*
ISC 16 11:28:45.1±1.3, 2985N±006×3620E±010, h0km, n13, σ0s57/13, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.00**	**263**	Pg	**Pg**	**11 29 04.6**	**+0.3**
HRFI	**Mount Harif**	**1.02**	**281**	Pg	**Pg**	**11 29 04.9**	**+0.2**
EIL	**Elat**	**1.10**	**261**	Pg	**Pg**	**11 29 06.2**	**+0.1**
MBRI	**Mt Berech**	**1.12**	**267**	Pg	**Pg**	**11 29 06.6**	**+0.1**
ZFRI	**Zfri**	**1.13**	**309**	Pg	**Pg**	**11 29 07.0**	**+0.3**
HQLS		**1.13**	**241**	P	**Pg**	**11 29 06.4**	**-0.3**
PRNI	**Paran**	**1.15**	**296**	Pg	**Pg**	**11 29 06.9**	**-0.2**
JLOS		**1.27**	**209**	P	**Pg**	**11 29 09.5**	**+0.1**
KRMI	**Paran Flat**	**1.30**	**282**	Pg	**Pg**	**11 29 09.8**	**-0.2**
MZDA	**Masada**	**1.62**	**334**	Pn	**Pn**	**11 29 15.2**	**+0.3**
TBKS	**Tabuk**	**1.65**	**169**	S	**Sn**	**11 29 38.5**	**+1.3**
TBKS	**Tabuk**	**1.65**	**169**	P	**Pn**	**11 29 14.0**	**-1.3**
BDAS	**Al Bad'**	**1.71**	**214**	P	**Pn**	**11 29 15.5**	**-0.6**

CASC 16 11:30:46.3±2.3, 941N×8439W, h28km±5km, MD4.0, ML3.1, 7C-6D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.50**	**49**	⇑*eP*	**Pb**	**11 30 56.8**	**+0.1**
PRS1	**Puriscal**	**0.57**	**8**	⇑*iP*	**Pb**	**11 30 56.2**	**-1.6**
CGA2	**Cerro Gallo 2**	**0.60**	**353**	⇑*iP*	**Pb**	**11 30 58.2**	**-0.2**
SJS	**Escuela Geolog**	**0.62**	**32**	⇑*eP*	**Pb**	**11 30 58.5**	**-0.1**
SJS				*eS*	**Sb**	**11 31 07.7**	**+0.7**
BUS	**Buena Vista**	**0.64**	**77**	⇓*iP*	**Pb**	**11 30 59.4**	**+0.4**
CAO	**Cobano**	**0.76**	**292**	⇑*iP*	**Pb**	**11 31 00.2**	**-0.7**
JCR	**Jicaral**	**0.83**	**301**	⇓*iP*	**Pn**	**11 31 01.4**	**-0.8**
JCR				*eS*	**Sb**	**11 31 13.3**	**+0.2**
BAR1		**1.08**	**99**	⇑*iP*	**Pn**	**11 31 05.8**	**+0.3**
BAR1				*eS*	**Sn**	**11 31 19.2**	**-0.3**
FORC	**Fortuna**	**1.09**	**345**	⇓*eP*	**Pn**	**11 31 05.8**	**+0.1**
FORC				*eS*	**Sn**	**11 31 20.6**	**+0.8**
2RIO	**Dos Rios de Up**	**1.39**	**323**	*eP*	**Pn**	**11 31 15.2**	**+5.5**
VCR	**Vista de Mar**	**1.41**	**300**	*eP*	**Pn**	**11 31 09.3**	**-0.9**
ACR	**Cerro Adams**	**1.42**	**122**	⇑*eP*	**Pn**	**11 31 10.0**	**-0.3**
ACR				*eS*	**Sn**	**11 31 27.6**	**-0.4**
LIO	**Limon**	**1.46**	**66**	⇓*eP*	**Pn**	**11 31 10.5**	**-0.3**
CUI		**1.47**	**328**	⇓*eP*	**Pn**	**11 31 10.7**	**-0.1**
CUI				*eS*	**Sn**	**11 31 27.0**	**-2.1**
CTCR	**Cotoan**	**1.69**	**108**	*eP*	**Pn**	**11 31 14.2**	**+0.3**
BRU2	**Volcan**	**1.79**	**110**	*eP*	**Pn**	**11 31 15.6**	**+0.3**
CNI	**Changuinola**	**1.85**	**90**	⇓*eP*	**Pn**	**11 31 16.8**	**+0.6**
COPN	**Copaltepe**	**3.50**	**322**	*eP*	**Pn**	**11 31 39.5**	**+0.6**
BCIP	**Isla Barro Col**	**4.50**	**93**	*eP*	**Pn**	**11 31 53.2**	**+0.6**
LAPE	**La Pedrera**	**12.81**	**97**	*eP*	**Px**	**11 31 14.5**	
LAPE				*eS*	**Sx**	**11 31 35.5**	
PTP	**Ponta Puerca**	**20.21**	**62**	*eP*	**Px**	**11 31 19.1**	

*SZGRF **16** 11:37:30.8, 6.15S×102.44E, h47km, mb5.8, Southwest of Sumatera, Indonesia*
*BJI **16** 11:37:41.1, 3.11S×100.99E, h35km, mB5.3, mb5.4, Ms5.1, Ms2.4

7µm,0.7s,SNR=9.0
COCO West Island 10.14 204 Pn **Pn** 11 40 03.9 -4.9
BSI Banda Aceh 10.16 325 P **Pn** 11 40 07.2 -1.9
0.0nm,0.0s
KSM Kuching 10.19 65 ⇑P **Pn** 11 40 12.0 +2.3
KSM Kuching 10.19 65 *e*Pn **Pn** 11 40 10.8 +1.2
PBKI Pangkalan Bun 10.57 89 P **Pn** 11 40 18.1 +3.3
0.0nm,0.0s
STKI Sintang 10.80 74 P **Pn** 11 40 21.1 +3.2
0.0nm,0.0s
SJI Sawahan 11.66 115 P **Pn** 11 40 30.5 +0.8
0.0nm,0.0s
SBUM Sibu 12.34 65 ⇑P **Pn** 11 40 43.5 +4.6
TRT Tretes 12.44 113⇑ *e*P **Pn** 11 40 40.0 -0.4
TRT Tretes 12.44 113⇑ *e*P **Pn** 11 40 40.0 -0.4
KRKI Karangkates 12.45 115 P **Pn** 11 40 42.2 +1.7
0.0nm,0.0s
BTM Bintulu 13.44 63 ⇑P **Pn** 11 40 58.7 +4.7
KMMI Kalianget 13.47 108 P **Pn** 11 40 52.4 -2.0
0.0nm,0.0s
IGBI Denpasar 15.16 113 P **Pn** 11 41 15.8 -1.2
0.0nm,0.0s
KHKI Kahang-Kahang 15.43 111 P **Pn** 11 41 18.3 -2.2
0.0nm,0.0s
NNT Nongplab 15.46 355 P **Pn** 11 41 21.8 +1.0
MTNI Mataram 16.04 111 P **Pn** 11 41 24.6 -3.7
0.0nm,0.0s
KKM Kota Kinabalu 17.53 60 ⇓P **Pn** 11 41 51.0 +4.1
KKM Kota Kinabalu 17.53 60 *e*Pn **Pn** 11 41 48.3 +1.4
SDKM Sandakan 18.19 62 ⇓P **Pn** 11 41 57.3 +2.2
TSM Tawau 18.23 67 ⇑P **Pn** 11 41 57.5 +1.9
UBT Ubonrachathani 18.45 12 ⇑P **Pn** 11 41 57.0 -1.2
NST Nakhon Sawan 18.49 357 P **Pn** 11 41 50.5 -8.1
45nm,0.7s
KDM Kudat 18.50 58 ⇑P **Pn** 11 42 01.3 +2.5
KAPI Kappang 18.73 97 Pn **Pn** 11 42 00.9 -0.8
3µm,1.0s,SNR=12
KAPI Kappang 18.73 97 P **Pn** 11 42 00.2 -1.4
17nm,0.3s,baz=276,slow=12,SNR=44
KAPI PcP PcP 11 46 26.5 -0.9
0.6nm,0.3s,baz=254,slow=5.7,SNR=4.0
KAPI LR LR 11 50 07.5
comp=Z,2µm,18.7s,baz=283,slow=40
KAPI Kappang 18.73 97 *e*Pn **Pn** 11 42 00.3 -1.3
PCI Palu 18.84 84 P **Pn** 11 42 03.6 +0.6
0.0nm,0.0s
MYLDM Lahad Datu 19.16 65 ⇓P **Pn** 11 42 08.7 +1.9
KKTK Khon Kaen 19.20 5 P **Pn** 11 42 04.0 -3.1
1µm,0.5s
BDT Bhumibol Dam 20.13 354 P **P** 11 42 13.0 -3.0
31nm,0.9s
BATP Bataraza 20.32 55 *e*P **P** 11 42 19.3 +1.2
CMAR Chiang Mai Arr 21.34 354 P **P** 11 42 26.3 -2.7
64nm,0.8s,mb5.0,baz=184,slow=10,SNR=173
CMAR PcP PcP 11 46 32.0 0.0
12nm,0.8s,baz=211,slow=3.0,SNR=12
CMAR ScP ScP 11 50 03.8 -1.5
7.4nm,0.9s,baz=214,slow=3.4,SNR=13
CMAR LR LR 11 51 35.7
comp=Z,2µm,18.7s,MS4.5,baz=178,slow=39
CMAR Chiang Mai Arr 21.34 354 P **P** 11 42 26.3 -2.7
CMAR 11 46 32.0
KDI Kendari 21.52 93 P **P** 11 42 31.9 +0.8
0.0nm,0.0s
BBSI Bau Bau 21.58 98 P **P** 11 42 32.3 +0.6
0.0nm,0.0s
NANT Nan 21.58 359 ⇓P **P** 11 42 30.0 -1.6
340nm,0.8s,mb5.8
PPR Puerto Princes 21.63 54⇑ *i*P **P** 11 42 30.8 -1.4
CHG Chiang Mai 21.69 354 ⇓P **P** 11 42 24.9 -7.9
52nm,0.8s,mb5.0
CHRT Chiangrai 22.67 357 ⇑P **P** 11 42 40.5 -2.7
890nm,0.9s,mb6.2
PALK Pallekele 22.72 297 *e*P **P** 11 42 44.9 +1.1
86nm,1.0s,mb5.1
PALK LR LR
comp=Z,529nm,20.0s,MS4.0
QIZ Qiongzhong 23.44 21 P **P** 11 42 50.3 -0.8
QIZ XP sP 11 43 04.3 -4.5
QIZ S **S** **11 47 04.8 +3.8**
QIZ AMB AMB
comp=Z,119nm,1.5s,mb5.1
QIZ LR LR
comp=N,2µm,22.2s
QIZ LR LR
comp=Z,2µm,23.9s,MS4.5
QIZ Qiongzhong 23.44 21 *e*P **P** 11 42 49.8 -1.3
comp=Z,264nm,1.4s,mb5.5
QIZ LR LR
comp=Z,2µm,21.0s,MS4.6
BATI Baumata 23.55 109 P **P** 11 42 49.9 -2.4
comp=Z,0.0nm,0.0s
BATI Baumata 23.55 109 P **P** 11 42 50.0 -2.2
comp=Z,118nm,0.8s,mb5.4,baz=141,slow=3.8,SNR=9.7
BATI S **S** **11 46 54.3 -8.7**
comp=Z,51nm,0.5s,baz=196,slow=1.1,SNR=4.3
CUYO Cuyo Island 24.09 55 *e*P **P** 11 42 57.3 +0.2
BUSP Coron 24.09 52 *e*P **P** 11 42 57.5 +0.4
MNI Manado 24.14 80 P **P** 11 42 58.9 +1.3
comp=Z,1µm,1.0s,mb6.2
PAGZ Pagadian 24.68 64 *e*P **P** 11 43 03.2 +0.7
DCPH Dipolog City 24.96 63⇑ *e*P **P** 11 43 07.2 +2.1
SJMP San Jose 25.08 52 *e*P **P** 11 43 06.5 +0.3
LUBP Lubang 25.19 49 *e*P **P** 11 43 06.9 -0.2
GUIM Jordan 25.28 58 *e*P **P** 11 43 08.8 +0.9
MBWA Marble Bar 25.66 136 *e*P **P** 11 43 11.4 +0.1
comp=Z,111nm,1.1s,mb5.3
MBWA LR LR
comp=Z,2µm,21.0s,MS4.5
OTRP Odiongan 25.75 53 *e*P **P** 11 43 12.6 +0.4
RCP Roxas 25.89 56⇑ *e*P **P** 11 43 14.3 +0.8
BUKP Musuan 26.21 66 *e*P **P** 11 43 15.7 -0.7
SCZP Santa Cruz 26.29 45 *e*P **P** 11 43 17.2 +0.1
LLP Lapu-Lapu 26.30 60⇓ *e*P **P** 11 43 18.4 +1.2
LLP *e*S pP 11 43 34.5 +4.9
DAV Davao City (W) 26.38 68 P **P** 11 43 16.1 -1.9
comp=Z,170nm,0.4s,mb5.9,baz=165,slow=2.9,SNR=6.2
DAV LR LR 11 54 42.5
comp=Z,1µm,20.9s,MS4.5,baz=251,slow=39
DAV Davao City (W) 26.38 68⇓ *e*P **P** 11 43 18.8 +0.9
DAV Davao City (W) 26.38 68 *e*P **P** 11 43 18.8 +0.8
DAV LR LR
comp=Z,2µm,22.0s,MS4.7
LBMI Labuha 26.50 86 P **P** 11 43 17.4 -1.6
comp=Z,0.0nm,0.0s
BOLP Bolinao 26.71 44 *e*P **P** 11 43 20.2 -0.6
KOD Kodaikanal 26.90 299 *e*P **P** 11 43 24.6 +2.0
KOD AMb AMB 11 43 43.9
comp=Z,77nm,1.1s,mb5.2
VIS Vishakhapatnam 26.96 320 *e*P **P** 11 43 22.6 -0.5
VIS AMb AMB 11 43 27.5
comp=Z,152nm,1.0s,mb5.5
BWNR Bhubaneshwar 27.51 328 *e*P **P** 11 43 27.0 -1.0
BWNR *ex* x 11 48 03.0
KMI Kunming 27.91 3 P **P** 11 43 31.8 +0.3
KMI AP pP 11 43 43.8 -0.2
KMI XP sP 11 43 48.0 -1.8
KMI PP PP 11 44 23.4 -12
KMI PCP PcP 11 46 46.9 +0.5
KMI S **S** **11 48 12.6 +0.6**
KMI XS sS 11 48 31.5 -1.6
KMI SS 11 49 39.3
KMI PCS PcS 11 50 27.6 -0.9
KMI SCS ScS 11 54 16.8 +0.9
KMI AMB AMB
comp=Z,33nm,0.8s,mb5.0
KMI LR LR
comp=N,2µm,16.1s,MS4.9
KMI LR LR
comp=E,2µm,16.5s,MS4.9
KMI LR LR
comp=Z,3µm,16.9s,MS4.9
PVCP Virac 28.15 54 *e*P **P** 11 43 33.1 -0.7
IMP Imphal 28.39 346 *e*P **P** 11 43 35.0 -0.8
IMP *ex* x 11 46 05.0
FITZ Fitzroy Crossi 28.41 124 *e*P **P** 11 43 34.4 -1.7
comp=Z,75nm,0.6s,mb5.5
FITZ *e*PCP PcP 11 46 47.9 +0.2
FITZ *e*S **S** **11 48 13.2 -6.8**
FITZ Fitzroy Crossi 28.41 124 P **P** 11 43 34.8 -1.2
comp=Z,67nm,1.0s,mb5.2,baz=299,slow=7.4,SNR=55
FITZ LR LR 11 56 05.2
comp=Z,549nm,20.5s,MS4.1,baz=302,slow=39
CAUP Cauayan 28.43 45 *e*P **P** 11 43 35.2 -1.1
GZH Guangzhou 28.47 24 P **P** 11 43 42.4 +5.9
GZH LR LR
comp=N,1µm,20.4s,MS4.6
GZH LR LR
comp=E,1µm,17.9s,MS4.6
GZH LR LR
comp=Z,2µm,17.0s,MS4.7
APYP Conner 28.65 43 *e*P **P** 11 43 35.9 -2.3
DGAR Diego Garcia 28.86 260 PFAKE 11 43 50.0 +10
DGAR LR LR
comp=Z,2µm,20.0s,MS4.7
SHL Shillong 29.68 343 *ex* x 11 46 53.5
GYA Guiyang 29.69 10⇑ *i*P **P** **11 43 46.9 -0.4**
GYA AP pP 11 43 56.0 -3.9
GYA XP sP 11 44 00.5 -5.1
GYA PP PP 11 44 43.0 -12
GYA PCP PcP 11 46 50.5 -0.3
GYA S **S** **11 48 37.4 -2.5**
GYA SCP ScP 11 50 30.4 +1.4
GYA PCS PcS 11 50 35.8 +1.7
GYA SCS ScS 11 54 23.4 -0.6
GYA AMB AMB
comp=Z,60nm,0.8s,mb5.4
GYA AMB AMB
comp=Z,730nm,6.0s
GYA LR LR
comp=N,4µm,15.0s,MS5.3
GYA LR LR
comp=E,4µm,16.0s,MS5.3
GYA LR LR
comp=Z,5µm,15.1s,MS5.3
HYB Hyderabad 30.04 313 *i* P **P** **11 43 51.0 +0.5**
SWI Sorong 30.22 87 P **P** **11 43 51.0 -1.3**
comp=Z,0.0nm,0.0s
BOK Bokaro 30.39 332 *e*P **P** **11 43 52.5 -1.0**
BOK AMb AMB 11 43 57.2
comp=Z,329nm,1.0s,mb6.0
SHBG Sahibganj 30.84 336 *ex* x 11 43 24.2
TLE Tual 31.67 96 P **P** **11 44 07.8 +2.7**
comp=Z,0.0nm,0.0s
LATR Latur 32.13 312 *e*P **P** **11 44 09.9 +0.9**
LATR AMb AMB 11 44 10.5
comp=Z,57nm,2.8s,mb4.9
NGP Nagpur 32.21 319 *e*P **P** **11 44 07.5 -2.1**
NGP AMb AMB 11 44 09.6
comp=Z,82nm,1.0s,mb5.5
MUN Mundaring 32.23 155 *e*P **P** **11 44 10.3 +0.7**
MUN *es*P sP 11 44 24.0 -3.9
ODAN Odare 32.42 337 *e*P **P** **11 44 12.3 +0.9**
comp=Z,939nm,0.7s,mb6.7
QZH Quanzhou 32.49 31⇑ *i*P **P** **11 44 11.3 -0.7**
QZH XP sP 11 44 24.8 -5.5
QZH S **S** **11 49 21.0 -2.8**
QZH AMB AMB
comp=Z,200nm,1.0s,mb5.9
QZH LR LR
comp=N,2µm,16.3s,MS5.2
QZH LR LR
comp=E,4µm,20.9s,MS5.2
QZH LR LR
comp=Z,3µm,23.5s,MS4.9
KLBR Kellerberrin 32.57 153 *e*P **P** **11 44 12.8 +0.2**
comp=Z,33nm,1.1s,mb5.2
TAPN Taplejung 32.73 338 *e*P **P** **11 44 15.5 +1.4**
comp=Z,2µm,0.9s,mb6.9
RAMN Ramite 32.82 336 *e*P **P** **11 44 16.1 +1.2**
comp=Z,349nm,0.7s,mb6.4
AKL Akola 33.28 316 *e*P **P** **11 44 15.9 -3.2**
AKL AMb AMB 11 44 20.8
comp=Z,44nm,2.2s,mb5.0
KAD Karad 33.29 308 *e*P **P** **11 44 19.4 +0.3**
KAD AMb AMB 11 44 36.2
comp=Z,119nm,1.7s,mb5.5
NWAO Narrogin (SRO) 33.48 155 P **P** **11 44 21.2 +0.6**
comp=Z,41nm,0.7s,mb5.4,baz=324,slow=9.4,SNR=20
NWAO LR LR 11 56 02.7
comp=Z,2µm,21.9s,MS4.9,baz=332,slow=33
NACB Ninganchiao 33.51 35 *e*P **P** **11 44 21.0 +0.1**
comp=Z,395nm,0.8s,mb6.4
JIRN Jiri 33.61 336 *e*P **P** **11 44 23.1 +1.3**
comp=Z,1µm,0.9s,mb6.8
CD2 Chengdu 33.73 4⇓ *i*P **P** **11 44 21.1 -1.6**
CD2 AP pP 11 44 30.8 -4.6
CD2 XP sP 11 44 35.3 -5.8
CD2 PP PP 11 45 35.6 -4.2
CD2 PCP PcP 11 46 58.8 -2.8
CD2 S **S** **11 49 43.3 +0.4**
CD2 XS sS 11 49 59.3 -4.8
CD2 PCS PcS 11 50 43.8 -3.8
CD2 SS SS 11 51 51.4 -19
CD2 SCS ScS 11 54 40.4 -3.7
CD2 AMB AMB
comp=Z,70nm,0.7s,mb5.7
CD2 AMB AMB
comp=Z,220nm,6.0s
CD2 LR LR
comp=N,3µm,24.0s
CD2 LR LR
comp=E,2µm,14.4s
CD2 LR LR
comp=Z,3µm,19.2s,MS5.1
YHNB Yeheng 33.76 35 *e*P **P** **11 44 23.1 -0.1**
comp=Z,112nm,1.0s,mb5.8
YHNB LR LR
comp=Z,1µm,22.0s,MS4.5
LSA Lhasa 33.79 344 P **P** **11 44 23.0 -0.3**
LSA Lhasa 33.79 344 *e*P **P** **11 44 23.4 +0.1**
LSA pmax pmax
comp=Z,44nm,0.8s,mb5.4
LSA MLR MLR
comp=Z,798nm,20.0s,MS4.4
LSA Lhasa 33.79 344 *e*P **P** **11 44 23.4 +0.1**
comp=Z,44nm,0.8s,mb5.4
LSA LR LR
comp=Z,798nm,20.0s,MS4.4
PKI Pulchoki 33.86 334 *e*P **P** **11 44 24.8 +0.8**
comp=Z,386nm,1.0s,mb6.3
PKIN Phulchoki 33.87 334 *e*P **P** **11 44 24.5 +0.4**
comp=Z,211nm,0.8s,mb6.1
GUN Gumba 33.96 335 *e*P **P** **11 44 26.2 +1.4**
comp=Z,2µm,0.7s
DMN Daman 34.03 334 *e*P **P** **11 44 26.3 +0.9**
comp=Z,502nm,1.0s,mb6.4
TATO Taipei 34.06 34 PFAKE 11 44 40.0 +14
TATO LR LR
comp=Z,1µm,20.0s,MS4.6
KKN Kakani 34.11 335 *e*P **P** **11 44 27.0 +0.9**
comp=Z,671nm,0.8s,mb6.6
POO Poona 34.25 310 *e*P **P** **11 44 27.1 -0.4**
POO AMb AMB 11 44 44.5
comp=Z,105nm,1.3s,mb5.6
GKN Gorkha 34.57 334 *e*P **P** **11 44 30.9 +0.8**
KOLN Koldanda 34.84 332 *e*P **P** **11 44 33.7 +1.2**
comp=Z,404nm,0.7s,mb6.5
BAKI Biak 35.04 88 P **P** **11 44 32.5 -1.9**
comp=Z,0.0nm,0.0s
DANN Dangsing 35.26 333 *e*P **P** **11 44 37.2 +1.1**
comp=Z,694nm,0.5s,mb6.9
WHN Wuhan 35.59 20⇓ *i*P **P** **11 44 39.0 +0.1**
WHN AP pP 11 44 51.8 +0.2
WHN LR LR
comp=Z,3µm,15.0s,MS5.2
WRA Warramunga Arr 36.60 120 P **P** **11 44 46.1 -1.6**
comp=Z,56nm,0.4s,mb5.8,baz=304,slow=9.0,SNR=821
WRA PcP PcP 11 47 09.3 -0.9
comp=Z,14nm,0.7s,baz=303,slow=2.4,SNR=4.8
WRA S **S** **11 50 21.1 -6.2**
comp=Z,16nm,0.8s,baz=293,slow=16,SNR=13
WRA LR LR 12 01 43.4
comp=Z,601nm,18.4s,MS4.4,baz=315,slow=39
WRA P3KPbc 12 15 20.4
comp=Z,1.2nm,0.8s,baz=107,slow=4.2,SNR=5.6
WRA Warramunga Arr 36.60 120 P **P** **11 44 46.1 -1.6**
WRA 11 47 09.3
WRA S **S** **11 50 21.1 -6.3**
WRA Warramunga Arr 36.60 120 P **P** **11 44 46.1 -1.6**
WRA PcP PcP 11 47 09.3 -0.9
WRA S **S** **11 50 21.1 -6.2**
WRA LR LR 12 01 43.4
WRA *e* 12 15 20.4
WRAB Tennant Creek 36.60 120 P **P** **11 44 46.0 -1.7**
comp=Z,986nm,0.7s,mb6.8
WRAB Tennant Creek 36.60 120 *e*P **P** **11 44 46.2 -1.5**
WRAB *e*S **S** **11 50 20.3 -7.2**
WRAB pmax pmax
comp=Z,101nm,0.7s,mb5.8
WRAB MLR MLR
comp=Z,826nm,21.0s,MS4.5
WRAB Tennant Creek 36.60 120 *e*P **P** **11 44 46.2 -1.5**
comp=Z,101nm,0.7s,mb5.8
WRAB *e*S **S** **11 50 20.3 -7.1**
WRAB LR LR
comp=Z,826nm,21.0s,MS4.5
WB2 Warramunga Arr 36.61 120 *e*P **P** **11 44 46.1 -1.6**
WB2 *e*PCP PcP 11 47 09.4 -0.9
WB2 *e*S **S** **11 50 21.2 -6.3**
XAN Xi'an 37.48 11 P **P** **11 44 53.4 -1.5**
XAN AP pP 11 45 03.1 -4.6
XAN XP sP 11 45 07.5 -5.9
XAN PP PP 11 46 22.0 +0.7
XAN PCP PcP 11 47 14.3 +1.7
XAN S **S** **11 50 35.8 -4.6**
XAN SCP ScP 11 50 57.5 +1.3
XAN PCS PcS 11 51 01.4 +0.2
XAN SCS ScS 11 55 03.0 -1.5
XAN AMB AMB
comp=Z,279nm,0.7s,mb6.2
XAN AMB AMB
comp=Z,232nm,9.7s
XAN LR LR
comp=N,295nm,29.5s
XAN LR LR
comp=E,1µm,23.2s
XAN LR LR
comp=Z,2µm,17.4s
FORT Forrest 37.65 140 *e*P **P** **11 44 57.2 +0.8**
comp=Z,40nm,0.4s,mb5.5
FORT *e*PCP PcP 11 47 13.7 +0.4
ASAR Alice Springs 37.84 126 P **P** **11 44 57.4 -0.8**
comp=Z,28nm,0.7s,mb5.1,baz=299,slow=7.6,SNR=393
ASAR PcP PcP 11 47 13.8 -0.1
comp=Z,20nm,0.7s,baz=304,slow=2.6,SNR=9.6
ASAR S **S** **11 50 41.2 -5.0**
comp=Z,19nm,0.9s,baz=298,slow=17,SNR=18
PTH Pithoragarh 37.96 330 *e*P **P** **11 45 00.0 +0.9**
PTH *e*S **S** **11 50 51.0 +3.2**
NJ2 Nanjing 38.65 25 *e*P **P** **11 45 05.3 +0.5**
NJ2 AP pP 11 45 14.8 -2.8
NJ2 XP sP 11 45 19.1 -4.1
NJ2 PP PP 11 46 38.4 +4.4
NJ2 S **S** **11 51 02.5 +4.4**
NJ2 AMB AMB
comp=Z,20nm,1.1s,mb4.8
NJ2 AMB AMB
comp=Z,240nm,4.4s
NJ2 LR LR
comp=N,960nm,20.8s,MS4.8
NJ2 LR LR
comp=E,1µm,21.7s,MS4.8
NJ2 LR LR
comp=Z,1µm,21.7s,MS4.7
AJM Ajmer 38.82 320 *e*P **P** **11 45 06.8 +0.5**
SSE Sheshan 38.86 28 P **P** **11 45 06.9 +0.3**
SSE AP pP 11 45 17.6 -1.8
SSE PP PP 11 46 37.0 +0.6
SSE S **S** **11 51 04.8 +3.4**
SSE AMB AMB
comp=Z,51nm,1.1s,mb5.2
SSE AMB AMB
comp=Z,494nm,4.6s
SSE LR LR
comp=N,823nm,27.2s,MS4.5
SSE LR LR
comp=E,707nm,27.2s,MS4.5
SSE LR LR
comp=Z,1µm,23.4s,MS4.6
LZH Lanzhou 38.88 4⇓P **P** **11 45 06.0 -0.6**
LZH AP pP 11 45 16.3 -3.2
LZH XP sP 11 45 21.3 -3.8
LZH PP PP 11 46 40.3 +3.8
LZH S **S** **11 51 01.3 -0.1**
LZH XS sS 11 51 18.1 -4.8
LZH SS SS 11 53 50.6 -3.9
LZH AMB AMB
comp=Z,60nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,340nm,4.8s
LZH LR LR
comp=N,470nm,14.0s
LZH LR LR
comp=Z,780nm,15.3s,MS4.7
NDI New Delhi 38.89 326⇑ *i*P **P** **11 45 05.5 -1.3**
comp=Z,28nm,0.4s,mb5.3
NDI *ex* x 11 51 06.0
JAY Jayapura 39.57 90 P **P** **11 45 10.0 -2.8**
comp=Z,0.0nm,0.0s
DDI Dehra Dun 39.70 328⇑ *i*P **P** **11 45 12.0 -1.6**
DDI *ex* x 11 51 05.0
BHJ Bhuj 40.19 312 *e*P **P** **11 45 17.1 -0.6**
SMLA Simla 40.80 328 *i* P **P** **11 45 23.0 +0.3**
SMLA *ex* x 11 45 24.1
comp=Z,884nm,0.7s
SMLA *i* x x 11 51 49.7
SDNR Sundarnagar 41.20 328 *e*P **P** **11 45 26.6 +0.6**
BHK Bhakra 41.43 327 *e*P **P** **11 45 28.0 +0.1**
TIA Tai'an 41.70 20⇑P **P** **11 45 29.0 -1.0**
PONG Pong 42.09 327 *ex* x 11 46 30.0
GTA Gaotai 42.13 359⇑P **P** **11 45 32.8 -0.6**
GTA AP pP 11 45 44.5 -1.9
GTA XP sP 11 45 47.5 -4.5
GTA PP PP 11 47 14.5 +2.7
GTA PCP PcP 11 47 27.5 +0.2
GTA SCP ScP 11 51 13.1 -1.0
GTA S **S** **11 51 49.8 0.0**
GTA XS sS 11 52 07.8 -3.6
GTA SCS ScS 11 55 28.6 -3.1
GTA AMB AMB
comp=Z,17nm,0.6s,mb4.8
GTA AMB AMB
comp=Z,322nm,5.1s
GTA LR LR
comp=N,2µm,17.4s,MS5.0
GTA LR LR
comp=E,928nm,18.6s,MS5.0
GTA LR LR
comp=Z,2µm,19.8s,MS5.0
DLH Dalhousie 42.54 328 *e*P **P** **11 45 37.0 +0.1**
DLH *ex* x 11 45 43.0
THN Thein Dam 42.59 328 *e*P **P** **11 45 36.3 -1.0**
THN *ex* x 11 52 09.4
COEN Coen 42.97 107 *e*P **P** **11 45 39.1 -1.6**
comp=Z,6.3nm,0.8s,mb4.4
COEN *e*PcP PcP 11 47 30.1 -0.5
BTO Baotou 44.07 10 *e*P **P** **11 45 48.1 -1.0**
HHC Hu-ho-hao-te 44.59 11 *i* P **P** **11 45 53.8 +0.5**
HHC AP pP 11 46 04.1 -2.2
HHC XP sP 11 46 08.1 -3.8
HHC PCP PcP 11 47 36.0 +0.4
HHC PP PP 11 47 39.0 +0.9
HHC SCP ScP 11 51 24.4 +0.4
HHC PCS PcS 11 51 28.3 -0.6
HHC S **S** **11 52 28.0 +2.2**
HHC XS sS 11 52 45.0 -2.5
HHC SS SS 11 55 40.8 -6.3
HHC SCS ScS 11 55 46.5 -0.5
HHC AMB AMB
comp=Z,61nm,0.8s,mb5.5
HHC AMB AMB
comp=Z,390nm,6.9s
HHC LR LR
comp=N,1µm,14.5s,MS5.0
HHC LR LR
comp=E,918nm,14.0s,MS5.0
HHC LR LR
comp=Z,1µm,13.7s,MS4.9
BJT Baijiatuau 44.90 16 *e*P **P** **11 45 55.6 -0.2**
BJT pmax pmax
comp=Z,28nm,0.6s
BJT MLR MLR
comp=Z,3µm,20.0s
BJT Baijiatuau 44.90 16 *e*P **P** **11 45 55.6 -0.2**
comp=Z,28nm,0.6s,mb5.3
BJT LR LR
comp=Z,3µm,20.0s,MS5.2
BJI Beijing 44.93 16 P **P** **11 45 55.8 -0.2**
BJI S **S** **11 52 29.5 -1.2**
BJI AMB AMB
comp=Z,45nm,0.5s,mb5.5
BJI AMB AMB
comp=Z,387nm,5.4s

BJI LR LR
comp=E,1μm,18.8s,MS5.1
BJI LR LR
comp=N,2μm,19.6s,MS5.1
BJI LR LR
comp=Z,2μm,21.9s,MS5.0
MSEY Mahe Island 45.54 266 PFAKE 11 46 10.0 +8.7
MSEY LR LR
comp=Z,843nm,22.0s,MS4.6
DL2 Dalian 45.72 22 ⇑P **P** **11 46 02.0 -0.3**
DL2 XP sP 11 46 14.1 -6.8
DL2 *e*S **S** **11 52 43.3 +1.1**
DL2 AMB AMB
comp=Z,20nm,0.6s,mb5.2
DL2 AMB AMB
comp=Z,150nm,6.4s
DL2 LR LR
comp=N,580nm,19.0s,MS4.6
DL2 LR LR
comp=E,310nm,17.2s,MS4.6
DL2 LR LR
comp=Z,700nm,19.6s,MS4.6
PMG Port Moresby 46.22 100 *e*P **P** **11 46 04.7 -2.0**
PMG MLR MLR
comp=Z,601nm,20.0s
INCN Inchon 46.66 28 PFAKE 11 46 20.0 +10
INCN LR LR
comp=Z,914nm,20.0s,MS4.7
CTA Charters Tower 47.23 115 *e*P **P** **11 46 13.3 -1.2**
comp=Z,76nm,0.8s,mb5.7
CTA *e*S **S** **11 52 59.1 -5.3**
CTA Charters Tower 47.23 115 LR LR 12 07 57.2
comp=Z,569nm,19.8s,MS4.5,baz=183,slow=38
CTA Charters Tower 47.23 115 *e*P **P** **11 46 13.3 -1.2**
CTA *e*S **S** **11 52 59.1 -5.3**
CTA pmax pmax
comp=Z,76nm,0.8s
CTAO Charters Tower 47.23 115 *e*P **P** **11 46 13.3 -1.2**
CTAO pmax pmax
comp=Z,106nm,0.8s,mb5.8
CTAO MLR MLR
comp=Z,718nm,19.0s,MS4.7
CTAO Charters Tower 47.23 115 *e*P **P** **11 46 13.3 -1.2**
comp=Z,106nm,0.8s,mb5.8
CTAO LR LR
comp=Z,718nm,19.0s,MS4.7
KSRS Korea Array 47.26 29 P **P** **11 46 13.8 -0.6**
comp=Z,33nm,0.9s,mb5.3,baz=224,slow=7.8,SNR=46
KSRS LR LR 12 08 17.5
comp=Z,520nm,19.1s,MS4.5,baz=238,slow=39
KSRS Korea Array 47.26 29 P **P** **11 46 13.8 -0.6**
KSRS pmax pmax
comp=Z,33nm,0.9s,mb5.3
KSRS MLR MLR
comp=Z,520nm,19.1s,MS4.5
STKA Stephens Creek 47.74 132 *e*P **P** **11 46 17.8 -0.4**
comp=Z,115nm,0.8s,mb6.0
STKA *e*S **S** **11 53 06.7 -4.6**
STKA Stephens Creek 47.74 132 P **P** **11 46 18.0 -0.2**
comp=Z,40nm,0.6s,mb5.7,baz=307,slow=7.6,SNR=94
STKA S **S** **11 53 06.7 -4.6**
comp=Z,5.9nm,1.0s,baz=187,slow=19,SNR=3.4
STKA LR LR 12 06 27.4
comp=Z,1μm,21.4s,MS4.9,baz=292,slow=36
WMQ Urumqi 48.05 347 ⇑*i*P **P** **11 46 21.0 +0.6**
WMQ AP pP 11 46 31.0 -2.5
WMQ XP sP 11 46 35.0 -4.1
WMQ PCP PcP 11 47 49.0 +1.3
WMQ PP PP 11 48 14.0 +1.0
WMQ S **S** **11 53 16.0 +0.7**
WMQ XS sS 11 53 32.0 -5.3
WMQ SCS ScS 11 56 09.0 -0.4
WMQ AMB AMB
comp=Z,982nm,3.8s
WMQ LR LR
comp=N,1μm,24.7s,MS4.9
WMQ LR LR
comp=E,972nm,21.0s,MS4.9
WMQ LR LR
comp=Z,1μm,22.4s,MS4.8
KSH Kashi 48.12 334 P **P** **11 46 21.8 +0.8**
KSH *e*AP pP 11 46 30.8 -3.3
KSH *e*XP sP 11 46 34.8 -4.9
KSH *e*PCP PcP 11 47 49.3 +1.3
KSH *e*PP PP 11 48 12.3 -1.4
KSH *e*SCP ScP 11 51 39.8 +1.0
KSH *e*PCS PcS 11 51 43.8 0.0
KSH *e*S **S** **11 53 15.8 -0.6**
KSH *e*XS sS 11 53 32.0 -6.4
KSH *e*SCS ScS 11 56 08.1 -2.0
KSH *e*SS SS 11 56 39.3 -7.0
KSH LR LR
comp=N,457nm,5.5s
KSH LR LR
comp=E,561nm,5.6s
KSH LR LR
comp=Z,2μm,23.4s,MS5.0
WBK Wadi Bani Khal 48.30 304 P **P** **11 46 24.1 +1.5**
SNR=6.9
JMDO Jabal Madar 48.91 303 ⇑P **P** **11 46 28.9 +1.5**
SNR=6.4
SMDO Samad 49.26 304 P **P** **11 46 31.6 +1.6**
SNR=5.3
BIDO Bidbid 49.39 305 P **P** **11 46 32.7 +1.6**
SNR=21
BSY Bisya 49.83 303 P **P** **11 46 35.8 +1.4**
SNR=11
HOQ Hoqain 50.09 304 ⇑P **P** **11 46 37.8 +1.4**
SNR=8.8
RBK Rabkut 50.48 295 P **P** **11 46 41.0 +1.5**
SNR=7.0
KZA Kyzart 50.54 335 P **P** **11 46 40.0 +0.6**
SNR=14
ARQ Araqi 50.64 303 P **P** **11 46 41.9 +1.3**
SNR=8.8
SONM Songino Array 50.75 5 P **P** **11 46 41.3 +0.4**
comp=Z,199nm,0.8s,mb6.1,baz=184,slow=9.0,SNR=446
SONM PcP PcP 11 47 56.3 -1.1
comp=Z,11nm,0.5s,baz=183,slow=4.1,SNR=7.0
SONM ScP ScP 11 51 48.1 -1.7
comp=Z,4.9nm,1.0s,baz=198,slow=4.2,SNR=5.9
SONM LR LR 12 10 58.0
comp=Z,957nm,18.0s,MS4.9,baz=202,slow=39
SONM Songino Array 50.75 5 P **P** **11 46 41.3 +0.4**
SONM 11 47 56.3
ULN Ulaanbaatar 50.83 5 *e*P **P** **11 46 41.8 +0.3**
ULN pmax pmax
comp=Z,105nm,0.8s,mb5.8
ULN MLR MLR
comp=Z,1μm,20.0s,MS4.8
ULN Ulaanbaatar 50.83 5 *e*P **P** **11 46 41.8 +0.3**
comp=Z,105nm,0.8s,mb5.8
ULN LR LR
comp=Z,1μm,20.0s,MS4.8
WHFO Wadi Hawf 51.01 296 ⇑P **P** **11 46 44.7 +1.3**
SNR=6.7
TKM2 Tokmak 2 51.10 336 *e*P **P** **11 46 44.1 +0.5**
TKM2 *e* pP 11 46 57.2 +0.4
TKM2 pmax pmax
comp=Z,190nm,0.6s,mb6.2
TKM2 MLR MLR
comp=Z,347nm,20.0s,MS4.4
TKM2 Tokmak 2 51.10 336 P **P** **11 46 44.3 +0.7**
SNR=248
TKM2 Tokmak 2 51.10 336 *e*P **P** **11 46 44.1 +0.4**
comp=Z,190nm,0.6s,mb6.2
TKM2 *e* pP 11 46 57.2 +0.4
TKM2 LR LR
comp=Z,347nm,20.0s,MS4.4
KBK Karagaybulak 51.14 335 P **P** **11 46 45.2 +1.2**
SNR=25
AML Almayashu 51.25 334 P **P** **11 46 45.7 +0.9**
SNR=11
AML Almayashu 51.25 334 *e*P **P** **11 46 45.5 +0.8**
comp=Z,179nm,0.7s,mb6.1
AML *e* pP 11 46 59.0 +1.0
AML LR LR
comp=Z,404nm,22.0s,MS4.4
ABTO Aybut 51.25 295 P **P** **11 46 46.8 +1.5**
SNR=6.4
AAK Ala-Archa 51.31 335 P **P** **11 46 46.2 +0.9**
SNR=33
CN2 Changchun 51.39 22 ⇑P **P** **11 46 44.8 -1.0**
CN2 *e*XP sP 11 46 59.8 -4.8
CN2 *e*S **S** **11 54 01.3 -0.7**
CN2 AMB AMB
comp=Z,120nm,4.0s
CN2 LR LR
comp=N,1μm,17.0s,MS5.0
CN2 LR LR
comp=E,840nm,17.0s,MS5.0
CN2 LR LR
comp=Z,716nm,19.0s,MS4.7
FRU Bishkek 51.43 335 ⇑*i*P **P** **11 46 46.0 -0.1**
FRU *i* pP 11 46 56.0 -3.3
FRU *e* 11 54 00.0
FRU *e* 11 54 20.0
FRU pmax pmax
comp=Z,200nm,2.0s,mb5.7
FRU MLR MLR
comp=Z,300nm,20.0s,MS4.3
CHMS Chumysh 51.51 335 P **P** **11 46 46.9 +0.2**
SNR=43
ASHO Ashiyiah 51.60 305 P **P** **11 46 48.9 +1.2**
SNR=9.5
HATD Hatta, Dubai 51.60 305 P **P** **11 46 48.9 +1.2**
SNR=10
EKS2 Erkin-Say 51.64 334 P **P** **11 46 48.7 +1.0**
SNR=386
EKS2 Erkin-Say 51.64 334 *e*P **P** **11 46 48.5 +0.7**
comp=Z,323nm,0.8s,mb6.3
EKS2 *e* pP 11 47 02.2 +1.3
EKS2 LR LR
comp=Z,476nm,20.0s,MS4.5
USP Ospenovka 51.83 335 P **P** **11 46 49.3 +0.2**
SNR=22
MKAR Makanchi Array 52.20 344 P **P** **11 46 51.5 -0.3**
comp=Z,192nm,0.7s,mb6.1,baz=146,slow=8.2,SNR=888
MKAR LR LR 12 14 01.5
comp=Z,539nm,20.9s,MS4.6,baz=155,slow=42
MKAR Makanchi Array 52.20 344 P **P** **11 46 51.5 -0.3**
MKAR LR LR 12 14 01.5
MK31 Makanchi Array 52.20 344 *i* P **P** **11 46 51.5 -0.2**
MAJO Matsushiro 52.31 38 *e*P **P** **11 46 51.0 -1.8**
MAJO MLR MLR
comp=Z,437nm,22.0s,MS4.5
MAT Matsushiro 52.31 38 P **P** **11 46 52.1 -0.7**
MAT *e*S **S** **11 54 18.0 +3.2**
MJAR Matsushiro Arr 52.31 38 P **P** **11 46 51.5 -1.3**
comp=Z,26nm,0.7s,mb5.3,baz=202,slow=7.4,SNR=117
MJAR ScP ScP 11 51 55.8 -1.0
comp=Z,6.0nm,1.1s,baz=222,slow=5.9,SNR=9.4
MJAR LR LR 12 09 01.8
comp=Z,284nm,21.9s,MS4.3,baz=240,slow=36
ZAK Zakamensk 53.12 2 *e*P **P** **11 46 58.2 -0.3**
ZAK *e* 11 48 04.8
ZAK pmax pmax
comp=Z,42nm,1.0s,mb5.3
KK31 Karatay Array 53.46 332 *i* P **P** **11 47 00.3 -0.8**
VLA Vladivostok 53.58 28 *e*P **P** **11 47 00.9 -1.1**
VLA *i* *PP pP 11 47 13.2 -2.1
VLA pmax pmax
comp=Z,48nm,0.7s,mb5.5
VLA MLR MLR
comp=Z,600nm,18.6s,MS4.7
MDJ Mudanjiang 53.73 25 P **P** **11 47 02.6 -0.5**
MDJ AP pP 11 47 11.8 -4.6
MDJ XP sP 11 47 15.6 -6.4
MDJ PCP PcP 11 48 08.8 +0.1
MDJ PP PP 11 49 01.8 -2.8
MDJ S **S** **11 54 30.3 -3.7**
MDJ SS SS 11 58 16.5 +1.0
MDJ AMB AMB
comp=Z,21nm,0.8s,mb5.1
MDJ AMB AMB
comp=Z,222nm,6.2s
MDJ LR LR
comp=N,685nm,26.4s,MS4.8
MDJ LR LR
comp=E,874nm,22.9s,MS4.8
MDJ LR LR
comp=Z,1μm,22.9s,MS4.8
MOY Mondy 54.37 360 *e*P **P** **11 47 07.8 +0.2**
MOY pmax pmax
comp=Z,118nm,2.3s,mb5.4
HIA Hailar 54.42 15 PFAKE 11 47 20.0 +12
HIA LR LR
comp=Z,1μm,19.0s,MS4.9
TLY Talaya 54.43 2 P **P** **11 47 08.8 +0.8**
comp=Z,768nm,0.9s,mb6.6,SNR=15
TLY Talaya 54.43 2 *e*P **P** **11 47 08.8 +0.8**
TLY *e* 11 49 14.3
TLY *e*S **S** **11 54 44.1 +1.1**
TLY pmax pmax
comp=Z,102nm,0.8s,mb5.8
TLY MLR MLR
comp=Z,2μm,18.0s,MS5.1
TLY Talaya 54.43 2 ⇑*i*P **P** **11 47 08.7 +0.7**
ARMA Armidale 54.99 125 *e*P **P** **11 47 13.3 +0.7**
ABPO Ambohimpanom 55.00 249 PFAKE 11 47 30.0 +17
ABPO LR LR
comp=Z,1μm,20.0s,MS5.0
IRK Irkutsk 55.01 2 *e*P **P** **11 47 05.0 -7.3**
IRK pmax pmax
comp=Z,207nm,2.4s,mb5.7
CIT Chita 55.74 9 *e*P **P** **11 47 18.1 +0.6**
CIT *e* pP 11 47 29.3 -1.6
KURK Kurchatov 56.78 343 P **P** **11 47 24.1 -0.9**
comp=Z,1μm,0.6s,SNR=82
KURK Kurchatov 56.78 343 *e*P **P** **11 47 24.6 -0.4**
KURK pmax pmax
comp=Z,131nm,0.7s,mb6.1
KURK MLR MLR
comp=Z,573nm,20.0s,MS4.7
KURK Kurchatov 56.78 343 *e*P **P** **11 47 24.6 -0.3**
comp=Z,131nm,0.7s,mb6.1
KURK LR LR
comp=Z,573nm,20.0s,MS4.7
ABKT Ailbek 56.84 320 P **P** **11 47 25.4 -0.2**
comp=Z,453nm,0.9s,mb6.5,SNR=19
TAU Tasmania Unive 57.20 141 *e*P **P** **11 47 29.1 +1.0**
TAU pmax pmax
comp=Z,52nm,1.1s,mb5.5
TAU Tasmania Unive 57.20 141 *e*P **P** **11 47 29.1 +1.0**
comp=Z,52nm,1.1s,mb5.5
ZALV Zalesovo Beam 58.26 349 P **P** **11 47 34.8 -0.5**
comp=Z,570nm,0.8s,mb6.7,baz=172,slow=4.5,SNR=984
ZALV S **S** **11 55 31.5 -2.3**
comp=Z,2.2nm,0.8s,baz=163,slow=11,SNR=4.8
ZALV LR LR 12 16 45.2
comp=Z,347nm,20.2s,MS4.5,baz=158,slow=40
ZALV Zalesovo Beam 58.26 349 P **P** **11 47 34.8 -0.5**
ZALV S **S** **11 55 31.5 -2.3**
ZALV Zalesovo Beam 58.26 349 P **P** **11 47 34.8 -0.5**
ZALV S **S** **11 55 31.5 -2.3**
ZALV LR LR 12 16 45.2
KLR Kul'dur 58.33 23 ⇓*e*P **P** **11 47 31.0 -4.9**
KLR *e* pP 11 47 42.2 -7.1
KLR *e*S **S** **11 55 27.5 -7.3**
KLR pmax pmax
comp=E,45nm,1.6s
KLR pmax pmax
comp=Z,100nm,1.6s,mb5.6
KLR MLR MLR
comp=E,700nm,16.0s
KLR MLR MLR
comp=Z,1μm,16.0s,MS5.1
ERM Erimo 58.74 36 PFAKE 11 47 50.0 +11
ERM LR LR
comp=Z,263nm,22.0s,MS4.3
HNR Honiara 58.81 99 LR LR 12 14 46.4
comp=Z,142nm,19.4s,MS4.1,baz=42,slow=38
HNR Honiara 58.81 99 *e*P **P** **11 47 38.1 -1.9**
HNR pmax pmax
comp=Z,127nm,0.8s,mb6.0
HNR MLR MLR
comp=Z,193nm,19.0s,MS4.2
HNR Honiara 58.81 99 *e*P **P** **11 47 38.1 -1.9**
comp=Z,127nm,0.8s,mb6.0
HNR LR LR
comp=Z,193nm,19.0s,MS4.2
KRAR Krasnoyarsk 59.11 355*c* *i*P **P** **11 47 40.9 -0.3**
KRAR pmax pmax
comp=Z,353nm,0.7s,mb6.5
NVS Novosibirsk 59.42 348 ⇑*i*P **P** **11 47 41.9 -1.4**
NVS *e*S **S** **11 55 45.7 -3.1**
NVS pmax pmax
comp=N,114nm,1.0s
NVS pmax pmax
comp=E,75nm,1.0s
NVS pmax pmax
comp=Z,174nm,1.0s,mb6.0
NVS smax
comp=N,23nm,1.8s
NVS smax
comp=E,39nm,1.8s
KBD Kabd 60.24 306 *e*P **P** **11 47 49.6 +0.1**
baz=306
KBD AMb AMB 11 47 50.5
comp=Z,130nm,0.9s,mb6.0,baz=306
RDF Al-Radifah 60.26 306 *e*P **P** **11 47 49.6 -0.1**
baz=306
RDF AMb AMB 11 47 50.6
comp=Z,256nm,0.8s,mb6.3,baz=306
UMR Umm Al-Rimmam 60.37 306 *e*P **P** **11 47 50.6 +0.2**
baz=306
UMR AMb AMB 11 47 51.4
comp=Z,304nm,0.7s,mb6.4,baz=306
NAY Al-Naaiem 60.63 306 *e*P **P** **11 47 52.0 -0.2**
baz=306
NAY AMb AMB 11 47 52.9
comp=Z,112nm,0.7s,mb6.1,baz=306
MIB Mutribah 60.77 307 *e*P **P** **11 47 53.4 +0.3**
baz=306
MIB AMb AMB 11 47 54.6
comp=Z,301nm,1.1s,mb6.3,baz=306
RST Umm Al-Ruwaisa 60.93 306 *e*P **P** **11 47 53.9 -0.3**
baz=306
RST AMb AMB 11 47 54.8
comp=Z,196nm,0.7s,mb6.3,baz=306
VOSK Vostochnaya 60.95 340 P **P** **11 47 52.3 -1.6**
VOSK pmax pmax
comp=Z,188nm,1.1s,mb6.1
BVA0 Borovoye Array 61.41 339 *i* P **P** **11 47 55.5 -1.5**
BVA0 pmax pmax
comp=Z,22nm,0.7s,mb5.4
BOD Bodaibo 61.42 8 *e*P **P** **11 47 55.8 -1.1**
BOD pmax pmax
comp=Z,73nm,0.9s,mb5.8
BRVK Borovoye 61.47 339 P **P** **11 47 55.9 -1.5**
BRVK pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BRVK Borovoye 61.47 339 ⇑*e*P **P** **11 47 56.7 -0.7**
YSS Yuzh-Sakhalins 61.68 31 ⇑*i*P **P** **11 47 58.0 -0.9**
YSS *e* pP 11 48 11.0 -1.5
YSS *e* 11 48 38.3
YSS pmax pmax
comp=N,70nm,1.0s
YSS pmax pmax
comp=E,60nm,1.0s
YSS pmax pmax
comp=Z,250nm,1.0s,mb6.3
YSS Yuzh-Sakhalins 61.68 31 *e*P **P** **11 47 58.4 -0.6**
YSS LR LR
comp=Z,92nm,21.0s,MS3.9
CLNS Chul'man 62.61 14*c* *i*P **P** **11 48 04.2 -0.7**
CLNS *e**PP pP 11 48 10.5 -8.0
CLNS *e* 11 48 42.0
CLNS *e*S **S** **11 56 33.3 +4.0**
CLNS pmax pmax
comp=Z,54nm,1.0s,mb5.6
CLNS pmax pmax
comp=E,24nm,1.0s
CLNS pmax pmax
comp=N,37nm,1.1s
CLNS smax
comp=E,6.0nm,0.9s
CLNS smax
comp=N,8.0nm,0.9s
CLNS MLR MLR
comp=E,754nm,18.0s,MS5.1
CLNS MLR MLR
comp=Z,1μm,17.0s,MS5.2
CLNS MLR MLR
comp=N,849nm,15.0s,MS5.1
AB31 Akbulak array 62.95 331 *i* P **P** **11 48 06.6 -0.8**
CASY Casey 63.60 176 PFAKE 11 48 20.0 +8.6
CASY LR LR
comp=Z,1μm,20.0s,MS5.0
MIR Mirnyy 63.77 184 ⇓*i*P **P** **11 48 13.0 +0.5**
MIR *i* pP 11 48 29.0 +2.9
MIR pmax pmax
comp=Z,100nm,0.7s,mb6.0
KMBO Kilima Mbogo 63.81 270 P **P** **11 48 15.4 +1.6**
comp=Z,9.4nm,0.8s,mb4.8,baz=65,slow=8.9,SNR=21
KMBO LR LR 12 12 26.1
comp=Z,410nm,19.7s,MS4.6,baz=93,slow=32
KMBO Kilima Mbogo 63.81 270 *e*P **P** **11 48 14.8 +1.0**
comp=Z,26nm,1.2s,mb5.1
KMBO LR LR
comp=Z,490nm,22.0s,MS4.6
BHD Baghdad 64.42 309 *ex* x 11 48 15.0
BHD *ex* x 11 48 50.0
BHD *ex* x 11 56 51.0
AKTK Aktyubinsk 64.67 331 *i* P **P** **11 48 17.4 -1.3**
AKTO Aktyubinsk 64.67 331 *i* P **P** **11 48 17.4 -1.3**
DZM Mont Dzumac 66.10 113 *e*P **P** **11 48 28.0 -0.5**
MAK Makhachkala 66.36 320*c* *i*P **P** **11 48 22.4 -7.3**
MAK *e* 11 50 58.1
MAK pmax pmax
comp=Z,298nm,1.3s,mb6.2
MAK MLR MLR
comp=Z,285nm,19.0s,MS4.5
HKR Hakkari 66.58 313 *e*P **P** **11 48 31.6 +0.4**
MSL Mosul 66.58 312 *ex* x 11 48 34.0
MSL *ex* x 11 48 49.0
MSL *ex* x 11 57 17.0
GNI Garni 66.93 316 *e*P **P** **11 48 33.9 +0.4**
GNI Garni 66.93 316*c* *i*P **P** **11 48 34.2 +0.8**
GNI pmax pmax
comp=Z,94nm,1.9s
GNI Garni 66.93 316 *e*P **P** **11 48 33.2 -0.2**
GNI LR LR
comp=Z,210nm,22.0s,MS4.3
CLDR Caldiran 67.09 315 *e*P **P** **11 48 35.1 +0.7**
MTA Mtatsminda 67.56 318 P **P** **11 48 37.8 +0.4**
TBLG Delisi 67.62 318 P **P** **11 48 38.1 +0.3**
AGRB Hanur-Agry 67.92 315 *e*P **P** **11 48 40.7 +1.0**
SVE Sverdlovsk 67.93 337 ⇓*e*P **P** **11 48 39.1 -0.3**
SVE *e* pP 11 48 53.3 +0.2
SVE *e*S S 11 57 25.5 -9.0
SVE pmax pmax
comp=Z,244nm,0.9s,mb6.2
SVE MLR MLR
comp=Z,539nm,22.0s,MS4.7
KARS Kars 68.27 316 *e*P **P** **11 48 43.2 +1.3**
YAK Yakutsk 68.35 14*c* *i*P **P** **11 48 40.3 -1.6**
YAK *e**PP pP 11 48 50.0 -5.6
YAK *e* 11 49 05.6
YAK *e*S S 11 57 37.3 -2.0
YAK *e* 11 58 37.2
YAK pmax pmax
comp=Z,219nm,0.8s,mb6.2
YAK pmax pmax
comp=E,45nm,1.1s
YAK pmax pmax
comp=N,54nm,1.0s
YAK smax
comp=E,48μm,2.2s
YAK MLR MLR
comp=Z,2μm,19.0s,MS5.3
YAK MLR MLR
comp=E,736nm,19.0s,MS5.1
YAK MLR MLR
comp=N,869nm,18.0s,MS5.1
YAK Yakutsk 68.35 14 *e*P **P** **11 48 40.2 -1.7**
comp=N,355nm,0.8s,mb6.5
YAK LR LR
comp=Z,1μm,19.0s,MS5.2
ARU Arti 68.47 336 P **P** **11 48 42.8 0.0**
comp=Z,729nm,1.0s,mb6.7,SNR=30
ARU Arti 68.47 336*c* *i*P **P** **11 48 41.9 -0.9**
ARU *e* 11 49 04.8
ARU *e* 11 51 16.0
ARU *e*PPP 11 52 57.8
ARU pmax pmax
comp=Z,117nm,1.0s,mb5.9
ARU MLR MLR
comp=Z,699nm,26.0s,MS4.8
ARU Arti 68.47 336 *e*P **P** **11 48 41.9 -0.9**
comp=Z,106nm,0.8s,mb5.9
ARU *e* pP 11 48 55.6 -0.9
ARU LR LR
comp=Z,481nm,20.0s,MS4.7
ONI Oni 68.85 318 P **P** **11 48 46.1 +0.7**
DRV Dumont d'Urvil 69.16 164 P pP 11 48 59.0 -1.7
DRV S S 11 57 50.0 +1.2

DRV SS SS 12 02 12.0 -3.8
DRV R 12 10 00.0
EZM Erzurum 69.20 315 *eP* **P 11 48 49.0 +1.3**
MAW Mawson 69.68 195⇓*iP* **P 11 48 51.3 +1.2**
comp=Z,14nm,0.7s,mb5.0
MAW Mawson 69.68 195 P **P 11 48 51.4 +1.3**
comp=Z,18nm,0.8s,mb5.1,baz=33,slow=6.6,SNR=68
MAW LR LR 12 12 43.0
comp=Z,1μm,21.9s,MS5.0,baz=45,slow=30
KIV Kislovodsk 69.94 319 P **P 11 48 52.0 -0.2**
comp=Z,476nm,0.9s,mb6.4,SNR=8.2
KIV Kislovodsk 69.94 319⇑*eP* **P 11 48 52.6 +0.4**
KIV pmax pmax
comp=Z,105nm,1.1s,mb5.7
KIV Kislovodsk 69.94 319 *eP* **P 11 48 51.9 -0.2**
comp=Z,61nm,0.8s,mb5.6
KIV LR LR
comp=Z,258nm,20.0s,MS4.5
URFA Urfa 70.16 311 *eP* **P 11 48 54.7 +1.0**
PTK Pertek 70.24 313 *eP* **P 11 48 54.7 +0.5**
EZC Erzincan 70.25 314 *eP* **P 11 48 56.4 +2.3**
MALT Malatya 70.75 312 *eP* **P 11 48 55.4 -1.9**
MALT Malatya 70.75 312 *eP* **P 11 48 54.9 -2.4**
MALT pmax pmax
comp=Z,52nm,1.0s,mb5.4
MALT MLR MLR
comp=Z,261nm,22.0s,MS4.4
MALT Malatya 70.75 312⇑*iP* **P 11 48 55.5 -1.8**
MALT Malatya 70.75 312 *eP* **P 11 48 54.9 -2.3**
comp=Z,52nm,1.0s,mb5.4
MALT LR LR
comp=Z,261nm,22.0s,MS4.4
SKR Severo-Kuril's 71.02 33 *eP* **P 11 48 57.5 -1.1**
SKR pmax pmax
comp=N,60nm,0.8s
SKR pmax pmax
comp=E,70nm,0.8s
SKR pmax pmax
comp=Z,240nm,0.8s,mb6.2
GAZ Gaziantep 71.28 311 *eP* **P 11 49 01.3 +0.8**
KMRS Kahramanmaras 71.62 311 *eP* **P 11 49 03.1 +0.6**
SOC Sochi 71.75 318 *eP* **P 11 49 01.8 -1.4**
SOC *e* pP 11 49 19.7 +2.7
SOC *eS* S 11 58 16.2 -3.7
SOC *e* 11 59 03.1
SOC pmax pmax
comp=Z,73nm,0.6s,mb5.8
SOC Sochi 71.75 318 *i* P **P 11 49 03.1 -0.1**
HTY Hatay 71.77 309 *eP* **P 11 49 04.2 +0.7**
SARI SarD1z-Kayseri 72.15 312 *eP* **P 11 49 06.4 +0.7**
RSDY Resadiye-TOKAT 72.26 314 *eP* **P 11 49 06.8 +0.5**
SVSK Karacayir 72.34 313 *eP* **P 11 49 05.7 -1.1**
KOZT Kozan 72.43 311 *eP* **P 11 49 10.7 +3.3**
LSZ Lusaka 72.75 255 LR LR 12 15 55.9
comp=Z,385nm,20.0s,MS4.7,baz=349,slow=31
LSZ Lusaka 72.75 255 *eP* **P 11 49 09.9 +0.2**
LSZ pmax pmax
comp=Z,22nm,1.0s,mb5.0
LSZ MLR MLR
comp=Z,530nm,22.0s,MS4.8
LSZ Lusaka 72.75 255 *eP* **P 11 49 09.9 +0.2**
comp=Z,22nm,1.0s,mb5.0
LSZ LR LR
comp=Z,530nm,22.0s,MS4.8
BNN Bunyan 72.84 312 *eP* **P 11 49 09.4 -0.3**
KARA Karaisali 72.94 310 *eP* **P 11 49 10.7 +0.2**
PEA0B Petropavlovsk- 73.07 32 *eP* **P 11 49 09.8 -1.1**
PETK Petropavlovsk- 73.07 32 P **P 11 49 09.9 -0.9**
comp=Z,44nm,0.6s,mb5.5,baz=322,slow=0.8,SNR=97
PETK LR LR 12 26 23.6
comp=Z,205nm,18.7s,MS4.4,baz=255,slow=40
MERS Mersin 73.24 310 *eP* **P 11 49 12.3 +0.1**
PET Petropavlovsk 73.54 32 *eP* **P 11 49 12.6 -1.0**
PET *e* 12 03 21.5
PET pmax pmax
comp=Z,232nm,0.6s,mb6.3
PET pmax pmax
comp=Z,200nm,7.0s
PET MLR MLR
comp=Z,300nm,19.0s,MS4.6
PET Petropavlovsk 73.54 32 *eP* **P 11 49 12.6 -1.0**
comp=Z,178nm,0.7s,mb6.1
PET LR LR
comp=Z,409nm,21.0s,MS4.7
LFK Lefkose 73.56 308 *eP* **P 11 49 15.1 +1.0**
RPZ Rata Peaks 73.57 135 LR LR 12 20 29.3
comp=Z,765nm,20.2s,MS5.0,baz=227,slow=35
CSS Prodhromos 73.64 308 *eP* **P 11 49 14.8 +0.2**
comp=Z,78nm,0.9s,mb5.6
IKL Isikli 73.70 309 *eP* **P 11 49 14.9 -0.1**
ANN Anapa 73.73 318 *eP* **P 11 49 11.3 -3.6**
LEF Lefka 74.03 308 *eP* **P 11 49 17.2 +0.4**
CORM Corum 74.14 313 *eP* **P 11 49 16.9 -0.5**
KAMT Kaman 74.58 312 *eP* **P 11 49 19.2 -0.7**
HDMB Hadim 74.83 309 *eP* **P 11 49 21.6 +0.1**
TOS Tosya 74.84 314 *eP* **P 11 49 21.6 +0.2**
VSR Storozhevoye 75.14 325 *eP* **P 11 49 21.7 -1.2**
VSR pmax pmax
comp=Z,60nm,0.7s,mb5.6
VSR pmax pmax
comp=N,20nm,0.6s
VSR pmax pmax
comp=E,40nm,0.5s
KONT Konya--Tatoy 75.19 310 *eP* **P 11 49 23.3 -0.2**
LADK Ladik-KONYA 75.26 311 *eP* **P 11 49 23.6 -0.3**
VOR Voronezh 75.33 325 *eP* **P 11 49 23.0 -1.0**
VOR pmax pmax
comp=Z,300nm,2.0s,mb5.9
ANTO Ankara 75.40 312 *eP* **P 11 49 24.3 -0.4**
ANTO pmax pmax
comp=Z,27nm,0.8s,mb5.2
ANTO MLR MLR
comp=Z,139nm,21.0s,MS4.2
ANTO Ankara 75.40 312⇓*iP* **P 11 49 24.7 0.0**
ANTO Ankara 75.40 312 *eP* **P 11 49 24.3 -0.4**
comp=Z,27nm,0.8s,mb5.2
ANTO LR LR
comp=Z,139nm,21.0s,MS4.2
SNZO South Karori 75.80 132 PFAKE 11 49 40.0 +13
SNZO LR LR
comp=Z,1μm,21.0s,MS5.1
KIZT Kizilcal 75.81 311 *eP* **P 11 49 26.5 -0.6**
SAFT Safranbolu 75.87 314 *eP* **P 11 49 27.1 -0.2**
SIM Simferopol' 76.00 318 *eP* **P 11 49 28.0 0.0**
SIM pmax pmax
comp=Z,56nm,0.9s,mb5.5
BOSA Boshof 76.17 241 P **P 11 49 30.6 +1.2**
comp=Z,16nm,0.8s,mb5.0,baz=81,slow=5.9,SNR=22
BOSA LR LR 12 16 36.6
comp=Z,441nm,21.8s,MS4.7,baz=82,slow=30
TIXI Tiksi 76.58 9*c iP* **P 11 49 29.0 -1.8**
TIXI pmax pmax
comp=Z,96nm,0.9s,mb5.7
TIXI MLR MLR
comp=Z,1μm,18.0s,MS5.3
TIXI Tiksi 76.58 9 *eP* **P 11 49 28.8 -1.9**
comp=Z,78nm,0.6s,mb5.8
TIXI LR LR
comp=Z,1μm,20.0s,MS5.2
SHUT Suhut-Afyon 76.72 311 *eP* **P 11 49 32.6 +0.3**
ELL Elmali 76.78 309 *eP* **P 11 49 32.3 -0.3**
ALT Altintas 77.18 311 *eP* **P 11 49 34.7 -0.2**
SYO Syowa Base 77.36 199⇓*eP* **P 11 49 34.6 -0.6**
SYO Syowa Base 77.36 199⇓*eS*P sP 11 49 49.6 -5.0
FUNA Funafuti 77.82 98 PFAKE 11 49 50.0 +11
FUNA LR LR
comp=Z,5μm,19.0s,MS5.9
MOS Moscow 77.83 329 *eP* **P 11 49 36.5 -1.6**
MOS *e* pP 11 49 45.3 -6.7
MOS *e* 11 52 32.7
MOS pmax pmax
comp=Z,220nm,0.8s,mb6.1
OBN Obninsk 78.14 328 P **P 11 49 39.4 -0.4**
comp=Z,1μm,0.9s,mb6.8,SNR=7.7
OBN Obninsk 78.14 328*c iP* **P 11 49 39.5 -0.3**
OBN *e* 11 52 34.7
OBN *i* S S 11 59 28.3 -2.2
OBN *eS* SS SS 12 04 41.1 +8.0
OBN pmax pmax
comp=Z,240nm,1.2s,mb6.0
OBN MLR MLR
comp=Z,300nm,21.0s,MS4.6
OBN Obninsk 78.14 328 *eP* **P 11 49 39.3 -0.4**
comp=Z,83nm,0.6s,mb5.8
OBN LR LR
comp=Z,291nm,20.0s,MS4.6
TIRR Tirgusor 79.76 316 P **P 11 49 48.8 -0.1**
TIRR Tirgusor 79.76 316⇑*iP* **P 11 49 48.7 -0.2**
TIRR Tirgusor 79.76 316 *eP* **P 11 49 48.3 -0.6**
comp=Z,44nm,0.9s,mb5.4
PRD Provadia 80.17 315 *i* P **P 11 49 50.9 -0.3**
SANT Santorini 80.19 307 PFAKE 11 50 00.0 +8.5
SANT LR LR
comp=Z,342nm,22.0s,MS4.7
SUR Sutherland 80.23 238 *eP* **P 11 49 54.2 +2.4**
comp=Z,61nm,0.8s,mb5.6
SUR LR LR
comp=Z,1μm,19.0s,MS5.2
ALN Alexandroupoli 80.65 312 *eP* **P 11 49 53.2 -0.6**
RAO Raoul Island 80.73 119 LR LR 12 26 03.0
comp=Z,266nm,18.7s,MS4.6,baz=0.1,slow=36
AKASG Malin Array Be 80.86 322 P **P 11 49 53.8 -0.9**
comp=Z,24nm,0.8s,mb5.2,baz=86,slow=4.3,SNR=62
AKASG PP PP 11 52 58.5 -1.1
comp=Z,1.8nm,0.4s,baz=85,slow=7.4,SNR=6.3
AKASG LR LR 12 29 34.7
comp=Z,202nm,21.7s,MS4.4,baz=120,slow=38
AKASG Malin Array Be 80.86 322 *iP* **P 11 49 53.7 -1.0**
AKASG pmax pmax
comp=Z,24nm,0.8s
AKASG Malin Array Be 80.86 322 P **P 11 49 53.8 -0.9**
AKASG PP PP 11 52 58.5 -1.2
AKASG LR LR 12 29 34.7
KIEV Kiev 80.87 322 *eP* **P 11 49 53.5 -1.3**
KIEV pmax pmax
comp=Z,25nm,0.8s,mb5.2
KIEV MLR MLR
comp=Z,343nm,22.0s,MS4.7
KIEV Kiev 80.87 322 *eP* **P 11 49 53.5 -1.2**
comp=Z,24nm,0.8s,mb5.2
KIEV LR LR
comp=Z,343nm,22.0s,MS4.7
VRI Vrincioaia 81.25 317⇓*iP* **P 11 49 57.5 +0.6**
VRI Vrincioaia 81.25 317 P **P 11 49 57.6 +0.7**
KDZ Kurdzhali 81.27 313 *iP* **P 11 49 56.9 -0.2**
PLOR Plostina 81.30 317⇑*iP* **P 11 49 58.3 +1.1**
PVL Pavlikeni 81.65 314 *iP* **P 11 49 59.6 +0.5**
MLR Muntele Rosu 81.70 317 P **P 11 49 59.8 +0.5**
comp=Z,44nm,0.9s,mb5.4,baz=138,slow=2.4,SNR=43
MLR Muntele Rosu 81.70 317⇑*iP* **P 11 49 59.8 +0.5**
MLR Muntele Rosu 81.70 317⇑*eP* **P 11 49 59.8 +0.5**
DID Didima 82.15 308 *eP* **P 11 50 01.3 -0.6**
SBA Scott Base 82.16 169 PFAKE 11 50 10.0 +8.9
SBA LR LR
comp=Z,378nm,21.0s,MS4.7
PAIG Paliouri 82.23 311 *eP* **P 11 50 01.1 -1.1**
VOIR 82.31 316⇑*iP* **P 11 50 02.1 -0.4**
NVR Nevrokopi 82.35 312 *eP* **P 11 50 02.4 -0.4**
PLG Polygyros 82.49 311 *eP* **P 11 50 02.5 -1.0**
MMB Musomiste 82.50 312 *iP* **P 11 50 02.8 -0.7**
SOH Sokhos 82.64 312 *eP* **P 11 50 03.7 -0.5**
BURAR Bucovina Array 82.66 319⇑*iP* **P 11 50 05.2 +1.0**
BUR08 Bucovina Ar. S 82.67 319 *eP* **P 11 50 05.1 +0.8**
MNK Minsk 82.71 326 *eP* **P 11 50 01.0 -3.4**
HORT Hortiatis 82.79 311 *eP* **P 11 50 04.2 -0.9**
VLX Vlachokerasia 82.80 308 *eP* **P 11 50 05.9 +0.7**
TSUM Tsumeb 82.92 251 *eP* **P 11 50 07.0 +0.8**
comp=Z,23nm,0.9s,mb5.2
TSUM LR LR
comp=Z,812nm,22.0s,MS5.0
PUL Pulkovo 82.94 331⇑*eP* **P 11 50 05.9 +0.5**
KKB Krupnik 83.02 313 *iP* **P 11 50 05.5 -0.8**
KNT Kendrikon 83.03 312 *eP* **P 11 50 05.9 -0.5**
VTS Vitosha 83.06 313⇑*iP* **P 11 50 06.4 0.0**
VTS Vitosha 83.06 314 *iP* **P 11 50 06.0 -0.4**
VTS Vitosha 83.06 313⇑*eP* **P 11 50 06.4 -0.1**
ITM Ithomi 83.13 308 *eP* **P 11 50 06.7 -0.2**
LIT Litokhoron 83.16 311 *eP* **P 11 50 06.2 -0.8**
VAY Valandovo 83.31 312⇑*iP* **P 11 50 06.5 -1.2**
GRG Griva 83.37 312 *eP* **P 11 50 07.2 -0.9**
THL Klokotos Trika 83.43 310 *eP* **P 11 50 07.1 -1.4**
THL Klokotos Trika 83.43 310 *eP* **P 11 50 06.0 -2.5**
EVR Evrytania 83.49 310 *eP* **P 11 50 08.8 0.0**
JOF Joensuu 83.50 334 *ep* **P 11 50 08.3 0.0**
comp=Z,61nm,0.7s,mb5.8
JOF Joensuu 83.50 334 *eP* **P 11 50 08.3 0.0**
JOF pmax pmax
comp=Z,61nm,0.7s,mb5.8
RLS Riolos of Patr 83.62 309 *eP* **P 11 50 09.8 +0.3**
BILL Bilibino 83.63 20⇑*iP* **P 11 50 07.6 -1.2**
BILL *eS* S 12 00 23.4 -3.8
BILL pmax pmax
comp=Z,36nm,1.1s,mb5.4
BILL Bilibino 83.63 20 *eP* **P 11 50 07.3 -1.5**
comp=Z,14nm,0.6s,mb5.2
BILL LR LR
comp=Z,695nm,21.0s,MS5.0
GZR Gura Zlata 83.87 316⇓*iP* **P 11 50 11.0 +0.5**
LVV L'vov 83.89 321*d iP* **P 11 50 09.8 -0.7**
LVV *i* 11 50 30.1
LVV *e* 11 53 29.5
LVZ Lovozero 84.01 340 P **P 11 50 10.0 -0.7**
comp=Z,697nm,0.7s,mb6.9,SNR=24
LVZ Lovozero 84.01 340*c iP* **P 11 50 10.0 -0.7**
LVZ pmax pmax
comp=Z,77nm,0.7s,mb5.9
LVZ Lovozero 84.01 340⇑*iP* **P 11 50 10.1 -0.6**
LVZ LR LR
comp=Z,495nm,22.0s,MS4.8
DRGR 84.17 317⇑*iP* **P 11 50 12.5 +0.5**
DRGR 84.17 317 P **P 11 50 12.6 +0.6**
SKO Skopje 84.25 312⇑*iP* **P 11 50 11.7 -0.9**
KRUS Krusevo 84.29 312⇑*iP* **P 11 50 12.2 -0.6**
APA Apatity 84.32 339⇓*iP* **P 11 50 11.6 -0.7**
APA *i* pP 11 50 28.6 +2.2
APA pmax pmax
comp=Z,140nm,1.2s,mb6.0
APA MLR MLR
comp=Z,1μm,23.0s,MS5.2
VLS Valsamata 84.32 309 *eP* **P 11 50 12.9 -0.1**
VSU Vasula 84.34 329⇑*iP* **P 11 50 12.7 +0.1**
LKD Levkas 84.35 309 *eP* **P 11 50 13.2 0.0**
OHR Ohrid 84.59 312⇑*iP* **P 11 50 12.6 -1.7**
KWP Kalwaria 84.69 320 *eP* **P 11 50 15.0 +0.4**
KWP Kalwaria 84.69 320⇑*iP* **P 11 50 15.0 +0.4**
KWP Kalwaria 84.69 320⇑*eP* **P 11 50 15.0 +0.4**
BZS Buzias 84.71 316⇑*iP* **P 11 50 14.9 +0.1**
BZS Buzias 84.71 316 P **P 11 50 14.9 +0.1**
UZH Uzhgorod 84.78 319⇓*iP* **P 11 50 14.8 -0.3**
UZH *e* pP 11 50 30.8 +1.6
KOLS Kolonicke sedl 84.84 319 *eP* **P 11 50 16.2 +0.8**
KEK Kerkira 85.15 310 *eP* **P 11 50 17.1 0.0**
SUW Suwalki 85.25 325 *iP* **P 11 50 17.0 -0.3**
SUW *e* 11 50 37.1
SUW Suwalki 85.25 325⇑*iP* **P 11 50 17.0 -0.3**
SUW *e* 11 50 37.1
CRVS Cervenica-Dubn 85.37 319 *eP* **P 11 50 18.3 +0.3**
PVY Plav 85.42 313⇑*iP* **P 11 50 17.4 -1.0**
KAF Kangasniemi 85.48 333 *ep* **P 11 50 18.3 0.0**
comp=Z,75nm,0.7s,mb5.9,baz=99,slow=4.5
KAF Kangasniemi 85.48 333 *eP* **P 11 50 18.3 0.0**
KAF pmax pmax
comp=Z,75nm,0.7s,mb5.9
IVA Berane 85.51 313⇑*iP* **P 11 50 18.5 -0.4**
STHS Stebnicka Huta 85.59 320 *iP* **P 11 50 19.7 +0.6**
STHS *e* pP 11 50 36.2 +3.0
STHS pmax pmax
comp=Z,35nm,0.8s,mb5.6
STHS Stebnicka Huta 85.59 320 *iP* **P 11 50 19.7 +0.6**
comp=Z,34nm,0.8s,mb5.6
STHS *e* pP 11 50 36.2 +3.0
ULC Ulcinj 85.86 312⇑*iP* **P 11 50 20.5 -0.1**
TTG Podgorica 85.92 313⇑*iP* **P 11 50 20.2 -0.7**
KECS Kecovo 85.94 319 *iP* **P 11 50 21.1 +0.2**
KECS *e* pP 11 50 35.6 +0.6
KECS pmax pmax
comp=Z,15nm,0.8s,mb5.3
KECS Kecovo 85.94 319 *iP* **P 11 50 21.1 +0.2**
comp=Z,15nm,0.8s,mb5.3
KECS *e* pP 11 50 35.6 +0.6
PLE Pljevlja 85.94 314⇑*iP* **P 11 50 20.6 -0.4**
NKY Niksic 86.16 313⇑*iP* **P 11 50 21.9 -0.2**
BUM Brajici-Budva 86.17 313⇑*iP* **P 11 50 21.7 -0.4**
NIE Niedzica 86.19 320 *eP* **P 11 50 22.6 +0.5**
PSZ Piszkesteto 86.24 318 *eP* **P 11 50 22.4 0.0**
PSZ pmax pmax
comp=Z,29nm,0.8s,mb5.6
PSZ MLR MLR
comp=Z,229nm,20.0s,MS4.6
PSZ Piszkesteto 86.24 318⇑*iP* **P 11 50 22.6 +0.2**
PSZ Piszkesteto 86.24 318 *eP* **P 11 50 22.4 0.0**
comp=Z,29nm,0.8s,mb5.6
PSZ LR LR
comp=Z,229nm,20.0s,MS4.6
UPM Unac-Piva 86.27 313⇑*iP* **P 11 50 22.2 -0.4**
HCY Herceg Novi 86.48 313⇑*iP* **P 11 50 22.8 -0.9**
BRY Bratogost 86.50 313⇑*iP* **P 11 50 22.7 -1.1**
OJC Ojcow 86.64 320 *eP* **P 11 50 24.3 0.0**
PKSM Moragy 86.85 316⇑*iP* **P 11 50 25.4 0.0**
PKSM Moragy 86.85 316⇑*eP* **P 11 50 25.4 0.0**
LIKS Likavka 86.92 319 *eP* **P 11 50 22.7 -3.0**
VYHS Vyhne 87.02 319 *eP* **P 11 50 26.1 -0.1**
VYHS *e* 11 50 45.3
VYHS pmax pmax
comp=Z,18nm,1.8s,mb5.0
VYHS Vyhne 87.02 319 *eP* **P 11 50 26.1 -0.1**
comp=Z,18nm,1.8s,mb5.0
VYHS *e* 11 50 45.3
MAIT Maitri 87.06 199 *eP* pP 11 50 37.3 -2.8
KEV Kevo 87.24 340 *ep* **P 11 50 25.7 -1.1**
comp=Z,54nm,0.8s,mb5.8
KEV Kevo 87.24 340 *eP* **P 11 50 25.7 -1.1**
KEV pmax pmax
comp=Z,54nm,0.8s,mb5.8
KOLL Kolacno 87.32 319 *iP* **P 11 50 27.8 +0.2**
TIP Timpagrande 87.42 309 *eP* **P 11 50 28.8 +0.5**
comp=Z,37nm,1.3s,mb5.5
OKC Ostrava-Krasne 87.65 320⇑*eP* **P 11 50 29.6 +0.4**
OKC *epP* pP 11 50 44.2 +0.9
ARCES ARCESS Array B 87.69 340 P **P 11 50 28.8 -0.2**
comp=Z,62nm,0.8s,mb5.9,baz=100,slow=5.0,SNR=98
ARCES PP PP 11 53 57.5 +2.7
comp=Z,7.3nm,0.8s,baz=98,slow=8.7,SNR=3.8
ARCES LR LR 12 33 24.9
comp=Z,361nm,21.9s,MS4.7,baz=226,slow=38
ARCES ARCESS Array B 87.69 340 P **P 11 50 28.8 -0.2**
ARCES 11 53 57.5
ARCES ARCESS Array B 87.69 340 P **P 11 50 28.8 -0.2**
ARCES PP PP 11 53 57.5 +2.7
ARCES LR LR 12 33 24.9
MORC Moravsky Berou 88.03 320 *eP* **P 11 50 31.3 +0.3**
MORC pmax pmax
comp=Z,43nm,0.9s,mb5.7
MORC Moravsky Berou 88.03 320⇑*iP* **P 11 50 31.5 +0.5**
MORC Moravsky Berou 88.03 320 *eP* **P 11 50 31.3 +0.3**
comp=Z,43nm,0.9s,mb5.7
MODS Modra-Piesok 88.04 318 *iP* **P 11 50 31.2 +0.1**
MODS *epP* pP 11 50 45.4 +0.2
MODS Modra-Piesok 88.04 318 *iP* **P 11 50 31.2 +0.1**
MODS *e* pP 11 50 45.4 +0.2
ZST Bratislava 88.14 318 *iP* **P 11 50 32.0 +0.5**
ZST *e* pP 11 50 46.5 +0.8
ZST pmax pmax
comp=Z,34nm,0.8s,mb5.6
ZST Bratislava 88.14 318 *iP* **P 11 50 32.0 +0.5**
comp=Z,34nm,0.8s,mb5.6
ZST *e* pP 11 50 46.5 +0.8
CUC Castrocucco 88.23 310 *eP* **P 11 50 31.7 -0.4**
comp=Z,28nm,0.9s,mb5.5
VRAC Vranov 88.59 319⇑*iP* **P 11 50 34.0 +0.4**
VRAC Vranov 88.59 319 P **P 11 50 34.0 +0.4**
GKP Gorka Klasztor 88.63 323 *eP* **P 11 50 34.0 +0.3**
GKP Gorka Klasztor 88.63 323⇑*eP* **P 11 50 34.0 +0.3**
DPC Dobruska-Polom 88.87 320⇑*iP* **P 11 50 36.0 +1.0**
DPC *epP* pP 11 50 50.6 +1.5
DPC AMS AMS 12 36 50.0
comp=Z,200nm,17.3s
CONA Conrad Observa 88.94 318⇓*iP* **P 11 50 35.3 0.0**
comp=Z,16nm,0.9s,mb5.4,SNR=16
CSNA Conrad Observa 88.94 318⇑*iP* **P 11 50 35.3 0.0**
comp=Z,16nm,0.9s,mb5.4
KSP Ksiaz 88.94 321 *eP* **P 11 50 36.0 +0.7**
KSP Ksiaz 88.94 321⇑*eP* **P 11 50 35.8 +0.5**
KSP *epP* pP 11 50 50.2 +0.7
DOBS Dobrina 89.04 316 *iP* **P 11 50 36.4 +0.5**
UPC Upice 89.09 320⇑*eP* **P 11 50 36.8 +0.8**
UPC *epP* pP 11 50 51.7 +1.6
UPC Upice 89.09 320 *eP* **P 11 50 36.8 +0.8**
UPC *epP* pP 11 50 51.7 +1.6
ARSA Arzberg 89.10 317 *iP* **P 11 50 36.5 +0.4**
comp=Z,37nm,0.9s,mb5.7,SNR=19
ARSA Arzberg 89.10 317 *i* PcP PcP 11 50 36.5 -1.0
comp=Z,37nm,0.9s,SNR=19
BOJS Bojanci 89.13 315 *eP* **P 11 50 36.7 +0.4**
BOJS *i* pP pP 11 50 51.7 +1.2
TREC Trest 89.31 319⇑*iP* **P 11 50 37.5 +0.5**
PDKS Podkum 89.36 316 *iP* **P 11 50 38.0 +0.6**
SOKA Soboth 89.38 317⇑*iP* **P 11 50 38.0 +0.5**
comp=Z,50nm,0.9s,mb5.8
SOKA Soboth 89.38 317⇑*iPcP* PcP 11 50 38.0 -0.8
comp=Z,50nm,0.9s
VISS Visnje 89.44 316 *iP* **P 11 50 38.2 +0.5**
LJU Ljubljana 89.68 316 *iP* **P 11 50 39.6 +0.7**
LJU *i* pP pP 11 50 54.5 +1.5
OBKA Obir 89.70 316⇑*iP* **P 11 50 39.5 +0.6**
comp=Z,28nm,0.8s,mb5.6,SNR=18
OBKA Obir 89.70 316⇑*iPcP* PcP 11 50 39.5 -0.7
comp=Z,28nm,0.8s,SNR=18
PRU Pruhonice 89.98 320⇑*iP* **P 11 50 40.6 +0.4**
PRU *epP* pP 11 50 55.5 +1.1
PRU AMS AMS 12 37 40.0
comp=Z,300nm,21.3s
PRU Pruhonice 89.98 320⇑*iP* **P 11 50 40.6 +0.4**
PRU *epP* pP 11 50 55.5 +1.1
PRU LR LR
comp=Z,300nm,21.3s,MS4.7
JAVS Javornik 89.99 316 *iP* **P 11 50 40.2 -0.1**
MOA Molln 90.00 318⇑*iP* **P 11 50 40.3 0.0**
comp=Z,20nm,0.8s,mb5.5
PVCC Panska Ves 90.01 320⇑*iP* **P 11 50 41.1 +0.8**
PVCC *epP* pP 11 50 55.5 +1.0
VOY Vojsko 90.12 316 *eP* **P 11 50 41.2 +0.3**
VOY *e* pP 11 50 56.5 +1.4
MYKA Terra Mystica 90.34 316⇓*iP* **P 11 50 41.9 0.0**
comp=Z,17nm,0.6s,mb5.5
BRG Berggiesshubel 90.43 321⇑*iP* **P 11 50 42.9 +0.7**
BRG *i* pP 11 50 57.5 +1.1
BRG *e* 11 54 15.6
BRG *e* 12 01 06.0
BRG pmax pmax
comp=Z,30nm,0.9s,mb5.6
BRG pmax pmax
comp=Z,15nm,0.8s,mb5.4
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
BRG pmax pmax
comp=Z,6.0nm,1.8s,mb4.6
BRG MLR MLR
comp=N,67nm,16.7s,MS4.5
BRG MLR MLR
comp=E,158nm,21.4s,MS4.5
BRG MLR MLR
comp=Z,179nm,15.1s
BRG Berggiesshubel 90.43 321 *eP* **P 11 50 42.7 +0.5**
comp=Z,50nm,0.9s,mb5.8
BRG Berggiesshubel 90.43 321⇑*iP* **P 11 50 42.9 +0.7**
comp=Z,50nm,0.9s,mb5.8
BRG *i* pP 11 50 57.5 +1.1
comp=Z,25nm,0.8s
BRG *e* 11 54 15.6
comp=Z,6.7nm,1.0s
BRG *e* 12 01 06.0
comp=Z,10nm,1.8s
BRG S S 12 02 05.0 +32
BRG *i* 12 02 59.0
BRG
comp=N,112nm,16.7s
BRG
comp=E,264nm,21.4s
BRG
comp=Z,299nm,15.1s
BRG Berggiesshubel 90.43 321⇑*iP* **P 11 50 42.9 +0.7**
comp=Z,30nm,0.9s,mb5.6
BRG *i* pP 11 50 57.5 +1.1
BRG *e* 11 54 15.6
BRG *e* 12 01 06.0
BRG S S 12 02 05.0 +32
BRG *i* 12 02 59.0
BRG LR LR
comp=Z,180nm,15.1s,MS4.6
GEC2 GERESS Array S 90.44 319 *eP* **P 11 50 42.8 +0.5**
GEC2 pmax pmax

comp=Z,134nm,1.7s,mb6.0
GEC2 GERESS Array S 90.44 319 *e*P P **P 11 50 42.8 +0.5**
comp=Z,134nm,1.7s,mb6.0
GERES GERESS Array B 90.44 319 P P **P 11 50 42.9 +0.5**
comp=Z,21nm,0.8s,mb5.5,baz=87,slow=4.7,SNR=131
GERES PP PP 11 54 20.4 +3.1
comp=Z,2.0nm,0.8s,baz=93,slow=8.0,SNR=4.3
KHC Kasperske Hory 90.55 319⇑*i*P **P 11 50 43.0 +0.2**
KHC *e*pP pP 11 50 57.7 +0.7
KHC AMS AMS 12 40 30.0
comp=Z,300nm,21.9s
KHC Kasperske Hory 90.55 319⇑*i*P **P 11 50 43.0 +0.2**
KHC *e*pP pP 11 50 57.7 +0.7
KHC LR LR
comp=Z,300nm,21.9s,MS4.7
KBA Koelnbreinsper 90.57 317⇑*i*P **P 11 50 42.7 -0.3**
comp=Z,22nm,1.1s,mb5.4,SNR=12
RJOB Jochberg 90.98 318 *e*P **P 11 50 44.5 -0.4**
WET Wettzell 91.00 319 *e*P **P 11 50 45.5 +0.6**
WET pmax pmax
comp=Z,43nm,0.9s,mb5.8
WET Wettzell 91.00 319 *e*P **P 11 50 45.5 +0.6**
comp=Z,43nm,0.9s,mb5.8
CLL Collm 91.05 321 *e*P **P 11 50 45.1 0.0**
comp=Z,32nm,1.1s,mb5.6
CLL Collm 91.05 321⇑*i*P **P 11 50 45.1 0.0**
comp=Z,32nm,1.1s,mb5.6
CLL *e*sP sP 11 51 00.0 -4.6
CLL *e*S S 12 01 37.0 -2.1
CLL L 12 39 00.0
comp=Z,200nm,21.5s
CLL Collm 91.05 321⇑*i*P **P 11 50 45.1 0.0**
comp=Z,32nm,1.1s,mb5.6
CLL *e* pP 11 51 00.0 +0.7
CLL *e*S S 12 01 37.0 -2.1
ABTA Abfaltersbach 91.12 317⇑*i*P **P 11 50 45.2 -0.3**
comp=Z,18nm,0.8s,mb5.4,SNR=12
NKC Novy Kostel 91.34 320⇑*i*P **P 11 50 46.9 +0.4**
NKC *e*pP pP 11 51 00.6 -0.1
TANN Tannenbergstha 91.34 320 *e*P **P 11 50 46.8 +0.3**
ROTZ Rotzenmuhle 91.47 320 *e*P **P 11 50 47.9 +0.8**
SNAA Sanae 91.62 198 *e*P **P 11 50 48.2 +0.9**
SNAA pmax pmax
comp=Z,27nm,1.3s
SNAA Sanae 91.62 198 *e*P **P 11 50 48.2 +0.9**
comp=Z,27nm,1.3s,mb5.4
WTTA Wattenberg 91.74 317 *i* P **P 11 50 48.2 -0.2**
comp=Z,50nm,0.8s,mb5.9,SNR=26
WATA Walderalm 91.79 317 *i* P **P 11 50 48.3 -0.3**
comp=Z,16nm,0.6s,mb5.5,SNR=18
MOX Moxa 91.89 320 *e*P **P 11 50 49.3 +0.3**
comp=Z,39nm,1.4s,mb5.5
MOX *e* pP 11 51 04.0 +0.8
MOX Moxa 91.89 320 *e*P **P 11 50 49.3 +0.3**
MOX *e* pP 11 51 04.0 +0.8
MOX pmax pmax
comp=Z,39nm,1.4s,mb5.5
FUR Furstenfeldbru 92.02 318 *e*P **P 11 50 49.4 -0.3**
FUR pmax pmax
comp=Z,31nm,0.9s,mb5.6
FUR Furstenfeldbru 92.02 318 *e*P **P 11 50 49.4 -0.3**
comp=Z,31nm,0.9s,mb5.6
MOTA Moosalm 92.11 317⇓*i*P **P 11 50 49.9 -0.2**
comp=Z,31nm,0.7s,mb5.8,SNR=22
GRA1 Grafenberg Arr 92.11 319 *e*P **P 11 50 50.5 +0.4**
comp=Z,39nm,0.9s,mb5.7
GRA1 *e*pP pP 11 51 04.5 +0.2
GRF Grafenberg Arr 92.11 319 *e*P **P 11 50 50.5 +0.4**
GRF *e**PP pP 11 51 04.5 +0.2
GRF pmax pmax
comp=Z,39nm,0.9s,mb5.7
GRF Grafenberg Arr 92.11 319 *e*P **P 11 50 50.5 +0.4**
GRF *e**PP pP 11 51 04.5 +0.2
GRF pmax pmax
comp=Z,39nm,0.9s,mb5.7
GRF Grafenberg Arr 92.11 319 *e*P **P 11 50 50.5 +0.4**
comp=Z,39nm,0.9s,mb5.7
GRF *e*pP pP 11 51 04.5 +0.2
NIKO Nikolski 92.34 37 *e*P **P 11 50 49.4 -1.7**
comp=Z,110nm,0.8s,mb6.2
RETA Reutte 92.34 317⇑*i*P **P 11 50 51.2 0.0**
comp=Z,40nm,0.7s,mb5.9,SNR=22
RETA Reutte 92.34 317⇑*i*PcP PcP 11 50 51.2 -0.7
comp=Z,40nm,0.7s,SNR=22
FETA Feichten 92.35 317 *i* P **P 11 50 51.5 +0.3**
comp=Z,27nm,0.9s,mb5.6,SNR=12
FETA Feichten 92.35 317 *i* PcP PcP 11 50 51.5 -0.4
comp=Z,27nm,0.9s,SNR=12
NOA NORSAR Array B 92.46 331 P P **P 11 50 51.0 -0.4**
comp=Z,20nm,0.8s,mb5.5,baz=92,slow=4.7,SNR=49
NOA LR LR 12 36 51.9
comp=Z,286nm,20.3s,MS4.7,baz=75,slow=38
VLC Villacollemand 92.51 314 PFAKE 11 51 00.0 +8.0
VLC LR LR
comp=Z,214nm,20.0s,MS4.6
KBS Kingsbay 92.67 349⇑*e*P **P 11 50 50.7 -1.4**
KBS MLR MLR
comp=Z,646nm,19.0s,MS5.1
CLZ Clausthal 92.71 322 *e*P **P 11 50 53.2 +0.4**
CLZ pmax pmax
comp=Z,23nm,0.9s,mb5.6
CLZ Clausthal 92.71 322 *e*P **P 11 50 53.2 +0.4**
comp=Z,23nm,0.9s,mb5.6
BSEG Bad Segeberg 92.79 324 *e*P **P 11 50 53.4 +0.3**
BSEG pmax pmax
comp=Z,34nm,0.9s,mb5.8
BSEG Bad Segeberg 92.79 324 *e*P **P 11 50 53.4 +0.3**
comp=Z,34nm,0.9s,mb5.8
NRDL Niedersach Rie 92.89 322 *e*P **P 11 50 53.9 +0.3**
UBBA Unterbreizbach 92.92 321 *e*P **P 11 50 53.8 0.0**
DAVA Damuels 92.94 317⇑*i*P **P 11 50 54.3 +0.4**
comp=Z,51nm,0.9s,mb6.0,SNR=19
DAVA Damuels 92.94 317⇑*i*PcP PcP 11 50 54.3 -0.2
comp=Z,51nm,0.9s,SNR=19
KEST Kesra 93.10 305 P P **P 11 50 56.4 +1.4**
comp=Z,9.3nm,0.9s,mb5.2,baz=88,slow=0.5,SNR=32
KEST LR LR 12 31 55.9
comp=Z,46nm,21.1s,MS3.9,baz=306,slow=35
VSL Villasalto 93.15 309 PFAKE 11 51 10.0 +15
VSL LR LR
comp=Z,111nm,21.0s,MS4.3
KONO Kongsberg 93.25 329⇑*e*P **P 11 50 55.5 +0.4**
TUE Stuetta 93.29 316 *e*P **P 11 50 55.2 -0.4**
comp=Z,5.2nm,0.7s,mb5.1
STU Stuttgart 93.42 319 *e*P **P 11 50 56.2 +0.1**
STU pmax pmax
comp=Z,19nm,0.9s,mb5.5
STU Stuttgart 93.42 319 *e*P **P 11 50 56.0 -0.1**
STU Stuttgart 93.42 319 *e*P **P 11 50 56.2 +0.1**
comp=Z,19nm,0.9s,mb5.5
PGF Pioggiola 93.49 312⇑*i*P **P 11 50 56.7 +0.1**
comp=Z,35nm,0.9s,mb5.5
PGF Pioggiola 93.49 312⇑*i*P **P 11 50 56.7 +0.1**
PGF pmax pmax
comp=Z,17nm,0.9s,mb5.5
PGF Pioggiola 93.49 312⇑*i*P **P 11 50 56.7 +0.1**
comp=Z,17nm,0.9s,mb5.5
TOD Tromm 93.68 319 *e*P **P 11 50 57.2 -0.1**
SPAK Spaichingen-Ko 93.69 318 *e*P **P 11 50 57.2 -0.2**
BFO Black Forest 93.99 318 P **P 11 50 58.9 +0.1**
comp=Z,105nm,0.8s,mb6.3,SNR=8.0
BFO Black Forest 93.99 318 *e*P **P 11 50 58.2 -0.6**
BFO pmax pmax
comp=Z,19nm,0.9s,mb5.5
BFO Black Forest 93.99 318 *e*P **P 11 50 58.2 -0.6**
comp=Z,19nm,0.9s,mb5.5
FELD Feldberg im Sc 94.21 318 *e*P **P 11 50 59.5 -0.3**
IBBN Ibbenburen 94.33 322 *e*P **P 11 51 00.4 +0.2**
LANF Langenberg 94.34 319 *e*P **P 11 51 00.2 -0.1**
ABH Alteburg 94.49 320 *e*P **P 11 51 01.1 +0.1**
SAOF Saorge 94.55 314 *e*P **P 11 51 00.6 -0.8**
SBF Sospel 94.64 314⇑*i*P **P 11 51 01.7 -0.1**
comp=Z,35nm,0.8s,mb5.5
SBF Sospel 94.64 314⇑*i*P **P 11 51 01.7 -0.1**
SBF pmax pmax
comp=Z,17nm,0.8s,mb5.5
SBF Sospel 94.64 314⇑*i*P **P 11 51 01.7 -0.1**
comp=Z,17nm,0.8s,mb5.5
AUTN L'Aution 94.64 314 *e*P **P 11 51 01.3 -0.6**
BUG Bochum--Univer 94.64 321 *e*P **P 11 51 01.5 -0.2**
REVF Revere 94.69 313 *e*P **P 11 51 00.0 -2.1**
CDF Champ du Feu 94.69 318⇑*i*P **P 11 51 01.5 -0.5**
comp=Z,19nm,0.9s,mb5.2
CDF Champ du Feu 94.69 318⇑*i*P **P 11 51 01.5 -0.5**
CDF pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
CDF Champ du Feu 94.69 318⇑*i*P **P 11 51 01.5 -0.5**
comp=Z,9.6nm,0.9s,mb5.2
TOUF Mont Tournerai 94.77 314 *e*P **P 11 51 02.4 0.0**
ECH Echery 94.78 318 *e*P **P 11 51 01.6 -0.8**
ECH Echery 94.78 318 *e*P **P 11 51 02.2 -0.2**
MOF Molkenrain 94.80 318 *e*P **P 11 51 02.0 -0.5**
RUP Ruppelstein 94.81 319 *e*P **P 11 51 02.6 +0.1**
MVIF Mont Vial 94.84 314 *e*P **P 11 51 02.6 -0.2**
HINF Hinteralfeld 94.99 318⇑*i*P **P 11 51 02.5 -0.8**
LOMF Lomont 95.02 317 *e*P **P 11 51 02.7 -0.8**
CALN Calern 95.03 313 *e*P **P 11 51 03.8 +0.1**
MBDF Montbardon 95.10 314⇑*i*P **P 11 51 03.2 -0.7**
comp=Z,8.3nm,0.8s,mb4.9
MBDF Montbardon 95.10 314⇑*i*P **P 11 51 03.2 -0.7**
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
MBDF Montbardon 95.10 314⇑*i*P **P 11 51 03.2 -0.7**
comp=Z,4.2nm,0.8s,mb4.9
LPG La Plagne 95.10 315⇑*i*P **P 11 51 04.0 +0.1**
comp=Z,23nm,0.8s,mb5.4
LPG La Plagne 95.10 315⇑*i*P **P 11 51 04.0 +0.1**
LPG pmax pmax
comp=Z,11nm,0.8s,mb5.3
LPG La Plagne 95.10 315⇑*i*P **P 11 51 04.0 +0.1**
comp=Z,11nm,0.8s,mb5.3
LPL La Plagne 95.12 315⇑*i*P **P 11 51 04.0 0.0**
comp=Z,25nm,0.7s,mb5.4
LPL La Plagne 95.12 315⇑*i*P **P 11 51 04.0 0.0**
LPL pmax pmax
comp=Z,12nm,0.7s,mb5.4
LPL La Plagne 95.12 315⇑*i*P **P 11 51 04.0 0.0**
comp=Z,12nm,0.7s,mb5.5
BNI Bardonecchia 95.16 315 *e*P **P 11 51 03.3 -0.9**
BNI pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
BNI MLR MLR
comp=Z,294nm,22.0s,MS4.7
BNI Bardonecchia 95.16 315 *e*P **P 11 51 03.2 -1.0**
comp=Z,4.6nm,0.8s,mb5.0
BNI LR LR
comp=Z,294nm,22.0s,MS4.7
FRF La Foret Royal 95.21 313⇑*i*P **P 11 51 04.3 -0.2**
comp=Z,26nm,1.0s,mb5.3
FRF La Foret Royal 95.21 313⇑*i*P **P 11 51 04.3 -0.2**
FRF pmax pmax
comp=Z,13nm,1.0s,mb5.3
FRF La Foret Royal 95.21 313⇑*i*P **P 11 51 04.3 -0.2**
comp=Z,13nm,1.0s,mb5.3
LMR La Mourre 95.32 313⇑*i*P **P 11 51 04.7 -0.3**
HAU Haudompre 95.32 318⇑*i*P **P 11 51 04.4 -0.5**
comp=Z,29nm,0.8s,mb5.5
HAU *e*MLR MLR
comp=Z,163nm,18.8s,MS4.2
HAU Haudompre 95.32 318⇑*i*P **P 11 51 04.4 -0.5**
HAU pmax pmax
comp=Z,15nm,0.8s,mb5.5
HAU MLR MLR
comp=Z,160nm,18.8s,MS4.5
HAU Haudompre 95.32 318⇑*i*P **P 11 51 04.4 -0.5**
comp=Z,15nm,0.8s,mb5.5
HAU LR LR
comp=Z,160nm,18.8s,MS4.5
WLF Walferdange 95.40 319 P **P 11 51 06.0 +0.8**
comp=Z,12nm,1.6s,mb5.1
MEM Membach 95.46 320 P **P 11 51 05.4 -0.1**
CABF La Chapelle 95.54 316⇑*i*P **P 11 51 05.9 0.0**
comp=Z,35nm,1.1s,mb5.4
CABF La Chapelle 95.54 316⇑*i*P **P 11 51 05.9 0.0**
CABF pmax pmax
comp=Z,17nm,1.1s,mb5.4
CABF La Chapelle 95.54 316⇑*i*P **P 11 51 05.9 0.0**
comp=Z,17nm,1.1s,mb5.4
THEF They Montfort 95.56 318 *e*P **P 11 51 05.3 -0.6**
ORIF Oris-en-Rattie 95.73 315⇑*i*P **P 11 51 06.8 0.0**
comp=Z,15nm,1.0s,mb5.1
ORIF *e*MLR MLR
comp=Z,285nm,22.8s,MS4.4
ORIF Oris-en-Rattie 95.73 315⇑*i*P **P 11 51 06.8 0.0**
ORIF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
ORIF Oris-en-Rattie 95.73 315⇑*i*P **P 11 51 06.8 0.0**
comp=Z,7.3nm,1.0s,mb5.1
BCLA Clavier 95.92 320 P **P 11 51 08.1 +0.6**
SMRF Simiane la Rot 95.98 314⇑*i*P **P 11 51 08.4 +0.4**
comp=Z,13nm,1.0s,mb5.0
SMRF Simiane la Rot 95.98 314⇑*i*P **P 11 51 08.4 +0.4**
comp=Z,13nm,1.0s,mb5.3
MEZF Maizieres J'vi 96.17 318⇑*i*P **P 11 51 08.4 -0.3**
comp=Z,28nm,0.9s,mb5.4
MEZF Maizieres J'vi 96.17 318⇑*i*P **P 11 51 08.4 -0.3**
comp=Z,28nm,0.9s,mb5.7
GIVF Givet 96.24 320 P **P 11 51 08.7 -0.3**
DOU Dourbes 96.39 320 P **P 11 51 09.9 +0.2**
UCC Uccle 96.50 321 P **P 11 51 10.0 -0.2**
VIVF Saint-Julien-l 96.59 315⇑*i*P **P 11 51 10.4 -0.3**
comp=Z,13nm,1.0s,mb5.0
VIVF Saint-Julien-l 96.59 315⇑*i*P **P 11 51 10.4 -0.3**
VIVF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
VIVF Saint-Julien-l 96.59 315⇑*i*P **P 11 51 10.4 -0.3**
comp=Z,6.6nm,1.0s,mb5.0
BAIF Baives 96.64 320⇑*i*P **P 11 51 10.7 -0.1**
comp=Z,30nm,1.0s,mb5.4
BAIF Baives 96.64 320⇑*i*P **P 11 51 10.7 -0.1**
BAIF pmax pmax
comp=Z,15nm,1.0s,mb5.4
BAIF Baives 96.64 320⇑*i*P **P 11 51 10.7 -0.1**
comp=Z,15nm,1.0s,mb5.4
SSB Saint Sauveur 96.67 315 *e*P **P 11 51 10.5 -0.6**
LOR Lormes 97.04 317⇑*i*P **P 11 51 12.3 -0.4**
comp=Z,24nm,0.9s,mb5.3
LOR *e*MLR MLR
comp=Z,151nm,19.2s,MS4.2
LOR Lormes 97.04 317⇑*i*P **P 11 51 12.3 -0.4**
LOR pmax pmax
comp=Z,12nm,0.9s,mb5.3
LOR MLR MLR
comp=Z,150nm,19.3s,MS4.5
LOR Lormes 97.04 317⇑*i*P **P 11 51 12.3 -0.4**
comp=Z,12nm,0.9s,mb5.3
LOR LR LR
comp=Z,150nm,19.3s,MS4.5
SMF Signal de Mont 97.08 316⇑*i*P **P 11 51 12.4 -0.5**
comp=Z,30nm,1.1s,mb5.3
SMF Signal de Mont 97.08 316⇑*i*P **P 11 51 12.4 -0.5**
SMF pmax pmax
comp=Z,15nm,1.1s,mb5.3
SMF Signal de Mont 97.08 316⇑*i*P **P 11 51 12.4 -0.5**
comp=Z,15nm,1.1s,mb5.3
LASF Ste Croix 97.21 314⇑*i*P **P 11 51 13.5 -0.1**
comp=Z,10nm,1.1s,mb4.9
SSF Saint Saulge 97.29 317⇑*i*P **P 11 51 13.5 -0.3**
comp=Z,6.4nm,0.8s,mb4.8
SSF Saint Saulge 97.29 317⇑*i*P **P 11 51 13.5 -0.3**
SSF pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
SSF Saint Saulge 97.29 317⇑*i*P **P 11 51 13.5 -0.3**
comp=Z,3.2nm,0.8s,mb4.8
AVF Avril sur Loir 97.41 317⇑*i*P **P 11 51 13.8 -0.6**
comp=Z,39nm,1.4s,mb5.3
AVF Avril sur Loir 97.41 317⇑*i*P **P 11 51 13.8 -0.6**
AVF pmax pmax
comp=Z,19nm,1.4s,mb5.3
AVF Avril sur Loir 97.41 317⇑*i*P **P 11 51 13.8 -0.6**
comp=Z,20nm,1.4s,mb5.3
RAR Rarotonga 97.46 112 LR LR 12 39 18.9
comp=Z,190nm,18.1s,MS4.6,baz=264,slow=38
BGF Bois d'Agland 97.78 316⇑*i*P **P 11 51 15.9 -0.1**
comp=Z,25nm,1.0s,mb5.4
BGF Bois d'Agland 97.78 316⇑*i*P **P 11 51 15.9 -0.1**
BGF pmax pmax
comp=Z,12nm,1.0s,mb5.4
BGF Bois d'Agland 97.78 316⇑*i*P **P 11 51 15.9 -0.1**
comp=Z,12nm,1.0s,mb5.4
TCF Toulx Ste Croi 98.23 316⇑*i*P **P 11 51 17.9 -0.2**
CAF Calviac 98.44 315⇑*i*P **P 11 51 19.1 +0.1**
comp=Z,17nm,1.3s,mb5.1
CAF Calviac 98.44 315⇑*i*P **P 11 51 19.1 +0.1**
CAF pmax pmax
comp=Z,8.0nm,1.3s,mb5.1
CAF Calviac 98.44 315⇑*i*P **P 11 51 19.1 +0.1**
comp=Z,8.4nm,1.3s,mb5.1
MTLF Montolieu 98.44 313⇑*i*P **P 11 51 19.0 -0.1**
comp=Z,8.9nm,1.1s,mb4.9
MTLF Montolieu 98.44 313⇑*i*P **P 11 51 19.0 -0.1**
MTLF pmax pmax
comp=Z,4.0nm,1.1s,mb4.9
MTLF Montolieu 98.44 313⇑*i*P **P 11 51 19.0 -0.1**
comp=Z,4.4nm,1.1s,mb4.9
IMA2 Indian Mountai 98.80 23 *e*P **P 11 51 19.6 -0.6**
LFF La Frestale 99.38 315⇑*i*P **P 11 51 23.3 +0.1**
LDF La Druitiere 99.59 319⇑*i*P Pdif 11 51 23.7 -0.3
comp=Z,12nm,0.8s
LDF La Druitiere 99.59 319⇑*i*P Pdif 11 51 23.7 -0.3
LDF pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
LDF La Druitiere 99.59 319⇑*i*P Pdif 11 51 23.7 -0.3
comp=Z,6.2nm,0.8s
TORD Torodi Ar. Bea 99.80 283 P Pdif 11 51 26.0 +1.1
comp=Z,2.3nm,0.9s,baz=82,slow=5.2,SNR=15
TORD PP PP 11 55 33.9 +3.0
comp=Z,1.9nm,1.2s,baz=86,slow=8.4,SNR=4.6
TORD PKiKP PKiKP 11 55 53.8 -0.5
comp=Z,0.9nm,0.8s,baz=104,slow=4.7,SNR=3.7
TORD PKKPbc PKKPbc 12 07 45.4 -0.7
comp=Z,0.5nm,0.4s,baz=299,slow=3.1,SNR=8.2
TORD LR LR 12 32 34.3
comp=Z,198nm,21.9s,MS4.6,baz=100,slow=33
TORD Torodi Ar. Bea 99.80 283 P Pdif 11 51 26.0 +1.1
TORD PP PP 11 55 33.9 +3.0
FLN La Foliniere 99.81 319⇑*i*P Pdif 11 51 24.7 -0.2
comp=Z,15nm,0.8s
FLN *e*MLR MLR
comp=Z,154nm,22.8s,MS4.2
FLN La Foliniere 99.81 319⇑*i*P Pdif 11 51 24.7 -0.2
FLN pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
FLN MLR MLR
comp=Z,150nm,22.8s,MS4.4
FLN La Foliniere 99.81 319⇑*i*P Pdif 11 51 24.7 -0.2
comp=Z,7.7nm,0.8s
FLN LR LR
comp=Z,150nm,22.8s,MS4.4
MFF Saint Martin d 99.83 317⇑*i*P Pdif 11 51 24.8 -0.2
comp=Z,12nm,1.0s
MFF Saint Martin d 99.83 317⇑*i*P Pdif 11 51 24.8 -0.2
MFF pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
MFF Saint Martin d 99.83 317⇑*i*P Pdif 11 51 24.8 -0.2
comp=Z,6.1nm,1.0s
BPAW Bear Paw Mtn. 100.39 25 *e*Pdif Pdif 11 51 25.9 -1.6
comp=Z,21nm,1.1s
KDAK Kodiak Island 101.13 32 PFAKE 11 51 40.0 +9.2
KDAK LR LR
comp=Z,137nm,21.0s,MS4.4
COLA College 101.47 24 PFAKE 11 51 40.0 +7.7
COLA LR LR
comp=Z,282nm,19.0s,MS4.8
ROSF Rostrenen 101.70 319⇑*i*P Pdif 11 51 33.2 -0.1
comp=Z,35nm,1.2s
ROSF Rostrenen 101.70 319⇑*i*P Pdif 11 51 33.2 -0.1
ROSF pmax pmax
comp=Z,18nm,1.2s
ROSF Rostrenen 101.70 319⇑*i*P Pdif 11 51 33.2 -0.1
comp=Z,18nm,1.2s
PMR Palmer 101.88 27 PFAKE 11 51 40.0 +5.9
PMR LR LR
comp=Z,343nm,20.0s,MS4.9
ESDC Sonseca Array 103.43 310 Pdiff Pdif 11 51 41.9 +0.9
comp=Z,0.4nm,0.7s,baz=62,slow=4.6,SNR=4.1
ESDC PP PP 11 55 58.1 +0.6
comp=Z,1.4nm,0.8s,baz=75,slow=7.0,SNR=8.7
ESDC PKKPbc PKKPbc 12 07 34.2 -2.1
comp=Z,0.1nm,0.3s,baz=270,slow=3.5,SNR=5.1
PAB San Pablo 103.74 310 PFAKE 11 51 50.0 +7.6
PAB LR LR
comp=Z,75nm,19.0s,MS4.2
SFS San Fernando 105.61 307 PFAKE 11 56 20.0 +16
SFS LR LR
comp=Z,357nm,20.0s,MS4.9
RTC Rabat Centre 106.48 304 PFAKE 11 56 20.0 +14
RTC LR LR
comp=Z,108nm,20.0s,MS4.4
PPT Papeete 107.48 109 *e*LR LR 12 27 27.6
comp=Z,354nm,23.8s
YKA Yellowknife Ar 114.92 17 PKP PKiKP 11 56 19.2 -1.8
comp=Z,3.9nm,0.8s,baz=325,slow=2.4,SNR=7.3
YKA Yellowknife Ar 114.92 17 PKIKP PKiKP 11 56 19.2 -1.9
YKA pmax pmax
comp=Z,4.0nm,0.8s
PGC Sidney 120.65 33 *e*PKPdf PKPdf 11 56 31.4 -1.1
NLWA Neilton Lookou 121.14 34 *e*PKPdf PKPdf 11 56 33.3 -0.2
NLWA LR LR
comp=Z,269nm,19.0s,MS4.9
VDB Vedder Mountai 121.15 32 P PKPdf 11 56 32.0 -1.4
GNW Green Mountain 121.62 33 *e*PKPdf PKPdf 11 56 34.0 -0.4
JCW Jim Creek 121.74 32 P PKPdf 11 56 34.5 -0.1
RPW Rockport 121.81 32 *e*PKPdf PKPdf 11 56 33.5 -1.3
EDM Edmonton 122.38 24 *e*PKIKP PKPdf 11 56 34.3 -1.4
LON Longmire 122.66 34 *e*PKIKP PKPdf 11 56 35.7 -0.8
TDL Tradedollar La 122.67 34 P PKPdf 11 56 36.3 -0.2
EFI East Falkland 122.80 195 PFAKE 11 56 50.0 +13
EFI LR LR
comp=Z,411nm,19.0s,MS5.1
MPOR Mary's Peak 122.94 37 P PKPdf 11 56 37.4 +0.3
ETW Entiat 122.95 32 *e*PKPdf PKPdf 11 56 36.0 -1.0
COR Corvallis 123.04 37 PFAKE 11 56 50.0 +13
COR LR LR
comp=Z,248nm,19.0s,MS4.9
WTV Waterville 123.09 32 P PKPdf 11 56 36.2 -1.0
OD2 Odessa Site #2 123.94 32 *e*PKPdf PKPdf 11 56 38.1 -0.7
IRO Indian Ridge 123.99 37 P PKPdf 11 56 38.5 -0.6
WRD Warden 124.08 32 P PKPdf 11 56 38.8 -0.3
RSW Rattlesnake Hi 124.10 33 *e*PKPdf PKPdf 11 56 38.9 -0.3
HAWA Hanford 124.13 33 *e*PKPdf PKPdf 11 56 38.8 -0.5
HAWA LR LR
comp=Z,293nm,19.0s,MS5.0
NEW Newport 124.19 30 *e*PKIKP PKPdf 11 56 38.1 -1.2
NEW MLR MLR
comp=Z,409nm,21.0s
HUMO Hull Mountain 124.33 38 *e*PKPdf PKPdf 11 56 39.3 -0.5
HUMO LR LR
comp=Z,243nm,21.0s,MS4.8
YBH Yreka Blue Hor 124.96 39 *e*PKIKP PKPdf 11 56 39.6 -1.4
YBH MLR MLR
comp=Z,300nm,20.0s
FFC Flin Flon 125.04 16 *e*PKIKP PKPdf 11 56 39.3 -1.5
FFC MLR MLR
comp=Z,574nm,21.0s,MS5.2
LNOR Lincton Mounta 125.13 33 *e*PKIKP PKPdf 11 56 40.6 -0.6
WALA Waterton Lakes 125.18 27 *e*PKPdf PKPdf 11 56 39.7 -1.5
HOG Hogback Mounta 125.31 38 P PKPdf 11 56 41.8 +0.1
KCPM Cahto Peak 125.46 42 *e*PKPdf PKPdf 11 56 41.2 -0.9
WDC Whiskeytown Da 125.68 40 *e*PKIKP PKPdf 11 56 41.4 -1.0
WDC MLR MLR
comp=Z,219nm,22.0s,MS4.8
LTIM Timbered Crate 126.03 39 P PKPdf 11 56 43.1 0.0
HOPS Hopland 126.15 42 PFAKE 11 56 50.0 +6.6
HOPS LR LR
comp=Z,303nm,22.0s,MS4.9
BMO Blue Mountains 126.31 33 *e*PKIKP PKPdf 11 56 42.6 -0.9
BMO MLR MLR
comp=Z,194nm,21.0s,MS4.8
MOD Modoc 126.36 38 *e*PKPdf PKPdf 11 56 43.6 -0.1
MOD LR LR
comp=Z,256nm,19.0s,MS4.9
NSHM Saint Helena R 126.71 43 *e*PKPdf PKPdf 11 56 44.7 +0.2
MCCM Marconi Confer 126.71 43 PFAKE 11 57 00.0 +16
MCCM LR LR
comp=Z,220nm,21.0s,MS4.8
MSO Missoula 126.74 29 *e*PKPdf PKPdf 11 56 42.3 -1.9
MSO LR LR
comp=Z,241nm,19.0s,MS4.9
CHMT Chamberlain Mo 127.02 29 *e*PKPdf PKPdf 11 56 43.2 -1.6
WVOR Wild Horse Val 127.05 36 *e*PKIKP PKPdf 11 56 44.8 -0.2
WVOR MLR MLR
comp=Z,238nm,20.0s,MS4.9
SCHQ Schefferville 127.31 351 PKP PKPdf 11 56 44.6 -0.5
comp=Z,14nm,0.8s,baz=5.6,slow=3.7,SNR=9.2
SCHQ PP PP 11 58 40.2 -4.0
comp=Z,7.3nm,0.7s,baz=45,slow=11,SNR=5.3
SCHQ Schefferville 127.31 351 PKP PKPdf 11 56 44.6 -0.5
SCHQ PP PP 11 58 40.2 -4.0
EGMT Eagleton 127.81 26 *e*PKPdf PKPdf 11 56 46.0 -0.2
EGMT LR LR
comp=Z,332nm,19.0s,MS5.0
PAHR Pah Rah Range 128.18 40 *e*PKPdf PKPdf 11 56 47.4 +0.1
DLMT Dillon 128.44 30 *e*PKPdf PKPdf 11 56 47.2 -0.4
CMB Columbia Colle 128.45 42 *e*PKIKP PKPdf 11 56 47.3 -0.5
CMB MLR MLR
comp=Z,264nm,19.0s,MS4.9

MCMT	**McKenzie Canyo**	**128.69**	**31**	*e*PKPdf	PKPdf	11 56 48.2	+0.1		
BOZ	**Bozeman (W)**	**128.71**	**29**	*e*PKIKP	PKPdf	11 56 48.1	0.0		
BOZ				MLR	MLR				
	comp=Z,225nm,20.0s,MS4.8								
HLID	**Hailey**	**128.73**	**33**	*e*PKPdf	PKPdf	11 56 47.8	-0.4		
HLID				LR	LR				
	comp=Z,313nm,21.0s,MS5.0								
BMN	**Battle Mountai**	**129.11**	**38**	PFAKE		11 57 00.0	+11		
BMN				LR	LR				
	comp=Z,201nm,19.0s,MS4.8								
QLMT	**Earthquake Lak**	**129.40**	**30**	*e*PKPdf	PKPdf	11 56 49.9	+0.5		
GCMT	**Greyclift**	**129.53**	**28**	*e*PKPdf	PKPdf	11 56 49.5	-0.2		
NVAR	**Mina Array Bea**	**129.60**	**40**	PKhKP		11 56 42.7			
	comp=Z,0.5nm,0.7s,baz=296,slow=2.3,SNR=3.9								
NVAR				PKP	PKPdf	11 56 50.0	0.0		
	comp=Z,6.9nm,0.6s,baz=284,slow=2.1,SNR=43								
NVAR				SKPbc		12 00 06.3			
	comp=Z,5.7nm,0.9s,baz=269,slow=4.5,SNR=8.2								
NVAR	**Mina Array Bea**	**129.60**	**40**	PKP		11 56 42.7			
NVAR				PKP	PKPdf	11 56 50.0	0.0		
NVAR				SKPbc		12 00 06.3			
YMR	**Madison River**	**129.74**	**30**	*e*PKPdf	PKPdf	11 56 50.6	+0.6		
PTRM	**Twissleman Ran**	**129.82**	**44**	*e*PKPdf	PKPdf	11 56 50.9	+0.5		
LKWY	**Lake**	**130.09**	**29**	*e*PKIKP	PKPdf	11 56 52.4	+1.7		
LKWY				MLR	MLR				
	comp=Z,384nm,22.0s,MS5.0								
ELK	**Elko**	**130.10**	**36**	*e*PKIKP	PKPdf	11 56 50.8	-0.1		
ELK				MLR	MLR				
	comp=Z,245nm,20.0s								
RLMT	**Red Lodge**	**130.22**	**28**	PFAKE		11 57 00.0	+9.0		
RLMT				LR	LR				
	comp=Z,229nm,20.0s,MS4.9								
IMW	**Indian Meadow**	**130.31**	**30**	*e*PKPdf	PKPdf	11 56 51.0	-0.1		
LAO	**LASA Array**	**130.35**	**24**	*e*PKPdf	PKPdf	11 56 51.7	+0.6		
LAO				LR	LR				
	comp=Z,331nm,20.0s,MS5.0								
TPH	**Tonopah**	**130.50**	**40**	PFAKE		11 57 00.0	+8.3		
TPH				LR	LR				
	comp=Z,250nm,19.0s,MS4.9								
RRI2	**Red Ridge**	**130.51**	**31**	*e*PKPdf	PKPdf	11 56 51.6	+0.1		
MOOW	**Moose Ponds**	**130.52**	**30**	*e*PKPdf	PKPdf	11 56 51.5	-0.1		
TPAW	**Teton Pass**	**130.60**	**31**	*e*PKPdf	PKPdf	11 56 51.7	-0.1		
LOHW	**Long Hollow**	**130.69**	**30**	*e*PKPdf	PKPdf	11 56 51.6	-0.3		
ULM	**Lac du Bonnet**	**130.69**	**14**	PKP	PKPdf	11 56 50.8	-0.8		
	comp=Z,22nm,0.6s,baz=355,slow=2.7,SNR=40								
ULM				SKPbc	SKPbc	12 00 08.8	-2.8		
	comp=Z,8.9nm,1.0s,baz=353,slow=6.2,SNR=4.8								
SNOW	**Snow King Moun**	**130.72**	**30**	*e*PKPdf	PKPdf	11 56 51.7	-0.2		
REDW	**Red Top Meadow**	**130.74**	**31**	*e*PKPdf	PKPdf	11 56 51.5	-0.5		
REDW				*e*		11 57 07.2			
REDW				*e*SKPbc	SKPbc	12 00 10.7	-1.4		
HVU	**Hansel Valley**	**130.82**	**33**	*e*PKPdf	PKPdf	11 56 51.8	-0.4		
HVU				*e*SKPbc	SKPbc	12 00 10.4	-2.1		
ISA	**Isabella**	**131.01**	**43**	*e*PKIKP	PKPdf	11 56 52.0	-0.8		
ISA				MLR	MLR				
	comp=Z,200nm,19.0s,MS4.8								
AHID	**Auburn Hatcher**	**131.04**	**31**	PFAKE		11 57 00.0	+7.4		
AHID				LR	LR				
	comp=Z,245nm,19.0s,MS4.9								
BGU	**Big Grassy Mou**	**131.26**	**34**	*e*PKPdf	PKPdf	11 56 53.3	+0.2		
DAC	**Darwin (Calif)**	**131.28**	**42**	PFAKE		11 57 00.0	+6.8		
DAC				LR	LR				
	comp=Z,262nm,21.0s,MS4.9								
HWUT	**Hardware Ranch**	**131.60**	**33**	*e*PKPdf	PKPdf	11 56 53.0	-0.7		
HWUT				*e*		11 57 09.3			
HWUT				LR	LR				
	comp=Z,323nm,21.0s,MS5.0								
TPNV	**Topopah Spring**	**131.78**	**41**	*e*PKIKP	PKPdf	11 56 53.8	-0.4		
TPNV				MLR	MLR				
	comp=Z,196nm,19.0s,MS4.8								
BW06	**Boulder Array**	**131.82**	**30**	PFAKE		11 57 10.0	+16		
BW06				LR	LR				
	comp=Z,224nm,21.0s,MS4.8								
PDAR	**Pinedale Array**	**131.82**	**30**	PKhKP		11 56 46.4			
	comp=Z,0.7nm,0.8s,baz=54,slow=2.0,SNR=5.2								
PDAR				PKP	PKPdf	11 56 53.7	-0.4		
	comp=Z,3.8nm,0.6s,baz=65,slow=1.8,SNR=27								
PDAR				PP	PP	11 59 13.8	-0.3		
	comp=Z,2.4nm,0.9s,baz=310,slow=0.9,SNR=4.6								
PDAR				SKPbc	SKPbc	12 00 13.2	-3.0		
	comp=Z,4.5nm,0.9s,baz=315,slow=0.6,SNR=9.9								
DUG	**Dugway**	**131.87**	**35**	*e*PKIKP	PKPdf	11 56 54.2	0.0		
DUG				MLR	MLR				
	comp=Z,278nm,20.0s,MS5.0								
NOQ	**North Oquirrh**	**131.95**	**34**	*e*PKPdf	PKPdf	11 56 54.1	-0.3		
MWC	**Mount Wilson**	**132.07**	**45**	*e*PKIKP	PKPdf	11 56 54.7	-0.1		
MWC				MLR	MLR				
	comp=Z,246nm,20.0s,MS4.9								
GSC	**Goldstone**	**132.35**	**43**	*e*PKIKP	PKPdf	11 56 55.7	+0.4		
GSC				MLR	MLR				
	comp=Z,192nm,21.0s,MS4.8								
JLU	**Jordanelle**	**132.36**	**34**	*e*PKPdf	PKPdf	11 56 54.2	-0.9		
NLU	**North Lily Min**	**132.45**	**35**	*e*PKPdf	PKPdf	11 56 55.0	-0.3		
AGMN	**Agassiz Refuge**	**132.49**	**15**	*e*PKPdf	PKPdf	11 56 53.3	-1.9		
AGMN				LR	LR				
	comp=Z,457nm,21.0s,MS5.2								
MPU	**Maple Canyon**	**132.66**	**34**	PFAKE		11 57 10.0	+14		
MPU				LR	LR				
	comp=Z,1μm,21.0s,MS5.5								
ARUT	**Antelope Range**	**133.05**	**38**	*e*PKIKP	PKPdf	11 56 57.2	+0.7		
CCUT	**Cedar City**	**133.25**	**38**	*e*PKPdf	PKPdf	11 56 57.5	+0.6		
MVU	**Marysvale**	**133.33**	**36**	PFAKE		11 57 10.0	+13		
MVU				LR	LR				
	comp=Z,216nm,20.0s,MS4.9								
RSSD	**Black Hills**	**133.33**	**25**	*e*PKIKP	PKPdf	11 56 55.9	-1.0		
MSU	**Marysvale**	**133.35**	**36**	*e*PKIKP	PKPdf	11 56 57.5	+0.4		
TMUT	**Trail Mountain**	**133.38**	**35**	*e*PKPdf	PKPdf	11 56 57.0	-0.2		
PFO	**Pinyon Flat Ob**	**133.52**	**45**	*e*PKIKP	PKPdf	11 56 58.2	+0.6		
RWWY	**Rawlins**	**133.79**	**29**	*e*PKPdf	PKPdf	11 56 57.1	-0.7		
EYMN	**Ely**	**133.84**	**12**	*e*PKPdf	PKPdf	11 56 56.3	-1.4		
EYMN				LR	LR				
	comp=Z,456nm,22.0s,MS5.2								
BAR	**Barrett**	**133.87**	**46**	PFAKE		11 57 10.0	+12		
BAR				LR	LR				
	comp=Z,243nm,19.0s,MS4.9								
SRU	**San Rafael**	**133.90**	**34**	*e*PKIKP	PKPdf	11 56 57.5	-0.6		
PHWY	**Pilot Hill**	**134.94**	**28**	*e*PKPdf	PKPdf	11 56 58.9	-1.1		
GLA	**Glamis**	**134.97**	**44**	*e*PKIKP	PKPdf	11 57 00.4	+0.1		
GLA				MLR	MLR				
	comp=Z,137nm,20.0s,MS4.7								
PV10	**Paradox Valley**	**135.24**	**34**	*e*PKPdf	PKPdf	11 57 01.3	+0.7		
PV01	**Paradox Valley**	**135.68**	**34**	*e*PKPdf	PKPdf	11 57 01.8	+0.3		
WUAZ	**Wupatki**	**135.78**	**39**	*e*PKPdf	PKPdf	11 57 02.0	+0.3		
WUAZ				LR	LR				
	comp=Z,253nm,20.0s,MS4.9								
PLCA	**Paso Flores**	**135.90**	**189**	PKP	PKPdf	11 57 03.7	+1.9		
	comp=Z,4.8nm,0.9s,baz=150,slow=3.5,SNR=8.5								
PLCA				PP	PP	11 59 45.3	+5.9		
	comp=Z,1.7nm,0.9s,baz=181,slow=8.1,SNR=3.2								
PLCA				SKPbc	SKPbc	12 00 28.8	-0.9		
	comp=Z,2.8nm,0.8s,baz=57,slow=0.1,SNR=4.2								
PLCA	**Paso Flores**	**135.90**	**189**	PKIKP	PKPdf	11 57 03.7	+1.9		
PLCA						11 59 45.3			
PLCA	**Paso Flores**	**135.90**	**189**	PKP	PKPdf	11 57 03.7	+1.9		
PLCA				PP	PP	11 59 45.3	+5.9		
PLCA				SKPbc	SKPbc	12 00 28.8	-0.9		
ISCO	**Idaho Springs**	**136.01**	**30**	PFAKE		11 57 10.0	+8.0		
ISCO				LR	LR				
	comp=Z,367nm,22.0s,MS5.1								
COWI	**Conover**	**136.06**	**10**	PFAKE		11 57 10.0	+8.1		
COWI				LR	LR				
	comp=Z,557nm,20.0s,MS5.3								
TRQA	**Tornquist**	**136.33**	**199**	PFAKE		11 57 10.0	+7.3		
TRQA				LR	LR				
	comp=Z,492nm,22.0s,MS5.2								
MVCO	**Mesa Verde**	**136.37**	**35**	*e*PKPdf	PKPdf	11 57 02.4	-0.4		
MVCO				LR	LR				
	comp=Z,356nm,21.0s,MS5.1								
ECSD	**EROS,Sioux Fal**	**136.42**	**19**	*e*PKPdf	PKPdf	11 57 01.6	-1.1		
ECSD				LR	LR				
	comp=Z,480nm,22.0s,MS5.2								
OGNE	**Ogallala**	**136.78**	**26**	PFAKE		11 57 10.0	+6.6		
OGNE				LR	LR				
	comp=Z,473nm,22.0s,MS5.2								
PKME	**Peaks-Kenny Pk**	**136.98**	**350**	PFAKE		11 57 20.0	+16		
PKME				LR	LR				
	comp=Z,466nm,19.0s,MS5.2								
SDCO	**Great Sand Dun**	**137.62**	**32**	*e*PKPdf	PKPdf	11 57 05.1	0.0		
SDCO				LR	LR				
	comp=Z,293nm,20.0s,MS5.0								
GLMI	**Grayling**	**137.96**	**6**	*e*PKPdf	PKPdf	11 57 05.0	-0.4		
GLMI				LR	LR				
	comp=Z,544nm,20.0s,MS5.3								
TUC	**Tucson**	**138.16**	**42**	*e*PKPdf	PKPdf	11 57 06.7	+0.4		
TUC				*e*SKPbc	SKPbc	12 00 35.9	-0.8		
TUC				LR	LR				
	comp=Z,179nm,20.0s,MS4.8								
LONY	**Lake Ozonia**	**138.29**	**355**	PFAKE		11 57 20.0	+14		
LONY				LR	LR				
	comp=Z,577nm,19.0s,MS5.3								
LBNH	**Lisbon**	**138.38**	**352**	PFAKE		11 57 20.0	+14		
LBNH				LR	LR				
	comp=Z,429nm,20.0s,MS5.2								
MDV	**Middlebury**	**138.77**	**354**	*e*PKPdf	PKPdf	11 57 05.7	-1.3		
NCB	**Newcomb**	**138.90**	**355**	PFAKE		11 57 20.0	+13		
NCB				LR	LR				
	comp=Z,570nm,21.0s,MS5.3								
JFWS	**Jewell Farm**	**138.91**	**13**	*e*PKIKP	PKPdf	11 57 07.5	+0.2		
JFWS				MLR	MLR				
	comp=Z,284nm,19.0s,MS5.0								
SCIA	**State Center**	**139.11**	**16**	*e*PKPdf	PKPdf	11 57 08.5	+0.8		
SCIA				LR	LR				
	comp=Z,306nm,22.0s,MS5.0								
LAZ	**Ladron**	**139.11**	**37**	*e*PKPdf	PKPdf	11 57 08.0	+0.1		
ANMO	**Albuquerque**	**139.13**	**35**	*e*PKIKP	PKPdf	11 57 07.8	-0.1		
ANMO				MLR	MLR				
	comp=Z,315nm,22.0s								
LENM	**Lemitar**	**139.37**	**37**	*e*PKPdf	PKPdf	11 57 09.0	+0.6		
LPM	**Los Pinos Moun**	**139.47**	**36**	*e*PKPdf	PKPdf	11 57 07.2	-1.3		
CBKS	**Cedar Bluff**	**139.53**	**25**	*e*PKIKP	PKPdf	11 57 09.3	+0.8		
CBKS				MLR	MLR				
	comp=Z,427nm,19.0s,MS5.2								
BNM	**Barren Site**	**139.59**	**37**	*e*PKPdf	PKPdf	11 57 09.1	+0.3		
HRV	**Adam Dziewonsk**	**140.03**	**352**	PFAKE		11 57 20.0	+11		
HRV				LR	LR				
	comp=Z,325nm,20.0s,MS5.1								
WES	**Weston**	**140.12**	**351**	PFAKE		11 57 20.0	+11		
WES				LR	LR				
	comp=Z,757nm,21.0s,MS5.4								
KSU1	**Kansas State U**	**140.53**	**22**	*e*PKPdf	PKPdf	11 57 09.0	-1.3		
KSU1				LR	LR				
	comp=Z,625nm,21.0s,MS5.3								
BINY	**Binghamton**	**140.79**	**357**	PFAKE		11 57 20.0	+9.3		
BINY				LR	LR				
	comp=Z,760nm,22.0s,MS5.4								
AMTX	**Amarillo**	**141.79**	**31**	PFAKE		11 57 20.0	+7.2		
AMTX				LR	LR				
	comp=Z,391nm,21.0s,MS5.1								
ACSO	**Alum Creek Sta**	**142.67**	**5**	*e*PKPpre		11 57 08.1			
ACSO				LR	LR				
	comp=Z,457nm,19.0s,MS5.3								
CCM	**Cathedral Cave**	**143.24**	**16**	*e*PKHKP		11 57 10.0			
CCM				MLR	MLR				
	comp=Z,429nm,20.0s,MS5.2								
BLO	**Bloomington**	**143.25**	**10**	*e*PKHKP		11 57 10.0			
WMOK	**Wichita Mounta**	**143.34**	**28**	*e*PKHKP		11 57 10.8			
WMOK				MLR	MLR				
	comp=Z,531nm,20.0s,MS5.3								
OLIL	**Olney**	**143.37**	**12**	*e*PKPpre		11 57 10.5			
MCWV	**Mont Chateau**	**143.41**	**1**	PFAKE		11 57 30.0	+15		
MCWV				LR	LR				
	comp=Z,453nm,19.0s,MS5.3								
FVM	**French Village**	**143.53**	**15**	*e*PKHKP		11 57 10.4			
SIUC	**Southern Illin**	**144.09**	**14**	*e*PKPpre		11 57 13.5			
USIN	**University of**	**144.20**	**12**	*e*PKPpre		11 57 13.7			
WCI	**Wyandotte Cave**	**144.21**	**10**	*e*PKIKP	PKPdf	11 57 13.7	-3.2		
WCI				MLR	MLR				
	comp=Z,424nm,20.0s,MS5.2								
BDFB	**Brasilia**	**144.31**	**238**	PKP	PKPdf	11 57 16.7	-1.0		
	comp=Z,12nm,0.5s,baz=117,slow=3.5,SNR=18								
PARMA	**Parma**	**144.96**	**15**	*e*PKP	PKPdf	11 57 16.1	-2.2		
GLAT	**Glass**	**145.45**	**15**	*e*PKP	PKPdf	11 57 17.9	-1.2		
URVA	**University of**	**145.48**	**358**	*e*PKP	PKPdf	11 57 18.0	-1.1		
UTMT	**University of**	**145.49**	**14**	*e*PKP	PKPdf	11 57 18.0	-1.2		
MIAR	**Mount Ida**	**145.69**	**22**	*e*PKIKP	PKPdf	11 57 18.8	-0.8		
MIAR				MLR	MLR				
	comp=Z,360nm,19.0s,MS5.2								
HBAR	**Harrisburg**	**145.74**	**17**	*e*PKP	PKPdf	11 57 18.8	-0.8		
HALT	**Halls**	**145.77**	**15**	*e*PKP	PKPdf	11 57 19.0	-0.7		
ELN	**Prospectdale**	**145.81**	**3**	*e*PKP	PKPdf	11 57 18.2	-1.5		
BLA	**Blacksburg**	**145.84**	**2**	*e*PKIKP	PKPdf	11 57 18.5	-1.3		
BLA				MLR	MLR				
	comp=Z,359nm,20.0s,MS5.2								
UALR	**University of**	**145.92**	**20**	*e*PKP	PKPdf	11 57 19.2	-0.8		
WVT	**Waverly**	**145.93**	**13**	*e*PKIKP	PKPdf	11 57 18.6	-1.3		
WVT				*e*		11 57 19.3			
WVT				MLR	MLR				
	comp=Z,416nm,19.0s,MS5.2								
JCT	**Junction City**	**146.20**	**34**	*e*PKP2	PKPab	11 57 19.9	-2.4		
JCT				MLR	MLR				
	comp=Z,367nm,21.0s,MS5.1								
TZTN	**Tazewell**	**146.26**	**7**	*e*PKPdf	PKPdf	11 57 19.7	-0.8		
TZTN				LR	LR				
	comp=Z,469nm,20.0s,MS5.3								
OXF	**Oxford**	**147.07**	**16**	*e*PKIKP	PKPdf	11 57 20.9	-1.0		
OXF				MLR	MLR				
	comp=Z,428nm,22.0s,MS5.2								
TKL	**Tuckaleechee C**	**147.10**	**7**	*e*PKIKP	PKPdf	11 57 21.1	-0.8		
TKL				*e*		11 57 22.7			
SWET	**Sewanee**	**147.20**	**11**	*e*PKPdf	PKPdf	11 57 20.3	-1.9		
SWET				*e*PKPbc	PKPbc	11 57 22.1	-2.3		
CPCT	**Cooper Cave**	**147.21**	**8**	*e*PKPdf	PKPdf	11 57 21.4	-0.8		
LCO	**Las Campanas**	**147.30**	**193**	*e*PKPdf	PKPdf	11 57 22.3	-0.2		
LCO				*e*PKPbc	PKPbc	11 57 25.5	+0.7		
LCO				LR	LR				
	comp=Z,552nm,21.0s,MS5.3								
NATX	**Nacogdoches**	**147.70**	**26**	*e*PKPbc	PKPbc	11 57 24.9	-1.0		
NATX				LR	LR				
	comp=Z,441nm,20.0s,MS5.2								
BBSR	**BB Station**	**147.79**	**337**	*e*PKPbc	PKPbc	11 57 25.3	-0.8		
CNNC	**Cliffs of the**	**147.82**	**358**	*e*PKPbc	PKPbc	11 57 25.4	-0.7		
CNNC				LR	LR				
	comp=Z,596nm,22.0s,MS5.3								
HKT	**Hockley**	**148.69**	**29**	*e*PKIKP	PKPdf	11 57 24.1	-0.6		
HKT				*e*		11 57 28.1			
HKT				MLR	MLR				
	comp=Z,358nm,19.0s,MS5.2								
JSC	**Jenkinsville**	**148.71**	**4**	*e*PKIKP	PKPdf	11 57 24.2	-0.4		
JSC				*e*		11 57 27.2			
VBMS	**Vicksburg**	**148.87**	**19**	*e*PKPbc	PKPbc	11 57 27.9	-1.0		
VBMS				*e*PKPab	PKPab	11 57 32.8	0.0		
VBMS				LR	LR				
	comp=Z,425nm,21.0s,MS5.2								
LRAL	**Lakeview Retre**	**149.09**	**13**	*e*PKPdf	PKPdf	11 57 23.7	-1.5		
LRAL				*e*PKPbc	PKPbc	11 57 27.9	-1.5		
LRAL				LR	LR				
	comp=Z,447nm,20.0s,MS5.3								
GOGA	**Godfrey**	**149.36**	**7**	*e*PKP2	PKPab	11 57 28.8	-5.9		
GOGA				MLR	MLR				
	comp=Z,609nm,21.0s,MS5.4								
KVTX	**Kingsville**	**149.51**	**35**	*e*PKPbc	PKPbc	11 57 30.9	+0.3		
KVTX				LR	LR				
	comp=Z,344nm,20.0s,MS5.2								
COW	**Cow Castle Cre**	**149.64**	**3**	*e*PKPbc	PKPbc	11 57 30.0	-0.8		
NHSC	**New Hope**	**149.94**	**2**	*e*PKPbc	PKPbc	11 57 30.8	-0.7		
NHSC				LR	LR				
	comp=Z,483nm,22.0s,MS5.2								
BRAL	**Brewton**	**151.01**	**15**	*e*PKPdf	PKPdf	11 57 28.3	-0.1		
BRAL				*e*PKPbc	PKPbc	11 57 33.5	-0.6		
BRAL				LR	LR				
	comp=Z,450nm,20.0s,MS5.3								
LVC	**Limon Verde**	**152.82**	**201**	*e*PKPbc	PKPbc	11 57 39.2	+0.8		
LVC				LR	LR				
	comp=Z,290nm,22.0s,MS5.0								
DWPF	**Disney**	**154.82**	**5**	PFAKE		11 57 40.0	+6.0		
DWPF				LR	LR				
	comp=Z,363nm,20.0s,MS5.2								
LPAZ	**La Paz**	**158.15**	**209**	PKP	PKPdf	11 57 39.4	+0.8		
	comp=Z,5.5nm,0.9s,baz=62,slow=2.5,SNR=25								
MTP	**Monte Pirata**	**160.02**	**320**	*e*PKPdf	PKPdf	11 57 39.8	-0.9		
MTP				*e*PKPab	PKPab	11 58 20.2	-0.2		
SJG	**San Juan**	**160.38**	**321**	PFAKE		11 57 50.0	+8.8		
SJG				LR	LR				
	comp=Z,250nm,22.0s								
TEIG	**Tepich**	**160.51**	**27**	PFAKE		11 57 50.0	+8.7		
TEIG				LR	LR				
	comp=Z,375nm,21.0s								
GRGR	**Grenville**	**160.61**	**299**	PFAKE		11 57 50.0	+8.5		
GRGR				LR	LR				
	comp=Z,230nm,21.0s								
NNA	**Nana**	**165.06**	**188**	PFAKE		11 58 00.0	+14		
NNA				LR	LR				
	comp=Z,376nm,21.0s								
TGUH	**Tegucigalpa,Un**	**166.19**	**36**	PFAKE		11 58 00.0	+13		
TGUH				LR	LR				
	comp=Z,333nm,21.0s								
SDV	**Santo Domingo**	**169.85**	**306**	PFAKE		11 58 00.0	+11		
SDV				LR	LR				
	comp=Z,126nm,22.0s								
JTS	**JuntasAbangare**	**170.53**	**39**	PFAKE		11 58 00.0	+10		
JTS				LR	LR				
	comp=Z,224nm,19.0s								
ROSC	**El Rosal**	**175.04**	**293**	PKP	PKPdf	11 57 50.9	-0.7		
	comp=Z,15nm,0.3s,baz=78,slow=12,SNR=4.3								
OTAV	**Otavalo**	**177.31**	**190**	*e*PKPdf	PKPdf	11 57 51.6	-0.5		
OTAV				LR	LR				
	comp=Z,353nm,20.0s								

KRSC 16 12:01:12.1±0.9, 5233N×15935E, h23km±23km, ML3.9, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.52**	**282**	*e*P	Pb	12 01 23.4	+0.8
RUS				*i* S	Sb	12 01 31.4	+1.6
GRL	**Gorelyy**	**0.81**	**286**	*e*P	Pb	12 01 28.3	+0.8
GRL				*i* S	Sb	12 01 40.2	+2.2
PET	**Petropavlovsk**	**0.81**	**329**	*e*P	Pb	12 01 27.7	+0.2
PET				*i* S	Sb	12 01 38.4	+0.3
NLC	**Nalytchevo**	**0.84**	**360**	*e*P	Pb	12 01 27.7	-0.3
NLC				*i* S	Sb	12 01 39.0	+0.1
SPN	**Mys Shipunski**	**0.87**	**28**	*e*P	Pb	12 01 29.1	+0.6
SPN				*i* S	Sb	12 01 42.0	+2.3
AVH	**Avacha**	**1.01**	**339**	*e*P	Pn	12 01 30.8	0.0
AVH				*i* S	Sb	12 01 44.8	+1.2
MIPR	**Malaya Ipel'ka**	**1.59**	**269**	*e*P	Pn	12 01 39.8	+1.0
GNL	**Ganaly**	**1.61**	**329**	*e*P	Pn	12 01 39.8	+0.7
GNL				*i* S	Sn	12 02 00.1	+1.0
KMNR	**Kamenistaya**	**3.47**	**8**	P	Pn	12 02 08.3	+3.7
BZMR	**Bezymyannaya**	**3.67**	**10**	P	Pn	12 02 11.1	+3.7
KPT	**Kopyto**	**3.68**	**8**	P	Pn	12 02 09.6	+2.1
ZLN	**Zelenaya**	**3.79**	**12**	P	Pn	12 02 11.9	+2.9
SRDR	**Sredinnyy**	**4.00**	**3**	P	Pn	12 02 14.9	+3.0
KBTR	**Krutoberegovo**	**4.38**	**26**	P	Pn	12 02 18.9	+1.7

IDC ***16*** *12:06:26.0±0.7, 781S×10785E, h0km, mb4.0/10, mb1 4.2/11, mb1mx4.0/21, mbtmp4.1/11, ML4.4/1, MS3.3/1, Ms1 3.3/1, ms1mx2.9/23, Error ellipse: s-maj=27.5km s-min=15.9km az=46.0*
NEIC ***16*** *12:06:30.1±3.7, 783S×10785E, h28km±26km, mb4.1/3, Error ellipse: s-maj=13.6km s-min=9.9km az=212.0*
NEIC Felt [III] at Pangandaran and Tasikmalaya.
ISCJB ***16*** *12:06:33.7±0.6, 807S±006×10783E±004, h81km±7km, mb4.0/10, Error ellipse: s-maj=10.8km s-min=6.3km az=24.4*
DJA ***16*** *12:06:37, 805S×10781E, h38km, MLv4.7/9*

ISC 16 12:06:34.8±0.6, 809S±006×10784E±004, h71km±7km, n54, σ1°22/48, mb4.0/10, 4C-3D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLJI	**Cilicap**	**1.22**	**73**	P	**Pn**	**12 06 55.9**	**-0.2**
	0.0nm,0.0s						
LEM	**Lembang**	**1.27**	**350**	P	**Pn**	**12 06 55.9**	**-0.9**
	0.0nm,0.0s						
LEM	**Lembang**	**1.27**	**350**	*i*P	**Pn**	**12 06 56.5**	**-0.3**
LEM	**Lembang**	**1.27**	**350**	*i*P	**Pn**	**12 06 56.5**	**-0.3**
JCJI	**Jatiwangi**	**1.65**	**15**	P	**Pn**	**12 06 57.8**	**-3.9**
	0.0nm,0.0s						
SKJI	**Sukabumi**	**1.67**	**310**	P	**Pn**	**12 07 02.0**	**0.0**
	0.0nm,0.0s						
DBJI	**Dramaga**	**1.87**	**325**	P	**Pn**	**12 07 04.3**	**-0.4**
	0.0nm,0.0s						
CBJI	**Citeko**	**1.93**	**329**	P	**Pn**	**12 07 02.1**	**-3.4**
	0.0nm,0.0s						
BJII	**

GUIM eS Sb 12 07 33.6 +2.7
TBP Tagbilaran 1.05 90 eP Pb 12 07 08.4 -12
DCPH Dipolog City 1.22 153⇓eP Pn 12 07 22.0 -0.8
DCPH eS Sb 12 07 40.4 +1.8
PAGZ Pagadian 1.92 162 eP Pn 12 07 34.5 +2.3

IDC 16 13:21:36.2±4.2, 190S×10070E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.5/19, mbtmp3.5/4, Error ellipse: s-maj=175.8km s-min=24.9km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.30**	**355**	P		P		13 26 15.3	+1.4
	0.3nm,0.5s,baz=180,slow=10.0,SNR=3.7								
WRA	**Warramunga Arr**	**37.45**	**121**	P		P		13 28 51.4	-0.2
	0.9nm,0.6s,baz=301,slow=8.9,SNR=5.9								
ASAR	**Alice Springs**	**38.75**	**127**	P		P		13 29 02.8	+0.2
	0.3nm,0.5s,baz=300,slow=7.2,SNR=8.2								
MKAR	**Makanchi Array**	**51.12**	**344**	P		P		13 30 40.0	-0.8
	0.6nm,0.5s,baz=140,slow=7.6,SNR=3.3								

DJA ***16*** *13:29:05, 172S×10727E, h0km, Mw5.9/4*
ISCJB ***16*** *13:29:58.6±1.3, 82S±0.1×10785E±007, h100km, Error ellipse: s-maj=21.4km s-min=6.5km az=21.1*

ISC 16 13:30:00.0±1.3, 82S±02×10786E±007, h100km, n22, σ1⇕35/25, 7C, Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CLJI	**Cilicap**	**1.22**	**69**	P		**Pn**		**13 30 20.7**	**-2.2**
	0.0nm,0.0s								
LEM	**Lembang**	**1.34**	**349**	P		**Pn**		**13 30 23.0**	**-1.4**
	0.0nm,0.0s								
LEM	**Lembang**	**1.34**	**349**	⇑*i*P		**Pn**		**13 30 23.4**	**-1.0**
LEM	**Lembang**	**1.34**	**349**	⇑*i*P		**Pn**		**13 30 23.4**	**-1.0**
JCJI	**Jatiwangi**	**1.70**	**14**	P		**Pn**		**13 30 24.6**	**-4.2**
	0.0nm,0.0s								
SKJI	**Sukabumi**	**1.73**	**311**	P		**Pn**		**13 30 28.6**	**-0.5**
	0.0nm,0.0s								
DBJI	**Dramaga**	**1.94**	**325**	P		**Pn**		**13 30 31.7**	**-0.1**
	0.0nm,0.0s								
CBJI	**Citeko**	**1.99**	**330**	P		**Pn**		**13 30 29.3**	**-3.3**
	0.0nm,0.0s								
BJII	**Banjamegara**	**2.00**	**66**	P		**Pn**		**13 30 30.7**	**-2.0**
	0.0nm,0.0s								
BJII	**Banjamegara**	**2.00**	**66**⇑	*e*P		**Pn**		**13 30 30.6**	**-2.1**
BJII				*e*S		**Sn**		**13 30 58.5**	**+0.9**
BJII	**Banjamegara**	**2.00**	**66**⇑	*e*P		**Pn**		**13 30 30.6**	**-2.1**
BJII				*e*S		**Sn**		**13 30 58.5**	**+0.9**
SBJI	**Serang**	**2.65**	**319**	P		**Pn**		**13 30 42.1**	**+0.9**
	0.0nm,0.0s								
SJI	**Sawahan**	**3.89**	**84**	P		**Pn**		**13 30 58.3**	**+0.6**
	0.0nm,0.0s								
KRKI	**Karangkates**	**4.54**	**90**	P		**Pn**		**13 31 07.9**	**+1.3**
	0.0nm,0.0s								
TRT	**Tretes**	**4.75**	**85**⇑	*e*P		**Pn**		**13 31 06.5**	**-2.9**
TRT	**Tretes**	**4.75**	**85**⇑	*e*P		**Pn**		**13 31 06.5**	**-2.9**
TPI	**Tanjungpandan**	**5.37**	**358**⇑	*e*P		**Pn**		**13 31 25.0**	**+7.2**
TPI				*e*S		**Sn**		**13 32 29.0**	**+11**
KMMI	**Kalianget**	**6.15**	**80**	P		**Pn**		**13 31 27.9**	**-0.5**
	0.0nm,0.0s								
PPBI	**Pangkal Pinang**	**6.20**	**344**	P		**Pn**		**13 31 30.2**	**+1.1**
	0.0nm,0.0s								
KHKI	**Kahang-Kahang**	**7.67**	**92**	P		**Pn**		**13 31 50.6**	**+1.5**
	0.0nm,0.0s								
MTNI	**Mataram**	**8.23**	**94**	P		**Pn**		**13 31 57.4**	**+0.6**
	0.0nm,0.0s								
DSRI	**Dabo**	**8.30**	**337**	P		**Pn**		**13 31 59.1**	**+1.5**
	0.0nm,0.0s								

IDC 16 13:59:49.9±3.4, 280S×10032E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/19, mbtmp3.8/6, MS3.2/1, Ms1 3.4/1, ms1mx2.9/23, Error ellipse: s-maj=134.3km s-min=19.5km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.16**	**356**	P		P		14 04 36.0	-0.8
	1.1nm,0.6s,baz=189,slow=9.2,SNR=8.9								
CMAR				LR		LR		14 14 03.8	
	comp=Z,65nm,18.1s,baz=185,slow=40								
WRA	**Warramunga Arr**	**37.32**	**120**	P		P		14 07 03.8	-0.4
	0.3nm,0.3s,baz=285,slow=7.7,SNR=11								
ASAR	**Alice Springs**	**38.53**	**125**	P		P		14 07 14.6	+0.2
	0.6nm,0.7s,baz=299,slow=7.8,SNR=9.2								
SONM	**Songino Array**	**50.70**	**5**	P		P		14 08 52.1	+0.9
	2.8nm,0.9s,baz=183,slow=8.4,SNR=11								
MKAR	**Makanchi Array**	**51.88**	**344**	P		P		14 09 00.2	+0.3
	2.7nm,0.7s,baz=145,slow=8.2,SNR=13								
ZALV	**Zalesovo Beam**	**58.00**	**349**	P		P		14 09 43.6	-0.6
	1.6nm,0.8s,baz=186,slow=5.4,SNR=5.4								

ISCJB ***16*** *14:01:46.7±0.2, 1181S×003×4205E±004, h9km, mb5.0/174, MS4.4/36, Error ellipse: s-maj=5.3km s-min=4.5km az=1.5*
IDC ***16*** *14:01:47.1±0.4, 1173S×4209E, h0km, mb4.8/24, mb1 4.9/27, mb1mx4.8/30, mbtmp4.8/27, ML5.3/3, MS4.2/17, Ms1 4.2/17, ms1mx4.1/30, Error ellipse: s-maj=13.3km s-min=12.8km az=23.0*
BJI ***16*** *14:01:47.1, 1158S×4194E, h11km, mB5.2, mb5.0, Ms5.1, Msz4.9*
NEIC ***16*** *14:01:47.7±2.0, 1181S×4208E, h3km±12km, mb5.2/103, MS4.1/8, Error ellipse: s-maj=5.5km s-min=3.8km az=60.0*
GCMT ***16*** *14:01:47.7±0.4, 1174S×4200E, h42km±1km, MW5.0/44, Moment Tensor Solution. s34,c46; s44,c60; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-3.99±.27; Mθθ3.92±.16; Mϕϕ0.06±.17; Mrθ-1.38±.14; Mθϕ0.12±.15; Mϕr0.46±.13; Best double couple: Mo4.21400×10^16 NP1:ϕ262.00000°, δ36.00000°, λ-101.00000°. NP2: ϕ95.00000°, δ55.00000°, λ-82.00000°. Principal axes: T 4.1540, Plg10.0000°, Azm179.0000°; N 0.1130, Plg6.0000°, Azm270.0000°; P -4.2740, Plg79.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
LDG ***16*** *14:01:48.4±0.1, 1146S×4227E, h10km, Mb5.2/44, Ms4.0/10 Error ellipse: s-maj=11.7km s-min=5.0km az=50.0*
MOS ***16*** *14:01:51.6±0.9, 1153S×42.14E, h33km, mb5.2/68, MS4.1/7, Error ellipse: s-maj=12.7km s-min=4.1km az=111.6*
DJA ***16*** *14:01:52, 1138S×4205E, h10km, Mw6.2/5*
SZGRF ***16*** *14:02:01.8, 935S×4330E, h33km, mb5.2, Northwest of Madagascar*

ISC 16 14:01:47.7±3.3, 1183S±004×4207E±004, h3km±21km, h10km±1.4km: pP-P, n467, σ0⇕76/400, mb5.0/174, MS4.4/36, 26C-115D, Northwest of Madagascar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**8.32**	**144**	Pn		**Pn**		**14 03 50.1**	**+0.8**
	208nm,0.3s,baz=307,slow=12,SNR=690								
OPO				Sn		**Sn**		**14 05 16.6**	**-7.3**
	170nm,0.3s,baz=78,slow=22,SNR=7.5								
ABPO	**Ambohimpanom**	**8.70**	**146**	Pn		**Pn**		**14 03 55.0**	**+0.5**
	5μm,0.4s								
ABPO	**Ambohimpanom**	**8.70**	**146**	*e*Pn		**Pn**		**14 03 55.1**	**+0.6**
	533nm,0.6s								
ABPO				*e*Sn		**Sn**		**14 05 24.3**	**-8.9**
KMBO	**Kilima Mbogo**	**11.66**	**335**	Pn		**Pn**		**14 04 34.3**	**-0.9**
	6.2nm,0.3s,baz=152,slow=14,SNR=29								
KMBO				Sn		**Sn**		**14 06 32.5**	**-14**
	2.1nm,0.3s,baz=50,slow=22,SNR=2.7								
KMBO				LR		LR		14 08 47.0	
	comp=Z,974nm,20.9s,baz=298,slow=36								
KMBO	**Kilima Mbogo**	**11.66**	**335**	*e*P		**Pn**		**14 04 34.2**	**-1.0**
KMBO				*e*S		**Sn**		**14 06 33.7**	**-12**
LSZ	**Lusaka**	**13.93**	**254**	Pn		**Pn**		**14 05 04.9**	**-1.3**
	11nm,0.3s,baz=73,slow=13,SNR=128								
LSZ				Sn		**Sn**		**14 07 29.8**	**-12**
	13nm,0.3s,baz=164,slow=20,SNR=11								
LSZ				Lg				14 08 47.3	
	4.2nm,0.3s,baz=195,slow=18,SNR=3.1								
LSZ				LR		LR		14 10 24.6	
	comp=Z,2μm,19.2s,baz=60,slow=37								
LSZ	**Lusaka**	**13.93**	**254**	*e*P		**Pn**		**14 05 04.2**	**-2.0**
	68nm,0.8s								
LSZ				*e*S		**Sn**		**14 07 28.7**	**-13**
MOPA	**Mopani**	**15.43**	**220**	*e*P		**Pn**		**14 05 25.4**	**-1.1**
MOPA				AMb		AMB		14 05 37.2	
	comp=Z,936nm,1.0s								
MSNA	**Messina**	**15.54**	**226**	*e*P		**Pn**		**14 05 29.0**	**+1.0**
MSNA				AMb		AMB		14 05 30.9	
	comp=Z,252nm,1.1s								
POGA	**Pongola**	**18.31**	**211**	*e*P		**Pn**		**14 06 01.4**	**-1.5**
POGA				AMb		AMB		14 06 04.2	
	comp=Z,90nm,1.6s								
LBTB	**Lobatse**	**20.37**	**228**	P		**P**		**14 06 26.6**	**+1.0**
	comp=Z,43nm,0.7s,baz=69,slow=11,SNR=52								
LBTB				Lg				14 12 15.8	
	comp=Z,42nm,0.9s,baz=143,slow=21,SNR=5.1								
LBTB				LR		LR		14 14 02.8	
	comp=Z,835nm,18.9s,MS4.1,baz=60,slow=36								
PRYS	**Parys**	**20.41**	**221**	*e*P		**P**		**14 06 26.0**	**-0.1**
PRYS				AMb		AMB		14 06 28.3	
	comp=Z,119nm,1.7s								
FURI	**Furi**	**20.87**	**351**	*e*P		**P**		**14 06 33.1**	**+2.0**
SEK	**Senekal**	**21.25**	**217**	*e*P		**P**		**14 06 35.6**	**+0.5**
SEK				AMb		AMB		14 06 38.1	
	comp=Z,301nm,1.1s,mb5.5								
KSD	**Kokstad**	**22.01**	**210**	*e*P		**P**		**14 06 41.2**	**-2.1**
KSD				AMb		AMB		14 06 59.6	
	comp=Z,316nm,1.9s,mb5.4								
BOSA	**Boshof**	**22.92**	**221**	P		**P**		**14 06 53.0**	**-0.1**
	comp=Z,38nm,0.6s,mb5.0,baz=53,slow=12,SNR=29								
BOSA				Lg				14 13 33.3	
	comp=Z,14nm,0.8s,baz=290,slow=8.0,SNR=2.5								
BOSA				LR		LR		14 15 46.7	
	comp=Z,1μm,21.5s,MS4.3,baz=47,slow=36								
BOSA	**Boshof**	**22.92**	**221**	P		**P**		**14 06 53.0**	**-0.1**
BOSA				Lg				14 13 33.3	
BOSA				LR		LR		14 15 46.7	
HVD	**Gariep Dam**	**24.18**	**217**	*e*P		**P**		**14 07 06.1**	**+0.7**
HVD				AMb		AMB		14 07 27.0	
	comp=Z,76nm,1.6s,mb4.9								
TSUM	**Tsumeb**	**24.69**	**250**	P		**P**		**14 07 09.5**	**-0.7**
	comp=Z,12nm,0.7s,mb4.5,baz=59,slow=7.9,SNR=20								
TSUM				Lg				14 14 34.4	
	comp=Z,8.7nm,0.8s,baz=99,slow=22,SNR=3.7								
TSUM				LR		LR		14 16 58.7	
	comp=Z,934nm,20.3s,MS4.3,baz=136,slow=37								
TSUM	**Tsumeb**	**24.69**	**250**	*e*P		**P**		**14 07 10.9**	**+0.8**
	comp=Z,33nm,0.8s,mb4.9								
TSUM				LR		LR			
	comp=Z,1μm,20.0s,MS4.3								
PKA	**Prieska**	**25.25**	**222**	*e*P		**P**		**14 07 15.7**	**+0.5**
PKA				AMb		AMB		14 07 33.7	
	comp=Z,54nm,1.0s,mb5.0								
SUR	**Sutherland**	**28.29**	**220**	P		**P**		**14 07 42.7**	**+0.2**
	comp=Z,7.1nm,0.8s,mb4.3,baz=7.1,slow=8.1,SNR=4.5								
SUR				Lg				14 16 32.7	
	comp=Z,17nm,0.9s,baz=148,slow=22,SNR=3.4								
SUR				LR		LR		14 19 10.6	
	comp=Z,1μm,19.8s,MS4.5,baz=46,slow=37								
SUR	**Sutherland**	**28.29**	**220**	*e*P		**P**		**14 07 42.4**	**-0.1**
	comp=Z,39nm,1.0s,mb5.0								
SUR	**Sutherland**	**28.29**	**220**	*e*P		**P**		**14 07 43.3**	**+0.8**
RDF	**Al-Radifah**	**40.86**	**7**	*e*P		**P**		**14 09 31.3**	**+0.3**
	baz=7.0								
RDF				AMb		AMB		14 09 32.9	
	comp=Z,36nm,0.9s,mb5.0,baz=7.0								
NAY	**Al-Naaiem**	**41.14**	**7**	*e*P		**P**		**14 09 33.7**	**+0.4**
	baz=7.0								
NAY				AMb		AMB		14 09 35.5	
	comp=Z,18nm,1.0s,mb4.7,baz=7.0								
RST	**Umm Al-Ruwaisa**	**41.36**	**6**	*e*P		**P**		**14 09 35.5**	**+0.4**
	baz=7.0								
RST				AMb		AMB		14 09 37.4	
	comp=Z,78nm,0.7s,mb5.5,baz=7.0								
MIB	**Mutribah**	**41.70**	**7**	*e*P		**P**		**14 09 38.7**	**+0.8**
	baz=7.0								
MIB				AMb		AMB		14 09 40.1	
	comp=Z,50nm,0.8s,mb5.2,baz=7.0								
TORD	**Torodi Ar. Bea**	**47.12**	**301**	P		**P**		**14 10 21.8**	**+0.2**
	comp=Z,7.4nm,0.8s,mb4.6,baz=118,slow=8.2,SNR=52								
TORD				PcP		PcP		14 11 52.9	-0.7
	comp=Z,2.0nm,0.5s,baz=107,slow=4.0,SNR=12								
TORD				LR		LR		14 30 51.5	
	comp=Z,369nm,20.0s,MS4.3,baz=100,slow=37								
TAM	**Tamanrasset**	**49.66**	**314**	*e*P		**P**		**14 10 41.9**	**+0.9**
KIC	**Kosan Boka**	**49.95**	**289**	*e*P		**P**		**14 10 42.4**	**-1.0**
	comp=Z,61nm,0.9s,mb5.6								
MALT	**Malatya**	**50.00**	**356**	*e*P		**P**		**14 10 42.1**	**-1.2**
MALT				pmax		pmax			
	comp=Z,18nm,1.0s,mb5.1								
MALT	**Malatya**	**50.00**	**356**	⇑*i*P		**P**		**14 10 42.9**	**-0.4**
MALT	**Malatya**	**50.00**	**356**	*e*P		**P**		**14 10 42.1**	**-1.2**
	comp=Z,18nm,1.0s,mb5.1								
LIC	**Lamto**	**50.16**	**288**	⇓*i*P		**P**		**14 10 44.6**	**-0.5**
	comp=Z,34nm,1.0s,mb5.0								
LIC				*e*MLR		MLR			
	comp=Z,338nm,22.0s,MS4.0								
LIC	**Lamto**	**50.16**	**288**	*e*P		**P**		**14 10 44.0**	**-1.1**
	comp=Z,46nm,1.0s,mb5.5								
LIC	**Lamto**	**50.16**	**288**	⇓*i*P		**P**		**14 10 44.6**	**-0.5**
	comp=Z,17nm,1.0s,mb5.0								
LIC				LR		LR			
	comp=Z,170nm,22.0s,MS4.0								
DBIC	**Dimbokro**	**50.16**	**289**	P		**P**		**14 10 44.8**	**-0.3**
	comp=Z,14nm,0.8s,mb5.0,baz=98,slow=8.3,SNR=19								
DBIC				LR		LR		14 32 50.4	
	comp=Z,138nm,18.3s,MS4.0,baz=87,slow=37								
TIC	**Toumodi**	**50.31**	**289**	*e*P		**P**		**14 10 45.7**	**-0.5**
	comp=Z,105nm,0.7s,mb6.0								
TIC	**Toumodi**	**50.31**	**289**	*e*P		**P**		**14 10 45.7**	**-0.5**
TIC				pmax		pmax			
	comp=Z,105nm,0.7s,mb6.0								
GNI	**Garni**	**51.77**	**3**	*e*P		**P**		**14 10 57.8**	**+1.1**
GNI				pmax		pmax			
	comp=Z,8.0nm,0.7s								
GNI				MLR		MLR			
	comp=Z,184nm,19.0s								
GNI	**Garni**	**51.77**	**3**	*e*P		**P**		**14 10 57.8**	**+1.1**
	comp=Z,8.0nm,0.7s,mb4.8								
GNI				LR		LR			
	comp=Z,184nm,19.0s,MS4.1								
KIV	**Kislovodsk**	**55.52**	**1**	⇓*i*P		**P**		**14 11 24.6**	**+0.5**
KIV				pmax		pmax			
	comp=Z,21nm,1.0s,mb5.1								
KIV	**Kislovodsk**	**55.52**	**1**	*e*P		**P**		**14 11 24.2**	**+0.1**
	comp=Z,14nm,0.8s,mb5.0								
KIV				LR		LR			
	comp=Z,114nm,21.0s,MS3.9								
KEST	**Kesra**	**56.52**	**328**	P		**P**		**14 11 32.1**	**+0.7**
	comp=Z,3.7nm,0.8s,mb4.5,baz=94,slow=0.4,SNR=16								
KEST				LR		LR		14 37 54.6	
	comp=Z,150nm,18.8s,MS4.1,baz=164,slow=38								
VTS	**Vitosha**	**56.85**	**343**	⇑*i*P		**P**		**14 11 34.1**	**+0.5**
VTS	**Vitosha**	**56.85**	**343**	⇑P		**P**		**14 11 34.1**	**+0.5**
CUC	**Castrocucco**	**57.04**	**336**	*e*P		**P**		**14 11 35.0**	**0.0**
	comp=Z,23nm,1.3s,mb5.0								
SYO	**Syowa Base**	**57.15**	**181**⇑	*e*P		**P**		**14 11 35.3**	**-0.1**
SYO	**Syowa Base**	**57.15**	**181**⇓	*e*PcP		PcP		14 12 28.2	-1.8
MAW	**Mawson**	**57.39**	**171**	*e*P		**P**		**14 11 39.7**	**+2.6**
	comp=Z,6.0nm,1.0s,mb4.6								
MAW	**Mawson**	**57.39**	**171**	P		**P**		**14 11 39.3**	**+2.2**
	comp=Z,2.0nm,0.6s,mb4.3,baz=310,slow=9.8,SNR=6.9								
MAW				LR		LR		14 32 48.1	
	comp=Z,352nm,19.5s,MS4.5,baz=56,slow=32								
MLR	**Muntele Rosu**	**58.88**	**347**	⇓*i*P		**P**		**14 11 48.4**	**+0.5**
MLR	**Muntele Rosu**	**58.88**	**347**	⇓P		**P**		**14 11 48.4**	**+0.5**
VOIR		**59.04**	**346**	⇑*i*P		**P**		**14 11 49.1**	**+0.2**
VOIR		**59.04**	**346**	⇑P		**P**		**14 11 49.1**	**+0.2**
VRI	**Vrincioaia**	**59.07**	**348**	⇑*i*P		**P**		**14 11 50.0**	**+0.9**
VRI	**Vrincioaia**	**59.07**	**348**	⇑P		**P**		**14 11 50.0**	**+0.9**
PLOR	**Plostina**	**59.07**	**347**	⇑*i*P		**P**		**14 11 49.9**	**+0.7**
GZR	**Gura Zlata**	**59.57**	**344**	⇑*i*P		**P**		**14 11 53.4**	**+0.8**
GZR	**Gura Zlata**	**59.57**	**344**	⇑P		**P**		**14 11 53.4**	**+0.8**
BZS	**Buzias**	**60.09**	**344**	⇑*i*P		**P**		**14 11 56.8**	**+0.6**
BZS	**Buzias**	**60.09**	**344**	⇑P		**P**		**14 11 56.9**	**+0.7**
DRGR		**60.88**	**345**	⇑*i*P		**P**		**14 12 02.5**	**+0.9**
AML	**Almayashu**	**61.05**	**26**	P		**P**		**14 12 03.5**	**+0.6**
	SNR=11								
AML	**Almayashu**	**61.05**	**26**	*e*P		**P**		**14 12 03.3**	**+0.5**
	comp=Z,13nm,0.9s,mb5.0								
BURAR	**Bucovina Array**	**61.06**	**347**	⇓*i*P		**P**		**14 12 03.6**	**+0.8**
PKSM	**Moragy**	**61.50**	**342**	⇑*i*P		**P**		**14 12 06.1**	**+0.3**
PKSM	**Moragy**	**61.50**	**342**	⇑P		**P**		**14 12 06.1**	**+0.4**
EKS2	**Erkin-Say**	**61.52**	**26**	P		**P**		**14 12 06.4**	**+0.4**
	SNR=9.8								
EKS2	**Erkin-Say**	**61.52**	**26**	*e*P		**P**		**14 12 06.3**	**+0.3**
	comp=Z,17nm,1.3s,mb5.0								
AAK	**Ala-Archa**	**61.81**	**27**	P		**P**		**14 12 08.7**	**+0.7**
	SNR=7.6								
BOJS	**Bojanci**	**61.99**	**339**	*i* P		**P**		**14 12 09.2**	**+0.1**
FRU	**Bishkek**	**62.02**	**27**	*i* P		**P**		**14 12 10.0**	**+0.6**
FRU				pmax		pmax			
	comp=Z,40nm,1.6s,mb5.3								
KBK	**Karagaybulak**	**62.03**	**27**	P		**P**		**14 12 09.9**	**+0.5**
	SNR=22								
PGF	**Pioggiola**	**62.03**	**333**⇓	*i*P		**P**		**14 12 09.7**	**+0.3**
	comp=Z,51nm,1.1s,mb5.3								
PGF	**Pioggiola**	**62.03**	**333**⇓	*i*P		**P**		**14 12 09.7**	**+0.3**
PGF				pmax		pmax			
	comp=Z,26nm,1.1s,mb5.3								
PGF	**Pioggiola**	**62.03**	**333**⇓	*i*P		**P**		**14 12 09.7**	**+0.3**
	comp=Z,26nm,1.1s,mb5.3								
CHMS	**Chumysh**	**62.22**	**27**	P		**P**		**14 12 10.9**	**+0.2**
	SNR=5.8								
USP	**Ospenovka**	**62.32**	**26**	P		**P**		**14 12 11.2**	**-0.2**
	SNR=7.7								
VISS	**Visnje**	**62.40**	**339**	*i* P		**P**		**14 12 11.6**	**-0.2**
TKM2	**Tokmak 2**	**62.53**	**27**	*e*P		**P**		**14 12 12.8**	**0.0**
TKM2				pmax		pmax			
	comp=Z,66nm,1.2s,mb5.6								
TKM2	**Tokmak 2**	**62.53**	**27**	P		**P**		**14 12 12.9**	**+0.2**
	SNR=50								
TKM2	**Tokmak 2**	**62.53**	**27**	*e*P		**P**		**14 12 12.8**	**0.0**
	comp=Z,66nm,1.2s,mb5.6								
PSZ	**Piszkesteto**	**62.67**	**343**	*e*P		**P**		**14 12 13.2**	**-0.4**
PSZ				pmax		pmax			
	comp=Z,6.0nm,0.8s,mb4.8								
PSZ	**Piszkesteto**	**62.67**	**343**	⇑*i*P		**P**		**14 12 13.6**	**0.0**
PSZ	**Piszkesteto**	**62.67**	**343**	*e*P		**P**		**14 12 13.2**	**-0.4**
	comp=Z,6.0nm,0.8s,mb4.8								
JAVS	**Javornik**	**62.75**	**338**	*i* P		**P**		**14 12 14.1**	**-0.1**
LSA	**Lhasa**	**62.77**	**48**	P		**P**		**14 12 16.0**	**+1.3**
LSA	**Lhasa**	**62.77**	**48**	*e*P		**P**		**14 12 15.2**	**+0.5**
LSA				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb4.8								
LSA				MLR		MLR			
	comp=Z,270nm,22.0s,MS4.4								
LSA	**Lhasa**	**62.77**	**48**	*e*P		**P**		**14 12 15.2**	**+0.5**
	comp=Z,5.3nm,0.7s,mb4.8								
LSA				LR		LR			
	comp=Z,270nm,22.0s,MS4.4								
VSR	**Storozhevoye**	**62.83**	**358**	*e*P		**P**		**14 12 13.5**	**-1.1**
VSR				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb4.9								
VSR				pmax		pmax			
	comp=N,10.0nm,0.9s								
VSR				pmax		pmax			
	comp=E,5.0nm,0.6s								
MDT	**Midelt**	**62.89**	**317**	LR		LR		14 39 27.6	
	comp=E,168nm,21.5s,MS4.2,baz=326,slow=36								
PERS	**Pernice**	**63.02**	**339**	*i* P		**P**		**14 12 16.1**	**+0.1**
KECS	**Kecovo**	**63.02**	**344**	*e*P		**P**		**14 12 16.0**	**0.0**
KECS				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.7								
KECS	**Kecovo**	**63.02**	**344**	*e*P		**P**		**14 12 16.0**	**0.0**
	comp=Z,5.1nm,0.8s,mb4.7								
SOKA	**Soboth**	**63.09**	**339**⇑	*i*P		**P**		**14 12 16.4**	**0.0**
	comp=Z,14nm,1.2s,mb5.0								
OBKA	**Obir**	**63.11**	**339**⇓	*i*P		**P**		**14 12 17.1**	**+0.5**
	comp=Z,24nm,1.4s,mb5.1								
CRVS	**Cervenica-Dubn**	**63.15**	**345**	*e*P		**P**		**14 12 16.7**	**-0.1**
KIEV	**Kiev**	**63.27**	**351**	*e*P		**P**		**14 12 14.0**	**-3.5**
KIEV				pmax		pmax			
	comp=Z,7.0nm,0.9s,mb4.8								
KIEV	**Kiev**	**63.27**	**351**	*e*P		**P**		**14 12 14.0**	**-3.5**
	comp=Z,6.7nm,0.9s,mb4.8								
AKASG	**Malin Array Be**	**63.27**	**351**	P		**P**		**14 12 16.0**	**-1.5**
	comp=Z,2.1nm,0.6s,mb4.5,baz=175,slow=5.7,SNR=14								
AKASG	**Malin Array Be**	**63.27**	**351**	*i* P		**P**		**14 12 16.3**	**-1.2**
AKASG				pmax		pmax			
	comp=Z,2.0nm,0.6s								
ARSA	**Arzberg**	**63.42**	**340**	*i* P		**P**		**14 12 18.8**	**+0.3**
	comp=Z,13nm,1.2s,mb4.9,SNR=8.1								
VYHS	**Vyhne**	**63.49**	**343**	*e*P		**P**		**14 12 18.8**	**-0.3**
VYHS				pmax		pmax			
	comp=Z,6.0nm,2.1s,mb4.4								
VYHS	**Vyhne**	**63.49**	**343**	*e*P		**P**		**14 12 18.8**	**-0.3**
	comp=Z,5.5nm,2.1s,mb4.3								
CMAR	**Chiang Mai Arr**	**63.65**	**63**	P		**P**		**14 12 20.7**	**0.0**
	comp=Z,5.5nm,0.8s,mb4.6,baz=

comp=Z,17nm,1.0s,mb5.0,SNR=12
ERON Agron 64.95 321 P **P** **14 12 30.0 +1.1**
comp=Z,13nm,0.7s,mb5.1
ECOG Cogollos-Vega 64.97 321 P **P** **14 12 30.0 +1.0**
ECOG pmax pmax
comp=Z,20nm,1.0s,mb5.1
ECOG Cogollos-Vega 64.97 321 P **P** **14 12 30.0 +1.0**
comp=Z,20nm,1.0s,mb5.1
EQES Quesada 65.00 322 P **P** **14 12 29.1 -0.1**
comp=Z,44nm,1.2s,mb5.4
MORC Moravsky Berou 65.02 343 *eP* **P** **14 12 27.7 -1.4**
MORC pmax pmax
comp=Z,26nm,1.1s,mb5.2
MORC Moravsky Berou 65.02 343 ⇑*iP* **P** **14 12 29.0 -0.1**
MORC Moravsky Berou 65.02 343 *eP* **P** **14 12 27.7 -1.4**
comp=Z,26nm,1.1s,mb5.2
EPOB Poblet 65.03 327 P **P** **14 12 29.6 +0.4**
comp=Z,29nm,0.8s,mb5.4
BNI Bardonecchia 65.04 333 *eP* **P** **14 12 29.9 +0.6**
BNI pmax pmax
comp=Z,24nm,1.2s,mb5.1
BNI Bardonecchia 65.04 333 *eP* **P** **14 12 29.9 +0.6**
comp=Z,24nm,1.2s,mb5.1
TUE Stuetta 65.04 336 *eP* **P** **14 12 29.0 -0.3**
comp=Z,9.7nm,0.9s,mb4.8
MOTA Moosalm 65.07 337⇑*iP* **P** **14 12 28.8 -0.6**
comp=Z,13nm,1.2s,mb4.8
ERTA Horta de San J 65.15 326 P **P** **14 12 30.4 +0.3**
comp=Z,22nm,1.1s,mb5.1
EMOS Mosqueruela 65.18 325 P **P** **14 12 30.8 +0.5**
comp=Z,31nm,1.0s,mb5.3
EMIR Miracle 65.19 328 P **P** **14 12 30.7 +0.4**
comp=Z,18nm,0.6s,mb5.3
EVIA Vianos 65.20 323 P **P** **14 12 30.7 +0.2**
EVIA pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
EVIA Vianos 65.20 323 P **P** **14 12 30.7 +0.2**
comp=Z,7.8nm,0.8s,mb4.8
TREC Trest 65.22 341 *eP* **P** **14 12 29.2 -1.1**
ELOJ Sierra Loja 65.25 321 P **P** **14 12 31.7 +0.9**
ELOJ pmax pmax
comp=Z,14nm,0.8s,mb5.0
ELOJ Sierra Loja 65.25 321 P **P** **14 12 31.7 +0.8**
comp=Z,14nm,0.8s,mb5.0
ORIF Oris-en-Rattie 65.29 332 *eP* **P** **14 12 31.6 +0.7**
comp=Z,24nm,1.1s,mb4.8
ORIF *e*MLR MLR
comp=Z,155nm,22.8s,MS3.8
ORIF Oris-en-Rattie 65.29 332 *eP* **P** **14 12 31.6 +0.7**
ORIF pmax pmax
comp=Z,12nm,1.1s,mb4.8
ORIF Oris-en-Rattie 65.29 332 *eP* **P** **14 12 31.6 +0.7**
comp=Z,12nm,1.1s,mb4.8
RETA Reutte 65.32 337⇓*iP* **P** **14 12 30.5 -0.6**
comp=Z,11nm,0.9s,mb4.8
LPG La Plagne 65.35 333⇓*iP* **P** **14 12 31.1 -0.2**
comp=Z,30nm,1.0s,mb5.0
LPG La Plagne 65.35 333⇓*iP* **P** **14 12 31.1 -0.2**
LPG pmax pmax
comp=Z,15nm,1.0s,mb5.0
LPG La Plagne 65.35 333⇓*iP* **P** **14 12 31.1 -0.2**
comp=Z,15nm,1.0s,mb5.0
LPL La Plagne 65.38 333⇓*iP* **P** **14 12 31.2 -0.3**
comp=Z,12nm,0.8s,mb4.7
LPL La Plagne 65.38 333⇓*iP* **P** **14 12 31.2 -0.3**
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
LPL La Plagne 65.38 333⇓*iP* **P** **14 12 31.2 -0.3**
comp=Z,5.8nm,0.8s,mb4.7
GEC2 GERESS Array S 65.41 340 *eP* **P** **14 12 30.7 -0.9**
GEC2 pmax pmax
comp=Z,13nm,1.1s,mb4.9
GEC2 GERESS Array S 65.41 340 *eP* **P** **14 12 30.7 -0.9**
comp=Z,13nm,1.1s,mb4.9
GERES GERESS Array B 65.41 340 P **P** **14 12 30.5 -1.1**
comp=Z,4.9nm,0.8s,mb4.6,baz=148,slow=5.5,SNR=36
GERES LR LR 14 40 54.8
comp=Z,86nm,21.4s,MS3.9,baz=106,slow=36
DAVA Damuels 65.49 337⇓*iP* **P** **14 12 31.9 -0.3**
comp=Z,15nm,1.1s,mb4.9
LASF Ste Croix 65.59 331⇓*iP* **P** **14 12 34.0 +1.1**
comp=Z,35nm,1.1s,mb5.0
EBAN Banos Encina 65.66 322 P **P** **14 12 32.7 -0.8**
EBAN pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
EBAN Banos Encina 65.66 322 P **P** **14 12 32.7 -0.8**
comp=Z,2.0nm,0.5s,mb4.4
KHC Kasperske Hory 65.70 340 *eP* **P** **14 12 32.4 -1.1**
VIVF Saint-Julien-l 65.80 332⇓*iP* **P** **14 12 35.3 +1.1**
comp=Z,74nm,1.0s,mb5.4
VIVF Saint-Julien-l 65.80 332⇓*iP* **P** **14 12 35.3 +1.1**
VIVF pmax pmax
comp=Z,37nm,1.0s,mb5.4
VIVF Saint-Julien-l 65.80 332⇓*iP* **P** **14 12 35.3 +1.1**
comp=Z,37nm,1.0s,mb5.4
MTLF Montolieu 65.86 329⇓*iP* **P** **14 12 35.1 +0.5**
comp=Z,15nm,0.9s,mb4.7
MTLF Montolieu 65.86 329⇓*iP* **P** **14 12 35.1 +0.5**
MTLF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
MTLF Montolieu 65.86 329⇓*iP* **P** **14 12 35.1 +0.5**
comp=Z,7.4nm,0.9s,mb4.7
DPC Dobruska-Polom 65.89 342 *eP* **P** **14 12 34.0 -0.7**
WET Wettzell 65.95 339 *eP* **P** **14 12 33.8 -1.3**
WET pmax pmax
comp=Z,16nm,1.8s,mb4.8
WET Wettzell 65.95 339 *eP* **P** **14 12 33.8 -1.3**
comp=Z,16nm,1.8s,mb4.8
ESAC San Caprasio 66.11 326 P **P** **14 12 35.8 -0.5**
comp=Z,32nm,1.0s,mb5.3
UPC Upice 66.12 342 *eP* **P** **14 12 35.8 -0.4**
PRU Pruhonice 66.12 341 *eP* **P** **14 12 35.3 -0.9**
EADA Adamuz 66.15 321 P **P** **14 12 34.8 -1.8**
comp=Z,19nm,1.4s,mb4.9
ESPR Espera 66.15 319 P **P** **14 12 35.8 -0.8**
comp=Z,54nm,1.1s,mb5.5
SSB Saint Sauveur 66.18 332 *eP* **P** **14 12 37.4 +0.7**
SSB Saint Sauveur 66.18 332 *eP* **P** **14 12 37.6 +0.9**
ETOR Torete 66.38 325 P **P** **14 12 38.7 +0.6**
ETOR pmax pmax
comp=Z,27nm,0.5s,mb5.5
ETOR Torete 66.38 325 P **P** **14 12 38.7 +0.7**
comp=Z,27nm,0.5s,mb5.5
EBIE Bielsa 66.46 327 P **P** **14 12 38.6 +0.1**
comp=Z,14nm,0.8s,mb5.1
CABF La Chapelle 66.51 334⇓*iP* **P** **14 12 38.9 +0.1**
comp=Z,86nm,1.2s,mb5.4
CABF La Chapelle 66.51 334⇓*iP* **P** **14 12 38.9 +0.1**
CABF pmax pmax
comp=Z,43nm,1.2s,mb5.3
CABF La Chapelle 66.51 334⇓*iP* **P** **14 12 38.9 +0.1**
comp=Z,43nm,1.2s,mb5.4
SPAK Spaichingen-Ko 66.59 336 *eP* **P** **14 12 41.5 +2.3**
EPF Esparros 66.60 328⇓*iP* **P** **14 12 40.0 +0.6**
comp=Z,22nm,1.2s,mb4.8
EPF Esparros 66.60 328⇓*iP* **P** **14 12 40.0 +0.6**
EPF pmax pmax
comp=Z,11nm,1.2s,mb4.8
EPF Esparros 66.60 328⇓*iP* **P** **14 12 40.0 +0.6**
comp=Z,11nm,1.2s,mb4.8
ROTZ Rotzenmuhle 66.71 339 *eP* **P** **14 12 39.2 -0.7**
FELD Feldberg im Sc 66.71 336 *eP* **P** **14 12 39.5 -0.5**
ESDC Sonseca Array 66.73 323 P **P** **14 12 40.6 +0.3**
comp=Z,16nm,0.8s,mb5.1,baz=132,slow=6.0,SNR=94
ESDC LR LR 14 44 55.3
comp=Z,111nm,18.2s,MS4.1,baz=125,slow=39
ESDC Sonseca Array 66.73 323 P **P** **14 12 39.6 -0.7**
comp=Z,16nm,0.6s,mb5.2
LABF Labassere 66.75 328 *eP* **P** **14 12 41.5 +1.2**
LOMF Lomont 66.78 335 *eP* **P** **14 12 39.7 -0.7**
OBN Obninsk 66.85 357⇓*eP* **P** **14 12 39.7 -1.0**
OBN *e* 14 15 12.6
OBN *e*S S 14 21 25.8 -8.2
OBN *e*SS SS 14 25 45.1 -7.3
OBN pmax pmax
comp=Z,55nm,1.1s,mb5.5
PAB San Pablo 66.88 322 *eP* **P** **14 12 41.4 +0.1**
PAB pmax pmax
comp=Z,13nm,1.1s,mb4.9
PAB San Pablo 66.88 322 *eP* **P** **14 12 41.4 +0.1**
comp=Z,13nm,1.1s,mb4.9
BFO Black Forest 66.95 336 *eP* **P** **14 12 41.4 -0.1**
BFO pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BFO Black Forest 66.95 336 *eP* **P** **14 12 41.4 -0.1**
comp=Z,10.0nm,0.9s,mb4.8

STU Stuttgart 66.97 337 *eP* **P** **14 12 42.0 +0.4**
ETSF Etsaut 66.98 327⇓*iP* **P** **14 12 42.6 +0.8**
comp=Z,25nm,0.7s,mb5.0
ETSF Etsaut 66.98 327⇓*iP* **P** **14 12 42.6 +0.8**
ETSF pmax pmax
comp=Z,12nm,0.7s,mb5.0
ETSF Etsaut 66.98 327⇓*iP* **P** **14 12 42.6 +0.8**
comp=Z,12nm,0.7s,mb5.0
GRA1 Grafenberg Arr 66.99 339 *eP* **P** **14 12 41.2 -0.5**
comp=Z,16nm,1.0s,mb5.0
GRF Grafenberg Arr 66.99 339 *eP* **P** **14 12 41.2 -0.5**
GRF pmax pmax
comp=Z,16nm,1.0s,mb5.0
GRF Grafenberg Arr 66.99 339 *eP* **P** **14 12 41.3 -0.4**
GRF pmax pmax
comp=Z,16nm,1.0s,mb5.0
GRF Grafenberg Arr 66.99 339 *eP* **P** **14 12 41.2 -0.5**
comp=Z,16nm,1.0s,mb5.0
GRF Grafenberg Arr 66.99 339 *eP* **P** **14 12 41.3 -0.4**
comp=Z,16nm,1.0s,mb5.0
MOF Molkenrain 67.05 335 *eP* **P** **14 12 38.4 -3.8**
BRG Berggiesshubel 67.08 341 *eP* **P** **14 12 41.7 -0.6**
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
BRG pmax pmax
comp=Z,16nm,2.0s,mb4.7
BRG Berggiesshubel 67.08 341 *eP* **P** **14 12 41.5 -0.8**
comp=Z,116nm,3.0s
BRG Berggiesshubel 67.08 341 *eP* **P** **14 12 41.7 -0.6**
comp=Z,12nm,1.3s,mb4.8
BRG *e* 14 24 05.2
comp=Z,27nm,2.0s
CAF Calviac 67.09 330⇓*iP* **P** **14 12 43.6 +1.1**
comp=Z,63nm,1.0s,mb5.3
CAF Calviac 67.09 330⇓*iP* **P** **14 12 43.6 +1.1**
CAF pmax pmax
comp=Z,31nm,1.0s,mb5.3
CAF Calviac 67.09 330⇓*iP* **P** **14 12 43.6 +1.1**
comp=Z,31nm,1.0s,mb5.3
HINF Hinteralfeld 67.14 335⇓*iP* **P** **14 12 42.2 -0.5**
comp=Z,39nm,1.3s,mb5.0
HINF Hinteralfeld 67.14 335⇓*iP* **P** **14 12 42.2 -0.5**
HINF pmax pmax
comp=Z,20nm,1.3s,mb5.0
HINF Hinteralfeld 67.14 335⇓*iP* **P** **14 12 42.2 -0.5**
comp=Z,20nm,1.3s,mb5.0
TANN Tannenbergstha 67.17 340 *eP* **P** **14 12 42.8 -0.1**
EMIN Mina Concepcio 67.21 320 P **P** **14 12 42.7 -0.7**
comp=Z,27nm,1.4s,mb5.1
PYM Petit Puy Mans 67.25 331 *eP* **P** **14 12 44.4 +0.9**
ECH Echery 67.33 335 *eP* **P** **14 12 43.7 -0.2**
ECH Echery 67.33 335 *eP* **P** **14 12 42.9 -1.0**
AGO Saint Agoulin 67.41 332 *eP* **P** **14 12 43.7 -0.8**
MOS Moscow 67.42 357 *eP* **P** **14 12 41.7 -2.6**
MOS pmax pmax
comp=Z,62nm,1.1s,mb5.5
CDF Champ du Feu 67.44 336⇓*iP* **P** **14 12 44.0 -0.6**
comp=Z,24nm,1.0s,mb4.8
CDF Champ du Feu 67.44 336⇓*iP* **P** **14 12 44.0 -0.6**
CDF pmax pmax
comp=Z,12nm,1.0s,mb4.9
CDF Champ du Feu 67.44 336⇓*iP* **P** **14 12 44.0 -0.6**
comp=Z,12nm,1.0s,mb4.9
GUD Guadarrama 67.47 323 P **P** **14 12 44.8 -0.2**
GUD pmax pmax
comp=Z,11nm,0.8s,mb4.9
GUD Guadarrama 67.47 323 P **P** **14 12 44.8 -0.2**
comp=Z,11nm,0.8s,mb4.9
SJPF Ste Jean 67.48 327⇓*iP* **P** **14 12 45.8 +0.8**
comp=Z,22nm,0.8s,mb4.9
SJPF Ste Jean 67.48 327⇓*iP* **P** **14 12 45.8 +0.8**
SJPF pmax pmax
comp=Z,11nm,0.8s,mb4.9
SJPF Ste Jean 67.48 327⇓*iP* **P** **14 12 45.8 +0.8**
comp=Z,11nm,0.8s,mb4.9
HAU Haudompre 67.49 335⇓*iP* **P** **14 12 44.6 -0.4**
comp=Z,27nm,1.0s,mb4.9
HAU *e*MLR MLR
comp=Z,81nm,19.5s,MS3.6
HAU Haudompre 67.49 335⇓*iP* **P** **14 12 44.6 -0.4**
HAU pmax pmax
comp=Z,14nm,1.0s,mb5.0
HAU MLR MLR
comp=Z,80nm,19.5s,MS4.0
HAU Haudompre 67.49 335⇓*iP* **P** **14 12 44.6 -0.4**
comp=Z,14nm,1.0s,mb4.9
HAU LR LR
comp=Z,80nm,19.5s,MS4.0
SMF Signal de Mont 67.53 333⇓*iP* **P** **14 12 45.3 0.0**
comp=Z,42nm,1.0s,mb5.1
SMF Signal de Mont 67.53 333⇓*iP* **P** **14 12 45.3 0.0**
SMF pmax pmax
comp=Z,21nm,1.0s,mb5.1
SMF Signal de Mont 67.53 333⇓*iP* **P** **14 12 45.3 0.0**
comp=Z,21nm,1.0s,mb5.1
EGRO El Granado 67.59 319 P **P** **14 12 45.3 -0.5**
comp=Z,15nm,0.7s,mb5.1
RJF Les Rejaudoux 67.63 330⇓*iP* **P** **14 12 46.7 +0.8**
comp=Z,66nm,1.2s,mb5.2
RJF *e*MLR MLR
comp=Z,228nm,21.0s,MS4.1
RJF Les Rejaudoux 67.63 330⇓*iP* **P** **14 12 46.7 +0.8**
RJF pmax pmax
comp=Z,33nm,1.2s,mb5.2
RJF MLR MLR
comp=Z,230nm,21.0s,MS4.4
RJF Les Rejaudoux 67.63 330⇓*iP* **P** **14 12 46.7 +0.8**
comp=Z,33nm,1.2s,mb5.2
RJF LR LR
comp=Z,230nm,21.0s,MS4.4
MOX Moxa 67.65 340 *eP* **P** **14 12 45.5 -0.4**
comp=Z,8.0nm,1.1s,mb4.7
PVAQ Vaqueiros 67.66 319 *eP* **P** **14 12 45.6 -0.7**
comp=Z,28nm,1.9s,mb5.0
ELIZ Elizondo 67.67 327 P **P** **14 12 46.0 -0.2**
ELIZ pmax pmax
comp=Z,11nm,0.8s,mb4.9
ELIZ Elizondo 67.67 327 P **P** **14 12 46.0 -0.3**
comp=Z,11nm,0.8s,mb5.0
LANF Langenberg 67.68 336 *eP* **P** **14 12 42.9 -3.2**
PBAR Barrancos 67.69 320 *eP* **P** **14 12 46.7 +0.3**
comp=Z,16nm,1.7s,mb4.8
EALK Alkurruntz 67.70 327 P **P** **14 12 46.5 +0.1**
comp=Z,11nm,0.8s,mb4.9
LFF La Frestale 67.75 330⇓*iP* **P** **14 12 47.4 +0.7**
comp=Z,64nm,1.2s,mb5.2
LFF La Frestale 67.75 330⇓*iP* **P** **14 12 47.4 +0.7**
LFF pmax pmax
comp=Z,32nm,1.2s,mb5.2
LFF La Frestale 67.75 330⇓*iP* **P** **14 12 47.4 +0.7**
comp=Z,32nm,1.2s,mb5.2
CLL Collm 67.76 341 *eP* **P** **14 12 45.3 -1.3**
comp=Z,52nm,2.4s,mb5.1
CLL Collm 67.76 341⇓*iP* **P** **14 12 45.5 -1.1**
comp=Z,6.0nm,0.9s,mb4.6
CLL L 14 41 00.0
comp=Z,100nm,20.2s
TOD Tromm 67.80 337 *eP* **P** **14 12 46.4 -0.5**
THEF They Montfort 67.82 335 *eP* **P** **14 12 46.4 -0.6**
AVF Avril sur Loir 67.86 332⇓*iP* **P** **14 12 47.4 +0.1**
comp=Z,42nm,1.0s,mb5.1
AVF Avril sur Loir 67.86 332⇓*iP* **P** **14 12 47.4 +0.1**
AVF pmax pmax
comp=Z,21nm,1.0s,mb5.1
AVF Avril sur Loir 67.86 332⇓*iP* **P** **14 12 47.4 +0.1**
comp=Z,21nm,1.0s,mb5.1
BGF Bois d'Agland 67.92 332⇓*iP* **P** **14 12 48.1 +0.4**
comp=Z,37nm,0.9s,mb5.1
BGF Bois d'Agland 67.92 332⇓*iP* **P** **14 12 48.1 +0.4**
BGF pmax pmax
comp=Z,19nm,0.9s,mb5.1
BGF Bois d'Agland 67.92 332⇓*iP* **P** **14 12 48.1 +0.4**
comp=Z,19nm,0.9s,mb5.1
LOR Lormes 68.00 333⇓*iP* **P** **14 12 48.2 0.0**
comp=Z,45nm,1.1s,mb5.1
LOR *e*MLR MLR
comp=Z,107nm,18.5s,MS3.8
LOR Lormes 68.00 333⇓*iP* **P** **14 12 48.2 0.0**
LOR pmax pmax
comp=Z,22nm,1.1s,mb5.1
LOR MLR MLR
comp=Z,110nm,18.5s,MS4.1
LOR Lormes 68.00 333⇓*iP* **P** **14 12 48.2 0.0**
comp=Z,22nm,1.1s,mb5.1
LOR LR LR
comp=Z,110nm,18.5s,MS4.1
SSF Saint Saulge 68.00 333⇓*iP* **P** **14 12 48.0 -0.2**
comp=Z,17nm,1.0s,mb4.7
SSF Saint Saulge 68.00 333⇓*iP* **P** **14 12 48.0 -0.2**
SSF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
SSF Saint Saulge 68.00 333⇓*iP* **P** **14 12 48.0 -0.2**
comp=Z,8.6nm,1.0s,mb4.7
TCF Toulx Ste Croi 68.02 331⇓*iP* **P** **14 12 49.2 +0.9**
comp=Z,76nm,0.9s,mb5.4
TCF Toulx Ste Croi 68.02 331⇓*iP* **P** **14 12 49.2 +0.9**
TCF pmax pmax
comp=Z,38nm,0.9s,mb5.4
TCF Toulx Ste Croi 68.02 331⇓*iP* **P** **14 12 49.2 +0.9**
comp=Z,38nm,0.9s,mb5.4
EBAD Badajoz 68.02 320 P **P** **14 12 48.0 -0.5**
comp=Z,20nm,1.0s,mb5.1
PBEJ Beja 68.12 319 *eP* **P** **14 12 49.5 +0.3**
comp=Z,20nm,1.0s,mb5.1
UBBA Unterbreizbach 68.36 339 *eP* **P** **14 12 49.9 -0.5**
PTEO Sao Teotonio 68.39 319 *eP* **P** **14 12 50.7 -0.2**
comp=Z,37nm,1.4s,mb5.2
MEZF Maizieres J'vi 68.42 334⇓*iP* **P** **14 12 50.9 +0.1**
comp=Z,24nm,0.8s,mb5.0
MEZF Maizieres J'vi 68.42 334⇓*iP* **P** **14 12 50.9 +0.1**
comp=Z,24nm,0.8s,mb5.3
EVO Evora 68.51 320 *eP* **P** **14 12 52.5 +0.9**
comp=Z,24nm,1.1s,mb4.8
EVO *e*MLR MLR
comp=Z,208nm,18.0s,MS4.1
RUP Ruppelstein 68.55 336 *eP* **P** **14 12 50.9 -0.7**
MKAR Makanchi Array 68.55 28 P **P** **14 12 51.0 -0.7**
comp=Z,5.8nm,0.8s,mb4.5,baz=217,slow=6.2,SNR=28
MKAR Makanchi Array 68.55 28 P **P** **14 12 51.0 -0.7**
PMRV Marv??o 68.66 321 *eP* **P** **14 12 52.6 +0.1**
comp=Z,13nm,1.2s,mb4.7
ELAN Lanestosa 68.75 326 P **P** **14 12 53.4 +0.4**
comp=Z,30nm,1.0s,mb5.2
WLF Walferdange 68.88 336 P **P** **14 12 53.7 +0.1**
comp=Z,9.6nm,1.0s,mb4.7
KSM Kuching 69.04 84 *eP* **P** **14 12 55.6 +0.1**
CLZ Clausthal 69.08 340 *eP* **P** **14 12 55.3 +0.4**
CLZ pmax pmax
comp=Z,31nm,1.6s,mb5.0
CLZ Clausthal 69.08 340 *eP* **P** **14 12 55.3 +0.4**
comp=Z,31nm,1.6s,mb5.0
WMQ Urumqi 69.20 34 *eP* **P** **14 12 56.4 +0.6**
WMQ *e*S S 14 22 02.0 -0.6
WMQ SCS ScS 14 22 55.0 -2.7
WMQ AMB AMB
comp=Z,17nm,1.2s,mb4.8
WMQ AMB AMB
comp=Z,172nm,3.7s
WMQ LR LR
comp=N,267nm,20.4s,MS4.6
WMQ LR LR
comp=E,262nm,21.7s,MS4.6
WMQ LR LR
comp=Z,312nm,20.5s,MS4.5
MTE Manteigas 69.34 322 *eP* **P** **14 12 57.2 +0.5**
comp=Z,18nm,1.0s,mb4.9
MFF Saint Martin d 69.37 330⇓*iP* **P** **14 12 57.2 +0.5**
comp=Z,29nm,0.9s,mb4.9
MFF Saint Martin d 69.37 330⇓*iP* **P** **14 12 57.2 +0.5**
MFF pmax pmax
comp=Z,15nm,0.9s,mb4.9
MFF Saint Martin d 69.37 330⇓*iP* **P** **14 12 57.2 +0.5**
comp=Z,14nm,0.9s,mb4.9
ARU Arti 69.38 10*d iP* **P** **14 12 55.8 -0.8**
ARU *e*PPP 14 17 07.0
ARU *e*S S 14 22 03.2 -1.0
ARU *e*SS SS 14 26 29.3 -2.3
ARU pmax pmax
comp=Z,43nm,1.7s,mb5.1
ARU Arti 69.38 10 *eP* **P** **14 12 55.7 -0.9**
comp=Z,20nm,0.9s,mb5.0
MVO Moncorvo 69.49 322 *eP* **P** **14 12 57.7 +0.1**
comp=Z,18nm,0.9s,mb5.0
KMI Kunming 69.59 57 P **P** **14 12 58.8 +0.2**
KMI AP pP 14 13 00.4 +0.9
KMI PCP PcP 14 13 21.9 +0.2
KMI PP PP 14 15 36.8 +4.2
KMI S S 14 22 09.1 +1.2
KMI SCS ScS 14 22 59.5 -2.1
KMI SS SS 14 26 39.0 +3.0
KMI AMB AMB
comp=Z,12nm,0.5s,mb5.1
KMI AMB AMB
comp=Z,173nm,4.5s
KMI LR LR
comp=N,582nm,12.8s,MS5.1
KMI LR LR
comp=E,546nm,16.5s,MS5.1
KMI LR LR
comp=Z,643nm,14.9s,MS5.0
MEM Membach 69.68 336 P **P** **14 12 59.0 +0.4**
comp=Z,7.7nm,1.5s,mb4.4
NRDL Niedersach Rie 69.72 340 *eP* **P** **14 12 58.8 0.0**
PVIS Viseu 69.74 322 *eP* **P** **14 12 59.1 -0.1**
comp=Z,15nm,1.4s,mb4.7
GIVF Givet 69.76 335⇓*iP* **P** **14 12 58.7 -0.4**
ECAL Calabor 69.80 323 P **P** **14 12 59.6 +0.1**
comp=Z,44nm,1.2s,mb5.3
BCLA Clavier 69.81 336 P **P** **14 12 59.7 +0.3**
DOU Dourbes 69.85 335 P **P** **14 12 59.3 -0.3**
BUG Bochum--Univer 69.86 338 *eP* **P** **14 12 59.8 +0.1**
comp=Z,36nm,1.4s,mb5.1
KURK Kurchatov 69.95 24 P **P** **14 13 00.4 +0.1**
comp=Z,110nm,1.0s,mb5.7,SNR=10
BAIF Baives 69.98 335 *eP* **P** **14 13 00.0 -0.4**
SVE Sverdlovsk 70.12 11 *eP* **P** **14 13 00.8 -0.3**
SVE pmax pmax
comp=Z,27nm,0.9s,mb5.2
ERUA La Rua 70.31 323 P **P** **14 13 02.7 0.0**
ERUA pmax pmax
comp=Z,18nm,1.4s,mb4.8
ERUA La Rua 70.31 323 P **P** **14 13 02.7 0.0**
comp=Z,18nm,1.4s,mb4.8
IBBN Ibbenburen 70.39 338 *eP* **P** **14 13 02.9 0.0**
PCAB Cabril 70.42 322 *eP* **P** **14 13 03.8 +0.5**
comp=Z,24nm,1.9s,mb4.8
UCC Uccle 70.48 336 P **P** **14 13 03.4 -0.2**
ELOB Lobios 70.53 323 P **P** **14 13 03.5 -0.5**
comp=Z,27nm,1.3s,mb5.0
LDF La Druitiere 70.78 332⇓*iP* **P** **14 13 05.3 -0.1**
comp=Z,33nm,1.1s,mb4.9
LDF La Druitiere 70.78 332⇓*iP* **P** **14 13 05.3 -0.1**
LDF pmax pmax
comp=Z,17nm,1.0s,mb4.9
LDF La Druitiere 70.78 332⇓*iP* **P** **14 13 05.3 -0.1**
comp=Z,17nm,1.0s,mb4.9
BSEG Bad Segeberg 70.86 341 *eP* **P** **14 13 05.4 -0.3**
GRR Gorron 70.98 331⇓*iP* **P** **14 13 06.4 -0.2**
comp=Z,31nm,1.0s,mb4.9
GRR Gorron 70.98 331⇓*iP* **P** **14 13 06.4 -0.2**
GRR pmax pmax
comp=Z,15nm,1.0s,mb4.9
GRR Gorron 70.98 331⇓*iP* **P** **14 13 06.4 -0.2**
comp=Z,15nm,1.0s,mb4.9
FLN La Foliniere 71.07 332⇓*iP* **P** **14 13 06.9 -0.2**
comp=Z,45nm,1.1s,mb5.0
FLN *e*MLR MLR
comp=Z,87nm,17.5s,MS3.8
FLN La Foliniere 71.07 332⇓*iP* **P** **14 13 06.9 -0.2**
FLN pmax pmax
comp=Z,22nm,1.1s,mb5.0
FLN MLR MLR
comp=Z,90nm,17.5s,MS4.1
FLN La Foliniere 71.07 332⇓*iP* **P** **14 13 06.9 -0.2**
comp=Z,22nm,1.1s,mb5.0
FLN LR LR
comp=Z,90nm,17.5s,MS4.1
NWAO Narrogin (SRO) 71.27 121 P **P** **14 13 09.2 +0.4**
comp=Z,19nm,1.1s,mb5.0,baz=276,slow=8.2,SNR=3.8
STS Santiago 71.44 323 P **P** **14 13 08.6 -0.9**
STS pmax pmax
comp=Z,20nm,1.1s,mb5.0
STS Santiago 71.44 323 P **P** **14 13 08.6 -0.9**
comp=Z,20nm,1.1s,mb5.0
SGMF Saint Gilles 71.69 330⇓*iP* **P** **14 13 10.6 -0.3**
comp=Z,74nm,1.3s,mb5.2
SGMF Saint Gilles 71.69 330⇓*iP* **P** **14 13 10.6 -0.3**
SGMF pmax pmax
comp=Z,37nm,1.3s,mb5.2
SGMF Saint Gilles 71.69 330⇓*iP* **P** **14 13 10.6 -0.3**
comp=Z,37nm,1.3s,mb5.2
QUIF Quistinic 71.76 330⇓*iP* **P** **14 13 11.4 +0.1**
comp=Z,29nm,0.9s,mb4.9

QUIF Quistinic 71.76 330⇓ *i*P P 14 13 11.4 +0.1
QUIF pmax pmax
comp=Z,14nm,0.9s,mb4.9
QUIF Quistinic 71.76 330⇓ *i*P P 14 13 11.4 +0.1
comp=Z,14nm,0.9s,mb4.9
ROSF Rostrenen 72.10 330⇓ *i*P P 14 13 12.9 -0.5
comp=Z,12nm,0.6s,mb4.7
ROSF Rostrenen 72.10 330⇓ *i*P P 14 13 12.9 -0.5
ROSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
ROSF Rostrenen 72.10 330⇓ *i*P P 14 13 12.9 -0.5
comp=Z,6.0nm,0.6s,mb4.7
CD2 Chengdu 72.84 52 *e*P P 14 13 18.6 +0.4
CD2 AP pP 14 13 22.1 +3.0
CD2 XP sP 14 13 24.9 +5.5
CD2 PP PP 14 16 03.3 +2.8
CD2 S S 14 22 43.9 -1.5
CD2 XS sS 14 22 51.8 +5.0
CD2 SS SS 14 27 26.9 +1.1
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CD2 AMB AMB
comp=Z,30nm,6.2s
CD2 LR LR
comp=N,650nm,14.4s,MS5.3
CD2 LR LR
comp=E,780nm,13.2s,MS5.3
CD2 LR LR
comp=Z,950nm,10.8s,MS5.3
GYA Guiyang 73.36 58⇓ *i*P P 14 13 20.4 -1.0
GYA PP PP 14 16 04.8 -0.2
GYA S S 14 22 45.4 -6.1
GYA SKS 14 23 25.8
GYA SS SS 14 27 30.1 -3.8
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,70nm,5.7s
GYA LR LR
comp=N,200nm,19.5s,MS4.7
GYA LR LR
comp=E,340nm,20.2s,MS4.7
GYA LR LR
comp=Z,400nm,22.0s,MS4.7
QIZ Qiongzhong 73.48 66 P P 14 13 21.5 -0.7
QIZ AMB AMB
comp=Z,91nm,7.0s
QIZ LR LR
comp=E,197nm,14.1s
QIZ LR LR
comp=Z,233nm,10.8s,MS4.7
GTA Gaotai 73.98 43 *e*P P 14 13 25.0 +0.3
GTA AP pP 14 13 35.8 +10
GTA AMB AMB
comp=Z,20nm,0.9s,mb5.0
GTA AMB AMB
comp=Z,77nm,5.4s
GTA LR LR
comp=N,292nm,12.9s
GTA LR LR
comp=E,325nm,18.6s
GTA LR LR
comp=Z,334nm,15.6s,MS4.7
FINES FINESS Array B 74.12 352 *e*P P 14 13 23.0 -2.0
KAF Kangasniemi 74.74 352 *ep* P 14 13 28.0 -0.6
comp=Z,22nm,0.6s,mb5.3,baz=163,slow=5.6
KAF Kangasniemi 74.74 352 *e*P P 14 13 28.0 -0.6
KAF pmax pmax
comp=Z,22nm,0.6s,mb5.3
ZALV Zalesovo Beam 74.89 25 P P 14 13 28.3 -1.4
comp=Z,20nm,0.9s,mb5.0,baz=242,slow=6.2,SNR=57
ZALV Zalesovo Beam 74.89 25 P P 14 13 28.3 -1.4
NVS Novosibirsk 74.92 23 *i* P P 14 13 29.2 -0.6
NVS pmax pmax
comp=N,23nm,1.2s
NVS pmax pmax
comp=E,7.0nm,1.2s
NVS pmax pmax
comp=Z,42nm,1.2s,mb5.2
JOF Joensuu 74.98 355 *ep* P 14 13 29.2 -0.8
comp=Z,15nm,0.6s,mb5.1
JOF Joensuu 74.98 355 *e*P P 14 13 29.2 -0.8
JOF pmax pmax
comp=Z,15nm,0.6s,mb5.1
LZH Lanzhou 75.19 48 ⇑P P 14 13 32.0 +0.2
LZH AP pP 14 13 34.8 +2.1
LZH XP sP 14 13 36.0 +3.0
LZH *e*PP PP 14 16 23.0 +2.7
LZH AMB AMB
comp=Z,29nm,1.6s,mb5.0
LZH AMB AMB
comp=Z,100nm,4.0s
LZH LR LR
comp=N,933nm,14.3s
LZH LR LR
comp=Z,1μm,16.0s,MS5.3
NB2 NORSAR Subarra 76.64 345 P P 14 13 38.9 -0.6
comp=Z,7.0nm,0.8s,mb4.6,baz=125,slow=6.5
NOA NORSAR Array B 76.64 345 P P 14 13 39.0 -0.5
comp=Z,7.0nm,0.7s,mb4.7,baz=148,slow=5.7,SNR=13
NOA LR LR 14 47 51.2
comp=Z,48nm,19.7s,MS3.8,baz=110,slow=36
KAPI Kappang 76.95 92 P P 14 13 40.9 -1.5
comp=Z,8.6nm,0.5s,mb5.0,baz=202,slow=8.8,SNR=3.1
XAN Xi'an 78.10 51 P P 14 13 47.8 -0.6
XAN AMB AMB
comp=Z,19nm,1.2s,mb4.9
XAN AMB AMB
comp=Z,96nm,4.8s
XAN LR LR
comp=N,326nm,15.3s,MS5.0
XAN LR LR
comp=E,478nm,16.8s,MS5.0
XAN LR LR
comp=Z,1μm,14.9s,MS5.4
QSPA South Pole Qui 78.26 180 LR LR 14 47 09.2
comp=Z,145nm,18.1s,MS4.3,baz=261,slow=35
BATI Baumata 79.81 98 P P 14 13 58.4 +0.2
comp=Z,24nm,0.7s,mb5.2,baz=0.0,slow=3.0,SNR=3.1
FITZ Fitzroy Crossi 80.37 107 *e*P P 14 14 01.5 +0.4
comp=Z,21nm,0.9s,mb5.1
FITZ Fitzroy Crossi 80.37 107 P P 14 14 01.5 +0.4
comp=Z,12nm,0.8s,mb4.9,baz=255,slow=7.5,SNR=27
ZAK Zakamensk 81.64 35 *e*P P 14 13 57.9 -9.2
ZAK pmax pmax
comp=Z,6.0nm,1.6s,mb4.3
ARCES ARCESS Array B 81.99 354 P P 14 14 07.5 -1.1
comp=Z,9.3nm,0.6s,mb4.9,baz=163,slow=5.9,SNR=28
SONM Songino Array 82.22 38 P P 14 14 11.2 +0.9
comp=Z,3.1nm,0.8s,mb4.3,baz=236,slow=5.7,SNR=18
ULN Ulaanbaatar 82.63 38⇓ *e*P P 14 14 13.1 +0.7
HHC Hu-ho-hao-te 82.67 46 *e*P P 14 14 11.1 -1.7
HHC AP pP 14 14 14.6 +0.9
HHC PP PP 14 17 23.4 +0.7
HHC S S 14 24 27.8 -3.6
HHC SS SS 14 29 53.1 -0.6
HHC AMB AMB
comp=Z,20nm,0.6s,mb5.3
HHC AMB AMB
comp=Z,138nm,6.8s
HHC LR LR
comp=N,228nm,17.1s,MS4.7
HHC LR LR
comp=E,135nm,17.2s,MS4.7
HHC LR LR
comp=Z,195nm,18.0s,MS4.5
NJ2 Nanjing 85.27 56 *e*P P 14 14 26.6 +0.3
NJ2 S S 14 25 03.0 +5.2
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.9
NJ2 AMB AMB
comp=Z,330nm,4.6s
NJ2 LR LR
comp=N,370nm,22.6s,MS4.9
NJ2 LR LR
comp=E,340nm,20.8s,MS4.9
NJ2 LR LR
comp=Z,340nm,20.8s,MS4.7
BJI Beijing 85.68 48 P P 14 14 28.4 +0.3
BJI S S 14 25 02.5 +1.0
BJI SS SS 14 30 37.8 -0.3
BJI AMB AMB
comp=Z,10.0nm,0.8s,mb5.1
BJI LR LR
comp=N,331nm,20.5s,MS4.9
BJI LR LR
comp=E,426nm,21.1s,MS4.9
BJI LR LR
comp=Z,231nm,20.2s,MS4.6
BDFB Brasilia 86.95 255 P P 14 14 37.0 +2.0
comp=Z,14nm,0.8s,mb5.2,baz=112,slow=3.1,SNR=19
ASAR Alice Springs 86.98 113 P P 14 14 34.7 -0.3
comp=Z,2.5nm,0.8s,mb4.5,baz=259,slow=4.5,SNR=50
ASAR PKKPbc PKKPbc 14 32 26.9 -1.1
comp=Z,0.2nm,0.5s,baz=95,slow=2.4,SNR=6.7
WRA Warramunga Arr 88.13 110 P P 14 14 40.2 -0.4
comp=Z,6.1nm,1.0s,mb4.8,baz=260,slow=2.8,SNR=46
WRA PKKPbc PKKPbc 14 32 24.5 -0.5
comp=Z,0.4nm,0.6s,baz=77,slow=3.4,SNR=10
WB2 Warramunga Arr 88.14 110 *e*P P 14 14 40.1 -0.5
WRAB Tennant Creek 88.14 110 *e*P P 14 14 40.2 -0.4
WRAB pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
WRAB Tennant Creek 88.14 110 *e*P P 14 14 40.2 -0.5
comp=Z,10nm,1.1s,mb5.0
BOD Bodaibo 90.55 31 *e*P P 14 14 49.2 -1.8
BOD pmax pmax
comp=Z,4.0nm,1.4s,mb4.6
CN2 Changchun 93.37 46 *e*P P 14 15 06.0 +1.6
PLCA Paso Flores 98.85 225 LR LR 14 58 09.8
comp=Z,141nm,20.9s,MS4.4,baz=181,slow=34
JSC Jenkinsville 124.04 303 *e*PKIKP PKPdf 14 20 47.8 -0.3
DAWY Dawson 127.83 1 *e*PKPdf PKPdf 14 20 54.0 -0.5
OLIL Olney 128.38 310 *e*PKPdf PKPdf 14 20 55.4 -0.9
ULM Lac du Bonnet 128.53 327 PKP PKPdf 14 20 54.2 -1.9
comp=Z,4.7nm,0.8s,baz=33,slow=7.4,SNR=4.0
CCM Cathedral Cave 130.94 311 *e*PKIKP PKPdf 14 21 00.7 -0.5
HYT Haines Junctio 131.09 360 *e*PKPdf PKPdf 14 21 01.3 +0.6
WRAK Wrangell Islan 135.30 356 *e*PKPdf PKPdf 14 21 08.7 -0.1
EGMT Eagleton 136.92 332 *e*PKPdf PKPdf 14 21 12.7 +0.7
WMOK Wichita Mounta 137.81 309 *e*PKIKP PKPdf 14 21 13.2 -0.9
BOZ Bozeman (W) 139.54 331 *e*PKIKP PKPdf 14 21 17.8 +0.8
MSO Missoula 139.67 334 *e*PKPdf PKPdf 14 21 17.6 +0.4
NEW Newport 139.74 338 *e*PKIKP PKPdf 14 21 17.1 -0.1
DLMT Dillon 140.21 332 *e*PKPdf PKPdf 14 21 18.5 +0.3
IMW Indian Meadow 140.48 329 *e*PKPpre 14 21 15.9
PDAR Pinedale Array 140.55 327 PKP PKPdf 14 21 17.9 -1.0
comp=Z,2.8nm,1.0s,baz=90,slow=3.0,SNR=12
MCMT McKenzie Canyo 140.73 332 *e*PKPpre 14 21 17.6
TPAW Teton Pass 140.78 329 *e*PKPdf PKPdf 14 21 20.2 +0.9
RRI2 Red Ridge 141.07 329 *e*PKPdf PKPdf 14 21 20.7 +0.9
SDCO Great Sand Dun 141.20 317 *e*PKPdf PKPdf 14 21 14.0 -6.2
JCW Jim Creek 141.36 343 *e*PKPpre 14 21 13.6
HWUT Hardware Ranch 142.43 327 *e*PKPpre 14 21 18.4
LON Longmire 142.62 342 *e*PKIKP PKPdf 14 21 18.1 -4.4
HVU Hansel Valley 142.94 328 *e*PKIKP PKPdf 14 21 21.9 -1.3
PV01 Paradox Valley 142.96 320 *e*PKPdf PKPdf 14 21 22.1 -1.2
PV10 Paradox Valley 143.10 321 *e*PKPpre 14 21 21.3
ANMO Albuquerque 143.34 314 *e*PKIKP PKPdf 14 21 20.9 -3.2
SRU San Rafael 143.53 323 *e*PKIKP PKPdf 14 21 21.6 -2.7
BGU Big Grassy Mou 143.69 327 *e*PKPpre 14 21 21.2
LPM Los Pinos Moun 143.78 313 *e*PKPpre 14 21 22.3
NLU North Lily Min 143.86 325 *e*PKPpre 14 21 21.9
BNM Barren Site 143.86 313 *e*PKPpre 14 21 23.0
DUG Dugway 144.10 326 *e*PKIKP PKPdf 14 21 23.2 -2.1
LAZ Ladron 144.10 314 *e*PKP PKPdf 14 21 23.6 -1.9
LENM Lemitar 144.13 313 *e*PKP PKPdf 14 21 23.6 -1.9
BKCOR Black Crater 144.74 340 P PKPdf 14 21 26.0 -0.3
MSU Marysvale 144.90 324 *e*PKIKP PKPdf 14 21 26.5 -0.2
ELK Elko 144.96 329 *e*PKIKP PKPdf 14 21 26.6 -0.2
FRIS Frissel Point 144.98 340 P PKPdf 14 21 26.2 -0.5
COR Corvallis 145.03 342 *e*PKIKP PKPdf 14 21 25.5 -1.2
BROR Big Rock Looko 145.04 340 P PKPbc 14 21 26.1 0.0
MPOR Mary's Peak 145.18 342 P PKPbc 14 21 27.4 +0.9
WVOR Wild Horse Val 145.19 335 *e*PKIKP PKPdf 14 21 26.8 -0.3
IRO Indian Ridge 145.21 340 P PKPbc 14 21 26.6 -0.1
ARUT Antelope Range 146.12 324 *e*PKP2 PKPab 14 21 29.8 -0.5
BMN Battle Mountai 146.17 331 *e*PKP2 PKPab 14 21 30.2 -0.2
CCUT Cedar City 146.24 324 *e*PKPbc PKPbc 14 21 30.6 +0.5
MOD Modoc 146.32 336 *e*PKPbc PKPbc 14 21 30.0 -0.2
WUAZ Wupatki 146.33 319 *e*PKPbc PKPbc 14 21 30.6 +0.1
HOG Hogback Mounta 146.56 338 P PKPdf 14 21 31.2 +1.7
HUMO Hull Mountain 146.69 340 *e*PKPbc PKPbc 14 21 30.9 -0.3
YBH Yreka Blue Hor 147.37 329 PKPbc PKPbc 14 21 32.1 -1.1
comp=Z,7.7nm,0.7s,baz=21,slow=6.2,SNR=6.7
YBH Yreka Blue Hor 147.37 339 PKP2 PKPbc 14 21 32.1 -1.1
YBH pmax pmax
comp=Z,8.0nm,0.7s
YBH Yreka Blue Hor 147.37 339 *e*PKPdf PKPdf 14 21 31.5 +0.6
PAHR Pah Rah Range 147.75 333 *e*PKPdf PKPdf 14 21 32.9 +1.4
PAHR *e*PKPbc PKPbc 14 21 34.8 +0.5
TUC Tucson 147.79 314 *e*PKP2 PKPbc 14 21 33.0 -1.7
TPH Tonopah 147.98 328 *e*PKP2 PKPbc 14 21 33.5 -1.5
NVAR Mina Array Bea 148.25 330 PKPbc PKPbc 14 21 34.0 -1.7
comp=Z,17nm,0.9s,baz=119,slow=1.1,SNR=52
TPNV Topopah Spring 148.30 326 *e*PKP2 PKPbc 14 21 35.9 0.0
WDC Whiskeytown Da 148.32 337 *e*PKIKP PKPdf 14 21 32.7 +0.3
WDC *e* 14 21 34.8
LDFC Landfair 148.95 322 *e*PKPbc PKPbc 14 21 38.5 +0.9
CMB Columbia Colle 149.56 332 *e*PKHKP PKPdf 14 21 34.8 +0.3
CMB *e* PKPbc 14 21 38.9 -0.1
GSC Goldstone 149.79 324 *e*PKP2 PKPbc 14 21 40.4 +0.7
GLA Glamis 150.10 319 *e*PKP2 PKPbc 14 21 40.8 +0.3
NSHM Saint Helena R 150.12 335 *e*PKPbc PKPbc 14 21 40.5 +0.1
ISA Isabella 150.46 327 *e*PKIKP PKPbc 14 21 41.7 +0.4
PFO Pinyon Flat Ob 150.76 321 *e*PKIKP PKPbc 14 21 42.5 +0.4
SAO San Andreas Ge 151.08 332 *e*PKIKP PKPbc 14 21 42.9 +0.2
MWC Mount Wilson 151.28 324 *e*PKIKP PKPbc 14 21 43.4 +0.1
PTRM Twissleman Ran 151.37 329 *e*PKPbc PKPbc 14 21 43.9 +0.4

IDC ***16*** *14:10:59.7±0.4, 161S×9965E, h0km, mb4.4/25, mb1 4.5/26, mb1mx4.4/28, mbtmp4.4/26, MS4.1/8, Ms1 4.1/8, ms1mx3.9/24, Error ellipse: s-maj=15.4km s-min=12.5km az=52.0*

BJI ***16*** *14:11:01.2, 160S×9970E, h17km, mB5.1, mb4.7, Ms4.6, Msz4.4*

NEIC ***16*** *14:11:02.2±4.8, 162S×9965E, h17km±29km, mb4.8/13, Error ellipse: s-maj=9.4km s-min=5.8km az=54.0*

ISCJB ***16*** *14:11:02.8±0.3, 171S±004×9956E±004, h33km, mb4.8/61, MS4.3/15, Error ellipse: s-maj=6.2km s-min=5.0km az=31.9*

MOS ***16*** *14:11:04.0±0.8, 154S×9975E, h39km, mb4.9/25, MS4.4/6, Error ellipse: s-maj=13.9km s-min=9.2km az=104.0*

DJA ***16*** *14:11:07, 154S×9991E, h30km, MLv5.0/4*

ISC 16 14:11:05.0±0.3,**173S**±004×**9957E**±004,**h35**km, **(h29**km±5.7km**:pP-P),n149,**σ1**9**05**/137,**mb4.8**/61,**MS4.3**/15, **12C-15D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
PPI	**Padang Panjang** 0.0nm,0.0s	**1.51**	**33**	P	P	**Pn**	**14 11 27.2**	**-2.3**
TRSI	**Tarutung** 0.0nm,0.0s	**3.78**	**351**	P	P	**Pn**	**14 12 08.4**	**+7.6**
DSRI	**Dabo** 145nm,0.8s	**5.16**	**76**	P	P	**Pn**	**14 12 22.8**	**+3.1**
KGM	**Kluang**	**5.28**	**45**	⇑P	P	**Pn**	**14 12 24.0**	**+2.6**
FRIM	**Kepong**	**5.34**	**23**	⇓P	P	**Pn**	**14 12 21.5**	**-0.7**
MYKOM	**Kota Tinggi**	**5.52**	**51**	⇓P	P	**Pn**	**14 12 27.6**	**+2.8**
KLI	**Kotabumi** 230nm,1.2s	**6.13**	**121**	P	P	**Pn**	**14 12 39.0**	**+5.9**
IPM	**Ipoh**	**6.33**	**13**	⇓P	P	**Pn**	**14 12 37.5**	**+1.5**
KTGM	**Kuala Trenggan**	**7.86**	**27**	⇑P	P	**Pn**	**14 12 58.1**	**+1.2**
TPI	**Tanjungpandan**	**8.14**	**97**	⇓*e*P	P	**Pn**	**14 13 00.6**	**-0.1**
SNG	**Songkhla** 198nm,0.8s	**8.91**	**7**	P	P	**Pn**	**14 13 12.0**	**+0.8**
LEM	**Lembang** 145nm,1.0s	**9.49**	**123**	P	P	**Pn**	**14 13 30.2**	**+11**
KSM	**Kuching**	**11.20**	**74**	⇑P	P	**Pn**	**14 13 51.1**	**+8.5**
BJII	**Banjamegara** 52nm,1.9s	**11.54**	**119**	P	P	**Pn**	**14 13 58.7**	**+11**
STKI	**Sintang** 48nm,0.5s	**12.04**	**82**	P	P	**Pn**	**14 14 04.5**	**+10**
SBUM	**Sibu**	**13.31**	**72**	⇓P	P	**Pn**	**14 14 17.3**	**+5.7**
SJI	**Sawahan** 55nm,1.1s	**13.54**	**117**	P	P	**Pn**	**14 14 16.4**	**+1.8**
BTM	**Bintulu**	**14.37**	**70**	⇓P	P	**Pn**	**14 14 32.4**	**+6.4**
KKM	**Kota Kinabalu**	**18.32**	**65**	⇑P	P	**Pn**	**14 15 18.2**	**+1.6**
KKM	**Kota Kinabalu**	**18.32**	**65**	*e*P	P	**Pn**	**14 15 16.9**	**+0.3**
SDKM	**Sandakan**	**19.06**	**67**	⇑P	P	**Pn**	**14 15 25.1**	**-0.4**
TSM	**Tawau**	**19.24**	**72**	⇓P	P	**Pn**	**14 15 27.5**	**-0.2**
KDM	**Kudat**	**19.25**	**63**	⇓P	P	**Pn**	**14 15 28.6**	**+0.8**
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=188,slow=10,SNR=13	**20.07**	**358**	P	P	**Pn**	**14 15 31.6**	**-3.8**
CMAR				PcP	PcP		14 19 51.1	+0.8
	0.0nm,0.3s,baz=218,slow=4.2,SNR=4.5							
CMAR				LR	LR		14 23 52.4	
	comp=Z,710nm,19.0s,MS4.0,baz=190,slow=39							
MYLDM	**Lahad Datu**	**20.11**	**70**	⇑P	P		**14 15 39.6**	**+3.6**
KAPI	**Kappang** 22nm,0.6s,baz=290,slow=8.1,SNR=6.4	**20.41**	**100**	P	P		**14 15 37.4**	**-1.8**
KAPI	**Kappang**	**20.41**	**100**	*e*P	P		**14 15 37.4**	**-1.8**
QIZ	**Qiongzhong**	**22.96**	**26**	P	P		**14 16 04.8**	**-1.7**
QIZ				S	S		**14 20 08.3**	**-6.3**
QIZ				LR	LR			
	comp=E,820nm,12.6s							
QIZ				LR	LR			
	comp=Z,566nm,18.4s							
QIZ	**Qiongzhong** comp=Z,14nm,1.1s,mb4.3	**22.96**	**26**	*e*P	P		**14 16 03.1**	**-3.4**
MNI	**Manado** comp=Z,181nm,0.9s,mb5.6	**25.46**	**83**	P	P		**14 16 32.3**	**+2.3**
FITZ	**Fitzroy Crossi** comp=Z,13nm,1.0s,mb4.6	**30.32**	**124**	*e*P	P		**14 17 12.7**	**-0.7**
FITZ	**Fitzroy Crossi** comp=Z,4.9nm,0.9s,mb4.2,baz=232,slow=3.8,SNR=10	**30.32**	**124**	P	P		**14 17 12.8**	**-0.6**
FITZ				LR	LR		14 30 17.4	
	comp=Z,228nm,21.7s,MS3.8,baz=307,slow=38							
FITZ	**Fitzroy Crossi** comp=Z,43nm,1.0s,mb5.1	**30.32**	**124**	*e*P	P		**14 17 12.9**	**-0.5**
ODAN	**Odare** comp=Z,28nm,0.6s,mb5.3	**30.75**	**338**	*e*P	P		**14 17 17.8**	**+0.7**
TAPN	**Taplejung** comp=Z,78nm,1.0s,mb5.5	**31.08**	**339**	*e*P	P		**14 17 20.9**	**+0.9**
RAMN	**Ramite** comp=Z,21nm,0.6s,mb5.1	**31.13**	**337**	*e*P	P		**14 17 21.6**	**+1.1**
SWI	**Sorong** comp=Z,52nm,1.2s,mb5.2	**31.69**	**89**	P	P		**14 17 24.9**	**-0.7**
JIRN	**Jiri** comp=Z,47nm,0.7s,mb5.4	**31.93**	**337**	*e*P	P		**14 17 28.1**	**+0.6**
LSA	**Lhasa**	**32.27**	**346**	P	P		**14 17 33.0**	**+2.6**
LSA	**Lhasa**	**32.27**	**346**	*e*P	P		**14 17 30.7**	**+0.3**
LSA				pmax	pmax			
	comp=Z,27nm,0.9s,mb5.1							
LSA	**Lhasa** comp=Z,27nm,0.9s,mb5.1	**32.27**	**346**	*e*P	P		**14 17 30.6**	**+0.2**
GUN	**Gumba** comp=Z,43nm,0.6s,mb5.5	**32.27**	**337**	*e*P	P		**14 17 31.2**	**+0.7**
DMN	**Daman** comp=Z,15nm,0.9s,mb4.8	**32.32**	**336**	*e*P	P		**14 17 31.2**	**+0.3**
POO	**Poona**	**32.33**	**310**	*ex*	x		14 17 31.0	
KKN	**Kakani** comp=Z,30nm,1.0s,mb5.1	**32.41**	**336**	*e*P	P		**14 17 31.6**	**-0.1**
GKN	**Gorkha** comp=Z,20nm,0.9s,mb5.0	**32.86**	**335**	*e*P	P		**14 17 36.0**	**+0.4**
KOLN	**Koldanda** comp=Z,22nm,0.6s,mb5.3	**33.11**	**333**	*e*P	P		**14 17 38.0**	**+0.2**
DANN	**Dangsing** comp=Z,24nm,0.6s,mb5.3	**33.54**	**334**	*e*P	P		**14 17 41.0**	**-0.5**
LZH	**Lanzhou**	**37.83**	**6**	*e*P	P		**14 18 21.8**	**+3.6**
LZH				AP	pP		14 18 27.3	-1.2
LZH				XP	sP		14 18 29.6	-3.1
LZH				AMB	AMB			
	comp=Z,13nm,1.0s,mb4.6							
DDI	**Dehra Dun**	**37.91**	**329**	*ex*	x		14 18 17.0	
WRA	**Warramunga Arr** comp=Z,9.2nm,0.5s,mb4.7,baz=302,slow=9.1,SNR=87	**38.50**	**120**	P	P		**14 18 23.6**	**-0.6**
WRA				PcP	PcP		14 20 37.3	+0.5
	comp=Z,1.0nm,0.6s,baz=314,slow=2.3,SNR=5.4							
WRA	**Warramunga Arr**	**38.50**	**120**	P	P		**14 18 23.6**	**-0.6**
WRA							14 20 37.3	
WRA				pmax	pmax			
	comp=Z,9.0nm,0.5s							
WRA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
WRAB	**Tennant Creek**	**38.51**	**120**	*e*P	P		**14 18 23.6**	**-0.6**
WRAB	comp=Z,19nm,0.8s,mb4.9			pmax	pmax			
WRAB	**Tennant Creek** comp=Z,19nm,0.8s,mb4.9	**38.51**	**120**	*e*P	P		**14 18 23.6**	**-0.7**
WB2	**Warramunga Arr**	**38.51**	**120**	*e*P	P		**14 18 23.2**	**-1.1**
ASAR	**Alice Springs** comp=Z,6.1nm,0.6s,mb4.5,baz=304,slow=7.8,SNR=140	**39.76**	**126**	P	P		**14 18 34.6**	**0.0**
ASAR				PcP	PcP		14 20 41.9	+1.1
	comp=Z,1.8nm,0.7s,baz=316,slow=3.1,SNR=6.0							
ASAR				S	S		**14 24 34.6**	**-1.9**
	comp=Z,2.3nm,1.1s,baz=295,slow=16,SNR=7.0							
ASAR	**Alice Springs**	**39.76**	**126**	P	P		**14 18 34.7**	**+0.1**
ASAR							14 20 41.9	
ASAR				S	S		**14 24 34.6**	**-1.9**
ASAR				pmax	pmax			
	comp=Z,6.0nm,0.6s							
ASAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ASAR				smax				
	comp=N,2.0nm,1.1s							
GTA	**Gaotai**	**40.94**	**0**	*e*P	P		**14 18 44.0**	**-0.1**
GTA				AP	pP		14 18 51.9	-2.5
GTA				XP	sP		14 18 54.9	-3.7
GTA				PP	PP		14 20 20.8	+1.8
GTA				S	S		**14 24 52.8**	**-0.8**
GTA				AMB	AMB			
	comp=Z,5.0nm,1.1s,mb4.1							
GTA				AMB	AMB			
	comp=Z,86nm,3.9s							
GTA				LR	LR			
	comp=N,292nm,15.3s,MS4.4							
GTA				LR	LR			
	comp=E,258nm,15.3s,MS4.4							
GTA				LR	LR			
	comp=Z,334nm,15.6s,MS4.3							
KSRS	**Korea Array** comp=Z,3.2nm,0.7s,mb4.4,baz=223,slow=7.5,SNR=9.3	**47.01**	**31**	P	P		**14 19 31.7**	**-1.2**
KSRS				LR	LR		14 39 39.1	
	comp=Z,114nm,19.0s,MS3.9,baz=71,slow=37							
KSRS	**Korea Array**	**47.01**	**31**	P	P		**14 19 31.7**	**-1.2**
KSRS				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
KSRS				MLR	MLR			
	comp=Z,114nm,19.0s,MS3.9							
CTAO	**Charters Tower**	**49.10**	**115**	*e*P	P		**14 19 48.5**	**-0.9**
CTAO				pmax	pmax			
	comp=Z,14nm,1.2s,mb4.9							
CTAO	**Charters Tower** comp=Z,14nm,1.2s,mb4.9	**49.10**	**115**	*e*P	P		**14 19 48.5**	**-0.9**
TKM2	**Tokmak 2**	**49.41**	**337**	*e*P	P		**14 19 52.0**	**+0.6**
TKM2				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.8							
TKM2	**Tokmak 2** comp=Z,6.2nm,0.6s,mb4.8	**49.41**	**337**	*e*P	P		**14 19 52.0**	**+0.6**
AML	**Almayashu** comp=Z,9.4nm,0.6s,mb5.0	**49.54**	**335**	*e*P	P		**14 19 52.3**	**0.0**
STKA	**Stephens Creek** comp=Z,5.6nm,0.8s,mb4.7	**49.65**	**132**	*e*P	P		**14 19 54.3**	**+0.9**
STKA	**Stephens Creek** comp=Z,5.3nm,0.7s,mb4.7,baz=290,slow=5.2,SNR=7.8	**49.65**	**132**	P	P		**14 19 53.7**	**+0.3**
STKA				LR	LR		14 40 27.3	
	comp=Z,243nm,20.8s,MS4.2,baz=110,slow=36							
SONM	**Songino Array** comp=Z,1.9nm,0.7s,mb4.2,baz=187,slow=9.6,SNR=7.5	**49.72**	**6**	P	P		**14 19 53.3**	**-0.2**
SONM	**Songino Array** comp=Z,2.0nm,0.7s	**49.72**	**6**	P	P		**14 19 53.3**	**-0.3**
SONM				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ULN	**Ulaanbaatar**	**49.82**	**7**	⇑*e*P	P		**14 19 53.3**	**-1.1**
EKS2	**Erkin-Say** comp=Z,8.1nm,0.7s,mb4.9	**49.94**	**335**	*e*P	P		**14 19 55.6**	**+0.2**
MKAR	**Makanchi Array** comp=Z,8.6nm,0.6s,mb4.8,baz=148,slow=8.0,SNR=72	**50.65**	**345**	P	P		**14 20 00.6**	**-0.1**
MKAR	**Makanchi Array**	**50.65**	**345**	P	P		**14 20 00.6**	**-0.1**
MKAR				pmax	pmax			
	comp=Z,9.0nm,0.6s							
MKAR	**Makanchi Array**	**50.65**	**345**	P	P		**14 20 00.6**	**-0.1**
ZAK	**Zakamensk**	**52.01**	**3**	*e*P	P		**14 20 02.3**	**-8.5**
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.8s,mb4.0							
MJAR	**Matsushiro Arr** comp=Z,0.7nm,0.7s,mb3.7,baz=226,slow=6.7,SNR=6.3	**52.34**	**39**	P	P		**14 20 12.0**	**-1.5**
MJAR	**Matsushiro Arr**	**52.34**	**39**	P	P		**14 20 12.0**	**-1.5**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
VLA	**Vladivostok**	**53.27**	**29**	P	P		**14 20 21.0**	**+0.8**
VLA				pmax	pmax			
	comp=Z,39nm,1.9s,mb5.0							
VLA				MLR	MLR			
	comp=Z,300nm,12.6s,MS4.5							
TLY	**Talaya**	**53.32**	**3**	*e*P	P		**14 20 29.4**	**+8.9**
TLY				*e*	pP		14 20 38.6	+7.6
TLY				pmax	pmax			
	comp=Z,15nm,1.5s,mb4.7							
TLY				MLR	MLR			
	comp=Z,223nm,15.0s,MS4.3							
OPO	**Ambohidratompo**	**53.97**	**248**	P	P		**14 20 25.5**	**-0.4**

comp=Z,1.7nm,0.6s,mb4.2,baz=163,slow=3.8,SNR=3.1
KURK Kurchatov 55.23 344 *e*P **P** **14 20 32.6 -1.8**
KURK pmax pmax
comp=Z,15nm,1.0s,mb5.0
KURK Kurchatov 55.23 344 *e*P **P** **14 20 32.6 -1.8**
comp=Z,15nm,1.0s,mb5.0
ZAA0 Zalesovo Array 56.82 350 *e*P **P** **14 20 44.8 -0.9**
ZALV Zalesovo Beam 56.82 350 P **P** **14 20 45.2 -0.5**
comp=Z,9.6nm,0.5s,mb5.1,baz=185,slow=6.6,SNR=47
ZALV Zalesovo Beam 56.82 350 P **P** **14 20 45.2 -0.5**
ZALV pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
KLR Kul'dur 57.86 24 *e*P **P** **14 20 46.7 -6.4**
KLR MLR MLR
comp=E,500nm,15.0s
KLR MLR MLR
comp=Z,700nm,15.0s,MS4.9
NVS Novosibirsk 57.97 349 *e*P **P** **14 20 52.2 -1.6**
NVS *e*S **S** **14 28 50.5 -1.0**
NVS pmax pmax
comp=N,23nm,1.7s
NVS pmax pmax
comp=E,12nm,1.7s
NVS pmax pmax
comp=Z,20nm,1.7s,mb4.9
NVS smax
comp=N,8.0nm,1.7s
NVS smax
comp=E,13nm,1.7s
RDF Al-Radifah 58.35 306 *e*P **P** **14 20 56.3 -0.7**
baz=305
RDF AMb AMB 14 21 03.4
comp=Z,28nm,0.9s,mb5.3,baz=305
UMR Umm Al-Rimmam 58.45 306 *e*P **P** **14 20 56.6 -1.0**
baz=306
UMR AMb AMB 14 21 04.6
comp=Z,27nm,0.8s,mb5.3,baz=306
NAY Al-Naaiem 58.72 306 *e*P **P** **14 20 58.5 -1.0**
baz=306
NAY AMb AMB 14 20 59.5
comp=Z,15nm,0.8s,mb5.1,baz=306
MIB Mutribah 58.85 307 *e*P **P** **14 20 59.6 -0.8**
baz=306
MIB AMb AMB 14 21 06.6
comp=Z,33nm,0.8s,mb5.4,baz=306
RST Umm Al-Ruwaisa 59.01 306 *e*P **P** **14 21 00.5 -1.1**
baz=306
RST AMb AMB 14 21 01.7
comp=Z,16nm,0.7s,mb5.2,baz=306
BOD Bodaibo 60.48 9 *e*P **P** **14 21 09.9 -1.2**
BOD pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
YSS Yuzh-Sakhalins 61.48 32 *e*P **P** **14 21 16.9 -1.2**
KMBO Kilima Mbogo 62.30 270 P **P** **14 21 25.9 +1.6**
comp=Z,2.9nm,0.8s,mb4.5,baz=71,slow=14,SNR=5.3
KMBO LR LR 14 45 15.9
comp=Z,233nm,18.3s,MS4.4,baz=63,slow=33
KMBO Kilima Mbogo 62.30 270 P **P** **14 21 24.9 +0.6**
comp=Z,4.6nm,1.0s,mb4.6
KMBO LR LR 14 45 15.9
SVE Sverdlovsk 66.27 338 *e*P **P** **14 21 50.4 +1.0**
SVE pmax pmax
comp=Z,21nm,1.3s,mb5.0
ARU Arti 66.79 337 *c i*P **P** **14 22 01.4 +8.6**
ARU *e*SS SS 14 35 02.6 +1.6
ARU pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
YAK Yakutsk 67.59 15 *e*P **P** **14 21 56.7 -1.0**
YAK *e**PP pP 14 22 09.0 +0.5
YAK *e* 14 22 25.3
YAK *e*S S 14 30 39.3 -13
YAK *e* 14 31 45.7
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
YAK pmax pmax
comp=N,3.0nm,0.9s
YAK smax
comp=N,29μm,2.3s
YAK smax
comp=E,21μm,2.3s
YAK MLR MLR
comp=Z,371nm,18.0s,MS4.7
YAK MLR MLR
comp=N,296nm,20.0s,MS4.5
YAK MLR MLR
comp=E,139nm,21.0s,MS4.5
MAW Mawson 70.44 194 *e*P **P** **14 22 17.7 +2.3**
comp=E,2.8nm,0.6s,mb4.4
MAW Mawson 70.44 194 P **P** **14 22 17.4 +2.0**
comp=E,4.6nm,0.8s,mb4.5,baz=14,slow=6.0,SNR=14
MAW LR LR 14 46 11.7
comp=E,176nm,21.4s,MS4.3,baz=52,slow=30
MAW Mawson 70.44 194 *e*P **P** **14 22 17.7 +2.3**
MAW pmax pmax
comp=Z,3.0nm,0.6s
LSZ Lusaka 71.59 255 P **P** **14 22 24.6 +1.2**
comp=Z,0.8nm,0.3s,mb4.1,baz=87,slow=9.3,SNR=3.0
LSZ Lusaka 71.59 255 P **P** **14 22 24.6 +1.2**
LSZ pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
PETK Petropavlovsk- 72.88 32 P **P** **14 22 29.6 -0.8**
comp=Z,3.4nm,0.8s,mb4.3,baz=290,slow=1.0,SNR=7.7
PETK Petropavlovsk- 72.88 32 P **P** **14 22 29.6 -0.7**
PETK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BOSA Boshof 75.41 241 P **P** **14 22 46.7 +1.1**
comp=Z,5.1nm,1.0s,mb4.4,baz=287,slow=1.9,SNR=3.7
BOSA LR LR 14 51 06.1
comp=Z,219nm,18.1s,MS4.5,baz=259,slow=32
BOSA Boshof 75.41 241 P **P** **14 22 46.7 +1.1**
BOSA LR LR 14 51 06.1
RPZ Rata Peaks 75.47 135 P **P** **14 22 46.0 +0.3**
comp=Z,4.2nm,0.5s,mb4.6,baz=149,slow=16,SNR=7.1
TIXI Tiksi 75.66 9 *e*P **P** **14 22 45.2 -0.9**
TIXI pmax pmax
comp=Z,23nm,1.5s,mb4.9
TIXI MLR MLR
comp=Z,216nm,14.0s,MS4.6
TIXI Tiksi 75.66 9 *e*P **P** **14 22 44.5 -1.6**
comp=Z,19nm,1.3s,mb4.9
OBN Obninsk 76.34 328 *e*P PcP 14 23 00.6 -1.5
OBN *e* 14 25 51.1
OBN *e*S SKSac 14 32 49.6 -9.3
OBN pmax pmax
comp=Z,33nm,2.3s,mb4.9
OBN MLR MLR
comp=Z,100nm,18.0s,MS4.2
AKASG Malin Array Be 79.01 322 *i* P pP 14 23 19.6 +3.3
AKASG pmax pmax
comp=Z,1.0nm,0.5s
URZ Urewera 79.15 128 P **P** **14 23 05.7 -0.7**
comp=Z,4.5nm,0.8s,mb4.4,baz=205,slow=13,SNR=2.3
VRI Vrincioaia 79.36 317 ⇓ *i*P **P** **14 23 07.8 +0.4**
SUR Sutherland 79.58 238 P **P** **14 23 09.2 +0.3**
comp=Z,4.6nm,0.8s,mb4.5,baz=244,slow=16,SNR=3.2
MLR Muntele Rosu 79.81 317 ⇑ *i*P **P** **14 23 09.9 +0.1**
BURAR Bucovina Array 80.77 319 ⇓ *i*P **P** **14 23 15.9 +0.9**
BURAR Bucovina Array 80.77 319 ⇓P **P** **14 23 15.9 +1.0**
BUR08 Bucovina Ar. S 80.79 319 *e*P **P** **14 23 15.6 +0.5**
TSUM Tsumeb 81.87 251 P **P** **14 23 21.3 -0.1**
comp=Z,1.4nm,0.7s,mb4.0,baz=150,slow=20,SNR=2.6
DRGR 82.28 318 ⇑ *i*P **P** **14 23 23.8 +0.9**
DRGR 82.28 318 ⇑P **P** **14 23 23.8 +0.9**
BZS Buzias 82.81 316 ⇓ *i*P **P** **14 23 25.7 -0.1**
BZS Buzias 82.81 316 ⇓P **P** **14 23 25.7 0.0**
PKSM Moragy 84.96 316 ⇓ *i*P **P** **14 23 36.5 -0.2**
PKSM Moragy 84.96 316 ⇓P **P** **14 23 36.5 -0.1**
ARCES ARCESS Array B 86.07 340 P **P** **14 23 41.7 0.0**
comp=Z,3.1nm,0.8s,mb4.6,baz=77,slow=5.4,SNR=7.1
ARCES ARCESS Array B 86.07 340 P **P** **14 23 41.7 0.0**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES ARCESS Array B 86.07 340 P **P** **14 23 41.7 0.0**
GERES GERESS Array B 88.56 319 P **P** **14 23 54.0 -0.2**
comp=Z,0.7nm,0.6s,mb4.2,baz=85,slow=4.6,SNR=7.8
GERES GERESS Array B 88.56 319 P **P** **14 23 54.0 -0.2**
GERES pmax pmax
comp=Z,1.0nm,0.6s
HFS Hagfors 89.42 330 P **P** **14 23 57.2 -0.7**
comp=Z,1.0nm,0.6s,mb4.3,baz=100,slow=6.6,SNR=3.4
HFS Hagfors 89.42 330 P **P** **14 23 57.2 -0.8**
HFS pmax pmax
comp=Z,1.0nm,0.6s
DAVOX Davos/Dischmat 91.03 317 P **P** **14 24 06.4 +0.6**
comp=Z,2.5nm,0.5s,mb4.8,baz=107,slow=14,SNR=6.8
KEST Kesra 91.18 306 P **P** **14 24 08.0 +1.3**
comp=Z,1.6nm,0.8s,mb4.4,baz=280,slow=4.1,SNR=6.2
TORD Torodi Ar. Bea 98.06 283 LR LR 15 06 46.7
comp=Z,80nm,19.9s,MS4.2,baz=105,slow=34
NVAR Mina Array Bea 129.66 39 PKP PKPdf 14 30 11.8 +1.0
comp=Z,0.3nm,0.5s,baz=48,slow=2.2,SNR=3.8
PDAR Pinedale Array 131.55 29 PKP PKPdf 14 30 14.8 +0.5
comp=Z,0.4nm,0.6s,baz=224,slow=2.5,SNR=3.0
WVT Waverly 145.09 10 *e*PKIKP PKPdf 14 30 38.2 -1.1
MIAR Mount Ida 145.12 19 *e*PKIKP PKPdf 14 30 38.3 -1.1
TZTN Tazewell 145.24 4 *e*PKP PKPdf 14 30 38.4 -1.1
JCT Junction City 146.01 31 *e*PKP2 PKPab 14 30 41.6 -0.7
CPCT Cooper Cave 146.23 6 *e*PKPbc PKPbc 14 30 41.5 -0.7
SWET Sewanee 146.29 8 *e*PKP PKPdf 14 30 41.4 0.0
LPAZ La Paz 158.37 214 PKP PKPdf 14 30 59.7 +0.1
comp=Z,0.6nm,0.8s,baz=234,slow=6.9,SNR=3.2
LPAZ La Paz 158.37 214 PKIKP PKPdf 14 30 59.7 +0.1
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
LPAZ La Paz 158.37 214 PKP PKPdf 14 30 59.7 0.0
ROSC El Rosal 173.16 297 PKP PKPdf 14 31 11.3 -0.5
comp=Z,4.0nm,0.5s,baz=270,slow=20,SNR=3.0

TRN ***16*** *14:15:57.9, 1906N×6496W, h27km*
NEIC ***16*** *14:15:58.7, 1906N×6485W, h76km, MD3.7(RSPR), After RSPR.*

RSPR 16 14:15:58.7, 1906N×6485W, h76km±4km, MD3.6/6, MD3.6/6, 21C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.59**	**124**	↑*e*P		Pn	14 16 11.6	-1.3
ABV				*e*S		Sn	14 16 23.1	-0.2
TBVI	**Tortola**	**0.68**	**161**	↑*e*P		Pn	14 16 13.2	-0.6
TBVI				*e*S		Sn	14 16 24.5	-0.4
MTP	**Monte Pirata**	**1.17**	**215**	↑*e*P		Pn	14 16 19.0	-0.6
MTP	**Monte Pirata**	**1.17**	**215**	↑*e*P		Pn	14 16 19.1	-0.5
MTP				*e*S		Sn	14 16 35.5	+0.3
MTP	**Monte Pirata**	**1.17**	**215**	↑*e*P		Pn	14 16 19.0	-0.6
MTP				*e*S		Sn	14 16 35.5	+0.3
CBYP	**Canovanas**	**1.24**	**231**	↑*e*P		Pn	14 16 19.2	-1.3
HUMP	**Col San Antoni**	**1.32**	**226**	↑*e*P		Pn	14 16 21.0	-0.5
HUMP	**Col San Antoni**	**1.32**	**226**	↑*e*P		Pn	14 16 21.2	-0.3
HUMP				*e*S		Sn	14 16 38.3	-0.3
HUMP	**Col San Antoni**	**1.32**	**226**	↑*e*P		Pn	14 16 21.0	-0.5
HUMP				*e*S		Sn	14 16 38.3	-0.3
CPD	**Cerro la Pandu**	**1.44**	**225**	↑*e*P		Pn	14 16 22.6	-0.4
CPD				*e*S		Sn	14 16 40.4	-0.9
SJG	**San Juan**	**1.56**	**233**	↑*e*P		Pn	14 16 24.2	-0.4
SJG	**San Juan**	**1.56**	**233**	↑*e*P		Pn	14 16 24.2	-0.4
SJG				*e*S		Sn	14 16 43.1	-1.0
SJG	**San Juan**	**1.56**	**233**	↑*e*P		Pn	14 16 24.2	-0.4
SJG				*e*S		Sn	14 16 43.1	-1.0
SJG				*e*S		Sn	14 16 43.9	-0.2
SJG	**San Juan**	**1.56**	**233**	↑*e*P		Pn	14 16 24.2	-0.4
SJG				*e*S		Sn	14 16 43.1	-1.0
CELP	**Cerrillos**	**1.91**	**239**	↑*e*P		Pn	14 16 28.6	-0.7
CELP				*e*S		Sn	14 16 52.4	-0.2
AOPR	**Arecibo Observ**	**1.94**	**249**	↑*e*P		Pn	14 16 28.7	-1.0
AOPR				*e*S		Sn	14 16 53.3	0.0
OBIP	**Obispado Ponce**	**1.95**	**239**	↑*e*P		Pn	14 16 29.4	-0.4
OBIP				*e*S		Sn	14 16 52.2	-1.4
ICM	**Isla Caja Muer**	**1.97**	**234**	⇓*e*P		Pn	14 16 29.3	-0.7
ICM				*e*S		Sn	14 16 53.8	-0.2
LRS	**Lares**	**2.04**	**248**	↑*e*P		Pn	14 16 30.7	-0.4
LRS				*e*S		Sn	14 16 59.7	+4.0
AGPR	**Aguadilla, PR**	**2.23**	**255**	*e*S		Sn	14 16 59.7	-0.4
AGPR	**Aguadilla, PR**	**2.23**	**255**	*e*S		Sn	14 16 59.7	-0.4
LSP	**Las Mesas**	**2.30**	**248**	↑*e*P		Pn	14 16 34.6	+0.1
CRPR	**Cabo Rojo, PR**	**2.39**	**244**	↑*e*P		Pn	14 16 35.5	-0.2
CRPR				*e*S		Sn	14 17 04.2	+0.2
CRPR	**Cabo Rojo, PR**	**2.39**	**244**	↑*e*P		Pn	14 16 35.5	-0.2
CRPR				*e*S		Sn	14 17 04.2	+0.2
LZG	**Guadaloupe-1**	**4.13**	**134**	*e*P		Pn	14 17 04.8	+5.4
MGG	**Marie-Galante**	**4.60**	**132**	*e*P		Pn	14 17 11.9	+6.1

KRSC 16 14:32:44.3±1.0, 5142N×16060E, h10km±10km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.64**	**309**	*e*P		Pn	14 33 13.9	+0.7
RUS				*i* S		Sn	14 33 35.6	+1.3
NLC	**Nalytchevo**	**1.92**	**337**	*e*P		Pn	14 33 18.7	+1.8
NLC				*i* S		Sn	14 33 43.7	+2.6
PET	**Petropavlovsk**	**2.00**	**324**	P		Pn	14 33 20.6	+2.5
PET				*i* S		Sn	14 33 46.6	+3.4
AVH	**Avacha**	**2.17**	**329**	P		Pn	14 33 23.2	+2.7
AVH				*i* S		Sn	14 33 52.0	+4.6
MIPR	**Malaya Ipel'ka**	**2.53**	**291**	*e*P		Pn	14 33 27.1	+1.7
GNL	**Ganaly**	**2.80**	**326**	*e*P		Pn	14 33 31.9	+2.9
GNL				*i* S		Sn	14 34 06.9	+4.1
KMNR	**Kamenistaya**	**4.35**	**357**	P		Pn	14 33 53.2	+2.8
KBTR	**Krutoberegovo**	**4.97**	**14**	P		Pn	14 34 00.1	+1.2

ISCJB ***16*** *14:54:06.4±1.7, 668N×006×127.12E±006, h15km±12km, mb3.6/6, Error ellipse: s-maj=12.4km s-min=8.4km az=42.1*
MAN ***16*** *14:54:10, 696N×12692E, h1km, mb5.0, ML3.9, MS4.0*
NEIC ***16*** *14:54:12.8±2.4, 691N×12695E, h72km±26km, Error ellipse: s-maj=34.8km s-min=11.8km az=85.0*
IDC ***16*** *14:54:13.2±3.0, 691N×12696E, h74km±31km, mb3.4/6, mb1 3.5/6, mb1mx3.4/19, mbtmp3.4/6, Error ellipse: s-maj=35.0km s-min=15.8km az=82.0*

ISC 16 14:54:06.6±1.5, 671N×006×12709E±006, h4km±8km, n16, σ1§05/24, mb3.6/6, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.86**	**286**	*e*P		**Pg**	**14 54 23.2**	**0.0**
MATI				*e*S		**Sg**	**14 54 33.5**	**-0.7**
DAV	**Davao City (W)**	**1.54**	**283**	P		**Pn**	**14 54 36.2**	**+1.3**
DAV	111nm,0.3s,baz=93,slow=10,SNR=8.5			S		**Sn**	**14 54 54.5**	**-0.8**
	77nm,0.3s,baz=287,slow=22,SNR=4.7							
DMPH	**Davao City--Mi**	**1.61**	**283**	⇓ *i*P		**Pn**	**14 54 36.8**	**+0.9**
DMPH				*i* S		**Sn**	**14 54 40.1**	**-17**
KCP	**Kidapawan**	**2.01**	**279**	⇓*e*P		**Pn**	**14 54 41.4**	**+0.1**
KCP				*e*S		**Sn**	**14 55 06.7**	**-0.1**
GSPH	**General Santos**	**2.22**	**254**	↑ *i*P		**Pn**	**14 54 43.6**	**-0.6**
GSPH				*e*S		**Sn**	**14 55 11.0**	**-1.0**
BUKP	**Musuan**	**2.32**	**300**	*e*P		**Pn**	**14 54 46.2**	**+0.6**
BUKP				*e*S		**Sn**	**14 55 17.1**	**+2.6**
BUTP	**Butuan**	**2.67**	**327**	*e*P		**Pn**	**14 54 50.6**	**+0.2**
BUTP				*e*S		**Sn**	**14 55 27.8**	**+4.6**
SCPH	**Surigao**	**3.44**	**333**	*e*P		**Pn**	**14 55 05.9**	**+5.0**
SCPH				*e*S		**Sn**	**14 55 41.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**24.70**	**183**	P		**P**	**14 59 28.9**	**0.0**
	1.1nm,0.8s,mb3.5,baz=24,slow=19,SNR=5.7							
WRA	**Warramunga Arr**	**27.43**	**165**	P		**P**	**14 59 54.2**	**+0.6**
	0.2nm,0.3s,mb3.2,baz=340,slow=11,SNR=10							
ASAR	**Alice Springs**	**30.92**	**168**	P		**P**	**15 00 25.0**	**+0.4**
	0.3nm,0.3s,mb3.6,baz=345,slow=7.3,SNR=12							
ASAR				PcP	PcP		15 03 19.6	-1.8
	0.2nm,0.4s,baz=350,slow=2.5,SNR=4.7							
MJAR	**Matsushiro Arr**	**31.38**	**17**	P		**P**	**15 00 25.3**	**-3.3**
	0.6nm,0.8s,mb3.5,baz=169,slow=9.0,SNR=3.0							
MJAR	**Matsushiro Arr**	**31.38**	**17**	P		**P**	**15 00 25.3**	**-3.3**
PETK	**Petropavlovsk-**	**52.55**	**23**	P		**P**	**15 03 18.3**	**-2.8**
	1.0nm,0.5s,mb4.0,baz=222,slow=2.0,SNR=6.7							
MKAR	**Makanchi Array**	**55.35**	**324**	P		**P**	**15 03 37.7**	**-3.9**
	0.4nm,0.4s,mb3.8,baz=114,slow=7.0,SNR=11							
MKAR	**Makanchi Array**	**55.35**	**324**	P		**P**	**15 03 37.7**	**-3.9**

IDC ***16*** *15:21:27.9±0.6, 2267Sx17574W, h0km, mb4.6/15, mb1 4.7/17, mb1mx4.6/22, mbtmp4.6/17, ML3.7/2, MS4.1/21, Ms1 4.1/21, ms1mx4.1/27, Error ellipse: s-maj=18.5km s-min=14.5km az=144.0*
BJI ***16*** *15:21:30.5, 2270S×17590W, h35km, mB5.3, mb5.1, Ms4.9, Msz4.6*
ISCJB ***16*** *15:21:32.1±0.3, 2276S±007×17590W±007, h33km, mb4.7/39, MS4.2/24, Error ellipse: s-maj=11.6km s-min=7.6km az=137.8*
GCMT ***16*** *15:21:33.5±0.3, 2296S×175.11W, h42km±1km, MW5.0/63, Moment Tensor Solution. s51,c72; s63,c86; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.38±.17; Mθθ-0.59±.12; Mφφ-2.79±.11; Mrθ0.72±.13; Mrφ-2.02±.09; Mθφ1.33±.10; Best double couple: M03.98300×10^16 NP1:ϕ=212.00000°, δ34.00000°, λ92.00000°. NP2: ϕ=30.00000°, δ56.00000°, λ89.00000°. Principal axes: T 3.6790, Plg79.0000°, Azm295.0000°; N 0.6080, Plg1.0000°, Azm30.0000°; P -4.2880, Plg11.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***16*** *15:21:33.5±0.2, 2274S×17587W, h35km, mb4.7/22 Error ellipse: s-maj=10.8km s-min=6.6km az=140.0*
DJA ***16*** *15:21:34, 2328S×17625W, h10km, mb5.2/7*
MOS ***16*** *15:21:40.4±2.5, 2094S×17645W, h33km, mb4.9/15, Error ellipse: s-maj=15.7km s-min=12.8km az=54.9*

ISC 16 15:21:33.8±0.3, 2278S±007×17587W±007, h35km, (h38km±5km:pP-P), n151, σ1§00/80, mb4.7/39, MS4.2/24, 13C-8D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.64**	**24**	Pn		**Pn**	**15 23 44.3**	**-5.8**
	6.2nm,0.3s,baz=101,slow=17,SNR=9.5							
AFI				Sn		**Sn**	**15 25 21.0**	**-16**
	5.6nm,0.3s,baz=230,slow=21,SNR=3.6							
AFI	**Afiamalu**	**9.64**	**24**	*e*P		**Pn**	**15 23 43.9**	**-6.2**
	50nm,0.5s							
AFI				S		**Sn**	**15 25 18.9**	**-18**
RAR	**Rarotonga**	**15.01**	**87**	Pn		**Pn**	**15 24 53.2**	**-10**
	5.7nm,0.3s,baz=260,slow=17,SNR=12							
RAR				Sn		Sn	15 27 24.3	-24
	2.2nm,0.3s,baz=99,slow=15,SNR=3.7							
RAR				LR		LR	15 29 24.0	
	comp=Z,726nm,18.9s,baz=249,slow=32							
RAR				T			15 39 59.9	
	32nm,0.3s,baz=238,slow=13,SNR=9.9							
RAR	**Rarotonga**	**15.01**	**87**	Pn		**Pn**	**15 24 53.2**	**-10**
RAR				Sn		Sn	15 27 24.3	-24
RAR				LR		LR	15 29 23.9	
DZM	**Mont Dzumac**	**16.37**	**269**	*e*P		**Pn**	**15 25 28.9**	**+7.9**
URZ	**Urewera**	**16.56**	**200**	Pn		**Pn**	**15 25 23.2**	**-0.1**
	1.7nm,0.3s,baz=169,slow=1.1,SNR=3.7							
URZ				Sn		**Sn**	**15 28 14.9**	**-11**
	1.3nm,0.3s,baz=124,slow=18,SNR=6.0							
RPZ	**Rata Peaks**	**23.51**	**204**	P		**P**	**15 26 39.1**	**-1.6**
	9.9nm,1.0s,mb4.2,baz=135,slow=5.6,SNR=3.3							
PPT	**Papeete**	**25.20**	**83**	*e*LQ			15 31 41.8	
	1μm,28.2s							
PPT				*e*LR	LR		15 33 02.8	
	1μm,25.8s							
PPT	**Papeete**	**25.20**	**83**	LR	LR		15 35 47.7	
	comp=Z,179nm,18.2s,MS3.6,baz=277,slow=34							
PPT				T			15 52 46.5	
	88nm,0.4s,baz=71,slow=10,SNR=5.9							
HNR	**Honiara**	**26.70**	**296**	P		**P**	**15 27 10.3**	**+0.4**
	36nm,0.9s,mb4.9,baz=14,slow=5.8,SNR=3.2							
HNR				LR	LR		15 36 09.3	
	comp=Z,285nm,21.8s,MS3.8,baz=331,slow=33							
HNR	**Honiara**	**26.70**	**296**	P		**P**	**15 27 10.3**	**+0.3**
HNR				pmax	pmax			
	comp=Z,36nm,0.9s,mb4.9							
HNR				MLR	MLR			
	comp=Z,285nm,21.8s,MS3.8							
CTA	**Charters Tower**	**35.30**	**267**	*e*P		**P**	**15 28 26.7**	**+1.0**
	comp=Z,18nm,0.8s,mb5.0							
CTA	**Charters Tower**	**35.30**	**267**	P		**P**	**15 28 26.8**	**+1.1**
	comp=Z,20nm,0.7s,mb5.1,baz=104,slow=11,SNR=31							
CTA				LR	LR		15 40 53.0	
	comp=Z,108nm,21.5s,MS3.6,baz=265,slow=33							
CTAO	**Charters Tower**	**35.30**	**267**	*e*P		**P**	**15 28 26.3**	**+0.6**
CTAO				pmax	pmax			
	comp=Z,22nm,0.8s,mb5.1							
CTAO	**Charters Tower**	**35.30**	**267**	*e*P		**P**	**15 28 26.3**	**+0.6**
	comp=Z,22nm,0.8s,mb5.1							
RKT	**Rikitea**	**37.57**	**99**	*e*LR	LR		15 38 33.8	
	comp=Z,906nm,28.2s							
PMG	**Port Moresby**	**37.81**	**285**	*e*P		**P**	**15 28 47.4**	**+0.2**
PMG				pmax	pmax			
	comp=Z,65nm,1.0s							
PMG	**Port Moresby**	**37.81**	**285**	*e*P		**P**	**15 28 47.4**	**+0.3**
	comp=Z,65nm,1.0s,mb5.3							
STKA	**Stephens Creek**	**38.66**	**247**	*e*P		**P**	**15 28 54.9**	**+0.8**
	comp=Z,3.9nm,0.8s,mb4.2							
STKA	**Stephens Creek**	**38.66**	**247**	P		**P**	**15 28 53.1**	**-1.0**
	comp=Z,3.5nm,0.8s,mb4.1,baz=131,slow=12,SNR=6.6							
STKA				LR	LR		15 44 38.0	
	comp=Z,545nm,18.4s,MS4.4,baz=48,slow=36							
ASAR	**Alice Springs**	**45.97**	**259**	P		**P**	**15 29 53.4**	**-0.4**
	comp=Z,14nm,0.8s,mb4.9,baz=93,slow=8.2,SNR=34							
ASAR				S		**S**	**15 36 44.4**	**+7.9**
	comp=Z,0.3nm,0.8s,baz=96,slow=16,SNR=4.1							
WB2	**Warramunga Arr**	**46.28**	**264**	*e*P		**P**	**15 29 55.4**	**-0.8**
WRAB	**Tennant Creek**	**46.28**	**264**	*e*P		**P**	**15 29 56.0**	**-0.3**
	comp=Z,20nm,0.9s,mb5.0							
WRA	**Warramunga Arr**	**46.29**	**264**	P		**P**	**15 29 55.3**	**-1.1**
	comp=Z,14nm,0.9s,mb4.9,baz=100,slow=8.0,SNR=82							
WRA				LR	LR		15 49 26.9	
	comp=Z,274nm,18.4s,MS4.2,baz=285,slow=36							
FORT	**Forrest**	**50.26**	**248**	*e*P		**P**	**15 30 30.3**	**+3.5**
	comp=Z,22nm,0.6s,mb5.4							
GUMO	**Guam**	**52.78**	**309**	LR	LR		15 50 49.8	
	comp=Z,115nm,19.2s,MS3.9,baz=51,slow=33							
FITZ	**Fitzroy Crossi**	**54.72**	**263**	*e*P		**P**	**15 30 59.7**	**-0.3**
	comp=Z,11nm,0.9s,mb4.9							
FITZ	**Fitzroy Crossi**	**54.72**	**263**	P		**P**	**15 30 59.7**	**-0.4**
	comp=Z,5.7nm,0.8s,mb4.7,baz=133,slow=6.0,SNR=10							
SBA	**Scott Base**	**55.74**	**184**	*e*P		**P**	**15 31 09.1**	**+2.6**
	comp=Z,4.4nm,0.7s,mb4.6							
BATI	**Baumata**	**58.97**	**272**	LR	LR		15 56 48.8	
	comp=Z,549nm,19.0s,MS4.7,baz=252,slow=36							
NWAO	**Narrogin (SRO)**	**59.15**	**244**	LR	LR		15 56 33.5	
	comp=Z,149nm,19.5s,MS4.1,baz=277,slow=36							
DAV	**Davao City (W)**	**64.48**	**290**	LR	LR		15 55 14.1	
	comp=Z,139nm,20.8s,MS4.1,baz=238,slow=31							
QSPA	**South Pole Qui**	**67.30**	**180**	P		**P**	**15 32 26.0**	**+1.5**
	comp=Z,9.3nm,0.9s,mb4.8,baz=34,slow=3.6,SNR=15							
MJAR	**Matsushiro Arr**	**73.22**	**323**	P		**P**	**15 32 59.5**	**-1.8**
	comp=Z,1.3nm,0.8s,mb3.9,baz=165,slow=6.0,SNR=6.2							
MJAR				LR	LR		15 59 21.7	
	comp=Z,121nm,22.0s,MS4.1,baz=95,slow=31							
MAT	**Matsushiro**	**73.22**	**323**	P		**P**	**15 32 57.9**	**-3.3**
MAT				*e*S		S	15 42 15.0	-12
PETK	**Petropavlovsk-**	**78.99**	**344**	P		**P**	**15 33 32.8**	**-0.8**
	comp=Z,8.8nm,0.8s,mb4.7,baz=121,slow=7.9,SNR=10.0							
PETK				LR	LR		16 00 49.5	
	comp=Z,91nm,21.4s,MS4.1,baz=134,slow=30							
ISA	**Isabella**	**79.54**	**44**	*e*P		**P**	**15 33 37.1**	**0.0**
ISA				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.4							
ISA	**Isabella**	**79.54**	**44**	*e*P		**P**	**15 33 37.1**	**0.0**
	comp=Z,5.0nm,1.0s,mb4.4							
CMB	**Columbia Colle**	**79.82**	**41**	*e*P		**P**	**15 33 38.3**	**-0.3**
CMB				pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.2							
CMB	**Columbia Colle**	**79.82**	**41**	*e*P		**P**	**15 33 38.

HEBO	**Mount Hebo**	**82.63**	**34**	*e*P		**P**	**15 33 53.2**	**-0.1**
	comp=Z,156nm,1.7s,mb5.8								
BMW	**Boistfort Moun**	**83.76**	**34**	*e*P		**P**	**15 33 59.5**	**+0.4**
VIPM	**Ingram Point**	**83.83**	**36**	P		**P**	**15 34 00.1**	**+0.6**
FL2	**Flat Top 2**	**84.02**	**34**	P		**P**	**15 34 01.5**	**+1.0**
NLWA	**Neilton Lookou**	**84.06**	**33**	*e*P		**P**	**15 34 01.0**	**+0.4**
	comp=Z,14nm,1.1s,mb5.0								
TDL	**Tradedollar La**	**84.19**	**34**	P		**P**	**15 34 02.1**	**+0.8**
ELK	**Elko**	**84.63**	**42**	*e*P		**P**	**15 34 03.2**	**-0.5**
ELK					pmax	pmax			
	comp=Z,4.0nm,0.9s								
ELK	**Elko**	**84.63**	**42**	*e*P		**P**	**15 34 03.2**	**-0.5**
	comp=Z,3.9nm,0.9s,mb4.5								
SYO	**Syowa Base**	**84.93**	**192**⇓	*e*P		**P**	**15 34 03.0**	**-1.9**
CN2	**Changchun**	**85.31**	**322**	*e*P		**P**	**15 34 09.8**	**+2.8**
SNAA	**Sanae**	**85.67**	**178**	*e*P		**P**	**15 34 08.2**	**-0.3**
	comp=Z,8.1nm,0.9s,mb5.0								
ETW	**Entiat**	**85.99**	**34**	*e*P		**P**	**15 34 09.7**	**-0.6**
WTV	**Waterville**	**86.25**	**34**	P		**P**	**15 34 11.6**	**0.0**
PLCA	**Paso Flores**	**86.27**	**133**	P		**P**	**15 34 11.8**	**-0.3**
	comp=Z,1.4nm,0.9s,mb4.2,baz=228,slow=5.8,SNR=2.8								
PLCA					LR	LR	16 04 19.3		
	comp=Z,115nm,19.8s,MS4.3,baz=188,slow=30								
HLID	**Hailey**	**86.78**	**40**	*e*P		**P**	**15 34 14.0**	**-0.3**
	comp=Z,1.2nm,0.9s,mb4.1								
TTA	**Tatalina**	**86.86**	**9**	*e*P		**P**	**15 34 13.6**	**-0.6**
TTA					pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.8								
TTA	**Tatalina**	**86.86**	**9**	*e*P		**P**	**15 34 13.6**	**-0.6**
	comp=Z,5.5nm,0.9s,mb4.8								
ANMO	**Albuquerque**	**87.30**	**50**	*e*P		**P**	**15 34 14.9**	**-2.2**
ANMO					pmax	pmax			
	comp=Z,4.0nm,1.3s								
ANMO	**Albuquerque**	**87.30**	**50**	*e*P		**P**	**15 34 14.9**	**-2.2**
	comp=Z,4.0nm,1.3s,mb4.5								
MCK	**McKinley**	**88.78**	**12**	*e*P		**P**	**15 34 22.8**	**-0.6**
MCK					pmax	pmax			
	comp=Z,5.0nm,0.7s,mb5.0								
MCK	**McKinley**	**88.78**	**12**	*e*P		**P**	**15 34 22.8**	**-0.6**
	comp=Z,5.0nm,0.7s,mb5.0								
BJI	**Beijing**	**88.90**	**315**	P		**P**	**15 34 25.8**	**+1.3**
PDAR	**Pinedale Array**	**89.28**	**42**	P		**P**	**15 34 25.9**	**-0.4**
	comp=Z,1.2nm,0.9s,mb4.2,baz=151,slow=3.4,SNR=7.1								
PDAR					LR	LR	16 07 35.6		
	comp=Z,70nm,18.2s,MS4.1,baz=165,slow=31								
GYA	**Guiyang**	**89.49**	**299**		P	**P**	**15 34 29.3**	**+1.7**
GYA					AP	pP	15 34 40.8	+2.0	
GYA					XP	sP	15 34 44.5	+1.7	
GYA					PP	PP	15 38 03.8	+4.2	
GYA					SKS		15 44 54.3		
GYA					AMB	AMB			
	comp=Z,10.0nm,1.1s,mb5.1								
GYA					AMB	AMB			
	comp=Z,50nm,5.1s								
GYA					LR	LR			
	comp=N,170nm,19.6s,MS4.6								
GYA					LR	LR			
	comp=E,130nm,20.2s,MS4.6								
GYA					LR	LR			
	comp=Z,150nm,19.6s,MS4.4								
COLA	**College**	**90.02**	**12**⇓	*e*P		**P**	**15 34 28.7**	**-0.4**
DAWY	**Dawson**	**91.12**	**15**	*e*P		**P**	**15 34 34.5**	**+0.2**
KMI	**Kunming**	**92.14**	**296**	P		**P**	**15 34 41.5**	**+1.5**
KMI					AMB	AMB			
	comp=Z,5.0nm,0.8s,mb4.9								
HHC	**Hu-ho-hao-te**	**92.36**	**314**	*e*P		**P**	**15 34 39.8**	**-0.8**
HHC					AP	pP	15 34 51.1	-0.7	
HHC					XP	sP	15 34 55.1	-0.7	
HHC					PP	PP	15 38 23.0	+1.0	
HHC					SKS		15 45 09.3		
HHC					S	S	15 45 38.5	-3.0	
HHC					XS	sS	15 45 56.4	-3.7	
HHC					SS	SS	15 51 53.5	+0.1	
HHC					AMB	AMB			
	comp=Z,12nm,0.7s,mb5.3								
HHC					AMB	AMB			
	comp=Z,58nm,7.7s								
HHC					LR	LR			
	comp=N,142nm,18.5s,MS4.7								
HHC					LR	LR			
	comp=E,180nm,18.2s,MS4.7								
HHC					LR	LR			
	comp=Z,138nm,19.0s,MS4.4								
CMAR	**Chiang Mai Arr**	**92.73**	**289**	P		**P**	**15 34 43.9**	**+1.0**
	comp=Z,2.2nm,1.0s,mb4.5,baz=124,slow=3.2,SNR=10								
CMAR					LR	LR	16 13 29.7		
	comp=Z,75nm,18.8s,MS4.2,baz=290,slow=34								
CD2	**Chengdu**	**93.68**	**302**	*e*P		**P**	**15 34 47.6**	**+0.6**
CD2					XP	sP	15 35 02.1	0.0	
CD2					PP	PP	15 38 36.1	+3.5	
CD2					SKS		15 45 17.9		
CD2					S	S	15 45 51.8	-1.9	
CD2					XS	sS	15 46 09.5	-2.8	
CD2					SS	SS	15 52 14.5	+1.7	
CD2					AMB	AMB			
	comp=Z,10.0nm,0.9s,mb5.2								
CD2					AMB	AMB			
	comp=Z,20nm,6.8s								
CD2					LR	LR			
	comp=N,170nm,15.6s								
CD2					LR	LR			
	comp=E,210nm,22.8s								
CD2					LR	LR			
	comp=Z,190nm,15.6s,MS4.7								
YAK	**Yakutsk**	**94.97**	**337**⇑	*e*P		**P**	**15 34 52.0**	**-0.1**
YAK					pmax	pmax			
	comp=Z,8.0nm,0.8s,mb5.2								
LZH	**Lanzhou**	**95.72**	**307**	*e*P		**P**	**15 34 53.5**	**-2.7**
LZH					AP	pP	15 35 04.5	-2.9	
LZH					XP	sP	15 35 08.0	-3.3	
LZH					AMB	AMB			
	comp=Z,21nm,1.6s,mb5.3								
LZH					AMB	AMB			
	comp=Z,140nm,6.2s								
LZH					LR	LR			
	comp=E,174nm,10.5s								
LZH					LR	LR			
	comp=Z,272nm,12.3s,MS4.9								
YKA	**Yellowknife Ar**	**97.76**	**24**		LR	LR	16 13 31.9		
	comp=Z,87nm,19.1s,MS4.3,baz=180,slow=32								
SONM	**Songino Array**	**98.77**	**318**		LR	LR	16 20 44.7		
	comp=Z,70nm,18.3s,MS4.2,baz=240,slow=36								
LPAZ	**La Paz**	**99.36**	**112**		LR	LR	16 12 22.2		
	comp=Z,27nm,20.7s,MS3.7,baz=48,slow=31								
MKAR	**Makanchi Array**	**114.20**	**313**		PKP	PKiKP	15 40 08.3	-1.1	
	comp=Z,1.1nm,0.8s,baz=62,slow=2.9,SNR=6.6								
MKAR	**Makanchi Array**	**114.20**	**313**		PKIKP	PKiKP	15 40 08.3	-1.1	
MKAR					pmax	pmax			
	comp=Z,1.0nm,0.8s								
MKAR	**Makanchi Array**	**114.20**	**313**		PKP	PKiKP	15 40 08.3	-1.1	
AML	**Almayashu**	**119.81**	**307**	*e*PKPdf		PKPdf	15 40 20.6	+0.3	
ARU	**Arti**	**128.20**	**325**	*i* PKIKP		PKPdf	15 40 35.6	-0.4	
ARU							15 42 36.4		
ARU							15 47 39.0		
ARU					SS	SS	15 59 33.2	-19	
ARU	**Arti**	**128.20**	**325**⇓	*i* PKIKP		PKPdf	15 40 35.8	-0.2	
ARCES	**ARCESS Array B**	**131.51**	**350**		PKP	PKPdf	15 40 41.5	-0.4	
	comp=Z,4.9nm,1.0s,baz=14,slow=6.6,SNR=4.4								
ARCES	**ARCESS Array B**	**131.51**	**350**		PKIKP	PKPdf	15 40 41.5	-0.4	
ARCES					pmax	pmax			
	comp=Z,5.0nm,1.0s								
MOS	**Moscow**	**138.84**	**332**	*e*PKIKP		PKPdf	15 41 00.5	+4.6	
NAY	**Al-Naaiem**	**140.89**	**289**	*e*P		PKPdf	15 41 02.8	+2.2	
NAY					AMb	AMB	15 41 03.9		
	comp=Z,5.0nm,1.1s								
RST	**Umm Al-Ruwaisa**	**141.11**	**289**	*e*P		PKPdf	15 41 03.0	+2.1	
RST					AMb	AMB	15 41 04.1		
	comp=Z,20nm,1.1s								
SUW	**Suwalki**	**145.66**	**340**	*e*PKHKP		PKPbc	15 41 08.5	0.0	
AKASG	**Malin Array Be**	**145.96**	**331**		PKBPbc	PKPbc	15 41 08.4	-1.1	
	comp=Z,4.5nm,0.7s,baz=39,slow=4.1,SNR=15								
AKASG	**Malin Array Be**	**145.96**	**331**		PKHKP	PKPbc	15 41 08.4	-1.1	
AKASG					pmax	pmax			
	comp=Z,5.0nm,0.7s								
MALT	**Malatya**	**146.88**	**306**⇓	*i* P		PKPdf	15 41 11.0	+0.3	
MALT	**Malatya**	**146.88**	**306**	*e*PKPdf		PKPdf	15 41 10.4	-0.3	
SIM	**Simferopol'**	**147.01**	**319**	*e*PKP2		PKPab	15 41 13.0	-1.3	
SIM					pmax	pmax			
	comp=Z,19nm,0.7s								
EKA	**Eskdalemuir Ar**	**147.04**	**8**		PKPbc	PKPbc	15 41 11.5	-1.0	
	comp=Z,3.8nm,0.8s,baz=310,slow=3.1,SNR=6.6								
EKA	**Eskdalemuir Ar**	**147.04**	**8**		PKHKP	PKPbc	15 41 11.5	-1.0	
EKA					pmax	pmax			
	comp=Z,4.0nm,0.8s								
LVV	**L'vov**	**148.81**	**335**	*e*PKIKP		PKPbc	15 41 17.1	-0.3	

ASF	**Jabal al Asfar**	**149.56**	**295**		PKPbc	PKPbc	15 41 19.9	0.0	
	comp=Z,4.5nm,0.8s,baz=176,slow=0.5,SNR=10								
ASF	**Jabal al Asfar**	**149.56**	**295**		PKIKP	PKPbc	15 41 19.9	0.0	
ASF					pmax	pmax			
	comp=Z,5.0nm,0.8s								
OJC	**Ojcow**	**149.99**	**340**	*e*PKIKP		PKPbc	15 41 20.7	+0.4	
BUR08	**Bucovina Ar. S**	**150.00**	**331**	*e*PKPbc		PKPbc	15 41 20.7	+0.2	
BURAR	**Bucovina Array**	**150.01**	**331**⇑	*i* P		PKPbc	15 41 21.6	+1.1	
BURAR	**Bucovina Array**	**150.01**	**331**⇑	P		PKPbc	15 41 21.6	+1.1	
STHS	**Stebnicka Huta**	**150.19**	**337**	*e*PKP		PKPbc	15 41 21.2	+0.4	
KOLS	**Kolonicke sedl**	**150.21**	**336**	*e*PKP		PKPbc	15 41 20.7	-0.2	
ANTO	**Ankara**	**150.36**	**312**⇑	*i* P		PKPbc	15 41 22.1	+0.5	
ANTO	**Ankara**	**150.36**	**312**	*e*PKPbc		PKPdf	15 41 19.6	+3.3	
UZH	**Uzhgorod**	**150.44**	**335**⇑	*i* PKIKP		PKPdf	15 41 22.0	+5.8	
UZH					*e*		15 41 38.4		
NIE	**Niedzica**	**150.51**	**338**	*e*PKP		PKPbc	15 41 22.2	+0.6	
CRVS	**Cervenica-Dubn**	**150.54**	**336**	*e*PKP		PKPbc	15 41 21.5	-0.2	
CLL	**Collm**	**150.71**	**349**⇑	*i* PKPbc		PKPbc	15 41 21.8	-0.2	
	comp=Z,18nm,1.1s								
CLL					L		16 44 00.0		
	comp=Z,100nm,21.2s								
UPC	**Upice**	**150.81**	**344**	*e*PKPbc		PKPbc	15 41 22.3	0.0	
OKC	**Ostrava-Krasne**	**150.84**	**341**	*e*PKPbc		PKPbc	15 41 22.5	+0.1	
DPC	**Dobruska-Polom**	**150.88**	**344**	*e*PKPbc		PKPbc	15 41 22.7	+0.3	
DPC					*e*pPKP	pPKPdf	15 41 35.8	+7.5	
BRG	**Berggiesshubel**	**150.94**	**347**	*e*PKP		PKPbc	15 41 22.6	+0.1	
	comp=Z,10nm,0.9s								
MORC	**Moravsky Berou**	**151.06**	**342**⇑	*i* P		PKPbc	15 41 23.7	+0.8	
MORC	**Moravsky Berou**	**151.06**	**342**	*e*PKPbc		PKPdf	15 41 20.8	+3.7	
PVCC	**Panska Ves**	**151.13**	**346**	*e*PKPbc		PKPbc	15 41 22.5	-0.5	
PVCC					*e*pPKP	pPKPdf	15 41 37.2	+8.6	
MLR	**Muntele Rosu**	**151.21**	**327**⇑	*i* P		PKPbc	15 41 23.9	+0.5	
MLR	**Muntele Rosu**	**151.21**	**327**⇑	P		PKPbc	15 41 23.9	+0.5	
KECS	**Kecovo**	**151.24**	**337**	*e*PKP		PKPdf	15 41 15.7	-1.7	
KECS					*e*		15 41 23.2		
MOX	**Moxa**	**151.58**	**350**	*e*PKP		PKPbc	15 41 24.1	0.0	
	comp=Z,15nm,1.6s								
MOX					*e*		15 41 36.7		
PRU	**Pruhonice**	**151.64**	**346**	*e*PKPbc		PKPbc	15 41 24.0	-0.2	
DRGR		**151.74**	**332**⇓	*i* P		PKPbc	15 41 24.7	+0.1	
DRGR		**151.74**	**332**	⇓P		PKPbc	15 41 24.7	+0.1	
VYHS	**Vyhne**	**151.80**	**339**	*e*PKP		PKPbc	15 41 24.3	-0.3	
NKC	**Novy Kostel**	**151.84**	**349**	*e*PKPbc		PKPbc	15 41 24.0	-0.7	
KOLL	**Kolacno**	**151.87**	**340**	*e*PKP		PKPbc	15 41 24.7	-0.1	
PSZ	**Piszkesteto**	**151.93**	**337**⇑	*i* P		PKPbc	15 41 30.5	+5.5	
PSZ	**Piszkesteto**	**151.93**	**337**⇑	P		PKPbc	15 41 30.5	+5.6	
TREC	**Trest**	**152.06**	**344**	*e*PKPbc		PKPbc	15 41 25.0	-0.2	
MODS	**Modra-Piesok**	**152.40**	**341**	*e*PKP		PKPdf	15 41 26.5	+7.4	
KHC	**Kasperske Hory**	**152.66**	**346**	*e*PKPbc		PKPbc	15 41 26.4	-0.2	
KHC					*e*PKPab	PKPab	15 41 35.8	-1.4	
GERES	**GERESS Array B**	**152.91**	**346**		PKPbc	PKPbc	15 41 26.9	-0.2	
	comp=Z,1.4nm,0.8s,baz=75,slow=1.5,SNR=11								
GERES	**GERESS Array B**	**152.91**	**346**		PKIKP	PKPbc	15 41 26.9	-0.2	
GERES					pmax	pmax			
	comp=Z,1.0nm,0.8s								
BZS	**Buzias**	**153.14**	**332**⇓	*i* P		PKPbc	15 41 27.6	-0.1	
BZS	**Buzias**	**153.14**	**332**	⇓P		PKPbc	15 41 27.6	-0.1	
PKSM	**Moragy**	**153.83**	**337**⇑	*i* P		PKPbc	15 41 29.1	-0.1	
PKSM	**Moragy**	**153.83**	**337**⇑	P		PKPbc	15 41 29.1	-0.1	
TORD	**Torodi Ar. Bea**	**170.14**	**166**		PKP	PKPdf	15 41 36.6	-2.1	
	comp=Z,2.1nm,1.2s,baz=243,slow=0.3,SNR=4.6								
TORD					PKPab	PKPab	15 42 54.0	-0.1	
	comp=Z,3.0nm,0.8s,baz=203,slow=3.9,SNR=12								

IDC ***16*** *15:35:23.6±5.0, 3845S×17921E, h64km±34km, mb3.0/2, mb1 3.4/3, mb1mx3.3/14, mbtmp3.3/3, ML2.9/1, Error ellipse: s-maj=40.7km s-min=29.1km az=69.0*

ISC 16 15:35:22.6±4.0, 384S±01×1793E±03, h62km±26km, n5, σ0§91/6, mb3.1/2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
URZ	**Urewera**	**1.71**	**275**	P		**Pn**	**15 35 49.9**		**-0.3**
	5.0nm,0.3s,baz=178,slow=2.0,SNR=39								
URZ				S		**Sn**	**15 36 11.1**		**+0.1**
	12nm,0.3s,baz=357,slow=19,SNR=19								
RPZ	**Rata Peaks**	**8.16**	**227**	P		**Pn**	**15 37 18.4**		**+0.3**
	0.2nm,0.3s,baz=43,slow=18,SNR=3.9								
RPZ				S		**Sn**	**15 38 48.6**		**-0.2**
	0.6nm,0.3s,baz=16,slow=11,SNR=13								
ASAR	**Alice Springs**	**41.15**	**277**	P		**P**	**15 43 01.6**		**+0.9**
	0.3nm,0.6s,mb3.1,baz=119,slow=8.3,SNR=7.9								
WRA	**Warramunga Arr**	**42.87**	**282**	P		**P**	**15 43 13.9**		**-0.8**
	0.2nm,0.5s,mb3.1,baz=121,slow=7.6,SNR=8.4								
ARCES	**ARCESS Array B**	**145.81**	**344**		PKPbc	PKPbc	15 54 54.7		+1.3
	4.0nm,1.0s,baz=17,slow=6.6,SNR=3.8								

IDC ***16*** *15:35:25.6±1.3, 2273S×17582W, h0km, mb4.1/6, mb1 4.3/6, mb1mx4.0/17, mbtmp4.1/6, MS3.6/3, Ms1 3.6/3, ms1mx3.1/29, Error ellipse: s-maj=38.2km s-min=27.0km az=44.0*

ISCJB ***16*** *15:35:29.7±1.7, 228S±03×1760W±03, h33km, mb4.1/6, MS3.6/2, Error ellipse: s-maj=44.1km s-min=26.9km az=135.7*

NEIC ***16*** *15:35:31.6±1.6, 2279S×17594W, h35km, mb4.4/2, Error ellipse: s-maj=40.1km s-min=24.2km az=223.0*

ISC 16 15:35:31.9±1.7, 228S±03×1760W±03, h35km, n16, σ0§77/11, mb4.1/6, MS3.6/2, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
RAR	**Rarotonga**	**15.15**	**87**	LR		LR	15 43 06.5		
	comp=Z,244nm,19.3s,baz=221,slow=31								
RAR				T			15 53 56.2		
	6.1nm,0.3s,baz=207,slow=19,SNR=6.8								
HNR	**Honiara**	**26.58**	**296**	LR		LR	15 49 23.8		
	comp=Z,76nm,19.5s,MS3.2,baz=152,slow=31								
CTA	**Charters Tower**	**35.16**	**267**	*e*P		**P**	**15 42 24.0**		**+1.4**
	3.0nm,0.6s,mb4.4								
CTA	**Charters Tower**	**35.16**	**267**	P		**P**	**15 42 23.8**		**+1.1**
	3.8nm,0.6s,mb4.5,baz=115,slow=10,SNR=12								
CTAO	**Charters Tower**	**35.16**	**267**	*e*P		**P**	**15 42 23.9**		**+1.3**
	4.0nm,0.7s,mb4.5								
STKA	**Stephens Creek**	**38.53**	**247**	LR		LR	15 56 03.9		
	comp=Z,169nm,19.5s,MS3.9,baz=198,slow=32								
ASAR	**Alice Springs**	**45.84**	**259**	P		**P**	**15 43 51.8**		**+1.0**
	2.8nm,0.9s,mb4.2,baz=95,slow=6.8,SNR=18								
WB2	**Warramunga Arr**	**46.14**	**264**	*e*P		**P**	**15 43 52.2**		**-1.0**
WRA	**Warramunga Arr**	**46.15**	**264**	P		**P**	**15 43 52.5**		**-0.9**
	2.6nm,0.8s,mb4.2,baz=102,slow=8.2,SNR=20								
FITZ	**Fitzroy Crossi**	**54.58**	**263**	P		**P**	**15 44 56.6**		**-0.6**
	1.3nm,0.8s,mb4.0,baz=189,slow=19,SNR=2.5								
QSPA	**South Pole Qui**	**67.30**	**180**	P		**P**	**15 46 22.5**		**0.0**
	baz=268,slow=2.0								
QSPA	**South Pole Qui**	**67.30**	**180**	P		**P**	**15 46 22.5**		**0.0**
MJAR	**Matsushiro Arr**	**73.13**	**323**	P		**P**	**15 46 58.9**		**+0.1**
	0.7nm,0.8s,mb3.6,baz=152,slow=5.5,SNR=3.2								
MAW	**Mawson**	**80.05**	**199**	P		**P**	**15 47 37.7**		**+0.1**
	1.6nm,0.7s,mb4.1,baz=124,slow=11,SNR=6.2								
GERES	**GERESS Array B**	**152.87**	**346**		PKPbc	PKPbc	15 55 23.8		-1.4
	0.1nm,0.3s,baz=279,slow=1.9,SNR=4.4								
TORD	**Torodi Ar. Bea**	**170.18**	**167**		PKPab	PKPab	15 56 51.5		-0.9
	0.5nm,1.0s,baz=191,slow=2.2,SNR=3.6								

ISCJB ***16*** *15:36:23.8±1.0, 575N±03×333W±03, h10km, mb3.9/6, MS3.2/2, Error ellipse: s-maj=38.4km s-min=17.3km az=19.1*

IDC ***16*** *15:36:23.7±1.3, 5753N×331.1W, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/25, mbtmp3.4/4, MS3.1/4, Ms1 3.1/4, ms1mx2.8/29, Error ellipse: s-maj=52.5km s-min=29.1km az=29.0*

CSEM ***16*** *15:36:25.1, 5748N×3328W, h10km, mb4.4/3, After NEIC*

NEIC ***16*** *15:36:25.1±0.8, 5748N×3328W, h10km, mb4.3/3, Error ellipse: s-maj=32.2km s-min=13.8km az=200.0*

ISC 16 15:36:25.7±1.0, 575N±03×332W±03, h10km, n19, σ0§64/13, mb3.9/6, MS3.2/2, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
SFJD	**Kangerlussuaq**	**12.47**	**327**	LR		LR	15 43 44.8		
	comp=Z,46nm,21.9s,baz=108,slow=35								
SCHQ	**Schefferville**	**18.80**	**276**	LR		LR	15 45 36.7		
	comp=Z,59nm,19.1s,baz=46,slow=29								
FLN	**La Foliniere**	**21.30**	**100**	*e*P		**P**	**15 41 11.7**		**-0.5**
	20nm,0.9s,mb4.1								
FLN	**La Foliniere**	**21.30**	**100**	*e*P		**P**	**15 41 11.7**		**-0.5**
	9.9nm,0.9s,mb4.1								
SSF	**Saint Saulge**	**24.47**	**99**	*e*P		**P**	**15 41 44.8**		**+0.4**
	19nm,1.1s,mb4.1								
SSF	**Saint Saulge**	**24.47**	**99**	*e*P		**P**	**15 41 44.8**		**+0.4**
	9.4nm,1.1s,mb4.1								
AVF	**Avril sur Loir**	**24.56**	**100**	*e*P		**P**	**15 41 45.6**		**+0.3**
SMF	**Signal de Mont**	**24.91**	**100**	*e*P		**P**	**15 41 48.1**		**-0.4**
	29nm,1.1s,mb4.4								
SMF	**Signal de Mont**	**24.91**	**100**	*e*P		**P**	**15 41 48.1**		**-0.4**
	14nm,1.1s,mb4.4								
ESDC	**Sonseca Array**	**25.99**	**121**	P		**P**	**15 41 57.7**		**-0.6**
	0.1nm,0.3s,baz=310,slow=7.9,SNR=3.9								
LPG	**La Plagne**	**27.20**	**99**	*e*P		**P**	**15 42 10.7**		**+1.5**
DAVOX	**Davos/Dischmat**	**28.06**	**94**	LR		LR	15 53 05.2		
	comp=Z,69nm,18.9s,MS3.3,baz=105,slow=36								
GERES	**GERESS Array B**	**28.89**	**87**	LR		LR	15 52 22.0		
	comp=Z,40nm,18.9s,MS3.0,baz=91,slow=33								
PDAR	**Pinedale Array**	**48.45**	**287**	P		**P**	**15 45 08.2**		**+0.2**
	0.5nm,0.5s,mb3.8,baz=74,slow=7.9,SNR=4.6								
PDAR	**Pinedale Array**	**48.45**	**287**	P		**P**	**15 45 08.1**		**+0.2**
TORD	**Torodi Ar. Bea**	**51.55**	**135**	P		**P**	**15 45 31.4**		**-0.3**
	0.3nm,0.6s,mb3.4,baz=318,slow=10.0,SNR=2.5								
MKAR	**Makanchi Array**	**63.15**	**44**	P		**P**	**15 46 52.5**		**-0.6**
	0.5nm,0.7s,mb3.8,baz=317,slow=4.0,SNR=3.8								
ASAR	**Alice Springs**	**144.96**	**21**	PKP		PKPdf	15 56 01.1		-1.5
	1.1nm,1.0s,baz=348,slow=2.7,SNR=8.0								
ASAR	**Alice Springs**	**144.96**	**21**	PKP		PKPdf	15 56 01.1		-1.6

NEIC ***16*** *15:40:12.9±2.3, 360S×10023E, h35km, Error ellipse: s-maj=92.7km s-min=14.7km az=57.0*

IDC 16 15:40:07.9±3.4, 359S×10021E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/19, mbtmp3.8/6, Error ellipse: s-maj=132.8km s-min=19.4km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
CMAR	**Chiang Mai Arr**	**21.95**	**357**	P		P	15 45 04.5		+1.2
	2.2nm,0.8s,baz=186,slow=8.9,SNR=18								
WRA	**Warramunga Arr**	**37.02**	**119**	P		P	15 47 18.4		-1.3
	0.2nm,0.5s,baz=304,slow=8.6,SNR=8.0								
ASAR	**Alice Springs**	**38.16**	**125**	P		P	15 47 30.5		+1.2
	0.4nm,0.4s,baz=300,slow=7.6,SNR=19								
SONM	**Songino Array**	**51.50**	**5**	P		P	15 49 14.8		-0.4
	2.1nm,0.9s,baz=181,slow=8.3,SNR=7.4								
MKAR	**Makanchi Array**	**52.61**	**345**	P		P	15 49 23.5		0.0
	1.3nm,0.8s,baz=148,slow=7.1,SNR=8.1								
ZAA0	**Zalesovo Array**	**58.76**	**349**	*e*P		P	15 50 07.1		-0.4
ZALV	**Zalesovo Beam**	**58.76**	**349**	P		P	15 50 07.3		-0.3
	2.6nm,0.9s,baz=161,slow=5.8,SNR=8.0								

IDC ***16*** *15:43:05.8±2.5, 250S×10021E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/19, mbtmp4.0/6, Error ellipse: s-maj=106.9km s-min=18.7km az=59.0*

ISCJB ***16*** *15:43:08.8±2.4, 24S±04×1003E±06, h33km, mb4.0/5, Error ellipse: s-maj=99.6km s-min=16.1km az=146.9*

NEIC ***16*** *15:43:12.1±0.8, 226S×10056E, h35km, Error ellipse: s-maj=35.1km s-min=12.8km az=57.0*

ISC 16 15:43:11.3±2.3, 24S±04×1003E±06, h35km, n10, σ0§72/9, mb4.0/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
CMAR	**Chiang Mai Arr**	**20.78**	**356**	P		**P**	**15 47 48.8**		**-0.7**
	1.5nm,0.7s,baz=187,slow=10,SNR=

KSJES JEONGSEON 1.29 318 P Pn 16 16 55.0 +0.2
KSBUS Busan 1.33 203 P Pn 16 16 55.4 +0.1
KSMGY Mungyeong 1.37 278 P Pn 16 16 55.6 -0.4
KSCPR CHUPUNGNYEONG 1.46 261 P Pn 16 16 56.8 -0.3
KSCHJ Chungju 1.48 286 P Pn 16 16 57.7 +0.2
KSDGY Daegwallycong 1.49 325 P Pn 16 16 58.1 +0.6
KSBON Boeun 1.57 272 P Pn 16 16 59.0 +0.3
KSCEJ CHEONGJU 1.87 276 P Pn 16 17 04.5 +1.7
JTU Tsushima 1.97 188 P Pn 16 17 04.0 -0.1
JTY Toyota 2.45 154 *eS* Sn 16 17 40.6 -0.3
JGT Gotsu 2.55 124 P Pn 16 17 12.0 -0.1
JGT S Sn 16 17 42.8 -0.4
JHIK Hikimi 2.63 137 *eS* Sn 16 17 44.7 -0.5
JHT Toyohira 2.83 129 *eS* Sn 16 17 49.4 -0.8
JNA Nagahama 3.67 142 *eS* Sn 16 18 13.1 +2.2

IDC 16 16:30:48.4±3.4, 355°×10098E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/20, mbtmp3.8/7, MS3.3/1, Ms1 3.3/1, ms1mx2.4/33, Error ellipse: s-maj=136.1km s-min=18.6km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.96**	**355**	P		P	16 35 44.5	+0.7
	0.7nm,0.8s,baz=187,slow=9.4,SNR=6.5							
FITZ	**Fitzroy Crossi**	**28.15**	**123**	LR		LR	16 48 13.6	
	comp=Z,71nm,21.2s,baz=146,slow=37							
WRA	**Warramunga Arr**	**36.38**	**119**	P		P	16 37 54.7	0.0
	0.3nm,0.4s,baz=296,slow=8.9,SNR=4.3							
ASAR	**Alice Springs**	**37.56**	**125**	P		P	16 38 05.3	+0.5
	0.8nm,0.8s,baz=312,slow=8.7,SNR=5.8							
CTA	**Charters Tower**	**47.07**	**114**	P		P	16 39 21.8	-0.6
	4.0nm,1.0s,baz=289,slow=10,SNR=5.8							
SONM	**Songino Array**	**51.38**	**5**	P		P	16 39 54.8	-0.1
	1.3nm,0.9s,baz=184,slow=9.7,SNR=6.1							
MKAR	**Makanchi Array**	**52.77**	**344**	P		P	16 40 05.3	+0.1
	1.0nm,0.6s,baz=158,slow=8.5,SNR=12							
ZALV	**Zalesovo Beam**	**58.86**	**349**	P		P	16 40 48.5	-0.2
	2.0nm,0.7s,baz=176,slow=5.8,SNR=9.7							

*IDC **16** 16:33:59.4±1.1, 1191N×145.17E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.9/20, mbtmp3.8/10, Error ellipse: s-maj=39.7km s-min=15.9km az=85.0*
*NEIC **16** 16:34:01.0±0.7, 1192N×145.13E, h10km, mb4.6/1, Error ellipse: s-maj=26.5km s-min=10.3km az=86.0*
*ISCJB **16** 16:34:02.8±0.8, 1192N±005°×1450E±02, h33km, mb3.9/10, Error ellipse: s-maj=30.4km s-min=7.3km az=0.1*

ISC 16 16:34:04.7±0.8, 1196N±006°×1451E±02, h35km, n13, σ0§95/15, mb3.9/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.64**	**352**	Pn		**Pn**	**16 34 30.9**	**-0.1**
	60nm,0.3s,baz=166,slow=9.2,SNR=88							
GUMO				Sn		**Sn**	**16 34 50.9**	**+0.1**
	62nm,0.3s,baz=321,slow=23,SNR=6.6							
GUMO	**Guam**	**1.64**	**352**	*e*P		**Pn**	**16 34 30.9**	**-0.1**
GUMO				*e*S		**Sn**	**16 34 49.0**	**-1.9**
MJAR	**Matsushiro Arr**	**25.25**	**347**	P		**P**	**16 39 25.9**	**-1.7**
	1.1nm,0.8s,mb3.4,baz=172,slow=8.4,SNR=4.8							
CTA	**Charters Tower**	**31.87**	**178**	P		**P**	**16 40 26.1**	**-0.6**
	1.0nm,0.5s,mb3.9,baz=284,slow=12,SNR=3.9							
WRA	**Warramunga Arr**	**33.43**	**199**	P		**P**	**16 40 39.6**	**-0.7**
	1.2nm,0.6s,mb4.0,baz=22,slow=9.5,SNR=15							
ASAR	**Alice Springs**	**37.07**	**197**	P		**P**	**16 41 10.8**	**-0.8**
	0.3nm,0.6s,baz=12,slow=9.3,SNR=9.0							
CMAR	**Chiang Mai Arr**	**44.92**	**284**	P		**P**	**16 42 17.7**	**+1.2**
	0.8nm,0.5s,mb3.8,baz=77,slow=7.1,SNR=12							
SONM	**Songino Array**	**48.20**	**326**	P		**P**	**16 42 42.1**	**+0.4**
	0.7nm,0.6s,mb3.9,baz=147,slow=7.7,SNR=4.5							
MKAR	**Makanchi Array**	**52.83**	**317**	P		**P**	**16 44 27.7**	**+0.8**
	0.9nm,0.4s,mb4.2,baz=93,slow=8.7,SNR=23							
ZALV	**Zalesovo Beam**	**63.08**	**325**	P		**P**	**16 44 28.1**	**-0.4**
	0.5nm,0.4s,mb4.0,baz=108,slow=4.7,SNR=2.7							
KURK	**Kurchatov**	**65.98**	**320**	*e*P		**P**	**16 44 47.4**	**0.0**
	3.2nm,0.8s,mb4.4							
NVAR	**Mina Array Bea**	**87.75**	**51**	P		**P**	**16 46 51.6**	**+1.3**
	0.3nm,0.6s,mb3.7,baz=264,slow=8.1,SNR=2.7							
ARCES	**ARCESS Array B**	**88.70**	**342**			**P**	**16 46 55.6**	**+1.5**
	1.0nm,0.8s,mb4.2,baz=79,slow=8.8,SNR=4.2							

IDC 16 16:48:34.1±3.6, 284S×10103E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.6/5, Error ellipse: s-maj=157.5km s-min=21.3km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.68**	**120**	P		P	16 55 43.4	+0.4
	0.2nm,0.4s,baz=307,slow=8.6,SNR=6.8							
ASAR	**Alice Springs**	**37.93**	**126**	P		P	16 55 53.0	-0.5
	0.4nm,0.4s,baz=298,slow=7.7,SNR=20							
SONM	**Songino Array**	**50.69**	**5**	P		P	16 57 37.2	+1.9
	0.7nm,0.6s,baz=184,slow=9.0,SNR=5.4							
MKAR	**Makanchi Array**	**52.12**	**344**	P		P	16 57 45.6	-0.4
	0.5nm,0.5s,baz=159,slow=8.9,SNR=9.1							
ZALV	**Zalesovo Beam**	**58.18**	**349**	P		P	16 58 28.8	-1.0
	0.3nm,0.3s,baz=169,slow=8.4,SNR=3.6							

*ISCJB **16** 17:06:19.4±0.3, 322S±004°×10084E±003, h32km, mb4.9/67, MS3.8/22, Error ellipse: s-maj=6.0km s-min=4.1km az=31.4*
*MOS **16** 17:06:19.6±0.9, 265S×10134E, h22km, mb5.0/25, Error ellipse: s-maj=14.3km s-min=7.2km az=113.0*
*BJI **16** 17:06:21.5, 290S×101.10E, h35km, mB4.9, mb4.9, Ms4.6, Msz4.2*
*NEIC **16** 17:06:22.5±0.3, 288S×101.15E, h35km, mb4.9/16, Error ellipse: s-maj=10.8km s-min=5.3km az=220.0*
NEIC Felt [III] at Mukomuko and Painan.
*IDC **16** 17:06:23.2±3.7, 280S×10124E, h40km±30km, mb4.4/16, mb1 4.5/17, mb1mx4.3/23, mbtmp4.4/17, ML4.7/1, MS3.6/13, Ms1 3.6/13, ms1mx3.4/28, Error ellipse: s-maj=32.4km s-min=12.3km az=56.0*
*DJA **16** 17:06:26, 289S×10068E, h79km, Mw5.3/4*

ISC 16 17:06:21.7±0.3, 321S±004°×10087E±003, h34km, h34km±1.7km; pP-P, n183, σ1§20/181, mb4.9/67, MS3.8/22, 24C-17D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.78**	**104**	P		**Pn**	**17 06 51.0**	**+0.9**
	0.0nm,0.0s							
PPI	**Padang Panjang**	**2.77**	**350**	P		**Pn**	**17 07 04.2**	**+0.5**
	0.0nm,0.0s							
JMBI	**JAMBI**	**3.18**	**61**	P		**Pn**	**17 07 08.1**	**-1.3**
	0.0nm,0.0s							
RGRI	**Rengat**	**3.19**	**27**	P		**Pn**	**17 07 09.3**	**-0.3**
	0.0nm,0.0s							
KLI	**Kotabumi**	**4.31**	**113**	P		**Pn**	**17 07 28.3**	**+3.4**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.37**	**79**	P		**Pn**	**17 07 40.1**	**+0.7**
	0.0nm,0.0s							
TRSI	**Tarutung**	**5.53**	**340**	P		**Pn**	**17 07 38.8**	**-3.0**
	0.0nm,0.0s							
KGM	**Kluang**	**5.74**	**25**	⇓P		**Pn**	**17 07 44.7**	**+0.1**
MYKOM	**Kota Tinggi**	**5.79**	**31**	⇓P		**Pn**	**17 07 45.8**	**+0.5**
FRIM	**Kepong**	**6.44**	**7**	⇑P		**Pn**	**17 07 55.1**	**+0.8**
TPI	**Tanjungpandan**	**6.79**	**86**	P		**Pn**	**17 07 59.9**	**+0.8**
	0.0nm,0.0s							
TPI	**Tanjungpandan**	**6.79**	**86**	⇓*e*P		**Pn**	**17 08 00.3**	**+1.2**
IPM	**Ipoh**	**7.63**	**1**	⇑P		**Pn**	**17 08 13.5**	**+2.8**
KTGM	**Kuala Trenggan**	**8.77**	**15**	⇓P		**Pn**	**17 08 28.2**	**+1.9**
BJII	**Banjamegara**	**9.71**	**115**	P		**Pn**	**17 08 42.8**	**+3.6**
	0.0nm,0.0s							
COCO	**West Island**	**9.78**	**204**	*e*Pn		**Pn**	**17 08 39.8**	**-0.2**
BSI	**Banda Aceh**	**10.28**	**327**	P		**Pn**	**17 08 46.8**	**-0.1**
	0.0nm,0.0s							
KSM	**Kuching**	**10.52**	**64**	⇓P		**Pn**	**17 08 53.6**	**+3.4**
KSM	**Kuching**	**10.52**	**64**	*e*Pn		**Pn**	**17 08 45.4**	**-4.9**
SJI	**Sawahan**	**11.74**	**113**	P		**Pn**	**17 09 08.7**	**+1.7**
	0.0nm,0.0s							
SBUM	**Sibu**	**12.66**	**64**	⇓P		**Pn**	**17 09 22.4**	**+2.8**
BTM	**Bintulu**	**13.77**	**63**	⇓P		**Pn**	**17 09 38.2**	**+3.5**
KKM	**Kota Kinabalu**	**17.87**	**59**	⇓P		**Pn**	**17 10 33.1**	**+5.3**
KKM	**Kota Kinabalu**	**17.87**	**59**	*e*Pn		**Pn**	**17 10 27.8**	**-0.1**
SDKM	**Sandakan**	**18.52**	**62**	⇓P		**Pn**	**17 10 35.9**	**0.0**
TSM	**Tawau**	**18.55**	**66**	⇓P		**Pn**	**17 10 36.2**	**0.0**
KDM	**Kudat**	**18.84**	**58**	⇓P		**Pn**	**17 10 41.8**	**+2.1**
KAPI	**Kappang**	**18.92**	**96**	P		**Pn**	**17 10 39.1**	**-1.6**
	2.3nm,0.3s,baz=277,slow=12,SNR=16							
KAPI				LR		LR	17 18 46.0	
	comp=Z,144nm,18.1s,baz=298,slow=40							
KAPI	**Kappang**	**18.92**	**96**	*e*Pn		**Pn**	**17 10 40.8**	**+0.1**
PCI	**Palu**	**19.09**	**84**	P		**Pn**	**17 10 42.2**	**-0.6**
	0.0nm,0.0s							
MYLDM	**Lahad Datu**	**19.48**	**65**	⇓P		**Pn**	**17 10 47.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**21.61**	**355**	P		**P**	**17 11 04.8**	**-4.2**
	5.4nm,0.8s,mb4.0,baz=184,slow=10,SNR=35							
CMAR				PcP		PcP	17 15 10.9	+0.7
	1.0nm,0.7s,baz=213,slow=2.9,SNR=7.5							
CMAR				ScP		ScP	17 18 43.3	-1.7
	0.6nm,1.0s,baz=224,slow=2.5,SNR=3.6							
CMAR				LR		LR	17 21 07.5	
	comp=Z,90nm,18.5s,MS3.2,baz=148,slow=42							
CMAR	**Chiang Mai Arr**	**21.61**	**355**	P		**P**	**17 11 04.8**	**-4.2**
CMAR							17 15 11.0	
CMAR				pmax		pmax		
	comp=Z,5.0nm,0.8s							
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
CMAR				pmax		pmax		
	comp=N,1.0nm,1.0s							
CMAR				MLR		MLR		
	comp=Z,91nm,18.5s							
BATI	**Baumata**	**23.67**	**108**	P		**P**	**17 11 27.8**	**-2.8**
	comp=Z,9.6nm,0.7s,mb4.3,baz=270,slow=20,SNR=4.5							
BATI				S		**S**	**17 15 37.0**	**-6.2**
	comp=Z,20nm,1.0s,baz=294,slow=18,SNR=3.9							
QIZ	**Qiongzhong**	**23.80**	**21**	P		**P**	**17 11 31.8**	**+0.2**
QIZ				LR		LR		
	comp=N,177nm,16.4s							
QIZ				LR		LR		
	comp=Z,169nm,19.0s,MS3.5							
MNI	**Manado**	**24.41**	**79**	P		**P**	**17 11 37.3**	**0.0**
	comp=Z,0.0nm,0.0s							
KMI	**Kunming**	**28.22**	**4**	P		**P**	**17 12 14.8**	**+3.3**
KMI				S		**S**	**17 16 56.6**	**+1.4**
KMI				AMB		AMB		
	comp=Z,5.0nm,0.6s,mb4.3							
KMI				LR		LR		
	comp=Z,107nm,20.0s,MS3.4							
FITZ	**Fitzroy Crossi**	**28.43**	**123**	*e*P		**P**	**17 12 13.4**	**-0.1**
	comp=Z,9.7nm,0.7s,mb4.5							
FITZ	**Fitzroy Crossi**	**28.43**	**123**	P		**P**	**17 12 13.5**	**0.0**
	comp=Z,4.5nm,0.6s,mb4.3,baz=289,slow=8.1,SNR=12							
FITZ				LR		LR	17 22 04.7	
	comp=Z,145nm,21.4s,MS3.5,baz=139,slow=33							
GYA	**Guiyang**	**30.02**	**10**	⇑*i*P		**P**	**17 12 28.9**	**+1.4**
GYA				AP		pP	17 12 39.8	+2.6
GYA				XP		sP	17 12 44.6	+3.3
GYA				PP		PP	17 13 28.4	-7.3
GYA				PCP		PcP	17 15 31.3	+2.0
GYA				S		**S**	**17 17 25.8**	**+2.3**
GYA				XS		sS	17 17 41.3	+1.7
GYA				SCP		ScP	17 19 07.4	-1.7
GYA				SCS		ScS	17 23 02.9	-1.7
GYA				AMB		AMB		
	comp=Z,20nm,0.8s,mb4.9							
GYA				AMB		AMB		
	comp=Z,130nm,5.4s							
GYA				LR		LR		
	comp=N,960nm,15.0s,MS4.7							
GYA				LR		LR		
	comp=E,800nm,16.0s,MS4.7							
GYA				LR		LR		
	comp=Z,900nm,15.1s,MS4.5							
ODAN	**Odare**	**32.60**	**337**	*e*P		**P**	**17 12 50.5**	**+0.2**
	comp=Z,78nm,0.7s,mb5.8							
TAPN	**Taplejung**	**32.92**	**338**	*e*P		**P**	**17 12 53.7**	**+0.6**
	comp=Z,120nm,0.8s,mb5.9							
RAMN	**Ramite**	**32.99**	**336**	*e*P		**P**	**17 12 54.4**	**+0.7**
NWAO	**Narrogin (SRO)**	**33.31**	**154**	LR		LR	17 25 23.1	
	comp=Z,125nm,19.0s,MS3.6,baz=131,slow=34							
JIRN	**Jiri**	**33.79**	**336**	*e*P		**P**	**17 13 01.3**	**+0.7**
	comp=Z,102nm,0.9s,mb5.8							
LSA	**Lhasa**	**34.02**	**345**	*e*P		**P**	**17 13 02.4**	**-0.2**
LSA				pmax		pmax		
	comp=Z,110nm,2.9s,mb5.3							
LSA	**Lhasa**	**34.02**	**345**	*e*P		**P**	**17 13 02.4**	**-0.2**
	comp=Z,110nm,2.9s,mb5.3							
PKI	**Pulchoki**	**34.03**	**335**	*e*P		**P**	**17 13 03.3**	**+0.6**
	comp=Z,16nm,0.5s,mb5.2							
CD2	**Chengdu**	**34.04**	**4**	*e*P		**P**	**17 13 05.3**	**+2.6**
CD2				AP		pP	17 13 14.9	+2.4
CD2				XP		sP	17 13 19.3	+2.7
CD2				PP		PP	17 14 19.3	-0.9
CD2				PCP		PcP	17 15 42.9	+2.8
CD2				S		**S**	**17 18 27.3**	**+1.2**
CD2				XS		sS	17 18 43.3	+1.1
CD2				SCS		ScS	17 23 24.5	-0.2
CD2				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
CD2				AMB		AMB		
	comp=Z,30nm,5.8s							
CD2				LR		LR		
	comp=N,300nm,15.6s,MS4.3							
CD2				LR		LR		
	comp=E,320nm,16.8s,MS4.3							
CD2				LR		LR		
	comp=Z,250nm,15.6s,MS4.0							
PKIN	**Phulchoki**	**34.04**	**335**	*e*P		**P**	**17 13 02.9**	**+0.1**
GUN	**Gumba**	**34.14**	**336**	*e*P		**P**	**17 13 04.4**	**+0.8**
	comp=Z,88nm,0.5s,mb6.0							
DMN	**Daman**	**34.20**	**335**	*e*P		**P**	**17 13 04.5**	**+0.3**
	comp=Z,6.3nm,0.3s,mb5.0							
KKN	**Kakani**	**34.28**	**335**	*e*P		**P**	**17 13 05.3**	**+0.4**
	comp=Z,36nm,0.5s,mb5.5							
GKN	**Gorkha**	**34.74**	**334**	*e*P		**P**	**17 13 09.2**	**+0.3**
	comp=Z,40nm,0.6s,mb5.5							
KOLN	**Koldanda**	**35.00**	**333**	*e*P		**P**	**17 13 11.8**	**+0.7**
	comp=Z,36nm,0.7s,mb5.4							
DANN	**Dangsing**	**35.43**	**333**	*e*P		**P**	**17 13 15.3**	**+0.5**
	comp=Z,76nm,0.5s,mb5.9							
WRA	**Warramunga Arr**	**36.64**	**120**	P		**P**	**17 13 24.8**	**-0.5**
	comp=Z,6.9nm,0.5s,mb4.8,baz=304,slow=9.0,SNR=172							
WRA				PcP		PcP	17 15 48.0	-0.1
	comp=Z,1.5nm,1.0s,baz=309,slow=2.3,SNR=5.3							
WRA				S		**S**	**17 19 01.3**	**-5.2**
	comp=Z,1.4nm,1.0s,baz=293,slow=16,SNR=4.9							
WRA	**Warramunga Arr**	**36.64**	**120**	P		**P**	**17 13 24.8**	**-0.6**
WRA							17 15 48.0	
WRA				S		**S**	**17 19 01.3**	**-5.2**
WRA				pmax		pmax		
	comp=Z,7.0nm,0.5s							
WRA				pmax		pmax		
	comp=Z,2.0nm,1.0s							
WRA				smax				
	comp=N,1.0nm,1.0s							
WRAB	**Tennant Creek**	**36.65**	**120**	P		**P**	**17 13 25.0**	**-0.4**
	comp=N,120nm,0.8s,mb5.8,SNR=24							
WRAB	**Tennant Creek**	**36.65**	**120**	*e*P		**P**	**17 13 25.0**	**-0.4**
WRAB				pmax		pmax		
	comp=Z,13nm,0.7s,mb4.9							
WRAB	**Tennant Creek**	**36.65**	**120**	*e*P		**P**	**17 13 25.0**	**-0.4**
	comp=Z,12nm,0.7s,mb4.8							
WB2	**Warramunga Arr**	**36.65**	**120**	⇑*i*P		**P**	**17 13 24.8**	**-0.6**
XAN	**Xi'an**	**37.81**	**11**	P		**P**	**17 13 32.3**	**-2.8**
XAN				AMB		AMB		
	comp=Z,24nm,0.7s,mb5.0							
XAN				AMB		AMB		
	comp=Z,79nm,10.0s							
ASAR	**Alice Springs**	**37.85**	**125**	P		**P**	**17 13 36.0**	**+0.4**
	comp=Z,3.2nm,0.6s,mb4.2,baz=300,slow=7.9,SNR=99							
ASAR				PcP		PcP	17 15 51.9	+0.3
	comp=Z,2.2nm,0.7s,baz=305,slow=2.5,SNR=9.9							
ASAR				S		**S**	**17 19 20.8**	**-4.0**
	comp=Z,1.0nm,0.7s,baz=300,slow=15,SNR=9.8							
ASAR	**Alice Springs**	**37.85**	**125**	P		**P**	**17 13 36.0**	**+0.5**
ASAR							17 15 51.9	
ASAR				S		**S**	**17 19 20.8**	**-4.0**
ASAR				pmax		pmax		
	comp=Z,3.0nm,0.6s							
ASAR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
ASAR				smax				
	comp=N,1.0nm,0.7s							
NJ2	**Nanjing**	**39.01**	**25**	*e*P		**P**	**17 13 44.8**	**-0.3**
NJ2				AP		pP	17 13 53.8	-1.2
NJ2				XP		sP	17 13 57.0	-2.1
NJ2				PP		PP	17 15 14.8	-0.2
NJ2				S		**S**	**17 19 41.0**	**-0.9**
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.6							
NJ2				AMB		AMB		
	comp=Z,200nm,5.1s							
NJ2				LR		LR		
	comp=N,350nm,31.0s							
NJ2				LR		LR		
	comp=E,240nm,18.2s							
NJ2				LR		LR		
	comp=Z,330nm,25.8s							
LZH	**Lanzhou**	**39.19**	**4**	*e*P		**P**	**17 13 48.0**	**+1.5**
LZH				AP		pP	17 13 58.5	+2.0
LZH				XP		sP	17 14 02.5	+2.0
LZH				PP		PP	17 15 23.0	+6.1
LZH				*e*S		**S**	**17 19 48.6**	**+4.1**
LZH				AMB		AMB		
	comp=Z,25nm,1.0s,mb4.9							
LZH				AMB		AMB		
	comp=Z,100nm,8.0s							
LZH				LR		LR		
	comp=E,212nm,15.4s							
LZH				LR		LR		
	comp=Z,411nm,16.2s,MS4.3							
SMLA	**Simla**	**40.94**	**328**	*i* P		**P**	**17 13 56.6**	**-4.5**
GTA	**Gaotai**	**42.42**	**359**	*e*P		**P**	**17 14 11.3**	**-1.8**
GTA				AP		pP	17 14 21.3	-1.8
GTA				XP		sP	17 14 25.8	-1.4
GTA				AMB		AMB		
	comp=Z,4.0nm,0.6s,mb4.2							
THN	**Thein Dam**	**42.72**	**328**	*e*P		**P**	**17 14 15.4**	**-0.3**
HHC	**Hu-ho-hao-te**	**44.92**	**12**	*e*P		**P**	**17 14 32.0**	**-1.3**
HHC				AP		pP	17 14 42.3	-1.0
HHC				XP		sP	17 14 46.6	-0.7
HHC				PCP		PcP	17 16 13.1	-1.3
HHC				PP		PP	17 16 18.0	-0.7
HHC				SCP		ScP	17 20 01.9	-2.5
HHC				PCS		PcS	17 20 05.8	-2.1
HHC				S		**S**	**17 21 07.9**	**-1.2**
HHC				XS		sS	17 21 25.0	-0.6
HHC				SS		SS	17 24 21.5	-10
HHC				SCS		ScS	17 24 24.4	-3.7
HHC				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.8							
HHC				AMB		AMB		
	comp=Z,58nm,7.2s							
HHC				LR		LR		
	comp=N,157nm,14.1s,MS4.3							
HHC				LR		LR		
	comp=E,183nm,13.7s,MS4.3							
HHC				LR		LR		
	comp=Z,130nm,13.5s,MS4.0							
BJI	**Beijing**	**45.27**	**17**	P		**P**	**17 14 37.1**	**+1.0**
BJI				AP		pP	17 14 46.0	-0.1
BJI				XP		sP	17 14 49.5	-0.6
BJI				S		**S**	**17 21 16.9**	**+2.7**
BJI				AMB		AMB		
	comp=Z,6.0nm,0.5s,mb4.7							
BJI				AMB		AMB		
	comp=Z,133nm,5.7s							
CTA	**Charters Tower**	**47.31**	**114**	*e*P		**P**	**17 14 52.2**	**-0.3**
	comp=Z,7.1nm,0.6s,mb4.8							
CTA	**Charters Tower**	**47.31**	**114**	LR		LR	17 35 57.2	
	comp=Z,50nm,21.0s,MS3.5,baz=38,slow=38							
CTA	**Charters Tower**	**47.31**	**114**	*e*P		**P**	**17 14 52.2**	**-0.3**
CTA				pmax		pmax		
	comp=Z,7.0nm,0.6s							
CTAO	**Charters Tower**	**47.31**	**114**	*e*P		**P**	**17 14 52.3**	**-0.2**
CTAO				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.8							
CTAO	**Charters Tower**	**47.31**	**114**	*e*P		**P**	**17 14 52.3**	**-0.1**
	comp=Z,11nm,0.8s,mb4.8							
KSRS	**Korea Array**	**47.62**	**29**	P		**P**	**17 14 49.5**	**-5.1**
	comp=Z,1.9nm,0.8s,mb4.2,baz=217,slow=7.9,SNR=5.3							
KSRS				LR		LR	17 36 44.4	
	comp=Z,47nm,20.5s,MS3.5,baz=134,slow=39							
KSRS	**Korea Array**	**47.62**	**29**	P		**P**	**17 14 49.5**	**-5.1**
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.8s,mb4.2							
KSRS				MLR		MLR		
	comp=Z,47nm,20.5s,MS3.5							
STKA	**Stephens Creek**	**47.71**	**131**	*e*P		**P**	**17 14 56.5**	**+1.1**
	comp=Z,9.6nm,0.9s,mb4.8							
STKA	**Stephens Creek**	**47.71**	**131**	P		**P**	**17 14 56.5**	**+1.1**
	comp=Z,7.2nm,0.6s,mb4.9,baz=311,slow=8.1,SNR=25							
STKA				LR		LR	17 33 04.0	
	comp=Z,147nm,21.6s,MS3.9,baz=354,slow=34							
KBL	**Kabul**	**48.01**	**324**	*e*P		**P**	**17 14 56.5**	**-1.2**
KBL				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb4.5							
KBL	**Kabul**	**48.01**	**324**	*e*P		**P**	**17 14 56.5**	**-1.2**
	comp=Z,3.5nm,0.6s,mb4.6							
WMQ	**Urumqi**	**48.29**	**347**	⇑*i*P		**P**	**17 14 59.4**	**-0.2**
WMQ				AP		pP	17 15 06.0	-3.7
WMQ				XP		sP	17 15 10.0	-3.7
WMQ				PCP		PcP	17 16 26.0	-0.2
WMQ				*e*S		**S**	**17 21 56.0**	**-1.2**
WMQ				AMB		AMB		
	comp=Z,66nm,0.8s,mb5.7							
WMQ				AMB		AMB		
	comp=Z,274nm,3.6s							
WMQ				LR		LR		
	comp=N,157nm,23.8s,MS4.0							
WMQ				LR		LR		
	comp=E,118nm,22.4s,MS4.0							
WMQ				LR		LR		
	comp=Z,142nm,25.0s,MS3.9							
SONM	**Songino Array**	**47.56**	**5**	P		**P**	**17 15 19.5**	**-1.1**
	comp=Z,17nm,0.8s,mb5.0,baz=184,slow=9.0,SNR=94							
SONM				PcP		PcP	17 16 35.4	-0.7
	comp=Z,1.3nm,0.5s,baz=183,slow=4.1,SNR=6.5							
SONM	**Songino Array**	**51.06**	**5**	P		**P**	**17 15 19.5**	**-1.1**
SONM							17 16 35.4	
SONM				pmax		pmax		
	comp=Z,17nm,0.8s							
SONM				pmax		pmax		
	comp=Z,1.0nm,0.5s							
ULN	**Ulaanbaatar**	**51.15**	**5**	*e*P		**P**	**17 15 20.3**	**-1.0**

KK31					pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.2								
TLY	**Talaya**	**54.73**	**2**	*eP*	**P**		**17 15 47.0**	**-0.6**	
TLY					pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.8								
TLY					MLR	MLR			
	comp=Z,71nm,16.0s,MS3.8								
TLY	**Talaya**	**54.73**	**2**	*eP*	**P**		**17 15 46.0**	**-1.7**	
KURK	**Kurchatov**	**57.00**	**343**	P	**P**		**17 16 02.2**	**-1.7**	
	comp=Z,105nm,0.7s,mb6.0,SNR=12								
KURK	**Kurchatov**	**57.00**	**343**	*eP*	**P**		**17 16 02.7**	**-1.2**	
KURK					pmax	pmax			
	comp=Z,10.0nm,0.6s,mb5.0								
KURK	**Kurchatov**	**57.00**	**343**	*eP*	**P**		**17 16 02.7**	**-1.3**	
	comp=Z,10.0nm,0.6s,mb5.0								
ZAA0	**Zalesovo Array**	**58.51**	**349**	*eP*	**P**		**17 16 12.9**	**-1.6**	
ZALV	**Zalesovo Beam**	**58.51**	**349**	P	**P**		**17 16 13.1**	**-1.4**	
	comp=Z,44nm,0.8s,mb5.6,baz=170,slow=5.3,SNR=200								
ZALV					LR	LR	17 42 50.9		
	comp=Z,38nm,19.7s,MS3.5,baz=150,slow=38								
ZALV	**Zalesovo Beam**	**58.51**	**349**	P	**P**		**17 16 13.1**	**-1.4**	
ZALV					pmax	pmax			
	comp=Z,44nm,0.8s,mb5.5								
ZALV					MLR	MLR			
	comp=Z,38nm,19.7s,MS3.5								
KLR	**Kul'dur**	**58.68**	**23**	*eP*	**P**		**17 16 10.0**	**-5.8**	
HNR	**Honiara**	**58.99**	**99**	P	**P**		**17 16 17.8**	**-0.8**	
	comp=Z,19nm,0.9s,mb5.1,baz=225,slow=8.6,SNR=2.3								
HNR	**Honiara**	**58.99**	**99**	P	**P**		**17 16 17.8**	**-0.8**	
HNR					pmax	pmax			
	comp=Z,19nm,0.9s,mb5.1								
NVS	**Novosibirsk**	**59.66**	**348**⇑	*iP*	**P**		**17 16 20.1**	**-2.3**	
NVS					pmax	pmax			
	comp=N,7.0nm,1.0s								
NVS					pmax	pmax			
	comp=E,5.0nm,1.0s								
NVS					pmax	pmax			
	comp=Z,11nm,1.0s,mb4.8								
RDF	**Al-Radifah**	**60.25**	**306**	*eP*	**P**		**17 16 27.8**	**+0.8**	
	baz=306								
RDF					AMb	AMB	17 16 29.1		
	comp=Z,32nm,1.3s,mb5.2,baz=306								
NAY	**Al-Naaiem**	**60.63**	**306**	*eP*	**P**		**17 16 30.0**	**+0.4**	
	baz=306								
NAY					AMb	AMB	17 16 31.0		
	comp=Z,10.0nm,0.6s,mb5.1,baz=306								
MIB	**Mutribah**	**60.76**	**307**	*eP*	**P**		**17 16 31.2**	**+0.6**	
	baz=307								
MIB					AMb	AMB	17 16 32.2		
	comp=Z,21nm,0.8s,mb5.3,baz=307								
RST	**Umm Al-Ruwaisa**	**60.92**	**306**	*eP*	**P**		**17 16 32.2**	**+0.6**	
	baz=306								
RST					AMb	AMB	17 16 33.6		
	comp=Z,20nm,0.8s,mb5.3,baz=306								
VOSK	**Vostochnaya**	**61.15**	**340**	P	**P**		**17 16 31.1**	**-1.6**	
VOSK					pmax	pmax			
	comp=Z,6.0nm,0.5s,mb5.0								
BVA0	**Borovoye Array**	**61.61**	**340**	*i* P	**P**		**17 16 34.0**	**-1.7**	
BVA0					pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.4								
BOD	**Bodaibo**	**61.74**	**8**	*eP*	**P**		**17 16 34.6**	**-2.0**	
BOD					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.8								
YSS	**Yuzh-Sakhalins**	**62.05**	**31**	*eP*	**P**		**17 16 37.0**	**-1.8**	
YSS					pmax	pmax			
	comp=Z,30nm,0.9s,mb5.4								
YSS	**Yuzh-Sakhalins**	**62.05**	**31**	*eP*	**P**		**17 16 37.4**	**-1.5**	
	comp=Z,17nm,0.8s,mb5.2								
AB31	**Akbulak array**	**63.11**	**331**	P	**P**		**17 16 44.9**	**-1.0**	
AB31					pmax	pmax			
	comp=Z,13nm,0.6s,mb5.2								
SVE	**Sverdlovsk**	**68.12**	**338**⇓	*eP*	**P**		**17 17 17.4**	**-0.7**	
SVE					pmax	pmax			
	comp=Z,20nm,0.9s,mb5.2								
ARU	**Arti**	**68.65**	**336**	*c iP*	**P**		**17 17 20.1**	**-1.3**	
ARU				*e*			17 17 44.2		
ARU				*e*PPP			17 21 27.6		
ARU				*e*S	S		17 26 22.1	+0.3	
ARU					pmax	pmax			
	comp=Z,11nm,1.0s,mb4.7								
ARU	**Arti**	**68.65**	**336**	*eP*	**P**		**17 17 20.3**	**-1.1**	
	comp=Z,7.0nm,0.7s,mb4.7								
YAK	**Yakutsk**	**68.69**	**14**	*eP*	**P**		**17 17 18.7**	**-2.8**	
YAK					pmax	pmax			
	comp=E,3.0nm,1.1s								
YAK					pmax	pmax			
	comp=Z,19nm,0.8s,mb5.1								
YAK					pmax	pmax			
	comp=N,6.0nm,0.9s								
YAK	**Yakutsk**	**68.69**	**14**	*eP*	**P**		**17 17 18.9**	**-2.7**	
MAW	**Mawson**	**69.34**	**195**	LR	LR		17 41 55.0		
	comp=N,62nm,22.0s,MS3.8,baz=245,slow=30								
PETK	**Petropavlovsk-**	**73.44**	**32**	P	**P**		**17 17 47.8**	**-2.7**	
	comp=N,3.1nm,0.6s,mb4.4,baz=208,slow=0.2,SNR=14								
PETK					LR	LR	17 50 46.2		
	comp=N,26nm,18.0s,MS3.6,baz=97,slow=36								
PETK	**Petropavlovsk-**	**73.44**	**32**	P	**P**		**17 17 47.8**	**-2.7**	
PETK					pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4								
PETK					MLR	MLR			
	comp=Z,26nm,18.0s,MS3.6								
BOSA	**Boshof**	**75.84**	**241**	LR	LR		17 49 39.1		
	comp=Z,73nm,18.4s,MS4.0,baz=351,slow=34								
TIXI	**Tiksi**	**76.91**	**9**	*c iP*	**P**		**17 18 07.3**	**-2.8**	
TIXI					pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.7								
TIXI					MLR	MLR			
	comp=Z,167nm,20.0s,MS4.3								
TIXI	**Tiksi**	**76.91**	**9**	*eP*	**P**		**17 18 07.4**	**-2.7**	
	comp=Z,28nm,1.5s,mb5.0								
OBN	**Obninsk**	**78.27**	**328**⇓	*eP*	**P**		**17 18 17.8**	**-0.2**	
OBN				*e*S	S		17 28 16.2	+5.5	
OBN					pmax	pmax			
	comp=Z,8.0nm,0.7s,mb4.8								
AKASG	**Malin Array Be**	**80.96**	**322**	P	**P**		**17 18 32.2**	**-0.6**	
	comp=Z,0.7nm,0.6s,mb3.8,baz=98,slow=3.8,SNR=5.4								
AKASG	**Malin Array Be**	**80.96**	**322**	*i* P	**P**		**17 18 32.9**	**+0.1**	
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.6s								
VRI	**Vrincioaia**	**81.32**	**317**⇑	*iP*	**P**		**17 18 36.1**	**+1.3**	
VRI	**Vrincioaia**	**81.32**	**317**	⇑P	**P**		**17 18 36.1**	**+1.3**	
MLR	**Muntele Rosu**	**81.77**	**317**⇑	*iP*	**P**		**17 18 38.8**	**+1.6**	
MLR	**Muntele Rosu**	**81.77**	**317**	⇑P	**P**		**17 18 38.8**	**+1.6**	
BURAR	**Bucovina Array**	**82.73**	**319**⇑	*iP*	**P**		**17 18 43.8**	**+1.6**	
BURAR	**Bucovina Array**	**82.73**	**319**	⇑P	**P**		**17 18 43.8**	**+1.6**	
BUR08	**Bucovina Ar. S**	**82.75**	**319**	*eP*	**P**		**17 18 42.1**	**-0.1**	
VTS	**Vitosha**	**83.10**	**313**⇑	*iP*	**P**		**17 18 45.0**	**+0.8**	
VTS	**Vitosha**	**83.10**	**313**	⇑P	**P**		**17 18 45.0**	**+0.8**	
DRGR		**84.23**	**317**⇓	*iP*	**P**		**17 18 51.2**	**+1.3**	
DRGR		**84.23**	**317**	⇓P	**P**		**17 18 51.1**	**+1.2**	
BZS	**Buzias**	**84.77**	**316**⇓	*iP*	**P**		**17 18 53.6**	**+0.9**	
KOLS	**Kolonicke sedl**	**84.92**	**320**	*eP*	**P**		**17 18 54.6**	**+1.2**	
CRVS	**Cervenica-Dubn**	**85.45**	**319**	*eP*	**P**		**17 18 57.9**	**+1.9**	
STHS	**Stebnicka Huta**	**85.68**	**320**	*eP*	**P**		**17 18 57.7**	**+0.6**	
STHS					pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.5								
STHS	**Stebnicka Huta**	**85.68**	**320**	*eP*	**P**		**17 18 57.7**	**+0.6**	
	comp=Z,3.2nm,0.9s,mb4.5								
KECS	**Kecovo**	**86.01**	**319**	*eP*	**P**		**17 18 58.7**	**-0.1**	
KECS					pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.5								
KECS	**Kecovo**	**86.01**	**319**	*eP*	**P**		**17 18 58.7**	**-0.1**	
	comp=Z,1.7nm,0.7s,mb4.4								
PKSM	**Moragy**	**86.91**	**316**⇑	*iP*	**P**		**17 19 04.0**	**+0.7**	
PKSM	**Moragy**	**86.91**	**316**	⇑P	**P**		**17 19 04.0**	**+0.8**	
ARCES	**ARCESS Array B**	**87.89**	**340**	P	**P**		**17 19 07.1**	**-0.4**	
	comp=Z,5.7nm,0.8s,mb4.8,baz=76,slow=5.1,SNR=8.7								
ARCES					LR	LR	18 01 47.9		
	comp=Z,42nm,21.6s,MS3.8,baz=106,slow=38								
ARCES	**ARCESS Array B**	**87.89**	**340**	P	**P**		**17 19 07.1**	**-0.4**	
ARCES					pmax	pmax			
	comp=Z,6.0nm,0.8s								
ARCES					MLR	MLR			
	comp=Z,42nm,21.6s								
ARCES	**ARCESS Array B**	**87.89**	**340**	P	**P**		**17 19 07.1**	**-0.4**	
ARCES					LR	LR	18 01 47.9		
MORC	**Moravsky Berou**	**88.11**	**320**⇑	*iP*	**P**		**17 19 09.7**	**+0.8**	
MORC	**Moravsky Berou**	**88.11**	**320**	⇑P	**P**		**17 19 09.7**	**+0.7**	
BRG	**Berggiesshubel**	**90.52**	**321**	*eP*	pP		17 19 41.3	+10	
GERES	**GERESS Array B**	**90.52**	**319**	P	**P**		**17 19 21.1**	**+0.8**	
	comp=Z,1.3nm,0.7s,mb4.4,baz=87,slow=4.5,SNR=16								
GERES	**GERESS Array B**	**90.52**	**319**	P	**P**		**17 19 21.1**	**+0.8**	
GERES					pmax	pmax			
	comp=Z,1.0nm,0.7s								
KHC	**Kasperske Hory**	**90.62**	**319**	*eP*	**P**		**17 19 21.5**	**+0.8**	
NB2	**NORSAR Subarra**	**92.61**	**331**	P	**P**		**17 19 29.5**	**-0.2**	
	comp=Z,1.2nm,0.7s,mb4.4,baz=95,slow=5.3								
NVAR	**Mina Array Bea**	**129.97**	**40**	PKP	PKPdf		17 25 28.4	0.0	
	comp=Z,0.8nm,0.6s,baz=297,slow=2.2,SNR=7.1								
BW06	**Boulder Array**	**132.19**	**30**	*e*PKPdf	PKPdf		17 25 33.6	+1.1	
CPUP	**Villa Florida**	**143.85**	**214**	PKP	PKPdf		17 25 54.1	-0.2	
	comp=Z,1.0nm,0.7s,baz=178,slow=6.7,SNR=3.2								
CFAA	**Coronel Fontan**	**143.86**	**196**	PKP	PKPdf		17 25 54.1	-0.1	
	comp=Z,0.1nm,0.4s,baz=124,slow=3.6,SNR=2.2								
MIAR	**Mount Ida**	**146.05**	**22**	*e*PKIKP	PKPdf		17 25 57.9	0.0	
WVT	**Waverly**	**146.27**	**13**	*e*PKP2	PKPab		17 25 57.7	-2.3	
JCT	**Junction City**	**146.57**	**34**	*e*PKP2	PKPab		17 25 59.4	-1.9	
TKL	**Tuckaleechee C**	**147.42**	**7**	PKPbc	PKPbc		17 26 00.8	-1.8	
	comp=Z,3.0nm,0.6s,baz=0.0,slow=6.1,SNR=6.8								
TKL	**Tuckaleechee C**	**147.42**	**7**	PKP2	PKPbc		17 26 00.9	-1.7	
TKL				pmax	pmax				
	comp=Z,3.0nm,0.6s								
CPCT	**Cooper Cave**	**147.53**	**8**	*e*PKPdf	PKPdf		17 26 00.9	+0.6	
SWET	**Sewanee**	**147.53**	**10**	*e*PKPdf	PKPdf		17 26 01.3	+1.0	

*ISCJB **16** 17:17:59.3±0.6, 2293S±006×687W±0.1, h98km±6km, mb3.8/8, Error ellipse: s-maj=17.0km s-min=9.2km az=177.0*
*IDC **16** 17:17:59.9±0.5, 2280S×6878W, h91km±3km, mb3.8/9, mb1 3.9/12, mb1mx3.8/17, mbtmp3.8/12, Error ellipse: s-maj=18.3km s-min=11.7km az=55.0*
ISC 16 17:18:00.6±0.6, 2291S±006×687W±01, h94km±5km, h96km±1.1km: pP-P, n19, σ0 70/17, mb3.8/8, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
LVC	**Limon Verde**	**0.37**	**321**	P			**Pn**	**17 18 14.8**	**-0.1**
	1μm,0.3s,baz=166,slow=2.7								
LVC				S			**Sn**	**17 18 25.2**	**-0.3**
	3μm,0.3s,baz=41,slow=19,SNR=151								
LPAZ	**La Paz**	**6.60**	**4**	P			**Pn**	**17 19 36.9**	**+1.8**
	1.7nm,0.3s,baz=221,slow=4.7,SNR=41								
CFAA	**Coronel Fontan**	**8.67**	**178**	P			**Pn**	**17 20 02.7**	**-0.5**
	0.3nm,0.3s,baz=349,slow=14,SNR=34								
CFAA				S			**Sn**	**17 21 39.7**	**+0.5**
	0.2nm,0.3s,baz=56,slow=18,SNR=2.4								
SIV	**San Ignacio**	**9.92**	**47**	P			**Pn**	**17 20 19.3**	**-1.0**
	2.9nm,0.3s,baz=270,slow=10,SNR=51								
SIV				S			**Sn**	**17 22 05.2**	**-4.7**
	0.8nm,0.3s,baz=314,slow=20,SNR=7.9								
CPUP	**Villa Florida**	**10.86**	**111**	P			**Pn**	**17 20 33.1**	**+0.2**
	1.0nm,0.3s,baz=272,slow=12,SNR=30								
BDFB	**Brasilia**	**20.77**	**73**	P			**P**	**17 22 35.0**	**+0.8**
	1.2nm,0.3s,baz=222,slow=7.9,SNR=3.2								
DBIC	**Dimbokro**	**68.92**	**73**	P			**P**	**17 28 55.5**	**-0.4**
	2.9nm,0.8s,mb4.2,baz=174,slow=11,SNR=4.1								
DBIC				pP			pP	17 29 19.0	-0.8
	3.5nm,1.0s,baz=218,slow=8.8,SNR=1.7								
PDAR	**Pinedale Array**	**75.44**	**330**	P			**P**	**17 29 33.9**	**-0.2**
	0.3nm,0.7s,mb3.1,baz=132,slow=8.7,SNR=2.6								
ULM	**Lac du Bonnet**	**76.72**	**342**	P			**P**	**17 29 40.2**	**-0.9**
	1.4nm,0.5s,mb3.9,baz=150,slow=8.1,SNR=3.5								
NVAR	**Mina Array Bea**	**76.74**	**322**	P			**P**	**17 29 41.9**	**+0.3**
	0.2nm,0.6s,mb3.0,baz=145,slow=4.9,SNR=3.6								
NVAR				sP			sP	17 30 17.1	+1.0
	0.5nm,0.7s,baz=154,slow=8.1,SNR=3.5								
TORD	**Torodi Ar. Bea**	**77.61**	**70**	P			**P**	**17 29 46.9**	**-0.2**
	9.4nm,0.8s,mb4.6,baz=253,slow=5.3,SNR=56								
TORD				pP			pP	17 30 11.8	+0.5
	1.4nm,0.5s,baz=252,slow=5.6,SNR=4.0								
BOSA	**Boshof**	**82.59**	**118**	P			**P**	**17 30 12.9**	**-0.7**
	3.9nm,0.9s,mb4.2,baz=254,slow=7.4,SNR=4.5								
MAW	**Mawson**	**82.92**	**163**	P			**P**	**17 30 15.3**	**+0.6**
	0.9nm,0.7s,mb3.7,baz=240,slow=5.2,SNR=6.4								
MAW				pP			pP	17 30 40.3	+1.1
	3.1nm,0.8s,baz=255,slow=6.9,SNR=6.2								
ESDC	**Sonseca Array**	**86.67**	**44**	P			**P**	**17 30 34.2**	**+0.5**
	0.2nm,0.5s,mb3.3,baz=205,slow=2.4,SNR=3.9								
ASAR	**Alice Springs**	**128.78**	**207**	PKP		PKPdf		17 36 56.8	-1.0
	0.5nm,0.8s,baz=130,slow=1.7,SNR=9.2								
ASAR				pPKP		pPKPdf		17 37 23.6	-0.1
	0.4nm,0.6s,baz=121,slow=2.1,SNR=3.1								
WRA	**Warramunga Arr**	**131.86**	**210**	PKP		PKPdf		17 37 02.9	-0.7
	0.5nm,0.8s,baz=158,slow=1.6,SNR=11								
WRA				pPKP		pPKPdf		17 37 29.2	-0.4
	0.3nm,0.6s,baz=156,slow=1.7,SNR=2.5								
ZALV	**Zalesovo Beam**	**143.11**	**26**	PKP		PKPdf		17 37 20.7	-2.5
	0.8nm,0.5s,baz=274,slow=5.8,SNR=5.1								
ZALV				pPKP		pPKPdf		17 37 48.4	-0.8
	0.4nm,0.4s,baz=316,slow=4.0,SNR=2.5								
MKAR	**Makanchi Array**	**146.62**	**37**	PKPbc		PKPbc		17 37 30.2	-1.0
	1.8nm,0.8s,baz=326,slow=1.9,SNR=9.9								
MKAR				pPKPbc		pPKPbc		17 37 56.5	-0.4
	2.4nm,1.0s,baz=356,slow=2.7,SNR=4.2								
MJAR	**Matsushiro Arr**	**153.11**	**306**	PKPbc		PKPbc		17 37 47.0	-0.5
	0.5nm,0.7s,baz=94,slow=2.3,SNR=3.5								

*IDC **16** 17:38:54.6±2.5, 1693S×17267W, h0km, mb4.3/5, mb1 4.4/5, mb1mx4.0/19, mbtmp4.3/5, ML1.5/1, Error ellipse: s-maj=60.2km s-min=28.8km az=111.0*
*ISCJB **16** 17:38:57.5±1.5, 168S±02×1727W±03, h33km, mb4.3/5, Error ellipse: s-maj=45.8km s-min=9.1km az=26.9*
*NEIC **16** 17:38:58.8±1.3, 1691S×17257W, h35km, Error ellipse: s-maj=38.5km s-min=12.9km az=116.0*
ISC 16 17:38:58.7±1.6, 169S±01×1726W±03, h35km, n8, σ0 48/10, mb4.3/5, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
AFI	**Afiamalu**	**3.05**	**14**	Pn			**Pn**	**17 39 45.0**	**+0.5**
	3.2nm,0.3s,baz=233,slow=15,SNR=9.0								
AFI				Sn			**Sn**	**17 40 19.5**	**-0.4**
	43nm,0.3s,baz=177,slow=19,SNR=13								
AFI	**Afiamalu**	**3.05**	**14**	Pn			**Pn**	**17 39 45.0**	**+0.5**
AFI				Sn			**Sn**	**17 40 19.5**	**-0.4**
URZ	**Urewera**	**23.15**	**201**	P			**P**	**17 44 01.7**	**-0.3**
	8.7nm,0.4s,mb4.6,baz=36,slow=8.7,SNR=13								
CTA	**Charters Tower**	**39.12**	**259**	P			**P**	**17 46 22.4**	**-0.7**
	2.2nm,0.6s,mb4.1,baz=96,slow=8.7,SNR=6.8								
STKA	**Stephens Creek**	**44.02**	**241**	P			**P**	**17 47 03.0**	**-0.1**
	1.7nm,0.7s,mb3.9,baz=58,slow=9.5,SNR=2.8								
STKA	**Stephens Creek**	**44.02**	**241**	P			**P**	**17 47 03.0**	**-0.1**
WRA	**Warramunga Arr**	**50.31**	**258**	P			**P**	**17 47 52.6**	**+0.3**
	0.9nm,0.5s,mb4.1,baz=97,slow=6.7,SNR=33								
ASAR	**Alice Springs**	**50.44**	**253**	P			**P**	**17 47 53.9**	**+0.7**
	8.0nm,0.6s,mb4.9,baz=88,slow=8.7,SNR=189								

*NEIC **16** 17:49:17.5, 3451S×7354W, h15km, ML3.5(GUC), After GUC.*
GUC 16 17:49:17.5±0.6, 3451S×7354W, h15km±5km, MD3.6, ML3.5, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
COCH	**Cobquecura**	**1.73**	**160**	*eP*			Pn	17 49 46.6	-0.4
COCH				*i* S			Sn	17 50 08.8	0.0
COCH				AML		AML		17 50 10.1	
	comp=N,249nm,0.4s								
COCH	**Cobquecura**	**1.73**	**160**	*eP*			Pn	17 49 46.6	-0.4
COCH				*i* S			Sn	17 50 08.8	0.0
TALC	**Talca**	**1.80**	**120**	*eP*			Pn	17 49 52.9	+5.0
TALC				*i* S			Sn	17 50 16.2	+5.8
TALC				AML		AML		17 50 18.2	
	comp=E,2μm,0.1s								
TALC	**Talca**	**1.80**	**120**	*eP*			Pn	17 49 52.9	+5.0
TALC				*i* S			Sn	17 50 16.2	+5.8
LNV	**Longovilo**	**1.85**	**73**	*i* P			Pn	17 49 46.5	-2.1
LNV				*i* S			Sn	17 50 10.0	-1.6
NICH	**Los Niches**	**1.96**	**105**	*i* P			Pn	17 49 50.8	+0.6
NICH				*i* S			Sn	17 50 15.6	+1.0
SFDO	**San Fernando**	**2.09**	**94**	*i* P			Pn	17 49 52.4	+0.6
SFDO				*i* S			Sn	17 50 18.9	+1.4
CCHI	**Chillan**	**2.41**	**151**	*i* P			Pn	17 49 57.1	+0.8
CCHI				*i* S			Sn	17 50 27.3	+1.8
CCHI				AML		AML		17 50 29.5	
	comp=N,384nm,0.5s								
CCHI	**Chillan**	**2.41**	**151**	*i* P			Pn	17 49 57.1	+0.8
CCHI				*i* S			Sn	17 50 27.3	+1.8
PEL	**Peldehue**	**2.74**	**61**	AML		AML		17 50 34.2	
	comp=E,202nm,0.3s								
LMEL	**Las Melosas**	**2.84**	**78**	AML		AML		17 50 42.1	
	comp=N,239nm,0.2s								
FCH	**Farellones**	**2.94**	**67**	AML		AML		17 50 39.6	
	comp=N,195nm,0.2s								
PLCA	**Paso Flores**	**6.65**	**160**	*e*Pn			Pn	17 50 56.2	+1.6
	comp=N,1.8nm,0.6s								

*CSEM **16** 17:52:51.7±0.9, 3732N×2455W, h0km, ML2.5, Error ellipse: s-maj=7.5km s-min=3.4km az=84.0, After PDA*
*PDA **16** 17:52:51.7±0.9, 3732N×2455W, h0km, MD3.5, ML2.5, Error ellipse: s-maj=7.5km s-min=3.4km az=84.0*
ISC 16 17:52:51.4±2.0, 3739N±007×247W±01, h18km±8km, n11, σ0 63/21, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PSMN	**Pico do Norte,**	**0.50**	**220**	*eP*			**Pg**	**17 53 01.3**	**-0.1**
PSMN				*e*S			**Sg**	**17 53 08.0**	**-0.2**
CMLA	**Cha da Macela**	**0.78**	**299**	*eP*			**Pb**	**17 53 06.1**	**-0.3**
CMLA				*e*S			**Sg**	**17 53 17.3**	**+0.2**
CMLA				A				17 53 23.2	
	120nm,0.4s								
CMLA	**Cha da Macela**	**0.78**	**299**	*eP*			**Pb**	**17 53 06.1**	**-0.3**
CMLA				*e*S			**Sg**	**17 53 17.3**	**+0.2**
PDA	**Ponta Delgada**	**0.88**	**295**	*eP*			**Pb**	**17 53 08.0**	**0.0**
PDA				*e*S			**Sb**	**17 53 19.7**	**+0.3**
PSET	**Sete Cidades**	**0.95**	**298**	*eP*			**Pb**	**17 53 08.8**	**-0.5**
PSET				*e*S			**Sb**	**17 53 21.6**	**+0.1**
PSET				A				17 53 27.9	
	33nm,0.3s								
PSET	**Sete Cidades**	**0.95**	**298**	*eP*			**Pb**	**17 53 08.8**	**-0.5**
PSET				*e*S			**Sb**	**17 53 21.6**	**+0.1**
PSCM	**Serra do Cume**	**2.34**	**305**	*eP*			**Pn**	**17 53 28.5**	**-0.4**
PSCM				*e*S			**Sn**	**17 53 55.7**	**-1.5**
PSCM				A				17 54 02.6	
	12nm,0.2s								
PSCM	**Serra do Cume**	**2.34**	**305**	*eP*			**Pn**	**17 53 28.5**	**-0.4**
PSCM				*e*S			**Sn**	**17 53 55.7**	**-1.5**
ROSA	**Rosais**	**3.13**	**296**	*eP*			**Pn**	**17 53 40.1**	**+0.4**
PICO	**Pico**	**3.18**	**292**	*eP*			**Pn**	**17 53 41.5**	**+1.1**
PICO				*e*S			**Sn**	**17 54 18.9**	**+1.0**
CALA	**Caldeira**	**3.41**	**292**	*eP*			**Pn**	**17 53 44.1**	**+0.5**
CALA				*e*S			**Sn**	**17 54 23.0**	**-0.6**

*ISCJB **16** 18:10:44.0±1.3, 2068S±008×1778W±0.1, h438km±15km, mb4.1/21, Error ellipse: s-maj=16.3km s-min=9.7km az=31.6*
*BJI **16** 18:10:45.6, 2070S×17760W, h451km, mB4.9, mb4.6*
*NEIC **16** 18:10:45.6±1.0, 2067S×17765W, h452km±11km, mb4.4/8, Error ellipse: s-maj=15.4km s-min=8.2km az=142.0*
*IDC **16** 18:10:47.9±2.2, 2070S×17783W, h467km±24km, mb3.6/13, mb1 3.8/14, mb1mx3.7/18, mbtmp3.6/14, Error ellipse: s-maj=19.7km s-min=11.1km az=143.0*
ISC 16 18:10:45.3±1.2, 207S±01×1777W±01, h438km±15km, n71, σ0 86/38, mb4.1/21, 3C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
AFI	**Afiamalu**	**8.80**	**41**	P			**P**	**18 12 48.7**	**-0.7**
	5.6nm,0.3s,baz=200,slow=15,SNR=5.3								
AFI				S			**S**	**18 14 24.6**	**-6.7**
	15nm,0.3s,baz=57,slow=23,SNR=9.4								
AFI	**Afiamalu**	**8.80**	**41**	P			**P**	**18 12 48.7**	**-0.7**
AFI				S			**S**	**18 14 24.6**	**-6.7**
DZM	**Mont Dzumac**	**14.81**	**262**	*eP*			**P**	**18 13 56.7**	**+1.9**
URZ	**Urewera**	**18.10**	**193**	P			**P**	**18 14 27.8**	**-1.5**
	2.1nm,0.3s,baz=8.1,slow=3.5,SNR=12								
URZ				S			**S**	**18 17 28.0**	**-5.5**
	0.3nm,0.3s,baz=90,slow=20,SNR=4.5								
RPZ	**Rata Peaks**	**24.82**	**200**	P			**P**	**18 15 31.4**	**+0.7**
	7.6nm,0.8s,mb4.2,baz=45,slow=16,SNR=2.2								
CNB	**Canberra Magne**	**32.34**	**236**	*eP*			**P**	**18 16 38.3**	**+1.6**
CTA	**Charters T

BRG e 18 33 02.1
comp=Z,12nm,1.6s
MLR Muntele Rosu 148.49 327 PKPbc PKPbc 18 29 41.0 -0.6
comp=Z,1.2nm,0.4s,baz=320,slow=7.0,SNR=4.8
MLR PKPab PKPab 18 29 47.0 +0.5
comp=Z,2.1nm,0.5s,baz=336,slow=10,SNR=5.9
MORC Moravsky Berou 148.51 341 ⇓*i*P PKPab 18 29 46.3 -0.1
MORC Moravsky Berou 148.51 341 ⇓P PKPab 18 29 46.3 -0.1
KECS Kecovo 148.61 336 *e*PKP PKPab 18 29 46.2 -0.7
KECS Kecovo 148.61 336 *e*PKP PKPab 18 29 46.2 -0.7
VYHS Vyhne 149.20 338 *e*PKP PKPab 18 29 49.7 +0.4
VYHS Vyhne 149.20 338 *e*PKP PKPab 18 29 49.7 +0.4
VRAC Vranov 149.21 342 PKPbc PKPbc 18 29 42.6 -0.7
comp=Z,1.1nm,0.6s,baz=304,slow=3.6,SNR=2.7
VRAC PKPab PKPab 18 29 49.2 -0.1
comp=Z,3.1nm,0.6s,baz=20,slow=7.2,SNR=6.4
VRAC Vranov 149.21 342 ⇑*i*P PKPab 18 29 49.3 0.0
KHC Kasperske Hory 150.19 345 *e*PKPbc PKPbc 18 29 45.0 -0.6
KHC *e*PKPab PKPab 18 29 53.5 +0.1
GERES GERESS Array B 150.42 345 PKPbc PKPbc 18 29 45.0 -1.1
comp=Z,1.0nm,0.6s,baz=30,slow=2.4,SNR=11
GERES PKPab PKPab 18 29 53.8 -0.6
comp=Z,0.6nm,0.5s,baz=22,slow=5.4,SNR=5.8
BZS Buzias 150.46 332 ⇓*i*P PKPbc 18 29 45.1 -1.2
BZS Buzias 150.46 332 ⇓P PKPbc 18 29 45.1 -1.2
PKSM Moragy 151.20 336 ⇓*i*P PKPbc 18 29 46.8 -1.2
PKSM Moragy 151.20 336 ⇓P PKPbc 18 29 46.8 -1.2
TORD Torodi Ar. Bea 172.51 176 PKP PKPdf 18 30 01.2 -2.5
comp=Z,0.7nm,0.8s,baz=216,slow=0.6,SNR=3.8
TORD PKPab PKPab 18 31 32.8 +1.4
comp=Z,0.1nm,0.5s,baz=210,slow=3.0,SNR=3.3
TORD Torodi Ar. Bea 172.51 176 PKP PKPdf 18 30 01.2 -2.5
TORD PKPab PKPab 18 31 32.8 +1.4

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*CSEM **16** 18:21:03.1, 3304N×1305E, h0km, ML3.2, After LDSN*
*IDC **16** 18:21:04.0±2.1, 3315N×1309E, h0km, mb3.2/2, mb1 3.3/5, mb1mx3.3/26, mbtmp3.3/5, ML3.1/3, MS2.8/3, Ms1 2.8/3, ms1mx2.4/23, Error ellipse: s-maj=37.6km s-min=23.3km az=114.0*
*ISCJB **16** 18:21:04.5±0.7, 3320N±005×1309E±007, h10km, mb3.1/2, Error ellipse: s-maj=8.8km s-min=7.2km az=179.1*
ISC 16 18:21:05.6±0.7, 3314N±005×1309E±008, h10km, n11, σ0981/14, mb3.1/2, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GHAR	**Gharyan**	**1.01**	**180**	*i* P	**Pg**	**18 21 24.2**	**-0.9**
	SNR=35						
ALAS	**Alassa**	**1.27**	**257**	*i* P	**Pn**	**18 21 29.7**	**+0.3**
	SNR=24						
ALAS				*e*S	**Sb**	**18 21 50.7**	**+4.7**
	701nm,0.6s,SNR=24						
LMSR	**Misrath**	**1.82**	**116**	*i* P	**Pn**	**18 21 37.5**	**+0.6**
	SNR=24						
LMSR				*e*S	**Sn**	**18 22 04.9**	**+5.0**
	356nm,0.5s,SNR=24						
KEST	**Kesra**	**4.03**	**311**	Pn	**Pn**	**18 22 07.4**	**+0.1**
	0.3nm,0.3s,baz=84,slow=5.2,SNR=22						
KEST				Sn	**Sn**	**18 22 53.8**	**-0.8**
	1.0nm,0.3s,baz=60,slow=20,SNR=6.5						
VAE	**Valguarnera**	**4.46**	**14**	Pn	**Pn**	**18 22 12.3**	**-0.9**
	3.2nm,0.3s,baz=236,slow=22,SNR=7.7						
VAE				Sn	**Sn**	**18 23 05.1**	**-0.1**
	1.9nm,0.3s,baz=258,slow=19,SNR=2.1						
VAE				LR	LR	18 24 40.8	
	comp=Z,151nm,18.6s,baz=316,slow=49						
IDI	**Anoyia**	**10.01**	**74**	LR	LR	18 28 30.3	
	comp=Z,28nm,18.0s,baz=76,slow=45						
DAVOX	**Davos/Dischmat**	**13.84**	**351**	Pn	**Pn**	**18 24 25.0**	**+3.2**
	0.1nm,0.3s,baz=175,slow=6.7,SNR=3.2						
MDT	**Midelt**	**14.87**	**274**	Pn	**Pn**	**18 24 36.7**	**+0.9**
	0.1nm,0.3s,baz=62,slow=17,SNR=5.1						
MDT				LR	LR	18 31 20.2	
	comp=Z,52nm,18.3s,baz=60,slow=42						
ESDC	**Sonseca Array**	**15.19**	**300**	Pn	**Pn**	**18 24 45.1**	**+5.0**
	0.1nm,0.3s,baz=107,slow=13,SNR=7.7						
AKASG	**Malin Array Be**	**21.18**	**29**	P	**P**	**18 25 50.9**	**0.0**
	0.7nm,0.5s,mb3.2,baz=221,slow=9.7,SNR=3.3						
TORD	**Torodi Ar. Bea**	**22.45**	**210**	P	**P**	**18 26 04.5**	**-0.3**
	0.6nm,0.8s,mb3.1,baz=32,slow=9.2,SNR=5.7						

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*NEIC **16** 18:35:36.8±1.9, 159S×9971E, h35km, Error ellipse: s-maj=78.3km s-min=13.0km az=59.0*
IDC 16 18:35:31.9±3.4, 159S×9974E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/19, mbtmp3.6/6, ML3.8/1, Error ellipse: s-maj=139.7km s-min=19.8km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.93**	**358**	P	Pn	18 40 05.8	-1.3
	0.1nm,0.3s,baz=188,slow=10,SNR=10						
WRA	**Warramunga Arr**	**38.43**	**121**	P	P	18 42 55.1	-0.5
	0.8nm,0.5s,baz=301,slow=9.3,SNR=12						
ASAR	**Alice Springs**	**39.71**	**126**	P	P	18 43 06.7	+0.4
	0.4nm,0.5s,baz=298,slow=8.0,SNR=12						
SONM	**Songino Array**	**49.56**	**6**	P	P	18 44 24.7	+0.2
	0.6nm,0.7s,baz=179,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**50.56**	**345**	P	P	18 44 32.4	+0.2
	0.4nm,0.3s,baz=158,slow=8.3,SNR=10						
ZAA0	**Zalesovo Array**	**56.71**	**350**	*e*P	P	18 45 16.1	-1.1
ZALV	**Zalesovo Beam**	**56.71**	**350**	P	P	18 45 16.6	-0.6
	0.6nm,0.3s,baz=165,slow=6.2,SNR=4.5						

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*ISCJB **16** 18:57:01.9±0.3, 5767N±003×3292W±007, h10km, mb4.3/98, MS3.8/30, Error ellipse: s-maj=5.2km s-min=4.0km az=168.5*
*IDC **16** 18:57:01.8±0.5, 5767N×3280W, h0km, mb4.1/26, mb1 4.2/29, mb1mx4.2/37, mbtmp4.1/29, ML3.5/3, MS3.8/26, Ms1 3.8/26, ms1mx3.6/43, Error ellipse: s-maj=16.0km s-min=11.2km az=179.0*
*CSEM **16** 18:57:01.2±0.1, 5763N×3295W, h10km, mb4.5/68, Ms3.9, Error ellipse: s-maj=1.9km s-min=1.7km az=44.0*
*NEIC **16** 18:57:03.5±0.2, 5771N×3286W, h10km, mb4.5/67, MS4.1/4, Error ellipse: s-maj=7.1km s-min=4.2km az=206.0*
*REY **16** 18:57:48.1, 5979N×2792W, h10km, ML3.7, ML2.7*
ISC 16 18:57:03.8±0.3, 5759N±003×3292W±007, h10km, n226, σ1900/209, mb4.3/98, MS3.8/30, 26C-4D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGRV	**Grindav??k**	**8.10**	**35**	P	**Pn**	**18 59 02.0**	**+0.7**
INYL	**Nylenda**	**8.10**	**34**	P	**Pn**	**18 59 02.8**	**+1.5**
IVOG	**Vogar**	**8.20**	**34**	P	**Pn**	**18 59 03.6**	**+1.0**
IVOS	**Vogsosar**	**8.34**	**36**	P	**Pn**	**18 59 04.6**	**+0.1**
IKAS	**Kald??rsel**	**8.41**	**35**	P	**Pn**	**18 59 06.7**	**+1.3**
ISAN	**Sandskeio**	**8.52**	**39**	P	**Pn**	**18 59 07.6**	**+0.6**
IBJA	**Bjarnastaoir**	**8.53**	**37**	P	**Pn**	**18 59 07.6**	**+0.5**
IKUD	**Kuludalsa**	**8.62**	**34**	P	**Pn**	**18 59 10.0**	**+1.7**
ISOL	**Solvholt**	**8.63**	**38**	P	**Pn**	**18 59 08.5**	**0.0**
IASM	**Asmuli**	**8.68**	**39**	P	**Pn**	**18 59 09.1**	**-0.1**
IKRO	**Krokur**	**8.69**	**36**	P	**Pn**	**18 59 10.0**	**+0.7**
ISAU	**Saurbar**	**8.85**	**38**	P	**Pn**	**18 59 11.5**	**0.0**
IHAU	**Haukadalur**	**8.99**	**39**	P	**Pn**	**18 59 14.0**	**+0.6**
BORG	**Borgarnes**	**9.09**	**33**	Pn	**Pn**	**18 59 16.8**	**+2.0**
	2.8nm,0.3s,baz=233,slow=6.0,SNR=8.9						
BORG				Sn	**Sn**	**19 00 56.1**	**-0.9**
	0.5nm,0.3s,baz=273,slow=17,SNR=2.4						
BORG				LR	LR	19 01 42.8	
	comp=Z,319nm,20.2s,baz=205,slow=31						
IASB	**`sbjarnarst**	**9.09**	**33**	P	**Pn**	**18 59 17.8**	**+3.0**
IGYG	**Gygjarholskot**	**9.11**	**37**	P	**Pn**	**18 59 15.9**	**+0.9**
SFJD	**Kangerlussuaq**	**12.46**	**326**	Pn	**Pn**	**19 00 01.0**	**+0.1**
	0.6nm,0.3s,baz=96,slow=6.0,SNR=4.2						
SFJD				LR	LR	19 04 03.7	
	comp=Z,1μm,18.8s,baz=109,slow=34						
SFJD	**Kangerlussuaq**	**12.46**	**326**	*i* P	**Pn**	**19 00 01.2**	**+0.3**
SFJD							
	comp=Z,770nm,18.0s						
SFJD	**Kangerlussuaq**	**12.46**	**326**	*e*P	**Pn**	**19 00 01.2**	**+0.3**
SUMG	**Summit**	**15.22**	**354**	*e*P	**Pn**	**19 00 36.2**	**-2.1**
	comp=Z,10nm,1.3s						
SUMG	**Summit**	**15.22**	**354**	*e*P	**Pn**	**19 00 36.2**	**-2.1**
	comp=Z,10nm,1.3s						
DLF	**Lyons Farm**	**15.53**	**95**	*e*P	**Pn**	**19 00 41.0**	**-1.5**
EKA	**Eskdalemuir Ar**	**16.54**	**85**	Pn	**Pn**	**19 00 56.0**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=286,slow=10,SNR=9.6						
SCHQ	**Schefferville**	**18.95**	**276**	P	**Pn**	**19 01 24.9**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=78,slow=14,SNR=3.0						
SCHQ				LR	LR	19 07 26.5	
	comp=Z,547nm,20.0s,baz=115,slow=33						
SCHQ	**Schefferville**	**18.95**	**276**	P	**Pn**	**19 01 24.9**	**-0.3**
SCHQ				LR	LR	19 07 26.5	
ROSF	**Rostrenen**	**19.96**	**105**	*e*P	**Pn**	**19 01 37.1**	**-0.4**
	comp=Z,76nm,1.4s						
ROSF	**Rostrenen**	**19.96**	**105**	*e*P	**Pn**	**19 01 37.1**	**-0.4**
	comp=Z,38nm,1.4s						
QUIF	**Quistinic**	**20.29**	**106**	*e*P	**P**	**19 01 39.4**	**+0.1**
	comp=Z,191nm,1.8s						
QUIF	**Quistinic**	**20.29**	**106**	*e*P	**P**	**19 01 39.4**	**+0.1**
	comp=Z,96nm,1.8s						
SGMF	**Saint Gilles**	**20.39**	**104**	*e*P	**P**	**19 01 41.5**	**+1.1**
	comp=Z,217nm,1.8s						
SGMF	**Saint Gilles**	**20.39**	**104**	*e*P	**P**	**19 01 41.5**	**+1.1**
	comp=Z,109nm,1.8s						
EMAZ	**Mazaricos**	**21.02**	**124**	P	**P**	**19 01 46.6**	**-0.7**
	comp=Z,8.5nm,0.8s,mb4.1						
EMAZ	**Mazaricos**	**21.02**	**124**	P	**P**	**19 01 46.6**	**-0.8**
	comp=Z,8.5nm,0.8s,mb4.1						
FLN	**La Foliniere**	**21.17**	**101**	⇑*i*P	**P**	**19 01 49.1**	**+0.3**
	comp=Z,77nm,1.1s,mb4.7						
FLN				*e*MLR	MLR		
	comp=Z,344nm,17.0s,MS3.5						
FLN	**La Foliniere**	**21.17**	**101**	⇑*i*P	**P**	**19 01 49.1**	**+0.3**
	comp=Z,39nm,1.1s,mb4.7						
FLN				LR	LR		
	comp=Z,340nm,17.0s,MS3.8						
GRR	**Gorron**	**21.20**	**102**	*e*P	**P**	**19 01 50.2**	**+1.1**
	comp=Z,56nm,1.0s,mb4.5						
GRR	**Gorron**	**21.20**	**102**	*e*P	**P**	**19 01 50.2**	**+1.1**
	comp=Z,28nm,1.0s,mb4.5						
STS	**Santiago**	**21.27**	**123**	P	**P**	**19 01 50.2**	**+0.3**
	comp=Z,23nm,1.1s,mb4.4						
STS	**Santiago**	**21.27**	**123**	P	**P**	**19 01 50.2**	**+0.3**
	comp=Z,23nm,1.1s,mb4.4						
LDF	**La Druitiere**	**21.46**	**101**	*e*P	**P**	**19 01 52.2**	**+0.2**
	comp=Z,120nm,1.4s,mb4.7						
LDF	**La Druitiere**	**21.46**	**101**	*e*P	**P**	**19 01 52.2**	**+0.2**
	comp=Z,60nm,1.4s,mb4.7						
EPON	**Pontenova**	**21.56**	**120**	P	**P**	**19 01 52.4**	**-0.7**
	comp=Z,15nm,0.7s,mb4.5						
EPON	**Pontenova**	**21.56**	**120**	P	**P**	**19 01 52.4**	**-0.7**
	comp=Z,15nm,0.7s,mb4.5						
ERUA	**La Rua**	**22.29**	**122**	P	**P**	**19 02 01.2**	**+0.3**
	comp=Z,17nm,1.1s,mb4.4						
ERUA	**La Rua**	**22.29**	**122**	P	**P**	**19 02 01.2**	**+0.3**
	comp=Z,17nm,1.1s,mb4.4						
ELOB	**Lobios**	**22.30**	**124**	P	**P**	**19 02 01.4**	**+0.5**
	comp=Z,6.7nm,0.6s,mb4.2						
ELOB	**Lobios**	**22.30**	**124**	P	**P**	**19 02 01.4**	**+0.4**
	comp=Z,6.7nm,0.6s,mb4.2						
PCAB	**Cabril**	**22.44**	**124**	*e*P	**P**	**19 02 05.0**	**+2.5**
	comp=Z,8.8nm,0.8s,mb4.2						
NOA	**NORSAR Array B**	**22.45**	**63**	LR	LR	19 09 32.1	
	comp=Z,38nm,19.9s,MS2.8,baz=290,slow=34						
EARI	**Arriondas**	**22.50**	**117**	P	**P**	**19 02 03.9**	**+0.8**
	comp=Z,29nm,1.3s,mb4.5						
MFF	**Saint Martin d**	**22.71**	**105**	⇑*i*P	**P**	**19 02 04.9**	**-0.4**
	comp=Z,126nm,1.6s,mb4.8						
MFF	**Saint Martin d**	**22.71**	**105**	⇑*i*P	**P**	**19 02 04.9**	**-0.4**
	comp=Z,63nm,1.6s,mb4.8						
ECAL	**Calabor**	**22.84**	**122**	P	**P**	**19 02 06.8**	**+0.1**
	comp=Z,16nm,1.4s,mb4.3						
ECAL	**Calabor**	**22.84**	**122**	P	**P**	**19 02 06.8**	**+0.2**
	comp=Z,16nm,1.4s,mb4.3						
BAIF	**Baives**	**22.93**	**93**	*e*P	**P**	**19 02 06.7**	**-0.9**
	comp=Z,76nm,1.7s,mb4.6						
BAIF	**Baives**	**22.93**	**93**	*e*P	**P**	**19 02 06.7**	**-0.9**
	comp=Z,38nm,1.7s,mb4.6						
GIVF	**Givet**	**23.24**	**92**	*e*P	**P**	**19 02 09.8**	**-1.1**
	comp=Z,96nm,1.5s,mb4.7						
GIVF	**Givet**	**23.24**	**92**	*e*P	**P**	**19 02 09.8**	**-1.1**
	comp=Z,48nm,1.5s,mb4.7						
PVIS	**Viseu**	**23.30**	**126**	*e*P	**P**	**19 02 12.1**	**+0.5**
	comp=Z,14nm,1.2s,mb4.3						
MVO	**Moncorvo**	**23.32**	**124**	*e*P	**P**	**19 02 13.0**	**+1.2**
	comp=Z,16nm,0.8s,mb4.5						
MVO				*e*LR	LR	19 08 01.1	
	comp=Z,466nm,18.6s						
ELAN	**Lanestosa**	**23.41**	**115**	P	**P**	**19 02 12.7**	**0.0**
	comp=Z,7.3nm,1.1s,mb4.0						
ELAN	**Lanestosa**	**23.41**	**115**	P	**P**	**19 02 12.7**	**0.0**
	comp=Z,7.3nm,1.1s,mb4.0						
MTE	**Manteigas**	**23.71**	**126**	*e*P	**P**	**19 02 16.6**	**+0.9**
	comp=Z,21nm,1.1s,mb4.5						
MTE				*e*LR	LR	19 07 54.2	
	comp=Z,451nm,20.7s						
MTE	**Manteigas**	**23.71**	**126**	*e*P	**P**	**19 02 16.2**	**+0.5**
	comp=Z,20nm,1.0s,mb4.5						
MTE	**Manteigas**	**23.71**	**126**	*e*P	**P**	**19 02 16.2**	**+0.5**
	comp=Z,20nm,1.0s,mb4.5						
HFS	**Hagfors**	**23.85**	**64**	P	**P**	**19 02 16.0**	**-0.8**
	comp=Z,4.2nm,0.8s,mb3.9,baz=274,slow=5.6,SNR=4.4						
HFS				LR	LR	19 09 55.5	
	comp=Z,84nm,21.9s,MS3.2,baz=219,slow=33						
TCF	**Toulx Ste Croi**	**24.14**	**103**	⇑*i*P	**P**	**19 02 19.0**	**-0.6**
	comp=Z,47nm,1.3s,mb4.5						
TCF	**Toulx Ste Croi**	**24.14**	**103**	⇑*i*P	**P**	**19 02 19.0**	**-0.6**
	comp=Z,23nm,1.3s,mb4.5						
PMAFR	**Mata**	**24.18**	**130**	*e*LR	LR	19 08 10.6	
	comp=Z,427nm,23.7s						
MEZF	**Maizieres J'vi**	**24.28**	**96**	*e*P	**P**	**19 02 19.8**	**-1.0**
	comp=Z,136nm,1.9s,mb4.8						
MEZF	**Maizieres J'vi**	**24.28**	**96**	*e*P	**P**	**19 02 19.8**	**-1.0**
	comp=Z,68nm,1.9s,mb4.8						
LFF	**La Frestale**	**24.28**	**107**	⇑*i*P	**P**	**19 02 19.9**	**-0.9**
	comp=Z,14nm,0.8s,mb4.2						
LFF	**La Frestale**	**24.28**	**107**	⇑*i*P	**P**	**19 02 19.9**	**-0.9**
	comp=Z,7.0nm,0.8s,mb4.2						
BGF	**Bois d'Agland**	**24.30**	**101**	⇑*i*P	**P**	**19 02 20.3**	**-0.7**
	comp=Z,24nm,0.7s,mb4.4						
BGF	**Bois d'Agland**	**24.30**	**101**	⇑*i*P	**P**	**19 02 20.3**	**-0.7**
	comp=Z,12nm,0.7s,mb4.4						
SSF	**Saint Saulge**	**24.33**	**100**	⇑*i*P	**P**	**19 02 20.9**	**-0.4**
	comp=Z,16nm,0.8s,mb4.2						
SSF	**Saint Saulge**	**24.33**	**100**	⇑*i*P	**P**	**19 02 20.9**	**-0.4**
	comp=Z,8.1nm,0.8s,mb4.2						
LOR	**Lormes**	**24.39**	**99**	⇑*i*P	**P**	**19 02 21.3**	**-0.5**
	comp=Z,18nm,1.0s,mb4.1						
LOR				*e*MLR	MLR		
	comp=Z,321nm,20.0s,MS3.5						
LOR	**Lormes**	**24.39**	**99**	⇑*i*P	**P**	**19 02 21.3**	**-0.5**
	comp=Z,8.9nm,1.0s,mb4.2						
LOR				LR	LR		
	comp=Z,320nm,20.0s,MS3.8						
AVF	**Avril sur Loir**	**24.42**	**101**	⇑*i*P	**P**	**19 02 21.3**	**-0.8**
	comp=Z,7.6nm,0.7s,mb4.0						
AVF	**Avril sur Loir**	**24.42**	**101**	⇑*i*P	**P**	**19 02 21.3**	**-0.8**
	comp=Z,3.8nm,0.7s,mb4.0						
RJF	**Les Rejaudoux**	**24.43**	**105**	⇑*i*P	**P**	**19 02 21.5**	**-0.7**
	comp=Z,40nm,1.3s,mb4.4						
RJF				*e*MLR	MLR		
	comp=Z,1μm,21.0s,MS4.0						
RJF	**Les Rejaudoux**	**24.43**	**105**	⇑*i*P	**P**	**19 02 21.5**	**-0.7**
	comp=Z,20nm,1.3s,mb4.4						
RJF				LR	LR		
	comp=Z,1μm,21.0s,MS4.3						
PMRV	**Marv??o**	**24.58**	**127**	*e*P	**P**	**19 02 23.7**	**+0.1**
	comp=Z,13nm,1.6s,mb4.2						
PMRV				*e*LR	LR	19 08 25.0	
	comp=Z,307nm,19.1s						
SJPF	**Ste Jean**	**24.58**	**112**	*e*P	**P**	**19 02 22.8**	**-0.8**
SMF	**Signal de Mont**	**24.77**	**100**	*e*P	**P**	**19 02 23.9**	**-1.4**
	comp=Z,45nm,1.1s,mb4.6						
SMF	**Signal de Mont**	**24.77**	**100**	*e*P	**P**	**19 02 23.9**	**-1.4**
	comp=Z,23nm,1.1s,mb4.6						
CAF	**Calviac**	**24.98**	**105**	⇑*i*P	**P**	**19 02 26.3**	**-0.9**
	comp=Z,36nm,1.4s,mb4.4						
CAF	**Calviac**	**24.98**	**105**	⇑*i*P	**P**	**19 02 26.3**	**-0.9**
	comp=Z,18nm,1.4s,mb4.4						
EVOP	**Sao Brissos**	**25.02**	**129**	*e*P	**P**	**19 02 26.4**	**-1.2**
	comp=Z,18nm,1.4s,mb4.4						
GUD	**Guadarrama**	**25.05**	**120**	P	**P**	**19 02 27.8**	**-0.1**
	comp=Z,9.6nm,0.7s,mb4.4						
GUD	**Guadarrama**	**25.05**	**120**	P	**P**	**19 02 27.8**	**0.0**
	comp=Z,9.6nm,0.7s,mb4.4						
EVO	**Evora**	**25.07**	**129**	*e*P	**P**	**19 02 26.4**	**-1.6**
	comp=Z,35nm,1.4s,mb4.4						
EVO				*e*MLR	MLR		
	comp=Z,651nm,21.0s,MS3.8						
ETSF	**Etsaut**	**25.07**	**112**	*e*P	**P**	**19 02 27.4**	**-0.7**
	comp=Z,26nm,1.5s,mb4.2						
ETSF	**Etsaut**	**25.07**	**112**	*e*P	**P**	**19 02 27.4**	**-0.7**
	comp=Z,13nm,1.5s,mb4.2						
HAU	**Haudompre**	**25.27**	**95**	*e*P	**P**	**19 02 29.5**	**-0.3**
HAU				*e*MLR	MLR		
	comp=Z,642nm,20.5s,MS3.8						
HAU	**Haudompre**	**25.27**	**95**	*e*P	**P**	**19 02 29.5**	**-0.3**
HAU				LR	LR		
	comp=Z,640nm,20.5s,MS4.1						
EBAD	**Badajoz**	**25.30**	**127**	P	**P**	**19 02 29.7**	**-0.5**
	comp=Z,14nm,1.1s,mb4.4						
EBAD	**Badajoz**	**25.30**	**127**	P	**P**	**19 02 29.7**	**-0.4**
	comp=Z,14nm,1.1s,mb4.4						
EPF	**Esparros**	**25.43**	**111**	*e*P	**P**	**19 02 30.9**	**-0.4**
CDF	**Champ du Feu**	**25.52**	**94**	⇑*i*P	**P**	**19 02 32.0**	**-0.1**
	comp=Z,17nm,1.1s,mb4.2						
CDF	**Champ du Feu**	**25.52**	**94**	⇑*i*P	**P**	**19 02 32.0**	**-0.1**
	comp=Z,8.7nm,1.1s,mb4.2						
PBEJ	**Beja**	**25.55**	**129**	*e*P	**P**	**19 02 33.1**	**+0.6**
	comp=Z,15nm,1.3s,mb4.4						
EBIE	**Bielsa**	**25.58**	**111**	P	**P**	**19 02 32.9**	**+0.2**
	comp=Z,4.1nm,0.7s,mb4.1						
EBIE	**Bielsa**	**25.58**	**111**	P	**P**	**19 02 32.9**	**+0.3**
	comp=Z,4.1nm,0.7s,mb4.1						
HINF	**Hinteralfeld**	**25.65**	**95**	*e*P	**P**	**19 02 32.8**	**-0.5**
	comp=Z,49nm,1.6s,mb4.5						
HINF	**Hinteralfeld**	**25.65**	**95**	*e*P	**P**	**19 02 32.8**	**-0.5**
	comp=Z,24nm,1.6s,mb4.5						
PBAR	**Barrancos**	**25.78**	**128**	*e*P	**P**	**19 02 34.9**	**+0.4**
	comp=Z,12nm,1.5s,mb4.2						
PBAR				*e*LR	LR	19 09 03.8	
	comp=Z,401nm,15.7s						
PAB	**San Pablo**	**25.84**	**122**	*e*P	**P**	**19 02 34.6**	**-0.4**
	comp=Z,20nm,1.4s,mb4.5						
PAB	**San Pablo**	**25.84**	**122**	*e*P	**P**	**19 02 34.6**	**-0.4**
	comp=Z,20nm,1.4s,mb4.5						
MORF	**Marmelete**	**25.85**	**131**	*e*P	**P**	**19 02 36.7**	**+1.6**
	comp=Z,59nm,1.8s,mb4.8						
MORF				*e*LR	LR	19 09 04.2	
	comp=Z,266nm,17.9s						
ETOR	**Torete**	**25.91**	**117**	P	**P**	**19 02 38.1**	**+2.5**
	comp=Z,8.5nm,0.9s,mb4.3						
ETOR	**Torete**	**25.91**	**117**	P	**P**	**19 02 38.1**	**+2.4**
	comp=Z,8.5nm,0.9s,mb4.3						
ESDC	**Sonseca Array**	**25.91**	**121**	P	**P**	**19 02 36.4**	**+0.7**
	comp=Z,3.3nm,0.6s,mb4.0,baz=322,slow=9.1,SNR=34						
ESDC				LR	LR	19 11 04.6	
	comp=Z,203nm,18.4s,MS3.7,baz=305,slow=32						
ESDC	**Sonseca Array**	**25.91**	**121**	P	**P**	**19 02 35.1**	**-0.6**
	comp=Z,11nm,1.3s,mb4.2						
ESDC	**Sonseca Array**	**25.91**	**121**	P	**P**	**19 02 35.1**	**-0.6**
	comp=Z,11nm,1.3s,mb4.2						
PFVI	**Vila Bisbo**	**25.92**	**132**	*e*LR	LR	19 09 11.2	
	comp=Z,254nm,22.4s						
CABF	**La Chapelle**	**25.99**	**98**	*e*P	**P**	**19 02 36.2**	**-0.1**
	comp=Z,19nm,0.8s,mb4.4						
CABF	**La Chapelle**	**25.99**	**98**	*e*P	**P**	**19 02 36.2**	**-0.1**
	comp=Z,9.4nm,0.8s,mb4.4						
PVAQ	**Vaqueiros**	**26.14**	**130**	*e*LR	LR	19 09 11.4	
	comp=Z,472nm,20.6s						
MTLF	**Montolieu**	**26.16**	**108**	⇑*i*P	**P**	**19 02 36.9**	**-1.0**
	comp=Z,28nm,1.3s,mb4.3						
MTLF	**Montolieu**	**26.16**	**108**	⇑*i*P	**P**	**19 02 36.9**	**-1.0**
	comp=Z,14nm,1.3s,mb4.3						
EMIN	**Mina Concepcio**	**26.28**	**128**	P	**P**	**19 02 38.5**	**-0.5**
	comp=Z,7.3nm,0.9s,mb4.2						
EMIN	**Mina Concepcio**	**26.28**	**128**	P	**P**	**19 02 38.5**	**-0.5**
	comp=Z,7.3nm,0.9s,mb4.2						
VIVF	**Saint-Julien-l**	**26.39**	**103**	*e*P	**P**	**19 02 40.0**	**0.0**
	comp=Z,11nm,1.1s,mb4.0						
VIVF	**Saint-Julien-l**	**26.39**	**103**	*e*P	**P**	**19 02 40.0**	**0.0**
	comp=Z,5.7nm,1.1s,mb4.0						
LASF	**Ste Croix**	**26.49**	**105**	*e*P	**P**	**19 02 40.7**	**-0.2**
	comp=Z,42nm,1.4s,mb4.5						
LASF	**Ste Croix**	**26.49**	**105**	*e*P	**P**	**19 02 40.7**	**-0.2**
	comp=Z,21nm,1.4s,mb4.5						
EADA	**Adamuz**	**26.86**	**124**	P	**P**	**19 02 44.1**	**-0.1**
	comp=Z,6.2nm,0.9s,mb4.1						
EADA	**Adamuz**	**26.86**	**124**	P	**P**	**19 02 44.1**	**-0.2**
	comp=Z,6.2nm,0.9s,mb4.1						
ERTA	**Horta de San J**	**26.96**	**114**	P	**P**	**19 02 42.0**	**-3.2**
	comp=Z,2.8nm,0.

PGF	**Pioggiola**	**30.25**	**102**	*e*P		**P**	**19 03 14.5**	**+0.1**
STHS	**Stebnicka Huta**	**32.43**	**81**	*e*P		**P**	**19 03 31.9**	**-1.7**
	comp=Z,1.4nm,0.9s,mb3.8							
STHS				*e*			19 05 10.6	
PKSM	**Moragy**	**32.99**	**87**	⇓*i*P		**P**	**19 03 38.2**	**-0.2**
PKSM	**Moragy**	**32.99**	**87**	⇓P		**P**	**19 03 38.2**	**-0.2**
BZS	**Buzias**	**34.97**	**86**	⇓*i*P		**P**	**19 03 55.5**	**-0.1**
BZS	**Buzias**	**34.97**	**86**	⇓P		**P**	**19 03 55.5**	**-0.2**
KEST	**Kesra**	**35.50**	**110**	P		**P**	**19 04 01.3**	**+1.0**
	comp=Z,1.9nm,0.7s,mb4.1,baz=272,slow=5.1,SNR=6.6							
KEST				LR		LR	19 16 41.8	
	comp=E,68nm,22.0s,MS3.4,baz=255,slow=33							
BURAR	**Bucovina Array**	**35.63**	**81**	⇑*i*P		**P**	**19 04 01.7**	**+0.4**
BURAR	**Bucovina Array**	**35.63**	**81**	⇑P		**P**	**19 04 01.7**	**+0.4**
AKASG	**Malin Array Be**	**35.88**	**74**	P		**P**	**19 04 02.5**	**-0.9**
	comp=Z,1.7nm,0.5s,mb4.2,baz=301,slow=8.3,SNR=10							
AKASG	**Malin Array Be**	**35.88**	**74**	P		**P**	**19 04 02.5**	**-0.9**
ULM	**Lac du Bonnet**	**36.56**	**286**	LR		LR	19 17 37.6	
	comp=Z,291nm,19.0s,MS4.1,baz=18,slow=34							
ELN	**Prospectdale**	**37.24**	**258**	*e*P		**P**	**19 04 04.5**	**-11**
YKA	**Yellowknife Ar**	**38.52**	**312**	P		**P**	**19 04 25.1**	**-0.5**
	comp=Z,2.0nm,0.8s,mb3.9,baz=57,slow=9.9,SNR=3.1							
YKA				LR		LR	19 19 41.8	
	comp=E,601nm,18.4s,MS4.5,baz=150,slow=35							
TKL	**Tuckaleechee C**	**40.02**	**259**	LR		LR	19 20 02.5	
	comp=Z,330nm,20.3s,MS4.2,baz=41,slow=34							
TAM	**Tamanrasset**	**44.45**	**125**	*e*P		**P**	**19 05 14.9**	**+0.1**
TAM	**Tamanrasset**	**44.45**	**125**	*e*P		**P**	**19 05 14.9**	**+0.1**
SJG	**San Juan**	**46.47**	**226**	LR		LR	19 21 03.5	
	comp=Z,33nm,19.0s,MS3.3,baz=86,slow=31							
PDAR	**Pinedale Array**	**48.57**	**287**	P		**P**	**19 05 46.6**	**-0.2**
	comp=Z,1.5nm,0.8s,mb4.1,baz=65,slow=7.6,SNR=8.4							
PDAR				LR		LR	19 25 12.7	
	comp=Z,218nm,18.7s,MS4.2,baz=58,slow=35							
BBB	**Bella Bella**	**50.66**	**308**	LR		LR	19 25 50.1	
	comp=Z,120nm,20.9s,MS3.9,baz=11,slow=34							
GNI	**Garni**	**51.00**	**74**	P		**P**	**19 06 05.5**	**+0.1**
	comp=Z,2.1nm,0.5s,mb4.4,baz=0.0,slow=10,SNR=2.0							
MMAI	**Mount Meron Ar**	**51.39**	**88**	LR		LR	19 26 54.9	
	comp=Z,45nm,21.0s,MS3.5,baz=130,slow=35							
TORD	**Torodi Ar. Bea**	**51.52**	**135**	P		**P**	**19 06 08.7**	**-0.8**
	comp=Z,5.8nm,0.8s,mb4.6,baz=340,slow=7.5,SNR=20							
TORD				LR		LR	19 25 18.2	
	comp=Z,100nm,18.7s,MS3.9,baz=345,slow=33							
ANMO	**Albuquerque**	**52.71**	**278**	P		**P**	**19 06 18.3**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.7,baz=5.7,slow=10,SNR=3.0							
ASF	**Jabal al Asfar**	**52.84**	**87**	P		**P**	**19 06 16.9**	**-2.3**
	comp=Z,1.5nm,0.6s,mb4.1,baz=304,slow=7.3,SNR=2.8							
ELK	**Elko**	**52.95**	**289**	P		**P**	**19 06 21.9**	**+1.9**
	comp=Z,0.7nm,0.8s,mb3.7,baz=43,slow=5.4,SNR=3.4							
BVAR	**Borovoye Array**	**53.37**	**47**	P		**P**	**19 06 22.6**	**-0.2**
	comp=Z,2.8nm,0.8s,mb4.3,baz=0.0,slow=12,SNR=4.7							
EIL	**Elat**	**53.73**	**91**	P		**P**	**19 06 23.5**	**-2.3**
	comp=Z,3.1nm,0.6s,mb4.5,baz=63,slow=4.5,SNR=3.5							
TEIG	**Tepich**	**54.76**	**251**	LR		LR	19 31 26.8	
	comp=Z,54nm,19.9s,MS3.6,baz=316,slow=38							
DBIC	**Dimbokro**	**55.30**	**145**	P		**P**	**19 06 36.5**	**-0.8**
	comp=Z,5.5nm,0.8s,mb4.6,baz=322,slow=8.3,SNR=5.7							
DBIC				LR		LR	19 27 23.0	
	comp=Z,178nm,19.8s,MS4.2,baz=328,slow=33							
KDAK	**Kodiak Island**	**55.34**	**326**	LR		LR	19 31 01.9	
	comp=Z,122nm,19.1s,MS4.0,baz=97,slow=37							
LIC	**Lamto**	**55.67**	**146**	*e*P		**P**	**19 06 39.8**	**-0.1**
	comp=Z,83nm,1.6s,mb5.2							
LIC				*e*MLR		MLR		
	comp=Z,301nm,21.2s,MS4.0							
LIC	**Lamto**	**55.67**	**146**	*e*P		**P**	**19 06 39.8**	**-0.1**
	comp=Z,42nm,1.6s,mb5.2							
LIC				LR		LR		
	comp=Z,150nm,21.3s,MS4.0							
NVAR	**Mina Array Bea**	**56.25**	**290**	P		**P**	**19 06 43.9**	**0.0**
	comp=Z,0.7nm,0.7s,mb3.8,baz=51,slow=5.6,SNR=6.4							
NVAR	**Mina Array Bea**	**56.25**	**290**	P		**P**	**19 06 43.8**	**-0.1**
KURK	**Kurchatov**	**58.35**	**44**	P		**P**	**19 06 56.9**	**-1.6**
	comp=Z,3.2nm,0.9s,mb4.3,baz=324,slow=7.0,SNR=2.4							
PFO	**Pinyon Flat Ob**	**59.02**	**285**	P		**P**	**19 07 02.5**	**-0.9**
	comp=Z,2.1nm,0.9s,mb4.2,baz=16,slow=7.4,SNR=2.6							
CMIG	**Matias Romero**	**60.78**	**255**	LR		LR	19 33 04.6	
	comp=Z,37nm,22.0s,MS3.5,baz=24,slow=36							
ROSC	**El Rosal**	**61.75**	**228**	P		**P**	**19 07 25.0**	**+2.7**
	comp=Z,2.5nm,0.3s,mb4.8,baz=96,slow=10,SNR=7.0							
MKAR	**Makanchi Array**	**62.96**	**44**	P		**P**	**19 07 28.9**	**-1.1**
	comp=Z,1.1nm,0.7s,mb4.1,baz=348,slow=5.0,SNR=5.6							
PETK	**Petropavlovsk-**	**69.32**	**353**	LR		LR	19 40 42.4	
	comp=Z,31nm,19.2s,MS3.6,baz=32,slow=38							
SONM	**Songino Array**	**69.67**	**28**	P		**P**	**19 08 11.7**	**-1.3**
	comp=Z,1.9nm,1.0s,mb4.0,baz=322,slow=4.4,SNR=5.6							
BDFB	**Brasilia**	**74.03**	**195**	P		**P**	**19 08 39.6**	**+0.2**
	comp=Z,4.3nm,0.7s,mb4.5,baz=7.2,slow=8.0,SNR=9.0							
BDFB				LR		LR	19 34 58.5	
	comp=Z,51nm,21.9s,MS3.8,baz=112,slow=31							
LPAZ	**La Paz**	**79.18**	**214**	P		**P**	**19 09 09.2**	**+0.6**
	comp=Z,0.6nm,0.7s,mb3.6,baz=3.1,slow=7.6,SNR=3.3							
KSRS	**Korea Array**	**83.95**	**15**	LR		LR	19 49 26.7	
	comp=Z,21nm,19.1s,MS3.5,baz=280,slow=38							
CPUP	**Villa Florida**	**86.08**	**202**	P		**P**	**19 09 43.2**	**-1.0**
	comp=Z,2.3nm,0.7s,mb4.5,baz=61,slow=5.6,SNR=11							
CMAR	**Chiang Mai Arr**	**94.36**	**45**	P		**P**	**19 10 23.1**	**-0.4**
	comp=Z,0.5nm,0.7s,mb4.0,baz=340,slow=6.7,SNR=4.4							
CMAR	**Chiang Mai Arr**	**94.36**	**45**	P		**P**	**19 10 23.1**	**-0.4**
BOSA	**Boshof**	**98.73**	**131**	LR		LR	19 52 14.8	
	comp=Z,153nm,20.0s,MS4.5,baz=170,slow=34							
ASAR	**Alice Springs**	**144.80**	**21**	PKP		PKPdf	19 16 39.0	-1.4
	comp=Z,1.1nm,0.7s,baz=348,slow=3.0,SNR=8.9							
ASAR	**Alice Springs**	**144.80**	**21**	PKIKP		PKPdf	19 16 39.0	-1.5

MOS ***16*** *18:57:22.9± 1.2, 36° 85' N × 68° 73' E, h38km, mb4.7/19, Error ellipse: s-maj=8.3km s-min=5.7km az=95.5*

IDC ***16*** *18:57:23.1± 3.1, 36° 64' N × 68° 81' E, h35km±24km, mb3.8/13, mb1 4.1/18, mb1mx3.9/28, mbtmp4.0/18, ML3.9/3, MS3.2/4, Ms1 3.2/4, ms1mx2.8/43, Error ellipse: s-maj=14.7km s-min=13.1km az=2.0*

ISCJB ***16*** *18:57:23.3± 0.7, 36° 75' N ± 003 × 68° 84' E ± 004, h52km±8km, mb4.3/31, MS3.5/7, Error ellipse: s-maj=6.4km s-min=4.1km az=154.5*

NEIC ***16*** *18:57:24.8± 0.5, 36° 85' N × 68° 67' E, h35km, mb4.5/11, Error ellipse: s-maj=9.1km s-min=6.9km az=167.0*

BJI ***16*** *18:57:27.5, 37.13° N × 69.14° E, h35km, mB5.2, mb4.6, ML4.3, Ms4.1, Msz4.2*

NNC ***16*** *18:57:28.2± 2.2, 37.10° N × 68.65° E, h133km±26km, mb3.8, mpv4.6, Error ellipse: s-maj=17.3km s-min=12.8km az=27.0*

ISC 16 18:57:25.5± 0.6, 36° 74' N ± 003° × 68° 79' E ± 004, h53km±6km, n140, σ1♀39/155, mb4.3/31, MS3.5/7, 24C-7D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
KBL	**Kabul**	**2.20**	**175**	⇑*i*Pn		**Pn**	**18 58**	**00.5**	**+0.9**
KBL				*e*Sn		**Sn**	**18 58**	**29.6**	**+3.8**
CEP	**Cherat**	**3.87**	**138**	P		**Pn**	**18 58**	**25.2**	**+2.7**
CEP				S		**Sn**	**18 59**	**13.0**	**+6.4**
THW	**Thamme Wali**	**4.62**	**147**	P		**Pn**	**18 58**	**33.7**	**+0.9**
CHCP	**Chirah Chowk**	**4.78**	**129**	P		**Pn**	**18 58**	**37.4**	**+2.4**
KSH	**Kashi**	**6.30**	**62**	*e*P		**Pn**	**18 58**	**53.8**	**-2.0**
KSH				Smax					
	comp=N,520nm,0.8s								
KSH				Smax					
	comp=E,543nm,1.0s								
KK31	**Karatay Array**	**6.49**	**11**	⇑Pn		**Pn**	**18 58**	**57.8**	**-0.6**
	comp=E,8.4nm,0.5s								
KK31				⇑Sn		**Sn**	**19 00**	**09.1**	**-1.9**
	comp=E,20nm,0.4s								
KK31				⇓Lg			19 00 46.8		
	comp=E,44nm,0.6s,baz=196,slow=26,SNR=4.6								
KK31	**Karatay Array**	**6.49**	**11**	*i* PN		**Pn**	**18 58**	**57.7**	**-0.7**
KK31				pmax		pmax			
	comp=Z,13nm,0.6s								
AML	**Almayashu**	**6.58**	**34**	P		**Pn**	**18 59**	**00.5**	**+0.8**
	SNR=35								
AML	**Almayashu**	**6.58**	**34**	⇑*i*Pn		**Pn**	**18 59**	**00.1**	**+0.4**
	comp=Z,55nm,0.5s								
EKS2	**Erkin-Say**	**7.05**	**31**	P		**Pn**	**18 59**	**06.8**	**+0.7**
	SNR=24								
EKS2	**Erkin-Say**	**7.05**	**31**	⇑*e*Pn		**Pn**	**18 59**	**06.6**	**+0.6**
	comp=Z,71nm,0.6s								
THN	**Thein Dam**	**7.14**	**125**	*e*P		**Pn**	**18 59**	**08.6**	**+1.2**
THN				*e*S		**Sn**	**19 00**	**29.2**	**+2.1**
DLH	**Dalhousie**	**7.24**	**123**	*ex*		x	18 59 15.0		
DLH				*ex*		x	19 00 38.0		
AAK	**Ala-Archa**	**7.34**	**35**	P		**Pn**	**18 59**	**11.1**	**+1.1**
	SNR=53								
FRU	**Bishkek**	**7.56**	**35**	⇑*i*P		**Pn**	**18 59**	**13.0**	**0.0**
FRU				*e*S		**Sn**	**19 00**	**40.0**	**+2.8**
FRU				pmax		pmax			
	comp=Z,70nm,1.8s								
FRU				pmax		pmax			
	comp=E,600nm,2.0s								
FRU				MLR		MLR			
	comp=N,2μm,10.0s								
KBK	**Karagaybulak**	**7.58**	**37**	P		**Pn**	**18 59**	**14.7**	**+1.4**
	SNR=236								
CHMS	**Chumysh**	**7.75**	**34**	P		**Pn**	**18 59**	**16.4**	**+0.8**
	SNR=9.2								
USP	**Ospenovka**	**7.85**	**32**	P		**Pn**	**18 59**	**17.6**	**+0.6**
	SNR=24								
ULHL	**Ulahol**	**7.96**	**44**	P		**Pn**	**18 59**	**19.4**	**+0.9**
	SNR=32								
TKM2	**Tokmak 2**	**8.09**	**38**	⇑Pn		**Pn**	**18 59**	**20.8**	**+0.5**
	comp=N,49nm,0.9s								
TKM2				⇑Sn		**Sn**	**19 00**	**49.0**	**-1.2**
	comp=N,20nm,0.7s								
TKM2	**Tokmak 2**	**8.09**	**38**	⇑*e*P		**Pn**	**18 59**	**20.8**	**+0.5**
TKM2				pmax		pmax			
	comp=Z,30nm,0.6s								
TKM2	**Tokmak 2**	**8.09**	**38**	P		**Pn**	**18 59**	**21.4**	**+1.1**
	SNR=7.2								
TKM2	**Tokmak 2**	**8.09**	**38**	⇑*e*Pn		**Pn**	**18 59**	**20.8**	**+0.5**
	comp=Z,30nm,0.6s								
SMLA	**Simla**	**8.93**	**126**	*i* x		x	18 59 31.9		
SMLA				*i* S		**Sn**	**19 01**	**10.5**	**-0.4**
SMLA				*ex*		x	19 01 16.6		
	comp=N,153nm,0.5s								
SMLA				*ex*		x	19 01 18.0		
	comp=E,157nm,0.5s								
KNDC	**Almaty**	**9.01**	**42**	⇓Pn		**Pn**	**18 59**	**34.1**	**+1.3**
	comp=E,35nm,0.6s								
KNDC				⇑Lg			19 02 11.0		
	comp=E,192nm,1.3s								
DDI	**Dehra Dun**	**10.03**	**127**	*e*P		**Pn**	**18 59**	**49.0**	**+2.1**
DDI				*ex*		x	19 01 56.0		
NDI	**New Delhi**	**10.71**	**136**	*ex*		**Pn**	**18 59**	**55.0**	**-1.2**
NDI				*e*S		**Sn**	**19 01**	**52.0**	**-2.6**
JOSI	**Joshimath**	**10.88**	**121**	*e*P		**Pn**	**18 59**	**59.6**	**+1.0**
JOSI				*e*S		**Sn**	**19 01**	**59.8**	**+1.1**
JOSI				AML		AML	19 02 25.2		
	comp=E,92nm,0.6s								
JOSI				AML		AML	19 02 26.6		
	comp=N,100nm,0.5s								
SONA	**Sohna**	**10.98**	**138**	*ex*		**Pn**	**18 59**	**57.4**	**-2.4**
SONA				*e*S		**Sn**	**19 01**	**56.1**	**-5.1**
AB31	**Akbulak array**	**14.07**	**336**	⇑Pn		**Pn**	**19 00**	**36.3**	**-5.5**
	comp=N,16nm,0.7s								
AB31				⇑Sn		**Sn**	**19 03**	**07.4**	**-9.0**
	comp=N,11nm,0.8s								
MK31	**Makanchi Array**	**14.20**	**41**	⇓Pn		**Pn**	**19 00**	**41.4**	**-2.2**
	comp=N,19nm,0.8s								
MK31	**Makanchi Array**	**14.20**	**41**	*i* P		**Pn**	**19 00**	**41.3**	**-2.3**
MK31				pmax		pmax			
	comp=Z,19nm,0.7s								
MKAR	**Makanchi Array**	**14.20**	**41**	Pn		**Pn**	**19 00**	**42.1**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=232,slow=13,SNR=98								
MKAR				Lg			19 04 54.1		
	comp=Z,0.1nm,0.3s,baz=229,slow=24,SNR=2.4								
DANN	**Dangsing**	**15.13**	**119**	*e*P		**Pn**	**19 00**	**52.8**	**-3.1**
	comp=Z,88nm,0.9s								
KOLN	**Koldanda**	**15.38**	**121**	*e*P		**Pn**	**19 00**	**55.7**	**-3.4**
	comp=Z,23nm,0.5s								
KURBB	**Kurchatov Arra**	**15.54**	**24**	⇓Pn		**Pn**	**19 00**	**56.9**	**-4.1**
	comp=Z,1.4nm,0.7s								
KURK	**Kurchatov**	**15.65**	**24**	Pn		**Pn**	**19 00**	**57.0**	**-5.4**
	comp=Z,0.1nm,0.3s,baz=215,slow=12,SNR=27								
KURK				Lg			19 05 31.9		
	comp=Z,0.0nm,0.3s,baz=220,slow=34,SNR=2.9								
KURK				LR		LR	19 08 29.4		
	comp=Z,20nm,20.6s,baz=175,slow=43								
KURK	**Kurchatov**	**15.65**	**24**	Pn		**Pn**	**19 00**	**57.0**	**-5.4**
KURK				Lg			19 05 31.9		
KURK				LR		LR	19 08 29.4		
AKTK	**Aktyubinsk**	**15.73**	**334**	Pn		**Pn**	**19 00**	**59.7**	**-3.8**
AKTK				Sn		**Sn**	**19 03**	**48.9**	**-7.8**
AKTK				Lg			19 05 52.4		
AKTO	**Aktyubinsk**	**15.73**	**334**	⇓Pn		**Pn**	**19 00**	**58.9**	**-4.6**
	comp=Z,3.1nm,1.0s								
AKTO				⇑Sn		**Sn**	**19 03**	**51.3**	**-5.4**
	comp=Z,2.8nm,1.1s								
AKTO	**Aktyubinsk**	**15.73**	**334**	Pn		**Pn**	**19 00**	**59.7**	**-3.8**
	comp=Z,0.6nm,0.3s,baz=151,slow=13,SNR=10								
AKTO				Sn		**Sn**	**19 03**	**48.9**	**-7.8**
	comp=Z,0.4nm,0.3s,baz=152,slow=19,SNR=5.0								
AKTO				Lg			19 05 52.4		
	comp=Z,0.1nm,0.3s,baz=60,slow=20,SNR=2.4								
AKTO	**Aktyubinsk**	**15.73**	**334**	P		**Pn**	**19 00**	**59.7**	**-3.8**
AKTO							19 03 48.9		
GKN	**Gorkha**	**15.95**	**119**	*e*P		**Pn**	**19 01**	**03.6**	**-2.9**
WMQ	**Urumqi**	**16.05**	**58**	P		**Pn**	**19 01**	**11.5**	**+4.0**
WMQ				AP		pP	19 01 17.4		-4.5
WMQ				XP		sP	19 01 21.0		-7.7
WMQ				PP			19 01 24.0		
WMQ				*e*S		S	19 03 54.8		-21
WMQ				AMB		AMB			
	comp=Z,31nm,1.0s								
WMQ				AMB		AMB			
	comp=Z,155nm,3.9s								
WMQ				LR		LR			
	comp=N,506nm,6.7s								
WMQ				LR		LR			
	comp=E,590nm,7.5s								
WMQ				LR		LR			
	comp=Z,670nm,8.6s								
VOSK	**Vostochnaya**	**16.06**	**5**	⇑Pn		**Pn**	**19 01**	**03.7**	**-3.8**
	comp=Z,16nm,1.4s								
VOSK	**Vostochnaya**	**16.06**	**5**	P		**Pn**	**19 01**	**03.7**	**-3.8**
VOSK				pmax		pmax			
	comp=Z,16nm,1.4s								
BVA0	**Borovoye Array**	**16.32**	**3**	⇑Pn		**Pn**	**19 01**	**05.1**	**-5.8**
	comp=Z,2.0nm,0.7s,baz=175,slow=12,SNR=69								
BVA0	**Borovoye Array**	**16.32**	**3**	P		**Pn**	**19 01**	**07.6**	**-3.3**
BVA0				pmax		pmax			
	comp=Z,2.0nm,0.7s								
BVAR	**Borovoye Array**	**16.32**	**3**	Pn		**Pn**	**19 01**	**07.8**	**-3.1**
	comp=Z,2.2nm,0.3s,baz=169,slow=9.3,SNR=24								
BVAR				Sn		**Sn**	**19 04**	**04.1**	**-6.8**
	comp=Z,0.4nm,0.3s,baz=172,slow=22,SNR=3.2								
BVAR				Lg			19 05 59.6		
	baz=192,slow=25,SNR=2.5								
BVAR	**Borovoye Array**	**16.32**	**3**	P		**Pn**	**19 01**	**07.8**	**-3.1**
BVAR							19 04 04.1		
DMN	**Daman**	**16.52**	**119**	*e*P		**Pn**	**19 01**	**11.2**	**-2.4**
KKN	**Kakani**	**16.54**	**118**	*e*P		**Pn**	**19 01**	**11.1**	**-2.7**
	comp=Z,51nm,0.6s								
PKI	**Pulchoki**	**16.76**	**118**	*e*P		**Pn**	**19 01**	**14.5**	**-2.1**
	comp=Z,37nm,0.6s								
GUN	**Gumba**	**16.89**	**117**	*e*P		**Pn**	**19 01**	**16.1**	**-2.2**
JIRN	**Jiri**	**17.26**	**117**	*e*P		**Pn**	**19 01**	**20.9**	**-1.9**
	comp=Z,80nm,0.6s								
RAMN	**Ramite**	**17.98**	**118**	*e*P		**Pn**	**19 01**	**29.3**	**-2.3**
	comp=Z,76nm,0.7s								
TAPN	**Taplejung**	**18.54**	**115**	*e*P		**Pn**	**19 01**	**37.6**	**-0.8**
	comp=Z,54nm,0.7s								
ODAN	**Odare**	**18.60**	**117**	*e*P		**Pn**	**19 01**	**38.3**	**-0.8**
	comp=Z,28nm,0.5s								
GNI	**Garni**	**19.13**	**288**	P		**Pn**	**19 01**	**44.8**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=197,slow=20,SNR=5.2								
GNI	**Garni**	**19.13**	**288**	*e*P		**Pn**	**19 01**	**44.1**	**-1.3**
GNI				pmax		pmax			
	comp=Z,30nm,1.1s								
MIB	**Mutribah**	**19.21**	**255**	*e*P		**Pn**	**19 01**	**42.6**	**-3.8**
	baz=255								
MIB				AMb		AMb	19 01 44.6		
	comp=Z,31nm,1.0s,baz=255								
NAY	**Al-Naaiem**	**19.54**	**254**	*e*P		**Pn**	**19 01**	**46.7**	**-3.6**
	baz=254								
NAY				AMb		AMb	19 01 53.0		
	comp=Z,16nm,1.0s,baz=254								
RST	**Umm Al-Ruwaisa**	**19.61**	**255**	*e*P		**Pn**	**19 01**	**47.3**	**-3.9**
	baz=255								
RST				AMb		AMb	19 01 53.2		
	comp=Z,22nm,1.0s,baz=255								
LSA	**Lhasa**	**19.95**	**104**	P		**Pn**	**19 01**	**56.0**	**+0.8**
LSA	**Lhasa**	**19.95**	**104**	*e*P		**Pn**	**19 01**	**56.1**	**+0.9**
LSA				pmax		pmax			
	comp=Z,8.0nm,0.8s								
LSA	**Lhasa**	**19.95**	**104**	*e*P		**Pn**	**19 01**	**56.1**	**+0.8**
	comp=Z,8.1nm,0.8s								
ZAA0	**Zalesovo Array**	**20.48**	**28**	⇑*e*P		**P**	**19 01**	**58.4**	**-0.3**
ZALV	**Zalesovo Beam**	**20.48**	**28**	P		**P**	**19 01**	**58.5**	**-0.2**
	comp=Z,20nm,0.6s,baz=222,slow=9.9,SNR=77								
ZALV				S		**S**	**19 05**	**44.5**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=211,slow=18,SNR=2.0								
ZALV	**Zalesovo Beam**	**20.48**	**28**	P		**P**	**19 01**	**58.5**	**-0.2**
ZALV				S		**S**	**19 05**	**44.5**	**-0.3**
NVS	**Novosibirsk**	**20.64**	**24**	⇑*i*P		**P**	**19 01**	**59.4**	**-1.0**
NVS				*e*S		**S**	**19 05**	**48.1**	**+0.2**
NVS				pmax		pmax			
	comp=N,22nm,0.9s								
NVS				pmax		pmax			
	comp=E,6.0nm,0.9s								
NVS				pmax		pmax			
	comp=Z,18nm,0.9s								
NVS				smax					
	comp=N,14nm,2.0s								
NVS				smax					
	comp=E,7.0nm,1.4s								
SVE	**Sverdlovsk**	**20.83**	**347**	*e*P		**P**	**19 02**	**03.5**	**+1.1**
SVE				*e*S		**S**	**19 05**	**45.8**	**-5.7**
SVE				pmax		pmax			
	comp=Z,12nm,0.7s								
SVE				MLR		MLR			
	comp=Z,173nm,11.0s,MS3.7								
ARU	**Arti**	**20.87**	**344**	*e*P		**P**	**19 02**	**04.6**	**+1.8**
ARU				*e*			19 02 20.2		
ARU				*e*S		**S**	**19 05**	**56.6**	**+4.2**
ARU				*e*SS			19 06 18.7		
ARU				pmax		pmax			
	comp=Z,28nm,1.7s								
ARU	**Arti**	**20.87**	**344**	*e*P		**P**	**19 02**	**02.8**	**0.0**
	comp=Z,22nm,1.0s								
HYB	**Hyderabad**	**21.09**	**153**	*i* P		**P**	**19 02**	**11.5**	**+6.0**
KIV	**Kislovodsk**	**21.11**	**298**	*d*P		**P**	**19 02**	**03.2**	**-2.3**
KIV				pmax		pmax			
	comp=Z,21nm,1.0s,mb4.4								
KIV				MLR		MLR			
	comp=Z,100nm,18.0s,MS3.2								
KIV	**Kislovodsk**	**21.11**	**298**	*e*P		**P**	**19 02**	**03.5**	**-2.0**
	comp=Z,19nm,0.8s,mb4.5								
GTA	**Gaotai**	**24.51**	**74**	*e*P		**P**	**19 02**	**43.8**	**+4.1**
GTA				AP			19 02 47.3		
GTA				XP		sP	19 02 50.4		-9.1
GTA				LR		LR			
	comp=N,210nm,12.9s,MS4.1								
GTA				LR		LR			
	comp=E,271nm,10.8s,MS4.1								
GTA				LR		LR			
	comp=Z,278nm,9.6s								
ANN	**Anapa**	**24.96**	**299**	*e*P		**P**	**19 02**	**44.1**	**+0.3**
ANN				pmax		pmax			
	comp=Z,60nm,1.2s,mb5.0								
KRAR	**Krasnoyarsk**	**25.22**	**33**	⇑*e*P		**P**	**19 02**	**47.9**	**+1.9**
KRAR				pmax		pmax			
	comp=Z,22nm,1.2s,mb4.6								
VSR	**Storozhevoye**	**25.55**	**314**	*e*P		**P**	**19 02**	**52.2**	**+3.1**
VSR				pmax		pmax			
	comp=Z,8.0nm,1.2s,mb4.1								
VSR				pmax		pmax			
	comp=N,6.0nm,0.8s								
VSR				pmax		pmax			
	comp=E,20nm,0.8s								
ZAK	**Zakamensk**	**28.18**	**50**	*e*P		**P**	**19 03**	**12.5**	**-0.3**
ZAK				*e*			19 07 50.4		
ZAK				pmax		pmax			
	comp=Z,3.0nm,1.3s,mb3.8								
OBN	**Obninsk**	**28.61**	**320**	⇓*e*P		**P**	**19 03**	**17.2**	**+0.7**
OBN				*e*			19 04 05.7		
OBN				pmax		pmax			
	comp=Z,17nm,1.2s,mb4.7								
OBN				MLR		MLR			
	comp=Z,100nm,15.0s,MS3.5								
EIL	**Elat**	**29.07**	**266**	LR		LR	19 18 05.5		
	comp=Z,60nm,18.1s,MS

comp=Z,3.9nm,0.9s,mb4.4
LASF Ste Croix 48.84 300 *e*P **P 19 06 05.9 +0.4**
comp=Z,19nm,1.2s,mb4.7
TCF Toulx Ste Croi 49.42 303 *e*P **P 19 06 10.5 +0.6**
comp=Z,12nm,0.9s,mb4.6
TCF Toulx Ste Croi 49.42 303 *e*P **P 19 06 10.5 +0.6**
TCF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
TCF Toulx Ste Croi 49.42 303 *e*P **P 19 06 10.5 +0.6**
comp=Z,6.1nm,0.9s,mb4.6
ETSF Etsaut 52.26 300 *e*P **P 19 06 31.8 +0.5**
ESDC Sonseca Array 55.77 297 P **P 19 06 56.4 -0.5**
comp=Z,1.0nm,0.7s,mb4.0,baz=69,slow=7.5,SNR=7.0
TORD Torodi Ar. Bea 63.95 267 P **P 19 07 52.1 -1.3**
comp=Z,2.6nm,0.8s,mb4.3,baz=46,slow=5.4,SNR=8.5
YKA Yellowknife Ar 81.07 2 P **P 19 09 36.0 +1.6**
comp=Z,1.8nm,0.4s,mb4.3,baz=353,slow=5.4,SNR=6.8
YKA Yellowknife Ar 81.07 2 *i* P **P 19 09 36.2 +1.8**
YKA pmax pmax
comp=Z,2.0nm,0.4s
YKA Yellowknife Ar 81.07 2 P **P 19 09 36.0 +1.6**
WRA Warramunga Arr 83.63 120 P **P 19 09 46.6 -1.8**
comp=Z,0.5nm,0.5s,mb3.9,baz=322,slow=4.8,SNR=11
WRA Warramunga Arr 83.63 120 *i* P **P 19 09 47.5 -0.9**
WRA pmax pmax
comp=Z,1.0nm,0.5s
ASAR Alice Springs 85.86 123 P **P 19 09 58.2 -1.3**
comp=Z,0.5nm,0.6s,mb3.9,baz=313,slow=5.2,SNR=14
PLCA Paso Flores 148.24 250 PKPbc PKPab 19 17 09.2 +0.6
comp=Z,3.3nm,1.0s,baz=70,slow=1.5,SNR=5.0

ISCJB **16** *19:05:10.8±0.6, 4373N±006×10529W±007, h0km, Error ellipse: s-maj=8.4km s-min=7.3km az=10.9*
NEIC **16** *19:05:11.9±0.5, 4371N×10529W, h0km, ML2.7, Error ellipse: s-maj=7.9km s-min=6.7km az=172.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
IDC **16** *19:05:11.6±2.0, 4377N×10554W, h0km, mb4.4/1, mb1 4.3/3, mb1mx3.6/23, mbtmp4.1/3, ML3.6/2, MS3.3/1, Ms1 3.3/1, ms1mx2.2/43, Error ellipse: s-maj=60.3km s-min=8.9km az=151.0*
ISC 16 19:05:12.0±0.5, 4372N±006×10527W±007, h0km, n20, σ0s95/19, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**66**	*e*P	**Pg**	**19 05 31.2**	**+0.5**
PHWY	**Pilot Hill**	**2.42**	**183**	*e*Pn	**Pn**	**19 05 53.0**	**+0.2**
RWWY	**Rawlins**	**2.48**	**216**	*e*Pn	**Pn**	**19 05 54.7**	**+1.1**
LAO	**LASA Array**	**3.04**	**348**	*e*Pn	**Pn**	**19 06 02.0**	**+0.7**
RLMT	**Red Lodge**	**3.19**	**297**	*e*Pn	**Pn**	**19 06 03.6**	**+0.4**
PDAR	**Pinedale Array**	**3.27**	**255**	Pn	**Pn**	**19 06 05.1**	**+0.6**
	4.0nm,0.3s,baz=75,slow=16,SNR=52						
PDAR				Lg		19 06 48.7	
	9.0nm,0.3s,baz=73,slow=30,SNR=12						
OGNE	**Ogallala**	**3.67**	**138**	*e*Pn	**Pn**	**19 06 10.0**	**+0.1**
GCMT	**Greycliff**	**3.75**	**305**	*e*Pn	**Pn**	**19 06 11.9**	**+0.9**
LOHW	**Long Hollow**	**3.87**	**270**	*e*Pn	**Pn**	**19 06 10.1**	**-2.6**
ISCO	**Idaho Springs**	**3.93**	**184**	*e*Pn	**Pn**	**19 06 13.7**	**+0.3**
FLWY	**Flagg Ranch**	**3.94**	**277**	*e*Pn	**Pn**	**19 06 13.9**	**+0.3**
MOOW	**Moose Ponds**	**3.97**	**272**	*e*Pn	**Pn**	**19 06 13.9**	**-0.1**
SNOW	**Snow King Moun**	**3.99**	**268**	*e*Pn	**Pn**	**19 06 12.7**	**-1.7**
IMW	**Indian Meadow**	**4.11**	**274**	*e*Pn	**Pn**	**19 06 16.7**	**+0.8**
TPAW	**Teton Pass**	**4.13**	**269**	*e*Pn	**Pn**	**19 06 17.4**	**+1.2**
RRI2	**Red Ridge**	**4.41**	**267**	*e*Pn	**Pn**	**19 06 19.5**	**-0.6**
SRU	**San Rafael**	**6.07**	**222**	*e*Pn	**Pn**	**19 06 41.4**	**-1.4**
	4.3nm,0.4s						
ULM	**Lac du Bonnet**	**9.15**	**41**	Pn	**Pn**	**19 07 23.9**	**-1.2**
	2.3nm,0.3s,baz=228,slow=12,SNR=18						
ROSC	**El Rosal**	**47.35**	**136**	LR	LR	19 33 43.0	
	comp=Z,32nm,19.9s,baz=35,slow=36						
ARCES	**ARCESS Array B**	**61.44**	**18**	P	**P**	**19 15 28.9**	**-0.6**
	2.2nm,1.1s,baz=338,slow=6.3,SNR=4.0						

ISCJB **16** *19:07:32.4±1.3, 1835N±006×1477E±02, h33km, mb3.8/8, Error ellipse: s-maj=33.5km s-min=8.2km az=7.9*
NEIC **16** *19:07:33.7±1.3, 1835N×14793E, h35km, Error ellipse: s-maj=40.6km s-min=9.0km az=89.0*
IDC **16** *19:07:35.1±5.9, 1831N×14777E, h41km±45km, mb3.6/8, mb1 3.8/10, mb1mx3.7/20, mbtmp3.6/10, ML4.2/1, Error ellipse: s-maj=60.0km s-min=14.5km az=84.0*
ISC 16 19:07:34.3±1.3, 1833N±007×1478E±02, h35km, n16, σ0s56/17, mb3.8/8, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.50**	**211**	P	**Pn**	**19 08 54.2**	**+0.5**
	7.9nm,0.3s,baz=14,slow=12,SNR=13						
GUMO				S	**Sn**	**19 09 55.4**	**-0.3**
	8.8nm,0.3s,baz=18,slow=19,SNR=3.7						
GUMO	**Guam**	**5.50**	**211**	*e*Pn	**Pn**	**19 08 54.3**	**+0.6**
	84nm,1.1s						
MJAR	**Matsushiro Arr**	**20.01**	**337**	P	**P**	**19 12 05.0**	**+1.0**
	0.2nm,0.3s,baz=162,slow=11,SNR=4.7						
MJAR	**Matsushiro Arr**	**20.01**	**337**	P	**P**	**19 12 05.0**	**+1.0**
KSRS	**Korea Array**	**25.82**	**322**	P	**P**	**19 13 01.8**	**-0.4**
	1.3nm,0.8s,mb3.5,baz=129,slow=9.5,SNR=4.2						
WB2	**Warramunga Arr**	**40.26**	**200**	*e*P	**P**	**19 15 08.2**	**+0.2**
WRA	**Warramunga Arr**	**40.27**	**200**	P	**P**	**19 15 07.6**	**-0.4**
	3.4nm,0.7s,mb4.2,baz=21,slow=8.6,SNR=22						
WRA				PcP	PcP	19 17 12.2	+0.7
	0.3nm,0.4s,baz=16,slow=3.2,SNR=5.8						
FITZ	**Fitzroy Crossi**	**42.26**	**212**	P	**P**	**19 15 24.4**	**-0.1**
	1.1nm,0.7s,mb3.6,baz=23,slow=14,SNR=6.2						
ASAR	**Alice Springs**	**43.89**	**199**	P	**P**	**19 15 37.9**	**+0.3**
	0.7nm,0.6s,mb3.5,baz=20,slow=9.0,SNR=19						
ASAR				PcP	PcP	19 17 21.6	-1.8
	0.8nm,1.0s,baz=30,slow=3.7,SNR=2.9						
SONM	**Songino Array**	**44.68**	**321**	P	**P**	**19 15 43.8**	**+0.1**
	0.6nm,0.7s,mb3.5,baz=134,slow=8.6,SNR=3.9						
CMAR	**Chiang Mai Arr**	**46.24**	**278**	P	**P**	**19 15 56.8**	**+0.3**
	0.5nm,0.6s,mb3.6,baz=71,slow=6.8,SNR=4.9						
ZAA0	**Zalesovo Array**	**59.52**	**322**	*e*P	**P**	**19 17 32.7**	**-1.3**
ZALV	**Zalesovo Beam**	**59.52**	**322**	P	**P**	**19 17 33.4**	**-0.5**
	2.3nm,0.7s,mb4.3,baz=105,slow=7.4,SNR=12						
ZALV	**Zalesovo Beam**	**59.52**	**322**	P	**P**	**19 17 33.4**	**-0.5**
MKAR	**Makanchi Array**	**60.15**	**314**	P	**P**	**19 17 38.9**	**+0.5**
	1.4nm,0.8s,mb4.0,baz=88,slow=9.2,SNR=7.4						
MKAR	**Makanchi Array**	**60.15**	**314**	P	**P**	**19 17 38.9**	**+0.5**

ISCJB **16** *19:19:32.5±0.9, 577N±0.1×331W±02, h10km, mb4.2/17, MS3.5/18, Error ellipse: s-maj=17.1km s-min=12.9km az=135.1*
IDC **16** *19:19:32.2±1.3, 5762N×3291W, h0km, mb3.7/6, mb1 4.0/8, mb1mx3.7/27, mbtmp3.9/8, ML3.6/2, MS3.5/17, Ms1 3.5/17, ms1mx3.4/38, Error ellipse: s-maj=32.1km s-min=26.2km az=43.0*
NEIC **16** *19:19:34.0±0.7, 5767N×3314W, h10km, mb4.5/11, Error ellipse: s-maj=15.3km s-min=11.5km az=220.0*
CSEM **16** *19:19:35.8±0.1, 5781N×3300W, h33km, mb4.5/11, Ms3.4, Error ellipse: s-maj=8.7km s-min=4.2km az=16.0*
ISC 16 19:19:34.5±0.9, 577N±01×331W±02, h10km, n56, σ0s85/40, mb4.2/17, MS3.5/18, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**9.07**	**34**	Pn	**Pn**	**19 21 46.0**	**+0.8**
	1.4nm,0.3s,baz=214,slow=6.9,SNR=3.7						
BORG				LR	LR	19 24 40.3	
	comp=Z,154nm,18.7s,baz=161,slow=34						
SFJD	**Kangerlussuaq**	**12.36**	**326**	LR	LR	19 26 33.1	
	comp=Z,356nm,18.1s,baz=108,slow=34						
EKA	**Eskdalemuir Ar**	**16.61**	**85**	Pn	**Pn**	**19 23 27.1**	**+0.1**
	0.1nm,0.3s,baz=292,slow=11,SNR=3.2						
EKA	**Eskdalemuir Ar**	**16.61**	**85**	Pn	**Pn**	**19 23 27.1**	**0.0**
SCHQ	**Schefferville**	**18.86**	**276**	LR	LR	19 30 15.7	
	comp=Z,263nm,18.2s,baz=35,slow=34						
ROSF	**Rostrenen**	**20.06**	**105**	*e*P	**P**	**19 24 08.7**	**+1.1**
SGMF	**Saint Gilles**	**20.48**	**104**	*e*P	**P**	**19 24 13.3**	**+1.1**
FLN	**La Foliniere**	**21.26**	**101**	*e*P	**P**	**19 24 20.9**	**+0.3**
	66nm,1.4s,mb4.5						
FLN				*e*MLR	MLR		
	comp=Z,171nm,22.2s,MS3.1						
FLN	**La Foliniere**	**21.26**	**101**	*e*P	**P**	**19 24 20.9**	**+0.3**
	comp=Z,33nm,1.4s,mb4.5						
FLN				LR	LR		
	comp=Z,170nm,22.3s,MS3.4						
GRR	**Gorron**	**21.29**	**102**	*e*P	**P**	**19 24 21.6**	**+0.7**
	comp=Z,69nm,1.3s,mb4.5						
GRR	**Gorron**	**21.29**	**102**	*e*P	**P**	**19 24 21.6**	**+0.7**
	comp=Z,34nm,1.3s,mb4.5						
LDF	**La Druitiere**	**21.55**	**101**	*e*P	**P**	**19 24 24.1**	**+0.4**
	comp=Z,23nm,1.1s,mb4.2						
LDF	**La Druitiere**	**21.55**	**101**	*e*P	**P**	**19 24 24.1**	**+0.4**
	comp=Z,11nm,1.1s,mb4.2						
NOA	**NORSAR Array B**	**22.49**	**63**	LR	LR	19 31 40.3	
	comp=Z,94nm,18.6s,MS3.2,baz=275,slow=32						
HFS	**Hagfors**	**23.88**	**64**	LR	LR	19 33 03.0	
	comp=Z,72nm,21.7s,MS3.1,baz=236,slow=34						
TCF	**Toulx Ste Croi**	**24.23**	**103**	*e*P	**P**	**19 24 51.1**	**-0.1**
	comp=Z,11nm,0.9s,mb4.0						
TCF	**Toulx Ste Croi**	**24.23**	**103**	*e*P	**P**	**19 24 51.1**	**-0.1**
	comp=Z,5.6nm,0.9s,mb4.0						
BGF	**Bois d'Agland**	**24.39**	**102**	*e*P	**P**	**19 24 51.9**	**-0.7**
SSF	**Saint Saulge**	**24.42**	**100**	*e*P	**P**	**19 24 52.8**	**0.0**
	comp=Z,17nm,0.9s,mb4.2						
SSF	**Saint Saulge**	**24.42**	**100**	*e*P	**P**	**19 24 52.8**	**0.0**
	comp=Z,8.4nm,0.9s,mb4.2						
LOR	**Lormes**	**24.48**	**99**	*e*P	**P**	**19 24 53.7**	**+0.3**
	comp=Z,21nm,1.2s,mb4.1						
LOR				*e*MLR	MLR		
	comp=Z,138nm,20.0s,MS3.1						
LOR	**Lormes**	**24.48**	**99**	*e*P	**P**	**19 24 53.7**	**+0.3**
	comp=Z,11nm,1.2s,mb4.2						
LOR				LR	LR		
	comp=Z,140nm,20.0s,MS3.5						
AVF	**Avril sur Loir**	**24.51**	**101**	*e*P	**P**	**19 24 53.1**	**-0.6**
	comp=Z,22nm,1.2s,mb4.3						
AVF	**Avril sur Loir**	**24.51**	**101**	*e*P	**P**	**19 24 53.1**	**-0.6**
	comp=Z,11nm,1.2s,mb4.3						
SMF	**Signal de Mont**	**24.86**	**100**	*e*P	**P**	**19 24 55.9**	**-1.0**
	comp=Z,22nm,1.1s,mb4.3						
SMF	**Signal de Mont**	**24.86**	**100**	*e*P	**P**	**19 24 55.9**	**-1.0**
	comp=Z,11nm,1.1s,mb4.3						
HAU	**Haudompre**	**25.35**	**95**	*e*P	**P**	**19 25 01.3**	**0.0**
HAU				*e*MLR	MLR		
	comp=Z,307nm,20.8s,MS3.5						
HAU	**Haudompre**	**25.35**	**95**	*e*P	**P**	**19 25 01.3**	**0.0**
HAU				LR	LR		
	comp=Z,310nm,20.8s,MS3.8						
CDF	**Champ du Feu**	**25.60**	**94**	*e*P	**P**	**19 25 03.8**	**+0.2**
HINF	**Hinteralfeld**	**25.73**	**95**	*e*P	**P**	**19 25 03.7**	**-1.1**
ESDC	**Sonseca Array**	**26.02**	**121**	P	**P**	**19 25 07.1**	**-0.3**
	comp=Z,1.2nm,0.7s,mb3.5,baz=315,slow=8.4,SNR=6.5						
ESDC				LR	LR	19 33 24.1	
	comp=Z,76nm,18.3s,MS3.3,baz=295,slow=32						
CABF	**La Chapelle**	**26.08**	**98**	*e*P	**P**	**19 25 08.4**	**+0.5**
	comp=Z,27nm,1.2s,mb4.4						
CABF	**La Chapelle**	**26.08**	**98**	*e*P	**P**	**19 25 08.4**	**+0.5**
	comp=Z,13nm,1.2s,mb4.4						
ARCES	**ARCESS Array B**	**27.38**	**41**	LR	LR	19 34 09.4	
	comp=Z,75nm,19.1s,MS3.3,baz=172,slow=32						
DAVOX	**Davos/Dischmat**	**28.00**	**94**	LR	LR	19 35 42.6	
	comp=Z,182nm,19.4s,MS3.7,baz=263,slow=35						
GERES	**GERESS Array B**	**28.80**	**87**	LR	LR	19 36 41.8	
	comp=Z,116nm,18.7s,MS3.5,baz=83,slow=36						
VRAC	**Vranov**	**30.08**	**84**	LR	LR	19 37 35.7	
	comp=Z,148nm,18.4s,MS3.7,baz=256,slow=36						
KEST	**Kesra**	**35.59**	**109**	LR	LR	19 39 30.6	
	comp=Z,29nm,20.2s,MS3.0,baz=189,slow=34						
AKASG	**Malin Array Be**	**35.93**	**74**	P	**P**	**19 26 31.8**	**-2.8**
	comp=Z,0.3nm,0.3s,mb3.7,baz=312,slow=7.4,SNR=3.9						
ULM	**Lac du Bonnet**	**36.47**	**286**	LR	LR	19 40 18.7	
	comp=Z,134nm,18.7s,MS3.8,baz=334,slow=34						
TAM	**Tamanrasset**	**44.56**	**125**	*e*P	**P**	**19 27 46.7**	**+0.3**
TAM	**Tamanrasset**	**44.56**	**125**	*e*P	**P**	**19 27 46.7**	**+0.3**
PDAR	**Pinedale Array**	**48.48**	**287**	LR	LR	19 47 34.0	
	comp=Z,114nm,18.3s,MS3.9,baz=41,slow=35						
TORD	**Torodi Ar. Bea**	**51.63**	**135**	P	**P**	**19 28 39.1**	**-2.0**
	comp=Z,1.4nm,0.9s,mb3.9,baz=342,slow=6.5,SNR=8.1						
BVAR	**Borovoye Array**	**53.37**	**47**	LR	LR	19 49 52.8	
	comp=Z,60nm,21.4s,MS3.6,baz=39,slow=34						
LIC	**Lamto**	**55.78**	**146**	*e*P	**P**	**19 29 12.4**	**+0.9**
	comp=Z,20nm,1.0s,mb4.8						
LIC				*e*MLR	MLR		
	comp=Z,128nm,20.8s,MS3.7						
LIC	**Lamto**	**55.78**	**146**	*e*P	**P**	**19 29 12.4**	**+0.9**
	comp=Z,9.8nm,1.0s,mb4.8						
LIC				LR	LR		
	comp=Z,60nm,20.8s,MS3.7						
NVAR	**Mina Array Bea**	**56.15**	**290**	P	**P**	**19 29 14.8**	**+0.8**
	comp=Z,3.0nm,0.5s,mb3.6,baz=69,slow=7.8,SNR=3.0						
ZALV	**Zalesovo Beam**	**57.88**	**38**	LR	LR	19 54 26.9	
	comp=Z,21nm,20.6s,MS3.2,baz=202,slow=36						
KURK	**Kurchatov**	**58.35**	**44**	LR	LR	19 53 57.9	
	comp=Z,21nm,18.9s,MS3.3,baz=180,slow=35						
PFO	**Pinyon Flat Ob**	**58.92**	**285**	LR	LR	19 53 43.1	
	comp=Z,86nm,18.1s,MS3.9,baz=91,slow=35						
MKAR	**Makanchi Array**	**62.96**	**44**	P	**P**	**19 30 00.1**	**-0.7**
	comp=Z,0.8nm,0.6s,mb4.0,baz=344,slow=4.6,SNR=8.4						
EKS2	**Erkin-Say**	**62.96**	**52**	*e*P	**P**	**19 30 01.6**	**+0.8**
	comp=Z,10nm,1.4s,mb4.8						
EKS2	**Erkin-Say**	**62.96**	**52**	*e*P	**P**	**19 30 01.6**	**+0.7**
	comp=Z,10nm,1.4s,mb4.8						
SONM	**Songino Array**	**69.63**	**28**	P	**P**	**19 30 42.7**	**-0.8**
	comp=Z,1.8nm,1.0s,mb4.0,baz=320,slow=4.3,SNR=4.6						
ASAR	**Alice Springs**	**144.75**	**21**	PKP	PKPdf	19 39 09.4	-1.7
	comp=Z,1.3nm,0.9s,baz=342,slow=2.7,SNR=18						

IDC 16 19:28:27.0±5.7, 896S×12412E, h61km±67km, mb2.9/1, mb1 3.1/4, mb1mx3.0/16, mbtmp3.0/4, ML2.9/3, Error ellipse: s-maj=55.9km s-min=35.6km az=25.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.32**	**200**	P	Pn	19 28 49.9	+0.6
	2.3nm,0.3s,baz=45,slow=3.4,SNR=7.4						
BATI				S	Sn	19 29 06.0	0.0
	10nm,0.3s,baz=139,slow=22,SNR=19						
FITZ	**Fitzroy Crossi**	**9.21**	**171**	P	Pn	19 30 35.3	-1.9
	0.0nm,0.3s,baz=348,slow=12,SNR=4.4						
FITZ				S	Sn	19 32 07.8	-11
	0.2nm,0.3s,baz=123,slow=14,SNR=7.8						
WRA	**Warramunga Arr**	**14.73**	**139**	P	Pn	19 31 51.5	-0.4
	0.1nm,0.3s,baz=320,slow=14,SNR=7.6						
WRA				S	Sn	19 34 26.1	-7.9
	0.1nm,0.3s,baz=299,slow=22,SNR=6.7						
ASAR	**Alice Springs**	**17.37**	**149**	P	Pn	19 32 26.8	+1.5
	0.1nm,0.3s,baz=316,slow=12,SNR=10						
ASAR				S	S	19 35 30.6	-13
	0.1nm,0.3s,baz=309,slow=21,SNR=4.2						
MKAR	**Makanchi Array**	**66.83**	**330**	P	P	19 39 12.3	0.0
	0.1nm,0.4s,baz=129,slow=7.3,SNR=3.3						

IDC 16 19:41:21.9±10.0, 692S×11425E, h311km±74km, mb3.2/3, mb1 3.3/5, mb1mx2.9/18, mbtmp3.2/5, Error ellipse: s-maj=121.5km s-min=99.8km az=56.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**9.87**	**110**	P	Pn	19 43 38.1	-0.2
	0.7nm,0.3s,baz=270,slow=6.1,SNR=3.3						
BATI				S	S	19 45 37.2	+7.2
	1.6nm,0.3s,baz=319,slow=19,SNR=3.9						
FITZ	**Fitzroy Crossi**	**15.71**	**136**	P	P	19 44 47.5	+1.3
	0.0nm,0.3s,baz=333,slow=14,SNR=2.1						
FITZ				S	S	19 47 36.5	+0.7
	0.0nm,0.3s,baz=119,slow=19,SNR=2.6						
WRA	**Warramunga Arr**	**23.40**	**126**	P	P	19 46 04.0	+0.1
	1.0nm,0.7s,baz=299,slow=11,SNR=10						
ASAR	**Alice Springs**	**25.17**	**134**	P	P	19 46 19.3	-0.5
	0.7nm,0.3s,baz=310,slow=8.8,SNR=34						
STKA	**Stephens Creek**	**35.59**	**138**	P	P	19 47 51.0	+0.3
	1.6nm,0.4s,baz=320,slow=8.9,SNR=13						

IDC 16 19:58:13.9±5.2, 538S×8434E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.4/21, mbtmp3.7/3, Error ellipse: s-maj=132.0km s-min=42.1km az=79.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**27.72**	**31**	P	P	20 04 04.2	0.0
	0.4nm,0.4s,baz=224,slow=7.6,SNR=4.1						
WRA	**Warramunga Arr**	**50.68**	**111**	P	P	20 07 15.4	-0.1
	1.3nm,0.5s,baz=287,slow=8.6,SNR=25						
ASAR	**Alice Springs**	**51.00**	**116**	P	P	20 07 18.0	+0.1
	0.3nm,0.6s,baz=282,slow=7.5,SNR=4.4						
ASAR				PcP	PcP	20 08 34.1	-0.1
	0.2nm,0.6s,baz=296,slow=4.4,SNR=5.3						

IDC 16 20:35:33.2±8.8, 3429S×17858W, h48km±67km, mb3.9/4, mb1 4.1/5, mb1mx3.7/17, mbtmp3.9/5, ML3.9/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/34, Error ellipse: s-maj=67.1km s-min=35.8km az=54.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.27**	**220**	P	Pn	20 36 48.9	-0.5
	3.7nm,0.3s,baz=60,slow=4.7,SNR=12						
URZ				S	Sn	20 37 49.7	+0.9
	5.3nm,0.3s,baz=157,slow=20,SNR=8.1						
RAR	**Rarotonga**	**21.09**	**57**	LR	LR	20 47 17.4	
	comp=Z,51nm,18.8s,baz=108,slow=33						
STKA	**Stephens Creek**	**33.31**	**263**	LR	LR	20 52 43.8	
	comp=Z,174nm,19.6s,baz=2.4,slow=31						
CTA	**Charters Tower**	**34.14**	**285**	P	P	20 42 14.9	+1.2
	0.7nm,0.3s,baz=121,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**42.56**	**271**	P	P	20 43 24.4	-0.1
	3.5nm,0.7s,baz=114,slow=7.5,SNR=58						
ASAR				PcP	PcP	20 45 15.9	-0.3
	0.5nm,0.5s,baz=114,slow=3.9,SNR=6.6						
WB2	**Warramunga Arr**	**43.89**	**277**	*e*P	P	20 43 34.7	-0.5
WRA	**Warramunga Arr**	**43.90**	**277**	P	P	20 43 34.6	-0.7
	3.2nm,0.7s,baz=119,slow=7.2,SNR=35						
FITZ	**Fitzroy Crossi**	**51.97**	**273**	P	P	20 44 37.4	-0.3
	1.0nm,0.6s,baz=100,slow=6.1,SNR=5.9						
TORD	**Torodi Ar. Bea**	**158.95**	**181**	PKPab	PKPab	20 56 02.5	0.0
	0.3nm,0.5s,baz=195,slow=2.8,SNR=5.7						

BGS **16** *20:43:04.2±1.3, 5390N×16284E, h33km, mb5.5*
BJI **16** *20:43:06.6, 5476N×16137E, h39km, mB4.8, mb4.8, Ms4.6, Msz4.3*
ISCJB **16** *20:43:07.7±0.1, 5458N±002×16149E±003, h37km, mb5.2/296, MS4.2/53, Error ellipse: s-maj=3.5km s-min=2.0km az=149.0*
DJA **16** *20:43:08, 5465N×16249E, h49km, mb5.5/19*
IDC **16** *20:43:08.9±0.6, 5461N×16132E, h34km±4km, mb5.0/29, mb1 5.0/30, mb1mx5.0/31, mbtmp5.0/30, MS4.1/26, Ms1 4.1/26, ms1mx3.9/44, Error ellipse: s-maj=12.8km s-min=9.0km az=130.0*
NEIC **16** *20:43:09.5±0.5, 5453N×16143E, h41km±5km, mb5.2/177, Error ellipse: s-maj=3.9km s-min=2.2km az=174.0*
KRSC **16** *20:43:09.9±0.2, 5443N×16149E, h43km±32km, ML5.3*
MOS **16** *20:43:09.4±0.9, 5450N×16144E, h54km, mb5.4/106, MS4.2/21, Error ellipse: s-maj=7.5km s-min=3.7km az=89.7*
GCMT **16** *20:43:09.5±0.4, 5437N×16199E, h43km±1km, MW5.0/59, Moment Tensor Solution. s51,c63; s59,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.93±.15; $M_{\theta\theta}$-0.57±.13; $M_{\phi\phi}$-2.36±.11; $M_{r\theta}$1.13±.11; $M_{r\phi}$-1.71±.08; $M_{\theta\phi}$1.02±.09; Best double couple: $M_0$3.51600×10^{16} NP1:ϕ_s202.00000°, δ33.00000°, λ75.00000°. NP2: ϕ_s39.00000°, δ58.00000°, λ100.00000°. Principal axes: T 3.3140, Plg75.0000°, Azm336.0000°; N 0.4000, Plg8.0000°, Azm214.0000°; P -3.7180, Plg12.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
SZGRF **16** *20:43:10.8, 5489N×16290E, h33km, mb5.6, Near east coast of Kamchatka Peninsula, Russia*
ORF **16** *20:43:18.0, 5640N×16398E, h30km, mb5.5*
ISC 16 20:43:09.7±0.1, 5458N±002×16144E±003, h39km, h39km±.9km:pP-P, n768, σ0s89/758, mb5.2/296, MS4.2/53, 159C-51D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**1.03**	**314**	*i* P	**Pn**	**20 43 30.9**	**+3.3**
KII	**Karymskiy**	**1.29**	**246**	*i* P	**Pn**	**20 43 32.6**	**+1.5**
KMNR	**Kamenistaya**	**1.37**	**330**	*i* P	**Pn**	**20 43 36.2**	**+4.0**
BZMR	**Bezymyannaya**	**1.47**	**339**	*i* P	**Pn**	**20 43 37.0**	**+3.5**
ZLN	**Zelenaya**	**1.49**	**346**	*i* P	**Pn**	**20 43 37.6**	**+3.7**
KIRR	**Kirishev**	**1.52**	**336**	*i* P	**Pn**	**20 43 38.1**	**+3.9**
KPT	**Kopyto**	**1.56**	**334**	*i* P	**Pn**	**20 43 38.5**	**+3.7**
SPN	**Mys Shipunski**	**1.70**	**210**	*i* P	**Pn**	**20 43 35.0**	**-1.8**
KRSR	**Krestovskiy**	**1.72**	**343**	*i* P	**Pn**	**20 43 40.3**	**+3.3**
KRSR				*i* S	**Sn**	**20 44 02.2**	**+4.5**
KOZ	**Kozyrevsk**	**1.73**	**330**	*i* P	**Pn**	**20 43 41.6**	**+4.4**
KOZR	**Kozyr**	**1.73**	**330**	PN	**Pn**	**20 43 41.6**	**+4.4**
KLY	**Klyuchi**	**1.80**	**346**	*i* P	**Pn**	**20 43 40.9**	**+2.8**
KBTR	**Krutoberegovo**	**1.81**	**25**	*e*P	**Pn**	**20 43 39.1**	**+0.8**
NLC	**Nalytchevo**	**1.88**	**222**	*i* P	**Pn**	**20 43 38.9**	**-0.3**
NLC				*i* S	**Sn**	**20 44 00.8**	**-0.8**
SRDR	**Sredinnyy**	**2.00**	**331**	*i* P	**Pn**	**20 43 44.4**	**+3.5**
AVH	**Avacha**	**2.07**	**232**	*i* P	**Pn**	**20 43 43.6**	**+1.7**
AVH				*i*

ERM	**Erimo**	**17.42**	**231**	*e*P	**Pn**	**20 47 06.2**	**-3.3**
ERM				pmax	pmax		
	comp=Z,139nm,0.5s						
ERM	**Erimo**	**17.42**	**231**	*e*Pn	**Pn**	**20 47 06.2**	**-3.3**
	comp=Z,139nm,0.5s						
YAK	**Yakutsk**	**18.12**	**307**	*e*P	**Pn**	**20 47 18.8**	**+0.9**
YAK				*e*S	**S**	**20 50 43.7**	**+0.5**
YAK				pmax	pmax		
	comp=E,86nm,1.0s						
YAK				pmax	pmax		
	comp=Z,271nm,0.9s						
YAK				pmax	pmax		
	comp=N,24nm,0.9s						
YAK				smax			
	comp=N,119µm,2.0s						
YAK				smax			
	comp=E,143µm,2.0s						
YAK				MLR	MLR		
	comp=Z,508nm,12.0s						
YAK				MLR	MLR		
	comp=E,507nm,17.0s						
YAK				MLR	MLR		
	comp=N,257nm,16.0s						
YAK	**Yakutsk**	**18.12**	**307**	*e*Pn	**Pn**	**20 47 17.4**	**-0.5**
TNA	**Tin City**	**18.60**	**42**	*e*Pn	**Pn**	**20 47 24.7**	**+1.0**
	comp=N,66nm,1.3s						
UNV	**Unalaska Valle**	**18.68**	**79**	*e*Pn	**Pn**	**20 47 24.0**	**-0.8**
	comp=N,49nm,0.9s						
KLR	**Kul'dur**	**19.00**	**266**	*e*P	**Pn**	**20 47 25.2**	**-3.5**
KLR				pmax	pmax		
	comp=E,140nm,1.4s						
KLR				pmax	pmax		
	comp=Z,120nm,1.4s						
KLR				MLR	MLR		
	comp=N,2µm,17.5s						
FALS	**False Pass**	**20.18**	**75**	*e*Pn	**P**	**20 47 41.6**	**+1.1**
	comp=N,110nm,1.1s						
CLNS	**Chul'man**	**20.56**	**291**	*e*P	**P**	**20 47 46.3**	**+1.7**
CLNS				*e*		20 48 04.0	
CLNS				*e*S	**S**	**20 51 36.2**	**+4.0**
CLNS				*e*		20 51 54.4	
CLNS				pmax	pmax		
	comp=Z,22nm,0.9s						
CLNS				pmax	pmax		
	comp=E,16nm,0.8s						
CLNS				pmax	pmax		
	comp=N,15nm,0.8s						
CLNS				smax			
	comp=E,47µm,8.7s						
CLNS				smax			
	comp=N,60µm,12.3s						
CLNS				MLR	MLR		
	comp=N,140nm,11.0s,MS4.1						
CLNS				MLR	MLR		
	comp=Z,531nm,12.0s,MS4.1						
CLNS				MLR	MLR		
	comp=E,498nm,14.0s,MS4.1						
TIXI	**Tiksi**	**22.09**	**333**	*e*P	**P**	**20 48 00.6**	**-0.3**
TIXI				*e*		20 48 19.0	
TIXI				*e*S	**S**	**20 51 58.1**	**-3.8**
TIXI				pmax	pmax		
	comp=Z,44nm,0.8s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.4						
TIXI	**Tiksi**	**22.09**	**333**	*e*P	**P**	**20 48 00.9**	**0.0**
VLA	**Vladivostok**	**22.39**	**251**	*e*P	**P**	**20 48 01.6**	**-2.8**
VLA				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.6						
VLA				MLR	MLR		
	comp=Z,600nm,17.2s,MS4.1						
CHGN	**Chignik**	**22.62**	**69**	*e*P	**P**	**20 48 08.4**	**+1.8**
MDJ	**Mudanjiang**	**22.74**	**257**	P	**P**	**20 48 06.5**	**-1.5**
MDJ				AP		20 48 15.0	
MDJ				XP	sP	20 48 19.0	-3.8
MDJ				PCP	PcP	20 51 59.1	+0.4
MDJ				S	**S**	**20 52 10.6**	**-3.4**
MDJ				XS	sS	20 52 24.6	-6.3
MDJ				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,75nm,3.9s						
MDJ				LR	LR		
	comp=N,454nm,19.5s,MS4.1						
MDJ				LR	LR		
	comp=E,606nm,19.5s,MS4.1						
MDJ				LR	LR		
	comp=Z,616nm,17.6s,MS4.1						
TTA	**Tatalina**	**23.19**	**52**	*e*P	**P**	**20 48 12.6**	**0.0**
SVW2	**Sparrevohn**	**23.43**	**56**	*e*P	**P**	**20 48 14.5**	**-0.5**
MAJO	**Matsushiro**	**24.10**	**231**	*e*P	**P**	**20 48 21.0**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,100nm,0.6s,mb5.4						
MAJO	**Matsushiro**	**24.10**	**231**	*e*Pn	**P**	**20 48 21.0**	**-0.4**
	comp=Z,100nm,0.6s,mb5.4						
MAT	**Matsushiro**	**24.10**	**231**	P	**P**	**20 48 22.1**	**+0.7**
MAT				S	**S**	**20 52 39.0**	**+2.8**
MJAR	**Matsushiro Arr**	**24.10**	**231**	P	**P**	**20 48 21.3**	**0.0**
	comp=Z,16nm,0.4s,mb4.8,baz=25,slow=8.7,SNR=143						
MJAR				PcP	PcP	20 52 01.8	+0.1
	comp=Z,2.2nm,0.7s,baz=95,slow=0.8,SNR=4.3						
MJAR	**Matsushiro Arr**	**24.10**	**231**	P	**P**	**20 48 21.3**	**0.0**
MJAR				PcP	PcP	20 52 01.8	+0.1
IMA2	**Indian Mountai**	**24.41**	**44**	*e*P	**P**	**20 48 23.7**	**-0.2**
CHUM	**Lake Minchumin**	**24.87**	**49**	*e*P	**P**	**20 48 28.2**	**0.0**
	comp=Z,83nm,0.7s,mb5.4						
PPLA	**Purkeypile**	**24.94**	**52**	*e*P	**P**	**20 48 29.0**	**+0.2**
	comp=Z,79nm,0.8s,mb5.3						
OHAK	**Old Harbor**	**25.16**	**65**	*e*Pn	**P**	**20 48 28.4**	**-2.5**
KDAK	**Kodiak Island**	**25.41**	**64**	P	**P**	**20 48 31.8**	**-1.3**
	comp=Z,27nm,0.6s,mb4.9,baz=286,slow=7.1,SNR=21						
KDAK				PcP	PcP	20 52 04.4	+0.2
	comp=Z,9.9nm,0.7s,baz=169,slow=5.2,SNR=4.8						
KDAK				LR	LR	20 58 12.3	
	comp=Z,463nm,21.9s,MS4.0,baz=37,slow=36						
KDAK	**Kodiak Island**	**25.41**	**64**	*e*P	**P**	**20 48 31.8**	**-1.3**
BPAW	**Bear Paw Mtn.**	**25.45**	**49**	*e*P	**P**	**20 48 33.0**	**-0.4**
	comp=Z,34nm,0.7s,mb5.0						
KTH	**Kantishna Hill**	**25.49**	**50**⇑	*i*P	**P**	**20 48 34.0**	**+0.2**
	comp=Z,23nm,0.7s,mb4.8						
CN2	**Changchun**	**25.60**	**260**	*e*P	**P**	**20 48 33.3**	**-1.6**
CN2				*e*XP	sP	20 48 48.3	-2.0
CN2				*e*S	**S**	**20 52 57.4**	**-2.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
CN2				AMB	AMB		
	comp=Z,116nm,6.0s						
CN2				LR	LR		
	comp=N,488nm,13.0s,MS4.3						
CN2				LR	LR		
	comp=E,436nm,13.0s,MS4.3						
CN2				LR	LR		
	comp=Z,352nm,17.0s,MS4.0						
COLD	**Coldfoot**	**25.91**	**42**⇑	*i*P	**P**	**20 48 36.9**	**-0.6**
	comp=Z,36nm,0.8s,mb5.0						
HIA	**Hailar**	**25.96**	**276**	*e*P	**P**	**20 48 36.3**	**-1.9**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HIA	**Hailar**	**25.96**	**276**	*e*P	**P**	**20 48 36.3**	**-1.8**
	comp=Z,10nm,0.7s,mb4.5						
BOD	**Bodaibo**	**26.16**	**297**	*e*P	**P**	**20 48 38.3**	**-1.6**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
RC01	**Rabbit Creek A**	**26.25**	**56**	*e*P	**P**	**20 48 39.9**	**-0.8**
JHJ	**Hachijo jima 2**	**26.33**	**224**	P	**P**	**20 48 40.0**	**-1.6**
	comp=Z,73nm,0.8s,mb5.3,baz=11,slow=9.9,SNR=3.0						
MCK	**McKinley**	**26.37**	**50**	P	**P**	**20 48 41.6**	**-0.1**
MCK				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.0						
MCK	**McKinley**	**26.37**	**50**	*e*P	**P**	**20 48 41.3**	**-0.5**
	comp=Z,43nm,0.9s,mb5.0						
PMR	**Palmer**	**26.48**	**55**	P	**P**	**20 48 44.1**	**+1.4**
PMR				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.6						
PMR	**Palmer**	**26.48**	**55**	*e*P	**P**	**20 48 41.8**	**-0.9**
	comp=Z,17nm,0.8s,mb4.6						
SEW	**Seward**	**26.54**	**58**	*e*P	**P**	**20 48 42.0**	**-1.4**
COLA	**College**	**26.79**	**47**	P	**P**	**20 48 44.3**	**-1.2**
COLA				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.8						
COLA	**College**	**26.79**	**47**	*e*P	**P**	**20 48 43.7**	**-1.8**
	comp=Z,35nm,1.0s,mb4.8						
SNY	**Shenyang**	**27.91**	**259**	⇓P	**P**	**20 48 57.5**	**+1.8**
SNY				AMB	AMB		
	comp=Z,18nm,0.8s,mb4.8						
SNY				AMB	AMB		
	comp=Z,247nm,4.0s						
SNY				LR	LR		
	comp=N,425nm,19.2s						
SNY				LR	LR		
	comp=E,518nm,11.1s						
SNY				LR	LR		
	comp=Z,413nm,24.0s,MS3.9						
DIV	**Divide**	**28.14**	**55**	*e*P	**P**	**20 48 57.4**	**-0.2**
	comp=Z,46nm,1.1s,mb5.0						
KSRS	**Korea Array**	**28.52**	**247**	P	**P**	**20 49 02.4**	**+1.1**
	comp=Z,7.1nm,0.7s,mb4.5,baz=38,slow=8.7,SNR=14						
KSRS				PcP	PcP	20 52 12.4	+0.4
	comp=Z,4.7nm,0.7s,baz=4.6,slow=2.3,SNR=8.3						
KSRS				LR	LR	21 00 02.6	
	comp=Z,297nm,19.3s,MS3.9,baz=38,slow=36						
KSRS	**Korea Array**	**28.52**	**247**	P	**P**	**20 49 02.4**	**+1.1**
KSRS						20 52 12.4	
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
KSRS				MLR	MLR		
	comp=Z,297nm,19.3s,MS3.9						
CBIJ	**Chichi jima**	**30.87**	**215**	LR	LR	20 59 47.5	
	comp=Z,78nm,20.6s,MS3.4,baz=80,slow=32						
DL2	**Dalian**	**30.96**	**256**	P	**P**	**20 49 24.3**	**+1.4**
DL2				*e*S	**S**	**20 54 27.4**	**+2.8**
DL2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
DL2				LR	LR		
	comp=N,280nm,15.0s,MS4.1						
DL2				LR	LR		
	comp=E,190nm,16.2s,MS4.1						
DL2				LR	LR		
	comp=Z,340nm,18.0s,MS4.0						
PNL	**Peninsula**	**31.57**	**56**	*e*P	**P**	**20 49 27.6**	**-0.4**
	comp=Z,2µm,0.6s						
BJI	**Beijing**	**33.32**	**263**	P	**P**	**20 49 43.1**	**-0.4**
BJI				S	**S**	**20 55 01.3**	**0.0**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.5						
BJI				LR	LR		
	comp=N,557nm,18.2s,MS4.4						
BJI				LR	LR		
	comp=E,522nm,21.1s,MS4.4						
BJI				LR	LR		
	comp=Z,508nm,19.4s,MS4.2						
TLY	**Talaya**	**33.96**	**289**	*e*P	pP	20 50 06.6	+6.8
TLY				*e*		20 51 26.8	
TLY				*e*SS	SS	20 57 48.0	+10
TLY				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
TLY				MLR	MLR		
	comp=Z,628nm,17.0s,MS4.4						
ULN	**Ulaanbaatar**	**33.97**	**282**	*i*P	**P**	**20 49 48.6**	**-0.4**
SONM	**Songino Array**	**34.36**	**282**	P	**P**	**20 49 51.1**	**-1.3**
	comp=Z,3.6nm,0.7s,mb4.4,baz=61,slow=8.0,SNR=17						
SONM				PcP	PcP	20 52 27.7	+0.2
	comp=Z,9.2nm,0.6s,baz=70,slow=1.6,SNR=24						
SONM				LR	LR	21 05 09.7	
	comp=Z,244nm,18.9s,MS4.0,baz=58,slow=38						
SONM	**Songino Array**	**34.36**	**282**	P	**P**	**20 49 51.1**	**-1.3**
SONM						20 52 27.7	
SONM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,245nm,18.9s						
ZAK	**Zakamensk**	**34.79**	**288**	*e*P	**P**	**20 49 58.7**	**+2.6**
ZAK				*e*	pP	20 50 11.0	+4.0
ZAK				*e*		20 52 27.7	
MOY	**Mondy**	**35.42**	**291**	*e*P	pP	20 50 19.1	+6.7
HHC	**Hu-ho-hao-te**	**35.48**	**268**	*e*P	**P**	**20 50 03.4**	**+1.3**
HHC				AP	pP	20 50 13.8	+0.8
HHC				XP	sP	20 50 17.8	+0.1
HHC				PP	PP	20 51 24.0	+1.1
HHC				PCP	PcP	20 52 32.8	+2.0
HHC				S	**S**	**20 55 35.8**	**+1.4**
HHC				XS	sS	20 55 52.8	+0.3
HHC				SCP	ScP	20 56 14.6	+1.3
HHC				PCS	PcS	20 56 18.8	+0.9
HHC				SS	SS	20 57 56.3	-13
HHC				SCS	ScS	21 00 17.9	+0.1
HHC				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,71nm,6.1s						
HHC				LR	LR		
	comp=N,312nm,12.0s,MS4.5						
HHC				LR	LR		
	comp=E,391nm,12.4s,MS4.5						
HHC				LR	LR		
	comp=Z,451nm,12.4s,MS4.4						
JOW	**Kunigami**	**36.82**	**235**	P	**P**	**20 50 13.2**	**-0.6**
	comp=Z,49nm,0.4s,mb5.7,baz=27,slow=9.8,SNR=12						
SSE	**Sheshan**	**36.97**	**247**	P	**P**	**20 50 15.5**	**+0.6**
SSE				XP	sP	20 50 31.6	+1.1
SSE				PP	PP	20 51 40.3	+0.8
SSE				S	**S**	**20 55 58.9**	**+1.5**
SSE				AMB	AMB		
	comp=Z,25nm,0.9s,mb5.0						
SSE				AMB	AMB		
	comp=Z,291nm,4.9s						
SSE				LR	LR		
	comp=N,92nm,22.2s,MS3.7						
SSE				LR	LR		
	comp=E,95nm,22.2s,MS3.7						
SSE				LR	LR		
	comp=Z,169nm,20.9s,MS3.8						
NJ2	**Nanjing**	**37.50**	**251**	*e*P	**P**	**20 50 20.3**	**+0.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
KRAR	**Krasnoyarsk**	**37.61**	**301**	*e*P	**P**	**20 50 20.4**	**+0.3**
KRAR				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
ALE	**Alert**	**41.34**	**8**	P	**P**	**20 50 51.3**	**+0.4**
	comp=Z,260nm,0.9s,mb5.9,SNR=9.8						
YKA	**Yellowknife Ar**	**41.53**	**44**	P	**P**	**20 50 52.8**	**+0.1**
	comp=Z,15nm,0.6s,mb4.8,baz=300,slow=7.8,SNR=15						
YKA				PcP	PcP	20 52 49.3	0.0
	comp=Z,8.4nm,0.7s,baz=303,slow=3.8,SNR=10						
YKA				LR	LR	21 09 17.6	
	comp=Z,129nm,21.2s,MS3.8,baz=50,slow=38						
YKA	**Yellowknife Ar**	**41.53**	**44**	P	**P**	**20 50 52.8**	**+0.1**
YKA						20 52 49.4	
YKA	**Yellowknife Ar**	**41.53**	**44**	P	**P**	**20 50 52.8**	**+0.1**
YKA				PcP	PcP	20 52 49.4	0.0
YKA				LR	LR	21 09 17.6	
ZAA0	**Zalesovo Array**	**42.66**	**302**	*e*P	**P**	**20 50 59.5**	**-2.5**
ZALV	**Zalesovo Beam**	**42.66**	**302**	P	**P**	**20 50 59.3**	**-2.6**
	comp=Z,2.3nm,0.6s,mb4.1,baz=68,slow=8.2,SNR=11						
ZALV				PP	PP	20 52 43.2	+2.2
	comp=Z,2.7nm,0.7s,baz=47,slow=10.0,SNR=3.9						
ZALV				PcP	PcP	20 52 51.9	-1.3
	comp=Z,9.9nm,0.9s,baz=56,slow=5.6,SNR=8.8						
ZALV				LR	LR	21 10 31.0	
	comp=Z,355nm,18.7s,MS4.3,baz=60,slow=39						
GUMO	**Guam**	**42.91**	**204**	LR	LR	21 07 33.0	
	comp=Z,85nm,21.3s,MS3.6,baz=73,slow=34						
NVS	**Novosibirsk**	**42.94**	**304**	*e*P	**P**	**20 51 01.5**	**-2.7**
NVS				*e*		20 51 17.0	
NVS				*e*		20 52 49.3	
NVS				pmax	pmax		
	comp=N,10.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,17nm,1.2s						
NVS				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.8						
LZH	**Lanzhou**	**43.16**	**269**	*e*P	**P**	**20 51 04.5**	**-1.7**
LZH				AP	pP	20 51 15.9	-1.4
LZH				XP	sP	20 51 20.0	-1.9
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,110nm,5.0s						
LZH				LR	LR		
	comp=E,584nm,14.8s						
LZH				LR	LR		
	comp=Z,536nm,17.0s,MS4.5						
GTA	**Gaotai**	**43.24**	**276**	*e*P	**P**	**20 51 05.8**	**-1.1**
GTA				AP	pP	20 51 16.9	-1.1
GTA				XP	sP	20 51 20.0	-2.6
GTA				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.2						
GTA				AMB	AMB		
	comp=Z,61nm,4.2s						
GTA				LR	LR		
	comp=N,400nm,15.3s,MS4.6						
GTA				LR	LR		
	comp=E,454nm,13.2s,MS4.6						
GTA				LR	LR		
	comp=Z,677nm,14.4s,MS4.7						
OBC	**Olympics--Boni**	**44.99**	**66**	P	**P**	**20 51 21.6**	**+0.9**
NLWA	**Neilton Lookou**	**45.49**	**67**	*e*P	**P**	**20 51 25.3**	**+0.6**
	comp=Z,32nm,0.8s,mb5.2						
MBW	**Mount Baker**	**45.68**	**64**	P	**P**	**20 51 26.5**	**+0.3**
GNW	**Green Mountain**	**45.94**	**66**	*e*P	**P**	**20 51 28.2**	**-0.1**
	comp=Z,9.1nm,0.7s,mb4.8						
JCW	**Jim Creek**	**46.03**	**65**	P	**P**	**20 51 29.3**	**+0.3**
RPW	**Rockport**	**46.09**	**64**	P	**P**	**20 51 29.5**	**0.0**
BMW	**Boistfort Moun**	**46.41**	**67**	P	**P**	**20 51 32.4**	**+0.4**
BMW	**Boistfort Moun**	**46.41**	**67**	*e*P	**P**	**20 51 31.9**	**-0.1**
RMW	**Rattlesnake Mo**	**46.55**	**65**	P	**P**	**20 51 33.8**	**+0.7**
LMW	**Ladd Mountain**	**46.79**	**67**	P	**P**	**20 51 35.9**	**+1.0**
CD2	**Chengdu**	**46.91**	**264**	*e*P	**P**	**20 51 34.8**	**-1.3**
CD2				AP	pP	20 51 44.6	-2.7
CD2				XP	sP	20 51 48.5	-3.4
CD2				PP	PP	20 53 24.3	-2.4
CD2				S	**S**	**20 58 21.8**	**-2.4**
CD2				XS	sS	20 58 38.3	-4.5
CD2				SS	SS	21 01 41.1	-10
CD2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
CD2				AMB	AMB		
	comp=Z,80nm,6.2s						
CD2				LR	LR		
	comp=N,400nm,18.0s,MS4.6						
CD2				LR	LR		
	comp=E,420nm,15.6s,MS4.6						
CD2				LR	LR		
	comp=Z,420nm,16.8s,MS4.5						
HEBO	**Mount Hebo**	**46.92**	**69**	*e*P	**P**	**20 51 36.6**	**+0.6**
	comp=Z,52nm,0.9s,mb5.5						
LON	**Longmire**	**46.99**	**66**	P	**P**	**20 51 36.8**	**+0.3**
LON				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
LON	**Longmire**	**46.99**	**66**	*e*P	**P**	**20 51 36.0**	**-0.5**
	comp=Z,5.4nm,0.7s,mb4.6						
ETW	**Entiat**	**47.24**	**64**	P	**P**	**20 51 38.8**	**+0.3**
WMQ	**Urumqi**	**47.24**	**289**	*e*P	**P**	**20 51 42.0**	**+3.5**
WMQ				AP	pP	20 51 52.0	+2.3
WMQ				XP	sP	20 51 56.0	+1.7
WMQ				PCP	PcP	20 53 12.5	+3.3
WMQ				S	**S**	**20 58 33.0**	**+4.4**
WMQ				XS	sS	20 58 50.0	+2.9
WMQ				SCS	ScS	21 01 30.0	+1.1
WMQ				AMB	AMB		
	comp=Z,21nm,0.9s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,120nm,4.6s						
WMQ				LR	LR		
	comp=N,820nm,16.0s,MS4.9						
WMQ				LR	LR		
	comp=E,631nm,16.2s,MS4.9						
WMQ				LR	LR		
	comp=Z,963nm,23.6s						
TWW	**Teanaway**	**47.25**	**65**	P	**P**	**20 51 39.4**	**+0.9**
KURK	**Kurchatov**	**47.63**	**301**	PcP	PcP	20 53 10.0	-0.5
	baz=70,slow=4.5						
KURK	**Kurchatov**	**47.63**	**301**	*e*P	**P**	**20 51 39.0**	**-2.5**
KURK				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.3						
KURK	**Kurchatov**	**47.63**	**301**	*e*P	**P**	**20 51 39.0**	**-2.4**
	comp=Z,20nm,0.7s,mb5.3						
VFP	**Flag Point**	**48.09**	**68**	P	**P**	**20 51 45.4**	**+0.3**
OD2	**Odessa Site #2**	**48.22**	**64**	P	**P**	**20 51 45.7**	**-0.4**
MK31	**Makanchi Array**	**48.24**	**295**	*e*P	**P**	**20 51 43.5**	**-2.7**
MKAR	**Makanchi Array**	**48.24**	**295**	P	**P**	**20 51 43.3**	**-2.9**
	comp=Z,5.2nm,0.7s,mb4.7,baz=37,slow=6.3,SNR=25						
MKAR				PcP	PcP	20 53 12.6	-0.1
	comp=Z,1.8nm,0.7s,baz=41,slow=4.5,SNR=2.0						
MKAR				LR	LR	21 13 23.7	
	comp=Z,309nm,18.4s,MS4.3,baz=38,slow=38						
MKAR	**Makanchi Array**	**48.24**	**295**	P	**P**	**20 51 43.3**	**-2.9**
MKAR						20 53 12.6	
MKAR	**Makanchi Array**	**48.24**	**295**	P	**P**	**20 51 43.3**	**-2.9**
MKAR				PcP	PcP	20 53 12.6	-0.1
MKAR				LR	LR	21 13 23.7	
RSW	**Rattlesnake Hi**	**48.40**	**65**	*e*P	**P**	**20 51 47.2**	**-0.2**
HAWA	**Hanford**	**48.43**	**65**	*e*P	**P**	**20 51 47.5**	**-0.2**
	comp=Z,22nm,1.1s,mb5.1						
FRIS	**Frissel Point**	**48.47**	**69**	P	**P**	**20 51 48.4**	**+0.4**
NEW	**Newport**	**48.48**	**62**	P	**P**	**20 51 48.2**	**+0.1**
NEW				pmax	pmax		
	comp=Z,21nm,1.0s						
NEW	**Newport**	**48.48**	**62**	*e*P	**P**	**20 51 47.6**	**-0.4**
	comp=Z,21nm,1.0s,mb5.1						
CROR	**Criterion Ridg**	**48.57**	**68**	P	**P**	**20 51 49.0**	**+0.2**
GYA	**Guiyang**	**48.60**	**257**⇑	*i*P	**P**	**20 51 50.4**	**+1.2**
GYA				AP	pP	20 52 01.8	+1.4
GYA				XP	sP	20 52 06.6	+1.6
GYA				PCP	PcP	20 53 16.0	+1.7
GYA				PP	PP	20 53 43.8	+1.6
GYA				SCP	ScP	20 57 05.4	-0.3
GYA				PCS	PcS	20 57 11.9	+1.4
GYA				S	**S**	**20 58 49.6**	**+1.4**
GYA				XS	sS	20 59 05.8	-1.0
GYA				SS	SS	21 02 14.3	-4.0
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
GYA				AMB	AMB		
	comp=Z,130nm,5.6s						
GYA				LR	LR		
	comp=N,560nm,15.9s,MS4.8						
GYA				LR	LR		
	comp=E,490nm,16.4s,MS4.8						
GYA				LR	LR		
	comp=Z,620nm,15.8s,MS4.7						
HUMO	**Hull Mountain**	**49.06**	**71**	*e*P	**P**	**20 51 52.9**	**+0.3**
	comp=Z,13nm,0.8s,mb5.0						
KTRM	**Thompson Ridge**	**49.30**	**72**	P	**P**	**20 51 55.2**	**+0.8**
LNOR	**Lincton Mounta**	**49.43**	**65**	P	**P**	**20 51 55.3**	**0.0**
LNOR	**Lincton Mounta**	**49.43**	**65**	*e*P	**P**	**20 51 55.0**	**-0.3**
YBH	**Yreka Blue Hor**	**49.78**	**72**	P	**P**	**20 51 59.2**	**+1.1**
YBH				pmax	pmax		
	comp=Z,14nm,0.7s						
YBH	**Yreka Blue Hor**	**49.78**	**72**	*e*P	**P**	**20 51 59.0**	**+1.0**
	comp=Z,14nm,0.7s,mb5.1						
BMO	**Blue Mountains**	**50.62**	**65**	*e*P	**P**	**20 52 04.1**	**-0.3**
	comp=Z,12nm,0.9s,mb4.8						
WDC	**Whiskeytown Da**	**50.66**	**73**	P	**P**	**20 52 05.6**	**+0.9**
WDC				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
WDC	**Whiskeytown Da**	**50.66**	**73**	*e*P	**P**	**20 52 04.5**	**-0.2**
	comp=Z,15nm,0.8s,mb5.0						
MOD	**Modoc**	**50.99**	**70**	*e*P	**P**	**20 52 07.6**	**+0.4**
	comp=Z,30nm,0.8s,mb5.3						
MSO	**Missoula**	**51.05**	**62**	*e*P	**P**	**20 52 07.0**	**-0.6**
	comp=Z,21nm,1.3s,mb4.9						
CHMT	**Chamberlain Mo**	**51.35**	**61**	*e*P	**P**	**20 52 09.7**	**-0.1**
FFC	**Flin Flon**	**51.42**	**47**	P	**P**	**20 52 10.5**	**+0.2**
FFC				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
FFC	**Flin Flon**	**51.42**	**47**	*e*P	**P**	**20 52 10.2**	**-0.1**
	comp=Z,13nm,0.8s,mb4.9						
WVOR	**Wild Horse Val**	**51.54**	**69**	P	**P**	**20 52 12.0**	**+0.7**
WVOR				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
WVOR	**Wild Horse Val**	**51.54**	**69**	*e*P	**P**	**

ARCES ARCESS Array B 52.12 342 P **P** **20 52 13.7 -1.5**
comp=Z,16nm,0.7s,mb5.1,baz=32,slow=7.1,SNR=46
ARCES PcP PcP 20 53 26.5 -0.1
comp=Z,4.8nm,0.6s,baz=18,slow=3.7,SNR=7.5
ARCES LR LR 21 17 14.5
comp=Z,171nm,18.4s,MS4.1,baz=178,slow=39
ARCES ARCESS Array B 52.12 342 P **P** **20 52 13.7 -1.6**
ARCES 20 53 26.5
SUMG Summit 52.39 7 *eP* **P** **20 52 17.9 +0.8**
comp=Z,57nm,1.0s,mb5.5
QIZ Qiongzhong 52.73 249 P **P** **20 52 20.9 +0.5**
QIZ S **S** **20 59 47.4 +1.9**
QIZ LR LR
comp=E,240nm,17.9s
QIZ LR LR
comp=Z,229nm,18.9s,MS4.2
ARU Arti 52.85 317 *d iP* **P** **20 52 19.9 -0.9**
ARU *e* 20 53 24.6
ARU *eS* **S** **20 59 46.0 -0.3**
ARU *eSS* SS 21 03 20.0 -4.6
ARU pmax pmax
comp=Z,26nm,0.8s,mb5.2
ARU Arti 52.85 317 *eP* **P** **20 52 19.1 -1.7**
comp=Z,22nm,0.6s,mb5.2
KTK1 Kautokeino 52.98 342 *eP* **P** **20 52 20.7 -0.9**
PAHR Pah Rah Range 53.01 72 *eP* **P** **20 52 22.4 +0.1**
comp=Z,23nm,0.9s,mb5.1
HLID Hailey 53.02 65 *eP* **P** **20 52 22.3 0.0**
comp=Z,4.0nm,0.8s,mb4.4
BOZ Bozeman (W) 53.04 61 P **P** **20 52 22.6 +0.2**
BOZ pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
BOZ Bozeman (W) 53.04 61 *eP* **P** **20 52 22.2 -0.1**
comp=Z,7.5nm,0.8s,mb4.7
TRO Tromso 53.14 345 *eP* **P** **20 52 21.9 -0.9**
CMB Columbia Colle 53.62 74 P **P** **20 52 27.3 +0.5**
CMB pmax pmax
comp=Z,15nm,1.2s,mb4.8
CMB Columbia Colle 53.62 74 *eP* **P** **20 52 27.1 +0.3**
comp=Z,15nm,1.3s,mb4.8
BMN Battle Mountai 53.69 69 P **P** **20 52 28.5 +1.3**
BMN pmax pmax
comp=Z,19nm,0.9s,mb5.0
BMN Battle Mountai 53.69 69 *eP* **P** **20 52 28.1 +0.9**
comp=Z,19nm,0.9s,mb5.0
QLMT Earthquake Lak 53.70 62 *eP* **P** **20 52 27.4 +0.1**
GCMT Greycliff 53.93 60 *eP* **P** **20 52 29.5 +0.6**
TKM2 Tokmak 2 54.36 296 P **P** **20 52 31.1 -1.0**
TKM2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TKM2 Tokmak 2 54.36 296 *eP* **P** **20 52 30.0 -2.0**
comp=Z,4.6nm,0.7s,mb4.5
NVAR Mina Array Bea 54.50 72 P **P** **20 52 34.2 +1.0**
comp=Z,22nm,0.7s,mb5.3,baz=296,slow=7.4,SNR=154
NVAR pP pP 20 52 44.1 -0.4
comp=Z,19nm,0.7s,baz=291,slow=7.1,SNR=19
NVAR Mina Array Bea 54.50 72 P **P** **20 52 34.2 +1.0**
NVAR pP pP 20 52 44.1 -0.4
ELK Elko 54.55 68 P **P** **20 52 34.5 +1.0**
ELK pmax pmax
comp=Z,12nm,1.0s
ELK Elko 54.55 68 *eP* **P** **20 52 34.3 +0.9**
comp=Z,12nm,0.9s,mb4.9
RLMT Red Lodge 54.60 60 *eP* **P** **20 52 34.3 +0.5**
comp=Z,26nm,0.8s,mb5.3
IMW Indian Meadow 54.60 62 *eP* **P** **20 52 34.2 +0.4**
comp=Z,15nm,0.8s,mb5.1
DGMT Dagmar 54.73 54 *eP* **P** **20 52 34.3 -0.5**
comp=Z,12nm,0.8s,mb5.0
MOOW Moose Ponds 54.81 62 *eP* **P** **20 52 36.0 +0.7**
comp=Z,4.7nm,0.8s,mb4.6
TPAW Teton Pass 54.88 63 *eP* **P** **20 52 36.9 +1.0**
comp=Z,8.4nm,0.7s,mb4.9
MTUM Tungsten Hills 55.12 73 *eP* **P** **20 52 38.7 +1.0**
HVU Hansel Valley 55.13 65 P **P** **20 52 38.9 +1.2**
HVU pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
HVU Hansel Valley 55.13 65 *eP* **P** **20 52 38.3 +0.6**
comp=Z,8.2nm,0.8s,mb4.8
LSA Lhasa 55.14 273 P **P** **20 52 37.0 -0.9**
LSA Lhasa 55.14 273 *eP* **P** **20 52 36.8 -1.1**
LSA pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
LSA Lhasa 55.14 273 *eP* **P** **20 52 36.8 -1.0**
comp=Z,4.1nm,0.6s,mb4.6
LOF Lofoten 55.31 346 *eP* **P** **20 52 40.5 +1.8**
LOF AMb AMb 20 52 41.8
comp=Z,85nm,1.1s,mb5.7
AHID Auburn Hatcher 55.32 63 *eP* **P** **20 52 39.3 +0.3**
comp=Z,7.9nm,0.9s,mb4.7
TPH Tonopah 55.35 72 P **P** **20 52 40.3 +1.0**
TPH pmax pmax
comp=Z,22nm,0.8s,mb5.2
TPH Tonopah 55.35 72 *eP* **P** **20 52 39.9 +0.5**
comp=Z,22nm,0.8s,mb5.2
EKS2 Erkin-Say 55.49 297 *eP* **P** **20 52 38.3 -2.0**
comp=Z,8.6nm,0.7s,mb4.9
BGU Big Grassy Mou 55.60 66 *eP* **P** **20 52 41.1 0.0**
SPUT South Promonto 55.64 66 *eP* **P** **20 52 41.8 +0.5**
HWUT Hardware Ranch 55.89 65 *eP* **P** **20 52 43.8 +0.6**
comp=Z,18nm,0.7s,mb5.2
AML Almayashu 55.91 296 *eP* **P** **20 52 41.8 -1.5**
comp=Z,17nm,1.1s,mb5.0
PDAR Pinedale Array 56.12 62 P **P** **20 52 45.2 +0.5**
comp=Z,11nm,0.7s,mb5.0,baz=333,slow=2.5,SNR=65
PDAR pP pP 20 52 55.2 -0.9
comp=Z,4.4nm,0.7s,baz=32,slow=1.7,SNR=7.4
PDAR LR LR 21 17 37.9
comp=Z,80nm,19.1s,MS3.8,baz=182,slow=37
DUG Dugway 56.24 67 P **P** **20 52 46.6 +1.0**
DUG pmax pmax
comp=Z,15nm,0.8s,mb5.1
DUG Dugway 56.24 67 *eP* **P** **20 52 46.3 +0.6**
comp=Z,15nm,0.8s,mb5.1
NOQ North Oquirrh 56.28 66 *eP* **P** **20 52 46.6 +0.7**
comp=Z,20nm,0.7s,mb5.2
SFJD Kangerlussuaq 56.38 15 P **P** **20 52 45.8 -0.4**
SFJD pmax pmax
comp=Z,15nm,0.4s,mb5.4
SFJD Kangerlussuaq 56.38 15 *eP* **P** **20 52 45.6 -0.7**
comp=Z,15nm,0.4s,mb5.4
ISA Isabella 56.39 74 P **P** **20 52 46.8 0.0**
ISA pmax pmax
comp=Z,11nm,0.9s,mb4.9
ISA Isabella 56.39 74 *eP* **P** **20 52 46.2 -0.5**
comp=Z,11nm,0.9s,mb4.9
CTU Camp Tracy 56.45 66 *eP* **P** **20 52 47.6 +0.5**
comp=Z,11nm,0.7s,mb5.0
JOF Joensuu 56.55 335 *ep* **P** **20 52 46.4 -1.1**
comp=Z,34nm,0.5s,mb5.6
JOF Joensuu 56.55 335 *eP* **P** **20 52 46.4 -1.1**
JOF pmax pmax
comp=Z,34nm,0.5s,mb5.6
JLU Jordanelle 56.67 66 *eP* **P** **20 52 43.8 -5.0**
TPNV Topopah Spring 56.70 72 P **P** **20 52 49.7 +0.7**
TPNV pmax pmax
comp=Z,16nm,1.0s,mb5.0
TPNV Topopah Spring 56.70 72 *eP* **P** **20 52 49.4 +0.4**
comp=Z,16nm,0.9s,mb5.0
NLU North Lily Min 56.80 66 *eP* **P** **20 52 50.1 +0.4**
MPU Maple Canyon 57.00 66 *eP* **P** **20 52 51.9 +0.9**
comp=Z,18nm,1.0s,mb5.0
MOR8 Moi Rana 57.01 345 *eP* **P** **20 52 48.5 -2.2**
MOR8 AMb AMb 20 52 49.6
comp=Z,34nm,0.4s,mb5.8
OSI Osito Adit 57.01 75 *eP* **P** **20 52 50.9 -0.3**
comp=Z,20nm,0.8s,mb5.2
STOK Stokkvaagen 57.07 345 *eP* **P** **20 52 51.0 -0.1**
STOK AMb AMb 20 52 52.4
comp=Z,109nm,1.8s,mb5.6
ULM Lac du Bonnet 57.23 48 P **P** **20 52 52.5 0.0**
comp=Z,11nm,0.4s,mb5.2,baz=316,slow=6.9,SNR=24
ULM LR LR 21 17 33.2
comp=Z,192nm,21.2s,MS4.2,baz=321,slow=36
GSC Goldstone 57.59 74 P **P** **20 52 55.5 +0.2**
GSC pmax pmax
comp=Z,17nm,0.8s,mb5.1
GSC Goldstone 57.59 74 *eP* **P** **20 52 55.3 +0.1**
comp=Z,17nm,0.8s,mb5.1
ARUT Antelope Range 57.63 69 P **P** **20 52 56.6 +1.0**
ARUT Antelope Range 57.63 69 *eP* **P** **20 52 56.3 +0.7**
MWC Mount Wilson 57.67 75 *eP* **P** **20 52 56.7 +0.8**
MWC pmax pmax
comp=Z,24nm,1.1s,mb5.1
MWC Mount Wilson 57.67 75 *eP* **P** **20 52 55.9 +0.1**
comp=Z,24nm,1.1s,mb5.1

TMUT Trail Mountain 57.74 66 *eP* **P** **20 52 57.0 +0.7**
MSU Marysvale 57.79 68 P **P** **20 52 57.8 +1.1**
MSU Marysvale 57.79 68 *eP* **P** **20 52 57.4 +0.7**
CCUT Cedar City 57.85 69 *eP* **P** **20 52 57.5 +0.5**
RSSD Black Hills 57.93 58 P **P** **20 52 57.8 +0.3**
RSSD pmax pmax
comp=Z,29nm,0.8s,mb5.4
RSSD Black Hills 57.93 58 *i*⇑*iP* **P** **20 52 57.7 +0.2**
comp=Z,29nm,0.8s,mb5.4
NANT Nan 57.99 257 ⇓P **P** **20 52 58.9 +0.6**
comp=Z,94nm,1.0s,mb5.8
KAF Kangasniemi 58.43 337 *ep* **P** **20 52 59.7 -1.0**
comp=Z,38nm,0.4s,mb5.8,baz=28,slow=6.5
KAF Kangasniemi 58.43 337 *eP* **P** **20 52 59.7 -1.0**
KAF pmax pmax
comp=Z,38nm,0.4s,mb5.8
AGMN Agassiz Refuge 58.68 50 *eP* **P** **20 53 01.7 -1.0**
comp=Z,15nm,0.8s,mb5.1
TAPN Taplejung 58.89 274 *eP* **P** **20 53 05.3 +0.8**
comp=Z,26nm,0.7s,mb5.4
NSS Namsos 58.92 345 *eP* **P** **20 53 02.8 -1.3**
NSS AMb AMb 20 53 10.9
comp=Z,74nm,2.0s,mb5.4
CHG Chiang Mai 58.98 259 ⇑P **P** **20 53 05.5 +0.3**
comp=Z,27nm,0.9s,mb5.3
PFO Pinyon Flat Ob 59.02 75 P **P** **20 53 05.6 +0.3**
PFO pmax pmax
comp=Z,11nm,1.2s,mb4.8
PFO Pinyon Flat Ob 59.02 75 *eP* **P** **20 53 05.1 -0.2**
comp=Z,11nm,1.2s,mb4.8
CM31 Chiang Mai Arr 59.27 258 *eP* **P** **20 53 06.0 -1.1**
comp=Z,41nm,1.0s,mb5.4
CMAR Chiang Mai Arr 59.27 258 P **P** **20 53 06.8 -0.4**
comp=Z,3.5nm,0.7s,mb4.5,baz=25,slow=6.9,SNR=66
CMAR LR LR 21 20 42.6
comp=Z,198nm,20.3s,MS4.2,baz=54,slow=38
ODAN Odare 59.45 274 *eP* **P** **20 53 08.1 -0.2**
comp=Z,9.6nm,0.5s,mb5.1
RAMN Ramite 59.84 275 *eP* **P** **20 53 08.9 -2.1**
comp=Z,47nm,0.6s,mb5.7
KKN Kakani 59.97 276 *eP* **P** **20 53 09.8 -2.1**
comp=Z,17nm,0.5s,mb5.3
PKI Pulchoki 60.06 276 *eP* **P** **20 53 11.4 -1.1**
GKN Gorkha 60.18 277 *eP* **P** **20 53 12.2 -1.2**
comp=Z,19nm,0.7s,mb5.2
DMN Daman 60.21 276 *eP* **P** **20 53 12.8 -0.7**
comp=Z,28nm,0.8s,mb5.3
ISCO Idaho Springs 60.31 62 P **P** **20 53 15.3 +1.2**
ISCO pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ISCO Idaho Springs 60.31 62 *eP* **P** **20 53 15.2 +1.1**
comp=Z,6.0nm,0.7s,mb4.7
DANN Dangsing 60.42 278 *eP* **P** **20 53 14.0 -1.0**
comp=Z,20nm,0.3s,mb5.6
WUAZ Wupatki 60.43 70 *eP* **P** **20 53 15.8 +0.8**
comp=Z,24nm,1.3s,mb5.1
MVCO Mesa Verde 60.72 66 *eP* **P** **20 53 16.1 -0.8**
comp=Z,8.6nm,0.6s,mb5.1
EYMN Ely 60.86 47 *eP* **P** **20 53 17.0 -0.6**
comp=Z,32nm,0.9s,mb5.4
KOLN Koldanda 60.95 278 *eP* **P** **20 53 16.4 -2.2**
comp=Z,14nm,0.7s,mb5.2
BORG Borgarnes 60.99 1 P **P** **20 53 18.0 -0.3**
comp=Z,30nm,1.0s,mb5.4,baz=340,slow=3.6,SNR=5.1
MOL Molde 61.41 347 *eP* **P** **20 53 21.5 +0.3**
MOL AMb AMb 20 53 31.4
comp=Z,123nm,2.0s,mb5.7
OBN Obninsk 61.69 328‖*eP* **P** **20 53 21.8 -1.4**
OBN *eS* **S** **21 01 45.7 +3.1**
OBN pmax pmax
comp=Z,12nm,0.6s,mb5.2
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.5
ECSD EROS,Sioux Fal 61.79 54 *eP* **P** **20 53 23.2 -0.8**
comp=Z,8.9nm,0.6s,mb5.1
SDCO Great Sand Dun 61.90 64 *eP* **P** **20 53 25.4 +0.5**
comp=Z,4.7nm,0.9s,mb4.6
NB2 NORSAR Subarra 62.34 344 P **P** **20 53 26.7 -0.7**
comp=Z,52nm,0.8s,mb5.7,baz=22,slow=6.9
NOA NORSAR Array B 62.34 344 P **P** **20 53 26.8 -0.6**
comp=Z,51nm,0.7s,mb5.8,baz=20,slow=6.7,SNR=150
NOA LR LR 21 27 26.4
comp=Z,115nm,18.3s,MS4.1,baz=10.0,slow=43
TUC Tucson 63.15 72 P **P** **20 53 33.6 +0.3**
TUC pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
TUC Tucson 63.15 72 *eP* **P** **20 53 33.5 +0.2**
comp=Z,4.6nm,0.9s,mb4.6
COWI Conover 63.31 47 *eP* **P** **20 53 33.1 -1.0**
comp=Z,20nm,0.8s,mb5.3
ANMO Albuquerque 63.50 67 P **P** **20 53 36.0 +0.4**
ANMO pmax pmax
comp=Z,8.0nm,0.8s
ANMO Albuquerque 63.50 67 *eP* **P** **20 53 35.8 +0.2**
comp=Z,7.7nm,0.8s,mb4.8
LAZ Ladron 63.56 67 *eP* **P** **20 53 36.1 +0.2**
HNR Honiara 63.78 182 P **P** **20 53 37.2 -0.3**
comp=Z,61nm,0.4s,mb6.0,baz=295,slow=7.4,SNR=15
HNR LR LR 21 16 25.3
comp=Z,277nm,21.5s,MS4.4,baz=330,slow=31
LPM Los Pinos Moun 63.90 67 *eP* **P** **20 53 38.6 +0.4**
KONO Kongsberg 63.91 345‖*eP* **P** **20 53 37.8 -0.1**
SCHQ Schefferville 63.96 29 P **P** **20 53 37.6 -0.7**
comp=Z,22nm,0.7s,mb5.3,baz=355,slow=7.0,SNR=20
SCHQ pP pP 20 53 48.3 -1.6
comp=Z,15nm,0.7s,baz=346,slow=6.8,SNR=6.1
SCHQ LR LR 21 24 26.0
comp=Z,81nm,19.4s,MS3.9,baz=40,slow=39
BNM Barren Site 64.02 67 *eP* **P** **20 53 39.9 +0.9**
SCIA State Center 64.78 53 *eP* **P** **20 53 43.5 -0.3**
comp=Z,56nm,0.8s,mb5.7
LRW Lerwick 64.80 350‖*eP* **P** **20 53 43.6 -0.1**
LRW AMb AMb 20 53 45.2
comp=Z,212nm,1.8s,mb5.9
SNART Snartemo 65.53 345 *eP* **P** **20 53 48.5 0.0**
SNART AMb AMb 20 53 52.4
comp=Z,83nm,1.7s,mb5.5
SUW Suwalki 66.42 335 *eP* **P** **20 53 54.1 -0.2**
SUW Suwalki 66.42 335 P **P** **20 53 54.3 0.0**
SUW pmax pmax
comp=Z,53nm,0.8s,mb5.6
SUW Suwalki 66.42 335 *eP* **P** **20 53 54.1 -0.2**
RSC Scourie 66.91 352‖*eP* **P** **20 53 57.4 +0.1**
ABKT Ailbek 66.94 303 P **P** **20 53 53.9 -4.0**
comp=Z,143nm,0.6s,mb6.2,SNR=6.1
RTO Tolsta 66.96 353‖*eP* **P** **20 53 57.2 -0.4**
MVH1 Achvaich 67.25 352‖*eP* **P** **20 53 59.5 +0.1**
KSM Kuching 67.30 238 *eP* **P** **20 54 00.8 +0.5**
MCD Coleburn Disti 67.51 351‖*eP* **P** **20 54 01.3 +0.2**
WMOK Wichita Mounta 67.68 61 P **P** **20 54 02.1 -0.5**
WMOK pmax pmax
comp=Z,25nm,0.8s,mb5.3
WMOK Wichita Mounta 67.68 61 *eP* **P** **20 54 01.9 -0.7**
comp=Z,25nm,0.8s,mb5.3
MDO Dochfour 67.75 352‖*eP* **P** **20 54 02.6 0.0**
AKASG Malin Array Be 67.75 329 P **P** **20 54 01.2 -1.5**
comp=Z,9.4nm,0.3s,mb5.3,baz=28,slow=6.9,SNR=59
AKASG LR LR 21 27 36.6
comp=Z,435nm,18.1s,MS4.7,baz=15,slow=39
MME1 Meikle Cairn 67.75 351‖*eP* **P** **20 54 02.2 -0.4**
KIEV Kiev 67.76 329 P **P** **20 54 01.3 -1.5**
KIEV pmax pmax
comp=Z,15nm,0.8s,mb5.1
KIEV Kiev 67.76 329 *eP* **P** **20 54 01.2 -1.5**
comp=Z,15nm,0.8s,mb5.1
KPL Plockton 67.95 352‖*eP* **P** **20 54 03.7 -0.1**
KPL AMb AMb 20 54 07.0
comp=Z,103nm,1.8s,mb5.6
KSB Sheil Bridge 68.06 352‖*eP* **P** **20 54 04.8 +0.3**
KAR1 Arisaig 68.38 353‖*eP* **P** **20 54 07.0 +0.5**
GKP Gorka Klasztor 68.50 338 *eP* **P** **20 54 08.0 +0.5**
GKP Gorka Klasztor 68.50 338 *eP* **P** **20 54 08.0 +0.6**
AAM Ann Arbor 68.70 46 *eP* **P** **20 54 08.3 -0.5**
AAM pmax pmax
comp=Z,31nm,0.9s,mb5.2
AAM Ann Arbor 68.70 46 *eP* **P** **20 54 08.3 -0.5**
comp=Z,31nm,0.9s,mb5.2
KAPI Kappang 68.74 225 P **P** **20 54 08.4 -0.9**
comp=Z,6.1nm,0.4s,mb4.9,baz=60,slow=8.1,SNR=3.3
CCM Cathedral Cave 68.76 54 P **P** **20 54 08.1 -1.2**
CCM pmax pmax
comp=Z,16nm,1.0s,mb4.9
CCM Cathedral Cave 68.76 54 *eP* **P** **20 54 07.9 -1.3**
comp=Z,16nm,1.0s,mb4.9
EBH Black Hill 68.85 351 *eP* **P** **20 54 09.4 -0.1**
KIV Kislovodsk 68.89 317 *de*P **P** **20 54 10.3 +0.3**

KIV pmax pmax
comp=Z,18nm,0.6s,mb5.2
KIV Kislovodsk 68.89 317⇑*iP* **P** **20 54 10.6 +0.6**
KIV Kislovodsk 68.89 317 ⇑P **P** **20 54 10.7 +0.6**
EAB Aberfoyle 68.98 352‖*eP* **P** **20 54 10.5 +0.2**
ESY Stoneypath 69.09 350‖*eP* **P** **20 54 11.0 -0.1**
EDI Edinburgh 69.14 351‖*eP* **P** **20 54 11.1 -0.3**
EDI AMb AMb 20 54 12.1
comp=Z,85nm,1.3s,mb5.5
FVM French Village 69.20 53 P **P** **20 54 11.3 -0.7**
FVM pmax pmax
comp=Z,34nm,1.0s,mb5.2
FVM French Village 69.20 53 *eP* **P** **20 54 11.1 -0.9**
comp=Z,34nm,1.0s,mb5.2
EAU Auchinoon 69.25 351‖*eP* **P** **20 54 12.1 +0.1**
BSEG Bad Segeberg 69.25 342 *eP* **P** **20 54 12.3 +0.3**
BSEG pmax pmax
comp=Z,45nm,0.9s,mb5.4
BSEG Bad Segeberg 69.25 342 *eP* **P** **20 54 12.3 +0.3**
comp=Z,45nm,0.9s,mb5.4
EBL Broad Law 69.28 351 *eP* **P** **20 54 12.1 -0.1**
PGBU Glenifferbraes 69.37 352‖*eP* **P** **20 54 12.6 -0.1**
PGBU AMb AMb 20 54 13.6
comp=Z,149nm,0.9s,mb5.9
XSO Sourhope Farm 69.48 350‖*eP* **P** **20 54 13.5 0.0**
ESK Eskdalemuir 69.75 351‖*eP* **P** **20 54 15.0 -0.1**
ESK AMb AMb 20 54 21.0
comp=Z,67nm,2.0s,mb5.2
ESK Eskdalemuir 69.75 351 P **P** **20 54 14.2 -0.9**
ESK pmax pmax
comp=Z,41nm,0.8s,mb5.4
ESK Eskdalemuir 69.75 351 *eP* **P** **20 54 13.9 -1.2**
comp=Z,41nm,0.8s,mb5.4
ECK Cauldkaine Hil 69.87 351‖*eP* **P** **20 54 15.8 -0.1**
COEN Coen 70.01 199 *eP* **P** **20 54 16.2 -0.9**
comp=Z,14nm,1.0s,mb4.8
XAL Allendale 70.10 350‖*eP* **P** **20 54 17.2 0.0**
GCD Castle Douglas 70.26 351‖*eP* **P** **20 54 18.0 -0.2**
LONY Lake Ozonia 70.32 39 *eP* **P** **20 54 16.9 -1.9**
GAL1 Galloway 70.33 352‖*eP* **P** **20 54 18.5 -0.2**
GAL1 AMb AMb 20 54 21.0
comp=Z,82nm,1.3s,mb5.5
MIAR Mount Ida 70.45 58 P **P** **20 54 18.8 -0.9**
MIAR pmax pmax
comp=Z,18nm,1.0s,mb5.0
MIAR Mount Ida 70.45 58 *eP* **P** **20 54 18.6 -1.1**
comp=Z,18nm,1.0s,mb5.0
JCT Junction City 70.50 65 P **P** **20 54 19.6 -0.5**
JCT pmax pmax
comp=Z,26nm,0.8s,mb5.2
JCT Junction City 70.50 65 *eP* **P** **20 54 19.6 -0.5**
comp=Z,26nm,0.8s,mb5.2
KWP Kalwaria 70.54 333 *eP* **P** **20 54 20.4 +0.4**
KWP Kalwaria 70.54 333 P **P** **20 54 20.3 +0.3**
KWP pmax pmax
comp=Z,47nm,1.1s,mb5.3
KWP Kalwaria 70.54 333‖*iP* **P** **20 54 20.6 +0.6**
KWP Kalwaria 70.54 333 *eP* **P** **20 54 20.4 +0.4**
PARMO Parma 70.58 54 *eP* **P** **20 54 20.3 -0.2**
NRDL Niedersach Rie 70.67 342 *eP* **P** **20 54 20.5 -0.3**
ALLY Alegheny Colle 70.69 44 *eP* **P** **20 54 20.3 -0.8**
comp=Z,39nm,1.2s,mb5.2
ACSO Alum Creek Sta 70.69 47 *eP* **P** **20 54 20.1 -1.0**
comp=Z,16nm,0.8s,mb5.0
OJC Ojcow 70.74 335 *eP* **P** **20 54 21.8 +0.6**
GIM North Isle of 70.87 351‖*eP* **P** **20 54 21.7 -0.2**
WCI Wyandotte Cave 70.90 50 P **P** **20 54 21.8 -0.6**
WCI pmax pmax
comp=Z,13nm,0.8s,mb4.9
WCI Wyandotte Cave 70.90 50 *eP* **P** **20 54 21.4 -1.0**
comp=Z,13nm,0.8s,mb4.9
HPK Haverah Park 70.93 350‖*eP* **P** **20 54 22.3 0.0**
HPK AMb AMb 20 54 24.4
comp=Z,182nm,1.8s,mb5.7
KSP Ksiaz 70.98 337 *eP* **P** **20 54 23.0 +0.3**
KSP Ksiaz 70.98 337⇑*iP* **P** **20 54 22.9 +0.2**
GMM Mts of Mourne 71.05 352‖*eP* **P** **20 54 22.6 -0.5**
STHS Stebnicka Huta 71.12 334 *eP* **P** **20 54 23.9 +0.4**
STHS *e* 20 54 43.8
STHS pmax pmax
comp=Z,11nm,0.9s,mb4.8
STHS Stebnicka Huta 71.12 334 *eP* **P** **20 54 23.9 +0.4**
comp=Z,11nm,0.9s,mb4.8
STHS *e* 20 54 43.8
KIS Kishinev 71.16 328 *eP* **P** **20 54 16.0 -7.9**
KIS MLR MLR
comp=Z,400nm,18.0s,MS4.7
KIS MLR MLR
comp=Z,500nm,17.0s
GNI Garni 71.24 314 P **P** **20 54 26.0 +1.5**
comp=Z,12nm,0.7s,mb5.0,baz=297,slow=6.2,SNR=12
GNI Garni 71.24 314 *ce*P **P** **20 54 25.9 +1.5**
GNI pmax pmax
comp=Z,44nm,1.9s
CLL Collm 71.24 340⇑*iP* **P** **20 54 24.1 -0.2**
CLL pmax pmax
comp=Z,79nm,1.0s,mb5.6
CLL Collm 71.24 340 *eP* **P** **20 54 24.0 -0.3**
comp=Z,79nm,1.0s,mb5.6
CLL Collm 71.24 340⇑*iP* **P** **20 54 24.1 -0.2**
comp=Z,79nm,1.0s,mb5.6
CLL *e*PcP PcP 20 54 43.0 -1.0
CLZ Clausthal 71.24 342 *eP* **P** **20 54 24.8 +0.5**
CLZ pmax pmax
comp=Z,78nm,0.9s,mb5.6
CLZ Clausthal 71.24 342 *eP* **P** **20 54 24.8 +0.5**
comp=Z,78nm,0.9s,mb5.6
IBBN Ibbenburen 71.26 343 *eP* **P** **20 54 24.2 -0.1**
comp=Z,70nm,0.9s,mb5.6
KOLS Kolonicke sedl 71.29 333 *eP* **P** **20 54 24.5 -0.1**
NIE Niedzica 71.35 334 *eP* **P** **20 54 25.9 +0.9**
LHO Holmfirth 71.36 350‖*eP* **P** **20 54 24.3 -0.7**
UPC Upice 71.36 338 *eP* **P** **20 54 25.3 +0.3**
DPC Dobruska-Polom 71.44 337 *eP* **P** **20 54 26.5 +1.0**
DPC AMS AMS 21 24 10.0
comp=Z,300nm,15.1s
BRG Berggiesshubel 71.46 339 *i* P **P** **20 54 25.6 0.0**
BRG pmax pmax
comp=Z,21nm,1.0s,mb5.0
BRG Berggiesshubel 71.46 339 *eP* **P** **20 54 25.6 0.0**
comp=Z,34nm,1.0s,mb5.2
BRG Berggiesshubel 71.46 339 *i* P **P** **20 54 25.6 0.0**
comp=Z,34nm,1.0s,mb5.2
OKC Ostrava-Krasne 71.50 336 *eP* **P** **20 54 26.6 +0.8**
OKC AMS AMS 21 29 30.0
comp=Z,300nm,15.9s
CRVS Cervenica-Dubn 71.53 333 *eP* **P** **20 54 26.1 0.0**
UZH Uzhgorod 71.56 333 *eP* **P** **20 54 28.0 +1.7**
KBI1 Birley Grange 71.61 349‖*eP* **P** **20 54 26.4 0.0**
PVCC Panska Ves 71.66 338 *eP* **P** **20 54 27.1 +0.3**
PVCC AMS AMS 21 31 10.0
comp=Z,200nm,14.9s
BUR08 Bucovina Ar. S 71.66 330 *eP* **P** **20 54 26.4 -0.4**
BURAR Bucovina Array 71.68 330⇑*iP* **P** **20 54 26.6 -0.4**
BURAR Bucovina Array 71.68 330 ⇑P **P** **20 54 26.6 -0.4**
MORC Moravsky Berou 71.69 336 P **P** **20 54 27.3 +0.3**
MORC pmax pmax
comp=Z,28nm,0.9s,mb5.2
MORC Moravsky Berou 71.69 336‖*iP* **P** **20 54 28.2 +1.2**
MORC Moravsky Berou 71.69 336 P **P** **20 54 27.5 +0.5**
WTSB Winterswijk 71.74 344⇑*eP* **P** **20 54 27.1 -0.1**
comp=Z,63nm,0.6s,mb5.7
KWE Weaver Farm 71.88 349 *eP* **P** **20 54 28.0 0.0**
AFI Afiamalu 71.91 153 LR LR 21 18 31.4
comp=Z,120nm,20.4s,MS4.2,baz=69,slow=30
WVT Waverly 71.91 53 *eP* **P** **20 54 27.9 -0.7**
WVT pmax pmax
comp=Z,29nm,1.0s,mb5.2
WVT Waverly 71.91 53 *eP* **P** **20 54 27.9 -0.7**
comp=Z,29nm,1.0s,mb5.2
BATI Baumata 71.95 219 P **P** **20 54 28.3 -0.6**
comp=Z,22nm,0.5s,mb5.3,baz=149,slow=1.5,SNR=7.5
DLF Lyons Farm 72.03 352 *eP* **P** **20 54 29.4 +0.4**
DCN Croghan 72.04 353 *eP* **P** **20 54 29.4 +0.4**
CWF Charnwood Fore 72.10 349‖*eP* **P** **20 54 29.7 +0.3**
CWF AMb AMb 20 54 31.0
comp=Z,64nm,1.2s,mb5.4
SBD1 Bryn Du 72.13 350‖*eP* **P** **20 54 29.6 0.0**
MOX Moxa 72.15 340⇑*iP* **P** **20 54 29.9 +0.2**
comp=Z,62nm,0.9s,mb5.5
MOX *e* pP 20 54 41.6 +0.1
MOX Moxa 72.15 340⇑*iP* **P** **20 54 29.9 +0.2**
MOX *e* pP 20 54 41.6 +0.1
MOX pmax pmax
comp=Z,62nm,0.9s,mb5.5

MOX Moxa 72.15 340 *e*P **P 20 54 29.8 +0.1**
comp=Z,53nm,0.9s,mb5.5

PRU Pruhonice 72.17 338 *e*P **P 20 54 30.3 +0.4**
PRU AMS AMS 21 31 30.0
comp=Z,400nm,16.3s

KECS Kecovo 72.17 334 *e*P **P 20 54 29.6 -0.3**
KECS *e* 20 54 47.0
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3

KECS Kecovo 72.17 334 *e*P **P 20 54 29.6 -0.3**
comp=Z,3.5nm,0.9s,mb4.3
KECS *e* 20 54 47.0

BUG Bochum--Univer 72.17 343 *e*P **P 20 54 29.6 -0.3**
comp=Z,44nm,0.9s,mb5.4

TANN Tannenbergstha 72.20 340 *e*P **P 20 54 30.2 +0.2**

UBBA Unterbreizbach 72.29 341 *e*P **P 20 54 30.3 -0.3**

VRAC Vranov 72.35 337⇓ *i*P **P 20 54 31.9 +0.9**

VRAC Vranov 72.35 337 P **P 20 54 32.0 +1.1**

NKC Novy Kostel 72.38 340 *e*P **P 20 54 31.6 +0.5**

HLM1 Long Mynd 72.48 350⇓ *e*P **P 20 54 31.6 -0.1**

OXF Oxford 72.49 55 *e*P **P 20 54 30.9 -1.2**
OXF *e* pP 20 54 42.0 -1.8
OXF pmax pmax
comp=Z,46nm,1.0s,mb5.4

OXF Oxford 72.49 55 *e*P **P 20 54 30.9 -1.1**
comp=Z,46nm,1.0s,mb5.4
OXF *e* pP 20 54 42.0 -1.8

VYHS Vyhne 72.58 335 *e*P **P 20 54 32.6 +0.3**

KOLL Kolacno 72.61 335 *e*P **P 20 54 33.4 +0.9**

TREC Trest 72.62 337 *e*P **P 20 54 33.0 +0.5**
TREC AMS AMS 21 24 50.0

TLCR 72.78 327⇑ *i*P **P 20 54 33.2 -0.4**

TLCR 72.78 327⇑⇑P **P 20 54 33.2 -0.4**

PSZ Piszkesteto 72.85 334 P **P 20 54 34.8 +0.9**
PSZ pmax pmax
comp=Z,9.0nm,1.0s,mb4.7

PSZ Piszkesteto 72.85 334⇑ *i*P **P 20 54 35.4 +1.5**

ROTZ Rotzenmuhle 72.87 340 *e*P **P 20 54 34.2 +0.2**

HTR Trewern Hill 72.95 350⇓ *e*P **P 20 54 34.4 -0.1**

MCH1 Michaelchurch 73.01 350⇓ *e*P **P 20 54 34.5 -0.3**
MCH1 AMb AMB 20 54 36.1
comp=Z,97nm,2.0s,mb5.4

HGN Heimansgroeve 73.05 344⇑ *e*P **P 20 54 35.0 -0.1**
comp=Z,46nm,0.9s,mb5.4

BEBN Eben Emael 73.06 344 P **P 20 54 35.4 +0.3**

MODS Modra-Piesok 73.07 336 *e*P **P 20 54 35.9 +0.7**
MODS *e*pP pP 20 54 48.4 +1.4

GRA1 Grafenberg Arr 73.14 340 *e*P **P 20 54 36.2 +0.6**
comp=Z,98nm,0.8s,mb5.8

GRF Grafenberg Arr 73.14 340 *e*P **P 20 54 36.2 +0.6**
GRF pmax pmax
comp=Z,98nm,0.8s,mb5.8

GRF Grafenberg Arr 73.14 340 *e*P **P 20 54 36.2 +0.6**
GRF pmax pmax
comp=Z,98nm,0.8s,mb5.8

GRF Grafenberg Arr 73.14 340 *e*P **P 20 54 36.2 +0.6**
comp=Z,98nm,0.8s,mb5.8

DRGR 73.14 332⇓ *i*P **P 20 54 35.6 -0.1**

DRGR 73.14 332 P **P 20 54 35.5 -0.2**

MEM Membach 73.19 344 P **P 20 54 36.3 +0.4**
comp=Z,88nm,1.0s,mb5.6

KHC Kasperske Hory 73.19 339 *e*P **P 20 54 36.6 +0.7**
KHC AMS AMS 21 31 00.0
comp=Z,300nm,22.2s

UCC Uccle 73.26 345 P **P 20 54 36.2 -0.1**

ZST Bratislava 73.28 336 *e*P **P 20 54 36.8 +0.3**
comp=Z,18nm,0.9s,mb5.0
ZST LR LR
comp=Z,100nm,20.3s,MS4.1

WET Wettzell 73.32 339 *e*P **P 20 54 37.2 +0.5**
WET pmax pmax
comp=Z,38nm,0.9s,mb5.3

WET Wettzell 73.32 339 *e*P **P 20 54 37.2 +0.5**
comp=Z,38nm,0.9s,mb5.3

HGH Gray Hill 73.34 350⇓ *e*P **P 20 54 35.9 -0.9**

SWN1 Swindon 73.36 349⇓ *e*P **P 20 54 37.2 +0.3**
SWN1 AMb AMB 20 54 42.8
comp=Z,202nm,1.9s,mb5.7

MLR Muntele Rosu 73.39 329⇑ *i*P **P 20 54 38.2 +1.0**

MLR Muntele Rosu 73.39 329 P **P 20 54 37.8 +0.6**

GEC2 GERESS Array S 73.43 338 *e*P **P 20 54 37.6 +0.2**
GEC2 pmax pmax
comp=Z,22nm,0.8s,mb5.1

GEC2 GERESS Array S 73.43 338 *e*P **P 20 54 37.6 +0.2**
comp=Z,22nm,0.8s,mb5.1

GERES GERESS Array B 73.43 338 P **P 20 54 37.7 +0.3**
comp=Z,15nm,0.6s,mb5.1,baz=34,slow=4.9,SNR=181
GERES LR LR 21 32 43.3
comp=Z,233nm,19.2s,MS4.5,baz=192,slow=40

BCLA Clavier 73.48 344 P **P 20 54 37.6 -0.1**
comp=Z,17nm,1.1s,mb4.9

SWET Sewanee 73.54 52 *e*P **P 20 54 36.7 -1.6**

SNF Seneffe 73.55 345 P **P 20 54 38.0 0.0**
comp=Z,12nm,0.9s,mb4.8

TIRR Tirgusor 73.56 327⇓ *i*P **P 20 54 37.2 -1.0**

TIRR Tirgusor 73.56 327 *e*P pP 20 54 48.6 -1.3

ABH Alteburg 73.63 343 *e*P **P 20 54 38.6 +0.1**

TOD Tromm 73.67 342 *e*P **P 20 54 38.5 -0.3**

VOIR 73.71 330⇓ *i*P **P 20 54 39.7 +0.7**

VOIR 73.71 330 P **P 20 54 39.6 +0.6**

MENF Mencas 73.81 346 *e*P **P 20 54 39.4 -0.1**

CONA Conrad Observa 73.82 337⇑ *i*P **P 20 54 40.4 +0.8**
comp=Z,28nm,1.0s,mb5.2,SNR=12

CSNA Conrad Observa 73.82 337⇑ *i*P **P 20 54 40.4 +0.8**
comp=Z,26nm,1.0s,mb5.1

GIVF Givet 73.86 345⇑ *i*P **P 20 54 39.6 -0.3**
comp=Z,56nm,0.8s,mb5.3

GIVF Givet 73.86 345⇑ *i*P **P 20 54 39.6 -0.3**
GIVF pmax pmax
comp=Z,28nm,0.8s,mb5.2

GIVF Givet 73.86 345⇑ *i*P **P 20 54 39.6 -0.3**
comp=Z,28nm,0.8s,mb5.2

RUP Ruppelstein 73.89 343 *e*P **P 20 54 39.7 -0.3**

DOU Dourbes 73.91 345 P **P 20 54 40.2 +0.1**
comp=Z,18nm,1.0s,mb4.9

CPCT Cooper Cave 73.99 51 *e*P **P 20 54 39.6 -1.3**

BAIF Baives 74.00 345⇑ *i*P **P 20 54 40.7 0.0**
comp=Z,72nm,0.7s,mb5.4

BAIF Baives 74.00 345⇑ *i*P **P 20 54 40.7 0.0**
BAIF pmax pmax
comp=Z,36nm,0.7s,mb5.4

BAIF Baives 74.00 345⇑ *i*P **P 20 54 40.7 0.0**
comp=Z,36nm,0.7s,mb5.4

WLF Walferdange 74.08 344 P **P 20 54 41.4 +0.3**
comp=Z,18nm,1.4s,mb4.8

KTD Kalmit 74.08 342 *e*P **P 20 54 41.2 +0.1**

ELN Prospectdale 74.16 47 *e*P **P 20 54 40.6 -1.2**

MOA Molln 74.25 338⇑ *i*P **P 20 54 42.5 +0.3**
comp=Z,11nm,0.7s,mb4.9,SNR=14

BLA Blacksburg 74.31 47 *e*P **P 20 54 41.6 -1.1**
BLA pmax pmax
comp=Z,15nm,0.7s,mb5.0

BLA Blacksburg 74.31 47 *e*P **P 20 54 41.6 -1.1**
comp=Z,15nm,0.7s,mb5.0

GZR Gura Zlata 74.40 331⇑ *i*P **P 20 54 42.6 -0.5**

GZR Gura Zlata 74.40 331 P **P 20 54 42.9 -0.2**

STU Stuttgart 74.40 341 *e*P **P 20 54 43.0 0.0**
STU pmax pmax
comp=Z,44nm,1.2s,mb5.3

STU Stuttgart 74.40 341 *e*P **P 20 54 42.8 -0.2**

STU Stuttgart 74.40 341 *e*P **P 20 54 43.0 -0.1**
comp=Z,44nm,1.2s,mb5.3

LANF Langenberg 74.46 342 *e*P **P 20 54 43.5 +0.2**

BZS Buzias 74.52 332⇑ *i*P **P 20 54 43.3 -0.5**

BZS Buzias 74.52 332 P **P 20 54 43.2 -0.6**

ARSA Arzberg 74.53 337⇑ *i*P **P 20 54 44.6 +0.8**
comp=Z,18nm,0.8s,mb5.0,SNR=12

FUR Furstenfeldbru 74.58 340 *e*P **P 20 54 43.9 -0.2**
FUR pmax pmax
comp=Z,41nm,1.0s,mb5.3

FUR Furstenfeldbru 74.58 340 *e*P **P 20 54 43.9 -0.2**
comp=Z,41nm,1.0s,mb5.3

DYA Yadsworthy 74.64 350 *e*P **P 20 54 43.8 -0.6**
DYA AMb AMB 20 54 45.3
comp=Z,101nm,1.1s,mb5.7

RJOB Jochberg 74.68 339 *e*P **P 20 54 45.0 +0.4**

PKSM Moragy 74.75 334⇓ *i*P **P 20 54 45.3 +0.2**

PKSM Moragy 74.75 334 P **P 20 54 44.6 -0.5**

STR Strasbourg 74.84 342 *e*P **P 20 54 46.3 +0.7**

LRAL Lakeview Retre 74.85 54 *e*P **P 20 54 44.3 -1.6**
comp=Z,16nm,0.7s,mb5.1

BFO Black Forest 74.99 342 *e*P **P 20 54 46.3 -0.1**
BFO pmax pmax
comp=Z,34nm,0.9s,mb5.3

BFO Black Forest 74.99 342 *e*P **P 20 54 46.3 -0.1**
comp=Z,34nm,0.9s,mb5.3

CDF Champ du Feu 75.10 343⇑ *i*P **P 20 54 47.3 +0.2**
comp=Z,129nm,0.8s,mb5.6

CDF Champ du Feu 75.10 343⇑ *i*P **P 20 54 47.3 +0.2**
CDF pmax pmax
comp=Z,64nm,0.8s,mb5.6

CDF Champ du Feu 75.10 343⇑ *i*P **P 20 54 47.3 +0.2**
comp=Z,64nm,0.8s,mb5.6

SPAK Spaichingen-Ko 75.12 341 *e*P **P 20 54 47.2 0.0**

KBA Koelnbreinsper 75.18 338 *i*P **P 20 54 48.9 +1.3**
comp=Z,66nm,0.6s,mb5.7,SNR=94

SOKA Soboth 75.19 337⇑ *i*P **P 20 54 48.1 +0.5**
comp=Z,21nm,0.7s,mb5.2

PERS Pernice 75.20 337 *i*P **P 20 54 48.2 +0.5**

URVA University of 75.21 45 *e*P **P 20 54 46.9 -1.0**

LIBD Limburg 75.29 342 *e*P **P 20 54 48.2 0.0**

ECH Echery 75.31 343 *e*P **P 20 54 48.2 -0.1**

ECH Echery 75.31 343 P **P 20 54 48.3 0.0**

WATA Walderalm 75.31 339⇓ *i*P **P 20 54 49.0 +0.7**
comp=Z,43nm,1.0s,mb5.3,SNR=12

RETA Reutte 75.33 340⇑ *i*P **P 20 54 48.8 +0.4**
comp=Z,24nm,0.9s,mb5.1

WTTA Wattenberg 75.37 339⇑ *i*P **P 20 54 49.6 +0.9**
comp=Z,44nm,1.0s,mb5.4,SNR=21

MALT Malatya 75.38 317 P **P 20 54 47.2 -1.7**
MALT pmax pmax
comp=Z,12nm,1.0s,mb4.8

MALT Malatya 75.38 317⇑ *i*P **P 20 54 47.5 -1.4**

MALT Malatya 75.38 317⇑⇑P **P 20 54 47.5 -1.4**

MEZF Maizieres J'vi 75.38 344⇑ *i*P **P 20 54 48.9 +0.2**
comp=Z,112nm,0.8s,mb5.6

MEZF Maizieres J'vi 75.38 344⇑ *i*P **P 20 54 48.9 +0.2**
comp=Z,112nm,0.8s,mb5.8

MOTA Moosalm 75.40 340⇑ *i*P **P 20 54 49.4 +0.5**
SNR=36

OBKA Obir 75.45 337 *i*P **P 20 54 49.9 +0.8**
comp=Z,51nm,0.8s,mb5.5,SNR=28

FELD Feldberg im Sc 75.48 342 *e*P **P 20 54 49.3 0.0**

CTA Charters Tower 75.49 195 *e*P **P 20 54 48.7 -0.8**
comp=Z,13nm,0.9s,mb4.8

CTA Charters Tower 75.49 195 P **P 20 54 48.8 -0.7**
comp=Z,18nm,0.9s,mb5.0,baz=5.2,slow=7.3,SNR=29
CTA LR LR 21 25 50.7
comp=Z,74nm,18.7s,MS4.0,baz=49,slow=34

CTA Charters Tower 75.49 195 P **P 20 54 48.8 -0.7**
CTA pmax pmax
comp=Z,18nm,0.9s
CTA MLR MLR
comp=Z,74nm,18.7s

CTAO Charters Tower 75.49 195 P **P 20 54 48.8 -0.7**
CTAO pmax pmax
comp=Z,20nm,1.0s,mb5.0

CTAO Charters Tower 75.49 195 *e*P **P 20 54 48.8 -0.7**
comp=Z,20nm,1.0s,mb5.0

THEF They Montfort 75.50 343 *e*P **P 20 54 49.3 -0.1**

MYKA Terra Mystica 75.54 338⇑ *i*P **P 20 54 49.8 +0.1**
comp=Z,21nm,0.6s,mb5.2

HAU Haudompre 75.65 343⇑ *i*P **P 20 54 50.2 0.0**
comp=Z,104nm,0.8s,mb5.5
HAU *e*MLR MLR
comp=Z,114nm,19.8s,MS3.9

HAU Haudompre 75.65 343⇑ *i*P **P 20 54 50.2 0.0**
HAU pmax pmax
comp=Z,52nm,0.8s,mb5.5
HAU MLR MLR
comp=Z,110nm,19.8s,MS4.2

HAU Haudompre 75.65 343⇑ *i*P **P 20 54 50.2 0.0**
comp=Z,52nm,0.8s,mb5.5
HAU LR LR
comp=Z,110nm,19.8s,MS4.2

MOF Molkenrain 75.66 342 *e*P **P 20 54 50.0 -0.3**

JQE Queens East 75.67 349⇓ *e*P **P 20 54 50.1 -0.2**

ABTA Abfaltersbach 75.68 339 *i*P **P 20 54 50.9 +0.4**
comp=Z,48nm,0.9s,mb5.4,SNR=46

JRS Jersey 75.68 349⇓ *e*P **P 20 54 50.1 -0.3**

JSA Saint Aubin 75.69 349⇓ *e*P **P 20 54 50.4 -0.1**
JSA AMb AMB 20 54 51.0
comp=Z,85nm,0.9s,mb5.7

DAVA Damuels 75.70 340⇑ *i*P **P 20 54 50.9 +0.3**
comp=Z,28nm,1.1s,mb5.1,SNR=14

HINF Hinteralfeld 75.75 343⇑ *i*P **P 20 54 50.4 -0.4**
comp=Z,42nm,0.9s,mb5.1

HINF Hinteralfeld 75.75 343⇑ *i*P **P 20 54 50.4 -0.4**
HINF pmax pmax
comp=Z,21nm,0.9s,mb5.1

HINF Hinteralfeld 75.75 343⇑ *i*P **P 20 54 50.4 -0.4**
comp=Z,21nm,0.9s,mb5.1

FETA Feichten 75.78 340⇑ *i*P **P 20 54 51.8 +0.8**
comp=Z,51nm,0.9s,mb5.5,SNR=51

FLN La Foliniere 75.91 348⇑ *i*P **P 20 54 51.3 -0.4**
comp=Z,92nm,0.8s,mb5.5
FLN *e*MLR MLR
comp=Z,98nm,23.0s,MS3.8

FLN La Foliniere 75.91 348⇑ *i*P **P 20 54 51.3 -0.4**
FLN pmax pmax
comp=Z,46nm,0.8s,mb5.5
FLN MLR MLR
comp=Z,100nm,23.0s,MS4.1

FLN La Foliniere 75.91 348⇑ *i*P **P 20 54 51.3 -0.4**
comp=Z,46nm,0.8s,mb5.5
FLN LR LR
comp=Z,100nm,23.0s,MS4.1

BBS Basel-Blauen 75.97 342 *e*P **P 20 54 50.5 -1.6**

LDF La Druitiere 76.03 348⇑ *i*P **P 20 54 51.9 -0.5**
comp=Z,50nm,0.9s,mb5.2

LDF La Druitiere 76.03 348⇑ *i*P **P 20 54 51.9 -0.5**
LDF pmax pmax
comp=Z,25nm,0.9s,mb5.1

LDF La Druitiere 76.03 348⇑ *i*P **P 20 54 51.9 -0.5**
comp=Z,25nm,0.9s,mb5.1

VISS Visnje 76.06 337 *i*P **P 20 54 52.4 -0.2**

JAVS Javornik 76.15 337 *i*P **P 20 54 52.5 -0.6**

ANTO Ankara 76.16 322 P **P 20 54 55.2 +1.9**
ANTO pmax pmax
comp=Z,11nm,0.8s,mb4.8

ANTO Ankara 76.16 322 *e*P **P 20 54 53.2 0.0**
comp=Z,11nm,0.8s,mb4.8

LOMF Lomont 76.20 343 *e*P **P 20 54 53.3 -0.1**

BOJS Bojanci 76.24 336 *i*P **P 20 54 53.6 0.0**

GRR Gorron 76.33 348⇑ *i*P **P 20 54 53.9 -0.2**
comp=Z,127nm,0.9s,mb5.6

GRR Gorron 76.33 348⇑ *i*P **P 20 54 53.9 -0.2**
GRR pmax pmax
comp=Z,64nm,0.9s,mb5.5

GRR Gorron 76.33 348⇑ *i*P **P 20 54 53.9 -0.2**
comp=Z,64nm,0.9s,mb5.5

TUE Stuetta 76.58 341⇑ *i*P **P 20 54 56.0 +0.4**
comp=Z,44nm,0.6s,mb5.6

ROSF Rostrenen 76.65 350 *e*P **P 20 54 55.9 0.0**
comp=Z,105nm,1.0s,mb5.4

ROSF Rostrenen 76.65 350 *e*P **P 20 54 55.9 0.0**
ROSF pmax pmax
comp=Z,53nm,1.0s,mb5.4

ROSF Rostrenen 76.65 350 *e*P **P 20 54 55.9 0.0**
comp=Z,53nm,1.0s,mb5.4

SGMF Saint Gilles 76.66 349 *e*P **P 20 54 55.9 -0.1**
comp=Z,96nm,0.9s,mb5.4

SGMF Saint Gilles 76.66 349 *e*P **P 20 54 55.9 -0.1**
SGMF pmax pmax
comp=Z,48nm,0.9s,mb5.4

SGMF Saint Gilles 76.66 349 *e*P **P 20 54 55.9 -0.1**
comp=Z,48nm,0.9s,mb5.4

LOR Lormes 76.77 345⇑ *i*P **P 20 54 56.5 -0.1**
comp=Z,108nm,0.8s,mb5.5
LOR *e*MLR MLR
comp=Z,127nm,21.8s,MS3.9

LOR Lormes 76.77 345⇑ *i*P **P 20 54 56.5 -0.1**
LOR pmax pmax
comp=Z,54nm,0.8s,mb5.5
LOR MLR MLR
comp=Z,130nm,21.8s,MS4.2

LOR Lormes 76.77 345⇑ *i*P **P 20 54 56.5 -0.1**
comp=Z,54nm,0.8s,mb5.5
LOR LR LR
comp=Z,130nm,21.8s,MS4.2

VTS Vitosha 76.85 330⇓ *i*P **P 20 54 56.9 -0.2**

VTS Vitosha 76.85 330⇓⇓P **P 20 54 56.9 -0.2**

HYF Humbligny 76.96 345⇑ *i*P **P 20 54 57.9 +0.2**

SSF Saint Saulge 77.03 345⇑ *i*P **P 20 54 58.0 -0.1**
comp=Z,55nm,0.8s,mb5.3

SSF Saint Saulge 77.03 345⇑ *i*P **P 20 54 58.0 -0.1**
SSF pmax pmax
comp=Z,27nm,0.8s,mb5.2

SSF Saint Saulge 77.03 345⇑ *i*P **P 20 54 58.0 -0.1**
comp=Z,27nm,0.8s,mb5.2

CABF La Chapelle 77.05 343⇑ *i*P **P 20 54 58.6 +0.4**
comp=Z,88nm,0.9s,mb5.4

CABF La Chapelle 77.05 343⇑ *i*P **P 20 54 58.6 +0.4**
CABF pmax pmax
comp=Z,44nm,0.9s,mb5.4

CABF La Chapelle 77.05 343⇑ *i*P **P 20 54 58.6 +0.4**
comp=Z,44nm,0.9s,mb5.4

QUIF Quistinic 77.06 349 *e*P **P 20 54 58.1 -0.1**
comp=Z,70nm,0.9s,mb5.3

QUIF Quistinic 77.06 349 *e*P **P 20 54 58.1 -0.1**
QUIF pmax pmax
comp=Z,35nm,0.9s,mb5.3

QUIF Quistinic 77.06 349 *e*P **P 20 54 58.1 -0.1**
comp=Z,35nm,0.9s,mb5.3

PLE Pljevlja 77.24 333⇑ *i*P **P 20 55 00.0 +0.7**

AVF Avril sur Loir 77.31 345⇑ *i*P **P 20 54 59.7 0.0**
comp=Z,102nm,0.8s,mb5.5

AVF Avril sur Loir 77.31 345⇑ *i*P **P 20 54 59.7 0.0**
AVF pmax pmax
comp=Z,51nm,0.8s,mb5.5

AVF Avril sur Loir 77.31 345⇑ *i*P **P 20 54 59.7 0.0**
comp=Z,51nm,0.8s,mb5.5

SMF Signal de Mont 77.38 344⇑ *i*P **P 20 54 59.9 -0.2**
comp=Z,65nm,1.0s,mb5.2

SMF Signal de Mont 77.38 344⇑ *i*P **P 20 54 59.9 -0.2**
SMF pmax pmax
comp=Z,32nm,1.0s,mb5.2

SMF Signal de Mont 77.38 344⇑ *i*P **P 20 54 59.9 -0.2**
comp=Z,32nm,1.0s,mb5.2

RDO Rodhopi 77.46 327 *e*P **P 20 55 00.7 +0.1**

UPM Unac-Piva 77.48 333⇑ *i*P **P 20 54 59.8 -0.9**

IVA Berane 77.53 332⇑ *i*P **P 20 55 00.7 -0.2**

BGF Bois d'Agland 77.62 345⇑ *i*P **P 20 55 01.3 -0.1**
comp=Z,43nm,0.9s,mb5.1

BGF Bois d'Agland 77.62 345⇑ *i*P **P 20 55 01.3 -0.1**
BGF pmax pmax
comp=Z,21nm,0.9s,mb5.1

BGF Bois d'Agland 77.62 345⇑ *i*P **P 20 55 01.3 -0.1**
comp=Z,22nm,0.9s,mb5.1

WRAB Tennant Creek 77.75 206⇑⇑ *e*P **P 20 55 01.6 -0.7**
WRAB pmax pmax
comp=Z,30nm,0.8s,mb5.3

WRAB Tennant Creek 77.75 206⇑⇑ *e*P **P 20 55 01.6 -0.7**
comp=Z,30nm,0.8s,mb5.3

PVY Plav 77.76 332⇑ *i*P **P 20 55 01.3 -1.0**

WB2 Warramunga Arr 77.76 206 *e*P **P 20 55 01.8 -0.5**

WRA Warramunga Arr 77.77 206 P **P 20 55 01.8 -0.6**
comp=Z,30nm,0.7s,mb5.4,baz=20,slow=6.0,SNR=329
WRA PKiKP PKiKP 21 00 40.9 -0.3
comp=Z,0.2nm,0.5s,baz=359,slow=1.9,SNR=4.7

NVR Nevrokopi 77.79 329 *e*P **P 20 55 01.9 -0.5**

NKY Niksic 77.82 333⇑ *i*P **P 20 55 00.9 -1.7**

BRY Bratogost 77.86 333⇑ *i*P **P 20 55 01.6 -1.2**

STIP Stip 77.97 330 *i*P **P 20 55 02.9 -0.5**

TCF Toulx Ste Croi 77.98 345⇑ *i*P **P 20 55 03.5 +0.1**
comp=Z,55nm,0.9s,mb5.2

TCF Toulx Ste Croi 77.98 345⇑ *i*P **P 20 55 03.5 +0.1**
TCF pmax pmax
comp=Z,28nm,0.9s,mb5.2

TCF Toulx Ste Croi 77.98 345⇑ *i*P **P 20 55 03.5 +0.1**
comp=Z,28nm,0.9s,mb5.2

LPL La Plagne 77.99 342⇑ *i*P **P 20 55 04.7 +1.2**
comp=Z,134nm,0.8s,mb5.6

LPL La Plagne 77.99 342⇑ *i*P **P 20 55 04.7 +1.2**
LPL pmax pmax
comp=Z,67nm,0.8s,mb5.6

LPL La Plagne 77.99 342⇑ *i*P **P 20 55 04.7 +1.2**
comp=Z,67nm,0.8s,mb5.6

MFF Saint Martin d 77.99 347⇑ *i*P **P 20 55 03.6 +0.1**
comp=Z,45nm,0.9s,mb5.1

MFF Saint Martin d 77.99 347⇑ *i*P **P 20 55 03.6 +0.1**
MFF pmax pmax
comp=Z,22nm,0.9s,mb5.1

MFF Saint Martin d 77.99 347⇑ *i*P **P 20 55 03.6 +0.1**
comp=Z,22nm,0.9s,mb5.1

LPG La Plagne 78.01 342⇑ *i*P **P 20 55 05.0 +1.4**
comp=Z,174nm,0.8s,mb5.7

LPG La Plagne 78.01 342⇑ *i*P **P 20 55 05.0 +1.4**
LPG pmax pmax
comp=Z,87nm,0.8s,mb5.7

LPG La Plagne 78.01 342⇑ *i*P **P 20 55 05.0 +1.4**
comp=Z,87nm,0.8s,mb5.7

AGO Saint Agoulin 78.07 345 *e*P **P 20 55 04.5 +0.6**

PLDF La Plantade 78.07 344 *e*P **P 20 55 04.2 +0.3**

TTG Podgorica 78.11 332⇑ *i*P **P 20 55 02.6 -1.6**

VAY Valandovo 78.20 330⇑ *i*P **P 20 55 04.1 -0.6**

HCY Herceg Novi 78.30 333⇑ *i*P **P 20 55 04.3 -0.9**

BUM Brajici-Budva 78.33 333⇑ *i*P **P 20 55 03.5 -1.9**

PYM Petit Puy Mans 78.38 345 *e*P **P 20 55 06.2 +0.6**

BNI Bardonecchia 78.45 342 P **P 20 55 07.2 +1.2**
BNI pmax pmax
comp=Z,34nm,1.0s,mb5.2

BNI Bardonecchia 78.45 342 *e*P **P 20 55 07.2 +1.2**
comp=Z,34nm,0.9s,mb5.3

KRUS Krusevo 78.54 331⇑ *i*P **P 20 55 06.5 -0.1**

ULC Ulcinj 78.55 332⇑ *i*P **P 20 55 05.4 -1.2**

FITZ Fitzroy Crossi 78.58 215 *e*P **P 20 55 06.7 -0.2**
comp=Z,30nm,0.8s,mb5.3

FITZ Fitzroy Crossi 78.58 215 P **P 20 55 06.8 -0.1**
comp=Z,21nm,0.9s,mb5.1,baz=16,slow=5.1,SNR=30

VLC Villacollemand 78.59 339 *e*P **P 20 55 07.3 +0.5**
comp=Z,67nm,0.8s,mb5.6

SSB Saint Sauveur 78.60 344 *e*P **P 20 55 07.2 +0.4**

ORIF Oris-en-Rattie 78.72 343⇑ *i*P **P 20 55 08.5 +1.0**
comp=Z,78nm,0.9s,mb5.4
ORIF *e*MLR MLR
comp=Z,115nm,22.2s,MS3.9

ORIF Oris-en-Rattie 78.72 343⇑ *i*P **P 20 55 08.5 +1.0**
ORIF pmax pmax
comp=Z,39nm,0.9s,mb5.3

ORIF Oris-en-Rattie 78.72 343⇑ *i*P **P 20 55 08.5 +1.0**
comp=Z,39nm,0.9s,mb5.3

MIB Mutribah 78.73 306 *e*P **P 20 55 06.4 -1.5**
baz=306
MIB AMb AMB 20 55 08.0
comp=Z,118nm,0.7s,mb5.9,baz=306

PALK Pallekele 78.74 267 *e*P **P 20 55 07.3 -0.8**
comp=Z,19nm,0.7s,mb5.1

MBDF Montbardon 78.75 342⇑ *i*P **P 20 55 08.3 +0.6**
comp=Z,74nm,0.9s,mb5.3

MBDF Montbardon 78.75 342⇑ *i*P **P 20 55 08.3 +0.6**
MBDF pmax pmax
comp=Z,37nm,0.9s,mb5.3

MBDF Montbardon 78.75 342⇑ *i*P **P 20 55 08.3 +0.6**
comp=Z,37nm,0.9s,mb5.3

UMR Umm Al-Rimmam 78.76 306 *e*P **P 20 55 06.4 -1.6**
baz=306
UMR AMb AMB 20 55 07.7
comp=Z,77nm,0.4s,mb6.0,baz=306

LBL Lubilhac 78.85 344 *e*P **P 20 55 08.8 +0.6**

OHR Ohrid 78.91 331⇑ *i*P **P 20 55 07.3 -1.3**

TIR Tirane 78.95 332 P **P 20 55 08.8 0.0**
TIR pmax pmax
comp=Z,34nm,0.7s,mb5.4

TIR Tirane 78.95 332 *e*P **P 20 55 08.3 -0.6**
comp=Z,34nm,0.7s,mb5.4

VIVF Saint-Julien-l 78.99 343⇑ *i*P **P 20 55 09.7 +0.7**
comp=Z,75nm,0.9s,mb5.3

VIVF Saint-Julien-l 78.99 343⇑ *i*P **P 20 55 09.7 +0.7**
VIVF pmax pmax
comp=Z,38nm,0.9s,mb5.3

VIVF Saint-Julien-l 78.99 343⇑ *i*P **P 20 55 09.7 +0.7**
comp=Z,38nm,0.9s,mb5.3

RJF Les Rejaudoux 79.04 346⇑ *i*P **P 20 55 09.3 0.0**
comp=Z,24nm,0.8s,mb4.9
RJF *e*MLR MLR
comp=Z,108nm,17.8s,MS3.9

RJF Les Rejaudoux 79.04 346⇑ *i*P **P 20 55 09.3 0.0**
RJF pmax pmax
comp=Z,12nm,0.8s,mb4.9
RJF MLR MLR
comp=Z,110nm,17.8s,MS4.2

RJF Les Rejaudoux 79.04 346⇑ *i*P **P 20 55 09.3 0.0**
comp=Z,12nm,0.8s,mb4.9
RJF LR LR
comp=Z,110nm,17.8s,MS4.2

KBD Kabd 79.09 305 *e*P **P 20 55 08.3 -1.5**
baz=305
KBD AMb AMB 20 55 09.7
comp=Z,38nm,0.5s,mb5.6,baz=305

RST Umm Al-Ruwaisa 79.15 306 *e*P **P 20 55 08.2 -1.9**
baz=306
RST AMb AMB 20 55 09.9
comp=Z,103nm,0.8s,mb5.8,baz=306

NAY Al-Naaiem 79.24 306 *e*P **P 20 55 09.0 -1.7**
baz=306

NAY AMb AMB 20 55 10.4
comp=Z,43nm,0.5s,mb5.6,baz=306
SAOF Saorge 79.32 341 *eP* **P 20 55 10.7 -0.1**
CAF Calviac 79.33 345⇑*iP* **P 20 55 11.6 +0.7**
comp=Z,61nm,0.9s,mb5.2
CAF Calviac 79.33 345⇑*iP* **P 20 55 11.6 +0.7**
CAF pmax pmax
comp=Z,30nm,0.9s,mb5.2
CAF Calviac 79.33 345⇑*iP* **P 20 55 11.6 +0.7**
comp=Z,30nm,0.9s,mb5.2
AUTN L'Aution 79.33 341 *eP* **P 20 55 11.5 +0.6**
TOUF Mont Tournerai 79.35 341 *eP* **P 20 55 11.3 +0.3**
RDF Al-Radifah 79.37 305 *eP* **P 20 55 10.0 -1.3**
baz=305
RDF AMb AMB 20 55 11.7
comp=Z,118nm,0.8s,mb5.9,baz=305
LUCF Luceram 79.45 341 *eP* **P 20 55 11.7 +0.2**
SBF Sospel 79.46 341⇑*iP* **P 20 55 11.6 0.0**
comp=Z,118nm,1.0s,mb5.5
SBF Sospel 79.46 341⇑*iP* **P 20 55 11.6 0.0**
SBF pmax pmax
comp=Z,59nm,1.0s,mb5.5
SBF Sospel 79.46 341⇑*iP* **P 20 55 11.6 0.0**
comp=Z,59nm,1.0s,mb5.5
MVIF Mont Vial 79.48 341 *eP* **P 20 55 11.8 +0.1**
LFF La Frestale 79.51 346⇑*iP* **P 20 55 12.3 +0.5**
comp=Z,93nm,1.1s,mb5.3
LFF La Frestale 79.51 346⇑*iP* **P 20 55 12.3 +0.5**
LFF pmax pmax
comp=Z,47nm,1.1s,mb5.3
LFF La Frestale 79.51 346⇑*iP* **P 20 55 12.3 +0.5**
comp=Z,47nm,1.1s,mb5.3
REVF Revere 79.59 341 *eP* **P 20 55 12.5 +0.2**
CALN Calern 79.67 342 *eP* **P 20 55 13.1 +0.4**
SMRF Simiane la Rot 79.69 343⇑*iP* **P 20 55 13.8 +1.0**
comp=Z,30nm,1.0s,mb4.9
SMRF Simiane la Rot 79.69 343⇑*iP* **P 20 55 13.8 +1.0**
comp=Z,30nm,1.0s,mb5.2
TAOE Nuku Hiva Isla 79.80 121 *e*LR LR 21 19 56.6
comp=Z,651nm,23.0s
LASF Ste Croix 79.88 344⇑*iP* **P 20 55 14.8 +0.9**
comp=Z,33nm,0.9s,mb5.0
FRF La Foret Royal 79.90 342⇑*iP* **P 20 55 14.0 0.0**
comp=Z,32nm,0.7s,mb5.0
FRF La Foret Royal 79.90 342⇑*iP* **P 20 55 14.0 0.0**
FRF pmax pmax
comp=Z,16nm,0.7s,mb5.1
FRF La Foret Royal 79.90 342⇑*iP* **P 20 55 14.0 0.0**
comp=Z,16nm,0.7s,mb5.1
LMR La Mourre 80.14 342⇑*iP* **P 20 55 15.6 +0.3**
comp=Z,92nm,1.0s,mb5.4
LMR La Mourre 80.14 342⇑*iP* **P 20 55 15.6 +0.3**
LMR pmax pmax
comp=Z,46nm,1.0s,mb5.4
LMR La Mourre 80.14 342⇑*iP* **P 20 55 15.6 +0.3**
comp=Z,46nm,1.0s,mb5.4
SMG Samos 80.16 325 *eP* **P 20 55 24.3 +8.8**
JAN Janina 80.24 330 *eP* **P 20 55 15.8 -0.1**
CSS Prodhromos 80.29 319 *eP* **P 20 55 15.0 -1.2**
comp=Z,18nm,0.6s,mb5.2
PGF Pioggiola 80.42 340⇑*iP* **P 20 55 17.0 +0.2**
comp=Z,118nm,0.7s,mb5.6
PGF Pioggiola 80.42 340⇑*iP* **P 20 55 17.0 +0.2**
PGF pmax pmax
comp=Z,59nm,0.7s,mb5.6
PGF Pioggiola 80.42 340⇑*iP* **P 20 55 17.0 +0.2**
comp=Z,59nm,0.7s,mb5.6
CORF Corte 80.63 340 *eP* **P 20 55 18.0 +0.1**
MTLF Montolieu 80.86 345⇑*iP* **P 20 55 20.0 +0.9**
comp=Z,40nm,0.9s,mb5.0
MTLF Montolieu 80.86 345⇑*iP* **P 20 55 20.0 +0.9**
MTLF pmax pmax
comp=Z,20nm,0.9s,mb5.0
MTLF Montolieu 80.86 345⇑*iP* **P 20 55 20.0 +0.9**
comp=Z,20nm,0.9s,mb5.0
OSPF L'Ospedale 81.23 339 *eP* **P 20 55 21.3 +0.1**
CUC Castrocucco 81.30 334 *eP* **P 20 55 20.3 -1.2**
comp=Z,21nm,0.8s,mb5.1
MLS Moulis 81.40 346 *eP* **P 20 55 22.8 +0.8**
EPF Esparros 81.44 346⇑*iP* **P 20 55 22.2 0.0**
comp=Z,39nm,1.2s,mb4.9
EPF Esparros 81.44 346⇑*iP* **P 20 55 22.2 0.0**
EPF pmax pmax
comp=Z,20nm,1.2s,mb4.9
EPF Esparros 81.44 346⇑*iP* **P 20 55 22.2 0.0**
comp=Z,20nm,1.2s,mb4.9
ASAR Alice Springs 81.44 205 P P 20 55 22.4 +0.1
comp=Z,33nm,0.8s,mb5.3,baz=17,slow=5.6,SNR=341
CARF Carcanieres 81.48 345 *eP* **P 20 55 22.9 +0.4**
EALK Alkurruntz 81.50 347 P **P 20 55 25.6 +3.1**
comp=Z,19nm,1.0s,mb5.0
RLS Riolos of Patr 81.54 329 *eP* **P 20 55 22.1 -0.7**
SJPF Ste Jean 81.56 347 *eP* **P 20 55 24.0 +1.1**
comp=Z,20nm,0.8s,mb4.8
SJPF Ste Jean 81.56 347 *eP* **P 20 55 24.0 +1.1**
SJPF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SJPF Ste Jean 81.56 347 *eP* **P 20 55 24.0 +1.1**
comp=Z,10nm,0.8s,mb4.8
SJAF Saint Jean de 81.59 344 *eP* **P 20 55 23.4 +0.4**
LARF Larrau 81.61 347 *eP* **P 20 55 23.9 +0.8**
EJON La Jonquera 81.62 344 P **P 20 55 24.2 +1.0**
comp=Z,23nm,1.0s,mb5.1
VIEF Viey 81.62 346 *eP* **P 20 55 24.3 +1.1**
VLS Valsamata 81.69 330 *eP* **P 20 55 22.5 -1.1**
ETSF Etsaut 81.69 347⇑*iP* **P 20 55 24.5 +1.0**
comp=Z,40nm,0.9s,mb5.0
ETSF Etsaut 81.69 347⇑*iP* **P 20 55 24.5 +1.0**
ETSF pmax pmax
comp=Z,20nm,0.9s,mb5.0
ETSF Etsaut 81.69 347⇑*iP* **P 20 55 24.5 +1.0**
comp=Z,20nm,0.9s,mb5.0
ELAN Lanestosa 81.71 349 P **P 20 55 24.0 +0.3**
comp=Z,35nm,0.8s,mb5.3
EBIE Bielsa 81.80 346 P **P 20 55 25.8 +1.7**
comp=Z,13nm,0.8s,mb4.9
VALF Valcebollere 81.81 345 *eP* **P 20 55 25.4 +1.2**
TIP Timpagrande 81.82 333 *eP* **P 20 55 24.4 +0.1**
comp=Z,50nm,1.1s,mb5.3
EARI Arriondas 81.83 350 P **P 20 55 24.5 +0.2**
comp=Z,32nm,1.1s,mb5.2
ITM Ithomi 82.21 328 *eP* **P 20 55 25.2 -1.2**
EMIR Miracle 82.36 345 P **P 20 55 28.6 +1.6**
comp=Z,9.2nm,0.8s,mb4.8
STS Santiago 82.53 353 P **P 20 55 28.1 +0.1**
STS pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
STS Santiago 82.53 353 P **P 20 55 28.1 +0.1**
comp=Z,7.9nm,0.7s,mb4.8
PPT Papeete 83.08 134 *e*LR LR 21 21 23.7
comp=Z,240nm,22.0s
PPT Papeete 83.08 134 LR LR 21 24 41.9
comp=Z,211nm,21.6s,MS4.5,baz=0.9,slow=30
VSL Villasalto 83.28 339 *eP* **P 20 55 31.8 0.0**
comp=Z,41nm,1.0s,mb5.4
PCAB Cabril 83.66 352 *eP* **P 20 55 34.4 +0.6**
comp=Z,26nm,1.2s,mb5.2
ETOR Torete 83.93 347 P **P 20 55 36.0 +0.8**
ETOR pmax pmax
comp=Z,20nm,0.9s,mb5.2
ETOR Torete 83.93 347 P **P 20 55 36.0 +0.8**
comp=Z,20nm,0.9s,mb5.2
MVO Moncorvo 84.12 351 *eP* **P 20 55 36.5 +0.3**
comp=Z,40nm,1.2s,mb5.4
EIL Elat 84.31 315 LR LR 21 36 44.2
comp=Z,124nm,21.4s,MS4.3,baz=199,slow=38
GUD Guadarrama 84.35 349 P **P 20 55 37.7 +0.4**
GUD pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
GUD Guadarrama 84.35 349 P **P 20 55 37.7 +0.3**
comp=Z,4.4nm,0.6s,mb4.8
PVIS Viseu 84.64 352 *eP* **P 20 55 39.3 +0.5**
comp=Z,45nm,0.9s,mb5.6
MTE Manteigas 84.92 352 *eP* **P 20 55 40.9 +0.7**
comp=Z,47nm,0.8s,mb5.7
MTE Manteigas 84.92 352 *eP* **P 20 55 40.6 +0.3**
comp=Z,31nm,0.8s,mb5.5
ECHE Chera 85.00 346 P **P 20 55 41.9 +1.3**
ECHE pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
ECHE Chera 85.00 346 P **P 20 55 41.9 +1.3**
comp=Z,8.0nm,1.0s,mb4.8
ESDC Sonseca Array 85.29 349 P **P 20 55 42.5 +0.4**
comp=Z,14nm,0.8s,mb5.2,baz=2.0,slow=5.0,SNR=95
ESDC pP pP 20 55 53.1 -0.9
comp=Z,13nm,0.7s,baz=1.4,slow=4.9,SNR=21
ESDC PKKPbc PKKPbc 21 13 44.5 0.0
comp=Z,0.7nm,0.8s,baz=170,slow=1.9,SNR=6.5
ESDC Sonseca Array 85.29 349 P **P 20 55 42.5 +0.4**
comp=Z,8.8nm,0.6s,mb5.1
ESLA Sonseca Array 85.29 349 *eP* **P 20 55 42.5 +0.4**
comp=Z,6.5nm,0.9s,mb4.8
ESLA *e* pP 20 55 53.7 -0.3
PAB San Pablo 85.46 349 *eP* **P 20 55 42.8 -0.1**
PAB *e* pP 20 55 54.4 -0.5
PAB pmax pmax
comp=Z,15nm,0.9s,mb5.1
PAB San Pablo 85.46 349 *eP* **P 20 55 42.8 -0.2**
comp=Z,15nm,0.9s,mb5.1
PAB *e* pP 20 55 54.4 -0.5
PMRV Marv??o 85.88 351 *eP* **P 20 55 45.0 0.0**
comp=Z,13nm,1.3s,mb5.0
EVIA Vianos 86.13 347 P **P 20 55 47.2 +0.9**
EVIA pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
EVIA Vianos 86.13 347 P **P 20 55 47.2 +0.9**
comp=Z,7.4nm,0.7s,mb5.0
EBAN Banos Encina 86.76 348 P **P 20 55 49.9 +0.5**
EBAN pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
EBAN Banos Encina 86.76 348 P **P 20 55 49.9 +0.5**
comp=Z,5.3nm,0.6s,mb5.0
EVO Evora 86.82 352⇑*iP* **P 20 55 49.1 -0.6**
comp=Z,13nm,0.8s,mb4.9
EVO *e*MLR MLR
comp=Z,88nm,18.5s,MS3.9
KEST Kesra 86.90 338 P **P 20 55 49.8 -0.3**
comp=Z,5.3nm,1.0s,mb4.7,baz=302,slow=4.4,SNR=14
KEST LR LR 21 39 17.6
comp=Z,50nm,21.2s,MS3.9,baz=338,slow=39
PBAR Barrancos 87.09 351 *eP* **P 20 55 50.8 -0.2**
comp=Z,18nm,0.9s,mb5.3
PBEJ Beja 87.31 352 *eP* **P 20 55 51.7 -0.3**
comp=Z,7.0nm,0.7s,mb5.0
STKA Stephens Creek 87.79 197 *eP* **P 20 55 53.6 -0.5**
comp=Z,9.7nm,0.8s,mb5.1
STKA Stephens Creek 87.79 197 P **P 20 55 54.0 -0.1**
comp=Z,10nm,0.8s,mb5.1,baz=355,slow=4.8,SNR=18
STKA LR LR 21 30 49.6
comp=Z,162nm,20.3s,MS4.4,baz=26,slow=33
ELOJ Sierra Loja 87.80 349 P **P 20 55 54.2 -0.2**
ELOJ pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
ELOJ Sierra Loja 87.80 349 P **P 20 55 54.2 -0.2**
comp=Z,2.9nm,0.7s,mb4.6
PTEO Sao Teotonio 87.86 352 *eP* **P 20 55 54.9 +0.2**
PVAQ Vaqueiros 87.91 351 *eP* **P 20 55 54.8 -0.1**
comp=Z,18nm,1.0s,mb5.3
MORF Marmelete 88.09 352 *eP* **P 20 55 56.3 +0.5**
comp=Z,20nm,1.4s,mb5.2
FORT Forrest 89.75 208 *eP* **P 20 56 02.8 -0.5**
comp=Z,45nm,0.7s,mb5.9
KLBR Kellerberrin 93.70 216 *eP* **P 20 56 20.1 -1.5**
comp=Z,78nm,2.0s,mb5.8
JTS JuntasAbangare 94.88 65 LR LR 21 39 32.8
comp=Z,113nm,21.0s,MS4.3,baz=5.1,slow=36
NWAO Narrogin (SRO) 95.10 216 P **P 20 56 26.6 -1.4**
comp=Z,14nm,1.0s,mb5.3,baz=45,slow=4.3,SNR=3.2
SJG San Juan 97.02 45 LR LR 21 43 13.6
comp=Z,76nm,20.2s,MS4.2,baz=280,slow=37
TORD Torodi Ar. Bea 110.38 339 Pdiff Pdif 20 57 35.8 -1.0
comp=Z,0.4nm,1.0s,baz=14,slow=3.8,SNR=2.5
TORD PKiKP PKiKP 21 01 37.1 -0.5
comp=Z,1.3nm,0.7s,baz=22,slow=1.7,SNR=10.0
TORD PP PP 21 02 09.4 -2.6
comp=Z,2.0nm,0.8s,baz=9.1,slow=7.0,SNR=8.4
DBIC Dimbokro 117.91 345 PKP PKPdf 21 01 51.5 -0.6
comp=Z,4.2nm,0.6s,baz=105,slow=2.3,SNR=13
TIC Toumodi 117.96 345 *e*PKP1 PKPdf 21 01 50.9 -1.2
comp=Z,30nm,0.7s
KIC Kosan Boka 118.19 344 *e*PKP1 PKPdf 21 01 51.2 -1.4
comp=Z,87nm,1.4s
LIC Lamto 118.37 345 *e*PKP1 PKPdf 21 01 52.0 -0.9
comp=Z,49nm,1.5s
LPAZ La Paz 126.10 65 PKP PKPdf 21 02 07.7 +0.2
comp=Z,3.6nm,0.7s,baz=16,slow=8.2,SNR=21
LPAZ La Paz 126.10 65 PKP PKPdf 21 02 07.7 +0.2
LSZ Lusaka 126.72 299 PKP PKPdf 21 02 09.2 +0.5
comp=Z,5.3nm,0.8s,baz=46,slow=3.5,SNR=17
LSZ Lusaka 126.72 299 PKIKP PKPdf 21 02 09.2 +0.4
LSZ pmax pmax
comp=Z,5.0nm,0.8s
BDFB Brasilia 134.93 42 PKP PKPdf 21 02 24.0 -0.3
comp=Z,5.4nm,0.7s,baz=4.3,slow=1.6,SNR=10
LBTB Lobatse 136.12 294 PKP PKPdf 21 02 26.6 +0.3
comp=Z,11nm,0.8s,baz=285,slow=2.2,SNR=15
BOSA Boshof 139.17 291 PKhKP 21 02 23.4
comp=Z,3.1nm,0.7s,baz=13,slow=4.4,SNR=3.9
BOSA PKP PKPdf 21 02 31.4 -0.4
comp=Z,7.0nm,0.8s,baz=73,slow=1.8,SNR=8.1
BOSA Boshof 139.17 291 PKP PKPdf 21 02 31.4 -0.4
CPUP Villa Florida 140.00 61 PKP PKPdf 21 02 33.5 +0.1
comp=Z,1.8nm,0.6s,baz=318,slow=3.0,SNR=3.0
MAW Mawson 141.65 218 PKhKP 21 02 31.0
comp=Z,4.2nm,0.8s,baz=54,slow=3.0,SNR=10
PLCA Paso Flores 143.22 90 PKhKP 21 02 33.4
comp=Z,2.2nm,0.9s,baz=358,slow=5.5,SNR=5.3
PLCA PKP PKPdf 21 02 39.2 +0.5
comp=Z,6.8nm,0.7s,baz=268,slow=4.1,SNR=20
PLCA Paso Flores 143.22 90 PKP 21 02 33.4
PLCA PKP PKPdf 21 02 39.2 +0.5
QSPA South Pole Qui 144.33 180 PKP PKPdf 21 02 36.9 -2.6
comp=Z,58nm,0.9s,baz=343,slow=1.1,SNR=131
QSPA South Pole Qui 144.33 180 PKP PKPdf 21 02 36.9 -2.6
SUR Sutherland 144.50 292 PKP PKPdf 21 02 40.1 -1.1
comp=Z,9.5nm,0.7s,baz=178,slow=4.0,SNR=7.5
SUR Sutherland 144.50 292 PKP PKPdf 21 02 40.1 -1.1
TRQA Tornquist 146.40 79 *eP* PKPdf 21 02 43.2 -1.1
SYO Syowa Base 150.36 218⇓*iP* PKPbc 21 02 53.2 -1.8
SYO Syowa Base 150.36 218⇓*iP* PKPbc 21 02 54.7 -0.3

BJI **16** *20:48:07.5,4.17S×100.96E,h35km,mB4.8,mb4.8,Ms4.3, Ms2.4*
ISCJB **16** *20:48:13.2±1.5,32S±02×100.6E±0.2,h27km,mb4.3/12, MS3.8/3,Error ellipse: s-maj=40.7km s-min=18.1km az=139.0*
IDC **16** *20:48:15.5±1.9,3.19S×100.71E,h26km±4km,mb4.1/9, mb1 4.2/9,mb1mx3.9/22,mbtmp4.1/9,MS3.6/2,Ms1 3.6/2, ms1mx2.9/37,Error ellipse: s-maj=46.7km s-min=23.8km az=40.0*
NEIC **16** *20:48:16.3±1.2,325S×100.62E,h35km,mb4.7/1,Error ellipse: s-maj=45.9km s-min=15.9km az=49.0*
ISC 16 20:48:16.0±1.5,**32S**±0.2×**100.7E**±0.2,**h29**km, **h29**km±1.0km:**pP-P,n17**,σ0:**69**/14,**mb4.3**/12,**MS3.8**/3, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.57**	**355**	P	**P**	**20 53 02.8**	**-0.6**
	3.4nm,0.7s,mb3.9,baz=185,slow=9.6,SNR=6.7						
FITZ	**Fitzroy Crossi**	**28.59**	**123**	P	**P**	**20 54 10.0**	**+0.1**
	1.5nm,0.7s,mb3.8,baz=282,slow=9.3,SNR=4.2						
NWAO	**Narrogin (SRO)**	**33.41**	**154**	LR	LR	21 08 54.4	
	comp=Z,142nm,18.5s,MS3.7,baz=140,slow=37						
WRA	**Warramunga Arr**	**36.81**	**120**	LR	LR	21 11 37.1	
	comp=Z,71nm,21.6s,MS3.4,baz=220,slow=38						
XAN	**Xi'an**	**37.82**	**11**	P	**P**	**20 55 30.0**	**0.0**
XAN				AP	pP	20 55 37.8	-0.8
XAN				XP	sP	20 55 41.6	-0.6
XAN				AMB	AMB		
	comp=Z,16nm,0.8s,mb4.8						
XAN				AMB	AMB		
	comp=Z,88nm,8.7s						
XAN				LR	LR		
	comp=N,87nm,15.7s,MS4.2						
XAN				LR	LR		
	comp=E,308nm,18.5s,MS4.2						
XAN				LR	LR		
	comp=Z,366nm,19.0s,MS4.2						
GTA	**Gaotai**	**42.38**	**359**	*e*P	**P**	**20 56 09.0**	**+1.2**
GTA				AP	pP	20 56 19.0	+2.5
GTA				XP	sP	20 56 22.6	+2.6
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb3.9						
KSRS	**Korea Array**	**47.69**	**30**	P	**P**	**20 56 49.7**	**-0.3**
	comp=Z,3.1nm,0.9s,mb4.3,baz=223,slow=7.7,SNR=5.4						
KSRS				pP	pP	20 56 57.6	-1.2
	comp=Z,4.7nm,1.0s,baz=213,slow=8.6,SNR=4.5						
SONM	**Songino Array**	**51.05**	**5**	P	**P**	**20 57 17.1**	**+1.6**
	comp=Z,4.3nm,0.7s,mb4.5,baz=187,slow=9.5,SNR=21						
SONM				pP	pP	20 57 24.9	+0.6
	comp=Z,6.9nm,0.8s,baz=182,slow=9.0,SNR=19						
EKS2	**Erkin-Say**	**51.71**	**335**	*e*P	**P**	**20 57 20.6**	**0.0**
	comp=Z,9.3nm,1.1s,mb4.6						
EKS2				*e*	pP	20 57 29.8	+0.4
MK31	**Makanchi Array**	**52.34**	**344**	*e*P	**P**	**20 57 25.3**	**+0.1**
MK31				*e*	pP	20 57 33.9	-0.2
MKAR	**Makanchi Array**	**52.34**	**344**	P	**P**	**20 57 25.6**	**+0.4**
	comp=Z,3.5nm,0.8s,mb4.4,baz=147,slow=8.4,SNR=15						
MKAR				pP	pP	20 57 33.9	-0.1
	comp=Z,2.5nm,0.6s,baz=155,slow=8.2,SNR=7.8						
MJAR	**Matsushiro Arr**	**52.76**	**38**	P	**P**	**20 57 27.8**	**-0.8**
	comp=Z,0.5nm,0.7s,mb3.6,baz=216,slow=8.2,SNR=5.3						
MJAR				pP	pP	20 57 35.1	-2.3
	comp=Z,1.8nm,0.9s,baz=220,slow=7.0,SNR=4.7						
KURK	**Kurchatov**	**56.92**	**343**	P	**P**	**20 57 57.8**	**-0.6**
	comp=Z,2.6nm,0.8s,mb4.3,baz=162,slow=6.9,SNR=7.6						
ZALV	**Zalesovo Beam**	**58.45**	**349**	P	**P**	**20 58 09.0**	**0.0**
	comp=Z,5.0nm,0.8s,mb4.6,baz=163,slow=5.3,SNR=16						
ZALV				pP	pP	20 58 16.6	-1.3
	comp=Z,4.2nm,0.7s,baz=179,slow=4.5,SNR=7.5						
ZALV	**Zalesovo Beam**	**58.45**	**349**	P	**P**	**20 58 09.0**	**0.0**
ZALV				pP	pP	20 58 16.6	-1.3
BVAR	**Borovoye Array**	**61.52**	**340**	P	**P**	**20 58 29.2**	**-1.0**
	comp=Z,2.4nm,0.7s,mb4.5,baz=140,slow=9.6,SNR=7.8						
BVAR				pP	pP	20 58 37.9	-1.2
	comp=Z,2.0nm,0.6s,baz=145,slow=9.0,SNR=6.2						
JCT	**Junction City**	**146.64**	**33**	*e*PKPdf	PKPdf	21 07 53.1	-0.9

MOS **16** *20:54:51.2±1.3,4791N×154.25E,h70km,mb4.1/5,Error ellipse: s-maj=20.7km s-min=13.6km az=139.2*
ISCJB **16** *20:54:52.5±1.3,480N±0.1×1542E±0.1,h73km±11km, mb3.8/12,Error ellipse: s-maj=21.3km s-min=7.8km az=139.4*
NEIC **16** *20:54:53.9±1.2,4789N×154.12E,h72km±11km,mb4.5/2, Error ellipse: s-maj=15.8km s-min=8.0km az=148.0*
IDC **16** *20:54:55.3±2.8,4792N×154.08E,h83km±26km,mb3.5/10, mb1 3.7/13,mb1mx3.5/25,mbtmp3.5/13,Error ellipse: s-maj=23.2km s-min=15.2km az=150.0*
ISC 16 20:54:54.2±1.1,**4799N**±010×**1541E**±01,**h71**km±10km,**n31,** σ1:**03**/33,**mb3.8**/12,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.99**	**25**	*e*PN	**Pn**	**20 55 38.5**	**-0.7**
SKR				*e*S	**Sn**	**20 56 13.0**	**-0.9**
SKR				pmax	pmax		
	comp=Z,120nm,0.5s						
SKR				smax			
	comp=N,280nm,0.7s						
SKR				smax			
	comp=E,190nm,0.7s						
KUR	**Kuril'sk**	**5.12**	**240**	*e*PN	**Pn**	**20 56 04.0**	**-4.3**
KUR				*e*S	**Sn**	**20 57 02.4**	**-3.6**
KUR				pmax	pmax		
	comp=Z,150nm,0.7s						
KUR				smax			
	comp=N,150nm,0.6s						
KUR				smax			
	comp=E,80nm,0.6s						
PETK	**Petropavlovsk-**	**5.61**	**23**	P	**Pn**	**20 56 15.5**	**+0.7**
	comp=E,2.5nm,0.3s,baz=176,slow=12,SNR=37						
YSS	**Yuzh-Sakhalins**	**7.78**	**267**	*e*PN	**Pn**	**20 56 44.9**	**+0.3**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**7.78**	**267**	*e*Pn	**Pn**	**20 56 44.8**	**+0.2**
	comp=Z,19nm,0.6s						
ASAJ	**Asahikawa**	**8.91**	**248**	P	**Pn**	**20 57 01.6**	**+1.6**
	comp=Z,2.1nm,0.3s,baz=85,slow=24,SNR=14						
ASAJ	**Asahikawa**	**8.91**	**248**	PN	**Pn**	**20 57 01.6**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ERM	**Erimo**	**9.80**	**236**	*i* PN	**Pn**	**20 57 13.6**	**+1.4**
KLR	**Kul'dur**	**14.85**	**283**	*e*P	**Pn**	**20 58 13.0**	**-7.1**
MJAR	**Matsushiro Arr**	**16.39**	**232**	P	**Pn**	**20 58 38.2**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=31,slow=14,SNR=3.3						
MJAR	**Matsushiro Arr**	**16.39**	**232**	*e*P	**Pn**	**20 58 44.3**	**+4.7**
KSRS	**Korea Array**	**21.84**	**251**	P	**P**	**20 59 41.9**	**+1.2**
	comp=Z,3.9nm,0.9s,mb3.8,baz=49,slow=12,SNR=6.1						
KSRS	**Korea Array**	**21.84**	**251**	P	**P**	**20 59 41.9**	**+1.2**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.8						
SONM	**Songino Array**	**31.59**	**288**	P	**P**	**21 01 10.1**	**+0.2**
	comp=Z,0.6nm,1.0s,mb3.3,baz=61,slow=12,SNR=2.7						
SEW	**Seward**	**34.18**	**48**	*e*P	**P**	**21 01 31.8**	**-0.5**
MKAR	**Makanchi Array**	**46.99**	**297**	P	**P**	**21 03 17.9**	**-0.1**
	comp=Z,1.5nm,0.7s,mb3.8,baz=68,slow=8.3,SNR=9.4						
MKAR	**Makanchi Array**	**46.99**	**297**	*e*P	**P**	**21 03 17.8**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov**	**47.26**	**303**	P	**P**	**21 03 20.8**	**+0.8**
	comp=Z,1.3nm,0.7s,mb3.8,baz=70,slow=7.9,SNR=11						
KURK	**Kurchatov**	**47.26**	**303**	P	**P**	**21 03 20.8**	**+0.8**
BVAR	**Borovoye Array**	**50.61**	**309**	P	**P**	**21 03 43.9**	**-1.6**
	comp=Z,0.6nm,0.5s,mb3.9,baz=58,slow=8.4,SNR=4.4						
LSA	**Lhasa**	**50.90**	**273**	*e*P	**P**	**21 03 48.3**	**+0.3**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
LSA	**Lhasa**	**50.90**	**273**	*e*P	**P**	**21 03 48.2**	**+0.2**
	comp=Z,2.5nm,0.7s,mb4.3						
CMAR	**Chiang Mai Arr**	**53.34**	**256**	P	**P**	**21 04 05.8**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.8,baz=35,slow=6.6,SNR=3.8						
BMO	**Blue Mountains**	**57.81**	**57**	*e*P	**P**	**21 04 38.7**	**+0.7**
	comp=Z,10nm,1.5s,mb4.6						
NVAR	**Mina Array Bea**	**61.25**	**64**	P	**P**	**21 05 02.7**	**+1.0**
	comp=Z,1.2nm,0.7s,mb4.0,baz=294,slow=7.3,SNR=7.5						
NVAR	**Mina Array Bea**	**61.25**	**64**	P	**P**	**21 05 02.7**	**+0.9**
PDAR	**Pinedale Array**	**63.46**	**55**	P	**P**	**21 05 17.6**	**+1.2**
	comp=Z,1.4nm,0.8s,mb3.9,baz=328,slow=1.2,SNR=10						
WRA	**Warramunga Arr**	**69.91**	**200**	P	**P**	**21 05 55.8**	**-1.7**
	comp=Z,0.5nm,0.7s,mb3.5,baz=15,slow=6.7,SNR=5.2						
WRA	**Warramunga Arr**	**69.91**	**200**	*i* P	**P**	**21 05 55.7**	**-1.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**73.61**	**199**	P	**P**	**21 06 18.8**	**-0.9**
	comp=Z,0.6nm,0.9s,mb3.3,baz=10.0,slow=5.0,SNR=6.1						
ASAR	**Alice Springs**	**73.61**	**199**	*e*P	**P**	**21 06 18.7**	**-0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						

IDC 16 21:06:12.7±3.4,**397S**×**10000E**,**h0**km,**mb3.8**/6,**mb1 4.0**/6, **mb1mx3.7**/19,**mbtmp3.8**/6,**Error ellipse: s-maj=130.2km s-min=19.5km az=57.0,Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.30**	**357**	P	P	21 11 11.8	-0.1
	1.2nm,0.8s,baz=189,slow=9.4,SNR=12						
WRA	**Warramunga Arr**	**37.04**	**118**	P	P	21 13 24.3	-0.3
	0.3nm,0.4s,baz=302,slow=8.4,SNR=18						
ASAR	**Alice Springs**	**38.13**	**124**	P	P	21 13 34.1	+0.3
	0.7nm,0.4s,baz=298,slow=7.7,SNR=2.9						
SONM	**Songino Array**	**51.89**	**5**	P	P	21 15 23.2	+0.4
	1.6nm,0.7s,baz=186,slow=9.7,SNR=13						
MKAR	**Makanchi Array**	**52.91**	**345**	P	P	21 15 30.1	-0.3
	0.5nm,0.4s,baz=161,slow=7.1,SNR=8.1						
ZALV	**Zalesovo Beam**	**59.09**	**350**	P	P	21 16 14.9	+0.3
	2.0nm,0.9s,baz=162,slow=6.1,SNR=6.4						

ISCJB **16** *21:09:37.6±0.6,2399S±004×6671W±006,h194km±5km, mb4.4/27,Error ellipse: s-maj=9.7km s-min=6.3km az=150.6*
IDC **16** *21:09:38.2±0.9,2395S×6673W,h185km±7km,mb4.0/11, mb1 4.0/19,mb1mx4.0/22,mbtmp3.9/19,Error ellipse: s-maj=13.6km s-min=10.3km az=37.0*
BJI **16** *21:09:38.5,2400S×6670W,h187km,mB4.9*
NEIC **16** *21:09:38.5±0.6,2398S×6671W,h188km±5km,mb4.6/18, Error ellipse: s-maj=8.3km s-min=5.6km az=63.0*
ISC 16 21:09:38.5±0.5,**2399S**±004×**6670W**±006,**h186**km±5km, **n99**,σ0:**95**/84,**mb4.4**

33nm,0.3s
LCO eSn Sn 21 12 05.6 -12
CFAA Coronel Fontan 7.71 190 P Pn 21 11 26.8 -1.1
0.8nm,0.3s,baz=12,slow=9.0,SNR=151
CFAA S Sn 21 12 48.0 -6.6
2.6nm,0.3s,baz=265,slow=19,SNR=32
CFAA Coronel Fontan 7.71 190 P Pn 21 11 26.8 -1.1
CFAA S Sn 21 12 48.0 -6.6
LPAZ La Paz 7.78 350 P Pn 21 11 29.3 +0.4
1.1nm,0.3s,baz=173,slow=9.5,SNR=24
LPAZ S Sn 21 12 56.2 -0.1
0.4nm,0.3s,baz=98,slow=24,SNR=4.1
ARE Arequipa 8.73 328 eP Pn 21 11 42.0 +0.6
ARE eS Sn 21 13 11.0 -8.2
CPUP Villa Florida 8.80 107 P Pn 21 11 43.4 +1.1
1.0nm,0.3s,baz=271,slow=11,SNR=41
SIV San Ignacio 9.55 35 P Pn 21 11 51.6 -0.5
3.8nm,0.3s,baz=234,slow=8.4,SNR=79
SIV S Sn 21 13 29.3 -9.4
baz=232,slow=15,SNR=3.1
TRQA Tornquist 14.59 165 eP Pn 21 12 57.8 +1.5
NNA Nana 15.34 319 P Pn 21 13 06.0 +0.4
1.0nm,0.3s,baz=166,slow=8.4,SNR=6.9
PLCA Paso Flores 17.01 190 P Pn 21 13 25.3 -0.2
0.2nm,0.3s,baz=12,slow=13,SNR=4.1
SPB Sao Paulo 17.64 93 eP Pn 21 13 32.0 -1.2
VAO Valinhos 18.13 91⇑iP P 21 13 37.4 +0.7
VAO i 21 13 38.8
VAO i 21 13 40.7
BDFB Brasilia 19.42 68 P P 21 13 51.8 +1.0
6.0nm,0.3s,baz=235,slow=11,SNR=93
ATAH Atahualpa 20.28 325 P P 21 13 59.4 -0.6
5.7nm,0.7s,baz=106,slow=5.5,SNR=6.5
OTAV Otavalo 26.64 333 eP P 21 15 01.1 +1.0
CPD Cerro la Pandu 41.77 1 P P 21 17 10.7 +1.0
DWPF Disney 53.70 344 P P 21 18 38.0 -3.3
SNAA Sanae 59.27 161 eP P 21 19 20.9 +0.8
LRAL Lakeview Retre 59.91 340 eP P 21 19 23.4 -1.6
SWET Sewanee 61.64 342 eP P 21 19 34.9 -1.6
JCT Junction City 62.78 328 eP P 21 19 43.7 -0.5
WVT Waverly 63.04 341 eP P 21 19 43.8 -1.9
MIAR Mount Ida 63.56 335 eP P 21 19 48.4 -0.8
6.5nm,0.8s,mb4.5
PARMO Parma 64.13 340 eP P 21 19 51.9 -1.0
WCI Wyandotte Cave 64.56 343 eP P 21 19 53.8 -1.9
FVM French Village 65.55 340 eP P 21 20 00.7 -1.3
13nm,0.7s,mb4.9
CCM Cathedral Cave 65.88 339 eP P 21 20 02.8 -1.3
GDL2 Guadalupe Moun 66.45 326 eP P 21 20 08.7 +0.8
DBIC Dimbokro 67.53 71 P P 21 20 14.2 -1.0
3.5nm,0.5s,mb4.3,baz=211,slow=6.4,SNR=11
BNM Barren Site 69.16 325 eP P 21 20 24.7 -0.1
LPM Los Pinos Moun 69.28 325 eP P 21 20 26.4 +0.8
ANMO Albuquerque 69.69 326 eP P 21 20 28.5 +0.5
7.5nm,0.9s,mb4.4
JFWS Jewell Farm 70.02 342 eP P 21 20 28.7 -1.1
TUC Tucson 70.04 321 eP P 21 20 31.0 +0.7
SDCO Great Sand Dun 71.42 328 eP P 21 20 38.3 -0.1
34nm,1.9s,mb4.8
MVCO Mesa Verde 72.48 326 eP P 21 20 45.8 +1.0
ECSD EROS,Sioux Fal 72.77 338 eP P 21 20 45.3 -1.0
19nm,1.2s,mb4.7
ISCO Idaho Springs 73.11 330 eP P 21 20 48.9 +0.5
38nm,2.3s,mb4.7
SYO Syowa Base 73.46 159⇑eP P 21 20 49.6 -0.6
SRU San Rafael 74.96 326 eP P 21 20 59.9 +0.8
EYMN Ely 74.99 343 eP P 21 20 58.2 -0.9
3.0nm,0.4s,mb4.3
CCUT Cedar City 75.31 323 eP P 21 21 02.3 +1.1
MSU Marysvale 75.38 325 eP P 21 21 02.8 +1.2
TMUT Trail Mountain 75.45 326 eP P 21 20 54.4 -7.5
SHPR Sheep Range 75.57 321 eP P 21 21 03.5 +0.9
TORD Torodi Ar. Bea 76.31 69 P P 21 21 06.7 -0.7
3.1nm,0.6s,mb4.1,baz=257,slow=5.4,SNR=45
TPNV Topopah Spring 76.50 321 eP P 21 21 09.3 +1.4
PDAR Pinedale Array 77.28 329 P P 21 21 12.1 -0.1
1.7nm,0.5s,mb3.9,baz=124,slow=7.4,SNR=13
HWUT Hardware Ranch 77.36 327 eP P 21 21 13.0 +0.3
4.7nm,0.6s,mb4.3
SPUT South Promonto 77.58 326 eP P 21 21 14.6 +0.7
ULM Lac du Bonnet 78.30 341 P P 21 21 16.5 -1.1
11nm,0.6s,mb4.7,baz=142,slow=5.8,SNR=20
LOHW Long Hollow 78.42 329 eP P 21 21 18.9 +0.5
6.8nm,0.6s,mb4.5
TPAW Teton Pass 78.49 329 eP P 21 21 19.7 +0.9
SCHQ Schefferville 78.49 360 P P 21 21 17.6 -0.9
3.9nm,0.8s,mb4.1,baz=201,slow=14,SNR=3.8
RRI2 Red Ridge 78.55 328 eP P 21 21 19.7 +0.5
23nm,1.4s,mb4.6
ELK Elko 78.62 324 eP P 21 21 20.0 +0.4
NVAR Mina Array Bea 78.70 321 P P 21 21 20.8 +0.7
1.5nm,0.7s,mb3.8,baz=157,slow=6.7,SNR=12
LAO LASA Array 78.90 333 eP P 21 21 19.4 -1.6
24nm,0.9s,mb4.8
RLMT Red Lodge 78.96 331 eP P 21 21 21.1 -0.2
3.8nm,0.4s,mb4.4
YMR Madison River 79.39 330 eP P 21 21 25.0 +1.3
22nm,0.9s,mb4.8
DGMT Dagmar 79.56 336 eP P 21 21 24.9 +0.4
PAHR Pah Rah Range 80.18 321 eP P 21 21 29.1 +1.0
12nm,0.9s,mb4.5
HLID Hailey 80.23 327 eP P 21 21 29.2 +1.0
9.2nm,0.8s,mb4.5
BOSA Boshof 80.49 117 P P 21 21 29.9 -0.2
1.1nm,0.5s,mb3.7,baz=98,slow=21,SNR=7.1
BOSA Boshof 80.49 117 P P 21 21 29.9 -0.2
DLMT Dillon 80.67 329 eP P 21 21 31.5 +0.9
15nm,1.4s,mb4.4
LRM Limekiln Ridge 80.95 330 eP P 21 21 32.8 +0.8
MAW Mawson 81.37 163 P P 21 21 34.7 +0.7
2.3nm,0.5s,mb4.0,baz=217,slow=5.2,SNR=11
MOD Modoc 82.17 323 eP P 21 21 39.0 +0.5
BMO Blue Mountains 82.60 326 eP P 21 21 40.6 -0.1
29nm,1.9s,mb4.7
OD2 Odessa Site #2 85.07 327 eP P 21 21 52.1 -1.0
ESDC Sonseca Array 86.19 43 P P 21 21 59.6 +0.8
0.9nm,0.7s,mb3.6,baz=247,slow=4.4,SNR=10
JCW Jim Creek 87.22 327 eP P 21 22 02.3 -1.3
YKA Yellowknife Ar 94.20 340 P P 21 22 35.1 -0.6
3.1nm,0.5s,mb4.7,baz=134,slow=4.7,SNR=15
KIEV Kiev 111.83 43 ePdif Pdif 21 23 54.6 -0.3
ASAR Alice Springs 128.59 204 PKP PKPdf 21 28 23.5 -0.6
4.1nm,0.7s,baz=134,slow=1.8,SNR=22
WRA Warramunga Arr 131.77 207 PKP PKPdf 21 28 29.8 -0.4
2.2nm,0.5s,baz=154,slow=2.0,SNR=36
WRA SKPbc SKPbc 21 31 36.7 -1.9
2.9nm,0.9s,baz=157,slow=3.7,SNR=14
WRAB Tennant Creek 131.77 207 PKPdf PKPdf 21 28 29.4 -0.8
PETK Petropavlovsk- 135.77 323 PKP PKPdf 21 28 37.1 +0.5
3.1nm,0.7s,baz=70,slow=2.1,SNR=3.4
BVAR Borovoye Array 136.62 37 PKP PKPdf 21 28 38.5 +0.4
0.8nm,0.6s,baz=321,slow=2.0,SNR=2.2
KURK Kurchatov 142.20 36 PKP PKPdf 21 28 49.0 +0.6
1.5nm,0.7s,baz=305,slow=2.8,SNR=3.0
ZAA0 Zalesovo Array 143.25 28 ePKPdf PKPdf 21 28 47.8 -2.4
ZALV Zalesovo Beam 143.25 28 PKP PKPdf 21 28 47.5 -2.6
6.3nm,0.6s,baz=305,slow=4.5,SNR=12
BATI Baumata 144.54 198 PKP PKPdf 21 28 53.1 -0.6
15nm,0.6s,baz=235,slow=1.4,SNR=4.2
MKAR Makanchi Array 146.34 40 PKPbc PKPbc 21 28 56.1 -1.2
8.8nm,0.6s,baz=327,slow=2.2,SNR=38
ASAJ Asahikawa 148.75 317 PKPbc PKPbc 21 29 03.2 -0.6
5.8nm,1.0s,baz=9.5,slow=6.1,SNR=3.0
WMQ Urumqi 151.16 40 ePKP PKPdf 21 29 06.0 +2.4
MJAR Matsushiro Arr 155.19 306 PKPbc PKPdf 21 29 18.1 +8.4
0.3nm,0.3s,baz=38,slow=6.2,SNR=4.1
MJAR PKPab PKPab 21 29 34.7 -0.8
1.4nm,1.0s,baz=269,slow=26,SNR=4.2
SONM Songino Array 155.57 11 PKPbc PKPdf 21 29 10.2 +0.4
0.6nm,0.8s,baz=350,slow=1.8,SNR=3.6
SONM PKPbc PKPdf 21 29 19.0 +9.2
0.4nm,0.4s,baz=339,slow=2.5,SNR=5.9
SONM PKPab PKPab 21 29 36.9 +0.3
1.8nm,0.7s,baz=326,slow=5.1,SNR=8.7
CN2 Changchun 157.86 336 ePKP PKPdf 21 29 08.3 -4.5
GTA Gaotai 160.85 33 ePKP PKPdf 21 29 17.3 +0.9
GTA XPKP 21 30 20.3
HHC Hu-ho-hao-te 163.12 5 ePKP PKPdf 21 29 20.6 +1.9
HHC APKP 21 30 08.4
HHC XPKP 21 30 26.8
HHC PKS 21 32 52.4
HHC PP PP 21 33 58.5 +4.4
HHC SKS SKSdf 21 36 05.8 0.0
HHC SKKS SKKSac 21 40 27.0 +2.3
HHC SS SS 21 54 06.6 +3.9
HHC PP PP
comp=Z,256nm,9.2s
HHC LR LR
comp=N,118nm,20.5s
HHC LR LR
comp=E,198nm,21.8s
HHC LR LR
comp=Z,108nm,21.3s
LZH Lanzhou 165.43 32 ePKP PKPdf 21 29 23.5 +2.6
LZH APKP 21 30 04.5
CMAR Chiang Mai Arr 165.53 110 PKPab PKPab 21 30 21.0 0.0
comp=Z,0.2nm,0.3s,baz=251,slow=6.1,SNR=4.8
CD2 Chengdu 169.08 49 ePKP PKPdf 21 29 21.8 -1.9
KMI Kunming 170.32 81 PKP PKPdf 21 29 25.6 +1.0
GYA Guiyang 173.50 66 PKP PKPdf 21 29 25.3 -0.7
GYA APKP 21 30 14.6
GYA XPKP 21 30 34.3
GYA PKP2 PKPab 21 30 58.4 +2.2
GYA PKS 21 32 56.8
GYA PP PP 21 34 50.9 +2.4
GYA PP PP
comp=Z,60nm,8.9s

*NEIC **16** 21:14:34.9, 3389S×72.12W, h7km, ML3.3(GUC), After GUC.*
GUC 16 21:14:34.9±0.8, 3389S×7212W, h7km±4km, MD3.5, ML3.3, 8C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.59**	**97**	*i*	P		Pg	21 14 47.3	+1.0
LNV					S		Sg	21 14 56.2	+2.3
IHA	**Instituto Hidr**	**0.94**	**25**	*i*	P		Pg	21 14 52.8	-0.2
IHA					S		Sg	21 15 06.0	+0.7
TACH	**Talagante**	**1.01**	**77**⇑	*i*	P		Pg	21 14 53.6	-0.7
TACH					S		Sg	21 15 07.7	+0.4
SFDO	**San Fernando**	**1.17**	**129**⇑	*i*	P		Pg	21 14 55.5	-1.8
SFDO					S		Sg	21 15 11.6	-0.8
CHCH	**Chadas Angostu**	**1.22**	**93**	*i*	S		Sg	21 15 13.8	-0.2
ANTU	**Antumapu**	**1.27**	**76**		AML	AML		21 15 18.8	
	comp=E,644nm,0.3s								
CACH	**El Canelo**	**1.28**	**101**⇓	*i*	P		Pn	21 14 58.5	-0.7
CACH					S		Sb	21 15 17.1	+1.1
NICH	**Los Niches**	**1.33**	**147**	*i*	S		Sb	21 15 16.8	-0.8
PCH	**Pirque**	**1.36**	**79**⇑	*i*	P		Pn	21 14 59.2	-1.1
PCH					S		Sb	21 15 18.3	0.0
CLCH	**Cerro Calan**	**1.41**	**70**⇑	*i*	P		Pn	21 15 00.4	-0.5
CLCH						AML	AML	21 15 28.9	
	comp=N,482nm,0.5s								
CLCH						AML	AML	21 15 29.5	
	comp=N,512nm,0.2s								
CICH	**Cipreses**	**1.47**	**108**⇓	*i*	P		Pn	21 15 01.0	-0.8
CICH					S		Sn	21 15 21.2	-0.1
SJCH	**San Jose de Ma**	**1.49**	**81**⇓	*i*	P		Pn	21 15 01.0	-1.0
SJCH					S		Sn	21 15 21.4	-0.3
SJCH						AML	AML	21 15 26.4	
	comp=N,619nm,0.4s								
SJCH	**San Jose de Ma**	**1.49**	**81**⇓	*i*	P		Pn	21 15 01.0	-1.0
SJCH					S		Sn	21 15 21.4	-0.3
TALC	**Talca**	**1.56**	**165**	*i*	P		Pn	21 15 05.5	+2.5
TALC					S		Sn	21 15 26.3	+2.8
TALC						AML	AML	21 15 31.4	
	comp=E,2μm,0.4s								
TALC	**Talca**	**1.56**	**165**	*i*	P		Pn	21 15 05.5	+2.5
TALC					S		Sn	21 15 26.3	+2.8
LMEL	**Las Melosas**	**1.59**	**89**⇑	*e*	P		Pn	21 15 03.1	-0.4
LMEL					S		Sn	21 15 24.8	+0.5
LMEL						AML	AML	21 15 29.5	
	comp=N,574nm,0.2s								
LMEL	**Las Melosas**	**1.59**	**89**⇑	*e*	P		Pn	21 15 03.1	-0.4
LMEL					S		Sn	21 15 24.8	+0.5
FCH	**Farellones**	**1.62**	**70**⇑	*i*	P		Pn	21 15 03.7	-0.2
FCH					S		Sn	21 15 25.7	+0.7
FCH						AML	AML	21 15 31.6	
	comp=N,457nm,0.3s								
YECH	**El Yeso**	**1.71**	**83**⇑	*i*	P		Pn	21 15 05.3	+0.2
YECH					S		Sn	21 15 28.6	+1.4
YECH						AML	AML	21 15 34.5	
	comp=E,476nm,0.3s								
CCHI	**Chillan**	**2.71**	**179**	*e*	P		Pn	21 15 22.1	+3.2
CCHI					S		Sn	21 15 56.7	+4.8
CCHI						AML	AML	21 16 07.5	
	comp=N,126nm,0.7s								
CCHI	**Chillan**	**2.71**	**179**	*e*	P		Pn	21 15 22.1	+3.2
CCHI					S		Sn	21 15 56.7	+4.8
TLL	**Tololo Astrono**	**3.87**	**17**		AML	AML		21 16 47.6	
	comp=N,59nm,0.3s								

*DDA **16** 21:15:16.6, 3667N×2790E, h7km±4km, Md2.7*
*ISK **16** 21:15:20.6, 3690N×2773E, h4km, MD2.8*
CSEM 16 21:15:20.3±0.2, 3691N×2773E, h3km±1km, MD2.8, Error ellipse: s-maj=4.7km s-min=2.1km az=7.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.27**	**304**	*i*	P		Pg	21 15 26.5	+0.9
BDRM					S		Sg	21 15 31.3	+2.2
BODT	**Bodrum**	**0.37**	**294**	*e*	PG		Pg	21 15 28.2	+0.8
BODT				*e*	SG		Sg	21 15 34.4	+2.3
MLSB	**Milas**	**0.38**	**6**	*e*	PG		Pg	21 15 29.6	+1.9
MLSB				*e*	SG		Sg	21 15 35.0	+2.2
YER	**Yerkesik**	**0.50**	**63**	*e*	PG		Pg	21 15 30.7	+0.8
YER				*e*	SG		Sg	21 15 38.8	+2.5
TURN	**Turunc**	**0.70**	**93**	*i*	P		Pg	21 15 28.8	-5.0
TURN				*i*	S		Sg	21 15 36.6	-6.3
AKAS	**Kas**	**1.66**	**114**	*i*	P		Pg	21 15 54.9	+2.9
AKAS				*i*	S		Sg	21 16 18.8	+5.3
ELL	**Elmali**	**1.76**	**95**	*e*	PN		Pg	21 15 52.9	-1.0

*SKHL **16** 21:16:43.7±0.2, 4640N×15590E, h43km±12km, mb5.6/4, mbv5.5/2, ms4.9/1, msh5.3/2*
*IDC **16** 21:16:44.8±0.5, 47.11N×15578E, h0km, mb4.8/24, mb1 4.9/26, mb1mx4.9/29, mbtmp4.8/26, ML4.5/2, MS4.1/18, Ms1 4.1/18, ms1mx3.8/39, Error ellipse: s-maj=14.8km s-min=12.1km az=132.0*
*DJA **16** 21:16:45, 4767N×15706E, h10km, Mw6.2/4*
*BJI **16** 21:16:45.4, 4720N×15606E, h19km, mB5.1, mb4.9, Ms4.7, Msz4.5*
*ISCJB **16** 21:16:47.9±0.2, 47.18N±004×15571E±003, h26km, mb5.1/193, MS4.2/45, Error ellipse: s-maj=5.6km s-min=2.7km az=167.8*
*MOS **16** 21:16:47.9±0.9, 4698N×15561E, h32km, mb5.3/85, MS4.3/27, Error ellipse: s-maj=6.9km s-min=4.3km az=102.8*
*GCMT **16** 21:16:48.3±0.3, 47.15N×15587E, h16km, MW5.0/84, Moment Tensor Solution. s38,c53; s84,c143; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-3.20±.15; Mθθ-0.01±.10; Mϕϕ3.21±.10; Mrθ-0.05±.29; Mϕθ1.23±.06; Mϕr2.07±.27; Best double couple: Mo4.00100×10^16 NP1:ϕs31.00000°, δ31.00000°, λ-70.00000°. NP2: ϕs188.00000°, δ61.00000°, λ-102.00000°. Principal axes: T 4.1480, Plg15.0000°, Azm286.0000°; N -0.2980, Plg10.0000°, Azm193.0000°; P -3.8530, Plg72.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **16** 21:16:48.3±1.9, 47.14N×15563E, h19km±11km, mb5.2/95, MS4.4/4 Error ellipse: s-maj=4.9km s-min=2.6km az=176.0*
*SZGRF **16** 21:17:00.2, 4829N×15401E, h24km, mb5.2, Kuril Islands, Russia*
ISC 16 21:16:50.2±0.2, 4722N±004×15565E±003, h28km, h28km±1.2km: pP-P, n560, σ0.88/569, mb5.1/193, MS4.2/45, 37C-15D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.48**	**5**	*e*	PN		**Pn**	**21 17 39.0**	**-3.4**
SKR						pmax	pmax		
	comp=Z,150nm,0.5s								
SKR						pmax	pmax		
	comp=Z,1μm,4.0s								
SKR						MLR	MLR		
	comp=Z,4μm,10.0s								
KUR	**Kuril'sk**	**5.76**	**253**	*e*	P		**Pn**	**21 18 08.4**	**-5.3**
KUR						AMB	AMB	21 18 09.5	
	comp=Z,230nm,0.9s								
KUR						AMB	AMB	21 18 09.5	
	comp=Z,280nm,0.9s								
KUR						AMB	AMB	21 18 09.5	
	comp=Z,2μm,0.9s								
KUR						AMB	AMB	21 18 09.6	
	comp=Z,3μm,1.2s								
KUR					*i*	S	**Sn**	**21 19 11.8**	**-7.0**
KUR						A		21 19 14.2	
	comp=Z,1μm,0.9s								
KUR						A		21 19 14.2	
	comp=Z,740nm,0.9s								
KUR						A		21 19 16.2	
	comp=Z,6μm,2.0s								
KUR						A		21 19 16.2	
	comp=Z,2μm,2.0s								
KUR						AMS	AMS	21 20 36.0	
	comp=Z,3μm,14.0s								
KUR						AMS	AMS	21 20 36.0	
	comp=Z,3μm,14.0s								
KUR						AMS	AMS	21 20 36.0	
	comp=Z,4μm,14.0s								
PEA0B	**Petropavlovsk-**	**6.04**	**12**	*e*	Pn		**Pn**	**21 18 16.3**	**-1.2**
PEA0B						Sn	**Sn**	**21 19 22.2**	**-3.4**
PETK	**Petropavlovsk-**	**6.04**	**12**		Pn		**Pn**	**21 18 16.1**	**-1.5**
	comp=Z,20nm,0.3s,baz=179,slow=12,SNR=180								
PETK						Sn	**Sn**	**21 19 27.1**	**+1.6**
	comp=Z,4.4nm,0.3s,baz=127,slow=22,SNR=3.0								
PET	**Petropavlovsk**	**6.12**	**17**	*e*	PN		**Pn**	**21 18 15.7**	**-2.9**
PET						pmax	pmax		
	comp=Z,77nm,0.6s								
PET	**Petropavlovsk**	**6.12**	**17**	*e*	Pn		**Pn**	**21 18 15.8**	**-2.8**
PET				*e*	Sn		**Sn**	**21 19 22.8**	**-4.8**
YUK	**Yuzh-Kuril'sk**	**7.57**	**249**	*e*	PN		**Pn**	**21 18 35.0**	**-3.6**
YUK						pmax	pmax		
	comp=Z,2μm,1.2s								
YUK						pmax	pmax		
	comp=E,220nm,0.5s								
YUK						pmax	pmax		
	comp=Z,370nm,0.5s								
YUK						MLR	MLR		
	comp=N,3μm,11.0s								
YUK						MLR	MLR		
	comp=E,3μm,11.0s								
YUK						MLR	MLR		
	comp=Z,3μm,11.0s								
YUK	**Yuzh-Kuril'sk**	**7.57**	**249**	*e*	P		**Pn**	**21 18 35.0**	**-3.6**
YUK						AMB	AMB	21 18 40.0	
	comp=Z,2μm,1.2s								
YUK						AMB	AMB	21 18 42.0	
	comp=Z,220nm,0.5s								
YUK						AMB	AMB	21 18 42.0	
	comp=Z,370nm,0.5s								
YUK					*e*	S	**Sn**	**21 19 58.6**	**-4.7**
YUK						A		21 20 07.9	
	comp=Z,460nm,0.5s								
YUK						A		21 20 07.9	
	comp=Z,380nm,0.5s								
YUK						A		21 20 15.0	
	comp=Z,2μm,1.0s								
YUK						AMS	AMS	21 23 46.0	
	comp=Z,3μm,11.0s								
YUK						AMS	AMS	21 23 46.0	
	comp=Z,3μm,11.0s								
YSS	**Yuzh-Sakhalins**	**8.81**	**273**	*ae*	PN		**Pn**	**21 18 56.7**	**+1.2**
YSS						pmax	pmax		
	comp=E,140nm,1.0s								
YSS						pmax	pmax		
	comp=Z,140nm,1.0s								
YSS						pmax	pmax		
	comp=N,80nm,0.9s								
YSS						MLR	MLR		
	comp=Z,2μm,15.0s								
YSS						MLR	MLR		
	comp=E,500nm,12.0s								
YSS	**Yuzh-Sakhalins**	**8.81**	**273**⇑	*e*	P		**Pn**	**21 18 56.7**	**+1.2**
YSS						AMB	AMB	21 18 57.8	
	comp=E,140nm,1.0s								
YSS						AMB	AMB	21 18 57.8	
	comp=E,80nm,0.9s								
YSS						AMB	AMB	21 18 57.8	
	comp=E,140nm,1.0s								
YSS					*e*	S	**Sn**	**21 20 34.3**	**+0.5**
YSS					*e*	LQ		21 20 54.0	
YSS						AMS	AMS	21 23 28.0	
	comp=E,500nm,12.0s								
YSS						AMS	AMS	21 23 28.0	
	comp=E,2μm,15.0s								
YSS	**Yuzh-Sakhalins**	**8.81**	**273**	*e*	Pn		**Pn**	**21 18 57.2**	**+1.6**
UGL	**Uglegorsk**	**9.27**	**287**⇓	*i*	PN		**Pn**	**21 19 04.9**	**+3.0**
UGL				*e*				21 20 58.0	
UGL						pmax	pmax		
	comp=Z,150nm,0.8s								
UGL						pmax	pmax		
	comp=Z,850nm,2.0s								
UGL						MLR	MLR		
	comp=E,2μm,14.0s								
UGL						MLR	MLR		
	comp=Z,2μm,14.0s								
UGL						MLR	MLR		
	comp=N,4μm,12.0s								
UGL	**Uglegorsk**	**9.27**	**287**⇓	*i*	P		**Pn**	**21 19 04.9**	**+3.0**
UGL					*e*	P		21 19 05.0	
UGL						AMB	AMB	21 19 06.0	
	comp=N,150nm,0.8s								
UGL						AMB	AMB	21 19 06.0	
	comp=N,850nm,2.0s								
UGL					*e*	L		21 21 38.0	
UGL						AMS	AMS	21 24 05.0	
	comp=N,2μm,14.0s								
UGL						AMS	AMS	21 24 05.0	
	comp=N,2μm,14.0s								
UGL						AMS	AMS	21 24 05.0	
	comp=N,4μm,12.0s								
ASAJ	**Asahikawa**	**9.65**	**256**		Pn		**Pn**	**21 19 06.5**	**-0.7**
	comp=N,3.7nm,0.3s,baz=86,slow=13,SNR=54								
ASAJ						LR	LR	21 23 01.9	
	comp=N,557nm,18.1s,baz=76,slow=39								
ASAJ	**Asahikawa**	**9.65**	**256**		PN		**Pn**	**21 19 06.5**	**-0.6**
ASAJ						pmax	pmax		
	comp=Z,4.0nm,0.3s								
ASAJ						MLR	MLR		
	comp=Z,557nm,18.1s								
ERM	**Erimo**	**10.31**	**244**		Pn		**Pn**	**21 19 13.5**	**-2.7**
	comp=Z,1μm,0.8s,SNR=17								
ERM	**Erimo**	**10.31**	**244**	*e*	PN		**Pn**	**21 19 13.1**	**-3.1**
ERM						pmax	pmax		
	comp=Z,145nm,0.8s								
ERM	**Erimo**	**10.31**	**244**	*e*	Pn		**Pn**	**21 19 13.1**	**-3.1**
	comp=Z,145nm,0.8s								
ERM					*e*			21 19 23.2	
ERM					*e*	Sn	**Sn**	**21 21 00.3**	**-10**
KLR	**Kul'dur**	**16.04**	**286**	*e*	P		**Pn**	**21 20 29.0**	**-4.6**
KLR					*e*	S	**Sn**	**21 23 39.5**	**+9.1**
KLR						pmax	pmax		
	comp=E,100nm,1.8s								
KLR						pmax	pmax		
	comp=Z,100nm,1.8s								
KLR						MLR	MLR		
	comp=N,1μm,13.0s								
KLR						MLR	MLR		
	comp=E,1μm,13.0s								
KLR						MLR	MLR		
	comp=Z,2μm,13.0s								
MJAR	**Matsushiro Arr**	**16.77**	**237**		Pn		**Pn**	**21 20 38.4**	**-4.5**
	comp=Z,0.8nm,0.3s,baz=27,slow=13,SNR=26								
MJAR						LR	LR	21 27 18.8	
	comp=Z,336nm,18.3s,baz=65,slow=38								
MJAR	**Matsushiro Arr**	**16.77**	**237**		Pn		**Pn**	**21 20 38.4**	**-4.6**
MJAR						LR	LR	21 27 18.8	
MAJO	**Matsushiro**	**16.77**	**237**	*e*	P		**Pn**	**21 20 38.1**	**-4.9**
VLA	**Vladivostok**	**17.23**	**265**	*e*	PN		**Pn**	**21 20 45.2**	**-3.4**
VLA						pmax	pmax		
	comp=Z,72nm,1.5s								
VLA						MLR	MLR		
	comp=Z,800nm,12.8s								
MDJ	**Mudanjiang**	**18.29**	**271**		P		**Pn**	**21 20 58.8**	**-2.9**
MDJ						AP	pP	21 21 07.0	-2.2
MDJ						XP	sP	21 21 11.0	-1.8
MDJ						S	**Sn**	**21 24 18.3**	**-6.7**
MDJ						XS	sS	21 24 37.6	-3.7
MDJ						PCP	PcP	21 25 31.8	-0.8
MDJ						AMB	AMB		
	comp=Z,30nm,0.9s								
MDJ						AMB	AMB		
	comp=Z,186nm,8.4s								

MDJ LR LR
comp=N,551nm,14.2s
MDJ LR LR
comp=E,500nm,14.0s
MDJ LR LR
comp=Z,1μm,14.4s
ZEA Zeya 19.13 300 *e*P **Pn** **21 21 09.0 -2.8**
ZEA AMB AMB 21 21 16.0
comp=Z,500nm,7.0s
ZEA A 21 24 37.0
comp=Z,200nm,6.0s
YAK Yakutsk 20.90 325 *e*P **P** **21 21 29.4 -0.6**
YAK *e* 21 21 46.1
YAK *e*S **S** **21 25 15.1 -6.2**
YAK *e*SS 21 25 30.3
YAK *e* 21 25 41.0
YAK *e* 21 33 00.1
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK pmax pmax
comp=E,18nm,1.1s
YAK pmax pmax
comp=Z,68nm,0.9s
YAK smax
comp=E,85μm,1.3s
YAK smax
comp=N,179μm,1.5s
YAK MLR MLR
comp=Z,827nm,15.0s,MS4.2
YAK MLR MLR
comp=E,359nm,17.0s,MS4.2
YAK MLR MLR
comp=N,771nm,16.0s,MS4.2
YAK Yakutsk 20.90 325 *e*Pn **P** **21 21 30.8 +0.8**
comp=N,84nm,0.8s
CLNS Chul'man 21.06 309 *e*P **P** **21 21 32.8 +1.1**
CLNS *e* 21 21 48.4
CLNS *e*S **S** **21 25 27.7 +3.2**
CLNS *e* 21 25 38.7
CLNS *e*SS 21 25 53.7
CLNS pmax pmax
comp=N,12nm,0.9s
CLNS pmax pmax
comp=Z,61nm,0.8s,mb5.0
CLNS pmax pmax
comp=E,38nm,0.8s
CLNS smax
comp=E,34nm,0.9s
CLNS smax
comp=N,99nm,1.6s
CLNS MLR MLR
comp=N,569nm,14.0s,MS4.2
CLNS MLR MLR
comp=E,358nm,11.0s,MS4.2
CLNS MLR MLR
comp=Z,665nm,15.0s,MS4.1
CN2 Changchun 21.38 272 ⇑P **P** **21 21 32.5 -2.8**
CN2 *e*XP sP 21 21 47.6 +1.2
CN2 *e*S **S** **21 25 22.0 -8.9**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.1
CN2 AMB AMB
comp=Z,116nm,6.0s
CN2 LR LR
comp=N,488nm,13.0s,MS4.2
CN2 LR LR
comp=E,436nm,13.0s,MS4.2
CN2 LR LR
comp=Z,705nm,14.0s,MS4.2
BILL Bilibino 21.57 11⇓ *e*P **P** **21 21 38.0 +0.9**
BILL *e*S **S** **21 25 40.3 +6.0**
BILL pmax pmax
comp=Z,56nm,1.1s,mb4.9
BILL MLR MLR
comp=Z,600nm,16.0s,MS4.1
BILL Bilibino 21.57 11 *e*P **P** **21 21 38.3 +1.2**
comp=Z,68nm,0.9s,mb5.1
BILL *e*S **S** **21 25 34.3 0.0**
KSRS Korea Array 22.60 255 P **P** **21 21 48.8 +0.4**
comp=Z,18nm,0.9s,mb4.5,baz=51,slow=12,SNR=15
KSRS LR LR 21 30 21.5
comp=Z,345nm,18.5s,MS3.8,baz=60,slow=36
KSRS Korea Array 22.60 255 P **P** **21 21 48.8 +0.4**
KSRS pmax pmax
comp=Z,18nm,0.9s,mb4.5
KSRS MLR MLR
comp=Z,345nm,18.5s,MS3.8
SNY Shenyang 23.39 268 P **P** **21 21 55.3 -1.4**
SNY S **S** **21 26 15.9 +8.4**
SNY AMB AMB
comp=Z,30nm,1.0s,mb4.7
SNY AMB AMB
comp=Z,233nm,4.7s
SNY LR LR
comp=N,765nm,13.1s,MS4.5
SNY LR LR
comp=E,792nm,15.1s,MS4.5
SNY LR LR
comp=Z,974nm,14.1s,MS4.4
INCN Inchon 23.43 256 *e*P **P** **21 22 00.6 +3.5**
comp=Z,60nm,0.9s,mb5.0
HIA Hailar 23.87 288 *e*P **P** **21 21 58.7 -2.3**
HIA *e* 21 25 42.2
HIA pmax pmax
comp=Z,11nm,0.6s
HIA Hailar 23.87 288 *e*P **P** **21 21 58.7 -2.3**
comp=Z,11nm,0.6s,mb4.5
HIA *e*PcP PcP 21 25 42.2 -0.9
DL2 Dalian 26.05 264 *i*P **P** **21 22 27.4 +6.5**
DL2 *e*S **S** **21 27 00.8 +11**
DL2 AMB AMB
comp=Z,30nm,1.2s,mb4.7
DL2 AMB AMB
comp=Z,250nm,5.7s
DL2 LR LR
comp=N,320nm,12.0s,MS4.2
DL2 LR LR
comp=E,230nm,12.7s,MS4.2
DL2 LR LR
comp=Z,260nm,14.8s,MS3.9
TNA Tin City 26.68 33 *e*P **P** **21 22 28.7 +2.4**
BOD Bodaibo 27.04 309 *e*P **P** **21 22 26.4 -3.3**
BOD pmax pmax
comp=Z,13nm,1.1s,mb4.4
TIXI Tiksi 27.53 342 *e*P **P** **21 22 33.7 -0.3**
TIXI *e*S **S** **21 27 13.3 +0.4**
TIXI pmax pmax
comp=Z,27nm,1.4s,mb4.7
TIXI MLR MLR
comp=Z,460nm,15.0s,MS4.2
TIXI Tiksi 27.53 342 *e*P **P** **21 22 32.1 -1.9**
BJI Beijing 29.22 270 P **P** **21 22 55.1 +5.8**
BJI S **S** **21 27 45.8 +5.8**
BJI AMB AMB
comp=Z,26nm,0.9s,mb5.0
BJI AMB AMB
comp=Z,309nm,7.9s
BJI LR LR
comp=N,783nm,22.8s
BJI LR LR
comp=E,785nm,14.6s
BJI LR LR
comp=Z,401nm,20.0s,MS4.0
BJT Baijiatuau 29.23 270 *e*P **P** **21 22 49.4 0.0**
BJT *e* 21 25 52.1
BJT pmax pmax
comp=Z,26nm,1.0s
BJT Baijiatuau 29.23 270 *e*P **P** **21 22 49.4 -0.1**
comp=Z,26nm,1.0s,mb4.9
BJT *e*PcP PcP 21 25 52.0 -3.9
SSE Sheshan 30.89 251 P **P** **21 23 03.4 -0.8**
SSE AP pP 21 23 14.3 +1.9
SSE S **S** **21 28 06.4 -0.1**
SSE XS sS 21 28 24.3 +4.2
SSE AMB AMB
comp=Z,35nm,0.9s,mb5.2
SSE AMB AMB
comp=Z,248nm,4.4s
SSE LR LR
comp=N,169nm,26.6s,MS3.7
SSE LR LR
comp=E,148nm,26.6s,MS3.7
SSE LR LR
comp=Z,206nm,18.4s
TTA Tatalina 30.91 42 *e*P **P** **21 23 03.7 -0.3**
SVW2 Sparrevohn 30.93 45 *e*P **P** **21 23 04.3 +0.1**

NJ2 Nanjing 31.80 255 *e*P **P** **21 23 14.3 +2.1**
NJ2 AP pP 21 23 23.3 +2.9
NJ2 XP sP 21 23 28.1 +4.3
NJ2 PP PP 21 24 17.5 -6.6
NJ2 S **S** **21 28 23.0 +2.4**
NJ2 AMB AMB
comp=Z,40nm,1.3s,mb5.1
NJ2 AMB AMB
comp=Z,250nm,5.6s
NJ2 LR LR
comp=N,260nm,21.0s
NJ2 LR LR
comp=E,390nm,13.3s
NJ2 LR LR
comp=Z,390nm,13.3s
HHC Hu-ho-hao-te 31.99 275 *e*P **P** **21 23 13.8 0.0**
HHC AP pP 21 23 23.8 +1.8
HHC XP sP 21 23 28.3 +2.9
HHC PP PP 21 24 19.3 -6.8
HHC PCP PcP 21 26 04.0 +0.9
HHC S **S** **21 28 20.6 -2.8**
HHC XS sS 21 28 37.3 +0.3
HHC AMB AMB
comp=Z,20nm,0.8s,mb5.0
HHC AMB AMB
comp=Z,175nm,5.8s
HHC LR LR
comp=N,656nm,13.8s,MS4.7
HHC LR LR
comp=E,750nm,12.5s,MS4.7
HHC LR LR
comp=Z,600nm,11.9s,MS4.5
ULN Ulaanbaatar 32.38 289 *e*P **P** **21 23 16.6 -0.5**
IMA2 Indian Mountai 32.40 36 *e*P **P** **21 23 16.5 -0.6**
KDAK Kodiak Island 32.45 52 P **P** **21 23 16.0 -1.6**
comp=Z,34nm,0.9s,mb5.2,baz=316,slow=1.7,SNR=10
KDAK Kodiak Island 32.45 52 P **P** **21 23 16.0 -1.6**
PPLA Purkeypile 32.65 42 *e*P **P** **21 23 19.6 +0.3**
comp=Z,70nm,1.4s,mb5.4
PPLA *e*PP PP 21 24 34.0 +0.8
SONM Songino Array 32.81 290 P **P** **21 23 20.1 -0.8**
comp=Z,5.6nm,0.8s,mb4.5,baz=70,slow=7.9,SNR=28
SONM PcP PcP 21 26 04.6 -0.6
comp=Z,4.0nm,0.9s,baz=76,slow=1.7,SNR=7.8
SONM LR LR 21 37 15.7
comp=Z,358nm,18.4s,MS4.1,baz=78,slow=37
SONM Songino Array 32.81 290 P **P** **21 23 20.1 -0.8**
SONM 21 26 04.6
KTH Kantishna Hill 33.27 41 *e*P **P** **21 23 24.4 -0.2**
comp=Z,90nm,1.2s,mb5.6
KTH *e* 21 23 35.0
TLY Talaya 33.51 297 P **P** **21 23 26.4 -0.5**
comp=Z,97nm,0.5s,mb6.0,SNR=7.1
TLY Talaya 33.51 297 *e*P **P** **21 23 25.4 -1.5**
TLY pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
TLY MLR MLR
comp=Z,521nm,15.0s,MS4.4
TLY Talaya 33.51 297 *e*P **P** **21 23 26.6 -0.3**
TRF Thorofare Moun 33.55 41 *e*P **P** **21 23 26.1 -1.0**
TRF *e*PcP PcP 21 26 05.3 -1.7
COLD Coldfoot 33.96 34 *e*P **P** **21 23 29.8 -0.9**
comp=Z,66nm,0.7s,mb5.7
PMR Palmer 34.05 45 *e*P **P** **21 23 30.9 -0.6**
PMR pmax pmax
comp=Z,20nm,1.0s,mb5.0
PMR Palmer 34.05 45 *e*P **P** **21 23 30.9 -0.6**
comp=Z,20nm,1.0s,mb5.0
ZAK Zakamensk 34.05 295 *e*P **P** **21 23 29.4 -2.3**
ZAK *e* 21 26 05.2
ZAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
MCK McKinley 34.16 41 *e*P **P** **21 23 32.1 -0.3**
COLA College 34.68 39 P **P** **21 23 36.9 0.0**
COLA pmax pmax
comp=Z,90nm,1.2s,mb5.6
COLA College 34.68 39 *e*P **P** **21 23 36.4 -0.5**
comp=Z,90nm,1.3s,mb5.5
DIV Divide 35.69 45 *e*P **P** **21 23 45.4 -0.2**
comp=Z,34nm,0.9s,mb5.3
WHN Wuhan 35.73 257 *e*P **P** **21 23 46.5 +0.1**
BMRM Bremner River 36.27 45 *e*P **P** **21 23 50.1 -0.5**
XAN Xi'an 37.28 267 P **P** **21 23 59.8 +0.2**
XAN AP pP 21 24 09.0 +1.1
XAN XP sP 21 24 13.3 +2.0
XAN PP PP 21 25 30.6 +5.9
XAN S **S** **21 29 50.5 +5.4**
XAN SCP ScP 21 29 58.6 -4.9
XAN PCS PcS 21 30 02.0 -5.0
XAN SCS ScS 21 34 05.3 -6.2
XAN AMB AMB
comp=Z,15nm,1.2s,mb4.7
XAN AMB AMB
comp=Z,113nm,11.0s
XAN LR LR
comp=N,196nm,14.8s,MS4.3
XAN LR LR
comp=E,303nm,15.6s,MS4.3
XAN LR LR
comp=Z,512nm,14.8s,MS4.5
KRAR Krasnoyarsk 38.69 307 *i*P **P** **21 24 10.2 -1.0**
LZH Lanzhou 39.61 273 *e*P **P** **21 24 19.0 -0.1**
LZH AP pP 21 24 30.6 +3.2
LZH XP sP 21 24 34.0 +3.2
LZH PP PP 21 25 52.3 +2.2
LZH AMB AMB
comp=Z,80nm,1.0s,mb5.4
LZH AMB AMB
comp=Z,250nm,4.0s
LZH LR LR
comp=N,713nm,16.2s
LZH LR LR
comp=Z,1μm,17.3s,MS4.8
GTA Gaotai 40.61 280 ⇓P **P** **21 24 28.6 +1.3**
GTA AP pP 21 24 40.0 +4.3
GTA XP sP 21 24 42.9 +3.8
GTA PP PP 21 26 06.6 +5.7
GTA PCP PcP 21 26 29.6 +0.7
GTA AMB AMB
comp=Z,31nm,1.0s,mb4.9
GTA AMB AMB
comp=Z,132nm,4.5s
GTA LR LR
comp=N,312nm,17.1s,MS4.4
GTA LR LR
comp=E,336nm,14.4s,MS4.4
GTA LR LR
comp=Z,425nm,15.3s,MS4.4
SKAG Skagway 41.08 47 *e*P **P** **21 24 32.0 +1.0**
SKAG *e*PP PP 21 26 05.2 -0.6
CD2 Chengdu 42.65 267 P **P** **21 24 44.3 +0.2**
CD2 AP pP 21 24 54.0 +1.5
CD2 XP sP 21 24 58.3 +2.4
CD2 PP PP 21 26 25.8 +2.7
CD2 PCP PcP 21 26 37.6 +1.8
CD2 AMB AMB
comp=Z,40nm,0.7s,mb5.3
CD2 AMB AMB
comp=Z,180nm,8.4s
CD2 LR LR
comp=N,450nm,16.8s,MS4.5
CD2 LR LR
comp=E,360nm,16.8s,MS4.5
CD2 LR LR
comp=Z,400nm,16.8s,MS4.4
GYA Guiyang 43.51 259⇑ *i*P **P** **21 24 51.4 +0.2**
GYA AP pP 21 25 01.4 +1.8
GYA XP sP 21 25 06.8 +3.8
GYA PCP PcP 21 26 40.8 +2.1
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,190nm,5.4s
GYA LR LR
comp=N,860nm,16.9s,MS4.8
GYA LR LR
comp=E,690nm,15.4s,MS4.8
GYA LR LR
comp=Z,720nm,17.8s,MS4.6
ZAA0 Zalesovo Array 43.74 306 *e*P **P** **21 24 51.3 -1.4**
ZAA0 *e*PcP PcP 21 26 38.4 -0.7
ZALV Zalesovo Beam 43.74 306 P **P** **21 24 52.1 -0.5**
comp=Z,18nm,0.7s,mb4.9,baz=62,slow=7.5,SNR=31
ZALV PcP PcP 21 26 38.8 -0.3
comp=Z,6.2nm,0.9s,baz=60,slow=3.6,SNR=5.0

ZALV LR LR 21 43 41.8
comp=Z,164nm,20.0s,MS3.9,baz=67,slow=37
ZALV Zalesovo Beam 43.74 306 P **P** **21 24 52.1 -0.6**
ZALV 21 26 38.8
NVS Novosibirsk 44.28 308 *e*P **P** **21 24 56.3 -0.6**
NVS *e* 21 26 40.4
NVS *e*S **S** **21 31 21.9 -6.8**
NVS pmax pmax
comp=E,19nm,0.7s
NVS pmax pmax
comp=Z,21nm,0.7s,mb5.0
NVS pmax pmax
comp=N,5.0nm,1.1s
NVS smax
comp=N,21nm,1.6s
NVS smax
comp=E,16nm,1.6s
WMQ Urumqi 46.37 292 *e*P **P** **21 25 15.5 +1.8**
WMQ AP pP 21 25 25.5 +3.3
WMQ XP sP 21 25 29.5 +4.0
WMQ PCP PcP 21 26 49.0 +0.7
WMQ AMB AMB
comp=Z,14nm,0.9s,mb4.9
WMQ AMB AMB
comp=Z,123nm,5.2s
WMQ LR LR
comp=N,847nm,13.8s,MS5.0
WMQ LR LR
comp=E,645nm,13.8s,MS5.0
WMQ LR LR
comp=Z,538nm,18.0s,MS4.5
QIZ Qiongzhong 46.64 249 P **P** **21 25 16.4 +0.4**
QIZ XP sP 21 25 28.9 +1.0
QIZ S **S** **21 32 02.5 -1.0**
QIZ AMB AMB
comp=Z,7.0nm,1.4s,mb4.4
QIZ LR LR
comp=N,234nm,19.3s
QIZ LR LR
comp=Z,193nm,19.1s,MS4.1
QIZ Qiongzhong 46.64 249 *e*P **P** **21 25 16.0 0.0**
comp=Z,25nm,1.3s,mb5.0
KMI Kunming 47.04 261 P **P** **21 25 19.8 +0.7**
KMI AP pP 21 25 29.8 +2.2
KMI XP sP 21 25 33.9 +2.9
KMI PCP PcP 21 26 52.6 +1.6
KMI PP PP 21 27 09.5 -0.4
KMI AMB AMB
comp=Z,32nm,0.9s,mb5.2
KMI AMB AMB
comp=Z,230nm,5.1s
KMI LR LR
comp=N,273nm,13.8s,MS4.5
KMI LR LR
comp=E,263nm,13.8s,MS4.5
KMI LR LR
comp=Z,191nm,18.8s,MS4.1
MK31 Makanchi Array 48.26 298 *i*P **P** **21 25 28.7 +0.3**
MK31 pmax pmax
comp=Z,42nm,0.7s,mb5.6
MKAR Makanchi Array 48.26 298 P **P** **21 25 28.8 +0.5**
comp=Z,34nm,0.7s,mb5.5,baz=64,slow=8.2,SNR=53
MKAR S **S** **21 32 25.7 -0.3**
comp=Z,0.7nm,1.0s,baz=68,slow=20,SNR=2.9
MKAR LR LR 21 47 05.0
comp=Z,354nm,18.3s,MS4.4,baz=242,slow=38
MKAR Makanchi Array 48.26 298 P **P** **21 25 28.8 +0.4**
MKAR S **S** **21 32 25.7 -0.3**
KURK Kurchatov 48.54 304 P **P** **21 25 31.1 +0.6**
comp=Z,677nm,0.7s,SNR=57
KURK Kurchatov 48.54 304 P **P** **21 25 31.0 +0.6**
comp=Z,81nm,0.8s,mb5.8,baz=67,slow=8.4,SNR=147
KURK S **S** **21 32 25.1 -4.7**
comp=Z,2.3nm,1.1s,baz=72,slow=15,SNR=8.6
KURK Kurchatov 48.54 304 P **P** **21 25 31.0 +0.5**
KURK S **S** **21 32 25.2 -4.7**
KURK pmax pmax
comp=Z,81nm,0.8s,mb5.8
KURK smax
comp=N,2.0nm,1.1s
KURK Kurchatov 48.54 304 *e*P **P** **21 25 30.0 -0.4**
KURK *e*PcP PcP 21 26 55.0 -1.0
KURK S **S** **21 32 25.1 -4.7**
ALE Alert 49.09 6 P **P** **21 25 35.0 +0.7**
comp=N,145nm,1.1s,mb5.9,SNR=12
YKA Yellowknife Ar 49.50 38 P **P** **21 25 37.6 0.0**
comp=N,23nm,0.8s,mb5.2,baz=298,slow=7.6,SNR=18
YKA LR LR 21 48 20.6
comp=N,84nm,19.8s,MS3.7,baz=245,slow=38
YKA Yellowknife Ar 49.50 38 *i*P **P** **21 25 37.5 -0.1**
YKA pmax pmax
comp=Z,23nm,0.8s
VOSK Vostochnaya 51.74 310 P **P** **21 25 53.7 -0.9**
VOSK pmax pmax
comp=Z,43nm,1.1s,mb5.3
BVA0 Borovoye Array 51.89 310 *e*P **P** **21 25 55.3 -0.5**
BVA0 pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
BVAR Borovoye Array 51.89 310 P **P** **21 25 56.0 +0.2**
comp=Z,18nm,0.7s,mb5.1,baz=59,slow=7.5,SNR=44
BVAR PcP PcP 21 27 07.0 -1.2
comp=Z,1.8nm,0.5s,baz=47,slow=6.3,SNR=2.3
BVAR S **S** **21 33 10.3 -6.1**
comp=Z,0.9nm,0.9s,baz=42,slow=8.8,SNR=3.4
BRVK Borovoye 51.93 310 *e*P **P** **21 25 55.7 -0.4**
BRVK pmax pmax
comp=Z,2.0nm,1.5s
BRVK Borovoye 51.93 310 *e*P **P** **21 25 55.7 -0.4**
comp=Z,1.8nm,1.5s
LSA Lhasa 51.98 275 P **P** **21 26 01.4 +4.6**
LSA Lhasa 51.98 275 *e*P **P** **21 25 58.8 +2.0**
LSA pmax pmax
comp=Z,28nm,0.8s,mb5.2
LSA Lhasa 51.98 275 *e*P **P** **21 25 58.8 +2.0**
comp=Z,28nm,0.8s,mb5.2
NLWA Neilton Lookou 52.16 58 *e*P **P** **21 25 58.4 +0.5**
comp=Z,38nm,1.0s,mb5.3
KBS Kingsbay 52.29 352 *e*P **P** **21 25 59.4 +1.0**
SPITS Spitsbergen Ar 52.45 350 P **P** **21 26 00.1 +0.5**
baz=49,slow=8.8
CMW Cultus Mountai 52.62 56 P **P** **21 26 01.2 -0.1**
GNW Green Mountain 52.67 57 *e*P **P** **21 26 01.8 +0.2**
NANT Nan 52.76 257⇑P **P** **21 26 03.0 +0.3**
comp=Z,250nm,0.9s,mb6.1
JCW Jim Creek 52.84 56 P **P** **21 26 02.9 -0.1**
KKTK Khon Kaen 53.13 253⇓P **P** **21 26 09.0 +3.6**
comp=Z,432nm,0.5s
CHG Chiang Mai 53.92 258⇑P **P** **21 26 12.1 +0.9**
comp=Z,30nm,1.3s,mb5.1
COR Corvallis 54.01 61 *e*P **P** **21 26 12.2 +0.7**
ETW Entiat 54.07 56 *e*P **P** **21 26 11.5 -0.4**
CMAR Chiang Mai Arr 54.17 258 P **P** **21 26 13.6 +0.6**
comp=Z,9.9nm,0.8s,mb4.8,baz=36,slow=7.2,SNR=28
CMAR PcP PcP 21 27 17.8 +0.5
comp=Z,2.6nm,0.8s,baz=19,slow=3.1,SNR=4.6
CMAR LR LR 21 52 22.1
comp=Z,232nm,18.6s,MS4.3,baz=235,slow=39
CMAR Chiang Mai Arr 54.17 258 *i*P **P** **21 26 17.3 +4.3**
CMAR pmax pmax
comp=Z,10.0nm,0.8s
EBG Ellensburg 54.32 57 P **P** **21 26 13.9 +0.2**
KEBM Edson Butte 54.34 63 *e*P **P** **21 26 15.1 +1.1**
TKM2 Tokmak 2 54.34 297 P **P** **21 26 15.0 +1.0**
SNR=22
TKM2 Tokmak 2 54.34 297 *e*P **P** **21 26 15.1 +1.1**
SSOR Sweet Springs 54.35 60 P **P** **21 26 14.7 +0.7**
SVE Sverdlovsk 54.66 318⇓*e*P **P** **21 26 16.8 +0.7**
SVE *e*S **S** **21 33 50.3 -3.6**
SVE *e*SS SS 21 37 35.5 -0.7
SVE pmax pmax
comp=Z,40nm,0.9s,mb5.5
SVE MLR MLR
comp=Z,282nm,15.0s,MS4.5
USP Ospenovka 54.81 298 P **P** **21 26 18.2 +0.8**
SNR=23
CHMS Chumysh 54.81 298 P **P** **21 26 18.5 +1.1**
SNR=14
KBK Karagaybulak 54.89 297 P **P** **21 26 19.1 +1.1**
SNR=17
FRIS Frissel Point 54.93 61 P **P** **21 26 18.9 +0.7**
FRU Bishkek 54.99 297 *i*P **P** **21 26 19.0 +0.3**
FRU MLR MLR
comp=Z,300nm,15.0s,MS4.5
OD2 Odessa Site #2 55.10 56 *e*P **P** **21 26 18.4 -1.1**
RSW Rattlesnake Hi 55.16 57 P **P** **21 26 20.0 +0.2**
AAK Ala-Archa 55.17 297 P **P** **21 26 20.4 +0.4**

SNR=12
HAWA Hanford 55.20 57 *e*P P 21 26 20.2 +0.1
comp=Z,17nm,1.0s,mb5.0
HUMO Hull Mountain 55.33 63 *e*P P 21 26 21.8 +0.7
comp=Z,38nm,1.4s,mb5.2
NST Nakhon Sawan 55.38 255 P P 21 26 22.0 +0.2
NEW Newport 55.50 54 *e*P P 21 26 22.0 -0.3
NEW pmax pmax
comp=Z,25nm,1.3s
NEW Newport 55.50 54 *e*P P 21 26 22.0 -0.3
comp=Z,25nm,1.3s,mb5.1
EKS2 Erkin-Say 55.59 298 P P 21 26 24.2 +1.2
SNR=15
EKS2 Erkin-Say 55.59 298 *e*P P 21 26 19.8 -3.2
comp=Z,27nm,0.8s,mb5.3
VIPM Ingram Point 55.63 59 P P 21 26 23.6 +0.3
TAPN Taplejung 55.80 275 *e*P P 21 26 26.9 +2.2
comp=Z,37nm,0.8s,mb5.5
ARU Arti 55.83 318 P P 21 26 24.3 -0.2
comp=Z,306nm,1.2s,mb6.2,SNR=26
ARU Arti 55.83 318 *d i*P P 21 26 24.4 -0.1
ARU *e* 21 27 20.2
ARU *e* 21 28 26.5
ARU *e*S S 21 34 10.5 +1.0
ARU *e*SS SS 21 37 49.8 -4.8
ARU pmax pmax
comp=Z,71nm,1.2s,mb5.6
ARU Arti 55.83 318 *e*P P 21 26 24.5 0.0
comp=Z,61nm,1.0s,mb5.6
ARU *e* 21 26 34.7
KHMM Horse Mountain 55.86 65 *e*P P 21 26 26.0 +1.1
YBH Yreka Blue Hor 55.98 63 *e*P P 21 26 26.6 +0.8
YBH pmax pmax
comp=Z,31nm,1.1s
YBH Yreka Blue Hor 55.98 63 *e*P P 21 26 26.6 +0.7
comp=Z,31nm,1.1s,mb5.2
LNOR Lincton Mounta 56.21 57 P P 21 26 27.7 +0.3
LNOR Lincton Mounta 56.21 57 *e*P P 21 26 27.3 -0.1
ODAN Odare 56.34 274 *e*P P 21 26 30.2 +1.6
comp=Z,38nm,0.9s,mb5.4
JIRN Jiri 56.63 276 *e*P P 21 26 32.1 +1.4
comp=Z,107nm,1.2s,mb5.8
GUN Gumba 56.68 276 *e*P P 21 26 34.9 +3.9
WDC Whiskeytown Da 56.76 64 *e*P P 21 26 31.6 +0.2
RAMN Ramite 56.81 275 *e*P P 21 26 32.9 +0.9
comp=Z,85nm,0.9s,mb5.8
LVZ Lovozero 57.01 337 *ce*P P 21 26 33.2 +0.4
LVZ pmax pmax
comp=Z,55nm,1.2s,mb5.5
KKN Kakani 57.17 277 *e*P P 21 26 35.7 +1.2
comp=Z,123nm,1.2s,mb5.8
PKI Pulchoki 57.22 276 *e*P P 21 26 36.7 +1.9
KK31 Karatay Array 57.28 300 *i* P P 21 26 32.1 -3.0
KK31 pmax pmax
comp=Z,15nm,0.7s,mb5.1
MOD Modoc 57.34 62 *e*P P 21 26 35.8 +0.3
BMO Blue Mountains 57.36 58 *e*P P 21 26 35.8 +0.2
DMN Daman 57.40 277 *e*P P 21 26 37.5 +1.4
comp=Z,171nm,1.2s,mb6.0
GKN Gorkha 57.47 277 *e*P P 21 26 37.6 +1.0
comp=Z,142nm,1.1s,mb5.9
KEV Kevo 57.47 341 *e*p P 21 26 35.6 -0.4
comp=Z,11nm,0.8s,mb4.9
KEV Kevo 57.47 341 *e*P P 21 26 35.6 -0.4
KEV pmax pmax
comp=Z,11nm,0.8s,mb4.9
APA Apatity 57.58 337 ⇓*i*P P 21 26 36.6 -0.2
APA pmax pmax
comp=Z,83nm,1.5s,mb5.5
DANN Dangsing 57.84 278 *e*P P 21 26 41.3 +2.1
comp=Z,87nm,0.7s,mb5.9
ARCES ARCESS Array B 57.97 342 P P 21 26 39.4 -0.1
comp=Z,23nm,0.8s,mb5.2,baz=34,slow=7.2,SNR=48
ARCES LR LR 21 53 13.0
comp=Z,198nm,21.2s,MS4.2,baz=214,slow=38
WVOR Wild Horse Val 58.02 60 P P 21 26 40.6 +0.4
WVOR pmax pmax
comp=Z,16nm,1.0s,mb5.0
WVOR Wild Horse Val 58.02 60 *e*P P 21 26 39.9 -0.4
comp=Z,16nm,1.0s,mb5.0
MSO Missoula 58.09 54 *e*P P 21 26 40.4 -0.3
comp=Z,23nm,1.3s,mb5.0
OHCM Honcut 58.16 65 *e*P P 21 26 40.1 -1.1
KOLN Koldanda 58.32 278 *e*P P 21 26 43.7 +1.2
comp=Z,36nm,0.7s,mb5.5
CHMT Chamberlain Mo 58.41 54 *e*P P 21 26 42.9 0.0
PAHR Pah Rah Range 59.22 63 *e*P P 21 26 49.0 +0.4
comp=Z,25nm,1.0s,mb5.2
FFC Flin Flon 59.25 41 P P 21 26 48.1 -0.5
comp=Z,203nm,1.0s,mb6.1,SNR=7.8
FFC Flin Flon 59.25 41 P P 21 26 48.7 +0.1
FFC pmax pmax
comp=Z,48nm,1.2s,mb5.4
FFC Flin Flon 59.25 41 *e*P P 21 26 48.6 0.0
comp=Z,48nm,1.2s,mb5.4
BOK Bokaro 59.37 273 *e*P P 21 26 50.7 +0.8
BOK AMb AMB 21 26 57.9
comp=Z,21nm,1.1s,mb5.1
AB31 Akbulak array 59.45 311 *i* P P 21 26 49.9 -0.2
AB31 pmax pmax
comp=Z,13nm,0.6s,mb5.1
LRM Limekiln Ridge 59.52 54 *e*P P 21 26 51.0 +0.4
EGMT Eagleton 59.62 51 *e*P P 21 26 51.2 -0.1
CMB Columbia Colle 59.63 66 *e*P P 21 26 51.9 +0.4
AKTO Aktyubinsk 59.70 313 *i* P P 21 26 49.1 -2.6
AKTO pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
DLMT Dillon 59.72 55 *e*P P 21 26 52.5 +0.5
comp=Z,12nm,0.9s,mb4.9
HLID Hailey 59.80 57 *e*P P 21 26 50.8 -1.8
BOZ Bozeman (W) 60.08 54 *e*P P 21 26 55.0 +0.5
BMN Battle Mountai 60.08 62 *e*P P 21 26 55.0 +0.4
BMN pmax pmax
comp=Z,22nm,1.0s,mb5.1
BMN Battle Mountai 60.08 62 *e*P P 21 26 55.0 +0.4
comp=Z,22nm,1.0s,mb5.2
SUMG Summit 60.10 5 *e*P P 21 26 55.0 +0.8
DDI Dehra Dun 60.39 284 *ex* x 21 26 50.3
SMLA Simla 60.46 285 *i* P P 21 26 58.5 +1.2
SMLA *ex* x 21 27 03.0
comp=Z,137nm,0.6s
SMLA *i* x x 21 35 09.3
QLMT Earthquake Lak 60.70 55 *e*P P 21 26 59.6 +0.9
YMR Madison River 61.06 54 *e*P P 21 27 01.3 +0.2
comp=Z,17nm,0.9s,mb5.2
YMR *e*PcP PcP 21 27 44.3 +0.2
YMR *e*PP PP 21 29 14.3 -1.1
GCMT Greycliff 61.06 53 *e*P P 21 27 01.4 +0.2
ELK Elko 61.07 60 P P 21 27 01.7 +0.4
ELK pmax pmax
comp=Z,5.0nm,0.8s
ELK Elko 61.07 60 *e*P P 21 27 00.9 -0.3
comp=Z,5.3nm,0.8s,mb4.7
TPH Tonopah 61.55 64 *e*P P 21 27 05.1 +0.5
IMW Indian Meadow 61.56 55 *e*P P 21 27 04.8 +0.3
DCID1 Drake Creek 61.61 56 *e*P P 21 27 05.3 +0.4
JOF Joensuu 61.67 335 *e*p P 21 27 05.0 0.0
comp=Z,16nm,0.8s,mb5.2
JOF Joensuu 61.67 335 *e*P P 21 27 05.0 0.0
JOF pmax pmax
comp=Z,16nm,0.8s,mb5.2
RRI2 Red Ridge 61.69 56 *e*P P 21 27 06.4 +1.0
RLMT Red Lodge 61.70 53 *e*P P 21 27 06.1 +0.6
MOOW Moose Ponds 61.76 55 *e*P P 21 27 06.7 +0.8
TPAW Teton Pass 61.81 56 *e*P P 21 27 07.3 +1.1
HVU Hansel Valley 61.85 58 *e*P P 21 27 07.4 +0.8
LOHW Long Hollow 61.93 55 *e*P P 21 27 07.9 +0.9
SNOW Snow King Moun 61.94 55 *e*P P 21 27 08.3 +1.2
REDW Red Top Meadow 61.95 56 *e*P P 21 27 02.3 -4.8
AHID Auburn Hatcher 62.19 56 *e*P P 21 27 09.5 +0.7
DGMT Dagmar 62.21 48 *e*P P 21 27 08.8 -0.1
ISA Isabella 62.31 67 *e*P P 21 27 09.0 -0.8
LAO LASA Array 62.33 50 *e*P P 21 27 10.5 +0.9
SPUT South Promonto 62.34 58 *e*P P 21 27 10.6 +0.7
HWUT Hardware Ranch 62.66 57 *e*P P 21 27 12.3 +0.3
DUG Dugway 62.84 59 P P 21 27 13.4 +0.2
DUG pmax pmax
comp=Z,32nm,1.3s,mb5.3
DUG Dugway 62.84 59 *e*P P 21 27 13.4 +0.2
comp=Z,32nm,1.3s,mb5.3
TPNV Topopah Spring 62.87 64 P P 21 27 13.2 -0.2
NOQ North Oquirrh 62.95 59 *e*P P 21 27 14.6 +0.7
BW06 Boulder Array 63.05 55 *e*P P 21 27 14.7 +0.1
PDAR Pinedale Array 63.05 55 P P 21 27 14.6 0.0
comp=Z,16nm,0.9s,mb5.1,baz=318,slow=2.0,SNR=77
PDAR LR LR 21 52 22.2
comp=Z,54nm,18.4s,MS3.8,baz=145,slow=34
JLU Jordanelle 63.38 58 *e*P P 21 27 17.5 +0.8
NLU North Lily Min 63.43 59 *e*P P 21 27 17.7 +0.6
KBL Kabul 63.50 293 *e*P P 21 27 17.0 -0.6
KBL *e* 21 27 58.1
KBL pmax pmax
comp=Z,45nm,1.2s,mb5.5
KBL Kabul 63.50 293 *e*P P 21 27 17.0 -0.7
comp=Z,45nm,1.2s,mb5.5
KBL *e*PcP PcP 21 27 58.1 +4.0
DAU Daniels Canyon 63.61 58 *e*P P 21 27 18.8 +0.5
MPU Maple Canyon 63.65 59 *e*P P 21 27 19.2 +0.6
KAF Kangasniemi 63.73 336 *ep* P 21 27 18.3 -0.4
comp=Z,12nm,1.0s,mb4.9
KAF Kangasniemi 63.73 336 *e*P P 21 27 18.3 -0.4
KAF pmax pmax
comp=Z,12nm,1.0s,mb4.9
SHPR Sheep Range 63.82 64 *e*P P 21 27 19.6 -0.1
MSU Marysvale 64.31 60 P P 21 27 23.8 +0.9
MSU Marysvale 64.31 60 *e*P P 21 27 23.4 +0.5
SFJD Kangerlussuaq 64.37 11 *i* P P 21 27 22.9 +0.1
SFJD pmax pmax
comp=Z,30nm,0.9s,mb5.3
SFJD Kangerlussuaq 64.37 11 *i* P P 21 27 22.9 +0.1
comp=Z,30nm,0.9s,mb5.3
TMUT Trail Mountain 64.37 59 *e*P P 21 27 23.8 +0.5
SRU San Rafael 64.89 59 *e*P P 21 27 26.4 -0.3
SRU *e* 21 27 59.7
SRU pmax pmax
comp=Z,16nm,1.1s,mb5.0
SRU San Rafael 64.89 59 *e*P P 21 27 26.4 -0.3
comp=Z,16nm,1.1s,mb5.0
SRU *e*PcP PcP 21 27 59.7 -0.1
PFO Pinyon Flat Ob 64.91 67 LR LR 21 49 29.3
comp=Z,87nm,21.4s,MS3.9,baz=284,slow=30
ULM Lac du Bonnet 65.02 42 P P 21 27 26.7 -0.6
comp=Z,10nm,0.7s,mb5.0,baz=324,slow=6.5,SNR=10
ULM LR LR 21 56 29.7
comp=Z,122nm,18.0s,MS4.1,baz=143,slow=37
AJM Ajmer 65.17 283 *e*P P 21 27 28.9 +0.2
AJM AMb AMB 21 27 34.3
comp=Z,26nm,1.2s,mb5.1
RSSD Black Hills 65.18 51 P P 21 27 28.4 -0.1
RSSD pmax pmax
comp=Z,29nm,0.9s,mb5.3
RSSD Black Hills 65.18 51 *e*P P 21 27 28.2 -0.3
comp=Z,29nm,0.9s,mb5.3
VIS Vishakhapatnam 65.25 270 *e*P P 21 27 29.8 +0.5
VIS AMb AMB 21 27 30.8
comp=Z,25nm,1.3s,mb5.1
NGP Nagpur 65.80 275 *e*P P 21 27 31.2 -1.6
NGP AMb AMB 21 27 38.5
comp=Z,57nm,0.0s
OBN Obninsk 65.89 327 ⇑*e*P P 21 27 32.4 -0.5
OBN *e*S S 21 36 08.6 -9.2
OBN pmax pmax
comp=Z,30nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.4
GLA Glamis 66.30 67 P P 21 27 35.7 -0.2
GLA pmax pmax
comp=Z,39nm,1.4s,mb5.2
GLA Glamis 66.30 67 *e*P P 21 27 35.7 -0.2
AGMN Agassiz Refuge 66.40 44 *e*P P 21 27 35.3 -1.0
comp=Z,45nm,1.2s,mb5.4
AGMN *e* 21 27 45.9
AGMN *e*PcP PcP 21 28 05.4 -0.5
ISCO Idaho Springs 67.25 56 *e*P P 21 27 41.6 -0.2
ISCO *e* 21 27 53.2
ISCO pmax pmax
comp=Z,32nm,1.4s,mb5.2
ISCO Idaho Springs 67.25 56 *e*P P 21 27 41.6 -0.2
comp=Z,32nm,1.4s,mb5.2
ISCO *e* 21 27 53.2
MVCO Mesa Verde 67.35 59 *e*P P 21 27 42.5 0.0
AKL Akola 67.49 277 *ex* x 21 27 47.8
AKL AMb AMB 21 27 52.9
comp=Z,45nm,1.0s,mb5.5
CTA Charters Tower 67.53 190 P P 21 27 41.4 -2.2
comp=Z,1.1nm,0.3s,mb4.4,baz=4.7,slow=3.4,SNR=4.1
VSR Storozhevoye 67.81 323 *e*P P 21 27 44.9 -0.3
ABKT Ailbek 67.84 302 P P 21 27 46.3 +0.7
comp=Z,143nm,0.7s,mb6.1,SNR=13
NB2 NORSAR Subarra 68.33 342 P P 21 27 48.0 -0.3
comp=Z,22nm,1.0s,mb5.1,baz=26,slow=6.5
NOA NORSAR Array B 68.33 342 P P 21 27 48.0 -0.2
comp=Z,12nm,0.9s,mb4.9,baz=26,slow=6.3,SNR=19
NOA LR LR 22 01 11.8
comp=Z,109nm,18.0s,MS4.1,baz=10.0,slow=39
OGNE Ogallala 68.44 53 *e*P P 21 27 49.0 -0.3
comp=Z,79nm,0.9s,mb5.7
HYB Hyderabad 68.72 273 *i* P P 21 27 51.5 +0.1
SDCO Great Sand Dun 68.72 57 *e*P P 21 27 51.1 0.0
comp=Z,25nm,1.5s,mb4.9
ECSD EROS,Sioux Fal 69.29 48 *e*P P 21 27 53.5 -1.1
LATR Latur 69.38 275 *ex* x 21 27 58.6
LATR AMb AMB 21 28 05.0
comp=Z,36nm,0.6s,mb5.5
WRAB Tennant Creek 69.54 201 P P 21 27 54.0 -2.2
comp=Z,120nm,1.0s,mb5.8,SNR=7.0
WRAB Tennant Creek 69.54 201 P P 21 27 54.5 -1.7
WRAB pmax pmax
comp=Z,22nm,1.0s,mb5.0
WRAB Tennant Creek 69.54 201 *e*P P 21 27 53.8 -2.5
comp=Z,22nm,1.0s,mb5.0
WB2 Warramunga Arr 69.55 201 *e*P P 21 27 54.3 -2.0
WRA Warramunga Arr 69.56 201 P P 21 27 54.2 -2.1
comp=Z,12nm,0.9s,mb4.8,baz=19,slow=6.3,SNR=29
LAZ Ladron 70.07 61 *e*P P 21 27 59.7 +0.2
ANMO Albuquerque 70.10 60 P P 21 27 59.8 +0.1
ANMO pmax pmax
comp=Z,5.0nm,1.0s
ANMO Albuquerque 70.10 60 *e*P P 21 27 59.5 -0.1
comp=Z,5.4nm,1.0s,mb4.4
FITZ Fitzroy Crossi 70.40 210 *e*P P 21 28 00.4 -1.2
comp=Z,11nm,0.9s,mb4.8
FITZ Fitzroy Crossi 70.40 210 P P 21 27 59.7 -1.8
comp=Z,7.1nm,1.0s,mb4.6,baz=36,slow=8.2,SNR=9.6
FITZ Fitzroy Crossi 70.40 210 *e*P P 21 28 00.8 -0.8
BNM Barren Site 70.55 61 *e*P P 21 28 02.8 +0.3
POO Poona 71.14 277 *e*P P 21 28 07.0 +0.8
POO AMb AMB 21 28 08.6
comp=Z,27nm,1.4s,mb5.0
CBKS Cedar Bluff 71.19 53 P P 21 28 05.8 -0.5
CBKS pmax pmax
comp=Z,11nm,0.9s,mb4.8
CBKS Cedar Bluff 71.19 53 *e*P P 21 28 05.1 -1.2
comp=Z,11nm,0.9s,mb4.8
SUW Suwalki 71.39 333 *e*P P 21 28 06.5 -0.7
SUW Suwalki 71.39 333 *e*P P 21 28 06.6 -0.6
KIV Kislovodsk 71.70 316 ⇓*e*P P 21 28 09.7 +0.4
KIV pmax pmax
comp=Z,23nm,1.2s,mb5.0
KAD Karad 71.76 276 *e*P P 21 28 10.4 +0.3
KAD AMb AMB 21 28 19.8
comp=Z,57nm,0.9s,mb5.5
AKASG Malin Array Be 72.10 327 P P 21 28 10.6 -1.0
comp=Z,6.0nm,0.7s,mb4.6,baz=30,slow=5.8,SNR=21
AKASG LR LR 22 04 37.4
comp=Z,109nm,18.2s,MS4.2,baz=20,slow=40
AKASG Malin Array Be 72.10 327 P P 21 28 10.6 -1.0
AKASG LR LR 22 04 37.4
KIEV Kiev 72.11 327 P P 21 28 10.6 -1.0
KIEV pmax pmax
comp=Z,32nm,0.6s,mb5.4
KIEV Kiev 72.11 327 *e*P P 21 28 10.4 -1.2
comp=Z,32nm,0.6s,mb5.4
SCIA State Center 72.33 47 *e*P P 21 28 12.0 -1.1
comp=Z,68nm,1.4s,mb5.4
ASAR Alice Springs 73.24 201 P P 21 28 17.6 -0.9
comp=Z,4.5nm,0.8s,mb4.4,baz=15,slow=5.4,SNR=38
ASAR Alice Springs 73.24 201 P P 21 28 17.6 -0.9
GOA Goa 73.28 275 *e*P P 21 28 19.5 +0.4
GOA AMb AMB 21 28 28.4
comp=Z,40nm,1.0s,mb5.3
GNI Garni 73.53 312 P P 21 28 21.2 +1.0
comp=Z,4.9nm,0.6s,mb4.6,baz=273,slow=12,SNR=3.3
GNI Garni 73.53 312 P P 21 28 22.4 +2.2
GNI pmax pmax
comp=Z,39nm,1.0s
LVV L'vov 74.68 330 *e*P P 21 28 25.4 -1.4
SIM Simferopol' 74.81 321 P P 21 28 27.0 -0.6
SIM pmax pmax
comp=Z,14nm,0.8s,mb4.9
SIM MLR MLR
comp=Z,100nm,14.5s,MS4.2
KWP Kalwaria 75.29 331 *e*P P 21 28 31.1 +0.8
KWP Kalwaria 75.29 331 P P 21 28 31.0 +0.7
KWP pmax pmax
comp=Z,21nm,0.8s,mb5.1
KWP Kalwaria 75.29 331 ⇓*i*P P 21 28 30.9 +0.6
KWP Kalwaria 75.29 331 *e*P P 21 28 30.7 +0.5
KIS Kishinev 75.30 326 *e*P P 21 28 27.0 -3.4
KIS *e* pP 21 28 34.0 -5.3
OJC Ojcow 75.73 333 *e*P P 21 28 32.2 -0.6
STHS Stebnicka Huta 75.96 331 *e*P P 21 28 34.6 +0.5
STHS *e* pP 21 28 41.5 -1.5
STHS pmax pmax
comp=Z,13nm,0.9s,mb4.9
STHS Stebnicka Huta 75.96 331 *e*P P 21 28 34.6 +0.5
comp=Z,13nm,0.9s,mb4.8
STHS *e* pP 21 28 41.5 -1.5
KOLS Kolonicke sedl 76.03 330 *e*P P 21 28 34.6 +0.1
KOLS *e*pP pP 21 28 41.4 -2.1
BUR08 Bucovina Ar. S 76.11 328 *e*P P 21 28 34.5 -0.5
BURAR Bucovina Array 76.13 328 ⇑*i*P P 21 28 35.2 +0.1
BURAR Bucovina Array 76.13 328 ⇑P P 21 28 35.2 +0.1
KSP Ksiaz 76.24 335 *e*P P 21 28 35.7 +0.1
KSP Ksiaz 76.24 335 *e*P P 21 28 35.2 -0.5
KSP *e*pP pP 21 28 39.7 -4.9
NIE Niedzica 76.26 332 *e*P P 21 28 36.4 +0.6
UZH Uzhgorod 76.29 330 ⇓*i*P P 21 28 35.7 -0.3
CRVS Cervenica-Dubn 76.33 331 *e*P P 21 28 36.3 +0.1
NRDL Niedersach Rie 76.39 339 *e*P P 21 28 37.0 +0.5
OKC Ostrava-Krasne 76.57 333 *e*P P 21 28 37.3 -0.3
OKC *e*pP pP 21 28 45.5 -1.0
OKC AMS AMS 22 01 30.0
comp=Z,500nm,5.0s
OKC Ostrava-Krasne 76.57 333 *e*P P 21 28 37.3 -0.3
OKC *e*pP pP 21 28 45.5 -1.0
UPC Upice 76.62 335 *e*P P 21 28 38.3 +0.5
UPC *e*pP pP 21 28 45.1 -1.6
DPC Dobruska-Polom 76.67 335 *e*P P 21 28 38.9 +0.8
DPC *e*pP pP 21 28 46.5 -0.5
DPC AMS AMS 22 09 00.0
comp=Z,300nm,15.3s
CLL Collm 76.73 337 ⇑*i*P P 21 28 38.3 -0.2
CLL *i* pP 21 28 45.2 -2.2
CLL pmax pmax
comp=Z,24nm,1.3s,mb5.0
CLL Collm 76.73 337 *e*P P 21 28 38.1 -0.4
comp=Z,26nm,0.9s,mb5.2
CLL Collm 76.73 337 ⇑*i*P P 21 28 38.3 -0.2
comp=Z,24nm,1.3s,mb5.0
CLL L 21 05 00.0
comp=Z,100nm,21.3s
CLL *i* pP pP 21 28 45.2 -2.2
MORC Moravsky Berou 76.81 334 P P 21 28 38.5 -0.4
MORC pmax pmax
comp=Z,22nm,1.0s,mb5.0
MORC Moravsky Berou 76.81 334 ⇑*i*P P 21 28 39.3 +0.4
MORC Moravsky Berou 76.81 334 *e*P P 21 28 38.9 0.0
BRG Berggiesshubel 76.87 336 *e*P P 21 28 39.0 -0.3
comp=Z,54nm,2.2s,mb5.1
BRG Berggiesshubel 76.87 336 *e* P 21 28 38.8 -0.5
comp=Z,29nm,1.8s,mb4.9
CLZ Clausthal 76.92 339 *e*P P 21 28 40.1 +0.6
CLZ pmax pmax
comp=Z,33nm,1.3s,mb5.1
CLZ Clausthal 76.92 339 *e*P P 21 28 40.1 +0.6
comp=Z,33nm,1.3s,mb5.1
LIKS Likavka 76.97 332 *e*P P 21 28 47.0 +7.2
LIKS Likavka 76.97 332 *e*pP pP 21 28 47.0 -1.7
PVCC Panska Ves 77.01 336 *e*P P 21 28 39.9 -0.1
PVCC *e*pP pP 21 28 47.5 -1.4
PVCC AMS AMS 22 09 30.0
comp=Z,300nm,15.1s
KECS Kecovo 77.02 331 *e*P P 21 28 39.8 -0.3
KECS *e* 21 28 45.1
KECS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KECS Kecovo 77.02 331 *e*P P 21 28 39.8 -0.3
comp=Z,6.9nm,0.9s,mb4.6
KECS *e* 21 28 45.1
VRI Vrincioaia 77.05 326 ⇓*i*P P 21 28 41.0 +0.7
VRI Vrincioaia 77.05 326 ⇓P P 21 28 41.0 +0.7
PLOR Plostina 77.09 326 ⇓*i*P P 21 28 41.2 +0.6
IBBN Ibbenburen 77.11 340 *e*P P 21 28 40.8 +0.2
comp=Z,59nm,1.8s,mb5.2
JCT Junction City 77.20 59 P P 21 28 41.0 -0.5
JCT pmax pmax
comp=Z,50nm,1.5s,mb5.2
JCT Junction City 77.20 59 *e*P P 21 28 40.8 -0.7
comp=Z,50nm,1.5s,mb5.2
MSL Mosul 77.20 310 *ex* x 21 28 46.0
MSL *ex* x 21 38 38.0
PRU Pruhonice 77.50 335 *e*P P 21 28 43.3 +0.5
PRU *e*pP pP 21 28 50.6 -1.1
PRU AMS AMS 22 08 40.0
comp=Z,200nm,17.0s
VRAC Vranov 77.51 334 ⇑*i*P P 21 28 43.5 +0.6
VRAC Vranov 77.51 334 ⇑P P 21 28 43.5 +0.6
SIUC Southern Illin 77.52 47 *e*P P 21 28 41.4 -1.7
comp=Z,25nm,1.0s,mb5.1
VYHS Vyhne 77.54 332 *e*P P 21 28 43.0 -0.1
VYHS *e* pP 21 28 50.8 -1.2
VYHS pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
VYHS Vyhne 77.54 332 *e*P P 21 28 43.0 -0.1
comp=Z,1.4nm,0.8s,mb3.9
VYHS *e* pP 21 28 50.8 -1.2
TIRR Tirgusor 77.56 324 ⇑*i*P P 21 28 43.3 0.0
KOLL Kolacno 77.61 333 *e*P pP 21 28 50.3 -2.0
KOLL Kolacno 77.61 333 *e*pP pP 21 28 50.3 -2.0
MLR Muntele Rosu 77.66 326 ⇑*i*P P 21 28 44.6 +0.8
MLR Muntele Rosu 77.66 326 ⇑P P 21 28 44.6 +0.9
MOX Moxa 77.70 338 *e*P P 21 28 43.8 -0.1
comp=Z,56nm,2.1s,mb5.1
MOX Moxa 77.70 338 *e*P P 21 28 43.8 -0.1
MOX pmax pmax
comp=Z,56nm,2.1s,mb5.1
MOX Moxa 77.70 338 *e*P P 21 28 43.9 0.0
comp=Z,16nm,1.1s,mb4.9
PSZ Piszkesteto 77.70 331 P P 21 28 44.6 +0.6
PSZ pmax pmax
comp=Z,13nm,1.0s,mb4.8
PSZ Piszkesteto 77.70 331 ⇑*i*P P 21 28 44.6 +0.6
PSZ Piszkesteto 77.70 331 *e*P P 21 28 44.1 +0.1
DRGR 77.73 329 ⇑*i*P P 21 28 43.9 -0.2
TREC Trest 77.85 335 *e*P P 21 28 45.2 +0.4
TREC *e*pP pP 21 28 52.7 -1.0
TREC AMS AMS 22 09 30.0
comp=Z,400nm,17.9s
NKC Novy Kostel 77.86 337 *e*P P 21 28 44.2 -0.6
NKC *e*pP pP 21 28 52.7 -1.0
NKC AMS AMS 22 09 10.0
comp=Z,200nm,13.1s
NKC Novy Kostel 77.86 337 *e*P P 21 28 44.2 -0.6
NKC *e*pP pP 21 28 52.7 -1.0
UBBA Unterbreizbach 77.95 339 *e*P P 21 28 45.8 +0.5
BUG Bochum--Univer 78.03 340 *e*P P 21 28 46.1 +0.4
comp=Z,21nm,1.0s,mb5.0
VOIR 78.04 327 ⇑*i*P P 21 28 46.4 +0.5
VOIR 78.04 327 ⇑P P 21 28 46.4 +0.5
MALT Malatya 78.09 314 P P 21 28 45.2 -1.1
MALT pmax pmax
comp=Z,26nm,1.2s,mb5.0
MALT Malatya 78.09 314 ⇑*i*P P 21 28 45.0 -1.3
MALT Malatya 78.09 314 *e*P P 21 28 44.7 -1.6
MODS Modra-Piesok 78.14 333 *e*P P 21 28 47.5 +1.1
ROTZ Rotzenmuhle 78.35 337 *e*P P 21 28 45.8 +0.6
ZST Bratislava 78.35 333 *e*P P 21 28 48.7 +1.2
ZST *e*pP pP 21 28 56.3 -0.2
ZST Bratislava 78.35 333 *e*P P 21 28 48.7 +1.2
comp=Z,13nm,0.9s,mb4.9
ZST *e* pP 21 28 56.3 -0.2
ZST LR LR
comp=Z,200nm,16.9s,MS4.5
ACSO Alum Creek Sta 78.51 42 *e*P P 21 28 47.2 -1.4
comp=Z,12nm,1.0s,mb4.8
KHC Kasperske Hory 78.55 336 *e*P P 21 28 49.1 +0.5
KHC *e*pP pP 21 28 56.6 -1.0
KHC AMS AMS 22 09 20.0
comp=Z,300nm,15.8s
WCI Wyandotte Cave 78.55 45 P P 21 28 48.4 -0.5
WCI pmax pmax
comp=Z,26nm,1.1s,mb5.1

WCI	**Wyandotte Cave**	**78.55**	**45**	*e*P		**P**	**21 28 48.0**	**-0.8**
	comp=Z,26nm,1.1s,mb5.1							
GRA1	**Grafenberg Arr**	**78.68**	**337**	*e*P		**P**	**21 28 49.6**	**+0.3**
	comp=Z,35nm,0.8s,mb5.3							
GRA1				*e*pP		pP	21 28 56.5	-1.8
GRF	**Grafenberg Arr**	**78.68**	**337**	*e*P		**P**	**21 28 49.6**	**+0.3**
GRF				*e**PP		pP	21 28 56.5	-1.8
GRF					pmax	pmax		
	comp=Z,35nm,0.8s,mb5.3							
GRF	**Grafenberg Arr**	**78.68**	**337**	*e*P		**P**	**21 28 49.6**	**+0.3**
GRF				*e**PP		pP	21 28 56.5	-1.8
GRF					pmax	pmax		
	comp=Z,35nm,0.8s,mb5.3							
GRF	**Grafenberg Arr**	**78.68**	**337**	*e*P		**P**	**21 28 49.6**	**+0.3**
	comp=Z,35nm,0.8s,mb5.3							
GRF				*e*pP		pP	21 28 56.5	-1.8
WET	**Wettzell**	**78.73**	**336**	*e*P		**P**	**21 28 50.4**	**+0.8**
WET					pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1							
WET	**Wettzell**	**78.73**	**336**	*e*P		**P**	**21 28 50.4**	**+0.8**
	comp=Z,25nm,1.0s,mb5.1							
GEC2	**GERESS Array S**	**78.77**	**335**	*e*P		**P**	**21 28 49.9**	**0.0**
GEC2					pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8							
GEC2	**GERESS Array S**	**78.77**	**335**	*e*P		**P**	**21 28 49.9**	**0.0**
	comp=Z,10.0nm,0.9s,mb4.8							
GERES	**GERESS Array B**	**78.77**	**335**	P		**P**	**21 28 49.6**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=30,slow=6.1,SNR=3.5							
GERES				LR		LR	22 04 57.5	
	comp=Z,114nm,18.2s,MS4.2,baz=34,slow=37							
GZR	**Gura Zlata**	**78.91**	**328**	⇑*i*P		**P**	**21 28 51.0**	**+0.3**
GZR	**Gura Zlata**	**78.91**	**328**	⇑P		**P**	**21 28 51.0**	**+0.4**
CONA	**Conrad Observa**	**78.97**	**334**	⇑⇑*i*P		**P**	**21 28 51.9**	**+0.9**
	comp=Z,14nm,1.4s,mb4.7							
CSNA	**Conrad Observa**	**78.97**	**334**	⇑⇑*i*P		**P**	**21 28 51.9**	**+1.0**
	comp=Z,13nm,1.5s,mb4.6							
MEM	**Membach**	**79.09**	**341**	P		**P**	**21 28 52.1**	**+0.5**
	comp=Z,15nm,1.1s,mb4.8							
MEM				AP		pP	21 28 59.7	-0.9
BZS	**Buzias**	**79.12**	**329**	⇑*i*P		**P**	**21 28 51.7**	**-0.2**
TOD	**Tromm**	**79.37**	**339**	*e*P		**P**	**21 28 53.5**	**+0.4**
ABH	**Alteburg**	**79.42**	**340**	*e*P		**P**	**21 28 53.7**	**+0.3**
BCLA	**Clavier**	**79.43**	**341**	P		**P**	**21 28 53.5**	**+0.1**
	comp=Z,18nm,1.6s,mb4.8							
ANTO	**Ankara**	**79.48**	**319**	P		**P**	**21 28 54.9**	**+1.0**
ANTO					pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1							
ANTO	**Ankara**	**79.48**	**319**	⇑*i*P		**P**	**21 28 54.9**	**+1.0**
ANTO	**Ankara**	**79.48**	**319**	⇑P		**P**	**21 28 54.9**	**+0.9**
SZH	**Strazhica**	**79.54**	**325**	*i* P		**P**	**21 29 01.0**	**+6.8**
PKSM	**Moragy**	**79.61**	**331**	⇑*i*P		**P**	**21 28 53.8**	**-0.7**
PKSM	**Moragy**	**79.61**	**331**	⇑P		**P**	**21 28 53.8**	**-0.7**
RUP	**Ruppelstein**	**79.70**	**340**	*e*P		**P**	**21 28 52.8**	**-2.1**
STKA	**Stephens Creek**	**79.75**	**192**	LR		LR	22 01 48.8	
	comp=Z,208nm,21.6s,MS4.4,baz=26,slow=34							
GIVF	**Givet**	**79.83**	**341**	*e*P		**P**	**21 28 54.7**	**-0.9**
UMR	**Umm Al-Rimmam**	**79.86**	**303**	*e*P		**P**	**21 28 55.6**	**-0.5**
	baz=303							
UMR				AMb		AMB	21 29 03.3	
	comp=Z,72nm,0.7s,mb5.7,baz=303							
MIB	**Mutribah**	**79.88**	**303**	*e*P		**P**	**21 28 55.9**	**-0.4**
	baz=303							
DOU	**Dourbes**	**79.89**	**342**	P		**P**	**21 28 56.0**	**+0.1**
BAIF	**Baives**	**80.00**	**342**	*e*P		**P**	**21 28 55.9**	**-0.7**
	comp=Z,31nm,1.0s,mb4.9							
BAIF	**Baives**	**80.00**	**342**	*e*P		**P**	**21 28 55.9**	**-0.7**
BAIF					pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9							
BAIF	**Baives**	**80.00**	**342**	*e*P		**P**	**21 28 55.9**	**-0.7**
	comp=Z,16nm,1.0s,mb4.9							
RJOB	**Jochberg**	**80.03**	**336**	*e*P		**P**	**21 28 57.3**	**+0.6**
FUR	**Furstenfeldbru**	**80.06**	**337**	*e*P		**P**	**21 28 57.1**	**+0.2**
FUR					pmax	pmax		
	comp=Z,47nm,1.2s,mb5.3							
FUR	**Furstenfeldbru**	**80.06**	**337**	*e*P		**P**	**21 28 57.1**	**+0.2**
	comp=Z,47nm,1.2s,mb5.3							
LANF	**Langenberg**	**80.20**	**339**	*e*P		**P**	**21 28 56.0**	**-1.6**
RST	**Umm Al-Ruwaisa**	**80.31**	**303**	*e*P		**P**	**21 28 57.9**	**-0.6**
	baz=303							
RST				AMb		AMB	21 29 05.9	
	comp=Z,104nm,0.9s,mb5.8,baz=303							
PERS	**Pernice**	**80.35**	**334**	*i* P		**P**	**21 28 58.4**	**-0.1**
NAY	**Al-Naaiem**	**80.36**	**303**	*e*P		**P**	**21 28 58.3**	**-0.5**
	baz=303							
NAY				AMb		AMB	21 29 06.4	
	comp=Z,41nm,1.1s,mb5.3,baz=303							
RDF	**Al-Radifah**	**80.42**	**302**	*e*P		**P**	**21 28 59.0**	**-0.2**
	baz=302							
RDF				AMb		AMB	21 29 07.0	
	comp=Z,110nm,1.3s,mb5.6,baz=302							
KBA	**Koelnbreinsper**	**80.47**	**335**	*i* P		**P**	**21 29 00.2**	**+1.0**
	comp=Z,39nm,0.8s,mb5.4,SNR=10							
BFO	**Black Forest**	**80.67**	**339**	*e*P		**P**	**21 29 00.5**	**+0.3**
BFO					pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0							
BFO	**Black Forest**	**80.67**	**339**	*e*P		**P**	**21 29 00.5**	**+0.3**
	comp=Z,20nm,1.0s,mb5.0							
DIM	**Dimitrovgrad**	**80.73**	**325**	*i* P		**P**	**21 29 09.0**	**+8.4**
WTTA	**Wattenberg**	**80.79**	**336**	*i* P		**P**	**21 29 01.6**	**+0.8**
	comp=Z,70nm,1.2s,mb5.5,SNR=8.2							
CDF	**Champ du Feu**	**80.86**	**339**	*e*P		**P**	**21 29 00.5**	**-0.7**
	comp=Z,42nm,1.0s,mb5.0							
CDF	**Champ du Feu**	**80.86**	**339**	*e*P		**P**	**21 29 00.5**	**-0.7**
CDF					pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0							
CDF	**Champ du Feu**	**80.86**	**339**	*e*P		**P**	**21 29 00.5**	**-0.7**
	comp=Z,21nm,1.0s,mb5.0							
MOTA	**Moosalm**	**80.86**	**336**	⇓*i*P		**P**	**21 29 01.5**	**+0.3**
	comp=Z,48nm,1.0s,mb5.4,SNR=8.6							
PPT	**Papeete**	**81.05**	**128**	LR		LR	21 56 44.3	
	comp=Z,231nm,19.9s,MS4.5,baz=354,slow=30							
ECH	**Echery**	**81.07**	**339**	*e*P		**P**	**21 29 02.6**	**+0.3**
VTS	**Vitosha**	**81.16**	**327**	⇑*i*P		**P**	**21 29 03.5**	**+0.6**
VTS	**Vitosha**	**81.16**	**327**	*i* P		**P**	**21 29 10.5**	**+7.6**
VTS	**Vitosha**	**81.16**	**327**	⇑P		**P**	**21 29 03.5**	**+0.6**
FELD	**Feldberg im Sc**	**81.18**	**339**	*e*P		**P**	**21 29 03.2**	**+0.3**
VISS	**Visnje**	**81.18**	**333**	*e*P		**P**	**21 29 04.5**	**+1.5**
FETA	**Feichten**	**81.26**	**337**	⇑*i*P		**P**	**21 29 04.3**	**+1.0**
	comp=Z,23nm,1.0s,mb5.0							
MEZF	**Maizieres J'vi**	**81.29**	**341**	*e*P		**P**	**21 29 03.1**	**-0.4**
	comp=Z,36nm,0.9s,mb5.0							
MEZF	**Maizieres J'vi**	**81.29**	**341**	*e*P		**P**	**21 29 03.1**	**-0.4**
	comp=Z,36nm,0.9s,mb5.3							
BOJS	**Bojanci**	**81.32**	**333**	*i* P		**P**	**21 29 09.3**	**+5.6**
THEF	**They Montfort**	**81.33**	**340**	*e*P		**P**	**21 29 02.9**	**-0.8**
JAVS	**Javornik**	**81.33**	**334**	*i* P		**P**	**21 28 59.2**	**-4.5**
MOF	**Molkenrain**	**81.41**	**339**	*e*P		**P**	**21 29 02.9**	**-1.2**
HAU	**Haudompre**	**81.46**	**340**	*e*P		**P**	**21 29 03.6**	**-0.8**
	comp=Z,28nm,1.0s,mb4.8							
HAU				*e*MLR		MLR		
	comp=Z,171nm,21.0s,MS4.1							
HAU	**Haudompre**	**81.46**	**340**	*e*P		**P**	**21 29 03.6**	**-0.8**
HAU					pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8							
HAU				MLR		MLR		
	comp=Z,170nm,21.0s,MS4.4							
HAU	**Haudompre**	**81.46**	**340**	*e*P		**P**	**21 29 03.6**	**-0.8**
	comp=Z,14nm,1.0s,mb4.8							
HAU				LR		LR		
	comp=Z,170nm,21.0s,MS4.4							
HINF	**Hinteralfeld**	**81.51**	**339**	*e*P		**P**	**21 29 03.7**	**-1.0**
	comp=Z,28nm,1.1s,mb4.8							
HINF	**Hinteralfeld**	**81.51**	**339**	*e*P		**P**	**21 29 03.7**	**-1.0**
HINF					pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8							
HINF	**Hinteralfeld**	**81.51**	**339**	*e*P		**P**	**21 29 03.7**	**-1.0**
	comp=Z,14nm,1.1s,mb4.8							
MMB	**Musomiste**	**81.82**	**326**	*i* P		**P**	**21 29 14.7**	**+8.3**
TUE	**Stuetta**	**82.13**	**337**	*e*P		**P**	**21 29 08.5**	**+0.6**
	comp=Z,34nm,0.8s,mb5.3							
FLN	**La Foliniere**	**82.17**	**344**	*e*P		**P**	**21 29 07.7**	**-0.4**
	comp=Z,55nm,1.1s,mb5.1							
FLN				*e*MLR		MLR		
	comp=Z,132nm,18.5s,MS4.0							
FLN	**La Foliniere**	**82.17**	**344**	*e*P		**P**	**21 29 07.7**	**-0.4**
FLN					pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1							
FLN				MLR		MLR		
	comp=Z,130nm,18.5s,MS4.3							
FLN	**La Foliniere**	**82.17**	**344**	*e*P		**P**	**21 29 07.7**	**-0.4**
	comp=Z,27nm,1.1s,mb5.1							
FLN				LR		LR		
	comp=Z,130nm,18.5s,MS4.3							
LDF	**La Druitiere**	**82.27**	**344**	*e*P		**P**	**21 29 08.2**	**-0.4**
	comp=Z,39nm,1.2s,mb4.9							
LDF	**La Druitiere**	**82.27**	**344**	*e*P		**P**	**21 29 08.2**	**-0.4**
LDF					pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9							
LDF	**La Druitiere**	**82.27**	**344**	*e*P		**P**	**21 29 08.2**	**-0.4**
	comp=Z,20nm,1.2s,mb4.9							
STIP	**Stip**	**82.32**	**327**	*i* P		**P**	**21 29 08.1**	**-0.9**
STIP				*i* PcP		PcP	21 29 15.9	+1.6
VAY	**Valandovo**	**82.50**	**326**	*i* P		**P**	**21 29 08.7**	**-1.2**
VAY				*i* PcP		PcP	21 29 17.1	+2.1
GRR	**Gorron**	**82.60**	**344**	*e*P		**P**	**21 29 10.2**	**-0.2**
LOR	**Lormes**	**82.72**	**341**	*e*P		**P**	**21 29 10.5**	**-0.5**
	comp=Z,50nm,1.2s,mb5.1							
LOR				*e*MLR		MLR		
	comp=Z,137nm,18.0s,MS4.1							
LOR	**Lormes**	**82.72**	**341**	*e*P		**P**	**21 29 10.5**	**-0.5**
LOR					pmax	pmax		
	comp=Z,25nm,1.2s,mb5.1							
LOR				MLR		MLR		
	comp=Z,140nm,18.0s,MS4.4							
LOR	**Lormes**	**82.72**	**341**	*e*P		**P**	**21 29 10.5**	**-0.5**
	comp=Z,25nm,1.2s,mb5.1							
LOR				LR		LR		
	comp=Z,140nm,18.0s,MS4.4							
CABF	**La Chapelle**	**82.83**	**339**	*e*P		**P**	**21 29 11.5**	**-0.1**
	comp=Z,42nm,1.2s,mb5.0							
CABF	**La Chapelle**	**82.83**	**339**	*e*P		**P**	**21 29 11.5**	**-0.1**
CABF					pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0							
CABF	**La Chapelle**	**82.83**	**339**	*e*P		**P**	**21 29 11.5**	**-0.1**
	comp=Z,21nm,1.2s,mb5.0							
KRUS	**Krusevo**	**82.95**	**327**	*i* P		**P**	**21 29 12.3**	**0.0**
KRUS				*i* PcP		PcP	21 29 20.5	+3.5
SSF	**Saint Saulge**	**82.99**	**341**	*e*P		**P**	**21 29 12.0**	**-0.4**
	comp=Z,18nm,0.9s,mb4.8							
SSF	**Saint Saulge**	**82.99**	**341**	*e*P		**P**	**21 29 12.0**	**-0.4**
SSF					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8							
SSF	**Saint Saulge**	**82.99**	**341**	*e*P		**P**	**21 29 12.0**	**-0.4**
	comp=Z,8.8nm,0.9s,mb4.8							
SGMF	**Saint Gilles**	**83.03**	**346**	*e*P		**P**	**21 29 12.8**	**+0.2**
	comp=Z,29nm,0.8s,mb5.0							
SGMF	**Saint Gilles**	**83.03**	**346**	*e*P		**P**	**21 29 12.8**	**+0.2**
SGMF					pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1							
SGMF	**Saint Gilles**	**83.03**	**346**	*e*P		**P**	**21 29 12.8**	**+0.2**
	comp=Z,15nm,0.8s,mb5.1							
ROSF	**Rostrenen**	**83.07**	**346**	*e*P		**P**	**21 29 12.7**	**-0.1**
	comp=Z,66nm,1.2s,mb5.2							
ROSF	**Rostrenen**	**83.07**	**346**	*e*P		**P**	**21 29 12.7**	**-0.1**
ROSF					pmax	pmax		
	comp=Z,33nm,1.2s,mb5.2							
ROSF	**Rostrenen**	**83.07**	**346**	*e*P		**P**	**21 29 12.7**	**-0.1**
	comp=Z,33nm,1.2s,mb5.2							
CSS	**Prodhromos**	**83.22**	**316**	*e*P		**P**	**21 29 12.7**	**-1.2**
	comp=Z,19nm,0.8s,mb5.2							
AVF	**Avril sur Loir**	**83.28**	**341**	*e*P		**P**	**21 29 13.5**	**-0.4**
	comp=Z,45nm,1.2s,mb5.1							
AVF	**Avril sur Loir**	**83.28**	**341**	*e*P		**P**	**21 29 13.5**	**-0.4**
AVF					pmax	pmax		
	comp=Z,22nm,1.2s,mb5.1							
AVF	**Avril sur Loir**	**83.28**	**341**	*e*P		**P**	**21 29 13.5**	**-0.4**
	comp=Z,22nm,1.2s,mb5.1							
SMF	**Signal de Mont**	**83.31**	**341**	*e*P		**P**	**21 29 13.7**	**-0.4**
	comp=Z,88nm,1.2s,mb5.4							
SMF	**Signal de Mont**	**83.31**	**341**	*e*P		**P**	**21 29 13.7**	**-0.4**
SMF					pmax	pmax		
	comp=Z,44nm,1.2s,mb5.4							
SMF	**Signal de Mont**	**83.31**	**341**	*e*P		**P**	**21 29 13.7**	**-0.4**
	comp=Z,44nm,1.2s,mb5.4							
QUIF	**Quistinic**	**83.46**	**346**	*e*P		**P**	**21 29 14.7**	**-0.1**
TIR	**Tirane**	**83.47**	**328**	*e*P		**P**	**21 29 14.5**	**-0.5**
TIR					pmax	pmax		
	comp=Z,38nm,0.7s,mb5.5							
TIR	**Tirane**	**83.47**	**328**	*e*P		**P**	**21 29 14.5**	**-0.5**
	comp=Z,38nm,0.7s,mb5.5							
BGF	**Bois d'Agland**	**83.61**	**341**	*e*P		**P**	**21 29 15.4**	**-0.2**
LPL	**La Plagne**	**83.69**	**339**	*e*P		**P**	**21 29 16.6**	**+0.5**
	comp=Z,41nm,0.9s,mb5.3							
LPL	**La Plagne**	**83.69**	**339**	*e*P		**P**	**21 29 16.6**	**+0.5**
LPL					pmax	pmax		
	comp=Z,21nm,0.9s,mb5.3							
LPL	**La Plagne**	**83.69**	**339**	*e*P		**P**	**21 29 16.6**	**+0.5**
	comp=Z,21nm,0.9s,mb5.3							
LPG	**La Plagne**	**83.71**	**339**	*e*P		**P**	**21 29 16.8**	**+0.7**
	comp=Z,59nm,0.9s,mb5.4							
LPG	**La Plagne**	**83.71**	**339**	*e*P		**P**	**21 29 16.8**	**+0.7**
LPG					pmax	pmax		
	comp=Z,30nm,0.9s,mb5.4							
LPG	**La Plagne**	**83.71**	**339**	*e*P		**P**	**21 29 16.8**	**+0.7**
	comp=Z,30nm,0.9s,mb5.4							
PLDF	**La Plantade**	**84.00**	**341**	*e*P		**P**	**21 29 17.8**	**+0.2**
TCF	**Toulx Ste Croi**	**84.01**	**342**	*e*P		**P**	**21 29 17.7**	**0.0**
	comp=Z,21nm,1.0s,mb4.9							
TCF	**Toulx Ste Croi**	**84.01**	**342**	*e*P		**P**	**21 29 17.7**	**0.0**
TCF					pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9							
TCF	**Toulx Ste Croi**	**84.01**	**342**	*e*P		**P**	**21 29 17.7**	**0.0**
	comp=Z,11nm,1.0s,mb4.9							
AGO	**Saint Agoulin**	**84.03**	**341**	*e*P		**P**	**21 29 18.0**	**+0.2**
BNI	**Bardonecchia**	**84.14**	**338**	*e*P		**P**	**21 29 18.8**	**+0.4**
BNI				*e*		pP	21 29 27.7	+0.3
BNI					pmax	pmax		
	comp=Z,15nm,1.0s,mb5.1							
BNI	**Bardonecchia**	**84.14**	**338**	*e*P		**P**	**21 29 18.8**	**+0.5**
	comp=Z,15nm,1.0s,mb5.1							
BNI				*e*		pP	21 29 27.7	+0.4
MFF	**Saint Martin d**	**84.19**	**343**	*e*P		**P**	**21 29 18.7**	**+0.1**
MBDF	**Montbardon**	**84.42**	**338**	*e*P		**P**	**21 29 19.7**	**-0.1**
	comp=Z,21nm,0.9s,mb5.0							
MBDF	**Montbardon**	**84.42**	**338**	*e*P		**P**	**21 29 19.7**	**-0.1**
MBDF					pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0							
MBDF	**Montbardon**	**84.42**	**338**	*e*P		**P**	**21 29 19.7**	**-0.1**
	comp=Z,11nm,0.9s,mb5.0							
SSB	**Saint Sauveur**	**84.44**	**340**	*e*P		**P**	**21 29 19.7**	**-0.2**
ORIF	**Oris-en-Rattie**	**84.46**	**339**	*e*P		**P**	**21 29 20.4**	**+0.4**
	comp=Z,38nm,0.9s,mb5.2							
ORIF				*e*MLR		MLR		
	comp=Z,140nm,20.5s,MS4.0							
ORIF	**Oris-en-Rattie**	**84.46**	**339**	*e*P		**P**	**21 29 20.4**	**+0.4**
ORIF					pmax	pmax		
	comp=Z,19nm,0.9s,mb5.2							
ORIF	**Oris-en-Rattie**	**84.46**	**339**	*e*P		**P**	**21 29 20.4**	**+0.4**
	comp=Z,19nm,0.9s,mb5.2							
VIVF	**Saint-Julien-l**	**84.81**	**340**	*e*P		**P**	**21 29 22.2**	**+0.4**
	comp=Z,19nm,1.0s,mb4.9							
VIVF	**Saint-Julien-l**	**84.81**	**340**	*e*P		**P**	**21 29 22.2**	**+0.4**
VIVF					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9							
VIVF	**Saint-Julien-l**	**84.81**	**340**	*e*P		**P**	**21 29 22.2**	**+0.4**
	comp=Z,9.6nm,1.0s,mb4.9							
SAOF	**Saorge**	**84.91**	**337**	*e*P		**P**	**21 29 22.2**	**-0.1**
AUTN	**L'Aution**	**84.94**	**338**	*e*P		**P**	**21 29 21.8**	**-0.6**
TOUF	**Mont Tournerai**	**84.97**	**338**	*e*P		**P**	**21 29 22.5**	**0.0**
LUCF	**Luceram**	**85.05**	**338**	*e*P		**P**	**21 29 22.5**	**-0.5**
SBF	**Sospel**	**85.06**	**338**	*e*P		**P**	**21 29 22.5**	**-0.5**
	comp=Z,23nm,0.7s,mb5.1							
SBF	**Sospel**	**85.06**	**338**	*e*P		**P**	**21 29 22.5**	**-0.5**
SBF					pmax	pmax		
	comp=Z,11nm,0.7s,mb5.1							
SBF	**Sospel**	**85.06**	**338**	*e*P		**P**	**21 29 22.5**	**-0.5**
	comp=Z,11nm,0.7s,mb5.1							
RJF	**Les Rejaudoux**	**85.09**	**342**	*e*P		**P**	**21 29 22.9**	**-0.3**
RJF				*e*MLR		MLR		
	comp=Z,115nm,19.8s,MS4.0							
RJF	**Les Rejaudoux**	**85.09**	**342**	*e*P		**P**	**21 29 22.9**	**-0.3**
RJF					LR	LR		
	comp=Z,110nm,19.8s,MS4.2							
MVIF	**Mont Vial**	**85.10**	**338**	*e*P		**P**	**21 29 22.5**	**-0.7**
REVF	**Revere**	**85.19**	**338**	*e*P		**P**	**21 29 23.4**	**-0.3**
CAF	**Calviac**	**85.34**	**342**	*e*P		**P**	**21 29 24.5**	**+0.1**
	comp=Z,31nm,1.1s,mb5.0							
CAF	**Calviac**	**85.34**	**342**	*e*P		**P**	**21 29 24.5**	**+0.1**
CAF					pmax	pmax		
	comp=Z,16nm,1.1s,mb5.1							
CAF	**Calviac**	**85.34**	**342**	*e*P		**P**	**21 29 24.5**	**+0.1**
	comp=Z,16nm,1.1s,mb5.0							
SMRF	**Simiane la Rot**	**85.42**	**339**	*e*P		**P**	**21 29 25.7**	**+0.9**
	comp=Z,37nm,1.4s,mb5.0							
SMRF	**Simiane la Rot**	**85.42**	**339**	*e*P		**P**	**21 29 25.7**	**+0.9**
	comp=Z,37nm,1.4s,mb5.3							
FRF	**La Foret Royal**	**85.54**	**338**	*e*P		**P**	**21 29 25.0**	**-0.4**
LFF	**La Frestale**	**85.60**	**342**	*e*P		**P**	**21 29 26.2**	**+0.5**
	comp=Z,80nm,1.3s,mb5.5							
LFF	**La Frestale**	**85.60**	**342**	*e*P		**P**	**21 29 26.2**	**+0.5**
LFF					pmax	pmax		
	comp=Z,40nm,1.3s,mb5.5							
LFF	**La Frestale**	**85.60**	**342**	*e*P		**P**	**21 29 26.2**	**+0.5**
	comp=Z,40nm,1.3s,mb5.5							
LASF	**Ste Croix**	**85.74**	**340**	*e*P		**P**	**21 29 25.8**	**-0.6**
	comp=Z,41nm,1.3s,mb5.2							
LMR	**La Mourre**	**85.79**	**338**	*e*P		**P**	**21 29 26.6**	**-0.1**
	comp=Z,59nm,1.2s,mb5.4							
LMR	**La Mourre**	**85.79**	**338**	*e*P		**P**	**21 29 26.6**	**-0.1**
LMR					pmax	pmax		
	comp=Z,29nm,1.2s,mb5.4							
LMR	**La Mourre**	**85.79**	**338**	*e*P		**P**	**21 29 26.6**	**-0.1**
	comp=Z,29nm,1.2s,mb5.4							
PGF	**Pioggiola**	**85.86**	**336**	*e*P		**P**	**21 29 26.5**	**-0.5**
	comp=Z,23nm,1.1s,mb5.0							
PGF	**Pioggiola**	**85.86**	**336**	*e*P		**P**	**21 29 26.5**	**-0.5**
PGF					pmax	pmax		
	comp=Z,11nm,1.1s,mb5.0							
PGF	**Pioggiola**	**85.86**	**336**	*e*P		**P**	**21 29 26.5**	**-0.5**
	comp=Z,11nm,1.1s,mb5.0							
CUC	**Castrocucco**	**86.09**	**330**	*e*P		**P**	**21 29 26.5**	**-1.7**
	comp=Z,12nm,1.0s,mb5.1							
TIP	**Timpagrande**	**86.49**	**329**	*e*P		**P**	**21 29 29.4**	**-0.8**
	comp=Z,20nm,1.1s,mb5.2							
EIL	**Elat**	**86.71**	**311**	P		**P**	**21 29 30.9**	**-0.5**
	comp=Z,3.2nm,0.8s,mb4.6,baz=328,slow=19,SNR=3.1							
MTLF	**Montolieu**	**86.81**	**341**	*e*P		**P**	**21 29 30.7**	**-1.0**
	comp=Z,26nm,1.2s,mb5.0							
MTLF	**Montolieu**	**86.81**	**341**	*e*P		**P**	**21 29 30.7**	**-1.0**
MTLF					pmax	pmax		
	comp=Z,13nm,1.2s,mb5.0							
MTLF	**Montolieu**	**86.81**	**341**	*e*P		**P**	**21 29 30.7**	**-1.0**
	comp=Z,13nm,1.2s,mb5.0							
EPF	**Esparros**	**87.51**	**342**	*e*P		**P**	**21 29 34.7**	**-0.4**
	comp=Z,9.2nm,0.9s,mb4.7							
EPF	**Esparros**	**87.51**	**342**	*e*P		**P**	**21 29 34.7**	**-0.4**
EPF					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7							
EPF	**Esparros**	**87.51**	**342**	*e*P		**P**	**21 29 34.7**	**-0.4**
	comp=Z,4.6nm,0.9s,mb4.7							
SJPF	**Ste Jean**	**87.75**	**343**	*e*P		**P**	**21 29 36.4**	**+0.2**
	comp=Z,45nm,1.5s,mb5.2							
SJPF	**Ste Jean**	**87.75**	**343**	*e*P		**P**	**21 29 36.4**	**+0.2**
SJPF					pmax	pmax		
	comp=Z,23nm,1.5s,mb5.2							
SJPF	**Ste Jean**	**87.75**	**343**	*e*P		**P**	**21 29 36.4**	**+0.2**
	comp=Z,23nm,1.5s,mb5.2							
CMIG	**Matias Romero**	**90.20**	**64**	P		**P**	**21 29 46.5**	**-1.7**
	comp=Z,5.0nm,1.0s,mb4.8,baz=337,slow=7.4,SNR=4.1							
ESDC	**Sonseca Array**	**91.60**	**344**	P		**P**	**21 29 53.1**	**-1.2**
	comp=Z,1.1nm,0.8s,mb4.2,baz=12,slow=3.6,SNR=9.4							
ESDC				LR		LR	22 13 58.8	
	comp=Z,106nm,19.8s,MS4.3,baz=30,slow=37							
KEST	**Kesra**	**92.06**	**333**	P		**P**	**21 29 56.1**	**-0.4**
	comp=Z,2.1nm,1.0s,mb4.4,baz=218,slow=6.6,SNR=4.4							
TORD	**Torodi Ar. Bea**	**115.54**	**332**	PKP		PKPdf	21 35 27.1	-2.7
	comp=Z,0.6nm,1.1s,baz=7.2,slow=2.6,SNR=2.8							
TORD

PLIG			*i* S		**Sn**	**21 34 26.2**	**-3.1**
PLIG	**Platanillo**	**4.32 286**	*i* P		**Pn**	**21 33 40.7**	**+0.9**
PLIG			*i* S		**Sn**	**21 34 25.3**	**-4.0**
SZVM	**Salazar**	**4.54 298**	*i* P		**Pn**	**21 33 45.7**	**+3.0**
ZIIG	**Zihuatanejo**	**6.06 274**	*i* P		**Pn**	**21 34 03.0**	**-0.3**
ZIIG	**Zihuatanejo**	**6.06 274**	*i* P		**Pn**	**21 34 03.1**	**-0.2**
TEIG	**Tepich**	**7.13 64**	P		**Pn**	**21 34 16.0**	**-1.8**
	14nm,0.3s,baz=269,slow=2.8,SNR=100						
TEIG			S		**Sn**	**21 35 31.5**	**-5.7**
	29nm,0.3s,baz=330,slow=22,SNR=16						
TEIG	**Tepich**	**7.13 64**	*e*Pn		**Pn**	**21 34 16.0**	**-1.8**
TEIG			*e*Sn		**Sn**	**21 35 34.0**	**-3.2**
JTS	**JuntasAbangare**	**12.06 124**	P		**Pn**	**21 35 24.0**	**-0.2**
	2.2nm,0.3s,baz=308,slow=20,SNR=5.1						
JTS	**JuntasAbangare**	**12.06 124**	*e*Pn		**Pn**	**21 35 24.3**	**+0.2**
JCT	**Junction City**	**13.84 343**	*e*Pn		**Pn**	**21 35 53.3**	**+6.2**
GDL2	**Guadalupe Moun**	**17.07 332**	*e*P		**Pn**	**21 36 29.8**	**+2.4**
MIAR	**Mount Ida**	**17.27 4**	*e*Pn		**Pn**	**21 36 29.8**	**-0.1**
	8.7nm,0.6s						
LRAL	**Lakeview Retre**	**17.33 23**	*e*Pn		**Pn**	**21 36 31.6**	**+1.0**
UALR	**University of**	**17.62 8**	*e*Pn		**Pn**	**21 36 34.1**	**0.0**
	15nm,0.6s						
WMOK	**Wichita Mounta**	**17.71 350**	*e*P		**Pn**	**21 36 35.0**	**-0.2**
	9.5nm,1.1s						
AMTX	**Amarillo**	**18.50 343**	*e*P		**P**	**21 36 40.3**	**-2.8**
	12nm,0.8s						
GOGA	**Godfrey**	**19.20 31**	*e*P		**P**	**21 36 49.6**	**-1.1**
BNM	**Barren Site**	**19.73 331**	*e*P		**P**	**21 36 57.8**	**+1.3**
LPM	**Los Pinos Moun**	**19.87 331**	*e*P		**P**	**21 36 58.4**	**+0.5**
WVT	**Waverly**	**19.88 18**	*e*P		**P**	**21 36 56.4**	**-1.6**
LENM	**Lemitar**	**19.91 330**	*e*P		**P**	**21 36 59.5**	**+1.2**
LAZ	**Ladron**	**20.18 330**	*e*P		**P**	**21 37 02.0**	**+0.7**
ANMO	**Albuquerque**	**20.32 332**	P		**P**	**21 37 03.9**	**+1.1**
	2.9nm,0.9s,baz=151,slow=13,SNR=11						
ANMO	**Albuquerque**	**20.32 332**	*e*P		**P**	**21 37 04.1**	**+1.4**
CPCT	**Cooper Cave**	**20.43 25**	*e*P		**P**	**21 37 02.9**	**-1.1**
TUC	**Tucson**	**20.62 320**	*e*P		**P**	**21 37 07.6**	**+1.6**
	7.8nm,0.8s						
TKL	**Tuckaleechee C**	**20.92 27**	P		**P**	**21 37 08.8**	**-0.5**
	6.1nm,0.5s,baz=196,slow=13,SNR=8.9						
CCM	**Cathedral Cave**	**21.00 9**	*e*P		**P**	**21 37 09.3**	**-0.7**
	7.4nm,0.6s						
TZTN	**Tazewell**	**21.77 26**	*e*P		**P**	**21 37 16.9**	**-1.4**
SDCO	**Great Sand Dun**	**22.36 338**	*e*P		**P**	**21 37 26.0**	**+1.6**
MVCO	**Mesa Verde**	**23.11 332**	*e*P		**P**	**21 37 32.7**	**+1.0**
	2.7nm,0.5s,mb3.8						
OTAV	**Otavalo**	**23.57 134**	P		**P**	**21 37 36.0**	**-0.1**
ISCO	**Idaho Springs**	**24.24 340**	*e*P		**P**	**21 37 42.3**	**+0.4**
	3.3nm,1.0s,mb3.6						
SCIA	**State Center**	**24.62 3**	*e*P		**P**	**21 37 44.5**	**-0.9**
	16nm,0.4s,mb4.8						
ACSO	**Alum Creek Sta**	**25.19 22**	*e*P		**P**	**21 37 48.8**	**-1.8**
JFWS	**Jewell Farm**	**25.91 8**	*e*P		**P**	**21 37 56.1**	**-0.9**
	11nm,0.5s,mb4.6						
ECSD	**EROS,Sioux Fal**	**26.42 358**	*e*P		**P**	**21 38 01.1**	**-0.5**
PDAR	**Pinedale Array**	**28.25 337**	P		**P**	**21 38 18.8**	**+0.9**
	0.4nm,0.8s,mb3.0,baz=161,slow=11,SNR=3.7						
ELK	**Elko**	**29.14 328**	P		**P**	**21 38 27.0**	**+1.1**
	2.0nm,0.8s,mb3.8,baz=130,slow=5.8,SNR=9.3						
NVAR	**Mina Array Bea**	**29.26 321**	P		**P**	**21 38 29.1**	**+2.1**
	3.1nm,0.7s,mb4.0,baz=131,slow=8.9,SNR=26						
HLID	**Hailey**	**30.90 332**	*e*P		**P**	**21 38 40.5**	**-0.8**
	1.0nm,0.8s,mb3.6						
LPAZ	**La Paz**	**42.65 140**	P		**P**	**21 40 21.9**	**+0.8**
	1.4nm,0.6s,mb3.8,baz=327,slow=6.9,SNR=5.8						
LPAZ			pP		pP	21 40 49.8	+1.8
	2.0nm,0.8s,baz=332,slow=7.4,SNR=6.5						
CPUP	**Villa Florida**	**56.80 139**	pP		pP	21 42 35.6	-0.8
	1.8nm,0.8s,baz=331,slow=8.5,SNR=5.1						
ESDC	**Sonseca Array**	**80.06 52**	P		**P**	**21 44 32.4**	**-0.5**
	0.4nm,0.7s,mb3.4,baz=302,slow=3.3,SNR=4.5						
ARCES	**ARCESS Array B**	**83.98 18**	P		**P**	**21 44 52.5**	**-0.3**
	1.9nm,0.7s,mb4.0,baz=297,slow=5.3,SNR=9.9						
STKA	**Stephens Creek**	**126.95 243**	PKP		PKPdf	21 51 26.0	-0.5
	3.9nm,1.1s,baz=273,slow=18,SNR=4.3						
STKA	**Stephens Creek**	**126.95 243**	PKP		PKPdf	21 51 26.0	-0.5
MAW	**Mawson**	**127.72 170**	PKP		PKPdf	21 51 26.3	-0.6
	0.9nm,0.8s,baz=297,slow=4.5,SNR=3.6						
WRA	**Warramunga Arr**	**133.18 259**	PKP		PKPdf	21 51 38.1	-0.6
	0.7nm,0.5s,baz=85,slow=2.7,SNR=17						
ASAR	**Alice Springs**	**133.80 254**	PKP		PKPdf	21 51 39.8	0.0
	0.4nm,0.8s,baz=119,slow=1.6,SNR=5.6						

MAN 16 21:39:17,943N×12495E,h34km,mb3.8,ML2.6,MS2.1,
Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.63**	**57**	*e*P	Pn	21 39 31.3	+1.8
SCPH				*e*S	Sn	21 39 36.4	-2.0
MSLP	**Maasin**	**0.70**	**352**	*e*P	Pn	21 39 32.1	+1.5
MSLP				*e*S	Sn	21 39 40.5	+0.2
BUKP	**Musuan**	**1.55**	**176**	*e*P	Pn	21 39 43.5	+1.3

IDC 16 21:43:13.0±1.1,6322S×16462W,h0km,mb3.7/4,
mb1 4.0/4,mb1mx3.8/11,mbtmp3.7/4,MS4.0/3,Ms1 3.9/3,
ms1mx3.4/20,Error ellipse: s-maj=298.0km
s-min=25.7km az=17.0,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**45.08 204**		LR	LR	22 09 27.2	
	comp=Z,85nm,21.6s,baz=248,slow=35						
ASAR	**Alice Springs**	**56.34 285**		P	P	21 52 55.5	+0.1
	0.6nm,0.5s,baz=148,slow=8.2,SNR=9.2						
WRA	**Warramunga Arr**	**59.43 287**		P	P	21 53 16.4	-0.7
	0.3nm,0.7s,baz=155,slow=5.7,SNR=6.1						
CPUP	**Villa Florida**	**74.19 117**		P	P	21 54 50.6	-0.6
	0.1nm,0.3s,baz=221,slow=9.3,SNR=2.8						
LPAZ	**La Paz**	**78.50 103**		P	P	21 55 16.9	+1.1
	0.4nm,0.4s,baz=169,slow=5.2,SNR=4.8						
BOSA	**Boshof**	**88.15 189**		LR	LR	22 35 23.2	
	comp=Z,106nm,18.1s,baz=351,slow=36						
TSUM	**Tsumeb**	**97.83 182**		LR	LR	22 34 31.0	
	comp=Z,105nm,21.1s,baz=178,slow=32						
KURK	**Kurchatov**	**144.87 279**		PKP	PKPdf	22 02 49.2	-1.3
	1.6nm,0.7s,baz=126,slow=3.6,SNR=8.4						
BVAR	**Borovoye Array**	**150.16 276**		PKP	PKPdf	22 02 59.8	+0.6
	0.3nm,0.4s,baz=50,slow=14,SNR=2.7						
BVAR				PKPbc	PKPbc	22 03 04.1	-0.1
	0.7nm,0.5s,baz=119,slow=3.4,SNR=5.8						
BVAR				PKPab	PKPab	22 03 10.7	+0.3
	0.8nm,0.6s,baz=151,slow=5.0,SNR=5.4						

*ISCJB **16** 21:49:26.0±5.6, 190N×0.1×1458E±0.3, h237km±58km, mb3.5/8, Error ellipse: s-maj=52.5km s-min=17.1km az=175.7*
*IDC **16** 21:49:28.6±6.2, 1899N×14587E, h251km±63km, mb3.1/7, mb1 3.3/9, mb1mx3.2/21, mbtmp3.2/9, Error ellipse: s-maj=50.7km s-min=13.7km az=83.0*

ISC 16 21:49:27.7±5.3,190N±01×1458E±03,h239km±57km,n11,
σ0s56/11,mb3.5/8,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**17.95 299**		P	**P**	**21 53 20.0**	**-0.5**
	3.7nm,0.3s,baz=126,slow=19,SNR=3.4						
MJAR	**Matsushiro Arr**	**18.75 341**		P	**P**	**21 53 28.5**	**-0.5**
	0.4nm,0.3s,baz=164,slow=9.0,SNR=7.7						
MAT	**Matsushiro**	**18.75 341**		P	**P**	**21 53 29.3**	**+0.3**
KSRS	**Korea Array**	**24.17 323**		P	**P**	**21 54 22.9**	**+0.6**
	1.0nm,0.7s,mb3.5,baz=134,slow=10,SNR=3.4						
BATI	**Baumata**	**36.30 219**		P	**P**	**21 56 09.2**	**+0.3**
	8.8nm,0.3s,mb4.7,baz=68,slow=11,SNR=3.9						
WRA	**Warramunga Arr**	**40.27 197**		P	**P**	**21 56 42.0**	**+0.3**
	0.9nm,0.5s,mb3.5,baz=4.3,slow=8.9,SNR=11						
FITZ	**Fitzroy Crossi**	**41.83 209**		P	**P**	**21 56 54.1**	**-0.4**
	0.6nm,0.3s,mb3.5,baz=42,slow=10,SNR=7.4						
SONM	**Songino Array**	**43.01 321**		P	**P**	**21 57 04.6**	**+1.0**
	0.3nm,0.5s,mb2.9,baz=122,slow=11,SNR=2.4						
ASAR	**Alice Springs**	**43.94 196**		P	**P**	**21 57 11.1**	**-0.1**
	0.2nm,0.5s,mb2.8,baz=9.6,slow=7.6,SNR=3.6						
CMAR	**Chiang Mai Arr**	**44.30 277**		P	**P**	**21 57 14.4**	**+0.1**
	0.8nm,0.7s,mb3.2,baz=68,slow=8.2,SNR=6.3						
BVAR	**Borovoye Array**	**66.34 320**		P	**P**	**21 59 49.5**	**-1.2**
	0.7nm,0.6s,mb3.5,baz=95,slow=7.7,SNR=6.8						

*IDC **16** 21:58:32.9±1.4, 3585N×2560E, h0km, mb3.8/5, mb1 3.8/5, mb1mx3.6/23, mbtmp3.8/5, Error ellipse: s-maj=316.0km s-min=24.1km az=141.0*
*ATH **16** 21:58:34.7, 3543N×2605E, h20km±2km, MD3.6/9*

*ISCJB **16** 21:58:34.5±1.0, 3526N±004×26.14E±005, h20km±8km, mb3.8/5, Error ellipse: s-maj=8.3km s-min=6.0km az=140.7*
*NEIC **16** 21:58:34.7, 3543N×2605E, h20km, MD3.7(ATH), After ATH.*
*CSEM **16** 21:58:35.4±0.1, 3527N×2607E, h30km, MD3.7, Error ellipse: s-maj=2.3km s-min=2.0km az=53.0*
*THE **16** 21:58:36.1, 3534N×2600E, h2km*

ISC 16 21:58:33.7±1.0,3530N±004×2616E±005,h4km±7km,n31,
σ0s63/43,mb3.8/5,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.45**	**266**	*e*PB	**Pg**	**21 58 42.8**	**+0.5**
NPS				SB	**Sg**	**21 58 48.1**	**0.0**
KARP	**Karpathos**	**0.86**	**73**	*e*PN	**Pn**	**21 58 51.8**	**-0.7**
KARP				SN	**Sn**	**21 59 05.5**	**+0.1**
IDI	**Anoyia**	**1.04**	**270**	P	**Pg**	**21 58 53.1**	**-0.4**
SIVA	**Sivas**	**1.14**	**256**	*e*Pg	**Pg**	**21 58 55.7**	**+0.2**
SIVA				*e*Sg	**Sg**	**21 59 10.4**	**+0.2**
SANT	**Santorini**	**1.21**	**332**	*e*Pg	**Pg**	**21 58 56.7**	**-0.2**
SANT				*e*Sg	**Sg**	**21 59 12.6**	**0.0**
SANT	**Santorini**	**1.21**	**332**	*e*P	**Pg**	**21 58 56.4**	**-0.5**
SANT	**Santorini**	**1.21**	**332**	*e*Pg	**Pg**	**21 58 56.7**	**-0.2**
SANT				*e*S	**Sg**	**21 59 08.3**	**-4.3**
SANT				*e*Sg	**Sg**	**21 59 12.6**	**0.0**
SANT	**Santorini**	**1.21**	**332**	*e*P	**Pg**	**21 58 56.4**	**-0.5**
SANT				*e*S	**Sg**	**21 59 08.3**	**-4.3**
THR1	**Thera Island**	**1.21**	**332**	*e*Pg	**Pg**	**21 58 56.5**	**-0.4**
THR1				*e*Sg	**Sg**	**21 59 13.8**	**+1.1**
THR6	**Thira Island,**	**1.22**	**330**	*e*Pg	**Pg**	**21 58 57.1**	**-0.1**
THR6				*e*Sg	**Sg**	**21 59 13.3**	**+0.3**
THR3	**Thira Island,**	**1.27**	**331**	*e*Pg	**Pg**	**21 58 57.6**	**-0.4**
THR5	**Thira Island,**	**1.30**	**330**	*e*Pg	**Pg**	**21 58 58.0**	**-0.6**
THR4	**Thira Island,**	**1.31**	**332**	*e*Pg	**Pg**	**21 58 58.9**	**0.0**
THR4				*e*Sg	**Sg**	**21 59 15.6**	**-0.3**
VAM	**Vamos**	**1.60**	**274**	*e*PN	**Pn**	**21 59 03.4**	**+0.7**
VAM				SN	**Sn**	**21 59 23.6**	**-0.2**
VAM	**Vamos**	**1.60**	**274**	*e*Pn	**Pn**	**21 59 04.1**	**+1.4**
VAM				Sn	**Sn**	**21 59 23.6**	**-0.2**
APE	**Apeiranthos**	**1.84**	**344**	*e*PN	**Pn**	**21 59 05.5**	**-0.5**
ARG	**Arkhangelos**	**1.84**	**60**	*e*PN	**Pn**	**21 59 07.3**	**+1.3**
SMG	**Samos**	**2.47**	**13**	*e*PN	**Pn**	**21 59 14.5**	**-0.1**
KYTH	**Kithira**	**2.72**	**292**	*e*PN	**Pn**	**21 59 18.0**	**-0.1**
KYTH	**Kithira**	**2.72**	**292**	*e*Pb	**Pb**	**21 59 19.0**	**-3.8**
VLI	**Veliai**	**2.97**	**299**	*e*PN	**Pn**	**21 59 21.3**	**-0.2**
VLI	**Veliai**	**2.97**	**299**	*e*Pn	**Pn**	**21 59 20.3**	**-1.2**
ITM	**Ithomi**	**3.90**	**300**	*e*Pb	**Pb**	**21 59 36.1**	**-6.9**
PRK	**Paraskevi**	**3.94**	**1**	*e*PN	**Pn**	**21 59 34.8**	**-0.1**
LIA	**Limnos Island**	**4.66**	**351**	P	**Pn**	**21 59 45.9**	**+1.2**
TORD	**Torodi Ar. Bea**	**31.21**	**231**	P	**P**	**22 04 54.0**	**-0.2**
	0.3nm,0.4s,mb3.5,baz=33,slow=8.7,SNR=6.8						
KURK	**Kurchatov**	**40.46**	**51**	P	**P**	**22 06 12.2**	**-0.8**
	1.3nm,0.3s,mb4.1,baz=269,slow=8.2,SNR=12						
MKAR	**Makanchi Array**	**43.02**	**57**	P	**P**	**22 06 34.5**	**+0.4**
	1.4nm,0.5s,mb4.0,baz=267,slow=8.2,SNR=25						
MKAR	**Makanchi Array**	**43.02**	**57**	P	**P**	**22 06 34.5**	**+0.4**
ZALV	**Zalesovo Beam**	**44.32**	**46**	P	**P**	**22 06 43.5**	**-0.9**
	0.6nm,0.3s,mb3.8,baz=277,slow=9.5,SNR=3.8						
SONM	**Songino Array**	**58.77**	**51**	P	**P**	**22 08 33.6**	**+0.9**
	0.3nm,0.5s,mb3.6,baz=285,slow=5.8,SNR=3.0						

*ISCJB **16** 22:06:25.0±3.7, 16S±0.1×1283E±0.3, h26km±26km, mb4.3/5, Error ellipse: s-maj=61.0km s-min=8.7km az=159.3*
*NEIC **16** 22:06:28.7±0.6, 170S×12809E, h35km, mb4.5/3, Error ellipse: s-maj=38.0km s-min=7.7km az=70.0*
*DJA **16** 22:06:31, 192S×12738E, h42km, MLv4.0/5*
*IDC **16** 22:06:33.1±4.2, 186S×12818E, h82km±37km, mb3.7/3, mb1 3.8/5, mb1mx3.5/16, mbtmp3.6/5, MS3.2/2, Ms1 3.2/2, ms1mx2.8/20, Error ellipse: s-maj=93.4km s-min=11.9km az=71.0*

ISC 16 22:06:34.7±2.6,19S±02×1282E±04,h101km±24km,n12,
σ0s62/13,mb4.1/5,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**8.96**	**250**	LR	LR	22 11 32.2	
	comp=Z,90nm,20.7s,baz=120,slow=33						
BATI	**Baumata**	**9.40**	**208**	LR	LR	22 13 09.3	
	comp=Z,187nm,18.2s,baz=3.0,slow=42						
FITZ	**Fitzroy Crossi**	**16.30**	**189**	P	**Pn**	**22 10 17.8**	**+0.2**
	0.1nm,0.3s,baz=16,slow=12,SNR=3.8						
WRAB	**Tennant Creek**	**18.91**	**162**	*e*P	**Pn**	**22 10 49.1**	**-0.2**
	3.2nm,0.6s						
WRAB				*e*S	**S**	**22 14 16.8**	**-0.4**
WRA	**Warramunga Arr**	**18.92**	**162**	P	**Pn**	**22 10 49.2**	**-0.1**
	0.7nm,0.3s,baz=341,slow=12,SNR=44						
WRA				S	**S**	**22 14 17.5**	**+0.1**
	0.0nm,0.3s,baz=346,slow=21,SNR=3.7						
WB2	**Warramunga Arr**	**18.92**	**162**	*e*P	**Pn**	**22 10 48.5**	**-0.9**
ASAR	**Alice Springs**	**22.34**	**166**	P	**P**	**22 11 25.8**	**+1.5**
	2.5nm,0.4s,mb3.9,baz=347,slow=11,SNR=63						
ASAR				S	**S**	**22 15 27.8**	**+4.9**
	0.7nm,0.9s,baz=347,slow=21,SNR=4.9						
LSA	**Lhasa**	**47.31**	**315**	*e*P	**P**	**22 14 57.5**	**-0.8**
	4.5nm,0.6s,mb4.4						
SONM	**Songino Array**	**53.06**	**342**	P	**P**	**22 15 41.9**	**+0.5**
	0.4nm,0.7s,mb3.5,baz=134,slow=8.3,SNR=3.6						
MKAR	**Makanchi Array**	**62.99**	**326**	P	**P**	**22 16 50.5**	**-0.2**
	1.8nm,0.4s,mb4.4,baz=114,slow=8.0,SNR=50						
EKS2	**Erkin-Say**	**65.99**	**319**	*e*P	**P**	**22 17 10.9**	**+0.6**
EKS2				*e*PP	PP	22 19 36.7	-0.2
KURK	**Kurchatov**	**67.25**	**328**	*e*P	**P**	**22 17 17.9**	**-0.3**
	2.5nm,0.3s,mb4.5						

IDC 16 22:19:31.4±3.6,1790S×17453W,h0km,mb4.5/4,
mb1 4.6/4,mb1mx4.1/17,mbtmp4.5/4,Error ellipse:
s-maj=162.4km s-min=43.4km az=145.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.09**	**260**	P	P	22 26 44.1	+0.4
	3.8nm,0.7s,baz=87,slow=11,SNR=8.1						
STKA	**Stephens Creek**	**41.88**	**242**	P	P	22 27 24.4	+0.8
	1.7nm,0.8s,baz=82,slow=14,SNR=2.9						
WB2	**Warramunga Arr**	**48.25**	**259**	*e*P	P	22 28 13.4	-1.0
WRA	**Warramunga Arr**	**48.26**	**259**	P	P	22 28 13.8	-0.7
	4.0nm,0.4s,baz=98,slow=6.8,SNR=107						
ASAR	**Alice Springs**	**48.34**	**254**	P	P	22 28 14.8	-0.4
	14nm,0.7s,baz=87,slow=8.6,SNR=162						
GERES	**GERESS Array B**	**148.41**	**350**	PKPbc	PKPbc	22 39 19.4	-0.4
	0.3nm,0.5s,baz=350,slow=4.3,SNR=3.2						

IDC 16 22:28:16.2±1.6,262N×6621E,h0km,mb3.9/5,mb1 4.1/5,
mb1mx3.6/22,mbtmp3.9/5,Error ellipse: s-maj=66.6km
s-min=25.6km az=49.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKTO	**Aktyubinsk**	**48.14**	**353**	P	P	22 36 58.3	+0.3
	1.7nm,0.6s,baz=158,slow=11,SNR=4.4						
ZALV	**Zalesovo Beam**	**53.39**	**14**	P	P	22 37 37.2	-0.3
	1.0nm,0.7s,baz=222,slow=8.0,SNR=4.7						
WRA	**Warramunga Arr**	**70.44**	**112**	P	P	22 39 33.4	+0.3
	1.3nm,0.7s,baz=291,slow=5.6,SNR=8.6						
ASAR	**Alice Springs**	**70.76**	**116**	P	P	22 39 34.9	0.0
	0.7nm,0.6s,baz=286,slow=6.1,SNR=11						
ESDC	**Sonseca Array**	**73.12**	**311**	P	P	22 39 48.8	+0.1
	0.5nm,0.8s,baz=92,slow=7.5,SNR=4.8						

*ISCJB **16** 22:56:19.3±4.6, 13N±0.1×1282E±02, h136km±43km, mb4.3/19, Error ellipse: s-maj=35.9km s-min=10.5km az=143.8*
*IDC **16** 22:56:20.6±5.0, 128N×12813E, h133km±47km, mb3.7/9, mb1 3.7/11, mb1mx3.6/17, mbtmp3.6/11, Error ellipse: s-maj=42.8km s-min=14.4km az=66.0*
*NEIC **16** 22:56:20.0±4.1, 131N×12823E, h130km±38km, mb4.4/3, Error ellipse: s-maj=32.9km s-min=7.9km az=54.0*

ISC 16 22:56:19.4±4.2,13N±01×1282E±02,h121km±40km,n31,
σ0s62/29,mb4.5/19,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**10.54**	**233**	P	**Pn**	**22 58 47.3**	**0.0**
	1.1nm,0.3s,baz=188,slow=3.4,SNR=5.0						
KSM	**Kuching**	**17.92**	**271**	*e*P	**Pn**	**23 00 20.5**	**-0.6**
FITZ	**Fitzroy Crossi**	**19.45**	**187**	P	**P**	**23 00 36.2**	**-0.5**
	0.1nm,0.3s,baz=347,slow=7.7,SNR=6.5						
WRAB	**Tennant Creek**	**21.94**	**164**	*e*P	**P**	**23 01 03.9**	**+0.5**
	2.9nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**21.95**	**164**	P	**P**	**23 01 03.5**	**+0.1**
	3.5nm,0.6s,mb3.9,baz=342,slow=11,SNR=23						
WB2	**Warramunga Arr**	**21.95**	**164**	*e*P	**P**	**23 01 02.8**	**-0.7**
ASAR	**Alice Springs**	**25.43**	**168**	P	**P**	**23 01 36.3**	**+0.4**
	1.7nm,0.5s,mb3.7,baz=346,slow=12,SNR=12						
ASAR	**Alice Springs**	**25.43**	**168**	P	**P**	**23 01 36.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**33.41**	**303**	P	**P**	**23 02 46.4**	**-0.4**
	0.6nm,0.3s,mb3.9,baz=104,slow=6.6,SNR=4.6						
STKA	**Stephens Creek**	**35.35**	**160**	P	**P**	**23 03 03.9**	**+0.6**
	2.4nm,0.9s,mb4.0,baz=360,slow=5.9,SNR=3.0						
STKA	**Stephens Creek**	**35.35**	**160**	P	**P**	**23 03 03.9**	**+0.6**
KSRS	**Korea Array**	**35.98**	**360**	P	**P**	**23 03 08.8**	**+0.2**
	0.7nm,0.5s,mb3.9,baz=173,slow=9.5,SNR=3.3						
LSA	**Lhasa**	**45.16**	**312**	*e*P	**P**	**23 04 25.5**	**+1.2**
	5.1nm,0.6s,mb4.4						
TAPN	**Taplejung**	**46.66**	**307**	*e*P	**P**	**23 04 36.3**	**+0.2**
	9.0nm,0.5s,mb4.8						
ODAN	**Odare**	**46.70**	**307**	*e*P	**P**	**23 04 36.8**	**+0.4**
	16nm,0.6s,mb4.9						
RAMN	**Ramite**	**47.37**	**306**	*e*P	**P**	**23 04 42.3**	**+0.7**
	31nm,0.7s,mb5.2						
JIRN	**Jiri**	**48.01**	**307**	*e*P	**P**	**23 04 47.0**	**+0.5**
	26nm,0.8s,mb5.1						
GUN	**Gumba**	**48.37**	**307**	*e*P	**P**	**23 04 49.5**	**+0.2**
PKI	**Pulchoki**	**48.60**	**306**	*e*P	**P**	**23 04 51.0**	**0.0**
DMN	**Daman**	**48.86**	**306**	*e*P	**P**	**23 04 53.3**	**+0.3**
	9.9nm,0.7s,mb4.9						
GKN	**Gorkha**	**49.40**	**307**	*e*P	**P**	**23 04 56.6**	**-0.6**
SONM	**Songino Array**	**50.06**	**341**	P	**P**	**23 05 02.3**	**+0.5**
	1.2nm,0.6s,mb4.0,baz=152,slow=8.2,SNR=11						
SONM				PcP	PcP	23 06 20.2	+0.4
	0.4nm,0.6s,baz=168,slow=4.1,SNR=3.2						
KOLN	**Koldanda**	**50.14**	**306**	*e*P	**P**	**23 05 03.3**	**+0.5**
	28nm,0.6s,mb5.4						
DANN	**Dangsing**	**50.25**	**307**	*e*P	**P**	**23 05 03.4**	**-0.2**
	25nm,0.5s,mb5.4						
MKAR	**Makanchi Array**	**60.39**	**325**	P	**P**	**23 06 15.8**	**-0.1**
	3.9nm,0.4s,mb4.8,baz=116,slow=8.2,SNR=120						
MKAR	**Makanchi Array**	**60.39**	**325**	P	**P**	**23 06 15.8**	**-0.1**
ZALV	**Zalesovo Beam**	**63.42**	**333**	P	**P**	**23 06 34.4**	**-1.7**
	0.6nm,0.6s,mb3.7,baz=100,slow=3.3,SNR=4.2						
KURK	**Kurchatov**	**64.58**	**328**	*e*P	**P**	**23 06 43.2**	**-0.5**
	7.5nm,0.7s,mb4.6						
ARCES	**ARCESS Array B**	**93.23**	**340**	P	**P**	**23 09 18.6**	**-1.3**
	1.2nm,0.6s,mb4.4,baz=86,slow=5.8,SNR=5.9						
TORD	**Torodi Ar. Bea**	**125.08**	**287**	PKP	PKPdf	23 15 06.1	-0.5
	0.4nm,0.4s,baz=95,slow=2.0,SNR=16						
TORD	**Torodi Ar. Bea**	**125.08**	**287**	PKP	PKPdf	23 15 06.1	-0.5

IDC 16 22:57:46.0±3.3,417S×10235E,h0km,mb3.8/5,mb1 3.9/5,
mb1mx3.6/18,mbtmp3.8/5,Error ellipse:
s-maj=148.3km s-min=21.5km az=54.0,Southern
Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.88**	**119**	P	P	23 04 39.0	-0.5
	0.3nm,0.7s,baz=297,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**36.09**	**125**	P	P	23 04 50.1	+0.3
	0.1nm,0.3s,baz=291,slow=7.7,SNR=2.9						
SONM	**Songino Array**	**51.91**	**3**	P	P	23 06 57.9	+1.5
	0.9nm,0.6s,baz=188,slow=8.9,SNR=6.7						
SONM				PcP	PcP	23 08 08.9	-0.2
	0.2nm,0.4s,baz=202,slow=2.7,SNR=2.7						
MKAR	**Makanchi Array**	**53.76**	**343**	P	P	23 07 09.9	-0.2
	1.2nm,0.5

57nm,0.3s,baz=289,slow=12,SNR=434
STKA Pg **Pg** **23 19 21.8 +0.5**
180nm,0.3s,baz=286,slow=16,SNR=95
STKA Sn **Sn** **23 19 44.5 -3.2**
334nm,0.3s,baz=242,slow=5.8,SNR=7.9
STKA Lg 23 19 57.7
485nm,0.3s,baz=194,slow=19,SNR=9.6
STKA Stephens Creek 2.75 101 *e*P **Pn** **23 19 14.4 +0.6**
STKA *e*Pg **Pg** **23 19 22.4 +1.2**
STKA *e*S **Sn** **23 19 45.6 -2.0**
STKA *e*Sg **Sg** **23 19 57.5 +0.7**
ARPS Mount Arapiles 6.05 153 *e*P **Pn** **23 20 00.8 +1.6**
179nm,0.4s
ARPS *e*S **Sn** **23 21 04.0 -5.1**
CMSA Cobar Meteorol 6.21 93 *e*P **Pn** **23 20 00.6 -0.8**
CMSA *e*S **Sn** **23 21 04.9 -8.2**
121nm,0.2s
CMSA Cobar Meteorol 6.21 93 *e*P **Pn** **23 20 00.6 -0.8**
121nm,0.2s
CMSA *e*S **Sn** **23 21 04.9 -8.2**
QLP Quilpie 7.00 48 *e*P **Pn** **23 20 12.6 +0.3**
TOO Toolangi 8.47 138 *e*P **Pn** **23 20 33.3 +0.9**
TOO *e*S **Sn** **23 22 03.1 -5.6**
ASAR Alice Springs 8.69 331 Pn **Pn** **23 20 36.8 +1.4**
4.7nm,0.3s,baz=150,slow=13,SNR=94
ASAR Sn **Sn** **23 22 09.6 -4.5**
35nm,0.3s,baz=153,slow=22,SNR=14
ASAR Lg 23 23 07.8
2.3nm,0.3s,baz=177,slow=18,SNR=4.4
YNG Young 8.87 112 *e*P **Pn** **23 20 37.7 -0.2**
YNG *e*S **Sn** **23 22 09.6 -9.0**
FORT Forrest 8.91 271 *e*P **Pn** **23 20 40.5 +2.1**
FORT *e* 23 20 47.9
FORT *e*S **Sn** **23 22 11.9 -7.5**
148nm,0.4s
FORT Forrest 8.91 271 *e*P **Pn** **23 20 40.5 +2.1**
148nm,0.4s
FORT *e* 23 20 47.9
FORT *e*S **Sn** **23 22 11.9 -7.5**
CAN Canberra 9.67 117 *e*Pn **Pn** **23 20 48.1 -0.7**
CNB Canberra Magne 9.95 116 *e*P **Pn** **23 20 51.3 -1.3**
CNB *e*S **Sn** **23 22 37.4 -7.5**
QIS Mount Isa 10.86 6 *e*P **Pn** **23 21 03.8 -1.4**
MGCD Mangrove Creek 10.89 103 *e*P **Pn** **23 21 05.1 -0.4**
WB2 Warramunga Arr 11.99 341 *e*P **Pn** **23 21 20.2 -0.5**
WB2 *e*S **Sn** **23 23 24.3 -11**
WRA Warramunga Arr 11.99 341 Pn **Pn** **23 21 20.4 -0.3**
4.6nm,0.3s,baz=154,slow=12,SNR=42
WRA Sn **Sn** **23 23 26.9 -8.4**
7.8nm,0.3s,baz=168,slow=23,SNR=8.8
WRA Lg 23 24 57.3
baz=171,slow=29,SNR=4.6
WRAB Tennant Creek 12.00 341 *e*Pn **Pn** **23 21 20.5 -0.3**
39nm,0.5s
WRAB *e*Sn **Sn** **23 23 25.3 -10**
CTA Charters Tower 13.29 34⇑*i*P **Pn** **23 21 36.1 -2.4**
CTA *e*S **Sn** **23 23 56.2 -11**
CTA Charters Tower 13.29 34 Pn **Pn** **23 21 36.3 -2.2**
1.5nm,0.3s,baz=203,slow=15,SNR=13
CTA Sn **Sn** **23 23 55.4 -12**
2.3nm,0.3s,baz=21,slow=24,SNR=3.3
CTA LR LR 23 27 43.0
comp=Z,284nm,21.4s,baz=221,slow=42
CTAO Charters Tower 13.29 34 *e*Pn **Pn** **23 21 36.0 -2.5**
23nm,0.6s
CTAO *e*Sn **Sn** **23 23 55.4 -12**
FITZ Fitzroy Crossi 17.59 316 *e*P **Pn** **23 22 32.9 -2.2**
FITZ *e*S **Sn** **23 25 36.9 -15**
31nm,0.6s
FITZ Fitzroy Crossi 17.59 316 P **Pn** **23 22 33.5 -1.6**
1.3nm,0.3s,baz=157,slow=13,SNR=29
FITZ S **Sn** **23 25 36.9 -15**
2.3nm,0.3s,baz=276,slow=20,SNR=6.2
FITZ Fitzroy Crossi 17.59 316 *e*P **Pn** **23 22 32.9 -2.2**
31nm,0.6s
FITZ *e*S **Sn** **23 25 36.9 -15**
KLBR Kellerberrin 17.63 264 *e*P **Pn** **23 22 34.8 -0.7**
COEN Coen 17.91 15 *e*P **Pn** **23 22 40.4 +1.4**
MEEK Meekatharra 17.96 280 *e*P **Pn** **23 22 37.1 -2.5**
MEEK *e*S **Sn** **23 25 45.0 -15**
64nm,0.6s
MEEK Meekatharra 17.96 280 *e*P **Pn** **23 22 37.1 -2.5**
64nm,0.6s
MEEK *e*S **Sn** **23 25 45.0 -15**
NWAO Narrogin (SRO) 18.00 260 P **Pn** **23 22 38.7 -1.4**
0.4nm,0.3s,baz=111,slow=10,SNR=3.3
NWAO S **Sn** **23 25 52.1 -9.3**
1.9nm,0.3s,baz=35,slow=15,SNR=3.6
NWAO Lg 23 27 54.6
4.6nm,0.3s,baz=172,slow=22,SNR=6.3
NWAO Narrogin (SRO) 18.00 260 *e*P **Pn** **23 22 42.9 +2.8**
51nm,1.3s
NWAO S **Sn** **23 25 52.1 -9.3**
NWAO Lg 23 27 54.6
BLDU Ballidu 18.63 267 *e*P **Pn** **23 22 44.9 -2.9**
2.6nm,0.4s
MUN Mundaring 18.91 262 *e*P **Pn** **23 22 49.6 -1.6**
MUN *e*S **Sn** **23 26 09.2 -14**
MBWA Marble Bar 19.59 297 *e*P **Pn** **23 22 58.7 -0.8**
15nm,0.4s
MBWA *e*S **Sn** **23 26 22.0 -18**
PMG Port Moresby 23.35 22 *e*P **P** **23 23 40.2 +1.5**
18nm,0.7s,mb4.7
BATI Baumata 25.15 324 P **P** **23 23 57.5 +2.1**
11nm,0.4s,mb4.9,baz=104,slow=4.5,SNR=3.7
MCQ Macquarie Isla 27.34 154 P **P** **23 24 12.4 -2.5**
RPZ Rata Peaks 28.45 125 LR LR 23 34 40.8
comp=Z,160nm,18.2s,baz=169,slow=34
HNR Honiara 29.63 47 LR LR 23 35 51.4
comp=Z,82nm,20.9s,baz=131,slow=35
CASY Casey 38.74 198 P **P** **23 25 51.9 -2.1**
33nm,1.0s,mb4.9
MAW Mawson 55.89 207 *e*P **P** **23 28 08.9 +1.4**
MAW Mawson 55.89 207 P **P** **23 28 09.1 +1.5**
2.9nm,0.5s,mb4.5,baz=90,slow=7.2,SNR=15
QSPA South Pole Qui 58.69 180 P **P** **23 28 28.3 +1.1**
5.0nm,0.8s,mb4.6,baz=329,slow=3.0,SNR=13
QSPA South Pole Qui 58.69 180 P **P** **23 28 28.3 +1.1**
CMAR Chiang Mai Arr 62.40 317 P **P** **23 28 53.2 0.0**
0.9nm,0.3s,mb4.4,baz=152,slow=5.7,SNR=3.4
MJAR Matsushiro Arr 67.59 360 P **P** **23 29 26.6 -0.1**
1.1nm,0.7s,mb4.2,baz=185,slow=6.3,SNR=4.2
KSRS Korea Array 69.20 351 P **P** **23 29 36.8 0.0**
3.8nm,1.1s,mb4.5,baz=76,slow=32,SNR=3.5
SNAA Sanae 73.68 192 *e*P **P** **23 30 03.6 +0.1**
1.4nm,0.6s,mb4.2
LSA Lhasa 75.57 319 *e*P **P** **23 30 17.5 +2.6**
10nm,0.8s,mb5.0
TAPN Taplejung 75.84 315 *e*P **P** **23 30 17.8 +1.2**
23nm,0.9s,mb5.3
RAMN Ramite 76.23 314 *e*P **P** **23 30 20.3 +1.5**
13nm,0.9s,mb5.1
PKI Pulchoki 77.41 313 *e*P **P** **23 30 26.7 +1.2**
DMN Daman 77.63 313 *e*P **P** **23 30 28.2 +1.5**
22nm,0.8s,mb5.3
KKN Kakani 77.65 313 *e*P **P** **23 30 27.7 +0.9**
25nm,0.8s,mb5.4
GKN Gorkha 78.20 313 *e*P **P** **23 30 31.0 +1.2**
21nm,0.7s,mb5.4
KOLN Koldanda 78.69 312 *e*P **P** **23 30 33.5 +1.0**
13nm,0.7s,mb5.1
DANN Dangsing 78.99 313 *e*P **P** **23 30 35.4 +1.2**
34nm,0.7s,mb5.5
ULN Ulaanbaatar 83.79 339 *e*P **P** **23 31 00.0 +0.9**
7.6nm,1.0s,mb4.9
ULN *e* 23 31 09.7
SONM Songino Array 83.96 339 P **P** **23 31 01.1 +1.1**
2.6nm,0.6s,mb4.6,baz=156,slow=5.6,SNR=17
BOSA Boshof 92.79 234 P **P** **23 31 44.8 +1.7**
4.1nm,0.5s,mb5.1,baz=140,slow=4.8,SNR=22
MKAR Makanchi Array 92.83 325 P **P** **23 31 43.0 +0.4**
2.6nm,0.7s,mb4.8,baz=127,slow=6.0,SNR=22
MKAR Makanchi Array 92.83 325 P **P** **23 31 43.0 +0.4**
KURK Kurchatov 97.29 326 P **P** **23 32 02.4 -0.5**
0.5nm,0.7s,mb4.2,baz=131,slow=3.6,SNR=4.2
KURK Kurchatov 97.29 326 P **P** **23 32 02.4 -0.5**
ARCES ARCESS Array B 127.05 336 PKP PKPdf 23 37 33.8 +0.3
1.5nm,0.8s,baz=111,slow=1.3,SNR=4.5
BDFB Brasília 132.81 172 PKP PKPdf 23 37 45.8 -0.4
1.2nm,0.4s,baz=198,slow=3.2,SNR=3.5
TORD Torodi Ar. Bea 136.35 255 PKhKP 23 37 39.7
0.4nm,0.5s,baz=97,slow=3.9,SNR=9.2
TORD PKP PKPdf 23 37 52.5 -0.2
0.8nm,0.5s,baz=92,slow=1.3,SNR=16
DBIC Dimbokro 137.78 242 PKP PKPdf 23 37 56.9 +1.4
1.3nm,0.4s,baz=104,slow=3.6,SNR=7.3

SBF Sospel 139.79 302 *e*PKP1 PKPdf 23 37 58.7 +0.5
SMRF Simiane la Rot 141.13 302 *e*PKP1 PKPdf 23 38 03.2 +2.6
BGF Bois d'Agland 142.81 307⇑*i*PKP1 PKPdf 23 38 00.0 -3.5
9.1nm,0.7s
TCF Toulx Ste Croi 143.29 307 *e*PKP1 PKPdf 23 38 03.3 -1.1
4.6nm,0.9s
CAF Calviac 143.56 304 *e*PKP1 PKPdf 23 38 04.5 -0.4
MTLF Montolieu 143.60 302 *e*PKP1 PKPdf 23 38 02.3 -2.7
RJF Les Rejaudoux 143.90 305⇑*i*PKP1 PKPdf 23 38 04.2 -1.3
LDF La Druflere 144.41 311⇑*i*PKP1 PKPdf 23 38 04.8 -1.4
14nm,0.6s
LFF La Frestale 144.50 305 *e*PKP1 PKPdf 23 38 05.1 -1.4
19nm,0.8s
FLN La Foliniere 144.60 311 *e*PKP1 PKPdf 23 38 05.4 -1.2
35nm,0.9s
MFF Saint Martin d 144.84 308 *e*PKP1 PKPdf 23 38 06.4 -0.7
23nm,0.8s
GRR Gorron 144.94 311⇑*i*PKP1 PKPdf 23 38 06.8 -0.4
31nm,0.7s
EPF Esparros 145.00 301 *e*PKP1 PKPdf 23 38 06.5 -0.9
5.2nm,0.5s
TZTN Tazewell 145.02 70 *e*PKPdf PKPdf 23 38 05.9 -1.8
ETSF Etsaut 145.67 301⇑*i*PKP1 PKPbc 23 38 09.5 +0.6
7.0nm,0.5s
SGMF Saint Gilles 146.07 311 *e*PKP1 PKPbc 23 38 09.9 -0.1
15nm,0.7s
SJPF Ste Jean 146.13 302⇑*i*PKP1 PKPbc 23 38 11.2 +0.9
16nm,0.6s
ROSF Rostrenen 146.51 311 *e*PKP1 PKPbc 23 38 11.2 -0.1
13nm,0.6s
QUIF Quistinic 146.55 311 *e*PKP1 PKPbc 23 38 11.2 -0.2
23nm,1.0s
JSC Jenkinsville 146.68 74 *e*PKPbc PKPbc 23 38 11.4 -0.9
ESDC Sonseca Array 148.48 296 PKPbc PKPbc 23 38 17.1 +0.1
3.6nm,0.7s,baz=53,slow=2.5,SNR=39
PAB San Pablo 148.79 295 *e*PKP PKPdf 23 38 18.3 +4.3
MVO Moncorvo 150.66 299 *e*P PKPbc 23 38 22.8 +0.5
11nm,1.0s
PBAR Barrancos 150.96 293 *e*P PKPbc 23 38 23.9 +0.8
9.5nm,1.1s
PMRV Marv??o 151.14 296 *e*P PKPbc 23 38 23.5 0.0
11nm,2.0s
MTE Manteigas 151.15 298 *e*P PKPbc 23 38 24.4 +0.9
14nm,1.1s
PVRL Vila Real 151.16 299 *e*P PKPbc 23 38 24.4 +0.9
8.3nm,1.8s
PVIS Viseu 151.37 298 *e*P PKPbc 23 38 25.0 +1.0
12nm,1.2s
PVAQ Vaqueiros 151.53 291 *e*P PKPbc 23 38 25.0 +0.5
15nm,1.0s
PBEJ Beja 151.62 293 *e*P PKPbc 23 38 25.5 +0.8
9.0nm,1.6s
EVO Evora 151.70 294 *e*PKP1 PKPbc 23 38 25.7 +0.9
7.7nm,0.8s
MORF Marmelete 152.28 291 *e*P PKPbc 23 38 27.2 +1.0
40nm,1.6s
PTEO Sao Teotonio 152.32 292 *e*P PKPbc 23 38 26.8 +0.5
11nm,0.8s
PMAFR Mafra 152.65 295 *e*P PKPbc 23 38 31.3 +4.3
27nm,1.3s

IDC 16 23:27:17.3±3.1,**365S**×**10028E**,**h0**km,**mb3.8**/6,**mb1 3.8**/6,**mb1mx3.6**/21,**mbtmp3.8**/6,**Error ellipse: s-maj=140.3km s-min=28.9km az=54.0**,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**38.08**	**125**	P		P	23 34 38.0	0.0
	0.4nm,0.6s,baz=296,slow=7.5,SNR=3.5						
SONM	**Songino Array**	**51.55**	**5**	P		P	23 36 25.2	+0.2
	1.2nm,0.7s,baz=187,slow=8.9,SNR=6.3						
MKAR	**Makanchi Array**	**52.68**	**345**	P		P	23 36 34.2	+0.7
	1.2nm,0.7s,baz=152,slow=8.7,SNR=7.4						
KURK	**Kurchatov**	**57.26**	**344**	P		P	23 37 06.0	-0.4
	0.9nm,0.9s,baz=171,slow=6.8,SNR=5.1						
ZALV	**Zalesovo Beam**	**58.83**	**349**	P		P	23 37 16.9	-0.6
	2.7nm,0.9s,baz=160,slow=4.6,SNR=7.2						
BVAR	**Borovoye Array**	**61.82**	**340**	P		P	23 37 37.8	-0.1
	0.7nm,0.6s,baz=142,slow=7.5,SNR=5.3						

*IDC **16** 23:40:58.0*±*0.9,331S*×*10120E,h0*km*,mb4.6/17, mb1 4.7/18,mb1mx4.5/24,mbtmp4.6/18,ML4.3/1,MS3.6/10, Ms1 3.6/10,ms1mx3.5/22,Error ellipse: s-maj=33.7km s-min=12.3km az=51.0*
*BJI **16** 23:40:58.7,367S*×*10132E,h35*km*,mB5.1,mb5.0,Ms4.4, Msz4.0*
*MOS **16** 23:41:01.8*±*1.0,316S*×*10143E,h33*km*,mb5.0/27,Error ellipse: s-maj=15.3km s-min=7.6km az=111.7*
*ISCJB **16** 23:41:02.1*±*0.3,352S*±*005*×*10114E*±*004,h46*km*, mb5.0/52,MS3.7/11,Error ellipse: s-maj=7.6km s-min=4.3km az=31.7*
*NEIC **16** 23:41:03.3*±*0.3,333S*×*10125E,h35*km*,mb4.9/12,Error ellipse: s-maj=12.5km s-min=5.8km az=222.0*
NEIC Felt [III] at Mukomuko.
*DJA **16** 23:41:06,316S*×*10134E,h27*km*,MLv4.5/2*
ISC 16 23:41:04.3±0.3,**352S**±005×**10116E**±004,**h48**km, **h48**km±2.9km**:pP-P,n147,**σ1§**11**/148,**mb5.0**/52,**MS3.7**/11, **20C-14D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.43**	**95**	P		**Pn**	**23 41 27.3**	**-0.6**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.13**	**346**	P		**Pn**	**23 41 50.3**	**-0.9**
	0.0nm,0.0s						
RGRI	**Regat**	**3.36**	**20**	P		**Pn**	**23 41 55.0**	**+0.7**
	0.0nm,0.0s						
KLI	**Kotabumi**	**3.92**	**110**	P		**Pn**	**23 42 08.2**	**+6.2**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.14**	**75**	P		**Pn**	**23 42 18.9**	**+0.1**
	0.0nm,0.0s						
KGM	**Kluang**	**5.90**	**21**	⇓P		**Pn**	**23 42 30.3**	**+1.0**
MYKOM	**Kota Tinggi**	**5.92**	**27**	⇓P		**Pn**	**23 42 30.8**	**+1.4**
TPI	**Tanjungpandan**	**6.52**	**84**	P		**Pn**	**23 42 39.3**	**+1.5**
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**6.52**	**84**	⇓*e*P		**Pn**	**23 42 37.5**	**-0.3**
TPI				*e*S		Sn	23 44 27.0	+36
FRIM	**Kepong**	**6.72**	**4**	⇓P		**Pn**	**23 42 41.8**	**+1.3**
IPM	**Ipoh**	**7.94**	**359**	⇑P		**Pn**	**23 43 00.0**	**+2.8**
KTGM	**Kuala Trenggan**	**9.00**	**13**	⇓P		**Pn**	**23 43 14.4**	**+2.6**
KSM	**Kuching**	**10.40**	**62**	⇑P		**Pn**	**23 43 35.9**	**+5.0**
BSI	**Banda Aceh**	**10.70**	**327**	P		**Pn**	**23 43 33.3**	**-1.7**
	0.0nm,0.0s						
SJI	**Sawahan**	**11.35**	**112**	P		**Pn**	**23 43 45.5**	**+1.6**
	0.0nm,0.0s						
BTM	**Bintulu**	**13.65**	**61**	⇑P		**Pn**	**23 44 18.7**	**+3.3**
KKM	**Kota Kinabalu**	**17.78**	**58**	⇓P		**Pn**	**23 45 10.4**	**+2.0**
KKM	**Kota Kinabalu**	**17.78**	**58**	*e*Pn		**Pn**	**23 45 07.2**	**-1.2**
TSM	**Tawau**	**18.41**	**65**	⇓P		**Pn**	**23 45 17.1**	**+0.9**
SDKM	**Sandakan**	**18.41**	**60**	⇑P		**Pn**	**23 45 17.2**	**+0.9**
KAPI	**Kappang**	**18.59**	**95**	P		**Pn**	**23 45 18.3**	**-0.1**
	1.0nm,0.3s,baz=276,slow=14,SNR=6.8						
KAPI				LR		LR	23 52 30.2	
	comp=Z,142nm,18.8s,baz=281,slow=37						
KDM	**Kudat**	**18.76**	**56**	⇓P		**Pn**	**23 45 20.3**	**-0.1**
PCI	**Palu**	**18.84**	**83**	P		**Pn**	**23 45 20.7**	**-0.6**
	0.0nm,0.0s						
MYLDM	**Lahad Datu**	**19.35**	**64**	⇑P		**Pn**	**23 45 28.4**	**+1.0**
KDI	**Kendari**	**21.41**	**92**	P		**P**	**23 45 48.9**	**+0.5**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**21.94**	**354**	P		**P**	**23 45 50.0**	**-3.9**
	5.0nm,0.6s,mb4.1,baz=186,slow=8.7,SNR=18						
CMAR				LR		LR	23 56 16.2	
	comp=Z,93nm,19.5s,MS3.2,baz=167,slow=42						
CMAR	**Chiang Mai Arr**	**21.94**	**354**	⇑*e*P		**P**	**23 45 51.5**	**-2.4**
CMAR	**Chiang Mai Arr**	**21.94**	**354**	P		**P**	**23 45 50.0**	**-3.9**
CMAR				LR		LR	23 56 16.2	
BATI	**Baumata**	**23.29**	**108**	P		**P**	**23 46 06.5**	**-1.8**
	0.0nm,0.0s						
BATI	**Baumata**	**23.29**	**108**	P		**P**	**23 46 09.2**	**+0.9**
	9.4nm,0.3s,mb4.7,baz=111,slow=11,SNR=2.8						
BATI				S		**S**	**23 50 07.8**	**-9.4**
	9.5nm,0.6s,baz=169,slow=16,SNR=2.6						
QIZ	**Qiongzhong**	**23.98**	**21**	*e*P		**P**	**23 46 12.8**	**-1.7**
	9.0nm,1.0s,mb4.2						
QIZ				*e*			23 46 24.0	
FITZ	**Fitzroy Crossi**	**28.01**	**123**	⇑*i*P		**P**	**23 46 51.1**	**+0.1**
	5.5nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**28.01**	**123**	P		**P**	**23 46 51.5**	**+0.6**
	5.1nm,0.9s,mb4.1,baz=272,slow=7.4,SNR=9.8						
FITZ				LR		LR	23 56 45.0	
	comp=Z,97nm,20.5s,MS3.4,baz=134,slow=34						
FITZ	**Fitzroy Crossi**	**28.01**	**123**	*e*P		**P**	**23 46 51.2**	**+0.2**
	8.6nm,0.8s,mb4.4						
SWI	**Sorong**	**30.19**	**86**	P		**P**	**23 47 09.1**	**-1.3**
	0.0nm,0.0s						
ODAN	**Odare**	**33.00**	**337**	*e*P		**P**	**23 47 35.1**	**+0.2**
	59nm,0.7s,mb5.6						
TAPN	**Taplejung**	**33.32**	**338**	*e*P		**P**	**23 47 38.4**	**+0.7**
	114nm,0.9s,mb5.8						
RAMN	**Ramite**	**33.40**	**336**	*e*P		**P**	**23 47 39.1**	**+0.7**
JIRN	**Jiri**	**34.19**	**336**	*e*P		**P**	**23 47 46.0**	**+0.7**
CD2	**Chengdu**	**34.32**	**4**	*e*P		**P**	**23 47 44.3**	**-2.0**
CD2				AP		pP	23 47 53.9	-5.1
CD2				XP		sP	23 47 58.3	-6.4
CD2				PP		PP	23 49 00.8	-4.1
CD2				S		**S**	**23 53 10.8**	**+0.3**
CD2				XS		sS	23 53 24.4	-7.4
CD2				SS		SS	23 55 20.3	-21
CD2				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				AMB		AMB		
	comp=Z,20nm,5.2s						
CD2				LR		LR		
	comp=N,270nm,18.0s,MS4.2						
CD2				LR		LR		
	comp=E,250nm,16.2s,MS4.2						
CD2				LR		LR		
	comp=Z,310nm,20.4s,MS4.0						
LSA	**Lhasa**	**34.39**	**344**	P		**P**	**23 47 47.6**	**+0.6**
LSA	**Lhasa**	**34.39**	**344**	*e*P		**P**	**23 47 46.4**	**-0.6**
LSA				pmax		pmax		
	comp=Z,13nm,0.9s,mb4.9						
LSA	**Lhasa**	**34.39**	**344**	*e*P		**P**	**23 47 46.4**	**-0.6**
	comp=Z,13nm,0.9s,mb4.9						
PKI	**Pulchoki**	**34.44**	**335**	*e*P		**P**	**23 47 47.1**	**-0.3**
	comp=Z,38nm,0.9s,mb5.3						
GUN	**Gumba**	**34.54**	**336**	*e*P		**P**	**23 47 49.1**	**+0.8**
	comp=Z,83nm,0.5s,mb5.9						
DMN	**Daman**	**34.60**	**334**	*e*P		**P**	**23 47 49.3**	**+0.5**
KKN	**Kakani**	**34.69**	**335**	*e*P		**P**	**23 47 49.9**	**+0.4**
	comp=Z,31nm,0.5s,mb5.5						
GKN	**Gorkha**	**35.15**	**334**	*e*P		**P**	**23 47 53.9**	**+0.4**
	comp=Z,49nm,0.6s,mb5.6						
KOLN	**Koldanda**	**35.41**	**333**	*e*P		**P**	**23 47 56.6**	**+0.8**
	comp=Z,72nm,0.7s,mb5.7						
DANN	**Dangsing**	**35.84**	**333**	*e*P		**P**	**23 48 00.0**	**+0.6**
	comp=Z,85nm,0.6s,mb5.9						
WHN	**Wuhan**	**36.14**	**19**	P		**P**	**23 48 03.0**	**+1.0**
WRA	**Warramunga Arr**	**36.23**	**119**	P		**P**	**23 48 03.0**	**0.0**
	comp=Z,3.9nm,0.5s,mb4.6,baz=307,slow=9.0,SNR=28						
WRA				S		**S**	**23 53 38.3**	**-2.0**
	comp=Z,2.4nm,0.9s,baz=292,slow=16,SNR=8.9						
WRA	**Warramunga Arr**	**36.23**	**119**	P		**P**	**23 48 03.0**	**0.0**
WRA				S		**S**	**23 53 38.3**	**-1.9**
WRA				pmax		pmax		
	comp=Z,4.0nm,0.5s						
WRA				smax				
	comp=N,2.0nm,0.9s						
WRAB	**Tennant Creek**	**36.24**	**119**	*e*P		**P**	**23 48 03.3**	**+0.3**
WRAB				*e*		pP	23 48 14.6	-1.2
WRAB				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
WRAB	**Tennant Creek**	**36.24**	**119**	*e*P		**P**	**23 48 03.3**	**+0.2**
	comp=Z,9.0nm,0.6s,mb4.9						
WRAB				*e*		pP	23 48 14.6	-1.1
WB2	**Warramunga Arr**	**36.24**	**119**	*e*P		**P**	**23 48 02.8**	**-0.3**
WB2				*e*S		**S**	**23 53 36.2**	**-4.2**
ASAR	**Alice Springs**	**37.43**	**125**	P		**P**	**23 48 13.9**	**+0.8**
	comp=Z,9.0nm,0.9s,mb4.6,baz=304,slow=8.2,SNR=65						
ASAR				PcP		PcP	23 50 32.4	+1.3
	comp=Z,1.8nm,0.7s,baz=314,slow=2.6,SNR=9.0						
ASAR				S		**S**	**23 53 56.4**	**-2.0**
	comp=Z,1.5nm,0.8s,baz=298,slow=14,SNR=8.9						
ASAR	**Alice Springs**	**37.43**	**125**	P		**P**	**23 48 13.9**	**+0.8**
ASAR							23 50 32.4	
ASAR				S		**S**	**23 53 56.4**	**-2.0**
ASAR				pmax		pmax		
	comp=Z,9.0nm,0.9s						
ASAR				pmax		pmax		
	comp=Z,2.0nm,0.7s						
ASAR				smax				
	comp=N,2.0nm,0.8s						
XAN	**Xi'an**	**38.06**	**10**	P		**P**	**23 48 15.9**	**-2.4**
XAN				AP		pP	23 48 26.3	-4.8
XAN				XP		sP	23 48 31.3	-5.4
XAN				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
XAN				AMB		AMB		
	comp=Z,64nm,8.4s						
NJ2	**Nanjing**	**39.16**	**24**	*e*P		**P**	**23 48 24.6**	**-2.9**
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CTA	**Charters Tower**	**46.91**	**114**⇑*i*P			**P**	**23 49 30.6**	**+0.2**
	comp=Z,16nm,0.8s,mb5.0						
CTA	**Charters Tower**	**46.91**	**114**	P		**P**	**23 49 31.0**	**+0.6**
	comp=Z,21nm,0.7s,mb5.2,baz=285,slow=9.5,SNR=46						
CTA	**Charters Tower**	**46.91**	**114**⇑*i*P			**P**	**23 49 30.6**	**+0.2**
CTA				pmax		pmax		
	comp=Z,16nm,0.8s						
CTAO	**Charters Tower**	**46.91**	**114**	*e*P		**P**	**23 49 30.7**	**+0.3**
CTAO				pmax		pmax		
	comp=Z,22nm,0.8s,mb5.1						
CTAO	**Charters Tower**	**46.91**	**114**	*e*P		**P**	**23 49 30.7**	**+0.3**
	comp=Z,22nm,0.8s,mb5.1						
STKA	**Stephens Creek**	**47.28**	**131**	*e*P		**P**	**23 49 33.8**	**+0.7**
	comp=Z,6.4nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**47.28**	**131**	P		**P**	**23 49 34.1**	**+1.0**
	comp=Z,3.4nm,0.5s,mb4.6,baz=312,slow=14,SNR=6.1						
STKA				LR		LR	00 08 57.8	
	comp=Z,166nm,19.1s,MS4.0,baz=23,slow=35						
KSRS	**Korea Array**	**47.75**	**29**	P		**P**	**23 49 35.6**	**-1.0**
	comp=Z,1.8nm,0.7s,mb4.2,baz=208,slow=6.3,SNR=3.9						
KSRS				LR		LR	00 08 34.1	
	comp=Z,47nm,20.6s,MS3.4,baz=215,slow=35						
KBL	**Kabul**	**48.44**	**324**	*e*P		**P**	**23 49 41.2**	**-0.8**
KBL				pmax		pmax		
	comp=Z,3.0nm,0.3s,mb4.8						
KBL	**Kabul**	**48.44**	**324**	*e*P		**P**	**23 49 41.2**	**-0.8**
	comp=Z,2.8nm,0.3s,mb4.8						
WMQ	**Urumqi**	**48.66**	**347**	P		**P**	**23 49 43.8**	**+0.3**
WMQ				AMB		AMB		
	comp=Z,74nm,0.6s,mb5.9						
WMQ				AMB		AMB		
	comp=Z,102nm,4.5s						
SONM	**Songino Array**	**51.34**	**5**	P		**P**	**23 50 03.9**	**+0.1**
	comp=Z,9.9nm,0.7s,mb4.9,baz=186,slow=9.2,SNR=61						
SONM				PcP		PcP	23 51 17.5	-0.6
	comp=Z,2.1nm,0.7s,baz=186,slow=3.8,SNR=2.6						
SONM				LR		LR	00 15 04.7	
	comp=Z,71nm,18.2s,MS3.7,baz=243,slow=40						
SONM	**Songino Array**	**51.34**	**5**	P		**P**	**23 50 03.9**	**+0.1**
SONM							23 51 17.5	
SONM				pmax		pmax		
	comp=Z,10.0nm,0.7s						
SONM				pmax		pmax		
	comp=Z,2.0nm,0.7s						
SONM				MLR		MLR		
	comp=Z,71nm,18.2s						
ULN	**Ulaanbaatar**	**51.43**	**5**	*e*P		**P**	**23 50 04.4**	**0.0**
ULN				*e*		pP	23 50 16.0	-1.7
ULN				pmax		pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
ULN	**Ulaanbaatar**	**51.43**	**5**	*e*P		**P**	**23

SNR=26
EKS2 Erkin-Say 52.22 335 *e*P **P** **23 50 10.9 +0.5**
comp=Z,16nm,0.8s,mb5.0
EKS2 *e* pP 23 50 24.9 +1.2
USP Ospenovka 52.41 336 P **P** **23 50 11.8 -0.1**
SNR=9.2
MJAR Matsushiro Arr 52.74 38 P **P** **23 50 12.6 -1.8**
comp=Z,3.2nm,0.8s,mb4.3,baz=213,slow=7.3,SNR=8.3
MJAR LR LR 00 15 02.0
comp=Z,32nm,18.2s,MS3.4,baz=120,slow=39
MJAR Matsushiro Arr 52.74 38 P **P** **23 50 12.6 -1.8**
MJAR pmax pmax
comp=Z,3.0nm,0.8s
MJAR MLR MLR
comp=Z,32nm,18.3s
MK31 Makanchi Array 52.80 344 *e*P **P** **23 50 14.2 -0.4**
MKAR Makanchi Array 52.80 344 P **P** **23 50 13.9 -0.7**
comp=Z,11nm,0.5s,mb5.1,baz=152,slow=8.0,SNR=53
MKAR Makanchi Array 52.80 344 P **P** **23 50 14.0 -0.6**
MKAR pmax pmax
comp=Z,11nm,0.5s
ZAK Zakamensk 53.72 2 *e*P **P** **23 50 19.1 -2.2**
ZAK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
TLY Talaya 55.03 2 *e*P **P** **23 50 30.9 +0.1**
TLY pmax pmax
comp=Z,13nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,62nm,17.0s,MS3.8
KURK Kurchatov 57.38 343 P **P** **23 50 46.4 -1.3**
comp=Z,9.7nm,0.7s,mb4.9,baz=161,slow=6.9,SNR=23
KURK Kurchatov 57.38 343 P **P** **23 50 46.4 -1.2**
KURK pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KURK Kurchatov 57.38 343 *e*P **P** **23 50 46.8 -0.8**
KURK *e* pP 23 50 57.9 -3.2
KLR Kul'dur 58.85 23 *e*P **P** **23 50 52.8 -5.1**
ZAA0 Zalesovo Array 58.87 349 *e*P **P** **23 50 56.9 -1.0**
ZAA0 *e* pP 23 51 07.9 -3.6
ZALV Zalesovo Beam 58.87 349 P **P** **23 50 56.9 -1.0**
comp=Z,13nm,0.6s,mb5.2,baz=172,slow=4.0,SNR=69
ZALV LR LR 00 20 04.8
comp=Z,28nm,19.2s,MS3.4,baz=138,slow=40
ZALV Zalesovo Beam 58.87 349 P **P** **23 50 56.9 -1.1**
ZALV pmax pmax
comp=Z,13nm,0.6s,mb5.1
ZALV MLR MLR
comp=Z,28nm,19.2s,MS3.4
ZALV Zalesovo Beam 58.87 349 P **P** **23 50 56.9 -1.0**
ZALV LR LR 00 20 04.8
NVS Novosibirsk 60.02 348 *e*P **P** **23 51 03.4 -2.5**
NVS *e*S **S** **23 59 22.3 +7.3**
NVS pmax pmax
comp=N,11nm,1.3s
NVS pmax pmax
comp=E,6.0nm,1.3s
NVS pmax pmax
comp=Z,11nm,1.3s,mb4.7
NVS smax
comp=N,5.0nm,1.7s
NVS smax
comp=E,8.0nm,1.7s
RDF Al-Radifah 60.68 306 *e*P **P** **23 51 11.5 +0.6**
baz=305
RDF AMb AMB 23 51 23.0
comp=Z,27nm,1.3s,mb5.2,baz=305
UMR Umm Al-Rimmam 60.79 307 *e*P **P** **23 51 12.1 +0.4**
baz=306
UMR AMb AMB 23 51 13.1
comp=Z,24nm,0.8s,mb5.4,baz=306
NAY Al-Naaiem 61.05 306 *e*P **P** **23 51 13.7 +0.3**
baz=306
NAY AMb AMB 23 51 24.4
comp=Z,6.0nm,0.5s,mb5.0,baz=306
MIB Mutribah 61.19 307 *e*P **P** **23 51 15.1 +0.7**
baz=306
MIB AMb AMB 23 51 25.4
comp=Z,13nm,0.9s,mb5.1,baz=306
BOD Bodaibo 62.01 8 *e*P **P** **23 51 18.0 -1.3**
BOD pmax pmax
comp=Z,11nm,0.8s,mb5.0
YSS Yuzh-Sakhalins 62.16 31 *e*P **P** **23 51 19.0 -1.6**
YSS pmax pmax
comp=Z,40nm,0.9s,mb5.5
SVE Sverdlovsk 68.52 337i*e*P **P** **23 52 01.4 -0.1**
SVE pmax pmax
comp=Z,12nm,0.9s,mb4.8
YAK Yakutsk 68.92 14 *e*P **P** **23 52 01.9 -2.0**
YAK pmax pmax
comp=Z,34nm,0.8s,mb5.3
ARU Arti 69.05 336*c i*P **P** **23 52 03.9 -0.9**
ARU *e* pP 23 52 20.6 +2.0
ARU *e*S S 00 01 05.3 -1.0
ARU *e*SS SS 00 05 25.1 -8.0
ARU pmax pmax
comp=Z,11nm,1.2s,mb4.7
MAW Mawson 69.12 195 LR LR 00 15 08.8
comp=Z,115nm,21.3s,MS4.1,baz=57,slow=30
PETK Petropavlovsk- 73.55 32 P **P** **23 52 31.0 -1.1**
comp=Z,3.7nm,0.8s,mb4.4,baz=71,slow=1.2,SNR=5.5
PETK Petropavlovsk- 73.55 32 P **P** **23 52 31.0 -1.1**
PETK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
VSR Storozhevoye 75.68 325 *e*P **P** **23 52 43.7 -0.8**
VSR pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.7s
BOSA Boshof 75.95 242 LR LR 00 21 22.2
comp=E,81nm,18.6s,MS4.1,baz=347,slow=32
TIXI Tiksi 77.17 9 *e*P **P** **23 52 49.9 -2.6**
TIXI pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
OBN Obninsk 78.69 328↓*i*P **P** **23 53 01.5 +0.2**
OBN *e*S S 00 02 50.3 -4.5
OBN pmax pmax
comp=Z,14nm,0.6s,mb5.1
OBN Obninsk 78.69 328 *e*P **P** **23 53 01.1 -0.1**
comp=Z,15nm,0.7s,mb5.0
AKASG Malin Array Be 81.39 322 P **P** **23 53 15.6 -0.3**
comp=Z,2.2nm,0.7s,mb4.2,baz=88,slow=3.6,SNR=7.8
AKASG Malin Array Be 81.39 322 P **P** **23 53 15.6 -0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
VRI Vrincioaia 81.75 317↑*i*P **P** **23 53 16.1 -1.8**
PLOR Plostina 81.80 317↑*i*P **P** **23 53 20.2 +2.0**
MLR Muntele Rosu 82.19 317↓*i*P **P** **23 53 21.5 +1.2**
MLR Muntele Rosu 82.19 317 ↓P **P** **23 53 21.5 +1.2**
BURAR Bucovina Array 83.16 319↓*i*P **P** **23 53 27.0 +1.7**
BUR08 Bucovina Ar. S 83.18 319 *e*P **P** **23 53 25.3 0.0**
BUR08 *e* pP 23 53 41.2 +1.7
VTS Vitosha 83.53 313↓*i*P **P** **23 53 26.8 -0.5**
VTS Vitosha 83.53 313 ↓P **P** **23 53 26.8 -0.5**
LVV L'vov 84.40 321 *e*P **P** **23 53 31.6 0.0**
DRGR 84.66 317↑*i*P **P** **23 53 34.7 +1.7**
DRGR 84.66 317 ↑P **P** **23 53 34.7 +1.7**
BZS Buzias 85.20 316↑*i*P **P** **23 53 36.6 +0.9**
BZS Buzias 85.20 316 ↑P **P** **23 53 36.6 +0.9**
PKSM Moragy 87.34 316↑*i*P **P** **23 53 47.0 +0.8**
ARCES ARCESS Array B 88.28 340 P **P** **23 53 50.0 -0.2**
comp=Z,4.4nm,0.8s,mb4.7,baz=111,slow=6.8,SNR=8.4
ARCES ARCESS Array B 88.28 340 P **P** **23 53 50.0 -0.2**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
MORC Moravsky Berou 88.54 320↑*i*P **P** **23 53 53.2 +1.4**
MORC Moravsky Berou 88.54 320 ↑P **P** **23 53 53.2 +1.4**
GERES GERESS Array B 90.95 319 P **P** **23 54 04.4 +1.2**
comp=Z,13nm,0.7s,mb4.3,baz=85,slow=4.4,SNR=12
GERES GERESS Array B 90.95 319 P **P** **23 54 04.4 +1.3**
GERES pmax pmax
comp=Z,1.0nm,0.7s
KHC Kasperske Hory 91.05 319 *e*P **P** **23 54 04.5 +0.9**
NVAR Mina Array Bea 130.01 41 PKP PKPdf 00 00 11.0 +1.8
comp=Z,0.7nm,0.6s,baz=309,slow=1.7,SNR=5.5
ULM Lac du Bonnet 131.25 14 PKP PKPdf 00 00 10.8 -0.4
comp=Z,2.3nm,0.7s,baz=2.3,slow=11,SNR=3.6
PDAR Pinedale Array 132.31 31 PKP PKPdf 00 00 13.8 +0.4
comp=Z,0.4nm,0.6s,baz=225,slow=1.9,SNR=3.9
TKL Tuckaleechee C 147.69 8 PKPbc PKPbc 00 00 43.3 -0.8
comp=Z,2.5nm,0.5s,baz=194,slow=16,SNR=5.1
TKL Tuckaleechee C 147.69 8 PKP2 PKPab 00 00 43.3 -3.1
TKL pmax pmax
comp=Z,3.0nm,0.5s

*TRN **16** 23:42:47.6, 1904N×6481W, h86km*
*ISCJB **16** 23:42:48.1±1.6, 190N±02×648W±01, h94km±24km, Error ellipse: s-maj=41.9km s-min=9.9km az=160.9*
*RSPR **16** 23:42:49.6, 1907N×6483W, h85km±5km, MD3.5/10, MD3.5/10*
*NEIC **16** 23:42:49.6, 1907N×6483W, h85km, MD3.5(RSPR), After RSPR.*

ISC 16 23:42:48.6±1.6, 191N±02×648W±01, h90km±26km, n14, σ0°43/28, 8C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.55**	**127**	↓*e*P		**Pn**		**23 43 03.8**	**0.0**
ABV				*e*S		**Sn**		**23 43 15.3**	**+0.3**
TBVI	**Tortola**	**0.66**	**165**	↑*e*P		**Pn**		**23 43 04.5**	**-0.3**
TBVI				*e*S		**Sn**		**23 43 16.2**	**-0.6**
MTP	**Monte Pirata**	**1.20**	**217**	↑*e*P		**Pn**		**23 43 11.0**	**+0.4**
MTP				*e*S		**Sn**		**23 43 27.5**	**+0.3**
CBYP	**Canovanas**	**1.27**	**232**	↑*e*P		**Pn**		**23 43 11.4**	**-0.2**
CBYP				*e*S		**Sn**		**23 43 29.8**	**+1.0**
CBYP	**Canovanas**	**1.27**	**232**	↑*e*P		**Pn**		**23 43 11.4**	**-0.2**
CBYP				*e*S		**Sn**		**23 43 29.1**	**+0.2**
HUMP	**Col San Antoni**	**1.35**	**228**	↑*e*P		**Pn**		**23 43 12.3**	**-0.2**
HUMP				*e*S		**Sn**		**23 43 31.1**	**+0.5**
SJG	**San Juan**	**1.59**	**234**	↓*e*P		**Pn**		**23 43 15.6**	**+0.1**
SJG				*e*S		**Sn**		**23 43 35.1**	**-0.8**
SJG	**San Juan**	**1.59**	**234**	↓*e*P		**Pn**		**23 43 15.6**	**+0.1**
SJG	**San Juan**	**1.59**	**234**	↑*e*P		**Pn**		**23 43 15.7**	**+0.2**
SJG				*e*S		**Sn**		**23 43 35.1**	**-0.8**
SJG				*e*S		**Sn**		**23 43 35.7**	**-0.2**
SJG	**San Juan**	**1.59**	**234**	↑*e*P		**Pn**		**23 43 15.7**	**+0.2**
SJG				*e*S		**Sn**		**23 43 35.1**	**-0.9**
CELP	**Cerrillos**	**1.95**	**240**	↓*e*P		**Pn**		**23 43 20.5**	**+0.3**
CELP				*e*S		**Sn**		**23 43 44.1**	**-0.2**
CELP	**Cerrillos**	**1.95**	**240**	↓*e*P		**Pn**		**23 43 20.5**	**+0.3**
CELP				*e*S		**Sn**		**23 43 44.7**	**+0.4**
AOPR	**Arecibo Observ**	**1.98**	**249**	↓*e*P		**Pn**		**23 43 20.2**	**-0.4**
AOPR				*e*S		**Sn**		**23 43 44.8**	**-0.2**
OBIP	**Obispado Ponce**	**1.99**	**240**	↑*e*P		**Pn**		**23 43 21.1**	**+0.4**
OBIP				*e*S		**Sn**		**23 43 44.5**	**-0.6**

*BJI **16** 23:46:47.5, 19.10N×6470W, h12km, mB5.1, Ms4.8*
*ISCJB **16** 23:46:48.8±0.3, 19.15N±003×6472W±002, h12km, mb4.2/20, MS3.3/5, Error ellipse: s-maj=3.7km s-min=3.2km az=6.0*
*TRN **16** 23:46:49.8, 1905N×6473W, h25km, MD4.3*
*IDC **16** 23:46:50.7±4.4, 1895N×6469W, h25km±29km, mb3.9/12, mb1 4.1/14, mb1mx3.9/26, mbtmp3.9/14, ML3.5/2, MS3.3/6, Ms1 3.4/6, ms1mx3.1/33, Error ellipse: s-maj=15.4km s-min=14.6km az=32.0*
*RSPR **16** 23:46:51.6, 19.14N×6466W, h12km±6km, MD4.2/15, MD4.2/15*
*NEIC **16** 23:46:51.6, 19.14N×6466W, h12km, mb4.5/9, MD4.2(RSPR), After RSPR.*

ISC 16 23:46:51.4±1.0, 1907N±003×6472W±003, h22km±8km, n77, σ0°96/97, mb4.2/20, MS3.3/5, 9C-16D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.50**	**132**	↑*i*P		**Pb**		**23 47 01.4**	**-0.2**
TBVI	**Tortola**	**0.66**	**171**	↑*i*P		**Pb**		**23 47 04.0**	**-0.2**
TBVI	**Tortola**	**0.66**	**171**	↑*i*P		**Pb**		**23 47 04.5**	**+0.3**
MTP	**Monte Pirata**	**1.25**	**219**	↓*e*P		**Pn**		**23 47 13.2**	**-0.3**
CDVI	**St. Croix**	**1.31**	**182**	↑*e*P		**Pn**		**23 47 14.9**	**+0.5**
CDVI	**St. Croix**	**1.31**	**182**	↑*e*P		**Pn**		**23 47 14.9**	**+0.5**
CDVI				*e*S		**Sn**		**23 47 32.0**	**+0.8**
CDVI	**St. Croix**	**1.31**	**182**	↑*e*P		**Pn**		**23 47 14.9**	**+0.5**
CDVI				*e*S		**Sn**		**23 47 32.0**	**+0.8**
CBYP	**Canovanas**	**1.33**	**234**	↓*e*P		**Pn**		**23 47 14.1**	**-0.6**
CBYP				*e*S		**Sn**		**23 47 31.8**	**0.0**
HUMP	**Col San Antoni**	**1.41**	**229**	↓*e*P		**Pn**		**23 47 15.3**	**-0.5**
HUMP				*e*S		**Sn**		**23 47 33.5**	**-0.2**
CPD	**Cerro la Pandu**	**1.53**	**228**	↓*e*P		**Pn**		**23 47 17.2**	**-0.1**
CPD				*e*S		**Sn**		**23 47 36.8**	**+0.2**
SJG	**San Juan**	**1.65**	**235**	↓*e*P		**Pn**		**23 47 18.4**	**-0.7**
SJG	**San Juan**	**1.65**	**235**	↓*e*P		**Pn**		**23 47 18.6**	**-0.5**
SJG	**San Juan**	**1.65**	**235**	Pn		**Pn**		**23 47 18.3**	**-0.9**
	65nm,0.3s,baz=57,slow=9.5,SNR=69								
SJG						**Sn**		**23 47 36.4**	**-3.3**
	266nm,0.3s,baz=88,slow=7.5,SNR=13								
SJG	**San Juan**	**1.65**	**235**	↓*e*P		**Pn**		**23 47 18.6**	**-0.5**
SJG				*e*S		**Sn**		**23 47 39.1**	**-0.5**
SJG	**San Juan**	**1.65**	**235**	↓*e*P		**Pn**		**23 47 18.4**	**-0.7**
SJG				*e*S		**Sn**		**23 47 39.1**	**-0.5**
STMA	**St. Maarten, A**	**1.84**	**123**	*e*P		**Pn**		**23 47 20.7**	**-1.0**
STMA				*e*S		**Sn**		**23 47 43.8**	**-0.5**
CELP	**Cerrillos**	**2.02**	**241**	↓*i*P		**Pn**		**23 47 23.9**	**-0.3**
AOPR	**Arecibo Observ**	**2.05**	**250**	↓*e*P		**Pn**		**23 47 23.9**	**-0.7**
OBIP	**Obispado Ponce**	**2.06**	**241**	↓*i*P		**Pn**		**23 47 24.4**	**-0.3**
OBIP				*e*S		**Sn**		**23 47 50.5**	**+0.8**
GBPR	**Guanica, Bosqu**	**2.32**	**242**	↑*e*P		**Pn**		**23 47 28.8**	**+0.5**
GBPR				*e*S		**Sn**		**23 47 56.0**	**0.0**
GBPR				*e*S		**Sn**		**23 47 56.4**	**+0.3**
AGPR	**Aguadilla, PR**	**2.34**	**256**	↑*e*P		**Pn**		**23 47 27.9**	**-0.6**
AGPR				*e*S		**Sn**		**23 47 57.0**	**+0.4**
AGPR	**Aguadilla, PR**	**2.34**	**256**	↑*e*P		**Pn**		**23 47 27.9**	**-0.6**
AGPR				*e*S		**Sn**		**23 47 57.0**	**+0.4**
LSP	**Las Mesas**	**2.41**	**249**	↓*e*P		**Pn**		**23 47 29.2**	**-0.3**
MPR	**Mayaguez**	**2.44**	**250**	*e*Pn		**Pn**		**23 47 29.5**	**-0.5**
ANWB	**Willy Bob**	**3.12**	**116**	*e*Pn		**Pn**		**23 47 39.3**	**0.0**
ANWB				*e*Sn		**Sn**		**23 48 10.3**	**-5.6**
MBWH		**3.34**	**133**	↓*i*P		**Pn**		**23 47 42.7**	**+0.3**
MBWH				↑↑*i*S		**Sn**		**23 48 25.2**	**+3.8**
MLYT	**Lee's Yard**	**3.36**	**134**	↓*i*P		**Pn**		**23 47 42.9**	**+0.4**
MLYT				↑↑*i*S		**Sn**		**23 48 28.3**	**+6.6**
MBRY		**3.40**	**133**	↓*i*P		**Pn**		**23 47 44.6**	**+1.5**
MBRY				↓↓*i*S		**Sn**		**23 48 37.1**	**+14**
LZG	**Guadaloupe-1**	**4.05**	**136**	*e*P		**Pn**		**23 47 52.5**	**+0.4**
TBG	**Guadaloupe-3**	**4.34**	**137**	*e*P		**Pn**		**23 47 58.6**	**+2.4**
DEG	**La Desirade**	**4.44**	**128**	*e*P		**Pn**		**23 47 58.3**	**+0.9**
MGG	**Marie-Galante**	**4.51**	**133**	*e*P		**Pn**		**23 47 59.7**	**+1.2**
FDF	**Fort de France**	**5.50**	**141**	*e*P		**Pn**		**23 48 12.9**	**+0.8**
FDF	**Fort de France**	**5.50**	**141**	*e*Pn		**Pn**		**23 48 12.9**	**+0.8**
FDF				*e*Sn		**Sn**		**23 49 14.5**	**-0.2**
GRGR	**Grenville**	**7.50**	**156**	*e*Pn		**Pn**		**23 48 38.8**	**-0.8**
GRGR				Sn		**Sn**		**23 49 58.0**	**-6.0**
PCRV	**Puerto La Cruz**	**8.84**	**179**	Pn		**Pn**		**23 48 56.4**	**-1.6**
	4.3nm,0.3s,baz=294,slow=3.4,SNR=11								
PCRV				Sn		**Sn**		**23 50 31.5**	**-5.4**
	1.0nm,0.3s,baz=82,slow=3.5,SNR=2.9								
PCRV				LR		LR		23 52 28.5	
	comp=Z,232nm,18.1s,baz=286,slow=39								
SDV	**Santo Domingo**	**11.63**	**210**	Pn		**Pn**		**23 49 39.1**	**+3.0**
	5.6nm,0.3s,baz=52,slow=7.3,SNR=7.6								
SDV				Sn		**Sn**		**23 51 40.3**	**-5.1**
	1.9nm,0.3s,baz=238,slow=10,SNR=2.2								
SDV	**Santo Domingo**	**11.63**	**210**	*e*Pn		**Pn**		**23 49 39.2**	**+3.0**
	19nm,0.5s								
SDV				Sn		**Sn**		**23 51 40.3**	**-5.1**
ROSC	**El Rosal**	**16.95**	**215**	Pn		**Pn**		**23 50 46.3**	**-1.0**
	0.7nm,0.3s,baz=107,slow=21,SNR=2.3								
ROSC				Sn		**Sn**		**23 53 57.9**	**+2.7**
	0.5nm,0.3s,baz=91,slow=18,SNR=2.1								
BCIP	**Isla Barro Col**	**17.64**	**238**	*e*Pn		**Pn**		**23 50 58.2**	**+2.3**
NHSC	**New Hope**	**19.66**	**318**	*e*P		**Pn**		**23 51 25.2**	**+4.8**
CNNC	**Cliffs of the**	**19.88**	**327**	*e*P		**Pn**		**23 51 23.6**	**+0.7**
	85nm,0.6s								
LHS	**Liberty Hill**	**20.97**	**320**	*e*P		**P**		**23 51 43.7**	**+11**
JSC	**Jenkinsville**	**21.12**	**319**	*e*P		**P**		**23 51 34.5**	**-0.2**
TEIG	**Tepich**	**22.21**	**277**	P		**P**		**23 51 46.8**	**+0.3**
	6.7nm,0.8s,mb4.1,baz=139,slow=19,SNR=3.1								
TEIG	**Tepich**	**22.21**	**277**	P		**P**		**23 51 46.8**	**+0.3**
MVL	**Millersville**	**23.14**	**337**	*e*P		**P**		**23 51 56.0**	**-0.2**
	7.9nm,0.6s,mb4.3								
BRYW	**Bryant College**	**23.50**	**347**	P		**P**		**23 52 01.6**	**+1.7**
TKL	**Tuckaleechee C**	**23.58**	**318**	P		**P**		**23 52 00.4**	**-0.3**
	2.1nm,0.7s,mb3.6,baz=129,slow=13,SNR=3.5								
TKL				S		**S**		**23 56 15.7**	**+2.2**
	4.5nm,0.8s,baz=114,slow=6.4,SNR=3.3								
TKL				LR		LR		00 02 09.7	
	comp=Z,65nm,18.8s,MS3.1,baz=261,slow=39								
WES	**Weston**	**23.91**	**348**	P		**P**		**23 52 04.1**	**+0.5**
LRAL	**Lakeview Retre**	**24.30**	**309**	*e*P		**P**		**23 52 07.2**	**-0.1**
	9.6nm,0.9s,mb4.2								
LPAZ	**La Paz**	**35.29**	**186**	P		**P**		**23 53 42.9**	**-2.0**
	0.4nm,0.5s,mb3.6,baz=56,slow=9.7,SNR=2.9								
LPAZ				LR		LR		00 09 36.9	
	comp=Z,66nm,19.3s,MS3.4,baz=56,slow=39								

BDFB Brasilia 38.21 153 LR LR 00 10 55.5
comp=Z,100nm,18.7s,MS3.6,baz=142,slow=38
ULM Lac du Bonnet 39.77 329 P **P** **23 54 20.4 -2.1**
1.9nm,0.6s,mb4.0,baz=117,slow=11,SNR=3.2
SDCO Great Sand Dun 40.03 306 *e*P **P** **23 54 24.9 +0.1**
7.9nm,0.9s,mb4.4
BNM Barren Site 40.07 301 *e*P **P** **23 54 25.6 +0.3**
LVC Limon Verde 41.63 186 P **P** **23 54 36.6 -1.5**
3.1nm,0.6s,mb4.1,baz=341,slow=7.7,SNR=4.7
LVC Limon Verde 41.63 186 P **P** **23 54 36.6 -1.5**
PDAR Pinedale Array 44.47 312 P **P** **23 55 00.7 -0.3**
6.4nm,0.8s,mb4.4,baz=112,slow=9.0,SNR=45
PDAR PcP PcP 23 56 43.8 -0.5
1.1nm,0.7s,baz=97,slow=5.8,SNR=4.0
LOHW Long Hollow 45.46 313 *e*P **P** **23 55 08.9 +0.1**
2.5nm,0.8s,mb4.1
HWUT Hardware Ranch 45.57 310 *e*P **P** **23 55 09.4 -0.4**
6.6nm,0.9s,mb4.6
MOOW Moose Ponds 45.59 313 *e*P **P** **23 55 09.4 -0.5**
3.9nm,0.8s,mb4.4
TPAW Teton Pass 45.66 313 *e*P **P** **23 55 10.3 -0.1**
5.2nm,0.8s,mb4.5
CPUP Villa Florida 45.70 171 P **P** **23 55 07.6 -3.2**
4.2nm,0.7s,mb4.5,baz=339,slow=9.3,SNR=15
CPUP LR LR 00 16 44.4
comp=Z,41nm,21.4s,MS3.3,baz=95,slow=39
RRI2 Red Ridge 45.88 312 *e*P **P** **23 55 12.0 -0.1**
2.8nm,0.6s,mb4.4
QLMT Earthquake Lak 46.40 314 *e*P **P** **23 55 17.6 +1.4**
BGU Big Grassy Mou 46.48 309 *e*P **P** **23 55 16.8 -0.1**
MCMT McKenzie Canyo 47.36 314 *e*P **P** **23 55 24.9 +1.2**
NVAR Mina Array Bea 50.06 304 P **P** **23 55 45.1 +0.5**
0.6nm,0.5s,mb3.9,baz=98,slow=7.1,SNR=8.1
MDT Midelt 55.11 63 P **P** **23 56 22.1 0.0**
2.6nm,0.9s,mb4.3,baz=286,slow=7.4,SNR=6.9
ESDC Sonseca Array 55.73 55 P **P** **23 56 25.8 -0.7**
1.9nm,0.9s,mb4.1,baz=263,slow=6.7,SNR=15
PLCA Paso Flores 59.74 185 P **P** **23 56 53.1 -1.3**
0.8nm,0.5s,mb4.0,baz=334,slow=9.9,SNR=4.1
TORD Torodi Ar. Bea 63.77 84 P **P** **23 57 20.6 -1.6**
0.2nm,0.7s,mb3.3,baz=294,slow=35,SNR=3.7
NOA NORSAR Array B 66.70 31 LR LR 00 20 13.8
comp=Z,6.3nm,19.4s,MS2.8,baz=275,slow=30
HHC Hu-ho-hao-te 120.29 3 *e*PKP PKPdf 00 05 35.3 -5.8
HHC PP PP
comp=Z,113nm,8.5s
CD2 Chengdu 129.09 13 *e*PKP PKPdf 00 05 57.0 -1.3
ASAR Alice Springs 162.06 252 PKPab PKPab 00 07 37.1 -1.1
comp=Z,0.5nm,0.7s,baz=91,slow=4.8,SNR=4.5

IDC 16 23:58:01.3±4.2, 333S×10077E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/19, mbtmp3.7/5, Error ellipse: s-maj=179.0km s-min=22.0km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Ar**	**36.66**	**119**	P		P		00 05 08.9	-1.1
	0.3nm,0.4s,baz=305,slow=9.1,SNR=2.5								
ASAR	**Alice Springs**	**37.85**	**125**	P		P		00 05 21.1	+1.0
	0.3nm,0.3s,baz=303,slow=7.9,SNR=7.5								
SONM	**Songino Array**	**51.19**	**5**	P		P		00 07 07.2	+0.9
	0.8nm,0.6s,baz=201,slow=8.7,SNR=5.2								
MKAR	**Makanchi Array**	**52.51**	**344**	P		P		00 07 16.2	+0.1
	0.9nm,0.8s,baz=152,slow=6.5,SNR=6.2								
ZALV	**Zalesovo Beam**	**58.61**	**349**	P		P		00 07 59.1	-0.8
	0.4nm,0.3s,baz=177,slow=5.8,SNR=4.5								

JMA 17 00:06:57.5±0.1, 2779N×14080E, h409km, M3.5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.41**	**119**	P		Pn		00 07 51.4	+0.2
CBIJ				*e*S		S		00 08 33.3	-1.2
JHHJ	**Haha-jima-NKT**	**1.69**	**133**	P		Pn		00 07 52.6	0.0
JHHJ				*e*S		S		00 08 28.9	-8.1
BSO1	**Boso 1**	**6.84**	**1**	*e*S		S		00 10 09.5	+6.5
JIE	**Ise**	**7.46**	**333**	P		P		00 08 48.4	+2.0
JNY	**Yasuok**	**7.95**	**342**	P		P		00 08 53.9	+2.0
JRY	**Ryogami san**	**8.36**	**349**	P		P		00 08 57.5	+1.1
JYT	**Yasato**	**8.43**	**357**	P		P		00 08 57.5	+0.3
JAG	**Ashikaga**	**8.69**	**353**	P		P		00 09 00.2	+0.2
JHO	**Hitachi**	**8.80**	**359**	P		P		00 09 02.5	+1.2

*ISCJB **17** 00:11:15.9±0.7, 2458N±006×11028W±005, h10km, Error ellipse: s-maj=8.3km s-min=6.6km az=176.3*
*MEX **17** 00:11:16.7±0.5, 2463N×11065W, h5km, MD4.3*
*NEIC **17** 00:11:18.4±0.6, 2455N×11030W, h10km, mb4.0/11, MD4.3(MEX), Error ellipse: s-maj=8.7km s-min=7.1km az=90.0*

ISC 17 00:11:15.9±0.8, 2439N±007×11029W±005, h10km, n140, σ0°88/144, 45C-52D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.28**	**184**	*e*P		**Pg**		**00 11 27.6**	**+6.0**
LPIG				*i*S		**Sg**		**00 11 36.9**	**+11**
HSIG		**4.65**	**353**	*i*P		**Pn**		**00 12 22.2**	**-4.1**
HSIG				*i*S		**Sn**		**00 13 13.2**	**-7.1**
HPIG		**4.88**	**58**	*i*P		**Pn**		**00 12 29.2**	**-0.2**
HPIG				*i*S		**Sn**		**00 13 28.2**	**+2.2**
ANIG	**Ahuacatlan**	**6.27**	**121**	*i*P		**Pn**		**00 12 48.4**	**-0.1**
CGIG		**6.30**	**19**	*i*P		**Pn**		**00 12 47.1**	**-1.8**
CGIG				*i*S		**Sn**		**00 13 56.5**	**-4.4**
MNTX	**Cornudas Mount**	**8.48**	**30**	*e*Pn		**Pn**		**00 13 18.4**	**-0.3**
Y18A	**Canyon Day Jun**	**9.36**	**1**	↑P		**Pn**		**00 13 30.7**	**-0.2**
	baz=9.8								
GLA	**Glamis**	**9.51**	**336**	*e*Pn		**Pn**		**00 13 34.7**	**+1.8**
Y16A	**Circle Bar Ran**	**9.52**	**354**	↓P		**Pn**		**00 13 32.4**	**-0.7**
	baz=9.9								
Y15A	**Casa Rosa Ranc**	**9.70**	**350**	↓P		**Pn**		**00 13 35.3**	**-0.3**
	baz=10								
Y14A	**Wickenburg**	**9.81**	**347**	↑P		**Pn**		**00 13 37.1**	**0.0**
	baz=10								
X19A	**St. Johns**	**10.04**	**5**	↑P		**Pn**		**00 13 40.2**	**0.0**
	baz=10								
X16A	**Lo Mia Camp, P**	**10.05**	**355**	↑P		**Pn**		**00 13 40.2**	**-0.1**
	baz=10,SNR=9.3								
LENM	**Lemitar**	**10.16**	**16**	*e*Pn		**Pn**		**00 13 43.2**	**+1.3**
X15A	**Humboldt**	**10.21**	**351**	↓P		**Pn**		**00 13 43.3**	**+0.8**
	baz

baz=13
MVCO **Mesa Verde** 12.88 6 ePn Pn 00 14 18.4 -0.6
1.9nm,0.3s
ARVC **Arvin** 13.02 327 ⇑P Pn 00 14 20.5 -0.5
baz=13
MPMC **Manual Prospec** 13.19 334 ⇓P Pn 00 14 23.5 +0.2
baz=14,SNR=9.4
ISA **Isabella** 13.28 330 ⇓P Pn 00 14 24.1 -0.4
baz=14
ISA **Isabella** 13.28 330 ePn Pn 00 14 26.0 +1.4
FURC **Furnace Creek,** 13.31 336 ⇓P Pn 00 14 25.2 +0.3
baz=14,SNR=7.9
CCUT **Cedar City** 13.38 349 ePn Pn 00 14 27.6 +1.7
T11A **Corn Creek, Al** 13.49 343 ⇓P Pn 00 14 28.1 +0.7
baz=14
TPNV **Topopah Spring** 13.53 339 ePn Pn 00 14 28.5 +0.6
1.7nm,0.7s
VES **Vestal, Richgr** 13.71 328 ⇑P Pn 00 14 30.5 +0.1
baz=14
S12A **Delamar Landin** 13.75 345 ⇑P Pn 00 14 31.8 +0.9
baz=14
CWC **Cottonwood Cre** 13.76 333 ⇓P Pn 00 14 31.2 +0.1
baz=14,SNR=7.1
SDCO **Great Sand Dun** 13.93 16 ePn Pn 00 14 35.1 +1.7
S11A **Rachel** 14.02 342 ⇓P Pn 00 14 36.1 +1.5
baz=14
MVU **Marysvale** 14.17 354 ePn Pn 00 14 38.3 +1.7
MSU **Marysvale** 14.18 354 ePn Pn 00 14 38.4 +1.7
WMOK **Wichita Mounta** 14.36 41 ePn Pn 00 14 41.3 +2.0
HELL **Mitchell Peak** 14.37 331 ⇑P Pn 00 14 39.9 +0.5
baz=15
S09A **Goldfield** 14.56 338 ⇑P Pn 00 14 43.4 +1.4
baz=15,SNR=5.2
S08C **White Mtn Res** 14.71 335 ⇓P Pn 00 14 45.4 +1.4
baz=15,SNR=7.5
MTUM **Tungsten Hills** 14.74 333 ePn Pn 00 14 45.3 +0.9
Q13A **Wheeler Ranch,** 14.87 349 ⇑P Pn 00 14 46.6 +0.5
baz=15
TPH **Tonopah** 14.87 338 ePn Pn 00 14 47.3 +1.1
R09A **Tonopah** 14.97 339 ⇓P Pn 00 14 48.0 +0.4
baz=15,SNR=5.2
KCC **Kaiser Creek** 15.04 331 ⇓P Pn 00 14 49.2 +0.8
baz=15,SNR=7.6
Q12A **Willow Creek R** 15.11 346 ⇓P Pn 00 14 50.1 +0.7
baz=16
SAO **San Andreas Ge** 15.62 325 ePn Pn 00 14 56.3 +0.2
CMB **Columbia Colle** 16.10 330 ePn Pn 00 15 02.9 +0.5
12nm,1.6s
O11A **Cowboy Ranch,** 16.34 345 ⇓P Pn 00 15 07.1 +1.7
baz=17
ELK **Elko** 16.83 347 ePn Pn 00 15 13.2 +1.6
M16A **Huntsville** 16.92 357 ⇓P Pn 00 15 12.6 -0.2
baz=17
BMN **Battle Mountai** 17.03 342 ePn Pn 00 15 14.6 +0.5
PAHR **Pah Rah Range** 17.10 335 ePn Pn 00 15 15.4 +0.5
12nm,1.3s
M15A **Larsen Ranch,** 17.13 354 ⇑P Pn 00 15 15.4 0.0
baz=18
HWUT **Hardware Ranch** 17.21 357 ePn Pn 00 15 15.2 -1.2
26nm,1.3s
P05C **Yuba Gap, Truc** 17.25 332 ⇑P Pn 00 15 15.7 -1.2
baz=18
M14A **Sheep Mountain** 17.26 352 ⇑P Pn 00 15 17.7 +0.7
baz=18
O07A **Toulon** 17.31 337 ⇓P Pn 00 15 17.9 +0.3
baz=18
M11A **Holland Ranch,** 17.61 346 ⇓P Pn 00 15 20.7 -0.6
baz=18
L15A **Malad City** 17.66 355 ⇓P Pn 00 15 21.7 -0.3
baz=18
L14A **Malta** 17.77 353 ⇑P Pn 00 15 23.2 -0.2
baz=18
ORV **Oroville** 17.84 331 ⇓P Pn 00 15 23.5 -0.8
baz=18
N07B **Gerlach** 17.89 338 ⇑P Pn 00 15 24.7 -0.1
baz=18
L12A **House Creek Ra** 18.14 349 ⇑P Pn 00 15 28.3 +0.3
baz=19
K14A **Jones Ranch, D** 18.27 353 ⇓P Pn 00 15 29.0 -0.5
baz=19
O04C **Chester** 18.30 333 ⇑P Pn 00 15 28.6 -1.3
baz=19
L11A **Cat Creek Ranc** 18.31 347 ⇓P Pn 00 15 29.6 -0.3
baz=19
M08A **Happy Creek Ra** 18.31 340 ⇑P Pn 00 15 29.8 -0.2
baz=19
K15A **Arbon** 18.35 355 ⇓P Pn 00 15 30.0 -0.4
baz=19
J16A **Bone** 18.87 357 ⇑P Pn 00 15 36.4 -0.4
baz=19
RRI2 **Red Ridge** 18.93 358 eP Pn 00 15 37.7 +0.1
31nm,1.8s
K11A **Parker Ranch,** 18.94 347 ⇑P Pn 00 15 37.5 -0.2
baz=19
L08A **Fields** 18.98 341 ⇓P Pn 00 15 37.3 -0.8
baz=19
KIPM **Iron Peak** 18.98 327 eP Pn 00 15 37.6 -0.5
J15A **Blackfoot** 19.05 355 ⇑P Pn 00 15 38.3 -0.6
baz=20
TPAW **Teton Pass** 19.07 359 eP Pn 00 15 39.2 0.0
L07A **Adell** 19.13 339 ⇓P Pn 00 15 38.8 -1.1
baz=20
LOHW **Long Hollow** 19.18 359 ePn Pn 00 15 40.3 -0.2
9.4nm,1.4s
J12A **Stokes Ranch,** 19.23 349 ⇓P Pn 00 15 40.3 -0.8
baz=20
J13A **Cove Ranch, Pi** 19.23 351 ⇓P Pn 00 15 40.2 -1.0
baz=20
K09A **Rome** 19.27 343 ⇓P Pn 00 15 39.9 -1.8
baz=20,SNR=8.5
WVOR **Wild Horse Val** 19.28 341 eP Pn 00 15 41.5 -0.3
24nm,1.6s
MOOW **Moose Ponds** 19.32 359 eP Pn 00 15 41.8 -0.4
5.0nm,1.3s
MOD **Modoc** 19.35 337 ⇓P Pn 00 15 41.3 -1.3
baz=20
MOD **Modoc** 19.35 337 eP Pn 00 15 42.1 -0.5
13nm,1.6s
HLID **Hailey** 19.43 351 ⇓P Pn 00 15 42.3 -1.2
baz=20
HLID **Hailey** 19.43 351 eP Pn 00 15 43.3 -0.2
13nm,1.6s
I16A **Newdale** 19.47 357 ⇓P Pn 00 15 43.2 -0.8
baz=20
K08A **Mann Creek Ran** 19.51 342 ⇑P Pn 00 15 43.5 -1.0
baz=20
MFID **Camas Ranch** 19.52 348 ⇑P Pn 00 15 44.0 -0.7
baz=20
I15A **Monteview** 19.65 355 ⇓P Pn 00 15 45.8 -0.4
baz=20
I14A **Mackay** 19.67 353 ⇓P Pn 00 15 45.8 -0.5
baz=20
K07A **Rock Creek Ran** 19.70 340 ⇑P Pn 00 15 45.9 -0.9
baz=20
I13A **Wildhorse Cree** 19.73 352 ⇑P Pn 00 15 46.0 -1.1
baz=20
J09A **Fry Pan Ranch,** 19.89 344 ⇓P Pn 00 15 47.7 -1.3
baz=20
K06A **Valley Falls** 20.13 338 ⇓P P 00 15 49.1 -0.9
baz=20
YBH **Yreka Blue Hor** 20.15 332 eP P 00 15 51.4 +1.1
6.8nm,1.6s
H15A **Lima** 20.28 355 ⇓P P 00 15 52.3 +0.8
baz=21
K05A **Summer Lake** 20.29 337 ⇓P P 00 15 51.6 -0.1
baz=21
H14A **Leadore** 20.34 354 ⇑P P 00 15 52.1 -0.1
baz=21
H12A **Diamond D Ranc** 20.46 351 ⇑P P 00 15 53.2 -0.3
baz=21
J06A **Christmas Vall** 20.50 339 ⇓P P 00 15 53.6 -0.4
baz=21,SNR=5.9
MCMT **McKenzie Canyo** 20.50 355 eP P 00 15 54.4 +0.4
H11A **Donnelly** 20.80 348 ⇓P P 00 15 57.2 0.0
baz=21
G15A **Dillon** 20.81 356 ⇓P P 00 15 57.9 +0.5
baz=21
H10A **Noah's Angus R** 20.83 347 ⇑P P 00 15 56.9 -0.7
baz=21
J05A **Fort Rock** 20.89 337 ⇑P P 00 15 58.1 -0.2
baz=21
G13A **Cobalt** 20.91 352 ⇑P P 00 15 57.8 -0.6
baz=21
I07A **Izee** 21.05 341 ⇓P P 00 15 59.6 -0.3
baz=21
BMO **Blue Mountains** 21.20 346 eP P 00 16 01.7 +0.1
22nm,1.8s
H08A **Prairie City** 21.22 343 ⇓P P 00 16 01.3 -0.5
baz=22
G11A **Walters Elk Ra** 21.52 348 ⇑P P 00 16 03.7 -1.3
baz=22
G10A **Bishop Farm, J** 21.58 347 ⇑P P 00 16 04.3 -1.4
baz=22
F13A **Darby** 21.61 352 ⇓P P 00 16 04.7 -1.2
baz=22,SNR=6.8
F12A **Elk City** 21.70 351 ⇑P P 00 16 05.7 -1.3
baz=22
G09A **Cove** 21.71 346 ⇑P P 00 16 05.8 -1.3
baz=22,SNR=5.5
KEBM **Edson Butte** 21.78 331 eP P 00 16 07.8 0.0
E13A **Victor** 22.23 353 ⇑P P 00 16 11.6 -1.0
baz=23
CHMT **Chamberlain Mo** 22.61 355 eP P 00 16 17.7 +1.1
D14A **Greenough** 22.80 354 ⇓P P 00 16 17.2 -1.4
baz=23
D12A **Red Ives Fores** 22.98 351 ⇓P P 00 16 19.0 -1.6
baz=23
D11A **Klaveano Farm,** 23.13 349 ⇓P P 00 16 20.4 -1.7
baz=24

BJI ***17*** *00:16:29.6,2450N×109.80W,h10km,mB5.5,mb4.9,Ms5.1, Msz4.7*
IDC ***17*** *00:16:30.6±0.5,2474N×109.99W,h0km,mb4.4/14, mb1 4.5/21,mb1mx4.4/28,mbtmp4.4/21,ML3.5/4,MS4.9/27, Ms1 4.9/27,ms1mx4.7/38,Error ellipse: s-maj=13.5km s-min=7.7km az=106.0*
ISCJB ***17*** *00:16:30.4±0.2,2457N±0.02×109.85W±0.02,h10km, mb4.6/40,MS4.9/26,Error ellipse: s-maj=3.4km s-min=2.5km az=30.0*
NEIC ***17*** *00:16:31.6±0.3,2449N×109.85W,h10km,mb4.8/42,Error ellipse: s-maj=4.7km s-min=3.3km az=211.0*
NEIC Felt [IV] at La Paz, Mexico. Also felt at Los Cabos, Mexico.
GCMT ***17*** *00:16:31.6±0.2,2477N×109.88W,h15km,MW5.4/90, Moment Tensor Solution. s66,c101; s90,c177; Duration: 1s2 Moment tensor: Scale 10^17Nm; Mrr=0.10±.03; Mθθ-1.14±.03; Mϕϕ1.24±.03; Mrθ-0.23±.07; Mθϕ-0.89±.02; Mϕr0.33±.08; Best double couple: M0 1.53100×10^17 NP1:ϕs27.00000°,δ78.00000°, λ5.00000°. NP2:ϕs296.00000°,δ85.00000°,λ168.00000°. Principal axes: T 1.6180, Plg12.0000°, Azm251.0000°; N -0.1770, Plg76.0000°, Azm94.0000°; P -1.4440, Plg5.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MEX ***17*** *00:16:33.2±0.6,2465N×109.87W,h11km±15km,MD4.8*
ISC 17 00:16:30.5±0.3,2438N±003×10991W±002,h10km,n605,
s0688/584,mb4.6/41,MS4.9/26,200C-194D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.46**	**233**	Pg		**Pg**	**Pg**	**00 16 44.5**	**+5.0**
	4μm,0.3s,baz=10,slow=3.5,SNR=131								
LPIG				Lg				00 16 53.7	
	10μm,0.3s,baz=129,slow=21,SNR=74								
LPIG				LR		LR	LR	00 16 55.9	
	comp=Z,5μm,20.5s,baz=0.0,slow=36								
LPIG	**La Paz**	**0.46**	**233**	*i* P		**Pg**	**Pg**	**00 16 45.1**	**+5.6**
LPIG				*i* S		**Sg**	**Sg**	**00 16 53.5**	**+7.9**
MAIG	**Mazatlaan**	**3.41**	**110**	*i* P		**Pn**	**Pn**	**00 17 23.4**	**-0.3**
MAIG				*i* S		**Sn**	**Sn**	**00 18 05.2**	**+1.1**
MAIG	**Mazatlaan**	**3.41**	**110**	*i* P		**Pn**	**Pn**	**00 17 23.1**	**-0.7**
MAIG				*i* S		**Sn**	**Sn**	**00 18 00.2**	**-4.0**
HPIG		**4.60**	**56**	*i* P		**Pn**	**Pn**	**00 17 37.9**	**-2.2**
HPIG				*i* S		**Sn**	**Sn**	**00 18 29.2**	**-4.4**
ANIG	**Ahuacatlan**	**5.98**	**123**	*i* P		**Pn**	**Pn**	**00 18 03.0**	**+4.0**
ANIG				*i* S		**Sn**	**Sn**	**00 19 11.3**	**+3.7**
CGIG		**6.20**	**16**	*i* P		**Pn**	**Pn**	**00 18 00.1**	**-2.1**
CGIG				*i* S		**Sn**	**Sn**	**00 19 05.3**	**-7.8**
319A	**Douglas**	**6.99**	**4**	⇑P		**Pn**	**Pn**	**00 18 09.4**	**-3.5**
	baz=7.1,SNR=26								
318A	**Bisbee**	**7.03**	**359**	⇑P		**Pn**	**Pn**	**00 18 10.4**	**-3.1**
	baz=7.1,SNR=18								
217A	**Green Valley**	**7.41**	**354**	⇑P		**Pn**	**Pn**	**00 18 16.6**	**-2.1**
	baz=7.5,SNR=8.6								
218A	**Dragoon**	**7.56**	**359**	⇓P		**Pn**	**Pn**	**00 18 19.2**	**-1.6**
	baz=7.6,SNR=13								
219A	**White Tail Can**	**7.61**	**4**	⇑P		**Pn**	**Pn**	**00 18 19.5**	**-2.0**
	baz=7.7								
216A	**Three Points,**	**7.71**	**350**	⇑P		**Pn**	**Pn**	**00 18 20.6**	**-2.3**
	baz=7.8,SNR=11								
TUC	**Tucson**	**7.94**	**355**	ePn		**Pn**	**Pn**	**00 18 22.9**	**-3.0**
214A	**Organ Pipe Nat**	**7.97**	**342**	⇑P		**Pn**	**Pn**	**00 18 24.9**	**-1.5**
	baz=8.0,SNR=6.8								
117A	**Oracle**	**8.19**	**355**	⇑P		**Pn**	**Pn**	**00 18 26.6**	**-2.8**
	baz=8.3,SNR=26								
118A	**Homack Ranch,**	**8.23**	**360**	⇑P		**Pn**	**Pn**	**00 18 27.2**	**-2.7**
	baz=8.3,SNR=14								
116A	**Eloy**	**8.30**	**349**	⇓P		**Pn**	**Pn**	**00 18 29.3**	**-1.7**
	baz=8.4,SNR=12								
119A	**Ashpeak Ranch,**	**8.37**	**4**	⇑P		**Pn**	**Pn**	**00 18 29.8**	**-2.1**
	baz=8.4								
115A	**Sonoran Desert**	**8.54**	**347**	⇑P		**Pn**	**Pn**	**00 18 32.2**	**-1.9**
	baz=8.6,SNR=11								
Z18A	**Geronimo**	**8.67**	**359**	⇓P		**Pn**	**Pn**	**00 18 34.6**	**-1.4**
	baz=8.7								
Z19A	**T-Link Ranch,**	**8.90**	**3**	⇑P		**Pn**	**Pn**	**00 18 37.2**	**-2.0**
	baz=9.0								
Z17A	**San Carlos Hig**	**8.90**	**357**	⇑P		**Pn**	**Pn**	**00 18 37.7**	**-1.4**
	baz=9.0,SNR=11								
113A	**Mohawk Valley,**	**9.02**	**339**	⇑P		**Pn**	**Pn**	**00 18 40.9**	**+0.2**
	baz=9.1,SNR=5.1								
Z16A	**Peralta Trail,**	**9.03**	**352**	⇑P		**Pn**	**Pn**	**00 18 39.7**	**-1.2**
	baz=9.1								
Z15A	**Gila River Ind**	**9.09**	**348**	⇑P		**Pn**	**Pn**	**00 18 41.6**	**-0.2**
	baz=9.2								
112A	**Yuma**	**9.10**	**334**	⇓P		**Pn**	**Pn**	**00 18 41.3**	**-0.6**
	baz=9.2								
GDL2	**Guadalupe Moun**	**9.19**	**31**	ePn		**Pn**	**Pn**	**00 18 43.9**	**+0.7**
Y17A	**Roosevelt**	**9.32**	**355**	⇓P		**Pn**	**Pn**	**00 18 44.2**	**-0.7**
	baz=9.4								
Z14A	**Wintersburg**	**9.34**	**344**	⇑P		**Pn**	**Pn**	**00 18 45.1**	**-0.1**
	baz=9.4,SNR=6.7								
Y18A	**Canyon Day Jun**	**9.36**	**359**	⇓P		**Pn**	**Pn**	**00 18 44.1**	**-1.4**
	baz=9.4,SNR=16								
LNIG	**Linares**	**9.52**	**85**	*i* P		**Pn**	**Pn**	**00 18 50.5**	**+2.9**
LNIG				*i* S		**Sn**	**Sn**	**00 20 34.9**	**+0.2**
Y19A	**Nutrioso**	**9.56**	**3**	⇑P		**Pn**	**Pn**	**00 18 48.6**	**+0.4**
	baz=9.6,SNR=20								
Y16A	**Circle Bar Ran**	**9.56**	**352**	⇑P		**Pn**	**Pn**	**00 18 48.2**	**0.0**
	baz=9.6,SNR=13								
GLA	**Glamis**	**9.65**	**335**	⇑P		**Pn**	**Pn**	**00 18 49.4**	**-0.1**
	baz=9.7,SNR=8.2								
GLA	**Glamis**	**9.65**	**335**	ePn		**Pn**	**Pn**	**00 18 50.0**	**+0.5**
Y15A	**Casa Rosa Ranc**	**9.77**	**348**	⇑P		**Pn**	**Pn**	**00 18 51.4**	**+0.3**
	baz=9.8,SNR=10								
DVTC	**Desert V Tower**	**9.88**	**328**	⇑P		**Pn**	**Pn**	**00 18 52.8**	**+0.2**
	baz=9.9,SNR=8.0								
Y14A	**Wickenburg**	**9.90**	**345**	⇑P		**Pn**	**Pn**	**00 18 53.3**	**+0.5**
	baz=10.0,SNR=26								
X17A	**Forest Lakes**	**9.95**	**356**	⇑P		**Pn**	**Pn**	**00 18 52.6**	**-1.0**
	baz=10.0,SNR=15								
SWSC	**Sam W. Stewart**	**9.97**	**330**	⇑P		**Pn**	**Pn**	**00 18 53.7**	**-0.2**
	baz=10.0,SNR=6.7								
Y13A	**Salome**	**10.00**	**341**	⇓P		**Pn**	**Pn**	**00 18 54.4**	**+0.1**
	baz=10,SNR=13								
Y22C	**IRIS PASSCAL I**	**10.00**	**14**	⇑P		**Pn**	**Pn**	**00 18 53.9**	**-0.4**
	baz=10								
X19A	**St. Johns**	**10.03**	**3**	⇑P		**Pn**	**Pn**	**00 18 54.5**	**-0.1**
	baz=10								
LENM	**Lemitar**	**10.08**	**14**	ePn		**Pn**	**Pn**	**00 18 55.0**	**-0.4**
X16A	**Lo Mia Camp, P**	**10.09**	**353**	⇑P		**Pn**	**Pn**	**00 18 55.5**	**0.0**
	baz=10,SNR=28								
X18A	**Snowflake**	**10.11**	**360**	⇓P		**Pn**	**Pn**	**00 18 55.6**	**-0.2**
	baz=10,SNR=14								
BNM	**Barren Site**	**10.15**	**16**	ePn		**Pn**	**Pn**	**00 18 56.0**	**-0.2**
Y12C	**Blythe**	**10.17**	**338**	⇑P		**Pn**	**Pn**	**00 18 56.9**	**+0.3**
	baz=10,SNR=14								
BAR	**Barrett**	**10.18**	**326**	ePn		**Pn**	**Pn**	**00 18 58.0**	**+1.3**
MONP	**Monument Peak**	**10.22**	**327**	⇓P		**Pn**	**Pn**	**00 18 58.0**	**+0.7**
	baz=10								
X15A	**Humboldt**	**10.27**	**349**	⇓P		**Pn**	**Pn**	**00 18 58.9**	**+1.0**
	baz=10,SNR=40								
LAZ	**Ladron**	**10.27**	**13**	ePn		**Pn**	**Pn**	**00 18 58.1**	**+0.1**
LPM	**Los Pinos Moun**	**10.30**	**15**	ePn		**Pn**	**Pn**	**00 18 58.7**	**+0.3**
X14A	**Yava**	**10.38**	**346**	⇓P		**Pn**	**Pn**	**00 19 00.2**	**+0.7**
	baz=10,SNR=30								
BC3	**Big Chuckw Mtn**	**10.43**	**334**	⇑P		**Pn**	**Pn**	**00 19 00.3**	**+0.1**
	baz=10,SNR=8.7								
PDMCI	**Parker Dam,Lak**	**10.55**	**341**	⇓P		**Pn**	**Pn**	**00 19 02.9**	**+1.1**
	baz=11,SNR=14								
W17A	**Winslow**	**10.68**	**356**	⇓P		**Pn**	**Pn**	**00 19 03.4**	**-0.3**
	baz=11								
W18A	**Petrified Fore**	**10.70**	**1**	⇑P		**Pn**	**Pn**	**00 19 04.1**	**+0.2**
	baz=11								
W19A	**Sanders**	**10.70**	**2**	⇑P		**Pn**	**Pn**	**00 19 04.2**	**+0.3**
	baz=11,SNR=10								
X13A	**Yucca**	**10.73**	**342**	⇑P		**Pn**	**Pn**	**00 19 05.4**	**+1.1**
	baz=11,SNR=52								
IRM	**Iron Mountain**	**10.76**	**336**	⇑P		**Pn**	**Pn**	**00 19 04.3**	**-0.4**
	baz=11,SNR=5.5								
W16A	**Flagstaff**	**10.77**	**353**	⇑P		**Pn**	**Pn**	**00 19 04.8**	**0.0**
	baz=11,SNR=9.8								
PFO	**Pinyon Flat Ob**	**10.83**	**330**	Pn		**Pn**	**Pn**	**00 19 05.4**	**-0.2**
	0.2nm,0.3s,baz=152,slow=13,SNR=16								
PFO	**Pinyon Flat Ob**	**10.83**	**330**	⇓P		**Pn**	**Pn**	**00 19 05.6**	**0.0**
	baz=11								
PFO	**Pinyon Flat Ob**	**10.83**	**330**	ePn		**Pn**	**Pn**	**00 19 06.7**	**+1.1**
JCT	**Junction City**	**10.84**	**54**	ePn		**Pn**	**Pn**	**00 19 06.6**	**+0.9**
ANMO	**Albuquerque**	**10.95**	**15**	Pn		**Pn**	**Pn**	**00 19 05.3**	**-1.9**
	0.1nm,0.3s,baz=202,slow=13,SNR=18								
ANMO				LR		LR	LR	00 23 24.0	
	comp=Z,8μm,19.8s,baz=26,slow=39								
ANMO	**Albuquerque**	**10.95**	**15**	ePn		**Pn**	**Pn**	**00 19 07.2**	**-0.1**
W15A	**Williams**	**10.95**	**350**	⇑P		**Pn**	**Pn**	**00 19 07.2**	**-0.1**
	baz=11,SNR=16								
BELC	**Belle Mtn.**	**10.96**	**332**	⇓P		**Pn**	**Pn**	**00 19 08.0**	**+0.6**
	baz=11,SNR=8.2								
NEE2	**Needles Airpor**	**11.13**	**340**	⇓P		**Pn**	**Pn**	**00 19 09.8**	**+0.1**
	baz=11								
W14A	**Seligman**	**11.14**	**346**	⇑P		**Pn**	**Pn**	**00 19 11.2**	**+1.4**
	baz=11,SNR=44								
WUAZ	**Wupatki**	**11.17**	**354**	ePn		**Pn**	**Pn**	**00 19 11.4**	**+1.1**
MURC	**Murrieta**	**11.18**	**327**	⇑P		**Pn**	**Pn**	**00 19 10.5**	**0.0**
	baz=11								
W13A	**Hualapai Mount**	**11.22**	**343**	⇓P		**Pn**	**Pn**	**00 19 12.4**	**+1.4**
	baz=11,SNR=70								
V18A	**Ganado**	**11.29**	**360**	⇓P		**Pn**	**Pn**	**00 19 11.9**	**0.0**
	baz=11,SNR=5.7								
V19A	**Window Rock**	**11.32**	**4**	⇓P		**Pn**	**Pn**	**00 19 12.3**	**0.0**
	baz=11								
GMRC	**Granite Mounta**	**11.50**	**336**	⇑P		**Pn**	**Pn**	**00 19 15.1**	**+0.2**
	baz=12								
V14A	**Boquillas Ranc**	**11.55**	**347**	⇓P		**Pn**	**Pn**	**00 19 16.8**	**+1.4**
	baz=12,SNR=39								
V15A	**Kaibab Nationa**	**11.57**	**351**	⇓P		**Pn**	**Pn**	**00 19 16.8**	**+1.1**
	baz=12,SNR=13								
LDFC	**Landfair**	**11.57**	**338**	ePn		**Pn**	**Pn**	**00 19 18.9**	**+3.1**
BBRC	**Big Bear Sol-O**	**11.59**	**330**	⇓P		**Pn**	**Pn**	**00 19 17.0**	**+1.0**
	baz=12								
CIS	**Catalina Islan**	**11.67**	**322**	⇑P		**Pn**	**Pn**	**00 19 16.6**	**-0.5**
	baz=12								
W12A	**Cal Nev Ari**	**11.70**	**340**	⇑P		**Pn**	**Pn**	**00 19 18.6**	**+1.1**
	baz=12,SNR=12								
U16A	**Tuba City**	**11.77**	**355**	⇓P		**Pn**	**Pn**	**00 19 19.5**	**+1.0**
	baz=12,SNR=30								
HEC	**Hector,Ludlow**	**11.81**	**333**	⇓P		**Pn**	**Pn**	**00 19 19.4**	**+0.3**
	baz=12,SNR=11								
BFSC	**Mount Baldy St**	**11.92**	**327**	⇑P		**Pn**	**Pn**	**00 19 21.0**	**+0.5**
	baz=12								
V13A	**Grand Canyon W**	**11.96**	**344**	⇑P		**Pn**	**Pn**	**00 19 22.2**	**+1.1**
	baz=12,SNR=19								
U18A	**Rough Rock, Ch**	**12.00**	**0**	⇓P		**Pn**	**Pn**	**00 19 21.9**	**+0.3**
	baz=12,SNR=10.0								
V12A	**Nelson**	**12.09**	**340**	⇑P		**Pn**	**Pn**	**00 19 24.0**	**+1.2**
	baz=12,SNR=34								
MWC	**Mount Wilson**	**12.11**	**326**	ePn		**Pn**	**Pn**	**00 19 25.2**	**+2.2**
RRX	**Edison Barstow**	**12.14**	**331**	⇑P		**Pn**	**Pn**	**00 19 24.5**	**+0.9**
	baz=12								
U15A	**North Rim**	**12.18**	**351**	⇓P		**Pn**	**Pn**	**00 19 25.6**	**+1.5**
	baz=12,SNR=13								
TUQ	**Turquoise Moun**	**12.19**	**336**	⇑P		**Pn**	**Pn**	**00 19 25.0**	**+0.8**
	baz=12,SNR=20								
U17A	**Shonto**	**12.20**	**357**	⇓P		**Pn**	**Pn**	**00 19 24.6**	**+0.3**
	baz=12								
DECC	**Green Verdugo**	**12.27**	**325**	⇑P		**Pn**	**Pn**	**00 19 25.0**	**-0.2**
	baz=12								
U14A	**Mt Trumbull**	**12.32**	**348**	⇑P		**Pn**	**Pn**	**00 19 27.1**	**+1.0**
	baz=12								
V11A	**Goodsprings**	**12.37**	**339**	⇑P		**Pn**	**Pn**	**00 19 28.1**	**+1.3**
	baz=12,SNR=16								
GSC	**Goldstone**	**12.41**	**333**	⇓P		**Pn**	**Pn**	**00 19 28.2**	**+0.9**
	baz=12,SNR=30								
GSC	**Goldstone**	**12.41**	**333**	ePn		**Pn**	**Pn**	**00 19 28.3**	**+1.0**
T19A	**Beclabito**	**12.43**	**3**	⇑P		**Pn**	**Pn**	**00 19 27.2**	**-0.4**
	baz=12,SNR=19								
U13A	**Pakoon Wash**	**12.49**	**345**	⇓P		**Pn**	**Pn**	**00 19 29.5**	**+1.1**
	baz=13,SNR=12								
BLG	**Laguna Peak**	**12.55**	**323**	⇓P		**Pn**	**Pn**	**00 19 29.5**	**+0.3**
	baz=13								
EDW2	**Edwards Air Fo**	**12.60**	**328**	⇑P		**Pn**	**Pn**	**00 19 30.8**	**+1.0**
	baz=13								
T17A	**Navajo Res., N**	**12.60**	**357**	⇓P		**Pn**	**Pn**	**00 19 30.1**	**+0.3**
	baz=13,SNR=10								
T16A	**Glen Canyon Da**	**12.64**	**354**	⇑P		**Pn**	**Pn**	**00 19 31.4**	**+1.1**
	baz=13,SNR=6.1								
U12A	**Valley of Fire**	**12.65**	**343**	⇑P		**Pn**	**Pn**	**00 19 31.2**	**+0.6**
	baz=13,SNR=9.5								
AMTX	**Amarillo**	**12.67**	**32**	ePn		**Pn**	**Pn**	**00 19 31.1**	**+0.3**
T18A	**Mexican Hat**	**12.71**	**0**	⇓P		**Pn**	**Pn**	**00 19 31.2**	**-0.2**
	baz=13,SNR=16								
SHOC	**Shoshone**	**12.73**	**336**	⇑P		**Pn**	**Pn**	**00 19 32.1**	**+0.6**
	baz=13,SNR=17								
OSI	**Osito Adit**	**12.76**	**325**	⇓P		**Pn**	**Pn**	**00 19 32.0**	**+0.1**
	baz=13								
T15A	**Red Dirt Ranch**	**12.77**	**351**	⇑P		**Pn**	**Pn**	**00 19 33.5**	**+1.3**
	baz=13,SNR=11								
BSC	**Santa Cruz Isl**	**12.79**	**321**	⇓P		**Pn**	**Pn**	**00 19 31.9**	**-0.6**
	baz=13								
MVCO	**Mesa Verde**	**12.85**	**5**	ePn		**Pn**	**Pn**	**00 19 33.0**	**-0.2**
U11A	**Corn Creek**	**12.89**	**340**	⇓P		**Pn**	**Pn**	**00 19 35.3**	**+1.5**
	baz=13								
SHPR	**Sheep Range**	**12.90**	**341**	ePn		**Pn**	**Pn**	**00 19 35.1**	**+1.2**
T14A	**Hurricane**	**12.93**	**349**	⇑P		**Pn**	**Pn**	**00 19 35.6**	**+1.3**
	baz=13,SNR=11								
LRMC	**Laurel Mountai**	**12.95**	**330**	⇓P		**Pn**	**Pn**	**00 19 35.4**	**+0.9**
	baz=13,SNR=10.0								
T12A	**Moapa**	**12.98**	**343**	⇑P		**Pn**	**Pn**	**00 19 35.9**	**+0.9**
	baz=13								
T13A	**Saint George**	**13.06**	**346**	⇓P		**Pn**	**Pn**	**00 19 37.3**	**+1.3**
	baz=13,SNR=12								
SBC	**Santa Barbara**	**13.16**	**322**	⇑P		**Pn**

baz=14
SMMC Simmler 13.96 324 ⇓P Pn 00 19 48.4 -0.1
baz=14
R17A Hanksville Air 14.01 357 ⇓P Pn 00 19 49.4 +0.3
baz=14,SNR=14
GRAC Grapevine Rang 14.11 335 ⇓P Pn 00 19 51.5 +1.0
baz=14,SNR=8.5
R14A James Farms, M 14.12 350 ⇑P Pn 00 19 51.7 +1.1
baz=14
S11A Rachel 14.13 341 ⇑P Pn 00 19 52.1 +1.4
baz=14,SNR=13
WMOK Wichita Mounta 14.14 41 ePn Pn 00 19 51.8 +1.0
R13A O'Grain Ranch, 14.18 347 ⇓P Pn 00 19 53.3 +1.8
baz=14,SNR=10
MSU Marysvale 14.22 353 ePn Pn 00 19 53.7 +1.8
V05C Boulder Hill, 14.33 325 ⇑P Pn 00 19 54.2 +0.7
baz=14
RCTC Rector, Farmer 14.35 328 ⇓P Pn 00 19 54.3 +0.6
baz=14
R12A Pony Springs, 14.47 345 ⇓P Pn 00 19 56.9 +1.6
baz=15,SNR=27
TIN Tinemaha 14.51 332 ⇑P Pn 00 19 56.2 +0.3
baz=15
Q16A Castle Valley 14.53 356 ⇓P Pn 00 19 56.3 +0.1
baz=15,SNR=12
Q19A Hogan Spring (14.54 2 ⇑P Pn 00 19 56.1 -0.2
baz=15
HELL Mitchell Peak 14.55 330 ⇓P Pn 00 19 57.0 +0.6
baz=15,SNR=9.9
S10A Tonopah Range, 14.65 339 ⇓P Pn 00 19 58.9 +1.0
baz=15,SNR=46
Q18A Rafter H Ranch 14.68 359 ⇑P Pn 00 19 57.8 -0.4
baz=15
SRU San Rafael 14.69 358 ⇓P Pn 00 19 57.9 -0.5
baz=15,SNR=12
SRU San Rafael 14.69 358 ePn Pn 00 19 58.6 +0.2
S09A Goldfield 14.70 337 ⇑P Pn 00 19 59.7 +1.2
baz=15,SNR=41
Q15A Fillmore 14.72 352 ⇑P Pn 00 19 59.5 +0.7
baz=15,SNR=6.0
PKD Parkfield 14.73 324 ⇑P Pn 00 19 57.8 -1.1
baz=15
R11A Troy Canyon, C 14.74 342 ⇓P Pn 00 19 59.7 +0.7
baz=15,SNR=31
U05C Westside ANR, 14.81 326 ⇑P Pn 00 19 59.9 0.0
baz=15
Q14A Sevier Lake (B 14.84 350 ⇑P Pn 00 20 01.0 +0.6
baz=15,SNR=16
S08C White Mtn Res 14.86 334 ⇑P Pn 00 20 01.5 +0.8
baz=15,SNR=22
R10A Warm Springs 14.89 340 ⇓P Pn 00 20 02.3 +1.2
baz=15,SNR=12
TMUT Trail Mountain 14.91 356 ePn Pn 00 20 04.4 +3.0
Q13A Wheeler Ranch, 14.94 347 ⇑P Pn 00 20 02.9 +1.1
baz=15,SNR=36
TPH Tonopah 15.01 337 ePn Pn 00 20 04.1 +1.4
P17A Butcher Ranch, 15.06 358 ⇑P Pn 00 20 03.1 -0.3
baz=15
R09A Tonopah 15.10 338 ⇓P Pn 00 20 04.4 +0.5
baz=15,SNR=34
T06C Millerton Lake 15.13 329 ⇓P Pn 00 20 04.0 -0.4
baz=15,SNR=26
V03C Hunter Liggett 15.16 323 ⇓P Pn 00 20 03.7 -1.1
baz=15
U04C Hernandez Rese 15.17 324 ⇑P Pn 00 20 04.0 -0.8
baz=15,SNR=6.7
Q12A Willow Creek R 15.20 345 ⇓P Pn 00 20 06.4 +1.2
baz=15,SNR=47
P18A Preston Nutter 15.20 359 ⇓P Pn 00 20 05.1 -0.2
baz=15,SNR=23
KCC Kaiser Creek 15.21 330 ⇓P Pn 00 20 04.7 -0.6
baz=15,SNR=39
P19A Cripple Cowboy 15.23 3 ⇑P Pn 00 20 04.9 -0.7
baz=15,SNR=6.1
MLAC Mammoth Lakes 15.25 332 ⇑P Pn 00 20 06.8 +0.9
baz=15
P16A Fountain Green 15.26 355 ⇓P Pn 00 20 05.9 0.0
baz=15
P15A Leamington 15.28 353 ⇑P Pn 00 20 06.7 +0.5
baz=15,SNR=9.3
NATX Nacogdoches 15.33 58 ePn Pn 00 20 09.1 +2.2
P14A Drum Mountains 15.40 351 ⇑P Pn 00 20 08.5 +0.7
baz=16,SNR=25
Q10A Clear Creek Ra 15.42 341 ⇑P Pn 00 20 08.9 +0.9
baz=16,SNR=20
P13A Bates Ranch, G 15.42 348 ⇓P Pn 00 20 08.6 +0.4
baz=16
R08A Mina 15.57 335 ⇓P Pn 00 20 10.7 +0.6
baz=16,SNR=5.3
P12A McGill 15.63 346 ⇓P Pn 00 20 11.4 +0.6
baz=16,SNR=25
NLU North Lily Min 15.63 354 ePn Pn 00 20 12.6 +1.7
MPU Maple Canyon 15.66 355 ePn Pn 00 20 12.2 +1.1
Q09A Carvers 15.67 339 ⇑P Pn 00 20 12.0 +0.6
baz=16
S05C Merced 15.70 328 ⇓P Pn 00 20 11.4 -0.4
baz=16,SNR=7.0
NVAR Mina Array Bea 15.72 335 Pn Pn 00 20 11.7 -0.4
1.0nm,0.3s,baz=163,slow=12,SNR=58
R07C Lee Vining 15.73 332 ⇓P Pn 00 20 13.3 +1.2
baz=16
O17A Robinson Place 15.78 358 ⇑P Pn 00 20 13.2 +0.3
baz=16,SNR=17
ISCO Idaho Springs 15.79 12 ePn Pn 00 20 13.1 +0.1
CMIG Matias Romero 15.81 114 Pn Pn 00 20 18.4 +5.1
0.1nm,0.3s,baz=289,slow=9.7,SNR=6.2
CMIG LR LR 00 26 27.5
comp=Z,7µm,18.5s,baz=283,slow=37
O16A Springville 15.84 356 ⇓P Pn 00 20 13.4 -0.2
baz=16
O18A Roosevelt 15.84 360 ⇑P Pn 00 20 13.0 -0.6
baz=16,SNR=22
O19A Miners Draw (B 15.88 2 ⇑P Pn 00 20 13.8 -0.3
baz=16,SNR=20
S06C San Francisco 15.91 330 ⇓P Pn 00 20 14.6 +0.1
baz=16,SNR=12
P11A Circle Ranch, 15.91 343 ⇓P Pn 00 20 14.8 +0.3
baz=16,SNR=21
PACP Pacheco Peak 15.92 325 ⇑P Pn 00 20 13.8 -0.8
baz=16
DUG Dugway 15.96 352 ePn Pn 00 20 16.2 +1.1
68nm,1.1s
Q08A Gabbs 15.96 337 ⇓P Pn 00 20 15.7 +0.6
baz=16,SNR=27
O15A The Old Anders 16.00 353 ⇓P Pn 00 20 15.9 +0.3
baz=16
DAU Daniels Canyon 16.02 356 ePn Pn 00 20 16.9 +0.9
P10A Eureka 16.17 342 ⇓P Pn 00 20 18.6 +0.8
baz=16
JLU Jordanelle 16.23 356 ePn Pn 00 20 19.3 +0.7
WAKR Walker 16.24 332 ePn Pn 00 20 19.7 +1.0
R06C Coleville 16.26 332 ⇓P Pn 00 20 20.2 +1.1
baz=16,SNR=11
CMB Columbia Colle 16.28 329 ⇓P Pn 00 20 19.0 -0.3
baz=16,SNR=6.1
CMB Columbia Colle 16.28 329 ePn Pn 00 20 19.2 0.0
P09A Austin 16.31 340 ⇑P Pn 00 20 19.9 +0.2
baz=16
NOQ North Oquirrh 16.33 354 ePn Pn 00 20 20.9 +1.1
CTU Camp Tracy 16.34 355 ePn Pn 00 20 20.7 +0.7
O12A Currie 16.35 347 ⇓P Pn 00 20 20.2 0.0
baz=16,SNR=50
Q07A Schurz 16.36 335 ⇑P Pn 00 20 21.1 +0.9
baz=16
O11A Cowboy Ranch, 16.43 344 ⇓P Pn 00 20 21.3 +0.2
baz=16,SNR=27
N19A John Jarvie Ra 16.48 2 ⇓P Pn 00 20 20.9 -0.8
baz=17,SNR=6.8
N16A Rees Ranch, Co 16.51 356 ⇓P Pn 00 20 22.2 +0.1
baz=17,SNR=7.6
N17A Moffit Pass 16.53 358 ⇑P Pn 00 20 22.8 +0.3
baz=17,SNR=15
N18A Larsen Ranch, 16.55 1 ⇓P Pn 00 20 22.3 -0.3
baz=17
N15A Stansbury Isla 16.61 353 ⇓P Pn 00 20 23.7 +0.3
baz=17
WENL Wente Vineyard 16.63 325 ⇑P Pn 00 20 23.3 -0.5
baz=17
N14A Grayback Hills 16.65 351 ⇑P Pn 00 20 24.5 +0.6
baz=17,SNR=30
R05C Kirkwood Meado 16.68 331 ⇓P Pn 00 20 25.0 +0.6
baz=17,SNR=12
BGU Big Grassy Mou 16.70 352 ePn Pn 00 20 24.8 +0.2
R04C Big Horse Ranc 16.71 328 ⇑P Pn 00 20 24.7 -0.1
baz=17
JRSC Jasper Ridge 16.73 324 ⇓P Pn 00 20 24.0 -0.9
baz=17
P08A Dixie Valley 16.75 338 ⇓P Pn 00 20 26.1 +0.8
baz=17
CBKS Cedar Bluff 16.78 29 ePn Pn 00 20 25.6 0.0
O10A Cortez Mining, 16.80 342 ⇑P Pn 00 20 26.4 +0.5
baz=17,SNR=8.5
N13A Wendover, West 16.82 349 ⇑P Pn 00 20 26.0 -0.1
baz=17,SNR=7.8
P07A Fallon 16.91 335 ⇓P Pn 00 20 28.0 +0.8
baz=17
ELK Elko 16.92 346 Pn Pn 00 20 27.4 0.0
0.1nm,0.3s,baz=171,slow=8.3,SNR=25
ELK LR LR 00 26 41.8
comp=Z,6µm,19.9s,baz=172,slow=37
ELK Elko 16.92 346 ePn Pn 00 20 27.4 +0.1
BDM Black Diamond 16.94 326 ⇑P Pn 00 20 27.5 -0.1
baz=17
M16A Huntsville 16.95 356 ⇑P Pn 00 20 27.6 -0.1
baz=17,SNR=24
N12A Clover Valley, 16.98 347 ⇓P Pn 00 20 28.2 +0.2
baz=17,SNR=27
SPUT South Promonto 17.01 353 ePn Pn 00 20 29.3 +0.8
LAVA Lava Cap Winer 17.02 330 ⇑P Pn 00 20 28.5 -0.2
baz=17,SNR=11
WCN Washoe City 17.05 333 ⇓P Pn 00 20 29.7 +0.8
baz=17,SNR=9.3
N11A Elko Archery C 17.10 345 ⇑P Pn 00 20 29.9 +0.3
baz=17
BMN Battle Mountai 17.14 341 ePn Pn 00 20 30.8 +0.6
M15A Larsen Ranch, 17.17 354 ⇓P Pn 00 20 30.7 +0.3
baz=17,SNR=37
N10A Dunphy 17.20 343 ⇑P Pn 00 20 30.8 -0.1
baz=17
HWUT Hardware Ranch 17.23 356 ePn Pn 00 20 31.4 +0.2
PAHR Pah Rah Range 17.24 335 ePn Pn 00 20 32.6 +1.2
70nm,1.3s
PHWY Pilot Hill 17.28 11 ePn Pn 00 20 31.5 -0.3
M13A Montello 17.30 349 ⇑P Pn 00 20 31.9 -0.2
baz=17
O08A Rochester Mine 17.31 338 ⇓P Pn 00 20 32.5 +0.2
baz=17,SNR=12
M14A Sheep Mountain 17.31 351 ⇑P Pn 00 20 32.1 -0.2
baz=17,SNR=31
FARB Farallon Islan 17.35 323 ⇓P Pn 00 20 32.0 -0.8
baz=17
Q04C Lincoln 17.39 329 ⇑P Pn 00 20 33.7 +0.4
baz=18,SNR=8.5
RWWY Rawlins 17.41 7 ePn Pn 00 20 34.4 +0.9
17nm,1.0s
P05C Yuba Gap, Truc 17.41 331 ⇓P Pn 00 20 33.9 +0.4
baz=18,SNR=15
P06A Stead Airport, 17.43 333 ⇑P Pn 00 20 34.1 +0.4
baz=18
MIAR Mount Ida 17.44 51 ePn Pn 00 20 33.8 -0.1
O07A Toulon 17.45 337 ⇑P Pn 00 20 34.7 +0.7
baz=18,SNR=16
M12A Wells 17.49 347 ⇑P Pn 00 20 34.6 0.0
baz=18,SNR=18
HVU Hansel Valley 17.51 353 ePn Pn 00 20 35.2 +0.5
Q03C Winters 17.54 327 ⇑P Pn 00 20 34.7 -0.3
baz=18
CVS Carmenet Viney 17.54 325 ⇓P Pn 00 20 34.2 -1.0
baz=18
MCCM Marconi Confer 17.61 324 ⇓P Pn 00 20 35.2 -0.9
baz=18
N09A Rock Creek Ran 17.62 341 ⇓P Pn 00 20 36.3 +0.2
baz=18,SNR=12
L16A Fish Hatchen 17.63 356 ⇑P Pn 00 20 36.0 -0.2
baz=18,SNR=21
L15A Malad City 17.70 354 ⇑P Pn 00 20 37.0 -0.1
baz=18,SNR=26
M11A Holland Ranch, 17.70 345 ⇓P Pn 00 20 37.3 +0.3
baz=18,SNR=15
N08A GE Springer Mi 17.75 339 ⇓P Pn 00 20 37.9 +0.2
baz=18,SNR=19
BEKR Beckwourth 17.77 333 ⇓P Pn 00 20 38.9 +0.9
baz=18,SNR=12
O06A Flanigan 17.81 334 ⇑P Pn 00 20 39.0 +0.5
baz=18,SNR=7.1
L14A Malta 17.82 352 ⇑P Pn 00 20 38.8 +0.2
baz=18,SNR=36
OHCM Honcut 17.83 329 ePn Pn 00 20 48.4 +10
MNRC McLaughlin Nat 17.94 327 ⇑P Pn 00 20 39.6 -0.5
baz=18
M10A I.L. Ranch, Tu 17.96 344 ⇓P Pn 00 20 41.0 +0.6
baz=18,SNR=14
L13A Dobe Diamond 17.98 350 ⇑P Pn 00 20 41.0 +0.5
baz=18,SNR=6.4
ORV Oroville 18.02 330 ⇓P Pn 00 20 41.0 0.0
baz=18,SNR=8.5
N07B Gerlach 18.03 337 ⇓P Pn 00 20 41.8 +0.7
baz=18,SNR=19
O05C Quincy 18.09 332 ⇑P Pn 00 20 42.8 +0.9
baz=18,SNR=10
M09A Marrel Ranch, 18.12 342 ⇓P Pn 00 20 42.8 +0.5
baz=18
L12A House Creek Ra 18.22 348 ⇑P Pn 00 20 44.1 +0.7
baz=18,SNR=17
N06A Buffalo Meadow 18.32 335 ⇓P Pn 00 20 45.2 +0.5
baz=18,SNR=8.7
K14A Jones Ranch, D 18.32 352 ⇑P Pn 00 20 45.1 +0.4
baz=18,SNR=47
BW06 Boulder Array 18.34 1 ePn Pn 00 20 44.0 -1.0
PDAR Pinedale Array 18.34 1 P Pn 00 20 43.3 -1.6
0.7nm,0.3s,baz=168,slow=8.6,SNR=139
PDAR LR LR 00 27 23.1
comp=Z,3µm,21.8s,baz=191,slow=36
HOPS Hopland 18.34 326 ⇑P Pn 00 20 44.1 -0.9
baz=18
AHID Auburn Hatcher 18.36 357 ePn Pn 00 20 44.9 -0.3
102nm,1.5s
K15A Arbon 18.38 354 ⇓P Pn 00 20 46.1 +0.6
baz=18,SNR=12
L11A Cat Creek Ranc 18.39 346 ⇑P Pn 00 20 46.3 +0.8
baz=18,SNR=36
M08A Happy Creek Ra 18.43 339 ⇑P Pn 00 20 46.7 +0.7
baz=18,SNR=20
UALR University of 18.43 52 ePn Pn 00 20 46.2 +0.1
123nm,1.9s
K16A Soda Springs 18.45 356 ⇓P Pn 00 20 46.1 -0.3
baz=18,SNR=12
O04C Chester 18.46 332 ⇓P Pn 00 20 46.9 +0.4
baz=18
L10A Juniper Basin 18.47 344 ⇓P Pn 00 20 47.0 +0.4
baz=19,SNR=19
K13A Stover Farm, H 18.54 350 ⇑P Pn 00 20 47.9 +0.5
baz=19,SNR=16
ELFS Eagle Lake Fie 18.56 333 ⇑P Pn 00 20 48.1 +0.5
baz=19
M07A Soldier Meadow 18.64 338 ⇑P Pn 00 20 48.8 +0.2
baz=19,SNR=12
K12A Draper Farm, C 18.67 348 ⇑P Pn 00 20 49.4 +0.5
baz=19,SNR=10
GASB Alder Springs 18.67 328 ⇑P Pn 00 20 49.4 +0.4
baz=19
L09A Wilkinson Ranc 18.73 342 ⇑P Pn 00 20 49.7 0.0
baz=19
J16A Bone 18.90 356 ⇓P Pn 00 20 51.7 0.0
baz=19,SNR=33
REDW Red Top Meadow 18.95 358 ePn Pn 00 20 51.8 -0.5
142nm,1.8s
RRI2 Red Ridge 18.95 357 eP Pn 00 20 51.8 -0.6
92nm,1.3s
M06C Likely Place G 18.96 335 ⇑P Pn 00 20 52.1 -0.3
baz=19,SNR=11
K11A Parker Ranch, 19.03 346 ⇓P Pn 00 20 53.1 -0.2
baz=19,SNR=22
SNOW Snow King Moun 19.05 358 ePn Pn 00 20 53.1 -0.4
TPAW Teton Pass 19.08 358 eP Pn 00 20 53.2 -0.7
70nm,1.2s
J15A Blackfoot 19.08 354 ⇓P Pn 00 20 53.4 -0.6
baz=19,SNR=36
L08A Fields 19.09 341 ⇓P Pn 00 20 53.6 -0.4
baz=19,SNR=33
O02C Red Bluff 19.11 329 ⇓P Pn 00 20 54.0 -0.4
baz=19
J14A Carey 19.13 352 ⇑P Pn 00 20 54.6 +0.1
baz=19,SNR=11
LOHW Long Hollow 19.19 358 eP Pn 00 20 54.2 -1.1
47nm,1.3s
DCID1 Drake Creek 19.19 357 ePn Pn 00 20 54.6 -0.7
K10A MacKenzie Ranc 19.23 344 ⇓P Pn 00 20 55.3 -0.4
baz=19,SNR=12
L07A Adell 19.25 338 ⇑P Pn 00 20 55.9 -0.1
baz=19
J13A Cove Ranch, Pi 19.29 351 ⇑P Pn 00 20 55.9 -0.6
baz=19,SNR=26
J12A Stokes Ranch, 19.30 348 ⇑P Pn 00 20 55.7 -0.8
baz=19,SNR=20
WDC Whiskeytown Da 19.32 330 ⇑P Pn 00 20 55.1 -1.7
baz=19
WDC Whiskeytown Da 19.32 330 eP Pn 00 20 55.0 -1.8
94nm,2.3s
MOOW Moose Ponds 19.33 358 eP Pn 00 20 55.6 -1.3
LTIM Timbered Crate 19.34 333 P Pn 00 20 56.9 -0.2
M05C Lookout 19.35 334 ⇑P Pn 00 20 56.6 -0.7
baz=19,SNR=18
K09A Rome 19.38 342 ⇑P Pn 00 20 56.9 -0.6
baz=20,SNR=63
WVOR Wild Horse Val 19.40 340 P Pn 00 20 56.3 -1.5
IMW Indian Meadow 19.49 358 ePn Pn 00 20 58.2 -0.5
42nm,0.9s
HLID Hailey 19.49 350 ⇑P Pn 00 20 58.0 -0.8
baz=20,SNR=29
HLID Hailey 19.49 350 eP Pn 00 20 58.1 -0.7
I16A Newdale 19.49 357 ⇑P Pn 00 20 57.9 -0.9
baz=20,SNR=31
MOD Modoc 19.49 336 ⇑P Pn 00 20 58.1 -0.8
baz=20,SNR=13
MOD Modoc 19.49 336 eP Pn 00 20 58.3 -0.6
O01C Eel River Cons 19.59 327 ⇑P Pn 00 20 58.6 -1.4
baz=20
MFID Camas Ranch 19.60 347 ⇑P Pn 00 20 59.4 -0.8
baz=20,SNR=15
K08A Mann Creek Ran 19.63 341 ⇓P Pn 00 20 59.3 -1.2
baz=20,SNR=36
I15A Monteview 19.68 354 ⇓P Pn 00 21 00.3 -0.8
baz=20,SNR=5.6
M03C McCloud 19.69 332 ⇓P Pn 00 20 59.2 -2.0
baz=20
I14A Mackay 19.71 352 ⇓P Pn 00 21 00.9 -0.6
baz=20,SNR=18
I13A Wildhorse Cree 19.79 351 ⇓P Pn 00 21 01.8 -0.6
baz=20,SNR=23
L05A Lakeview 19.82 335 ⇓P Pn 00 21 01.9 -0.9
baz=20,SNR=11
J10A Berg Farm, Mel 19.82 345 ⇓P Pn 00 21 01.7 -1.0
baz=20
K07A Rock Creek Ran 19.83 339 ⇓P Pn 00 21 01.8 -1.1
baz=20,SNR=27
N02C Big Bar 19.86 329 ⇓P Pn 00 21 01.4 -1.9
baz=20,SNR=13
J09A Fry Pan Ranch, 19.99 343 ⇓P Pn 00 21 03.5 -1.3
baz=20,SNR=16
M04C Macdoel 19.99 333 ⇓P Pn 00 21 03.1 -1.7
baz=20,SNR=22
I11A Placerville 20.10 347 ⇓P P 00 21 04.7 +0.4
baz=20,SNR=9.0
KHMM Horse Mountain 20.11 328 eP P 00 21 04.9 +0.5
M02C Callahan 20.11 331 ⇑P P 00 21 03.2 -1.1
baz=20
J08A Circle Bar Ran 20.20 342 ⇑P P 00 21 06.0 +0.6
baz=20,SNR=12
JCC Jacoby Creek 20.21 328 ⇓P P 00 21 04.4 -1.1
baz=20
K06A Valley Falls 20.26 338 ⇑P P 00 21 06.7 +0.7
baz=20,SNR=18
RSSD Black Hills 20.27 12 ePn P 00 21 06.7 +0.6
H16A Russell Place, 20.30 357 ⇑P P 00 21 07.1 +0.6
baz=20,SNR=19
H15A Lima 20.31 354 ⇑P P 00 21 07.4 +0.8
baz=20,SNR=25
YBH Yreka Blue Hor 20.32 331 P P 00 21 05.6 -1.0
0.1nm,0.3s,baz=109,slow=8.7,SNR=8.9
YBH LR LR 00 29 13.3
comp=Z,1µm,18.3s,MS4.3,baz=149,slow=38
YBH Yreka Blue Hor 20.32 331 ⇓P P 00 21 06.5 -0.1
baz=20
YBH Yreka Blue Hor 20.32 331 eP P 00 21 06.2 -0.5
L04A Klamath Falls 20.34 334 ⇓P P 00 21 06.9 0.0
baz=20
H14A Leadore 20.38 353 ⇑P P 00 21 08.2 +0.8
baz=20,SNR=21
K05A Summer Lake 20.42 336 ⇓P P 00 21 08.5 +0.7
baz=20,SNR=24
TEIG Tepich 20.43 97 P P 00 21 09.9 +1.8
30nm,0.8s,baz=311,slow=10,SNR=18
TEIG LR LR 00 32 32.7
comp=Z,3µm,18.2s,MS4.7,baz=293,slow=47
TEIG Tepich 20.43 97 eP P 00 21 11.0 +2.9
32nm,0.8s
QLMT Earthquake Lak 20.44 357 ePn P 00 21 09.1 +1.2
H13A Challis 20.44 351 ⇑P P 00 21 08.7 +0.7
baz=20,SNR=21
I10A Payette 20.45 346 ⇓P P 00 21 08.4 +0.3
baz=20,SNR=8.5
J07A Hines 20.46 340 ⇑P P 00 21 08.5 +0.2
baz=20,SNR=26
OXF Oxford 20.47 56 eP P 00 21 08.2 -0.3
46nm,1.1s
H12A Diamond D Ranc 20.52 350 ⇓P P 00 21 09.3 +0.4
baz=21,SNR=46
MCMT McKenzie Canyo 20.54 354 eP P 00 21 10.2 +1.2
I09A Lost Marbles R 20.57 344 ⇓P P 00 21 09.4 0.0
baz=21,SNR=13
J06A Christmas Vall 20.62 338 ⇓P P 00 21 10.3 +0.3
baz=21,SNR=44
K04A Chilquin 20.64 335 ⇑P P 00 21 09.9 -0.3
baz=21
KRMB Red Mountain 20.69 329 eP P 00 21 10.9 +0.2
RLMT Red Lodge 20.70 1 eP P 00 21 11.0 +0.2
44nm,1.2s
I08A Drewsey 20.73 342 ⇑P P 00 21 11.5 +0.4
baz=21,SNR=7.6
G15A Dillon 20.84 355 ⇑P P 00 21 12.9 +0.6
baz=21,SNR=27
H11A Donnelly 20.88 348 ⇑P P 00 21 12.7 +0.1
baz=21,SNR=19
H10A Noah's Angus R 20.92 346 ⇓P P 00 21 13.3 +0.2
baz=21,SNR=33
G13A Cobalt 20.96 351 ⇑P P 00 21 13.5 0.0
baz=21,SNR=36
G14A Jackson 21.01 353 ⇓P P 00 21 13.9 -0.3
baz=21
J05A Fort Rock 21.03 336 ⇑P P 00 21 14.5 +0.1
baz=21,SNR=29
DLMT Dillon 21.05 355 eP P 00 21 15.5 +1.0
60nm,1.2s,mb4.8
M01C Crescent City 21.05 329 ⇑P P 00 21 14.6 +0.1
baz=21
L02A Cave Junction 21.05 331 ⇓P P 00 21 14.5 -0.1
baz=21
HUMO Hull Mountain 21.14 332 ⇑P P 00 21 15.3 -0.2
baz=21
HUMO Hull Mountain 21.14 332 eP P 00 21 15.4 -0.1
21nm,1.5s,mb4.2
I07A Izee 21.16 341 ⇑P P 00 21 16.0 +0.2
baz=21,SNR=24
H09A Durkee 21.20 345 ⇑P P 00 21 16.1 -0.1
baz=21,SNR=17
I06A Prineville 21.26 339 ⇑P P 00 21 16.8 0.0
baz=21,SNR=5.1
BOZ Bozeman (W) 21.26 357 eP P 00 21 17.0 +0.2
105nm,1.9s,mb4.8
BRAL Brewton 21.27 67 ePn P 00 21 17.6 +0.6
BMO Blue Mountains 21.29 345 eP P 00 21 16.8 -0.4
H08A Prairie City 21.32 343 ⇑P P 00 21 17.8 +0.3
baz=21,SNR=38
J04A Umpqua Nationa 21.32 335 ⇓P P 00 21 17.3 -0.2
baz=21,SNR=8.5
GCMT Greycliff 21.36 0 eP P 00 21 17.5 -0.4
KBO Bosley Butte 21.38 330 eP P 00 21 18.6 +0.5
FVM French Village 21.43 46 eP P 00 21 18.4 -0.4
74nm,1.8s,mb4.7
LCCM Lewis and Clar 21.47 356 P P 00 21 19.8 +0.8
LRM Limekiln Ridge 21.49 355 eP P 00 21 19.5 +0.2
K02A Glendale 21.50 332 ⇑P P 00 21 18.9 -0.5
baz=22
F15A Butte 21.51 355 ⇑P P 00 21 19.7 +0.2
baz=22,SNR=29
F14A Wisdom 21.56 353 ⇑P P 00 21 20.1 0.0
baz=22
G11A Walters Elk Ra 21.59 348 ⇓P P 00 21 20.2 -0.2
baz=22,SNR=26
H07A Lands Inn, Kim 21.64 341 ⇓P P 00 21 20.5 -0.5
baz=22,SNR=16
F13A Darby 21.66 352 ⇓P P 00 21 20.7 -0.4
baz=22,SNR=69
G10A Bishop Farm, J 21.67 346 ⇓P P 00 21 20.8 -0.4
baz=22,SNR=15
F12A Elk City 21.76 350 ⇑P P 00 21 21.9 -0.3
baz=22,SNR=20
G09A Cove 21.80 345 ⇑P P 00 21 22.1 -0.6
baz=22,SNR=26
I05A Bend 21.81 338 ⇓P P 00 21 21.7 -1.0
baz=22
LRAL Lakeview Retre 21.83 62 eP P 00 21 23.6 +0.5

I04A	Tendick Farm, baz=22	21.91	335	⇓P	P	00 21 23.0	-0.8	
KEBM	Edson Butte	21.95	331	*e*P	P	00 21 24.5	+0.2	
K01A	Sixes baz=22	21.96	330	⇓P	P	00 21 24.0	-0.4	
H06A	Lindquist Farm baz=22,SNR=10	22.01	340	⇑P	P	00 21 24.5	-0.4	
J02A	Umpqua baz=22,SNR=9.2	22.02	333	⇑P	P	00 21 24.0	-1.0	
F11A	Grangeville baz=22,SNR=19	22.04	348	⇓P	P	00 21 24.2	-1.1	
SIUC	Southern Illin 61nm,1.3s,mb4.9	22.09	48	*e*P	P	00 21 25.8	0.0	
E15A	Deer Lodge baz=22,SNR=9.3	22.10	355	⇓P	P	00 21 24.8	-1.0	
G08A	Pilot Rock baz=22	22.11	343	⇓P	P	00 21 25.6	-0.4	
ECSD	EROS,Sioux Fal 27nm,0.9s,mb4.7	22.17	26	*e*P	P	00 21 25.9	-0.7	
E14A	Clinton baz=22,SNR=6.3	22.17	353	⇑P	P	00 21 26.3	-0.3	
H05A	Madras baz=22	22.22	338	⇑P	P	00 21 26.2	-0.9	
F09A	S2 Ranch, Elgi baz=22	22.24	345	⇑P	P	00 21 26.6	-0.7	
E13A	Victor baz=22,SNR=27	22.28	352	⇑P	P	00 21 26.9	-0.8	
G07A	Ruggs Ranch, H baz=22,SNR=10	22.29	342	⇑P	P	00 21 27.1	-0.7	
WVT	Waverly 41nm,1.2s,mb4.7	22.32	53	*e*P	P	00 21 28.3	0.0	
F10A	Beach Ranch, E baz=22	22.34	346	⇓P	P	00 21 27.5	-0.8	
I03A	Eugene baz=22,SNR=14	22.40	334	⇓P	P	00 21 27.9	-1.1	
CROR	Criterion Ridg	22.44	339	P	P	00 21 28.9	-0.5	
E12A	Beaver Dam Sad baz=22,SNR=18	22.45	350	⇓P	P	00 21 29.0	-0.6	
LAO	LASA Array	22.45	7	*e*P	P	00 21 28.6	-1.0	
LNOR	Lincton Mounta	22.48	345	*e*P	P	00 21 30.2	+0.3	
E11A	Bogner Ranch, baz=23,SNR=20	22.50	349	⇑P	P	00 21 28.9	-1.2	
F08A	Pendleton baz=23	22.54	344	⇓P	P	00 21 29.5	-1.0	
G06A	Carlson Farm, baz=23	22.55	340	⇓P	P	00 21 29.8	-0.9	
H04A	Detroit Lake baz=23	22.59	337	⇓P	P	00 21 30.1	-0.9	
MSO	Missoula 35nm,1.3s,mb4.6	22.63	353	*e*P	P	00 21 31.2	-0.3	
CHMT	Chamberlain Mo	22.64	354	*e*P	P	00 21 31.2	-0.4	
I02A	Mapleton baz=23	22.65	333	⇓P	P	00 21 31.0	-0.7	
D15A	Lincoln baz=23	22.71	355	⇓P	P	00 21 31.6	-0.7	
G05A	Wamic baz=23	22.78	339	⇓P	P	00 21 31.9	-1.1	
E10A	Myers Farm, Un baz=23	22.80	347	⇓P	P	00 21 32.1	-1.2	
D14A	Greenough baz=23,SNR=19	22.83	354	⇑P	P	00 21 32.6	-1.0	
COR	Corvallis 59nm,1.2s,mb4.9	22.92	335	*e*P	P	00 21 35.7	+1.1	
F07A	Phinny Hill Vi baz=23	22.94	342	⇑P	P	00 21 33.4	-1.4	
D13A	Huson baz=23,SNR=11	22.95	352	⇓P	P	00 21 33.6	-1.3	
H03A	Soap Creek Ran baz=23,SNR=7.9	22.99	335	⇑P	P	00 21 34.4	-1.0	
D12A	Red Ives Fores baz=23	23.04	350	⇓P	P	00 21 35.0	-0.8	
E09A	Wood Farm, Sta baz=23,SNR=6.3	23.05	345	⇓P	P	00 21 33.5	-2.4	
F06A	Goldendale baz=23	23.07	340	⇑P	P	00 21 34.9	-1.3	
G04A	Mulino baz=23	23.14	337	⇑P	P	00 21 35.4	-1.6	
D11A	Klaveano Farm, baz=23,SNR=25	23.20	349	⇑P	P	00 21 36.0	-1.4	
C17A	Wharram Farm, baz=23,SNR=12	23.21	359	⇑P	P	00 21 36.6	-1.0	
E08A	Dider Farm, El baz=23	23.25	344	⇓P	P	00 21 37.1	-1.0	
HAWA	Hanford	23.29	343	*e*P	P	00 21 38.1	-0.3	
RSW	Rattlesnake Hi	23.30	343	*e*P	P	00 21 39.4	+0.8	
OLIL	Olney 24nm,0.9s,mb4.6	23.38	47	*e*P	P	00 21 40.0	+0.5	
D10A	Wagner Farm, O baz=24	23.38	347	⇓P	P	00 21 38.6	-0.8	
SWET	Sewanee	23.38	57	*e*P	P	00 21 39.8	+0.3	
F05A	White Salmon baz=24	23.39	339	⇑P	P	00 21 38.7	-0.8	
C16A	Fuhringer Ranc baz=24	23.42	357	⇓P	P	00 21 39.0	-0.8	
C15A	Salmond Ranch, baz=24	23.44	355	⇑P	P	00 21 39.0	-1.0	
E07A	Sunnyside baz=24	23.52	343	⇓P	P	00 21 39.8	-1.1	
G03A	Yamhill baz=24	23.53	336	⇓P	P	00 21 39.9	-1.0	
C14A	Swan Lake baz=24	23.54	354	⇓P	P	00 21 40.1	-0.9	
C13A	Hot Springs baz=24	23.55	352	⇓P	P	00 21 39.8	-1.3	
EGMT	Eagleton	23.59	0	*e*P	P	00 21 41.0	-0.5	
HEBO	Mount Hebo 137nm,1.3s,mb5.2	23.62	335	*e*P	P	00 21 42.4	+0.5	
TGUH	Tegucigalpa,Un 16nm,0.6s,mb4.6	23.68	112	*e*P	P	00 21 43.6	+1.0	
C12B	Naegeli Ranch, baz=24	23.70	351	⇑P	P	00 21 41.1	-1.4	
D08A	Wollman Farm, baz=24	23.75	345	⇑P	P	00 21 41.0	-2.0	
F04A	Amboy baz=24	23.75	338	⇓P	P	00 21 41.6	-1.4	
E06A	Yakima baz=24	23.83	341	⇑P	P	00 21 43.5	-0.3	
KMOR	Kings Mountain	23.88	336	P	P	00 21 44.0	-0.2	
C11A	Tepee Creek (N baz=24,SNR=13	23.95	349	⇑P	P	00 21 43.6	-1.2	
B15A	Bradely Ranch, baz=24,SNR=10	23.98	356	⇓P	P	00 21 44.0	-1.0	
OD2	Odessa Site #2	24.01	345	*e*P	P	00 21 43.8	-1.6	
E05A	Randle baz=24,SNR=14	24.09	340	⇑P	P	00 21 45.4	-0.6	
C10A	Spilker Farm, baz=24	24.12	348	⇑P	P	00 21 45.1	-1.2	
D07A	Quincy baz=24	24.14	343	⇓P	P	00 21 46.0	-0.6	
F03A	Seaside baz=24	24.16	336	⇓P	P	00 21 46.8	+0.1	
B13A	Whitefish baz=24,SNR=7.5	24.21	353	⇓P	P	00 21 46.5	-0.7	
LON	Longmire 46nm,1.4s,mb4.7	24.27	340	*e*P	P	00 21 47.6	-0.2	
C09A	Chrisman Ranch baz=24	24.30	346	⇑P	P	00 21 47.8	-0.2	
WCI	Wyandotte Cave	24.36	50	*e*P	P	00 21 47.9	-0.8	
D06A	Cle Elum baz=24	24.38	342	⇑P	P	00 21 48.3	-0.5	
E04A	Onalaska baz=24	24.43	338	⇓P	P	00 21 48.7	-0.5	
B12A	Libby baz=24,SNR=12	24.46	351	⇑P	P	00 21 48.6	-0.8	
C08A	Higginbotham F baz=24	24.46	345	⇓P	P	00 21 48.6	-0.8	
DGMT	Dagmar	24.46	9	*e*P	P	00 21 48.9	-0.6	
BMW	Boistfort Moun	24.50	337	*e*P	P	00 21 50.8	+0.9	
NEW	Newport 28nm,0.9s,mb4.8	24.51	348	*e*P	P	00 21 49.3	-0.6	
B11A	Sandpoint baz=25	24.55	350	⇑P	P	00 21 49.4	-0.8	
CPCT	Cooper Cave	24.55	57	*e*P	P	00 21 50.5	+0.1	
B10A	Chitwood Farm, baz=25	24.56	348	⇑P	P	00 21 49.7	-0.7	
JFWS	Jewell Farm 19nm,0.9s,mb4.6	24.58	36	*e*P	P	00 21 50.0	-0.7	
ETW	Entiat	24.61	343	*e*P	P	00 21 50.2	-0.7	
C07A	Waterville baz=25	24.62	343	⇓P	P	00 21 50.3	-0.6	
BLO	Bloomington	24.66	48	*e*P	P	00 21 51.0	-0.4	
E03A	Lebam baz=25	24.68	337	⇑P	P	00 21 50.7	-0.8	
A14A	Double T Ranch baz=25,SNR=28	24.70	354	⇓P	P	00 21 51.2	-0.4	
D05A	Enumclaw baz=25	24.72	340	⇓P	P	00 21 51.9	+0.1	
A13A	Flathead Natio baz=25	24.76	353	⇓P	P	00 21 51.6	-0.5	
WALA	Waterton Lakes	24.83	354	*e*P	P	00 21 52.0	-0.8	
B09A	Rice baz=25	24.86	347	⇓P	P	00 21 52.5	-0.6	
A12A	Yaak River Ran baz=25	24.92	351	⇓P	P	00 21 53.6	-0.1	
A11A	Hall Mountain, baz=25,SNR=30	25.05	350	⇓P	P	00 21 54.4	-0.4	
B08A	Colville Reser baz=25,SNR=9.1	25.06	345	⇓P	P	00 21 54.9	-0.1	
C05A	Tolt Reservoir baz=25	25.08	341	⇓P	P	00 21 55.6	+0.5	
TKL	Tuckaleechee C 9.2nm,0.8s,mb4.3,baz=213,slow=10,SNR=8.1	25.19	57	P	P	00 21 56.9	+0.7	
TKL				LR	LR	00 32 35.1		
	comp=Z,9μm,18.4s,MS5.3,baz=255,slow=38							
TKL	Tuckaleechee C	25.19	57	P	P	00 21 56.9	+0.7	
TKL				LR	LR	00 32 35.1		
D03A	Wishkah Elem. baz=25	25.25	337	⇓P	P	00 21 56.9	+0.3	
A10A	Northport baz=25	25.28	348	⇑P	P	00 21 57.2	+0.3	
GNW	Green Mountain 44nm,1.6s,mb4.7	25.32	339	*e*P	P	00 21 56.9	-0.4	
B07A	Winthrop baz=25	25.35	344	⇓P	P	00 21 57.2	-0.3	
C04A	Brinnon baz=26	25.50	339	⇑P	P	00 21 58.9	0.0	
NLWA	Neilton Lookou baz=26	25.52	338	⇓P	P	00 21 59.0	-0.1	
NLWA	Neilton Lookou 49nm,1.5s,mb4.8	25.52	338	*e*P	P	00 21 59.5	+0.4	
JCW	Jim Creek	25.60	341	*e*P	P	00 21 58.8	-1.0	
A08A	Turner Farm, O baz=26,SNR=7.3	25.61	346	⇓P	P	00 22 00.7	+0.8	
TZTN	Tazewell	25.66	56	*e*P	P	00 22 01.2	+0.7	
B05A	Bryant baz=26	25.71	341	⇑P	P	00 22 00.8	0.0	
A07A	Ashnola River, baz=26	25.96	344	⇑P	P	00 22 02.7	-0.4	
B04A	Port Angeles baz=26	25.97	339	⇓P	P	00 22 03.0	-0.2	
A04A	Legoe Bay, Lum baz=26	26.30	341	⇑P	P	00 22 06.0	-0.1	
AGMN	Agassiz Refuge 82nm,2.0s,mb4.9	26.33	21	*e*P	P	00 22 06.5	+0.1	
A05A	Maple Falls baz=26	26.37	342	⇓P	P	00 22 06.4	-0.4	
COWI	Conover 60nm,1.8s,mb4.8	27.37	32	*e*P	P	00 22 15.5	-0.3	
EYMN	Ely 29nm,1.3s,mb4.8	27.68	27	*e*P	P	00 22 18.4	-0.2	
ULM	Lac du Bonnet 4.8nm,0.8s,mb4.2,baz=198,slow=10,SNR=4.3	28.03	19	P	P	00 22 20.8	-1.0	
ULM				LR	LR	00 33 01.5		
	comp=Z,1μm,19.5s,MS4.4,baz=27,slow=36							
EDM	Edmonton	28.92	356	*e*P	P	00 22 29.2	-0.3	
FFC	Flin Flon 18nm,1.1s,mb4.8	30.88	9	*e*P	P	00 22 46.8	-0.1	
NCB	Newcomb	35.04	47	*e*P	P	00 23 22.6	-0.8	
MIV	Mineville/With	35.54	47	*e*P	P	00 23 27.2	-0.5	
QUA2	Belchertown 6.6nm,0.7s,mb4.7	35.75	51	*e*P	P	00 23 27.4	-2.1	
MDV	Middlebury	35.75	48	*e*P	P	00 23 29.0	-0.5	
FRNY	Flat Rock	35.79	46	*e*P	P	00 23 29.4	-0.4	
YKA	Yellowknife Ar 3.8nm,0.8s,mb4.2,baz=3.8,slow=8.5,SNR=4.1	38.23	356	P	P	00 23 48.3	-2.0	
YKA				LR	LR	00 42 03.7		
	comp=Z,2μm,18.7s,MS5.0,baz=175,slow=40							
YKA	Yellowknife Ar	38.23	356	P	P	00 23 48.3	-2.0	
YKA				LR	LR	00 42 03.7		
OTAV	Otavalo	38.78	124	*e*P	P	00 24 01.4	+5.9	
ROSC	El Rosal 4.2nm,0.7s,mb4.3,baz=103,slow=22,SNR=4.2	39.33	114	P	P	00 24 05.4	+5.2	
ROSC				LR	LR	00 41 48.8		
	comp=Z,1μm,18.3s,MS4.8,baz=350,slow=38							
SJG	San Juan 5.3nm,0.3s,mb4.6,baz=336,slow=6.1,SNR=7.0	41.13	90	P	P	00 24 18.3	+3.2	
SJG	San Juan	41.13	90	*e*P	P	00 24 16.6	+1.5	
SCHQ	Schefferville comp=Z,2μm,19.1s,MS5.1,baz=66,slow=36	43.93	35	LR	LR	00 42 38.6		
DAWY	Dawson	44.13	342	*e*P	P	00 24 40.0	+1.2	
TAOE	Nuku Hiva Isla 766nm,24.2s	44.30	225	*e*S	S	00 31 19.0	+4.1	
TAOE				*e*LR	LR	00 37 06.7		
	10μm,26.2s,baz=38							
MCK	McKinley	46.93	337	*e*P	P	00 25 02.1	+1.0	
TRF	Thorofare Moun 61nm,1.4s,mb5.3	47.24	337	*e*P	P	00 25 04.2	+0.7	
KTH	Kantishna Hill 2μm,0.6s	47.53	337	*e*P	P	00 25 06.2	+0.4	
PPLA	Purkeypile 53nm,1.4s,mb5.4	47.63	335	*e*P	P	00 25 07.1	+0.7	
BPAW	Bear Paw Mtn. 2μm,0.6s	47.88	337	*e*P	P	00 25 08.7	+0.3	
SVW2	Sparrevohn	48.06	332	*e*P	P	00 25 09.3	-0.5	
CHUM	Lake Minchumin 7.7nm,0.8s,mb4.8	48.23	336	*e*P	P	00 25 10.9	-0.2	
TTA	Tatalina 21nm,1.1s,mb5.1	49.13	334	*e*P	P	00 25 17.5	-0.6	
COLD	Coldfoot 8.6nm,0.9s,mb4.8	49.54	341	*e*P	P	00 25 21.8	+0.6	
IMA2	Indian Mountai	49.96	338	*e*P	P	00 25 24.1	-0.2	
PPT	Papeete 1μm,24.8s	56.88	227	*e*S	S	00 34 18.2	+8.6	
PPT				*e*LQ		00 40 36.3		
	613nm,23.5s							
PPT				*e*LR	LR	00 42 56.1		
	3μm,27.2s,baz=33							
PPT	Papeete	56.88	227	LR	LR	00 43 50.2		
	comp=Z,1μm,21.6s,MS5.0,baz=19,slow=29							
LPAZ	La Paz 2.0nm,0.9s,mb4.1,baz=337,slow=4.3,SNR=5.9	57.41	131	P	P	00 26 23.1	+3.6	
LPAZ				LR	LR	00 48 31.4		
	comp=Z,497nm,21.9s,MS4.6,baz=321,slow=33							
LPAZ	La Paz	57.41	131	P	P	00 26 23.1	+3.6	
LPAZ				LR	LR	00 48 31.4		
CPUP	Villa Florida 3.2nm,0.8s,mb4.3,baz=302,slow=8.6,SNR=9.1	71.57	131	P	P	00 27 54.4	+2.3	
CPUP				LR	LR	00 57 22.6		
	comp=Z,298nm,21.3s,MS4.5,baz=214,slow=34							
PETK	Petropavlovsk- 0.6nm,0.3s,mb4.0,baz=170,slow=28,SNR=5.3	72.27	321	P	P	00 27 54.0	-2.0	
PETK				LR	LR	00 51 52.7		
	comp=Z,409nm,21.5s,MS4.7,baz=79,slow=30							
BDFB	Brasilia 5.9nm,0.8s,mb4.6,baz=286,slow=4.2,SNR=7.1	72.31	117	P	P	00 27 59.6	+2.9	
BDFB				LR	LR	01 05 21.1		
	comp=Z,518nm,18.3s,MS4.8,baz=88,slow=40							
PLCA	Paso Flores 2.7nm,0.8s,mb4.3,baz=318,slow=5.9,SNR=6.2	74.40	150	P	P	00 28 14.0	+5.5	
PLCA				LR	LR	00 55 09.9		
	comp=Z,677nm,18.6s,MS5.0,baz=336,slow=31							
PLCA	Paso Flores	74.40	150	P	P	00 28 14.0	+5.5	
PLCA				LR	LR	00 55 09.9		
TIXI	Tiksi 7.0nm,1.0s,mb4.5	76.14	344	*e*P	P	00 28 17.1	-1.1	
ARCES	ARCESS Array B 4.8nm,1.1s,mb4.3,baz=38,slow=16,SNR=4.7	81.03	14	P	P	00 28 44.7	-0.5	
ARCES				LR	LR	01 06 33.3		
	comp=Z,814nm,19.3s,MS5.1,baz=326,slow=37							
ARCES	ARCESS Array B	81.03	14	P	P	00 28 44.7	-0.5	
ARCES				LR	LR	01 06 33.3		
NOA	NORSAR Array B comp=Z,884nm,18.2s,MS5.2,baz=295,slow=36	82.58	25	LR	LR	01 05 48.4		
MTE	Manteigas	83.34	49	*e*P	P	00 28 57.8	-0.1	
ESDC	Sonseca Array 0.4nm,0.7s,mb3.8,baz=306,slow=4.5,SNR=5.6	86.12	48	P	P	00 29 12.7	+0.7	
ESDC				LR	LR	01 04 22.6		
	comp=Z,886nm,21.9s,MS5.1,baz=295,slow=33							
USHA	Ushuaia comp=Z,490nm,18.3s,MS4.9,baz=328,slow=31	86.53	157	LR	LR	01 01 03.7		
CLL	Collm 2μm,19.7s	89.51	32	*e*S	S	00 40 19.0	+0.4	
CLL				*e*SS	SS	00 46 06.0	-6.9	
CLL				*e*SSS		00 50 00.0		
CLL				*e*SSSS		00 53 06.0		
NKC	Novy Kostel 2μm,18.3s	89.93	33	AMS	AMS	01 10 10.0		
PVCC	Paska Ves 2μm,16.5s	90.77	32	AMS	AMS	01 11 30.0		
PRU	Pruhonice 1μm,17.0s	91.11	32	AMS	AMS	01 11 00.0		
KHC	Kasperske Hory 2μm,19.7s	91.20	33	AMS	AMS	01 08 20.0		
GERES	GERESS Array B comp=Z,1μm,20.7s,MS5.4,baz=304,slow=35	91.45	33	LR	LR	01 09 20.5		
DPC	Dobruska-Polom 1μm,16.2s	91.72	31	AMS	AMS	01 11 20.0		
MJAR	Matsushiro Arr 1.8nm,0.9s,mb4.4,baz=76,slow=3.5,SNR=3.4	91.74	312	P	P	00 29 38.6	0.0	
MJAR				LR	LR	01 04 26.5		
	comp=Z,413nm,19.5s,MS4.9,baz=70,slow=32							
TREC	Trest 2μm,19.4s	92.03	32	AMS	AMS	01 11 10.0		
OKC	Ostrava-Krasne 1μm,17.0s	92.93	31	AMS	AMS	01 10 00.0		
HNR	Honiara comp=Z,963nm,20.9s,MS5.2,baz=246,slow=30	93.96	262	LR	LR	01 03 13.3		
CN2	Changchun	95.29	323	*e*P	P	00 29 52.3	-2.5	
AKASG	Malin Array Be comp=Z,1μm,19.4s,MS5.4,baz=15,slow=36	96.99	25	LR	LR	01 15 04.9		
KEST	Kesra comp=Z,371nm,19.6s,MS4.9,baz=91,slow=35	97.12	46	LR	LR	01 12 50.0		
KSRS	Korea Array comp=Z,185nm,19.3s,MS4.6,baz=45,slow=32	97.92	317	LR	LR	01 09 14.9		
BJI	Beijing	102.86	325	P	Pdif	00 30 26.4	-2.2	
WMQ	Urumqi	110.24	347	*e*PKP	PKiKP	00 35 01.0	-1.8	
WMQ				*e*PP	PP	00 35 40.0	+4.2	
WMQ				PP	PP			
	comp=Z,135nm,4.8s							
WMQ				LR	LR			
	comp=N,444nm,23.6s,MS5.1							
WMQ				LR	LR			
	comp=E,287nm,21.4s,MS5.1							
WMQ				LR	LR			
	comp=Z,522nm,24.4s,MS5.0							
LZH	Lanzhou	111.92	331	*e*PKP	PKiKP	00 35 06.0	-0.2	
LZH				PP	PP			
	comp=Z,60nm,4.2s							
CD2	Chengdu	116.26	328	*e*PKP	PKPdf	00 35 12.9	-1.8	
CD2				XPKP		00 35 20.0		
CD2				PP	PP	00 36 22.3	+3.2	
CD2				PKS		00 38 48.1		
CD2				SKS	SKSdf	00 42 20.1	-7.1	
CD2				SKKS	SKKSac	00 43 13.3	-8.4	
CD2				PP	PP			
	comp=Z,90nm,10.2s							
STKA	Stephens Creek comp=Z,1.3nm,0.7s,baz=233,slow=9.6,SNR=2.8	117.50	245	PKP	PKPdf	00 35 22.3	+5.4	
GYA	Guiyang	118.33	323	*e*PDIF	Pdif	00 31 36.3	-1.1	
GYA				PKP	PKPdf	00 35 18.0	-0.8	
GYA				PP	PP	00 36 37.4	+3.6	
GYA				PKS		00 38 51.4		
GYA				SKS	SKSdf	00 42 28.8	-2.5	
GYA				SKKS	SKKSac	00 43 28.9	-6.8	
GYA				PP	PP			
	comp=Z,120nm,7.8s							
GYA				LR	LR			
	comp=N,260nm,20.9s,MS4.9							
GYA				LR	LR			
	comp=E,190nm,19.4s,MS4.9							
GYA				LR	LR			
	comp=Z,120nm,21.8s,MS4.5							
WRA	Warramunga Arr comp=Z,3.3nm,0.9s,baz=74,slow=1.9,SNR=14	120.79	261	PKP	PKPdf	00 35 25.6	+2.0	
KMI	Kunming	121.51	325	PKP	PKPdf	00 35 24.4	-0.5	
KMI				LR	LR			
	comp=Z,165nm,20.8s,MS4.7							
ASAR	Alice Springs comp=Z,2.7nm,0.9s,baz=90,slow=2.0,SNR=18	122.19	256	PKP	PKPdf	00 35 28.3	+2.1	
CMAR	Chiang Mai Arr comp=Z,0.8nm,0.3s,baz=214,slow=48,SNR=2.7	128.97	324	PKP	PKPdf	00 35 40.3	+0.9	
MAW	Mawson comp=Z,0.4nm,0.4s,baz=261,slow=13,SNR=5.0	136.54	176	PKP	PKPdf	00 35 57.9	+5.8	

*ISCJB **17** 00:33:32.0±0.6, 29.75N±0.05×95.09E±0.08, h10km, mb3.9/9, Error ellipse: s-maj=9.8km s-min=6.5km az=18.7*
*IDC **17** 00:33:32.8±0.9, 29.89N×95.17E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.8/26, mbtmp3.8/11, ML3.7/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/37, Error ellipse: s-maj=41.1km s-min=16.7km az=56.0*
*BJI **17** 00:33:38.4, 30.27N×94.84E, h14km, ML3.6*
*NEIC **17** 00:33:42.7±2.3, 30.04N×95.18E, h76km±22km, mb4.2/1, Error ellipse: s-maj=20.3km s-min=16.2km az=68.0*

ISC 17 00:33:34.3±0.6, 2985N±0.005×9515E±0.08, h10km, n28, σ1s09/29, mb3.9/9, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	Lhasa	3.48	268	PG	Pg	00 34 36.9	-4.0
LSA				SG	Sg	00 35 18.5	-7.5
LSA				Smax			
	comp=N,50nm,0.8s						
LSA				Smax			
	comp=E,30nm,0.6s						
LSA	Lhasa	3.48	268	*e*Pn	Pg	00 34 36.1	-4.9
IMP	Imphal	5.16	192	*e*P	Pg	00 35 09.0	-4.2
IMP				*e*S	Sg	00 36 19.0	-1.1
ODAN	Odare	7.46	248	*e*P	Pn	00 35 25.8	+2.7
RAMN	Ramite comp=E,5.7nm,0.3s	8.06	251	*e*P	Pn	00 35 33.4	+1.9
GUN	Gumba	8.35	259	*e*P	Pn	00 35 35.4	0.0
PKI	Pulchoki	8.85	257	*e*P	Pn	00 35 42.8	+0.6
PKIN	Phulchoki comp=E,9.4nm,0.3s	8.86	258	*e*P	Pn	00 35 42.8	+0.5
KKN	Kakani comp=E,6.2nm,0.2s	8.90	259	*e*P	Pn	00 35 42.6	-0.3
GKN	Gorkha comp=E,4.1nm,0.3s	9.39	261	*e*P	Pn	00 35 49.8	+0.1
DANN	Dangsing comp=E,8.8nm,0.4s	10.07	264	*e*P	Pn	00 35 57.7	-1.3
KOLN	Koldanda comp=E,21nm,0.7s	10.34	261	*e*P	Pn	00 36 01.9	-0.8
MKAR	Makanchi Array comp=E,0.3nm,0.3s,baz=144,slow=9.7,SNR=9.3	19.65	333	P	Pn	00 38 01.2	-3.2
MKAR				LR	LR	00 47 47.8	
	comp=E,31nm,19.3s,baz=38,slow=44						
SONM	Songino Array comp=E,0.2nm,0.3s,baz=195,slow=10.0,SNR=6.5	19.94	23	P	Pn	00 38 05.7	-2.2
KURK	Kurchatov comp=E,2.8nm,0.8s,mb3.8,baz=143,slow=10,SNR=17	24.25	334	P	P	00 38 50.4	-0.9
ZAA0	Zalesovo Array	25.22	346	*e*P	P	00 38 59.6	-0.4
ZALV	Zalesovo Beam comp=E,3.6nm,0.6s,mb4.1,baz=166,slow=8.9,SNR=19	25.22	346	P	P	00 39 00.2	+0.2
BVAR	Borovoye Array comp=E,1.6nm,0.8s,mb3.8,baz=128,slow=9.6,SNR=10	29.40	329	P	P	00 39 37.9	+0.3
AKTK	Aktyubinsk	34.55	317	P	P	00 40 22.9	+0.1
AKTO	Aktyubinsk comp=E,0.9nm,0.6s,mb3.9,baz=80,slow=12,SNR=3.4	34.55	317	P	P	00 40 22.9	+0.1
PEA0B	Petropavlovsk-	50.47	44	*e*P	P	00 42 34.1	+2.0
MLR	Muntele Rosu comp=E,1.6nm,0.8s,mb4.1,baz=228,slow=12,SNR=3.4	55.32	307	P	P	00 43 09.4	+1.3
WRA	Warramunga Arr comp=E,0.6nm,0.8s,mb3.8,baz=318,slow=8.5,SNR=2.3	62.26	138	P	P	00 43 56.6	+0.1
GERES	GERESS Array B comp=E,0.1nm,0.4s,baz=59,slow=5.4,SNR=3.5	62.80	313	P	P	00 43 59.7	-0.1
ASAR	Alice Springs comp=E,0.3nm,0.5s,mb3.5,baz=323,slow=6.8,SNR=4.7	64.94	141	P	P	00 44 14.8	+0.6
VLC	Villacollemand comp=E,2.5nm,0.7s,mb4.3	66.36	309	*e*P	P	00 44 17.0	-6.3
TORD	Torodi Ar. Bea comp=E,0.4nm,0.7s,mb3.8,baz=48,slow=3.9,SNR=4.6	86.50	283	P	P	00 46 17.2	-0.7
LPAZ	La Paz comp=E,0.9nm,0.3s,baz=163,slow=9.8,SNR=10	159.57	308	PKPbc	PKPdf	00 53 43.4	+10

*BJI **17** 00:35:17.9, 54.59N×169.83E, h20km, mB5.1, mb4.9, Ms5.1, Msz4.7*
*ISCJB **17** 00:35:20.1±0.1, 54.13N±0.003×169.24E±0.02, h15km, mb4.8/152, MS4.8/37, Error ellipse: s-maj=4.6km s-min=1.5km az=4.1*
*KRSC **17** 00:35:21.0±1.7, 53.94N×168.97E, h15km±15km, ML5.6*
*MOS **17** 00:35:21.4±1.0, 54.12N×169.15E, h26km, mb5.0/72, MS4.8/14, Error ellipse

Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
*IDC **17** 00:35:24.5±5.5,5427N×16926E,h33km±41km,mb4.3/28, mb1 4.4/29,mb1mx4.4/32,mbtmp4.3/29,ML5.1/1,MS4.5/8, Ms1 4.5/8,ms1mx4.0/34 Error ellipse: s-maj=15.7km s-min=10.8km az=153.0*
*SZGRF **17** 00:35:29.8,5408N×16932E,h33km,mb4.7,MS5.2, Komandorsky Islands, Russia, region*
ISC 17 00:35:22.3±0.1,5416N±003×16926E±002,h16km, h16km±1.0km:pP-P,n623,σ0s90/654,mb4.8/152,MS4.8/37, 133C-116D,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FX1	**Attu Island--F**	**2.66**	**117**	P	**Pn**	**00 36 01.6**	**-2.8**
FX1				S	**Sn**	**00 36 31.3**	**-4.9**
SMY	**Shemya**	**3.23**	**114**	P	**Pn**	**00 36 09.7**	**-2.5**
SMY				S	**Sn**	**00 36 47.5**	**-2.8**
KBTR	**Krutoberegovo**	**4.22**	**302**	*e*P	**Pn**	**00 36 25.4**	**-0.4**
KBTR				*i* S	**Sn**	**00 37 13.0**	**-1.7**
ZLN	**Zelenaya**	**5.20**	**294**	*e*P	**Pn**	**00 36 40.9**	**+1.6**
ZLN				*i* S	**Sn**	**00 37 40.1**	**+1.3**
SRKR	**Sorokina**	**5.24**	**302**	P	**Pn**	**00 36 41.1**	**+1.3**
BZMR	**Bezymyannaya**	**5.35**	**293**	*e*P	**Pn**	**00 36 42.4**	**+1.1**
BZMR				*i* S	**Sn**	**00 37 42.5**	**+0.1**
KLY	**Klyuchi**	**5.38**	**297**	*e*P	**Pn**	**00 36 41.3**	**-0.4**
KLY				*i* S	**Sn**	**00 37 40.8**	**-2.3**
KRSR	**Krestovskiy**	**5.39**	**296**	*e*P	**Pn**	**00 36 42.4**	**+0.5**
KRSR				*i* S	**Sn**	**00 37 42.5**	**-1.0**
TUMR	**Tumrok**	**5.40**	**286**	P	**Pn**	**00 36 42.8**	**+0.8**
KIRR	**Kirishev**	**5.43**	**293**	*e*P	**Pn**	**00 36 43.9**	**+1.5**
KIRR				*i* S	**Sn**	**00 37 45.0**	**+0.5**
KMNR	**Kamenistaya**	**5.44**	**291**	*e*P	**Pn**	**00 36 43.8**	**+1.3**
KMNR				*i* S	**Sn**	**00 37 44.8**	**+0.1**
KPT	**Kopyto**	**5.50**	**293**	P	**Pn**	**00 36 44.9**	**+1.5**
KPT				*i* S	**Sn**	**00 37 46.9**	**+0.7**
SPN	**Mys Shipunski**	**5.60**	**263**	P	**Pn**	**00 36 43.6**	**-1.1**
KOZR	**Kozyr**	**5.70**	**293**	PN	**Pn**	**00 36 48.1**	**+2.0**
KOZR				S	**Sn**	**00 37 52.5**	**+1.3**
KOZ	**Kozyrevsk**	**5.71**	**293**	*e*P	**Pn**	**00 36 48.1**	**+1.8**
KOZ				*i* S	**Sn**	**00 37 52.5**	**+1.1**
SRDR	**Sredinnyy**	**5.87**	**295**	*e*P	**Pn**	**00 36 50.1**	**+1.6**
SRDR				*i* S	**Sn**	**00 37 55.5**	**+0.2**
NLC	**Nalytchevo**	**5.98**	**264**	*e*P	**Pn**	**00 36 49.0**	**-0.9**
NLC				*i* S	**Sn**	**00 37 51.7**	**-6.2**
AVH	**Avacha**	**6.31**	**266**	*e*P	**Pn**	**00 36 54.3**	**-0.2**
AVH				*e*S	**Sn**	**00 38 02.0**	**-4.2**
PET	**Petropavlovsk**	**6.42**	**264**	*i* PN	**Pn**	**00 36 53.6**	**-2.4**
PET				pmax	pmax		
	comp=Z,600nm,1.5s						
PET				pmax	pmax		
	comp=Z,267nm,0.7s						
PET				MLR	MLR		
	comp=Z,3μm,18.0s						
PET				MLR	MLR		
	comp=Z,3μm,20.0s						
PET	**Petropavlovsk**	**6.42**	**264**	P	**Pn**	**00 36 55.0**	**-1.0**
PET				*i* S	**Sn**	**00 38 03.6**	**-5.2**
PET	**Petropavlovsk**	**6.42**	**264**	*e*Pn	**Pn**	**00 36 55.4**	**-0.6**
INSR	**Institute**	**6.43**	**265**	*e*P	**Pn**	**00 36 55.9**	**-0.3**
INSR				*i* S	**Sn**	**00 38 05.7**	**-3.5**
RUS	**Russkaya**	**6.67**	**259**	P	**Pn**	**00 36 58.3**	**-1.1**
RUS				*i* S	**Sn**	**00 38 08.8**	**-6.2**
GNL	**Ganaly**	**6.70**	**271**	P	**Pn**	**00 37 00.4**	**+0.5**
GRL	**Gorelyy**	**6.89**	**261**	P	**Pn**	**00 37 03.1**	**+0.7**
PEA0B	**Petropavlovsk-**	**6.96**	**266**	*e*Pn	**Pn**	**00 37 03.6**	**+0.2**
PETK	**Petropavlovsk-**	**6.96**	**266**	Pn	**Pn**	**00 37 03.4**	**0.0**
	comp=Z,38nm,0.3s,baz=91,slow=20,SNR=435						
PETK				Sn	**Sn**	**00 38 19.9**	**-2.2**
	comp=Z,27nm,0.3s,baz=153,slow=8.2,SNR=8.2						
PETK				LR	LR	00 39 48.0	
	comp=Z,2μm,19.4s,baz=271,slow=38						
PETK	**Petropavlovsk-**	**6.96**	**266**	Pn	**Pn**	**00 37 03.4**	**0.0**
PETK				Sn	**Sn**	**00 38 19.9**	**-2.2**
PETK				LR	LR	00 39 48.0	
MIPR	**Malaya Ipel'ka**	**7.74**	**261**	P	**Pn**	**00 37 14.6**	**+0.5**
SKR	**Severo-Kuril's**	**8.75**	**252**	*e*PN	**Pn**	**00 37 26.1**	**-1.9**
SKR				pmax	pmax		
	comp=Z,230nm,0.9s						
SKR				pmax	pmax		
	comp=Z,2μm,4.0s						
SKR				MLR	MLR		
	comp=N,5μm,12.0s						
NIKO	**Nikolski**	**13.06**	**86**	*e*Pn	**Pn**	**00 38 27.6**	**+0.8**
	comp=N,509nm,1.5s						
BILL	**Bilibino**	**14.00**	**355**	⇓ *i*P	**Pn**	**00 38 41.2**	**+1.6**
BILL				pmax	pmax		
	comp=Z,121nm,1.5s						
BILL	**Bilibino**	**14.00**	**355**	*e*Pn	**Pn**	**00 38 40.8**	**+1.2**
	comp=Z,236nm,1.3s						
UNV	**Unalaska Valle**	**14.24**	**81**	*e*Pn	**Pn**	**00 38 43.4**	**+0.4**
AKUT	**Akutan**	**14.61**	**80**	*e*P	**Pn**	**00 38 46.7**	**-1.3**
	comp=Z,49nm,1.2s						
OKH	**Okha**	**15.52**	**278**	⇑ *e*P	**Pn**	**00 38 57.0**	**-3.1**
OKH				*e*S	**Sn**	**00 41 55.8**	**+4.3**
OKH				pmax	pmax		
	comp=Z,2μm,8.0s						
OKH				smax			
	comp=N,1μm,7.0s						
TNA	**Tin City**	**16.06**	**36**	*e*Pn	**Pn**	**00 39 08.7**	**+1.7**
UGL	**Uglegorsk**	**17.58**	**264**	⇑ *i*P	**Pn**	**00 39 28.5**	**+2.2**
UGL				pmax	pmax		
	comp=Z,440nm,1.2s						
UGL				pmax	pmax		
	comp=Z,2μm,2.5s						
UGL				MLR	MLR		
	comp=Z,1μm,19.0s						
UGL				MLR	MLR		
	comp=N,2μm,17.0s						
UGL				MLR	MLR		
	comp=E,1μm,17.0s						
YSS	**Yuzh-Sakhalins**	**18.24**	**258**	⇑ *e*P	**Pn**	**00 39 35.0**	**+0.5**
YSS				pmax	pmax		
	comp=Z,120nm,1.0s						
YSS				pmax	pmax		
	comp=N,90nm,1.2s						
YSS				pmax	pmax		
	comp=E,180nm,1.2s						
YSS				MLR	MLR		
	comp=Z,2μm,14.0s						
YSS				MLR	MLR		
	comp=N,2μm,12.0s						
YSS	**Yuzh-Sakhalins**	**18.24**	**258**	*e*Pn	**Pn**	**00 39 35.6**	**+1.2**
	comp=N,89nm,1.0s						
CHGN	**Chignik**	**18.47**	**70**	*e*Pn	**Pn**	**00 39 36.6**	**-0.6**
SVW2	**Sparrevohn**	**19.86**	**55**	*e*P	**Pn**	**00 39 53.6**	**-0.3**
TTA	**Tatalina**	**19.90**	**50**	*e*P	**Pn**	**00 39 54.0**	**-0.3**
ASAJ	**Asahikawa**	**20.02**	**251**	P	**P**	**00 39 55.4**	**+1.3**
	comp=N,29nm,0.8s,baz=88,slow=9.1,SNR=11						
ASAJ	**Asahikawa**	**20.02**	**251**	P	**P**	**00 39 55.4**	**+1.4**
ASAJ				pmax	pmax		
	comp=Z,29nm,0.8s						
OHAK	**Old Harbor**	**21.15**	**66**	*e*P	**P**	**00 40 05.5**	**-0.8**
	comp=Z,89nm,1.6s,mb4.8						
OHAK				LR	LR		
	comp=Z,2μm,17.0s,MS4.6						
KDAK	**Kodiak Island**	**21.46**	**65**	P	**P**	**00 40 08.9**	**-0.6**
	comp=Z,18nm,1.1s,mb4.3,baz=151,slow=12,SNR=6.4						
PPLA	**Purkeypile**	**21.63**	**51**	*e*P	**P**	**00 40 12.1**	**+0.8**
	comp=Z,237nm,1.5s,mb5.4						
CHUM	**Lake Minchumin**	**21.69**	**48**	*e*P	**P**	**00 40 13.4**	**+1.4**
	comp=Z,135nm,1.5s,mb5.2						
YAK	**Yakutsk**	**22.03**	**307**	*e*P	**P**	**00 40 13.4**	**-2.2**
YAK				*e**PP		00 40 20.2	
YAK				*e*		00 40 34.7	
YAK				*e*S	**S**	**00 44 12.6**	**-5.2**
YAK				*e*SSS		00 45 05.9	
YAK				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,13nm,1.2s						
YAK				pmax	pmax		
	comp=E,62nm,1.5s						
YAK				pmax	pmax		
	comp=Z,110nm,1.3s,mb5.1						
YAK				pmax	pmax		
	comp=E,171nm,1.4s						
YAK				pmax	pmax		
	comp=N,118nm,1.6s						
YAK				smax			
	comp=E,688μm,2.7s						
YAK				smax			
	comp=N,472μm,2.2s						
YAK				MLR	MLR		
	comp=Z,859nm,13.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,900nm,13.0s,MS4.7						
YAK				MLR	MLR		
	comp=N,2μm,15.0s,MS4.7						
YAK	**Yakutsk**	**22.03**	**307**	*e*P	**P**	**00 40 14.2**	**-1.4**
KTH	**Kantishna Hill**	**22.27**	**49**	*e*P	**P**	**00 40 19.4**	**+1.3**
	comp=N,33nm,1.0s,mb4.7						
BPAW	**Bear Paw Mtn.**	**22.31**	**48**	*e*P	**P**	**00 40 19.9**	**+1.3**
	comp=N,26nm,1.0s,mb4.6						
SLKM	**Skilak Lake**	**22.48**	**57**	*e*P	**P**	**00 40 21.1**	**+0.7**
TRF	**Thorofare Moun**	**22.54**	**50**	*e*P	**P**	**00 40 21.1**	**+0.1**
	comp=N,52nm,1.0s,mb4.9						
PMR	**Palmer**	**22.99**	**54**	*e*P	**P**	**00 40 26.4**	**+0.6**
PMR				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.5						
PMR	**Palmer**	**22.99**	**54**	*e*P	**P**	**00 40 26.4**	**+0.6**
	comp=Z,25nm,1.2s,mb4.5						
MCK	**McKinley**	**23.17**	**49**	*e*P	**P**	**00 40 27.4**	**-0.2**
MCK				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
MCK	**McKinley**	**23.17**	**49**	*e*P	**P**	**00 40 27.4**	**-0.3**
	comp=Z,30nm,1.0s,mb4.7						
COLD	**Coldfoot**	**23.22**	**40**	*e*P	**P**	**00 40 28.7**	**+0.5**
	comp=Z,25nm,1.0s,mb4.6						
KLR	**Kul'dur**	**23.57**	**273**	*e*P	**P**	**00 40 27.0**	**-4.9**
KLR				*e*S	**S**	**00 44 42.5**	**-2.4**
KLR				*e*		00 45 40.0	
KLR				pmax	pmax		
	comp=E,70nm,1.8s						
KLR				pmax	pmax		
	comp=Z,100nm,1.8s,mb4.9						
KLR				MLR	MLR		
	comp=E,1μm,13.5s						
KLR				MLR	MLR		
	comp=Z,1μm,13.5s,MS4.6						
COLA	**College**	**23.75**	**46**	*e*P	**P**	**00 40 32.9**	**-0.5**
COLA				pmax	pmax		
	comp=Z,38nm,0.9s,mb4.8						
COLA	**College**	**23.75**	**46**	*e*P	**P**	**00 40 32.9**	**-0.5**
	comp=Z,38nm,0.9s,mb4.8						
TIXI	**Tiksi**	**24.63**	**330**	*d i*P	**P**	**00 40 40.9**	**-0.5**
TIXI				*e*		00 44 19.8	
TIXI				*e*S	**S**	**00 44 57.3**	**-4.4**
TIXI				*e*SSS		00 45 52.3	
TIXI				*e*		00 46 17.9	
TIXI				pmax	pmax		
	comp=Z,93nm,1.1s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,679nm,10.0s,MS4.4						
TIXI	**Tiksi**	**24.63**	**330**	*e*P	**P**	**00 40 41.0**	**-0.4**
CLNS	**Chul'man**	**24.94**	**294**	*e*P	pP	00 40 54.0	+4.8
CLNS				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.6						
CLNS				pmax	pmax		
	comp=E,16nm,1.0s						
CLNS				pmax	pmax		
	comp=N,21nm,1.0s						
BMRM	**Bremner River**	**25.20**	**56**	*e*P	**P**	**00 40 48.0**	**+1.3**
VLA	**Vladivostok**	**26.74**	**261**	P	**P**	**00 40 59.0**	**-1.7**
VLA				MLR	MLR		
	comp=Z,800nm,14.2s,MS4.4						
MDJ	**Mudanjiang**	**27.20**	**266**	P	**P**	**00 41 06.4**	**+1.5**
MDJ				AP	pP	00 41 08.5	-1.3
MDJ				S	**S**	**00 45 44.3**	**+1.5**
MDJ				XS	sS	00 45 55.4	+4.5
MDJ				SCP	ScP	00 48 03.8	-0.2
MDJ				PCS	PcS	00 48 05.4	-0.6
MDJ				SCS	ScS	00 51 55.5	+0.4
MDJ				AMB	AMB		
	comp=Z,22nm,1.1s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,141nm,5.7s						
MDJ				LR	LR		
	comp=N,2μm,18.0s,MS4.8						
MDJ				LR	LR		
	comp=E,725nm,16.0s,MS4.8						
MDJ				LR	LR		
	comp=Z,853nm,17.0s,MS4.4						
DAWY	**Dawson**	**27.39**	**48**	*e*P	**P**	**00 41 06.5**	**+0.1**
MAJO	**Matsushiro**	**27.72**	**243**	*e*P	**P**	**00 41 10.4**	**+0.8**
MAT	**Matsushiro**	**27.72**	**243**	P	**P**	**00 41 10.9**	**+1.3**
MAT				S	**S**	**00 45 52.0**	**+0.9**
MJAR	**Matsushiro Arr**	**27.72**	**243**	P	**P**	**00 41 11.0**	**+1.4**
	comp=Z,7.5nm,0.8s,mb4.4,baz=30,slow=8.5,SNR=17						
MJAR	**Matsushiro Arr**	**27.72**	**243**	P	**P**	**00 41 11.0**	**+1.4**
MJAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MJAR	**Matsushiro Arr**	**27.72**	**243**	P	**P**	**00 41 11.0**	**+1.4**
PNL	**Peninsula**	**27.95**	**58**	*e*P	**P**	**00 41 11.8**	**+0.3**
	comp=Z,4μm,1.2s						
HYT	**Haines Junctio**	**28.66**	**55**	*e*P	**P**	**00 41 18.2**	**+0.4**
CN2	**Changchun**	**30.10**	**268**	*e*P	**P**	**00 41 30.4**	**-0.3**
CN2				*e*AP	pP	00 41 34.8	-0.9
CN2				*e*XP	sP	00 41 37.4	-0.3
CN2				*e*S	**S**	**00 46 26.3**	**-2.2**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,2μm,17.0s,MS4.8						
CN2				LR	LR		
	comp=E,1μm,17.0s,MS4.8						
CN2				LR	LR		
	comp=Z,900nm,17.0s,MS4.5						
BOD	**Bodaibo**	**30.39**	**300**	*e*P	**P**	**00 41 31.7**	**-1.4**
BOD				*e*		00 46 30.0	
BOD				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
SNY	**Shenyang**	**32.39**	**267**	⇓ P	**P**	**00 41 51.3**	**+0.4**
SNY				S	**S**	**00 47 13.0**	**+8.8**
SNY				AMB	AMB		
	comp=Z,21nm,1.0s,mb4.9						
SNY				AMB	AMB		
	comp=Z,301nm,5.0s						
SNY				LR	LR		
	comp=N,2μm,17.6s,MS5.0						
SNY				LR	LR		
	comp=E,2μm,18.5s,MS5.0						
SNY				LR	LR		
	comp=Z,1μm,15.1s,MS4.8						
KSRS	**Korea Array**	**32.74**	**256**	P	**P**	**00 41 55.8**	**+1.9**
	comp=Z,8.7nm,0.7s,mb4.8,baz=44,slow=8.7,SNR=20						
KSRS				LR	LR	00 56 22.0	
	comp=Z,361nm,19.2s,MS4.1,baz=52,slow=38						
KSRS	**Korea Array**	**32.74**	**256**	P	**P**	**00 41 55.8**	**+1.9**
KSRS				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
KSRS				MLR	MLR		
	comp=Z,361nm,19.2s,MS4.1						
DL2	**Dalian**	**35.40**	**264**	P	**P**	**00 42 19.1**	**+2.0**
DL2				S	**S**	**00 47 54.3**	**+3.4**
DL2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
DL2				LR	LR		
	comp=N,630nm,16.7s,MS4.6						
DL2				LR	LR		
	comp=E,520nm,16.7s,MS4.6						
DL2				LR	LR		
	comp=Z,500nm,14.4s,MS4.4						
BJI	**Beijing**	**37.87**	**270**	P	**P**	**00 42 39.0**	**+1.0**
BJI				S	**S**	**00 48 34.8**	**+6.3**
BJI				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.4						
BJI				LR	LR		
	comp=N,3μm,17.4s,MS5.2						
BJI				LR	LR		
	comp=E,1μm,16.2s,MS5.2						
BJI				LR	LR		
	comp=Z,854nm,20.8s,MS4.5						
TLY	**Talaya**	**38.37**	**294**	*e*P	**P**	**00 42 45.6**	**+3.5**
TLY				*e*S	**S**	**00 48 33.7**	**-2.1**
TLY				*e*SS	SS	00 51 17.1	-6.5
TLY				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
TLY				MLR	MLR		
	comp=Z,2μm,18.0s,MS4.9						
ULN	**Ulaanbaatar**	**38.50**	**287**	⇑ *e*P	**P**	**00 42 43.3**	**0.0**
ULN	**Ulaanbaatar**	**38.50**	**287**	*e*P	**P**	**00 42 44.2**	**+0.9**
YKA	**Yellowknife Ar**	**38.58**	**46**	P	**P**	**00 42 43.3**	**-0.4**
	comp=Z,1.2nm,0.6s,mb3.8,baz=252,slow=34,SNR=3.3						
YKA	**Yellowknife Ar**	**38.58**	**46**	P	**P**	**00 42 43.3**	**-0.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**38.89**	**287**	P	**P**	**00 42 46.4**	**-0.2**
	comp=Z,4.2nm,0.5s,mb4.4,baz=59,slow=8.0,SNR=32						
SONM				ScP	ScP	00 48 41.7	-2.7
	comp=Z,1.2nm,1.0s,baz=27,slow=3.6,SNR=3.8						
SONM				LR	LR	01 00 24.8	
	comp=Z,2μm,18.3s,MS4.9,baz=56,slow=39						
SONM	**Songino Array**	**38.89**	**287**	P	**P**	**00 42 46.4**	**-0.1**
SONM						00 48 41.7	
SONM				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,2μm,18.3s						
ZAK	**Zakamensk**	**39.23**	**292**	*e*P	**P**	**00 42 52.8**	**+3.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
HHC	**Hu-ho-hao-te**	**40.06**	**275**	*e*P	**P**	**00 42 56.5**	**+0.1**
HHC				AP	pP	00 43 00.8	-0.6
HHC				XP	sP	00 43 02.8	-0.6
HHC				PP	PP	00 44 32.5	+4.1
HHC				PCP	PcP	00 45 02.5	+1.6
HHC				SCP	ScP	00 48 49.9	+0.9
HHC				PCS	PcS	00 48 51.6	+0.5
HHC				S	**S**	**00 49 00.8**	**-0.6**
HHC				SS	SS	00 51 50.6	-7.9
HHC				SCS	ScS	00 53 01.4	-0.8
HHC				AMB	AMB		
	comp=Z,18nm,0.5s,mb5.1						
HHC				AMB	AMB		
	comp=Z,179nm,6.5s						
HHC				LR	LR		
	comp=N,1μm,14.7s,MS5.1						
HHC				LR	LR		
	comp=E,1μm,16.1s,MS5.1						
HHC				LR	LR		
	comp=Z,1μm,16.9s,MS4.8						
JOW	**Kunigami**	**40.55**	**244**	P	**P**	**00 43 02.1**	**+1.5**
	comp=Z,41nm,0.8s,mb5.1,baz=64,slow=22,SNR=4.2						
BTO	**Baotou**	**41.12**	**276**	*e*P	**P**	**00 43 05.4**	**+0.3**
SSE	**Sheshan**	**41.17**	**256**	P	**P**	**00 43 06.1**	**+0.4**
SSE				S	**S**	**00 49 19.3**	**+1.1**
SSE				AMB	AMB		
	comp=Z,27nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,223nm,5.3s						
SSE				LR	LR		
	comp=N,507nm,23.2s,MS4.4						
SSE				LR	LR		
	comp=E,283nm,23.2s,MS4.4						
SSE				LR	LR		
	comp=Z,469nm,23.2s,MS4.3						
NLWA	**Neilton Lookou**	**41.38**	**71**	*e*P	**P**	**00 43 08.2**	**+1.0**
	comp=Z,11nm,0.9s,mb4.5						
C04A	**Brinnon**	**41.69**	**70**	⇓ P	**P**	**00 43 09.3**	**-0.4**
	baz=42						
A06A	**Chilliwack**	**41.72**	**67**	⇓ P	**P**	**00 43 10.0**	**+0.1**
	baz=42						
NJ2	**Nanjing**	**41.80**	**259**	*e*P	**P**	**00 43 12.8**	**+1.9**
NJ2				AP	pP	00 43 17.3	+1.4
NJ2				XP	sP	00 43 20.0	+2.1
NJ2				PP	PP	00 44 53.0	+5.5
NJ2				S	**S**	**00 49 30.0**	**+2.4**
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,1μm,5.2s						
NJ2				LR	LR		
	comp=N,280nm,14.1s,MS4.6						
NJ2				LR	LR		
	comp=E,460nm,14.2s,MS4.6						
B05A	**Bryant**	**41.86**	**69**	⇓ P	**P**	**00 43 11.3**	**+0.2**
	baz=42						
JCW	**Jim Creek**	**41.99**	**69**	*e*P	**P**	**00 43 12.5**	**+0.3**
A07A	**Ashnola River,**	**42.34**	**67**	⇑ P	**P**	**00 43 15.1**	**+0.1**
	baz=42						
C05A	**Tolt Reservoir**	**42.41**	**69**	⇑ P	**P**	**00 43 15.7**	**+0.1**
	baz=42						
D05A	**Enumclaw**	**42.54**	**70**	⇑ P	**P**	**00 43 17.2**	**+0.6**
	baz=42						
B07A	**Winthrop**	**42.82**	**67**	⇓ P	**P**	**00 43 19.4**	**+0.4**
	baz=43						
A08A	**Turner Farm, O**	**43.00**	**66**	⇓ P	**P**	**00 43 20.4**	**0.0**
	baz=43						
B08A	**Colville Reser**	**43.31**	**67**	⇑ P	**P**	**00 43 22.8**	**-0.1**
	baz=43						
A09A	**Danville**	**43.35**	**66**	⇓ P	**P**	**00 43 23.2**	**-0.1**
	baz=43						
G04A	**Mulino**	**43.45**	**73**	⇑ P	**P**	**00 43 25.0**	**+0.9**
	baz=43						
E06A	**Yakima**	**43.48**	**70**	⇑ P	**P**	**00 43 24.0**	**-0.3**
	baz=43						
F05A	**White Salmon**	**43.61**	**71**	⇓ P	**P**	**00 43 25.9**	**+0.5**
	baz=43						
EDM	**Edmonton**	**43.66**	**58**	*e*P	**P**	**00 43 26.3**	**+0.6**
I03A	**Eugene**	**43.75**	**75**	⇑ P	**P**	**00 43 26.7**	**+0.2**
	baz=44						
C08A	**Higginbotham F**	**43.80**	**68**	⇓ P	**P**	**00 43 27.4**	**+0.5**
	baz=44						
A10A	**Northport**	**43.90**	**65**	⇓ P	**P**	**00 43 27.7**	**0.0**
	baz=44						
B09A	**Rice**	**43.91**	**66**	⇑ P	**P**	**00 43 27.7**	**-0.1**
	baz=44						
H04A	**Detroit Lake**	**43.93**	**73**	⇓ P	**P**	**00 43 28.0**	**+0.1**
	baz=44						
J02A	**Umpqua**	**43.96**	**76**	⇑ P	**P**	**00 43 28.4**	**+0.2**
	baz=44						
F06A	**Goldendale**	**44.06**	**71**	⇓ P	**P**	**00 43 29.2**	**+0.3**
	baz=44						
G05A	**Wamic**	**44.08**	**72**	⇓ P	**P**	**00 43 29.4**	**+0.3**
	baz=44						
D08A	**Wollman Farm,**	**44.30**	**68**	⇑ P	**P**	**00 43 30.8**	**-0.1**
	baz=44						
RSW	**Rattlesnake Hi**	**44.33**	**70**	*e*P	**P**	**00 43 32.0**	**+0.8**
I04A	**Tendick Farm,**	**44.35**	**74**	⇓ P	**P**	**00 43 31.4**	**+0.1**
	baz=44						
HAWA	**Hanford**	**44.37**	**70**	*e*P	**P**	**00 43 31.8**	**+0.3**
K02A	**Glendale**	**44.39**	**76**	⇑ P	**P**	**00 43 31.2**	**-0.4**
	baz=44						
G06A	**Carlson Farm,**	**44.46**	**72**	⇓ P	**P**	**00 43 31.7**	**-0.5**
	baz=44						
A11A	**Hall Mountain,**	**44.55**	**65**	⇑ P	**P**	**00 43 32.8**	**-0.1**
	baz=44						
L02A	**Cave Junction**	**44.71**	**77**	⇓ P	**P**	**00 43 34.3**	**+0.1**
	baz=45						
HUMO	**Hull Mountain**	**44.79**	**76**	⇓ P	**P**	**00 43 34.9**	**+0.1**
	baz=45						
HUMO	**Hull Mountain**	**44.79**	**76**	*e*P	**P**	**00 43 36.4**	**+1.5**
J04A	**Umpqua Nationa**	**44.87**	**75**	⇑ P	**P**	**00 43 35.6**	**+0.1**
	baz=45						
H06A	**Lindquist Farm**	**44.94**	**72**	⇑ P	**P**	**00 43 35.9**	**-0.1**
	baz=45						
E09A	**Wood Farm, Sta**	**45.06**	**69**	⇑ P	**P**	**00 43 36.8**	**-0.1**
	baz=45						
D10A	**Wagner Farm, O**	**45.20**	**67**	⇓ P	**P**	**00 43 37.7**	**-0.3**
	baz=45						
C11A	**Tepee Creek (N**	**45.28**	**66**	⇓ P	**P**	**00 43 38.3**	**-0.4**
	baz=45						
JCC	**Jacoby Creek**	**45.33**	**79**	⇑ P	**P**	**00 43 39.0**	**-0.2**
	baz=45						
J05A

	baz=46									
I07A	**Izee**	**45.81**	**72**	⇑P		**P**	**00 43 42.6**	**-0.3**
	baz=46									
K05A	**Summer Lake**	**45.89**	**74**	⇓P		**P**	**00 43 43.6**	**0.0**
	baz=46									
O01C	**Eel River Cons**	**45.89**	**79**	⇓P		**P**	**00 43 43.6**	**0.0**
	baz=46									
B13A	**Whitefish**	**45.91**	**64**	⇑P		**P**	**00 43 43.3**	**-0.4**
	baz=46									
M04C	**Macdoel**	**45.96**	**76**	⇓P		**P**	**00 43 44.2**	**+0.1**
	baz=46,SNR=6.5									
J06A	**Christmas Vall**	**45.97**	**73**	⇑P		**P**	**00 43 44.4**	**+0.2**
	baz=46									
H08A	**Prairie City**	**46.00**	**71**	⇑P		**P**	**00 43 44.0**	**-0.5**
	baz=46									
G09A	**Cove**	**46.02**	**70**	⇓P		**P**	**00 43 44.0**	**-0.6**
	baz=46									
A14A	**Double T Ranch**	**46.10**	**63**	⇓P		**P**	**00 43 44.4**	**-0.7**
	baz=46									
M03C	**McCloud**	**46.12**	**77**	⇑P		**P**	**00 43 45.1**	**-0.3**
	baz=46									
XAN	**Xi'an**	**46.19**	**270**		P	**P**	**00 43 46.8**	**+0.8**
XAN					AP	pP	00 43 50.3	-0.8
XAN					PCP	PcP	00 45 24.4	+2.8
XAN					PP	PP	00 45 36.3	+2.1
XAN					SCP	ScP	00 49 15.8	+1.9
XAN					S	**S**	**00 50 28.6**	**-2.8**
XAN					SCS	ScS	00 53 40.5	-0.1
XAN					AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5									
XAN					AMB	AMB		
	comp=Z,102nm,8.8s									
XAN					LR	LR		
	comp=N,347nm,14.5s,MS4.8									
XAN					LR	LR		
	comp=E,765nm,15.5s,MS4.8									
XAN					LR	LR		
	comp=Z,657nm,15.3s,MS4.7									
K06A	**Valley Falls**	**46.21**	**74**	⇑P		**P**	**00 43 45.7**	**-0.3**
	baz=46									
E11A	**Bogner Ranch,**	**46.21**	**68**	⇑P		**P**	**00 43 45.6**	**-0.5**
	baz=46									
C13A	**Hot Springs**	**46.28**	**65**	⇓P		**P**	**00 43 46.1**	**-0.5**
	baz=46									
WDC	**Whiskeytown Da**	**46.34**	**78**	⇑P		**P**	**00 43 46.6**	**-0.6**
	baz=46									
L05A	**Lakeview**	**46.36**	**75**	⇓P		**P**	**00 43 47.0**	**-0.3**
	baz=46									
G10A	**Bishop Farm, J**	**46.37**	**69**	⇓P		**P**	**00 43 47.0**	**-0.4**
	baz=46									
H09A	**Durkee**	**46.47**	**70**	⇑P		**P**	**00 43 48.1**	**0.0**
	baz=46									
E12A	**Beaver Dam Sad**	**46.52**	**67**	⇑P		**P**	**00 43 48.2**	**-0.2**
	baz=46									
BMO	**Blue Mountains**	**46.55**	**70**	*e*P		**P**	**00 43 49.7**	**+1.0**
	comp=Z,10nm,1.3s,mb4.6									
M05C	**Lookout**	**46.63**	**76**	⇓P		**P**	**00 43 49.4**	**+0.1**
	baz=46									
C14A	**Swan Lake**	**46.66**	**65**	⇑P		**P**	**00 43 49.1**	**-0.5**
	baz=46									
ZAA0	**Zalesovo Array**	**46.68**	**306**	*e*P		**P**	**00 43 50.6**	**+1.0**
ZALV	**Zalesovo Beam**	**46.68**	**306**	P		**P**	**00 43 47.7**	**-1.9**
	comp=Z,1.5nm,0.3s,mb4.4,baz=330,slow=11,SNR=7.4									
ZALV	**Zalesovo Beam**	**46.68**	**306**	P		**P**	**00 43 47.7**	**-1.9**
ZALV					pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5									
MOD	**Modoc**	**46.75**	**75**	⇑P		**P**	**00 43 49.7**	**-0.7**
	baz=47,SNR=5.7									
MOD	**Modoc**	**46.75**	**75**	*e*P		**P**	**00 43 50.2**	**-0.2**
G11A	**Walters Elk Ra**	**46.77**	**69**	⇑P		**P**	**00 43 50.0**	**-0.5**
	baz=47									
K07A	**Rock Creek Ran**	**46.84**	**73**	⇑P		**P**	**00 43 50.6**	**-0.5**
	baz=47,SNR=5.9									
GASB	**Alder Springs**	**46.85**	**79**	⇑P		**P**	**00 43 50.8**	**-0.3**
	baz=47									
NVS	**Novosibirsk**	**46.90**	**308**	*e*P		**P**	**00 43 49.9**	**-1.4**
NVS				*i*			00 45 29.9	
NVS				*e*S		**S**	**00 50 38.6**	**-2.5**
NVS					pmax	pmax		
	comp=Z,30nm,1.6s,mb5.0									
NVS					pmax	pmax		
	comp=N,32nm,2.0s									
NVS					pmax	pmax		
	comp=E,35nm,1.9s									
NVS					smax			
	comp=N,29nm,1.9s									
B15A	**Bradely Ranch,**	**46.95**	**63**	⇑P		**P**	**00 43 51.1**	**-0.7**
	baz=47									
H10A	**Noah's Angus R**	**47.02**	**70**	⇑P		**P**	**00 43 51.7**	**-0.7**
	baz=47									
F12A	**Elk City**	**47.10**	**68**	⇑P		**P**	**00 43 52.6**	**-0.5**
	baz=47									
M06C	**Likely Place G**	**47.11**	**76**	⇓P		**P**	**00 43 53.0**	**-0.2**
	baz=47									
D14A	**Greenough**	**47.22**	**65**	⇑P		**P**	**00 43 53.5**	**-0.4**
	baz=47									
L07A	**Adell**	**47.23**	**74**	⇑P		**P**	**00 43 54.0**	**-0.1**
	baz=47									
K08A	**Mann Creek Ran**	**47.24**	**73**	⇑P		**P**	**00 43 54.1**	**-0.1**
	baz=47									
J09A	**Fry Pan Ranch,**	**47.26**	**72**	⇓P		**P**	**00 43 54.3**	**0.0**
	baz=47,SNR=6.6									
C15A	**Salmond Ranch,**	**47.26**	**64**	⇑P		**P**	**00 43 53.9**	**-0.4**
	baz=47									
O04C	**Chester**	**47.34**	**77**	⇓P		**P**	**00 43 55.1**	**+0.1**
	baz=47									
H11A	**Donnelly**	**47.35**	**69**	⇓P		**P**	**00 43 54.4**	**-0.6**
	baz=47									
F13A	**Darby**	**47.58**	**67**	⇑P		**P**	**00 43 56.2**	**-0.6**
	baz=47									
ORV	**Oroville**	**47.61**	**78**	⇑P		**P**	**00 43 56.3**	**-0.8**
	baz=48									
L08A	**Fields**	**47.67**	**73**	⇑P		**P**	**00 43 57.0**	**-0.6**
	baz=48									
O05C	**Quincy**	**47.68**	**77**	⇑P		**P**	**00 43 57.3**	**-0.3**
	baz=48									
K09A	**Rome**	**47.69**	**72**	⇓P		**P**	**00 43 57.3**	**-0.3**
	baz=48									
C16A	**Fuhringer Ranc**	**47.70**	**63**	⇓P		**P**	**00 43 57.0**	**-0.6**
	baz=48									
M07A	**Soldier Meadow**	**47.73**	**75**	⇓P		**P**	**00 43 57.9**	**-0.1**
	baz=48,SNR=8.4									
LZH	**Lanzhou**	**47.74**	**276**	*e*P		**P**	**00 43 59.0**	**+0.9**
LZH					AP	pP	00 44 02.5	-0.7
LZH					XP	sP	00 44 03.9	-1.3
LZH					PP	PP	00 45 51.3	+1.6
LZH				*e*S		**S**	**00 50 51.0**	**-2.6**
LZH					AMB	AMB		
	comp=Z,40nm,1.0s,mb5.4									
LZH					AMB	AMB		
	comp=Z,160nm,4.0s									
LZH					LR	LR		
	comp=N,3μm,14.6s									
LZH					LR	LR		
	comp=Z,851nm,16.4s,MS4.8									
D15A	**Lincoln**	**47.77**	**65**	⇓P		**P**	**00 43 57.7**	**-0.5**
	baz=48									
OHCM	**Honcut**	**47.77**	**78**	*e*P		**P**	**00 43 55.0**	**-3.3**
N06A	**Buffalo Meadow**	**47.78**	**76**	⇓P		**P**	**00 43 57.9**	**-0.4**
	baz=48,SNR=6.5									
GTA	**Gaotai**	**47.83**	**282**	⇑P		**P**	**00 43 59.3**	**+0.5**
GTA					AP	pP	00 44 03.5	-0.4
GTA					XP	sP	00 44 05.8	-0.1
GTA					PP	PP	00 45 51.6	+1.2
GTA					S	**S**	**00 50 53.8**	**-0.9**
GTA					SS	SS	00 54 13.8	-9.0
GTA					AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0									
GTA					AMB	AMB		
	comp=Z,180nm,6.0s									
GTA					LR	LR		
	comp=N,1μm,17.1s,MS5.1									
GTA					LR	LR		
	comp=E,1μm,16.2s,MS5.1									
GTA					LR	LR		
	comp=Z,1μm,21.6s									
I11A	**Placerville**	**47.89**	**70**	⇑P		**P**	**00 43 58.9**	**-0.4**
	baz=48									
G13A	**Cobalt**	**48.08**	**68**	⇓P		**P**	**00 44 00.0**	**-0.6**
	baz=48,SNR=6.7									
H12A	**Diamond D Ranc**	**48.09**	**69**	⇓P		**P**	**00 44 00.2**	**-0.5**
	baz=48									
E15A	**Deer Lodge**	**48.09**	**65**	⇓P		**P**	**00 44 00.1**	**-0.6**
	baz=48									
M08A	**Happy Creek Ra**	**48.14**	**74**	⇑P		**P**	**00 44 00.8**	**-0.3**
	baz=48									
O06A	**Flanigan**	**48.17**	**76**	⇑P		**P**	**00 44 01.1**	**-0.3**
	baz=48									
N07B	**Gerlach**	**48.25**	**75**	⇓P		**P**	**00 44 01.8**	**-0.2**
	baz=48									
MFID	**Camas Ranch**	**48.28**	**70**	⇓P		**P**	**00 44 01.9**	**-0.4**
	baz=48									
C17A	**Wharram Farm,**	**48.32**	**63**	⇓P		**P**	**00 44 01.8**	**-0.6**
	baz=48									
H13A	**Challis**	**48.41**	**68**	⇑P		**P**	**00 44 02.6**	**-0.6**
	baz=48									
F15A	**Butte**	**48.54**	**66**	⇓P		**P**	**00 44 03.6**	**-0.6**
	baz=48									
LAVA	**Lava Cap Winer**	**48.59**	**78**	⇓P		**P**	**00 44 04.0**	**-0.7**
	baz=48,SNR=6.0									
K11A	**Parker Ranch,**	**48.59**	**71**	⇓P		**P**	**00 44 04.1**	**-0.5**
	baz=48									
O07A	**Toulon**	**48.71**	**76**	⇑P		**P**	**00 44 05.4**	**-0.2**
	baz=48									
N08A	**GE Springer Mi**	**48.72**	**75**	⇓P		**P**	**00 44 05.4**	**-0.2**
	baz=49									
J12A	**Stokes Ranch,**	**48.80**	**70**	⇓P		**P**	**00 44 06.2**	**0.0**
	baz=49									
L10A	**Juniper Basin**	**48.80**	**72**	⇑P		**P**	**00 44 06.0**	**-0.2**
	baz=49									
I13A	**Wildhorse Cree**	**48.91**	**69**	⇑P		**P**	**00 44 06.5**	**-0.5**
	baz=49,SNR=6.0									
HLID	**Hailey**	**48.97**	**69**	⇑P		**P**	**00 44 07.2**	**-0.4**
	baz=49									
HLID	**Hailey**	**48.97**	**69**	*e*P		**P**	**00 44 07.4**	**-0.1**
G15A	**Dillon**	**48.98**	**67**	⇑P		**P**	**00 44 06.6**	**-1.0**
	baz=49									
MCMT	**McKenzie Canyo**	**49.00**	**67**	*e*P		**P**	**00 44 07.8**	**0.0**
R05C	**Kirkwood Meado**	**49.01**	**78**	⇓P		**P**	**00 44 07.8**	**-0.1**
	baz=49									
N09A	**Rock Creek Ran**	**49.02**	**74**	⇑P		**P**	**00 44 07.9**	**-0.1**
	baz=49									
O08A	**Rochester Mine**	**49.04**	**75**	⇑P		**P**	**00 44 07.7**	**-0.3**
	baz=49									
M10A	**I.L. Ranch, Tu**	**49.13**	**73**	⇓P		**P**	**00 44 08.8**	**0.0**
	baz=49									
BOZ	**Bozeman (W)**	**49.13**	**66**	*e*P		**P**	**00 44 09.0**	**+0.3**
L11A	**Cat Creek Ranc**	**49.14**	**72**	⇑P		**P**	**00 44 08.8**	**-0.1**
	baz=49,SNR=6.5									
J13A	**Cove Ranch, Pi**	**49.21**	**69**	⇑P		**P**	**00 44 08.8**	**-0.6**
	baz=49,SNR=5.2									
I14A	**Mackay**	**49.26**	**68**	⇑P		**P**	**00 44 09.2**	**-0.5**
	baz=49,SNR=6.6									
CMB	**Columbia Colle**	**49.28**	**79**	⇓P		**P**	**00 44 09.3**	**-0.7**
	baz=49									
K12A	**Draper Farm, C**	**49.31**	**71**	⇓P		**P**	**00 44 09.3**	**-0.9**
	baz=49									
R06C	**Coleville**	**49.49**	**78**	⇓P		**P**	**00 44 11.2**	**-0.3**
	baz=49									
WAKR	**Walker**	**49.51**	**78**	*e*P		**P**	**00 44 12.7**	**+1.0**
L12A	**House Creek Ra**	**49.57**	**71**	⇑P		**P**	**00 44 11.9**	**-0.2**
	baz=49									
M11A	**Holland Ranch,**	**49.61**	**72**	⇓P		**P**	**00 44 12.6**	**+0.2**
	baz=49									
J14A	**Carey**	**49.62**	**69**	⇑P		**P**	**00 44 12.7**	**+0.3**
	baz=49									
S06C	**San Francisco**	**49.70**	**79**	⇓P		**P**	**00 44 13.3**	**+0.2**
	baz=50									
QLMT	**Earthquake Lak**	**49.77**	**66**	*e*P		**P**	**00 44 14.8**	**+1.2**
H16A	**Russell Place,**	**49.95**	**66**	⇑P		**P**	**00 44 14.6**	**-0.4**
	baz=50									
M12A	**Wells**	**50.11**	**72**	⇓P		**P**	**00 44 16.0**	**-0.2**
	baz=50									
Q08A	**Gabbs**	**50.13**	**76**	⇑P		**P**	**00 44 16.2**	**-0.2**
	baz=50,SNR=9.4									
J15A	**Blackfoot**	**50.16**	**68**	⇑P		**P**	**00 44 16.9**	**+0.3**
	baz=50									
NVAR	**Mina Array Bea**	**50.21**	**77**	P		**P**	**00 44 16.5**	**-0.6**
	comp=Z,2.9nm,0.7s,mb4.4,baz=293,slow=7.7,SNR=17									
K14A	**Jones Ranch, D**	**50.32**	**70**	⇑P		**P**	**00 44 18.0**	**+0.1**
	baz=50									
I16A	**Newdale**	**50.37**	**67**	⇓P		**P**	**00 44 17.6**	**-0.5**
	baz=50									
KCC	**Kaiser Creek**	**50.38**	**79**	⇓P		**P**	**00 44 18.5**	**+0.1**
	baz=50									
N12A	**Clover Valley,**	**50.42**	**73**	⇓P		**P**	**00 44 18.5**	**-0.1**
	baz=50									
IMW	**Indian Meadow**	**50.65**	**67**	*e*P		**P**	**00 44 21.4**	**+1.1**
	comp=Z,11nm,1.0s,mb4.7									
RLMT	**Red Lodge**	**50.73**	**65**	*e*P		**P**	**00 44 22.0**	**+1.1**
	comp=Z,16nm,1.1s,mb4.9									
MTUM	**Tungsten Hills**	**50.80**	**78**	*e*P		**P**	**00 44 22.0**	**+0.5**
MOOW	**Moose Ponds**	**50.85**	**67**	*e*P		**P**	**00 44 21.7**	**-0.1**
TPAW	**Teton Pass**	**50.91**	**67**	*e*P		**P**	**00 44 22.6**	**+0.4**
	comp=Z,21nm,1.8s,mb4.8									
S08C	**White Mtn Res**	**50.92**	**78**	⇑P		**P**	**00 44 22.4**	**0.0**
	baz=51									
O12A	**Currie**	**50.98**	**73**	⇓P		**P**	**00 44 22.6**	**-0.2**
	baz=51									
HELL	**Mitchell Peak**	**51.00**	**79**	⇓P		**P**	**00 44 22.9**	**-0.1**
	baz=51									
K16A	**Soda Springs**	**51.00**	**68**	⇑P		**P**	**00 44 23.0**	**0.0**
	baz=51									
LOHW	**Long Hollow**	**51.02**	**67**	*e*P		**P**	**00 44 24.1**	**+1.0**
	comp=Z,20nm,1.5s,mb4.8									
R09A	**Tonopah**	**51.04**	**76**	⇓P		**P**	**00 44 22.9**	**-0.4**
	baz=51,SNR=6.0									
L15A	**Malad City**	**51.12**	**70**	⇓P		**P**	**00 44 23.9**	**0.0**
	baz=51									
LAO	**LASA Array**	**51.30**	**61**	*e*P		**P**	**00 44 25.9**	**+0.8**
	comp=Z,19nm,1.0s,mb5.0									
S09A	**Goldfield**	**51.31**	**77**	⇑P		**P**	**00 44 25.0**	**-0.3**
	baz=51									
R10A	**Warm Springs**	**51.45**	**76**	⇑P		**P**	**00 44 26.3**	**-0.1**
	baz=51									
M15A	**Larsen Ranch,**	**51.45**	**70**	⇑P		**P**	**00 44 26.5**	**+0.1**
	baz=51									
CD2	**Chengdu**	**51.46**	**271**	⇑*i*P		**P**	**00 44 26.8**	**+0.2**
CD2					AP	pP	00 44 31.3	-0.4
CD2					XP	sP	00 44 34.3	+0.6
CD2					PP	PP	00 46 23.8	+0.2
CD2					S	**S**	**00 51 43.0**	**-2.8**
CD2					SS	SS	00 55 16.6	-4.8
CD2					AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9									
CD2					AMB	AMB		
	comp=Z,180nm,7.2s									
CD2					LR	LR		
	comp=N,1μm,16.8s,MS5.1									
CD2					LR	LR		
	comp=E,980nm,15.6s,MS5.1									
CD2					LR	LR		
	comp=Z,560nm,15.6s,MS4.7									
S10A	**Tonopah Range,**	**51.53**	**76**	⇑P		**P**	**00 44 26.8**	**-0.2**
	baz=51									
WMQ	**Urumqi**	**51.65**	**294**	P		**P**	**00 44 27.8**	**0.0**
WMQ					AP	pP	00 44 32.1	-0.8
WMQ					XP	sP	00 44 34.5	-0.4
WMQ					PCP	PcP	00 45 41.0	-0.2
WMQ					S	**S**	**00 51 47.0**	**-1.0**
WMQ					XS	sS	00 51 57.0	+0.5
WMQ					SS	SS	00 55 22.0	-1.7
WMQ					AMB	AMB		
	comp=Z,24nm,1.1s,mb5.0									
WMQ					AMB	AMB		
	comp=Z,243nm,6.0s									
WMQ					LR	LR		
	comp=N,6μm,21.4s,MS5.7									
WMQ					LR	LR		
	comp=E,4μm,20.2s,MS5.7									
WMQ					LR	LR		
	comp=Z,2μm,24.0s,MS5.1									
KURK	**Kurchatov**	**51.67**	**306**	P		**P**	**00 44 27.1**	**-0.8**
	comp=Z,4.8nm,0.7s,mb4.5,baz=57,slow=6.6,SNR=18									
KURK					PP	PP	00 46 26.5	+1.4
	comp=Z,3.3nm,0.8s,baz=48,slow=10,SNR=3.9									
KURK	**Kurchatov**	**51.67**	**306**	P		**P**	**00 44 27.1**	**-0.8**
KURK							00 46 26.5	
KURK					pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5									
KURK					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3									
Q12A	**Willow Creek R**	**51.77**	**74**	⇑P		**P**	**00 44 28.3**	**-0.4**
	baz=52									
R11A	**Troy Canyon, C**	**51.82**	**75**	⇑P		**P**	**00 44 29.2**	**+0.1**
	baz=52									
HWUT	**Hardware Ranch**	**51.84**	**70**	*e*P		**P**	**00 44 29.7**	**+0.5**
P13A	**Bates Ranch, G**	**51.94**	**73**	⇓P		**P**	**00 44 29.8**	**-0.2**
	baz=52									
SUMG	**Summit**	**52.10**	**10**	*e*P		**P**	**00 44 31.3**	**+0.6**
BW06	**Boulder Array**	**52.15**	**67**	*e*P		**P**	**00 44 31.8**	**+0.3**
	comp=Z,15nm,1.2s,mb4.8									
PDAR	**Pinedale Array**	**52.15**	**67**	P		**P**	**00 44 31.7**	**+0.1**
	comp=Z,1.8nm,0.7s,mb4.1,baz=304,slow=3.9,SNR=13									
S11A	**Rachel**	**52.21**	**76**	⇑P		**P**	**00 44 31.8**	**-0.3**
	baz=52									
MPMC	**Manual Prospec**	**52.32**	**79**	⇑P		**P**	**00 44 32.7**	**-0.1**
	baz=52									
FURC	**Furnace Creek,**	**52.39**	**78**	⇑P		**P**	**00 44 33.3**	**-0.2**
	baz=52,SNR=5.2									
TPNV	**Topopah Spring**	**52.41**	**77**	*e*P		**P**	**00 44 34.2**	**+0.7**
TPNV					pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8									
TPNV	**Topopah Spring**	**52.41**	**77**	*e*P		**P**	**00 44 34.2**	**+0.7**
	comp=Z,10nm,0.9s,mb4.8									
MK31	**Makanchi Array**	**52.48**	**300**	*i* P		**P**	**00 44 31.9**	**-2.0**
MK31					pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6									
MKAR	**Makanchi Array**	**52.48**	**300**	P		**P**	**00 44 32.3**	**-1.6**
	comp=Z,4.3nm,0.8s,mb4.4,baz=50,slow=7.4,SNR=20									
Q14A	**Sevier Lake (B**	**52.68**	**73**	⇑P		**P**	**00 44 35.7**	**+0.2**
	baz=52									
S12A	**Delamar Landin**	**52.75**	**75**	⇓P		**P**	**00 44 36.4**	**+0.3**
	baz=53									
T11A	**Corn Creek, Al**	**52.79**	**76**	⇓P		**P**	**00 44 36.5**	**+0.1**
	baz=53,SNR=8.5									
P15A	**Leamington**	**52.84**	**72**	⇑P		**P**	**00 44 36.6**	**-0.1**
	baz=53									
R13A	**O'Grain Ranch,**	**52.85**	**74**	⇓P		**P**	**00 44 37.3**	**+0.6**
	baz=53									
GYA	**Guiyang**	**53.05**	**265**	⇓*i*P		**P**	**00 44 40.0**	**+1.6**
GYA					AP	pP	00 44 44.6	+1.0
GYA					PCP	PcP	00 45 49.8	+3.0
GYA					PP	PP	00 46 42.9	+4.8
GYA					SCP	ScP	00 49 45.3	+2.0
GYA					S	**S**	**00 52 07.6**	**0.0**
GYA					SS	SS	00 55 45.3	-1.3
GYA					AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7									
GYA					AMB	AMB		
	comp=Z,120nm,5.4s									
GYA					LR	LR		
	comp=N,560nm,19.9s,MS4.8									
GYA					LR	LR		
	comp=E,490nm,18.4s,MS4.8									
GYA					LR	LR		
	comp=Z,520nm,19.8s,MS4.6									
SHOC	**Shoshone**	**53.13**	**78**	⇑P		**P**	**00 44 39.0**	**+0.1**
	baz=53									
GSC	**Goldstone**	**53.24**	**79**	⇓P		**P**	**00 44 40.0**	**+0.2**
	baz=53									
GSC	**Goldstone**	**53.24**	**79**	*e*P		**P**	**00 44 39.6**	**-0.1**
S13A	**Holt Ranch, En**	**53.33**	**75**	⇓P		**P**	**00 44 40.4**	**+0.1**
	baz=53									
KEV	**Kevo**	**53.39**	**345**	*e*p		**P**	**00 44 38.9**	**-1.4**
TMUT	**Trail Mountain**	**53.63**	**71**	*e*P		**P**	**00 44 44.0**	**+1.5**
MSU	**Marysvale**	**53.63**	**73**	*e*P		**P**	**00 44 44.4**	**+1.9**
CCUT	**Cedar City**	**53.63**	**74**	*e*P		**P**	**00 44 43.2**	**+0.6**
V11A	**Goodsprings**	**53.66**	**77**	⇓P		**P**	**00 44 43.1**	**+0.3**
	baz=54									
TUQ	**Turquoise Moun**	**53.66**	**78**	⇓P		**P**	**00 44 42.6**	**-0.1**
	baz=54									
T13A	**Saint George**	**53.70**	**75**	⇓P		**P**	**00 44 43.2**	**+0.2**
	baz=54									
P17A	**Butcher Ranch,**	**53.76**	**71**	⇓P		**P**	**00 44 43.9**	**+0.4**
	baz=54									
VOSK	**Vostochnaya**	**53.81**	**312**	P		**P**	**00 44 42.1**	**-1.5**
VOSK					pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9									
ARCES	**ARCESS Array B**	**53.82**	**345**	P		**P**	**00 44 42.6**	**-0.9**
	comp=Z,7.5nm,0.9s,mb4.6,baz=22,slow=9.0,SNR=23									
ARCES	**ARCESS Array B**	**53.82**	**345**	P		**P**	**00 44 42.6**	**-0.9**
ARCES					pmax	pmax		
	comp=Z,8.0nm,0.9s									
BVA0	**Borovoye Array**	**53.86**	**312**	*i* P		**P**	**00 44 42.8**	**-1.2**
BVA0					pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7									
BVAR	**Borovoye Array**	**53.86**	**312**	P		**P**	**00 44 43.0**	**-0.9**
	comp=Z,17nm,0.7s,mb5.1,baz=49,slow=7.8,SNR=99									
BVAR	**Borovoye Array**	**53.86**	**312**	P		**P**	**00 44 43.0**	**-1.0**
BVAR					pmax	pmax		
	comp=Z,17nm,0.7s									
Q16A	**Castle Valley**	**53.91**	**72**	⇑P		**P**	**00 44 44.6**	**0.0**
	baz=54									
P18A	**Preston Nutter**	**53.93**	**70**	⇓P		**P**	**00 44 45.0**	**+0.3**
	baz=54									
ULM	**Lac du Bonnet**	**53.98**	**52**	P		**P**	**00 44 44.4**	**-0.6**
	comp=Z,0.9nm,0.4s,mb4.0,baz=308,slow=12,SNR=4.1									
ULM					LR	LR	01 06 43.8	
	comp=Z,476nm,18.8s,MS4.6,baz=323,slow=35									
O19A	**Miners Draw (B**	**54.08**	**69**	⇑P		**P**	**00 44 46.1**	**+0.3**
	baz=54									
U13A	**Pakoon Wash**	**54.09**	**76**	⇑P		**P**	**00 44 46.5**	**+0.6**
	baz=54									
SRU	**San Rafael**	**54.14**	**71**	⇓P		**P**	**00 44 46.1**	**-0.1**
	baz=54,SNR=14									
SRU	**San Rafael**	**54.14**	**71**	*e*P		**P**	**00 44 47.1**	**+0.8**
RSSD	**Black Hills**	**54.17**	**62**	*e*P		**P**	**00 44 46.5**	**+0.1**
RSSD					pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7									
RSSD	**Black Hills**	**54.17**	**62**	*e*P		**P**	**00 44 46.5**	**+0.2**
	comp=Z,8.4nm,0.8s,mb4.7									
R16A	**

KMI SCS ScS 00 54 49.8 -1.1
KMI SS SS 00 56 39.3 +0.5
KMI AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
KMI LR LR
comp=N,846nm,19.4s,MS4.9
KMI LR LR
comp=E,594nm,22.9s,MS4.9
KMI LR LR
comp=Z,610nm,22.5s,MS4.6
U18A Rough Rock, Ch 56.40 73 ⇑P **P 00 45 02.7 +0.1**
baz=56
Y14A Wickenburg 56.41 77 ⇑P **P 00 45 02.9 +0.3**
baz=56
W16A Flagstaff 56.41 75 ⇓P **P 00 45 02.8 +0.1**
baz=56
X15A Humboldt 56.45 76 ⇓P **P 00 45 03.0 0.0**
baz=56
T19A Beclabito 56.59 72 ⇑P **P 00 45 03.8 -0.1**
baz=56,SNR=6.6
MVCO Mesa Verde 56.61 71 *e*P **P 00 45 04.7 +0.7**
comp=Z,12nm,1.1s,mb4.8
Y15A Casa Rosa Ranc 56.78 77 ⇑P **P 00 45 05.3 0.0**
baz=57
X16A Lo Mia Camp, P 56.95 76 ⇑P **P 00 45 06.7 +0.1**
baz=57
QIZ Qiongzhong 56.96 256 P **P 00 45 07.1 +0.4**
QIZ S **S 00 53 03.5 +3.3**
QIZ AMB AMB
comp=Z,7.0nm,1.0s,mb4.7
QIZ AMB AMB
comp=Z,72nm,5.5s
QIZ LR LR
comp=N,226nm,22.5s,MS4.4
QIZ LR LR
comp=E,223nm,21.5s,MS4.4
QIZ LR LR
comp=Z,255nm,28.6s
Y16A Circle Bar Ran 57.32 76 ⇓P **P 00 45 08.5 -0.6**
baz=57
115A Sonoran Desert 57.75 78 ⇑P **P 00 45 13.0 +0.8**
baz=58,SNR=6.3
SDCO Great Sand Dun 57.88 69 *e*P **P 00 45 13.6 +0.6**
comp=Z,11nm,1.3s,mb4.7
214A Organ Pipe Nat 57.96 79 ⇓P **P 00 45 14.1 +0.4**
baz=58
X19A St. Johns 58.17 74 ⇑P **P 00 45 15.6 +0.5**
baz=58
Y18A Canyon Day Jun 58.22 75 ⇓P **P 00 45 16.1 +0.6**
baz=58
Y19A Nutrioso 58.53 75 ⇑P **P 00 45 18.5 +0.9**
baz=58
TKM2 Tokmak 2 58.59 301 P **P 00 45 17.8 -0.1**
TKM2 pmax pmax
comp=Z,11nm,1.3s,mb4.7
TKM2 Tokmak 2 58.59 301 *e*P **P 00 45 17.4 -0.5**
comp=Z,11nm,1.3s,mb4.7
117A Oracle 58.70 77 ⇑P **P 00 45 19.3 +0.5**
baz=58
216A Three Points, 58.70 78 ⇑P **P 00 45 19.4 +0.5**
baz=58
JOF Joensuu 58.72 339 *e*p **P 00 45 17.2 -1.3**
comp=Z,13nm,0.7s,mb5.1
JOF Joensuu 58.72 339 *e*P **P 00 45 17.2 -1.3**
JOF pmax pmax
comp=Z,13nm,0.7s,mb5.1
TUC Tucson 58.87 77 *e*P **P 00 45 20.4 +0.4**
TUC pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
TUC Tucson 58.87 77 *e*P **P 00 45 20.4 +0.4**
comp=Z,6.1nm,1.1s,mb4.5
118A Homack Ranch, 59.09 76 ⇓P **P 00 45 22.3 +0.8**
baz=59
FRU Bishkek 59.15 301 *e*P **P 00 45 25.0 +3.2**
119A Ashpeak Ranch, 59.38 76 ⇓P **P 00 45 24.0 +0.5**
baz=59
ANMO Albuquerque 59.38 72 *e*P **P 00 45 24.3 +0.8**
LAZ Ladron 59.40 73 *e*P **P 00 45 24.9 +1.2**
218A Dragoon 59.53 77 ⇓P **P 00 45 25.3 +0.7**
baz=59
EKS2 Erkin-Say 59.69 302 *e*P **P 00 45 25.6 0.0**
comp=Z,72nm,0.6s,mb5.9
LSA Lhasa 59.73 280 P **P 00 45 27.6 +1.6**
BNM Barren Site 59.87 73 *e*P **P 00 45 28.9 +2.0**
219A White Tail Can 59.97 76 ⇑P **P 00 45 28.0 +0.4**
baz=60
AML Almayashu 60.12 301 *e*P **P 00 45 28.7 +0.2**
comp=Z,293nm,1.0s
KAF Kangasniemi 60.46 341 *e*p **P 00 45 29.3 -1.2**
comp=Z,4.4nm,0.6s,mb4.7
KAF Kangasniemi 60.46 341 *e*P **P 00 45 29.3 -1.2**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
AKTK Aktyubinsk 60.95 317 P **P 00 45 33.4 -0.7**
AKTO Aktyubinsk 60.95 317 P **P 00 45 33.4 -0.7**
comp=Z,7.3nm,0.6s,mb5.0,baz=50,slow=7.7,SNR=36
AKTO Aktyubinsk 60.95 317 P **P 00 45 33.4 -0.6**
AKTO pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
KK31 Karatay Array 60.98 304 *i*P **P 00 45 33.1 -1.2**
KK31 pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
AB31 Akbulak array 61.08 315 *i*P **P 00 45 33.8 -1.1**
AB31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
SCHQ Schefferville 61.98 33 P **P 00 45 40.3 -0.6**
comp=Z,5.5nm,0.8s,mb4.7,baz=12,slow=19,SNR=2.7
CHRT Chiangrai 62.14 266 P **P 00 45 43.0 +0.6**
NANT Nan 62.44 264 P **P 00 45 45.0 +0.5**
TAPN Taplejung 63.48 280 *e*P **P 00 45 51.1 -0.2**
comp=Z,58nm,0.9s,mb5.7
MOS Moscow 63.51 332 *e*P **P 00 45 48.5 -2.6**
CMAR Chiang Mai Arr 63.73 265 P **P 00 45 53.4 +0.3**
comp=Z,6.2nm,0.9s,mb4.6,baz=24,slow=7.3,SNR=9.6
CMAR LR LR 01 13 28.2
comp=Z,307nm,19.0s,MS4.5,baz=257,slow=36
CMAR Chiang Mai Arr 63.73 265 P **P 00 45 53.4 +0.3**
CMAR pmax pmax
comp=Z,6.0nm,0.9s
CMAR MLR MLR
comp=Z,307nm,19.0s
WMOK Wichita Mounta 63.76 67 P **P 00 45 52.9 -0.1**
WMOK pmax pmax
comp=Z,17nm,0.9s,mb5.1
WMOK Wichita Mounta 63.76 67 *e*P **P 00 45 52.6 -0.4**
NB2 NORSAR Subarra 63.83 348 P **P 00 45 52.1 -1.0**
comp=Z,18nm,0.9s,mb5.1,baz=15,slow=6.9
ODAN Odare 64.04 280 *e*P **P 00 45 54.7 -0.3**
GUN Gumba 64.11 282 *e*P **P 00 45 54.7 -0.8**
comp=Z,97nm,0.9s,mb5.8
JIRN Jiri 64.12 282 *e*P **P 00 45 54.9 -0.7**
OBN Obninsk 64.35 332⇑ *e*P **P 00 45 56.3 -0.3**
OBN pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
RAMN Ramite 64.43 281 *e*P **P 00 45 57.1 -0.4**
comp=Z,79nm,0.7s,mb5.9
KKN Kakani 64.55 283 *e*P **P 00 45 57.9 -0.4**
comp=Z,46nm,1.0s,mb5.5
PKI Pulchoki 64.64 282 *e*P **P 00 45 57.9 -1.0**
comp=Z,43nm,0.9s,mb5.5
PKIN Phulchoki 64.64 282 *e*P **P 00 45 58.4 -0.6**
comp=Z,25nm,0.7s,mb5.4
GKN Gorkha 64.75 283 *e*P **P 00 45 58.5 -1.2**
comp=Z,41nm,1.0s,mb5.4
DMN Daman 64.79 283 *e*P **P 00 45 59.0 -0.9**
DANN Dangsing 64.99 284 *e*P **P 00 46 00.9 -0.3**
comp=Z,36nm,0.7s,mb5.5
KOLN Koldanda 65.53 284 *e*P **P 00 46 03.9 -0.8**
comp=Z,11nm,0.7s,mb5.0
JCT Junction City 66.43 70 P **P 00 46 11.4 +0.9**
JCT pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
JCT Junction City 66.43 70 *e*P **P 00 46 11.3 +0.8**
comp=Z,7.0nm,0.6s,mb4.9
MIAR Mount Ida 66.67 63 *e*P **P 00 46 11.8 -0.2**
DDI Dehra Dun 66.70 290 *ex* **P 00 46 12.2 0.0**
VSR Storozhevoye 67.01 328 *e*P **P 00 46 13.0 -0.8**
VSR pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
VSR pmax pmax
comp=N,9.0nm,1.4s
VSR pmax pmax
comp=E,7.0nm,1.1s
USIN University of 67.03 57 *e*P **P 00 46 17.3 +3.1**
MIV Mineville/With 68.48 44 *e*P **P 00 46 25.0 +1.8**
OXF Oxford 68.86 60 P **P 00 46 31.6 +5.9**

OXF pmax pmax
comp=Z,51nm,1.0s,mb5.4
OXF Oxford 68.86 60 *e*P **P 00 46 26.2 +0.5**
comp=Z,51nm,1.0s,mb5.4
MCWV Mont Chateau 69.38 50 *e*P **P 00 46 29.7 +0.8**
comp=Z,15nm,0.8s,mb5.0
AFI Afiamalu 69.70 160 LR LR 01 11 30.0
comp=Z,342nm,20.3s,MS4.6,baz=20,slow=31
SWET Sewanee 70.05 57 *e*P **P 00 46 36.1 +3.0**
AKASG Malin Array Be 70.27 334 P **P 00 46 33.2 -0.9**
comp=Z,1.4nm,0.5s,mb4.2,baz=272,slow=20,SNR=4.8
AKASG Malin Array Be 70.27 334 P **P 00 46 33.2 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
KIEV Kiev 70.28 334 *e*P **P 00 46 33.8 -0.5**
KIEV pmax pmax
comp=Z,12nm,0.9s,mb4.8
KIEV Kiev 70.28 334 *e*P **P 00 46 33.8 -0.5**
comp=Z,12nm,0.9s,mb4.8
KIV Kislovodsk 72.16 322 *e*P **P 00 46 49.9 +4.2**
KIV pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KIV MLR MLR
comp=Z,786nm,18.0s,MS5.0
LVV L'vov 72.35 337 *e*P **P 00 46 50.6 +3.9**
KWP Kalwaria 72.82 338 P **P 00 46 49.9 +0.3**
KWP pmax pmax
comp=Z,90nm,1.1s,mb5.6
KWP Kalwaria 72.82 338⇑ *i*P **P 00 46 50.5 +0.9**
KWP Kalwaria 72.82 338 *e*P **P 00 46 50.4 +0.8**
comp=Z,90nm,1.1s,mb5.6
OJC Ojcow 72.88 340 *e*P **P 00 46 49.6 -0.3**
CLL Collm 73.04 345 *e*P **P 00 46 54.0 +3.2**
CLL *e*S S 00 56 22.0 +5.1
CLL pmax pmax
comp=Z,29nm,1.9s,mb4.9
CLL MLR MLR
comp=Z,2μm,16.0s,MS5.4
CLL Collm 73.04 345 *e*(P) **P 00 46 54.0 +3.2**
comp=Z,29nm,1.9s,mb4.9
CLL *e*S S 00 56 22.0 +5.1
CLL Collm 73.04 345 *e*P **P 00 46 54.0 +3.2**
comp=Z,29nm,1.9s,mb4.9
CLL *e*S S 00 56 22.0 +5.1
CLL LR LR
comp=Z,2μm,16.0s,MS5.4
ANN Anapa 73.22 326 *e*P **P 00 46 51.8 -0.2**
ANN pmax pmax
comp=Z,85nm,1.2s,mb5.5
ANN MLR MLR
comp=Z,986nm,16.0s,MS5.2
BRG Berggiesshubel 73.31 344 *e*P **P 00 46 56.1 +3.6**
BRG *e* 00 47 15.4
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BRG MLR MLR
comp=N,348nm,18.4s,MS5.0
BRG MLR MLR
comp=Z,939nm,18.4s,MS5.1
BRG MLR MLR
comp=E,672nm,17.9s,MS5.0
BRG Berggiesshubel 73.31 344 *e*P **P 00 46 56.1 +3.6**
comp=E,3.8nm,0.9s,mb4.3
BRG *e* 00 47 15.4
comp=E,22nm,1.6s
BRG
comp=N,581nm,18.4s
BRG
comp=E,1μm,17.9s
BRG
comp=Z,2μm,18.4s
BRG Berggiesshubel 73.31 344 *e*P **P 00 46 56.1 +3.6**
comp=Z,2.3nm,0.9s,mb4.1
BRG *e* 00 47 15.4
BRG LR LR
comp=Z,940nm,18.4s,MS5.1
UPC Upice 73.31 343 *e*P **P 00 46 55.2 +2.7**
STHS Stebnicka Huta 73.34 339 *e*P **P 00 46 49.9 -2.7**
STHS pmax pmax
comp=Z,73nm,2.8s,mb5.1
STHS Stebnicka Huta 73.34 339 *e*P **P 00 46 49.9 -2.7**
STHS Stebnicka Huta 73.34 339 *e*P **P 00 46 49.9 -2.7**
comp=Z,73nm,2.8s,mb5.1
DPC Dobruska-Polom 73.41 342 *e*P **P 00 46 56.8 +3.8**
SOC Sochi 73.53 324 *i*P **P 00 46 58.9 +5.0**
NIE Niedzica 73.53 339 *e*P **P 00 46 54.6 +0.8**
PVCC Panska Ves 73.54 343 *e*P **P 00 46 59.8 +6.0**
PVCC *ex* x 00 47 05.1
OKC Ostrava-Krasne 73.56 341 *e*P **P 00 46 53.9 -0.1**
OKC *ex* x 00 46 58.7
KOLS Kolonicke sedl 73.57 338 *e*P **P 00 46 54.6 +0.6**
KOLS *e*pP pP 00 46 59.1 -0.2
MORC Moravsky Berou 73.74 341 *e*P **P 00 46 56.5 +1.5**
MORC pmax pmax
comp=Z,21nm,1.5s,mb4.8
MORC Moravsky Berou 73.74 341⇑ *i*P **P 00 47 00.1 +5.1**
MORC Moravsky Berou 73.74 341 *e*P **P 00 46 56.5 +1.5**
comp=Z,21nm,1.5s,mb4.8
CRVS Cervenica-Dubn 73.78 339 *e*P **P 00 46 55.0 -0.2**
CRVS *e*pP pP 00 47 00.0 -0.6
KIS Kishinev 73.78 333 *e*P **P 00 46 55.0 -0.3**
KIS *e* pP 00 47 01.0 +0.4
KIS *e* 00 56 54.0
KIS Kishinev 73.78 333 *e*P **P 00 46 55.0 -0.3**
KIS LRM 01 17 40.0
comp=Z,1μm,16.0s
UZH Uzhgorod 73.85 338 *e*P **P 00 46 59.5 +3.8**
UZH *i* pP 00 47 05.6 +4.6
MOX Moxa 73.90 345 *e*P **P 00 47 00.2 +4.3**
comp=Z,16nm,1.6s,mb4.7
MOX
comp=Z,1μm,19.0s
MOX Moxa 73.90 345 *e*P **P 00 47 00.2 +4.3**
MOX pmax pmax
comp=Z,16nm,1.6s,mb4.7
MOX MLR MLR
comp=Z,1μm,19.0s,MS5.2
PRU Pruhonice 74.07 343 *e*P **P 00 47 01.2 +4.3**
PRU *ex* x 00 47 06.5
BUR08 Bucovina Ar. S 74.11 336 *e*P **P 00 46 57.5 +0.4**
LIKS Likavka 74.13 340 *e*P **P 00 46 51.0 -6.3**
LIKS pmax pmax
comp=Z,111nm,1.3s,mb5.6
LIKS Likavka 74.13 340 *e* **P 00 46 51.0 -6.3**
BURAR Bucovina Array 74.13 336⇑ *i*P **P 00 46 57.8 +0.5**
BURAR Bucovina Array 74.13 336 ⇑P **P 00 46 57.8 +0.5**
SIM Simferopol' 74.13 329 *e*P **P 00 46 57.0 -0.4**
SIM *e*S S 00 56 28.0 -1.5
SIM pmax pmax
comp=Z,15nm,1.2s,mb4.8
SIM MLR MLR
comp=Z,800nm,17.0s,MS5.1
NKC Novy Kostel 74.17 345 *e*P **P 00 47 01.3 +3.8**
VRAC Vranov 74.36 342⇑ *i*P **P 00 47 03.5 +4.9**
VRAC Vranov 74.36 342 ⇑P **P 00 47 03.5 +4.9**
KECS Kecovo 74.38 339 *e*P **P 00 46 56.6 -2.2**
KECS *e* 00 47 03.9
KECS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KECS Kecovo 74.38 339 *e*P **P 00 46 56.5 -2.3**
KECS *e*pP pP 00 47 03.9 -0.2
KECS *e* 00 47 22.1
KECS Kecovo 74.38 339 *e*P **P 00 46 56.6 -2.2**
comp=Z,4.7nm,1.0s,mb4.4
KECS *e* 00 47 03.9
KECS *e* 00 47 22.2
TREC Trest 74.58 343 *e*P **P 00 47 03.9 +4.0**
GNI Garni 74.69 319 *e*P **P 00 47 00.9 +0.2**
GNI pmax pmax
comp=Z,25nm,1.6s
GNI Garni 74.69 319 *e*P **P 00 47 01.4 +0.7**
comp=Z,41nm,1.4s,mb5.2
VYHS Vyhne 74.71 340 *e*P **P 00 47 01.4 +0.7**
VYHS *e*pP pP 00 47 05.9 -0.1
KOLL Kolacno 74.72 340 *e*P **P 00 47 00.0 -0.7**
KOLL *e*pP pP 00 47 06.3 +0.3
GRA1 Grafenberg Arr 74.88 345 *e*P **P 00 47 06.1 +4.5**
comp=Z,11nm,1.5s,mb4.6
GRA1 LR LR
comp=Z,1μm,21.2s,MS5.2
GRF Grafenberg Arr 74.88 345 *e*P **P 00 47 06.1 +4.5**
GRF pmax pmax
comp=Z,11nm,1.5s,mb4.6
GRF MLR MLR
comp=Z,1μm,21.2s,MS5.2
GRF Grafenberg Arr 74.88 345 *e*P **P 00 47 06.1 +4.5**
comp=Z,11nm,1.5s,mb4.6
GRF *e*L 01 07 53.7
comp=Z,1μm,21.2s
PSZ Piszkesteto 75.05 339 *e*P **P 00 47 03.7 +1.1**
PSZ pmax pmax
comp=Z,18nm,1.3s,mb4.8
PSZ Piszkesteto 75.05 339⇓ *i*P **P 00 47 04.2 +1.6**
PSZ Piszkesteto 75.05 339 *e*P **P 00 47 03.7 +1.1**
comp=Z,18nm,1.3s,mb4.8
KHC Kasperske Hory 75.06 344⇑ *e*P **P 00 47 02.5 -0.2**
KHC Kasperske Hory 75.06 344 *e*P **P 00 47 06.7 +4.0**
MODS Modra-Piesok 75.13 341 *e*P **P 00 47 02.1 -1.0**
MODS *e* pP 00 47 08.8 +0.4
MODS pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
MODS Modra-Piesok 75.13 341 *e*P **P 00 47 02.1 -1.0**
comp=Z,9.5nm,1.4s,mb4.5
MODS *e* pP 00 47 08.8 +0.4
GERES GERESS Array B 75.32 344 P **P 00 47 02.9 -1.3**
comp=Z,1.6nm,0.7s,mb4.1,baz=18,slow=4.8,SNR=14
GERES PP PP 00 49 56.9 +4.8
comp=Z,0.9nm,0.9s,baz=0.9,slow=8.4,SNR=3.7
GERES GERESS Array B 75.32 344 P **P 00 47 02.9 -1.3**
GERES 00 49 56.9
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES pmax pmax
comp=Z,1.0nm,0.9s
ZST Bratislava 75.34 341 *e*P **P 00 47 06.0 +1.7**
ZST *e* pP 00 47 09.6 0.0
ZST pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ZST Bratislava 75.34 341 *e*P **P 00 47 06.0 +1.7**
comp=Z,7.1nm,0.9s,mb4.6
ZST *e* pP 00 47 09.6 0.0
VRI Vrincioaia 75.38 334⇑ *i*P pP 00 47 12.5 +2.6
BAIF Baives 75.40 350 *e*P **P 00 47 04.0 -0.6**
PLOR Plostina 75.41 334⇓ *i*P **P 00 47 02.1 -2.7**
DRGR 75.49 337⇑ *i*P **P 00 47 05.5 +0.3**
DRGR 75.49 337 ⇑P **P 00 47 05.5 +0.2**
TAOE Nuku Hiva Isla 75.80 128 *e*LR LR 01 10 25.0
comp=Z,877nm,26.0s
CONA Conrad Observa 75.83 342⇑ *i*P **P 00 47 08.1 +1.0**
comp=Z,18nm,1.5s,mb4.8,SNR=7.2
MLR Muntele Rosu 75.93 334 P **P 00 47 08.1 +0.4**
comp=Z,5.2nm,0.7s,mb4.6,baz=176,slow=6.5,SNR=9.6
MLR Muntele Rosu 75.93 334 P **P 00 47 08.1 +0.4**
MLR pmax pmax
comp=Z,5.0nm,0.7s
MLR Muntele Rosu 75.93 334⇓ *i*P **P 00 47 09.1 +1.4**
MLR Muntele Rosu 75.93 334 ⇓P **P 00 47 09.1 +1.3**
VOIR 76.20 335⇓ *i*P **P 00 47 14.9 +5.6**
TIRR Tirgusor 76.24 332⇑ *i*P **P 00 47 07.6 -1.9**
TIRR Tirgusor 76.24 332 ⇑P **P 00 47 07.6 -1.9**
CTA Charters Tower 76.55 202 P **P 00 47 12.2 +0.8**
comp=Z,2.9nm,0.7s,mb4.3,baz=23,slow=8.8,SNR=5.7
CTA Charters Tower 76.55 202 P **P 00 47 12.2 +0.8**
CTA pmax pmax
comp=Z,3.0nm,0.7s
CTAO Charters Tower 76.55 202 *e*P **P 00 47 11.7 +0.3**
CTAO pmax pmax
comp=Z,15nm,1.1s,mb4.8
CTAO Charters Tower 76.55 202 *e*P **P 00 47 11.7 +0.3**
comp=Z,15nm,1.1s,mb4.8
CDF Champ du Feu 76.67 348 *e*P **P 00 47 10.8 -1.1**
GZR Gura Zlata 76.80 336⇑ *i*P **P 00 47 13.6 +0.9**
BZS Buzias 76.85 337⇓ *i*P **P 00 47 13.4 +0.4**
PKSM Moragy 76.93 340⇑ *i*P **P 00 47 17.8 +4.4**
PKSM Moragy 76.93 340 ⇑P **P 00 47 17.8 +4.4**
FLN La Foliniere 77.09 353 *e*P **P 00 47 13.0 -1.2**
KBA Koelnbreinsper 77.09 343⇑ *i*P **P 00 47 15.7 +1.4**
comp=Z,26nm,1.2s,mb5.0,SNR=9.7
WTTA Wattenberg 77.19 345⇑ *i*P **P 00 47 15.4 +0.6**
comp=Z,14nm,1.4s,mb4.7
PERS Pernice 77.21 342 *i*P **P 00 47 19.9 +5.0**
LDF La Druitiere 77.23 353 *e*P **P 00 47 13.6 -1.4**
comp=Z,41nm,1.2s,mb4.9
LDF La Druitiere 77.23 353 *e*P **P 00 47 13.6 -1.4**
LDF pmax pmax
comp=Z,21nm,1.2s,mb4.9
LDF La Druitiere 77.23 353 *e*P **P 00 47 13.6 -1.4**
comp=Z,21nm,1.2s,mb4.9
OBKA Obir 77.43 342⇑ *i*P **P 00 47 16.9 +0.7**
comp=Z,40nm,1.6s,mb5.1,SNR=9.6
ABTA Abfaltersbach 77.55 344⇑ *i*P **P 00 47 20.9 +4.1**
comp=Z,12nm,1.1s,mb4.7
ABTA Abfaltersbach 77.55 344⇑ *i*pP pP 00 47 20.9 -1.3
comp=Z,12nm,1.1s
ROSF Rostrenen 77.68 355 *e*P **P 00 47 16.8 -0.8**
comp=Z,58nm,1.3s,mb5.1
ROSF Rostrenen 77.68 355 *e*P **P 00 47 16.8 -0.8**
ROSF pmax pmax
comp=Z,29nm,1.3s,mb5.0
ROSF Rostrenen 77.68 355 *e*P **P 00 47 16.8 -0.8**
comp=Z,29nm,1.3s,mb5.0
JAVS Javornik 78.11 343 *i*P **P 00 47 23.2 +3.2**
LOR Lormes 78.19 350 *e*P **P 00 47 19.3 -1.1**
BOJS Bojanci 78.27 342 *i*P **P 00 47 24.3 +3.4**
TUE Stuetta 78.30 346 *e*P **P 00 47 23.6 +2.6**
comp=Z,8.7nm,1.4s,mb4.5
SSF Saint Saulge 78.43 350 *e*P **P 00 47 20.9 -0.8**
comp=Z,14nm,1.1s,mb4.5
SSF Saint Saulge 78.43 350 *e*P **P 00 47 20.9 -0.8**
SSF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
SSF Saint Saulge 78.43 350 *e*P **P 00 47 20.9 -0.8**
comp=Z,6.9nm,1.1s,mb4.5
CABF La Chapelle 78.59 348 *e*P **P 00 47 21.9 -0.7**
MALT Malatya 78.65 323 P **P 00 47 20.7 -2.4**
MALT pmax pmax
comp=Z,27nm,1.4s,mb5.0
MALT Malatya 78.65 323⇓ *i*P **P 00 47 21.6 -1.5**
MALT Malatya 78.65 323 *e*P **P 00 47 20.7 -2.4**
comp=Z,27nm,1.4s,mb5.0
AVF Avril sur Loir 78.72 350 *e*P **P 00 47 22.4 -0.9**
comp=Z,20nm,1.0s,mb4.7
AVF Avril sur Loir 78.72 350 *e*P **P 00 47 22.4 -0.9**
AVF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
AVF Avril sur Loir 78.72 350 *e*P **P 00 47 22.4 -0.9**
comp=Z,10nm,1.0s,mb4.7
SMF Signal de Mont 78.81 350 *e*P **P 00 47 22.8 -1.0**
comp=Z,26nm,1.1s,mb4.8
SMF Signal de Mont 78.81 350 *e*P **P 00 47 22.8 -1.0**
SMF pmax pmax
comp=Z,13nm,1.1s,mb4.8
SMF Signal de Mont 78.81 350 *e*P **P 00 47 22.8 -1.0**
comp=Z,13nm,1.1s,mb4.8
BGF Bois d'Agland 79.00 350 *e*P **P 00 47 23.9 -1.0**
ANTO Ankara 79.15 327 *e*P **P 00 47 26.6 +0.8**
ANTO pmax pmax
comp=Z,35nm,1.4s,mb5.1
ANTO Ankara 79.15 327⇓ *i*P **P 00 47 26.9 +1.1**
ANTO Ankara 79.15 327 *e*P **P 00 47 26.6 +0.8**
comp=Z,35nm,1.4s,mb5.1
MFF Saint Martin d 79.21 353 *e*P **P 00 47 25.4 -0.6**
comp=Z,58nm,1.7s,mb4.9
MFF Saint Martin d 79.21 353 *e*P **P 00 47 25.4 -0.6**
MFF pmax pmax
comp=Z,29nm,1.7s,mb4.9
MFF Saint Martin d 79.21 353 *e*P **P 00 47 25.4 -0.6**
comp=Z,29nm,1.7s,mb4.9
TCF Toulx Ste Croi 79.32 351 *e*P **P 00 47 25.9 -0.8**
VTS Vitosha 79.33 335⇑ *i*P **P 00 47 26.7 -0.1**
VTS Vitosha 79.33 335 ⇑P **P 00 47 26.7 -0.1**
LPL La Plagne 79.59 348 *e*P **P 00 47 28.3 +0.2**
comp=Z,28nm,1.2s,mb4.8
LPL La Plagne 79.59 348 *e*P **P 00 47 28.3 +0.2**
LPL pmax pmax
comp=Z,14nm,1.2s,mb4.8
LPL La Plagne 79.59 348 *e*P **P 00 47 28.3 +0.2**
comp=Z,14nm,1.2s,mb4.8
LPG La Plagne 79.61 348 *e*P **P 00 47 28.7 +0.5**
comp=Z,38nm,1.1s,mb4.9
LPG La Plagne 79.61 348 *e*P **P 00 47 28.7 +0.5**
LPG pmax pmax
comp=Z,19nm,1.1s,mb4.9
LPG La Plagne 79.61 348 *e*P **P 00 47 28.7 +0.5**
comp=Z,19nm,1.1s,mb4.9
PPT Papeete 79.65 140 *e*LR LR 01 12 02.6
comp=Z,503nm,25.0s,baz=340
PPT Papeete 79.65 140 LR LR 01 18 43.9
comp=Z,298nm,18.4s,MS4.7,baz=355,slow=33
WRAB Tennant Creek 79.65 213 *e*P **P 00 47 27.3 -1.3**

comp=Z,76nm,0.8s,mb5.7
WB2 Warramunga Arr 79.66 213 *e*P P **00 47 26.8 -1.8**
WB2 *e*pP pP 00 47 31.8 -2.2
WB2 Warramunga Arr 79.66 213 *e*P P **00 47 26.8 -1.8**
WB2 *e*pP pP 00 47 31.8 -2.2
WRA Warramunga Arr 79.66 213 P P **00 47 27.3 -1.3**
comp=Z,68nm,0.7s,mb5.7,baz=336,slow=12,SNR=38
BNI Bardonecchia 80.05 348 *e*P P **00 47 31.7 +1.1**
BNI pmax pmax
comp=Z,11nm,1.0s,mb4.7
BNI Bardonecchia 80.05 348 *e*P P **00 47 31.7 +1.0**
comp=Z,11nm,1.0s,mb4.8
ORIF Oris-en-Rattie 80.28 348 *e*P P **00 47 32.0 +0.1**
comp=Z,20nm,1.1s,mb4.7
ORIF Oris-en-Rattie 80.28 348 *e*P P **00 47 32.0 +0.1**
ORIF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
ORIF Oris-en-Rattie 80.28 348 *e*P P **00 47 32.0 +0.1**
comp=Z,9.9nm,1.1s,mb4.7
MBDF Montbardon 80.36 347 *e*P P **00 47 32.3 0.0**
comp=Z,24nm,1.0s,mb4.8
MBDF Montbardon 80.36 347 *e*P P **00 47 32.3 0.0**
MBDF pmax pmax
comp=Z,12nm,1.0s,mb4.8
MBDF Montbardon 80.36 347 *e*P P **00 47 32.3 0.0**
comp=Z,12nm,1.0s,mb4.8
RJF Les Rejaudoux 80.36 351 *e*P P **00 47 31.7 -0.6**
STIP Stip 80.43 336 *i* pP 00 47 44.3 +6.2
CAF Calviac 80.69 351 *e*P P **00 47 33.9 -0.2**
comp=Z,24nm,1.3s,mb4.7
CAF Calviac 80.69 351 *e*P P **00 47 33.9 -0.2**
CAF pmax pmax
comp=Z,12nm,1.3s,mb4.7
CAF Calviac 80.69 351 *e*P P **00 47 33.9 -0.2**
comp=Z,12nm,1.3s,mb4.7
VAY Valandovo 80.69 335 *i* P **00 47 37.5 +3.4**
FITZ Fitzroy Crossi 81.07 222 LR LR 01 21 30.7
comp=Z,401nm,18.1s,MS4.8,baz=257,slow=34
SMRF Simiane la Rot 81.25 348 *e*P P **00 47 37.7 +0.6**
comp=Z,52nm,1.5s,mb4.9
SMRF Simiane la Rot 81.25 348 *e*P P **00 47 37.7 +0.6**
comp=Z,52nm,1.5s,mb5.2
FRF La Foret Royal 81.53 347 *e*P P **00 47 38.0 -0.5**
comp=Z,44nm,1.5s,mb4.9
FRF La Foret Royal 81.53 347 *e*P P **00 47 38.0 -0.5**
FRF pmax pmax
comp=Z,22nm,1.5s,mb4.9
FRF La Foret Royal 81.53 347 *e*P P **00 47 38.0 -0.5**
comp=Z,22nm,1.5s,mb4.9
LMR La Mourre 81.77 347 *e*P P **00 47 39.3 -0.5**
comp=Z,39nm,1.3s,mb4.9
LMR La Mourre 81.77 347 *e*P P **00 47 39.3 -0.5**
LMR pmax pmax
comp=Z,20nm,1.3s,mb4.9
LMR La Mourre 81.77 347 *e*P P **00 47 39.3 -0.5**
comp=Z,20nm,1.3s,mb4.9
PGF Pioggiola 82.19 345 *e*P P **00 47 41.6 -0.5**
comp=Z,29nm,1.2s,mb4.8
PGF Pioggiola 82.19 345 *e*P P **00 47 41.6 -0.5**
PGF pmax pmax
comp=Z,15nm,1.2s,mb4.8
PGF Pioggiola 82.19 345 *e*P P **00 47 41.6 -0.5**
comp=Z,15nm,1.2s,mb4.8
MTLF Montolieu 82.24 350 *e*P P **00 47 41.4 -0.9**
MIB Mutribah 82.55 312 *e*P P **00 47 43.0 -1.1**
baz=312
MIB AMb AMB 00 47 55.1
comp=Z,45nm,0.9s,mb5.5,baz=312
ETSF Etsaut 82.92 352 *e*P P **00 47 44.5 -1.4**
comp=Z,13nm,0.9s,mb4.7
ETSF Etsaut 82.92 352 *e*P P **00 47 44.5 -1.4**
ETSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
ETSF Etsaut 82.92 352 *e*P P **00 47 44.5 -1.4**
comp=Z,6.5nm,0.9s,mb4.7
RST Umm Al-Ruwaisa 82.96 312 *e*P P **00 47 44.9 -1.4**
baz=312
RST AMb AMB 00 47 50.3
comp=Z,44nm,1.0s,mb5.4,baz=312
NAY Al-Naaiem 83.07 312 *e*P P **00 47 45.4 -1.5**
baz=312
NAY AMb AMB 00 47 55.3
comp=Z,31nm,2.0s,mb5.0,baz=312
ASAR Alice Springs 83.28 212 P P **00 47 47.1 -0.6**
comp=Z,2.4nm,0.8s,mb4.3,baz=18,slow=5.1,SNR=17
ASAR Alice Springs 83.28 212 P P **00 47 47.2 -0.6**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
CUC Castrocucco 83.48 340 *e*P P **00 47 49.7 +0.9**
comp=Z,22nm,1.3s,mb5.0
TIP Timpagrande 84.06 339 *e*P P **00 47 52.2 +0.4**
comp=Z,30nm,1.3s,mb5.3
PCAB Cabril 84.48 358 *e*P P **00 48 00.1 +6.2**
MMAI Mount Meron Ar 84.48 323 P P **00 47 53.3 -0.7**
comp=Z,12nm,0.9s,mb5.0,baz=46,slow=7.1,SNR=9.1
ASF Jabal al Asfar 84.69 321 P P **00 47 54.7 -0.4**
comp=Z,3.3nm,0.9s,mb4.5,baz=232,slow=8.1,SNR=6.2
ASF Jabal al Asfar 84.69 321 P P **00 47 54.7 -0.4**
ASF pmax pmax
comp=Z,3.0nm,0.9s
PVRL Vila Real 84.90 358 *e*P P **00 47 59.1 +3.1**
MVO Moncorvo 85.00 357 *e*P P **00 47 59.8 +3.3**
MTE Manteigas 85.77 358 *e*P P **00 48 05.0 +4.6**
ESDC Sonseca Array 86.36 355 P P **00 48 03.4 +0.2**
comp=Z,0.4nm,0.5s,mb3.9,baz=359,slow=4.3,SNR=7.0
EVO Evora 87.65 358 *e*P P **00 48 08.4 -1.2**
comp=Z,11nm,0.9s,mb4.8
PBAR Barrancos 87.98 357 *e*P P **00 48 15.3 +4.1**
PBEJ Beja 88.15 358 *e*P P **00 48 16.1 +4.1**
STKA Stephens Creek 88.96 203 P P **00 48 16.0 +0.5**
comp=Z,3.3nm,0.7s,mb4.8,baz=45,slow=8.6,SNR=5.9
STKA Stephens Creek 88.96 203 P P **00 48 16.0 +0.5**
SFS San Fernando 89.66 356 *e*P P **00 48 18.2 -0.9**
TORD Torodi Ar. Bea 112.13 347 PKiKP PKiKP 00 53 56.8 -0.2
comp=Z,0.2nm,0.6s,baz=10,slow=4.4,SNR=4.6
TORD PP PP 00 54 35.6 -4.6
comp=Z,0.6nm,0.9s,baz=352,slow=4.5,SNR=4.6
BOSA Boshof 143.48 300 PKP PKPdf 00 54 53.0 -2.6
comp=Z,2.2nm,0.8s,baz=124,slow=11,SNR=3.9
BOSA Boshof 143.48 300 PKiKP PKPdf 00 54 53.0 -2.6
BOSA pmax pmax
comp=Z,2.0nm,0.8s
QSPA South Pole Qui 143.91 180 PKP PKPdf 00 54 52.9 -1.9
comp=Z,3.6nm,0.8s,baz=350,slow=1.4,SNR=14
MAW Mawson 144.16 219 PKP PKPdf 00 54 54.3 -1.2
comp=Z,3.6nm,0.9s,baz=146,slow=6.4,SNR=8.3
MAW Mawson 144.16 219 PKiKP PKPdf 00 54 54.3 -1.2
MAW pmax pmax
comp=Z,4.0nm,0.9s

DJA ***17*** *00:42:31, 145N×126.35E, h90km, Mw5.1/4*
ISCJB ***17*** *00:42:34.1±1.0, 109N±006×126.14E±006, h62km±10km, mb4.6/26, Error ellipse: s-maj=11.6km s-min=8.7km az=146.6*
NEIC ***17*** *00:42:34.4±1.6, 107N×126.14E, h50km±15km, mb4.6/10, Error ellipse: s-maj=12.2km s-min=7.3km az=69.0*
IDC ***17*** *00:42:36.2±3.0, 106N×12596E, h60km±28km, mb4.1/15, mb1 4.2/18, mb1mx4.2/22, mbtmp4.2/18, ML4.8/3, Error ellipse: s-maj=25.2km s-min=12.2km az=81.0*
ISC 17 00:42:35.7±1.0, 110N±006×12617E±006, h60km±10km, n50, σ1°14/48, mb4.6/26, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MNI	**Manado**	**1.38**	**284**	P		**Pn**	**00 42 56.9**	**-1.8**
	0.0nm,0.0s							
LBMI	**Labuha**	**2.17**	**142**	P		**Pn**	**00 43 09.3**	**-0.3**
	0.0nm,0.0s							
AAI	**Ambon**	**5.16**	**157**	P		**Pn**	**00 43 49.9**	**-0.6**
	0.0nm,0.0s							
AAI	**Ambon**	**5.16**	**157**	P		**Pn**	**00 43 49.8**	**-0.7**
	0.0nm,0.0s							
KDI	**Kendari**	**6.15**	**215**	P		**Pn**	**00 44 03.0**	**-1.0**
	0.0nm,0.0s							
PCI	**Palu**	**6.64**	**253**	P		**Pn**	**00 44 11.0**	**+0.3**
	0.0nm,0.0s							
BBSI	**Bau Bau**	**7.47**	**209**	P		**Pn**	**00 44 22.7**	**+0.7**
	0.0nm,0.0s							
KAPI	**Kappang**	**8.83**	**227**	P		**Pn**	**00 44 39.5**	**-1.2**
	6.5nm,0.3s,baz=52,slow=5.9,SNR=6.7							
BATI	**Baumata**	**11.50**	**192**	P		**Pn**	**00 45 18.7**	**+1.4**
	0.0nm,0.0s							
BATI	**Baumata**	**11.50**	**192**	P		**Pn**	**00 45 18.4**	**+1.1**
	5.2nm,0.3s,baz=160,slow=6.4,SNR=3.5							
STKI	**Sintang**	**14.73**	**266**	P		**Pn**	**00 46 03.4**	**+2.6**
	0.0nm,0.0s							
KRKI	**Karangkates**	**16.48**	**236**	P		**Pn**	**00 46 26.2**	**+3.0**
	0.0nm,0.0s							
SJI	**Sawahan**	**16.84**	**238**	P		**Pn**	**00 46 28.8**	**+1.2**
	0.0nm,0.0s							
BJII	**Banjamegara**	**18.44**	**243**	P		**Pn**	**00 46 48.4**	**+1.2**
	0.0nm,0.0s							
FITZ	**Fitzroy Crossi**	**19.09**	**182**	↑*i*P		**Pn**	**00 46 51.4**	**-3.5**
	13nm,0.3s							
FITZ	**Fitzroy Crossi**	**19.09**	**182**	P		**Pn**	**00 46 51.6**	**-3.3**
	2.8nm,0.3s,baz=11,slow=12,SNR=45							
WRA	**Warramunga Arr**	**22.39**	**159**	P		**P**	**00 47 30.7**	**+1.5**
	71nm,0.7s,mb5.2,baz=335,slow=12,SNR=94							
COEN	**Coen**	**22.53**	**132**	*e*P		**P**	**00 47 29.7**	**-1.0**
	8.6nm,0.9s,mb4.2							
ASAR	**Alice Springs**	**25.74**	**164**	P		**P**	**00 48 01.5**	**+0.8**
	12nm,0.3s,mb4.8,baz=347,slow=12,SNR=130							
FORT	**Forrest**	**31.75**	**177**	*e*P		**P**	**00 48 53.1**	**-1.1**
	24nm,0.7s,mb5.1							
STKA	**Stephens Creek**	**35.90**	**157**	*e*P		**P**	**00 49 29.4**	**-0.8**
	9.0nm,0.8s,mb4.8							
STKA	**Stephens Creek**	**35.90**	**157**	P		**P**	**00 49 29.6**	**-0.6**
	9.2nm,0.7s,mb4.8,baz=331,slow=9.5,SNR=9.5							
KSRS	**Korea Array**	**36.21**	**2**	P		**P**	**00 49 34.8**	**+2.1**
	1.5nm,0.7s,mb4.1,baz=191,slow=10,SNR=3.7							
MJAR	**Matsushiro Arr**	**36.99**	**16**	P		**P**	**00 49 39.9**	**+0.5**
	2.0nm,0.7s,mb4.0,baz=342,slow=20,SNR=5.3							
ASAJ	**Asahikawa**	**45.26**	**17**	P		**P**	**00 50 49.2**	**+2.1**
	4.6nm,0.6s,mb4.5,baz=217,slow=10,SNR=4.0							
SONM	**Songino Array**	**49.61**	**343**	P		**P**	**00 51 21.2**	**+0.3**
	1.8nm,0.8s,mb4.1,baz=155,slow=7.5,SNR=7.6							
PETK	**Petropavlovsk-**	**58.06**	**22**	P		**P**	**00 52 24.0**	**+1.5**
	4.0nm,0.7s,mb4.6,baz=156,slow=4.5,SNR=6.1							
MKAR	**Makanchi Array**	**59.41**	**326**	P		**P**	**00 52 31.2**	**-0.8**
	1.6nm,0.5s,mb4.3,baz=122,slow=7.5,SNR=10							
TKM2	**Tokmak 2**	**61.36**	**320**	*e*P		**P**	**00 52 45.2**	**-0.2**
	6.1nm,1.0s,mb4.7							
AML	**Almayashu**	**62.25**	**318**	*e*P		**P**	**00 52 51.8**	**+0.3**
	13nm,1.3s,mb4.9							
EKS2	**Erkin-Say**	**62.43**	**319**	*e*P		**P**	**00 52 52.5**	**-0.1**
	3.6nm,1.0s,mb4.5							
ZALV	**Zalesovo Beam**	**62.68**	**334**	P		**P**	**00 52 53.1**	**-0.9**
	0.9nm,0.5s,mb4.2,baz=134,slow=6.4,SNR=4.9							
KURK	**Kurchatov**	**63.66**	**328**	P		**P**	**00 52 59.6**	**-1.1**
	3.9nm,0.6s,mb4.6,baz=128,slow=6.1,SNR=17							
BVAR	**Borovoye Array**	**69.22**	**328**	P		**P**	**00 53 35.4**	**-0.7**
	2.2nm,0.6s,mb4.3,baz=138,slow=9.1,SNR=12							
TIXI	**Tiksi**	**70.47**	**1**	*e*P		**P**	**00 53 43.5**	**+0.1**
	3.4nm,0.6s,mb4.5							
RER	**Riviere de l'E**	**72.19**	**247**	*e*P		**P**	**00 53 54.3**	**-0.5**
ARU	**Arti**	**76.86**	**328**	*e*P		**P**	**00 54 20.5**	**-0.6**
	5.2nm,0.6s,mb4.6							
MIB	**Mutribah**	**79.77**	**300**	*e*P		**P**	**00 54 36.2**	**-1.6**
	baz=300							
MIB				AMb		AMB	00 54 38.2	
	comp=Z,14nm,1.0s,mb4.8,baz=300							
NAY	**Al-Naaiem**	**79.81**	**299**	*e*P		**P**	**00 54 36.4**	**-1.6**
	baz=299							
NAY				AMb		AMB	00 54 37.9	
	comp=Z,9.0nm,0.9s,mb4.7,baz=299							
RST	**Umm Al-Ruwaisa**	**80.04**	**300**	*e*P		**P**	**00 54 37.4**	**-1.9**
	baz=300							
RST				AMb		AMB	00 54 39.0	
	comp=Z,24nm,0.6s,mb5.3,baz=300							
MAW	**Mawson**	**81.11**	**200**	*e*P		**P**	**00 54 44.1**	**-0.1**
	comp=Z,7.9nm,1.1s,mb4.6							
MAW	**Mawson**	**81.11**	**200**	P		**P**	**00 54 44.4**	**+0.2**
	comp=Z,1.8nm,0.7s,mb4.1,baz=63,slow=6.7,SNR=7.6							
BMRM	**Bremner River**	**88.67**	**29**	*e*P		**P**	**00 55 21.9**	**-0.3**
ASF	**Jabal al Asfar**	**88.81**	**302**	P		**P**	**00 55 24.5**	**+0.9**
	comp=Z,3.2nm,0.8s,mb4.7,baz=123,slow=0.9,SNR=5.3							
KMBO	**Kilima Mbogo**	**88.94**	**269**	P		**P**	**00 55 25.6**	**+1.0**
	comp=Z,2.5nm,0.7s,mb4.6,baz=67,slow=9.9,SNR=5.5							
ARCES	**ARCESS Array B**	**92.71**	**340**	P		**P**	**00 55 41.4**	**+0.5**
	comp=Z,1.4nm,0.7s,mb4.5,baz=74,slow=6.7,SNR=2.7							
ARCES	**ARCESS Array B**	**92.71**	**340**	P		**P**	**00 55 41.4**	**+0.5**
BUR08	**Bucovina Ar. S**	**96.59**	**318**	*e*P		**P**	**00 55 59.1**	**+0.1**
TORD	**Torodi Ar. Bea**	**123.17**	**286**	PKP	PKPdf		01 01 26.8	+0.1
	comp=Z,1.2nm,0.7s,baz=52,slow=1.6,SNR=17							
CFAA	**Coronel Fontan**	**146.74**	**157**	PKPbc	PKPbc		01 02 12.2	+0.7
	comp=Z,0.3nm,0.6s,baz=203,slow=4.6,SNR=7.4							

NEIC ***17*** *00:43:22.9, 3947N×2066E, h17km, MD3.5(ATH), After ATH.*
ATH ***17*** *00:43:22.8, 3947N×2066E, h17km±1km, MD3.5/7*
CSEM ***17*** *00:43:23.3±0.1, 3946N×2064E, h5km, MD3.5, Error ellipse: s-maj=2.0km s-min=1.4km az=105.0*
ISCJB ***17*** *00:43:23.7±0.4, 3944N±002×2069E±004, h10km, Error ellipse: s-maj=3.9km s-min=2.6km az=8.6*
THE ***17*** *00:43:23.5, 3944N×2069E, h0km, ML3.3*
BEO ***17*** *00:43:36.5±1.1, 4067N×2057E, ML2.5/1*
ISC 17 00:43:23.1±0.5, 3946N±002×2064E±003, h1km±4km, n47, σ0°98/73, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.25**	**288**	*e*Pg		**Pg**	**00 43 29.0**	**+1.1**
JAN	**Janina**	**0.26**	**39**	*e*PB		**Pg**	**00 43 28.4**	**+0.3**
JAN				SB		**Sg**	**00 43 32.5**	**+1.1**
JAN	**Janina**	**0.26**	**39**	*e*Pb		**Pg**	**00 43 28.4**	**+0.3**
JAN				Sb		**Sg**	**00 43 32.7**	**+1.3**
MEV	**Metsovon**	**0.56**	**54**	*e*Pg		**Pg**	**00 43 33.8**	**-0.1**
KEK	**Kerkira**	**0.70**	**292**	*e*PN		**Pg**	**00 43 36.4**	**-0.1**
LKD	**Levkas**	**0.75**	**179**	*e*Pg		**Pg**	**00 43 37.5**	**+0.2**
LKD				*e*Sg		**Sg**	**00 43 48.0**	**+1.0**
LKD	**Levkas**	**0.75**	**179**	*e*Pg		**Pg**	**00 43 37.5**	**+0.1**
LKD				*e*Sg		**Sg**	**00 43 48.0**	**+1.0**
EVR	**Evrytania**	**1.06**	**120**	*e*PN		**Pg**	**00 43 42.5**	**-0.8**
EVR	**Evrytania**	**1.06**	**120**	*e*Pb		**Pg**	**00 43 42.2**	**-1.1**
THL	**Klokotos Trika**	**1.07**	**84**	*e*Pg		**Pg**	**00 43 42.4**	**-1.2**
THL				*e*Sg		**Sg**	**00 43 57.6**	**+0.1**
THL	**Klokotos Trika**	**1.07**	**84**	*e*PN		**Pg**	**00 43 42.7**	**-0.9**
KZN	**Kozani**	**1.22**	**45**	*e*PN		**Pn**	**00 43 45.6**	**-1.6**
KZN				SN		**Sg**	**00 44 02.2**	**0.0**
KZN	**Kozani**	**1.22**	**45**	*e*Pb		**Pn**	**00 43 44.9**	**-2.3**
KZN				Sn		**Sg**	**00 44 02.2**	**0.0**
VLS	**Valsamata**	**1.28**	**182**	*e*Pg		**Pn**	**00 43 47.1**	**-0.9**
VLS				*e*Sg		**Sg**	**00 44 05.2**	**+1.2**
VLS	**Valsamata**	**1.28**	**182**	*e*Pn		**Pn**	**00 43 47.8**	**-0.2**
VLS				*e*Sg		**Sg**	**00 44 05.2**	**+1.1**
VLS				Sn		**Sn**	**00 44 05.5**	**-0.3**
KFL	**Anninata**	**1.35**	**175**	*e*Pg		**Pn**	**00 43 48.4**	**-0.6**
AGG	**Agios Georgios**	**1.38**	**108**	*e*Pg		**Pn**	**00 43 48.2**	**-1.2**
AGG				*e*Sg		**Sg**	**00 44 07.5**	**0.0**
AGG	**Agios Georgios**	**1.38**	**108**	*e*Pg		**Sg**	**00 43 48.2**	**-1.3**
AGG				*e*Sg		**Sg**	**00 44 07.5**	**0.0**
FNA	**Florina**	**1.44**	**23**	*e*Pg		**Pn**	**00 43 49.2**	**-1.2**
FNA				*e*Sg		**Sn**	**00 44 11.0**	**+1.1**
RLS	**Riolos of Patr**	**1.54**	**155**	*e*PN		**Pn**	**00 43 51.9**	**+0.3**
LIT	**Litokhoron**	**1.57**	**65**	*e*Pg		**Pn**	**00 43 51.8**	**-0.2**
LIT				*e*Sg		**Sg**	**00 44 13.1**	**-0.3**
BIA	**Bitola**	**1.65**	**18**	*e*Pb		**Pn**	**00 43 52.9**	**-0.3**
BIA				*e*Sb		**Sn**	**00 44 16.6**	**+1.7**
BIA	**Bitola**	**1.65**	**18**	*i* Pn		**Pn**	**00 43 53.0**	**-0.2**
OHR	**Ohrid**	**1.66**	**4**	*e*Pb		**Pb**	**00 43 54.1**	**-0.4**
OHR				*e*Sb		**Sb**	**00 44 15.9**	**+0.1**
OHR	**Ohrid**	**1.66**	**4**	*i* Pn		**Pn**	**00 43 54.8**	**+1.4**
OHR	**Ohrid**	**1.66**	**4**	*i* Pn		**Pn**	**00 43 54.7**	**+1.4**
KRUS	**Krusevo**	**1.97**	**13**	*e*Pn		**Pn**	**00 43 59.9**	**+2.4**
XOR	**Xorichti**	**1.98**	**92**	*e*Pb		**Pn**	**00 43 57.6**	**-0.1**
TIR	**Tirane**	**1.98**	**343**	*e*Pn		**Pn**	**00 43 57.2**	**-0.5**
TIR				*e*Sn		**Sn**	**00 44 24.7**	**+1.5**
LKR	**Lokris**	**2.01**	**113**	*e*Pb		**Pn**	**00 43 58.3**	**+0.2**
LKR	**Lokris**	**2.01**	**113**	*e*Pn		**Pn**	**00 43 59.5**	**+1.4**
LKR	**Lokris**	**2.01**	**113**	*e*Pn		**Pn**	**00 43 59.5**	**+1.4**
GRG	**Griva**	**2.02**	**41**	*e*Pn		**Pn**	**00 43 58.1**	**-0.1**
GRG				*e*Sn		**Sn**	**00 44 24.6**	**+0.5**
LTK	**Loutraki**	**2.31**	**127**	*e*Pn		**Pn**	**00 44 01.8**	**-0.5**
LTK				*e*Sn		**Sn**	**00 44 31.8**	**+0.4**
PLG	**Polygyros**	**2.35**	**66**	*e*Pn		**Pn**	**00 44 01.9**	**-0.8**
PLG				*e*Sn		**Sn**	**00 44 33.2**	**+1.1**
PLG	**Polygyros**	**2.35**	**66**	*e*Pn		**Pn**	**00 44 02.4**	**-0.3**
PLG				*e*Sn		**Sn**	**00 44 33.2**	**+1.0**
PAIG	**Paliouri**	**2.39**	**78**	*e*Pn		**Pn**	**00 44 02.8**	**-0.6**
PAIG				*e*Sn		**Sn**	**00 44 33.1**	**-0.2**
KNT	**Kendrikon**	**2.43**	**45**	*e*Pn		**Pn**	**00 44 03.5**	**-0.4**
ITM	**Ithomi**	**2.49**	**156**	*e*Pb		**Pn**	**00 44 05.8**	**+1.1**
SOH	**Sokhos**	**2.49**	**56**	*e*Pn		**Pn**	**00 44 04.8**	**+0.1**
SOH				*e*Sn		**Sn**	**00 44 36.8**	**+1.1**
STIP	**Stip**	**2.53**	**27**	*e*Pn		**Pn**	**00 44 06.1**	**+0.8**
STIP				*e*Sn		**Sn**	**00 44 37.8**	**+1.1**
OUR	**Ouranopolis**	**2.72**	**70**	*e*Pn		**Pn**	**00 44 07.4**	**-0.4**
BARS	**Barje**	**3.47**	**14**	*e*Pn		**Pn**	**00 44 16.0**	**-2.2**
VTS	**Vitosha**	**3.69**	**31**	*e*Sg		**Sn**	**00 45 03.9**	**-1.4**
TREB	**Trebinje**	**3.69**	**333**	*e*Pn		**Pn**	**00 44 18.6**	**-2.6**
TREB				*e*Sg		**Sn**	**00 45 00.6**	**-4.7**
BBLS	**Lazići**	**4.50**	**349**	*e*Sg		**Sn**	**00 45 21.3**	**-4.1**
DIVS	**Divibare**	**4.67**	**354**	*e*Pn		**Pn**	**00 44 33.2**	**-1.4**
DIVS				*e*Sg		**Sn**	**00 45 25.6**	**-3.8**

IDC 17 00:52:30.9±4.4, 480S×10286E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.8/18, mbtmp3.9/6, Error ellipse: s-maj=181.5km s-min=19.5km az=59.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**23.43**	**351**	P		P	00 57 41.8	-0.2
	0.9nm,0.3s,baz=179,slow=8.8,SNR=7.0							
WRA	**Warramunga Arr**	**34.14**	**119**	P		P	00 59 18.2	+0.3
	0.3nm,0.4s,baz=289,slow=9.4,SNR=3.1							
ASAR	**Alice Springs**	**35.31**	**125**	P		P	00 59 28.1	0.0
	0.9nm,0.5s,baz=295,slow=7.7,SNR=14							
STKA	**Stephens Creek**	**45.17**	**131**	P		P	01 00 49.2	-0.5
	3.1nm,1.0s,baz=321,slow=13,SNR=2.9							
SONM	**Songino Array**	**52.50**	**3**	P		P	01 01 45.6	-0.1
	1.6nm,0.7s,baz=185,slow=9.0,SNR=9.3							
ZALV	**Zalesovo Beam**	**60.45**	**348**	P		P	01 02 42.6	+0.4
	0.3nm,0.4s,baz=157,slow=8.0,SNR=3.8							

ISCJB ***17*** *01:18:12.6±1.0, 3829N±003×2032E±007, h3km±6km, Error ellipse: s-maj=10.1km s-min=4.5km az=159.8*
THE ***17*** *01:18:13.7, 3830N×2038E, h1km, ML3.1*
CSEM ***17*** *01:18:13.4±0.5, 3826N×2033E, h0km±2km, ML3.1, Error ellipse: s-maj=7.6km s-min=3.6km az=74.0*
NEIC ***17*** *01:18:13.9, 3825N×2033E, h9km, MD3.6(ATH), After ATH.*
ATH ***17*** *01:18:14.0, 3825N×2036E, h10km±3km, MD3.5/6*
ISC 17 01:18:13.2±1.0, 3829N±003×2036E±007, h2km±6km, n22, σ1°18/34, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.21**	**122**	*e*Pg		**Pg**	**01 18 18.2**	**+1.0**
VLS				*e*Sg		**Sg**	**01 18 20.4**	**+0.5**
VLS	**Valsamata**	**0.21**	**122**	*e*PG		**Pg**	**01 18 18.1**	**+0.9**
VLS				SG		**Sg**	**01 18 21.6**	**+1.7**
VLS	**Valsamata**	**0.21**	**122**	*e*Pg		**Pg**	**01 18 18.1**	**+0.9**
VLS				*e*Sg		**Sg**	**01 18 20.4**	**+0.5**
KFL	**Anninata**	**0.38**	**118**	*e*Pg		**Pg**	**01 18 21.1**	**+0.7**
KFL	**Anninata**	**0.38**	**118**	*e*Pg		**Pg**	**01 18 21.1**	**+0.7**
LKD	**Levkas**	**0.47**	**28**	*e*Pg		**Pg**	**01 18 21.9**	**-0.5**
LKD				*e*Sg		**Sg**	**01 18 28.8**	**+0.3**
RLS	**Riolos of Patr**	**0.90**	**104**	*e*Pb		**Pb**	**01 18 30.1**	**-1.4**
RLS				Sb		**Sb**	**01 18 44.8**	**+0.9**
IGT	**Igoumenitsa**	**1.24**	**359**	*e*Pg		**Pg**	**01 18 36.2**	**-0.9**
EVR	**Evrytania**	**1.29**	**61**	*e*PB		**Pb**	**01 18 38.9**	**+0.7**
JAN	**Janina**	**1.42**	**15**	*e*PB		**Pb**	**01 18 41.6**	**+1.2**
KEK	**Kerkira**	**1.49**	**343**	*e*PG		**Pg**	**01 18 42.5**	**+0.7**
MEV	**Metsovon**	**1.64**	**24**	*e*Pb		**Pb**	**01 18 42.0**	**-2.2**
ITM	**Ithomi**	**1.66**	**131**	*e*PB		**Pb**	**01 18 45.5**	**+1.0**
ITM	**Ithomi**	**1.66**	**131**	*e*Pb		**Pb**	**01 18 46.5**	**+2.0**
AGG	**Agios Georgios**	**1.71**	**64**	*e*Pb		**Pb**	**01 18 43.7**	**-1.6**
AGG				*e*Sb		**Sb**	**01 19 06.7**	**-0.5**
PYL	**PYLOS**	**1.77**	**141**	*e*Pb		**Pb**	**01 18 45.4**	**-0.9**
PYL				*e*Sb		**Sb**	**01 19 08.2**	**-0.8**
THL	**Klokotos Trika**	**1.81**	**45**	*e*Pb		**Pb**	**01 18 44.2**	**-2.8**
THL				*e*Sb		**Sb**	**01 19 10.2**	**-0.1**
THL	**Klokotos Trika**	**1.81**	**45**	*e*Pn		**Pn**	**01 18 47.5**	**+2.1**
THL				*e*Sb		**Sb**	**01 19 10.1**	**-0.1**
VLX	**Vlachokerasia**	**1.84**	**119**	*e*Pb		**Pb**	**01 18 45.5**	**-2.1**
VLX				*e*Sb		**Sb**	**01 19 10.2**	**-0.8**
LKR	**Lokris**	**2.10**	**79**	*e*Pn		**Pn**	**01 18 52.6**	**+3.2**
DID	**Didima**	**2.40**	**108**	*e*Pn		**Pn**	**01 18 53.9**	**+0.4**
DID				*e*Sn		**Sn**	**01 19 24.1**	**+0.6**
FNA	**Florina**	**2.61**	**17**	*e*Pn		**Pn**	**01 18 56.6**	**+0.2**
FNA				*e*Sn		**Sn**	**01 19 29.4**	**+0.7**

ISCJB ***17*** *01:22:06.5±0.6, 3947N±002×2067E±004, h4km±5km, Error ellipse: s-maj=5.5km s-min=3.7km az=22.4*
NEIC ***17*** *01:22:06.9, 3950N×2072E, h28km, MD3.3(ATH), After ATH.*
THE ***17*** *01:22:07.9, 3946N×2069E, h0km, ML2.8*
ATH ***17*** *01:22:07.4, 3945N×2072E, h20km±3km, MD3.3/5*
CSEM ***17*** *01:22:07.6±0.1, 3948N×2063E, h8km, MD3.

TLL				*i* S		**Sn**	**01 32 55.8**	**+0.7**
TLL				AML	AML	01 33 03.1		
	comp=N,1μm,0.6s								
TLL	**Tololo Astrono**	**1.78**	**39**	*e*P		**Pn**	**01 32 32.8**	**+0.6**
TLL				*i* S		**Sn**	**01 32 55.8**	**+0.7**
LSCH	**La Serena**	**1.80**	**25**	AML	AML	01 33 06.4		
	comp=N,322nm,0.8s								
PEL	**Peldehue**	**1.99**	**143**	⇓*i* P		**Pn**	**01 32 35.1**	**+0.1**
PEL				*i* S		**Sn**	**01 32 58.7**	**-1.6**
PEL				AML	AML	01 33 08.0		
	comp=N,3μm,0.6s								
SAN	**Santiago**	**2.25**	**148**	AML	AML	01 33 21.5		
	comp=E,594nm,0.5s								
CLCH	**Cerro Calan**	**2.27**	**145**	AML	AML	01 33 15.5		
	comp=E,1μm,0.6s								
CLCH				AML	AML	01 33 16.1		
	comp=E,2μm,0.5s								
FCH	**Farellones**	**2.34**	**139**	*e*P		**Pn**	**01 32 40.8**	**+0.9**
FCH				*i* S		**Sn**	**01 33 09.1**	**+0.1**
FCH				AML	AML	01 33 24.6		
	comp=E,327nm,0.4s								
ANTU	**Antumapu**	**2.36**	**149**	AML	AML	01 33 24.3		
	comp=N,434nm,0.6s								
YECH	**El Yeso**	**2.71**	**141**	AML	AML	01 33 37.8		
	comp=N,425nm,0.2s								
LMEL	**Las Melosas**	**2.79**	**145**	⇑*i* P		**Pn**	**01 32 46.8**	**+0.7**
LMEL				AML	AML	01 33 32.4		
	comp=E,339nm,0.5s								
LCO	**Las Campanas**	**2.81**	**26**	*e*Pn		**Pn**	**01 32 45.7**	**-0.6**

IDC ***17*** *01:35:31.5±1.5,291S×10104E,h0km,mb4.3/11, mb1 4.4/12,mb1mx4.2/23,mbtmp4.4/12,ML4.4/1,Error ellipse: s-maj=66.3km s-min=13.7km az=53.0*
ISCJB ***17*** *01:35:35.2±1.0,27S±02×1013E±02,h33km,mb4.3/14, Error ellipse: s-maj=39.7km s-min=9.6km az=138.8*
NEIC ***17*** *01:35:37.3±0.6,278S×10125E,h35km,mb4.7/3,Error ellipse: s-maj=28.3km s-min=6.8km az=50.0*

ISC 17 01:35:37.5±1.0,28S±02×1013E±02,h35km,n19,σ0§66/17, mb4.3/14,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**18.55**	**98**	P		**P**	**Pn**	**01 39 52.0**	**+0.1**
	1.1nm,0.3s,baz=191,slow=21,SNR=2.5								
CMAR	**Chiang Mai Arr**	**21.21**	**354**	P		**P**		**01 40 19.2**	**-1.0**
	1.2nm,0.3s,mb3.7,baz=192,slow=8.9,SNR=7.8								
FITZ	**Fitzroy Crossi**	**28.32**	**124**	P		**P**		**01 41 27.1**	**-1.1**
	1.2nm,0.9s,mb3.5,baz=256,slow=21,SNR=2.3								
WRA	**Warramunga Arr**	**36.50**	**120**	P		**P**		**01 42 40.2**	**+0.5**
	2.8nm,0.5s,mb4.4,baz=302,slow=9.0,SNR=20								
WB2	**Warramunga Arr**	**36.51**	**120**	*e*P		**P**		**01 42 39.8**	**0.0**
ASAR	**Alice Springs**	**37.77**	**126**	P		**P**		**01 42 50.9**	**+0.4**
	0.7nm,0.4s,mb3.7,baz=301,slow=8.2,SNR=15								
STKA	**Stephens Creek**	**47.69**	**132**	P		**P**		**01 44 10.9**	**+0.1**
	3.4nm,0.6s,mb4.5,baz=313,slow=3.8,SNR=7.8								
SONM	**Songino Array**	**50.58**	**4**	P		**P**		**01 44 34.2**	**+1.6**
	5.7nm,0.8s,mb4.5,baz=185,slow=8.9,SNR=32								
TKM2	**Tokmak 2**	**51.04**	**336**	*e*P		**P**		**01 44 36.5**	**+0.3**
	2.7nm,0.6s,mb4.3								
AML	**Almayashu**	**51.20**	**334**	*e*P		**P**		**01 44 37.8**	**+0.3**
	11nm,1.1s,mb4.7								
EKS2	**Erkin-Say**	**51.59**	**334**	*e*P		**P**		**01 44 41.3**	**+0.9**
	9.4nm,0.8s,mb4.8								
MKAR	**Makanchi Array**	**52.11**	**344**	P		**P**		**01 44 44.3**	**+0.2**
	2.8nm,0.5s,mb4.5,baz=146,slow=8.2,SNR=16								
KURK	**Kurchatov**	**56.70**	**343**	P		**P**		**01 45 16.9**	**-0.5**
	1.7nm,0.6s,mb4.3,baz=163,slow=7.3,SNR=7.5								
ZAA0	**Zalesovo Array**	**58.15**	**349**	*e*P		**P**		**01 45 27.3**	**-0.3**
ZALV	**Zalesovo Beam**	**58.15**	**349**	P		**P**		**01 45 27.3**	**-0.3**
	14nm,0.8s,mb5.0,baz=172,slow=4.5,SNR=48								
BVAR	**Borovoye Array**	**61.34**	**339**	P		**P**		**01 45 48.6**	**-0.9**
	2.2nm,0.6s,mb4.5,baz=145,slow=8.7,SNR=12								
ARCES	**ARCESS Array B**	**87.62**	**340**	P		**P**		**01 48 21.7**	**-0.1**
	2.3nm,0.9s,mb4.4,baz=81,slow=5.8,SNR=3.9								
MIAR	**Mount Ida**	**145.47**	**22**	*e*PKPdf		PKPdf		01 55 12.1	-0.4
JCT	**Junction City**	**145.96**	**34**	*e*PKPdf		PKPdf		01 55 14.1	+0.6

IDC ***17*** *01:39:03.6±0.5,358S×10109E,h0km,mb4.4/22, mb1 4.5/23,mb1mx4.4/28,mbtmp4.4/23,ML4.5/1,MS3.9/3, Ms1 3.9/3,ms1mx3.4/26,Error ellipse: s-maj=17.0km s-min=9.7km az=46.0*
BJI ***17*** *01:39:08.2,353S×10125E,h36km,mB5.1,mb4.7*
DJA ***17*** *01:39:09,358S×10091E,h10km,MLv5.0/8*
NEIC ***17*** *01:39:09.1±0.3,354S×10105E,h35km,mb4.7/5,Error ellipse: s-maj=11.5km s-min=6.7km az=49.0*
ISCJB ***17*** *01:39:10.6±1.2,358S±006×10106E±007,h65km±10km, mb4.7/7,Error ellipse: s-maj=14.6km s-min=6.9km az=142.6*

ISC 17 01:39:11.7±1.0,358S±006×10103E±007,h55km±8km,n66, σ1§12/64,mb4.7/37,MS3.8/3,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.56**	**93**	P		**P**	**Pn**	**01 39 36.3**	**-0.9**
	0.0nm,0.0s								
PPI	**Padang Panjang**	**3.17**	**349**	P		**P**	**Pn**	**01 39 57.3**	**-1.8**
	0.0nm,0.0s								
JMBI	**JAMBI**	**3.25**	**54**	P		**P**	**Pn**	**01 39 59.2**	**-1.0**
	0.0nm,0.0s								
RGRI	**Rengat**	**3.47**	**22**	P		**P**	**Pn**	**01 40 03.9**	**+0.7**
	0.0nm,0.0s								
KLI	**Kotabumi**	**4.03**	**109**	P		**P**	**Pn**	**01 40 13.7**	**+2.9**
	0.0nm,0.0s								
BLSI	**Bandar Lampung**	**4.56**	**113**	P		**P**	**Pn**	**01 40 21.8**	**+3.6**
	0.0nm,0.0s								
DSRI	**Dabo**	**4.70**	**49**	P		**P**	**Pn**	**01 40 20.5**	**+0.4**
	0.0nm,0.0s								
PPBI	**Pangkal Pinang**	**5.29**	**75**	P		**P**	**Pn**	**01 40 28.8**	**+0.5**
	0.0nm,0.0s								
DBJI	**Dramaga**	**6.42**	**118**	P		**P**	**Pn**	**01 40 43.0**	**-0.7**
	0.0nm,0.0s								
TPI	**Tanjungpandan**	**6.67**	**83**	P		**P**	**Pn**	**01 40 49.4**	**+2.3**
	0.0nm,0.0s								
LEM	**Lembang**	**7.31**	**116**	P		**P**	**Pn**	**01 40 56.6**	**+0.7**
	0.0nm,0.0s								
BSI	**Banda Aceh**	**10.68**	**328**	P		**P**	**Pn**	**01 41 37.6**	**-4.5**
	0.0nm,0.0s								
SJI	**Sawahan**	**11.45**	**112**	P		**P**	**Pn**	**01 41 52.0**	**-0.6**
	0.0nm,0.0s								
KAPI	**Kappang**	**18.73**	**95**	P		**P**	**Pn**	**01 43 24.4**	**-2.5**
	1.6nm,0.3s,baz=270,slow=14,SNR=7.1								
KAPI	**Kappang**	**18.73**	**95**	*e*P		**P**	**Pn**	**01 43 25.1**	**-1.8**
PCI	**Palu**	**18.98**	**82**	P		**P**	**Pn**	**01 43 31.9**	**+1.9**
	0.0nm,0.0s								
KDI	**Kendari**	**21.55**	**92**	P		**P**		**01 44 00.6**	**+3.9**
	0.0nm,0.0s								
CMAR	**Chiang Mai Arr**	**22.00**	**355**	P		**P**		**01 43 58.9**	**-2.4**
	2.4nm,0.4s,mb4.0,baz=185,slow=9.0,SNR=9.0								
CMAR				LR		LR		01 53 43.0	
	comp=Z,217nm,18.4s,MS3.6,baz=180,slow=40								
FITZ	**Fitzroy Crossi**	**28.09**	**123**	*e*P		**P**		**01 44 57.3**	**-1.1**
	12nm,0.9s,mb4.5								
FITZ	**Fitzroy Crossi**	**28.09**	**123**	P		**P**		**01 44 57.6**	**-0.8**
	3.0nm,0.9s,mb3.9,baz=333,slow=6.8,SNR=5.2								
FITZ				LR		LR		01 56 47.2	
	comp=Z,136nm,19.7s,MS3.5,baz=115,slow=38								
ODAN	**Odare**	**33.01**	**337**	*e*P		**P**		**01 45 42.6**	**+0.9**
	34nm,0.7s,mb5.4								
TAPN	**Taplejung**	**33.33**	**338**	*e*P		**P**		**01 45 46.2**	**+1.7**
	61nm,0.9s,mb5.5								
RAMN	**Ramite**	**33.40**	**336**	*e*P		**P**		**01 45 46.6**	**+1.5**
	20nm,0.6s,mb5.2								
JIRN	**Jiri**	**34.20**	**336**	*e*P		**P**		**01 45 53.1**	**+1.1**
	36nm,0.6s,mb5.4								
PKI	**Pulchoki**	**34.44**	**335**	*e*P		**P**		**01 45 55.0**	**+0.9**
GUN	**Gumba**	**34.55**	**336**	*e*P		**P**		**01 45 56.3**	**+1.3**
	39nm,0.4s,mb5.7								
DMN	**Daman**	**34.60**	**335**	*e*P		**P**		**01 45 55.9**	**+0.4**
KKN	**Kakani**	**34.69**	**335**	*e*P		**P**		**01 45 57.0**	**+0.7**
	21nm,0.6s,mb5.2								
GKN	**Gorkha**	**35.15**	**334**	*e*P		**P**		**01 46 00.6**	**+0.4**
KOLN	**Koldanda**	**35.41**	**333**	*e*P		**P**		**01 46 03.4**	**+0.9**
	25nm,0.6s,mb5.3								
DANN	**Dangsing**	**35.83**	**333**	*e*P		**P**		**01 46 07.3**	**+1.2**
	33nm,0.5s,mb5.5								
WRA	**Warramunga Arr**	**36.32**	**119**	P		**P**		**01 46 09.5**	**-0.9**
	6.2nm,0.8s,mb4.6,baz=295,slow=9.9,SNR=12								
WRA				PcP		PcP		01 48 34.7	+0.3
	1.8nm,0.8s,baz=303,slow=3.1,SNR=5.3								
WRA				S		**S**		**01 51 49.4**	**+1.7**
	0.8nm,0.6s,baz=299,slow=17,SNR=4.6								
WRAB	**Tennant Creek**	**36.33**	**119**	*e*P		**P**		**01 46 09.8**	**-0.7**
	15nm,1.0s,mb4.9								
WB2	**Warramunga Arr**	**36.33**	**119**	*e*P		**P**		**01 46 09.7**	**-0.8**
ASAR	**Alice Springs**	**37.50**	**125**	P		**P**		**01 46 20.0**	**-0.4**
	3.9nm,0.7s,mb4.3,baz=298,slow=7.6,SNR=17								
ASAR				PcP		PcP		01 48 38.8	+0.9
	1.7nm,0.7s,baz=294,slow=2.5,SNR=7.8								
ASAR				S		**S**		**01 52 07.7**	**+2.1**
	0.8nm,0.7s,baz=294,slow=14,SNR=9.1								
XAN	**Xi'an**	**38.15**	**11**	P		**P**		**01 46 24.6**	**-1.1**
XAN				AP		pP		01 46 33.4	-6.5
XAN				XP		sP		01 46 37.9	-8.5
XAN				AMB		AMB			
	comp=Z,10.0nm,1.1s,mb4.5								
DDI	**Dehra Dun**	**40.24**	**329**	*ex*		x		01 46 42.0	
GTA	**Gaotai**	**42.80**	**359**	*e*P		**P**		**01 47 03.8**	**-0.2**
GTA				AP		pP		01 47 15.3	-3.1
GTA				XP		sP		01 47 18.1	-6.7
GTA				AMB		AMB			
	comp=Z,6.0nm,1.1s,mb4.2								
STKA	**Stephens Creek**	**47.34**	**131**	P		**P**		**01 47 40.8**	**+0.6**
	comp=Z,11nm,0.8s,mb4.8,baz=300,slow=9.7,SNR=12								
KSRS	**Korea Array**	**47.87**	**29**	P		**P**		**01 47 44.2**	**0.0**
	comp=Z,7.4nm,0.9s,mb4.7,baz=226,slow=8.4,SNR=12								
WMQ	**Urumqi**	**48.69**	**347**	*e*P		**P**		**01 47 51.4**	**+1.0**
WMQ				AMB		AMB			
	comp=Z,12nm,1.1s,mb4.8								
WMQ				AMB		AMB			
	comp=Z,107nm,4.6s								
SONM	**Songino Array**	**51.42**	**5**	P		**P**		**01 48 12.1**	**+1.1**
	comp=Z,7.6nm,0.6s,mb4.8,baz=188,slow=9.5,SNR=48								
ULN	**Ulaanbaatar**	**51.51**	**5**	*e*P		**P**		**01 48 11.4**	**-0.3**
	comp=Z,8nm,0.8s,mb4.5								
TKM2	**Tokmak 2**	**51.68**	**336**	*e*P		**P**		**01 48 13.5**	**+0.4**
	comp=Z,13nm,0.9s,mb4.8								
CN2	**Changchun**	**52.03**	**22**	*e*P		**P**		**01 48 15.0**	**-0.7**
CN2				AMB		AMB			
	comp=Z,10.0nm,0.7s,mb4.8								
MKAR	**Makanchi Array**	**52.82**	**344**	P		**P**		**01 48 21.1**	**-0.3**
	comp=Z,1.7nm,0.5s,mb4.2,baz=147,slow=7.2,SNR=4.1								
MJAR	**Matsushiro Arr**	**52.87**	**38**	P		**P**		**01 48 20.5**	**-1.6**
	comp=Z,2.1nm,0.6s,mb4.3,baz=214,slow=7.9,SNR=7.1								
OPO	**Amohidratompo**	**54.67**	**250**	P		**P**		**01 48 36.1**	**+0.6**
	comp=Z,3.9nm,0.9s,mb4.4,baz=92,slow=13,SNR=4.6								
KURK	**Kurchatov**	**57.41**	**343**	P		**P**		**01 48 53.3**	**-1.2**
	comp=Z,3.7nm,0.9s,mb4.4,baz=162,slow=6.7,SNR=3.9								
KURK	**Kurchatov**	**57.41**	**343**	*e*P		**P**		**01 48 53.8**	**-0.7**
	comp=Z,5.8nm,0.7s,mb4.7								
ZAA0	**Zalesovo Array**	**58.91**	**349**	*e*P		**P**		**01 49 04.5**	**-0.4**
ZALV	**Zalesovo Beam**	**58.91**	**349**	P		**P**		**01 49 04.2**	**-0.7**
	comp=Z,4.5nm,0.7s,mb4.6,baz=180,slow=5.3,SNR=7.5								
BVAR	**Borovoye Array**	**62.01**	**340**	P		**P**		**01 49 24.1**	**-2.0**
	comp=Z,2.5nm,0.6s,mb4.5,baz=146,slow=9.2,SNR=14								
AKTK	**Aktyubinsk**	**65.23**	**331**	P		**P**		**01 49 45.2**	**-2.1**
AKTO	**Aktyubinsk**	**65.23**	**331**	P		**P**		**01 49 45.2**	**-2.1**
	comp=Z,0.7nm,0.4s,mb4.0,baz=130,slow=7.2,SNR=4.3								
MAW	**Mawson**	**69.02**	**195**	P		**P**		**01 50 10.8**	**-0.3**
	comp=Z,2.3nm,0.7s,mb4.2,baz=20,slow=9.7,SNR=7.4								
MAW				LR		LR		02 13 04.4	
	comp=Z,180nm,20.6s,MS4.3,baz=71,slow=30								
ASF	**Jabal al Asfar**	**70.34**	**306**	P		**P**		**01 50 19.7**	**-0.2**
	comp=Z,3.3nm,0.8s,mb4.3,baz=353,slow=2.5,SNR=6.0								
EIL	**Elat**	**71.24**	**303**	P		**P**		**01 50 25.1**	**-0.4**
	comp=Z,8.5nm,0.8s,mb4.7,baz=118,slow=2.1,SNR=6.9								
MMAI	**Mount Meron Ar**	**71.79**	**306**	P		**P**		**01 50 28.9**	**+0.1**
	comp=Z,3.2nm,0.6s,mb4.4,baz=104,slow=3.5,SNR=6.0								
PETK	**Petropavlovsk-**	**73.67**	**32**	P		**P**		**01 50 38.8**	**-0.6**
	comp=Z,2.8nm,0.8s,mb4.2,baz=268,slow=7.2,SNR=2.7								
BOSA	**Boshof**	**75.80**	**242**	P		**P**		**01 50 51.8**	**-0.5**
	comp=Z,3.1nm,0.9s,mb4.2,baz=138,slow=7.5,SNR=3.1								
ARCES	**ARCESS Array B**	**88.00**	**340**	P		**P**		**01 51 57.5**	**+0.7**
	comp=Z,2.0nm,0.9s,mb4.4,baz=109,slow=5.0,SNR=2.9								
GERES	**GERESS Array B**	**90.91**	**319**	P		**P**		**01 52 10.3**	**+0.8**
	comp=Z,0.7nm,0.6s,mb4.2,baz=92,slow=4.7,SNR=8.3								
CPUP	**Villa Florida**	**143.63**	**214**	PKP		PKPdf		01 58 38.6	-2.6
	comp=Z,2.0nm,0.6s,baz=113,slow=3.8,SNR=9.6								
BDFB	**Brasilia**	**143.90**	**237**	PKP		PKPdf		01 58 39.9	-2.0
	comp=Z,3.4nm,0.6s,baz=127,slow=3.3,SNR=7.3								
LPAZ	**La Paz**	**157.53**	**208**	PKPab		PKPab		01 59 35.8	+1.3
	comp=Z,0.8nm,0.9s,baz=37,slow=3.3,SNR=4.1								

MOS ***17*** *01:45:18.2±2.5,4980N×8784E,h13km,mb4.3/1,Error ellipse: s-maj=19.5km s-min=9.9km az=98.4*
NEIC ***17*** *01:45:19.5±0.7,5006N×8810E,h10km,Error ellipse: s-maj=13.8km s-min=10.3km az=159.0*
IDC ***17*** *01:45:21.0±2.3,5005N×8752E,h0km,mb4.1/1,mb1 3.5/4, mb1mx3.3/25,mbtmp3.4/4,ML2.8/3,Error ellipse: s-maj=23.3km s-min=15.8km az=100.0*
ISCJB ***17*** *01:45:21.8±0.7,5024N±004×8736E±008,h10km,Error ellipse: s-maj=8.0km s-min=4.6km az=29.9*
NNC ***17*** *01:45:23.5±4.1,5006N×8728E,h0km,mb3.2,mpv2.8, Error ellipse: s-maj=33.1km s-min=19.7km az=69.0*

ISC 17 01:45:23.8±0.8,5018N±004×8746E±008,h10km,n21, σ1§29/32,7C-2D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.17**	**36**	*i* PG		**Pg**		**01 45 27.1**	**-0.4**
ARTR	**Artybash**	**1.62**	**356**	*e*PN		**Pn**		**01 45 53.5**	**+1.1**
ARTR				*e*		**Sn**		**01 46 16.1**	**+2.7**
UKR	**Ust'-Kan**	**1.88**	**295**	*e*PN		**Pn**		**01 45 57.4**	**+1.6**
UKR				*e*		**Sn**		**01 46 23.7**	**+4.2**
TASR	**Tashtagol**	**2.60**	**6**	*e*PN		**Pg**		**01 46 10.8**	**-2.7**
TASR				*e*		**Sg**		**01 46 45.8**	**-1.3**
ELT	**Yel'tsovka**	**3.18**	**347**	*e*PN		**Pn**		**01 46 15.7**	**+2.0**
ELT				*e*		**Sg**		**01 47 04.1**	**-1.7**
ZALV	**Zalesovo Beam**	**4.11**	**338**	Pn		**Pn**		**01 46 27.2**	**+0.6**
	0.4nm,0.3s,baz=154,slow=15,SNR=4.1								
ZALV				Sn		**Sn**		**01 47 18.9**	**+4.2**
	0.7nm,0.3s,baz=162,slow=26,SNR=4.3								
ZALV				Lg				01 47 37.5	
	1.3nm,0.3s,baz=156,slow=26,SNR=6.1								
MK31	**Makanchi Array**	**4.83**	**227**	⇓Pn		**Pn**		**01 46 35.5**	**-0.9**
	0.7nm,0.5s,baz=44,slow=14,SNR=7.5								
MK31				⇑Pg		**Pg**		**01 46 48.5**	**-7.7**
	1.2nm,0.5s,baz=51,slow=17,SNR=5.8								
MK31				⇓Sn		**Sn**		**01 47 31.3**	**-1.0**
	0.6nm,0.3s,baz=54,slow=29,SNR=5.8								
MK31				⇑Lg				01 47 50.9	
	4.3nm,0.6s,baz=60,slow=25,SNR=6.4								
MKAR	**Makanchi Array**	**4.83**	**227**	Pn		**Pn**		**01 46 35.7**	**-0.7**
	0.3nm,0.3s,baz=56,slow=12,SNR=5.1								
MKAR				Lg				01 47 50.6	
	1.3nm,0.3s,baz=64,slow=31,SNR=9.3								
NVS	**Novosibirsk**	**5.33**	**333**	*e*PN		**Pg**		**01 47 06.1**	**+0.3**
NVS				*e*		**Sg**		**01 48 12.7**	**-2.1**
KURK	**Kurchatov**	**5.67**	**279**	⇑Pn		**Pn**		**01 46 47.7**	**-0.4**
	3.4nm,1.2s								
KURK				⇑Lg				01 48 18.3	
	5.6nm,0.7s								
KURK	**Kurchatov**	**5.67**	**279**	Pn		**Pn**		**01 46 48.8**	**+0.8**
	0.1nm,0.3s,baz=93,slow=15,SNR=7.9								
KURK				Sn		**Sn**		**01 47 54.2**	**+1.0**
	0.1nm,0.3s,baz=201,slow=16,SNR=3.0								
KURK				Lg				01 48 24.7	
	0.2nm,0.3s,baz=88,slow=33,SNR=7.5								
KURK	**Kurchatov**	**5.67**	**279**	Pn		**Pn**		**01 46 48.8**	**+0.8**
KURK				Sn		**Sn**		**01 47 54.2**	**+1.0**
KURBB	**Kurchatov Arra**	**5.73**	**278**	⇑Pn		**Pn**		**01 46 48.5**	**-0.3**
	0.2nm,0.4s								
KURBB				⇑Sn		**Sn**		**01 47 53.9**	**-0.6**
	0.2nm,0.3s								
KURBB				⇑Lg				01 48 22.7	
	0.8nm,0.6s								
FRU	**Bishkek**	**11.49**	**235**	*e*P		**Pn**		**01 48 17.0**	**+9.2**
AML	**Almayashu**	**12.47**	**235**	*e*Pn		**Pn**		**01 48 21.5**	**+0.3**
	273nm,1.2s								
ULN	**Ulaanbaatar**	**13.06**	**93**	*e*P		**Pn**		**01 48 19.6**	**-10**
ULN				pmax		pmax			
	comp=Z,6.0nm,0.9s								
ULN	**Ulaanbaatar**	**13.06**	**93**	*e*Pn		**Pn**		**01 48 19.6**	**-10**
	comp=Z,5.5nm,0.9s								
BOD	**Bodaibo**	**17.29**	**54**	*e*P		**Pn**		**01 49 25.7**	**+0.8**
BOD				pmax		pmax			
	comp=Z,5.0nm,1.1s								
ARCES	**ARCESS Array B**	**34.58**	**327**	P		**P**		**01 52 10.5**	**-1.6**
	comp=Z,2.9nm,0.9s,baz=97,slow=5.0,SNR=3.6								
ARCES	**ARCESS Array B**	**34.58**	**327**	P		**P**		**01 52 10.5**	**-1.7**
ARCES				pmax		pmax			
	comp=Z,3.0nm,1.0s								
EDM	**Edmonton**	**75.49**	**13**	*e*P		**P**		**01 57 03.0**	**-4.6**

IDC 17 02:05:22.4±1.7,897N×4241W,h0km,mb3.6/3,mb1 3.8/3, mb1mx3.5/20,mbtmp3.6/3,MS3.5/3,Ms1 3.7/3,
ms1mx3.2/24,Error ellipse: s-maj=95.1km s-min=28.0km az=143.0,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**35.75**	**226**	P		P	P	02 12 23.9	+0.7
	1.0nm,0.7s,baz=42,slow=11,SNR=4.9								
LPAZ				LR		LR	LR	02 26 20.5	
	comp=Z,96nm,20.7s,baz=101,slow=35								
TORD	**Torodi Ar. Bea**	**43.44**	**80**	P		P	P	02 13 27.4	-0.1
	0.7nm,0.7s,baz=278,slow=8.6,SNR=6.8								
ESDC	**Sonseca Array**	**45.92**	**42**	P		P	P	02 13 47.1	+0.1
	0.4nm,0.7s,baz=246,slow=9.1,SNR=5.3								
ESDC				LR		LR	LR	02 29 59.0	
	comp=Z,55nm,18.2s,baz=140,slow=32								
NOA	**NORSAR Array B**	**65.14**	**26**	LR		LR	LR	02 38 29.4	
	comp=Z,33nm,18.7s,baz=355,slow=30								

IDC ***17*** *02:19:08.2±1.3,226S×9999E,h0km,mb4.3/10, mb1 4.4/11,mb1mx4.1/20,mbtmp4.3/11,ML4.2/1,MS3.7/2, Ms1 3.6/2,ms1mx3.1/27,Error ellipse: s-maj=50.9km s-min=14.8km az=57.0*
ISCJB ***17*** *02:19:11.5±0.6,22S±01×1001E±01,h33km,mb4.3/13, MS3.7/2,Error ellipse: s-maj=20.6km s-min=9.7km az=143.1*
NEIC ***17*** *02:19:13.7±0.4,220S×10011E,h35km,mb4.4/4,Error ellipse: s-maj=14.1km s-min=6.2km az=52.0*

ISC 17 02:19:13.7±0.6,22S±01×1001E±01,h35km,n21,σ0§64/18, mb4.3/13,MS3.7/2,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**19.77**	**99**	P		**P**	**Pn**	**02 23 40.9**	**-1.8**
	0.7nm,0.3s,baz=297,slow=11,SNR=4.5								
CMAR	**Chiang Mai Arr**	**20.56**	**357**	P		**P**		**02 23 48.9**	**-0.6**
	2.0nm,0.5s,baz=187,slow=10,SNR=11								
FITZ	**Fitzroy Crossi**	**29.59**	**124**	P		**P**		**02 25 15.9**	**+0.3**
	1.2nm,0.6s,mb3.8,baz=333,slow=21,SNR=6.9								
WRA	**Warramunga Arr**	**37.77**	**120**	P		**P**		**02 26 26.5**	**-0.3**
	5.1nm,0.8s,mb4.3,baz=297,slow=9.6,SNR=19								
WRA				PcP		PcP		02 28 43.6	+0.3
	0.4nm,0.6s,baz=303,slow=2.4,SNR=3.3								
WRAB	**Tennant Creek**	**37.78**	**120**	*e*P		**P**		**02 26 26.8**	**0.0**
	6.7nm,0.8s,mb4.4								
WB2	**Warramunga Arr**	**37.78**	**120**	*e*P		**P**		**02 26 26.7**	**-0.2**
ASAR	**Alice Springs**	**39.02**	**126**	P		**P**		**02 26 37.9**	**+0.6**
	2.1nm,0.6s,mb4.0,baz=300,slow=7.8,SNR=24								
ASAR				PcP		PcP		02 28 47.5	+0.3
	0.7nm,0.6s,baz=300,slow=2.7,SNR=4.3								
KSRS	**Korea Array**	**47.12**	**30**	P		**P**		**02 27 43.3**	**+0.8**
	1.5nm,0.8s,mb4.0,baz=221,slow=8.0,SNR=6.5								
KSRS				LR		LR		02 52 01.6	
	comp=Z,51nm,18.0s,MS3.5,baz=202,slow=42								
RER	**Riviere de l'E**	**47.14**	**243**	*e*P		**P**		**02 27 42.5**	**-0.5**
STKA	**Stephens Creek**	**48.91**	**132**	P		**P**		**02 27 57.6**	**+1.1**
	2.1nm,0.7s,mb4.3,baz=300,slow=20,SNR=3.4								
SONM	**Songino Array**	**50.13**	**5**	P		**P**		**02 28 06.3**	**

PBAR	**Barrancos**	**3.17**	**48**	*e*Pn		**Pn**	**02 34 56.4**	**+1.0**
PBAR				*e*Sn		**Sn**	**02 35 33.9**	**+0.6**
PBAR				A			02 35 35.0	
	12nm,0.3s							
PBAR	**Barrancos**	**3.17**	**48**	Pn		**Pn**	**02 34 56.4**	**+1.0**
PBAR				Sn		**Sn**	**02 35 33.9**	**+0.6**
	5.8nm,0.3s							
EMIN	**Mina Concepcio**	**3.18**	**57**	P		**Pn**	**02 34 56.5**	**+1.0**
	2.0nm,0.2s,SNR=21							
EMIN				S		**Sn**	**02 35 33.5**	**+0.1**
	9.1nm,0.1s,SNR=15							
EMIN	**Mina Concepcio**	**3.18**	**57**	P		**Pn**	**02 34 56.5**	**+1.0**
	1.1nm,0.3s,SNR=21							
EMIN				S		**Sn**	**02 35 33.5**	**+0.1**
	8.7nm,0.2s,SNR=15							
ALMR	**Almeirim**	**3.27**	**20**	*e*P		**Pn**	**02 34 57.0**	**+0.3**
ALMR				*e*S		**Sn**	**02 35 34.4**	**-1.3**
ALMR				*e*S		**Sn**	**02 35 34.4**	**-1.2**
ALMR				AML	AML		02 35 36.3	
	comp=E,20nm,0.1s							
ALMR	**Almeirim**	**3.27**	**20**	*e*P		**Pn**	**02 34 57.0**	**+0.3**
ALMR				*e*S		**Sn**	**02 35 34.4**	**-1.2**
ALMR	**Almeirim**	**3.27**	**20**	P		**Pn**	**02 34 57.0**	**+0.3**
ALMR				S		**Sn**	**02 35 34.4**	**-1.3**
ESPR	**Espera**	**3.46**	**76**	⇑P		**Pn**	**02 35 00.4**	**+1.0**
	comp=E,14nm,0.2s,SNR=18							
ESPR				S		**Sn**	**02 35 40.1**	**-0.4**
	comp=E,34nm,0.3s,SNR=6.8							
ESPR	**Espera**	**3.46**	**76**	P		**Pn**	**02 35 00.4**	**+1.0**
	comp=E,10nm,0.3s,SNR=18							
ESPR				S		**Sn**	**02 35 40.5**	**0.0**
	comp=E,34nm,0.3s,SNR=6.8							
ESPR	**Espera**	**3.46**	**76**	⇑P		**Pn**	**02 35 00.4**	**+1.0**
ESPR				S		**Sn**	**02 35 40.5**	**0.0**
EBAD	**Badajoz**	**3.59**	**41**	P		**Pn**	**02 35 01.6**	**+0.5**
	comp=E,1.0nm,0.1s,SNR=16							
EBAD				S		**Sn**	**02 35 43.6**	**+0.1**
	comp=E,4.7nm,0.0s,SNR=23							
EBAD	**Badajoz**	**3.59**	**41**	P		**Pn**	**02 35 01.6**	**+0.5**
	comp=E,0.8nm,0.5s,SNR=16							
EBAD				S		**Sn**	**02 35 43.5**	**0.0**
	comp=E,25nm,0.2s,SNR=23							
EBAD	**Badajoz**	**3.59**	**41**	P		**Pn**	**02 35 01.6**	**+0.5**
EBAD				S		**Sn**	**02 35 43.5**	**0.0**
EJIF	**Jimena Fronter**	**3.72**	**83**	P		**Pn**	**02 35 04.3**	**+1.4**
	comp=E,1.3nm,0.2s,SNR=7.9							
EJIF				S		**Sn**	**02 35 47.9**	**+1.2**
	comp=E,2.7nm,0.3s,SNR=7.9							
EJIF	**Jimena Fronter**	**3.72**	**83**	P		**Pn**	**02 35 03.9**	**+1.0**
	comp=E,0.7nm,0.1s,SNR=7.9							
EJIF				S		**Sn**	**02 35 47.9**	**+1.2**
	comp=E,2.7nm,0.3s,SNR=7.9							
EJIF	**Jimena Fronter**	**3.72**	**83**	P		**Pn**	**02 35 03.9**	**+1.0**
EJIF				S		**Sn**	**02 35 47.9**	**+1.2**
ECEU	**Ceuta**	**3.79**	**92**	P		**Pn**	**02 35 04.9**	**+0.9**
	comp=E,2.7nm,0.3s,SNR=8.1							
ECEU				S		**Sn**	**02 35 50.2**	**+1.6**
	comp=E,3.1nm,0.1s,SNR=7.9							
ECEU	**Ceuta**	**3.79**	**92**	P		**Pn**	**02 35 04.9**	**+0.9**
	comp=E,2.7nm,0.3s,SNR=8.1							
DKH	**Dar Kharkhour**	**3.86**	**98**	*e*P		**Pn**	**02 35 05.0**	**+0.1**
DKH				*i* S		**Sn**	**02 35 45.0**	**-5.2**
PMRV	**Marv??o**	**3.93**	**32**	*e*Pn		**Pn**	**02 35 06.4**	**+0.5**
PMRV				*e*Sn		**Sn**	**02 35 50.8**	**-1.3**
PMRV				A			02 35 53.6	
	comp=E,17nm,0.2s							
PMRV	**Marv??o**	**3.93**	**32**	*e*Pn		**Pn**	**02 35 06.4**	**+0.5**
PMRV				*e*Sn		**Sn**	**02 35 50.8**	**-1.3**
	comp=E,17nm,0.2s							
EMIJ	**Mijas**	**4.28**	**82**	P		**Pn**	**02 35 11.4**	**+0.7**
	comp=E,1.5nm,0.3s,SNR=4.6							
EMIJ				S		**Sn**	**02 36 00.9**	**+0.2**
	comp=E,3.5nm,0.3s							
CIA	**Chichaoua**	**4.65**	**166**	P		**Pn**	**02 35 10.5**	**-5.2**
CIA				S		**Sn**	**02 35 58.0**	**-12**
CIA	**Chichaoua**	**4.65**	**166**	*e*P		**Pn**	**02 35 10.5**	**-5.2**
MTE	**Manteigas**	**4.72**	**24**	*e*Pn		**Pn**	**02 35 16.6**	**-0.2**
MTE				*e*Sn		**Sn**	**02 36 08.9**	**-2.7**
MTE				A			02 36 15.7	
	comp=E,7.8nm,0.3s							
MTE	**Manteigas**	**4.72**	**24**	*e*Pn		**Pn**	**02 35 16.6**	**-0.2**
MTE				*e*Sn		**Sn**	**02 36 08.9**	**-2.7**
	comp=E,7.8nm,0.3s							
KIB	**El Ksiba**	**4.83**	**136**	P		**Pn**	**02 35 15.0**	**-3.2**
KIB				S		**Sn**	**02 36 05.0**	**-9.2**
KIB	**El Ksiba**	**4.83**	**136**	*e*P		**Pn**	**02 35 15.0**	**-3.2**
EADA	**Adamuz**	**4.83**	**63**	⇑P		**Pn**	**02 35 19.4**	**+1.1**
	comp=E,2.6nm,0.1s,SNR=18							
EADA				S		**Sn**	**02 36 13.2**	**-1.1**
	comp=E,8.9nm,0.1s							
EADA	**Adamuz**	**4.83**	**63**	P		**Pn**	**02 35 19.4**	**+1.1**
	comp=E,2.2nm,0.3s,SNR=18							
EADA				S		**Sn**	**02 36 14.1**	**-0.2**
	comp=E,2.7nm,0.1s							
EADA	**Adamuz**	**4.83**	**63**	⇑P		**Pn**	**02 35 19.4**	**+1.1**
EADA				S		**Sn**	**02 36 14.1**	**-0.2**
ELOJ	**Sierra Loja**	**4.86**	**76**	P		**Pn**	**02 35 20.3**	**+1.8**
	comp=E,1.2nm,0.2s,SNR=7.9							
ELOJ				S		**Sn**	**02 36 15.2**	**+0.4**
	comp=E,0.8nm,0.1s,SNR=7.9							
ELOJ	**Sierra Loja**	**4.86**	**76**	P		**Pn**	**02 35 20.4**	**+1.8**
	comp=E,1.2nm,0.2s,SNR=7.9							
ELOJ				S		**Sn**	**02 36 15.2**	**+0.4**
	comp=E,2.5nm,0.4s,SNR=7.9							
ELOJ	**Sierra Loja**	**4.86**	**76**	P		**Pn**	**02 35 20.4**	**+1.8**
ELOJ				S		**Sn**	**02 36 15.2**	**+0.4**
PVIS	**Viseu**	**4.91**	**19**	*e*Pn		**Pn**	**02 35 18.9**	**-0.4**
TZC	**Tazercounte**	**4.92**	**142**	P		**Pn**	**02 35 16.0**	**-3.5**
TZC				S		**Sn**	**02 36 06.0**	**-10**
TZC	**Tazercounte**	**4.92**	**142**	*e*P		**Pn**	**02 35 16.0**	**-3.5**
CZD	**Col de Zad**	**5.14**	**125**	P		**Pn**	**02 35 19.0**	**-3.5**
CZD				S		**Sn**	**02 36 12.0**	**-10**
CZD	**Col de Zad**	**5.14**	**125**	*i* P		**Pn**	**02 35 19.0**	**-3.5**
OUK	**Oukaimeden**	**5.20**	**159**	P		**Pn**	**02 35 19.0**	**-4.4**
OUK				S		**Sn**	**02 36 10.5**	**-13**
OUK	**Oukaimeden**	**5.20**	**159**	*i* P		**Pn**	**02 35 19.0**	**-4.4**
ECOG	**Cogollos-Vega**	**5.34**	**75**	P		**Pn**	**02 35 26.6**	**+1.4**
	comp=E,4.3nm,0.4s,SNR=32							
ECOG				S		**Sn**	**02 36 26.8**	**+0.1**
	comp=E,2.2nm,0.3s,SNR=7.9							
EBAN	**Banos Encina**	**5.41**	**66**	P		**Pn**	**02 35 26.7**	**+0.5**
	comp=E,1.9nm,0.2s,SNR=6.1							
EBAN				S		**Sn**	**02 36 27.0**	**-1.5**
	comp=E,5.2nm,0.2s,SNR=9.6							
EBAN	**Banos Encina**	**5.41**	**66**	P		**Pn**	**02 35 26.7**	**+0.5**
	comp=E,1.9nm,0.2s,SNR=6.1							
EBAN				S		**Sn**	**02 36 27.1**	**-1.4**
	comp=E,5.2nm,0.2s,SNR=9.6							
EBAN	**Banos Encina**	**5.41**	**66**	P		**Pn**	**02 35 26.7**	**+0.5**
EBAN				S		**Sn**	**02 36 27.1**	**-1.5**
EQUE	**Quentar**	**5.43**	**76**	P		**Pn**	**02 35 28.3**	**+1.9**
	comp=E,0.6nm,0.2s,SNR=41							
EQUE				S		**Sn**	**02 36 28.9**	**0.0**
	comp=E,1.0nm,0.2s,SNR=7.9							
EQUE	**Quentar**	**5.43**	**76**	P		**Pn**	**02 35 28.4**	**+2.0**
	comp=E,1.6nm,0.4s,SNR=41							
EQUE				S		**Sn**	**02 36 29.2**	**+0.3**
	comp=E,1.0nm,0.2s,SNR=7.9							
PVRL	**Vila Real**	**5.48**	**19**	*e*Pn		**Pn**	**02 35 26.3**	**-0.8**
PVRL				*e*Sn		**Sn**	**02 36 25.8**	**-4.4**
PVRL				A			02 36 31.8	
	comp=E,6.6nm,0.1s							
PVRL	**Vila Real**	**5.48**	**19**	*e*Pn		**Pn**	**02 35 26.3**	**-0.8**
PVRL				*e*Sn		**Sn**	**02 36 25.8**	**-4.4**
	comp=E,6.6nm,0.1s							
MVO	**Moncorvo**	**5.58**	**24**	*e*Pn		**Pn**	**02 35 28.1**	**-0.4**
MVO				*e*Sn		**Sn**	**02 36 29.4**	**-3.3**
MVO				A			02 36 33.0	
	comp=E,4.0nm,0.3s							
MVO	**Moncorvo**	**5.58**	**24**	*e*Pn		**Pn**	**02 35 28.1**	**-0.4**
MVO				*e*Sn		**Sn**	**02 36 29.4**	**-3.3**
	comp=E,4.0nm,0.3s							
PCAB	**Cabril**	**5.82**	**15**	*e*Pn		**Pn**	**02 35 31.0**	**-0.8**
PCAB				*e*Sn		**Sn**	**02 36 34.0**	**-4.6**
PCAB				A			02 36 36.3	
	comp=E,2.5nm,0.1s							
PCAB	**Cabril**	**5.82**	**15**	*e*Pn		**Pn**	**02 35 31.0**	**-0.8**
PCAB				*e*Sn		**Sn**	**02 36 34.0**	**-4.6**
	comp=E,2.5nm,0.1s							
EBER	**Berja**	**5.82**	**80**	P		**Pn**	**02 35 33.4**	**+1.5**
	comp=E,0.1nm,0.3s,SNR=7.9							
EBER				S		**Sn**	**02 36 39.5**	**+0.8**
	comp=E,1.7nm,0.3s,SNR=7.9							
EBER	**Berja**	**5.82**	**80**	P		**Pn**	**02 35 32.9**	**+1.1**
	comp=E,0.1nm,0.3s,SNR=7.9							
EBER				S		**Sn**	**02 36 36.7**	**-1.9**
	comp=E,3.0nm,0.3s,SNR=7.9							
EBER	**Berja**	**5.82**	**80**	P		**Pn**	**02 35 32.9**	**+1.0**
EBER				S		**Sn**	**02 36 36.7**	**-1.9**
EQES	**Quesada**	**5.84**	**71**	P		**Pn**	**02 35 32.8**	**+0.7**
	comp=E,0.3nm,0.1s,SNR=8.8							
EQES				S		**Sn**	**02 36 37.3**	**-1.8**
	comp=E,2.9nm,0.2s							
EQES	**Quesada**	**5.84**	**71**	P		**Pn**	**02 35 32.8**	**+0.7**
	comp=E,1.0nm,0.4s,SNR=8.8							
EQES	**Quesada**	**5.84**	**71**	P		**Pn**	**02 35 32.8**	**+0.7**
EQES				S		**Sn**	**02 36 37.4**	**-1.7**
ELOB	**Lobios**	**5.96**	**14**	P		**Pn**	**02 35 33.0**	**-0.7**
	comp=E,0.2nm,0.1s,SNR=4.8							
ELOB				S		**Sn**	**02 36 36.9**	**-5.2**
	comp=E,1.5nm,0.1s,SNR=6.2							
ELOB	**Lobios**	**5.96**	**14**	P		**Pn**	**02 35 33.0**	**-0.7**
ELOB				S		**Sn**	**02 36 37.5**	**-4.7**
ESDC	**Sonseca Array**	**5.99**	**52**	P		**Pn**	**02 35 35.2**	**+1.0**
	comp=E,0.4nm,0.2s,baz=232,slow=13,SNR=16							
ESDC				S		**Sn**	**02 36 41.7**	**-1.1**
	comp=E,3.1nm,0.5s,baz=238,slow=23,SNR=81							
ESDC	**Sonseca Array**	**5.99**	**52**	P		**Pn**	**02 35 35.2**	**+1.0**
	comp=E,0.4nm,0.2s,SNR=16							
EHUE	**Huescar**	**6.21**	**72**	P		**Pn**	**02 35 37.5**	**+0.3**
	comp=E,0.8nm,0.2s,SNR=7.9							
EHUE				S		**Sn**	**02 36 46.9**	**-1.3**
	comp=E,1.5nm,0.2s,SNR=7.9							
ZFT	**Errachidia**	**6.23**	**129**	P		**Pn**	**02 35 35.0**	**-2.4**
ZFT				S		**Sn**	**02 36 39.0**	**-10**
ZFT	**Errachidia**	**6.23**	**129**	*e*P		**Pn**	**02 35 35.0**	**-2.4**
ECAL	**Calabor**	**6.38**	**23**	P		**Pn**	**02 35 39.0**	**-0.4**
	comp=E,1.3nm,0.2s,SNR=9.6							
ECAL				S		**Sn**	**02 36 48.2**	**-4.1**
	comp=E,4.5nm,0.3s,SNR=8.1							
ECAL	**Calabor**	**6.38**	**23**	P		**Pn**	**02 35 39.4**	**0.0**
ECAL				S		**Sn**	**02 36 49.1**	**-3.2**
GUD	**Guadarrama**	**6.48**	**44**	P		**Pn**	**02 35 41.2**	**+0.3**
	comp=E,0.5nm,0.2s,SNR=7.9							
GUD				S		**Sn**	**02 36 52.8**	**-2.0**
	comp=E,2.2nm,0.3s,SNR=6.5							
GUD	**Guadarrama**	**6.48**	**44**	P		**Pn**	**02 35 41.0**	**+0.1**
	comp=E,0.5nm,0.2s,SNR=7.9							
GUD	**Guadarrama**	**6.48**	**44**	P		**Pn**	**02 35 41.0**	**+0.1**
GUD				S		**Sn**	**02 36 52.8**	**-2.0**
EVIA	**Vianos**	**6.52**	**65**	P		**Pn**	**02 35 41.8**	**+0.3**
	comp=E,0.5nm,0.1s,SNR=7.9							
EVIA				S		**Sn**	**02 36 54.4**	**-1.5**
	comp=E,2.5nm,0.1s,SNR=9.9							
EVIA	**Vianos**	**6.52**	**65**	P		**Pn**	**02 35 41.4**	**0.0**
	comp=E,0.7nm,0.2s,SNR=7.9							
EVIA	**Vianos**	**6.52**	**65**	P		**Pn**	**02 35 41.4**	**-0.1**
EVIA				S		**Sn**	**02 36 54.3**	**-1.6**
EMAZ	**Mazaricos**	**6.89**	**7**	P		**Pn**	**02 35 44.7**	**-1.8**
	comp=E,3.0nm,0.2s,SNR=7.7							
EMAZ				S		**Sn**	**02 36 58.7**	**-6.2**
	comp=E,2.7nm,0.1s,SNR=6.0							
EMAZ	**Mazaricos**	**6.89**	**7**	P		**Pn**	**02 35 44.8**	**-1.8**
EMAZ				S		**Sn**	**02 36 59.1**	**-5.8**
ETOB	**Tobarra**	**7.23**	**67**	P		**Pn**	**02 35 51.4**	**+0.2**
	comp=E,1.2nm,0.4s,SNR=7.3							
ETOB				S		**Sn**	**02 37 10.2**	**-3.1**
	comp=E,1.6nm,0.1s,SNR=8.2							
ETOB	**Tobarra**	**7.23**	**67**	P		**Pn**	**02 35 51.4**	**+0.2**
	comp=E,1.2nm,0.4s,SNR=7.3							
EPON	**Pontenova**	**7.56**	**16**	P		**Pn**	**02 35 55.3**	**-0.3**
	comp=E,0.4nm,0.2s,SNR=7.9							
EPON				S		**Sn**	**02 37 16.5**	**-4.8**
	comp=E,1.1nm,0.2s,SNR=7.9							
EPON	**Pontenova**	**7.56**	**16**	P		**Pn**	**02 35 55.0**	**-0.7**
EPON				S		**Sn**	**02 37 16.8**	**-4.5**
ETOR	**Torete**	**7.84**	**51**	P		**Pn**	**02 36 00.4**	**+0.8**
	comp=E,1.9nm,0.3s,SNR=5.0							
ETOR				S		**Sn**	**02 37 26.0**	**-2.3**
	comp=E,2.3nm,0.2s,SNR=4.7							
EARI	**Arriondas**	**8.10**	**26**	P		**Pn**	**02 36 05.0**	**+1.9**
	comp=E,0.2nm,0.1s,SNR=4.0							
EARI				S		**Sn**	**02 37 31.9**	**-2.8**
	comp=E,0.3nm,0.2s,SNR=7.9							
EARI	**Arriondas**	**8.10**	**26**	P		**Pn**	**02 36 05.0**	**+1.9**
	SNR=7.9							
EBEN	**Beniarda**	**8.24**	**69**	S		**Sn**	**02 37 36.0**	**-2.1**
	comp=E,0.5nm,0.2s,SNR=7.9							
EMOS	**Mosqueruela**	**8.65**	**58**	P		**Pn**	**02 36 12.8**	**+2.1**
	comp=E,0.3nm,0.1s,SNR=7.9							
EMOS				S		**Sn**	**02 37 45.1**	**-3.1**
	comp=E,1.4nm,0.2s,SNR=7.9							
EMOS	**Mosqueruela**	**8.65**	**58**	P		**Pn**	**02 36 11.5**	**+0.8**
	SNR=7.9							
EMOS	**Mosqueruela**	**8.65**	**58**	P		**Pn**	**02 36 11.5**	**+0.8**
EMOS				S		**Sn**	**02 37 45.1**	**-3.1**
ELAN	**Lanestosa**	**8.76**	**34**	S		**Sn**	**02 37 45.9**	**-5.0**
	comp=E,0.0nm,0.0s,SNR=7.9							
SJPF	**Ste Jean**	**9.76**	**41**	*e*Pn		**Pn**	**02 36 26.0**	**+0.1**
SJPF				*e*Sn		**Sn**	**02 38 11.0**	**-4.5**
	comp=E,0.8nm,0.2s							
SJPF	**Ste Jean**	**9.76**	**41**	*e*Pn		**Pn**	**02 36 26.0**	**+0.1**
SJPF				*e*Sn		**Sn**	**02 38 11.0**	**-4.5**
	comp=E,0.4nm,0.2s							
ETSF	**Etsaut**	**9.99**	**44**	*e*Pn		**Pn**	**02 36 28.8**	**-0.2**
ETSF				*e*Sn		**Sn**	**02 38 16.7**	**-4.4**
	comp=E,1.0nm,0.4s							
ETSF	**Etsaut**	**9.99**	**44**	*e*Pn		**Pn**	**02 36 28.8**	**-0.2**
ETSF				*e*Sn		**Sn**	**02 38 16.7**	**-4.4**
	comp=E,0.5nm,0.4s							
EPF	**Esparros**	**10.59**	**46**	*e*Sn		**Sn**	**02 38 31.0**	**-4.8**
	comp=E,0.7nm,0.2s							
EPF	**Esparros**	**10.59**	**46**	*e*Sn		**Sn**	**02 38 31.0**	**-4.8**
	comp=E,0.3nm,0.2s							

*IDC **17** 03:38:44.1±1.7, 150S×100.18E, h0km, mb4.0/6, mb1 4.0/7, mb1mx3.8/19, mbtmp3.9/7, ML4.3/1, Error ellipse: s-maj=75.3km s-min=19.5km az=58.0*
*ISCJB **17** 03:38:47.3±1.5, 15S±02×1002E±03, h33km, mb4.0/7, Error ellipse: s-maj=50.5km s-min=16.6km az=151.0*
*NEIC **17** 03:38:49.2±0.8, 151S×100.19E, h35km, mb3.9/1, Error ellipse: s-maj=27.6km s-min=11.9km az=66.0*

ISC 17 03:38:49.6±1.5, 14S±02×1003E±03, h35km, n9, σ0§57/8, mb4.0/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.81**	**356**	P		**Pn**	**Pn**	**03 43 18.1**	**-0.9**
	0.4nm,0.3s,baz=186,slow=10,SNR=5.0								
QIZ	**Qiongzhong**	**22.42**	**24**	*e*P		**P**	**P**	**03 43 46.0**	**+0.7**
	3.2nm,0.7s,mb3.9								
WRA	**Warramunga Arr**	**38.07**	**121**	P		**P**	**P**	**03 46 04.2**	**-0.9**
	0.6nm,0.4s,mb3.6,baz=296,slow=9.7,SNR=4.0								
ASAR	**Alice Springs**	**39.39**	**127**	P		**P**	**P**	**03 46 16.7**	**+0.6**
	0.9nm,0.8s,mb3.6,baz=306,slow=7.8,SNR=9.8								
SONM	**Songino Array**	**49.36**	**5**	P		**P**	**P**	**03 47 35.3**	**-0.2**
	0.8nm,0.6s,mb3.9,baz=189,slow=12,SNR=6.4								
MKAR	**Makanchi Array**	**50.55**	**344**	P		**P**	**P**	**03 47 44.9**	**+0.3**
	2.3nm,0.7s,mb4.2,baz=148,slow=8.0,SNR=13								
ZALV	**Zalesovo Beam**	**56.66**	**349**	P		**P**	**P**	**03 48 29.1**	**0.0**
	1.8nm,0.6s,mb4.3,baz=141,slow=5.0,SNR=6.2								
ARCES	**ARCESS Array B**	**86.03**	**340**	P		**P**	**P**	**03 51 26.5**	**+0.4**
	1.4nm,0.8s,mb4.2,baz=10,slow=16,SNR=2.4								
CPUP	**Villa Florida**	**144.92**	**217**	PKP		PKPdf	PKPdf	03 58 23.1	-0.8
	1.8nm,0.8s,baz=61,slow=6.0,SNR=6.4								

*LDG **17** 03:48:16.6±0.9, 1580S×16886E, h10km, Error ellipse: s-maj=114.7km s-min=31.5km az=124.0*
*IDC **17** 03:48:16.5±2.1, 1499S×16775E, h0km, mb4.3/6, mb1 4.4/6, mb1mx4.1/16, mbtmp4.3/6, Error ellipse: s-maj=75.5km s-min=31.3km az=134.0*
*NEIC **17** 03:48:20.3±0.4, 1461S×16744E, h10km, mb4.5/3, Error ellipse: s-maj=18.1km s-min=12.4km az=138.0*
*ISCJB **17** 03:48:25.3±4.8, 148S±02×1674E±02, h65km±45km, mb4.2/9, Error ellipse: s-maj=43.0km s-min=21.5km az=158.8*

ISC 17 03:48:26.2±3.9, 147S±02×1674E±02, h58km±38km, n39, σ0§89/12, mb4.3/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.38**	**187**	*e*Pn		**Pn**	**Pn**	**03 50 11.6**	**+0.3**
STKA	**Stephens Creek**	**29.09**	**230**	P		**P**	**P**	**03 54 21.0**	**-0.4**
	4.0nm,0.3s,mb4.6,baz=45,slow=13,SNR=9.7								
WRAB	**Tennant Creek**	**31.93**	**256**	*e*P		**P**	**P**	**03 54 46.3**	**-0.3**
	7.2nm,1.4s,mb4.3								
WRA	**Warramunga Arr**	**31.94**	**256**	P		**P**	**P**	**03 54 46.4**	**-0.3**
	1.0nm,0.6s,mb3.9,baz=86,slow=8.9,SNR=8.8								
ASAR	**Alice Springs**	**32.79**	**249**	P		**P**	**P**	**03 54 53.2**	**-0.9**
	3.6nm,0.4s,mb4.6,baz=78,slow=9.1,SNR=56								
FITZ	**Fitzroy Crossi**	**40.13**	**259**	P		**P**	**P**	**03 55 56.4**	**-0.4**
	2.8nm,0.8s,mb4.0,baz=115,slow=11,SNR=8.3								
CASY	**Casey**	**63.59**	**202**	*e*P		**P**	**P**	**03 58 51.5**	**+1.0**
	7.4nm,0.9s,mb4.7								
SONM	**Songino Array**	**82.55**	**324**	P		**P**	**P**	**04 00 43.8**	**+1.1**
	0.5nm,0.5s,mb3.8,baz=152,slow=6.7,SNR=4.1								
COLD	**Coldfoot**	**87.38**	**15**	*e*P		**P**	**P**	**04 01 06.6**	**0.0**
	3.7nm,1.3s,mb4.5								
RPW	**Rockport**	**88.83**	**39**	*e*P		**P**	**P**	**04 01 12.8**	**-1.0**
CHMT	**Chamberlain Mo**	**93.51**	**42**	*e*P		**P**	**P**	**04 01 34.6**	**-1.0**
MKAR	**Makanchi Array**	**97.27**	**316**	P		**P**	**P**	**04 01 54.9**	**+2.1**
	0.2nm,0.3s,mb4.0,baz=98,slow=7.4,SNR=3.0								
ARCES	**ARCESS Array B**	**120.26**	**345**	PKP		PKPdf	PKPdf	04 07 08.8	-1.3
	2.0nm,1.1s,baz=90,slow=1.7,SNR=4.8								
ARCES	**ARCESS Array B**	**120.26**	**345**	PKP		PKPdf	PKPdf	04 07 08.8	-1.3
CABF	**La Chapelle**	**144.55**	**338**	*e*PKP1		PKPbc	PKPdf	04 07 56.2	0.0
	24nm,0.9s								
FLN	**La Foliniere**	**144.60**	**346**	*e*PKP1		PKPbc	PKPdf	04 07 55.5	-0.7
	19nm,0.5s								
LDF	**La Druitiere**	**144.68**	**346**	*e*PKP1		PKPbc	PKPdf	04 07 55.7	-0.6
	7.6nm,0.5s								
LOR	**Lormes**	**144.76**	**340**	*e*PKP1		PKPbc	PKPdf	04 07 56.4	-0.1
	23nm,1.1s								
GRR	**Gorron**	**145.04**	**346**	*e*PKP1		PKPbc	PKPbc	04 07 57.1	+0.7
	11nm,0.6s								
SSF	**Saint Saulge**	**145.06**	**341**	*e*PKP1		PKPbc	PKPbc	04 07 57.6	+1.1
	14nm,0.8s								
LPL	**La Plagne**	**145.22**	**336**	*e*PKP1		PKPbc	PKPbc	04 07 58.8	+1.7
LPG	**La Plagne**	**145.23**	**336**	*e*PKP1		PKPbc	PKPbc	04 07 59.1	+2.0
	4.8nm,0.5s								
SMF	**Signal de Mont**	**145.31**	**340**	*e*PKP1		PKPbc	PKPbc	04 07 58.1	+0.7
AVF	**Avril sur Loir**	**145.34**	**341**	*e*PKP1		PKPbc	PKPbc	04 07 58.7	+1.2
	8.9nm,0.7s								
SGMF	**Saint Gilles**	**145.53**	**348**	*e*PKP1		PKPbc	PKPbc	04 07 58.4	+0.4
	45nm,1.0s								
ROSF	**Rostrenen**	**145.59**	**349**	*e*PKP1		PKPbc	PKPbc	04 07 58.1	-0.1
BGF	**Bois d'Agland**	**145.71**	**341**	*e*PKP1		PKPbc	PKPbc	04 07 59.3	+0.7
	6.7nm,0.5s								
MBDF	**Montbardon**	**145.86**	**335**	*e*PKP1		PKPbc	PKPbc	04 08 00.5	+1.4
	4.0nm,0.7s								
ORIF	**Oris-en-Rattie**	**146.06**	**336**	*e*PKP1		PKPbc	PKPbc	04 08 00.5	+0.8
	7.7nm,0.8s								
TCF	**Toulx Ste Croi**	**146.15**	**341**	*e*PKP1		PKPbc	PKPbc	04 08 00.6	+0.6
SBF	**Sospel**	**146.28**	**333**	*e*PKP1		PKPbc	PKPbc	04 08 01.8	+1.4
	12nm,0.8s								
MFF	**Saint Martin d**	**146.53**	**344**	*e*PKP1		PKPbc	PKPbc	04 08 01.6	+0.5
	6.0nm,0.4s								
FRF	**La Foret Royal**	**146.86**	**334**	*e*PKP1		PKPbc	PKPbc	04 08 02.1	0.0
RJF	**Les Rejaudoux**	**147.25**	**341**	*e*PKP1		PKPbc	PKPbc	04 08 03.8	+0.7
CAF	**Calviac**	**147.41**	**340**	*e*PKP1		PKPbc	PKPbc	04 08 04.2	+0.6
LFF	**

az=29.0

*NEIC **17** 04:27:31.7±0.3, 656S×14752E, mb4.7/6, Error ellipse: s-maj=8.7km s-min=5.2km az=94.0*

*IDC **17** 04:27:31.8±0.7, 657S×14760E, h69km±5km, mb4.2/17, mb1 4.4/19, mb1mx4.4/22, mbtmp4.3/19, MS3.9/18, Ms1 3.9/18, ms1mx3.7/26, Error ellipse: s-maj=19.3km s-min=11.3km az=87.0*

*GCMT **17** 04:27:31.7±0.2, 659S×14755E, h72km±1km, MW5.1/82, Moment Tensor Solution. s56,c70; s82,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=3.37±.15; $M_{\theta\theta}$=4.79±.12; $M_{\phi\phi}$=-1.42±.15; $M_{r\theta}$=1.72±.10; $M_{\theta\phi}$=-2.52±.15; $M_{r\phi}$=0.41±.11; Best double couple: M_o=5.01600×10^{16} NP1:ϕs137.00000°,δ43.00000°,λ-48.00000°. NP2: ϕs266.00000°,δ60.00000°,λ-122.00000°. Principal axes: T 5.9240, Plg9.0000°, Azm18.0000°; N -1.8170, Plg27.0000°, Azm284.0000°; P -4.1080, Plg61.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*DJA **17** 04:27:37, 686S×14720E, h60km, mb4.9/5*

ISC 17 04:27:32.9±1.5, 661S±007×14748E±009, h79km±13km, h70km±1.3km:pP-P, n70, σ0s85/37, mb4.4/20, 1C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**2.79**	**186**	*e*Pn		**Pn**	**04 28 14.9**	**-0.6**
COEN	**Coen**	**8.44**	**210**	*e*Pn		**Pn**	**04 29 32.0**	**-0.5**
	33nm,0.8s							
CTA	**Charters Tower**	**13.45**	**185**	*e*P		**Pn**	**04 30 41.6**	**+1.2**
	16nm,0.7s							
CTA	**Charters Tower**	**13.45**	**185**	P		**Pn**	**04 30 41.3**	**+0.9**
	3.3nm,0.3s,baz=359,slow=14,SNR=11							
CTA				LR		LR	04 35 26.6	
	comp=Z,935nm,18.1s,baz=8.8,slow=35							
WB2	**Warramunga Arr**	**18.39**	**223**	*e*P		**Pn**	**04 31 41.7**	**-0.9**
WB2				*e*S		**S**	**04 35 00.2**	**-7.5**
WRA	**Warramunga Arr**	**18.40**	**223**	P		**Pn**	**04 31 42.0**	**-0.7**
	4.2nm,0.3s,baz=50,slow=11,SNR=33							
WRA				S		**S**	**04 35 03.0**	**-4.8**
	0.1nm,0.3s,baz=44,slow=22,SNR=8.4							
WRA				LR		LR	04 39 34.2	
	comp=Z,511nm,19.6s,baz=45,slow=39							
GUMO	**Guam**	**20.23**	**353**	LR		LR	04 38 32.3	
	comp=Z,474nm,21.9s,baz=182,slow=33							
ASAR	**Alice Springs**	**21.40**	**216**	P		**P**	**04 32 14.4**	**+0.2**
	29nm,0.5s,mb4.9,baz=50,slow=9.7,SNR=149							
BATI	**Baumata**	**23.82**	**260**	P		**P**	**04 32 40.9**	**+2.0**
	26nm,0.4s,mb4.9,baz=87,slow=9.8,SNR=7.6							
DZM	**Mont Dzumac**	**23.91**	**132**	*e*P		**P**	**04 32 39.2**	**-0.3**
ARMA	**Armidale**	**24.00**	**171**	*e*P		**P**	**04 32 41.4**	**+1.1**
FITZ	**Fitzroy Crossi**	**24.16**	**240**	↑*i*P		**P**	**04 32 42.1**	**+0.2**
	36nm,0.6s,mb4.9							
FITZ				*e*S		**S**	**04 36 52.3**	**-2.3**
FITZ	**Fitzroy Crossi**	**24.16**	**240**	P		**P**	**04 32 42.1**	**+0.2**
	22nm,0.5s,mb4.7,baz=56,slow=9.4,SNR=82							
FITZ				LR		LR	04 42 33.1	
	comp=Z,300nm,19.5s,baz=67,slow=37							
STKA	**Stephens Creek**	**25.73**	**192**	*e*P		**P**	**04 32 55.6**	**-0.4**
	10nm,0.7s,mb4.4							
STKA	**Stephens Creek**	**25.73**	**192**	P		**P**	**04 32 55.9**	**-0.1**
	8.1nm,0.3s,mb4.6,baz=360,slow=10,SNR=29							
STKA				LR		LR	04 43 28.2	
	comp=Z,556nm,18.5s,baz=8.6,slow=37							
FORT	**Forrest**	**30.16**	**215**	*e*P		**P**	**04 33 35.4**	**-0.2**
	18nm,0.7s,mb4.8							
CBIJ	**Chichi jima**	**33.90**	**352**	LR		LR	04 46 15.4	
	comp=Z,169nm,20.7s,baz=189,slow=33							
KLBR	**Kellerberrin**	**37.27**	**224**	*e*P		**P**	**04 34 36.9**	**-0.3**
	16nm,0.5s,mb5.2							
JOW	**Kunigami**	**38.10**	**332**	LR		LR	04 48 15.6	
	comp=Z,190nm,20.6s,baz=98,slow=33							
NWAO	**Narrogin (SRO)**	**38.40**	**223**	P		**P**	**04 34 47.0**	**+0.2**
	8.6nm,0.5s,mb4.8,baz=351,slow=9.1,SNR=12							
NWAO	**Narrogin (SRO)**	**38.40**	**223**	P		**P**	**04 34 47.0**	**+0.2**
MUN	**Mundaring**	**38.57**	**225**	*e*P		**P**	**04 34 49.4**	**+1.3**
URZ	**Urewera**	**41.38**	**144**	P		**P**	**04 35 10.3**	**-1.0**
	2.2nm,0.4s,mb4.3,baz=358,slow=2.1,SNR=3.2							
RPZ	**Rata Peaks**	**42.36**	**155**	P		**P**	**04 35 19.8**	**+0.7**
	17nm,0.8s,mb4.8,baz=342,slow=3.2,SNR=8.1							
MJAR	**Matsushiro Arr**	**43.80**	**349**	P		**P**	**04 35 30.1**	**-0.7**
	0.5nm,0.3s,mb3.7,baz=88,slow=1.7,SNR=5.8							
MJAR				pP		pP	04 35 46.6	-3.5
	4.7nm,0.8s,baz=176,slow=8.9,SNR=5.1							
MJAR				LR		LR	04 52 14.8	
	comp=Z,95nm,19.4s,baz=130,slow=34							
KSRS	**Korea Array**	**47.49**	**339**	P		**P**	**04 35 59.6**	**-0.4**
	3.7nm,0.7s,mb4.2,baz=156,slow=8.8,SNR=5.0							
KSRS				LR		LR	04 53 51.0	
	comp=Z,170nm,19.5s,baz=144,slow=33							
CMAR	**Chiang Mai Arr**	**53.96**	**298**	P		**P**	**04 36 51.1**	**+2.2**
	1.0nm,0.3s,mb4.3,baz=188,slow=9.8,SNR=4.4							
CMAR				pP		pP	04 37 09.2	+0.3
	3.8nm,0.8s,baz=121,slow=6.5,SNR=3.4							
CMAR				LR		LR	05 00 34.3	
	comp=Z,74nm,18.2s,baz=286,slow=37							
PETK	**Petropavlovsk-**	**60.12**	**7**	P		**P**	**04 37 32.4**	**+0.6**
	4.0nm,0.8s,mb4.5,baz=156,slow=4.3,SNR=7.1							
PETK				LR		LR	04 58 36.4	
	comp=Z,118nm,20.4s,baz=215,slow=31							
PETK	**Petropavlovsk-**	**60.12**	**7**	P		**P**	**04 37 32.4**	**+0.6**
PETK				LR		LR	04 58 36.4	
SONM	**Songino Array**	**65.17**	**331**	P		**P**	**04 38 05.3**	**-0.2**
	0.7nm,0.4s,mb3.9,baz=146,slow=5.8,SNR=4.9							
SONM				pP		pP	04 38 23.8	-2.2
	2.3nm,0.8s,baz=139,slow=7.5,SNR=6.6							
SONM				LR		LR	05 04 01.7	
	comp=Z,111nm,21.7s,baz=330,slow=34							
MKAR	**Makanchi Array**	**78.27**	**320**	P		**P**	**04 39 24.2**	**+0.1**
	1.3nm,0.7s,mb3.8,baz=113,slow=6.1,SNR=9.2							
MKAR				LR		LR	05 14 55.8	
	comp=Z,54nm,18.5s,baz=148,slow=36							
ZALV	**Zalesovo Beam**	**79.78**	**328**	P		**P**	**04 39 31.1**	**-1.2**
	3.1nm,0.5s,mb4.4,baz=110,slow=4.6,SNR=9.6							
ZALV				LR		LR	05 14 37.3	
	comp=Z,59nm,19.9s,baz=80,slow=35							
MAW	**Mawson**	**81.87**	**203**	*e*P		**P**	**04 39 43.0**	**-0.2**
	3.1nm,0.8s,mb4.2							
MAW	**Mawson**	**81.87**	**203**	P		**P**	**04 39 43.4**	**+0.2**
	4.8nm,0.8s,mb4.3,baz=94,slow=6.2,SNR=11							
MAW				LR		LR	05 16 10.7	
	comp=Z,124nm,19.1s,baz=313,slow=36							
KURK	**Kurchatov**	**81.98**	**323**	P		**P**	**04 39 43.5**	**-0.5**
	0.9nm,0.7s,mb3.7,baz=104,slow=3.7,SNR=4.2							
KURK				LR		LR	05 15 04.9	
	comp=Z,30nm,19.1s,baz=95,slow=35							
AML	**Almayashu**	**82.53**	**314**	*e*P		**P**	**04 39 47.5**	**+0.3**
	1.6nm,0.6s,mb4.0							
BVAR	**Borovoye Array**	**87.54**	**324**	P		**P**	**04 40 11.3**	**-0.6**
	1.9nm,0.7s,mb4.2,baz=102,slow=6.8,SNR=6.7							
BVAR				LR		LR	05 20 01.0	
	comp=Z,91nm,19.8s,baz=82,slow=36							
AKTO	**Aktyubinsk**	**94.70**	**320**	LR		LR	05 22 11.5	
	comp=Z,36nm,21.4s,baz=262,slow=35							
PDAR	**Pinedale Array**	**103.97**	**48**	Pdiff		Pdif	04 41 27.8	+1.0
	0.4nm,0.8s,baz=288,slow=0.9,SNR=4.6							
BOSA	**Boshof**	**114.28**	**235**	PKP		PKiKP	04 46 04.7	+0.7
	2.7nm,1.0s,baz=150,slow=8.1,SNR=4.0							
BOSA	**Boshof**	**114.28**	**235**	PKP		PKiKP	04 46 04.7	+0.6
PLCA	**Paso Flores**	**121.35**	**147**	PKP		PKPdf	04 46 17.6	+0.3
	1.0nm,0.6s,baz=245,slow=6.4,SNR=3.9							
GERES	**GERESS Array B**	**122.68**	**325**	PKP		PKPdf	04 46 19.8	+0.3
	1.5nm,0.5s,baz=66,slow=1.5,SNR=14							
CDF	**Champ du Feu**	**126.43**	**328**	*e*PKP1		PKPdf	04 46 28.0	+1.2
TUE	**Stuetta**	**126.44**	**325**	*e*PKPdf		PKPdf	04 46 27.7	+0.8
HINF	**Hinteralfeld**	**127.02**	**328**	*e*PKP1		PKPdf	04 46 29.1	+1.2
	5.8nm,0.6s							
HAU	**Haudompre**	**127.17**	**328**	*e*PKP1		PKPdf	04 46 28.8	+0.6
	18nm,1.0s							
CABF	**La Chapelle**	**128.17**	**327**	*e*PKP1		PKPdf	04 46 31.4	+1.2
LPL	**La Plagne**	**128.48**	**325**	*e*PKP1		PKPdf	04 46 32.7	+1.9
	6.8nm,1.0s							
LPG	**La Plagne**	**128.48**	**325**	*e*PKP1		PKPdf	04 46 32.8	+2.0
PGF	**Pioggiola**	**128.81**	**321**	*e*PKP1		PKPdf	04 46 32.3	+0.8
	10.0nm,1.0s							
SSF	**Saint Saulge**	**129.25**	**329**	*e*PKP1		PKPdf	04 46 34.1	+1.9
SMF	**Signal de Mont**	**129.35**	**328**	*e*PKP1		PKPdf	04 46 34.1	+1.7
AVF	**Avril sur Loir**	**129.51**	**329**	*e*PKP1		PKPdf	04 46 34.1	+1.4
TCF	**Toulx Ste Croi**	**130.43**	**329**	*e*PKP1		PKPdf	04 46 36.5	+2.0
	4.4nm,0.7s							
GRR	**Gorron**	**130.46**	**333**	*e*PKP1		PKPdf	04 46 34.9	+0.5
KEST	**Kesra**	**131.94**	**313**	PKP		PKPdf	04 46 39.7	+2.0
	1.5nm,0.9s,baz=279,slow=5.0,SNR=4.2							
LPAZ	**La Paz**	**138.06**	**123**	PKP		PKPdf	04 46 50.5	+0.9
	2.5nm,1.0s,baz=199,slow=1.8,SNR=5.2							
LPAZ				SKP			04 50 23.8	
	0.4nm,0.6s,baz=309,slow=1.3,SNR=3.7							
CPUP	**Villa Florida**	**139.36**	**145**	PKP		PKPdf	04 46 52.1	+0.4
	0.4nm,0.5s,baz=170,slow=6.1,SNR=3.3							
EVO	**Evora**	**141.25**	**329**	*e*PKIKP		PKPdf	04 46 55.2	+0.4
	8.7nm,1.0s							
TOA0	**Torodi Ar. Sit**	**145.70**	**284**	*e*PKPdf		PKPdf	04 47 04.5	+1.3
TORD	**Torodi Ar. Bea**	**145.70**	**284**	PKPbc		PKPbc	04 47 04.2	+0.5
	10nm,0.5s,baz=65,slow=3.5,SNR=267							
TORD					pPKPbc	pPKPbc	04 47 23.3	-2.5
	8.1nm,0.6s,baz=76,slow=3.9,SNR=7.2							
TORD					SKPbc	SKPbc	04 50 38.0	+1.7
	2.4nm,0.8s,baz=58,slow=2.1,SNR=7.3							
TORD	**Torodi Ar. Bea**	**145.70**	**284**	PKPbc		PKPbc	04 47 04.2	+0.5
TORD					pPKPbc	pPKPbc	04 47 23.3	-2.5
TORD					SKPbc	SKPbc	04 50 38.0	+1.7
SPB	**Sao Paulo**	**146.63**	**155**	*e*PKPdf		PKPdf	04 47 05.4	+0.7
KIC	**Kosan Boka**	**152.40**	**271**	*e*PKIKP		PKPbc	04 47 21.6	+0.6
	43nm,0.8s							
DBIC	**Dimbokro**	**152.52**	**272**	PKPbc		PKPbc	04 47 21.9	+0.6
	4.5nm,0.5s,baz=71,slow=2.6,SNR=18							
DBIC					PKPab	PKPab	04 47 33.8	+1.9
	3.6nm,0.4s,baz=50,slow=4.3,SNR=9.7							
LIC	**Lamto**	**152.68**	**271**	*e*PKP1		PKPbc	04 47 21.8	+0.2
	20nm,0.6s							
LIC	**Lamto**	**152.68**	**271**	*e*PKIKP		PKPbc	04 47 22.1	+0.5
	58nm,0.9s							
TIC	**Toumodi**	**152.68**	**272**	*e*PKIKP		PKPbc	04 47 22.1	+0.5
	16nm,0.2s							
BDFB	**Brasilia**	**153.09**	**145**	PKPbc		PKPbc	04 47 22.7	+0.3
	9.0nm,0.6s,baz=178,slow=3.7,SNR=16							

*IDC **17** 05:09:32.6±1.3, 3803S×7409W, h0km, mb4.1/6, mb1 4.0/9, mb1mx3.9/16, mbtmp3.9/9, ML4.2/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/26, Error ellipse: s-maj=40.1km s-min=20.6km az=106.0*

*GUC **17** 05:09:33.3±0.7, 3793S×7446W, h16km, ML3.8*

*NEIC **17** 05:09:33.3, 3793S×7446W, h16km, ML3.8(GUC), After GUC.*

*ISCJB **17** 05:09:34.3±1.5, 3799S±006×742W±0.1, h23km±12km, mb3.9/7, Error ellipse: s-maj=20.0km s-min=6.3km az=23.2*

ISC 17 05:09:35.3±1.5, 3803S±006×742W±01, h17km±11km, n37, σ0s63/51, mb3.9/7, 5C-10D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
COCH	**Cobquecura**	**2.19**	**31**	↓*i*P		**Pn**	**05 10 10.8**	**-0.1**
COCH				*i* S		**Sn**	**05 10 37.0**	**-0.6**
COCH				AML		AML	05 10 43.0	
	comp=E,629nm,0.6s							
COCH	**Cobquecura**	**2.19**	**31**	↓*i*P		**Pn**	**05 10 10.8**	**-0.1**
COCH				S		**Sn**	**05 10 37.0**	**-0.6**
CCHI	**Chillan**	**2.19**	**50**	↓*i*P		**Pn**	**05 10 12.0**	**+1.1**
CCHI				AML		AML	05 10 41.9	
	comp=E,554nm,0.6s							
CNCO	**Chanco**	**2.64**	**30**	*e*P		**Pn**	**05 10 16.4**	**-0.6**
CNCO				*i* S		**Sn**	**05 10 48.5**	**-0.2**
CNCO				AML		AML	05 10 54.3	
	comp=N,49nm,0.5s							
CNCO	**Chanco**	**2.64**	**30**	*e*P		**Pn**	**05 10 16.4**	**-0.6**
CNCO				S		**Sn**	**05 10 48.5**	**-0.2**
LNCH	**Linares**	**3.00**	**44**	*e*P		**Pn**	**05 10 22.4**	**+0.4**
LNCH				*i* S		**Sn**	**05 10 59.4**	**+1.9**
LNCH				AML		AML	05 11 08.7	
	comp=N,534nm,0.6s							
LNCH	**Linares**	**3.00**	**44**	*e*P		**Pn**	**05 10 22.4**	**+0.4**
LNCH				*i* S		**Sn**	**05 10 59.4**	**+1.9**
TALC	**Talca**	**3.32**	**39**	*e*P		**Pn**	**05 10 27.3**	**+0.8**
TALC				AML		AML	05 11 18.3	
	comp=N,883nm,0.1s							
NICH	**Los Niches**	**3.84**	**39**	*e*P		**Pn**	**05 10 33.6**	**0.0**
PLCA	**Paso Flores**	**3.90**	**135**	Pn		**Pn**	**05 10 33.5**	**-0.8**
	comp=N,6.0nm,0.3s,baz=303,slow=14,SNR=46							
SFDO	**San Fernando**	**4.25**	**38**	↑*i*P		**Pn**	**05 10 39.1**	**-0.2**
LNV	**Longovilo**	**4.64**	**30**	*e*P		**Pn**	**05 10 44.2**	**-0.4**
CICH	**Cipreses**	**4.78**	**41**	↓*i*P		**Pn**	**05 10 47.3**	**+0.8**
CACH	**El Canelo**	**4.86**	**38**	↑*i*P		**Pn**	**05 10 47.6**	**0.0**
CHCH	**Chadas Angostu**	**4.98**	**36**	↓*i*P		**Pn**	**05 10 49.1**	**-0.2**
CHCH				*i* S		**Sn**	**05 11 47.1**	**+0.6**
TACH	**Talagante**	**5.09**	**32**	↓*i*P		**Pn**	**05 10 50.5**	**-0.3**
TACH				*i* S		**Sn**	**05 11 49.6**	**+0.4**
LMEL	**Las Melosas**	**5.27**	**39**	↓*i*P		**Pn**	**05 10 53.8**	**+0.5**
ANTU	**Antumapu**	**5.29**	**34**	*e*P		**Pn**	**05 10 53.7**	**+0.1**
PCH	**Pirque**	**5.30**	**35**	↓*i*P		**Pn**	**05 10 53.5**	**-0.2**
PCH				*i* S		**Sn**	**05 11 55.3**	**+0.9**
CLCH	**Cerro Calan**	**5.48**	**34**	↓*i*P		**Pn**	**05 10 55.9**	**-0.3**
CLCH				*i* S		**Sn**	**05 11 58.5**	**-0.4**
PEL	**Peldehue**	**5.64**	**31**	↑*i*P		**Pn**	**05 10 58.1**	**-0.2**
PEL				*e*S		**Sn**	**05 12 02.7**	**+0.1**
FCH	**Farellones**	**5.65**	**35**	↓*i*P		**Pn**	**05 10 58.3**	**-0.2**
FCH				*i* S		**Sn**	**05 12 02.2**	**-0.8**
ROCH	**El Roble**	**5.66**	**28**	↑*i*P		**Pn**	**05 10 59.0**	**+0.3**
JACH	**Jahuel**	**6.08**	**30**	↑*i*P		**Pn**	**05 11 04.2**	**-0.2**
JACH				*i* S		**Sn**	**05 12 12.8**	**-0.7**
CFAA	**Coronel Fontan**	**8.05**	**39**	Pn		**Pn**	**05 11 30.1**	**-1.3**
	comp=N,0.4nm,0.3s,baz=216,slow=11,SNR=91							
CFAA				Sn		**Sn**	**05 13 00.8**	**-1.3**
	comp=N,0.2nm,0.3s,baz=327,slow=18,SNR=3.8							
CFAA	**Coronel Fontan**	**8.05**	**39**	Pn		**Pn**	**05 11 30.1**	**-1.3**
CFAA				Sn		**Sn**	**05 13 00.8**	**-1.3**
TLL	**Tololo Astrono**	**8.32**	**21**	*e*P		**Pn**	**05 11 34.9**	**-0.3**
LCO	**Las Campanas**	**9.44**	**19**	*e*Pn		**Pn**	**05 11 51.0**	**+0.4**
	comp=N,22nm,0.4s							
LVC	**Limon Verde**	**16.01**	**18**	LR		LR	05 19 18.1	
	comp=N,86nm,19.7s,baz=204,slow=37							
CPUP	**Villa Florida**	**18.39**	**56**	P		**Pn**	**05 13 50.1**	**+0.7**
	comp=N,0.3nm,0.3s,baz=226,slow=10,SNR=4.2							
LPAZ	**La Paz**	**22.30**	**15**	P		**P**	**05 14 36.5**	**+4.7**
	comp=N,2.4nm,0.7s,mb3.7,baz=184,slow=3.7,SNR=11							
SIV	**San Ignacio**	**24.80**	**31**	P		**P**	**05 14 56.7**	**+0.3**
	comp=N,0.7nm,0.7s,mb3.3,baz=226,slow=14,SNR=4.1							
QSPA	**South Pole Qui**	**52.22**	**180**	P		**P**	**05 18 45.4**	**+0.7**
	comp=N,3.4nm,1.0s,mb4.2,baz=147,slow=2.5,SNR=6.4							
MAW	**Mawson**	**69.81**	**164**	P		**P**	**05 20 43.9**	**-0.4**
	comp=N,0.9nm,0.8s,mb3.8,baz=211,slow=5.9,SNR=4.1							
DBIC	**Dimbokro**	**78.09**	**72**	P		**P**	**05 21 33.1**	**-0.4**
	comp=N,2.7nm,0.7s,mb4.3,baz=173,slow=4.4,SNR=5.5							
PDAR	**Pinedale Array**	**86.61**	**335**	P		**P**	**05 22 18.1**	**+0.8**
	comp=N,0.5nm,0.9s,mb3.8,baz=128,slow=4.1,SNR=3.7							
TORD	**Torodi Ar. Bea**	**87.18**	**71**	P		**P**	**05 22 20.2**	**-0.6**
	comp=N,1.5nm,0.6s,mb4.4,baz=227,slow=5.5,SNR=18							

*DJA **17** 05:13:48, 4.17S×10029E, h10km, MLv5.0/8*

*BJI **17** 05:13:49.3, 4.15S×10088E, h35km, mB5.0, mb4.9, Ms4.5, Msz4.3*

*ISCJB **17** 05:13:49.6±0.4, 4.01S±006×10078E±005, h25km, mb4.8/43, MS4.2/11, Error ellipse: s-maj=10.8km s-min=4.6km az=40.0*

*MOS **17** 05:13:51.9±1.0, 3.71S×10109E, h33km, mb4.9/21, Error ellipse: s-maj=16.9km s-min=9.2km az=102.6*

*IDC **17** 05:13:53.0±0.7, 3.77S×10109E, h24km±3km, mb4.4/14, mb1 4.5/15, mb1mx4.3/22, mbtmp4.4/15, ML4.4/1, MS4.0/5, Ms1 4.0/5, ms1mx3.6/27, Error ellipse: s-maj=25.5km s-min=10.6km az=57.0*

*NEIC **17** 05:13:54.5±0.4, 3.74S×101.13E, h35km, mb4.7/7, Error ellipse: s-maj=15.9km s-min=6.6km az=52.0*

ISC 17 05:13:52.2±0.4, 395S±006×10084E±006, h26km, h26km±.9km:pP-P, n113, σ1s06/97, mb4.8/43, MS4.2/11, 2C-2D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KSI	**Kapahiang**	**1.77**	**81**	P		**Pn**	**05 14 20.8**	**-0.4**
	0.0nm,0.0s							
KRJI	**Kerinci**	**1.94**	**19**	P		**Pn**	**05 14 24.0**	**+0.4**
	0.0nm,0.0s							
PPI	**Padang Panjang**	**3.50**	**353**	P		**Pn**	**05 14 45.1**	**+0.2**
	0.0nm,0.0s							
RGRI	**Rengat**	**3.87**	**23**	P		**Pn**	**05 14 51.7**	**+1.6**
	0.0nm,0.0s							
KLI	**Kotabumi**	**4.11**	**103**	P		**Pn**	**05 14 53.6**	**+0.3**
	0.0nm,0.0s							
BLSI	**Bandar Lampung**	**4.61**	**108**	P		**Pn**	**05 15 00.6**	**+0.4**
	0.0nm,0.0s							
DSRI	**Dabo**	**5.08**	**47**	P		**Pn**	**05 15 03.1**	**-3.6**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.58**	**72**	P		**Pn**	**05 15 14.6**	**+1.1**
	0.0nm,0.0s							
DBJI	**Dramaga**	**6.43**	**114**	P		**Pn**	**05 15 26.5**	**+1.3**
	0.0nm,0.0s							
CBJI	**Citeko**	**6.47**	**113**	P		**Pn**	**05 15 29.0**	**+3.2**
	0.0nm,0.0s							
LEM	**Lembang**	**7.33**	**113**	P		**Pn**	**05 15 39.3**	**+1.7**
	0.0nm,0.0s							
BSI	**Banda Aceh**	**10.89**	**329**	P		**Pn**	**05 16 25.3**	**-1.2**
	0.0nm,0.0s							
SJI	**Sawahan**	**11.50**	**110**	P		**Pn**	**05 16 35.5**	**+0.7**
	0.0nm,0.0s							
KAPI	**Kappang**	**18.88**	**94**	P		**Pn**	**05 18 09.1**	**-2.4**
	1.2nm,0.3s,baz=261,slow=13,SNR=5.1							
KAPI	**Kappang**	**18.88**	**94**	*e*Pn		**Pn**	**05 18 10.2**	**-1.4**
BDT	**Bhumibol Dam**	**21.13**	**355**	P		**P**	**05 18 36.0**	**+0.7**
KDI	**Kendari**	**21.73**	**91**	P		**P**	**05 18 42.7**	**+1.0**
	0.0nm,0.0s							
CMAR	**Chiang Mai Arr**	**22.34**	**355**	P		**P**	**05 18 46.6**	**-1.6**
	16nm,0.9s,mb4.5,baz=184,slow=8.8,SNR=45							
CMAR				PcP		PcP	05 22 44.5	+1.2
	0.6nm,0.3s,baz=199,slow=4.4,SNR=3.9							
CMAR	**Chiang Mai Arr**	**22.34**	**355**	P		**P**	**05 18 46.6**	**-1.6**
CMAR							05 22 44.5	
CMAR				pmax		pmax		
	comp=Z,16nm,0.9s							
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
CHRT	**Chiangrai**	**23.69**	**358**	P		**P**	**05 19 02.0**	**-0.1**
QIZ	**Qiongzhong**	**24.49**	**21**	*e*P		**P**	**05 19 09.6**	**+0.2**
FITZ	**Fitzroy Crossi**	**28.05**	**122**	*e*P		**P**	**05 19 41.0**	**-0.7**
	comp=Z,11nm,0.9s,mb4.5							
FITZ				*e*pP		pP	05 19 49.0	-0.4
FITZ	**Fitzroy Crossi**	**28.05**	**122**	P		**P**	**05 19 41.4**	**-0.2**
	comp=Z,5.6nm,0.8s,mb4.2,baz=278,slow=6.5,SNR=14							
FITZ				pP		pP	05 19 49.0	-0.4
	comp=Z,12nm,0.9s,baz=289,slow=7.1,SNR=15							
ODAN	**Odare**	**33.27**	**338**	*e*P		**P**	**05 20 29.2**	**+1.6**
TAPN	**Taplejung**	**33.60**	**339**	*e*P		**P**	**05 20 32.3**	**+1.8**
	comp=Z,98nm,0.9s,mb5.8							
RAMN	**Ramite**	**33.66**	**337**	*e*P		**P**	**05 20 32.4**	**+1.4**
	comp=Z,26nm,0.7s,mb5.3							
JIRN	**Jiri**	**34.45**	**337**	*e*P		**P**	**05 20 39.6**	**+1.7**
	comp=Z,76nm,0.8s,mb5.7							
LSA	**Lhasa**	**34.72**	**345**	P		**P**	**05 20 38.0**	**-2.2**
GUN	**Gumba**	**34.80**	**336**	*e*P		**P**	**05 20 42.4**	**+1.5**
	comp=Z,40nm,0.6s,mb5.5							
DMN	**Daman**	**34.85**	**335**	*e*P		**P**	**05 20 42.4**	**+1.1**
KKN	**Kakani**	**34.94**	**335**	*e*P		**P**	**05 20 43.1**	**+1.0**
	comp=Z,23nm,0.7s,mb5.2							
GKN	**Gorkha**	**35.39**	**335**	*e*P		**P**	**05 20 47.1**	**+1.1**
KOLN	**Koldanda**	**35.65**	**333**	*e*P		**P**	**05 20 49.4**	**+1.2**
	comp=Z,20nm,0.7s,mb5.2							
DANN	**Dangsing**	**36.08**	**334**	*e*P		**P**	**05 20 53.3**	**+1.4**
WRA	**Warramunga Arr**	**36.31**	**119**	P		**P**	**05 20 53.4**	**-0.6**
	comp=Z,5.7nm,0.9s,mb4.5,baz=291,slow=10.0,SNR=28							
WRA				pP		pP	05 21 00.7	-1.1
	comp=Z,5.6nm,0.8s,baz=295,slow=9.4,SNR=14							
WRA	**Warramunga Arr**	**36.31**	**119**	P		**P**	**05 20 53.4**	**-0.6**
WRA				*PP		pP	05 21 00.7	-1.1
WRA				pmax		pmax		
	comp=Z,6.0

ULN Ulaanbaatar 51.88 5 *e*P **P 05 22 58.4 +0.1**
comp=Z,8.6nm,0.9s,mb4.7
TKM2 Tokmak 2 51.94 337 *e*P **P 05 22 59.6 +0.7**
TKM2 *e**PP pP 05 23 07.7 +0.8
TKM2 pmax pmax
comp=Z,13nm,0.7s,mb5.0
TKM2 Tokmak 2 51.94 337 *e*P **P 05 22 59.6 +0.8**
comp=Z,13nm,0.7s,mb5.0
TKM2 *e*pP pP 05 23 07.7 +0.8
CN2 Changchun 52.44 22 *e*P **P 05 23 01.1 -1.5**
CN2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
EKS2 Erkin-Say 52.47 335 *e*P **P 05 23 04.0 +1.1**
comp=Z,9.6nm,0.7s,mb4.8
MK31 Makanchi Array 53.12 344 *e*P **P 05 23 07.3 -0.2**
MKAR Makanchi Array 53.12 344 P **P 05 23 07.8 +0.3**
comp=Z,10nm,0.7s,mb4.8,baz=144,slow=8.4,SNR=58
MKAR pP pP 05 23 15.7 +0.1
comp=Z,5.0nm,0.7s,baz=147,slow=7.3,SNR=11
MKAR Makanchi Array 53.12 344 P **P 05 23 07.9 +0.4**
MKAR *PP pP 05 23 15.7 +0.1
MKAR pmax pmax
comp=Z,11nm,0.7s
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MJAR Matsushiro Arr 53.27 38 P **P 05 23 07.4 -1.5**
comp=Z,3.7nm,0.7s,mb4.4,baz=212,slow=7.6,SNR=9.9
MJAR Matsushiro Arr 53.27 38 P **P 05 23 07.4 -1.5**
MJAR pmax pmax
comp=Z,4.0nm,0.7s
ZAK Zakamensk 54.15 2 *e*P **P 05 23 15.0 0.0**
ZAK pmax pmax
comp=Z,4.0nm,2.1s,mb4.0
TLY Talaya 55.46 2 *e*P **P 05 23 22.9 -1.6**
TLY *e* 05 36 48.1
TLY pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TLY MLR MLR
comp=Z,232nm,16.0s,MS4.4
KURK Kurchatov 57.70 343 *e*P **P 05 23 39.5 -0.9**
ZAA0 Zalesovo Array 59.22 349 *e*P **P 05 23 51.0 -0.1**
ZALV Zalesovo Beam 59.22 349 P **P 05 23 50.6 -0.4**
comp=Z,20nm,0.8s,mb5.2,baz=172,slow=4.5,SNR=56
ZALV pP pP 05 23 58.4 -0.8
comp=Z,10nm,0.7s,baz=189,slow=4.2,SNR=8.0
ZALV Zalesovo Beam 59.22 349 P **P 05 23 50.6 -0.4**
ZALV *PP pP 05 23 58.4 -0.8
ZALV pmax pmax
comp=Z,20nm,0.8s,mb5.2
ZALV pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KLR Kul'dur 59.37 23 *e*P **P 05 23 47.3 -4.8**
NVS Novosibirsk 60.38 348 *e*P **P 05 23 56.6 -2.3**
NVS pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
NVS pmax pmax
comp=N,7.0nm,1.0s
NAY Al-Naaiem 61.04 306 *e*P **P 05 24 03.9 -0.1**
baz=306
NAY AMb AMB 05 24 24.6
comp=Z,9.0nm,1.3s,mb4.7,baz=306
MIB Mutribah 61.19 307 *e*P **P 05 24 03.9 -1.1**
baz=307
MIB AMb AMB 05 24 14.0
comp=Z,18nm,1.1s,mb5.1,baz=307
RST Umm Al-Ruwaisa 61.34 307 *e*P **P 05 24 05.1 -0.9**
baz=307
RST AMb AMB 05 24 06.8
comp=Z,15nm,1.1s,mb5.0,baz=307
BOD Bodaibo 62.47 8 *e*P **P 05 24 11.3 -1.7**
BOD pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
YSS Yuzh-Sakhalins 62.69 31⇓ *e*P **P 05 24 14.2 -0.5**
YSS pmax pmax
comp=Z,31nm,1.5s,mb5.2
AKTK Aktyubinsk 65.46 331 P **P 05 24 32.2 -0.6**
AKTO Aktyubinsk 65.46 331 P **P 05 24 32.2 -0.6**
comp=Z,1.3nm,0.6s,mb4.1,baz=107,slow=11,SNR=3.5
AKTO Aktyubinsk 65.46 331 P **P 05 24 32.3 -0.5**
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
MAW Mawson 68.62 195 P **P 05 24 56.7 +4.0**
comp=Z,1.3nm,0.8s,mb3.9,baz=17,slow=11,SNR=3.3
MAW Mawson 68.62 195 P **P 05 24 56.7 +4.0**
MAW pmax pmax
comp=Z,1.0nm,0.8s
ARU Arti 69.31 336 *c i*P **P 05 24 56.4 -0.7**
ARU 05 27 28.9
ARU *e*S S 05 34 02.7 +0.7
ARU *e*SS SS 05 38 24.7 -4.6
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.6
YAK Yakutsk 69.41 14 *c i*P **P 05 24 56.1 -1.5**
YAK pmax pmax
comp=Z,50nm,1.3s,mb5.3
ASF Jabal al Asfar 70.40 306 LR LR 05 55 58.8
comp=Z,70nm,19.6s,MS3.9,baz=59,slow=36
MMAI Mount Meron Ar 71.86 306 LR LR 05 57 06.3
comp=Z,87nm,18.1s,MS4.1,baz=60,slow=36
LSZ Lusaka 72.24 255 LR LR 05 55 03.1
comp=Z,101nm,18.8s,MS4.1,baz=163,slow=34
LBTB Lobatse 74.97 245 LR LR 05 53 14.1
comp=Z,109nm,19.3s,MS4.2,baz=308,slow=31
BOSA Boshof 75.47 242 LR LR 05 53 36.5
comp=Z,100nm,18.1s,MS4.2,baz=280,slow=32
TIXI Tiksi 77.64 9⇓ *e*P **P 05 25 44.3 -1.5**
TIXI pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
TIXI Tiksi 77.64 9 *e*P **P 05 25 44.4 -1.4**
OBN Obninsk 78.88 328 *e*P **P 05 25 53.0 0.0**
OBN pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
BILL Bilibino 84.68 20 *e*P **P 05 26 23.2 -0.1**
BILL pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
ARCES ARCESS Array B 88.58 340 P **P 05 26 42.3 0.0**
comp=Z,4.9nm,0.8s,mb4.9,baz=102,slow=5.1,SNR=8.3
ARCES ARCESS Array B 88.58 340 P **P 05 26 42.3 0.0**
ARCES pmax pmax
comp=Z,5.0nm,0.8s
GERES GERESS Array B 91.06 319 P **P 05 26 55.3 +0.9**
comp=Z,0.3nm,0.3s,mb4.1,baz=112,slow=5.9,SNR=4.3
GERES pP pP 05 27 03.7 +0.8
comp=Z,0.9nm,0.7s,baz=66,slow=3.3,SNR=2.3
GERES GERESS Array B 91.06 319 P **P 05 26 55.3 +0.9**
GERES *PP pP 05 27 03.7 +0.8
GERES pmax pmax
comp=Z,1.0nm,0.7s
MOD Modoc 127.33 38 *e*PKPdf PKPdf 05 32 56.3 +1.4
DLMT Dillon 129.45 30 *e*PKPdf PKPdf 05 33 00.5 +1.6
NVAR Mina Array Bea 130.54 41 PKP PKPdf 05 33 02.8 +1.7
comp=Z,0.9nm,0.7s,baz=336,slow=2.0,SNR=5.5
REDW Red Top Meadow 131.75 31 *e*PKPdf PKPdf 05 33 01.7 -1.6
HWUT Hardware Ranch 132.60 33 *e*PKPdf PKPdf 05 33 02.9 -2.0
PDAR Pinedale Array 132.84 31 PKP PKPdf 05 33 06.4 +1.1
comp=Z,0.3nm,0.7s,baz=96,slow=0.9,SNR=3.1
PDAR pPKP pPKPdf 05 33 14.8 +0.8
comp=Z,0.5nm,0.7s,baz=130,slow=2.3,SNR=3.2
WMOK Wichita Mounta 144.36 28 *e*PKIKP PKPdf 05 33 24.5 -2.1
WCI Wyandotte Cave 145.26 10 *e*PKIKP PKPdf 05 33 27.4 -0.7
MIAR Mount Ida 146.74 22 *e*PKP2 PKPab 05 33 32.4 -1.1
WVT Waverly 146.99 13 *e*PKP2 PKPab 05 33 32.4 -2.0
TKL Tuckaleechee C 148.16 7 PKPbc PKPbc 05 33 35.5 -0.7
comp=Z,4.8nm,0.7s,baz=240,slow=0.4,SNR=7.2
TKL pPKPbc pPKPbc 05 33 43.4 -1.6
comp=Z,5.1nm,0.7s,baz=96,slow=3.3,SNR=4.2
TKL Tuckaleechee C 148.16 7 PKP2 PKPbc 05 33 35.5 -0.7
TKL pmax pmax
comp=Z,5.0nm,0.7s
TKL pmax pmax
comp=Z,5.0nm,0.7s
LVC Limon Verde 151.77 200 PKPbc PKPbc 05 33 47.5 +2.1
comp=Z,2.7nm,0.8s,baz=252,slow=7.6,SNR=3.6

*NEIC **17** 05:16:07.5, 1436N×94.11W, h16km, mb4.5/20, MD4.6(MEX), After MEX.*
*CASC **17** 05:16:08.7±3.2, 1437N×9395W, h36km±999km, MD4.8, mb4.5(NEIC)*
*MEX **17** 05:16:08.4±1.0, 1440N×9408W, h19km±44km, MD4.6*
*IDC **17** 05:16:11.9±2.3, 1476N×9376W, h43km±18km, mb3.9/12, mb1 4.1/14, mb1mx3.9/25, mbtmp4.0/14, ML4.3/3, MS3.7/11, Ms1 3.7/11, ms1mx3.5/34, Error ellipse: s-maj=26.3km s-min=11.7km az=44.0*

*ISCJB **17** 05:16:12.4±0.8, 1481N×005×9366W×004, h52km±6km, mb4.4/37, MS3.6/10, Error ellipse: s-maj=9.7km s-min=4.3km az=29.7*
*GCG **17** 05:16:13.1, 1495N×9359W, h27km, MD4.7*
ISC 17 05:16:14.1±0.8, 1481N×005×9363W×004, h51km±6km, n317,₀0°70/315, mb4.4/37, MS3.6/10, 103C-102D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
THIG		**1.33**	**85**	*i* P		**Pn**	**05 16 34.7**	**-1.5**
THIG				*i* S		**Sn**	**05 16 56.9**	**+4.1**
TGIG		**2.02**	**14**	*e*P		**Pn**	**05 16 46.1**	**+0.3**
TGIG				*i* S		**Sn**	**05 17 15.2**	**+5.4**
CCIG	**Comitan**	**2.06**	**44**	*i* P		**Pn**	**05 16 48.3**	**+2.1**
CCIG				*i* S		**Sn**	**05 17 19.3**	**+8.6**
SCX	**San Cristobal**	**2.15**	**27**	*i* P		**Pn**	**05 16 49.3**	**+1.9**
CMIG	**Matias Romero**	**2.57**	**332**	P		**Pn**	**05 16 49.5**	**-3.8**
	29nm,0.3s,baz=151,slow=11,SNR=173							
CMIG				S		**Sn**	**05 17 21.0**	**-2.3**
	67nm,0.3s,baz=72,slow=13,SNR=9.7							
FG6		**2.67**	**95**	*e*P		**Pn**	**05 16 55.5**	**+0.8**
FG6				*e*S		**Sn**	**05 17 28.2**	**+2.4**
FUG	**Fuego 3**	**2.73**	**97**↑	*e*P		**Pn**	**05 16 53.6**	**-1.8**
PCG	**Pacaya**	**2.96**	**98**	*e*P		**Pn**	**05 16 58.5**	**-0.1**
NBG	**Las Nubes**	**3.19**	**93**	*e*P		**Pn**	**05 17 02.3**	**+0.6**
TUIG	**Tuzandepetl**	**3.30**	**347**	*i* P		**Pn**	**05 17 00.9**	**-2.3**
TUIG				*i* S		**Sn**	**05 17 43.0**	**+1.9**
VHO	**Vista Hermosa**	**3.74**	**307**	*i* P		**Pn**	**05 17 02.0**	**-7.3**
VHO				*i* S		**Sn**	**05 17 43.2**	**-8.8**
SBLS	**San Blas**	**4.00**	**103**	*e*P		x	05 17 10.8	
SBLS				*e*P		x	05 17 13.1	
SNJE	**San Jose**	**4.01**	**103**	*e*P		x	05 17 10.1	
SNJE				*e*P		x	05 17 11.8	
MTO2	**Montecristo 2**	**4.16**	**95**	*e*P		x	05 17 18.3	
BOQS	**Boqueron**	**4.35**	**104**	*e*P		x	05 17 15.3	
BOQS				*e*S		x	05 18 09.4	
LFRS	**El Faro**	**4.59**	**104**	*e*P		x	05 17 18.1	
LFRS				*e*S		x	05 18 15.8	
PNIG	**Pinotepa**	**4.61**	**291**	*i* P		**Pn**	**05 17 12.9**	**-8.3**
PNIG				*i* S		**Sn**	**05 17 58.1**	**-15**
PNIG	**Pinotepa**	**4.61**	**291**	*i* P		**Pn**	**05 17 12.8**	**-8.4**
PNIG				*i* S		**Sn**	**05 17 57.7**	**-16**
SCIG	**Sabancuy**	**4.75**	**29**	*i* P		**Pn**	**05 17 24.4**	**+1.1**
SCIG				*i* S		**Sn**	**05 18 26.7**	**+10**
SNVI	**San Vicente**	**4.80**	**104**	*e*P		x	05 17 22.8	
TPIG	**Tehuac#an**	**5.07**	**316**	*i* P		**Pn**	**05 17 22.6**	**-4.9**
TPIG				*i* S		**Sn**	**05 18 20.0**	**-4.7**
TGUH	**Tegucigalpa,Un**	**6.21**	**96**	*e*Pn		**Pn**	**05 17 49.6**	**+6.4**
PPM	**Popocatepetl**	**6.38**	**312**	*i* P		**Pn**	**05 17 38.5**	**-7.0**
PPM				*i* S		**Sn**	**05 18 50.9**	**-6.3**
CAIG	**El Cayaco**	**6.76**	**290**	*i* P		**Pn**	**05 17 41.4**	**-9.3**
SZVM	**Salazar**	**7.10**	**310**	*e*P		**Pn**	**05 17 48.4**	**-7.0**
TEIG	**Tepich**	**7.43**	**43**	P		**Pn**	**05 17 59.0**	**-0.9**
	28nm,0.3s,baz=266,slow=3.6,SNR=137							
TEIG				S		**Sn**	**05 19 24.7**	**+2.0**
	3.6nm,0.3s,baz=50,slow=19,SNR=3.4							
TEIG				LR		LR	05 21 22.2	
	comp=Z,2μm,21.1s,baz=237,slow=41							
TEIG	**Tepich**	**7.43**	**43**	*e*Pn		**Pn**	**05 17 59.3**	**-0.5**
	66nm,0.4s							
JTS	**JuntasAbangare**	**9.59**	**117**	P		**Pn**	**05 18 29.2**	**-0.3**
	1.3nm,0.3s,baz=322,slow=19,SNR=2.2							
JTS	**JuntasAbangare**	**9.59**	**117**	*e*Pn		**Pn**	**05 18 28.6**	**-0.9**
	14nm,0.9s							
HKT	**Hockley**	**15.21**	**353**	*e*Pn		**Pn**	**05 19 44.6**	**-1.0**
	28nm,1.5s							
JCT	**Junction City**	**16.60**	**341**	*e*Pn		**Pn**	**05 20 02.1**	**-1.1**
	48nm,1.4s							
NATX	**Nacogdoches**	**16.90**	**357**	*e*Pn		**Pn**	**05 20 05.4**	**-1.7**
LRAL	**Lakeview Retre**	**19.12**	**17**	*e*P		**Pn**	**05 20 32.8**	**-1.3**
MIAR	**Mount Ida**	**19.65**	**0**	*e*P		**Pn**	**05 20 38.0**	**-2.4**
	19nm,0.9s							
GDL2	**Guadalupe Moun**	**19.89**	**332**	*e*P		**Pn**	**05 20 41.2**	**-2.1**
OXF	**Oxford**	**19.99**	**10**	P		**P**	**05 20 41.2**	**-1.0**
	51nm,1.2s							
WMOK	**Wichita Mounta**	**20.38**	**348**	*e*P		**P**	**05 20 45.8**	**-0.8**
AMTX	**Amarillo**	**21.27**	**342**	*e*P		**P**	**05 20 55.0**	**-1.1**
	17nm,0.7s,mb4.5							
ROSC	**El Rosal**	**21.41**	**116**	P		**P**	**05 20 59.8**	**+1.9**
	14nm,1.0s,mb4.3,baz=104,slow=23,SNR=16							
SWET	**Sewanee**	**21.47**	**17**	*e*pP		pP	05 21 09.2	-0.9
319A	**Douglas**	**21.84**	**322**	⇑P		**P**	**05 21 02.5**	**+0.1**
	baz=22							
WVT	**Waverly**	**21.86**	**13**	*e*P		**P**	**05 21 03.0**	**+0.6**
219A	**White Tail Can**	**22.28**	**323**	⇑P		**P**	**05 21 06.4**	**-0.5**
	baz=22,SNR=7.6							
318A	**Bisee**	**22.32**	**321**	⇓P		**P**	**05 21 06.8**	**-0.5**
	baz=22							
BNM	**Barren Site**	**22.56**	**331**	*e*P		**P**	**05 21 10.4**	**+0.5**
TKL	**Tuckaleechee C**	**22.57**	**21**	P		**P**	**05 21 10.0**	**0.0**
	2.5nm,0.8s,mb3.7,baz=229,slow=16,SNR=2.3							
TKL				LR		LR	05 31 39.2	
	comp=Z,242nm,20.2s,MS3.6,baz=246,slow=41							
LPM	**Los Pinos Moun**	**22.69**	**331**	*e*P		**P**	**05 21 11.8**	**+0.5**
218A	**Dragoon**	**22.73**	**322**	⇑P		**P**	**05 21 11.7**	**+0.1**
	baz=22							
LENM	**Lemitar**	**22.73**	**330**	*e*P		**P**	**05 21 12.1**	**+0.4**
119A	**Ashpeak Ranch,**	**22.86**	**324**	⇑P		**P**	**05 21 12.8**	**-0.3**
	baz=22,SNR=6.4							
LAZ	**Ladron**	**23.01**	**330**	*e*P		**P**	**05 21 14.4**	**-0.2**
217A	**Green Valley**	**23.06**	**320**	⇑P		**P**	**05 21 14.1**	**-1.1**
	baz=23,SNR=7.7							
ANMO	**Albuquerque**	**23.14**	**332**	P		**P**	**05 21 15.3**	**-0.7**
	2.1nm,0.8s,mb3.6,baz=148,slow=12,SNR=7.4							
ANMO				LR		LR	05 30 37.4	
	comp=Z,112nm,20.0s,MS3.3,baz=337,slow=37							
ANMO	**Albuquerque**	**23.14**	**332**	*e*P		**P**	**05 21 15.4**	**-0.6**
	2.5nm,0.9s,mb3.6							
SIUC	**Southern Illin**	**23.15**	**9**	*e*P		**P**	**05 21 15.5**	**-0.5**
	21nm,1.1s,mb4.5							
SIUC				*e*pP			05 21 27.9	
118A	**Homack Ranch,**	**23.16**	**323**	⇓P		**P**	**05 21 15.5**	**-0.7**
	baz=23,SNR=8.0							
Z19A	**T-Link Ranch,**	**23.23**	**325**	⇓P		**P**	**05 21 16.7**	**-0.3**
	baz=23							
CCM	**Cathedral Cave**	**23.25**	**5**	*e*P		**P**	**05 21 15.5**	**-1.6**
	3.6nm,0.8s,mb3.9							
CCM				*e*pP			05 21 29.4	
TUC	**Tucson**	**23.41**	**321**	*e*P		**P**	**05 21 18.4**	**-0.2**
	8.6nm,1.2s,mb4.1							
Z18A	**Geronimo**	**23.52**	**324**	⇓P		**P**	**05 21 19.0**	**-0.6**
	baz=23							
117A	**Oracle**	**23.56**	**322**	⇑P		**P**	**05 21 19.6**	**-0.5**
	baz=23,SNR=8.0							
216A	**Three Points,**	**23.61**	**320**	⇓P		**P**	**05 21 20.6**	**+0.2**
	baz=23							
Y19A	**Nutrioso**	**23.73**	**326**	⇓P		**P**	**05 21 21.4**	**-0.1**
	baz=23,SNR=10.0							
Z17A	**San Carlos Hig**	**23.92**	**323**	⇓P		**P**	**05 21 23.5**	**+0.2**
	baz=24							
Y18A	**Canyon Day Jun**	**24.02**	**325**	⇑P		**P**	**05 21 24.3**	**+0.1**
	baz=24							
X19A	**St. Johns**	**24.11**	**327**	⇓P		**P**	**05 21 25.3**	**+0.4**
	baz=24							
116A	**Eloy**	**24.15**	**320**	⇑P		**P**	**05 21 25.6**	**+0.3**
	baz=24							
WCI	**Wyandotte Cave**	**24.22**	**14**	*e*P		**P**	**05 21 25.4**	**-0.5**
	13nm,0.9s,mb4.4							
OLIL	**Olney**	**24.33**	**11**	*e*P		**P**	**05 21 25.9**	**-1.0**
	22nm,0.9s,mb4.6							
Y17A	**Roosevelt**	**24.42**	**323**	⇓P		**P**	**05 21 28.5**	**+0.6**
	baz=24							
214A	**Organ Pipe Nat**	**24.45**	**318**	⇓P		**P**	**05 21 28.0**	**-0.1**
	baz=24							
Z16A	**Peralta Trail,**	**24.51**	**322**	⇑P		**P**	**05 21 28.8**	**+0.1**
	baz=24							
X18A	**Snowflake**	**24.54**	**326**	⇑P		**P**	**05 21 28.9**	**0.0**
	baz=24							
115A	**Sonoran Desert**	**24.57**	**320**	⇓P		**P**	**05 21 29.4**	**+0.3**
	baz=24							
W19A	**Sanders**	**24.69**	**328**	⇑P		**P**	**05 21 30.4**	**+0.1**
	baz=24							
X17A	**Forest Lakes**	**24.87**	**324**	⇑P		**P**	**05 21 32.1**	**+0.2**
	baz=24							
Y16A	**Circle Bar Ran**	**24.92**	**323**	⇓P		**P**	**05 21 33.1**	**+0.7**
	baz=25							
V19A	**Window Rock**	**24.99**	**329**	⇓P		**P**	**05 21 33.0**	**+0.1**
	baz=25							
SDCO	**Great Sand Dun**	**25.16**	**337**	*e*P		**P**	**05 21 35.0**	**+0.5**
X16A	**Lo Mia Camp, P**	**25.29**	**324**	⇓P		**P**	**05 21 35.8**	**+0.1**
	baz=25							
W17A	**Winslow**	**25.36**	**326**	⇓P		**P**	**05 21 36.6**	**+0.2**
	baz=25							
V18A	**Ganado**	**25.43**	**328**	⇓P		**P**	**05 21 36.8**	**-0.3**
	baz=25							
Z14A	**Wintersburg**	**25.45**	**320**	⇑P		**P**	**05 21 37.9**	**+0.7**
	baz=25							
Y15A	**Casa Rosa Ranc**	**25.48**	**322**	⇑P		**P**	**05 21 38.8**	**+1.3**
	baz=25,SNR=5.1							
113A	**Mohawk Valley,**	**25.59**	**318**	⇑P		**P**	**05 21 38.9**	**+0.4**
	baz=25							
X15A	**Humboldt**	**25.80**	**323**	⇓P		**P**	**05 21 40.3**	**-0.1**
	baz=26							
W16A	**Flagstaff**	**25.83**	**325**	⇓P		**P**	**05 21 40.7**	**+0.1**
	baz=26							
T19A	**Beclabito**	**25.87**	**331**	⇑P		**P**	**05 21 40.7**	**-0.2**
	baz=26							
Y14A	**Wickenburg**	**25.88**	**321**	⇑P		**P**	**05 21 41.5**	**+0.4**
	baz=26							
MVCO	**Mesa Verde**	**25.94**	**332**	*e*P		**P**	**05 21 42.0**	**+0.4**
	19nm,1.4s,mb4.4							
U18A	**Rough Rock, Ch**	**25.95**	**329**	⇑P		**P**	**05 21 41.4**	**-0.3**
	baz=26							
WUAZ	**Wupatki**	**26.05**	**326**	*e*P		**P**	**05 21 45.9**	**+3.3**
	16nm,1.1s,mb4.5							
X14A	**Yava**	**26.17**	**322**	⇑P		**P**	**05 21 43.3**	**-0.4**
	baz=26							
W15A	**Williams**	**26.30**	**324**	⇑P		**P**	**05 21 44.8**	**-0.1**
	baz=26							
Y13A	**Salome**	**26.31**	**320**	⇑P		**P**	**05 21 44.8**	**-0.2**
	baz=26							
U16A	**Tuba City**	**26.39**	**327**	⇑P		**P**	**05 21 45.3**	**-0.3**
	baz=26							
ATAH	**Atahualpa**	**26.41**	**144**	LR		LR	05 29 19.9	
	comp=Z,84nm,20.2s,MS3.3,baz=197,slow=30							
GLA	**Glamis**	**26.46**	**317**	⇑P		**P**	**05 21 46.0**	**-0.3**
	baz=26							
U17A	**Shonto**	**26.49**	**328**	⇑P		**P**	**05 21 46.4**	**-0.2**
	baz=26							
T18A	**Mexican Hat**	**26.52**	**330**	⇓P		**P**	**05 21 46.7**	**-0.2**
	baz=26							
S19A	**Harvey Farm, M**	**26.66**	**332**	⇑P		**P**	**05 21 47.7**	**-0.5**
	baz=26							
V15A	**Kaibab Nationa**	**26.71**	**325**	⇑P		**P**	**05 21 48.2**	**-0.4**
	baz=26							
W14A	**Seligman**	**26.80**	**323**	⇓P		**P**	**05 21 48.8**	**-0.5**
	baz=26							
PDMCI	**Parker Dam,Lak**	**26.82**	**320**	⇓P		**P**	**05 21 49.2**	**-0.4**
	baz=26							
X13A	**Yucca**	**26.82**	**321**	⇓P		**P**	**05 21 49.1**	**-0.5**
	baz=26							
T17A	**Navajo Res., N**	**26.87**	**328**	⇓P		**P**	**05 21 49.6**	**-0.4**
	baz=26							
SCIA	**State Center**	**27.01**	**1**	*e*P		**P**	**05 21 50.4**	**-0.7**
S18A	**Hurst Farm, BI**	**27.02**	**331**	⇑P		**P**	**05 21 51.3**	**-0.1**
	baz=27							
ISCO	**Idaho Springs**	**27.02**	**339**	*e*P		**P**	**05 21 52.2**	**+0.9**
V14A	**Boquillas Ranc**	**27.11**	**323**	⇓P		**P**	**05 21 52.0**	**-0.2**
	baz=27,SNR=6.6							
W13A	**Hualapai Mount**	**27.20**	**322**	⇑P		**P**	**05 21 52.8**	**-0.1**
	baz=27							
BC3	**Big Chuckw Mtn**	**27.25**	**317**	⇓P		**P**	**05 21 53.5**	**+0.1**
	baz=27							
IRM	**Iron Mountain**	**27.37**	**319**	⇑P		**P**	**05 21 54.2**	**-0.3**
	baz=27							
S17A	**Black Ridge (B**	**27.37**	**329**	⇑P		**P**	**05 21 54.1**	**-0.4**
	baz=27							
R18A	**Canyonlands Na**	**27.53**	**332**	⇑P		**P**	**05 21 55.7**	**-0.2**
	baz=27							
T15A	**Red Dirt Ranch**	**27.71**	**326**	⇑P		**P**	**05 21 57.2**	**-0.3**
	baz=27							
U14A	**Mt Trumbull**	**27.71**	**325**	⇓P		**P**	**05 21 57.6**	**0.0**
	baz=27							
Q19A	**Hogan Spring (**	**27.71**	**333**	⇓P		**P**	**05 21 57.3**	**-0.2**
	baz=27							
V13A	**Grand Canyon W**	**27.77**	**323**	⇑P		**P**	**05 21 57.8**	**-0.3**
	baz=27,SNR=5.1							
PFO	**Pinyon Flat Ob**	**27.88**	**316**	LR		LR	05 33 45.1	
	comp=Z,195nm,19.0s,MS3.7,baz=145,slow=38							
109C	**Camp Elliot, M**	**27.91**	**314**	⇑P		**P**	**05 21 58.8**	**-0.5**
	baz=28							
R17A	**Hanksville Air**	**27.94**	**331**	⇓P		**P**	**05 21 59.2**	**-0.4**
	baz=28							
GMRC	**Granite Mounta**	**28.09**	**319**	⇓P		**P**	**05 22 00.4**	**-0.5**
	baz=28							
U13A	**Pakoon Wash**	**28.15**	**324**	⇓P		**P**	**05 22 01.6**	**+0.1**
	baz=28							
S15A	**Panguitch**	**28.19**	**327**	⇑P		**P**	**05 22 02.3**	**+0.4**
	baz=28							
V12A	**Nelson**	**28.20**	**321**	⇑P		**P**	**05 22 01.5**	**-0.5**
	baz=28,SNR=5.2							
R16A	**Teasdale**	**28.21**	**329**	⇑P		**P**	**05 22 02.0**	**0.0**
	baz=28							
Q18A	**Rafter H Ranch**	**28.22**	**332**	⇓P		**P**	**05 22 02.1**	**+0.1**
	baz=28							
SRU	**San Rafael**	**28.41**	**332**	⇓P		**P**	**05 22 03.5**	**-0.2**
	baz=28							
T13A	**Saint George**	**28.55**	**325**	⇓P		**P**	**05 22 05.4**	**+0.4**
	baz=28							
Q16A	**Castle Valley**	**28.56**	**331**	⇑P		**P**	**05 22 04.8**	**-0.3**
	baz=28							
PCRV	**Puerto La Cruz**	**28.67**	**96**	LR		LR	05 35 21.0	
	comp=Z,276nm,18.6s,MS3.9,baz=109,slow=40							
S14A	**Cedar City**	**28.68**	**326**	⇑P		**P**	**05 22 06.6**	**+0.5**
	baz=28							
P18A	**Preston Nutter**	**28.70**	**333**	⇑P		**P**	**05 22 06.7**	**+0.4**
	baz=28							
O19A	**Miners Draw (B**	**28.78**	**335**	⇓P		**P**	**05 22 07.1**	**+0.1**
	baz=28							
ARUT	**Antelope Range**	**28.84**	**326**	*e*P		**P**	**05 22 08.4**	**+0.8**
S13A	**Holt Ranch, En**	**28.92**	**325**	⇓P		**P**	**05 22 08.7**	**+0.4**
	baz=29							
ECSD	**EROS,Sioux Fal**	**28.94**	**356**	*e*P		**P**	**05 22 04.7**	**-3.7**
	10nm,0.7s,mb4.7							
RWWY	**Rawlins**	**29.25**	**339**	*e*P		**P**	**05 22 12.7**	**+1.5**
O17A	**Robinson Place**	**29.38**	**333**	⇑P		**P**	**05 22 11.9**	**-0.4**
	baz=29,SNR=5.4							
R13A	**O'Grain Ranch,**	**29.42**	**326**	⇑P		**P**	**05 22 13.3**	**+0.6**
	baz=29							
T11A	**Corn Creek, Al**	**29.45**	**323**	⇑P		**P**	**05 22 13.0**	**0.0**
	baz=29							
U10A	**Ash Meadows, A**	**29.56**	**321**	⇑P		**P**	**05 22 14.5**	**+0.6**
	baz=29							
N18A	**Larsen Ranch,**	**29.57**	**335**	⇑P		**P**	**05 22 13.9**	**-0.1**
	baz=29							
Q14A	**Sevier Lake (B**	**29.65**	**328**	⇑P		**P**	**05 22 15.3**	**+0.6**
	baz=29							
P14A	**Drum Mountains**	**30.00**	**329**

baz=31
L15A **Malad City** 31.58 333 ⇓P P 05 22 32.5 +0.8
baz=31
M14A **Sheep Mountain** 31.62 331 ⇓P P 05 22 32.3 +0.3
baz=31
O11A **Cowboy Ranch,** 31.73 327 ⇓P P 05 22 33.5 +0.4
baz=31
R08A **Mina** 31.89 322 ⇓P P 05 22 34.9 +0.4
baz=32
M13A **Montello** 31.89 330 ⇑P P 05 22 35.0 +0.5
baz=32,SNR=6.1
N12A **Clover Valley,** 31.94 328 ⇓P P 05 22 35.5 +0.6
baz=32
ELK **Elko** 31.97 328 *e*P P 05 22 33.9 -1.3
3.2nm,0.9s,mb4.2
L14A **Malta** 31.98 332 ⇓P P 05 22 35.4 +0.1
baz=32,SNR=9.5
KCC **Kaiser Creek** 31.98 319 ⇑P P 05 22 35.4 0.0
baz=32
REDW **Red Top Meadow** 32.05 336 *e*P P 05 22 36.6 +0.7
NVAR **Mina Array Bea** 32.06 322 P P 05 22 36.4 +0.4
4.9nm,0.9s,mb4.3,baz=143,slow=8.5,SNR=22
SNOW **Snow King Moun** 32.10 336 *e*P P 05 22 36.9 +0.6
Q08A **Gabbs** 32.12 323 ⇑P P 05 22 36.7 +0.1
baz=32
LOHW **Long Hollow** 32.17 337 *e*P P 05 22 37.1 +0.3
K15A **Arbon** 32.19 333 ⇓P P 05 22 37.1 +0.1
baz=32
TPAW **Teton Pass** 32.20 336 *e*P P 05 22 38.0 +0.8
RRI2 **Red Ridge** 32.23 335 *e*P P 05 22 38.4 +1.0
N11A **Elko Archery C** 32.27 328 ⇓P P 05 22 38.6 +0.7
baz=32
M12A **Wells** 32.30 329 ⇑P P 05 22 38.5 +0.4
baz=32,SNR=5.8
L13A **Double Diamond** 32.35 331 ⇑P P 05 22 38.8 +0.3
baz=32
K14A **Jones Ranch, D** 32.36 332 ⇑P P 05 22 39.0 +0.5
baz=32
S06C **San Francisco** 32.66 320 ⇓P P 05 22 41.7 +0.5
baz=32
M11A **Holland Ranch,** 32.75 328 ⇓P P 05 22 42.2 +0.2
baz=32
R06C **Coleville** 32.81 321 ⇑P P 05 22 43.4 +0.8
baz=32
K13A **Stover Farm, H** 32.85 332 ⇑P P 05 22 42.8 -0.1
baz=32
LKWY **Lake** 32.90 338 *e*P P 05 22 45.5 +2.2
3.1nm,0.6s,mb4.4
L12A **House Creek Ra** 32.91 330 ⇓P P 05 22 43.6 +0.3
baz=33
RLMT **Red Lodge** 32.99 339 *e*P P 05 22 43.3 -0.7
21nm,1.7s,mb4.8
CMB **Columbia Colle** 33.09 319 ⇓P P 05 22 44.9 -0.1
baz=33
J14A **Carey** 33.13 333 ⇓P P 05 22 45.4 +0.1
baz=33
M10A **I.L. Ranch, Tu** 33.20 328 ⇑P P 05 22 46.6 +0.6
baz=33
O08A **Rochester Mine** 33.21 325 ⇑P P 05 22 46.1 +0.1
baz=33
K12A **Draper Farm, C** 33.23 331 ⇓P P 05 22 46.5 +0.4
baz=33
N09A **Rock Creek Ran** 33.25 326 ⇑P P 05 22 46.6 +0.3
baz=33
L11A **Cat Creek Ranc** 33.28 329 ⇑P P 05 22 46.7 +0.1
baz=33,SNR=6.9
H16A **Russell Place,** 33.34 337 ⇓P P 05 22 48.2 +1.1
baz=33
AGMN **Agassiz Refuge** 33.45 357 *e*P P 05 22 46.4 -1.6
J13A **Cove Ranch, Pi** 33.48 332 ⇓P P 05 22 48.3 0.0
baz=33
O07A **Toulon** 33.53 324 ⇓P P 05 22 49.4 +0.6
baz=33
N08A **GE Springer Mi** 33.53 325 ⇑P P 05 22 49.2 +0.4
baz=33
R04C **Big Horse Ranc** 33.57 319 ⇑P P 05 22 49.7 +0.5
baz=33
L10A **Juniper Basin** 33.57 328 ⇑P P 05 22 49.2 +0.1
baz=33,SNR=5.2
I14A **Mackay** 33.59 334 ⇑P P 05 22 49.9 +0.6
baz=33
GCMT **Greycliff** 33.71 340 *e*P P 05 22 50.5 +0.2
HLID **Hailey** 33.72 332 ⇓P P 05 22 50.3 -0.1
baz=33,SNR=5.9
HLID **Hailey** 33.72 332 *e*P P 05 22 50.9 +0.4
5.2nm,1.2s,mb4.3
H15A **Lima** 33.81 335 ⇑P P 05 22 51.5 +0.3
baz=34
I13A **Wildhorse Cree** 33.87 333 ⇑P P 05 22 52.2 +0.5
baz=34
K11A **Parker Ranch,** 33.87 330 ⇑P P 05 22 51.7 -0.1
baz=34
MCMT **McKenzie Canyo** 34.07 335 *e*P P 05 22 54.9 +1.4
O06A **Flanigan** 34.08 323 ⇓P P 05 22 54.1 +0.5
baz=34
H14A **Leadore** 34.11 335 ⇑P P 05 22 54.5 +0.7
baz=34
BEKR **Beckwourth** 34.20 322 ⇓P P 05 22 55.2 +0.5
baz=34
G15A **Dillon** 34.21 336 ⇑P P 05 22 54.8 +0.1
baz=34,SNR=5.8
MFID **Camas Ranch** 34.26 331 ⇓P P 05 22 55.4 +0.3
baz=34
K10A **MacKenzie Ranc** 34.29 329 ⇓P P 05 22 55.6 +0.2
baz=34
DLMT **Dillon** 34.41 336 *e*P P 05 22 57.5 +1.1
H13A **Challis** 34.44 334 ⇑P P 05 22 56.6 0.0
baz=34
N06A **Buffalo Meadow** 34.47 324 ⇓P P 05 22 57.0 +0.1
baz=34,SNR=6.1
L08A **Fields** 34.62 327 ⇑P P 05 22 58.0 -0.3
baz=34,SNR=5.5
G14A **Jackson** 34.66 335 ⇓P P 05 22 58.3 -0.2
baz=34
K09A **Rome** 34.66 328 ⇓P P 05 22 58.6 0.0
baz=34,SNR=6.5
DGMT **Dagmar** 34.68 348 *e*P P 05 22 58.1 -0.6
12nm,0.9s,mb4.8
H12A **Diamond D Ranc** 34.69 333 ⇑P P 05 22 58.8 0.0
baz=34,SNR=7.5
I11A **Placerville** 34.70 331 ⇓P P 05 22 58.8 -0.1
baz=34,SNR=9.5
ORV **Oroville** 34.70 321 ⇑P P 05 22 59.4 +0.4
baz=34
LRM **Limekiln Ridge** 34.74 337 *e*P P 05 23 00.2 +0.9
F15A **Butte** 34.77 337 ⇑P P 05 22 59.6 +0.1
baz=34
G13A **Cobalt** 34.86 334 ⇓P P 05 22 60.0 -0.3
baz=34
O04C **Chester** 34.92 322 ⇓P P 05 23 00.5 -0.4
baz=35
L07A **Adell** 35.04 326 ⇑P P 05 23 01.8 -0.1
baz=35
M06C **Likely Place G** 35.13 324 ⇑P P 05 23 02.8 +0.1
baz=35,SNR=5.9
J09A **Fry Pan Ranch,** 35.15 329 ⇑P P 05 23 03.1 +0.3
baz=35
I10A **Payette** 35.23 331 ⇓P P 05 23 03.9 +0.4
baz=35
E15A **Deer Lodge** 35.32 337 ⇓P P 05 23 03.7 -0.5
baz=35
H11A **Donnelly** 35.33 332 ⇑P P 05 23 04.3 0.0
baz=35,SNR=5.1
ULM **Lac du Bonnet** 35.40 358 P P 05 23 02.8 -2.0
5.7nm,0.9s,mb4.5,baz=190,slow=7.5,SNR=4.0
ULM LR LR 05 39 20.7
comp=Z,69nm,21.2s,MS3.4,baz=43,slow=39
K07A **Rock Creek Ran** 35.45 327 ⇓P P 05 23 05.2 -0.2
baz=35
F13A **Darby** 35.46 335 ⇓P P 05 23 05.2 -0.2
baz=35
MOD **Modoc** 35.49 325 ⇓P P 05 23 05.2 -0.6
baz=35
GASB **Alder Springs** 35.51 320 ⇑P P 05 23 07.0 +1.0
baz=35
J08A **Circle Bar Ran** 35.52 328 ⇑P P 05 23 06.2 +0.2
baz=35
H10A **Noah's Angus R** 35.58 331 ⇓P P 05 23 05.9 -0.6
baz=35
I09A **Lost Marbles R** 35.60 330 ⇑P P 05 23 06.6 -0.1
baz=35,SNR=5.4
M05C **Lookout** 35.62 323 ⇓P P 05 23 06.4 -0.4
baz=35
E14A **Clinton** 35.64 336 ⇓P P 05 23 06.6 -0.3
baz=35
C17A **Wharram Farm,** 35.69 340 ⇑P P 05 23 06.9 -0.4
baz=35,SNR=10
F12A **Elk City** 35.82 334 ⇑P P 05 23 08.0 -0.5
baz=36,SNR=7.1
L05A **Lakeview** 35.88 324 ⇓P P 05 23 09.1 -0.1
baz=36
E13A **Victor** 35.93 336 ⇓P P 05 23 09.3 -0.2
baz=36
G11A **Walters Elk Ra** 35.98 333 ⇓P P 05 23 10.0 +0.1
baz=36
C16A **Fuhringer Ranc** 36.16 339 ⇑P P 05 23 11.4 0.0
baz=36,SNR=7.4
D14A **Greenough** 36.19 337 ⇓P P 05 23 11.0 -0.7
baz=36
G10A **Bishop Farm, J** 36.29 332 ⇑P P 05 23 11.9 -0.6
baz=36
K05A **Summer Lake** 36.37 325 ⇓P P 05 23 13.9 +0.7
baz=36
C15A **Salmond Ranch,** 36.44 338 ⇓P P 05 23 13.8 0.0
baz=36
H08A **Prairie City** 36.45 329 ⇓P P 05 23 13.9 -0.1
baz=36
E12A **Beaver Dam Sad** 36.48 334 ⇑P P 05 23 13.2 -0.9
baz=36
D13A **Huson** 36.57 336 ⇓P P 05 23 14.6 -0.3
baz=36
G09A **Cove** 36.58 331 ⇑P P 05 23 14.1 -1.0
baz=36
E11A **Bogner Ranch,** 36.70 334 ⇓P P 05 23 15.3 -0.8
baz=36
C14A **Swan Lake** 36.85 337 ⇑P P 05 23 17.2 -0.1
baz=36
F10A **Beach Ranch, E** 36.85 332 ⇓P P 05 23 16.8 -0.5
baz=36,SNR=6.6
D12A **Red Ives Fores** 36.90 335 ⇓P P 05 23 16.6 -1.0
baz=36
H07A **Lands Inn, Kim** 36.95 329 ⇓P P 05 23 17.5 -0.7
baz=37
I05A **Bend** 37.53 327 ⇓P P 05 23 22.9 -0.2
baz=37
B13A **Whitefish** 37.63 337 ⇑P P 05 23 23.5 -0.3
baz=37
A14A **Double T Ranch** 37.75 339 ⇑P P 05 23 25.0 +0.1
baz=37
A13A **Flathead Natio** 38.07 338 ⇓P P 05 23 27.4 -0.2
baz=38
B12A **Libby** 38.13 336 ⇓P P 05 23 28.1 -0.1
baz=38
D09A **Jones Farm, Ri** 38.17 332 ⇓P P 05 23 27.9 -0.5
baz=38
E06A **Yakima** 39.03 330 ⇓P P 05 23 35.8 +0.1
baz=39
C08A **Higginbotham F** 39.04 333 ⇓P P 05 23 35.9 +0.1
baz=39
B09A **Rice** 39.14 334 ⇑P P 05 23 36.8 +0.2
baz=39
B08A **Colville Reser** 39.60 333 ⇑P P 05 23 40.7 +0.3
baz=39
RPW **Rockport** 40.65 331 *e*P P 05 23 50.0 +0.9
C04A **Brinnon** 40.83 330 ⇓P P 05 23 51.2 +0.6
baz=40
A04A **Legoe Bay, Lum** 41.40 331 ⇓P P 05 23 54.7 -0.5
baz=41
SIV **San Ignacio** 44.40 132 P P 05 24 19.2 -0.7
2.2nm,1.0s,mb3.8,baz=305,slow=10,SNR=6.8
SCHQ **Schefferville** 45.04 22 LR LR 05 44 57.3
comp=Z,278nm,18.1s,MS4.2,baz=236,slow=38
YKA **Yellowknife Ar** 49.89 347 P P 05 25 01.3 -0.8
9.1nm,0.9s,mb4.8,baz=154,slow=7.2,SNR=7.4
YKA LR LR 05 46 22.8
comp=Z,40nm,22.0s,MS3.4,baz=50,slow=36
YKA **Yellowknife Ar** 49.89 347 P P 05 25 01.3 -0.8
YKA LR LR 05 46 22.8
BDFB **Brasilia** 54.29 122 P P 05 25 33.2 -2.2
2.1nm,0.7s,mb4.2,baz=262,slow=9.5,SNR=3.8
ESDC **Sonseca Array** 80.46 52 P P 05 28 19.6 -1.0
0.2nm,0.3s,mb3.5,baz=298,slow=5.8,SNR=5.9
MDT **Midelt** 81.32 58 LR LR 05 58 51.5
comp=Z,38nm,19.6s,MS3.8,baz=9.6,slow=31
ETSF **Etsaut** 82.29 48 *e*P P 05 28 30.4 +0.1
8.4nm,1.1s,mb4.3
EPF **Esparros** 82.91 47 *e*P P 05 28 33.1 -0.4
11nm,1.1s,mb4.5
TCF **Toulx Ste Croi** 83.42 44 *e*P P 05 28 35.3 -0.7
BGF **Bois d'Agland** 83.77 44 *e*P P 05 28 37.3 -0.6
AVF **Avril sur Loir** 84.05 43 *e*P P 05 28 38.2 -1.1
9.4nm,0.9s,mb4.6
SSF **Saint Saulge** 84.08 43 *e*P P 05 28 38.2 -1.2
NB2 **NORSAR Subarra** 84.19 28 P P 05 28 40.3 +0.6
comp=Z,8.9nm,0.9s,mb4.9,baz=293,slow=5.1
NOA **NORSAR Array B** 84.19 28 LR LR 06 05 33.4
comp=Z,42nm,18.9s,MS3.8,baz=20,slow=35
SMF **Signal de Mont** 84.41 43 *e*P P 05 28 40.3 -0.8
comp=Z,14nm,1.1s,mb4.7
VIVF **Saint-Julien-l** 85.46 45 *e*P P 05 28 46.5 +0.1
HAU **Haudompre** 85.67 42 *e*P P 05 28 47.0 -0.4
comp=Z,10nm,0.8s,mb4.8
ARCES **ARCESS Array B** 85.87 18 P P 05 28 47.3 -0.7
comp=Z,4.7nm,1.1s,mb4.6,baz=280,slow=5.1,SNR=8.4
CABF **La Chapelle** 85.91 43 *e*P P 05 28 48.7 +0.1
comp=Z,13nm,0.9s,mb4.8
HINF **Hinteralfeld** 86.05 42 *e*P P 05 28 48.8 -0.5
CDF **Champ du Feu** 86.14 41 *e*P P 05 28 49.4 -0.3
SMRF **Simiane la Rot** 86.33 46 *e*P P 05 28 51.2 +0.4
comp=Z,35nm,1.3s,mb5.1
LPL **La Plagne** 86.66 44 *e*P P 05 28 52.7 +0.4
BNI **Bardonecchia** 86.77 44 *e*P P 05 28 53.7 +0.8
comp=Z,5.9nm,1.1s,mb4.7
MBDF **Montbardon** 86.93 45 *e*P P 05 28 53.9 +0.2
comp=Z,8.1nm,0.8s,mb4.7
LMR **La Mourre** 87.17 46 *e*P P 05 28 54.7 -0.2
comp=Z,12nm,1.0s,mb4.8
GERES **GERESS Array B** 89.98 39 P P 05 29 08.4 +0.4
comp=Z,0.6nm,0.6s,mb4.1,baz=298,slow=2.9,SNR=4.9
TORD **Torodi Ar. Bea** 91.72 76 P P 05 29 15.0 -1.8
comp=Z,0.5nm,0.7s,mb3.9,baz=290,slow=6.0,SNR=3.4
WRA **Warramunga Arr** 134.05 256 PKP PKPdf 05 35 24.0 -2.5
comp=Z,0.6nm,1.0s,baz=61,slow=1.3,SNR=2.8
CMAR **Chiang Mai Arr** 144.70 339 PKP PKPdf 05 35 43.3 -2.7
comp=Z,1.5nm,0.4s,baz=350,slow=4.3,SNR=17

*NEIC **17** 05:43:40.5, 16.13N×98.04W, h14km, MD4.3(MEX), After MEX.*

MEX 17 05:43:40.6±0.6, 16.14N×98.04W, h14km±4km, MD4.3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.27**	**342**	*i* P		Pg	05 43 46.0	-0.3
PNIG				*i* S		Sg	05 43 49.7	-0.4
VHO	**Vista Hermosa**	**1.56**	**53**	*i* P		Pn	05 44 04.7	-3.2
VHO				*i* S		Sn	05 44 23.4	-4.7
OXX	**Oaxaca**	**1.57**	**53**	*i* P		Pn	05 44 05.6	-2.5
OXX				*i* S		Sn	05 44 20.7	-7.6
HUIG	**Huatulco**	**1.90**	**101**	*e*P		Pn	05 44 10.0	-2.6
HUIG				*i* S		Sn	05 44 31.4	-4.8
ACX	**Acapulco**	**1.94**	**292**	*i* P		Pn	05 44 08.7	-4.4
CAIG	**El Cayaco**	**2.32**	**293**	*i* P		Pn	05 44 15.1	-3.3
CAIG				*i* S		Sn	05 44 43.1	-3.6
MEIG	**Mezcala**	**2.33**	**320**	*i* P		Pn	05 44 15.7	-2.9
MEIG				*i* S		Sn	05 44 44.5	-2.5
SZVM	**Salazar**	**3.42**	**338**	*i* P		Pn	05 44 32.5	-0.9
SZVM				*i* S		Sn	05 45 09.4	-4.4
CCIG	**Comitan**	**5.67**	**88**	*i* P		Pn	05 45 04.0	-0.6
CCIG				*i* S		Sn	05 46 05.4	-4.1

*ISCJB **17** 05:55:42.8±0.1, 54.04N×100.03W×16.928E±0.02, h12km, mb5.1/308, MS4.9/231, Error ellipse: s-maj=4.0km s-min=1.4km az=1.3*

*BJI **17** 05:55:43.4, 54.62N×168.98E, h10km, mB5.2, mb5.2, Ms5.4, Msz5.0*

*NEIC **17** 05:55:44.7±0.1, 54.13N×169.23E, h10km, mb5.2/207, MS4.9/177, Error ellipse: s-maj=4.8km s-min=2.4km az=1.0*

*MOS **17** 05:55:44.3±1.0, 54.11N×169.21E, h20km, mb5.3/144, MS4.8/86, Error ellipse: s-maj=6.0km s-min=4.0km az=97.3*

*GCMT **17** 05:55:44.7±0.1, 54.29N×169.26E, h20km, MW5.4/104, Moment Tensor Solution. s81,c143; s104,c215; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr=0.18±.03; Mθθ=1.52±.03; Mφφ 1.70±.03; Mrθ 0.02±.05; Mθφ=0.10±.02; Mφr 0.19±.05; Best double couple: M0 1.62200×10^17 NP1:φs313.00000°, δ85.00000°, λ177.00000°. NP2:φs43.00000°, δ87.00000°, λ5.00000°.*

Principal axes: T 1.7220, Plg6.0000°, Azm268.0000°; N -0.1940, Plg84.0000°, Azm78.0000°; P -1.5230, Plg1.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*IDC **17** 05:55:46.2±2.0, 54.24N×169.22E, h18km±11km, mb4.8/28, mb1 4.9/29, mb1mx4.9/30, mbtmp4.8/29, ML5.2/1, MS4.7/26, Ms1 4.7/26, ms1mx4.5/34 Error ellipse: s-maj=15.2km s-min=9.6km az=164.0*

*KRSC **17** 05:55:46.0±1.9, 53.91N×168.71E, h15km±15km, ML5.6*

*SZGRF **17** 05:55:54.7, 54.89N×166.36E, h33km, mb5.2, MS4.7, Komandorsky Islands, Russia, region*

ISC 17 05:55:44.9±0.1, 54.10N±0.03×169.26E±0.02, h12km, h12km±.5km:pP-P, n1167, σ0:82/1108, mb5.1/308, MS4.9/231, 212C-198D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**2.63**	**116**	P		**Pn**	**05 56 25.0**	**-2.1**
FX1				S		**Sn**	**05 56 55.9**	**-3.0**
SMY	**Shemya**	**3.21**	**113**	*e*Pn		**Pn**	**05 56 34.0**	**-0.9**
SMY				S		**Sn**	**05 57 11.4**	**-1.6**
SMY				*e*Sn		**Sn**	**05 57 12.1**	**-0.9**
KBTR	**Krutoberegovo**	**4.25**	**302**	*e*P		**Pn**	**05 56 48.7**	**-0.6**
KBTR				*i* S		**Sn**	**05 57 33.9**	**-4.9**
BDR	**Baidarnaya**	**5.22**	**302**	*e*P		**Pn**	**05 57 04.3**	**+1.7**
ZLN	**Zelenaya**	**5.23**	**295**	*e*P		**Pn**	**05 57 04.2**	**+1.5**
BZMR	**Bezymyannaya**	**5.37**	**294**	*e*P		**Pn**	**05 57 05.4**	**+0.8**
KLY	**Klyuchi**	**5.40**	**298**	*e*P		**Pn**	**05 57 05.0**	**-0.1**
KLY				*i* S		**Sn**	**05 58 02.2**	**-4.9**
KRSR	**Krestovskiy**	**5.42**	**297**	*e*P		**Pn**	**05 57 06.7**	**+1.4**
KRSR				*i* S		**Sn**	**05 58 06.5**	**-0.9**
TUMR	**Tumrok**	**5.42**	**286**	P		**Pn**	**05 57 04.5**	**-0.8**
KIRR	**Kirishev**	**5.46**	**294**	*e*P		**Pn**	**05 57 06.9**	**+1.1**
KIRR				*i* S		**Sn**	**05 58 06.2**	**-2.2**
KMNR	**Kamenistaya**	**5.46**	**291**	*e*P		**Pn**	**05 57 06.7**	**+0.8**
KMNR				*i* S		**Sn**	**05 58 05.7**	**-2.8**
KPT	**Kopyto**	**5.52**	**293**	P		**Pn**	**05 57 08.0**	**+1.3**
SPN	**Mys Shipunski**	**5.59**	**263**	*e*P		**Pn**	**05 57 06.7**	**-1.0**
SPN				*i* S		**Sn**	**05 58 05.2**	**-6.5**
KOZR	**Kozyr**	**5.73**	**294**	PN		**Pn**	**05 57 11.1**	**+1.6**
KOZ	**Kozyrevsk**	**5.74**	**294**	*e*P		**Pn**	**05 57 11.1**	**+1.4**
KOZ				*i* S		**Sn**	**05 58 13.1**	**-2.2**
KII	**Karymskiy**	**5.78**	**273**	P		**Pn**	**05 57 10.4**	**+0.2**
SRDR	**Sredinnyy**	**5.90**	**296**	*e*P		**Pn**	**05 57 13.5**	**+1.6**
SRDR				*i* S		**Sn**	**05 58 17.3**	**-2.0**
NLC	**Nalytchevo**	**5.97**	**265**	*e*P		**Pn**	**05 57 11.9**	**-1.0**
NLC				*i* S		**Sn**	**05 58 14.9**	**-6.2**
AVH	**Avacha**	**6.31**	**267**	*e*P		**Pn**	**05 57 17.4**	**-0.1**
PET	**Petropavlovsk**	**6.41**	**265**	*α i*PN		**Pn**	**05 57 18.2**	**-0.7**
PET				pmax	pmax			
	comp=Z,1μm,2.2s							
PET				pmax	pmax			
	comp=Z,557nm,0.7s							
PET				pmax	pmax			
	comp=Z,2μm,22.8s							
PET				MLR	MLR			
	comp=Z,6μm,18.0s							
PET				MLR	MLR			
	comp=Z,6μm,20.0s							
PET	**Petropavlovsk**	**6.41**	**265**	*e*P		**Pn**	**05 57 18.5**	**-0.4**
PET				*i* S		**Sn**	**05 58 25.9**	**-6.0**
PET	**Petropavlovsk**	**6.41**	**265**	*e*Pn		**Pn**	**05 57 19.2**	**+0.3**
PET				*e*Sn		**Sn**	**05 58 29.8**	**-2.1**
INSR	**Institute**	**6.43**	**265**	*e*P		**Pn**	**05 57 17.1**	**-2.1**
INSR				*i* S		**Sn**	**05 58 24.9**	**-7.5**
RUS	**Russkaya**	**6.66**	**260**	*e*P		**Pn**	**05 57 21.5**	**-0.8**
RUS				*i* S		**Sn**	**05 58 30.9**	**-7.2**
GNL	**Ganaly**	**6.70**	**271**	*e*P		**Pn**	**05 57 23.3**	**+0.4**
GRL	**Gorelyy**	**6.88**	**262**	*e*P		**Pn**	**05 57 26.6**	**+1.3**
PEA0B	**Petropavlovsk-**	**6.95**	**266**	*e*Pn		**Pn**	**05 57 26.7**	**+0.4**
PEA0B				*e*Sn		**Sn**	**05 58 43.0**	**-2.3**
PETK	**Petropavlovsk-**	**6.95**	**266**	Pn		**Pn**	**05 57 26.4**	**+0.1**
	comp=Z,41nm,0.3s,baz=90,slow=18,SNR=206							
PETK				Sn		**Sn**	**05 58 43.0**	**-2.3**
	comp=Z,25nm,0.3s,baz=203,slow=30,SNR=7.0							
PETK				LR	LR		06 00 11.9	
	comp=Z,3μm,20.3s,baz=279,slow=38							
PETK	**Petropavlovsk-**	**6.95**	**266**	Pn		**Pn**	**05 57 26.4**	**+0.1**
PETK				Sn		**Sn**	**05 58 43.0**	**-2.3**
PETK				LR		LR	06 00 11.9	
MIPR	**Malaya Ipel'ka**	**7.73**	**261**	P		**Pn**	**05 57 37.8**	**+0.8**
SKR	**Severo-Kuril's**	**8.73**	**252**	*e*PN		**Pn**	**05 57 49.5**	**-1.3**
SKR				pmax	pmax			
	comp=N,220nm,1.0s							
SKR				pmax	pmax			
	comp=Z,450nm,1.0s							
SKR				MLR	MLR			
	comp=N,8μm,16.0s							
SKR				MLR	MLR			
	comp=E,11μm,16.0s							
SKR				MLR	MLR			
	comp=Z,6μm,16.0s							
ADK	**Adak**	**8.77**	**99**	*e*Pn		**Pn**	**05 57 50.0**	**-1.2**
ADK				*e*Sn		**Sn**	**05 59 27.9**	**-1.9**
NIKO	**Nikolski**	**13.06**	**86**	*e*Pn		**Pn**	**05 58 50.4**	**+0.4**
	comp=Z,462nm,1.0s							
BILL	**Bilibino**	**14.06**	**355**	⇑*i*P		**Pn**	**05 59 03.1**	**-0.4**
BILL				*e*S		**Sn**	**06 01 34.9**	**-4.3**
BILL				pmax	pmax			
	comp=Z,161nm,1.4s							
BILL	**Bilibino**	**14.06**	**355**	*e*Pn		**Pn**	**05 59 05.0**	**+1.5**
	comp=Z,359nm,1.4s							
UNV	**Unalaska Valle**	**14.25**	**81**	*e*Pn		**Pn**	**05 59 06.0**	**-0.1**
AKUT	**Akutan**	**14.62**	**80**	*e*Pn		**Pn**	**05 59 11.7**	**+0.5**
OKH	**Okha**	**15.53**	**279**	*e*P		**Pn**	**05 59 22.0**	**-1.3**
OKH				*e*S		**Sn**	**06 02 24.4**	**+9.4**
OKH				pmax	pmax			
	comp=Z,3μm,5.0s							
FALS	**False Pass**	**15.87**	**76**	*e*P		**Pn**	**05 59 30.6**	**+2.9**
	comp=Z,188nm,0.9s							
TNA	**Tin City**	**16.11**	**36**	*e*Pn		**Pn**	**05 59 31.2**	**+0.5**
	comp=Z,163nm,1.1s							
KUR	**Kuril'sk**	**16.39**	**246**	*e*P		**Pn**	**05 59 30.5**	**-4.0**
KUR				S		**Sn**	**06 02 33.0**	**-3.1**
KUR				pmax	pmax			
	comp=E,190nm,1.0s							
KUR				pmax	pmax			
	comp=Z,380nm,1.0s							
KUR				pmax	pmax			
	comp=N,2μm,4.0s							
KUR				pmax	pmax			
	comp=E,5μm,4.0s							
KUR				pmax	pmax			
	comp=Z,4μm,4.0s							
KUR				smax				
	comp=N,2μm,4.0s							
KUR				MLR	MLR			
	comp=N,6μm,16.0s							
KUR				MLR	MLR			
	comp=E,3μm,16.0s							
KUR				MLR	MLR			
	comp=Z,6μm,16.0s							
SDPT	**Sand Point**	**17.46**	**74**	*e*Pn		**Pn**	**05 59 50.0**	**+2.1**
	comp=Z,76nm,0.7s							
UGL	**Uglegorsk**	**17.57**	**265**	*c i*P		**Pn**	**05 59 51.5**	**+2.2**
UGL				pmax	pmax			
	comp=N,600nm,4.5s							
UGL				pmax	pmax			
	comp=E,2μm,4.5s							
UGL				pmax	pmax			
	comp=Z,2μm,4.5s							
UGL				pmax	pmax			
	comp=Z,990nm,1.3s							
UGL				MLR	MLR			
	comp=Z,3μm,18.0s							
UGL				MLR	MLR			
	comp=N,3μm,17.0s							
UGL				MLR	MLR			
	comp=E,3μm,17.0s							
YSS	**Yuzh-Sakhalins**	**18.23**	**258**	⇓*i*P		**Pn**	**05 59 58.5**	**+1.1**
YSS				*e*S		**Sn**	**06 03 18.0**	**-2.6**
YSS				pmax	pmax			
	comp=Z,1μm,6.0s							
YSS				pmax	pmax			
	comp=E,900nm,1.0s							
YSS				pmax	pmax			
	comp=Z,400nm,1.0s							
YSS				MLR	MLR			
	comp=N,3μm,12.0s							
YSS				MLR	MLR			
	comp=Z,2μm,12.0s							
YSS	**Yuzh-Sakhalins**	**18.23**	**258**	*e*P		**Pn**	**05 59 59.2**	**+1.8**
	comp=Z,164nm,1.0s							

YUK	**Yuzh-Kuril'sk**	**18.26**	**246**	P	**Pn**	**05 59 57.0**	**-0.8**
YUK				pmax	pmax		
	comp=Z,2μm,2.0s						
YUK				MLR	MLR		
	comp=N,1μm,12.0s						
YUK				MLR	MLR		
	comp=E,3μm,12.0s						
YUK				MLR	MLR		
	comp=Z,3μm,12.0s						
SVW2	**Sparrevohn**	**19.90**	**55**	*e*P	**Pn**	**06 00 16.4**	**-1.0**
TTA	**Tatalina**	**19.94**	**50**	*e*P	**Pn**	**06 00 17.2**	**-0.7**
TTA				pmax	pmax		
	comp=Z,255nm,1.1s						
TTA	**Tatalina**	**19.94**	**50**	*e*P	**Pn**	**06 00 17.2**	**-0.7**
	comp=Z,255nm,1.1s						
ASAJ	**Asahikawa**	**19.99**	**251**	P	**Pn**	**06 00 18.8**	**+0.1**
	comp=Z,58nm,1.0s,baz=43,slow=7.1,SNR=16						
ASAJ	**Asahikawa**	**19.99**	**251**	P	**Pn**	**06 00 18.8**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,58nm,1.0s						
ERM	**Erimo**	**21.08**	**246**	P	**P**	**06 00 29.9**	**+1.1**
	comp=Z,453nm,1.0s,mb5.8,SNR=5.5						
ERM	**Erimo**	**21.08**	**246**	*e*P	**P**	**06 00 29.5**	**+0.7**
ERM				pmax	pmax		
	comp=Z,57nm,1.2s,mb4.8						
ERM				MLR	MLR		
	comp=Z,2μm,21.0s,MS4.5						
ERM	**Erimo**	**21.08**	**246**	*e*P	**P**	**06 00 29.5**	**+0.7**
	comp=Z,57nm,1.2s,mb4.8						
ERM				LR	LR		
	comp=Z,2μm,21.0s,MS4.5						
OHAK	**Old Harbor**	**21.18**	**66**	*e*P	**P**	**06 00 28.4**	**-1.3**
	comp=Z,181nm,0.9s,mb5.4						
OHAK				LR	LR		
	comp=Z,2μm,21.0s,MS4.5						
KDAK	**Kodiak Island**	**21.49**	**65**	P	**P**	**06 00 32.0**	**-1.0**
	comp=Z,303nm,0.8s,mb5.7,SNR=8.8						
KDAK	**Kodiak Island**	**21.49**	**65**	P	**P**	**06 00 32.7**	**-0.3**
	comp=Z,34nm,0.7s,mb4.8,baz=296,slow=4.6,SNR=16						
KDAK	**Kodiak Island**	**21.49**	**65**	*e*P	**P**	**06 00 32.6**	**-0.4**
	comp=Z,66nm,0.8s,mb5.0						
KDAK				LR	LR		
	comp=Z,840nm,20.0s,MS4.1						
IMA2	**Indian Mountai**	**21.63**	**42**	*e*P	**P**	**06 00 35.5**	**+1.0**
IMA2				*e*ScP	ScP	06 08 11.1	-0.8
PPLA	**Purkeypile**	**21.66**	**51**	*e*P	**P**	**06 00 36.2**	**+1.4**
	comp=Z,216nm,1.1s,mb5.5						
CHUM	**Lake Minchumin**	**21.74**	**48**	*e*P	**P**	**06 00 37.4**	**+1.8**
	comp=Z,153nm,1.2s,mb5.3						
YAK	**Yakutsk**	**22.07**	**307**	*c i*P	**P**	**06 00 37.3**	**-1.9**
YAK				*e**PP		06 00 43.6	
YAK				*e*S	**S**	**06 04 38.1**	**-3.9**
YAK				*e*		06 04 44.1	
YAK				*e*SSS		06 05 15.1	
YAK				pmax	pmax		
	comp=N,60nm,1.1s						
YAK				pmax	pmax		
	comp=Z,302nm,1.0s,mb5.7						
YAK				pmax	pmax		
	comp=E,196nm,1.1s						
YAK				smax			
	comp=N,408μm,1.8s						
YAK				smax			
	comp=E,855μm,3.3s						
YAK				MLR	MLR		
	comp=Z,1μm,13.0s,MS4.6						
YAK				MLR	MLR		
	comp=E,1μm,14.0s,MS4.8						
YAK				MLR	MLR		
	comp=N,2μm,15.0s,MS4.8						
YAK	**Yakutsk**	**22.07**	**307**	*e*P	**P**	**06 00 37.3**	**-1.9**
	comp=N,246nm,1.3s,mb5.5						
YAK				LR	LR		
	comp=Z,962nm,19.0s,MS4.2						
KTH	**Kantishna Hill**	**22.31**	**49**	*e*P	**P**	**06 00 42.6**	**+1.0**
	comp=Z,124nm,1.1s,mb5.2						
SLKM	**Skilak Lake**	**22.51**	**57**	*e*P	**P**	**06 00 43.8**	**-0.1**
FIB	**Fire Island**	**22.52**	**55**	*e*P	**P**	**06 00 44.8**	**+0.8**
FIB				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.0						
FIB	**Fire Island**	**22.52**	**55**	*e*P	**P**	**06 00 44.8**	**+0.8**
	comp=Z,60nm,1.0s,mb5.0						
TRF	**Thorofare Moun**	**22.58**	**49**	*e*P	**P**	**06 00 44.7**	**+0.1**
	comp=Z,2μm,0.6s						
RC01	**Rabbit Creek A**	**22.73**	**56**	*e*P	**P**	**06 00 46.1**	**-0.2**
	comp=Z,37nm,1.1s,mb4.7						
SEW	**Seward**	**22.91**	**58**	*e*P	**P**	**06 00 46.7**	**-1.4**
PMR	**Palmer**	**23.02**	**54**	*e*P	**P**	**06 00 49.7**	**+0.4**
PMR				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
PMR				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.5						
PMR	**Palmer**	**23.02**	**54**	*e*P	**P**	**06 00 49.7**	**+0.4**
	comp=Z,17nm,1.0s,mb4.4						
PMR				LR	LR		
	comp=Z,2μm,19.0s,MS4.5						
MCK	**McKinley**	**23.21**	**49**	*e*P	**P**	**06 00 50.8**	**-0.4**
MCK				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.6						
MCK	**McKinley**	**23.21**	**49**	*e*P	**P**	**06 00 50.8**	**-0.4**
	comp=Z,24nm,1.0s,mb4.6						
COLD	**Coldfoot**	**23.27**	**40**	*e*P	**P**	**06 00 51.4**	**-0.5**
	comp=Z,50nm,1.0s,mb4.9						
KLR	**Kul'dur**	**23.57**	**274**	*e*P	**P**	**06 00 48.0**	**-7.1**
KLR				*e*		06 01 42.0	
KLR				*e*S	**S**	**06 05 04.5**	**-4.0**
KLR				pmax	pmax		
	comp=E,160nm,1.6s						
KLR				pmax	pmax		
	comp=Z,200nm,1.6s,mb5.3						
KLR				MLR	MLR		
	comp=Z,3μm,14.0s,MS4.8						
COLA	**College**	**23.79**	**46**	*e*P	**P**	**06 00 56.2**	**-0.8**
COLA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.5						
COLA				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.5						
COLA	**College**	**23.79**	**46**	*e*P	**P**	**06 00 56.2**	**-0.8**
	comp=Z,15nm,0.8s,mb4.5						
COLA				LR	LR		
	comp=Z,1μm,19.0s,MS4.5						
DIV	**Divide**	**24.66**	**55**	*e*P	**P**	**06 01 05.6**	**+0.7**
	comp=Z,81nm,1.1s,mb5.2						
TIXI	**Tiksi**	**24.68**	**331**	*e*P	**P**	**06 01 04.4**	**-0.7**
TIXI				*e*S	**S**	**06 05 22.8**	**-3.3**
TIXI				pmax	pmax		
	comp=Z,165nm,1.2s,mb5.4						
TIXI				MLR	MLR		
	comp=Z,1μm,9.0s						
TIXI	**Tiksi**	**24.68**	**331**	*e*P	**P**	**06 01 04.7**	**-0.4**
	comp=Z,142nm,1.0s,mb5.5						
TIXI				LR	LR		
	comp=Z,1μm,21.0s,MS4.5						
CLNS	**Chul'man**	**24.96**	**294**	*e*P	**P**	**06 01 09.0**	**+1.3**
CLNS				*e*		06 01 43.7	
CLNS				*e*		06 04 40.8	
CLNS				*e*S	**S**	**06 05 33.2**	**+2.4**
CLNS				*e*SS		06 06 46.1	
CLNS				pmax	pmax		
	comp=Z,73nm,1.4s,mb5.0						
CLNS				pmax	pmax		
	comp=E,63nm,1.1s						
CLNS				pmax	pmax		
	comp=N,34nm,1.3s						
CLNS				smax			
	comp=N,436μm,14.2s						
CLNS				smax			
	comp=E,1002μm,13.5s						
CLNS				MLR	MLR		
	comp=E,2μm,16.0s,MS4.9						
CLNS				MLR	MLR		
	comp=N,3μm,14.0s,MS4.9						
CLNS				MLR	MLR		
	comp=Z,2μm,17.0s,MS4.6						
BMRM	**Bremner River**	**25.24**	**56**	*e*P	**P**	**06 01 10.8**	**+0.6**
MENT	**Mentasta**	**25.54**	**51**	*e*P	**P**	**06 01 14.2**	**+1.3**
VLA	**Vladivostok**	**26.73**	**261**	*e*P	**P**	**06 01 23.7**	**-0.1**
VLA				*e*S	**S**	**06 05 59.3**	**+0.4**
VLA				pmax	pmax		
	comp=Z,159nm,1.1s,mb5.5						
VLA				MLR	MLR		
	comp=Z,2μm,13.5s,MS4.7						
VLA	**Vladivostok**	**26.73**	**261**	⇓*i*P	**P**	**06 01 23.7**	**-0.1**
MDJ	**Mudanjiang**	**27.19**	**266**	P	**P**	**06 01 27.5**	**-0.5**
MDJ				AP	pP	06 01 30.4	-1.3
MDJ				XP	sP	06 01 32.6	-0.7
MDJ				PCP	PcP	06 04 49.8	+1.9
MDJ				S	**S**	**06 06 07.3**	**+1.0**
MDJ				XS	sS	06 06 11.6	-0.9
MDJ				SCP	ScP	06 08 28.6	+0.9
MDJ				PCS	PcS	06 08 29.8	+0.5
MDJ				AMB	AMB		
	comp=Z,78nm,1.0s,mb5.2						
MDJ				LR	LR		
	comp=N,5μm,16.3s,MS5.1						
MDJ				LR	LR		
	comp=E,2μm,17.3s,MS5.1						
MDJ				LR	LR		
	comp=Z,2μm,17.3s,MS4.7						
MDJ	**Mudanjiang**	**27.19**	**266**	*e*P	**P**	**06 01 27.9**	**-0.1**
	comp=Z,105nm,1.2s,mb5.2						
MDJ				LR	LR		
	comp=Z,2μm,20.0s,MS4.7						
MIDW	**Midway**	**27.65**	**154**	PFAKE		06 01 40.0	+7.7
MIDW				LR	LR		
	comp=Z,2μm,21.0s,MS4.6						
MAJO	**Matsushiro**	**27.69**	**243**	*e*P	**P**	**06 01 34.1**	**+1.5**
MAJO				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.6						
MAT	**Matsushiro**	**27.69**	**243**	P	**P**	**06 01 35.0**	**+2.4**
MAT				S	**S**	**06 06 17.0**	**+2.7**
MJAR	**Matsushiro Arr**	**27.69**	**243**	P	**P**	**06 01 34.0**	**+1.5**
	comp=Z,53nm,1.2s,mb5.0,baz=20,slow=8.8,SNR=20						
MJAR				ScP	ScP	06 08 28.8	-0.5
	comp=Z,5.5nm,1.0s,baz=61,slow=2.6,SNR=6.7						
MJAR				LR	LR	06 12 04.2	
	comp=Z,665nm,19.1s,MS4.2,baz=25,slow=35						
MJAR	**Matsushiro Arr**	**27.69**	**243**	P	**P**	**06 01 34.0**	**+1.5**
MJAR				ScP	ScP	06 08 28.8	-0.5
MJAR				LR	LR	06 12 04.2	
SKAG	**Skagway**	**30.05**	**57**	*e*P	**P**	**06 01 51.3**	**-2.0**
	comp=Z,35nm,1.6s,mb4.8						
CN2	**Changchun**	**30.10**	**268**	⇑P	**P**	**06 01 53.4**	**-0.5**
CN2				*e*AP	pP	06 01 57.8	+0.2
CN2				*e*S	**S**	**06 06 49.5**	**-2.5**
CN2				SS	SS	06 08 25.8	-34
CN2				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.2						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,4μm,16.0s,MS5.2						
CN2				LR	LR		
	comp=E,2μm,16.0s,MS5.2						
CN2				LR	LR		
	comp=Z,2μm,19.0s,MS4.8						
BOD	**Bodaibo**	**30.42**	**300**	*e*P	**P**	**06 01 55.0**	**-1.6**
BOD				pmax	pmax		
	comp=Z,33nm,1.5s,mb4.8						
HIA	**Hailar**	**30.56**	**281**	⇑*i*P	**P**	**06 01 56.8**	**-1.1**
HIA	**Hailar**	**30.56**	**281**	⇑*i*P	**P**	**06 01 56.9**	**-1.0**
HIA				LR	LR		
	comp=Z,1μm,22.0s,MS4.6						
SIT	**Sitka**	**30.74**	**62**	PFAKE		06 02 10.0	+11
SIT				LR	LR		
	comp=Z,4μm,21.0s,MS5.0						
SNY	**Shenyang**	**32.38**	**267**	⇑P	**P**	**06 02 14.0**	**0.0**
SNY				AMB	AMB		
	comp=Z,43nm,1.2s,mb5.2						
SNY				AMB	AMB		
	comp=Z,297nm,4.2s						
SNY				LR	LR		
	comp=N,4μm,17.2s,MS5.3						
SNY				LR	LR		
	comp=E,4μm,19.6s,MS5.3						
SNY				LR	LR		
	comp=Z,2μm,14.9s,MS5.0						
WRAK	**Wrangell Islan**	**32.50**	**62**	*e*P	**P**	**06 02 17.0**	**+2.1**
	comp=Z,32nm,0.8s,mb5.2						
WRAK				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
KSRS	**Korea Array**	**32.72**	**256**	P	**P**	**06 02 18.8**	**+1.7**
	comp=Z,42nm,1.1s,mb5.3,baz=46,slow=8.4,SNR=30						
KSRS				ScP	ScP	06 08 45.0	-0.8
	comp=Z,6.6nm,1.0s,baz=66,slow=3.8,SNR=6.6						
KSRS				LR	LR	06 16 44.7	
	comp=Z,683nm,18.3s,MS4.4,baz=48,slow=38						
DLBC	**Dease Lake**	**32.98**	**57**	P	**P**	**06 02 20.4**	**+1.4**
	baz=282,slow=9.1						
INCN	**Inchon**	**33.44**	**258**	PFAKE		06 02 40.0	+17
INCN				LR	LR		
	comp=Z,935nm,19.0s,MS4.5						
DL2	**Dalian**	**35.40**	**264**	P	**P**	**06 02 40.4**	**+0.2**
DL2				S	**S**	**06 08 15.3**	**+0.9**
DL2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
DL2				LR	LR		
	comp=N,1μm,14.3s,MS4.9						
DL2				LR	LR		
	comp=E,1μm,15.0s,MS4.9						
DL2				LR	LR		
	comp=Z,940nm,19.4s,MS4.6						
BBB	**Bella Bella**	**36.53**	**67**	P	**P**	**06 02 50.4**	**+0.6**
	comp=Z,18nm,1.0s,mb4.8,baz=230,slow=4.5,SNR=4.4						
BBB				LR	LR	06 17 31.1	
	comp=Z,1μm,19.3s,MS4.6,baz=298,slow=36						
BJI	**Beijing**	**37.87**	**270**	P	**P**	**06 03 00.9**	**-0.3**
BJI				S	**S**	**06 08 52.1**	**+0.1**
BJI				AMB	AMB		
	comp=Z,12nm,1.7s,mb4.3						
BJI				LR	LR		
	comp=N,6μm,18.7s,MS5.4						
BJI				LR	LR		
	comp=E,3μm,18.7s,MS5.4						
BJI				LR	LR		
	comp=Z,2μm,24.7s						
BJT	**Baijiatuau**	**37.88**	**270**	*e*P	**P**	**06 03 01.5**	**+0.1**
BJT				pmax	pmax		
	comp=Z,11nm,0.6s						
BJT				MLR	MLR		
	comp=Z,3μm,20.0s						
BJT	**Baijiatuau**	**37.88**	**270**	*e*P	**P**	**06 03 01.5**	**+0.1**
	comp=Z,11nm,0.6s,mb4.8						
BJT				LR	LR		
	comp=Z,3μm,20.0s,MS5.0						
TLY	**Talaya**	**38.39**	**294**	*e*P	**P**	**06 03 04.8**	**-0.7**
TLY				*e*		06 04 36.0	
TLY				*e*PPP		06 04 55.7	
TLY				*e*S	**S**	**06 08 58.0**	**-1.7**
TLY				*e*SSS		06 12 16.7	
TLY				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.7						
TLY				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.2						
TLY	**Talaya**	**38.39**	**294**	*i* P	**P**	**06 03 05.8**	**+0.3**
TLY				LR	LR		
	comp=Z,4μm,21.0s,MS5.2						
ULN	**Ulaanbaatar**	**38.52**	**287**	*e*P	**P**	**06 03 07.1**	**+0.5**
ULN						06 09 06.2	
ULN				pmax	pmax		
	comp=Z,34nm,1.3s,mb4.9						
ULN				MLR	MLR		
	comp=Z,1μm,21.0s,MS4.7						
ULN	**Ulaanbaatar**	**38.52**	**287**	*e*P	**P**	**06 03 07.0**	**+0.4**
	comp=Z,34nm,1.3s,mb4.9						
ULN				ScP	ScP	06 09 06.2	-0.5
ULN				LR	LR		
	comp=Z,1μm,21.0s,MS4.7						
YKA	**Yellowknife Ar**	**38.62**	**46**	P	**P**	**06 03 07.1**	**-0.2**
	comp=Z,6.9nm,0.7s,mb4.5,baz=290,slow=7.6,SNR=8.8						
YKA	**Yellowknife Ar**	**38.62**	**46**	P	**P**	**06 03 07.1**	**-0.2**
YKA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YKA	**Yellowknife Ar**	**38.62**	**46**	P	**P**	**06 03 07.1**	**-0.3**
SONM	**Songino Array**	**38.91**	**287**	P	**P**	**06 03 10.3**	**+0.4**
	comp=Z,8.5nm,0.6s,mb4.7,baz=58,slow=8.2,SNR=43						
SONM				PcP	PcP	06 05 22.1	+1.7
	comp=Z,4.2nm,0.8s,baz=34,slow=2.5,SNR=4.1						
SONM				ScP	ScP	06 09 07.7	-0.4
	comp=Z,9.2nm,1.0s,baz=64,slow=2.3,SNR=16						
SONM				LR	LR	06 20 48.5	
	comp=Z,3μm,18.4s,MS5.1,baz=58,slow=39						
SONM	**Songino Array**	**38.91**	**287**	P	**P**	**06 03 10.3**	**+0.4**
SONM						06 05 22.1	
SONM						06 09 07.7	
SONM				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,3μm,18.4s						
ZAK	**Zakamensk**	**39.26**	**292**	⇑*i*P	**P**	**06 03 12.5**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
MOY	**Mondy**	**39.81**	**295**	*e*P	**P**	**06 03 17.8**	**+0.4**
MOY				pmax	pmax		
	comp=Z,39nm,2.8s,mb4.6						
HHC	**Hu-ho-hao-te**	**40.06**	**275**	*e*P	**P**	**06 03 19.6**	**0.0**
HHC				AP	pP	06 03 22.8	-0.6
HHC				XP	sP	06 03 24.9	-0.1
HHC				PP	PP	06 04 55.9	+4.3
HHC				PCP	PcP	06 05 25.9	+1.7
HHC				SCP	ScP	06 09 13.0	+0.3
HHC				PCS	PcS	06 09 14.9	+0.5
HHC				S	**S**	**06 09 23.6**	**-1.5**
HHC				XS	sS	06 09 29.6	-1.8
HHC				SS	SS	06 12 13.8	-8.3
HHC				SCS	ScS	06 13 24.3	-1.7
HHC				AMB	AMB		
	comp=Z,27nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,195nm,6.2s						
HHC				LR	LR		
	comp=N,3μm,13.5s,MS5.4						
HHC				LR	LR		
	comp=E,3μm,14.7s,MS5.4						
HHC				LR	LR		
	comp=Z,2μm,15.0s,MS5.1						
KIP	**Kipapa**	**40.97**	**130**	PFAKE		06 03 40.0	+13
KIP				LR	LR		
	comp=Z,2μm,19.0s,MS4.9						
BTO	**Baotou**	**41.12**	**276**	*e*P	**P**	**06 03 28.9**	**+0.5**
ALE	**Alert**	**41.14**	**9**	P	**P**	**06 03 28.2**	**+0.1**
	comp=Z,103nm,1.3s,mb5.3,SNR=5.5						
SSE	**Sheshan**	**41.16**	**256**	P	**P**	**06 03 29.0**	**+0.2**
SSE				AP	pP	06 03 32.3	-0.3
SSE				XP	sP	06 03 33.5	-0.6
SSE				S	**S**	**06 09 42.6**	**+1.0**
SSE				XS	sS	06 09 47.8	-0.1
SSE				AMB	AMB		
	comp=Z,49nm,0.8s,mb5.2						
SSE				AMB	AMB		
	comp=Z,285nm,8.7s						
SSE				LR	LR		
	comp=N,781nm,23.8s,MS4.6						
SSE				LR	LR		
	comp=E,596nm,23.8s,MS4.6						
SSE				LR	LR		
	comp=Z,901nm,25.3s,MS4.5						
B04A	**Port Angeles**	**41.22**	**70**	⇓P	**P**	**06 03 28.7**	**-0.4**
	baz=41						
A04A	**Legoe Bay, Lum**	**41.29**	**69**	⇑P	**P**	**06 03 29.4**	**-0.2**
	baz=41,SNR=7.4						
NLWA	**Neilton Lookou**	**41.40**	**71**	⇓P	**P**	**06 03 30.1**	**-0.5**
	baz=41						
NLWA	**Neilton Lookou**	**41.40**	**71**	*e*P	**P**	**06 03 31.1**	**+0.6**
	comp=Z,39nm,0.9s,mb5.0						
NLWA				LR	LR		
	comp=Z,947nm,19.0s,MS4.7						
A05A	**Maple Falls**	**41.47**	**68**	⇑P	**P**	**06 03 30.6**	**-0.6**
	baz=41						
TIY	**Taiyuan**	**41.59**	**271**	*e*P	**P**	**06 03 34.8**	**+2.5**
TIY				S	**S**	**06 09 51.9**	**+3.9**
TIY				LR	LR		
	comp=N,1μm,12.4s,MS5.1						
TIY				LR	LR		
	comp=E,795nm,11.4s,MS5.1						
TIY				LR	LR		
	comp=Z,1μm,12.6s,MS5.0						
C04A	**Brinnon**	**41.71**	**70**	⇑P	**P**	**06 03 32.7**	**-0.4**
	baz=42						
A06A	**Chilliwack**	**41.74**	**67**	⇓P	**P**	**06 03 33.0**	**-0.3**
	baz=42,SNR=8.6						
NJ2	**Nanjing**	**41.79**	**259**	*e*P	**P**	**06 03 35.5**	**+1.5**
NJ2				AP	pP	06 03 39.3	+1.5
NJ2				XP	sP	06 03 41.8	+2.5
NJ2				PP	PP	06 05 15.6	+5.1
NJ2				S	**S**	**06 09 51.5**	**+0.5**
NJ2				XS	sS	06 09 58.0	+0.7
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,1μm,5.2s						
NJ2				LR	LR		
	comp=N,510nm,14.6s,MS4.8						
NJ2				LR	LR		
	comp=E,810nm,11.7s,MS4.8						
GNW	**Green Mountain**	**41.88**	**70**	*e*P	**P**	**06 03 35.5**	**+1.0**
	comp=E,22nm,1.2s,mb4.7						
B05A	**Bryant**	**41.88**	**69**	⇓P	**P**	**06 03 34.3**	**-0.2**
	baz=42,SNR=10						
JCW	**Jim Creek**	**42.01**	**69**	*e*P	**P**	**06 03 36.2**	**+0.6**
E03A	**Lebam**	**42.06**	**72**	⇑P	**P**	**06 03 35.7**	**-0.3**
	baz=42						
B06A	**Marblemount**	**42.07**	**68**	⇑P	**P**	**06 03 36.0**	**-0.1**
	baz=42						
RPW	**Rockport**	**42.09**	**68**	*e*P	**P**	**06 03 36.5**	**+0.3**
D04A	**Dobbs Creek Ra**	**42.15**	**71**	⇑P	**P**	**06 03 36.5**	**-0.3**
	baz=42						
BMW	**Boistfort Moun**	**42.29**	**72**	*e*P	**P**	**06 03 38.7**	**+0.8**
A07A	**Ashnola River,**	**42.37**	**67**	⇑P	**P**	**06 03 38.4**	**-0.1**
	baz=42,SNR=26						
F03A	**Seaside**	**42.42**	**72**	⇑P	**P**	**06 03 39.1**	**+0.1**
	baz=42						
C05A	**Tolt Reservoir**	**42.43**	**69**	⇑P	**P**	**06 03 38.8**	**-0.2**
	baz=42,SNR=8.7						
E04A	**Onalaska**	**42.50**	**71**	⇑P	**P**	**06 03 39.3**	**-0.3**
	baz=42						
D05A	**Enumclaw**	**42.56**	**70**	⇑P	**P**	**06 03 39.6**	**-0.4**
	baz=42,SNR=6.9						
C06A	**Tall Timber Ra**	**42.73**	**69**	⇓P	**P**	**06 03 41.5**	**+0.1**
	baz=42						
B07A	**Winthrop**	**42.85**	**67**	⇓P	**P**	**06 03 42.1**	**-0.2**
	baz=43,SNR=18						
LON	**Longmire**	**42.92**	**70**	*e*P	**P**	**06 03 44.7**	**+1.8**
LON				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
LON	**Longmire**	**42.92**	**70**	*e*P	**P**	**06 03 44.7**	**+1.7**
	comp=Z,8.5nm,0.7s,mb4.6						
A08A	**Turner Farm, O**	**43.02**	**66**	⇑P	**P**	**06 03 43.7**	**-0.1**
	baz=43,SNR=15						
E05A	**Randle**	**43.06**	**71**	⇑P	**P**	**06 03 43.7**	**-0.4**
	baz=43						
F04A	**Amboy**	**43.06**	**72**	⇑P	**P**	**06 03 43.6**	**-0.5**
	baz=43						
D06A	**Cle Elum**	**43.19**	**69**	⇓P	**P**	**06 03 44.7**	**-0.4**
	baz=43,SNR=7.9						
ETW	**Entiat**	**43.23**	**69**	*e*P	**P**	**06 03 45.7**	**+0.2**
C07A	**Waterville**	**43.33**	**68**	⇓P	**P**	**06 03 45.7**	**-0.6**
	baz=43,SNR=9.1						
B08A	**Colville Reser**	**43.33**	**67**	⇓P	**P**	**06 03 45.7**	**-0.6**
	baz=43,SNR=22						
A09A	**Danville**	**43.38**	**66**	⇓P	**P**	**06 03 46.4**	**-0.2**
	baz=43,SNR=18						
COR	**Corvallis**	**43.38**	**74**	*e*P	**P**	**06 03 47.9**	**+1.2**
COR				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.1						
COR				MLR	MLR		
	comp=Z,1μm,20.0s,MS4.9						
COR	**Corvallis**	**43.38**	**74**	*e*P	**P**	**06 03 47.9**	**+1.2**
	comp=Z,36nm,0.9s,mb5.1						
COR				LR	LR		
	comp=Z,1μm,20.0s,MS4.9						
I02A	**Mapleton**	**43.44**	**75**	⇓P	**P**	**06 03 47.1**	**-0.1**
	baz=43						
G04A	**Mulino**	**43.47**	**73**	⇓P	**P**	**06 03 47.0**	**-0.4**
	baz=43						
E06A	**Yakima**	**43.50**	**70**	⇑P	**P**	**06 03 47.6**	**-0.1**
	baz=43						
EBG	**Ellensburg**	**43.51**	**70**	P	**P**	**06 03 48.0**	**+0.3**
POHA	**Pohakuloa**	**43.55**	**128**	PFAKE		06 04 00.0	+12
POHA				LR	LR		
	comp=Z,1μm,19.0s,MS4.8						
F05A	**White Salmon**	**43.63**	**71**	⇑P	**P**	**06 03 48.2**	**-0.5**
	baz=43						
D07A	**Quincy**	**43.67**	**69**	⇑P	**P**	**06 03 48.7**	**-0.3**
	baz

baz=44,SNR=12
J02A Umpqua 43.98 75 ⇓P **P 06 03 51.6 0.0**
baz=44,SNR=15
F06A Goldendale 44.08 71 ⇑P **P 06 03 52.0 -0.3**
baz=44
G05A Wamic 44.10 72 ⇓P **P 06 03 52.3 -0.2**
baz=44,SNR=5.7
E07A Sunnyside 44.11 70 ⇓P **P 06 03 52.0 -0.6**
baz=44
MDW Midway 44.13 69 P **P 06 03 52.8 +0.1**
C09A Chrisman Ranch 44.24 67 ⇓P **P 06 03 52.8 -0.7**
baz=44,SNR=11
OD2 Odessa Site #2 44.24 68 *e*P **P 06 03 53.5 -0.1**
D08A Wollman Farm, 44.33 68 ⇓P **P 06 03 53.7 -0.6**
baz=44
RSW Rattlesnake Hi 44.36 70 *e*P **P 06 03 55.0 +0.4**
I04A Tendick Farm, 44.37 74 ⇓P **P 06 03 54.1 -0.6**
baz=44,SNR=8.3
HAWA Hanford 44.39 70 *e*P **P 06 03 54.8 0.0**
HAWA comp=Z,21nm,0.9s,mb4.9 LR LR
comp=Z,875nm,19.0s,MS4.7
K02A Glendale 44.40 76 ⇓P **P 06 03 54.6 -0.3**
baz=44
CROR Criterion Ridg 44.44 72 P **P 06 03 55.5 +0.2**
F07A Phinny Hill Vi 44.47 70 ⇓P **P 06 03 55.1 -0.4**
baz=44,SNR=8.9
G06A Carlson Farm, 44.48 71 ⇑P **P 06 03 55.0 -0.5**
baz=44
B10A Chitwood Farm, 44.51 66 ⇑P **P 06 03 55.5 -0.3**
baz=44
H05A Madras 44.51 73 ⇓P **P 06 03 55.3 -0.5**
baz=44
A11A Hall Mountain, 44.58 65 ⇓P **P 06 03 55.8 -0.5**
baz=44
NEW Newport 44.58 66 PFAKE 06 04 10.0 +14
NEW LR LR
comp=Z,899nm,19.0s,MS4.7
E08A Dider Farm, El 44.59 69 ⇓P **P 06 03 55.6 -0.8**
baz=44
M01C Crescent City 44.62 78 ⇓P **P 06 03 56.6 -0.2**
baz=44
D09A Jones Farm, Ri 44.66 68 ⇓P **P 06 03 56.4 -0.6**
baz=44
L02A Cave Junction 44.72 77 ⇑P **P 06 03 57.2 -0.3**
baz=44,SNR=9.9
I05A Bend 44.79 73 ⇓P **P 06 03 57.8 -0.3**
baz=45,SNR=5.1
HUMO Hull Mountain 44.81 76 ⇑P **P 06 03 58.1 -0.1**
baz=45,SNR=15
HUMO Hull Mountain 44.81 76 *e*P **P 06 03 58.9 +0.7**
comp=Z,14nm,0.9s,mb4.8
HUMO LR LR
comp=Z,1μm,20.0s,MS4.7
B11A Sandpoint 44.88 65 ⇓P **P 06 03 57.7 -1.0**
baz=45
J04A Umpqua Nationa 44.89 75 ⇑P **P 06 03 58.7 -0.1**
baz=45,SNR=13
VIPM Ingram Point 44.94 72 P **P 06 03 59.2 0.0**
H06A Lindquist Farm 44.96 72 ⇓P **P 06 03 58.8 -0.5**
baz=45,SNR=7.1
G07A Ruggs Ranch, H 45.00 71 ⇓P **P 06 03 59.2 -0.6**
baz=45
E09A Wood Farm, Sta 45.08 69 ⇓P **P 06 03 59.7 -0.6**
baz=45,SNR=9.2
F08A Pendleton 45.17 70 ⇓P **P 06 04 00.8 -0.2**
baz=45
C11A Tepee Creek (N 45.30 66 ⇑P **P 06 04 01.6 -0.5**
baz=45,SNR=11
JCC Jacoby Creek 45.34 79 ⇓P **P 06 04 02.3 -0.1**
baz=45
J05A Fort Rock 45.36 74 ⇑P **P 06 04 02.6 0.0**
baz=45,SNR=28
G08A Pilot Rock 45.38 70 ⇑P **P 06 04 02.4 -0.3**
baz=45,SNR=6.8
BUOR Burton Butte 45.42 76 P **P 06 04 03.7 +0.6**
H07A Lands Inn, Kim 45.48 72 ⇓P **P 06 04 03.2 -0.3**
baz=45
K04A Chilquin 45.50 75 ⇑P **P 06 04 03.5 -0.2**
baz=45
YBH Yreka Blue Hor 45.51 77 P **P 06 04 04.8 +1.0**
comp=Z,18nm,0.9s,mb5.0,baz=342,slow=3.2,SNR=38
YBH Yreka Blue Hor 45.51 77 *e*P **P 06 04 04.6 +0.8**
YBH pmax pmax
comp=Z,17nm,1.0s
YBH MLR MLR
comp=Z,816nm,20.0s
YBH Yreka Blue Hor 45.51 77 ⇑P **P 06 04 03.9 +0.2**
baz=45,SNR=30
YBH Yreka Blue Hor 45.51 77 *e*P **P 06 04 04.5 +0.8**
comp=Z,17nm,1.0s,mb4.9
YBH LR LR
comp=Z,816nm,20.0s,MS4.7
WHN Wuhan 45.51 262 ⇓P **P 06 04 04.8 +0.9**
WHN S **S 06 10 43.8 -1.6**
WHN LR LR
comp=N,3μm,16.2s,MS5.5
WHN LR LR
comp=E,4μm,16.3s,MS5.5
WHN LR LR
comp=Z,2μm,16.2s,MS5.2
I06A Prineville 45.52 73 ⇑P **P 06 04 03.8 0.0**
baz=45,SNR=5.7
A13A Flathead Natio 45.63 64 ⇓P **P 06 04 04.2 -0.4**
baz=45
M02C Callahan 45.64 77 ⇓P **P 06 04 05.3 +0.4**
baz=46,SNR=21
E10A Myers Farm, Un 45.66 68 ⇑P **P 06 04 04.0 -1.0**
baz=45,SNR=10
L04A Klamath Falls 45.69 76 ⇓P **P 06 04 05.2 0.0**
baz=46,SNR=8.1
F09A S2 Ranch, Elgi 45.70 69 ⇑P **P 06 04 05.1 -0.2**
baz=46
D11A Klaveano Farm, 45.74 67 ⇑P **P 06 04 04.5 -1.0**
baz=46,SNR=9.8
N02C Big Bar 45.75 78 ⇑P **P 06 04 06.1 +0.3**
baz=46,SNR=21
I07A Izee 45.83 72 ⇓P **P 06 04 05.5 -0.8**
baz=46,SNR=6.9
LHEM Herd Peak 45.85 76 P **P 06 04 07.3 +0.8**
O01C Eel River Cons 45.90 79 ⇓P **P 06 04 06.9 0.0**
baz=46
K05A Summer Lake 45.91 74 ⇓P **P 06 04 06.8 -0.1**
baz=46,SNR=16
F10A Beach Ranch, E 45.91 69 ⇑P **P 06 04 06.1 -0.8**
baz=46,SNR=15
B13A Whitefish 45.94 64 ⇑P **P 06 04 06.4 -0.7**
baz=46,SNR=11
M04C Macdoel 45.97 76 ⇑P **P 06 04 07.4 -0.1**
baz=46,SNR=17
J06A Christmas Vall 45.99 73 ⇓P **P 06 04 07.6 0.0**
baz=46,SNR=22
H08A Prairie City 46.02 71 ⇑P **P 06 04 07.4 -0.4**
baz=46
G09A Cove 46.04 70 ⇑P **P 06 04 07.5 -0.5**
baz=46
A14A Double T Ranch 46.13 63 ⇑P **P 06 04 08.1 -0.4**
baz=46
M03C McCloud 46.14 77 ⇓P **P 06 04 08.7 -0.1**
baz=46,SNR=11
XAN Xi'an 46.19 270 P **P 06 04 09.3 +0.1**
XAN XP sP 06 04 16.5 +1.9
XAN PCP PcP 06 05 45.3 +0.4
XAN PP PP 06 05 58.0 +0.6
XAN SCP ScP 06 09 33.1 -4.5
XAN PCS PcS 06 09 35.1 -4.3
XAN S **S 06 10 54.3 -0.7**
XAN SCS ScS 06 14 00.1 -4.2
XAN AMB AMB
comp=Z,30nm,1.3s,mb5.1
XAN AMB AMB
comp=Z,177nm,8.2s
XAN LR LR
comp=N,603nm,15.0s,MS5.0
XAN LR LR
comp=E,1μm,15.0s,MS5.0
XAN LR LR
comp=Z,1μm,11.7s,MS5.1
K06A Valley Falls 46.22 74 ⇑P **P 06 04 09.2 -0.2**
baz=46,SNR=23
E11A Bogner Ranch, 46.23 68 ⇓P **P 06 04 08.8 -0.6**
baz=46
D12A Red Ives Fores 46.27 66 ⇓P **P 06 04 08.8 -0.9**
baz=46
C13A Hot Springs 46.30 65 ⇑P **P 06 04 09.4 -0.5**
baz=46
WDC Whiskeytown Da 46.35 78 *e*P **P 06 04 11.0 +0.6**
WDC pmax pmax
comp=Z,17nm,0.9s,mb5.0
WDC MLR MLR
comp=Z,567nm,19.0s,MS4.5
WDC Whiskeytown Da 46.35 78 ⇓P **P 06 04 10.5 +0.1**
baz=46,SNR=14
WDC Whiskeytown Da 46.35 78 *e*P **P 06 04 11.0 +0.6**
comp=Z,17nm,0.9s,mb5.0
WDC LR LR
comp=Z,567nm,19.0s,MS4.5
L05A Lakeview 46.38 75 ⇑P **P 06 04 11.1 +0.5**
baz=46,SNR=13
J07A Hines 46.39 73 ⇓P **P 06 04 10.4 -0.3**
baz=46,SNR=7.5
G10A Bishop Farm, J 46.40 69 ⇓P **P 06 04 10.3 -0.5**
baz=46,SNR=17
I08A Drewsey 46.46 72 ⇓P **P 06 04 11.1 -0.2**
baz=46,SNR=6.5
O02C Red Bluff 46.47 78 ⇓P **P 06 04 11.6 +0.2**
baz=46,SNR=11
H09A Durkee 46.49 70 ⇑P **P 06 04 11.3 -0.2**
baz=46,SNR=8.1
KBS Kingsbay 46.54 354 PFAKE 06 04 20.0 +8.5
KBS LR LR
comp=Z,819nm,20.0s,MS4.7
E12A Beaver Dam Sad 46.54 67 ⇓P **P 06 04 11.1 -0.7**
baz=46,SNR=25
F11A Grangeville 46.55 68 ⇑P **P 06 04 11.3 -0.6**
baz=46
BMO Blue Mountains 46.57 70 *e*P **P 06 04 12.4 +0.3**
comp=Z,18nm,1.2s,mb4.9
BMO LR LR
comp=Z,1μm,22.0s,MS4.8
M05C Lookout 46.64 76 ⇓P **P 06 04 12.8 0.0**
baz=46,SNR=12
C14A Swan Lake 46.69 65 ⇓P **P 06 04 12.4 -0.5**
baz=46
ZALV Zalesovo Beam 46.72 306 P **P 06 04 11.3 -1.8**
comp=Z,5.4nm,0.7s,mb4.6,baz=43,slow=6.9,SNR=11
ZALV LR LR 06 24 24.2
comp=Z,872nm,18.7s,MS4.7,baz=52,slow=37
ZALV Zalesovo Beam 46.72 306 P **P 06 04 11.3 -1.8**
ZALV pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ZALV MLR MLR
comp=Z,872nm,18.7s,MS4.7
D13A Huson 46.72 66 ⇑P **P 06 04 12.9 -0.4**
baz=46
MOD Modoc 46.77 75 ⇑P **P 06 04 13.4 -0.4**
baz=47,SNR=31
MOD Modoc 46.77 75 *e*P **P 06 04 14.2 +0.5**
comp=Z,25nm,0.6s,mb5.3
MOD LR LR
comp=Z,908nm,21.0s,MS4.7
G11A Walters Elk Ra 46.80 69 ⇑P **P 06 04 13.3 -0.6**
baz=47,SNR=21
GASB Alder Springs 46.86 79 ⇑P **P 06 04 14.4 0.0**
baz=47
K07A Rock Creek Ran 46.86 73 ⇑P **P 06 04 14.4 0.0**
baz=47
J08A Circle Bar Ran 46.87 72 ⇑P **P 06 04 13.9 -0.5**
baz=47
I09A Lost Marbles R 46.88 71 ⇓P **P 06 04 14.0 -0.6**
baz=47,SNR=7.5
NVS Novosibirsk 46.93 308 *e*P **P 06 04 12.9 -1.9**
NVS *i* 06 05 59.7
NVS *e*S **S 06 10 55.2 -10**
NVS pmax pmax
comp=Z,45nm,1.4s,mb5.2
NVS pmax pmax
comp=N,24nm,1.2s
NVS pmax pmax
comp=E,31nm,1.5s
NVS smax
comp=N,24nm,1.7s
SPITS Spitsbergen Ar 46.95 353 P **P 06 04 13.7 -0.9**
comp=N,16nm,0.8s,mb5.0,baz=64,slow=4.5,SNR=8.4
SPITS Spitsbergen Ar 46.95 353 P **P 06 04 13.7 -1.0**
SPITS pmax pmax
comp=Z,16nm,0.8s
B15A Bradely Ranch, 46.98 63 ⇓P **P 06 04 14.5 -0.8**
baz=47
H10A Noah's Angus R 47.05 70 ⇓P **P 06 04 14.9 -1.0**
baz=47,SNR=11
HOPS Hopland 47.09 80 PFAKE 06 04 30.0 +14
HOPS LR LR
comp=Z,1μm,19.0s,MS4.8
M06C Likely Place G 47.12 76 ⇑P **P 06 04 16.4 -0.1**
baz=47,SNR=5.3
F12A Elk City 47.13 68 ⇑P **P 06 04 16.1 -0.4**
baz=47
MSO Missoula 47.17 66 *e*P **P 06 04 16.4 -0.4**
comp=Z,22nm,1.2s,mb5.0
MSO LR LR
comp=Z,641nm,19.0s,MS4.6
D14A Greenough 47.24 65 ⇓P **P 06 04 16.8 -0.5**
baz=47,SNR=13
L07A Adell 47.24 74 ⇑P **P 06 04 17.1 -0.2**
baz=47,SNR=18
K08A Mann Creek Ran 47.26 73 ⇓P **P 06 04 17.5 0.0**
baz=47
E13A Victor 47.27 66 ⇓P **P 06 04 16.9 -0.6**
baz=47
J09A Fry Pan Ranch, 47.28 72 ⇓P **P 06 04 17.1 -0.5**
baz=47,SNR=29
C15A Salmond Ranch, 47.29 64 ⇑P **P 06 04 17.2 -0.4**
baz=47,SNR=23
O04C Chester 47.36 77 ⇑P **P 06 04 18.4 +0.1**
baz=47,SNR=23
WVOR Wild Horse Val 47.37 73 PFAKE 06 04 30.0 +12
WVOR LR LR
comp=Z,1μm,19.0s,MS4.8
H11A Donnelly 47.38 69 ⇑P **P 06 04 17.9 -0.5**
baz=47,SNR=23
CHMT Chamberlain Mo 47.48 65 *e*P **P 06 04 18.5 -0.7**
MNRC McLaughlin Nat 47.53 79 ⇓P **P 06 04 19.9 +0.2**
baz=47
F13A Darby 47.61 67 ⇓P **P 06 04 19.3 -0.9**
baz=47
ORV Oroville 47.63 78 ⇓P **P 06 04 20.1 -0.3**
baz=47,SNR=23
E14A Clinton 47.67 66 ⇑P **P 06 04 20.2 -0.4**
baz=47,SNR=17
NSHM Saint Helena R 47.68 80 *e*P **P 06 04 19.9 -0.9**
O05C Quincy 47.69 77 ⇓P **P 06 04 20.7 -0.2**
baz=48,SNR=14
L08A Fields 47.69 73 ⇓P **P 06 04 20.4 -0.5**
baz=48,SNR=14
K09A Rome 47.71 72 ⇑P **P 06 04 20.7 -0.3**
baz=48,SNR=7.0
C16A Fuhringer Ranc 47.73 63 ⇑P **P 06 04 20.5 -0.6**
baz=48
LZH Lanzhou 47.75 276 ⇓P **P 06 04 22.3 +0.9**
LZH AP pP 06 04 25.5 +0.2
LZH PP PP 06 06 13.0 +0.1
LZH S **S 06 11 16.3 -1.0**
LZH XS sS 06 11 24.0 +0.4
LZH SS SS 06 14 38.3 -6.9
LZH AMB AMB
comp=Z,70nm,1.0s,mb5.7
LZH AMB AMB
comp=Z,137nm,4.0s
LZH LR LR
comp=N,4μm,14.1s
LZH LR LR
comp=Z,5μm,14.2s,MS5.6
M07A Soldier Meadow 47.75 75 ⇑P **P 06 04 21.1 -0.2**
baz=48,SNR=30
MCCM Marconi Confer 47.77 81 PFAKE 06 04 30.0 +8.4
MCCM LR LR
comp=Z,847nm,20.0s,MS4.7
J10A Berg Farm, Mel 47.78 71 ⇓P **P 06 04 21.2 -0.3**
baz=48
N06A Buffalo Meadow 47.79 76 ⇓P **P 06 04 21.3 -0.3**
baz=48,SNR=26
D15A Lincoln 47.79 65 ⇑P **P 06 04 21.1 -0.5**
baz=48,SNR=11
GTA Gaotai 47.84 282 ⇑P **P 06 04 22.3 +0.2**
GTA AP pP 06 04 25.6 -0.3
GTA XP sP 06 04 28.8 +1.4
GTA PP PP 06 06 14.3 +0.6
GTA S **S 06 11 18.5 0.0**
GTA XS sS 06 11 26.8 +1.9
GTA SS SS 06 14 40.5 -6.1
GTA AMB AMB
comp=Z,25nm,1.3s,mb5.1
GTA AMB AMB
comp=Z,223nm,4.8s
GTA LR LR
comp=N,3μm,16.5s,MS5.4
GTA LR LR
comp=E,2μm,16.2s,MS5.4
GTA LR LR
comp=Z,2μm,21.0s,MS5.1
I11A Placerville 47.91 70 ⇓P **P 06 04 22.0 -0.6**
baz=48,SNR=14
Q03C Winters 47.95 79 ⇓P **P 06 04 22.4 -0.5**
baz=48
BEKR Beckwourth 48.08 77 ⇓P **P 06 04 23.6 -0.3**
baz=48,SNR=28
G13A Cobalt 48.10 68 ⇓P **P 06 04 23.5 -0.5**
baz=48
H12A Diamond D Ranc 48.11 69 ⇓P **P 06 04 23.8 -0.4**
baz=48
F14A Wisdom 48.11 66 ⇑P **P 06 04 23.7 -0.4**
baz=48
E15A Deer Lodge 48.12 65 ⇑P **P 06 04 23.3 -0.8**
baz=48,SNR=16
K10A MacKenzie Ranc 48.14 72 ⇓P **P 06 04 24.0 -0.3**
baz=48,SNR=15
M08A Happy Creek Ra 48.16 74 ⇑P **P 06 04 24.4 -0.1**
baz=48,SNR=14
Q04C Lincoln 48.18 79 ⇓P **P 06 04 24.4 -0.3**
baz=48
O06A Flanigan 48.18 76 ⇑P **P 06 04 24.6 -0.1**
baz=48,SNR=9.3
N07B Gerlach 48.26 75 ⇑P **P 06 04 25.6 +0.3**
baz=48,SNR=11
FFC Flin Flon 48.27 51 PFAKE 06 04 40.0 +15
FFC LR LR
comp=Z,2μm,20.0s,MS5.0
MFID Camas Ranch 48.31 70 ⇓P **P 06 04 25.3 -0.3**
baz=48
P05C Yuba Gap, Truc 48.31 78 ⇓P **P 06 04 25.2 -0.5**
baz=48,SNR=11
C17A Wharram Farm, 48.35 63 ⇓P **P 06 04 25.2 -0.7**
baz=48,SNR=20
G14A Jackson 48.43 67 ⇑P **P 06 04 25.8 -0.8**
baz=48
H13A Challis 48.43 68 ⇑P **P 06 04 26.0 -0.6**
baz=48,SNR=14
P06A Stead Airport, 48.47 77 ⇑P **P 06 04 26.3 -0.6**
baz=48,SNR=9.7
F15A Butte 48.57 66 ⇑P **P 06 04 27.0 -0.6**
baz=48,SNR=9.1
LAVA Lava Cap Winer 48.60 78 ⇑P **P 06 04 27.7 -0.3**
baz=48,SNR=33
K11A Parker Ranch, 48.61 71 ⇑P **P 06 04 27.7 -0.3**
baz=48,SNR=5.6
EGMT Eagleton 48.63 62 PFAKE 06 04 40.0 +12
EGMT LR LR
comp=Z,1μm,20.0s,MS4.8
M09A Marrel Ranch, 48.70 73 ⇑P **P 06 04 28.7 0.0**
baz=48,SNR=12
O07A Toulon 48.73 76 ⇓P **P 06 04 28.6 -0.3**
baz=48,SNR=11
N08A GE Springer Mi 48.74 75 ⇓P **P 06 04 28.6 -0.4**
baz=48,SNR=18
PAHR Pah Rah Range 48.74 76 *e*P **P 06 04 29.5 +0.5**
comp=Z,25nm,1.0s,mb5.2
WENL Wente Vineyard 48.78 80 ⇑P **P 06 04 28.7 -0.6**
baz=49
WCN Washoe City 48.80 77 ⇑P **P 06 04 29.5 +0.1**
baz=49,SNR=18
J12A Stokes Ranch, 48.82 70 ⇑P **P 06 04 29.4 -0.2**
baz=49,SNR=12
DLMT Dillon 48.82 66 *e*P **P 06 04 29.4 -0.1**
comp=Z,16nm,1.1s,mb5.0
L10A Juniper Basin 48.82 72 ⇑P **P 06 04 29.2 -0.4**
baz=49,SNR=13
R04C Big Horse Ranc 48.82 79 ⇑P **P 06 04 28.9 -0.7**
baz=49
H14A Leadore 48.88 68 ⇓P **P 06 04 29.5 -0.5**
baz=49,SNR=11
I13A Wildhorse Cree 48.93 69 ⇓P **P 06 04 29.9 -0.5**
baz=49,SNR=25
HLID Hailey 48.99 69 ⇑P **P 06 04 30.4 -0.5**
baz=49,SNR=9.8
HLID Hailey 48.99 69 *e*P **P 06 04 30.7 -0.2**
comp=Z,11nm,0.9s,mb4.9
HLID LR LR
comp=Z,893nm,21.0s,MS4.7
G15A Dillon 49.00 67 ⇓P **P 06 04 30.2 -0.8**
baz=49,SNR=11
R05C Kirkwood Meado 49.02 78 ⇑P **P 06 04 31.1 0.0**
baz=49,SNR=8.4
MCMT McKenzie Canyo 49.03 67 *e*P **P 06 04 30.4 -0.8**
N09A Rock Creek Ran 49.04 74 ⇑P **P 06 04 31.2 -0.1**
baz=49,SNR=9.8
O08A Rochester Mine 49.05 75 ⇑P **P 06 04 31.6 +0.2**
baz=49,SNR=16
P07A Fallon 49.14 76 ⇓P **P 06 04 32.0 -0.1**
baz=49
FCC Fort Churchill 49.15 43 *e*P **P 06 04 32.8 +1.0**
FCC pmax pmax
comp=Z,34nm,1.1s,mb5.3
FCC Fort Churchill 49.15 43 *e*P **P 06 04 32.8 +1.0**
comp=Z,34nm,1.1s,mb5.3
M10A I.L. Ranch, Tu 49.15 73 ⇑P **P 06 04 32.0 -0.1**
baz=49,SNR=10
BOZ Bozeman (W) 49.16 66 PFAKE 06 04 40.0 +7.9
BOZ LR LR
comp=Z,261nm,22.0s,MS4.2
L11A Cat Creek Ranc 49.16 72 ⇑P **P 06 04 32.1 -0.2**
baz=49,SNR=20
J13A Cove Ranch, Pi 49.23 69 ⇑P **P 06 04 32.4 -0.3**
baz=49,SNR=13
H15A Lima 49.27 67 ⇓P **P 06 04 32.7 -0.4**
baz=49,SNR=8.7
I14A Mackay 49.28 68 ⇓P **P 06 04 32.8 -0.4**
baz=49,SNR=30
CMB Columbia Colle 49.29 79 *e*P **P 06 04 33.8 +0.5**
CMB *e* 06 05 56.8
CMB pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
CMB MLR MLR
comp=Z,1μm,21.0s,MS4.8
CMB Columbia Colle 49.29 79 ⇑P **P 06 04 33.0 -0.3**
baz=49
CMB Columbia Colle 49.29 79 *e*P **P 06 04 33.8 +0.5**
comp=Z,7.7nm,0.7s,mb4.8
CMB *e*PcP PcP 06 05 56.8 +0.9
CMB LR LR
comp=Z,1μm,21.0s,MS4.8
DAG Danmarks Havn 49.30 2 *e*P **P 06 04 33.0 +0.1**
DAG Danmarks Havn 49.30 2 *i* P **P 06 04 33.0 +0.1**
K12A Draper Farm, C 49.33 71 ⇓P **P 06 04 33.4 -0.1**
baz=49,SNR=20
PACP Pacheco Peak 49.47 80 ⇓P **P 06 04 34.8 +0.2**
baz=49
BMN Battle Mountai 49.49 74 *e*P **P 06 04 35.2 +0.5**
BMN pmax pmax
comp=Z,24nm,1.0s,mb5.2
BMN MLR MLR
comp=Z,899nm,21.0s,MS4.7
BMN Battle Mountai 49.49 74 *e*P **P 06 04 35.2 +0.4**
comp=Z,24nm,1.0s,mb5.2
BMN LR LR
comp=Z,899nm,21.0s,MS4.7
P08A Dixie Valley 49.49 76 ⇓P **P 06 04 34.8 0.0**
baz=49
R06C Coleville 49.50 78 ⇓P **P 06 04 34.8 0.0**
baz=49,SNR=35
SAO San Andreas Ge 49.55 81 *e*P **P 06 04 37.2 +2.0**
SAO pmax pmax
comp=Z,14nm,0.8s,mb5.0
SAO MLR MLR
comp=Z,792nm,20.0s,MS4.7
SAO San Andreas Ge 49.55 81 *e*P **P 06 04 37.2 +1.9**
comp=Z,14nm,0.8s,mb5.0
SAO LR LR
comp=Z,792nm,20.0s,MS4.7
Q07A Schurz 49.59 77 ⇓P **P 06 04 35.6 +0.1**
baz=49
L12A House Creek Ra 49.59 71 ⇑P **P 06 04 35.5 +0.1**
baz=49,SNR=18
M11A Holland Ranch, 49.63 72 ⇑P **P 06 04 36.0 +0.2**
baz=49
J14A Carey 49.64 69 ⇓P **P 06 04 35.8 -0.1**
baz=49,SNR=7.0
N10A Dunphy 49.70 74 ⇑P **P 06 04 36.7 +0.4**
baz=50
S06C San Francisco 49.71 79 ⇑P **P 06 04 36.4 0.0**
baz=50,SNR=22
I15A Monteview 49.77 68 ⇑P **P 06 04 36.8 0.0**

baz=50
QLMT Earthquake Lak 49.79 66 *e*P **P 06 04 37.3 +0.3**
S05C Merced 49.80 79 ⇓P **P 06 04 36.6 -0.5**
baz=50
H16A Russell Place, 49.98 66 ⇑P **P 06 04 37.9 -0.5**
baz=50,SNR=33
R07C Lee Vining 50.03 78 ⇓P **P 06 04 39.1 +0.2**
baz=50,SNR=19
N11A Elko Archery C 50.07 73 ⇓P **P 06 04 39.6 +0.5**
baz=50
GCMT Greycliff 50.11 64 *e*P **P 06 04 40.1 +0.7**
P09A Austin 50.13 75 ⇓P **P 06 04 39.0 -0.6**
baz=50
M12A Wells 50.13 72 ⇑P **P 06 04 39.4 -0.2**
baz=50,SNR=14
Q08A Gabbs 50.14 76 ⇓P **P 06 04 39.7 -0.1**
baz=50,SNR=56
YMR Madison River 50.15 66 *e*P **P 06 04 40.6 +0.9**
comp=Z,57nm,1.2s,mb5.5
U04C Hernandez Rese 50.21 81 ⇓P **P 06 04 40.5 +0.2**
baz=50
L13A Double Diamond 50.22 71 ⇑P **P 06 04 40.2 -0.1**
baz=50,SNR=15
NVAR Mina Array Bea 50.22 77 P **P 06 04 40.6 +0.3**
comp=Z,21nm,0.8s,mb5.2,baz=293,slow=7.1,SNR=66
NVAR ScP ScP 06 09 53.9 -0.8
comp=Z,0.6nm,0.7s,baz=303,slow=5.1,SNR=2.6
K14A Jones Ranch, D 50.34 70 ⇓P **P 06 04 41.3 0.0**
baz=50,SNR=16
T06C Milleton Lake 50.39 79 ⇑P **P 06 04 41.4 -0.2**
baz=50,SNR=16
I16A Newdale 50.39 67 ⇓P **P 06 04 41.4 -0.1**
baz=50,SNR=8.7
KCC Kaiser Creek 50.40 79 ⇓P **P 06 04 41.2 -0.5**
baz=50,SNR=20
ELK Elko 50.40 73 *e*P **P 06 04 42.6 +1.0**
ELK pmax pmax
comp=Z,11nm,0.9s
ELK MLR MLR
comp=Z,1μm,20.0s
ELK Elko 50.40 73 *e*P **P 06 04 42.6 +1.0**
comp=Z,11nm,0.9s,mb4.9
ELK LR LR
comp=Z,1μm,20.0s,MS4.9
N12A Clover Valley, 50.44 72 ⇑P **P 06 04 41.5 -0.4**
baz=50,SNR=12
P10A Eureka 50.46 75 ⇑P **P 06 04 42.2 0.0**
baz=50,SNR=8.6
LKWY Lake 50.52 66 *e*P **P 06 04 44.3 +1.8**
LKWY pmax pmax
comp=Z,16nm,0.9s,mb5.0
LKWY MLR MLR
comp=Z,1μm,21.0s,MS4.9
LKWY Lake 50.52 66 *e*P **P 06 04 44.3 +1.8**
comp=Z,16nm,0.9s,mb5.0
LKWY LR LR
comp=Z,1μm,21.0s,MS4.9
O11A Cowboy Ranch, 50.58 74 ⇓P **P 06 04 42.7 -0.2**
baz=50
M13A Montello 50.59 71 ⇓P **P 06 04 43.0 0.0**
baz=50
K15A Arbon 50.61 69 ⇓P **P 06 04 42.9 -0.3**
baz=50,SNR=12
L14A Malta 50.65 70 ⇓P **P 06 04 43.3 -0.2**
baz=50,SNR=20
IMW Indian Meadow 50.67 67 *e*P **P 06 04 44.3 +0.6**
comp=Z,26nm,1.0s,mb5.1
RLMT Red Lodge 50.76 65 *e*P **P 06 04 44.9 +0.5**
comp=Z,42nm,1.1s,mb5.3
RLMT LR LR
comp=Z,1μm,19.0s,MS4.9
RRI2 Red Ridge 50.83 68 *e*P **P 06 04 46.6 +1.7**
comp=Z,11nm,0.9s,mb4.8
MOOW Moose Ponds 50.88 67 *e*P **P 06 04 45.5 +0.3**
comp=Z,15nm,1.2s,mb4.8
N13A Wendover, West 50.90 72 ⇑P **P 06 04 45.3 -0.2**
baz=51,SNR=6.6
TPAW Teton Pass 50.94 67 *e*P **P 06 04 46.2 +0.6**
comp=Z,17nm,1.1s,mb4.9
TPAW *e*PcP PcP 06 06 00.9 -1.0
S08C White Mtn Res 50.94 78 ⇑P **P 06 04 46.0 +0.2**
baz=51,SNR=8.8
M14A Sheep Mountain 50.95 71 ⇓P **P 06 04 45.5 -0.3**
baz=51,SNR=7.3
O12A Currie 51.00 73 ⇑P **P 06 04 46.0 -0.1**
baz=51,SNR=12
HELL Mitchell Peak 51.01 79 ⇓P **P 06 04 46.2 -0.1**
baz=51,SNR=27
K16A Soda Springs 51.03 68 ⇓P **P 06 04 46.6 +0.3**
baz=51,SNR=12
PTRM Twissleman Ran 51.03 81 P **P 06 04 47.4 +0.8**
Q10A Clear Creek Ra 51.04 75 ⇑P **P 06 04 46.7 +0.2**
baz=51,SNR=24
LOHW Long Hollow 51.04 67 *e*P **P 06 04 46.8 +0.3**
comp=Z,10nm,0.7s,mb4.9
R09A Tonopah 51.06 76 ⇑P **P 06 04 46.6 -0.1**
baz=51,SNR=39
SNOW Snow King Moun 51.06 67 *e*P **P 06 04 47.0 +0.4**
comp=Z,18nm,1.2s,mb4.9
REDW Red Top Meadow 51.08 67 *e*P **P 06 04 47.6 +0.9**
comp=Z,21nm,1.3s,mb4.9
HVU Hansel Valley 51.08 70 *e*P **P 06 04 47.1 +0.3**
HVU pmax pmax
comp=Z,15nm,0.8s,mb5.0
HVU Hansel Valley 51.08 70 *e*P **P 06 04 47.1 +0.3**
comp=Z,15nm,0.8s,mb5.0
TPH Tonopah 51.09 77 *e*P **P 06 04 47.6 +0.7**
TPH pmax pmax
comp=Z,32nm,0.9s,mb5.2
TPH MLR MLR
comp=Z,810nm,22.0s,MS4.7
TPH Tonopah 51.09 77 *e*P **P 06 04 47.6 +0.7**
comp=Z,32nm,0.9s,mb5.2
TPH LR LR
comp=Z,810nm,22.0s,MS4.7
L15A Malad City 51.14 70 ⇑P **P 06 04 46.7 -0.6**
baz=51,SNR=12
DGMT Dagmar 51.19 58 *e*P **P 06 04 48.0 +0.5**
comp=Z,41nm,1.0s,mb5.3
DGMT LR LR
comp=Z,2μm,19.0s,MS5.0
LAO LASA Array 51.33 61 *e*P **P 06 04 48.7 +0.2**
comp=Z,47nm,1.0s,mb5.4
LAO LR LR
comp=Z,2μm,19.0s,MS5.1
S09A Goldfield 51.33 77 ⇓P **P 06 04 48.6 0.0**
baz=51,SNR=18
AHID Auburn Hatcher 51.34 68 *e*P **P 06 04 49.1 +0.4**
comp=Z,18nm,1.0s,mb4.9
AHID LR LR
comp=Z,792nm,19.0s,MS4.8
CD2 Chengdu 51.46 271 ⇓ *i*P **P 06 04 50.5 +0.7**
CD2 AP pP 06 04 55.0 +1.3
CD2 XP sP 06 04 58.3 +3.1
CD2 PCP PcP 06 06 05.3 +1.3
CD2 PP PP 06 06 48.4 +1.6
CD2 S **S 06 12 08.3 -1.1**
CD2 XS sS 06 12 15.9 +0.1
CD2 AMB AMB
comp=Z,50nm,0.9s,mb5.4
CD2 AMB AMB
comp=Z,370nm,7.2s
CD2 LR LR
comp=N,2μm,16.8s,MS5.4
CD2 LR LR
comp=E,2μm,16.8s,MS5.4
CD2 LR LR
comp=Z,1μm,18.0s,MS5.0
R10A Warm Springs 51.47 76 ⇓P **P 06 04 49.1 -0.6**
baz=51,SNR=18
M15A Larsen Ranch, 51.47 70 ⇓P **P 06 04 49.3 -0.4**
baz=51,SNR=7.5
N14A Grayback Hills 51.48 71 ⇓P **P 06 04 49.2 -0.5**
baz=51
S10A Tonopah Range, 51.55 76 ⇑P **P 06 04 49.7 -0.7**
baz=51,SNR=18
VES Vestal, Richgr 51.56 80 ⇓P **P 06 04 50.0 -0.5**
baz=51,SNR=10.0
SPUT South Promonto 51.58 70 *e*P **P 06 04 50.9 +0.4**
L16A Fish Haven 51.66 69 ⇑P **P 06 04 50.8 -0.3**
baz=51
WMQ Urumqi 51.67 294 ⇑ *i*P **P 06 04 50.9 -0.3**
WMQ AP pP 06 04 55.5 +0.4
WMQ XP sP 06 04 58.0 +1.4
WMQ PCP PcP 06 06 06.5 +1.9
WMQ PP PP 06 06 51.8 +3.4
WMQ SCP ScP 06 09 57.0 -3.8
WMQ S **S 06 12 10.0 -2.0**
WMQ XS sS 06 12 20.0 +1.6
WMQ SS SS 06 15 45.0 -2.7
WMQ AMB AMB
comp=Z,42nm,1.2s,mb5.2
WMQ AMB AMB
comp=Z,354nm,5.4s
WMQ LR LR
comp=N,10μm,19.5s,MS5.9
WMQ LR LR
comp=E,7μm,20.9s,MS5.9
WMQ LR LR
comp=Z,4μm,27.2s
KURK Kurchatov 51.71 306 P **P 06 04 50.2 -1.1**
comp=Z,340nm,1.0s,mb6.2,SNR=54
KURK Kurchatov 51.71 306 P **P 06 04 51.0 -0.4**
comp=Z,42nm,1.1s,mb5.3,baz=52,slow=7.0,SNR=67
KURK PP PP 06 06 47.1 -1.5
comp=Z,11nm,0.9s,baz=47,slow=8.7,SNR=3.2
KURK ScP ScP 06 10 00.7 -0.1
comp=Z,5.3nm,1.0s,baz=48,slow=4.0,SNR=4.8
KURK Kurchatov 51.71 306 P **P 06 04 51.0 -0.3**
KURK 06 06 47.1
KURK pmax pmax
comp=Z,42nm,1.1s,mb5.3
KURK pmax pmax
comp=Z,11nm,0.9s,mb4.8
KURK Kurchatov 51.71 306 P **P 06 04 51.0 -0.4**
KURK PP PP 06 06 47.1 -1.4
KURK ScP ScP 06 10 00.7 -0.1
KURK LR LR
comp=Z,1μm,19.0s,MS5.0
CWC Cottonwood Cre 51.72 79 ⇑P **P 06 04 51.2 -0.5**
baz=52
GRAC Grapevine Rang 51.74 78 ⇓P **P 06 04 51.6 -0.2**
baz=52,SNR=14
GZH Guangzhou 51.75 256 P **P 06 04 49.1 -2.9**
GZH S **S 06 12 06.3 -7.2**
GZH LR LR
comp=N,725nm,17.3s,MS4.9
GZH LR LR
comp=E,877nm,18.8s,MS4.9
GZH LR LR
comp=Z,1μm,14.8s,MS5.0
Q12A Willow Creek R 51.79 74 ⇓P **P 06 04 52.2 +0.1**
baz=52
R11A Troy Canyon, C 51.83 75 ⇓P **P 06 04 52.0 -0.4**
baz=52,SNR=18
HWUT Hardware Ranch 51.86 69 *e*P **P 06 04 53.3 +0.7**
comp=Z,19nm,1.0s,mb5.0
HWUT LR LR
comp=Z,891nm,19.0s,MS4.8
P13A Bates Ranch, G 51.96 73 ⇓P **P 06 04 52.8 -0.6**
baz=52,SNR=12
M16A Huntsville 52.03 70 ⇑P **P 06 04 53.3 -0.6**
baz=52,SNR=12
ISA Isabella 52.04 80 *e*P **P 06 04 53.9 -0.1**
ISA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
ISA MLR MLR
comp=Z,739nm,22.0s,MS4.7
ISA Isabella 52.04 80 ⇑P **P 06 04 53.4 -0.6**
baz=52
ISA Isabella 52.04 80 *e*P **P 06 04 53.9 -0.1**
comp=Z,8.1nm,0.8s,mb4.7
ISA LR LR
comp=Z,739nm,22.0s,MS4.7
DAC Darwin (Calif) 52.12 78 PFAKE 06 05 10.0 +15
DAC LR LR
comp=Z,787nm,21.0s,MS4.7
DUG Dugway 52.13 72 *e*P **P 06 04 55.0 +0.4**
DUG pmax pmax
comp=Z,19nm,1.0s,mb5.0
DUG MLR MLR
comp=Z,675nm,21.0s,MS4.7
DUG Dugway 52.13 72 *e*P **P 06 04 55.0 +0.4**
comp=Z,19nm,1.0s,mb5.0
DUG LR LR
comp=Z,675nm,21.0s,MS4.7
SUMG Summit 52.16 10 *e*P **P 06 04 54.7 +0.3**
comp=Z,14nm,1.0s,mb4.9
SUMG *e*PP pP 06 04 58.1 -0.2
BW06 Boulder Array 52.18 67 PFAKE 06 05 10.0 +15
BW06 LR LR
comp=Z,947nm,21.0s,MS4.8
PDAR Pinedale Array 52.18 67 P **P 06 04 54.5 -0.4**
comp=Z,11nm,0.9s,mb4.8,baz=318,slow=4.2,SNR=31
PDAR LR LR 06 28 25.8
comp=Z,526nm,19.7s,MS4.6,baz=329,slow=38
ARVC Arvin 52.21 80 ⇑P **P 06 04 55.2 -0.1**
baz=52
S11A Rachel 52.23 76 ⇑P **P 06 04 55.0 -0.4**
baz=52,SNR=14
O15A The Old Anders 52.26 71 ⇑P **P 06 04 55.3 -0.3**
baz=52
Q13A Wheeler Ranch, 52.30 74 ⇓P **P 06 04 55.6 -0.4**
baz=52,SNR=28
MPMC Manual Prospec 52.33 79 ⇓P **P 06 04 56.0 -0.2**
baz=52,SNR=14
CTU Camp Tracy 52.38 70 *e*P **P 06 04 56.9 +0.3**
comp=Z,12nm,0.8s,mb4.9
P14A Drum Mountains 52.40 72 ⇑P **P 06 04 56.0 -0.6**
baz=52,SNR=14
R12A Pony Springs, 52.40 75 ⇓P **P 06 04 56.0 -0.7**
baz=52,SNR=16
FURC Furnace Creek, 52.41 78 ⇓P **P 06 04 56.2 -0.5**
baz=52,SNR=25
TPNV Topopah Spring 52.42 77 *e*P **P 06 04 57.5 +0.6**
TPNV pmax pmax
comp=Z,44nm,1.1s,mb5.3
TPNV MLR MLR
comp=Z,942nm,22.0s,MS4.8
TPNV Topopah Spring 52.42 77 *e*P **P 06 04 57.5 +0.7**
comp=Z,44nm,1.1s,mb5.3
TPNV LR LR
comp=Z,942nm,22.0s,MS4.8
MK31 Makanchi Array 52.51 300 *i*P **P 06 04 55.2 -2.2**
MK31 pmax pmax
comp=Z,12nm,0.7s,mb4.9
MK31 Makanchi Array 52.51 300 *i*P **P 06 04 55.3 -2.1**
MKAR Makanchi Array 52.51 300 P **P 06 04 55.8 -1.6**
comp=Z,7.7nm,0.7s,mb4.8,baz=51,slow=7.2,SNR=39
MKAR ScP ScP 06 10 03.5 -0.9
comp=Z,2.4nm,1.0s,baz=69,slow=6.6,SNR=3.7
MKAR LR LR 06 28 01.7
comp=Z,2μm,18.6s,MS5.1,baz=36,slow=37
MKAR Makanchi Array 52.51 300 P **P 06 04 55.8 -1.6**
MKAR ScP ScP 06 10 03.5 -0.9
MKAR LR LR 06 28 01.7
JLU Jordanelle 52.61 70 *e*P **P 06 04 58.6 +0.4**
LRMC Laurel Mountai 52.62 79 ⇑P **P 06 04 57.9 -0.4**
baz=52
OSI Osito Adit 52.63 81 ⇑P **P 06 04 58.1 -0.3**
baz=52
OSI Osito Adit 52.63 81 *e*P **P 06 04 59.1 +0.7**
comp=Z,26nm,0.8s,mb5.2
OSI *e*pP pP 06 05 02.7 +0.4
Q14A Sevier Lake (B 52.70 73 ⇓P **P 06 04 58.4 -0.5**
baz=52,SNR=20
NLU North Lily Min 52.71 71 *e*P **P 06 04 59.4 +0.5**
N17A Moffit Pass 52.72 70 ⇑P **P 06 04 58.8 -0.2**
baz=52
U10A Ash Meadows, A 52.75 77 ⇓P **P 06 04 58.9 -0.4**
baz=53,SNR=12
S12A Delamar Landin 52.76 75 ⇑P **P 06 04 59.1 -0.3**
baz=53
T11A Corn Creek, Al 52.81 76 ⇓P **P 06 04 59.4 -0.3**
baz=53,SNR=36
DAU Daniels Canyon 52.85 70 *e*P **P 06 04 58.6 -1.4**
O16A Springville 52.85 71 ⇓P **P 06 04 60.0 0.0**
baz=53,SNR=17
P15A Leamington 52.86 72 ⇓P **P 06 04 59.5 -0.5**
baz=53
R13A O'Grain Ranch, 52.87 74 ⇓P **P 06 05 00.0 -0.1**
baz=53,SNR=8.6
EDW2 Edwards Air Fo 52.87 80 ⇑P **P 06 05 00.2 0.0**
baz=53,SNR=6.4
MPU Maple Canyon 52.91 71 *e*P **P 06 05 00.9 +0.5**
comp=Z,8.2nm,0.8s,mb4.7
MPU LR LR
comp=Z,1μm,20.0s,MS5.0
GYA Guiyang 53.05 265 ⇓ *i*P **P 06 05 03.4 +1.8**
GYA PCP PcP 06 06 12.8 +2.8
GYA PP PP 06 07 04.3 +3.1
GYA SCP ScP 06 10 08.6 +1.6
GYA S **S 06 12 31.0 -0.2**
GYA SS SS 06 16 08.8 -1.3
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,160nm,5.8s
GYA LR LR
comp=N,760nm,19.8s,MS4.9
GYA LR LR
comp=E,690nm,18.6s,MS4.9
GYA LR LR
comp=Z,590nm,19.0s,MS4.7
SNCC San Nicolas Is 53.14 83 PFAKE 06 05 10.0 +7.8
SNCC LR LR
comp=Z,1μm,20.0s,MS4.9
SHOC Shoshone 53.14 78 ⇓P **P 06 05 02.3 +0.2**
baz=53,SNR=16
Q15A Fillmore 53.20 72 ⇑P **P 06 05 02.0 -0.5**
baz=53,SNR=8.3
GSC Goldstone 53.26 79 *e*P **P 06 05 03.4 +0.4**
GSC pmax pmax
comp=Z,22nm,0.8s,mb5.1
GSC MLR MLR
comp=Z,549nm,19.0s,MS4.6
GSC Goldstone 53.26 79 ⇑P **P 06 05 02.8 -0.2**
baz=53,SNR=15
GSC Goldstone 53.26 79 *e*P **P 06 05 03.4 +0.4**
comp=Z,22nm,0.8s,mb5.1
GSC LR LR
comp=Z,549nm,19.0s,MS4.6
O17A Robinson Place 53.29 70 ⇓P **P 06 05 03.1 -0.1**
baz=53,SNR=7.0
MWC Mount Wilson 53.30 81 *e*P **P 06 05 03.6 +0.3**
MWC pmax pmax
comp=Z,19nm,0.9s,mb5.0
MWC MLR MLR
comp=Z,754nm,20.0s,MS4.7
MWC Mount Wilson 53.30 81 *e*P **P 06 05 03.6 +0.3**
comp=Z,18nm,0.9s,mb5.0
MWC LR LR
comp=Z,754nm,20.0s,MS4.7
N18A Larsen Ranch, 53.34 69 ⇓P **P 06 05 03.2 -0.3**
baz=53
S13A Holt Ranch, En 53.35 75 ⇑P **P 06 05 03.5 -0.2**
baz=53,SNR=19
KEV Kevo 53.45 345 *e*p **P 06 05 03.0 -1.0**
comp=Z,6.4nm,0.7s,mb4.7
KEV Kevo 53.45 345 *e*P **P 06 05 03.0 -1.0**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
BFSC Mount Baldy St 53.52 80 ⇓P **P 06 05 04.5 -0.4**
baz=53
S14A Cedar City 53.61 74 ⇑P **P 06 05 05.5 -0.1**
baz=53,SNR=8.6
MVU Marysvale 53.63 73 PFAKE 06 05 20.0 +14
MVU LR LR
comp=Z,1μm,20.0s,MS4.9
O18A Roosevelt 53.64 70 ⇑P **P 06 05 05.5 -0.3**
baz=53,SNR=7.2
TMUT Trail Mountain 53.65 71 *e*P **P 06 05 06.9 +1.0**
MSU Marysvale 53.65 73 *e*P **P 06 05 06.9 +1.0**
CCUT Cedar City 53.65 74 *e*P **P 06 05 06.7 +0.8**
N19A John Jarvie Ra 53.66 69 ⇑P **P 06 05 05.2 -0.7**
baz=53,SNR=10
V11A Goodsprings 53.67 77 ⇑P **P 06 05 06.2 +0.1**
baz=54,SNR=8.5
T13A Saint George 53.71 75 ⇑P **P 06 05 06.3 -0.1**
baz=54,SNR=24
LVZ Lovozero 53.73 340 ⇑ *e*P **P 06 05 05.3 -0.8**
LVZ MLR MLR
comp=Z,651nm,19.0s,MS4.7
U12A Valley of Fire 53.76 76 ⇓P **P 06 05 06.5 -0.3**
baz=54
P17A Butcher Ranch, 53.78 71 ⇑P **P 06 05 06.4 -0.4**
baz=54
R15A Junction 53.80 73 ⇓P **P 06 05 06.8 -0.2**
baz=54,SNR=5.2
HEC Hector,Ludlow 53.87 79 ⇓P **P 06 05 07.8 +0.3**
baz=54
ARCES ARCESS Array B 53.88 345 P **P 06 05 05.7 -1.4**
comp=Z,22nm,0.8s,mb5.1,baz=26,slow=5.8,SNR=25
ARCES LR LR 06 29 23.6
comp=Z,432nm,20.0s,MS4.5,baz=194,slow=38
ARCES ARCESS Array B 53.88 345 P **P 06 05 05.7 -1.4**
ARCES pmax pmax
comp=Z,22nm,0.9s
ARCES MLR MLR
comp=Z,432nm,20.0s
BVA0 Borovoye Array 53.90 312 *i*P **P 06 05 06.3 -1.2**
BVA0 pmax pmax
comp=Z,16nm,0.9s,mb5.0
BRVK Borovoye 53.92 312 ⇑ *e*P **P 06 05 06.9 -0.8**
Q16A Castle Valley 53.93 72 ⇓P **P 06 05 08.3 +0.4**
baz=54,SNR=11
P18A Preston Nutter 53.95 70 ⇑P **P 06 05 08.5 +0.5**
baz=54,SNR=14
ULM Lac du Bonnet 54.02 52 P **P 06 05 07.8 -0.5**
comp=Z,7.4nm,0.8s,mb4.7,baz=307,slow=8.7,SNR=7.8
ULM LR LR 06 31 19.4
comp=Z,852nm,18.1s,MS4.8,baz=136,slow=40
V12A Nelson 54.08 77 ⇑P **P 06 05 09.4 +0.4**
baz=54,SNR=14
U13A Pakoon Wash 54.10 76 ⇑P **P 06 05 09.6 +0.3**
baz=54,SNR=29
O19A Miners Draw (B 54.11 69 ⇓P **P 06 05 09.2 +0.1**
baz=54,SNR=20
S15A Panguitch 54.13 74 ⇓P **P 06 05 09.9 +0.5**
baz=54,SNR=15
T14A Hurricane 54.15 75 ⇑P **P 06 05 10.1 +0.6**
baz=54,SNR=20
SRU San Rafael 54.16 71 *e*P **P 06 05 10.0 +0.4**
SRU pmax pmax
comp=Z,32nm,0.8s,mb5.3
SRU San Rafael 54.16 71 ⇓P **P 06 05 09.7 +0.1**
baz=54,SNR=45
SRU San Rafael 54.16 71 *e*P **P 06 05 10.0 +0.4**
comp=Z,32nm,0.8s,mb5.3
RWWY Rawlins 54.19 67 *e*P **P 06 05 11.8 +2.1**
comp=Z,26nm,1.1s,mb5.1
RSSD Black Hills 54.20 62 *e*P **P 06 05 09.5 -0.3**
RSSD *e**PP pP 06 05 14.4 +0.7
RSSD pmax pmax
comp=Z,26nm,0.9s,mb5.2
RSSD MLR MLR
comp=Z,2μm,22.0s,MS5.0
RSSD Black Hills 54.20 62 *e*P **P 06 05 09.5 -0.3**
comp=Z,26nm,0.9s,mb5.2
RSSD *e*pP pP 06 05 14.3 +0.7
RSSD LR LR
comp=Z,2μm,22.0s,MS5.0
R16A Teasdale 54.20 72 ⇓P **P 06 05 10.4 +0.5**
baz=54,SNR=13
MURC Murrieta 54.24 81 ⇓P **P 06 05 10.6 +0.4**
baz=54
APA Apatity 54.26 341 ⇑ *e*P **P 06 05 09.0 -0.9**
APA pmax pmax
comp=Z,43nm,1.4s,mb5.2
APA MLR MLR
comp=Z,1μm,17.0s,MS5.0
GMRC Granite Mounta 54.29 78 ⇑P **P 06 05 10.5 -0.1**
baz=54,SNR=12
W12A Cal Nev Ari 54.37 77 ⇓P **P 06 05 11.0 -0.2**
baz=54
Q18A Rafter H Ranch 54.38 71 ⇓P **P 06 05 11.3 +0.1**
baz=54,SNR=14
V13A Grand Canyon W 54.49 76 ⇑P **P 06 05 12.0 0.0**
baz=54,SNR=28
S16A Weppner Ranch, 54.53 73 ⇑P **P 06 05 12.3 0.0**
baz=54,SNR=8.0
R17A Hanksville Air 54.54 72 ⇑P **P 06 05 12.2 -0.1**
baz=54,SNR=26
U14A Mt Trumbull 54.55 75 ⇓P **P 06 05 12.7 +0.2**
baz=54,SNR=30
T15A Red Dirt Ranch 54.58 74 ⇓P **P 06 05 13.0 +0.3**
baz=54,SNR=22
P19A Cripple Cowboy 54.65 70 ⇓P **P 06 05 13.0 -0.2**
baz=54,SNR=25
BELC Belle Mtn. 54.65 79 ⇓P **P 06 05 12.8 -0.4**
baz=54,SNR=9.1
PFO Pinyon Flat Ob 54.66 80 P **P 06 05 12.9 -0.5**
comp=Z,6.1nm,0.9s,mb4.6,baz=325,slow=6.7,SNR=4.7
PFO Pinyon Flat Ob 54.66 80 P **P 06 05 12.9 -0.5**
PFO LR LR
comp=Z,1μm,19.0s,MS4.9
Q19A Hogan Spring (54.97 70 ⇑P **P 06 05 14.8 -0.7**
baz=55,SNR=54
R18A Canyonlands Na 55.02 71 ⇑P **P 06 05 15.2 -0.6**
baz=55,SNR=34
IRM Iron Mountain 55.03 79 ⇓P **P 06 05 16.0 +0.1**

baz=55,SNR=14
S17A Black Ridge (B 55.03 73 ⇓P **P 06 05 15.7 -0.2**
baz=55,SNR=43
U15A North Rim 55.05 75 ⇑P **P 06 05 15.9 -0.2**
baz=55,SNR=18
W13A Hualapai Mount 55.08 77 ⇓P **P 06 05 16.2 -0.1**
baz=55,SNR=10
T16A Glen Canyon Da 55.10 74 ⇓P **P 06 05 16.1 -0.3**
baz=55,SNR=12
SVE Sverdlovsk 55.13 321⇑ *e*P **P 06 05 16.5 +0.1**
SVE *e*PPP 06 08 36.6
SVE *e*S **S 06 13 08.2 +10**
SVE pmax pmax
comp=Z,54nm,1.1s,mb5.5
SVE MLR MLR
comp=Z,994nm,15.0s,MS5.0
V14A Boquillas Ranc 55.15 76 ⇓P **P 06 05 16.8 0.0**
baz=55,SNR=40
MONP Monument Peak 55.20 81 ⇑P **P 06 05 17.8 +0.6**
baz=55
BAR Barrett 55.21 81 P **P 06 05 18.0 +0.8**
comp=Z,10nm,0.8s,mb4.9
BAR LR LR
comp=Z,666nm,22.0s,MS4.7
BC3 Big Chuckw Mtn 55.21 79 ⇓P **P 06 05 17.4 +0.1**
baz=55,SNR=7.1
AGMN Agassiz Refuge 55.38 54 *e*P **P 06 05 18.2 -0.1**
comp=Z,23nm,0.9s,mb5.2
AGMN LR LR
comp=Z,1μm,19.0s,MS5.0
PHWY Pilot Hill 55.40 66 *e*P **P 06 05 20.3 +1.7**
comp=Z,22nm,1.3s,mb5.0
S18A Hurst Farm, Bl 55.45 72 ⇓P **P 06 05 18.8 -0.1**
baz=55,SNR=44
W14A Seligman 55.46 76 ⇓P **P 06 05 19.3 +0.2**
baz=55,SNR=27
X13A Yucca 55.48 77 ⇑P **P 06 05 19.2 0.0**
baz=55,SNR=9.3
T17A Navajo Res., N 55.49 73 ⇑P **P 06 05 18.9 -0.3**
baz=55,SNR=15
PDMCI Parker Dam,Lak 55.51 78 ⇑P **P 06 05 19.8 +0.4**
baz=55,SNR=6.2
V15A Kaibab Nationa 55.55 75 ⇑P **P 06 05 19.5 -0.2**
baz=55,SNR=42
Y12C Blythe 55.68 78 ⇑P **P 06 05 20.7 +0.1**
baz=56,SNR=8.0
U17A Shonto 55.85 73 ⇓P **P 06 05 21.9 0.0**
baz=56,SNR=22
S19A Harvey Farm, M 55.89 71 ⇑P **P 06 05 22.0 -0.1**
baz=56,SNR=34
U16A Tuba City 55.91 74 ⇑P **P 06 05 22.3 +0.1**
baz=56,SNR=33
T18A Mexican Hat 55.91 72 ⇓P **P 06 05 21.9 -0.3**
baz=56,SNR=31
W15A Williams 55.95 76 ⇑P **P 06 05 23.1 +0.5**
baz=56,SNR=6.9
GLA Glamis 56.01 79 *e*P **P 06 05 23.8 +0.8**
GLA pmax pmax
comp=Z,37nm,1.0s,mb5.4
GLA MLR MLR
comp=Z,603nm,20.0s,MS4.7
GLA Glamis 56.01 79 ⇓P **P 06 05 23.4 +0.3**
baz=56
GLA Glamis 56.01 79 *e*P **P 06 05 23.8 +0.7**
comp=Z,37nm,1.0s,mb5.4
GLA LR LR
comp=Z,603nm,20.0s,MS4.7
Y13A Salome 56.04 78 ⇑P **P 06 05 23.3 0.0**
baz=56,SNR=6.5
X14A Yava 56.10 77 ⇑P **P 06 05 24.2 +0.5**
baz=56,SNR=21
ARU Arti 56.20 321 P **P 06 05 23.9 -0.1**
comp=Z,335nm,0.8s,mb6.4,SNR=14
ARU Arti 56.20 321 *c i*P **P 06 05 23.3 -0.7**
ARU *e* 06 06 20.3
ARU *e* 06 07 28.2
ARU *e*S **S 06 13 11.0 -1.8**
ARU *e*SS SS 06 17 01.4 +3.0
ARU pmax pmax
comp=Z,61nm,1.0s,mb5.6
ARU MLR MLR
comp=Z,1μm,17.0s,MS5.0
ARU Arti 56.20 321 *e*P **P 06 05 23.4 -0.7**
comp=Z,43nm,1.2s,mb5.4
ARU LR LR
comp=Z,773nm,21.0s,MS4.8
WUAZ Wupatki 56.22 75 *e*P **P 06 05 27.5 +3.0**
comp=Z,22nm,0.9s,mb5.2
WUAZ LR LR
comp=Z,716nm,19.0s,MS4.8
KMI Kunming 56.36 267 P **P 06 05 26.5 +0.9**
KMI AP pP 06 05 30.3 +0.7
KMI XP sP 06 05 31.8 +0.7
KMI PCP PcP 06 06 25.3 +2.6
KMI PP PP 06 07 34.9 +3.9
KMI SCP ScP 06 10 23.3 +1.7
KMI S **S 06 13 15.9 +0.2**
KMI XS sS 06 13 20.9 -1.3
KMI SCS ScS 06 15 13.8 -0.8
KMI SS SS 06 17 03.1 +0.7
KMI AMB AMB
comp=Z,16nm,1.0s,mb5.0
KMI LR LR
comp=N,2μm,19.5s,MS5.2
KMI LR LR
comp=E,1μm,21.0s,MS5.2
KMI LR LR
comp=Z,1μm,24.9s,MS4.8
ISCO Idaho Springs 56.37 67 *e*P **P 06 05 26.8 +1.2**
ISCO pmax pmax
comp=Z,40nm,1.1s,mb5.4
ISCO MLR MLR
comp=Z,928nm,19.0s,MS4.9
ISCO Idaho Springs 56.37 67 *e*P **P 06 05 26.8 +1.3**
comp=Z,40nm,1.1s,mb5.4
ISCO LR LR
comp=Z,928nm,19.0s,MS4.9
Y14A Wickenburg 56.42 77 ⇑P **P 06 05 25.7 -0.2**
baz=56,SNR=14
U18A Rough Rock, Ch 56.42 73 ⇑P **P 06 05 26.0 0.0**
baz=56,SNR=11
W16A Flagstaff 56.43 75 ⇑P **P 06 05 26.9 +0.8**
baz=56,SNR=18
X15A Humboldt 56.47 76 ⇓P **P 06 05 26.9 +0.6**
baz=56,SNR=22
112A Yuma 56.53 80 ⇓P **P 06 05 27.2 +0.5**
baz=56
T19A Beclabito 56.60 72 ⇓P **P 06 05 27.3 0.0**
baz=56,SNR=57
MVCO Mesa Verde 56.63 71 PFAKE 06 05 40.0 +13
MVCO LR LR
comp=Z,101nm,19.0s,MS3.9
Y15A Casa Rosa Ranc 56.80 77 ⇑P **P 06 05 28.8 +0.1**
baz=57,SNR=25
113A Mohawk Valley, 56.83 79 ⇓P **P 06 05 29.0 +0.1**
baz=57
Z14A Wintersburg 56.87 78 ⇑P **P 06 05 29.2 +0.1**
baz=57
V18A Ganado 56.90 74 ⇑P **P 06 05 29.5 +0.2**
baz=57,SNR=15
W17A Winslow 56.91 75 ⇓P **P 06 05 29.3 -0.2**
baz=57
QIZ Qiongzhong 56.95 256 P **P 06 05 32.3 +2.5**
QIZ PP PP 06 07 36.6 +0.3
QIZ S **S 06 13 25.6 +2.0**
QIZ SS SS 06 17 15.8 +4.0
QIZ AMB AMB
comp=Z,36nm,1.1s,mb5.3
QIZ AMB AMB
comp=Z,170nm,6.9s
QIZ LR LR
comp=N,316nm,12.7s,MS5.0
QIZ LR LR
comp=E,686nm,14.7s,MS5.0
QIZ LR LR
comp=Z,730nm,15.9s,MS4.9
QIZ Qiongzhong 56.95 256 *e*P **P 06 05 32.5 +2.7**
comp=Z,40nm,1.1s,mb5.4
QIZ LR LR
comp=Z,522nm,19.0s,MS4.7
X16A Lo Mia Camp, P 56.97 76 ⇑P **P 06 05 29.9 0.0**
baz=57,SNR=30
Y16A Circle Bar Ran 57.34 76 ⇓P **P 06 05 32.2 -0.2**
baz=57,SNR=12
Z15A Gila River Ind 57.38 77 ⇑P **P 06 05 33.3 +0.5**
baz=57,SNR=8.6
X17A Forest Lakes 57.39 75 ⇓P **P 06 05 33.5 +0.6**
baz=57,SNR=6.3
V19A Window Rock 57.39 73 ⇓P **P 06 05 32.8 -0.1**
baz=57
W18A Petrified Fore 57.43 74 ⇓P **P 06 05 33.1 0.0**
baz=57
OGNE Ogallala 57.48 64 *e*P **P 06 05 33.8 +0.4**
comp=Z,37nm,0.7s,mb5.5
OGNE LR LR
comp=Z,788nm,19.0s,MS4.8
W19A Sanders 57.63 74 ⇑P **P 06 05 34.5 0.0**
baz=57
EYMN Ely 57.68 52 *e*P **P 06 05 35.0 +0.3**
comp=Z,41nm,0.9s,mb5.5
EYMN LR LR
comp=Z,1μm,19.0s,MS5.0
X18A Snowflake 57.74 75 ⇑P **P 06 05 35.3 0.0**
baz=58,SNR=16
Z16A Peralta Trail, 57.76 77 ⇓P **P 06 05 35.8 +0.4**
baz=58,SNR=21
115A Sonoran Desert 57.76 78 ⇓P **P 06 05 35.8 +0.3**
baz=58,SNR=30
Y17A Roosevelt 57.83 76 ⇑P **P 06 05 36.5 +0.5**
baz=58,SNR=28
SDCO Great Sand Dun 57.90 69 *e*P **P 06 05 37.2 +0.8**
comp=Z,29nm,1.2s,mb5.2
SDCO LR LR
comp=Z,611nm,22.0s,MS4.7
214A Organ Pipe Nat 57.97 79 ⇓P **P 06 05 36.9 0.0**
baz=58,SNR=10
116A Eloy 58.17 77 ⇓P **P 06 05 38.5 +0.2**
baz=58,SNR=9.3
X19A St. Johns 58.19 74 ⇓P **P 06 05 38.7 +0.2**
baz=58,SNR=16
Y18A Canyon Day Jun 58.24 75 ⇑P **P 06 05 39.0 +0.3**
baz=58,SNR=16
ECSD EROS,Sioux Fal 58.27 58 *e*P **P 06 05 38.3 -0.5**
comp=Z,19nm,0.9s,mb5.1
ECSD LR LR
comp=Z,2μm,20.0s,MS5.1
Z17A San Carlos Hig 58.34 76 ⇓P **P 06 05 39.6 +0.2**
baz=58,SNR=8.3
Y19A Nutrioso 58.55 74 ⇓P **P 06 05 41.0 0.0**
baz=58,SNR=12
DAV Davao City (W) 58.56 233 PFAKE 06 05 50.0 +8.8
DAV LR LR
comp=Z,530nm,19.0s,MS4.7
TKM2 Tokmak 2 58.62 301 *e*P **P 06 05 40.7 -0.6**
TKM2 pmax pmax
comp=Z,18nm,0.6s,mb5.3
TKM2 MLR MLR
comp=Z,2μm,22.0s,MS5.1
TKM2 Tokmak 2 58.62 301 P **P 06 05 40.7 -0.6**
SNR=10
TKM2 Tokmak 2 58.62 301 *e*P **P 06 05 40.7 -0.6**
comp=Z,18nm,0.6s,mb5.3
TKM2 LR LR
comp=Z,2μm,22.0s,MS5.1
117A Oracle 58.71 77 ⇓P **P 06 05 41.9 -0.2**
baz=58,SNR=14
216A Three Points, 58.72 78 ⇓P **P 06 05 42.5 +0.3**
baz=58,SNR=11
Z18A Geronimo 58.74 76 ⇓P **P 06 05 43.5 +1.1**
baz=58
JOF Joensuu 58.78 339 *ep* **P 06 05 40.8 -1.3**
comp=Z,19nm,0.6s,mb5.3
JOF Joensuu 58.78 339 *e*P **P 06 05 40.8 -1.3**
JOF pmax pmax
comp=Z,19nm,0.6s,mb5.3
TUC Tucson 58.88 77 *e*P **P 06 05 44.0 +0.7**
TUC pmax pmax
comp=Z,12nm,0.9s,mb4.9
TUC MLR MLR
comp=Z,418nm,19.0s,MS4.6
TUC Tucson 58.88 77 *e*P **P 06 05 44.0 +0.7**
comp=Z,12nm,0.9s,mb4.9
TUC LR LR
comp=Z,418nm,19.0s,MS4.6
USP Ospenovka 58.92 302 P **P 06 05 43.0 -0.4**
SNR=16
CHMS Chumysh 58.99 301 P **P 06 05 43.3 -0.6**
SNR=5.5
Z19A T-Link Ranch, 59.03 75 ⇓P **P 06 05 44.3 0.0**
baz=59
118A Homack Ranch, 59.10 76 ⇑P **P 06 05 45.1 +0.3**
baz=59,SNR=9.6
FRU Bishkek 59.18 301 ⇓ *i*P **P 06 05 44.0 -1.2**
FRU pmax pmax
comp=Z,53nm,1.6s,mb5.3
217A Green Valley 59.25 77 ⇑P **P 06 05 45.9 0.0**
baz=59
AAK Ala-Archa 59.38 301 P **P 06 05 46.2 -0.4**
SNR=12
119A Ashpeak Ranch, 59.39 75 ⇓P **P 06 05 46.6 -0.2**
baz=59,SNR=9.5
ANMO Albuquerque 59.40 72 LR LR 06 29 05.3
comp=Z,452nm,18.7s,MS4.6,baz=335,slow=34
ANMO Albuquerque 59.40 72 *e*P **P 06 05 47.6 +0.8**
ANMO *e**PP pP 06 05 51.1 +0.3
ANMO pmax pmax
comp=Z,12nm,1.0s
ANMO MLR MLR
comp=Z,551nm,21.0s
ANMO Albuquerque 59.40 72 *e*P **P 06 05 47.6 +0.8**
comp=Z,12nm,1.0s,mb4.9
ANMO *e*pP pP 06 05 51.1 +0.3
ANMO LR LR
comp=Z,551nm,21.0s,MS4.7
LAZ Ladron 59.42 73 *e*P **P 06 05 48.3 +1.3**
218A Dragoon 59.55 77 ⇑P **P 06 05 48.3 +0.3**
baz=59,SNR=10
UCH Uchtor 59.67 301 PFAKE 06 06 00.0 +11
UCH LR LR
comp=Z,44nm,20.0s,MS3.6
LENM Lemitar 59.69 73 *e*P **P 06 05 50.3 +1.5**
EKS2 Erkin-Say 59.72 302 P **P 06 05 48.7 -0.3**
SNR=19
EKS2 Erkin-Say 59.72 302 *e*P **P 06 05 48.5 -0.5**
comp=Z,26nm,0.9s,mb5.2
EKS2 LR LR
comp=Z,2μm,20.0s,MS5.2
LSA Lhasa 59.74 280 P **P 06 05 50.0 +0.7**
LSA Lhasa 59.74 280 *e*P **P 06 05 50.3 +1.0**
LSA pmax pmax
comp=Z,35nm,0.7s,mb5.5
LSA MLR MLR
comp=Z,1μm,20.0s,MS5.0
LSA Lhasa 59.74 280 *e*P **P 06 05 50.3 +1.0**
comp=Z,35nm,0.7s,mb5.5
LSA LR LR
comp=Z,1μm,20.0s,MS5.0
LPM Los Pinos Moun 59.77 72 *e*P **P 06 05 50.8 +1.4**
BNM Barren Site 59.89 72 *e*P **P 06 05 50.9 +0.6**
318A Bisbee 59.98 77 ⇓P **P 06 05 50.6 -0.3**
baz=60,SNR=11
219A White Tail Can 59.98 76 ⇑P **P 06 05 51.1 +0.2**
baz=60,SNR=15
COWI Conover 60.13 52 *e*P **P 06 05 52.3 +0.5**
comp=Z,31nm,1.2s,mb5.2
COWI LR LR
comp=Z,2μm,19.0s,MS5.2
AML Almayashu 60.16 301 P **P 06 05 52.1 +0.2**
SNR=14
AML Almayashu 60.16 301 *e*P **P 06 05 51.9 -0.1**
comp=Z,15nm,0.8s,mb5.1
AML LR LR
comp=Z,1μm,22.0s,MS5.0
CBKS Cedar Bluff 60.24 64 *e*P **P 06 05 52.4 -0.2**
CBKS pmax pmax
comp=Z,39nm,0.8s,mb5.5
CBKS MLR MLR
comp=Z,635nm,19.0s,MS4.8
CBKS Cedar Bluff 60.24 64 *e*P **P 06 05 52.4 -0.1**
comp=Z,39nm,0.8s,mb5.5
CBKS LR LR
comp=Z,635nm,19.0s,MS4.8
319A Douglas 60.43 77 ⇑P **P 06 05 54.1 +0.1**
baz=60
KAF Kangasniemi 60.51 341 *ep* **P 06 05 52.6 -1.5**
comp=Z,7.9nm,0.6s,mb5.0
KAF Kangasniemi 60.51 341 *e*P **P 06 05 52.6 -1.5**
KAF pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
KSH Kashi 60.92 298 *e*P **P 06 05 56.9 -0.3**
KSH *e*AP pP 06 06 00.0 -1.2
KSH *e*XP sP 06 06 03.1 +0.5
KSH *e*PCP PcP 06 06 40.1 -0.5
KSH *e*PP PP 06 08 11.0 0.0
KSH *e*SCP ScP 06 10 39.1 -2.4
KSH *e*S **S 06 14 09.8 -4.9**
KSH *e*SCS ScS 06 15 42.3 -5.5
KSH *e*SS SS 06 18 07.1 -6.2
KSH AMB AMB
comp=Z,237nm,1.6s,mb6.1
KSH LR LR
comp=N,7μm,16.9s,MS6.1
KSH LR LR
comp=E,9μm,15.2s,MS6.1
KSH LR LR
comp=Z,2μm,16.6s,MS5.4
AKTK Aktyubinsk 61.00 317 *i*P **P 06 05 56.7 -0.9**
AKTO Aktyubinsk 61.00 317 *i*P **P 06 05 56.6 -1.0**
AKTO pmax pmax
comp=Z,12nm,1.1s,mb4.9
KK31 Karatay Array 61.01 304 *i*P **P 06 05 56.4 -1.4**
AB31 Akbulak array 61.13 315 P **P 06 05 57.4 -1.1**
AB31 pmax pmax
comp=Z,20nm,0.8s,mb5.3
AB31 Akbulak array 61.13 315⇑ *e*P **P 06 05 57.5 -1.0**
SCIA State Center 61.30 58 *e*P **P 06 06 00.0 +0.3**
comp=Z,49nm,0.8s,mb5.7
SCIA *ep*P pP 06 06 04.1 +0.4
SCIA LR LR
comp=Z,1μm,20.0s,MS5.1
KSU1 Kansas State U 61.67 62 *e*P **P 06 06 01.4 -0.9**
comp=Z,20nm,0.8s,mb5.3
KSU1 LR LR
comp=Z,1μm,20.0s,MS5.0
JFWS Jewell Farm 62.00 55 *e*P **P 06 06 04.0 -0.5**
JFWS pmax pmax
comp=Z,24nm,0.8s,mb5.4
JFWS MLR MLR
comp=Z,2μm,20.0s,MS5.2
JFWS Jewell Farm 62.00 55 *e*P **P 06 06 04.0 -0.4**
comp=Z,24nm,0.8s,mb5.4
JFWS LR LR
comp=Z,2μm,20.0s,MS5.2
SCHQ Schefferville 62.03 33 P **P 06 06 05.2 +0.8**
comp=Z,25nm,1.0s,mb5.3,baz=317,slow=5.6,SNR=13
SCHQ LR LR 06 35 53.4
comp=Z,506nm,19.0s,MS4.7,baz=333,slow=39
SCHQ Schefferville 62.03 33 P **P 06 06 05.2 +0.8**
SCHQ LR LR 06 35 53.4
AMTX Amarillo 62.09 68 PFAKE 06 06 20.0 +15
AMTX LR LR
comp=Z,606nm,21.0s,MS4.7
GLMI Grayling 63.17 50 *e*P **P 06 06 13.7 +1.5**
comp=Z,41nm,0.6s,mb5.7
GLMI LR LR
comp=Z,1μm,19.0s,MS5.0
CHTO Chiang Mai 63.45 266 PFAKE 06 06 30.0 +16
CHTO LR LR
comp=Z,585nm,20.0s,MS4.8
TAPN Taplejung 63.49 281 *e*P **P 06 06 14.6 0.0**
comp=Z,241nm,1.0s,mb6.3
MOS Moscow 63.56 332 *e*P **P 06 06 13.6 -1.1**
MOS pmax pmax
comp=Z,73nm,0.9s,mb5.7
CMAR Chiang Mai Arr 63.73 265 P **P 06 06 17.1 +0.9**
comp=Z,16nm,0.9s,mb5.0,baz=22,slow=7.4,SNR=28
CMAR LR LR 06 33 51.6
comp=Z,635nm,19.3s,MS4.8,baz=49,slow=36
CMAR Chiang Mai Arr 63.73 265 P **P 06 06 17.2 +0.9**
CMAR pmax pmax
comp=Z,17nm,0.9s
CMAR MLR MLR
comp=Z,635nm,19.3s
HNR Honiara 63.77 190 LR LR 06 28 29.1
comp=Z,794nm,21.2s,MS4.9,baz=204,slow=31
HNR Honiara 63.77 190 PFAKE 06 06 30.0 +14
HNR LR LR
comp=Z,876nm,21.0s,MS4.9
WMOK Wichita Mounta 63.78 67 PFAKE 06 06 30.0 +14
WMOK LR LR
comp=Z,673nm,20.0s,MS4.8
NB2 NORSAR Subarra 63.89 348 P **P 06 06 15.6 -1.1**
comp=Z,87nm,1.4s,mb5.6,baz=15,slow=6.9
NOA NORSAR Array B 63.89 348 P **P 06 06 15.9 -0.9**
comp=Z,13nm,0.6s,mb5.2,baz=16,slow=6.7,SNR=29
NOA LR LR 06 34 36.0
comp=Z,246nm,19.9s,MS4.4,baz=55,slow=36
NOA NORSAR Array B 63.89 348 P **P 06 06 15.9 -0.8**
NOA pmax pmax
comp=Z,13nm,0.6s
NOA MLR MLR
comp=Z,246nm,19.9s
ODAN Odare 64.05 280 *e*P **P 06 06 18.0 -0.3**
comp=Z,96nm,1.1s,mb5.8
GUN Gumba 64.12 282 *e*P **P 06 06 18.7 -0.1**
comp=Z,164nm,0.8s,mb6.1
JIRN Jiri 64.14 282 *e*P **P 06 06 19.0 +0.1**
comp=Z,55nm,0.8s,mb5.7
OBN Obninsk 64.41 332⇑ *e*P **P 06 06 19.8 -0.4**
OBN *e* 06 06 53.0
OBN pmax pmax
comp=Z,63nm,1.0s,mb5.6
OBN MLR MLR
comp=Z,800nm,21.0s,MS4.9
OBN Obninsk 64.41 332 *e*P **P 06 06 20.7 +0.5**
comp=Z,54nm,1.2s,mb5.5
OBN LR LR
comp=Z,800nm,21.0s,MS4.9
RAMN Ramite 64.44 281 *e*P **P 06 06 20.5 -0.3**
comp=Z,180nm,0.7s,mb6.2
KKN Kakani 64.56 283 *e*P **P 06 06 21.6 0.0**
comp=Z,52nm,0.8s,mb5.6
PKI Pulchoki 64.65 282 *e*P **P 06 06 22.0 -0.2**
comp=Z,80nm,0.8s,mb5.8
PKIN Phulchoki 64.66 282 *e*P **P 06 06 21.7 -0.6**
comp=Z,36nm,0.6s,mb5.6
GKN Gorkha 64.77 283 *e*P **P 06 06 22.5 -0.5**
comp=Z,90nm,1.1s,mb5.7
DMN Daman 64.80 283 *e*P **P 06 06 23.0 -0.2**
comp=Z,54nm,0.8s,mb5.6
DANN Dangsing 65.01 284 *e*P **P 06 06 24.3 -0.2**
comp=Z,62nm,0.9s,mb5.7
CCM Cathedral Cave 65.21 59 *e*P **P 06 06 24.7 -1.0**
CCM pmax pmax
comp=Z,14nm,0.9s,mb5.0
CCM MLR MLR
comp=Z,826nm,21.0s,MS4.9
CCM Cathedral Cave 65.21 59 *e*P **P 06 06 24.7 -1.0**
comp=Z,14nm,0.9s,mb5.0
CCM LR LR
comp=Z,826nm,21.0s,MS4.9
KONO Kongsberg 65.44 349⇑ *e*P **P 06 06 26.7 -0.1**
KOLN Koldanda 65.54 284 *e*P **P 06 06 27.3 -0.7**
comp=Z,17nm,0.7s,mb5.2
AAM Ann Arbor 65.57 51 PFAKE 06 06 40.0 +12
AAM LR LR
comp=Z,941nm,20.0s,MS5.0
FVM French Village 65.67 59 *e*P **P 06 06 27.3 -1.4**
FVM pmax pmax
comp=Z,18nm,0.9s,mb5.1
FVM French Village 65.67 59 *e*P **P 06 06 27.3 -1.4**
comp=Z,18nm,0.9s,mb5.1
KLP Kalpa 65.69 290 *e*P **P 06 06 28.3 -0.6**
KLP AMb AMB 06 06 30.3
comp=Z,29nm,0.8s,mb5.3
JOSI Joshimath 65.70 289 *e*P **P 06 06 29.5 +0.5**
PMG Port Moresby 65.97 204⇑ *e*P **P 06 06 36.0 +5.3**
PMG Port Moresby 65.97 204 PFAKE 06 06 40.0 +9.3
PMG LR LR
comp=Z,553nm,19.0s,MS4.8
JCT Junction City 66.45 70 *e*P **P 06 06 33.4 -0.4**
JCT pmax pmax
comp=Z,23nm,0.8s,mb5.3
JCT MLR MLR
comp=Z,877nm,21.0s,MS5.0
JCT Junction City 66.45 70 *e*P **P 06 06 33.4 -0.5**
comp=Z,23nm,0.8s,mb5.2
JCT LR LR
comp=Z,877nm,21.0s,MS5.0
SIUC Southern Illin 66.49 58 *e*P **P 06 06 33.2 -0.8**
comp=Z,23nm,0.8s,mb5.3
SMLA Simla 66.59 291 *e*P **P 06 06 33.9 -0.9**
SMLA AMb AMB 06 06 35.7
comp=Z,49nm,0.9s,mb5.5
MIAR Mount Ida 66.70 63 *e*P **P 06 06 34.7 -0.7**
MIAR pmax pmax
comp=Z,25nm,0.9s,mb5.2
MIAR MLR MLR
comp=Z,1μm,20.0s,MS5.1
MIAR Mount Ida 66.70 63 *e*P **P 06 06 34.7 -0.7**
comp=Z,25nm,0.9s,mb5.2

MIAR LR LR
comp=Z,1µm,20.0s,MS5.1
DDI Dehra Dun 66.72 290 *ex* **P 06 06 32.4 -3.1**
PARMO Parma 67.03 59 *eP* **P 06 06 37.3 -0.2**
USIN University of 67.06 57 *eP* **P 06 06 37.2 -0.4**
comp=Z,73nm,0.8s,mb5.8
VSR Storozhevoye 67.06 329 *eP* **P 06 06 34.7 -2.7**
VSR pmax pmax
comp=Z,20nm,1.1s,mb5.1
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
MNK Minsk 67.18 337 *eP* **P 06 06 36.0 -2.1**
ACSO Alum Creek Sta 67.52 52 *eP* **P 06 06 41.5 +1.0**
comp=E,13nm,0.8s,mb5.0
ACSO LR LR
comp=Z,2µm,19.0s,MS5.2
WCI Wyandotte Cave 67.53 56 *eP* **P 06 06 41.0 +0.4**
WCI pmax pmax
comp=Z,20nm,0.6s,mb5.3
WCI MLR MLR
comp=Z,1µm,20.0s,MS5.1
WCI Wyandotte Cave 67.53 56 *eP* **P 06 06 41.0 +0.4**
comp=Z,20nm,0.6s,mb5.3
WCI LR LR
comp=Z,1µm,20.0s,MS5.1
LONY Lake Ozonia 67.65 44 *eP* **P 06 06 40.6 -0.6**
comp=Z,11nm,1.1s,mb4.8
LONY LR LR
comp=Z,1µm,20.0s,MS5.2
ALLY Alegheny Colle 67.68 49 *eP* **P 06 06 41.8 +0.3**
comp=Z,87nm,1.2s,mb5.7
UTMT University of 67.73 59 *eP* **P 06 06 42.1 +0.2**
comp=Z,49nm,0.8s,mb5.6
ASOR Ausora 68.08 289 *eP* **P 06 06 42.9 -1.2**
NATX Nacogdoches 68.28 66 PFAKE 06 07 00.0 +15
NATX LR LR
comp=Z,651nm,21.0s,MS4.8
KBL Kabul 68.29 299 *eP* **P 06 06 43.9 -1.5**
KBL pmax pmax
comp=Z,32nm,0.9s,mb5.3
KBL Kabul 68.29 299 *eP* **P 06 06 43.9 -1.5**
comp=Z,32nm,0.9s,mb5.3
NCB Newcomb 68.33 44 PFAKE 06 07 00.0 +14
NCB LR LR
comp=Z,1µm,20.0s,MS5.1
WVT Waverly 68.42 58 *eP* **P 06 06 45.7 -0.5**
WVT pmax pmax
comp=Z,19nm,0.8s,mb5.2
WVT MLR MLR
comp=Z,860nm,21.0s,MS5.0
WVT Waverly 68.42 58 *eP* **P 06 06 45.7 -0.5**
comp=Z,18nm,0.8s,mb5.2
WVT LR LR
comp=Z,860nm,21.0s,MS5.0
AYAN Aya Nagar 68.65 289 *eP* **P 06 06 46.5 -1.2**
AYAN AMb AMB 06 06 48.3
comp=Z,9.7nm,0.9s,mb4.7
SONA Sohna 68.85 289 *eP* **P 06 06 47.5 -1.5**
SONA AMb AMB 06 06 49.1
comp=Z,7.0nm,0.4s,mb4.9
OXF Oxford 68.89 60 *eP* **P 06 06 48.8 -0.3**
OXF pmax pmax
comp=Z,103nm,1.1s,mb5.7
OXF MLR MLR
comp=Z,1µm,22.0s,MS5.0
OXF Oxford 68.89 60 *eP* **P 06 06 48.8 -0.3**
comp=Z,103nm,1.1s,mb5.7
OXF LR LR
comp=Z,1µm,22.0s,MS5.0
LBNH Lisbon 69.03 42 *eP* **P 06 06 49.6 -0.3**
LBNH pmax pmax
comp=Z,17nm,0.9s,mb5.0
LBNH MLR MLR
comp=Z,948nm,21.0s,MS5.0
LBNH Lisbon 69.03 42 *eP* **P 06 06 49.6 -0.3**
comp=Z,17nm,0.9s,mb5.0
LBNH LR LR
comp=Z,948nm,21.0s,MS5.0
HKT Hockley 69.04 68 *eP* **P 06 06 50.8 +0.6**
HKT pmax pmax
comp=Z,21nm,1.2s,mb4.9
HKT MLR MLR
comp=Z,605nm,19.0s,MS4.9
HKT Hockley 69.04 68 *eP* **P 06 06 50.8 +0.6**
comp=Z,21nm,1.2s,mb4.9
HKT LR LR
comp=Z,605nm,19.0s,MS4.9
BINY Binghamton 69.05 46 PFAKE 06 07 00.0 +10
BINY LR LR
comp=Z,1µm,20.0s,MS5.1
PKME Peaks-Kenny Pk 69.20 40 PFAKE 06 07 00.0 +9.1
PKME LR LR
comp=Z,988nm,21.0s,MS5.0
MCWV Mont Chateau 69.42 50 *eP* **P 06 06 52.4 +0.1**
comp=Z,24nm,0.7s,mb5.2
MCWV LR LR
comp=Z,1µm,19.0s,MS5.2
AFI Afiamalu 69.64 160 LR LR 06 32 00.8
comp=Z,563nm,19.1s,MS4.8,baz=2.6,slow=31
AFI Afiamalu 69.64 160 PFAKE 06 07 10.0 +16
AFI LR LR
comp=Z,918nm,19.0s,MS5.0
KHET Khetri 69.70 290 *eP* **P 06 06 53.4 -0.9**
KHET AMb AMB 06 06 54.5
comp=Z,8.6nm,1.7s,mb4.4
KVTX Kingsville 69.77 71 PFAKE 06 07 10.0 +15
KVTX LR LR
comp=Z,803nm,19.0s,MS5.0
SWET Sewanee 70.08 57 *eP* **P 06 06 56.0 -0.5**
VBMS Vicksburg 70.11 63 PFAKE 06 07 10.0 +13
VBMS LR LR
comp=Z,637nm,19.0s,MS4.9
TZTN Tazewell 70.19 55 *eP* **P 06 06 58.0 +0.8**
comp=Z,14nm,0.6s,mb5.1
TZTN LR LR
comp=Z,2µm,20.0s,MS5.3
AKASG Malin Array Be 70.33 334 P **P 06 06 57.0 -0.8**
comp=Z,16nm,0.6s,mb5.1,baz=28,slow=5.8,SNR=33
AKASG LR LR 06 38 37.0
comp=Z,716nm,21.7s,MS4.9,baz=50,slow=37
AKASG Malin Array Be 70.33 334 P **P 06 06 57.0 -0.8**
AKASG pmax pmax
comp=Z,16nm,0.6s
AKASG MLR MLR
comp=Z,716nm,21.7s
KIEV Kiev 70.34 334 *eP* **P 06 06 57.0 -0.8**
KIEV pmax pmax
comp=Z,69nm,1.1s,mb5.5
KIEV MLR MLR
comp=Z,878nm,21.0s,MS5.0
KIEV Kiev 70.34 334 *eP* **P 06 06 57.0 -0.8**
comp=Z,69nm,1.1s,mb5.5
KIEV LR LR
comp=Z,878nm,21.0s,MS5.0
CPCT Cooper Cave 70.59 56 *eP* **P 06 06 59.5 -0.1**
HRV Adam Dziewonsk 70.63 43 PFAKE 06 07 10.0 +10
HRV LR LR
comp=Z,934nm,19.0s,MS5.1
TKL Tuckaleechee C 70.79 56 *eP* **P 06 07 01.4 +0.6**
WES Weston 70.83 43 PFAKE 06 07 10.0 +9.0
WES LR LR
comp=Z,522nm,22.0s,MS4.8
BSEG Bad Segeberg 70.93 347 *eP* **P 06 07 01.8 +0.4**
BSEG pmax pmax
comp=Z,60nm,1.8s,mb5.2
BSEG Bad Segeberg 70.93 347 *eP* **P 06 07 01.8 +0.4**
comp=Z,60nm,1.8s,mb5.2
ABKT Ailbek 70.93 309 P **P 06 07 01.5 -0.2**
comp=Z,285nm,0.9s,mb6.2,SNR=5.8
ELN Prospectdale 70.97 53 *eP* **P 06 07 03.0 +1.2**
KSM Kuching 71.08 245 *eP* **P 06 07 04.7 +1.9**
BLA Blacksburg 71.14 52 *eP* **P 06 07 03.3 +0.4**
BLA pmax pmax
comp=Z,22nm,0.9s,mb5.1
BLA MLR MLR
comp=Z,804nm,20.0s,MS5.0
BLA Blacksburg 71.14 52 *eP* **P 06 07 03.3 +0.4**
comp=Z,22nm,0.9s,mb5.1
BLA LR LR
comp=Z,804nm,20.0s,MS5.0
MAK Makhachkala 71.26 319 *d iP* **P 06 07 03.7 +0.1**
MAK *e* 06 09 43.8
MAK *e*PPP 06 11 25.4
MAK pmax pmax
comp=Z,389nm,2.0s,mb6.0
MAK MLR MLR
comp=Z,931nm,13.0s,MS5.2
LRAL Lakeview Retre 71.28 59 *eP* **P 06 07 02.4 -1.5**
comp=Z,11nm,0.6s,mb5.0
LRAL LR LR
comp=Z,1µm,22.0s,MS5.2
COEN Coen 71.34 207 *eP* **P 06 07 05.4 +1.2**
comp=Z,15nm,1.2s,mb4.8
KAPI Kappang 71.89 233 PFAKE 06 07 20.0 +12
KAPI LR LR
comp=Z,222nm,19.0s,MS4.5
KIV Kislovodsk 72.21 322 *eP* **P 06 07 09.8 +0.5**
KIV *eS* S 06 16 29.6 -1.7
KIV *e*SS SS 06 21 07.2 -0.6
KIV pmax pmax
comp=Z,36nm,1.2s,mb5.2
KIV MLR MLR
comp=Z,461nm,18.0s,MS4.8
KIV Kislovodsk 72.21 322 ⇑ *iP* **P 06 07 09.8 +0.5**
KIV Kislovodsk 72.21 322 *eP* **P 06 07 07.5 -1.8**
comp=Z,3.6nm,0.4s,mb4.7
KIV *e*PP PP 06 09 46.3 -2.7
KIV LR LR
comp=Z,551nm,21.0s,MS4.8
LVV L'vov 72.40 337 *eP* **P 06 07 10.2 -0.1**
LVV *e* pP 06 07 13.4 -0.9
GOGA Godfrey 72.75 57 PFAKE 06 07 20.0 +7.4
GOGA LR LR
comp=Z,765nm,19.0s,MS5.0
IBBN Ibbenburen 72.85 348 *eP* **P 06 07 14.2 +1.3**
comp=Z,20nm,0.6s,mb5.2
BRAL Brewton 72.86 61 PFAKE 06 07 30.0 +17
BRAL LR LR
comp=Z,1µm,22.0s,MS5.1
KWP Kalwaria 72.88 338 *eP* **P 06 07 14.2 +1.1**
KWP Kalwaria 72.88 338 ⇓ *iP* **P 06 07 14.7 +1.6**
KWP Kalwaria 72.88 338 *eP* **P 06 07 14.2 +1.1**
KWP LR LR
comp=Z,1µm,20.0s,MS5.1
OJC Ojcow 72.93 340 *eP* **P 06 07 13.8 +0.3**
CLZ Clausthal 72.97 346 *eP* **P 06 07 14.3 +0.7**
CLZ pmax pmax
comp=Z,13nm,1.0s,mb4.8
CLZ Clausthal 72.97 346 *eP* **P 06 07 14.3 +0.7**
comp=Z,13nm,1.0s,mb4.8
KSP Ksiaz 73.00 342 *eP* **P 06 07 13.6 -0.2**
KSP *e**PP pP 06 07 17.5 -0.4
KSP *eS* S 06 16 45.0 +4.9
KSP Ksiaz 73.00 342 *eP* **P 06 07 13.6 -0.2**
KSP *e*pP pP 06 07 17.5 -0.4
KSP *eS* S 06 16 45.0 +4.9
KSP LR LR
comp=Z,1µm,17.6s,MS5.3
CLL Collm 73.10 345 *eP* **P 06 07 14.8 +0.4**
comp=Z,24nm,1.2s,mb5.0
CLL Collm 73.10 345 *eP* **P 06 07 15.0 +0.6**
comp=Z,25nm,1.2s,mb5.0
CLL *eS* S 06 16 51.0 +10
CLL *e*SS SS 06 21 30.0 +9.1
CLL LmH 06 40 00.0
comp=N,600nm,21.1s
CLL LmH 06 40 00.0
comp=E,600nm,19.9s
CLL LmV 06 42 00.0
comp=Z,400nm,20.3s
CLL Collm 73.10 345 *eP* **P 06 07 15.0 +0.6**
comp=Z,25nm,1.2s,mb5.0
CLL *eS* S 06 16 51.0 +10
JSC Jenkinsville 73.11 55 *eP* **P 06 07 15.1 +0.3**
ANN Anapa 73.27 326 *eP* **P 06 07 24.9 +9.4**
ANN pmax pmax
comp=Z,77nm,1.2s,mb5.5
ANN MLR MLR
comp=Z,861nm,20.0s,MS5.0
JASL Jaisalmer 73.29 293 *eP* **P 06 07 14.9 -1.1**
BRG Berggiesshubel 73.37 344 *eP* **P 06 07 16.5 +0.5**
BRG *i* pP 06 07 19.7 -0.4
BRG 06 10 02.0
BRG *e* 06 17 21.0
BRG SS SS 06 21 25.0 -0.1
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
BRG MLR MLR
comp=N,352nm,16.2s,MS4.8
BRG MLR MLR
comp=Z,352nm,16.2s,MS4.7
BRG MLR MLR
comp=E,217nm,14.9s,MS4.8
BRG Berggiesshubel 73.37 344 *eP* **P 06 07 16.1 +0.1**
comp=Z,21nm,1.2s,mb4.9
BRG Berggiesshubel 73.37 344 *eP* **P 06 07 16.5 +0.4**
comp=Z,11nm,1.3s,mb4.6
BRG *i* pP 06 07 19.7 -0.4
comp=Z,21nm,1.2s
BRG PP PP 06 10 02.0 +3.3
BRG S S 06 16 52.0 +7.7
BRG *e* 06 17 21.0
BRG SS SS 06 21 25.0 -0.1
BRG LR LR
comp=N,588nm,16.2s
BRG
comp=E,362nm,14.9s
BRG
comp=Z,588nm,16.2s
BRG Berggiesshubel 73.37 344 *eP* **P 06 07 16.5 +0.4**
comp=Z,6.6nm,1.3s,mb4.4
BRG *i* pP 06 07 19.7 -0.4
BRG PP PP 06 10 02.0 +3.3
BRG S S 06 16 52.0 +7.7
BRG *e* 06 17 21.0
BRG SS SS 06 21 25.0 -0.1
BRG LR LR
comp=Z,350nm,16.2s,MS4.7
UPC Upice 73.37 343 *eP* **P 06 07 16.1 0.0**
UPC *e*pP pP 06 07 19.5 -0.6
STHS Stebnicka Huta 73.40 339 *eP* **P 06 07 17.7 +1.5**
STHS pmax pmax
comp=Z,53nm,1.1s,mb5.4
STHS Stebnicka Huta 73.40 339 *eP* **P 06 07 17.7 +1.5**
comp=Z,53nm,1.1s,mb5.4
DPC Dobruska-Polom 73.47 342 *eP* **P 06 07 17.0 +0.4**
DPC *e*pP pP 06 07 20.9 +0.3
DPC AMS AMS 06 46 10.0
comp=Z,700nm,16.2s
SOC Sochi 73.58 324 *eP* **P 06 07 18.7 +1.3**
SOC *e* 06 07 31.3
SOC *eS* S 06 16 40.5 -6.4
SOC *e* 06 17 12.8
SOC pmax pmax
comp=Z,55nm,1.2s,mb5.4
NIE Niedzica 73.59 339 *eP* **P 06 07 18.3 +1.0**
OKC Ostrava-Krasne 73.62 341 *eP* **P 06 07 18.3 +0.8**
OKC *e*pP pP 06 07 21.4 -0.2
OKC AMS AMS 06 41 10.0
comp=Z,700nm,17.3s
OKC Ostrava-Krasne 73.62 341 *eP* **P 06 07 18.3 +0.8**
OKC *e* pP 06 07 21.4 -0.2
KOLS Kolonicke sedl 73.63 338 *eP* **P 06 07 18.2 +0.6**
MORC Moravsky Berou 73.80 341 *eP* **P 06 07 19.3 +0.8**
MORC pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
MORC Moravsky Berou 73.80 341 ⇑ *iP* **P 06 07 19.7 +1.2**
MORC Moravsky Berou 73.80 341 *eP* **P 06 07 19.3 +0.7**
comp=Z,9.8nm,1.2s,mb4.6
CRVS Cervenica-Dubn 73.84 339 *eP* **P 06 07 19.5 +0.7**
KIS Kishinev 73.84 333 *eP* **P 06 07 21.0 +2.2**
KIS *e* 06 10 09.0
KIS *e* 06 17 28.0
KIS MLR MLR
comp=Z,500nm,16.0s,MS4.9
UZH Uzhgorod 73.91 338 *eP* **P 06 07 20.0 +0.8**
UZH *i* pP 06 07 23.4 +0.1
UZH *e* 06 07 30.0
UZH *eS* S 06 16 51.0 +0.5
UZH MLR MLR
comp=N,420nm,16.0s,MS4.9
UZH MLR MLR
comp=E,250nm,16.0s,MS4.9
UZH MLR MLR
comp=Z,200nm,16.0s,MS4.5
CNNC Cliffs of the 73.92 52 *eP* **P 06 07 21.9 +2.3**
comp=Z,40nm,0.9s,mb5.3
CNNC LR LR
comp=Z,1µm,21.0s,MS5.1
MOX Moxa 73.96 345 *eP* **P 06 07 20.0 +0.5**
comp=Z,18nm,1.3s,mb4.8
MOX
comp=Z,300nm,22.0s
MOX Moxa 73.96 345 *eP* **P 06 07 20.0 +0.5**
MOX pmax pmax
comp=Z,18nm,1.3s,mb4.8
MOX MLR MLR
comp=Z,300nm,22.0s,MS4.5
TANN Tannenbergstha 74.05 345 *eP* **P 06 07 20.5 +0.5**
comp=Z,20nm,1.3s,mb4.9
PRU Pruhonice 74.13 343 *eP* **P 06 07 20.5 0.0**
PRU AMS AMS 06 46 40.0
comp=Z,600nm,14.7s
BUR08 Bucovina Ar. S 74.16 336 *eP* **P 06 07 21.3 +0.6**
BURAR Bucovina Array 74.19 336 ⇑ *iP* **P 06 07 21.1 +0.2**
BURAR Bucovina Array 74.19 336 ⇑ P **P 06 07 21.1 +0.2**
SIM Simferopol' 74.19 329 *eP* **P 06 07 22.0 +1.1**
SIM *eS* S 06 16 56.0 +2.3
SIM pmax pmax
comp=Z,50nm,1.1s,mb5.4
SIM MLR MLR
comp=Z,800nm,16.0s,MS5.1
LIKS Likavka 74.19 340 *eP* **P 06 07 17.6 -3.2**
LIKS *e* 06 07 27.8
LIKS pmax pmax
comp=Z,150nm,1.6s,mb5.7
LIKS Likavka 74.19 340 *eP* **P 06 07 17.6 -3.2**
comp=Z,150nm,1.6s,mb5.7
LIKS *e* 06 07 27.8
LIKS Likavka 74.19 340 *e* **P 06 07 17.6 -3.2**
LIKS *e*pP pP 06 07 27.8 +2.9
NKC Novy Kostel 74.23 345 *eP* **P 06 07 21.8 +0.7**
NKC *e*pP pP 06 07 24.7 -0.4
VRAC Vranov 74.42 342 ⇑ *iP* **P 06 07 23.5 +1.3**
KECS Kecovo 74.44 339 *eP* **P 06 07 22.9 +0.6**
KECS pmax pmax
comp=Z,14nm,1.1s,mb4.8
KECS Kecovo 74.44 339 *eP* **P 06 07 22.9 +0.6**
comp=Z,14nm,1.1s,mb4.8
NHSC New Hope 74.59 55 PFAKE 06 07 40.0 +17
NHSC LR LR
comp=Z,2µm,19.0s,MS5.4
TREC Trest 74.63 343 AMS AMS 06 47 10.0
comp=Z,600nm,15.0s
UCC Uccle 74.71 350 P **P 06 07 24.3 +0.4**
UCC AP pP 06 07 27.5 -0.4
ROTZ Rotzenmuhle 74.72 345 *eP* **P 06 07 24.6 +0.7**
comp=Z,20nm,1.3s,mb4.9
MEM Membach 74.72 349 P **P 06 07 24.5 +0.6**
comp=Z,16nm,1.3s,mb4.8
MEM AP pP 06 07 27.3 -0.6
GNI Garni 74.74 319 ⇑ *eP* **P 06 07 25.4 +1.2**
GNI pmax pmax
comp=Z,96nm,1.4s
GNI Garni 74.74 319 ⇑ *eP* **P 06 07 25.5 +1.3**
GNI LR LR
comp=Z,1µm,19.0s,MS5.2
VYHS Vyhne 74.77 340 *eP* **P 06 07 24.7 +0.5**
KOLL Kolacno 74.78 340 *eP* **P 06 07 25.8 +1.5**
GRA1 Grafenberg Arr 74.94 345 *eP* **P 06 07 25.9 +0.7**
comp=Z,36nm,1.1s,mb5.2
GRA1 LR LR
comp=Z,300nm,19.0s,MS4.6
GRF Grafenberg Arr 74.94 345 *eP* **P 06 07 25.9 +0.7**
GRF pmax pmax
comp=Z,36nm,1.1s,mb5.2
GRF MLR MLR
comp=Z,300nm,19.0s,MS4.6
GRF Grafenberg Arr 74.94 345 *eP* **P 06 07 25.9 +0.7**
GRF pmax pmax
comp=Z,36nm,1.1s,mb5.2
GRF MLR MLR
comp=Z,300nm,19.0s,MS4.6
GRF Grafenberg Arr 74.94 345 *eP* **P 06 07 25.9 +0.7**
comp=Z,36nm,1.1s,mb5.2
GRF *eL* 06 45 07.0
comp=Z,348nm,19.0s
BCLA Clavier 74.99 349 AP pP 06 07 29.2 -0.3
PSZ Piszkesteto 75.10 339 ⇑ *iP* **P 06 07 28.1 +1.9**
PSZ Piszkesteto 75.10 339 P **P 06 07 28.5 +2.3**
PSZ LR LR
comp=Z,587nm,20.0s,MS4.9
KHC Kasperske Hory 75.12 344 *eP* **P 06 07 26.9 +0.7**
KHC AMS AMS 06 48 20.0
comp=Z,600nm,16.4s
MODS Modra-Piesok 75.19 341 *eP* **P 06 07 28.2 +1.5**
MODS pmax pmax
comp=Z,17nm,1.1s,mb4.9
MODS Modra-Piesok 75.19 341 *eP* **P 06 07 28.2 +1.5**
comp=Z,17nm,1.1s,mb4.9
WET Wettzell 75.22 344 *eP* **P 06 07 27.5 +0.7**
WET pmax pmax
comp=Z,22nm,1.0s,mb5.0
WET Wettzell 75.22 344 *eP* **P 06 07 27.5 +0.7**
comp=Z,22nm,1.0s,mb5.0
GIVF Givet 75.35 350 *eP* **P 06 07 26.5 -1.1**
GEC2 GERESS Array S 75.38 344 *eP* **P 06 07 28.2 +0.5**
GEC2 pmax pmax
comp=Z,20nm,0.9s,mb5.0
GEC2 GERESS Array S 75.38 344 *eP* **P 06 07 28.2 +0.5**
comp=Z,20nm,0.9s,mb5.0
GERES GERESS Array B 75.38 344 P **P 06 07 27.7 0.0**
comp=Z,2.9nm,0.5s,mb4.5,baz=35,slow=4.9,SNR=29
GERES LR LR 06 43 07.6
comp=Z,610nm,19.2s,MS4.9,baz=26,slow=38
GERES GERESS Array B 75.38 344 P **P 06 07 27.7 0.0**
GERES pmax pmax
comp=Z,3.0nm,0.5s
GERES MLR MLR
comp=Z,610nm,19.2s
DOU Dourbes 75.38 350 AP pP 06 07 31.1 -0.7
ZST Bratislava 75.39 341 *eP* **P 06 07 30.0 +2.1**
ZST pmax pmax
comp=Z,37nm,1.1s,mb5.2
ZST Bratislava 75.39 341 *eP* **P 06 07 30.0 +2.1**
comp=Z,37nm,1.1s,mb5.2
VRI Vrincioaia 75.43 334 ⇓ *iP* **P 06 07 29.6 +1.5**
VRI Vrincioaia 75.43 334 ⇓ P **P 06 07 29.6 +1.5**
BAIF Baives 75.46 350 *eP* **P 06 07 27.3 -0.9**
comp=Z,68nm,1.4s,mb5.1
BAIF Baives 75.46 350 *eP* **P 06 07 27.3 -0.9**
BAIF pmax pmax
comp=Z,34nm,1.4s,mb5.1
BAIF Baives 75.46 350 *eP* **P 06 07 27.3 -0.9**
comp=Z,34nm,1.4s,mb5.1
DRGR 75.55 337 ⇑ P **P 06 07 29.2 +0.4**
DRGR 75.55 337 ⇑ *iP* **P 06 07 29.1 +0.3**
DRGR 75.55 337 P **P 06 07 29.0 +0.2**
TAOE Nuku Hiva Isla 75.77 128 *e*LR LR 06 30 47.1
comp=Z,2µm,26.9s,baz=343
CONA Conrad Observa 75.88 342 *i* P **P 06 07 32.0 +1.3**
comp=Z,42nm,1.2s,mb5.2,SNR=16
CSNA Conrad Observa 75.88 342 ⇓ *iP* **P 06 07 31.8 +1.1**
comp=Z,40nm,1.2s,mb5.2
DZM Mont Dzumac 75.89 183 *eP* **P 06 07 31.9 +1.1**
MLR Muntele Rosu 75.98 334 ⇑ *iP* **P 06 07 32.3 +1.0**
MLR Muntele Rosu 75.98 334 P **P 06 07 32.7 +1.4**
LANF Langenberg 76.11 348 *eP* **P 06 07 36.3 +4.4**
MOA Molln 76.24 343 ⇑ *iP* **P 06 07 33.1 +0.4**
comp=Z,25nm,1.1s,mb5.1
VOIR 76.26 335 ⇓ *iP* **P 06 07 34.3 +1.4**
VOIR 76.26 335 P **P 06 07 34.0 +1.2**
TIRR Tirgusor 76.29 332 ⇓ *iP* **P 06 07 33.5 +0.5**
TIRR Tirgusor 76.29 332 ⇓ P **P 06 07 33.5 +0.4**
CTA Charters Tower 76.49 202 *eP* **P 06 07 34.8 +0.5**
comp=Z,16nm,1.0s,mb4.9
CTA Charters Tower 76.49 202 LR LR 06 39 00.2
comp=Z,308nm,20.9s,MS4.6,baz=9.4,slow=34
CTA Charters Tower 76.49 202 *eP* **P 06 07 34.8 +0.5**
CTA pmax pmax
comp=Z,16nm,1.0s
CTAO Charters Tower 76.49 202 *eP* **P 06 07 35.0 +0.7**
CTAO pmax pmax
comp=Z,26nm,1.0s,mb5.1
CTAO Charters Tower 76.49 202 *eP* **P 06 07 35.0 +0.7**
comp=Z,26nm,1.0s,mb5.1
HYB Hyderabad 76.50 281 *i* P **P 06 07 35.0 +0.4**
HYB Hyderabad 76.50 281 *eP* **P 06 07 35.0 +0.4**
ARSA Arzberg 76.60 342 ⇑ *iP* **P 06 07 35.7 +1.0**
comp=Z,24nm,1.1s,mb5.0
RJOB Jochberg 76.60 344 *eP* **P 06 07 35.4 +0.7**
comp=Z,16nm,1.0s,mb4.9
BFO Black Forest 76.68 347 *eP* **P 06 07 35.8 +0.6**
comp=Z,28nm,1.7s,mb4.9

BFO LR LR
comp=Z,444nm,20.0s,MS4.8
CDF Champ du Feu 76.73 348 *e*P **P 06 07 34.6 -0.9**
comp=Z,20nm,1.1s,mb4.7
CDF Champ du Feu 76.73 348 *e*P **P 06 07 34.6 -0.9**
CDF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
CDF Champ du Feu 76.73 348 *e*P **P 06 07 34.6 -0.9**
comp=Z,10.0nm,1.1s,mb4.7
GZR Gura Zlata 76.85 336 P **P 06 07 36.6 +0.4**
GZR Gura Zlata 76.85 336⇑ *i*P **P 06 07 36.5 +0.3**
LATR Latur 76.85 283 *e*P **P 06 07 36.8 +0.2**
LATR AMb AMB 06 07 43.9
comp=Z,36nm,0.4s,mb5.7
BZS Buzias 76.91 337⇑ *i*P **P 06 07 36.5 0.0**
BZS Buzias 76.91 337 P **P 06 07 36.6 +0.1**
PKSM Moragy 76.99 340⇑ *i*P **P 06 07 37.0 0.0**
PKSM Moragy 76.99 340 P **P 06 07 37.7 +0.7**
KBA Koelnbreinsper 77.15 343⇓ *i*P **P 06 07 38.7 +0.9**
comp=Z,108nm,1.2s,mb5.7,SNR=19
FLN La Foliniere 77.15 353 *e*P **P 06 07 36.6 -1.2**
comp=Z,72nm,1.1s,mb5.2
FLN *e*MLR MLR
comp=Z,452nm,20.0s,MS4.5
FLN La Foliniere 77.15 353 *e*P **P 06 07 36.6 -1.2**
FLN pmax pmax
comp=Z,36nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,450nm,20.0s,MS4.8
FLN La Foliniere 77.15 353 *e*P **P 06 07 36.6 -1.2**
comp=Z,36nm,1.1s,mb5.2
FLN LR LR
comp=Z,450nm,20.0s,MS4.8
SOKA Soboth 77.24 342⇓ *i*P **P 06 07 39.5 +1.1**
WTTA Wattenberg 77.25 345⇓ *i*P **P 06 07 39.5 +1.1**
comp=Z,21nm,1.0s,mb5.0
HAU Haudompre 77.25 348 *e*P **P 06 07 37.4 -1.0**
HAU *e*MLR MLR
comp=Z,511nm,19.2s,MS4.6
HAU Haudompre 77.25 348 *e*P **P 06 07 37.4 -1.0**
HAU LR LR
comp=Z,510nm,19.3s,MS4.9
PERS Pernice 77.27 342 *i*P **P 06 07 39.0 +0.5**
LDF La Druitiere 77.29 353 *e*P **P 06 07 37.3 -1.3**
comp=Z,48nm,1.2s,mb5.0
LDF La Druitiere 77.29 353 *e*P **P 06 07 37.3 -1.3**
LDF pmax pmax
comp=Z,24nm,1.2s,mb5.0
LDF La Druitiere 77.29 353 *e*P **P 06 07 37.3 -1.3**
comp=Z,24nm,1.2s,mb5.0
HINF Hinteralfeld 77.37 348 *e*P **P 06 07 37.9 -1.2**
OBKA Obir 77.49 342 *i*P **P 06 07 40.9 +1.2**
comp=Z,58nm,1.0s,mb5.5,SNR=18
BALT Daday 77.50 328 *i*P **P 06 07 41.1 +1.2**
GRR Gorron 77.55 353 *e*P **P 06 07 39.0 -1.0**
comp=Z,75nm,1.1s,mb5.2
GRR Gorron 77.55 353 *e*P **P 06 07 39.0 -1.0**
GRR pmax pmax
comp=Z,38nm,1.1s,mb5.2
GRR Gorron 77.55 353 *e*P **P 06 07 39.0 -1.0**
comp=Z,38nm,1.1s,mb5.2
ABTA Abfaltersbach 77.61 344⇓ *i*P **P 06 07 40.6 +0.2**
comp=Z,44nm,1.2s,mb5.3,SNR=12
FETA Feichten 77.62 345⇓ *i*P **P 06 07 41.5 +1.0**
comp=Z,23nm,1.2s,mb5.0
ROSF Rostrenen 77.75 355 *e*P **P 06 07 39.9 -1.2**
comp=Z,45nm,1.2s,mb5.0
ROSF Rostrenen 77.75 355 *e*P **P 06 07 39.9 -1.2**
ROSF pmax pmax
comp=Z,23nm,1.2s,mb5.0
ROSF Rostrenen 77.75 355 *e*P **P 06 07 39.9 -1.2**
comp=Z,22nm,1.2s,mb5.0
SGMF Saint Gilles 77.79 354 *e*P **P 06 07 41.2 -0.2**
DWPF Disney 78.07 58 PFAKE 06 07 50.0 +6.7
DWPF LR LR
comp=Z,807nm,21.0s,MS5.0
VISS Visnje 78.12 342 *i*P **P 06 07 42.9 -0.4**
QUIF Quistinic 78.16 355 *e*P **P 06 07 42.4 -1.0**
JAVS Javornik 78.17 343 *i*P **P 06 07 44.1 +0.5**
LOR Lormes 78.25 350 *e*P **P 06 07 43.0 -1.0**
comp=Z,57nm,1.3s,mb5.0
LOR *e*MLR MLR
comp=Z,418nm,18.0s,MS4.5
LOR Lormes 78.25 350 *e*P **P 06 07 43.0 -1.0**
LOR pmax pmax
comp=Z,29nm,1.3s,mb5.0
LOR MLR MLR
comp=Z,420nm,18.0s,MS4.8
LOR Lormes 78.25 350 *e*P **P 06 07 43.0 -1.0**
comp=Z,29nm,1.3s,mb5.0
LOR LR LR
comp=Z,420nm,18.0s,MS4.8
POO Poona 78.31 285 *e*P **P 06 07 44.6 -0.1**
POO AMb AMB 06 07 46.2
comp=Z,26nm,0.7s,mb5.3
BOJS Bojanci 78.33 342 *i*P **P 06 07 45.1 +0.6**
TUE Stuetta 78.36 346 *e*P **P 06 07 46.1 +1.5**
comp=Z,22nm,1.1s,mb5.0
TUE LR LR
comp=Z,436nm,19.0s,MS4.8
SSF Saint Saulge 78.49 350 *e*P **P 06 07 44.5 -0.8**
comp=Z,32nm,1.2s,mb4.8
SSF Saint Saulge 78.49 350 *e*P **P 06 07 44.5 -0.8**
SSF pmax pmax
comp=Z,16nm,1.2s,mb4.8
SSF Saint Saulge 78.49 350 *e*P **P 06 07 44.5 -0.8**
comp=Z,16nm,1.2s,mb4.8
CABF La Chapelle 78.65 348 *e*P **P 06 07 45.6 -0.6**
comp=Z,21nm,1.1s,mb4.7
CABF La Chapelle 78.65 348 *e*P **P 06 07 45.6 -0.6**
CABF pmax pmax
comp=Z,11nm,1.0s,mb4.7
CABF La Chapelle 78.65 348 *e*P **P 06 07 45.6 -0.6**
comp=Z,11nm,1.0s,mb4.7
MALT Malatya 78.70 323 *e*P **P 06 07 44.9 -1.7**
MALT pmax pmax
comp=Z,28nm,1.3s,mb5.0
MALT MLR MLR
comp=Z,321nm,21.0s,MS4.6
MALT Malatya 78.70 323⇑ *i*P **P 06 07 44.8 -1.8**
MALT Malatya 78.70 323 *e*P **P 06 07 44.9 -1.7**
comp=Z,28nm,1.3s,mb5.0
MALT LR LR
comp=Z,321nm,21.0s,MS4.6
AVF Avril sur Loir 78.78 350 *e*P **P 06 07 46.0 -0.9**
comp=Z,61nm,1.2s,mb5.1
AVF Avril sur Loir 78.78 350 *e*P **P 06 07 46.0 -0.9**
AVF pmax pmax
comp=Z,30nm,1.2s,mb5.1
AVF Avril sur Loir 78.78 350 *e*P **P 06 07 46.0 -0.9**
comp=Z,30nm,1.2s,mb5.1
SMF Signal de Mont 78.87 350 *e*P **P 06 07 46.5 -0.9**
comp=Z,78nm,1.4s,mb5.2
SMF Signal de Mont 78.87 350 *e*P **P 06 07 46.5 -0.9**
SMF pmax pmax
comp=Z,39nm,1.4s,mb5.1
SMF Signal de Mont 78.87 350 *e*P **P 06 07 46.5 -0.9**
comp=Z,39nm,1.4s,mb5.1
BGF Bois d'Agland 79.06 350 *e*P **P 06 07 47.7 -0.7**
KAD Karad 79.09 284 *e*P **P 06 07 48.2 -0.9**
KAD AMb AMB 06 07 55.6
comp=Z,31nm,0.9s,mb5.2
ANTO Ankara 79.20 327 *e*P **P 06 07 50.7 +1.4**
ANTO pmax pmax
comp=Z,45nm,1.2s,mb5.3
ANTO MLR MLR
comp=Z,494nm,20.0s,MS4.8
ANTO Ankara 79.20 327⇑ *i*P **P 06 07 50.3 +1.0**
ANTO Ankara 79.20 327 *e*P **P 06 07 50.7 +1.4**
comp=Z,45nm,1.2s,mb5.3
ANTO LR LR
comp=Z,494nm,20.0s,MS4.8
MFF Saint Martin d 79.27 353 *e*P **P 06 07 48.9 -0.7**
comp=Z,48nm,1.2s,mb5.0
MFF Saint Martin d 79.27 353 *e*P **P 06 07 48.9 -0.7**
MFF pmax pmax
comp=Z,24nm,1.2s,mb5.0
MFF Saint Martin d 79.27 353 *e*P **P 06 07 48.9 -0.7**
comp=Z,24nm,1.2s,mb5.0
TCF Toulx Ste Croi 79.38 351 *e*P **P 06 07 49.5 -0.7**
comp=Z,37nm,1.3s,mb4.8
TCF Toulx Ste Croi 79.38 351 *e*P **P 06 07 49.5 -0.7**
TCF pmax pmax
comp=Z,19nm,1.3s,mb4.9
TCF Toulx Ste Croi 79.38 351 *e*P **P 06 07 49.5 -0.7**
comp=Z,18nm,1.3s,mb4.8

VTS Vitosha 79.39 335⇑ *i*P **P 06 07 50.4 +0.1**
VTS Vitosha 79.39 335⇑ P **P 06 07 50.4 +0.1**
AGO Saint Agoulin 79.53 350 *e*P **P 06 07 50.1 -0.9**
AGO Saint Agoulin 79.53 350 *e*P **P 06 07 52.3 +1.3**
PLDF La Plantade 79.56 350 *e*P **P 06 07 50.6 -0.6**
PLDF La Plantade 79.56 350 *e*P **P 06 07 51.9 +0.7**
WRAB Tennant Creek 79.60 213 P **P 06 07 51.6 +0.1**
comp=Z,166nm,0.9s,mb6.0,SNR=8.7
WRAB Tennant Creek 79.60 213 *e*P **P 06 07 52.2 +0.7**
WRAB pmax pmax
comp=Z,40nm,1.1s,mb5.3
WRAB MLR MLR
comp=Z,534nm,19.0s,MS4.9
WRAB Tennant Creek 79.60 213 *e*P **P 06 07 52.2 +0.6**
comp=Z,40nm,1.1s,mb5.3
WRAB LR LR
comp=Z,534nm,19.0s,MS4.9
PPT Papeete 79.60 140 *e*SS SS 06 23 04.0 +2.1
comp=Z,91nm,27.0s
PPT *e*LQ 06 28 34.0
comp=Z,2µm,30.8s
PPT *e*LR LR 06 32 29.6
comp=Z,1µm,25.2s,baz=338
PPT Papeete 79.60 140 LR LR 06 42 07.1
comp=Z,534nm,18.1s,MS4.9,baz=347,slow=35
RAR Rarotonga 79.60 151 LR LR 06 40 55.8
comp=Z,470nm,18.9s,MS4.8,baz=162,slow=34
WB2 Warramunga Arr 79.61 213 *e*P **P 06 07 51.9 +0.3**
WRA Warramunga Arr 79.61 213 P **P 06 07 51.9 +0.3**
comp=Z,15nm,0.9s,mb4.9,baz=29,slow=5.8,SNR=59
WRA Warramunga Arr 79.61 213 P **P 06 07 51.9 +0.3**
WRA pmax pmax
comp=Z,15nm,0.9s
LPL La Plagne 79.65 348 *e*P **P 06 07 52.1 +0.4**
comp=Z,44nm,1.3s,mb4.9
LPL La Plagne 79.65 348 *e*P **P 06 07 52.1 +0.4**
LPL pmax pmax
comp=Z,22nm,1.3s,mb4.9
LPL La Plagne 79.65 348 *e*P **P 06 07 52.1 +0.4**
comp=Z,22nm,1.3s,mb4.9
LPG La Plagne 79.67 348 *e*P **P 06 07 52.3 +0.5**
comp=Z,52nm,1.2s,mb5.0
LPG La Plagne 79.67 348 *e*P **P 06 07 52.3 +0.5**
LPG pmax pmax
comp=Z,26nm,1.2s,mb5.0
LPG La Plagne 79.67 348 *e*P **P 06 07 52.3 +0.5**
comp=Z,26nm,1.2s,mb5.0
PYM Petit Puy Mans 79.84 350 *e*P **P 06 07 52.0 -0.7**
PYM Petit Puy Mans 79.84 350 *e*P **P 06 07 52.5 -0.2**
BNI Bardonecchia 80.11 348 *e*P **P 06 07 55.3 +1.1**
BNI pmax pmax
comp=Z,19nm,0.9s,mb5.0
BNI MLR MLR
comp=Z,529nm,20.0s,MS4.9
BNI Bardonecchia 80.11 348 *e*P **P 06 07 55.3 +1.1**
comp=Z,19nm,0.9s,mb5.0
BNI LR LR
comp=Z,529nm,20.0s,MS4.9
ESKT Eskisehir 80.13 329 *i*P **P 06 07 50.8 -3.6**
ORIF Oris-en-Rattie 80.34 348 *e*P **P 06 07 55.7 +0.2**
comp=Z,30nm,1.0s,mb4.9
ORIF *e*MLR MLR
comp=Z,446nm,20.2s,MS4.5
ORIF Oris-en-Rattie 80.34 348 *e*P **P 06 07 55.7 +0.2**
ORIF pmax pmax
comp=Z,15nm,1.0s,mb4.9
ORIF Oris-en-Rattie 80.34 348 *e*P **P 06 07 55.7 +0.2**
comp=Z,15nm,1.0s,mb4.9
SKO Skopje 80.40 336 *i*P **P 06 07 58.6 +2.8**
MBDF Montbardon 80.42 347 *e*P **P 06 07 55.7 -0.2**
comp=Z,39nm,1.2s,mb4.9
MBDF Montbardon 80.42 347 *e*P **P 06 07 55.7 -0.2**
MBDF pmax pmax
comp=Z,19nm,1.2s,mb4.9
MBDF Montbardon 80.42 347 *e*P **P 06 07 55.7 -0.2**
comp=Z,19nm,1.2s,mb4.9
RJF Les Rejaudoux 80.42 351 *e*P **P 06 07 55.3 -0.6**
comp=Z,37nm,1.3s,mb4.8
RJF *e*MLR MLR
comp=Z,740nm,19.2s,MS4.8
RJF Les Rejaudoux 80.42 351 *e*P **P 06 07 55.3 -0.6**
RJF pmax pmax
comp=Z,18nm,1.3s,mb4.8
RJF MLR MLR
comp=Z,740nm,19.3s,MS5.0
RJF Les Rejaudoux 80.42 351 *e*P **P 06 07 55.3 -0.6**
comp=Z,18nm,1.3s,mb4.8
RJF LR LR
comp=Z,740nm,19.3s,MS5.0
VLC Villacollemand 80.47 345 PFAKE 06 08 10.0 +14
VLC LR LR
comp=Z,564nm,19.0s,MS4.9
VIVF Saint-Julien-l 80.55 349 *e*P **P 06 07 56.3 -0.2**
comp=Z,34nm,1.2s,mb4.8
VIVF Saint-Julien-l 80.55 349 *e*P **P 06 07 56.3 -0.2**
VIVF pmax pmax
comp=Z,17nm,1.2s,mb4.8
VIVF Saint-Julien-l 80.55 349 *e*P **P 06 07 56.3 -0.2**
comp=Z,17nm,1.2s,mb4.8
VAY Valandovo 80.75 335 *i*P **P 06 07 58.0 +0.3**
CAF Calviac 80.75 351 *e*P **P 06 07 57.4 -0.2**
comp=Z,44nm,1.2s,mb5.0
CAF Calviac 80.75 351 *e*P **P 06 07 57.4 -0.2**
CAF pmax pmax
comp=Z,22nm,1.2s,mb5.0
CAF Calviac 80.75 351 *e*P **P 06 07 57.4 -0.2**
comp=Z,22nm,1.2s,mb5.0
GOA Goa 80.75 283 *ex* x 06 07 24.7
GOA AMb AMB 06 07 33.0
comp=Z,48nm,1.8s,mb5.1
LFF La Frestale 80.85 352 *e*P **P 06 07 56.4 -1.8**
comp=Z,79nm,1.3s,mb5.2
LFF La Frestale 80.85 352 *e*P **P 06 07 56.4 -1.8**
LFF pmax pmax
comp=Z,40nm,1.3s,mb5.2
LFF La Frestale 80.85 352 *e*P **P 06 07 56.4 -1.8**
comp=Z,40nm,1.3s,mb5.2
TEIG Tepich 80.89 68 PFAKE 06 08 10.0 +11
TEIG LR LR
comp=Z,524nm,22.0s,MS4.8
KRUS Krusevo 81.02 336 *i*P **P 06 07 59.6 +0.4**
FITZ Fitzroy Crossi 81.03 222 *e*P **P 06 08 00.1 +0.8**
comp=Z,19nm,1.0s,mb5.0
SAOF Saorge 81.05 347 *e*P **P 06 07 59.7 +0.5**
SAOF Saorge 81.05 347 *e*P **P 06 08 01.5 +2.3**
AUTN L'Aution 81.06 347 *e*P **P 06 08 01.8 +2.5**
TOUF Mont Tournerai 81.06 347 *e*P **P 06 07 59.2 -0.1**
TOUF Mont Tournerai 81.06 347 *e*P **P 06 08 02.7 +3.4**
SBF Sospel 81.18 347 *e*P **P 06 08 00.8 +0.8**
comp=Z,76nm,1.2s,mb5.2
SBF Sospel 81.18 347 *e*P **P 06 08 00.8 +0.8**
SBF pmax pmax
comp=Z,38nm,1.2s,mb5.2
SBF Sospel 81.18 347 *e*P **P 06 08 00.8 +0.8**
comp=Z,38nm,1.2s,mb5.2
MVIF Mont Vial 81.19 347 *e*P **P 06 08 00.0 0.0**
MVIF Mont Vial 81.19 347 *e*P **P 06 08 03.0 +3.0**
SMRF Simiane la Rot 81.31 348 *e*P **P 06 08 01.1 +0.5**
comp=Z,71nm,1.4s,mb5.1
SMRF Simiane la Rot 81.31 348 *e*P **P 06 08 01.1 +0.5**
comp=Z,71nm,1.4s,mb5.4
TIR Tirane 81.36 337 PFAKE 06 08 10.0 +9.0
TIR LR LR
comp=Z,917nm,20.0s,MS5.1
CALN Calern 81.36 347 *e*P **P 06 08 05.1 +4.2**
FRF La Foret Royal 81.58 347 *e*P **P 06 08 01.6 -0.5**
comp=Z,62nm,1.2s,mb5.1
FRF La Foret Royal 81.58 347 *e*P **P 06 08 01.6 -0.5**
FRF pmax pmax
comp=Z,31nm,1.2s,mb5.1
FRF La Foret Royal 81.58 347 *e*P **P 06 08 01.6 -0.5**
comp=Z,31nm,1.2s,mb5.1
ISP Isparta 81.77 328 *e*P **P 06 08 03.5 +0.3**
ISP pmax pmax
comp=Z,46nm,1.3s,mb5.2
ISP MLR MLR
comp=Z,497nm,20.0s,MS4.9
ISP Isparta 81.77 328⇑ *i*P **P 06 08 05.6 +2.4**
ISP Isparta 81.77 328 *e*P **P 06 08 03.5 +0.3**
comp=Z,46nm,1.3s,mb5.2
ISP LR LR
comp=Z,497nm,20.0s,MS4.9
LMR La Mourre 81.83 347 *e*P **P 06 08 02.9 -0.5**
comp=Z,82nm,1.3s,mb5.2
LMR La Mourre 81.83 347 *e*P **P 06 08 02.9 -0.5**
LMR pmax pmax
comp=Z,41nm,1.3s,mb5.2
LMR La Mourre 81.83 347 *e*P **P 06 08 02.9 -0.5**
comp=Z,41nm,1.3s,mb5.2
BBSR BB Station 82.11 44 PFAKE 06 08 20.0 +15
BBSR LR LR
comp=Z,643nm,19.0s,MS5.0
PGF Pioggiola 82.25 345 *e*P **P 06 08 05.4 -0.2**
comp=Z,76nm,1.4s,mb5.1
PGF Pioggiola 82.25 345 *e*P **P 06 08 05.4 -0.2**
PGF pmax pmax
comp=Z,38nm,1.4s,mb5.1
PGF Pioggiola 82.25 345 *e*P **P 06 08 05.4 -0.2**
comp=Z,38nm,1.4s,mb5.1
MTLF Montolieu 82.30 350 *e*P **P 06 08 05.8 -0.1**
comp=Z,30nm,1.3s,mb4.8
MTLF Montolieu 82.30 350 *e*P **P 06 08 05.8 -0.1**
MTLF pmax pmax
comp=Z,15nm,1.3s,mb4.8
MTLF Montolieu 82.30 350 *e*P **P 06 08 05.8 -0.1**
comp=Z,15nm,1.3s,mb4.8
DNZL Cakiroluk 82.36 329 *i*P **P 06 08 02.1 -4.2**
MIB Mutribah 82.59 312 *e*P **P 06 08 06.4 -1.2**
baz=312
MIB AMb AMB 06 08 08.6
comp=Z,78nm,0.9s,mb5.7,baz=312
EPF Esparros 82.78 352 *e*P **P 06 08 07.4 -1.0**
ELIZ Elizondo 82.79 353 P **P 06 08 10.6 +2.2**
ELIZ pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
ELIZ Elizondo 82.79 353 P **P 06 08 10.6 +2.2**
comp=Z,8.7nm,1.0s,mb4.7
SJPF Ste Jean 82.82 353 *e*P **P 06 08 07.3 -1.3**
ELAN Lanestosa 82.84 355 P **P 06 08 09.7 +1.0**
comp=Z,45nm,1.2s,mb5.4
KOD Kodaikanal 82.85 277 *e*P **P 06 08 10.0 +0.9**
KOD AMb AMB 06 08 15.4
comp=Z,33nm,1.2s,mb5.2
EPON Pontenova 82.90 357 P **P 06 08 08.7 -0.3**
comp=Z,80nm,2.7s,mb5.3
ETSF Etsaut 82.98 352 *e*P **P 06 08 08.3 -1.1**
comp=Z,34nm,1.0s,mb5.0
ETSF Etsaut 82.98 352 *e*P **P 06 08 08.3 -1.1**
ETSF pmax pmax
comp=Z,17nm,1.0s,mb5.0
ETSF Etsaut 82.98 352 *e*P **P 06 08 08.3 -1.1**
comp=Z,17nm,1.0s,mb5.0
RST Umm Al-Ruwaisa 83.00 312 *e*P **P 06 08 08.5 -1.2**
baz=312
RST AMb AMB 06 08 12.9
comp=Z,89nm,1.0s,mb5.8,baz=312
NAY Al-Naaiem 83.11 312 *e*P **P 06 08 09.0 -1.3**
baz=312
NAY AMb AMB 06 08 15.1
comp=Z,52nm,1.1s,mb5.5,baz=312
EBIE Bielsa 83.14 352 P **P 06 08 11.2 +0.9**
comp=Z,32nm,1.4s,mb5.2
ASAR Alice Springs 83.23 212 P **P 06 08 11.7 +0.9**
comp=Z,15nm,0.9s,mb5.0,baz=20,slow=4.6,SNR=71
ASAR Alice Springs 83.23 212 P **P 06 08 11.7 +1.0**
ASAR pmax pmax
comp=Z,15nm,0.9s
RDF Al-Radifah 83.25 311 *e*P **P 06 08 10.0 -1.1**
baz=311
RDF AMb AMB 06 08 16.7
comp=Z,137nm,1.4s,mb5.8,baz=311
PALK Pallekele 83.32 273 PFAKE 06 08 20.0 +8.4
PALK LR LR
comp=Z,446nm,22.0s,MS4.8
CUC Castrocucco 83.53 340 *e*P **P 06 08 12.5 +0.1**
comp=Z,42nm,1.2s,mb5.4
CUC LR LR
comp=Z,910nm,19.0s,MS5.2
RAO Raoul Island 83.74 169 LR LR 06 41 09.6
comp=Z,302nm,18.9s,MS4.7,baz=348,slow=32
ERUA La Rua 83.83 357 P **P 06 08 14.8 +1.0**
ERUA pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
ERUA La Rua 83.83 357 P **P 06 08 14.8 +1.0**
comp=Z,7.1nm,1.0s,mb4.8
TIP Timpagrande 84.12 339 *e*P **P 06 08 15.3 -0.1**
comp=Z,89nm,1.4s,mb5.7
TIP LR LR
comp=Z,510nm,21.0s,MS4.9
ESAC San Caprasio 84.15 352 P **P 06 08 15.6 +0.2**
comp=Z,59nm,1.1s,mb5.6
ECAL Calabor 84.27 357 P **P 06 08 15.9 -0.1**
comp=Z,11nm,1.2s,mb4.9
ELOB Lobios 84.38 358 P **P 06 08 17.5 +0.9**
comp=Z,36nm,1.7s,mb5.2
EPOB Poblet 84.38 351 P **P 06 08 17.3 +0.7**
comp=Z,34nm,1.0s,mb5.4
PCAB Cabril 84.54 358 *e*P **P 06 08 18.3 +0.9**
comp=Z,19nm,1.3s,mb5.1
SANT Santorini 84.63 331 PFAKE 06 08 30.0 +12
SANT LR LR
comp=Z,475nm,19.0s,MS4.9
ASF Jabal al Asfar 84.74 321 P **P 06 08 19.1 +0.5**
comp=Z,29nm,1.1s,mb5.3,baz=349,slow=1.4,SNR=15
ASF Jabal al Asfar 84.74 321 P **P 06 08 19.1 +0.5**
ASF pmax pmax
comp=Z,29nm,1.1s
ERTA Horta de San J 84.84 352 P **P 06 08 21.0 +2.0**
comp=Z,26nm,1.5s,mb5.1
PVRL Vila Real 84.97 358 *e*P **P 06 08 20.5 +0.9**
comp=Z,58nm,1.4s,mb5.5
MVO Moncorvo 85.06 357 *e*P **P 06 08 20.4 +0.4**
comp=Z,14nm,0.9s,mb5.1
ETOR Torete 85.16 353 P **P 06 08 20.3 -0.3**
ETOR pmax pmax
comp=Z,33nm,1.1s,mb5.4
ETOR Torete 85.16 353 P **P 06 08 20.3 -0.3**
comp=Z,33nm,1.1s,mb5.4
VSL Villasalto 85.18 345 PFAKE 06 08 30.0 +9.3
VSL LR LR
comp=Z,346nm,22.0s,MS4.7
GUD Guadarrama 85.46 355 P **P 06 08 21.8 -0.3**
GUD pmax pmax
comp=Z,15nm,1.0s,mb5.1
GUD Guadarrama 85.46 355 P **P 06 08 21.8 -0.3**
comp=Z,15nm,1.0s,mb5.1
EMOS Mosqueruela 85.50 352 P **P 06 08 23.0 +0.8**
comp=Z,36nm,0.8s,mb5.6
ETOS Mallorca 85.78 350 P **P 06 08 18.2 -5.4**
comp=Z,52nm,1.6s,mb5.5
MTE Manteigas 85.83 358 *e*P **P 06 08 25.2 +1.3**
comp=Z,26nm,1.4s,mb5.3
MTE Manteigas 85.83 358 *e*SKS SKSac 06 18 59.4 +10
MTE *e*SS SS 06 24 46.4 +15
MTE Manteigas 85.83 358 *e*P **P 06 08 23.9 0.0**
comp=Z,22nm,1.1s,mb5.3
MTE LR LR
comp=Z,378nm,20.0s,MS4.8
ECHE Chera 86.30 352 P **P 06 08 27.5 +1.2**
ECHE pmax pmax
comp=Z,41nm,1.5s,mb5.4
ECHE Chera 86.30 352 P **P 06 08 27.5 +1.2**
comp=Z,41nm,1.5s,mb5.4
ESDC Sonseca Array 86.42 355 P **P 06 08 28.6 +1.8**
comp=Z,6.4nm,0.9s,mb4.9,baz=3.0,slow=5.5,SNR=18
ESDC Sonseca Array 86.42 355 P **P 06 08 26.8 0.0**
comp=Z,7.9nm,1.1s,mb4.9
ESLA Sonseca Array 86.42 355 *e*P **P 06 08 27.2 +0.4**
comp=Z,5.7nm,1.2s,mb4.7
TGUH Tegucigalpa,Un 86.45 71 *e*P **P 06 08 28.4 +1.1**
comp=Z,55nm,1.3s,mb5.6
TGUH LR LR
comp=Z,360nm,20.0s,MS4.8
PAB San Pablo 86.57 355 PFAKE 06 08 40.0 +12
PAB LR LR
comp=Z,334nm,19.0s,MS4.8
PMRV Marv??o 86.80 357 *e*P **P 06 08 30.3 +1.6**
comp=Z,13nm,1.7s,mb4.9
PMAFR Mafra 87.31 359 *e*SKS SKSac 06 18 44.5 -14
PMAFR *e*SS SS 06 25 10.6 +17
EVIA Vianos 87.36 354 P **P 06 08 30.8 -0.6**
EVIA pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
EVIA Vianos 87.36 354 P **P 06 08 30.8 -0.6**
comp=Z,7.1nm,0.7s,mb5.0
EVO Evora 87.71 358 *e*P **P 06 08 31.6 -1.5**
comp=Z,16nm,1.1s,mb4.9
EVO *e*MLR MLR
comp=Z,448nm,20.2s,MS4.6
EBAN Banos Encina 87.91 355 P **P 06 08 37.8 +3.7**
EBAN pmax pmax
comp=Z,9.0nm,1.4s,mb4.8
EBAN Banos Encina 87.91 355 P **P 06 08 37.8 +3.7**

comp=Z,8.9nm,1.4s,mb4.8
EADA Adamuz 87.95 355 P **P** 06 08 33.8 -0.5
comp=Z,18nm,1.5s,mb5.1
PBAR Barrancos 88.04 357 *e*P **P** 06 08 34.6 -0.1
comp=Z,11nm,1.1s,mb5.0
EHUE Huescar 88.19 354 P **P** 06 08 36.4 +1.0
EHUE pmax pmax
comp=Z,7.0nm,1.3s,mb4.7
EHUE Huescar 88.19 354 P **P** 06 08 36.4 +1.0
comp=Z,7.1nm,1.3s,mb4.7
EMIN Mina Concepcio 88.44 357 P **P** 06 08 38.8 +2.2
comp=Z,19nm,1.2s,mb5.2
PVAQ Vaqueiros 88.83 358 *e*SKS SKSac 06 19 20.1 +13
PVAQ *e*SS SS 06 25 23.3 +7.7
KEST Kesra 88.86 344 P **P** 06 08 39.8 +1.2
comp=Z,2.0nm,1.0s,mb4.4,baz=0.0,slow=9.1,SNR=3.0
KEST LR LR 06 54 43.5
comp=Z,147nm,18.5s,MS4.4,baz=274,slow=40
STKA Stephens Creek 88.91 203 *e*P **P** 06 08 39.3 +0.8
comp=Z,15nm,0.9s,mb5.3
STKA Stephens Creek 88.91 203 P **P** 06 08 39.6 +1.1
comp=Z,19nm,1.0s,mb5.4,baz=345,slow=5.5,SNR=21
STKA LR LR 06 42 30.5
comp=Z,314nm,21.6s,MS4.7,baz=16,slow=32
ELOJ Sierra Loja 88.94 355 P **P** 06 08 42.4 +3.4
ELOJ pmax pmax
comp=Z,15nm,0.7s,mb5.4
ELOJ Sierra Loja 88.94 355 P **P** 06 08 42.4 +3.4
comp=Z,14nm,0.7s,mb5.4
PFVI Vila Bisbo 89.12 358 *e*SKS SKSac 06 19 13.6 +4.3
PFVI *e*SS SS 06 25 30.4 +11
ESPR Espera 89.30 356 P **P** 06 08 41.5 +0.9
comp=Z,16nm,0.7s,mb5.5
EMIJ Mijas 89.56 355 P **P** 06 08 43.2 +1.3
comp=Z,9.6nm,0.9s,mb5.1
EJIF Jimena Fronter 89.70 356 P **P** 06 08 42.9 +0.3
EJIF pmax pmax
comp=Z,16nm,1.1s,mb5.3
EJIF Jimena Fronter 89.70 356 P **P** 06 08 42.9 +0.3
comp=Z,16nm,1.1s,mb5.3
SFS San Fernando 89.72 356 PFAKE 06 08 50.0 +7.4
SFS LR LR
comp=Z,734nm,21.0s,MS5.1
JTS JuntasAbangare 90.82 71 PFAKE 06 09 00.0 +12
JTS LR LR
comp=Z,216nm,19.0s,MS4.6
FORT Forrest 91.72 215 *e*P **P** 06 08 52.0 +0.3
comp=Z,14nm,0.8s,mb5.4
RTC Rabat Centre 92.21 357 PFAKE 06 09 10.0 +16
RTC LR LR
comp=Z,227nm,19.0s,MS4.6
URZ Urewera 92.24 174 LR LR 06 47 59.2
comp=Z,312nm,18.4s,MS4.8,baz=172,slow=34
SJG San Juan 93.92 52 PFAKE 06 09 10.0 +7.7
SJG LR LR
comp=Z,562nm,20.0s,MS5.0
BCIP Isla Barro Col 94.57 68 PFAKE 06 09 20.0 +15
BCIP LR LR
comp=Z,299nm,22.0s,MS4.7
SNZO South Karori 95.15 176 PFAKE 06 09 20.0 +13
SNZO LR LR
comp=Z,579nm,21.0s,MS5.0
RPZ Rata Peaks 97.45 179 LR LR 06 51 22.1
comp=Z,368nm,18.5s,MS4.9,baz=354,slow=34
SDV Santo Domingo 99.67 60 PFAKE 06 09 40.0 +12
SDV LR LR
comp=Z,174nm,19.0s,MS4.6
GRGR Grenville 101.21 51 PFAKE 06 09 50.0 +15
GRGR LR LR
comp=Z,392nm,20.0s,MS4.9
BBGH Gun Hill 101.26 48 PFAKE 06 09 50.0 +15
BBGH LR LR
comp=Z,1μm,21.0s,MS5.3
OTAV Otavalo 102.71 72 PFAKE 06 09 50.0 +8.1
OTAV LR LR
comp=Z,208nm,20.0s,MS4.7
MSEY Mahe Island 107.58 287 PFAKE 06 14 20.0 +8.4
MSEY LR LR
comp=Z,604nm,20.0s,MS5.2
TORD Torodi Ar. Bea 112.19 347 PKiKP PKiKP 06 14 21.5 +1.2
comp=Z,0.4nm,0.7s,baz=343,slow=2.1,SNR=5.3
TORD PP PP 06 14 58.4 -5.4
comp=Z,1.5nm,1.0s,baz=8.9,slow=6.6,SNR=5.1
TORD PKKPab PKKPab 06 25 19.0 -3.2
comp=Z,2.7nm,1.0s,baz=185,slow=2.7,SNR=10
TORD Torodi Ar. Bea 112.19 347 PKPdf PKiKP 06 14 21.5 +1.2
TORD PP PP 06 14 58.4 -5.4
TORD PKKPab PKKPab 06 25 19.0 -3.3
NNA Nana 113.59 77 PFAKE 06 14 30.0 +7.1
NNA LR LR
comp=Z,287nm,20.0s,MS4.9
KMBO Kilima Mbogo 114.20 305 PFAKE 06 14 40.0 +16
KMBO LR LR
comp=Z,429nm,20.0s,MS5.0
LPAZ La Paz 122.01 73 PFAKE 06 14 50.0 +11
LPAZ LR LR
comp=Z,179nm,19.0s,MS4.7
SIV San Ignacio 125.65 66 PKP PKPdf 06 14 45.9 -0.1
comp=Z,1.6nm,0.7s,baz=209,slow=0.2,SNR=7.0
SIV PP PP 06 16 35.1 -2.6
comp=Z,2.2nm,1.1s,baz=331,slow=10,SNR=3.1
LVC Limon Verde 126.58 78 PFAKE 06 15 00.0 +12
LVC LR LR
comp=Z,306nm,22.0s,MS4.9
CASY Casey 127.98 206 PFAKE 06 15 00.0 +11
CASY LR LR
comp=Z,303nm,19.0s,MS5.0
LCO Las Campanas 130.41 85 PFAKE 06 15 10.0 +15
LCO LR LR
comp=Z,255nm,19.0s,MS4.9
LSZ Lusaka 130.83 307 PFAKE 06 15 10.0 +14
LSZ LR LR
comp=Z,601nm,20.0s,MS5.3
SBA Scott Base 131.69 181 PFAKE 06 15 10.0 +14
SBA LR LR
comp=Z,208nm,19.0s,MS4.9
BDFB Brasilia 131.92 52 PFAKE 06 15 10.0 +12
BDFB LR LR
comp=Z,450nm,19.0s,MS5.2
CFAA Coronel Fontan 133.75 85 PKP PKPdf 06 15 00.3 -0.6
comp=Z,0.3nm,1.0s,baz=258,slow=3.2,SNR=5.0
CFAA Coronel Fontan 133.75 85 PKP PKPdf 06 15 00.3 -0.6
CPUP Villa Florida 136.04 70 PKP PKPdf 06 15 06.0 +0.7
comp=Z,1.8nm,0.8s,baz=309,slow=1.6,SNR=3.6
CPUP Villa Florida 136.04 70 PKIKP PKPdf 06 15 06.1 +0.7
CPUP pmax pmax
comp=Z,2.0nm,0.9s
PLCA Paso Flores 138.62 96 PKhKP 06 15 00.6
comp=Z,1.7nm,1.0s,baz=315,slow=4.3,SNR=2.9
PLCA PKP PKPdf 06 15 10.6 +0.9
comp=Z,3.3nm,0.8s,baz=12,slow=1.0,SNR=7.7
PLCA Paso Flores 138.62 96 PKIKP PKPdf 06 15 10.6 +0.9
TSUM Tsumeb 138.95 317 PFAKE 06 15 20.0 +9.0
TSUM LR LR
comp=Z,542nm,21.0s,MS5.3
LBTB Lobatse 140.38 303 PKP PKPdf 06 15 15.7 +2.3
comp=Z,9.2nm,1.0s,baz=97,slow=2.0,SNR=6.8
LBTB Lobatse 140.38 303 PKIKP PKPdf 06 15 15.7 +2.3
LBTB pmax pmax
comp=Z,9.0nm,1.0s
TRQA Tornquist 141.92 86 PFAKE 06 15 30.0 +14
TRQA LR LR
comp=Z,373nm,19.0s,MS5.2
BOSA Boshof 143.51 300 PKhKP 06 15 15.4
comp=Z,3.9nm,0.6s,baz=54,slow=5.3,SNR=6.7
BOSA Boshof 143.51 300 *i* PKIKP PKPdf 06 15 15.4 -3.5
BOSA pmax pmax
comp=Z,4.0nm,0.6s
QSPA South Pole Qui 143.85 180 PKhKP 06 15 14.8
comp=Z,30nm,1.0s,baz=354,slow=1.3,SNR=57
MAW Mawson 144.11 219 *e*P PKPdf 06 15 16.8 -1.9
comp=Z,16nm,1.0s
MAW Mawson 144.11 219 PKP PKPdf 06 15 17.1 -1.6
comp=Z,15nm,0.7s,baz=88,slow=4.5,SNR=46
MAW Mawson 144.11 219 PKIKP PKPdf 06 15 17.1 -1.6
MAW pmax pmax
comp=Z,15nm,0.7s
USHA Ushuaia 147.28 115 PKPbc PKPbc 06 15 26.6 -0.3
comp=Z,40nm,0.9s,baz=302,slow=1.8,SNR=17
EFI East Falkland 151.76 105 PFAKE 06 15 40.0 +8.3
EFI LR LR
comp=Z,323nm,20.0s,MS5.1
PMSA Palmer Station 151.76 133 PKPbc PKPbc 06 15 37.6 0.0
comp=Z,28nm,0.9s,baz=166,slow=1.8,SNR=9.9
PMSA Palmer Station 151.76 133 *e*PKPbc PKPbc 06 15 38.0 +0.3
SYO Syowa Base 152.79 217⇑ *e*PKPdf PKPdf 06 15 37.6 +4.9

HOPE Hope Point 164.95 101 PFAKE 06 16 00.0 +13
HOPE LR LR
comp=Z,8.0nm,22.0s

KRSC ***17*** *05:59:07.3±2.2,5393N×16883E,h15km±15km,ML4.8*
IDC ***17*** *05:59:09.0±0.7,5425N×169.16E,h0km,mb4.2/12,*
mb1 4.3/13,mb1mx4.2/23,mbtmp4.2/13,ML4.2/1,Error ellipse: s-maj=24.4km s-min=15.3km az=166.0
ISCJB ***17*** *05:59:10.7±0.7,5399N±0.10×16880E±008,h33km,*
mb4.1/12,Error ellipse: s-maj=14.0km s-min=7.1km az=175.3
MOS ***17*** *05:59:10.8±1.6,5424N×16866E,h19km,mb4.4/12,Error ellipse: s-maj=19.8km s-min=16.4km az=7.0*
ISC 17 05:59:13.5±0.6,5405N±009×16880E±008,h35km,n42,
σ1§33/43,mb4.1/12,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**4.06**	**305**	P		**Pn**	**06 00 12.8**	**-0.2**
KBTR				S		**Sn**	**06 01 00.9**	**+1.7**
KBTR	**Krutoberegovo**	**4.06**	**305**	P		**Pn**	**06 00 12.8**	**-0.2**
KBTR				*i* S		**Sn**	**06 01 00.9**	**+1.7**
ZLN	**Zelenaya**	**5.01**	**296**	P		**Pn**	**06 00 24.5**	**-1.5**
SPN	**Mys Shipunski**	**5.32**	**263**	P		**Pn**	**06 00 30.1**	**-0.2**
SPN	**Mys Shipunski**	**5.32**	**263**	P		**Pn**	**06 00 30.1**	**-0.2**
NLC	**Nalytchevo**	**5.70**	**265**	P		**Pn**	**06 00 34.0**	**-1.5**
NLC				S		**Sn**	**06 01 36.3**	**-3.3**
NLC	**Nalytchevo**	**5.70**	**265**	P		**Pn**	**06 00 34.0**	**-1.5**
NLC				*i* S		**Sn**	**06 01 36.3**	**-3.3**
PET	**Petropavlovsk**	**6.14**	**265**	P		**Pn**	**06 00 40.7**	**-0.8**
PET				S		**Sn**	**06 01 49.2**	**-1.2**
PET	**Petropavlovsk**	**6.14**	**265**	P		**Pn**	**06 00 40.7**	**-0.8**
PET				*i* S		**Sn**	**06 01 49.2**	**-1.2**
RUS	**Russkaya**	**6.38**	**260**	P		**Pn**	**06 00 44.4**	**-0.5**
RUS	**Russkaya**	**6.38**	**260**	P		**Pn**	**06 00 44.4**	**-0.5**
GNL	**Ganaly**	**6.43**	**271**	P		**Pn**	**06 00 45.6**	**0.0**
PETK	**Petropavlovsk-** 4.8nm,0.3s,baz=91,slow=20,SNR=6.1	**6.68**	**266**	Pn		**Pn**	**06 00 49.4**	**+0.4**
PETK				Sn		**Sn**	**06 02 09.1**	**+5.3**
	3.1nm,0.3s,baz=74,slow=26,SNR=4.3							
KSRS	**Korea Array** 4.6nm,0.7s,mb4.4,baz=42,slow=9.0,SNR=5.2	**32.45**	**256**	P		**P**	**06 05 44.6**	**+4.6**
KSRS	**Korea Array**	**32.45**	**256**	P		**P**	**06 05 44.7**	**+4.6**
KSRS				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5							
DLBC	**Dease Lake** baz=291,slow=14	**33.24**	**57**	P		**P**	**06 05 46.0**	**-0.8**
SONM	**Songino Array**	**38.66**	**287**	P		**P**	**06 06 36.3**	**+3.0**
	comp=Z,1.7nm,0.5s,mb4.0,baz=60,slow=7.9,SNR=8.1							
SONM	**Songino Array**	**38.66**	**287**	P		**P**	**06 06 36.3**	**+3.0**
SONM				pmax	pmax			
	comp=Z,2.0nm,0.5s							
NVAR	**Mina Array Bea**	**50.50**	**77**	P		**P**	**06 08 05.6**	**-2.2**
	comp=Z,0.9nm,0.7s,mb3.9,baz=307,slow=8.9,SNR=2.7							
KURK	**Kurchatov**	**51.52**	**306**	P		**P**	**06 08 16.7**	**+1.4**
	comp=Z,3.5nm,0.8s,mb4.3,baz=55,slow=7.7,SNR=2.9							
KURK	**Kurchatov**	**51.52**	**306**	P		**P**	**06 08 16.7**	**+1.4**
KURK				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4							
MKAR	**Makanchi Array**	**52.30**	**300**	P		**P**	**06 08 22.0**	**+0.8**
	comp=Z,0.6nm,0.4s,mb3.9,baz=44,slow=6.3,SNR=3.3							
MKAR	**Makanchi Array**	**52.30**	**300**	P		**P**	**06 08 22.0**	**+0.8**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
PDAR	**Pinedale Array** comp=Z,0.8nm,0.6s,mb3.8,baz=316,slow=5.0,SNR=3.1	**52.45**	**67**	P		**P**	**06 08 21.7**	**-0.6**
ARCES	**ARCESS Array B**	**53.86**	**345**	P		**P**	**06 08 31.6**	**-0.8**
	comp=Z,2.0nm,0.8s,mb4.1,baz=20,slow=8.9,SNR=5.5							
ARCES	**ARCESS Array B**	**53.86**	**345**	P		**P**	**06 08 31.6**	**-0.7**
ARCES				pmax	pmax			
	comp=Z,2.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**63.45**	**265**	P		**P**	**06 09 42.8**	**+3.1**
	comp=Z,1.0nm,0.3s,mb4.4,baz=33,slow=6.9,SNR=4.2							
CMAR	**Chiang Mai Arr**	**63.45**	**265**	P		**P**	**06 09 42.8**	**+3.1**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
NOA	**NORSAR Array B**	**63.89**	**348**	P		**P**	**06 09 41.6**	**-0.3**
	comp=Z,1.0nm,0.5s,mb4.1,baz=4.6,slow=5.3,SNR=3.6							
NOA	**NORSAR Array B**	**63.89**	**348**	P		**P**	**06 09 41.6**	**-0.4**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.5s							
AKASG	**Malin Array Be**	**70.26**	**334**	P		**P**	**06 10 22.9**	**+0.3**
	comp=Z,2.3nm,0.4s,mb4.4,baz=26,slow=6.5,SNR=4.4							
AKASG	**Malin Array Be**	**70.26**	**334**	P		**P**	**06 10 22.9**	**+0.3**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.4s							
WRA	**Warramunga Arr**	**79.42**	**213**	P		**P**	**06 11 17.8**	**+2.0**
	comp=Z,1.5nm,0.8s,mb4.0,baz=23,slow=6.4,SNR=4.9							
WRA	**Warramunga Arr**	**79.42**	**213**	P		**P**	**06 11 17.8**	**+2.0**
WRA				pmax	pmax			
	comp=Z,2.0nm,0.9s							
ASAR	**Alice Springs**	**83.04**	**212**	P		**P**	**06 11 37.4**	**+2.4**
	comp=Z,1.8nm,0.9s,mb4.1,baz=21,slow=5.1,SNR=6.9							
ASAR	**Alice Springs**	**83.04**	**212**	P		**P**	**06 11 37.4**	**+2.5**
ASAR				pmax	pmax			
	comp=Z,2.0nm,0.9s							
CFAA	**Coronel Fontan**	**134.02**	**85**	PKP	PKPdf		06 18 28.1	+1.6
	comp=Z,0.4nm,0.9s,baz=282,slow=4.6,SNR=4.1							
BOSA	**Boshof**	**143.30**	**299**	PKhKP			06 18 38.4	
	comp=Z,3.3nm,0.9s,baz=17,slow=3.7,SNR=4.2							
BOSA	**Boshof**	**143.30**	**299**	*i* PKHKP			06 18 38.4	
BOSA				pmax	pmax			
	comp=Z,3.0nm,0.9s							
QSPA	**South Pole Qui**	**143.79**	**180**	PKhKP			06 18 39.9	
	comp=Z,1.9nm,0.7s,baz=314,slow=3.2,SNR=4.1							
MAW	**Mawson**	**143.90**	**219**	PKP	PKPdf		06 18 42.8	-0.5
	comp=Z,2.8nm,0.6s,baz=106,slow=6.3,SNR=8.9							
MAW	**Mawson**	**143.90**	**219**	PKIKP	PKPdf		06 18 42.8	-0.5
MAW				pmax	pmax			
	comp=Z,3.0nm,0.6s							

MOS ***17*** *06:12:49.7±1.4,5395N×16884E,h15km,mb4.3/1,Error ellipse: s-maj=66.2km s-min=32.2km az=1.6*
KRSC 17 06:12:49.7±1.3,5395N×16884E,h15km±15km,ML4.2,
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**4.13**	**306**	P		Pn	06 13 54.3	+2.1
KBTR				*i* S		Sn	06 14 42.5	+2.3
BZGR	**Bezymyannyi-Gr**	**5.10**	**296**	P		Pn	06 14 08.3	+2.8
BZGR				*i* S		Sn	06 15 04.7	+0.7
BZMR	**Bezymyannaya**	**5.21**	**296**	P		Pn	06 14 09.7	+2.8
BZMR				*i* S		Sn	06 15 07.2	+0.5
BZWR	**Bezymyannyi-We**	**5.21**	**296**	P		Pn	06 14 09.9	+2.9
SPN	**Mys Shipunski**	**5.33**	**264**	P		Pn	06 14 11.4	+2.8
SPN				*i* S		Sn	06 15 09.6	-0.1
NLC	**Nalytchevo**	**5.71**	**266**	P		Pn	06 14 17.9	+4.0
NLC				*i* S		Sn	06 15 20.5	+1.4
SRDR	**Sredinnyy**	**5.75**	**298**	P		Pn	06 14 17.5	+3.2
AVH	**Avacha**	**6.05**	**268**	P		Pn	06 14 22.8	+4.2
AVH				*i* S		Sn	06 15 29.1	+1.6
PET	**Petropavlovsk**	**6.15**	**265**	P		Pn	06 14 24.6	+4.7
PET				*i* S		Sn	06 15 32.4	+2.5
RUS	**Russkaya**	**6.39**	**260**	P		Pn	06 14 27.3	+4.1
RUS				*i* S		Sn	06 15 37.4	+1.6
GNL	**Ganaly**	**6.46**	**272**	P		Pn	06 14 29.3	+5.2
GNL				*i* S		Sn	06 15 41.4	+3.9

JMA 17 06:14:36.6±0.2,3057N×12868E,h18km,M3.6,
Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**1.26**	**125**	P		Pn	06 14 59.6	+0.3
JNN				S		Sb	06 15 16.8	+1.0
JKC	**Kuchinoerabu**	**1.31**	**94**	P		Pn	06 15 00.1	+0.1
JKC				S		Sn	06 15 16.9	-0.2
JSJ	**Shimokoshiki**	**1.42**	**39**	P		Pn	06 15 01.6	+0.1
JSJ				S		Sn	06 15 19.6	-0.1
JSU	**Suzuyama**	**1.79**	**58**	P		Pn	06 15 07.0	+0.5
JTN	**Tanegashima 3**	**1.98**	**87**	P		Pn	06 15 10.0	+0.7
JTN				S		Sn	06 15 33.1	-0.6
JFU	**Fukue jima 2**	**2.08**	**2**	P		Pn	06 15 11.5	+0.9
JTZ	**Takazaki**	**2.45**	**57**	P		Pn	06 15 17.0	+1.3

BJI ***17*** *06:31:05.9,5420N×16920E,h10km,mB5.1,mb4.7,Ms4.8,*
Msz4.5
IDC ***17*** *06:31:09.5±0.7,5430N×16928E,h0km,mb4.2/15,*
mb1 4.4/16,mb1mx4.2/25,mbtmp4.2/16,ML4.3/1,MS3.9/2,
Ms1 3.9/2,ms1mx3.3/24,Error ellipse: s-maj=20.8km
s-min=14.5km az=164.0
ISCJB ***17*** *06:31:09.7±0.3,5409N±0.005×169.15E±003,h18km,*
mb4.4/41,MS4.2/5,Error ellipse: s-maj=7.1km
s-min=2.7km az=8.4
NEIC ***17*** *06:31:11.0±0.3,5419N×16922E,h10km,mb4.5/16,Error ellipse: s-maj=9.4km s-min=4.6km az=173.0*
MOS ***17*** *06:31:11.3±1.5,5416N×169.16E,h29km,mb4.5/20,Error ellipse: s-maj=10.7km s-min=8.7km az=133.4*
KRSC ***17*** *06:31:11.8±2.3,5380N×16864E,h5km±5km,ML4.7*
ISC 17 06:31:12.1±0.3,5413N±005×16923E±003,h19km,
h19km±1.8km:pP-P,n107,σ1§25/123,mb4.4/41,MS4.2/5,6C,
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**3.23**	**114**	*e*Pn		**Pn**	**06 32 01.4**	**-0.3**
SMY				*e*Sn		**Sn**	**06 32 40.8**	**+1.1**
KBTR	**Krutoberegovo**	**4.23**	**302**	*e*P		**Pn**	**06 32 16.5**	**+1.1**
KBTR				*i* S		**Sn**	**06 33 03.7**	**-0.5**
ZLN	**Zelenaya**	**5.20**	**295**	P		**Pn**	**06 32 31.8**	**+3.0**
BZMR	**Bezymyannaya**	**5.34**	**293**	*e*P		**Pn**	**06 32 32.0**	**+1.3**
BZMR				*i* S		**Sn**	**06 33 30.9**	**-0.8**
KLY	**Klyuchi**	**5.38**	**298**	P		**Pn**	**06 32 32.5**	**+1.3**
KLY				*i* S		**Sn**	**06 33 31.4**	**-1.1**
KRSR	**Krestovskiy**	**5.39**	**296**	*e*P		**Pn**	**06 32 33.2**	**+1.8**
KRSR				*i* S		**Sn**	**06 33 33.3**	**+0.5**
KIRR	**Kirishev**	**5.43**	**293**	*e*P		**Pn**	**06 32 33.8**	**+1.9**
KIRR				*i* S		**Sn**	**06 33 34.4**	**+0.6**
KMNR	**Kamenistaya**	**5.43**	**291**	*e*P		**Pn**	**06 32 33.6**	**+1.6**
KMNR				*i* S		**Sn**	**06 33 33.6**	**-0.3**
SPN	**Mys Shipunski**	**5.58**	**263**	*e*P		**Pn**	**06 32 33.0**	**-1.0**
SPN				*i* S		**Sn**	**06 33 32.5**	**-5.0**
KOZR	**Kozyr**	**5.70**	**294**	PN		**Pn**	**06 32 38.2**	**+2.6**
KOZR				S		**Sn**	**06 33 41.9**	**+1.4**
KOZ	**Kozyrevsk**	**5.71**	**294**	*e*P		**Pn**	**06 32 38.2**	**+2.4**
KOZ				*i* S		**Sn**	**06 33 41.9**	**+1.2**
SRDR	**Sredinnyy**	**5.87**	**296**	*e*P		**Pn**	**06 32 40.5**	**+2.5**
SRDR				*i* S		**Sn**	**06 33 44.9**	**+0.2**
NLC	**Nalytchevo**	**5.96**	**265**	*e*P		**Pn**	**06 32 38.3**	**-0.9**
NLC				*i* S		**Sn**	**06 33 40.5**	**-6.3**
PET	**Petropavlovsk**	**6.40**	**264**	P		**Pn**	**06 32 45.2**	**0.0**
PET				*i* S		**Sn**	**06 33 52.4**	**-5.2**
PET	**Petropavlovsk**	**6.40**	**264**	*e*Pn		**Pn**	**06 32 45.6**	**+0.4**
RUS	**Russkaya**	**6.65**	**260**	*e*P		**Pn**	**06 32 48.0**	**-0.6**
RUS				*i* S		**Sn**	**06 33 56.9**	**-6.9**
GNL	**Ganaly**	**6.69**	**271**	*e*P		**Pn**	**06 32 49.9**	**+0.7**
PEA0B	**Petropavlovsk-**	**6.94**	**266**	*e*Pn		**Pn**	**06 32 53.9**	**+1.3**
PETK	**Petropavlovsk-** 6.0nm,0.3s,baz=92,slow=20,SNR=48	**6.94**	**266**	Pn		**Pn**	**06 32 53.5**	**+0.9**
PETK				Sn		**Sn**	**06 34 09.5**	**-1.4**
	5.4nm,0.3s,baz=202,slow=27,SNR=7.3							
PETK	**Petropavlovsk-**	**6.94**	**266**	Pn		**Pn**	**06 32 53.5**	**+0.9**
PETK				Sn		**Sn**	**06 34 09.5**	**-1.4**
ADK	**Adak**	**8.79**	**99**	*e*PN		**Pn**	**06 33 17.5**	**-0.5**
ADK				pmax	pmax			
	comp=Z,23nm,1.1s							
ADK	**Adak**	**8.79**	**99**	*e*P		**Pn**	**06 33 17.5**	**-0.5**
	comp=Z,23nm,1.1s							
BILL	**Bilibino**	**14.03**	**355**	*e*P		**Pn**	**06 34 27.9**	**-1.7**
BILL				pmax	pmax			
	comp=Z,5.0nm,0.8s							
UNV	**Unalaska Valle**	**14.27**	**81**	*e*Pn		**Pn**	**06 34 33.8**	**+1.0**
	comp=Z,73nm,1.7s							
SVW2	**Sparrevohn**	**19.90**	**55**	*e*P		**Pn**	**06 35 42.6**	**-1.1**
TTA	**Tatalina**	**19.93**	**50**	*e*P		**Pn**	**06 35 44.1**	**-0.1**
TTA				pmax	pmax			
	comp=Z,13nm,0.9s							
TTA	**Tatalina**	**19.93**	**50**	*e*P		**Pn**	**06 35 44.1**	**-0.1**
	comp=Z,13nm,0.9s							
OHAK	**Old Harbor**	**21.18**	**66**	*e*P		**P**	**06 35 54.4**	**-1.6**
	comp=Z,39nm,0.9s,mb4.7							
KDAK	**Kodiak Island**	**21.49**	**65**	P		**P**	**06 35 58.1**	**-1.2**
	comp=Z,3.3nm,0.5s,mb4.0,baz=239,slow=5.9,SNR=5.7							
IMA2	**Indian Mountai**	**21.62**	**42**	*e*P		**P**	**06 36 01.6**	**+0.9**
PPLA	**Purkeypile**	**21.66**	**51**	*e*P		**P**	**06 36 00.6**	**-0.5**
	comp=Z,54nm,1.5s,mb4.8							
CHUM	**Lake Minchumin**	**21.73**	**48**	*e*P		**P**	**06 36 03.5**	**+1.6**
	comp=Z,30nm,1.4s,mb4.5							
YAK	**Yakutsk**	**22.04**	**307**⇑	*e*P		**P**	**06 36 03.4**	**-1.8**
YAK				pmax	pmax			
	comp=Z,97nm,1.1s,mb5.2							
YAK	**Yakutsk**	**22.04**	**307**	*e*P		**P**	**06 36 03.9**	**-1.3**
	comp=Z,64nm,0.7s,mb5.2							
SEW	**Seward**	**22.91**	**58**	*e*P		**P**	**06 36 13.7**	**-0.8**
MCK	**McKinley**	**23.20**	**49**	*e*P		**P**	**06 36 18.6**	**+1.1**
MCK				pmax	pmax			
	comp=Z,2.0nm,0.9s,mb3.5							
MCK	**McKinley**	**23.20**	**49**	*e*P		**P**	**06 36 18.6**	**+1.1**
	comp=Z,1.9nm,0.9s,mb3.5							
COLD	**Coldfoot**	**23.26**	**40**	*e*P		**P**	**06 36 18.4**	**+0.3**
	comp=Z,13nm,1.7s,mb4.1							
KLR	**Kul'dur**	**23.55**	**273**	*e*P		**P**	**06 36 17.3**	**-3.9**
COLA	**College**	**23.78**	**46**⇑	*i*P		**P**	**06 36 22.4**	**-0.8**
TIXI	**Tiksi**	**24.65**	**331**	*i* P		**P**	**06 36 30.7**	**-0.3**
TIXI				pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.4							
TIXI	**Tiksi**	**24.65**	**331**	*e*P		**P**	**06 36 30.9**	**-0.2**
	comp=Z,131nm,2.5s,mb5.0							
MDJ	**Mudanjiang**	**27.18**	**266**	P		**P**	**06 36 51.3**	**-2.8**
MDJ				AP	pP		06 36 55.1	-4.7
MDJ				AMB	AMB			
	comp=Z,8.0nm,0.8s,mb4.3							
MDJ				AMB	AMB			
	comp=Z,213nm,7.2s							
HYT	**Haines Junctio**	**28.69**	**55**	*e*P		**P**	**06 37 07.8**	**+0.4**
CN2	**Changchun**	**30.08**	**268**	*e*P		**P**	**06 37 17.0**	**-3.0**
CN2				AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.7							
BOD	**Bodaibo**	**30.39**	**300**	*e*P		**P**	**06 37 21.2**	**-1.4**
BOD				pmax	pmax			
	comp=Z,3.0nm,1.2s,mb3.9							
KSRS	**Korea Array**	**32.71**	**256**	P		**P**	**06 37 45.8**	**+2.6**
	comp=Z,1.8nm,0.6s,mb4.2,baz=32,slow=12,SNR=3.9							
KSRS	**Korea Array**	**32.71**	**256**	P		**P**	**06 37 45.8**	**+2.6**
KSRS				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2							
BJI	**Beijing**	**37.85**	**270**	P		**P**	**06 38 24.1**	**-3.2**
TLY	**Talaya**	**38.36**	**294**⇑	*i*P		**P**	**06 38 29.0**	**-2.5**
TLY				pmax	pmax			
	comp=Z,13nm,1.9s,mb4.3							
ULN	**Ulaanbaatar**	**38.49**	**287**⇑	*i*P		**P**	**06 38 31.6**	**-1.1**
SONM	**Songino Array**	**38.88**	**287**	P		**P**	**06 38 36.6**	**+0.7**
	comp=Z,2.5nm,0.5s,mb4.2,baz=61,slow=8.0,SNR=24							
SONM				LR

MOD				*e*pP	pP	06 39 46.9	+1.1
NVS	**Novosibirsk**	**46.90**	**308**	*e*P	**P**	**06 39 37.0**	**-3.8**
NVS				*e*		06 41 19.3	
SPITS	**Spitsbergen Ar**	**46.92**	**353**	P	**P**	**06 39 39.7**	**-1.0**
	comp=Z,6.9nm,0.8s,mb4.6,baz=39,slow=16,SNR=5.4						
SPITS	**Spitsbergen Ar**	**46.92**	**353**	P	**P**	**06 39 39.7**	**-0.9**
SPITS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LZH	**Lanzhou**	**47.73**	**276**	*e*P	**P**	**06 39 47.8**	**+0.3**
LZH				AP	pP	06 39 51.5	-1.8
LZH				AMB	AMB		
	comp=Z,27nm,1.3s,mb5.1						
LZH				AMB	AMB		
	comp=Z,270nm,5.7s						
GTA	**Gaotai**	**47.82**	**282**	P	**P**	**06 39 49.1**	**+1.0**
GTA				AP	pP	06 39 54.8	+0.8
GTA				XP	sP	06 39 57.4	+1.1
GTA				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb5.0						
MCMT	**McKenzie Canyo**	**49.03**	**67**	*e*P	**P**	**06 39 57.1**	**-0.3**
WAKR	**Walker**	**49.53**	**78**	*e*P	**P**	**06 40 02.2**	**+0.9**
NVAR	**Mina Array Bea**	**50.23**	**77**	P	**P**	**06 40 07.3**	**+0.7**
	comp=Z,1.9nm,0.7s,mb4.2,baz=293,slow=7.5,SNR=12						
IMW	**Indian Meadow**	**50.68**	**67**	*e*P	**P**	**06 40 10.5**	**+0.6**
	comp=Z,2.0nm,0.8s,mb4.1						
IMW				*e*pP	pP	06 40 17.6	+1.8
CD2	**Chengdu**	**51.45**	**271**	*e*P	**P**	**06 40 13.6**	**-2.3**
CD2				AP	pP	06 40 18.3	-3.5
CD2				XP	sP	06 40 20.6	-3.5
CD2				PP	PP	06 42 11.4	-1.5
CD2				S	**S**	**06 47 30.1**	**-4.6**
CD2				SS	SS	06 51 03.3	-7.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,7.2s						
WMQ	**Urumqi**	**51.65**	**294**	*e*P	**P**	**06 40 15.0**	**-2.2**
WMQ				AP	pP	06 40 19.5	-3.6
WMQ				XP	sP	06 40 22.0	-3.4
WMQ				*e*S	**S**	**06 47 34.0**	**-3.1**
WMQ				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,217nm,5.4s						
WMQ				LR	LR		
	comp=N,617nm,15.4s,MS4.8						
WMQ				LR	LR		
	comp=E,373nm,16.7s,MS4.8						
WMQ				LR	LR		
	comp=Z,209nm,18.3s,MS4.2						
KURK	**Kurchatov**	**51.68**	**306**	*e*P	**P**	**06 40 16.5**	**-0.8**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KURK	**Kurchatov**	**51.68**	**306**	*e*P	**P**	**06 40 16.5**	**-0.8**
	comp=Z,10nm,1.0s,mb4.7						
PDAR	**Pinedale Array**	**52.18**	**67**	P	**P**	**06 40 21.1**	**0.0**
	comp=Z,0.9nm,0.7s,mb3.8,baz=318,slow=4.2,SNR=8.4						
TPNV	**Topopah Spring**	**52.43**	**77**	*e*P	**P**	**06 40 23.7**	**+0.6**
TPNV				pmax	pmax		
	comp=Z,94nm,3.0s						
TPNV	**Topopah Spring**	**52.43**	**77**	*e*P	**P**	**06 40 23.7**	**+0.5**
	comp=Z,94nm,3.0s						
MKAR	**Makanchi Array**	**52.48**	**300**	P	**P**	**06 40 21.9**	**-1.5**
	comp=Z,1.7nm,0.7s,mb4.1,baz=48,slow=7.5,SNR=13						
MKAR	**Makanchi Array**	**52.48**	**300**	P	**P**	**06 40 21.9**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GYA	**Guiyang**	**53.03**	**265**	P	**P**	**06 40 25.4**	**-2.3**
GYA				PCP	PcP	06 41 35.4	-0.7
GYA				PP	PP	06 42 26.8	-0.5
GYA				SCP	ScP	06 45 31.0	-1.3
GYA				S	**S**	**06 47 51.3**	**-5.2**
GYA				SS	SS	06 51 28.9	-6.6
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,110nm,5.2s						
GYA				LR	LR		
	comp=N,360nm,19.4s,MS4.5						
GYA				LR	LR		
	comp=E,290nm,18.8s,MS4.5						
GYA				LR	LR		
	comp=Z,490nm,19.2s,MS4.6						
ARCES	**ARCESS Array B**	**53.85**	**345**	P	**P**	**06 40 31.9**	**-1.2**
	comp=Z,2.0nm,0.5s,mb4.3,baz=26,slow=9.0,SNR=16						
ARCES	**ARCESS Array B**	**53.85**	**345**	P	**P**	**06 40 32.0**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SRU	**San Rafael**	**54.16**	**71**	*e*P	**P**	**06 40 36.7**	**+0.9**
SRU				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
SRU	**San Rafael**	**54.16**	**71**	*e*P	**P**	**06 40 36.7**	**+0.9**
	comp=Z,1.4nm,1.0s,mb3.9						
ARU	**Arti**	**56.17**	**321**	*c i*P	**P**	**06 40 49.0**	**-1.0**
ARU				*e*S	**S**	**06 48 39.5**	**+1.6**
ARU				*e*SS	SS	06 52 16.2	-7.4
ARU				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.6						
KMI	**Kunming**	**56.35**	**267**	P	**P**	**06 40 50.3**	**-1.4**
KMI				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.5						
ISCO	**Idaho Springs**	**56.38**	**67**	*e*P	**P**	**06 40 53.0**	**+1.2**
ISCO				*e**PP	pP	06 41 00.0	+2.2
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
ISCO	**Idaho Springs**	**56.38**	**67**	*e*P	**P**	**06 40 53.0**	**+1.2**
	comp=Z,3.6nm,0.9s,mb4.4						
ISCO				*e*pP	pP	06 41 00.0	+2.2
ANMO	**Albuquerque**	**59.41**	**72**	*e*P	**P**	**06 41 13.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**63.71**	**265**	P	**P**	**06 41 43.8**	**+1.5**
	comp=Z,1.2nm,0.3s,mb4.4,baz=37,slow=7.9,SNR=3.7						
CMAR	**Chiang Mai Arr**	**63.71**	**265**	P	**P**	**06 41 43.8**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WMOK	**Wichita Mounta**	**63.78**	**67**	*e*P	**P**	**06 41 42.6**	**0.0**
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
WMOK	**Wichita Mounta**	**63.78**	**67**	*e*P	**P**	**06 41 42.6**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.4						
HNR	**Honiara**	**63.80**	**190**	LR	LR	07 09 20.6	
	comp=Z,98nm,18.2s,MS4.0,baz=101,slow=36						
NB2	**NORSAR Subarra**	**63.86**	**348**	P	**P**	**06 41 42.0**	**-0.7**
	comp=Z,1.8nm,0.6s,mb4.3,baz=16,slow=6.9						
NOA	**NORSAR Array B**	**63.86**	**348**	P	**P**	**06 41 42.4**	**-0.3**
	comp=Z,2.3nm,0.6s,mb4.4,baz=16,slow=6.5,SNR=7.9						
NOA	**NORSAR Array B**	**63.86**	**348**	P	**P**	**06 41 42.4**	**-0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**70.30**	**334**	P	**P**	**06 42 23.1**	**-0.6**
	comp=Z,1.9nm,0.5s,mb4.2,baz=26,slow=6.8,SNR=3.4						
AKASG	**Malin Array Be**	**70.30**	**334**	P	**P**	**06 42 23.1**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BUR08	**Bucovina Ar. S**	**74.13**	**336**	*e*P	**P**	**06 42 46.1**	**-0.6**
WRA	**Warramunga Arr**	**79.62**	**213**	P	**P**	**06 43 18.3**	**+0.5**
	comp=Z,1.2nm,0.7s,mb3.9,baz=26,slow=5.7,SNR=2.9						
WRA	**Warramunga Arr**	**79.62**	**213**	P	**P**	**06 43 18.3**	**+0.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**83.25**	**212**	P	**P**	**06 43 37.7**	**+0.7**
	comp=Z,2.0nm,0.8s,mb4.2,baz=23,slow=5.0,SNR=6.9						
ASAR	**Alice Springs**	**83.25**	**212**	P	**P**	**06 43 37.7**	**+0.7**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**88.92**	**203**	P	**P**	**06 44 06.1**	**+1.4**
	comp=Z,2.3nm,0.8s,mb4.5,baz=309,slow=6.5,SNR=2.6						
QSPA	**South Pole Qui**	**143.88**	**180**	PKhKP	PKPdf	06 50 41.0	-3.1
	comp=Z,2.7nm,0.9s,baz=352,slow=2.2,SNR=6.0						
QSPA	**South Pole Qui**	**143.88**	**180**	PKP	PKPdf	06 50 41.0	-3.1
MAW	**Mawson**	**144.12**	**219**	PKP	PKPdf	06 50 43.8	-1.0
	comp=Z,3.7nm,0.9s,baz=59,slow=4.9,SNR=8.4						
MAW	**Mawson**	**144.12**	**219**	PKIKP	PKPdf	06 50 43.8	-1.0
MAW				pmax	pmax		
	comp=Z,4.0nm,0.9s						

IDC 17 06:37:29.5±2.1, 107N×12618E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.7/15, mbtmp3.8/3, Error ellipse: s-maj=173.5km s-min=26.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.36**	**159**	P	P	06 42 29.0	-0.3
	6.8nm,0.7s,baz=338,slow=11,SNR=36						
WB2	**Warramunga Arr**	**22.37**	**159**	*e*P	P	06 42 29.1	-0.3
ASAR	**Alice Springs**	**25.71**	**163**	P	P	06 43 02.0	+0.4
	1.6nm,0.6s,baz=346,slow=12,SNR=29						
MKAR	**Makanchi Array**	**59.43**	**326**	P	P	06 47 34.0	0.0
	0.4nm,0.4s,baz=123,slow=7.4,SNR=4.1						

CSEM 17 06:38:08.0±0.9, 3813N×2654W, h2km±3km, ML2.6, Error ellipse: s-maj=6.0km s-min=1.4km az=32.0, After PDA

PDA 17 06:38:08.0±0.9, 3813N×2654W, h2km±3km, MD3.6, ML2.6, Error ellipse: s-maj=6.0km s-min=1.4km az=32.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSET	**Sete Cidades**	**0.71**	**115**	*e*P	Pg	06 38 20.0	-1.6
PSET				*e*S	Sg	06 38 29.2	-1.7
PSET				A		06 38 30.9	
	76nm,0.2s						
PSET	**Sete Cidades**	**0.71**	**115**	*e*P	Pg	06 38 20.0	-1.6
PSET				*e*S	Sg	06 38 29.2	-1.7
PSCM	**Serra do Cume**	**0.73**	**321**	*e*P	Pg	06 38 19.9	-2.1
PSCM				*e*S	Sg	06 38 29.6	-1.9
PSCM				A		06 38 31.2	
	157nm,0.2s						
PSCM	**Serra do Cume**	**0.73**	**321**	*e*P	Pg	06 38 19.9	-2.1
PSCM				*e*S	Sg	06 38 29.6	-1.9
PDA	**Ponta Delgada**	**0.79**	**119**	*e*P	Pg	06 38 21.2	-1.9
PDA				*e*S	Sg	06 38 30.7	-2.6
CMLA	**Cha da Macela**	**0.88**	**114**	*e*P	Pg	06 38 22.4	-2.4
CMLA				*e*S	Sg	06 38 33.3	-2.9
CMLA				A		06 38 36.0	
	123nm,0.3s						
CMLA	**Cha da Macela**	**0.88**	**114**	*e*P	Pg	06 38 22.4	-2.4
CMLA				*e*S	Sg	06 38 33.3	-2.9
PMAN	**Manadas**	**1.32**	**293**	*e*P	Pg	06 38 29.1	-4.2
PMAN				*e*S	Sg	06 38 43.7	-6.7
PMAN				A		06 38 46.3	
	132nm,0.2s						
PMAN	**Manadas**	**1.32**	**293**	*e*P	Pg	06 38 29.1	-4.2
PMAN				*e*S	Sg	06 38 43.7	-6.7
ROSA	**Rosais**	**1.46**	**294**	*e*P	Pn	06 38 30.4	-5.0
ROSA				*e*S	Sb	06 38 47.5	-7.4
PICO	**Pico**	**1.53**	**285**	*e*P	Pn	06 38 31.7	-4.6
PICO				*e*S	Sn	06 38 49.0	-7.8
PSMN	**Pico do Norte,**	**1.62**	**133**	*e*P	Pn	06 38 32.5	-5.0
PSMN				*e*S	Sn	06 38 51.0	-7.9
HOR	**Horta**	**1.69**	**284**	*e*S	Sn	06 38 52.9	-7.8
CALA	**Caldeira**	**1.76**	**286**	*e*P	Pn	06 38 34.8	-4.7
CALA				*e*S	Sn	06 38 54.7	-7.7

CSEM 17 07:17:40.8±0.2, 3933N×3197E, h10km, MD2.9, Error ellipse: s-maj=4.8km s-min=3.9km az=121.0
ISCJB 17 07:17:41.4±0.9, 3931N±004×3202E±004, h8km±7km, Error ellipse: s-maj=7.4km s-min=5.5km az=5.7
ISK 17 07:17:41.6, 3931N×3203E, h12km, MD2.9
DDA 17 07:17:41.5, 3934N×3224E, h7km±5km, Md2.9

ISC 17 07:17:41.8±0.7, 3930N±004×3200E±005, h11km±7km, n14, σ0§78/22, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIZT	**Kizilcal**	**0.43**	**193**	*e*PG	**Pg**	**07 17 50.7**	**+0.5**
KDHN	**Kadinhani**	**0.78**	**173**	*i* P	**Pg**	**07 17 57.4**	**+0.5**
KDHN				*i* S	**Sg**	**07 18 12.8**	**+5.7**
LOD	**Lodumlu**	**0.83**	**45**	*e*PG	**Pg**	**07 17 57.9**	**0.0**
ANTO	**Ankara**	**0.84**	**47**	*e*PG	**Pg**	**07 17 57.1**	**-0.9**
ESKT	**Eskisehir**	**0.92**	**284**	*i* P	**Pg**	**07 17 54.1**	**-5.5**
ESKT				*i* S	**Sg**	**07 18 11.2**	**-0.3**
SEYT	**Eskypehyr**	**0.92**	**284**	*i* P	**Pg**	**07 17 54.1**	**-5.4**
SEYT				*i* S	**Sg**	**07 18 11.2**	**-0.3**
LADK	**Ladik-KONYA**	**1.13**	**165**	*e*PN	**Pn**	**07 18 03.3**	**-0.3**
SGKT	**Sivrigoynuk**	**1.27**	**2**	*i* P	**Pn**	**07 18 04.6**	**-1.0**
SGKT				*i* S	**Sb**	**07 18 24.2**	**+2.0**
BORA	**Eskisehir**	**1.33**	**296**	*i* P	**Pn**	**07 18 04.9**	**-1.4**
BORA				*i* S	**Sb**	**07 18 24.2**	**+0.5**
BORA	**Eskisehir**	**1.33**	**296**	*i* P	**Pn**	**07 18 04.9**	**-1.4**
BORA				*i* S	**Sb**	**07 18 24.2**	**+0.4**
KAMT	**Kaman**	**1.33**	**86**	*e*PN	**Pn**	**07 18 06.4**	**+0.1**
KAMT				*e*SN	**Sn**	**07 18 24.1**	**+0.1**
KONT	**Konya--Tatoy**	**1.38**	**168**	*e*PN	**Pn**	**07 18 07.4**	**+0.3**
CDAG	**Cicekdag**	**1.86**	**79**	*i* P	**Pn**	**07 18 13.9**	**+0.3**
CDAG				*i* S	**Sn**	**07 18 36.3**	**-0.8**
CORM	**Corum**	**2.21**	**66**	*e*PN	**Pn**	**07 18 19.3**	**+0.9**

ISCJB 17 07:19:58.7±0.6, 1085N±004×6238W±003, h84km±7km, Error ellipse: s-maj=6.5km s-min=4.2km az=159.7
FUNV 17 07:20:00.1, 1088N×6233W, h75km, MW3.2
TRN 17 07:20:02.8, 1095N×6221W, h67km, MD3.2
NEIC 17 07:20:02.9, 1096N×6221W, h65km, MD3.2(TRN), After TRN.

ISC 17 07:19:59.7±0.6, 1087N±004×6237W±003, h78km±7km, n24, σ1§12/47, 1C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.26**	**146**	*e*P	**Pn**	**07 20 11.8**	**+0.3**
GUIV				*e*S	**Sn**	**07 20 19.9**	**-0.3**
TCE	**Chacachacare**	**0.63**	**105**	*e*P	**Pn**	**07 20 15.0**	**+0.6**
TCE				*e*S	**Sn**	**07 20 25.4**	**0.0**
CRUV	**Carupano**	**0.87**	**258**	*i* P	**Pn**	**07 20 17.3**	**+0.3**
CRUV				*i* S	**Sn**	**07 20 29.9**	**-0.1**
ITEV	**Isla Los Testi**	**0.89**	**303**	*i* P	**Pn**	**07 20 17.9**	**+0.7**
ITEV				*e*S	**Sn**	**07 20 30.2**	**-0.2**
GUNV	**Guanoco**	**0.90**	**219**	*e*P	**Pn**	**07 20 18.0**	**+0.7**
GUNV				*e*S	**Sn**	**07 20 30.9**	**+0.4**
TRN	**Trinidad (W)**	**0.98**	**103**	*e*P	**Pn**	**07 20 18.9**	**+0.9**
TRN				*e*S	**Sn**	**07 20 31.9**	**-0.3**
TPP	**Pointe-a-Pierr**	**1.06**	**121**	*e*P	**Pn**	**07 20 21.5**	**+2.2**
TPP				*e*S	**Sn**	**07 20 34.7**	**+0.7**
TBH	**Brigand Hill**	**1.34**	**106**	*e*P	**Pn**	**07 20 23.5**	**+0.7**
TBH				*e*S	**Sn**	**07 20 39.1**	**-1.1**
GRGR	**Grenville**	**1.44**	**29**	*e*Pn	**Pn**	**07 20 24.8**	**+0.6**
GRGR				*e*Sn	**Sn**	**07 20 44.0**	**+1.4**
GRW	**Mount Saint Ca**	**1.46**	**28**	*e*P	**Pn**	**07 20 25.4**	**+1.0**
GRW				*e*S	**Sn**	**07 20 41.4**	**-1.7**
GRW	**Mount Saint Ca**	**1.46**	**28**	*e*P	**Pn**	**07 20 25.4**	**+1.0**
GRW				*e*S	**Sn**	**07 20 40.6**	**-2.6**
GRHS	**Sauteurs**	**1.53**	**28**	*e*P	**Pn**	**07 20 27.7**	**+2.4**
GRHS				*e*S	**Sn**	**07 20 43.2**	**-1.4**
GRHS	**Sauteurs**	**1.53**	**28**	*e*P	**Pn**	**07 20 29.1**	**+3.8**
GRHS				*e*S	**Sn**	**07 20 39.4**	**-5.3**
TPR	**Prospect**	**1.60**	**78**	*e*P	**Pn**	**07 20 27.1**	**+0.8**
TPR				*e*S	**Sn**	**07 20 45.1**	**-1.2**
GRSS	**Sisters**	**1.61**	**28**	*e*P	**Pn**	**07 20 27.9**	**+1.6**
GRSS				*e*S	**Sn**	**07 20 45.1**	**-1.4**
GRSS	**Sisters**	**1.61**	**28**	*e*P	**Pn**	**07 20 28.4**	**+2.0**
GRSS				*e*S	**Sn**	**07 20 42.4**	**-4.1**
GRIC	**Isle de Caille**	**1.61**	**29**	*e*P	**Pn**	**07 20 28.2**	**+1.8**
GRIC				*e*S	**Sn**	**07 20 44.7**	**-1.8**
BOT	**Bacolet**	**1.65**	**79**	*e*P	**Pn**	**07 20 27.3**	**+0.4**
BOT				*e*S	**Sn**	**07 20 46.3**	**-1.3**
TOSP	**Speyside**	**1.85**	**76**	*e*P	**Pn**	**07 20 29.5**	**0.0**
TOSP				*e*S	**Sn**	**07 20 50.9**	**-1.5**
SVB	**Belmont**	**2.63**	**25**	*e*P	**Pn**	**07 20 45.5**	**+5.5**
SVB				*e*S	**Sn**	**07 21 15.7**	**+4.7**
GURV	**El Guri**	**3.16**	**193**	*e*P	**Pn**	**07 20 46.4**	**-0.9**
CUPV	**Cœpira**	**3.45**	**257**	*e*P	**Pn**	**07 20 51.7**	**+0.5**
CUPV				*e*S	**Sn**	**07 21 28.8**	**-2.2**
CAOV	**Caicara del Or**	**5.25**	**228**	*e*P	**Pn**	**07 21 14.7**	**-1.0**
CAOV				*e*S	**Sn**	**07 22 11.5**	**-3.4**
BAUV	**El Baul**	**5.90**	**252**	*e*P	**Pn**	**07 21 24.0**	**-0.6**
BAUV				*e*S	**Sn**	**07 22 26.0**	**-4.8**

IDC 17 07:35:34.2±44.0, 1616S×17508W, h0km, mb4.3/3, mb1 4.5/3, mb1mx4.0/15, mbtmp4.3/3, Error ellipse: s-maj=833.2km s-min=171.6km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**42.26**	**240**	P	P	07 43 30.7	+1.2
	2.1nm,0.7s,baz=54,slow=8.7,SNR=3.9						
WRA	**Warramunga Arr**	**48.10**	**258**	P	P	07 44 15.4	-0.7
	0.6nm,0.3s,baz=97,slow=7.6,SNR=24						
ASAR	**Alice Springs**	**48.34**	**253**	P	P	07 44 17.8	-0.2
	7.3nm,0.5s,baz=89,slow=8.0,SNR=150						

MOS 17 07:51:06.5±0.6, 5387N×16992E, h33km, mb4.4/1, Error ellipse: s-maj=73.6km s-min=31.8km az=5.1

KRSC 17 07:51:12.5±0.7, 5376N×16884E, h15km±15km, ML4.2, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**4.25**	**308**	P	Pn	07 52 17.0	+0.4
KBTR				S	Sn	07 53 05.6	-0.2
ZLN	**Zelenaya**	**5.16**	**299**	P	Pn	07 52 33.5	+4.4
ZLN				S	Sn	07 53 30.6	+2.3
SPN	**Mys Shipunski**	**5.31**	**266**	P	Pn	07 52 33.8	+2.6
SPN				S	Sn	07 53 33.4	+1.3
KLY	**Klyuchi**	**5.36**	**302**	S	Sn	07 53 34.5	+1.3
NLC	**Nalytchevo**	**5.70**	**268**	P	Pn	07 52 40.2	+3.7
NLC				S	Sn	07 53 42.3	+0.6
PET	**Petropavlovsk**	**6.14**	**267**	*e*PN	Pn	07 52 46.6	+4.1
RUS	**Russkaya**	**6.36**	**262**	P	Pn	07 52 49.7	+4.1
RUS				S	Sn	07 53 59.1	+1.2
GNL	**Ganaly**	**6.47**	**274**	P	Pn	07 52 51.7	+4.6
GNL				S	Sn	07 54 04.0	+3.5

ISCJB 17 08:02:45.8±1.1, 2446N±005×10977W±004, h2km±11km, mb4.2/5, Error ellipse: s-maj=9.1km s-min=5.5km az=20.9
MEX 17 08:02:46.8±0.3, 2450N×11088W, h25km±27km, MD4.9
NEIC 17 08:02:48.1±0.8, 2438N×10982W, h10km, mb4.3/24, MD4.9(MEX), Error ellipse: s-maj=10.4km s-min=8.3km az=173.0

ISC 17 08:02:48.4±1.0, 2437N±006×10983W±004, h13km±11km, n52, σ1§13/58, mb4.3/6, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**0.51**	**238**	*i* P	**Pg**	**08 02 57.6**	**-1.0**
LPIG				*i* S	**Sg**	**08 03 05.8**	**+0.4**
MAIG	**Mazatlaan**	**3.33**	**110**	*i* P	**Pg**	**08 03 48.2**	**-4.2**
MAIG				*i* S	**Sg**	**08 04 37.1**	**+1.5**
HPIG		**4.54**	**55**	*i* P	**Pn**	**08 04 03.0**	**+6.1**
HPIG				*i* S	**Sb**	**08 05 03.4**	**+0.8**
HSIG		**4.74**	**348**	*e*P	**Pn**	**08 03 51.9**	**-7.6**
HSIG				*i* S	**Sn**	**08 04 42.0**	**-12**
ANIG	**Ahuacatlan**	**5.91**	**123**	*i* P	**Pn**	**08 04 24.9**	**+9.2**
ANIG				*i* S	**Sb**	**08 05 40.8**	**-1.3**
CGIG		**6.19**	**15**	*e*P	**Pn**	**08 04 17.4**	**-2.2**
CGIG				*i* S	**Sn**	**08 05 30.2**	**0.0**
TUC	**Tucson**	**7.95**	**354**	*e*Pn	**Pn**	**08 04 41.8**	**-1.9**
	4.6nm,1.1s						
BNM	**Barren Site**	**10.13**	**15**	*e*P	**Pn**	**08 05 13.3**	**-0.3**
LAZ	**Ladron**	**10.27**	**13**	*e*Pn	**Pn**	**08 05 13.8**	**-1.6**
JCT	**Junction City**	**10.78**	**53**	*e*Pn	**Pn**	**08 05 22.7**	**+0.2**
	11nm,1.1s						
PFO	**Pinyon Flat Ob**	**10.87**	**329**	*e*Pn	**Pn**	**08 05 22.4**	**-1.3**
	34nm,1.5s						
ANMO	**Albuquerque**	**10.94**	**15**	*e*Pn	**Pn**	**08 05 24.5**	**-0.1**
	40nm,2.0s						
LDFC	**Landfair**	**11.61**	**338**	*e*Pn	**Pn**	**08 05 35.8**	**+2.0**
GSC	**Goldstone**	**12.46**	**333**	*e*Pn	**Pn**	**08 05 46.0**	**+0.7**
	27nm,1.4s						
CCUT	**Cedar City**	**13.48**	**348**	*e*P	**Pn**	**08 06 00.9**	**+1.6**
TPNV	**Topopah Spring**	**13.69**	**338**	*e*P	**Pn**	**08 06 02.8**	**+0.5**
	43nm,1.8s						
ARUT	**Antelope Range**	**13.72**	**348**	*e*P	**Pn**	**08 06 03.8**	**+1.1**
WMOK	**Wichita Mounta**	**14.10**	**40**	*e*P	**Pn**	**08 06 06.8**	**-1.1**
	22nm,1.4s						
MSU	**Marysvale**	**14.24**	**352**	*e*P	**Pn**	**08 06 08.2**	**-1.4**
MTUM	**Tungsten Hills**	**14.94**	**332**	*e*Pn	**Pn**	**08 06 19.9**	**+0.5**
NATX	**Nacogdoches**	**15.27**	**58**	*e*Pn	**Pn**	**08 06 26.1**	**+2.4**
ISCO	**Idaho Springs**	**15.79**	**12**	*e*Pn	**Pn**	**08 06 30.3**	**-0.1**
	29nm,1.5s						
DUG	**Dugway**	**15.97**	**352**	*e*Pn	**Pn**	**08 06 33.0**	**+0.2**
	20nm,1.4s						
DAU	**Daniels Canyon**	**16.04**	**356**	*e*Pn	**Pn**	**08 06 34.5**	**+0.9**
JLU	**Jordanelle**	**16.24**	**356**	*e*Pn	**Pn**	**08 06 38.4**	**+2.2**
CTU	**Camp Tracy**	**16.35**	**355**	*e*Pn	**Pn**	**08 06 38.9**	**+1.3**
	16nm,1.3s						
BGU	**Big Grassy Mou**	**16.72**	**352**	*e*P	**Pn**	**08 06 42.4**	**0.0**
CBKS	**Cedar Bluff**	**16.75**	**28**	*e*Pn	**Pn**	**08 06 42.1**	**-0.6**
	50nm,1.1s						
ELK	**Elko**	**16.94**	**346**	*e*Pn	**Pn**	**08 06 44.1**	**-1.1**
	22nm,1.6s						
SPUT	**South Promonto**	**17.03**	**353**	*e*Pn	**Pn**	**08 06 46.1**	**-0.1**
HWUT	**Hardware Ranch**	**17.25**	**356**	*e*Pn	**Pn**	**08 06 48.7**	**-0.3**
	46nm,1.4s						
PHWY	**Pilot Hill**	**17.27**	**11**	*e*Pn	**Pn**	**08 06 50.5**	**+1.3**
	16nm,1.5s						
UALR	**University of**	**18.38**	**52**	*e*P	**Pn**	**08 07 02.1**	**-0.9**
	37nm,1.6s						
KSU1	**Kansas State U**	**18.46**	**34**	*e*P	**Pn**	**08 07 02.8**	**-1.1**
	118nm,1.8s						
REDW	**Red Top Meadow**	**18.96**	**358**	*e*P	**Pn**	**08 07 10.0**	**+0.1**
	28nm,1.8s						
RRI2	**Red Ridge**	**18.97**	**357**	*e*P	**Pn**	**08 07 11.3**	**+1.3**
	38nm,1.6s			

	comp=Z,2µm,19.9s,baz=156,slow=33								
JCT	**Junction City**	**10.86**	**54**	*e*Pn		**Pn**	**08 06 55.7**	**-1.1**
	16nm,0.7s								
ANMO	**Albuquerque**	**10.92**	**15**	Pn		**Pn**	**08 06 56.8**	**-0.8**
	0.1nm,0.3s,baz=198,slow=12,SNR=7.2								
LDFC	**Landfair**	**11.51**	**338**	*e*Pn		**Pn**	**08 07 08.5**	**+2.8**
	34nm,0.9s								
GSC	**Goldstone**	**12.35**	**333**	*e*Pn		**Pn**	**08 07 17.9**	**+0.7**
	49nm,1.4s								
CCUT	**Cedar City**	**13.40**	**348**	*e*Pn		**Pn**	**08 07 33.2**	**+1.7**
ARUT	**Antelope Range**	**13.64**	**348**	*e*Pn		**Pn**	**08 07 36.8**	**+2.0**
WMOK	**Wichita Mounta**	**14.14**	**41**	*e*Pn		**Pn**	**08 07 37.2**	**-4.5**
	26nm,1.2s								
MSU	**Marysvale**	**14.17**	**353**	*e*Pn		**Pn**	**08 07 43.3**	**+1.3**
SRU	**San Rafael**	**14.65**	**358**	*e*Pn		**Pn**	**08 07 49.8**	**+1.3**
	5.3nm,1.0s								
MTUM	**Tungsten Hills**	**14.83**	**332**	*e*Pn		**Pn**	**08 07 51.4**	**+0.3**
NVAR	**Mina Array Bea**	**15.65**	**335**	Pn		**Pn**	**08 08 05.3**	**+3.6**
	0.6nm,0.3s,baz=166,slow=12,SNR=28								
ISCO	**Idaho Springs**	**15.76**	**12**	*e*Pn		**Pn**	**08 08 06.0**	**+2.8**
	26nm,1.3s								
CMIG	**Matias Romero**	**15.88**	**115**	Pn		**Pn**	**08 08 06.8**	**+1.9**
	0.1nm,0.3s,baz=332,slow=15,SNR=3.0								
CMIG				Sn		**Sn**	**08 10 56.5**	**-3.4**
	0.9nm,0.3s,baz=120,slow=8.1,SNR=24								
DUG	**Dugway**	**15.90**	**352**	*e*Pn		**Pn**	**08 08 05.3**	**+0.3**
	25nm,1.1s								
DAU	**Daniels Canyon**	**15.98**	**356**	*e*Pn		**Pn**	**08 08 06.5**	**+0.6**
JLU	**Jordanelle**	**16.18**	**356**	*e*Pn		**Pn**	**08 08 09.0**	**+0.5**
CMB	**Columbia Colle**	**16.21**	**329**	*e*Pn		**Pn**	**08 08 06.7**	**-2.2**
	20nm,1.2s								
NOQ	**North Oquirrh**	**16.28**	**354**	*e*Pn		**Pn**	**08 08 10.7**	**+0.9**
	46nm,1.4s								
CTU	**Camp Tracy**	**16.29**	**355**	*e*Pn		**Pn**	**08 08 09.8**	**-0.1**
	28nm,1.4s								
BGU	**Big Grassy Mou**	**16.65**	**352**	*e*Pn		**Pn**	**08 08 14.1**	**-0.4**
CBKS	**Cedar Bluff**	**16.77**	**29**	*e*Pn		**Pn**	**08 08 14.5**	**-1.5**
	85nm,1.2s								
ELK	**Elko**	**16.86**	**346**	Pn		**Pn**	**08 08 16.3**	**-0.8**
	0.1nm,0.3s,baz=180,slow=7.4,SNR=7.4								
SPUT	**South Promonto**	**16.96**	**354**	*e*Pn		**Pn**	**08 08 18.5**	**+0.1**
HWUT	**Hardware Ranch**	**17.18**	**356**	*e*Pn		**Pn**	**08 08 21.4**	**+0.2**
	56nm,1.4s								
HVU	**Hansel Valley**	**17.46**	**353**	*e*Pn		**Pn**	**08 08 25.3**	**+0.7**
	56nm,1.7s								
PDAR	**Pinedale Array**	**18.30**	**1**	P		**Pn**	**08 08 33.8**	**-1.1**
	0.1nm,0.3s,baz=172,slow=8.6,SNR=26								
UALR	**University of**	**18.45**	**52**	*e*P		**Pn**	**08 08 34.9**	**-1.9**
	40nm,1.4s								
KSU1	**Kansas State U**	**18.49**	**35**	*e*Pn		**Pn**	**08 08 35.6**	**-1.6**
	81nm,1.4s								
REDW	**Red Top Meadow**	**18.90**	**358**	*e*Pn		**Pn**	**08 08 42.5**	**+0.4**
	52nm,1.7s								
RRI2	**Red Ridge**	**18.91**	**357**	*e*Pn		**Pn**	**08 08 41.2**	**-1.1**
	46nm,1.4s								
SNOW	**Snow King Moun**	**19.00**	**358**	*e*Pn		**Pn**	**08 08 44.2**	**+0.8**
	61nm,1.6s								
TPAW	**Teton Pass**	**19.03**	**358**	*e*Pn		**Pn**	**08 08 43.1**	**-0.7**
	27nm,1.3s								
LOHW	**Long Hollow**	**19.14**	**359**	*e*Pn		**Pn**	**08 08 44.4**	**-0.7**
	38nm,1.6s								
DCID1	**Drake Creek**	**19.14**	**357**	*e*Pn		**Pn**	**08 08 45.7**	**+0.5**
	45nm,1.3s								
LTIM	**Timbered Crate**	**19.27**	**333**	P		**Pn**	**08 08 45.8**	**-0.8**
MOOW	**Moose Ponds**	**19.28**	**358**	*e*Pn		**Pn**	**08 08 48.1**	**+1.4**
	23nm,1.6s								
WVOR	**Wild Horse Val**	**19.34**	**340**	*e*Pn		**Pn**	**08 08 46.2**	**-1.3**
	12nm,1.2s								
HLID	**Hailey**	**19.43**	**350**	*e*Pn		**Pn**	**08 08 47.0**	**-1.6**
	5.8nm,1.1s								
IMW	**Indian Meadow**	**19.44**	**358**	*e*Pn		**Pn**	**08 08 47.6**	**-1.0**
	16nm,1.2s								
LKWY	**Lake**	**20.09**	**359**	*e*P		**P**	**08 08 58.4**	**+4.0**
	20nm,1.2s								
YMR	**Madison River**	**20.21**	**358**	*e*P		**P**	**08 08 55.6**	**-0.1**
	21nm,1.2s								
RSSD	**Black Hills**	**20.24**	**12**	*e*P		**P**	**08 08 56.3**	**+0.3**
	4.0nm,0.9s								
YBH	**Yreka Blue Hor**	**20.25**	**332**	P		**P**	**08 08 54.1**	**-2.1**
	2.8nm,0.7s,baz=230,slow=7.1,SNR=9.0								
YBH				LR		LR	08 15 44.0		
	comp=Z,756nm,21.5s,MS4.0,baz=148,slow=34								
QLMT	**Earthquake Lak**	**20.39**	**357**	*e*P		**P**	**08 08 58.3**	**+0.7**
MCMT	**McKenzie Canyo**	**20.49**	**354**	P		**P**	**08 08 59.5**	**+0.9**
TEIG	**Tepich**	**20.50**	**97**	P		**P**	**08 08 58.8**	**-0.2**
	3.7nm,0.7s,baz=120,slow=3.2,SNR=4.1								
TEIG				LR		LR	08 17 33.0		
	comp=Z,291nm,19.0s,MS3.7,baz=313,slow=38								
RLMT	**Red Lodge**	**20.66**	**1**	*e*P		**P**	**08 08 59.9**	**-0.6**
	16nm,1.4s								
BOZ	**Bozeman (W)**	**21.21**	**357**	*e*P		**P**	**08 09 06.7**	**+0.1**
	20nm,1.6s,mb4.2								
BMO	**Blue Mountains**	**21.23**	**345**	*e*P		**P**	**08 09 05.9**	**-0.8**
	9.7nm,1.1s,mb4.0								
GCMT	**Greycliff**	**21.32**	**1**	*e*P		**P**	**08 09 07.3**	**-0.4**
VIPM	**Ingram Point**	**21.83**	**339**	P		**P**	**08 09 14.8**	**+1.7**
LRAL	**Lakeview Retre**	**21.86**	**62**	*e*P		**P**	**08 09 14.9**	**+1.2**
	38nm,1.5s,mb4.6								
KEBM	**Edson Butte**	**21.88**	**331**	*e*P		**P**	**08 09 13.4**	**-0.3**
WVT	**Waverly**	**22.34**	**53**	*e*P		**P**	**08 09 18.9**	**+0.2**
	19nm,1.1s,mb4.4								
LAO	**LASA Array**	**22.42**	**7**	*e*P		**P**	**08 09 18.4**	**-0.9**
	64nm,1.5s,mb4.8								
MSO	**Missoula**	**22.58**	**353**	*e*P		**P**	**08 09 22.4**	**+1.4**
	12nm,1.4s,mb4.1								
LON	**Longmire**	**24.21**	**340**	*e*P		**P**	**08 09 36.9**	**-0.2**
	16nm,1.3s,mb4.3								
NEW	**Newport**	**24.45**	**348**	*e*P		**P**	**08 09 38.2**	**-1.1**
	11nm,1.1s,mb4.2								
TKL	**Tuckaleechee C**	**25.22**	**58**	P		**P**	**08 09 45.6**	**-0.9**
	7.6nm,1.1s,mb4.1,baz=225,slow=11,SNR=4.1								
TKL				LR		LR	08 20 25.3		
	comp=Z,2µm,18.8s,MS4.7,baz=249,slow=38								
JTS	**JuntasAbangare**	**27.64**	**116**	LR		LR	08 21 54.3		
	comp=Z,315nm,19.9s,MS3.9,baz=139,slow=38								
ULM	**Lac du Bonnet**	**28.01**	**19**	LR		LR	08 21 55.6		
	comp=Z,598nm,20.0s,MS4.2,baz=214,slow=38								
YKA	**Yellowknife Ar**	**38.18**	**357**	LR		LR	08 27 50.8		
	comp=Z,382nm,20.2s,MS4.2,baz=175,slow=37								
ROSC	**El Rosal**	**39.40**	**114**	LR		LR	08 29 26.2		
	comp=Z,202nm,20.1s,MS4.0,baz=187,slow=38								
SCHQ	**Schefferville**	**43.93**	**35**	LR		LR	08 29 50.3		
	comp=Z,726nm,20.5s,MS4.6,baz=240,slow=35								
DAWY	**Dawson**	**44.07**	**342**	*e*P		**P**	**08 12 28.6**	**+0.3**
TAOE	**Nuku Hiva Isla**	**44.28**	**225**	*e*LQ			08 23 06.6		
	2µm,27.6s								
TAOE				*e*LR		LR	08 24 52.2		
	4µm,27.3s,baz=46								
MCK	**McKinley**	**46.87**	**337**	*e*P		**P**	**08 12 50.1**	**-0.3**
	12nm,1.2s,mb4.7								
TRF	**Thorofare Moun**	**47.18**	**337**	*e*P		**P**	**08 12 52.6**	**-0.1**
	10nm,0.7s,mb4.9								
KTH	**Kantishna Hill**	**47.47**	**337**	*e*P		**P**	**08 12 54.3**	**-0.8**
	16nm,1.2s,mb4.8								
PPLA	**Purkeypile**	**47.56**	**335**	*e*P		**P**	**08 12 55.3**	**-0.5**
	17nm,0.9s,mb5.1								
IMA2	**Indian Mountai**	**49.89**	**338**	*e*P		**P**	**08 13 12.8**	**-0.9**
PPT	**Papeete**	**56.87**	**227**	*e*S		**S**	**08 22 09.2**	**+12**
	456nm,24.0s								
PPT				*e*LR		LR	08 30 38.7		
	1µm,28.0s,baz=32								
PPT	**Papeete**	**56.87**	**227**	LR		LR	08 31 44.8		
	comp=Z,606nm,18.7s,MS4.7,baz=32,slow=29								
LPAZ	**La Paz**	**57.48**	**131**	P		**P**	**08 14 12.2**	**+2.3**
	2.3nm,1.2s,mb4.1,baz=294,slow=9.0,SNR=4.0								
CPUP	**Villa Florida**	**71.64**	**131**	P		**P**	**08 15 43.4**	**+1.1**
	3.4nm,0.8s,mb4.3,baz=314,slow=8.5,SNR=8.2								
PETK	**Petropavlovsk-**	**72.19**	**321**	LR		LR	08 41 50.1		
	comp=Z,46nm,19.5s,MS3.8,baz=270,slow=31								
BDFB	**Brasilia**	**72.38**	**117**	LR		LR	08 47 36.1		
	comp=Z,80nm,18.0s,MS4.0,baz=99,slow=36								
PLCA	**Paso Flores**	**74.47**	**150**	P		**P**	**08 16 01.0**	**+2.4**
	2.3nm,0.8s,mb4.1,baz=331,slow=10,SNR=6.5								
PLCA				LR		LR	08 43 23.4		
	comp=Z,302nm,18.2s,MS4.6,baz=193,slow=31								
ARCES	**ARCESS Array B**	**81.00**	**14**	P		**P**	**08 16 34.5**	**-0.2**
	5.8nm,1.0s,mb4.5,baz=316,slow=5.1,SNR=6.8								
ARCES				LR		LR	08 54 35.5		
	comp=Z,198nm,18.7s,MS4.5,baz=80,slow=37								
NOA	**NORSAR Array B**	**82.56**	**25**	LR		LR	08 53 21.5		
	comp=Z,290nm,18.1s,MS4.7,baz=295,slow=36								
ESDC	**Sonseca Array**	**86.13**	**48**	LR		LR	08 55 54.0		
	comp=Z,192nm,18.6s,MS4.5,baz=305,slow=36								
USHA	**Ushuaia**	**86.60**	**157**	LR		LR	08 47 59.6		
	comp=Z,224nm,19.1s,MS4.6,baz=294,slow=30								
MDT	**Midelt**	**88.94**	**54**	LR		LR	08 57 17.4		
	comp=Z,349nm,18.8s,MS4.8,baz=192,slow=36								
DAVOX	**Davos/Dischmat**	**90.75**	**37**	LR		LR	08 58 27.1		
	comp=Z,527nm,18.7s,MS5.0,baz=264,slow=36								
GERES	**GERESS Array B**	**91.44**	**33**	LR		LR	08 57 11.8		
	comp=Z,384nm,21.8s,MS4.8,baz=148,slow=35								
MJAR	**Matsushiro Arr**	**91.66**	**312**	P		**P**	**08 17 27.7**	**-0.2**
	0.8nm,0.6s,mb4.3,baz=181,slow=31,SNR=3.3								
MJAR				LR		LR	08 52 25.8		
	comp=Z,160nm,20.6s,MS4.5,baz=80,slow=32								
VRAC	**Vranov**	**92.55**	**32**	LR		LR	08 59 16.4		
	comp=Z,417nm,18.4s,MS4.9,baz=297,slow=36								
AKASG	**Malin Array Be**	**96.97**	**25**	LR		LR	09 02 48.4		
	comp=Z,323nm,18.0s,MS4.8,baz=315,slow=36								
KEST	**Kesra**	**97.13**	**46**	LR		LR	08 58 05.1		
	comp=Z,129nm,21.1s,MS4.4,baz=308,slow=33								
KSRS	**Korea Array**	**97.84**	**317**	LR		LR	08 52 43.1		
	comp=Z,55nm,21.7s,MS4.0,baz=180,slow=30								
WRA	**Warramunga Arr**	**120.74**	**261**	PKP		PKPdf	08 23 11.9	-1.0	
	0.6nm,0.7s,baz=72,slow=2.0,SNR=10								
ASAR	**Alice Springs**	**122.15**	**256**	PKP		PKPdf	08 23 14.8	-0.8	
	0.5nm,0.6s,baz=77,slow=2.0,SNR=5.3								
CMAR	**Chiang Mai Arr**	**128.90**	**324**	PKP		PKPdf	08 23 28.9	+0.2	
	0.7nm,0.3s,baz=16,slow=1.1,SNR=4.7								

INET ***17*** *08:09:04.8, 1508N×8701W, h18km, ML4.6*
SSS ***17*** *08:09:06.5, 1492N×8702W, h19km, MD4.0, ML4.1*

CASC 17 08:09:07.7±3.2, 1507N×8720W, h18km, MD4.0, ML4.0, 3D, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CAHU	**Cacacuatique**	**1.62**	**217**	*e*P		x	08 09 33.0	
CAHU				*e*S		x	08 09 55.6	
CAHU				AML		x	08 10 00.2	
	comp=Z,3µm,0.3s							
CNCH	**Conchagua**	**1.88**	**199**	*e*P		x	08 09 37.4	
CNCH				*e*S		x	08 10 03.8	
BLLM	**Bellamira**	**1.90**	**212**	*e*P		x	08 09 37.8	
BLLM				*e*S		x	08 10 02.3	
VSM	**San Miguel**	**1.93**	**213**	*e*P		x	08 09 38.2	
VSM				*e*S		x	08 10 03.3	
SNVI	**San Vicente**	**2.15**	**228**	*e*P		x	08 09 42.4	
SNVI				*e*S		x	08 10 12.2	
MTO2	**Montecristo 2**	**2.19**	**253**	*e*P		x	08 09 43.6	
LBRS	**Las Brisas**	**2.22**	**234**	*e*P		x	08 09 43.5	
LFRS	**El Faro**	**2.30**	**232**	*e*P		x	08 09 44.7	
LFRS				*e*S		x	08 10 14.4	
SNET	**Serv Nac Est T**	**2.40**	**235**	*e*P		x	08 09 46.7	
SNET				*e*S		x	08 10 16.9	
SNET				*i*			08 10 26.8	
	comp=Z,1µm,0.8s							
BOQS	**Boqueron**	**2.41**	**237**	*e*P		x	08 09 46.7	
BOQS				*e*S		x	08 10 18.6	
RBDL	**Robledal**	**2.59**	**249**	*e*P		x	08 09 48.8	
CNGN	**Cerro Negro**	**2.60**	**169**	*e*P		Pn	08 09 48.9	+0.1
SNJE	**San Jose**	**2.62**	**243**	*e*P		x	08 09 50.1	
SBLS	**San Blas**	**2.65**	**243**	*e*P		x	08 09 51.0	
LEON	**Leon**	**2.65**	**173**	*e*P		Pn	08 09 49.2	-0.4
LEON				*e*S		Sn	08 10 21.8	+0.6
MOMN	**Momotombo**	**2.72**	**166**	*e*P		Pn	08 09 50.7	+0.3
MOMN				*e*S		Sn	08 10 26.1	+3.2
HUEN		**2.89**	**160**	*e*P		Pn	08 09 52.9	+0.1
COPN	**Copaltepe**	**2.93**	**168**	*e*P		Pn	08 09 51.0	-2.3
APYN	**Apoyeque**	**2.93**	**164**	*e*P		Pn	08 09 51.9	-1.5
CSAN		**2.96**	**165**	*e*P		Pn	08 09 53.9	0.0
MGAN	**Managua**	**3.04**	**162**	*e*P		Pn	08 09 56.5	+1.5
APON	**Apoyo**	**3.32**	**160**	*e*P		Pn	08 10 00.9	+2.2
CHI2		**16.81**	**127**	*e*P			08 09 46.0	

CASC 17 09:01:00.6±2.1, 939N×8462W, h2km±5km, MD4.0, ML2.4, 2C-10D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CAO	**Cobano**	**0.57**	**303**	*e*P		Pg	09 01 12.7	+1.2
CAO				*e*S		Sg	09 01 22.3	+3.4
CGA2	**Cerro Gallo 2**	**0.64**	**14**	*e*P		Pg	09 01 13.7	+0.8
PRS1	**Puriscal**	**0.66**	**27**	*i*P		Pg	09 01 11.9	-1.4
JCR	**Jicaral**	**0.67**	**313**	*e*P		Pg	09 01 14.2	+0.9
JCR				*e*S		Sg	09 01 24.9	+2.8
LCR2	**La Lucha 2**	**0.70**	**60**	*e*P		Pg	09 01 14.9	+0.4
SJS	**Escuela Geolog**	**0.78**	**46**	*e*P		Pg	09 01 15.9	+0.4
SJS				*e*S		Sg	09 01 29.9	+4.2
BUS	**Buena Vista**	**0.86**	**79**	*e*P		Pg	09 01 17.4	+0.2
BUS				*e*S		Sg	09 01 31.8	+3.4
FORC	**Fortuna**	**1.07**	**357**	*e*P		Pg	09 01 21.1	-0.1
FORC				*e*S		Sg	09 01 37.5	+2.3
2RIO	**Dos Rios de Up**	**1.28**	**332**	*e*P		Pg	09 01 30.7	+5.5
BAR1		**1.30**	**96**	*e*P		Pg	09 01 24.6	-0.9
BAR1				*e*S		Sg	09 01 41.6	-0.7
CUI		**1.38**	**337**	*e*P		Pn	09 01 25.6	-1.2
CUI				*e*S		Sg	09 01 44.9	-0.1
ACR	**Cerro Adams**	**1.61**	**117**	*e*P		Pn	09 01 28.0	-2.0
LIO	**Limon**	**1.68**	**69**	*e*P		Pn	09 01 29.8	-1.1
LIO				*e*S		Sn	09 01 52.6	-0.3
CTCR	**Cotoan**	**1.90**	**105**	*e*P		Pn	09 01 32.9	-1.1
CTCR				*e*S		Sn	09 02 01.6	+3.1
BRU2	**Volcan**	**2.00**	**107**	*e*P		Pn	09 01 37.4	+2.0
CNI	**Changuinola**	**2.07**	**89**	*e*P		Pn	09 01 36.4	-0.1
CONN	**Concepcion**	**2.38**	**335**	*e*P		Pn	09 01 40.8	+0.2
CONN					AML	AML	09 01 56.0	
	comp=Z,22nm,0.5s							
LAPE	**La Pedrera**	**13.03**	**97**	*e*P			09 01 28.6	
LAPE				*e*P			09 01 29.6	
LAPE				*e*S			09 01 52.4	
PTP	**Ponta Puerca**	**20.42**	**62**	*e*P			09 01 36.5	
PTP				*e*S			09 02 03.6	

ISCJB ***17*** *09:02:45.5±0.8, 16S±0.1×997E±02, h33km, mb4.1/9, Error ellipse: s-maj=27.2km s-min=11.9km az=149.2*
NEIC ***17*** *09:02:47.6±0.7, 169S×9968E, h35km, mb4.3/1, Error ellipse: s-maj=27.3km s-min=11.1km az=58.0*
DJA ***17*** *09:02:50, 154S×9990E, h10km, MLv4.3/6*
IDC ***17*** *09:02:54.4±7.4, 156S×9986E, h95km±67km, mb3.8/10, mb1 3.8/11, mb1mx3.7/20, mbtmp3.7/11, ML4.2/1, MS3.2/1, Ms1 3.4/1, ms1mx2.9/25, Error ellipse: s-maj=36.3km s-min=13.3km az=64.0*

ISC 17 09:02:53.2±6.0, 16S±01×999E±02, h86km±54km, n17, σ0s45/15, mb4.1/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.90**	**357**	P		**Pn**	**09 07 20.2**	**-0.1**
	0.3nm,0.3s,baz=187,slow=10,SNR=11							
CMAR				LR		LR	09 15 14.4	
	comp=Z,71nm,21.0s,baz=195,slow=37							
KAPI	**Kappang**	**20.16**	**100**	P		**P**	**09 07 21.7**	**+0.8**
	3.5nm,0.3s,baz=281,slow=10,SNR=4.7							
WRA	**Warramunga Arr**	**38.35**	**121**	P		**P**	**09 10 05.8**	**-0.3**
	1.7nm,0.4s,mb4.2,baz=303,slow=9.3,SNR=38							
WRA				PcP		PcP	09 12 19.8	+1.4
	0.2nm,0.6s,baz=314,slow=2.6,SNR=5.0							
WB2	**Warramunga Arr**	**38.36**	**121**	*e*P		**P**	**09 10 05.5**	**-0.7**
ASAR	**Alice Springs**	**39.64**	**126**	P		**P**	**09 10 16.9**	**0.0**
	1.6nm,0.5s,mb4.1,baz=303,slow=7.8,SNR=42							
ASAR				PcP		PcP	09 12 21.8	-0.6
	0.3nm,0.6s,baz=308,slow=2.4,SNR=3.3							
KSRS	**Korea Array**	**46.71**	**31**	P		**P**	**09 11 13.7**	**+0.1**
	1.2nm,0.7s,mb3.7,baz=238,slow=44,SNR=3.0							
SONM	**Songino Array**	**49.51**	**6**	P		**P**	**09 11 34.3**	**-0.7**
	0.7nm,0.4s,mb4.0,baz=186,slow=1.1,SNR=7.1							
STKA	**Stephens Creek**	**49.56**	**132**	*e*P		**P**	**09 11 35.7**	**0.0**
	5.1nm,1.6s,mb4.2							
STKA	**Stephens Creek**	**49.56**	**132**	P		**P**	**09 11 35.9**	**+0.2**
	1.3nm,0.6s,mb4.1,baz=238,slow=8.2,SNR=6.5							
MKAR	**Makanchi Array**	**50.55**	**344**	P		**P**	**09 11 43.0**	**+0.1**
	1.1nm,0.4s,mb4.2,baz=160,slow=7.9,SNR=10							
ZAA0	**Zalesovo Array**	**56.70**	**349**	*e*P		**P**	**09 12 27.6**	**-0.1**
ZALV	**Zalesovo Beam**	**56.70**	**349**	P		**P**	**09 12 27.5**	**-0.1**
	2.5nm,0.5s,mb4.5,baz=163,slow=5.7,SNR=9.5							
ZALV	**Zalesovo Beam**	**56.70**	**349**	P		**P**	**09 12 27.5**	**-0.1**
MAW	**Mawson**	**70.68**	**194**	P		**P**	**09 13 59.4**	**0.0**
	1.1nm,0.6s,mb3.9,baz=355,slow=8.7,SNR=8.1							
ARCES	**ARCESS Array B**	**86.00**	**340**	P		**P**	**09 15 24.6**	**+0.9**
	1.7nm,0.8s,mb4.0,baz=88,slow=7.4,SNR=4.0							
TZTN	**Tazewell**	**145.03**	**5**	*e*PKPbc		PKPbc	09 22 21.3	+0.7
JCT	**Junction City**	**145.72**	**31**	*e*PKPbc		PKPbc	09 22 24.2	+1.3

ISCJB ***17*** *09:31:05.5±0.2, 4933N×001×670E±002, h0km, Error ellipse: s-maj=1.7km s-min=1.6km az=25.7*

CSEM ***17*** *09:31:07.8±0.0, 4937N×679E, h1km, ML3.4/29, Error ellipse: s-maj=0.8km s-min=0.7km az=78.0*
STR ***17*** *09:31:07.5±0.3, 4935N×682E, h1km, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
NEIC ***17*** *09:31:07.7, 4938N×679E, h1km, ML3.0(STR), ML3.4(LDG), After LDG.*
LDG ***17*** *09:31:07.7±0.1, 4938N×679E, h1km, Md3.3/4, Ml3.4/31, Error ellipse: s-maj=1.4km s-min=1.2km az=166.0, Suspected Mining induced.*
LEDBW ***17*** *09:31:08.0±0.2, 49380N±0009×684E±002, h1km, ML2.8, Error ellipse: s-maj=6.0km s-min=2.0km az=101.0*
BGR ***17*** *09:31:08.1±0.5, 4936N×686E, h1km, ML2.9/3, Error ellipse: s-maj=6.7km s-min=3.3km az=105.0*
PRU ***17*** *09:31:09.1, 4941N×690E, h7km*
BNS ***17*** *09:31:09.1±0.5, 4939N×683E, h1km, ML2.3*

ISC 17 09:31:06.5±0.2, 4935N±001×673E±002, h0km, n134, σ1s27/245, 3C-3D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RUP	**Ruppelstein**	**0.41**	**31**	P*		**Pg**	**09 31 14.9**	**+0.4**
RUP	**Ruppelstein**	**0.41**	**31**	Pg		**Pg**	**09 31 14.9**	**+0.4**
RUP				Sg		**Sg**	**09 31 20.4**	**+0.6**
WLF	**Walferdange**	**0.49**	**310**	P		**Pg**	**09 31 18.9**	**+2.9**
WLF	**Walferdange**	**0.49**	**310**	P		**Pg**	**09 31 18.8**	**+2.9**
ABH	**Alteburg**	**0.75**	**45**	P*		**Pb**	**09 31 20.5**	**-2.0**
ABH	**Alteburg**	**0.75**	**45**	Pg		**Pg**	**09 31 20.8**	**-0.2**
ABH				Sg		**Sg**	**09 31 29.8**	**-0.9**
LANF	**Langenberg**	**0.80**	**117**	Pg		**Pg**	**09 31 21.8**	**0.0**
LANF				Sg		**Sg**	**09 31 32.1**	**0.0**
LANF	**Langenberg**	**0.80**	**117**	Pg		**Pg**	**09 31 22.0**	**+0.3**
KTD	**Kalmit**	**0.89**	**91**	P*		**Pb**	**09 31 23.9**	**-0.8**
KTD	**Kalmit**	**0.89**	**91**	Pg		**Pg**	**09 31 23.9**	**+0.4**
KTD				Sg		**Sg**	**09 31 35.5**	**+0.5**
BGG	**Burgeitz**	**0.94**	**24**	*e*Pg		**Pg**	**09 31 25.7**	**+1.1**
HILG	**Hillesheim**	**0.95**	**358**	*e*Pg		**Pg**	**09 31 26.0**	**+1.4**
CDF	**Champ du Feu**	**1.00**	**159**	*e*Pn		**Pn**	**09 31 27.3**	**-0.5**
CDF				*e*Sg		**Sg**	**09 31 39.8**	**+1.1**
	134nm,0.2s							
CDF	**Champ du Feu**	**1.00**	**159**	*e*Pn		**Pn**	**09 31 27.3**	**-0.5**
CDF				*e*Sg		**Sg**	**09 31 39.8**	**+1.1**
	67nm,0.2s							
CDF	**Champ du Feu**	**1.00**	**159**	*e*Pg		**Pg**	**09 31 26.5**	**+0.8**
CDF				*e*Pn		**Pn**	**09 31 27.3**	**-0.5**
CDF				*e*Sg		**Sg**	**09 31 39.8**	**+1.1**
RFYF	**Reffroy**	**1.10**	**229**	*e*Pg		**Pg**	**09 31 30.5**	**+3.0**
	baz=55							
RFYF				*e*Sn		**Sn**	**09 31 46.2**	**+1.3**
	284nm,0.3s,baz=59							
RFYF	**Reffroy**	**1.10**	**229**	*e*Pg		**Pg**	**09 31 30.5**	**+3.0**
RFYF				*e*Sn		**Sn**	**09 31 46.2**	**+1.3**
	142nm,0.3s							
ECH	**Echery**	**1.17**	**166**	Pg		**Pg**	**09 31 29.6**	**+0.7**
ECH				Sg		**Sg**	**09 31 45.4**	**+1.4**

LOMF	**Lomont**	2.00	178	Pg	Pg	09 31 45.8	+1.0
LOMF				Sg	Sg	09 32 12.1	+1.4
GUT	**Gutenstein**	2.03	128	Pg	Pg	09 31 45.5	+0.1
GUT				Sg	Sg	09 32 12.4	+0.6
SISB	**Singen-Schiene**	2.23	137	S*	Sb	09 32 19.3	+3.5
CABF	**La Chapelle**	2.77	189	*e*Pn	Pn	09 31 52.5	+0.4
CABF				*e*Sn	Sn	09 32 24.7	-1.6
CABF				*e*Sg	Sg	09 32 36.2	+0.7
	76nm,0.5s						
CABF	**La Chapelle**	2.77	189	*e*Pn	Pn	09 31 52.5	+0.4
CABF				*e*Sn	Sn	09 32 24.7	-1.6
CABF				*e*Sg	Sg	09 32 36.2	+0.7
	38nm,0.5s						
UBR	**Ueberruh**	2.80	125	P	Pn	09 31 53.0	+0.5
LOR	**Lormes**	2.83	224	*e*Pn	Pn	09 31 53.2	+0.3
	baz=46						
LOR				*e*Sn	Sn	09 32 27.6	0.0
LOR				*e*Sg	Sg	09 32 37.1	-0.2
	40nm,0.4s,baz=45						
LOR	**Lormes**	2.83	224	*e*Pn	Pn	09 31 53.2	+0.3
LOR				*e*Sn	Sn	09 32 27.6	0.0
LOR				*e*Sg	Sg	09 32 37.1	-0.2
	20nm,0.4s						
SSF	**Saint Saulge**	3.14	225	*e*Pn	Pn	09 31 57.2	0.0
SSF				*e*Sn	Sn	09 32 33.8	-1.6
SSF				*e*Sg	Sg	09 32 45.5	-1.9
	48nm,0.4s						
SSF	**Saint Saulge**	3.14	225	*e*Pn	Pn	09 31 57.2	0.0
SSF				*e*Sn	Sn	09 32 33.8	-1.6
SMF	**Signal de Mont**	3.33	217	*e*Pn	Pn	09 31 59.5	-0.3
SMF				*e*Sn	Sn	09 32 39.3	-0.7
SMF				*e*Sg	Sg	09 32 53.5	+0.1
	42nm,0.5s						
SMF	**Signal de Mont**	3.33	217	*e*Pn	Pn	09 31 59.5	-0.3
SMF				*e*Sn	Sn	09 32 39.3	-0.7
SMF				*e*Sg	Sg	09 32 53.5	+0.1
	21nm,0.5s						
TUE	**Stuetta**	3.37	148	*e*Pn	Pn	09 32 02.4	+2.0
MOX	**Moxa**	3.41	66	*e*Pg	Pg	09 32 09.2	-2.6
	SNR=1.6						
MOX	**Moxa**	3.41	66	Pg	Pg	09 32 09.2	-2.6
	SNR=1.6						
AVF	**Avril sur Loir**	3.42	223	*e*Pn	Pn	09 32 00.9	-0.1
AVF				*e*Sn	Sn	09 32 41.3	-0.8
AVF				*e*Sg	Sg	09 32 56.4	+0.2
	46nm,0.7s						
AVF	**Avril sur Loir**	3.42	223	*e*Pn	Pn	09 32 00.9	-0.1
AVF				*e*Sn	Sn	09 32 41.3	-0.8
AVF				*e*Sg	Sg	09 32 56.4	+0.2
	23nm,0.7s						
HYF	**Humbligny**	3.43	234	*e*Pn	Pn	09 32 02.0	+0.8
HYF				*e*Sg	Sg	09 32 56.7	0.0
FETA	**Feichten**	3.55	130	⇓*i*Pn	Pn	09 32 04.6	+1.8
FETA				⇓*i*Sg	Sg	09 33 02.0	+1.6
	5.0nm,0.6s						
WERD	**Werda**	3.77	71	*e*Sg	Sg	09 33 05.3	-2.3
	SNR=4.0						
NKC	**Novy Kostel**	3.81	74	*e*PG	Pg	09 32 15.1	-4.4
NKC				*e*SG	Sg	09 33 06.3	-2.5
	comp=Z,24nm,0.7s						
BGF	**Bois d'Agland**	3.82	225	*e*Pn	Pn	09 32 06.5	0.0
BGF				*e*Sn	Sn	09 32 50.0	-2.1
BGF				*e*Sg	Sg	09 33 09.6	+0.4
	comp=Z,119nm,0.5s						
BGF	**Bois d'Agland**	3.82	225	*e*Pn	Pn	09 32 06.5	0.0
BGF				*e*Sn	Sn	09 32 50.0	-2.1
BGF				*e*Sg	Sg	09 33 09.6	+0.4
	comp=Z,59nm,0.5s						
LPL	**La Plagne**	3.83	180	*e*Sg	Sg	09 33 09.9	+0.3
	comp=Z,12nm,0.5s						
LPL	**La Plagne**	3.83	180	*e*Sg	Sg	09 33 09.9	+0.3
	comp=Z,6.1nm,0.5s						
LPG	**La Plagne**	3.85	180	*e*Sg	Sg	09 33 09.7	-0.5
	comp=Z,16nm,0.6s						
LPG	**La Plagne**	3.85	180	*e*Sg	Sg	09 33 09.7	-0.5
	comp=Z,8.2nm,0.6s						
TANN	**Tannenbergstha**	3.86	72	*e*Pg	Pg	09 32 17.8	-2.6
	SNR=2.2						
TANN				*e*Sg	Sg	09 33 07.1	-3.3
	SNR=2.2						
WET	**Wettzell**	4.03	91	*e*Pn	Pn	09 32 09.7	+0.2
	SNR=2.4						
TCF	**Toulx Ste Croi**	4.32	227	*e*Pg	Pg	09 32 29.3	+0.1
TCF				*e*Sn	Sn	09 33 00.9	-3.5
TCF				*e*Sg	Sg	09 33 23.4	-1.7
	comp=Z,41nm,0.8s						
TCF	**Toulx Ste Croi**	4.32	227	*e*Pg	Pg	09 32 29.3	+0.1
TCF				*e*Sn	Sn	09 33 00.9	-3.5
TCF				*e*Sg	Sg	09 33 23.4	-1.7
	comp=Z,20nm,0.8s						
TCF	**Toulx Ste Croi**	4.32	227	*e*Pn	Pn	09 32 13.2	-0.2
TCF				*e*Pg	Pg	09 32 29.3	+0.1
TCF				*e*Sn	Sn	09 33 00.9	-3.5
TCF				*e*Sg	Sg	09 33 23.4	-1.7
ORIF	**Oris-en-Rattie**	4.47	188	*e*Pg	Pg	09 32 32.3	+0.2
ORIF				*e*Sg	Sg	09 33 28.4	-1.6
	comp=Z,22nm,0.6s						
ORIF	**Oris-en-Rattie**	4.47	188	*e*Pg	Pg	09 32 32.3	+0.2
ORIF				*e*Sg	Sg	09 33 28.4	-1.6
	comp=Z,11nm,0.6s						
CLL	**Collm**	4.47	62	*e*Sg	Sg	09 33 28.0	-2.1
KHC	**Kasperske Hory**	4.49	90	*e*PN	Pn	09 32 15.4	-0.4
KHC				*e*SN	Sn	09 33 05.6	-3.1
KHC				*e*SG	Sg	09 33 28.2	-2.6
LDF	**La Druitiere**	4.58	263	*e*Pn	Pn	09 32 16.7	-0.2
LDF				*e*Sg	Sg	09 33 32.5	-0.9
	comp=Z,34nm,0.8s						
LDF	**La Druitiere**	4.58	263	*e*Pn	Pn	09 32 16.7	-0.2
LDF				*e*Sg	Sg	09 33 32.5	-0.9
	comp=Z,17nm,0.8s						
GEC2	**GERESS Array S**	4.61	94	*e*Pn	Pn	09 32 17.6	+0.3
	SNR=11						
GEC2	**GERESS Array S**	4.61	94	*e*Pn	Pn	09 32 17.6	+0.2
MBDF	**Montbardon**	4.62	180	*e*Pn	Pn	09 32 17.0	-0.6
MBDF				*e*Sn	Sn	09 33 08.7	-3.2
VIVF	**Saint-Julien-l**	4.71	198	*e*Sn	Sn	09 33 10.8	-3.2
VIVF				*e*Sg	Sg	09 33 36.4	-1.3
	comp=Z,7.5nm,0.3s						
VIVF	**Saint-Julien-l**	4.71	198	*e*Sn	Sn	09 33 10.8	-3.2
VIVF				*e*Sg	Sg	09 33 36.4	-1.3
	comp=Z,3.8nm,0.3s						
FLN	**La Foliniere**	4.78	266	*e*Pn	Pn	09 32 19.3	-0.4
FLN				*e*Sn	Sn	09 33 12.7	-3.0
FLN				*e*Sg	Sg	09 33 38.7	-1.2
	comp=Z,17nm,0.4s						
FLN	**La Foliniere**	4.78	266	*e*Pn	Pn	09 32 19.3	-0.4
FLN				*e*Sn	Sn	09 33 12.7	-3.0
FLN				*e*Sg	Sg	09 33 38.7	-1.2
	comp=Z,8.7nm,0.4s						
KBA	**Koelnbreinsper**	4.97	115	⇓*i*Pn	Pn	09 32 23.1	+0.8
KBA				⇑*i*Sn	Sn	09 33 19.4	-1.1
GRR	**Gorron**	5.10	262	*e*Pn	Pn	09 32 22.7	-1.4
GRR				*e*Sn	Sn	09 33 19.0	-4.6
GRR				*e*Sg	Sg	09 33 48.2	-2.0
	comp=Z,8.1nm,0.4s						
GRR	**Gorron**	5.10	262	*e*Pn	Pn	09 32 22.7	-1.4
GRR				*e*Sn	Sn	09 33 19.0	-4.6
GRR				*e*Sg	Sg	09 33 48.2	-2.0
	comp=Z,4.1nm,0.4s						
PRU	**Pruhonice**	5.11	80	*e*SG	Sg	09 33 47.3	-3.4
MOA	**Molln**	5.22	104	⇓*i*Pn	Pn	09 32 26.5	+0.8
MOA				⇑*i*Sn	Sn	09 33 24.0	-2.6
RJF	**Les Rejaudoux**	5.38	223	*e*Sg	Sg	09 33 56.9	-2.3
	comp=Z,15nm,0.6s						
RJF	**Les Rejaudoux**	5.38	223	*e*Sg	Sg	09 33 56.9	-2.3
	comp=Z,7.7nm,0.6s						
SMRF	**Simiane la Rot**	5.43	189	*e*Sg	Sg	09 34 00.1	-0.8
	comp=Z,3.6nm,0.5s						
SMRF	**Simiane la Rot**	5.43	189	*e*Sg	Sg	09 34 00.1	-0.8
	comp=Z,1.8nm,0.5s						
CAF	**Calviac**	5.45	217	*e*Pn	Pn	09 32 28.5	-0.4
CAF				*e*Sn	Sn	09 33 30.7	-1.5
LASF	**Ste Croix**	5.63	202	*e*Sg	Sg	09 34 04.8	-2.5
	comp=Z,18nm,0.6s						
LASF	**Ste Croix**	5.63	202	*e*Sg	Sg	09 34 04.8	-2.5
	comp=Z,9.1nm,0.6s						
LFF	**La Frestale**	6.01	225	*e*Sg	Sg	09 34 16.9	-2.6
	comp=Z,16nm,0.5s						
LFF	**La Frestale**	6.01	225	*e*Sg	Sg	09 34 16.9	-2.6
	comp=Z,8.1nm,0.5s						
SGMF	**Saint Gilles**	6.23	263	*e*Pn	Pn	09 32 39.2	-0.5
SGMF				*e*Sn	Sn	09 33 46.6	-4.9
SGMF				*e*Sg	Sg	09 34 24.5	-2.1
	comp=Z,6.3nm,0.4s						
SGMF	**Saint Gilles**	6.23	263	*e*Pn	Pn	09 32 39.2	-0.5
SGMF				*e*Sn	Sn	09 33 46.6	-4.9
SGMF				*e*Sg	Sg	09 34 24.5	-2.1
	comp=Z,3.2nm,0.4s						
QUIF	**Quistinic**	6.71	261	*e*Pn	Pn	09 32 45.8	-0.4
QUIF				*e*Sn	Sn	09 33 57.3	-6.1
QUIF				*e*Sg	Sg	09 34 39.5	-2.5
	comp=Z,3.0nm,0.4s						
QUIF	**Quistinic**	6.71	261	*e*Pn	Pn	09 32 45.8	-0.4
QUIF				*e*Sn	Sn	09 33 57.3	-6.1
QUIF				*e*Sg	Sg	09 34 39.5	-2.5
	comp=Z,1.5nm,0.4s						
MTLF	**Montolieu**	6.77	209	*e*Sg	Sg	09 34 41.0	-2.8
	comp=Z,3.6nm,0.4s						
MTLF	**Montolieu**	6.77	209	*e*Sg	Sg	09 34 41.0	-2.8
	comp=Z,1.8nm,0.4s						

IDC ***17*** *09:34:15.6±1.6,293S×10109E,h0km,mb4.3/9, mb1 4.4/10,mb1mx4.1/20,mbtmp4.3/10,ML4.4/1,MS3.6/1, Ms1 3.6/1,ms1mx2.9/26,Error ellipse: s-maj=61.2km s-min=15.9km az=56.0*

NEIC ***17*** *09:34:21.4±1.1,285S×10121E,h35km,mb4.4/3,Error ellipse: s-maj=38.3km s-min=9.6km az=52.0*

ISCJB ***17*** *09:34:24.2±6.2,28S±02×1014E±02,h74km±56km, mb4.4/15,Error ellipse: s-maj=51.8km s-min=10.2km az=137.8*

ISC 17 09:34:26.0±5.1,28S±02×1014E±02,h73km±47km,n24, σ0.65/24,mb4.4/15,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	18.46	97	P		Pn	09 38 37.1	+0.1
	1.2nm,0.3s,baz=285,slow=11,SNR=5.7							
CMAR	**Chiang Mai Arr**	21.27	354	P		P	09 39 03.4	-3.2
	0.9nm,0.4s,mb3.5,baz=186,slow=8.9,SNR=5.9							
ODAN	**Odare**	32.45	336	*e*P		P	09 40 49.5	+0.1
	17nm,0.6s,mb5.0							
TAPN	**Taplejung**	32.76	337	*e*P		P	09 40 52.4	+0.3
	28nm,0.8s							
RAMN	**Ramite**	32.85	335	*e*P		P	09 40 53.1	+0.2
	8.0nm,0.6s,mb4.7							
JIRN	**Jiri**	33.65	335	*e*P		P	09 41 00.2	+0.4
GUN	**Gumba**	34.00	335	*e*P		P	09 41 03.1	+0.2
	28nm,0.4s							
DMN	**Daman**	34.07	334	*e*P		P	09 41 04.3	+0.8
KKN	**Kakani**	34.15	334	*e*P		P	09 41 04.0	-0.2
	11nm,0.4s,mb5.0							
GKN	**Gorkha**	34.62	333	*e*P		P	09 41 08.5	+0.3
	12nm,0.3s							
KOLN	**Koldanda**	34.90	332	*e*P		P	09 41 10.0	-0.6
DANN	**Dangsing**	35.31	333	*e*P		P	09 41 14.5	+0.3
	25nm,0.4s							
WRA	**Warramunga Arr**	36.39	120	P		P	09 41 24.0	+0.4
	2.0nm,0.4s,mb4.4,baz=303,slow=8.9,SNR=50							
WRAB	**Tennant Creek**	36.40	120	*e*P		P	09 41 23.7	+0.1
	3.9nm,0.8s,mb4.4							
WB2	**Warramunga Arr**	36.40	120	*e*P		P	09 41 23.8	+0.1
ASAR	**Alice Springs**	37.66	126	P		P	09 41 33.0	-1.3
	1.0nm,0.5s,mb3.9,baz=300,slow=7.9,SNR=25							
ASAR				PcP		PcP	09 43 51.1	+0.6
	0.3nm,0.8s,baz=260,slow=3.7,SNR=4.4							
STKA	**Stephens Creek**	47.58	132	P		P	09 42 55.2	+0.6
	1.0nm,0.4s,mb4.0,baz=320,slow=10,SNR=6.4							
SONM	**Songino Array**	50.63	4	P		P	09 43 18.7	+1.2
	3.0nm,0.5s,mb4.5,baz=184,slow=9.6,SNR=24							
SONM				LR		LR	10 06 42.9	
	comp=Z,59nm,18.9s,baz=63,slow=38							
TKM2	**Tokmak 2**	51.13	336	*e*P		P	09 43 20.8	-0.6
	2.1nm,0.4s,mb4.5							
EKS2	**Erkin-Say**	51.69	334	*e*P		P	09 43 25.9	+0.4
	4.1nm,0.7s,mb4.6							
MKAR	**Makanchi Array**	52.19	343	P		P	09 43 28.8	-0.4
	3.7nm,0.6s,mb4.6,baz=148,slow=8.2,SNR=26							
ZALV	**Zalesovo Beam**	58.23	349	P		P	09 44 11.8	-0.7
	10nm,0.7s,mb5.0,baz=167,slow=5.1,SNR=27							
PETK	**Petropavlovsk-**	72.84	32	P		P	09 45 46.8	0.0
	1.8nm,0.8s,mb4.0,baz=325,slow=2.1,SNR=4.4							
ARCES	**ARCESS Array B**	87.70	340	P		P	09 47 05.5	-0.7
	2.8nm,1.0s,mb4.2,baz=72,slow=4.0,SNR=4.1							

GRAL ***17*** *09:46:47.7±0.3,3383N×3682E,h8km±3km,MD3.3*

GII ***17*** *09:46:48.3±2.0,3394N×3645E,h0km,ML2.5/1, EXPLOSION*

ISC 17 09:46:48.6±1.4,3385N±003×3674E±008,h0km,n10, σ0.90/17,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FKH	**Fakeheh**	0.47	324	*e*P		Pg	09 46 57.5	-0.2
FKH				*e*S		Sg	09 47 04.7	+0.9
HWQ	**Hawqa**	0.78	303	*e*S		Sg	09 47 14.5	+0.7
RCY	**Rachaya**	0.85	245	*e*P		Pg	09 47 03.5	-1.3
RCY				*e*S		Sg	09 47 15.4	-0.5
BHL	**Bhannes**	0.90	274	*e*P		Pg	09 47 05.0	-0.9
BHL				*e*S		Sg	09 47 17.8	+0.2
KSDI	**Kefar Szold**	1.11	234	Pg		Pg	09 47 09.5	-0.4
KSDI				Sg		Sg	09 47 23.3	-1.1
KSHT	**Keshet**	1.16	222	Sg		Sg	09 47 27.7	+1.8
MMA0	**Mount Meron ar**	1.39	234	Pg		Pg	09 47 14.4	-0.9
MMA0				Sg		Sg	09 47 32.8	-0.5
MMLI	**Mount Malkishu**	1.79	218	Pn		Pn	09 47 20.1	-0.6
MMLI				Sn		Sn	09 47 45.2	+1.1
HMDT	**Nahal Hemdat**	1.89	213	Pn		Pn	09 47 21.8	-0.3
HMDT				Sn		Sn	09 47 48.0	+1.4
SLTI	**Sal'it**	2.15	222	Sn		Sn	09 47 53.9	+0.9

IDC ***17*** *09:55:15.3±1.3,194S×10047E,h0km,mb4.4/11, mb1 4.5/12,mb1mx4.3/21,mbtmp4.4/12,ML4.4/1,MS3.2/3, Ms1 3.3/3,ms1mx3.0/22,Error ellipse: s-maj=48.3km s-min=14.3km az=59.0*

NEIC ***17*** *09:55:21.1±0.7,184S×10064E,h35km,mb4.5/7,Error ellipse: s-maj=24.2km s-min=7.7km az=54.0*

ISCJB ***17*** *09:55:23.2±6.2,18S±01×1008E±02,h69km±56km, mb4.5/18,Error ellipse: s-maj=37.2km s-min=10.0km az=141.5*

ISC 17 09:55:25.2±4.7,17S±01×1009E±02,h67km±43km,n28, σ0.66/26,mb4.5/18,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	19.14	100	P		Pn	09 59 45.3	+0.5
	1.1nm,0.3s,baz=284,slow=13,SNR=5.2							
KAPI				LR		LR	10 07 22.7	
	comp=Z,90nm,19.0s,baz=137,slow=37							
CMAR	**Chiang Mai Arr**	20.16	355	P		P	09 59 53.5	-0.7
	6.0nm,0.4s,baz=187,slow=10,SNR=26							
CMAR				LR		LR	10 07 28.1	
	comp=Z,87nm,20.1s,baz=195,slow=36							
QIZ	**Qiongzhong**	22.45	23	*e*P		P	10 00 17.5	-1.4
	4.8nm,0.4s,mb4.2							
FITZ	**Fitzroy Crossi**	29.26	125	*e*P		P	10 01 21.1	-0.1
	5.6nm,1.0s,mb4.2							
FITZ	**Fitzroy Crossi**	29.26	125	P		P	10 01 20.5	-0.8
	3.9nm,0.9s,mb4.0,baz=295,slow=9.1,SNR=10							
ODAN	**Odare**	31.26	336	*e*P		P	10 01 38.7	-0.1
TAPN	**Taplejung**	31.57	337	*e*P		P	10 01 42.2	+0.7
	8.1nm,0.4s,mb4.8							
GUN	**Gumba**	32.81	335	*e*P		P	10 01 52.8	+0.4
	21nm,0.4s,mb5.3							
KKN	**Kakani**	32.96	334	*e*P		P	10 01 53.9	+0.2
	12nm,0.4s,mb5.1							
DANN	**Dangsing**	34.12	332	*e*P		P	10 02 04.4	+0.6
WRA	**Warramunga Arr**	37.39	121	P		P	10 02 31.8	-0.2
	4.0nm,0.4s,mb4.7,baz=303,slow=9.1,SNR=102							
WRA				PcP		PcP	10 04 50.0	+0.2
	0.8nm,0.6s,baz=292,slow=2.8,SNR=7.3							
WB2	**Warramunga Arr**	37.40	121	*e*P		P	10 02 31.6	-0.4
ASAR	**Alice Springs**	38.72	127	P		P	10 02 43.2	+0.2
	9.1nm,0.8s,mb4.7,baz=300,slow=7.8,SNR=113							
ASAR				PcP		PcP	10 04 54.0	+0.1
	1.2nm,0.7s,baz=304,slow=2.5,SNR=7.3							
KSRS	**Korea Array**	46.37	30	P		P	10 03 46.1	+1.2
	1.6nm,0.7s,mb3.9,baz=217,slow=8.4,SNR=3.4							
KSRS				LR		LR	10 22 53.1	
	comp=Z,22nm,19.7s,baz=205,slow=36							
CTA	**Charters Tower**	47.94	116	*e*P		P	10 03 57.7	+0.3
	2.3nm,0.6s,mb4.2							
STKA	**Stephens Creek**	48.69	132	*e*P		P	10 04 03.1	+0.1
	4.2nm,0.8s,mb4.4							
STKA	**Stephens Creek**	48.69	132	P		P	10 04 03.1	+0.1
	4.4nm,0.7s,mb4.5,baz=310,slow=8.9,SNR=10.0							
SONM	**Songino Array**	49.61	5	P		P	10 04 11.3	+1.5
	1.2nm,0.4s,mb4.2,baz=189,slow=11,SNR=13							
TKM2	**Tokmak 2**	49.94	336	*e*P		P	10 04 12.8	+0.4
	9.8nm,0.9s,mb4.7							
EKS2	**Erkin-Say**	50.50	334	*e*P		P	10 04 16.7	+0.1
	9.3nm,0.8s,mb4.8							
MKAR	**Makanchi Array**	51.02	344	P		P	10 04 20.0	-0.4
	4.5nm,0.6s,mb4.7,baz=149,slow=8.1,SNR=25							
KURK	**Kurchatov**	55.61	343	*e*P		P	10 04 53.5	-0.5
	7.0nm,1.2s,mb4.6							
ZAA0	**Zalesovo Array**	57.08	349	*e*P		P	10 05 04.0	-0.4
ZALV	**Zalesovo Beam**	57.08	349	P		P	10 05 04.0	-0.3
	14nm,0.8s,mb5.1,baz=164,slow=5.9,SNR=28							
PETK	**Petropavlovsk-**	72.22	32	P		P	10 06 43.0	0.0
	1.2nm,0.4s,mb4.1,baz=172,slow=13,SNR=20							
ARCES	**ARCESS Array B**	86.52	340	P		P	10 07 59.1	-1.4
	1.6nm,0.8s,mb4.0,baz=113,slow=5.7,SNR=4.0							
MIAR	**Mount Ida**	144.70	21	*e*PKPdf		PKPdf	10 14 53.7	-1.2
JCT	**Junction City**	145.36	32	*e*PKPdf		PKPdf	10 14 56.4	+0.2

JMA 17 10:06:29.2,3530N×13539E,h11km±1km,M2.5,Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JWT	**Wachi**	0.02	152	P		Pg	10 06 31.1	0.0
JKY	**Yasaka**	0.40	325	P		Pg	10 06 37.3	+0.1
JKY				S		Sg	10 06 42.9	+0.4
MAT	**Matsushiro**	2.60	61	P		Pn	10 07 19.1	+7.9
MAT				S		Sn	10 07 52.6	+10

IDC ***17*** *10:42:31.6±2.3,5439N×16948E,h0km,mb3.6/5, mb1 3.8/6,mb1mx3.6/23,mbtmp3.6/6,ML3.7/1,MS2.7/1, Ms1 2.7/1,ms1mx2.1/32,Error ellipse: s-maj=60.1km s-min=34.0km az=42.0*

KRSC ***17*** *10:42:34.5±1.8,5411N×16888E,h20km±20km,ML4.4*

MOS ***17*** *10:42:36.5±1.4,5433N×16893E,h33km,mb4.0/1,Error ellipse: s-maj=36.9km s-min=24.0km az=4.6*

ISC 17 10:42:42.5±1.9,542N±01×1686E±02,h59km±16km,n16, σ1.04/21,mb3.5/5,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	3.84	303	P		Pn	10 43 36.9	-2.1
KBTR				S		Sn	10 44 23.0	+0.2
BZMR	**Bezymyannaya**	4.94	294	P		Pn	10 43 53.6	-0.5
SPN	**Mys Shipunski**	5.20	261	P		Pn	10 43 56.6	-1.0
SPN				S		Sn	10 44 56.3	+0.1
SRDR	**Sredinnyy**	5.47	296	P		Pn	10 44 04.0	+2.7
NLC	**Nalytchevo**	5.58	263	P		Pn	10 44 02.0	-0.8
NLC				S		Sn	10 45 04.7	-0.7
AVH	**Avacha**	5.91	265	P		Pn	10 44 07.6	+0.3
PET	**Petropavlovsk**	6.02	262	P		Pn	10 44 08.8	0.0
PET				S		Sn	10 45 16.0	-0.2
RUS	**Russkaya**	6.28	257	S		Sn	10 45 22.9	+0.2
GNL	**Ganaly**	6.29	269	P		Pn	10 44 14.0	+1.5
PETK	**Petropavlovsk-**	6.55	265	Pn		Pn	10 44 17.5	+1.4
	1.2nm,0.3s,baz=92,slow=20,SNR=19							
PETK				Sn		Sn	10 45 36.6	+7.3
	1.7nm,0.3s,baz=333,slow=20,SNR=8.7							
PETK				LR		LR	10 47 09.2	
	comp=Z,54nm,18.1s,baz=259,slow=39							
SONM	**Songino Array**	38.48	287	P		P	10 50 00.1	+1.7
	0.2nm,0.4s,mb3.2,baz=58,slow=9.2,SNR=4.1							
MKAR	**Makanchi Array**	52.09	300	P		P	10 51 44.9	-1.2
	0.3nm,0.6s,mb3.4,baz=52,slow=7.5,SNR=4.2							
WRA	**Warramunga Arr**	79.50	213	P		P	10 54 41.5	-1.0
	0.6nm,0.8s,mb3.6,baz=31,slow=5.6,SNR=3.2							
WRA	**Warramunga Arr**	79.50	213	P		P	10 54 41.5	-1.0
WRA				pmax		pmax		
	comp=Z,1.0nm,0.8s							
FITZ	**Fitzroy Crossi**	80.85	221	P		P	10 54 49.8	0.0
	comp=Z,0.4nm,0.2s,mb3.9,baz=337,slow=3.1,SNR=3.0							
ASAR	**Alice Springs**	83.12	212	P		P	10 55 02.2	+0.6
	comp=Z,0.4nm,0.8s,mb3.5,baz=21,slow=5.1,SNR=4.3							

IDC 17 10:54:56.6±2.2,690S×12908E,h0km,mb3.7/1,mb1 3.6/4, mb1mx3.5/15,mbtmp3.5/4,ML3.6/3,Error ellipse: s-maj=85.1km s-min=28.9km az=75.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	11.63	196	*e*P		Pn	10 57 45.0	+1.0
	4.6nm,1.2s							
FITZ				*e*S		Sn	10 59 38.6	-16
FITZ	**Fitzroy Crossi**	11.63	196	Pn		Pn	10 57 44.5	+0.5
	0.2nm,0.3s,baz=18,slow=14,SNR=4.2							
WRA	**Warramuga Arr**	13.94	159	Pn		Pn	10 58 14.9	-0.6
	0.6nm,0.3s,baz=338,slow=9.6,SNR=37							
WB2	**War

TIC	**Toumodi**	**70.99**	**80**	*eP*	**P**		**11 08 44.9**	**-0.8**
	39nm,0.8s,mb5.2								
DBIC	**Dimbokro**	**71.15**	**80**	P	**P**		**11 08 46.0**	**-0.7**
	12nm,0.5s,mb4.9,baz=234,slow=5.9,SNR=25								
DBIC				pP	pP		11 09 21.7	-1.1	
	2.5nm,0.5s,baz=214,slow=5.7,SNR=2.7								
KIC	**Kosan Boka**	**71.20**	**80**	*eP*	**P**		**11 08 46.4**	**-0.6**
	64nm,0.7s								
YKA	**Yellowknife Ar**	**77.53**	**342**	P	**P**		**11 09 23.0**	**+0.5**
	1.1nm,0.4s,mb3.9,baz=139,slow=5.9,SNR=6.7								
TORD	**Torodi Ar. Bea**	**78.79**	**75**	P	**P**		**11 09 30.1**	**-0.4**
	4.0nm,0.3s,mb4.5,baz=257,slow=4.4,SNR=101								
TORD				pP	pP		11 10 05.8	-1.5	
	2.1nm,0.6s,baz=283,slow=5.3,SNR=4.8								
ESDC	**Sonseca Array**	**81.00**	**47**	P	**P**		**11 09 41.3**	**-0.6**
	0.5nm,0.4s,mb3.5,baz=248,slow=6.1,SNR=43								
TAM	**Tamanrasset**	**84.36**	**66**	*eP*	**P**		**11 10 00.9**	**+1.3**
TSUM	**Tsumeb**	**89.13**	**109**	P	**P**		**11 10 21.1**	**-1.7**
	1.6nm,0.7s,mb4.0,baz=240,slow=20,SNR=3.4								
ASAR	**Alice Springs**	**137.36**	**220**	PKP	PKPdf		11 16 50.5	+0.1	
	0.4nm,0.5s,baz=120,slow=2.6,SNR=7.7								
ASAR				pPKP	pPKPdf		11 17 28.9	-0.8	
	0.5nm,0.8s,baz=92,slow=3.0,SNR=3.2								
WRA	**Warramunga Arr**	**139.66**	**225**	PKhKP			11 16 48.3		
	0.2nm,0.5s,baz=127,slow=1.7,SNR=7.8								
WRA				PKP	PKPdf		11 16 55.4	+0.8	
	0.8nm,0.4s,baz=123,slow=2.1,SNR=14								
WRA				pPKP	pPKPdf		11 17 34.4	+0.4	
	0.5nm,0.6s,baz=125,slow=2.0,SNR=2.4								
SONM	**Songino Array**	**141.14**	**359**	PKP	PKPdf		11 16 54.0	-2.5	
	0.3nm,0.3s,baz=112,slow=1.6,SNR=3.9								
FITZ	**Fitzroy Crossi**	**146.62**	**217**	*eP*	PKPdf		11 17 09.4	+2.5	
	4.5nm,0.9s								

JMA 17 10:59:39.9±0.1, 4032N×14282E, h33km±2km, M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.83**	**243**	P	Pn	10 59 55.3	+0.1
JTH				S	Sn	11 00 06.5	+0.3
JANG	**Nango**	**1.00**	**273**	P	Pn	10 59 57.9	+0.3
JANG				S	Sn	11 00 11.0	+0.5
MIYJ	**Miyakonagasawa**	**1.07**	**226**	P	Pn	10 59 59.0	+0.5
MIYJ				S	Sn	11 00 12.2	0.0
JTM	**Tenmabayashi**	**1.41**	**290**	P	Pn	11 00 04.2	+0.9
JOM	**Ohasama**	**1.45**	**235**	P	Pn	11 00 05.0	+1.3
JOM				*eS*	Sn	11 00 22.8	+1.2
JAH	**Hinai**	**1.68**	**266**	P	Pn	11 00 08.4	+1.5
JAH				S	Sn	11 00 28.7	+1.5
JOT	**Ohata**	**1.71**	**309**	P	Pn	11 00 08.2	+0.8
JOT				S	Sn	11 00 29.3	+1.2
JEM	**Erimo**	**1.71**	**8**	P	Pn	11 00 07.6	+0.2
JEM				*eS*	Sn	11 00 28.6	+0.5
JMK	**Ichinoseki**	**1.84**	**223**	P	Pn	11 00 10.3	+1.1
JMK				*eS*	Sn	11 00 32.0	+0.7
JNBK	**Urakawa-nobuka**	**1.96**	**359**	P	Pn	11 00 11.6	+0.8
JNBK				*eS*	Sn	11 00 35.8	+1.6

*CSEM **17** 11:16:32.7±0.7, 2985N×3643E, h2km, ML2.9, Error ellipse: s-maj=16.2km s-min=7.1km az=82.0*
*HLW **17** 11:16:33.6, 2983N×3659E, h15km, Mb2.9*
*ISCJB **17** 11:16:34.8±0.9, 2984N±003×3624E±005, h0km, Error ellipse: s-maj=6.3km s-min=4.8km az=0.5*
*SGS **17** 11:16:34.9, 30.11N×3610E, h7km*
*GII **17** 11:16:36.0±1.0, 2989N×3611E, h0km, ML2.2/3, EXPLOSION*

ISC 17 11:16:34.8±0.9, 2983N±003×3629E±005, h0km, n21, σ0°80/33, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.08**	**265**	Pg	**Pg**	**11 16 56.3**	**+0.7**
HRFI	**Mount Harif**	**1.10**	**281**	Pg	**Pg**	**11 16 55.1**	**-0.9**
HRFI				Sg	**Sg**	**11 17 10.4**	**+0.2**
EIL	**Elat**	**1.17**	**262**	Pg	**Pg**	**11 16 57.0**	**-0.3**
EIL				Sg	**Sg**	**11 17 13.2**	**+0.7**
HQLS		**1.19**	**244**	P	**Pg**	**11 16 56.3**	**-1.3**
HQLS		**1.19**	**244**	P	**Pg**	**11 16 56.3**	**-1.3**
HQLS				S	**Sg**	**11 17 12.4**	**-0.7**
MBRI	**Mt Berech**	**1.19**	**269**	Pg	**Pg**	**11 16 57.5**	**-0.2**
MBRI				Sg	**Sg**	**11 17 13.8**	**+0.6**
ZFRI	**Zfri**	**1.20**	**307**	Pg	**Pg**	**11 16 57.4**	**-0.4**
ZFRI				Sg	**Sg**	**11 17 13.3**	**-0.1**
PRNI	**Paran**	**1.23**	**295**	Pg	**Pg**	**11 16 57.3**	**-1.0**
PRNI				Sg	**Sg**	**11 17 14.4**	**+0.2**
JLOS		**1.29**	**213**	P	**Pg**	**11 16 59.9**	**+0.3**
JLOS		**1.29**	**213**	P	**Pg**	**11 16 59.9**	**+0.3**
JLOS				S	**Sg**	**11 17 18.6**	**+2.2**
KRMI	**Paran Flat**	**1.38**	**282**	Pg	**Pg**	**11 17 00.2**	**-1.2**
KRMI				Sg	**Sg**	**11 17 18.8**	**-0.5**
MZDA	**Masada**	**1.68**	**332**	Pn	**Pn**	**11 17 05.6**	**+0.2**
MZDA				Sn	**Sn**	**11 17 27.6**	**0.0**
DSI	**Dead Sea**	**1.90**	**336**	Pn	**Pn**	**11 17 09.3**	**+0.8**
DSI				Sn	**Sn**	**11 17 35.6**	**+2.4**
KZIT	**Kziot**	**1.95**	**304**	Pn	**Pn**	**11 17 08.6**	**-0.6**
KZIT				Sn	**Sn**	**11 17 34.4**	**0.0**
HNKL	**Nakhl**	**2.00**	**273**	P	**Pn**	**11 17 10.2**	**+0.3**
HNKL				S	**Sn**	**11 17 36.6**	**+0.9**
RSHS		**2.01**	**221**	P	**Pn**	**11 17 09.1**	**-0.9**
RSH		**2.48**	**298**	P	**Pn**	**11 17 16.0**	**-0.5**
TR2		**2.66**	**238**	P	**Pn**	**11 17 18.6**	**-0.5**
AMAG	**Maghara**	**2.76**	**288**	P	**Pn**	**11 17 20.9**	**+0.3**
HRSH	**Kfar Ka'horesh**	**2.99**	**344**	P	**Pn**	**11 17 16.0**	**-7.5**
SUZ		**3.00**	**271**	P	**Pn**	**11 17 23.9**	**+0.2**

*DJA **17** 11:51:56, 1874S×17473W, h147km, Mw5.9/27*
*MOS **17** 11:52:07.2±0.9, 1815S×17556W, h219km, mb5.0/19, Error ellipse: s-maj=9.5km s-min=8.0km az=47.5*
*IDC **17** 11:52:07.6±2.0, 1835S×17540W, h221km±18km, mb5.2/17, mb1 5.2/18, mb1mx5.2/20, mbtmp5.2/18, Error ellipse: s-maj=13.3km s-min=9.8km az=132.0*
*BJI **17** 11:52:07.4, 1825S×17463W, h250km, mB5.1, mb5.1*
*ISCJB **17** 11:52:11.0±0.2, 1835S±005×17549W±003, h262km, mb5.0/96, Error ellipse: s-maj=7.1km s-min=3.2km az=156.5*
*BGS **17** 11:52:12.3±3.8, 1830S×17550W, h263km, mb4.9(NEIC)*
*GCMT **17** 11:52:12.3±0.2, 1840S×17509W, h267km±1km, MW5.3/81, Moment Tensor Solution. s81,c121; s80,c133; Duration: 1§1 Moment tensor: Scale 10^17 Nm; Mrr-0.53±.02; Mθθ 0.96±.02; Mϕϕ-0.43±.02; Mrθ-0.25±.02; Mθϕ 0.05±.02; Mϕr-0.74±.02; Best double couple: M0 1.13000×10^17 NP1 ϕs 301.00000°, δ 47.00000°, λ -30.00000°. NP2 ϕs 52.00000°, δ 69.00000°, λ -133.00000°. Principal axes: T 1.0260, Plg 13.0000°, Azm 172.0000°; N 0.2080, Plg 40.0000°, Azm 71.0000°; P -1.2340, Plg 47.0000°, Azm 276.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **17** 11:52:12.3±0.1, 1830S×17550W, mb4.9/61 Error ellipse: s-maj=7.5km s-min=4.1km az=145.0*
NEIC Felt at Neiafu.
*SZGRF **17** 11:52:13.9, 1870S×17536W, h276km, Tonga Islands*

ISC 17 11:52:12.5±0.2, 1837S±005×17548W±003, h264km, h264km±6km: pP-P, n808, σ0°66/514, mb5.0/96, 212C-163D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.68**	**39**	P	**Pn**	**11 53 29.5**	**-7.7**
	177nm,0.3s,baz=165,slow=1.4,SNR=275						
AFI				S	**S**	**11 54 29.2**	**-16**
	463nm,0.3s,baz=19,slow=20,SNR=12						
AFI	**Afiamalu**	**5.68**	**39**	P	**Pn**	**11 53 29.5**	**-7.6**
AFI				S	**S**	**11 54 29.2**	**-16**
AFI				pmax	pmax		
	comp=Z,177nm,0.3s						
AFI				smax			
	comp=N,463nm,0.3s						
AFI	**Afiamalu**	**5.68**	**39**	*e*Pn	**Pn**	**11 53 29.4**	**-7.7**
	comp=N,693nm,0.5s						
AFI				*e*Sn	**S**	**11 54 29.4**	**-15**
RAO	**Raoul Island**	**11.06**	**191**	S	**S**	**11 56 37.8**	**-10**
	comp=N,137nm,0.3s,baz=86,slow=22,SNR=5.6						
FUNA	**Funafuti**	**11.07**	**331**	*e*Pn	**Pn**	**11 54 43.3**	**-1.1**
	comp=N,687nm,1.5s						
RAR	**Rarotonga**	**15.05**	**103**	*e*P	**Pn**	**11 55 31.2**	**-1.6**
DZM	**Mont Dzumac**	**17.36**	**255**	*e*P	**P**	**11 55 58.1**	**+0.7**
DZM	**Mont Dzumac**	**17.36**	**255**	*e*P	**P**	**11 55 58.0**	**+0.5**
URZ	**Urewera**	**20.85**	**197**	P	**P**	**11 56 33.1**	**-1.4**
	comp=N,173nm,0.4s,baz=15,slow=2.7,SNR=152						
URZ				S	**S**	**12 00 08.7**	**-1.2**
	comp=N,70nm,0.6s,baz=127,slow=20,SNR=10						
URZ				PKKP	PKKPdf	12 23 32.4	+4.2
	comp=N,9.7nm,0.9s,baz=256,slow=2.8,SNR=3.7						
SNZO	**South Karori**	**24.36**	**198**	*e*P	**P**	**11 57 06.1**	**-0.6**
	comp=N,85nm,0.7s,mb5.2						
PAE	**Paea**	**24.63**	**92**	*e*P	**P**	**11 57 10.3**	**+0.9**
	comp=N,1μm,1.3s						
TIAR	**Tiarei**	**24.86**	**92**	*e*P	**P**	**11 57 12.0**	**+0.5**
	comp=N,540nm,0.9s,mb6.0						
HNR	**Honiara**	**25.43**	**287**	P	**P**	**11 57 16.7**	**+0.1**
	comp=N,308nm,0.6s,mb5.9,baz=171,slow=2.1,SNR=9.6						
HNR	**Honiara**	**25.43**	**287**	*e*P	**P**	**11 57 16.9**	**+0.2**
HNR				pmax	pmax		
	comp=Z,336nm,0.8s,mb5.8						
HNR	**Honiara**	**25.43**	**287**	*e*P	**P**	**11 57 16.9**	**+0.2**
	comp=Z,336nm,0.8s,mb5.8						
PMOR	**Pomariorio Ree**	**26.62**	**87**	*e*P	**P**	**11 57 25.6**	**-1.7**
	comp=Z,275nm,1.4s,mb5.5						
RPZ	**Rata Peaks**	**27.70**	**201**	P	**P**	**11 57 36.0**	**-0.5**
	comp=Z,38nm,0.4s,mb5.2,baz=23,slow=3.6,SNR=40						
EIDS	**Eidsvold**	**31.75**	**251**	*e*P	**P**	**11 58 17.5**	**+5.1**
ARMA	**Armidale**	**32.15**	**242**	*e*P	**P**	**11 58 16.5**	**+0.7**
CNB	**Canberra Magne**	**35.39**	**234**	*e*P	**P**	**11 58 43.9**	**+0.3**
CAN	**Canberra**	**35.68**	**235**	*e*P	**P**	**11 58 45.7**	**-0.3**
CTA	**Charters Tower**	**36.12**	**261**	ǀ*iP*	**P**	**11 58 49.0**	**-1.0**
	comp=Z,91nm,0.6s,mb5.5						
CTA	**Charters Tower**	**36.12**	**261**	P	**P**	**11 58 49.1**	**-0.9**
	comp=Z,177nm,0.7s,mb5.7,baz=88,slow=10,SNR=160						
CTA	**Charters Tower**	**36.12**	**261**	P	**P**	**11 58 49.1**	**-0.9**
CTA				pmax	pmax		
	comp=Z,177nm,0.7s						
CTAO	**Charters Tower**	**36.12**	**261**	*e*P	**P**	**11 58 49.1**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,188nm,0.8s,mb5.7						
CTAO	**Charters Tower**	**36.12**	**261**	*e*P	**P**	**11 58 49.1**	**-0.9**
	comp=Z,188nm,0.8s,mb5.7						
PMG	**Port Moresby**	**37.29**	**279**	*e*P	**P**	**11 59 00.1**	**+0.3**
PMG				pmax	pmax		
	comp=Z,100nm,0.6s						
PMG	**Port Moresby**	**37.29**	**279**	*e*P	**P**	**11 59 00.1**	**+0.2**
	comp=Z,100nm,0.6s,mb5.4						
TOO	**Toolangi**	**39.07**	**233**	*e*P	**P**	**11 59 14.4**	**0.0**
COEN	**Coen**	**39.90**	**270**	*e*P	**P**	**11 59 20.5**	**-0.9**
	comp=Z,42nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**40.87**	**242**	*e*P	**P**	**11 59 28.9**	**-0.3**
	comp=Z,85nm,1.0s,mb4.9						
STKA	**Stephens Creek**	**40.87**	**242**	P	**P**	**11 59 29.4**	**+0.2**
	comp=Z,53nm,0.5s,mb5.0,baz=90,slow=9.2,SNR=196						
WB2	**Warramunga Arr**	**47.28**	**260**	*e*P	**P**	**12 00 18.3**	**-1.8**
WB2				*e*S	**S**	**12 06 49.6**	**-3.5**
WB2				*e*SCS	ScS	12 09 49.0	+3.1
WRAB	**Tennant Creek**	**47.28**	**260**	P	**P**	**12 00 19.0**	**-1.1**
	comp=Z,2μm,0.4s						
WRAB	**Tennant Creek**	**47.28**	**260**	*e*P	**P**	**12 00 18.9**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,183nm,0.4s,mb5.8						
WRAB	**Tennant Creek**	**47.28**	**260**	*e*P	**P**	**12 00 18.9**	**-1.2**
	comp=Z,183nm,0.4s,mb5.8						
WRA	**Warramunga Arr**	**47.29**	**260**	P	**P**	**12 00 19.1**	**-1.0**
	comp=Z,167nm,0.4s,mb5.7,baz=97,slow=7.5,SNR=1535						
WRA				PcP	PcP	12 01 46.8	0.0
	comp=Z,26nm,0.9s,baz=92,slow=3.5,SNR=6.2						
WRA				S	**S**	**12 06 51.6**	**-1.7**
	comp=Z,8.7nm,0.9s,baz=97,slow=13,SNR=9.0						
ASAR	**Alice Springs**	**47.35**	**254**	P	**P**	**12 00 20.1**	**-0.4**
	comp=Z,1μm,0.6s,baz=90,slow=8.1,SNR=2502						
ASAR				PcP	PcP	12 01 47.4	+0.5
	comp=Z,23nm,0.7s,baz=108,slow=3.4,SNR=4.2						
ASAR				S	**S**	**12 06 51.1**	**-3.0**
	comp=Z,13nm,0.7s,baz=93,slow=16,SNR=22						
GUMO	**Guam**	**50.37**	**306**	P	**P**	**12 00 43.1**	**-0.3**
	comp=Z,351nm,0.8s,mb5.7,baz=166,slow=8.6,SNR=22						
GUMO	**Guam**	**50.37**	**306**	P	**P**	**12 00 43.1**	**-0.3**
GUMO				pmax	pmax		
	comp=Z,351nm,0.8s,mb5.7						
GUMO	**Guam**	**50.37**	**306**	*e*P	**P**	**12 00 43.0**	**-0.4**
	comp=Z,246nm,0.8s,mb5.6						
FORT	**Forrest**	**52.34**	**245**	*e*P	**P**	**12 00 56.5**	**-1.3**
	comp=Z,218nm,0.6s,mb5.7						
FITZ	**Fitzroy Crossi**	**55.70**	**260**	*e*P	**P**	**12 01 21.6**	**-0.7**
	comp=Z,149nm,0.5s,mb5.7						
FITZ				*e*S	**S**	**12 08 46.4**	**-1.6**
FITZ	**Fitzroy Crossi**	**55.70**	**260**	P	**P**	**12 01 21.8**	**-0.5**
	comp=Z,63nm,0.5s,mb5.3,baz=96,slow=6.1,SNR=488						
BATI	**Baumata**	**59.31**	**269**	P	**P**	**12 01 48.4**	**+1.0**
	comp=Z,249nm,0.7s,mb5.8,baz=184,slow=1.7,SNR=40						
SBA	**Scott Base**	**60.15**	**184**	*e*P	**P**	**12 01 55.0**	**+2.9**
SBA				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.7						
SBA	**Scott Base**	**60.15**	**184**	*e*P	**P**	**12 01 55.0**	**+2.9**
	comp=Z,23nm,0.9s,mb4.7						
MBWA	**Marble Bar**	**60.66**	**256**	*e*P	**P**	**12 01 55.8**	**-0.7**
	comp=Z,209nm,1.3s,mb5.5						
KLBR	**Kellerrin**	**61.12**	**244**	*e*P	**P**	**12 01 58.4**	**-1.0**
	comp=Z,98nm,0.6s,mb5.5						
NWAO	**Narrogin (SRO)**	**61.46**	**242**	*e*P	**P**	**12 02 00.4**	**-1.2**
NWAO				pmax	pmax		
	comp=Z,94nm,1.4s						
NWAO	**Narrogin (SRO)**	**61.46**	**242**	*e*P	**P**	**12 02 00.4**	**-1.2**
	comp=Z,94nm,1.4s,mb5.1						
MUN	**Mundaring**	**62.40**	**243**	*e*P	**P**	**12 02 07.8**	**-0.1**
KAPI	**Kappang**	**64.50**	**273**	P	**P**	**12 02 20.7**	**-1.2**
	comp=Z,567nm,0.6s,SNR=6.5						
KAPI	**Kappang**	**64.50**	**273**	P	**P**	**12 02 20.6**	**-1.3**
	comp=Z,52nm,0.5s,mb5.4,baz=136,slow=2.6,SNR=15						
KAPI	**Kappang**	**64.50**	**273**	*e*P	**P**	**12 02 20.5**	**-1.4**
	comp=Z,30nm,0.5s,mb5.2						
CASY	**Casey**	**66.89**	**205**	*e*P	**P**	**12 02 36.5**	**+0.3**
MYLDM	**Lahad Datu**	**69.13**	**283**	ǁP	**P**	**12 02 52.6**	**+1.6**
TSM	**Tawau**	**69.39**	**282**	ǁP	**P**	**12 02 52.7**	**+0.2**
MJAR	**Matsushiro Arr**	**69.97**	**322**	P	**P**	**12 02 55.0**	**-0.5**
	comp=Z,53nm,0.9s,mb5.3,baz=159,slow=6.1,SNR=73						
MAJO	**Matsushiro**	**69.97**	**322**	*e*P	**P**	**12 02 55.3**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,58nm,0.6s,mb5.5						
MAJO	**Matsushiro**	**69.97**	**322**	*e*P	**P**	**12 02 55.3**	**-0.3**
	comp=Z,58nm,0.6s,mb5.5						
MAT	**Matsushiro**	**69.97**	**322**	P	**P**	**12 02 55.7**	**+0.1**
TRT	**Tretes**	**70.47**	**268**	ǁ*e*P	**P**	**12 02 55.5**	**-3.6**
SDKM	**Sandakan**	**70.51**	**283**	ǁP	**P**	**12 03 00.5**	**+1.2**
KRKI	**Karangkates**	**70.51**	**268**	ǁ*i*P	**P**	**12 03 01.4**	**+2.0**
KDM	**Kudat**	**71.31**	**284**	ǁP	**P**	**12 03 07.7**	**+3.5**
KKM	**Kota Kinabalu**	**71.56**	**283**	ǁP	**P**	**12 03 06.2**	**+0.6**
KKM	**Kota Kinabalu**	**71.56**	**283**	*e*P	**P**	**12 03 05.7**	**0.0**
AKUT	**Akutan**	**72.69**	**6**	*e*P	**P**	**12 03 09.9**	**-1.5**
	comp=Z,100nm,1.1s,mb5.4						
BTM	**Bintulu**	**73.47**	**279**	ǁP	**P**	**12 03 17.8**	**+0.9**
SBUM	**Sibu**	**74.03**	**278**	ǁP	**P**	**12 03 21.3**	**+1.1**
NACB	**Ninganchiao**	**74.50**	**302**	*e*P	**P**	**12 03 22.0**	**-0.6**
	comp=Z,490nm,0.7s,mb6.2						
PET	**Petropavlovsk**	**74.54**	**344**	*e*P	**P**	**12 03 21.0**	**-1.1**
PET				pmax	pmax		
	comp=Z,19nm,0.6s,mb4.9						
PETK	**Petropavlovsk-**	**74.87**	**344**	P	**P**	**12 03 23.6**	**-0.5**
	comp=Z,37nm,0.8s,mb5.0,baz=103,slow=9.2,SNR=72						
YHNB	**Yeheng**	**74.92**	**303**	*e*P	**P**	**12 03 24.9**	**-0.1**
	comp=Z,406nm,1.4s,mb5.9						
PACP	**Pacheco Peak**	**75.10**	**42**	ǁP	**P**	**12 03 26.1**	**+0.3**
	baz=75						
YSS	**Yuzh-Sakhalins**	**75.11**	**332**	ǁ*e*P	**P**	**12 03 25.6**	**+0.1**
YSS				pmax	pmax		
	comp=Z,117nm,1.0s,mb5.5						
YSS	**Yuzh-Sakhalins**	**75.11**	**332**	*e*P	**P**	**12 03 25.5**	**0.0**
	comp=Z,53nm,0.7s,mb5.3						
KSM	**Kuching**	**75.51**	**276**	ǁP	**P**	**12 03 29.7**	**+1.1**
KSM	**Kuching**	**75.51**	**276**	*e*P	**P**	**12 03 29.3**	**+0.7**
MNRC	**McLaughlin Nat**	**75.53**	**40**	ǁP	**P**	**12 03 28.2**	**+0.1**
	baz=76						
Q03C	**Winters**	**75.64**	**41**	ǁP	**P**	**12 03 29.2**	**+0.5**
	baz=76						
CHGN	**Chignik**	**75.76**	**10**	*e*P	**P**	**12 03 27.1**	**-1.9**
GASB	**Alder Springs**	**75.84**	**39**	ǁP	**P**	**12 03 30.1**	**+0.2**
	baz=76						
EDW2	**Edwards Air Fo**	**76.03**	**46**	ǁP	**P**	**12 03 30.8**	**-0.3**
	baz=76						
T06C	**Millerton Lake**	**76.12**	**43**	ǁP	**P**	**12 03 31.4**	**-0.1**
	baz=76						
O02C	**Red Bluff**	**76.13**	**39**	ǁP	**P**	**12 03 31.7**	**+0.2**
	baz=76,SNR=5.4						
ISA	**Isabella**	**76.15**	**45**	*e*P	**P**	**12 03 32.1**	**+0.4**
ISA				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.4						
ISA	**Isabella**	**76.15**	**45**	*e*P	**P**	**12 03 31.9**	**+0.2**
	baz=76						
ISA	**Isabella**	**76.15**	**45**	*e*P	**P**	**12 03 32.1**	**+0.4**
	comp=Z,14nm,1.4s,mb4.4						
ISA				*e*pP	pP	12 04 33.7	+0.4
N02C	**Big Bar**	**76.23**	**38**	ǁP	**P**	**12 03 32.3**	**+0.3**
	baz=76						
CMB	**Columbia Colle**	**76.29**	**42**	ǁP	**P**	**12 03 32.1**	**-0.3**
	baz=76						
HELL	**Mitchell Peak**	**76.37**	**44**	ǁP	**P**	**12 03 32.5**	**-0.4**
	baz=76						
LAVA	**Lava Cap Winer**	**76.50**	**41**	ǁP	**P**	**12 03 33.2**	**-0.3**
	baz=77						
ORV	**Oroville**	**76.52**	**40**	ǁP	**P**	**12 03 33.0**	**-0.7**
	baz=77						
WDC	**Whiskeytown Da**	**76.53**	**39**	ǁP	**P**	**12 03 33.4**	**-0.3**
	baz=77						
WDC	**Whiskeytown Da**	**76.53**	**39**	*e*P	**P**	**12 03 33.8**	**+0.1**
KCC	**Kaiser Creek**	**76.55**	**43**	ǁP	**P**	**12 03 33.5**	**-0.5**
	baz=77						
LRMC	**Laurel Mountai**	**76.57**	**45**	ǁP	**P**	**12 03 33.9**	**-0.2**
	baz=77						
TPI	**Tanjungpandan**	**76.68**	**272**	ǁ*e*P	**P**	**12 03 35.0**	**-0.2**
TPI	**Tanjungpandan**	**76.68**	**272**	ǁ*e*P	**P**	**12 03 35.0**	**-0.2**
M02C	**Callahan**	**76.85**	**38**	ǁP	**P**	**12 03 35.6**	**+0.1**
	baz=77,SNR=6.2						
CWC	**Cottonwood Cre**	**76.86**	**44**	ǁP	**P**	**12 03 35.2**	**-0.4**
	baz=77						
L02A	**Cave Junction**	**76.91**	**37**	ǁP	**P**	**12 03 35.9**	**+0.2**
	baz=77						
P05C	**Yuba Gap, Truc**	**76.91**	**41**	ǁP	**P**	**12 03 35.8**	**0.0**
	baz=77						
BELC	**Belle Mtn.**	**76.92**	**47**	ǁP	**P**	**12 03 35.9**	**-0.2**
	baz=77						
KSRS	**Korea Array**	**76.92**	**317**	P	**P**	**12 03 37.0**	**+1.0**
	comp=Z,33nm,0.9s,mb5.1,baz=133,slow=7.1,SNR=39						
KSRS	**Korea Array**	**76.92**	**317**	P	**P**	**12 03 37.0**	**+1.0**
KSRS				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.1						
MPMC	**Manual Prospec**	**77.03**	**45**	ǁP	**P**	**12 03 36.5**	**-0.2**
	baz=77,SNR=7.4						
MLAC	**Mammoth Lakes**	**77.05**	**43**	ǁP	**P**	**12 03 36.9**	**+0.2**
	baz=77						
GSC	**Goldstone**	**77.07**	**46**	ǁP	**P**	**12 03 36.3**	**-0.6**
	baz=77						
GSC	**Goldstone**	**77.07**	**46**	*e*P	**P**	**12 03 37.0**	**+0.2**
GSC				*e*pP	pP	12 04 38.4	-0.2
BC3	**Big Chuckw Mtn**	**77.11**	**48**	ǁP	**P**	**12 03 36.9**	**-0.2**
	baz=77						
O05C	**Quincy**	**77.12**	**40**	ǁP	**P**	**12 03 36.9**	**-0.1**
	baz=77						
YBH	**Yreka Blue Hor**	**77.15**	**38**	*e*P	**P**	**12 03 37.8**	**+0.7**
YBH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YBH	**Yreka Blue Hor**	**77.15**	**38**	ǁP	**P**	**12 03 37.5**	**+0.4**
	baz=77,SNR=7.8						
YBH	**Yreka Blue Hor**	**77.15**	**38**	*e*P	**P**	**12 03 37.8**	**+0.6**
	comp=Z,2.8nm,0.7s,mb4.1						
YBH				*e*pP	pP	12 04 38.4	-0.5
WAKR	**Walker**	**77.17**	**42**	*e*P	**P**	**12 03 37.8**	**+0.5**
WAKR				*e*pP	pP	12 04 38.8	-0.3
R06C	**Coleville**	**77.17**	**42**	ǁP	**P**	**12 03 37.6**	**+0.3**
	baz=77						
R07C	**Lee Vining**	**77.18**	**42**	ǁP	**P**	**12 03 37.7**	**+0.4**
	baz=77						
QZH	**Quanzhou**	**77.28**	**302**	P	**P**	**12 03 38.8**	**+0.6**
QZH				S	S	12 13 05.8	-0.3
QZH				AMB	AMB		
	comp=Z,230nm,0.8s,mb6.0						
QZH				AMB	AMB		
	comp=Z,1μm,6.7s						
K02A	**Glendale**	**77.36**	**36**	ǁP	**P**	**12 03 38.8**	**+0.5**
	baz=78						
S08C	**White Mtn Res**	**77.40**	**43**	ǁP	**P**	**12 03 38.5**	**-0.2**
	baz=78,SNR=7.4						
BEKR	**Beckwourth**	**77.41**	**40**	ǁP	**P**	**12 03 38.7**	**+0.1**
	baz=78						
WCN	**Washoe City**	**77.44**	**41**	ǁP	**P**	**12 03 38.4**	**-0.4**
	baz=78						
**HUM

P09A	**Austin**	**79.23**	**42**	⇑P		**P**	**12 03 48.7**	**+0.1**
	baz=79							
K06A	**Valley Falls**	**79.24**	**38**	⇓P		**P**	**12 03 48.6**	**0.0**
	baz=79,SNR=6.6							
Q10A	**Clear Creek Ra**	**79.30**	**43**	⇓P		**P**	**12 03 49.3**	**+0.4**
	baz=79							
V13A	**Grand Canyon W**	**79.31**	**47**	⇑P		**P**	**12 03 48.7**	**-0.3**
	baz=79							
H04A	**Detroit Lake**	**79.31**	**36**	⇑P		**P**	**12 03 47.9**	**-0.9**
	baz=80							
L07A	**Adell**	**79.31**	**39**	⇓P		**P**	**12 03 49.2**	**+0.2**
	baz=79,SNR=7.9							
N08A	**GE Springer Mi**	**79.32**	**41**	⇓P		**P**	**12 03 49.0**	**0.0**
	baz=79,SNR=9.5							
X14A	**Yava**	**79.35**	**48**	⇓P		**P**	**12 03 49.1**	**-0.3**
	baz=80,SNR=5.4							
G04A	**Mulino**	**79.48**	**35**	⇑P		**P**	**12 03 49.3**	**-0.5**
	baz=80							
Y15A	**Casa Rosa Ranc**	**79.48**	**49**	⇑P		**P**	**12 03 50.4**	**+0.3**
	baz=80,SNR=5.3							
I05A	**Bend**	**79.50**	**36**	⇑P		**P**	**12 03 49.3**	**-0.6**
	baz=80							
217A	**Green Valley**	**79.51**	**52**	⇓P		**P**	**12 03 50.8**	**+0.5**
	baz=80							
M08A	**Happy Creek Ra**	**79.56**	**40**	⇑P		**P**	**12 03 50.1**	**-0.2**
	baz=80							
R11A	**Troy Canyon, C**	**79.57**	**44**	⇓P		**P**	**12 03 50.2**	**-0.3**
	baz=80							
W14A	**Seligman**	**79.60**	**48**	⇓P		**P**	**12 03 51.0**	**+0.4**
	baz=80,SNR=7.1							
U13A	**Pakoon Wash**	**79.61**	**46**	⇓P		**P**	**12 03 51.2**	**+0.5**
	baz=80,SNR=9.6							
S12A	**Delamar Landin**	**79.65**	**45**	⇑P		**P**	**12 03 51.1**	**+0.2**
	baz=80,SNR=6.7							
BMN	**Battle Mountai**	**79.68**	**41**	*e*P		**P**	**12 03 50.7**	**-0.3**
BMN				*e*			12 03 57.3	
BMN					pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.3							
BMN	**Battle Mountai**	**79.68**	**41**	*e*P		**P**	**12 03 50.7**	**-0.3**
	comp=Z,8.7nm,1.3s,mb4.3							
BMN				*e*PcP		PcP	12 03 57.3	-0.5
BMN				*e*pP		pP	12 04 53.9	+0.8
P10A	**Eureka**	**79.70**	**42**	⇓P		**P**	**12 03 51.2**	**+0.1**
	baz=80							
N09A	**Rock Creek Ran**	**79.74**	**41**	⇑P		**P**	**12 03 51.2**	**-0.1**
	baz=80,SNR=5.5							
K07A	**Rock Creek Ran**	**79.77**	**39**	⇑P		**P**	**12 03 51.3**	**-0.1**
	baz=80,SNR=5.7							
TUC	**Tucson**	**79.80**	**51**	*e*P		**P**	**12 03 52.2**	**+0.4**
TUC					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3							
TUC	**Tucson**	**79.80**	**51**	*e*P		**P**	**12 03 52.2**	**+0.4**
	comp=Z,4.8nm,0.8s,mb4.3							
TUC				*e*pP		pP	12 04 53.8	-0.1
V14A	**Boquillas Ranc**	**79.80**	**47**	⇑P		**P**	**12 03 51.9**	**+0.2**
	baz=80,SNR=7.4							
X15A	**Humboldt**	**79.82**	**49**	⇑P		**P**	**12 03 52.1**	**+0.2**
	baz=80,SNR=5.9							
117A	**Oracle**	**79.96**	**51**	⇑P		**P**	**12 03 53.0**	**+0.4**
	baz=80							
I06A	**Prineville**	**79.96**	**37**	⇑P		**P**	**12 03 52.3**	**-0.1**
	baz=80,SNR=5.2							
318A	**Bisbee**	**79.97**	**52**	⇑P		**P**	**12 03 53.0**	**+0.3**
	baz=80							
T13A	**Saint George**	**79.97**	**46**	⇑P		**P**	**12 03 52.7**	**0.0**
	baz=80							
F04A	**Amboy**	**79.98**	**35**	⇑P		**P**	**12 03 52.2**	**-0.2**
	baz=80							
WVOR	**Wild Horse Val**	**79.98**	**39**	*e*P		**P**	**12 03 52.5**	**0.0**
WVOR					pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3							
WVOR	**Wild Horse Val**	**79.98**	**39**	*e*P		**P**	**12 03 52.5**	**0.0**
	comp=Z,5.9nm,1.0s,mb4.3							
L08A	**Fields**	**80.01**	**39**	⇓P		**P**	**12 03 52.6**	**-0.1**
	baz=80,SNR=15							
M09A	**Marrel Ranch,**	**80.11**	**40**	⇑P		**P**	**12 03 53.1**	**-0.2**
	baz=80							
J07A	**Hines**	**80.14**	**38**	⇑P		**P**	**12 03 53.1**	**-0.3**
	baz=80,SNR=5.7							
U14A	**Mt Trumbull**	**80.16**	**46**	⇑P		**P**	**12 03 53.9**	**+0.3**
	baz=80,SNR=9.9							
218A	**Dragoon**	**80.18**	**52**	⇑P		**P**	**12 03 53.9**	**+0.1**
	baz=80							
MDJ	**Mudanjiang**	**80.19**	**324**	P		**P**	**12 03 54.8**	**+1.2**
MDJ					AMB	AMB		
	comp=Z,54nm,1.0s,mb5.2							
MDJ					AMB	AMB		
	comp=Z,168nm,3.5s							
MDJ	**Mudanjiang**	**80.19**	**324**	*e*P		**P**	**12 03 53.7**	**+0.2**
	comp=Z,57nm,1.1s,mb5.2							
R12A	**Pony Springs,**	**80.20**	**44**	⇓P		**P**	**12 03 53.8**	**0.0**
	baz=80,SNR=7.6							
K08A	**Mann Creek Ran**	**80.24**	**39**	⇑P		**P**	**12 03 54.4**	**+0.4**
	baz=80,SNR=13							
S13A	**Holt Ranch, En**	**80.30**	**45**	⇓P		**P**	**12 03 54.7**	**+0.3**
	baz=80							
L09A	**Wilkinson Ranc**	**80.32**	**40**	⇑P		**P**	**12 03 55.0**	**+0.6**
	baz=80							
TDL	**Tradedollar La**	**80.35**	**34**	P		**P**	**12 03 54.9**	**+0.5**
X16A	**Lo Mia Camp, P**	**80.36**	**49**	⇑P		**P**	**12 03 55.2**	**+0.5**
	baz=80,SNR=6.3							
H06A	**Lindquist Farm**	**80.38**	**36**	⇑P		**P**	**12 03 54.0**	**-0.5**
	baz=80,SNR=6.1							
NJ2	**Nanjing**	**80.40**	**308**	*e*P		**P**	**12 03 57.8**	**+2.8**
NJ2					AMB	AMB		
	comp=Z,60nm,1.0s,mb5.3							
Q12A	**Willow Creek R**	**80.44**	**43**	⇑P		**P**	**12 03 55.2**	**+0.2**
	baz=81							
I07A	**Izee**	**80.45**	**37**	⇓P		**P**	**12 03 55.0**	**0.0**
	baz=81,SNR=6.2							
F05A	**White Salmon**	**80.47**	**35**	⇑P		**P**	**12 03 54.8**	**-0.2**
	baz=81							
319A	**Douglas**	**80.47**	**53**	⇑P		**P**	**12 03 56.2**	**+0.8**
	baz=81							
O11A	**Cowboy Ranch,**	**80.50**	**42**	⇑P		**P**	**12 03 55.4**	**0.0**
	baz=81,SNR=5.0							
G06A	**Carlson Farm,**	**80.52**	**36**	⇓P		**P**	**12 03 55.3**	**0.0**
	baz=81							
V15A	**Kaibab Nationa**	**80.55**	**47**	⇓P		**P**	**12 03 56.0**	**+0.4**
	baz=81							
118A	**Homack Ranch,**	**80.56**	**51**	⇓P		**P**	**12 03 56.2**	**+0.4**
	baz=81							
J08A	**Circle Bar Ran**	**80.62**	**38**	⇑P		**P**	**12 03 56.0**	**+0.1**
	baz=81							
W16A	**Flagstaff**	**80.63**	**48**	⇑P		**P**	**12 03 57.0**	**+0.8**
	baz=81							
K09A	**Rome**	**80.68**	**39**	⇓P		**P**	**12 03 56.2**	**-0.1**
	baz=81,SNR=11							
ARUT	**Antelope Range**	**80.69**	**45**	*e*P		**P**	**12 03 56.6**	**+0.2**
H07A	**Lands Inn, Kim**	**80.73**	**37**	⇓P		**P**	**12 03 56.3**	**-0.2**
	baz=81,SNR=8.8							
E05A	**Randle**	**80.73**	**34**	⇓P		**P**	**12 03 56.4**	**0.0**
	baz=81							
M10A	**I.L. Ranch, Tu**	**80.73**	**41**	⇑P		**P**	**12 03 56.6**	**+0.1**
	baz=81,SNR=7.1							
U15A	**North Rim**	**80.77**	**47**	⇑P		**P**	**12 03 57.3**	**+0.4**
	baz=81,SNR=7.7							
X17A	**Forest Lakes**	**80.77**	**49**	⇑P		**P**	**12 03 57.8**	**+0.9**
	baz=81							
219A	**White Tail Can**	**80.78**	**52**	⇓P		**P**	**12 03 57.5**	**+0.5**
	baz=81							
B04A	**Port Angeles**	**80.78**	**32**	⇑P		**P**	**12 03 57.1**	**+0.5**
	baz=81							
SVW2	**Sparrevohn**	**80.79**	**10**	*e*P		**P**	**12 03 55.7**	**-0.7**
C04A	**Brinnon**	**80.83**	**33**	⇑P		**P**	**12 03 57.2**	**+0.3**
	baz=81							
S14A	**Cedar City**	**80.86**	**45**	⇓P		**P**	**12 03 57.4**	**+0.1**
	baz=81							
I08A	**Drewsey**	**80.89**	**38**	⇑P		**P**	**12 03 57.1**	**-0.2**
	baz=81,SNR=7.0							
Q13A	**Wheeler Ranch,**	**80.93**	**44**	⇑P		**P**	**12 03 57.3**	**-0.3**
	baz=81							
T15A	**Red Dirt Ranch**	**81.01**	**46**	⇓P		**P**	**12 03 58.3**	**+0.2**
	baz=81,SNR=7.1							
J09A	**Fry Pan Ranch,**	**81.04**	**39**	⇓P		**P**	**12 03 58.0**	**-0.1**
	baz=81,SNR=9.9							
Y18A	**Canyon Day Jun**	**81.06**	**50**	⇓P		**P**	**12 03 58.9**	**+0.5**
	baz=81,SNR=9.2							
G07A	**Ruggs Ranch, H**	**81.08**	**36**	⇑P		**P**	**12 03 58.1**	**-0.1**
	baz=81							
L10A	**Juniper Basin**	**81.08**	**40**	⇑P		**P**	**12 03 58.5**	**+0.2**
	baz=81,SNR=7.2							
ELK	**Elko**	**81.11**	**42**	*e*P		**P**	**12 03 57.4**	**-1.1**
ELK					pmax	pmax		
	comp=Z,3.0nm,0.9s							
ELK	**Elko**	**81.11**	**42**	*e*P		**P**	**12 03 57.4**	**-1.1**
	comp=Z,2.6nm,0.9s,mb4.0							
ELK				*e*pP		pP	12 05 01.2	+0.3
119A	**Ashpeak Ranch,**	**81.11**	**51**	⇓P		**P**	**12 03 59.2**	**+0.4**
	baz=81							
E06A	**Yakima**	**81.14**	**35**	⇑P		**P**	**12 03 58.7**	**+0.1**
	baz=81							
M11A	**Holland Ranch,**	**81.14**	**41**	⇑P		**P**	**12 03 59.1**	**+0.4**
	baz=81							
O12A	**Currie**	**81.16**	**42**	⇑P		**P**	**12 03 58.9**	**0.0**
	baz=81							
H08A	**Prairie City**	**81.19**	**37**	⇑P		**P**	**12 03 59.0**	**+0.1**
	baz=81							
PGC	**Sidney**	**81.19**	**32**	*e*P		**P**	**12 03 58.7**	**-0.1**
	comp=Z,43nm,1.3s,mb5.0							
PGC				*e*pP		pP	12 05 01.4	+0.2
P13A	**Bates Ranch, G**	**81.20**	**43**	⇓P		**P**	**12 03 59.4**	**+0.4**
	baz=81							
SLKM	**Skilak Lake**	**81.21**	**12**	*e*P		**P**	**12 03 58.0**	**-0.6**
SLKM				*e*pP		pP	12 05 01.2	+0.3
K10A	**MacKenzie Ranc**	**81.24**	**39**	⇓P		**P**	**12 03 59.3**	**+0.1**
	baz=81,SNR=6.5							
N12A	**Clover Valley,**	**81.30**	**42**	⇑P		**P**	**12 03 59.9**	**+0.3**
	baz=81							
S15A	**Panguitch**	**81.36**	**46**	⇓P		**P**	**12 04 01.0**	**+1.0**
	baz=82							
I09A	**Lost Marbles R**	**81.41**	**38**	⇑P		**P**	**12 03 59.7**	**-0.3**
	baz=82							
Q14A	**Sevier Lake (B**	**81.44**	**44**	⇑P		**P**	**12 04 00.8**	**+0.5**
	baz=82,SNR=5.0							
U16A	**Tuba City**	**81.44**	**48**	⇓P		**P**	**12 04 00.8**	**+0.4**
	baz=82,SNR=5.4							
C05A	**Tolt Reservoir**	**81.48**	**33**	⇑P		**P**	**12 04 00.0**	**-0.3**
	baz=82							
X18A	**Snowflake**	**81.48**	**49**	⇓P		**P**	**12 04 01.0**	**+0.3**
	baz=82							
G08A	**Pilot Rock**	**81.49**	**37**	⇓P		**P**	**12 04 00.4**	**0.0**
	baz=82,SNR=9.4							
L11A	**Cat Creek Ranc**	**81.58**	**40**	⇓P		**P**	**12 04 01.0**	**+0.1**
	baz=82,SNR=6.9							
T16A	**Glen Canyon Da**	**81.60**	**47**	⇑P		**P**	**12 04 01.7**	**+0.5**
	baz=82							
A04A	**Legoe Bay, Lum**	**81.61**	**32**	⇓P		**P**	**12 04 00.9**	**-0.1**
	baz=82,SNR=7.6							
D06A	**Cle Elum**	**81.62**	**34**	⇓P		**P**	**12 04 01.2**	**+0.2**
	baz=82							
B05A	**Bryant**	**81.64**	**33**	⇓P		**P**	**12 04 01.0**	**-0.1**
	baz=82,SNR=5.3							
J10A	**Berg Farm, Mel**	**81.67**	**39**	⇓P		**P**	**12 04 01.2**	**-0.2**
	baz=82							
M12A	**Wells**	**81.68**	**41**	⇑P		**P**	**12 04 01.3**	**-0.2**
	baz=82							
Y19A	**Nutrioso**	**81.71**	**50**	⇑P		**P**	**12 04 02.5**	**+0.7**
	baz=82,SNR=8.2							
MYKOM	**Kota Tinggi**	**81.72**	**275**	⇑P		**P**	**12 04 03.3**	**+0.9**
CMW	**Cultus Mountai**	**81.72**	**33**	P		**P**	**12 04 01.9**	**+0.3**
K11A	**Parker Ranch,**	**81.75**	**40**	⇑P		**P**	**12 04 01.6**	**-0.3**
	baz=82							
E07A	**Sunnyside**	**81.76**	**35**	⇑P		**P**	**12 04 02.0**	**+0.2**
	baz=82							
RSW	**Rattlesnake Hi**	**81.80**	**35**	*e*P		**P**	**12 04 01.5**	**-0.5**
N13A	**Wendover, West**	**81.83**	**42**	⇑P		**P**	**12 04 02.4**	**+0.1**
	baz=82							
HAWA	**Hanford**	**81.83**	**35**	*e*P		**P**	**12 04 01.8**	**-0.4**
	comp=Z,7.9nm,0.6s,mb4.6							
HAWA				*e*pP		pP	12 05 05.0	+0.3
RC01	**Rabbit Creek A**	**81.84**	**12**	*e*P		**P**	**12 04 00.3**	**-1.6**
	comp=Z,4µm,1.2s							
MDW	**Midway**	**81.84**	**35**	P		**P**	**12 04 02.4**	**+0.2**
DL2	**Dalian**	**81.86**	**315**	P		**P**	**12 04 03.3**	**+0.8**
DL2					AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8							
H09A	**Durkee**	**81.86**	**38**	⇑P		**P**	**12 04 02.1**	**-0.3**
	baz=82							
P14A	**Drum Mountains**	**81.89**	**44**	⇓P		**P**	**12 04 02.7**	**0.0**
	baz=82,SNR=7.4							
F08A	**Pendleton**	**81.90**	**36**	⇓P		**P**	**12 04 03.0**	**+0.4**
	baz=82							
S16A	**Weppner Ranch,**	**81.91**	**46**	⇓P		**P**	**12 04 03.2**	**+0.4**
	baz=82							
X19A	**St. Johns**	**81.91**	**50**	⇑P		**P**	**12 04 03.8**	**+0.9**
	baz=82,SNR=9.8							
MSU	**Marysvale**	**81.92**	**45**	*e*P		**P**	**12 04 03.8**	**+1.0**
MSU				*e*pP		pP	12 05 06.3	+1.0
KLR	**Kul'dur**	**81.95**	**328**	*e*P		**P**	**12 03 58.2**	**-4.5**
GBL	**Gable Mountain**	**82.00**	**35**	P		**P**	**12 04 03.2**	**+0.2**
L12A	**House Creek Ra**	**82.02**	**41**	⇑P		**P**	**12 04 03.3**	**+0.1**
	baz=82							
Q15A	**Fillmore**	**82.04**	**45**	⇑P		**P**	**12 04 03.8**	**+0.4**
	baz=82							
C06A	**Tall Timber Ra**	**82.04**	**34**	⇓P		**P**	**12 04 03.2**	**0.0**
	baz=82							
RPW	**Rockport**	**82.05**	**33**	P		**P**	**12 04 02.8**	**-0.5**
V18A	**Ganado**	**82.07**	**48**	⇓P		**P**	**12 04 04.5**	**+0.8**
	baz=82,SNR=9.3							
D07A	**Quincy**	**82.08**	**35**	⇑P		**P**	**12 04 03.4**	**-0.1**
	baz=82							
T17A	**Navajo Res., N**	**82.09**	**47**	⇑P		**P**	**12 04 04.3**	**+0.5**
	baz=82							
CN2	**Changchun**	**82.11**	**321**	⇓P		**P**	**12 04 03.8**	**+0.1**
CN2					AMB	AMB		
	comp=Z,60nm,1.0s,mb5.3							
CN2					AMB	AMB		
	comp=Z,200nm,5.0s							
A05A	**Maple Falls**	**82.11**	**32**	⇑P		**P**	**12 04 03.6**	**0.0**
	baz=82							
M13A	**Montello**	**82.13**	**42**	⇓P		**P**	**12 04 04.5**	**+0.7**
	baz=82							
ETW	**Entiat**	**82.14**	**34**	P		**P**	**12 04 03.8**	**0.0**
G09A	**Cove**	**82.15**	**37**	⇑P		**P**	**12 04 03.7**	**-0.2**
	baz=82,SNR=7.7							
E08A	**Dider Farm, El**	**82.16**	**36**	⇓P		**P**	**12 04 03.8**	**0.0**
	baz=82							
W19A	**Sanders**	**82.17**	**49**	⇑P		**P**	**12 04 05.0**	**+0.8**
	baz=82							
BMO	**Blue Mountains**	**82.18**	**38**	*e*P		**P**	**12 04 03.9**	**-0.1**
BMO					pmax	pmax		
	comp=Z,13nm,1.5s,mb4.4							
BMO	**Blue Mountains**	**82.18**	**38**	*e*P		**P**	**12 04 03.9**	**-0.1**
	comp=Z,13nm,1.5s,mb4.4							
BMO				*e*pP		pP	12 05 06.2	-0.4
QIZ	**Qiongzhong**	**82.19**	**293**	*e*P		**P**	**12 04 05.6**	**+0.9**
	comp=Z,12nm,0.6s,mb4.8							
MFID	**Camas Ranch**	**82.23**	**39**	⇓P		**P**	**12 04 04.5**	**+0.2**
	baz=82							
R16A	**Teasdale**	**82.27**	**46**	⇑P		**P**	**12 04 04.9**	**+0.2**
	baz=82							
KGM	**Kluang**	**82.29**	**275**	⇑P		**P**	**12 04 05.7**	**+0.4**
F09A	**S2 Ranch, Elgi**	**82.33**	**37**	⇓P		**P**	**12 04 04.5**	**-0.3**
	baz=82							
C07A	**Waterville**	**82.34**	**34**	⇓P		**P**	**12 04 04.2**	**-0.5**
	baz=82,SNR=5.7							
H10A	**Noah's Angus R**	**82.35**	**38**	⇑P		**P**	**12 04 04.8**	**-0.1**
	baz=82,SNR=7.0							
K12A	**Draper Farm, C**	**82.36**	**40**	⇑P		**P**	**12 04 05.1**	**+0.1**
	baz=82							
WTV	**Waterville**	**82.40**	**34**	P		**P**	**12 04 04.9**	**-0.2**
S17A	**Black Ridge (B**	**82.41**	**46**	⇓P		**P**	**12 04 05.2**	**-0.2**
	baz=82,SNR=5.4							
PMR	**Palmer**	**82.42**	**12**	*e*P		**P**	**12 04 04.0**	**-0.9**
PMR					pmax	pmax		
	comp=Z,19nm,1.2s,mb4.7							
PMR	**Palmer**	**82.42**	**12**	*e*P		**P**	**12 04 04.0**	**-0.8**
	comp=Z,19nm,1.2s,mb4.7							
I11A	**Placerville**	**82.43**	**39**	⇓P		**P**	**12 04 04.7**	**-0.7**
	baz=83,SNR=5.2							
U18A	**Rough Rock, Ch**	**82.46**	**48**	⇓P		**P**	**12 04 05.8**	**+0.1**
	baz=83,SNR=7.4							
TTA	**Tatalina**	**82.47**	**9**	*e*P		**P**	**12 04 05.3**	**+0.2**
A06A	**Chilliwack**	**82.48**	**32**	⇓P		**P**	**12 04 05.6**	**+0.2**
	baz=83							
G10A	**Bishop Farm, J**	**82.54**	**37**	⇑P		**P**	**12 04 05.4**	**-0.4**
	baz=83,SNR=6.3							
D08A	**Wollman Farm,**	**82.57**	**35**	⇓P		**P**	**12 04 05.9**	**-0.1**
	baz=83,SNR=5.3							
J12A	**Stokes Ranch,**	**82.58**	**40**	⇓P		**P**	**12 04 06.0**	**-0.1**
	baz=83							
L13A	**Double Diamond**	**82.66**	**41**	⇓P		**P**	**12 04 06.6**	**+0.1**
	baz=83							
E09A	**Wood Farm, Sta**	**82.67**	**36**	⇑P		**P**	**12 04 06.4**	**-0.1**
	baz=83							
M14A	**Sheep Mountain**	**82.72**	**42**	⇑P		**P**	**12 04 06.7**	**-0.2**
	baz=83,SNR=7.6							
DIV	**Divide**	**82.73**	**14**	*e*P		**P**	**12 04 05.9**	**-0.5**
	comp=Z,52nm,1.3s,mb5.2							
B07A	**Winthrop**	**82.78**	**34**	⇑P		**P**	**12 04 06.8**	**-0.2**
	baz=83							
Q16A	**Castle Valley**	**82.80**	**45**	⇑P		**P**	**12 04 07.8**	**+0.4**
	baz=83							
T18A	**Mexican Hat**	**82.81**	**47**	⇓P		**P**	**12 04 07.8**	**+0.4**
	baz=83,SNR=32							
H11A	**Donnelly**	**82.85**	**38**	⇑P		**P**	**12 04 07.2**	**-0.2**
	baz=83,SNR=8.5							
R17A	**Hanksville Air**	**82.86**	**46**	⇓P		**P**	**12 04 07.2**	**-0.5**
	baz=83,SNR=6.7							
BMRM	**Bremner River**	**82.87**	**15**	*e*P		**P**	**12 04 06.5**	**-0.7**
BMRM				*e*pP		pP	12 05 10.0	+0.2
F10A	**Beach Ranch, E**	**82.87**	**37**	⇓P		**P**	**12 04 07.2**	**-0.4**
	baz=83,SNR=10.0							
K13A	**Stover Farm, H**	**82.87**	**41**	⇓P		**P**	**12 04 07.8**	**+0.1**
	baz=83							
OD2	**Odessa Site #2**	**82.89**	**35**	*e*P		**P**	**12 04 07.2**	**-0.4**
D09A	**Jones Farm, Ri**	**82.91**	**35**	⇑P		**P**	**12 04 07.3**	**-0.4**
	baz=83,SNR=8.4							
TMUT	**Trail Mountain**	**82.97**	**45**	*e*P		**P**	**12 04 09.5**	**+1.3**
S18A	**Hurst Farm, Bl**	**83.00**	**47**	⇑P		**P**	**12 04 07.0**	**-1.4**
	baz=83							
A07A	**Ashnola River,**	**83.01**	**33**	⇑P		**P**	**12 04 08.1**	**-0.1**
	baz=83,SNR=5.9							
PPLA	**Purkeypile**	**83.05**	**11**	*e*P		**P**	**12 04 06.7**	**-1.3**
MPU	**Maple Canyon**	**83.06**	**44**	*e*P		**P**	**12 04 08.9**	**+0.2**
MPU				*e*pP		pP	12 05 13.2	+1.9
L14A	**Malta**	**83.07**	**42**	⇑P		**P**	**12 04 08.7**	**0.0**
	baz=83							
G11A	**Walters Elk Ra**	**83.09**	**38**	⇓P		**P**	**12 04 08.4**	**-0.3**
	baz=83,SNR=13							
B08A	**Colville Reser**	**83.14**	**34**	⇓P		**P**	**12 04 08.5**	**-0.3**
	baz=83							
WHN	**Wuhan**	**83.14**	**305**	⇑P		**P**	**12 04 10.3**	**+1.0**
HLID	**Hailey**	**83.17**	**40**	⇓P		**P**	**12 04 09.0**	**-0.2**
	baz=83,SNR=11							
HLID	**Hailey**	**83.17**	**40**	*e*P		**P**	**12 04 09.8**	**+0.7**
	comp=Z,8.2nm,1.0s,mb4.5							
HLID				*e*pP		pP	12 05 11.4	-0.4
J13A	**Cove Ranch, Pi**	**83.22**	**40**	⇑P		**P**	**12 04 09.9**	**+0.4**
	baz=83,SNR=10							
HVU	**Hansel Valley**	**83.23**	**42**	*e*P		**P**	**12 04 09.9**	**+0.4**
E10A	**Myers Farm, Un**	**83.24**	**36**	⇑P		**P**	**12 04 09.8**	**+0.4**
	baz=83							
O16A	**Springville**	**83.24**	**44**	⇓P		**P**	**12 04 09.7**	**+0.1**
	baz=83							
T19A	**Beclabito**	**83.25**	**48**	⇑P		**P**	**12 04 10.3**	**+0.5**
	baz=83							
M15A	**Larsen Ranch,**	**83.27**	**42**	⇑P		**P**	**12 04 09.8**	**+0.1**
	baz=83							
SRU	**San Rafael**	**83.34**	**45**	*e*P		**P**	**12 04 10.7**	**+0.6**
SRU					pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6							
SRU	**San Rafael**	**83.34**	**45**	⇑P		**P**	**12 04 10.0**	**-0.1**
	baz=83,SNR=20							
SRU	**San Rafael**	**83.34**	**45**	*e*P		**P**	**12 04 10.7**	**+0.6**
	comp=Z,6.8nm,0.7s,mb4.6							
P17A	**Butcher Ranch,**	**83.37**	**45**	⇑P		**P**	**12 04 11.3**	**+1.1**
	baz=84							
K14A	**Jones Ranch, D**	**83.38**	**41**	⇑P		**P**	**12 04 10.4**	**+0.1**
	baz=84							
R18A	**Canyonlands Na**	**83.41**	**46**	⇓P		**P**	**12 04 10.4**	**-0.1**
	baz=84,SNR=7.2							
F11A	**Grangeville**	**83.44**	**37**	⇑P		**P**	**12 04 13.2**	**+2.7**
	baz=84							
H12A	**Diamond D Ranc**	**83.45**	**39**	⇓P		**P**	**12 04 10.7**	**+0.2**
	baz=84							
LAZ	**Ladron**	**83.47**	**51**	*e*P		**P**	**12 04 11.7**	**+0.8**
JLU	**Jordanelle**	**83.47**	**44**	*e*P		**P**	**12 04 11.6**	**+0.9**
JLU				*e*pP		pP	12 05 14.4	+0.9
D10A	**Wagner Farm, O**	**83.48**	**36**	⇑P		**P**	**12 04 10.2**	**-0.4**
	baz=84,SNR=6.3							
LENM	**Lemitar**	**83.48**	**51**	*e*P		**P**	**12 04 11.0**	**+0.1**
LENM				*e*pP		pP	12 05 14.0	+0.3
A08A	**Turner Farm, O**	**83.53**	**33**	⇑P		**P**	**12 04 10.5**	**-0.3**
	baz=84,SNR=9.8							
KTGM	**Kuala Trenggan**	**83.53**	**278**	⇑P		**P**	**12 04 13.2**	**+1.5**
I13A	**Wildhorse Cree**	**83.54**	**40**	⇓P		**P**	**12 04 10.9**	**-0.1**
	baz=84							
J14A	**Carey**	**83.59**	**40**	⇓P		**P**	**12 04 11.8**	**+0.6**
	baz=84,SNR=16							
L15A	**Malad City**	**83.60**	**42**	⇑P		**P**	**12 04 11.0**	**-0.4**
	baz=84,SNR=5.3			

baz=85,SNR=5.9
B11A Sandpoint 84.78 35 ⇓P P 12 04 17.8 +0.7
baz=85
MCMT McKenzie Canyo 84.80 39 eP P 12 04 17.6 +0.3
MCMT epP pP 12 05 20.2 0.0
H15A Lima 84.81 40 ⇓P P 12 04 17.7 +0.3
baz=85,SNR=5.6
N18A Larsen Ranch, 84.83 44 ⇓P P 12 04 17.8 +0.2
baz=85
O19A Miners Draw (B 84.86 45 ⇑P P 12 04 17.2 -0.6
baz=85
E13A Victor 84.88 38 ⇑P P 12 04 17.5 -0.2
baz=85
RRI2 Red Ridge 84.97 41 eP P 12 04 17.1 -1.0
RRI2 epP pP 12 05 20.9 -0.2
A11A Hall Mountain, 85.08 35 ⇓P P 12 04 18.6 0.0
baz=85
D13A Huson 85.08 37 ⇓P P 12 04 18.3 -0.4
baz=85,SNR=5.3
N19A John Jarvie Ra 85.12 44 ⇑P P 12 04 18.2 -0.8
baz=85
UBT Ubonrachathani 85.12 288 ⇑P P 12 04 21.4 +1.9
comp=Z,410nm,0.9s
I16A Newdale 85.13 41 ⇓P P 12 04 19.5 +0.5
baz=85,SNR=5.4
DLBC Dease Lake 85.18 22 eP P 12 04 18.4 -0.5
G15A Dillon 85.19 39 ⇓P P 12 04 19.1 -0.1
baz=85,SNR=6.0
B12A Libby 85.22 35 ⇑P P 12 04 19.5 +0.2
baz=85
DLMT Dillon 85.23 39 eP P 12 04 19.9 +0.4
comp=Z,5.3nm,0.6s,mb4.5
MSO Missoula 85.23 37 eP P 12 04 18.7 -0.7
comp=Z,11nm,1.8s,mb4.4
IPM Ipoh 85.25 276 ⇑P P 12 04 21.4 +1.1
REDW Red Top Meadow 85.27 41 eP P 12 04 19.9 +0.3
comp=Z,14nm,1.4s,mb4.6
REDW epP pP 12 05 22.3 -0.3
TPAW Teton Pass 85.27 41 eP P 12 04 20.1 +0.4
comp=Z,12nm,1.5s,mb4.5
TPAW epP pP 12 05 22.0 -0.7
E14A Clinton 85.27 38 ⇓P P 12 04 19.3 -0.3
baz=85,SNR=5.5
C13A Hot Springs 85.34 36 ⇑P P 12 04 19.9 0.0
baz=86
SNOW Snow King Moun 85.38 41 eP P 12 04 20.2 0.0
comp=Z,19nm,1.6s,mb4.7
SNOW epP pP 12 05 23.1 -0.1
A12A Yaak River Ran 85.45 35 ⇑P P 12 04 20.6 +0.2
baz=86
IMW Indian Meadow 85.48 41 eP P 12 04 21.3 +0.6
comp=Z,1.0nm,0.6s
IMW epP pP 12 05 21.5 -2.2
MOOW Moose Ponds 85.53 41 eP P 12 04 19.9 -1.1
comp=Z,1.8nm,1.1s
MOOW epP pP 12 05 23.9 -0.1
LOHW Long Hollow 85.55 41 eP P 12 04 21.2 +0.2
LOHW epP pP 12 05 23.6 -0.5
F15A Butte 85.55 39 ⇓P P 12 04 21.1 +0.2
baz=86
LRM Limekiln Ridge 85.56 39 eP P 12 04 21.0 -0.1
LRM epP pP 12 05 24.1 0.0
D14A Greenough 85.62 37 ⇓P P 12 04 21.1 -0.3
baz=86
COLA College 85.64 11 eP P 12 04 19.7 -1.3
COLA pmax pmax
comp=Z,57nm,0.8s,mb5.5
COLA College 85.64 11 eP P 12 04 19.7 -1.3
comp=Z,57nm,0.8s,mb5.5
QLMT Earthquake Lak 85.66 40 eP P 12 04 21.8 +0.2
QLMT epP pP 12 05 24.9 +0.3
CHMT Chamberlain Mo 85.68 37 eP P 12 04 20.6 -1.0
CHMT epP pP 12 05 24.3 -0.3
H16A Russell Place, 85.71 40 ⇑P P 12 04 21.9 +0.1
baz=86,SNR=5.9
IMA2 Indian Mountai 85.77 9 eP P 12 04 21.2 -0.4
E15A Deer Lodge 85.77 38 ⇓P P 12 04 22.1 +0.1
baz=86
B13A Whitefish 85.79 36 ⇓P P 12 04 22.2 +0.1
baz=86
BW06 Boulder Array 85.79 42 eP P 12 04 21.9 -0.3
BW06 epP pP 12 05 24.2 -1.1
PDAR Pinedale Array 85.79 42 P P 12 04 21.8 -0.5
comp=Z,1.4nm,0.7s,mb3.9,baz=213,slow=3.7,SNR=13
PDAR PKKP PKKPbc 12 22 23.0 -1.2
comp=Z,0.6nm,0.8s,baz=103,slow=3.2,SNR=4.4
C14A Swan Lake 85.86 37 ⇑P P 12 04 22.1 -0.3
baz=86
BOZ Bozeman (W) 85.96 39 eP P 12 04 23.3 +0.3
BOZ pmax pmax
comp=Z,7.0nm,1.4s,mb4.3
BOZ Bozeman (W) 85.96 39 eP P 12 04 23.3 +0.2
comp=Z,7.3nm,1.4s,mb4.3
BOZ epP pP 12 05 25.6 -0.5
BJT Baijiatuau 86.08 314 eP P 12 04 24.1 +0.4
BJT pmax pmax
comp=Z,19nm,0.8s
BJT Baijiatuau 86.08 314 eP P 12 04 24.1 +0.4
comp=Z,20nm,0.8s,mb5.0
BJI Beijing 86.08 314 P P 12 04 23.8 0.0
BJI AMB AMB
comp=Z,35nm,1.8s,mb4.9
BJI LR LR
comp=N,262nm,10.7s
BJI LR LR
comp=E,233nm,16.5s
BJI LR LR
comp=Z,122nm,37.0s
A13A Flathead Natio 86.13 35 ⇓P P 12 04 23.5 -0.2
baz=86
SDCO Great Sand Dun 86.17 48 eP P 12 04 24.4 +0.2
comp=Z,28nm,2.5s,mb4.7
SDCO epP pP 12 05 28.1 +0.8
D15A Lincoln 86.17 38 ⇑P P 12 04 23.9 -0.1
baz=86
WALA Waterton Lakes 86.47 35 eP P 12 04 25.4 0.0
comp=Z,121nm,2.6s,mb5.3
WALA epP pP 12 05 29.3 +0.7
SNG Songkhla 86.50 279 P P 12 04 28.0 +1.6
comp=Z,380nm,1.0s,mb6.2
C15A Salmond Ranch, 86.51 37 ⇓P P 12 04 25.4 -0.2
baz=87
A14A Double T Ranch 86.69 36 ⇓P P 12 04 26.6 +0.1
baz=87
DAWY Dawson 86.78 15 eP P 12 04 26.8 +0.2
DAWY epP pP 12 05 31.8 +2.1
B15A Bradely Ranch, 86.82 37 ⇓P P 12 04 26.1 -1.0
baz=87
C16A Fuhringer Ranc 87.02 37 ⇓P P 12 04 27.4 -0.7
baz=87
BILL Bilibino 87.19 353 ⇓iP P 12 04 27.6 -0.8
BILL eS S 12 14 27.0 -18
BILL pmax pmax
comp=Z,56nm,1.2s,mb5.3
BILL Bilibino 87.19 353 ⇓iP P 12 04 27.7 -0.7
COLD Coldfoot 87.38 10 eP P 12 04 29.1 -0.2
comp=Z,9.2nm,0.6s,mb4.8
C17A Wharram Farm, 87.50 38 ⇑P P 12 04 30.2 -0.1
baz=88
GYA Guiyang 87.69 299 ⇑iP P 12 04 33.0 +1.2
GYA AP pP 12 05 36.8 +1.6
GYA XP sP 12 06 03.4 +0.7
GYA PP PP 12 08 04.6 +3.0
GYA SKS 12 14 33.3
GYA S S 12 14 50.9 -0.4
GYA XS sS 12 16 42.3 -0.5
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,130nm,6.9s
HIA Hailar 88.37 324 eP P 12 04 34.6 +0.2
HIA pmax pmax
comp=Z,6.0nm,0.6s
HIA Hailar 88.37 324 eP P 12 04 34.6 +0.2
comp=Z,6.3nm,0.6s,mb4.6
XAN Xi'an 88.77 306 P P 12 04 37.4 +0.8
XAN AMB AMB
comp=Z,60nm,1.2s,mb5.3
XAN AMB AMB
comp=Z,87nm,7.1s
PLCA Paso Flores 88.98 133 P P 12 04 38.4 +0.7
comp=Z,1.0nm,0.7s,mb3.8,baz=220,slow=5.3,SNR=3.9
EDM Edmonton 89.04 32 eP P 12 04 36.5 -0.9
EDM epP pP 12 05 40.2 -0.8
SYO Syowa Base 89.31 192 ⇑eP P 12 04 36.9 -1.7
SYO Syowa Base 89.31 192 ⇑ePcP PcP 12 04 40.0 +0.2

HHC Hu-ho-hao-te 89.60 314 ⇓P P 12 04 41.3 +0.9
HHC AP pP 12 05 44.3 +0.4
HHC XP sP 12 06 12.0 +0.5
HHC PP PP 12 08 19.0 +2.5
HHC S S 12 15 07.4 -1.0
HHC XS sS 12 16 59.6 -0.8
HHC SS SS 12 21 13.8 +1.9
HHC AMB AMB
comp=Z,59nm,0.9s,mb5.4
HHC AMB AMB
comp=Z,321nm,7.7s
HHC LR LR
comp=N,159nm,17.2s
HHC LR LR
comp=E,166nm,17.3s
HHC LR LR
comp=Z,273nm,16.5s
NST Nakhon Sawan 89.69 287 P P 12 04 43.0 +1.6
comp=Z,67nm,1.0s,mb5.4
CLNS Chul'man 89.87 332 eP P 12 04 41.0 -0.2
CLNS pmax pmax
comp=E,27nm,1.3s
CLNS pmax pmax
comp=N,41nm,1.5s
CLNS pmax pmax
comp=Z,66nm,1.3s,mb5.3
NANT Nan 90.20 290 ⇓P P 12 04 43.8 +0.1
comp=Z,512nm,0.9s
KMI Kunming 90.53 296 P P 12 04 46.4 +1.3
KMI AP pP 12 05 48.0 -0.7
KMI XP sP 12 06 17.3 +1.1
KMI PP PP 12 08 26.9 +2.7
KMI SKS 12 14 50.8
KMI S S 12 15 16.3 -1.3
KMI XS sS 12 17 08.4 -1.4
KMI AMB AMB
comp=Z,39nm,1.5s,mb5.0
KMI AMB AMB
comp=Z,320nm,4.9s
KMI LR LR
comp=N,194nm,13.7s
KMI LR LR
comp=E,190nm,12.9s
KMI LR LR
comp=Z,157nm,13.4s
YAK Yakutsk 91.06 337 ⇑eP P 12 04 44.9 -1.7
YAK pmax pmax
comp=Z,19nm,0.7s,mb5.0
YAK Yakutsk 91.06 337 ⇑eP P 12 04 44.0 -2.6
BDT Bhumibol Dam 91.23 288 ⇑P P 12 04 49.5 +1.0
comp=Z,58nm,1.0s,mb5.4
CHRT Chiangrai 91.37 290 ⇓P P 12 04 50.0 +0.9
comp=Z,479nm,0.9s
CMAR Chiang Mai Arr 91.67 289 P P 12 04 51.8 +1.3
comp=Z,46nm,1.0s,mb5.4,baz=106,slow=2.9,SNR=180
CMAR Chiang Mai Arr 91.67 289 iP P 12 04 51.7 +1.2
CMAR pmax pmax
comp=Z,46nm,1.0s
CD2 Chengdu 91.67 302 ⇓iP P 12 04 51.3 +1.1
CD2 AP pP 12 05 53.3 -0.6
CD2 XP sP 12 06 19.3 -2.1
CD2 PP PP 12 08 36.3 +3.3
CD2 SKS 12 14 57.8
CD2 S S 12 15 27.3 -0.3
CD2 XS sS 12 17 16.3 -3.9
CD2 SS SS 12 21 44.9 +2.8
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CD2 AMB AMB
comp=Z,120nm,8.2s
DGMT Dagmar 91.77 39 eP P 12 04 50.5 +0.2
comp=Z,30nm,1.1s,mb5.1
DGMT epP pP 12 05 53.6 -0.3
LZH Lanzhou 93.39 307 eP P 12 04 59.5 +1.5
LZH AP pP 12 06 01.5 -0.2
LZH PP PP 12 08 50.0 +3.7
LZH SKS 12 15 07.3
LZH eS S 12 15 40.5 -2.1
LZH XS sS 12 17 31.6 -3.9
LZH SS SS 12 22 08.1 +1.7
LZH AMB AMB
comp=Z,40nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,130nm,4.0s
YKA Yellowknife Ar 93.60 24 P P 12 04 57.8 -0.5
comp=Z,4.9nm,0.8s,mb4.6,baz=234,slow=4.2,SNR=5.1
YKA Yellowknife Ar 93.60 24 P P 12 04 57.8 -0.5
ULN Ulaanbaatar 95.33 319 eP P 12 05 06.7 +0.1
ULN pmax pmax
comp=Z,11nm,1.3s,mb4.8
ULN Ulaanbaatar 95.33 319 eP P 12 05 06.7 +0.1
comp=Z,11nm,1.3s,mb4.8
BOD Bodaibo 95.46 330 eP P 12 05 05.5 -1.4
BOD pmax pmax
comp=Z,4.0nm,1.3s,mb4.4
SONM Songino Array 95.73 318 P P 12 05 08.3 -0.2
comp=Z,2.4nm,0.8s,mb4.3,baz=135,slow=3.2,SNR=15
SONM PP PP 12 09 01.2 -3.0
comp=Z,1.5nm,0.9s,baz=137,slow=6.6,SNR=4.9
TIXI Tiksi 97.32 345 eP P 12 05 12.8 -2.3
TIXI pmax pmax
comp=Z,15nm,1.2s,mb5.1
TIXI Tiksi 97.32 345 ⇑eP P 12 05 13.3 -1.8
GTA Gaotai 97.48 309 eP P 12 05 17.3 +0.8
GTA SS SS 12 23 12.4 +8.3
GTA AMB AMB
comp=Z,6.0nm,1.2s,mb4.7
GTA AMB AMB
comp=Z,146nm,5.4s
GTA LR LR
comp=N,96nm,13.2s
GTA LR LR
comp=E,106nm,16.5s
GTA LR LR
comp=Z,99nm,16.5s
ZAK Zakamensk 98.52 320 eP P 12 05 18.9 -2.0
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb4.3
ZAA0 Zalesovo Array 110.32 322 ePKPdf PKiKP 12 10 11.7 -1.2
ZALV Zalesovo Beam 110.32 322 PKiKP PKiKP 12 10 11.8 -1.0
comp=Z,6.3nm,0.6s,baz=141,slow=0.9,SNR=23
ZALV Zalesovo Beam 110.32 322 PKPdf PKiKP 12 10 11.8 -1.0
NVS Novosibirsk 111.29 322 ePKIKP PKiKP 12 10 12.8 -1.9
MKAR Makanchi Array 111.46 314 Pdiff Pdif 12 06 18.8 +0.2
comp=Z,0.4nm,0.6s,baz=224,slow=3.2,SNR=2.9
MKAR PKiKP PKiKP 12 10 14.2 -1.0
comp=Z,6.6nm,0.6s,baz=124,slow=0.3,SNR=45
TKM2 Tokmak 2 116.03 309 P PKPdf 12 10 23.8 -0.3
SNR=17
TKM2 Tokmak 2 116.03 309 ePKPdf PKPdf 12 10 23.7 -0.5
KBK Karagaybulak 116.50 309 P PKPdf 12 10 25.0 -0.1
SNR=8.9
CHMS Chumysh 116.65 309 P PKPdf 12 10 24.9 -0.4
SNR=5.3
USP Ospenovka 116.84 310 P PKPdf 12 10 25.3 -0.4
SNR=9.2
EKS2 Erkin-Say 117.36 309 P PKPdf 12 10 26.8 0.0
SNR=9.9
EKS2 Erkin-Say 117.36 309 ePKPdf PKPdf 12 10 26.6 -0.2
AML Almayashu 117.42 308 P PKPdf 12 10 27.4 +0.5
SNR=10
AML Almayashu 117.42 308 ePKPdf PKPdf 12 10 26.6 -0.2
BRVK Borovoye 119.02 321 ⇑ePKIKP PKPdf 12 10 28.7 -0.9
SVE Sverdlovsk 123.56 327 ePKIKP PKPdf 12 10 37.6 -0.6
SVE pmax pmax
comp=Z,27nm,0.9s
ARU Arti 124.77 327 iPKIKP PKPdf 12 10 39.5 -1.0
ARU 12 12 27.0
ARU 12 17 15.0
ARU Arti 124.77 327 ⇑ePKP PKPdf 12 10 39.3 -1.2
KEV Kevo 126.81 350 epkp PKPdf 12 10 42.8 -1.2
comp=Z,5.5nm,0.6s
ARCES ARCESS Array B 127.23 351 PKP PKPdf 12 10 44.2 -0.6
comp=Z,7.9nm,0.5s,baz=35,slow=4.4,SNR=3.9
ARCES ARCESS Array B 127.23 351 PKP PKPdf 12 10 44.2 -0.7
ARE0 ARCESS Array S 127.23 351 ePKPdf PKPdf 12 10 44.4 -0.4
APA Apatity 127.47 346 ⇓ePKIKP PKPdf 12 10 44.0 -1.4
APA pmax pmax
comp=Z,16nm,1.0s
BOSA Boshof 129.17 204 PKP PKPdf 12 10 50.2 +0.3
comp=Z,4.1nm,0.7s,baz=74,slow=4.4,SNR=10
JOF Joensuu 131.80 344 epkp PKPdf 12 10 52.7 -1.0
comp=Z,12nm,0.5s
KAF Kangasniemi 133.72 346 epkp PKPdf 12 10 57.0 -0.3
comp=Z,7.8nm,0.5s

OBN Obninsk 135.96 334 ⇑iPKIKP PKPdf 12 11 01.7 0.0
OBN e 12 13 39.5
OBN e 12 17 44.9
OBN ePS PS 12 24 07.3 -4.2
OBN pmax pmax
comp=Z,6.0nm,0.5s
OBN Obninsk 135.96 334 ⇑ePKP PKPdf 12 11 01.7 0.0
NB2 NORSAR Subarra 137.11 355 PKP PKPdf 12 10 54.2 -9.5
comp=Z,1.7nm,0.8s,baz=17,slow=2.6
KIV Kislovodsk 139.11 317 iPKIKP PKPdf 12 11 09.0 +1.1
KIV pmax pmax
comp=Z,9.0nm,0.7s
KIV Kislovodsk 139.11 317 iPKP PKPdf 12 11 09.1 +1.2
RDF Al-Radifah 139.41 293 eP PKPdf 12 11 00.8 -8.1
baz=293
RDF AMb AMB 12 11 11.7
comp=Z,43nm,0.7s,baz=293
MIB Mutribah 139.50 295 eP PKPdf 12 10 60.0 -9.1
baz=295
MIB AMb AMB 12 11 12.2
comp=Z,50nm,0.9s,baz=295
NAY Al-Naaiem 139.64 294 eP PKPdf 12 11 01.0 -8.3
baz=294
NAY AMb AMB 12 11 12.3
comp=Z,21nm,1.0s,baz=294
RST Umm Al-Ruwaisa 139.83 294 eP PKPdf 12 11 01.2 -8.5
baz=294
RST AMb AMB 12 11 12.6
comp=Z,65nm,1.0s,baz=294
SUW Suwalki 141.62 342 ePKP PKPdf 12 11 07.0 -5.1
SUW Suwalki 141.62 342 ePKP PKPdf 12 11 07.1 -5.0
ANN Anapa 141.96 321 iPKIKP PKPdf 12 11 16.2 +3.2
ANN pmax pmax
comp=Z,59nm,1.1s
AKASG Malin Array Be 142.22 334 PKhKP 12 11 07.9
comp=Z,4.5nm,0.4s,baz=40,slow=4.3,SNR=29
AKASG Malin Array Be 142.22 334 iPKHKP 12 11 07.9
AKASG pmax pmax
comp=Z,5.0nm,0.4s
KIEV Kiev 142.24 334 ePKHKP 12 11 07.9
KMBO Kilima Mbogo 142.43 242 PKP PKPdf 12 11 12.6 -2.3
comp=Z,9.4nm,0.9s,baz=59,slow=3.9,SNR=17
KMBO Kilima Mbogo 142.43 242 PKIKP PKPdf 12 11 12.6 -2.2
KMBO pmax pmax
comp=Z,9.0nm,0.9s
KMBO Kilima Mbogo 142.43 242 ePKPdf PKPdf 12 11 12.3 -2.5
MARD Mardin 143.10 308 iP PKPdf 12 11 12.1 -3.2
SIM Simferopol' 143.80 324 ePKIKP PKPdf 12 11 14.0 -2.3
SIM pmax pmax
comp=Z,24nm,1.0s
ELZG Elazig 143.96 311 iP PKPdf 12 11 16.4 -0.4
HPK Haverah Park 144.16 6 eP PKPdf 12 11 14.4 -2.2
BSEG Bad Segeberg 144.22 354 ePKPbc PKPdf 12 11 15.2 -1.5
MALT Malatya 144.43 311 ⇓iP PKPdf 12 11 14.6 -3.0
MALT Malatya 144.43 311 iP PKPdf 12 11 15.1 -2.5
LHO Holmfirth 144.55 7 ⇑eP PKPdf 12 11 16.0 -1.3
KVT Kavak 144.79 317 eP pPKPdf 12 12 17.6 -7.5
AKCD Akcadag 144.80 311 iP PKPdf 12 11 19.1 +0.9
KBI1 Birley Grange 144.87 6 ⇑eP PKPdf 12 11 16.9 -0.9
ATAB Bozova 144.87 310 iP PKPdf 12 11 18.6 +0.2
LVV L'vov 144.93 338 iPKIKP PKPdf 12 11 17.4 -0.7
SBD1 Bryn Du 145.00 8 ⇑eP PKPbc 12 11 17.7 -0.4
KWE Weaver Farm 145.07 7 ⇑eP PKPdf 12 11 18.1 -0.1
KIS Kishinev 145.17 330 κiPKHKP 12 11 13.0
KIS pmax pmax
comp=Z,300nm,1.2s
KIS pmax pmax
comp=Z,200nm,2.0s
KIS Kishinev 145.17 330 ⇓iPKIKP 12 11 13.0
KIS M 12 11 13.5
comp=Z,300nm,1.2s
RUE Ruedersdorf 145.19 350 ePKPdf PKPdf 12 11 18.4 -0.1
CWF Charnwood Fore 145.40 6 eP PKPdf 12 11 18.7 -0.1
HLM1 Long Mynd 145.43 8 ⇑eP PKPdf 12 11 19.0 +0.2
GZT Gaziantep 145.45 310 iP PKPdf 12 11 20.4 +1.1
KWP Kalwaria 145.55 339 ePKP PKPdf 12 11 19.9 +0.7
KWP Kalwaria 145.55 339 ⇓iP PKPdf 12 11 19.7 +0.6
KWP Kalwaria 145.55 339 ePKP PKPdf 12 11 19.9 +0.8
NRDL Niedersach Rie 145.67 354 ePKPbc PKPbc 12 11 20.2 +0.1
NRDL epPKPbc pPKPbc 12 12 29.7 +3.8
HTR Trewern Hill 145.81 9 ⇑eP PKPdf 12 11 19.8 +0.3
CTKT Corum 145.84 317 iP PKPdf 12 11 21.8 +1.8
MCH1 Michaelchurch 145.92 8 eP PKPdf 12 11 20.0 +0.3
HAE Alders End 145.94 8 ⇑eP PKPdf 12 11 20.8 +1.1
OJC Ojcow 145.95 342 ePKP PKPdf 12 11 19.8 0.0
OJC e 12 11 31.0
YOZ Yozgat 145.99 315 eP pPKPdf 12 12 21.9 -5.3
IBBN Ibbenburen 146.04 356 ePKPbc PKPbc 12 11 21.5 +0.3
TOS Tosya 146.11 318 eP pPKPdf 12 12 22.6 -4.8
CORM Corum 146.18 316 eP pPKPdf 12 12 22.5 -5.1
STHS Stebnicka Huta 146.22 340 ePKP PKPbc 12 11 22.5 +0.7
STHS e 12 11 38.4
STHS Stebnicka Huta 146.22 340 ePKP PKPbc 12 11 22.6 +0.8
STHS e 12 11 38.4
ANDN Andirin 146.24 311 iP PKPab 12 11 22.8 -0.7
BALT Daday 146.24 319 iP PKPdf 12 11 20.2 -0.4
BUR08 Bucovina Ar. S 146.26 335 ePKPbc PKPbc 12 11 22.5 +0.5
KSP Ksiaz 146.27 347 ePKPdf PKPdf 12 11 22.1 +1.7
KSP e 12 11 38.1
KSP Ksiaz 146.27 347 ePKP PKPdf 12 11 21.8 +1.5
KSP e 12 11 37.0
BURAR Bucovina Array 146.28 334 ⇓iP PKPdf 12 11 22.1 +1.7
BURAR Bucovina Array 146.28 334 ⇓P PKPdf 12 11 22.1 +1.7
CLZ Clausthal 146.28 353 ePKPbc PKPbc 12 11 22.3 +0.4
KOLS Kolonicke sedl 146.30 339 ePKP PKPbc 12 11 22.6 +0.5
ILGA Ilgaz 146.30 318 iP PKPab 12 11 23.5 -0.2
HGH Gray Hill 146.30 8 ⇑eP PKPdf 12 11 21.5 +1.2
WTSB Winterswijk 146.43 357 ePKP PKPdf 12 11 21.9 +1.3
comp=Z,3.6nm,1.0s
CLL Collm 146.45 350 ePKPbc PKPbc 12 11 22.6 +0.2
CLL epPKPbc pPKPbc 12 12 31.1 +2.7
CLL Collm 146.45 350 ⇓iPKPbc PKPbc 12 11 22.2 -0.2
comp=Z,87nm,0.9s
CLL iPKPbc pPKPbc 12 12 31.1 +2.7
TLCR 146.47 328 ⇓iP PKPdf 12 11 22.6 +1.8
TLCR 146.47 328 ⇓P PKPdf 12 11 22.6 +1.7
NIE Niedzica 146.51 341 ePKP PKPbc 12 11 23.3 +0.7
NIE e 12 11 38.5
NIE Niedzica 146.51 341 ePKP PKPbc 12 11 23.3 +0.7
NIE e 12 11 38.5
UZH Uzhgorod 146.55 338 ⇑iPKP2 PKPbc 12 11 22.2 -0.6
CRVS Cervenica-Dubn 146.60 340 ePKP PKPbc 12 11 22.9 0.0
CRVS e 12 11 38.2
CANT Cankiri 146.60 318 eP pPKPdf 12 12 23.3 -5.0
CDAG Cicekdag 146.63 316 iP PKPdf 12 11 22.4 +1.1
UPC Upice 146.65 347 ePKIKP PKPdf 12 11 21.2 +0.2
UPC e 12 11 23.2
UPC Upice 146.65 347 ePKPDF PKPdf 12 11 21.2 +0.2
UPC ⇑ePKP PKPbc 12 11 23.2 +0.2
UPC ex x 12 11 38.9
BRG Berggiesshubel 146.71 349 ePKIKP PKPdf 12 11 21.3 +0.2
BRG i 12 11 23.2
BRG Berggiesshubel 146.71 349 ePKPbc PKPbc 12 11 23.5 +0.3
BRG Berggiesshubel 146.71 349 ePKP PKPdf 12 11 21.3 +0.3
comp=Z,19nm,1.3s
BRG i 12 11 23.2
comp=Z,81nm,1.3s
BRG i 12 11 39.4
comp=Z,22nm,0.7s
BRG pPKP pPKPdf 12 12 32.1 +4.0
comp=Z,18nm,1.1s
DPC Dobruska-Polom 146.73 346 ePKIKP PKPdf 12 11 21.4 +0.3
DPC e 12 11 23.5
DPC Dobruska-Polom 146.73 346 ePKPDF PKPdf 12 11 21.4 +0.3
DPC ⇑ePKP PKPbc 12 11 23.5 +0.3
DPC ex x 12 11 39.2
OKC Ostrava-Krasne 146.75 344 ⇑ePKP PKPbc 12 11 23.5 +0.2
WOL Wolverton 146.81 7 eP PKPdf 12 11 22.9 +1.7
SAFT Safranbolu 146.84 319 eP pPKPdf 12 12 23.3 -5.3
PVCC Panska Ves 146.93 348 ePKPDF PKPdf 12 11 21.9 +0.5
PVCC ⇑ePKP PKPbc 12 11 24.1 +0.3
BUG Bochum--Univer 146.93 357 ePKPbc PKPbc 12 11 23.7 0.0
MORC Moravsky Berou 146.97 344 ePKIKP PKPdf 12 11 21.5 0.0
MORC e PKPbc 12 11 24.0 +0.1
VRI Vrincioaia 146.98 331 ⇑iP PKPbc 12 11 24.2 +0.1
VRI Vrincioaia 146.98 331 P PKPbc 12 11 24.3 +0.2
PLOR Plostina 147.03 331 PKP2 PKPbc 12 11 24.4 +0.2
PLOR Plostina 147.03 331 ⇑iP PKPbc 12 11 24.3 +0.1
BR131 Keskin Array S 147.06 316 ePKPdf PKPdf 12 11 21.5 -0.5
BR131 ePKPbc PKPbc 12 11 24.7 +0.2
YURE YUREGIR 147.07 310 iP PKPab 12 11 25.6 -1.3
KAMT Kaman 147.20 316 eP pPKPdf 12 12 21.8 -7.6

KECS	**Kecovo**	**147.28**	**340**	*e*PKP		PKPbc	12 11 25.3	+0.5
KECS				*e*			12 11 40.1	
MOX	**Moxa**	**147.31**	**352**	*e*PKP		PKPdf	12 11 22.1	0.0
	comp=Z,74nm,1.6s							
MOX				*e*			12 12 33.0	
MOX	**Moxa**	**147.31**	**352**	*e*PKPbc		PKPbc	12 11 25.0	+0.2
UBBA	**Unterbreizbach**	**147.33**	**354**	*e*PKPbc		PKPbc	12 11 25.1	+0.2
TANN	**Tannenbergstha**	**147.41**	**351**	*e*PKPbc		PKPbc	12 11 25.5	+0.4
PRU	**Pruhonice**	**147.45**	**348**	*e*PKIKP		PKPdf	12 11 22.4	+0.1
PRU				*e*			12 11 25.0	
PRU	**Pruhonice**	**147.45**	**348**	*e*PKPDF		PKPdf	12 11 22.4	+0.1
PRU				⇑*e*PKP		PKPbc	12 11 25.0	-0.2
PRU				*ex*		x	12 11 41.1	
ANTO	**Ankara**	**147.54**	**317**	*e*P		pPKPdf	12 12 21.0	-8.9
ANTO	**Ankara**	**147.54**	**317**	⇓*i*P		PKPbc	12 11 25.9	+0.1
ANTO	**Ankara**	**147.54**	**317**	⇓P		PKPbc	12 11 25.9	+0.1
NKC	**Novy Kostel**	**147.58**	**350**	*e*PKPDF		PKPdf	12 11 22.7	+0.2
NKC				⇑*e*PKP		PKPbc	12 11 25.9	+0.3
SGKT	**Sivrigoynuk**	**147.61**	**319**	*i* P		PKPbc	12 11 26.4	+0.4
MLR	**Muntele Rosu**	**147.62**	**331**	⇑*i*P		PKPbc	12 11 26.0	+0.2
MLR	**Muntele Rosu**	**147.62**	**331**	P		PKPbc	12 11 26.1	+0.3
BEBN	**Eben Emael**	**147.63**	**359**	PKPbc		PKPbc	12 11 25.5	-0.2
VRAC	**Vranov**	**147.63**	**345**	⇑*i*P		PKPbc	12 11 25.6	-0.1
VRAC	**Vranov**	**147.63**	**345**	P		PKPbc	12 11 26.1	+0.3
UCC	**Uccle**	**147.65**	**0**	PKPbc		PKPbc	12 11 25.5	-0.2
HGN	**Heimansgroeve**	**147.66**	**358**	*e*PKP		PKPdf	12 11 24.1	+1.5
	comp=Z,48nm,1.5s							
VYHS	**Vyhne**	**147.78**	**342**	*e*PKP		PKPbc	12 11 26.6	+0.5
VYHS				*e*			12 11 41.3	
MEM	**Membach**	**147.81**	**358**	PKPbc		PKPbc	12 11 26.2	+0.1
KOLL	**Kolacno**	**147.83**	**343**	*e*PKP		PKPbc	12 11 27.0	+0.7
KOLL				*e*			12 11 42.3	
MENF	**Mencas**	**147.83**	**3**	PKP		PKPbc	12 11 26.2	0.0
PSN	**Preselentsi**	**147.85**	**327**	P		PKPbc	12 11 26.8	+0.3
TREC	**Trest**	**147.91**	**346**	*e*PKPDF		PKPdf	12 11 23.1	0.0
TREC				⇑*e*PKP		PKPbc	12 11 26.5	+0.1
SNF	**Seneffe**	**147.94**	**0**	PKPbc		PKPbc	12 11 26.2	-0.3
DRGR		**147.94**	**336**	⇓*i*P		PKPbc	12 11 26.4	-0.2
DRGR		**147.94**	**336**	P		PKPbc	12 11 27.0	+0.4
PSZ	**Piszkesteto**	**147.97**	**340**	⇑*i*P		PKPbc	12 11 26.5	-0.1
PSZ	**Piszkesteto**	**147.97**	**340**	P		PKPbc	12 11 27.1	+0.5
BCLA	**Clavier**	**148.02**	**359**	PKPbc		PKPbc	12 11 26.7	0.0
BCLA				PKPab		PKPab	12 11 29.9	-0.2
VOIR		**148.06**	**332**	⇓*i*P		PKPbc	12 11 28.9	+1.9
VOIR		**148.06**	**332**	P		PKPbc	12 11 27.5	+0.5
ROTZ	**Rotzenmuhle**	**148.07**	**351**	*e*PKPbc		PKPbc	12 11 27.5	+0.6
ROTZ				*ep*PKPbc		pPKPbc	12 12 36.2	+3.0
MDU	**Mudurnu**	**148.19**	**319**	*e*P		pPKPdf	12 12 27.4	-3.5
BHL	**Bhannes**	**148.22**	**305**	⇓*e*P		PKPbc	12 11 27.9	+0.2
MEST	**Erdemli**	**148.25**	**311**	*i* P		PKPbc	12 11 28.0	+0.3
GRF	**Grafenberg Arr**	**148.29**	**352**	*e*PKPbc		PKPbc	12 11 28.0	+0.6
MODS	**Modra-Piesok**	**148.32**	**344**	*e*PKP		PKPbc	12 11 28.6	+1.0
DOU	**Dourbes**	**148.35**	**360**	PKPbc		PKPbc	12 11 27.8	+0.2
DOU				PKPab		PKPab	12 11 31.0	-0.5
KHC	**Kasperske Hory**	**148.45**	**349**	*e*PKIKP		PKPdf	12 11 24.0	0.0
KHC				*e*			12 11 27.9	
KHC	**Kasperske Hory**	**148.45**	**349**	*e*PKPDF		PKPdf	12 11 24.0	0.0
KHC				⇑*e*PKP		PKPbc	12 11 27.9	0.0
KHC				*ex*		x	12 11 44.5	
ABH	**Alteburg**	**148.47**	**356**	PKP		PKPbc	12 11 28.1	+0.2
ZST	**Bratislava**	**148.53**	**344**	*e*PKP		PKPbc	12 11 28.9	+0.8
WET	**Wettzell**	**148.57**	**349**	*e*PKPbc		PKPbc	12 11 28.5	+0.4
PRD	**Provadia**	**148.59**	**327**	P		PKPbc	12 11 28.6	+0.2
GULT	**Gulveren**	**148.60**	**320**	*e*P		pPKPdf	12 12 27.4	-4.3
TOD	**Tromm**	**148.65**	**355**	PKP2		PKPbc	12 11 28.1	-0.2
KIZT	**Kizilcal**	**148.67**	**316**	*e*P		pPKPdf	12 12 28.5	-3.2
RUP	**Ruppelstein**	**148.68**	**357**	PKP2		PKPbc	12 11 28.3	-0.1
GEC2	**GERESS Array S**	**148.70**	**348**	*e*PKPbc		PKPbc	12 11 28.9	+0.4
GEC2				*e*PKPab		PKPab	12 11 33.4	+0.4
GEC2				*ep*PKPbc		pPKPbc	12 12 37.7	+2.8
GERES	**GERESS Array B**	**148.70**	**348**	PKPbc		PKPbc	12 11 28.2	-0.3
	comp=Z,21nm,0.8s,baz=64,slow=3.1,SNR=66							
GERES	**GERESS Array B**	**148.70**	**348**	PKP2		PKPbc	12 11 28.2	-0.3
GERES				pmax		pmax		
	comp=Z,21nm,0.8s							
KDHN	**Kadinhani**	**148.70**	**316**	*i* P		PKPbc	12 11 27.8	-1.1
JLP	**Les Platons**	**148.74**	**8**	*e*P		PKPbc	12 11 28.1	-0.5
JVM	**Valle D.L. Mar**	**148.75**	**9**	*e*P		PKPbc	12 11 28.1	-0.5
WLF	**Walferdange**	**148.75**	**358**	PKPbc		PKPbc	12 11 29.1	+0.5
WLF	**Walferdange**	**148.75**	**358**	*e*PKPbc		PKPbc	12 11 29.5	+0.9
WLF				*e*PKPab		PKPab	12 11 33.5	+0.3
WLF				*ep*PKPbc		pPKPbc	12 12 38.0	+3.0
WLF	**Walferdange**	**148.75**	**358**	*e*PKPbc		PKPbc	12 11 28.5	-0.1
JSA	**Saint Aubin**	**148.78**	**8**	*e*P		PKPbc	12 11 27.9	-0.8
JQE	**Queens East**	**148.79**	**8**	*e*P		PKPbc	12 11 28.2	-0.5
KTD	**Kalmit**	**148.99**	**355**	PKP2		PKPbc	12 11 29.1	-0.1
GZR	**Gura Zlata**	**149.07**	**335**	⇓*i*P		PKPbc	12 11 29.6	+0.1
GZR	**Gura Zlata**	**149.07**	**335**	P		PKPbc	12 11 29.6	+0.1
CONA	**Conrad Observa**	**149.10**	**345**	⇑*i*P		PKPdf	12 11 25.1	0.0
	comp=Z,12nm,1.5s,SNR=22							
CSNA	**Conrad Observa**	**149.10**	**345**	⇑*i*P		PKPdf	12 11 25.2	+0.1
	comp=Z,9.0nm,1.2s							
ADVT	**Abdulwahap**	**149.12**	**321**	*e*P		pPKPdf	12 12 29.3	-3.1
YLV	**Yalova**	**149.25**	**321**	*e*P		pPKPdf	12 12 28.8	-3.8
ZIMR		**149.28**	**330**	PKP2		PKPbc	12 11 30.6	+0.5
SZH	**Strazhica**	**149.29**	**329**	P		PKPbc	12 11 30.0	-0.1
BZS	**Buzias**	**149.34**	**336**	⇓*i*P		PKPbc	12 11 29.7	-0.5
BZS	**Buzias**	**149.34**	**336**	P		PKPbc	12 11 30.2	0.0
LANF	**Langenberg**	**149.35**	**356**	PKP		PKPbc	12 11 30.1	0.0
FLN	**La Foliniere**	**149.41**	**7**	*e*PKIKP		PKPdf	12 11 25.4	-0.1
	comp=Z,12nm,0.6s							
STU	**Stuttgart**	**149.44**	**354**	*e*PKPbc		PKPbc	12 11 30.7	+0.4
ROSF	**Rostrenen**	**149.44**	**10**	*e*PKIKP		PKPdf	12 11 25.2	-0.4
JMB	**Yambol**	**149.54**	**327**	P		PKPbc	12 11 31.4	+0.6
MOA	**Molln**	**149.54**	**347**	⇑*i*P		PKPdf	12 11 25.6	-0.1
	comp=Z,3.0nm,0.8s,SNR=9.7							
CSS	**Prodhromos**	**149.56**	**309**	*e*P		PKPbc	12 11 31.0	-0.1
CSS	**Prodhromos**	**149.56**	**309**	*e*PKPbc		PKPbc	12 11 31.1	+0.1
CSS				*e*PKPab		PKPab	12 11 37.0	-0.1
LDF	**La Druitiere**	**149.62**	**6**	*e*PKIKP		PKPdf	12 11 25.7	-0.2
	comp=Z,15nm,0.7s							
SGMF	**Saint Gilles**	**149.64**	**9**	*e*PKIKP		PKPdf	12 11 25.6	-0.3
	comp=Z,34nm,1.1s							
ULDT	**Uludag**	**149.66**	**321**	*i* P		PKPbc	12 11 31.6	+0.5
GRR	**Gorron**	**149.74**	**7**	*e*PKIKP		PKPdf	12 11 26.0	-0.1
STR	**Strasbourg**	**149.75**	**356**	PKP		PKPbc	12 11 31.6	+0.5
FUR	**Furstenfeldbru**	**149.78**	**351**	*e*PKPbc		PKPbc	12 11 31.5	+0.3
FUR				*e*PKPab		PKPab	12 11 37.4	0.0
FUR				*ep*PKPbc		pPKPbc	12 12 40.5	+2.9
ARSA	**Arzberg**	**149.81**	**345**	⇑*i*P		PKPdf	12 11 25.7	-0.5
	comp=Z,4.5nm,1.3s,SNR=7.7							
QUIF	**Quistinic**	**149.87**	**10**	*e*PKIKP		PKPdf	12 11 26.1	-0.2
PKSM	**Moragy**	**149.88**	**340**	⇑*i*P		PKPbc	12 11 31.5	0.0
PKSM	**Moragy**	**149.88**	**340**	P		PKPbc	12 11 31.2	-0.3
RJOB	**Jochberg**	**149.94**	**349**	*e*PKPbc		PKPbc	12 11 31.7	+0.1
RJOB				*e*PKPab		PKPab	12 11 38.7	+0.6
BFO	**Black Forest**	**149.96**	**355**	*e*PKPbc		PKPbc	12 11 31.8	+0.2
BFO				*e*PKPab		PKPab	12 11 37.8	-0.3
BFO				*ep*PKPbc		pPKPbc	12 12 40.6	+2.5
ISP	**Isparta**	**150.14**	**316**	*e*PKHKP		PKPbc	12 11 31.8	-0.6
ISP				*e*			12 11 38.0	
SPAK	**Spaichingen-Ko**	**150.14**	**354**	PKP		PKPbc	12 11 31.7	-0.3
ECH	**Echery**	**150.15**	**356**	PKP		PKPbc	12 11 31.6	-0.5
ECH	**Echery**	**150.15**	**356**	*e*PKPbc		PKPbc	12 11 31.5	-0.5
ECH				*e*PKPab		PKPab	12 11 38.1	-0.8
THEF	**They Montfort**	**150.20**	**358**	PKP		PKPbc	12 11 32.0	-0.2
DIM	**Dimitrovgrad**	**150.38**	**327**	P		PKPbc	12 11 33.1	+0.3
FELD	**Feldberg im Sc**	**150.43**	**355**	PKP		PKPbc	12 11 32.2	-0.5
KBA	**Koelnbreinsper**	**150.46**	**348**	⇑*i*P		PKPdf	12 11 26.4	-0.9
	comp=Z,7.1nm,1.2s,SNR=8.8							
SOKA	**Soboth**	**150.47**	**345**	⇑*i*P		PKPdf	12 11 26.9	-0.4
	comp=Z,6.9nm,1.1s							
PERS	**Pernice**	**150.49**	**345**	*i* PKPdf		PKPdf	12 11 26.1	-1.2
PERS				*i* PKPbc		PKPbc	12 11 32.1	-0.8
PERS				*i* PKPab		PKPab	12 11 40.1	-0.3
PERS				*i* pPKPbc		pPKPbc	12 12 41.7	+2.3
RETA	**Reutte**	**150.51**	**351**	⇑*i*P		PKPdf	12 11 27.1	-0.2
	comp=Z,1.2nm,0.5s							
MOF	**Molkenrain**	**150.52**	**356**	PKP		PKPbc	12 11 32.3	-0.6
WATA	**Walderalm**	**150.54**	**350**	⇑*i*P		PKPdf	12 11 26.9	-0.5
	comp=Z,6.6nm,1.2s							
WTTA	**Wattenberg**	**150.60**	**350**	⇑*i*P		PKPdf	12 11 27.6	+0.2
	comp=Z,12nm,1.3s,SNR=24							
WTTA				⇑*i*P			12 11 33.0	
	comp=Z,78nm,0.5s							
WTTA				⇓*i*P			12 11 39.3	
	comp=Z,41nm,0.8s							
MOTA	**Moosalm**	**150.60**	**351**	⇑*i*P		PKPdf	12 11 27.3	-0.2
	comp=Z,11nm,1.2s							
KDZ	**Kurdzhali**	**150.73**	**327**	P		PKPbc	12 11 33.1	-0.5
DAVA	**Damuels**	**150.83**	**353**	⇑*i*P		PKPdf	12 11 28.1	+0.3
	comp=Z,3.8nm,0.8s,SNR=18							
MYKA	**Terra Mystica**	**150.83**	**347**	⇑*i*P		PKPdf	12 11 27.2	-0.6
	comp=Z,4.8nm,0.8s							
ALN	**Alexandroupoli**	**150.93**	**325**	*e*P		PKPbc	12 11 33.5	-0.6
ABTA	**Abfaltersbach**	**150.94**	**349**	⇓*i*P		PKPdf	12 11 27.6	-0.4
	comp=Z,11nm,0.8s,SNR=15							
FETA	**Feichten**	**150.97**	**351**	⇑*i*P		PKPdf	12 11 28.3	+0.2
	comp=Z,11nm,1.0s,SNR=11							
VTS	**Vitosha**	**151.11**	**331**	⇓*i*P		PKPbc	12 11 34.5	0.0
VTS	**Vitosha**	**151.11**	**331**	P		PKPbc	12 11 34.7	+0.2
LOR	**Lormes**	**151.17**	**1**	*e*PKIKP		PKPdf	12 11 28.5	+0.2
DNZL	**Cakiroluk**	**151.18**	**317**	*i* P		PKPbc	12 11 35.2	+0.4
DIVS	**Divibare**	**151.24**	**336**	*e*P		PKPbc	12 11 35.0	+0.3
VOY	**Vojsko**	**151.34**	**346**	*e*PKPbc		PKPbc	12 11 33.7	-1.2
VOY				*e*PKPab		PKPab	12 11 42.7	-1.3
VOY				*e*			12 11 49.7	
SSF	**Saint Saulge**	**151.37**	**1**	*e*PKIKP		PKPdf	12 11 28.8	+0.2
	comp=Z,25nm,1.1s							
JAVS	**Javornik**	**151.44**	**346**	*i* PKPbc		PKPbc	12 11 34.0	-1.1
JAVS				*i* PKPab		PKPab	12 11 43.4	-1.0
JAVS				*i* pPKPbc		pPKPbc	12 12 43.2	+1.5
BOJS	**Bojanci**	**151.51**	**344**	*i* PKPdf		PKPdf	12 11 28.3	-0.6
BOJS				*i* PKPbc		PKPbc	12 11 35.2	-0.1
BOJS				*i* PKPab		PKPab	12 11 50.9	+6.2
BOJS				*i* pPKPbc		pPKPbc	12 12 43.7	+1.8
MFF	**Saint Martin d**	**151.58**	**7**	*e*PKIKP		PKPdf	12 11 29.1	+0.1
AKAS	**Kas**	**151.61**	**314**	*i* P		PKPbc	12 11 35.0	-0.9
MMB	**Musomiste**	**151.63**	**329**	P		PKPbc	12 11 34.9	-0.8
AVF	**Avril sur Loir**	**151.64**	**2**	*e*PKIKP		PKPdf	12 11 29.0	0.0
TUE	**Stuetta**	**151.69**	**353**	*e*PKPdf		PKPdf	12 11 29.3	+0.1
TUE				*e*PKPbc		PKPbc	12 11 35.5	-0.1
TUE				*e*PKPab		PKPab	12 11 45.2	-0.2
KKB	**Krupnik**	**151.73**	**330**	P		PKPbc	12 11 35.6	-0.3
SMF	**Signal de Mont**	**151.80**	**1**	*e*PKIKP		PKPdf	12 11 29.3	0.0
BGF	**Bois d'Agland**	**151.85**	**2**	*e*PKIKP		PKPdf	12 11 29.5	+0.1
KDAG	**Bornova**	**151.88**	**320**	*i* P		PKPdf	12 11 29.2	-0.5
TURN	**Turunc**	**151.94**	**316**	*i* P		PKPbc	12 11 37.1	+0.5
AYDN	**Tasoluk**	**151.95**	**318**	*i* P		PKPbc	12 11 36.7	+0.1
TCF	**Toulx Ste Croi**	**152.09**	**3**	*e*PKIKP		PKPdf	12 11 29.8	+0.1
AGO	**Saint Agoulin**	**152.37**	**2**	*e*PKIKP		PKPdf	12 11 37.1	-0.1
VAY	**Valandovo**	**152.40**	**330**	⇑*i*PKP		PKPbc	12 11 36.2	-1.2
VAY				*i* PKP		PKPab	12 11 47.8	-0.8
SKO	**Skopje**	**152.41**	**332**	*i* PKP		PKPbc	12 11 37.6	+0.2
SKO				*i* PKP		PKPab	12 11 48.9	+0.3
PLDF	**La Plantade**	**152.47**	**1**	PKP		PKPbc	12 11 37.7	+0.3
PYM	**Petit Puy Mans**	**152.67**	**2**	PKP		PKPbc	12 11 38.2	+0.3
KRUS	**Krusevo**	**152.97**	**332**	*i* PKP		PKPdf	12 11 30.7	-0.5
KRUS				⇑*i*PKP		PKPbc	12 11 38.7	0.0
KRUS				*i* PKP		PKPab	12 11 51.0	0.0
RJF	**Les Rejaudoux**	**153.03**	**5**	*e*PKIKP		PKPdf	12 11 31.2	+0.1
	comp=Z,20nm,1.1s							
SSB	**Saint Sauveur**	**153.17**	**360**	PKP		PKPbc	12 11 38.8	-0.2
SSB	**Saint Sauveur**	**153.17**	**360**	*e*PKPbc		PKPbc	12 11 39.2	+0.2
SSB				*e*PKPab		PKPab	12 11 51.1	-0.6
LBL	**Lubilhac**	**153.19**	**2**	PKP		PKPbc	12 11 39.6	+0.6
BNI	**Bardonecchia**	**153.34**	**357**	*e*PKIKP		PKPbc	12 11 40.3	+0.9
LIT	**Litokhoron**	**153.37**	**328**	*e*P		PKPbc	12 11 38.3	+1.3
FNA	**Florina**	**153.38**	**331**	*e*P		PKPbc	12 11 39.0	-0.6
OHR	**Ohrid**	**153.38**	**332**	⇑*i*PKP		PKPbc	12 11 38.8	-0.8
OHR				*i* PKP		PKPab	12 11 51.7	-1.1
CAF	**Calviac**	**153.44**	**4**	*e*PKIKP		PKPdf	12 11 31.2	-0.6
	comp=Z,17nm,1.1s							
ORIF	**Oris-en-Rattie**	**153.50**	**358**	*e*PKIKP		PKPdf	12 11 32.2	+0.4
XOR	**Xorichti**	**153.55**	**326**	*e*P		PKPbc	12 11 38.7	-1.3
VIVF	**Saint-Julien-l**	**153.59**	**360**	*e*PKIKP		PKPdf	12 11 31.5	-0.5
	comp=Z,6.2nm,0.8s							
MBDF	**Montbardon**	**153.65**	**356**	*e*PKIKP		PKPdf	12 11 31.6	-0.5
EARI	**Arriondas**	**153.82**	**16**	PKP		PKPdf	12 11 32.5	+0.2
MEV	**Metsovon**	**154.23**	**329**	*e*P		PKPbc	12 11 42.2	+0.8
TOUF	**Mont Tournerai**	**154.33**	**355**	PKP		PKPbc	12 11 42.0	+0.5
SAOF	**Saorge**	**154.33**	**355**	PKP		PKPbc	12 11 41.3	-0.2
AUTN	**L'Aution**	**154.34**	**355**	PKP		PKPbc	12 11 41.4	-0.1
LASF	**Ste Croix**	**154.37**	**1**	*e*PKIKP		PKPdf	12 11 32.2	-0.9
	comp=Z,26nm,1.3s							
MVIF	**Mont Vial**	**154.46**	**356**	PKP		PKPbc	12 11 41.8	0.0
SMRF	**Simiane la Rot**	**154.46**	**358**	*e*PKIKP		PKPdf	12 11 32.8	-0.4
SBF	**Sospel**	**154.47**	**355**	*e*PKIKP		PKPdf	12 11 33.2	0.0
CALN	**Calern**	**154.62**	**356**	PKP		PKPbc	12 11 42.5	+0.4
FRF	**La Foret Royal**	**154.82**	**356**	*e*PKIKP		PKPdf	12 11 33.7	0.0
SJPF	**Ste Jean**	**154.86**	**10**	*e*PKIKP		PKPdf	12 11 33.4	-0.4
MTLF	**Montolieu**	**155.03**	**4**	*e*PKIKP		PKPdf	12 11 33.4	-0.6
LMR	**La Mourre**	**155.06**	**357**	*e*PKIKP		PKPdf	12 11 33.9	-0.2
EPF	**Esparros**	**155.16**	**7**	*e*PKIKP		PKPdf	12 11 33.5	-0.7
ETSF	**Etsaut**	**155.17**	**9**	*e*PKIKP		PKPdf	12 11 33.7	-0.5
PGF	**Pioggiola**	**155.60**	**352**	*e*PKIKP		PKPdf	12 11 34.7	-0.1
CUC	**Castrocucco**	**156.35**	**338**	*e*PKPab		PKPab	12 12 03.9	-1.6
GUD	**Guadarrama**	**156.58**	**17**	PKIKP		PKPdf	12 11 37.0	+0.8
TIP	**Timpagrande**	**156.70**	**335**	*e*PKPdf		PKPdf	12 11 36.1	-0.2
EVO	**Evora**	**157.13**	**26**	*e*PKIKP		PKPdf	12 11 36.5	-0.4
	comp=Z,24nm,1.4s							
ESDC	**Sonseca Array**	**157.53**	**17**	PKP		PKPdf	12 11 37.4	0.0
	comp=Z,1.0nm,0.7s,baz=342,slow=2.8,SNR=6.7							
ESDC				PKPab		PKPab	12 12 10.6	0.0
	comp=Z,7.5nm,0.8s,baz=335,slow=3.6,SNR=23							
KEST	**Kesra**	**162.19**	**347**	PKP		PKPdf	12 11 42.2	-0.5
	comp=Z,0.7nm,0.7s,baz=319,slow=11,SNR=2.5							
KEST				PKPab		PKPab	12 12 30.7	-0.2
	comp=Z,4.1nm,1.0s,baz=220,slow=2.2,SNR=6.2							
DBIC	**Dimbokro**	**165.21**	**141**	PKP		PKPdf	12 11 43.9	-2.2
	comp=Z,5.0nm,1.0s,baz=234,slow=2.0,SNR=4.3							
DBIC	**Dimbokro**	**165.21**	**141**	PKP		PKPdf	12 11 43.9	-2.3
TORD	**Torodi Ar. Bea**	**174.14**	**152**	PKP		PKPdf	12 11 50.1	-1.2
	comp=Z,4.3nm,1.1s,baz=350,slow=1.1,SNR=15							

TAP 17 12:19:27.9, 2189N×12052E, h41km, ML3.6, 1C-4D, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HEN	**Hengchun**	**0.24**	**60**	⇓*i*P		Pn	12 19 36.2	+0.6
	baz=60							
HEN				*e*S		Sn	12 19 42.6	+1.7
	baz=60							
TWK1	**Hengchun**	**0.28**	**78**	⇓*i*P		Pn	12 19 36.4	+0.5
	baz=78							
TWK1				*e*S		Sn	12 19 42.8	+1.3
	baz=78							
TSEB	**Hengchuen, Pin**	**0.36**	**88**	*i* P		Pn	12 19 37.7	+0.8
	baz=78							
TSEB				S		Sn	12 19 44.7	+1.6
	baz=78							
TWP	**Hsiaoliuchiu**	**0.48**	**343**	*e*P		Pn	12 19 39.2	+0.9
	baz=343							
TWP				*e*S		Sn	12 19 48.6	+2.8
	baz=343							
SCZT	**Fangliau**	**0.49**	**11**	⇓*i*P		Pn	12 19 39.5	+1.0
	baz=11							
SCZT				*i* S		Sn	12 19 47.7	+1.6
	baz=11							
EAST	**Anshuo**	**0.58**	**32**	⇓*i*P		Pn	12 19 40.9	+1.1
	baz=32							
EAST				*i* S		Sn	12 19 49.6	+1.4
	baz=32							
TAW	**Tawu**	**0.59**	**37**	*i* P		Pn	12 19 41.0	+1.1
	baz=37							
TAW				*i* S		Sn	12 19 49.8	+1.5
	baz=37							
ECL	**Taimali**	**0.82**	**30**	P		Pn	12 19 44.1	+1.2
	baz=40							
ECL				*e*S		Sn	12 19 55.9	+2.1
	baz=40							
SSD	**Sandimen**	**0.86**	**7**	P		Pn	12 19 44.5	+0.9
	baz=18							
SSD				*e*S		Sn	12 19 55.9	+0.9
	baz=18							
TWM1	**Shoushan**	**0.94**	**355**	*e*P		Pn	12 19 45.4	+0.8
	baz=354							
LAY	**Lan-yu**	**0.97**	**81**	P		Pn	12 19 45.2	+0.1
	baz=81							
LAY				*e*S		Sn	12 19 58.1	+0.4
	baz=81							
TWG	**Pinlang**	**1.06**	**29**	P		Pn	12 19 47.3	+1.0
	baz=39							
TWG				S		Sn	12 20 00.8	+0.9
	baz=39							
SGST	**Jiashian**	**1.19**	**3**	*e*P		Pn	12 19 49.3	+1.3
	baz=3.0							
STYT	**Tauyuan**	**1.29**	**10**	*e*P		Pn	12 19 50.6	+1.2
	baz=10.0							
STYT				*e*S		Sn	12 20 07.0	+1.5
	baz=10.0							
CHN1	**Nanshi**	**1.29**	**1**	*e*P		Pn	12 19 50.6	+1.2
	baz=360							
WTP	**Ta-pu**	**1.36**	**4**	*e*P		Pn	12 19 51.3	+1.0
	baz=3.0							
TWK	**Hsinying**	**1.38**	**359**	*e*P		Pn	12 19 51.6	+1.1
	baz=358							
ELDTW	**Lidau**	**1.38**	**20**	*e*P		Pn	12 19 52.3	+1.7
	baz=7.0							
CHKT	**Chengkung**	**1.44**	**33**	*e*P		Pn	12 19 52.6	+1.1
	baz=33							
CHKT				*e*S		Sn	12 20 11.4	+2.2
	baz=33							
CHN4	**Tsaushan**	**1.46**	**3**	*e*P		Pn	12 19 51.1	-0.6
	baz=2.0							
TWF1	**Yuli**	**1.63**	**26**	*e*P		Pn	12 19 55.7	+1.6
	baz=39							
TWF1				*e*S		Sn	12 20 16.2	+2.4
	baz=39							
ALS	**Alishan**	**1.64**	**9**	*e*P		Pn	12 19 55.8	+1.6
	baz=356							
YUS	**Yu-Shan**	**1.65**	**14**	⇑P		Pn	12 19 56.5	+2.2
	baz=1.0							
CHN5	**Tsauling**	**1.71**	**5**	*e*P		Pn	12 19 56.1	+0.9
	baz=355							
CHN5				*e*S		Sn	12 20 16.8	+1.0
	baz=355							
EHY	**Hungye**	**1.78**	**25**	*e*P		Pn	12 19 57.8	+1.8
	baz=24							
WGK	**Gukeng**	**1.79**	**1**	*e*P		Pn	12 19 57.9	+1.6
	baz=2.0							
WGK				*e*S		Sn	12 20 19.1	+1.3
	baz=2.0							
SMLT	**Sun Moon Lake**	**2.02**	**10**	*e*P		Pn	12 20 00.8	+1

comp=Z,3.0nm,0.7s
CN2 Changchun 34.40 337 *e*P **P 12 27 08.9 +5.5**
KSM Kuching 34.69 254 ⇓P **P 12 27 04.8 -1.4**
KSM Kuching 34.69 254 *e*P **P 12 27 04.5 -1.8**
FITZ Fitzroy Crossi 35.48 210 *e*P **P 12 27 12.4 -0.5**
comp=Z,24nm,0.9s,mb4.8
FITZ Fitzroy Crossi 35.48 210 P **P 12 27 12.3 -0.6**
comp=Z,11nm,0.7s,mb4.6,baz=31,slow=14,SNR=11
FITZ PcP PcP 12 29 40.4 +0.7
comp=Z,4.5nm,0.7s,baz=99,slow=3.9,SNR=3.8
BJT Baijiatuau 36.07 323 *e*P **P 12 27 17.8 +0.1**
BJT pmax pmax
comp=Z,18nm,0.6s
BJT Baijiatuau 36.07 323 *e*P **P 12 27 17.8 +0.1**
comp=Z,18nm,0.6s,mb4.9
BJI Beijing 36.08 323 P **P 12 27 17.4 -0.4**
BJI AMB AMB
comp=Z,63nm,1.2s,mb5.1
GYA Guiyang 36.96 297⇑*i*P **P 12 27 26.0 +0.5**
GYA AP pP 12 27 54.9 +1.0
GYA XP sP 12 28 08.4 -0.2
GYA PP PP 12 28 55.3 +3.0
GYA PCP PcP 12 29 45.0 +0.9
GYA S **S 12 33 01.3 0.0**
GYA SCP ScP 12 33 20.8 +1.5
GYA PCS PcS 12 33 34.6 +2.1
GYA XS sS 12 33 49.8 -1.0
GYA SCS ScS 12 37 26.5 -0.5
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,120nm,4.9s
ASAR Alice Springs 37.55 194 P **P 12 27 30.6 +0.2**
comp=Z,27nm,0.6s,mb5.0,baz=18,slow=12,SNR=32
ASAR PcP PcP 12 29 46.4 +0.6
comp=Z,3.3nm,0.6s,baz=31,slow=2.5,SNR=5.4
ASAR Alice Springs 37.55 194 P **P 12 27 30.6 +0.2**
ASAR 12 29 46.4
ASAR pmax pmax
comp=Z,27nm,0.6s
ASAR pmax pmax
comp=Z,3.0nm,0.6s
XAN Xi'an 37.68 310 P **P 12 27 30.5 -1.0**
XAN AMB AMB
comp=Z,28nm,0.8s,mb4.9
XAN AMB AMB
comp=Z,111nm,4.5s
EIDS Eidsvold 38.81 169 *e*P **P 12 27 37.8 -3.1**
HHC Hu-ho-hao-te 39.34 321 ⇓P **P 12 27 45.6 +0.4**
HHC AP pP 12 28 12.8 -1.1
HHC XP sP 12 28 27.5 -1.0
HHC PP PP 12 29 22.3 +4.2
HHC PCP PcP 12 29 52.3 +1.1
HHC SCP ScP 12 33 28.5 +0.5
HHC S **S 12 33 37.3 +0.5**
HHC PCS PcS 12 33 40.9 -0.2
HHC XS sS 12 34 25.4 -1.3
HHC SS SS 12 36 29.0 -6.8
HHC SCS ScS 12 37 38.8 -1.4
HHC AMB AMB
comp=Z,25nm,1.1s,mb4.8
HHC AMB AMB
comp=Z,94nm,5.0s
HHC LR LR
comp=N,115nm,15.1s
HHC LR LR
comp=E,134nm,14.2s
HHC LR LR
comp=Z,163nm,14.8s
KMI Kunming 40.14 294 P **P 12 27 53.0 +0.9**
KMI AP pP 12 28 19.8 -1.1
KMI XP sP 12 28 34.9 -0.6
KMI PP PP 12 29 30.5 +3.5
KMI S **S 12 33 48.5 -0.8**
KMI XS sS 12 34 38.6 -0.6
KMI SS SS 12 36 44.9 -7.3
KMI AMB AMB
comp=Z,31nm,0.9s,mb4.9
KMI AMB AMB
comp=Z,143nm,3.8s
KMI LR LR
comp=N,251nm,10.0s
KMI LR LR
comp=E,145nm,13.3s
KMI LR LR
comp=Z,115nm,14.4s
BTO Baotou 40.17 320 *e*P **P 12 27 52.0 0.0**
KTGM Kuala Trenggan 40.42 263 ⇑P **P 12 27 55.2 +0.7**
CD2 Chengdu 40.62 303 ⇓*i*P **P 12 27 55.8 -0.1**
CD2 AP pP 12 28 24.1 -0.6
CD2 XP sP 12 28 38.8 -0.5
CD2 PP PP 12 29 34.8 +2.7
CD2 S **S 12 33 55.6 -0.6**
CD2 XS sS 12 34 45.1 -1.1
CD2 SS SS 12 36 55.4 -6.1
CD2 AMB AMB
comp=Z,190nm,0.9s,mb5.7
CD2 AMB AMB
comp=Z,220nm,7.2s
MYKOM Kota Tinggi 40.68 257 ⇓P **P 12 27 57.0 +0.3**
MBWA Marble Bar 41.10 215 *e*P **P 12 27 59.0 -0.8**
comp=Z,14nm,0.7s,mb4.7
KGM Kluang 41.12 258 ⇓P **P 12 28 00.6 +0.3**
HIA Hailar 41.13 336 *e*P **P 12 28 00.3 +0.5**
HIA pmax pmax
comp=Z,39nm,1.3s
HIA Hailar 41.13 336 *e*P **P 12 28 00.3 +0.4**
comp=Z,39nm,1.3s,mb4.9
NANT Nan 41.40 284 ⇑P **P 12 28 02.0 -0.5**
comp=Z,175nm,0.9s,mb5.7
DZM Mont Dzumac 41.50 147 *e*P **P 12 28 04.2 +1.1**
PETK Petropavlovsk- 41.66 13 LR LR 12 44 30.6
comp=Z,48nm,18.3s,baz=197,slow=35
CHRT Chiangrai 42.31 285 ⇓P **P 12 28 10.0 +0.2**
comp=Z,153nm,0.9s,mb5.6
LZH Lanzhou 42.32 310 ⇑P **P 12 28 10.5 +0.8**
LZH AP pP 12 28 39.8 +1.1
LZH XP sP 12 28 52.8 -0.5
LZH PP PP 12 29 49.3 -1.0
LZH *e*S **S 12 34 23.0 +1.9**
LZH XS sS 12 35 11.0 -0.4
LZH AMB AMB
comp=Z,80nm,1.1s,mb5.3
LZH AMB AMB
comp=Z,260nm,4.0s
FRIM Kepong 42.40 261 ⇓P **P 12 28 10.8 +0.1**
IPM Ipoh 42.66 263 ⇓P **P 12 28 13.1 +0.3**
CMAR Chiang Mai Arr 43.06 283 P **P 12 28 16.4 +0.4**
comp=Z,18nm,0.6s,mb4.9,baz=85,slow=6.3,SNR=79
CMAR PcP PcP 12 30 04.3 +0.5
comp=Z,1.5nm,0.9s,baz=84,slow=1.8,SNR=5.2
CMAR LR LR 12 45 04.7
comp=Z,79nm,18.6s,baz=270,slow=34
CMAR Chiang Mai Arr 43.06 283 P **P 12 28 16.4 +0.4**
CMAR 12 30 04.3
CMAR pmax pmax
comp=Z,18nm,0.6s
CMAR pmax pmax
comp=Z,2.0nm,0.9s
STKA Stephens Creek 44.60 182 *e*P **P 12 28 27.3 -0.6**
comp=Z,13nm,0.6s,mb4.7
STKA Stephens Creek 44.60 182 P **P 12 28 27.6 -0.3**
comp=Z,26nm,0.8s,mb4.9,baz=358,slow=7.6,SNR=35
STKA PcP PcP 12 30 08.6 -0.1
comp=Z,2.2nm,0.6s,baz=30,slow=8.1,SNR=2.9
FORT Forrest 45.91 198 *e*P **P 12 28 38.4 +0.1**
comp=Z,115nm,0.7s,mb5.6
ULN Ulaanbaatar 46.10 326 *e*P **P 12 28 40.1 +0.4**
ULN pmax pmax
comp=Z,25nm,0.8s,mb4.9
ULN Ulaanbaatar 46.10 326 *e*P **P 12 28 40.1 +0.5**
comp=Z,25nm,0.8s,mb4.9
SONM Songino Array 46.44 326 P **P 12 28 42.9 +0.6**
comp=Z,12nm,0.6s,mb4.7,baz=147,slow=8.0,SNR=99
SONM ScP ScP 12 33 55.6 -0.9
comp=Z,2.4nm,0.9s,baz=130,slow=3.6,SNR=8.8
SONM Songino Array 46.44 326 P **P 12 28 42.9 +0.6**
SONM pmax pmax
comp=Z,12nm,0.6s
SONM pmax pmax
comp=N,2.0nm,0.9s
GTA Gaotai 46.54 313 ⇓*i*P **P 12 28 43.9 +0.7**
GTA AP pP 12 29 18.9 +6.2
GTA XP sP 12 29 27.1 0.0
GTA PCP PcP 12 30 15.9 +0.4
GTA SCP ScP 12 33 56.8 -0.4
GTA S **S 12 35 23.0 +0.9**
GTA XS sS 12 36 14.5 +1.4
GTA SCS ScS 12 38 24.8 -0.3
GTA AMB AMB
comp=Z,63nm,0.7s,mb5.3
GTA AMB AMB
comp=Z,227nm,3.8s
ZAK Zakamensk 49.59 327⇑*i*P **P 12 29 06.4 0.0**
ZAK *e* pP 12 29 37.4 +1.2
ZAK pmax pmax
comp=Z,26nm,1.2s,mb4.7
YAK Yakutsk 50.00 352*d i*P **P 12 29 08.5 -0.8**
YAK *i* *PP pP 12 29 39.4 +0.2
YAK pmax pmax
comp=Z,33nm,0.8s,mb5.0
YAK Yakutsk 50.00 352 *e*P **P 12 29 09.2 -0.1**
comp=Z,26nm,0.6s,mb5.0
BOD Bodaibo 50.01 340⇓*i*P **P 12 29 09.5 0.0**
BOD pmax pmax
comp=Z,15nm,1.1s,mb4.5
TLY Talaya 50.14 329*d i*P **P 12 29 10.9 +0.3**
TLY pmax pmax
comp=Z,22nm,0.9s,mb4.8
TLY Talaya 50.14 329 *e*P **P 12 29 11.6 +1.0**
comp=Z,18nm,0.8s,mb4.8
TOO Toolangi 50.28 178 *e*P **P 12 29 13.3 +1.5**
KLBR Kellerberrin 50.65 209 *e*P **P 12 29 14.1 -0.6**
comp=Z,22nm,0.6s,mb5.0
LSA Lhasa 51.02 298 P **P 12 29 18.8 +1.2**
LSA Lhasa 51.02 298 *e*P **P 12 29 18.8 +1.2**
LSA pmax pmax
comp=Z,33nm,0.7s,mb5.1
LSA Lhasa 51.02 298 *e*P **P 12 29 18.8 +1.2**
comp=Z,33nm,0.7s,mb5.1
MOY Mondy 51.50 328 *e*P **P 12 29 21.3 +0.5**
MOY pmax pmax
comp=Z,40nm,2.9s,mb4.5
MUN Mundaring 51.71 210 *e*P **P 12 29 22.2 -0.4**
NWAO Narrogin (SRO) 52.01 208 P **P 12 29 23.6 -1.2**
comp=Z,9.2nm,0.7s,mb4.5,baz=34,slow=7.7,SNR=7.0
NWAO LR LR 12 50 13.2
comp=Z,173nm,19.9s,baz=132,slow=34
TAPN Taplejung 53.80 294 *e*P **P 12 29 38.3 +0.1**
comp=Z,64nm,0.8s,mb5.4
ODAN Odare 54.06 294 *e*P **P 12 29 39.8 -0.2**
comp=Z,31nm,0.6s,mb5.2
RAMN Ramite 54.77 294 *e*P **P 12 29 45.0 -0.2**
comp=Z,96nm,0.9s,mb5.5
JIRN Jiri 55.17 295 *e*P **P 12 29 48.2 +0.1**
comp=Z,76nm,0.6s,mb5.6
GUN Gumba 55.46 295 *e*P **P 12 29 50.3 +0.2**
PKI Pulchoki 55.86 295 *e*P **P 12 29 52.4 -0.6**
PKIN Phulchoki 55.87 295 *e*P **P 12 29 52.9 -0.2**
KKN Kakani 55.98 295 *e*P **P 12 29 53.3 -0.6**
DMN Daman 56.13 295 *e*P **P 12 29 54.6 -0.3**
comp=Z,72nm,0.9s,mb5.5
WMQ Urumqi 56.55 314 P **P 12 29 59.3 +1.7**
WMQ AP pP 12 30 29.0 +0.9
WMQ XP sP 12 30 43.0 +0.7
WMQ PCP PcP 12 30 54.0 +1.3
WMQ *e*S **S 12 37 38.0 -1.3**
WMQ XS sS 12 38 31.0 -0.8
WMQ AMB AMB
comp=Z,47nm,1.1s,mb5.2
WMQ AMB AMB
comp=Z,101nm,4.5s
GKN Gorkha 56.56 295 *e*P **P 12 29 57.3 -0.7**
comp=Z,44nm,0.6s,mb5.5
BILL Bilibino 57.04 10 *e*P **P 12 30 00.2 -0.4**
BILL pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
DANN Dangsing 57.35 295 *e*P **P 12 30 03.4 -0.1**
comp=Z,116nm,0.5s,mb5.9
KOLN Koldanda 57.47 295 *e*P **P 12 30 03.9 -0.5**
comp=Z,59nm,0.7s,mb5.5
TIXI Tiksi 59.33 355 *e*P **P 12 30 16.3 -0.2**
TIXI *e* pP 12 30 48.6 +1.3
TIXI pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
MKAR Makanchi Array 60.96 317 P **P 12 30 28.4 +0.3**
comp=Z,19nm,0.7s,mb5.0,baz=92,slow=8.8,SNR=111
MKAR Makanchi Array 60.96 317 P **P 12 30 28.4 +0.3**
MKAR pmax pmax
comp=Z,19nm,0.7s
ZALV Zalesovo Beam 61.31 325 P **P 12 30 29.9 -0.4**
comp=Z,20nm,0.5s,mb5.2,baz=100,slow=6.6,SNR=24
ZALV PcP PcP 12 31 10.2 -1.3
comp=Z,5.2nm,0.6s,baz=132,slow=6.4,SNR=4.1
ZALV Zalesovo Beam 61.31 325 P **P 12 30 29.9 -0.4**
ZALV 12 31 10.2
ZALV pmax pmax
comp=Z,20nm,0.5s,mb5.2
ZALV pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
RPZ Rata Peaks 61.78 158 P **P 12 30 33.8 +0.3**
comp=Z,10nm,0.6s,mb4.8,baz=43,slow=8.6,SNR=9.8
DDI Dehra Dun 62.38 298 *ex* **P 12 30 35.0 -2.9**
NVS Novosibirsk 62.47 326⇓*i*P **P 12 30 37.9 -0.1**
NVS pmax pmax
comp=Z,64nm,1.4s,mb5.3
NVS pmax pmax
comp=E,38nm,1.3s
HYB Hyderabad 62.49 283 *i* P **P 12 30 39.5 +0.7**
HYB Hyderabad 62.49 283 *e*P **P 12 30 38.0 -0.8**
KURK Kurchatov 64.15 320 P **P 12 30 49.0 -0.1**
comp=E,66nm,0.7s,mb5.6,baz=103,slow=6.7,SNR=38
KURK Kurchatov 64.15 320 P **P 12 30 49.1 -0.1**
KURK pmax pmax
comp=Z,66nm,0.7s,mb5.6
ULHL Ulahol 64.52 311 P **P 12 30 52.6 +0.9**
SNR=5.1
TKM2 Tokmak 2 65.06 311 *e*P **P 12 30 55.2 -0.1**
TKM2 pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
TKM2 Tokmak 2 65.06 311 P **P 12 30 55.5 +0.2**
SNR=14
TKM2 Tokmak 2 65.06 311 *e*P **P 12 30 55.2 0.0**
comp=Z,8.6nm,0.9s,mb4.6
KBK Karagaybulak 65.51 311 P **P 12 30 58.8 +0.6**
SNR=6.6
USP Ospenovka 65.89 312 P **P 12 31 00.5 -0.1**
SNR=5.9
EKS2 Erkin-Say 66.38 311 P **P 12 31 03.9 +0.2**
SNR=5.5
EKS2 Erkin-Say 66.38 311 *e*P **P 12 31 03.7 0.0**
comp=Z,7.6nm,1.2s,mb4.4
AML Almayashu 66.40 310 P **P 12 31 04.9 +1.1**
SNR=6.3
AML Almayashu 66.40 310 *e*P **P 12 31 04.6 +0.8**
comp=Z,9.0nm,0.8s,mb4.7
COLD Coldfoot 69.09 22 *e*P **P 12 31 21.0 +0.8**
comp=Z,4.0nm,0.9s,mb4.2
BVAR Borovoye Array 69.54 322 P **P 12 31 23.2 -0.1**
comp=Z,47nm,0.6s,mb5.4,baz=103,slow=8.3,SNR=193
BVAR Borovoye Array 69.54 322 P **P 12 31 23.2 -0.1**
BVAR pmax pmax
comp=Z,47nm,0.6s
SVE Sverdlovsk 75.31 326 *e*P **P 12 31 56.8 -0.6**
SVE pmax pmax
comp=Z,19nm,0.9s,mb4.7
ARU Arti 76.47 325*c i*P **P 12 32 02.7 -1.3**
ARU *e**PP pP 12 32 32.8 -3.4
ARU *e*PPP 12 36 40.9
ARU *e*S S 12 41 39.0 -0.1
ARU *e*SS SS 12 46 33.0 -3.1
ARU pmax pmax
comp=Z,24nm,1.2s,mb4.7
ARU Arti 76.47 325 *e*P **P 12 32 03.2 -0.9**
comp=Z,8.5nm,0.7s,mb4.5
AKTK Aktyubinsk 77.21 319 P **P 12 32 07.7 -0.6**
AKTO Aktyubinsk 77.21 319 P **P 12 32 07.7 -0.6**
comp=Z,3.5nm,0.6s,mb4.2,baz=102,slow=8.7,SNR=14
AKTO Aktyubinsk 77.21 319 P **P 12 32 07.7 -0.6**
AKTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
YKA Yellowknife Ar 84.09 27 LR LR 13 08 29.4
comp=Z,31nm,19.2s,baz=195,slow=34
YBH Yreka Blue Hor 84.37 49 P **P 12 32 47.7 +1.2**
comp=Z,1.3nm,0.8s,mb3.7,baz=206,slow=7.5,SNR=5.2
YBH Yreka Blue Hor 84.37 49 P **P 12 32 47.7 +1.1**
YBH pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 87.25 342 P **P 12 32 59.7 -0.5**
comp=Z,2.6nm,0.7s,mb4.2,baz=69,slow=6.9,SNR=9.1
ARCES ARCESS Array B 87.25 342 P **P 12 32 59.7 -0.5**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
BMO Blue Mountains 87.45 45 *e*P **P 12 33 02.0 +0.4**
comp=Z,47nm,2.5s,mb4.9
NVAR Mina Array Bea 88.44 51 P **P 12 33 08.0 +1.5**
comp=Z,1.1nm,0.7s,mb3.8,baz=264,slow=6.5,SNR=12
MIB Mutribah 88.82 300 *e*P **P 12 33 07.4 -1.0**
baz=300
MIB AMb AMB 12 33 09.0
comp=Z,27nm,0.7s,mb5.3,baz=300
OBN Obninsk 88.85 327 *e*P **P 12 33 07.0 -1.0**
OBN *e*PP pP 12 33 41.6 +0.6
OBN pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
NAY Al-Naaiem 89.03 300 *e*P **P 12 33 07.4 -2.0**
baz=300
NAY AMb AMB 12 33 10.2
comp=Z,15nm,0.7s,mb5.0,baz=300
RST Umm Al-Ruwaisa 89.18 300 *e*P **P 12 33 08.7 -1.5**
baz=300
RST AMb AMB 12 33 10.7
comp=Z,22nm,0.8s,mb5.1,baz=300
HLID Hailey 89.82 45 *e*P **P 12 33 13.7 +0.9**
comp=Z,29nm,2.4s,mb4.8
SBA Scott Base 91.60 175 *e*P **P 12 33 22.0 +1.7**
SBA pmax pmax
comp=Z,18nm,1.7s,mb4.8
SBA Scott Base 91.60 175 *e*P **P 12 33 22.0 +1.8**
comp=Z,18nm,1.7s,mb4.8
PDAR Pinedale Array 93.43 45 LR LR 13 10 58.1
comp=Z,33nm,19.9s,baz=62,slow=32
CLL Collm 102.90 331 *e*Pdif Pdif 12 34 12.0 +0.1
WLF Walferdange 107.21 332 *e*PKKPdf PKKPdf 12 50 08.6 -0.9
UTMT University of 110.52 43 *e*Pdif Pdif 12 34 46.0 +0.2
LHS Liberty Hill 116.87 40 *e*PKKPab PKKPab 12 49 30.6 +0.1
TORD Torodi Ar. Bea 134.03 303 PKP PKPdf 12 39 29.4 -2.2
comp=Z,1.0nm,0.7s,baz=27,slow=2.3,SNR=6.0
TORD PP PP 12 41 58.9 -4.1
comp=Z,1.1nm,1.0s,baz=59,slow=4.4,SNR=3.9
TORD SKPbc SKPbc 12 42 47.8 -1.5
comp=Z,1.9nm,0.9s,baz=59,slow=2.4,SNR=7.9
TORD Torodi Ar. Bea 134.03 303 PKP PKPdf 12 39 29.4 -2.2
TORD PP PP 12 41 58.9 -4.1
TORD SKPbc SKPbc 12 42 47.8 -1.5
PLCA Paso Flores 139.40 139 PKP PKPdf 12 39 42.6 +1.8
comp=Z,2.8nm,1.0s,baz=180,slow=8.1,SNR=4.0
PLCA SKPbc SKPbc 12 43 06.2 +1.6
comp=Z,5.3nm,1.0s,baz=223,slow=4.7,SNR=10
PLCA Paso Flores 139.40 139 PKIKP PKPdf 12 39 42.6 +1.8
PLCA pmax pmax
comp=Z,3.0nm,1.0s
PLCA pmax pmax
comp=N,5.0nm,1.0s
DBIC Dimbokro 142.92 300 PKhKP 12 39 43.7
comp=N,5.5nm,0.7s,baz=66,slow=3.5,SNR=11
DBIC Dimbokro 142.92 300 PKIKP PKPdf 12 39 43.7 -4.3
DBIC pmax pmax
comp=Z,6.0nm,0.7s
KIC Kosan Boka 142.99 299 *e*PKIKP PKPdf 12 39 43.6 -4.5
comp=Z,45nm,1.0s
TIC Toumodi 143.07 300 *e*PKIKP PKPdf 12 39 44.0 -4.3
comp=Z,34nm,0.8s
LIC Lamto 143.30 299 *e*PKIKP PKPdf 12 39 43.6 -5.1
comp=Z,45nm,0.9s
LCO Las Campanas 144.54 122 *e*PKPdf PKPdf 12 39 50.5 +0.1
LPAZ La Paz 149.33 100 PKPbc PKPbc 12 40 04.7 +1.6
comp=Z,4.1nm,0.6s,baz=9.2,slow=1.3,SNR=7.9
LPAZ La Paz 149.33 100 PKP2 PKPbc 12 40 04.7 +1.5
LPAZ pmax pmax
comp=Z,4.0nm,0.6s

ISCJB ***17*** *12:23:20.9±1.1, 155S±02×1750W±0.2, h271km±14km, mb4.2/8, Error ellipse: s-maj=40.0km s-min=15.9km az=140.1*
NEIC ***17*** *12:23:20.9±0.9, 1549S×17487W, h258km±10km, mb4.6/2, Error ellipse: s-maj=24.1km s-min=9.9km az=140.0*
IDC ***17*** *12:23:21.9±1.4, 1557S×17490W, h264km±22km, mb3.9/6, mb1 4.1/7, mb1mx3.7/17, mbtmp3.9/7, Error ellipse: s-maj=35.0km s-min=23.5km az=145.0*

ISC 17 12:23:21.9±1.1, 155S±02×1749W±02, h268km±13km, n11, σ0s72/13, mb4.2/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.42**	**63**	P	P	**Pn**	**12 24 18.2**	**-1.9**
	38nm,0.3s,baz=99,slow=1.5,SNR=58							
AFI				S		**S**	**12 25 07.5**	**+1.2**
	12nm,0.3s,baz=96,slow=19,SNR=2.5							
AFI	**Afiamalu**	**3.42**	**63**	P		**Pn**	**12 24 18.2**	**-1.9**
AFI				S		**S**	**12 25 07.5**	**+1.2**
DZM	**Mont Dzumac**	**18.81**	**247**	P		**P**	**12 27 22.5**	**+0.2**
URZ	**Urewera**	**23.74**	**196**	P		**P**	**12 28 10.1**	**-0.2**
	7.6nm,0.6s,mb4.2,baz=57,slow=5.0,SNR=6.4							
STKA	**Stephens Creek**	**42.73**	**240**	P		**P**	**12 30 53.2**	**-0.1**
	2.3nm,0.4s,mb3.7,baz=97,slow=12,SNR=3.6							
WRA	**Warramunga Arr**	**48.40**	**257**	P		**P**	**12 31 37.8**	**+0.1**
	2.9nm,0.5s,mb3.9,baz=96,slow=7.9,SNR=14							
ASAR	**Alice Springs**	**48.69**	**252**	P		**P**	**12 31 40.4**	**+0.5**
	31nm,0.5s,mb4.9,baz=88,slow=7.7,SNR=157							
COR	**Corvallis**	**76.00**	**35**	P		**P**	**12 34 39.1**	**-0.6**
	57nm,1.6s,mb5.0							
RC01	**Rabbit Creek A**	**78.94**	**12**	*e*P		**P**	**12 34 55.4**	**-0.2**
	2.0nm,0.4s,mb4.2							
PDAR	**Pinedale Array**	**83.32**	**42**	P		**P**	**12 35 19.6**	**+0.6**
	0.7nm,0.8s,mb3.6,baz=204,slow=3.3,SNR=3.7							
MAW	**Mawson**	**87.23**	**199**	P		**P**	**12 35 38.0**	**+0.2**
	1.5nm,0.7s,mb3.9,baz=132,slow=2.3,SNR=5.3							

MAN 17 12:34:39, 1863N×12011E, h14km, mb4.1, ML2.9, MS2.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.57**	**122**	⇓*e*P		Pg	12 34 50.9	+0.7
PIP				*e*S		Sg	12 35 01.3	+3.5
ABRA	**Dolores**	**1.13**	**149**	*e*P		Pb	12 34 58.9	-1.4
ABRA				*e*S		Sb	12 35 16.2	+1.3
APYP	**Conner**	**1.32**	**125**	*e*P		Pn	12 35 02.7	-0.3
APYP				*e*S		Sb	12 35 21.6	+1.3

HLW ***17*** *12:35:53.9, 2987N×3670E, h18km, Mb2.8*
CSEM ***17*** *12:35:53.9±0.6, 2982N×3639E, h2km, ML2.8, Error ellipse: s-maj=12.9km s-min=6.6km az=67.0*
ISCJB ***17*** *12:35:54.7±1.1, 2989N±004×3629E±006, h0km, Error ellipse: s-maj=8.2km s-min=5.3km az=144.5*
GII ***17*** *12:35:57.0±0.9, 2994N×3611E, h0km, ML2.3/3, EXPLOSION*
SGS ***17*** *12:35:57.0, 2999N×3616E, h6km*

ISC 17 12:35:54.8±1.1, 2988N±004×3633E±006, h0km, n17, σ0s57/25, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.13**	**263**	Pg		**Pg**	**12 36 17.1**	**+0.7**
HRFI	**Mount Harif**	**1.14**	**278**	Pg		**Pg**	**12 36 16.4**	**-0.2**
HRFI				Sg		**Sg**	**12 36 30.9**	**-0.4**
ZFRI	**Zfri**	**1.21**	**304**	Pg		**Pg**	**12 36 17.9**	**0.0**
ZFRI				Sg		**Sg**	**12 36 33.5**	**-0.1**
EIL	**Elat**	**1.22**	**261**	Pg		**Pg**	**12 36 18.1**	**-0.1**
EIL				Sg		**Sg**	**12 36 35.1**	**+1.1**
MBRI	**Mt Berech**	**1.24**	**267**	Pg		**Pg**	**12 36 18.1**	**-0.4**
MBRI				Sg		**Sg**	**12 36 35.0**	**+0.5**
PRNI	**Paran**	**1.25**	**293**	Pg		**Pg**	**12 36 18.3**	**-0.4**
PRNI				Sg		**Sg**	**12 36 34.3**	**-0.5**
HQLS		**1.25**	**243**	P		**Pg**	**12 36 18.1**	**-0.7**
JLOS		**1.35**	**213**	P		**Pg**	**12 36 20.9**	**+0.1**
JLOS		**1.35**	**213**	P		**Pg**	**12 36 20.9**	**+0.1**
JLOS				S		**Sg**	**12 36 38.7**	**+0.4**
KRMI	**Paran Flat**	**1.42**	**280**	Pg		**Pg**	**12 36 21.4**	**-0.6**
KRMI				Sg		**Sg**	**12 36 39.7**	**-0.6**
HBST	**Basata**	**1.54**	**245**	P		**Pn**	**12 36 23.6**	**+0.1**
BDAS	**Al Bad'**	**1.80**	**217**	P		**Pn**	**12 36 26.8**	**-0.3**
DSI	**Dead Sea**	**1.88**	**334**	Pn		**Pn**	**12 36 29.7**	**+1.5**
HNKL	**Nakhl**	**2.04**	**272**	P		**Pn**	**12 36 30.7**	**+0.2**
HNKL				S		**Sn**	**12 36 57.6**	**+1.0**
RSHS		**2.07**	**221**	P		**Pn**	**12 36 30.2**	**-0.5**
HKAT	**Jabal Katrina**	**2.45**	**237**	P		**Pn**	**12 36 35.7**	**-0.4**
TR2		**2.73**	**238**	P		**Pn**	**12 36 39.6**	**-0.2**

HLW ***17*** *12:41:18.2,3169N×3568E,h11km,Mb3.4*
GII ***17*** *12:41:25.1±0.9,31.12N×35.18E,h0km,ML2.6/8, EXPLOSION*
ISCJB ***17*** *12:41:26.6±0.3,31.12N±002×35.19E±004,h0km,Error ellipse: s-maj=5.2km s-min=2.2km az=14.7*

ISC 17 12:41:27.1±0.3,3112N±002×3520E±004,h0km,n25,
σ1§24/39,3C-3D,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
				T		12 42 42.7	
MZDA	**Masada**	**0.23**	**37**	Pg	**Pg**	**12 41 31.6**	**0.0**
MZDA	**Masada**	**0.23**	**37**	Sg	**Sg**	**12 41 36.2**	**+1.6**
MZDA				Sg	**Sg**	**12 41 33.0**	**+1.1**
YTIR	**Yattir**	**0.25**	**344**	Pg	**Pg**	**12 41 35.5**	**0.0**
RTMI	**Retamim**	**0.44**	**261**	Pg	**Pg**	**12 41 42.5**	**+1.3**
RTMI				Sg	**Sg**	**12 41 36.3**	**+0.2**
DSI	**Dead Sea**	**0.47**	**19**	Pg	**Pg**	**12 41 37.8**	**-0.1**
ZFRI	**Zfri**	**0.57**	**182**	Pg	**Pg**	**12 41 47.5**	**+2.3**
ZFRI				Sg	**Sg**	**12 41 40.3**	**+0.9**
RMNI	**Mount Ramon**	**0.64**	**216**	Pg	**Pg**	**12 41 40.5**	**-0.4**
KZIT	**Kziot**	**0.72**	**253**	Pg	**Pg**	**12 41 51.3**	**+1.1**
KZIT				Sg	**Sg**	**12 41 42.0**	**-0.1**
PRNI	**Paran**	**0.79**	**192**	Pg	**Pg**	**12 41 54.2**	**+1.9**
PRNI				Sg	**Sg**	**12 41 46.5**	**-1.2**
KRMI	**Paran Flat**	**1.08**	**202**	Pg	**Pg**	**12 42 03.8**	**+2.0**
KRMI				Sg	**Sg**	**12 41 47.1**	**-0.8**
HRFI	**Mount Harif**	**1.09**	**187**	Pg	**Pg**	**12 42 04.3**	**+2.2**
HRFI				Sg	**Sg**	**12 41 47.5**	**-1.1**
SLTI	**Sal'it**	**1.12**	**353**	Pg	**Pg**	**12 41 47.5**	**-1.1**
SLTI				Sg	**Sg**	**12 42 04.6**	**+1.4**
HMDT	**Nahal Hemdat**	**1.16**	**14**	Pg	**Pg**	**12 41 48.5**	**-0.9**
HMDT				Sg	**Sg**	**12 42 06.2**	**+1.8**
MMLI	**Mount Malkishu**	**1.33**	**8**	Pn	**Pn**	**12 41 51.3**	**-1.5**
MMLI				Sn	**Sn**	**12 42 11.2**	**0.0**
MBRI	**Mt Berech**	**1.35**	**191**	Pn	**Pn**	**12 41 51.6**	**-1.4**
MBRI				Sn	**Sn**	**12 42 11.7**	**+0.1**
EIL	**Elat**	**1.46**	**188**	Pn	**Pn**	**12 41 53.1**	**-1.6**
EIL				Sn	**Sn**	**12 42 15.1**	**+0.5**
OFRI	**'Ofer**	**1.51**	**353**	Pn	**Pn**	**12 41 54.3**	**-1.0**
OFRI				Sn	**Sn**	**12 42 15.3**	**-0.3**
HNKL	**Nakhl**	**1.59**	**222**	⇑P	**Pn**	**12 41 54.8**	**-1.6**
AMAG	**Maghara**	**1.78**	**255**	⇓P	**Pn**	**12 41 56.5**	**-2.5**
MMA0B	**Mount Meron ar**	**1.90**	**5**	Pn	**Pn**	**12 42 00.3**	**-0.3**
MMA0B				Sn	**Sn**	**12 42 26.6**	**+1.4**
HBST	**Basata**	**1.94**	**192**	⇑P	**Pn**	**12 41 59.8**	**-1.4**
HBST				S	**Sn**	**12 42 29.8**	**+3.5**
SUZ		**2.41**	**239**	⇑P	**Pn**	**12 42 06.0**	**-1.7**
RCY	**Rachaya**	**2.41**	**12**	*e*Pn	**Pn**	**12 42 08.1**	**+0.3**
HKAT	**Jabal Katrina**	**2.79**	**202**	⇓P	**Pn**	**12 42 11.9**	**-1.1**
TR2		**3.01**	**206**	⇓P	**Pn**	**12 42 14.8**	**-1.3**

IDC ***17*** *12:42:27.2±3.5,463S×10080E,h0km,mb3.9/6,mb1 4.0/6, mb1mx3.8/19,mbtmp3.9/6,Error ellipse: s-maj=137.3km s-min=19.5km az=56.0*
ISCJB ***17*** *12:42:30.1±1.2,46S±01×1009E±02,h33km,mb4.0/7, Error ellipse: s-maj=30.4km s-min=13.1km az=142.0*
NEIC ***17*** *12:42:32.5±1.3,460S×10094E,h35km,mb4.4/1,Error ellipse: s-maj=34.9km s-min=12.8km az=54.0*

ISC 17 12:42:32.7±1.2,46S±01×1010E±02,h35km,n11,σ1§06/11,
mb4.0/7,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**18.51**	**55**	P	**Pn**	**12 46 47.0**	**+0.5**
KAPI	**Kappang**	**18.70**	**92**	*e*P	**Pn**	**12 46 48.2**	**-0.7**
CMAR	**Chiang Mai Arr**	**22.98**	**355**	P	**P**	**12 47 34.6**	**+0.2**
	2.6nm,0.8s,mb3.7,baz=182,slow=8.8,SNR=14						
FITZ	**Fitzroy Crossi**	**27.60**	**121**	P	**P**	**12 48 18.6**	**+1.7**
	17nm,1.9s,mb4.3						
WRA	**Warramunga Arr**	**35.88**	**118**	P	**P**	**12 49 28.6**	**-1.0**
	0.5nm,0.4s,mb3.8,baz=305,slow=9.3,SNR=9.6						
WRAB	**Tennant Creek**	**35.89**	**118**	*e*P	**P**	**12 49 27.9**	**-1.7**
WB2	**Warramunga Arr**	**35.89**	**118**	*e*P	**P**	**12 49 29.4**	**-0.3**
ASAR	**Alice Springs**	**36.97**	**124**	P	**P**	**12 49 41.2**	**+2.3**
	0.3nm,0.5s,mb3.4,baz=299,slow=7.9,SNR=11						
SONM	**Songino Array**	**52.41**	**5**	P	**P**	**12 51 42.0**	**+0.5**
	3.1nm,0.8s,mb4.3,baz=184,slow=8.6,SNR=19						
MKAR	**Makanchi Array**	**53.76**	**344**	P	**P**	**12 51 51.1**	**-0.3**
	1.3nm,0.7s,mb4.0,baz=144,slow=8.4,SNR=9.0						
ZALV	**Zalesovo Beam**	**59.87**	**349**	P	**P**	**12 52 34.0**	**-0.6**
	0.7nm,0.3s,mb4.1,baz=159,slow=4.3,SNR=4.1						

DJA ***17*** *13:01:10,2549S×17942W,h305km,mb5.2/9*
IDC ***17*** *13:01:29.8±1.0,2502S×17981E,h482km±11km,mb4.1/16, mb1 4.2/18,mb1mx4.2/21,mbtmp4.1/18,Error ellipse: s-maj=11.2km s-min=10.1km az=179.0*
MOS ***17*** *13:01:29.0±3.5,2470S×17963E,h450km,mb4.7/8,Error ellipse: s-maj=11.6km s-min=11.0km az=30.1*
ISCJB ***17*** *13:01:29.2±0.8,2502S±006×17973E±004,h482km±9km, mb4.6/35,Error ellipse: s-maj=9.6km s-min=5.5km az=162.4*
NEIC ***17*** *13:01:31.0±0.9,2499S×17982E,h498km±11km,mb4.7/15, Error ellipse: s-maj=10.4km s-min=8.2km az=157.0*
BJI ***17*** *13:01:31.0,2500S×17980E,h497km,mB4.8,mb4.7*

ISC 17 13:01:29.9±0.8,2506S±006×17979E±004,h479km±9km,
h487km±3,4km;pP-P,n320,σ0§65/250,mb4.6/35,83C-100D,
South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.65**	**154**	P	**P**	**13 02 53.5**	**+1.0**
	304nm,0.3s,baz=30,slow=14,SNR=6.3						
RAO				S	**S**	**13 03 58.9**	**-1.0**
	182nm,0.3s,baz=70,slow=22,SNR=3.9						
RAO	**Raoul Island**	**4.65**	**154**	P	**P**	**13 02 53.5**	**+1.0**
RAO				S	**S**	**13 03 58.9**	**-1.0**
RAO				pmax	pmax		
	comp=Z,304nm,0.3s						
RAO				smax			
	comp=N,182nm,0.3s						
RAO	**Raoul Island**	**4.65**	**154**	*e*P	**P**	**13 02 53.9**	**+1.5**
RAO				*e*S	**S**	**13 03 53.3**	**-6.6**
DZM	**Mont Dzumac**	**12.59**	**281**	*e*P	**P**	**13 04 18.2**	**+3.2**
URZ	**Urewera**	**13.36**	**189**	P	**P**	**13 04 20.6**	**-2.3**
	comp=N,4.9nm,0.3s,baz=2.9,slow=2.2,SNR=23						
URZ				S	**S**	**13 06 44.7**	**-0.9**
	comp=N,5.9nm,0.3s,baz=249,slow=23,SNR=19						
AFI	**Afiamalu**	**13.64**	**37**	P	**P**	**13 04 21.1**	**-5.1**
	comp=N,4.2nm,0.3s,baz=241,slow=16,SNR=6.6						
AFI	**Afiamalu**	**13.64**	**37**	*e*P	**P**	**13 04 21.6**	**-4.6**
SNZO	**South Karori**	**16.75**	**193**	*e*P	**P**	**13 04 57.2**	**-1.4**
	comp=N,43nm,0.7s						
RPZ	**Rata Peaks**	**19.93**	**199**	P	**P**	**13 05 27.9**	**-1.0**
	comp=N,1.2nm,0.3s,baz=108,slow=3.2,SNR=14						
HNR	**Honiara**	**24.45**	**306**	P	**P**	**13 06 08.3**	**-1.5**
	comp=N,149nm,0.7s,mb5.5,baz=324,slow=1.0,SNR=8.1						
HNR	**Honiara**	**24.45**	**306**	P	**P**	**13 06 08.3**	**-1.6**
HNR				pmax	pmax		
	comp=Z,149nm,0.7s,mb5.5						
ARMA	**Armidale**	**25.45**	**252**	*e*P	**P**	**13 06 20.9**	**+2.3**
CNB	**Canberra Magne**	**28.12**	**241**	*e*P	**P**	**13 06 44.0**	**+2.0**
CAN	**Canberra**	**28.41**	**242**	*e*P	**P**	**13 06 46.4**	**+1.8**
CTA	**Charters Tower**	**31.31**	**272**	*e*P	**P**	**13 07 11.2**	**+1.3**
	comp=Z,115nm,0.4s,mb5.7						
CTA				*e*S	**S**	**13 11 44.3**	**+2.0**
CTA	**Charters Tower**	**31.31**	**272**	P	**P**	**13 07 11.2**	**+1.3**
	comp=Z,117nm,0.4s,mb5.7,baz=96,slow=11,SNR=207						
CTA	**Charters Tower**	**31.31**	**272**	*e*P	**P**	**13 07 11.2**	**+1.3**
CTA				*e*S	**S**	**13 11 44.3**	**+2.0**
CTA				pmax	pmax		
	comp=Z,115nm,0.4s						
CTAO	**Charters Tower**	**31.31**	**272**	⇓*i*P	**P**	**13 07 11.1**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,132nm,0.5s,mb5.6						
CTAO	**Charters Tower**	**31.31**	**272**	⇓*i*P	**P**	**13 07 11.1**	**+1.2**
	comp=Z,132nm,0.5s,mb5.6						
TOO	**Toolangi**	**31.67**	**239**	*e*P	**P**	**13 07 14.1**	**+1.3**
STKA	**Stephens Creek**	**34.12**	**250**	*e*P	**P**	**13 07 34.8**	**+1.0**
	comp=Z,7.2nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**34.12**	**250**	P	**P**	**13 07 34.8**	**+1.0**
	comp=Z,7.8nm,0.4s,mb4.5,baz=92,slow=9.3,SNR=38						
STKA				PcP	PcP	13 09 57.1	-0.5
	comp=Z,3.1nm,0.5s,baz=79,slow=11,SNR=3.6						
PMG	**Port Moresby**	**34.71**	**291**	*d*P	**P**	**13 07 38.6**	**-0.3**
COEN	**Coen**	**36.12**	**281**	*e*P	**P**	**13 07 51.6**	**+0.8**
	comp=Z,18nm,0.7s,mb4.6						
ASAR	**Alice Springs**	**41.67**	**262**	P	**P**	**13 08 36.0**	**+0.3**
	comp=Z,19nm,0.6s,mb4.7,baz=94,slow=7.3,SNR=958						
ASAR				pP	pP	13 10 05.0	+0.9
	comp=Z,1.4nm,0.6s,baz=87,slow=8.6,SNR=4.8						
ASAR				S	**S**	**13 14 16.1**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=96,slow=15,SNR=7.9						
ASAR				PKiKP	PKiKP	13 17 23.6	-3.1
	comp=Z,0.2nm,0.5s,baz=102,slow=1.3,SNR=4.6						
ASAR	**Alice Springs**	**41.67**	**262**	P	**P**	**13 08 36.0**	**+0.3**
ASAR				*PP	pP	13 10 05.0	+0.9
ASAR				S	**S**	**13 14 16.2**	**-0.9**
ASAR				pmax	pmax		
	comp=Z,19nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR				smax			
	comp=N,2.0nm,0.7s						
WB2	**Warramunga Arr**	**42.14**	**267**	⇓*i*P	**P**	**13 08 39.2**	**-0.2**
WB2				*e*S	**S**	**13 14 20.8**	**-3.1**
WRAB	**Tennant Creek**	**42.14**	**267**	⇓*i*P	**P**	**13 08 39.2**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.2						
WRAB	**Tennant Creek**	**42.14**	**267**	⇓*i*P	**P**	**13 08 39.2**	**-0.3**
	comp=Z,72nm,0.8s,mb5.2						
WRA	**Warramunga Arr**	**42.15**	**267**	P	**P**	**13 08 39.3**	**-0.3**
	comp=Z,30nm,0.3s,mb5.2,baz=98,slow=6.8,SNR=964						
WRA				PcP	PcP	13 10 22.8	-0.4
	comp=Z,2.9nm,0.8s,baz=103,slow=3.2,SNR=5.8						
WRA				ScP	ScP	13 13 29.3	+1.6
	comp=Z,2.3nm,0.8s,baz=104,slow=3.9,SNR=8.5						
WRA				S	**S**	**13 14 21.3**	**-2.8**
	comp=Z,3.3nm,0.9s,baz=99,slow=14,SNR=13						
WRA				PKiKP	PKiKP	13 17 24.1	-3.2
	comp=Z,0.2nm,0.4s,baz=95,slow=0.5,SNR=4.6						
WRA	**Warramunga Arr**	**42.15**	**267**	P	**P**	**13 08 39.3**	**-0.2**
WRA						13 10 22.8	
WRA				S	**S**	**13 14 21.3**	**-2.8**
WRA				pmax	pmax		
	comp=Z,31nm,0.3s						
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRA				pmax	pmax		
	comp=N,2.0nm,0.8s						
WRA				smax			
	comp=N,3.0nm,0.9s						
WRA	**Warramunga Arr**	**42.15**	**267**	P	**P**	**13 08 39.3**	**-0.3**
WRA				PcP	PcP	13 10 22.8	-0.4
WRA				ScP	ScP	13 13 29.3	+1.6
WRA				S	**S**	**13 14 21.3**	**-2.8**
FORT	**Forrest**	**45.74**	**251**	*e*P	**P**	**13 09 06.4**	**-0.9**
	comp=N,48nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**50.56**	**267**	*e*P	**P**	**13 09 43.6**	**0.0**
	comp=N,41nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**50.56**	**267**	P	**P**	**13 09 43.7**	**+0.1**
	comp=N,24nm,0.5s,mb4.7,baz=101,slow=7.7,SNR=90						
GUMO	**Guam**	**51.33**	**315**	P	**P**	**13 09 48.4**	**-0.8**
	comp=N,22nm,0.4s,mb4.8,baz=35,slow=21,SNR=5.1						
GUMO	**Guam**	**51.33**	**315**	P	**P**	**13 09 48.4**	**-0.8**
GUMO				pmax	pmax		
	comp=Z,22nm,0.4s,mb4.8						
SBA	**Scott Base**	**53.21**	**183**	*e*P	**P**	**13 10 04.3**	**+2.4**
SBA				*e*		13 11 02.9	
SBA				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb3.8						
SBA	**Scott Base**	**53.21**	**183**	*e*P	**P**	**13 10 04.3**	**+2.4**
	comp=Z,5.6nm,1.3s,mb3.7						
SBA				*e*PcP	PcP	13 11 02.9	+0.7
KLBR	**Kellerberrin**	**54.37**	**248**	*e*P	**P**	**13 10 10.2**	**-0.7**
	comp=Z,18nm,0.4s,mb4.8						
MBWA	**Marble Bar**	**54.99**	**261**	*e*P	**P**	**13 10 14.7**	**-0.7**
	comp=Z,24nm,1.2s,mb4.4						
MUN	**Mundaring**	**55.60**	**247**	*e*P	**P**	**13 10 19.3**	**-0.2**
CASY	**Casey**	**58.99**	**206**	*e*P	**P**	**13 10 41.5**	**-0.6**
QSPA	**South Pole Qui**	**65.03**	**180**	P	**P**	**13 11 22.4**	**+1.0**
	comp=Z,2.9nm,0.8s,mb4.0,baz=60,slow=1.7,SNR=14						
MJAR	**Matsushiro Arr**	**72.74**	**326**	P	**P**	**13 12 07.8**	**-0.8**
	comp=Z,11nm,0.9s,mb4.4,baz=163,slow=5.5,SNR=19						
MJAR	**Matsushiro Arr**	**72.74**	**326**	P	**P**	**13 12 07.8**	**-0.8**
MJAR				pmax	pmax		
	comp=Z,11nm,0.9s						
MAJO	**Matsushiro**	**72.74**	**326**	*e*P	**P**	**13 12 07.8**	**-0.8**
MAT	**Matsushiro**	**72.74**	**326**	P	**P**	**13 12 08.7**	**+0.1**
MAW	**Mawson**	**76.60**	**201**	*e*P	**P**	**13 12 30.0**	**+0.1**
	comp=Z,5.4nm,0.6s,mb4.2						
MAW	**Mawson**	**76.60**	**201**	P	**P**	**13 12 30.1**	**+0.2**
	comp=Z,6.1nm,0.6s,mb4.3,baz=131,slow=6.0,SNR=48						
MAW	**Mawson**	**76.60**	**201**	P	**P**	**13 12 30.1**	**+0.2**
MAW				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSRS	**Korea Array**	**79.01**	**320**	P	**P**	**13 12 43.5**	**+0.2**
	comp=Z,5.7nm,0.8s,mb4.2,baz=131,slow=5.9,SNR=13						
KSRS	**Korea Array**	**79.01**	**320**	P	**P**	**13 12 43.6**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
YSS	**Yuzh-Sakhalins**	**79.10**	**335**	*d*P	**P**	**13 12 43.8**	**+0.2**
YSS				*i*PP	pP	13 14 28.0	-0.1
YSS				pmax	pmax		
	comp=Z,44nm,1.6s,mb4.7						
YSS	**Yuzh-Sakhalins**	**79.10**	**335**	*e*P	**P**	**13 12 43.6**	**0.0**
	comp=Z,30nm,0.9s,mb4.8						
PET	**Petropavlovsk**	**79.90**	**347**	*e*P	**P**	**13 12 46.3**	**-1.4**
PET				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.7						
PEA0B	**Petropavlovsk-**	**80.18**	**347**	*e*P	**P**	**13 12 48.6**	**-0.6**
PETK	**Petropavlovsk-**	**80.18**	**347**	P	**P**	**13 12 48.4**	**-0.7**
	comp=Z,14nm,0.7s,mb4.6,baz=113,slow=7.2,SNR=45						
PETK	**Petropavlovsk-**	**80.18**	**347**	P	**P**	**13 12 48.4**	**-0.7**
PETK				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.6						
PETK	**Petropavlovsk-**	**80.18**	**347**	P	**P**	**13 12 48.4**	**-0.7**
SYO	**Syowa Base**	**81.84**	**193**	⇓*e*P	**P**	**13 12 55.0**	**-2.7**
MDJ	**Mudanjiang**	**83.12**	**326**	P	**P**	**13 13 04.8**	**+0.3**
MDJ				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,72nm,4.0s						
MDJ	**Mudanjiang**	**83.12**	**326**	*e*P	**P**	**13 13 04.5**	**+0.1**
	comp=Z,8.4nm,0.9s,mb4.3						
WHN	**Wuhan**	**83.55**	**308**	⇓P	**P**	**13 13 06.9**	**-0.1**
GASB	**Alder Springs**	**83.77**	**41**	⇑P	**P**	**13 13 08.7**	**+0.9**
	baz=84						
EDW2	**Edwards Air Fo**	**83.82**	**47**	⇑P	**P**	**13 13 08.4**	**+0.2**
	baz=84						
ISA	**Isabella**	**83.96**	**46**	⇓P	**P**	**13 13 09.1**	**+0.2**
	baz=84						
T06C	**Millerton Lake**	**83.97**	**44**	⇓P	**P**	**13 13 08.6**	**-0.3**
	baz=84						
O02C	**Red Bluff**	**84.06**	**40**	⇓P	**P**	**13 13 09.9**	**+0.6**
	baz=84						
CMB	**Columbia Colle**	**84.17**	**43**	⇓P	**P**	**13 13 09.7**	**-0.2**
	baz=84						
N02C	**Big Bar**	**84.17**	**40**	⇓P	**P**	**13 13 10.0**	**+0.1**
	baz=84						
HELL	**Mitchell Peak**	**84.21**	**45**	⇓P	**P**	**13 13 09.8**	**-0.3**
	baz=84						
LRMC	**Laurel Mountai**	**84.37**	**47**	⇓P	**P**	**13 13 10.8**	**-0.1**
	baz=84						
S06C	**San Francisco**	**84.42**	**44**	⇓P	**P**	**13 13 10.9**	**-0.2**
	baz=84						
ORV	**Oroville**	**84.43**	**42**	⇓P	**P**	**13 13 11.2**	**+0.1**
	baz=84						
WDC	**Whiskeytown Da**	**84.46**	**40**	⇓P	**P**	**13 13 11.6**	**+0.3**
	baz=85						
BELC	**Belle Mtn.**	**84.65**	**49**	⇓P	**P**	**13 13 12.4**	**+0.1**
	baz=85						
CN2	**Changchun**	**84.70**	**324**	⇑P	**P**	**13 13 12.6**	**+0.3**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
R05C	**Kirkwood Meado**	**84.78**	**43**	⇓P	**P**	**13 13 12.8**	**0.0**
	baz=85						
M02C	**Callahan**	**84.80**	**40**	⇓P	**P**	**13 13 13.4**	**+0.5**
	baz=85						
P05C	**Yuba Gap, Truc**	**84.82**	**42**	⇓P	**P**	**13 13 13.3**	**+0.3**
	baz=85						
BC3	**Big Chuckw Mtn**	**84.82**	**49**	⇑P	**P**	**13 13 13.2**	**0.0**
	baz=85						
MPMC	**Manual Prospec**	**84.84**	**46**	⇓P	**P**	**13 13 13.2**	**0.0**
	baz=85						
GSC	**Goldstone**	**84.85**	**47**	⇑P	**P**	**13 13 13.4**	**+0.1**
	baz=85						
GLA	**Glamis**	**84.92**	**50**	⇓P	**P**	**13 13 14.0**	**+0.3**
	baz=85						
R06C	**Coleville**	**85.05**	**43**	⇑P	**P**	**13 13 14.6**	**+0.4**
	baz=85						
YBH	**Yreka Blue Hor**	**85.10**	**39**	P	**P**	**13 13 14.5**	**+0.2**
	comp=Z,1.4nm,0.7s,mb3.7,baz=145,slow=5.4,SNR=5.1						
YBH	**Yreka Blue Hor**	**85.10**	**39**	P	**P**	**13 13 14.5**	**+0.1**
YBH				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YBH	**Yreka Blue Hor**	**85.10**	**39**	⇓P	**P**	**13 13 14.8**	**+0.4**
	baz=85						
S08C	**White Mtn Res**	**85.25**	**45**	⇑P	**P**	**13 13 15.3**	**+0.1**
	baz=85						
IRM	**Iron Mountain**	**85.31**	**49**	⇑P	**P**	**13 13 15.9**	**+0.3**
	baz=85						
BEKR	**Beckwourth**	**85.32**	**42**	⇑P	**P**	**13 13 15.3**	**-0.1**
	baz=85						
GMRC	**Granite Mounta**	**85.32**	**48**	⇑P	**P**	**13 13 15.7**	**+0.1**
	baz=85						
WCN	**Washoe City**	**85.34**	**43**	⇓P	**P**	**13 13 15.8**	**+0.2**
	baz=85						
HUMO	**Hull Mountain**	**85.52**	**39**	⇓P	**P**	**13 13 16.7**	**+0.3**
	baz=86						
NVAR	**Mina Array Bea**	**85.72**	**44**	P	**P**	**13 13 16.9**	**-0.5**
	comp=Z,1.7nm,0.7s,mb3.8,baz=222,slow=8.6,SNR=16						
O06A	**Flanigan**	**85.82**	**42**	⇑P	**P**	**13 13 17.7**	**-0.2**
	baz=86						
L04A	**Klamath Falls**	**85.85**	**39**	⇓P	**P**	**13 13 17.9**	**-0.1**
	baz=86						
Y13A	**Salome**	**86.03**	**50**	⇑P	**P**	**13 13 19.3**	**+0.2**
	baz=86						
N06A	**Buffalo Meadow**	**86.17**	**41**	⇓P	**P**	**13 13 19.0**	**-0.6**
	baz=86						
Q08A	**Gabbs**	**86.21**	**44**	⇓P	**P**	**13 13 19.3**	**-0.5**
	baz=86						
L05A	**Lakeview**	**86.39**	**40**	⇓P	**P**	**13 13 20.5**	**0.0**
	baz=86						
R09A	**Tonopah**	**86.39**	**45**	⇓P	**P**	**13 13 20.3**	**-0.3**
	baz=86						
O07A	**Toulon**	**86.40**	**42**	⇑P	**P**	**13 13 20.4**	**-0.3**
	baz=86						
S10A	**Tonopah Range,**	**86.51**	**45**	⇑P	**P**	**13 13 21.0**	**-0.2**
	baz=87						
MOD	**Modoc**	**86.61**	**40**	⇑P	**P**	**13 13 21.7**	**+0.1**
	baz=87						
Y14A	**Wickenburg**	**86.67**	**50**	⇓P	**P**	**13 13 21.9**	**-0.2**
	baz=87						
W13A	**Hualapai Mount**	**86.70**	**49**	⇑P	**P**	**13 13 22.2**	**0.0**
	baz=87						
K05A	**Summer Lake**	**86.78**	**39**	⇓P	**P**	**13 13 22.6**	**+0.3**
	baz=87						
116A	**Eloy**	**86.85**	**52**	⇑P	**P**	**13 13 23.2**	**+0.2**
	baz=87						
S11A	**Rachel**	**86.89**	**46**	⇑P	**P**	**13 13 22.9**	**-0.1**
	baz=87						
O08A	**Rochester Mine**	**86.92**	**43**	⇓P	**P**	**13 13 23.0**	**-0.1**
	baz=87						
J05A	**Fort Rock**	**86.93**	**39**	⇓P	**P**	**13 13 23.2**	**+0.2**
	baz=87						
M07A	**Soldier Meadow**	**86.96**	**41**	⇓P	**P**	**13 13 23.4**	**+0.1**
	baz=87						
U12A	**Valley of Fire**	**87.00**	**47**	⇑P	**P**	**13 13 23.5**	**-0.1**
	baz=87						
T11A	**Corn Creek, Al**	**87.01**	**46**	⇑P	**P**	**13 13 23.9**	**+0.3**
	baz=87						
X14A	**Yava**	**87.04**	**50**	⇑P	**P**	**13 13 23.6**	**-0.2**
	baz=87						
V13A	**Grand Canyon W**	**87.05**	**48**	⇑P	**P**	**13 13 23.8**	**0.0**
	baz=87						
217A	**Green Valley**	**87.07**	**53**	⇓P	**P**	**13 13 24.6**	**+0.5**
	baz=87						
Y15A	**Casa Rosa Ranc**	**87.15**	**50**	⇓P	**P**	**13 13 24.5**	**+0.1**
	baz=87						
GYA	**Guiyang**	**87.17**	**301**	⇑*i*P	**P**	**13 13 25.4**	**+0.8**
GYA				AP	pP	13 15 15.8	+4.2
GYA				XP	sP	13 16 05.4	+4.8
GYA				PP	PP	13 17 01.3	+4.0
GYA				SKS		13 23 04.8	
GYA				S	S	13 23 23.6	-0.1
GYA				XS	sS	13 26 37.0	+2.7
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
GYA				AMB	AMB		
	comp=Z,80nm,6.5s						
K06A	**Valley Falls**	**87.19**	**40**	⇑P	**P**	**13 13 24.5**	**+0.2**
	baz=87,SNR=5.7						
N08A	**GE Springer Mi**	**87.22**	**42**	⇓P	**P**	**13 13 24.1**	**-0.4**
	baz=87						
L07A	**Adell**	**87.25**	**41**	⇑P	**P**	**13 13 24.8**	**+0.2**
	baz=87						
H04A	**Detroit Lake**	**87.28**	**37**	⇓P	**P**	**13 13 24.4**	**-0.3**
	baz=87						
W14A	**Seligman**	**87.31**	**49**	⇓P	**P**	**13 13 25.2**	**+0.1**
	baz=87						
U13A	**Pakoon Wash**	**87.38**	**48**	⇑P	**P**	**13 13 25.8**	**+0.4**
	baz=88						
S12A	**Delamar Landin**	**87.46**	**46**	⇑P	**P**	**13 13 26.3**	**+0.6**
	baz=88						
318A	**Bisbee**	**87.50**	**54**	⇑P	**P**	**13 13 26.6**	**+0.6**
	baz=88						
X15A	**Humboldt**	**87.

baz=89
C04A Brinnon 88.81 35 ⇓P P 13 13 32.0 +0.2
baz=89
I08A Drewsey 88.84 40 ⇓P P 13 13 32.0 0.0
baz=89
J09A Fry Pan Ranch, 88.98 40 ⇑P P 13 13 32.4 -0.2
baz=89,SNR=6.8
ELK Elko 88.99 44 P P 13 13 32.7 -0.1
comp=Z,1.0nm,0.6s,mb3.8,baz=191,slow=21,SNR=5.6
ELK Elko 88.99 44 P P 13 13 32.7 -0.1
ELK pmax pmax
comp=Z,1.0nm,0.6s
L10A Juniper Basin 89.00 42 ⇓P P 13 13 32.5 -0.2
baz=89,SNR=7.8
P13A Bates Ranch, G 89.04 45 ⇑P P 13 13 34.0 +0.9
baz=89
M11A Holland Ranch, 89.04 43 ⇓P P 13 13 33.1 +0.2
baz=89
G07A Ruggs Ranch, H 89.04 38 ⇓P P 13 13 32.6 -0.3
baz=89
E06A Yakima 89.11 36 ⇓P P 13 13 33.0 -0.2
baz=89
X18A Snowflake 89.13 51 ⇑P P 13 13 33.9 +0.4
baz=89
H08A Prairie City 89.15 39 ⇓P P 13 13 33.1 -0.3
baz=89
K10A MacKenzie Ranc 89.17 41 ⇑P P 13 13 33.6 +0.1
baz=89
N12A Clover Valley, 89.17 44 ⇓P P 13 13 33.7 +0.1
baz=89
RMW Rattlesnake Mo 89.25 35 P P 13 13 33.7 -0.1
Q14A Sevier Lake (B 89.26 46 ⇑P P 13 13 34.3 +0.2
baz=89
XAN Xi'an 89.30 308 P P 13 13 34.8 +0.4
XAN AMB AMB
comp=Z,16nm,1.0s,mb4.8
XAN AMB AMB
comp=Z,123nm,5.3s
Y19A Nutrioso 89.33 52 ⇑P P 13 13 35.4 +0.9
baz=89
RC01 Rabbit Creek A 89.33 14 eP P 13 13 32.5 -1.4
comp=Z,8.6nm,1.1s,mb4.5
I09A Lost Marbles R 89.36 40 ⇑P P 13 13 34.1 -0.3
baz=90
G08A Pilot Rock 89.45 38 ⇓P P 13 13 34.9 +0.1
baz=90
L11A Cat Creek Ranc 89.48 42 ⇓P P 13 13 34.8 -0.2
baz=90,SNR=5.9
M12A Wells 89.57 43 ⇓P P 13 13 35.5 +0.1
baz=90
D06A Cle Elum 89.59 36 ⇓P P 13 13 35.8 +0.4
baz=90
A04A Legoe Bay, Lum 89.59 34 ⇑P P 13 13 35.4 +0.1
baz=90
B05A Bryant 89.61 35 ⇓P P 13 13 35.4 -0.1
baz=90
KMI Kunming 89.63 298 P P 13 13 37.5 +1.4
KMI AP pP 13 15 27.3 +3.6
KMI XP sP 13 16 18.1 +5.6
KMI PP PP 13 17 20.1 +3.4
KMI SKS 13 23 19.8
KMI S S 13 23 45.3 -1.1
KMI XS sS 13 27 01.0 +2.7
KMI SS SS 13 30 00.3 +3.0
KMI AMB AMB
comp=Z,14nm,0.7s,mb4.9
K11A Parker Ranch, 89.66 42 ⇓P P 13 13 36.2 +0.4
baz=90
CMAR Chiang Mai Arr 89.75 290 P P 13 13 38.2 +1.4
comp=Z,7.7nm,0.8s,mb4.6,baz=138,slow=3.5,SNR=49
CMAR Chiang Mai Arr 89.75 290 P P 13 13 38.3 +1.5
CMAR pmax pmax
comp=Z,8.0nm,0.8s
V18A Ganado 89.75 50 ⇓P P 13 13 36.4 -0.1
baz=90
H09A Durkee 89.81 39 ⇑P P 13 13 36.5 0.0
baz=90
L12A House Creek Ra 89.92 42 ⇑P P 13 13 37.3 +0.2
baz=90
I10A Payette 89.97 40 ⇑P P 13 13 37.5 +0.2
baz=90
RPW Rockport 90.03 35 P P 13 13 36.8 -0.6
MFID Camas Ranch 90.16 41 ⇓P P 13 13 38.1 0.0
baz=90
S17A Black Ridge (B 90.17 48 ⇓P P 13 13 38.2 -0.2
baz=90
K12A Draper Farm, C 90.27 42 ⇓P P 13 13 38.8 +0.1
baz=90
H10A Noah's Angus R 90.30 40 ⇑P P 13 13 38.7 -0.1
baz=90
A06A Chilliwack 90.46 34 ⇓P P 13 13 39.2 -0.2
baz=91
G10A Bishop Farm, J 90.50 39 ⇑P P 13 13 39.3 -0.4
baz=91
J12A Stokes Ranch, 90.50 42 ⇓P P 13 13 39.8 +0.1
baz=91,SNR=5.8
T18A Mexican Hat 90.53 49 ⇑P P 13 13 39.9 -0.1
baz=91
D08A Wollman Farm, 90.55 37 ⇓P P 13 13 39.5 -0.3
baz=91
M14A Sheep Mountain 90.60 44 ⇓P P 13 13 40.1 -0.1
baz=91
K13A Stover Farm, H 90.78 42 ⇑P P 13 13 41.1 +0.1
baz=91
F10A Beach Ranch, E 90.83 38 ⇓P P 13 13 40.2 -1.0
baz=91
D09A Jones Farm, Ri 90.88 37 ⇓P P 13 13 40.8 -0.5
baz=91
C08A Higginbotham F 90.92 36 ⇓P P 13 13 41.1 -0.4
baz=91
A07A Ashnola River, 90.99 35 ⇓P P 13 13 41.5 -0.3
baz=91
G11A Walters Elk Ra 91.05 39 ⇓P P 13 13 41.5 -0.7
baz=91
HLID Hailey 91.09 42 ⇓P P 13 13 42.5 0.0
baz=91
HHC Hu-ho-hao-te 91.10 315 eP P 13 13 39.3 -3.2
HHC AP pP 13 15 30.3 0.0
HHC XP sP 13 16 19.6 +0.6
HHC PP PP 13 17 28.1 +0.2
HHC SKS 13 23 21.5
HHC S S 13 23 51.9 -7.0
HHC XS sS 13 27 10.5 -1.1
HHC SS SS 13 30 15.8 -2.0
HHC AMB AMB
comp=Z,14nm,0.7s,mb5.0
HHC AMB AMB
comp=Z,111nm,7.3s
SRU San Rafael 91.13 47 ⇑P P 13 13 42.6 -0.1
baz=91
J13A Cove Ranch, Pi 91.14 42 ⇓P P 13 13 42.9 +0.2
baz=91
M15A Larsen Ranch, 91.14 44 ⇑P P 13 13 42.6 -0.2
baz=91
HIA Hailar 91.24 325 ⇑iP P 13 13 42.5 -0.5
H12A Diamond D Ranc 91.38 41 ⇓P P 13 13 43.4 -0.4
baz=92
D10A Wagner Farm, O 91.44 38 ⇓P P 13 13 43.0 -1.0
baz=92
L15A Malad City 91.47 44 ⇓P P 13 13 44.0 -0.2
baz=92
J14A Carey 91.50 42 ⇓P P 13 13 44.6 +0.3
baz=92
CD2 Chengdu 91.55 303 eP P 13 13 44.8 -0.1
CD2 AP pP 13 15 35.8 +3.1
CD2 XP sP 13 16 24.3 +2.9
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CD2 AMB AMB
comp=Z,20nm,8.2s
O17A Robinson Place 91.56 46 ⇑P P 13 13 44.7 0.0
baz=92,SNR=12
ANMO Albuquerque 91.82 52 ⇑iP P 13 13 44.2 -1.8
F12A Elk City 91.83 39 ⇓P P 13 13 45.3 -0.5
baz=92
Q19A Hogan Spring (91.89 48 ⇓P P 13 13 45.9 -0.4
baz=92
COLA College 93.08 13 ⇑iP P 13 13 47.1 -4.0
LZH Lanzhou 93.93 308 eP P 13 13 54.9 -0.8
LZH AP pP 13 15 44.0 +0.4
LZH XP sP 13 16 32.5 +0.2
LZH AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,130nm,6.4s
YAK Yakutsk 95.58 339 iP P 13 14 00.7 -1.8
ZALV Zalesovo Beam 112.72 320 PKiKP PKiKP 13 19 08.7 -2.2
comp=Z,1.1nm,0.5s,baz=180,slow=0.9,SNR=4.2
ZALV Zalesovo Beam 112.72 320 i PKiKP PKiKP 13 19 08.7 -2.2
ZALV pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 112.79 312 PKiKP PKiKP 13 19 09.3 -2.0
comp=Z,0.9nm,0.5s,baz=132,slow=0.9,SNR=6.8
MKAR Makanchi Array 112.79 312 i PKiKP PKiKP 13 19 09.4 -1.9
MKAR pmax pmax
comp=Z,1.0nm,0.5s
KBL Kabul 120.19 297 ePKiKP PKPdf 13 19 25.6 -0.4
BOSA Boshof 121.28 206 PKP PKPdf 13 19 27.5 -0.8
comp=Z,2.0nm,0.6s,baz=92,slow=3.7,SNR=5.4
BOSA Boshof 121.28 206 PKiKP PKPdf 13 19 27.5 -0.9
BOSA pmax pmax
comp=Z,2.0nm,0.6s
BOSA Boshof 121.28 206 PKP PKPdf 13 19 27.5 -0.8
ARU Arti 127.69 323 i PKiKP PKPdf 13 19 38.6 -1.0
ARU 13 21 45.8
ARU Arti 127.69 323 ePKPdf PKPdf 13 19 38.2 -1.4
KEV Kevo 132.50 348 epkp PKPdf 13 19 45.8 -2.6
ARCES ARCESS Array B 132.98 348 PKiKP 13 19 41.6
comp=Z,1.4nm,0.8s,baz=96,slow=3.7,SNR=4.7
ARCES PKP PKPdf 13 19 47.7 -1.6
comp=Z,5.8nm,0.8s,baz=70,slow=2.3,SNR=17
ARCES ARCESS Array B 132.98 348 PKHKP 13 19 41.6
ARCES 13 19 47.7
ARCES pmax pmax
comp=Z,1.0nm,0.8s
ARCES pmax pmax
comp=Z,6.0nm,0.8s
JOF Joensuu 136.75 340 epkp PKPdf 13 19 54.5 -2.0
comp=Z,5.0nm,0.5s
KAF Kangasniemi 138.88 341 epkp PKPdf 13 19 49.8 -11
NB2 NORSAR Subarra 143.19 351 PKP PKPdf 13 20 04.2 -4.0
comp=Z,24nm,1.0s,baz=17,slow=3.1
MALT Malatya 144.82 302 ⇑iP PKPdf 13 20 08.9 -2.8
MALT Malatya 144.82 302 ePKP PKPdf 13 20 08.8 -2.9
AKASG Malin Array Be 145.83 326 PKPbc PKPbc 13 20 12.9 -1.7
comp=Z,13nm,0.6s,baz=42,slow=4.2,SNR=33
AKASG Malin Array Be 145.83 326 PKHKP 13 20 12.9
AKASG pmax pmax
comp=Z,13nm,0.6s
KIEV Kiev 145.84 326 ePKHKP 13 20 13.0
KIS Kishinev 148.20 321 ePKP PKPbc 13 20 20.0 -1.1
ANTO Ankara 148.68 306 ⇓iP PKPbc 13 20 22.1 -0.4
ANTO Ankara 148.68 306 ePKPbc PKPbc 13 20 22.1 -0.4
TLCR 149.16 318 ⇑iP PKPbc 13 20 21.8 -1.7
TLCR 149.16 318 ⇑P PKPbc 13 20 21.8 -1.7
KWP Kalwaria 149.68 330 ePKP PKPbc 13 20 24.0 -0.6
KWP Kalwaria 149.68 330 ⇑iP PKPbc 13 20 24.0 -0.6
KWP Kalwaria 149.68 330 ePKP PKPbc 13 20 24.0 -0.6
BUR08 Bucovina Ar. S 149.80 325 ePKPbc PKPbc 13 20 24.3 -0.6
BURAR Bucovina Array 149.81 325 ⇑iP PKPbc 13 20 25.1 +0.1
BURAR Bucovina Array 149.81 325 ⇑P PKPbc 13 20 25.1 +0.2
VRI Vrincioaia 150.03 321 ⇑iP PKPbc 13 20 24.8 -0.8
VRI Vrincioaia 150.03 321 ⇑P PKPbc 13 20 24.8 -0.8
PLOR Plostina 150.08 321 ⇓iP PKPbc 13 20 24.9 -0.8
KOLS Kolonicke sedl 150.37 329 ePKP PKPbc 13 20 26.4 +0.1
STHS Stebnicka Huta 150.49 331 ePKP PKPbc 13 20 26.5 0.0
OJC Ojcow 150.49 333 ePKiKP PKPbc 13 20 25.6 -0.9
MLR Muntele Rosu 150.69 321 ⇑iP PKPbc 13 20 26.2 -0.9
CRVS Cervenica-Dubn 150.77 330 ePKP PKPbc 13 20 26.2 -1.0
NIE Niedzica 150.89 332 ePKP PKPbc 13 20 27.4 0.0
KSP Ksiaz 151.29 338 ePKP PKPbc 13 20 27.8 -0.5
KSP Ksiaz 151.29 338 ePKPdf PKPbc 13 20 27.7 -0.6
KSP ePKPab PKPab 13 20 37.7 -0.8
KECS Kecovo 151.51 330 ePKP PKPdf 13 20 24.9 +2.7
DRGR 151.64 326 ⇓iP PKPbc 13 20 28.3 -0.9
DRGR 151.64 326 ⇓P PKPbc 13 20 28.3 -0.9
CLL Collm 151.90 342 ⇓iPKPbc PKPbc 13 20 28.7 -0.9
comp=Z,21nm,0.8s
CLL i PKPab PKPab 13 20 40.1 -0.9
comp=Z,11nm,0.9s
CLL e(pPKPab) 13 22 30.0
CLL Collm 151.90 342 ⇓iPKP PKPbc 13 20 28.7 -0.9
CLL i PKP PKPab 13 20 40.1 -0.9
BRG Berggiesshubel 152.02 341 i PKiKP PKPbc 13 20 29.2 -0.7
BRG i 13 20 41.0
BRG Berggiesshubel 152.02 341 i PKP PKPbc 13 20 29.2 -0.7
comp=Z,12nm,0.6s
BRG i 13 20 41.0
comp=Z,9.4nm,0.7s
BRG pPKP pPKPdf 13 22 27.8 +10
comp=Z,3.0nm,0.6s
PSZ Piszkesteto 152.20 330 ⇑iP PKPbc 13 20 30.6 +0.2
VYHS Vyhne 152.22 332 ePKP PKPbc 13 20 29.7 -0.8
VYHS e 13 20 42.2
KOLL Kolacno 152.34 333 ePKP PKPbc 13 20 30.2 -0.5
GZR Gura Zlata 152.52 323 ⇑iP PKPbc 13 20 30.1 -1.1
GZR Gura Zlata 152.52 323 ⇑P PKPbc 13 20 30.1 -1.1
BZS Buzias 152.99 325 ⇑iP PKPbc 13 20 31.3 -0.9
BZS Buzias 152.99 325 ⇑P PKPbc 13 20 31.3 -1.0
GRA1 Grafenberg Arr 153.85 343 ePKPab PKPab 13 20 49.0 -0.4
GRF Grafenberg Arr 153.85 343 ePKPab PKPab 13 20 49.0 -0.4
GERES GERESS Array B 153.87 339 PKP PKPdf 13 20 23.8 -1.8
comp=Z,0.3nm,0.2s,baz=117,slow=1.3,SNR=3.7
GERES PKPbc PKPbc 13 20 33.2 -0.8
comp=Z,1.2nm,0.7s,baz=108,slow=1.7,SNR=6.3
GERES PKPab PKPab 13 20 48.8 -0.7
comp=Z,0.9nm,0.4s,baz=46,slow=5.8,SNR=7.3
GERES GERESS Array B 153.87 339 PKiKP PKPdf 13 20 23.8 -1.8
GERES 13 20 33.2
GERES 13 20 48.8
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES pmax pmax
comp=Z,1.0nm,0.4s
CONA Conrad Observa 153.88 335 ⇑iP PKPab 13 20 49.6 +0.1
comp=Z,7.4nm,1.0s
CSNA Conrad Observa 153.88 335 ⇑iP PKPab 13 20 49.6 0.0
comp=Z,6.5nm,1.0s
PKSM Moragy 154.04 329 ⇓iP PKPbc 13 20 32.5 -1.9
PKSM Moragy 154.04 329 ⇓P PKPbc 13 20 32.5 -2.0
GIVF Givet 154.70 352 ePKP2 PKPab 13 20 51.2 -1.8
WTTA Wattenberg 155.92 340 PKPab 13 20 57.5 -0.9
CDF Champ du Feu 155.96 348 ePKP2 PKPab 13 20 57.0 -1.4
comp=Z,5.6nm,0.7s
HAU Haudompre 156.52 349 ePKP2 PKPab 13 20 59.3 -1.6
comp=Z,11nm,0.7s
HINF Hinteralfeld 156.61 348 ePKP2 PKPab 13 20 58.7 -2.6
LOR Lormes 157.60 353 ePKP2 PKPab 13 21 04.1 -1.5
comp=Z,3.6nm,0.6s
SSF Saint Saulge 157.84 353 ePKP2 PKPab 13 21 05.1 -1.6
comp=Z,18nm,0.8s
AVF Avril sur Loir 158.13 353 ePKP2 PKPab 13 21 06.3 -1.6
SMF Signal de Mont 158.22 352 ePKP2 PKPab 13 21 06.7 -1.6
comp=Z,21nm,0.8s
TCF Toulx Ste Croi 158.73 355 ePKP2 PKPab 13 21 08.8 -1.7
comp=Z,7.1nm,0.8s
LPL La Plagne 158.83 346 ePKP2 PKPab 13 21 10.5 -0.5
LPG La Plagne 158.85 346 ePKP2 PKPab 13 21 10.8 -0.3
VIVF Saint-Julien-l 159.85 350 ePKP2 PKPab 13 21 14.3 -1.2
comp=Z,5.8nm,0.6s
SBF Sospel 160.23 343 ePKP2 PKPab 13 21 15.6 -1.6
comp=Z,43nm,1.0s
PGF Pioggiola 160.97 339 ePKP2 PKPab 13 21 19.0 -1.5
comp=Z,10.0nm,0.9s
ESDC Sonseca Array 165.09 11 PKPab PKPab 13 21 36.7 -1.9
comp=Z,0.7nm,0.6s,baz=359,slow=6.3,SNR=5.4
TORD Torodi Ar. Bea 168.01 189 PKP PKPdf 13 20 39.5 -1.9
comp=Z,1.1nm,0.6s,baz=7.9,slow=0.6,SNR=8.8
TORD PKPab PKPab 13 21 51.2 -0.9
comp=Z,1.5nm,0.6s,baz=163,slow=4.0,SNR=10

JMA 17 13:22:56.8±0.2, 2375N×12399E, h22km±2km, M3.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.35	331	P		Pb	13 23 04.2	-0.2
HATJ				S		Sb	13 23 09.5	-0.1
JKRS	Kuro-shima	0.49	2	P		Pb	13 23 06.6	-0.1
JKRS				S		Sb	13 23 13.3	-0.1
JIJ	Ishigaki jima	0.63	13	P		Pb	13 23 08.7	-0.4
JIJ				S		Sb	13 23 17.1	-0.3
IRIF	Iriomote-Funau	0.63	338	P		Pb	13 23 08.9	-0.2
JTJ	Tarama	1.10	36	S		Sb	13 23 31.4	+0.3
YOJ	Yonaguni jima	1.14	309	P		Pn	13 23 17.0	-0.5
JMJ	Miyako jima 2	1.59	48	S		Sn	13 23 43.7	+0.1

IDC 17 14:09:36.4±18.0, 638S×15118E, h237km±149km, mb3.2/2, mb1 3.5/2, mb1mx2.9/14, mbtmp3.2/2, Error ellipse: s-maj=131.1km s-min=93.0km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.20	229	P		P	14 14 03.7	-0.2
	1.7nm,0.4s,baz=53,slow=9.9,SNR=30							
ASAR	Alice Springs	23.91	222	P		P	14 14 29.1	+0.3
	1.1nm,0.6s,baz=58,slow=9.0,SNR=38							
TORD	Torodi Ar. Bea	149.21	285	PKPbc		PKPbc	14 28 57.4	-0.5
	0.3nm,0.7s,baz=84,slow=2.7,SNR=2.9							

*ISCJB **17** 14:18:53.8±0.9, 3378N±003×3603E±007, h0km, Error ellipse: s-maj=9.0km s-min=4.0km az=2.9*
*CSEM **17** 14:18:53.2, 3372N×3581E, h32km, ML2.8, After GRAL*
*GRAL **17** 14:18:53.2±0.3, 3372N×3581E, h33km±3km, MD2.8, Fault plane solution: NP1:φ±210.00000°, δ90.00000°, λ60.00000°.*
*GII **17** 14:18:53.1±1.5, 3375N×3602E, h0km, ML1.4/1, EXPLOSION*

ISC 17 14:18:54.2±0.9, 3379N±003×3605E±008, h0km, n12, σ1§04/20, 1C-2D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.35	290	⇑eP		Pg	14 18 59.6	-1.2
BHL				eS		Sg	14 19 04.4	-1.0
RCY	Rachaya	0.36	212	⇓eP		Pg	14 18 59.7	-1.4
RCY				eS		Sg	14 19 04.5	-1.1
HWQ	Hawqa	0.49	351	⇓eP		Pg	14 19 04.1	+0.3
HWQ				eS		Sg	14 19 12.2	+2.1
HRI	Mount Hermon	0.58	207	Pg		Pg	14 19 05.3	0.0
KSDI	Kefar Szold	0.68	209	Pg		Pg	14 19 06.4	-0.8
KSDI				Sg		Sg	14 19 17.2	+1.3
KSHT	Keshet	0.83	194	Pg		Pg	14 19 10.6	+0.5
MMA0B	Mount Meron ar	0.94	215	Pg		Pg	14 19 11.6	-0.6
MMA0B				Sg		Sg	14 19 25.8	+1.4
MMC7	Mount Meron ar	0.94	216	Pg		Pg	14 19 11.2	-1.0
HNTI	Hanita	1.01	226	Pg		Pg	14 19 13.9	+0.3
HNTI				Sg		Sg	14 19 28.6	+1.9
MMLI	Mount Malkishu	1.45	201	Pn		Pn	14 19 20.6	-1.0
MMLI				Sn		Sn	14 19 41.8	+0.6
HMDT	Nahal Hemdat	1.59	196	Pn		Pn	14 19 22.7	-0.9
HMDT				Sn		Sn	14 19 45.1	+0.3
SLTI	Sal'it	1.76	209	Sn		Sn	14 19 49.9	+0.9

IDC 17 14:19:33.0±1.7, 3787S×7958E, h0km, mb4.2/5, mb1 4.3/5, mb1mx3.9/18, mbtmp4.2/5, MS4.0/6, Ms1 3.9/6, ms1mx3.6/21, Error ellipse: s-maj=41.8km s-min=36.9km az=110.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	30.95	92	LR		LR	14 35 33.0	
	comp=Z,304nm,19.9s,baz=141,slow=31							
MAW	Mawson	31.23	192	LR		LR	14 35 21.1	
	comp=Z,120nm,18.8s,baz=70,slow=30							
BOSA	Boshof	45.81	265	LR		LR	14 42 58.9	
	comp=Z,72nm,19.0s,baz=299,slow=31							
ASAR	Alice Springs	48.15	89	P		P	14 28 15.3	+0.3
	2.5nm,1.1s,baz=225,slow=7.6,SNR=12							
STKA	Stephens Creek	50.42	103	P		P	14 28 30.2	-2.0
	3.5nm,1.1s,baz=249,slow=8.6,SNR=3.4							
WRA	Warramunga Arr	50.44	85	P		P	14 28 33.4	+0.8
	5.5nm,0.9s,baz=237,slow=7.3,SNR=24							
QSPA	South Pole Qui	52.29	180	P		P	14 28 46.4	+0.7
	3.7nm,1.0s,baz=259,slow=2.6,SNR=5.0							
CTA	Charters Tower	59.79	93	LR		LR	14 50 33.1	
	comp=Z,273nm,22.0s,baz=309,slow=31							
MKAR	Makanchi Array	84.31	2	P		P	14 32 06.2	-0.1
	0.7nm,0.7s,baz=166,slow=6.2,SNR=6.7							
TORD	Torodi Ar. Bea	88.64	288	LR		LR	15 07 40.7	
	comp=Z,60nm,20.1s,baz=145,slow=33							
AFI	Afiamalu	95.72	112	LR		LR	15 07 44.9	
	comp=Z,100nm,19.2s,baz=52,slow=30							

*MOS **17** 14:31:40.9±1.1, 569N×12576E, h50km, mb5.5/36, Error ellipse: s-maj=13.3km s-min=6.2km az=106.1*
*ISCJB **17** 14:31:48.7±0.4, 565N±002×12600E±003, h120km±2km, mb5.2/102, Error ellipse: s-maj=4.9km s-min=3.8km az=174.3*
*MAN **17** 14:31:48, 561N×12595E, h101km, mb5.9, ML4.9, MS5.4*
MAN INTENSITY II - GEN SANTOS CITY; INTENSITY I - DAVAO CITY.
*GCMT **17** 14:31:49.1±0.2, 560N×12609E, h103km±1km, MW5.1/89, Moment Tensor Solution. s60,c76; s89,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.48±.12; $M_{\theta\theta}$1.21±.13; $M_{\phi\phi}$4.27±.16; $M_{r\theta}$1.65±.10; $M_{r\phi}$-0.26±.14; $M_{\theta\phi}$1.99±.13; Best double couple: M_o5.45300×10^{16} NP1:φ346.00000°, δ35.00000°, λ-111.00000°. NP2: φ192.00000°, δ57.00000°, λ-76.00000°. Principal axes: T 4.6620, Plg11.0000°, Azm271.0000°; N 1.5820, Plg12.0000°, Azm4.0000°; P -6.2440, Plg73.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **17** 14:31:49.0, 570N×12590E, h108km, mB5.0, mb5.0*
*NEIC **17** 14:31:49.1±0.1, 565N×12591E, mb5.4/42, Error ellipse: s-maj=7.0km s-min=4.1km az=83.0*
NEIC Felt [II PIVS] at General Santos.
*IDC **17** 14:31:49.7±0.7, 563N×12587E, h111km±5km, mb4.9/20, mb1 5.0/22, mb1mx4.9/25, mbtmp4.9/22, MS3.9/13, Ms1 3.9/13, ms1mx3.6/27, Error ellipse: s-maj=15.9km s-min=6.8km az=81.0*
*DJA **17** 14:31:51, 561N×12612E, h71km, Mw5.4/11*

ISC 17 14:31:49.9±0.3, 564N±002×12601E±003, h116km±2km, h109km±1.6km: pP-P, n303, σ1§16/292, mb5.2/102, 22C-31D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.15	293	⇓iP		Pn	14 32 09.9	-3.2
GSPH				iS		Sn	14 32 26.7	-4.1
MATI	Mati	1.32	11	eP		Pn	14 32 13.1	-2.0
MATI				eS		Sn	14 32 29.5	-4.6
DAV	Davao City (W)	1.48	343	P		Pn	14 32 15.8	-1.2
	646nm,0.3s,baz=188,slow=1.2,SNR=166							
DAV				S		Sn	14 32 36.6	-0.9
	2µm,0.3s,baz=81,slow=21,SNR=19							
DAV	Davao City (W)	1.48	343	eP		Pn	14 32 15.7	-1.2
DMPH	Davao City--Mi	1.52	341	⇓iP		Pn	14 32 15.9	-1.4
DMPH				iS		Sn	14 32 44.2	+6.0
KCP	Kidapawan	1.64	326	⇓eP		Pn	14 32 22.0	+3.2
KCP				iS		Sn	14 32 46.2	+5.4
CTBH	Cotabato--PC H	2.36	312	⇑eP		Pn	14 32 26.2	-1.6
CTBH				iS		Sn	14 32 54.2	-2.5
BUKP	Musuan	2.42	337	eP		Pn	14 32 28.4	-0.2
BIPH	Bislig	2.55	8	⇑iP		Pn	14 32 30.3	0.0
BIPH				iS		Sn	14 33 02.1	+0.9
BUTP	Butuan	3.33	353	eP		Pn	14 32 41.1	+0.6
BUTP				eS		Sn	14 33 30.7	+11
PAGZ	Pagadian	3.41	310	eP		Pn	14 32 40.6	-1.0
DCPH	Dipolog City	3.94	318	⇑eP		Pn	14 32 49.0	+0.4
IPIL	Ipil	4.03	302	eP		Pn	14 32 49.2	-0.6
IPIL				eS		Sn	14 33 36.3	+0.1
ZMPH	Zamboanga City	4.14	289	⇑iP		Pn	14 32 49.7	-1.6
ZMPH				iS		Sn	14 33 23.0	-16
SCPH	Surigao	4.15	353	eP		Pn	14 32 49.7	-1.7
SCPH				eS		Sn	14 33 39.5	+0.4
TBP	Tagbilaran	4.55	332	eP		Pn	14 32 56.5	-0.3
TBP				eS		Sn	14 33 55.4	+6.5
MSLP	Maasin	4.61	346	eP		Pn	14 32 56.7	-0.9
MSLP				eS		Sn	14 33 42.0	-8.2
LLP	Lapu-Lapu	5.07	337	eP		Pn	14 33 04.0	+0.2
LLP				eS		Sn	14 34 01.4	+0.1
OCLP	Ormoc	5.55	346	eP		Pn	14 33 10.3	0.0
OCLP				eS		Sn	14 34 18.9	+6.0
PLP	Palo	5.58	350	⇓eP		Pn	14 33 10.4	-0.3
PLP				eS		Sn	14 33 58.3	-15
GUIM	Jordan	6.00	326	eP		Pn	14 33 17.4	+0.9
RCP	Roxas	6.71	331	⇑eP		Pn	14 33 27.2	+1.2
CNP	Catarman	6.96	349	eP		Pn	14 33 29.0	-0.3
KALP	Kalibo	7.01	329	eP		Pn	14 33 34.6	+4.5
CUYO	Cuyo Island	7.16	317	eP		Pn	14 33 32.0	0.0
MYLDM	Lahad Datu	7.50	267	⇓P		Pn	14 33 38.4	+1.7
OTRP	Odiongan	7.75	330	eP		Pn	14 33 42.1	+2.0

PVCP	**Virac**	**8.11**	**347**	*e*P		**Pn**	**14 33 46.1**	**+1.1**
TSM	**Tawau**	**8.22**	**261**	⇓P		**Pn**	**14 33 46.9**	**+0.3**
PPR	**Puerto Princes**	**8.30**	**300**	⇑*i*P		**Pn**	**14 33 48.1**	**+0.5**
SJMP	**San Jose**	**8.32**	**325**	*e*P		**Pn**	**14 33 48.6**	**+0.7**
BUSP	**Coron**	**8.54**	**318**	*e*P		**Pn**	**14 33 49.8**	**-1.0**
ENPP	**El Nido**	**8.55**	**311**	*e*P		**Pn**	**14 33 50.9**	**0.0**
BATP	**Bataraza**	**8.73**	**292**	*e*P		**Pn**	**14 33 54.1**	**+0.7**
SDKM	**Sandakan**	**8.78**	**270**	⇓P		**Pn**	**14 33 55.3**	**+1.3**
KDM	**Kudat**	**9.21**	**278**	⇑P		**Pn**	**14 34 03.0**	**+3.0**
KKM	**Kota Kinabalu**	**9.76**	**273**	⇓P		**Pn**	**14 34 09.2**	**+1.8**
KKM	**Kota Kinabalu**	**9.76**	**273**	*e*P		**Pn**	**14 34 09.2**	**+1.8**
LUBP	**Lubang**	**9.85**	**325**	*e*P		**Pn**	**14 34 11.6**	**+3.1**
SCZP	**Santa Cruz**	**11.72**	**330**	*e*P		**Pn**	**14 34 38.5**	**+5.0**
CAUP	**Cauayan**	**11.96**	**340**	*e*P		**Pn**	**14 34 37.7**	**+1.0**
BOLP	**Bolinao**	**12.23**	**331**	*e*P		**Pn**	**14 34 44.8**	**+4.5**
KAPI	**Kappang**	**12.29**	**211**	Pn		**Pn**	**14 34 41.0**	**-0.1**
	766nm,0.8s,SNR=6.7							
KAPI	**Kappang**	**12.29**	**211**	P		**Pn**	**14 34 40.6**	**-0.6**
	3.9nm,0.3s,baz=30,slow=9.0,SNR=17							
KAPI	**Kappang**	**12.29**	**211**	*e*P		**Pn**	**14 34 40.7**	**-0.4**
	171nm,1.1s							
APYP	**Conner**	**13.01**	**339**	*e*P		**Pn**	**14 34 55.2**	**+4.8**
ABRA	**Dolores**	**13.01**	**337**	*e*P		**Pn**	**14 34 56.3**	**+5.8**
BTM	**Bintulu**	**13.12**	**260**	⇓P		**Pn**	**14 34 55.0**	**+3.1**
SBUM	**Sibu**	**14.12**	**258**	⇓P		**Pn**	**14 35 07.6**	**+2.7**
BATI	**Baumata**	**15.92**	**188**	P		**Pn**	**14 35 27.9**	**+0.4**
	18nm,0.3s,baz=342,slow=1.3,SNR=26							
BATI				S		**S**	**14 38 27.5**	**-2.6**
	3.5nm,0.3s,baz=289,slow=11,SNR=4.2							
BATI				LR		LR	14 41 44.8	
	comp=Z,714nm,19.1s,baz=117,slow=38							
KSM	**Kuching**	**16.21**	**256**	⇑P		**Pn**	**14 35 31.9**	**+0.8**
KSM	**Kuching**	**16.21**	**256**	*e*P		**Pn**	**14 35 32.3**	**+1.2**
TRT	**Tretes**	**18.81**	**225**	⇓*e*P		**P**	**14 36 01.0**	**+0.3**
TPI	**Tanjungpandan**	**20.15**	**246**	⇓*e*P		**P**	**14 36 16.0**	**+0.8**
TPI	**Tanjungpandan**	**20.15**	**246**	⇓*e*P		**P**	**14 36 16.0**	**+0.8**
GUMO	**Guam**	**20.18**	**66**	LR		LR	14 42 46.0	
	comp=Z,300nm,18.6s,baz=268,slow=32							
QIZ	**Qiongzhong**	**20.63**	**312**	P		**P**	**14 36 20.8**	**+0.5**
QIZ				AP			14 36 39.8	
QIZ				XP		sP	14 36 52.6	-3.8
QIZ				S		**S**	**14 40 06.4**	**+1.9**
QIZ				AMB		AMB		
	comp=Z,38nm,1.0s							
QIZ				LR		LR		
	comp=N,288nm,13.3s							
QIZ				LR		LR		
	comp=Z,410nm,14.9s							
JOW	**Kunigami**	**21.18**	**6**	P		**P**	**14 36 26.0**	**-0.1**
	comp=Z,63nm,0.7s,mb5.1,baz=182,slow=8.6,SNR=6.9							
GZH	**Guangzhou**	**21.22**	**326**	P		**P**	**14 36 31.3**	**+4.8**
GZH				S		**S**	**14 40 19.3**	**+3.3**
GZH				LR		LR		
	comp=N,499nm,15.4s							
GZH				LR		LR		
	comp=E,594nm,17.6s							
MYKOM	**Kota Tinggi**	**22.44**	**261**	⇓P		**P**	**14 36 40.4**	**+0.8**
KTGM	**Kuala Trenggan**	**22.78**	**270**	⇓P		**P**	**14 36 44.1**	**+1.2**
KGM	**Kluang**	**22.93**	**262**	⇑P		**P**	**14 36 45.7**	**+1.4**
FITZ	**Fitzroy Crossi**	**23.59**	**181**	⇑*i*P		**P**	**14 36 49.6**	**-0.7**
	comp=E,212nm,0.6s,mb5.7							
FITZ				*e*S		**S**	**14 40 54.7**	**-1.5**
FITZ				*e*SCP		ScP	14 44 01.0	+0.9
FITZ				*e*SCS		ScS	14 47 44.6	-2.4
FITZ	**Fitzroy Crossi**	**23.59**	**181**	P		**P**	**14 36 50.1**	**-0.2**
	comp=E,123nm,0.7s,mb5.3,baz=8.7,slow=11,SNR=103							
FITZ				S		**S**	**14 40 57.3**	**+1.2**
	comp=E,8.8nm,0.9s,baz=326,slow=21,SNR=3.2							
FRIM	**Kepong**	**24.43**	**265**	⇑P		**P**	**14 36 59.1**	**+1.0**
IPM	**Ipoh**	**24.92**	**269**	⇑P		**P**	**14 37 02.9**	**+0.4**
KKTK	**Khon Kaen**	**25.09**	**297**	P		**P**	**14 37 06.0**	**+2.0**
SNG	**Songkhla**	**25.28**	**275**	P		**P**	**14 37 07.0**	**+1.2**
	comp=E,160nm,1.0s,mb5.4							
SSE	**Sheshan**	**25.72**	**350**	P		**P**	**14 37 11.5**	**+2.0**
SSE				XP		sP	14 37 48.4	+0.2
SSE				S		**S**	**14 41 34.3**	**+4.4**
SSE				AMB		AMB		
	comp=Z,65nm,0.7s,mb5.2							
SSE				AMB		AMB		
	comp=Z,290nm,6.5s							
SSE				LR		LR		
	comp=N,149nm,25.0s							
SSE				LR		LR		
	comp=E,120nm,25.0s							
SSE				LR		LR		
	comp=Z,218nm,22.0s							
PMG	**Port Moresby**	**25.84**	**125**	*e*P		**P**	**14 37 10.1**	**-0.7**
PMG				pmax		pmax		
	comp=Z,110nm,0.8s							
PMG	**Port Moresby**	**25.84**	**125**	*e*P		**P**	**14 37 10.1**	**-0.6**
	comp=Z,110nm,0.8s,mb5.3							
COEN	**Coen**	**25.87**	**139**	*e*P		**P**	**14 37 10.9**	**-0.1**
	comp=Z,114nm,1.0s,mb5.3							
CBIJ	**Chichi jima**	**26.32**	**34**	P		**P**	**14 37 13.3**	**-1.6**
	comp=Z,82nm,0.5s,mb5.4,baz=299,slow=11,SNR=7.8							
CBIJ				LR		LR	14 45 32.9	
	comp=Z,162nm,19.9s,baz=192,slow=31							
WRAB	**Tennant Creek**	**26.70**	**162**	P		**P**	**14 37 17.0**	**-1.5**
	comp=Z,325nm,1.0s,mb5.8,SNR=21							
WRAB	**Tennant Creek**	**26.70**	**162**	*e*P		**P**	**14 37 17.2**	**-1.3**
WRAB				pmax		pmax		
	comp=Z,93nm,1.0s,mb5.3							
WRAB	**Tennant Creek**	**26.70**	**162**	*e*P		**P**	**14 37 17.2**	**-1.3**
	comp=Z,93nm,1.0s,mb5.3							
WRA	**Warramunga Arr**	**26.71**	**162**	P		**P**	**14 37 17.6**	**-0.9**
	comp=Z,37nm,0.9s,mb4.9,baz=340,slow=9.8,SNR=122							
WRA				S		**S**	**14 41 54.9**	**+9.2**
	comp=Z,16nm,1.0s,baz=335,slow=19,SNR=6.5							
WB2	**Warramunga Arr**	**26.71**	**162**	⇓*i*P		**P**	**14 37 17.5**	**-1.0**
WB2				*e*SCS		ScS	14 47 58.0	-1.8
NJ2	**Nanjing**	**27.11**	**347**	*e*P		**P**	**14 37 23.4**	**+1.4**
NJ2				AMB		AMB		
	comp=Z,80nm,1.2s,mb5.1							
NST	**Nakhon Sawan**	**27.28**	**293**	P		**P**	**14 37 24.0**	**+0.2**
MBWA	**Marble Bar**	**27.34**	**193**	*e*P		**P**	**14 37 23.4**	**-0.7**
	comp=Z,56nm,0.7s,mb5.2							
NANT	**Nan**	**27.93**	**300**	P		**P**	**14 37 28.1**	**-1.4**
	comp=Z,146nm,0.9s,mb5.5							
BDT	**Bhumibol Dam**	**28.83**	**296**	P		**P**	**14 37 41.0**	**+3.5**
CHRT	**Chiangrai**	**29.16**	**301**	P		**P**	**14 37 40.0**	**-0.4**
	comp=Z,126nm,0.7s,mb5.7							
CMAR	**Chiang Mai Arr**	**29.32**	**298**	P		**P**	**14 37 41.5**	**-0.3**
	comp=Z,5.5nm,0.7s,mb4.3,baz=116,slow=6.9,SNR=34							
CMAR				PcP		PcP	14 40 46.8	+1.0
	comp=Z,2.6nm,0.7s,baz=117,slow=1.4,SNR=7.1							
CMAR				ScP		ScP	14 44 17.6	+0.5
	comp=Z,14nm,0.9s,baz=138,slow=1.5,SNR=35							
CMAR				PKiKP		PKiKP	14 48 18.2	-1.2
	comp=Z,0.4nm,0.7s,baz=277,slow=1.2,SNR=4.2							
CMAR	**Chiang Mai Arr**	**29.32**	**298**	P		**P**	**14 37 41.5**	**-0.3**
CMAR				PcP		PcP	14 40 46.8	+1.0
CMAR				ScP		ScP	14 44 17.6	+0.5
KMI	**Kunming**	**29.55**	**313**	P		**P**	**14 37 45.5**	**+1.8**
KMI				AP		pP	14 38 08.5	-0.7
KMI				XP		sP	14 38 23.8	+1.2
KMI				PP		PP	14 38 46.4	-6.3
KMI				PCP		PcP	14 40 48.5	+2.2
KMI				S		**S**	**14 42 31.9**	**+1.6**
KMI				XS		sS	14 43 15.0	+0.4
KMI				SS		SS	14 44 13.8	-27
KMI				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.5							
KMI				AMB		AMB		
	comp=Z,77nm,5.0s							
KMI				LR		LR		
	comp=N,315nm,13.2s							
KMI				LR		LR		
	comp=E,325nm,21.0s							
KMI				LR		LR		
	comp=Z,530nm,18.9s							
ASAR	**Alice Springs**	**30.13**	**165**	P		**P**	**14 37 48.5**	**-0.4**
	comp=Z,19nm,0.6s,mb4.9,baz=346,slow=7.4,SNR=149							
ASAR				ScP		ScP	14 44 20.6	+1.0
	comp=Z,3.9nm,0.8s,baz=339,slow=1.5,SNR=6.2							
KSRS	**Korea Array**	**31.71**	**3**	P		**P**	**14 38 03.4**	**+0.7**
	comp=Z,13nm,0.6s,mb4.8,baz=186,slow=9.7,SNR=35							
KSRS				PcP		PcP	14 40 52.6	+0.9
	comp=Z,4.6nm,0.8s,baz=200,slow=2.9,SNR=7.1							
KSRS				ScP		ScP	14 44 26.5	+2.0
	comp=Z,2.5nm,0.8s,baz=181,slow=5.3,SNR=4.4							
KSRS				LR		LR	14 51 43.5	
	comp=Z,94nm,19.5s,baz=195,slow=38							
XAN	**Xi'an**	**32.40**	**333**	P		**P**	**14 38 07.1**	**-1.6**
XAN				AMB		AMB		
	comp=Z,20nm,0.6s,mb5.0							
XAN				AMB		AMB		
	comp=Z,111nm,4.7s							
CTA	**Charters Tower**	**32.40**	**143**	⇓*i*P		**P**	**14 38 09.9**	**+1.0**
	comp=Z,34nm,1.1s,mb5.0							
CTA	**Charters Tower**	**32.40**	**143**	P		**P**	**14 38 10.1**	**+1.2**
	comp=Z,46nm,1.0s,mb5.2,baz=321,slow=10,SNR=55							
CTA	**Charters Tower**	**32.40**	**143**	⇓*i*P		**P**	**14 38 09.9**	**+1.0**
CTA				pmax		pmax		
	comp=Z,34nm,1.1s							
CTAO	**Charters Tower**	**32.40**	**143**	*e*P		**P**	**14 38 09.9**	**+1.0**
CTAO				pmax		pmax		
	comp=Z,66nm,1.1s,mb5.3							
CTAO	**Charters Tower**	**32.40**	**143**	*e*P		**P**	**14 38 09.8**	**+1.0**
	comp=Z,66nm,1.1s,mb5.3							
CD2	**Chengdu**	**32.69**	**323**	⇓*i*P		**P**	**14 38 12.9**	**+1.5**
CD2				AP		pP	14 38 37.6	+0.7
CD2				XP		sP	14 38 50.8	+0.5
CD2				PP		PP	14 39 26.5	-1.0
CD2				PCP		PcP	14 40 55.6	+1.0
CD2				S		**S**	**14 43 20.8**	**+1.5**
CD2				XS		sS	14 44 02.1	-1.4
CD2				PCS		PcS	14 44 39.5	-0.4
CD2				SS		SS	14 45 26.4	-18
CD2				SCS		ScS	14 48 26.8	-1.2
CD2				AMB		AMB		
	comp=Z,30nm,1.0s,mb5.1							
CD2				AMB		AMB		
	comp=Z,290nm,7.2s							
CD2				LR		LR		
	comp=N,370nm,13.2s							
CD2				LR		LR		
	comp=E,240nm,13.2s							
CD2				LR		LR		
	comp=Z,280nm,13.2s							
MAJO	**Matsushiro**	**32.72**	**18**	*e*P		**P**	**14 38 10.1**	**-1.4**
MAJO				pmax		pmax		
	comp=Z,12nm,0.8s,mb4.8							
MAJO	**Matsushiro**	**32.72**	**18**	*e*P		**P**	**14 38 10.1**	**-1.4**
	comp=Z,12nm,0.8s,mb4.8							
MAT	**Matsushiro**	**32.72**	**18**	P		**P**	**14 38 10.9**	**-0.6**
MJAR	**Matsushiro Arr**	**32.72**	**18**	P		**P**	**14 38 10.9**	**-0.6**
	comp=Z,8.4nm,0.9s,mb4.6,baz=197,slow=9.5,SNR=15							
MJAR				PcP		PcP	14 40 54.9	+0.3
	comp=Z,3.8nm,0.8s,baz=176,slow=3.0,SNR=4.8							
MJAR				ScP		ScP	14 44 30.1	+2.0
	comp=Z,2.3nm,0.8s,baz=164,slow=3.3,SNR=5.5							
MJAR	**Matsushiro Arr**	**32.72**	**18**	P		**P**	**14 38 10.9**	**-0.6**
MJAR							14 40 54.9	
DL2	**Dalian**	**33.35**	**354**	P		**P**	**14 38 17.3**	**+0.3**
DL2				AMB		AMB		
	comp=Z,20nm,0.7s,mb5.1							
BJI	**Beijing**	**35.38**	**347**	P		**P**	**14 38 33.8**	**-0.6**
BJI				AP		pP	14 38 58.8	-1.4
BJI				XP		sP	14 39 09.9	-3.7
BJI				S		**S**	**14 44 03.5**	**+3.1**
BJI				AMB		AMB		
	comp=Z,27nm,0.9s,mb5.1							
BJI				LR		LR		
	comp=N,270nm,10.7s							
BJI				LR		LR		
	comp=E,174nm,8.5s							
BJI				LR		LR		
	comp=Z,247nm,25.1s							
SNY	**Shenyang**	**36.10**	**357**	⇓P		**P**	**14 38 41.3**	**+0.8**
SNY				XP		sP	14 39 23.5	+3.7
SNY				S		**S**	**14 44 08.8**	**-2.6**
SNY				AMB		AMB		
	comp=Z,103nm,0.7s,mb5.9							
SNY				AMB		AMB		
	comp=Z,146nm,4.8s							
FORT	**Forrest**	**36.27**	**177**	*e*P		**P**	**14 38 41.9**	**-0.2**
	comp=Z,59nm,0.4s,mb5.9							
LZH	**Lanzhou**	**36.51**	**329**	*e*P		**P**	**14 38 44.0**	**-0.1**
LZH				AP		pP	14 39 07.0	-3.0
LZH				XP		sP	14 39 18.8	-4.6
LZH				*e*S		**S**	**14 44 18.0**	**+0.2**
LZH				XS		sS	14 45 01.3	-1.5
LZH				*e*SS		SS	14 46 54.0	-6.9
LZH				AMB		AMB		
	comp=Z,33nm,1.6s,mb5.0							
LZH				AMB		AMB		
	comp=Z,240nm,5.2s							
LZH				LR		LR		
	comp=N,402nm,15.9s							
LZH				LR		LR		
	comp=Z,782nm,16.7s							
HNR	**Honiara**	**36.98**	**114**	P		**P**	**14 38 48.3**	**-0.1**
	comp=Z,158nm,0.7s,mb6.0,baz=216,slow=5.0,SNR=8.7							
HNR				LR		LR	14 51 57.7	
	comp=Z,188nm,19.3s,baz=75,slow=32							
HNR	**Honiara**	**36.98**	**114**	*e*P		**P**	**14 38 48.0**	**-0.5**
HNR				pmax		pmax		
	comp=Z,144nm,0.8s,mb6.0							
HNR	**Honiara**	**36.98**	**114**	*e*P		**P**	**14 38 48.0**	**-0.5**
	comp=Z,144nm,0.8s,mb6.0							
HHC	**Hu-ho-hao-te**	**37.37**	**342**	*e*P		**P**	**14 38 52.6**	**+1.2**
HHC				S		**S**	**14 44 32.4**	**+1.6**
VLA	**Vladivostok**	**37.69**	**7**	*e*P		**P**	**14 38 54.4**	**+0.4**
VLA				*e*			14 39 08.5	
VLA				S		PP	14 40 41.0	+19
VLA				pmax		pmax		
	comp=Z,126nm,1.2s,mb5.6							
KLBR	**Kellerberrin**	**37.85**	**192**	*e*P		**P**	**14 38 55.1**	**-0.4**
	comp=Z,147nm,1.2s,mb5.7							
CN2	**Changchun**	**38.01**	**359**	⇑P		**P**	**14 38 57.0**	**+0.3**
CN2				*e*AP		pP	14 39 22.4	-0.3
CN2				*e*S		**S**	**14 44 42.4**	**+2.1**
CN2				AMB		AMB		
	comp=Z,20nm,0.5s,mb5.2							
CN2				AMB		AMB		
	comp=Z,200nm,5.0s							
CN2				LR		LR		
	comp=N,200nm,18.0s							
CN2				LR		LR		
	comp=E,200nm,18.0s							
CN2				LR		LR		
	comp=Z,200nm,18.0s							
MUN	**Mundaring**	**38.56**	**193**	⇓*i*P		**P**	**14 39 01.1**	**-0.3**
MDJ	**Mudanjiang**	**38.95**	**4**	P		**P**	**14 39 06.3**	**+1.8**
MDJ				AP		pP	14 39 29.3	-1.4
MDJ				XP		sP	14 39 41.0	-2.9
MDJ				PP		PP	14 40 37.9	+1.8
MDJ				SCP		ScP	14 44 53.0	+2.4
MDJ				S		**S**	**14 44 59.1**	**+4.7**
MDJ				PCS		PcS	14 45 03.8	+1.5
MDJ				SCS		ScS	14 49 05.3	+3.5
MDJ				AMB		AMB		
	comp=Z,52nm,1.0s,mb5.3							
MDJ				AMB		AMB		
	comp=Z,108nm,5.8s							
MDJ				LR		LR		
	comp=N,148nm,34.6s							
MDJ				LR		LR		
	comp=E,59nm,21.6s							
MDJ				LR		LR		
	comp=Z,199nm,34.3s							
NWAO	**Narrogin (SRO)**	**39.25**	**192**	P		**P**	**14 39 07.3**	**+0.2**
	comp=Z,63nm,0.6s,mb5.6,baz=18,slow=8.5,SNR=71							
NWAO	**Narrogin (SRO)**	**39.25**	**192**	*e*P		**P**	**14 39 07.1**	**-0.1**
NWAO				pmax		pmax		
	comp=Z,114nm,1.0s							
NWAO	**Narrogin (SRO)**	**39.25**	**192**	*e*P		**P**	**14 39 07.1**	**-0.1**
	comp=Z,114nm,1.0s,mb5.7							
ERM	**Erimo**	**39.30**	**20**	*c i*P		**P**	**14 39 09.2**	**+1.7**
STKA	**Stephens Creek**	**40.16**	**159**	⇓*i*P		**P**	**14 39 15.2**	**+0.5**
	comp=Z,169nm,0.8s,mb5.9							
STKA				*e*SCP		ScP	14 44 56.6	+1.1
STKA				*e*			14 45 11.8	
STKA	**Stephens Creek**	**40.16**	**159**	P		**P**	**14 39 15.2**	**+0.5**
	comp=Z,208nm,0.8s,mb6.0,baz=334,slow=8.0,SNR=386							
STKA				ScP		ScP	14 44 56.7	+1.2
	comp=Z,6.8nm,0.8s,baz=345,slow=2.8,SNR=4.4							
LSA	**Lhasa**	**40.66**	**310**	P		**P**	**14 39 20.6**	**+1.7**
GTA	**Gaotai**	**41.10**	**329**	P		**P**	**14 39 22.0**	**-0.4**
GTA				XP		sP	14 39 59.1	-2.9
GTA				PP		PP	14 41 00.6	+1.0
GTA				PCP		PcP	14 41 20.9	+1.0
GTA				SCP		ScP	14 44 59.4	+0.2
GTA				S		**S**	**14 45 23.6**	**-3.1**
GTA				XS		sS	14 46 08.8	-3.6
GTA				SCS		ScS	14 49 12.8	-2.1
GTA				AMB		AMB		
	comp=Z,7.0nm,0.8s,mb4.5							
GTA				AMB		AMB		
	comp=Z,107nm,6.6s							
GTA				LR		LR		
	comp=N,154nm,16.2s							
GTA				LR		LR		
	comp=E,151nm,15.3s							
GTA				LR		LR		
	comp=Z,156nm,16.2s							
TAPN	**Taplejung**	**42.33**	**305**	*e*P		**P**	**14 39 33.2**	**+0.6**
	comp=Z,31nm,0.5s,mb5.3							
ODAN	**Odare**	**42.40**	**304**	*e*P		**P**	**14 39 33.5**	**+0.3**
	comp=Z,58nm,0.6s,mb5.5							
BOK	**Bokaro**	**42.59**	**299**	*e*P		**P**	**14 39 34.0**	**-0.8**
RAMN	**Ramite**	**43.09**	**304**	*e*P		**P**	**14 39 39.3**	**+0.6**
	comp=Z,56nm,0.6s,mb5.5							
ARMA	**Armidale**	**43.45**	**147**	*e*P		**P**	**14 39 42.6**	**+1.1**
YSS	**Yuzh-Sakhalins**	**43.61**	**17**	⇑*e*P		**P**	**14 39 43.2**	**+0.6**
YSS				pmax		pmax		
	comp=Z,41nm,1.1s,mb5.1							
YSS	**Yuzh-Sakhalins**	**43.61**	**17**	*e*P		**P**	**14 39 42.6**	**0.0**
	comp=Z,23nm,0.6s,mb5.1							
JIRN	**Jiri**	**43.69**	**305**	*e*P		**P**	**14 39 44.0**	**+0.4**
	comp=Z,72nm,0.6s,mb5.6							
GUN	**Gumba**	**44.04**	**305**	*e*P		**P**	**14 39 47.1**	**+0.7**
	comp=Z,71nm,0.6s,mb5.5							
PKI	**Pulchoki**	**44.30**	**304**	*e*P		**P**	**14 39 48.6**	**+0.1**
KKN	**Kakani**	**44.49**	**304**	*e*P		**P**	**14 39 50.0**	**+0.1**
	comp=Z,27nm,0.6s,mb5.1							
DMN	**Daman**	**44.56**	**304**	*e*P		**P**	**14 39 50.3**	**-0.3**
ULN	**Ulaanbaatar**	**45.09**	**342**	*e*P		**P**	**14 39 53.9**	**-0.5**
ULN				pmax		pmax		
	comp=Z,35nm,0.9s,mb5.1							
ULN	**Ulaanbaatar**	**45.09**	**342**	*e*P		**P**	**14 39 53.9**	**-0.5**
	comp=Z,35nm,0.9s,mb5.1							
GKN	**Gorkha**	**45.09**	**304**	*e*P		**P**	**14 39 54.4**	**-0.4**
	comp=Z,19nm,0.6s,mb5.0							
SONM	**Songino Array**	**45.27**	**341**	P		**P**	**14 39 55.4**	**-0.3**
	comp=Z,4.0nm,0.8s,mb4.2,baz=156,slow=7.1,SNR=21							
SONM				PcP		PcP	14 41 34.2	+0.4
	comp=Z,11nm,0.7s,baz=166,slow=3.0,SNR=9.8							
SONM				ScP		ScP	14 45 16.3	+0.4
	comp=Z,1.4nm,0.8s,baz=149,slow=4.1,SNR=4.9							
SONM				LR		LR	15 00 33.8	
	comp=Z,143nm,18.6s,baz=164,slow=38							
SONM	**Songino Array**	**45.27**	**341**	P		**P**	**14 39 55.4**	**-0.4**
SONM							14 41 34.2	
SONM	**Songino Array**	**45.27**	**341**	P		**P**	**14 39 55.4**	**-0.3**
SONM				PcP		PcP	14 41 34.2	+0.4
SONM				ScP		ScP	14 45 16.3	+0.4
SONM				LR		LR	15 00 33.8	
KOLN	**Koldanda**	**45.87**	**304**	*e*P		**P**	**14 40 01.2**	**+0.4**
	comp=Z,42nm,0.3s,mb5.6							
DANN	**Dangsing**	**45.94**	**304**	*e*P		**P**	**14 40 01.7**	**+0.3**
	comp=Z,91nm,0.6s,mb5.7							
CAN	**Canberra**	**46.13**	**154**	*e*P		**P**	**14 40 04.3**	**+1.6**
CNB	**Canberra Magne**	**46.28**	**153**	*e*P		**P**	**14 40 04.7**	**+0.8**
TOO	**Toolangi**	**46.67**	**159**	⇓*i*P		**P**	**14 40 08.6**	**+1.7**
HYB	**Hyderabad**	**47.82**	**288**	*i* P		**P**	**14 40 17.5**	**+1.3**
HYB	**Hyderabad**	**47.82**	**288**	*e*P		**P**	**14 40 17.5**	**+1.3**
DZM	**Mont Dzumac**	**48.22**	**126**	*e*P		**P**	**14 40 19.4**	**+0.2**
KOD	**Kodaikanal**	**48.26**	**279**	*e*P		**P**	**14 40 20.1**	**+0.4**
ZAK	**Zakamensk**	**48.50**	**341**	*e*P		**P**	**14 40 22.6**	**+1.8**
ZAK				*e*			14 41 45.2	
ZAK				pmax		pmax		
	comp=Z,5.0nm,0.9s,mb4.3							
TLY	**Talaya**	**49.50**	**342**	*c i*P		**P**	**14 40 29.1**	**+0.6**
TLY				pmax		pmax		
	comp=Z,7.0nm,0.7s,mb4.7							
AKL	**Akola**	**49.79**	**292**	*e*P		**P**	**14 40 31.6**	**+0.4**
AKL				AMb		AMB	14 41 01.6	
	comp=Z,63nm,1.1s,mb5.5							
JOSI	**Joshimath**	**50.15**	**305**	*e*P		**P**	**14 40 32.8**	**-1.0**
JOSI				AMb		AMB	14 40 34.8	
	comp=Z,262nm,0.8s,mb6.2							
MOY	**Mondy**	**50.35**	**340**	*e*P		**P**	**14 40 34.8**	**-0.1**
WMQ	**Urumqi**	**50.76**	**325**	*e*P		**P**	**14 40 37.5**	**-0.6**
WMQ				AP		pP	14 41 04.0	-1.5
WMQ				XP		sP	14 41 17.0	-1.4
WMQ				PCP		PcP	14 41 53.0	-0.6
WMQ				PCS		PcS	14 45 50.0	-1.0
WMQ				*e*S		**S**	**14 47 43.0**	**-1.9**
WMQ				AMB		AMB		
	comp=Z,14nm,1.0s,mb5.0							
WMQ				AMB		AMB		
	comp=Z,99nm,4.6s							
WMQ				LR		LR		
	comp=N,383nm,22.7s							
WMQ				LR		LR		
	comp=E,189nm,19.3s							
WMQ				LR		LR		
	comp=Z,332nm,19.3s							
CLNS	**Chul'man**	**51.06**	**359**	*e*P		**P**	**14 40 41.2**	**+1.0**
CLNS				pmax		pmax		
	comp=N,24nm,0.7s							
CLNS				pmax		pmax		
	comp=Z,63nm,0.7s,mb5.8							
CLNS				pmax		pmax		
	comp=E,20nm,0.7s							
SONA	**Sohna**	**51.48**	**302**	*e*P		**P**	**14 40 42.8**

YAK					pmax	pmax			
	comp=Z,3.0nm,0.2s,mb5.0								
YAK					smax				
	comp=E,118μm,2.1s								
YAK					smax				
	comp=N,86μm,2.2s								
YAK	**Yakutsk**	**56.33**	**2**	*e*P	**P**		**14 41 18.9**	**+0.4**	
	comp=N,101nm,0.7s,mb6.0								
TKM2	**Tokmak 2**	**57.85**	**318**	*e*P	**P**		**14 41 29.0**	**-0.6**	
TKM2					pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.8								
TKM2	**Tokmak 2**	**57.85**	**318**	P	**P**		**14 41 29.0**	**-0.6**	
	SNR=13								
TKM2	**Tokmak 2**	**57.85**	**318**	*e*P	**P**		**14 41 29.0**	**-0.6**	
	comp=Z,10nm,1.0s,mb4.8								
KBK	**Karagaybulak**	**58.18**	**318**	P	**P**		**14 41 31.8**	**0.0**	
	SNR=7.8								
CHMS	**Chumysh**	**58.45**	**318**	P	**P**		**14 41 32.8**	**-0.9**	
	SNR=5.7								
ZAA0	**Zalesovo Array**	**58.57**	**333**	*e*P	**P**		**14 41 32.6**	**-1.7**	
ZALV	**Zalesovo Beam**	**58.57**	**333**	P	**P**		**14 41 32.7**	**-1.6**	
	comp=Z,8.2nm,0.4s,mb5.1,baz=133,slow=6.5,SNR=25								
USP	**Ospenovka**	**58.73**	**318**	P	**P**		**14 41 35.0**	**-0.7**	
	SNR=15								
AML	**Almayashu**	**58.82**	**317**	P	**P**		**14 41 36.5**	**+0.2**	
	SNR=14								
AML	**Almayashu**	**58.82**	**317**	*e*P	**P**		**14 41 36.3**	**0.0**	
	comp=Z,128nm,0.6s,mb6.1								
EKS2	**Erkin-Say**	**58.97**	**317**	P	**P**		**14 41 37.1**	**-0.2**	
	SNR=17								
EKS2	**Erkin-Say**	**58.97**	**317**	*e*P	**P**		**14 41 36.6**	**-0.7**	
	comp=Z,93nm,0.8s,mb5.9								
KURK	**Kurchatov**	**59.76**	**327**	P	**P**		**14 41 41.2**	**-1.4**	
	comp=Z,286nm,0.5s,SNR=19								
KBL	**Kabul**	**59.81**	**307**	*e*P	**P**		**14 41 41.7**	**-1.5**	
KBL					pmax	pmax			
	comp=Z,20nm,0.6s,mb5.3								
KBL	**Kabul**	**59.81**	**307**	*e*P	**P**		**14 41 41.7**	**-1.5**	
	comp=Z,20nm,0.6s,mb5.3								
NVS	**Novosibirsk**	**59.85**	**333**	*e*P	**P**		**14 41 40.9**	**-2.3**	
NVS				*e*			14 42 00.2		
NVS				*e*S	**S**		**14 49 40.2**	**-5.5**	
NVS					pmax	pmax			
	comp=Z,24nm,1.6s,mb5.0								
NVS					pmax	pmax			
	comp=N,17nm,1.8s								
NVS					pmax	pmax			
	comp=E,16nm,1.8s								
NVS					smax				
	comp=E,5.0nm,1.2s								
KK31	**Karatay Array**	**61.36**	**317**	*i* P	**P**		**14 41 52.5**	**-1.1**	
KK31					pmax	pmax			
	comp=Z,14nm,0.8s,mb5.0								
RPZ	**Rata Peaks**	**63.73**	**145**	LR	LR		15 08 41.5		
	comp=Z,160nm,19.7s,baz=262,slow=35								
RAO	**Raoul Island**	**64.02**	**126**	LR	LR		15 06 50.8		
	comp=Z,98nm,19.9s,baz=251,slow=33								
URZ	**Urewera**	**64.42**	**137**	LR	LR		15 08 30.3		
	comp=Z,174nm,19.5s,baz=245,slow=34								
VOSK	**Vostochnaya**	**64.89**	**327**	P	**P**		**14 42 14.8**	**-1.9**	
VOSK					pmax	pmax			
	comp=Z,12nm,0.7s,mb4.8								
BVA0	**Borovoye Array**	**65.34**	**327**	P	**P**		**14 42 18.4**	**-1.2**	
BVA0					pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.2								
TIXI	**Tiksi**	**65.95**	**1**	*e*P	**P**		**14 42 21.9**	**-1.3**	
TIXI				*e*PP	pP		14 42 50.4	-1.4	
TIXI				*e*S	S		14 50 58.9	-2.3	
TIXI					pmax	pmax			
	comp=Z,33nm,1.1s,mb5.1								
TIXI	**Tiksi**	**65.95**	**1**	*e*P	**P**		**14 42 22.5**	**-0.7**	
	comp=Z,18nm,0.7s,mb5.0								
BILL	**Bilibino**	**67.90**	**15**	*i* P	**P**		**14 42 35.9**	**+0.3**	
BILL					pmax	pmax			
	comp=Z,25nm,1.0s,mb5.0								
BILL	**Bilibino**	**67.90**	**15**	*e*P	**P**		**14 42 35.4**	**-0.3**	
	comp=Z,29nm,1.0s,mb5.1								
AB31	**Akbulak array**	**70.23**	**320**	P	**P**		**14 42 48.6**	**-1.8**	
AB31					pmax	pmax			
	comp=Z,5.0nm,0.5s,mb4.6								
SVE	**Sverdlovsk**	**71.97**	**328**	*e*P	**P**		**14 42 59.5**	**-1.2**	
SVE				*e*	pP		14 43 25.9	-3.8	
SVE				*e*S	S		14 52 46.8	+34	
SVE					pmax	pmax			
	comp=Z,32nm,0.7s,mb5.3								
UNV	**Unalaska Valle**	**72.27**	**35**	*e*P	**P**		**14 43 02.8**	**+0.2**	
	comp=Z,61nm,0.9s,mb5.4								
ARU	**Arti**	**72.95**	**328**	P	**P**		**14 43 04.4**	**-2.2**	
	comp=Z,327nm,0.5s,mb6.4,SNR=18								
ARU	**Arti**	**72.95**	**328**	*d* /*P*	**P**		**14 43 04.6**	**-2.0**	
ARU				*e*			14 43 19.5		
ARU				*e*			14 45 43.4		
ARU				*e*S	S		14 52 23.7	-0.1	
ARU					pmax	pmax			
	comp=Z,25nm,0.6s,mb5.2								
ARU	**Arti**	**72.95**	**328**	*e*P	**P**		**14 43 04.7**	**-1.9**	
	comp=Z,29nm,0.6s,mb5.3								
MIR	**Mirnyy**	**75.84**	**193**	/*P*	**P**		**14 43 24.0**	**+1.0**	
SDPT	**Sand Point**	**76.03**	**34**	*e*P	**P**		**14 43 24.6**	**+0.3**	
	comp=Z,69nm,0.8s,mb5.4								
MIB	**Mutribah**	**77.40**	**299**	*e*P	**P**		**14 43 31.3**	**-1.3**	
	baz=299								
MIB					AMb	AMB	14 43 60.0		
	comp=Z,36nm,1.4s,mb4.9,baz=299								
NAY	**Al-Naaiem**	**77.48**	**299**	*e*P	**P**		**14 43 31.3**	**-1.8**	
	baz=299								
NAY					AMb	AMB	14 43 34.4		
	comp=Z,11nm,0.8s,mb4.6,baz=299								
RST	**Umm Al-Ruwaisa**	**77.69**	**299**	*e*P	**P**		**14 43 32.4**	**-1.9**	
	baz=299								
RST					AMb	AMB	14 43 34.3		
	comp=Z,26nm,1.4s,mb4.8,baz=299								
SVW2	**Sparrevohn**	**79.48**	**29**	*e*P	**P**		**14 43 44.7**	**+1.3**	
TTA	**Tatalina**	**79.53**	**27**	*e*P	**P**		**14 43 45.5**	**+1.9**	
GNI	**Garni**	**79.72**	**310**	*c* /*P*	**P**		**14 43 41.8**	**-3.4**	
GNI					pmax	pmax			
	comp=Z,22nm,1.7s								
OHAK	**Old Harbor**	**80.25**	**33**	*e*P	**P**		**14 43 49.1**	**+1.5**	
	comp=Z,108nm,0.8s,mb5.7								
OHAK					LR	LR			
	comp=Z,200nm,22.0s								
KDAK	**Kodiak Island**	**80.67**	**32**	P	**P**		**14 43 51.0**	**+1.1**	
	comp=Z,100nm,0.7s,mb5.8,baz=239,slow=8.5								
KDAK	**Kodiak Island**	**80.67**	**32**	*e*P	**P**		**14 43 50.6**	**+0.7**	
	comp=Z,98nm,0.7s,mb5.8								
KDAK				*e*pP	pP		14 44 20.7	+1.3	
IMA2	**Indian Mountai**	**80.94**	**24**	*e*P	**P**		**14 43 52.8**	**+1.7**	
PPLA	**Purkeypile**	**81.27**	**27**	*e*P	**P**		**14 43 54.1**	**+1.2**	
	comp=Z,78nm,0.8s,mb5.6								
PPLA				*e*pP	pP		14 44 22.0	-0.6	
CHUM	**Lake Minchumin**	**81.29**	**26**	*e*P	**P**		**14 43 54.8**	**+1.7**	
	comp=Z,76nm,0.8s,mb5.6								
SLKM	**Skilak Lake**	**82.05**	**30**	*e*P	**P**		**14 43 57.5**	**+0.4**	
RC01	**Rabbit Creek A**	**82.31**	**29**	*e*P	**P**		**14 43 58.8**	**+0.3**	
	comp=Z,80nm,0.8s,mb5.6								
SEW	**Seward**	**82.42**	**30**	*e*P	**P**		**14 43 59.4**	**+0.4**	
COLD	**Coldfoot**	**82.42**	**23**	*e*P	**P**		**14 44 00.6**	**+1.7**	
	comp=Z,37nm,0.6s,mb5.4								
COLD				*e*pP	pP		14 44 26.8	-1.8	
PMR	**Palmer**	**82.62**	**29**	*e*P	**P**		**14 44 00.3**	**+0.3**	
PMR					pmax	pmax			
	comp=Z,188nm,1.5s,mb5.7								
PMR	**Palmer**	**82.62**	**29**	*e*P	**P**		**14 44 00.3**	**+0.3**	
	comp=Z,188nm,1.5s,mb5.7								
COLA	**College**	**83.28**	**25**	*e*P	**P**		**14 44 03.2**	**-0.2**	
COLA					pmax	pmax			
	comp=Z,28nm,0.8s,mb5.1								
COLA	**College**	**83.28**	**25**	*e*P	**P**		**14 44 03.2**	**-0.2**	
	comp=Z,28nm,0.8s,mb5.2								
VSR	**Storozhevoye**	**83.67**	**321**	*e*P	**P**		**14 44 02.9**	**-2.7**	
VSR					pmax	pmax			
	comp=N,6.0nm,0.8s								
VSR					pmax	pmax			
	comp=E,8.0nm,0.8s								
VSR					pmax	pmax			
	comp=Z,2.0nm,0.8s								
EYAK	**Cordova Ski Ar**	**84.26**	**30**	*e*P	**P**		**14 44 09.7**	**+1.2**	
	comp=Z,36nm,0.6s,mb5.4								
ANN	**Anapa**	**85.06**	**314**	*e*P	**P**		**14 44 10.2**	**-2.6**	
ANN					pmax	pmax			
	comp=Z,53nm,1.0s,mb5.4								
OBN	**Obninsk**	**85.10**	**325**	*d* /*P*	**P**		**14 44 11.1**	**-1.7**	
OBN				*e*			14 47 28.9		
OBN					pmax	pmax			
	comp=Z,31nm,0.8s,mb5.3								
OBN					MLR	MLR			
	comp=Z,100nm,18.0s								
MAW	**Mawson**	**85.29**	**200**	/*P*	**P**		**14 44 13.3**	**-0.1**	
	comp=Z,13nm,0.9s,mb4.8								
MAW	**Mawson**	**85.29**	**200**	P	**P**		**14 44 13.5**	**+0.1**	
	comp=Z,14nm,0.8s,mb5.0,baz=45,slow=5.5,SNR=36								
MAW	**Mawson**	**85.29**	**200**	/*P*	**P**		**14 44 13.3**	**-0.1**	
MAW					pmax	pmax			
	comp=Z,13nm,0.9s								
APA	**Apatity**	**85.83**	**337**	/*eP*	**P**		**14 44 15.0**	**-1.1**	
APA				*i*			14 44 32.4		
APA					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
SBA	**Scott Base**	**86.31**	**172**	*e*P	**P**		**14 44 19.2**	**+0.9**	
SBA					pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.7								
SBA	**Scott Base**	**86.31**	**172**	*e*P	**P**		**14 44 19.2**	**+0.9**	
	comp=Z,10nm,1.0s,mb4.7								
PPT	**Papeete**	**86.38**	**108**	LR	LR		15 16 49.8		
	comp=Z,105nm,20.2s,baz=232,slow=31								
DAWY	**Dawson**	**86.98**	**26**	*e*P	**P**		**14 44 22.1**	**+0.3**	
JOF	**Joensuu**	**87.16**	**333**	*ep*	**P**		**14 44 20.6**	**-2.2**	
	comp=Z,23nm,0.5s,mb5.4								
JOF	**Joensuu**	**87.16**	**333**	*e*P	**P**		**14 44 20.6**	**-2.2**	
JOF					pmax	pmax			
	comp=Z,23nm,0.5s,mb5.4								
KEV	**Kevo**	**87.86**	**340**	*ep*	**P**		**14 44 24.5**	**-1.5**	
	comp=Z,12nm,0.8s,mb5.0								
KEV	**Kevo**	**87.86**	**340**	*e*P	**P**		**14 44 24.5**	**-1.5**	
KEV					pmax	pmax			
	comp=Z,12nm,0.8s,mb5.0								
ARCES	**ARCESS Array B**	**88.42**	**340**	P	**P**		**14 44 27.5**	**-1.1**	
	comp=Z,16nm,0.7s,mb5.2,baz=80,slow=5.9,SNR=28								
ARCES					pP	pP	14 44 55.9	-2.8	
	comp=Z,5.8nm,0.7s,baz=76,slow=5.1,SNR=2.2								
KAF	**Kangasniemi**	**89.58**	**332**	*ep*	**P**		**14 44 32.4**	**-1.8**	
	comp=Z,9.7nm,0.5s,mb5.2,baz=74,slow=4.3								
KAF	**Kangasniemi**	**89.58**	**332**	*e*P	**P**		**14 44 32.4**	**-1.8**	
KAF					pmax	pmax			
	comp=Z,10.0nm,0.5s,mb5.2								
AKASG	**Malin Array Be**	**89.97**	**321**	P	**P**		**14 44 34.6**	**-1.7**	
	comp=Z,0.9nm,0.4s,mb4.2,baz=60,slow=4.9,SNR=9.0								
DLBC	**Dease Lake**	**92.48**	**31**	P	**P**		**14 44 49.0**	**+1.2**	
	baz=275,slow=5.1								
DLBC	**Dease Lake**	**92.48**	**31**	*e*P	**P**		**14 44 48.6**	**+0.9**	
BUR08	**Bucovina Ar. S**	**93.11**	**318**	P	**P**		**14 44 52.3**	**+1.4**	
SYO	**Syowa Base**	**93.94**	**201**	/*eP*	**P**		**14 44 52.8**	**-1.4**	
SYO	**Syowa Base**	**93.94**	**201**	/*e*PcP	PcP		14 44 55.6	+1.0	
DAG	**Danmarks Havn**	**95.28**	**352**	/*iP*	**P**		**14 44 59.0**	**-1.2**	
DAG					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb5.0								
DAG	**Danmarks Havn**	**95.28**	**352**	/*iP*	**P**		**14 44 59.0**	**-1.2**	
	comp=Z,5.2nm,0.8s,mb5.0								
NOA	**NORSAR Array B**	**96.77**	**334**	LR	LR		15 33 20.8		
	comp=Z,95nm,18.5s,baz=40,slow=38								
YKA	**Yellowknife Ar**	**98.06**	**24**	P	**P**		**14 45 13.6**	**+0.6**	
	comp=Z,6.4nm,0.8s,mb5.2,baz=298,slow=4.7,SNR=6.3								
YKA					LR	LR	15 30 01.4		
	comp=Z,38nm,19.5s,baz=165,slow=36								
BRG	**Berggiesshubel**	**99.29**	**323**	*e*P	**P**		**14 45 17.7**	**-1.1**	
BRG					pmax	pmax			
	comp=Z,3.0nm,0.6s,mb5.0								
BRG	**Berggiesshubel**	**99.29**	**323**	*e*P	**P**		**14 45 17.7**	**-1.1**	
	comp=Z,4.8nm,0.6s,mb5.2								
NVAR	**Mina Array Bea**	**106.16**	**47**	PKiKP	PKiKP		14 50 03.1	+2.2	
	comp=Z,0.9nm,0.7s,baz=217,slow=2.1,SNR=5.8								
NVAR					PKKPbc	PKKPbc	15 01 23.4	-0.3	
	comp=Z,0.4nm,0.6s,baz=104,slow=2.9,SNR=4.7								
PDAR	**Pinedale Array**	**110.38**	**40**	PKiKP	PKiKP		14 50 07.7	-1.1	
	comp=Z,0.4nm,0.5s,baz=45,slow=2.7,SNR=3.0								
PDAR					PKKPbc	PKKPbc	15 01 07.3	-3.3	
	comp=Z,0.6nm,0.6s,baz=116,slow=6.1,SNR=4.4								
ULM	**Lac du Bonnet**	**113.63**	**28**	PKiKP	PKiKP		14 50 14.1	-0.6	
	comp=Z,5.1nm,0.6s,baz=281,slow=1.8,SNR=8.2								
ULM	**Lac du Bonnet**	**113.63**	**28**	PKPdf	PKiKP		14 50 14.1	-0.6	
ESDC	**Sonseca Array**	**115.56**	**319**	PKKPbc	PKKPbc		15 00 54.5	+1.3	
	comp=Z,0.2nm,0.3s,baz=242,slow=4.2,SNR=4.7								
ANMO	**Albuquerque**	**116.25**	**47**	PKP	PKPdf		14 50 21.6	+1.3	
	comp=Z,2.3nm,0.6s,baz=173,slow=4.1,SNR=5.4								
ECSD	**EROS,Sioux Fal**	**117.61**	**34**	*e*PKPdf	PKPdf		14 50 22.1	-0.5	
SCHQ	**Schefferville**	**118.80**	**8**	PKP	PKPdf		14 50 24.9	+0.3	
	comp=Z,6.3nm,0.6s,baz=37,slow=5.6,SNR=11								
COWI	**Conover**	**119.74**	**27**	*e*PKPdf	PKPdf		14 50 26.8	+0.2	
JFWS	**Jewell Farm**	**121.55**	**31**	*e*PKiKP	PKPdf		14 50 29.7	-0.5	
TORD	**Torodi Ar. Bea**	**121.64**	**289**	PKP	PKPdf		14 50 30.4	-0.6	
	comp=Z,9.3nm,0.8s,baz=54,slow=1.9,SNR=63								
TORD					SKP		14 53 56.2		
	comp=Z,2.0nm,0.7s,baz=47,slow=1.8,SNR=6.4								
TORD					PKKPbc	PKKPbc	15 00 31.4	+0.8	
	comp=Z,3.7nm,0.7s,baz=296,slow=2.3,SNR=21								
TORD	**Torodi Ar. Bea**	**121.64**	**289**	PKP	PKPdf		14 50 30.4	-0.6	
TORD					SKP		14 53 56.2		
TORD					PKKPbc	PKKPbc	15 00 31.4	+0.8	
JCT	**Junction City**	**123.33**	**48**	*e*PKiKP	PKPdf		14 50 34.7	+0.7	
MIAR	**Mount Ida**	**125.31**	**40**	*e*PKiKP	PKPdf		14 50 38.0	+0.4	
OLIL	**Olney**	**125.70**	**33**	*e*PKPdf	PKPdf		14 50 38.8	+0.5	
ACSO	**Alum Creek Sta**	**127.13**	**28**	*e*PKPdf	PKPdf		14 50 41.1	+0.2	
MDV	**Middlebury**	**127.64**	**17**	*e*PKPdf	PKPdf		14 50 42.6	+0.8	
WVT	**Waverly**	**127.72**	**35**	*e*PKiKP	PKPdf		14 50 42.1	-0.1	
KIC	**Kosan Boka**	**129.42**	**283**	*e*PKP1	PKPdf		14 50 45.8	-0.2	
	comp=Z,34nm,0.7s								
DBIC	**Dimbokro**	**129.47**	**283**	PKP	PKPdf		14 50 45.8	-0.3	
	comp=Z,4.8nm,0.6s,baz=102,slow=4.0,SNR=11								
DBIC					SKPbc		14 53 56.9		
	comp=Z,39nm,0.8s,baz=57,slow=4.5,SNR=37								
TIC	**Toumodi**	**129.63**	**283**	*e*PKP1	PKPdf		14 50 46.5	+0.1	
	comp=Z,19nm,0.7s								
LIC	**Lamto**	**129.73**	**283**	*e*PKP1	PKPdf		14 50 46.7	+0.1	
	comp=Z,65nm,1.3s								
TKL	**Tuckaleechee C**	**130.29**	**32**	PKP	PKPdf		14 50 47.6	+0.5	
	comp=Z,16nm,0.6s,baz=151,slow=4.4,SNR=18								
TKL					SKPbc	SKPbc	14 54 00.7	+0.8	
	comp=Z,7.2nm,0.7s,baz=250,slow=0.7,SNR=6.7								
TKL	**Tuckaleechee C**	**130.29**	**32**	*e*PKPdf	PKPdf		14 50 47.3	+0.2	
ELN	**Prospectdale**	**130.57**	**28**	*e*PKPdf	PKPdf		14 50 47.6	0.0	
PLCA	**Paso Flores**	**142.03**	**159**	PKhKP			14 51 05.1		
	comp=Z,3.4nm,0.8s,baz=193,slow=4.0,SNR=6.4								
PLCA					SKPbc	SKPbc	14 54 38.0	+2.2	
	comp=Z,2.2nm,0.9s,baz=215,slow=4.4,SNR=4.4								
PLCA	**Paso Flores**	**142.03**	**159**	PKP	PKPdf		14 51 05.1	-3.5	
PLCA					SKPbc	SKPbc	14 54 38.0	+2.2	
JTS	**JuntasAbangare**	**145.34**	**63**	*e*PKiKP	PKPdf		14 51 16.1	+0.9	
TRQA	**Tornquist**	**146.92**	**168**	*e*PKPbc	PKPbc		14 51 19.6	+0.3	
BCIP	**Isla Barro Col**	**150.33**	**60**	*e*PKPbc	PKPbc		14 51 29.0	+0.2	
LCO	**Las Campanas**	**151.88**	**148**	*e*PKPbc	PKPbc		14 51 33.2	+1.3	
CPD	**Cerro la Pandu**	**153.69**	**26**	PKiKP	PKPbc		14 51 36.4	+0.2	
CPD				*e*			14 51 49.5		
MTP	**Monte Pirata**	**153.80**	**26**	*e*PKPbc	PKPbc		14 51 36.6	+0.2	
MTP				*e*PKPab	PKPab		14 51 50.0	+0.4	
OTAV	**Otavalo**	**154.88**	**77**	*e*PKPab	PKPab		14 51 56.9	+2.3	
ROSC	**El Rosal**	**157.16**	**63**	PKP	PKPdf		14 51 34.0	+0.8	
	comp=Z,7.4nm,0.6s,baz=260,slow=23,SNR=3.8								
CPUP	**Villa Florida**	**159.18**	**172**	PKP	PKPdf		14 51 36.2	+1.0	
	comp=Z,1.5nm,0.7s,baz=210,slow=1.0,SNR=7.8								
CPUP					PKPab	PKPab	14 52 13.3	+0.9	
	comp=Z,6.0nm,0.8s,baz=187,slow=5.0,SNR=8.0								
CPUP	**Villa Florida**	**159.18**	**172**	PKP	PKPdf		14 51 36.2	+1.0	
CPUP					PKPab	PKPab	14 52 13.3	+0.9	
LPAZ	**La Paz**	**162.56**	**128**	PKP	PKPdf		14 51 41.0	+1.9	
	comp=Z,3.6nm,1.0s,baz=25,slow=4.2,SNR=12								
LPAZ					PKPab	PKPab	14 52 31.0	+3.3	
	comp=Z,8.1nm,0.9s,baz=260,slow=1.5,SNR=11								
BDFB	**Brasilia**	**168.46**	**210**	PKP	PKPdf		14 51 44.0	0.0	
	comp=Z,3.6nm,0.7s,baz=29,slow=2.3,SNR=4.5								
BDFB					PKPab	PKPab	14 52 53.6	+0.1	
	baz=121,slow=6.0								
VLS				*e*SN	**Sg**		**14 49 54.9**	**+0.9**	
KFL	**Anninata**	**0.60**	**171**	*e*Pg	**Pg**		**14 49 48.4**	**0.0**	
RLS	**Riolos of Patr**	**0.90**	**135**	*e*PN	**Pn**		**14 49 54.2**	**-1.1**	
JAN	**Janina**	**0.97**	**9**	*e*PN	**Pn**		**14 49 55.3**	**-1.0**	
MEV	**Metsovon**	**1.17**	**22**	*e*Pg	**Pg**		**14 49 58.2**	**-1.1**	
KEK	**Kerkira**	**1.22**	**327**	*e*PN	**Pn**		**14 49 58.8**	**-0.9**	
AGG	**Agios Georgios**	**1.34**	**76**	*e*Pg	**Pg**		**14 50 02.3**	**-0.3**	
AGG				*e*Sg	**Sg**		**14 50 20.9**	**+0.9**	
THL	**Klokotos Trika**	**1.36**	**50**	*e*Pg	**Pg**		**14 50 01.7**	**-1.2**	
THL				*e*Sg	**Sg**		**14 50 21.9**	**+1.3**	
THL	**Klokotos Trika**	**1.36**	**50**	*e*PN	**Pn**		**14 50 02.1**	**+0.4**	
VLX	**Vlachokerasia**	**1.90**	**134**	*e*Pb	**Pb**		**14 50 10.2**	**-1.2**	
LTK	**Loutraki**	**1.93**	**110**	*e*Pb	**Pb**		**14 50 09.8**	**-2.2**	
LTK				*e*Sb	**Sb**		**14 50 34.9**	**-1.2**	
LIT	**Litokhoron**	**1.99**	**45**	*e*Pb	**Pb**		**14 50 11.7**	**-1.3**	
LIT				*e*Sb	**Sb**		**14 50 37.4**	**-0.3**	
XOR	**Xorichti**	**2.08**	**71**	*e*Pn	**Pn**		**14 50 12.5**	**+0.9**	
FNA	**Florina**	**2.15**	**15**	*e*Pn	**Pn**		**14 50 13.8**	**+1.2**	
FNA				*e*Sn	**Sn**		**14 50 42.8**	**+3.5**	
DID	**Didima**	**2.35**	**120**	*e*Pn	**Pn**		**14 50 16.4**	**+1.0**	
DID				*e*Sn	**Sn**		**14 50 45.9**	**+1.7**	
KRUS	**Krusevo**	**2.70**	**9**	*i* Pn	**Pn**		**14 50 20.8**	**+0.6**	
KRUS	**Krusevo**	**2.70**	**9**	*i* Pn	**Pn**		**14 50 20.7**	**+0.5**	
PLG	**Polygyros**	**2.72**	**51**	*e*Pn	**Pn**		**14 50 21.6**	**+1.1**	
PLG	**Polygyros**	**2.72**	**51**	*e*Pn	**Pn**		**14 50 21.5**	**+1.1**	

*ISCJB **17** 15:02:52.1±1.7, 196S±02×1776W±02, h350km±25km, mb3.9/8, Error ellipse: s-maj=30.5km s-min=18.3km az=145.9*
*IDC **17** 15:02:52.2±1.9, 1960S×17750W, h338km±25km, mb3.7/5, mb1 3.9/7, mb1mx3.6/18, mbtmp3.8/7, Error ellipse: s-maj=20.9km s-min=15.9km az=110.0*
*NEIC **17** 15:02:53.8±1.4, 1971S×17749W, h355km±19km, mb4.0/5, Error ellipse: s-maj=21.5km s-min=14.3km az=146.0*

ISC 17 15:02:53.1±1.6, 196S±01×1775W±01, h347km±24km, n16, σ1§05/19, mb3.9/8, 2C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.87**	**45**	P	**Pn**	**15 04 47.0**	**+1.2**
	4.1nm,0.3s,baz=41,slow=10.0,SNR=21						
AFI				S	**S**	15 06 15.1	-2.4
	7.6nm,0.3s,baz=321,slow=19,SNR=6.2						
AFI	**Afiamalu**	**7.87**	**45**	*e*Pn	**Pn**	**15 04 47.3**	**+1.5**
AFI				*e*S	**S**	15 06 13.6	-4.0
URZ	**Urewera**	**19.21**	**193**	P	**P**	**15 06 51.7**	**-1.2**
	2.4nm,0.3s,baz=344,slow=4.5,SNR=13						
URZ				S	**S**	**15 10 12.4**	**+1.0**
	0.3nm,0.3s,baz=227,slow=14,SNR=3.4						
ARMA	**Armidale**	**29.88**	**243**	/*P*	**P**	**15 08 31.2**	**+1.4**
CTA	**Charters Tower**	**34.03**	**263**	/*iP*	**P**	**15 09 06.9**	**+1.0**
	4.6nm,0.6s,mb3.9						
CTAO	**Charters Tower**	**34.03**	**263**	*e*P	**P**	**15 09 06.9**	**+1.0**
	7.0nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**38.60**	**243**	/*iP*	**P**	**15 09 44.2**	**+0.2**
	7.3nm,1.0s,mb3.9						
STKA	**Stephens Creek**	**38.60**	**243**	P	**P**	**15 09 44.5**	**+0.4**
	8.5nm,0.6s,mb4.2,baz=92,slow=8.5,SNR=22						
WB2	**Warramunga Arr**	**45.16**	**261**	*e*P	**P**	**15 10 36.1**	**-0.7**
WB2	**Warramunga Arr**	**45.16**	**261**	*e*P	**P**	**15 10 36.1**	**-0.7**
WRAB	**Tennant Creek**	**45.16**	**261**	*e*P	**P**	**15 10 35.9**	**-0.9**
	2.6nm,0.5s,mb3.6						
ASAR	**Alice Springs**	**45.17**	**256**	P	**P**	**15 10 36.8**	**0.0**
	25nm,0.6s,mb4.5,baz=93,slow=8.1,SNR=518						
WRA	**Warramunga Arr**	**45.17**	**261**	P	**P**	**15 10 36.5**	**-0.3**
	4.3nm,0.6s,mb3.8,baz

JAN	**Janina**	**0.61**	**49**	*e*PB	**Pg**	**15 24 11.9**	**-0.7**
JAN				*e*SB	**Sg**	**15 24 21.4**	**+0.9**
LKD	**Levkas**	**0.63**	**151**	*e*Pg	**Pg**	**15 24 11.9**	**-1.1**
LKD				*e*Sg	**Sg**	**15 24 21.7**	**+0.5**
MEV	**Metsovon**	**0.92**	**55**	*e*Pg	**Pg**	**15 24 17.5**	**-1.0**
VLS	**Valsamata**	**1.11**	**167**	*e*Pg	**Pg**	**15 24 22.4**	**+0.2**
VLS				*e*Sg	**Sg**	**15 24 38.0**	**+1.4**
VLS	**Valsamata**	**1.11**	**167**	*e*PB	**Pb**	**15 24 22.6**	**-0.3**
VLS				*e*SB	**Sb**	**15 24 38.1**	**+0.4**
KFL	**Anninata**	**1.22**	**160**	*e*Pg	**Pg**	**15 24 24.0**	**-0.4**
THL	**Klokotos Trika**	**1.39**	**77**	*e*Pg	**Pg**	**15 24 26.2**	**-1.4**
THL				*e*Sg	**Sg**	**15 24 47.4**	**+1.6**
THL	**Klokotos Trika**	**1.39**	**77**	*e*PG	**Pg**	**15 24 26.9**	**-0.8**
THL	**Klokotos Trika**	**1.39**	**77**	*e*Pg	**Pn**	**15 24 26.2**	**-1.2**
THL				*e*Sg	**Sg**	**15 24 47.4**	**+1.7**
RLS	**Riolos of Patr**	**1.52**	**141**	*e*PG	**Pn**	**15 24 29.1**	**-0.1**
KZN	**Kozani**	**1.56**	**48**	*e*PB	**Pb**	**15 24 31.4**	**+0.8**
AGG	**Agios Georgios**	**1.63**	**98**	*e*Pg	**Pn**	**15 24 30.4**	**-0.2**
AGG				*e*Sg	**Sg**	**15 24 53.2**	**0.0**
FNA	**Florina**	**1.75**	**29**	*e*Pb	**Pn**	**15 24 32.5**	**+0.2**
FNA				*e*Sb	**Sb**	**15 24 55.8**	**-0.4**
LIT	**Litokhoron**	**1.92**	**63**	*e*Pb	**Pn**	**15 24 34.3**	**-0.3**
LIT				*e*Sb	**Sb**	**15 25 00.1**	**-0.8**
BIA	**Bitola**	**1.94**	**25**	*e*Pb	**Pn**	**15 24 34.2**	**-0.7**
BIA				*e*Sb	**Sb**	**15 25 01.4**	**-0.3**
BIA	**Bitola**	**1.94**	**25**	*i* Pn	**Pb**	**15 24 36.8**	**-0.2**
BIA	**Bitola**	**1.94**	**25**	*i* Pn	**Pb**	**15 24 36.7**	**-0.3**
KRUS	**Krusevo**	**2.24**	**19**	*i* Pn	**Pn**	**15 24 40.1**	**+1.1**
NEO	**Neokhori**	**2.30**	**88**	*e*PN	**Pb**	**15 24 42.8**	**-0.4**
GRG	**Griva**	**2.36**	**43**	*e*Pn	**Pn**	**15 24 40.6**	**-0.1**
LTK	**Loutraki**	**2.45**	**119**	*e*Pn	**Pn**	**15 24 41.6**	**-0.4**
LTK				*e*Sn	**Sn**	**15 25 12.6**	**+0.1**
ITM	**Ithomi**	**2.46**	**147**	*e*PN	**Pn**	**15 24 44.5**	**+2.5**
VLX	**Vlachokerasia**	**2.52**	**138**	*e*Pn	**Pn**	**15 24 41.5**	**-1.3**
PYL	**PYLOS**	**2.63**	**153**	*e*Pn	**Pn**	**15 24 44.3**	**-0.1**
PLG	**Polygyros**	**2.69**	**65**	*e*Pn	**Pn**	**15 24 46.0**	**+0.7**
TIP	**Timpagrande**	**2.72**	**269**	*e*Pn	**Pn**	**15 24 45.0**	**-0.7**
TIP	**Timpagrande**	**2.72**	**269**	*e*Pn	**Pn**	**15 24 45.0**	**-0.6**
SOH	**Sokhos**	**2.84**	**56**	*e*Pn	**Pn**	**15 24 47.8**	**+0.5**
SOH	**Sokhos**	**2.84**	**56**	*e*Pn	**Pn**	**15 24 47.8**	**+0.5**
SOH				S	**Sn**	**15 25 24.6**	**+2.5**
SOH	**Sokhos**	**2.84**	**56**	P	**Pn**	**15 24 47.8**	**+0.5**
SOH				S	**Sn**	**15 25 24.6**	**+2.5**
DID	**Didima**	**2.92**	**126**	*e*Pn	**Pn**	**15 24 47.6**	**-0.8**
DID				*e*Sn	**Sn**	**15 25 24.6**	**+0.5**
OUR	**Ouranopolis**	**3.06**	**68**	*e*Pn	**Pn**	**15 24 49.4**	**-0.9**
CUC	**Castrocucco**	**3.51**	**283**	Pn	**Pn**	**15 24 56.7**	**+0.2**
CUC	**Castrocucco**	**3.51**	**283**	Pn	**Pn**	**15 24 56.7**	**+0.2**

CSEM ***17*** *15:31:37.4±0.5, 4053N×2901W, h0km, ML3.2, Error ellipse: s-maj=10.0km s-min=2.9km az=87.0, After PDA*

PDA 17 15:31:37.4±0.5, 4053N×2901W, h0km, MD3.7, ML3.2, Error ellipse: s-maj=10.0km s-min=2.9km az=87.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBC	**Serra Branca**	**1.67**	**153**	*e*P	Pn	15 32 02.9	-4.9
ROSA	**Rosais**	**1.90**	**162**	*e*P	Pn	15 32 06.1	-4.9
ROSA				*e*S	Sn	15 32 27.7	-7.9
PCED	**Cedros**	**1.91**	**173**	*e*S	Sn	15 32 28.3	-7.6
PCED				A		15 32 28.6	
	34nm,0.2s						
CALA	**Caldeira**	**1.96**	**173**	*e*P	Pn	15 32 07.2	-4.6
CALA				*e*S	Sn	15 32 29.4	-7.7
HOR	**Horta**	**2.02**	**172**	*e*S	Sn	15 32 30.5	-8.1
PMAN	**Manadas**	**2.02**	**159**	*e*P	Pn	15 32 07.7	-5.0
PMAN				*e*S	Sn	15 32 31.0	-7.6
PMAN				A		15 32 34.7	
	49nm,0.2s						
PMAN	**Manadas**	**2.02**	**159**	*e*P	Pn	15 32 07.7	-5.0
PMAN				*e*S	Sn	15 32 31.0	-7.6
PICO	**Pico**	**2.07**	**167**	*e*P	Pn	15 32 08.9	-4.5
PICO				*e*S	Sn	15 32 32.1	-7.8

ISCJB ***17*** *15:39:35.6±1.9, 399N±0.1×783E±0.1, h10km, Error ellipse: s-maj=19.3km s-min=6.8km az=145.0*
NNC ***17*** *15:39:40.9±5.0, 4040N×7761E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=37.1km s-min=24.2km az=179.0*
BJI ***17*** *15:39:42.4, 4057N×7757E, h15km, ML3.1*

ISC 17 15:39:37.9±2.0, 399N±01×782E±01, h10km, n12, σ1s08/14, 4C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.75**	**259**	*e*PG	**Pg**	**15 40 10.4**	**-1.0**
KSH				SG	**Sg**	**15 40 34.9**	**+0.8**
KSH				Smax			
	comp=N,443nm,0.4s						
KSH				Smax			
	comp=E,1μm,0.4s						
KZA	**Kyzart**	**3.15**	**316**	P	**Pn**	**15 40 27.0**	**-0.4**
	SNR=10						
KNDC	**Almaty**	**3.48**	**345**	⇓Pg	**Pn**	**15 40 34.1**	**+2.1**
	comp=E,48nm,0.6s						
KNDC				⇓Lg		15 41 10.4	
	comp=E,71nm,0.6s						
TKM2	**Tokmak 2**	**3.63**	**328**	⇓Pg	**Pn**	**15 40 33.4**	**-0.7**
	comp=E,9.7nm,0.3s						
TKM2				⇓Lg		15 41 13.5	
	comp=E,45nm,0.7s						
TKM2	**Tokmak 2**	**3.63**	**328**	P	**Pn**	**15 40 33.4**	**-0.7**
	SNR=16						
KBK	**Karagaybulak**	**3.72**	**320**	P	**Pn**	**15 40 35.7**	**+0.4**
	SNR=8.0						
CHMS	**Chumysh**	**4.07**	**322**	P	**Sn**	**15 41 27.8**	**0.0**
	SNR=5.5						
AML	**Almayashu**	**4.09**	**305**	P	**Pn**	**15 40 40.1**	**-0.4**
	SNR=15						
EKS2	**Erkin-Say**	**4.35**	**311**	P	**Pn**	**15 40 43.7**	**-0.3**
	SNR=16						
USP	**Ospenovka**	**4.39**	**322**	P	**Pn**	**15 40 46.4**	**+1.9**
	SNR=8.9						
KK31	**Karatay Array**	**6.62**	**302**	Pg	**Pb**	**15 41 30.1**	**-2.8**
	comp=E,2.2nm,0.6s,baz=131,slow=15,SNR=12						
KK31				⇑Lg		15 42 49.8	
	comp=E,5.6nm,0.7s,baz=114,slow=26,SNR=5.5						
MK31	**Makanchi Array**	**7.55**	**22**	⇑Pn	**Pn**	**15 41 28.2**	**+0.3**
	comp=E,0.3nm,0.4s,baz=202,slow=15,SNR=9.2						
MK31				⇑Sn	**Sn**	**15 42 52.6**	**-0.8**
	comp=E,0.6nm,0.6s,baz=204,slow=23,SNR=4.3						
MK31				⇑Lg		15 43 29.5	
	comp=E,1.0nm,0.6s,baz=203,slow=26						

IDC ***17*** *15:55:37.3±0.5, 359S×10078E, h0km, mb4.8/22, mb1 4.9/23, mb1mx4.8/26, mbtmp4.8/23, MS4.6/15, Ms1 4.6/15, ms1mx4.4/28, Error ellipse: s-maj=16.4km s-min=12.0km az=48.0*
BJI ***17*** *15:55:38.8, 393S×10073E, h41km, mB5.3, mb5.2, Ms5.3, Msz5.1*
ISCJB ***17*** *15:55:39.5±0.2, 367S±003×10072E±003, h28km, mb5.2/127, MS4.9/41, Error ellipse: s-maj=4.9km s-min=3.5km az=28.0*
GCMT ***17*** *15:55:40.9±0.3, 4.13S×10035E, h36km±1km, MW5.1/60, Moment Tensor Solution. s49,c72; s60,c90; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=4.22±.23; Mθθ=2.99±.14; Mφφ=-1.22±.20; Mrθ=3.35±.17; Mθφ=2.87±.10; Mφr=-1.97±.24; Best double couple: M=6.07400×10^16 NP1:ϕs=312.00000°, δ25.00000°, λ.99.00000°. NP2: ϕs=122.00000°, δ65.00000°, λ.86.00000°. Principal axes: T 5.6440, Plg70.0000°, Azm23.0000°; N 0.8700, Plg4.0000°, Azm124.0000°; P -6.5040, Plg20.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MOS ***17*** *15:55:40.8±1.1, 348S×10089E, h33km, mb5.5/48, MS4.6/8 Error ellipse: s-maj=11.0km s-min=5.8km az=114.6*
NEIC ***17*** *15:55:40.9±0.2, 365S×10077E, mb5.2/46, MS4.6/3, Error ellipse: s-maj=7.0km s-min=5.0km az=210.0*
DJA ***17*** *15:55:42, 371S×10032E, h32km, Mw5.4/19*
SZGRF ***17*** *15:55:47.2, 302S×9959E, h28km, mb5.2, MS4.4, Southwest of Sumatera, Indonesia*

ISC 17 15:55:41.5±0.2, 368S±003×10070E±003, h29km, h29km±.8km: pP-P, n325, σ1s03/311, mb5.2/127, MS4.9/41, 39C-36D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.89**	**89**	P	**Pn**	**15 56 11.7**	**-0.1**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.22**	**355**	P	**Pn**	**15 56 29.6**	**-0.6**
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.57**	**55**	P	**Pn**	**15 56 36.1**	**+1.1**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.01**	**51**	P	**Pn**	**15 56 55.9**	**+1.1**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.63**	**75**	P	**Pn**	**15 57 04.6**	**+1.3**
	0.0nm,0.0s						
GSI	**Gunungsitoli**	**5.86**	**328**	⇑*e*P	**Pn**	**15 57 07.0**	**+0.5**
KGM	**Kluang**	**6.24**	**25**	⇑P	**Pn**	**15 57 12.6**	**+1.0**
MYKOM	**Kota Tinggi**	**6.28**	**30**	⇓P	**Pn**	**15 57 13.6**	**+1.3**
DBJI	**Dramaga**	**6.66**	**116**	P	**Pn**	**15 57 17.9**	**+0.4**
	0.0nm,0.0s						
CBJI	**Citeko**	**6.70**	**114**	P	**Pn**	**15 57 20.5**	**+2.5**
	0.0nm,0.0s						
FRIM	**Kepong**	**6.94**	**8**	⇓P	**Pn**	**15 57 23.0**	**+1.7**
TPI	**Tanjungpandan**	**7.00**	**83**	⇓*e*P	**Pn**	**15 57 31.0**	**+8.9**
TPI				*e*S	**Sn**	**15 58 55.0**	**+14**
TPI	**Tanjungpandan**	**7.00**	**83**	⇓*e*P	**Pn**	**15 57 31.0**	**+8.9**
TPI				*e*S	**Sn**	**15 58 55.0**	**+14**
LEM	**Lembang**	**7.56**	**115**	P	**Pn**	**15 57 31.4**	**+1.6**
	0.0nm,0.0s						
LEM	**Lembang**	**7.56**	**115**	⇓*e*P	**Pn**	**15 57 32.0**	**+2.2**
IPM	**Ipoh**	**8.12**	**2**	⇓P	**Pn**	**15 57 40.2**	**+2.7**
KTGM	**Kuala Trenggan**	**9.28**	**15**	⇓P	**Pn**	**15 57 58.1**	**+4.7**
BJII	**Banjamegara**	**9.67**	**112**	P	**Pn**	**15 58 00.2**	**+1.4**
	0.0nm,0.0s						
BSI	**Banda Aceh**	**10.60**	**329**	P	**Pn**	**15 58 09.7**	**-1.8**
	0.0nm,0.0s						
SNG	**Songkhla**	**10.79**	**360**	P	**Pn**	**15 58 12.0**	**-2.1**
	20nm,0.1s						
KSM	**Kuching**	**10.88**	**62**	⇑P	**Pn**	**15 58 25.4**	**+10**
KSM	**Kuching**	**10.88**	**62**	*e*P	**Pn**	**15 58 17.0**	**+1.6**
SJI	**Sawahan**	**11.72**	**111**	P	**Pn**	**15 58 26.2**	**-0.7**
	0.0nm,0.0s						
SBUM	**Sibu**	**13.02**	**62**	⇑P	**Pn**	**15 58 49.2**	**+4.5**
BTM	**Bintulu**	**14.14**	**61**	⇑P	**Pn**	**15 59 05.8**	**+5.9**
KKM	**Kota Kinabalu**	**18.26**	**58**	⇓P	**Pn**	**15 59 54.7**	**+1.8**
KKM	**Kota Kinabalu**	**18.26**	**58**	*e*P	**Pn**	**15 59 53.4**	**+0.5**
SDKM	**Sandakan**	**18.90**	**61**	⇓P	**Pn**	**16 00 01.3**	**+0.6**
TSM	**Tawau**	**18.90**	**65**	⇑P	**Pn**	**16 00 02.2**	**+1.6**
KAPI	**Kappang**	**19.04**	**95**	Pn	**Pn**	**16 00 01.2**	**-1.2**
	624nm,1.2s,SNR=5.5						
KAPI	**Kappang**	**19.04**	**95**	P	**Pn**	**16 00 00.7**	**-1.7**
	baz=264,slow=13						
KAPI	**Kappang**	**19.04**	**95**	*e*P	**Pn**	**16 00 00.5**	**-1.9**
	186nm,1.3s						
KDM	**Kudat**	**19.24**	**57**	⇓P	**Pn**	**16 00 06.0**	**+1.2**
NST	**Nakhon Sawan**	**19.24**	**358**	P	**Pn**	**16 00 09.0**	**+4.3**
UBT	**Ubonrachathani**	**19.29**	**13**	⇑P	**Pn**	**16 00 04.0**	**-1.3**
PCI	**Palu**	**19.32**	**82**	P	**Pn**	**16 00 05.5**	**-0.2**
	0.0nm,0.0s						
MYLDM	**Lahad Datu**	**19.84**	**64**	⇓P	**Pn**	**16 00 13.1**	**+1.2**
KKTK	**Khon Kaen**	**20.00**	**6**	P	**P**	**16 00 05.0**	**-7.0**
BDT	**Bhumibol Dam**	**20.86**	**355**	⇓P	**P**	**16 00 20.0**	**-1.3**
	27nm,1.1s						
KDI	**Kendari**	**21.87**	**91**	P	**P**	**16 00 31.9**	**-0.3**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**22.07**	**356**	P	**P**	**16 00 31.7**	**-2.5**
	31nm,0.9s,mb4.7,baz=185,slow=9.2,SNR=51						
CMAR				PcP	PcP	16 04 32.8	+1.1
	2.7nm,1.0s,baz=184,slow=3.8,SNR=4.5						
CMAR				ScP	ScP	16 08 07.8	+0.7
	1.5nm,1.1s,baz=199,slow=4.6,SNR=5.1						
CMAR				LR	LR	16 11 31.4	
	comp=Z,2μm,18.5s,MS4.6,baz=6.0,slow=43						
CMAR	**Chiang Mai Arr**	**22.07**	**356**	P	**P**	**16 00 31.7**	**-2.5**
CMAR						16 04 32.8	
NANT	**Nan**	**22.34**	**360**	⇑P	**P**	**16 00 35.0**	**-2.1**
	190nm,0.9s,mb5.5						
CHRT	**Chiangrai**	**23.43**	**358**	⇓P	**P**	**16 00 47.0**	**-1.6**
	316nm,1.1s,mb5.7						
BATI	**Baumata**	**23.68**	**107**	P	**P**	**16 00 48.0**	**-3.1**
	0.0nm,0.0s						
BATI	**Baumata**	**23.68**	**107**	P	**P**	**16 00 49.8**	**-1.2**
	35nm,1.0s,mb4.7,baz=227,slow=8.1,SNR=9.3						
QIZ	**Qiongzhong**	**24.30**	**21**	P	**P**	**16 00 56.3**	**-0.3**
QIZ				AP		16 01 04.8	
QIZ				S	**S**	**16 05 16.4**	**+2.5**
QIZ				AMB	AMB		
	comp=Z,85nm,1.7s,mb4.9						
QIZ				LR	LR		
	comp=N,2μm,13.7s						
QIZ				LR	LR		
	comp=Z,2μm,14.6s,MS4.8						
QIZ	**Qiongzhong**	**24.30**	**21**	*e*P	**P**	**16 00 55.8**	**-0.8**
	comp=Z,254nm,1.6s,mb5.4						
MNI	**Manado**	**24.66**	**78**	P	**P**	**16 00 58.8**	**-1.2**
	comp=Z,0.0nm,0.0s						
MDRS	**Chennai**	**26.26**	**310**	*e*P	**P**	**16 01 16.0**	**+1.5**
MDRS				*ex*	x	16 05 56.0	
LBMI	**Labuha**	**26.95**	**84**	P	**P**	**16 01 18.9**	**-1.8**
	comp=Z,0.0nm,0.0s						
KOD	**Kodaikanal**	**26.96**	**301**	*ex*	x	16 03 05.0	
KOD				AMb	AMB	16 03 11.8	
	comp=Z,34nm,1.2s,mb4.8						
FITZ	**Fitzroy Crossi**	**28.31**	**122**	*e*P	**P**	**16 01 32.2**	**-0.7**
	comp=Z,41nm,1.0s,mb5.0						
FITZ	**Fitzroy Crossi**	**28.31**	**122**	P	**P**	**16 01 33.0**	**+0.2**
	comp=Z,5.5nm,0.9s,mb4.2,baz=321,slow=8.8,SNR=12						
FITZ				LR	LR	16 13 31.6	
	comp=Z,541nm,20.2s,MS4.1,baz=141,slow=38						
KMI	**Kunming**	**28.70**	**4**	P	**P**	**16 01 36.9**	**+0.7**
KMI				AP	pP	16 01 48.1	+3.3
KMI				XP	sP	16 01 52.8	+4.4
KMI				PP	PP	16 02 31.5	-10
KMI				PCP	PcP	16 04 48.6	+2.2
KMI				S	**S**	**16 06 24.1**	**+0.5**
KMI				XS	sS	16 06 43.3	+5.5
KMI				SS	SS	16 07 53.8	-32
KMI				SCS	ScS	16 12 14.8	-4.7
KMI				AMB	AMB		
	comp=Z,26nm,1.0s,mb4.9						
KMI				AMB	AMB		
	comp=Z,219nm,4.8s						
KMI				LR	LR		
	comp=N,2μm,13.5s,MS5.1						
KMI				LR	LR		
	comp=E,3μm,16.8s,MS5.1						
KMI				LR	LR		
	comp=Z,3μm,13.5s,MS5.1						
HYB	**Hyderabad**	**30.29**	**314**	*i* P	**P**	**16 01 52.5**	**+2.1**
HYB	**Hyderabad**	**30.29**	**314**	*e*P	**P**	**16 01 50.5**	**+0.1**
GYA	**Guiyang**	**30.52**	**11**	⇑*i*P	**P**	**16 01 53.4**	**+1.1**
GYA				AP	pP	16 02 03.6	+2.7
GYA				XP	sP	16 02 07.8	+3.3
GYA				PP	PP	16 02 54.9	-6.7
GYA				PCP	PcP	16 04 51.8	+0.7
GYA				S	**S**	**16 06 52.3**	**+0.2**
GYA				XS	sS	16 07 09.4	+3.2
GYA				SS	SS	16 08 35.8	-27
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2						
GYA				AMB	AMB		
	comp=Z,140nm,5.8s						
GYA				LR	LR		
	comp=N,1μm,15.8s,MS4.7						
GYA				LR	LR		
	comp=E,840nm,16.4s,MS4.7						
GYA				LR	LR		
	comp=Z,960nm,15.6s,MS4.5						
BOK	**Bokaro**	**30.89**	**333**	⇑*i*P	**P**	**16 01 56.6**	**+0.9**
BOK				AMb	AMB	16 01 59.0	
	comp=Z,57nm,0.9s,mb5.4						
BOK				*e*S	**S**	**16 07 00.0**	**+1.9**
GOA	**Goa**	**32.73**	**306**	*ex*	x	16 03 40.3	
GOA				AMb	AMB	16 03 47.5	
	comp=Z,22nm,1.6s,mb4.8						
ODAN	**Odare**	**32.98**	**338**	*e*P	**P**	**16 02 15.0**	**+1.0**
	comp=Z,364nm,1.2s,mb6.2						
TAPN	**Taplejung**	**33.30**	**339**	*e*P	**P**	**16 02 18.4**	**+1.6**
	comp=Z,559nm,1.0s,mb6.4						
RAMN	**Ramite**	**33.37**	**337**	*e*P	**P**	**16 02 18.0**	**+0.7**
	comp=Z,106nm,0.4s,mb6.2						
KAD	**Karad**	**33.47**	**309**	*e*P	**P**	**16 02 17.0**	**-1.4**
KAD				AMb	AMB	16 02 29.4	
	comp=Z,35nm,1.8s,mb5.0						
JIRN	**Jiri**	**34.16**	**337**	*e*P	**P**	**16 02 25.7**	**+1.5**
	comp=Z,175nm,0.7s,mb6.1						
PKI	**Pulchoki**	**34.40**	**336**	*e*P	**P**	**16 02 27.1**	**+0.8**
	comp=Z,189nm,1.3s,mb5.8						
PKIN	**Phulchoki**	**34.41**	**336**	*e*P	**P**	**16 02 27.0**	**+0.6**
LSA	**Lhasa**	**34.43**	**345**	P	**P**	**16 02 27.0**	**+0.4**
LSA	**Lhasa**	**34.43**	**345**	*e*P	**P**	**16 02 27.6**	**+1.0**
LSA				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
LSA	**Lhasa**	**34.43**	**345**	*e*P	**P**	**16 02 27.6**	**+1.0**
	comp=Z,25nm,0.8s,mb5.2						
POO	**Poona**	**34.45**	**311**	*ex*	x	16 02 34.0	
GUN	**Gumba**	**34.51**	**336**	*e*P	**P**	**16 02 28.7**	**+1.5**
CD2	**Chengdu**	**34.52**	**5**	⇑*i*P	**P**	**16 02 26.3**	**-1.0**
CD2				AP	pP	16 02 35.9	-0.1
CD2				XP	sP	16 02 39.8	+0.2
CD2				PP	PP	16 03 46.8	+0.8
CD2				PCP	PcP	16 04 59.3	-2.7
CD2				S	**S**	**16 07 53.8**	**-0.6**
CD2				XS	sS	16 08 09.8	+1.2
CD2				SCS	ScS	16 12 42.9	-5.3
CD2				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.2						
CD2				AMB	AMB		
	comp=Z,240nm,6.0s						
CD2				LR	LR		
	comp=N,3μm,14.4s,MS5.5						
CD2				LR	LR		
	comp=E,5μm,12.0s,MS5.5						
CD2				LR	LR		
	comp=Z,3μm,15.6s,MS5.2						
DMN	**Daman**	**34.56**	**335**	*e*P	**P**	**16 02 28.6**	**+0.9**
	comp=Z,123nm,1.0s,mb5.8						
KKN	**Kakani**	**34.64**	**336**	*e*P	**P**	**16 02 29.2**	**+0.8**
	comp=Z,149nm,0.9s,mb5.9						
GKN	**Gorkha**	**35.10**	**335**	*e*P	**P**	**16 02 33.0**	**+0.6**
	comp=Z,127nm,0.7s,mb6.0						
KOLN	**Koldanda**	**35.35**	**333**	*e*P	**P**	**16 02 35.4**	**+0.9**
	comp=Z,113nm,0.9s,mb5.8						
DANN	**Dangsing**	**35.78**	**334**	*e*P	**P**	**16 02 38.8**	**+0.6**
	comp=Z,334nm,1.0s,mb6.2						
WHN	**Wuhan**	**36.45**	**20**	⇓P	**P**	**16 02 44.3**	**+0.4**
WHN				AP	pP	16 02 51.5	-1.1
WHN				AMB	AMB		
	comp=Z,68nm,1.1s,mb5.5						
WRA	**Warramunga Arr**	**36.55**	**119**	P	**P**	**16 02 44.8**	**-0.2**
	comp=Z,12nm,0.9s,mb4.7,baz=308,slow=9.3,SNR=39						
WRA				LR	LR	16 19 14.8	
	comp=Z,1μm,20.3s,MS4.6,baz=305,slow=39						
WRAB	**Tennant Creek**	**36.56**	**119**	P	**P**	**16 02 44.2**	**-0.8**
	comp=Z,111nm,1.0s,mb5.6,SNR=11						
WRAB	**Tennant Creek**	**36.56**	**119**	*e*P	**P**	**16 02 44.0**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**36.56**	**119**	*e*P	**P**	**16 02 44.0**	**-1.0**
	comp=Z,18nm,0.8s,mb5.0						
WB2	**Warramunga Arr**	**36.56**	**119**	*e*P	**P**	**16 02 44.1**	**-1.0**
ASAR	**Alice Springs**	**37.71**	**125**	P	**P**	**16 02 54.8**	**0.0**
	comp=Z,8.9nm,1.0s,mb4.5,baz=292,slow=7.3,SNR=62						
ASAR				PcP	PcP	16 05 12.3	+0.6
	comp=Z,1.5nm,0.6s,baz=298,slow=2.0,SNR=4.4						
XAN	**Xi'an**	**38.31**	**11**	P	**P**	**16 02 58.8**	**-0.9**
XAN				AP	pP	16 03 08.3	-0.1
XAN				XP	sP	16 03 12.8	+0.9
XAN				PP	PP	16 04 28.1	+0.4
XAN				PCP	PcP	16 05 12.9	-0.4
XAN				S	**S**	**16 08 48.4**	**-3.8**
XAN				SCP	ScP	16 08 57.9	-1.4
XAN				PCS	PcS	16 09 02.0	-0.4
XAN				SCS	ScS	16 13 06.4	-2.7
XAN				AMB	AMB		
	comp=Z,117nm,1.1s,mb5.5						
XAN				AMB	AMB		
	comp=Z,233nm,9.8s						
XAN				LR	LR		
	comp=N,433nm,17.5s,MS5.0						
XAN				LR	LR		
	comp=E,2μm,17.5s,MS5.0						
XAN				LR	LR		
	comp=Z,3μm,14.3s,MS5.2						
SONA	**Sohna**	**39.05**	**326**	*e*P	**P**	**16 03 04.9**	**-1.0**
SONA				AMb	AMB	16 03 07.0	
	comp=Z,27nm,1.9s,mb4.7						
ASOR	**Ausora**	**39.06**	**327**	*e*P	**P**	**16 03 06.4**	**+0.3**
ASOR				AMb	AMB	16 03 15.9	
	comp=Z,187nm,1.0s,mb5.8						
AJM	**Ajmer**	**39.17**	**321**	*e*P	**P**	**16 03 06.0**	**-1.0**
AJM				*e*P		16 03 07.3	
AJM				AMb	AMB	16 03 09.1	
	comp=Z,34nm,1.4s,mb4.9						
AYAN	**Aya Nagar**	**39.20**	**326**	*e*P	**P**	**16 03 06.7**	**-0.6**
AYAN				AMb	AMB	16 03 08.1	
	comp=Z,17nm,0.9s,mb4.8						
NDI	**New Delhi**	**39.31**	**326**	*e*P	**P**	**16 03 07.0**	**-1.1**
NJ2	**Nanjing**	**39.51**	**25**	*e*P	**P**	**16 03 11.4**	**+1.7**
NJ2				AP	pP	16 03 21.5	+3.1
NJ2				XP	sP	16 03 25.6	+3.6
NJ2				PP	PP	16 04 45.3	+4.5
NJ2				S	**S**	**16 09 12.0**	**+1.8**
NJ2				XS	sS	16 09 29.5	+4.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,1μm,6.2s						
NJ2				LR	LR		
	comp=N,900nm,14.4s,MS5.1						
NJ2				LR	LR		
	comp=E,2μm,17.6s,MS5.1						
NJ2				LR	LR		
	comp=Z,6μm,17.9s,MS5.5			

	comp=E,1µm,18.9s										
GTA					LR	LR					
	comp=Z,1µm,15.3s,MS5.0										
THN	**Thein Dam**	**43.04**	**328**		*e*P	**P**	**16 03 37.1**	**-1.6**			
BTO	**Baotou**	**44.89**	**10**		*e*P	**P**	**16 03 53.4**	**-0.1**			
HHC	**Hu-ho-hao-te**	**45.42**	**12**	⇑	*i*P	**P**	**16 03 58.3**	**+0.7**			
HHC					AP	pP	16 04 09.0	+2.5			
HHC					XP	sP	16 04 12.5	+2.5			
HHC					PCP	PcP	16 05 36.8	+0.2			
HHC					PP	PP	16 05 46.0	+1.6			
HHC					SCP	ScP	16 09 25.8	-1.7			
HHC					PCS	PcS	16 09 29.6	-0.8			
HHC					S	**S**	**16 10 37.8**	**+0.7**			
HHC					XS	sS	16 10 54.8	+3.1			
HHC					SCS	ScS	16 13 49.8	-2.4			
HHC					SS	SS	16 13 53.5	-7.9			
HHC					AMB	AMB					
	comp=Z,65nm,1.0s,mb5.4										
HHC					AMB	AMB					
	comp=Z,383nm,6.0s										
HHC					LR	LR					
	comp=N,2µm,14.7s,MS5.3										
HHC					LR	LR					
	comp=E,2µm,14.1s,MS5.3										
HHC					LR	LR					
	comp=Z,2µm,14.7s,MS5.2										
BJT	**Baijiatuau**	**45.75**	**17**		*e*P	**P**	**16 03 59.5**	**-0.8**			
BJT					pmax	pmax					
	comp=Z,65nm,1.1s										
BJT	**Baijiatuau**	**45.75**	**17**		*e*P	**P**	**16 03 59.5**	**-0.8**			
	comp=Z,65nm,1.1s,mb5.5										
DL2	**Dalian**	**46.58**	**23**	⇑	P	**P**	**16 04 06.1**	**-0.7**			
DL2					PP	PP	16 06 00.1	+3.5			
DL2					S	**S**	**16 10 52.1**	**-1.7**			
DL2					AMB	AMB					
	comp=Z,30nm,1.2s,mb5.1										
DL2					AMB	AMB					
	comp=Z,150nm,4.4s										
DL2					LR	LR					
	comp=N,880nm,14.0s,MS4.9										
DL2					LR	LR					
	comp=E,450nm,14.1s,MS4.9										
DL2					LR	LR					
	comp=Z,1µm,14.4s,MS5.0										
CTA	**Charters Tower**	**47.26**	**114**		*e*P	**P**	**16 04 12.1**	**-0.4**			
	comp=Z,11nm,0.9s,mb4.8										
CTA	**Charters Tower**	**47.26**	**114**		*e*P	**P**	**16 04 12.1**	**-0.4**			
CTA					pmax	pmax					
	comp=Z,11nm,0.9s										
CTAO	**Charters Tower**	**47.26**	**114**		*e*P	**P**	**16 04 11.9**	**-0.6**			
CTAO					pmax	pmax					
	comp=Z,29nm,1.2s,mb5.1										
CTAO	**Charters Tower**	**47.26**	**114**		*e*P	**P**	**16 04 11.9**	**-0.7**			
	comp=Z,29nm,1.2s,mb5.1										
STKA	**Stephens Creek**	**47.52**	**131**		*e*P	**P**	**16 04 14.7**	**+0.4**			
	comp=Z,5.2nm,0.6s,mb4.7										
STKA	**Stephens Creek**	**47.52**	**131**		P	**P**	**16 04 14.7**	**+0.3**			
	comp=Z,4.3nm,0.5s,mb4.7,baz=304,slow=8.0,SNR=16										
STKA					LR	LR	16 25 37.3				
	comp=Z,1µm,19.6s,MS4.9,baz=294,slow=38										
KSRS	**Korea Array**	**48.12**	**29**		P	**P**	**16 04 18.4**	**-0.5**			
	comp=Z,63nm,1.1s,mb5.6,baz=218,slow=8.0,SNR=60										
KSRS					LR	LR	16 27 02.3				
	comp=Z,536nm,18.1s,MS4.6,baz=251,slow=39										
KSH	**Kashi**	**48.65**	**334**	⇑	*i*P	**P**	**16 04 23.5**	**+0.6**			
KSH					*e*AP	pP	16 04 33.3	+1.5			
KSH					*e*XP	sP	16 04 37.1	+1.8			
KSH					*e*PP	PP	16 06 16.3	+0.2			
KSH					*e*SCP	ScP	16 09 40.0	-1.1			
KSH					*e*PCS	PcS	16 09 44.0	-0.1			
KSH					*e*S	**S**	**16 11 20.4**	**-2.8**			
KSH					*e*XS	sS	16 11 39.3	+1.5			
KSH					*e*SCS	ScS	16 14 11.0	-2.5			
KSH					*e*SS	SS	16 14 47.0	-6.9			
KSH					LR	LR					
	comp=N,611nm,9.5s										
KSH					LR	LR					
	comp=E,989nm,10.9s										
KSH					LR	LR					
	comp=Z,2µm,19.8s										
WMQ	**Urumqi**	**48.72**	**347**	⇑	*i*P	**P**	**16 04 24.1**	**+0.8**			
WMQ					AP	pP	16 04 34.0	+1.8			
WMQ					XP	sP	16 04 38.0	+2.3			
WMQ					PCP	PcP	16 05 49.0	+0.8			
WMQ					PP	PP	16 06 17.0	+0.3			
WMQ					S	**S**	**16 11 23.0**	**-1.1**			
WMQ					XS	sS	16 11 40.0	+1.3			
WMQ					SS	SS	16 14 47.0	-7.9			
WMQ					AMB	AMB					
	comp=Z,106nm,1.1s,mb5.8										
WMQ					AMB	AMB					
	comp=Z,375nm,3.6s										
WMQ					LR	LR					
	comp=N,1µm,16.9s,MS5.1										
WMQ					LR	LR					
	comp=E,1µm,17.8s,MS5.1										
WMQ					LR	LR					
	comp=Z,1µm,26.0s										
SNY	**Shenyang**	**49.85**	**22**	⇑	P	**P**	**16 04 30.6**	**-1.4**			
SNY					AMB	AMB					
	comp=Z,26nm,1.2s,mb5.1										
SNY					AMB	AMB					
	comp=Z,292nm,4.4s										
SNY					LR	LR					
	comp=N,460nm,13.2s,MS5.2										
SNY					LR	LR					
	comp=E,2µm,15.0s,MS5.2										
SNY					LR	LR					
	comp=Z,2µm,14.5s,MS5.3										
CBIJ	**Chichi jima**	**50.39**	**50**		LR	LR	16 22 38.6				
	comp=Z,191nm,21.6s,MS4.1,baz=188,slow=32										
ULHL	**Ulahol**	**50.82**	**337**		P	**P**	**16 04 40.0**	**+0.6**			
	SNR=6.9										
SONM	**Songino Array**	**51.55**	**5**		P	**P**	**16 04 45.4**	**+0.7**			
	comp=Z,39nm,1.0s,mb5.3,baz=189,slow=8.2,SNR=167										
ULN	**Ulaanbaatar**	**51.63**	**5**		*e*P	**P**	**16 04 45.7**	**+0.3**			
ULN					pmax	pmax					
	comp=Z,143nm,1.5s,mb5.7										
ULN	**Ulaanbaatar**	**51.63**	**5**		*e*P	**P**	**16 04 45.7**	**+0.4**			
	comp=Z,143nm,1.5s,mb5.7										
TKM2	**Tokmak 2**	**51.65**	**337**		*e*P	**P**	**16 04 45.9**	**+0.3**			
TKM2					pmax	pmax					
	comp=Z,37nm,0.5s,mb5.6										
TKM2	**Tokmak 2**	**51.65**	**337**		P	**P**	**16 04 46.1**	**+0.5**			
	SNR=64										
TKM2	**Tokmak 2**	**51.65**	**337**		*e*P	**P**	**16 04 45.9**	**+0.4**			
	comp=Z,37nm,0.5s,mb5.6										
KBK	**Karagaybulak**	**51.69**	**336**		P	**P**	**16 04 46.9**	**+1.0**			
	SNR=21										
AML	**Almayashu**	**51.78**	**335**		P	**P**	**16 04 47.4**	**+0.8**			
	SNR=17										
AML	**Almayashu**	**51.78**	**335**		*e*P	**P**	**16 04 47.2**	**+0.6**			
	comp=Z,35nm,1.2s,mb5.2										
AAK	**Ala-Archa**	**51.85**	**336**		P	**P**	**16 04 47.5**	**+0.4**			
	SNR=6.0										
FRU	**Bishkek**	**51.97**	**336**		*e*P	**P**	**16 04 47.6**	**-0.4**			
FRU					*i*	pP	16 04 55.5	-1.4			
FRU					*e*		16 12 09.0				
FRU					pmax	pmax					
	comp=Z,136nm,2.2s,mb5.5										
CHMS	**Chumysh**	**52.05**	**336**		P	**P**	**16 04 48.3**	**-0.3**			
	SNR=11										
EKS2	**Erkin-Say**	**52.18**	**335**		P	**P**	**16 04 50.3**	**+0.8**			
	SNR=53										
EKS2	**Erkin-Say**	**52.18**	**335**		*e*P	**P**	**16 04 50.1**	**+0.6**			
	comp=Z,34nm,0.8s,mb5.3										
CN2	**Changchun**	**52.25**	**23**	⇑	P	**P**	**16 04 49.1**	**-0.9**			
CN2					*e*AP	pP	16 05 01.6	+2.6			
CN2					*e*XP	sP	16 05 06.8	+4.3			
CN2					PP	PP	16 06 48.0	-0.8			
CN2					*e*S	**S**	**16 12 10.6**	**-2.6**			
CN2					SS	SS	16 15 46.1	-5.1			
CN2					AMB	AMB					
	comp=Z,50nm,1.2s,mb5.3										
CN2					LR	LR					
	comp=N,2µm,16.0s,MS5.2										
CN2					LR	LR					
	comp=E,1µm,16.0s,MS5.2										
CN2					LR	LR					
	comp=Z,2µm,14.0s,MS5.2										
USP	**Ospenovka**	**52.38**	**336**		P	**P**	**16 04 51.2**	**+0.2**			
	SNR=26										
MK31	**Makanchi Array**	**52.83**	**344**		*i* P	**P**	**16 04 53.8**	**-0.5**			
MK31					pmax	pmax					
	comp=Z,74nm,1.1s,mb5.5										
MKAR	**Makanchi Array**	**52.83**	**344**		P	**P**	**16 04 54.1**	**-0.1**			
	comp=Z,40nm,0.9s,mb5.3,baz=147,slow=7.3,SNR=172										
MKAR					LR	LR	16 32 13.3				
	comp=Z,425nm,18.9s,MS4.5,baz=160,slow=42										
MAJO	**Matsushiro**	**53.15**	**38**		*e*P	**P**	**16 04 54.9**	**-1.9**			
MAJO					pmax	pmax					
	comp=Z,32nm,1.2s,mb5.1										
MAJO	**Matsushiro**	**53.15**	**38**		*e*P	**P**	**16 04 54.9**	**-2.0**			
	comp=Z,32nm,1.2s,mb5.1										
MAT	**Matsushiro**	**53.15**	**38**		P	**P**	**16 04 55.7**	**-1.1**			
MJAR	**Matsushiro Arr**	**53.15**	**38**		P	**P**	**16 04 55.8**	**-1.1**			
	comp=Z,22nm,1.1s,mb5.0,baz=221,slow=7.9,SNR=25										
ZAK	**Zakamensk**	**53.90**	**2**		*e*P	**P**	**16 05 01.2**	**-0.8**			
ZAK					pmax	pmax					
	comp=Z,19nm,1.7s,mb4.8										
OPO	**Ambohidratompo**	**54.33**	**250**		P	**P**	**16 05 07.2**	**+1.4**			
	comp=Z,3.6nm,0.8s,mb4.3,baz=68,slow=7.5,SNR=6.0										
VLA	**Vladivostok**	**54.44**	**28**		P	**P**	**16 05 04.0**	**-2.1**			
VLA					pmax	pmax					
	comp=Z,92nm,1.9s,mb5.4										
VLA					MLR	MLR					
	comp=Z,600nm,18.4s,MS4.7										
MDJ	**Mudanjiang**	**54.59**	**25**		P	**P**	**16 05 07.0**	**-0.2**			
MDJ					AP	pP	16 05 16.1	-0.1			
MDJ					XP	sP	16 05 19.9	+0.2			
MDJ					SCP	ScP	16 10 05.8	-0.8			
MDJ					PCS	PcS	16 10 09.6	0.0			
MDJ					S	**S**	**16 12 47.9**	**+2.9**			
MDJ					XS	sS	16 13 00.6	+0.8			
MDJ					AMB	AMB					
	comp=Z,16nm,1.3s,mb4.9										
MDJ					AMB	AMB					
	comp=Z,164nm,6.6s										
MDJ					LR	LR					
	comp=N,579nm,14.0s,MS5.2										
MDJ					LR	LR					
	comp=E,1µm,14.7s,MS5.2										
MDJ					LR	LR					
	comp=Z,2µm,13.3s,MS5.3										
MDJ	**Mudanjiang**	**54.59**	**25**		*e*P	**P**	**16 05 06.7**	**-0.6**			
	comp=Z,23nm,1.1s,mb5.1										
MOY	**Mondy**	**55.14**	**0**		*e*P	**P**	**16 05 10.6**	**-0.4**			
MOY					pmax	pmax					
	comp=Z,56nm,2.8s,mb5.1										
TLY	**Talaya**	**55.21**	**2**		P	**P**	**16 05 12.1**	**+0.6**			
	comp=Z,120nm,1.1s,mb5.8,SNR=7.6										
TLY	**Talaya**	**55.21**	**2**		*e*P	**P**	**16 05 11.7**	**+0.2**			
TLY					*e*S	**S**	**16 13 05.7**	**+13**			
TLY					*e*		16 15 01.7				
TLY					pmax	pmax					
	comp=Z,55nm,1.7s,mb5.3										
TLY					MLR	MLR					
	comp=Z,1µm,16.0s,MS5.0										
TLY	**Talaya**	**55.21**	**2**		*e*P	**P**	**16 05 12.1**	**+0.6**			
	comp=Z,86nm,1.8s,mb5.5										
HIA	**Hailar**	**55.27**	**15**		*e*P	**P**	**16 05 10.9**	**-1.1**			
HIA					pmax	pmax					
	comp=Z,25nm,1.3s										
HIA	**Hailar**	**55.27**	**15**		*e*P	**P**	**16 05 10.9**	**-1.1**			
	comp=Z,25nm,1.3s,mb5.1										
IRK	**Irkutsk**	**55.80**	**3**		*e*P	**P**	**16 05 12.4**	**-3.4**			
IRK					pmax	pmax					
	comp=Z,113nm,2.2s,mb5.5										
CIT	**Chita**	**56.56**	**9**		*e*P	**P**	**16 05 21.9**	**+0.7**			
CIT					*e*	pP	16 05 29.6	-0.7			
CIT					*e*		16 07 28.3				
CIT					pmax	pmax					
	comp=Z,111nm,2.3s,mb5.5										
ABKT	**Ailbek**	**57.18**	**320**		P	**P**	**16 05 25.3**	**-0.6**			
	comp=Z,172nm,1.2s,mb6.0,SNR=5.4										
KURK	**Kurchatov**	**57.41**	**344**		P	**P**	**16 05 27.5**	**+0.2**			
	comp=Z,367nm,1.0s,mb6.4,SNR=39										
ZAA0	**Zalesovo Array**	**58.94**	**349**		*e*P	**P**	**16 05 37.2**	**-0.7**			
ZALV	**Zalesovo Beam**	**58.94**	**349**		P	**P**	**16 05 37.4**	**-0.6**			
	comp=Z,76nm,1.0s,mb5.7,baz=159,slow=4.5,SNR=176										
ZALV					LR	LR	16 34 25.8				
	comp=Z,268nm,18.3s,MS4.4,baz=169,slow=40										
HNR	**Honiara**	**59.07**	**99**		*e*P	**P**	**16 05 38.7**	**-0.9**			
HNR					*e*	pP	16 05 47.5	-1.2			
HNR					pmax	pmax					
	comp=Z,141nm,1.2s,mb5.9										
HNR	**Honiara**	**59.07**	**99**		*e*P	**P**	**16 05 38.7**	**-0.9**			
	comp=Z,141nm,1.2s,mb5.9										
HNR					*e*	pP	16 05 47.5	-1.2			
KLR	**Kul'dur**	**59.18**	**23**		*e*P	**P**	**16 05 35.5**	**-4.2**			
KLR					*e*S	**S**	**16 13 40.0**	**-5.4**			
KLR					pmax	pmax					
	comp=E,54nm,2.0s										
KLR					pmax	pmax					
	comp=Z,130nm,2.0s,mb5.6										
KLR					MLR	MLR					
	comp=E,1µm,14.0s										
KLR					MLR	MLR					
	comp=Z,2µm,14.0s,MS5.4										
NVS	**Novosibirsk**	**60.09**	**348**	⇑	*i*P	**P**	**16 05 44.7**	**-1.2**			
NVS					*i* S	**S**	**16 13 54.7**	**-2.2**			
NVS					pmax	pmax					
	comp=Z,89nm,1.8s,mb5.5										
NVS					pmax	pmax					
	comp=N,58nm,1.6s										
NVS					pmax	pmax					
	comp=E,28nm,1.4s										
NVS					smax						
	comp=N,31nm,2.3s										
ASAJ	**Asahikawa**	**60.61**	**34**		P	**P**	**16 05 49.5**	**-0.1**			
	comp=N,11nm,0.8s,mb5.0,baz=238,slow=14,SNR=8.5										
VOSK	**Vostochnaya**	**61.54**	**340**		P	**P**	**16 05 53.9**	**-1.9**			
VOSK					pmax	pmax					
	comp=Z,30nm,1.1s,mb5.3										
BVA0	**Borovoye Array**	**62.00**	**340**		*i* P	**P**	**16 05 57.6**	**-1.2**			
BVA0					pmax	pmax					
	comp=Z,11nm,1.3s,mb4.8										
BOD	**Bodaibo**	**62.24**	**8**		*e*P	**P**	**16 05 59.4**	**-0.9**			
BOD					pmax	pmax					
	comp=Z,30nm,1.2s,mb5.3										
YSS	**Yuzh-Sakhalins**	**62.54**	**31**	⇑	*i*P	**P**	**16 06 01.8**	**-0.8**			
YSS					*e*	pP	16 06 10.0	-1.7			
YSS					pmax	pmax					
	comp=Z,90nm,1.0s,mb5.8										
YSS	**Yuzh-Sakhalins**	**62.54**	**31**		*e*P	**P**	**16 06 01.9**	**-0.7**			
	comp=Z,65nm,1.0s,mb5.7										
KMBO	**Kilima Mbogo**	**63.44**	**271**		LR	LR	16 27 25.9				
	comp=Z,354nm,21.5s,MS4.5,baz=93,slow=30										
AB31	**Akbulak array**	**63.45**	**331**		*i* P	**P**	**16 06 07.4**	**-1.1**			
AB31					pmax	pmax					
	comp=Z,40nm,0.9s,mb5.5										
AKTO	**Aktyubinsk**	**65.16**	**331**		P	**P**	**16 06 18.6**	**-1.2**			
AKTO					pmax	pmax					
	comp=Z,10.0nm,2.1s,mb4.5										
GNI	**Garni**	**67.22**	**316**		P	**P**	**16 06 34.3**	**+1.1**			
	comp=Z,6.3nm,0.5s,mb4.9,baz=181,slow=13,SNR=3.9										
GNI	**Garni**	**67.22**	**316**	⇑	*e*P	**P**	**16 06 33.4**	**+0.2**			
GNI					pmax	pmax					
	comp=Z,44nm,2.2s										
SVE	**Sverdlovsk**	**68.50**	**338**	⇓	*e*P	**P**	**16 06 40.7**	**-0.2**			
SVE					*e*		16 09 15.3				
SVE					*e*PPP		16 10 58.4				
SVE					*e*S	S	16 15 29.9	-11			
SVE					*e*		16 16 25.6				
SVE					pmax	pmax					
	comp=Z,67nm,1.2s,mb5.5										
SVE					MLR	MLR					
	comp=Z,843nm,22.0s,MS4.9										
MAW	**Mawson**	**68.84**	**195**		*e*P	**P**	**16 06 43.4**	**+0.5**			
	comp=Z,4.7nm,1.0s,mb4.4										
MAW	**Mawson**	**68.84**	**195**		P	**P**	**16 06 44.1**	**+1.3**			
	comp=Z,3.3nm,0.9s,mb4.2,baz=19,slow=9.4,SNR=7.7										
MAW					LR	LR	16 30 09.4				
	comp=Z,709nm,21.8s,MS4.9,baz=52,slow=30										
MAW	**Mawson**	**68.84**	**195**		*e*P	**P**	**16 06 43.4**	**+0.5**			
MAW					pmax	pmax					
	comp=Z,5.0nm,1.0s										
ARU	**Arti**	**69.02**	**336**		P	**P**	**16 06 43.5**	**-0.7**			
	comp=Z,144nm,1.2s,mb5.8,SNR=8.1										
ARU	**Arti**	**69.02**	**336**	*c*	*i*P	**P**	**16 06 43.2**	**-1.0**			
ARU					*e*		16 07 09.1				
ARU					*e*		16 09 17.3				
ARU					*e*PPP		16 10 56.5				
ARU					*e*S	S	16 15 45.7	-1.4			
ARU					pmax	pmax					
	comp=Z,56nm,1.7s,mb5.2										
ARU					MLR	MLR					
	comp=Z,486nm,21.0s,MS4.7										
ARU	**Arti**	**69.02**	**336**		*e*P	**P**	**16 06 43.1**	**-1.1**			
	comp=Z,40nm,1.3s,mb5.2										
YAK	**Yakutsk**	**69.19**	**14**	⇑	*e*P	**P**	**16 06 43.3**	**-1.8**			
YAK					pmax	pmax					
	comp=Z,77nm,1.1s,mb5.5										
YAK	**Yakutsk**	**69.19**	**14**		*e*P	**P**	**16 06 43.0**	**-2.0**			
	comp=Z,93nm,1.3s,mb5.6										
ASF	**Jabal al Asfar**	**70.14**	**306**		P	**P**	**16 06 53.2**	**+1.6**			
	comp=Z,7.7nm,1.1s,mb4.5,baz=331,slow=2.5,SNR=8.5										
KIV	**Kislovodsk**	**70.27**	**319**		*e*P	**P**	**16 06 52.1**	**0.0**			
KIV					*e*		16 07 14.5				
KIV					*e*S	S	16 16 01.6	-0.7			
KIV					pmax	pmax					
	comp=Z,30nm,1.1s,mb5.1										
KIV					MLR	MLR					
	comp=Z,218nm,20.0s,MS4.4										
KIV	**Kislovodsk**	**70.27**	**319**	⇓	*i*P	**P**	**16 06 52.5**	**+0.4**			
KIV	**Kislovodsk**	**70.27**	**319**		*e*P	**P**	**16 06 52.2**	**+0.1**			
	comp=Z,62nm,1.4s,mb5.3										
KIV					*e*	pP	16 07 01.4	0.0			
MALT	**Malatya**	**70.98**	**313**		*e*P	**P**	**16 06 54.0**	**-2.6**			
MALT					pmax	pmax					
	comp=Z,23nm,1.3s,mb5.0										
MALT	**Malatya**	**70.98**	**313**	⇑	*i*P	**P**	**16 06 54.0**	**-2.6**			
MALT	**Malatya**	**70.98**	**313**		*e*P	**P**	**16 06 54.0**	**-2.7**			
	comp=Z,23nm,1.3s,mb4.9										
LSZ	**Lusaka**	**72.18**	**255**		*e*P	**P**	**16 07 04.5**	**+0.3**			
LSZ					pmax	pmax					
	comp=Z,22nm,1.3s,mb4.9										
LSZ	**Lusaka**	**72.18**	**255**		*e*P	**P**	**16 07 04.5**	**+0.2**			
	comp=Z,22nm,1.3s,mb4.9										
PETK	**Petropavlovsk-**	**73.93**	**32**		P	**P**	**16 07 12.0**	**-1.9**			
	comp=Z,6.9nm,1.0s,mb4.5,baz=289,slow=4.4,SNR=5.7										
PET	**Petropavlovsk**	**74.39**	**32**	‖	*e*P	**P**	**16 07 15.9**	**-0.7**			
PET					pmax	pmax					
	comp=Z,56nm,1.4s,mb5.3										
PET	**Petropavlovsk**	**74.39**	**32**		*e*P	**P**	**16 07 15.4**	**-1.1**			
	comp=Z,38nm,1.3s,mb5.2										
BOSA	**Boshof**	**75.47**	**242**		P	**P**	**16 07 23.2**	**-0.2**			
	comp=Z,3.9nm,0.7s,mb4.5,baz=86,slow=7.8,SNR=7.2										
BOSA					LR	LR	16 33 39.2				
	comp=Z,496nm,20.9s,MS4.8,baz=102,slow=30										
VSR	**Storozhevoye**	**75.55**	**325**		*e*P	**P**	**16 07 21.9**	**-1.4**			
VSR					pmax	pmax					
	comp=N,7.0nm,1.0s										
VSR					pmax	pmax					
	comp=Z,10.0nm,1.0s,mb4.7										
VSR					pmax	pmax					
	comp=E,20nm,1.1s										
TIXI	**Tiksi**	**77.40**	**9**		*e*P	**P**	**16 07 31.4**	**-2.0**			
TIXI					*e*S	S	16 17 15.9	-5.7			
TIXI					pmax	pmax					
	comp=Z,37nm,1.7s,mb5.0										
TIXI					MLR	MLR					
	comp=Z,1µm,17.0s,MS5.4										
TIXI	**Tiksi**	**77.40**	**9**		*e*P	**P**	**16 07 31.5**	**-1.8**			
	comp=Z,16nm,1.0s,mb4.9										
MOS	**Moscow**	**78.29**	**329**		*e*P	**P**	**16 07 36.8**	**-1.8**			
MOS					*e*	pP	16 07 45.4	-2.6			
MOS					*e*		16 10 33.2				
MOS					*e*PPP		16 12 24.4				
MOS					pmax	pmax					
	comp=Z,75nm,1.7s,mb5.3										
MOS					pmax	pmax					
	comp=Z,200µm,2.1s										
OBN	**Obninsk**	**78.59**	**328**	*c*	*i*P	**P**	**16 07 39.9**	**-0.4**			
OBN					*e*	pP	16 07 48.2	-1.4			
OBN					*e*		16 10 34.8				
OBN					pmax	pmax					
	comp=Z,75nm,1.7s,mb5.3										
APE	**Apeiranthos**	**80.45**	**308**	⇑	*i*P	**P**	**16 07 46.7**	**-4.1**			
KIS	**Kishinev**	**80.45**	**319**		*e*P	**P**	**16 07 50.0**	**-0.6**			
KIS					LRM		16 50 04.0				
	comp=Z,300nm,16.0s										
AKASG	**Malin Array Be**	**81.24**	**322**		P	**P**	**16 07 53.4**	**-1.3**			
	comp=Z,4.4nm,0.8s,mb4.5,baz=79,slow=4.3,SNR=17										
AKASG					LR	LR	16 48 11.1				
	comp=Z,340nm,21.9s,MS4.7,baz=75,slow=39										
AKASG	**Malin Array Be**	**81.24**	**322**		P	**P**	**16 07 53.4**	**-1.3**			
AKASG					LR	LR	16 48 11.1				
SBA	**Scott Base**	**81.48**	**169**		P	**P**	**16 07 53.6**	**-1.9**			
SBA					*e*	pP	16 08 03.8	-1.1			
SBA					pmax	pmax					
	comp=Z,18nm,1.4s,mb4.8										
SBA	**Scott Base**	**81.48**	**169**		P	**P**	**16 07 53.6**	**-1.9**			
	comp=Z,18nm,1.4s,mb4.8										
SBA					*e*	pP	16 08 03.8	-1.1			
VRI	**Vrincioaia**	**81.56**	**317**	⇓	*i*P	**P**	**16

comp=Z,20nm,1.4s,mb5.2
ZST Bratislava 88.45 318 *e*P P **16 08 31.9 +0.8**
ZST pmax pmax
comp=Z,11nm,0.9s,mb5.1
ZST Bratislava 88.45 318 *e*P P **16 08 31.9 +0.8**
comp=Z,11nm,0.9s,mb5.1
ZST *e*PP pP 16 08 39.3 -1.2
DPC Dobruska-Polom 89.22 320 *e*P P **16 08 35.3 +0.7**
DPC epP pP 16 08 42.7 -1.4
CONA Conrad Observa 89.25 318⇑*i*P P **16 08 34.5 -0.4**
comp=Z,4.1nm,1.0s,mb4.7
CSNA Conrad Observa 89.25 318⇑*i*P P **16 08 32.9 -1.9**
comp=Z,4.2nm,1.2s,mb4.7
CSNA Conrad Observa 89.25 318⇑*i*P P **16 08 34.5 -0.3**
comp=Z,4.2nm,1.2s,mb4.7
KSP Ksiaz 89.30 321 *e*P P **16 08 35.5 +0.5**
KSP *e**PP pP 16 08 43.3 -1.1
KSP *e*S S 16 19 22.0 -0.7
ARSA Arzberg 89.40 317⇑*i*P P **16 08 35.9 +0.3**
comp=Z,13nm,1.3s,mb5.1
BOJS Bojanci 89.41 315 *i* P P **16 08 37.4 +1.8**
UPC Upice 89.44 321 *e*P P **16 08 36.7 +1.1**
UPC epP pP 16 08 44.1 -1.0
PERS Pernice 89.62 317 *i* P P **16 08 37.0 +0.4**
PERS *i* pP 16 08 44.8 -1.2
SOKA Soboth 89.68 317⇑*i*P P **16 08 37.3 +0.5**
comp=Z,19nm,1.2s,mb5.3
VISS Visnje 89.73 316 *i* P P **16 08 37.2 +0.1**
VISS *i* pP 16 08 47.0 +0.4
PRU Pruhonice 90.32 320 *e*P P **16 08 40.2 +0.4**
PRU epP pP 16 08 48.2 -1.1
PVCC Panska Ves 90.36 320 *e*P P **16 08 40.6 +0.7**
PVCC epP pP 16 08 48.9 -0.5
SNAA Sanae 90.77 198 *e*P P **16 08 42.3 +0.8**
SNAA pmax pmax
comp=Z,24nm,1.6s
SNAA Sanae 90.77 198 *e*P P **16 08 42.3 +0.8**
comp=Z,24nm,1.6s,mb5.3
GEC2 GERESS Array S 90.77 319 *e*P P **16 08 41.7 -0.2**
GEC2 *e**PP pP 16 08 50.1 -1.3
GEC2 pmax pmax
comp=Z,26nm,1.4s,mb5.4
GEC2 GERESS Array S 90.77 319 *e*P P **16 08 41.7 -0.2**
comp=Z,26nm,1.4s,mb5.4
GEC2 epP pP 16 08 50.1 -1.3
GERES GERESS Array B 90.77 319 P P **16 08 42.6 +0.7**
comp=Z,3.4nm,0.9s,mb4.7,baz=104,slow=4.5,SNR=17
BRG Berggiesshubel 90.78 321 *e*P P **16 08 42.3 +0.4**
BRG *e* pP 16 08 49.8 -1.6
BRG pmax pmax
comp=Z,7.0nm,1.2s,mb4.9
BRG pmax pmax
comp=Z,18nm,1.5s,mb5.2
BRG MLR MLR
comp=N,90nm,23.8s,MS4.3
BRG MLR MLR
comp=E,103nm,20.3s,MS4.3
BRG MLR MLR
comp=Z,180nm,17.0s,MS4.6
BRG Berggiesshubel 90.78 321 *e*P P **16 08 42.2 +0.3**
comp=Z,30nm,1.5s,mb5.4
BRG epP pP 16 08 50.0 -1.4
BRG Berggiesshubel 90.78 321 *e*P P **16 08 42.3 +0.4**
comp=Z,12nm,1.2s,mb5.1
BRG *e* pP 16 08 49.8 -1.6
comp=Z,30nm,1.5s
BRG
comp=N,150nm,23.8s
BRG
comp=E,172nm,20.3s
BRG
comp=Z,301nm,17.0s
BRG Berggiesshubel 90.78 321 *e*P P **16 08 42.3 +0.4**
comp=Z,7.3nm,1.2s,mb4.9
BRG *e* pP 16 08 49.8 -1.6
BRG LR LR
comp=Z,180nm,17.0s,MS4.6
KHC Kasperske Hory 90.87 319 *e*P P **16 08 42.5 +0.1**
KHC epP pP 16 08 49.6 -2.3
KHC AMS AMS 16 56 10.0
comp=Z,300nm,15.6s
WET Wettzell 91.33 319 *e*P P **16 08 44.9 +0.4**
WET *e**PP pP 16 08 52.6 -1.4
WET pmax pmax
comp=Z,16nm,1.2s,mb5.2
WET Wettzell 91.33 319 *e*P P **16 08 44.9 +0.4**
comp=Z,16nm,1.2s,mb5.2
WET epP pP 16 08 52.6 -1.4
CLL Collm 91.41 321⇓*i*P P **16 08 45.2 +0.4**
CLL *i* pP 16 08 54.5 +0.2
CLL pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
CLL Collm 91.41 321 *e*P P **16 08 45.1 +0.3**
comp=Z,21nm,1.5s,mb5.2
CLL epP pP 16 08 52.7 -1.6
CLL Collm 91.41 321⇓*i*P P **16 08 45.2 +0.4**
comp=Z,9.0nm,1.2s,mb5.0
CLL *i* sP sP 16 08 54.5 -3.2
CLL *e*S S 16 19 49.0 +6.9
CLL Collm 91.41 321⇓*i*P P **16 08 45.2 +0.4**
comp=Z,9.0nm,1.2s,mb5.0
CLL *i* pP 16 08 54.5 +0.2
NKC Novy Kostel 91.69 320 *e*P P **16 08 46.0 -0.1**
NKC epP pP 16 08 53.5 -2.1
TANN Tannenbergstha 91.69 320 *e*P P **16 08 46.6 +0.5**
comp=Z,9.0nm,1.5s,mb4.9
ROTZ Rotzenmuhle 91.81 320 *e*P P **16 08 47.6 +0.9**
comp=Z,22nm,1.6s,mb5.2
ROTZ epP pP 16 08 55.2 -1.0
MOX Moxa 92.24 320 *e*P P **16 08 49.2 +0.5**
comp=Z,20nm,1.6s,mb5.2
MOX
comp=Z,200nm,18.0s
MOX Moxa 92.24 320 *e*P P **16 08 49.2 +0.5**
MOX pmax pmax
comp=Z,20nm,1.6s,mb5.2
MOX MLR MLR
comp=Z,200nm,18.0s,MS4.6
MOX Moxa 92.24 320 *e*P P **16 08 48.8 +0.1**
comp=Z,19nm,1.6s,mb5.2
MOX epP pP 16 08 58.9 +0.7
GRA1 Grafenberg Arr 92.45 319 *e*P P **16 08 50.3 +0.7**
comp=Z,24nm,1.2s,mb5.4
GRA1 *e*S S 16 19 53.3 +1.7
GRA1 LR LR
comp=Z,200nm,19.7s,MS4.6
GRF Grafenberg Arr 92.45 319 *e*P P **16 08 50.3 +0.7**
GRF *e*S S 16 19 53.3 +1.7
GRF pmax pmax
comp=Z,24nm,1.2s,mb5.4
GRF MLR MLR
comp=Z,200nm,19.7s,MS4.6
GRF Grafenberg Arr 92.45 319 *e*P P **16 08 50.3 +0.7**
GRF *e*S S 16 19 53.3 +1.7
GRF pmax pmax
comp=Z,24nm,1.2s,mb5.4
GRF MLR MLR
comp=Z,200nm,19.7s,MS4.6
GRF Grafenberg Arr 92.45 319 *e*P P **16 08 50.3 +0.7**
comp=Z,24nm,1.2s,mb5.4
GRF *e*S S 16 19 53.3 +1.7
GRF *e*L 17 02 00.9
comp=Z,151nm,19.7s
NOA NORSAR Array B 92.95 331 LR LR 16 57 01.2
comp=Z,224nm,18.1s,MS4.7,baz=50,slow=40
KEST Kesra 93.23 305 P P **16 08 54.9 +1.3**
comp=Z,3.5nm,1.1s,mb4.7,baz=13,slow=3.4,SNR=5.2
TNS Taunus Mts 94.25 320 *e*P P **16 08 58.1 +0.1**
TNS *e**PP pP 16 09 05.9 -1.5
TNS pmax pmax
comp=Z,17nm,1.1s,mb5.4
TNS Taunus Mts 94.25 320 *e*P P **16 08 58.1 +0.1**
comp=Z,17nm,1.1s,mb5.4
TNS epP pP 16 09 05.9 -1.5
BFO Black Forest 94.31 318 *e*P P **16 08 58.6 +0.3**
BFO pmax pmax
comp=Z,65nm,2.7s,mb5.6
BFO Black Forest 94.31 318 *e*P P **16 08 58.6 +0.3**
comp=Z,65nm,2.7s,mb5.6
TORD Torodi Ar. Bea 99.59 283 LR LR 16 50 55.0
comp=Z,301nm,21.0s,MS4.8,baz=105,slow=33
PPT Papeete 107.58 110 *e*LR LR 16 45 37.4
comp=Z,251nm,21.8s
RKT Rikitea 119.55 119 *e*LR LR 16 51 09.1
comp=Z,599nm,27.2s

MOD Modoc 127.20 38 *e*PKPdf PKPdf 16 14 44.2 +0.8
MOD *e* 16 14 52.6
CHMT Chamberlain Mo 127.88 29 *e*PKPdf PKPdf 16 14 44.6 0.0
WVOR Wild Horse Val 127.90 36 *e*PKIKP PKPdf 16 14 45.5 +0.7
DLMT Dillon 129.30 30 *e*PKPdf PKPdf 16 14 48.3 +0.9
MCMT McKenzie Canyo 129.54 31 *e*PKPdf PKPdf 16 14 48.9 +1.1
QLMT Earthquake Lak 130.25 30 *e*PKPdf PKPdf 16 14 50.8 +1.6
NVAR Mina Array Bea 130.44 41 PKP PKPdf 16 14 52.0 +2.2
comp=Z,2.7nm,1.0s,baz=263,slow=1.5,SNR=9.5
MSU Marysvale 134.19 36 *e*PKIKP PKPdf 16 14 58.9 +2.1
WMOK Wichita Mounta 144.20 28 *e*PKIKP PKPdf 16 15 12.3 -2.9
FVM French Village 144.38 15 *e*PKIKP PKPdf 16 15 12.6 -2.8
SIUC Southern Illin 144.93 14 *e*PKIKP PKPdf 16 15 15.1 -1.3
WCI Wyandotte Cave 145.03 10 *e*PKIKP PKPdf 16 15 14.4 -2.1
USIN University of 145.03 12 *e*PKPab PKPab 16 15 15.4 -0.5
TXAR Lajitas Array 145.57 40 PKPbc PKPbc 16 15 18.6 +0.7
comp=Z,30nm,0.8s,baz=278,slow=1.5,SNR=185
PARMO Parma 145.80 15 *e*PKP PKPdf 16 15 18.3 +0.4
GLAT Glass 146.29 15 *e*PKPbc PKPbc 16 15 19.4 -0.4
MIAR Mount Ida 146.55 22 *e*PKP2 PKPab 16 15 19.7 -1.9
WVT Waverly 146.77 13 *e*PKP2 PKPbc 16 15 20.4 -0.8
UALR University of 146.78 20 *e*PKPbc PKPbc 16 15 20.8 -0.5
JCT Junction City 147.05 34 *e*PKP2 PKPbc 16 15 20.7 -1.5
TZTN Tazewell 147.07 6 *e*PKPbc PKPbc 16 15 20.5 -1.5
OXF Oxford 147.92 16 *e*PKP2 PKPbc 16 15 24.0 -0.5
SWET Sewanee 148.03 10 *e*PKPbc PKPbc 16 15 22.9 -1.8
SWET *e* 16 15 31.6
HKT Hockley 149.54 29 *e*PKHKP PKPdf 16 15 24.6 +0.3
HKT *e* 16 15 29.1
VBMS Vicksburg 149.72 19 *e*PKPbc PKPbc 16 15 28.3 -0.9
GOGA Godfrey 150.17 7 *e*PKHKP PKPdf 16 15 24.2 -1.0

MAN 17 16:19:34,933N×12553E,h1km,mb4.5,ML3.4,MS3.3, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.37**	**166**	*e*P		Pg		16 19 41.9	+0.8
SCPH	**Surigao**	**0.45**	**355**	*e*P		Pg		16 19 44.8	+2.1
SCPH				*e*S		Sg		16 19 52.7	+4.1
MSLP	**Maasin**	**1.04**	**321**	*e*P		Pg		16 19 55.2	+1.3
MSLP				*e*S		Sg		16 20 11.0	+3.7
BIPH	**Bislig**	**1.40**	**144**	⇑*i*P		Pn		16 19 58.3	-2.5
BIPH				*i* S		Sg		16 20 15.5	-3.6
BUKP	**Musuan**	**1.51**	**198**	*e*P		Pn		16 20 02.4	+0.2
BUKP				*e*S		Sb		16 20 24.1	+1.5
TBP	**Tagbilaran**	**1.68**	**282**	*e*P		Pn		16 20 04.0	-0.6
TBP				*e*S		Sn		16 20 23.8	-3.0
LLP	**Lapu-Lapu**	**1.83**	**303**	*e*P		Pn		16 20 06.6	+0.1
LLP				*e*S		Sn		16 20 31.5	+1.2
PLP	**Palo**	**1.90**	**344**	⇓*e*P		Pn		16 20 09.5	+1.9
PLP				*e*S		Sn		16 20 36.1	+3.9
OCLP	**Ormoc**	**1.94**	**332**	*e*P		Pn		16 20 09.7	+1.6
MATI	**Mati**	**2.48**	**163**	*e*P		Pn		16 20 16.7	+1.3
MATI				*e*S		Sn		16 20 50.0	+3.6
PAGZ	**Pagadian**	**2.58**	**235**	*e*P		Pn		16 20 18.1	+1.1
PAGZ				*e*S		Sn		16 20 50.9	+1.9
CNP	**Catarman**	**3.27**	**345**	*e*P		Pn		16 20 28.0	+1.5

IDC ***17*** *16:21:56.6±1.4,283S×136.40E,h0km,mb4.1/3,mb1 4.5/4, mb1mx3.9/14,mbtmp4.3/4,ML4.1/1,Error ellipse: s-maj=84.3km s-min=26.7km az=78.0*
NEIC ***17*** *16:21:58.3±0.8,292S×13630E,h10km,mb4.0/4,Error ellipse: s-maj=18.3km s-min=11.5km az=71.0*
ISCJB ***17*** *16:22:01.7±2.9,309S±007×1363E±0.1,h46km±30km, mb3.9/3,Error ellipse: s-maj=22.2km s-min=10.9km az=7.5*

ISC 17 16:22:06.4±5.1,33S±02×1362E±02,h73km±55km,n16, σ1§49/20,mb3.8/3,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**12.65**	**147**	*e*P		**Pn**		**16 25 02.4**	**-1.1**
	4.6nm,0.3s								
WRAB	**Tennant Creek**	**16.65**	**186**	*e*P		**Pn**		**16 25 55.2**	**+0.1**
	13nm,0.8s								
WRAB				*e*S		**S**		**16 29 00.4**	**-6.2**
WB2	**Warramunga Arr**	**16.66**	**186**	*e*P		**Pn**		**16 25 54.9**	**-0.3**
WB2				*e*S		**S**		**16 29 00.6**	**-6.2**
WRA	**Warramunga Arr**	**16.66**	**186**	P		**Pn**		**16 25 56.0**	**+0.7**
	0.8nm,0.3s,baz=3.9,slow=13,SNR=29								
WRA				S		**S**		**16 29 00.4**	**-6.4**
	0.8nm,0.3s,baz=7.7,slow=22,SNR=8.9								
FITZ	**Fitzroy Crossi**	**18.00**	**214**	*e*P		**Pn**		**16 26 14.7**	**+3.0**
	6.1nm,0.4s								
FITZ				*e*S		**S**		**16 29 30.9**	**-2.1**
FITZ	**Fitzroy Crossi**	**18.00**	**214**	*e*P		**Pn**		**16 26 14.4**	**+2.7**
FITZ				*e*S		**S**		**16 29 30.9**	**-2.1**
CTA	**Charters Tower**	**19.37**	**150**	*e*P		**Pn**		**16 26 27.7**	**-0.4**
	3.6nm,0.8s								
CTAO	**Charters Tower**	**19.37**	**150**	*e*P		**Pn**		**16 26 27.8**	**-0.4**
	4.5nm,0.8s								
ASAR	**Alice Springs**	**20.39**	**186**	P		**P**		**16 26 41.0**	**+3.7**
	16nm,0.6s,baz=10,slow=11,SNR=123								
ASAR				S		**S**		**16 30 27.4**	**+5.7**
	1.7nm,0.8s,baz=10,slow=27,SNR=4.2								
MBWA	**Marble Bar**	**23.92**	**221**	*e*P		**P**		**16 27 16.1**	**+2.4**
STKA	**Stephens Creek**	**28.89**	**170**	P		**P**		**16 28 01.0**	**+2.7**
	1.5nm,0.7s,mb3.7,baz=347,slow=10,SNR=2.7								
STKA	**Stephens Creek**	**28.89**	**170**	P		**P**		**16 28 01.0**	**+2.7**
MKAR	**Makanchi Array**	**68.73**	**323**	P		**P**		**16 33 00.9**	**-1.4**
	0.6nm,0.7s,mb3.5,baz=114,slow=6.4,SNR=5.9								
AML	**Almayashu**	**72.25**	**316**	*e*P		**P**		**16 33 23.6**	**-0.3**
	2.5nm,0.6s,mb4.2								
CPUP	**Villa Florida**	**147.79**	**157**	PKPbc		PKPbc		16 41 44.0	+0.4
	0.2nm,0.3s,baz=193,slow=1.8,SNR=3.1								
LPAZ	**La Paz**	**149.08**	**130**	PKPbc		PKPbc		16 41 48.6	+1.4
	1.4nm,1.0s,baz=225,slow=2.9,SNR=3.7								

IDC ***17*** *16:35:41.0±2.1,3753N×13843E,h0km,mb3.5/2, mb1 3.8/2,mb1mx3.3/22,mbtmp3.5/2,Error ellipse: s-maj=24.2km s-min=18.8km az=102.0*
ISCJB ***17*** *16:35:44.0±0.5,3745N±003×13859E±005,h29km±4km, mb3.5/2,Error ellipse: s-maj=6.1km s-min=5.8km az=167.6*
JMA ***17*** *16:35:44.5,3745N×13857E,h19km±1km,M3.4 Broadband fault plane solution: P waves. NP1: ϕs18.00000°, δs35.00000°, λs59.00000°. NP2:ϕs234.00000°, δ60.00000°, λ110.00000°. Principal axes: T Plg68.0000°, Azm185.0000°; N Plg17.0000°, Azm44.0000°; P Plg13.0000°, Azm310.0000°;*
JMA Felt II J1.

ISC 17 16:35:44.4±0.5,3744N±003×13858E±004,h21km±6km, n12,σ0§49/21,mb3.5/2,2C-5D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIZZ	**Izumozaki**	**0.14**	**49**	⇑P		**Pb**		**16 35 48.8**	**-0.1**
JIZZ				S		**Sb**		**16 35 52.6**	**+0.7**
JHK	**Hiroka**	**0.40**	**119**	⇓P		**Pb**		**16 35 52.4**	**-0.4**
JHK				S		**Sb**		**16 35 58.0**	**-0.5**
JJN	**Nakama**	**0.47**	**225**	⇑P		**Pb**		**16 35 54.0**	**-0.1**
JJN				S		**Sb**		**16 36 01.4**	**+0.8**
JSD	**Sado**	**0.65**	**337**	⇓P		**Pb**		**16 35 56.6**	**-0.4**
JSD				S		**Sb**		**16 36 05.4**	**-0.2**
JNS	**Sasagawa**	**0.70**	**57**	⇓P		**Pb**		**16 35 57.8**	**0.0**
JNS				S		**Sb**		**16 36 07.6**	**+0.6**
JKT	**Katashina**	**0.86**	**141**	⇓P		**Pb**		**16 36 00.3**	**-0.3**
JKT				S		**Sb**		**16 36 11.6**	**-0.1**
MAT	**Matsushiro**	**0.95**	**198**	P		**Pb**		**16 36 02.5**	**+0.4**
MAT				S		**Sb**		**16 36 15.4**	**+1.2**
MAT	**Matsushiro**	**0.95**	**198**	P		**Pb**		**16 36 01.5**	**-0.6**
MAT				S		**Sb**		**16 36 14.1**	**-0.1**
MJAR	**Matsushiro Arr**	**0.95**	**198**	Pg		**Pb**		**16 36 01.4**	**-0.7**
	30nm,0.3s,baz=9.3,slow=17,SNR=540								
MJAR				Lg				16 36 14.1	
	88nm,0.3s,baz=7.7,slow=28,SNR=46								
JSZ	**Suzu**	**0.97**	**271**	⇓P		**Pb**		**16 36 01.8**	**-0.7**
JSZ				S		**Sb**		**16 36 14.8**	**0.0**
WRA	**Warramunga Arr**	**57.22**	**185**	P		**P**		**16 45 30.4**	**+0.4**
	0.6nm,0.7s,mb3.8,baz=360,slow=7.6,SNR=12								
ASAR	**Alice Springs**	**60.94**	**185**	P		**P**		**16 45 56.2**	**+0.5**
	0.2nm,0.8s,mb3.3,baz=356,slow=4.9,SNR=6.1								

IDC ***17*** *16:46:44.3±3.5,350S×101.15E,h0km,mb3.6/6,mb1 3.7/6, mb1mx3.6/19,mbtmp3.6/6,Error ellipse: s-maj=143.2km s-min=19.2km az=57.0*
ISCJB ***17*** *16:46:46.7±3.2,355S±05×101.1E±07,h33km,mb3.6/6, Error ellipse: s-maj=126.9km s-min=15.2km az=146.6*
NEIC ***17*** *16:46:49.8±2.2,341S×10128E,h35km,Error ellipse: s-maj=88.5km s-min=11.3km az=57.0*

ISC 17 16:46:49.7±3.0,34S±05×1013E±07,h35km,n9,σ0§47/7, mb3.6/6,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**21.87**	**354**	P		**P**		**16 51 39.0**	**-0.6**
	0.4nm,0.6s,mb3.0,baz=187,slow=8.8,SNR=4.3								
WRA	**Warramunga Arr**	**36.20**	**120**	P		**P**		**16 53 49.1**	**-0.3**
	0.5nm,0.4s,mb3.8,baz=303,slow=8.9,SNR=18								
WB2	**Warramunga Arr**	**36.21**	**120**	*e*P		**P**		**16 53 49.4**	**-0.1**
ASAR	**Alice Springs**	**37.41**	**125**	P		**P**		**16 53 59.9**	**+0.2**
	0.4nm,0.4s,mb3.6,baz=298,slow=7.5,SNR=22								
SONM	**Songino Array**	**51.25**	**4**	P		**P**		**16 55 50.9**	**+1.0**
	0.7nm,0.6s,mb3.8,baz=187,slow=9.6,SNR=7.4								
MKAR	**Makanchi Array**	**52.74**	**344**	P		**P**		**16 56 01.1**	**+0.1**
	0.6nm,0.5s,mb3.8,baz=148,slow=7.6,SNR=10								
ZALV	**Zalesovo Beam**	**58.80**	**349**	P		**P**		**16 56 44.1**	**-0.3**
	0.3nm,0.3s,mb3.8,baz=161,slow=6.1,SNR=3.7								
TXAR	**Lajitas Array**	**145.03**	**40**	PKPbc		PKPbc		17 06 24.0	+0.6
	0.4nm,0.5s,baz=357,slow=0.9,SNR=7.6								
TXAR	**Lajitas Array**	**145.03**	**40**	PKPbc		PKPbc		17 06 24.0	+0.6

ISCJB ***17*** *16:55:26.9±1.6,1384S±0.10×765W±02,h41km±15km, mb4.2/9,MS4.1/2,Error ellipse: s-maj=35.2km s-min=7.5km az=154.5*
NEIC ***17*** *16:55:29.0±1.5,1378S×7651W,h47km±13km,mb4.4/2, Error ellipse: s-maj=37.3km s-min=10.3km az=68.0*
NEIC Felt [III] at Pisco.
IDC ***17*** *16:55:28.6±2.1,1380S×7649W,h41km±18km,mb4.0/7, mb1 4.2/9,mb1mx4.0/18,mbtmp4.0/9,ML4.0/3,MS3.5/6, Ms1 3.5/6,ms1mx3.3/30,Error ellipse: s-maj=34.8km s-min=10.7km az=69.0*

ISC 17 16:55:28.7±1.3,1380S±010×765W±02,h40km±12km,n26, σ1§06/22,mb4.2/9,MS4.1/2,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**1.83**	**350**	P		**Pn**		**16 55 55.8**	**-1.8**
	112nm,0.3s,baz=172,slow=13,SNR=109								
NNA				S		**Sn**		**16 56 20.5**	**+0.9**
	390nm,0.3s,baz=176,slow=14,SNR=17								
NNA				LR		LR		16 56 36.2	
	comp=Z,698nm,19.0s,baz=309,slow=37								
ARE	**Arequipa**	**5.52**	**119**	*e*P		**Pn**		**16 56 55.0**	**+6.6**
ARE				*e*S		**Sn**		**16 58 05.0**	**+14**
ATAH	**Atahualpa**	**7.00**	**344**	P		**Pn**		**16 57 06.1**	**-2.7**
	4.1nm,0.3s,baz=142,slow=5.6,SNR=15								
ATAH				S		**Sn**		**16 58 36.9**	**+10**
	5.4nm,0.3s,baz=150,slow=13,SNR=5.9								
ATAH				LR		LR		17 00 17.0	
	comp=Z,169nm,18.3s,baz=358,slow=42								
LPAZ	**La Paz**	**8.46**	**108**	LR		LR		17 01 27.9	
	comp=Z,140nm,19.5s,baz=116,slow=42								
LVC	**Limon Verde**	**11.35**	**142**	P		**Pn**		**16 58 08.2**	**-0.1**
	0.6nm,0.3s,baz=305,slow=13,SNR=5.0								
LVC				S		**Sn**		**17 00 14.1**	**+0.2**
	0.6nm,0.3s,baz=75,slow=20,SNR=3.2								
LVC				LR		LR		17 02 46.2	
	comp=Z,132nm,21.9s,baz=116,slow=39								
LVC	**Limon Verde**	**11.35**	**142**	*e*Pn		**Pn**		**16 58 08.5**	**+0.1**
LVC				S		**Sn**		**17 00 14.1**	**+0.2**
LVC				LR		LR		17 02 46.2	
OTAV	**Otavalo**	**14.08**	**352**	*e*P		**Pn**		**16 58 47.9**	**+2.3**
	6.1nm,0.8s								
ROSC	**El Rosal**	**18.66**	**7**	LR		LR		17 06 34.7	
	comp=Z,58nm,18.7s,baz=197,slow=36								
CFAA	**Coronel Fontan**	**19.28**	**158**	P		**Pn**		**16 59 51.2**	**-0.1**
	0.1nm,0.3s,baz=337,slow=14,SNR=7.5								
PCRV	**Puerto La Cruz**	**26.57**	**27**	LR		LR		17 12 35.3	
	comp=Z,301nm,18.6s,MS3.9,baz=254,slow=39								
PLCA	**Paso Flores**	**27.34**	**170**	P		**P**		**17 01 10.2**	**+0.3**
	3.3nm,1.0s,mb3.8,baz=338,slow=11,SNR=8.1								
TEIG	**Tepich**	**35.74**	**341**	P		**P**		**17 02 24.4**	**+0.6**
	6.9nm,0.6s,mb4.8,baz=156,slow=7.1,SNR=8.2								
TEIG	**Tepich**	**35.74**	**341**	P		**P**		**17 02 24.4**	**+0.6**
TXAR	**Lajitas Array**	**50.26**	**329**	P		**P**		**17 04 21.7**	**+0.5**
	0.8nm,0.8s,mb3.8,baz=150,slow=9.5,SNR=8.0								
ANMO	**Albuquerque**	**56.20**	**330**	LR		LR		17 27 30.9	
	comp=Z,273nm,18.7s,MS4.4,baz=337,slow=34								
PDAR	**Pinedale Array**	**63.94**	**333**	P		**P**		**17 05 57.5**	**-0.2**
	0.3nm,0.3s,mb3.8,baz=135,slow=9.0,SNR=3.0								
RRI2	**Red Ridge**	**65.18**	**333**	*e*P		**P**		**17 06 06.2**	**+0.5**
	4.4nm,1.1s,mb4.4								
ULM	**Lac du Bonnet**	**66.00**	**347**	P		**P**		**17 06 08.9**	**-2.0**
	4.7nm,0.9s,mb4.5,baz=142,slow=10,SNR=3.7								
SNAA	**Sanae**	**71.87**	**161**	*e*P		**P**		**17 06 47.7**	**+0.5**
	3.6nm,0.9s,mb4.3								
DBIC	**Dimbokro**	**73.95**	**79**	P		**P**		**17 07 00.1**	**-0.4**
	3.6nm,0.8s,mb4.4,baz=224,slow=9.5,SNR=5.8								
TORD	**Torodi Ar. Bea**	**81.95**	**74**	P		**P**		**17 07 44.9**	**-0.1**
	2.7nm,0.6s,mb4.3,baz=267,slow=4.4,SNR=12								
ASAR	**Alice Springs**	**132.35**	**219**	PKhKP				17 14 35.0	
	0.2nm,0.7s,baz=103,slow=1.3,SNR=3.3								
ASAR				PKP		PKPdf		17 14 38.8	-0.6
	0.4nm,0.8s,baz=119,slow=1.6,SNR=4.6								
WRA	**Warramunga Arr**	**134.78**	**223**	PKhKP				17 14 40.7	
	0.6nm,0.9s,baz=142,slow=1.9,SNR=4.1								
WRA				PKP		PKPdf		17 14 42.5	-1.6
	0.5nm,0.8s,baz=138,slow=1.8,SNR=5.1								
ZALV	**Zalesovo Beam**	**137.32**	**16**	PKP		PKPdf		17 14 47.8	0.0
	0.6nm,0.5s,baz=336,slow=3.2,SNR=3.7								
MKAR	**Makanchi Array**	**142.61**	**24**	PKP		PKPdf		17 14 55.5	-2.1
	0.3nm,0.7s,baz=318,slow=1.9,SNR=3.7								
SONM	**Songino Array**	**145.98**	**357**	PKPbc		PKPbc		17 15 04.1	0.0
	1.1nm,0.6s,baz=343,slow=2.7,SNR=9.0								

IDC 17 16:55:29.2±1.7,2017S×6553W,h70km±21km,mb3.7/1, mb1 3.9/5,mb1mx3.5/20,mbtmp3.8/5,Error ellipse: s-maj=18.7km s-min=14.6km az=44.0,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**3.98**	**232**	P		Pn		16 56 28.4	+0.7
	0.7nm,0.3s,baz=38,slow=12,SNR=7.4								
LPAZ	**La Paz**	**4.58**	**327**	P		Pn		16 56 37.9	+1.9
	3.3nm,0.3s,baz=128,slow=8.0,SNR=64								
LPAZ				S		Sn		16 57 28.5	+0.5
	2.5nm,0.3s,baz=295,slow=22,SNR=9.7								
SIV	**San Ignacio**	**5.94**	**46**	P		Pn		16 56 55.9	+1.4
	19nm,0.3s,baz=240,slow=13,SNR=170								
SIV				S		Sn		16 58 01.8	+0.6
	4.5nm,0.3s,baz=161,slow=20,SNR=8.6								
CPUP	**Villa Florida**	**9.72**	**131**	P		Pn		16 57 47.1	+0.9
	1.7nm,0.3s,baz=291,slow=13,SNR=8.3								
CPUP				S		Sn		16 59 30.3	-3.4
	2.9nm,0.3s,baz=303,slow=9.2,SNR=5.2								
TORD	**Torodi Ar. Bea**	**73.93**	**69**	P		P		17 06 57.5	+0.1
	1.0nm,0.6s,baz=257,slow=5.4,SNR=13								

IDC 17 16:55:47.0±2.0,607S×12985E,h0km,mb3.6/1,mb1 3.9/5, mb1mx3.6/16,mbtmp3.8/5,ML3.7/4,Error ellipse: s-maj=56.5km s-min=26.8km az=82.0,Banda Sea

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

0.3nm,0.3s,baz=115,slow=7.8,SNR=8.7

*RSPR **17** 17:27:45.8, 1924N×6489W, h25km±26km, MD3.5/14, MD3.5/14*
*NEIC **17** 17:27:45.8, 1924N×6489W, h25km, MD3.5(RSPR), After RSPR.*

ISC 17 17:27:44.8±1.2, 1921N±008×6488W±005, h35km, n19, σ0§44/33, 18C-1D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABV	**Anegada**	**0.71**	**133**	⇑*eP*	**Pn**	**17 27 57.9**	**-0.5**
TBVI	**Tortola**	**0.83**	**162**	⇑*eP*	**Pn**	**17 27 59.8**	**-0.2**
TBVI				*eS*	**Sn**	**17 28 11.8**	**+0.8**
MTP	**Monte Pirata**	**1.28**	**210**	⇑*eP*	**Pn**	**17 28 06.0**	**-0.2**
MTP				*eS*	**Sn**	**17 28 22.6**	**+0.5**
CBYP	**Canovanas**	**1.31**	**225**	⇑*eP*	**Pn**	**17 28 06.0**	**-0.6**
CBYP	**Canovanas**	**1.31**	**225**	⇑*eP*	**Pn**	**17 28 06.5**	**-0.2**
CBYP				*eS*	**Sn**	**17 28 22.2**	**-0.7**
CBYP	**Canovanas**	**1.31**	**225**	⇑*eP*	**Pn**	**17 28 06.0**	**-0.6**
CBYP				*eS*	**Sn**	**17 28 22.2**	**-0.7**
HUMP	**Col San Antoni**	**1.41**	**221**	⇑*eP*	**Pn**	**17 28 07.6**	**-0.3**
HUMP				*eS*	**Sn**	**17 28 24.8**	**-0.4**
CDVI	**St. Croix**	**1.46**	**176**	⇑*eP*	**Pn**	**17 28 09.2**	**+0.6**
CDVI				*eS*	**Sn**	**17 28 26.2**	**-0.4**
CPD	**Cerro la Pandu**	**1.52**	**220**	⇑*eP*	**Pn**	**17 28 09.7**	**+0.1**
SJG	**San Juan**	**1.63**	**228**	⇑*eP*	**Pn**	**17 28 10.6**	**-0.4**
SJG	**San Juan**	**1.63**	**228**	⇑*eP*	**Pn**	**17 28 10.8**	**-0.2**
SJG				*eS*	**Sn**	**17 28 29.9**	**-0.8**
SJG	**San Juan**	**1.63**	**228**	⇑*eP*	**Pn**	**17 28 10.8**	**-0.2**
SJG				*eS*	**Sn**	**17 28 29.9**	**-0.8**
SJG				*eS*	**Sn**	**17 28 30.5**	**-0.2**
SJG	**San Juan**	**1.63**	**228**	⇑*eP*	**Pn**	**17 28 10.6**	**-0.4**
SJG				*eS*	**Sn**	**17 28 30.5**	**-0.2**
CELP	**Cerrillos**	**1.97**	**235**	⇑*eP*	**Pn**	**17 28 15.7**	**+0.1**
CELP				*eS*	**Sn**	**17 28 38.6**	**-0.5**
AOPR	**Arecibo Observ**	**1.97**	**244**	⇓*eP*	**Pn**	**17 28 15.7**	**0.0**
AOPR				*eS*	**Sn**	**17 28 39.4**	**+0.2**
OBIP	**Obispado Ponce**	**2.01**	**235**	⇑*eP*	**Pn**	**17 28 16.5**	**+0.3**
ICM	**Isla Caja Muer**	**2.03**	**230**	⇑*eP*	**Pn**	**17 28 16.5**	**-0.1**
ICM				*eS*	**Sn**	**17 28 41.4**	**+0.6**
LRS	**Lares**	**2.07**	**244**	⇑*eP*	**Pn**	**17 28 17.2**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.43**	**241**	⇑*eP*	**Pn**	**17 28 22.6**	**+0.6**
CRPR				*eS*	**Sn**	**17 28 51.1**	**+0.6**

*ISCJB **17** 17:28:43.3±0.7, 10.10N±004×126.12E±006, h75km±7km, mb4.0/10, Error ellipse: s-maj=9.7km s-min=5.5km az=162.1*
*MAN **17** 17:28:43, 10.11N×12608E, h36km, mb5.2, ML4.1, MS4.3*
*IDC **17** 17:28:49.1±3.9, 10.13N×126.14E, h113km±35km, mb3.7/9, mb1 3.8/10, mb1mx3.6/21, mbtmp3.7/10, MS3.1/2, Ms1 3.1/2, ms1mx2.8/35, Error ellipse: s-maj=55.5km s-min=19.8km az=66.0*
*NEIC **17** 17:28:49.8±1.9, 1009N×126.12E, h121km±17km, mb4.2/1, Error ellipse: s-maj=36.6km s-min=13.4km az=69.0*

ISC 17 17:28:44.4±0.7, 1010N±004×12613E±006, h67km±7km, n35, σ1§17/42, mb4.0/10, 4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.70**	**243**	*eP*	**Pn**	**17 28 55.7**	**-3.4**
SCPH				*eS*	**Sn**	**17 29 05.6**	**-4.4**
BUTP	**Butuan**	**1.23**	**204**	*eP*	**Pn**	**17 29 04.1**	**-1.6**
MSLP	**Maasin**	**1.25**	**272**	*eP*	**Pn**	**17 29 04.5**	**-1.4**
MSLP				*eS*	**Sn**	**17 29 24.1**	**+2.0**
PLP	**Palo**	**1.55**	**313**	⇓*eP*	**Pn**	**17 29 08.4**	**-1.5**
BESP	**Borongan**	**1.64**	**336**	*eP*	**Pn**	**17 29 11.0**	**-0.1**
OCLP	**Ormoc**	**1.77**	**302**	*eP*	**Pn**	**17 29 12.4**	**-0.4**
BIPH	**Bislig**	**1.92**	**179**	⇓*iP*	**Pn**	**17 29 13.2**	**-1.7**
BIPH				*i* S	**Sn**	**17 29 37.6**	**-0.4**
LLP	**Lapu-Lapu**	**2.14**	**276**	*eP*	**Pn**	**17 29 17.6**	**-0.2**
LLP				*eS*	**Sn**	**17 29 43.1**	**-0.3**
TBP	**Tagbilaran**	**2.27**	**260**	*eP*	**Pn**	**17 29 19.2**	**-0.4**
TBP				*eS*	**Sn**	**17 29 44.5**	**-2.1**
BUKP	**Musuan**	**2.44**	**206**	*eP*	**Pn**	**17 29 22.5**	**+0.5**
BUKP				*eS*	**Sn**	**17 29 53.9**	**+3.0**
CNP	**Catarman**	**2.79**	**329**	*eP*	**Pn**	**17 29 26.5**	**-0.2**
CNP				*eS*	**Sn**	**17 30 01.1**	**+1.7**
DAV	**Davao City (W)**	**3.06**	**190**	P	**Pn**	**17 29 36.8**	**+6.4**
	28nm,0.3s,baz=258,slow=17,SNR=5.1						
DAV				LR	LR	17 31 05.1	
	comp=Z,354nm,19.3s,baz=144,slow=44						
DMPH	**Davao City--Mi**	**3.06**	**192**	*eP*	**Pn**	**17 29 32.6**	**+2.2**
DCPH	**Dipolog City**	**3.13**	**241**	⇓*iP*	**Pn**	**17 29 29.1**	**-2.2**
DCPH				*i* S	**Sn**	**17 30 07.5**	**0.0**
MATI	**Mati**	**3.14**	**178**	*eP*	**Pn**	**17 29 32.8**	**+1.3**
MATI				*eS*	**Sn**	**17 30 18.0**	**+10**
PAGZ	**Pagadian**	**3.52**	**231**	*eP*	**Pn**	**17 29 36.6**	**0.0**
GUIM	**Jordan**	**3.52**	**279**	*eP*	**Pn**	**17 29 36.0**	**-0.6**
RCP	**Roxas**	**3.63**	**294**	⇓*iP*	**Pn**	**17 29 38.7**	**+0.6**
PVCP	**Virac**	**3.98**	**331**	*eP*	**Pn**	**17 29 43.9**	**+1.0**
KALP	**Kalibo**	**4.04**	**293**	*eP*	**Pn**	**17 29 46.2**	**+2.5**
IPIL	**Ipil**	**4.20**	**237**	*eP*	**Pn**	**17 29 47.6**	**+1.6**
CUYO	**Cuyo Island**	**5.08**	**279**	*eP*	**Pn**	**17 29 58.4**	**+0.4**
CAUP	**Cauayan**	**7.99**	**329**	*eP*	**Pn**	**17 30 37.0**	**-0.7**
GUMO	**Guam**	**18.66**	**77**	LR	LR	17 39 03.2	
	comp=Z,42nm,18.2s,baz=312,slow=33						
CMAR	**Chiang Mai Arr**	**27.59**	**291**	P	**P**	**17 34 26.3**	**+0.8**
	1.8nm,0.9s,mb3.6,baz=99,slow=7.6,SNR=9.2						
ASAR	**Alice Springs**	**34.41**	**167**	P	**P**	**17 35 25.6**	**+0.2**
	0.7nm,0.5s,mb3.8,baz=351,slow=7.0,SNR=7.1						
ULN	**Ulaanbaatar**	**40.93**	**340**	*eP*	**P**	**17 36 21.1**	**+0.9**
	2.8nm,0.6s,mb4.3						
SONM	**Songino Array**	**41.13**	**340**	P	**P**	**17 36 22.5**	**+0.7**
	1.2nm,0.6s,mb3.9,baz=158,slow=10,SNR=11						
MKAR	**Makanchi Array**	**52.08**	**323**	P	**P**	**17 37 47.2**	**-0.2**
	2.6nm,0.7s,mb4.4,baz=124,slow=8.7,SNR=29						
ZALV	**Zalesovo Beam**	**54.71**	**331**	P	**P**	**17 38 05.4**	**-1.2**
	2.0nm,0.7s,mb4.3,baz=115,slow=6.8,SNR=8.0						
KURK	**Kurchatov**	**56.13**	**326**	P	**P**	**17 38 16.7**	**-0.1**
	3.1nm,0.7s,mb4.5,baz=127,slow=6.8,SNR=12						
BVAR	**Borovoye Array**	**61.73**	**325**	P	**P**	**17 38 55.2**	**-0.4**
	1.0nm,0.7s,mb4.0,baz=123,slow=7.1,SNR=5.3						
BVAR				PcP	PcP	17 39 36.4	+0.1
	0.9nm,0.6s,baz=116,slow=3.3,SNR=4.4						
ARCES	**ARCESS Array B**	**84.30**	**340**	P	**P**	**17 41 08.7**	**+0.1**
	3.7nm,1.1s,mb4.1,baz=63,slow=5.9,SNR=6.4						
AKASG	**Malin Array Be**	**86.61**	**321**	P	**P**	**17 41 19.2**	**-1.2**
	0.2nm,0.3s,mb3.5,baz=68,slow=4.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**120.20**	**292**	PKP	PKPdf	17 47 28.2	-0.5
	0.2nm,0.4s,baz=69,slow=2.0,SNR=4.6						

IDC 17 17:30:36.8±7.0, 739S×13025E, h85km±74km, mb3.2/1, mb1 3.4/5, mb1mx3.1/16, mbtmp3.2/5, ML3.5/4, Error ellipse: s-maj=59.4km s-min=22.5km az=34.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**7.08**	**246**	P	Pn	17 32 18.3	+0.4
	1.0nm,0.3s,baz=86,slow=14,SNR=5.3						
BATI				S	Sn	17 33 36.3	-0.6
	1.9nm,0.3s,baz=75,slow=16,SNR=2.7						
FITZ	**Fitzroy Crossi**	**11.55**	**202**	*eP*	Pn	17 33 18.4	-0.4
	1.4nm,0.3s						
FITZ				*eS*	Sn	17 35 18.9	-7.1
FITZ	**Fitzroy Crossi**	**11.55**	**202**	P	Pn	17 33 18.6	-0.2
	0.2nm,0.3s,baz=22,slow=12,SNR=16						
FITZ				S	Sn	17 35 19.0	-7.0
	0.5nm,0.3s,baz=333,slow=21,SNR=7.9						
WRA	**Warramunga Arr**	**13.09**	**163**	P	Pn	17 33 40.2	+0.7
	0.2nm,0.3s,baz=346,slow=13,SNR=16						
WRA				S	Sn	17 36 02.4	-1.0
	0.7nm,0.3s,baz=349,slow=22,SNR=12						
WB2	**Warramunga Arr**	**13.10**	**163**	*eP*	Pn	17 33 40.2	+0.7
WB2				*eS*	Sn	17 36 02.8	-0.7
ASAR	**Alice Springs**	**16.56**	**168**	P	Pn	17 34 25.8	+2.0
	0.2nm,0.3s,baz=346,slow=11,SNR=19						
ASAR				S	S	17 37 26.8	-6.9
	0.2nm,0.3s,baz=358,slow=25,SNR=5.5						
MKAR	**Makanchi Array**	**68.69**	**327**	P	P	17 41 31.2	+0.1
	0.3nm,0.5s,baz=123,slow=8.1,SNR=4.1						

IDC 17 17:36:55.1±1.7, 382N×12778E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/18, mbtmp3.6/5, Error ellipse: s-maj=91.3km s-min=22.8km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.89**	**185**	P	P	17 41 51.2	+1.4
	1.3nm,0.9s,baz=4.1,slow=12,SNR=4.8						
WRA	**Warramunga Arr**	**24.48**	**165**	P	P	17 42 15.9	-0.1
	1.1nm,0.4s,baz=343,slow=10,SNR=24						
ASAR	**Alice Springs**	**27.97**	**168**	P	P	17 42 47.4	-0.2
	0.3nm,0.5s,baz=353,slow=7.9,SNR=14						
STKA	**Stephens Creek**	**37.86**	**161**	P	P	17 44 13.3	-0.4
	1.3nm,0.4s,baz=334,slow=10,SNR=12						
MKAR	**Makanchi Array**	**58.08**	**325**	P	P	17 46 50.2	+0.1
	0.2nm,0.4s,baz=115,slow=8.1,SNR=3.3						

*ISCJB **17** 17:01:18.9±0.5, 43.79N±004×10524W±006, h0km, mb3.8/3, Error ellipse: s-maj=6.5km s-min=5.4km az=137.9*
*IDC **17** 17:01:19.7±1.9, 43.63N×105.35W, h0km, mb3.9/3, mb1 3.9/8, mb1mx3.7/26, mbtmp3.7/8, ML3.5/5, MS4.0/1, Ms1 4.0/1, ms1mx2.5/58, Error ellipse: s-maj=57.2km s-min=8.3km az=150.0*
*NEIC **17** 17:01:20.4±0.4, 43.78N×105.23W, h0km, ML3.4, Error ellipse: s-maj=5.0km s-min=4.3km az=138.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.

ISC 17 18:01:20.4±0.5, 4380N±004×10522W±006, h0km, n44, σ0§79/43, mb3.8/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.91**	**69**	*eP*	**Pg**	**18 01 38.6**	**+0.8**
PHWY	**Pilot Hill**	**2.50**	**184**	*eP*	**Pn**	**18 02 01.9**	**-0.3**
RWWY	**Rawlins**	**2.57**	**216**	*eP*	**Pn**	**18 02 03.7**	**+0.5**
LAO	**LASA Array**	**2.98**	**347**	*eP*	**Pn**	**18 02 08.3**	**-0.6**
RLMT	**Red Lodge**	**3.19**	**296**	*eP*	**Pn**	**18 02 11.7**	**0.0**
BW06	**Boulder Array**	**3.33**	**254**	*eP*	**Pn**	**18 02 13.5**	**-0.2**
PDAR	**Pinedale Array**	**3.33**	**254**	Pn	**Pn**	**18 02 13.8**	**+0.1**
	6.8nm,0.3s,baz=76,slow=15,SNR=50						
PDAR				Lg		18 02 59.0	
	20nm,0.3s,baz=75,slow=31,SNR=8.7						
OGNE	**Ogallala**	**3.70**	**139**	*eP*	**Pn**	**18 02 19.7**	**+0.9**
GCMT	**Greycliff**	**3.74**	**304**	*eP*	**Pn**	**18 02 19.5**	**+0.1**
LKWY	**Lake**	**3.81**	**283**	*ePn*	**Pn**	**18 02 21.2**	**+1.0**
LOHW	**Long Hollow**	**3.91**	**269**	*eP*	**Pn**	**18 02 22.1**	**+0.5**
ISCO	**Idaho Springs**	**4.00**	**184**	*eP*	**Pn**	**18 02 23.3**	**+0.3**
MOOW	**Moose Ponds**	**4.00**	**271**	*eP*	**Pn**	**18 02 22.9**	**0.0**
SNOW	**Snow King Moun**	**4.04**	**267**	*ePn*	**Pn**	**18 02 24.0**	**+0.7**
REDW	**Red Top Meadow**	**4.12**	**266**	*ePn*	**Pn**	**18 02 26.4**	**+1.9**
IMW	**Indian Meadow**	**4.14**	**273**	*eP*	**Pn**	**18 02 24.7**	**-0.1**
TPAW	**Teton Pass**	**4.17**	**268**	*eP*	**Pn**	**18 02 25.7**	**+0.5**
AHID	**Auburn Hatcher**	**4.42**	**259**	*ePn*	**Pn**	**18 02 30.2**	**+1.6**
RRI2	**Red Ridge**	**4.46**	**266**	*eP*	**Pn**	**18 02 29.0**	**-0.2**
DGMT	**Dagmar**	**4.73**	**8**	*ePn*	**Pn**	**18 02 32.2**	**-0.7**
BOZ	**Bozeman (W)**	**4.93**	**294**	*ePn*	**Pn**	**18 02 34.6**	**-1.1**
HWUT	**Hardware Ranch**	**5.16**	**247**	*ePn*	**Pn**	**18 02 37.6**	**-1.2**
	14nm,0.5s						
EGMT	**Eagleton**	**5.28**	**325**	*ePn*	**Pn**	**18 02 40.5**	**0.0**
	28nm,0.4s						
DLMT	**Dillon**	**5.50**	**289**	Pn	**Pn**	**18 02 38.8**	**-4.7**
	5.1nm,0.4s						
MCMT	**McKenzie Canyo**	**5.57**	**283**	*ePn*	**Pn**	**18 02 44.4**	**-0.1**
DAU	**Daniels Canyon**	**5.62**	**235**	*ePn*	**Pn**	**18 02 44.5**	**-0.6**
JLU	**Jordanelle**	**5.62**	**238**	Pn	**Pn**	**18 02 44.0**	**-1.2**
HVU	**Hansel Valley**	**5.92**	**253**	*ePn*	**Pn**	**18 02 48.6**	**-0.6**
	10nm,0.6s						
SRU	**San Rafael**	**6.15**	**222**	*ePn*	**Pn**	**18 02 50.9**	**-1.4**
	13nm,0.5s						
TMUT	**Trail Mountain**	**6.36**	**227**	*ePn*	**Pn**	**18 02 55.1**	**-0.1**
CHMT	**Chamberlain Mo**	**6.46**	**302**	*ePn*	**Pn**	**18 02 56.5**	**-0.2**
HLID	**Hailey**	**6.67**	**271**	*ePn*	**Pn**	**18 03 00.9**	**+1.3**
	1.9nm,0.5s						
DUG	**Dugway**	**6.71**	**240**	*ePn*	**Pn**	**18 02 58.9**	**-1.1**
	8.9nm,0.9s						
MSU	**Marysvale**	**7.44**	**227**	*ePn*	**Pn**	**18 03 09.8**	**-0.4**
ELK	**Elko**	**8.03**	**251**	Pn	**Pn**	**18 03 18.4**	**+0.2**
	0.5nm,0.3s,baz=71,slow=12,SNR=6.0						
ELK	**Elko**	**8.03**	**251**	Pn	**Pn**	**18 03 18.4**	**+0.2**
ANMO	**Albuquerque**	**8.89**	**187**	LR	LR	18 06 49.5	
	comp=Z,1μm,21.7s,baz=69,slow=38						
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	**Pn**	**18 03 32.5**	**0.0**
	0.9nm,0.3s,baz=230,slow=12,SNR=8.5						
ULM				Lg		18 06 05.7	
	0.8nm,0.3s,baz=246,slow=19,SNR=3.9						
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	**Pn**	**18 03 32.5**	**0.0**
ULM				Lg		18 06 05.7	
NVAR	**Mina Array Bea**	**11.23**	**246**	Pn	**Pn**	**18 04 03.1**	**+1.0**
	0.1nm,0.3s,baz=56,slow=12,SNR=4.4						
YBH	**Yreka Blue Hor**	**13.02**	**267**	Pn	**Pn**	**18 04 30.3**	**+3.8**
	0.1nm,0.3s,baz=66,slow=12,SNR=4.5						
ZALV	**Zalesovo Beam**	**82.25**	**354**	P	**P**	**18 13 42.2**	**-1.0**
	0.2nm,0.3s,mb3.8,baz=20,slow=4.6,SNR=3.7						
SONM	**Songino Array**	**84.60**	**339**	P	**P**	**18 13 55.7**	**+0.4**
	0.4nm,0.3s,mb3.8,baz=32,slow=5.6,SNR=3.3						
MKAR	**Makanchi Array**	**89.55**	**355**	P	**P**	**18 14 18.7**	**-0.7**
	0.2nm,0.2s,mb3.9,baz=1.1,slow=6.1,SNR=4.1						

*NIED **17** 18:16:00, 3350N×14050E, h62km, Mw4.5 Best double couple: M₀6.39000×10¹⁵ NP1:φ₁284.00000°, δ57.00000°, λ-131.00000°. NP2:φ₂162.00000°, δ50.00000°, λ-44.00000°.*
*MOS **17** 18:16:46.2±0.9, 3351N×14087E, h71km, mb4.6/5, Error ellipse: s-maj=23.4km s-min=10.5km az=112.6*
*ISCJB **17** 18:16:47.0±0.6, 3344N±003×14053E±007, h63km±5km, mb4.0/11, Error ellipse: s-maj=10.0km s-min=5.7km az=1.3*
*JMA **17** 18:16:48.4±0.1, 3353N×14046E, h59km±2km, M4.5*
JMA Felt I J1.
*IDC **17** 18:16:48.4±0.6, 3341N×14045E, h54km±4km, mb3.7/10, mb1 4.0/12, mb1mx3.9/21, mbtmp3.8/12, MS3.3/8, Ms1 3.3/8, ms1mx3.0/27, Error ellipse: s-maj=11.1km s-min=8.9km az=111.0*
*NEIC **17** 18:16:49.8±1.1, 3336N×14027E, h68km±9km, mb4.4/2, Error ellipse: s-maj=12.9km s-min=8.0km az=76.0*

ISC 17 18:16:48.1±0.6, 3345N±003×14053E±007, h53km±6km, h52km±2.2km: pP-P, n56, σ0§96/57, mb4.0/11, MS3.2/7, 2C-7D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.68**	**241**	⇑P	**Pn**	**18 17 02.5**	**+0.7**
JHJ2				*eS*	**Sn**	**18 17 12.3**	**+0.6**
JHJ	**Hachijo jima 2**	**0.70**	**242**	P	**Pn**	**18 17 02.5**	**+0.5**
	1μm,0.3s,baz=88,slow=16,SNR=2037						
JHJ				S	**Sn**	**18 17 12.5**	**+0.3**
	7μm,0.3s,baz=72,slow=19,SNR=204						
JMY	**Miyakejima3**	**1.05**	**307**	⇓P	**Pn**	**18 17 05.9**	**-0.7**
JMY				*eS*	**Sn**	**18 17 18.8**	**-1.4**
BSO1	**Boso 1**	**1.26**	**17**	P	**Pn**	**18 17 09.0**	**-0.4**
BSO3	**Boso 3**	**1.35**	**359**	⇓P	**Pn**	**18 17 10.6**	**0.0**
BSO3				*eS*	**Sn**	**18 17 27.3**	**-0.2**
JKO	**Kozu shima**	**1.37**	**303**	⇓P	**Pn**	**18 17 10.5**	**-0.4**
JKO				*eS*	**Sn**	**18 17 27.0**	**-1.0**
BSO4	**Boso 4**	**1.55**	**354**	⇑P	**Pn**	**18 17 13.6**	**+0.3**
JIM2	**Oshima 3**	**1.56**	**325**	P	**Pn**	**18 17 12.6**	**-0.8**
JIZS	**Izushimoda**	**1.87**	**313**	⇓P	**Pn**	**18 17 15.**	**-0.1**
KTJJ	**Kamata 2**	**1.91**	**321**	⇓P	**Pn**	**18 17 17.8**	**-0.4**
JOD2	**Odawara 2**	**2.17**	**327**	⇓P	**Pn**	**18 17 21.3**	**-0.4**
TK03	**Tokai 3**	**2.25**	**289**	P	**Pn**	**18 17 22.8**	**-0.1**
TK04	**Tokai 4**	**2.40**	**294**	⇓P	**Pn**	**18 17 25.4**	**+0.5**
MJAR	**Matsushiro Arr**	**3.63**	**329**	P	**Pn**	**18 17 42.9**	**+1.2**
MJAR				S	**Sn**	**18 18 23.9**	**+0.7**
MJAR				pmax	pmax		
	comp=Z,21nm,0.3s						
MJAR				smax			
	comp=N,13nm,0.3s						
MAJO	**Matsushiro**	**3.63**	**329**	*eP*	**Pn**	**18 17 43.2**	**+1.5**
MAT	**Matsushiro**	**3.63**	**329**	P	**Pn**	**18 17 44.1**	**+2.4**
MAT				S	**Sn**	**18 18 25.0**	**+1.7**
CBIJ	**Chichi jima**	**6.49**	**167**	P	**Pn**	**18 18 20.6**	**-0.4**
	comp=N,13nm,0.3s,baz=306,slow=17,SNR=5.1						
ASAJ	**Asahikawa**	**10.77**	**8**	P	**Pn**	**18 19 17.8**	**-1.8**
	comp=N,1.1nm,0.3s,baz=219,slow=11,SNR=9.5						
ASAJ				S	**Sn**	**18 21 11.3**	**-7.2**
	comp=N,0.3nm,0.3s,baz=313,slow=19,SNR=2.1						
ASAJ	**Asahikawa**	**10.77**	**8**	P	**Pn**	**18 19 17.8**	**-1.8**
ASAJ				S	**Sn**	**18 21 11.4**	**-7.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**11.03**	**295**	P	**Pn**	**18 19 27.2**	**+4.1**
	comp=Z,0.1nm,0.3s,baz=99,slow=14,SNR=5.5						
KSRS				LR	LR	18 23 13.6	
	comp=Z,119nm,19.2s,baz=143,slow=35						
YSS	**Yuzh-Sakhalins**	**13.60**	**6**	P	**Pn**	**18 19 56.0**	**-2.0**
GUMO	**Guam**	**20.16**	**168**	LR	LR	18 27 06.1	
	comp=Z,24nm,21.9s,MS2.5,baz=33,slow=31						
PETK	**Petropavlovsk-**	**23.18**	**27**	LR	LR	18 30 17.9	
	comp=Z,31nm,19.0s,MS2.8,baz=272,slow=35						
SONM	**Songino Array**	**29.35**	**310**	P	**P**	**18 22 45.3**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.4,baz=104,slow=8.2,SNR=4.0						
SONM				LR	LR	18 35 03.3	
	comp=Z,77nm,18.8s,MS3.4,baz=326,slow=37						
SONM	**Songino Array**	**29.35**	**310**	P	**P**	**18 22 45.3**	**-0.4**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,77nm,18.8s						
CMAR	**Chiang Mai Arr**	**39.98**	**259**	sP	sP	18 24 39.0	+1.3
	comp=Z,0.5nm,0.8s,baz=55,slow=7.8,SNR=3.4						
ZALV	**Zalesovo Beam**	**43.87**	**315**	P	**P**	**18 24 48.2**	**-0.7**
	comp=Z,0.3nm,0.4s,mb3.4,baz=111,slow=6.3,SNR=2.8						
ZALV				pP	pP	18 25 01.9	-1.0
	comp=Z,0.8nm,0.5s,baz=90,slow=7.7,SNR=3.1						
ZALV				LR	LR	18 41 46.4	
	comp=Z,43nm,19.3s,MS3.4,baz=77,slow=34						
ZALV	**Zalesovo Beam**	**43.87**	**315**	P	**P**	**18 24 48.2**	**-0.7**
ZALV				*PP	pP	18 25 01.9	-1.1
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ZALV				MLR	MLR		
	comp=Z,43nm,19.3s,MS3.4						
ZALV	**Zalesovo Beam**	**43.87**	**315**	P	**P**	**18 24 48.2**	**-0.7**
ZALV				pP	pP	18 25 01.9	-1.0
ZALV				LR	LR	18 41 46.4	
MK31	**Makanchi Array**	**45.49**	**305**	*eP*	**P**	**18 25 01.8**	**-0.2**
MKAR	**Makanchi Array**	**45.49**	**305**	P	**P**	**18 25 02.0**	**0.0**
	comp=Z,1.4nm,0.7s,mb3.9,baz=92,slow=9.6,SNR=16						
MKAR	**Makanchi Array**	**45.49**	**305**	P	**P**	**18 25 02.0**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**47.64**	**311**	LR	LR	18 46 21.4	
	comp=Z,64nm,20.4s,MS3.6,baz=155,slow=37						
KURK	**Kurchatov**	**47.64**	**311**	*eP*	**P**	**18 25 17.8**	**-1.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
KURK	**Kurchatov**	**47.64**	**311**	*eP*	**P**	**18 25 17.8**	**-0.9**
	comp=Z,5.1nm,0.9s,mb4.5						
WRAB	**Tennant Creek**	**53.41**	**187**	*eP*	**P**	**18 26 01.8**	**-0.7**
WB2	**Warramunga Arr**	**53.42**	**187**	*eP*	**P**	**18 26 01.6**	**-0.9**
WRA	**Warramunga Arr**	**53.42**	**187**	P	**P**	**18 26 01.9**	**-0.7**
	comp=Z,5.1nm,0.6s,mb4.6,baz=3.7,slow=7.7,SNR=134						
WRA	**Warramunga Arr**	**53.42**	**187**	P	**P**	**18 26 01.9**	**-0.6**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ASAR	**Alice Springs**	**57.15**	**187**	P	**P**	**18 26 28.9**	**-0.5**
	comp=Z,2.6nm,0.7s,mb4.3,baz=0.7,slow=6.1,SNR=93						
ASAR	**Alice Springs**	**57.15**	**187**	P	**P**	**18 26 28.9**	**-0.4**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
STKA	**Stephens Creek**	**64.98**	**179**	*eP*	**P**	**18 27 22.4**	**+0.1**
	comp=Z,2.2nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**64.98**	**179**	P	**P**	**18 27 22.7**	**+0.4**
	comp=Z,3.9nm,0.8s,mb4.5,baz=346,slow=7.5,SNR=7.2						
NOA	**NORSAR Array B**	**77.21**	**337**	LR	LR	19 10 35.5	
	comp=Z,20nm,18.2s,MS3.5,baz=40,slow=42						
NVAR	**Mina Array Bea**	**77.74**	**52**	P	**P**	**18 28 41.3**	**+1.9**
	comp=Z,0.9nm,0.8s,mb3.7,baz=279,slow=6.4,SNR=3.6						
NVAR				pP	pP	18 28 55.5	+0.9
	comp=Z,0.7nm,0.7s,baz=294,slow=4.8,SNR=3.6						
**

TALC				*i* S		**Sn**	**18 20 55.1**	**+4.0**
NICH	**Los Niches**	**4.43**	**10**	*e*P		**Pn**	**18 20 12.1**	**+0.8**
NICH				*i* S		**Sn**	**18 21 02.1**	**+0.4**
SFDO	**San Fernando**	**4.84**	**12**	⇓*i*P		**Pn**	**18 20 17.5**	**+0.5**
SFDO				*i* S		**Sn**	**18 21 12.2**	**+0.4**
LNV	**Longovilo**	**5.44**	**7**	⇓*i*P		**Pn**	**18 20 24.6**	**-0.5**
LNV				*i* S		**Sn**	**18 21 25.4**	**-1.0**
TACH	**Talagante**	**5.80**	**11**	⇑*i*P		**Pn**	**18 20 29.2**	**-0.7**
TACH				*i* S		**Sn**	**18 21 33.6**	**-1.5**
CLCH	**Cerro Calan**	**6.11**	**13**	⇑*i*P		**Pn**	**18 20 34.1**	**-0.2**
CLCH				*i* S		**Sn**	**18 21 41.9**	**-0.9**
FCH	**Farellones**	**6.22**	**15**	*e*P		**Pn**	**18 20 36.4**	**+0.5**
FCH				*i* S		**Sn**	**18 21 46.2**	**+0.7**
TRQA	**Tornquist**	**8.11**	**84**	*e*P		**Pn**	**18 21 03.0**	**+1.6**
	comp=N,5.4nm,0.6s							
CFAA	**Coronel Fontan**	**8.40**	**24**	P		**Pn**	**18 21 05.5**	**+0.1**
	comp=N,0.2nm,0.3s,baz=194,slow=13,SNR=12							
CFAA				S		**Sn**	**18 22 37.7**	**-0.9**
	comp=N,0.2nm,0.3s,baz=303,slow=18,SNR=5.5							
CFAA	**Coronel Fontan**	**8.40**	**24**	P		**Pn**	**18 21 05.5**	**+0.1**
CFAA				S		**Sn**	**18 22 37.7**	**-0.9**
USHA	**Ushuaia**	**15.68**	**172**	P		**Pn**	**18 22 41.0**	**-1.1**
	comp=N,0.5nm,0.3s,baz=351,slow=13,SNR=3.5							
LPAZ	**La Paz**	**23.27**	**10**	P		**P**	**18 24 08.7**	**+2.2**
	comp=N,0.6nm,0.6s,mb3.1,baz=207,slow=6.8,SNR=3.5							
SIV	**San Ignacio**	**25.25**	**26**	P		**P**	**18 24 24.9**	**+0.4**
	comp=N,0.6nm,0.5s,mb3.3,baz=218,slow=9.0,SNR=6.6							
SNAA	**Sanae**	**46.71**	**156**	*e*P		**P**	**18 27 25.7**	**-0.4**
	comp=N,13nm,1.3s,mb4.5							
QSPA	**South Pole Qui**	**50.88**	**180**	P		**P**	**18 27 58.6**	**+0.6**
	comp=N,3.2nm,0.6s,mb4.5,baz=139,slow=5.6,SNR=25							
MAW	**Mawson**	**68.09**	**163**	P		**P**	**18 29 55.8**	**-0.5**
	comp=N,1.6nm,0.8s,mb3.9,baz=187,slow=4.7,SNR=5.2							
DBIC	**Dimbokro**	**77.08**	**70**	P		**P**	**18 30 50.5**	**0.0**
	comp=N,2.9nm,0.7s,mb4.1,baz=207,slow=4.5,SNR=5.2							
BOSA	**Boshof**	**77.74**	**117**	P		**P**	**18 30 53.9**	**-0.2**
	comp=N,2.2nm,0.8s,mb4.0,baz=228,slow=4.3,SNR=4.2							
TORD	**Torodi Ar. Bea**	**86.19**	**70**	P		**P**	**18 31 38.2**	**-0.2**
	comp=N,0.2nm,0.6s,mb3.3,baz=225,slow=4.8,SNR=4.1							
TORD	**Torodi Ar. Bea**	**86.19**	**70**	P		**P**	**18 31 38.2**	**-0.2**

*NEIC **17** 18:20:57.4, 1888N×6429W, h38km, MD3.0(RSPR), After RSPR.*
*RSPR **17** 18:20:57.4, 1888N±6429W, h38km±1km, MD2.9/4, MD2.9/4*
ISC 17 18:20:57.1±2.3, 188N±02×643W±01, h39km±14km, n18, σ0§40/35, 15C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABV	**Anegada**	**0.11**	**198**	⇑*e*P	**Pn**	**18 21 03.2**	**-0.4**
ABV				*e*S	**Sn**	**18 21 08.4**	**+0.2**
ABV	**Anegada**	**0.11**	**198**	⇑*e*P	**Pn**	**18 21 03.3**	**-0.4**
ABV				*e*S	**Sn**	**18 21 08.4**	**+0.2**
ABV	**Anegada**	**0.11**	**198**	⇑*e*P	**Pn**	**18 21 03.3**	**-0.4**
ABV				*e*S	**Sn**	**18 21 08.4**	**+0.2**
ABV				*e*S	**Sn**	**18 21 08.4**	**+0.2**
TBVI	**Tortola**	**0.52**	**216**	⇑*e*P	**Pn**	**18 21 08.0**	**-0.1**
TBVI	**Tortola**	**0.52**	**216**	⇑*e*P	**Pn**	**18 21 08.0**	**-0.1**
TBVI	**Tortola**	**0.52**	**216**	*e*S	**Sn**	**18 21 15.9**	**+0.2**
TBVI	**Tortola**	**0.52**	**216**	⇑*e*P	**Pn**	**18 21 08.0**	**-0.1**
TBVI				*e*S	**Sn**	**18 21 15.8**	**+0.1**
TBVI				*e*S	**Sn**	**18 21 15.9**	**+0.2**
TBVI	**Tortola**	**0.52**	**216**	⇑*e*P	**Pn**	**18 21 08.0**	**-0.1**
TBVI				*e*S	**Sn**	**18 21 15.8**	**+0.1**
TBVI				*e*S	**Sn**	**18 21 15.9**	**+0.2**
MTP	**Monte Pirata**	**1.40**	**239**	⇓*e*P	**Pn**	**18 21 19.8**	**-0.3**
MTP	**Monte Pirata**	**1.40**	**239**	⇑*e*P	**Pn**	**18 21 19.9**	**-0.3**
MTP	**Monte Pirata**	**1.40**	**239**	⇑*e*P	**Pn**	**18 21 19.9**	**-0.3**
MTP				*e*S	**Sn**	**18 21 37.2**	**-0.2**
MTP				*e*S	**Sn**	**18 21 37.5**	**+0.1**
MTP	**Monte Pirata**	**1.40**	**239**	⇓*e*P	**Pn**	**18 21 19.8**	**-0.3**
MTP				*e*S	**Sn**	**18 21 37.2**	**-0.2**
MTP				*e*S	**Sn**	**18 21 37.5**	**+0.1**
CBYP	**Canovanas**	**1.58**	**249**	⇑*e*P	**Pn**	**18 21 22.4**	**-0.3**
CBYP	**Canovanas**	**1.58**	**249**	⇑*e*P	**Pn**	**18 21 22.8**	**+0.1**
CBYP	**Canovanas**	**1.58**	**249**	⇑*e*P	**Pn**	**18 21 22.8**	**+0.1**
CBYP				*e*S	**Sn**	**18 21 41.4**	**-0.5**
CBYP				*e*S	**Sn**	**18 21 41.4**	**-0.5**
CBYP	**Canovanas**	**1.58**	**249**	⇑*e*P	**Pn**	**18 21 22.4**	**-0.3**
CBYP				*e*S	**Sn**	**18 21 41.4**	**-0.5**
CELP	**Cerrillos**	**2.29**	**251**	⇑*e*P	**Pn**	**18 21 33.1**	**+0.6**
CELP				*e*S	**Sn**	**18 21 59.7**	**+0.2**
CELP	**Cerrillos**	**2.29**	**251**	⇑*e*P	**Pn**	**18 21 33.6**	**+1.1**
CELP				*e*S	**Sn**	**18 21 59.7**	**+0.2**

*NEIC **17** 18:28:30.9±1.0, 1306N×12625E, h10km, Error ellipse: s-maj=32.5km s-min=14.0km az=73.0*
*IDC **17** 18:28:31.1±1.8, 1272N×12533E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/20, mbtmp3.8/6, MS2.9/1, Ms1 2.9/1, ms1mx2.5/28, Error ellipse: s-maj=154.7km s-min=17.3km az=68.0*
*ISCJB **17** 18:28:35.7±0.8, 1285N±004×12521E±007, h33km, mb3.8/6, Error ellipse: s-maj=9.9km s-min=6.1km az=177.2*
*MAN **17** 18:28:38, 1277N×12501E, h27km, mb4.4, ML3.2, MS3.1*
ISC 17 18:28:36.5±1.6, 1279N±004×12525E±007, h31km±11km, n21, σ1§22/26, mb3.8/6, 1C-3D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.64**	**244**	*e*P	**Pb**	**18 28 48.2**	**-1.0**
PVCP	**Virac**	**1.33**	**307**	*e*P	**Pn**	**18 28 58.8**	**-0.2**
PVCP				*e*S	**Sn**	**18 29 17.4**	**+1.8**
PLP	**Palo**	**1.64**	**189**	⇓*e*P	**Pn**	**18 29 04.5**	**+1.2**
PLP				*e*S	**Sn**	**18 29 24.4**	**+1.1**
OCLP	**Ormoc**	**1.84**	**200**	*e*P	**Pn**	**18 29 07.9**	**+1.9**
OCLP				*e*S	**Sn**	**18 29 17.9**	**-10**
MSLP	**Maasin**	**2.67**	**188**	*e*P	**Pn**	**18 29 20.8**	**+3.3**
MSLP				*e*S	**Sn**	**18 29 43.0**	**-5.8**
RCP	**Roxas**	**2.74**	**244**	⇑*e*P	**Pn**	**18 29 18.3**	**0.0**
RCP				*e*S	**Sn**	**18 29 49.4**	**-1.0**
GQP	**Guinayangan**	**2.94**	**292**	⇓*e*P	**Pn**	**18 29 21.0**	**-0.2**
SCPH	**Surigao**	**3.00**	**175**	*e*P	**Pn**	**18 29 24.6**	**+2.6**
KALP	**Kalibo**	**3.05**	**249**	⇓*e*P	**Pn**	**18 29 26.9**	**+4.3**
OTRP	**Odiongan**	**3.18**	**263**	*e*P	**Pn**	**18 29 24.0**	**-0.4**
GUIM	**Jordan**	**3.38**	**231**	*e*P	**Pn**	**18 29 26.6**	**-0.6**
GUIM				*e*S	**Sn**	**18 30 06.0**	**-0.3**
CAUP	**Cauayan**	**5.29**	**322**	*e*P	**Pn**	**18 29 52.5**	**-0.9**
DAV	**Davao City (W)**	**5.70**	**177**	LR	LR	18 31 55.4	
	comp=Z,111nm,21.0s,baz=163,slow=36						
APYP	**Conner**	**6.35**	**323**	*e*P	**Pn**	**18 30 09.4**	**+1.4**
KSM	**Kuching**	**18.59**	**234**	*e*P	**Pn**	**18 32 59.2**	**+7.5**
FITZ	**Fitzroy Crossi**	**30.70**	**179**	P	**P**	**18 34 46.8**	**-1.9**
	1.4nm,1.1s,mb3.7,baz=0.0,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**33.74**	**164**	P	**P**	**18 35 13.3**	**-2.1**
	0.4nm,1.0s,mb3.3,baz=346,slow=8.0,SNR=8.7						
WRA				PcP	PcP	18 37 53.6	-1.1
	0.2nm,0.4s,baz=341,slow=2.9,SNR=5.3						
ASAR	**Alice Springs**	**37.21**	**167**	P	**P**	**18 35 44.0**	**-1.2**
	0.6nm,0.5s,mb3.7,baz=347,slow=7.7,SNR=20						
MKAR	**Makanchi Array**	**49.43**	**322**	P	**P**	**18 37 23.6**	**0.0**
	0.8nm,0.7s,mb3.9,baz=113,slow=9.3,SNR=7.8						
ZALV	**Zalesovo Beam**	**51.95**	**331**	P	**P**	**18 37 42.3**	**-0.1**
	0.4nm,0.4s,mb3.7,baz=123,slow=5.3,SNR=3.5						
KURK	**Kurchatov**	**53.44**	**325**	P	**P**	**18 37 53.6**	**+0.2**
	3.3nm,0.6s,mb4.5,baz=122,slow=8.2,SNR=39						

*ISCJB **17** 18:29:06.1±0.7, 6706N±003×208E±02, h0km, Error ellipse: s-maj=8.9km s-min=4.4km az=8.5*
*IDC **17** 18:29:08.9±0.9, 6706N×2122E, h0km, mb1 3.2/4, mb1mx3.0/25, mbtmp3.1/4, ML2.4/3, Error ellipse: s-maj=35.1km s-min=9.3km az=120.0*
*HEL **17** 18:29:08.9±0.1, 6708N×2097E, h0km, ML2.0, Explosion*
ISC 17 18:29:08.2±0.7, 6706N±003×211E±01, h0km, n11, σ0§81/16, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEF	**Hetta**	**1.67**	**35**	*e*P	**Pn**	**18 29 38.6**	**0.0**
HEF				*e*S	**Sn**	**18 30 00.8**	**+0.1**
KIF	**Kilpisjarvi**	**1.96**	**357**	*e*P	**Pn**	**18 29 43.4**	**+0.9**
KIF				*e*SG	**Sg**	**18 30 09.4**	**-1.5**
KIF				MSG		18 30 12.7	
	comp=Z,18nm,0.1s						
SGF	**Sodankyl**	**2.15**	**77**	*e*PB	**Pb**	**18 29 47.1**	**-0.7**
SGF				*e*SG	**Sg**	**18 30 16.2**	**-0.9**
OUL	**Oulu**	**2.79**	**133**	*e*SB	**Sb**	**18 30 33.6**	**+0.1**
ARCES	**ARCESS Array B**	**2.98**	**31**	Pn	**Pn**	**18 29 56.9**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=211,slow=14,SNR=19						
ARCES				Sn	**Sn**	**18 30 34.4**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=213,slow=25,SNR=8.7						
KEV	**Kevo**	**3.48**	**36**	*e*P	**Pn**	**18 30 04.0**	**+0.6**
KEV				*e*S	**Sn**	**18 30 45.0**	**-0.2**
KEV				MSG		18 30 52.6	
	comp=Z,2.6nm,0.2s						
KU6	**Riekki**	**3.67**	**102**	MSG		18 31 08.4	
	comp=Z,1.7nm,0.2s						
VAF	**Ylistaro**	**4.09**	**170**	*e*P	**Pn**	**18 30 13.3**	**+1.5**
VAF				*e*S	**Sn**	**18 30 59.9**	**-0.5**
NOA	**NORSAR Array B**	**7.43**	**220**	Pn	**Pn**	**18 30 56.9**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=30,slow=14,SNR=2.4						
HFS	**Hagfors**	**7.69**	**209**	Pn	**Pn**	**18 31 00.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=24,slow=13,SNR=4.0						
AKASG	**Malin Array Be**	**16.91**	**162**	Pn	**Pn**	**18 32 59.2**	**-6.7**
	comp=Z,0.8nm,0.3s,baz=332,slow=14,SNR=5.8						

*CSEM **17** 18:35:41.9±0.7, 4054N×2945W, h5km, ML3.1, Error ellipse: s-maj=16.1km s-min=4.9km az=78.0, After PDA*
PDA 17 18:35:41.9±0.7, 4054N×2945W, h5km, MD3.8, ML3.1, Error ellipse: s-maj=16.1km s-min=4.9km az=78.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRBC	**Serra Branca**	**1.85**	**144**	*e*P	Pn	18 36 09.5	-4.8
PCED	**Cedros**	**1.99**	**163**	*e*S	Sn	18 36 33.9	-7.6
PCED				A		18 36 35.6	
	36nm,0.1s						
CALA	**Caldeira**	**2.04**	**163**	*e*P	Pn	18 36 11.9	-4.9
CALA				*e*S	Sn	18 36 34.9	-7.7
ROSA	**Rosais**	**2.04**	**152**	*e*P	Pn	18 36 12.2	-4.7
ROSA				*e*S	Sn	18 36 34.9	-7.8
PMAN	**Manadas**	**2.17**	**151**	*e*S	Sn	18 36 38.0	-8.0
PMAN				A		18 36 39.0	
	29nm,0.3s						
PICO	**Pico**	**2.18**	**158**	*e*P	Pn	18 36 14.5	-4.3
PICO				*e*S	Sn	18 36 38.2	-8.0

*IDC **17** 18:41:37.3±5.1, 3398N×13684E, h216km±88km, mb2.9/4, mb1 3.1/5, mb1mx2.9/22, mbtmp2.9/5, Error ellipse: s-maj=135.8km s-min=16.9km az=60.0*
*ISCJB **17** 18:41:39.7±0.5, 3448N±008×13783E±008, h294km±6km, mb3.1/5, Error ellipse: s-maj=13.4km s-min=10.5km az=9.2*
*JMA **17** 18:41:39.3±0.4, 3446N×13776E, h300km±4km, M3.2*
ISC 17 18:41:40.8±0.5, 3449N±008×13783E±008, h287km±6km, n23, σ0§68/29, mb3.1/5, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HMMJ	**Hamamatsu 2**	**0.38**	**346**	P	**Pn**	**18 42 17.7**	**+0.1**
JNY	**Yasuok**	**0.87**	**2**	P	**Pn**	**18 42 19.4**	**+0.3**
JAO	**Obara**	**0.91**	**329**	P	**Pn**	**18 42 19.4**	**+0.1**
JIE	**Ise**	**0.94**	**265**	P	**Pn**	**18 42 19.2**	**-0.2**
JOD2	**Odawara 2**	**1.29**	**53**	P	**Pn**	**18 42 22.2**	**+0.9**
JKN2	**Miekihoku**	**1.31**	**260**	P	**Pn**	**18 42 20.9**	**-0.5**
JHU	**Hanno**	**1.81**	**41**	P	**Pn**	**18 42 25.7**	**+0.9**
MJAR	**Matsushiro Arr**	**2.08**	**8**	P	**Pn**	**18 42 27.0**	**+0.1**
	5.8nm,0.3s,baz=205,slow=12,SNR=84						
MJAR				S	**S**	**18 43 02.8**	**-0.8**
	0.1nm,0.3s,baz=223,slow=17,SNR=3.9						
MAT	**Matsushiro**	**2.08**	**8**	P	**Pn**	**18 42 28.2**	**+1.3**
MAT				S	**S**	**18 43 04.7**	**+1.1**
MAT	**Matsushiro**	**2.08**	**8**	P	**Pn**	**18 42 27.2**	**+0.3**
MAT				S	**S**	**18 43 03.5**	**-0.1**
BSO4	**Boso 4**	**2.12**	**76**	P	**Pn**	**18 42 28.2**	**+0.8**
BSO4				*e*S	**S**	**18 43 05.0**	**+0.6**
JWT	**Wachi**	**2.15**	**292**	P	**Pn**	**18 42 27.0**	**-0.6**
JKG	**Kaga**	**2.17**	**326**	P	**Pn**	**18 42 27.4**	**-0.3**
BSO3	**Boso 3**	**2.23**	**81**	P	**Pn**	**18 42 28.2**	**-0.1**
BSO3				S	**S**	**18 43 06.0**	**-0.1**
JAG	**Ashikaga**	**2.34**	**34**	P	**Pn**	**18 42 29.4**	**+0.1**
BSO1	**Boso 1**	**2.60**	**85**	P	**Pn**	**18 42 31.2**	**-0.5**
JHO	**Hitachi**	**3.08**	**46**	P	**Pn**	**18 42 36.1**	**-0.2**
JHO				S	**S**	**18 43 18.5**	**-2.1**
JFK	**Kawauchi**	**3.79**	**40**	P	**Pn**	**18 42 43.8**	**-0.1**
SONM	**Songino Array**	**26.96**	**309**	P	**P**	**18 46 56.2**	**0.0**
	0.5nm,0.6s,mb3.2,baz=115,slow=10,SNR=4.1						
MKAR	**Makanchi Array**	**43.06**	**304**	P	**P**	**18 49 12.2**	**-0.4**
	0.4nm,0.6s,mb2.8,baz=92,slow=8.9,SNR=5.1						
KURK	**Kurchatov**	**45.26**	**310**	P	**P**	**18 49 31.3**	**+1.3**
	0.8nm,0.2s,mb3.5,baz=72,slow=4.7,SNR=2.4						
WRA	**Warramunga Arr**	**54.23**	**184**	P	**P**	**18 50 36.7**	**-0.7**
	0.4nm,0.4s,mb3.1,baz=0.1,slow=7.6,SNR=22						
ASAR	**Alice Springs**	**57.95**	**184**	P	**P**	**18 51 03.2**	**-0.3**
	0.2nm,0.6s,mb2.7,baz=358,slow=4.6,SNR=7.6						

IDC 17 18:42:51.0±4.6, 375S×10125E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/18, mbtmp3.4/4, Error ellipse: s-maj=188.4km s-min=24.7km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.05**	**119**	P	P	18 49 55.3	+0.8
	0.4nm,1.0s,baz=290,slow=8.1,SNR=2.9						
ASAR	**Alice Springs**	**37.23**	**125**	P	P	18 50 03.9	-0.7
	0.2nm,0.5s,baz=295,slow=7.9,SNR=9.1						
SONM	**Songino Array**	**51.57**	**4**	P	P	18 51 58.5	-0.3
	0.4nm,0.6s,baz=180,slow=8.9,SNR=4.2						
MKAR	**Makanchi Array**	**53.04**	**344**	P	P	18 52 10.2	+0.4
	0.3nm,0.6s,baz=165,slow=7.0,SNR=4.1						

KRSC 17 18:50:27.2±0.2, 5497N×16373E, h47km±47km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**1.34**	**338**	*e*P	Pn	18 50 49.3	-0.2
KBTR				*e*S	Sn	18 51 05.8	-0.4
ZLN	**Zelenaya**	**1.97**	**303**	*e*P	Pn	18 51 00.3	+2.3
ZLN				*e*S	Sn	18 51 25.4	+4.0
BZMR	**Bezymyannaya**	**2.08**	**299**	*e*P	Pn	18 51 01.9	+2.3
BZMR				*e*S	Sn	18 51 27.6	+3.3
KMNR	**Kamenistaya**	**2.14**	**293**	*e*P	Pn	18 51 02.9	+2.5
KMNR				*e*S	Sn	18 51 29.2	+3.4
KIRR	**Kirishev**	**2.17**	**298**	*e*P	Pn	18 51 03.8	+3.1
KIRR				*e*S	Sn	18 51 31.1	+4.8
KRSR	**Krestovskiy**	**2.19**	**306**	*e*P	Pn	18 51 02.7	+1.7
KRSR				*e*S	Sn	18 51 28.9	+2.1
KLY	**Klyuchi**	**2.20**	**309**	*e*S	Sn	18 51 27.7	+0.5
KPT	**Kopyto**	**2.23**	**298**	*e*P	Pn	18 51 04.2	+2.6
KOZ	**Kozyrevsk**	**2.45**	**298**	P	Pn	18 51 07.6	+3.0
KOZ				*e*S	Sn	18 51 37.7	+4.4
SRDR	**Sredinnyy**	**2.65**	**302**	*e*P	Pn	18 51 10.2	+2.9
SRDR				*e*S	Sn	18 51 42.0	+3.9
NLC	**Nalytchevo**	**3.15**	**237**	*e*P	Pn	18 51 16.0	+1.8
NLC				*e*S	Sn	18 51 51.3	+0.8
AVH	**Avacha**	**3.40**	**242**	*e*P	Pn	18 51 21.2	+3.6
AVH				*e*S	Sn	18 51 59.2	+2.6
PET	**Petropavlovsk**	**3.58**	**239**	*e*P	Pn	18 51 22.6	+2.6
PET				*e*S	Sn	18 52 02.4	+1.4
GNL	**Ganaly**	**3.62**	**252**	P	Pn	18 51 24.0	+3.3
RUS	**Russkaya**	**4.01**	**233**	*e*P	Pn	18 51 28.4	+2.4
RUS				*e*S	Sn	18 52 11.6	0.0

IDC 17 19:07:57.2±9.5, 334S×10007E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/19, mbtmp3.3/3, Error ellipse: s-maj=310.7km s-min=30.6km az=63.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.68**	**357**	P	P	19 12 50.0	+0.2
	0.6nm,0.7s,baz=191,slow=11,SNR=5.8						
WRA	**Warramunga Arr**	**37.27**	**119**	P	P	19 15 11.5	+0.4
	0.4nm,0.7s,baz=297,slow=8.6,SNR=5.0						
ASAR	**Alice Springs**	**38.42**	**125**	P	P	19 15 20.4	-0.4
	0.4nm,0.9s,baz=289,slow=12,SNR=3.8						

*IDC **17** 19:11:25.3±3.0, 369S×10130E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.8/19, mbtmp3.8/8, Error ellipse: s-maj=126.5km s-min=16.6km az=57.0*
*ISCJB **17** 19:11:31.8±1.0, 30S±02×1023E±02, h33km, mb3.9/10, Error ellipse: s-maj=32.7km s-min=11.7km az=137.1*
*DJA **17** 19:11:34, 329S×10230E, h10km, MLv4.4/6*
*NEIC **17** 19:11:35.0±1.1, 2775S×10257E, h35km, mb4.5/2, Error ellipse: s-maj=58.5km s-min=13.8km az=55.0*
NEIC Felt [III] at Muaraaman.
ISC 17 19:11:34.3±1.0, 30S±02×1023E±02, h35km, n15, σ1§25/14, mb3.9/10, 2C, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPI	**Tanjungpandan**	**5.32**	**87**	⇑*e*P	**Pn**	**19 12 50.5**	**-0.8**
TPI				*e*S	Sn	19 14 16.0	+25
TPI	**Tanjungpandan**	**5.32**	**87**	⇑*e*P	**Pn**	**19 12 50.5**	**-0.8**
TPI				*e*S	Sn	19 14 16.0	+25
CMAR	**Chiang Mai Arr**	**21.61**	**351**	P	**P**	**19 16 24.1**	**+2.8**
	0.3nm,0.7s,mb2.8,baz=186,slow=11,SNR=4.1						
FITZ	**Fitzroy Crossi**	**27.32**	**125**	P	**P**	**19 17 15.5**	**-0.5**
	1.1nm,0.8s,mb3.4,baz=102,slow=22,SNR=3.1						
WRA	**Warramunga Arr**	**35.47**	**121**	P	**P**	**19 18 28.9**	**+1.2**
	0.5nm,0.5s,mb3.7,baz=299,slow=9.6,SNR=8.0						
WRAB	**Tennant Creek**	**35.48**	**121**	P	**P**	**19 18 28.5**	**+0.8**
ASAR	**Alice Springs**	**36.77**	**127**	P	**P**	**19 18 37.7**	**-1.1**
	1.3nm,0.5s,mb4.0,baz=296,slow=7.8,SNR=27						
STKA	**Stephens Creek**	**46.74**	**132**	P	**P**	**19 20 00.8**	**+0.5**
	1.4nm,0.5s,mb4.1,baz=292,slow=7.2,SNR=3.5						
SONM	**Songino Array**	**50.77**	**4**	P	**P**	**19 20 32.6**	**+1.7**
	1.7nm,0.6s,mb4.2,baz=188,slow=9.4,SNR=18						
EKS2	**Erkin-Say**	**52.29**	**334**	*e*P	**P**	**19 20 42.2**	**-0.1**
	2.7nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**52.66**	**343**	P	**P**	**19 20 44.1**	**-0.8**
	0.6nm,0.5s,mb3.8,baz=156,slow=8.8,SNR=12						
KURK	**Kurchatov**	**57.26**	**342**	P	**P**	**19 21 17.5**	**-0.6**
ZALV	**Zalesovo Beam**	**58.62**	**348**	P	**P**	**19 21 25.5**	**-2.2**
	0.6nm,0.3s,mb4.1,baz=160,slow=4.7,SNR=7.2						
SBA	**Scott Base**	**81.81**	**169**	*e*P	**P**	**19 23 52.8**	**+3.6**
	6.1nm,0.8s,mb4.6						
TXAR	**Lajitas Array**	**144.03**	**41**	PKPbc	PKPdf	19 31 06.1	-0.8
	0.3nm,0.6s,baz=143,slow=0.6,SNR=4.4						

IDC 17 19:12:41.6±35.0, 2001S×17849W, h578km±284km, mb3.3/5, mb1 3.5/5, mb1mx3.2/16, mbtmp3.3/5, 1D, Error ellipse: s-maj=298.4km s-min=86.8km az=72.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.09**	**264**	⇓*i*P	P	19 18 31.3	+0.4
	6.1nm,0.4s						
CTA	**Charters Tower**	**33.09**	**264**	P	P	19 18 31.4	+0.5
	7.3nm,0.4s,baz=92,slow=11,SNR=32						
STKA	**Stephens Creek**	**37.59**	**243**	*e*P	P	19 19 07.7	-0.4
	1.6nm,0.4s						
STKA	**Stephens Creek**	**37.59**	**243**	P	P	19 19 08.0	-0.1
	1.9nm,0.5s,baz=104,slow=11,SNR=9.6						
ASAR	**Alice Springs**	**44.19**	**256**	P	P	19 20 00.1	-0.4
	5.8nm,0.9s,baz=92,slow=7.8,SNR=33						
ASAR				PcP	PcP	19 21 32.2	-0.1
	0.6nm,0.6s,baz=93,slow=3.9,SNR=4.7						
WB2	**Warramunga Arr**	**44.21**	**262**	*e*P	P	19 20 00.0	-0.6
WRA	**Warramunga Arr**	**44.22**	**262**	P	P	19 20 00.1	-0.6
	2.1nm,0.5s,baz=97,slow=7.6,SNR=42						
FITZ	**Fitzroy Crossi**	**52.64**	**262**	P	P	19 21 03.4	+0.3
	0.8nm,0.5s,baz=102,slow=9.3,SNR=9.7						

*ISCJB **17** 19:29:39.8±0.7, 3348N±004×14044E±007, h72km±7km, mb3.5/3, Error ellipse: s-maj=9.9km s-min=5.9km az=14.4*
*JMA **17** 19:29:41.5±0.1, 3353N×14043E, h55km±3km, M3.0*
*IDC **17** 19:29:43.5±0.9, 3324N×13960E, h74km±12km, mb3.2/3, mb1 3.5/4, mb1mx3.1/21, mbtmp3.1/4, Error ellipse: s-maj=52.6km s-min=11.1km az=69.0*
ISC 17 19:29:41.0±0.7, 3349N±004×14044E±007, h64km±8km, n16, σ0§75/26, mb3.5/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.65**	**235**	P	**Pn**	**19 29 55.2**	**+0.4**
JHJ2				S	**Sn**	**19 30 04.7**	**-0.2**
JHJ	**Hachijo jima 2**	**0.66**	**236**	P	**Pn**	**19 29 55.1**

RGRI	**Rengat**	**3.19**	**10**	P	**Sn**	**19 34 50.4**	**+0.1**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.35**	**335**	P	**Pn**	**19 34 15.9**	**+0.3**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**4.54**	**73**	P	**Pn**	**19 34 23.7**	**-8.1**
	0.0nm,0.0s						
WRA	**Warramunga Arr**	**35.68**	**120**	P	**P**	**19 40 18.1**	**+0.1**
	0.2nm,0.6s,mb3.2,baz=303,slow=9.2,SNR=3.9						
ASAR	**Alice Springs**	**36.91**	**126**	P	**P**	**19 40 28.8**	**+0.4**
	1.0nm,0.6s,mb3.8,baz=297,slow=8.3,SNR=17						
SONM	**Songino Array**	**51.30**	**4**	P	**P**	**19 42 23.6**	**+0.6**
	1.0nm,0.7s,mb3.8,baz=189,slow=9.5,SNR=7.7						
MKAR	**Makanchi Array**	**52.98**	**343**	P	**P**	**19 42 35.7**	**+0.1**
	0.6nm,0.7s,mb3.6,baz=151,slow=7.7,SNR=6.0						
ZALV	**Zalesovo Beam**	**59.00**	**348**	P	**P**	**19 43 17.1**	**-1.3**
	0.6nm,0.5s,mb3.9,baz=167,slow=7.3,SNR=3.7						

*CSEM **17** 19:35:30.6±0.1, 5579N×596W, h15km, ML2.7, Error ellipse: s-maj=1.8km s-min=1.3km az=74.0*
*ISCJB **17** 19:35:31.0±0.6, 5581N±003×600W±007, h19km, Error ellipse: s-maj=6.2km s-min=4.3km az=154.4*
*BGS **17** 19:35:32.3, 5580N×599W, h19km, ML3.0*
*BER **17** 19:35:32.6±1.4, 5581N×599W, h14km±6km, ML2.7, ML3.0(BGS)*

ISC 17 19:35:30.4±0.8, 5577N±003×603W±006, h13km±5km, n40, σ0s70/46, 1C-1D, United Kingdom

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMSU	**Muirshiel**	**0.73**	**84**	*i*P	**Pg**	**19 35 45.2**	**+0.7**
PGBU	**Glenifferbraes**	**0.87**	**87**	*e*P	**Pg**	**19 35 47.8**	**+0.6**
PGBU				*e*S	**Sg**	**19 35 58.6**	**0.0**
PGBU				AML	AML	19 35 59.9	
	comp=N,402nm,0.2s						
PGBU				AML	AML	19 36 00.1	
	comp=E,865nm,0.3s						
POB1	**Observatory**	**0.90**	**85**	*e*P	**Pg**	**19 35 48.5**	**+0.6**
EAB	**Aberfoyle**	**1.03**	**66**	*e*P	**Pb**	**19 35 49.9**	**-0.3**
KAR1	**Arisaig**	**1.16**	**5**	*e*P	**Pb**	**19 35 52.2**	**0.0**
GAL1	**Galloway**	**1.18**	**140**	*e*P	**Pn**	**19 35 52.9**	**+0.4**
GAL1				*e*S	**Sb**	**19 36 07.5**	**-0.2**
GAL1				AML	AML	19 36 09.1	
	comp=N,291nm,0.2s						
GAL1				AML	AML	19 36 09.4	
	comp=E,481nm,0.3s						
GAL1	**Galloway**	**1.18**	**140**	*e*P	**Pn**	**19 35 52.9**	**+0.4**
GAL1				*e*S	**Sb**	**19 36 07.5**	**-0.2**
GAL1				AML	AML	19 36 09.1	
	comp=N,291nm,0.2s						
GAL1				AML	AML	19 36 09.4	
	comp=E,481nm,0.3s						
GAL1	**Galloway**	**1.18**	**140**	*e*P	**Pn**	**19 35 52.9**	**+0.3**
	SNR=55						
GAL1				*e*S	**Sb**	**19 36 07.5**	**-0.2**
	comp=E,481nm,0.3s,SNR=55						
EAU	**Auchinoon**	**1.46**	**86**	*e*P	**Pn**	**19 35 56.9**	**+0.5**
KSB	**Sheil Bridge**	**1.48**	**13**	*e*P	**Pn**	**19 35 56.8**	**+0.1**
EBH	**Black Hill**	**1.49**	**70**	*e*P	**Pn**	**19 35 56.5**	**-0.4**
GCD	**Castle Douglas**	**1.50**	**127**	*e*P	**Pn**	**19 35 58.1**	**+1.1**
GMM	**Mts of Mourne**	**1.54**	**178**	*e*P	**Pn**	**19 35 58.0**	**+0.5**
KPL	**Plockton**	**1.58**	**7**	*i*P	**Pn**	**19 35 58.2**	**+0.1**
KPL				AML	AML	19 36 25.5	
	comp=E,134nm,0.5s						
KPL				AML	AML	19 36 27.9	
	comp=N,65nm,0.3s						
EDI	**Edinburgh**	**1.61**	**83**	*e*P	**Pn**	**19 35 59.0**	**+0.5**
EDI				*e*S	**Sn**	**19 36 18.0**	**-1.1**
EDI				AML	AML	19 36 24.9	
	comp=E,145nm,0.6s						
EDI				AML	AML	19 36 28.4	
	comp=N,140nm,0.4s						
EDI	**Edinburgh**	**1.61**	**83**	*e*P	**Pn**	**19 35 59.0**	**+0.5**
	SNR=55						
EDI				*e*S	**Sn**	**19 36 18.0**	**-1.1**
	comp=N,140nm,0.4s,SNR=55						
ESK	**Eskdalemuir**	**1.67**	**105**	*e*P	**Pn**	**19 35 59.5**	**+0.2**
ESK				*e*S	**Sn**	**19 36 20.3**	**-0.2**
ESK				AML	AML	19 36 24.0	
	comp=E,125nm,0.3s						
ESK				AML	AML	19 36 24.9	
	comp=N,116nm,0.5s						
ESK	**Eskdalemuir**	**1.67**	**105**	*e*P	**Pn**	**19 35 59.5**	**+0.2**
	SNR=55						
ESK				*e*S	**Sn**	**19 36 20.3**	**-0.2**
	comp=N,116nm,0.5s,SNR=55						
EBL	**Broad Law**	**1.69**	**89**	*e*P	**Pn**	**19 35 59.5**	**0.0**
KSK	**Scoval**	**1.74**	**348**	*e*P	**Pn**	**19 36 01.4**	**+1.1**
ECK	**Cauldkaine Hil**	**1.75**	**109**	*e*P	**Pn**	**19 36 00.7**	**+0.2**
ECK	**Cauldkaine Hil**	**1.75**	**109**	*e*P	**Pn**	**19 36 00.6**	**+0.1**
	SNR=55						
KAC	**Achnashellach**	**1.78**	**13**	*e*P	**Pn**	**19 36 00.8**	**-0.1**
MDO	**Dochfour**	**1.91**	**28**	*e*P	**Pn**	**19 36 01.7**	**-0.9**
ESY	**Stoneypath**	**1.93**	**84**	*e*P	**Pn**	**19 36 03.0**	**+0.1**
RRR	**Rubha Reidh**	**2.10**	**3**	AML	AML	19 36 40.0	
	comp=N,65nm,0.3s						
RRR				AML	AML	19 36 41.8	
	comp=N,48nm,0.3s						
RRR	**Rubha Reidh**	**2.10**	**3**	AML	AML	19 36 40.0	
	comp=N,65nm,0.3s						
RRR				AML	AML	19 36 41.8	
	comp=E

1.8nm,0.3s,baz=163,slow=14,SNR=9.0
KAPI Sn Sn 20 24 15.2 +2.3
1.3nm,0.3s,baz=88,slow=22,SNR=2.2
FITZ Fitzroy Crossi 10.55 155 Pn Pn 20 25 04.0 +1.3
0.3nm,0.3s,baz=14,slow=6.6,SNR=9.3
FITZ Sn Sn 20 26 57.1 -4.5
0.2nm,0.3s,baz=191,slow=11,SNR=5.7
WRA Warramunga Arr 17.23 133 P Pn 20 26 28.3 -4.1
0.1nm,0.3s,baz=300,slow=14,SNR=11
WRA S Sn 20 29 27.4 -17
0.1nm,0.3s,baz=308,slow=24,SNR=5.8
ASAR Alice Springs 19.51 142 P Pn 20 26 58.9 -1.4
0.2nm,0.3s,baz=321,slow=12,SNR=11
ASAR S Sn 20 30 26.6 -13
0.1nm,0.3s,baz=315,slow=22,SNR=5.6
SONM Songino Array 57.59 348 P P 20 32 21.6 -0.2
0.2nm,0.4s,baz=165,slow=8.5,SNR=2.8
MKAR Makanchi Array 64.94 332 P P 20 33 11.1 -0.5
0.2nm,0.4s,baz=138,slow=7.5,SNR=5.7

IDC ***17*** *20:58:42.8±2.6, 181S×9970E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.9/19, mbtmp4.0/7, MS3.4/1, Ms1 3.6/1, ms1mx3.0/24, Error ellipse: s-maj=112.7km s-min=17.4km az=59.0*
ISCJB ***17*** *20:58:45.9±2.3, 17S±03×997E±05, h33km, mb4.1/7, Error ellipse: s-maj=91.0km s-min=12.3km az=148.9*
NEIC ***17*** *20:58:48.4±1.0, 173S×9982E, h35km, mb4.2/1, Error ellipse: s-maj=46.1km s-min=8.0km az=59.0*

ISC 17 20:58:48.3±2.2, 18S±03×998E±05, h35km, n12, σ0§24/10, mb4.1/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.10**	**358**	P	**P**	**21 03 19.1**	**0.0**
	1.4nm,0.7s,baz=186,slow=10.0,SNR=10						
CMAR				LR	LR	21 11 19.0	
	comp=Z,111nm,19.7s,baz=200,slow=38						
WRA	**Warramunga Arr**	**38.30**	**121**	P	**P**	**21 06 05.7**	**-0.1**
	1.4nm,0.4s,mb4.0,baz=302,slow=9.1,SNR=20						
WRAB	**Tennant Creek**	**38.30**	**121**	*eP*	**P**	**21 06 06.0**	**+0.2**
	2.9nm,0.7s,mb4.1						
WB2	**Warramunga Arr**	**38.31**	**121**	*eP*	**P**	**21 06 05.6**	**-0.3**
ASAR	**Alice Springs**	**39.57**	**126**	P	**P**	**21 06 16.1**	**-0.3**
	0.7nm,0.5s,mb3.6,baz=301,slow=7.8,SNR=16						
STKA	**Stephens Creek**	**49.47**	**132**	P	**P**	**21 07 35.9**	**+0.5**
	2.6nm,0.9s,mb4.3,baz=283,slow=3.0,SNR=4.0						
SONM	**Songino Array**	**49.72**	**6**	P	**P**	**21 07 37.2**	**+0.3**
	0.6nm,0.6s,mb3.8,baz=194,slow=8.4,SNR=6.2						
MKAR	**Makanchi Array**	**50.73**	**345**	P	**P**	**21 07 44.6**	**0.0**
	2.6nm,0.6s,mb4.3,baz=150,slow=8.1,SNR=38						
ZAA0	**Zalesovo Array**	**56.89**	**349**	*eP*	**P**	**21 08 29.4**	**-0.1**
ZALV	**Zalesovo Beam**	**56.89**	**349**	P	**P**	**21 08 29.4**	**-0.1**
	5.7nm,0.6s,mb4.8,baz=179,slow=5.8,SNR=33						
TXAR	**Lajitas Array**	**144.63**	**37**	PKP	PKPdf	21 18 21.7	-0.3
	1.6nm,0.6s,baz=298,slow=1.5,SNR=22						
JCT	**Junction City**	**145.92**	**31**	*eP*	PKPdf	21 18 24.8	+0.6

IDC ***17*** *21:06:18.9±1.3, 369S×10141E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.1/20, mbtmp4.2/11, Error ellipse: s-maj=48.1km s-min=14.5km az=54.0*
BJI ***17*** *21:06:21.6, 383S×10096E, h35km, mB5.0, mb4.7, Ms4.5, Ms4.0*
ISCJB ***17*** *21:06:22.1±2.1, 40S±01×1010E±02, h55km±14km, mb4.3/20, MS4.0/2, Error ellipse: s-maj=35.3km s-min=8.2km az=144.5*
NEIC ***17*** *21:06:22.8±0.9, 384S×101.17E, h35km, mb4.5/6, Error ellipse: s-maj=36.5km s-min=7.7km az=55.0*
DJA ***17*** *21:06:28, 374S×10086E, h60km, MLv4.8/5*

ISC 17 21:06:24.7±1.9, 39S±01×1010E±02, h57km±13km, h27km±2.4km:pP-P,n31, σ0§96/30, mb4.3/20, MS4.0/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPI	**Padang Panjang**	**3.52**	**349**	P	**Pn**	**21 07 15.2**	**-1.8**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.79**	**20**	P	**Pn**	**21 07 21.0**	**+0.3**
	0.0nm,0.0s						
DBJI	**Dramaga**	**6.25**	**115**	P	**Pn**	**21 07 53.7**	**-0.7**
	0.0nm,0.0s						
CBJI	**Citeko**	**6.29**	**113**	P	**Pn**	**21 07 56.7**	**+1.8**
	0.0nm,0.0s						
LEM	**Lembang**	**7.15**	**114**	P	**Pn**	**21 08 07.6**	**+0.9**
	0.0nm,0.0s						
PCI	**Palu**	**19.02**	**81**	P	**Pn**	**21 10 43.9**	**+0.5**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**22.35**	**355**	P	**P**	**21 11 15.1**	**-2.9**
	7.6nm,0.9s,mb4.1,baz=154,slow=8.7,SNR=37						
BATI	**Baumata**	**23.29**	**107**	P	**P**	**21 11 25.4**	**-2.4**
	5.2nm,0.5s,mb4.2,baz=271,slow=20,SNR=2.4						
FITZ	**Fitzroy Crossi**	**27.89**	**122**	*eP*	**P**	**21 12 09.1**	**-0.4**
	4.4nm,0.7s,mb4.2						
FITZ	**Fitzroy Crossi**	**27.89**	**122**	P	**P**	**21 12 09.1**	**-0.4**
	2.5nm,1.0s,mb3.8,baz=270,slow=8.1,SNR=4.5						
WRA	**Warramunga Arr**	**36.14**	**119**	P	**P**	**21 13 21.1**	**-0.6**
	1.2nm,0.5s,mb4.1,baz=300,slow=9.2,SNR=23						
WRAB	**Tennant Creek**	**36.14**	**119**	*eP*	**P**	**21 13 21.6**	**-0.2**
	11nm,1.1s,mb4.7						
WRAB				*ePP*	PP	21 14 47.0	+2.1
WB2	**Warramunga Arr**	**36.15**	**119**	*eP*	**P**	**21 13 21.0**	**-0.8**
ASAR	**Alice Springs**	**37.29**	**125**	P	**P**	**21 13 31.6**	**+0.2**
	1.0nm,0.6s,mb3.8,baz=294,slow=7.9,SNR=13						
XAN	**Xi'an**	**38.50**	**11**	P	**P**	**21 13 40.8**	**-0.7**
XAN				AP	pP	21 13 49.8	-6.2
XAN				XP	sP	21 13 54.1	-8.6
XAN				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.5						
XAN				AMB	AMB		
	comp=Z,187nm,7.7s						
LZH	**Lanzhou**	**39.90**	**4**	*eP*	**P**	**21 13 54.0**	**+0.8**
LZH				AP	pP	21 14 02.0	-5.8
LZH				XP	sP	21 14 04.5	-10
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,114nm,4.8s						
GTA	**Gaotai**	**43.15**	**359**	*eP*	**P**	**21 14 20.4**	**+0.7**
GTA				AP	pP	21 14 28.1	-6.3
GTA				XP	sP	21 14 31.1	-10
GTA				PP	PP	21 16 06.0	+5.0
GTA				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.0						
GTA				AMB	AMB		
	comp=Z,131nm,5.7s						
GTA				LR	LR		
	comp=N,202nm,12.6s,MS4.4						
GTA				LR	LR		
	comp=E,227nm,14.7s,MS4.4						
GTA				LR	LR		
	comp=Z,207nm,15.3s,MS4.2						
STKA	**Stephens Creek**	**47.10**	**131**	P	**P**	**21 14 51.5**	**+0.3**
	comp=Z,0.9nm,0.5s,mb3.9,baz=346,slow=15,SNR=5.4						
WMQ	**Urumqi**	**49.04**	**347**	P	**P**	**21 15 07.3**	**+1.3**
WMQ				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,94nm,4.2s						
WMQ				LR	LR		
	comp=Z,117nm,22.2s,MS3.8						
SONM	**Songino Array**	**51.77**	**5**	P	**P**	**21 15 27.7**	**+1.2**
	comp=Z,5.5nm,0.8s,mb4.5,baz=187,slow=9.2,SNR=38						
ULN	**Ulaanbaatar**	**51.86**	**5**	*eP*	**P**	**21 15 28.2**	**+1.0**
	comp=Z,6.0nm,1.0s,mb4.5						
TKM2	**Tokmak 2**	**52.01**	**336**	*eP*	**P**	**21 15 28.7**	**+0.3**
	comp=Z,5.1nm,1.0s,mb4.4						
TKM2				*ePcP*	PcP	21 16 42.3	+2.3
EKS2	**Erkin-Say**	**52.55**	**335**	*eP*	**P**	**21 15 32.5**	**+0.1**
	comp=Z,3.9nm,0.9s,mb4.3						
EKS2				*ePcP*	PcP	21 16 44.3	+2.2
MJAR	**Matsushiro Arr**	**53.15**	**37**	P	**P**	**21 15 36.1**	**-0.8**
	comp=Z,0.7nm,0.4s,mb4.0,baz=197,slow=7.6,SNR=3.8						
MKAR	**Makanchi Array**	**53.17**	**344**	P	**P**	**21 15 36.9**	**0.0**
	comp=Z,5.0nm,0.8s,mb4.5,baz=150,slow=8.0,SNR=43						
KURK	**Kurchatov**	**57.75**	**343**	*eP*	**P**	**21 16 09.7**	**0.0**
	comp=Z,6.2nm,0.8s,mb4.7						
ZAA0	**Zalesovo Array**	**59.26**	**349**	*eP*	**P**	**21 16 20.0**	**-0.1**
ZALV	**Zalesovo Beam**	**59.26**	**349**	P	**P**	**21 16 19.9**	**-0.2**
	comp=Z,8.6nm,0.9s,mb4.8,baz=160,slow=4.7,SNR=33						
ZALV	**Zalesovo Beam**	**59.26**	**349**	P	**P**	**21 16 19.9**	**-0.2**
KEST	**Kesra**	**93.65**	**305**	P	**P**	**21 19 39.5**	**+4.1**
	comp=Z,1.2nm,0.7s,mb4.5,baz=357,slow=5.2,SNR=6.6						
TXAR	**Lajitas Array**	**145.56**	**40**	PKPbc	PKPbc	21 25 58.6	+1.1

comp=Z,4.9nm,1.0s,baz=282,slow=2.4,SNR=25

IDC ***17*** *21:12:06.8±1.7, 305S×10086E, h0km, mb4.2/9, mb1 4.3/10, mb1mx4.1/21, mbtmp4.3/10, ML4.7/1, Error ellipse: s-maj=68.3km s-min=15.2km az=54.0*
NEIC ***17*** *21:12:12.6±0.8, 295S×10101E, h35km, mb4.3/4, Error ellipse: s-maj=32.9km s-min=8.1km az=52.0*
ISCJB ***17*** *21:12:18.2±5.3, 28S±02×1013E±02, h96km±49km, mb4.7/21, Error ellipse: s-maj=50.8km s-min=9.5km az=138.4*

ISC 17 21:12:21.0±5.7, 29S±02×1012E±02, h109km±53km, n31, σ0§50/29, mb4.7/21, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**18.63**	**97**	P	**P**	**21 16 30.7**	**+0.4**
	2.1nm,0.3s,baz=261,slow=10,SNR=5.9						
CMAR	**Chiang Mai Arr**	**21.37**	**354**	P	**P**	**21 16 55.1**	**-4.6**
	1.2nm,0.7s,baz=185,slow=9.5,SNR=8.7						
FITZ	**Fitzroy Crossi**	**28.31**	**124**	P	**P**	**21 18 03.0**	**-1.6**
	1.6nm,0.9s,mb3.6,baz=268,slow=13,SNR=3.2						
ODAN	**Odare**	**32.48**	**337**	*eP*	**P**	**21 18 41.3**	**+0.1**
	21nm,0.6s,mb5.1						
TAPN	**Taplejung**	**32.79**	**337**	*eP*	**P**	**21 18 44.1**	**+0.2**
	252nm,0.8s						
RAMN	**Ramite**	**32.88**	**336**	*eP*	**P**	**21 18 45.0**	**+0.3**
	9.1nm,0.4s,mb4.9						
JIRN	**Jiri**	**33.67**	**336**	*eP*	**P**	**21 18 51.5**	**-0.1**
PKI	**Pulchoki**	**33.92**	**334**	*eP*	**P**	**21 18 54.0**	**+0.2**
PKIN	**Phulchoki**	**33.93**	**334**	*eP*	**P**	**21 18 53.4**	**-0.5**
	5.4nm,0.4s,mb4.7						
GUN	**Gumba**	**34.02**	**335**	*eP*	**P**	**21 18 55.2**	**+0.6**
	34nm,0.4s,mb5.5						
DMN	**Daman**	**34.09**	**334**	*eP*	**P**	**21 18 55.5**	**+0.3**
	3.2nm,0.3s,mb4.7						
KKN	**Kakani**	**34.17**	**334**	*eP*	**P**	**21 18 55.7**	**-0.2**
	15nm,0.4s,mb5.2						
GKN	**Gorkha**	**34.63**	**334**	*eP*	**P**	**21 18 59.7**	**-0.2**
	13nm,0.4s,mb5.2						
KOLN	**Koldanda**	**34.91**	**332**	*eP*	**P**	**21 19 02.3**	**0.0**
	8.1nm,0.6s,mb4.8						
DANN	**Dangsing**	**35.33**	**333**	*eP*	**P**	**21 19 06.0**	**+0.1**
	28nm,0.4s,mb5.4						
WRA	**Warramunga Arr**	**36.50**	**120**	P	**P**	**21 19 16.0**	**0.0**
	2.0nm,0.4s,mb4.4,baz=302,slow=9.0,SNR=34						
WB2	**Warramunga Arr**	**36.51**	**120**	*eP*	**P**	**21 19 16.0**	**-0.1**
ASAR	**Alice Springs**	**37.75**	**126**	P	**P**	**21 19 26.5**	**0.0**
	0.8nm,0.5s,mb3.8,baz=300,slow=8.1,SNR=10						
STKA	**Stephens Creek**	**47.65**	**132**	P	**P**	**21 20 47.1**	**+0.7**
	2.8nm,1.0s,mb4.0,baz=134,slow=14,SNR=3.3						
SONM	**Songino Array**	**50.76**	**5**	P	**P**	**21 21 10.4**	**+0.6**
	5.1nm,0.9s,mb4.6,baz=183,slow=8.8,SNR=29						
SONM				PcP	PcP	21 22 26.0	+0.7
	0.4nm,0.4s,baz=192,slow=4.9,SNR=4.5						
ULN	**Ulaanbaatar**	**50.84**	**5**	*eP*	**P**	**21 21 10.3**	**-0.1**
	2.4nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**51.16**	**336**	*eP*	**P**	**21 21 12.9**	**0.0**
	2.8nm,0.6s,mb4.5						
TKM2				*e*		21 21 24.8	
EKS2	**Erkin-Say**	**51.70**	**334**	*eP*	**P**	**21 21 17.3**	**+0.4**
	6.6nm,0.8s,mb4.7						
EKS2				*e*		21 21 29.0	
MKAR	**Makanchi Array**	**52.24**	**344**	P	**P**	**21 21 20.6**	**-0.3**
	4.0nm,0.6s,mb4.7,baz=160,slow=8.9,SNR=52						
KURK	**Kurchatov**	**56.83**	**343**	*eP*	**P**	**21 21 53.2**	**-0.7**
	1.3nm,0.5s,mb4.2						
ZAA0	**Zalesovo Array**	**58.30**	**349**	*eP*	**P**	**21 22 03.6**	**-0.5**
ZALV	**Zalesovo Beam**	**58.30**	**349**	P	**P**	**21 22 03.5**	**-0.6**
	17nm,0.9s,mb5.1,baz=172,slow=4.5,SNR=52						
RAO	**Raoul Island**	**80.63**	**119**	*eP*	**P**	**21 24 23.1**	**+1.0**
ARCES	**ARCESS Array B**	**87.75**	**340**	P	**P**	**21 24 57.1**	**-0.1**
	4.1nm,0.9s,mb4.4,baz=90,slow=7.2,SNR=3.8						
TXAR	**Lajitas Array**	**144.69**	**39**	PKP	PKPdf	21 31 46.2	+0.6
	1.1nm,0.5s,baz=233,slow=0.7,SNR=29						
TXAR	**Lajitas Array**	**144.69**	**39**	PKP	PKPdf	21 31 46.2	+0.6

DJA ***17*** *21:23:19, 635S×10266E, h50km, MLv5.4/6*
IDC ***17*** *21:23:49.7±2.9, 358S×10146E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/18, mbtmp3.9/7, Error ellipse: s-maj=126.8km s-min=17.3km az=58.0*
ISCJB ***17*** *21:23:51.8±0.8, 38S±01×10118E±008, h33km, mb4.0/11, Error ellipse: s-maj=18.9km s-min=9.5km az=25.8*
NEIC ***17*** *21:23:55.5±1.1, 346S×10167E, h35km, mb4.2/4, Error ellipse: s-maj=55.9km s-min=10.4km az=55.0*

ISC 17 21:23:54.0±0.8, 38S±01×10114E±008, h35km, n19, σ1§13/19, mb4.0/11, 2C, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPI	**Tanjungpandan**	**6.59**	**81**	*eP*	**Pn**	**21 25 41.0**	**+13**
TPI				*eS*	**Sn**	**21 26 43.0**	**+0.6**
TPI	**Tanjungpandan**	**6.59**	**81**	*eP*	**Pn**	**21 25 41.0**	**+13**
TPI				*eS*	**Sn**	**21 26 43.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**22.25**	**354**	P	**P**	**21 28 47.8**	**-0.1**
	0.3nm,0.6s,mb2.9,baz=191,slow=7.6,SNR=3.5						
LSA	**Lhasa**	**34.68**	**345**	P	**P**	**21 30 40.1**	**-0.3**
WRA	**Warramunga Arr**	**36.10**	**119**	P	**P**	**21 30 51.4**	**-1.5**
	0.7nm,0.6s,mb3.8,baz=300,slow=9.1,SNR=7.8						
ASAR	**Alice Springs**	**37.27**	**125**	P	**P**	**21 31 02.3**	**-0.5**
	3.2nm,0.8s,mb4.2,baz=300,slow=8.0,SNR=25						
STKA	**Stephens Creek**	**47.10**	**131**	P	**P**	**21 32 24.3**	**+1.5**
	1.3nm,0.7s,mb4.0,baz=322,slow=7.1,SNR=5.5						
STKA	**Stephens Creek**	**47.10**	**131**	P	**P**	**21 32 24.3**	**+1.5**
SONM	**Songino Array**	**51.65**	**5**	P	**P**	**21 32 56.0**	**-1.2**
	1.8nm,0.7s,mb4.1,baz=185,slow=10,SNR=14						
TKM2	**Tokmak 2**	**51.95**	**336**	*eP*	**P**	**21 33 00.4**	**+0.9**
	1.7nm,0.6s,mb4.2						
AML	**Almayashu**	**52.09**	**334**	*eP*	**P**	**21 33 02.6**	**+2.0**
	2.6nm,0.7s,mb4.3						
AML				*e*	pP	21 33 15.5	+4.3
EKS2	**Erkin-Say**	**52.49**	**335**	*eP*	**P**	**21 33 05.9**	**+2.4**
	3.0nm,0.7s,mb4.3						
MK31	**Makanchi Array**	**53.08**	**344**	*eP*	**P**	**21 33 08.1**	**+0.2**
MKAR	**Makanchi Array**	**53.08**	**344**	P	**P**	**21 33 07.8**	**-0.1**
	0.8nm,0.6s,mb3.6,baz=145,slow=8.9,SNR=10.0						
KURK	**Kurchatov**	**57.67**	**343**	*eP*	**P**	**21 33 40.0**	**-0.7**
	1.9nm,0.8s,mb4.2						
ZAA0	**Zalesovo Array**	**59.16**	**349**	*eP*	**P**	**21 33 49.9**	**-1.2**
ZALV	**Zalesovo Beam**	**59.16**	**349**	P	**P**	**21 33 49.9**	**-1.3**
	2.2nm,0.8s,mb4.2,baz=159,slow=4.5,SNR=8.8						
TXAR	**Lajitas Array**	**145.40**	**40**	PKPbc	PKPbc	21 43 29.0	+0.1
	0.9nm,0.8s,baz=64,slow=2.9,SNR=9.3						
TXAR	**Lajitas Array**	**145.40**	**40**	PKPbc	PKPbc	21 43 29.0	+0.1

IDC 17 21:34:39.6±7.7, 184S×10209E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/18, mbtmp3.2/3, Error ellipse: s-maj=435.5km s-min=29.1km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.29**	**122**	P	P	21 41 44.7	-0.5
	0.2nm,0.6s,baz=304,slow=8.9,SNR=3.6						
ASAR	**Alice Springs**	**37.68**	**128**	P	P	21 41 57.6	+0.7
	0.1nm,0.4s,baz=297,slow=7.5,SNR=4.2						
MKAR	**Makanchi Array**	**51.47**	**343**	P	P	21 43 47.0	+0.3
	0.4nm,0.6s,baz=141,slow=7.3,SNR=4.4						
TXAR	**Lajitas Array**	**143.28**	**39**	PKP	PKPdf	21 54 14.7	-2.0
	0.2nm,0.4s,baz=241,slow=0.3,SNR=3.6						

IDC 17 21:40:41.5±3.3, 178N×9442E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/21, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=119.5km s-min=28.8km az=59.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.16**	**15**	P	Pn	21 44 42.3	-0.5
	0.1nm,0.3s,baz=210,slow=12,SNR=6.3						
WRA	**Warramunga Arr**	**44.71**	**121**	P	P	21 48 56.6	-0.1
	0.2nm,0.8s,baz=281,slow=6.5,SNR=2.5						
MKAR	**Makanchi Array**	**46.06**	**348**	P	P	21 49 07.1	+0.1
	0.4nm,0.5s,baz=166,slow=8.8,SNR=5.5						
ZALV	**Zalesovo Beam**	**52.59**	**353**	P	P	21 49 56.9	0.0
	0.2nm,0.3s,baz=175,slow=7.4,SNR=3.7						

NEIC ***17*** *21:49:54.7±1.6, 740S×12850E, h93km±16km, mb4.2/5, Error ellipse: s-maj=17.5km s-min=9.0km az=47.0*
IDC ***17*** *21:49:55.3±3.8, 741S×12843E, h95km±35km, mb3.8/6, mb1 4.0/9, mb1mx3.8/16, mbtmp3.9/9, MS3.3/1, Ms1 3.3/1, ms1mx2.7/19, Error ellipse: s-maj=46.7km s-min=15.5km az=56.0*
ISCJB ***17*** *21:49:56.5±2.2, 74S±01×12857E±009, h111km±24km, n28, σ1§06/24, mb4.1/9, Banda Sea*

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.58**	**240**	P	**Pn**	**21 51 20.1**	**+2.9**
	31nm,0.3s,baz=127,slow=2.9,SNR=50						
BATI				S	**Sn**	**21 52 19.9**	**-0.2**
	31nm,0.3s,baz=312,slow=21,SNR=13						
BATI				LR	LR	21 52 54.6	
	comp=Z,303nm,18.5s,baz=294,slow=33						
FITZ	**Fitzroy Crossi**	**10.98**	**195**	*eP*	**Pn**	**21 52 28.8**	**-1.6**
	7.6nm,0.3s						
FITZ				*eS*	Sx	21 54 23.0	
FITZ	**Fitzroy Crossi**	**10.98**	**195**	P	**Pn**	**21 52 28.9**	**-1.5**
	1.7nm,0.3s,baz=26,slow=13,SNR=51						
FITZ				S	Sx	21 54 23.6	
	2.5nm,0.3s,baz=72,slow=17,SNR=14						
WRAB	**Tennant Creek**	**13.63**	**156**	*ePn*	**Pn**	**21 53 04.6**	**-0.8**
	15nm,0.6s						
WRAB				*e*Sn	Sx	21 55 24.6	
WRA	**Warramunga Arr**	**13.64**	**156**	P	**Pn**	**21 53 04.1**	**-1.3**
	3.3nm,0.3s,baz=343,slow=12,SNR=162						
WRA				S	Sx	21 55 25.5	
	3.5nm,0.3s,baz=333,slow=21,SNR=9.2						
WB2	**Warramunga Arr**	**13.64**	**156**	*eP*	**Pn**	**21 53 04.1**	**-1.3**
WB2				*e*S	Sx	21 55 26.9	
COEN	**Coen**	**15.74**	**116**	*ePn*	**Pn**	**21 53 33.0**	**+0.9**
	4.5nm,0.5s						
ASAR	**Alice Springs**	**16.93**	**163**	P	**Pn**	**21 53 47.0**	**+0.2**
	1.8nm,0.3s,baz=332,slow=9.4,SNR=90						
ASAR				S	**S**	**21 56 48.0**	**-7.8**
	1.3nm,0.3s,baz=344,slow=25,SNR=7.7						
KSM	**Kuching**	**20.25**	**295**	*eP*	**P**	**21 54 23.5**	**+0.2**
CTA	**Charters Tower**	**21.26**	**128**	P	**P**	**21 54 35.6**	**+1.6**
	2.5nm,0.9s,mb3.5,baz=304,slow=11,SNR=3.0						
FORT	**Forrest**	**23.23**	**181**	*eP*	**P**	**21 54 55.1**	**+1.2**
	9.8nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**27.18**	**155**	*eP*	**P**	**21 55 31.0**	**+1.3**
	3.0nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**27.18**	**155**	P	**P**	**21 55 31.3**	**+1.6**
	3.9nm,0.6s,mb4.1,baz=327,slow=8.4,SNR=13						
CMAR	**Chiang Mai Arr**	**38.94**	**312**	P	**P**	**21 57 12.2**	**+0.3**
	1.1nm,0.6s,mb3.8,baz=140,slow=7.2,SNR=8.0						
ULN	**Ulaanbaatar**	**58.25**	**343**	*eP*	**P**	**21 59 38.7**	**-0.6**
	2.0nm,0.6s,mb4.3						
SONM	**Songino Array**	**58.41**	**343**	P	**P**	**21 59 40.9**	**+0.6**
	2.8nm,0.7s,mb4.4,baz=162,slow=7.0,SNR=23						
MKAR	**Makanchi Array**	**67.82**	**328**	P	**P**	**22 00 42.7**	**+0.2**
	1.5nm,0.6s,mb4.0,baz=121,slow=7.8,SNR=28						
MKAR	**Makanchi Array**	**67.82**	**328**	P	**P**	**22 00 42.7**	**+0.2**
ZAA0	**Zalesovo Array**	**71.35**	**334**	*eP*	**P**	**22 01 02.6**	**-1.5**
ZALV	**Zalesovo Beam**	**71.35**	**334**	P	**P**	**22 01 03.5**	**-0.6**
	3.0nm,0.7s,mb4.3,baz=110,slow=3.9,SNR=15						
ZALV	**Zalesovo Beam**	**71.35**	**334**	P	**P**	**22 01 03.5**	**-0.6**
KURK	**Kurchatov**	**72.15**	**329**	*eP*	**P**	**22 01 08.4**	**-0.6**
	8.8nm,1.0s,mb4.5						
TXAR	**Lajitas Array**	**126.36**	**59**	PKP	PKPdf	22 08 47.8	+0.9
	0.2nm,0.7s,baz=275,slow=4.4,SNR=3.5						
TORD	**Torodi Ar. Bea**	**127.50**	**281**	PKP	PKPdf	22 08 48.6	-0.9
	0.7nm,0.7s,baz=64,slow=2.1,SNR=9.1						
CPUP	**Villa Florida**	**145.96**	**171**	PKPbc	PKPbc	22 09 24.8	+0.8
	0.5nm,0.3s,baz=208,slow=1.6,SNR=3.5						
CPUP	**Villa Florida**	**145.96**	**171**	PKPbc	PKPbc	22 09 24.8	+0.8
LPAZ	**La Paz**	**151.21**	**145**	PKPbc	PKPbc	22 09 39.4	+1.5
	0.9nm,0.4s,baz=31,slow=2.7,SNR=8.0						
LPAZ	**La Paz**	**151.21**	**145**	PKPbc	PKPbc	22 09 39.4	+1.5

TRN 17 21:56:54.5, 1729N×6144W, h3km, MD3.5, M2.6(FDF), **Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BPA	**Boggy Peak**	**0.47**	**239**	*eP*	Pg	21 57 06.7	+3.1
BPA				*eS*	Sg	21 57 15.7	+6.1
DEG	**La Desirade**	**1.04**	**160**	*eP*	Pg	21 57 18.4	+4.0
LZG	**Guadaloupe-1**	**1.19**	**196**	*eP*	Pg	21 57 20.3	+2.9
LZG				*eS*	Sg	21 57 39.3	+6.5

IDC 17 22:14:55.3±9.1, 363S×10170E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/18, mbtmp3.4/3, MS3.4/2, Ms1 3.4/2, ms1mx3.0/20, Error ellipse: s-maj=465.8km s-min=29.4km az=51.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**18.05**	**95**	LR	LR	22 28 05.3	
	comp=Z,115nm,19.1s,baz=300

RBDL Robledal 4.40 112 *e*P x 22 30 35.4
RBDL *e*S x 22 31 30.1
RTR El Retiro 4.53 115 *e*P x 22 30 38.1
SBLS San Blas 4.57 115 *e*P x 22 30 38.4
SBLS *e*P x 22 30 38.7
SBLS *e*S x 22 31 35.0
SNJE San Jose 4.57 115 *e*P x 22 30 38.4
SNJE *e*S x 22 31 35.4
BOQS Boqueron 4.92 115 *e*P x 22 30 42.5
BOQS *e*P x 22 30 43.3
LBRS Las Brisas 5.12 113 *e*P x 22 30 45.0
LFRS El Faro 5.16 115 *e*P x 22 30 45.9
LFRS *e*S x 22 31 48.3
SNVI San Vicente 5.36 114 *e*P x 22 30 48.5
SNVI *e*P x 22 30 48.8
SNVI *e*S x 22 31 53.0
PPM Popocatepetl 5.55 306 *i* P **Pn 22 30 53.2 +2.6**
CAHU Cacacuatique 5.86 110 *e*P x 22 30 55.7
CAHU *e*P x 22 30 55.7
MEIG Mezcala 5.87 291 *i* P **Pn 22 30 56.2 +1.2**
MEIG *i* S **Sn 22 31 59.5 -1.5**
ACX Acapulco 5.89 281 *i* P **Pn 22 30 54.3 -0.9**
VSM San Miguel 5.93 113 *e*P x 22 30 56.7
IIO Organos 5.93 310 *i* P **Pn 22 30 58.7 +2.9**
PLIG Platanillo 5.95 296 *i* P **Pn 22 30 56.5 +0.5**
PLIG *e*S **Sn 22 32 01.9 -0.8**
CAIG El Cayaco 6.25 282 *i* P **Pn 22 30 59.1 -1.1**
CAIG *e*S **Sn 22 32 11.7 +1.6**
SZVM Salazar 6.29 304 *e*P **Pn 22 31 03.6 +2.9**
SZVM *i* S **Sn 22 32 13.4 +2.3**
CNCH Conchagua 6.38 113 *e*P x 22 31 02.2
CNCH *e*P x 22 31 02.6
DEIG Demacu 6.61 313 *i* P **Pn 22 31 08.8 +3.7**
TGUH Tegucigalpa,Un 6.63 105 *e*P **Pn 22 31 06.1 +0.7**
TGUH Tegucigalpa,Un 6.63 105 *e*Pn **Pn 22 31 06.0 +0.7**
TEIG Tepich 6.88 50 P **Pn 22 31 06.5 -2.3**
101nm,0.3s,baz=251,slow=0.8,SNR=190
TEIG S **Sn 22 32 19.8 -5.9**
85nm,0.3s,baz=33,slow=23,SNR=15
TEIG LR LR 22 34 31.7
comp=Z,128nm,19.3s,baz=237,slow=45
TEIG Tepich 6.88 50 *e*Pn **Pn 22 31 06.4 -2.4**
TEIG *e*Sn **Sn 22 32 19.6 -6.2**
ZIIG Zihuatanejo 7.48 285 *i* P **Pn 22 31 17.3 +0.3**
ZIIG *e*S **Sn 22 32 37.7 -2.7**
TELN Telica 7.55 114 *e*P **Pn 22 31 19.4 +1.4**
TEL3 Telica 3 7.55 115 *e*P **Pn 22 31 18.4 +0.4**
LEON Leon 7.58 116 *e*P **Pn 22 31 19.0 +0.5**
CNGN Cerro Negro 7.71 115 *e*P **Pn 22 31 20.1 -0.2**
MOMN Momotombo 7.89 115 *e*P **Pn 22 31 23.2 +0.5**
COPN Copaltepe 7.95 116 *e*P **Pn 22 31 22.8 -0.7**
CSAN 8.10 116 *e*P **Pn 22 31 25.3 -0.2**
APYN Apoyeque 8.14 115 *e*P **Pn 22 31 26.1 0.0**
MGAN Managua 8.27 115 *e*S **Sn 22 32 59.3 -0.5**
MGAN AML AML 22 33 11.1
comp=E,18nm,0.8s
TICN Ticuantepe 8.33 116 *e*P **Pn 22 31 28.1 -0.6**
MMIG Aquila 9.38 286 *i* P **Pn 22 31 41.8 -1.1**
VCR Vista de Mar 9.84 124 *e*P **Pn 22 31 49.8 +0.4**
SFJM Santa Fe 9.86 299 *e*P **Pn 22 31 50.7 +1.2**
JTS JuntasAbangare 10.30 121 P **Pn 22 31 54.8 -0.8**
comp=E,10nm,0.3s,baz=291,slow=9.5,SNR=13
JTS JuntasAbangare 10.30 121 *e*Pn **Pn 22 31 55.0 -0.5**
JCR Jicaral 10.42 124 *e*P **Pn 22 31 57.5 +0.3**
LNIG Linares 10.42 331 *i* P **Pn 22 31 54.8 -2.4**
CGA2 Cerro Gallo 2 10.85 121 *e*P **Pn 22 32 02.8 -0.3**
PRS1 Puriscal 10.99 121 *e*P **Pn 22 32 05.7 +0.7**
ANIG Ahuacatlan 11.35 299 *i* P **Pn 22 32 11.0 +1.2**
LCR2 La Lucha 2 11.38 121 *e*P **Pn 22 32 10.0 -0.3**
BUS Buena Vista 11.68 121 *e*P **Pn 22 32 14.3 -0.2**
BRU2 Volcan 12.98 121 *e*P **Pn 22 32 30.7 -1.4**
HKT Hockley 14.16 353 *e*Pn **Pn 22 32 46.9 -0.8**
comp=E,13nm,1.4s
JCT Junction City 15.55 341 *e*Pn **Pn 22 33 05.6 -0.1**
comp=E,36nm,0.6s
NATX Nacogdoches 15.86 358 *e*Pn **Pn 22 33 09.8 +0.2**
TXAR Lajitas Array 16.17 328 P **Pn 22 33 14.4 +0.9**
comp=E,0.4nm,0.3s,baz=148,slow=14,SNR=134
TXAR LR LR 22 41 15.6
comp=E,36nm,18.9s,baz=5.0,slow=44
LPIG La Paz 17.48 301 LR LR 22 40 57.4
comp=E,90nm,21.7s,baz=356,slow=39
LRAL Lakeview Retre 18.22 19 *e*Pn **Pn 22 33 40.7 +2.0**
GDL2 Guadalupe Moun 18.87 332 *e*P **Pn 22 33 46.4 -0.2**
UALR University of 18.90 4 *e*P **Pn 22 33 47.5 +0.6**
comp=E,45nm,0.8s
UALR *e* 22 34 03.6
WMOK Wichita Mounta 19.32 348 *e*P **Pn 22 33 50.3 -1.6**
comp=E,19nm,0.7s
GOGA Godfrey 19.86 26 *e*Pn **Pn 22 33 58.4 0.0**
comp=E,29nm,0.7s
AMTX Amarillo 20.21 341 *e*P **P 22 33 59.5 -0.4**
SWET Sewanee 20.57 19 *e*Pn **P 22 34 03.9 +0.1**
WVT Waverly 20.91 14 *e*P **P 22 34 07.7 +0.2**
comp=E,24nm,0.8s
PARMO Parma 21.06 9 P **P 22 34 06.7 -2.3**
COW Cow Castle Cre 21.14 32 *e*P **P 22 34 09.1 -0.8**
BNM Barren Site 21.55 330 *e*P **P 22 34 15.2 +0.9**
JSC Jenkinsville 21.59 29 *e*P **P 22 34 14.6 -0.2**
JSC *e*S **S 22 38 05.4 -4.7**
LPM Los Pinos Moun 21.68 330 *e*P **P 22 34 17.7 +2.0**
TKL Tuckaleechee C 21.70 23 P **P 22 34 14.4 -1.5**
comp=E,9.7nm,1.1s,mb4.1,baz=179,slow=12,SNR=3.5
TKL LR LR 22 44 50.3
comp=E,60nm,18.8s,baz=63,slow=43
TKL Tuckaleechee C 21.70 23 P **P 22 34 15.5 -0.4**
TKL LR LR 22 44 50.3
LENM Lemitar 21.73 329 *e*P **P 22 34 18.4 +2.2**
LENM *e*P 22 34 34.9
OTAV Otavalo 21.73 134 *e*P **P 22 34 16.5 0.0**
LAZ Ladron 22.00 330 *e*P **P 22 34 20.6 +1.5**
LAZ *e*PcP PcP 22 38 14.2 -1.1
ROSC El Rosal 22.09 118 P **P 22 34 19.8 -0.4**
comp=E,9.3nm,0.5s,mb4.4,baz=92,slow=20,SNR=7.6
ANMO Albuquerque 22.12 332 P **P 22 34 20.6 +0.2**
comp=E,4.8nm,0.9s,mb3.9,baz=153,slow=11,SNR=13
ANMO LR LR 22 45 00.6
comp=E,45nm,20.0s,baz=339,slow=42
ANMO Albuquerque 22.12 332 *e*P **P 22 34 20.8 +0.4**
SIUC Southern Illin 22.17 10 *e*P **P 22 34 20.6 -0.3**
comp=E,41nm,0.8s,mb4.8
SIUC *e*PcP PcP 22 38 12.1 -3.5
CCM Cathedral Cave 22.25 5 *e*P **P 22 34 24.2 +2.5**
comp=E,22nm,0.8s,mb4.5
TUC Tucson 22.46 320 *e*P **P 22 34 24.5 +0.4**
comp=E,70nm,2.0s,mb4.6
TZTN Tazewell 22.57 22 P **P 22 34 27.4 +2.2**
comp=E,38nm,0.8s,mb4.8
TZTN *e* 22 34 41.7
CHI2 22.70 117 *e*P Px 22 31 15.1
USIN University of 22.71 13 P **P 22 34 26.7 +0.1**
comp=E,90nm,0.9s,mb5.1
USIN *e* 22 34 42.7
WCI Wyandotte Cave 23.28 15 P **P 22 34 31.5 -0.9**
comp=E,53nm,0.8s,mb4.9
KSU1 Kansas State U 23.29 355 P **P 22 34 31.6 -0.8**
comp=E,32nm,1.2s,mb4.5
OLIL Olney 23.36 11 P **P 22 34 32.9 -0.2**
comp=E,76nm,0.9s,mb5.0
CBKS Cedar Bluff 23.46 348 *e*P **P 22 34 32.4 -1.5**
comp=E,97nm,1.2s,mb5.0
CBKS *e* 22 34 50.7
SDV Santo Domingo 23.72 104 P **P 22 34 34.5 -2.1**
comp=E,4.8nm,0.3s,mb4.3,baz=352,slow=13,SNR=3.1
SDCO Great Sand Dun 24.11 337 *e*P **P 22 34 41.5 +1.5**
BLO Bloomington 24.12 14 P **P 22 34 39.9 -0.1**
comp=E,169nm,1.0s,mb5.3
BLO *e* 22 34 56.8
ELN Prospectdale 24.27 26 P **P 22 34 42.8 +1.4**
ELN *e* 22 34 57.8
BLA Blacksburg 24.40 27 *e*P **P 22 34 42.5 0.0**
comp=E,68nm,1.2s,mb4.8
BLA *e* 22 34 59.1
MVCO Mesa Verde 24.92 331 *e*P **P 22 34 48.0 +0.7**
comp=E,19nm,0.8s,mb4.6
WUAZ Wupatki 25.07 325 P **P 22 34 47.5 -1.2**
comp=E,12nm,0.9s,mb4.3
GLA Glamis 25.55 316 *e*P **P 22 34 55.4 +2.3**
comp=E,16nm,0.9s,mb4.5
ISCO Idaho Springs 25.98 339 *e*P **P 22 34 56.6 -0.3**
comp=E,33nm,1.3s,mb4.6
ISCO *e* pP 22 35 15.3 +2.3
OGNE Ogallala 25.99 346 *e*P **P 22 34 56.4 -0.5**
comp=E,87nm,1.1s,mb5.1
OGNE *e* pP 22 35 14.2 +1.1
ACSO Alum Creek Sta 26.09 19 P **P 22 34 58.5 +0.6**
comp=E,19nm,0.8s,mb4.6
ACSO *e* pP 22 35 14.2 +0.2
PFO Pinyon Flat Ob 26.98 315 LR LR 22 46 21.3
comp=E,126nm,20.1s,baz=133,slow=38
JFWS Jewell Farm 27.16 6 *e*P **P 22 35 07.2 -0.3**
comp=E,41nm,0.7s,mb5.1
JFWS *e* pP 22 35 24.2 +0.6
ATAH Atahualpa 27.39 145 P **P 22 35 10.9 +1.1**
comp=E,10.0nm,0.8s,mb4.4,baz=337,slow=5.7,SNR=5.7
ATAH LR LR 22 42 43.8
comp=E,47nm,20.5s,baz=255,slow=29
MSU Marysvale 27.73 328 P **P 22 35 14.2 +1.6**
ARUT Antelope Range 27.86 325 *e*P **P 22 35 14.9 +1.1**
ARUT *e* pP 22 35 32.4 +2.4
RSSD Black Hills 29.48 345 *e*P **P 22 35 30.1 +2.0**
RSSD *e*pP pP 22 35 46.6 +2.2
PDAR Pinedale Array 30.01 337 P **P 22 35 31.4 -1.4**
comp=E,0.4nm,0.4s,mb3.4,baz=161,slow=9.5,SNR=2.3
PDAR pP pP 22 35 50.6 +1.5
comp=E,1.2nm,0.5s,baz=126,slow=7.5,SNR=5.2
ELK Elko 30.97 327 *e*P **P 22 35 43.1 +1.8**
ELK *e*pP pP 22 36 01.8 +4.2
REDW Red Top Meadow 31.02 336 *e*P **P 22 35 42.2 +0.5**
SNOW Snow King Moun 31.06 336 *e*P **P 22 35 41.9 -0.1**
comp=E,13nm,0.8s,mb4.7
SNOW *e*pP pP 22 35 59.8 +1.4
NVAR Mina Array Bea 31.11 321 P **P 22 35 41.6 -0.9**
comp=E,1.0nm,0.5s,mb3.8,baz=128,slow=8.4,SNR=6.3
NVAR pP pP 22 36 02.0 +3.1
comp=E,6.4nm,0.7s,baz=134,slow=9.1,SNR=15
NVAR *e*PcP 22 38 58.6
comp=E,1.7nm,0.7s,baz=123,slow=2.4,SNR=4.9
LOHW Long Hollow 31.13 336 *e*P **P 22 35 42.7 0.0**
comp=E,7.8nm,1.1s,mb4.3
TPAW Teton Pass 31.16 336 *e*P **P 22 35 43.2 +0.3**
comp=E,17nm,1.3s,mb4.6
RRI2 Red Ridge 31.19 335 *e*P **P 22 35 43.6 +0.4**
RLMT Red Lodge 31.94 339 P **P 22 35 51.9 +2.1**
comp=E,3.5nm,0.6s,mb4.3
RLMT *e* pP 22 36 07.0 +0.8
AGMN Agassiz Refuge 32.41 358 *e*P **P 22 35 53.3 -0.5**
PAHR Pah Rah Range 32.57 322 *e*P **P 22 35 55.6 +0.3**
comp=E,5.6nm,0.8s,mb4.5
GCMT Greyclift 32.66 339 *e*P **P 22 35 54.6 -1.4**
GCMT *e* pP 22 36 14.2 +1.7
HLID Hailey 32.70 332 *e*P **P 22 35 55.9 -0.5**
HLID *e*pP pP 22 36 16.2 +3.4
BOZ Bozeman (W) 33.24 337 *e*P **P 22 36 02.0 +0.9**
DLMT Dillon 33.38 336 *e*P **P 22 36 03.2 +0.9**
LRM Limekiln Ridge 33.70 336 *e*P **P 22 36 05.2 +0.1**
WVOR Wild Horse Val 33.96 326 *e*P **P 22 36 06.9 -0.6**
comp=E,4.8nm,0.9s,mb4.3
WVOR *e* pP 22 36 26.1 +2.2
ULM Lac du Bonnet 34.36 358 P **P 22 36 06.8 -4.0**
comp=E,2.2nm,0.7s,mb4.1,baz=171,slow=16,SNR=3.4
ULM LR LR 22 51 47.6
comp=E,52nm,20.5s,baz=324,slow=39
CHMT Chamberlain Mo 34.92 337 *e*P **P 22 36 15.4 -0.2**
CHMT *e* pP 22 36 33.1 +1.0
MSO Missoula 35.11 336 *e*P **P 22 36 17.1 -0.3**
ETW Entiat 38.47 331 *e*P **P 22 36 47.4 +1.5**
ETW *e* pP 22 37 04.3 +1.8
LPAZ La Paz 40.80 140 P **P 22 37 03.5 -2.1**
comp=E,3.5nm,0.7s,mb4.3,baz=326,slow=7.9,SNR=16
LPAZ LR LR 22 53 00.8
comp=E,39nm,20.8s,baz=187,slow=35
SCHQ Schefferville 44.17 22 LR LR 22 57 20.0
comp=E,60nm,20.6s,baz=184,slow=38
LVC Limon Verde 45.37 147 *e*P **P 22 37 41.6 -0.8**
comp=E,9.1nm,0.8s,mb4.6
YKA Yellowknife Ar 48.83 347 P **P 22 38 06.2 -2.6**
comp=E,3.3nm,0.5s,mb4.5,baz=152,slow=7.4,SNR=12
YKA pP pP 22 38 25.4 -0.6
comp=E,4.4nm,0.6s,baz=152,slow=7.3,SNR=7.3
YKA LR LR 23 02 39.4
comp=E,24nm,19.5s,baz=160,slow=41
YKA Yellowknife Ar 48.83 347 P **P 22 38 06.2 -2.6**
YKA pP pP 22 38 25.4 -0.6
YKA LR LR 23 02 39.4
CPUP Villa Florida 54.95 139 P **P 22 38 50.5 -4.4**
comp=E,3.8nm,0.7s,mb4.5,baz=310,slow=6.6,SNR=9.8
CPUP LR LR 23 00 16.2
comp=E,62nm,20.4s,baz=111,slow=34
CPUP Villa Florida 54.95 139 P **P 22 38 50.5 -4.4**
CPUP LR LR 23 00 16.2
BDFB Brasilia 55.04 122 P **P 22 38 52.2 -3.4**
comp=E,12nm,0.6s,mb5.1,baz=276,slow=9.3,SNR=15
RKT Rikitea 55.81 227 *e*T 23 38 34.0
comp=E,2.5nm,0.3s
BMRM Bremner River 57.72 333 *e*P **P 22 39 14.5 +0.4**
BMRM *e* pP 22 39 32.4 +0.7
PLCA Paso Flores 60.31 160 P **P 22 39 29.8 -2.4**
comp=E,16nm,0.9s,mb5.0,baz=333,slow=8.3,SNR=36
KTH Kantishna Hill 61.51 335 *e*P **P 22 39 38.0 -2.1**
comp=E,12nm,0.8s,mb5.0
KTH *e* pP 22 39 58.6 +0.7
COLD Coldfoot 62.76 339 P **P 22 39 49.3 +0.9**
comp=E,5.7nm,0.9s,mb4.5
COLD *e* pP 22 40 07.3 +1.1
PPT Papeete 64.15 241 *e*LR LR 22 58 57.8
comp=E,92nm,26.2s
PPT *e*LR LR 22 58 57.8
comp=E,92nm,26.2s
PPT Papeete 64.15 241 LR LR 22 59 26.0
comp=E,64nm,20.4s,baz=168,slow=28
NOA NORSAR Array B 83.39 28 LR LR 23 14 45.5
comp=E,20nm,21.6s,baz=305,slow=33
ARCES ARCESS Array B 84.96 18 P **P 22 41 55.0 -3.0**
comp=E,3.2nm,0.6s,mb4.4,baz=299,slow=5.0,SNR=9.6
ARCES ARCESS Array B 84.96 18 P **P 22 41 55.0 -3.0**
DBIC Dimbokro 87.27 84 P **P 22 42 08.1 -2.4**
comp=E,3.4nm,1.0s,mb4.2,baz=336,slow=5.0,SNR=3.7
GERES GERESS Array B 89.33 39 LR LR 23 28 19.1
comp=E,39nm,18.6s,baz=310,slow=40
TORD Torodi Ar. Bea 91.70 76 P **P 22 42 26.2 -5.1**
comp=E,0.3nm,0.7s,mb3.7,baz=292,slow=5.8,SNR=3.6
BJI Beijing 117.76 334 PKP PKPdf 22 48 06.9 -2.6
HHC Hu-ho-hao-te 118.85 338 *e*PKP PKPdf 22 48 05.0 -6.5
HHC PKS 22 51 40.5
HHC SKS SKSdf 22 55 09.3 -8.6
HHC PP PP
comp=Z,103nm,8.2s
HHC LR LR
comp=N,245nm,20.8s
HHC LR LR
comp=E,266nm,22.4s
HHC LR LR
comp=Z,192nm,21.3s
WMQ Urumqi 120.61 359 *e*PKP PKPdf 22 48 16.0 +1.2
WMQ LR LR
comp=Z,89nm,20.2s
BOSA Boshof 122.77 114 PKP PKPdf 22 48 16.4 -2.9
comp=Z,3.8nm,0.8s,baz=309,slow=3.8,SNR=7.4
LZH Lanzhou 125.70 342 *e*PKP PKPdf 22 48 28.5 +3.7
LZH XPKP 22 48 51.0
CD2 Chengdu 130.52 340 *e*PKP PKPdf 22 48 32.8 -1.4
CD2 PP PP 22 50 50.8 +3.0
CD2 SKKS SKKSac 22 57 37.9 -2.0
CD2 SS SS 23 08 11.1 +1.1
CD2 PP PP
comp=Z,80nm,10.2s
GYA Guiyang 133.45 334 *e*PDIF Pdif 22 45 35.3 -1.6
GYA PKP PKPdf 22 48 38.5 -1.3
GYA XPKP 22 49 02.8
GYA PP PP 22 51 10.9 +4.1
GYA PP PP
comp=Z,90nm,7.9s
WRA Warramunga Arr 134.05 257 PKP PKPdf 22 48 38.5 -2.5
comp=Z,1.8nm,0.8s,baz=72,slow=1.5,SNR=7.3
WRA pPKP pPKPdf 22 49 02.7 +2.2
comp=Z,1.7nm,0.8s,baz=90,slow=2.1,SNR=6.3
WRA Warramunga Arr 134.05 257 PKP PKPdf 22 48 38.5 -2.5
WRA pPKP pPKPdf 22 49 02.7 +2.2
ASAR Alice Springs 134.53 252 PKP PKPdf 22 48 39.1 -2.8
comp=Z,0.6nm,0.7s,baz=94,slow=1.8,SNR=4.8
KMI Kunming 136.18 338 PKP PKPdf 22 48 44.8 -0.2
KMI PP PP 22 51 27.8 +3.9
KMI SS SS 23 09 19.9 +1.3
KMI PP PP
comp=Z,222nm,7.4s
KMI LR LR
comp=Z,301nm,24.6s
BATI Baumata 143.04 274 PKP PKPdf 22 48 56.1 -1.5
comp=Z,17nm,0.5s,baz=318,slow=6.5,SNR=4.3
CMAR Chiang Mai Arr 143.65 339 PKP PKPdf 22 48 53.5 -5.1
comp=Z,1.0nm,0.3s,baz=334,slow=2.3,SNR=4.7
CMAR *e*PKP pPKPdf 22 49 20.2 +2.1
comp=Z,0.9nm,0.4s,baz=338,slow=2.6,SNR=1.7
KAPI Kappang 145.28 284 PKPbc PKPbc 22 48 57.7 -3.8
comp=Z,11nm,0.9s,baz=124,slow=16,SNR=4.2

*ISCJB **17** 22:31:43.1±0.9, 3571N±005×2602E±007, h27km±10km, Error ellipse: s-maj=9.7km s-min=8.0km az=145.6*
*ATH **17** 22:31:43.5, 3570N×2605E, h26km±7km, MD3.0/3*
*CSEM **17** 22:31:43.7±0.1, 3573N×2605E, h20km, ML2.5, Error ellipse: s-maj=2.9km s-min=1.9km az=48.0*
*NEIC **17** 22:31:43.5, 3570N×2605E, h26km, MD3.0(ATH), After ATH.*
*THE **17** 22:31:45.4, 3584N×2599E, h13km, ML2.5*
ISC 17 22:31:43.1±0.9, 3573N±004×2606E±007, h20km±11km, n10, σ0°68/17, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.59**	**218**	*e*PN		**Pn**		**22 31 54.7**	**-1.7**
NPS				*e*SN		**Sb**		**22 32 02.5**	**-0.2**
THR1	**Thera Island**	**0.80**	**323**	*e*Pg		**Pb**		**22 31 58.8**	**+0.4**
THR1				*e*Sg		**Sb**		**22 32 08.6**	**-0.2**
SANT	**Santorini**	**0.80**	**323**	*e*Pg		**Pb**		**22 31 58.2**	**-0.2**
SANT				*e*Sg		**Sb**		**22 32 08.9**	**0.0**
THR6	**Thira Island,**	**0.82**	**320**	*e*Pg		**Pb**		**22 31 59.0**	**+0.3**
THR6				*e*Sg		**Sb**		**22 32 08.9**	**-0.5**
THR3	**Thira Island,**	**0.86**	**322**	*e*Pg		**Pb**		**22 31 59.6**	**+0.2**
THR3				*e*Sg		**Sb**		**22 32 10.8**	**+0.3**
THR5	**Thira Island,**	**0.90**	**320**	*e*Pg		**Pb**		**22 32 00.1**	**+0.1**
THR5				*e*Sg		**Sb**		**22 32 11.6**	**+0.1**
KARP	**Karpathos**	**0.92**	**101**	*e*PN		**Pn**		**22 32 01.5**	**+0.7**
APE	**Apeiranthos**	**1.40**	**342**	*e*Pg		**Pn**		**22 32 07.4**	**-0.1**
APE				*e*Sg		**Sn**		**22 32 24.9**	**-0.5**
VAM	**Vamos**	**1.55**	**259**	*e*PN		**Pn**		**22 32 11.6**	**+2.1**
ARG	**Arkhangelos**	**1.75**	**73**	*e*PB		**Pb**		**22 32 14.1**	**-0.4**

*MOS **17** 22:37:20.0±1.1, 7725×10789E, h33km, mb4.7/25, Error ellipse: s-maj=16.8km s-min=8.4km az=121.4*
*NEIC **17** 22:37:22.1±0.9, 7855×10782E, h41km±8km, mb4.6/12, Error ellipse: s-maj=8.7km s-min=6.6km az=59.0*
NEIC Felt [III] at Pandangaran.
*IDC **17** 22:37:22.9±1.9, 7785×10791E, h45km±16km, mb4.1/18, mb1 4.2/19, mb1mx4.1/24, mbtmp4.1/19, ML4.8/1, MS3.7/10, Ms1 3.7/10, ms1mx3.5/23, Error ellipse: s-maj=19.3km s-min=11.3km az=55.0*
*BJI **17** 22:37:22.0, 7805×10780E, h40km, mB5.1, mb4.1*
*ISCJB **17** 22:37:24.3±0.6, 8035±005×10782E±004, h80km±4km, mb4.5/49, Error ellipse: s-maj=9.0km s-min=5.0km az=30.2*
*DJA **17** 22:37:24, 8055×10784E, h25km, MLv5.1/12*
ISC 17 22:37:25.6±0.6, 8025±005×10780E±004, h74km±4km, n162, σ1°18/132, mb4.5/49, 11C-8D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LEM	**Lembang** 0.0nm,0.0s	**1.20**	**351**	P		**Pn**		**22 37 47.6**	**+0.8**
LEM	**Lembang**	**1.20**	**351**	⇓*i*P		**Pn**		**22 37 47.8**	**+1.0**
LEM				*i* S		**Sn**		**22 38 19.8**	**+17**
CLJI	**Cilicap** 0.0nm,0.0s	**1.24**	**76**	P		**Pn**		**22 37 44.9**	**-2.5**
JCJI	**Jatiwangi** 0.0nm,0.0s	**1.59**	**17**	P		**Pn**		**22 37 49.2**	**-2.7**
SKJI	**Sukabumi** 0.0nm,0.0s	**1.59**	**309**	P		**Pn**		**22 37 51.8**	**-0.1**
TGJI	**Tegal** 0.0nm,0.0s	**1.74**	**49**	P		**Pn**		**22 37 55.5**	**+1.6**
DBJI	**Dramaga** 0.0nm,0.0s	**1.79**	**324**	P		**Pn**		**22 37 56.1**	**+1.5**
CBJI	**Citeko** 0.0nm,0.0s	**1.85**	**329**	P		**Pn**		**22 37 53.3**	**-2.0**
BJII	**Banjamegara** 0.0nm,0.0s	**2.01**	**70**	P		**Pn**		**22 37 55.5**	**-2.0**
SBJI	**Serang** 0.0nm,0.0s	**2.51**	**319**	P		**Pn**		**22 38 05.1**	**+0.8**
XMIS	**Christmas Isla**	**3.23**	**221**	*e*P		**Pn**		**22 38 11.6**	**-2.5**
XMIS				*e*S		**Sn**		**22 38 44.3**	**-7.2**
SJI	**Sawahan** 0.0nm,0.0s	**3.94**	**86**	P		**Pn**		**22 38 23.2**	**-0.5**
KRKI	**Karangkates** 0.0nm,0.0s	**4.61**	**92**	P		**Pn**		**22 38 32.6**	**-0.2**
KRKI	**Karangkates**	**4.61**	**92**	⇑*i*P		**Pn**		**22 38 27.4**	**-5.4**
TRT	**Tretes**	**4.80**	**87**	⇑*e*P		**Pn**		**22 38 31.2**	**-4.2**
TRT				*e*S		**Sn**		**22 39 31.9**	**+2.1**
TPI	**Tanjungpandan** 0.0nm,0.0s	**5.23**	**358**	P		**Pn**		**22 38 42.0**	**+0.7**
TPI	**Tanjungpandan**	**5.23**	**358**	⇓*e*P		**Pn**		**22 38 42.0**	**+0.7**
TPI				*e*S		Sn		22 40 15.0	+35
TPI	**Tanjungpandan**	**5.23**	**358**	⇓*e*P		**Pn**		**22 38 42.0**	**+0.7**
TPI				*e*S		Sn		22 40 15.0	+35
PPBI	**Pangkal Pinang** 0.0nm,0.0s	**6.05**	**344**	P		**Pn**		**22 38 54.4**	**+1.9**
PBKI	**Pangkalan Bun** 0.0nm,0.0s	**6.54**	**36**	P		**Pn**		**22 38 58.5**	**-0.7**
KHKI	**Kahang-Kahang** 0.0nm,0.0s	**7.74**	**93**	P		**Pn**		**22 39 16.3**	**+0.7**
BBKI	**Banjar Baru** 0.0nm,0.0s	**8.34**	**58**	P		**Pn**		**22 39 25.3**	**+1.5**
STKI	**Sintang** 0.0nm,0.0s	**8.83**	**25**	P		**Pn**		**22 39 31.8**	**+1.3**
KSM	**Kuching**	**9.76**	**15**	⇓P		**Pn**		**22 39 50.9**	**+7.7**
KSM	**Kuching**	**9.76**	**15**	Pn		**Pn**		**22 39 36.9**	**-6.3**
MYKOM	**Kota Tinggi**	**10.51**	**338**	⇑P		**Pn**		**22 39 57.4**	**+3.9**
KGM	**Kluang**	**10.92**	**336**	⇑P		**Pn**		**22 40 04.0**	**+4.8**
KAPI	**Kappang** 0.7nm,0.3s,baz=262,slow=12,SNR=4.6	**12.24**	**77**	P		**Pn**		**22 40 16.2**	**-0.9**
KAPI						LR	LR	22 45 04.2	
comp=Z,281nm,21.5s,baz=270,slow=38									
KTGM	**Kuala Trenggan**	**14.05**	**341**	⇓P		**Pn**		**22 40 47.2**	**+5.9**
BATI	**Baumata** 0.0nm,0.0s	**15.81**	**99**	P		**Pn**		**22 41 01.7**	**-2.2**
BATI	**Baumata** 3.7nm,0.3s,baz=286,slow=7.4,SNR=3.5	**15.81**	**99**	P		**Pn**		**22 41 01.2**	**-2.8**
BATI						LR	LR	22 49 35.1	
comp=Z,265nm,19.2s,baz=174,slow=46									
TSM	**Tawau**	**15.83**	**40**	⇓P		**Pn**		**22 41 08.6**	**+4.4**
SDKM	**Sandakan**	**16.49**	**35**	⇑P		**Pn**		**22 41 14.7**	**+2.3**
MYLDM	**Lahad Datu**	**16.91**	**39**	⇓P		**Pn**		**22 41 22.8**	**+5.2**
MBWA	**Marble Bar** 15nm,0.8s	**17.42**	**140**	*e*Pn		**Pn**		**22 41 21.8**	**-1.9**
MBWA						Sn		**22 44 17.4**	**-20**
FITZ	**Fitzroy Crossi** 15nm,0.6s	**20.04**	**122**	*e*P		**P**		**22 41 53.1**	**+0.3**
FITZ	**Fitzroy Crossi** 9.5nm,0.7s,baz=291,slow=7.7,SNR=40	**20.04**	**122**	P		**P**		**22 41 53.1**	**+0.3**
FITZ						LR	LR	22 48 51.6	
comp=Z,99nm,20.1s,baz=156,slow=34									
AAI	**Ambon** 0.0nm,0.0s	**20.74**	**79**	P		**P**		**22 42 00.5**	**+0.1**
LBMI	**Labuha** 0.0nm,0.0s	**20.96**	**70**	P		**P**		**22 42 02.2**	**-0.5**
DAV	**Davao City (W)**	**23.22**	**50**	LR		LR		22 53 35.6	
comp=Z,110nm,19.3s,baz=257,slow=42									
CMAR	**Chiang Mai Arr** 0.9nm,0.5s,mb3.6,baz=172,slow=9.0,SNR=4.2	**27.72**	**342**	P		**P**		**22 43 06.2**	**-0.9**
CMAR				PcP		PcP		22 46 24.4	+1.9
2.8nm,0.8s,baz=205,slow=3.6,SNR=9.5									
CMAR				ScP		ScP		22 49 59.6	+2.8
1.0nm,0.4s,baz=202,slow=3.3,SNR=4.6									
CMAR				LR		LR		22 55 47.6	
comp=Z,105nm,18.1s,baz=183,slow=40									
CMAR	**Chiang Mai Arr**	**27.72**	**342**	P		**P**		**22 43 06.2**	**-0.9**
CMAR								22 46 24.4	
CMAR				pmax		pmax			
comp=Z,1.0nm,0.5s									
CMAR				pmax		pmax			
comp=Z,3.0nm,0.8s									
CMAR				pmax		pmax			
comp=N,1.0nm,0.4s									
CMAR				MLR		MLR			
comp=Z,105nm,18.1s									
WRA	**Warramunga Arr**	**28.30**	**118**	P		**P**		**22 43 11.9**	**-0.4**
comp=Z,3.5nm,0.4s,mb4.2,baz=290,slow=11,SNR=31									
WRA				PcP		PcP		22 46 24.6	+0.7
comp=Z,1.0nm,0.5s,baz=307,slow=2.0,SNR=6.4									
WRA	**Warramunga Arr**	**28.30**	**118**	P		**P**		**22 43 11.9**	**-0.4**
WRA								22 46 24.6	

WRA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRAB	**Tennant Creek**	**28.30**	**118**	*e*P	**P**	**22 43 12.3**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.3						
WRAB	**Tennant Creek**	**28.30**	**118**	*e*P	**P**	**22 43 12.3**	**-0.1**
	comp=Z,3.7nm,0.4s,mb4.3						
WB2	**Warramunga Arr**	**28.31**	**118**	*e*P	**P**	**22 43 12.2**	**-0.2**
WB2	**Warramunga Arr**	**28.31**	**118**	*e*P	**P**	**22 43 12.4**	**0.0**
ASAR	**Alice Springs**	**29.46**	**125**	P	**P**	**22 43 22.6**	**0.0**
	comp=Z,1.0nm,0.5s,mb3.8,baz=302,slow=8.8,SNR=15						
ASAR				PcP	PcP	22 46 27.8	+1.0
	comp=Z,1.6nm,0.6s,baz=305,slow=2.1,SNR=11						
ASAR				ScP	ScP	22 50 05.3	+3.1
	comp=Z,2.0nm,0.9s,baz=332,slow=3.3,SNR=7.7						
ASAR	**Alice Springs**	**29.46**	**125**	P	**P**	**22 43 22.6**	**0.0**
ASAR						22 46 27.8	
ASAR						22 50 05.4	
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR				pmax	pmax		
	comp=N,2.0nm,0.9s						
PMG	**Port Moresby**	**38.92**	**95**⇑	*i*P	**P**	**22 44 46.0**	**+1.5**
CTA	**Charters Tower**	**39.08**	**112**	P	**P**	**22 44 46.5**	**+0.7**
	comp=N,1.0nm,0.3s,mb4.2,baz=264,slow=9.6,SNR=3.3						
CTA				LR	LR	23 00 38.5	
	comp=N,166nm,20.7s,baz=232,slow=36						
CTA	**Charters Tower**	**39.08**	**112**	P	**P**	**22 44 46.5**	**+0.7**
CTA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CTA				MLR	MLR		
	comp=Z,167nm,20.7s						
STKA	**Stephens Creek**	**39.37**	**132**	*e*P	**P**	**22 44 48.8**	**+0.8**
	comp=Z,7.9nm,0.4s,mb4.9						
STKA	**Stephens Creek**	**39.37**	**132**	P	**P**	**22 44 48.8**	**+0.8**
	comp=Z,9.9nm,0.5s,mb4.9,baz=311,slow=7.7,SNR=40						
STKA				PcP	PcP	22 46 56.6	+1.4
	comp=Z,2.3nm,0.4s,baz=298,slow=2.1,SNR=3.8						
STKA				LR	LR	23 01 50.3	
	comp=Z,182nm,18.9s,baz=211,slow=37						
ODAN	**Odare**	**39.92**	**331**	*e*P	**P**	**22 44 53.1**	**+0.5**
	comp=Z,10.0nm,0.5s,mb4.9						
RAMN	**Ramite**	**40.38**	**330**	*e*P	**P**	**22 44 56.5**	**+0.1**
	comp=Z,10nm,0.4s,mb5.0						
LSA	**Lhasa**	**40.78**	**338**	*e*P	**P**	**22 44 58.4**	**-1.2**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**40.78**	**338**	*e*P	**P**	**22 44 58.4**	**-1.2**
	comp=Z,6.6nm,0.8s,mb4.5						
JIRN	**Jiri**	**41.17**	**330**	*e*P	**P**	**22 45 03.8**	**+0.9**
	comp=Z,11nm,0.4s,mb5.1						
PKIN	**Phulchoki**	**41.50**	**329**	*e*P	**P**	**22 45 04.9**	**-0.7**
	comp=Z,2.8nm,0.4s,mb4.3						
GUN	**Gumba**	**41.53**	**330**	*e*P	**P**	**22 45 06.2**	**+0.3**
	comp=Z,13nm,0.5s,mb4.9						
DMN	**Daman**	**41.68**	**329**	*e*P	**P**	**22 45 07.4**	**+0.4**
	comp=Z,8.0nm,0.7s,mb4.6						
KKN	**Kakani**	**41.73**	**329**	*e*P	**P**	**22 45 07.8**	**+0.3**
	comp=Z,4.8nm,0.5s,mb4.5						
GKN	**Gorkha**	**42.24**	**329**	*e*P	**P**	**22 45 11.9**	**+0.3**
	comp=Z,12nm,0.3s,mb5.0						
KOLN	**Koldanda**	**42.59**	**328**	*e*P	**P**	**22 45 13.3**	**-1.2**
	comp=Z,10nm,0.4s,mb4.9						
DANN	**Dangsing**	**42.97**	**328**	*e*P	**P**	**22 45 18.0**	**+0.5**
	comp=Z,17nm,0.4s,mb5.2						
GTA	**Gaotai**	**47.77**	**352**	*e*P	**P**	**22 45 53.9**	**-1.4**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.3s,mb4.0						
SMLA	**Simla**	**48.74**	**324**	*i* P	**P**	**22 46 02.0**	**-0.9**
SMLA				*e*x	x	22 46 04.5	
	comp=Z,142nm,0.4s						
KSRS	**Korea Array**	**49.00**	**21**	LR	LR	23 06 36.0	
	comp=Z,64nm,18.4s,baz=352,slow=36						
SONM	**Songino Array**	**55.62**	**359**	P	**P**	**22 46 53.0**	**-0.6**
	comp=Z,1.7nm,0.6s,mb4.3,baz=169,slow=5.5,SNR=17						
SONM				PcP	PcP	22 47 52.9	+0.4
	comp=Z,5.1nm,0.4s,baz=177,slow=3.8,SNR=26						
SONM				ScP	ScP	22 51 47.6	+2.6
	comp=Z,0.4nm,0.7s,baz=158,slow=2.7,SNR=3.7						
SONM				LR	LR	23 11 15.2	
	comp=Z,114nm,21.1s,baz=358,slow=37						
SONM	**Songino Array**	**55.62**	**359**	P	**P**	**22 46 53.0**	**-0.6**
SONM						22 47 52.9	
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM				pmax	pmax		
	comp=Z,5.0nm,0.4s						
SONM				MLR	MLR		
	comp=Z,114nm,21.1s						
ULN	**Ulaanbaatar**	**55.64**	**359**	*e*P	**P**	**22 46 53.2**	**-0.6**
ULN				*e*		22 47 52.9	
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
ULN	**Ulaanbaatar**	**55.64**	**359**	*e*P	**P**	**22 46 53.1**	**-0.6**
	comp=Z,3.0nm,0.6s,mb4.5						
ULN				*e*PcP	PcP	22 47 52.9	+0.4
KBL	**Kabul**	**55.99**	**321**	*e*P	**P**	**22 46 55.8**	**-0.8**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
KBL	**Kabul**	**55.99**	**321**	*e*P	**P**	**22 46 55.8**	**-0.8**
	comp=Z,4.6nm,0.6s,mb4.7						
TKM2	**Tokmak 2**	**58.56**	**333**	*e*P	**P**	**22 47 13.6**	**-0.9**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.1						
TKM2	**Tokmak 2**	**58.56**	**333**	*e*P	**P**	**22 47 13.6**	**-0.9**
	comp=Z,9.2nm,0.5s,mb5.1						
MK31	**Makanchi Array**	**59.11**	**340**	*i* P	**P**	**22 47 16.3**	**-1.9**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
MKAR	**Makanchi Array**	**59.11**	**340**	P	**P**	**22 47 16.8**	**-1.5**
	comp=Z,4.2nm,0.5s,mb4.7,baz=154,slow=8.0,SNR=55						
MKAR				PcP	PcP	22 48 07.0	+0.9
	comp=Z,1.9nm,0.6s,baz=125,slow=6.4,SNR=3.7						
MKAR				ScP	ScP	22 52 02.0	+1.7
	comp=Z,1.4nm,1.2s,baz=132,slow=5.4,SNR=3.7						
MKAR	**Makanchi Array**	**59.11**	**340**	P	**P**	**22 47 16.8**	**-1.4**
MKAR						22 48 07.1	
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR				pmax	pmax		
	comp=N,1.0nm,1.3s						
OPO	**Ambohidratompo**	**59.68**	**253**	P	**P**	**22 47 24.0**	**+1.3**
	comp=N,3.1nm,0.9s,mb4.3,baz=72,slow=5.0,SNR=8.3						
KK31	**Karatay Array**	**61.14**	**330**	*i* P	**P**	**22 47 31.2**	**-1.0**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KURK	**Kurchatov**	**63.72**	**340**	P	**P**	**22 47 48.0**	**-1.2**
	comp=Z,1.4nm,0.6s,mb4.0,baz=149,slow=6.1,SNR=16						
KURK	**Kurchatov**	**63.72**	**340**	P	**P**	**22 47 48.1**	**-1.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
ZAA0	**Zalesovo Array**	**64.71**	**345**	*e*P	**P**	**22 47 54.5**	**-1.2**
ZALV	**Zalesovo Beam**	**64.71**	**345**	P	**P**	**22 47 54.2**	**-1.5**
	comp=Z,1.4nm,0.5s,mb4.1,baz=141,slow=6.6,SNR=8.5						
ZALV	**Zalesovo Beam**	**64.71**	**345**	P	**P**	**22 47 54.2**	**-1.5**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
MAW	**Mawson**	**66.63**	**197**	P	**P**	**22 48 09.9**	**+2.1**
	comp=Z,3.5nm,0.6s,mb4.4,baz=53,slow=5.2,SNR=22						
MAW	**Mawson**	**66.63**	**197**	P	**P**	**22 48 09.9**	**+2.1**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAW	**Mawson**	**66.63**	**197**	*e*P	**P**	**22 48 09.7**	**+1.8**
	comp=Z,3.1nm,0.5s,mb4.4						
VOSK	**Vostochnaya**	**68.15**	**337**	P	**P**	**22 48 16.7**	**-0.9**
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
BVA0	**Borovoye Array**	**68.61**	**337**	*i* P	**P**	**22 48 14.8**	**-5.7**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
BVAR	**Borovoye Array**	**68.61**	**337**	P	**P**	**22 48 20.4**	**-0.1**
	comp=Z,3.7nm,0.6s,mb4.4,baz=140,slow=8.7,SNR=13						
BVAR	**Borovoye Array**	**68.61**	**337**	P	**P**	**22 48 20.4**	**-0.1**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
UMR	**Umm Al-Rimmam**	**68.75**	**306**	*e*P	**P**	**22 48 22.3**	**+0.4**
	baz=306						
NAY	**Al-Naaiem**	**69.02**	**305**	*e*P	**P**	**22 48 23.7**	**+0.1**
	baz=305						
MIB	**Mutribah**	**69.15**	**306**	*e*P	**P**	**22 48 24.7**	**+0.3**
	baz=306						
RST	**Umm Al-Ruwaisa**	**69.31**	**306**	*e*P	**P**	**22 48 25.5**	**+0.1**
	baz=306						
AB31	**Akbulak array**	**70.69**	**329**	*i* P	**P**	**22 48 33.4**	**0.0**
AB31				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
AKTK	**Aktyubinsk**	**72.40**	**329**	P	**P**	**22 48 43.5**	**-0.2**
AKTO	**Aktyubinsk**	**72.40**	**329**	P	**P**	**22 48 43.5**	**-0.2**
	comp=Z,2.3nm,0.6s,mb4.2,baz=118,slow=5.1,SNR=8.1						
AKTO	**Aktyubinsk**	**72.40**	**329**	*i* P	**P**	**22 48 43.6**	**0.0**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
RAO	**Raoul Island**	**72.43**	**118**	P	**P**	**22 48 44.9**	**+0.5**
PETK	**Petropavlovsk-**	**74.10**	**29**	P	**P**	**22 48 52.3**	**-1.3**
	comp=Z,4.6nm,0.8s,mb4.2,baz=134,slow=0.9,SNR=5.9						
PETK				LR	LR	23 21 30.2	
	comp=Z,32nm,18.2s,baz=114,slow=36						
PETK	**Petropavlovsk-**	**74.10**	**29**	P	**P**	**22 48 52.3**	**-1.3**
PETK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
PETK				MLR	MLR		
	comp=Z,32nm,18.2s						
SVE	**Sverdlovsk**	**75.26**	**335**⇑	*e*P	**P**	**22 49 00.8**	**+0.6**
SVE				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.5						
ARU	**Arti**	**75.88**	**334***c*	*i*P	**P**	**22 49 04.0**	**+0.2**
ARU				*e*		22 49 16.9	
ARU				*e*		22 51 50.0	
ARU				*e*S	S	22 58 45.0	+4.8
ARU				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.3						
LSZ	**Lusaka**	**77.96**	**256**	*e*P	**P**	**22 49 18.8**	**+2.5**
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
LSZ	**Lusaka**	**77.96**	**256**	*e*P	**P**	**22 49 18.8**	**+2.5**
	comp=Z,2.8nm,0.5s,mb4.2						
KIV	**Kislovodsk**	**78.16**	**318**	*e*P	**P**	**22 49 18.6**	**+1.7**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
BOSA	**Boshof**	**79.69**	**242**	P	**P**	**22 49 28.1**	**+2.5**
	comp=Z,1.6nm,0.5s,mb4.1,baz=134,slow=13,SNR=6.8						
BOSA	**Boshof**	**79.69**	**242**	P	**P**	**22 49 28.1**	**+2.5**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
ANN	**Anapa**	**81.98**	**317**	*e*P	**P**	**22 49 37.4**	**0.0**
ANN				pmax	pmax		
	comp=Z,38nm,1.3s,mb5.1						
VSR	**Storozhevoye**	**83.15**	**324**	*e*P	**P**	**22 49 43.6**	**+0.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.4						
VSR				pmax	pmax		
	comp=N,4.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.3s						
OBN	**Obninsk**	**86.01**	**327***c*	*i*P	**P**	**22 49 57.0**	**-0.7**
OBN				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
BILL	**Bilibino**	**86.19**	**19**	P	**P**	**22 49 58.4**	**+0.1**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
SNAA	**Sanae**	**88.79**	**197**	*e*P	**P**	**22 50 13.1**	**+2.2**
SNAA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SNAA	**Sanae**	**88.79**	**197**	*e*P	**P**	**22 50 13.1**	**+2.3**
	comp=Z,2.5nm,0.9s,mb4.2						
AKASG	**Malin Array Be**	**88.98**	**321**	P	**P**	**22 50 10.8**	**-1.3**
	comp=Z,0.3nm,0.3s,mb3.9,baz=87,slow=4.3,SNR=5.2						
AKASG	**Malin Array Be**	**88.98**	**321**	*i* P	**P**	**22 50 11.3**	**-0.8**
VRI	**Vrincioaia**	**89.53**	**316**⇑	*i*P	**P**	**22 50 16.7**	**+2.0**
MLR	**Muntele Rosu**	**89.99**	**316**⇓	*i*P	**P**	**22 50 18.5**	**+1.6**
BURAR	**Bucovina Array**	**90.89**	**318**⇑	*i*P	**P**	**22 50 23.3**	**+2.2**
BUR08	**Bucovina Ar. S**	**90.91**	**318**	*e*P	**P**	**22 50 22.4**	**+1.3**
JOF	**Joensuu**	**90.99**	**334**	*e*p	**P**	**22 50 20.1**	**-1.1**
	comp=Z,4.8nm,0.6s,mb4.8						
KAF	**Kangasniemi**	**93.06**	**332**	*e*p	**P**	**22 50 30.1**	**-0.7**
	comp=Z,2.8nm,0.6s,mb4.8						
KAF	**Kangasniemi**	**93.06**	**332**	*e*P	**P**	**22 50 30.1**	**-0.7**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.8						
ARCES	**ARCESS Array B**	**94.76**	**340**	P	**P**	**22 50 37.5**	**-0.9**
	comp=Z,1.3nm,0.8s,mb4.4,baz=45,slow=5.3,SNR=4.0						
ARCES	**ARCESS Array B**	**94.76**	**340**	P	**P**	**22 50 37.5**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**117.53**	**21**	PKP	PKPdf	22 56 02.8	+0.2
	comp=Z,2.0nm,0.5s,baz=358,slow=1.8,SNR=11						
YKA	**Yellowknife Ar**	**117.53**	**21**	PKIKP	PKPdf	22 56 02.8	+0.3
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NVAR	**Mina Array Bea**	**128.69**	**46**	PKP	PKPdf	22 56 25.1	+0.4
	comp=Z,0.5nm,0.4s,baz=288,slow=1.4,SNR=3.8						
PDAR	**Pinedale Array**	**132.34**	**37**	PKP	PKPdf	22 56 32.8	+1.3
	comp=Z,1.0nm,0.6s,baz=70,slow=1.6,SNR=5.9						
SCHQ	**Schefferville**	**133.12**	**356**	PKP	PKPdf	22 56 33.8	+1.2
	comp=Z,3.3nm,0.5s,baz=238,slow=11,SNR=12						
ULM	**Lac du Bonnet**	**133.52**	**21**	PKP	PKPdf	22 56 33.0	-0.4
	comp=Z,2.6nm,0.6s,baz=270,slow=6.2,SNR=3.7						
RSSD	**Black Hills**	**134.60**	**32**	*e*PKIKP	PKPdf	22 56 36.5	+0.8
TXAR	**Lajitas Array**	**143.62**	**50**	PKP	PKPdf	22 56 51.5	-1.1
	comp=Z,1.4nm,0.5s,baz=239,slow=0.5,SNR=25						
TXAR	**Lajitas Array**	**143.62**	**50**	PKIKP	PKPdf	22 56 51.5	-1.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**143.62**	**50**	PKP	PKPdf	22 56 51.5	-1.1
WMOK	**Wichita Mounta**	**143.90**	**39**	*e*PKIKP	PKPdf	22 56 51.5	-1.4
NCB	**Newcomb**	**144.15**	**2**	*e*PKPdf	PKPdf	22 56 51.4	-1.6
ACCN	**Adirondack Com**	**144.75**	**2**	*e*PKPdf	PKPdf	22 56 52.9	-1.2
CCM	**Cathedral Cave**	**145.50**	**27**	*e*PKIKP	PKPdf	22 56 56.2	+0.6
BINY	**Binghamton**	**145.80**	**5**	*e*PKP	PKPdf	22 56 56.9	+1.0
JCT	**Junction City**	**145.85**	**45**	*e*PKP2	PKPab	22 56 58.2	+0.6
OLIL	**Olney**	**146.23**	**23**	*e*PKP	PKPdf	22 56 57.8	+0.9
BDFB	**Brasilia**	**146.43**	**226**	PKPbc	PKPbc	22 57 01.3	+2.1
	comp=Z,2.2nm,0.4s,baz=50,slow=3.3,SNR=4.9						
BDFB	**Brasilia**	**146.43**	**226**	PKP2	PKPab	22 57 01.3	+1.2
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ACSO	**Alum Creek Sta**	**146.51**	**15**	*e*PKP	PKPdf	22 56 58.0	+0.8
MIAR	**Mount Ida**	**147.09**	**34**	*e*PKP2	PKPab	22 57 00.6	-1.6
WCI	**Wyandotte Cave**	**147.34**	**21**	*e*PKP2	PKPbc	22 56 59.8	-1.3
MCWV	**Mont Chateau**	**147.76**	**11**	PKPdf	PKPdf	22 56 59.5	+0.1
WVT	**Waverly**	**148.59**	**25**	*e*PKP2	PKPab	22 57 05.2	-2.9
OXF	**Oxford**	**149.25**	**29**	*e*PKP2	PKPbc	22 57 06.6	+0.4
TZTN	**Tazewell**	**149.78**	**18**	*e*PKPbc	PKPbc	22 57 08.2	+0.7
SWET	**Sewanee**	**150.15**	**23**	*e*PKPbc	PKPbc	22 57 08.6	+0.2
CPCT	**Cooper Cave**	**150.46**	**21**	*e*PKPbc	PKPbc	22 57 09.8	+0.7
TKL	**Tuckaleechee C**	**150.52**	**19**	*e*PKIKP	PKPbc	22 57 10.3	+1.0
LRAL	**Lakeview Retre**	**151.58**	**27**	*e*PKPbc	PKPbc	22 57 12.2	+0.3
JSC	**Jenkinsville**	**152.56**	**16**	*e*PKIKP	PKPdf	22 57 09.0	+2.0
JSC				*e*		22 57 15.1	
GOGA	**Godfrey**	**152.67**	**21**	*e*PKIKP	PKPbc	22 57 14.0	-0.3

ISK ***17*** *22:40:05.8, 3947N×3999E, h5km, MD3.8*
DDA ***17*** *22:40:06.3, 3945N×4005E, h5km±1km, Md3.7*
CSEM ***17*** *22:40:06.5±0.0, 3947N×3998E, h5km, MD3.7, Error ellipse: s-maj=1.2km s-min=1.1km az=38.0*
ISCJB ***17*** *22:40:07.0±0.2, 3942N±002×4003E±002, h10km, Error ellipse: s-maj=3.0km s-min=2.3km az=143.6*
ISC 17 22:40:07.0±0.4**, 3944N**±002×**4003E**±002**, h1**km±4km**, n49, σ1!09**/66**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.68**	**31**	*i* P	**Pg**	**22 40 19.9**	**-0.2**
KOPT				*i* S	**Sg**	**22 40 31.1**	**+2.1**
PTK	**Pertek**	**0.74**	**223**	PG	**Pg**	**22 40 20.9**	**-0.2**
PTK				*e*SG	**Sg**	**22 40 32.0**	**+1.4**
BNGL	**BINGOL**	**0.99**	**119**	*i* P	**Pn**	**22 40 26.2**	**-1.8**
BNGL				*i* S	**Sn**	**22 40 41.0**	**-1.6**
GUMT	**Gumushane**	**1.11**	**338**	PG	**Pg**	**22 40 27.2**	**-1.1**
GUMT				*e*SG	**Sg**	**22 40 42.2**	**-0.4**
EZM	**Erzurum**	**1.13**	**65**	PN	**Pn**	**22 40 27.9**	**-2.0**
ERZM	**Erzurum**	**1.13**	**65**	*i* P	**Pg**	**22 40 28.4**	**-0.3**
ERZM				*i* S	**Sg**	**22 40 41.6**	**-1.7**
SVRC	**Sivrice-ELAZID**	**1.20**	**208**	*e*PN	**Pn**	**22 40 29.2**	**-1.6**
MACK	**Trabzon**	**1.52**	**352**	*i* P	**Pn**	**22 40 34.9**	**-0.4**
MACK				*i* S	**Sg**	**22 40 57.0**	**+1.2**
KTUT	**Trabzon**	**1.56**	**353**	*e*PN	**Pn**	**22 40 35.3**	**-0.6**
KTUT				*e*SN	**Sn**	**22 40 56.5**	**-0.3**
HOMI	**Horasan**	**1.57**	**67**	*i* P	**Pn**	**22 40 36.1**	**+0.2**
HOMI				*i* S	**Sg**	**22 41 00.8**	**+3.4**
MYA	**Malataya**	**1.67**	**229**	*e*PN	**Pn**	**22 40 37.1**	**-0.2**
ESPY	**Espiye-Giresun**	**1.79**	**326**	*e*PN	**Pn**	**22 40 38.4**	**-0.5**
DARE	**Darende-Malaty**	**1.80**	**255**	*e*PN	**Pg**	**22 40 44.2**	**+2.8**
BEST	**Besiri**	**1.82**	**147**	*i* P	**Pg**	**22 40 41.4**	**-0.4**
BEST				*i* S	**Sg**	**22 41 05.9**	**+0.4**
PZAR	**Pazar-Rize**	**1.86**	**21**	*e*PN	**Pn**	**22 40 39.7**	**-0.3**
AKCD	**Akcadag**	**2.00**	**236**	*i* P	**Pn**	**22 40 42.9**	**+1.1**
AKCD				*i* S	**Sn**	**22 41 09.1**	**+1.6**
MARD	**Mardin**	**2.20**	**164**	*i* P	**Pg**	**22 40 47.2**	**-1.9**
MARD				*i* S	**Sg**	**22 41 16.6**	**-1.0**
URFA	**Urfa**	**2.21**	**206**	*e*PN	**Pn**	**22 40 45.0**	**+0.3**
ARTV	**Artvin**	**2.27**	**39**	*i* P	**Pn**	**22 40 45.4**	**-0.2**
ARTV				*i* S	**Sn**	**22 41 07.1**	**-7.1**
RSDY	**Resadiye-TOKAT**	**2.29**	**296**	*e*PN	**Pn**	**22 40 45.5**	**-0.4**
AGRB	**Hanur-Agry**	**2.29**	**86**	*e*PN	**Pn**	**22 40 46.8**	**+0.9**
BCA	**Borcka**	**2.35**	**31**	*e*PN	**Pn**	**22 40 46.0**	**-0.6**
ATAB	**Bozova**	**2.39**	**215**	*i* P	**Pn**	**22 40 48.2**	**+1.0**
ATAB				*i* S	**Sn**	**22 41 14.2**	**-2.9**
SVSK	**Karacayir**	**2.39**	**283**	*e*PN	**Pn**	**22 40 46.9**	**-0.3**
KARS	**Kars**	**2.63**	**62**	*e*PN	**Pn**	**22 40 51.5**	**+1.0**
SIRT	**Sirnak**	**2.70**	**135**	*e*PN	**Pn**	**22 40 52.5**	**+1.0**
VANB	**Van**	**2.75**	**107**	*e*PN	**Pn**	**22 40 53.3**	**+1.2**
VANT	**Van**	**2.80**	**110**	*e*PN	**Pn**	**22 40 52.9**	**+0.1**
TOKT	**Tokat**	**2.83**	**289**	*e*PN	**Pn**	**22 40 53.0**	**-0.2**
DYDN	**Diyadin**	**2.83**	**87**	*i* P	**Pb**	**22 40 58.5**	**+0.2**
DYDN				*i* S	**Sg**	**22 41 39.1**	**+1.2**
GZT	**Gaziantep**	**2.84**	**224**	*i* P	**Pg**	**22 41 01.2**	**-0.2**
GZT				*i* S	**Sg**	**22 41 39.4**	**+1.1**
CLDR	**Caldiran**	**3.03**	**94**	*e*PN	**Pn**	**22 40 57.1**	**+1.1**
KMRS	**Kahramanmaras**	**3.12**	**233**	*e*PN	**Pn**	**22 40 57.8**	**+0.5**
GAZ	**Gaziantep**	**3.17**	**225**	*e*PN	**Pn**	**22 40 58.5**	**+0.6**
BNN	**Bunyan**	**3.31**	**261**	*e*PN	**Pn**	**22 41 00.1**	**+0.3**
ANDN	**Andirin**	**3.43**	**239**	*i* P	**Pb**	**22 41 06.8**	**-1.7**
ANDN				*i* S	**Sn**	**22 41 42.0**	**-0.9**
HAKT	**HAKKARI**	**3.44**	**122**	*i* P	**Pn**	**22 41 03.5**	**+1.9**
HAKT				*i* P		22 41 54.7	
HAKT				*i* S	**Sg**	**22 41 57.5**	**0.0**
HAKT	**HAKKARI**	**3.44**	**122**	*i* P	**Pn**	**22 41 03.5**	**+1.9**
KVT	**Kavak**	**3.46**	**300**	*e*PN	**Pn**	**22 41 02.1**	**+0.1**
YOZ	**Yozgat**	**3.65**	**275**	*e*PN	**Pn**	**22 41 04.9**	**+0.3**
KOZT	**Kozan**	**3.83**	**241**	*e*PN	**Pn**	**22 41 07.9**	**+0.8**
MSL	**Mosul**	**3.89**	**140**	*e*x	x	22 41 08.0	
MSL				*e*x	x	22 41 23.0	
MSL				*e*x	x	22 41 55.0	
MSL				*e*x	x	22 42 18.0	
ONI	**Oni**	**4.07**	**38**	P	**Pn**	**22 41 10.2**	**-0.1**
ONI				S	**Sg**	**22 42 14.6**	**-3.1**
COBT	**Iskenderun**	**4.17**	**227**	*i* P	**Pg**	**22 41 25.6**	**-1.2**
COBT				*i* S	**Sn**	**22 41 56.0**	**-4.9**
CTKT	**Corum**	**4.20**	**288**	*i* P	**Pn**	**22 41 13.5**	**+1.5**
CDAG	**Cicekdag**	**4.38**	**274**	*i* P	**Pb**	**22 41 24.9**	**+0.2**
CDAG				*i* S	**Sg**	**22 42 25.8**	**-1.9**
DGRG	**David-gareji**	**4.55**	**62**	P	**Pg**	**22 41 34.8**	**+0.7**
BHD	**Baghdad**	**7.08**	**149**	*e*x	x	22 41 51.0	
BHD				*e*x	x	22 43 13.0	
BHD				*e*x	x	22 44 02.0	
BHD	**Baghdad**	**7.08**	**149**	*e*Pn	x	22 41 51.0	
BHD				*e*Sn	x	22 43 13.0	

NEIC ***17*** *22:52:30.7±0.4, 285S×10248E, h35km, mb4.3/5, Error ellipse: s-maj=23.8km s-min=8.3km az=62.0*
DJA ***17*** *22:52:30, 321S×10224E, h10km, MLv4.4/5*
ISCJB ***17*** *22:52:32.1±1.3, 295S±0.10×1024E±0.1, h70km±11km, mb4.2/15, Error ellipse: s-maj=22.5km s-min=8.8km az=138.3*
IDC ***17*** *22:52:37.2±8.3, 282S×10262E, h93km±78km, mb3.8/10, mb1 3.9/10, mb1mx3.7/20, mbtmp3.8/10, MS3.6/1, Ms1 3.6/1, ms1mx3.0/23, Error ellipse: s-maj=40.3km s-min=12.9km az=65.0*
ISC 17 22:52:33.6±1.2**, 300S**±009×**1024E**±01**, h65**km±10km**, n30, σ1!14**/25**, mb4.2**/15**, 1C, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**0.68**	**163**	P	**Pn**	**22 52 38.7**	**-9.2**
	0.0nm,0.0s						
JMBI	**JAMBI**	**1.85**	**43**	P	**Pn**	**22 53 05.5**	**+2.5**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.22**	**322**	P	**Pn**	**22 53 21.3**	**-0.5**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**3.83**	**77**	P	**Pn**	**22 53 30.6**	**+0.5**
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**5.26**	**87**	P	**Pn**	**22 53 48.4**	**-1.3**
	0.0nm,0.0s						
SKJI	**Sukabumi**	**5.75**	**134**	P	**Pn**	**22 53 53.7**	**-2.6**
	0.0nm,0.0s						
PSI	**Prapat**	**6.73**	**329**⇑	*e*P	**Pn**	**22 54 10.3**	**+0.5**
KAPI	**Kappang**	**17.43**	**97**	LR	LR	23 03 50.7	
	comp=Z,201nm,18.2s,baz=276,slow=39						
CMAR	**Chiang Mai Arr**	**21.59**	**351**	P	**P**	**22 57 19.3**	**+1.1**
	1.0nm,0.3s,mb3.6,baz=184,slow=11,SNR=3.3						
FITZ	**Fitzroy Crossi**	**27.28**	**125**	P	**P**	**22 58 13.5**	**+1.4**
	3.6nm,1.0s,mb3.8,baz=312,slow=5.4,SNR=4.8						
NWAO	**Narrogin (SRO)**	**32.86**	**157**	P	**P**	**22 59 03.1**	**+1.8**
	21nm,1.2s,mb4.8,baz=288,slow=7.2,SNR=3.1						
WRA	**Warramunga Arr**	**35.43**	**121**	P	**P**	**22 59 23.1**	**-0.6**
	0.7nm,0.5s,mb3.8,baz=300,slow=9.1,SNR=7.6						
ASAR	**Alice Springs**	**36.74**	**127**	P	**P**	**22 59 35.1**	**+0.3**
	5.0nm,0.9s,mb4.4,baz=303,slow=7.8,SNR=24						
STKA	**Stephens Creek**	**46.71**	**132**	P	**P**	**23 00 55.5**	**-0.7**
	2.9nm,0.8s,mb4.1,baz=352,slow=8.0,SNR=3.0						
STKA	**Stephens Creek**	**46.71**	**132**	P	**P**	**23 00 55.5**	**-0.7**
SONM	**Songino Array**	**50.75**	**3**	P	**P**	**23 01 28.1**	**+1.2**
	3.7nm,0.9s,mb4.4,baz=186,slow=8.9,SNR=12						
ULN	**Ulaanbaatar**	**50.82**	**4**	*e*P	**P**	**23 01 26.8**	**-0.6**
	1.6nm,0.8s,mb4.1						
TKM2	**Tokmak 2**	**51.72**	**335**	*e*P	**P**	**23 01 34.3**	**+0.1**
	3.0nm,0.7s,mb4.4						
AML	**Almayashu**	**51.92**	**333**	*e*P	**P**	**23 01 36.0**	**+0.3**
	2.3nm,0.7s,mb4.3						
EKS2	**Erkin-Say**	**52.30**	**333**	*e*P	**P**	**23 01 38.3**	**-0.2**
	3.3nm,0.6s,mb4.5						
MK31	**Makanchi Array**	**52.66**	**343**	*e*P	**P**	**23 01 40.6**	**-0.5**
MKAR	**Makanchi Array**	**52.66**	**343**	P	**P**	**23 01 39.4**	**-1.7**
	1.4nm,0.8s,mb4.1,baz=146,slow=7.5,SNR=12						
KURK	**Kurchatov**	**57.26**	**342**	*e*P	**P**	**23 02 13.7**	**-0.6**
	1.8nm,0.6s,mb4.3						
ZAA0	**Zalesovo Array**	**58.62**	**348**	*e*P	**P**	**23 02 23.0**	**-0.7**
ZALV	**Zalesovo Beam**	**58.62**	**348**	P	**P**	**23 02 22.6**	**-1.1**
	3.1nm,0.8s,mb4.4,baz=165,slow=6.2,SNR=9.7						
MAW	**Mawson**	**69.92**	**195**	P	**P**	**23 03 39.5**	**+2.1**
	1.2nm,0.8s,mb3.8,baz=46,slow=9.7,SNR=5.1						
TORD	**Torodi Ar. Bea**	**101.09**	**283**	P	Pdif	23 06 19.6	+3.2
	0.4nm,0.7s,baz=268,slow=4.6,SNR=4.3						
TXAR	**Lajitas Array**	**143.97**	**41**	PKP	PKPdf	23 12 02.2	-0.2
	1.2nm,0.8s,baz=297,slow=0.7,SNR=11						
TXAR	**Lajitas Array**	**143.97**	**41**	PKP	PKPdf	23 12 02.2	-0.2
CPUP	**Villa Florida**	**144.86**	**213**	PKPbc	PKPdf	23 12 04.1	+0.1
	6.3nm,0.9s,baz=105,slow=3.9,SNR=11						

MOS ***17*** *23:27:36.7±1.1, 032N×12565E, h42km, mb4.8/25, Error ellipse: s-maj=21.0km s-min=7.8km az=116.0*
DJA ***17*** *23:27:38, 034N×12593E, h10km, Mw5.3/7*
ISCJB ***17*** *23:27:39.2±0.8, 034N±005×12584E±005, h67km±8km, mb4.6/47, Error ellipse: s-maj=9.4km s-min=6.6km az=137.8*
BJI ***17*** *23:27:39.7, 031N×12582E, h61km, mB5.4, mb4.8, Ms4.5, Msz4.1*
GCMT ***17*** *23:27:40.4±0.3, 041N×12554E, h23km±1km, MW5.2/63, Moment Tensor Solution. s55,c71; s63,c73; Duration: 1!0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.84±.23; $M_{\theta\theta}$0.10±.15; $M_{\phi\phi}$-4.94±.19; $M_{r\theta}$0.52±.35; $M_{\theta\phi}$1.61±.14; $M_{\phi r}$-6.32±.55; Best double couple: $M_0$8.16000×10^{16} NP1:ϕ_s333.00000°, δ20.00000°, λ71.00000°. NP2: ϕ_s173.00000°, δ71.00000°, λ97.00000°. Principal axes: T 7.9490, Plg64.0000°, Azm94.0000°; N 0.4250, Plg7.0000°, Azm351.0000°; P -8.3710, Plg25.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***17*** *23:27:40.4±2.0, 029N×12582E, h63km±18km, mb4.8/15 Error ellipse: s-maj=16.3km s-min=6.9km az=55.0*
IDC ***17*** *23:27:40.0±3.5, 030N×12568E, h56km±31km, mb4.2/11, mb1 4.3/13, mb1mx4.2/18, mbtmp4.2/13, ML4.3/2, MS4.2/6, Ms1 4.1/6, ms1mx3.8/16, Error ellipse: s-maj=26.0km s-min=10.0km az=72.0*
ISC 17 23:27:41.1±0.7**, 028N**±005×**12585E**±005**, h69**km±7km**, n104, σ1!08**/100**, mb4.6**/47**, 8C-2D, Northern Molucca Sea**

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

MNI	Manado	1.53	319	P		Pn	23 28 01.2	-5.3	
	0.0nm,0.0s								
LBMI	Labuha	1.89	119	P		Pn	23 28 09.7	-1.6	
	0.0nm,0.0s								
KDI	Kendari	5.30	217	P		Pn	23 28 57.4	-0.4	
	148nm,1.9s								
SWI	Sorong	5.53	102	P		Pn	23 29 02.1	+1.1	
	69nm,1.3s								
PCI	Palu	6.12	259	P		Pn	23 29 10.3	+1.3	
	270nm,1.1s								
BBSI	Bau Bau	6.60	210	P		Pn	23 29 18.0	+2.5	
	209nm,1.0s								
KAPI	Kappang	8.04	229	P		Pn	23 29 33.9	-1.5	
	6.5nm,0.3s,baz=71,slow=4.3,SNR=22								
KAPI				S		Sn	23 31 03.4	-1.5	
	baz=320,slow=21,SNR=2.2								
MYLDM	Lahad Datu	8.80	304	⇑P		Pn	23 29 45.9	+0.2	
SDKM	Sandakan	10.14	302	⇑P		Pn	23 30 02.7	-1.4	
BATI	Baumata	10.64	192	P		Pn	23 30 20.6	+10	
	49nm,1.2s								
BATI	Baumata	10.64	192	P		Pn	23 30 15.5	+4.6	
	1.6nm,0.3s,baz=274,slow=13,SNR=2.4								
SBUM	Sibu	13.79	279	⇑P		Pn	23 30 54.7	+1.2	
KSM	Kuching	15.58	274	⇑P		Pn	23 31 19.5	+2.8	
KSM	Kuching	15.58	274	Pn		Pn	23 31 18.7	+2.0	
KRKI	Karangkates	15.76	238	P		Pn	23 31 29.0	+10	
	260nm,1.2s								
SJI	Sawahan	16.14	240	P		Pn	23 31 28.2	+4.4	
	242nm,1.8s								
BJII	Banjarnegara	17.78	245	P		Pn	23 31 46.5	+2.4	
	220nm,1.8s								
FITZ	Fitzroy Crossi	18.27	181	eP		Pn	23 31 49.2	-0.8	
	9.2nm,0.8s								
FITZ	Fitzroy Crossi	18.27	181	P		Pn	23 31 49.2	-0.8	
	0.5nm,0.3s,baz=13,slow=13,SNR=16								
WRAB	Tennant Creek	21.75	158	eP		P	23 32 26.7	-0.4	
WRAB				pmax		pmax			
	comp=Z,29nm,0.9s,mb4.6								
WRAB	Tennant Creek	21.75	158	eP		P	23 32 26.7	-0.4	
	comp=Z,29nm,0.9s,mb4.6								
WRA	Warramunga Arr	21.75	158	P		P	23 32 26.3	-0.8	
	comp=Z,10.0nm,0.5s,mb4.4,baz=336,slow=11,SNR=76								
WRA				S		S	23 36 27.2	+3.2	
	comp=Z,2.8nm,1.0s,baz=342,slow=15,SNR=6.0								
WRA	Warramunga Arr	21.75	158	P		P	23 32 26.3	-0.8	
WRA				S		S	23 36 27.2	+3.3	
WRA				pmax		pmax			
	comp=Z,10.0nm,0.5s								
WRA				smax					
	comp=N,3.0nm,1.0s								
WB2	Warramunga Arr	21.76	158	eP		P	23 32 26.2	-1.0	
MBWA	Marble Bar	22.13	195	eP		P	23 32 31.2	+0.1	
	comp=N,24nm,1.0s,mb4.5								
COEN	Coen	22.24	130	eP		P	23 32 31.8	-0.5	
	comp=N,38nm,1.2s,mb4.6								
GUMO	Guam	23.02	54	LR		LR	23 40 43.5		
	comp=N,325nm,18.3s,baz=272,slow=34								
PMG	Port Moresby	23.30	115	i/P		P	23 32 43.6	+0.3	
QIZ	Qiongzhong	24.36	321	P		P	23 32 51.5	-1.4	
QIZ				AP			23 33 07.8		
QIZ				XP		sP	23 33 16.4	-0.9	
QIZ				S		S	23 37 07.6	-0.1	
QIZ				LR		LR			
	comp=N,340nm,14.4s								
QIZ				LR		LR			
	comp=E,345nm,14.6s								
QIZ				LR		LR			
	comp=Z,423nm,23.1s								
ASAR	Alice Springs	25.06	162	P		P	23 33 00.8	+1.7	
	comp=Z,7.3nm,0.3s,mb4.6,baz=344,slow=12,SNR=120								
ASAR	Alice Springs	25.06	162	P		P	23 33 00.9	+1.7	
ASAR				pmax		pmax			
	comp=Z,7.0nm,0.3s								
PPI	Padang Panjang	25.46	268	P		P	23 33 06.4	+3.4	
	comp=Z,28nm,1.2s,mb4.6								
CMAR	Chiang Mai Arr	32.01	306	P		P	23 33 58.4	-2.7	
	comp=Z,1.2nm,0.4s,mb4.0,baz=131,slow=7.7,SNR=7.0								
CMAR	Chiang Mai Arr	32.01	306	P		P	23 33 58.4	-2.7	
CMAR				pmax		pmax			
	comp=Z,1.0nm,0.4s								
KMI	Kunming	33.30	320	P		P	23 34 15.8	+3.4	
KMI				AMB		AMB			
	comp=Z,11nm,1.2s,mb4.6								
STKA	Stephens Creek	35.29	156	eP		P	23 34 30.3	+0.8	
	comp=Z,37nm,4.5s								
STKA	Stephens Creek	35.29	156	P		P	23 34 30.1	+0.6	
	comp=Z,3.5nm,0.5s,mb4.4,baz=325,slow=9.0,SNR=11								
KSRS	Korea Array	37.04	3	P		P	23 34 44.4	0.0	
	comp=Z,2.9nm,0.7s,mb4.3,baz=178,slow=9.4,SNR=4.4								
KSRS	Korea Array	37.04	3	P		P	23 34 44.4	+0.1	
KSRS				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.3								
LZH	Lanzhou	41.07	332	eP		P	23 35 21.3	+3.2	
LZH				AMB		AMB			
	comp=Z,27nm,1.2s,mb5.0								
LZH				AMB		AMB			
	comp=Z,140nm,5.6s								
LSA	Lhasa	44.13	315	P		P	23 35 46.3	+3.3	
LSA	Lhasa	44.13	315	eP		P	23 35 43.1	+0.1	
LSA				pmax		pmax			
	comp=Z,7.0nm,0.7s,mb4.5								
LSA	Lhasa	44.13	315	eP		P	23 35 43.1	+0.1	
	comp=Z,6.7nm,0.7s,mb4.5								
GTA	Gaotai	45.64	332	eP		P	23 35 55.8	+1.0	
GTA				PP		PP	23 37 44.8	+1.9	
GTA				S		S	23 42 27.1	-5.4	
GTA				SS		SS	23 45 44.3	-13	
GTA				AMB		AMB			
	comp=Z,9.0nm,0.8s,mb4.5								
GTA				LR		LR			
	comp=N,339nm,17.4s								
GTA				LR		LR			
	comp=E,391nm,16.2s								
GTA				LR		LR			
	comp=Z,537nm,25.8s								
KLR	Kul'dur	49.02	5	eP		P	23 36 14.4	-6.5	
HIA	Hailar	49.08	355	eP		P	23 36 20.9	-0.4	
HIA				pmax		pmax			
	comp=Z,21nm,1.3s								
HIA	Hailar	49.08	355	eP		P	23 36 20.9	-0.4	
	comp=Z,21nm,1.3s,mb4.9								
ULN	Ulaanbaatar	50.13	344	eP		P	23 36 30.0	+0.7	
ULN				pmax		pmax			
	comp=Z,6.0nm,1.0s,mb4.5								
ULN	Ulaanbaatar	50.13	344	eP		P	23 36 30.0	+0.7	
	comp=Z,6.4nm,1.0s,mb4.5								
SONM	Songino Array	50.29	343	P		P	23 36 30.9	+0.3	
	comp=Z,6.7nm,1.0s,mb4.5,baz=157,slow=8.6,SNR=13								
SONM	Songino Array	50.29	343	P		P	23 36 30.9	+0.3	
SONM				pmax		pmax			
	comp=Z,7.0nm,1.0s								
ZAK	Zakamensk	53.49	342	eP		P	23 36 53.0	-1.3	
ZAK				pmax		pmax			
	comp=Z,4.0nm,1.4s,mb4.3								
BOD	Bodaibo	58.14	353	eP		P	23 37 27.8	+0.4	
BOD				pmax		pmax			
	comp=Z,10.0nm,1.5s,mb4.6								
PETK	Petropavlovsk-	58.94	22	P		P	23 37 34.2	+1.2	
	comp=Z,3.8nm,0.7s,mb4.6,baz=168,slow=5.9,SNR=5.1								
PETK	Petropavlovsk-	58.94	22	P		P	23 37 34.3	+1.2	
PETK				pmax		pmax			
	comp=Z,4.0nm,0.7s,mb4.6								
MK31	Makanchi Array	59.90	327	i P		P	23 37 38.9	-1.0	
MK31				pmax		pmax			
	comp=Z,4.0nm,0.4s,mb4.8								
MKAR	Makanchi Array	59.90	327	P		P	23 37 39.2	-0.6	
	comp=Z,6.2nm,0.5s,mb4.9,baz=123,slow=7.9,SNR=45								
MKAR				LR		LR	00 06 10.5		
	comp=Z,320nm,21.7s,baz=117,slow=39								
MKAR	Makanchi Array	59.90	327	P		P	23 37 39.2	-0.7	
MKAR				pmax		pmax			
	comp=Z,6.0nm,0.5s								
MKAR				MLR		MLR			
	comp=Z,320nm,21.7s								
MKAR	Makanchi Array	59.90	327	P		P	23 37 39.2	-0.6	
MKAR				LR		LR	00 06 10.5		
YAK	Yakutsk	61.66	2	i/P		P	23 37 52.0	+0.5	
YAK				pmax		pmax			
	comp=Z,21nm,0.6s,mb5.3								
TKM2	Tokmak 2	61.77	320	eP		P	23 37 52.2	-0.4	
TKM2				pmax		pmax			
	comp=Z,15nm,1.2s,mb4.9								
TKM2	Tokmak 2	61.77	320	eP		P	23 37 52.2	-0.4	
	comp=Z,16nm,1.2s,mb4.9								
AML	Almayashu	62.63	319	eP		P	23 37 59.1	+0.7	
	comp=Z,19nm,1.1s,mb4.9								
EKS2	Erkin-Say	62.82	319	eP		P	23 37 59.6	0.0	
	comp=Z,16nm,1.2s,mb4.8								
KBL	Kabul	62.95	309	eP		P	23 38 00.3	-0.4	
KBL				pmax		pmax			
	comp=Z,8.0nm,0.8s,mb4.7								
KBL	Kabul	62.95	309	eP		P	23 38 00.3	-0.4	
	comp=Z,7.9nm,0.8s,mb4.7								
ZAA0	Zalesovo Array	63.26	334	eP		P	23 38 01.3	-1.0	
ZALV	Zalesovo Beam	63.26	334	P		P	23 38 01.8	-0.6	
	comp=Z,1.8nm,0.3s,mb4.4,baz=120,slow=6.0,SNR=18								
ZALV	Zalesovo Beam	63.26	334	P		P	23 38 01.8	-0.6	
ZALV				pmax		pmax			
	comp=Z,2.0nm,0.3s,mb4.5								
ZALV	Zalesovo Beam	63.26	334	P		P	23 38 01.8	-0.6	
KURK	Kurchatov	64.18	329	eP		P	23 38 07.7	-0.8	
KURK				pmax		pmax			
	comp=Z,25nm,0.9s,mb5.0								
KURK	Kurchatov	64.18	329	eP		P	23 38 07.7	-0.8	
	comp=Z,25nm,0.9s,mb5.0								
NVS	Novosibirsk	64.55	334	eP		P	23 38 08.7	-2.1	
NVS				pmax		pmax			
	comp=N,12nm,1.5s								
NVS				pmax		pmax			
	comp=Z,15nm,1.5s,mb4.6								
NVS				pmax		pmax			
	comp=E,21nm,1.7s								
KK31	Karatay Array	65.17	318	i P		P	23 38 14.6	-0.5	
KK31				pmax		pmax			
	comp=Z,1.0nm,0.3s,mb4.1								
VOSK	Vostochnaya	69.27	328	P		P	23 38 40.0	-0.8	
VOSK				pmax		pmax			
	comp=Z,6.0nm,0.7s,mb4.5								
BVA0	Borovoye Array	69.73	328	i P		P	23 38 44.6	+0.9	
BVA0				pmax		pmax			
	comp=Z,5.0nm,1.4s,mb4.2								
TIXI	Tiksi	71.28	1	⇑i P		P	23 38 52.5	-0.2	
TIXI				pmax		pmax			
	comp=Z,10.0nm,1.7s,mb4.4								
BILL	Bilibino	73.09	15	eP		P	23 39 04.4	+0.8	
BILL				pmax		pmax			
	comp=Z,6.0nm,1.3s,mb4.3								
AB31	Akbulak array	74.26	322	i P		P	23 39 10.0	-0.9	
AB31				pmax		pmax			
	comp=Z,2.0nm,0.5s,mb4.1								
AKTO	Aktyubinsk	75.81	322	i P		P	23 39 19.8	+0.1	
AKTO				pmax		pmax			
	comp=Z,2.0nm,1.2s,mb3.7								
SVE	Sverdlovsk	76.43	329	⇑eP		P	23 39 24.0	+0.9	
SVE				eSS		SS	23 54 04.3	+5.4	
SVE				pmax		pmax			
	comp=Z,33nm,1.1s,mb5.0								
ARU	Arti	77.37	328	eP		P	23 39 28.7	+0.3	
ARU				pmax		pmax			
	comp=Z,30nm,1.1s,mb4.9								
ARU	Arti	77.37	328	eP		P	23 39 28.7	+0.2	
	comp=Z,30nm,1.1s,mb4.9								
MIB	Mutribah	79.89	300	eP		P	23 39 42.4	-0.5	
	baz=300								
MIB				AMb		AMB	23 39 46.8		
	comp=Z,25nm,0.8s,mb5.1,baz=300								
NAY	Al-Naaiem	79.92	300	eP		P	23 39 42.5	-0.5	
	baz=299								
NAY				AMb		AMB	23 39 46.9		
	comp=Z,11nm,1.1s,mb4.6,baz=299								
RST	Umm Al-Ruwaisa	80.15	300	eP		P	23 39 43.4	-0.9	
	baz=300								
RST				AMb		AMB	23 39 48.9		
	comp=Z,36nm,0.6s,mb5.4,baz=300								
MAW	Mawson	80.23	200	P		P	23 39 43.2	-0.7	
	comp=Z,1.9nm,0.8s,mb4.0,baz=21,slow=11,SNR=4.3								
MAW				LR		LR	00 09 36.8		
	comp=Z,94nm,19.5s,baz=67,slow=31								
GNI	Garni	83.01	310	d i/P		P	23 39 58.9	-0.2	
GNI				pmax		pmax			
	comp=Z,20nm,1.7s								
KIV	Kislovodsk	84.87	314	eP		P	23 40 10.3	+1.8	
KIV				pmax		pmax			
	comp=Z,10.0nm,1.2s,mb4.6								
KIV				MLR		MLR			
	comp=Z,57nm,20.0s								
PPT	Papeete	84.91	108	LR		LR	00 16 45.0		
	comp=Z,158nm,19.1s,baz=208,slow=35								
COLD	Coldfoot	87.39	23	eP		P	23 40 21.4	+1.0	
	comp=Z,6.2nm,1.1s,mb4.5								
MALT	Malatya	87.80	308	eP		P	23 40 22.0	-1.0	
MALT				pmax		pmax			
	comp=Z,15nm,1.4s,mb4.8								
MALT	Malatya	87.80	308	eP		P	23 40 22.0	-1.0	
	comp=Z,15nm,1.4s,mb4.8								
OBN	Obninsk	89.36	325	⇑i P		P	23 40 30.6	+0.7	
OBN				ePS		PS	23 52 29.2	+1.1	
OBN				pmax		pmax			
	comp=Z,5.0nm,0.4s,mb4.9								
OBN				MLR		MLR			
	comp=Z,100nm,17.0s								
ARCES	ARCESS Array B	93.36	340	P		P	23 40 48.3	+0.1	
	comp=Z,3.0nm,0.8s,mb4.7,baz=79,slow=4.7,SNR=3.8								
ARCES	ARCESS Array B	93.36	340	P		P	23 40 48.3	+0.1	
ARCES				pmax		pmax			
	comp=Z,3.0nm,0.8s								
AKASG	Malin Array Be	93.99	321	LR		LR	00 28 55.3		
	comp=Z,100nm,21.0s,baz=110,slow=39								
BUR08	Bucovina Ar. S	96.97	318	eP		P	23 41 05.9	+0.7	
BOSA	Boshof	99.43	241	LR		LR	00 21 26.2		
	comp=Z,125nm,21.4s,baz=273,slow=32								
TORD	Torodi Ar. Bea	123.08	286	PKP		PKPdf	23 46 31.8	+1.0	
	comp=Z,1.2nm,0.7s,baz=87,slow=1.7,SNR=18								
TXAR	Lajitas Array	124.37	54	PKP		PKPdf	23 46 34.3	+1.4	
	comp=Z,0.1nm,0.5s,baz=220,slow=3.3,SNR=3.1								
DBIC	Dimbokro	130.33	279	PKP		PKPdf	23 46 45.4	+0.7	
	comp=Z,1.8nm,0.7s,baz=102,slow=12,SNR=3.6								
DBIC	Dimbokro	130.33	279	PKIKP		PKPdf	23 46 45.4	+0.6	
DBIC				pmax		pmax			
	comp=Z,2.0nm,0.7s								
DBIC	Dimbokro	130.33	279	PKP		PKPdf	23 46 45.4	+0.7	

IDC 18 00:26:47.9±4.5, 448S×10088E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.6/5, Error ellipse: s-maj=190.3km s-min=22.4km az=54.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	36.02	118	P		P	00 33 51.4	+0.4
	0.3nm,0.3s,baz=304,slow=8.7,SNR=4.1							
ASAR	Alice Springs	37.11	124	P		P	00 33 59.8	-0.5
	0.2nm,0.4s,baz=300,slow=7.4,SNR=3.5							
SONM	Songino Array	52.32	5	P		P	00 36 01.2	-0.1
	0.6nm,0.6s,baz=180,slow=11,SNR=4.4							
MKAR	Makanchi Array	53.64	344	P		P	00 36 10.9	-0.2
	0.3nm,0.3s,baz=151,slow=8.1,SNR=4.9							
ZALV	Zalesovo Beam	59.76	349	P		P	00 36 54.5	+0.1
	0.5nm,0.4s,baz=173,slow=6.0,SNR=3.8							
TXAR	Lajitas Array	146.07	41	PKPbc		PKPbc	00 46 30.4	-0.2
	0.8nm,0.7s,baz=316,slow=2.5,SNR=5.8							

IDC 18 00:33:20.4±1.3, 063N×12657E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/15, mbtmp3.8/5, Error ellipse: s-maj=70.8km s-min=22.1km az=76.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	21.81	160	P		P	00 38 13.7	-0.7
	1.0nm,0.5s,baz=338,slow=11,SNR=3.3							
ASAR	Alice Springs	25.18	164	P		P	00 38 48.4	+0.7
	0.6nm,0.3s,baz=348,slow=14,SNR=12							
STKA	Stephens Creek	35.32	158	P		P	00 40 17.1	-0.3
	0.8nm,0.4s,baz=322,slow=12,SNR=3.0							
PETK	Petropavlovsk-	58.35	21	P		P	00 43 17.1	-0.1
	1.7nm,0.7s,baz=197,slow=4.5,SNR=4.7							
MKAR	Makanchi Array	60.02	326	P		P	00 43 29.1	+0.1
	0.3nm,0.3s,baz=128,slow=8.4,SNR=3.8							

IDC 18 01:13:38.6±1.5, 265N×94.14E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.8/21, mbtmp4.0/7, ML4.5/1, Error ellipse: s-maj=60.7km s-min=24.8km az=63.0
ISCJB 18 01:13:41.4±1.2, 26N±01×942E±02, h33km, mb4.0/6, Error ellipse: s-maj=30.3km s-min=19.9km az=173.0
NEIC 18 01:13:43.4±0.9, 261N×94.13E, h35km, Error ellipse: s-maj=29.3km s-min=16.1km az=69.0
ISC 18 01:13:43.8±1.2, 27N±01×942E±02, h35km, n9, σ0s54/9, mb4.0/6, 1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BSI	Banda Aceh	3.00	21	⇓eP		Pn	01 14 28.0	-0.8
CMAR	Chiang Mai Arr	16.35	16	Pn		Pn	01 17 32.0	+1.2
	0.7nm,0.3s,baz=212,slow=12,SNR=19							
MKAR	Makanchi Array	45.16	348	P		P	01 21 56.8	-0.2
	2.3nm,0.5s,mb4.2,baz=166,slow=8.2,SNR=15							
SONM	Songino Array	46.20	11	P		P	01 22 05.2	+0.1
	1.5nm,0.7s,mb4.0,baz=188,slow=9.2,SNR=11							
ASAR	Alice Springs	46.65	126	P		P	01 22 09.2	0.0
	0.7nm,1.0s,mb3.6,baz=296,slow=7.8,SNR=4.3							
ASAR				PcP		PcP	01 23 44.1	+1.4
	0.7nm,0.9s,baz=304,slow=3.9,SNR=4.3							
KURK	Kurchatov	49.65	347	P		P	01 22 31.7	-0.1
	0.9nm,0.2s,mb4.4,baz=172,slow=6.7,SNR=5.6							
ZAA0	Zalesovo Array	51.69	353	eP		P	01 22 46.6	-0.5
ZAA0				ePP		pP	01 22 55.8	-1.9
ZALV	Zalesovo Beam	51.69	353	P		P	01 22 47.3	+0.1
	2.8nm,0.4s,mb4.5,baz=185,slow=8.2,SNR=15							
GERES	GERESS Array B	81.75	319	P		P	01 25 59.3	+0.3
	0.4nm,0.6s,mb3.5,baz=97,slow=5.4,SNR=5.5							

IDC 18 02:22:21.5±1.9, 034N×125.46E, h0km, mb4.0/3, mb1 4.0/4, mb1mx3.7/16, mbtmp3.9/4, ML3.5/1, Error ellipse: s-maj=151.5km s-min=25.2km az=67.0
NEIC 18 02:22:22.1±1.0, 066N×126.32E, h10km, mb4.1/3, Error ellipse: s-maj=30.4km s-min=12.5km az=54.0
ISCJB 18 02:22:23.2±1.1, 08N±02×126.4E±02, h33km, mb4.1/5, Error ellipse: s-maj=34.4km s-min=13.7km az=141.4
ISC 18 02:22:25.8±1.1, 06N±02×1263E±02, h35km, n10, σ0s91/10, mb4.1/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSM	Kuching	15.97	273	ePn		Pn	02 26 08.6	+0.7
FITZ	Fitzroy Crossi	18.61	182	eP		Pn	02 26 38.3	-2.5
	2.8nm,0.7s							
FITZ	Fitzroy Crossi	18.61	182	P		Pn	02 26 37.3	-3.5
	0.1nm,0.3s,baz=30,slow=11,SNR=5.9							
WRAB	Tennant Creek	21.91	159	eP		P	02 27 16.5	+0.4
	9.1nm,1.1s,mb4.1							
WB2	Warramunga Arr	21.92	159	eP		P	02 27 15.7	-0.5
ASAR	Alice Springs	25.25	163	P		P	02 27 49.5	+0.6
	1.1nm,0.5s,mb3.7,baz=338,slow=8.1,SNR=17							
STKA	Stephens Creek	35.43	157	P		P	02 29 19.9	+1.2
	1.1nm,0.5s,mb4.1,baz=324,slow=14,SNR=2.9							
MKAR	Makanchi Array	59.85	327	P		P	02 32 27.5	-0.3
	0.8nm,0.4s,mb4.2,baz=114,slow=7.5,SNR=5.8							
MKAR	Makanchi Array	59.85	327	P		P	02 32 27.5	-0.4
KURK	Kurchatov	64.11	329	eP		P	02 32 55.9	-0.5
	2.6nm,0.4s,mb4.6							

NIED 18 02:26:00, 3360N×14050E, h74km, Mw4.1 Best double couple: M0 1.64000×10^15 NP1:φs283.00000°, δ59.00000°, λ-118.00000°. NP2:φs149.00000°, δ41.00000°, λ-52.00000°.
JMA 18 02:26:29.3±0.1, 3352N×140.44E, h57km±2km, M3.4
JMA Felt I J1.
ISCJB 18 02:26:30.4±1.4, 3355N±006×140.40E±007, h38km±41km, Error ellipse: s-maj=12.9km s-min=6.2km az=135.2
ISC 18 02:26:30.3±1.1, 3359N±009×10400E±007, h24km±17km, n14, σ0s79/25, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHJ2	Mitsune	0.68	225	P		Pb	02 26 43.1	-0.4
JHJ2				S		Sb	02 26 52.9	+0.4
JMY	Miyakejima3	0.88	303	P		Pb	02 26 46.8	0.0
BSO1	Boso 1	1.16	24	P		Pn	02 26 49.8	-1.3
BSO1				S		Sn	02 27 05.6	-0.6
BSO2	Boso 2	1.19	14	eS		Sn	02 27 07.5	+0.5
JKO	Kozu shima	1.20	300	P		Pn	02 26 51.2	-0.4
JKO				S		Sn	02 27 07.2	0.0
BSO3	Boso 3	1.21	5	P		Pn	02 26 51.4	-0.3
BSO3				S		Sn	02 27 08.0	+0.6
JIM2	Oshima 3	1.38	325	P		Pn	02 26 53.5	-0.5
JIM2				S		Sn	02 27 11.2	-0.3
BSO4	Boso 4	1.40	358	P		Pn	02 26 54.8	+0.5
BSO4				S		Sn	02 27 13.2	+1.3
JIZS	Izushimoda	1.69	312	P		Pn	02 26 58.3	0.0
JIZS				eS		Sn	02 27 18.7	-0.4
KTJJ	Kamata 2	1.73	321	P		Pn	02 26 58.5	-0.3
KTJJ				S		Sn	02 27 19.5	-0.6
JOD2	Odawara 2	1.99	327	P		Pn	02 27 02.1	-0.3
JOD2				S		Sn	02 27 25.2	-1.3
TK04	Tokai 4	2.24	291	P		Pn	02 27 06.2	+0.3
TK04				eS		Sn	02 27 33.2	+0.5
SHZ3	Shizuoka 3	2.33	310	P		Pn	02 27 08.0	+0.9
MAT	Matsushiro	3.45	329	P		Pn	02 27 25.2	+2.7
MAT				eS		Sn	02 28 06.3	+3.7

IDC 18 02:39:30.7±0.7, 1354S×7701W, h0km, mb4.5/9, mb1 4.5/12, mb1mx4.4/18, mbtmp4.4/12, ML4.0/3, MS3.7/9, Ms1 3.6/9, ms1mx3.5/22, Error ellipse: s-maj=27.0km s-min=13.2km az=67.0
ISCJB 18 02:39:34.7±0.2, 1354S±004×7693W±006, h33km, mb4.5/21, MS4.0/7, Error ellipse: s-maj=9.5km s-min=5.0km az=151.7
NEIC 18 02:39:36.5±0.3, 1353S×7693W, h35km, mb4.7/11, ML4.4(LIM), Error ellipse: s-maj=11.1km s-min=5.1km az=57.0
NEIC Felt [II] at San Vicente de Canete.
BJI 18 02:39:37.4, 1350S×7690W, h35km, mB5.2, Ms5.5, Msz5.1
ISC 18 02:39:34.8±3.1, 1351S±005×7680W±008, h19km±20km, n258, σ0s55/248, mb4.5/21, MS4.0/7, 88C-98D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NNA	Nana	1.51	359	Pn		Pn	02 39 59.0	-1.8

CPUP			LR	LR	02 54 58.2		
SDV	**Santo Domingo**	**23.07 16**	P	**P**	**02 44 39.2**	**-0.1**	
	9.2nm,0.4s,mb4.5,baz=248,slow=7.4,SNR=6.0						
PLCA	**Paso Flores**	**27.67 170**	P	**P**	**02 45 20.2**	**-1.2**	
	3.4nm,1.0s,mb4.0,baz=332,slow=8.7,SNR=3.2						
PLCA			LR	LR	02 54 28.7		
	comp=Z,57nm,19.6s,MS3.2,baz=264,slow=32						
AGPR	**Aguadilla, PR**	**33.18 17**	P	**P**	**02 46 08.0**	**-2.3**	
TXAR	**Lajitas Array**	**49.87 329**	P	**P**	**02 48 25.5**	**-1.4**	
	2.0nm,0.8s,mb4.2,baz=147,slow=8.9,SNR=24						
TXAR			LR	LR	03 08 19.9		
	comp=Z,83nm,18.8s,MS3.8,baz=5.0,slow=35						
TXAR	**Lajitas Array**	**49.87 329**	P	**P**	**02 48 25.5**	**-1.4**	
TXAR			LR	LR	03 08 19.9		
319A	**Douglas**	**54.44 326**	⇓P	**P**	**02 49 00.8**	**0.0**	
	baz=54						
318A	**Bisbee**	**54.88 325**	⇓P	**P**	**02 49 04.1**	**0.0**	
	baz=55						
219A	**White Tail Can**	**54.90 326**	⇑P	**P**	**02 49 04.2**	**-0.1**	
	baz=55						
218A	**Dragoon**	**55.31 325**	⇑P	**P**	**02 49 07.2**	**0.0**	
	baz=55						
217A	**Green Valley**	**55.59 325**	⇑P	**P**	**02 49 09.2**	**0.0**	
	baz=56						
LAZ	**Ladron**	**55.69 330**	*e*P	**P**	**02 49 10.2**	**+0.3**	
118A	**Homack Ranch,**	**55.78 326**	⇓P	**P**	**02 49 10.6**	**0.0**	
	baz=56						
ANMO	**Albuquerque**	**55.80 331**	*e*P	**P**	**02 49 10.6**	**-0.1**	
	48nm,2.4s,mb5.1						
117A	**Oracle**	**56.15 325**	⇑P	**P**	**02 49 13.1**	**-0.1**	
	baz=56						
Y19A	**Nutrioso**	**56.41 328**	⇑P	**P**	**02 49 15.4**	**+0.3**	
	baz=56,SNR=7.4						
116A	**Eloy**	**56.68 325**	⇑P	**P**	**02 49 16.8**	**-0.2**	
	baz=57						
Y18A	**Canyon Day Jun**	**56.68 327**	⇑P	**P**	**02 49 16.7**	**-0.3**	
	baz=57						
X19A	**St. Johns**	**56.80 328**	⇓P	**P**	**02 49 17.9**	**+0.1**	
	baz=57						
214A	**Organ Pipe Nat**	**56.86 323**	⇓P	**P**	**02 49 17.9**	**-0.4**	
	baz=57						
Z16A	**Peralta Trail,**	**57.10 325**	⇓P	**P**	**02 49 19.9**	**-0.1**	
	baz=57						
X18A	**Snowflake**	**57.22 328**	⇑P	**P**	**02 49 21.0**	**+0.3**	
	baz=57						
X17A	**Forest Lakes**	**57.52 327**	⇓P	**P**	**02 49 23.2**	**+0.3**	
	baz=58						
Y16A	**Circle Bar Ran**	**57.54 326**	⇑P	**P**	**02 49 23.2**	**+0.2**	
	baz=58						
SDCO	**Great Sand Dun**	**57.66 333**	*e*P	**P**	**02 49 23.7**	**-0.1**	
X16A	**Lo Mia Camp, P**	**57.92 326**	⇓P	**P**	**02 49 26.0**	**+0.2**	
	baz=58						
Y15A	**Casa Rosa Ranc**	**58.06 325**	⇓P	**P**	**02 49 26.8**	**0.0**	
	baz=58						
FRNY	**Flat Rock**	**58.13 3**	*e*P	**P**	**02 49 25.9**	**-1.1**	
X15A	**Humboldt**	**58.41 326**	⇓P	**P**	**02 49 29.4**	**+0.2**	
	baz=58						
Y14A	**Wickenburg**	**58.43 325**	⇓P	**P**	**02 49 28.7**	**-0.6**	
	baz=58						
W16A	**Flagstaff**	**58.48 327**	⇓P	**P**	**02 49 29.9**	**+0.2**	
	baz=59						
T19A	**Beclabito**	**58.55 330**	⇓P	**P**	**02 49 30.4**	**+0.4**	
	baz=59						
MVCO	**Mesa Verde**	**58.60 331**	*e*P	**P**	**02 49 30.0**	**-0.4**	
	2.5nm,0.7s,mb4.3						
U18A	**Rough Rock, Ch**	**58.65 329**	⇑P	**P**	**02 49 30.5**	**-0.2**	
	baz=59						
WUAZ	**Wupatki**	**58.72 327**	⇓P	**P**	**02 49 31.4**	**+0.1**	
	baz=59						
WUAZ	**Wupatki**	**58.72 327**	*e*P	**P**	**02 49 31.8**	**+0.4**	
	6.0nm,0.8s,mb4.7						
X14A	**Yava**	**58.76 325**	⇑P	**P**	**02 49 32.1**	**+0.5**	
	baz=59						
U16A	**Tuba City**	**59.07 328**	⇓P	**P**	**02 49 34.0**	**+0.3**	
	baz=59						
T18A	**Mexican Hat**	**59.21 329**	⇑P	**P**	**02 49 34.6**	**0.0**	
	baz=59,SNR=8.3						
S19A	**Harvey Farm, M**	**59.33 330**	⇑P	**P**	**02 49 35.5**	**0.0**	
	baz=60,SNR=7.5						
X13A	**Yucca**	**59.37 325**	⇑P	**P**	**02 49 36.0**	**+0.2**	
	baz=60						
V15A	**Kaibab Nationa**	**59.37 327**	⇓P	**P**	**02 49 36.1**	**+0.2**	
	baz=60						
W14A	**Seligman**	**59.41 326**	⇓P	**P**	**02 49 36.3**	**+0.2**	
	baz=60						
T17A	**Navajo Res., N**	**59.56 329**	⇑P	**P**	**02 49 37.6**	**+0.5**	
	baz=60,SNR=7.5						
BC3	**Big Chuckw Mtn**	**59.63 323**	⇑P	**P**	**02 49 37.7**	**+0.1**	
	baz=60						
BAR	**Barrett**	**59.67 321**	*e*P	**P**	**02 49 36.3**	**-1.7**	
S18A	**Hurst Farm, BI**	**59.70 330**	⇓P	**P**	**02 49 38.2**	**+0.2**	
	baz=60						
V14A	**Boquillas Ranc**	**59.74 326**	⇑P	**P**	**02 49 38.4**	**0.0**	
	baz=60,SNR=5.7						
W13A	**Hualapai Mount**	**59.77 325**	⇑P	**P**	**02 49 38.6**	**0.0**	
	baz=60,SNR=6.9						
IRM	**Iron Mountain**	**59.81 323**	⇑P	**P**	**02 49 38.8**	**-0.1**	
	baz=60,SNR=6.6						
U15A	**North Rim**	**59.90 327**	⇓P	**P**	**02 49 39.5**	**+0.1**	
	baz=60						
S17A	**Black Ridge (B**	**60.06 329**	⇓P	**P**	**02 49 40.3**	**-0.2**	
	baz=60						
Q19A	**Hogan Spring (**	**60.35 331**	⇑P	**P**	**02 49 42.9**	**+0.4**	
	baz=60						
V13A	**Grand Canyon W**	**60.38 326**	⇓P	**P**	**02 49 43.1**	**+0.4**	
	baz=60						
S16A	**Weppner Ranch,**	**60.52 329**	⇑P	**P**	**02 49 43.8**	**+0.1**	
	baz=61						
GMRC	**Granite Mounta**	**60.55 324**	⇑P	**P**	**02 49 44.1**	**+0.2**	
	baz=61						
R17A	**Hanksville Air**	**60.62 330**	⇑P	**P**	**02 49 44.0**	**-0.3**	
	baz=61,SNR=6.0						
V12A	**Nelson**	**60.77 325**	⇓P	**P**	**02 49 45.2**	**-0.2**	
	baz=61						
P19A	**Cripple Cowboy**	**60.77 332**	⇓P	**P**	**02 49 45.8**	**+0.4**	
	baz=61						
U13A	**Pakoon Wash**	**60.78 326**	⇑P	**P**	**02 49 45.4**	**-0.1**	
	baz=61						
T14A	**Hurricane**	**60.79 327**	⇑P	**P**	**02 49 45.6**	**+0.1**	
	baz=61						
Q18A	**Rafter H Ranch**	**60.88 331**	⇑P	**P**	**02 49 46.0**	**-0.1**	
	baz=61						
R16A	**Teasdale**	**60.90 329**	⇓P	**P**	**02 49 46.2**	**0.0**	
	baz=61						
SRU	**San Rafael**	**61.08 330**	⇓P	**P**	**02 49 47.3**	**-0.1**	
	baz=61						
SRU	**San Rafael**	**61.08 330**	*e*P	**P**	**02 49 47.4**	**-0.1**	
TUQ	**Turquoise Moun**	**61.16 324**	⇓P	**P**	**02 49 48.3**	**+0.2**	
	baz=61						
V11A	**Goodsprings**	**61.17 325**	⇑P	**P**	**02 49 48.0**	**-0.2**	
	baz=61						
CCUT	**Cedar City**	**61.30 327**	*e*P	**P**	**02 49 49.0**	**0.0**	
O19A	**Miners Draw (B**	**61.37 332**	⇓P	**P**	**02 49 49.5**	**+0.1**	
	baz=62						
P17A	**Butcher Ranch,**	**61.46 331**	⇑P	**P**	**02 49 49.7**	**-0.3**	
	baz=62						
ARUT	**Antelope Range**	**61.52 327**	*e*P	**P**	**02 49 50.9**	**+0.4**	
S13A	**Holt Ranch, En**	**61.59 327**	⇓P	**P**	**02 49 51.2**	**+0.3**	
	baz=62,SNR=12						
SHOC	**Shoshone**	**61.70 324**	⇑P	**P**	**02 49 51.5**	**-0.2**	
	baz=62						
O18A	**Roosevelt**	**61.75 332**	⇑P	**P**	**02 49 52.0**	**+0.1**	
	baz=62						
N19A	**John Jarvie Ra**	**61.87 333**	⇓P	**P**	**02 49 52.2**	**-0.6**	
	baz=62,SNR=11						
Q15A	**Fillmore**	**61.90 329**	⇑P	**P**	**02 49 53.3**	**+0.3**	
	baz=62						
EDW2	**Edwards Air Fo**	**61.98 322**	⇑P	**P**	**02 49 53.6**	**-0.1**	
	baz=62						
O17A	**Robinson Place**	**62.03 331**	⇑P	**P**	**02 49 53.7**	**-0.1**	
	baz=62,SNR=6.0						
T11A	**Corn Creek, Al**	**62.07 326**	⇓P	**P**	**02 49 54.1**	**-0.1**	
	baz=62,SNR=7.1						
R13A	**O'Grain Ranch,**	**62.09 327**	⇑P	**P**	**02 49 55.1**	**+0.8**	
	baz=62						
U10A	**Ash Meadows, A**	**62.10 324**	⇓P	**P**	**02 49 54.5**	**+0.2**	
	baz=62						
S12A	**Delamar Landin**	**62.14 326**	⇓P	**P**	**02 49 55.2**	**+0.6**	
	baz=62						
Q14A	**Sevier Lake (B**	**62.34 328**	⇑P	**P**	**02 49 55.9**	**0.0**	
	baz=62,SNR=6.7						
TPNV	**Topopah Spring**	**62.43 325**	*e*P	**P**	**02 49 56.2**	**-0.4**	
	3.0nm,0.9s,mb4.4						
FURC	**Furnace Creek,**	**62.43 324**	⇓P	**P**	**02 49 56.8**	**+0.2**	
	baz=62						
DAU	**Daniels Canyon**	**62.45 331**	*e*P	**P**	**02 49 55.5**	**-1.1**	
MPMC	**Manual Prospec**	**62.51 323**	⇓P	**P**	**02 49 57.1**	**0.0**	
	baz=63						
N17A	**Moffit Pass**	**62.66 331**	⇓P	**P**	**02 49 58.3**	**+0.3**	
	baz=63						
P14A	**Drum Mountains**	**62.70 329**	⇑P	**P**	**02 49 58.5**	**+0.2**	
	baz=63,SNR=5.5						
Q13A	**Wheeler Ranch,**	**62.70 328**	⇑P	**P**	**02 49 58.5**	**+0.1**	
	baz=63,SNR=5.4						
ISA	**Isabella**	**62.81 323**	⇓P	**P**	**02 49 59.4**	**+0.3**	
	baz=63						
DUG	**Dugway**	**63.03 330**	*e*P	**P**	**02 50 00.5**	**0.0**	
	5.3nm,0.8s,mb4.7						
P13A	**Bates Ranch, G**	**63.07 328**	⇑P	**P**	**02 50 01.3**	**+0.5**	
	baz=63						
R11A	**Troy Canyon, C**	**63.08 326**	⇑P	**P**	**02 50 01.1**	**+0.3**	
	baz=63						
GRAC	**Grapevine Rang**	**63.10 324**	⇓P	**P**	**02 50 01.0**	**0.0**	
	baz=63						
Q12A	**Willow Creek R**	**63.18 327**	⇑P	**P**	**02 50 01.7**	**+0.1**	
	baz=63						
S10A	**Tonopah Range,**	**63.32 325**	⇑P	**P**	**02 50 02.7**	**+0.2**	
	baz=63,SNR=6.5						
M16A	**Huntsville**	**63.33 331**	⇓P	**P**	**02 50 02.4**	**-0.1**	
	baz=64						
R10A	**Warm Springs**	**63.42 326**	⇑P	**P**	**02 50 03.9**	**+0.8**	
	baz=64						
Q11A	**Duckwater**	**63.48 327**	⇓P	**P**	**02 50 03.6**	**+0.1**	
	baz=64,SNR=7.6						
S09A	**Goldfield**	**63.53 325**	⇓P	**P**	**02 50 03.7**	**-0.1**	
	baz=64						
HWUT	**Hardware Ranch**	**63.53 331**	*e*P	**P**	**02 50 03.4**	**-0.4**	
	5.6nm,0.9s,mb4.6						
P12A	**McGill**	**63.54 328**	⇑P	**P**	**02 50 04.4**	**+0.5**	
	baz=64,SNR=6.0						
PDAR	**Pinedale Array**	**63.55 334**	P	**P**	**02 50 03.0**	**-0.9**	
	1.9nm,0.9s,mb4.1,baz=134,slow=8.5,SNR=7.8						
AGMN	**Agassiz Refuge**	**63.82 346**	*e*P	**P**	**02 50 04.7**	**-0.9**	
HELL	**Mitchell Peak**	**63.83 323**	⇑P	**P**	**02 50 05.7**	**-0.2**	
	baz=64						
S08C	**White Mtn Res**	**63.90 324**	⇑P	**P**	**02 50 06.7**	**+0.4**	
	baz=64,SNR=5.8						
MTUM	**Tungsten Hills**	**64.03 324**	*e*P	**P**	**02 50 07.1**	**-0.1**	
O12A	**Currie**	**64.05 328**	⇓P	**P**	**02 50 07.3**	**0.0**	
	baz=64						
L15A	**Malad City**	**64.22 331**	⇓P	**P**	**02 50 07.5**	**-0.8**	
	baz=64						
M14A	**Sheep Mountain**	**64.29 330**	⇓P	**P**	**02 50 08.5**	**-0.3**	
	baz=64						
KCC	**Kaiser Creek**	**64.44 323**	⇑P	**P**	**02 50 09.7**	**-0.2**	
	baz=64						
NVAR	**Mina Array Bea**	**64.63 325**	P	**P**	**02 50 10.6**	**-0.5**	
	2.4nm,0.7s,mb4.3,baz=136,slow=6.5,SNR=18						
L14A	**Malta**	**64.65 331**	⇑P	**P**	**02 50 10.7**	**-0.5**	
	baz=65						
LOHW	**Long Hollow**	**64.69 333**	*e*P	**P**	**02 50 11.0**	**-0.3**	
	34nm,2.1s,mb5.0						
Q08A	**Gabbs**	**64.72 325**	⇓P	**P**	**02 50 11.4**	**-0.3**	
	baz=65						
RRI2	**Red Ridge**	**64.79 333**	*e*P	**P**	**02 50 12.1**	**0.0**	
	7.5nm,0.8s,mb4.8						
O10A	**Cortez Mining,**	**64.98 327**	⇓P	**P**	**02 50 13.5**	**+0.1**	
	baz=65						
L13A	**Double Diamond**	**65.03 330**	⇑P	**P**	**02 50 13.8**	**+0.2**	
	baz=65						
S05C	**Merced**	**65.05 323**	⇓P	**P**	**02 50 14.2**	**+0.3**	
	baz=65						
IMW	**Indian Meadow**	**65.06 333**	*e*P	**P**	**02 50 13.3**	**-0.4**	
S06C	**San Francisco**	**65.13 323**	⇑P	**P**	**02 50 14.4**	**0.0**	
	baz=65						
O09A	**Fish Creek Ran**	**65.25 327**	⇓P	**P**	**02 50 15.4**	**+0.3**	
	baz=65						
J15A	**Blackfoot**	**65.33 332**	⇓P	**P**	**02 50 15.9**	**+0.3**	
	baz=66						
PACP	**Pacheco Peak**	**65.39 322**	⇑P	**P**	**02 50 16.2**	**+0.1**	
	baz=66						
M11A	**Holland Ranch,**	**65.45 329**	⇓P	**P**	**02 50 17.1**	**+0.7**	
	baz=66						
CMB	**Columbia Colle**	**65.54 323**	⇓P	**P**	**02 50 17.4**	**+0.3**	
	baz=66						
ULM	**Lac du Bonnet**	**65.65 347**	P	**P**	**02 50 15.9**	**-1.6**	
	6.4nm,0.8s,mb4.7,baz=178,slow=4.3,SNR=8.4						
J14A	**Carey**	**65.77 331**	⇓P	**P**	**02 50 18.1**	**-0.3**	
	baz=66,SNR=5.3						
R05C	**Kirkwood Meado**	**65.82 324**	⇑P	**P**	**02 50 19.5**	**+0.7**	
	baz=66						
H16A	**Russell Place,**	**65.84 334**	⇑P	**P**	**02 50 19.3**	**+0.5**	
	baz=66						
O08A	**Rochester Mine**	**65.86 326**	⇓P	**P**	**02 50 18.8**	**-0.3**	
	baz=66,SNR=7.1						
K12A	**Draper Farm, C**	**65.91 330**	⇓P	**P**	**02 50 19.7**	**+0.4**	
	baz=66						
N09A	**Rock Creek Ran**	**65.92 327**	⇓P	**P**	**02 50 20.3**	**+0.8**	
	baz=66						
L11A	**Cat Creek Ranc**	**65.97 329**	⇑P	**P**	**02 50 19.8**	**0.0**	
	baz=66,SNR=5.7						
GCMT	**Greycliff**	**66.06 335**	*e*P	**P**	**02 50 19.8**	**-0.4**	
PAHR	**Pah Rah Range**	**66.12 325**	*e*P	**P**	**02 50 21.4**	**+0.7**	
	9.5nm,0.9s,mb4.8						
J13A	**Cove Ranch, Pi**	**66.14 331**	⇓P	**P**	**02 50 20.8**	**+0.1**	
	baz=66						
O07A	**Toulon**	**66.16 326**	⇓P	**P**	**02 50 20.5**	**-0.5**	
	baz=66,SNR=8.9						
I14A	**Mackay**	**66.21 332**	⇓P	**P**	**02 50 21.7**	**+0.5**	
	baz=66						
L10A	**Juniper Basin**	**66.27 329**	⇓P	**P**	**02 50 21.6**	**0.0**	
	baz=66,SNR=6.5						
M09A	**Marrel Ranch,**	**66.29 328**	⇓P	**P**	**02 50 22.1**	**+0.3**	
	baz=66						
HLID	**Hailey**	**66.37 331**	⇓P	**P**	**02 50 22.4**	**+0.1**	
	baz=66						
H15A	**Lima**	**66.38 333**	⇓P	**P**	**02 50 23.0**	**+0.7**	
	baz=66						
J12A	**Stokes Ranch,**	**66.46 330**	⇑P	**P**	**02 50 24.2**	**+1.3**	
	baz=67						
I13A	**Wildhorse Cree**	**66.50 331**	⇓P	**P**	**02 50 23.2**	**+0.1**	
	baz=67,SNR=5.7						
P05C	**Yuba Gap, Truc**	**66.53 324**	⇓P	**P**	**02 50 23.7**	**+0.4**	
	baz=67						
K11A	**Parker Ranch,**	**66.56 329**	⇓P	**P**	**02 50 23.2**	**-0.3**	
	baz=67						
MCMT	**McKenzie Canyo**	**66.63 333**	*e*P	**P**	**02 50 23.7**	**-0.2**	
N07B	**Gerlach**	**66.64 326**	⇓P	**P**	**02 50 24.0**	**-0.1**	
	baz=67						
O06A	**Flanigan**	**66.68 325**	⇓P	**P**	**02 50 24.2**	**-0.1**	
	baz=67						
H14A	**Leadore**	**66.70 332**	⇑P	**P**	**02 50 24.6**	**+0.3**	
	baz=67						
G15A	**Dillon**	**66.74 333**	⇓P	**P**	**02 50 25.1**	**+0.5**	
	baz=67						
BOZ	**Bozeman (W)**	**66.75 334**	*e*P	**P**	**02 50 24.2**	**-0.4**	
BEKR	**Beckwourth**	**66.77 325**	⇑P	**P**	**02 50 25.5**	**+0.6**	
	baz=67						
M08A	**Happy Creek Ra**	**66.80 327**	⇑P	**P**	**02 50 25.3**	**+0.3**	
	baz=67						
MFID	**Camas Ranch**	**66.94 330**	⇓P	**P**	**02 50 26.1**	**+0.2**	
	baz=67						
DLMT	**Dillon**	**66.94 333**	*e*P	**P**	**02 50 25.9**	**0.0**	
K10A	**MacKenzie Ranc**	**66.98 329**	⇑P	**P**	**02 50 26.4**	**+0.2**	
	baz=67						
H13A	**Challis**	**67.06 332**	⇑P	**P**	**02 50 26.8**	**+0.1**	
	baz=67						
N06A	**Buffalo Meadow**	**67.09 326**	⇑P	**P**	**02 50 27.3**	**+0.4**	
	baz=67,SNR=7.6						
O05C	**Quincy**	**67.15 325**	⇑P	**P**	**02 50 27.7**	**+0.4**	
	baz=67						
M07A	**Soldier Meadow**	**67.18 327**	⇑P	**P**	**02 50 27.5**	**+0.1**	
	baz=67						
ORV	**Oroville**	**67.21 324**	⇓P	**P**	**02 50 28.2**	**+0.5**	
	baz=67,SNR=12						
K09A	**Rome**	**67.36 328**	⇓P	**P**	**02 50 28.7**	**+0.2**	
	baz=68,SNR=8.2						
G13A	**Cobalt**	**67.46 332**	⇑P	**P**	**02 50 29.1**	**-0.1**	
	baz=68						
L07A	**Adell**	**67.71 327**	⇑P	**P**	**02 50 31.1**	**+0.3**	
	baz=68						
K08A	**Mann Creek Ran**	**67.77 328**	⇓P	**P**	**02 50 31.5**	**+0.3**	
	baz=68						
C17A	**Wharram Farm,**	**67.99 336**	⇑P	**P**	**02 50 32.0**	**-0.5**	
	baz=68						
F13A	**Darby**	**68.04 333**	⇓P	**P**	**02 50 32.8**	**0.0**	
	baz=68						
K07A	**Rock Creek Ran**	**68.13 328**	⇓P	**P**	**02 50 33.1**	**-0.4**	
	baz=68						
MOD	**Modoc**	**68.14 326**	⇓P	**P**	**02 50 33.4**	**-0.1**	
	baz=68						
E14A	**Clinton**	**68.16 334**	⇑P	**P**	**02 50 34.0**	**+0.5**	
	baz=68						
M05C	**Lookout**	**68.23 325**	⇓P	**P**	**02 50 34.0**	**-0.1**	
	baz=68,SNR=6.4						
F12A	**Elk City**	**68.43 332**	⇑P	**P**	**02 50 35.2**	**-0.1**	
	baz=68						
E13A	**Victor**	**68.48 333**	⇑P	**P**	**02 50 36.2**	**+0.7**	
	baz=69						
C16A	**Fuhringer Ranc**	**68.52 335**	⇓P	**P**	**02 50 35.8**	**0.0**	
	baz=69						
SCHQ	**Schefferville**	**68.59 6**	P	**P**	**02 50 35.3**	**-0.7**	
	5.1nm,0.8s,mb4.5,baz=185,slow=11,SNR=2.8						
G11A	**Walters Elk Ra**	**68.63 331**	⇓P	**P**	**02 50 36.2**	**-0.3**	
	baz=69						
D14A	**Greenough**	**68.68 334**	⇓P	**P**	**02 50 36.4**	**-0.4**	
	baz=69						
K06A	**Valley Falls**	**68.74 327**	⇓P	**P**	**02 50 37.3**	**+0.1**	
	baz=69,SNR=6.4						
C15A	**Salmond Ranch,**	**68.85 335**	⇑P	**P**	**02 50 38.2**	**+0.4**	
	baz=69,SNR=5.4						
M04C	**Macdoel**	**68.90 325**	⇓P	**P**	**02 50 38.3**	**+0.1**	
	baz=69						
G10A	**Bishop Farm, J**	**68.95 331**	⇑P	**P**	**02 50 38.8**	**+0.2**	
	baz=69						
J06A	**Christmas Vall**	**69.00 328**	⇑P	**P**	**02 50 39.2**	**+0.3**	
	baz=69						
K05A	**Summer Lake**	**69.03 327**	⇓P	**P**	**02 50 40.2**	**+1.2**	
	baz=69						
E12A	**Beaver Dam Sad**	**69.07 332**	⇑P	**P**	**02 50 39.0**	**-0.2**	
	baz=69						
N02C	**Big Bar**	**69.08 324**	⇑P	**P**	**02 50 39.3**	**-0.2**	
	baz=69						
D13A	**Huson**	**69.10 333**	⇑P	**P**	**02 50 39.2**	**-0.2**	
	baz=69						
H08A	**Prairie City**	**69.14 329**	⇑P	**P**	**02 50 39.7**	**0.0**	
	baz=69,SNR=7.0						
L04A	**Klamath Falls**	**69.19 326**	⇑P	**P**	**02 50 40.3**	**+0.2**	
	baz=69						
I07A	**Izee**	**69.25 328**	⇑P	**P**	**02 50 40.6**	**+0.2**	
	baz=69,SNR=5.5						
G09A	**Cove**	**69.26 330**	⇓P	**P**	**02 50 40.3**	**-0.1**	
	baz=69,SNR=8.7						
B15A	**Bradely Ranch,**	**69.26 335**	⇓P	**P**	**02 50 39.9**	**-0.5**	
	baz=69						
E11A	**Bogner Ranch,**	**69.32 332**	⇓P	**P**	**02 50 40.2**	**-0.6**	
	baz=69						
C14A	**Swan Lake**	**69.32 334**	⇓P	**P**	**02 50 40.9**	**+0.2**	
	baz=69						
YBH	**Yreka Blue Hor**	**69.35 325**	⇓P	**P**	**02 50 40.7**	**-0.3**	
	baz=69						
D12A	**Red Ives Fores**	**69.46 333**	⇓P	**P**	**02 50 41.1**	**-0.6**	
	baz=70						
F10A	**Beach Ranch, E**	**69.51 331**	⇑P	**P**	**02 50 41.8**	**-0.1**	
	baz=70						
I06A	**Prineville**	**69.51 328**	⇓P	**P**	**02 50 42.7**	**+0.7**	
	baz=70						
C13A	**Hot Springs**	**69.60 334**	⇑P	**P**	**02 50 42.8**	**+0.3**	
	baz=70						
G08A	**Pilot Rock**	**69.84 330**	⇑P	**P**	**02 50 44.0**	**0.0**	
	baz=70						
D11A	**Klaveano Farm,**	**69.90 332**	⇓P	**P**	**02 50 44.6**	**+0.3**	
	baz=70						
A14A	**Double T Ranch**	**70.13 335**	⇑P	**P**	**02 50 45.0**	**-0.7**	
	baz=70						
H06A	**Lindquist Farm**	**70.13 329**	⇓P	**P**	**02 50 46.2**	**+0.3**	
	baz=70						
G07A	**Ruggs Ranch, H**	**70.17 329**	⇓P	**P**	**02 50 46.8**	**+0.7**	
	baz=70						
D10A	**Wagner Farm, O**	**70.33 332**	⇑P	**P**	**02 50 46.5**	**-0.4**	
	baz=70						
E09A	**Wood Farm, Sta**	**70.34 331**	⇑P	**P**	**02 50 46.9**	**-0.1**	
	baz=70						
WALA	**Waterton Lakes**	**70.40 335**	*e*P	**P**	**02 50 46.7**	**-0.7**	
C11A	**Tepee Creek (N**	**70.46 333**	⇑P	**P**	**02 50 47.7**	**0.0**	
	baz=71						
K02A	**Glendale**	**70.47 325**	⇓P	**P**	**02 50 47.6**	**-0.3**	
	baz=71						
A13A	**Flathead Natio**	**70.51 335**	⇑P	**P**	**02 50 48.2**	**+0.2**	
	baz=71						
A12A	**Yaak River Ran**	**71.03 334**	⇓P	**P**	**02 50 51.5**	**+0.3**	
	baz=71,SNR=5.4						
A11A	**Hall Mountain,**	**71.35 334**	⇓P	**P**	**02 50 53.3**	**+0.2**	
	baz=72						
B09A	**Rice**	**71.74 332**	⇑P	**P**	**02 50 55.6**	**+0.1**	
	baz=72						
E05A	**Randle**	**72.12 329**	⇓P	**P**	**02 50 57.7**	**-0.2**	
	baz=72						
B08A	**Colville Reser**	**72.23 332**	⇓P	**P**	**02 50 58.4**	**-0.1**	
	baz=72						
SNAA	**Sanae**	**72.23 161**	*e*P	**P**	**02 50 57.6**	**-0.6**	
	12nm,1.3s,mb4.7						
A09A	**Danville**	**72.34 333**	⇑P	**P**	**02 50 59.4**	**+0.3**	
	baz=72						
A07A	**Ashnola River,**	**73.21 332**	⇓P	**P**	**02 51 05.0**	**+0.8**	
	baz=73,SNR=5.4						
EDM	**Edmonton**	**73.47 338**	*e*P	**P**	**02 51 04.5**	**-1.2**	
DBIC	**Dimbokro**	**74.18 79**	P	**P**	**02 51 11.7**	**+0.9**	
	5.0nm,1.1s,mb4.4,baz=300,slow=7.5,SNR=4.1						
DBIC			LR	LR	03 21 26.4		
	comp=Z,58nm,19.2s,MS3.9,baz=177,slow=34						
YKA	**Yellowknife Ar**	**81.30 343**	P	**P**	**02 51 48.5**	**-0.8**	
	2.5nm,0.8s,mb4.2,baz=139,slow=5.7,SNR=5.0						
TORD	**Torodi Ar. Bea**	**82.16 74**	P	**P**	**02 51 55.5**	**+0.6**	

BDR	**Baidarnaya**	**0.75**	**291**	*e*P	Pg	02 44 39.0 +1.3
BDR				*e*S	Sg	02 44 50.5 +3.0
ZLN	**Zelenaya**	**0.97**	**254**	*e*P	Pg	02 44 43.7 +1.8
ZLN				*e*S	Sg	02 44 57.7 +3.1
CIRR	**Tsirk**	**0.98**	**260**	*e*P	Pg	02 44 43.3 +1.3
CIRR				*e*S	Sg	02 44 57.8 +3.0
KLY	**Klyuchi**	**1.01**	**271**	*e*P	Pg	02 44 41.3 -1.4
KLY				*e*S	Sg	02 44 54.7 -1.1
BZGR	**Bezymyannyi-Gr**	**1.06**	**251**	*e*P	Pb	02 44 44.5 +1.0
BZGR				*e*S	Sg	02 44 59.9 +2.7
KRSR	**Krestovskiy**	**1.07**	**266**	*e*P	Pb	02 44 44.3 +0.7
BZWR	**Bezymyannyi-We**	**1.16**	**254**	*e*P	Pb	02 44 46.1 +1.0
BZWR				*e*S	Sb	02 45 02.6 +2.5
BZMR	**Bezymyannaya**	**1.17**	**253**	*e*P	Ph	02 44 46.3 +1.0
BZMR				*e*S	Sb	02 45 02.8 +2.4
KIRR	**Kirishev**	**1.24**	**255**	*e*P	Pn	02 44 47.2 +0.8
KIRR				*e*S	Sb	02 45 04.8 +2.2
KPT	**Kopyto**	**1.30**	**256**	P	Pn	02 44 48.8 +1.5
KMNR	**Kamenistaya**	**1.37**	**247**	*e*P	Pn	02 44 49.8 +1.6
KMNR				*e*S	Sb	02 45 08.7 +2.5
KOZ	**Kozyrevsk**	**1.47**	**262**	*e*P	Pn	02 44 51.5 +1.9
SRDR	**Sredinnyy**	**1.53**	**272**	*e*P	Pn	02 44 51.9 +1.4
SRDR				*e*S	Sn	02 45 13.2 +2.8
SPN	**Mys Shipunski**	**3.51**	**205**	S	Sn	02 46 00.9 +1.9
NLC	**Nalytchevo**	**3.62**	**211**	P	Pn	02 45 20.8 +1.7
NLC				S	Sn	02 46 03.4 +1.6
GNL	**Ganaly**	**3.69**	**227**	*e*P	Pn	02 45 23.2 +3.1
AVH	**Avacha**	**3.73**	**217**	P	Pn	02 45 23.6 +3.0

KRSC 18 02:46:02.8±1.4, 5037N×15913E, h41km±41km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**2.10**	**350**	*e*P	Pn	02 46 37.4	+2.0
RUS				*e*S	Sn	02 47 02.6	+2.3
GRL	**Gorelyy**	**2.28**	**344**	P	Pn	02 46 40.2	+2.3
ALID	**Alaid**	**2.33**	**284**	P	Pn	02 46 40.1	+1.5
MIPR	**Malaya Ipel'ka**	**2.42**	**323**	P	Pn	02 46 42.3	+2.5
MIPR				S	Sn	02 47 11.0	+2.9
PET	**Petropavlovsk**	**2.67**	**354**	P	Pn	02 46 45.8	+2.5
PET				S	Sn	02 47 17.3	+2.9
SPN	**Mys Shipunski**	**2.79**	**11**	S	Sn	02 47 19.8	+2.6
NLC	**Nalytchevo**	**2.81**	**3**	S	Sn	02 47 20.5	+2.8
AVH	**Avacha**	**2.91**	**355**	P	Pn	02 46 49.4	+2.9
GNL	**Ganaly**	**3.41**	**348**	P	Pn	02 46 56.4	+3.0
KBTR	**Krutoberegovo**	**6.25**	**19**	P	Pn	02 47 36.2	+3.8

*IDC **18** 02:50:02.3±1.5, 1181S×16528E, h0km, mb3.9/6, mb1 4.1/6, mb1mx4.0/16, mbtmp3.9/6, Error ellipse: s-maj=65.0km s-min=26.8km az=149.0*
*ISCJB **18** 02:50:06.1±1.2, 119S±0.4×1652E±0.2, h33km, mb3.8/5, Error ellipse: s-maj=58.3km s-min=19.0km az=147.9*
ISC 18 02:50:07.7±1.2, 119S±0.3×1652E±0.2, h35km, n7, σ0§37/7, mb3.8/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**19.95**	**244**	P	**Pn**	**02 54 38.8**	**+0.1**
	3.6nm,0.7s,baz=82,slow=10,SNR=7.3						
WB2	**Warramunga Arr**	**30.69**	**251**	*e*P	**P**	**02 56 19.7**	**+0.2**
ASAR	**Alice Springs**	**31.95**	**244**	P	**P**	**02 56 30.1**	**-0.3**
	1.0nm,0.8s,mb3.7,baz=73,slow=9.2,SNR=10.0						
SONM	**Songino Array**	**79.03**	**324**	P	**P**	**03 02 08.5**	**+0.3**
	0.4nm,0.5s,mb3.6,baz=154,slow=7.5,SNR=2.9						
NVAR	**Mina Array Bea**	**86.97**	**50**	P	**P**	**03 02 49.0**	**-0.5**
	1.5nm,0.9s,mb4.2,baz=229,slow=8.3,SNR=7.3						
MKAR	**Makanchi Array**	**93.78**	**317**	P	**P**	**03 03 20.8**	**-0.3**
	0.2nm,0.5s,mb3.8,baz=96,slow=7.8,SNR=3.5						
TXAR	**Lajitas Array**	**96.69**	**62**	P	**P**	**03 03 35.5**	**+0.6**
	0.2nm,0.8s,mb3.6,baz=243,slow=5.5,SNR=4.0						

*CSEM **18** 03:15:46.4±0.9, 3905N×2788W, h8km±4km, ML2.6, Error ellipse: s-maj=6.3km s-min=3.4km az=169.0, After PDA*
PDA 18 03:15:46.4±0.9, 3905N×2788W, h8km±4km, MD3.6, ML2.6, Error ellipse: s-maj=6.3km s-min=3.4km az=169.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBC	**Serra Branca**	**0.12**	**266**	*e*P	Pg	03 15 49.2	+0.1
SRBC				*i* S	Sg	03 15 51.0	0.0
ROSA	**Rosais**	**0.43**	**221**	*i* P	Pg	03 15 53.5	-1.2
ROSA				*e*S	Sg	03 15 59.6	-0.8
ROSA	**Rosais**	**0.43**	**221**	*e*S	Sg	03 15 59.6	-0.8
PMAN	**Manadas**	**0.44**	**202**	*e*P	Pg	03 15 53.7	-1.3
PMAN				*i* S	Sg	03 15 59.4	-1.4
PMAN				A		03 16 00.3	
	814nm,0.1s						
PMAN	**Manadas**	**0.44**	**202**	*e*P	Pg	03 15 53.7	-1.3
PMAN				*i* S	Sg	03 15 59.4	-1.4
PSCM	**Serra do Cume**	**0.69**	**120**	*e*P	Pg	03 15 58.7	-1.0
PSCM				*e*S	Sg	03 16 06.1	-2.5
PSCM				A		03 16 06.3	
	12nm,0.2s						
PICO	**Pico**	**0.69**	**218**	*e*P	Pg	03 15 58.0	-1.7
PICO				*e*S	Sg	03 16 06.4	-2.3
PCED	**Cedros**	**0.76**	**237**	*e*P	Pg	03 15 58.3	-2.8
PCED				*i* S	Sg	03 16 07.6	-3.4
PCED				A		03 16 10.3	
	289nm,0.5s						
PCED	**Cedros**	**0.76**	**237**	*e*P	Pg	03 15 58.3	-2.8
PCED				*i* S	Sg	03 16 07.6	-3.4
HOR	**Horta**	**0.78**	**229**	*e*P	Pg	03 15 58.6	-2.8
HOR				*e*S	Sg	03 16 08.3	-3.3
CALA	**Caldeira**	**0.79**	**234**	*e*P	Pg	03 15 59.2	-2.4
CALA				*e*S	Sg	03 16 08.4	-3.5

*IDC **18** 03:31:51.6±1.0, 377N×12626E, h0km, mb4.0/8, mb1 4.1/9, mb1mx4.0/20, mbtmp4.0/9, MS3.1/2, Ms1 3.1/2, ms1mx2.8/30, Error ellipse: s-maj=61.4km s-min=16.8km az=74.0*
*NEIC **18** 03:31:53.3±0.5, 376N×12625E, h10km, mb4.3/3, Error ellipse: s-maj=20.5km s-min=8.6km az=76.0*
*ISCJB **18** 03:31:54.9±0.7, 368N±009×126.1E±0.2, h33km, mb4.1/9, Error ellipse: s-maj=27.5km s-min=11.1km az=166.5*
ISC 18 03:31:57.0±0.7, 371N±009×1262E±0.2, h35km, n15, σ0§46/13, mb4.1/9, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.40**	**350**	LR	LR	03 34 22.8	
	comp=Z,269nm,18.1s,baz=133,slow=45						
KAPI	**Kappang**	**10.78**	**217**	Pn	**Pn**	**03 34 28.8**	**-0.1**
	baz=85,slow=23,SNR=1.7						
KAPI				LR	LR	03 37 59.1	
	comp=Z,106nm,21.5s,baz=286,slow=34						
FITZ	**Fitzroy Crossi**	**21.68**	**181**	*e*P	**P**	**03 36 45.2**	**+0.4**
	5.5nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**21.68**	**181**	P	**P**	**03 36 44.6**	**-0.2**
	2.4nm,0.5s,mb3.9,baz=14,slow=12,SNR=7.9						
WRAB	**Tennant Creek**	**24.82**	**161**	*e*P	**P**	**03 37 15.8**	**-0.3**
	16nm,1.1s,mb4.5						
WB2	**Warramunga Arr**	**24.83**	**161**	*e*P	**P**	**03 37 15.9**	**-0.3**
ASAR	**Alice Springs**	**28.23**	**165**	P	**P**	**03 37 47.5**	**+0.8**
	0.5nm,0.3s,mb3.7,baz=345,slow=11,SNR=8.4						
STKA	**Stephens Creek**	**38.30**	**159**	*e*P	**P**	**03 39 14.2**	**-0.1**
	4.0nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**38.30**	**159**	P	**P**	**03 39 13.9**	**-0.4**
	4.2nm,0.7s,mb4.3,baz=307,slow=7.3,SNR=6.0						
SONM	**Songino Array**	**47.15**	**342**	P	**P**	**03 40 25.5**	**-0.3**
	0.3nm,0.5s,mb3.5,baz=122,slow=5.2,SNR=2.8						
MKAR	**Makanchi Array**	**57.26**	**326**	P	**P**	**03 41 41.0**	**0.0**
	1.0nm,0.6s,mb4.0,baz=120,slow=9.0,SNR=7.3						
KURK	**Kurchatov**	**61.47**	**328**	P	**P**	**03 42 09.6**	**-0.5**
	1.5nm,0.6s,mb4.3,baz=127,slow=6.5,SNR=10.0						
BVAR	**Borovoye Array**	**67.04**	**327**	P	**P**	**03 42 47.5**	**+1.0**
	0.6nm,0.4s,mb4.0,baz=221,slow=43,SNR=3.0						
ARCES	**ARCESS Array B**	**90.28**	**340**	P	**P**	**03 44 53.8**	**-0.1**
	2.4nm,0.8s,mb4.6,baz=79,slow=6.7,SNR=2.8						
TORD	**Torodi Ar. Bea**	**122.41**	**288**	PKP	PKPdf	03 50 49.0	-0.6
	0.5nm,0.9s,baz=34,slow=5.4,SNR=2.7						

*ISCJB **18** 03:55:45.2±1.4, 1308N±009×1436E±0.2, h127km±17km, mb3.9/8, Error ellipse: s-maj=32.4km s-min=14.7km az=172.5*
*IDC **18** 03:55:47.1±1.3, 1308N×14380E, h134km±16km, mb3.6/8, mb1 3.7/8, mb1mx3.7/19, mbtmp3.6/8, Error ellipse: s-maj=33.9km s-min=14.7km az=88.0*
*NEIC **18** 03:55:47.2±1.1, 1309N×14374E, h133km±12km, mb4.1/1, Error ellipse: s-maj=23.8km s-min=11.2km az=86.0*
ISC 18 03:55:46.9±1.3, 1309N±009×1437E±02, h128km±16km, n15, σ0§69/15, mb3.9/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.23**	**66**	P	**Pn**	**03 56 12.3**	**+0.5**
	41nm,0.3s,baz=182,slow=7.1,SNR=9.5						
GUMO				S	**Sn**	**03 56 30.6**	**-0.3**
	55nm,0.3s,baz=169,slow=23,SNR=5.1						
MJAR	**Matsushiro Arr**	**23.87**	**349**	P	**P**	**04 00 47.5**	**-1.0**
	1.9nm,0.8s,mb3.5,baz=172,slow=10,SNR=5.4						
KSRS	**Korea Array**	**28.06**	**333**	P	**P**	**04 01 25.9**	**-0.3**
	2.1nm,0.5s,mb3.9,baz=142,slow=8.5,SNR=6.9						
WB2	**Warramunga Arr**	**34.09**	**196**	*e*P	**P**	**04 02 19.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**35.76**	**210**	*e*P	**P**	**04 02 33.7**	**0.0**
	3.2nm,1.0s,mb4.2						
FITZ	**Fitzroy Crossi**	**35.76**	**210**	P	**P**	**04 02 33.5**	**-0.2**
	1.0nm,0.6s,mb3.9,baz=24,slow=17,SNR=5.3						
ASAR	**Alice Springs**	**37.77**	**195**	P	**P**	**04 02 50.5**	**-0.2**
	2.6nm,0.5s,mb4.3,baz=18,slow=13,SNR=51						
DZM	**Mont Dzumac**	**41.45**	**147**	*e*P	**P**	**04 03 22.4**	**+1.2**
DZM	**Mont Dzumac**	**41.45**	**147**	*e*P	**P**	**04 03 21.9**	**+0.7**
STKA	**Stephens Creek**	**44.76**	**183**	P	**P**	**04 03 47.0**	**-0.7**
	1.6nm,0.5s,mb4.0,baz=349,slow=10,SNR=4.5						
STKA	**Stephens Creek**	**44.76**	**183**	P	**P**	**04 03 47.0**	**-0.7**
SONM	**Songino Array**	**46.49**	**326**	P	**P**	**04 04 02.9**	**+1.8**
	1.2nm,0.9s,mb3.6,baz=147,slow=8.3,SNR=4.1						
MKAR	**Makanchi Array**	**61.07**	**316**	P	**P**	**04 05 47.1**	**-0.1**
	0.9nm,0.7s,mb3.9,baz=88,slow=8.6,SNR=6.5						
NVAR	**Mina Array Bea**	**88.11**	**51**	P	**P**	**04 08 23.1**	**-0.2**
	0.8nm,0.6s,mb3.9,baz=259,slow=5.7,SNR=7.5						
TORD	**Torodi Ar. Bea**	**134.20**	**303**	PKP	PKPdf	04 14 50.6	+0.2
	0.1nm,0.5s,baz=48,slow=2.3,SNR=3.6						

*CSEM **18** 03:56:41.0±0.9, 2766N×1525W, h41km±9km, mb3.6/3, Error ellipse: s-maj=11.2km s-min=2.5km az=176.0, After MDD*
MDD 18 03:56:42.0±1.9, 2790N×1525W, h51km±10km, mb3.0/3, Error ellipse: s-maj=31.6km s-min=7.1km az=177.0, PRIMO SIN SOLUCI TT-MODEL: CANARY, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOSO	**Osorio**	**0.32**	**303**	P	Pn	03 56 51.4	0.0
	3.4nm,0.1s,SNR=11						
EOSO				S	Sn	03 56 57.4	-0.7
	16nm,0.1s,SNR=10						
EOSO	**Osorio**	**0.32**	**303**	P	Pn	03 56 51.4	0.0
	3.4nm,0.1s,SNR=11						
EOSO				S	Sn	03 56 57.4	-0.7
	16nm,0.1s,SNR=10						
CFTV	**Fuerteventura**	**1.15**	**63**	S	Sn	03 57 15.8	-0.6
	1.2nm,0.1s,SNR=7.9						
EBAJ	**Bajamar**	**1.16**	**304**	P	Pn	03 57 02.9	+1.1
	1.6nm,0.3s,SNR=4.0						
EBAJ				S	Sn	03 57 16.8	+0.1
	9.6nm,0.2s,SNR=12						
EBAJ	**Bajamar**	**1.16**	**304**	P	Pn	03 57 02.9	+1.0
	1.5nm,0.2s,SNR=4.0						
EBAJ				S	Sn	03 57 16.8	+0.1
	9.6nm,0.2s,SNR=12						
CCAN	**Las Canadas**	**1.24**	**285**	P	Pn	03 57 05.5	+2.6
	0.4nm,0.1s,SNR=4.0						
CCAN				S	Sn	03 57 17.1	-1.6
	1.7nm,0.1s,SNR=18						
CCAN	**Las Canadas**	**1.24**	**285**	P	Pn	03 57 05.1	+2.1
	SNR=7.9						
CCAN				S	Sn	03 57 17.1	-1.6
	1.7nm,0.1s,SNR=18						
CFUE	**Fuerteventura**	**1.38**	**57**	P	Pn	03 57 03.0	-1.8
	3.5nm,0.1s,SNR=4.0						
CFUE				S	Sn	03 57 19.9	-2.1
	12nm,0.1s,SNR=4.0						
CFUE	**Fuerteventura**	**1.38**	**57**	P	Pn	03 57 02.9	-1.9
	3.5nm,0.1s,SNR=4.0						
CFUE				S	Sn	03 57 19.9	-2.0
	12nm,0.1s,SNR=4.0						
CICO	**Icod de los Vi**	**1.38**	**289**	S	Sn	03 57 19.5	-2.5
	0.3nm,0.1s,SNR=4.0						
CICO	**Icod de los Vi**	**1.38**	**289**	S	Sn	03 57 19.2	-2.8
	0.3nm,0.1s,SNR=4.0						
CHIO	**Chio**	**1.43**	**284**	S	Sn	03 57 22.0	-1.1
	4.4nm,0.2s,SNR=7.9						
EGOM	**La Gomera**	**1.75**	**279**	S	Sn	03 57 27.5	-3.7
	4.7nm,0.1s,SNR=7.9						
EGOM	**La Gomera**	**1.75**	**279**	S	Sn	03 57 27.8	-3.3
	2.1nm,0.1s,SNR=7.9						

*ISCJB **18** 04:07:40.6±0.5, 2803N±007×1402E±0.2, h525km±7km, mb3.6/7, Error ellipse: s-maj=27.2km s-min=8.6km az=162.6*
*IDC **18** 04:07:41.3±0.8, 2796N×13953E, h487km±26km, mb3.2/6, mb1 3.2/8, mb1mx3.0/22, mbtmp3.2/8, Error ellipse: s-maj=68.3km s-min=15.3km az=72.0*
*JMA **18** 04:07:41.8±0.1, 28.14N×14027E, h515km, M4.2*
*NEIC **18** 04:07:41.8, 28.14N×14027E, h515km, MG4.2(JMA), After JMA.*
ISC 18 04:07:41.7±0.5, 2806N±008×1403E±02, h521km±7km, n23, σ0§82/27, mb3.6/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.94**	**119**	P	**P**	**04 08 48.5**	**0.0**
	17nm,0.3s,baz=274,slow=19,SNR=5.0						
CBIJ				S	**S**	**04 09 42.1**	**-0.5**
	22nm,0.3s,baz=297,slow=23,SNR=4.8						
CBIJ	**Chichi jima**	**1.94**	**119**	P	**P**	**04 08 48.4**	**-0.1**
CBIJ				S	**S**	**04 09 41.1**	**-1.6**
JHHJ	**Haha-jima-NKT**	**2.21**	**130**	P	**P**	**04 08 50.2**	**+0.4**
JHHJ				*e*S	**S**	**04 09 44.8**	**-0.2**
JHJ2	**Mitsune**	**5.05**	**356**	P	**P**	**04 09 10.1**	**0.0**
JHJ	**Hachijo jima 2**	**5.06**	**355**	P	**P**	**04 09 10.2**	**0.0**
	9.7nm,0.3s,baz=253,slow=20,SNR=6.4						
BSO3	**Boso 3**	**6.72**	**2**	P	**P**	**04 09 26.6**	**+0.9**
JIE	**Ise**	**7.01**	**335**	P	**P**	**04 09 29.6**	**+1.0**
JKN2	**Miekihoku**	**7.05**	**332**	P	**P**	**04 09 29.1**	**+0.2**
JRY	**Ryogami san**	**8.02**	**352**	P	**P**	**04 09 38.6**	**0.0**
JRY				*e*S	**S**	**04 11 12.6**	**-2.0**
JFM	**Mihama**	**8.29**	**335**	P	**P**	**04 09 42.2**	**+0.8**
JWT	**Wachi**	**8.31**	**331**	P	**P**	**04 09 42.0**	**+0.4**
JHO	**Hitachi**	**8.53**	**2**	P	**P**	**04 09 45.1**	**+1.3**
JAD	**Aida**	**8.62**	**324**	P	**P**	**04 09 44.6**	**-0.1**
JHK	**Hiroka**	**9.22**	**354**	P	**P**	**04 09 50.9**	**-0.1**
ZALV	**Zalesovo Beam**	**47.66**	**319**	P	**P**	**04 15 28.6**	**-1.6**
	0.5nm,0.3s,mb3.5,baz=86,slow=7.4,SNR=1.5						
FITZ	**Fitzroy Crossi**	**48.03**	**199**	*e*P	**P**	**04 15 33.2**	**-0.3**
	1.5nm,0.6s,mb3.7						
WB2	**Warramunga Arr**	**48.06**	**188**	*e*P	**P**	**04 15 33.4**	**-0.3**
MKAR	**Makanchi Array**	**48.56**	**309**	P	**P**	**04 15 36.0**	**-1.1**
	0.4nm,0.4s,mb3.3,baz=79,slow=11,SNR=3.3						
KURK	**Kurchatov**	**51.11**	**314**	P	**P**	**04 15 55.4**	**-0.4**
	2.4nm,0.5s,mb3.8,baz=92,slow=7.7,SNR=14						
ASAR	**Alice Springs**	**51.79**	**187**	P	**P**	**04 16 02.0**	**+1.0**
	0.6nm,0.6s,mb3.1,baz=14,slow=14,SNR=12						
BVAR	**Borovoye Array**	**56.19**	**317**	P	**P**	**04 16 31.5**	**-0.2**
	2.4nm,0.4s,mb3.8,baz=91,slow=6.8,SNR=9.0						
ARCES	**ARCESS Array B**	**72.07**	**340**	P	**P**	**04 18 14.0**	**+1.6**
	3.8nm,0.9s,mb3.8,baz=46,slow=6.4,SNR=4.3						
DCID1	**Drake Creek**	**83.25**	**44**	*e*P	**P**	**04 19 12.7**	**-0.6**
	35nm,0.3s						

*NEIC **18** 04:16:16.1±0.9, 6.74S×13023E, h15km, mb4.5/1, Error ellipse: s-maj=40.5km s-min=10.8km az=75.0*
*ISCJB **18** 04:16:17.9±1.1, 69S±0.1×1302E±0.3, h33km, mb4.2/4, Error ellipse: s-maj=37.2km s-min=13.3km az=163.0*
*IDC **18** 04:16:43.3±11.0, 775S×12938E, h264km±123km, mb3.7/3, mb1 3.6/4, mb1mx3.3/14, mbtmp3.6/4, Error ellipse: s-maj=189.2km s-min=32.1km az=66.0*
ISC 18 04:16:20.1±3.3, 69S±02×1302E±03, h35km±31km, n11, σ0§43/14, mb4.2/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.97**	**201**	*e*P	**Pn**	**04 19 08.3**	**0.0**
	7.2nm,0.2s						
FITZ				*e*S	**Sn**	**04 21 09.4**	**-11**
WRAB	**Tennant Creek**	**13.56**	**163**	*e*Pn	**Pn**	**04 19 30.1**	**+0.1**
	4.4nm,0.4s						
WB2	**Warramunga Arr**	**13.57**	**163**	*e*P	**Pn**	**04 19 29.6**	**-0.5**
WB2				*e*S	**Sn**	**04 21 49.3**	**-10**
DAV	**Davao City (W)**	**14.63**	**342**	*e*Pn	**Pn**	**04 19 38.4**	**-6.2**
	0.3nm,0.7s						
ASAR	**Alice Springs**	**17.04**	**168**	P	**Pn**	**04 20 16.5**	**+0.9**
	1.1nm,0.3s,baz=350,slow=9.3,SNR=31						
ASAR				S	**S**	**04 23 13.7**	**-19**
	1.0nm,0.3s,baz=350,slow=26,SNR=12						
FORT	**Forrest**	**23.83**	**185**	*e*P	**P**	**04 21 29.6**	**-0.3**
	14nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**27.02**	**158**	P	**P**	**04 21 58.8**	**-0.1**
	0.7nm,0.4s,mb3.5,baz=326,slow=14,SNR=2.8						
MKAR	**Makanchi Array**	**68.25**	**327**	P	**P**	**04 27 17.7**	**+0.4**
	4.8nm,0.4s,mb4.8,baz=116,slow=8.1,SNR=34						
MKAR	**Makanchi Array**	**68.25**	**327**	P	**P**	**04 27 17.7**	**+0.4**
KURK	**Kurchatov**	**72.54**	**329**	P	**P**	**04 27 43.0**	**-0.4**
	0.9nm,0.5s,mb4.0,baz=125,slow=5.2,SNR=3.8						
KURK	**Kurchatov**	**72.54**	**329**	P	**P**	**04 27 43.0**	**-0.4**

*ISCJB **18** 04:28:46.1±1.0, 561S±02×276W±05, h100km, mb4.2/4, Error ellipse: s-maj=38.6km s-min=17.5km az=157.1*
*NEIC **18** 04:28:46.8±0.7, 5605S×2769W, mb4.4/1, Error ellipse: s-maj=30.2km s-min=14.2km az=66.0*
*IDC **18** 04:28:47.4±1.1, 5605S×2771W, h96km±7km, mb4.0/4, mb1 4.0/4, mb1mx3.6/15, mbtmp4.0/4, MS3.4/2, Ms1 3.5/2, ms1mx3.1/13, Error ellipse: s-maj=33.5km s-min=23.5km az=45.0*
ISC 18 04:28:48.1±1.0, 561S±02×276W±05, h100km, n10, σ0§19/7, mb4.2/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**18.82**	**156**	*e*P	**P**	**04 32 59.4**	**0.0**
	12nm,0.5s						
MAW	**Mawson**	**40.27**	**144**	P	**P**	**04 36 14.6**	**0.0**
	1.6nm,0.6s,mb4.0,baz=251,slow=12,SNR=5.1						
LPAZ	**La Paz**	**50.21**	**306**	P	**P**	**04 37 33.7**	**0.0**
	1.1nm,0.4s,mb4.2,baz=132,slow=8.4,SNR=12						
LPAZ				pP	pP	04 37 56.0	-1.6
	0.9nm,0.7s,baz=148,slow=5.8,SNR=2.5						
LPAZ				LR	LR	04 58 45.7	
	comp=Z,29nm,21.6s,baz=259,slow=36						
LPAZ	**La Paz**	**50.21**	**306**	P	**P**	**04 37 33.7**	**0.0**
LPAZ				pP	pP	04 37 56.0	-1.6
DBIC	**Dimbokro**	**65.26**	**25**	P	**P**	**04 39 18.6**	**-0.3**
	4.2nm,1.0s,mb4.2,baz=190,slow=9.5,SNR=3.8						
DBIC				LR	LR	05 00 12.1	
	comp=Z,47nm,20.2s,baz=314,slow=29						
TORD	**Torodi Ar. Bea**	**73.17**	**30**	P	**P**	**04 40 08.0**	**+0.3**
	3.7nm,0.5s,mb4.5,baz=200,slow=6.7,SNR=209						
TORD				pP	pP	04 40 31.9	-1.2
	1.6nm,0.6s,baz=198,slow=6.2,SNR=4.6						
TORD	**Torodi Ar. Bea**	**73.17**	**30**	P	**P**	**04 40 08.0**	**+0.3**
TORD				pP	pP	04 40 31.9	-1.2
EDM	**Edmonton**	**129.55**	**309**	*e*PKPdf	PKPdf	04 47 43.4	-0.5
SONM	**Songino Array**	**150.94**	**87**	PKPbc	PKPbc	04 48 27.6	-0.3
	0.9nm,0.5s,baz=215,slow=3.5,SNR=5.8						
SONM				pPKPbc	pPKPbc	04 48 54.6	-0.6
	0.7nm,0.5s,baz=228,slow=1.7,SNR=2.4						
SONM	**Songino Array**	**150.94**	**87**	pPKPbc	pPKPbc	04 48 54.6	-0.6

*ISCJB **18** 04:46:09.3±1.5, 376N±0.1×722E±0.2, h138km±25km, Error ellipse: s-maj=38.4km s-min=6.1km az=145.9*
*NNC **18** 04:46:19.6±10.0, 3800N×7155E, h160km±108km, mb2.7, mpv3.5, Error ellipse: s-maj=97.4km s-min=70.1km az=12.0*
ISC 18 04:46:10.7±1.3, 376N±01×723E±03, h130km±21km, n15, σ0§85/17, 3C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.64**	**346**	⇑Pn	**Pn**	**04 47 35.0**	**+2.6**
	2.3nm,0.3s,baz=165,slow=12,SNR=3.8						
KK31				Sn	**Sn**	**04 48 35.1**	**-0.9**
	25nm,0.5s,baz=172,slow=23,SNR=37						
DLH	**Dalhousie**	**5.88**	**149**	*e*P	**Sn**	**04 48 42.0**	**+0.1**
DANN	**Dangsing**	**13.31**	**131**	*e*P	**Pn**	**04 49 14.0**	**-0.6**
	20nm,0.4s						
GKN	**Gorkha**	**14.10**	**129**	*e*P	**Pn**	**04 49 23.5**	**-1.1**
	17nm,0.3s						
KKN	**Kakani**	**14.64**	**128**	*e*P	**Pn**	**04 49 31.0**	**-0.6**
	15nm,0.4s						
DMN	**Daman**	**14.66**	**129**	*e*P	**Pn**	**04 49 31.7**	**-0.1**
	8.3nm,0.4s						
AB31	**Akbulak array**	**14.68**	**326**	⇑P	**Pn**	**04 49 31.0**	**-0.8**
	0.8nm,0.4s						
PKIN	**Phulchoki**	**14.87**	**129**	*e*P	**Pn**	**04 49 33.6**	**-0.8**
PKI	**Pulchoki**	**14.88**	**129**	*e*P	**Pn**	**04 49 34.3**	**-0.2**
	12nm,0.5s						
GUN	**Gumba**	**14.94**	**127**	*e*P	**Pn**	**04 49 35.3**	**+0.1**
	12nm,0.4s						
JIRN	**Jiri**	**15.31**	**126**	*e*P	**Pn**	**04 49 40.7**	**+0.8**
	29nm,0.4s						
RAMN	**Ramite**	**16.07**	**127**	*e*P

JHHJ eS **Sn** **05 02 29.9 -0.8**

CBIJ **Chichi jima** **1.50 18** P **Pn** **05 02 13.1 +0.8**
394nm,0.3s,baz=202,slow=2.4,SNR=114

CBIJ S **Sn** **05 02 37.0 -0.3**
199nm,0.3s,baz=289,slow=22,SNR=38

CBIJ **Chichi jima** **1.50 18** P **Pn** **05 02 13.4 +1.1**

CBIJ eS **Sn** **05 02 37.3 0.0**

BSO1 **Boso 1** **8.98 356** P **Pn** **05 03 45.9 -0.1**

JOD2 **Odawara 2** **9.82 348** P **Pn** **05 03 57.5 +0.5**

JYN **Shimob** **10.16 345** P **Pn** **05 04 01.9 +0.4**

JRY **Ryogami san** **10.59 348** P **Pn** **05 04 06.2 -0.8**

MJAR **Matsushiro Arr** **11.24 346** P **Pn** **05 04 14.8 -0.7**
0.9nm,0.3s,baz=163,slow=10,SNR=5.2

JFT **Otama** **11.87 355** P **Pn** **05 04 24.3 +0.7**

JMM **Marumori** **12.19 357** P **Pn** **05 04 27.1 -0.5**

JMM eS **Sn** **05 06 31.9 -11**

KSRS **Korea Array** **16.57 319** P **Pn** **05 05 22.3 +0.4**
0.2nm,0.3s,baz=146,slow=12,SNR=3.8

ASAJ **Asahikawa** **18.43 2** P **P** **05 05 47.0 +5.6**
0.4nm,0.3s,baz=180,slow=14,SNR=4.6

WRAB **Tennant Creek** **45.88 190** *e*P **P** **05 09 44.5 +0.4**
10nm,0.6s,mb4.6

WB2 **Warramunga Arr** **45.88 190** *e*P **P** **05 09 43.9 -0.3**

FITZ **Fitzroy Crossi** **46.21 201** *e*P **P** **05 09 46.0 -0.7**
3.2nm,0.6s,mb4.1

ASAR **Alice Springs** **49.61 189** P **P** **05 10 12.2 -0.6**
0.6nm,0.7s,mb3.4,baz=13,slow=14,SNR=8.5

STKA **Stephens Creek** **57.22 180** *e*P **P** **05 11 08.9 +0.9**
1.4nm,0.4s,mb4.1

STKA **Stephens Creek** **57.22 180** P **P** **05 11 08.9 +0.9**
2.2nm,0.6s,mb4.2,baz=6.3,slow=9.2,SNR=5.9

PLCA **Paso Flores** **149.35 127** PKPbc PKPbc 05 21 09.5 +2.3
2.2nm,1.0s,baz=256,slow=4.5,SNR=4.0

LPAZ **La Paz** **150.72 77** PKPbc PKPbc 05 21 15.9 +4.7
0.7nm,0.4s,baz=265,slow=1.5,SNR=5.9

ISCJB ***18*** *05:21:20.6±1.5, 4485N±004×150E±02, h4km±11km, Error ellipse: s-maj=27.4km s-min=5.9km az=175.1*
VIE ***18*** *05:21:20.8±0.7, 4479N×1484E, h11km±2km, mb1.8/2, ML2.6/1, Error ellipse: s-maj=4.2km s-min=3.6km az=7.0 70 km SSE of Rijeka*
CSEM ***18*** *05:21:20.9±0.2, 4478N×1492E, h25km, ML2.6/1, Error ellipse: s-maj=9.7km s-min=2.3km az=82.0*

ISC 18 05:21:21.6±1.2, 4481N±005×150E±03, h14km±9km, n4, σ0s77/11, 5C-2D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NVLJ	**Novalja**	**0.25**	**194**	*e*Pg		**Pg**	**05 21 26.9**		**0.0**
NVLJ				Sg		**Sg**	**05 21 31.1**		**+0.6**
VOY	**Vojsko**	**1.44**	**329**	*e*Pg		**Pg**	**05 21 49.3**		**+0.1**
VOY				*e*Sg		**Sg**	**05 22 08.2**		**+0.3**
OBKA	**Obir**	**1.73**	**351**	⇓*i*Pn		**Pn**	**05 21 51.1**		**-0.1**
OBKA				⇑*i*Pg		**Pg**	**05 21 53.9**		**-0.9**
OBKA				⇑*i*Sn		**Sn**	**05 22 14.3**		**+1.2**
OBKA				⇑*i*Sg		**Sg**	**05 22 18.1**		**+0.9**
	25nm,0.5s								
MYKA	**Terra Mystica**	**2.04**	**334**	⇑*i*Pn		**Pn**	**05 21 54.8**		**-0.8**
MYKA				⇓*i*Pg		**Pg**	**05 21 59.3**		**-1.5**
MYKA				⇑*i*Sg		**Sg**	**05 22 27.4**		**+0.1**
	8.3nm,0.4s								

NEIC 18 05:23:17.9, 3820S×17559E, h188km, MG3.9(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FWVZ	**Far West T-bar**	**1.05**	**182**	P			Pn	05 23 47.8	+1.1
TUVZ	**Tukino**	**1.07**	**177**	P			Pn	05 23 48.0	+1.1
WNVZ	**Wahianoa**	**1.13**	**180**	P			Pn	05 23 48.4	+1.1
BKZ	**Black Stump Fm**	**1.20**	**144**	P			Pn	05 23 47.7	-0.1
URZ	**Urewera**	**1.20**	**93**	*e*P			Pn	05 23 47.8	-0.1
MWZ	**Matawai**	**1.53**	**96**	P			Pn	05 23 50.9	+0.1
TSZ	**Takapari Road**	**1.88**	**171**	P			Pn	05 23 54.3	+0.1
MRZ	**Mangatainoka R**	**2.46**	**180**	P			Pn	05 24 00.3	-0.2
MRZ				S			Sn	05 24 28.0	-5.8
KIW	**Kapiti Island**	**2.71**	**191**	P			Pn	05 24 03.5	+0.1
CAW	**Cannon Point**	**2.93**	**188**	P			Pn	05 24 05.9	-0.1
MTW	**Mount Morrison**	**2.96**	**181**	P			Pn	05 24 05.4	-0.9
TCW	**Tory Channel**	**3.18**	**198**	P			Pn	05 24 09.4	+0.5
TCW				S			Sn	05 24 45.3	-3.6
PAWZ	**Paruwai Farm**	**3.18**	**182**	P			Pn	05 24 08.2	-0.8
MSWZ	**Moikau Station**	**3.22**	**185**	P			Pn	05 24 08.9	-0.6
QRZ	**Quartz Range**	**3.53**	**221**	*e*P			Pn	05 24 14.8	+1.5

MAN 18 05:34:18, 1003N×12657E, h33km, mb4.5, ML3.3, MS3.2, 2C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.09**	**257**	⇓*i*P			Pn	05 34 34.6	-2.4
SCPH				*i*S			Sn	05 34 45.7	-5.2
BUTP	**Butuan**	**1.41**	**222**	*e*P			Pn	05 34 40.4	-0.9
BUTP				*e*S			Sn	05 35 01.6	+2.8
MSLP	**Maasin**	**1.68**	**274**	*e*P			Pn	05 34 45.9	+0.8
MSLP				*e*S			Sn	05 35 04.3	-1.3
BIPH	**Bislig**	**1.84**	**186**	⇓*e*P			Pn	05 34 48.3	+0.9
BIPH				*i*S			Sn	05 35 15.3	+5.8
PLP	**Palo**	**1.93**	**306**	⇓*e*P			Pn	05 34 50.4	+1.9
PLP				*e*S			Sn	05 35 13.1	+1.5
BUKP	**Musuan**	**2.60**	**215**	*e*P			Pn	05 34 59.5	+1.7
BUKP				*e*S			Sn	05 35 30.6	+2.4
TBP	**Tagbilaran**	**2.69**	**263**	*e*P			Pn	05 34 59.6	+0.7
TBP				*e*S			Sn	05 35 28.6	-1.7
DCPH	**Dipolog City**	**3.48**	**246**	⇑*e*P			Pn	05 35 10.7	+0.8
DCPH				*e*S			Sn	05 35 49.5	-0.5
RCP	**Roxas**	**4.05**	**292**	⇑*i*P			Pn	05 35 20.2	+2.5
PVCP	**Virac**	**4.26**	**327**	*e*P			Pn	05 35 31.5	+11

MAN 18 05:37:31, 992N×12648E, h7km, mb4.5, ML3.3, MS3.2, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.98**	**262**	*e*P			Pg	05 37 48.5	-1.5
SCPH				*e*S			Sg	05 37 59.6	-3.2
BUTP	**Butuan**	**1.27**	**222**	*e*P			Pn	05 37 54.2	-0.9
BUTP				*e*S			Sb	05 38 12.9	+1.1
MSLP	**Maasin**	**1.61**	**278**	*e*P			Pn	05 37 59.8	0.0
MSLP				*e*S			Sn	05 38 17.4	-3.4
BIPH	**Bislig**	**1.73**	**184**	⇑*e*P			Pn	05 38 01.2	-0.3
BIPH				*i*S			Sn	05 38 29.2	+5.4
PLP	**Palo**	**1.93**	**310**	⇓*e*P			Pn	05 38 05.0	+0.8
PLP				*e*S			Sn	05 38 26.8	-1.8
BUKP	**Musuan**	**2.46**	**215**	*e*P			Pn	05 38 13.4	+1.8
BUKP				*e*S			Sn	05 38 44.4	+2.4
TBP	**Tagbilaran**	**2.59**	**265**	*e*P			Pn	05 38 13.6	+0.3
TBP				*e*S			Sn	05 38 42.6	-2.4
DCPH	**Dipolog City**	**3.36**	**247**	⇑*e*P			Pn	05 38 24.0	+0.1
DCPH				*e*S			Sn	05 39 02.6	-1.6
RCP	**Roxas**	**4.01**	**294**	⇑*e*P			Pn	05 38 35.1	+2.2

IDC ***18*** *06:10:52.8±0.6, 1543S×17993E, h0km, mb4.6/16, mb1 4.7/17, mb1mx4.7/20, mbtmp4.6/17, MS5.0/14, Ms1 4.9/14, ms1mx4.8/22, Error ellipse: s-maj=18.7km s-min=15.9km az=125.0*
ISCJB ***18*** *06:10:57.3±0.2, 1553S±005×17990E±004, h40km, mb4.9/76, MS5.1/189, Error ellipse: s-maj=8.3km s-min=4.9km az=153.0*
MOS ***18*** *06:10:57.7±1.5, 1545S×17989E, h33km, mb5.2/33, MS5.1/32, Error ellipse: s-maj=10.6km s-min=8.3km az=141.0*
BJI ***18*** *06:10:58.6, 1567S×17962E, h36km, mB5.4, mb5.0, Ms5.5, Msz5.2*
NEIC ***18*** *06:10:59.4±0.2, 1542S×17989E, mb5.0/55, MS5.2/165, Error ellipse: s-maj=11.4km s-min=6.4km az=148.0*
GCMT ***18*** *06:10:59.4±0.1, 1524S×17997W, h12km, MW5.5/110, Moment Tensor Solution. s93,c155; s110,c204; Duration: 1s3 Moment tensor: Scale 10^17Nm; Mrr0.25±.02; Mθθ-1.92±.02; Mφφ1.67±.02; Mrθ-0.18±.05; Mθφ0.77±.02; Mφr-0.02±.06; Best double couple: M◎1.95900×10^17 NP1:φs147.00000°, δ85.00000°, λ-178.00000°. NP2:φs57.00000°, δ88.00000°, λ-5.00000°. Principal axes: T 1.8290, Plg2.0000°, Azm102.0000°; N*

0.2640, Plg85.0000°, Azm217.0000°; P -2.0900, Plg4.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
DJA ***18*** *06:11:00, 1638S×17988E, h10km, mb5.1/11*

ISC 18 06:10:59.2±0.2, 1552S±005×17992E±004, h42km±1.2km: pP-P, n657, σ0s82/432, mb4.9/76, MS5.1/189, 123C-150D, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.19**	**80**	Pn			**Pn**	**06 12 53.1**	**-2.5**
	1.1nm,0.3s,baz=259,slow=18,SNR=2.6								
AFI						LR	LR	06 15 25.2	
	comp=Z,10μm,21.8s,baz=254,slow=33								
AFI	**Afiamalu**	**8.19**	**80**	*e*Pn			**Pn**	**06 12 55.6**	**0.0**
RAO	**Raoul Island**	**13.81**	**172**	Pn			**Pn**	**06 14 11.0**	**-1.4**
	41nm,0.3s,baz=343,slow=20,SNR=3.3								
RAO						LR	LR	06 18 49.5	
	comp=Z,5μm,18.9s,baz=355,slow=34								
RAO	**Raoul Island**	**13.81**	**172**	*e*Pn			**Pn**	**06 14 12.0**	**-0.5**
DZM	**Mont Dzumac**	**14.32**	**241**	*e*P			**Pn**	**06 14 21.4**	**+2.0**
DZM				*e*S			**Sn**	**06 17 11.0**	**+14**
DZM	**Mont Dzumac**	**14.32**	**241**	*e*Pn			**Pn**	**06 14 21.7**	**+2.2**
RAR	**Rarotonga**	**20.08**	**109**	P			**P**	**06 15 29.2**	**0.0**
	32nm,1.1s,baz=321,slow=12,SNR=4.3								
RAR	**Rarotonga**	**20.08**	**109**	*e*P			**P**	**06 15 29.5**	**+0.2**
RAR						pmax	pmax		
	comp=Z,298nm,1.9s								
RAR	**Rarotonga**	**20.08**	**109**	*e*P			**P**	**06 15 29.5**	**+0.3**
	comp=Z,298nm,1.9s								
HNR	**Honiara**	**20.41**	**285**	P			**P**	**06 15 32.6**	**-0.3**
	comp=Z,104nm,0.6s,baz=184,slow=3.3,SNR=4.6								
HNR						LR	LR	06 22 13.9	
	comp=Z,18μm,19.6s,MS5.4,baz=97,slow=33								
HNR	**Honiara**	**20.41**	**285**	*e*P			**P**	**06 15 32.2**	**-0.7**
HNR						pmax	pmax		
	comp=Z,653nm,1.4s								
HNR						MLR	MLR		
	comp=Z,18μm,20.0s,MS5.4								
HNR	**Honiara**	**20.41**	**285**	*e*P			**P**	**06 15 32.2**	**-0.7**
	comp=Z,653nm,1.4s								
HNR						LR	LR		
	comp=Z,18μm,20.0s,MS5.4								
URZ	**Urewera**	**22.79**	**186**	P			**P**	**06 15 56.6**	**-1.5**
	comp=Z,45nm,0.9s,mb4.9,baz=20,slow=4.6,SNR=21								
URZ						LR	LR	06 23 01.1	
	comp=Z,4μm,19.5s,MS4.9,baz=226,slow=32								
SNZO	**South Karori**	**26.09**	**189**		PFAKE			06 16 40.0	+11
SNZO						LR	LR		
	comp=Z,4μm,22.0s,MS4.9								
RPZ	**Rata Peaks**	**29.10**	**193**	P			**P**	**06 16 54.5**	**-1.4**
	comp=Z,8.4nm,0.7s,mb4.6,baz=11,slow=16,SNR=3.7								
RPZ						LR	LR	06 27 40.1	
	comp=Z,3μm,18.2s,MS4.9,baz=32,slow=34								
PPT	**Papeete**	**29.30**	**98**	*e*S			**S**	**06 21 53.0**	**+4.5**
	comp=Z,860nm,26.5s								
PPT						eLQ		06 23 24.0	
	comp=Z,1μm,23.5s								
PPT						eLR	LR	06 24 33.9	
	comp=Z,10μm,26.8s								
PPT	**Papeete**	**29.30**	**98**		LR		LR	06 25 46.9	
	comp=Z,3μm,19.6s,MS4.8,baz=279,slow=30								
CTA	**Charters Tower**	**32.34**	**257**	*e*P			**P**	**06 17 25.0**	**+0.2**
	comp=Z,10nm,1.1s,mb4.6								
CTA						*e*S	**S**	**06 22 43.0**	**+6.9**
CTA	**Charters Tower**	**32.34**	**257**	*e*P			**P**	**06 17 25.0**	**+0.2**
CTA						*e*S	**S**	**06 22 43.0**	**+6.9**
CTA						pmax	pmax		
	comp=Z,11nm,1.1s								
CTAO	**Charters Tower**	**32.34**	**257**	*e*P			**P**	**06 17 24.8**	**0.0**
CTAO						pmax	pmax		
	comp=Z,21nm,1.1s,mb4.9								
CTAO						MLR	MLR		
	comp=Z,2μm,19.0s,MS4.7								
CTAO	**Charters Tower**	**32.34**	**257**	*e*P			**P**	**06 17 24.8**	**0.0**
	comp=Z,21nm,1.1s,mb4.9								
CTAO						LR	LR		
	comp=Z,2μm,19.0s,MS4.7								
PMG	**Port Moresby**	**32.53**	**277**	*e*P			**P**	**06 17 25.6**	**-0.9**
PMG						pmax	pmax		
	comp=Z,32nm,1.1s								
PMG						MLR	MLR		
	comp=Z,2μm,21.0s								
PMG	**Port Moresby**	**32.53**	**277**	*e*P			**P**	**06 17 25.6**	**-0.9**
	comp=Z,32nm,1.1s,mb5.2								
PMG						LR	LR		
	comp=Z,2μm,21.0s,MS4.8								
CNB	**Canberra Magne**	**33.71**	**229**	*e*P			**P**	**06 17 43.7**	**+7.2**
CNB						*e*S	SS	06 25 20.4	-3.3
TOO	**Toolangi**	**37.51**	**228**	*e*P			**P**	**06 18 12.7**	**+3.5**
TOO						*e*S	SS	06 26 53.5	+13
STKA	**Stephens Creek**	**38.45**	**238**	*e*P			**P**	**06 18 20.7**	**+3.5**
	comp=Z,24nm,0.9s,mb4.9								
STKA						*e*S	SS	06 27 16.1	+16
STKA	**Stephens Creek**	**38.45**	**238**	P			**P**	**06 18 17.9**	**+0.8**
	comp=Z,29nm,1.0s,mb5.0,baz=76,slow=8.0,SNR=10.0								
STKA						LR	LR	06 32 08.0	
	comp=Z,2μm,18.0s,MS5.0,baz=68,slow=33								
TAU	**Tasmania Unive**	**39.01**	**219**		PFAKE			06 18 30.0	+8.3
TAU						LR	LR		
	comp=Z,3μm,19.0s,MS5.1								
TAOE	**Nuku Hiva Isla**	**39.54**	**85**	*e*S			**S**	**06 24 29.8**	**+3.3**
	comp=Z,1μm,25.6s								
TAOE						eLQ		06 27 40.0	
	comp=Z,7μm,24.0s								
TAOE						eLR	LR	06 29 09.3	
	comp=Z,20μm,28.1s								
POHA	**Pohakuloa**	**42.56**	**35**		PFAKE			06 19 00.0	+8.8
POHA						LR	LR		
	comp=Z,3μm,21.0s,MS5.1								
KIP	**Kipapa**	**42.62**	**31**		PFAKE			06 19 00.0	+8.4
KIP						LR	LR		
	comp=Z,4μm,20.0s,MS5.3								
RKT	**Rikitea**	**43.10**	**107**	*e*S			**S**	**06 25 24.0**	**+4.9**
	comp=Z,1μm,37.5s								
RKT						eLQ		06 28 50.8	
	comp=Z,2μm,37.8s								
RKT						eLR	LR	06 31 01.2	
	comp=Z,5μm,29.0s								
WB2	**Warramunga Arr**	**43.53**	**257**	*e*P			**P**	**06 18 57.6**	**-1.5**
WB2						*e*		06 19 49.4	
WB2						*e*PP	PP	06 20 51.2	+10
WRAB	**Tennant Creek**	**43.53**	**257**	*e*P			**P**	**06 18 57.8**	**-1.3**
WRAB						pmax	pmax		
	comp=Z,39nm,1.7s,mb4.9								
WRAB	**Tennant Creek**	**43.53**	**257**	*e*P			**P**	**06 18 57.8**	**-1.4**
	comp=Z,39nm,1.7s,mb4.9								
MIDW	**Midway**	**43.55**	**3**		PFAKE			06 19 10.0	+11
MIDW						LR	LR		
	comp=Z,3μm,20.0s,MS5.2								
ASAR	**Alice Springs**	**43.95**	**252**	P			**P**	**06 19 01.6**	**-0.9**
	comp=Z,14nm,0.9s,mb4.7,baz=84,slow=8.2,SNR=57								
PTCN	**Pitcairn Islan**	**47.61**	**110**		PFAKE			06 19 40.0	+8.7
PTCN						LR	LR		
	comp=Z,3μm,20.0s,MS5.2								
FORT	**Forrest**	**49.63**	**243**	*e*P			**P**	**06 19 51.7**	**+4.9**
	comp=Z,30nm,1.3s,mb5.2								
FITZ	**Fitzroy Crossi**	**51.88**	**259**	*e*P			**P**	**06 20 03.7**	**-0.2**
	comp=Z,23nm,1.0s,mb5.1								
FITZ						*e*PCP	PcP	06 21 19.3	+2.9
FITZ	**Fitzroy Crossi**	**51.88**	**259**		LR		LR	06 39 41.6	
	comp=Z,1μm,20.6s,MS5.0,baz=6.2,slow=33								
MBWA	**Marble Bar**	**57.13**	**255**	*e*P			**P**	**06 20 41.9**	**-0.1**
	comp=Z,43nm,1.3s,mb5.3								
MBWA						LR	LR		
	comp=Z,3μm,22.0s,MS5.3								
DAV	**Davao City (W)**	**58.32**	**289**		LR		LR	06 44 25.4	
	comp=Z,1μm,18.0s,MS5.1,baz=21,slow=34								
DAV	**Davao City (W)**	**58.32**	**289**		PFAKE			06 21 00.0	+10
DAV						LR	LR		
	comp=Z,2.0nm,22.0s								
NWAO	**Narrogin (SRO)**	**58.95**	**241**		PFAKE			06 21 10.0	+15
NWAO						LR	LR		
	comp=Z,2μm,21.0s,MS5.2								
KAPI	**Kappang**	**59.95**	**273**		PFAKE			06 21 10.0	+8.2
KAPI						LR	LR		
	comp=Z,3μm,21.0s,MS5.4								
SBA	**Scott Base**	**62.70**	**183**	*e*P			**P**	**06 21 21.5**	**+2.2**
SBA						pmax	pmax		
	comp=Z,131nm,2.3s,mb5.7								
SBA						MLR	MLR		
	comp=Z,736nm,19.0s,MS4.9								
SBA	**Scott Base**	**62.70**	**183**	*e*P			**P**	**06 21 21.5**	**+2.2**
	comp=Z,131nm,2.3s,mb5.7								
SBA						LR	LR		
	comp=Z,736nm,19.0s,MS4.9								

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**65.04**	**324**	P			**P**	**06 21 33.8**	**-1.6**
	comp=Z,12nm,1.2s,mb4.8,baz=161,slow=5.8,SNR=5.4								
MAJO	**Matsushiro**	**65.05**	**324**	PFAKE				06 21 50.0	+15
MAJO						LR	LR		
	comp=Z,595nm,21.0s,MS4.8								
ERM	**Erimo**	**66.53**	**331**	PFAKE				06 22 00.0	+15
ERM						LR	LR		
	comp=Z,627nm,20.0s,MS4.8								
KKM	**Kota Kinabalu**	**66.62**	**284**	PFAKE				06 22 00.0	+14
KKM						LR	LR		
	comp=Z,3μm,19.0s,MS5.5								
CASY	**Casey**	**67.64**	**204**	*e*P			**P**	**06 21 52.3**	**+0.8**
CASY						LR	LR		
	comp=Z,985nm,20.0s,MS5.0								
SMY	**Shemya**	**68.15**	**356**	PFAKE				06 22 10.0	+15
SMY						LR	LR		
	comp=Z,2μm,21.0s,MS5.4								
YSS	**Yuzh-Sakhalins**	**70.58**	**334**	*e*P			**P**	**06 22 09.8**	**-0.1**
YSS				*e*				06 22 27.5	
YSS				*e*S			S	06 31 24.0	+3.5
YSS				MLR			MLR		
	comp=Z,500nm,18.0s,MS4.8								
PET	**Petropavlovsk**	**70.68**	**347**	PFAKE				06 22 20.0	+10
PET						LR	LR		
	comp=Z,947nm,20.0s,MS5.0								
PETK	**Petropavlovsk-**	**70.98**	**346**	P			**P**	**06 22 11.6**	**-0.7**
	comp=Z,16nm,1.0s,mb4.9,baz=116,slow=6.6,SNR=8.2								
PETK						LR	LR	06 46 41.9	
	comp=Z,414nm,20.7s,MS4.7,baz=158,slow=30								
KSRS	**Korea Array**	**71.86**	**319**	P			**P**	**06 22 17.4**	**-0.4**
	comp=Z,2.0nm,0.9s,mb4.0,baz=98,slow=8.7,SNR=5.1								
INCN	**Inchon**	**72.70**	**318**	PFAKE				06 22 40.0	+17
INCN						LR	LR		
	comp=Z,795nm,20.0s,MS5.0								
SSE	**Sheshan**	**72.99**	**310**	P			**P**	**06 22 24.9**	**+0.1**
SSE						S	S	06 31 48.8	-0.1
SSE						AMB	AMB		
	comp=Z,44nm,0.7s,mb5.5								
SSE						AMB	AMB		
	comp=Z,629nm,5.5s								
SSE						LR	LR		
	comp=N,681nm,20.8s,MS4.9								
SSE						LR	LR		
	comp=E,97nm,21.3s,MS4.9								
SSE						LR	LR		
	comp=Z,610nm,21.8s,MS4.8								
MIR	**Mirnyy**	**74.66**	**204**	*e*P			**P**	**06 22 34.0**	**0.0**
MIR				*i*			pP	06 22 48.0	+1.6
MIR						pmax	pmax		
	comp=Z,100nm,1.2s,mb5.6								
NJ2	**Nanjing**	**75.19**	**310**	*e*P			**P**	**06 22 38.5**	**+0.9**
NJ2						AP	pP	06 22 51.4	+1.4
NJ2						XP	sP	06 22 56.8	+2.0
NJ2						PP	PP	06 25 29.1	+2.5
NJ2						S	S	06 32 13.0	-0.6
NJ2						XS	sS	06 32 36.5	+2.2
NJ2						SS	SS	06 37 03.5	-0.6
NJ2						AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8								
NJ2						AMB	AMB		
	comp=Z,700nm,8.1s								
NJ2						LR	LR		
	comp=N,1μm,27.7s,MS5.2								
NJ2						LR	LR		
	comp=E,1μm,27.5s,MS5.2								
NJ2						LR	LR		
	comp=Z,1μm,27.5s,MS5.1								
MDJ	**Mudanjiang**	**75.32**	**325**	P			**P**	**06 22 36.8**	**-1.3**
MDJ						AP	pP	06 22 47.6	-2.9
MDJ						XP	sP	06 22 52.4	-2.8
MDJ						S	S	06 32 11.1	-3.4
MDJ						XS	sS	06 32 32.4	-2.8
MDJ						SCS	ScS	06 32 44.3	-3.5
MDJ						AMB	AMB		
	comp=Z,12nm,1.3s,mb4.7								
MDJ						AMB	AMB		
	comp=Z,109nm,3.7s								
MDJ						LR	LR		
	comp=N,322nm,19.4s,MS4.7								
MDJ						LR	LR		
	comp=E,203nm,23.5s,MS4.7								
MDJ						LR	LR		
	comp=Z,360nm,20.4s,MS4.7								
MDJ	**Mudanjiang**	**75.32**	**325**	PFAKE				06 22 50.0	+12
MDJ						LR	LR		
	comp=Z,941nm,20.0s,MS5.1								
SNCC	**San Nicolas Is**	**75.40**	**49**	PFAKE				06 22 50.0	+11
SNCC						LR	LR		
	comp=Z,794nm,19.0s,MS5.0								
MCCM	**Marconi Confer**	**75.63**	**43**	PFAKE				06 22 50.0	+10
MCCM						LR	LR		
	comp=Z,1μm,20.0s,MS5.2								
SAO	**San Andreas Ge**	**75.85**	**45**	*e*P			**P**	**06 22 50.6**	**+9.3**
SAO						MLR	MLR		
	comp=Z,1μm,22.0s,MS5.2								
HOPS	**Hopland**	**75.97**	**42**	PFAKE				06 22 50.0	+8.1
HOPS						LR	LR		
	comp=Z,2μm,21.0s,MS5.4								
PACP	**Pacheco Peak**	**76.08**	**45**	⇓P			**P**	**06 22 44.6**	**+2.0**
	baz=76								
U04C	**Hernandez Rese**	**76.09**	**46**	⇓P			**P**	**06 22 44.1**	**+1.5**
	baz=76								
PTRM	**Twissleman Ran**	**76.12**	**47**	*e*P			**P**	**06 22 41.0**	**-1.9**
KDAK	**Kodiak Island**	**76.49**	**15**	P			**P**	**06 22 43.0**	**-1.4**
	comp=Z,11nm,1.0s,mb4.7,baz=195,slow=5.2,SNR=4.4								
GASB	**Alder Springs**	**76.56**	**42**	⇓P			**P**	**06 22 46.6**	**+1.3**
	baz=77								
O02C	**Red Bluff**	**76.80**	**41**	⇓P			**P**	**06 22 48.2**	**+1.6**
	baz=77								
ARVC	**Arvin**	**76.83**	**48**	⇑P			**P**	**06 22 47.9**	**+1.0**
	baz=77								
N02C	**Big Bar**	**76.83**	**41**	⇓P			**P**	**06 22 48.4**	**+1.6**
	baz=77					

baz=78
ISA Isabella 77.35 47 *e*P P 06 22 49.9 +0.1
ISA pmax pmax
comp=Z,26nm,1.5s,mb4.9
ISA MLR MLR
comp=Z,732nm,20.0s,MS5.0
ISA Isabella 77.35 47 ⇓P P 06 22 50.0 +0.2
baz=78
ISA Isabella 77.35 47 *e*P P 06 22 49.9 +0.1
comp=Z,26nm,1.5s,mb4.9
ISA LR LR
comp=Z,732nm,20.0s,MS5.0
L02A Cave Junction 77.40 39 ⇑P P 06 22 50.7 +0.7
baz=78
M02C Callahan 77.44 40 ⇓P P 06 22 50.8 +0.7
baz=78
HELL Mitchell Peak 77.47 46 ⇓P P 06 22 50.8 +0.3
baz=78
MONP Monument Peak 77.51 51 ⇓P P 06 22 52.1 +1.3
baz=78,SNR=6.4
S06C San Francisco 77.52 45 ⇑P P 06 22 50.8 +0.1
baz=78
KCC Kaiser Creek 77.59 45 ⇓P P 06 22 51.5 +0.3
baz=78
YBH Yreka Blue Hor 77.72 40 *e*P P 06 22 53.7 +2.0
YBH pmax pmax
comp=Z,22nm,1.3s
YBH Yreka Blue Hor 77.72 40 ⇓P P 06 22 52.3 +0.6
baz=78
YBH Yreka Blue Hor 77.72 40 *e*P P 06 22 53.7 +2.0
comp=Z,22nm,1.3s,mb4.9
P05C Yuba Gap, Truc 77.75 43 ⇑P P 06 22 52.7 +0.8
baz=78
R05C Kirkwood Meado 77.79 44 ⇓P P 06 22 52.9 +0.8
baz=78
LRMC Laurel Mountai 77.82 48 ⇑P P 06 22 53.1 +0.7
baz=78
PFO Pinyon Flat Ob 77.82 50 PFAKE 06 23 00.0 +7.5
PFO LR LR
comp=Z,547nm,20.0s,MS4.9
M03C McCloud 77.83 41 ⇑P P 06 22 53.4 +1.1
baz=78
WHN Wuhan 77.91 307 P P 06 22 52.1 -0.9
O04C Chester 77.97 42 ⇓P P 06 22 54.5 +1.3
baz=78
CWC Cottonwood Cre 78.01 47 ⇑P P 06 22 54.6 +1.2
baz=78
HUMO Hull Mountain 78.05 39 ⇓P P 06 22 54.8 +1.2
baz=78
HUMO Hull Mountain 78.05 39 *e*P P 06 22 55.3 +1.8
comp=Z,11nm,1.3s,mb4.6
HUMO LR LR
comp=Z,1μm,22.0s,MS5.1
WAKR Walker 78.11 44 *e*P P 06 22 55.9 +1.9
MTUM Tungsten Hills 78.13 46 *e*P P 06 22 53.8 -0.2
BEKR Beckwourth 78.21 43 ⇑P P 06 22 55.0 +0.5
baz=78
MPMC Manual Prospec 78.24 47 ⇓P P 06 22 55.2 +0.4
baz=78,SNR=12
DAC Darwin (Calif) 78.27 47 PFAKE 06 23 10.0 +15
DAC LR LR
comp=Z,1μm,22.0s,MS5.1
M04C Macdoel 78.29 40 ⇓P P 06 22 55.6 +0.7
baz=78
BELC Belle Mtn. 78.34 50 ⇑P P 06 22 55.7 +0.4
baz=78
GSC Goldstone 78.37 48 *e*P P 06 22 54.3 -1.1
GSC pmax pmax
comp=Z,48nm,1.9s,mb5.1
GSC MLR MLR
comp=Z,705nm,21.0s,MS5.0
GSC Goldstone 78.37 48 ⇓P P 06 22 55.3 -0.1
baz=78
GSC Goldstone 78.37 48 *e*P P 06 22 54.3 -1.1
comp=Z,48nm,1.9s,mb5.1
GSC LR LR
comp=Z,705nm,21.0s,MS5.0
L04A Klamath Falls 78.47 40 ⇓P P 06 22 56.3 +0.5
baz=79
S08C White Mtn Res 78.47 46 ⇓P P 06 22 56.3 +0.3
baz=79
M05C Lookout 78.49 41 ⇓P P 06 22 56.1 +0.1
baz=79
O06A Flanigan 78.71 43 ⇑P P 06 22 57.6 +0.4
baz=79
PAHR Pah Rah Range 78.77 43 *e*P P 06 22 57.5 -0.1
comp=Z,24nm,1.4s,mb4.9
GLA Glamis 78.78 51 *e*P P 06 23 00.1 +2.3
GLA pmax pmax
comp=Z,19nm,1.3s,mb4.9
GLA MLR MLR
comp=Z,537nm,20.0s,MS4.9
GLA Glamis 78.78 51 *e*P P 06 23 00.1 +2.4
comp=Z,20nm,1.3s,mb4.9
GLA LR LR
comp=Z,537nm,20.0s,MS4.9
GRAC Grapevine Rang 78.78 46 ⇓P P 06 22 57.8 +0.1
baz=79
SVW2 Sparrevohn 78.83 12 *e*P P 06 22 57.3 0.0
M06C Likely Place G 78.84 42 ⇓P P 06 22 58.1 +0.2
baz=79
NVAR Mina Array Bea 78.84 45 P P 06 22 56.7 -1.3
comp=Z,1.5nm,0.9s,mb3.9,baz=224,slow=4.1,SNR=12
NVAR Mina Array Bea 78.84 45 P P 06 22 56.7 -1.3
FURC Furnace Creek, 78.89 47 ⇓P P 06 22 58.2 -0.1
baz=79
J04A Umpqua Nationa 78.92 39 ⇓P P 06 22 58.0 -0.3
baz=79
GMRC Granite Mounta 78.95 49 ⇑P P 06 22 57.9 -0.7
baz=79
COR Corvallis 78.96 38 PFAKE 06 23 10.0 +11
COR LR LR
comp=Z,1μm,20.0s,MS5.2
N06A Buffalo Meadow 79.01 42 ⇓P P 06 22 58.3 -0.6
baz=79
SHOC Shoshone 79.03 48 ⇓P P 06 22 59.0 -0.1
baz=79
IRM Iron Mountain 79.04 50 ⇑P P 06 22 58.7 -0.5
baz=79
L05A Lakeview 79.06 41 ⇓P P 06 22 59.2 +0.1
baz=79
TUQ Turquoise Moun 79.06 48 ⇓P P 06 22 59.0 -0.2
baz=79
S09A Goldfield 79.23 46 ⇑P P 06 22 60.0 -0.2
baz=79
U10A Ash Meadows, A 79.24 47 ⇓P P 06 22 59.9 -0.4
baz=79
Q08A Gabbs 79.31 45 ⇓P P 06 23 00.3 -0.3
baz=80
MOD Modoc 79.32 41 ⇓P P 06 23 00.1 -0.5
baz=80,SNR=6.6
MOD Modoc 79.32 41 *e*P P 06 23 00.2 -0.3
MOD LR LR
comp=Z,1μm,20.0s,MS5.2
O07A Toulon 79.33 43 ⇓P P 06 23 00.4 -0.2
baz=80
K05A Summer Lake 79.39 40 ⇑P P 06 23 00.9 +0.1
baz=80
TPH Tonopah 79.41 46 *e*P P 06 23 01.4 +0.3
TPH pmax pmax
comp=Z,16nm,1.5s,mb4.7
TPH MLR MLR
comp=Z,938nm,22.0s,MS5.1
TPH Tonopah 79.41 46 *e*P P 06 23 01.4 +0.3
comp=Z,16nm,1.5s,mb4.7
TPH LR LR
comp=Z,938nm,22.0s,MS5.1
J05A Fort Rock 79.48 39 ⇑P P 06 23 02.4 +1.1
baz=80,SNR=12
LDFC Landfair 79.49 49 *e*P P 06 23 02.0 +0.3
comp=Z,29nm,1.7s,mb4.9
TPNV Topopah Spring 79.54 47 *e*P P 06 23 02.1 +0.2
TPNV pmax pmax
comp=Z,43nm,2.0s,mb5.0
TPNV MLR MLR
comp=Z,1μm,22.0s,MS5.1
TPNV Topopah Spring 79.54 47 *e*P P 06 23 02.1 +0.3
comp=Z,43nm,2.0s,mb5.0
TPNV LR LR
comp=Z,1μm,22.0s,MS5.1
N07B Gerlach 79.59 43 ⇓P P 06 23 02.4 +0.4
baz=80
R09A Tonopah 79.59 46 ⇓P P 06 23 02.5 +0.4
baz=80
V11A Goodsprings 79.61 48 ⇓P P 06 23 03.4 +1.1
baz=80
S10A Tonopah Range, 79.77 46 ⇑P P 06 23 03.1 0.0
baz=80
M07A Soldier Meadow 79.77 42 ⇑P P 06 23 03.5 +0.5
baz=80
G04A Mulino 79.80 37 ⇓P P 06 23 03.3 +0.2
baz=80
214A Organ Pipe Nat 79.83 53 ⇓P P 06 23 03.3 -0.2
baz=80
K06A Valley Falls 79.83 40 ⇑P P 06 23 03.3 +0.1
baz=80,SNR=8.1
PDMCI Parker Dam,Lak 79.85 50 ⇓P P 06 23 03.5 -0.1
baz=80
O08A Rochester Mine 79.88 43 ⇓P P 06 23 03.4 -0.1
baz=80
E03A Lebam 79.94 36 ⇓P P 06 23 04.3 +0.5
baz=80
I05A Bend 79.94 39 ⇑P P 06 23 04.3 +0.5
baz=80
V12A Nelson 79.97 49 ⇑P P 06 23 04.2 0.0
baz=80
L07A Adell 79.99 41 ⇑P P 06 23 03.7 -0.5
baz=80,SNR=5.8
SHPR Sheep Range 80.11 48 *e*P P 06 23 05.2 +0.3
J06A Christmas Vall 80.13 40 ⇓P P 06 23 04.8 -0.1
baz=80
R10A Warm Springs 80.15 46 ⇑P P 06 23 04.8 -0.3
baz=80,SNR=5.9
X13A Yucca 80.21 50 ⇓P P 06 23 06.1 +0.6
baz=80
H05A Madras 80.23 38 ⇓P P 06 23 06.2 +0.8
baz=80
F04A Amboy 80.24 37 ⇑P P 06 23 06.2 +0.7
baz=80
COCO West Island 80.26 260 PFAKE 06 23 20.0 +14
COCO LR LR
comp=Z,934nm,19.0s,MS5.2
NLWA Neilton Lookou 80.26 35 PFAKE 06 23 20.0 +15
NLWA LR LR
comp=Z,1μm,20.0s,MS5.2
M08A Happy Creek Ra 80.31 42 ⇑P P 06 23 06.7 +0.7
baz=80
W13A Hualapai Mount 80.39 50 ⇓P P 06 23 06.5 -0.1
baz=81
K07A Rock Creek Ran 80.40 41 ⇓P P 06 23 06.5 +0.2
baz=81
T11A Corn Creek, Al 80.41 47 ⇑P P 06 23 06.9 +0.4
baz=81
TTA Tatalina 80.43 11 *e*P P 06 23 06.9 +0.9
E04A Onalaska 80.44 36 ⇓P P 06 23 07.4 +0.9
baz=81
O09A Fish Creek Ran 80.46 44 ⇑P P 06 23 07.3 +0.6
baz=81
I06A Prineville 80.46 39 ⇓P P 06 23 07.5 +0.8
baz=81,SNR=10
G05A Wamic 80.50 38 ⇑P P 06 23 07.4 +0.6
baz=81
BMN Battle Mountai 80.56 44 *e*P P 06 23 07.6 +0.3
BMN pmax pmax
comp=Z,20nm,1.4s,mb4.8
BMN MLR MLR
comp=Z,1μm,20.0s,MS5.2
BMN Battle Mountai 80.56 44 *e*P P 06 23 07.6 +0.3
comp=Z,20nm,1.4s,mb4.8
BMN LR LR
comp=Z,1μm,20.0s,MS5.2
N09A Rock Creek Ran 80.57 43 ⇑P P 06 23 08.2 +0.8
baz=81
WVOR Wild Horse Val 80.65 41 *e*P P 06 23 07.7 0.0
WVOR pmax pmax
comp=Z,14nm,1.1s,mb4.8
WVOR Wild Horse Val 80.65 41 *e*P P 06 23 07.7 0.0
comp=Z,14nm,1.1s,mb4.8
V13A Grand Canyon W 80.66 49 ⇓P P 06 23 08.2 +0.3
baz=81
R11A Troy Canyon, C 80.67 46 ⇑P P 06 23 08.2 +0.3
baz=81
PMR Palmer 80.68 14 *e*P P 06 23 07.6 +0.2
PMR pmax pmax
comp=Z,24nm,1.2s,mb5.0
PMR MLR MLR
comp=Z,583nm,22.0s,MS4.9
PMR Palmer 80.68 14 *e*P P 06 23 07.5 +0.1
comp=Z,24nm,1.2s,mb5.0
PMR LR LR
comp=Z,583nm,22.0s,MS4.9
L08A Fields 80.71 42 ⇓P P 06 23 08.9 +0.9
baz=81,SNR=8.7
J07A Hines 80.72 40 ⇓P P 06 23 08.2 +0.2
baz=81
F05A White Salmon 80.77 37 ⇓P P 06 23 08.7 +0.5
baz=81
H06A Lindquist Farm 80.81 39 ⇓P P 06 23 08.7 +0.2
baz=81,SNR=11
S12A Delamar Landin 80.84 47 ⇓P P 06 23 09.3 +0.5
baz=81,SNR=8.0
X14A Yava 80.85 50 ⇑P P 06 23 09.5 +0.5
baz=81,SNR=5.4
Q11A Duckwater 80.86 46 ⇓P P 06 23 09.2 +0.3
baz=81
K08A Mann Creek Ran 80.90 41 ⇑P P 06 23 09.0 0.0
baz=81,SNR=6.7
G06A Carlson Farm, 80.90 38 ⇓P P 06 23 08.8 -0.2
baz=81
M09A Marrel Ranch, 80.91 43 ⇑P P 06 23 09.2 +0.1
baz=81
U13A Pakoon Wash 80.92 48 ⇑P P 06 23 09.3 0.0
baz=81
GNW Green Mountain 80.94 35 *e*P P 06 23 08.5 -0.6
comp=Z,16nm,1.4s,mb4.8
C04A Brinnon 80.94 35 ⇓P P 06 23 09.8 +0.6
baz=81
BJT Baijiatuau 80.96 316 *e*P P 06 23 09.6 +0.2
BJT pmax pmax
comp=Z,17nm,1.5s
BJT MLR MLR
comp=Z,2μm,19.0s
BJT Baijiatuau 80.96 316 *e*P P 06 23 09.6 +0.2
comp=Z,17nm,1.5s,mb4.8
BJT LR LR
comp=Z,2μm,19.0s,MS5.4
BJI Beijing 80.97 316 P P 06 23 10.3 +0.8
BJI PP PP 06 26 17.8 +3.0
BJI S S 06 33 16.4 +0.9
BJI XS sS 06 33 38.1 +1.8
BJI AMB AMB
comp=Z,9.0nm,2.3s,mb4.3
BJI LR LR
comp=N,591nm,19.8s,MS5.0
BJI LR LR
comp=E,351nm,19.1s,MS5.0
BJI LR LR
comp=Z,674nm,25.3s
I07A Izee 80.97 39 ⇑P P 06 23 10.2 +0.8
baz=81,SNR=6.9
E05A Randle 80.97 36 ⇓P P 06 23 09.8 +0.5
baz=81
W14A Seligman 81.03 50 ⇑P P 06 23 10.5 +0.6
baz=81
Y15A Casa Rosa Ranc 81.05 51 ⇑P P 06 23 10.5 +0.5
baz=81
F06A Goldendale 81.10 38 ⇑P P 06 23 10.6 +0.6
baz=81
P11A Circle Ranch, 81.12 45 ⇓P P 06 23 10.7 +0.4
baz=81
DIV Divide 81.14 16 *e*P P 06 23 09.9 +0.1
comp=Z,26nm,1.1s,mb5.1
D05A Enumclaw 81.19 36 ⇓P P 06 23 10.8 +0.4
baz=81
H07A Lands Inn, Kim 81.20 39 ⇑P P 06 23 11.1 +0.5
baz=81,SNR=10
V14A Boquillas Ranc 81.20 49 ⇓P P 06 23 10.9 +0.1
baz=81
J08A Circle Bar Ran 81.23 40 ⇑P P 06 23 10.5 -0.2
baz=81
T13A Saint George 81.24 48 ⇓P P 06 23 10.7 -0.3
baz=81,SNR=5.6
217A Green Valley 81.29 54 ⇓P P 06 23 11.6 +0.2
baz=82
SIT Sitka 81.29 23 PFAKE 06 23 20.0 +9.2
SIT LR LR
comp=Z,2μm,21.0s,MS5.5
BMRM Bremner River 81.32 17 *e*P P 06 23 11.0 +0.1
R12A Pony Springs, 81.34 46 ⇓P P 06 23 11.5 0.0
X15A Humboldt 81.34 51 ⇓P P 06 23 11.3 -0.3
baz=82
K09A Rome 81.37 41 ⇓P P 06 23 11.3 -0.3
baz=82,SNR=13
E06A Yakima 81.41 37 ⇓P P 06 23 11.8 +0.1
baz=82
RMW Rattlesnake Mo 81.45 36 P P 06 23 13.1 +1.3
I08A Drewsey 81.45 40 ⇑P P 06 23 12.2 +0.3
baz=82
G07A Ruggs Ranch, H 81.49 38 ⇓P P 06 23 11.9 -0.2
baz=82
U14A Mt Trumbull 81.49 49 ⇓P P 06 23 12.9 +0.6
baz=82,SNR=5.3
S13A Holt Ranch, En 81.53 47 ⇑P P 06 23 13.0 +0.5
baz=82,SNR=6.2
TUC Tucson 81.54 53 *e*P P 06 23 14.2 +1.5
TUC pmax pmax
comp=Z,11nm,2.0s,mb4.4
TUC MLR MLR
comp=Z,612nm,21.0s,MS4.9
TUC Tucson 81.54 53 *e*P P 06 23 14.2 +1.5
comp=Z,11nm,2.0s,mb4.5
TUC LR LR
comp=Z,612nm,21.0s,MS4.9
M10A I.L. Ranch, Tu 81.55 43 ⇓P P 06 23 12.8 +0.3
baz=82
ENH Enshi 81.61 305 PFAKE 06 23 20.0 +6.9
ENH LR LR
comp=Z,5.0nm,20.0s
C05A Tolt Reservoir 81.64 36 ⇑P P 06 23 13.0 +0.1
baz=82,SNR=7.7
J09A Fry Pan Ranch, 81.67 41 ⇑P P 06 23 12.6 -0.5
baz=82,SNR=8.6
117A Oracle 81.68 53 ⇓P P 06 23 13.5 +0.1
baz=82
H08A Prairie City 81.71 39 ⇑P P 06 23 13.7 +0.4
baz=82
R13A O'Grain Ranch, 81.72 47 ⇑P P 06 23 13.5 0.0
baz=82
B05A Bryant 81.74 35 ⇓P P 06 23 13.5 +0.1
baz=82
N11A Elko Archery C 81.74 44 ⇑P P 06 23 13.7 +0.2
baz=82
JCW Jim Creek 81.79 35 *e*P P 06 23 14.3 +0.7
D06A Cle Elum 81.84 36 ⇑P P 06 23 14.3 +0.3
baz=82
T14A Hurricane 81.85 48 ⇓P P 06 23 13.9 -0.3
baz=82
L10A Juniper Basin 81.86 42 ⇓P P 06 23 14.1 0.0
baz=82
X16A Lo Mia Camp, P 81.91 51 ⇓P P 06 23 14.2 -0.4
baz=82
ARUT Antelope Range 81.92 47 *e*P P 06 23 15.3 +0.8
G08A Pilot Rock 81.93 39 ⇓P P 06 23 14.0 -0.5
baz=82,SNR=13
K10A MacKenzie Ranc 81.95 42 ⇓P P 06 23 13.8 -0.8
baz=82
V15A Kaibab Nationa 81.97 50 ⇑P P 06 23 14.3 -0.6
baz=82
218A Dragoon 81.97 54 ⇓P P 06 23 14.9 -0.1
baz=82
KTH Kantishna Hill 82.00 13 *e*P P 06 23 12.9 -1.4
comp=Z,2μm,0.6s
M11A Holland Ranch, 82.00 43 ⇑P P 06 23 14.9 +0.1
baz=82
I09A Lost Marbles R 82.00 40 ⇓P P 06 23 15.1 +0.3
baz=82
ELK Elko 82.04 44 *e*P P 06 23 14.2 -0.9
ELK pmax pmax
comp=Z,10.0nm,1.3s
ELK MLR MLR
comp=Z,1μm,21.0s
ELK Elko 82.04 44 *e*P P 06 23 14.2 -0.9
comp=Z,10nm,1.3s,mb4.6
ELK LR LR
comp=Z,1μm,21.0s,MS5.2
Q13A Wheeler Ranch, 82.04 46 ⇑P P 06 23 15.4 +0.2
baz=82
Y17A Roosevelt 82.06 52 ⇑P P 06 23 15.3 -0.1
baz=82
E07A Sunnyside 82.07 37 ⇓P P 06 23 16.2 +1.1
baz=82
S14A Cedar City 82.10 47 ⇓P P 06 23 15.9 +0.5
baz=82
W16A Flagstaff 82.13 50 ⇓P P 06 23 15.6 -0.1
baz=82
RSW Rattlesnake Hi 82.14 37 P P 06 23 15.3 -0.2
U15A North Rim 82.14 49 ⇓P P 06 23 15.8 +0.1
baz=82,SNR=5.9
O12A Currie 82.14 45 ⇑P P 06 23 15.3 -0.3
baz=82
HAWA Hanford 82.17 37 *e*P P 06 23 14.6 -1.0
HAWA comp=Z,29nm,1.3s,mb5.0
LR LR
comp=Z,906nm,20.0s,MS5.1
N12A Clover Valley, 82.22 44 ⇓P P 06 23 16.4 +0.3
baz=82
P13A Bates Ranch, G 82.27 46 ⇑P P 06 23 16.7 +0.4
baz=82
118A Homack Ranch, 82.30 53 ⇑P P 06 23 16.5 -0.2
baz=82
F08A Pendleton 82.31 38 ⇑P P 06 23 16.3 -0.1
baz=82
319A Douglas 82.33 55 ⇓P P 06 23 16.3 -0.6
baz=82
ETW Entiat 82.36 36 P P 06 23 17.8 +1.2
L11A Cat Creek Ranc 82.38 43 ⇑P P 06 23 17.0 +0.2
baz=82,SNR=6.2
H09A Durkee 82.40 40 ⇑P P 06 23 16.9 0.0
baz=83
WUAZ Wupatki 82.42 50 *e*P P 06 23 17.7 +0.5
comp=Z,21nm,1.4s,mb4.9
GYA Guiyang 82.47 300 ⇑*i*P P 06 23 19.8 +2.1
GYA AP pP 06 23 31.8 +1.6
GYA XP sP 06 23 36.9 +2.0
GYA PP PP 06 26 30.3 +2.9
GYA SKS 06 33 32.4
GYA XS sS 06 33 51.8 -0.6
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,130nm,6.9s
GYA LR LR
comp=N,650nm,20.6s,MS5.1
GYA LR LR
comp=E,580nm,21.4s,MS5.1
GYA LR LR
comp=Z,640nm,20.8s,MS5.0
K11A Parker Ranch, 82.49 42 ⇑P P 06 23 17.4 0.0
baz=83
E08A Dider Farm, El 82.50 38 ⇓P P 06 23 17.4 +0.1
baz=83
A06A Chilliwack 82.54 34 ⇓P P 06 23 17.4 -0.1
baz=83
C07A Waterville 82.56 36 ⇓P P 06 23 17.2 -0.4
baz=83
Q14A Sevier Lake (B 82.57 46 ⇓P P 06 23 17.9 0.0
baz=83,SNR=12
M12A Wells 82.57 44 ⇓P P 06 23 17.2 -0.7
baz=83
219A White Tail Can 82.59 54 ⇓P P 06 23 17.3 -0.9
baz=83
WTV Waterville 82.63 36 P P 06 23 18.8 +0.8
LNOR Lincton Mounta 82.64 38 *e*P P 06 23 19.7 +1.6
G09A Cove 82.64 39 ⇑P P 06 23 18.0 -0.1
baz=83,SNR=7.5
I10A Payette 82.64 40 ⇓P P 06 23 17.8 -0.4
baz=83
Y18A Canyon Day Jun 82.71 52 ⇓P P 06 23 18.1 -0.7
baz=83
BMO Blue Mountains 82.71 40 *e*P P 06 23 18.7 +0.2
BMO pmax pmax
comp=Z,10.0nm,1.5s,mb4.6
BMO MLR MLR
comp=Z,997nm,20.0s,MS5.2
BMO Blue Mountains 82.71 40 *e*P P 06 23 18.7 +0.1
comp=Z,10nm,1.5s,mb4.6
BMO LR LR
comp=Z,997nm,20.0s,MS5.2
F09A S2 Ranch, Elgi 82.78 39 ⇓P P 06 23 18.9 0.0
baz=83
N13A Wendover, West 82.78 44 ⇓P P 06 23 19.0 0.0
baz=83
L12A House Creek Ra 82.85 43 ⇓P P 06 23 19.1 -0.2
baz=83
119A Ashpeak Ranch, 82.86 53 ⇑P P 06 23 19.4 -0.2
baz=83
U16A Tuba City 82.87 50 ⇓P P 06 23 19.6 0.0
baz=83
D08A Wollman Farm, 82.88 37 ⇓P P 06 23 19.5 +0.2
baz=83
H10A Noah's Angus R 82.93 40 ⇑P P 06 23 19.3 -0.4
baz=83,SNR=7.8

MFID	Camas Ranch	82.93	41	⇑P		P	06 23 19.1	-0.5	
	baz=83								
B07A	Winthrop	82.94	35	⇑P		P	06 23 19.7	+0.1	
	baz=83,SNR=7.4								
T16A	Glen Canyon Da	82.95	49	⇑P		P	06 23 20.1	+0.2	
	baz=83								
P14A	Drum Mountains	82.98	46	⇓P		P	06 23 20.0	0.0	
	baz=83								
M13A	Montello	83.04	44	⇑P		P	06 23 20.4	0.0	
	baz=83								
G10A	Bishop Farm, J	83.05	39	⇓P		P	06 23 20.4	+0.1	
	baz=83								
I11A	Placerville	83.09	41	⇑P		P	06 23 20.2	-0.3	
	baz=83								
MVU	Marysvale	83.10	47		PFAKE		06 23 30.0	+9.3	
MVU					LR	LR			
	comp=Z,770nm,20.0s,MS5.1								
A07A	Ashnola River,	83.12	35	⇑P		P	06 23 20.4	-0.2	
	baz=83,SNR=5.8								
MSU	Marysvale	83.13	47	*e*P		P	06 23 22.2	+1.4	
K12A	Draper Farm, C	83.15	42	⇑P		P	06 23 20.4	-0.4	
	baz=83								
OD2	Odessa Site #2	83.18	37	*e*P		P	06 23 21.8	+0.9	
Q15A	Fillmore	83.20	47	⇑P		P	06 23 20.8	-0.4	
	baz=83								
S16A	Weppner Ranch,	83.20	48	⇓P		P	06 23 20.9	-0.3	
	baz=83								
D09A	Jones Farm, Ri	83.24	37	⇓P		P	06 23 21.1	-0.1	
	baz=83,SNR=9.4								
J12A	Stokes Ranch,	83.32	42	⇓P		P	06 23 21.0	-0.7	
	baz=84,SNR=7.0								
F10A	Beach Ranch, E	83.33	39	⇑P		P	06 23 21.1	-0.6	
	baz=84								
B08A	Colville Reser	83.33	36	⇓P		P	06 23 21.1	-0.6	
	baz=84								
U17A	Shonto	83.40	49	⇑P		P	06 23 21.7	-0.6	
	baz=84								
DUG	Dugway	83.43	45		PFAKE		06 23 30.0	+7.7	
DUG					LR	LR			
	comp=Z,1μm,22.0s,MS5.2								
H11A	Donnelly	83.44	40	⇓P		P	06 23 22.1	-0.2	
	baz=84								
T17A	Navajo Res., N	83.46	49	⇑P		P	06 23 22.1	-0.5	
	baz=84								
HIA	Hailar	83.50	325	*e*P		P	06 23 22.6	+0.1	
HIA				pmax		pmax			
	comp=Z,33nm,2.2s								
HIA				MLR		MLR			
	comp=Z,1μm,19.0s								
HIA	Hailar	83.50	325	*e*P		P	06 23 22.6	0.0	
	comp=Z,33nm,2.2s,mb5.1								
HIA				LR		LR			
	comp=Z,1μm,19.0s,MS5.3								
P15A	Leamington	83.52	46	⇓P		P	06 23 22.9	+0.1	
	baz=84								
R16A	Teasdale	83.52	48	⇓P		P	06 23 22.6	-0.3	
	baz=84								
L13A	Double Diamond	83.53	43	⇓P		P	06 23 22.8	0.0	
	baz=84								
X19A	St. Johns	83.54	52	⇓P		P	06 23 23.1	+0.1	
	baz=84								
V18A	Ganado	83.57	50	⇓P		P	06 23 23.3	+0.1	
	baz=84								
G11A	Walters Elk Ra	83.62	40	⇓P		P	06 23 23.2	0.0	
	baz=84,SNR=7.3								
C09A	Chrisman Ranch	83.64	37	⇓P		P	06 23 23.7	+0.4	
	baz=84								
E10A	Myers Farm, Un	83.65	38	⇑P		P	06 23 23.7	+0.4	
	baz=84								
M14A	Sheep Mountain	83.65	44	⇓P		P	06 23 23.7	+0.3	
	baz=84								
A08A	Turner Farm, O	83.68	35	⇑P		P	06 23 23.6	+0.2	
	baz=84,SNR=6.3								
K13A	Stover Farm, H	83.69	43	⇓P		P	06 23 23.1	-0.6	
	baz=84								
COLA	College	83.81	13	*e*P		P	06 23 23.5	-0.2	
COLA				pmax		pmax			
	comp=Z,27nm,1.0s,mb5.3								
COLA				MLR		MLR			
	comp=Z,829nm,21.0s,MS5.1								
COLA	College	83.81	13	*e*P		P	06 23 23.5	-0.3	
	comp=Z,27nm,1.0s,mb5.3								
COLA				LR		LR			
	comp=Z,829nm,21.0s,MS5.1								
HLID	Hailey	83.90	42	⇓P		P	06 23 25.0	+0.3	
	baz=84,SNR=9.1								
HLID	Hailey	83.90	42	*e*P		P	06 23 25.0	+0.3	
	comp=Z,12nm,1.7s,mb4.8								
HLID				LR		LR			
	comp=Z,1μm,21.0s,MS5.3								
BILL	Bilibino	83.91	355	*c i*P		P	06 23 24.4	+0.2	
BILL				pmax		pmax			
	comp=Z,6.0nm,0.4s,mb5.1								
BILL	Bilibino	83.91	355		PFAKE		06 23 40.0	+16	
BILL					LR	LR			
	comp=Z,884nm,22.0s,MS5.1								
L14A	Malta	83.97	44	⇑P		P	06 23 24.4	-0.6	
	baz=84								
J13A	Cove Ranch, Pi	83.98	42	⇑P		P	06 23 24.5	-0.6	
	baz=84,SNR=12								
Q16A	Castle Valley	84.01	47	⇓P		P	06 23 24.4	-0.9	
	baz=84								
B09A	Rice	84.04	36	⇑P		P	06 23 24.5	-0.7	
	baz=84								
A09A	Danville	84.08	36	⇓P		P	06 23 24.6	-0.8	
	baz=84								
R17A	Hanksville Air	84.13	48	⇑P		P	06 23 24.9	-1.1	
	baz=84								
E11A	Bogner Ranch,	84.13	39	⇓P		P	06 23 24.9	-0.9	
	baz=84								
TMUT	Trail Mountain	84.15	47	*e*P		P	06 23 27.1	+1.0	
HVU	Hansel Valley	84.16	44	*e*P		P	06 23 27.2	+1.1	
HVU				pmax		pmax			
	comp=Z,11nm,1.2s,mb4.9								
HVU	Hansel Valley	84.16	44	*e*P		P	06 23 27.2	+1.1	
	comp=Z,11nm,1.2s,mb4.8								
MPU	Maple Canyon	84.16	46		PFAKE		06 23 40.0	+14	
MPU					LR	LR			
	comp=Z,1μm,21.0s,MS5.2								
T18A	Mexican Hat	84.20	49	⇓P		P	06 23 25.1	-1.2	
	baz=84								
K14A	Jones Ranch, D	84.24	43	⇑P		P	06 23 25.7	-0.7	
	baz=84								
I13A	Wildhorse Cree	84.26	42	⇑P		P	06 23 25.8	-0.7	
	baz=84								
DLBC	Dease Lake	84.29	24	*e*P		P	06 23 26.9	+0.5	
O16A	Springville	84.33	46	⇑P		P	06 23 26.1	-0.9	
	baz=84								
J14A	Carey	84.37	42	⇑P		P	06 23 26.5	-0.6	
	baz=84,SNR=8.8								
D11A	Klaveano Farm,	84.40	38	⇓P		P	06 23 25.9	-1.3	
	baz=85								
F12A	Elk City	84.42	40	⇓P		P	06 23 25.7	-1.5	
	baz=85,SNR=12								
HHC	Hu-ho-hao-te	84.46	315	*e*P		P	06 23 26.6	-1.0	
HHC				AP		pP	06 23 38.6	-1.6	
HHC				XP		sP	06 23 43.6	-1.3	
HHC				PP		PP	06 26 43.6	+0.1	
HHC				S		S	06 33 48.4	-2.7	
HHC				XS		sS	06 34 09.0	-3.1	
HHC				SS		SS	06 39 21.8	-0.9	
HHC				AMB		AMB			
	comp=Z,17nm,0.6s,mb5.3								
HHC				AMB		AMB			
	comp=Z,194nm,6.8s								
HHC				LR		LR			
	comp=N,1μm,18.0s,MS5.5								
HHC				LR		LR			
	comp=E,1μm,17.1s,MS5.5								
HHC				LR		LR			
	comp=Z,1μm,16.9s,MS5.4								
H13A	Challis	84.47	41	⇑P		P	06 23 26.3	-1.3	
	baz=85,SNR=6.5								
L15A	Malad City	84.52	44	⇓P		P	06 23 26.5	-1.4	
	baz=85								
JLU	Jordanelle	84.54	45	*e*P		P	06 23 28.5	+0.5	
E12A	Beaver Dam Sad	84.54	39	⇑P		P	06 23 26.9	-1.0	
	baz=85								
NEW	Newport	84.55	37	*e*P		P	06 23 28.3	+0.5	
NEW				pmax		pmax			
	comp=Z,5.0nm,1.2s								
NEW				MLR		MLR			
	comp=Z,577nm,20.0s								
NEW	Newport	84.55	37	*e*P		P	06 23 28.3	+0.4	
	comp=Z,5.4nm,1.2s,mb4.5								
NEW				LR		LR			
	comp=Z,577nm,20.0s,MS5.0								
SRU	San Rafael	84.55	47	⇓P		P	06 23 26.8	-1.3	
	baz=85								
SRU	San Rafael	84.55	47	*e*P		P	06 23 33.8	+5.6	
DAU	Daniels Canyon	84.59	46	*e*P		P	06 23 33.9	+5.6	
A10A	Northport	84.66	36	⇓P		P	06 23 27.3	-1.1	
	baz=85								
N16A	Rees Ranch, Co	84.67	45	⇑P		P	06 23 27.9	-0.8	
	baz=85								
I14A	Mackay	84.69	42	⇑P		P	06 23 27.8	-0.8	
	baz=85								
T19A	Beclabito	84.70	50	⇑P		P	06 23 28.1	-0.8	
	baz=85								
R18A	Canyonlands Na	84.70	48	⇑P		P	06 23 28.0	-0.9	
	baz=85								
M16A	Huntsville	84.73	45	⇑P		P	06 23 28.0	-0.9	
	baz=85								
K15A	Arbon	84.73	43	⇑P		P	06 23 28.3	-0.6	
	baz=85								
G13A	Cobalt	84.74	40	⇓P		P	06 23 28.4	-0.4	
	baz=85								
Q18A	Rafter H Ranch	84.83	47	⇑P		P	06 23 28.6	-0.8	
	baz=85								
C11A	Tepee Creek (N	84.84	37	⇓P		P	06 23 28.9	-0.4	
	baz=85,SNR=13								
O17A	Robinson Place	84.86	46	⇑P		P	06 23 28.9	-0.7	
	baz=85,SNR=9.9								
HWUT	Hardware Ranch	84.90	44	*e*P		P	06 23 32.9	+3.2	
HWUT	comp=Z,28nm,1.5s,mb5.2				LR	LR			
	comp=Z,1μm,21.0s,MS5.2								
P18A	Preston Nutter	84.96	47	⇑P		P	06 23 29.1	-1.1	
	baz=85								
S19A	Harvey Farm, M	84.98	49	⇓P		P	06 23 29.4	-0.9	
	baz=85								
D12A	Red Ives Fores	84.98	38	⇑P		P	06 23 29.3	-0.8	
	baz=85								
F13A	Darby	85.00	40	⇓P		P	06 23 29.4	-0.8	
	baz=85								
H14A	Leadore	85.06	41	⇓P		P	06 23 29.4	-1.1	
	baz=85								
N17A	Moffit Pass	85.11	45	⇓P		P	06 23 30.1	-0.8	
	baz=85								
J15A	Blackfoot	85.11	43	⇓P		P	06 23 30.1	-0.7	
	baz=85								
LAZ	Ladron	85.16	52	*e*P		P	06 23 30.5	-0.8	
LAZ				*e*pP		pP	06 23 42.4	-1.5	
L16A	Fish Haven	85.17	44	⇑P		P	06 23 30.5	-0.7	
	baz=85,SNR=5.6								
MVCO	Mesa Verde	85.23	49		PFAKE		06 23 40.0	+8.4	
MVCO					LR	LR			
	comp=Z,622nm,20.0s,MS5.0								
KMI	Kunming	85.32	298		P	P	06 23 33.5	+1.2	
KMI					AP	pP	06 23 46.3	+1.4	
KMI					XP	sP	06 23 50.8	+1.2	
KMI					SKS		06 33 50.4		
KMI					S	S	06 34 00.3	+0.1	
KMI					XS	sS	06 34 20.3	-1.0	
KMI					AMB	AMB			
	comp=Z,6.0nm,0.5s,mb5.0								
KMI					LR	LR			
	comp=N,3μm,16.0s,MS5.9								
KMI					LR	LR			
	comp=E,2μm,11.6s,MS5.9								
KMI					LR	LR			
	comp=Z,3μm,14.5s,MS5.9								
A11A	Hall Mountain,	85.33	36	⇓P		P	06 23 30.8	-1.0	
	baz=86								
I15A	Monteview	85.35	42	⇓P		P	06 23 30.7	-1.2	
	baz=86								
COLD	Coldfoot	85.38	11	*e*P		P	06 23 32.9	+1.3	
	comp=Z,11nm,1.1s,mb4.9								
Q19A	Hogan Spring (	85.38	48	⇑P		P	06 23 31.3	-1.0	
	baz=86								
O18A	Roosevelt	85.40	46	⇑P		P	06 23 31.4	-1.0	
	baz=86								
E13A	Victor	85.40	39	⇓P		P	06 23 30.7	-1.4	
	baz=86								
K16A	Soda Springs	85.42	43	⇓P		P	06 23 31.0	-1.4	
	baz=86								
BNM	Barren Site	85.46	53	*e*P		P	06 23 32.9	+0.1	
BNM				*e*pP		pP	06 23 44.4	-1.0	
BNM				PP		PP	06 26 39.4	-12	
LPM	Los Pinos Moun	85.52	53	*e*P		P	06 23 33.5	+0.5	
LPM				*e*pP		pP	06 23 44.5	-1.2	
H15A	Lima	85.52	41	⇓P		P	06 23 31.6	-1.2	
	baz=86								
MNTX	Cornudas Mount	85.53	56		PFAKE		06 23 50.0	+17	
MNTX					LR	LR			
	comp=Z,4.0nm,21.0s								
D13A	Huon	85.54	39	⇑P		P	06 23 31.9	-0.9	
	baz=86								
MAW	Mawson	85.55	200	*e*P		P	06 23 33.8	+1.1	
	comp=Z,8.8nm,1.1s,mb4.9								
MAW	Mawson	85.55	200	P		P	06 23 33.5	+0.8	
	comp=Z,8.4nm,0.9s,mb5.0,baz=108,slow=5.5,SNR=14								
MAW	Mawson	85.55	200	*e*P		P	06 23 33.8	+1.1	
MAW				pmax		pmax			
	comp=Z,9.0nm,1.1s								
J16A	Bone	85.59	43	⇑P		P	06 23 32.1	-1.1	
	baz=86								
AHID	Auburn Hatcher	85.71	44		PFAKE		06 23 50.0	+16	
AHID					LR	LR			
	comp=Z,572nm,20.0s,MS5.0								
MSO	Missoula	85.73	39	*e*P		P	06 23 39.8	+6.0	
MSO					LR	LR			
	comp=Z,726nm,22.0s,MS5.0								
C13A	Hot Springs	85.75	38	⇑P		P	06 23 32.6	-1.3	
	baz=86								
E14A	Clinton	85.81	40	⇑P		P	06 23 32.6	-1.6	
	baz=86								
RRI2	Red Ridge	85.82	43	*e*P		P	06 23 34.7	+0.4	
G15A	Dillon	85.87	41	⇓P		P	06 23 33.4	-1.1	
	baz=86								
DLMT	Dillon	85.89	41	*e*P		P	06 23 36.4	+1.8	
ANMO	Albuquerque	85.89	52	*e*P		P	06 23 33.2	-1.7	
ANMO				pmax		pmax			
	comp=Z,19nm,2.5s								
ANMO				MLR		MLR			
	comp=Z,471nm,19.0s								
ANMO	Albuquerque	85.89	52	*e*P		P	06 23 33.1	-1.7	
	comp=Z,19nm,2.5s,mb4.9								
ANMO				LR		LR			
	comp=Z,471nm,19.0s,MS4.9								
I16A	Newdale	85.94	42	⇓P		P	06 23 34.4	-0.5	
	baz=86								
DCID1	Drake Creek	86.01	43	*e*P		P	06 23 35.9	+0.6	
	comp=Z,18nm,1.8s,mb5.0								
O19A	Miners Draw (B	86.03	46	⇓P		P	06 23 34.7	-0.7	
	baz=86								
TXAR	Lajitas Array	86.09	58	P		P	06 23 37.5	+1.4	
	comp=Z,1.3nm,0.9s,mb4.2,baz=228,slow=5.8,SNR=9.4								
TXAR					LR	LR	06 53 47.5		
	comp=Z,335nm,21.5s,MS4.7,baz=250,slow=30								
D14A	Greenough	86.11	39	⇓P		P	06 23 34.7	-0.9	
	baz=86								
TPAW	Teton Pass	86.12	43	*e*P		P	06 23 37.1	+1.3	
	comp=Z,12nm,1.0s,mb5.1								
REDW	Red Top Meadow	86.13	43	*e*P		P	06 23 35.5	-0.3	
B13A	Whitefish	86.14	37	⇑P		P	06 23 34.6	-1.2	
	baz=86								
F15A	Butte	86.17	40	⇑P		P	06 23 35.0	-1.0	
	baz=86								
LRM	Limekiln Ridge	86.19	40	*e*P		P	06 23 36.6	+0.5	
CHMT	Chamberlain Mo	86.19	39	*e*P		P	06 23 35.1	-1.0	
CHMT				*e*pP		pP	06 23 47.2	-1.5	
N19A	John Jarvie Ra	86.23	46	⇑P		P	06 23 34.8	-1.6	
	baz=86								
SNOW	Snow King Moun	86.24	43	*e*P		P	06 23 38.0	+1.6	
	comp=Z,36nm,1.4s,mb5.4								
C14A	Swan Lake	86.28	38	⇑P		P	06 23 35.2	-1.3	
	baz=86								
IMW	Indian Meadow	86.31	43	*e*P		P	06 23 37.6	+0.9	
	comp=Z,25nm,1.4s,mb5.2								
E15A	Deer Lodge	86.34	40	⇓P		P	06 23 35.9	-1.0	
	baz=86								
MOOW	Moose Ponds	86.37	43	*e*P		P	06 23 37.2	+0.2	
	comp=Z,14nm,1.4s,mb5.0								
QLMT	Earthquake Lak	86.39	42	*e*P		P	06 23 38.3	+1.2	
LOHW	Long Hollow	86.40	43	*e*P		P	06 23 38.0	+0.8	
	comp=Z,16nm,1.3s,mb5.1								
CD2	Chengdu	86.43	303	*i*P		P	06 23 39.3	+1.6	
CD2				AP		pP	06 23 51.3	+1.0	
CD2				XP		sP	06 23 55.3	+0.3	
CD2				PP		PP	06 27 02.6	+2.9	
CD2				SKS			06 34 00.5		
CD2				S		S	06 34 11.1	+0.2	
CD2				XS		sS	06 34 28.6	-3.4	
CD2				AMB		AMB			
	comp=Z,10.0nm,1.6s,mb4.8								
CD2				AMB		AMB			
	comp=Z,60nm,8.2s								
CD2				LR		LR			
	comp=N,960nm,14.4s,MS5.6								
CD2				LR		LR			
	comp=E,2μm,15.6s,MS5.6								
CD2				LR		LR			
	comp=Z,1μm,12.0s,MS5.5								
A13A	Flathead Natio	86.44	37	⇓P		P	06 23 36.0	-1.3	
	baz=87								
H16A	Russell Place,	86.45	42	⇑P		P	06 23 36.7	-0.8	
	baz=87								
GDL2	Guadalupe Moun	86.52	55	*e*P		P	06 23 45.1	+7.1	
CMAR	Chiang Mai Arr	86.57	290	P		P	06 23 38.5	-0.1	
	comp=Z,0.9nm,0.3s,mb4.5,baz=106,slow=3.8,SNR=11								
BOZ	Bozeman (W)	86.62	41	*e*P		P	06 23 37.1	-1.1	
BOZ				pmax		pmax			
	comp=Z,18nm,1.6s,mb5.0								
BOZ				MLR		MLR			
	comp=Z,1μm,20.0s,MS5.3								
BOZ	Bozeman (W)	86.62	41	*e*P		P	06 23 37.1	-1.2	
	comp=Z,18nm,1.6s,mb5.0								
BOZ				LR		LR			
	comp=Z,1μm,20.0s,MS5.3								
CHTO	Chiang Mai	86.68	290		PFAKE		06 23 50.0	+11	
CHTO					LR	LR			
	comp=Z,1μm,22.0s,MS5.2								
D15A	Lincoln	86.69	39	⇑P		P	06 23 37.6	-1.0	
	baz=87								
BW06	Boulder Array	86.74	44	*e*P		P	06 23 41.3	+2.4	
	comp=Z,17nm,1.4s,mb5.1								
BW06				LR		LR			
	comp=Z,843nm,19.0s,MS5.2								
PDAR	Pinedale Array	86.74	44	P		P	06 23 38.0	-0.8	
	comp=Z,1.4nm,0.9s,mb4.2,baz=212,slow=3.2,SNR=4.2								
WALA	Waterton Lakes	86.79	37	*e*P		P	06 23 40.7	+1.7	
	comp=Z,23nm,1.4s,mb5.2								
LKWY	Lake	86.94	42	*e*P		P	06 23 48.8	+9.0	
LKWY				MLR		MLR			
	comp=Z,1μm,21.0s,MS5.2								
C15A	Salmond Ranch,	86.97	39	⇓P		P	06 23 38.8	-1.1	
	baz=87								
A14A	Double T Ranch	87.04	37	⇑P		P	06 23 39.6	-0.6	
	baz=87								
B15A	Bradely Ranch,	87.24	38	⇓P		P	06 23 40.1	-1.1	
	baz=87								
C16A	Fuhringer Ranc	87.50	39	⇓P		P	06 23 41.3	-1.1	
	baz=88								
SDCO	Great Sand Dun	87.64	50	*e*P		pP	06 23 53.9	-2.1	
SDCO					LR	LR			
	comp=Z,401nm,21.0s,MS4.8								
RLMT	Red Lodge	87.91	42	*e*P		P	06 23 45.7	+1.2	
	comp=Z,23nm,1.5s,mb5.2								
RLMT					LR	LR			
	comp=Z,2μm,21.0s,MS5.4								
C17A	Wharram Farm,	88.03	39	⇓P		P	06 23 44.1	-0.9	
	baz=88								
LZH	Lanzhou	88.17	308	*e*P		P	06 23 46.1	+0.2	
LZH					AP	pP	06 23 56.5	-2.1	
LZH					XP	sP	06 24 01.3	-2.0	
LZH					*e*S	S	06 34 26.0	-1.4	
LZH					XS	sS	06 34 51.1	+2.6	
LZH					AMB	AMB			
	comp=Z,43nm,1.6s,mb5.4								
LZH					AMB	AMB			
	comp=Z,272nm,4.5s								
LZH					LR	LR			
	comp=E,3μm,15.2s								
LZH					LR	LR			
	comp=Z,3μm,18.1s,MS5.8								
ISCO	Idaho Springs	88.32	48		PFAKE		06 24 00.0	+13	
ISCO					LR	LR			
	comp=Z,582nm,19.0s,MS5.0								
EGMT	Eagleton	88.81	39		PFAKE		06 24 00.0	+11	
EGMT					LR	LR			
	comp=Z,820nm,20.0s,MS5.2								
AMTX	Amarillo	89.54	54		PFAKE		06 24 00.0	+7.6	
AMTX					LR	LR			
	comp=Z,653nm,22.0s,MS5.0								
PAYG	Puerto Ayora	89.62	91		PFAKE		06 24 10.0	+17	
PAYG					LR	LR			
	comp=Z,1μm,22.0s,MS5.2								
JCT	Junction City	89.64	58		PFAKE		06 24 00.0	+7.0	
JCT					LR	LR			
	comp=Z,312nm,19.0s,MS4.8								
ULN	Ulaanbaatar	90.31	320	*e*P		P	06 23 55.6	-0.1	
ULN				pmax		pmax			
	comp=Z,20nm,1.3s,mb5.3								
ULN	Ulaanbaatar	90.31	320	*e*P		P	06 23 55.6	-0.1	
	comp=Z,20nm,1.3s,mb5.3								
LAO	LASA Array	90.48	41		PFAKE		06 24 10.0	+14	
LAO					LR	LR			
	comp=Z,2μm,22.0s,MS5.4								
SONM	Songino Array	90.70	320	P		P	06 23 56.8	-0.7	
	comp=Z,0.6nm,0.6s,mb4.1,baz=154,slow=18,SNR=5.0								
RSSD	Black Hills	90.97	44	*e*P		P	06 23 57.8	-1.1	
RSSD				pmax		pmax			
	comp=Z,13nm,1.4s,mb5.1								
RSSD	Black Hills	90.97	44	*e*P		P	06 23 57.8	-1.1	
	comp=Z,13nm,1.4s,mb5.1								
OGNE	Ogallala	91.28	48		PFAKE		06 24 10.0	+10	
OGNE					LR	LR			
	comp=Z,590nm,21.0s,MS5.0								
CBKS	Cedar Bluff	92.27	50		PFAKE		06 24 20.0	+15	
CBKS					LR	LR			
	comp=Z,485nm,19.0s,MS5.0								
DGMT	Dagmar	92.41	40		PFAKE		06 24 20.0	+15	
DGMT					LR	LR			
	comp=Z,726nm,19.0s,MS5.2								
HKT	Hockley	92.76	60		PFAKE		06 24 20.0	+13	
HKT					LR	LR			
	comp=Z,469nm,20.0s,MS4.9								
YKA	Yellowknife Ar	92.85	25	LR		LR	06 58 50.9		
	comp=Z,986nm,20.8s,MS5.2,baz=210,slow=31								
SNAA	Sanae	93.01	179	*e*P		P	06 24 09.6	+1.7	
SNAA				pmax		pmax			
	comp=Z,21nm,1.4s								
SNAA	Sanae	93.01	179	*e*P		P	06 24 09.6	+1.7	
	comp=Z,21nm,1.4s,mb5.4								
TIXI	Tiksi	93.45	346		PFAKE		06 24 20.0	+10	
TIXI					LR	LR			
	comp=Z,881nm,20.0s,MS5.2								
TLY	Talaya	93.77	323		PFAKE		06 24 20.0	+8.4	
TLY					LR	LR			
	comp=Z,1μm,20.0s,MS5.3								
PLCA	Paso Flores	94.13	134	LR		LR	06 56 54.3		
	comp=Z,342nm,20.8s,MS4.8,baz=247,slow=29								
NATX	Nacogdoches	94.22	58		PFAKE		06 24 30.0	+16	
NATX					LR

ULM Lac du Bonnet 98.13 40 LR LR 07 04 02.5
comp=Z,396nm,18.7s,MS4.9,baz=8.8,slow=32
CCM Cathedral Cave 98.50 53 PFAKE 06 24 50.0 +17
CCM LR LR
comp=Z,555nm,19.0s,MS5.1
LCO Las Campanas 98.74 123 PFAKE 06 24 50.0 +15
LCO LR LR
comp=Z,774nm,21.0s,MS5.2
OXF Oxford 99.16 57 PFAKE 06 24 50.0 +13
OXF LR LR
comp=Z,431nm,19.0s,MS5.0
NNA Nana 99.27 105 PFAKE 06 24 50.0 +13
NNA LR LR
comp=Z,553nm,20.0s,MS5.1
JFWS Jewell Farm 100.27 48 PFAKE 06 24 50.0 +8.9
JFWS LR LR
comp=Z,577nm,20.0s,MS5.1
EYMN Ely 100.42 43 PFAKE 06 24 50.0 +8.3
EYMN LR LR
comp=Z,572nm,20.0s,MS5.1
PALK Pallekele 100.76 275 PFAKE 06 25 00.0 +17
PALK LR LR
comp=Z,501nm,21.0s,MS5.0
LRAL Lakeview Retre 100.82 59 PFAKE 06 25 00.0 +16
LRAL LR LR
comp=Z,467nm,19.0s,MS5.0
TRQA Tornquist 101.26 135 PFAKE 06 25 00.0 +15
TRQA LR LR
comp=Z,296nm,21.0s,MS4.8
OTAV Otavalo 101.27 93 PFAKE 06 25 00.0 +14
OTAV LR LR
comp=Z,173nm,21.0s,MS4.5
COWI Conover 101.65 45 PFAKE 06 25 00.0 +13
COWI LR LR
comp=Z,760nm,21.0s,MS5.2
WMQ Urumqi 102.16 312 *e*P Pdif 06 24 49.9 +0.4
WMQ AP 06 25 01.0
WMQ XP 06 25 05.0
WMQ SKS 06 35 25.0
WMQ *e*S Sdif 06 36 26.0 -3.3
WMQ AMB AMB
comp=Z,10.0nm,0.7s
WMQ AMB AMB
comp=Z,112nm,4.8s
WMQ LR LR
comp=N,327nm,25.4s,MS4.9
WMQ LR LR
comp=E,222nm,21.5s,MS4.9
WMQ LR LR
comp=Z,319nm,20.0s,MS4.8
BCIP Isla Barro Col 102.20 84 PFAKE 06 25 00.0 +10
BCIP LR LR
comp=Z,199nm,19.0s,MS4.7
LVC Limon Verde 102.71 118 PFAKE 06 25 10.0 +18
LVC LR LR
comp=Z,705nm,20.0s,MS5.2
GOGA Godfrey 103.80 59 PFAKE 06 25 10.0 +13
GOGA LR LR
comp=Z,475nm,20.0s,MS5.0
HOPE Hope Point 103.86 159 PFAKE 06 25 10.0 +13
HOPE LR LR
comp=Z,8.0nm,22.0s
TZTN Tazewell 104.24 56 PFAKE 06 25 10.0 +11
TZTN LR LR
comp=Z,583nm,20.0s,MS5.1
GLMI Grayling 104.60 47 PFAKE 06 25 10.0 +10
GLMI LR LR
comp=Z,976nm,20.0s,MS5.3
DGAR Diego Garcia 104.65 258 PFAKE 06 25 10.0 +9.4
DGAR LR LR
comp=Z,1μm,21.0s,MS5.5
ACSO Alum Creek Sta 105.20 52 PFAKE 06 29 30.0 +13
ACSO LR LR
comp=Z,759nm,20.0s,MS5.2
MKAR Makanchi Array 106.33 315 PKiKP PKiKP 06 29 20.3 +1.0
comp=Z,0.2nm,0.3s,baz=85,slow=3.6,SNR=3.8
NHSC New Hope 106.48 60 PFAKE 06 29 30.0 +10
NHSC LR LR
comp=Z,543nm,19.0s,MS5.1
BLA Blacksburg 106.81 55 PFAKE 06 29 30.0 +10
BLA LR LR
comp=Z,691nm,21.0s,MS5.2
MCWV Mont Chateau 107.53 53 PFAKE 06 29 30.0 +8.3
MCWV LR LR
comp=Z,1μm,20.0s,MS5.4
CNNC Cliffs of the 108.62 58 PFAKE 06 29 40.0 +16
CNNC LR LR
comp=Z,462nm,22.0s,MS5.0
KURK Kurchatov 108.99 319 PFAKE 06 29 40.0 +16
KURK LR LR
comp=Z,949nm,19.0s,MS5.4
CBN Corbin 109.32 55 PFAKE 06 29 40.0 +15
CBN LR LR
comp=Z,851nm,21.0s,MS5.3
BINY Binghamton 110.63 50 PFAKE 06 29 40.0 +13
BINY LR LR
comp=Z,771nm,21.0s,MS5.3
TKM2 Tokmak 2 110.83 310 PFAKE 06 29 40.0 +12
TKM2 LR LR
comp=Z,944nm,20.0s,MS5.4
SDV Santo Domingo 110.97 86 PFAKE 06 29 40.0 +11
SDV LR LR
comp=Z,104nm,20.0s,MS4.4
UCH Uchtor 111.61 310 PFAKE 06 29 40.0 +11
UCH LR LR
comp=Z,67nm,22.0s,MS4.2
LONY Lake Ozonia 111.72 48 PFAKE 06 29 40.0 +11
LONY LR LR
comp=Z,529nm,22.0s,MS5.1
NCB Newcomb 111.97 48 PFAKE 06 29 40.0 +10
NCB LR LR
comp=Z,880nm,19.0s,MS5.4
EKS2 Erkin-Say 112.16 310 *e*PKPdf PKiKP 06 29 30.1 -0.2
EKS2 LR LR
comp=Z,754nm,22.0s,MS5.2
AML Almayashu 112.22 310 PFAKE 06 29 40.0 +10
AML LR LR
comp=Z,492nm,20.0s,MS5.1
LBNH Lisbon 113.62 48 PFAKE 06 29 50.0 +17
LBNH LR LR
comp=Z,640nm,20.0s,MS5.2
HRV Adam Dziewonsk 113.92 50 PFAKE 06 29 50.0 +16
HRV LR LR
comp=Z,797nm,21.0s,MS5.3
PKME Peaks-Kenny Pk 115.46 47 PFAKE 06 29 50.0 +13
PKME LR LR
comp=Z,825nm,20.0s,MS5.3
KBS Kingsbay 116.31 357 PFAKE 06 29 50.0 +13
KBS LR LR
comp=Z,752nm,19.0s,MS5.3
SJG San Juan 117.00 77 PFAKE 06 29 50.0 +10
SJG LR LR
comp=Z,237nm,20.0s,MS4.8
SFJD Kangerlussuaq 119.03 20 PFAKE 06 30 00.0 +17
SFJD LR LR
comp=Z,999nm,19.0s,MS5.5
ARU Arti 119.98 327 *i* PKIKP PKPdf 06 29 44.5 -0.5
ARU 06 31 13.0
ARU 06 36 37.5
ARU SS SS 06 47 29.0 -3.6
ARU Arti 119.98 327 PFAKE 06 30 00.0 +15
ARU LR LR
comp=Z,816nm,21.0s,MS5.3
GRGR Grenville 120.28 85 PFAKE 06 30 00.0 +13
GRGR LR LR
comp=Z,341nm,22.0s,MS4.9
MSEY Mahe Island 121.46 255 PFAKE 06 30 00.0 +11
MSEY LR LR
comp=Z,848nm,19.0s,MS5.4
AKTK Aktyubinsk 122.02 320 PKP PKPdf 06 29 49.3 +0.2
AKTO Aktyubinsk 122.02 320 PKP PKPdf 06 29 49.3 +0.2
comp=Z,2.5nm,0.8s,baz=105,slow=4.3,SNR=6.0
ABPO Ambohimpanom 122.16 235 PFAKE 06 30 00.0 +10
ABPO LR LR
comp=Z,777nm,21.0s,MS5.3
BBGH Gun Hill 122.48 84 PFAKE 06 30 00.0 +9.0
BBGH LR LR
comp=Z,892nm,20.0s,MS5.4
LVZ Lovozero 123.09 345 PFAKE 06 30 00.0 +9.4
LVZ LR LR
comp=Z,902nm,20.0s,MS5.4
ARCES ARCESS Array B 123.69 349 PKP PKPdf 06 29 52.4 +0.6
comp=Z,2.9nm,0.7s,baz=96,slow=1.2,SNR=5.0
SUR Sutherland 128.34 203 PFAKE 06 30 10.0 +8.1
SUR LR LR

comp=Z,815nm,21.0s,MS5.4
OBN Obninsk 131.45 333⇑ *i* PKIKP PKPdf 06 30 08.3 +1.4
OBN *e* 06 32 29.0
OBN pmax pmax
comp=Z,8.0nm,0.5s
OBN Obninsk 131.45 333 PFAKE 06 30 20.0 +13
OBN LR LR
comp=Z,541nm,19.0s,MS5.3
LBTB Lobatse 132.57 212 PFAKE 06 30 20.0 +10
LBTB LR LR
comp=Z,729nm,19.0s,MS5.4
GNI Garni 134.02 311 PFAKE 06 30 20.0 +7.7
GNI LR LR
comp=Z,329nm,22.0s,MS5.0
KIV Kislovodsk 134.03 317 PFAKE 06 30 20.0 +7.9
KIV LR LR
comp=Z,365nm,22.0s,MS5.0
AKASG Malin Array Be 137.71 332 PKP PKPdf 06 30 20.2 +1.5
comp=Z,0.7nm,0.4s,baz=47,slow=1.4,SNR=5.3
AKASG Malin Array Be 137.71 332 *i* PKIKP PKPdf 06 30 17.1 -1.7
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KIEV Kiev 137.72 332 PFAKE 06 30 30.0 +11
KIEV LR LR
comp=Z,497nm,20.0s,MS5.2
LSZ Lusaka 138.57 224 PFAKE 06 30 30.0 +8.6
LSZ LR LR
comp=Z,925nm,20.0s,MS5.5
MALT Malatya 139.25 311 PFAKE 06 30 30.0 +8.0
MALT LR LR
comp=Z,305nm,20.0s,MS5.0
KMBO Kilima Mbogo 139.57 249 PFAKE 06 30 40.0 +17
KMBO LR LR
comp=Z,504nm,21.0s,MS5.2
ESK Eskdalemuir 140.21 3 PFAKE 06 30 40.0 +17
ESK LR LR
comp=Z,592nm,21.0s,MS5.3
KWP Kalwaria 141.25 336 PFAKE 06 30 40.0 +15
KWP LR LR
comp=Z,712nm,21.0s,MS5.4
TSUM Tsumeb 141.37 207 PFAKE 06 30 40.0 +14
TSUM LR LR
comp=Z,988nm,20.0s,MS5.6
ANTO Ankara 142.46 317 PFAKE 06 30 40.0 +12
ANTO LR LR
comp=Z,373nm,20.0s,MS5.2
CLL Collm 142.79 346 *e*PKIKP PKPdf 06 30 29.0 +1.0
CLL pmax pmax
comp=Z,10.0nm,1.3s
CLL Collm 142.79 346 *e*PKPdf PKPdf 06 30 29.0 +1.0
comp=Z,10.0nm,1.3s
CLL *e*(SS) 06 52 18.0
CLL Collm 142.79 346 *e*PKP PKPdf 06 30 29.0 +1.0
BRG Berggiesshubel 142.97 345 *e*PKIKP PKPdf 06 30 29.6 +1.3
BRG pmax pmax
comp=Z,2.0nm,0.7s
BRG MLR MLR
comp=N,267nm,18.0s,MS5.1
BRG MLR MLR
comp=E,144nm,16.8s,MS5.1
BRG MLR MLR
comp=Z,387nm,23.3s
BRG Berggiesshubel 142.97 345 *e*PKP PKPdf 06 30 29.6 +1.4
comp=Z,4.0nm,0.7s
BRG
comp=N,446nm,18.0s
BRG
comp=E,240nm,16.8s
BRG
comp=Z,646nm,23.3s
VYHS Vyhne 143.62 339 *e*PKIKP PKPdf 06 30 37.6 +8.1
VYHS *e* 06 30 53.0
VYHS Vyhne 143.62 339 *e*PKP PKPdf 06 30 37.6 +8.1
VYHS *e* 06 30 53.0
PSZ Piszkesteto 143.73 337 *e*pPKP pPKPdf 06 30 41.5 -1.3
PSZ Piszkesteto 143.73 337 PFAKE 06 30 40.0 +10
PSZ LR LR
comp=Z,465nm,21.0s,MS5.2
MODS Modra-Piesok 144.26 340 *e*PKP PKPdf 06 30 36.9 +6.3
MODS *e* 06 30 58.6
KHC Kasperske Hory 144.66 344 *e*PKP PKPdf 06 30 30.0 -1.3
GRF Grafenberg Arr 144.70 347 *e*PKIKP PKPdf 06 30 30.9 -0.5
GEC2 GERESS Array S 144.90 344 *e*PKIKP PKPdf 06 30 31.7 0.0
GERES GERESS Array B 144.90 344 PKP PKPdf 06 30 31.2 -0.5
comp=Z,3.8nm,0.8s,baz=43,slow=2.5,SNR=9.3
ISP Isparta 145.03 315 PFAKE 06 30 40.0 +8.3
ISP LR LR
comp=Z,326nm,21.0s,MS5.1
CONA Conrad Observa 145.10 341⇓ *i* P PKPbc 06 30 31.7 +0.1
comp=Z,16nm,1.1s
CSNA Conrad Observa 145.10 341⇓ *i* P PKPbc 06 30 31.8 +0.2
comp=Z,14nm,1.0s
ABH Alteburg 145.17 351 PKP PKPdf 06 30 33.1 +0.9
TOD Tromm 145.24 350 PKIKP PKPdf 06 30 33.1 +0.8
DOU Dourbes 145.31 355 PKP PKPdf 06 30 31.8 -0.6
BAIF Baives 145.38 355 *e*PKP1 PKPbc 06 30 32.4 0.0
RUP Ruppelstein 145.41 352 PKIKP PKPdf 06 30 32.8 +0.2
WLF Walferdange 145.57 353 PKP PKPdf 06 30 34.0 +1.2
WLF Walferdange 145.57 353 *e*PKPbc PKPbc 06 30 33.2 +0.1
MOA Molln 145.65 343⇑ *i* P PKPdf 06 30 33.6 +0.6
comp=Z,32nm,1.0s
SOKA Soboth 146.47 341⇑ *i* P PKPdf 06 30 34.8 +0.3
PERS Pernice 146.48 341 *e*PKPdf PKPab 06 30 39.4 +2.5
BFO Black Forest 146.56 350 *e*PKP2 PKPab 06 30 36.1 -1.0
BFO MLR MLR
comp=Z,439nm,21.0s,MS5.2
CDF Champ du Feu 146.64 351 *e*PKP1 PKPbc 06 30 36.4 +0.1
comp=Z,144nm,1.5s
SPAK Spaichingen-Ko 146.69 349 PKP PKPdf 06 30 35.8 +1.0
MEZF Maizieres J'vi 146.84 354 *e*PKP1 PKPbc 06 30 37.1 +0.2
comp=Z,101nm,1.3s
FLN La Foliniere 146.85 0 *e*PKP1 PKPbc 06 30 36.3 -0.6
comp=Z,166nm,1.5s
FLN *e*MLR MLR
comp=Z,826nm,21.2s,MS5.2
FLN La Foliniere 146.85 0 *e*PKP PKPbc 06 30 36.3 -0.6
FLN LR LR
comp=Z,830nm,21.3s,MS5.5
ECH Echery 146.85 351 PKP PKPbc 06 30 37.0 +0.1
ECH Echery 146.85 351 *e*PKPbc PKPbc 06 30 37.4 +0.5
WTTA Wattenberg 146.88 345⇑ *i* P PKPbc 06 30 37.1 0.0
comp=Z,23nm,1.4s
MOTA Moosalm 146.94 346⇑ *i* P PKPbc 06 30 37.3 +0.1
comp=Z,23nm,1.1s
THEF They Montfort 147.00 353 PKP PKPbc 06 30 37.4 0.0
LDF La Druitiere 147.02 0 *e*PKP1 PKPbc 06 30 36.4 -1.0
comp=Z,154nm,1.6s
FELD Feldberg im Sc 147.05 350 PKP PKPdf 06 30 36.5 +1.1
ABTA Abfaltersbach 147.14 344⇑ *i* P PKPbc 06 30 39.0 +1.2
comp=Z,17nm,1.0s
HAU Haudompre 147.17 352 *e*PKP1 PKPbc 06 30 37.8 0.0
comp=Z,54nm,1.2s
HAU *e*MLR MLR
comp=Z,554nm,20.2s,MS5.0
HAU Haudompre 147.17 352 *e*PKP PKPbc 06 30 37.8 0.0
HAU LR LR
comp=Z,550nm,20.3s,MS5.3
GRR Gorron 147.22 1 *e*PKP1 PKPbc 06 30 37.6 -0.4
comp=Z,88nm,1.2s
HINF Hinteralfeld 147.29 351 *e*PKP1 PKPbc 06 30 38.0 -0.2
SGMF Saint Gilles 147.29 3 *e*PKP1 PKPbc 06 30 37.6 -0.6
comp=Z,84nm,1.3s
FETA Feichten 147.33 346⇓ *i* P PKPbc 06 30 39.2 +0.9
comp=Z,20nm,1.1s
BOJS Bojanci 147.44 340 *e*PKPdf PKPab 06 30 43.4 +2.7
JAVS Javornik 147.47 341 *e*PKPdf PKPab 06 30 43.3 +2.6
BBS Basel-Blauen 147.53 350 PKIKP PKPdf 06 30 36.4 +0.2
LOMF Lomont 147.75 351 PKP PKPdf 06 30 37.2 +0.6
TUE Stuetta 148.15 348 *e*PKPbc PKPbc 06 30 40.8 +0.3
LOR Lormes 148.18 355 *e*PKP1 PKPbc 06 30 40.8 +0.2
comp=Z,74nm,1.3s
LOR *e*MLR MLR
comp=Z,656nm,20.8s,MS5.1
LOR Lormes 148.18 355 *e*PKP PKPbc 06 30 40.8 +0.2
LOR LR LR
comp=Z,660nm,20.8s,MS5.4
KRUS Krusevo 148.31 329 *i* PKP PKPbc 06 30 40.5 -0.6
KRUS *i* PKP PKPab 06 30 44.8 +0.5
KRUS *i* PKP pPKPab 06 30 57.0 -0.1
SSF Saint Saulge 148.41 355 *e*PKP1 PKPbc 06 30 41.4 +0.2
comp=Z,122nm,1.5s
CABF La Chapelle 148.58 352 *e*PKP1 PKPbc 06 30 40.8 -0.9
comp=Z,83nm,1.2s
AVF Avril sur Loir 148.69 355 *e*PKP1 PKPbc 06 30 41.6 -0.3
comp=Z,33nm,1.1s

SMF Signal de Mont 148.79 355 *e*PKP1 PKPbc 06 30 42.0 -0.2
comp=Z,58nm,1.1s
BGF Bois d'Agland 148.96 356 *e*PKP1 PKPbc 06 30 42.5 -0.1
comp=Z,47nm,1.0s
MFF Saint Martin d 149.01 0 *e*PKP1 PKPbc 06 30 41.9 -0.9
comp=Z,98nm,1.5s
SANT Santorini 149.21 317 PFAKE 06 30 50.0 +11
SANT LR LR
comp=Z,255nm,20.0s,MS5.0
TCF Toulx Ste Croi 149.26 357 *e*PKP1 PKPbc 06 30 43.5 +0.1
comp=Z,34nm,1.1s
AGO Saint Agoulin 149.44 356 PKP PKPbc 06 30 42.3 -1.6
PLDF La Plantade 149.48 355 PKP PKPbc 06 30 42.1 -1.9
LPL La Plagne 149.55 351 *e*PKP1 PKPbc 06 30 45.1 +0.9
comp=Z,49nm,1.2s
LPG La Plagne 149.57 350 *e*PKP1 PKPbc 06 30 45.3 +1.1
comp=Z,67nm,1.1s
PYM Petit Puy Mans 149.75 356 PKP PKPdf 06 30 42.3 +2.4
BNI Bardonecchia 150.01 350 *e*PKP2 PKPbc 06 30 46.0 +0.7
BNI MLR MLR
comp=Z,639nm,19.0s,MS5.4
VLC Villacollemand 150.10 345 PFAKE 06 30 50.0 +9.5
VLC LR LR
comp=Z,543nm,22.0s,MS5.3
LBL Lubilhac 150.25 355 PKP PKPdf 06 30 42.1 +1.4
ORIF Oris-en-Rattie 150.26 351 *e*PKP1 PKPbc 06 30 46.4 +0.5
ORIF *e*MLR MLR
comp=Z,540nm,21.5s,MS5.0
RJF Les Rejaudoux 150.28 358 *e*PKP1 PKPbc 06 30 46.1 +0.2
comp=Z,75nm,1.4s
RJF *e*MLR MLR
comp=Z,875nm,19.8s,MS5.3
RJF Les Rejaudoux 150.28 358 *e*PKP PKPbc 06 30 46.1 +0.2
RJF LR LR
comp=Z,880nm,19.8s,MS5.6
MBDF Montbardon 150.31 350 *e*PKP1 PKPbc 06 30 46.4 +0.4
comp=Z,54nm,1.1s
VIVF Saint-Julien-l 150.48 353 *e*PKP1 PKPbc 06 30 45.5 -0.9
comp=Z,92nm,1.5s
CAF Calviac 150.63 357 *e*PKP1 PKPbc 06 30 45.9 -0.9
comp=Z,74nm,1.7s
LFF La Frestale 150.66 359 *e*PKP1 PKPbc 06 30 46.8 -0.1
comp=Z,116nm,1.5s
SBF Sospel 151.03 349 *e*PKP1 PKPbc 06 30 47.5 -0.3
comp=Z,90nm,1.2s
SMRF Simiane la Rot 151.23 352 *e*PKP1 PKPbc 06 30 48.7 +0.5
comp=Z,43nm,1.3s
LASF Ste Croix 151.34 354 *e*PKP1 PKPbc 06 30 47.7 -0.8
comp=Z,83nm,1.6s
FRF La Foret Royal 151.47 350 *e*PKP1 PKPbc 06 30 48.6 -0.2
comp=Z,74nm,1.4s
LMR La Mourre 151.71 350 *e*PKP1 PKPbc 06 30 49.0 -0.3
comp=Z,55nm,1.3s
CUC Castrocucco 151.94 333 PFAKE 06 31 00.0 +17
CUC LR LR
comp=Z,558nm,21.0s,MS5.3
PGF Pioggiola 151.96 346 *e*PKP1 PKPbc 06 30 49.6 -0.3
comp=Z,45nm,0.9s
TIP Timpagrande 152.18 331 *e*PKPbc PKPbc 06 30 50.9 +0.3
TIP LR LR
comp=Z,360nm,19.0s,MS5.2
MTE Manteigas 154.37 13 PFAKE 06 31 00.0 +13
MTE LR LR
comp=Z,814nm,20.0s,MS5.5
VSL Villasalto 154.72 343 PFAKE 06 31 00.0 +13
VSL LR LR
comp=Z,476nm,21.0s,MS5.3
PAB San Pablo 155.77 8 PFAKE 06 31 00.0 +11
PAB LR LR
comp=Z,684nm,20.0s,MS5.5
SFS San Fernando 158.44 14 PFAKE 06 31 00.0 +7.6
SFS LR LR
comp=Z,1μm,22.0s,MS5.7
RTC Rabat Centre 160.62 17 PFAKE 06 31 10.0 +15
RTC LR LR
comp=Z,385nm,20.0s
DBIC Dimbokro 170.04 151 PFAKE 06 31 20.0 +17
DBIC LR LR
comp=Z,203nm,20.0s
TORD Torodi Ar. Bea 177.08 216 PKP PKPdf 06 31 06.5 +0.6
comp=Z,2.0nm,1.1s,baz=339,slow=1.7,SNR=6.6
TORD PKPab PKPab 06 32 51.4 +1.6
comp=Z,0.7nm,0.8s,baz=91,slow=4.7,SNR=4.6
TORD PP PP 06 36 44.4 +2.5
comp=Z,1.6nm,1.1s,baz=164,slow=3.9,SNR=5.4

ISCJB ***18*** *06:32:10.3±0.3, 4.13S±004×10094E±003, h28km, mb5.0/80, MS4.9/30, Error ellipse: s-maj=6.2km s-min=3.4km az=40.4*
DJA ***18*** *06:32:11, 4.11S×10090E, h10km, Mw5.5/8*
NEIC ***18*** *06:32:12.3±0.3, 4.04S×101 03E, mb5.0/20, Error ellipse: s-maj=10.6km s-min=6.7km az=50.0*
NEIC Felt [II] at Kapahiang.
IDC ***18*** *06:32:12.8±0.6, 397S×101 24E, h26km±2km, mb4.6/15, mb1 4.7/16, mb1mx4.5/20, mbtmp4.6/16, ML4.3/1, MS4.5/9, Ms1 4.6/9, ms1mx4.4/28, Error ellipse: s-maj=17.5km s-min=9.6km az=49.0*
MOS ***18*** *06:32:12.9±0.9, 391S×101.10E, h45km, mb5.3/25, MS5.0/6, Error ellipse: s-maj=15.8km s-min=7.8km az=104.8*
BJI ***18*** *06:32:14.3, 379S×101 29E, h25km, mB5.4, mb5.1, Ms5.2, Msz4.9*

ISC 18 06:32:12.8±0.3, 409S±004×10099E±003, h29km, h29km±1.2km; pP-P, n189, σ1§13/171, mb5.0/80, MS4.9/30, 18C-12D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang** 0.0nm,0.0s	**1.66**	**75**	P	**Pn**	**06 32 40.1**	**+0.1**
KRJI	**Kerinci** 0.0nm,0.0s	**2.04**	**13**	P	**Pn**	**06 32 45.5**	**+0.2**
JMBI	**JAMBI** 0.0nm,0.0s	**3.61**	**47**	P	**Pn**	**06 33 07.5**	**+0.7**
PPI	**Padang Panjang** 0.0nm,0.0s	**3.66**	**351**	P	**Pn**	**06 33 06.9**	**-0.6**
KLI	**Kotabumi** 0.0nm,0.0s	**3.94**	**101**	P	**Pn**	**06 33 11.9**	**+0.6**
RGRI	**Rengat** 0.0nm,0.0s	**3.96**	**20**	P	**Pn**	**06 33 12.6**	**+1.0**
BLSI	**Bandar Lampung** 0.0nm,0.0s	**4.43**	**107**	P	**Pn**	**06 33 19.3**	**+1.2**
DSRI	**Dabo** 0.0nm,0.0s	**5.08**	**45**	P	**Pn**	**06 33 27.3**	**+0.3**
PPBI	**Pangkal Pinang** 0.0nm,0.0s	**5.49**	**70**	P	**Pn**	**06 33 32.9**	**+0.2**
SBJI	**Serang** 0.0nm,0.0s	**5.51**	**112**	P	**Pn**	**06 33 32.8**	**-0.1**
TNG	**Tangerang** 0.0nm,0.0s	**6.00**	**110**	P	**Pn**	**06 33 39.8**	**0.0**
DBJI	**Dramaga** 0.0nm,0.0s	**6.24**	**113**	P	**Pn**	**06 33 43.5**	**+0.5**
GSI	**Gunungsitoli**	**6.35**	**327**⇓	*e*P	**Pn**	**06 33 45.0**	**+0.5**
TPI	**Tanjungpandan** 0.0nm,0.0s	**6.79**	**79**	P	**Pn**	**06 33 52.0**	**+1.5**
LEM	**Lembang** 0.0nm,0.0s	**7.14**	**113**	P	**Pn**	**06 33 56.8**	**+1.5**
PSI	**Prapat**	**7.15**	**343**⇑	*e*P	**Pn**	**06 33 52.6**	**-2.9**
FRIM	**Kepong**	**7.31**	**5**	⇓P	**Pn**	**06 33 58.3**	**+0.7**
IPM	**Ipoh**	**8.52**	**0**	⇓P	**Pn**	**06 34 16.3**	**+2.0**
BJII	**Banjamegara** 0.0nm,0.0s	**9.26**	**111**	P	**Pn**	**06 34 22.6**	**-1.8**
KTGM	**Kuala Trenggan**	**9.60**	**13**	⇑P	**Pn**	**06 34 32.7**	**+3.6**
KSM	**Kuching**	**10.83**	**59**	⇑P	**Pn**	**06 34 48.0**	**+1.9**
KSM	**Kuching**	**10.83**	**59**	Pn	**Pn**	**06 34 46.9**	**+0.8**
BSI	**Banda Aceh** 0.0nm,0.0s	**11.09**	**329**	P	**Pn**	**06 34 48.2**	**-1.4**
SNG	**Songkhla** 120nm,1.0s	**11.20**	**358**	P	**Pn**	**06 34 50.0**	**-1.1**
STKI	**Sintang** 0.0nm,0.0s	**11.27**	**69**	P	**Pn**	**06 34 55.3**	**+3.3**
SJI	**Sawahan** 0.0nm,0.0s	**11.32**	**109**	P	**Pn**	**06 34 52.9**	**+0.2**
SBUM	**Sibu**	**12.97**	**60**	⇑P	**Pn**	**06 35 19.5**	**+4.2**
BTM	**Bintulu**	**14.09**	**59**	⇑P	**Pn**	**06 35 35.1**	**+4.5**
KKM	**Kota Kinabalu**	**18.24**	**57**	Pn	**Pn**	**06 36 24.6**	**+0.7**
KAPI	**Kappang** 314nm,1.0s,SNR=6.3	**18.73**	**94**	P	**Pn**	**06 36 28.7**	**-1.3**
KAPI	**Kappang** 1.1nm,0.3s,baz=270,slow=12,SNR=6.2	**18.73**	**94**	P	**Pn**	**06 36 27.9**	**-2.0**
KAPI	**Kappang** 67nm,1.6s	**18.73**	**94**	*e*Pn	**Pn**	**06 36 28.7**	**-1.2**
TSM	**Tawau**	**18.82**	**64**	⇑P	**Pn**	**06 36 32.1**	**+1.1**

SDKM **Sandakan** 18.86 59 ⇑P Pn 06 36 32.4 +0.9
PCI **Palu** 19.10 81 P Pn 06 36 34.1 -0.3
0.0nm,0.0s
KDM **Kudat** 19.23 55 ⇓P Pn 06 36 36.8 +0.8
NST **Nakhon Sawan** 19.66 358 P Pn 06 36 38.8 -2.2
MYLDM **Lahad Datu** 19.77 62 ⇑P Pn 06 36 43.2 +0.8
KKTK **Khon Kaen** 20.38 5 P P 06 36 46.5 -0.8
494nm,0.9s
KDI **Kendari** 21.58 90 P P 06 37 00.6 +0.2
0.0nm,0.0s
CMAR **Chiang Mai Arr** 22.50 355 P P 06 37 08.0 -2.1
22nm,0.8s,mb4.7,baz=185,slow=10,SNR=40
CMAR LR LR 06 47 23.8
comp=Z,3μm,18.1s,MS4.8,baz=185,slow=41
NANT **Nan** 22.75 359 ⇓P P 06 37 10.0 -2.8
131nm,0.8s,mb5.4
CHG **Chiang Mai** 22.85 355 ⇑P P 06 37 13.8 0.0
30nm,0.8s,mb4.8
BATI **Baumata** 23.30 106 P P 06 37 16.5 -2.2
17nm,0.3s,mb5.0,baz=326,slow=15,SNR=3.5
BATI S S 06 41 25.6 -3.6
52nm,0.6s,baz=115,slow=21,SNR=9.3
QIZ **Qiongzhong** 24.58 21 P P 06 37 31.3 +0.9
QIZ AP 06 37 39.9
QIZ S S 06 41 51.0 +1.3
QIZ AMB AMB
comp=Z,43nm,1.7s,mb4.7
QIZ LR LR
comp=N,1μm,23.4s
QIZ LR LR
comp=Z,2μm,19.8s,MS4.6
QIZ **Qiongzhong** 24.58 21 eP P 06 37 30.1 -0.3
comp=Z,129nm,1.6s,mb5.2
QIZ ePn P 06 37 38.6 +8.2
MBWA **Marble Bar** 24.89 135 P P 06 37 33.0 -0.3
comp=Z,15nm,1.3s,mb4.4
LBMI **Labuha** 26.71 83 P P 06 37 49.5 -0.4
comp=Z,0.0nm,0.0s
FITZ **Fitzroy Crossi** 27.86 122 ⇑i P P 06 37 59.8 -0.3
comp=Z,24nm,1.0s,mb4.8
FITZ e pP 06 38 07.0 -1.7
FITZ eS S 06 43 14.1 +32
FITZ **Fitzroy Crossi** 27.86 122 P P 06 37 59.9 -0.2
comp=Z,12nm,0.9s,mb4.5,baz=299,slow=8.6,SNR=20
FITZ LR LR 06 50 28.0
comp=Z,1μm,18.2s,MS4.5,baz=136,slow=40
KMI **Kunming** 29.09 3 P P 06 38 11.8 +0.8
KMI AP pP 06 38 19.6 0.0
KMI XP sP 06 38 22.8 -0.4
KMI PP PP 06 39 06.9 -10
KMI S S 06 43 01.5 +0.5
KMI XS sS 06 43 14.9 -0.3
KMI AMB AMB
comp=Z,19nm,0.8s,mb4.9
KMI AMB AMB
comp=Z,465nm,4.8s
KMI LR LR
comp=N,2μm,16.2s,MS5.1
KMI LR LR
comp=E,2μm,13.5s,MS5.1
KMI LR LR
comp=Z,2μm,17.3s,MS4.9
GYA **Guiyang** 30.86 10⇑i P P 06 38 27.6 +0.9
GYA AP pP 06 38 37.3 +2.0
GYA XP sP 06 38 41.5 +2.6
GYA PP PP 06 39 30.0 -6.8
GYA PCP PcP 06 41 23.4 +0.1
GYA S S 06 43 28.6 -0.2
GYA XS sS 06 43 45.8 +2.8
GYA AMB AMB
comp=Z,30nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,140nm,5.2s
GYA LR LR
comp=N,1μm,16.8s,MS4.7
GYA LR LR
comp=E,740nm,15.4s,MS4.7
GYA LR LR
comp=Z,860nm,16.6s,MS4.5
ODAN **Odare** 33.46 338 eP P 06 38 50.8 +1.3
comp=Z,158nm,0.9s,mb6.0
TAPN **Taplejung** 33.78 338 eP P 06 38 54.0 +1.7
comp=Z,194nm,0.9s,mb6.0
RAMN **Ramite** 33.85 337 eP P 06 38 54.4 +1.6
comp=Z,88nm,0.9s,mb5.7
JIRN **Jiri** 34.64 337 eP P 06 39 01.3 +1.6
comp=Z,173nm,0.9s,mb6.0
PKI **Pulchoki** 34.88 335 eP P 06 39 02.7 +0.9
comp=Z,16nm,0.5s,mb5.2
PKIN **Phulchoki** 34.89 335 eP P 06 39 02.8 +0.9
LSA **Lhasa** 34.90 345 eP P 06 39 02.7 +0.8
LSA pmax pmax
comp=Z,16nm,1.0s,mb4.9
LSA **Lhasa** 34.90 345 eP P 06 39 02.7 +0.8
comp=Z,16nm,1.0s,mb4.9
CD2 **Chengdu** 34.91 4⇑i P P 06 39 01.3 -0.6
CD2 AP pP 06 39 11.0 +0.4
CD2 XP sP 06 39 15.3 +1.1
CD2 PP PP 06 40 20.1 -1.4
CD2 PCP PcP 06 41 33.3 -1.1
CD2 S S 06 44 30.3 -1.3
CD2 XS sS 06 44 46.3 +0.4
CD2 PCS PcS 06 45 18.9 -2.3
CD2 SS SS 06 46 46.0 -18
CD2 SCS ScS 06 49 17.3 -4.3
CD2 AMB AMB
comp=Z,90nm,0.8s,mb5.8
CD2 AMB AMB
comp=Z,470nm,6.0s
CD2 LR LR
comp=N,3μm,20.4s,MS5.3
CD2 LR LR
comp=E,5μm,20.4s,MS5.3
CD2 LR LR
comp=Z,3μm,13.2s
GUN **Gumba** 34.99 336 eP P 06 39 04.2 +1.5
comp=Z,99nm,0.6s,mb5.9
DMN **Daman** 35.04 335 eP P 06 39 04.3 +1.1
comp=Z,19nm,0.7s,mb5.2
KKN **Kakani** 35.13 335 eP P 06 39 04.8 +0.9
comp=Z,65nm,0.7s,mb5.7
GKN **Gorkha** 35.59 335 eP P 06 39 08.7 +0.8
comp=Z,18nm,0.3s,mb5.4
KOLN **Koldanda** 35.84 333 eP P 06 39 11.3 +1.3
comp=Z,47nm,0.8s,mb5.5
WRAB **Tennant Creek** 36.12 119 P P 06 39 12.9 +0.3
comp=Z,136nm,1.0s,mb5.8,SNR=8.4
WRAB **Tennant Creek** 36.12 119 eP P 06 39 12.2 -0.4
WRAB pmax pmax
comp=Z,18nm,1.0s,mb5.0
WRAB **Tennant Creek** 36.12 119 eP P 06 39 12.2 -0.4
comp=Z,18nm,1.0s,mb5.0
WB2 **Warramunga Arr** 36.12 119⇑i P P 06 39 11.9 -0.7
WB2 eS S 06 44 47.9 -2.7
DANN **Dangsing** 36.27 334 eP P 06 39 14.8 +1.1
comp=Z,117nm,0.7s,mb5.9
FORT **Forrest** 36.82 139 eP pP 06 39 26.1 -1.0
comp=Z,18nm,1.4s
FORT **Forrest** 36.82 139 P P 06 39 21.2 +2.8
comp=Z,6.0nm,1.9s,mb4.1
ASAR **Alice Springs** 37.25 125 P P 06 39 22.3 +0.1
comp=Z,3.0nm,0.4s,mb4.5,baz=298,slow=7.5,SNR=91
ASAR pP pP 06 39 29.9 -1.0
comp=Z,11nm,0.7s,baz=302,slow=8.1,SNR=18
ASAR S S 06 45 05.3 -2.4
comp=Z,5.1nm,1.2s,baz=297,slow=16,SNR=8.0
XAN **Xi'an** 38.66 11 P P 06 39 33.0 -0.9
XAN AP pP 06 39 40.3 -2.3
XAN XP sP 06 39 44.0 -2.2
XAN PP PP 06 41 08.3 +5.5
XAN S S 06 45 32.9 +4.2
XAN AMB AMB
comp=Z,55nm,0.9s,mb5.3
XAN AMB AMB
comp=Z,242nm,6.5s
XAN LR LR
comp=E,2μm,18.9s
XAN LR LR
comp=Z,2μm,19.8s,MS5.0
NJ2 **Nanjing** 39.76 24 eP P 06 39 44.4 +1.3
NJ2 AP pP 06 39 54.3 +2.4
NJ2 XP sP 06 39 58.3 +2.9
NJ2 PP PP 06 41 19.6 +4.8
NJ2 S S 06 45 45.5 +0.2
NJ2 XS sS 06 45 55.0 -4.8
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
NJ2 AMB AMB
comp=Z,1μm,6.9s
NJ2 LR LR
comp=N,1μm,21.7s,MS4.9
NJ2 LR LR
comp=E,2μm,22.2s,MS4.9
NJ2 LR LR
comp=Z,2μm,22.2s,MS4.9
LZH **Lanzhou** 40.06 4 ⇓P P 06 39 46.0 +0.5
LZH AP pP 06 39 57.8 +3.5
LZH XP sP 06 40 01.8 +4.0
LZH ePP PP 06 41 24.0 +6.0
LZH AMB AMB
comp=Z,78nm,0.8s,mb5.5
LZH AMB AMB
comp=Z,655nm,8.2s
LZH LR LR
comp=E,2μm,16.2s
LZH LR LR
comp=Z,2μm,15.6s,MS5.0
COEN **Coen** 42.73 106 eP P 06 40 05.7 -2.2
comp=Z,10nm,1.3s,mb4.4
GTA **Gaotai** 43.30 359 ⇑P P 06 40 12.6 +0.6
GTA AP pP 06 40 22.9 +2.1
GTA XP sP 06 40 26.8 +2.4
GTA S S 06 46 36.8 -0.8
GTA XS sS 06 46 53.0 +0.9
GTA SS SS 06 49 40.8 -11
GTA AMB AMB
comp=Z,22nm,1.0s,mb4.8
GTA AMB AMB
comp=Z,305nm,4.2s
GTA LR LR
comp=N,771nm,18.0s,MS5.1
GTA LR LR
comp=E,2μm,15.6s,MS5.1
GTA LR LR
comp=Z,868nm,18.6s,MS4.7
THN **Thein Dam** 43.53 328 eP P 06 40 11.9 -2.1
HHC **Hu-ho-hao-te** 45.76 11 ⇑P P 06 40 32.1 +0.5
HHC AP pP 06 40 42.4 +1.9
HHC XP sP 06 40 46.4 +2.4
HHC PCP PcP 06 42 09.6 +0.6
HHC PP PP 06 42 19.8 +0.5
HHC SCP ScP 06 45 58.6 -1.6
HHC PCS PcS 06 46 02.8 -0.4
HHC S S 06 47 13.1 -0.2
HHC XS sS 06 47 30.1 +2.2
HHC SCS ScS 06 50 22.3 -3.4
HHC SS SS 06 50 29.4 -8.8
HHC AMB AMB
comp=Z,25nm,1.0s,mb5.1
HHC AMB AMB
comp=Z,517nm,6.8s
HHC LR LR
comp=N,1μm,15.1s,MS5.1
HHC LR LR
comp=E,946nm,15.4s,MS5.1
HHC LR LR
comp=Z,1μm,14.9s,MS5.0
BJT **Baijiatuao** 46.06 16 eP P 06 40 34.0 0.0
BJT pmax pmax
comp=Z,20nm,0.7s
BJT **Baijiatuao** 46.06 16 eP P 06 40 34.0 0.0
comp=Z,20nm,0.7s,mb5.2
BJI **Beijing** 46.08 16 P P 06 40 34.0 -0.2
BJI PP PP 06 42 24.8 +2.1
BJI S S 06 47 19.3 +1.3
BJI XS sS 06 47 36.1 +3.5
BJI AMB AMB
comp=Z,26nm,1.0s,mb5.1
BJI LR LR
comp=N,1μm,20.4s,MS5.2
BJI LR LR
comp=E,2μm,21.0s,MS5.2
BJI LR LR
comp=Z,1μm,19.2s,MS4.8
PMG **Port Moresby** 46.13 99 eP P 06 40 34.8 -0.2
PMG pmax pmax
comp=Z,23nm,1.2s
PMG **Port Moresby** 46.13 99 eP P 06 40 34.8 -0.2
comp=Z,23nm,1.2s,mb5.0
CTA **Charters Tower** 46.84 114⇓i P P 06 40 40.8 +0.3
comp=Z,11nm,1.4s,mb4.6
CTA e pP 06 40 47.9 -1.5
CTA eS S 06 47 18.6 -11
CTA **Charters Tower** 46.84 114⇓i P P 06 40 40.8 +0.3
CTA eS S 06 47 18.6 -11
CTA pmax pmax
comp=Z,11nm,1.4s
CTAO **Charters Tower** 46.84 114 eP P 06 40 40.8 +0.3
CTAO pmax pmax
comp=Z,39nm,1.3s,mb5.2
CTAO **Charters Tower** 46.84 114 eP P 06 40 40.8 +0.3
comp=Z,40nm,1.3s,mb5.2
STKA **Stephens Creek** 47.04 131 eP P 06 40 42.6 +0.7
comp=Z,15nm,0.8s,mb5.0
STKA **Stephens Creek** 47.04 131 P P 06 40 42.3 +0.4
comp=Z,2.9nm,0.5s,mb4.5,baz=258,slow=5.3,SNR=9.3
STKA pP pP 06 40 49.8 -1.0
comp=Z,8.0nm,0.7s,baz=305,slow=8.2,SNR=7.8
STKA **Stephens Creek** 47.04 131 eP P 06 40 42.9 +1.0
comp=Z,34nm,1.6s,mb5.0
KSRS **Korea Array** 48.34 29 P P 06 40 50.9 -0.9
comp=Z,9.9nm,0.9s,mb4.8,baz=216,slow=8.2,SNR=16
KSRS pP pP 06 40 57.5 -3.3
comp=Z,8.9nm,0.8s,baz=225,slow=8.3,SNR=7.9
KSH **Kashi** 49.13 334 eP P 06 41 06.3 +8.4
KSH eAP pP 06 41 15.8 +9.0
KSH ePCP PcP 06 42 26.1 +5.0
KSH eSCP ScP 06 46 18.0 +3.6
KSH ePCS PcS 06 46 22.5 +5.1
KSH eS S 06 48 12.1 +11
KSH eSCS ScS 06 50 51.0 +2.9
KSH LR LR
comp=N,677nm,6.1s
KSH LR LR
comp=E,912nm,7.6s
KSH LR LR
comp=Z,2μm,18.7s,MS5.1
WMQ **Urumqi** 49.17 347 P P 06 40 59.0 +0.9
WMQ AP pP 06 41 05.3 -1.8
WMQ XP sP 06 41 07.9 -2.7
WMQ PCP PcP 06 42 23.0 +1.9
WMQ PP PP 06 42 52.0 -0.2
WMQ S S 06 48 00.4 -1.4
WMQ XS sS 06 48 17.0 +0.5
WMQ SS SS 06 51 26.0 -7.5
WMQ AMB AMB
comp=Z,41nm,0.8s,mb5.5
WMQ AMB AMB
comp=Z,289nm,5.0s
WMQ LR LR
comp=N,1μm,17.2s,MS5.2
WMQ LR LR
comp=E,2μm,19.2s,MS5.2
WMQ LR LR
comp=Z,1μm,19.0s,MS5.0
ULHL **Ulahol** 51.30 337 P P 06 41 14.6 +0.3
SNR=7.1
SONM **Songino Array** 51.93 5 P P 06 41 19.7 +0.8
comp=Z,26nm,0.8s,mb5.2,baz=184,slow=8.9,SNR=130
SONM pP pP 06 41 26.3 -1.5
comp=Z,20nm,0.7s,baz=185,slow=9.1,SNR=17
SONM PcP PcP 06 42 31.1 -0.1
comp=Z,2.0nm,0.5s,baz=183,slow=4.1,SNR=4.4
ULN **Ulaanbaatar** 52.01 5c i P P 06 41 20.3 +0.8
ULN **Ulaanbaatar** 52.01 5 eP P 06 41 20.3 +0.8
comp=Z,42nm,1.3s,mb5.2
ULN epP pP 06 41 27.9 -0.6
TKM2 **Tokmak 2** 52.13 336 eP P 06 41 21.1 +0.6
TKM2 pmax pmax
comp=Z,18nm,0.6s,mb5.2
TKM2 **Tokmak 2** 52.13 336 P P 06 41 21.1 +0.7
SNR=22
TKM2 **Tokmak 2** 52.13 336 eP P 06 41 21.1 +0.7
comp=Z,18nm,0.6s,mb5.2
KBK **Karagaybulak** 52.17 336 P P 06 41 21.9 +1.1
SNR=6.7
AML **Almayashu** 52.27 334 eP P 06 41 22.2 +0.8
comp=Z,12nm,0.6s,mb5.0
FRU **Bishkek** 52.45 336 eP P 06 41 22.5 -0.4
FRU pmax pmax
comp=Z,100nm,2.6s,mb5.3
FRU MLR MLR
comp=Z,1μm,20.0s,MS4.8
CN2 **Changchun** 52.52 22 ⇓P P 06 41 22.8 -0.5
CN2 eAP pP 06 41 35.1 +2.8
CN2 eXP sP 06 41 40.4 +4.6
CN2 eS S 06 48 46.1 -2.0
CN2 AMB AMB
comp=Z,40nm,0.7s,mb5.5
CN2 LR LR
comp=N,1μm,17.0s,MS5.2
CN2 LR LR
comp=E,1μm,17.0s,MS5.2
CN2 LR LR
comp=Z,1μm,19.0s,MS4.9
EKS2 **Erkin-Say** 52.66 335 P P 06 41 25.4 +0.9
SNR=24
EKS2 **Erkin-Say** 52.66 335 eP P 06 41 25.3 +0.9
comp=Z,23nm,0.9s,mb5.1
USP **Oepenovka** 52.86 336 P P 06 41 26.0 +0.1
SNR=7.0
MK31 **Makanchi Array** 53.30 344 i P P 06 41 28.5 -0.5
MK31 pmax pmax
comp=Z,41nm,0.9s,mb5.4
MK31 **Makanchi Array** 53.30 344 eP P 06 41 29.0 0.0
MKAR **Makanchi Array** 53.30 344 P P 06 41 29.0 0.0
comp=Z,26nm,0.8s,mb5.2,baz=149,slow=7.5,SNR=146
MKAR LR LR 07 08 42.4
comp=Z,444nm,18.4s,MS4.5,baz=124,slow=41
MKAR **Makanchi Array** 53.30 344 i P P 06 41 29.0 0.0
MKAR pmax pmax
comp=Z,26nm,0.8s
MAT **Matsushiro** 53.30 37 P P 06 41 26.8 -2.4
MJAR **Matsushiro Arr** 53.30 37 P P 06 41 27.4 -1.8
comp=Z,7.6nm,0.8s,mb4.7,baz=218,slow=7.5,SNR=12
MJAR pP pP 06 41 34.8 -3.5
comp=Z,6.9nm,0.7s,baz=212,slow=7.0,SNR=5.8
MJAR LR LR 07 02 42.3
comp=Z,347nm,20.1s,MS4.4,baz=240,slow=34
ZAK **Zakamensk** 54.29 2 eP P 06 41 35.8 -0.4
ZAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
OPO **Ambohidratompo** 54.46 250 P P 06 41 39.4 +1.4
comp=Z,2.1nm,0.8s,mb4.1,baz=297,slow=2.3,SNR=4.4
MDJ **Mudanjiang** 54.84 25 P P 06 41 40.1 -0.3
MDJ AP pP 06 41 49.5 +0.1
MDJ XP sP 06 41 53.1 +0.2
MDJ PCP PcP 06 42 41.6 -0.8
MDJ S S 06 49 18.4 -1.2
MDJ XS sS 06 49 34.5 0.0
MDJ SCS ScS 06 51 25.9 -1.6
MDJ SS SS 06 53 02.8 -0.6
MDJ AMB AMB
comp=Z,13nm,0.9s,mb5.0
MDJ AMB AMB
comp=Z,219nm,4.6s
MDJ LR LR
comp=N,588nm,19.4s,MS4.9
MDJ LR LR
comp=E,747nm,18.1s,MS4.9
MDJ LR LR
comp=Z,740nm,18.8s,MS4.8
TLY **Talaya** 55.60 2 eP P 06 41 54.5 +8.8
TLY pmax pmax
comp=Z,18nm,0.8s,mb5.2
TLY MLR MLR
comp=Z,1μm,16.0s,MS5.1
IRK **Irkutsk** 56.19 2 eP P 06 41 49.3 -0.6
IRK e 06 42 44.5
IRK pmax pmax
comp=Z,77nm,2.5s,mb5.3
KURK **Kurchatov** 57.88 343 P P 06 42 01.8 -0.1
comp=Z,217nm,0.8s,SNR=37
KURK **Kurchatov** 57.88 343 eP P 06 42 01.7 -0.2
KURK pmax pmax
comp=Z,30nm,0.8s,mb5.4
KURK **Kurchatov** 57.88 343 eP P 06 42 01.7 -0.1
comp=Z,30nm,0.8s,mb5.4
ZAA0 **Zalesovo Array** 59.39 349 eP P 06 42 12.1 -0.3
ZALV **Zalesovo Beam** 59.39 349 P P 06 42 12.0 -0.3
comp=Z,16nm,0.5s,mb5.3,baz=170,slow=4.5,SNR=42
ZALV pP pP 06 42 19.2 -2.2
comp=Z,23nm,0.8s,baz=167,slow=3.9,SNR=8.4
ZALV LR LR 07 11 54.2
comp=Z,321nm,18.0s,MS4.5,baz=19,slow=40
KLR **Kul'dur** 59.45 23 eP P 06 42 08.3 -4.5
KLR pmax pmax
comp=Z,42nm,1.8s,mb5.2
KLR MLR MLR
comp=N,4μm,18.0s,MS5.6
KLR MLR MLR
comp=E,1μm,18.0s,MS5.6
NVS **Novosibirsk** 60.55 348 eP P 06 42 19.0 -1.2
NVS eS S 06 50 31.7 -2.3
NVS pmax pmax
comp=Z,39nm,1.9s,mb5.2
NVS pmax pmax
comp=N,23nm,1.5s
NVS smax
comp=N,39nm,2.3s
RDF **Al-Radifah** 60.87 306 eP pP 06 42 31.3 -0.8
baz=306
RDF AMb AMB 06 42 34.1
comp=Z,26nm,1.2s,mb5.2,baz=306
UMR **Umm Al-Rimmam** 60.99 307 eP pP 06 42 32.0 -0.9
baz=307
UMR AMb AMB 06 42 34.5
comp=Z,32nm,0.9s,mb5.5,baz=307
NAY **Al-Naaiem** 61.24 307 eP pP 06 42 33.5 -1.2
baz=306
NAY AMb AMB 06 42 36.0
comp=Z,13nm,0.7s,mb5.2,baz=306
RST **Umm Al-Ruwaisa** 61.54 307 eP pP 06 42 35.5 -1.2
baz=307
RST AMb AMB 06 42 37.8
comp=Z,24nm,0.8s,mb5.4,baz=307
VOSK **Vostochnaya** 62.02 340 P P 06 42 29.2 -1.1
VOSK pmax pmax
comp=Z,16nm,1.2s,mb5.0
BVA0 **Borovoye Array** 62.47 340 i P P 06 42 32.4 -0.9
BVA0 pmax pmax
comp=Z,3.0nm,1.3s,mb4.3
BOD **Bodaibo** 62.60 8 eP P 06 42 33.2 -0.8
BOD pmax pmax
comp=Z,5.0nm,1.8s,mb4.3
YSS **Yuzh-Sakhalins** 62.74 31⇑eP P 06 42 34.0 -1.2
YSS e pP 06 42 42.0 -2.4
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.4
CLNS **Chul'man** 63.77 14 eP P 06 42 39.3 -2.5
CLNS pmax pmax
comp=Z,11nm,0.9s,mb4.9
CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS pmax pmax
comp=E,8.0nm,0.9s
CLNS MLR MLR
comp=Z,1μm,16.0s,MS5.1
CLNS MLR MLR
comp=N,885nm,15.0s,MS5.1
CLNS MLR MLR
comp=E,434nm,16.0s,MS5.1
AB31 **Akbulak array** 63.94 331 i P P 06 42 42.3 -0.8
AB31 pmax pmax
comp=Z,13nm,0.6s,mb5.1
AKTO **Aktyubinsk** 65.65 331 LR LR 07 16 27.3
comp=Z,299nm,19.0s,MS4.5,baz=340,slow=40
AKTO **Aktyubinsk** 65.65 331 P P 06 42 52.8 -1.4
AKTO pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
MAW **Mawson** 68.52 195 P P 06 43 12.2 +0.1
comp=Z,0.8nm,0.2s,mb4.3,baz=19,slow=7.2,SNR=3.6
SVE **Sverdlovsk** 68.98 336⇓eP P 06 43 15.1 -0.1
SVE e 06 43 30.6
SVE eS S 06 52 17.6 -0.2
SVE eSS SS 06 56 48.2 +4.2
SVE pmax pmax
comp=Z,35nm,1.2s,mb5.2
SVE MLR MLR
comp=Z,1μm,20.0s,MS5.1
ARU **Arti** 69.50 336d i P P 06 43 17.2 -1.2
ARU e 06 43 33.1
ARU eS S 06 52 25.2 +1.1
ARU eSS SS 06 56 46.0 -6.1
ARU pmax pmax
comp=Z,21nm,1.7s,mb4.8
ARU MLR MLR

	comp=Z,822nm,21.0s,MS5.0								
ARU	**Arti**	**69.50**	**336**	*e*P		**P**	**06 43 18.1**	**-0.3**
	comp=Z,38nm,1.5s,mb5.1								
ARU					pP	pP	06 43 27.1	-0.6
YAK	**Yakutsk**	**69.51**	**14**	*e*P		**P**	**06 43 12.1**	**-6.3**
YAK				*e*			06 43 24.2	
YAK				*e*			06 43 32.5	
YAK					pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2								
YAK					pmax	pmax		
	comp=E,7.0nm,1.2s								
YAK					pmax	pmax			
	comp=N,7.0nm,1.0s								
PETK	**Petropavlovsk-**	**74.13**	**32**	P		P	**06 43 44.0**	**-2.3**
	comp=N,5.4nm,0.8s,mb4.5,baz=212,slow=5.3,SNR=5.1								
PETK					LR	LR	07 16 52.2		
	comp=N,266nm,20.1s,MS4.5,baz=138,slow=36								
BOSA	**Boshof**	**75.52**	**242**	pP		pP	06 44 03.3	-1.0	
	comp=N,1.4nm,0.5s,baz=165,slow=6.2,SNR=2.4								
VSR	**Storozhevoye**	**76.04**	**325**	*e*P		**P**	**06 43 56.6**	**-0.8**	
VSR					pmax	pmax			
	comp=Z,2.0nm,1.1s,mb4.0								
VSR					pmax	pmax			
	comp=N,9.0nm,1.3s								
VSR					pmax	pmax			
	comp=E,6.0nm,0.6s								
URZ	**Urewera**	**76.58**	**128**	LR		LR	07 18 47.3		
	comp=E,433nm,20.8s,MS4.8,baz=94,slow=36								
TIXI	**Tiksi**	**77.76**	**9**	*e*P		**P**	**06 44 05.0**	**-1.6**	
TIXI					pmax	pmax			
	comp=Z,21nm,1.0s,mb5.0								
TIXI					MLR	MLR			
	comp=Z,800nm,17.0s,MS5.1								
OBN	**Obninsk**	**79.08**	**328**	*e*P		**P**	**06 44 14.5**	**+0.2**	
OBN				*e*S		S	06 54 18.1	+6.6	
OBN					pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.8								
AKASG	**Malin Array Be**	**81.73**	**322**	*i* P		**P**	**06 44 27.2**	**-1.4**	
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.3s								
BUR08	**Bucovina Ar. S**	**83.49**	**319**	*e*P		**P**	**06 44 38.7**	**+0.9**	
BILL	**Bilibino**	**84.77**	**20**	*e*P		**P**	**06 44 41.4**	**-2.5**	
BILL					pmax	pmax			
	comp=Z,16nm,1.0s,mb5.1								
ARCES	**ARCESS Array B**	**88.76**	**340**	P		**P**	**06 45 03.5**	**+0.2**	
	comp=Z,7.2nm,0.8s,mb5.0,baz=81,slow=7.5,SNR=8.2								
ARCES					pP	pP	06 45 12.2	-0.6	
	comp=Z,7.8nm,1.0s,baz=93,slow=2.6,SNR=3.0								
SNAA	**Sanae**	**90.47**	**198**	*e*P		**P**	**06 45 13.3**	**+1.9**	
SNAA					pmax	pmax			
	comp=Z,1.0nm,0.9s								
SNAA	**Sanae**	**90.47**	**198**	*e*P		**P**	**06 45 13.2**	**+1.9**	
	comp=Z,1.0nm,0.9s,mb4.2								
GERES	**GERESS Array B**	**91.26**	**319**	P		**P**	**06 45 16.0**	**+0.6**	
	comp=Z,0.4nm,0.2s,mb4.3,baz=79,slow=6.9,SNR=4.7								
GERES					pP	pP	06 45 24.4	-0.6	
	comp=Z,0.7nm,0.2s,baz=108,slow=3.4,SNR=2.8								
GERES					LR	LR	07 32 42.0		
	comp=Z,116nm,18.3s,MS4.3,baz=173,slow=40								
GERES	**GERESS Array B**	**91.26**	**319**	P		**P**	**06 45 16.0**	**+0.5**	
GERES					*PP	pP	06 45 24.4	-0.6	
CLL	**Collm**	**91.90**	**321**	*e*S		S	06 56 19.0	+1.1	
PPT	**Papeete**	**107.18**	**110**	*e*LR		LR	07 22 00.0		
	comp=Z,330nm,22.5s								
NVAR	**Mina Array Bea**	**130.56**	**41**	PKP		PKPdf	06 51 23.4	+2.1	
	comp=Z,0.3nm,0.6s,baz=277,slow=2.3,SNR=6.5								
NVAR					pPKP	pPKPdf	06 51 30.7	-0.3	
	comp=Z,0.6nm,0.7s,baz=334,slow=1.9,SNR=4.5								
NVAR					SKPbc	SKPbc	06 54 43.9	+1.0	
	comp=Z,0.7nm,0.8s,baz=284,slow=4.1,SNR=5.0								
NVAR	**Mina Array Bea**	**130.56**	**41**	PKP		PKPdf	06 51 23.4	+2.1	
NVAR					pPKP	pPKPdf	06 51 30.7	-0.3	
NVAR					SKPbc	SKPbc	06 54 43.9	+1.0	
SNOW	**Snow King Moun**	**131.78**	**31**	*e*PKPdf		PKPdf	06 51 25.7	+2.3	
ULM	**Lac du Bonnet**	**131.85**	**14**	PKP		PKPdf	06 51 23.7	+0.3	
	comp=Z,1.9nm,0.8s,baz=344,slow=22,SNR=4.3								
ULM	**Lac du Bonnet**	**131.85**	**14**	PKP		PKPdf	06 51 23.7	+0.3	
HWUT	**Hardware Ranch**	**132.64**	**33**	*e*PKPdf		PKPdf	06 51 24.8	-0.3	
PDAR	**Pinedale Array**	**132.89**	**31**	PKP		PKPdf	06 51 25.1	-0.4	
	comp=Z,0.3nm,0.5s,baz=245,slow=5.9,SNR=3.0								
MSU	**Marysvale**	**134.35**	**37**	*e*PKIKP		PKPdf	06 51 30.3	+1.9	
GDL2	**Guadalupe Moun**	**143.31**	**37**	*e*PKPdf		PKPdf	06 51 43.0	-2.0	
CCM	**Cathedral Cave**	**144.40**	**17**	*e*PKIKP		PKPdf	06 51 44.3	-2.4	
WMOK	**Wichita Mounta**	**144.42**	**29**	*e*PKIKP		PKPdf	06 51 44.8	-2.0	
OLIL	**Olney**	**144.54**	**12**	*e*PKPdf		PKPdf	06 51 45.1	-1.8	
FVM	**French Village**	**144.69**	**16**	*e*PKIKP		PKPdf	06 51 45.5	-1.7	
SIUC	**Southern Illin**	**145.26**	**14**	*e*PKPbc		PKPbc	06 51 47.7	-0.1	
USIN	**University of**	**145.37**	**12**	*e*PKPbc		PKPbc	06 51 47.9	-0.3	
WCI	**Wyandotte Cave**	**145.38**	**10**	*e*PKIKP		PKPdf	06 51 48.1	-0.3	
TXAR	**Lajitas Array**	**145.71**	**40**	PKPbc		PKPbc	06 51 50.3	+0.7	
	comp=Z,14nm,0.9s,baz=284,slow=1.5,SNR=130								
TXAR					pPKPbc	pPKPbc	06 51 58.4	-0.9	
	comp=Z,9.1nm,0.8s,baz=270,slow=0.9,SNR=15								
PARMO	**Parma**	**146.12**	**16**	PKPbc		PKPbc	06 51 51.1	+0.5	
URVA	**University of**	**146.65**	**358**	*e*PKPbc		PKPbc	06 51 52.5	+0.4	
MIAR	**Mount Ida**	**146.82**	**22**	*e*PKP2		PKPab	06 51 52.8	-1.2	
UALR	**University of**	**147.06**	**22**	*e*PKPbc		PKPbc	06 51 52.7	-0.7	
WVT	**Waverly**	**147.10**	**13**	*e*PKP2		PKPab	06 51 53.1	-1.9	
JCT	**Junction City**	**147.23**	**34**	*e*PKPbc		PKPbc	06 51 54.5	+0.5	
JCT				*ep*PKPdf		pPKPdf	06 52 02.5	+0.9	
TZTN	**Tazewell**	**147.44**	**7**	*e*PKPbc		PKPbc	06 51 54.1	-0.3	
TZTN				*ep*PKPdf		pPKPdf	06 52 03.5	+1.9	
SWET	**Sewanee**	**148.38**	**11**	*e*PKPbc		PKPbc	06 51 56.4	-0.6	
CPCT	**Cooper Cave**	**148.38**	**9**	*e*PKPbc		PKPbc	06 51 56.9	-0.1	
NATX	**Nacogdoches**	**148.80**	**26**	*e*PKPbc		PKPbc	06 51 58.8	+0.7	
HKT	**Hockley**	**149.76**	**30**	*e*PKP2		PKPbc	06 52 01.3	+0.7	

*ISCJB **18** 07:11:29.7±3.6, 70S±02×157.4E±0.1, h43km±35km, mb4.2/9, Error ellipse: s-maj=28.3km s-min=17.6km az=165.1*

*NEIC **18** 07:11:30.2±0.6, 685S×157.50E, h35km, mb4.3/4, Error ellipse: s-maj=16.0km s-min=15.0km az=137.0*

*IDC **18** 07:11:31.7±3.4, 703S×157.47E, h47km±34km, mb4.1/7, mb1 4.3/8, mb1mx4.1/15, mbtmp4.1/8, ML4.4/1, MS3.3/1, Ms1 3.3/1, ms1mx3.0/20, Error ellipse: s-maj=27.0km s-min=21.0km az=179.0*

ISC 18 07:11:32.4±3.5, 70S±02×157.5E±0.1, h54km±36km, n19, σ1§09/18, mb4.2/9, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.44**	**135**	P		**Pn**	**07 12 22.2**	**-1.3**
	34nm,0.3s,baz=161,slow=0.7,SNR=8.4							
HNR				S		**Sn**	**07 13 02.6**	**-0.6**
	262nm,0.3s,baz=123,slow=21,SNR=14							
HNR				LR		LR	07 13 21.5	
	comp=Z,454nm,21.2s,baz=295,slow=32							
HNR	**Honiara**	**3.44**	**135**	*e*Pn		**Pn**	**07 12 22.8**	**-0.7**
HNR				*e*Sn		**Sn**	**07 13 04.9**	**+1.8**
CTA	**Charters Tower**	**16.99**	**219**	*e*P		**Pn**	**07 15 29.1**	**+2.7**
	5.2nm,1.1s							
CTA	**Charters Tower**	**16.99**	**219**	P		**Pn**	**07 15 28.4**	**+2.1**
	0.6nm,0.3s,baz=52,slow=13,SNR=5.5							
WRAB	**Tennant Creek**	**25.88**	**238**	*e*P		**P**	**07 16 59.0**	**-0.3**
	6.2nm,0.8s,mb4.2							
ASAR	**Alice Springs**	**28.07**	**231**	P		**P**	**07 17 17.8**	**-1.2**
	2.4nm,0.7s,mb3.9,baz=61,slow=8.7,SNR=29							
STKA	**Stephens Creek**	**28.87**	**209**	*e*P		**P**	**07 17 27.6**	**+1.6**
	5.2nm,0.6s,mb4.4							
STKA	**Stephens Creek**	**28.87**	**209**	P		**P**	**07 17 25.9**	**-0.1**
	7.4nm,0.8s,mb4.5,baz=39,slow=12,SNR=11							
FITZ	**Fitzroy Crossi**	**32.94**	**247**	*e*P		**P**	**07 18 00.4**	**-1.6**
	7.0nm,1.0s,mb4.5							
CMAR	**Chiang Mai Arr**	**63.02**	**295**	P		**P**	**07 21 54.8**	**+0.5**
	0.9nm,0.4s,mb4.3,baz=128,slow=5.8,SNR=6.1							
SONM	**Songino Array**	**70.68**	**326**	P		**P**	**07 22 43.5**	**+1.1**
	4.8nm,0.9s,mb4.4,baz=142,slow=6.6,SNR=19							
MK31	**Makanchi Array**	**85.03**	**318**	*e*P		**P**	**07 24 02.1**	**-0.1**
MK31				*ep*P		pP	07 24 15.8	-1.9
MKAR	**Makanchi Array**	**85.03**	**318**	P		**P**	**07 24 02.4**	**+0.2**
	1.8nm,0.8s,mb4.3,baz=98,slow=6.2,SNR=12							
MKAR	**Makanchi Array**	**85.03**	**318**	P		**P**	**07 24 02.4**	**+0.2**
NVAR	**Mina Array Bea**	**89.77**	**51**	P		**P**	**07 24 26.0**	**+0.7**
	0.6nm,0.8s,mb4.0,baz=237,slow=7.0,SNR=5.2							
PDAR	**Pinedale Array**	**96.85**	**48**	P		**P**	**07 24 56.7**	**-1.1**
	0.8nm,0.9s,mb4.2,baz=222,slow=2.0,SNR=5.6							
LPAZ	**La Paz**	**129.28**	**118**	PKP		PKPdf	07 30 36.7	+0.9
	0.7nm,0.6s,baz=42,slow=13,SNR=4.0							
BDFB	**Brasilia**	**146.19**	**132**	PKPbc		PKPbc	07 31 07.8	+0.1
	4.8nm,0.7s,baz=180,slow=3.1,SNR=8.1							
TORD	**Torodi Ar. Bea**	**155.40**	**286**	PKP		PKPdf	07 31 20.5	-0.4
	0.6nm,1.0s,baz=64,slow=2.0,SNR=2.7							
TORD				PKPbc		PKPdf	07 31 29.0	+8.1
	0.5nm,0.8s,baz=60,slow=1.7,SNR=3.1							

*ISCJB **18** 07:34:22.8±1.3, 1109N±007×935E±02, h85km±19km, mb3.7/4, Error ellipse: s-maj=25.8km s-min=8.5km az=162.6*

*IDC **18** 07:34:29.1±5.7, 1141N×9360E, h119km±53km, mb3.4/4, mb1 3.5/5, mb1mx3.3/20, mbtmp3.4/5, Error ellipse: s-maj=41.4km s-min=24.5km az=69.0*

ISC 18 07:34:24.1±1.1, 1110N±007×935E±02, h78km±17km, n16, σ1§15/16, mb3.7/4, 1D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**5.86**	**162**	↓*e*P		**Pn**	**07 35 47.5**	**-0.9**
BSI				*e*S		**Sn**	**07 36 54.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**9.04**	**35**	P		**Pn**	**07 36 32.9**	**+1.1**
	0.7nm,0.3s,baz=231,slow=15,SNR=22							
ODAN	**Odare**	**16.69**	**341**	*e*P		**Pn**	**07 38 14.0**	**+0.9**
	11nm,0.3s							
RAMN	**Ramite**	**17.04**	**339**	*e*P		**Pn**	**07 38 17.8**	**+0.4**
	8.6nm,0.3s							
TAPN	**Taplejung**	**17.05**	**342**	*e*P		**Pn**	**07 38 18.3**	**+0.8**
	15nm,0.5s							
JIRN	**Jiri**	**17.84**	**339**	*e*P		**Pn**	**07 38 27.0**	**-0.1**
	7.4nm,0.3s							
PKI	**Pulchoki**	**18.05**	**336**	*e*P		**Pn**	**07 38 30.4**	**+0.7**
	7.5nm,0.4s							
PKIN	**Phulchoki**	**18.06**	**336**	*e*P		**Pn**	**07 38 30.5**	**+0.7**
	8.4nm,0.4s							
DMN	**Daman**	**18.20**	**336**	*e*P		**Pn**	**07 38 31.9**	**+0.3**
	9.2nm,0.5s							
GKN	**Gorkha**	**18.74**	**335**	*e*P		**Pn**	**07 38 36.4**	**-1.7**
	16nm,0.3s							
KOLN	**Koldanda**	**18.99**	**332**	*e*P		**Pn**	**07 38 39.5**	**-1.5**
	9.3nm,0.3s							
MKAR	**Makanchi Array**	**36.81**	**347**	P		**P**	**07 41 22.5**	**-1.9**
	0.5nm,0.4s,mb3.8,baz=168,slow=8.2,SNR=7.9							
SONM	**Songino Array**	**38.20**	**14**	P		**P**	**07 41 34.4**	**-1.8**
	0.2nm,0.3s,mb3.4,baz=186,slow=12,SNR=4.9							
ASAR	**Alice Springs**	**52.51**	**131**	P		**P**	**07 43 30.6**	**+1.0**
	0.3nm,0.5s,mb3.6,baz=306,slow=6.6,SNR=7.3							
BOSA	**Boshof**	**76.74**	**237**	P		**P**	**07 46 09.7**	**+2.4**
	3.2nm,1.0s,mb4.0,baz=65,slow=5.5,SNR=5.5							
TXAR	**Lajitas Array**	**136.54**	**22**	PKP		PKPdf	07 53 39.3	+1.5
	0.1nm,0.5s,baz=270,slow=0.5,SNR=3.3							

NEIC 18 07:48:26.6, 3843S×17595E, h156km, MG4.5(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
UTU	**Utuhina**	**0.32**	**37**	P		Pn	07 48 48.2	+0.3
WATZ	**Wairara**	**0.33**	**211**	P		Pn	07 48 48.1	+0.2
RATZ	**Rangitukua**	**0.46**	**198**	P		Pn	07 48 48.5	+0.1
KARZ	**Kaharoa**	**0.47**	**30**	P		Pn	07 48 48.5	0.0
KARZ				S		Sn	07 49 05.5	+0.4
HATZ	**Hinemaiaia**	**0.47**	**167**	P		Pn	07 48 48.4	-0.1
TAZ	**Tarawera**	**0.48**	**66**	P		Pn	07 48 48.8	+0.3
RITZ	**Rihia Road**	**0.55**	**187**	P		Pn	07 48 49.1	+0.3
KATZ	**Kakaramea**	**0.58**	**200**	P		Pn	07 48 49.2	+0.2
TGRZ	**Tauranga**	**0.74**	**19**	P		Pn	07 48 50.0	0.0
TGRZ				S		Sn	07 49 08.1	+0.3
WTVZ	**West Tongariro**	**0.74**	**202**	P		Pn	07 48 50.0	0.0
TWVZ	**Taurewa**	**0.76**	**212**	P		Pn	07 48 50.2	+0.1
TWVZ				S		Sn	07 49 07.9	-0.2
TOZ	**Tahuroa Road**	**0.78**	**333**	P		Pn	07 48 50.4	+0.1
NGZ	**Ngauruhoe**	**0.79**	**200**	P		Pn	07 48 50.2	-0.1
WPVZ	**Whakapapa**	**0.84**	**202**	P		Pn	07 48 50.5	-0.1
BKZ	**Black Stump Fm**	**0.85**	**150**	P		Pn	07 48 50.9	+0.2
HIZ	**Hauiti**	**0.86**	**264**	P		Pn	07 48 50.8	0.0
TUVZ	**Tukino**	**0.87**	**195**	P		Pn	07 48 51.0	+0.1
FWVZ	**Far West T-bar**	**0.88**	**201**	P		Pn	07 48 50.9	0.0
DRZ	**Dome Shelter**	**0.90**	**200**	P		Pn	07 48 51.7	+0.6
URZ	**Urewera**	**0.93**	**80**	P		Pn	07 48 50.9	-0.4
WNVZ	**Wahianoa**	**0.94**	**197**	P		Pn	07 48 51.6	+0.2
MOVZ	**Moawhango**	**0.99**	**189**	P		Pn	07 48 51.6	-0.2
VRZ	**Vera Road**	**1.16**	**233**	P		Pn	07 48 53.5	+0.2
MWZ	**Matawai**	**1.24**	**86**	P		Pn	07 48 54.0	0.0
MKAZ	**Moumakai**	**1.46**	**335**	P		Pn	07 48 56.3	+0.1
KNZ	**Kokohu**	**1.47**	**114**	P		Pn	07 48 56.5	+0.2
RAEZ	**Rainy Point**	**1.49**	**234**	P		Pn	07 48 56.7	+0.3
WAZ	**Wanganui**	**1.52**	**209**	P		Pn	07 48 56.7	-0.1
TSZ	**Takapari Road**	**1.63**	**180**	P		Pn	07 48 57.6	-0.3
NEZ	**North Egmont**	**1.67**	**239**	P		Pn	07 48 59.1	+0.7
KUZ	**Kuaotunu**	**1.69**	**354**	P		Pn	07 48 58.5	-0.1
PKE	**Pukeiti**	**1.71**	**243**	P		Pn	07 48 59.1	+0.3
NWEZ	**Newall Road**	**1.83**	**242**	P		Pn	07 49 00.6	+0.5
PUZ	**Puketiti**	**1.85**	**80**	P		Pn	07 49 00.0	-0.3
MXZ	**Matakaoa Point**	**2.05**	**66**	P		Pn	07 49 02.6	-0.1
MRZ	**Mangatainoka R**	**2.25**	**187**	P		Pn	07 49 03.7	-1.2
KIW	**Kapiti Island**	**2.56**	**198**	P		Pn	07 49 06.8	-1.8
CAW	**Cannon Point**	**2.76**	**194**	P		Pn	07 49 09.2	-1.9
MRW	**Makara Radio**	**2.96**	**199**	P		Pn	07 49 11.3	-2.3
MSWZ	**Moikau Station**	**3.03**	**190**	P		Pn	07 49 12.2	-2.3
SNZO	**South Karori**	**3.03**	**198**	*e*Pn		Pn	07 49 12.1	-2.4
SNZO				*e*Sn		Sn	07 49 48.4	-3.3
TCW	**Tory Channel**	**3.06**	**204**	P		Pn	07 49 12.6	-2.3
NNZ	**Nelson**	**3.42**	**215**	*e*P		Pn	07 49 16.6	-2.8
QRZ	**Quartz Range**	**3.56**	**227**	P		Pn	07 49 18.2	-3.1
BSWZ	**Blackbirch Sta**	**3.65**	**205**	P		Pn	07 49 19.8	-2.5
KHZ	**Kahutara**	**4.39**	**204**	P		Pn	07 49 28.9	-3.1
LTZ	**Lake Taylor**	**5.17**	**212**	*e*P		Pn	07 49 38.3	-4.0
MQZ	**McQueen's Vall**	**5.83**	**204**	*e*P		Pn	07 49 46.1	-4.9
RPZ	**Rata Peaks**	**6.45**	**213**	*e*P		Pn	07 49 55.3	-3.9
LBZ	**Lake Benmore**	**7.36**	**214**	*e*P		Pn	07 50 06.6	-4.7
ODZ	**Otahua Downs**	**7.71**	**209**	*e*P		Pn	07 50 11.7	-4.2
JCZ	**Jackson Bay**	**7.82**	**222**	*e*P		Pn	07 50 12.3	-5.1
WKZ	**Wanaka**	**8.23**	**217**	*e*P		Pn	07 50 17.6	-5.3

MAN 18 08:22:02, 1683N×120 15E, h26km, mb4.0, ML2.8, MS2.5, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.50**	**207**	*e*P		Pb	08 22 13.1	+0.9
BOLP				*e*S		Sb	08 22 22.9	+3.7
BCPH	**Baguio City Da**	**0.61**	**137**	↑*e*P		Pb	08 22 14.4	+0.3
BCPH				*e*S		Sb	08 22 20.4	-1.9
ABRA	**Dolores**	**0.98**	**33**	*e*P		Pn	08 22 19.9	-0.2
ABRA				*e*S		Sb	08 22 34.0	+1.1
SIPP	**Brgy, Tapao**	**1.13**	**15**	↓*e*P		Pn	08 22 21.3	-0.8
SIPP				*e*S		Sn	08 22 40.8	+3.9
APYP	**Conner**	**1.47**	**45**	*e*P		Pn	08 22 26.2	-0.6
APYP				*e*S		Sn	08 22 45.5	+0.3
CAUP	**Cauayan**	**1.61**	**86**	*e*P		Pn	08 22 29.7	+0.9
BALP	**Baler**	**1.75**	**128**	*e*P		Pn	08 22 30.6	0.0

*NEIC **18** 08:28:42.1, 2549S×7094W, h12km, ML3.6(GUC), After GUC.*

GUC 18 08:28:42.1±0.4, 2549S×7094W, h12km±3km, MD3.8, ML3.6, 4C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**0.99**	**29**	*i* S		Sg	08 29 14.7	+0.6
CPN1				AML		AML	08 29 15.9	
	comp=E,6μm,0.3s							
ANCH	**Antofagasta**	**1.87**	**15**	↑*i*P		Pn	08 29 13.8	0.0
ANCH				*i* S		Sn	08 29 37.8	+0.5
ANCH				AML		AML	08 29 42.1	
	comp=N,782nm,0.3s							
ANCH	**Antofagasta**	**1.87**	**15**	↑*i*P		Pn	08 29 13.8	0.0
ANCH				*i* S		Sn	08 29 37.8	+0.5
CEN1	**Los Morros**	**2.20**	**18**	↑*i*P		Pn	08 29 16.1	-2.4
CEN1				*i* S		Sn	08 29 41.9	-3.7
CEN1				AML		AML	08 29 50.5	
	comp=E,369nm,0.5s							
VACH	**Vallenar**	**3.07**	**177**	*i* S		Sn	08 30 09.1	+1.9
LVC	**Limon Verde**	**3.41**	**33**	*e*Pn		Pn	08 29 38.3	+3.2
LVC				*e*Sg		Sg	08 30 29.6	-2.2
LCO	**Las Campanas**	**3.51**	**177**	↓*i*P		Pn	08 29 38.0	+1.5
LCO				*i* S		Sn	08 30 20.6	+2.7
LCO	**Las Campanas**	**3.51**	**177**	*e*Pn		Pn	08 29 38.0	+1.6
LCO				*e*Sn		Sn	08 30 17.7	-0.2
LCO				*i* S		Sn	08 30 20.6	+2.7
LCO				*e*Sg		Sg	08 30 32.0	-2.9
TLL	**Tololo Astrono**	**4.66**	**179**	↑*i*P		Pn	08 29 53.9	+1.7
TLL				*i* S		Sn	08 30 48.2	+2.0
TRQA	**Tornquist**	**14.65**	**151**	*e*Pn		Pn	08 32 10.8	+1.7

*MOS **18** 08:32:00.9±1.7, 5078N×8697E, h15km, mb4.0/1, Error ellipse: s-maj=25.2km s-min=11.8km az=79.2*

*ISCJB **18** 08:32:02.2±0.8, 5084N±007×8671E±009, h10km, Error ellipse: s-maj=11.8km s-min=5.7km az=142.4*

*NNC **18** 08:32:03.0±4.6, 5086N×8664E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=34.3km s-min=18.6km az=65.0*

ISC 18 08:32:03.4±0.8, 5088N±007×8680E±009, h10km, n12, σ1§18/16, 7C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.77**	**136**	*e*PG		**Pg**	**08 32 11.7**	**-6.4**
AKAR				*e*			06 32 20.5	
ARTR	**Artybash**	**0.97**	**18**	*e*PG		**Pg**	**08 32 20.0**	**-2.1**
ARTR				*e*			06 32 34.1	
UKR	**Ust'-Kan**	**1.28**	**274**	*e*PG		**Pg**	**08 32 26.5**	**-1.5**
UKR				*e*			06 32 45.0	
TASR	**Tashtagol**	**2.00**	**19**	*i* PN		**Pn**	**08 32 38.6**	**+1.3**
TASR				*e*			06 33 05.6	
ELT	**Yel'tsovka**	**2.41**	**352**	*i* PN		**Pn**	**08 32 44.0**	**+1.1**
ELT				*e*			06 33 18.9	
TBTR	**Tabat**	**3.18**	**48**	*de*PN		**Pn**	**08 32 53.4**	**-0.1**
TBTR				*e*			06 33 00.5	
TBTR							06 33 39.8	
BLRR	**Bol'shaya Rech**	**4.10**	**56**	↓PN		**Pn**	**08 33 14.2**	**+8.1**
BLRR							06 33 18.1	
BLRR							06 33 50.9	
SHRR	**Shira**	**4.16**	**28**	↓*e*PN		**Pn**	**08 33 08.6**	**+1.7**
SHRR				*e*			06 33 17.1	
SHRR				*e*			06 33 54.9	
MK31	**Makanchi Array**	**5.05**	**218**	Pn		**Pn**	**08 33 20.0**	**+0.8**
	0.3nm,0.2s,baz=58,slow=14,SNR=19							
MK31				↑Pg		**Pg**	**08 33 34.0**	**-6.1**
	2.1nm,0.5s,baz=34,slow=13,SNR=4.4							
MK31				↓Sn		**Sn**	**08 34 17.2**	**-0.3**
	2.4nm,0.4s,baz=49,slow=28,SNR=3.9							
MK31				↑Lg			08 34 37.9	
	6.6nm,0.5s,baz=42,slow=32,SNR=9.4							
KURK	**Kurchatov**	**5.19**	**271**	↑Pn		**Pn**	**08 33 20.6**	**-0.4**
	1.5nm,0.6s							
KURK				↓Sn		**Sn**	**08 34 21.5**	**+0.7**
	5.0nm,0.8s							
KURK				↑Lg			08 34 46.2	
	9.5nm,0.6s							
KURBB	**Kurchatov Arra**	**5.25**	**270**	↑Pn		**Pn**	**08 33 21.6**	**-0.3**
	0.5nm,0.4s,baz=87,slow=15							
KURBB				↑Sn		**Sn**	**08 34 22.7**	**+0.2**
	0.6nm,0.2s							
KURBB				↑Lg			08 34 46.7	
	4.0nm,0.7s,baz=78,slow=33							
KTRR	**Kuturchin**	**6.06**	**45**	↓*e*PN		**Pn**	**08 33 30.4**	**-2.5**

*BJI **18** 08:41:29.5, 368S×10129E, h57km, mB5.7, mb5.4, Ms5.4, Msz5.3*

*ISCJB **18** 08:41:31.3±0.1, 330S±002×10125E±002, h36km, mb5.4/144, MS5.2/218, Error ellipse: s-maj=3.8km s-min=2.7km az=33.1*

*MOS **18** 08:41:31.3±1.2, 310S×10143E, h33km, mb5.7/55, MS5.1/57, Error ellipse: s-maj=10.1km s-min=4.8km az=115.9*

*NEIC **18** 08:41:32.8±0.1, 326S×10135E, h35km, mb5.5/50, MS5.2/173, Error ellipse: s-maj=6.0km s-min=3.8km az=47.0*

*NEIC Felt [III]

7.8nm,0.3s,baz=277,slow=14,SNR=22
KAPI LR LR 08 54 44.1
comp=Z,5μm,18.1s,baz=284,slow=43
KAPI Kappang 18.57 96 *e*P **Pn 08 45 45.6 -1.9**
232nm,1.1s
KDM Kudat 18.62 57 ⇓P **Pn 08 45 49.1 +0.9**
PCI Palu 18.77 83 P **Pn 08 45 49.8 -0.2**
0.0nm,0.0s
UBT Ubonrachathani 18.84 11 P **Pn 08 45 46.4 -4.4**
NST Nakhon Sawan 18.91 357 P **Pn 08 45 51.4 -0.3**
MYLDM Lahad Datu 19.23 64 ⇑P **Pn 08 45 56.8 +1.2**
KKTK Khon Kaen 19.61 5 P **Pn 08 45 58.0 -2.0**
494nm,0.9s
WSI Waingapu 19.97 109 ⇓*e*P **Pn 08 46 01.0 -3.3**
WSI *e*S **S 08 49 37.0 -8.2**
BATP Bataraza 20.46 54 *e*P **P 08 46 08.4 +0.7**
BDT Bhumibol Dam 20.56 354 ⇑P **P 08 46 07.0 -1.8**
18nm,1.0s
KDI Kendari 21.37 92 P **P 08 46 17.5 -0.1**
0.0nm,0.0s
BBSI Bau Bau 21.40 96 P **P 08 46 18.5 +0.6**
0.0nm,0.0s
CMAR Chiang Mai Arr 21.77 354 P **P 08 46 19.8 -2.0**
26nm,0.6s,mb4.9,baz=185,slow=8.9,SNR=23
CMAR PcP PcP 08 50 21.2 -0.2
1.5nm,0.4s,baz=210,slow=3.7,SNR=4.0
CMAR ScP ScP 08 53 53.8 -2.1
1.0nm,0.3s,baz=231,slow=2.7,SNR=6.3
CMAR LR LR 08 55 45.5
comp=Z,6μm,18.0s,MS5.0,baz=326,slow=39
CMAR Chiang Mai Arr 21.77 354 P **P 08 46 19.8 -2.0**
CMAR 08 50 21.3
NANT Nan 22.00 359 ⇑P **P 08 46 22.0 -2.2**
281nm,1.0s,mb5.7
CHG Chiang Mai 22.12 354 ⇓P **P 08 46 24.2 -1.3**
38nm,1.2s,mb4.7
CHTO Chiang Mai 22.12 354 PFAKE 08 46 40.0 +14
CHTO LR LR
comp=Z,5μm,20.0s,MS4.9
PALK Pallekele 23.02 297 P **P 08 46 35.5 +0.3**
comp=Z,49nm,1.6s,mb4.7
PALK LR LR
comp=Z,3μm,21.0s,MS4.7
CHRT Chiangrai 23.10 357 ⇓P **P 08 46 35.0 -0.9**
comp=Z,350nm,1.2s,mb5.7
BATI Baumata 23.30 108 P **P 08 46 38.0 -0.1**
comp=Z,0.0nm,0.0s
BATI Baumata 23.30 108 P **P 08 46 35.3 -2.8**
comp=Z,53nm,0.4s,mb5.3,baz=219,slow=6.5,SNR=3.5
BATI S **S 08 50 44.9 -3.0**
comp=Z,94nm,0.5s,baz=38,slow=22,SNR=7.7
QIZ Qiongzhong 23.79 21 P **P 08 46 42.8 +0.2**
QIZ XP sP 08 46 55.4 -2.4
QIZ S **S 08 50 57.8 +2.2**
QIZ AMB AMB
comp=Z,56nm,1.5s,mb4.8
QIZ LR LR
comp=N,4μm,21.7s
QIZ LR LR
comp=Z,6μm,23.6s,MS5.0
QIZ Qiongzhong 23.79 21 *e*P **P 08 46 41.5 -1.0**
comp=Z,258nm,1.6s,mb5.4
QIZ LR LR
comp=Z,5μm,20.0s,MS5.0
MNI Manado 24.09 79 P **P 08 46 46.9 +1.5**
comp=Z,0.0nm,0.0s
BUSP Coron 24.26 51 *e*P **P 08 46 47.2 +0.3**
PAGZ Pagadian 24.75 63 *e*P **P 08 46 52.9 +1.5**
MBWA Marble Bar 25.27 136 *e*P **P 08 46 57.3 +1.2**
comp=Z,37nm,1.1s,mb4.8
MBWA LR LR
comp=Z,3μm,20.0s,MS4.8
LUBP Lubang 25.38 48 *e*P **P 08 46 57.2 +0.1**
GUIM Jordan 25.40 57 *e*P **P 08 46 58.0 +0.7**
OTRP Odiongan 25.90 53 *e*P **P 08 47 01.2 -0.7**
RCP Roxas 26.03 55 ⇓*e*P **P 08 47 03.7 +0.7**
LBMI Labuha 26.41 85 P **P 08 47 05.4 -1.1**
comp=Z,0.0nm,0.0s
DAV Davao City (W) 26.43 67 LR LR 08 59 17.7
comp=Z,2μm,19.2s,MS4.7,baz=58,slow=41
DAV Davao City (W) 26.43 67 ⇑*e*P **P 08 47 03.1 -3.6**
MDRS Chennai 26.44 308 *e*P **P 08 47 08.5 +1.7**
MDRS AMb AMB 08 47 11.9
comp=Z,106nm,0.2s,mb6.1
TRD Trivandrum 26.89 296 ⇓*ex* **P 08 47 15.0 +4.1**
TRD *ex* x 08 52 13.0
VIS Vishakhapatnam 27.36 320 *e*P **P 08 47 14.7 -0.3**
VIS AMb AMB 08 47 22.4
comp=Z,70nm,1.2s,mb5.1
BALP Baler 27.66 46 *e*P **P 08 47 17.5 -0.2**
BWNR Bhubaneshwar 27.93 328 *e*P **P 08 47 18.0 -2.1**
BWNR *e*S **S 08 52 01.0 -0.5**
FITZ Fitzroy Crossi 28.07 123 *e*P **P 08 47 19.8 -1.5**
comp=Z,60nm,0.7s,mb5.3
FITZ *e*S **S 08 51 57.8 -5.9**
FITZ Fitzroy Crossi 28.07 123 P **P 08 47 19.9 -1.4**
comp=Z,30nm,0.7s,mb5.1,baz=308,slow=6.9,SNR=52
FITZ S **S 08 52 00.6 -3.1**
comp=Z,6.6nm,0.8s,baz=135,slow=18,SNR=4.1
FITZ LR LR 09 00 12.5
comp=Z,2μm,18.6s,MS4.6,baz=299,slow=40
KMI Kunming 28.33 3 P **P 08 47 23.4 -0.1**
KMI AP pP 08 47 33.3 -0.9
KMI PP PP 08 48 17.3 -11
KMI S **S 08 52 09.9 +2.3**
KMI XS sS 08 52 26.4 +1.0
KMI AMB AMB
comp=Z,25nm,1.2s,mb4.7
KMI AMB AMB
comp=Z,440nm,9.8s
KMI LR LR
comp=N,5μm,18.7s
KMI LR LR
comp=E,2μm,8.5s
KMI LR LR
comp=Z,6μm,18.9s,MS5.2
CAL Calcutta 28.63 335 *e*P **P 08 47 25.9 -0.3**
DGAR Diego Garcia 28.91 261 PFAKE 08 47 40.0 +11
DGAR LR LR
comp=Z,4μm,19.0s,MS5.1
GYA Guiyang 30.08 10 ⇑*i*P **P 08 47 38.6 -0.5**
GYA AP pP 08 47 49.8 0.0
GYA XP sP 08 47 54.9 +0.5
GYA PP PP 08 48 38.0 -10
GYA PCP PcP 08 50 40.3 0.0
GYA S **S 08 52 37.8 +2.6**
GYA SS SS 08 54 18.3 -26
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,240nm,4.9s
GYA LR LR
comp=N,9μm,16.4s,MS5.6
GYA LR LR
comp=E,7μm,15.8s,MS5.6
GYA LR LR
comp=Z,6μm,16.3s,MS5.3
SWI Sorong 30.12 86 P **P 08 47 37.6 -2.1**
comp=Z,0.0nm,0.0s
HYB Hyderabad 30.42 313 *i*P **P 08 47 44.0 +1.8**
HYB *e*S **S 08 52 40.0 -0.6**
HYB Hyderabad 30.42 313 *e*P **P 08 47 44.0 +1.8**
HYB *e*S **S 08 52 40.0 -0.6**
BOK Bokaro 30.82 332 *e*P **P 08 47 45.9 +0.2**
BOK AMb AMB 08 47 51.4
comp=Z,317nm,1.3s,mb6.0
MUN Mundaring 31.79 155 *e*P **P 08 47 55.6 +1.5**
KLBR Kellerberrin 32.13 153 *e*P **P 08 48 01.1 +4.0**
comp=Z,50nm,1.2s,mb5.2
NGP Nagpur 32.61 319 *e*P **P 08 48 00.4 -1.1**
NGP AMb AMB 08 48 02.7
comp=Z,61nm,3.9s
ODAN Odare 32.85 337 *e*P **P 08 48 04.5 +1.0**
comp=Z,316nm,0.7s,mb6.4
NWAO Narrogin (SRO) 33.04 155 P **P 08 48 05.5 +0.4**
comp=Z,26nm,1.1s,mb5.1,baz=348,slow=9.3,SNR=4.2
NWAO Narrogin (SRO) 33.04 155 *e*P **P 08 48 05.0 -0.1**
NWAO LR LR
comp=Z,5μm,20.0s,MS5.2
TAPN Taplejung 33.17 338 *e*P **P 08 48 07.6 +1.3**
RAMN Ramite 33.25 336 *e*P **P 08 48 08.3 +1.3**
comp=Z,131nm,0.5s,mb6.2
JBP Jabalpur 33.51 323 *e*P **P 08 48 10.1 +0.8**
JBP *e*S **S 08 53 30.2 +1.5**
AKL Akola 33.67 316 *ex* x 08 49 31.2

AKL AMb AMB 08 49 51.8
comp=Z,61nm,1.8s,mb5.2
YHNB Yeheng 34.04 34 PFAKE 08 48 20.0 +6.1
YHNB LR LR
comp=Z,4μm,22.0s,MS5.1
JIRN Jiri 34.05 336 *e*P **P 08 48 15.3 +1.4**
CD2 Chengdu 34.14 4 ⇓*i*P **P 08 48 13.3 -1.3**
CD2 PP PP 08 49 29.3 -3.2
CD2 PCP PcP 08 50 48.3 -3.0
CD2 S **S 08 53 38.0 -0.3**
CD2 PCS PcS 08 54 34.9 -2.7
CD2 SS SS 08 55 49.4 -18
CD2 SCS ScS 08 58 31.3 -4.4
CD2 AMB AMB
comp=Z,40nm,1.0s,mb5.3
CD2 AMB AMB
comp=Z,1μm,6.0s
CD2 LR LR
comp=N,7μm,18.0s,MS5.5
CD2 LR LR
comp=E,5μm,21.6s,MS5.5
CD2 LR LR
comp=Z,9μm,20.4s,MS5.5
LSA Lhasa 34.23 344 *e*P **P 08 48 16.5 +1.1**
LSA pmax pmax
comp=Z,113nm,1.3s,mb5.6
LSA MLR MLR
comp=Z,2μm,21.0s,MS4.8
LSA Lhasa 34.23 344 *e*P **P 08 48 16.5 +1.1**
comp=Z,113nm,1.3s,mb5.6
LSA LR LR
comp=Z,2μm,21.0s,MS4.8
PKI Pulchoki 34.30 335 *e*P **P 08 48 17.0 +1.0**
comp=Z,118nm,0.6s,mb6.0
PKIN Phulchoki 34.31 335 *e*P **P 08 48 16.9 +0.8**
comp=Z,101nm,0.7s,mb5.9
GUN Gumba 34.40 336 *e*P **P 08 48 18.3 +1.4**
comp=Z,193nm,0.4s,mb6.4
DMN Daman 34.46 334 *e*P **P 08 48 18.6 +1.1**
KKN Kakani 34.54 335 *e*P **P 08 48 19.2 +1.0**
comp=Z,667nm,1.2s,mb6.5
POO Poona 34.62 310 *e*P **P 08 48 20.2 +1.3**
POO AMb AMB 08 48 23.8
comp=Z,24nm,0.4s,mb5.4
GKN Gorkha 35.01 334 *e*P **P 08 48 23.2 +1.0**
comp=Z,171nm,0.4s,mb6.3
KOLN Koldanda 35.27 332 *e*P **P 08 48 25.9 +1.4**
comp=Z,249nm,0.5s,mb6.4
DANN Dangsing 35.70 333 *e*P **P 08 48 29.4 +1.3**
comp=Z,509nm,0.5s
WHN Wuhan 35.95 20 ⇓P **P 08 48 30.1 -0.1**
WHN AP pP 08 48 42.6 +1.5
WHN AMB AMB
comp=Z,79nm,0.9s,mb5.6
WHN LR LR
comp=Z,7μm,15.4s,MS5.5
WRAB Tennant Creek 36.29 120 P **P 08 48 31.0 -2.3**
comp=Z,654nm,0.9s,mb6.6,SNR=80
WRAB Tennant Creek 36.29 120 *e*P **P 08 48 31.6 -1.7**
WRAB *e*S **S 08 54 06.0 -5.7**
WRAB pmax pmax
comp=Z,74nm,0.8s,mb5.7
WRAB MLR MLR
comp=Z,2μm,20.0s,MS4.9
WRAB Tennant Creek 36.29 120 *e*P **P 08 48 31.6 -1.7**
comp=Z,74nm,0.8s,mb5.7
WRAB *e*S **S 08 54 06.0 -5.7**
WRAB LR LR
comp=Z,2μm,20.0s,MS4.9
WB2 Warramunga Arr 36.29 120 *e*P **P 08 48 31.4 -1.9**
WB2 *e*S **S 08 54 04.0 -7.7**
FORT Forrest 37.25 140 *e*P **P 08 48 45.1 +3.8**
comp=Z,50nm,0.7s,mb5.5
ASAR Alice Springs 37.49 126 P **P 08 48 42.6 -0.9**
comp=Z,45nm,0.8s,mb5.4,baz=302,slow=7.9,SNR=358
ASAR PcP PcP 08 51 00.9 -0.5
comp=Z,7.5nm,0.6s,baz=318,slow=3.1,SNR=5.1
ASAR S **S 08 54 26.3 -3.7**
comp=Z,7.4nm,0.6s,baz=296,slow=14,SNR=14
XAN Xi'an 37.88 10 P **P 08 48 45.1 -1.5**
XAN PP PP 08 50 20.5 +6.8
XAN SCP ScP 08 54 38.1 -9.0
XAN SCS ScS 08 58 47.9 -8.2
XAN AMB AMB
comp=Z,94nm,1.1s,mb5.4
XAN AMB AMB
comp=Z,424nm,6.3s
XAN LR LR
comp=E,2μm,18.2s
XAN LR LR
comp=Z,6μm,18.2s,MS5.4
PTH Pithoragarh 38.39 330 *e*P **P 08 48 52.8 +1.8**
PTH *ex* x 08 54 39.3
NJ2 Nanjing 38.98 24 *e*P **P 08 48 56.3 +0.4**
NJ2 AP pP 08 49 05.1 -1.7
NJ2 PP PP 08 50 31.0 +5.2
NJ2 S **S 08 54 53.0 +0.8**
NJ2 AMB AMB
comp=Z,30nm,1.1s,mb4.9
NJ2 AMB AMB
comp=Z,780nm,4.8s
NJ2 LR LR
comp=N,1μm,21.7s,MS5.5
NJ2 LR LR
comp=E,8μm,26.0s,MS5.5
NJ2 LR LR
comp=Z,6μm,23.0s,MS5.4
SSE Sheshan 39.18 28 P **P 08 48 57.9 +0.3**
SSE S **S 08 54 57.3 +2.1**
SSE AMB AMB
comp=Z,58nm,0.9s,mb5.3
SSE AMB AMB
comp=Z,1μm,4.4s
SSE LR LR
comp=N,2μm,25.6s,MS4.9
SSE LR LR
comp=E,1μm,25.6s,MS4.9
SSE LR LR
comp=Z,3μm,26.4s,MS4.9
AJM Ajmer 39.22 321 *e*P **P 08 48 58.0 0.0**
LZH Lanzhou 39.29 3 P **P 08 48 58.0 -0.4**
LZH AP pP 08 49 10.3 +1.0
LZH XP sP 08 49 15.0 +1.1
LZH PP PP 08 50 33.8 +4.7
LZH S **S 08 54 56.3 -0.4**
LZH SS SS 08 57 49.0 -2.4
LZH AMB AMB
comp=Z,80nm,1.0s,mb5.4
LZH AMB AMB
comp=Z,671nm,5.5s
LZH LR LR
comp=N,7μm,16.1s
LZH LR LR
comp=Z,10μm,20.4s,MS5.6
NDI New Delhi 39.30 326 *e*P **P 08 48 57.0 -1.7**
JAY Jayapura 39.45 90 P **P 08 48 56.7 -3.4**
comp=Z,0.0nm,0.0s
SMLA Simla 41.23 328 *i*P **P 08 49 14.4 -0.1**
SMLA *ex* x 08 49 20.8
comp=Z,292nm,0.5s
SMLA *i*x x 08 55 22.6
SDNR Sundarnagar 41.62 328 *e*P **P 08 49 18.6 +0.8**
BHK Bhakra 41.85 327 *ex* x 08 49 25.2
GTA Gaotai 42.55 358 *e*P **P 08 49 24.8 -0.4**
GTA AP pP 08 49 34.3 -1.9
GTA PP PP 08 51 07.8 +3.3
GTA PCP PcP 08 51 17.0 -0.3
GTA S **S 08 55 43.9 -1.3**
GTA SCS ScS 08 59 19.8 -3.9
GTA AMB AMB
comp=Z,12nm,1.2s,mb4.5
GTA AMB AMB
comp=Z,450nm,5.4s
GTA LR LR
comp=N,5μm,18.3s,MS5.5
GTA LR LR
comp=E,3μm,18.0s,MS5.5
GTA LR LR
comp=Z,7μm,19.2s,MS5.6
COEN Coen 42.73 107 *e*P **P 08 49 24.9 -2.2**
comp=Z,8.1nm,0.8s,mb4.5
DLH Dalhousie 42.97 328 *e*P **P 08 49 30.0 +1.3**
THN Thein Dam 43.01 328 *e*P **P 08 49 27.7 -1.4**
BTO Baotou 44.47 10 *e*P **P 08 49 39.3 -1.3**
HHC Hu-ho-hao-te 44.98 11 ⇑P **P 08 49 44.8 +0.1**

HHC AP pP 08 49 54.4 -1.4
HHC PCP PcP 08 51 25.5 0.0
HHC PP PP 08 51 30.6 +0.2
HHC SCP ScP 08 55 14.0 -1.1
HHC PCS PcS 08 55 18.1 -1.0
HHC S **S 08 56 20.8 +0.3**
HHC SS SS 08 59 35.4 -8.0
HHC AMB AMB
comp=Z,35nm,1.1s,mb5.1
HHC AMB AMB
comp=Z,872nm,6.6s
HHC LR LR
comp=N,3μm,15.9s,MS5.4
HHC LR LR
comp=E,3μm,16.6s,MS5.4
HHC LR LR
comp=Z,3μm,16.0s,MS5.4
BJT Baijiatuau 45.27 16 *e*P **P 08 49 46.6 -0.5**
BJT pmax pmax
comp=Z,133nm,1.3s
BJT MLR MLR
comp=Z,5μm,20.0s
BJT Baijiatuau 45.27 16 *e*P **P 08 49 46.6 -0.5**
comp=Z,133nm,1.3s,mb5.6
BJT LR LR
comp=Z,5μm,20.0s,MS5.4
BJI Beijing 45.30 16 P **P 08 49 46.6 -0.7**
BJI PP PP 08 51 34.1 +0.3
BJI S **S 08 56 23.3 -1.9**
BJI XS sS 08 56 44.5 +1.0
BJI AMB AMB
comp=Z,49nm,1.5s,mb5.1
BJI AMB AMB
comp=Z,862nm,8.9s
BJI LR LR
comp=N,4μm,19.1s,MS5.5
BJI LR LR
comp=E,2μm,14.4s,MS5.5
BJI LR LR
comp=Z,3μm,19.8s
MSEY Mahe Island 45.63 267 PFAKE 08 50 00.0 +10
MSEY LR LR
comp=Z,2μm,20.0s,MS5.1
PMG Port Moresby 46.02 100 *e*P **P 08 49 50.8 -2.7**
PMG pmax pmax
comp=Z,19nm,0.9s
PMG MLR MLR
comp=Z,1μm,20.0s
PMG Port Moresby 46.02 100 *e*P **P 08 49 50.8 -2.7**
comp=Z,18nm,0.9s,mb5.0
PMG LR LR
comp=Z,1μm,20.0s,MS4.9
DL2 Dalian 46.06 22 ⇑P **P 08 49 52.0 -1.3**
DL2 S **S 08 56 35.6 -0.6**
DL2 AMB AMB
comp=Z,40nm,0.7s,mb5.5
DL2 AMB AMB
comp=Z,360nm,5.4s
DL2 LR LR
comp=N,1μm,17.2s,MS5.0
DL2 LR LR
comp=E,840nm,13.6s,MS5.0
DL2 LR LR
comp=Z,1μm,17.6s,MS5.0
GUMO Guam 46.46 68 PFAKE 08 50 10.0 +13
GUMO LR LR
comp=Z,783nm,20.0s,MS4.7
CTA Charters Tower 46.94 114 *e*P **P 08 49 59.2 -1.4**
comp=Z,88nm,0.8s,mb5.7
CTA *e*S **S 08 56 44.0 -5.5**
CTA Charters Tower 46.94 114 *e*P **P 08 49 59.2 -1.4**
CTA *e*S **S 08 56 44.0 -5.5**
CTA pmax pmax
comp=Z,88nm,0.8s
CTAO Charters Tower 46.94 114 *e*P **P 08 49 59.2 -1.3**
comp=Z,148nm,1.0s,mb5.9
CTAO LR LR
comp=Z,2μm,20.0s,MS5.1
INCN Inchon 46.98 28 PFAKE 08 50 10.0 +9.5
INCN LR LR
comp=Z,1μm,19.0s,MS4.9
STKA Stephens Creek 47.36 131 *e*P **P 08 50 02.7 -1.0**
STKA Stephens Creek 47.36 131 P **P 08 50 02.9 -0.8**
comp=Z,23nm,0.7s,mb5.2,baz=310,slow=6.5,SNR=46
STKA S **S 08 56 52.1 -3.0**
comp=Z,3.6nm,0.9s,baz=98,slow=18,SNR=3.4
STKA LR LR 09 10 15.9
comp=Z,2μm,20.9s,MS5.2,baz=292,slow=36
KSRS Korea Array 47.57 29 P **P 08 50 04.0 -1.1**
comp=Z,27nm,1.0s,mb5.2,baz=216,slow=7.5,SNR=22
KSRS LR LR 09 14 51.0
comp=Z,884nm,18.1s,MS4.8,baz=227,slow=42
WMQ Urumqi 48.49 347 ⇑*i*P **P 08 50 12.8 +0.6**
WMQ AP pP 08 50 21.0 -2.3
WMQ PCP PcP 08 51 37.0 -0.8
WMQ PP PP 08 52 05.0 -0.3
WMQ S **S 08 57 11.0 +0.4**
WMQ SCS ScS 09 00 00.0 -1.8
WMQ AMB AMB
comp=Z,297nm,1.4s,mb6.1
WMQ AMB AMB
comp=Z,1μm,3.6s
WMQ LR LR
comp=N,3μm,18.1s
WMQ LR LR
comp=E,3μm,12.4s
WMQ LR LR
comp=Z,3μm,23.0s,MS5.2
KSH Kashi 48.55 334 ⇑*i*P **P 08 50 13.5 +0.8**
KSH *e*AP pP 08 50 22.5 -1.4
KSH *e*PCP PcP 08 51 40.1 +2.0
KSH *e*PP PP 08 52 05.1 -0.8
KSH *e*PCS PcS 08 55 34.4 +0.3
KSH *e*S **S 08 57 10.4 -1.3**
KSH *e*SCS ScS 09 00 00.3 -2.1
KSH *e*SS SS 09 00 35.3 -7.0
KSH AMB AMB
comp=Z,2μm,4.6s
KSH LR LR
comp=N,901nm,7.6s
KSH LR LR
comp=E,666nm,5.6s
KSH LR LR
comp=Z,2μm,14.0s,MS5.2
SNY Shenyang 49.34 22 ⇑P **P 08 50 16.6 -2.1**
SNY AMB AMB
comp=Z,596nm,5.4s
SNY LR LR
comp=N,2μm,19.8s,MS5.2
SNY LR LR
comp=E,2μm,19.5s,MS5.2
SNY LR LR
comp=Z,2μm,19.2s,MS5.1
ULHL Ulahol 50.71 336 P **P 08 50 29.5 +0.4**
SNR=14
KZA Kyzart 50.98 335 P **P 08 50 32.1 +1.0**
SNR=18
SONM Songino Array 51.16 4 P **P 08 50 32.5 +0.2**
comp=Z,27nm,0.5s,mb5.5,baz=188,slow=9.1,SNR=146
SONM PcP PcP 08 51 46.6 -0.9
comp=Z,4.5nm,0.3s,baz=190,slow=4.8,SNR=10
SONM ScP ScP 08 55 38.5 -2.6
comp=Z,5.9nm,1.2s,baz=186,slow=4.7,SNR=4.0
SONM LR LR 09 15 24.8
comp=Z,4μm,18.7s,MS5.4,baz=186,slow=40
SONM Songino Array 51.16 4 P **P 08 50 32.5 +0.2**
SONM 08 51 46.6
SONM Songino Array 51.16 4 P **P 08 50 32.5 +0.2**
SONM PcP PcP 08 51 46.6 -0.9
SONM ScP ScP 08 55 38.5 -2.6
SONM LR LR 09 15 24.8
ULN Ulaanbaatar 51.24 5 *e*P **P 08 50 33.2 +0.2**
ULN *e* 08 51 48.0
ULN pmax pmax
comp=Z,237nm,1.9s,mb5.8
ULN MLR MLR
comp=Z,3μm,20.0s,MS5.2
ULN Ulaanbaatar 51.24 5 *e*P **P 08 50 33.2 +0.2**
comp=Z,237nm,1.9s,mb5.8
ULN *e*PcP PcP 08 51 48.0 +0.2
ULN LR LR
comp=Z,3μm,20.0s,MS5.2
AAA Alma-Ata 51.30 337 *e*P **P 08 50 32.6 -0.9**
AAA *e*S **S 08 57 47.5 -2.3**
AAA pmax pmax

comp=Z,1μm,4.5s
AAA smax
comp=E,1μm,6.4s
AAA MLR MLR
comp=Z,1μm,22.0s,MS4.9
TKM2 Tokmak 2 51.53 336 *e*P **P 08 50 35.6 +0.3**
TKM2 pmax pmax
comp=Z,94nm,0.8s,mb5.8
TKM2 MLR MLR
comp=Z,912nm,19.0s,MS4.8
TKM2 Tokmak 2 51.53 336 P **P 08 50 35.8 +0.5**
SNR=70
TKM2 Tokmak 2 51.53 336 *e*P **P 08 50 35.6 +0.4**
comp=Z,94nm,0.8s,mb5.8
TKM2 LR LR
comp=Z,912nm,19.0s,MS4.8
KBK Karagaybulak 51.58 335 P **P 08 50 36.7 +1.1**
SNR=22
AML Almayashu 51.69 334 P **P 08 50 37.5 +1.0**
SNR=5.9
AML Almayashu 51.69 334 *e*P **P 08 50 37.4 +1.0**
comp=Z,82nm,0.7s,mb5.8
AML LR LR
comp=Z,864nm,21.0s,MS4.8
CN2 Changchun 51.73 22 *e*P **P 08 50 35.3 -1.5**
CN2 AMB AMB
comp=Z,60nm,0.7s,mb5.6
AAK Ala-Archa 51.75 335 P **P 08 50 34.0 -2.9**
SNR=7.3
FRU Bishkek 51.86 335⇑ *i*P **P 08 50 37.5 -0.2**
FRU *i* pP 08 50 50.0 +1.0
FRU *e*S **S 08 57 57.5 -0.2**
FRU pmax pmax
comp=Z,130nm,1.8s,mb5.6
FRU MLR MLR
comp=E,1μm,20.0s
FRU MLR MLR
comp=Z,1μm,23.0s,MS4.9
CHMS Chumysh 51.94 335 P **P 08 50 38.4 +0.1**
SNR=12
EKS2 Erkin-Say 52.08 334 P **P 08 50 40.2 +0.8**
SNR=51
EKS2 Erkin-Say 52.08 334 *e*P **P 08 50 40.1 +0.8**
comp=Z,66nm,0.6s,mb5.7
EKS2 LR LR
comp=Z,1μm,22.0s,MS4.8
USP Ospenovka 52.27 335 P **P 08 50 40.8 +0.1**
SNR=34
MAJO Matsushiro 52.56 38 *e*P **P 08 50 40.9 -2.2**
MAJO pmax pmax
comp=Z,30nm,1.2s,mb5.1
MAJO MLR MLR
comp=Z,1μm,21.0s,MS4.8
MAJO Matsushiro 52.56 38 *e*P **P 08 50 40.9 -2.2**
comp=Z,30nm,1.2s,mb5.1
MAJO LR LR
comp=Z,1μm,21.0s,MS4.8
MAT Matsushiro 52.56 38 P **P 08 50 41.5 -1.6**
MAT S **S 08 58 03.0 -4.5**
MJAR Matsushiro Arr 52.56 38 P **P 08 50 41.0 -2.1**
comp=Z,11nm,0.7s,mb4.9,baz=213,slow=7.6,SNR=22
MJAR ScP ScP 08 55 45.0 -2.5
comp=Z,3.9nm,0.9s,baz=222,slow=5.7,SNR=6.3
MJAR LR LR 09 12 20.0
comp=Z,839nm,21.5s,MS4.8,baz=260,slow=35
MK31 Makanchi Array 52.63 344 *i*P **P 08 50 43.0 -0.4**
MK31 pmax pmax
comp=Z,51nm,0.4s,mb5.8
MK31 Makanchi Array 52.63 344 *i*P **P 08 50 43.1 -0.3**
MKAR Makanchi Array 52.63 344 *i*P **P 08 50 43.0 -0.3**
comp=Z,48nm,0.4s,mb5.7,baz=155,slow=8.1,SNR=235
MKAR S **S 08 58 06.6 -1.5**
comp=Z,1.4nm,0.8s,baz=156,slow=14,SNR=3.6
MKAR LR LR 09 17 59.8
comp=Z,1μm,21.1s,MS4.9,baz=154,slow=42
MKAR Makanchi Array 52.63 344 P **P 08 50 43.1 -0.3**
MKAR S **S 08 58 06.6 -1.5**
MKAR Makanchi Array 52.63 344 P **P 08 50 43.0 -0.3**
MKAR S **S 08 58 06.6 -1.5**
MKAR LR LR 09 17 59.8
TOO Toolangi 52.91 136 *e*P **P 08 50 47.0 +1.3**
ZAK Zakamensk 53.53 2⇓ *i*P **P 08 50 49.3 -0.6**
ZAK pmax pmax
comp=Z,24nm,1.4s,mb4.9
KK31 Karatay Array 53.89 332 *i*P **P 08 50 52.0 -0.7**
KK31 pmax pmax
comp=Z,5.0nm,0.3s,mb4.9
KK31 Karatay Array 53.89 332 *i*P **P 08 50 52.1 -0.6**
VLA Vladivostok 53.89 28⇑ *e*P **P 08 50 51.8 -0.9**
VLA pmax pmax
comp=Z,129nm,1.9s,mb5.5
VLA Vladivostok 53.89 28⇑ *e*P **P 08 50 51.9 -0.8**
MDJ Mudanjiang 54.06 25 P **P 08 50 52.8 -1.1**
MDJ PCS PcS 08 55 57.0 -0.7
MDJ S **S 08 58 28.1 +0.5**
MDJ AMB AMB
comp=Z,40nm,0.9s,mb5.3
MDJ AMB AMB
comp=Z,489nm,6.0s
MDJ LR LR
comp=N,2μm,20.7s,MS5.2
MDJ LR LR
comp=E,1μm,20.7s,MS5.2
MDJ LR LR
comp=Z,3μm,20.7s,MS5.3
MDJ Mudanjiang 54.06 25 *e*P **P 08 50 53.3 -0.7**
comp=Z,42nm,1.1s,mb5.3
MDJ LR LR
comp=Z,2μm,22.0s,MS5.2
CAN Canberra 54.42 132 *e*P **P 08 50 57.9 +1.1**
ARMA Armidale 54.65 125 *e*P **P 08 50 59.5 +1.0**
ARMA *e*pP pP 08 51 08.1 -1.7
CNB Canberra Magne 54.69 132 *e*P **P 08 50 58.3 -0.4**
MOY Mondy 54.79 360 *e*P **P 08 50 59.2 +0.1**
HIA Hailar 54.80 15 *e*P **P 08 50 57.9 -1.3**
HIA pmax pmax
comp=Z,40nm,1.2s
HIA MLR MLR
comp=Z,2μm,20.0s
HIA Hailar 54.80 15 *e*P **P 08 50 57.9 -1.3**
comp=Z,40nm,1.2s,mb5.3
HIA LR LR
comp=Z,2μm,20.0s,MS5.2
TLY Talaya 54.84 2 *e*P **P 08 50 59.3 -0.1**
TLY *e*S **S 08 58 32.8 -5.0**
TLY pmax pmax
comp=Z,67nm,1.2s,mb5.5
TLY MLR MLR
comp=Z,4μm,18.0s,MS5.5
TLY Talaya 54.84 2 *e*P **P 08 51 00.1 +0.6**
comp=Z,110nm,1.5s,mb5.7
TLY LR LR
comp=Z,3μm,19.0s,MS5.4
OPO Ambohidratompo 54.93 250 P **P 08 51 01.8 +1.1**
comp=Z,3.2nm,0.8s,mb4.4,baz=81,slow=19,SNR=2.3
ABPO Ambohimpanom 54.97 249 PFAKE 08 51 10.0 +9.0
ABPO LR LR
comp=Z,2μm,22.0s,MS5.2
IRK Irkutsk 55.43 2⇑ *i*P **P 08 51 03.3 -0.4**
IRK pmax pmax
comp=Z,133nm,2.8s,mb5.5
CIT Chita 56.13 9 *e*P **P 08 51 06.9 -1.8**
CIT *e* pP 08 51 18.3 -1.8
CIT pmax pmax
comp=Z,174nm,1.4s,mb5.9
TAU Tasmania Unive 56.79 141 PFAKE 08 51 30.0 +16
TAU LR LR
comp=Z,2μm,21.0s,MS5.3
KURK Kurchatov 57.22 343 *e*P **P 08 51 16.0 -0.5**
KURK pmax pmax
comp=Z,90nm,0.8s,mb5.8
KURK MLR MLR
comp=Z,1μm,21.0s,MS5.1
KURK Kurchatov 57.22 343 *e*P **P 08 51 15.9 -0.5**
comp=Z,90nm,0.8s,mb5.8
KURK LR LR
comp=Z,1μm,21.0s,MS5.1
HNR Honiara 58.62 99 PFAKE 08 51 40.0 +13
HNR LR LR
comp=Z,579nm,22.0s,MS4.7
KLR Kul'dur 58.66 23⇓ *i*P **P 08 51 21.7 -4.9**
KLR *e*S **S 08 59 17.0 -11**
KLR *e* 09 03 24.0
KLR pmax pmax
comp=E,50nm,1.6s
KLR pmax pmax
comp=Z,130nm,1.6s,mb5.7
KLR MLR MLR
comp=E,2μm,17.0s
KLR MLR MLR
comp=Z,2μm,17.0s,MS5.3
ZAA0 Zalesovo Array 58.70 349 *e*P **P 08 51 26.1 -0.7**
ZALV Zalesovo Beam 58.70 349 P **P 08 51 26.0 -0.7**
comp=Z,33nm,0.4s,mb5.7,baz=160,slow=4.7,SNR=58
ZALV S **S 08 59 24.9 -3.8**
comp=Z,2.8nm,0.3s,baz=178,slow=6.8,SNR=2.7
ZALV LR LR 09 20 32.6
comp=Z,1μm,19.5s,MS5.0,baz=154,slow=40
ZALV Zalesovo Beam 58.70 349 P **P 08 51 26.0 -0.8**
ZALV S **S 08 59 24.9 -3.8**
ZALV Zalesovo Beam 58.70 349 P **P 08 51 26.0 -0.7**
ZALV S **S 08 59 24.9 -3.8**
ZALV LR LR 09 20 32.6
ERM Erimo 59.01 36 P **P 08 51 28.6 -0.6**
comp=Z,191nm,1.1s,mb6.0,SNR=7.0
ERM Erimo 59.01 36 PFAKE 08 51 40.0 +11
ERM LR LR
comp=Z,784nm,22.0s,MS4.8
KRAR Krasnoyarsk 59.54 355⇑ *e*P **P 08 51 31.9 -0.6**
KRAR pmax pmax
comp=Z,355nm,1.8s,mb6.1
KRAR MLR MLR
comp=Z,2μm,15.0s,MS5.2
NVS Novosibirsk 59.86 348⇑ *i*P **P 08 51 32.9 -1.9**
NVS *e* pP 08 51 42.0 -4.2
NVS *e*S **S 08 59 34.3 -9.3**
NVS pmax pmax
comp=Z,96nm,1.4s,mb5.6
NVS pmax pmax
comp=N,108nm,1.6s
NVS pmax pmax
comp=E,68nm,1.5s
NVS smax
comp=E,57nm,1.6s
NVS smax
comp=N,67nm,1.9s
RDF Al-Radifah 60.61 306 *e*P **P 08 51 40.4 -0.1**
baz=306
RDF AMb AMB 08 51 44.7
comp=Z,105nm,1.0s,mb5.9,baz=306
UMR Umm Al-Rimmam 60.72 307 *e*P **P 08 51 40.4 -0.8**
baz=307
UMR AMb AMB 08 51 45.1
comp=Z,120nm,0.9s,mb6.0,baz=307
NAY Al-Naaiem 60.98 306 *e*P **P 08 51 43.0 0.0**
baz=306
NAY AMb AMB 08 51 54.2
comp=Z,32nm,0.5s,mb5.7,baz=306
MIB Mutribah 61.12 307 *e*P **P 08 51 42.8 -1.1**
baz=307
MIB AMb AMB 08 51 47.7
comp=Z,96nm,1.1s,mb5.8,baz=307
RST Umm Al-Ruwaisa 61.27 306 *e*P **P 08 51 44.4 -0.6**
baz=306
RST AMb AMB 08 51 55.7
comp=Z,59nm,0.5s,mb6.0,baz=306
BOD Bodaibo 61.82 8 *e*P **P 08 51 46.8 -1.3**
BOD pmax pmax
comp=Z,53nm,1.2s,mb5.5
BVA0 Borovoye Array 61.85 339 *i*P **P 08 51 46.9 -1.4**
BVA0 pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
BRVK Borovoye 61.91 339 *e*P **P 08 51 47.7 -1.1**
BRVK pmax pmax
comp=Z,68nm,1.3s,mb5.6
BRVK Borovoye 61.91 339 *e*P **P 08 51 47.7 -1.1**
comp=Z,68nm,1.3s,mb5.6
YSS Yuzh-Sakhalins 61.98 31*α* *i*P **P 08 51 48.0 -1.3**
YSS *e* pP 08 51 59.5 -1.3
YSS *e*S **S 09 00 04.0 -7.0**
YSS pmax pmax
comp=Z,140nm,1.0s,mb6.0
YSS Yuzh-Sakhalins 61.98 31 *e*P **P 08 51 48.4 -0.9**
comp=Z,147nm,1.1s,mb6.0
YSS LR LR
comp=Z,252nm,22.0s,MS4.3
CLNS Chul'man 62.98 14 *e*P **P 08 51 54.6 -1.3**
CLNS *e**PP pP 08 52 03.1 -4.2
CLNS *e* 08 52 28.7
CLNS *e* 08 54 14.7
CLNS *e*S **S 09 00 26.8 +3.5**
CLNS *e*SS SS 09 04 20.1 -9.3
CLNS pmax pmax
comp=Z,48nm,1.0s,mb5.6
CLNS pmax pmax
comp=E,35nm,1.2s
CLNS pmax pmax
comp=N,34nm,1.2s
CLNS smax
comp=E,134μm,13.8s
CLNS smax
comp=N,50μm,15.4s
CLNS MLR MLR
comp=N,882nm,13.0s,MS5.3
CLNS MLR MLR
comp=Z,2μm,14.0s,MS5.3
CLNS MLR MLR
comp=E,1μm,14.0s,MS5.3
CASY Casey 63.17 176 PFAKE 08 52 10.0 +13
CASY LR LR
comp=Z,2μm,21.0s,MS5.2
MIR Mirnyy 63.36 184⇑ *i*P sP 08 52 13.0 -1.2
MIR *i* 08 52 22.0
MIR *e*S **S 09 00 28.0 +0.3**
MIR *e*PS 09 01 00.0
MIR pmax pmax
comp=Z,100nm,2.0s,mb5.6
MIR MLR MLR
comp=Z,700nm,20.0s,MS4.8
AB31 Akbulak array 63.38 331 *i*P **P 08 51 57.8 -0.9**
AB31 pmax pmax
comp=Z,31nm,0.6s,mb5.6
AB31 Akbulak array 63.38 331 *i*P **P 08 51 57.9 -0.8**
KMBO Kilima Mbogo 63.94 270 P **P 08 52 02.6 -0.4**
comp=Z,0.6nm,0.3s,baz=60,slow=20,SNR=2.2
KMBO LR LR 09 14 31.7
comp=Z,1μm,21.4s,MS5.0,baz=278,slow=31
AKTK Aktyubinsk 65.10 331 P **P 08 52 08.9 -1.0**
AKTK LR LR 09 24 10.3
AKTO Aktyubinsk 65.10 331 P **P 08 52 08.9 -1.0**
comp=Z,6.4nm,0.3s,mb5.1,baz=120,slow=6.7,SNR=35
AKTO LR LR 09 24 10.3
comp=Z,899nm,20.7s,MS5.0,baz=133,slow=39
AKTO Aktyubinsk 65.10 331 *i*P **P 08 52 08.7 -1.2**
AKTO pmax pmax
comp=Z,19nm,1.4s,mb4.9
DZM Mont Dzumac 65.82 113 *e*P **P 08 52 14.5 -0.7**
MAK Makhachkala 66.76 320 *e*P **P 08 52 19.1 -1.6**
MAK *i* 08 52 36.4
MAK *e* 08 54 48.3
MAK *i*S S 09 01 07.1 -3.2
MAK *i* 09 02 17.7
MAK pmax pmax
comp=Z,353nm,1.4s,mb6.2
GNI Garni 67.32 316 P **P 08 52 24.2 -0.2**
comp=Z,2.4nm,0.4s,mb4.6,baz=28,slow=13,SNR=7.9
GNI LR LR 09 25 02.3
comp=Z,178nm,21.2s,MS4.3,baz=103,slow=39
GNI Garni 67.32 316 *e*P **P 08 52 25.6 +1.2**
GNI pmax pmax
comp=Z,29nm,1.0s
GNI MLR MLR
comp=Z,344nm,22.0s
GNI Garni 67.32 316 *e*P **P 08 52 25.6 +1.3**
comp=Z,29nm,1.0s,mb5.3
GNI LR LR
comp=Z,344nm,22.0s,MS4.5
MTA Mtatsminda 67.96 318 P **P 08 52 28.7 +0.4**
TBLG Delisi 68.01 318 P **P 08 52 29.9 +1.2**
SVE Sverdlovsk 68.37 337⇓ *e*P **P 08 52 30.1 -0.5**
SVE *e* 08 52 52.8
SVE pmax pmax
comp=Z,66nm,1.4s,mb5.5
SVE MLR MLR
comp=Z,1μm,21.0s,MS5.1
GOR Gori 68.55 318 P **P 08 52 32.6 +0.6**
DRV Dumont d'Urvil 68.72 164 S S 09 01 16.0 -17
DRV SS SS 09 05 48.0 -10
DRV L 09 10 00.0
DRV R 09 13 00.0
YAK Yakutsk 68.73 14 *e*P **P 08 52 30.5 -2.2**
YAK *e**PP pP 08 52 42.6 -1.7
YAK *e* 08 52 52.1
YAK *e*S S 09 01 31.2 -1.9
YAK *e* 09 02 12.8
YAK *e*SS SS 09 06 00.4 +1.9
YAK pmax pmax
comp=Z,138nm,1.1s,mb5.8
YAK pmax pmax
comp=N,62nm,1.4s
YAK pmax pmax
comp=E,54nm,1.3s
YAK pmax pmax
comp=N,21nm,1.9s
YAK pmax pmax
comp=E,25nm,2.2s
YAK pmax pmax
comp=Z,137nm,4.2s
YAK smax
comp=N,19μm,1.6s
YAK smax
comp=E,65μm,2.5s
YAK MLR MLR
comp=Z,2μm,16.0s,MS5.5
YAK MLR MLR
comp=E,2μm,21.0s,MS5.3
YAK MLR MLR
comp=N,1μm,20.0s,MS5.3
YAK Yakutsk 68.73 14 *e*P **P 08 52 30.9 -1.8**
comp=N,233nm,1.2s,mb6.0
YAK LR LR
comp=Z,2μm,19.0s,MS5.4
ARU Arti 68.91 336*c* *i*P **P 08 52 33.0 -1.0**
ARU *e* 08 52 54.1
ARU *e* 08 55 01.5
ARU *e*S S 09 01 37.4 +2.0
ARU pmax pmax
comp=Z,97nm,1.7s,mb5.5
ARU MLR MLR
comp=Z,1μm,24.0s,MS5.1
ARU Arti 68.91 336 *e*P **P 08 52 33.1 -0.8**
comp=Z,143nm,1.5s,mb5.7
ARU pP pP 08 52 44.1 -1.4
ARU LR LR
comp=Z,1μm,20.0s,MS5.1
ONI Oni 69.24 318 P **P 08 52 37.0 +0.6**
MAW Mawson 69.30 195 *e*P **P 08 52 38.3 +2.0**
comp=Z,3.1nm,0.5s,mb4.5
MAW Mawson 69.30 195 P **P 08 52 37.8 +1.5**
comp=Z,2.9nm,0.8s,mb4.3,baz=2.6,slow=7.0,SNR=3.9
MAW LR LR 09 16 23.9
comp=Z,3μm,21.9s,MS5.5,baz=38,slow=30
MAW PKPPKP 09 20 43.9
comp=Z,2.3nm,1.1s,baz=270,slow=1.0,SNR=4.0
MAW Mawson 69.30 195 *e*P **P 08 52 38.3 +2.0**
MAW pmax pmax
comp=Z,3.0nm,0.5s
KIV Kislovodsk 70.34 319 *e*P **P 08 52 42.7 -0.4**
KIV *e* 08 53 00.9
KIV *e* 08 55 18.9
KIV *e*PPP 08 57 02.1
KIV *e*S S 09 01 51.7 -1.0
KIV pmax pmax
comp=Z,26nm,0.9s,mb5.2
KIV MLR MLR
comp=Z,374nm,19.0s,MS4.7
KIV Kislovodsk 70.34 319⇑ *i*P **P 08 52 43.4 +0.3**
KIV Kislovodsk 70.34 319 *e*P **P 08 52 44.1 +1.0**
comp=Z,57nm,1.1s,mb5.4
KIV LR LR
comp=Z,417nm,20.0s,MS4.7
ASF Jabal al Asfar 70.35 306 P **P 08 52 44.1 +0.8**
comp=Z,3.5nm,0.7s,mb4.4,baz=353,slow=2.6,SNR=15
ASF LR LR 09 25 41.1
comp=Z,612nm,18.2s,MS4.9,baz=334,slow=38
GOF Gofitskoye 70.59 320 *e*P **P 08 52 44.7 +0.1**
GOF pmax pmax
comp=Z,70nm,1.5s,mb5.4
MALT Malatya 71.13 312 *e*P **P 08 52 45.7 -2.3**
MALT pmax pmax
comp=Z,63nm,1.8s,mb5.2
MALT MLR MLR
comp=Z,591nm,22.0s,MS4.8
MALT Malatya 71.13 312⇑ *i*P **P 08 52 45.7 -2.3**
MALT Malatya 71.13 312 *e*P **P 08 52 45.7 -2.2**
comp=Z,63nm,1.8s,mb5.2
MALT LR LR
comp=Z,591nm,22.0s,MS4.8
EIL Elat 71.26 303 LR LR 09 22 54.9
comp=Z,949nm,20.8s,MS5.0,baz=103,slow=35
MMAI Mount Meron Ar 71.80 306 LR LR 09 26 14.5
comp=Z,794nm,18.0s,MS5.0,baz=95,slow=37
LSZ Lusaka 72.76 255 PFAKE 08 53 10.0 +12
LSZ LR LR
comp=Z,2μm,22.0s,MS5.3
PETK Petropavlovsk- 73.37 32 P **P 08 52 59.8 -1.2**
comp=Z,10.0nm,0.6s,mb4.9,baz=226,slow=0.3,SNR=36
PETK LR LR 09 30 43.3
comp=Z,547nm,18.7s,MS4.9,baz=256,slow=40
PET Petropavlovsk 73.83 32 *e*P **P 08 53 02.9 -0.8**
PET *e* 08 55 50.9
PET *e*S S 09 02 29.9 -2.5
PET *e*PPS 09 03 10.3
PET *e*SS SS 09 07 19.9 +2.8
PET pmax pmax
comp=Z,58nm,0.6s,mb5.7
PET pmax pmax
comp=Z,200nm,10.9s
PET pmax pmax
comp=Z,100nm,15.6s
PET MLR MLR
comp=Z,600nm,20.0s,MS4.9
PET Petropavlovsk 73.83 32 *i*P **P 08 53 02.4 -1.3**
PET LR LR
comp=Z,979nm,21.0s,MS5.1
CSS Prodhromos 73.99 308 *e*P **P 08 53 05.9 +0.8**
comp=Z,81nm,1.4s,mb5.5
VRHR Novokhopersk 74.11 326 *e*P **P 08 53 04.3 -1.1**
VRHR pmax pmax
comp=N,80nm,0.6s
VRHR pmax pmax
comp=Z,160nm,0.6s,mb6.1
VRHR pmax pmax
comp=E,70nm,0.8s
SNZO South Karori 75.42 132 PFAKE 08 53 20.0 +6.7
SNZO LR LR
comp=Z,2μm,22.0s,MS5.4
VSR Storozhevoye 75.56 325 *e*P **P 08 53 12.3 -1.5**
VSR *e*S S 09 02 47.8 -4.0
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.2
VSR pmax pmax
comp=N,30nm,1.8s
VSR pmax pmax
comp=E,60nm,1.5s
VSR smax
comp=N,20nm,0.9s
VSR smax
comp=Z,3.0nm,1.3s
VSR smax
comp=E,10.0nm,1.2s
LBTB Lobatse 75.56 245 PFAKE 08 53 30.0 +16
LBTB LR LR
comp=Z,920nm,20.0s,MS5.1
VOR Voronezh 75.75 325 *e*P **P 08 53 13.0 -1.9**
VOR pmax pmax
comp=Z,300nm,2.0s,mb5.9
ANTO Ankara 75.78 312 *e*P **P 08 53 15.5 +0.2**
ANTO pmax pmax
comp=Z,49nm,1.3s,mb5.3
ANTO MLR MLR
comp=Z,300nm,21.0s,MS4.6
ANTO Ankara 75.78 312⇑ *i*P **P 08 53 15.1 -0.2**
ANTO Ankara 75.78 312 *e*P **P 08 53 15.5 +0.2**
comp=Z,49nm,1.3s,mb5.3
ANTO LR LR
comp=Z,300nm,21.0s,MS4.6
BOSA Boshof 76.08 241 P **P 08 53 17.4 0.0**
comp=Z,1.9nm,0.5s,mb4.3,baz=344,slow=7.4,SNR=2.7
BOSA LR LR 09 20 35.8
comp=Z,948nm,21.6s,MS5.1,baz=80,slow=31
SIM Simferopol' 76.39 318*de*P **P 08 53 19.7 +1.0**
SIM *e* 08 53 35.0
SIM *e*S S 09 03 02.0 +0.7
SIM pmax pmax
comp=Z,45nm,0.5s,mb5.7
SIM MLR MLR
comp=Z,370nm,23.0s,MS4.6

ISP Isparta 76.94 310 PFAKE 08 53 30.0 +8.0
ISP LR LR
comp=Z,587nm,19.0s,MS4.9
TIXI Tiksi 76.98 9 *e*P **P** **08 53 17.9 -3.6**
TIXI *e* 08 56 12.8
TIXI *e*S S 09 03 08.9 +2.2
TIXI pmax pmax
comp=Z,26nm,0.5s,mb5.4
TIXI MLR MLR
comp=Z,3μm,18.0s,MS5.7
TIXI Tiksi 76.98 9 *e*P **P** **08 53 19.6 -1.9**
comp=Z,42nm,0.5s,mb5.6
TIXI LR LR
comp=Z,3μm,20.0s,MS5.7
MOS Moscow 78.26 329 *e*P **P** **08 53 26.9 -2.0**
MOS *e* pP 08 53 39.4 -1.3
MOS *e*S S 09 03 17.2 -3.9
MOS pmax pmax
comp=Z,166nm,1.6s,mb5.7
MOS pmax pmax
comp=Z,300μm,1.9s
MOS MLR MLR
comp=Z,1μm,22.0s,MS5.2
MOS Moscow 78.26 329 *e*P **P** **08 53 26.6 -2.3**
OBN Obninsk 78.56 328⇑ *e*P **P** **08 53 30.3 -0.3**
OBN *e* 08 56 27.2
OBN pmax pmax
comp=Z,53nm,0.5s,mb5.7
OBN Obninsk 78.56 328 *e*P **P** **08 53 30.7 +0.1**
comp=Z,277nm,1.7s,mb5.9
OBN LR LR
comp=Z,958nm,22.0s,MS5.1
PSN Preselentsi 80.12 315 P **P** **08 53 39.3 -0.1**
SUR Sutherland 80.12 238 PFAKE 08 53 50.0 +10
SUR LR LR
comp=Z,1μm,21.0s,MS5.3
TIRR Tirgusor 80.15 316 *e*P **P** **08 53 39.4 -0.1**
TIRR pmax pmax
comp=Z,16nm,0.8s,mb5.0
TIRR Tirgusor 80.15 316⇓ *i*P **P** **08 53 39.5 0.0**
TIRR Tirgusor 80.15 316 *e*P **P** **08 53 39.4 -0.2**
comp=Z,16nm,0.8s,mb5.0
RAO Raoul Island 80.41 119 PFAKE 08 53 50.0 +8.7
RAO LR LR
comp=Z,1μm,19.0s,MS5.3
KIS Kishinev 80.53 319 *e*P **P** **08 53 40.0 -1.5**
KIS *e* 08 56 50.0
KIS *e* 08 58 44.0
KIS Kishinev 80.53 319 *e*P **P** **08 53 40.0 -1.5**
KIS LRM 09 36 20.0
comp=Z,300nm,16.0s
SANT Santorini 80.55 308 PFAKE 08 53 50.0 +8.1
SANT LR LR
comp=Z,255nm,20.0s,MS4.6
PRD Provadia 80.55 315 P **P** **08 53 40.8 -0.9**
AKASG Malin Array Be 81.27 322 P **P** **08 53 44.6 -0.8**
comp=Z,2.6nm,0.4s,mb4.5,baz=84,slow=4.1,SNR=21
AKASG LR LR 09 35 17.7
comp=Z,419nm,21.0s,MS4.8,baz=105,slow=40
KIEV Kiev 81.28 322 *e*P **P** **08 53 44.6 -0.8**
KIEV pmax pmax
comp=Z,15nm,0.9s,mb4.9
KIEV MLR MLR
comp=Z,592nm,21.0s,MS4.9
KIEV Kiev 81.28 322 *e*P **P** **08 53 44.6 -0.8**
comp=Z,15nm,0.9s,mb4.9
KIEV LR LR
comp=Z,592nm,21.0s,MS4.9
KDZ Kurdzhali 81.64 313 P **P** **08 53 47.3 -0.3**
VRI Vrincioaia 81.65 317⇑ *i*P **P** **08 53 48.2 +0.7**
VRI Vrincioaia 81.65 317 P **P** **08 53 48.5 +1.1**
PLOR Plostina 81.70 317 P **P** **08 53 49.1 +1.4**
SBA Scott Base 81.72 169 *e*P **P** **08 53 47.3 0.0**
SBA pmax pmax
comp=Z,73nm,1.8s,mb5.3
SBA MLR MLR
comp=Z,865nm,20.0s,MS5.1
SBA Scott Base 81.72 169 *e*P **P** **08 53 47.3 0.0**
comp=Z,73nm,1.8s,mb5.3
SBA LR LR
comp=Z,865nm,20.0s,MS5.1
MLR Muntele Rosu 82.10 317 P **P** **08 53 49.8 -0.1**
comp=Z,24nm,1.1s,mb5.1,baz=34,slow=1.7,SNR=38
MLR Muntele Rosu 82.10 317⇓ *i*P **P** **08 53 50.4 +0.6**
MLR Muntele Rosu 82.10 317 P **P** **08 53 50.7 +0.9**
RZN Rozhen 82.17 313 P **P** **08 53 50.4 +0.1**
PAIG Paliouri 82.60 311 *e*P **P** **08 53 52.6 0.0**
PGB Panagyurishte 82.73 313 P **P** **08 53 52.8 -0.5**
MMB Musomiste 82.87 312 P **P** **08 53 52.8 -1.2**
TSUM Tsumeb 82.90 251 PFAKE 08 54 10.0 +15
TSUM LR LR
comp=Z,1μm,20.0s,MS5.3
BURAR Bucovina Array 83.06 319⇑ *i*P **P** **08 53 56.0 +1.2**
BURAR Bucovina Array 83.06 319 ⇑P **P** **08 53 56.0 +1.2**
BUR08 Bucovina Ar. S 83.07 319 *e*P **P** **08 53 55.9 +1.1**
BUR08 *e*pP pP 08 54 05.2 -1.5
KKB Krupnik 83.40 313 P **P** **08 53 56.2 -0.5**
VTS Vitosha 83.44 313⇓ *i*P **P** **08 53 57.1 +0.2**
VTS Vitosha 83.44 313 *i* P **P** **08 53 56.6 -0.3**
VTS Vitosha 83.44 313 P **P** **08 53 57.1 +0.2**
LIT Litokhoron 83.53 311 *e*P **P** **08 53 56.7 -0.7**
VAY Valandovo 83.68 312 *i* P **P** **08 53 57.0 -1.2**
GRG Griva 83.74 312 *e*P **P** **08 53 57.9 -0.6**
JOF Joensuu 83.94 334 *e*p **P** **08 53 57.6 -1.4**
comp=Z,9.1nm,0.5s,mb5.2
JOF Joensuu 83.94 334 *e*P **P** **08 53 57.6 -1.4**
JOF pmax pmax
comp=Z,9.0nm,0.5s,mb5.2
BILL Bilibino 83.98 20⇑ *e*P **P** **08 53 57.7 -1.4**
BILL pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
BILL Bilibino 83.98 20⇑ *e*P **P** **08 53 57.8 -1.3**
BILL LR LR
comp=Z,1μm,20.0s,MS5.4
GZR Gura Zlata 84.26 316 P **P** **08 54 02.1 +1.1**
LVV L'vov 84.29 321 *e*P **P** **08 54 00.0 -1.1**
LVZ Lovozero 84.44 340 PFAKE 08 54 10.0 +8.5
LVZ LR LR
comp=Z,1μm,21.0s,MS5.2
FNA Florina 84.48 311 *e*P **P** **08 54 01.1 -1.1**
BIA Bitola 84.56 312 *i* P **P** **08 54 02.2 -0.5**
DRGR 84.56 317⇑ *i*P **P** **08 54 03.2 +0.7**
DRGR 84.56 317 P **P** **08 54 03.5 +1.0**
SKO Skopje 84.62 313 *i* P **P** **08 54 02.6 -0.3**
KRUS Krusevo 84.67 312 *i* P **P** **08 54 02.9 -0.2**
LKD Levkas 84.72 309 *e*P **P** **08 54 04.0 +0.5**
APA Apatity 84.76 339⇑ *e*P **P** **08 54 03.2 +0.2**
APA pmax pmax
comp=Z,16nm,1.0s,mb5.1
APA MLR MLR
comp=Z,2μm,19.0s,MS5.5
OHR Ohrid 84.96 312 *i* P **P** **08 54 04.1 -0.6**
KWP Kalwaria 85.10 320 *e*P **P** **08 54 05.8 +0.7**
KWP Kalwaria 85.10 320⇑ *i*P **P** **08 54 05.6 +0.5**
KWP Kalwaria 85.10 320 *e*P **P** **08 54 05.8 +0.7**
KWP LR LR
comp=Z,668nm,20.0s,MS5.0
BZS Buzias 85.10 316⇑ *i*P **P** **08 54 05.4 +0.1**
BZS Buzias 85.10 316 P **P** **08 54 05.7 +0.4**
KOLS Kolonicke sedl 85.25 320 *e*P **P** **08 54 06.7 +0.8**
SUW Suwalki 85.67 325 *e*P **P** **08 54 07.9 +0.1**
SUW Suwalki 85.67 325 *e*P **P** **08 54 07.9 0.0**
CRVS Cervenica-Dubn 85.77 319 *e*P **P** **08 54 08.8 +0.3**
CRVS *e*pP pP 08 54 23.9 +3.5
KAF Kangasniemi 85.91 333 *e*p **P** **08 54 08.0 -0.9**
comp=Z,11nm,0.5s,mb5.3,baz=100,slow=4.5
KAF Kangasniemi 85.91 333 *e*P **P** **08 54 08.0 -0.9**
KAF pmax pmax
comp=Z,11nm,0.5s,mb5.3
STHS Stebnicka Huta 86.00 320 *e*P **P** **08 54 10.4 +0.8**
STHS pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
STHS Stebnicka Huta 86.00 320 *e*P **P** **08 54 10.4 +0.8**
comp=Z,9.9nm,0.6s,mb5.2
DIVS Divibare 86.00 314 *e*P **P** **08 54 10.5 +0.7**
NIE Niedzica 86.60 320 *e*P **P** **08 54 13.2 +0.6**
PSZ Piszkesteto 86.64 318 *e*P **P** **08 54 12.0 -0.8**
PSZ pmax pmax
comp=Z,49nm,1.5s,mb5.5
PSZ MLR MLR
comp=Z,427nm,20.0s,MS4.8
PSZ Piszkesteto 86.64 318⇑ *e*P **P** **08 54 13.1 +0.3**
PSZ Piszkesteto 86.64 318⇓ *i*P **P** **08 54 13.3 +0.5**
PSZ Piszkesteto 86.64 318 *e*P **P** **08 54 12.0 -0.8**
comp=Z,49nm,1.5s,mb5.5
PSZ LR LR
comp=Z,427nm,20.0s,MS4.8
MAIT Maitri 86.70 199 *e*P **P** **08 54 21.6 +8.9**
OJC Ojcow 87.05 321 *e*P **P** **08 54 15.1 +0.3**
BUD Budapest 87.16 318 *e*P **P** **08 54 16.1 +0.7**
PKSM Moragy 87.25 316⇑ *i*P **P** **08 54 15.9 +0.1**
PKSM Moragy 87.25 316 P **P** **08 54 16.2 +0.4**
VYHS Vyhne 87.42 319 *e*P **P** **08 54 16.8 +0.2**
VYHS pmax pmax
comp=Z,11nm,1.8s,mb4.8
VYHS Vyhne 87.42 319 *e*P **P** **08 54 16.8 +0.2**
KEV Kevo 87.68 340 *e*P **P** **08 54 15.9 -1.5**
comp=Z,9.5nm,0.7s,mb5.1
KEV LR LR
comp=Z,1μm,21.0s,MS5.2
TIP Timpagrande 87.79 309 *e*P **P** **08 54 19.5 +0.9**
comp=Z,29nm,1.3s,mb5.3
TIP LR LR
comp=Z,236nm,21.0s,MS4.6
OKC Ostrava-Krasne 88.05 320⇑ *e*P **P** **08 54 20.3 +0.7**
OKC *e*S S 09 04 59.2 -1.4
OKC AMS AMS 09 43 00.0
comp=Z,500nm,14.8s
OKC Ostrava-Krasne 88.05 320 *e*P **P** **08 54 20.3 +0.7**
OKC *e*SKS 09 04 59.2
ARCES ARCESS Array B 88.13 340 P **P** **08 54 18.9 -0.6**
comp=Z,4.6nm,0.5s,mb5.0,baz=103,slow=5.1,SNR=42
ARCES LR LR 09 37 48.0
comp=Z,977nm,21.6s,MS5.2,baz=108,slow=38
ARE0 ARCESS Array S 88.13 340 *e*P **P** **08 54 19.2 -0.4**
MORC Moravsky Berou 88.43 320 *e*P **P** **08 54 22.1 +0.7**
MORC pmax pmax
comp=Z,52nm,1.4s,mb5.6
MORC Moravsky Berou 88.43 320⇑ *i*P **P** **08 54 22.0 +0.6**
MORC Moravsky Berou 88.43 320 *e*P **P** **08 54 22.1 +0.7**
comp=Z,52nm,1.4s,mb5.6
MODS Modra-Piesok 88.44 318 *e*P **P** **08 54 21.0 -0.4**
MODS *e*pP pP 08 54 35.8 +2.4
ZST Bratislava 88.53 318 *e*P **P** **08 54 22.4 +0.5**
comp=Z,80nm,1.8s,mb5.8
ZST LR LR
comp=Z,400nm,19.9s,MS4.8
CUC Castrocucco 88.59 310 *e*P **P** **08 54 22.0 -0.4**
comp=Z,12nm,0.7s,mb5.3
SOP Sopron 88.84 318 *e*P **P** **08 54 23.3 -0.1**
DPC Dobruska-Polom 89.28 320⇑ *i*P **P** **08 54 26.4 +1.0**
DPC *e*S S 09 05 04.6 -7.6
DPC AMS AMS 09 43 20.0
comp=Z,600nm,23.1s
CONA Conrad Observa 89.33 318⇑ *i*P **P** **08 54 25.9 +0.2**
comp=Z,16nm,1.6s,mb5.1
CSNA Conrad Observa 89.33 318⇓ *i*P **P** **08 54 25.8 +0.1**
comp=Z,15nm,1.5s,mb5.1
KSP Ksiaz 89.35 321 *e*P **P** **08 54 26.7 +1.0**
KSP Ksiaz 89.35 321 *e*P **P** **08 54 26.2 +0.5**
KSP *e*PP pP 08 54 36.1 -1.5
KSP *e*S S 09 05 08.5 -4.3
KSP Ksiaz 89.35 321 *e*P **P** **08 54 26.2 +0.5**
KSP *e*pP pP 08 54 36.1 -1.5
KSP *e*S S 09 05 08.5 -4.3
KSP LR LR
comp=Z,2μm,23.9s,MS5.3
GROS Grobnik 89.43 316 *i* P **P** **08 54 26.8 +0.6**
UPC Upice 89.49 320⇑ *i*P **P** **08 54 27.0 +0.6**
ARSA Arzberg 89.49 317 *i* P **P** **08 54 27.1 +0.7**
comp=Z,40nm,1.5s,mb5.5,SNR=10
BOJS Bojanci 89.52 315 *e*P **P** **08 54 27.1 +0.5**
BOJS *e* pP 08 54 40.9 +2.3
TREC Trest 89.71 319⇑ *e*P **P** **08 54 27.8 +0.4**
TREC AMS AMS 09 42 50.0
comp=Z,600nm,22.6s
PERS Pernice 89.72 317 *i* P **P** **08 54 27.9 +0.4**
PERS *e* 08 54 46.7
PDKS Podkum 89.75 316 *i* P **P** **08 54 28.2 +0.5**
SOKA Soboth 89.78 317⇑ *i*P **P** **08 54 28.5 +0.7**
SOKA Soboth 89.78 317⇑ *i*PcP PcP 08 54 28.5 -0.6
LJU Ljubljana 90.07 316 *i* P **P** **08 54 29.9 +0.7**
LJU *i* pP 08 54 41.3 +0.2
OBKA Obir 90.09 316⇑ *i*P **P** **08 54 29.9 +0.7**
comp=Z,36nm,1.9s,mb5.4
OBKA Obir 90.09 316⇑ *i*PcP PcP 08 54 29.9 -0.5
comp=Z,36nm,1.9s
JAVS Javornik 90.38 316 *i* P **P** **08 54 30.7 +0.1**
JAVS *i* pP 08 54 41.7 -0.8
PRU Pruhonice 90.38 320⇑ *i*P **P** **08 54 31.1 +0.6**
PRU *e*S S 09 05 19.2 -3.2
PRU AMS AMS 09 43 50.0
comp=Z,600nm,23.0s
MOA Molln 90.39 318⇑ *i*P **P** **08 54 30.6 0.0**
comp=Z,25nm,1.9s,mb5.2
PVCC Panska Ves 90.41 320⇑ *e*P **P** **08 54 31.5 +0.9**
PVCC AMS AMS 09 42 00.0
comp=Z,900nm,28.7s
GORS Gorjuse 90.46 316 *i* P **P** **08 54 31.5 +0.5**
MYKA Terra Mystica 90.73 316⇑ *i*P **P** **08 54 32.5 +0.2**
comp=Z,158nm,1.8s,mb6.0
BRG Berggiesshubel 90.83 321 *e*P **P** **08 54 33.3 +0.7**
BRG *e* 08 54 48.8
BRG 08 58 10.8
BRG 09 05 23.0
BRG pmax pmax
comp=Z,38nm,1.7s,mb5.5
BRG pmax pmax
comp=Z,13nm,1.3s,mb5.1
BRG pmax pmax
comp=Z,7.0nm,1.4s,mb4.8
BRG MLR MLR
comp=N,239nm,26.2s
BRG MLR MLR
comp=E,347nm,20.8s
BRG MLR MLR
comp=Z,403nm,25.5s,MS4.8
BRG Berggiesshubel 90.83 321 *e*P **P** **08 54 33.3 +0.7**
comp=Z,63nm,1.7s,mb5.7
BRG *e* 08 54 48.8
comp=Z,21nm,1.3s
BRG PP PP 08 58 10.8 +2.1
comp=Z,12nm,1.4s
BRG SKS 09 05 23.0
BRG S S 09 05 57.0 +30
BRG
comp=N,399nm,26.2s
BRG
comp=E,579nm,20.8s
BRG
comp=Z,673nm,25.5s
BRG Berggiesshubel 90.83 321 *e*P **P** **08 54 33.3 +0.7**
comp=Z,38nm,1.7s,mb5.5
BRG *e* 08 54 48.8
BRG PP PP 08 58 10.8 +2.1
BRG SKS 09 05 23.0
BRG S S 09 05 57.0 +30
BRG LR LR
comp=Z,400nm,25.5s,MS4.8
GEC2 GERESS Array S 90.84 319 *e*P **P** **08 54 33.7 +1.0**
GERES GERESS Array B 90.84 319 P **P** **08 54 32.9 +0.2**
comp=Z,3.8nm,0.8s,mb4.8,baz=90,slow=4.0,SNR=20
KHC Kasperske Hory 90.94 319⇑ *i*P **P** **08 54 33.4 +0.2**
KHC *e*S S 09 05 20.4 -7.2
KHC AMS AMS 09 44 30.0
comp=Z,800nm,17.9s
RUE Ruedersdorf 91.05 322 *e*P **P** **08 54 34.6 +1.0**
comp=Z,100nm,1.6s,mb5.9
SNAA Sanae 91.25 198 *i* P **P** **08 54 40.2 +6.0**
CLL Collm 91.45 321⇓ *i*P **P** **08 54 36.2 +0.7**
CLL pmax pmax
comp=Z,25nm,1.4s,mb5.3
CLL MLR MLR
comp=Z,600nm,21.9s,MS5.0
CLL Collm 91.45 321⇓ *i*P **P** **08 54 36.2 +0.7**
comp=Z,25nm,1.4s,mb5.3
CLL *e*sP sP 08 54 51.0 -0.8
CLL *e*PP PP 08 58 09.0 -4.6
CLL *e*S S 09 05 33.0 +0.8
CLL LmV 09 42 00.0
comp=Z,600nm,21.9s
NKC Novy Kostel 91.75 320⇑ *e*P **P** **08 54 37.7 +0.8**
NKC AMS AMS 09 42 30.0
comp=Z,800nm,26.0s
WTTA Wattenberg 92.14 317⇑ *i*P **P** **08 54 38.6 -0.1**
comp=Z,22nm,0.9s,mb5.5
MOX Moxa 92.30 320 *e*P **P** **08 54 40.5 +1.1**
MOX
comp=Z,200nm,19.0s
MOTA Moosalm 92.50 317⇓ *i*P **P** **08 54 40.2 -0.2**
comp=Z,18nm,1.5s,mb5.3
RETA Reutte 92.74 317⇓ *i*P **P** **08 54 41.5 0.0**
comp=Z,12nm,0.9s,mb5.3
FETA Feichten 92.75 317⇑ *i*P **P** **08 54 41.8 +0.2**
comp=Z,16nm,1.6s,mb5.2
FETA Feichten 92.75 317⇑ *i*PcP **P** **08 54 41.8 +0.2**
comp=Z,16nm,1.6s,mb5.2
NB2 NORSAR Subarra 92.89 331 P **P** **08 54 40.8 -1.1**
comp=Z,1.1nm,0.6s,mb4.5,baz=93,slow=4.6
NOA NORSAR Array B 92.89 331 LR LR 09 40 17.6
comp=Z,717nm,21.8s,MS5.1,baz=95,slow=38
VLC Villacollemand 92.89 314 PFAKE 08 54 50.0 +7.7
VLC LR LR
comp=Z,313nm,19.0s,MS4.8
KBS Kingsbay 93.11 349 PFAKE 08 54 50.0 +7.4
KBS LR LR
comp=Z,1μm,21.0s,MS5.4
DAVA Damuels 93.33 317⇑ *i*P **P** **08 54 44.8 +0.5**
comp=Z,27nm,1.3s,mb5.5
DAVA Damuels 93.33 317⇑ *i*PcP **P** **08 54 44.8 +0.5**
comp=Z,27nm,1.3s,mb5.5
KEST Kesra 93.44 305 P **P** **08 54 46.0 +0.9**
comp=Z,1.5nm,0.7s,mb4.5,baz=108,slow=5.3,SNR=4.3
KEST LR LR 09 39 32.0
comp=Z,198nm,18.9s,MS4.6,baz=187,slow=37
VSL Villasalto 93.52 309 PFAKE 08 55 00.0 +15
VSL LR LR
comp=Z,283nm,22.0s,MS4.7
KONO Kongsberg 93.67 329 *i* P **P** **08 54 45.1 -0.4**
PGF Pioggiola 93.86 312 *e*P **P** **08 54 46.4 -0.4**
BFO Black Forest 94.39 318 PFAKE 08 55 00.0 +11
BFO LR LR
comp=Z,544nm,20.0s,MS5.0
CDF Champ du Feu 95.09 318 *e*P **P** **08 54 52.1 -0.2**
LPL La Plagne 95.50 315 *e*P **P** **08 54 54.3 0.0**
BNI Bardonecchia 95.55 315 PFAKE 08 55 10.0 +16
BNI LR LR
comp=Z,477nm,21.0s,MS4.9
WLF Walferdange 95.80 319 PFAKE 08 55 10.0 +14
WLF LR LR
comp=Z,593nm,19.0s,MS5.1
LOR Lormes 97.43 317 *e*P **P** **08 55 02.9 -0.1**
comp=Z,5.6nm,0.6s,mb4.8
LOR Lormes 97.43 317 *e*P **P** **08 55 02.9 -0.1**
LOR pmax pmax
comp=Z,3.0nm,0.6s,mb4.9
LOR Lormes 97.43 317 *e*P **P** **08 55 02.9 -0.1**
comp=Z,2.8nm,0.6s,mb4.9
SMF Signal de Mont 97.48 316 *e*P **P** **08 55 02.8 -0.4**
IMA2 Indian Mountai 99.14 24 *e*P **P** **08 55 10.5 +0.3**
TORD Torodi Ar. Bea 100.01 283 P Pdif 08 55 15.7 +1.3
comp=Z,0.3nm,0.9s,baz=240,slow=14,SNR=3.3
TORD PKiKP PKiKP 08 59 42.4 -0.8
comp=Z,0.7nm,0.9s,baz=66,slow=1.7,SNR=3.7
TORD PKKPbc PKKPbc 09 11 33.5 -0.5
comp=Z,0.3nm,0.5s,baz=298,slow=3.7,SNR=5.9
ESK Eskdalemuir 100.92 326 PFAKE 08 55 30.0 +12
ESK LR LR
comp=Z,559nm,20.0s,MS5.1
KDAK Kodiak Island 101.42 32 PFAKE 08 55 30.0 +9.4
KDAK LR LR
comp=Z,185nm,21.0s,MS4.6
COLA College 101.80 24 PFAKE 08 55 30.0 +7.7
COLA LR LR
comp=Z,661nm,21.0s,MS5.1
PMR Palmer 102.20 27 PFAKE 08 55 30.0 +5.9
PMR LR LR
comp=Z,726nm,19.0s,MS5.2
ESLA Sonseca Array 103.80 310 PFAKE 08 55 40.0 +8.8
ESLA LR LR
comp=Z,2μm,21.0s,MS5.6
PAB San Pablo 104.11 310 PFAKE 08 55 40.0 +7.5
PAB LR LR
comp=Z,339nm,21.0s,MS4.9
SHEL Horse Pasture 105.33 253 PFAKE 09 00 00.0 +7.1
SHEL LR LR
comp=Z,2μm,20.0s,MS5.6
SFS San Fernando 105.97 307 PFAKE 09 00 10.0 +16
SFS LR LR
comp=Z,632nm,21.0s,MS5.1
MTE Manteigas 106.41 311 PFAKE 09 00 10.0 +16
MTE LR LR
comp=Z,437nm,19.0s,MS5.0
PPT Papeete 107.22 109 *e*LR LR 09 31 33.8
comp=Z,574nm,24.0s
SIT Sitka 110.44 29 PFAKE 09 00 10.0 +8.8
SIT LR LR
comp=Z,966nm,20.0s,MS5.4
PMSA Palmer Station 111.20 187 PFAKE 09 00 10.0 +7.5
PMSA LR LR
comp=Z,2μm,21.0s,MS5.6
WRAK Wrangell Islan 112.18 29 PFAKE 09 00 20.0 +15
WRAK LR LR
comp=Z,754nm,21.0s,MS5.3
SFJD Kangerlussuaq 113.52 348 PFAKE 09 00 20.0 +13
SFJD LR LR
comp=Z,2μm,19.0s,MS5.7
RKT Rikitea 119.27 119 *e*LR LR 09 37 07.5
comp=Z,548nm,29.8s
C03A Quillayute Air 120.72 34⇓P PKPdf 09 00 20.3 -1.0
baz=121
NLWA Neilton Lookou 121.42 34 PFAKE 09 00 30.0 +7.4
NLWA LR LR
comp=Z,483nm,21.0s,MS5.1
D03A Wishkah Elem. 121.63 35⇓P PKPdf 09 00 22.0 -1.0
baz=122
A06A Chilliwack 121.72 32⇑P PKPdf 09 00 21.9 -1.2
baz=122
C04A Brinnon 121.74 34⇓P PKPdf 09 00 22.3 -0.9
baz=122
B05A Bryant 121.90 33⇓P PKPdf 09 00 22.4 -1.1
baz=122
JCW Jim Creek 122.03 33 *e*PKPdf PKPdf 09 00 23.4 -0.4
B06A Marblemount 122.07 32⇑P PKPdf 09 00 22.5 -1.4
baz=122
A07A Ashnola River, 122.33 31⇓P PKPdf 09 00 23.4 -0.9
baz=122
F03A Seaside 122.41 36⇑P PKPdf 09 00 23.6 -0.9
baz=122
EFI East Falkland 122.43 195 PFAKE 09 00 40.0 +16
EFI LR LR
comp=Z,658nm,20.0s,MS5.3
C05A Tolt Reservoir 122.45 33⇑P PKPdf 09 00 23.7 -0.9
baz=122
E04A Onalaska 122.52 35⇓P PKPdf 09 00 24.0 -0.8
baz=122
D05A Enumclaw 122.59 34⇑P PKPdf 09 00 23.9 -0.9
baz=122
EDM Edmonton 122.72 24 *e*PKIKP PKPdf 09 00 24.0 -0.9
C06A Tall Timber Ra 122.75 32⇑P PKPdf 09 00 24.7 -0.4
baz=123
B07A Winthrop 122.83 32⇑P PKPdf 09 00 24.6 -0.6
baz=123
A08A Turner Farm, O 122.95 31⇓P PKPdf 09 00 24.8 -0.7
baz=123
F04A Amboy 123.07 35⇓P PKPdf 09 00 25.1 -0.7
baz=123
E05A Randle 123.08 34⇑P PKPdf 09 00 25.3 -0.6
baz=123
D06A Cle Elum 123.21 33⇑P PKPdf 09 00 25.3 -0.8
baz=123
H03A Soap Creek Ran 123.26 37⇑P PKPdf 09 00 25.9 -0.4
baz=123
A09A Danville 123.29 30⇑P PKPdf 09 00 25.4 -0.8
baz=123
B08A Colville Reser 123.30 31⇑P PKPdf 09 00 25.0 -1.1
baz=123
I02A Mapleton 123.30 38⇑P PKPdf 09 00 25.2 -1.1
baz=123
COR Corvallis 123.31 37 PFAKE 09 00 40.0 +14
COR LR LR
comp=Z,770nm,21.0s,MS5.3
C07A Waterville 123.33 32⇑P PKPdf 09 00 25.4 -0.9
baz=123
G04A Mulino 123.45 36⇓P PKPdf 09 00 25.8 -0.7
baz=123
E06A Yakima 123.53 34⇓P PKPdf 09 00 25.7 -0.9
baz=123
I03A Eugene 123.65 37⇑P PKPdf 09 00 26.4 -0.6
baz=124
D07A Quincy 123.69 33⇓P PKPdf 09 00 25.8 -1.2
baz=124
A10A Northport 123.80 30⇑P PKPdf 09 00 26.2 -0.9
baz=124
J02A Umpqua 123.80 38⇓P PKPdf 09 00 26.8 -0.5
baz=124

C08A	Higginbotham F	123.81	32	⇑P		PKPdf	09 00 26.4	-0.8
	baz=124								
B09A	Rice	123.87	31	⇑P		PKPdf	09 00 26.4	-0.9
	baz=124,SNR=6.5								
H04A	Detroit Lake	123.91	36	⇓P		PKPdf	09 00 26.2	-1.2
	baz=124								
F06A	Goldendale	124.10	34	⇓P		PKPdf	09 00 27.1	-0.7
	baz=124								
E07A	Sunnyside	124.14	33	⇑P		PKPdf	09 00 27.0	-0.8
	baz=124								
K02A	Glendale	124.17	39	⇑P		PKPdf	09 00 27.5	-0.6
	baz=124								
I04A	Tendick Farm,	124.28	37	⇑P		PKPdf	09 00 27.0	-1.2
	baz=124								
D08A	Wollman Farm,	124.33	32	⇑P		PKPdf	09 00 27.9	-0.3
	baz=124								
A11A	Hall Mountain,	124.40	29	⇓P		PKPdf	09 00 28.0	-0.3
	baz=124								
HAWA	Hanford	124.42	33	ℯPKPdf		PKPdf	09 00 28.4	0.0
HAWA				LR		LR			
	comp=Z,683nm,20.0s,MS5.3								
NEW	Newport	124.49	30	PFAKE			09 00 40.0	+12
NEW				LR		LR			
	comp=Z,896nm,20.0s,MS5.4								
G06A	Carlson Farm,	124.50	35	⇑P		PKPdf	09 00 28.2	-0.4
	baz=124								
H05A	Madras	124.50	36	⇑P		PKPdf	09 00 28.2	-0.4
	baz=124								
HUMO	Hull Mountain	124.59	39	⇓P		PKPdf	09 00 28.4	-0.4
	baz=124								
HUMO	Hull Mountain	124.59	39	ℯPKPdf		PKPdf	09 00 29.1	+0.2
HUMO				LR		LR			
	comp=Z,538nm,21.0s,MS5.2								
E08A	Dider Farm, El	124.61	33	⇓P		PKPdf	09 00 28.5	-0.2
	baz=124								
D09A	Jones Farm, Ri	124.66	32	⇑P		PKPdf	09 00 28.4	-0.5
	baz=124								
B11A	Sandpoint	124.75	30	⇓P		PKPdf	09 00 28.4	-0.6
	baz=125								
I05A	Bend	124.75	36	⇑P		PKPdf	09 00 28.6	-0.5
	baz=125								
A12A	Yaak River Ran	124.76	29	⇓P		PKPdf	09 00 28.7	-0.3
	baz=125								
J04A	Umpqua Nationa	124.76	38	⇓P		PKPdf	09 00 29.1	-0.1
	baz=125								
H06A	Lindquist Farm	124.96	35	⇑P		PKPdf	09 00 28.7	-0.8
	baz=125								
G07A	Ruggs Ranch, H	125.03	34	⇓P		PKPdf	09 00 29.3	-0.3
	baz=125								
E09A	Wood Farm, Sta	125.09	32	⇑P		PKPdf	09 00 28.7	-1.0
	baz=125								
F08A	Pendleton	125.20	33	⇓P		PKPdf	09 00 29.3	-0.6
	baz=125								
D10A	Wagner Farm, O	125.20	31	⇓P		PKPdf	09 00 29.2	-0.7
	baz=125								
C11A	Tepee Creek (N	125.20	30	⇓P		PKPdf	09 00 29.2	-0.7
	baz=125								
YBH	Yreka Blue Hor	125.21	39	⇓P		PKPdf	09 00 29.4	-0.6
	baz=125								
YBH	Yreka Blue Hor	125.21	39	PFAKE			09 00 40.0	+10
YBH				LR		LR			
	comp=Z,474nm,22.0s,MS5.1								
J05A	Fort Rock	125.27	37	⇑P		PKPdf	09 00 29.8	-0.3
	baz=125								
M02C	Callahan	125.30	40	⇓P		PKPdf	09 00 29.1	-1.1
	baz=125								
N02C	Big Bar	125.30	41	⇓P		PKPdf	09 00 29.3	-1.0
	baz=125								
A13A	Flathead Natio	125.35	28	⇑P		PKPdf	09 00 29.3	-0.8
	baz=125								
FFC	Flin Flon	125.41	16	PFAKE			09 00 40.0	+10
FFC				LR		LR			
	comp=Z,1μm,20.0s,MS5.6								
G08A	Pilot Rock	125.41	34	⇑P		PKPdf	09 00 29.8	-0.5
	baz=125								
L04A	Klamath Falls	125.48	39	⇓P		PKPdf	09 00 29.8	-0.7
	baz=125								
H07A	Lands Inn, Kim	125.49	35	⇓P		PKPdf	09 00 29.8	-0.7
	baz=125								
I06A	Prineville	125.50	36	⇓P		PKPdf	09 00 30.2	-0.3
	baz=125								
E10A	Myers Farm, Un	125.66	32	⇑P		PKPdf	09 00 30.3	-0.5
	baz=126								
C12B	Naegeli Ranch,	125.68	30	⇑P		PKPdf	09 00 29.8	-1.0
	baz=126								
D11A	Klaveano Farm,	125.69	31	⇓P		PKPdf	09 00 30.0	-0.9
	baz=126								
B13A	Whitefish	125.72	29	⇑P		PKPdf	09 00 30.1	-0.7
	baz=126,SNR=7.8								
M04C	Macdoel	125.73	39	⇑P		PKPdf	09 00 30.1	-1.0
	baz=126								
A14A	Double T Ranch	125.78	27	⇑P		PKPdf	09 00 30.1	-0.8
	baz=126								
K05A	Summer Lake	125.79	38	⇑P		PKPdf	09 00 30.9	-0.2
	baz=126								
M03C	McCloud	125.82	40	⇓P		PKPdf	09 00 30.5	-0.8
	baz=126								
I07A	Izee	125.83	35	⇓P		PKPdf	09 00 30.7	-0.4
	baz=126								
WDC	Whiskeytown Da	125.92	41	⇑P		PKPdf	09 00 30.3	-1.1
	baz=126								
WDC	Whiskeytown Da	125.92	41	PFAKE			09 00 40.0	+8.5
WDC				LR		LR			
	comp=Z,571nm,22.0s,MS5.2								
F10A	Beach Ranch, E	125.93	32	⇓P		PKPdf	09 00 30.7	-0.6
	baz=126,SNR=9.3								
J06A	Christmas Vall	125.94	37	⇓P		PKPdf	09 00 30.8	-0.6
	baz=126								
O02C	Red Bluff	125.97	41	⇓P		PKPdf	09 00 31.5	0.0
	baz=126								
H08A	Prairie City	126.04	35	⇓P		PKPdf	09 00 31.3	-0.3
	baz=126								
G09A	Cove	126.07	33	⇑P		PKPdf	09 00 30.3	-1.3
	baz=126								
K06A	Valley Falls	126.14	37	⇑P		PKPdf	09 00 31.0	-0.8
	baz=126								
C13A	Hot Springs	126.15	29	⇑P		PKPdf	09 00 31.1	-0.6
	baz=126								
D12A	Red Ives Fores	126.19	30	⇓P		PKPdf	09 00 30.4	-1.4
	baz=126								
L05A	Lakeview	126.21	38	⇓P		PKPdf	09 00 31.5	-0.5
	baz=126								
E11A	Bogner Ranch,	126.22	31	⇑P		PKPdf	09 00 30.8	-1.0
	baz=126								
J07A	Hines	126.36	36	⇑P		PKPdf	09 00 31.8	-0.5
	baz=126								
HOPS	Hopland	126.38	43	⇑P		PKPdf	09 00 31.9	-0.4
	baz=126								
HOPS	Hopland	126.38	43	PFAKE			09 00 40.0	+7.6
HOPS				LR		LR			
	comp=Z,514nm,20.0s,MS5.2								
M05C	Lookout	126.40	39	⇑P		PKPdf	09 00 32.3	0.0
	baz=126								
G10A	Bishop Farm, J	126.42	33	⇓P		PKPdf	09 00 31.5	-0.8
	baz=126								
I08A	Drewsey	126.47	35	⇓P		PKPdf	09 00 31.7	-0.7
	baz=126,SNR=15								
C14A	Swan Lake	126.48	29	⇑P		PKPdf	09 00 31.4	-0.9
	baz=126								
E12A	Beaver Dam Sad	126.51	31	⇓P		PKPdf	09 00 31.4	-1.0
	baz=126								
F11A	Grangeville	126.55	32	⇓P		PKPdf	09 00 31.8	-0.7
	baz=126								
BMO	Blue Mountains	126.60	33	PFAKE			09 00 40.0	+7.4
BMO				LR		LR			
	comp=Z,537nm,22.0s,MS5.2								
D13A	Huson	126.61	30	⇑P		PKPdf	09 00 31.4	-1.1
	baz=126								
MOD	Modoc	126.62	38	⇓P		PKPdf	09 00 31.9	-0.9
	baz=126								
MOD	Modoc	126.62	38	ℯPKPdf		PKPdf	09 00 33.0	+0.3
MOD				LR		LR			
	comp=Z,478nm,20.0s,MS5.2								
B15A	Bradely Ranch,	126.65	28	⇓P		PKPdf	09 00 31.3	-1.3
	baz=126,SNR=6.6								
K07A	Rock Creek Ran	126.80	37	⇓P		PKPdf	09 00 33.0	-0.1
	baz=127,SNR=7.8								
G11A	Walters Elk Ra	126.81	32	⇑P		PKPdf	09 00 32.2	-0.8
	baz=127								
J08A	Circle Bar Ran	126.86	36	⇓P		PKPdf	09 00 32.8	-0.4
	baz=127,SNR=11								
MNRC	McLaughlin Nat	126.86	42	⇑P		PKPdf	09 00 33.2	-0.1
	baz=127								
M06C	Likely Place G	126.90	39	⇓P		PKPdf	09 00 32.8	-0.5
	baz=127								
I09A	Lost Marbles R	126.91	35	⇓P		PKPdf	09 00 32.8	-0.5
	baz=127								
MCCM	Marconi Confer	126.93	43	PFAKE			09 00 40.0	+6.5
MCCM				LR		LR			
	comp=Z,537nm,19.0s,MS5.2								
C15A	Salmond Ranch,	127.02	28	⇓P		PKPdf	09 00 32.6	-0.7
	baz=127,SNR=12								
MSO	Missoula	127.05	30	ℯPKPdf		PKPdf	09 00 32.5	-1.0
MSO				LR		LR			
	comp=Z,584nm,19.0s,MS5.3								
FARB	Farallon Islan	127.07	44	⇓P		PKPdf	09 00 32.9	-0.9
	baz=127								
H10A	Noah's Angus R	127.07	33	⇑P		PKPdf	09 00 32.5	-1.1
	baz=127,SNR=8.1								
D14A	Greenough	127.08	29	⇓P		PKPdf	09 00 32.8	-0.6
	baz=127								
F12A	Elk City	127.11	31	⇑P		PKPdf	09 00 33.1	-0.4
	baz=127								
CVS	Carmenet Viney	127.12	43	⇑P		PKPdf	09 00 34.0	+0.1
	baz=127								
ORV	Oroville	127.14	41	⇑P		PKPdf	09 00 33.0	-0.8
	baz=127								
L07A	Adell	127.14	37	⇓P		PKPdf	09 00 34.0	+0.2
	baz=127								
E13A	Victor	127.19	30	⇓P		PKPdf	09 00 32.8	-0.9
	baz=127,SNR=9.3								
K08A	Mann Creek Ran	127.23	36	⇓P		PKPdf	09 00 33.5	-0.4
	baz=127,SNR=9.5								
J09A	Fry Pan Ranch,	127.28	35	⇑P		PKPdf	09 00 33.2	-0.7
	baz=127,SNR=5.8								
O05C	Quincy	127.30	40	⇓P		PKPdf	09 00 33.7	-0.4
	baz=127								
WVOR	Wild Horse Val	127.32	37	ℯPKIKP		PKPdf	09 00 34.5	+0.4
WVOR				MLR		MLR			
	comp=Z,450nm,20.0s,MS5.2								
CHMT	Chamberlain Mo	127.33	29	ℯPKPdf		PKPdf	09 00 34.4	+0.4
I10A	Payette	127.36	34	⇓P		PKPdf	09 00 34.0	-0.1
	baz=127								
H11A	Donnelly	127.40	33	⇑P		PKPdf	09 00 33.8	-0.3
	baz=127								
C16A	Fuhringer Ranc	127.40	27	⇑P		PKPdf	09 00 33.6	-0.5
	baz=127								
E14A	Clinton	127.56	30	⇓P		PKPdf	09 00 33.6	-0.8
	baz=127,SNR=6.8								
N06A	Buffalo Meadow	127.56	39	⇓P		PKPdf	09 00 34.3	-0.3
	baz=127,SNR=8.6								
F13A	Darby	127.56	31	⇑P		PKPdf	09 00 33.5	-0.9
	baz=127								
D15A	Lincoln	127.59	29	⇑P		PKPdf	09 00 34.0	-0.4
	baz=127								
M07A	Soldier Meadow	127.61	38	⇓P		PKPdf	09 00 34.5	-0.2
	baz=128,SNR=6.4								
L08A	Fields	127.64	37	⇓P		PKPdf	09 00 34.5	-0.2
	baz=128,SNR=9.6								
K09A	Rome	127.70	36	⇓P		PKPdf	09 00 34.6	-0.1
	baz=128,SNR=11								
BEKR	Beckwourth	127.72	40	⇑P		PKPdf	09 00 34.3	-0.6
	baz=128,SNR=7.1								
SCHQ	Schefferville	127.75	351	PKP		PKPdf	09 00 34.5	0.0
	comp=Z,4.6nm,0.7s,baz=225,slow=14,SNR=11								
P05C	Yuba Gap, Truc	127.86	41	⇓P		PKPdf	09 00 34.7	-0.5
	baz=128								
O06A	Flanigan	127.89	40	⇑P		PKPdf	09 00 34.4	-0.8
	baz=128								
I11A	Placerville	127.94	34	⇓P		PKPdf	09 00 34.9	-0.4
	baz=128								
E15A	Deer Lodge	127.97	29	⇓P		PKPdf	09 00 34.9	-0.3
	baz=128								
C17A	Wharram Farm,	127.98	27	⇓P		PKPdf	09 00 34.1	-1.0
	baz=128								
F14A	Wisdom	128.04	30	⇑P		PKPdf	09 00 35.3	-0.1
	baz=128								
M08A	Happy Creek Ra	128.06	37	⇓P		PKPdf	09 00 35.6	+0.1
	baz=128								
LAVA	Lava Cap Winer	128.06	42	⇓P		PKPdf	09 00 35.6	0.0
	baz=128								
N07B	Gerlach	128.08	38	⇑P		PKPdf	09 00 34.8	-0.8
	baz=128,SNR=6.5								
G13A	Cobalt	128.09	31	⇓P		PKPdf	09 00 34.5	-1.0
	baz=128								
H12A	Diamond D Ranc	128.12	32	⇓P		PKPdf	09 00 34.8	-0.7
	baz=128,SNR=5.5								
EGMT	Eagleton	128.13	26	ℯPKPdf		PKPdf	09 00 35.4	0.0
EGMT				LR		LR			
	comp=Z,597nm,20.0s,MS5.3								
K10A	MacKenzie Ranc	128.15	35	⇑P		PKPdf	09 00 35.9	+0.2
	baz=128,SNR=12								
MFID	Camas Ranch	128.33	34	⇑P		PKPdf	09 00 35.8	-0.1
	baz=128								
G14A	Jackson	128.38	31	⇓P		PKPdf	09 00 35.9	-0.1
	baz=128,SNR=7.8								
H13A	Challis	128.43	32	⇓P		PKPdf	09 00 35.4	-0.7
	baz=128,SNR=12								
F15A	Butte	128.46	30	⇑P		PKPdf	09 00 35.7	-0.5
	baz=128								
O07A	Toton	128.49	39	⇑P		PKPdf	09 00 36.2	-0.2
	baz=128								
R05C	Kirkwood Meado	128.53	41	⇑P		PKPdf	09 00 36.0	-0.5
	baz=128								
SAO	San Andreas Ge	128.61	44	PFAKE			09 00 50.0	+13
SAO				LR		LR			
	comp=Z,477nm,22.0s,MS5.1								
K11A	Parker Ranch,	128.63	35	⇑P		PKPdf	09 00 36.7	+0.1
	baz=128								
M09A	Marrel Ranch,	128.63	37	⇑P		PKPdf	09 00 36.4	-0.2
	baz=128								
CMB	Columbia Colle	128.68	42	⇓P		PKPdf	09 00 36.7	-0.1
	baz=129								
CMB	Columbia Colle	128.68	42	PFAKE			09 00 50.0	+13
CMB				LR		LR			
	comp=Z,413nm,22.0s,MS5.1								
DLMT	Dillon	128.74	30	ℯPKPdf		PKPdf	09 00 37.0	+0.3
L10A	Juniper Basin	128.81	36	⇓P		PKPdf	09 00 37.4	+0.4
	baz=129								
J12A	Stokes Ranch,	128.85	34	⇑P		PKPdf	09 00 36.9	0.0
	baz=129,SNR=7.3								
H14A	Leadore	128.86	31	⇑P		PKPdf	09 00 36.3	-0.6
	baz=129								
O08A	Rochester Mine	128.87	39	⇓P		PKPdf	09 00 36.9	-0.2
	baz=129,SNR=6.3								
N09A	Rock Creek Ran	128.93	38	⇓P		PKPdf	09 00 37.5	+0.3
	baz=129,SNR=9.5								
G15A	Dillon	128.93	30	⇑P		PKPdf	09 00 37.1	0.0
	baz=129,SNR=10								
I13A	Wildhorse Cree	128.94	33	⇓P		PKPdf	09 00 36.7	-0.4
	baz=129,SNR=5.3								
MCMT	McKenzie Canyo	128.99	31	ℯPKPdf		PKPdf	09 00 38.0	+0.8
BOZ	Bozeman (W)	129.02	29	ℯPKIKP		PKPdf	09 00 37.0	-0.2
BOZ				MLR		MLR			
	comp=Z,626nm,19.0s,MS5.3								
HLID	Hailey	129.02	33	⇓P		PKPdf	09 00 37.4	+0.1
	baz=129,SNR=8.6								
HLID	Hailey	129.02	33	ℯPKPdf		PKPdf	09 00 37.6	+0.3
HLID				LR		LR			
	comp=Z,573nm,22.0s,MS5.2								
R06C	Coleville	129.04	41	⇓P		PKPdf	09 00 38.0	+0.5
	baz=129								
S05C	Merced	129.08	43	⇑P		PKPdf	09 00 36.9	-0.7
	baz=129								
M10A	I.L. Ranch, Tu	129.12	36	⇓P		PKPdf	09 00 37.6	0.0
	baz=129								
S06C	San Francisco	129.12	42	⇓P		PKPdf	09 00 37.2	-0.4
	baz=129,SNR=7.1								
L11A	Cat Creek Ranc	129.17	35	⇑P		PKPdf	09 00 37.8	+0.2
	baz=129,SNR=18								
H15A	Lima	129.24	31	⇑P		PKPdf	09 00 37.7	0.0
	baz=129,SNR=7.0								
J13A	Cove Ranch, Pi	129.26	33	⇑P		PKPdf	09 00 37.5	-0.3
	baz=129,SNR=14								
U04C	Hernandez Rese	129.27	44	⇑P		PKPdf	09 00 37.8	-0.2
	baz=129								
I14A	Mackay	129.29	32	⇑P		PKPdf	09 00 37.5	-0.3
	baz=129								
K12A	Draper Farm, C	129.35	34	⇓P		PKPdf	09 00 38.0	+0.1
	baz=129								
BMN	Battle Mountai	129.37	38	PFAKE			09 00 50.0	+12
BMN				LR		LR			
	comp=Z,460nm,21.0s,MS5.2								
O09A	Fish Creek Ran	129.54	38	⇓P		PKPdf	09 00 38.1	-0.2
	baz=129								
M11A	Holland Ranch,	129.61	36	⇓P		PKPdf	09 00 38.8	+0.3
	baz=130								
PKD	Parkfield	129.65	45	⇑P		PKPdf	09 00 38.8	0.0
	baz=130								
J14A	Carey	129.66	33	⇑P		PKPdf	09 00 39.0	+0.4
	baz=130								
T06C	Millerton Lake	129.68	43	⇓P		PKPdf	09 00 38.7	-0.1
	baz=130								
QLMT	Earthquake Lak	129.70	30	ℯPKPdf		PKPdf	09 00 39.9	+1.3
I15A	Monteview	129.75	31	⇓P		PKPdf	09 00 38.9	+0.2
	baz=130								
K13A	Stover Farm, H	129.80	34	⇓P		PKPdf	09 00 38.7	-0.1
	baz=130,SNR=5.7								
Q08A	Gabbs	129.84	40	⇑P		PKPdf	09 00 38.7	-0.3
	baz=130								
NVAR	Mina Array Bea	129.84	41	PKP		PKPdf	09 00 39.8	+0.7
	comp=Z,2.2nm,0.4s,baz=303,slow=2.3,SNR=27								
NVAR				SKPbc			09 03 56.5		
	comp=Z,4.1nm,0.9s,baz=276,slow=3.2,SNR=11								
GCMT	Greycliff	129.85	28	ℯPKPdf		PKPdf	09 00 39.4	+0.6
H16A	Russell Place,	129.88	30	⇑P		PKPdf	09 00 39.0	+0.1
	baz=130								
O10A	Cortez Mining,	129.89	38	⇑P		PKPdf	09 00 38.3	-0.7
	baz=130								
DGMT	Dagmar	130.03	22	PFAKE			09 00 50.0	+11
DGMT				LR		LR			
	comp=Z,804nm,20.0s,MS5.4								
YMR	Madison River	130.05	30	ℯPKPdf		PKPdf	09 00 41.2	+2.0
YMR				LR		LR			
	comp=Z,1μm,21.0s,MS5.6								
M12A	Wells	130.13	35	⇓P		PKPdf	09 00 39.7	+0.3
	baz=130,SNR=9.3								
J15A	Blackfoot	130.19	32	⇓P		PKPdf	09 00 39.6	+0.1
	baz=130,SNR=7.8								
L13A	Double Diamond	130.25	34	⇓P		PKPdf	09 00 40.0	+0.3
	baz=130,SNR=8.4								
P10A	Eureka	130.32	38	⇑P		PKPdf	09 00 39.7	-0.1
	baz=130								
HELL	Mitchell Peak	130.32	43	⇑P		PKPdf	09 00 39.5	-0.5
	baz=130								
I16A	Newdale	130.35	31	⇓P		PKPdf	09 00 40.0	+0.2
	baz=130								
ELK	Elko	130.37	36	ℯPKIKP		PKPdf	09 00 40.7	+0.8
ELK				MLR		MLR			
	comp=Z,723nm,21.0s								
K14A	Jones Ranch, D	130.37	33	⇓P		PKPdf	09 00 40.1	+0.2
	baz=130								
LKWY	Lake	130.40	29	PFAKE			09 00 50.0	+10
LKWY				LR		LR			
	comp=Z,751nm,21.0s,MS5.4								
N12A	Clover Valley,	130.42	36	⇓P		PKPdf	09 00 39.7	-0.4
	baz=130,SNR=7.2								
S08C	White Mtn Res	130.44	42	⇓P		PKPdf	09 00 40.0	-0.2
	baz=130								
O11A	Cowboy Ranch,	130.50	37	⇓P		PKPdf	09 00 39.9	-0.3
	baz=130,SNR=6.4								
RLMT	Red Lodge	130.54	28	PFAKE			09 00 50.0	+10
RLMT				LR		LR			
	comp=Z,606nm,19.0s,MS5.3								
M13A	Montello	130.60	35	⇓P		PKPdf	09 00 40.2	-0.1
	baz=130,SNR=9.4								
K15A	Arbon	130.63	33	⇓P		PKPdf	09 00 40.5	+0.2
	baz=130								
L14A	Malta	130.68	34	⇓P		PKPdf	09 00 39.8	-0.7
	baz=130								
LAO	LASA Array	130.68	25	PFAKE			09 00 50.0	+10
LAO				LR		LR			
	comp=Z,776nm,20.0s,MS5.4								
J16A	Bone	130.71	31	⇓P		PKPdf	09 00 39.9	-0.6
	baz=131								
VES	Vestal, Richgr	130.72	44	⇑P		PKPdf	09 00 39.9	-0.9
	baz=131								
TPH	Tonopah	130.74	40	PFAKE			09 00 50.0	+9.3
TPH				LR		LR			
	comp=Z,332nm,22.0s,MS5.0								
R09A	Tonopah	130.74	40	⇓P		PKPdf	09 00 40.3	-0.4
	baz=131								
P11A	Circle Ranch,	130.79	38	⇑P		PKPdf	09 00 40.5	-0.3
	baz=131								
RRI2	Red Ridge	130.81	31	ℯPKPdf		PKPdf	09 00 40.6	-0.1
TPAW	Teton Pass	130.90	31	ℯPKPdf		PKPdf	09 00 41.4	+0.5
S09A	Goldfield	130.94	41	⇑P		PKPdf	09 00 41.5	+0.4
	baz=131,SNR=9.4								
O12A	Currie	130.96	37	⇓P		PKPdf	09 00 41.4	+0.3
	baz=131,SNR=8.0								
M14A	Sheep Mountain	130.97	34	⇓P		PKPdf	09 00 41.1	0.0
	baz=131,SNR=12								
LOHW	Long Hollow	130.99	30	ℯPKPdf		PKPdf	09 00 41.5	+0.5
SNOW	Snow King Moun	131.02	31	ℯPKPdf		PKPdf	09 00 42.0	+0.9
REDW	Red Top Meadow	131.04	31	ℯPKPdf		PKPdf	09 00 41.6	+0.5
ULM	Lac du Bonnet	131.06	14	PKP		PKPdf	09 00 39.3	-1.7
	comp=Z,4.5nm,0.6s,baz=288,slow=0.3,SNR=10								
ULM				SKPbc		SKPbc	09 03 57.6	-5.0
	comp=Z,3.0nm,0.6s,baz=33,slow=3.9,SNR=5.4								
HVU	Hansel Valley	131.11	34	ℯPKIKP		PKPdf	09 00 41.9	+0.6
L15A	Malad City	131.17	33	⇓P		PKPdf	09 00 41.3	-0.1
	baz=131,SNR=5.6								
R10A	Warm Springs	131.21	40	⇓P		PKPdf	09 00 41.7	0.0
	baz=131								
S10A	Tonopah Range,	131.23	40	⇑P		PKPdf	09 00 42.1	+0.4
	baz=131,SNR=7.5								
ISA	Isabella	131.24	44	PFAKE			09 00 50.0	+8.3
ISA				LR		LR			
	comp=Z,439nm,21.0s,MS5.1								
Q11A	Duckwater	131.28	39	⇓P		PKPdf	09 00 41.7	-0.1
	baz=131,SNR=6.8								
AHID	Auburn Hatcher	131.33	32	PFAKE			09 00 50.0	+8.3
AHID				LR		LR			
	comp=Z,718nm,20.0s,MS5.4								
P12A	McGill	131.36	37	⇑P		PKPdf	09 00 42.2	+0.3
	baz=131,SNR=6.6								
N14A	Grayback Hills	131.49	35	⇑P		PKPdf	09 00 42.3	+0.2
	baz=131,SNR=5.3								
DAC	Darwin (Calif)	131.50	43	PFAKE			09 00 50.0	+7.8
DAC

N17A	**Moffit Pass**	**132.75**	**33**	⇑P		PKPdf	09 00 44.0	-0.4
	baz=133							
P15A	**Leamington**	**132.86**	**36**	⇓P		PKPdf	09 00 44.5	-0.2
	baz=133							
AGMN	**Agassiz Refuge**	**132.86**	**16**	PFAKE			09 01 00.0	+16
AGMN				LR	LR			
	comp=Z,662nm,22.0s,MS5.3							
DAU	**Daniels Canyon**	**132.88**	**34**	*e*PKIKP		PKPdf	09 00 45.6	+0.9
BBRC	**Big Bear Sol-O**	**133.06**	**44**	⇓P		PKPdf	09 00 45.3	0.0
	baz=133							
TUQ	**Turquoise Moun**	**133.10**	**42**	⇓P		PKPdf	09 00 46.0	+0.7
	baz=133							
Q15A	**Fillmore**	**133.17**	**36**	⇑P		PKPdf	09 00 45.6	+0.3
	baz=133							
S13A	**Holt Ranch, En**	**133.17**	**39**	⇓P		PKPdf	09 00 45.8	+0.5
	baz=133							
O17A	**Robinson Place**	**133.31**	**34**	⇑P		PKPdf	09 00 46.1	+0.5
	baz=133							
U12A	**Valley of Fire**	**133.44**	**40**	⇓P		PKPdf	09 00 46.2	+0.3
	baz=133							
T13A	**Saint George**	**133.49**	**39**	⇓P		PKPdf	09 00 46.0	+0.1
	baz=133							
S14A	**Cedar City**	**133.49**	**38**	⇓P		PKPdf	09 00 46.3	+0.4
	baz=133							
MVU	**Marysvale**	**133.60**	**37**	PFAKE			09 01 00.0	+14
MVU				LR	LR			
	comp=Z,582nm,22.0s,MS5.2							
MSU	**Marysvale**	**133.61**	**37**	*e*PKIKP		PKPdf	09 00 46.6	+0.5
GMRC	**Granite Mounta**	**133.65**	**43**	⇑P		PKPdf	09 00 47.0	+0.7
	baz=134							
V12A	**Nelson**	**133.65**	**41**	⇑P		PKPdf	09 00 47.1	+0.8
	baz=134							
RSSD	**Black Hills**	**133.66**	**25**	*e*PKIKP		PKPdf	09 00 46.4	+0.3
RSSD				MLR	MLR			
	comp=Z,586nm,21.0s,MS5.3							
O18A	**Roosevelt**	**133.67**	**33**	⇑P		PKPdf	09 00 46.0	-0.2
	baz=134							
N19A	**John Jarvie Ra**	**133.67**	**32**	⇓P		PKPdf	09 00 46.5	+0.3
	baz=134							
PFO	**Pinyon Flat Ob**	**133.74**	**45**	⇓P		PKPdf	09 00 47.1	+0.6
	baz=134							
PFO	**Pinyon Flat Ob**	**133.74**	**45**	PFAKE			09 01 00.0	+13
PFO				LR	LR			
	comp=Z,398nm,20.0s,MS5.1							
P17A	**Butcher Ranch,**	**133.81**	**35**	⇑P		PKPdf	09 00 47.0	+0.5
	baz=134							
BELC	**Belle Mtn.**	**133.84**	**44**	⇓P		PKPdf	09 00 47.8	+1.1
	baz=134							
P18A	**Preston Nutter**	**133.98**	**34**	⇑P		PKPdf	09 00 47.8	+1.0
	baz=134							
BAR	**Barrett**	**134.07**	**46**	PFAKE			09 01 00.0	+13
BAR				LR	LR			
	comp=Z,474nm,22.0s,MS5.2							
O19A	**Miners Draw (B**	**134.12**	**33**	⇑P		PKPdf	09 00 47.6	+0.5
	baz=134							
MONP	**Monument Peak**	**134.14**	**46**	⇓P		PKPdf	09 00 47.4	+0.1
	baz=134							
V13A	**Grand Canyon W**	**134.14**	**41**	⇑P		PKPdf	09 00 47.4	+0.2
	baz=134							
R16A	**Teasdale**	**134.17**	**36**	⇑P		PKPdf	09 00 48.2	+1.0
	baz=134							
SRU	**San Rafael**	**134.18**	**35**	⇑P		PKPdf	09 00 47.9	+0.7
	baz=134							
SRU	**San Rafael**	**134.18**	**35**	*e*PKPdf		PKPdf	09 00 48.2	+1.1
EYMN	**Ely**	**134.23**	**12**	*e*PKPdf		PKPdf	09 00 48.2	+1.2
EYMN				LR	LR			
	comp=Z,879nm,22.0s,MS5.4							
U14A	**Mt Trumbull**	**134.32**	**40**	⇑P		PKPdf	09 00 48.5	+0.9
	baz=134							
IRM	**Iron Mountain**	**134.34**	**43**	⇑P		PKPdf	09 00 48.5	+0.9
	baz=134							
Q18A	**Rafter H Ranch**	**134.40**	**35**	⇓P		PKPdf	09 00 48.5	+0.9
	baz=134							
BC3	**Big Chuckw Mtn**	**134.41**	**44**	⇑P		PKPdf	09 00 48.4	+0.6
	baz=134							
T15A	**Red Dirt Ranch**	**134.44**	**38**	⇓P		PKPdf	09 00 48.4	+0.7
	baz=134							
S16A	**Weppner Ranch,**	**134.47**	**37**	⇓P		PKPdf	09 00 47.9	+0.1
	baz=134							
R17A	**Hanksville Air**	**134.54**	**36**	⇓P		PKPdf	09 00 48.0	+0.1
	baz=134							
W13A	**Hualapai Mount**	**134.65**	**42**	⇓P		PKPdf	09 00 48.8	+0.6
	baz=134							
P19A	**Cripple Cowboy**	**134.67**	**33**	⇓P		PKPdf	09 00 48.7	+0.6
	baz=134							
V14A	**Boquillas Ranc**	**134.84**	**40**	⇓P		PKPdf	09 00 49.2	+0.6
	baz=135							
U15A	**North Rim**	**134.87**	**39**	⇓P		PKPdf	09 00 49.2	+0.7
	baz=135							
X13A	**Yucca**	**134.99**	**42**	⇓P		PKPdf	09 00 49.3	+0.5
	baz=135							
Q19A	**Hogan Spring (**	**134.99**	**34**	⇑P		PKPdf	09 00 49.1	+0.3
	baz=135							
Y12C	**Blythe**	**135.00**	**43**	⇑P		PKPdf	09 00 49.0	+0.1
	baz=135							
S17A	**Black Ridge (B**	**135.00**	**37**	⇓P		PKPdf	09 00 49.2	+0.4
	baz=135							
R18A	**Canyonlands Na**	**135.03**	**35**	⇑P		PKPdf	09 00 49.7	+0.9
	baz=135							
W14A	**Seligman**	**135.11**	**41**	⇓P		PKPdf	09 00 49.7	+0.6
	baz=135							
GLA	**Glamis**	**135.18**	**45**	⇓P		PKPdf	09 00 49.5	+0.2
	baz=135							
GLA	**Glamis**	**135.18**	**45**	PFAKE			09 01 00.0	+11
GLA				LR	LR			
	comp=Z,384nm,19.0s,MS5.1							
V15A	**Kaibab Nationa**	**135.33**	**40**	⇑P		PKPdf	09 00 50.2	+0.8
	baz=135							
T17A	**Navajo Res., N**	**135.42**	**37**	⇓P		PKPdf	09 00 50.6	+1.0
	baz=135							
S18A	**Hurst Farm, BI**	**135.44**	**36**	⇑P		PKPdf	09 00 50.3	+0.7
	baz=135							
PLCA	**Paso Flores**	**135.50**	**189**	PKP		PKPdf	09 00 47.6	-2.1
	comp=Z,1.2nm,0.7s,baz=292,slow=2.9,SNR=3.7							
X14A	**Yava**	**135.69**	**42**	⇑P		PKPdf	09 00 50.5	+0.4
	baz=136							
U17A	**Shonto**	**135.77**	**38**	⇑P		PKPdf	09 00 51.4	+1.1
	baz=136							
U16A	**Tuba City**	**135.78**	**38**	⇓P		PKPdf	09 00 50.5	+0.3
	baz=136							
T18A	**Mexican Hat**	**135.89**	**36**	⇑P		PKPdf	09 00 51.0	+0.5
	baz=136							
S19A	**Harvey Farm, M**	**135.90**	**35**	⇓P		PKPdf	09 00 51.2	+0.8
	baz=136							
Y14A	**Wickenburg**	**135.93**	**42**	⇓P		PKPdf	09 00 51.6	+1.0
	baz=136							
TRQA	**Tornquist**	**135.97**	**199**	PFAKE			09 01 00.0	+9.4
TRQA				LR	LR			
	comp=Z,784nm,21.0s,MS5.4							
WUAZ	**Wupatki**	**136.02**	**39**	⇑P		PKPdf	09 00 51.0	+0.2
	baz=136							
WUAZ	**Wupatki**	**136.02**	**39**	PFAKE			09 01 00.0	+9.3
WUAZ				LR	LR			
	comp=Z,505nm,19.0s,MS5.3							
X15A	**Humboldt**	**136.11**	**41**	⇑P		PKPdf	09 00 51.3	+0.3
	baz=136							
W16A	**Flagstaff**	**136.19**	**40**	⇑P		PKPdf	09 00 51.5	+0.5
	baz=136							
ISCO	**Idaho Springs**	**136.32**	**30**	PFAKE			09 01 00.0	+8.8
ISCO				LR	LR			
	comp=Z,701nm,22.0s,MS5.3							
Y15A	**Casa Rosa Ranc**	**136.37**	**42**	⇓P		PKPdf	09 00 51.5	+0.1
	baz=136							
U18A	**Rough Rock, Ch**	**136.37**	**37**	⇓P		PKPdf	09 00 51.5	+0.1
	baz=136							
COWI	**Conover**	**136.46**	**10**	PFAKE			09 01 00.0	+8.8
COWI				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
MVCO	**Mesa Verde**	**136.64**	**35**	PFAKE			09 01 00.0	+8.2
MVCO				LR	LR			
	comp=Z,590nm,21.0s,MS5.3							
X16A	**Lo Mia Camp, P**	**136.67**	**41**	⇓P		PKPdf	09 00 51.9	0.0
	baz=136							
ECSD	**EROS,Sioux Fal**	**136.78**	**19**	PFAKE			09 01 00.0	+8.1
ECSD				LR	LR			
	comp=Z,1μm,21.0s,MS5.5							
V18A	**Ganado**	**136.80**	**38**	⇓P		PKPdf	09 00 52.3	+0.1
	baz=137							
OGNE	**Ogallala**	**137.10**	**26**	PFAKE			09 01 00.0	+7.4
OGNE				LR	LR			
	comp=Z,835nm,20.0s,MS5.5							
X17A	**Forest Lakes**	**137.13**	**40**	⇑P		PKPdf	09 00 53.5	+0.7
	baz=137							
115A	**Sonoran Desert**	**137.18**	**43**	⇓P		PKPdf	09 00 53.2	+0.3
	baz=137							
214A	**Organ Pipe Nat**	**137.20**	**44**	⇑P		PKPdf	09 00 53.2	+0.1
	baz=137							
W18A	**Petrified Fore**	**137.31**	**38**	⇓P		PKPdf	09 00 53.5	+0.3
	baz=137							
Z16A	**Peralta Trail,**	**137.34**	**42**	⇑P		PKPdf	09 00 53.4	+0.2
	baz=137							
PKME	**Peaks-Kenny Pk**	**137.42**	**350**	PFAKE			09 01 00.0	+7.0
PKME				LR	LR			
	comp=Z,852nm,22.0s,MS5.4							
Y17A	**Roosevelt**	**137.50**	**41**	⇑P		PKPdf	09 00 54.2	+0.7
	baz=137							
X18A	**Snowflake**	**137.55**	**39**	⇓P		PKPdf	09 00 54.0	+0.4
	baz=137							
116A	**Eloy**	**137.62**	**43**	⇑P		PKPdf	09 00 54.4	+0.6
	baz=138							
SDCO	**Great Sand Dun**	**137.91**	**32**	*e*PKPdf		PKPdf	09 00 55.0	+0.8
SDCO				LR	LR			
	comp=Z,481nm,20.0s,MS5.2							
Y18A	**Canyon Day Jun**	**137.98**	**40**	⇑P		PKPdf	09 00 55.4	+1.0
	baz=138							
X19A	**St. Johns**	**138.03**	**39**	⇓P		PKPdf	09 00 55.5	+1.0
	baz=138							
117A	**Oracle**	**138.26**	**42**	⇓P		PKPdf	09 00 56.0	+1.0
	baz=138							
Y19A	**Nutrioso**	**138.36**	**39**	⇑P		PKPdf	09 00 56.1	+1.0
	baz=138							
GLMI	**Grayling**	**138.36**	**6**	PFAKE			09 01 10.0	+15
GLMI				LR	LR			
	comp=Z,963nm,20.0s,MS5.5							
TUC	**Tucson**	**138.39**	**43**	*e*PKIKP		PKPdf	09 00 56.3	+1.1
TUC				MLR	MLR			
	comp=Z,399nm,20.0s,MS5.2							
LONY	**Lake Ozonia**	**138.72**	**355**	PFAKE			09 01 10.0	+15
LONY				LR	LR			
	comp=Z,898nm,21.0s,MS5.5							
118A	**Homack Ranch,**	**138.73**	**41**	⇑P		PKPdf	09 00 56.4	+0.6
	baz=139							
LBNH	**Lisbon**	**138.82**	**353**	PFAKE			09 01 10.0	+14
LBNH				LR	LR			
	comp=Z,807nm,20.0s,MS5.5							
218A	**Dragoon**	**139.09**	**42**	⇓P		PKPdf	09 00 57.1	+0.6
	baz=139							
119A	**Ashpeak Ranch,**	**139.09**	**41**	⇓P		PKPdf	09 00 56.8	+0.4
	baz=139							
JFWS	**Jewell Farm**	**139.29**	**13**	PFAKE			09 01 10.0	+13
JFWS				LR	LR			
	comp=Z,866nm,21.0s,MS5.5							
NCB	**Newcomb**	**139.33**	**355**	PFAKE			09 01 10.0	+13
NCB				LR	LR			
	comp=Z,897nm,22.0s,MS5.5							
LAZ	**Ladron**	**139.37**	**37**	*e*PKPdf		PKPdf	09 00 56.9	0.0
ANMO	**Albuquerque**	**139.40**	**36**	*e*PKIKP		PKPdf	09 00 58.2	+1.2
ANMO				MLR	MLR			
	comp=Z,509nm,19.0s							
318A	**Bisbee**	**139.45**	**43**	⇓P		PKPdf	09 00 57.5	+0.3
	baz=139							
SCIA	**State Center**	**139.48**	**17**	PFAKE			09 01 10.0	+13
SCIA				LR	LR			
	comp=Z,751nm,22.0s,MS5.4							
219A	**White Tail Can**	**139.60**	**42**	⇑P		PKPdf	09 00 58.0	+0.6
	baz=140							
CBKS	**Cedar Bluff**	**139.86**	**26**	PFAKE			09 01 10.0	+12
CBKS				LR	LR			
	comp=Z,1μm,19.0s,MS5.6							
319A	**Douglas**	**139.97**	**42**	⇑P		PKPdf	09 00 58.6	+0.4
	baz=140							
HRV	**Adam Dziewonsk**	**140.47**	**352**	PFAKE			09 01 10.0	+11
HRV				LR	LR			
	comp=Z,862nm,20.0s,MS5.5							
WES	**Weston**	**140.55**	**351**	PFAKE			09 01 10.0	+11
WES				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
KSU1	**Kansas State U**	**140.88**	**22**	*e*PKPdf		PKPdf	09 01 00.4	+0.8
KSU1				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
BINY	**Binghamton**	**141.22**	**357**	PFAKE			09 01 10.0	+10
BINY				LR	LR			
	comp=Z,917nm,20.0s,MS5.5							
AMTX	**Amarillo**	**142.09**	**31**	PFAKE			09 01 10.0	+8.2
AMTX				LR	LR			
	comp=Z,664nm,20.0s,MS5.4							
ACSO	**Alum Creek Sta**	**143.07**	**5**	PFAKE			09 01 20.0	+17
ACSO				LR	LR			
	comp=Z,860nm,20.0s,MS5.5							
CCM	**Cathedral Cave**	**143.61**	**17**	*e*PKIKP		PKPdf	09 01 00.7	-3.7
CCM				MLR	MLR			
	comp=Z,907nm,19.0s,MS5.6							
WMOK	**Wichita Mounta**	**143.65**	**28**	*e*PKIKP		PKPdf	09 01 00.2	-4.4
WMOK				MLR	MLR			
	comp=Z,1μm,21.0s,MS5.7							
MCWV	**Mont Chateau**	**143.83**	**1**	PFAKE			09 01 20.0	+15
MCWV				LR	LR			
	comp=Z,1μm,20.0s,MS5.7							
BDFB	**Brasilia**	**144.19**	**237**	PKP		PKPdf	09 01 06.5	+0.5
	comp=Z,5.0nm,0.6s,baz=68,slow=6.3,SNR=6.2							
BDFB	**Brasilia**	**144.19**	**237**	PKP		PKPdf	09 01 06.5	+0.5
BDFB				LR	LR			
	comp=Z,526nm,19.0s,MS5.3							
SIUC	**Southern Illin**	**144.47**	**14**	*e*PKPdf		PKPdf	09 01 03.4	-2.6
USIN	**University of**	**144.59**	**12**	*e*PKPdf		PKPdf	09 01 04.0	-2.1
WCI	**Wyandotte Cave**	**144.60**	**10**	*e*PKIKP		PKPdf	09 01 03.5	-2.7
WCI				*e*			09 04 18.5	
WCI				MLR	MLR			
	comp=Z,821nm,21.0s,MS5.5							
TXAR	**Lajitas Array**	**144.98**	**40**	PKP		PKPdf	09 01 05.8	-1.2
	comp=Z,15nm,0.7s,baz=262,slow=0.8,SNR=213							
TXAR				SKPbc	SKPbc		09 04 41.7	-2.0
	comp=Z,1.3nm,0.6s,baz=270,slow=0.6,SNR=6.3							
CBN	**Corbin**	**145.27**	**358**	*e*PKPbc		PKPbc	09 01 06.8	-0.2
CBN				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
GLAT	**Glass**	**145.82**	**15**	*e*PKPbc		PKPbc	09 01 08.8	0.0
UTMT	**University of**	**145.86**	**15**	*e*PKPbc		PKPbc	09 01 08.6	-0.4
URVA	**University of**	**145.91**	**358**	*e*PKPbc		PKPbc	09 01 08.9	-0.2
GNAR	**Gosnell**	**145.91**	**16**	*e*PKPbc		PKPbc	09 01 08.9	-0.2
MIAR	**Mount Ida**	**146.04**	**22**	*e*PKP2		PKPab	09 01 09.8	-0.3
MIAR				MLR	MLR			
	comp=Z,627nm,20.0s,MS5.4							
HBAR	**Harrisburg**	**146.11**	**18**	*e*PKPbc		PKPbc	09 01 09.8	0.0
HALT	**Halls**	**146.15**	**15**	*e*PKPdf		PKPdf	09 01 08.8	0.0
ELN	**Prospectdale**	**146.22**	**3**	*e*PKPbc		PKPbc	09 01 09.2	-0.8
BLA	**Blacksburg**	**146.25**	**2**	*e*PKP2		PKPab	09 01 10.3	-0.5
BLA				MLR	MLR			
	comp=Z,918nm,19.0s,MS5.6							
UALR	**University of**	**146.28**	**20**	*e*PKPbc		PKPbc	09 01 09.2	-1.1
WVT	**Waverly**	**146.31**	**13**	*e*PKP2		PKPab	09 01 10.4	-0.7
WVT				MLR	MLR			
	comp=Z,691nm,19.0s,MS5.5							
JCT	**Junction City**	**146.48**	**34**	PFAKE			09 01 20.0	+10
JCT				LR	LR			
	comp=Z,898nm,21.0s,MS5.5							
TZTN	**Tazewell**	**146.66**	**7**	*e*PKPbc		PKPbc	09 01 09.9	-1.5
TZTN				LR	LR			
	comp=Z,1μm,20.0s,MS5.7							
LCO	**Las Campanas**	**146.92**	**193**	PFAKE			09 01 20.0	+10
LCO				LR	LR			
	comp=Z,572nm,20.0s,MS5.3							
OXF	**Oxford**	**147.44**	**16**	*e*PKP2		PKPbc	09 01 13.7	+0.1
OXF				MLR	MLR			
	comp=Z,631nm,20.0s,MS5.4							
TKL	**Tuckaleechee C**	**147.51**	**8**	*e*PKP2		PKPbc	09 01 14.0	+0.3
SWET	**Sewanee**	**147.59**	**11**	*e*PKPbc		PKPbc	09 01 13.9	-0.1
CPCT	**Cooper Cave**	**147.61**	**9**	*e*PKPbc		PKPbc	09 01 14.7	+0.7
NATX	**Nacogdoches**	**148.02**	**26**	*e*PKPbc		PKPbc	09 01 14.7	-0.6
NATX				LR	LR			
	comp=Z,826nm,20.0s,MS5.5							
BBSR	**BB Station**	**148.23**	**337**	PFAKE			09 01 20.0	+7.5
BBSR				LR	LR			
	comp=Z,773nm,20.0s,MS5.5							
CNNC	**Cliffs of the**	**148.24**	**359**	*e*PKPbc		PKPbc	09 01 15.4	-0.3
CNNC				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
HKT	**Hockley**	**148.99**	**30**	*e*PKP2		PKPbc	09 01 17.9	+0.1
HKT				MLR	MLR			
	comp=Z,1μm,22.0s,MS5.6							
JSC	**Jenkinsville**	**149.12**	**4**	*e*PKP2		PKPbc	09 01 17.2	-0.8
VBMS	**Vicksburg**	**149.23**	**20**	*e*PKPbc		PKPbc	09 01 17.8	-0.6
VBMS				LR	LR			
	comp=Z,906nm,21.0s,MS5.5							
LRAL	**Lakeview Retre**	**149.47**	**14**	*e*PKPbc		PKPbc	09 01 17.6	-1.4
LRAL				LR	LR			
	comp=Z,848nm,20.0s,MS5.5							
GOGA	**Godfrey**	**149.76**	**8**	*e*PKP2		PKPbc	09 01 18.6	-1.0
GOGA				MLR	MLR			
	comp=Z,1μm,20.0s,MS5.7							
KVTX	**Kingsville**	**149.79**	**35**	PFAKE			09 01 30.0	+15
KVTX				LR	LR			
	comp=Z,678nm,20.0s,MS5.4							
NHSC	**New Hope**	**150.35**	**2**	PFAKE			09 01 30.0	+14
NHSC				LR	LR			
	comp=Z,1μm,19.0s,MS5.8							
BRAL	**Brewton**	**151.39**	**15**	PFAKE			09 01 30.0	+12
BRAL				LR	LR			
	comp=Z,850nm,20.0s,MS5.5							
LVC	**Limon Verde**	**152.47**	**200**	*e*PKPbc		PKPbc	09 01 27.9	+1.6
LVC				LR	LR			
	comp=Z,403nm,20.0s,MS5.2							
DWPF	**Disney**	**155.23**	**6**	PFAKE			09 01 30.0	+6.9
DWPF				LR	LR			
	comp=Z,1μm,22.0s,MS5.6							
LPAZ	**La Paz**	**157.84**	**208**	PKP		PKPdf	09 01 27.3	+0.5
	comp=Z,1.0nm,0.7s,baz=53,slow=3.5,SNR=4.6							
LPAZ	**La Paz**	**157.84**	**208**	*e*PKPdf		PKPdf	09 01 28.1	+1.3
LPAZ				LR	LR			
	comp=Z,281nm,20.0s,MS5.1							
BBGH	**Gun Hill**	**158.64**	**298**	PFAKE			09 01 40.0	+12
BBGH				LR	LR			
	comp=Z,1μm,20.0s,MS5.7							
SJG	**San Juan**	**160.79**	**321**	PFAKE			09 01 40.0	+10
SJG				LR	LR			
	comp=Z,719nm,22.0s							
TEIG	**Tepich**	**160.83**	**28**	PFAKE			09 01 40.0	+10
TEIG				LR	LR			
	comp=Z,658nm,19.0s							
GRGR	**Grenville**	**160.92**	**298**	PFAKE			09 01 40.0	+10
GRGR				LR	LR			
	comp=Z,373nm,21.0s							
NNA	**Nana**	**164.66**	**187**	PFAKE			09 01 50.0	+16
NNA				LR	LR			
	comp=Z,624nm,20.0s							
TGUH	**Tegucigalpa,Un**	**166.45**	**38**	*e*PKPab		PKPab	09 02 36.8	-0.3
TGUH				LR	LR			
	comp=Z,713nm,20.0s							
PAYG	**Puerto Ayora**	**167.84**	**109**	PFAKE			09 01 50.0	+13
PAYG				LR	LR			
	comp=Z,516nm,19.0s							
SDV	**Santo Domingo**	**170.20**	**305**	PFAKE			09 01 50.0	+12
SDV				LR	LR			
	comp=Z,223nm,22.0s							
JTS	**JuntasAbangare**	**170.77**	**41**	PFAKE			09 01 50.0	+12
JTS				LR	LR			
	comp=Z,375nm,20.0s							
BCIP	**Isla Barro Col**	**174.11**	**10**	PFAKE			09 01 50.0	+10
BCIP				LR	LR			
	comp=Z,750nm,21.0s							
ROSC	**El Rosal**	**175.30**	**289**	PKP		PKPdf	09 01 41.1	+0.9
	comp=Z,2.8nm,0.4s,baz=78,slow=23,SNR=5.8							
OTAV	**Otavalo**	**176.91**	**186**	*e*PKPdf		PKPdf	09 01 41.1	+0.4
OTAV				LR	LR			
	comp=Z,846nm,22.0s							

CSEM ***18*** *09:01:07.6±0.2, 4156N×1950E, h2km, ML2.5/10, Error ellipse: s-maj=4.7km s-min=1.8km az=5.0*
ISCJB ***18*** *09:01:09.6±0.6, 4170N±003×1951E±004, h10km, Error ellipse: s-maj=5.2km s-min=2.8km az=143.4*
TIR ***18*** *09:01:10.0±1.1, 4170N×1953E, h7km±461km, ML2.4*
PDG ***18*** *09:01:11.0±0.3, 4176N×1956E, h11km±1km, MD2.6/1, ML2.5/10, Error ellipse: s-maj=1.6km s-min=1.4km az=90.0*

ISC 18 09:01:10.0±0.6, 4169N±003×1951E±005, h18km±6km, n20, σ1ᵠ00/36, 7C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
QSH	**Qafa e Shtames**	**0.34**	**119**	*e*PG		**Pg**	**09 01 16.5**	**-0.6**
QSH				*i* SG		**Sg**	**09 01 22.0**	**0.0**
ULC	**Ulcinj**	**0.34**	**325**	⇑*i* Pg		**Pg**	**09 01 16.0**	**-1.2**
ULC				*i* Sg		**Sg**	**09 01 22.3**	**+0.2**
TIR	**Tirane**	**0.43**	**142**	*e*PG		**Pg**	**09 01 19.3**	**+0.5**
TIR				*i* SG		**Sg**	**09 01 26.0**	**+1.4**
PUK	**Puka**	**0.46**	**38**	*e*PG		**Pg**	**09 01 19.0**	**-0.3**
PUK				*i* SG		**Sg**	**09 01 26.0**	**+0.5**
BUM	**Brajici-Budva**	**0.77**	**323**	⇑*i* Pg		**Pg**	**09 01 24.9**	**-0.1**
BUM				*e* Sg		**Sg**	**09 01 35.9**	**+0.7**
PDG	**Podgorica**	**0.77**	**346**	⇓*i* Pg		**Pg**	**09 01 23.4**	**-1.6**
PDG				*e* Sg		**Sg**	**09 01 35.0**	**-0.2**
TTG	**Podgorica**	**0.77**	**346**	⇓*i* Pg		**Pg**	**09 01 23.4**	**-1.6**
TTG				*e* Sg		**Sg**	**09 01 35.0**	**-0.2**
BCI	**Bajram Curri**	**0.80**	**31**	*e*PG		**Pg**	**09 01 25.1**	**-0.5**
BCI				*i* SG		**Sg**	**09 01 36.8**	**+0.7**
PVY	**Plav**	**0.97**	**20**	⇑*i* Pg		**Pg**	**09 01 26.9**	**-2.0**
PVY				*e* Sg		**Sg**	**09 01 42.0**	**+0.3**
HCY	**Herceg Novi**	**1.07**	**316**	⇓*i* Pg		**Pg**	**09 01 30.6**	**-0.2**
HCY				*e* Sg		**Sg**	**09 01 47.0**	**+2.1**
OHR	**Ohrid**	**1.12**	**120**	*i* Pn		**Pn**	**09 01 31.1**	**+0.2**
OHR	**Ohrid**	**1.12**	**120**	*i* Pn		**Pn**	**09 01 31.0**	**+0.2**
NKY	**Niksic**	**1.19**	**341**	⇓*i* Pg		**Pg**	**09 01 32.2**	**+0.8**
NKY				*e* Sg		**Sg**	**09 01 49.6**	**+1.0**
BEY	**Berane**	**1.22**	**13**	⇑*i* Pg		**Pg**	**09 01 31.9**	**-1.7**
BEY				*e* Sg		**Sg**	**09 01 50.4**	**+0.9**
IVA	**Berane**	**

RAMN	**Ramite**		**9.50**	**318**	*e*Pn	**Pn**	**09 04 05.4**	**-0.2**
KMI	**Kunming**		**9.86**	**57**	P	**Pn**	**09 04 14.5**	**+4.0**
KMI					AP		09 04 19.3	
KMI					PP		09 04 23.1	
KMI					S	**Sn**	**09 06 01.3**	**+1.3**
KMI					AMB	AMB		
	comp=Z,51nm,1.2s							
KMI					LR	LR		
	comp=N,2μm,11.6s							
KMI					LR	LR		
	comp=E,1μm,9.6s							
KMI					LR	LR		
	comp=Z,2μm,15.4s							
LSA	**Lhasa**		**9.96**	**347**	P	**Pn**	**09 04 13.0**	**+1.0**
LSA	**Lhasa**		**9.96**	**347**	*e*P	**Pn**	**09 04 10.7**	**-1.3**
LSA					pmax	pmax		
	comp=Z,31nm,0.4s							
LSA	**Lhasa**		**9.96**	**347**	*e*P	**Pn**	**09 04 10.7**	**-1.3**
	comp=Z,31nm,0.4s							
VIS	**Vishakhapatnam**		**10.01**	**259**	*i* P	**Pn**	**09 04 11.5**	**-1.2**
VIS					AMb	AMB	09 04 12.4	
	comp=Z,26nm,0.4s							
VIS					*i* S	**Sn**	**09 05 53.6**	**-10**
JIRN	**Jiri**		**10.26**	**320**	*e*Pn	**Pn**	**09 04 16.4**	**+0.3**
JIRN					*e*Sn	**Sn**	**09 06 04.9**	**-5.0**
	comp=Z,178nm,0.3s							
GUN	**Gumba**		**10.63**	**320**	*e*Pn	**Pn**	**09 04 21.0**	**-0.1**
GUN					*e*Sn	**Sn**	**09 06 13.5**	**-5.5**
PKI	**Pulchoki**		**10.69**	**317**	*e*Pn	**Pn**	**09 04 21.6**	**-0.3**
PKI					*e*Sn	**Sn**	**09 06 14.9**	**-5.5**
	comp=Z,114nm,0.4s							
DMN	**Daman**		**10.91**	**316**	*e*Pn	**Pn**	**09 04 24.4**	**-0.5**
DMN					*e*Sn	**Sn**	**09 06 20.0**	**-5.8**
	comp=Z,198nm,0.5s							
KKN	**Kakani**		**10.92**	**317**	*e*Pn	**Pn**	**09 04 25.1**	**0.0**
KKN					*e*Sn	**Sn**	**09 06 19.7**	**-6.4**
	comp=Z,168nm,0.6s							
GKN	**Gorkha**		**11.48**	**316**	*e*Pn	**Pn**	**09 04 31.9**	**-0.9**
GKN					*e*Sn	**Sn**	**09 06 34.0**	**-5.8**
	comp=Z,89nm,0.3s							
KOLN	**Koldanda**		**12.04**	**312**	*e*Pn	**Pn**	**09 04 39.5**	**-0.8**
KOLN					*e*Sn	**Sn**	**09 06 46.3**	**-7.0**
	comp=Z,215nm,0.5s							
DANN	**Dangsing**		**12.29**	**315**	*e*Pn	**Pn**	**09 04 42.3**	**-1.5**
DANN					*e*Sn	**Sn**	**09 06 52.5**	**-7.1**
	comp=Z,173nm,0.7s							
JBP	**Jabalpur**		**13.10**	**287**	*e*P	**Pn**	**09 04 57.3**	**+2.4**
JBP					*e*S	**Sn**	**09 07 11.9**	**-7.6**
GYA	**Guiyang**		**13.61**	**59**	P	**Pn**	**09 05 03.0**	**+1.2**
GYA					AP		09 05 09.8	
GYA					PP		09 05 14.5	
GYA					S	**Sn**	**09 07 33.3**	**+1.5**
GYA					SS		09 07 49.0	
GYA					AMB	AMB		
	comp=Z,20nm,0.8s							
GYA					AMB	AMB		
	comp=Z,130nm,4.2s							
GYA					LR	LR		
	comp=N,3μm,12.4s							
GYA					LR	LR		
	comp=E,4μm,13.8s							
GYA					LR	LR		
	comp=Z,3μm,14.3s							
NGP	**Nagpur**		**13.72**	**278**	*ex*	x	09 04 60.0	
NGP					*ex*	x	09 05 00.3	
	comp=Z,28nm,0.7s							
NGP					*ex*	x	09 07 21.3	
CD2	**Chengdu**		**14.22**	**38**⇓	*i* P	**Pn**	**09 05 10.8**	**+0.6**
CD2					AP		09 05 18.3	
CD2					PP		09 05 22.5	
CD2					S	**Sn**	**09 07 48.3**	**+1.6**
CD2					XS		09 07 59.3	
CD2					SS		09 08 04.8	
CD2					AMB	AMB		
	comp=Z,50nm,0.6s							
CD2					AMB	AMB		
	comp=Z,680nm,7.2s							
CD2					LR	LR		
	comp=N,1μm,14.4s							
CD2					LR	LR		
	comp=E,1μm,8.4s							
CD2					LR	LR		
	comp=Z,2μm,9.6s							
HYB	**Hyderabad**		**14.52**	**262**	*e*P	**Pn**	**09 05 11.5**	**-2.8**
HYB					pmax	pmax		
	comp=Z,129nm,0.8s							
HYB	**Hyderabad**		**14.52**	**262**	*i* P	**Pn**	**09 05 15.5**	**+1.2**
	comp=Z,129nm,0.8s							
HYB					*e*S	**Sn**	**09 07 56.0**	**+2.0**
HYB	**Hyderabad**		**14.52**	**262**	*e*P	**Pn**	**09 05 11.5**	**-2.8**
	comp=Z,129nm,0.8s							
HYB					*e*S	Sn	09 08 20.0	+26
PTH	**Pithoragarh**		**15.48**	**311**	*e*P	**Pn**	**09 05 29.0**	**+2.0**
PTH					*ex*	x	09 08 04.0	
AKL	**Akola**		**15.61**	**276**	*e*P	**Pn**	**09 05 26.8**	**-2.0**
AKL					AMb	AMB	09 05 28.2	
	comp=Z,88nm,0.9s							
AKL					*ex*	x	09 08 07.2	
LATR	**Latur**		**16.21**	**267**	*e*S	**Sn**	**09 08 34.5**	**-0.7**
NDI	**New Delhi**		**17.30**	**303**	*ex*	x	09 05 57.0	
NDI					*ex*	x	09 08 46.0	
KOD	**Kodaikanal**		**18.35**	**241**	*ex*	x	09 05 33.9	
LZH	**Lanzhou**		**18.41**	**27**	*e*P	**Pn**	**09 06 03.0**	**-0.6**
LZH					AP	pP	09 06 12.8	+0.3
LZH					XP	sP	09 06 19.3	+2.3
LZH					*e*S	**Sn**	**09 09 23.0**	**-5.2**
LZH					SS		09 09 49.1	
LZH					AMB	AMB		
	comp=Z,40nm,1.0s							
LZH					AMB	AMB		
	comp=Z,169nm,4.0s							
LZH					LR	LR		
	comp=E,550nm,12.3s							
LZH					LR	LR		
	comp=Z,901nm,13.5s							
SMLA	**Simla**		**18.54**	**310**	*i* P	**Pn**	**09 06 06.1**	**+0.7**
SMLA					AMb	AMB	09 06 06.9	
	comp=Z,52nm,0.7s							
SMLA					*i* x	x	09 09 16.9	
AJM	**Ajmer**		**18.62**	**294**	*e*P	**Pn**	**09 06 06.3**	**0.0**
AJM					AMb	AMB	09 06 09.5	
	comp=Z,19nm,0.5s							
POO	**Poona**		**18.74**	**269**	*e*P	**Pn**	**09 06 07.6**	**-0.2**
POO					AMb	AMB	09 06 08.6	
	comp=Z,87nm,0.7s							
XAN	**Xi'an**		**19.52**	**41**	P	**Pn**	**09 06 14.3**	**-2.7**
GTA	**Gaotai**		**20.11**	**14**	P	**P**	**09 06 21.5**	**-0.5**
GTA					AP		09 06 31.4	
GTA					XP	sP	09 06 34.4	-1.3
GTA					S	**S**	**09 10 00.9**	**-5.1**
GTA					XS	sS	09 10 14.8	-5.8
GTA					PCP	PcP	09 10 36.1	-0.2
GTA					PCS	PcS	09 14 14.3	+0.6
GTA					AMB	AMB		
	comp=Z,19nm,0.8s							
GTA					LR	LR		
	comp=N,631nm,15.3s,MS4.2							
GTA					LR	LR		
	comp=E,673nm,15.0s,MS4.2							
GTA					LR	LR		
	comp=Z,675nm,16.2s,MS4.1							
THN	**Thein Dam**		**20.29**	**311**	*e*P	**P**	**09 06 24.5**	**+0.5**
THN					*ex*	x	09 09 52.4	
WHN	**Wuhan**		**21.46**	**56**	⇑P	**P**	**09 06 36.8**	**+0.1**
WHN					AMB	AMB		
	comp=Z,96nm,0.5s,mb5.4							
WMQ	**Urumqi**		**24.32**	**350**⇓	*i* P	**P**	**09 07 06.4**	**+0.9**
WMQ					AP		09 07 16.0	
WMQ					XP	sP	09 07 19.0	-0.7
WMQ					PP		09 07 43.0	
WMQ					*e*S	**S**	**09 11 20.0**	**-2.3**
WMQ					XS	sS	09 11 37.0	-1.7
WMQ					AMB	AMB		
	comp=Z,47nm,0.8s,mb5.0							
WMQ					AMB	AMB		
	comp=Z,233nm,4.9s							
WMQ					LR	LR		
	comp=N,2μm,20.6s,MS4.7							
WMQ					LR	LR		
	comp=E,2μm,17.5s,MS4.7							
WMQ					LR	LR		
	comp=Z,1μm,21.6s,MS4.3							
KSM	**Kuching**		**24.56**	**136**	*e*P	**P**	**09 07 07.5**	**-0.5**
KSH	**Kashi**		**24.73**	**326**	*e*P	**P**	**09 07 11.5**	**+2.2**
KSH					*e*AP		09 07 19.0	
KSH					*e*XP	sP	09 07 23.3	-0.2
KSH					*e*PP		09 07 46.0	
KSH					*e*PCP	PcP	09 10 48.0	+2.4
KSH					*e*S	**S**	**09 11 28.3**	**-0.7**
KSH					*e*XS	sS	09 11 41.1	-4.4
KSH					*e*SS		09 12 22.0	
KSH					*e*SCP	ScP	09 14 23.3	+1.3
KSH					*e*PCS	PcS	09 14 27.3	+1.7
KSH					AMB	AMB		
	comp=Z,423nm,1.5s,mb5.8							
KSH					LR	LR		
	comp=N,1μm,8.1s							
KSH					LR	LR		
	comp=E,730nm,5.5s							
KSH					LR	LR		
	comp=Z,957nm,13.1s,MS4.5							
NJ2	**Nanjing**		**25.60**	**57**	*e*P	**P**	**09 07 20.0**	**+2.7**
NJ2					AP	pP	09 07 29.3	+2.0
NJ2					XP	sP	09 07 33.3	+1.8
NJ2					PP		09 08 00.0	
NJ2					S	**S**	**09 11 46.0**	**+3.0**
NJ2					XS	sS	09 11 57.5	-2.1
NJ2					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4							
NJ2					AMB	AMB		
	comp=Z,820nm,7.0s							
NJ2					LR	LR		
	comp=N,450nm,19.8s							
NJ2					LR	LR		
	comp=E,1μm,26.8s							
NJ2					LR	LR		
	comp=Z,940nm,21.9s,MS4.3							
HHC	**Hu-ho-hao-te**		**25.84**	**32**	*e*P	**P**	**09 07 16.6**	**-2.8**
HHC					AP	pP	09 07 25.3	-4.1
HHC					XP	sP	09 07 29.3	-4.3
HHC					PP		09 07 57.3	
HHC					PCP	PcP	09 10 46.5	-1.6
HHC					S	**S**	**09 11 41.5**	**-5.2**
HHC					SCP	ScP	09 14 22.0	-3.1
HHC					PCS	PcS	09 14 25.9	-2.9
HHC					SCS	ScS	09 18 10.0	-4.5
HHC					AMB	AMB		
	comp=Z,15nm,0.5s,mb4.8							
HHC					AMB	AMB		
	comp=Z,1μm,4.3s							
HHC					LR	LR		
	comp=N,360nm,12.2s,MS4.4							
HHC					LR	LR		
	comp=E,559nm,11.9s,MS4.4							
HHC					LR	LR		
	comp=Z,572nm,12.9s,MS4.3							
KBL	**Kabul**		**26.16**	**309**	*e*P	**P**	**09 07 22.8**	**+0.4**
KBL					pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.4							
KBL	**Kabul**		**26.16**	**309**	*e*P	**P**	**09 07 22.8**	**+0.4**
	comp=Z,9.0nm,0.7s,mb4.4							
TKM2	**Tokmak 2**		**27.48**	**330**	*i* P	**P**	**09 07 35.1**	**+1.0**
TKM2					pmax	pmax		
	comp=Z,14nm,1.2s,mb4.4							
TKM2	**Tokmak 2**		**27.48**	**330**	*e*P	**P**	**09 07 35.1**	**+1.0**
	comp=Z,9.3nm,0.9s,mb4.3							
BJT	**Baijiatuan**		**27.80**	**39**	*e*P	**P**	**09 07 37.1**	**0.0**
BJT					pmax	pmax		
	comp=Z,14nm,0.8s							
BJT	**Baijiatuan**		**27.80**	**39**	*e*P	**P**	**09 07 37.1**	**0.0**
	comp=Z,14nm,0.8s,mb4.7							
BJI	**Beijing**		**27.82**	**39**	P	**P**	**09 07 36.8**	**-0.4**
BJI					AMB	AMB		
	comp=Z,25nm,0.7s,mb5.0							
FRU	**Bishkek**		**27.87**	**329**	*e*P	**P**	**09 07 36.5**	**-1.1**
EKS2	**Erkin-Say**		**28.16**	**328**	*e*P	**P**	**09 07 41.6**	**+1.5**
	comp=Z,5.3nm,1.0s,mb4.1							
MK31	**Makanchi Array**		**28.34**	**343**	*i* P	**P**	**09 07 42.0**	**+0.3**
MK31					pmax	pmax		
	comp=Z,16nm,0.4s,mb5.0							
MKAR	**Makanchi Array**		**28.34**	**343**	P	**P**	**09 07 42.1**	**+0.4**
	comp=Z,25nm,0.6s,mb5.1,baz=157,slow=8.9,SNR=205							
MKAR	**Makanchi Array**		**28.34**	**343**⇑	*e*P	**P**	**09 07 42.2**	**+0.5**
SONM	**Songino Array**		**29.68**	**17**	P	**P**	**09 07 53.4**	**-0.3**
	comp=Z,4.2nm,0.6s,mb4.3,baz=206,slow=11,SNR=31							
SONM					PcP	PcP	09 10 58.0	+0.7
	comp=Z,3.9nm,0.8s,baz=226,slow=2.7,SNR=8.8							
ULN	**Ulaanbaatar**		**29.89**	**18**	*e*P	**P**	**09 07 55.2**	**-0.3**
ULN					*e**PP	pP	09 08 05.2	-0.4
ZAK	**Zakamensk**		**31.32**	**12**	*e*P	**P**	**09 08 08.0**	**0.0**
ZAK					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6							
MOY	**Mondy**		**32.17**	**9**	*e*P	**P**	**09 08 16.1**	**+0.5**
KURK	**Kurchatov**		**32.92**	**342**	P	**P**	**09 08 22.0**	**-0.1**
	comp=Z,395nm,0.8s,mb6.4,SNR=40							
KURK	**Kurchatov**		**32.92**	**342**	*e*P	**P**	**09 08 22.3**	**+0.2**
KURK					pmax	pmax		
	comp=Z,42nm,0.7s,mb5.5							
KURK	**Kurchatov**		**32.92**	**342**	*e*P	**P**	**09 08 22.3**	**+0.2**
	comp=Z,42nm,0.7s,mb5.5							
KSRS	**Korea Array**		**34.52**	**52**	P	**P**	**09 08 34.0**	**-2.2**
	comp=Z,2.8nm,0.6s,mb4.3,baz=246,slow=8.6,SNR=7.0							
ZAA0	**Zalesovo Array**		**34.60**	**351**	*e*P	**P**	**09 08 36.6**	**-0.2**
ZALV	**Zalesovo Beam**		**34.60**	**351**	P	**P**	**09 08 36.5**	**-0.3**
	comp=Z,31nm,0.6s,mb5.4,baz=173,slow=8.5,SNR=40							
ZALV	**Zalesovo Beam**		**34.60**	**351**	P	**P**	**09 08 36.5**	**-0.3**
CN2	**Changchun**		**35.63**	**41**	*e*P	**P**	**09 08 46.1**	**+0.4**
KAPI	**Kappang**		**35.70**	**131**	*e*P	**P**	**09 08 46.0**	**-0.6**
NVS	**Novosibirsk**		**35.72**	**350**⇓	*i* P	**P**	**09 08 45.6**	**-0.7**
NVS					*e*S	**S**	**09 14 18.6**	**-2.1**
NVS					pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3							
NVS					pmax	pmax		
	comp=N,50nm,1.5s							
NVS					pmax	pmax		
	comp=E,27nm,1.3s							
NVS					smax			
	comp=N,12nm,1.2s							
KRAR	**Krasnoyarsk**		**36.01**	**359**	*i* P	**P**	**09 08 49.9**	**+1.1**
KRAR					pmax	pmax		
	comp=Z,23nm,0.5s,mb5.4							
BVA0	**Borovoye Array**		**37.59**	**337**	P	**P**	**09 09 02.3**	**0.0**
BVA0					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0							
BRVK	**Borovoye**		**37.65**	**337**	*e*P	**P**	**09 09 03.0**	**+0.2**
BRVK					pmax	pmax		
	comp=Z,84nm,1.3s,mb5.3							
BRVK	**Borovoye**		**37.65**	**337**	*e*P	**P**	**09 09 03.0**	**+0.2**
	comp=Z,84nm,1.3s,mb5.3							
MDJ	**Mudanjiang**		**38.62**	**42**	P	**P**	**09 09 10.5**	**-0.6**
MDJ					XP	sP	09 09 23.4	-2.1
MDJ					S	**S**	**09 15 04.3**	**-0.8**
MDJ					AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.3							
MDJ					LR	LR		
	comp=N,1μm,12.8s,MS5.0							
MDJ					LR	LR		
	comp=E,1μm,14.2s,MS5.0							
MDJ					LR	LR		
	comp=Z,2μm,14.2s,MS5.1							
AB31	**Akbulak array**		**39.73**	**325**⇑	*e*P	**P**	**09 09 20.9**	**+0.6**
BOD	**Bodaibo**		**40.67**	**17**	*e*P	**P**	**09 09 27.3**	**-0.6**
BOD					pmax	pmax		
	comp=Z,13nm,1.2s,mb4.4							
AKTK	**Aktyubinsk**		**41.43**	**326**	P	**P**	**09 09 34.2**	**-0.1**
AKTK					PcP	PcP	09 11 31.6	-0.2
AKTO	**Aktyubinsk**		**41.43**	**326**	P	**P**	**09 09 34.2**	**-0.1**
	comp=Z,9.6nm,0.8s,mb4.5,baz=128,slow=8.1,SNR=24							
AKTO					PcP	PcP	09 11 31.6	-0.2
	comp=Z,5.7nm,0.6s,baz=101,slow=6.5,SNR=5.8							
KLR	**Kul'dur**		**42.15**	**37**	*e*P	**P**	**09 09 35.3**	**-4.9**
MAT	**Matsushiro**		**42.20**	**57**	P	**P**	**09 09 40.1**	**-0.7**
MJAR	**Matsushiro Arr**		**42.20**	**57**	P	**P**	**09 09 41.0**	**+0.1**
	comp=Z,5.4nm,1.0s,mb4.1,baz=261,slow=9.6,SNR=8.2							
MJAR					PcP	PcP	09 11 34.1	-0.5
	comp=Z,3.8nm,0.9s,baz=253,slow=4.2,SNR=5.4							
MJAR	**Matsushiro Arr**		**42.20**	**57**	P	**P**	**09 09 41.0**	**+0.1**
MJAR					PcP	PcP	09 11 34.1	-0.5
CLNS	**Chul'man**		**43.50**	**24**	*e*P	**P**	**09 09 46.7**	**-4.3**
CLNS					*e**PP	pP	09 09 55.4	-6.0
CLNS					*e*PPP		09 11 34.9	
CLNS					*e*		09 11 38.4	
CLNS					*e*S	**S**	**09 16 09.8**	**-7.5**
CLNS					*e*		09 19 48.1	
CLNS					pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7							
CLNS					pmax	pmax		
	comp=N,12nm,1.1s							
CLNS					pmax	pmax		
	comp=E,12nm,1.0s							
CLNS					smax			
	comp=N,202μm,14.8s							
CLNS					smax			
	comp=E,205μm,12.7s							
CLNS					MLR	MLR		
	comp=N,129nm,12.0s,MS4.2							
CLNS					MLR	MLR		
	comp=E,130nm,13.0s,MS4.2							
CLNS					MLR	MLR		
	comp=Z,206nm,13.0s,MS4.2							
SVE	**Sverdlovsk**		**44.19**	**335**⇑	*e*P	**P**	**09 09 57.4**	**+0.8**
SVE					pmax	pmax		
	comp=E,81nm,0.7s,mb5.6							
ARU	**Arti**		**44.79**	**333**	*d* iP	**P**	**09 10 01.6**	**+0.2**
ARU	**Arti**		**44.79**	**333**	*e*P	**P**	**09 10 01.8**	**+0.4**
	comp=Z,29nm,0.6s,mb5.3							
GNI	**Garni**		**46.22**	**307**	P	**P**	**09 10 14.7**	**+1.7**
	comp=Z,3.9nm,0.4s,mb4.7,baz=41,slow=19,SNR=2.4							
GNI	**Garni**		**46.22**	**307**	*i* P	**P**	**09 10 11.6**	**-1.4**
GNI					P		09 10 14.7	
YSS	**Yuzh-Sakhalins**		**48.02**	**44**⇓	*e*P	**P**	**09 10 26.0**	**-0.9**
YSS					*e*	pP	09 10 37.0	-0.3
YSS					pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3							
YSS	**Yuzh-Sakhalins**		**48.02**	**44**	*e*P	**P**	**09 10 26.0**	**-0.9**
KIV	**Kislovodsk**		**48.50**	**312**	*d* iP	**P**	**09 10 31.7**	**+1.0**
KIV					pmax	pmax		
	comp=Z,73nm,1.4s,mb5.5							
KIV	**Kislovodsk**		**48.50**	**312**⇓	*i* P	**P**	**09 10 31.9**	**+1.2**
KIV	**Kislovodsk**		**48.50**	**312**	*e*P	**P**	**09 10 32.1**	**+1.4**
	comp=Z,30nm,0.8s,mb5.4							
YAK	**Yakutsk**		**48.87**	**22**⇑	*e*P	**P**	**09 10 32.2**	**-1.0**
YAK					pmax	pmax		
	comp=Z,12nm,0.4s,mb5.3							
YAK	**Yakutsk**		**48.87**	**22**	*e*P	**P**	**09 10 31.9**	**-1.3**
FITZ	**Fitzroy Crossi**		**49.15**	**138**⇓	*i* P	**P**	**09 10 35.5**	**-0.4**
	comp=Z,16nm,0.8s,mb5.1							
FITZ					*e*pP	pP	09 10 44.9	-1.5
FITZ					*e*PCP	PcP	09 11 58.6	-0.4
FITZ	**Fitzroy Crossi**		**49.15**	**138**	P	**P**	**09 10 35.6**	**-0.3**
	comp=Z,8.7nm,0.7s,mb4.9,baz=331,slow=6.1,SNR=24							
MALT	**Malatya**		**50.83**	**304**	*e*P	**P**	**09 10 46.5**	**-2.0**
MALT					pmax	pmax		
	comp=Z,37nm,1.6s,mb5.1							
MALT	**Malatya**		**50.83**	**304**	*e*P	**P**	**09 10 46.5**	**-2.0**
	comp=Z,37nm,1.6s,mb5.1							
ASF	**Jabal al Asfar**		**51.88**	**296**	P	**P**	**09 10 58.0**	**+1.5**
	comp=Z,5.8nm,0.7s,mb4.6,baz=327,slow=3.2,SNR=11							
ANN	**Anapa**		**52.36**	**312**	*e*P	**P**	**09 10 55.0**	**-4.8**
ANN					*e*		09 10 59.4	
ANN					*e*S	**S**	**09 18 16.0**	**-7.1**
ANN					pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1							
VSR	**Storozhevoye**		**52.59**	**320**	*e*P	**P**	**09 11 00.4**	**-1.0**
VSR					pmax	pmax		
	comp=E,10.0nm,1.0s							
VSR					pmax	pmax		
	comp=N,5.0nm,0.7s							
VSR					pmax	pmax		
	comp=Z,10.0nm,1.9s,mb4.4							
MMAI	**Mount Meron Ar**		**53.13**	**297**	P	**P**	**09 11 06.8**	**+1.1**
	comp=Z,6.4nm,0.7s,mb4.7,baz=81,slow=11,SNR=7.2							
EIL	**Elat**		**53.66**	**293**	P	**P**	**09 11 10.2**	**+0.5**
	comp=Z,21nm,0.7s,mb5.2,baz=34,slow=1.1,SNR=17							
MOS	**Moscow**		**54.75**	**325**	*e*P	**P**	**09 11 13.3**	**-3.8**
OBN	**Obninsk**		**55.15**	**324**⇓	*e*P	**P**	**09 11 19.7**	**-0.3**
OBN					*e*S	**S**	**09 18 52.6**	**-8.0**
OBN					pmax	pmax		
	comp=Z,33nm,0.7s,mb5.5							
OBN					MLR	MLR		
	comp=Z,300nm,18.0s,MS4.4							
TIXI	**Tiksi**		**55.59**	**13**	*d* iP	**P**	**09 11 21.3**	**-1.6**
TIXI					pmax	pmax		
	comp=Z,24nm,0.7s,mb5.3							
TIXI	**Tiksi**		**55.59**	**13**	*e*P	**P**	**09 11 21.4**	**-1.5**
MUN	**Mundaring**		**55.98**	**157**	*e*P	**P**	**09 11 26.0**	**-0.2**
WRAB	**Tennant Creek**		**56.23**	**132**	P	**P**	**09 11 28.0**	**-0.2**
	comp=Z,146nm,0.8s,mb6.1,SNR=6.6							
WRAB	**Tennant Creek**		**56.23**	**132**	*e*P	**P**	**09 11 27.9**	**-0.3**
WRAB					pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2							
WRAB	**Tennant Creek**		**56.23**	**132**	*e*P	**P**	**09 11 27.9**	**-0.3**
	comp=Z,19nm,0.8s,mb5.2							
KLBR	**Kellerberrin**		**56.23**	**155**	*e*P	**P**	**09 11 27.4**	**-0.6**
	comp=Z,49nm,1.4s,mb5.3							
WB2	**Warramunga Arr**		**56.23**	**132**⇓	*i* P	**P**	**09 11 27.6**	**-0.7**
WB2					*e*pP	pP	09 11 37.4	-1.5
WB2					*e*PCP	PcP	09 12 25.0	-0.7
ASAR	**Alice Springs**		**58.48**	**136**	P	**P**	**09 11 44.1**	**+0.1**
	comp=Z,7.5nm,0.6s,mb4.9,baz=314,slow=6.9,SNR=158							
ASAR					PcP	PcP	09 12 34.0	-0.4
	comp=Z,3.5nm,0.7s,baz=324,slow=4.2,SNR=7.7							
AKASG	**Malin Array Be**		**58.66**	**318**	P	**P**	**09 11 44.2**	**-0.8**
	comp=Z,7.1nm,0.5s,mb4.9,baz=70,slow=5.4,SNR=22							
AKASG					PcP	PcP	09 12 34.0	-0.7
	comp=Z,1.7nm,0.5s,baz=75,slow=4.5,SNR=5.4							
AKASG	**Malin Array Be**		**58.66**	**318**	*i* P	**P**	**09 11 44.2**	**-0.8**
AKASG					pmax	pmax		
	comp=Z,7.0nm,0.5s							
KIEV	**Kiev**		**58.67**	**318**	*e*P	**P**	**09 11 43.9**	**-1.2**
KIEV					pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1							
KIEV	**Kiev**		**58.67**	**318**	*e*P	**P**	**09 11 43.9**	**-1.1**
	comp=Z,24nm,1.1s,mb5.1							
TIRR	**Tirgusor**		**58.73**	**310**⇓	*i* P	**P**	**09 11 45.5**	**-0.1**
KMBO	**Kilima Mbogo**		**59.07**	**256**	P	**P**	**09 11 48.7**	**+0.3**
	comp=Z,6.3nm,0.9s,mb4.6,baz=53,slow=13,SNR=9.3							
KMBO	**Kilima Mbogo**		**59.07**	**256**	*i* P	**P**	**09 11 48.7**	**+0.3**
KMBO					pmax	pmax		
	comp=Z,6.0nm,0.9s							
KMBO	**Kilima Mbogo**		**59.07**	**256**	*e*P	**P**	**09 11 49.4**	**+1.0**
JOF	**Joensuu**		**59.90**	**332**	*e*p	**P**	**09 11 52.3**	**-1.0**
	comp=Z,20nm,0.6s,mb5.3							
JOF	**Joensuu**		**59.90**	**332**	*e*P	**P**	**09 11 52.3**	**-1.0**
JOF					pmax	pmax		
	comp=Z,20nm,0.6s

CTA	**Charters Tower**	65.10	125	⇓	*i*	P	P	09 12 28.8 +0.1
CTA					*e*	*P*	P	09 12 38.4 -1.1
CTA					*e*			09 13 01.1
CTA						pmax	pmax	
	comp=Z,5.0nm,0.8s							
BILL	**Bilibino**	65.17	23	*c*	*i*	P	P	09 12 27.9 -0.6
BILL					*e*			09 14 50.5
BILL					*e*	S	S	09 21 05.5 -3.2
BILL						pmax	pmax	
	comp=Z,16nm,1.4s,mb4.9							
BILL	**Bilibino**	65.17	23		*i*	P	P	09 12 27.0 -1.5
VYHS	**Vyhne**	65.34	315		*e*	P	P	09 12 30.1 +0.2
PKSM	**Moragy**	65.60	313	⇓	*i*	P	P	09 12 31.5 -0.1
OKC	**Ostrava-Krasne**	65.73	317		*e*	P	P	09 12 32.6 +0.2
MORC	**Moravsky Berou**	66.12	317		*e*	P	P	09 12 34.9 0.0
MORC						pmax	pmax	
	comp=Z,24nm,1.4s,mb5.0							
MORC	**Moravsky Berou**	66.12	317		*e*	P	P	09 12 34.9 -0.1
	comp=Z,24nm,1.4s,mb5.0							
MODS	**Modra-Piesok**	66.38	315		*e*	P	P	09 12 36.5 -0.1
ZST	**Bratislava**	66.51	315		*e*	P	P	09 12 37.7 +0.3
	comp=Z,8.7nm,0.8s,mb4.8							
ZST						LR	LR	
	comp=Z,400nm,19.9s,MS4.6							
KSP	**Ksiaz**	66.86	318		*e*	P	P	09 12 40.0 +0.4
DPC	**Dobruska-Polom**	66.87	317		*e*	P	P	09 12 40.4 +0.7
DPC					*ex*		x	09 12 49.6
UPC	**Upice**	67.06	317		*e*	P	P	09 12 41.7 +0.8
CONA	**Conrad Observa**	67.36	315	⇑	*i*	P	P	09 12 43.0 +0.1
	comp=Z,17nm,1.1s,mb5.0							
CSNA	**Conrad Observa**	67.36	315	⇓	*i*	P	P	09 12 42.9 +0.1
	comp=Z,18nm,1.1s,mb5.0							
TREC	**Trest**	67.49	316		*e*	P	P	09 12 44.2 +0.5
ARSA	**Arzberg**	67.65	314	⇓	*i*	P	P	09 12 44.9 +0.2
	comp=Z,11nm,0.9s,mb4.9							
TIP	**Timpagrande**	67.71	305		*e*	P	P	09 12 45.1 -0.1
	comp=Z,53nm,1.8s,mb5.3							
HFS	**Hagfors**	67.92	328		P	P	P	09 12 45.8 -0.4
	comp=Z,24nm,0.7s,mb5.4,baz=104,slow=6.3,SNR=72							
PVCC	**Panska Ves**	67.98	317		*e*	P	P	09 12 46.7 0.0
PERS	**Pernice**	67.99	313		*i*	P	P	09 12 47.2 +0.3
SPITS	**Spitsbergen Ar**	68.00	347		P	P	P	09 12 45.4 -1.0
	comp=Z,3.2nm,0.5s,mb4.7,baz=0.8,slow=14,SNR=5.8							
BOJS	**Bojanci**	68.02	312		*e*	P	P	09 12 46.3 -0.8
SOKA	**Soboth**	68.04	313	⇓	*i*	P	P	09 12 47.5 +0.4
PRU	**Pruhonice**	68.04	317		*e*	P	P	09 12 47.4 +0.3
BRG	**Berggiesshubel**	68.34	318		*i*	P	P	09 12 49.4 +0.4
BRG						pmax	pmax	
	comp=Z,11nm,0.7s,mb5.0							
BRG	**Berggiesshubel**	68.34	318		*i*	P	P	09 12 49.4 +0.4
	comp=Z,19nm,0.7s,mb5.2							
MOA	**Molln**	68.44	315	⇑	*i*	P	P	09 12 49.6 0.0
	comp=Z,26nm,1.1s,mb5.2							
LJU	**Ljubljana**	68.46	313		*i*	P	P	09 12 50.3 +0.5
GERES	**GERESS Array B**	68.70	316		P	P	P	09 12 51.8 +0.5
	comp=Z,17nm,0.7s,mb5.1,baz=77,slow=5.9,SNR=83							
KHC	**Kasperske Hory**	68.75	316		*e*	P	P	09 12 51.8 +0.2
KHC					*ex*		x	09 13 00.6
JAVS	**Javornik**	68.80	313		*i*	P	P	09 12 51.8 -0.1
CLL	**Collm**	68.89	318		*i*	P	P	09 12 52.4 0.0
CLL						pmax	pmax	
	comp=Z,13nm,1.1s,mb4.8							
CLL	**Collm**	68.89	318		*i*	P	P	09 12 52.4 0.0
	comp=Z,13nm,1.1s,mb4.8							
STKA	**Stephens Creek**	69.04	137	⇓	*i*	P	P	09 12 53.4 -0.1
	comp=Z,17nm,0.9s,mb5.0							
STKA					*i*	pP	pP	09 13 03.4 -1.0
STKA					*i*	PCP	PcP	09 13 17.1 -0.4
STKA	**Stephens Creek**	69.04	137		P	P	P	09 12 53.4 -0.1
	comp=Z,21nm,0.8s,mb5.1,baz=321,slow=6.8,SNR=28							
NB2	**NORSAR Subarra**	69.11	329		P	P	P	09 12 52.7 -0.8
	comp=Z,13nm,0.7s,mb5.0,baz=85,slow=6.5							
NOA	**NORSAR Array B**	69.11	329		P	P	P	09 12 52.5 -1.1
	comp=Z,13nm,0.7s,mb4.9,baz=86,slow=6.2,SNR=34							
NKC	**Novy Kostel**	69.36	317		*e*	P	P	09 12 55.4 +0.1
MOX	**Moxa**	69.84	318		*e*	P	P	09 12 58.5 +0.2
	comp=Z,20nm,1.1s,mb5.0							
MOX	**Moxa**	69.84	318		*e*	P	P	09 12 58.5 +0.2
MOX						pmax	pmax	
	comp=Z,20nm,1.1s,mb5.0							
GRA1	**Grafenberg Arr**	70.21	317		*e*	P	P	09 13 01.3 +0.7
	comp=Z,149nm,2.9s,mb5.4							
GRF	**Grafenberg Arr**	70.21	317		*e*	P	P	09 13 01.3 +0.7
GRF						pmax	pmax	
	comp=Z,149nm,2.9s,mb5.4							
GRF	**Grafenberg Arr**	70.21	317		*e*	P	P	09 13 01.3 +0.7
GRF						pmax	pmax	
	comp=Z,149nm,2.9s,mb5.4							
GRF	**Grafenberg Arr**	70.21	317		*e*	P	P	09 13 01.3 +0.7
	comp=Z,149nm,2.9s,mb5.4							
WTTA	**Wattenberg**	70.28	314	⇓	*i*	P	P	09 13 00.7 -0.4
	comp=Z,12nm,0.5s,mb5.1							
MOTA	**Moosalm**	70.62	314	⇑	*i*	P	P	09 13 02.5 -0.7
	comp=Z,18nm,0.8s,mb5.1							
RETA	**Reutte**	70.83	315	⇓	*i*	P	P	09 13 04.2 -0.2
	comp=Z,21nm,0.6s,mb5.2							
FETA	**Feichten**	70.92	314	⇑	*i*	P	P	09 13 04.5 -0.5
	comp=Z,16nm,1.1s,mb4.8							
DAVA	**Damuels**	71.45	314	⇑	*i*	P	P	09 13 07.8 -0.4
	comp=Z,37nm,1.1s,mb5.2							
TUE	**Stuetta**	71.95	314		*e*	P	P	09 13 11.5 +0.3
	comp=Z,8.2nm,0.7s,mb4.8							
PGF	**Pioggiola**	72.94	310		*e*	P	P	09 13 17.2 +0.1
	comp=Z,86nm,0.9s,mb5.4							
PGF	**Pioggiola**	72.94	310		*e*	P	P	09 13 17.2 +0.1
PGF						pmax	pmax	
	comp=Z,43nm,0.9s,mb5.4							
PGF	**Pioggiola**	72.94	310		*e*	P	P	09 13 17.2 +0.1
	comp=Z,43nm,0.9s,mb5.4							
CDF	**Champ du Feu**	72.98	316		*e*	P	P	09 13 16.8 -0.5
	comp=Z,40nm,1.0s,mb5.0							
CDF	**Champ du Feu**	72.98	316		*e*	P	P	09 13 16.8 -0.5
CDF						pmax	pmax	
	comp=Z,20nm,1.0s,mb5.0							
CDF	**Champ du Feu**	72.98	316		*e*	P	P	09 13 16.8 -0.5
	comp=Z,20nm,1.0s,mb5.0							
LSZ	**Lusaka**	73.24	246		*e*	P	P	09 13 19.7 +0.4
MEM	**Membach**	73.37	318		P	P	P	09 13 20.1 +0.5
HINF	**Hinteralfeld**	73.38	315		*e*	P	P	09 13 18.7 -0.9
WLF	**Walferdange**	73.46	317		P	P	P	09 13 21.0 +0.9
	comp=Z,11nm,1.2s,mb4.7							
WLF	**Walferdange**	73.46	317		*e*	P	P	09 13 21.2 +1.1
WLF						pmax	pmax	
	comp=Z,40nm,1.1s,mb5.3							
WLF	**Walferdange**	73.46	317		*e*	P	P	09 13 21.2 +1.1
	comp=Z,40nm,1.1s,mb5.3							
HAU	**Haudompre**	73.67	316		*e*	P	P	09 13 20.7 -0.7
	comp=Z,35nm,0.9s,mb5.0							
HAU	**Haudompre**	73.67	316		*e*	P	P	09 13 20.7 -0.7
HAU						pmax	pmax	
	comp=Z,18nm,0.9s,mb5.0							
HAU	**Haudompre**	73.67	316		*e*	P	P	09 13 20.7 -0.7
	comp=Z,18nm,0.9s,mb5.0							
SBF	**Sospel**	73.78	311		*e*	P	P	09 13 22.1 0.0
	comp=Z,84nm,1.0s,mb5.3							
SBF	**Sospel**	73.78	311		*e*	P	P	09 13 22.1 0.0
SBF						pmax	pmax	
	comp=Z,42nm,1.0s,mb5.3							
SBF	**Sospel**	73.78	311		*e*	P	P	09 13 22.1 0.0
	comp=Z,42nm,1.0s,mb5.3							
LPG	**La Plagne**	73.92	313		*e*	P	P	09 13 23.4 +0.5
	comp=Z,43nm,0.8s,mb5.1							
LPG	**La Plagne**	73.92	313		*e*	P	P	09 13 23.4 +0.5
LPG						pmax	pmax	
	comp=Z,22nm,0.8s,mb5.1							
LPG	**La Plagne**	73.92	313		*e*	P	P	09 13 23.4 +0.5
	comp=Z,22nm,0.8s,mb5.1							
LPL	**La Plagne**	73.93	313		*e*	P	P	09 13 23.4 +0.5
	comp=Z,68nm,0.9s,mb5.3							
LPL	**La Plagne**	73.93	313		*e*	P	P	09 13 23.4 +0.5
LPL						pmax	pmax	
	comp=Z,34nm,0.9s,mb5.3							
LPL	**La Plagne**	73.93	313		*e*	P	P	09 13 23.4 +0.5
	comp=Z,34nm,0.9s,mb5.3							
BNI	**Bardonecchia**	74.06	313		*e*	P	P	09 13 24.0 +0.3
BNI						pmax	pmax	
	comp=Z,12nm,0.9s,mb4.8							
BNI	**Bardonecchia**	74.06	313		*e*	P	P	09 13 24.0 +0.2
	comp=Z,12nm,0.9s,mb4.8							
MBDF	**Montbardon**	74.07	312		*e*	P	P	09 13 23.1 -0.6
	comp=Z,26nm,0.7s,mb5.0							
MBDF	**Montbardon**	74.07	312		*e*	P	P	09 13 23.1 -0.6
MBDF						pmax	pmax	
	comp=Z,13nm,0.7s,mb5.0							
MBDF	**Montbardon**	74.07	312		*e*	P	P	09 13 23.1 -0.6
	comp=Z,13nm,0.7s,mb5.0							

CABF	**La Chapelle**	74.13	314		*e*	P	P	09 13 23.9 -0.2
	comp=Z,31nm,0.8s,mb5.0							
CABF	**La Chapelle**	74.13	314		*e*	P	P	09 13 23.9 -0.2
CABF						pmax	pmax	
	comp=Z,15nm,0.8s,mb5.0							
CABF	**La Chapelle**	74.13	314		*e*	P	P	09 13 23.9 -0.2
	comp=Z,15nm,0.8s,mb5.0							
KEST	**Kesra**	74.14	303		P	P	P	09 13 24.4 0.0
	comp=Z,5.3nm,0.7s,mb4.6,baz=225,slow=1.4,SNR=16							
GIVF	**Givet**	74.22	318		*e*	P	P	09 13 24.3 -0.2
	comp=Z,25nm,0.8s,mb4.9							
GIVF	**Givet**	74.22	318		*e*	P	P	09 13 24.3 -0.2
GIVF						pmax	pmax	
	comp=Z,12nm,0.8s,mb4.9							
GIVF	**Givet**	74.22	318		*e*	P	P	09 13 24.3 -0.2
	comp=Z,12nm,0.8s,mb4.9							
DOU	**Dourbes**	74.36	318		P	P	P	09 13 25.8 +0.4
	comp=Z,9.5nm,2.0s,mb4.4							
FRF	**La Foret Royal**	74.41	311		*e*	P	P	09 13 25.9 +0.1
	comp=Z,82nm,0.8s,mb5.4							
FRF	**La Foret Royal**	74.41	311		*e*	P	P	09 13 25.9 +0.1
FRF						pmax	pmax	
	comp=Z,41nm,0.8s,mb5.4							
FRF	**La Foret Royal**	74.41	311		*e*	P	P	09 13 25.9 +0.1
	comp=Z,41nm,0.8s,mb5.4							
MEZF	**Maizieres J'vi**	74.41	316		*e*	P	P	09 13 25.4 -0.3
	comp=Z,62nm,0.6s,mb5.4							
MEZF	**Maizieres J'vi**	74.41	316		*e*	P	P	09 13 25.4 -0.3
	comp=Z,62nm,0.6s,mb5.7							
LMR	**La Mourre**	74.56	311		*e*	P	P	09 13 26.7 +0.1
	comp=Z,81nm,1.0s,mb5.3							
LMR	**La Mourre**	74.56	311		*e*	P	P	09 13 26.7 +0.1
LMR						pmax	pmax	
	comp=Z,41nm,1.0s,mb5.3							
LMR	**La Mourre**	74.56	311		*e*	P	P	09 13 26.7 +0.1
	comp=Z,41nm,1.0s,mb5.3							
BAIF	**Baives**	74.61	318		*e*	P	P	09 13 26.7 -0.1
	comp=Z,46nm,0.9s,mb5.1							
BAIF	**Baives**	74.61	318		*e*	P	P	09 13 26.7 -0.1
BAIF						pmax	pmax	
	comp=Z,23nm,0.9s,mb5.1							
BAIF	**Baives**	74.61	318		*e*	P	P	09 13 26.7 -0.1
	comp=Z,23nm,0.9s,mb5.1							
ORIF	**Oris-en-Rattie**	74.64	313		*e*	P	P	09 13 26.3 -0.8
	comp=Z,15nm,0.8s,mb4.7							
ORIF	**Oris-en-Rattie**	74.64	313		*e*	P	P	09 13 26.3 -0.8
ORIF						pmax	pmax	
	comp=Z,7.0nm,0.8s,mb4.6							
ORIF	**Oris-en-Rattie**	74.64	313		*e*	P	P	09 13 26.3 -0.8
	comp=Z,7.4nm,0.8s,mb4.7							
ARMA	**Armidale**	74.94	131		*e*	P	P	09 13 30.7 +1.8
SMRF	**Simiane la Rot**	75.07	312		*e*	P	P	09 13 29.9 +0.3
	comp=Z,27nm,0.9s,mb4.9							
SMRF	**Simiane la Rot**	75.07	312		*e*	P	P	09 13 29.9 +0.3
	comp=Z,27nm,0.9s,mb5.2							
TOO	**Toolangi**	75.18	140		*e*	P	P	09 13 30.9 +0.7
LOR	**Lormes**	75.47	315		*e*	P	P	09 13 31.1 -0.7
	comp=Z,29nm,0.8s,mb4.6							
LOR	**Lormes**	75.47	315		*e*	P	P	09 13 31.1 -0.7
LOR						pmax	pmax	
	comp=Z,14nm,0.8s,mb4.9							
LOR	**Lormes**	75.47	315		*e*	P	P	09 13 31.1 -0.7
	comp=Z,14nm,0.8s,mb5.0							
VIVF	**Saint-Julien-l**	75.49	313		*e*	P	P	09 13 31.6 -0.4
	comp=Z,22nm,0.7s,mb4.9							
VIVF	**Saint-Julien-l**	75.49	313		*e*	P	P	09 13 31.6 -0.4
VIVF						pmax	pmax	
	comp=Z,11nm,0.7s,mb4.9							
VIVF	**Saint-Julien-l**	75.49	313		*e*	P	P	09 13 31.6 -0.4
	comp=Z,11nm,0.7s,mb4.9							
SMF	**Signal de Mont**	75.63	315		*e*	P	P	09 13 32.2 -0.6
	comp=Z,39nm,0.7s,mb5.1							
SMF	**Signal de Mont**	75.63	315		*e*	P	P	09 13 32.2 -0.6
SMF						pmax	pmax	
	comp=Z,19nm,0.7s,mb5.1							
SMF	**Signal de Mont**	75.63	315		*e*	P	P	09 13 32.2 -0.6
	comp=Z,19nm,0.7s,mb5.1							
SSF	**Saint Saulge**	75.76	315		*e*	P	P	09 13 32.9 -0.6
	comp=Z,58nm,0.9s,mb5.2							
SSF	**Saint Saulge**	75.76	315		*e*	P	P	09 13 32.9 -0.6
SSF						pmax	pmax	
	comp=Z,29nm,0.9s,mb5.2							
SSF	**Saint Saulge**	75.76	315		*e*	P	P	09 13 32.9 -0.6
	comp=Z,29nm,0.9s,mb5.2							
AVF	**Avril sur Loir**	75.92	315		*e*	P	P	09 13 33.8 -0.6
	comp=Z,34nm,0.7s,mb5.1							
AVF	**Avril sur Loir**	75.92	315		*e*	P	P	09 13 33.8 -0.6
AVF						pmax	pmax	
	comp=Z,17nm,0.7s,mb5.1							
AVF	**Avril sur Loir**	75.92	315		*e*	P	P	09 13 33.8 -0.6
	comp=Z,17nm,0.7s,mb5.1							
CAN	**Canberra**	75.99	136		*e*	P	P	09 13 35.5 +0.6
CNB	**Canberra Magne**	76.23	136		*e*	P	P	09 13 36.2 0.0
LASF	**Ste Croix**	76.25	312		*e*	P	P	09 13 36.3 0.0
	comp=Z,22nm,0.7s,mb4.9							
HYF	**Humbligny**	76.28	315		*e*	P	P	09 13 36.6 +0.2
BGF	**Bois d'Agland**	76.32	315		*e*	P	P	09 13 36.2 -0.5
	comp=Z,20nm,0.8s,mb4.8							
BGF	**Bois d'Agland**	76.32	315		*e*	P	P	09 13 36.2 -0.5
BGF						pmax	pmax	
	comp=Z,10.0nm,0.8s,mb4.8							
BGF	**Bois d'Agland**	76.32	315		*e*	P	P	09 13 36.2 -0.5
	comp=Z,9.9nm,0.8s,mb4.8							
TCF	**Toulx Ste Croi**	76.81	315		*e*	P	P	09 13 39.5 0.0
	comp=Z,51nm,0.8s,mb5.2							
TCF	**Toulx Ste Croi**	76.81	315		*e*	P	P	09 13 39.5 0.0
TCF						pmax	pmax	
	comp=Z,26nm,0.8s,mb5.2							
TCF	**Toulx Ste Croi**	76.81	315		*e*	P	P	09 13 39.5 0.0
	comp=Z,26nm,0.8s,mb5.2							
CAF	**Calviac**	77.27	313		*e*	P	P	09 13 42.0 -0.1
	comp=Z,27nm,0.9s,mb4.8							
CAF	**Calviac**	77.27	313		*e*	P	P	09 13 42.0 -0.1
CAF						pmax	pmax	
	comp=Z,13nm,0.9s,mb4.9							
CAF	**Calviac**	77.27	313		*e*	P	P	09 13 42.0 -0.1
	comp=Z,13nm,0.9s,mb4.9							
RJF	**Les Rejaudoux**	77.54	314		*e*	P	P	09 13 43.7 +0.1
	comp=Z,24nm,0.7s,mb4.9							
RJF	**Les Rejaudoux**	77.54	314		*e*	P	P	09 13 43.7 +0.1
RJF						pmax	pmax	
	comp=Z,12nm,0.7s,mb4.9							
RJF	**Les Rejaudoux**	77.54	314		*e*	P	P	09 13 43.7 +0.1
	comp=Z,12nm,0.7s,mb4.9							
MTLF	**Montolieu**	77.59	312		*e*	P	P	09 13 43.7 -0.2
	comp=Z,18nm,0.7s,mb4.8							
MTLF	**Montolieu**	77.59	312		*e*	P	P	09 13 43.7 -0.2
MTLF						pmax	pmax	
	comp=Z,9.0nm,0.7s,mb4.8							
MTLF	**Montolieu**	77.59	312		*e*	P	P	09 13 43.7 -0.2
	comp=Z,9.1nm,0.7s,mb4.8							
EKA	**Eskdalemuir Ar**	77.60	324		P	P	P	09 13 43.9 +0.1
	comp=Z,11nm,0.8s,mb4.8,baz=82,slow=6.0,SNR=20							
LDF	**La Druitiere**	77.72	317		*e*	P	P	09 13 43.9 -0.6
	comp=Z,74nm,1.0s,mb5.3							
LDF	**La Druitiere**	77.72	317		*e*	P	P	09 13 43.9 -0.6
LDF						pmax	pmax	
	comp=Z,37nm,1.0s,mb5.3							
LDF	**La Druitiere**	77.72	317		*e*	P	P	09 13 43.9 -0.6
	comp=Z,37nm,1.0s,mb5.3							
FLN	**La Foliniere**	77.90	318		*e*	P	P	09 13 45.2 -0.3
LFF	**La Frestale**	78.17	314		*e*	P	P	09 13 47.1 0.0
GRR	**Gorron**	78.25	317		*e*	P	P	09 13 46.9 -0.6
	comp=Z,26nm,0.9s,mb4.9							
GRR	**Gorron**	78.25	317		*e*	P	P	09 13 46.9 -0.6
GRR						pmax	pmax	
	comp=Z,13nm,0.9s,mb4.9							
GRR	**Gorron**	78.25	317		*e*	P	P	09 13 46.9 -0.6
	comp=Z,13nm,0.9s,mb4.9							
MFF	**Saint Martin d**	78.30	315		*e*	P	P	09 13 47.7 -0.1
	comp=Z,71nm,0.6s,mb5.4							
MFF	**Saint Martin d**	78.30	315		*e*	P	P	09 13 47.7 -0.1
MFF						pmax	pmax	
	comp=Z,35nm,0.6s,mb5.5							
MFF	**Saint Martin d**	78.30	315		*e*	P	P	09 13 47.7 -0.1
	comp=Z,35nm,0.6s,mb5.5							
EPOB	**Poblet**	78.95	310		P	P	P	09 13 52.0 +0.6
	comp=Z,24nm,0.6s,mb5.3							
EPF	**Esparros**	78.99	312		*e*	P	P	09 13 51.6 -0.1
EBIE	**Bielsa**	79.23	311		P	P	P	09 13 53.5 +0.5
	comp=Z,7.0nm,0.7s,mb4.7							
SGMF	**Saint Gilles**	79.37	317		*e*	P	P	09 13 53.4 -0.2
	comp=Z,55nm,0.8s,mb5.2							
SGMF	**Saint Gilles**	79.37	317		*e*	P	P	09 13 53.4 -0.2
SGMF						pmax	pmax	
	comp=Z,27nm,0.8s,mb5.2							
SGMF	**Saint Gilles**	79.37	317		*e*	P	P	09 13 53.4 -0.2
	comp=Z,27nm,0.8s,mb5.2							
ERTA	**Horta de San J**	79.61	310		P	P	P	09 13 55.5 +0.4
	comp=Z,16nm,0.7s,mb5.1							
ETSF	**Etsaut**	79.66	312		*e*	P	P	09 13 55.5 +0.2
	comp=Z,22nm,0.9s,mb4.8							
ETSF	**Etsaut**	79.66	312		*e*	P	P	09 13 55.5 +0.2
ETSF						pmax	pmax	
	comp=Z,11nm,0.9s,mb4.8							
ETSF	**Etsaut**	79.66	312		*e*	P	P	09 13 55.5 +0.2
	comp=Z,11nm,0.9s,mb4.8							
ROSF	**Rostrenen**	79.80	318		*e*	P	P	09 13 55.6 -0.4
	comp=Z,70nm,0.8s,mb5.3							
ROSF	**Rostrenen**	79.80	318		*e*	P	P	09 13 55.6 -0.4
ROSF						pmax	pmax	
	comp=Z,35nm,0.8s,mb5.3							
ROSF	**Rostrenen**	79.80	318		*e*	P	P	09 13 55.6 -0.4
	comp=Z,35nm,0.8s,mb5.3							
QUIF	**Quistinic**	79.86	317		*e*	P	P	09 13 55.6 -0.7
	comp=Z,7.5nm,0.4s,mb4.7							
ESAC	**San Caprasio**	79.95	311		P	P	P	09 13 57.3 +0.4
	comp=Z,33nm,0.5s,mb5.5							
EMOS	**Mosqueruela**	80.37	309		P	P	P	09 14 00.7 +1.5
	comp=Z,15nm,0.7s,mb5.0							
TAM	**Tamanrasset**	80.84	291		*e*	P	P	09 14 02.7 +0.6
ECHE	**Chera**	80.97	309		P	P	P	09 14 02.7 +0.3
ECHE						pmax	pmax	
	comp=Z,5.0nm,0.6s,mb4.6							
ECHE	**Chera**	80.97	309		P	P	P	09 14 02.7 +0.3
	comp=Z,5.0nm,0.6s,mb4.6							
ETOR	**Torete**	81.37	310		P	P	P	09 14 05.1 +0.6
ETOR						pmax	pmax	
	comp=Z,13nm,0.7s,mb5.0							
ETOR	**Torete**	81.37	310		P	P	P	09 14 05.1 +0.5
	comp=Z,13nm,0.7s,mb5.0							
ETOB	**Tobarra**	81.70	308		P	P	P	09 14 07.3 +1.0
	comp=Z,10nm,0.6s,mb4.9							
BOSA	**Boshof**	81.77	236		P	P	P	09 14 06.9 +0.1
	comp=Z,14nm,0.8s,mb4.9,baz=60,slow=5.5,SNR=25							
CHUM	**Lake Minchumin**	82.27	24		*e*	P	P	09 14 08.5 -0.3
	comp=Z,10nm,0.9s,mb4.8							
SUMG	**Summit**	82.33	347		*e*	P	P	09 14 08.7 -0.2
EVIA	**Vianos**	82.41	308		P	P	P	09 14 09.8 -0.2
BPAW	**Bear Paw Mtn.**	82.66	24		*e*	P	P	09 14 10.6 -0.2
	comp=Z,7.7nm,0.7s,mb4.8							
EHUE	**Huescar**	82.75	307		P	P	P	09 14 11.5 -0.3
GUD	**Guadarrama**	82.94	311		P	P	P	09 14 13.5 +0.8
GUD						pmax	pmax	
	comp=Z,18nm,0.6s,mb5.3							
GUD	**Guadarrama**	82.94	311		P	P	P	09 14 13.5 +0.8
	comp=Z,18nm,0.6s,mb5.3							
EQES	**Quesada**	83.11	308		P	P	P	09 14 13.4 -0.3
	comp=Z,21nm,0.9s,mb5.2							
ESDC	**Sonseca Array**	83.13	310		P	P	P	09 14 14.1 +0.3
	comp=Z,8.6nm,0.7s,mb4.9,baz=58,slow=5.0,SNR=26							
ESDC	**Sonseca Array**	83.13	310		P	P	P	09 14 14.1 +0.4
	comp=Z,7.5nm,0.6s,mb4.9							
EBER	**Berja**	83.28	307		P	P	P	09 14 15.2 +0.6
	comp=Z,28nm,1.0s,mb5.2							
COLA	**College**	83.39	22		*e*	P	P	09 14 14.0 -0.6
COLA						pmax	pmax	
	comp=Z,12nm,1.4s,mb4.7							
**

NEZ	**North Egmont**	**1.18**	**238**	P		Pn	09 08 40.0	-0.1
URZ	**Urewera**	**1.41**	**75**	P		Pn	09 08 41.4	-0.6
TSZ	**Takapari Road**	**1.48**	**162**	P		Pn	09 08 42.4	0.0
MWZ	**Matawai**	**1.71**	**80**	*e*P		Pn	09 08 45.0	+0.5
MRZ	**Mangatainoka R**	**2.02**	**176**	*e*P		Pn	09 08 46.3	-1.0
KIW	**Kapiti Island**	**2.24**	**189**	P		Pn	09 08 48.0	-1.6
CAW	**Cannon Point**	**2.47**	**185**	P		Pn	09 08 50.5	-1.5
MTW	**Mount Morrison**	**2.51**	**178**	P		Pn	09 08 50.7	-1.7
MRW	**Makara Radio**	**2.63**	**191**	P		Pn	09 08 52.0	-1.7
TCW	**Tory Channel**	**2.70**	**198**	P		Pn	09 08 52.7	-1.8
TCW				S		S	09 09 26.8	-4.8
BHW	**Baring Head**	**2.78**	**188**	P		Pn	09 08 53.4	-2.0
NNZ	**Nelson**	**2.99**	**210**	*e*P		Pn	09 08 55.1	-2.7
QRZ	**Quartz Range**	**3.09**	**124**	P		Pn	09 08 55.5	-3.5
THZ	**Tophouse**	**3.64**	**111**	*e*P		Pn	09 09 02.2	-3.2
KHZ	**Kahutara**	**4.02**	**200**	P		Pn	09 09 07.4	-2.5
DSZ	**Denniston Nort**	**4.13**	**220**	*e*P		Pn	09 09 07.4	-3.9
LTZ	**Lake Taylor**	**4.76**	**209**	*e*P		Pn	09 09 15.6	-3.5
MQZ	**McQueen's Vall**	**5.46**	**201**	P		Pn	09 09 23.4	-4.5

*CSEM **18** 09:23:03.7±0.9, 3898N×2933W, h10km, ML3.6, Error ellipse: s-maj=6.6km s-min=5.6km az=86.0, After PDA*

PDA 18 09:23:03.7±0.9, 3898N×2933W, h10km, MD3.1, ML3.6, Error ellipse: s-maj=6.6km s-min=5.6km az=86.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	**0.60**	**125**	*i* S	Sg	09 23 20.8	-2.3
PCED				A		09 23 22.9	
	4µm,0.4s						
CALA	**Caldeira**	**0.63**	**129**	*e*S	Sg	09 23 21.6	-2.4
HOR	**Horta**	**0.70**	**129**	*e*P	Pg	09 23 15.0	-2.3
HOR				*e*S	Sg	09 23 23.8	-2.7
ROSA	**Rosais**	**0.89**	**106**	*e*P	Pg	09 23 17.1	-3.6
ROSA				*e*S	Sg	09 23 27.7	-4.5
SRBC	**Serra Branca**	**1.00**	**86**	*e*S	Sg	09 23 30.9	-5.1
PMAN	**Manadas**	**1.03**	**109**	*e*S	Sg	09 23 31.2	-5.5
PMAN				A		09 23 36.5	
	1µm,0.3s						
PSCM	**Serra do Cume**	**1.75**	**98**	*e*S	Sn	09 23 49.0	-7.3
PSCM				A		09 23 49.8	
	29nm,0.4s						
PSET	**Sete Cidades**	**3.06**	**111**	*e*P	Pn	09 23 47.4	-4.7
PSET				*e*S	Sn	09 24 20.9	-7.8
PSET				A		09 24 24.5	
	46nm,0.4s						
PSET	**Sete Cidades**	**3.06**	**111**	*e*P	Pn	09 23 47.4	-4.7
PSET				*e*S	Sn	09 24 20.9	-7.8
PDA	**Ponta Delgada**	**3.13**	**112**	*e*S	Sn	09 24 22.2	-8.3
CMLA	**Cha da Macela**	**3.22**	**111**	*e*S	Sn	09 24 24.6	-8.2
CMLA				A		09 24 31.7	
	64nm,0.4s						
PSMN	**Pico do Norte,**	**3.90**	**119**	*e*P	Pn	09 23 59.9	-3.7
PSMN				*e*S	Sn	09 24 41.0	-8.5

*ISCJB **18** 09:52:45.5±0.9, 1825N±006×1454E±0.1, h300km±10km, mb3.9/18, Error ellipse: s-maj=18.1km s-min=9.4km az=173.6*

*IDC **18** 09:52:45.8±1.3, 1825N×1454.9E, h289km±13km, mb3.6/13, mb1 3.7/18, mb1mx3.6/25, mbtmp3.7/18, Error ellipse: s-maj=18.2km s-min=8.7km az=82.0*

*NEIC **18** 09:52:47.0±1.1, 1825N×1454.2E, h301km±11km, mb4.2/5, Error ellipse: s-maj=12.5km s-min=8.5km az=78.0*

ISC 18 09:52:46.1±0.9, 1824N±006×1454E±01, h289km±9km, n30, σ0°79/28, mb3.9/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.66**	**187**	P	**Pn**	**09 54 00.8**	**+1.5**
	13nm,0.3s,baz=149,slow=16,SNR=11						
GUMO				S	**S**	**09 54 56.8**	**-1.2**
	10.0nm,0.3s,baz=357,slow=22,SNR=3.5						
CBIJ	**Chichi jima**	**9.30**	**342**	P	**Pn**	**09 54 55.9**	**+0.3**
	9.3nm,0.3s,baz=270,slow=22,SNR=5.5						
JHJ	**Hachijo jima 2**	**15.65**	**342**	P	**Pn**	**09 56 12.1**	**-0.4**
	17nm,0.3s,baz=240,slow=22,SNR=15						
JOW	**Kunigami**	**17.98**	**301**	P	**P**	**09 56 37.8**	**+1.6**
	6.6nm,0.3s,baz=140,slow=25,SNR=6.6						
MJAR	**Matsushiro Arr**	**19.31**	**342**	P	**P**	**09 56 48.8**	**-1.4**
	0.8nm,0.3s,baz=166,slow=10,SNR=10						
KSRS	**Korea Array**	**24.53**	**325**	P	**P**	**09 57 39.2**	**-0.6**
	2.0nm,0.8s,mb3.6,baz=141,slow=10,SNR=3.5						
ASAJ	**Asahikawa**	**25.90**	**355**	P	**P**	**09 57 52.0**	**0.0**
	4.5nm,0.5s,mb4.2,baz=206,slow=15,SNR=6.8						
WRAB	**Tennant Creek**	**39.46**	**197**	*e*P	**P**	**09 59 49.1**	**+0.1**
WRA	**Warramunga Arr**	**39.48**	**197**	P	**P**	**09 59 49.3**	**+0.2**
	1.4nm,0.6s,mb3.5,baz=18,slow=9.0,SNR=28						
WRA				PcP	PcP	10 01 49.4	-1.3
	0.3nm,0.4s,baz=12,slow=3.6,SNR=6.4						
ULN	**Ulaanbaatar**	**42.96**	**322**	*e*P	**P**	**10 00 16.9**	**-0.2**
	2.8nm,0.7s,mb3.6						
ASAR	**Alice Springs**	**43.15**	**196**	P	**P**	**10 00 18.7**	**-0.1**
	0.4nm,0.6s,mb2.9,baz=19,slow=8.1,SNR=11						
SONM	**Songino Array**	**43.33**	**322**	P	**P**	**10 00 19.4**	**-0.6**
	1.7nm,0.5s,mb3.5,baz=137,slow=9.9,SNR=14						
SONM				PcP	PcP	10 02 02.7	-0.3
	0.4nm,0.4s,baz=126,slow=2.5,SNR=3.8						
CMAR	**Chiang Mai Arr**	**44.02**	**278**	P	**P**	**10 00 26.1**	**+0.2**
	6.6nm,0.8s,mb3.9,baz=70,slow=7.2,SNR=18						
STKA	**Stephens Creek**	**49.97**	**184**	P	**P**	**10 01 10.6**	**-0.7**
	1.7nm,0.9s,mb3.4,baz=7.1,slow=8.1,SNR=2.9						
ZALV	**Zalesovo Beam**	**58.22**	**323**	P	**P**	**10 02 09.7**	**-0.6**
	2.8nm,0.3s,mb4.1,baz=97,slow=7.8,SNR=5.2						
MK31	**Makanchi Array**	**58.59**	**314**	*e*P	**P**	**10 02 13.8**	**+0.9**
MKAR	**Makanchi Array**	**58.59**	**314**	P	**P**	**10 02 14.0**	**+1.0**
	4.5nm,0.4s,mb4.2,baz=89,slow=8.9,SNR=24						
KDAK	**Kodiak Island**	**59.88**	**33**	P	**P**	**10 02 21.1**	**-0.4**
	4.9nm,0.9s,mb4.0,baz=301,slow=5.9,SNR=3.1						
PPLA	**Purkeypile**	**61.42**	**28**	*e*P	**P**	**10 02 32.7**	**+0.8**
KURK	**Kurchatov**	**61.43**	**318**	*e*P	**P**	**10 02 32.1**	**0.0**
	8.4nm,0.6s,mb4.5						
BPAW	**Bear Paw Mtn.**	**62.28**	**26**	*e*P	**P**	**10 02 37.7**	**+0.3**
	3.6nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	**63.13**	**309**	*e*P	**P**	**10 02 43.6**	**+0.1**
	1.1nm,0.4s,mb3.8						
BRVK	**Borovoye**	**66.72**	**321**	*e*P	**P**	**10 03 05.9**	**-0.4**
	11nm,0.6s,mb4.8						
JCW	**Jim Creek**	**78.35**	**43**	*e*P	**P**	**10 04 15.8**	**+1.1**
YKA	**Yellowknife Ar**	**78.51**	**28**	P	**P**	**10 04 14.5**	**-0.8**
	0.9nm,0.8s,mb3.6,baz=76,slow=7.6,SNR=3.1						
ARCES	**ARCESS Array B**	**82.84**	**342**	P	**P**	**10 04 36.4**	**-1.6**
	4.1nm,0.9s,mb4.3,baz=64,slow=8.2,SNR=5.7						
NVAR	**Mina Array Bea**	**83.63**	**52**	P	**P**	**10 04 43.3**	**+0.7**
	1.9nm,0.7s,mb4.1,baz=262,slow=5.8,SNR=15						
TORD	**Torodi Ar. Bea**	**132.53**	**309**	PKP	PKPdf	10 11 26.0	-1.1
	0.3nm,0.6s,baz=48,slow=1.0,SNR=4.5						
TORD	**Torodi Ar. Bea**	**132.53**	**309**	PKP	PKPdf	10 11 26.0	-1.1
LPAZ	**La Paz**	**147.93**	**92**	PKPbc	PKPbc	10 11 58.4	+0.3
	1.0nm,0.7s,baz=232,slow=4.6,SNR=6.7						

IDC 18 10:01:05.0±3.5, 269S×10218E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, MS4.3/1, Ms1 4.3/1, ms1mx3.1/24, Error ellipse: s-maj=158.6km s-min=23.2km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**35.77**	**121**	P	P	10 08 06.4	+0.3
	0.3nm,0.2s,baz=308,slow=8.8,SNR=16						
ASAR	**Alice Springs**	**37.09**	**127**	P	P	10 08 17.1	-0.3
	0.5nm,0.7s,baz=302,slow=7.7,SNR=13						
SONM	**Songino Array**	**50.45**	**4**	P	P	10 10 06.5	+2.1
	0.2nm,0.3s,baz=178,slow=7.1,SNR=3.0						
MKAR	**Makanchi Array**	**52.30**	**343**	P	P	10 10 17.6	-0.8
	0.9nm,0.5s,baz=152,slow=8.9,SNR=7.7						
GERES	**GERESS Array B**	**91.00**	**319**	LR	LR	11 01 06.0	
	comp=Z,137nm,18.3s,baz=95,slow=40						
TXAR	**Lajitas Array**	**143.87**	**40**	PKP	PKPdf	10 20 40.8	-2.3
	0.3nm,0.7s,baz=272,slow=1.9,SNR=4.8						

*BJI **18** 10:03:45.5, 053S×9744E, h25km, mB5.3, mb5.0, Ms5.2, Msz5.0*

*IDC **18** 10:03:47.7±0.4, 001N×9779E, h0km, mb4.7/23, mb1 4.8/24, mb1mx4.8/26, mbtmp4.7/24, ML4.4/1, MS4.6/11, Ms1 4.5/11, ms1mx4.3/25, Error ellipse: s-maj=16.2km s-min=11.8km az=58.0*

*ISCJB **18** 10:03:49.4±0.9, 002N±003×9758E±003, h18km±6km, mb5.0/87, MS4.8/34, Error ellipse: s-maj=5.9km s-min=4.8km az=139.6*

*MOS **18** 10:03:51.2±1.2, 0.18N×9775E, h31km, mb5.3/37, MS4.7/7, Error ellipse: s-maj=11.8km s-min=5.8km az=116.8*

*NEIC **18** 10:03:52.1±0.2, 0.13N×9772E, mb5.1/31, Error ellipse: s-maj=10.7km s-min=5.8km az=49.0*

*DJA **18** 10:03:52, 0.12N×9754E, h36km, MLv5.3/6*

ISC 18 10:03:52.9±1.0, 004N±003×9756E±003, h27km±6km, h27km±1.1km:pP-P, n240, σ1°19/241, mb4.9/87, MS4.8/34, 31C-12D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.26**	**1⇑**	*e*P	**Pn**	**10 04 14.0**	**-0.7**
GSI				*e*S	**Sn**	**10 04 25.0**	**-5.7**
TRSI	**Tarutung**	**2.42**	**35**	P	**Pn**	**10 04 31.1**	**+0.4**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**2.88**	**100**	P	**Pn**	**10 04 32.9**	**-4.1**
	0.0nm,0.0s						
FRIM	**Kepong**	**5.16**	**52**	⇑P	**Pn**	**10 05 09.2**	**+0.9**
IPM	**Ipoh**	**5.61**	**38**	⇑P	**Pn**	**10 05 14.9**	**+0.3**
BSI	**Banda Aceh**	**5.87**	**337**	P	**Pn**	**10 05 17.7**	**-0.5**
	121nm,1.1s						
KGM	**Kluang**	**6.08**	**71**	⇓P	**Pn**	**10 05 20.7**	**-0.4**
KSI	**Kapahilang**	**6.22**	**126**	P	**Pn**	**10 05 18.7**	**-4.3**
	2µm,0.8s						
MYKOM	**Kota Kinggi**	**6.53**	**75**	⇑P	**Pn**	**10 05 27.1**	**-0.1**
DSRI	**Dabo**	**7.04**	**94**	P	**Pn**	**10 05 34.4**	**+0.2**
	85nm,0.8s						
KTGM	**Kuala Trenggan**	**7.65**	**47**	⇑P	**Pn**	**10 05 43.7**	**+1.1**
SNG	**Songkhla**	**7.72**	**23**	P	**Pn**	**10 05 42.0**	**-1.5**
	300nm,1.0s						
KLI	**Kotabumi**	**8.77**	**124**	P	**Pn**	**10 05 57.8**	**-0.1**
	252nm,1.1s						
PPBI	**Pangkal Pinang**	**8.85**	**104**	P	**Pn**	**10 06 01.7**	**+2.6**
	43nm,1.0s						
TPI	**Tanjungpandan**	**10.46**	**105**	P	**Pn**	**10 06 21.1**	**-0.1**
	83nm,0.8s						
DBJI	**Dramaga**	**11.27**	**126**	P	**Pn**	**10 06 37.0**	**+4.8**
	142nm,1.2s						
CBJI	**Citeko**	**11.28**	**125**	P	**Pn**	**10 06 38.3**	**+6.0**
	598nm,1.0s						
LEM	**Lembang**	**12.13**	**124**	P	**Pn**	**10 06 51.9**	**+7.8**
	91nm,0.9s						
KSM	**Kuching**	**12.83**	**84**	⇑P	**Pn**	**10 06 54.1**	**+0.5**
KSM	**Kuching**	**12.83**	**84**	P	**Pn**	**10 06 45.9**	**-7.7**
STKI	**Sintang**	**13.92**	**90**	P	**Pn**	**10 07 15.5**	**+7.0**
	0.0nm,0.0s						
BJII	**Banjamegara**	**14.16**	**121**	P	**Pn**	**10 07 15.3**	**+3.5**
	59nm,1.1s						
SBUM	**Sibu**	**14.85**	**81**	⇓P	**Pn**	**10 07 19.3**	**-1.9**
BTM	**Bintulu**	**15.83**	**78**	⇑P	**Pn**	**10 07 35.5**	**+1.5**
BDT	**Bhumibol Dam**	**17.16**	**5**	⇑P	**Pn**	**10 07 54.0**	**+3.2**
	11nm,1.1s						
BBKI	**Banjar Baru**	**17.62**	**102**	P	**Pn**	**10 07 59.8**	**+3.2**
	164nm,1.2s						
CMAR	**Chiang Mai Arr**	**18.35**	**4**	P	**Pn**	**10 08 02.9**	**-2.7**
	0.4nm,0.3s,baz=193,slow=11,SNR=29						
CMAR				PcP	PcP	10 12 34.5	-1.9
	0.4nm,0.3s,baz=355,slow=16,SNR=4.3						
KKM	**Kota Kinabalu**	**19.55**	**72**	⇑P	**Pn**	**10 08 19.5**	**-0.6**
CHRT	**Chiangrai**	**19.83**	**6**	⇓P	**Pn**	**10 08 21.5**	**-1.8**
	158nm,1.2s						
SDKM	**Sandakan**	**20.38**	**74**	⇑P	**P**	**10 08 27.9**	**+0.2**
TSM	**Tawau**	**20.73**	**78**	⇑P	**P**	**10 08 31.3**	**-0.2**
MYLDM	**Lahad Datu**	**21.53**	**76**	⇑P	**P**	**10 08 41.5**	**+1.4**
QIZ	**Qiongzhong**	**22.39**	**32**	P	**P**	**10 08 51.1**	**+1.8**
QIZ				S	**S**	**10 12 54.4**	**+0.1**
QIZ				AMB	AMB		
	comp=Z,32nm,1.2s,mb4.6						
QIZ				LR	LR		
	comp=N,3µm,12.6s						
QIZ				LR	LR		
	comp=Z,3µm,12.4s,MS4.9						
KAPI	**Kappang**	**22.73**	**103**	P	**P**	**10 08 49.4**	**-3.5**
	comp=Z,26nm,0.9s,mb4.7,baz=291,slow=8.8,SNR=8.5						
KAPI				LR	LR	10 18 11.0	
	comp=Z,1µm,18.6s,MS4.4,baz=266,slow=38						
KAPI	**Kappang**	**22.73**	**103**	*e*P	**P**	**10 08 51.1**	**-1.8**
KAPI				*e*pP		10 08 58.5	
CAL	**Calcutta**	**24.10**	**339**	*e*P	**P**	**10 09 02.2**	**-4.1**
CAL				*e*S	**S**	**10 13 32.5**	**+10**
CAL				*ex*	x	10 26 44.1	
	comp=Z,614nm,15.3s						
KMI	**Kunming**	**25.43**	**11**	P	**P**	**10 09 20.9**	**+2.4**
KMI				AP	pP	10 09 27.9	+1.4
KMI				XP	sP	10 09 30.9	+1.0
KMI				PP		10 10 00.8	
KMI				S	**S**	**10 13 44.5**	**+0.7**
KMI				XS	sS	10 13 55.9	-1.2
KMI				SS		10 14 47.3	
KMI				AMB	AMB		
	comp=Z,34nm,1.2s,mb4.8						
KMI				AMB	AMB		
	comp=Z,442nm,5.3s						
KMI				LR	LR		
	comp=N,4µm,13.1s,MS5.2						
KMI				LR	LR		
	comp=E,3µm,14.5s,MS5.2						
KMI				LR	LR		
	comp=Z,5µm,13.1s,MS5.2						
HYB	**Hyderabad**	**25.46**	**314**	*i* P	**P**	**10 09 21.5**	**+2.7**
HYB	**Hyderabad**	**25.46**	**314**	*e*P	**P**	**10 09 24.0**	**+5.2**
GYA	**Guiyang**	**27.69**	**18⇑**	*i*P	**P**	**10 09 40.0**	**+1.2**
GYA				AP	pP	10 09 48.3	+1.4
GYA				XP	sP	10 09 52.8	+2.5
GYA				PP		10 10 27.6	
GYA				PCP	PcP	10 12 56.4	+0.8
GYA				S	**S**	**10 14 18.6**	**-0.9**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,140nm,4.6s						
GYA				LR	LR		
	comp=N,610nm,16.9s,MS4.4						
GYA				LR	LR		
	comp=E,540nm,15.6s,MS4.4						
GYA				LR	LR		
	comp=Z,560nm,16.0s,MS4.2						
ODAN	**Odare**	**28.41**	**341**	*e*P	**P**	**10 09 45.7**	**+0.5**
	comp=Z,34nm,0.9s,mb5.0						
TAPN	**Taplejung**	**28.76**	**342**	*e*P	**P**	**10 09 49.9**	**+1.6**
RAMN	**Ramite**	**28.76**	**339**	*e*P	**P**	**10 09 49.5**	**+1.2**
JIRN	**Jiri**	**29.55**	**339**	*e*P	**P**	**10 09 56.3**	**+0.9**
PKI	**Pyrkhoki**	**29.76**	**338**	*e*P	**P**	**10 09 58.2**	**+1.0**
PKIN	**Phulchoki**	**29.77**	**338**	*e*P	**P**	**10 09 58.1**	**+0.8**
GUN	**Gumba**	**29.89**	**339**	*e*P	**P**	**10 09 59.3**	**+0.9**
DMN	**Daman**	**29.91**	**337**	*e*P	**P**	**10 09 59.7**	**+1.2**
	comp=Z,37nm,0.9s,mb5.1						
KKN	**Kakani**	**30.00**	**338**	*e*P	**P**	**10 09 59.9**	**+0.5**
	comp=Z,50nm,0.9s,mb5.2						
LSA	**Lhasa**	**30.12**	**349**	P	**P**	**10 10 02.0**	**+1.6**
LSA	**Lhasa**	**30.12**	**349**	*e*P	**P**	**10 10 01.6**	**+1.2**
LSA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
LSA	**Lhasa**	**30.12**	**349**	*e*P	**P**	**10 10 01.6**	**+1.2**
	comp=Z,15nm,0.8s,mb4.8						
GKN	**Gorkha**	**30.44**	**337**	*e*P	**P**	**10 10 03.7**	**+0.4**
	comp=Z,34nm,0.9s,mb5.1						
KOLN	**Koldanda**	**30.65**	**335**	*e*P	**P**	**10 10 06.2**	**+1.1**
	comp=Z,26nm,0.7s,mb5.2						
CD2	**Chengdu**	**31.26**	**10⇑**	*i*P	**P**	**10 10 11.8**	**+1.4**
CD2				AP	pP	10 10 18.9	+0.4
CD2				XP	sP	10 10 22.5	+0.6
CD2				PP	PP	10 11 14.0	-7.4
CD2				PCP	PcP	10 13 06.3	+1.7
CD2				S	**S**	**10 15 15.3**	**-0.1**
CD2				SCS	ScS	10 20 41.0	-2.4
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
CD2				AMB	AMB		
	comp=Z,610nm,7.2s						
CD2				LR	LR		
	comp=N,5µm,14.4s,MS5.4						
CD2				LR	LR		
	comp=E,4µm,13.2s,MS5.4						
CD2				LR	LR		
	comp=Z,6µm,14.4s,MS5.4						
FITZ	**Fitzroy Crossi**	**32.97**	**125**	*e*P	**P**	**10 10 21.1**	**-4.5**
	comp=Z,31nm,0.8s,mb5.3						
FITZ	**Fitzroy Crossi**	**32.97**	**125**	P	**P**	**10 10 21.3**	**-4.3**
	comp=Z,18nm,0.8s,mb5.1,baz=297,slow=6.4,SNR=39						
WHN	**Wuhan**	**34.28**	**26**	P	**P**	**10 10 37.9**	**+1.0**
WHN				*e*S	**S**	**10 16 07.5**	**+5.1**
WHN				LR	LR		
	comp=Z,6µm,16.8s,MS5.4						
XAN	**Xi'an**	**35.46**	**16**	P	**P**	**10 10 45.3**	**-1.7**
XAN				AP	pP	10 10 55.0	-0.2
XAN				XP	sP	10 10 59.8	+1.3
XAN				AMB	AMB		
	comp=Z,71nm,1.0s,mb5.5						
XAN				AMB	AMB		
	comp=Z,278nm,5.7s						
XAN				LR	LR		
	comp=E,689nm,16.0s						
XAN				LR	LR		
	comp=Z,3µm,14.5s,MS5.2						
TLE	**Tual**	**35.57**	**100**	P	**P**	**10 10 57.5**	**+9.2**
	comp=Z,24µm,1.0s						
LZH	**Lanzhou**	**36.34**	**9**	*e*P	**P**	**10 10 51.5**	**-3.0**
LZH				AP	pP	10 10 57.8	-4.9
LZH				XP	sP	10 11 01.5	-4.5
LZH				*e*PP	PP	10 12 16.0	-1.5
LZH				*e*S	**S**	**10 16 36.3**	**+2.4**
LZH				XS	sS	10 16 51.0	+3.6
LZH				SS	SS	10 19 11.4	-1.9
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,312nm,4.3s						
LZH				LR	LR		
	comp=E,2µm,13.2s						
LZH				LR	LR		
	comp=Z,2µm,14.6s,MS5.1						
KLBR	**Kellerberrin**	**36.82**	**151**	*e*P	**P**	**10 10 58.9**	**+0.2**
	comp=Z,69nm,1.7s,mb5.2						
NWAO	**Narrogin (SRO)**	**37.67**	**152**	LR	LR	10 28 05.9	
	comp=Z,940nm,18.4s,MS4.6,baz=153,slow=39						
NJ2	**Nanjing**	**37.67**	**30**	*e*P	**P**	**10 11 05.8**	**-0.1**
NJ2				AP	pP	10 11 13.1	-1.0
NJ2				XP	sP	10 11 16.4	-1.0
NJ2				PP	PP	10 12 34.8	+2.6
NJ2				S	**S**	**10 16 54.0**	**-0.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,570nm,6.7s						
NJ2				LR	LR		
	comp=N,750nm,26.7s,MS4.8						
NJ2				LR	LR		
	comp=E,2µm,22.0s,MS4.8						
NJ2				LR	LR		
	comp=Z,2µm,22.0s,MS4.8						
GTA	**Gaotai**	**39.24**	**3**	⇑P	**P**	**10 11 18.6**	**-0.4**
GTA				AP	pP	10 11 26.0	-1.2
GTA				XP	sP	10 11 29.3	-1.2
GTA				PP	PP	10 12 53.5	+4.2
GTA				S	**S**	**10 17 16.4**	**-1.4**
GTA				AMB	AMB		
	comp=Z,13nm,1.7s,mb4.4						
GTA				AMB	AMB		
	comp=Z,291nm,5.4s						
GTA				LR	LR		
	comp=N,742nm,12.6s,MS4.9						
GTA				LR	LR		
	comp=E,1µm,13.2s,MS4.9						
GTA				LR	LR		
	comp=Z,703nm,11.7s,MS4.7						
WRA	**Warramunga Arr**	**41.12**	**121**	P	**P**	**10 11 31.1**	**-3.9**
	comp=Z,46nm,0.7s,mb5.2,baz=300,slow=9.0,SNR=176						
WRAB	**Tennant Creek**	**41.13**	**121**	P	**P**	**10 11 32.6**	**-2.4**
	comp=Z,464nm,0.7s,mb6.2,SNR=17						
WRAB	**Tennant Creek**	**41.13**	**121**	*e*P	**P**	**10 11 31.5**	**-3.5**
WRAB				pmax	pmax		
	comp=Z,51nm,0.7s,mb5.3						
WRAB	**Tennant Creek**	**41.13**	**121**	*e*P	**P**	**10 11 31.5**	**-3.5**
	comp=Z,51nm,0.7s,mb5.3						
WB2	**Warramunga Arr**	**41.13**	**121**	*e*P	**P**	**10 11 31.5**	**-3.5**
FORT	**Forrest**	**42.16**	**139**	*e*P	**P**	**10 11 42.8**	**-0.5**
	comp=Z,29nm,0.7s,mb5.0						
ASAR	**Alice Springs**	**42.42**	**126**	P	**P**	**10 11 42.2**	**-3.2**
	comp=Z,20nm,0.7s,mb4.8,baz=299,slow=6.3,SNR=140						
ASAR				PcP	PcP	10 13 39.2	+0.8
	comp=Z,2.5nm,0.8s,baz=311,slow=2.4,SNR=5.6						
HHC	**Hu-ho-hao-te**	**42.56**	**16**	*e*P	**P**	**10 11 46.8**	**+0.4**
HHC				AP	pP	10 11 54.1	-0.5
HHC				XP	sP	10 11 57.3	-0.7
HHC				PP	PP	10 13 28.3	+2.9
HHC				PCP	PcP	10 13 39.1	+0.6
HHC				SCP	ScP	10 17 27.1	-0.6
HHC				PCS	PcS	10 17 29.9	-0.6
HHC				S	**S**	**10 18 07.9**	**+0.6**
HHC				XS	sS	10 18 20.0	-0.9
HHC				SS	SS	10 21 12.0	-5.9
HHC				SCS	ScS	10 21 43.9	-2.2
HHC				AMB	AMB		
	comp=Z,12nm,0.5s,mb4.9						
HHC				AMB	AMB		
	comp=Z,202nm,5.6s						
HHC				LR	LR		
	comp=N,3µm,14.9s,MS5.4						
HHC				LR	LR		
	comp=E,2µm,13.3s,MS5.4						
HHC				LR	LR		
	comp=Z,2µm,13.8s,MS5.2						
BJT	**Baijiatuao**	**43.26**	**21**	*e*P	**P**	**10 11 53.7**	**+1.7**
BJT				pmax	pmax		
	comp=Z,52nm,1.0s						
BJT	**Baijiatuao**	**43.26**	**21**	*e*P	**P**	**10 11 53.7**	**+1.7**
	comp=Z,52nm,1.0s,mb5.2						
BJI	**Beijing**	**43.28**	**21**	P	**P**	**10 11 53.6**	**+1.4**
BJI				S	**S**	**10 18 19.8**	**+1.9**
BJI				AMB	AMB		
	comp=Z,47nm,1.0s,mb5.2						
BJI				LR	LR		
	comp=N,1µm,14.9s,MS5.

MK31 pmax pmax
comp=Z,39nm,0.8s,mb5.5
MK31 Makanchi Array 48.45 346 *e*P **P 10 12 32.8 -0.1**
MKAR Makanchi Array 48.45 346 P **P 10 12 32.9 +0.1**
comp=Z,24nm,0.6s,mb5.4,baz=155,slow=7.8,SNR=175
KK31 Karatay Array 49.25 334 *i* P **P 10 12 38.4 -0.7**
KK31 pmax pmax
comp=Z,15nm,1.0s,mb5.0
CN2 Changchun 50.17 26 ⇓P **P 10 12 46.3 +0.2**
CN2 eXP sP 10 12 57.3 -0.5
CN2 eS **S 10 19 56.5 +0.2**
CN2 AMB AMB
comp=Z,20nm,1.2s,mb5.0
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1μm,15.0s,MS5.3
CN2 LR LR
comp=E,2μm,15.0s,MS5.3
CN2 LR LR
comp=Z,900nm,14.0s,MS4.9
PMG Port Moresby 50.25 102 *e*P **P 10 12 46.0 -1.2**
ZAK Zakamensk 50.39 5 *e*P **P 10 12 46.3 -1.3**
ZAK pmax pmax
comp=Z,6.0nm,1.8s,mb4.3
MOY Mondy 51.52 3 *e*P **P 10 12 59.4 +3.3**
CTA Charters Tower 51.67 116 *e*P **P 10 12 56.9 -0.9**
comp=Z,11nm,1.1s,mb4.7
CTA Charters Tower 51.67 116 LR LR 10 37 51.7
comp=Z,697nm,18.5s,MS4.7,baz=64,slow=40
CTA Charters Tower 51.67 116 *e*P **P 10 12 56.9 -0.9**
CTA pmax pmax
comp=Z,11nm,1.1s
CTAO Charters Tower 51.67 116 *e*P **P 10 12 57.0 -0.8**
CTAO pmax pmax
comp=Z,28nm,1.2s,mb5.1
CTAO Charters Tower 51.67 116 *e*P **P 10 12 57.0 -0.8**
comp=Z,28nm,1.2s,mb5.1
MAT Matsushiro 52.31 42 P **P 10 12 58.5 -3.8**
MJAR Matsushiro Arr 52.31 42 P **P 10 13 00.0 -2.2**
comp=Z,3.1nm,0.8s,mb4.3,baz=221,slow=5.7,SNR=7.4
MJAR LR LR 10 39 07.8
comp=Z,358nm,18.4s,MS4.4,baz=225,slow=41
STKA Stephens Creek 52.32 132 *e*P **P 10 13 01.0 -1.4**
comp=Z,28nm,0.8s,mb5.2
STKA Stephens Creek 52.32 132 P **P 10 12 59.5 -3.0**
comp=Z,32nm,0.8s,mb5.3,baz=303,slow=7.2,SNR=48
STKA LR LR 10 34 26.2
comp=Z,501nm,19.2s,MS4.6,baz=238,slow=35
IRK Irkutsk 52.32 5 *e*P **P 10 13 02.5 +0.4**
IRK pmax pmax
comp=Z,43nm,2.1s,mb5.0
MDJ Mudanjiang 52.70 28 P **P 10 13 04.1 -0.9**
MDJ XP sP 10 13 13.1 -3.7
MDJ PCP PcP 10 14 14.1 -0.5
MDJ PP PP 10 15 02.9 -1.6
MDJ PCS PcS 10 18 12.8 -0.2
MDJ S **S 10 20 27.4 -3.8**
MDJ SS SS 10 24 09.0 -1.1
MDJ AMB AMB
comp=Z,14nm,2.0s,mb4.5
MDJ AMB AMB
comp=Z,274nm,4.2s
MDJ LR LR
comp=N,561nm,15.9s,MS4.8
MDJ LR LR
comp=E,355nm,14.9s,MS4.8
MDJ LR LR
comp=Z,882nm,14.3s,MS5.0
OPO Ambohidratompo 52.79 247 P **P 10 13 07.7 +1.6**
comp=Z,1.9nm,0.8s,mb4.1,baz=5.0,slow=2.0,SNR=3.4
KURK Kurchatov 53.00 345 P **P 10 13 06.0 -1.1**
comp=Z,140nm,1.1s,mb5.8,SNR=16
KURK Kurchatov 53.00 345 P **P 10 13 06.5 -0.6**
comp=Z,7.1nm,0.8s,mb4.7,baz=165,slow=6.8,SNR=11
ZAA0 Zalesovo Array 54.75 351 *e*P **P 10 13 19.6 -0.3**
ZALV Zalesovo Beam 54.75 351 P **P 10 13 19.5 -0.4**
comp=Z,26nm,0.8s,mb5.3,baz=178,slow=6.5,SNR=22
NVS Novosibirsk 55.87 350 *i* P **P 10 13 26.7 -1.2**
NVS *i* S **S 10 21 16.4 +2.8**
NVS pmax pmax
comp=Z,37nm,1.6s,mb5.2
NVS pmax pmax
comp=N,20nm,1.4s
NVS pmax pmax
comp=E,13nm,1.1s
NVS smax
comp=N,23nm,1.7s
NVS smax
comp=E,18nm,2.0s
KRAR Krasnoyarsk 55.92 357 *i* P **P 10 13 28.8 +0.5**
KRAR MLR MLR
comp=Z,300nm,16.0s,MS4.5
KLR Kul'dur 57.13 26 *e*P **P 10 13 31.8 -5.2**
KLR eS **S 10 21 49.5 +19**
KLR pmax pmax
comp=E,24nm,1.0s
KLR pmax pmax
comp=Z,52nm,1.0s,mb5.5
KLR MLR MLR
comp=N,4μm,17.0s,MS5.6
KLR MLR MLR
comp=E,1μm,17.0s,MS5.6
BVAR Borovoye Array 57.46 341 P **P 10 13 37.9 -1.3**
comp=E,4.2nm,0.7s,mb4.6,baz=141,slow=9.6,SNR=13
EIDS Eidsvold 57.48 120 *e*P **P 10 13 37.1 -2.8**
BRVK Borovoye 57.52 341 *e*P **P 10 13 38.4 -1.3**
BRVK pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
BRVK Borovoye 57.52 341 *e*P **P 10 13 38.4 -1.3**
comp=Z,9.5nm,0.7s,mb4.9
TOO Toolangi 57.86 136 *e*P **P 10 13 43.9 +1.5**
AB31 Akbulak array 58.70 332 *i* P **P 10 13 46.7 -1.3**
AB31 pmax pmax
comp=Z,11nm,0.9s,mb4.9
BOD Bodaibo 59.08 10 *e*P **P 10 13 49.7 -0.8**
BOD pmax pmax
comp=Z,17nm,1.3s,mb4.9
CAN Canberra 59.38 132 *e*P **P 10 13 53.0 0.0**
ARMA Armidale 59.56 126 *e*P **P 10 13 56.0 +1.6**
CNB Canberra Magne 59.65 132 *e*P **P 10 13 55.2 +0.3**
KMBO Kilima Mbogo 60.31 269 P **P 10 14 00.4 +0.6**
comp=Z,1.0nm,0.4s,mb4.2,baz=45,slow=19,SNR=3.2
YSS Yuzh-Sakhalins 61.10 34⇑*e*P **P 10 14 02.8 -1.8**
YSS eS **S 10 22 24.0 +2.0**
YSS pmax pmax
comp=Z,70nm,1.1s,mb5.7
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.7
YSS Yuzh-Sakhalins 61.10 34 *e*P **P 10 14 03.5 -1.1**
GNI Garni 62.38 316⇑*e*P **P 10 14 13.3 0.0**
GNI pmax pmax
comp=Z,27nm,1.8s
SVE Sverdlovsk 63.89 338 *e*P **P 10 14 22.3 -0.7**
SVE pmax pmax
comp=Z,21nm,1.4s,mb5.0
SVE MLR MLR
comp=Z,552nm,20.0s,MS4.7
ARU Arti 64.39 337 *d* iP **P 10 14 24.3 -1.9**
ARU *e* 10 14 57.7
ARU eS **S 10 23 02.1 -0.7**
ARU pmax pmax
comp=Z,18nm,1.7s,mb4.8
ARU Arti 64.39 337 *e*P **P 10 14 24.8 -1.4**
comp=Z,16nm,1.3s,mb4.9
KIV Kislovodsk 65.42 319 *e*P **P 10 14 33.0 -0.2**
KIV pmax pmax
comp=Z,21nm,1.0s,mb5.1
KIV MLR MLR
comp=Z,111nm,18.0s,MS4.1
MALT Malatya 66.17 312 *e*P **P 10 14 35.9 -2.3**
MALT pmax pmax
comp=Z,23nm,1.3s,mb5.0
MALT Malatya 66.17 312⇑*i*P **P 10 14 35.4 -2.8**
MALT Malatya 66.17 312 *e*P **P 10 14 35.9 -2.4**
comp=Z,23nm,1.3s,mb5.0
YAK Yakutsk 66.43 16⇑*e*P **P 10 14 37.6 -1.8**
YAK pmax pmax
comp=Z,50nm,1.4s,mb5.3
YAK MLR MLR
comp=Z,1μm,16.0s,MS5.2
CASY Casey 66.82 174 *e*P **P 10 14 43.4 +1.6**
SOC Sochi 67.22 318 *i* P **P 10 14 47.0 +2.2**
ANN Anapa 69.20 319 *e*P **P 10 14 55.6 -1.6**
ANN pmax pmax
comp=Z,12nm,0.8s,mb4.9

DZM Mont Dzumac 70.49 113 *e*P **P 10 15 06.0 +0.3**
VSR Storozhevoye 70.72 325 *e*P **P 10 15 04.8 -1.6**
VSR *e**SP sP 10 15 15.5 -2.8
VSR pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
VSR pmax pmax
comp=N,5.0nm,1.0s
VSR pmax pmax
comp=E,9.0nm,1.0s
MAW Mawson 71.67 193 *e*P **P 10 15 13.8 +2.0**
comp=E,5.3nm,1.0s,mb4.4
MAW Mawson 71.67 193 P **P 10 15 12.6 +0.8**
comp=E,5.4nm,0.9s,mb4.5,baz=358,slow=7.5,SNR=13
MAW LR LR 10 40 03.2
comp=E,293nm,19.5s,MS4.6,baz=78,slow=30
MAW Mawson 71.67 193 *e*P **P 10 15 13.8 +2.0**
MAW pmax pmax
comp=Z,5.0nm,1.0s
PETK Petropavlovsk- 72.50 33 P **P 10 15 15.5 -1.6**
comp=Z,6.3nm,0.7s,mb4.7,baz=206,slow=3.2,SNR=8.2
PETK LR LR 10 47 57.1
comp=Z,289nm,18.7s,MS4.6,baz=254,slow=37
PET Petropavlovsk 72.99 34⇑*e*P **P 10 15 20.1 +0.1**
PET pmax pmax
comp=Z,71nm,0.8s,mb5.7
PET MLR MLR
comp=Z,200nm,16.0s,MS4.5
OBN Obninsk 73.79 328⇑*e*P **P 10 15 24.2 -0.4**
OBN *e* 10 18 07.7
OBN *i* S S 10 24 52.9 -1.2
OBN pmax pmax
comp=Z,27nm,1.2s,mb5.0
TIXI Tiksi 74.26 10 *i* P **P 10 15 25.4 -1.7**
TIXI pmax pmax
comp=Z,26nm,1.4s,mb5.0
TIXI MLR MLR
comp=Z,1μm,25.0s,MS5.0
BOSA Boshof 74.52 240 P **P 10 15 28.9 -0.6**
comp=Z,2.3nm,0.7s,mb4.2,baz=59,slow=3.6,SNR=5.5
TIRR Tirgusor 75.20 316⇓*i*P **P 10 15 32.3 -0.8**
AKASG Malin Array Be 76.39 326 P **P 10 15 38.6 -1.2**
comp=Z,4.7nm,0.6s,mb4.6,baz=86,slow=4.1,SNR=14
KIEV Kiev 76.40 323 *e*P **P 10 15 38.2 -1.6**
KIEV pmax pmax
comp=Z,11nm,0.8s,mb4.8
KIEV Kiev 76.40 323 *e*P **P 10 15 38.1 -1.6**
comp=Z,11nm,0.8s,mb4.8
VRI Vrincioaia 76.71 317⇑*i*P **P 10 15 41.7 0.0**
VRI Vrincioaia 76.71 317⇑P **P 10 15 41.6 0.0**
MLR Muntele Rosu 77.15 317⇓*i*P **P 10 15 43.9 -0.3**
MLR Muntele Rosu 77.15 317⇓P **P 10 15 43.9 -0.2**
VOIR 77.75 317⇑*i*P **P 10 15 46.3 -1.2**
BURAR Bucovina Array 78.13 319⇑*i*P **P 10 15 49.9 +0.3**
BURAR Bucovina Array 78.13 319⇑P **P 10 15 49.9 +0.3**
RPZ Rata Peaks 78.14 135 P **P 10 15 47.5 -2.2**
comp=Z,5.0nm,0.8s,mb4.5,baz=106,slow=3.0,SNR=4.0
RPZ Rata Peaks 78.14 135 P **P 10 15 47.5 -2.2**
BUR08 Bucovina Ar. S 78.15 319 *e*P **P 10 15 49.2 -0.4**
SUR Sutherland 78.84 237 *e*P **P 10 15 55.6 +1.7**
SYO Syowa Base 79.02 198⇑*e*P **P 10 15 54.6 +0.6**
SYO Syowa Base 79.02 198⇑*e*PcP PcP 10 16 04.4 +1.9
DRGR 79.63 318⇓*i*P **P 10 15 57.7 -0.1**
DRGR 79.63 318⇓P **P 10 15 57.7 -0.1**
BZS Buzias 80.16 316⇑*i*P **P 10 16 00.0 -0.7**
BZS Buzias 80.16 316⇑P **P 10 16 00.0 -0.7**
KOLS Kolonicke sedl 80.33 320 *e*P **P 10 16 01.8 +0.2**
APA Apatity 80.33 339⇓*e*P **P 10 16 04.6 +3.4**
APA pmax pmax
comp=Z,34nm,1.3s,mb5.1
TSUM Tsumeb 80.55 251 *e*P **P 10 16 05.0 +1.6**
CRVS Cervenica-Dubn 80.85 320 *e*P **P 10 16 05.3 +0.9**
STHS Stebnicka Huta 81.08 320 *e*P **P 10 16 06.2 +0.6**
STHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
STHS Stebnicka Huta 81.08 320 *e*P **P 10 16 06.2 +0.6**
comp=Z,6.3nm,1.1s,mb4.5
URZ Urewera 81.81 129 LR LR 10 52 23.7
comp=Z,462nm,19.8s,MS4.8,baz=288,slow=36
BILL Bilibino 82.11 21⇓*e*P **P 10 16 09.5 -1.2**
BILL *e* 10 19 16.0
BILL eS S 10 26 11.6 -12
BILL pmax pmax
comp=Z,16nm,1.2s,mb4.8
VYHS Vyhne 82.50 319 *e*P **P 10 16 12.7 -0.4**
VYHS pmax pmax
comp=Z,6.0nm,1.7s,mb4.2
VYHS Vyhne 82.50 319 *e*P **P 10 16 12.7 -0.4**
comp=Z,5.8nm,1.7s,mb4.2
TIP Timpagrande 82.84 309 *e*P **P 10 16 15.8 +0.7**
comp=Z,10.0nm,1.1s,mb4.8
MODS Modra-Piesok 83.51 319 *e*P **P 10 16 15.5 -2.8**
MORC Moravsky Berou 83.52 320 *e*P **P 10 16 17.6 -0.7**
MORC pmax pmax
comp=Z,42nm,1.9s,mb5.2
MORC Moravsky Berou 83.52 320 *e*P **P 10 16 17.6 -0.7**
comp=Z,42nm,1.9s,mb5.2
ZST Bratislava 83.60 318 *e*P **P 10 16 18.5 -0.3**
ARCES ARCESS Array B 83.74 340 P **P 10 16 19.1 0.0**
comp=Z,8.3nm,0.9s,mb4.9,baz=97,slow=3.1,SNR=9.9
ARCES LR LR 11 02 27.0
comp=Z,240nm,18.2s,MS4.6,baz=219,slow=42
SBA Scott Base 85.72 169 *e*P **P 10 16 31.1 +2.2**
SBA *e**PP pP 10 16 38.5 +0.7
SBA pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
SBA Scott Base 85.72 169 *e*P **P 10 16 31.1 +2.1**
comp=Z,8.9nm,1.0s,mb5.0
SBA *e*pP pP 10 16 38.5 +0.7
GEC2 GERESS Array S 85.92 319 *e*P **P 10 16 28.8 -1.7**
GERES GERESS Array B 85.92 319 P **P 10 16 29.9 -0.6**
comp=Z,3.3nm,0.9s,mb4.5,baz=98,slow=5.5,SNR=19
BRG Berggiesshubel 85.93 321 *e*P **P 10 16 26.1 -4.4**
BRG pmax pmax
comp=Z,2.0nm,0.5s,mb4.6
BRG Berggiesshubel 85.93 321 *e*P **P 10 16 26.1 -4.4**
comp=Z,2.5nm,0.5s,mb4.7
CLL Collm 86.56 321 *e*P **P 10 16 34.0 +0.5**
KEST Kesra 88.52 306 P **P 10 16 43.4 0.0**
comp=Z,2.0nm,1.0s,mb4.4,baz=313,slow=8.1,SNR=4.2
MBDF Montbardon 90.53 315 *e*P **P 10 16 52.2 -0.4**
LPG La Plagne 90.54 315 *e*P **P 10 16 52.3 -0.3**
comp=Z,27nm,1.2s,mb5.2
LPG La Plagne 90.54 315 *e*P **P 10 16 52.3 -0.3**
LPG pmax pmax
comp=Z,14nm,1.2s,mb5.2
LPG La Plagne 90.54 315 *e*P **P 10 16 52.3 -0.3**
comp=Z,14nm,1.2s,mb5.2
LPL La Plagne 90.55 315 *e*P **P 10 16 52.4 -0.3**
comp=Z,25nm,1.1s,mb5.2
LPL La Plagne 90.55 315 *e*P **P 10 16 52.4 -0.3**
LPL pmax pmax
comp=Z,12nm,1.1s,mb5.1
LPL La Plagne 90.55 315 *e*P **P 10 16 52.4 -0.3**
comp=Z,12nm,1.1s,mb5.2
LMR La Mourre 90.74 313 *e*P **P 10 16 53.1 -0.5**
comp=Z,54nm,1.4s,mb5.4
LMR La Mourre 90.74 313 *e*P **P 10 16 53.1 -0.5**
LMR pmax pmax
comp=Z,27nm,1.4s,mb5.4
LMR La Mourre 90.74 313 *e*P **P 10 16 53.1 -0.5**
comp=Z,27nm,1.4s,mb5.4
HAU Haudompre 90.78 318 *e*P **P 10 16 52.9 -0.8**
comp=Z,33nm,1.1s,mb5.3
HAU Haudompre 90.78 318 *e*P **P 10 16 52.9 -0.8**
HAU pmax pmax
comp=Z,17nm,1.1s,mb5.3
HAU Haudompre 90.78 318 *e*P **P 10 16 52.9 -0.8**
comp=Z,17nm,1.1s,mb5.3
ORIF Oris-en-Rattie 91.17 315 *e*P **P 10 16 55.3 -0.2**
LOR Lormes 92.49 317 *e*P **P 10 17 01.0 -0.6**
comp=Z,30nm,1.3s,mb5.2
LOR Lormes 92.49 317 *e*P **P 10 17 01.0 -0.6**
LOR pmax pmax
comp=Z,15nm,1.3s,mb5.2
LOR Lormes 92.49 317 *e*P **P 10 17 01.0 -0.6**
comp=Z,15nm,1.3s,mb5.2
SMF Signal de Mont 92.53 317 *e*P **P 10 17 01.0 -0.8**
comp=Z,58nm,1.5s,mb5.5
SMF Signal de Mont 92.53 317 *e*P **P 10 17 01.0 -0.8**
SMF pmax pmax
comp=Z,29nm,1.5s,mb5.5
SMF Signal de Mont 92.53 317 *e*P **P 10 17 01.0 -0.8**
comp=Z,29nm,1.5s,mb5.5
SSF Saint Saulge 92.74 317 *e*P **P 10 17 02.2 -0.6**
AVF Avril sur Loir 92.86 317 *e*P **P 10 17 02.5 -0.8**

BGF Bois d'Agland 93.22 316 *e*P **P 10 17 04.8 -0.2**
comp=Z,113nm,1.7s,mb5.7
BGF Bois d'Agland 93.22 316 *e*P **P 10 17 04.8 -0.2**
BGF pmax pmax
comp=Z,57nm,1.7s,mb5.7
BGF Bois d'Agland 93.22 316 *e*P **P 10 17 04.8 -0.2**
comp=Z,57nm,1.7s,mb5.7
SNAA Sanae 93.31 198 *i* P **P 10 17 07.2 +2.3**
TORD Torodi Ar. Bea 95.70 283 P **P 10 17 16.9 -0.1**
comp=Z,0.8nm,1.1s,mb4.0,baz=87,slow=3.2,SNR=3.0
TORD LR LR 10 56 00.8
comp=Z,202nm,19.4s,MS4.6,baz=85,slow=33
IMA2 Indian Mountai 97.50 23 *e*P **P 10 17 25.6 +1.6**
CHMT Chamberlain Mo 126.04 26 *e*PKPdf PKPdf 10 22 52.5 -0.3
WVOR Wild Horse Val 126.65 33 *e*PKIKP PKPdf 10 22 55.9 +1.8
ULM Lac du Bonnet 128.60 11 PKP PKPdf 10 22 57.7 +0.1
comp=Z,2.3nm,0.7s,baz=341,slow=11,SNR=2.7
ULM Lac du Bonnet 128.60 11 PKP PKPdf 10 22 57.7 +0.1
NVAR Mina Array Bea 129.50 37 PKP PKPdf 10 22 59.9 +0.2
comp=Z,1.8nm,0.9s,baz=267,slow=2.3,SNR=9.7
PDAR Pinedale Array 130.92 26 PKP PKPdf 10 23 00.2 -1.9
comp=Z,0.7nm,0.8s,baz=48,slow=2.2,SNR=5.5
MSU Marysvale 132.91 32 *e*PKIKP PKPdf 10 23 07.5 +1.4
SRU San Rafael 133.31 30 *e*PKIKP PKPdf 10 23 08.9 +2.1
MIAR Mount Ida 144.05 16 *e*PKIKP PKPdf 10 23 23.1 -3.5
TXAR Lajitas Array 144.45 33 PKP PKPdf 10 23 25.3 -2.1
comp=Z,5.1nm,0.8s,baz=275,slow=0.6,SNR=33
JCT Junction City 145.45 27 *e*PKIKP PKPdf 10 23 27.6 -1.5
VBMS Vicksburg 147.02 13 *e*PKPbc PKPbc 10 23 33.5 -0.2
LPAZ La Paz 158.55 220 PKP PKPdf 10 23 49.8 +0.9
comp=Z,0.6nm,0.7s,baz=202,slow=7.7,SNR=3.5
LPAZ PKPab PKPab 10 24 25.8 +2.0
comp=Z,1.8nm,1.1s,baz=94,slow=9.7,SNR=4.5
LPAZ La Paz 158.55 220 PKP PKPdf 10 23 49.8 +0.9
LPAZ PKPab PKPab 10 24 25.8 +2.0

IDC ***18*** *10:10:07.5±2.9, 60.13N×153.31W, h78km±31km, mb3.3/6, mb1 3.6/8, mb1mx3.4/24, mbtmp3.4/8, Error ellipse: s-maj=24.1km s-min=19.9km az=178.0*
ISCJB ***18*** *10:10:08.5±0.4, 60.07N±0.003×153.02W±0.008, h107km±5km, mb3.5/6, Error ellipse: s-maj=6.3km s-min=5.8km az=8.7*
NEIC ***18*** *10:10:11.0, 60.06N×152.91W, h103km, MG3.4(AEIC), After AEIC.*

ISC 18 10:10:09.8±0.4, 6006N±004×15302W±008, h99km±5km, n40, σ0 89/45, mb3.5/6, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.71**	**197**	P		P	**Pn**	**10 10 28.7**	**+1.6**
SLKM	**Skilak Lake**	**1.46**	**71**	P		P	**Pn**	**10 10 35.9**	**+0.5**
SLKM				S		S	**Sn**	**10 10 55.1**	**+0.2**
SVW2	**Sparrevohn**	**1.64**	**310**	P		P	**Pn**	**10 10 37.6**	**+0.1**
FIB	**Fire Island**	**1.79**	**50**	P		P	**Pn**	**10 10 41.1**	**+1.7**
SEW	**Seward**	**1.79**	**87**	P		P	**Pn**	**10 10 39.3**	**-0.1**
SEW				S		S	**Sn**	**10 11 01.6**	**-0.5**
RC01	**Rabbit Creek A**	**1.92**	**56**	P		P	**Pn**	**10 10 41.3**	**+0.2**
RC01				S		S	**Sn**	**10 11 06.6**	**+1.5**
KDAK	**Kodiak Island**	**2.30**	**174**	P		P	**Pn**	**10 10 45.6**	**-0.5**
	19nm,0.3s,baz=37,slow=8.1,SNR=86								
KDAK				S		S	**Sn**	**10 11 13.2**	**-0.6**
	44nm,0.3s,baz=133,slow=23,SNR=43								
KDAK	**Kodiak Island**	**2.30**	**174**	P		P	**Pn**	**10 10 45.5**	**-0.5**
PMR	**Palmer**	**2.45**	**49**	P		P	**Pn**	**10 10 47.3**	**-0.7**
OHAK	**Old Harbor**	**2.85**	**183**	P		P	**Pn**	**10 10 52.6**	**-0.8**
PPLA	**Purkeypile**	**2.87**	**8**	P		P	**Pn**	**10 10 54.7**	**+1.0**
TT01	**Tatalina**	**3.20**	**335**	P		P	**Pn**	**10 10 57.8**	**-0.2**
TTA	**Tatalina**	**3.22**	**335**	*e*P		P	**Pn**	**10 10 58.2**	**0.0**
MID	**Middleton Isla**	**3.44**	**98**	*e*P		P	**Pn**	**10 11 01.4**	**+0.2**
KTH	**Kantishna Hill**	**3.64**	**15**	P		P	**Pn**	**10 11 04.1**	**+0.2**
EYAK	**Cordova Ski Ar**	**3.65**	**79**	P		P	**Pn**	**10 11 04.1**	**0.0**
DIV	**Divide**	**3.73**	**70**	P		P	**Pn**	**10 11 04.4**	**-0.7**
CHUM	**Lake Minchumin**	**3.85**	**5**	*e*P		P	**Pn**	**10 11 06.5**	**-0.3**
BPAW	**Bear Paw Mtn.**	**4.16**	**12**	P		P	**Pn**	**10 11 11.0**	**0.0**
BMRM	**Bremner River**	**4.26**	**74**	P		P	**Pn**	**10 11 10.7**	**-1.6**
HARP	**HAARP**	**4.47**	**55**	P		P	**Pn**	**10 11 14.6**	**-0.5**
CHGN	**Chignik**	**4.73**	**219**	*e*P		P	**Pn**	**10 11 18.8**	**+0.1**
MENT	**Mentasta**	**5.30**	**53**	*e*P		P	**Pn**	**10 11 26.1**	**-0.3**
COLA	**College**	**5.39**	**24**	P		P	**Pn**	**10 11 27.7**	**+0.2**
IL1	**Eielson Array**	**5.52**	**28**	P		P	**Pn**	**10 11 28.4**	**-0.8**
ILB	**Eielson Array**	**5.52**	**28**	P		P	**Pn**	**10 11 28.5**	**-0.8**
IM3	**Indian Mountai**	**5.95**	**357**	P		P	**Pn**	**10 11 35.6**	**+0.4**
IMA2	**Indian Mountai**	**6.04**	**357**	*e*P		P	**Pn**	**10 11 37.5**	**+1.2**
BCA3	**Beaver Creek A**	**6.15**	**56**	P		P	**Pn**	**10 11 37.3**	**-0.6**
PNL	**Peninsula**	**6.87**	**87**	P		P	**Pn**	**10 11 46.7**	**-1.0**
DAWY	**Dawson**	**7.55**	**52**	P		P	**Pn**	**10 11 55.8**	**-1.1**
BM3	**Burnt Mountain**	**8.26**	**23**	P		P	**Pn**	**10 12 06.0**	**-0.6**
DLBC	**Dease Lake**	**11.86**	**88**	P		P	**Pn**	**10 12 56.6**	**+1.3**
	baz=323,slow=10								
DLBC				S		S	**Sn**	**10 15 05.7**	**+0.1**
YKA	**Yellowknife Ar**	**18.43**	**66**	P		P	**Pn**	**10 14 16.8**	**-1.4**
	0.3nm,0.3s,baz=276,slow=9.9,SNR=5.9								
NVAR	**Mina Array Bea**	**30.76**	**119**	P		P		**10 16 17.5**	**+2.1**
	0.2nm,0.4s,mb3.2,baz=309,slow=9.1,SNR=2.8								
PDAR	**Pinedale Array**	**31.42**	**104**	P		P		**10 16 22.4**	**+1.3**
	0.4nm,0.6s,mb3.3,baz=305,slow=5.2,SNR=3.8								
SCHQ	**Schefferville**	**43.54**	**57**	P		P		**10 18 04.1**	**+1.0**
	3.0nm,0.7s,mb4.1,baz=276,slow=17,SNR=2.8								
TXAR	**Lajitas Array**	**45.01**	**110**	P		P		**10 18 15.9**	**+0.8**
	0.1nm,0.5s,mb2.8,baz=319,slow=5.1,SNR=3.5								
SONM	**Songino Array**	**54.75**	**306**	P		P		**10 19 28.2**	**-0.3**
	0.3nm,0.4s,mb3.7,baz=50,slow=8.3,SNR=3.5								
BVAR	**Borovoye Array**	**62.01**	**332**	P		P		**10 20 16.7**	**-2.2**
	0.8nm,0.6s,mb4.0,baz=25,slow=7.9,SNR=3.7								

ISCJB ***18*** *10:14:54.5±0.6, 196S±008×99.83E±0.10, h43km, mb4.6/20, Error ellipse: s-maj=15.8km s-min=8.7km az=148.3*
IDC ***18*** *10:14:57.1±0.8, 189S×99.97E, h42km±5km, mb4.2/17, mb1 4.2/18, mb1mx4.1/25, mbtmp4.2/18, Error ellipse: s-maj=27.4km s-min=10.7km az=60.0*
NEIC ***18*** *10:14:57.1±0.4, 186S×100.02E, mb4.6/5, Error ellipse: s-maj=16.9km s-min=6.7km az=57.0*
BJI ***18*** *10:14:57.4, 169S×99.47E, h38km, mB5.3, mb5.1*
DJA ***18*** *10:15:00, 162S×99.82E, h60km, MLv4.5/3*

ISC 18 10:14:57.0±0.6, 195S±008×9988E±010, h45km, h45km±2.0km: pP-P, n41, σ0 89/34, mb4.6/20, 1C, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.57**	**19**	P		P	**Pn**	**10 15 22.4**	**0.0**
	0.0nm,0.0s								
RGRI	**Rengat**	**2.92**	**57**	P		P	**Pn**	**10 15 44.9**	**+4.0**
	0.0nm,0.0s								
GSI	**Gunungsitoli**	**3.97**	**324**⇑	*e*P		P	**Pn**	**10 16 04.0**	**+8.7**
TRSI	**Tarutung**	**4.05**	**347**	P		P	**Pn**	**10 16 05.4**	**+8.9**
	0.0nm,0.0s								
DSRI	**Dabo**	**4.92**	**73**	P		P	**Pn**	**10 16 10.3**	**+2.0**
	0.0nm,0.0s								
KAPI	**Kappang**	**20.06**	**99**	P		P		**10 19 25.5**	**-1.2**
	0.4nm,0.3s,baz=162,slow=3.0,SNR=2.9								
CMAR	**Chiang Mai Arr**	**20.30**	**357**	P		P		**10 19 27.8**	**-1.3**
	6.5nm,0.8s,baz=187,slow=9.7,SNR=26								
FITZ	**Fitzroy Crossi**	**29.94**	**124**	*e*P		P		**10 20 59.1**	**-1.9**
	4.3nm,0.7s,mb4.3								
FITZ	**Fitzroy Crossi**	**29.94**	**124**	P		P		**10 21 00.9**	**-0.1**
	1.3nm,0.5s,mb3.9,baz=289,slow=8.8,SNR=4.3								
TLE	**Tual**	**32.98**	**97**	P		P		**10 21 33.9**	**+6.0**
	4μm,0.9s								
WRA	**Warramunga Arr**	**38.12**	**120**	P		P		**10 22 11.2**	**-0.7**
	3.2nm,0.4s,mb4.4,baz=303,slow=8.9,SNR=23								
WRA				pP		pP		10 22 22.8	-1.4
	2.4nm,0.5s,baz=303,slow=9.0,SNR=7.6								
WB2	**Warramunga Arr**	**38.13**	**120**	*e*P		P		**10 22 11.5**	**-0.5**
ASAR	**Alice Springs**	**39.38**	**126**	P		P		**10 22 22.4**	**0.0**
	1.8nm,0.5s,mb4.0,baz=302,slow=7.8,SNR=20								
ASAR				pP		pP		10 22 34.0	-0.7
	3.3nm,0.6s,baz=301,slow=8.0,SNR=10								
ASAR				PcP		PcP		10 24 30.5	+0.2
	1.2nm,0.9s,baz=319,slow=3.7,SNR=4.2								
WMQ	**Urumqi**	**46.86**	**348**	P		P		**10 23 24.4**	**+1.9**
WMQ				AMB		AMB			
	comp=Z,34nm,1.0s,mb5.2								
WMQ				AMB		AMB			
	comp=Z,150nm,4.2s								
KSRS	**Korea Array**	**47.03**	**31**	P		P		**10 23 23.8**	**-0.2**
	comp=Z,3.2nm,0.7s,mb4.3,baz=223,slow=9.4,SNR=6.0								
STKA	**Stephens Creek**	**49.27**	**132**	*e*P		P		**10 23 42.3**	**+0.9**
	comp=Z,4.5nm,0.7s,mb4.6								
STKA	**Stephens Creek**	**49.27**	**132**	P		P		**10 23 43.0**	**+1.6**
	comp=Z,2.1nm,0.6s,mb4.3,baz=318,slow=8.0,SNR=8.7								
STKA				pP		pP		10 23 53.7	-0.3

comp=Z,5.8nm,0.8s,baz=301,slow=7.7,SNR=6.4
TKM2 Tokmak 2 49.74 337 *e*P **P 10 23 44.5 -0.2**
comp=Z,7.7nm,0.8s,mb4.8
SONM Songino Array 49.90 6 P **P 10 23 46.7 +0.8**
comp=Z,6.3nm,0.6s,mb4.8,baz=187,slow=9.4,SNR=36
SONM PcP PcP 10 25 05.9 +0.1
comp=Z,1.1nm,0.7s,baz=187,slow=2.8,SNR=2.6
ULN Ulaanbaatar 50.00 6 *e*P **P 10 23 46.9 +0.2**
comp=Z,3.7nm,0.8s,mb4.5
MK31 Makanchi Array 50.95 344 *e*P **P 10 23 54.1 +0.3**
MK31 *ep*P pP 10 24 08.0 +1.6
MKAR Makanchi Array 50.95 344 P **P 10 23 54.3 +0.5**
comp=Z,10nm,0.7s,mb4.9,baz=149,slow=8.1,SNR=65
MJAR Matsushiro Arr 52.31 39 P **P 10 24 03.5 -0.6**
comp=Z,3.0nm,0.9s,mb4.2,baz=230,slow=7.0,SNR=5.2
KURK Kurchatov 55.52 344 P **P 10 24 27.1 -0.2**
comp=Z,7.9nm,0.8s,mb4.8,baz=164,slow=7.3,SNR=16
ZAA0 Zalesovo Array 57.10 349 *e*P **P 10 24 38.8 +0.2**
ZAA0 *ep*P pP 10 24 50.1 -1.2
ZALV Zalesovo Beam 57.10 349 P **P 10 24 38.4 -0.1**
comp=Z,15nm,0.8s,mb5.1,baz=163,slow=5.7,SNR=16
ZALV pP pP 10 24 50.8 -0.6
comp=Z,16nm,0.8s,baz=179,slow=5.7,SNR=5.1
ZALV Zalesovo Beam 57.10 349 P **P 10 24 38.4 -0.1**
ZALV pP pP 10 24 50.8 -0.6
ASAJ Asahikawa 59.64 34 P **P 10 24 57.0 +0.5**
comp=Z,2.6nm,0.4s,mb4.6,baz=354,slow=14,SNR=7.5
BVAR Borovoye Array 60.09 340 P **P 10 24 58.5 -0.9**
comp=Z,2.2nm,0.5s,mb4.5,baz=141,slow=9.6,SNR=7.8
YAK Yakutsk 67.72 15 *e*P **P 10 25 47.5 -1.9**
comp=Z,51nm,0.9s,mb5.5
MAW Mawson 70.31 194 P **P 10 26 06.0 +0.7**
comp=Z,1.1nm,0.7s,mb3.9,baz=335,slow=8.1,SNR=3.6
PETK Petropavlovsk- 72.90 32 P **P 10 26 21.0 -0.3**
comp=Z,2.6nm,0.9s,mb4.2,baz=160,slow=6.3,SNR=4.1
URZ Urewera 78.77 128 P **P 10 26 55.7 +0.6**
comp=Z,2.3nm,0.3s,mb4.5,baz=333,slow=6.8,SNR=7.5
ARCES ARCESS Array B 86.39 340 P **P 10 27 34.2 +0.2**
comp=Z,3.5nm,0.8s,mb4.6,baz=100,slow=3.7,SNR=6.3
ARCES pP pP 10 27 48.5 +1.0
comp=Z,2.6nm,0.6s,baz=102,slow=4.8,SNR=2.8
GERES GERESS Array B 88.93 319 pP pP 10 28 02.1 +1.9
comp=Z,0.7nm,0.5s,baz=75,slow=7.1,SNR=3.4
NVAR Mina Array Bea 129.63 39 PKP PKPdf 10 34 03.2 +1.7
comp=Z,0.2nm,0.5s,baz=285,slow=3.5,SNR=2.2
TXAR Lajitas Array 144.73 37 PKP PKPdf 10 34 29.5 0.0
comp=Z,4.5nm,0.5s,baz=194,slow=1.3,SNR=120
TXAR Lajitas Array 144.73 37 PKP PKPdf 10 34 29.5 0.0
MIAR Mount Ida 145.22 20 *e*PKPdf PKPdf 10 34 30.1 -0.1
MIAR *ep*PKPdf pPKPdf 10 34 44.0 -0.2
TZTN Tazewell 145.43 5 *e*PKPdf PKPdf 10 34 30.1 -0.5
TZTN *ep*PKPdf pPKPdf 10 34 42.0 -2.5
TZTN *ep*P 10 34 42.1
JCT Junction City 146.04 31 *e*P PKPdf 10 34 32.9 +1.1

NIED ***18*** *10:17:00,31.90N×14.180E,h5km,Mw4.1 Best double couple: M₀1.34000×10¹⁵ NP1:φ₀s349.00000°,δ56.00000°, λ79.00000°. NP2:φ₀188.00000°,δ35.00000°,λ105.00000°.*
JMA ***18*** *10:17:50.7±0.4,3188N×14181E,h0km,M3.8*
ISCJB ***18*** *10:17:51.5±0.6,3161N±0.05×1418E±0.1,h33km,mb4.0/7, Error ellipse: s-maj=14.6km s-min=5.4km az=160.4*
NEIC ***18*** *10:17:54.4±1.8,3151N×14163E,h39km±16km,mb4.7/1, MW4.0(NIED),Error ellipse: s-maj=21.2km s-min=14.5km az=79.0*
IDC ***18*** *10:17:54.1±3.8,3151N×14162E,h36km±31km,mb3.8/7, mb1 3.9/10,mb1mx3.7/25,mbtmp3.8/10,ML3.5/2,MS3.0/1, Ms1 3.0/1,ms1mx2.6/37,Error ellipse: s-maj=34.6km s-min=17.4km az=74.0*
ISC 18 10:17:52.5±2.1,3158N±005×1418E±01,h27km±17km,n22, σ1§07/32,mb4.0/7,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.25**	**313**	P		P	**Pn**	**10 18 27.1**	**-0.9**
JHJ2				*e*S		S	**Sn**	**10 18 54.5**	**-0.3**
JHJ	**Hachijo jima 2**	**2.27**	**313**	Pn		Pn	**Pn**	**10 18 27.6**	**-0.7**
	11nm,0.3s,baz=219,slow=23,SNR=15								
JHJ				Sn			**Sn**	**10 18 51.2**	**-4.2**
	11nm,0.3s,baz=146,slow=11,SNR=3.6								
JHJ				LR		LR	LR	10 19 37.8	
	comp=Z,323nm,18.6s,baz=7.9,slow=47								
BSO1	**Boso 1**	**3.14**	**348**	P		Pn	**Pn**	**10 18 39.0**	**-1.2**
BSO1				*e*S		S	**Sn**	**10 19 16.3**	**-0.5**
CBIJ	**Chichi jima**	**4.48**	**175**	Pn		Pn	**Pn**	**10 18 58.8**	**+0.1**
	7.0nm,0.3s,baz=264,slow=23,SNR=4.1								
CBIJ				Sn			**Sn**	**10 19 46.9**	**-3.0**
	4.4nm,0.3s,baz=263,slow=22,SNR=2.6								
JHU	**Hanno**	**4.74**	**335**	P		Pn	**Pn**	**10 19 03.4**	**+1.2**
JHU				*e*S		S	**Sn**	**10 19 56.2**	**0.0**
JYN	**Shimob**	**4.74**	**326**	*e*S		S	**Sn**	**10 20 03.6**	**+7.2**
JYT	**Yasato**	**4.82**	**345**	*e*S		S	**Sn**	**10 19 57.2**	**-1.0**
JRY	**Ryogami san**	**5.03**	**333**	P		Pn	**Pn**	**10 19 07.9**	**+1.7**
JHO	**Hitachi**	**5.12**	**349**	P		Pn	**Pn**	**10 19 05.8**	**-1.6**
JHO				*e*S		S	**Sn**	**10 19 59.7**	**-5.9**
JAG	**Ashikaga**	**5.20**	**339**	P		Pn	**Pn**	**10 19 08.3**	**-0.3**
JAG				*e*S		S	**Sn**	**10 20 07.1**	**-0.6**
MJAR	**Matsushiro Arr**	**5.76**	**330**	Pn		Pn	**Pn**	**10 19 17.6**	**+1.4**
	0.8nm,0.3s,baz=152,slow=11,SNR=8.8								
MJAR				Sn			**Sn**	**10 20 16.0**	**-5.5**
	baz=161,slow=12,SNR=2.1								
MAJO	**Matsushiro**	**5.76**	**330**	*e*P		P	**Pn**	**10 19 17.4**	**+1.1**
	8.0nm,0.6s								
MAT	**Matsushiro**	**5.76**	**330**	P		P	**Pn**	**10 19 19.2**	**+2.9**
MAT				S		S	**Sn**	**10 20 22.5**	**+1.0**
JFK	**Kawauchi**	**5.82**	**353**	P		Pn	**Pn**	**10 19 15.5**	**-1.6**
JFK				*e*S		S	**Sn**	**10 20 16.2**	**-6.8**
MKAR	**Makanchi Array**	**47.43**	**307**	P		P	**P**	**10 26 24.9**	**+0.3**
	0.9nm,0.7s,mb3.8,baz=76,slow=12,SNR=4.7								
KURK	**Kurchatov**	**49.66**	**312**	P		P	**P**	**10 26 42.0**	**+0.3**
	4.5nm,1.0s,mb4.5,baz=94,slow=7.2,SNR=6.0								
KURK	**Kurchatov**	**49.66**	**312**	*e*P		P	**P**	**10 26 41.7**	**0.0**
	7.1nm,0.9s,mb4.7								
WRA	**Warramunga Arr**	**51.72**	**189**	P		P	**P**	**10 26 57.3**	**-0.2**
	3.4nm,0.9s,mb4.3,baz=7.3,slow=7.9,SNR=21								
BVAR	**Borovoye Array**	**54.55**	**315**	P		P	**P**	**10 27 17.9**	**-0.2**
	1.3nm,0.6s,mb4.1,baz=98,slow=9.3,SNR=3.8								
ASAR	**Alice Springs**	**55.44**	**189**	P		P	**P**	**10 27 24.4**	**-0.4**
	0.7nm,0.7s,mb3.8,baz=16,slow=12,SNR=9.3								
NVAR	**Mina Array Bea**	**78.06**	**52**	P		P	**P**	**10 29 50.3**	**+1.3**
	0.3nm,0.5s,mb3.5,baz=296,slow=4.9,SNR=4.5								
TXAR	**Lajitas Array**	**93.21**	**53**	P		P	**P**	**10 31 05.7**	**+0.9**
	0.5nm,0.9s,mb3.9,baz=298,slow=1.9,SNR=4.5								

FUNV 18 10:21:46.6,1048N×6922W,h3km,MW3.5,4C-3D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TEPV	**Terepaima**	**0.52**	**177**	⇑*e*P		P	Pg	10 21 56.9	+0.4
TEPV				*e*S		S	Sg	10 22 03.5	+0.2
SIQV	**Siquisique**	**0.60**	**286**	⇓*i*P		P	Pg	10 21 58.0	-0.1
SIQV				*e*S		S	Sg	10 22 07.0	+1.1
JACV	**Jacura**	**0.71**	**33**	⇑*e*P		P	Pg	10 22 00.8	+0.5
JACV				*e*S		S	Sg	10 22 10.6	+1.1
CURV	**Curarigua**	**0.87**	**237**	⇑*e*P		P	Pg	10 22 02.6	-0.6
SANV	**Sanarito**	**1.02**	**198**	⇑*e*P		P	Pg	10 22 05.9	-0.3
SANV				*e*S		S	Sg	10 22 20.5	+0.9
QARV	**Quebrada Arrib**	**1.31**	**258**	⇓*e*P		P	Pg	10 22 11.7	-0.1
QARV				*e*S		S	Sg	10 22 29.0	+0.2
TURV	**Turiamo**	**1.36**	**91**	*e*P		Pn	Pn	10 22 11.0	-1.6
TURV				*e*S		S	Sg	10 22 30.2	-0.1
DABV	**Dabajuro**	**1.46**	**287**	*e*P		Pn	Pn	10 22 13.9	+0.1
DABV				*e*S		S	Sb	10 22 32.8	-0.6
BAUV	**El Baul**	**1.92**	**143**	*e*P		Pn	Pn	10 22 20.2	0.0
BAUV				*e*S		S	Sn	10 22 44.1	-0.9
IMOV	**Isla Los Monje**	**2.49**	**319**	*e*P		Pn	Pn	10 22 26.9	-1.2
VIGV	**El Vigia**	**2.67**	**232**	*e*P		Pn	Pn	10 22 29.9	-0.7
VIGV				*e*S		S	Sn	10 23 01.8	-1.7
SOCV	**Socops**	**2.72**	**217**	*e*P		Pn	Pn	10 22 30.5	-0.8
SOCV				*e*S		S	Sn	10 23 02.6	-2.1
MERV	**Las Mercedes**	**3.13**	**113**	*e*P		Pn	Pn	10 22 36.0	-1.0
VIRV	**Villa del Rosa**	**3.13**	**271**	*e*P		Pn	Pn	10 22 35.6	-1.4
VIRV				*e*S		S	Sn	10 23 12.6	-2.4
ORCV	**Isla La Orchil**	**3.25**	**66**	*e*P		Pn	Pn	10 22 36.7	-1.9
CUPV	**Cœpira**	**3.40**	**97**	⇓*e*P		Pn	Pn	10 22 40.0	-0.7
CAOV	**Caicara del Or**	**4.25**	**137**	*e*P		Pn	Pn	10 22 51.8	-0.5

IDC ***18*** *10:40:40.6±6.6,7.17S×129.16E,h77km±61km,mb3.7/3, mb1 4.0/7,mb1mx3.8/16,mbtmp3.9/7,ML4.3/4,Error ellipse: s-maj=81.1km s-min=20.3km az=56.0*
NEIC ***18*** *10:40:41.6±2.7,7.27S×128.78E,h85km±26km,mb3.6/2, Error ellipse: s-maj=25.9km s-min=15.2km az=221.0*
ISCJB ***18*** *10:40:48.6±2.3,7.7S±0.1×1286E±0.1,h179km±26km, mb3.7/3,Error ellipse: s-maj=24.7km s-min=10.7km az=42.3*
ISC 18 10:40:48.2±2.3,77S±01×1287E±01,h150km±24km,n14, σ1§52/18,mb3.7/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.54**	**243**	P		Pn	**Pn**	**10 42 11.0**	**+2.2**
	31nm,0.3s,baz=87,slow=5.5,SNR=20								
BATI				S			**Sn**	**10 43 10.4**	**-1.4**
	61nm,0.3s,baz=146,slow=22,SNR=7.8								
FITZ	**Fitzroy Crossi**	**10.76**	**196**	*e*P		Pn	**Pn**	**10 43 18.6**	**+0.4**
	12nm,0.8s								
FITZ				*e*S		S	**Sn**	**10 45 11.5**	**-5.8**
FITZ	**Fitzroy Crossi**	**10.76**	**196**	P		Pn	**Pn**	**10 43 18.7**	**+0.4**
	1.8nm,0.3s,baz=26,slow=12,SNR=57								
FITZ				S			**Sn**	**10 45 15.2**	**-2.0**
	2.4nm,0.3s,baz=330,slow=24,SNR=7.0								
WRAB	**Tennant Creek**	**13.35**	**156**	*e*P		Pn	**Pn**	**10 43 51.4**	**-0.6**
	2.7nm,0.6s								
WRA	**Warramunga Arr**	**13.36**	**156**	P		Pn	**Pn**	**10 43 51.9**	**0.0**
	0.8nm,0.3s,baz=344,slow=13,SNR=43								
WRA				S			**Sn**	**10 46 17.4**	**-2.5**
	1.6nm,0.3s,baz=332,slow=22,SNR=11								
WB2	**Warramunga Arr**	**13.36**	**156**	*e*P		Pn	**Pn**	**10 43 52.9**	**+0.9**
WB2				*e*S		S	**Sn**	**10 46 14.4**	**-5.6**
MBWA	**Marble Bar**	**15.93**	**212**	*e*P		Pn	**Pn**	**10 44 25.9**	**+1.8**
	3.6nm,0.6s								
ASAR	**Alice Springs**	**16.66**	**163**	P		Pn	**Pn**	**10 44 35.6**	**+2.7**
	0.8nm,0.3s,baz=335,slow=9.9,SNR=88								
ASAR				S		S	**S**	**10 47 38.1**	**-0.1**
	0.6nm,0.3s,baz=345,slow=26,SNR=8.4								
STKA	**Stephens Creek**	**26.90**	**155**	*e*P		P	**P**	**10 46 17.9**	**+2.7**
	1.4nm,0.8s,mb3.6								
STKA	**Stephens Creek**	**26.90**	**155**	P		P	**P**	**10 46 16.9**	**+1.7**
	2.0nm,0.8s,mb3.8,baz=351,slow=17,SNR=3.4								
SONM	**Songino Array**	**58.69**	**343**	P		P	**P**	**10 50 28.2**	**-1.6**
	0.4nm,0.5s,mb3.5,baz=161,slow=9.4,SNR=3.9								
MKAR	**Makanchi Array**	**68.09**	**328**	P		P	**P**	**10 51 30.4**	**-1.3**
	1.0nm,0.4s,mb3.9,baz=116,slow=9.5,SNR=5.8								
LPAZ	**La Paz**	**150.94**	**145**	PKPbc		PKPbc		11 00 26.5	+2.4
	0.4nm,0.4s,baz=63,slow=2.3,SNR=2.8								
LPAZ				PKPab		PKPab		11 00 34.5	+2.7
	0.8nm,0.7s,baz=210,slow=5.6,SNR=4.3								
LPAZ	**La Paz**	**150.94**	**145**	PKPbc		PKPbc		11 00 26.5	+2.4
LPAZ				PKPab		PKPab		11 00 34.5	+2.7

IDC 18 10:52:35.0±1.1,096N×12643E,h0km,mb3.7/5,mb1 3.9/6, mb1mx3.8/16,mbtmp3.8/6,ML3.9/1,Error ellipse: s-maj=52.3km s-min=19.3km az=70.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**8.93**	**228**	Pn		Pn	Pn	10 54 46.6	+1.2
	1.2nm,0.3s,baz=126,slow=18,SNR=4.2								
WRA	**Warramunga Arr**	**22.18**	**161**	P		P		10 57 31.9	-0.9
	3.1nm,0.7s,baz=335,slow=12,SNR=41								
ASAR	**Alice Springs**	**25.54**	**164**	P		P		10 58 07.0	+1.5
	1.1nm,0.3s,baz=348,slow=13,SNR=22								
ASAR				PcP		PcP		11 01 35.2	-2.1
	0.3nm,0.5s,baz=345,slow=1.9,SNR=9.0								
STKA	**Stephens Creek**	**35.68**	**158**	P		P		10 59 35.1	0.0
	1.0nm,0.7s,baz=326,slow=11,SNR=2.6								
SONM	**Songino Array**	**49.82**	**342**	P		P		11 01 30.3	+0.7
	0.2nm,0.3s,baz=147,slow=8.6,SNR=2.5								
MKAR	**Makanchi Array**	**59.66**	**326**	P		P		11 02 41.0	-0.1
	0.4nm,0.4s,baz=128,slow=9.1,SNR=3.8								

TIF ***18*** *10:55:16.9,4140N×4449E,h0km±2km*
MOS ***18*** *10:55:19.8±1.5,4152N×4498E,h10km,mb3.8/1,Error ellipse: s-maj=99.9km s-min=17.0km az=110.4*
CSEM ***18*** *10:55:19.8,4152N×4498E,h10km,mb3.8,Error ellipse: s-maj=99.9km s-min=17.0km az=204.0,After OBN*
ISC 18 10:55:18.8±1.9,4136N±009×445E±01,h9km±9km,n9, σ1§10/18,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TBLG	**Delisi**	**0.42**	**27**	*e*Pg		Pg	**Pg**	**10 55 25.7**	**-1.3**
TBLG				Sg		Sg	**Sg**	**10 55 32.6**	**0.0**
TBLG	**Delisi**	**0.42**	**27**	P		Pg	**Pg**	**10 55 25.7**	**-1.3**
TBLG				S		Sg	**Sg**	**10 55 32.5**	**-0.1**
DGRG	**David-gareji**	**0.68**	**82**	P		Pg	**Pg**	**10 55 31.7**	**-0.2**
DGRG				S		Sg	**Sg**	**10 55 43.9**	**+3.1**
GOR	**Gori**	**0.69**	**336**	P		Pg	**Pg**	**10 55 32.1**	**+0.1**
GOR				S		Sg	**Sg**	**10 55 41.8**	**+0.8**
ONI	**Oni**	**1.44**	**328**	P		Pn	**Pn**	**10 55 43.8**	**-1.3**
ONI				S		Sn	**Sn**	**10 56 04.6**	**+0.4**
LACR	**Lac**	**1.47**	**355**	*e*Pg		Pg	**Pg**	**10 55 45.5**	**-1.6**
LACR				*e*Sg		Sg	**Sg**	**10 56 06.2**	**0.0**
ZEI	**Tsey**	**1.48**	**343**	*e*Pg		Pg	**Pg**	**10 55 48.9**	**+1.8**
ZEI				*e*Sg		Sg	**Sg**	**10 56 11.5**	**+5.2**
KORR	**Kora**	**1.75**	**350**	*e*Pn		Pn	**Pn**	**10 55 50.8**	**+1.4**
KORR				*e*Sg		Sg	**Sg**	**10 56 15.1**	**-0.1**
ARNR	**Ardon**	**1.84**	**355**	*e*Pn		Pn	**Pn**	**10 55 49.8**	**-0.7**
ARNR				*e*Sg		Sg	**Sg**	**10 56 13.9**	**-4.0**

ISCJB ***18*** *11:06:06.3±0.9,688N±0.10×730W±0.1,h165km±11km, Error ellipse: s-maj=23.1km s-min=8.8km az=39.3*
IDC ***18*** *11:06:07.5±7.4,447N×7690W,h66km±75km,mb2.9/1, mb1 3.5/2,mb1mx3.1/20,mbtmp3.2/2,ML2.2/1,Error ellipse: s-maj=75.2km s-min=38.6km az=32.0*
FUNV ***18*** *11:06:09.3,7.11N×72.94W,h180km,MW3.0*
ISC 18 11:06:07.2±0.9,689N±010×730W±01,h159km±11km,n8, σ1§19/12,2D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.17**	**34**	⇓*i*P		P	**Pn**	**11 06 35.7**	**+1.4**
CAPV				*e*S		S	**Sn**	**11 06 56.5**	**+1.3**
ROSC	**El Rosal**	**2.43**	**214**	P		Pn	**Pn**	**11 06 47.2**	**-0.7**
	11nm,0.3s,baz=272,slow=22,SNR=17								
ROSC				S			**Sn**	**11 07 19.0**	**-0.4**
	24nm,0.3s,baz=86,slow=19,SNR=15								
VIGV	**El Vigia**	**2.51**	**39**	*e*P		Pn	**Pn**	**11 06 49.7**	**+0.8**
VIGV				*e*S		S	**Sn**	**11 07 17.8**	**-3.4**
SOCV	**Socops**	**2.52**	**57**	⇓*e*P		Pn	**Pn**	**11 06 50.4**	**+1.4**
SOCV				*e*S		S	**Sn**	**11 07 19.5**	**-1.8**
ELOV	**Elorza**	**3.47**	**88**	*e*P		Pn	**Pn**	**11 07 01.4**	**+0.5**
VIRV	**Villa del Rosa**	**3.63**	**9**	*e*P		Pn	**Pn**	**11 07 01.7**	**-1.3**
VIRV				*e*S		S	**Sn**	**11 07 40.6**	**-5.8**
TXAR	**Lajitas Array**	**36.52**	**312**	P		P	**P**	**11 12 57.8**	**+0.3**
	0.2nm,0.6s,baz=144,slow=9.7,SNR=4.2								
WRA	**Warramunga Arr**	**150.50**	**241**	PKPbc		PKPbc		11 25 39.4	-1.5
	0.2nm,0.4s,baz=104,slow=3.8,SNR=7.9								

IDC 18 11:46:34.9±8.6,708S×13101E,h181km±66km,mb3.5/1, mb1 3.6/3,mb1mx3.2/13,mbtmp3.4/3,Error ellipse: s-maj=127.1km s-min=61.1km az=86.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.14**	**205**	*e*P		Pn	Pn	11 49 13.9	-8.3
	3.3nm,0.2s								
FITZ				*e*S		Sn	Sn	11 51 23.3	-14
WRA	**Warramunga Arr**	**13.19**	**166**	P		Pn	Pn	11 49 34.0	-1.4
	0.7nm,0.3s,baz=349,slow=10,SNR=34								
WRA				S		Sn	Sn	11 52 03.2	+1.1
	1.9nm,0.3s,baz=340,slow=22,SNR=9.4								
WB2	**Warramunga Arr**	**13.19**	**166**	*e*P		Pn	Pn	11 49 34.1	-1.4
WB2				*e*S		Sn	Sn	11 52 01.2	-1.0
ASAR	**Alice Springs**	**16.72**	**171**	P		Pn	Pn	11 50 19.2	+0.3
	0.9nm,0.3s,baz=346,slow=10,SNR=122								
ASAR				S		S	S	11 53 24.6	+1.1
	0.2nm,0.3s,baz=356,slow=27,SNR=4.5								
STKA	**Stephens Creek**	**26.57**	**160**	*e*P		P	P	11 51 56.1	-0.1
	1.6nm,0.8s								
STKA	**Stephens Creek**	**26.57**	**160**	P		P	P	11 51 56.3	+0.1
	0.9nm,0.4s,baz=318,slow=8.2,SNR=7.0								

IDC 18 12:01:44.2±2.2,1641S×17852W,h0km,mb4.0/6, mb1 4.4/6,mb1mx4.1/17,mbtmp4.0/6,Error ellipse: s-maj=201.0km s-min=20.9km az=156.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.82**	**258**	P		P		12 10 00.9	+0.6
	1.0nm,0.5s,baz=91,slow=7.0,SNR=39								
ASAR	**Alice Springs**	**45.11**	**253**	P		P		12 10 02.6	0.0
	10nm,0.6s,baz=89,slow=8.2,SNR=120								
FITZ	**Fitzroy Crossi**	**53.19**	**259**	P		P		12 11 03.7	-0.9
	0.8nm,0.7s,baz=72,slow=9.8,SNR=5.6								
NVAR	**Mina Array Bea**	**78.42**	**44**	P		P		12 13 48.1	+1.2
	0.5nm,0.8s,baz=221,slow=9.1,SNR=5.6								
TXAR	**Lajitas Array**	**85.28**	**58**	P		P		12 14 23.2	-0.1
	0.3nm,0.6s,baz=223,slow=5.5,SNR=11								
PDAR	**Pinedale Array**	**86.34**	**44**	P		P		12 14 27.9	-0.3
	0.3nm,0.5s,baz=217,slow=7.2,SNR=4.2								

IDC 18 12:37:07.1±1.5,112N×12693E,h0km,mb3.3/3,mb1 3.5/3, mb1mx3.4/15,mbtmp3.3/3,Error ellipse: s-maj=162.6km s-min=24.5km az=73.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.15**	**161**	P		P		12 42 04.6	-0.1
	0.8nm,0.6s,baz=341,slow=9.5,SNR=19								
ASAR	**Alice Springs**	**25.55**	**165**	P		P		12 42 37.7	-0.1
	0.2nm,0.5s,baz=344,slow=8.0,SNR=10								
SONM	**Songino Array**	**49.82**	**342**	P		P		12 46 02.2	+0.4
	0.4nm,0.6s,baz=135,slow=7.4,SNR=3.4								

IDC ***18*** *12:49:25.1±1.8,3.13S×10122E,h0km,mb4.0/9,mb1 4.1/9, mb1mx3.9/21,mbtmp4.0/9,Error ellipse: s-maj=72.4km s-min=16.0km az=57.0*
ISCJB ***18*** *12:49:27.8±1.5,3.1S±0.2×1012E±0.4,h33km,mb4.1/10, Error ellipse: s-maj=60.8km s-min=12.4km az=146.2*
NEIC ***18*** *12:49:29.5±1.6,3.30S×10102E,h35km,mb4.3/1,Error ellipse: s-maj=73.6km s-min=8.5km az=54.0*
ISC 18 12:49:30.4±1.5,31S±03×1013E±04,h35km,n13,σ0§48/11, mb4.1/10,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**28.14**	**124**	P		P		**12 55 19.4**	**-0.1**
	0.8nm,0.7s,mb3.5,baz=300,slow=8.1,SNR=3.9								
WRA	**Warramunga Arr**	**36.33**	**120**	P		P		**12 56 31.2**	**0.0**
	1.9nm,0.4s,mb4.4,baz=302,slow=9.0,SNR=40								
WRAB	**Tennant Creek**	**36.34**	**120**	*e*P		P		**12 56 31.1**	**-0.2**
	3.2nm,0.7s,mb4.4								
ASAR	**Alice Springs**	**37.57**	**126**	P		P		**12 56 42.5**	**+0.7**
	1.1nm,0.5s,mb3.8,baz=300,slow=8.4,SNR=22								
KSRS	**Korea Array**	**47.34**	**29**	P		P		**12 58 00.3**	**-0.6**
	1.2nm,0.7s,mb3.9,baz=218,slow=9.0,SNR=2.8								
STKA	**Stephens Creek**	**47.46**	**132**	P		P		**12 58 01.6**	**-0.4**
	1.4nm,0.6s,mb4.0,baz=308,slow=16,SNR=3.8								
SONM	**Songino Array**	**50.93**	**4**	P		P		**12 58 29.2**	**+1.0**
	0.6nm,0.4s,mb3.9,baz=190,slow=10,SNR=7.4								
MK31	**Makanchi Array**	**52.44**	**344**	*e*P		P		**12 58 39.5**	**0.0**
MKAR	**Makanchi Array**	**52.44**	**344**	P		P		**12 58 39.5**	**0.0**
	2.5nm,0.7s,mb4.2,baz=141,slow=7.8,SNR=13								
KURK	**Kurchatov**	**57.03**	**343**	P		P		**12 59 12.1**	**-0.6**
	0.5nm,0.4s,mb3.9,baz=165,slow=7.3,SNR=5.2								
ZALV	**Zalesovo Beam**	**58.49**	**349**	P		P		**12 59 23.1**	**+0.1**
	2.4nm,0.3s,mb4.7,baz=172,slow=5.2,SNR=6.0								
TXAR	**Lajitas Array**	**144.77**	**40**	PKP		PKPdf		13 09 03.7	-0.7
	0.8nm,0.7s,baz=294,slow=0.9,SNR=13								
TXAR	**Lajitas Array**	**144.77**	**40**	PKP		PKPdf		13 09 03.7	-0.7

NEIC ***18*** *12:54:03.5±7.5,3619N×6978E,h112km±30km,mb4.4/3, Error ellipse: s-maj=86.1km s-min=33.3km az=184.0*
IDC ***18*** *12:54:10.9±30.0,3648N×6996E,h169km±202km,mb3.7/2, mb1 3.4/5,mb1mx3.0/25,mbtmp3.3/5,ML3.7/3,MS3.1/1, Ms1 3.1/1,ms1mx2.5/25,Error ellipse: s-maj=258.2km s-min=97.3km az=7.0*
NNC ***18*** *12:54:12.4±7.0,3694N×6967E,h201km±83km,mb2.6, mpv3.7,Error ellipse: s-maj=62.8km s-min=40.3km az=19.0*
ISC 18 12:54:07.4±2.7,366N±02×696E±02,h116km±22km,n14, σ0§64/16,3C-3D,Hindu Kush region

| Code | Station Name | Δ°

az=136.4
NEIC ***18*** *13:46:37.1±2.1,20.38S×176.95W,h411km±23km,mb3.6/1, Error ellipse: s-maj=66.6km s-min=16.4km az=142.0*

ISC 18 13:46:33.2±3.4**,205S**±05×**1767W**±05**,h387**km±30km**,n11,** σ0s**70**/13**,mb3.5/5,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.02**	**36**	P			**Pn**	**13 48 33.5**	**+5.2**
	3.4nm,0.3s,baz=300,slow=22,SNR=9.4								
AFI				S			**S**	**13 50 02.3**	**-0.1**
	1.3nm,0.3s,baz=180,slow=20,SNR=2.9								
AFI	**Afiamalu**	**8.02**	**36**	P			**Pn**	**13 48 33.5**	**+5.2**
AFI				S			**S**	**13 50 02.3**	**-0.1**
DZM	**Mont Dzumac**	**15.84**	**261**	*eP*			**P**	**13 49 55.8**	**+0.5**
STKA	**Stephens Creek**	**38.94**	**244**	*eP*			**P**	**13 53 24.9**	**+1.2**
	4.3nm,1.5s,mb3.6								
STKA	**Stephens Creek**	**38.94**	**244**	P			**P**	**13 53 24.8**	**+1.1**
	2.6nm,0.6s,mb3.7,baz=102,slow=8.9,SNR=9.4								
ASAR	**Alice Springs**	**45.75**	**257**	P			**P**	**13 54 17.9**	**-0.2**
	3.2nm,0.4s,mb4.0,baz=90,slow=8.6,SNR=177								
WB2	**Warramunga Arr**	**45.84**	**262**	*eP*			**P**	**13 54 18.0**	**-0.8**
WRA	**Warramunga Arr**	**45.85**	**262**	P			**P**	**13 54 17.8**	**-1.1**
	1.0nm,0.4s,mb3.5,baz=98,slow=7.6,SNR=54								
FITZ	**Fitzroy Crossi**	**54.28**	**262**	P			**P**	**13 55 21.0**	**-0.5**
	0.3nm,0.3s,mb3.0,baz=121,slow=5.9,SNR=7.6								
MBWA	**Marble Bar**	**59.09**	**257**	*eP*			**P**	**13 55 55.0**	**+0.2**
MJAR	**Matsushiro Arr**	**70.94**	**323**	P			**P**	**13 57 10.7**	**+0.9**
	0.7nm,0.6s,mb3.4,baz=145,slow=4.5,SNR=3.1								

MOS ***18*** *13:50:40.3±0.8,273S×10123E,h33km,mb5.1/28,Error ellipse: s-maj=14.1km s-min=7.5km az=107.9*
NEIC ***18*** *13:50:42.1±0.3,279S×10121E,h35km,mb4.9/13,Error ellipse: s-maj=10.0km s-min=5.8km az=49.0*
NEIC Felt [III] at Mukomuko.
BJI ***18*** *13:50:42.8,263S×10093E,h26km,mB5.3,mb4.9,Ms4.8, Msz4.4*
IDC ***18*** *13:50:43.8±0.7,279S×10125E,h48km±6km,mb4.4/20, mb1 4.5/21,mb1mx4.4/25,mbtmp4.5/21,MS3.7/8, Ms1 3.7/8,ms1mx3.4/28,Error ellipse: s-maj=17.5km s-min=11.2km az=57.0*
ISCJB ***18*** *13:50:44.8±0.9,292S±005×101.11E±005,h79km±7km, mb4.9/70,Error ellipse: s-maj=11.0km s-min=5.6km az=43.6*
DJA ***18*** *13:50:44,294S×10096E,h56km,MLv4.9/9*

ISC 18 13:50:46.9±0.8**,294S**±005×**10115E**±005**,h82**km±6km**, h40**km±4.9km**:pP-P,n157,**σ0s**98**/150**,mb4.9/70,15C-8D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**2.57**	**343**	P			**Pn**	**13 51 23.4**	**-3.2**
	0.0nm,0.0s								
RGRI	**Rengat**	**2.83**	**25**	P			**Pn**	**13 51 28.6**	**-1.4**
	0.0nm,0.0s								
KLI	**Kotabumi**	**4.17**	**117**	P			**Pn**	**13 51 52.0**	**+3.8**
	0.0nm,0.0s								
DSRI	**Dabo**	**4.21**	**55**	P			**Pn**	**13 51 49.5**	**+0.8**
	0.0nm,0.0s								
PPBI	**Pangkal Pinang**	**5.04**	**81**	P			**Pn**	**13 52 01.3**	**+1.2**
	38nm,0.8s								
KGM	**Kluang**	**5.38**	**24**	⇑P			**Pn**	**13 52 04.1**	**-0.6**
MYKOM	**Kota Tinggi**	**5.42**	**30**	⇑P			**Pn**	**13 52 05.7**	**+0.5**
GSI	**Gunungsitoli**	**5.52**	**320**	⇓*eP*			**Pn**	**13 52 03.0**	**-3.7**
FRIM	**Kepong**	**6.15**	**4**	⇑P			**Pn**	**13 52 14.8**	**-0.5**
TPI	**Tanjungpandan**	**6.50**	**89**	⇓*eP*			**Pn**	**13 52 19.0**	**-1.0**
TPI				*eS*			**Sn**	**13 53 43.0**	**+10**
DBJI	**Dramaga**	**6.64**	**123**	P			**Pn**	**13 52 31.1**	**+9.2**
	117nm,1.2s								
CBJI	**Citeko**	**6.65**	**122**	P			**Pn**	**13 52 28.9**	**+6.8**
	344nm,0.8s								
IPM	**Ipoh**	**7.37**	**359**	⇑P			**Pn**	**13 52 32.4**	**+0.6**
KTGM	**Kuala Trenggan**	**8.44**	**14**	⇓P			**Pn**	**13 52 48.3**	**+1.7**
XMIS	**Christmas Isla**	**8.73**	**149**	Pn			**Pn**	**13 52 41.3**	**-9.1**
XMIS				*eS*	n		**Sn**	**13 54 13.2**	**-14**
KSM	**Kuching**	**10.15**	**65**	⇑P			**Pn**	**13 53 12.8**	**+3.0**
KSM	**Kuching**	**10.15**	**65**	*ePn*			**Pn**	**13 53 11.9**	**+2.1**
SJI	**Sawahan**	**11.60**	**115**	P			**Pn**	**13 53 30.4**	**+0.8**
	95nm,0.8s								
SBUM	**Sibu**	**12.29**	**64**	⇑P			**Pn**	**13 53 42.8**	**+3.8**
BTM	**Bintulu**	**13.39**	**63**	⇓P			**Pn**	**13 53 57.5**	**+3.7**
BBKI	**Banjar Baru**	**13.68**	**93**	P			**Pn**	**13 54 04.5**	**+7.0**
	114nm,0.8s								
KKM	**Kota Kinabalu**	**17.49**	**59**	Pn			**Pn**	**13 54 41.9**	**-3.8**
KAPI	**Kappang**	**18.67**	**97**	P			**Pn**	**13 54 58.3**	**-1.7**
	4.0nm,0.3s,baz=278,slow=11,SNR=20								
KAPI				LR			LR	14 03 06.4	
	comp=Z,192nm,18.9s,baz=142,slow=40								
KAPI	**Kappang**	**18.67**	**97**	*eP*			**Pn**	**13 54 58.0**	**-2.0**
	61nm,0.9s								
CMAR	**Chiang Mai Arr**	**21.37**	**354**	P			**P**	**13 55 24.2**	**-3.6**
	7.3nm,0.8s,mb4.0,baz=185,slow=10,SNR=31								
CMAR				PcP			PcP	13 59 30.4	+1.3
	1.2nm,0.7s,baz=208,slow=2.5,SNR=8.2								
CMAR				LR			LR	14 04 49.9	
	comp=Z,155nm,18.3s,baz=3.3,slow=40								
CMAR	**Chiang Mai Arr**	**21.37**	**354**	P			**P**	**13 55 24.2**	**-3.6**
CMAR								13 59 30.4	
CMAR				pmax		pmax			
	comp=Z,7.0nm,0.8s								
CMAR				pmax		pmax			
	comp=Z,1.0nm,0.7s								
CMAR				MLR		MLR			
	comp=Z,155nm,18.3s								
BATI	**Baumata**	**23.49**	**109**	P			**P**	**13 55 49.0**	**-0.6**
	comp=Z,13nm,0.5s,mb4.5,baz=251,slow=6.5,SNR=6.1								
MNI	**Manado**	**24.08**	**80**	P			**P**	**13 56 01.1**	**+6.0**
	comp=Z,106nm,0.8s,mb5.2								
KMI	**Kunming**	**27.93**	**3**	P			**P**	**13 56 31.5**	**+1.9**
KMI				AP		pP		13 56 40.4	-8.1
KMI				XP		sP		13 56 44.3	-14
KMI				AMB		AMB			
	comp=Z,7.0nm,0.9s,mb4.2								
KMI				LR		LR			
	comp=Z,404nm,21.5s								
FITZ	**Fitzroy Crossi**	**28.34**	**124**	*eP*			**P**	**13 56 33.2**	**-0.2**
	comp=Z,13nm,0.8s,mb4.5								
FITZ	**Fitzroy Crossi**	**28.34**	**124**	P			**P**	**13 56 33.2**	**-0.2**
	comp=Z,7.2nm,0.8s,mb4.2,baz=255,slow=4.3,SNR=11								
GYA	**Guiyang**	**29.70**	**10**	⇑*iP*			**P**	**13 56 45.8**	**+0.4**
GYA				AP		pP		13 56 54.3	-10
GYA				XP		sP		13 57 00.4	-13
GYA				PP		PP		13 57 42.8	-11
GYA				PCP		PcP		13 59 48.3	+0.5
GYA				S		**S**		**14 01 37.5**	**+2.0**
GYA				SCP		ScP		14 03 26.0	+3.3
GYA				AMB		AMB			
	comp=Z,10.0nm,0.8s,mb4.5								
GYA				AMB		AMB			
	comp=Z,110nm,4.8s								
GYA				LR		LR			
	comp=N,480nm,16.4s								
GYA				LR		LR			
	comp=E,440nm,15.8s								
GYA				LR		LR			
	comp=Z,460nm,16.7s								
ODAN	**Odare**	**32.47**	**337**	*eP*			**P**	**13 57 10.5**	**+0.8**
	comp=Z,108nm,0.6s,mb5.7								
TAPN	**Taplejung**	**32.78**	**338**	*eP*			**P**	**13 57 13.3**	**+0.9**
	comp=Z,161nm,0.8s,mb5.9								
RAMN	**Ramite**	**32.86**	**336**	*eP*			**P**	**13 57 14.4**	**+1.2**
	comp=Z,34nm,0.4s,mb5.5								
NWAO	**Narrogin (SRO)**	**33.43**	**155**	LR			LR	14 09 51.4	
	comp=Z,100nm,19.6s,baz=187,slow=34								
JIRN	**Jiri**	**33.66**	**336**	*eP*			**P**	**13 57 21.0**	**+0.9**
	comp=Z,74nm,0.5s,mb5.8								
CD2	**Chengdu**	**33.75**	**4**	*eP*			**P**	**13 57 19.3**	**-1.5**
CD2				AP		pP		13 57 29.0	-11
CD2				XP		sP		13 57 33.0	-16
CD2				S		**S**		**14 02 39.9**	**+1.4**
CD2				AMB		AMB			
	comp=Z,10.0nm,0.6s,mb4.8								
CD2				AMB		AMB			
	comp=Z,320nm,6.4s								
CD2				LR		LR			
	comp=N,600nm,10.8s								
CD2				LR		LR			
	comp=Z,440nm,10.8s								
LSA	**Lhasa**	**33.83**	**344**	P			**P**	**13 57 22.3**	**+0.8**
PKI	**Pulchoki**	**33.91**	**334**	*eP*			**P**	**13 57 22.6**	**+0.3**
	comp=Z,21nm,0.5s,mb5.2								
PKIN	**Phulchoki**	**33.92**	**334**	*eP*			**P**	**13 57 22.5**	**+0.1**
	comp=Z,17nm,0.5s,mb5.2								
GUN	**Gumba**	**34.01**	**335**	*eP*			**P**	**13 57 24.0**	**+0.9**
	comp=Z,143nm,0.4s								
DMN	**Daman**	**34.08**	**334**	*eP*			**P**	**13 57 24.1**	**+0.4**
	comp=Z,14nm,0.3s,mb5.3								
KKN	**Kakani**	**34.16**	**334**	*eP*			**P**	**13 57 24.8**	**+0.4**
	comp=Z,72nm,0.6s,mb5.7								
GKN	**Gorkha**	**34.62**	**334**	*eP*			**P**	**13 57 28.8**	**+0.4**
	comp=Z,54nm,0.4s,mb5.7								
KOLN	**Koldanda**	**34.89**	**332**	*eP*			**P**	**13 57 31.4**	**+0.6**
	comp=Z,49nm,0.6s,mb5.5								
DANN	**Dangsing**	**35.31**	**333**	*eP*			**P**	**13 57 34.9**	**+0.5**
	comp=Z,122nm,0.4s								
WRA	**Warramunga Arr**	**36.53**	**120**	P			**P**	**13 57 44.4**	**-0.5**
	comp=Z,10nm,0.4s,mb5.1,baz=305,slow=9.0,SNR=234								
WRA				PcP			PcP	14 00 07.8	+0.7
	comp=Z,1.4nm,0.5s,baz=309,slow=2.5,SNR=5.2								
WRA	**Warramunga Arr**	**36.53**	**120**	P			**P**	**13 57 44.4**	**-0.5**
WRA								14 00 07.8	
WRA				pmax		pmax			
	comp=Z,11nm,0.4s								
WRA				pmax		pmax			
	comp=Z,1.0nm,0.5s								
WRAB	**Tennant Creek**	**36.54**	**120**	*eP*			**P**	**13 57 44.4**	**-0.6**
WRAB				pmax		pmax			
	comp=Z,15nm,0.6s,mb5.1								
WRAB	**Tennant Creek**	**36.54**	**120**	*ePn*			**P**	**13 57 44.4**	**-0.6**
	comp=Z,16nm,0.6s,mb5.1								
WB2	**Warramunga Arr**	**36.54**	**120**	⇑*iP*			**P**	**13 57 44.4**	**-0.6**
ASAR	**Alice Springs**	**37.78**	**126**	P			**P**	**13 57 55.6**	**+0.2**
	comp=Z,3.2nm,0.3s,mb4.6,baz=298,slow=7.8,SNR=98								
ASAR				PcP			PcP	14 00 11.9	+1.1
	comp=Z,2.7nm,0.7s,baz=303,slow=2.3,SNR=8.9								
ASAR				S			**S**	**14 03 40.5**	**0.0**
	comp=Z,1.2nm,0.7s,baz=300,slow=15,SNR=8.3								
ASAR	**Alice Springs**	**37.78**	**126**	P			**P**	**13 57 55.6**	**+0.2**
ASAR								14 00 11.9	
ASAR				S			**S**	**14 03 40.5**	**+0.1**
ASAR				pmax		pmax			
	comp=Z,3.0nm,0.4s								
ASAR				pmax		pmax			
	comp=Z,3.0nm,0.7s								
ASAR				smax					
	comp=N,1.0nm,0.7s								
NJ2	**Nanjing**	**38.64**	**24**	*eP*			**P**	**13 58 02.1**	**-0.4**
NJ2				AMB		AMB			
	comp=Z,10.0nm,0.5s,mb4.9								
THN	**Thein Dam**	**42.65**	**328**	*eP*			**P**	**13 58 34.4**	**-1.1**
HHC	**Hu-ho-hao-te**	**44.60**	**11**	*eP*			**P**	**13 58 50.3**	**-0.8**
HHC				AP		pP		13 59 00.4	-10
HHC				XP		sP		13 59 04.6	-16
HHC				PCP		PcP		14 00 33.3	+0.6
HHC				PP		PP		14 00 35.6	-1.1
HHC				SCP		ScP		14 04 21.8	+4.0
HHC				PCS		PcS		14 04 25.5	-0.6
HHC				S		**S**		**14 05 23.3**	**+2.3**
HHC				SCS		ScS		14 08 42.6	+1.7
HHC				AMB		AMB			
	comp=Z,22nm,0.5s,mb5.1								
HHC				AMB		AMB			
	comp=Z,238nm,6.4s								
HHC				LR		LR			
	comp=N,325nm,15.3s								
HHC				LR		LR			
	comp=E,290nm,15.0s								
HHC				LR		LR			
	comp=Z,177nm,15.4s								
GUMO	**Guam**	**46.37**	**68**	P			**P**	**13 59 03.1**	**-2.4**
	comp=Z,22nm,0.7s,mb5.0,baz=210,slow=20,SNR=2.7								
GUMO	**Guam**	**46.37**	**68**	P			**P**	**13 59 03.1**	**-2.4**
GUMO				pmax		pmax			
	comp=Z,22nm,0.7s,mb5.0								
CTA	**Charters Tower**	**47.16**	**115**	*eP*			**P**	**13 59 11.5**	**-0.1**
	comp=Z,7.9nm,0.6s,mb4.6								
CTA	**Charters Tower**	**47.16**	**115**	LR			LR	14 22 03.6	
	comp=Z,225nm,18.3s,baz=226,slow=40								
CTA	**Charters Tower**	**47.16**	**115**	*eP*			**P**	**13 59 11.5**	**-0.1**
CTA				pmax		pmax			
	comp=Z,8.0nm,0.6s								
KSRS	**Korea Array**	**47.25**	**29**	P			**P**	**13 59 12.3**	**+0.3**
	comp=Z,3.4nm,0.9s,mb4.1,baz=223,slow=7.6,SNR=7.7								
KSRS				LR			LR	14 24 05.5	
	comp=Z,77nm,18.1s,baz=105,slow=42								
STKA	**Stephens Creek**	**47.67**	**132**	*eP*			**P**	**13 59 16.1**	**+0.7**
	comp=Z,7.4nm,0.5s,mb4.8								
STKA	**Stephens Creek**	**47.67**	**132**	P			**P**	**13 59 16.2**	**+0.8**
	comp=Z,10.0nm,0.5s,mb4.9,baz=309,slow=6.9,SNR=36								
STKA				PcP			PcP	14 00 44.2	+0.5
	comp=Z,2.5nm,0.5s,baz=349,slow=5.2,SNR=1.5								
KBL	**Kabul**	**47.96**	**324**	*eP*			**P**	**13 59 17.8**	**+0.3**
KBL				pmax		pmax			
	comp=Z,5.0nm,0.5s,mb4.6								
KBL	**Kabul**	**47.96**	**324**	*ePn*			**P**	**13 59 17.8**	**+0.3**
	comp=Z,4.8nm,0.5s,mb4.6								
WMQ	**Urumqi**	**48.09**	**347**	P			**P**	**13 59 18.8**	**+0.5**
WMQ				AP		pP		13 59 29.0	-9.4
WMQ				XP		sP		13 59 33.0	-15
WMQ				PCP		PcP		14 00 47.0	+2.1
WMQ				*eS*		**S**		**14 06 13.0**	**+2.2**
WMQ				XS		sS		14 06 30.0	-15
WMQ				AMB		AMB			
	comp=Z,71nm,0.8s,mb5.5								
WMQ				AMB		AMB			
	comp=Z,110nm,5.6s								
WMQ				LR		LR			
	comp=N,162nm,20.0s								
WMQ				LR		LR			
	comp=E,194nm,21.4s								
WMQ				LR		LR			
	comp=Z,190nm,19.8s								
ULHL	**Ulahol**	**50.32**	**336**	P			**P**	**13 59 34.4**	**-1.0**
	SNR=6.0								
SONM	**Songino Array**	**50.77**	**5**	P			**P**	**13 59 39.2**	**+0.5**
	comp=Z,23nm,0.8s,mb5.3,baz=184,slow=9.2,SNR=138								
SONM				PcP			PcP	14 00 54.9	+0.4
	comp=Z,1.8nm,0.4s,baz=187,slow=4.2,SNR=7.8								
SONM	**Songino Array**	**50.77**	**5**	P			**P**	**13 59 39.2**	**+0.6**
SONM								14 00 54.9	
SONM				pmax		pmax			
	comp=Z,23nm,0.8s								
SONM				pmax		pmax			
	comp=Z,2.0nm,0.4s								
ULN	**Ulaanbaatar**	**50.85**	**5**	*cP*			**P**	**13 59 39.6**	**+0.3**
TKM2	**Tokmak 2**	**51.14**	**336**	*eP*			**P**	**13 59 41.8**	**+0.2**
TKM2				pmax		pmax			
	comp=Z,12nm,0.6s,mb5.1								
TKM2	**Tokmak 2**	**51.14**	**336**	P			**P**	**13 59 42.0**	**+0.5**
	SNR=37								
TKM2	**Tokmak 2**	**51.14**	**336**	*eP*			**P**	**13 59 41.8**	**+0.2**
	comp=Z,12nm,0.6s,mb5.1								
KBK	**Karagaybulak**	**51.19**	**335**	P			**P**	**13 59 42.4**	**+0.5**
	SNR=11								
AML	**Almayashu**	**51.30**	**334**	P			**P**	**13 59 43.6**	**+0.9**
	SNR=23								
AML	**Almayashu**	**51.30**	**334**	*eP*			**P**	**13 59 43.2**	**+0.5**
AML				*e*				13 59 56.6	
CN2	**Changchun**	**51.39**	**22**	*eP*			**P**	**13 59 42.5**	**-0.9**
CN2				AMB		AMB			
	comp=Z,20nm,0.8s,mb5.2								
EKS2	**Erkin-Say**	**51.69**	**334**	P			**P**	**13 59 46.6**	**+1.0**
	SNR=7.1								
EKS2	**Erkin-Say**	**51.69**	**334**	*eP*			**P**	**13 59 46.4**	**+0.7**
	comp=Z,34nm,0.8s,mb5.4								
EKS2				*e*				13 59 59.9	
USP	**Ospenovka**	**51.88**	**335**	P			**P**	**13 59 47.1**	**+0.1**
	SNR=12								
MK31	**Makanchi Array**	**52.24**	**344**	*eP*			**P**	**13 59 49.2**	**-0.4**
MK31				*e*				14 00 02.7	
MKAR	**Makanchi Array**	**52.24**	**344**	P			**P**	**13 59 49.2**	**-0.4**
	comp=Z,19nm,0.6s,mb5.3,baz=147,slow=8.1,SNR=117								
MKAR	**Makanchi Array**	**52.24**	**344**	P			**P**	**13 59 49.2**	**-0.4**
MKAR				pmax		pmax			
	comp=Z,19nm,0.6s								
MKAR	**Makanchi Array**	**52.24**	**344**	P			**P**	**13 59 49.2**	**-0.4**
MAT	**Matsushiro**	**52.29**	**38**	P			**P**	**13 59 49.3**	**-0.9**
MJAR	**Matsushiro Arr**	**52.29**	**38**	P			**P**	**13 59 49.5**	**-0.8**
	comp=Z,3.1nm,0.7s,mb4.5,baz=204,slow=7.4,SNR=11								
MJAR	**Matsushiro Arr**	**52.29**	**38**	P			**P**	**13 59 49.5**	**-0.7**
MJAR				pmax		pmax			
	comp=Z,3.0nm,0.7s								
KK31	**Karatay Array**	**53.51**	**332**	*iP*			**P**	**13 59 58.2**	**-0.9**
KK31				pmax		pmax			
	comp=Z,2.0nm,0.3s,mb4.6								
KURK	**Kurchatov**	**56.83**	**343**	*eP*			**P**	**14 00 22.2**	**-0.6**
KURK				pmax		pmax			
	comp=Z,11nm,0.6s,mb5.1								
KURK	**Kurchatov**	**56.83**	**343**	*eP*			**P**	**14 00 22.2**	**-0.6**
	comp=Z,11nm,0.6s,mb5.1								
ZAA0	**Zalesovo Array**	**58.30**	**349**	*eP*			**P**	**14 00 32.4**	**-0.6**
ZALV	**Zalesovo Beam**	**58.30**	**349**	P			**P**	**14 00 32.6**	**-0.5**
	comp=Z,64nm,0.8s,mb5.7,baz=174,slow=4.5,SNR=174								
ZALV				LR			LR	14 26 49.1	
	comp=Z,34nm,20.2s,baz=108,slow=37								
ZALV	**Zalesovo Beam**	**58.30**	**349**	P			**P**	**14 00 32.6**	**-0.5**
ZALV				pmax		pmax			
	comp=Z,64nm,0.8s,mb5.7								
ZALV				MLR		MLR			
	comp=Z,34nm,20.2s								
KRAR	**Krasnoyarsk**	**59.14**	**355**	⇓*eP*			**P**	**14 00 38.9**	**0.0**
KRAR				pmax		pmax			
	comp=Z,45nm,0.7s,mb5.6								
NVS	**Novosibirsk**	**59.45**	**348**	*iP*			**P**	**14 00 39.8**	**-1.3**
NVS				pmax		pmax			
	comp=N,7.0nm,0.8s								
NVS				pmax		pmax			
	comp=E,6.0nm,0.8s								
NVS				pmax		pmax			
	comp=Z,12nm,0.8s,mb5.0								
RDF	**Al-Radifah**	**60.33**	**306**	*eP*			**P**	**14 00 47.6**	**0.0**
	baz=306								
RDF				AMb			AMB	14 00 48.6	
	comp=Z,35nm,1.4s,mb5.2,baz=306								
UMR	**Umm Al-Rimmam**	**60.43**	**306**	*eP*			**P**	**14 00 48.4**	**+0.1**
	baz=306								
UMR				AMb			AMB	14 00 49.1	
	comp=Z,35nm,0.6s,mb5.6,baz=306								
NAY	**Al-Naaiem**	**60.70**	**306**	*eP*			**P**	**14 00 49.9**	**-0.2**
	baz=306								
NAY				AMb			AMB	14 00 50.6	
	comp=Z,14nm,0.6s,mb5.2,baz=306								
MIB	**Mutribah**	**60.83**	**307**	*eP*			**P**	**14 00 50.9**	**-0.1**
	baz=307								
MIB				AMb			AMB	14 00 52.8	
	comp=Z,24nm,0.8s,mb5.3,baz=307								
RST	**Umm Al-Ruwaisa**	**60.99**	**306**	*eP*			**P**	**14 00 51.6**	**-0.4**
	baz=306								
RST				AMb			AMB	14 00 52.4	
	comp=Z,19nm,0.6s,mb5.3,baz=306								
VOSK	**Vostochnaya**	**61.00**	**340**	P			**P**	**14 00 50.4**	**-1.3**
VOSK				pmax		pmax			
	comp=Z,12nm,0.9s,mb4.9								
BVA0	**Borovoye Array**	**61.45**	**339**	*iP*			**P**	**14 00 53.6**	**-1.1**
BVA0				pmax		pmax			
	comp=Z,2.0nm,0.7s,mb4.3								
BRVK	**Borovoye**	**61.52**	**339**	*eP*			**P**	**14 00 54.1**	**-1.1**
BRVK				pmax		pmax			
	comp=Z,21nm,0.9s,mb5.2								
BRVK	**Borovoye**	**61.52**	**339**	*eP*			**P**	**14 00 54.1**	**-1.1**
	comp=Z,21nm,0.9s,mb5.2								
YSS	**Yuzh-Sakhalins**	**61.67**	**31**	⇓*eP*			**P**	**14 00 56.7**	**+0.4**
YSS				pmax		pmax			
	comp=Z,17nm,0.8s,mb5.1								
AB31	**Akbulak array**	**63.01**	**331**	*eP*			**P**	**14 01 04.4**	**-0.8**
AB31				pmax		pmax			
	comp=Z,14nm,0.5s,mb5.2								
AKTO	**Aktyubinsk**	**64.72**	**331**	*iP*			**P**	**14 01 15.4**	**-1.0**
AKTO				pmax		pmax			
	comp=Z,1.0nm,0.5s,mb3.9								
GNI	**Garni**	**66.99**	**316**	⇑*eP*			**P**	**14 01 31.9**	**+0.7**
GNI				pmax		pmax			
	comp=Z,5.0nm,0.7s								
SVE	**Sverdlovsk**	**67.98**	**337**	⇓*eP*			**P**	**14 01 37.0**	**-0.1**
SVE				*eS*			S	14 10 49.5	+20
SVE				pmax		pmax			
	comp=Z,24nm,0.9s,mb5.0								
YAK	**Yakutsk**	**68.36**	**14**	*cP*			**P**	**14 01 38.1**	**-1.3**
YAK				pmax		pmax			
	comp=Z,55nm,1.1s,mb5.3								
YAK				MLR		MLR			
	comp=Z,100nm,24.0s								
YAK	**Yakutsk**	**68.36**	**14**	*eP*			**P**	**14 01 37.9**	**-1.5**
	comp=Z,34nm,0.8s,mb5.2								
ARU	**Arti**	**68.52**	**336**	*cP*			**P**	**14 01 39.7**	**-0.8**
ARU				*e*				14 04 06.3	
ARU				*ePPP*				14 05 44.3	
ARU				*eS*			S	14 10 39.5	+3.4
ARU				*eSS*			SS	14 15 04.4	+2.7
ARU				pmax		pmax			
	comp=Z,14nm,1.0s,mb4.8								
ARU	**Arti**	**68.52**	**336**	*eP*			**P**	**14 01 39.6**	**-0.9**
	comp=Z,13nm,1.0s,mb4.7								
MAW	**Mawson**	**69.67**	**195**	P			**P**	**14 01 50.0**	**+2.6**
	comp=Z,1.6nm,0.8s,mb3.9,baz=4.3,slow=5.5,SNR=4.8								
MAW				LR			LR	14 24 29.8	
	comp=Z,73nm,21.6s,baz=245,slow=29								
KIV	**Kislovodsk**	**70.00**	**319**	*iP*			**P**	**14 01 50.5**	**+0.6**
KIV				pmax		pmax			
	comp=Z,11nm,1.2s,mb4.6								
MALT	**Malatya**	**70.81**	**312**	*eP*			**P**	**14 01 52.5**	**-2.5**
MALT				pmax		pmax			
	comp=Z,3.0nm,1.0s,mb4.1								
MALT	**Malatya**	**70.81**	**312**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPITS	Spitsbergen Ar	91.78	348	P	P	14 03 44.8	-0.4
	comp=Z,6.4nm,0.8s,mb4.9,baz=345,slow=6.8,SNR=3.9						
SPITS	Spitsbergen Ar	91.78	348	P	P	14 03 44.8	-0.3
SPITS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NB2	NORSAR Subarra	92.51	331	P	P	14 03 48.7	-0.1
	comp=Z,1.7nm,0.7s,mb4.5,baz=94,slow=5.3						
NVAR	Mina Array Bea	129.58	40	PKP	PKPdf	14 09 48.8	+1.9
	comp=Z,0.8nm,0.6s,baz=300,slow=2.0,SNR=7.3						
ULM	Lac du Bonnet	130.70	14	PKP	PKPdf	14 09 49.1	+0.5
	comp=Z,4.3nm,0.9s,baz=356,slow=2.0,SNR=5.8						
PDAR	Pinedale Array	131.82	30	PKP	PKPdf	14 09 51.5	+0.4
	comp=Z,0.4nm,0.4s,baz=90,slow=0.9,SNR=4.7						
ANMO	Albuquerque	139.11	36	⇑ *i*PKIKP	PKPdf	14 10 07.0	+2.1
CPUP	Villa Florida	144.23	214	PKP	PKPdf	14 10 13.5	-0.8
	comp=Z,1.0nm,0.6s,baz=132,slow=12,SNR=3.3						
CPUP				pPKP	pPKPdf	14 10 28.8	-8.4
	comp=Z,4.9nm,0.8s,baz=133,slow=2.3,SNR=4.6						
CPUP	Villa Florida	144.23	214	PKIKP	PKPdf	14 10 13.5	-0.8
CPUP						14 10 28.8	
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CPUP				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BDFB	Brasilia	144.34	238	PKP	PKPdf	14 10 14.7	0.0
	comp=Z,3.9nm,0.5s,baz=148,slow=6.4,SNR=4.6						
BDFB	Brasilia	144.34	238	PKIKP	PKPdf	14 10 14.7	0.0
BDFB				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TXAR	Lajitas Array	144.72	39	PKP	PKPdf	14 10 14.9	-0.1
	comp=Z,8.0nm,0.6s,baz=283,slow=1.1,SNR=144						
TXAR				pPKP	pPKPdf	14 10 29.4	-8.5
	comp=Z,6.4nm,0.6s,baz=288,slow=0.8,SNR=16						
TXAR				SKPbc	SKPbc	14 13 50.8	+3.5
	comp=Z,0.3nm,0.6s,baz=318,slow=1.2,SNR=3.6						
TXAR	Lajitas Array	144.72	39	PKIKP	PKPdf	14 10 14.9	-0.1
TXAR						14 10 29.5	
TXAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TXAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MIAR	Mount Ida	145.69	22	*e*PKIKP	PKPdf	14 10 16.8	+0.2
JCT	Junction City	146.19	34	*e*PKP2	PKPab	14 10 18.1	-1.3
LPAZ	La Paz	158.16	209	PKP	PKPdf	14 10 38.3	+2.7
	comp=Z,0.4nm,0.4s,baz=288,slow=3.2,SNR=4.0						

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*IDC **18** 14:02:22.8±1.0, 1058S×108.15E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/17, mbtmp3.8/7, ML3.4/1, Error ellipse: s-maj=40.4km s-min=20.6km az=54.0*
*NEIC **18** 14:02:23.6±0.7, 1069S×10792E, h10km, Error ellipse: s-maj=25.4km s-min=13.3km az=206.0*
*ISCJB **18** 14:02:24.2±0.7, 108S±02×10784E±008, h33km, mb3.7/6, Error ellipse: s-maj=26.4km s-min=8.2km az=16.0*
*DJA **18** 14:02:35, 934S×108.19E, h216km, MLv4.1/6*
ISC 18 14:02:26.2±0.7, **109S**±02×**10777E**±009, **h35**km, **n10**, σ**0^{s}44**/10, **mb3.7**/6, **South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XMIS	Christmas Isla	2.12	282	*e*Pn	Pn	14 02 59.4	+0.1
XMIS				*e*Sn	Sn	14 03 24.2	-0.2
FITZ	Fitzroy Crossi	18.70	114	P	Pn	14 06 42.4	0.0
	0.1nm,0.3s,baz=279,slow=13,SNR=5.2						
FITZ				S	S	14 09 47.1	-26
	0.1nm,0.3s,baz=180,slow=20,SNR=2.7						
WRA	Warramunga Arr	27.10	113	P	P	14 08 05.6	-0.4
	1.0nm,0.8s,mb3.4,baz=289,slow=11,SNR=6.5						
WRA				PcP	PcP	14 11 28.0	+1.5
	0.4nm,0.6s,baz=294,slow=1.9,SNR=6.4						
ASAR	Alice Springs	27.92	120	P	P	14 08 12.7	-0.7
	0.2nm,0.3s,mb3.2,baz=302,slow=8.8,SNR=3.4						
ASAR				PcP	PcP	14 11 30.2	+1.8
	0.4nm,0.5s,baz=300,slow=1.8,SNR=5.2						
STKA	Stephens Creek	37.53	129	P	P	14 09 37.9	+0.9
	1.4nm,0.8s,mb3.7,baz=321,slow=13,SNR=4.4						
STKA	Stephens Creek	37.53	129	P	P	14 09 37.9	+0.9
SONM	Songino Array	58.51	359	P	P	14 12 18.8	-0.1
	0.9nm,0.6s,mb4.0,baz=180,slow=7.5,SNR=7.6						
MKAR	Makanchi Array	61.81	340	P	P	14 12 41.8	+0.3
	0.8nm,0.6s,mb4.0,baz=139,slow=7.6,SNR=5.2						
MAW	Mawson	63.86	198	P	P	14 12 59.8	+4.9
	0.7nm,0.7s,mb3.8,baz=72,slow=3.2,SNR=4.2						
TXAR	Lajitas Array	145.44	53	PKP	PKPdf	14 22 02.9	+1.7
	1.0nm,0.7s,baz=266,slow=1.4,SNR=12						

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*CSEM **18** 14:16:45.6±0.1, 3857N×3074E, h12km, MD2.9, Error ellipse: s-maj=4.0km s-min=2.5km az=15.0*
*DDA **18** 14:16:46.0, 3859N×3078E, h7km±3km, Md2.9*
*ISK **18** 14:16:45.8, 3858N×3075E, h9km, MD2.9*
*ISCJB **18** 14:16:46.5±0.5, 3857N±003×3077E±004, h10km, Error ellipse: s-maj=4.8km s-min=4.1km az=15.2*
ISC 18 14:16:46.6±0.5, **3859N**±003×**3078E**±004, **h7**km±8km, **n12**, σ**0^{s}61**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHUT	Suhut-Afyon	0.18	259	PG	Pg	14 16 50.0	-0.3
SHUT				SG	Sg	14 16 52.3	-0.4
TKTP	Tekketepe	0.66	214	*i* P	Pg	14 16 58.5	-0.7
TKTP				*i* S	Sg	14 17 09.2	+1.5
ALT	Altintas	0.70	312	*e*PG	Pg	14 16 59.4	-0.6
ALT				*e*SG	Sg	14 17 09.2	0.0
KIZT	Kizilcal	0.91	71	*e*PG	Pg	14 17 04.1	+0.1
ESKT	Eskisehir	0.93	3	*i* P	Pg	14 17 04.7	+0.3
ESKT				*i* S	Sg	14 17 17.0	+0.4
SEYT	Eskypehyr	0.93	3	*i* P	Pg	14 17 04.7	+0.2
SEYT				*i* S	Sg	14 17 17.0	+0.4
KDHN	Kadinhani	1.05	93	*i* P	Pg	14 17 05.8	-0.9
KDHN				*i* S	Sg	14 17 21.2	+0.8
KDHN	Kadinhani	1.05	93	*i* P	Pg	14 17 05.8	-0.9
KDHN				*i* S	Sg	14 17 21.2	+0.8
GDZ	Gediz	1.13	297	*i* P	Pg	14 17 07.7	-0.6
GDZ				*i* S	Sg	14 17 23.8	+0.8
LADK	Ladik-KONYA	1.30	107	*e*PN	Pn	14 17 11.1	-0.2
BORA	Eskisehir	1.31	349	*i* P	Pn	14 17 11.7	+0.3
BORA				*i* S	Sb	14 17 28.7	0.0
KONT	Konya--Tatoy	1.40	117	*e*PN	Pn	14 17 12.2	-0.3

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*BJI **18** 14:43:08.0, 36.19N×6966E, h113km, mB4.8, mb4.6*
*ISCJB **18** 14:43:10.7±0.4, 3627N±002×6982E±004, h134km±5km, mb4.2/32, Error ellipse: s-maj=5.2km s-min=3.3km az=161.7*
*MOS **18** 14:43:11.1±1.3, 3635N×6970E, h130km, mb4.5/20, Error ellipse: s-maj=10.3km s-min=5.6km az=87.6*
*NEIC **18** 14:43:12.2±0.8, 3632N×6972E, h134km±8km, mb4.8/9, Error ellipse: s-maj=8.5km s-min=7.6km az=99.0*
*IDC **18** 14:43:13.1±0.8, 3626N×6978E, h145km±7km, mb3.8/17, mb1 3.9/20, mb1mx3.9/25, mbtmp3.8/20, MS3.1/2, Ms1 3.2/2, ms1mx2.5/36, Error ellipse: s-maj=11.5km s-min=10.0km az=159.0*
*NNC **18** 14:43:15.7±3.0, 3670N×6957E, h140km±31km, mb4.1, mpv5.1, Error ellipse: s-maj=24.8km s-min=16.1km az=0.0*
ISC 18 14:43:11.8±0.4, **3627N**±002×**6984E**±004, **h130**km±4km, **h139**km±5.4km**:pP-P**, **n147**, σ**1^{s}25**/175, **mb4.2**/32, **14C-9D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	1.84	201	*e*Pn	Pn	14 43 45.1	+1.2
KBL				*e*Sn	Sn	14 44 09.3	+1.0
CEP	Cherat	2.97	144	⇓P	Pn	14 44 01.0	+2.9
CEP				S	Sn	14 44 38.0	+4.3
CHCP	Chirah Chowk	3.83	132	⇓P	Pn	14 44 12.2	+2.8
SARP	Sargodha	4.93	151	P	Pn	14 44 25.8	+1.8
JMU	Jammu	5.48	129	*e*P	Pn	14 44 33.5	+2.1
JMU				*e*S	Sn	14 45 33.0	-0.3
KSH	Kashi	5.84	54	⇓*i*P	Pn	14 44 38.8	+2.7
KSH				S	Sn	14 45 45.8	+4.0
KSH				Smax			
	comp=N,3μm,0.8s						
KSH				Smax			
	comp=E,3μm,0.7s						
THN	Thein Dam	6.19	126	*e*P	Pn	14 44 41.6	+0.7
THN				*e*S	Sn	14 45 50.1	-0.3
DLH	Dalhousie	6.28	124	*e*P	Pn	14 44 45.0	+2.8
DLH				*e*x	x	14 45 56.0	
AML	Almayashu	6.58	26	P	Pn	14 44 46.4	+0.3
	SNR=188						
AML	Almayashu	6.58	26	*e*Pn	Pn	14 44 46.2	+0.2
	comp=E,294nm,0.5s						
AML				*e*Sn	Sn	14 45 58.3	-1.4
PONG	Pong	6.65	129	*e*P	Pn	14 44 50.0	+2.9
PONG				*e*S	Sn	14 46 00.0	-1.5
KK31	Karatay Array	6.85	4	⇓P	Pn	14 44 48.6	-1.1
	comp=E,36nm,0.3s,baz=190,slow=13,SNR=436						
KK31				⇑S	Sn	14 46 00.6	-5.5
	comp=E,185nm,0.8s,baz=187,slow=21,SNR=6.7						
KK31	Karatay Array	6.85	4	*i* PN	Pn	14 44 48.5	-1.2
KK31				pmax	pmax		
	comp=Z,68nm,0.2s						
EKS2	Erkin-Say	7.08	24	P	Pn	14 44 52.9	+0.2
	SNR=72						
EKS2	Erkin-Say	7.08	24	*e*Pn	Pn	14 44 52.8	+0.1
	comp=Z,62nm,0.5s						
EKS2				*e*Sn	Sn	14 46 07.6	-4.0
KZA	Kyzart	7.17	34	P	Pn	14 44 54.1	+0.2
	SNR=53						
BHK	Bhakra	7.30	130	*e*x	x	14 45 04.0	
BHK				*e*x	x	14 46 07.0	
AAK	Ala-Archa	7.31	28	P	Pn	14 44 56.5	+0.6
	SNR=115						
KBK	Karagaybulak	7.51	30	P	Pn	14 44 59.3	+0.7
	SNR=78						
FRU	Bishkek	7.53	28	⇓*i*PN	Pn	14 44 59.0	+0.2
FRU				pmax	pmax		
	comp=Z,250nm,1.9s						
SDNR	Sundarnagar	7.60	127	*e*P	Pn	14 45 00.0	+0.1
SDNR				*e*S	Sn	14 46 22.0	-2.5
CHMS	Chumysh	7.72	28	P	Pn	14 45 01.5	+0.1
	SNR=143						
USP	Ospenovka	7.86	26	P	Pn	14 45 02.9	-0.4
	SNR=131						
SMLA	Simla	7.97	128	⇑*i*P	Pn	14 45 05.6	+0.7
SMLA				*i* S	Sn	14 46 31.8	-1.7
SMLA				*e*x	x	14 46 36.9	
	comp=E,2μm,0.3s						
SMLA				*e*x	x	14 46 38.7	
	comp=N,2μm,0.3s						
TKM2	Tokmak 2	7.99	32	⇑P	Pn	14 45 05.3	+0.2
	comp=N,110nm,0.6s						
TKM2				⇑S	Sn	14 46 33.1	-0.8
	comp=N,78nm,0.9s						
TKM2	Tokmak 2	7.99	32	*i* PN	Pn	14 45 05.3	+0.2
TKM2				pmax	pmax		
	comp=Z,156nm,0.6s						
TKM2	Tokmak 2	7.99	32	P	Pn	14 45 05.5	+0.3
	SNR=191						
TKM2	Tokmak 2	7.99	32	⇓*i*Pn	Pn	14 45 05.3	+0.2
	comp=Z,121nm,0.6s						
KLP	Kalpa	8.44	122	*e*P	Pn	14 45 13.0	+1.7
KLP				*e*S	Sn	14 46 43.1	-1.7
KLP				AML	AML	14 46 51.8	
	comp=N,680nm,0.4s						
KLP				AML	AML	14 46 52.1	
	comp=E,551nm,0.5s						
KKR	Kurukshetra	8.59	135	*e*P	Pn	14 45 14.0	+0.7
DDI	Dehra Dun	9.08	128	*e*P	Pn	14 45 18.5	-1.3
DDI				*e*x	x	14 46 34.7	
JASL	Jaisalmer	9.36	174	*e*P	Pn	14 45 22.1	-1.5
KHET	Khetri	9.61	147	*e*P	Pn	14 45 26.2	-0.7
KHET				*e*S	Sn	14 47 06.6	-6.5
KHET				AML	AML	14 47 11.1	
	comp=N,195nm,0.3s						
KHET				AML	AML	14 47 13.7	
	comp=E,179nm,0.3s						
NDI	New Delhi	9.80	138	*e*P	Pn	14 45 29.0	-0.5
NDI				*e*S	Sn	14 47 12.0	-5.7
AYAN	Aya Nagar	9.91	140	*e*P	Pn	14 45 30.2	-0.8
AYAN				*e*S	Sn	14 47 14.5	-5.9
JOSI	Joshimath	9.92	122	*e*P	Pn	14 45 31.8	+0.7
SONA	Sohna	10.07	140	*e*P	Pn	14 45 32.2	-1.0
SONA				*e*S	Sn	14 47 18.3	-6.1
SONA				AML	AML	14 47 23.5	
	comp=N,165nm,0.3s						
SONA				AML	AML	14 47 24.6	
	comp=E,303nm,0.3s						
AJM	Ajmer	10.59	156	*e*P	Pn	14 45 38.5	-1.5
AJM				*e*S	Sn	14 47 29.6	-7.1
PTH	Pithoragarh	10.99	125	*e*P	Pn	14 45 45.0	-0.4
PTH				*e*x	x	14 47 42.0	
BHJ	Bhuj	12.97	181	*e*P	Pn	14 46 10.4	-0.9
BHJ				*e*x	x	14 48 23.9	
BHJ				AML	AML	14 48 37.1	
	comp=E,61nm,0.3s						
BHJ				AML	AML	14 48 38.9	
	comp=N,96nm,0.6s						
MK31	Makanchi Array	14.04	38	*i* P	Pn	14 46 24.6	-0.3
MK31				pmax	pmax		
	comp=Z,52nm,0.9s						
MKAR	Makanchi Array	14.04	38	P	Pn	14 46 24.9	0.0
	comp=Z,0.9nm,0.3s,baz=217,slow=12,SNR=40						
MKAR				S	Sn	14 49 11.7	+12
	comp=Z,0.2nm,0.3s,baz=243,slow=16,SNR=3.2						
DANN	Dangsing	14.17	120	*e*P	Pn	14 46 25.4	-1.3
KOLN	Koldanda	14.41	122	*e*P	Pn	14 46 28.7	-1.1
	comp=Z,43nm,0.4s						
AB31	Akbulak array	14.86	334	⇑P	Pn	14 46 32.1	-3.1
	comp=Z,16nm,0.4s,baz=150,slow=12,SNR=1036						
AB31	Akbulak array	14.86	334	*e*P	Pn	14 46 32.0	-3.2
AB31				pmax	pmax		
	comp=Z,30nm,0.4s						
GKN	Gorkha	14.99	119	*e*P	Pn	14 46 36.0	-1.1
	comp=Z,120nm,0.4s						
DMN	Daman	15.56	119	*e*P	Pn	14 46 43.0	-1.1
	comp=Z,113nm,0.7s						
KKN	Kakani	15.57	119	*e*P	Pn	14 46 44.3	0.0
WMQ	Urumqi	15.60	56	P	Pn	14 46 46.0	+1.5
WMQ				AMB	AMB		
	comp=Z,29nm,0.6s						
WMQ				AMB	AMB		
	comp=Z,150nm,4.8s						
WMQ				LR	LR		
	comp=Z,204nm,19.8s						
KURBB	Kurchatov Arra	15.66	21	⇓P	Pn	14 46 43.0	-2.1
	comp=Z,19nm,1.0s						
KURK	Kurchatov	15.77	21	⇑P	Pn	14 46 44.7	-1.8
	comp=Z,53nm,0.8s						
KURK	Kurchatov	15.77	21	P	Pn	14 46 42.9	-3.6
	comp=Z,0.4nm,0.3s,baz=211,slow=12,SNR=47						
PKIN	Phulchoki	15.79	119	*e*P	Pn	14 46 46.9	0.0
PKI	Pulchoki	15.80	119	*e*P	Pn	14 46 46.4	-0.7
	comp=Z,80nm,0.4s						
GUN	Gumba	15.93	117	*e*P	Pn	14 46 48.5	-0.2
	comp=Z,112nm,0.4s						
JIRN	Jiri	16.30	117	*e*P	Pn	14 46 53.1	-0.2
	comp=Z,172nm,0.4s						
VOSK	Vostochnaya	16.47	2	⇑P	Pn	14 46 53.3	-1.8
	comp=Z,14nm,0.8s						
VOSK	Vostochnaya	16.47	2	P	Pn	14 46 53.2	-1.9
VOSK				pmax	pmax		
	comp=Z,14nm,0.8s						
AKTK	Aktyubinsk	16.53	333	P	Pn	14 46 54.3	-1.6
AKTK				S	S	14 49 46.8	-13
AKTO	Aktyubinsk	16.53	333	⇑P	Pn	14 46 54.3	-1.6
	comp=Z,3.7nm,0.7s						
AKTO	Aktyubinsk	16.53	333	P	Pn	14 46 54.3	-1.6
	comp=Z,3.7nm,0.3s,baz=142,slow=12,SNR=54						
AKTO				S	S	14 49 46.8	-13
	comp=Z,2.6nm,0.3s,baz=173,slow=22,SNR=6.6						
AKTO	Aktyubinsk	16.53	333	P	Pn	14 46 54.3	-1.6
AKTO				S	S	14 49 46.8	-13
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AKTO				smax			
	comp=N,3.0nm,0.3s						
AKL	Akola	16.73	156	*e*x	x	14 46 54.6	
AKL				*e*x	x	14 49 55.9	
BVA0	Borovoye Array	16.76	1	⇓P	Pn	14 46 58.1	-0.5
	comp=N,2.1nm,0.5s,baz=161,slow=9.4,SNR=99						
BVA0	Borovoye Array	16.76	1	*i* P	Pn	14 46 58.0	-0.6
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BVAR	Borovoye Array	16.76	1	P	Pn	14 46 56.9	-1.7
	comp=Z,9.2nm,0.3s,baz=170,slow=8.2,SNR=79						
BVAR				S	S	14 49 59.6	-5.6
	comp=Z,1.1nm,0.3s,baz=174,slow=22,SNR=3.8						
BVAR	Borovoye Array	16.76	1	P	Pn	14 46 56.9	-1.7
BVAR				S	S	14 49 59.6	-5.6
BVAR				pmax	pmax		
	comp=Z,9.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BRVK	Borovoye	16.79	1	*e*P	Pn	14 46 57.3	-1.7
BRVK				pmax	pmax		
	comp=Z,41nm,0.7s						
BRVK	Borovoye	16.79	1	*e*P	Pn	14 46 57.3	-1.7
	comp=Z,41nm,0.7s						
RAMN	Ramite	17.02	118	*e*P	Pn	14 47 02.2	+0.2
	comp=Z,114nm,0.5s						
TAPN	Taplejung	17.58	115	*e*P	Pn	14 47 09.9	+1.1
	comp=Z,54nm,0.4s						
ODAN	Odare	17.63	117	*e*P	Pn	14 47 10.1	+0.7
	comp=Z,63nm,0.6s						
POO	Poona	18.02	168	*e*P	P	14 47 12.2	-0.6
BOK	Bokaro	18.61	127	*e*P	P	14 47 21.2	+2.0
LSA	Lhasa	19.02	104	P	P	14 47 28.4	+4.7
LSA	Lhasa	19.02	104	*e*P	P	14 47 27.7	+4.0
LSA				pmax	pmax		
	comp=Z,21nm,0.9s						
LSA	Lhasa	19.02	104	*e*P	P	14 47 27.7	+4.0
	comp=Z,21nm,0.9s						
GNI	Garni	20.07	289	P	P	14 47 37.5	+2.6
	comp=Z,28nm,0.5s,baz=154,slow=0.9,SNR=14						
GNI	Garni	20.07	289	*c i*P	P	14 47 37.7	+2.8
GNI				pmax	pmax		
	comp=Z,62nm,1.2s						
HYB	Hyderabad	20.30	155	*i* P	P	14 47 39.5	+1.9
HYB				*e*S	S	14 51 17.0	-1.1
HYB	Hyderabad	20.30	155	*e*P	P	14 47 39.5	+1.9
HYB				*e*S	PcP	14 51 49.0	+3.3
ZAA0	Zalesovo Array	20.52	26	*e*P	P	14 47 40.4	+0.7
ZALV	Zalesovo Beam	20.52	26	P	P	14 47 40.1	+0.5
	comp=Z,146nm,0.5s,baz=223,slow=10,SNR=610						
ZALV				S	S	14 51 21.2	-0.7
	comp=Z,5.9nm,0.9s,baz=218,slow=18,SNR=5.1						
ZALV	Zalesovo Beam	20.52	26	P	P	14 47 40.2	+0.6
ZALV				S	S	14 51 21.2	-0.7
ZALV				pmax	pmax		
	comp=Z,146nm,0.5s						
ZALV				smax			
	comp=N,6.0nm,0.9s						
NVS	Novosibirsk	20.74	22	*i* P	P	14 47 42.8	+0.9
NVS				*i* S	S	14 51 26.8	+0.7
NVS				pmax	pmax		
	comp=N,65nm,0.5s						
NVS				pmax	pmax		
	comp=Z,80nm,0.5s						
NVS				pmax	pmax		
	comp=E,37nm,0.8s						
NVS				smax			
	comp=N,46nm,1.6s						
NVS				smax			
	comp=E,10.0nm,1.0s						
ONI	Oni	21.29	295	P	P	14 47 49.0	+1.1
SVE	Sverdlovsk	21.48	346	⇑*e*P	P	14 47 50.2	+0.4
SVE				*e*S	S	14 51 42.3	+2.0
SVE				pmax	pmax		
	comp=Z,38nm,0.8s,mb4.8						
ARU	Arti	21.56	343	*c i*P	P	14 47 50.1	-0.5
ARU				*e*S	S	14 51 41.0	-0.9
ARU				pmax	pmax		
	comp=Z,112nm,1.0s,mb5.2						
ARU	Arti	21.56	343	*e*P	P	14 47 50.1	-0.5
	comp=Z,105nm,0.8s,mb5.3						
KIV	Kislovodsk	22.07	299	*e*P	P	14 47 56.8	+0.7
KIV				*e*S	S	14 51 50.4	-0.1
KIV				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
KIV				MLR	MLR		
	comp=Z,19nm,15.0s						
KIV	Kislovodsk	22.07	299	*e*P	P	14 47 55.9	-0.3
	comp=Z,8.3nm,0.4s,mb4.5						
GTA	Gaotai	23.83	73	*e*P	P	14 48 16.8	+3.9
GTA				AMB	AMB		
	comp=Z,16nm,1.2s,mb4.4						
KRAR	Krasnoyarsk	25.18	31	⇑*e*P	P	14 48 27.7	+2.8
VSR	Storozhevoye	26.48	314	*e*P	P	14 48 37.3	+0.6
VSR				pmax	pmax		
	comp=N,3.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
VSR				pmax	pmax		
	comp=E,9.0nm,0.7s						
ZAK	Zakamensk	27.85	49	*e*P	P	14 48 50.1	+1.2
ZAK				*e*	pP	14 49 14.7	-2.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
SONM	Songino Array	29.24	55	P	P	14 49 03.2	+1.9
	comp=Z,4.7nm,0.8s,mb4.3,baz=262,slow=8.5,SNR=32						
SONM	Songino Array	29.24	55	P	P	14 49 03.2	+1.9
SONM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN	Obninsk	29.51	320	⇑*e*P	P	14 49 03.6	0.0
OBN				*e**PP	pP	14 49 32.0	+0.5
OBN				*e*		14 49 57.2	
OBN				*e*S	S	14 53 41.4	-7.0
OBN				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.7						
ULN	Ulaanbaatar	29.68	55	*e*P	P	14 49 07.5	+2.3
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
ULN	Ulaanbaatar	29.68	55	*e*P	P	14 49 07.5	+2.3
	comp=Z,3.3nm,0.6s,mb4.2						
EIL	Elat	29.88	267	P	P	14 49 08.7	+1.5
	comp=Z,1.6nm,0.4s,mb4.1,baz=56,slow=11,SNR=2.7						
CMAR	Chiang Mai Arr	31.18	117	P	P	14 49 20.0	+1.3
	comp=Z,1.9nm,0.7s,mb3.9,baz=296,slow=8.4,SNR=10						
CMAR				ScP	ScP	14 55 38.6	-2.7
	comp=Z,1.0nm,0.9s,baz=287,slow=4.5,SNR=4.5						
CMAR	Chiang Mai Arr	31.18	117	*i* P	P	14 49 21.0	+2.3
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	32.36	309	P	P	14 49 27.9	-0.8
	comp=Z,1.6nm,0.5s,mb4.0,baz=86,slow=7.4,SNR=6.6						
AKASG	Malin Array Be	32.36	309	*i* P	P	14 49 28.6	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
JOF	Joensuu	35.61	331	*e*p	P	14 49 56.5	0.0
	comp=Z,9.1nm,0.5s,mb4.7						
JOF	Joensuu	35.61	331	*e*P	P	14 49 56.5	0.0
JOF				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.7						
KAF	Kangasniemi	37.32	328	*e*p	P	14 50 10.6	-0.5
	baz=114,slow=8.3						
WHN	Wuhan	37.35	86	*e*P	P	14 50 08.0	-3.7
NJ2	Nanjing	40.44	81	*e*P	P	14 50 39.9	+2.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
KEV	Kevo	40.67	339	*e*p	P	14 50 38.5	-0.4
	comp=Z,5.5nm,0.4s,mb4.5						
KEV	Kevo	40.67	339	*e*P	P	14 50 38.5	-0.4
KEV				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.6						
ARCES	ARCESS Array B	41.01	338	P	P	14 50 42.2	+0.6
	comp=Z,11nm,0.6s,mb4.7,baz=104,slow=7.6,SNR=71						
ARCES				LR	LR	15 08 55.8	
	comp=Z,35nm,21.5s,baz=259,slow=38						
ARCES	ARCESS Array B	41.01	338	P	P	14 50 42.2	+0.6
ARCES				pmax	pmax		
	comp=Z,11nm,0.6s						
ARCES				MLR	MLR		
	comp=Z,35nm,21.5s						
ARCES	ARCESS Array B	41.01	338	P	P	14 50 42.2	+0.6
ARCES				LR	LR	15 08 55.8	
KTK1	Kautokeino	41.45	337	*e*	P	14 50 45.5	+0.2
GERES	GERESS Array B	42.30	305	P	P	14 50 52.8	+0.4
	comp=Z,0.3nm,0.4s,mb3.3,baz=86,slow=5.6,SNR=3.5						
NB2	NORSAR Subarra	44.00	323	P	P	14 51 05.0	-0.9
	comp=Z,6.0nm,0.6s,mb4.4,baz=97,slow=7.9						
NOA	NORSAR Array B	44.00	323	P	P	14 51 05.1	-0.8
	comp=Z,5.0nm,0.6s,mb4.3,baz=97,slow=8.0,SNR=20						
NOA				LR	LR	15 11 59.0	
	comp=Z,22nm,21.6s,baz=90,slow=39						
NOA	NORSAR Array B	44.00	323	P	P	14 51 05.1	-0.8
NOA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,22nm,21.6s						
YAK	Yakutsk	44.70	35	*e*P	P	14 51 12.5	+1.0
YAK				*e*	pP	14 51 41.8	+0.9
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK	Yakutsk	44.70	35	*e*P	P	14 51 12.6	+1.1
	comp=E,11nm,0.6s,mb4.7						
KSRS	Korea Array	45.84	70	P	P	14 51 22.2	+1.4
	comp=E,1.5nm,0.4s,mb3.9,baz=271,slow=6.8,SNR=7.4						
KSRS	Korea Array	45.84	70	P	P	14 51 22.3	+1.4

KSRS				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.1							
TIXI	**Tiksi**	**46.34**	**22**↑	*e*P	**P**	**14 51 24.8**	**+0.5**	
TIXI				pmax	pmax			
	comp=Z,23nm,1.4s,mb4.6							
KMBO	**Kilima Mbogo**	**47.98**	**226**	P	**P**	**14 51 37.5**	**-0.2**	
	comp=Z,1.6nm,0.5s,mb4.0,baz=35,slow=16,SNR=4.5							
KMBO	**Kilima Mbogo**	**47.98**	**226**	P	**P**	**14 51 37.5**	**-0.2**	
KMBO				pmax	pmax			
	comp=Z,2.0nm,0.5s							
KEST	**Kesra**	**48.22**	**288**	P	**P**	**14 51 38.5**	**-0.8**	
	comp=Z,0.9nm,0.7s,mb3.5,baz=49,slow=20,SNR=3.2							
YSS	**Yuzh-Sakhalins**	**53.73**	**54**	*i* P	**P**	**14 52 24.3**	**+4.0**	
YSS				pmax	pmax			
	comp=Z,11nm,1.1s,mb4.5							
ESDC	**Sonseca Array**	**56.73**	**298**	P	**P**	**14 52 42.7**	**+0.7**	
	comp=Z,0.3nm,0.3s,mb3.5,baz=55,slow=7.4,SNR=2.8							
BILL	**Bilibino**	**59.23**	**26**↓	*e*P	**P**	**14 53 01.9**	**+3.0**	
BILL				e*PP	pP	14 53 46.4	+17	
BILL				*e*		14 55 12.6		
BILL				pmax	pmax			
	comp=Z,34nm,2.5s,mb4.7							
PETK	**Petropavlovsk-**	**60.79**	**44**	P	**P**	**14 53 08.6**	**-1.2**	
	comp=Z,5.1nm,1.0s,mb4.3,baz=284,slow=5.8,SNR=4.0							
TOA0	**Torodi Ar. Sit**	**64.77**	**268**	P	**P**	**14 53 35.9**	**-0.8**	
TORD	**Torodi Ar. Bea**	**64.77**	**268**	P	**P**	**14 53 34.6**	**-2.2**	
	comp=Z,0.9nm,0.4s,mb4.0,baz=50,slow=6.5,SNR=15							
BOSA	**Boshof**	**76.97**	**219**	P	**P**	**14 54 48.5**	**-1.5**	
	comp=Z,2.6nm,0.6s,mb4.0,baz=21,slow=10,SNR=4.5							
BOSA	**Boshof**	**76.97**	**219**	P	**P**	**14 54 48.6**	**-1.4**	
BOSA				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.1							
YKA	**Yellowknife Ar**	**81.52**	**2**	P	**P**	**14 55 15.0**	**+0.6**	
	comp=Z,1.3nm,0.6s,mb3.7,baz=351,slow=5.4,SNR=3.5							
YKA				pP	pP	14 55 49.5	+2.4	
	comp=Z,2.3nm,0.6s,baz=350,slow=5.7,SNR=4.5							
YKA	**Yellowknife Ar**	**81.52**	**2**	P	**P**	**14 55 15.0**	**+0.6**	
YKA				*PP	pP	14 55 49.5	+2.5	
YKA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
YKA				pmax	pmax			
	comp=Z,2.0nm,0.6s							
YKA	**Yellowknife Ar**	**81.52**	**2**	P	**P**	**14 55 15.0**	**+0.6**	
YKA				pP	pP	14 55 49.5	+2.4	
WRA	**Warramunga Arr**	**82.67**	**121**	P	**P**	**14 55 19.6**	**-1.3**	
	comp=Z,0.7nm,0.4s,mb3.7,baz=326,slow=4.9,SNR=32							
WRA				pP	pP	14 55 56.4	+2.7	
	comp=Z,0.6nm,0.5s,baz=324,slow=4.8,SNR=3.1							
WRA	**Warramunga Arr**	**82.67**	**121**	P	**P**	**14 55 19.6**	**-1.4**	
WRA				*PP	pP	14 55 56.4	+2.6	
WRA				pmax	pmax			
	comp=Z,1.0nm,0.4s							
WRA				pmax	pmax			
	comp=Z,1.0nm,0.5s							
WB2	**Warramunga Arr**	**82.68**	**121**	*e*P	**P**	**14 55 19.9**	**-1.1**	
ASAR	**Alice Springs**	**84.90**	**124**	P	**P**	**14 55 31.4**	**-0.9**	
	comp=Z,1.1nm,0.7s,mb3.7,baz=310,slow=5.0,SNR=18							
ASAR				pP	pP	14 56 08.8	+3.7	
	comp=Z,0.5nm,0.5s,baz=311,slow=5.1,SNR=2.3							
ASAR	**Alice Springs**	**84.90**	**124**	P	**P**	**14 55 31.4**	**-0.8**	
ASAR				*PP	pP	14 56 08.9	+3.7	
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
PLCA	**Paso Flores**	**148.86**	**250**	PKPbc	PKPbc	15 02 42.6	-1.3	
	comp=Z,0.6nm,0.4s,baz=153,slow=6.8,SNR=2.9							
PLCA	**Paso Flores**	**148.86**	**250**	PKIKP	PKPbc	15 02 42.6	-1.4	
PLCA				pmax	pmax			
	comp=Z,1.0nm,0.4s							

IDC ***18*** *14:56:26.4±0.9, 868S×15756E, h0km, mb4.0/7, mb1 4.2/9, mb1mx4.1/16, mbtmp4.0/9, ML3.7/2, MS3.3/3, Ms1 3.3/3, ms1mx3.0/26, Error ellipse: s-maj=28.6km s-min=23.1km az=161.0*
NEIC ***18*** *14:56:27.7±0.7, 862S×15762E, h10km, mb4.3/3, Error ellipse: s-maj=20.3km s-min=13.8km az=164.0*
ISCJB ***18*** *14:56:30.9±0.7, 85S±0.1×15732E±007, h33km, mb4.0/9, Error ellipse: s-maj=16.7km s-min=9.2km az=4.6*
ISC 18 14:56:32.8±0.7, 85S±01×15732E±007, h35km, n16, σ0§92/15, mb4.0/9, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**2.74**	**109**	Pn		**Pn**	**14 57 06.9**	**-7.5**
	36nm,0.3s,baz=237,slow=4.1,SNR=20							
HNR				Sn		**Sn**	**14 57 46.3**	**0.0**
	139nm,0.3s,baz=259,slow=21,SNR=12							
HNR				LR		LR	14 57 53.7	
	comp=Z,448nm,20.9s,baz=167,slow=35							
CTA	**Charters Tower**	**15.71**	**222**	*e*P		**Pn**	**15 00 13.2**	**+1.6**
	4.8nm,0.8s							
CTA	**Charters Tower**	**15.71**	**222**	Pn		**Pn**	**15 00 11.5**	**-0.1**
	0.1nm,0.3s,baz=42,slow=12,SNR=2.8							
CTA				LR		LR	15 04 14.9	
	comp=Z,87nm,21.3s,baz=227,slow=30							
WRAB	**Tennant Creek**	**24.95**	**241**	*e*P		**P**	**15 01 52.6**	**-0.5**
	6.4nm,0.7s,mb4.3							
WB2	**Warramunga Arr**	**24.95**	**241**	*e*P		**P**	**15 01 52.7**	**-0.4**
WRA	**Warramunga Arr**	**24.96**	**241**	P		**P**	**15 01 53.0**	**-0.3**
	3.6nm,0.6s,mb4.1,baz=67,slow=9.4,SNR=34							
WRA				PcP		PcP	15 05 27.7	-0.5
	0.6nm,0.7s,baz=70,slow=2.9,SNR=7.6							
ASAR	**Alice Springs**	**27.00**	**233**	P		**P**	**15 02 10.2**	**-1.4**
	1.4nm,0.8s,mb3.6,baz=66,slow=9.0,SNR=11							
ASAR				PcP		PcP	15 05 32.5	-0.4
	0.4nm,0.6s,baz=79,slow=2.8,SNR=5.9							
STKA	**Stephens Creek**	**27.45**	**210**	*e*P		**P**	**15 02 18.2**	**+2.6**
	4.1nm,0.6s,mb4.1							
STKA	**Stephens Creek**	**27.45**	**210**	P		**P**	**15 02 17.4**	**+1.8**
	4.9nm,0.7s,mb4.1,baz=23,slow=11,SNR=10							
PETK	**Petropavlovsk-**	**61.40**	**0**	LR		LR	15 27 36.3	
	comp=Z,42nm,21.8s,baz=264,slow=30							
CMAR	**Chiang Mai Arr**	**63.52**	**295**	P		**P**	**15 07 01.1**	**+1.0**
	1.4nm,0.7s,mb4.1,baz=120,slow=5.0,SNR=8.9							
SONM	**Songino Array**	**71.87**	**327**	P		**P**	**15 07 53.0**	**+0.8**
	0.7nm,0.8s,mb3.6,baz=149,slow=5.0,SNR=5.1							
MAW	**Mawson**	**83.88**	**203**	P		**P**	**15 08 58.1**	**-0.6**
	1.1nm,0.7s,mb4.1,baz=90,slow=9.1,SNR=3.1							
MKAR	**Makanchi Array**	**86.08**	**318**	P		**P**	**15 09 09.4**	**-0.7**
	1.0nm,0.6s,mb4.2,baz=102,slow=5.8,SNR=7.7							
NVAR	**Mina Array Bea**	**90.86**	**51**	P		**P**	**15 09 32.8**	**-0.3**
	1.5nm,1.0s,mb4.3,baz=241,slow=5.6,SNR=5.9							
BDFB	**Brasilia**	**145.26**	**134**	PKP		PKPdf	15 16 10.3	+2.4
	3.2nm,0.7s,baz=242,slow=5.3,SNR=4.3							

ISCJB ***18*** *15:07:34.7±0.7, 3859N±003×3078E±003, h1km±7km, Error ellipse: s-maj=5.0km s-min=4.5km az=16.1*
ISK ***18*** *15:07:34.5, 3859N×3077E, h5km, MD3.0*
CSEM ***18*** *15:07:34.2±0.1, 3856N×3077E, h10km, MD3.0, Error ellipse: s-maj=2.4km s-min=1.8km az=173.0*
DDA ***18*** *15:07:35.1, 3859N×3080E, h7km±4km, Md2.8*
ISC 18 15:07:35.4±0.5, 3858N±003×3077E±003, h8km±6km, n16, σ0§68/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SHUT	**Suhut-Afyon**	**0.18**	**260**	PG		**Pg**	**15 07 38.7**	**-0.4**
TKTP	**Tekketepe**	**0.65**	**213**	*i* P		**Pg**	**15 07 47.5**	**-0.5**
TKTP				*i* S		**Sg**	**15 07 58.5**	**+2.0**
ALT	**Altintas**	**0.70**	**312**	PG		**Pg**	**15 07 48.3**	**-0.7**
ALT				*e*SG		**Sg**	**15 07 57.8**	**-0.3**
KIZT	**Kizilcal**	**0.92**	**71**	*e*PG		**Pg**	**15 07 52.8**	**-0.3**
KIZT				*e*SG		**Sg**	**15 08 05.6**	**+0.7**
ESKT	**Eskisehir**	**0.94**	**4**	*i* P		**Pg**	**15 07 53.7**	**+0.2**
ESKT				*i* S		**Sg**	**15 08 05.8**	**+0.2**
SEYT	**Eskypehyr**	**0.94**	**4**	*i* P		**Pg**	**15 07 53.7**	**+0.3**
SEYT				*i* S		**Sg**	**15 08 05.8**	**+0.2**
KHL	**Karahalli**	**1.02**	**256**	*e*PG		**Pg**	**15 07 54.2**	**-0.7**
KDHN	**Kadinhani**	**1.05**	**93**	*i* P		**Pg**	**15 07 54.8**	**-0.9**
KDHN				*i* S		**Sg**	**15 08 09.7**	**+0.3**
GDZ	**Gediz**	**1.13**	**297**	*i* P		**Pg**	**15 07 56.6**	**-0.5**
GDZ				*i* S		**Sg**	**15 08 12.6**	**+0.9**
BCK	**Bucak**	**1.13**	**187**	*e*PN		**Pn**	**15 07 56.2**	**-1.3**
LADK	**Ladik-KONYA**	**1.31**	**107**	*e*PN		**Pn**	**15 07 59.6**	**-0.3**
BORA	**Eskisehir**	**1.32**	**349**	*i* P		**Pn**	**15 08 00.2**	**+0.1**
BORA				*i* S		**Sb**	**15 08 17.6**	**+0.1**
KONT	**Konya--Tatoy**	**1.40**	**117**	*e*PN		**Pn**	**15 08 01.3**	**+0.1**
KULA	**Kula-Manisa**	**1.66**	**268**	*e*PN		**Pn**	**15 08 05.3**	**+0.5**
GULT	**Gulveren**	**1.86**	**354**	*e*PN		**Pn**	**15 08 07.9**	**+0.4**
HDMB	**Hadim**	**2.11**	**139**	*e*PN		**Pn**	**15 08 11.6**	**+0.6**

IDC 18 15:11:19.5±3.4, 045S×7927W, h0km, mb3.7/1, mb1 3.6/2, mb1mx3.4/18, mbtmp3.6/2, ML2.8/1, Error ellipse: s-maj=112.8km s-min=48.1km az=104.0, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ATAH	**Atahualpa**	**6.57**	**172**	Pn		Pn	15 12 59.7	+2.2
	0.2nm,0.3s,baz=13,slow=18,SNR=1.9							
ATAH				Sn		Sn	15 14 07.3	-5.9
	1.7nm,0.3s,baz=61,slow=13,SNR=4.9							
TORD	**Torodi Ar. Bea**	**81.31**	**77**	P		P	15 23 38.6	+0.1
	0.3nm,0.4s,baz=278,slow=5.7,SNR=4.8							
ASAR	**Alice Springs**	**139.84**	**231**	PKP		PKPdf	15 30 50.2	-0.4
	0.6nm,1.1s,baz=119,slow=3.7,SNR=3.6							
WRA	**Warramunga Arr**	**141.34**	**236**	PKP		PKPdf	15 30 53.1	-0.3
	0.2nm,0.8s,baz=118,slow=2.7,SNR=3.6							

IDC 18 15:13:33.8±3.6, 304S×10097E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/19, mbtmp3.5/5, Error ellipse: s-maj=159.8km s-min=22.0km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.64**	**120**	P		P	15 20 41.9	-0.5
	0.3nm,0.4s,baz=304,slow=8.9,SNR=9.7							
ASAR	**Alice Springs**	**37.87**	**126**	P		P	15 20 53.0	+0.3
	0.3nm,0.6s,baz=297,slow=7.3,SNR=7.3							
SONM	**Songino Array**	**50.88**	**5**	P		P	15 22 37.1	+0.6
	0.4nm,0.5s,baz=180,slow=8.8,SNR=4.3							
MKAR	**Makanchi Array**	**52.28**	**344**	P		P	15 22 47.1	+0.1
	0.2nm,0.4s,baz=161,slow=9.3,SNR=4.5							
ZALV	**Zalesovo Beam**	**58.36**	**349**	P		P	15 23 29.9	-0.8
	0.2nm,0.3s,baz=159,slow=5.1,SNR=5.1							
TXAR	**Lajitas Array**	**144.91**	**39**	PKP		PKPdf	15 33 14.0	+0.3
	0.2nm,0.5s,baz=278,slow=1.4,SNR=3.1							

IDC 18 15:18:56.8±3.4, 2014S×17460W, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.7/18, mbtmp3.9/4, ML2.5/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/28, Error ellipse: s-maj=129.0km s-min=33.2km az=134.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**6.75**	**24**	Pn		Pn	15 20 36.8	-0.5
	5.6nm,0.3s,baz=156,slow=21,SNR=10.0							
AFI				Sn		Sn	15 21 47.6	-7.3
	0.7nm,0.3s,baz=192,slow=20,SNR=2.0							
AFI				LR		LR	15 22 06.5	
	comp=Z,73nm,19.7s,baz=166,slow=28							
STKA	**Stephens Creek**	**40.82**	**244**	P		P	15 26 39.6	-0.7
	2.3nm,0.9s,baz=90,slow=8.1,SNR=3.5							
ASAR	**Alice Springs**	**47.71**	**256**	P		P	15 27 35.5	-0.1
	0.8nm,0.6s,baz=101,slow=7.6,SNR=25							
ASAR				PcP		PcP	15 29 05.0	-0.1
	0.6nm,0.9s,baz=109,slow=4.0,SNR=3.8							
WRA	**Warramunga Arr**	**47.81**	**261**	P		P	15 27 36.7	+0.2
	0.3nm,0.4s,baz=97,slow=7.7,SNR=14							
WRA				PcP		PcP	15 29 05.7	+0.2
	0.3nm,0.8s,baz=103,slow=3.4,SNR=2.6							
ELK	**Elko**	**81.87**	**41**	LR		LR	15 59 19.4	
	comp=Z,123nm,20.0s,slow=30							

ISCJB ***18*** *16:18:30.3±0.7, 2996S×10909×1789W±002, h221km±9km, mb3.7/7, Error ellipse: s-maj=31.4km s-min=10.7km az=22.0*
IDC ***18*** *16:18:30.9±0.6, 2999S×17879W, h218km±7km, mb3.4/5, mb1 3.5/7, mb1mx3.5/15, mbtmp3.4/7, Error ellipse: s-maj=27.8km s-min=15.4km az=120.0*
NEIC ***18*** *16:18:31.7±1.0, 3001S×17888W, h222km±11km, Error ellipse: s-maj=28.9km s-min=15.5km az=114.0*
ISC 18 16:18:31.2±0.7, 3000S±010×1789W±002, h216km±8km, n13, σ0§94/16, mb3.7/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**1.13**	**49**	P		**Pn**	**16 19 04.6**	**+1.1**
	110nm,0.3s,baz=84,slow=21,SNR=7.4							
RAO				S		**S**	**16 19 28.0**	**-0.5**
	436nm,0.3s,baz=104,slow=20,SNR=14							
RAO	**Raoul Island**	**1.13**	**49**	*e*Pn		**Pn**	**16 19 05.2**	**+1.8**
RAO				S		**S**	**16 19 28.0**	**-0.5**
URZ	**Urewera**	**8.88**	**201**	P		**Pn**	**16 20 35.1**	**-0.5**
	1.0nm,0.3s,baz=279,slow=13,SNR=12							
URZ				S		**S**	**16 22 15.6**	**0.0**
	3.3nm,0.3s,baz=304,slow=23,SNR=19							
RPZ	**Rata Peaks**	**15.86**	**208**	P		**Pn**	**16 22 01.2**	**-1.7**
	0.4nm,0.3s,baz=34,slow=15,SNR=3.9							
RPZ				S		**S**	**16 24 48.1**	**-10**
	0.6nm,0.3s,baz=128,slow=15,SNR=9.2							
ASAR	**Alice Springs**	**42.36**	**267**	P		**P**	**16 26 04.8**	**+0.4**
	0.3nm,0.6s,mb2.9,baz=102,slow=6.7,SNR=10							
ASAR				ScP		ScP	16 31 20.6	-2.9
	0.8nm,1.0s,baz=117,slow=3.9,SNR=5.4							
WB2	**Warramunga Arr**	**43.30**	**272**	*e*P		**P**	**16 26 12.0**	**0.0**
WRA	**Warramunga Arr**	**43.31**	**272**	P		**P**	**16 26 12.1**	**0.0**
	0.9nm,0.5s,mb3.5,baz=110,slow=7.7,SNR=26							
WRA				ScP		ScP	16 31 24.9	-2.5
	0.3nm,0.6s,baz=106,slow=3.7,SNR=4.8							
CASY	**Casey**	**55.13**	**208**	*e*P		**P**	**16 27 41.9**	**+1.2**
	12nm,0.4s,mb4.8							
MAW	**Mawson**	**72.41**	**201**	P		**P**	**16 29 35.0**	**+1.7**
	0.8nm,0.7s,mb3.4,baz=158,slow=5.1,SNR=6.7							
KSRS	**Korea Array**	**83.55**	**320**	P		**P**	**16 30 34.8**	**-0.1**
	2.2nm,0.8s,mb3.9,baz=151,slow=6.6,SNR=4.7							
PETK	**Petropavlovsk-**	**85.24**	**346**	P		**P**	**16 30 42.1**	**-0.9**
	2.0nm,0.7s,mb4.0,baz=130,slow=5.8,SNR=3.8							
NVAR	**Mina Array Bea**	**88.47**	**43**	P		**P**	**16 30 57.9**	**-1.0**
	0.2nm,0.4s,mb3.3,baz=213,slow=6.5,SNR=3.6							
TORD	**Torodi Ar. Bea**	**163.22**	**182**	PKPab		PKPab	16 39 00.5	+0.8
	0.7nm,0.6s,baz=176,slow=3.4,SNR=5.3							

IDC 18 16:25:29.5±8.8, 1901N×14500E, h167km±65km, mb3.2/3, mb1 3.6/4, mb1mx3.1/20, mbtmp3.3/4, MS3.2/1, Ms1 3.2/1, ms1mx2.1/19, Error ellipse: s-maj=144.8km s-min=26.7km az=121.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**5.39**	**181**	P		Pn	16 26 50.1	+1.6
	5.5nm,0.3s,baz=20,slow=23,SNR=4.5							
GUMO				S		Sn	16 27 49.4	-0.8
	18nm,0.3s,baz=162,slow=21,SNR=9.4							
ASAJ	**Asahikawa**	**25.11**	**356**	LR		LR	16 40 20.5	
	comp=Z,52nm,18.6s,baz=339,slow=36							
WRA	**Warramunga Arr**	**40.10**	**196**	P		P	16 32 49.3	+0.4
	1.0nm,0.3s,baz=13,slow=8.2,SNR=45							
WRA				PcP		PcP	16 34 49.6	-0.7
	0.2nm,0.5s,baz=15,slow=3.3,SNR=5.0							
ASAR	**Alice Springs**	**43.78**	**195**	P		P	16 33 18.5	-0.2
	0.2nm,0.3s,baz=14,slow=6.0,SNR=15							
NVAR	**Mina Array Bea**	**83.47**	**52**	P		P	16 37 38.8	+0.2
	0.5nm,0.7s,baz=273,slow=8.9,SNR=3.5							

ISCJB ***18*** *16:42:28.3±0.8, 2369S±007×680W±0.1, h123km±9km, mb4.0/5, Error ellipse: s-maj=18.9km s-min=10.7km az=175.2*
IDC ***18*** *16:42:29.1±1.3, 2371S×6795W, h115km±11km, mb3.8/6, mb1 3.8/10, mb1mx3.7/19, mbtmp3.7/10, MS3.1/1, Ms1 3.1/1, ms1mx2.3/26, Error ellipse: s-maj=22.1km s-min=16.6km az=49.0*
NEIC ***18*** *16:42:29.3±0.7, 2369S×6794W, h118km±7km, mb3.8/1, Error ellipse: s-maj=13.6km s-min=8.1km az=89.0*
ISC 18 16:42:29.4±0.7, 2370S±006×679W±01, h116km±9km, n16, σ0§77/18, mb4.0/5, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**1.40**	**320**	P		**Pn**	**16 42 55.9**	**+0.4**
	107nm,0.3s,baz=150,slow=6.6,SNR=924							
LVC				S		**Sn**	**16 43 15.1**	**-0.1**
	52nm,0.3s,baz=162,slow=7.8,SNR=6.1							
LPAZ	**La Paz**	**7.37**	**359**	P		**Pn**	**16 44 15.3**	**+0.8**
	1.3nm,0.3s,baz=191,slow=6.5,SNR=28							
CFAA	**Coronel Fontan**	**7.88**	**182**	P		**Pn**	**16 44 20.2**	**-1.1**
	0.2nm,0.3s,baz=356,slow=14,SNR=28							
CFAA				S		**Sn**	**16 45 42.5**	**-6.3**
	0.3nm,0.3s,baz=251,slow=18,SNR=9.8							
CFAA	**Coronel Fontan**	**7.88**	**182**	P		**Pn**	**16 44 20.2**	**-1.1**
CFAA				S		**Sn**	**16 45 42.5**	**-6.3**
SIV	**San Ignacio**	**10.02**	**41**	P		**Pn**	**16 44 49.2**	**-1.1**
	5.1nm,0.3s,baz=232,slow=12,SNR=52							
TRQA	**Tornquist**	**15.19**	**162**	P		**Pn**	**16 45 59.1**	**+1.3**
	5.2nm,0.9s							
PLCA	**Paso Flores**	**17.13**	**187**	P		**Pn**	**16 46 21.6**	**0.0**
	0.1nm,0.3s,baz=352,slow=11,SNR=3.6							
PLCA				LR		LR	16 53 18.7	
	comp=Z,74nm,21.5s,baz=183,slow=38							
BDFB	**Brasilia**	**20.38**	**70**	P		**P**	**16 46 57.8**	**+0.6**
	2.6nm,0.4s,baz=221,slow=13,SNR=7.8							
TXAR	**Lajitas Array**	**62.94**	**325**	P		**P**	**16 52 43.5**	**-0.2**
	0.3nm,0.5s,mb3.5,baz=147,slow=9.2,SNR=4.7							
TXAR	**Lajitas Array**	**62.94**	**325**	P		**P**	**16 52 43.5**	**-0.2**
DBIC	**Dimbokro**	**68.52**	**72**	P		**P**	**16 53 18.5**	**-1.4**
	4.8nm,0.6s,mb4.5,baz=203,slow=3.2,SNR=6.2							
PDAR	**Pinedale Array**	**76.45**	**330**	P		**P**	**16 54 06.5**	**+0.3**
	0.4nm,0.4s,mb3.5,baz=133,slow=5.3,SNR=2.8							
TOA0	**Torodi Ar. Sit**	**77.26**	**69**	*e*P		**P**	**16 54 11.9**	**+0.5**
TORD	**Torodi Ar. Bea**	**77.26**	**69**	P		**P**	**16 54 11.9**	**+0.5**
	3.6nm,0.5s,mb4.4,baz=257,slow=5.7,SNR=81							
ULM	**Lac du Bonnet**	**77.67**	**342**	P		**P**	**16 54 12.2**	**-0.6**
	1.3nm,0.4s,mb4.0,baz=124,slow=11,SNR=4.3							
ZALV	**Zalesovo Beam**	**143.52**	**27**	PKP		PKPdf	17 01 48.8	-1.3
	1.5nm,0.6s,baz=314,slow=4.5,SNR=6.4							

IDC ***18*** *16:47:44.6±1.2, 2.19S×9937E, h0km, mb4.2/13, mb1 4.3/13, mb1mx4.1/24, mbtmp4.2/13, Error ellipse: s-maj=48.2km s-min=13.6km az=55.0*
ISCJB ***18*** *16:47:47.5±0.8, 2.22S±0.1×994E±0.1, h33km, mb4.4/17, Error ellipse: s-maj=23.3km s-min=9.1km az=139.0*
BJI ***18*** *16:47:48.2, 2.14S×10005E, h29km, mb4.7*
DJA ***18*** *16:47:48, 178S×9951E, h0km, MLv4.5/5*
NEIC ***18*** *16:47:50.0±0.7, 2.16S×9945E, h35km, mb4.3/5, Error ellipse: s-maj=22.9km s-min=7.8km az=49.0*
ISC 18 16:47:49.9±0.8, 22S±01×994E±01, h35km, n30, σ0§95/27, mb4.4/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KKM	**Kota Kinabalu**	**18.64**	**64**	*e*P		**Pn**	**16 52 05.6**	**+0.2**
KAPI	**Kappang**	**20.46**	**98**	P		**P**	**16 52 24.5**	**-0.2**
	3.8nm,0.4s,baz=190,slow=21,SNR=2.5							
CMAR	**Chiang Mai Arr**	**20.52**	**359**	P		**P**	**16 52 23.2**	**-2.1**
	1.9nm,0.8s,baz=190,slow=10,SNR=11							
FITZ	**Fitzroy Crossi**	**30.17**	**123**	*e*P		**P**	**16 53 57.7**	**+0.7**
	3.4nm,0.9s,mb4.1							
FITZ	**Fitzroy Crossi**	**30.17**	**123**	P		**P**	**16 53 57.2**	**+0.2**
	2.6nm,1.0s,mb3.9,baz=132,slow=18,SNR=3.9							
WRA	**Warramunga Arr**	**38.38**	**120**	P		**P**	**16 55 07.7**	**-0.4**
	2.6nm,0.6s,mb4.2,baz=302,slow=9.1,SNR=47							
WRA				PcP		PcP	16 57 22.2	+0.8
	0.3nm,0.7s,baz=310,slow=2.1,SNR=4.6							
WB2	**Warramunga Arr**	**38.39**	**120**	*e*P		**P**	**16 55 07.2**	**-1.0**
ASAR	**Alice Springs**	**39.59**	**126**	P		**P**	**16 55 18.2**	**0.0**
	1.0nm,0.4s,mb3.9,baz=299,slow=7.5,SNR=26							
ASAR				PcP		PcP	16 57 25.7	+0.6
	0.4nm,0.6s,baz=317,slow=2.5,SNR=4.2							
GTA	**Gaotai**	**41.40**	**0**	*e*P		**P**	**16 55 33.8**	**+0.9**
GTA				AP		pP	16 55 39.6	-3.5
GTA				XP		sP	16 55 42.9	-4.4
GTA				AMB		AMB		
	comp=Z,4.0nm,1.0s,mb4.0							
WMQ	**Urumqi**	**47.00**	**348**	*e*P		**P**	**16 56 19.6**	**+1.9**
WMQ				AMB		AMB		
	comp=Z,11nm,1.0s,mb4.7							
KSRS	**Korea Array**	**47.47**	**31**	P		**P**	**16 56 21.4**	**0.0**
	comp=Z,4.3nm,0.9s,mb4.4,baz=214,slow=9.0,SNR=5.5							
STKA	**Stephens Creek**	**49.44**	**131**	*e*P		**P**	**16 56 37.9**	**+1.1**
	comp=Z,2.9nm,0.9s,mb4.3							
STKA	**Stephens Creek**	**49.44**	**131**	P		**P**	**16 56 37.7**	**+0.9**
	comp=Z,2.6nm,0.7s,mb4.4,baz=337,slow=9.1,SNR=5.1							
TKM2	**Tokmak 2**	**49.79**	**337**	*e*P		**P**	**16 56 40.4**	**+

	baz=209								
NSY	**Sanyi**	**1.23**	**251**	*e*P		Pn	16 51 52.1	+1.5	
	baz=265								
TWQ1	**Liyutan**	**1.25**	**248**	*e*P		Pn	16 51 51.2	+0.5	
	baz=263								
SMLT	**Sun Moon Lake**	**1.40**	**228**	*e*P		Pn	16 51 53.7	+0.9	
	baz=231								
TYC	**Yuchr**	**1.42**	**230**	*e*P		Pn	16 51 53.9	+0.8	
	baz=231								
TYC				*e*S		Sn	16 52 13.7	+1.9	
	baz=231								
EHY	**Hungye**	**1.46**	**207**	*e*P		Pn	16 51 53.4	-0.3	
	baz=204								
TWF1	**Yuli**	**1.61**	**205**	*e*P		Pn	16 51 56.0	+0.2	
	baz=223								
YUS	**Yu-Shan**	**1.66**	**217**	*e*P		Pn	16 51 58.1	+1.7	
	baz=201								
ALS	**Alishan**	**1.73**	**221**	*e*P		Pn	16 51 59.4	+2.0	
	baz=203								
CHN5	**Tsauling**	**1.74**	**226**	*e*P		Pn	16 52 00.3	+2.8	
	baz=229								
CHN5				*e*S		Sn	16 52 24.7	+4.9	
	baz=229								
WGK	**Gukeng**	**1.76**	**230**	*e*P		Pn	16 51 59.5	+1.7	
	baz=235								
ELDTW	**Lidau**	**1.88**	**210**	*e*P		Pn	16 52 00.8	+1.4	
	baz=192								
CHN4	**Tsaushan**	**1.97**	**223**	*e*P		Pn	16 52 02.8	+2.0	
	baz=228								
STYT	**Tauyuan**	**2.03**	**216**	*e*P		Pn	16 52 02.9	+1.4	
	baz=205								
STYT				*e*S		Sn	16 52 31.4	+4.6	
	baz=205								
WTP	**Ta-pu**	**2.04**	**220**	*e*P		Pn	16 52 03.5	+1.9	
	baz=226								
CHN1	**Nanshi**	**2.14**	**221**	*e*P		Pn	16 52 06.7	+3.7	
	baz=226								
CHN1				*e*S		Sn	16 52 35.9	+6.3	
	baz=226								
TWG	**Pinlang**	**2.18**	**204**	*e*P		Pn	16 52 03.4	-0.2	
	baz=201								
SGST	**Jiashian**	**2.19**	**218**	*e*P		Pn	16 52 05.4	+1.8	
	baz=201								
ECL	**Taimali**	**2.43**	**205**	*e*P		Pn	16 52 09.7	+2.7	
	baz=188								
SSD	**Sandimen**	**2.44**	**212**	*e*P		Pn	16 52 09.5	+2.4	
	baz=218								
SSD				*e*S		Sn	16 52 43.0	+6.1	
	baz=218								

*BJI **18** 16:52:26.0, 270S×9963E, h38km, mB5.4, mb5.1*
*NEIC **18** 16:52:28.7±6.7, 223S×9943E, h19km±40km, mb4.7/7, Error ellipse: s-maj=19.7km s-min=5.7km az=53.0*
*DJA **18** 16:52:29, 220S×9926E, h28km, Mw5.3/4*
*MOS **18** 16:52:30.8±0.9, 203S×9959E, h42km, mb4.9/21, Error ellipse: s-maj=17.7km s-min=8.9km az=105.0*
*IDC **18** 16:52:30.7±4.1, 216S×9949E, h29km±27km, mb4.4/18, mb1 4.5/18, mb1mx4.3/25, mbtmp4.4/18, MS3.8/5, Ms1 3.8/5, ms1mx3.4/24, Error ellipse: s-maj=33.7km s-min=11.2km az=51.0*
*ISCJB **18** 16:52:32.0±1.4, 212S±007×9948E±007, h57km±10km, mb4.8/42, MS3.8/5, Error ellipse: s-maj=15.7km s-min=6.4km az=136.9*

ISC 18 16:52:35.5±1.2, 208S±007×9960E±008, h69km±9km, h26km±2.9km; pP-P, n111, σ0§98/104, mb4.8/42, 12C-7D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PPI	**Padang Panjang**	**1.80**	**26**	P		**Pn**	**16 53 01.9**	**-2.6**
	0.0nm,0.0s							
RGRI	**Rengat**	**3.23**	**58**	P		**Pn**	**16 53 23.6**	**-0.3**
	0.0nm,0.0s							
KSI	**Kapahiang**	**3.37**	**118**	P		**Pn**	**16 53 30.1**	**+4.2**
	0.0nm,0.0s							
GSI	**Gunungsitoli**	**3.92**	**329**	⇓*e*P		**Pn**	**16 53 28.0**	**-5.4**
TRSI	**Tarutung**	**4.13**	**351**	P		**Pn**	**16 53 38.1**	**+1.9**
	0.0nm,0.0s							
DSRI	**Dabo**	**5.23**	**72**	P		**Pn**	**16 53 51.2**	**0.0**
	74nm,1.2s							
KGM	**Kluang**	**5.51**	**42**	⇑P		**Pn**	**16 53 55.3**	**+0.2**
FRIM	**Kepong**	**5.66**	**21**	⇑P		**Pn**	**16 53 56.2**	**-0.9**
MYKOM	**Kota Tinggi**	**5.73**	**48**	⇑P		**Pn**	**16 53 58.8**	**+0.6**
IPM	**Ipoh**	**6.67**	**12**	⇓P		**Pn**	**16 54 10.4**	**-0.6**
KTGM	**Kuala Trenggan**	**8.16**	**26**	⇓P		**Pn**	**16 54 31.4**	**0.0**
DBJI	**Dramaga**	**8.40**	**122**	P		**Pn**	**16 54 33.9**	**-0.7**
	71nm,1.0s							
CBJI	**Citeko**	**8.42**	**121**	P		**Pn**	**16 54 37.0**	**+2.1**
	305nm,1.1s							
KSM	**Kuching**	**11.28**	**72**	⇓P		**Pn**	**16 55 15.1**	**+1.2**
KKM	**Kota Kinabalu**	**18.45**	**64**	⇑P		**Pn**	**16 56 47.8**	**+1.1**
KKM	**Kota Kinabalu**	**18.45**	**64**	*e*P		**Pn**	**16 56 46.6**	**0.0**
SDKM	**Sandakan**	**19.18**	**66**	⇓P		**Pn**	**16 56 55.7**	**+0.3**
TSM	**Tawau**	**19.33**	**71**	⇑P		**Pn**	**16 56 56.7**	**-0.5**
PCI	**Palu**	**20.27**	**87**	P		**P**	**16 57 09.6**	**+4.0**
	57nm,1.1s							
KAPI	**Kappang**	**20.32**	**99**	P		**P**	**16 57 04.7**	**-1.6**
	25nm,0.9s,baz=244,slow=6.2,SNR=4.2							
CMAR	**Chiang Mai Arr**	**20.42**	**358**	P		**P**	**16 57 06.2**	**-0.9**
	6.2nm,0.8s,baz=188,slow=10,SNR=21							
CMAR	**Chiang Mai Arr**	**20.42**	**358**	P		**P**	**16 57 06.3**	**-0.9**
CMAR				pmax		pmax		
	comp=Z,6.0nm,0.9s							
NANT	**Nan**	**20.78**	**3**	P		**P**	**16 57 08.5**	**-2.6**
CHRT	**Chiangrai**	**21.82**	**0**	⇑P		**P**	**16 57 21.5**	**-0.7**
	comp=Z,158nm,0.9s,mb5.3							
KDI	**Kendari**	**23.07**	**95**	P		**P**	**16 57 36.9**	**+1.4**
	comp=Z,24nm,1.2s,mb4.4							
MNI	**Manado**	**25.48**	**82**	P		**P**	**16 58 00.1**	**+2.6**
	comp=Z,124nm,1.0s,mb5.3							
SGSI	**Sangihe**	**26.54**	**78**	P		**P**	**16 58 12.2**	**+5.0**
	comp=Z,223nm,0.6s,mb5.9							
FITZ	**Fitzroy Crossi**	**30.10**	**124**	*e*P		**P**	**16 58 37.9**	**-0.9**
	comp=Z,7.8nm,0.9s,mb4.3							
FITZ	**Fitzroy Crossi**	**30.10**	**124**	P		**P**	**16 58 38.0**	**-0.8**
	comp=Z,4.8nm,0.9s,mb4.1,baz=316,slow=6.7,SNR=8.5							
FITZ				LR		LR	17 09 39.9	
	comp=Z,158nm,20.8s,baz=312,slow=34							
ODAN	**Odare**	**31.09**	**339**	*e*P		**P**	**16 58 47.9**	**+0.5**
	comp=Z,29nm,0.9s,mb5.0							
TAPN	**Taplejung**	**31.42**	**339**	*e*P		**P**	**16 58 51.7**	**+1.4**
	comp=Z,46nm,1.0s,mb5.2							
RAMN	**Ramite**	**31.47**	**337**	*e*P		**P**	**16 58 51.6**	**+0.9**
	comp=Z,19nm,0.8s,mb4.9							
JIRN	**Jiri**	**32.26**	**337**	*e*P		**P**	**16 58 58.4**	**+0.7**
PKI	**Pulchoki**	**32.49**	**336**	*e*P		**P**	**16 59 00.3**	**+0.6**
GUN	**Gumba**	**32.61**	**337**	*e*P		**P**	**16 59 01.1**	**+0.4**
LSA	**Lhasa**	**32.62**	**346**	P		**P**	**16 59 02.4**	**+1.7**
LSA	**Lhasa**	**32.62**	**346**	*e*P		**P**	**16 59 01.7**	**+1.0**
LSA				pmax		pmax		
	comp=Z,5.0nm,0.6s,mb4.5							
LSA	**Lhasa**	**32.62**	**346**	*e*P		**P**	**16 59 01.7**	**+0.9**
	comp=Z,4.8nm,0.6s,mb4.5							
DMN	**Daman**	**32.65**	**336**	*e*P		**P**	**16 59 01.7**	**+0.6**
KKN	**Kakani**	**32.74**	**336**	*e*P		**P**	**16 59 02.0**	**+0.2**
GKN	**Gorkha**	**33.19**	**335**	*e*P		**P**	**16 59 05.3**	**-0.5**
NWAO	**Narrogin (SRO)**	**34.87**	**154**	LR		LR	17 11 36.2	
	comp=Z,233nm,21.6s,baz=305,slow=33							
LZH	**Lanzhou**	**38.18**	**6**	⇑P		**P**	**16 59 49.3**	**+0.9**
LZH				AP		pP	16 59 56.3	-9.0
LZH				XP		sP	17 00 00.3	-13
LZH				AMB		AMB		
	comp=Z,42nm,1.5s,mb5.0							
LZH				AMB		AMB		
	comp=Z,120nm,4.0s							
WRA	**Warramunga Arr**	**38.30**	**120**	P		**P**	**16 59 48.8**	**-0.9**
	comp=Z,9.7nm,0.9s,mb4.6,baz=301,slow=9.1,SNR=37							
WRA				PcP		PcP	17 02 02.5	-0.1
	comp=Z,0.9nm,0.8s,baz=316,slow=2.6,SNR=3.6							
WRA	**Warramunga Arr**	**38.30**	**120**	P		**P**	**16 59 48.8**	**-0.9**
WRA							17 02 02.5	
WRA				pmax		pmax		
	comp=Z,10.0nm,0.9s							
WRA				pmax		pmax		
	comp=Z,1.0nm,0.8s							
WRAB	**Tennant Creek**	**38.30**	**120**	*e*P		**P**	**16 59 48.8**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,18nm,1.1s,mb4.8							
WRAB	**Tennant Creek**	**38.30**	**120**	*e*P		**P**	**16 59 48.8**	**-1.0**
	comp=Z,18nm,1.1s,mb4.8							
WB2	**Warramunga Arr**	**38.31**	**120**	*e*P		**P**	**16 59 48.5**	**-1.3**
NJ2	**Nanjing**	**38.55**	**27**	*e*P		**P**	**16 59 49.6**	**-2.0**
NJ2				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.6							
ASAR	**Alice Springs**	**39.53**	**126**	P		**P**	**16 59 59.5**	**-0.4**
	comp=Z,4.8nm,0.9s,mb4.3,baz=293,slow=7.2,SNR=17							
ASAR				PcP		PcP	17 02 07.0	+0.6
	comp=Z,1.2nm,0.8s,baz=326,slow=4.5,SNR=4.5							
ASAR				S		**S**	**17 06 01.0**	**+3.4**
	comp=Z,1.2nm,1.0s,baz=289,slow=15,SNR=5.6							
ASAR	**Alice Springs**	**39.53**	**126**	P		**P**	**16 59 59.5**	**-0.4**
ASAR							17 02 07.0	
ASAR				S		**S**	**17 06 01.0**	**+3.4**
ASAR				pmax		pmax		
	comp=Z,5.0nm,0.9s							
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
ASAR				smax				
	comp=N,1.0nm,1.0s							
GTA	**Gaotai**	**41.29**	**0**	*e*P		**P**	**17 00 15.0**	**+0.8**
GTA				AP		pP	17 00 23.6	-7.7
GTA				XP		sP	17 00 27.0	-12
GTA				AMB		AMB		
	comp=Z,13nm,0.9s,mb4.8							
WMQ	**Urumqi**	**46.93**	**348**	⇑*i*P		**P**	**17 01 00.3**	**+1.1**
WMQ				AP		pP	17 01 08.8	-7.8
WMQ				XP		sP	17 01 12.0	-13
WMQ				PCP		PcP	17 02 30.0	-0.8
WMQ				*e*S		**S**	**17 07 53.6**	**+8.4**
WMQ				XS		sS	17 08 05.6	-9.2
WMQ				AMB		AMB		
	comp=Z,29nm,0.9s,mb5.0							
WMQ				AMB		AMB		
	comp=Z,148nm,5.2s							
KSRS	**Korea Array**	**47.30**	**31**	P		**P**	**17 01 02.5**	**+0.3**
	comp=Z,12nm,1.0s,mb4.6,baz=222,slow=8.2,SNR=15							
KSRS				LR		LR	17 26 05.1	
	comp=Z,85nm,18.3s,baz=220,slow=42							
KSRS	**Korea Array**	**47.30**	**31**	P		**P**	**17 01 02.5**	**+0.3**
KSRS				pmax		pmax		
	comp=Z,12nm,1.0s,mb4.6							
KSRS				MLR		MLR		
	comp=Z,85nm,18.3s							
CTA	**Charters Tower**	**48.93**	**115**	P		**P**	**17 01 15.1**	**0.0**
	comp=Z,8.4nm,0.9s,mb4.7,baz=279,slow=9.2,SNR=5.1							
CTA	**Charters Tower**	**48.93**	**115**	P		**P**	**17 01 15.1**	**0.0**
CTA				pmax		pmax		
	comp=Z,8.0nm,0.9s							
STKA	**Stephens Creek**	**49.40**	**131**	*e*P		**P**	**17 01 19.0**	**+0.5**
	comp=Z,7.0nm,0.9s,mb4.6							
STKA	**Stephens Creek**	**49.40**	**131**	P		**P**	**17 01 19.1**	**+0.7**
	comp=Z,7.6nm,0.8s,mb4.7,baz=299,slow=8.8,SNR=9.7							
TKM2	**Tokmak 2**	**49.75**	**337**	*e*P		**P**	**17 01 20.8**	**-0.1**
TKM2				pmax		pmax		
	comp=Z,12nm,0.9s,mb4.8							
TKM2	**Tokmak 2**	**49.75**	**337**	*e*P		**P**	**17 01 20.8**	**-0.1**
	comp=Z,12nm,0.9s,mb4.8							
SONM	**Songino Array**	**50.06**	**6**	P		**P**	**17 01 24.4**	**+1.1**
	comp=Z,18nm,0.8s,mb5.1,baz=187,slow=9.2,SNR=123							
SONM				PcP		PcP	17 02 43.3	+1.2
	comp=Z,2.1nm,0.7s,baz=185,slow=3.4,SNR=3.2							
SONM	**Songino Array**	**50.06**	**6**	P		**P**	**17 01 24.4**	**+1.2**
SONM							17 02 43.3	
SONM				pmax		pmax		
	comp=Z,18nm,0.8s							
SONM				pmax		pmax		
	comp=Z,2.0nm,0.7s							
ULN	**Ulaanbaatar**	**50.17**	**7**	*e*P		**P**	**17 01 25.0**	**+1.0**
ULN				pmax		pmax		
	comp=Z,273nm,0.8s							
ULN	**Ulaanbaatar**	**50.17**	**7**	*e*P		**P**	**17 01 25.0**	**+1.0**
	comp=Z,273nm,0.8s							
EKS2	**Erkin-Say**	**50.27**	**335**	*e*P		**P**	**17 01 25.3**	**+0.4**
	comp=Z,9.2nm,0.8s,mb4.8							
MK31	**Makanchi Array**	**51.00**	**345**	*e*P		**P**	**17 01 30.2**	**-0.1**
MKAR	**Makanchi Array**	**51.00**	**345**	P		**P**	**17 01 30.5**	**+0.2**
	comp=Z,13nm,0.7s,mb5.1,baz=150,slow=8.2,SNR=120							
MKAR	**Makanchi Array**	**51.00**	**345**	P		**P**	**17 01 30.5**	**+0.2**
MKAR				pmax		pmax		
	comp=Z,13nm,0.7s							
CN2	**Changchun**	**51.22**	**24**	⇑P		**P**	**17 01 31.9**	**-0.1**
CN2				AMB		AMB		
	comp=Z,30nm,0.8s,mb5.4							
ZAK	**Zakamensk**	**52.36**	**3**	*e*P		**P**	**17 01 39.1**	**-1.2**
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.3s,mb4.2							
MJAR	**Matsushiro Arr**	**52.59**	**39**	P		**P**	**17 01 42.8**	**+0.4**
	comp=Z,5.2nm,1.0s,mb4.5,baz=222,slow=7.3,SNR=8.8							
MJAR	**Matsushiro Arr**	**52.59**	**39**	P		**P**	**17 01 42.8**	**+0.4**
MJAR				pmax		pmax		
	comp=Z,5.0nm,1.0s							
KURK	**Kurchatov**	**55.57**	**344**	P		**P**	**17 02 03.3**	**-0.5**
	comp=Z,5.8nm,0.8s,mb4.6,baz=167,slow=7.3,SNR=29							
KURK	**Kurchatov**	**55.57**	**344**	P		**P**	**17 02 03.3**	**-0.5**
KURK				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.7							
ZAA0	**Zalesovo Array**	**57.17**	**350**	*e*P		**P**	**17 02 15.0**	**-0.1**
ZALV	**Zalesovo Beam**	**57.17**	**350**	P		**P**	**17 02 15.3**	**+0.2**
	comp=Z,24nm,0.8s,mb5.3,baz=178,slow=4.5,SNR=83							
ZALV	**Zalesovo Beam**	**57.17**	**350**	P		**P**	**17 02 15.3**	**+0.2**
ZALV				pmax		pmax		
	comp=Z,24nm,0.8s,mb5.3							
ZALV	**Zalesovo Beam**	**57.17**	**350**	P		**P**	**17 02 15.3**	**+0.2**
KRAR	**Krasnoyarsk**	**58.16**	**356**	*e*P		**P**	**17 02 22.3**	**+0.3**
KRAR				pmax		pmax		
	comp=Z,29nm,0.5s,mb5.6							
KLR	**Kul'dur**	**58.17**	**24**	*e*P		**P**	**17 02 19.1**	**-3.1**
KLR				pmax		pmax		
	comp=E,40nm,1.6s							
KLR				pmax		pmax		
	comp=Z,65nm,1.6s,mb5.4							
NVS	**Novosibirsk**	**58.32**	**349**	*e*P		**P**	**17 02 16.5**	**-6.6**
NVS				pmax		pmax		
	comp=Z,16nm,1.2s,mb4.9							
NVS				pmax		pmax		
	comp=N,9.0nm,0.7s							
NVS				pmax		pmax		
	comp=E,7.0nm,1.0s							
BVAR	**Borovoye Array**	**60.12**	**340**	P		**P**	**17 02 34.6**	**-1.0**
	comp=E,4.1nm,0.7s,mb4.6,baz=141,slow=9.6,SNR=21							
BVAR	**Borovoye Array**	**60.12**	**340**	P		**P**	**17 02 34.6**	**-1.0**
BVAR				pmax		pmax		
	comp=Z,4.0nm,0.7s							
YSS	**Yuzh-Sakhalins**	**61.76**	**32**	⇑*e*P		**P**	**17 02 47.0**	**+0.1**
YSS				*e*			17 02 57.0	
YSS				pmax		pmax		
	comp=Z,40nm,1.1s,mb5.4							
AKTK	**Aktyubinsk**	**63.24**	**332**	P		**P**	**17 02 55.2**	**-1.4**
AKTO	**Aktyubinsk**	**63.24**	**332**	P		**P**	**17 02 55.2**	**-1.4**
	comp=Z,2.8nm,0.9s,mb4.2,baz=148,slow=4.7,SNR=6.5							
AKTO	**Aktyubinsk**	**63.24**	**332**	P		**P**	**17 02 55.2**	**-1.4**
AKTO				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.2							
SVE	**Sverdlovsk**	**66.61**	**338**	*e*P		**P**	**17 03 18.5**	**+0.1**
SVE				pmax		pmax		
	comp=Z,16nm,0.8s,mb4.9							
ARU	**Arti**	**67.12**	**337**	*d i*P		**P**	**17 03 20.4**	**-1.3**
ARU				*e*			17 05 47.6	
ARU				PPP			17 07 24.7	
ARU				*e*S		S	17 12 13.2	+2.8
ARU				*e*SS		SS	17 16 27.5	-3.3
ARU				pmax		pmax		
	comp=Z,13nm,1.7s,mb4.5							
ARU	**Arti**	**67.12**	**337**	P		**P**	**17 03 20.0**	**-1.7**
	comp=Z,4.3nm,1.1s,mb4.2							
YAK	**Yakutsk**	**67.92**	**15**	*c i*P		**P**	**17 03 26.0**	**-0.6**
YAK				pmax		pmax		
	comp=Z,11nm,0.6s,mb4.9							
KIV	**Kislovodsk**	**68.34**	**319**	*e*P		**P**	**17 03 29.2**	**-0.4**
KIV				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.4							
MAW	**Mawson**	**70.11**	**194**	LR		LR	17 28 02.9	
	comp=Z,82nm,18.7s,baz=245,slow=30							
PETK	**Petropavlovsk-**	**73.17**	**32**	P		**P**	**17 03 58.9**	**+0.2**
	comp=Z,2.6nm,0.7s,mb4.2,baz=245,slow=4.3,SNR=4.2							
PETK	**Petropavlovsk-**	**73.17**	**32**	P		**P**	**17 03 58.9**	**+0.2**
PETK				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.2							
OBN	**Obninsk**	**76.65**	**328**	⇓*e*P		**P**	**17 04 18.5**	**-0.3**
OBN				*e*			17 07 05.5	
OBN				*e*S		S	17 14 04.6	+4.8
OBN				pmax		pmax		
	comp=Z,7.0nm,0.5s,mb4.7							
AKASG	**Malin Array Be**	**79.30**	**322**	*i* P		**P**	**17 04 34.4**	**+0.8**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
BUR08	**Bucovina Ar. S**	**81.07**	**319**	*e*P		**P**	**17 04 43.4**	**+0.3**
ARCES	**ARCESS Array B**	**86.41**	**340**	P		**P**	**17 05 09.2**	**-0.8**
	comp=Z,3.3nm,0.8s,mb4.3,baz=92,slow=3.6,SNR=4.6							
ARCES	**ARCESS Array B**	**86.41**	**340**	P		**P**	**17 05 09.2**	**-0.8**
ARCES				pmax		pmax		
	comp=Z,3.0nm,0.8s							
GERES	**GERESS Array B**	**88.84**	**319**	P		**P**	**17 05 22.6**	**+0.5**
	comp=Z,0.6nm,0.6s,mb3.8,baz=101,slow=2.7,SNR=4.7							
GERES	**GERESS Array B**	**88.84**	**319**	P		**P**	**17 05 22.6**	**+0.5**
GERES				pmax		pmax		
	comp=Z,1.0nm,0.6s							
NOA	**NORSAR Array B**	**91.02**	**331**	LR		LR	17 51 27.8	
	comp=Z,28nm,19.6s,baz=90,slow=39							
TXAR	**Lajitas Array**	**145.01**	**37**	PKPbc		PKPbc	17 12 06.6	+1.5
	comp=Z,9.7nm,0.7s,baz=280,slow=1.6,SNR=28							
TXAR	**Lajitas Array**	**145.01**	**37**	PKIKP		PKPdf	17 12 06.6	+1.0
TXAR				pmax		pmax		
	comp=Z,10.0nm,0.7s							
TXAR	**Lajitas Array**	**145.01**	**37**	PKPbc		PKPbc	17 12 06.6	+1.5
WVT	**Waverly**	**145.43**	**11**	*e*PKIKP		PKPdf	17 12 05.9	-0.3
MIAR	**Mount Ida**	**145.45**	**19**	*e*PKIKP		PKPdf	17 12 06.7	+0.5
TZTN	**Tazewell**	**145.59**	**4**	*e*PKP		PKPdf	17 12 06.3	-0.1
JCT	**Junction City**	**146.30**	**31**	*e*PKP2		PKPab	17 12 09.8	-0.1

*THE **18** 16:53:59.9, 3962N×2397E, h3km, ML3.7*
*ISCJB **18** 16:53:59.4±0.3, 3961N±002×2392E±002, h10km, Error ellipse: s-maj=2.6km s-min=2.6km az=27.4*
*NEIC **18** 16:53:59.9, 3962N×2397E, h3km, ML3.5(ATH), ML3.7(THE), After THE.*
*ATH **18** 16:54:00.0, 3968N×2393E, h5km±3km, MD3.7/9, ML3.5*
*CSEM **18** 16:54:01.4±0.1, 3958N×2394E, h20km, MD3.7/5, Error ellipse: s-maj=1.7km s-min=1.4km az=96.0*
*SOF **18** 16:54:03.4, 3981N×24.14E, h15km, MD3.3*

ISC 18 16:53:59.8±0.4, 3962N±002×2396E±003, h4km±4km, n57, σ1§18/77, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PAIG	**Paliouri**	**0.38**	**325**	*e*Pg		**Pg**	**16 54 07.2**	**+0.2**
PAIG				*e*Sg		**Sg**	**16 54 12.2**	**+0.2**
AOS	**Alonnisos**	**0.45**	**188**	*e*Pg		**Pg**	**16 54 09.3**	**+0.9**
AOS				*e*Sg		**Sg**	**16 54 15.6**	**+1.4**
XOR	**Xorichti**	**0.64**	**247**	*e*Pg		**Pg**	**16 54 13.1**	**+0.9**
NEO	**Neokhori**	**0.65**	**242**	*e*PB		**Pg**	**16 54 13.0**	**+0.8**
NEO	**Neokhori**	**0.65**	**242**	*e*Pb		**Pg**	**16 54 13.2**	**+1.0**
OUR	**Ouranopolis**	**0.72**	**1**	*e*Pg		**Pg**	**16 54 13.3**	**-0.2**
PLG	**Polygyros**	**0.85**	**333**	*e*Pg		**Pg**	**16 54 15.5**	**-0.6**
PLG	**Polygyros**	**0.85**	**333**	*e*PB		**Pb**	**16 54 14.9**	**-2.3**
LOS	**Limnos**	**0.92**	**70**	*e*Pg		**Pg**	**16 54 16.9**	**-0.6**
LIA	**Limnos Island**	**0.98**	**73**	*e*Pg		**Pg**	**16 54 18.1**	**-0.6**
LIA				*e*Sg		**Sg**	**16 54 32.5**	**+1.0**
LIA	**Limnos Island**	**0.98**	**73**	*e*Pb		**Pb**	**16 54 18.9**	**-0.5**
LIA	**Limnos Island**	**0.98**	**73**	P		**Pg**	**16 54 21.2**	**+2.5**
LIA				*e*Sg		**Sg**	**16 54 32.5**	**+1.1**
LIA				*e*Sb		**Sb**	**16 54 32.8**	**+0.1**
LIA	**Limnos Island**	**0.98**	**73**	*e*Pb		**Pb**	**16 54 18.9**	**-0.5**
LIA				P			16 54 21.2	
LIA				*e*Sb		**Sb**	**16 54 32.8**	**+0.1**
HORT	**Hortiatis**	**1.18**	**326**	*e*Pg		**Pg**	**16 54 22.4**	**0.0**
LKR	**Lokris**	**1.22**	**218**	*e*Pg		**Pg**	**16 54 21.9**	**-1.2**
LKR	**Lokris**	**1.22**	**218**	*e*Pb		**Pb**	**16 54 24.0**	**+0.6**
LKR	**Lokris**	**1.22**	**218**	P		**Pg**	**16 54 25.0**	**+1.8**
LKR	**Lokris**	**1.22**	**218**	*e*Pb		**Pb**	**16 54 24.0**	**+0.6**
LKR				P			16 54 25.0	
LIT	**Litokhoron**	**1.23**	**294**	*e*Pg		**Pg**	**16 54 23.3**	**-0.1**
LIT				*e*Sg		**Sg**	**16 54 40.0**	**+0.7**
THE	**Thessaloniki**	**1.27**	**323**	*e*Pg		**Pg**	**16 54 24.4**	**+0.3**
SOH	**Sokhos**	**1.29**	**339**	*e*Pg		**Pg**	**16 54 24.6**	**0.0**
SOH				*e*Sg		**Sg**	**16 54 43.0**	**+1.7**
AGG	**Agios Georgios**	**1.40**	**245**	*e*Pg		**Pg**	**16 54 25.0**	**-1.5**
AGG				*e*Sg		**Sg**	**16 54 45.5**	**+0.9**
THL	**Klokotos Trika**	**1.50**	**269**	*e*Pg		**Pg**	**16 54 26.7**	**-1.9**
THL				*e*Sg		**Sg**	**16 54 48.1**	**+0.1**
THL	**Klokotos Trika**	**1.50**	**269**	*e*Pb		**Pb**	**16 54 28.8**	**+0.6**
THL				*e*Sg		**Sg**	**16 54 48.1**	**0.0**
PTL	**Penteli**	**1.57**	**183**	*e*PG		**Pg**	**16 54 30.0**	**+0.2**
PTL	**Penteli**	**1.57**	**183**	*e*Pn		**Pn**	**16 54 28.0**	**-0.4**
ATH	**Athens Observa**	**1.65**	**187**	*e*PG		**Pg**	**16 54 31.9**	**+0.4**
NVR	**Nevrokopi**	**1.73**	**358**	*e*PB		**Pb**	**16 54 31.6**	**-0.6**
KNT	**Kendrikon**	**1.74**	**333**	*e*Pb		**Pb**	**16 54 30.9**	**-1.5**
LTK	**

*ISCJB **18** 17:46:28.4±0.5, 3931N×003×1722E×004, h6km±6km, Error ellipse: s-maj=5.6km s-min=4.9km az=43.9*
*CSEM **18** 17:46:28.6±0.1, 3926N×1722E, h12km, MD2.9/3, Error ellipse: s-maj=1.7km s-min=1.3km az=152.0*
*ROM **18** 17:46:29.6±0.3, 3926N×1722E, h10km, Md2.9/3, Ml2.9/15, Error ellipse: s-maj=4.4km s-min=2.5km az=128.0*

ISC 18 17:46:29.6±0.5, 3932N±003×1719E±004, h10km±6km, n33, σ0§88/37, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SERS	**Sersale**	**0.48**	**234**	Pg	**Pg**	**17 46 38.7**	**-0.2**
SERS				Sg	**Sg**	**17 46 45.6**	**+0.3**
	643nm,0.6s						
CARO	**Carolei**	**0.76**	**265**	Pg	**Pg**	**17 46 43.0**	**-1.1**
CARO				Sg	**Sg**	**17 46 55.5**	**+1.5**
	501nm,0.6s						
GRI	**Girifalco**	**0.78**	**231**	Pg	**Pg**	**17 46 44.2**	**-0.4**
	313nm,0.6s						
ORI	**Oriolo Calabro**	**0.94**	**323**	Pg	**Pg**	**17 46 49.0**	**+1.4**
	833nm,0.5s						
PLAC	**Placanica**	**1.05**	**214**	Pg	**Pg**	**17 46 49.0**	**-0.7**
	58nm,0.6s						
CRAC	**Craco**	**1.20**	**331**	Pg	**Pg**	**17 46 53.1**	**+0.6**
	432nm,0.5s						
SCHR	**S. Chirico Rap**	**1.23**	**316**	Pg	**Pg**	**17 46 54.5**	**+1.3**
	95nm,0.5s						
JOPP	**Joppolo**	**1.24**	**235**	Pg	**Pg**	**17 46 52.2**	**-1.2**
	141nm,0.9s						
SCTE	**Santa Cesarea**	**1.24**	**52**	Pg	**Pg**	**17 46 52.4**	**-1.0**
SCTE				Sg	**Sg**	**17 47 09.7**	**+0.2**
	380nm,0.3s						
CUC	**Castrocucco**	**1.25**	**303**	Pg	**Pg**	**17 46 54.2**	**+0.5**
	408nm,1.0s						
SIRI	**Monte Sirino -**	**1.33**	**311**	Pg	**Pg**	**17 46 55.1**	**-0.1**
	118nm,0.5s						
MIGL	**Miglionico**	**1.41**	**336**	Pg	**Pn**	**17 46 55.2**	**0.0**
	703nm,0.8s						
MCEL	**Monticello**	**1.47**	**314**	Pg	**Pg**	**17 46 56.7**	**-1.0**
	166nm,0.7s						
PTRP	**Pietrapertosa**	**1.48**	**325**	Pg	**Pg**	**17 46 57.2**	**-0.8**
	265nm,0.7s						
PE1	**Pezze di Greco**	**1.50**	**7**	*e*Pn	**Pn**	**17 46 55.6**	**-0.9**
PE1				*e*Sn	**Sn**	**17 47 15.0**	**-1.0**
SOI	**Samo**	**1.53**	**216**	Pg	**Pn**	**17 46 57.4**	**+0.5**
	83nm,0.9s						
SG1	**Sgolgore (BA)**	**1.57**	**346**	*e*Pn	**Pn**	**17 46 56.8**	**-0.7**
KEK	**Kerkira**	**2.06**	**78**	*e*P	**Pn**	**17 47 03.8**	**-0.4**
IGT	**Igoumenitsa**	**2.44**	**84**	*e*P	**Pn**	**17 47 09.1**	**-0.4**
LKD	**Levkas**	**2.77**	**102**	*e*P	**Pn**	**17 47 13.6**	**-0.3**
VLS	**Valsamata**	**2.89**	**112**	*e*P	**Pn**	**17 47 14.9**	**-0.8**
VLS	**Valsamata**	**2.89**	**112**	*e*P	**Pn**	**17 47 15.2**	**-0.5**
KFL	**Anninata**	**3.06**	**112**	*e*P	**Pn**	**17 47 16.6**	**-1.4**
FNA	**Florina**	**3.53**	**64**	*e*P	**Pn**	**17 47 25.1**	**+0.6**
RLS	**Riolos of Patr**	**3.58**	**109**	*e*P	**Pn**	**17 47 25.9**	**+0.8**
KRUS	**Krusevo**	**3.72**	**55**	*i* Pn	**Pn**	**17 47 27.9**	**+0.9**
KRUS	**Krusevo**	**3.72**	**55**	*i* Pn	**Pn**	**17 47 28.4**	**+0.8**
THL	**Klokotos Trika**	**3.75**	**85**	*e*P	**Pn**	**17 47 28.9**	**+1.5**
THL	**Klokotos Trika**	**3.75**	**85**	*e*P	**Pn**	**17 47 28.7**	**+1.3**
AGG	**Agios Georgios**	**4.01**	**93**	*e*P	**Pn**	**17 47 32.5**	**+1.5**
ITM	**Ithomi**	**4.30**	**118**	*e*P	**Pn**	**17 47 35.1**	**+0.1**
PYL	**PYLOS**	**4.33**	**123**	*e*P	**Pn**	**17 47 34.8**	**-0.7**
VLI	**Veliai**	**5.23**	**118**	*e*P	**Pn**	**17 47 49.4**	**+1.6**

IDC 18 17:46:49.7±3.3, 655S×14855E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.4/15, mbtmp3.5/3, MS3.6/1, Ms1 3.8/1, ms1mx2.9/14, Error ellipse: s-maj=98.9km s-min=44.0km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.17**	**225**	P	Pn	17 51 15.1	-0.7
	baz=52,slow=11,SNR=46						
ASAR	**Alice Springs**	**22.09**	**218**	P	P	17 51 48.0	+1.5
	0.7nm,0.4s,baz=52,slow=8.3,SNR=42						
FITZ	**Fitzroy Crossi**	**25.12**	**241**	P	P	17 52 15.3	-1.2
	1.1nm,0.7s,baz=90,slow=11,SNR=8.4						
CMAR	**Chiang Mai Arr**	**54.87**	**298**	LR	LR	18 21 19.0	
	comp=Z,54nm,19.1s,baz=230,slow=38						
TORD	**Torodi Ar. Bea**	**146.72**	**284**	PKPbc	PKPbc	18 06 34.0	-0.6
	0.9nm,0.6s,baz=81,slow=4.3,SNR=8.5						

*CSEM **18** 17:46:51.8, 4340N×4602E, h17km, mb4.2, After OBN*
*MOS **18** 17:46:51.8±1.3, 4340N×4602E, h17km, mb4.2/1, Error ellipse: s-maj=10.9km s-min=8.3km az=3.6*
*ISCJB **18** 17:46:53.0±0.7, 4339N±004×4603E×004, h18km±6km, Error ellipse: s-maj=7.8km s-min=3.6km az=21.8*
*TIF **18** 17:46:52.4, 4325N×4597E, h13km±1km*

ISC 18 17:46:52.4±0.6, 4337N±004×4599E±003, h5km±4km, n22, σ1§11/40, 1C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.70**	**119**	*e*PG	**Pg**	**17 47 06.0**	**+0.2**
DBC				*i* S	**Sg**	**17 47 16.0**	**+1.1**
KRNR	**Karanay**	**0.86**	**128**	*i* PG	**Pg**	**17 47 08.2**	**-0.6**
KRNR				*i* S	**Sg**	**17 47 20.0**	**+0.1**
SNJR	**Sundja**	**0.91**	**252**	*e*Pg	**Pg**	**17 47 08.9**	**-1.0**
SNJR				*e*Sg	**Sg**	**17 47 22.3**	**+0.6**
TRKR	**Terskaya**	**0.98**	**292**	*e*Pg	**Pg**	**17 47 12.2**	**+0.9**
TRKR				*i* Sg	**Sg**	**17 47 26.8**	**+2.8**
VLKR	**Vladikavkaz**	**1.01**	**252**	*e*Pg	**Pg**	**17 47 11.2**	**-0.6**
VLKR				*e*Sg	**Sg**	**17 47 25.5**	**+0.6**
BTKR	**Batakoyurt**	**1.06**	**271**	*i* Pg	**Pg**	**17 47 12.3**	**-0.4**
BTKR				*e*Sg	**Sg**	**17 47 27.0**	**+0.6**
KMSR	**Komsomolskaya**	**1.24**	**271**	*e*Pg	**Pg**	**17 47 16.0**	**-0.2**
KMSR				*e*Sg	**Sg**	**17 47 33.8**	**+1.6**
ARNR	**Ardon**	**1.27**	**263**	*i* Pg	**Pg**	**17 47 15.4**	**-1.2**
ARNR				*i* Sg	**Sg**	**17 47 32.7**	**-0.3**
PRTR	**Priterechnaya**	**1.30**	**288**	*e*Pg	**Pg**	**17 47 17.3**	**0.0**
PRTR				*e*Sg	**Sg**	**17 47 36.0**	**+1.8**
LACR	**Lac**	**1.36**	**247**	*i* Pg	**Pg**	**17 47 14.9**	**-3.4**
KORR	**Kora**	**1.44**	**259**	*i* Pg	**Pg**	**17 47 17.8**	**-2.1**
KORR				*e*Sg	**Sg**	**17 47 37.1**	**-1.4**
ZEI	**Tsey**	**1.65**	**250**	*i* Pn	**Pn**	**17 47 19.7**	**-2.3**
URKR	**Urkarakh**	**1.70**	**134**	*e*PN	**Pn**	**17 47 22.5**	**-0.2**
URKR				*e*S	**Sn**	**17 47 45.0**	**+0.2**
URKR				pmax	pmax		
	comp=Z,61nm,0.3s						
URKR	**Urkarakh**	**1.70**	**134**	*e*Pn	**Pn**	**17 47 22.5**	**-0.2**
	comp=Z,61nm,0.3s						
URKR				*e*Sg	**Sn**	**17 47 45.0**	**+0.2**
TBLG	**Delisi**	**1.88**	**210**	P	**Pn**	**17 47 25.0**	**-0.1**
TBLG				S	**Sn**	**17 47 49.0**	**-0.2**
MTA	**Mtatsminda**	**1.89**	**208**	P	**Pn**	**17 47 24.9**	**-0.4**
MTA				S	**Sn**	**17 47 48.8**	**-0.7**
DGRG	**David-gareji**	**1.97**	**194**	P	**Pn**	**17 47 27.3**	**+1.0**
DGRG				S	**Sn**	**17 47 53.1**	**+1.7**
ONI	**Oni**	**2.02**	**248**	P	**Pn**	**17 47 26.3**	**-0.9**
ONI				S	**Sn**	**17 47 53.7**	**+0.9**
KIV	**Kislovodsk**	**2.47**	**285↑**	*e*PN	**Pn**	**17 47 32.4**	**-0.9**
GOF	**Gofitskoye**	**2.72**	**310**	*e*PN	**Pn**	**17 47 33.4**	**-3.3**
GOF				*i* S	**Sn**	**17 48 10.2**	**+0.2**
GOF				pmax	pmax		
	comp=Z,60nm,1.0s						
GOF				smax			
	comp=N,60nm,0.9s						
GOF				smax			
	comp=E,100nm,0.9s						
GOF	**Gofitskoye**	**2.72**	**310**	*e*Pn	**Pn**	**17 47 33.4**	**-3.3**
	comp=E,60nm,1.0s						
GOF				*i* Sn	**Sn**	**17 48 10.2**	**+0.2**
GNI	**Garni**	**3.35**	**197**	*i* Pn	**Pn**	**17 47 47.4**	**+2.1**

NNC 18 18:25:24.9±9.5, 3690N×7086E, h0km, mb3.8, mpv3.7, 2C-1D, Error ellipse: s-maj=93.6km s-min=75.3km az=41.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.20**	**358**	⇑P	Pn	18 26 59.4	+1.8
	4.2nm,0.3s,baz=178,slow=13,SNR=352						
KK31				⇓S	Sn	18 28 10.0	+0.9
	1.3nm,0.5s,baz=180,slow=21,SNR=6.2						
TKM2	**Tokmak 2**	**7.03**	**30**	⇑P	Pn	18 27 07.7	-1.3
	1.7nm,0.6s						
AB31	**Akbulak array**	**14.68**	**331**	P	Pn	18 28 53.1	-0.5
	0.2nm,0.3s,baz=164,slow=11,SNR=16						

*IDC **18** 18:34:19.3±0.7, 1647S×17845E, h0km, mb4.1/13, mb1 4.3/13, mb1mx4.2/20, mbtmp4.1/13, MS4.2/19, Ms1 4.2/19, ms1mx4.1/21, Error ellipse: s-maj=26.6km s-min=17.1km az=131.0*
*GCMT **18** 18:34:20.9±0.2, 1615S×17836E, h18km, MW5.1/86, Moment Tensor Solution. s49,c73; s86,c132; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.97±.15; Mθθ-0.23±.13; Mφφ2.20±.13; Mrθ-0.22±.26; Mθφ4.64±.10; Mφr-0.79±.28; Best double couple: M○4.85900×10¹⁶ NP1:φ263.00000°, δ79.00000°, λ-3.00000°. NP2: φ353.00000°, δ87.00000°, λ-169.00000°. Principal axes: T 5.8570, Plg6.0000°, Azm127.0000°; N -1.9910, Plg79.0000°, Azm8.0000°; P -3.8620, Plg10.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **18** 18:34:20.9±0.5, 1647S×17838E, h10km, mb4.8/3 Error ellipse: s-maj=19.2km s-min=13.7km az=124.0*
*ISCJB **18** 18:34:22.8±0.6, 165S±0.1×1784E±0.1, h33km, mb4.2/15, MS4.3/16, Error ellipse: s-maj=17.6km s-min=13.3km az=39.0*

ISC 18 18:34:24.8±0.6, 165S±01×1784E±01, h35km, n45, σ0§94/18, mb4.2/15, MS4.3/16, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.87**	**76**	LR	LR	18 39 38.0	
	comp=Z,804nm,20.0s,baz=259,slow=33						
RAO	**Raoul Island**	**13.15**	**166**	LR	LR	18 41 45.1	
	comp=Z,2μm,20.6s,baz=186,slow=34						
HNR	**Honiara**	**19.25**	**289**	LR	LR	18 45 04.4	
	comp=Z,906nm,19.0s,baz=314,slow=33						
RAR	**Rarotonga**	**21.22**	**106**	LR	LR	18 45 49.0	
	comp=Z,346nm,20.2s,MS3.7,baz=278,slow=33						
URZ	**Urewera**	**21.71**	**183**	P	**P**	**18 39 12.2**	**-0.6**
	9.2nm,0.9s,mb4.2,baz=347,slow=11,SNR=4.0						
URZ				LR	LR	18 46 31.3	
	comp=Z,1μm,18.3s,MS4.3,baz=6.1,slow=34						
RPZ	**Rata Peaks**	**27.83**	**191**	P	**P**	**18 40 11.6**	**+0.9**
	1.4nm,0.3s,mb4.1,baz=309,slow=6.5,SNR=2.9						
PPT	**Papeete**	**30.66**	**97**	*e*LQ		18 47 17.5	
	2μm,26.5s						
PPT				*e*LR	LR	18 48 41.4	
	1μm,30.0s,baz=266						
PPT	**Papeete**	**30.66**	**97**	LR	LR	18 51 27.5	
	comp=Z,106nm,18.8s,MS3.5,baz=266,slow=34						
STKA	**Stephens Creek**	**36.66**	**239**	P	**P**	**18 41 29.1**	**+0.9**
	14nm,1.0s,mb4.8,baz=49,slow=10.0,SNR=6.3						
STKA				LR	LR	18 55 18.0	
	comp=Z,432nm,18.3s,MS4.3,baz=52,slow=34						
TAOE	**Nuku Hiva Isla**	**41.13**	**85**	*e*LR	LR	18 53 33.7	
	2μm,26.9s						
WB2	**Warramunga Arr**	**41.85**	**258**	*e*P	**P**	**18 42 11.1**	**-0.6**
WRAB	**Tennant Creek**	**41.85**	**258**	*e*P	**P**	**18 42 10.9**	**-0.8**
	13nm,1.4s,mb4.4						
WRA	**Warramunga Arr**	**41.86**	**258**	P	**P**	**18 42 11.1**	**-0.7**
	1.4nm,0.9s,mb3.6,baz=93,slow=7.8,SNR=13						
WRA				LR	LR	18 57 49.6	
	comp=Z,288nm,18.8s,MS4.2,baz=315,slow=34						
ASAR	**Alice Springs**	**42.22**	**253**	P	**P**	**18 42 13.8**	**-0.8**
	3.1nm,0.7s,mb4.1,baz=84,slow=8.8,SNR=52						
RKT	**Rikitea**	**44.26**	**106**	LR	LR	18 55 02.3	
	1μm,30.5s						
SBA	**Scott Base**	**61.65**	**183**	P	**P**	**18 44 38.7**	**+0.1**
	19nm,1.3s,mb5.1						
MJAR	**Matsushiro Arr**	**64.96**	**325**	P	**P**	**18 45 01.9**	**+0.9**
	5.1nm,1.1s,mb4.5,baz=162,slow=4.7,SNR=6.0						
MJAR				LR	LR	19 07 38.2	
	comp=Z,289nm,19.4s,MS4.5,baz=55,slow=31						
MJAR	**Matsushiro Arr**	**64.96**	**325**	P	**P**	**18 45 01.9**	**+0.9**
MJAR				LR	LR	19 07 38.2	
PETK	**Petropavlovsk-**	**71.58**	**347**	LR	LR	19 16 36.8	
	comp=Z,112nm,18.7s,MS4.2,baz=322,slow=36						
KSRS	**Korea Array**	**71.61**	**320**	LR	LR	19 11 07.9	
	comp=Z,310nm,19.8s,MS4.6,baz=149,slow=31						
YBH	**Yreka Blue Hor**	**79.44**	**41**	P	**P**	**18 46 27.0**	**-0.4**
	2.3nm,0.9s,mb4.1,baz=212,slow=9.5,SNR=2.4						
NVAR	**Mina Array Bea**	**80.60**	**45**	P	**P**	**18 46 32.0**	**-1.8**
	2.9nm,1.0s,mb4.2,baz=229,slow=9.0,SNR=8.3						
ELK	**Elko**	**83.79**	**44**	P	**P**	**18 46 49.8**	**-0.7**
	1.2nm,0.9s,mb4.0,baz=226,slow=5.8,SNR=3.7						
MAW	**Mawson**	**84.11**	**200**	*e*P	**P**	**18 46 52.3**	**+0.5**
	4.6nm,0.8s,mb4.7						
MAW	**Mawson**	**84.11**	**200**	P	**P**	**18 46 52.4**	**+0.7**
	2.3nm,1.0s,mb4.3,baz=114,slow=10,SNR=4.7						
MAW				LR	LR	19 22 23.8	
	comp=Z,108nm,18.1s,MS4.3,baz=258,slow=34						
CMAR	**Chiang Mai Arr**	**85.50**	**291**	P	**P**	**18 46 59.8**	**+0.1**
	1.1nm,0.8s,mb4.0,baz=156,slow=4.3,SNR=3.9						
CMAR				LR	LR	19 22 33.6	
	comp=Z,112nm,18.2s,MS4.3,baz=33,slow=34						
TXAR	**Lajitas Array**	**87.89**	**59**	P	**P**	**18 47 12.1**	**+1.1**
	0.5nm,1.0s,mb3.7,baz=256,slow=3.7,SNR=3.9						
TXAR				LR	LR	19 20 30.1	
	comp=Z,143nm,18.2s,MS4.4,baz=355,slow=32						
PDAR	**Pinedale Array**	**88.49**	**45**	LR	LR	19 18 24.8	
	comp=Z,112nm,21.1s,MS4.3,baz=253,slow=30						
SONM	**Songino Array**	**90.48**	**320**	P	**P**	**18 47 25.0**	**+2.2**
	1.3nm,1.0s,mb4.2,baz=100,slow=6.3,SNR=6.4						
SONM				LR	LR	19 27 28.9	
	comp=Z,97nm,18.8s,MS4.3,baz=170,slow=35						
YKA	**Yellowknife Ar**	**94.37**	**25**	LR	LR	19 27 33.1	
	comp=Z,146nm,18.3s,MS4.5,baz=45,slow=34						
PLCA	**Paso Flores**	**94.53**	**135**	LR	LR	19 20 02.3	
	comp=Z,160nm,21.5s,MS4.5,baz=190,slow=29						
ULM	**Lac du Bonnet**	**99.84**	**41**	LR	LR	19 27 07.8	
	comp=Z,117nm,18.2s,MS4.4,baz=264,slow=32						
KHC	**Kasperske Hory**	**145.17**	**342**	*e*P	PKPbc	18 54 04.0	+5.9
GEC2	**GERESS Array S**	**145.39**	**342**	*e*PKPdf	PKPdf	18 53 57.0	-1.9
GERES	**GERESS Array B**	**145.39**	**342**	PKPbc	PKPbc	18 53 57.5	-1.3
	0.9nm,0.7s,baz=356,slow=5.9,SNR=3.0						
BFO	**Black Forest**	**147.22**	**348**	*e*PKPbc	PKPbc	18 54 06.2	+1.9
CDF	**Champ du Feu**	**147.34**	**349**	*e*PKP1	PKPbc	18 54 05.9	+1.2
	39nm,1.4s						
HAU	**Haudompre**	**147.90**	**350**	*e*PKP1	PKPbc	18 54 06.8	+0.6
DAVOX	**Davos/Dischmat**	**148.32**	**345**	PKPbc	PKPbc	18 54 09.6	+2.2
	2.9nm,0.7s,baz=268,slow=10.0,SNR=2.9						
DAVOX	**Davos/Dischmat**	**148.32**	**345**	PKPbc	PKPbc	18 54 09.6	+2.2
LOR	**Lormes**	**148.98**	**353**	*e*PKP1	PKPbc	18 54 10.2	+1.2
SSF	**Saint Saulge**	**149.23**	**353**	*e*PKP1	PKPbc	18 54 11.0	+1.4
	31nm,1.2s						
LPL	**La Plagne**	**150.23**	**348**	*e*PKP1	PKPbc	18 54 13.9	+1.7
	42nm,1.5s						
LPG	**La Plagne**	**150.24**	**348**	*e*PKP1	PKPbc	18 54 13.8	+1.6
	54nm,1.4s						
ORIF	**Oris-en-Rattie**	**150.97**	**349**	*e*PKP1	PKPbc	18 54 13.1	-0.8

*IDC **18** 18:40:44.8±1.3, 3431N×2622E, h0km, mb3.8/3, mb1 3.7/6, mb1mx3.5/24, mbtmp3.7/6, ML3.8/3, MS2.8/1, Ms1 2.8/1, ms1mx2.0/38, Error ellipse: s-maj=27.2km s-min=18.5km az=19.0*
*CSEM **18** 18:40:47.3±0.1, 3427N×2629E, h30km, ML3.7, Error ellipse: s-maj=5.5km s-min=2.4km az=42.0*
*ISCJB **18** 18:40:47.5±0.3, 3435N±003×2634E±004, h33km, mb3.7/3, Error ellipse: s-maj=5.8km s-min=2.7km az=42.1*
*NEIC **18** 18:40:49.8, 3454N×2603E, h98km, MG3.3(ATH), After ATH.*
*HLW **18** 18:40:49.0, 3438N×2625E, h26km, Mb3.9*
*ATH **18** 18:40:49.8, 3454N×2603E, h98km±2km*
*THE **18** 18:40:49.9, 3444N×2632E, h71km, ML3.7*
*GII **18** 18:42:04.1±0.7, 3205N×3263E, h0km±7km, mb4.0/1, ML3.8/4*

ISC 18 18:40:49.4±0.3, 3437N±003×2627E±004, h35km, n61, σ1§05/75, mb3.7/3, 5C, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.74**	**357**	*e*Pg	**Pn**	**18 41 03.9**	**+0.5**
ZKR				*e*Sg	**Sn**	**18 41 14.9**	**+1.5**
ZKR	**Zakros**	**0.74**	**357**	P	**Pn**	**18 41 04.1**	**+0.7**
LAST	**Lasithi**	**1.02**	**321**	*e*Pg	**Pn**	**18 41 07.4**	**+0.1**
LAST				*e*Sg	**Sn**	**18 41 21.1**	**+0.8**
LAST	**Lasithi**	**1.02**	**321**	P	**Pn**	**18 41 07.6**	**+0.4**
NPS	**Neapolis**	**1.04**	**329**	*e*P	**Pn**	**18 41 08.2**	**+0.7**
NPS				*e*S	**Sn**	**18 41 21.7**	**+0.9**
SIVA	**Sivas**	**1.37**	**299**	*e*Pg	**Pn**	**18 41 12.1**	**+0.1**
SIVA				*e*Sg	**Sn**	**18 41 30.9**	**+2.0**
SIVA	**Sivas**	**1.37**	**299**	P	**Pn**	**18 41 13.3**	**+1.4**
SIVA				*e*Sg	**Sn**	**18 41 30.9**	**+2.1**
SIVA	**Sivas**	**1.37**	**299**	P	**Pn**	**18 41 13.3**	**+1.4**
KARP	**Karpathos**	**1.38**	**32**	*e*P	**Pn**	**18 41 14.9**	**+2.7**
IDI	**Anoyia**	**1.46**	**309**	Pn	**Pn**	**18 41 13.7**	**+0.5**
	11nm,0.3s,baz=134,slow=7.7,SNR=106						
IDI				Sn	**Sn**	**18 41 31.8**	**+0.7**
	25nm,0.3s,baz=301,slow=11,SNR=10						
GVD	**Gavdhos**	**1.86**	**285**	*e*P	**Pn**	**18 41 18.5**	**-0.2**
VAM	**Vamos**	**1.99**	**302**	*e*P	**Pn**	**18 41 20.0**	**-0.5**
SANT	**Santorini**	**2.10**	**342**	*e*Pn	**Pn**	**18 41 21.7**	**-0.4**
SANT				*e*Sn	**Sn**	**18 41 46.6**	**-0.4**
SANT	**Santorini**	**2.10**	**342**	*e*Pn	**Pn**	**18 41 24.4**	**+2.3**
THR1	**Thera Island**	**2.10**	**342**	*e*Pn	**Pn**	**18 41 21.7**	**-0.3**
THR1				*e*Sn	**Sn**	**18 41 46.9**	**-0.1**
THR6	**Thira Island,**	**2.11**	**340**	*e*Pn	**Pn**	**18 41 22.1**	**0.0**
THR3	**Thira Island,**	**2.15**	**341**	*e*Pn	**Pn**	**18 41 22.1**	**-0.7**
THR5	**Thira Island,**	**2.18**	**340**	*e*Pn	**Pn**	**18 41 22.8**	**-0.3**
KARN	**Karanos**	**2.19**	**299**	*e*Pn	**Pn**	**18 41 23.7**	**+0.4**
KARN				*e*Sn	**Sn**	**18 41 49.9**	**+0.7**
THR4	**Thira Island,**	**2.20**	**341**	*e*Pn	**Pn**	**18 41 22.3**	**-1.1**
ARG	**Arkhangelos**	**2.38**	**39**	*e*P	**Pn**	**18 41 29.1**	**+3.2**
APE	**Apeiranthos**	**2.76**	**348**	*e*Pn	**Pn**	**18 41 31.0**	**-0.1**
APE				*e*Sn	**Sn**	**18 42 00.9**	**-2.2**
APE	**Apeiranthos**	**2.76**	**348**	*e*P	**Pn**	**18 41 30.9**	**-0.2**
SLUM		**3.01**	**198**	P	**Pn**	**18 41 34.3**	**-0.2**
KYTH	**Kithira**	**3.26**	**307**	*e*P	**Pn**	**18 41 37.0**	**-1.0**
HMAT	**Matruh**	**3.34**	**168**	⇑P	**Pn**	**18 41 39.6**	**+0.5**
VLI	**Veliai**	**3.59**	**312**	*e*P	**Pn**	**18 41 41.0**	**-1.5**
DID	**Didima**	**3.98**	**323**	*e*Pn	**Pn**	**18 41 47.1**	**-0.8**
DID				*e*Sn	**Sn**	**18 42 31.6**	**-1.8**
DID	**Didima**	**3.98**	**323**	*e*Pn	**Pn**	**18 41 47.1**	**-0.8**
DID				*e*Sn	**Sn**	**18 42 31.5**	**-1.8**
CHOS	**Chios island**	**4.01**	**358**	*e*Pn	**Pn**	**18 41 47.5**	**-0.8**
PYL	**PYLOS**	**4.47**	**306**	*e*Pn	**Pn**	**18 41 53.0**	**-1.5**
ITM	**Ithomi**	**4.51**	**310**	*e*P	**Pn**	**18 41 54.1**	**-1.0**
LTK	**Loutraki**	**4.52**	**325**	*e*Pn	**Pn**	**18 41 54.6**	**-0.7**
SWA2		**5.16**	**188**	P	**Pn**	**18 42 03.9**	**-0.2**
AGG	**Agios Georgios**	**5.62**	**327**	*e*Pn	**Pn**	**18 42 10.3**	**0.0**
CSS	**Prodhromos**	**5.85**	**82**	*e*Pn	**Pn**	**18 42 13.9**	**+0.4**
CSS	**Prodhromos**	**5.85**	**82**	*e*Pn	**Pn**	**18 42 13.9**	**+0.4**
CSS				*e*Sn	**Sn**	**18 43 10.8**	**-8.5**
HSAF	**As Saff**	**6.52**	**135**	⇑P	**Pn**	**18 42 22.9**	**+0.1**
AMAG	**Maghara**	**6.94**	**120**	⇑P	**Pn**	**18 42 28.0**	**-0.5**
SUZ		**7.17**	**127**	⇑P	**Pn**	**18 42 31.3**	**-0.3**
KZIT	**Kziot**	**7.67**	**115**	Pn	**Pn**	**18 42 37.7**	**-0.9**
MMAI	**Mount Meron Ar**	**7.73**	**98**	Pn	**Pn**	**18 42 39.5**	**+0.1**
	1.5nm,0.3s,baz=293,slow=11,SNR=6.6						
MMAI				Sn	**Sn**	**18 44 03.9**	**-1.7**
	4.5nm,0.3s,baz=257,slow=23,SNR=8.5						
HMDT	**Nahal Hemdat**	**8.03**	**103**	Pn	**Pn**	**18 42 46.0**	**+2.5**
DSI	**Dead Sea**	**8.15**	**108**	Pn	**Pn**	**18 42 44.6**	**-0.5**
MZDA	**Masada**	**8.23**	**109**	Pn	**Pn**	**18 42 45.7**	**-0.6**
PRNI	**Paran**	**8.40**	**116**	Pn	**Pn**	**18 42 48.8**	**+0.2**
MBRI	**Mt Berech**	**8.63**	**120**	Pn	**Pn**	**18 42 53.3**	**+1.5**
EIL	**Elat**	**8.73**	**120**	Pn	**Pn**	**18 42 52.6**	**-0.5**
	0.5nm,0.3s,baz=345,slow=14,SNR=8.7						
EIL				Sn	**Sn**	**18 44 24.6**	**-5.7**
	1.1nm,0.3s,baz=236,slow=3.6,SNR=4.5						
EIL	**Elat**	**8.73**	**120**	Pn	**Pn**	**18 42 54.7**	**+1.5**
HKAT	**Jabal Katrina**	**8.80**	**129**	⇑P	**Pn**	**18 42 53.5**	**-0.6**
ASF	**Jabal al Asfar**	**9.16**	**101**	Sn	**Sn**	**18 44 38.4**	**-2.5**
	0.3nm,0.3s,baz=307,slow=15,SNR=4.0						
VAE	**Valguarnera**	**10.11**	**291**	LR	LR	18 47 27.7	
	comp=Z,54nm,18.9s,baz=129,slow=40						
AKASG	**Malin Array Be**	**16.46**	**7**	Pn	**Pn**	**18 44 36.5**	**-1.0**
	0.8nm,0.3s,baz=194,slow=11,SNR=4.7						
MIB	**Mutribah**	**18.42**	**99**	*e*P	**Pn**	**18 45 03.3**	**+1.5**
	5.8nm,1.3s						
MIB	**Mutribah**	**18.42**	**99**	*e*P	**Pn**	**18 45 03.3**	**+1.5**
MIB				AMb	AMB	18 45 14.2	
	comp=Z,6.0nm,1.3s						
NAY	**Al-Naaiem**	**18.53**	**100**	*e*P	**Pn**	**18 45 04.4**	**+1.2**
	comp=Z,4.5nm,1.0s						
**

BOLP	**Bolinao**	**1.33**	**357**	*eP*	Pn	19 15 51.2	+0.8
BOLP				*eS*	Sn	19 16 09.8	+2.7
LUBP	**Lubang**	**1.33**	**169**	*eP*	Pn	19 15 52.0	+1.6
LUBP				*eS*	Sn	19 16 09.4	+2.3
BALP	**Baler**	**1.69**	**66**	*eP*	Pn	19 15 54.1	-1.2
BALP				*eS*	Sn	19 15 56.5	-19

JMA ***18*** *19:30:48.0±0.2,2365N×14470E,h0km,M4.9*
ISCJB ***18*** *19:30:51.3±2.6,231N±0.1×1436E±04,h108km±26km, mb3.0/3, Error ellipse: s-maj=69.1km s-min=21.1km az=172.0*
IDC ***18*** *19:30:52.0±6.7,2285N×14247E,h59km±111km,mb2.9/3, mb1 3.3/5,mb1mx3.1/21,mbtmp3.2/5,ML3.8/2,Error ellipse: s-maj=208.7km s-min=26.9km az=76.0*
ISC 18 19:30:52.1±2.5,231N±01×1438E±04,h103km±25km,n12, σ0§87/15,mb3.0/3,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**3.83**	**337**	P	**Pn**	**19 31 48.9**	**-0.2**
JHHJ				*eS*	**Sn**	**19 32 34.3**	**+1.1**
CBIJ	**Chichi jima**	**4.26**	**340**	P	**Pn**	**19 31 54.0**	**-0.8**
	9.3nm,0.3s,baz=278,slow=21,SNR=13						
CBIJ				S	**Sn**	**19 32 42.7**	**-0.9**
	40nm,0.3s,baz=106,slow=23,SNR=14						
CBIJ	**Chichi jima**	**4.26**	**340**	P	**Pn**	**19 31 54.0**	**-0.9**
CBIJ				*eS*	**Sn**	**19 32 42.4**	**-1.2**
BSO1	**Boso 1**	**11.79**	**348**	P	**Pn**	**19 33 36.5**	**-0.4**
BSO3	**Boso 3**	**12.03**	**347**	P	**Pn**	**19 33 39.6**	**-0.5**
JOD2	**Odawara 2**	**12.82**	**342**	P	**Pn**	**19 33 51.3**	**+0.8**
JRY	**Ryogami san**	**13.58**	**343**	P	**Pn**	**19 34 01.7**	**+1.3**
JHO	**Hitachi**	**13.77**	**349**	P	**Pn**	**19 34 02.3**	**-0.6**
MJAR	**Matsushiro Arr**	**14.26**	**341**	P	**Pn**	**19 34 10.7**	**+1.4**
	0.5nm,0.3s,baz=156,slow=9.1,SNR=4.8						
WRA	**Warramunga Arr**	**43.75**	**193**	P	**P**	**19 38 48.1**	**+0.6**
	0.3nm,0.5s,mb3.3,baz=11,slow=8.5,SNR=14						
ASAR	**Alice Springs**	**47.46**	**192**	P	**P**	**19 39 16.4**	**-0.2**
	0.2nm,0.7s,mb3.0,baz=9.3,slow=9.2,SNR=5.4						
MKAR	**Makanchi Array**	**54.21**	**312**	P	**P**	**19 40 05.9**	**-1.2**
	0.1nm,0.8s,mb2.9,baz=95,slow=10,SNR=2.3						

IDC ***18*** *19:34:19.1±1.6,2339N×12170E,h0km,mb3.5/5, mb1 3.6/5,mb1mx3.5/20,mbtmp3.5/5, Error ellipse: s-maj=143.5km s-min=19.9km az=65.0*
NEIC ***18*** *19:34:20.9±2.0,2354N×12204E,h16km±11km,Error ellipse: s-maj=71.1km s-min=10.7km az=68.0*
ISCJB ***18*** *19:34:22.0±0.4,2338N±002×12162E±002,h22km±2km, mb3.4/5,Error ellipse: s-maj=4.0km s-min=2.2km az=26.3*
TAP ***18*** *19:34:22.6,2342N×12152E,h22km,ML4.0,B*
ISC 18 19:34:22.2±0.4,2339N±002×12160E±002,h18km±2km, n73,σ0§90/113,mb3.4/5,18C-6D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHY	**Hungye**	**0.28**	**295**	⇓*iP*	**Pg**	**19 34 28.4**	**-0.1**
	baz=297						
EHY				*i* S	**Sg**	**19 34 32.6**	**-0.1**
	baz=297						
TWF1	**Yuli**	**0.28**	**263**	⇓*iP*	**Pg**	**19 34 28.6**	**+0.1**
	baz=265						
TWF1				*i* S	**Sg**	**19 34 33.3**	**+0.6**
	baz=265						
TEGC	**Jichi Village**	**0.32**	**350**	P	**Pg**	**19 34 29.6**	**+0.4**
	baz=11						
TEGC				*eS*	**Sg**	**19 34 34.9**	**+1.0**
	baz=11						
CHKT	**Chengkung**	**0.36**	**217**	⇓*iP*	**Pg**	**19 34 30.7**	**+0.9**
	baz=190						
CHKT				S	**Sg**	**19 34 36.3**	**+1.4**
	baz=190						
ESL	**Shilin**	**0.45**	**340**	⇑*iP*	**Pg**	**19 34 31.3**	**-0.1**
	baz=340						
ESL				S	**Sg**	**19 34 37.3**	**-0.4**
	baz=340						
ESF	**Shoufeng Towns**	**0.49**	**350**	*eP*	**Pg**	**19 34 32.5**	**+0.4**
	baz=350						
ESF				*eS*	**Sg**	**19 34 39.4**	**+0.7**
	baz=350						
ELDTW	**Lidau**	**0.57**	**250**	⇑*iP*	**Pg**	**19 34 32.9**	**-0.8**
	baz=246						
ELDTW				S	**Sg**	**19 34 39.9**	**-1.5**
	baz=246						
HWA	**Hwalien**	**0.59**	**0**	*eP*	**Pg**	**19 34 34.7**	**+0.8**
	baz=23						
HWA				*eS*	**Sg**	**19 34 43.5**	**+1.7**
	baz=23						
YUS	**Yu-Shan**	**0.60**	**280**	⇑*iP*	**Pb**	**19 34 34.0**	**-0.2**
	baz=276						
YUS				*eS*	**Sg**	**19 34 41.3**	**-1.1**
	baz=276						
TWD	**Chiawan**	**0.69**	**360**	*i* P	**Pb**	**19 34 35.8**	**+0.1**
	baz=354						
TWD				*i* S	**Sb**	**19 34 44.6**	**-0.2**
	baz=354						
ALS	**Alishan**	**0.74**	**280**	⇑*iP*	**Pb**	**19 34 36.3**	**-0.3**
	baz=277						
TWG	**Pinlang**	**0.75**	**221**	⇓*iP*	**Pb**	**19 34 35.9**	**-0.8**
	baz=211						
TWG				*eS*	**Sb**	**19 34 45.4**	**-1.1**
	baz=211						
TTN	**Taitung**	**0.76**	**214**	*eP*	**Pb**	**19 34 36.9**	**+0.1**
	baz=203						
TTN				*eS*	**Sb**	**19 34 48.7**	**+1.9**
	baz=203						
NACB	**Ninganchiao**	**0.78**	**360**	*ePg*	**Pg**	**19 34 36.5**	**-1.1**
NACB				*eSg*	**Sg**	**19 34 46.5**	**-1.5**
STYT	**Tauyuan**	**0.81**	**254**	⇑*iP*	**Pb**	**19 34 37.2**	**-0.5**
	baz=248						
STYT				*i* S	**Sb**	**19 34 47.0**	**-1.2**
	baz=248						
SMLT	**Sun Moon Lake**	**0.81**	**308**	⇑*iP*	**Pb**	**19 34 37.0**	**-0.8**
	baz=310						
SMLT				*eS*	**Sb**	**19 34 48.6**	**+0.2**
	baz=310						
WHF	**Hehuan Shan**	**0.81**	**338**	⇑*iP*	**Pb**	**19 34 37.1**	**-0.7**
	baz=345						
WHF				*eS*	**Sb**	**19 34 46.8**	**-1.6**
	baz=345						
TYC	**Yuchr**	**0.85**	**307**	⇑*iP*	**Pb**	**19 34 37.7**	**-0.8**
	baz=310						
TYC				S	**Sb**	**19 34 49.9**	**+0.3**
	baz=310						
CHN5	**Tsauling**	**0.87**	**284**	⇑*iP*	**Pb**	**19 34 38.8**	**0.0**
	baz=283						
CHN5				*eS*	**Sb**	**19 34 50.6**	**+0.4**
	baz=283						
WTP	**Ta-pu**	**0.92**	**261**	⇑*iP*	**Pb**	**19 34 39.5**	**-0.1**
	baz=264						
WTP				S	**Sb**	**19 34 50.8**	**-0.7**
	baz=264						
CHN4	**Tsaushan**	**0.93**	**268**	⇑*iP*	**Pb**	**19 34 39.8**	**0.0**
	baz=264						
CHN4				S	**Sb**	**19 34 51.4**	**-0.2**
	baz=264						
TWT	**Tachien**	**0.94**	**336**	⇑*iP*	**Pb**	**19 34 39.8**	**-0.2**
	baz=340						
TWT				S	**Sb**	**19 34 50.5**	**-1.7**
	baz=340						
WNT	**Mingjian**	**0.97**	**300**	⇑*iP*	**Pb**	**19 34 40.8**	**+0.3**
	baz=302						
WNT				*i* S	**Sb**	**19 34 53.5**	**+0.5**
	baz=302						
SGST	**Jiashian**	**0.98**	**252**	*eP*	**Pb**	**19 34 40.4**	**-0.3**
	baz=235						
SGST				*eS*	**Sb**	**19 34 54.0**	**+0.6**
	baz=235						
ECL	**Taimali**	**0.99**	**217**	*eP*	**Pb**	**19 34 39.1**	**-1.7**
	baz=207						
WGK	**Gukeng**	**1.00**	**287**	⇑*iP*	**Pb**	**19 34 41.0**	**+0.1**
	baz=302						
WGK				*eS*	**Sb**	**19 34 54.1**	**+0.4**
	baz=302						
CHN1	**Nanshi**	**1.01**	**259**	⇑*iP*	**Pb**	**19 34 41.2**	**+0.2**
	baz=253						
CHN1				*eS*	**Sb**	**19 34 54.4**	**+0.4**
	baz=253						
TWK	**Hsinying**	**1.03**	**263**	P	**Pb**	**19 34 41.4**	**-0.1**
	baz=259						
TWK				*eS*	**Sb**	**19 34 55.3**	**+0.6**
	baz=259						
ENA	**Nanau**	**1.04**	**7**	⇑*iP*	**Pb**	**19 34 41.1**	**-0.6**
	baz=1.0						
ENA				*eS*	**Sb**	**19 34 53.9**	**-1.2**
	baz=1.0						
CHN2	**Minshiung**	**1.04**	**278**	⇓P	**Pb**	**19 34 42.2**	**+0.5**
	baz=276						
CHN2				S	**Sb**	**19 34 56.1**	**+1.0**
	baz=276						
NNS	**Nan Shan**	**1.07**	**349**	*eP*	**Pb**	**19 34 41.5**	**-0.6**
	baz=357						
NNS				*eS*	**Sb**	**19 34 53.8**	**-1.9**
	baz=357						
CHY	**Chiayi**	**1.09**	**276**	*eP*	**Pb**	**19 34 42.8**	**+0.3**
	baz=272						
SSD	**Sandimen**	**1.10**	**235**	*eP*	**Pn**	**19 34 41.8**	**-0.8**
	baz=221						
TCU	**Taichung**	**1.14**	**312**	⇑P	**Pn**	**19 34 43.7**	**+0.5**
	baz=314						
TAW	**Tawu**	**1.22**	**213**	*eP*	**Pn**	**19 34 42.9**	**-1.3**
	baz=202						
EAST	**Anshuo**	**1.22**	**215**	⇓P	**Pn**	**19 34 42.9**	**-1.4**
	baz=196						
TWQ1	**Liyutan**	**1.22**	**322**	P	**Pn**	**19 34 45.1**	**+0.8**
	baz=340						
TWQ1				*eS*	**Sb**	**19 35 00.7**	**+0.6**
	baz=340						
TWM1	**Shoushan**	**1.22**	**243**	*eP*	**Pn**	**19 34 46.0**	**+1.6**
	baz=222						
TWC	**Suao**	**1.24**	**11**	*eP*	**Pn**	**19 34 44.9**	**+0.3**
	baz=3.0						
TWC				*eS*	**Sb**	**19 35 00.7**	**+0.1**
	baz=3.0						
ENTT	**Nioudou**	**1.25**	**359**	*eP*	**Pn**	**19 34 44.0**	**-0.7**
	baz=8.0						
CHN8	**Yiju**	**1.28**	**268**	⇑*iP*	**Pn**	**19 34 45.5**	**+0.4**
	baz=266						
CHN8				*eS*	**Sn**	**19 35 02.5**	**+0.7**
	baz=266						
NSY	**Sanyi**	**1.28**	**323**	P	**Pn**	**19 34 46.4**	**+1.2**
	baz=328						
NSY				S	**Sn**	**19 35 03.1**	**+1.3**
	baz=328						
WSF	**Szhu**	**1.29**	**281**	*eP*	**Pn**	**19 34 45.1**	**-0.2**
	baz=280						
WSF				*eS*	**Sn**	**19 35 01.8**	**-0.3**
	baz=280						
YHNB	**Yeheng**	**1.29**	**351**	*ePg*	**Pg**	**19 34 45.0**	**-2.2**
WTCT	**Ta-ch'eng**	**1.30**	**292**	*i* P	**Pn**	**19 34 45.6**	**+0.1**
	baz=292						
WTCT				*eS*	**Sn**	**19 35 02.1**	**-0.2**
	baz=292						
TAI1	**Yung-k'ang**	**1.31**	**255**	*eP*	**Pn**	**19 34 46.2**	**+0.6**
	baz=245						
SCLT	**Jiali**	**1.31**	**261**	P	**Pn**	**19 34 46.4**	**+0.8**
	baz=274						
SCLT				*eS*	**Sn**	**19 35 04.0**	**+1.4**
	baz=274						
TWE	**Neicheng**	**1.33**	**3**	*eP*	**Pn**	**19 34 45.4**	**-0.4**
	baz=14						
LAY	**Lan-yu**	**1.34**	**182**	*eP*	**Pn**	**19 34 44.0**	**-2.0**
	baz=164						
NSTT	**Nanjuang**	**1.35**	**336**	*eP*	**Pn**	**19 34 46.9**	**+0.7**
	baz=351						
NSTT				*eS*	**Sn**	**19 35 02.8**	**-0.9**
	baz=351						
SCZT	**Fangliau**	**1.36**	**222**	*eP*	**Pn**	**19 34 46.4**	**+0.2**
	baz=205						
EGS		**1.48**	**12**	*eP*	**Pn**	**19 34 50.0**	**+2.0**
	baz=25						
HSN	**Hsinchu**	**1.52**	**338**	*eP*	**Pn**	**19 34 48.8**	**+0.3**
	baz=344						
TATO	**Taipei**	**1.58**	**356**	*ePn*	**Pn**	**19 34 47.3**	**-2.0**
TATO				*eSn*	**Sn**	**19 35 08.5**	**-0.8**
TWA	**Mucha**	**1.58**	**359**	*eP*	**Pn**	**19 34 50.0**	**+0.7**
	baz=21						
HEN	**Hengchun**	**1.59**	**210**	*eP*	**Pn**	**19 34 50.3**	**+0.9**
	baz=185						
TWK1	**Hengchun**	**1.61**	**207**	*eP*	**Pn**	**19 34 50.0**	**+0.3**
	baz=184						
TSEB	**Hengchuen, Pin**	**1.62**	**204**	*eP*	**Pn**	**19 34 49.9**	**+0.1**
	baz=184						
NCU	**National Centr**	**1.62**	**347**	*eP*	**Pn**	**19 34 51.7**	**+1.8**
	baz=358						
TAP1	**Taipei**	**1.65**	**358**	*eP*	**Pn**	**19 34 52.1**	**+1.9**
	baz=12						
TWB1	**Santiao Chiao**	**1.65**	**12**	*eP*	**Pn**	**19 34 52.0**	**+1.8**
	baz=25						
YOJ	**Yonaguni jima**	**1.68**	**50**	*eP*	**Pn**	**19 34 50.9**	**+0.4**
	baz=59						
NWF	**Wu-fen Shan**	**1.68**	**6**	*eP*	**Pn**	**19 34 51.7**	**+1.0**
	baz=14						
NWF				*eS*	**Sn**	**19 35 12.7**	**+0.9**
	baz=14						
TWS1	**Kuangyinshan**	**1.71**	**354**	*eP*	**Pn**	**19 34 51.4**	**+0.3**
	baz=28						
PNG	**Penghu**	**1.89**	**276**	*eP*	**Pn**	**19 34 53.2**	**-0.3**
	baz=275						
PNG				*eS*	**Sn**	**19 35 15.6**	**-1.3**
	baz=275						
KNM	**Kinmen**	**3.08**	**290**	*eP*	**Pn**	**19 35 10.0**	**+0.1**
	baz=286						
SONM	**Songino Array**	**27.25**	**337**	P	**P**	**19 40 05.3**	**+0.2**
	0.4nm,0.6s,mb3.1,baz=153,slow=7.4,SNR=3.3						
MKAR	**Makanchi Array**	**39.17**	**316**	P	**P**	**19 41 49.2**	**+0.3**
	0.7nm,0.6s,mb3.6,baz=107,slow=10.0,SNR=8.4						
MKAR	**Makanchi Array**	**39.17**	**316**	P	**P**	**19 41 49.2**	**+0.3**
ZALV	**Zalesovo Beam**	**41.12**	**327**	P	**P**	**19 42 04.8**	**-0.1**
	0.7nm,0.6s,mb3.5,baz=120,slow=8.5,SNR=3.2						
WRAB	**Tennant Creek**	**44.82**	**163**	P	**P**	**19 42 34.3**	**-0.9**
WRA	**Warramunga Arr**	**44.82**	**163**	P	**P**	**19 42 34.3**	**-0.9**
	0.3nm,0.5s,mb3.4,baz=345,slow=8.7,SNR=8.1						
ASAR	**Alice Springs**	**48.27**	**165**	P	**P**	**19 43 02.4**	**+0.1**
	0.2nm,0.3s,mb3.6,baz=338,slow=7.3,SNR=5.6						

ISCJB ***18*** *19:41:45.9±1.1,140S±02×10137E±009,h33km,mb3.7/7, Error ellipse: s-maj=23.4km s-min=11.6km az=15.0*
IDC ***18*** *19:41:46.8±3.5,3.19S×10241E,h0km,mb3.7/6,mb1 3.8/6, mb1mx3.6/19,mbtmp3.7/6, Error ellipse: s-maj=162.3km s-min=20.3km az=54.0*
NEIC ***18*** *19:41:51.1±0.7,336S×10222E,h35km,mb3.9/1, Error ellipse: s-maj=35.1km s-min=11.3km az=60.0*
DJA ***18*** *19:41:51,354S×10241E,h30km,MLv4.4/5*
ISC 18 19:41:48.1±1.1,40S±02×10134E±009,h35km,n10, σ1§10/11,mb3.7/7,1C,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPI	**Tanjungpandan**	**6.43**	**79**	⇑*eP*	**Pn**	**19 43 33.0**	**+13**
TPI				*eS*	**Sn**	**19 44 33.0**	**+0.3**
WRA	**Warramunga Arr**	**35.83**	**119**	P	**P**	**19 48 43.9**	**-0.7**
	0.6nm,0.8s,mb3.6,baz=296,slow=7.5,SNR=5.2						
ASAR	**Alice Springs**	**36.99**	**125**	P	**P**	**19 48 55.0**	**+0.5**
	1.9nm,0.8s,mb4.0,baz=305,slow=7.8,SNR=16						
SONM	**Songino Array**	**51.84**	**4**	P	**P**	**19 50 50.6**	**-2.1**
	0.4nm,0.6s,mb3.5,baz=185,slow=8.5,SNR=4.4						
TKM2	**Tokmak 2**	**52.22**	**336**	P	**P**	**19 50 57.5**	**+1.9**
	1.0nm,0.7s,mb3.9						
MKAR	**Makanchi Array**	**53.34**	**344**	P	**P**	**19 51 04.1**	**+0.3**
	0.5nm,0.7s,mb3.6,baz=150,slow=7.8,SNR=6.5						
MKAR	**Makanchi Array**	**53.34**	**344**	P	**P**	**19 51 04.1**	**+0.3**
KURK	**Kurchatov**	**57.93**	**343**	P	**P**	**19 51 37.3**	**+0.7**
	0.2nm,0.3s,mb3.6,baz=159,slow=6.5,SNR=2.5						
ZALV	**Zalesovo Beam**	**59.41**	**349**	P	**P**	**19 51 45.9**	**-1.1**
	0.4nm,0.4s,mb3.8,baz=175,slow=8.4,SNR=3.3						
CASY	**Casey**	**62.46**	**176**	P	**P**	**19 52 14.5**	**+7.0**

IDC ***18*** *19:48:59.0±0.8,2519N×9098E,h0km,mb3.9/12, mb1 4.0/13,mb1mx3.9/24,mbtmp3.9/13,ML3.9/1,Error ellipse: s-maj=34.5km s-min=14.5km az=56.0*
ISCJB ***18*** *19:49:02.6±0.6,2515N±005×9097E±003,h41km±7km, mb4.0/18, Error ellipse: s-maj=7.9km s-min=4.9km az=14.7*
BJI ***18*** *19:49:02.3,2521N×9092E,h32km,mB5.0,mb4.2,ML4.4*
DMN ***18*** *19:49:03.7±0.3,2508N×9107E,h10km,Ml5.0/6,Error ellipse: s-maj=27.2km s-min=6.3km az=27.0*
MOS ***18*** *19:49:03.0±0.9,2520N×9111E,h44km,mb4.2/14,Error ellipse: s-maj=17.1km s-min=9.7km az=106.9*
NEIC ***18*** *19:49:04.9±0.9,2524N×9113E,h40km±9km,mb4.3/5, Error ellipse: s-maj=10.3km s-min=6.8km az=58.0*
ISC 18 19:49:04.5±0.6,2518N±005×9101E±004,h36km±7km,n73, σ1§19/91,mb4.0/18,India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.88**	**64**	*eP*	**Pn**	**19 49 17.0**	**-3.3**
SHL				*eS*	**Sn**	**19 49 26.4**	**-5.4**

IMP	**Imphal**	**2.68**	**98**	*eP*	**Pn**	**19 49 44.0**	**-1.1**
IMP				*eS*	**Sn**	**19 50 11.0**	**-5.3**
SLGI	**Shiliguri**	**2.79**	**303**	*eP*	**Pn**	**19 49 46.7**	**+0.1**
GTK	**Gangtok**	**3.04**	**315**	*eP*	**Pn**	**19 49 48.0**	**-2.0**
GTK				*ex*	x	19 50 30.0	
CAL	**Calcutta**	**3.60**	**224**	*eS*	**Sn**	**19 50 42.8**	**+3.8**
CAL				AML	AML	19 50 49.3	
	comp=E,832nm,0.3s						
CAL				AML	AML	19 50 49.4	
	comp=N,1μm,0.3s						
ODAN	**Odare**	**3.66**	**298**	*ePn*	**Pn**	**19 50 00.2**	**+1.5**
ODAN				*eSn*	**Sn**	**19 50 42.0**	**+1.3**
TAPN	**Taplejung**	**3.67**	**307**	*ePn*	**Pn**	**19 50 00.0**	**+1.3**
RAMN	**Ramite**	**4.34**	**295**	*ePn*	**Pn**	**19 50 09.9**	**+1.9**
RAMN				*eSn*	**Sn**	**19 50 58.0**	**+0.6**
LSA	**Lhasa**	**4.50**	**2**	P	**Pn**	**19 50 11.8**	**+1.6**
LSA				SG	**Sn**	**19 51 21.0**	**+20**
LSA				Smax			
	comp=N,390nm,0.8s						
LSA				Smax			
	comp=E,910nm,1.1s						
LSA	**Lhasa**	**4.50**	**2**	*ePn*	**Pn**	**19 50 11.1**	**+0.9**
LSA				*eSn*	**Sn**	**19 51 19.5**	**+18**
BOK	**Bokaro**	**4.87**	**255**	*eP*	**Pn**	**19 50 16.2**	**+0.9**
BOK				*eS*	**Sn**	**19 51 09.3**	**-1.2**
BOK				AML	AML	19 51 35.6	
	comp=E,191nm,0.4s						
BOK				AML	AML	19 51 36.6	
	comp=N,330nm,0.8s						
JIRN	**Jiri**	**4.98**	**301**	*ePn*	**Pn**	**19 50 18.2**	**+1.4**
JIRN				*eSn*	**Sn**	**19 51 13.4**	**+0.3**
	comp=N,523nm,0.4s						
GUN	**Gumba**	**5.34**	**302**	*ePn*	**Pn**	**19 50 23.4**	**+1.7**
GUN				*eSn*	**Sn**	**19 51 21.5**	**-0.5**
	comp=N,814nm,0.6s						
PKI	**Pulchoki**	**5.56**	**297**	*ePn*	**Pn**	**19 50 26.0**	**+1.2**
PKI				*eSn*	**Sn**	**19 51 26.9**	**-0.6**
PKIN	**Phulchoki**	**5.57**	**297**	*ePn*	**Pn**	**19 50 26.1**	**+1.2**
KKN	**Kakani**	**5.76**	**298**	*ePn*	**Pn**	**19 50 28.6**	**+1.2**
KKN				*eSn*	**Sn**	**19 51 31.3**	**-1.0**
	comp=N,519nm,0.7s						
DMN	**Daman**	**5.82**	**296**	*ePn*	**Pn**	**19 50 29.2**	**+0.9**
DMN				*eSn*	**Sn**	**19 51 32.6**	**-1.3**
	comp=N,884nm,0.9s						
GKN	**Gorkha**	**6.36**	**298**	*ePn*	**Pn**	**19 50 36.6**	**+0.8**
GKN				*eSn*	**Sn**	**19 51 46.1**	**-1.1**
	comp=N,355nm,0.4s						
BWNR	**Bhubaneshwar**	**6.84**	**226**	*eP*	**Pn**	**19 50 42.0**	**-0.3**
KOLN	**Koldanda**	**7.13**	**293**	*ePn*	**Pn**	**19 50 46.6**	**+0.4**
KOLN				*eSn*	**Sn**	**19 52 04.3**	**-1.7**
	comp=N,199nm,0.5s						
DANN	**Dangsing**	**7.21**	**298**	*ePn*	**Pn**	**19 50 47.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**9.95**	**131**	P	**Pn**	**19 51 23.8**	**-1.2**
	comp=N,0.3nm,0.3s,baz=308,slow=14,SNR=11						
JBP	**Jabalpur**	**10.27**	**261**	*ex*	x	19 52 14.6	
JBP				*ex*	x	19 54 25.9	
VIS	**Vishakhapatnam**	**10.31**	**225**	*eS*	**Sn**	**19 53 17.5**	**-6.8**
PTH	**Pithoragarh**	**10.54**	**297**	*eP*	**Pn**	**19 51 33.0**	**0.0**
PTH				*ex*	x	19 53 29.0	
NGP	**Nagpur**	**11.71**	**252**	*eP*	**Pn**	**19 51 48.3**	**-0.8**
NGP				*eS*	**Sn**	**19 53 50.5**	**-8.1**
DDI	**Dehra Dun**	**12.56**	**297**	*eP*	**Pn**	**19 51 58.0**	**-2.7**
NDI	**New Delhi**	**12.79**	**289**	*ex*	x	19 51 35.0	
NDI				*eS*	**Sn**	**19 54 13.0**	**-12**
KLP	**Kalpa**	**12.89**	**302**	*eP*	**Pn**	**19 52 03.1**	**-2.2**
KLP				*eS*	**Sn**	**19 54 14.9**	**-13**
KLP				AML	AML	19 54 33.3	
	comp=E,59nm,1.1s						
KLP				AML	AML	19 54 35.6	
	comp=N,65nm,0.8s						
KUDL	**Kundal**	**13.32**	**286**	*eP*	**Pn**	**19 52 08.0**	**-3.0**
KUDL				*eS*	**Sn**	**19 54 27.3**	**-11**
SMLA	**Simla**	**13.57**	**299**	*i* P	**Pn**	**19 52 12.0**	**-2.5**
SMLA				*ex*	x	19 54 37.9	
KHET	**Khetri**	**13.90**	**285**	*ex*	**Pn**	**19 52 15.8**	**-3.3**
KHET				*ex*	x	19 54 40.6	
HYB	**Hyderabad**	**13.94**	**239**	*i* P	**Pn**	**19 52 22.0**	**+2.4**
HYB				*eS*	**Sn**	**19 54 58.0**	**+4.8**
HYB	**Hyderabad**	**13.94**	**239**	*eP*	**Pn**	**19 52 22.0**	**+2.4**
HYB				*eS*	**Sn**	**19 55 10.0**	**+17**
AJM	**Ajmer**	**14.80**	**279**	*ex*	**Pn**	**19 52 27.9**	**-3.4**
AJM				*ex*	x	19 55 03.0	
LZH	**Lanzhou**	**15.48**	**42**	*eP*	**Pn**	**19 52 40.5**	**+0.4**
LZH				AP	pP	19 52 46.0	-7.4
LZH				XP	sP	19 52 49.0	-9.0
LZH				AMB	AMB		
	comp=Z,32nm,1.1s						
LZH				AMB	AMB		
	comp=Z,170nm,4.3s						
GTA	**Gaotai**	**16.01**	**25**	*eP*	**Pn**	**19 52 47.1**	**+0.2**
GTA				AP	pP	19 52 51.4	-7.8
GTA				XP	sP	19 52 54.3	-10
GTA				AMB	AMB		
	comp=Z,6.0nm,0.7s						
KBL	**Kabul**	**21.18**	**301**	*eP*	**P**	**19 53 47.4**	**+0.7**
KBL				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.4						
KBL	**Kabul**	**21.18**	**301**	*eP*	**P**	**19 53 47.4**	**+0.6**
	comp=Z,15nm,0.8s,mb4.4						
TKM2	**Tokmak 2**	**21.76**	**328**	*eP*	**P**	**19 53 53.5**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.3						
TKM2	**Tokmak 2**	**21.76**	**328**	*eP*	**P**	**19 53 53.5**	**+0.6**
	comp=Z,16nm,1.3s,mb4.3						
EKS2	**Erkin-Say**	**22.48**	**325**	*eP*	**P**	**19 54 01.5**	**+0.9**
	comp=Z,3.7nm,0.9s,mb3.8						
MKAR	**Makanchi Array**	**22.66**	**344**	P	**P**	**19 54 01.7**	**-0.8**
	comp=Z,3.3nm,0.6s,mb4.0,baz=151,slow=12,SNR=33						
MKAR	**Makanchi Array**	**22.66**	**344**	P	**P**	**19 54 01.7**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM	**Songino Array**	**25.67**	**24**	P	**P**	**19 54 30.9**	**0.0**
	comp=Z,1.2nm,0.5s,mb3.7,baz=208,slow=9.6,SNR=13						
SONM	**Songino Array**	**25.67**	**24**	P	**P**	**19 54 30.9**	**0.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ULN	**Ulaanbaatar**	**25.95**	**25**	*eP*	**P**	**19 54 32.7**	**-0.7**
ULN				pm

	comp=Z,1.0nm,0.6s							
ASAR	**Alice Springs**	**63.91**	**136**	P		**P**	**19 59 34.5**	**+0.6**
	comp=Z,0.5nm,0.7s,mb3.7,baz=315,slow=6.2,SNR=8.0							
ASAR	**Alice Springs**	**63.91**	**136**	P		**P**	**19 59 34.6**	**+0.7**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
STKA	**Stephens Creek**	**74.51**	**137**	P		**P**	**20 00 38.4**	**-1.1**
	comp=Z,3.3nm,0.9s,mb4.2,baz=184,slow=6.0,SNR=3.2							
TOA0	**Torodi Ar. Sit**	**83.91**	**282**	P		**P**	**20 01 33.7**	**+2.5**
TORD	**Torodi Ar. Bea**	**83.91**	**282**	P		**P**	**20 01 31.7**	**+0.4**
	comp=Z,0.5nm,0.8s,mb3.7,baz=48,slow=6.6,SNR=3.4							

*ISCJB **18** 19:52:47.1±0.4, 6081S±008×244W±01, h10km, mb4.6/19, MS3.7/7, Error ellipse: s-maj=13.1km s-min=9.0km az=30.9*
*NEIC **18** 19:52:48.4±0.3, 6081S×2431W, h10km, mb4.9/11, Error ellipse: s-maj=12.6km s-min=8.9km az=211.0*
*IDC **18** 19:52:54.0±4.6, 6077S×2456W, h45km±44km, mb4.2/12, mb1 4.3/13, mb1mx4.3/17, mbtmp4.2/13, ML5.6/1, MS3.7/7, Ms1 3.7/7, ms1mx3.6/15, Error ellipse: s-maj=20.5km s-min=15.4km az=36.0*
ISC 18 19:52:48.8±0.4, 6089S±008×244W±01, h10km, n42, σ1§13/31, mb4.6/19, MS3.7/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SNAA	**Sanae**	**13.73**	**151**	*e*Pn		**Pn**	**19 56 01.3**	**-1.9**
	92nm,0.6s							
SNAA				*e*Sn		**Sn**	**19 58 23.1**	**-12**
MAIT	**Maitri**	**17.46**	**139**	*e*P		**Pn**	**19 56 50.5**	**-1.4**
MAIT				*e*S		**Sn**	**19 59 50.5**	**-15**
PMSA	**Palmer Station**	**18.30**	**241**	P		**Pn**	**19 57 05.0**	**+2.6**
	1.9nm,0.3s,baz=69,slow=11,SNR=13							
PMSA	**Palmer Station**	**18.30**	**241**	*e*P		**Pn**	**19 57 04.6**	**+2.2**
EFI	**East Falkland**	**20.63**	**281**	P		**P**	**19 57 28.1**	**+0.1**
	53nm,0.9s							
USHA	**Ushuaia**	**23.83**	**265**	P		**P**	**19 58 02.0**	**+0.4**
	33nm,1.1s,mb4.7,baz=103,slow=9.7,SNR=7.9							
USHA				LR		LR	20 05 06.6	
	comp=Z,289nm,21.2s,MS3.7,baz=204,slow=31							
QSPA	**South Pole Qui**	**29.34**	**180**	P		**P**	**19 58 53.6**	**+2.6**
	3.1nm,0.6s,mb4.2,baz=244,slow=6.0,SNR=6.0							
QSPA				LR		LR	20 11 26.9	
	comp=Z,71nm,18.2s,MS3.3,baz=205,slow=38							
QSPA	**South Pole Qui**	**29.34**	**180**	P		**P**	**19 58 53.6**	**+2.5**
QSPA				LR		LR	20 11 26.9	
TRQA	**Tornquist**	**32.73**	**297**	*e*P		**P**	**19 59 19.8**	**-1.4**
	14nm,0.8s,mb5.0							
PLCA	**Paso Flores**	**34.49**	**284**	P		**P**	**19 59 35.4**	**-1.2**
	7.3nm,0.7s,mb4.7,baz=142,slow=7.7,SNR=22							
PLCA				LR		LR	20 13 53.4	
	comp=Z,107nm,19.3s,MS3.6,baz=325,slow=37							
MAW	**Mawson**	**35.44**	**139**	P		**P**	**19 59 46.2**	**+1.8**
	3.2nm,0.7s,mb4.3,baz=232,slow=8.9,SNR=7.0							
MAW				LR		LR	20 12 17.3	
	comp=Z,149nm,18.1s,MS3.8,baz=244,slow=33							
MAW	**Mawson**	**35.44**	**139**	*e*P		**P**	**19 59 45.8**	**+1.4**
	3.8nm,0.7s,mb4.4							
CPUP	**Villa Florida**	**41.15**	**312**	P		**P**	**20 00 31.5**	**-1.4**
	5.8nm,0.6s,mb4.4,baz=138,slow=7.4,SNR=14							
CPUP				LR		LR	20 13 35.4	
	comp=Z,86nm,21.7s,MS3.6,baz=141,slow=30							
CPUP	**Villa Florida**	**41.15**	**312**	*e*P		**P**	**20 00 30.9**	**-2.1**
	30nm,0.8s,mb5.0							
CPUP				LR		LR	20 13 35.4	
BOSA	**Boshof**	**46.05**	**68**	P		**P**	**20 01 12.9**	**+0.6**
	2.9nm,0.8s,mb4.3,baz=204,slow=10.0,SNR=5.0							
BOSA				PcP		PcP	20 02 49.9	+1.3
	4.4nm,1.1s,baz=248,slow=12,SNR=5.4							
BOSA				LR		LR	20 16 19.7	
	comp=Z,133nm,19.0s,MS3.9,baz=186,slow=30							
BDFB	**Brasilia**	**48.30**	**329**	P		**P**	**20 01 29.4**	**-0.5**
	1.4nm,0.4s,mb4.3,baz=142,slow=7.4,SNR=3.5							
BDFB				LR		LR	20 20 15.3	
	comp=Z,73nm,18.5s,MS3.7,baz=324,slow=34							
CASY	**Casey**	**48.84**	**158**	P		**P**	**20 01 38.9**	**+5.2**
	5.1nm,0.8s,mb4.6							
LVC	**Limon Verde**	**49.05**	**301**	*e*P		**P**	**20 01 34.9**	**-0.7**
	17nm,1.0s,mb5.0							
LBTB	**Lobatse**	**49.29**	**66**	P		**P**	**20 01 37.8**	**+0.2**
	3.9nm,0.9s,mb4.4,baz=198,slow=14,SNR=3.5							
LBTB	**Lobatse**	**49.29**	**66**	*e*P		**P**	**20 01 32.4**	**-5.2**
	11nm,1.2s,mb4.8							
LPAZ	**La Paz**	**54.39**	**305**	P		**P**	**20 02 16.1**	**+0.4**
	5.3nm,0.6s,mb4.7,baz=154,slow=6.7,SNR=27							
LSZ	**Lusaka**	**58.98**	**63**	*e*P		**P**	**20 02 48.4**	**+0.2**
	9.5nm,0.9s,mb4.8							
NNA	**Nana**	**61.88**	**298**	P		**P**	**20 03 08.2**	**+0.1**
	19nm,1.0s,mb5.2							
OTAV	**Otavalo**	**73.55**	**302**	P		**P**	**20 04 23.4**	**+1.7**
	5.6nm,1.0s,mb4.5							
TOA0	**Torodi Ar. Sit**	**76.66**	**26**	*e*P		**P**	**20 04 40.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**76.66**	**26**	P		**P**	**20 04 40.3**	**+0.8**
	5.5nm,0.8s,mb4.5,baz=193,slow=6.7,SNR=30							
STKA	**Stephens Creek**	**86.85**	**168**	*e*P		**P**	**20 05 33.2**	**-0.1**
	9.9nm,1.2s,mb4.9							
ASAR	**Alice Springs**	**93.91**	**160**	P		**P**	**20 06 06.5**	**+0.1**
	1.2nm,0.7s,mb4.5,baz=185,slow=4.1,SNR=15							
WRA	**Warramunga Arr**	**97.63**	**160**	P		**P**	**20 06 23.0**	**-0.4**
	0.6nm,0.8s,mb4.2,baz=199,slow=4.2,SNR=3.9							
CMAR	**Chiang Mai Arr**	**121.96**	**111**	PKP		PKPdf	20 11 43.4	+0.4
	1.9nm,0.7s,baz=234,slow=3.4,SNR=8.4							
PDAR	**Pinedale Array**	**124.06**	**298**	PKP		PKPdf	20 11 45.8	-0.5
	0.5nm,0.6s,baz=122,slow=5.4,SNR=4.2							
NVAR	**Mina Array Bea**	**124.50**	**288**	PKP		PKPdf	20 11 47.3	+0.1
	0.3nm,0.4s,baz=91,slow=7.4,SNR=4.3							
NB2	**NORSAR Subarra**	**124.64**	**20**	PKPdf		PKPdf	20 11 46.9	+0.2
	comp=Z,2.7nm,1.1s,baz=202,slow=1.9							
ARCES	**ARCESS Array B**	**134.89**	**22**	PKP		PKPdf	20 12 04.8	-1.2
	comp=Z,2.8nm,0.9s,baz=355,slow=2.8,SNR=4.7							
MKAR	**Makanchi Array**	**136.89**	**74**	PKP		PKPdf	20 12 08.2	-2.2
	comp=Z,0.8nm,1.0s,baz=264,slow=1.2,SNR=4.6							
KURK	**Kurchatov**	**138.00**	**68**	PKP		PKPdf	20 12 11.6	-0.7
	comp=Z,0.5nm,0.6s,baz=237,slow=3.3,SNR=3.6							
ZALV	**Zalesovo Beam**	**142.39**	**68**	PKhKP			20 12 16.6	
	comp=Z,1.3nm,0.6s,baz=249,slow=4.6,SNR=7.2							
DLBC	**Dease Lake**	**144.23**	**300**	*e*PKPdf		PKPdf	20 12 22.1	-1.2
SONM	**Songino Array**	**149.28**	**93**	PKPbc		PKPbc	20 12 36.4	0.0
	comp=Z,9.7nm,0.8s,baz=214,slow=2.8,SNR=62							
ULN	**Ulaanbaatar**	**149.62**	**93**	*e*PKPbc		PKPbc	20 12 37.1	-0.2
ULN				*e*PKPab		PKPab	20 12 42.6	+0.1
KSRS	**Korea Array**	**150.77**	**131**	PKPbc		PKPbc	20 12 40.9	+0.5
	comp=Z,3.4nm,0.8s,baz=191,slow=3.8,SNR=6.3							
DAWY	**Dawson**	**150.98**	**305**	*e*PKPdf		PKPdf	20 12 32.2	-2.1
DAWY				*e*PKPbc		PKPbc	20 12 39.3	-0.7

*ISCJB **18** 20:02:31.6±0.4, 3892N±003×2121E±003, h10km, Error ellipse: s-maj=4.4km s-min=3.4km az=139.1*
*ATH **18** 20:02:31.5, 3891N×2119E, h33km±6km, MD3.2/3*
*NEIC **18** 20:02:31.5, 3891N×2119E, h33km, MD3.2(ATH), After ATH.*
*CSEM **18** 20:02:32.7±0.1, 3892N×2121E, h5km, MD3.2, Error ellipse: s-maj=2.4km s-min=1.8km az=106.0*
*THE **18** 20:02:33.0, 3892N×2123E, h12km, ML2.5*
ISC 18 20:02:33.4±0.5, 3892N±003×2122E±004, h34km±5km, n14, σ0§80/28, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EVR	**Evrytania**	**0.46**	**90**	*e*PB		**Pb**	**20 02 42.0**	**-1.5**
EVR				*e*SB		**Sb**	**20 02 50.1**	**-0.3**
LKD	**Levkas**	**0.49**	**244**	*e*Pg		**Pb**	**20 02 42.6**	**-1.2**
LKD				*e*Sg		**Sb**	**20 02 50.7**	**-0.4**
JAN	**Janina**	**0.79**	**339**	*e*PN		**Pn**	**20 02 47.1**	**-0.9**
JAN				*e*SN		**Sn**	**20 02 58.2**	**-0.4**
MEV	**Metsovon**	**0.86**	**1**	*e*Pg		**Pn**	**20 02 48.7**	**-0.3**
AGG	**Agios Georgios**	**0.88**	**83**	*e*Pg		**Pn**	**20 02 49.4**	**+0.2**
AGG				*e*Sg		**Sb**	**20 03 01.8**	**+0.2**
KFL	**Anninata**	**0.88**	**203**	*e*Pg		**Pn**	**20 02 49.3**	**+0.1**
RLS	**Riolos of Patr**	**0.88**	**167**	*e*Pn		**Pn**	**20 02 48.8**	**-0.5**
RLS				*e*Sn		**Sn**	**20 03 01.8**	**+0.9**
VLS	**Valsamata**	**0.89**	**214**	*e*Pg		**Pn**	**20 02 48.9**	**-0.5**
VLS				*e*Sg		**Sb**	**20 03 03.9**	**+1.9**
VLS	**Valsamata**	**0.89**	**214**	*e*PN		**Pn**	**20 02 48.8**	**-0.6**
VLS				*e*SN		**Sn**	**20 03 01.1**	**0.0**
VLS	**Valsamata**	**0.89**	**214**	*e*Pg		**Pn**	**20 02 48.9**	**-0.5**
VLS				*e*Sn		**Sn**	**20 03 01.1**	**0.0**
VLS				*e*Sg		**Sb**	**20 03 03.9**	**+1.9**
THL	**Klokotos Trika**	**0.89**	**44**	*e*Pg		**Pn**	**20 02 49.4**	**-0.1**
THL				*e*Sg		**Sb**	**20 03 03.2**	**+1.1**
THL	**Klokotos Trika**	**0.89**	**44**	*e*PN		**Pn**	**20 02 49.0**	**-0.5**
THL				*e*SN		**Sn**	**20 03 01.8**	**+0.6**
THL	**Klokotos Trika**	**0.89**	**44**	*e*Pg		**Pn**	**20 02 49.4**	**-0.1**
THL				*e*Sn		**Sn**	**20 03 01.8**	**+0.6**
THL				*e*Sg		**Sb**	**20 03 03.2**	**+1.1**
IGT	**Igoumenitsa**	**0.92**	**312**	*e*Pg		**Pn**	**20 02 50.2**	**+0.4**
IGT				*e*Sg		**Sb**	**20 03 04.0**	**+1.2**

*CSEM **18** 20:24:01.1±0.1, 4422N×957E, h2km, ML2.6/14, Error ellipse: s-maj=5.5km s-min=2.2km az=4.0*
*ISCJB **18** 20:24:01.9±0.3, 4434N±003×950E±003, h12km±3km, Error ellipse: s-maj=4.5km s-min=3.4km az=18.5*
*GEN **18** 20:24:02.2, 4441N×952E, h9km, ML2.0*
*ROM **18** 20:24:02.3±0.1, 4440N×951E, h7km±1km, Md2.2/8, Ml2.7/2, Error ellipse: s-maj=2.5km s-min=1.4km az=101.0*
*NEIC **18** 20:24:04.6, 4422N×954E, h10km, ML2.6(LDG), After LDG.*
*LDG **18** 20:24:04.6±0.2, 4422N×954E, h10km, Ml2.6/14, Error ellipse: s-maj=4.3km s-min=2.6km az=97.0*
ISC 18 20:24:02.4±0.4, 4432N±003×947E±003, h7km±3km, n59, σ1§05/95, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SC2M	**Scurtabo**	**0.10**	**27**	Pg		**Pg**	**20 24 03.9**	**-0.8**
SC2M				Sg		**Sg**	**20 24 05.0**	**-1.2**
	12µm,0.2s							
CODM	**Codolo**	**0.28**	**75**	P		**Pg**	**20 24 06.7**	**-1.3**
GENL	**Genova Univers**	**0.37**	**284**	P		**Pg**	**20 24 09.8**	**+0.2**
BACM	**Baccana**	**0.43**	**95**	P		**Pg**	**20 24 10.1**	**-0.7**
BOB	**Bobbio (Coli)**	**0.45**	**358**	Pg		**Pg**	**20 24 10.4**	**-0.8**
BOB				Sg		**Sg**	**20 24 16.4**	**-0.7**
	327nm,0.4s							
GRAM	**Graiana**	**0.46**	**68**	P		**Pg**	**20 24 09.9**	**-1.4**
VINC	**Vinca**	**0.52**	**110**	P		**Pg**	**20 24 12.3**	**-0.2**
VALM	**Valbona**	**0.56**	**86**	P		**Pg**	**20 24 12.2**	**-1.0**
ERBM	**Eremo**	**0.68**	**81**	Pg		**Pg**	**20 24 15.1**	**-0.5**
ERBM				Sg		**Sg**	**20 24 25.2**	**+0.8**
PCP	**Piancastagn**	**0.70**	**289**	P		**Pg**	**20 24 17.3**	**+1.4**
GSCL	**Gusciola**	**0.80**	**87**	Pg		**Pg**	**20 24 18.4**	**+0.6**
GSCL				Sg		**Sg**	**20 24 28.4**	**+0.2**
	9.0nm,0.2s							
BDI	**Bagni Di Lucca**	**0.85**	**107**	Pg		**Pg**	**20 24 18.7**	**0.0**
FIN	**Finale Ligure**	**0.91**	**264**	Pg		**Pg**	**20 24 20.7**	**+0.7**
FIN				Sg		**Sg**	**20 24 34.1**	**+2.3**
FIN	**Finale Ligure**	**0.91**	**264**	P		**Pg**	**20 24 19.7**	**-0.3**
FIN	**Finale Ligure**	**0.91**	**264**	Pg		**Pg**	**20 24 20.7**	**+0.7**
FIN				Sg		**Sg**	**20 24 34.1**	**+2.3**
PII	**Pisa**	**0.96**	**128**	Pg		**Pg**	**20 24 20.9**	**0.0**
PII				Sg		**Sg**	**20 24 34.9**	**+1.4**
	100nm,0.6s							
PZZT	**Monte Pizzetto**	**1.02**	**100**	Pg		**Pg**	**20 24 21.4**	**-0.5**
PZZT				Sg		**Sg**	**20 24 36.2**	**+1.1**
ROB	**Robourent**	**1.15**	**269**	P		**Pg**	**20 24 23.4**	**-1.1**
NEGI	**Seborga**	**1.36**	**250**	P		**Pn**	**20 24 26.4**	**-1.4**
ENR	**Entracque**	**1.48**	**267**	P		**Pn**	**20 24 28.7**	**-0.7**
SBF	**Sospel**	**1.54**	**254**	*e*Pn		**Pn**	**20 24 29.8**	**-0.4**
	SNR=1.0							
SBF				*e*Sn		**Sn**	**20 24 49.4**	**-1.0**
	21nm,0.2s,SNR=1.0							
SBF	**Sospel**	**1.54**	**254**	*e*Pn		**Pn**	**20 24 29.8**	**-0.4**
	SNR=1.0							
SBF				*e*Sn		**Sn**	**20 24 49.4**	**-1.0**
	11nm,0.2s,SNR=1.0							
STV	**Sant Anna di V**	**1.54**	**268**	P		**Pn**	**20 24 29.2**	**-1.1**
RSP	**Reno Superiore**	**1.79**	**299**	P		**Pn**	**20 24 33.3**	**-0.4**
PGF	**Pioggiola**	**1.80**	**191**	*e*Pn		**Pn**	**20 24 33.4**	**-0.5**
MBDF	**Montbardon**	**1.98**	**283**	*e*Pn		**Pn**	**20 24 36.0**	**-0.3**
MBDF				*e*Sn		**Sn**	**20 25 02.0**	**+0.8**
	6.1nm,0.4s							
MBDF	**Montbardon**	**1.98**	**283**	*e*Pn		**Pn**	**20 24 36.0**	**-0.3**
MBDF				*e*Sn		**Sn**	**20 25 02.0**	**+0.8**
	3.0nm,0.4s							
RRL	**Rocca Remolon**	**2.01**	**288**	P		**Pn**	**20 24 37.0**	**+0.2**
FRF	**La Foret Royal**	**2.18**	**251**	*e*Pn		**Pn**	**20 24 38.9**	**-0.1**
	SNR=1.0							
FRF				*e*Sn		**Sn**	**20 25 04.5**	**-1.7**
	4.5nm,0.2s,SNR=1.0							
FRF	**La Foret Royal**	**2.18**	**251**	*e*Pn		**Pn**	**20 24 38.9**	**-0.1**
	SNR=1.0							
FRF				*e*Sn		**Sn**	**20 25 04.5**	**-1.7**
	2.2nm,0.2s,SNR=1.0							
LPG	**La Plagne**	**2.27**	**302**	*e*Pn		**Pn**	**20 24 41.4**	**+1.2**
	SNR=1.0							
LPG				*e*Sn		**Sn**	**20 25 09.7**	**+1.3**
	3.5nm,0.3s							
LPG	**La Plagne**	**2.27**	**302**	*e*Pn		**Pn**	**20 24 41.4**	**+1.2**
	SNR=1.0							
LPG				*e*Sn		**Sn**	**20 25 09.7**	**+1.3**
	1.8nm,0.3s							
LPL	**La Plagne**	**2.29**	**303**	*e*Pn		**Pn**	**20 24 41.4**	**+0.9**
	SNR=1.0							
LPL				*e*Sn		**Sn**	**20 25 09.8**	**+0.9**
	3.4nm,0.4s							
LPL	**La Plagne**	**2.29**	**303**	*e*Pn		**Pn**	**20 24 41.4**	**+0.9**
	SNR=1.0							
LPL				*e*Sn		**Sn**	**20 25 09.8**	**+0.9**
	1.7nm,0.4s							
LMR	**La Mourre**	**2.36**	**246**	*e*Pn		**Pn**	**20 24 41.4**	**-0.1**
	SNR=1.0							
LMR				*e*Sn		**Sn**	**20 25 09.0**	**-1.7**
	4.7nm,0.2s,SNR=1.0							
LMR	**La Mourre**	**2.36**	**246**	*e*Pn		**Pn**	**20 24 41.4**	**-0.1**
	SNR=1.0							
LMR				*e*Sn		**Sn**	**20 25 09.0**	**-1.7**
	2.3nm,0.2s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**2.63**	**284**	*e*Pn		**Pn**	**20 24 46.9**	**+1.6**
ORIF				*e*Sn		**Sn**	**20 25 15.5**	**-2.0**
	2.0nm,0.3s							
ORIF	**Oris-en-Rattie**	**2.63**	**284**	*e*Pn		**Pn**	**20 24 46.9**	**+1.6**
ORIF				*e*Sn		**Sn**	**20 25 15.5**	**-2.0**
	1.0nm,0.3s							
SMRF	**Simiane la Rot**	**2.83**	**264**	*e*Pn		**Pn**	**20 24 48.8**	**+0.8**
CABF	**La Chapelle**	**3.31**	**315**	*e*Pn		**Pn**	**20 24 56.5**	**+1.9**
	SNR=1.0							
VIVF	**Saint-Julien-l**	**3.47**	**281**	*e*Pn		**Pn**	**20 24 57.5**	**+0.7**
	SNR=1.0							
HINF	**Hinteralfeld**	**3.95**	**333**	*e*Pn		**Pn**	**20 25 04.5**	**+1.2**
	SNR=1.0							
HINF				*e*Sn		**Sn**	**20 25 50.3**	**+0.5**
	2.0nm,0.3s,SNR=1.0							
HINF	**Hinteralfeld**	**3.95**	**333**	*e*Pn		**Pn**	**20 25 04.5**	**+1.2**
	SNR=1.0							
HINF				*e*Sn		**Sn**	**20 25 50.3**	**+0.5**
	1.0nm,0.3s,SNR=1.0							
LASF	**Ste Croix**	**4.04**	**269**	*e*Pn		**Pn**	**20 25 04.3**	**-0.4**
HAU	**Haudompre**	**4.28**	**331**	*e*Pn		**Pn**	**20 25 09.5**	**+1.6**
	SNR=1.0							
HAU				*e*Sn		**Sn**	**20 25 57.8**	**-0.3**
	6.4nm,0.3s,SNR=1.0							
HAU	**Haudompre**	**4.28**	**331**	*e*Pn		**Pn**	**20 25 09.5**	**+1.6**
	SNR=1.0							
HAU				*e*Sn		**Sn**	**20 25 57.8**	**-0.3**
	3.2nm,0.3s,SNR=1.0							
CDF	**Champ du Feu**	**4.37**	**340**	*e*Pn		**Pn**	**20 25 10.0**	**+0.8**
	SNR=1.0							
CDF				*e*Sn		**Sn**	**20 25 59.0**	**-1.3**
	1.9nm,0.3s							
CDF	**Champ du Feu**	**4.37**	**340**	*e*Pn		**Pn**	**20 25 10.0**	**+0.8**
	SNR=1.0							
CDF				*e*Sn		**Sn**	**20 25 59.0**	**-1.3**
	0.9nm,0.3s							
SMF	**Signal de Mont**	**4.59**	**302**	*e*Pn		**Pn**	**20 25 13.0**	**+0.8**
	SNR=1.0							
SMF				*e*Sn		**Sn**	**20 26 05.0**	**-0.8**
	1.1nm,0.2s							
SMF	**Signal de Mont**	**4.59**	**302**	*e*Pn		**Pn**	**20 25 13.0**	**+0.8**
	SNR=1.0							
SMF				*e*Sn		**Sn**	**20 26 05.0**	**-0.8**
	0.6nm,0.2s							
LOR	**Lormes**	**4.91**	**309**	*e*Pn		**Pn**	**20 25 17.8**	**+1.2**
LOR				*e*Sn		**Sn**	**20 26 12.3**	**-1.3**
	2.4nm,0.3s							
LOR	**Lormes**	**4.91**	**309**	*e*Pn		**Pn**	**20 25 17.8**	**+1.2**
LOR				*e*Sn		**Sn**	**20 26 12.3**	**-1.3**
	1.2nm,0.3s							
AVF	**Avril sur Loir**	**4.96**	**302**	*e*Pn		**Pn**	**20 25 18.6**	**+1.3**
	SNR=1.0							
SSF	**Saint Saulge**	**5.00**	**305**	*e*Pn		**Pn**	**20 25 19.1**	**+1.3**
SSF				*e*Sn		**Sn**	**20 26 13.9**	**-1.9**
	1.5nm,0.4s,SNR=1.0							
SSF	**Saint Saulge**	**5.00**	**305**	*e*Pn		**Pn**	**20 25 19.1**	**+1.3**
SSF				*e*Sn		**Sn**	**20 26 13.9**	**-1.9**
	0.8nm,0.4s,SNR=1.0							

BGF	**Bois d'Agland**	**5.17**	**298**	*e*Pn		**Pn**	**20 25 21.1**	**+0.9**
	SNR=1.0							
CAF	**Calviac**	**5.32**	**279**	*e*Pn		**Pn**	**20 25 22.6**	**+0.3**
CAF				*e*Sn		**Sn**	**20 26 21.0**	**-2.8**
	1.8nm,0.2s							
CAF	**Calviac**	**5.32**	**279**	*e*Pn		**Pn**	**20 25 22.6**	**+0.3**
CAF				*e*Sn		**Sn**	**20 26 21.0**	**-2.8**
	0.9nm,0.2s							
HYF	**Humbligny**	**5.62**	**304**	*e*Pn		**Pn**	**20 25 27.1**	**+0.8**

*BJI **18** 20:53:24.9, 3550N×4470E, h10km, mB5.0, mb4.7*
*CSEM **18** 20:53:25.9, 3561N×4463E, h10km, mb4.5/39, Ms3.9*
*ISCJB **18** 20:53:26.2±0.2, 3539N±002×4462E±002, h10km, mb4.4/73, MS3.3/12, Error ellipse: s-maj=3.7km s-min=2.3km az=37.2*
*NEIC **18** 20:53:28.0±0.3, 3554N×4467E, h10km, mb4.5/37, Error ellipse: s-maj=7.2km s-min=4.5km az=171.0*
*THR **18** 20:53:29.1±0.5, 3557N×4458E, h18km±10km, ML4.4*
*MOS **18** 20:53:29.2±1.3, 3548N×4464E, h33km, mb4.6/37, Error ellipse: s-maj=7.9km s-min=4.4km az=128.6*
*IDC **18** 20:53:31.4±2.5, 3557N×4465E, h33km±18km, mb3.9/18, mb1 4.0/26, mb1mx3.9/33, mbtmp3.9/26, ML4.1/7, MS3.4/10, Ms1 3.4/10, ms1mx3.1/30, Error ellipse: s-maj=16.4km s-min=10.8km az=154.0*
ISC 18 20:53:28.1±0.2, 3545N±002×4466E±002, h10km, (h13km±2.7km: pP-P), n310, σ1§29/317, mb4.4/73, MS3.3/12, 30C-15D, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSL	**Mosul**	**1.57**	**307**	*i* x		x	20 53 55.0	
MSL				*i* x		x	20 54 17.0	
BHD	**Baghdad**	**2.19**	**186**	*ex*		x	20 54 07.0	
BHD				*ex*		x	20 54 15.0	
BHD				*i* x		x	20 54 36.0	
BHD				*i* x		x	20 54 46.0	
SNGE	**Sanandaj**	**2.23**	**99**	*e*Pn		**Pb**	**20 54 08.5**	**+0.1**
SNGE				*e*Sg		**Sg**	**20 54 42.0**	**+2.3**
SNGE				AML		AML	20 54 45.6	
	comp=N,4µm,0.6s							
SNGE				AML		AML	20 54 48.9	
	comp=E,5µm,0.6s							
HAKT	**HAKKARI**	**2.24**	**340**	↑*i*P		**Pn**	**20 54 04.8**	**-0.4**
HKR	**Hakkari**	**2.25**	**341**	*e*PN		**Pn**	**20 54 05.8**	**+0.5**
SIRT	**Sirnak**	**2.72**	**319**	*e*PN		**Pn**	**20 54 12.5**	**+0.7**
VANT	**Van**	**3.15**	**342**	*e*PN		**Pn**	**20 54 19.2**	**+1.5**
TVAN	**Van**	**3.23**	**342**	↑*i*P		**Pn**	**20 54 19.9**	**+1.1**
VANB	**Van**	**3.30**	**342**	*e*PN		**Pn**	**20 54 20.1**	**+0.4**
ZNJK	**Zanjan**	**3.48**	**68**	*e*Pn		**Pn**	**20 54 24.8**	**+2.5**
ZNJK				*e*Sg		**Sg**	**20 55 18.1**	**-1.7**
MARD	**Mardin**	**3.64**	**302**	*e*P		**Pn**	**20 54 25.1**	**+0.6**
BEST	**Besiri**	**3.65**	**313**	*e*P		**Pb**	**20 54 34.6**	**+1.9**
CLDR	**Caldiran**	**3.73**	**351**	*e*PN		**Pn**	**20 54 27.8**	**+2.1**
MAKU	**Maku**	**3.89**	**0**	*e*Pn		**Pn**	**20 54 29.1**	**+1.1**
DYDN	**Diyadin**	**4.16**	**350**	↓*i*P		**Pb**	**20 54 44.4**	**+3.2**
AGRB	**Hanur-Agry**	**4.32**	**343**	*e*PN		**Pn**	**20 54 36.1**	**+2.2**
BNGL	**BINGOL**	**4.48**	**322**	↓*i*P		**Pn**	**20 54 36.7**	**+0.8**
ASAO	**Ashtian**	**4.50**	**100**	*e*Pn		**Pn**	**20 54 40.1**	**+3.9**
ASAO				*e*Sg		**Sg**	**20 55 51.3**	**-1.2**
ASAO				AML		AML	20 55 57.9	
	comp=E,220nm,0.7s							
ASAO				AML		AML	20 56 00.1	
	comp=N,207nm,0.7s							
GNI	**Garni**	**4.69**	**1**	Pn		**Pn**	**20 54 40.4**	**+1.5**
	comp=N,0.8nm,0.3s,baz=231,slow=3.3,SNR=7.4							
GNI				Pg		**Pg**	**20 54 54.6**	**-3.3**

comp=Z,617nm,9.0s
KIV Kislovodsk 8.63 350 *e*Pn **Pn 20 55 31.0 -1.9**
EIL Elat 10.02 238 Pn **Pn 20 55 52.6 +0.6**
comp=Z,0.7nm,0.3s,baz=145,slow=9.7,SNR=3.3
EIL Lg 20 58 47.8
comp=Z,0.9nm,0.3s,baz=87,slow=16,SNR=3.7
EIL LR LR 20 59 52.3
comp=Z,167nm,20.5s,baz=244,slow=38
EIL Elat 10.02 238 Pn **Pn 20 55 52.6 +0.6**
EIL Lg 20 58 47.8
BOQSS 10.38 156 S **Sn 20 57 46.5 -6.8**
BOQSS 10.38 156 P **Pn 20 55 57.4 +0.4**
BTHS 12.57 153 P **Pn 20 56 25.3 -1.7**
NAZ Nazwa, Dubai 14.10 135 P **Pn 20 56 46.8 -1.1**
SNR=10
ASUD Al Ashush, Dub 14.19 137 P **Pn 20 56 48.5 -0.7**
SNR=10
FAQ Al Faqa, Dubai 14.25 136 P **Pn 20 56 48.9 -1.0**
SNR=8.0
HATD Hatta, Dubai 14.50 134 P **Pn 20 56 52.1 -1.3**
ASHO Ashiyiah 14.57 134 ⇑P **Pn 20 56 52.8 -1.4**
SNR=12
TIRR Tirgusor 15.34 311 P **Pn 20 57 08.6 +4.0**
TIRR pmax pmax
comp=Z,13nm,1.1s
TIRR Tirgusor 15.34 311 P **Pn 20 57 08.6 +4.0**
comp=Z,13nm,1.1s
ARQ Araqi 15.88 136 P **Pn 20 57 09.4 -2.2**
SNR=13
IDI Anoyia 16.13 275 Pn **Pn 20 57 17.0 +2.1**
comp=Z,2.2nm,0.3s,baz=73,slow=12,SNR=23
HOQ Hoqain 16.14 134 ⇓P **Pn 20 57 13.4 -1.7**
SNR=11
BIDO Bidbid 16.68 132 ⇑P **Pn 20 57 19.9 -2.0**
SNR=5.5
BSY Bisya 16.73 136 P **Pn 20 57 20.3 -2.2**
SNR=22
SMDO Samad 16.98 133 ⇑P **Pn 20 57 24.0 -1.7**
SNR=18
MLR Muntele Rosu 17.38 311 P **Pn 20 57 32.2 +1.6**
comp=Z,0.1nm,0.3s,baz=267,slow=12,SNR=2.6
MLR Muntele Rosu 17.38 311 ⇑*i*P **Pn 20 57 36.7 +6.1**
MLR Muntele Rosu 17.38 311 P **Pn 20 57 32.2 +1.6**
MLR ⇑P 20 57 36.7
JMDO Jabal Madar 17.54 134 ⇑P **Pn 20 57 31.4 -1.3**
SNR=8.6
AKTK Aktyubinsk 17.84 29 P **Pn 20 57 35.6 -0.6**
comp=Z,1.0nm,0.3s
AKTK Aktyubinsk 17.84 29 P **Pn 20 57 35.6 -0.6**
AKTO Aktyubinsk 17.84 29 P **Pn 20 57 35.6 -0.6**
comp=Z,0.5nm,0.3s,baz=210,slow=11,SNR=11
AKTO Aktyubinsk 17.84 29 P **Pn 20 57 35.6 -0.6**
AKTO pmax pmax
comp=Z,1.0nm,0.3s
VOIR 17.91 310 ⇓*i*P **Pn 20 57 39.7 +2.6**
VOIR 17.91 310 ⇓P **Pn 20 57 39.7 +2.6**
AKASG Malin Array Be 18.90 328 P **Pn 20 57 47.2 -1.9**
comp=Z,1.1nm,0.3s,baz=135,slow=11,SNR=6.1
AKASG Malin Array Be 18.90 328 P **Pn 20 57 47.3 -1.9**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
BURAR Bucovina Array 18.90 316 ⇓*i*P **Pn 20 57 51.6 +2.4**
BURAR Bucovina Array 18.90 316 ⇓P **Pn 20 57 51.6 +2.4**
BUR08 Bucovina Ar. S 18.92 316 *e*P **Pn 20 57 48.7 -0.8**
BUR08 Bucovina Ar. S 18.92 316 *e*P **Pn 20 57 48.7 -0.8**
RBK Rabkut 19.79 152 ⇓P **Pn 20 57 57.9 -2.2**
SNR=6.3
BZS Buzias 20.18 307 ⇑*i*P **P 20 58 01.5 -1.1**
OBN Obninsk 20.44 347 ⇑*e*P **P 20 58 04.7 -0.7**
OBN *e*S **S 21 01 46.7 -7.4**
OBN pmax pmax
comp=Z,36nm,1.6s
OBN MLR MLR
comp=Z,200nm,14.0s,MS3.6
OBN Obninsk 20.44 347 *e*P **P 20 58 04.7 -0.7**
comp=Z,36nm,1.6s
OBN Obninsk 20.44 347 *e*P **P 20 58 03.5 -1.9**
LVV L'vov 20.80 320 *e*P **P 20 58 07.9 -1.4**
UZH Uzhgorod 21.10 315 *e*P **P 20 58 18.0 +5.4**
UZH *e* 20 58 34.0
UZH *e* 20 58 51.3
UZH *e*S **S 21 02 08.0 +0.8**
KOLS Kolonicke sedl 21.27 316 *e*P **P 20 58 15.1 +0.7**
KWP Kalwaria 21.40 318 ⇓*i*P **P 20 58 15.9 +0.1**
KWP Kalwaria 21.40 318 ⇓P **P 20 58 15.9 +0.2**
CRVS Cervenica-Dubn 21.71 315 *e*P **P 20 58 21.6 +2.4**
STHS Stebnicka Huta 22.09 316 *e*P **P 20 58 26.9 +3.7**
STHS pmax pmax
comp=Z,4.0nm,1.1s,mb3.8
STHS Stebnicka Huta 22.09 316 *e*P **P 20 58 26.9 +3.7**
comp=Z,4.0nm,1.1s,mb3.8
PSZ Piszkesteto 22.19 312 *e*P **P 20 58 22.0 -2.3**
PSZ Piszkesteto 22.19 312 *e*P **P 20 58 22.0 -2.2**
PKSM Moragy 22.33 307 ⇑*i*P **P 20 58 27.7 +1.9**
PKSM Moragy 22.33 307 ⇑P **P 20 58 27.7 +1.9**
TIP Timpagrande 22.46 288 P **P 20 58 25.8 -1.5**
comp=Z,18nm,1.2s,mb4.4
TIP Timpagrande 22.46 288 P **P 20 58 25.8 -1.5**
comp=Z,18nm,1.2s,mb4.4
ARU Arti 23.01 20 *c i*P **P 20 58 32.9 0.0**
ARU *e* 20 59 00.5
ARU *e*S **S 21 02 39.8 -3.5**
ARU pmax pmax
comp=Z,31nm,1.7s,mb4.5
ARU Arti 23.01 20 *e*P **P 20 58 31.5 -1.4**
comp=Z,17nm,1.0s,mb4.4
ARU Arti 23.01 20 *e*P **P 20 58 31.5 -1.4**
comp=Z,17nm,1.0s,mb4.4
VYHS Vyhne 23.07 312 *e*P **P 20 58 35.2 +1.6**
CUC Castrocucco 23.21 290 *e*P **P 20 58 33.7 -1.5**
comp=Z,8.5nm,0.7s,mb4.3
CUC Castrocucco 23.21 290 *e*P **P 20 58 33.6 -1.6**
comp=Z,8.5nm,0.7s,mb4.3
OJC Ojcow 23.31 317 *e*P **P 20 58 36.2 +0.1**
KOLL Kolacno 23.37 312 *e*P **P 20 58 37.3 +0.5**
AML Almayashu 23.52 65 *e*P **P 20 58 39.2 +0.8**
comp=Z,9.1nm,0.9s,mb4.2
AML Almayashu 23.52 65 *e*P **P 20 58 39.2 +0.7**
comp=Z,9.1nm,0.9s,mb4.2
EKS2 Erkin-Say 23.65 63 P **P 20 58 41.2 +1.6**
SNR=5.2
EKS2 Erkin-Say 23.65 63 *e*P **P 20 58 41.0 +1.4**
comp=Z,16nm,1.4s,mb4.2
EKS2 Erkin-Say 23.65 63 *e*P **P 20 58 41.0 +1.4**
comp=Z,16nm,1.4s,mb4.2
SUW Suwalki 23.86 328 P **P 20 58 39.4 -2.0**
SUW Suwalki 23.86 328 P **P 20 58 39.4 -2.0**
SVE Sverdlovsk 23.96 22 ⇑*e*P **P 20 58 41.9 -0.4**
SVE pmax pmax
comp=Z,25nm,1.5s,mb4.4
SVE Sverdlovsk 23.96 22 *e*P **P 20 58 41.9 -0.4**
comp=Z,25nm,1.5s,mb4.4
MODS Modra-Piesok 23.98 311 *e*P **P 20 58 38.9 -3.6**
ZST Bratislava 24.02 310 *e*P **P 20 58 40.1 -2.8**
ZST pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
ZST Bratislava 24.02 310 *e*P **P 20 58 40.1 -2.8**
comp=Z,6.0nm,0.8s,mb4.1
OKC Ostrava-Krasne 24.06 315 *e*P **P 20 58 43.6 +0.3**
OKC AMS AMS 21 11 40.0
comp=Z,300nm,5.1s
USP Ospenovka 24.26 62 P **P 20 58 46.4 +1.2**
SNR=14
VAE Valguarnera 24.36 284 P **P 20 58 46.2 0.0**
comp=Z,3.1nm,0.4s,mb4.1,baz=69,slow=12,SNR=3.1
MORC Moravsky Berou 24.39 314 *e*P **P 20 58 45.2 -1.1**
MORC pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
MORC Moravsky Berou 24.39 314 ⇑*i*P **P 20 58 46.7 +0.4**
MORC Moravsky Berou 24.39 314 *e*P **P 20 58 45.2 -1.1**
comp=Z,9.5nm,1.0s,mb4.2
MORC Moravsky Berou 24.39 314 *e*P **P 20 58 45.2 -1.1**
comp=Z,9.5nm,1.0s,mb4.2
MORC ⇑P 20 58 46.7
CHMS Chumysh 24.41 63 P **P 20 58 48.0 +1.4**
SNR=7.1
KBK Karagaybulak 24.50 64 P **P 20 58 49.5 +2.1**
SNR=10
ARSA Arzberg 24.70 307 **P 20 58 55.7 +6.5**
comp=Z,7.8nm,1.2s,mb4.1
CONA Conrad Observa 24.70 309 ⇑*i*P **P 20 58 50.2 +1.0**
CSNA Conrad Observa 24.70 309 ⇑*i*P **P 20 58 50.1 +0.9**
comp=Z,10nm,1.0s,mb4.3
VRAC Vranov 24.76 313 P **P 20 58 49.2 -0.5**
comp=Z,5.9nm,0.8s,mb4.2,baz=119,slow=9.8,SNR=8.5
VRAC LR LR 21 10 24.7
comp=Z,57nm,19.7s,MS3.1,baz=290,slow=41
VRAC Vranov 24.76 313 P **P 20 58 49.2 -0.4**
VRAC pmax pmax
comp=Z,6.0nm,0.8s
VRAC MLR MLR
comp=Z,57nm,19.7s
VRAC Vranov 24.76 313 ⇓*i*P **P 20 58 50.7 +1.1**
VRAC Vranov 24.76 313 ⇓P **P 20 58 50.7 +1.0**
TKM2 Tokmak 2 25.01 63 *e*P **P 20 58 52.7 +0.7**
TKM2 pmax pmax
comp=Z,7.0nm,0.9s,mb4.2
TKM2 Tokmak 2 25.01 63 P **P 20 58 53.2 +1.2**
SNR=8.6
TKM2 Tokmak 2 25.01 63 *e*P **P 20 58 52.7 +0.7**
comp=Z,6.6nm,0.9s,mb4.2
TKM2 Tokmak 2 25.01 63 *e*P **P 20 58 52.7 +0.6**
comp=Z,6.6nm,0.9s,mb4.2
BRVK Borovoye 25.21 38 *e*P **P 20 58 52.2 -1.6**
BRVK pmax pmax
comp=Z,23nm,1.3s,mb4.5
BRVK Borovoye 25.21 38 *e*P **P 20 58 52.2 -1.6**
comp=Z,23nm,1.3s,mb4.5
BRVK Borovoye 25.21 38 *e*P **P 20 58 52.1 -1.6**
comp=Z,23nm,1.3s,mb4.5
BVAR Borovoye Array 25.25 38 P **P 20 58 53.3 -0.8**
comp=Z,2.0nm,0.6s,mb3.8,baz=226,slow=7.9,SNR=12
BVAR PcP PcP 21 02 26.2 -0.9
comp=Z,0.5nm,0.5s,baz=227,slow=3.6,SNR=3.2
BVAR LR LR 21 11 06.6
comp=Z,92nm,18.1s,MS3.3,baz=232,slow=42
BVAR Borovoye Array 25.25 38 P **P 20 58 53.3 -0.8**
BVAR 21 02 26.2
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR MLR MLR
comp=Z,92nm,18.1s
BVAR Borovoye Array 25.25 38 PcP PcP 21 02 26.2 -0.9
DPC Dobruska-Polom 25.34 315 *e*P **P 20 58 54.8 -0.2**
DPC AMS AMS 21 13 40.0
comp=Z,200nm,5.7s
UPC Upice 25.59 315 *e*P **P 20 58 57.4 +0.2**
MOA Molln 25.69 308 ⇓*i*P **P 20 58 58.4 +0.3**
comp=Z,12nm,0.8s,mb4.5
PRU Pruhonice 26.25 313 *e*P **P 20 59 08.7 +5.5**
comp=Z,200nm,4.9s
PRU Pruhonice 26.25 313 *e*P **P 20 59 08.7 +5.5**
PRU AMS AMS 21 11 00.0
comp=Z,200nm,4.9s
GERES GERESS Array B 26.36 310 P **P 20 59 03.9 -0.3**
comp=Z,0.4nm,0.5s,mb3.2,baz=110,slow=9.4,SNR=8.0
PVCC Panska Ves 26.44 314 AMS AMS 21 12 00.0
comp=Z,300nm,5.2s
KHC Kasperske Hory 26.53 311 *e*P **P 20 59 06.4 +0.6**
KHC AMS AMS 21 12 40.0
comp=Z,200nm,15.9s
NKC Novy Kostel 27.59 312 AMS AMS 21 11 10.0
DAVOX Davos/Dischmat 28.32 304 P **P 20 59 21.0 -0.8**
comp=Z,2.7nm,0.6s,mb4.0,baz=17,slow=15,SNR=5.4
DAVOS Davos 28.39 304 P **P 20 59 21.0 -1.4**
DAVA Damuels 28.42 305 *i* P **P 20 59 22.3 -0.4**
comp=Z,8.2nm,0.5s,mb4.6
FINES FINESS Array B 28.57 341 *e*P **P 20 59 22.1 -1.7**
JOF Joensuu 28.72 347 *e*p **P 20 59 23.7 -1.5**
comp=Z,1.2nm,0.4s,mb4.0
JOF Joensuu 28.72 347 *e*P **P 20 59 23.7 -1.5**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
KURK Kurchatov 28.81 47 P **P 20 59 24.9 -1.2**
comp=Z,1.3nm,0.7s,mb3.8,baz=256,slow=9.0,SNR=7.9
KURK PcP PcP 21 02 34.5 -1.1
comp=Z,1.5nm,0.6s,baz=249,slow=2.9,SNR=7.2
KURK ScP ScP 21 06 13.9 -3.1
comp=Z,0.8nm,0.7s,baz=253,slow=4.1,SNR=3.6
KURK LR LR 21 13 27.4
comp=Z,89nm,19.1s,MS3.4,baz=180,slow=42
KURK Kurchatov 28.81 47 P **P 20 59 22.6 -3.5**
KURK P pP 20 59 24.9 -4.2
KURK PcP PcP 21 02 34.5 -1.1
KURK ScP ScP 21 06 13.9 -3.1
KURK LR LR 21 13 27.4
KAF Kangasniemi 29.07 342 *e*p **P 20 59 27.1 -1.2**
comp=Z,0.7nm,0.4s,mb3.7
KAF Kangasniemi 29.07 342 *e*P **P 20 59 27.1 -1.2**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
SBF Sospel 29.66 298 *e*P **P 20 59 34.0 +0.2**
comp=Z,76nm,0.9s,mb5.1
SBF Sospel 29.66 298 *e*P **P 20 59 34.0 +0.2**
SBF pmax pmax
comp=Z,38nm,0.9s,mb5.1
SBF Sospel 29.66 298 *e*P **P 20 59 34.0 +0.2**
comp=Z,38nm,0.9s,mb5.1
MBDF Montbardon 30.20 300 *e*P **P 20 59 39.3 +0.8**
comp=Z,23nm,0.6s,mb4.8
MBDF Montbardon 30.20 300 *e*P **P 20 59 39.3 +0.8**
MBDF pmax pmax
comp=Z,12nm,0.6s,mb4.8
MBDF Montbardon 30.20 300 *e*P **P 20 59 39.3 +0.8**
comp=Z,12nm,0.6s,mb4.8
FRF La Foret Royal 30.22 297 *e*P **P 20 59 39.0 +0.3**
MK31 Makanchi Array 30.25 56 *e*P **P 20 59 38.9 -0.1**
MKAR Makanchi Array 30.25 56 P **P 20 59 39.5 +0.5**
comp=Z,1.7nm,0.7s,mb3.9,baz=257,slow=8.3,SNR=16
MKAR PcP PcP 21 02 37.6 -1.8
comp=Z,0.7nm,0.8s,baz=240,slow=3.8,SNR=2.8
MKAR LR LR 21 12 51.9
comp=Z,18nm,19.5s,MS2.7,baz=213,slow=38
MKAR Makanchi Array 30.25 56 *i* P **P 20 59 39.5 +0.5**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 30.25 56 PcP PcP 21 02 37.6 -1.8
LPG La Plagne 30.28 301 *e*P **P 20 59 39.8 +0.5**
comp=Z,13nm,0.8s,mb4.4
LPG La Plagne 30.28 301 *e*P **P 20 59 39.8 +0.5**
LPG pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
LPG La Plagne 30.28 301 *e*P **P 20 59 39.8 +0.5**
comp=Z,6.3nm,0.8s,mb4.4
BNI Bardonecchia 30.29 300 *e*P **P 20 59 38.4 -0.9**
BNI pmax pmax
comp=Z,25nm,1.1s,mb4.9
BNI Bardonecchia 30.29 300 *e*P **P 20 59 38.4 -0.9**
comp=Z,5nm,1.1s,mb4.8
BNI Bardonecchia 30.29 300 *e*P **P 20 59 38.4 -0.9**
comp=Z,25nm,1.1s,mb4.8
LPL La Plagne 30.30 301 *e*P **P 20 59 39.8 +0.4**
comp=Z,7.2nm,0.6s,mb4.3
LPL La Plagne 30.30 301 *e*P **P 20 59 39.8 +0.4**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
LPL La Plagne 30.30 301 *e*P **P 20 59 39.8 +0.4**
comp=Z,3.6nm,0.6s,mb4.3
LMR La Mourre 30.31 297 *e*P **P 20 59 39.7 +0.2**
CDF Champ du Feu 30.36 307 *e*P **P 20 59 39.2 -0.7**
HINF Hinteralfeld 30.53 306 *e*P **P 20 59 40.5 -0.9**
ORIF Oris-en-Rattie 30.85 300 ⇑*i*P **P 20 59 43.7 -0.5**
comp=Z,13nm,0.7s,mb4.6
ORIF *e*MLR MLR
comp=Z,100nm,20.2s,MS3.2
ORIF Oris-en-Rattie 30.85 300 ⇑*i*P **P 20 59 43.7 -0.5**
ORIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
ORIF Oris-en-Rattie 30.85 300 ⇑*i*P **P 20 59 43.7 -0.5**
comp=Z,6.3nm,0.7s,mb4.6
CABF La Chapelle 30.87 303 ⇑*i*P **P 20 59 44.2 -0.2**
comp=Z,22nm,0.8s,mb4.7
CABF La Chapelle 30.87 303 ⇑*i*P **P 20 59 44.2 -0.2**
CABF pmax pmax
comp=Z,11nm,0.8s,mb4.7
CABF La Chapelle 30.87 303 ⇑*i*P **P 20 59 44.2 -0.2**
comp=Z,11nm,0.8s,mb4.7
SMRF Simiane la Rot 31.01 298 *e*P **P 20 59 46.5 +0.8**
comp=Z,20nm,1.1s,mb4.9
SMRF Simiane la Rot 31.01 298 *e*P **P 20 59 46.5 +0.8**
comp=Z,20nm,1.1s,mb4.9
VIVF Saint-Julien-l 31.70 300 *e*P **P 20 59 50.8 -0.9**
comp=Z,13nm,0.7s,mb4.5
VIVF Saint-Julien-l 31.70 300 *e*P **P 20 59 50.8 -0.9**
VIVF pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
VIVF Saint-Julien-l 31.70 300 *e*P **P 20 59 50.8 -0.9**
comp=Z,6.5nm,0.7s,mb4.5
MEZF Maizieres J'vi 31.84 307 *e*P **P 20 59 52.2 -0.7**
comp=Z,17nm,0.9s,mb4.6
MEZF Maizieres J'vi 31.84 307 *e*P **P 20 59 52.2 -0.7**
comp=Z,8.4nm,0.9s,mb4.6
LASF Ste Croix 32.25 298 *e*P **P 20 59 56.9 +0.3**
SMF Signal de Mont 32.41 303 *e*P **P 20 59 57.2 -0.8**
comp=Z,12nm,0.8s,mb4.5
SMF Signal de Mont 32.41 303 *e*P **P 20 59 57.2 -0.8**
SMF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
SMF Signal de Mont 32.41 303 *e*P **P 20 59 57.2 -0.8**
comp=Z,6.0nm,0.8s,mb4.5
LOR Lormes 32.46 304 *e*P **P 20 59 57.9 -0.5**
LOR *e*MLR MLR
comp=Z,63nm,22.5s,MS3.0
LOR Lormes 32.46 304 *e*P **P 20 59 57.9 -0.5**
LOR LR LR
comp=Z,60nm,22.5s,MS3.2
BAIF Baives 32.66 309 *e*P **P 20 59 59.9 -0.2**
SSF Saint Saulge 32.68 304 *e*P **P 20 59 59.5 -0.8**
comp=Z,8.9nm,1.0s,mb4.4
SSF Saint Saulge 32.68 304 *e*P **P 20 59 59.5 -0.8**
SSF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
SSF Saint Saulge 32.68 304 *e*P **P 20 59 59.5 -0.8**
comp=Z,4.4nm,1.0s,mb4.4
AVF Avril sur Loir 32.76 303 *e*P **P 21 00 00.1 -0.9**
comp=Z,7.4nm,0.8s,mb4.4
AVF Avril sur Loir 32.76 303 *e*P **P 21 00 00.1 -0.9**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
AVF Avril sur Loir 32.76 303 *e*P **P 21 00 00.1 -0.9**
comp=Z,3.7nm,0.8s,mb4.4
NOA NORSAR Array B 33.28 331 P **P 21 00 04.2 -1.2**
comp=Z,1.0nm,0.7s,mb3.8,baz=125,slow=8.7,SNR=2.8
NOA NORSAR Array B 33.28 331 P **P 21 00 04.2 -1.2**
NOA pmax pmax
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 33.43 44 P **P 21 00 06.4 -0.3**
comp=Z,0.5nm,0.3s,mb3.9,baz=238,slow=8.2,SNR=3.4
ZALV LR LR 21 14 35.2
comp=Z,57nm,21.7s,MS3.2,baz=335,slow=38
ZALV Zalesovo Beam 33.43 44 P **P 21 00 06.4 -0.4**
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
ZALV MLR MLR
comp=Z,57nm,21.7s,MS3.2
TCF Toulx Ste Croi 33.51 302 *e*P **P 21 00 07.7 +0.1**
comp=Z,18nm,1.1s,mb4.6
TCF Toulx Ste Croi 33.51 302 *e*P **P 21 00 07.7 +0.1**
TCF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
TCF Toulx Ste Croi 33.51 302 *e*P **P 21 00 07.7 +0.1**
comp=Z,8.9nm,1.1s,mb4.6
CAF Calviac 33.55 300 *e*P **P 21 00 07.4 -0.6**
comp=Z,3.1nm,0.6s,mb4.1
CAF Calviac 33.55 300 *e*P **P 21 00 07.4 -0.6**
CAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
CAF Calviac 33.55 300 *e*P **P 21 00 07.4 -0.6**
comp=Z,1.5nm,0.6s,mb4.1
DANN Dangsirg 33.78 91 *e*P **P 21 00 10.9 +0.8**
comp=Z,2.1nm,0.6s,mb5.3
WMQ Urumqi 33.86 62 *e*P **P 21 00 11.8 +1.1**
WMQ AMB AMB
comp=Z,13nm,0.6s,mb5.0
WMQ AMB AMB
comp=Z,76nm,3.6s
KOLN Koldanda 33.87 92 *e*P **P 21 00 10.2 -0.7**
comp=Z,4.6nm,0.5s,mb4.7
RJF Les Rejaudoux 33.95 300 *e*P **P 21 00 11.4 0.0**
RJF *e*MLR MLR
comp=Z,62nm,22.2s,MS3.0
RJF Les Rejaudoux 33.95 300 *e*P **P 21 00 11.4 0.0**
RJF LR LR
comp=Z,60nm,22.3s,MS3.3
LFF La Frestale 34.49 300 *e*P **P 21 00 15.7 -0.5**
comp=Z,12nm,0.5s,mb4.8
LFF La Frestale 34.49 300 *e*P **P 21 00 15.7 -0.5**
LFF pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
LFF La Frestale 34.49 300 *e*P **P 21 00 15.7 -0.5**
comp=Z,5.9nm,0.5s,mb4.8
GKN Gorkha 34.62 91 *e*P **P 21 00 18.0 +0.5**
comp=Z,17nm,0.5s,mb5.3
EPF Esparros 34.82 296 *e*P **P 21 00 17.5 -1.5**
MFF Saint Martin d 35.15 302 ⇑*i*P **P 21 00 20.7 -1.1**
comp=Z,13nm,0.8s,mb4.6
MFF Saint Martin d 35.15 302 ⇑*i*P **P 21 00 20.7 -1.1**
MFF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MFF Saint Martin d 35.15 302 ⇑*i*P **P 21 00 20.7 -1.1**
comp=Z,6.5nm,0.8s,mb4.6
DMN Daman 35.16 91 *e*P **P 21 00 22.7 +0.6**
comp=Z,25nm,0.9s,mb5.2
KKN Kakani 35.23 91 *e*P **P 21 00 22.6 -0.1**
LDF La Druitiere 35.26 306 *e*P **P 21 00 21.1 -1.6**
PKIN Phulchoki 35.41 91 *e*P **P 21 00 24.9 +0.7**
comp=Z,13nm,0.7s,mb5.0
PKI Pulchoki 35.42 91 *e*P **P 21 00 25.0 +0.6**
FLN La Foliniere 35.51 306 *e*P **P 21 00 23.4 -1.5**
FLN *e*MLR MLR
comp=Z,51nm,19.2s,MS3.0
FLN La Foliniere 35.51 306 *e*P **P 21 00 23.4 -1.5**
FLN LR LR
comp=Z,50nm,19.3s,MS3.3
GUN Gumba 35.67 90 *e*P **P 21 00 26.6 +0.1**
KEV Kevo 35.69 350 *e*p **P 21 00 23.7 -2.5**
ARCES ARCESS Array B 35.73 349 P **P 21 00 26.1 -0.4**
comp=Z,3.9nm,0.9s,mb4.3,baz=165,slow=9.7,SNR=6.9
ARCES ARCESS Array B 35.73 349 P **P 21 00 26.1 -0.4**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
GRR Gorron 35.73 305 *e*P **P 21 00 25.5 -1.3**
comp=Z,18nm,0.7s,mb4.8
GRR Gorron 35.73 305 *e*P **P 21 00 25.5 -1.3**
GRR pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
GRR Gorron 35.73 305 *e*P **P 21 00 25.5 -1.3**
comp=Z,9.1nm,0.7s,mb4.8
SJPF Ste Jean 35.96 296 *e*P **P 21 00 28.1 -0.7**
comp=Z,6.2nm,0.6s,mb4.4
SJPF Ste Jean 35.96 296 *e*P **P 21 00 28.1 -0.7**
SJPF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
SJPF Ste Jean 35.96 296 *e*P **P 21 00 28.1 -0.7**
comp=Z,3.1nm,0.6s,mb4.4
JIRN Jiri 36.02 91 *e*P **P 21 00 30.6 +1.1**
comp=Z,29nm,0.6s,mb5.4
TAM Tamanrasset 36.22 260 *e*P **P 21 00 32.7 +1.5**
RAMN Ramite 36.64 91 *e*P **P 21 00 35.0 +0.2**
comp=Z,43nm,0.7s,mb5.4
SGMF Saint Gilles 36.85 305 ⇑*i*P **P 21 00 35.3 -1.1**
comp=Z,9.4nm,0.4s,mb4.7
SGMF Saint Gilles 36.85 305 ⇑*i*P **P 21 00 35.3 -1.1**
SGMF pmax pmax
comp=Z,5.0nm,0.4s,mb4.7
SGMF Saint Gilles 36.85 305 ⇑*i*P **P 21 00 35.3 -1.1**
comp=Z,4.7nm,0.4s,mb4.7
QUIF Quistinic 37.25 305 *e*P **P 21 00 38.3 -1.4**
comp=Z,14nm,0.5s,mb4.8
QUIF Quistinic 37.25 305 *e*P **P 21 00 38.3 -1.4**
QUIF pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
QUIF Quistinic 37.25 305 *e*P **P 21 00 38.3 -1.4**
comp=Z,7.1nm,0.5s,mb4.8
ODAN Odare 37.32 91 *e*P **P 21 00 41.0 +0.4**
comp=Z,18nm,0.7s,mb5.0
ROSF Rostrenen 37.34 305 *e*P **P 21 00 39.2 -1.3**
comp=Z,12nm,0.6s,mb4.6
ROSF Rostrenen 37.34 305 *e*P **P 21 00 39.2 -1.3**
ROSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
ROSF Rostrenen 37.34 305 *e*P **P 21 00 39.2 -1.3**
comp=Z,5.8nm,0.6s,mb4.6
TAPN Taplejung 37.39 90 *e*P **P 21 00 42.3 +1.2**
comp=Z,24nm,0.8s,mb5.1
ESDC Sonseca Array 38.40 291 P **P 21 00 49.1 -0.5**
comp=Z,2.1nm,0.7s,mb4.0,baz=63,slow=8.5,SNR=8.9
LSA Lhasa 39.31 85 *e*P **P 21 00 57.6 +0.3**
LSA pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
LSA Lhasa 39.31 85 *e*P **P 21 00 57.6 +0.3**
comp=Z,9.8nm,0.9s,mb4.5
LSA Lhasa 39.31 85 *e*P **P 21 00 57.6 +0.3**
comp=Z,9.8nm,0.9s,mb4.5
MDT Midelt 40.54 281 P **P 21 01 07.4 -0.1**
comp=Z,2.2nm,1.0s,mb3.8,baz=100,slow=11,SNR=4.0
GTA Gaotai 43.41 68 *e*P **P 21 01 26.4 -4.4**
GTA AP pP 21 01 31.8 -2.2

GTA				XP	sP	21 01 35.5	+0.3		
GTA				AMB	AMB				
	comp=Z,4.0nm,1.7s,mb3.9								
ZAK	**Zakamensk**	**44.29**	**52**	*e*P	**P**	**21 01 31.9**	**-5.9**		
ZAK				pmax	pmax				
	comp=Z,3.0nm,1.4s,mb3.8								
ZAK	**Zakamensk**	**44.29**	**52**	*e*P	**P**	**21 01 31.9**	**-5.9**		
	comp=Z,3.0nm,1.4s,mb3.8								
TORD	**Torodi Ar. Bea**	**44.56**	**251**	P	**P**	**21 01 39.6**	**-0.8**		
	comp=Z,1.6nm,0.8s,mb3.9,baz=45,slow=7.6,SNR=8.7								
SONM	**Songino Array**	**46.59**	**55**	P	**P**	**21 01 56.4**	**+0.3**		
	comp=Z,0.5nm,0.5s,mb3.7,baz=280,slow=8.2,SNR=6.7								
SONM				PcP	PcP	21 03 28.7	-1.3		
	comp=Z,0.5nm,0.5s,baz=270,slow=3.8,SNR=6.5								
SONM				LR	LR	21 24 35.3			
	comp=Z,96nm,18.4s,MS3.8,baz=76,slow=40								
SONM	**Songino Array**	**46.59**	**55**	P	**P**	**21 01 56.4**	**+0.3**		
SONM						21 03 28.7			
SONM				pmax	pmax				
	comp=Z,1.0nm,0.5s								
SONM				MLR	MLR				
	comp=Z,96nm,18.4s								
ULN	**Ulaanbaatar**	**47.02**	**55**	*e*P	**P**	**21 01 59.4**	**-0.1**		
ULN				pmax	pmax				
	comp=Z,5.0nm,0.9s,mb4.4								
ULN	**Ulaanbaatar**	**47.02**	**55**	*e*P	**P**	**21 01 59.4**	**-0.1**		
	comp=Z,5.2nm,0.9s,mb4.5								
ULN	**Ulaanbaatar**	**47.02**	**55**	*e*P	**P**	**21 01 59.4**	**-0.1**		
	comp=Z,5.2nm,0.9s,mb4.5								
LZH	**Lanzhou**	**47.36**	**71**	*e*P	**P**	**21 02 03.5**	**+1.3**		
LZH				AP	pP	21 02 07.0	+1.6		
LZH				AMB	AMB				
	comp=Z,15nm,1.0s,mb4.9								
LZH				AMB	AMB				
	comp=Z,66nm,4.0s								
BORG	**Borgarnes**	**48.38**	**328**	*e*P	**P**	**21 02 08.3**	**-1.5**		
BORG	**Borgarnes**	**48.38**	**328**	*e*P	**P**	**21 02 08.3**	**-1.4**		
CMAR	**Chiang Mai Arr**	**50.65**	**95**	P	**P**	**21 02 26.9**	**-0.7**		
	comp=Z,2.4nm,0.8s,mb4.2,baz=296,slow=8.6,SNR=11								
CMAR	**Chiang Mai Arr**	**50.65**	**95**	P	**P**	**21 02 27.0**	**-0.6**		
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.8s								
LSZ	**Lusaka**	**52.81**	**200**	P	**P**	**21 02 43.0**	**-0.7**		
LSZ				pmax	pmax				
	comp=Z,5.0nm,1.2s,mb4.3								
LSZ	**Lusaka**	**52.81**	**200**	P	**P**	**21 02 43.0**	**-0.7**		
	comp=Z,5.0nm,1.2s,mb4.3								
LSZ	**Lusaka**	**52.81**	**200**	P	**P**	**21 02 43.0**	**-0.7**		
	comp=Z,5.0nm,1.2s,mb4.3								
KSRS	**Korea Array**	**64.79**	**61**	P	**P**	**21 04 05.8**	**-1.2**		
	comp=Z,2.3nm,0.8s,mb4.3,baz=285,slow=7.0,SNR=4.6								
KSRS	**Korea Array**	**64.79**	**61**	P	**P**	**21 04 05.8**	**-1.1**		
KSRS				pmax	pmax				
	comp=Z,2.0nm,0.8s,mb4.2								
BOSA	**Boshof**	**66.30**	**199**	P	**P**	**21 04 18.2**	**+1.7**		
	comp=Z,4.3nm,0.7s,mb4.6,baz=359,slow=7.5,SNR=13								
BOSA				LR	LR	21 36 21.7			
	comp=Z,94nm,18.4s,MS4.0,baz=215,slow=39								
BOSA	**Boshof**	**66.30**	**199**	P	**P**	**21 04 18.2**	**+1.6**		
BOSA				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.6								
BOSA				MLR	MLR				
	comp=Z,94nm,18.4s,MS4.0								
SCHQ	**Schefferville**	**72.67**	**326**	P	**P**	**21 04 54.3**	**-1.4**		
	comp=Z,3.0nm,0.7s,mb4.3,baz=45,slow=5.7,SNR=5.2								

MAN 18 20:57:21.1611N×12011E,h8km,mb4.2,ML3.0,MS2.7, 2C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.33**	**325**	*e*P	Pg	20 57 28.5	+1.0
BOLP				*e*S	Sg	20 57 34.4	+2.6
SCZP	**Santa Cruz**	**0.39**	**210**	*e*P	Pg	20 57 29.5	+0.9
BCPH	**Baguio City Da**	**0.53**	**59**↑	*i*P	Pg	20 57 32.2	+1.1
BCPH				*i* S	Sg	20 57 40.5	+2.4
BALP	**Baler**	**1.46**	**104**	*e*P	Pn	20 57 47.1	-0.5
BALP				*e*S	Sn	20 58 05.0	-1.9
ABRA	**Dolores**	**1.63**	**21**	*e*P	Pn	20 57 49.0	-1.0
ABRA				*e*S	Sn	20 58 13.1	+1.8
SIPP	**Brgy, Tapao**	**1.83**	**10**↑	*i*P	Pn	20 57 51.5	-1.3
SIPP				*i* S	Sn	20 58 17.1	+0.9
CAUP	**Cauayan**	**1.84**	**63**	*e*P	Pn	20 57 54.3	+1.4
LUBP	**Lubang**	**2.37**	**177**	*e*P	Pn	20 58 04.1	+4.0
PALP	**Palanan**	**2.41**	**67**	*e*P	Pn	20 57 57.4	-3.4

*ISCJB **18** 21:13:13.0±0.5,4021N±003×25.19E±004,h14km±4km, Error ellipse: s-maj=5.7km s-min=4.5km az=163.3*
*ATH **18** 21:13:12.5,4020N×25.17E,h25km±1km,MD3.0/4*
*NEIC **18** 21:13:12.5,4020N×25.17E,h25km,MD3.0(ATH),After ATH.*
*CSEM **18** 21:13:13.6±0.1,4021N×25.17E,h15km,ML2.6,Error ellipse: s-maj=2.8km s-min=2.0km az=75.0*
*THE **18** 21:13:14.1,4020N×25.17E,h10km,ML2.6*
ISC 18 21:13:13.5±0.5,4020N±003×2518E±004,h18km±5km,n11, σ0§72/22,1C,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOS	**Limnos**	**0.27**	**196**	*e*Pg	**Pg**	**21 13 19.3**	**-0.2**
LOS				*e*Sg	**Sg**	**21 13 23.2**	**-0.4**
LIA	**Limnos Island**	**0.30**	**180**	*e*Pg	**Pg**	**21 13 20.2**	**+0.2**
LIA				*e*Sg	**Sg**	**21 13 24.4**	**+0.1**
LIA	**Limnos Island**	**0.30**	**180**↑	*i*PB	**Pg**	**21 13 20.1**	**+0.1**
LIA				*e*SB	**Sg**	**21 13 24.5**	**+0.2**
OUR	**Ouranopolis**	**0.93**	**279**	*e*Pg	**Pg**	**21 13 30.9**	**-0.7**
OUR				*e*Sg	**Sg**	**21 13 44.8**	**+1.1**
ALN	**Alexandroupoli**	**0.96**	**43**	*e*Pg	**Pg**	**21 13 31.6**	**-0.6**
ALN				*e*Sg	**Sg**	**21 13 46.2**	**+1.4**
RDO	**Rodhopi**	**0.99**	**16**	*e*PN	**Pn**	**21 13 32.0**	**-0.5**
RDO				*e*SN	**Sn**	**21 13 44.8**	**-1.2**
PRK	**Paraskevi**	**1.27**	**138**	*e*Pg	**Pg**	**21 13 37.2**	**-0.8**
PRK				*e*Sg	**Sg**	**21 13 54.6**	**+0.1**
PRK	**Paraskevi**	**1.27**	**138**	*e*PN	**Pn**	**21 13 37.3**	**+0.9**
PRK				*e*SN	**Sn**	**21 13 53.6**	**+0.6**
PRK	**Paraskevi**	**1.27**	**138**	*e*Pn	**Pn**	**21 13 37.3**	**+0.9**
PRK				*e*Sn	**Sn**	**21 13 53.6**	**+0.6**
PRK				*e*Sg	**Sg**	**21 13 54.7**	**+0.1**
PLG	**Polygyros**	**1.34**	**278**	*e*PN	**Pn**	**21 13 36.7**	**-0.6**
NVR	**Nevrokopi**	**1.53**	**319**	*e*PN	**Pn**	**21 13 40.0**	**+0.1**
NVR				*e*SN	**Sn**	**21 14 00.1**	**+0.8**

CASC 18 21:18:34.9±2.1,1258N×8710W,h152km±6km,MD4.2, ML3.7,17C-8D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEL3	**Telica 3**	**0.25**	**92**↑	*e*P	Pn	21 18 55.9	+0.4
TEL3				*e*S	Sn	21 19 13.2	+2.0
LEON	**Leon**	**0.26**	**129**↑	*e*P	Pn	21 18 55.5	-0.1
LEON				*e*S	Sn	21 19 11.2	-0.1
TELN	**Telica**	**0.26**	**85**↑	*i*P	Pn	21 18 56.2	+0.6
CNGN	**Cerro Negro**	**0.40**	**101**↑	*i*P	Pn	21 18 56.2	+0.1
CNGN				*e*S	Sn	21 19 11.9	-0.2
MOMN	**Momotombo**	**0.57**	**107**↑	*i*P	Pn	21 18 57.5	+0.7
MOMN				*e*S	Sn	21 19 14.9	+1.4
COPN	**Copaltepe**	**0.64**	**129**↓	*e*P	Pn	21 18 57.1	-0.1
CSAN		**0.77**	**121**↓	*e*P	Pn	21 18 58.5	+0.4
CSAN				*e*S	Sn	21 19 16.7	+0.9
APYN	**Apoyeque**	**0.81**	**115**↓	*e*P	Pn	21 18 58.6	+0.2
XAVN	**Gruta Xavier**	**0.87**	**120**	*e*P	Pn	21 18 58.8	0.0
TISN	**Laguna Tiscapa**	**0.92**	**118**↓	*e*P	Pn	21 18 59.4	+0.1
TISN				*e*S	Sn	21 19 17.9	+0.1
HUEN		**0.94**	**105**↓	*e*P	Pn	21 18 59.9	+0.6
MGAN	**Managua**	**0.94**	**117**↑	*i*P	Pn	21 18 59.1	-0.2
MGAN				*e*S	Sn	21 19 19.1	+1.1
CRUN	**El Crucero**	**0.98**	**127**	*e*P	Pn	21 19 00.8	+1.0
WILN	**Americas 2**	**0.98**	**115**↑	*i*P	Pn	21 18 60.0	+0.2
WILN				*e*S	Sn	21 19 18.8	+0.2
CNCH	**Conchagua**	**1.00**	**314**↑	*e*P	x	21 19 00.0	
TICN	**Ticuantepe**	**1.01**	**123**↓	*e*P	Pn	21 19 00.2	+0.3
TICN				*e*S	Sn	21 19 20.3	+1.3
APON	**Apoyo**	**1.21**	**123**	*e*P	Pn	21 19 03.4	+1.7
VSM	**San Miguel**	**1.42**	**306**↑	*i*P	x	21 19 04.2	
VSM				*e*S	x	21 19 30.1	
TGUH	**Tegucigalpa,Un**	**1.48**	**353**↓	*i*P	Pn	21 19 04.6	+0.2
TGUH				*e*S	Sn	21 19 27.0	-0.1
CAHU	**Cacacuatique**	**1.60**	**318**↑	*i*P	x	21 19 06.2	
CAHU				*e*P	x	21 19 06.3	
CONN	**Concepcion**	**1.76**	**125**↑	*i*P	Pn	21 19 08.4	+0.9
SNVI	**San Vicente**	**1.98**	**301**↑	*e*P	x	21 19 10.2	
SNVI				*e*P	x	21 19 10.4	
SNVI				*e*S	x	21 19 37.3	
LFRS	**El Faro**	**2.18**	**299**	*e*P	x	21 19 12.5	
BOQS	**Boqueron**	**2.42**	**299**↓	*e*P	x	21 19 15.3	
BOQS				*e*P	x	21 19 15.8	
CUI		**2.68**	**135**	*e*P	Pn	21 19 18.6	+0.2
SNJE	**San Jose**	**2.76**	**298**	*e*P	x	21 19 19.8	
SBLS	**San Blas**	**2.76**	**297**↑	*e*P	x	21 19 19.7	
RTR	**El Retiro**	**2.81**	**298**	*e*P	x	21 19 21.4	
VCR	**Vista de Mar**	**2.83**	**149**↑	*e*P	Pn	21 19 21.2	+1.0
RBDL	**Robledal**	**2.94**	**301**	*e*P	x	21 19 22.1	
JCR	**Jicaral**	**3.34**	**144**	*e*P	Pn	21 19 27.8	+1.1
CGA2	**Cerro Gallo 2**	**3.63**	**134**↑	*e*P	Pn	21 19 32.8	+2.3
PRS1	**Puriscal**	**3.76**	**133**	*e*P	Pn	21 19 34.8	+2.7
LCR2	**La Lucha 2**	**4.14**	**133**↑	*e*P	Pn	21 19 38.7	+1.6
BUS	**Buena Vista**	**4.45**	**132**	*e*P	Pn	21 19 44.5	+3.4
CHI2		**15.37**	**120**↑	*e*P		21 18 55.5	
LAPE	**La Pedrera**	**16.07**	**107**	*i* P		21 19 16.2	
LAPE				*e*S		21 19 45.1	

*NEIC **18** 21:48:27.7, 1723N×10053W,h9km,MD4.1(MEX),After MEX.*
MEX 18 21:48:27.7±1.1,1723N×10054W,h9km±6km,MD4.1, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.32**	**125**	*e*P	Pg	21 48 33.5	-0.5
CAIG				*i* S	Sg	21 48 38.8	+0.5
ACX	**Acapulco**	**0.70**	**121**	*i* P	Pg	21 48 39.8	-1.4
ACX				*i* S	Sg	21 48 48.5	-1.8
ZIIG	**Zihuatanejo**	**0.96**	**293**	*i* P	Pg	21 48 42.8	-3.3
ZIIG				*i* S	Sg	21 48 56.5	-2.1
ZIIG	**Zihuatanejo**	**0.96**	**293**	*i* P	Pg	21 48 42.8	-3.3
ZIIG				*i* S	Sg	21 48 57.0	-1.6
MEIG	**Mezcala**	**1.12**	**52**	*e*P	Pg	21 48 45.4	-3.7
MEIG				*i* S	Sg	21 48 60.0	-3.7
PLIG	**Platanillo**	**1.52**	**40**	*e*P	Pn	21 48 51.6	-3.5
PLIG				*i* S	Sn	21 49 11.0	-3.9
PNIG	**Pinotepa**	**2.46**	**110**	*e*P	Pn	21 49 08.4	+0.5
PNIG				*i* S	Sn	21 49 38.8	+0.7

IDC 18 21:51:12.1±5.6,269N×6641E,h0km,mb3.7/5,mb1 3.9/5, mb1mx3.5/22,mbtmp3.7/5,Error ellipse: s-maj=203.2km s-min=27.6km az=63.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKTO	**Aktyubinsk**	**48.10**	**353**	P	P	21 59 53.4	-0.1
	1.6nm,0.9s,baz=161,slow=9.1,SNR=5.2						
KURK	**Kurchatov**	**48.95**	**10**	P	P	21 59 59.7	-0.4
	0.4nm,0.8s,baz=208,slow=7.9,SNR=2.3						
ZALV	**Zalesovo Beam**	**53.28**	**13**	P	P	22 00 31.8	-0.7
	0.5nm,0.4s,baz=216,slow=7.3,SNR=4.1						
WRA	**Warramunga Arr**	**70.29**	**112**	P	P	22 02 28.4	+0.5
	1.5nm,1.0s,baz=289,slow=5.6,SNR=5.9						
ASAR	**Alice Springs**	**70.61**	**116**	P	P	22 02 29.5	-0.3
	0.5nm,0.7s,baz=284,slow=5.7,SNR=4.1						

*BJI **18** 22:00:25.8,256S×9944E,h35km,mb4.9*
*IDC **18** 22:00:29.8±1.2,156S×9962E,h0km,mb4.2/11, mb1 4.2/12,mb1mx4.0/22,mbtmp4.1/12,ML4.3/1,Error ellipse: s-maj=53.3km s-min=14.1km az=57.0*
*NEIC **18** 22:00:34.4±0.6,165S×9951E,h35km,mb4.4/2,Error ellipse: s-maj=24.7km s-min=8.8km az=56.0*
*ISCJB **18** 22:00:35.6±1.9,15S±0.1×997E±02,h58km±16km, mb4.5/20,Error ellipse: s-maj=32.5km s-min=10.6km az=142.0*
*DJA **18** 22:00:37,151S×9966E,h10km,MLv4.4/6*
ISC 18 22:00:36.4±1.9,16S±01×997E±02,h48km±16km,n34, σ0§97/32,mb4.5/20,2C,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**3.57**	**324**↑	*e*P	**Pn**	**22 01 31.0**	**+1.7**
PSI	**Prapat**	**4.43**	**350**↑	*e*P	**Pn**	**22 01 38.7**	**-2.4**
CMAR	**Chiang Mai Arr**	**19.94**	**358**	P	**Pn**	**22 05 02.0**	**-4.5**
	0.4nm,0.3s,baz=190,slow=10,SNR=15						
FITZ	**Fitzroy Crossi**	**30.30**	**124**	P	**P**	**22 06 44.1**	**+0.7**
	0.4nm,0.4s,mb3.5,baz=329,slow=12,SNR=3.9						
ODAN	**Odare**	**30.67**	**338**	*e*P	**P**	**22 06 47.1**	**+0.5**
	14nm,0.6s,mb5.0						
TAPN	**Taplejung**	**31.00**	**339**	*e*P	**P**	**22 06 50.1**	**+0.6**
	12nm,0.6s,mb4.9						
RAMN	**Ramite**	**31.06**	**337**	*e*P	**P**	**22 06 50.7**	**+0.7**
	11nm,0.7s,mb4.8						
JIRN	**Jiri**	**31.85**	**337**	*e*P	**P**	**22 06 57.9**	**+0.9**
	21nm,0.7s,mb5.1						
PKIN	**Phulchoki**	**32.10**	**336**	*e*P	**P**	**22 06 59.2**	**+0.1**
LSA	**Lhasa**	**32.17**	**346**	P	**P**	**22 07 01.0**	**+1.3**
LSA	**Lhasa**	**32.17**	**346**	*e*P	**P**	**22 06 59.7**	**0.0**
	3.1nm,0.4s,mb4.5						
GUN	**Gumba**	**32.20**	**337**	*e*P	**P**	**22 07 00.6**	**+0.6**
	23nm,0.4s,mb5.3						
KKN	**Kakani**	**32.33**	**336**	*e*P	**P**	**22 07 01.2**	**0.0**
	4.7nm,0.4s,mb4.6						
GKN	**Gorkha**	**32.79**	**335**	*e*P	**P**	**22 07 05.4**	**+0.2**
	6.9nm,0.4s,mb4.9						
WRA	**Warramunga Arr**	**38.47**	**121**	P	**P**	**22 07 54.0**	**0.0**
	2.5nm,0.5s,mb4.2,baz=302,slow=9.1,SNR=30						
WRA				PcP	PcP	22 10 07.4	+0.8
	0.2nm,0.4s,baz=316,slow=2.6,SNR=5.0						
WB2	**Warramunga Arr**	**38.48**	**121**	*e*P	**P**	**22 07 53.5**	**-0.6**
ASAR	**Alice Springs**	**39.74**	**126**	P	**P**	**22 08 05.2**	**+0.6**
	1.2nm,0.6s,mb3.8,baz=297,slow=8.1,SNR=14						
KSRS	**Korea Array**	**46.84**	**31**	P	**P**	**22 09 01.0**	**-0.7**
	1.5nm,0.8s,mb4.0,baz=224,slow=10,SNR=3.8						
TKM2	**Tokmak 2**	**49.34**	**337**	*e*P	**P**	**22 09 21.4**	**+0.5**
	2.5nm,0.7s,mb4.3						
SONM	**Songino Array**	**49.58**	**6**	P	**P**	**22 09 23.2**	**+0.6**
	2.2nm,0.7s,mb4.3,baz=186,slow=9.0,SNR=19						
SONM				PcP	PcP	22 10 44.1	+0.4
	1.0nm,0.7s,baz=192,slow=5.3,SNR=3.0						
STKA	**Stephens Creek**	**49.65**	**132**	P	**P**	**22 09 23.8**	**+0.2**
	1.2nm,0.4s,mb4.2,baz=310,slow=16,SNR=5.8						
MK31	**Makanchi Array**	**50.56**	**345**	*e*P	**P**	**22 09 29.9**	**-0.1**
MKAR	**Makanchi Array**	**50.56**	**345**	P	**P**	**22 09 30.0**	**0.0**
	3.6nm,0.6s,mb4.5,baz=151,slow=8.0,SNR=47						
MKAR	**Makanchi Array**	**50.56**	**345**	P	**P**	**22 09 30.0**	**0.0**
KURK	**Kurchatov**	**55.13**	**344**	P	**P**	**22 10 03.0**	**-0.8**
	1.9nm,0.7s,mb4.3,baz=166,slow=7.0,SNR=12						
ZAA0	**Zalesovo Array**	**56.72**	**350**	*e*P	**P**	**22 10 14.3**	**-0.6**
ZAA0				*e*	pP	22 10 25.9	-2.4
ZALV	**Zalesovo Beam**	**56.72**	**350**	P	**P**	**22 10 14.8**	**-0.2**
	6.5nm,0.4s,mb5.0,baz=178,slow=5.3,SNR=44						
ZALV	**Zalesovo Beam**	**56.72**	**350**	P	**P**	**22 10 14.8**	**-0.2**
AKTK	**Aktyubinsk**	**62.85**	**331**	P	**P**	**22 10 55.6**	**-1.7**
AKTO	**Aktyubinsk**	**62.85**	**331**	P	**P**	**22 10 55.6**	**-1.7**
	0.5nm,0.6s,mb3.9,baz=108,slow=18,SNR=4.7						
LSZ	**Lusaka**	**71.73**	**255**	P	**P**	**22 11 51.7**	**-2.5**
ARCES	**ARCESS Array B**	**85.99**	**340**	P	**P**	**22 13 12.7**	**+1.4**
	2.2nm,0.8s,mb4.4,baz=75,slow=5.1,SNR=6.0						
TXAR	**Lajitas Array**	**144.57**	**37**	PKP	PKPdf	22 20 08.3	-0.1
	1.7nm,0.4s,baz=204,slow=0.6,SNR=50						
TXAR	**Lajitas Array**	**144.57**	**37**	PKP	PKPdf	22 20 08.3	-0.1

*IDC **18** 22:03:11.2±2.8,213S×9958E,h0km,mb4.1/8,mb1 4.2/8, mb1mx4.0/20,mbtmp4.1/8,MS3.4/1,Ms1 3.4/1, ms1mx3.0/21,Error ellipse: s-maj=116.7km s-min=16.5km az=58.0*
*ISCJB **18** 22:03:14.2±0.7,20S±0.1×997E±02,h33km,mb4.2/10, Error ellipse: s-maj=30.4km s-min=10.5km az=146.1*
*NEIC **18** 22:03:16.3±0.5,208S×9963E,h35km,mb4.3/3,Error ellipse: s-maj=18.6km s-min=6.6km az=56.0*
ISC 18 22:03:16.4±0.7,21S±01×997E±02,h35km,n17,σ0§38/15, mb4.2/10,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.42**	**358**	P	**P**	**22 07 50.4**	**-0.3**
	2.2nm,0.9s,baz=190,slow=10,SNR=7.5						
FITZ	**Fitzroy Crossi**	**30.06**	**124**	P	**P**	**22 09 22.2**	**-0.3**
	2.1nm,0.9s,mb3.9,baz=284,slow=4.2,SNR=3.6						
LSA	**Lhasa**	**32.63**	**346**	*e*P	**P**	**22 09 45.5**	**+0.5**
	1.5nm,0.3s,mb4.4						
WRA	**Warramunga Arr**	**38.25**	**120**	P	**P**	**22 10 33.3**	**-0.3**
	1.8nm,0.5s,mb4.0,baz=303,slow=9.1,SNR=14						
WB2	**Warramunga Arr**	**38.26**	**120**	*e*P	**P**	**22 10 33.7**	**+0.1**
ASAR	**Alice Springs**	**39.49**	**126**	P	**P**	**22 10 44.0**	**+0.1**
	0.9nm,0.5s,mb3.8,baz=302,slow=8.4,SNR=7.8						
STKA	**Stephens Creek**	**49.36**	**131**	P	**P**	**22 12 03.0**	**+0.4**
	2.4nm,0.8s,mb4.3,baz=323,slow=5.1,SNR=3.6						
TKM2	**Tokmak 2**	**49.77**	**337**	*e*P	**P**	**22 12 05.6**	**0.0**
	1.9nm,0.7s,mb4.2						
SONM	**Songino Array**	**50.06**	**6**	P	**P**	**22 12 08.6**	**+1.0**
	4.3nm,0.8s,mb4.5,baz=188,slow=9.4,SNR=18						
MK31	**Makanchi Array**	**51.01**	**345**	*e*P	**P**	**22 12 14.7**	**-0.1**
MKAR	**Makanchi Array**	**51.01**	**345**	P	**P**	**22 12 15.0**	**+0.1**
	3.0nm,0.6s,mb4.4,baz=149,slow=8.2,SNR=15						
MKAR				LR	LR	22 38 05.4	
	comp=Z,34nm,19.2s,baz=170,slow=41						
KURK	**Kurchatov**	**55.59**	**344**	*e*P	**P**	**22 12 47.9**	**-0.5**
	2.2nm,0.7s,mb4.3						
ZAA0	**Zalesovo Array**	**57.18**	**350**	*e*P	**P**	**22 12 59.2**	**-0.5**
ZALV	**Zalesovo Beam**	**57.18**	**350**	P	**P**	**22 12 59.5**	**-0.2**
	3.4nm,0.5s,mb4.6,baz=178,slow=5.5,SNR=15						
LSZ	**Lusaka**	**71.58**	**255**	P	**P**	**22 14 34.8**	**+0.1**
TXAR	**Lajitas Array**	**144.98**	**37**	PKPbc	PKPdf	22 22 51.0	+0.3
	2.5nm,0.7s,baz=271,slow=1.1,SNR=21						
TXAR	**Lajitas Array**	**144.98**	**37**	PKPbc	PKPdf	22 22 51.0	+0.3

*DJA **18** 22:08:20.4,98S×9998E,h0km,MLv4.9/4*
*IDC **18** 22:08:27.6±4.0,365S×10155E,h0km,mb3.7/5,mb1 3.8/5, mb1mx3.6/18,mbtmp3.7/5,Error ellipse: s-maj=173.6km s-min=22.2km az=55.0*
*ISCJB **18** 22:08:30.2±1.1,38S±02×10143E±009,h33km,mb3.8/7, Error ellipse: s-maj=24.1km s-min=11.3km az=16.6*
*NEIC **18** 22:08:32.7±1.7,368S×10159E,h35km,mb4.1/2,Error ellipse: s-maj=86.0km s-min=14.6km az=52.0*
ISC 18 22:08:32.4±1.1,38S±02×10139E±009,h35km,n9,σ0§70/8, mb3.8/7,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPI	**Tanjungpandan**	**6.35**	**81**	*e*S	**Sn**	**22 11 15.0**	**+0.2**
WRA	**Warramunga Arr**	**35.89**	**119**	P	**P**	**22 15 29.0**	**-0.3**
	0.3nm,0.6s,mb3.4,baz=300,slow=8.7,SNR=3.8						
ASAR	**Alice Springs**	**37.07**	**125**	P	**P**	**22 15 39.6**	**+0.2**
	1.0nm,0.8s,mb3.7,baz=300,slow=8.1,SNR=8.2						
SONM	**Songino Array**	**51.63**	**4**	P	**P**	**22 17 34.7**	**-0.7**
	1.1nm,0.7s,mb3.9,baz=188,slow=8.3,SNR=8.5						
TKM2	**Tokmak 2**	**52.05**	**336**	*e*P	**P**	**22 17 39.9**	**+1.2**
	0.9nm,0.6s,mb3.9						
TKM2				PcP	PcP	22 18 53.7	+3.2
EKS2	**Erkin-Say**	**52.60**	**335**	*e*P	**P**	**22 17 43.1**	**+0.4**
	2.4nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**53.16**	**344**	P	**P**	**22 17 46.9**	**+0.2**
	0.9nm,0.8s,mb3.7,baz=141,slow=7.8,SNR=7.7						
ZALV	**Zalesovo Beam**	**59.22**	**349**	P	**P**	**22 18 28.6**	**-1.2**
	1.0nm,0.7s,mb4.0,baz=144,slow=5.2,SNR=4.9						
TXAR	**Lajitas Array**	**145.25**	**40**	PKPbc	PKPbc	22 28 05.6	-1.2
	0.1nm,0.5s,baz=288,slow=3.7,SNR=3.3						

*CSEM **18** 22:09:25.7±0.3,3967N×2606E,h20km,MD3.1,Error ellipse: s-maj=7.8km s-min=5.2km az=38.0*
*ISCJB **18** 22:09:26.3±0.6,3974N±004×26.12E±005,h10km,Error ellipse: s-maj=5.8km s-min=4.5km az=37.7*
*ATH **18** 22:09:26.0,3963N×2601E,h47km±7km,MD3.1/3*
*DDA **18** 22:09:26.0,3978N×2614E,h7km±3km,Md2.9*
ISC 18 22:09:27.1±0.8,3971N±006×2610E±006,h21km±12km,n9, σ0§91/18,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.48**	**163**	*e*P	**Pb**	**22 09 36.9**	**+0.1**
PRK				*e*S	**Sb**	**22 09 44.7**	**+1.3**
AYVA	**Ayvalik**	**0.61**	**131**	*i* P	**Pb**	**22 09 38.2**	**-0.8**
AYVA				*i* S	**Sb**	**22 09 51.5**	**+4.4**
LIA	**Limnos Island**	**0.73**	**286**	*e*P	**Pb**	**22 09 40.1**	**-1.0**
LIA				*e*S	**Sb**	**22 09 50.8**	**+0.2**
BALY	**Balya**	**1.18**	**88**	*i* P	**Pn**	**22 09 48.6**	**+0.3**
BALY				*i* S	**Sb**	**22

JNE	**Jan Mayen East**	**0.42**	**342**	⇑*i*P		Pg	22 23 27.9	-0.1
JNE				*e*S		Sg	22 23 32.9	-0.6
JNE				AML		AML	22 23 33.5	
	comp=Z,1μm,0.1s							
JNE	**Jan Mayen East**	**0.42**	**342**	⇑*i*P		Pg	22 23 27.9	-0.1
	SNR=102							
JNE				*e*S		Sg	22 23 32.9	-0.7
	comp=Z,1μm,0.1s,SNR=102							
JMI	**Jan Mayen**	**0.44**	**321**	⇑*i*P		Pg	22 23 27.9	-0.4
JMI				*e*S		Sg	22 23 33.2	-0.9
JNW	**Jan Mayen West**	**0.47**	**338**	⇑*i*P		Pg	22 23 27.3	-1.7

*CSEM **18** 22:40:07.9,3856N×2397E,h27km,MD3.4/12,After ATH*
*NEIC **18** 22:40:07.9,3856N×2397E,h27km,ML3.5(ATH),After ATH.*

ATH 18 22:40:07.9,3856N×2397E,h27km±2km,MD3.4/12,ML3.5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.52**	**189**	*e*PN	Pn	22 40 18.5	-1.0
ATH	**Athens Observa**	**0.62**	**199**	*e*PN	Pn	22 40 20.5	-0.4
ATH				*e*SN	Sn	22 40 28.6	-1.3
KVR	**Kavouri**	**0.75**	**192**	*e*PN	Pn	22 40 22.5	-0.2
LKR	**Lokris**	**0.77**	**277**	*e*PN	Pn	22 40 22.6	-0.3
LKR				*e*SN	Sn	22 40 34.1	+0.5
NAIG	**Nisos Aigina**	**0.89**	**206**	*e*PN	Pn	22 40 25.0	+0.4
NAIG				*e*SN	Sn	22 40 38.0	+1.5
NEO	**Neokhori**	**0.95**	**322**	*e*PN	Pn	22 40 27.1	+1.7
NEO				*e*SN	Sn	22 40 39.4	+1.4
LIA	**Limnos Island**	**1.64**	**35**	*e*PB	Pb	22 40 36.5	-0.9
THL	**Klokotos Trika**	**1.82**	**304**	*e*PB	Pb	22 40 39.4	-1.2
PLG	**Polygyros**	**1.86**	**348**	*e*PB	Pb	22 40 40.0	-1.1
PRK	**Paraskevi**	**1.92**	**68**	*e*PN	Pn	22 40 41.6	+2.8
APE	**Apeiranthos**	**1.94**	**140**	*e*PB	Pb	22 40 40.8	-1.7
VLI	**Veliai**	**2.01**	**204**	*e*PB	Pb	22 40 42.5	-1.3
ITM	**Ithomi**	**2.12**	**230**	*e*PB	Pb	22 40 44.3	-1.4
NVR	**Nevrokopi**	**2.79**	**358**	*e*PN	Pn	22 40 53.2	+2.5

IDC 18 22:46:22.6±1.0,1758S×6601E,h0km,mb3.8/6,mb1 3.9/7, mb1mx3.7/20,mbtmp3.8/7,ML3.7/1,MS3.7/3,Ms1 3.7/3, ms1mx3.2/33,Error ellipse: s-maj=32.1km s-min=24.9km az=79.0,Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.92**	**264**	P	Pn	22 50 34.0	+0.6
	0.3nm,0.3s,baz=29,slow=18,SNR=3.0						
KMBO	**Kilima Mbogo**	**32.66**	**297**	LR	LR	23 05 06.2	
	comp=Z,95nm,19.8s,baz=192,slow=34						
LSZ	**Lusaka**	**36.31**	**268**	LR	LR	23 06 46.0	
	comp=Z,73nm,20.0s,baz=111,slow=34						
MAW	**Mawson**	**50.04**	**182**	P	P	22 55 18.2	-0.3
	0.9nm,0.5s,baz=322,slow=12,SNR=6.5						
ASAR	**Alice Springs**	**63.32**	**108**	P	P	22 56 53.9	0.0
	1.6nm,1.0s,baz=261,slow=5.1,SNR=8.3						
WRA	**Warramunga Arr**	**64.33**	**104**	P	P	22 57 00.8	+0.3
	0.8nm,0.7s,baz=267,slow=5.6,SNR=12						
MKAR	**Makanchi Array**	**65.74**	**12**	P	P	22 57 09.1	+0.1
	0.1nm,0.6s,baz=186,slow=2.9,SNR=2.5						
ZALV	**Zalesovo Beam**	**73.05**	**11**	P	P	22 57 54.0	-0.1
	0.3nm,0.4s,baz=193,slow=5.9,SNR=2.5						
SONM	**Songino Array**	**74.47**	**27**	P	P	22 58 02.9	+0.3
	0.8nm,0.9s,baz=213,slow=7.1,SNR=4.8						
HNR	**Honiara**	**90.90**	**100**	LR	LR	23 37 51.3	
	comp=Z,70nm,19.7s,baz=15,slow=34						

PRE 18 22:56:31.5±0.9,2641S×2762E,h2km,ML2.1,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.06**	**353**	*e*P	Pg	22 56 32.8	+0.1
KLOF				*e*S	Sg	22 56 33.9	+0.4
KLOF				AML	AML	22 56 35.2	
	comp=Z,4μm,0.1s						
PRYS	**Parys**	**0.57**	**204**	*e*P	Pg	22 56 42.5	+0.1
PRYS				*e*S	Sg	22 56 49.8	+0.1
PRYS				AML	AML	22 56 54.6	
	comp=Z,16nm,0.3s						
PRYS	**Parys**	**0.57**	**204**	*e*P	Pg	22 56 42.3	-0.1
PRYS				*e*S	Sg	22 56 48.8	-1.0
PRYS				AML	AML	22 56 50.4	
	comp=Z,21nm,0.3s						
ERPM	**east rand prop**	**0.58**	**74**	*e*P	Pg	22 56 43.3	+0.6
ERPM				*e*S	Sg	22 56 50.7	+0.5
ERPM				AML	AML	22 56 52.1	
	comp=Z,40nm,0.2s						
KSR	**Koster**	**0.85**	**310**	*e*P	Pg	22 56 47.8	-0.1
KSR				*e*S	Sg	22 56 59.3	+0.4
KSR				AML	AML	22 57 06.7	
	comp=Z,47nm,0.1s						
KSR	**Koster**	**0.85**	**310**	*e*P	Pg	22 56 48.2	+0.3
KSR				*e*S	Sg	22 56 58.6	-0.3
KSR				AML	AML	22 57 06.7	
	comp=Z,47nm,0.1s						
SEK	**Senekal**	**1.91**	**180**	*e*P	Pn	22 57 06.3	+1.2
SEK				*e*S	Sn	22 57 30.4	+0.7
SEK				AML	AML	22 57 33.6	
	comp=Z,14nm,0.2s						
SEK	**Senekal**	**1.91**	**180**	*e*P	Pn	22 57 06.4	+1.4
SEK				*e*S	Sn	22 57 30.1	+0.4
SEK				AML	AML	22 57 31.7	
	comp=Z,28nm,0.2s						
SWZ	**Schweizer**	**2.19**	**249**	*e*P	Pn	22 57 09.7	+0.9
SWZ				*e*S	Sn	22 57 37.6	+1.2
SWZ				AML	AML	22 57 48.5	
	comp=Z,17nm,0.4s						
SWZ	**Schweizer**	**2.19**	**249**	*e*P	Pn	22 57 08.8	0.0
SWZ				*e*S	Sn	22 57 37.6	+1.1
SWZ				AML	AML	22 57 39.2	
	comp=Z,15nm,0.7s						
LBTB	**Lobatse**	**2.29**	**307**	*e*P	Pn	22 57 10.6	+0.3
LBTB				*e*S	Sn	22 57 39.7	+0.6
LBTB				AML	AML	22 57 44.1	
	comp=Z,13nm,0.6s						
POGA	**Pongola**	**3.69**	**106**	*e*P	Pn	22 57 30.8	+1.2
POGA				*e*S	Sn	22 58 15.2	+1.5
POGA				AML	AML	22 58 29.5	
	comp=Z,4.5nm,0.6s						
MOPA	**Mopani**	**4.48**	**51**	*e*P	Pn	22 57 41.1	+0.7
MOPA				*e*S	Sn	22 58 31.1	-2.0
MOPA				AML	AML	22 58 45.3	
	comp=Z,14nm,0.6s						
MOPA	**Mopani**	**4.48**	**51**	*e*P	Pn	22 57 40.5	+0.1
MOPA				*e*S	Sn	22 58 31.1	-2.0
MOPA				AML	AML	22 59 02.3	
	comp=Z,1.5nm,0.5s						

*ISCJB **18** 23:15:58.2±0.6,3853N±003×2408E±006,h24km±7km, Error ellipse: s-maj=8.7km s-min=5.2km az=17.0*
*ATH **18** 23:15:58.0,3848N×2414E,h29km±8km,MD3.0/4,ML2.9*
*CSEM **18** 23:15:58.9±0.1,3853N×2401E,h12km,ML2.9,Error ellipse: s-maj=3.0km s-min=1.6km az=90.0*
*THE **18** 23:15:59.2,3854N×2396E,h11km*

ISC 18 23:15:58.2±0.6,3854N±003×2409E±006,h23km±8km,n16, σ0s85/23,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.52**	**200**	*e*PB	**Pb**	**23 16 08.0**	**-0.6**
PTL				*e*SB	**Sb**	**23 16 16.0**	**+0.3**
ATH	**Athens Observa**	**0.63**	**207**	*e*PN	**Pn**	**23 16 10.5**	**-1.3**
ATH				*e*SN	**Sb**	**23 16 19.0**	**0.0**
AOS	**Alonnisos**	**0.65**	**346**	*e*Pg	**Pb**	**23 16 11.4**	**+0.5**
KVR	**Kavouri**	**0.75**	**199**	*e*PN	**Pn**	**23 16 12.5**	**-0.9**
KVR				*e*SN	**Sn**	**23 16 22.7**	**-1.3**
LKR	**Lokris**	**0.86**	**278**	*e*Pg	**Pb**	**23 16 12.9**	**-1.5**
NAIG	**Nisos Aigina**	**0.91**	**211**	*e*PN	**Pn**	**23 16 15.5**	**0.0**
NAIG				*e*SN	**Sn**	**23 16 28.5**	**+0.6**
LTK	**Loutraki**	**1.02**	**240**	*e*Pg	**Pb**	**23 16 17.0**	**-0.1**
LTK				*e*Sg	**Sb**	**23 16 30.7**	**+0.7**
XOR	**Xorichti**	**1.08**	**320**	*e*Pg	**Pn**	**23 16 18.5**	**+0.6**
DID	**Didima**	**1.23**	**213**	*e*Pg	**Pn**	**23 16 20.6**	**+0.6**
DID				*e*Sg	**Sb**	**23 16 37.0**	**+0.9**
DID	**Didima**	**1.23**	**213**	*e*Pg	**Pn**	**23 16 20.5**	**+0.6**
DID				*e*Sg	**Sb**	**23 16 37.0**	**+0.9**
PAIG	**Paliouri**	**1.42**	**347**	*e*Pg	**Pn**	**23 16 23.6**	**+1.0**
AGG	**Agios Georgios**	**1.46**	**290**	*e*Pg	**Pn**	**23 16 24.0**	**+1.0**
CHOS	**Chios island**	**1.55**	**95**	*e*Pb	**Pb**	**23 16 27.8**	**+1.5**
LIA	**Limnos Island**	**1.60**	**32**	*e*Pb	**Pb**	**23 16 26.4**	**-0.7**
OUR	**Ouranopolis**	**1.80**	**357**	*e*Pb	**Pb**	**23 16 29.1**	**-1.3**
APE	**Apeiranthos**	**1.86**	**142**	*e*Pb	**Pb**	**23 16 31.4**	**-0.1**

IDC 18 23:16:54.0±3.2,6105×15153E,h0km,mb3.9/3,mb1 4.2/3, mb1mx3.7/14,mbtmp4.0/3,Error ellipse: s-maj=120.2km s-min=43.9km az=124.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.64**	**229**	P	P	23 21 45.7	-0.4
	1.3nm,0.8s,baz=53,slow=10.0,SNR=12						
ASAR	**Alice Springs**	**24.34**	**222**	P	P	23 22 13.7	0.0
	6.0nm,0.8s,baz=56,slow=8.9,SNR=41						
FITZ	**Fitzroy Crossi**	**27.93**	**242**	*e*P	P	23 22 46.4	+0.2
	3.9nm,0.9s						
FITZ				*e*		23 22 53.2	
FITZ	**Fitzroy Crossi**	**27.93**	**242**	P	P	23 22 46.7	+0.5
	0.9nm,0.3s,baz=46,slow=12,SNR=11						
MJAR	**Matsushiro Arr**	**44.22**	**345**	PcP	PcP	23 26 50.6	+0.9
	1.2nm,0.5s,baz=167,slow=6.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**149.47**	**286**	PKPbc	PKPbc	23 36 45.7	-0.5
	1.3nm,0.6s,baz=69,slow=2.0,SNR=25						

*IDC **18** 23:20:40.1±1.0,3698N×539W,h0km,mb3.9/7,mb1 3.9/10, mb1mx3.8/29,mbtmp3.8/10,ML3.7/3,MS3.0/2,Ms1 3.0/2, ms1mx2.5/51,Error ellipse: s-maj=33.6km s-min=15.0km az=102.0*
*ISCJB **18** 23:20:40.9±0.2,3716N±001×538W±001,h10km,mb3.8/7, Error ellipse: s-maj=1.8km s-min=1.4km az=9.4*
*MDD **18** 23:20:43.0±0.2,3706N×541W,h5km±2km,mbLg4.0/47, Error ellipse: s-maj=2.1km s-min=1.7km az=165.0,PRIMO*
MDD EMS: IV INTENSIDAD MIMA.
*CRAAG **18** 23:20:42.5,3706N×546W,Mb3.9*
*SFS **18** 23:20:43.0,3707N×538W,h0km,ML3.4*
*NEIC **18** 23:20:43.2,3706N×539W,h6km,MN3.4(MDD),After MDD.*
NEIC Felt [IV] in the Moron de la Frontera area.
*CSEM **18** 23:20:43.9±0.1,3696N×536W,h20km,ML4.3/47,Error ellipse: s-maj=1.2km s-min=0.9km az=176.0*
*IGIL **18** 23:20:43.3,3707N×538W,h4km,ML4.1*
*LDG **18** 23:20:44.4±0.1,3696N×541W,h20km,Ml4.0/20*
*CNRM **18** 23:20:44.1,3718N×580W,h30km,MD4.2*
*INMG **18** 23:20:44.6±2.0,3710N×540W,h20km±3km,MD3.7,ML4.0, Error ellipse: s-maj=2.5km s-min=1.7km az=177.0*
*STR **18** 23:20:55.3±0.6,3794N×495W,h5km,Ml3.9,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 18 23:20:42.5±0.3,3709N±001×540W±001,h15km±1km,n289, σ1s25/488,mb3.8/7,6C-16D,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIJA	**Lijar**	**0.18**	**182**	*i* P	**Pg**	**23 20 45.0**	**-1.8**
ESPR	**Espera**	**0.43**	**239**	⇓Pg	**Pg**	**23 20 51.1**	**+0.1**
	405nm,0.7s,SNR=18						
ESPR				Lg		23 20 56.3	
	4μm,0.3s,SNR=7.9						
ESPR	**Espera**	**0.43**	**239**	Pg	**Pg**	**23 20 51.1**	**0.0**
	SNR=18						
ESPR				Lg		23 20 57.8	
	4μm,0.3s,SNR=7.9						
ESPR	**Espera**	**0.43**	**239**	⇓Pg	**Pg**	**23 20 51.1**	**+0.1**
ESPR				Lg		23 20 57.8	
GIBL	**Gibalbin**	**0.53**	**241**	*i* P	**Pg**	**23 20 53.0**	**+0.2**
REAL	**Reales**	**0.62**	**166**	⇓P	**Pg**	**23 20 54.0**	**-0.7**
REAL				S	**Sg**	**23 21 12.0**	**+9.1**
REAL	**Reales**	**0.62**	**166**	*i* P	**Pg**	**23 20 54.0**	**-0.7**
EJIF	**Jimena Fronter**	**0.64**	**185**	⇓Pg	**Pg**	**23 20 53.8**	**-1.2**
	55nm,0.6s,SNR=18						
EMIJ	**Mijas**	**0.72**	**136**	⇓Pg	**Pg**	**23 20 55.4**	**-1.2**
	616nm,0.9s,SNR=18						
EMIJ				Lg		23 21 06.4	
	4μm,0.4s,SNR=21						
EMIJ	**Mijas**	**0.72**	**136**	Pg	**Pg**	**23 20 55.4**	**-1.2**
	192nm,0.2s,SNR=18						
EMIJ				Lg		23 21 05.7	
	4μm,0.4s,SNR=21						
EMIJ	**Mijas**	**0.72**	**136**	⇓Pg	**Pg**	**23 20 55.4**	**-1.2**
EMIJ				Lg		23 21 05.7	
EMAL	**Malaga-Limoner**	**0.84**	**113**	Pg	**Pg**	**23 21 01.2**	**+2.4**
	33nm,0.3s,SNR=7.9						
EMAL				Lg		23 21 14.5	
	239nm,0.3s,SNR=7.9						
EMAL	**Malaga-Limoner**	**0.84**	**113**	*e*P	**Pb**	**23 20 58.0**	**-0.8**
EMAL	**Malaga-Limoner**	**0.84**	**113**	Pg	**Pg**	**23 21 02.3**	**+3.5**
	46nm,0.1s,SNR=7.9						
EMAL				*e*S	**Sb**	**23 21 09.3**	**-0.6**
EMAL				Lg		23 21 14.0	
	360nm,0.5s,SNR=7.9						
EMAL	**Malaga-Limoner**	**0.84**	**113**	Pg	**Pg**	**23 21 02.3**	**+3.5**
EMAL				Lg		23 21 14.0	
CNIL	**Conil**	**0.89**	**217**	*e*P	**Pb**	**23 21 01.0**	**+1.4**
SFS	**San Fernando**	**0.90**	**226**	P	**Pb**	**23 21 01.2**	**+1.4**
SFS				S	**Sb**	**23 21 24.2**	**+13**
SFS	**San Fernando**	**0.90**	**226**	*e*P	**Pb**	**23 21 01.2**	**+1.4**
SFS				*e*S	**Sb**	**23 21 11.8**	**+0.2**
SFS	**San Fernando**	**0.90**	**226**	*e*P	**Pb**	**23 21 01.4**	**+1.6**
SFS				*e*S	**Sb**	**23 21 11.8**	**+0.2**
ECAB	**El Cabril**	**0.98**	**359**	Pg	**Pg**	**23 21 02.1**	**+0.6**
	438nm,0.1s,SNR=2169						
ECAB				Lg		23 21 15.6	
	4μm,0.2s,SNR=34						
ECAB	**El Cabril**	**0.98**	**359**	Pg	**Pg**	**23 21 02.1**	**+0.6**
	SNR=1000						
ECAB				Lg		23 21 15.8	
	4μm,0.2s,SNR=34						
ECAB	**El Cabril**	**0.98**	**359**	Pg	**Pg**	**23 21 02.1**	**+0.6**
ECAB				Lg		23 21 15.8	
ELOJ	**Sierra Loja**	**1.00**	**86**	Pg	**Pg**	**23 21 00.7**	**-1.0**
	111nm,0.3s,SNR=7.9						
ELOJ				Lg		23 21 16.9	
	156nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.00**	**86**	Pg	**Pg**	**23 21 02.2**	**+0.5**
	68nm,0.2s,SNR=7.9						
ELOJ				Lg		23 21 16.9	
	156nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.00**	**86**	Pg	**Pg**	**23 21 02.2**	**+0.5**
ELOJ				Lg		23 21 16.9	
ECEU	**Ceuta**	**1.19**	**179**	⇓Pg	**Pg**	**23 21 04.7**	**-0.6**
	32nm,0.2s,SNR=18						
ECEU				Lg		23 21 20.2	
	130nm,0.3s,SNR=5.2						
ECEU	**Ceuta**	**1.19**	**179**	Pg	**Pg**	**23 21 04.7**	**-0.7**
	23nm,0.1s,SNR=18						
EMIN	**Mina Concepcio**	**1.22**	**304**	⇓Pg	**Pg**	**23 21 05.2**	**-0.8**
	331nm,0.3s,SNR=18						
EMIN				Lg		23 21 21.7	
	8μm,0.8s,SNR=55						
EMIN	**Mina Concepcio**	**1.22**	**304**	Pg	**Pg**	**23 21 05.2**	**-0.8**
	261nm,0.2s,SNR=18						
EMIN	**Mina Concepcio**	**1.22**	**304**	⇓Pg	**Pg**	**23 21 05.2**	**-0.8**
EMIN				Lg		23 21 22.2	
EADA	**Adamuz**	**1.26**	**31**	Pg	**Pg**	**23 21 06.1**	**-0.5**
	63nm,0.2s,SNR=364						
EADA				Lg		23 21 23.3	
	4μm,0.3s,SNR=40						
EADA	**Adamuz**	**1.26**	**31**	Pg	**Pg**	**23 21 06.1**	**-0.6**
	72nm,0.1s,SNR=364						
EADA	**Adamuz**	**1.26**	**31**	Pg	**Pg**	**23 21 06.1**	**-0.5**
EADA				Lg		23 21 23.9	
ERON	**Agron**	**1.27**	**93**	⇑Pg	**Pg**	**23 21 07.0**	**0.0**
	66nm,0.2s,SNR=18						
ERON				Lg		23 21 24.0	
	173nm,0.1s,SNR=7.9						
ERON	**Agron**	**1.27**	**93**	Pg	**Pg**	**23 21 07.0**	**0.0**
ERON				Lg		23 21 24.0	
ECOG	**Cogollos-Vega**	**1.47**	**82**	⇓Pg	**Pg**	**23 21 09.9**	**-0.9**
	86nm,0.2s,SNR=18						
ECOG				Sn	**Sn**	**23 21 27.6**	**+0.1**
	454nm,0.3s,SNR=5.0						
ECOG				Lg		23 21 32.3	
	254nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.47**	**82**	⇓Pg	**Pg**	**23 21 09.9**	**-0.9**
ECOG				Lg		23 21 27.6	
EGUA	**Guajares**	**1.49**	**99**	Pg	**Pg**	**23 21 09.6**	**-1.5**
	25nm,0.3s,SNR=7.9						
EGUA	**Guajares**	**1.49**	**99**	Pg	**Pg**	**23 21 09.6**	**-1.5**
EGUA				Lg		23 21 30.5	
ERIP	**Rio Piedras**	**1.51**	**281**	⇑Pn	**Pn**	**23 21 08.9**	**-0.1**
	19nm,0.3s,SNR=18						
ERIP				Pg	**Pg**	**23 21 10.6**	**-0.9**
	199nm,0.1s,SNR=7.9						
ERIP				Sn	**Sn**	**23 21 28.2**	**-0.2**
	165nm,0.2s,SNR=7.9						
ERIP				Lg		23 21 30.5	
	863nm,0.1s,SNR=7.9						
ERIP	**Rio Piedras**	**1.51**	**281**	Pg	**Pg**	**23 21 10.6**	**-0.9**
	199nm,0.1s,SNR=7.9						
ERIP				Sn	**Sn**	**23 21 28.1**	**-0.3**
	266nm,0.2s,SNR=7.9						
ERIP	**Rio Piedras**	**1.51**	**281**	Pn	**Pn**	**23 21 08.9**	**-0.1**
ERIP				Pg	**Pg**	**23 21 10.6**	**-0.9**
ERIP				Sn	**Sn**	**23 21 28.1**	**-0.3**
ERIP				Lg		23 21 30.5	
EQUE	**Quentar**	**1.57**	**85**	⇑Pg	**Pg**	**23 21 11.1**	**-1.5**
	99nm,0.2s,SNR=18						
EQUE				Lg		23 21 34.4	
	2μm,0.4s,SNR=7.3						
DKH	**Dar Kharkhour**	**1.60**	**179**	P	**Pn**	**23 21 11.0**	**+0.8**
DKH				S	**Sn**	**23 21 31.0**	**+0.4**
DKH	**Dar Kharkhour**	**1.60**	**179**	*i* P	**Pn**	**23 21 11.0**	**+0.8**
DKH	**Dar Kharkhour**	**1.60**	**179**	*i* S	**Sn**	**23 21 31.0**	**+0.4**
EBAN	**Banos Encina**	**1.67**	**50**	Pn	**Pn**	**23 21 11.8**	**+0.6**
	31nm,0.3s,SNR=120						
EBAN				Pg	**Pg**	**23 21 14.2**	**-0.3**
	99nm,0.2s,SNR=7.9						
EBAN				Sn	**Sn**	**23 21 32.7**	**+0.3**
	106nm,0.2s,SNR=7.9						
EBAN				Lg		23 21 36.5	
	309nm,0.3s,SNR=14						
EBAN	**Banos Encina**	**1.67**	**50**	Pn	**Pn**	**23 21 11.8**	**+0.7**
EBAN				Pg	**Pg**	**23 21 14.2**	**-0.3**
EBAN				Lg		23 21 36.5	
PBAR	**Barrancos**	**1.69**	**310**	*e*Pn	**Pn**	**23 21 11.7**	**+0.2**
PBAR				*e*Sn	**Sn**	**23 21 35.0**	**+2.0**
PBAR				A		23 21 45.3	
	982nm,0.5s						
PBAR	**Barrancos**	**1.69**	**310**	*e*Pn	**Pn**	**23 21 11.7**	**+0.2**
PBAR				*e*Sn	**Sn**	**23 21 35.0**	**+2.0**
	982nm,0.5s						
EGRO	**El Granado**	**1.72**	**286**	⇓Pn	**Pn**	**23 21 12.0**	**+0.1**
	59nm,0.4s,SNR=18						
EGRO				Pg	**Pg**	**23 21 14.5**	**-1.0**
	90nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**23 21 32.7**	**-0.9**
	280nm,0.3s,SNR=7.9						
EGRO				Lg		23 21 36.6	
	576nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**1.72**	**286**	Pn	**Pn**	**23 21 12.0**	**+0.1**
	59nm,0.4s,SNR=18						
EGRO	**El Granado**	**1.72**	**286**	Pg	**Pg**	**23 21 14.5**	**-1.0**
	239nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**1.72**	**286**	⇓Pn	**Pn**	**23 21 12.0**	**+0.1**
EGRO				Pg	**Pg**	**23 21 14.5**	**-1.0**
EGRO				Lg		23 21 37.5	
PVAQ	**Vaqueiros**	**1.88**	**280**	*e*Pn	**Pn**	**23 21 14.0**	**0.0**
PVAQ				*e*Sn	**Sn**	**23 21 36.8**	**-0.7**
PVAQ				*e*Sg	**Sg**	**23 21 43.6**	**+0.7**
PVAQ				A		23 21 45.4	
	1μm,0.3s						
PVAQ	**Vaqueiros**	**1.88**	**280**	*e*Pn	**Pn**	**23 21 14.0**	**0.0**
PVAQ				*e*Sn	**Sn**	**23 21 36.8**	**-0.7**
PVAQ				*e*Sg	**Sg**	**23 21 43.6**	**+0.7**
	1μm,0.3s						
EQES	**Quesada**	**1.98**	**68**	⇑Pn	**Pn**	**23 21 16.2**	**+0.8**
	37nm,0.4s,SNR=18						
EQES				Pg	**Pg**	**23 21 20.3**	**-0.2**
	36nm,0.2s,SNR=7.9						
EQES				Sn	**Sn**	**23 21 42.4**	**+2.4**
	176nm,0.2s,SNR=7.9						
EQES				Lg		23 21 47.4	
	629nm,0.4s,SNR=5.0						
EQES	**Quesada**	**1.98**	**68**	Pn	**Pn**	**23 21 16.2**	**+0.7**
	22nm,0.1s,SNR=18						
EQES	**Quesada**	**1.98**	**68**	Pg	**Pg**	**23 21 20.3**	**-0.2**
	213nm,0.4s,SNR=7.9						
EQES				Sn	**Sn**	**23 21 42.7**	**+2.7**
	176nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.98**	**68**	⇑Pn	**Pn**	**23 21 16.2**	**+0.8**
EQES				Pg	**Pg**	**23 21 20.4**	**-0.2**
EQES				Sn	**Sn**	**23 21 42.7**	**+2.7**
EQES				Lg		23 21 47.4	
EBER	**Berja**	**2.02**	**95**	Pn	**Pn**	**23 21 17.4**	**+1.4**
	9.3nm,0.4s,SNR=41						
EBER				Pg	**Pg**	**23 21 20.6**	**-0.6**
	371nm,0.4s,SNR=7.9						
EBER				Lg		23 21 49.1	
	2μm,0.7s,SNR=5.0						
EBER	**Berja**	**2.02**	**95**	Pn	**Pn**	**23 21 17.4**	**+1.5**
	9.3nm,0.4s,SNR=41						
EBER	**Berja**	**2.02**	**95**	Pg	**Pg**	**23 21 20.5**	**-0.6**
	371nm,0.4s,SNR=7.9						
EBER	**Berja**	**2.02**	**95**	Pn	**Pn**	**23 21 17.4**	**+1.4**
EBER				Pg	**Pg**	**23 21 20.5**	**-0.6**
EBER				Lg		23 21 49.1	
PBDV	**Barranco-do-Ve**	**2.03**	**275**	*e*Pn	**Pn**	**23 21 16.3**	**+0.2**
PBDV				*e*Sn	**Sn**	**23 21 40.6**	**-0.6**
PBDV				*e*Sg	**Sg**	**23 21 47.8**	**0.0**
PBDV				A		23 21 51.6	
	815nm,0.4s						
PBDV	**Barranco-do-Ve**	**2.03**	**275**	*e*Pn	**Pn**	**23 21 16.3**	**+0.2**
PBDV				*e*Sn	**Sn**	**23 21 40.6**	**-0.6**
PBDV				*e*Sg	**Sg**	**23 21 47.8**	**0.0**
	815nm,0.4s						
EBAD	**Badajoz**	**2.10**	**323**	⇓Pn	**Pn**	**23 21 17.5**	**+0.4**
	41nm,0.2s,SNR=18						
EBAD				Pg	**Pg**	**23 21 21.4**	**-1.3**
	35nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**23 21 43.9**	**+1.0**
	152nm,0.2s,SNR=7.9						
EBAD				Lg		23 21 49.7	
	2μm,0.3s,SNR=14						
EBAD	**Bad

EVO Sn **Sn** **23 21 53.1 -0.3**
260nm,0.3s
ENIJ **Nijar** **2.56 92** Pn **Pn** **23 21 24.3 +0.9**
7.5nm,0.2s,SNR=13
ENIJ Pg **Pg** **23 21 31.0 -0.4**
38nm,0.4s,SNR=7.9
ENIJ Lg 23 22 04.8
163nm,0.5s,SNR=4.0
ENIJ **Nijar** **2.56 92** Pg **Pg** **23 21 30.3 -1.1**
4.3nm,0.2s,SNR=7.9
ENIJ **Nijar** **2.56 92** Pn **Pn** **23 21 24.3 +0.9**
ENIJ Pg **Pg** **23 21 30.3 -1.1**
ENIJ Lg 23 22 04.8
PAB **San Pablo** **2.59 18** *e*Pn **Pn** **23 21 26.2 +2.4**
PAB *e*Sn **Sn** **23 21 58.0 +3.0**
PAB **San Pablo** **2.59 18** *e*Pn **Pn** **23 21 26.2 +2.4**
PAB *e*Sn **Sn** **23 21 58.0 +3.1**
EVOP **Sao Brissos** **2.59 304** *e*Pn **Pn** **23 21 24.4 +0.5**
EVOP **Sao Brissos** **2.59 304** *e*Sg **Sg** **23 22 06.7 +0.9**
890nm,0.5s
MORF **Marmelete** **2.61 276** *e*Pn **Pn** **23 21 23.9 -0.2**
MORF *e*Sn **Sn** **23 21 55.3 -0.2**
MORF A 23 22 10.7
327nm,0.2s
MORF **Marmelete** **2.61 276** *e*Pn **Pn** **23 21 23.9 -0.2**
MORF *e*Sn **Sn** **23 21 55.3 -0.2**
327nm,0.2s
PTEO **Sao Teotonio** **2.69 281** *e*Pn **Pn** **23 21 25.5 +0.3**
PTEO *e*Sn **Sn** **23 21 56.7 -0.8**
PTEO A 23 22 20.6
520nm,0.5s
PTEO **Sao Teotonio** **2.69 281** ⇓Pn **Pn** **23 21 25.5 +0.3**
PTEO Sn **Sn** **23 21 56.7 -0.8**
260nm,0.5s
MOE **Montemor** **2.74 302** *e*Pn **Pn** **23 21 26.6 +0.7**
MOE *e*Sn **Sn** **23 21 58.7 -0.1**
PFVI **Vila Bisbo** **2.74 272** *e*Pn **Pn** **23 21 25.7 -0.2**
PFVI *e*Sn **Sn** **23 21 57.8 -1.0**
PFVI A 23 22 01.0
199nm,0.2s
PFVI A 23 22 16.4
222nm,0.5s
PFVI **Vila Bisbo** **2.74 272** *e*Pn **Pn** **23 21 25.7 -0.2**
PFVI *e*Sn **Sn** **23 21 57.8 -1.0**
222nm,0.5s
EVIA **Vianos** **2.76 55** Pn **Pn** **23 21 26.4 +0.2**
20nm,0.1s,SNR=51
EVIA Pg **Pg** **23 21 33.7 -1.7**
87nm,0.4s,SNR=7.9
EVIA Sn **Sn** **23 22 00.2 +0.9**
26nm,0.2s,SNR=7.9
EVIA **Vianos** **2.76 55** Pn **Pn** **23 21 26.6 +0.4**
20nm,0.1s,SNR=51
EVIA **Vianos** **2.76 55** Pn **Pn** **23 21 26.6 +0.4**
EVIA Pg **Pg** **23 21 33.7 -1.7**
EVIA Sn **Sn** **23 22 00.2 +0.9**
EVIA Lg 23 22 11.0
PMRV **Marv??o** **2.81 327** *e*Pn **Pn** **23 21 27.5 +0.6**
PMRV *e*Sn **Sn** **23 22 00.4 -0.2**
PMRV A 23 22 18.1
897nm,0.5s
PMRV **Marv??o** **2.81 327** *e*Pn **Pn** **23 21 27.5 +0.6**
PMRV *e*Sn **Sn** **23 22 00.4 -0.2**
897nm,0.5s
ESDC **Sonseca Array** **2.81 23** Pn **Pn** **23 21 28.2 +1.2**
8.4nm,0.3s,baz=203,slow=12,SNR=56
ESDC Sn **Sn** **23 21 59.4 -1.2**
54nm,0.3s,baz=206,slow=16,SNR=14
ESDC Lg 23 22 10.8
200nm,0.3s,baz=214,slow=30,SNR=19
ESDC **Sonseca Array** **2.81 23** Pn **Pn** **23 21 28.1 +1.2**
20nm,0.2s,baz=203,slow=12,SNR=61
ESDC Pg **Pg** **23 21 35.8 -0.6**
34nm,0.2s,baz=204,slow=13,SNR=7.9
ESDC Sn **Sn** **23 22 01.1 +0.5**
32nm,0.1s,baz=87,slow=22,SNR=7.9
ESDC Lg 23 22 13.6
330nm,0.3s,baz=205,slow=28,SNR=7.9
ESDC **Sonseca Array** **2.81 23** Pn **Pn** **23 21 28.1 +1.2**
20nm,0.2s,SNR=61
ESDC **Sonseca Array** **2.81 23** Pg **Pg** **23 21 35.8 -0.6**
34nm,0.2s,SNR=7.9
ESDC Sn **Sn** **23 22 01.1 +0.5**
32nm,0.1s,SNR=7.9
ESLA **Sonseca Array** **2.81 23** *e*Pn **Pn** **23 21 29.1 +2.2**
ESLA *e*Sn **Sn** **23 22 04.4 +3.8**
ESLA **Sonseca Array** **2.81 23** *e*Pn **Pn** **23 21 29.1 +2.2**
ESLA *e*Sn **Sn** **23 22 04.4 +3.8**
TZK **Tazeka** **3.15 161** *i* P **Pn** **23 21 33.0 +1.4**
TZK *i* S **Sn** **23 22 11.0 +2.1**
PCBR **Castelo Branco** **3.19 330** *e*Pn **Pn** **23 21 32.7 +0.6**
PCBR *e*Sn **Sn** **23 22 08.3 -1.7**
PCBR A 23 22 32.8
369nm,0.4s
PCBR **Castelo Branco** **3.19 330** *e*Pn **Pn** **23 21 32.7 +0.6**
PCBR *e*Sn **Sn** **23 22 08.3 -1.7**
369nm,0.4s
ALMR **Almeirim** **3.25 310** *e*P **Pn** **23 21 33.6 +0.7**
ALMR *e*S **Sn** **23 22 11.0 -0.3**
ALMR *e*S **Sn** **23 22 11.0 -0.2**
ALMR AML AML 23 22 13.8
comp=E,890nm,1.0s
ALMR **Almeirim** **3.25 310** *e*P **Pn** **23 21 33.6 +0.7**
ALMR *e*S **Sn** **23 22 11.0 -0.2**
RTC **Rabat Centre** **3.32 201** *i* P **Pn** **23 21 33.0 -0.8**
RTC *i* S **Sn** **23 22 10.0 -2.9**
LIS **Lisbon** **3.38 300** *e*P **Pn** **23 21 34.9 +0.1**
LIS *e*S **Sn** **23 22 13.5 -1.1**
LIS *e*S **Sn** **23 22 13.5 -1.1**
LIS AML AML 23 22 17.1
comp=N,594nm,0.6s
LIS **Lisbon** **3.38 300** *e*P **Pn** **23 21 34.9 +0.2**
LIS *e*S **Sn** **23 22 13.5 -1.1**
EMUR **La Murta** **3.39 76** Pn **Pn** **23 21 35.2 +0.4**
comp=N,7.7nm,0.3s,SNR=11
EMUR Pg **Pg** **23 21 44.5 -2.9**
comp=N,48nm,0.4s,SNR=7.9
EMUR Lg 23 22 33.2
comp=N,176nm,0.4s,SNR=5.0
EMUR **La Murta** **3.39 76** Pn **Pn** **23 21 35.2 +0.4**
comp=N,2.1nm,0.2s,SNR=11
EMUR **La Murta** **3.39 76** Pg **Pg** **23 21 44.5 -2.9**
comp=N,48nm,0.4s,SNR=7.9
EMUR **La Murta** **3.39 76** Pn **Pn** **23 21 35.2 +0.4**
EMUR Pg **Pg** **23 21 44.5 -2.9**
EMUR Lg 23 22 32.3
ETOB **Tobarra** **3.42 62** Pn **Pn** **23 21 35.7 +0.5**
comp=N,16nm,0.3s,SNR=70
ETOB Pg **Pg** **23 21 47.7 -0.2**
comp=N,10nm,0.3s,SNR=7.9
ETOB Sn **Sn** **23 22 15.5 0.0**
comp=N,21nm,0.1s,SNR=7.9
ETOB Lg 23 22 33.1
comp=N,216nm,0.4s,SNR=8.0
ETOB **Tobarra** **3.42 62** Pn **Pn** **23 21 35.7 +0.5**
comp=N,4.1nm,0.1s,SNR=70
ETOB Sn **Sn** **23 22 15.5 0.0**
comp=N,21nm,0.1s,SNR=7.9
PTOM **Tomar** **3.46 318** *e*Pn **Pn** **23 21 36.3 +0.5**
PTOM *e*Sn **Sn** **23 22 16.9 +0.4**
PTOM *e*Sg **Sg** **23 22 33.7 +0.1**
PTOM A 23 22 40.0
comp=N,486nm,0.6s
PTOM **Tomar** **3.46 318** *e*Pn **Pn** **23 21 36.3 +0.5**
PTOM *e*Sn **Sn** **23 22 16.9 +0.4**
PTOM *e*Sg **Sg** **23 22 33.7 +0.1**
comp=N,486nm,0.6s
CART **Cartagena** **3.54 81** *e*Pn **Pn** **23 21 36.5 -0.3**
CART Sn **Sn** **23 22 19.8 +1.4**
CART **Cartagena** **3.54 81** *e*Pn **Pn** **23 21 36.5 -0.3**
CART Sn **Sn** **23 22 19.8 +1.4**
PMAFR **Mafra** **3.59 302** *e*Pn **Pn** **23 21 38.1 +0.5**
PMAFR *e*Sn **Sn** **23 22 19.7 0.0**
PMAFR A 23 22 46.4
comp=N,545nm,0.8s
PMAFR **Mafra** **3.59 302** *e*Pn **Pn** **23 21 38.1 +0.5**
PMAFR *e*Sn **Sn** **23 22 19.7 0.0**
comp=N,545nm,0.8s
MIF **Mishlifen** **3.67 178** *i* P **Pn** **23 21 42.0 +3.3**
MIF *i* S **Sn** **23 22 21.0 -0.8**
GUD **Guadarrama** **3.68 15** Pn **Pn** **23 21 40.4 +1.6**
comp=N,3.8nm,0.2s,SNR=29
GUD Pg **Pg** **23 21 51.5 -1.4**
comp=N,14nm,0.2s,SNR=7.9
GUD Lg 23 22 40.3
comp=N,268nm,0.4s,SNR=9.8
MTE **Manteigas** **3.71 334** *e*Pn **Pn** **23 21 40.1 +0.9**
MTE *e*Sn **Sn** **23 22 22.1 -0.5**
MTE A 23 22 44.4
comp=N,877nm,0.6s
MTE **Manteigas** **3.71 334** *e*Pn **Pn** **23 21 40.1 +0.9**
MTE *e*Sn **Sn** **23 22 22.1 -0.5**
comp=N,877nm,0.6s
MTE **Manteigas** **3.71 334** *e*Pn **Pn** **23 21 40.8 +1.6**
MTE *e*Sn **Sn** **23 22 23.4 +0.8**
CZD **Col de Zad** **4.06 176** *i* P **Pn** **23 21 46.0 +2.0**
CZD *i* S **Sn** **23 22 30.0 -1.3**
PVIS **Viseu** **4.11 332** *e*Pn **Pn** **23 21 46.3 +1.6**
PVIS *e*Sn **Sn** **23 22 32.0 -0.6**
PVIS A 23 23 01.2
comp=N,267nm,0.5s
PVIS **Viseu** **4.11 332** *e*Pn **Pn** **23 21 46.3 +1.6**
PVIS *e*Sn **Sn** **23 22 32.0 -0.6**
comp=N,267nm,0.5s
AVE **Averroes** **4.13 204** P **Pn** **23 21 43.1 -1.9**
AVE S **Sn** **23 22 28.4 -4.6**
MVO **Moncorvo** **4.26 343** *e*Pn **Pn** **23 21 47.5 +0.7**
MVO *e*Sn **Sn** **23 22 35.4 -0.9**
MVO A 23 23 03.4
comp=N,459nm,0.5s
MVO **Moncorvo** **4.26 343** *e*Pn **Pn** **23 21 47.5 +0.7**
MVO *e*Sn **Sn** **23 22 35.4 -0.9**
comp=N,459nm,0.5s
ECHE **Chera** **4.28 53** Pn **Pn** **23 21 47.7 +0.6**
comp=N,9.1nm,0.4s,SNR=11
ECHE Pg **Pg** **23 22 00.3 -4.2**
comp=N,12nm,0.4s,SNR=7.9
ECHE Sn **Sn** **23 22 35.6 -1.2**
comp=N,7.7nm,0.3s,SNR=4.0
ECHE Lg 23 22 59.8
comp=N,95nm,0.6s,SNR=7.9
ECHE **Chera** **4.28 53** Pn **Pn** **23 21 47.7 +0.6**
comp=N,1.5nm,0.1s,SNR=11
ECHE Sn **Sn** **23 22 35.6 -1.2**
comp=N,7.7nm,0.3s,SNR=7.9
ECHE **Chera** **4.28 53** Pn **Pn** **23 21 47.7 +0.6**
ECHE Sn **Sn** **23 22 35.6 -1.2**
ECHE Lg 23 22 59.8
MDT **Midelt** **4.31 171** Pn **Pn** **23 21 46.7 -0.8**
comp=N,5.0nm,0.3s,baz=15,slow=12,SNR=453
MDT Sn **Sn** **23 22 34.3 -3.2**
comp=N,27nm,0.3s,baz=15,slow=20,SNR=32
EBEN **Beniarda** **4.40 67** Pn **Pn** **23 21 48.6 -0.1**
comp=N,12nm,0.4s,SNR=19
EBEN Pg **Pg** **23 22 04.2 -2.4**
comp=N,34nm,0.9s,SNR=7.9
EBEN Sn **Sn** **23 22 38.4 -1.2**
comp=N,57nm,0.7s,SNR=7.9
EBEN Lg 23 23 01.1
comp=N,87nm,0.5s,SNR=7.9
EBEN **Beniarda** **4.40 67** Pn **Pn** **23 21 48.6 0.0**
comp=N,1.2nm,0.2s,SNR=19
EBEN Sn **Sn** **23 22 38.4 -1.2**
comp=N,4.8nm,0.2s,SNR=7.9
KIB **El Ksiba** **4.53 187** *i* P **Pn** **23 21 51.0 +0.4**
KIB *i* S **Sn** **23 22 40.0 -3.0**
ETOR **Torete** **4.54 34** Pn **Pn** **23 21 51.9 +1.3**
comp=N,150nm,0.2s,SNR=90
ETOR Sn **Sn** **23 22 43.2 0.0**
comp=N,72nm,0.2s,SNR=7.9
ETOR Lg 23 23 07.6
comp=N,436nm,0.6s,SNR=13
ETOR **Torete** **4.54 34** Pn **Pn** **23 21 51.9 +1.2**
comp=N,150nm,0.2s,SNR=90
ETOR **Torete** **4.54 34** Pn **Pn** **23 21 52.0 +1.3**
ETOR Sn **Sn** **23 22 43.2 0.0**
comp=N,72nm,0.2s,SNR=7.9
ETOR **Torete** **4.54 34** Pn **Pn** **23 21 52.0 +1.3**
ETOR Sn **Sn** **23 22 43.2 0.0**
ETOR Lg 23 23 08.7
PVRL **Vila Real** **4.55 337** *e*Pn **Pn** **23 21 51.4 +0.6**
PVRL *e*Sn **Sn** **23 22 42.6 -0.8**
PVRL A 23 23 18.7
comp=N,190nm,0.5s
PVRL **Vila Real** **4.55 337** *e*Pn **Pn** **23 21 51.4 +0.6**
PVRL *e*Sn **Sn** **23 22 42.6 -0.8**
comp=N,190nm,0.5s
ECAL **Calabor** **4.96 348** Pn **Pn** **23 21 57.1 +0.8**
comp=N,1.9nm,0.1s,SNR=11
ECAL Sn **Sn** **23 22 52.0 -1.4**
comp=N,71nm,0.3s,SNR=7.9
ECAL Lg 23 23 19.9
comp=N,601nm,0.6s,SNR=7.9
ECAL **Calabor** **4.96 348** Pn **Pn** **23 21 57.1 +0.8**
comp=N,1.9nm,0.1s,SNR=11
ECAL Sn **Sn** **23 22 52.0 -1.3**
comp=N,22nm,0.2s,SNR=7.9
ECAL **Calabor** **4.96 348** Pn **Pn** **23 21 57.1 +0.8**
ECAL Sn **Sn** **23 22 52.0 -1.4**
ECAL Lg 23 23 20.7
TZC **Tazercounte** **5.01 191** *i* P **Pn** **23 21 57.0 -0.1**
TZC *i* S **Sn** **23 22 51.0 -3.8**
PCAB **Cabril** **5.04 337** *e*Pn **Pn** **23 21 58.2 +0.7**
PCAB *e*Sn **Sn** **23 22 53.6 -1.9**
PCAB *e*Sg **Sg** **23 23 23.8 -0.5**
PCAB A 23 23 31.1
comp=N,234nm,0.5s
PCAB **Cabril** **5.04 337** *e*Pn **Pn** **23 21 58.2 +0.7**
PCAB *e*Sn **Sn** **23 22 53.6 -1.9**
PCAB *e*Sg **Sg** **23 23 23.8 -0.5**
comp=N,234nm,0.5s
EMOS **Mosqueruela** **5.05 48** Pn **Pn** **23 21 59.0 +1.4**
comp=N,5.1nm,0.3s,SNR=13
EMOS Sn **Sn** **23 22 54.8 -0.9**
comp=N,53nm,0.7s,SNR=7.9
EMOS Lg 23 23 23.5
comp=N,256nm,0.8s,SNR=7.9
EMOS **Mosqueruela** **5.05 48** Pn **Pn** **23 21 59.0 +1.4**
comp=N,0.9nm,0.1s,SNR=13
EMOS Sn **Sn** **23 22 54.8 -0.9**
comp=N,3.7nm,0.2s,SNR=7.9
ZFT **Errachidia** **5.12 170** *i* P **Pn** **23 21 59.0 +0.4**
ZFT *i* S **Sn** **23 22 56.0 -1.4**
ELOB **Lobios** **5.20 337** Pn **Pn** **23 22 00.3 +0.6**
comp=N,2.8nm,0.2s,SNR=18
ELOB Sn **Sn** **23 22 56.8 -2.5**
comp=N,23nm,0.2s,SNR=7.9
ELOB Lg 23 23 28.6
comp=N,287nm,0.4s,SNR=7.9
ELOB **Lobios** **5.20 337** Pn **Pn** **23 21 59.8 +0.2**
comp=N,2.8nm,0.2s,SNR=18
ELOB **Lobios** **5.20 337** Pn **Pn** **23 21 59.8 +0.2**
ELOB Sn **Sn** **23 22 57.2 -2.1**
ELOB Lg 23 23 29.9
EANR **'Ain N'Sour** **5.35 100** P **Pn** **23 22 05.4 +3.6**
ERUA **La Rua** **5.46 346** Pn **Pn** **23 22 04.2 +0.9**
comp=N,7.9nm,0.1s,SNR=7.9
ERUA Sn **Sn** **23 23 03.8 -2.1**
comp=N,25nm,0.2s,SNR=7.9
ERUA Lg 23 23 37.4
comp=N,129nm,0.5s,SNR=7.9
ERUA **La Rua** **5.46 346** Pn **Pn** **23 22 03.4 +0.1**
comp=N,7.9nm,0.1s,SNR=7.9
ERUA **La Rua** **5.46 346** Pn **Pn** **23 22 03.4 +0.1**
ERUA Sn **Sn** **23 23 03.8 -2.1**
ERUA Lg 23 23 38.7
EBNR **Beni Rached** **5.62 96** P **Pn** **23 22 14.3 +8.8**
EIBI **Ibiza** **5.66 68** Pn **Pn** **23 22 05.7 -0.3**
comp=N,2.7nm,0.2s,SNR=7.9
EIBI Sn **Sn** **23 23 08.7 -2.0**
comp=N,4.2nm,0.2s,SNR=7.9
EIBI **Ibiza** **5.66 68** Pn **Pn** **23 22 05.7 -0.3**
comp=N,1.7nm,0.2s,SNR=7.9
EIBI Sn **Sn** **23 23 08.0 -2.7**
comp=N,4.2nm,0.2s,SNR=7.9
EIBI **Ibiza** **5.66 68** Pn **Pn** **23 22 05.7 -0.3**
EIBI Sn **Sn** **23 23 08.0 -2.8**
ETRT **Tiaret** **5.67 105** P **Pn** **23 22 09.6 +3.4**
ERTA **Horta de San J** **5.90 47** Pn **Pn** **23 22 10.8 +1.5**
comp=N,3.7nm,0.3s,SNR=7.9
ERTA Lg 23 23 49.9
comp=N,44nm,0.4s,SNR=7.9
ERTA **Horta de San J** **5.90 47** Pn **Pn** **23 22 10.8 +1.5**
comp=N,1.1nm,0.3s,SNR=7.9
ERTA **Horta de San J** **5.90 47** Pn **Pn** **23 22 10.8 +1.5**
ERTA Lg 23 23 51.7
ECRI **Cripan** **5.94 21** Pn **Pn** **23 22 10.4 +0.6**
comp=N,1.1nm,0.1s,SNR=4.0
ECRI Sn **Sn** **23 23 17.2 -0.5**
comp=N,6.0nm,0.2s,SNR=7.9
ECRI Lg 23 23 54.1
comp=N,19nm,0.3s,SNR=7.9
ECRI **Cripan** **5.94 21** Pn **Pn** **23 22 10.9 +1.0**
comp=N,2.6nm,0.2s,SNR=4.0
ECRI Sn **Sn** **23 23 15.8 -1.9**
comp=N,0.1nm,0.4s,SNR=7.9
ECRI **Cripan** **5.94 21** Pn **Pn** **23 22 10.9 +1.0**
ECRI Sn **Sn** **23 23 15.8 -1.8**
ECRI Lg 23 23 54.4
ESAC **San Caprasio** **6.00 38** Pn **Pn** **23 22 11.9 +1.3**
comp=N,25nm,0.5s,SNR=7.9
ESAC Lg 23 23 54.7
comp=N,341nm,0.4s,SNR=7.9
ESAC **San Caprasio** **6.00 38** Pn **Pn** **23 22 11.9 +1.3**
comp=N,4.5nm,0.1s,SNR=7.9
ESAC **San Caprasio** **6.00 38** Pn **Pn** **23 22 11.9 +1.3**
ESAC Lg 23 23 55.7
CIA **Chichaoua** **6.17 208** P **Pn** **23 22 12.0 -1.1**
CIA S **Sn** **23 23 18.0 -5.4**
EARI **Arriondas** **6.21 1** Pn **Pn** **23 22 15.3 +1.8**
comp=N,0.8nm,0.2s,SNR=11
EARI Sn **Sn** **23 23 21.5 -2.7**
comp=N,13nm,0.4s,SNR=7.9
EARI Lg 23 24 01.0
comp=N,200nm,0.7s,SNR=7.9
EARI **Arriondas** **6.21 1** Pn **Pn** **23 22 15.3 +1.8**
comp=N,0.6nm,0.1s,SNR=11
OUK **Oukaimeden** **6.21 200** P **Pn** **23 22 12.5 -1.1**
OUK S **Sn** **23 23 18.0 -6.4**
STS **Santiago** **6.28 338** Pn **Pn** **23 22 15.4 +0.9**
comp=N,2.2nm,0.2s,SNR=7.9
STS Sn **Sn** **23 23 22.5 -3.3**
comp=N,5.3nm,0.2s,SNR=7.9
STS Lg 23 24 02.1
comp=N,101nm,0.6s,SNR=7.9
STS **Santiago** **6.28 338** Pn **Pn** **23 22 16.5 +2.1**
comp=N,2.2nm,0.2s,SNR=7.9
STS **Santiago** **6.28 338** Pn **Pn** **23 22 16.5 +2.0**
STS Sn **Sn** **23 23 23.1 -2.8**
STS Lg 23 24 04.2
JHA **Jbel Lahdid** **6.30 213** P **Pn** **23 22 13.0 -1.9**
JHA S **Sn** **23 23 19.0 -7.7**
ELAN **Lanestosa** **6.32 13** Pn **Pn** **23 22 16.8 +1.8**
comp=N,0.5nm,0.1s,SNR=13
ELAN Sn **Sn** **23 23 23.1 -3.8**
comp=N,7.3nm,0.2s,SNR=7.9
ELAN Lg 23 24 02.2
comp=N,33nm,0.4s,SNR=7.9
ELAN **Lanestosa** **6.32 13** Pn **Pn** **23 22 16.8 +1.8**
comp=N,0.5nm,0.1s,SNR=13
ELAN **Lanestosa** **6.32 13** Pn **Pn** **23 22 16.8 +1.8**
ELAN Sn **Sn** **23 23 24.2 -2.6**
ELAN Lg 23 24 04.7
EPON **Pontenova** **6.37 348** Pn **Pn** **23 22 17.6 +1.8**
comp=N,4.0nm,0.4s,SNR=7.9
EPON Sn **Sn** **23 23 25.9 -2.4**
comp=N,6.2nm,0.2s,SNR=7.9
EPON Lg 23 24 06.5
comp=N,126nm,0.5s,SNR=7.9
EPON **Pontenova** **6.37 348** Pn **Pn** **23 22 17.2 +1.4**
comp=N,1.6nm,0.2s,SNR=7.9
EPON Sn **Sn** **23 23 26.4 -1.9**
comp=N,6.2nm,0.2s,SNR=7.9
EPON **Pontenova** **6.37 348** Pn **Pn** **23 22 17.2 +1.4**
EPON Sn **Sn** **23 23 26.4 -1.9**
EPON Lg 23 24 07.5
EARA **Aranguren** **6.39 26** Sn **Sn** **23 23 26.4 -2.2**
comp=N,17nm,0.3s,SNR=7.9
EARA Lg 23 24 07.6
comp=N,64nm,0.5s,SNR=7.9
EARA **Aranguren** **6.39 26** Sn **Sn** **23 23 26.4 -2.2**
comp=N,2.6nm,0.2s,SNR=7.9
IUNC **Unciti** **6.40 27** Sn **Sn** **23 23 28.0 -1.0**
comp=N,9.6nm,0.2s,SNR=7.9
IUNC Lg 23 24 08.8
comp=N,33nm,0.4s,SNR=7.9
EMAZ **Mazaricos** **6.46 336** Pn **Pn** **23 22 17.9 +0.8**
comp=N,1.6nm,0.1s,SNR=5.0
EMAZ Sn **Sn** **23 23 26.6 -4.0**
comp=N,14nm,0.3s,SNR=7.9
EMAZ Lg 23 24 08.2
comp=N,325nm,0.8s,SNR=5.0
EMAZ **Mazaricos** **6.46 336** Pn **Pn** **23 22 18.2 +1.2**
comp=N,1.7nm,0.1s,SNR=5.0
EMAZ **Mazaricos** **6.46 336** Pn **Pn** **23 22 18.2 +1.2**
EMAZ Sn **Sn** **23 23 26.2 -4.3**
EMAZ Lg 23 24 11.7
IZUN **Zunzarren** **6.51 26** Pn **Pn** **23 22 18.9 +1.3**
comp=N,3.8nm,0.3s,SNR=7.9
IZUN Sn **Sn** **23 23 29.4 -2.2**
comp=N,13nm,0.4s,SNR=7.9
IZUN Lg 23 24 12.4
comp=N,44nm,0.6s,SNR=7.9
IZUN **Zunzarren** **6.51 26** Pn **Pn** **23 22 19.9 +2.2**
comp=N,1.5nm,0.2s,SNR=7.9
IZUN Sn **Sn** **23 23 30.1 -1.5**
comp=N,1.3nm,0.2s,SNR=7.9
IUSE **Utxeti** **6.55 26** Pn **Pn** **23 22 19.6 +1.3**
comp=N,0.3nm,0.0s,SNR=7.9
IUSE Sn **Sn** **23 23 30.9 -1.8**
comp=N,4.5nm,0.2s,SNR=7.9
IUSE Lg 23 24 14.1
comp=N,34nm,0.6s,SNR=7.9
IUSE **Utxeti** **6.55 26** Pn **Pn** **23 22 19.9 +1.7**
comp=N,2.0nm,0.2s,SNR=7.9
IUSE Sn **Sn** **23 23 30.4 -2.3**
comp=N,1.2nm,0.1s,SNR=7.9
EPOB **Poblet** **6.59 48** Pn **Pn** **23 22 19.3 +0.6**
comp=N,0.3nm,0.1s,SNR=7.9
EPOB Lg 23 24 13.0
comp=N,416nm,2.9s,SNR=7.9
EPOB **Poblet** **6.59 48** Pn **Pn** **23 22 19.6 +0.9**
comp=N,0.4nm,0.3s,SNR=7.9
EPOB **Poblet** **6.59 48** Pn **Pn** **23 22 19.6 +0.9**
EPOB Lg 23 24 12.8
EORO **Oroz-Betelu** **6.59 27** Pn **Pn** **23 22 21.4 +2.6**
comp=N,0.3nm,0.1s,SNR=14
EORO Sn **Sn** **23 23 32.5 -1.1**
comp=N,2.1nm,0.2s,SNR=7.9
EORO Lg 23 24 13.1
comp=N,46nm,0.4s,SNR=7.9
EORO **Oroz-Betelu** **6.59 27** Lg 23 24 15.4
comp=N,140nm,0.9s,SNR=7.9
EORO **Oroz-Betelu** **6.59 27** Pn **Pn** **23 22 21.3 +2.5**
comp=N,2.3nm,0.2s,SNR=14
ELIZ **Elizondo** **6.75 25** Pn **Pn** **23 22 23.9 +2.9**
comp=N,2.9nm,0.3s,SNR=7.9
ELIZ Sn **Sn** **23 23 34.5 -3.0**
comp=N,10nm,0.4s,SNR=7.9
ELIZ Lg 23 24 21.7
comp=N,51nm,0.8s,SNR=7.9
ELIZ **Elizondo** **6.75 25** Lg 23 24 22.5
comp=N,32nm,0.7s,SNR=7.9
ELIZ **Elizondo** **6.75 25** Pn **Pn** **23 22 23.9 +2.9**
ELIZ Sn **Sn** **23 23 34.5 -3.0**
ELIZ Lg 23 24 22.5
EMHD **Djebel Mahouad** **6.77 95** P **Pb** **23 22 35.0 -4.8**
EALK **Alkurruntz** **6.81 25** Pn **Pn** **23 22 23.8 +2.1**
comp=N,3.1nm,0.2s,SNR=11
EALK Sn **Sn** **23 23 35.3 -3.7**
comp=N,134nm,0.4s,SNR=7.9
EALK Lg 23 24 22.1
comp=N,154nm,0.9s,SNR=7.9
EALK **Alkurruntz** **6.81 25** Lg 23 24 22.1
comp=N,79nm,0.5s,SNR=7.9
EALK **Alkurruntz** **6.81 25** Pn **Pn** **23 22 24.6 +2.8**
comp=N,3.1nm,0.2s,SNR=11
EALK **Alkurruntz** **6.81 25** Pn **Pn** **23 22 24.6 +2.8**
EALK Sn **Sn** **23 23 33.9 -5.1**
EALK Lg 23 24 22.1
SJPF **Ste Jean** **6.81 27** *e*Pn **Pn** **23 22 22.6 +0.8**
SNR=1.0
SJPF *e*Sn **Sn** **23 23 36.9 -2.2**
SNR=1.0
SJPF *e*Sg Sn 23 24 21.1 +42
comp=N,47nm,0.6s,SNR=1.0
SJPF **Ste Jean** **6.81 27** Pn **Pn** **23 22 22.6 +0.8**
SJPF Sn **Sn** **23 23 36.9 -2.2**
SJPF Lg 23 24 21.1
comp=N,23nm,0.6s
SJPF **Ste Jean** **6.81 27** *e*Pn **Pn** **23 22 22.6 +0.8**
SNR=1.0
SJPF *e*Sn **Sn** **23 23 36.9 -2.2**
SNR=1.0
ETSF **Etsaut** **6.89 31** *e*Pn **Pn** **23 22 23.7 +0.9**
SNR=1.0

ETSF					*e*Sn		**Sn**	23 23 38.3	-2.6
	SNR=1.0								
ETSF					*e*Sg		Sn	23 24 24.7	+44
	comp=N,82nm,0.8s								
ETSF	**Etsaut**	**6.89**	**31**		Pn		**Pn**	**23 22 23.7**	**+0.9**
ETSF					Sn		**Sn**	**23 23 38.3**	**-2.6**
ETSF					Lg			23 24 24.7	
	comp=N,41nm,0.8s								
ETSF	**Etsaut**	**6.89**	**31**		*e*Pn		**Pn**	**23 22 23.7**	**+0.9**
	SNR=1.0								
ETSF					*e*Sn		**Sn**	**23 23 38.3**	**-2.6**
	SNR=1.0								
OSSF	**Osses**	**6.92**	**26**		P		**Pn**	**23 22 25.5**	**+2.2**
OSSF					S		**Sn**	**23 23 38.7**	**-3.1**
ETOS	**Mallorca**	**6.98**	**65**		Pn		**Pn**	**23 22 23.8**	**-0.3**
	comp=N,1.3nm,0.2s,SNR=7.9								
ETOS					Sn		**Sn**	**23 23 41.7**	**-1.5**
	comp=N,0.6nm,0.1s,SNR=7.9								
ETOS	**Mallorca**	**6.98**	**65**		Pn		**Pn**	**23 22 23.2**	**-0.9**
	comp=N,1.3nm,0.2s,SNR=7.9								
ETOS	**Mallorca**	**6.98**	**65**		Pn		**Pn**	**23 22 23.2**	**-0.9**
EBIE	**Bielsa**	**7.03**	**36**		Pn		**Pn**	**23 22 26.0**	**+1.2**
	comp=N,6.7nm,0.2s,SNR=49								
EBIE					Sn		**Sn**	**23 23 42.2**	**-2.1**
	comp=N,18nm,0.6s,SNR=7.9								
EBIE					Lg			23 24 26.8	
	comp=N,42nm,0.7s,SNR=7.9								
EBIE	**Bielsa**	**7.03**	**36**		Sn		**Sn**	**23 23 42.2**	**-2.1**
	SNR=7.9								
EBIE	**Bielsa**	**7.03**	**36**		Pn		**Pn**	**23 22 26.8**	**+2.1**
	comp=N,6.7nm,0.2s,SNR=49								
EBIE	**Bielsa**	**7.03**	**36**		Pn		**Pn**	**23 22 26.8**	**+2.1**
EBIE					Sn		**Sn**	**23 23 42.2**	**-2.1**
REYF	**Montagne du Re**	**7.10**	**31**		P		**Pn**	**23 22 26.7**	**+1.0**
REYF					S		**Sn**	**23 23 42.7**	**-3.4**
VIEF	**Viey**	**7.13**	**34**		P		**Pn**	**23 22 27.9**	**+1.8**
VIEF					S		**Sn**	**23 23 43.4**	**-3.4**
VIEF	**Viey**	**7.13**	**34**		S		**Sn**	**23 23 43.4**	**-3.4**
EMIR	**Miracle**	**7.20**	**46**		Pn		**Pn**	**23 22 28.1**	**+1.0**
	comp=N,1.2nm,0.2s,SNR=4.6								
EMIR					Lg			23 24 34.3	
	comp=N,68nm,0.7s,SNR=7.9								
EMIR	**Miracle**	**7.20**	**46**		Pn		**Pn**	**23 22 28.1**	**+1.0**
	comp=N,1.2nm,0.2s,SNR=4.6								
RESF	**Ens**	**7.21**	**36**		P		**Pn**	**23 22 28.6**	**+1.3**
RESF					S		**Sn**	**23 23 46.9**	**-2.0**
LABF	**Labassere**	**7.28**	**33**		P		**Pn**	**23 22 30.2**	**+2.0**
LABF					S		**Sn**	**23 23 48.6**	**-2.0**
EPF	**Esparros**	**7.38**	**35**		*e*Pn		**Pn**	**23 22 30.2**	**+0.5**
	SNR=1.0								
EPF					*e*Sn		**Sn**	**23 23 50.5**	**-2.7**
	SNR=1.0								
EPF					*e*Sg		Sn	23 24 37.9	+45
	comp=N,63nm,0.6s,SNR=1.0								
EPF	**Esparros**	**7.38**	**35**		Pn		**Pn**	**23 22 30.2**	**+0.5**
EPF					Sn		**Sn**	**23 23 50.5**	**-2.7**
EPF					Lg			23 24 37.9	
	comp=N,32nm,0.6s								
SALF	**Salau**	**7.59**	**40**		P		**Pn**	**23 22 34.0**	**+1.5**
MLS	**Moulis**	**7.69**	**38**		P		**Pn**	**23 22 34.7**	**+0.9**
MLS					S		**Sn**	**23 23 59.7**	**-0.9**
MTLF	**Montolieu**	**8.54**	**41**		*e*Pn		**Pn**	**23 22 46.1**	**+0.6**
	SNR=1.0								
MTLF					*e*Sg		Sn	23 25 14.9	+53
	comp=N,9.9nm,0.5s								
MTLF	**Montolieu**	**8.54**	**41**		*e*Pn		**Pn**	**23 22 46.1**	**+0.6**
	SNR=1.0								
MTLF					*e*Sg		Sn	23 25 14.9	+53
	comp=N,4.9nm,0.5s								
LFF	**La Frestale**	**9.11**	**29**		*e*Pn		**Pn**	**23 22 53.5**	**+0.2**
	SNR=1.0								
LFF					*e*Sn		**Sn**	**23 24 30.9**	**-4.6**
	comp=N,14nm,0.5s,SNR=1.0								
LFF	**La Frestale**	**9.11**	**29**		*e*Pn		**Pn**	**23 22 53.5**	**+0.2**
	SNR=1.0								
LFF					*e*Sn		**Sn**	**23 24 30.9**	**-4.6**
	comp=N,7.2nm,0.5s,SNR=1.0								
CAF	**Calviac**	**9.64**	**33**		*e*Pn		**Pn**	**23 23 00.8**	**+0.2**
	SNR=1.0								
CAF					*e*Sn		**Sn**	**23 24 43.6**	**-5.0**
	comp=N,4.1nm,0.4s								
CAF	**Calviac**	**9.64**	**33**		*e*Pn		**Pn**	**23 23 00.8**	**+0.2**
	SNR=1.0								
CAF					*e*Sn		**Sn**	**23 24 43.6**	**-5.0**
	comp=N,2.0nm,0.4s								
RJF	**Les Rejaudoux**	**9.72**	**30**		*e*Pn		**Pn**	**23 23 01.3**	**-0.3**
RJF					*e*Sn		**Sn**	**23 24 45.1**	**-5.3**
	comp=N,4.8nm,0.3s,SNR=1.0								
RJF	**Les Rejaudoux**	**9.72**	**30**		*e*Pn		**Pn**	**23 23 01.3**	**-0.3**
RJF					*e*Sn		**Sn**	**23 24 45.1**	**-5.3**
	comp=N,2.4nm,0.3s,SNR=1.0								
LASF	**Ste Croix**	**9.91**	**42**		*e*Pn		**Pn**	**23 23 04.2**	**0.0**
LASF					*e*Sg		Sn	23 25 58.7	+64
	comp=N,33nm,0.9s								
LASF	**Ste Croix**	**9.91**	**42**		Pn		**Pn**	**23 23 04.2**	**0.0**
LASF					Lg			23 25 58.7	
	comp=N,16nm,0.9s								
MFF	**Saint Martin d**	**10.28**	**21**		*e*Pn		**Pn**	**23 23 09.9**	**+0.6**
MFF					*e*Sn		**Sn**	**23 24 59.0**	**-5.2**
	comp=N,4.9nm,0.4s								
MFF	**Saint Martin d**	**10.28**	**21**		*e*Pn		**Pn**	**23 23 09.9**	**+0.6**
MFF					*e*Sn		**Sn**	**23 24 59.0**	**-5.2**
	comp=N,2.5nm,0.4s								
TCF	**Toulx Ste Croi**	**10.80**	**29**		*e*Pn		**Pn**	**23 23 16.5**	**0.0**
TCF					*e*Sn		**Sn**	**23 25 11.1**	**-6.0**
	comp=N,4.1nm,0.4s								
TCF	**Toulx Ste Croi**	**10.80**	**29**		*e*Pn		**Pn**	**23 23 16.5**	**0.0**
TCF					*e*Sn		**Sn**	**23 25 11.1**	**-6.0**
	comp=N,2.0nm,0.4s								
VIVF	**Saint-Julien-l**	**10.86**	**41**		*e*Sg		Sx	23 26 27.5	
	comp=N,5.6nm,0.7s								
VIVF	**Saint-Julien-l**	**10.86**	**41**		*e*Sg		Sx	23 26 27.5	
	comp=N,2.8nm,0.7s								
QUIF	**Quistinic**	**10.94**	**8**		*e*Pn		**Pn**	**23 23 18.5**	**+0.1**
	SNR=1.0								
QUIF					*e*Sn		**Sn**	**23 25 13.3**	**-7.2**
	comp=N,7.2nm,0.4s,SNR=1.0								
QUIF	**Quistinic**	**10.94**	**8**		*e*Pn		**Pn**	**23 23 18.5**	**+0.1**
	SNR=1.0								
QUIF					*e*Sn		**Sn**	**23 25 13.3**	**-7.2**
	comp=N,3.6nm,0.4s,SNR=1.0								
CFUE	**Fuerteventura**	**11.06**	**223**		Pn		**Pn**	**23 23 17.2**	**-2.9**
	SNR=7.9								
BGF	**Bois d'Agland**	**11.28**	**30**		*e*Pn		**Pn**	**23 23 23.6**	**+0.6**
	SNR=1.0								
BGF					*e*Sn		**Sn**	**23 25 22.2**	**-6.5**
	comp=N,10nm,0.5s,SNR=1.0								
BGF	**Bois d'Agland**	**11.28**	**30**		*e*Pn		**Pn**	**23 23 23.6**	**+0.6**
	SNR=1.0								
BGF					*e*Sn		**Sn**	**23 25 22.2**	**-6.5**
	comp=N,5.2nm,0.5s,SNR=1.0								
ROSF	**Rostrenen**	**11.35**	**7**		*e*Pn		**Pn**	**23 23 24.1**	**+0.2**
ROSF					*e*Sn		**Sn**	**23 25 22.8**	**-7.6**
	comp=N,13nm,0.7s,SNR=1.0								
ROSF	**Rostrenen**	**11.35**	**7**		*e*Pn		**Pn**	**23 23 24.1**	**+0.2**
ROSF					*e*Sn		**Sn**	**23 25 22.8**	**-7.6**
	comp=N,6.5nm,0.7s,SNR=1.0								
SGMF	**Saint Gilles**	**11.35**	**10**		*e*Pn		**Pn**	**23 23 23.9**	**-0.1**
	SNR=1.0								
SGMF					*e*Sn		**Sn**	**23 25 23.5**	**-7.0**
	comp=N,4.3nm,0.4s								
SGMF	**Saint Gilles**	**11.35**	**10**		*e*Pn		**Pn**	**23 23 23.9**	**-0.1**
	SNR=1.0								
SGMF					*e*Sn		**Sn**	**23 25 23.5**	**-7.0**
	comp=N,2.2nm,0.4s								
AVF	**Avril sur Loir**	**11.67**	**31**		*e*Pn		**Pn**	**23 23 28.3**	**-0.1**
GRR	**Gorron**	**11.77**	**15**		*e*Pn		**Pn**	**23 23 29.8**	**+0.1**
GRR					*e*Sn		**Sn**	**23 25 34.4**	**-6.4**
	comp=N,4.8nm,0.4s								
GRR	**Gorron**	**11.77**	**15**		*e*Pn		**Pn**	**23 23 29.8**	**+0.1**
GRR					*e*Sn		**Sn**	**23 25 34.4**	**-6.4**
	comp=N,2.4nm,0.4s								
SSF	**Saint Saulge**	**11.95**	**31**		*e*Pn		**Pn**	**23 23 32.9**	**+0.7**
	SNR=1.0								
KEST	**Kesra**	**11.96**	**92**		Pn		**Pn**	**23 23 36.2**	**+3.8**
	comp=N,0.0nm,0.3s,baz=34,slow=8.9,SNR=2.8								
LDF	**La Druitiere**	**12.13**	**17**		*e*Pn		**Pn**	**23 23 35.0**	**+0.4**
LDF					*e*Sn		**Sn**	**23 25 42.8**	**-6.7**
	comp=N,1.1nm,0.3s								
LDF	**La Druitiere**	**12.13**	**17**		*e*Pn		**Pn**	**23 23 35.0**	**+0.4**
LDF					*e*Sn		**Sn**	**23 25 42.8**	**-6.7**
	comp=N,0.6nm,0.3s								
FLN	**La Foliniere**	**12.21**	**16**		*e*Pn		**Pn**	**23 23 35.7**	**0.0**
	baz=191,SNR=1.0								
FLN					*e*Sn		**Sn**	**23 25 43.9**	**-7.5**
	comp=N,2.1nm,0.3s								
FLN	**La Foliniere**	**12.21**	**16**		*e*Pn		**Pn**	**23 23 35.7**	**0.0**
	SNR=1.0								
FLN					*e*Sn		**Sn**	**23 25 43.9**	**-7.5**
	comp=N,1.0nm,0.3s								
VAE	**Valguarnera**	**15.78**	**83**		LR		LR	23 29 36.6	
	comp=N,68nm,20.0s,baz=309,slow=34								
GERES	**GERESS Array B**	**18.20**	**44**		P		**Pn**	**23 24 56.8**	**+2.4**
	comp=N,0.1nm,0.3s,baz=238,slow=12,SNR=4.2								
VRAC	**Vranov**	**20.07**	**46**		LR		LR	23 32 38.2	
	comp=N,26nm,18.8s,baz=76,slow=36								
TORD	**Torodi Ar. Bea**	**24.67**	**163**		P		**P**	**23 26 01.2**	**-1.5**
	comp=N,0.9nm,0.6s,mb3.5,baz=350,slow=8.8,SNR=11								
HFS	**Hagfors**	**26.09**	**22**		P		**P**	**23 26 16.5**	**+1.2**
	comp=N,2.5nm,0.8s,mb3.8,baz=243,slow=9.5,SNR=4.1								
KURK	**Kurchatov**	**58.90**	**48**		P		**P**	**23 30 40.9**	**+0.2**
	comp=N,0.9nm,0.4s,mb4.2,baz=294,slow=7.3,SNR=4.4								
ZALV	**Zalesovo Beam**	**61.15**	**42**		P		**P**	**23 30 56.5**	**+0.5**
	comp=N,0.4nm,0.4s,mb4.0,baz=297,slow=9.5,SNR=2.8								
MKAR	**Makanchi Array**	**62.71**	**51**		P		**P**	**23 31 06.6**	**0.0**
	comp=N,0.7nm,0.8s,mb3.8,baz=282,slow=7.2,SNR=6.1								
PDAR	**Pinedale Array**	**74.80**	**312**		P		**P**	**23 32 22.8**	**+0.8**
	comp=N,1.2nm,0.8s,mb3.9,baz=67,slow=6.7,SNR=9.4								
SONM	**Songino Array**	**75.89**	**40**		P		**P**	**23 32 30.0**	**+1.8**
	comp=N,0.5nm,0.8s,mb3.5,baz=297,slow=4.5,SNR=3.2								

IDC 18 23:22:20.5±1.6, 033S×12708E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/16, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=52.2km s-min=24.9km az=63.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**8.67**	**237**	Pn	Pn	23 24 27.3	0.0
	0.9nm,0.3s,baz=268,slow=9.9,SNR=4.6						
KAPI				Sn	Sn	23 25 56.7	-9.2
	0.8nm,0.3s,baz=114,slow=20,SNR=3.6						
WRA	**Warramunga Arr**	**20.75**	**160**	P	P	23 27 02.4	-0.5
	0.6nm,0.6s,baz=339,slow=11,SNR=8.2						
ASAR	**Alice Springs**	**24.12**	**165**	P	P	23 27 38.2	+0.1
	0.6nm,0.5s,baz=346,slow=11,SNR=7.5						
STKA	**Stephens Creek**	**34.25**	**158**	P	P	23 29 08.8	+0.6
	2.4nm,0.7s,baz=330,slow=8.1,SNR=2.8						
MKAR	**Makanchi Array**	**61.09**	**326**	P	P	23 32 36.3	0.0
	0.2nm,0.4s,baz=115,slow=7.4,SNR=5.5						

IGQ 18 23:39:44.7, 078S×8104W, h22km±2km, Mb4.2, Ms4.0, 5C-5D, Error ellipse: s-maj=7.2km s-min=3.1km az=25.6, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.41**	**130**	⇑P	Pb	23 39 52.0	-1.4
JAMA	**Jama**	**0.98**	**58**	⇑P	Pb	23 40 03.0	0.0
JAMA	**Jama**	**0.98**	**58**	⇑S	Sb	23 40 16.6	+1.0
MAG1	**Magdalena**	**1.45**	**61**	P	Pn	23 40 11.7	+2.1
QIL2	**Quilotoa**	**2.13**	**92**	P	Pn	23 40 20.6	+1.6
JUA2	**San Juan 2**	**2.50**	**77**	⇓P	Pn	23 40 26.0	+1.9
JUA2	**San Juan 2**	**2.50**	**77**	⇓S	Sn	23 40 56.8	+2.9
IGUA	**Igualata**	**2.50**	**106**	P	Pn	23 40 26.9	+2.8
TERV	**Terraza Guagua**	**2.51**	**76**	P	Pn	23 40 26.4	+2.2
PINO	**Pino**	**2.51**	**76**	P	Pn	23 40 26.8	+2.6
PINO	**Pino**	**2.51**	**76**	S	Sn	23 40 57.4	+3.2
GGP	**Refugio Guagua**	**2.52**	**76**	⇓P	Pn	23 40 26.3	+2.0
GGP	**Refugio Guagua**	**2.52**	**76**	⇓S	Sn	23 40 56.6	+2.2
CAMI	**Rancho Maria**	**2.54**	**88**	P	Pn	23 40 27.3	+2.7
YANA	**Yana**	**2.56**	**75**	P	Pn	23 40 27.4	+2.6
YANA	**Yana**	**2.56**	**75**	S	Sn	23 40 57.6	+2.3
VC1	**Cotopaxi 1**	**2.64**	**87**	P	Pn	23 40 29.9	+3.8
VC1	**Cotopaxi 1**	**2.64**	**87**	S	Sn	23 41 03.0	+5.6
TAMB	**Tambo**	**2.67**	**88**	P	Pn	23 40 29.9	+3.4
ARRY	**Arrayan**	**2.69**	**106**	P	Pn	23 40 29.2	+2.6
ARRY	**Arrayan**	**2.69**	**106**	S	Sn	23 41 02.2	+3.8
RUN5	**Runtun**	**2.69**	**104**	P	Pn	23 40 30.5	+3.7
PATA	**Patacocha**	**2.71**	**105**	P	Pn	23 40 30.4	+3.5
ULBA	**Ulba**	**2.72**	**104**	⇓P	Pn	23 40 31.0	+3.9
ANTI	**Antisana**	**2.90**	**84**	P	Pn	23 40 33.0	+3.4
COTA	**Cotacachi**	**2.92**	**68**	P	Pn	23 40 32.6	+2.7
CAYA	**Cayambe**	**3.17**	**75**	⇑P	Pn	23 40 37.3	+4.1
CAYA	**Cayambe**	**3.17**	**75**	⇑S	Sn	23 41 21.1	+11

*NEIC **18** 23:41:10.8, 3855N×2400E, h24km, MD3.2(ATH), After ATH.*
*ATH **18** 23:41:10.8, 3855N×2399E, h25km±2km, MD3.2/6*
*ISCJB **18** 23:41:11.5±0.6, 3853N±004×2399E±005, h25km±8km, Error ellipse: s-maj=7.0km s-min=5.8km az=158.6*
*CSEM **18** 23:41:11.9±0.1, 3858N×2398E, h20km, MD3.2, Error ellipse: s-maj=2.8km s-min=2.2km az=79.0*
*THE **18** 23:41:12.2, 3852N×2395E, h6km, ML2.0*

ISC 18 23:41:11.2±0.8, 3855N±003×2396E±005, h20km±6km, n15, σ0887/21, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATH	**Athens Observa**	**0.61**	**199**	*e*PN	Pn	**23 41 23.3**	**-1.4**
ATH				*e*SN	**Sb**	**23 41 31.9**	**+0.7**
AOS	**Alonnisos**	**0.62**	**354**	*e*Pg	**Pg**	**23 41 24.7**	**+1.1**
LKR	**Lokris**	**0.76**	**278**	*e*PN	**Pn**	**23 41 26.1**	**-0.7**
LKR				*e*SN	**Sn**	**23 41 37.1**	**-0.6**
LKR	**Lokris**	**0.76**	**278**	*e*Pg	**Pg**	**23 41 25.9**	**-0.3**
LKR	**Lokris**	**0.76**	**278**	*e*Pn	**Pn**	**23 41 26.1**	**-0.7**
LKR				*e*Sn	**Sn**	**23 41 37.1**	**-0.6**
LTK	**Loutraki**	**0.94**	**237**	*e*Pg	**Pg**	**23 41 30.0**	**+0.4**
LTK				*e*Sg	**Sg**	**23 41 42.8**	**+0.7**
NEO	**Neokhori**	**0.95**	**323**	*e*PN	**Pn**	**23 41 30.0**	**+0.6**
NEO				*e*SN	**Sn**	**23 41 43.2**	**+0.8**
DID	**Didima**	**1.19**	**209**	*e*Pg	**Pg**	**23 41 33.7**	**-0.5**
AGG	**Agios Georgios**	**1.36**	**291**	*e*Pg	**Pg**	**23 41 36.8**	**-0.7**
LIA	**Limnos Island**	**1.65**	**35**	*e*PN	**Pn**	**23 41 39.8**	**+0.8**
CHOS	**Chios island**	**1.65**	**95**	*e*Pb	**Pb**	**23 41 40.7**	**-0.2**
PLG	**Polygyros**	**1.87**	**348**	*e*PB	**Pb**	**23 41 43.4**	**-1.2**
APE	**Apeiranthos**	**1.93**	**139**	*e*Pb	**Pb**	**23 41 44.1**	**-1.6**
APE				*e*Sb	**Sb**	**23 42 09.9**	**+0.6**
VLI	**Veliai**	**2.00**	**204**	*e*PN	**Pn**	**23 41 45.5**	**+1.7**
ITM	**Ithomi**	**2.11**	**230**	*e*Pb	**Pb**	**23 41 48.4**	**-0.4**

*ISK **18** 23:46:30.5, 3925N×4101E, h5km, MD3.1*
*DDA **18** 23:46:31.9, 3929N×4103E, h5km±4km, Md3.2*
*ISCJB **18** 23:46:32.2±0.8, 3929N±002×4102E±006, h3km±6km, Error ellipse: s-maj=7.3km s-min=4.1km az=4.3*
*CSEM **18** 23:46:32.0±0.3, 3930N×4102E, h15km, MD3.1, Error ellipse: s-maj=9.7km s-min=6.8km az=149.0*

ISC 18 23:46:32.8±0.7, 3928N±003×4104E±006, h7km±7km, n14, σ1909/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.34**	**164**	*i* P	**Pg**	**23 46 38.8**	**-0.5**
BNGL				*i* S	**Sg**	**23 46 44.7**	**+1.0**
EZM	**Erzurum**	**0.68**	**22**	*e*PG	**Pg**	**23 46 44.9**	**-1.0**
EZM				*e*SG	**Sg**	**23 46 56.2**	**+1.5**
ERZM	**Erzurum**	**0.68**	**22**	*i* P	**Pg**	**23 46 45.1**	**-0.8**
ERZM				*i* S	**Sg**	**23 46 55.8**	**+1.0**
KOPT	**Kop Dagi**	**0.85**	**331**	*i* P	**Pg**	**23 46 48.2**	**-0.9**
KOPT				*i* S	**Sg**	**23 47 02.0**	**+1.8**
HOMI	**Horasan**	**1.02**	**41**	*i* P	**Pg**	**23 46 50.5**	**-1.9**
HOMI				*i* S	**Sg**	**23 47 05.5**	**-0.1**
EZC	**Erzincan**	**1.05**	**297**	*e*PN	**Pn**	**23 46 58.0**	**+4.0**
PTK	**Pertek**	**1.33**	**254**	*e*PN	**Pn**	**23 46 55.9**	**-1.9**
PTK				*e*SN	**Sn**	**23 47 16.0**	**+0.1**
BEST	**Besiri**	**1.39**	**172**	*i* P	**Pn**	**23 46 58.8**	**+0.1**
BEST				*i* S	**Sb**	**23 47 18.4**	**+1.3**
AGRB	**Hanur-Agry**	**1.54**	**78**	*e*PN	**Pn**	**23 47 00.5**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.62**	**237**	*e*PN	**Pn**	**23 47 01.2**	**-0.6**
GUMT	**Gumushane**	**1.68**	**315**	*e*PN	**Pn**	**23 47 03.2**	**+0.6**
MARD	**Mardin**	**1.97**	**186**	*i* P	**Pn**	**23 47 05.3**	**-1.2**
MARD				*i* S	**Sn**	**23 47 34.9**	**+3.3**
CLDR	**Caldiran**	**2.24**	**92**	*e*PN	**Pn**	**23 47 10.6**	**+0.3**
ESPY	**Espiye-Giresun**	**2.41**	**314**	*e*PN	**Pn**	**23 47 13.0**	**+0.3**

*ISCJB **18** 23:51:03.4±0.6, 2399S±004×6683W±006, h186km±5km, mb4.4/29, Error ellipse: s-maj=9.3km s-min=6.0km az=155.2*
*IDC **18** 23:51:04.7±0.9, 2395S×6679W, h178km±8km, mb4.1/16, mb1 4.2/22, mb1mx4.1/25, mbtmp4.1/22, Error ellipse: s-maj=13.7km s-min=10.0km az=59.0*
*BJI **18** 23:51:04.5, 2400S×6690W, h182km, mB4.9*

*NEIC **18** 23:51:04.3±0.6, 2398S×6685W, h182km±6km, mb4.5/16, Error ellipse: s-maj=9.4km s-min=6.3km az=67.0*

ISC 18 23:51:04.3±0.5, 2398S±004×6681W±006, h179km±5km, n79, σ1807/74, mb4.4/29, 2C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.36**	**305**	P	**Pn**	**23 51 47.4**	**+2.0**
	253nm,0.3s,baz=127,slow=6.0,SNR=1594						
LVC				S	**Sn**	**23 52 18.0**	**+0.8**
	504nm,0.3s,baz=252,slow=22,SNR=54						
LCO	**Las Campanas**	**6.10**	**214**	*e*Pn	**Pn**	**23 52 31.0**	**-1.6**
	69nm,0.3s						
LCO				*e*Sn	**Sn**	**23 53 28.1**	**-14**
CFAA	**Coronel Fontan**	**7.70**	**189**	P	**Pn**	**23 52 53.1**	**-0.4**
	0.3nm,0.3s,baz=11,slow=12,SNR=91						
CFAA				S	**Sn**	**23 54 15.3**	**-4.7**
	1.5nm,0.3s,baz=250,slow=17,SNR=14						
LPAZ	**La Paz**	**7.75**	**351**	P	**Pn**	**23 52 55.9**	**+1.4**
	4.0nm,0.3s,baz=160,slow=12,SNR=64						
LPAZ				S	**Sn**	**23 54 20.4**	**-1.1**
	0.8nm,0.3s,baz=303,slow=17,SNR=4.4						
ARE	**Arequipa**	**8.67**	**329**	*e*P	**Pn**	**23 53 04.0**	**-2.5**
ARE				*i* S	**Sn**	**23 54 37.2**	**-6.3**
CPUP	**Villa Florida**	**8.90**	**107**	P	**Pn**	**23 53 10.2**	**+0.8**
	1.1nm,0.3s,baz=271,slow=11,SNR=23						
SIV	**San Ignacio**	**9.61**	**35**	P	**Pn**	**23 53 18.6**	**-0.2**
	6.7nm,0.3s,baz=225,slow=12,SNR=92						
SIV				S	**Sn**	**23 54 53.4**	**-12**
	0.2nm,0.3s,baz=222,slow=17,SNR=6.6						
TRQA	**Tornquist**	**14.62**	**165**	*e*Pn	**Pn**	**23 54 21.4**	**-1.3**
NNA	**Nana**	**15.26**	**320**	P	**Pn**	**23 54 31.3**	**+0.5**
	2.5nm,0.3s,baz=216,slow=19,SNR=7.2						
NNA	**Nana**	**15.26**	**320**	*e*P	**Pn**	**23 54 31.7**	**+0.9**
PLCA	**Paso Flores**	**17.00**	**190**	P	**Pn**	**23 54 51.3**	**-0.1**
	0.3nm,0.3s,baz=355,slow=13,SNR=10						
PLCA	**Paso Flores**	**17.00**	**190**	*e*P	**Pn**	**23 54 50.6**	**-0.9**
	1.9nm,0.4s						
SPB	**Sao Paulo**	**17.74**	**93**	*e*P	**Pn**	**23 54 59.3**	**-1.2**
VAO	**Valinhos**	**18.23**	**91**	⇑*i*P	**P**	**23 55 04.6**	**+0.5**
VAO				*i*		23 55 06.1	
BDFB	**Brasilia**	**19.52**	**68**	P	**P**	**23 55 19.3**	**+1.1**
	19nm,0.3s,baz=232,slow=11,SNR=300						
ATAH	**Atahualpa**	**20.21**	**325**	P	**P**	**23 55 26.9**	**+1.3**
	8.3nm,0.6s,baz=171,slow=3.5,SNR=7.2						
CAM3	**Guarapari**	**24.52**	**88**	⇑*i*P	**P**	**23 56 06.9**	**-0.5**
CAM3				*i*		23 56 08.6	
CAM3				*i*		23 56 09.8	
CAM3				*i*		23 56 14.2	
CAM3				*i*		23 56 24.7	
CAM3				*i*		23 56 33.8	
OTAV	**Otavalo**	**26.59**	**333**	*e*P	**P**	**23 56 26.4**	**+0.2**
	3.0nm,0.4s,mb4.3						
USHA	**Ushuaia**	**30.84**	**182**	P	**P**	**23 57 05.1**	**+1.9**
	2.4nm,0.6s,mb4.1,baz=355,slow=11,SNR=3.2						
SDV	**Santo Domingo**	**32.88**	**353**	P	**P**	**23 57 20.7**	**-0.7**
PCRV	**Puerto La Cruz**	**34.01**	**4**	P	**P**	**23 57 31.4**	**+0.1**
	15nm,1.0s,mb4.7,baz=351,slow=12,SNR=2.6						
GRGR	**Grenville**	**36.24**	**9**	P	**P**	**23 57 49.3**	**-1.1**
JTS	**JuntasAbangare**	**38.40**	**330**	*e*P	**P**	**23 58 07.9**	**-0.6**
	28nm,0.8s,mb5.0						
CPD	**Cerro la Pandu**	**41.77**	**1**	P	**P**	**23 58 35.7**	**-0.5**
MTP	**Monte Pirata**	**41.84**	**2**	*e*P	**P**	**23 58 31.8**	**-5.0**
HUMP	**Col San Antoni**	**41.88**	**1**	*e*P	**P**	**23 58 32.5**	**-4.5**
CBYP	**Canovanas**	**42.01**	**1**	*e*P	**P**	**23 58 34.3**	**-3.8**
**

GYA PP PP 00 16 16.4 +0.9
GYA PP PP
comp=Z,70nm,8.4s

ISCJB ***18*** *23:53:51.9±0.8, 48N×01×836W±0.3, h10km, mb3.8/6, MS3.0/2, Error ellipse: s-maj=48.8km s-min=9.1km az=160.5*

IDC ***18*** *23:53:52.1±1.0, 473N×8356W, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.9/19, mbtmp3.9/6, ML5.0/1, MS3.1/2, Ms1 3.2/2, ms1mx2.7/27, Error ellipse: s-maj=59.2km s-min=17.9km az=65.0*

ISC 18 23:53:53.7±7.1, **48N**×01×**835W**±03, **h10**km±46km, **n8, σ1º20/8, mb3.8/6, MS3.0/2, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	**JuntasAbangare**	**5.62**	**345**	Pn	**Pn**	**23 55 16.9**	**-0.6**
	45nm,0.3s,baz=148,slow=13,SNR=69						
JTS				Sn	**Sn**	**23 56 21.6**	**-0.5**
	42nm,0.3s,baz=332,slow=22,SNR=18						
LPAZ	**La Paz**	**25.91**	**144**	P	**P**	**23 59 27.3**	**+1.1**
	5.6nm,1.0s,mb4.1,baz=342,slow=8.6,SNR=6.6						
LPAZ				LR	LR	00 08 01.2	
	comp=Z,21nm,21.7s,MS2.6,baz=86,slow=33						
TKL	**Tuckaleechee C**	**30.69**	**360**	LR	LR	00 11 44.6	
	comp=Z,89nm,19.6s,MS3.4,baz=107,slow=35						
ANMO	**Albuquerque**	**36.74**	**328**	P	**P**	**00 01 02.4**	**+1.0**
	2.2nm,0.9s,mb4.0,baz=149,slow=8.7,SNR=5.7						
CFAA	**Coronel Fontan**	**39.04**	**159**	P	**P**	**00 01 20.2**	**-0.5**
	0.3nm,0.7s,mb3.1,baz=316,slow=7.9,SNR=4.6						
PDAR	**Pinedale Array**	**44.29**	**332**	P	**P**	**00 02 04.5**	**+0.8**
	0.6nm,0.9s,mb3.3,baz=131,slow=4.1,SNR=5.5						
PLCA	**Paso Flores**	**46.86**	**166**	P	**P**	**00 02 22.6**	**-1.5**
	2.9nm,0.8s,mb4.3,baz=326,slow=11,SNR=8.1						
TORD	**Torodi Ar. Bea**	**84.27**	**77**	P	**P**	**00 06 26.6**	**+0.2**
	0.9nm,0.9s,mb3.9,baz=276,slow=4.2,SNR=3.5						

ISCJB ***18*** *23:55:22.1±0.8, 1175N×008×8808W×005, h10km, mb4.2/7, Error ellipse: s-maj=12.2km s-min=6.6km az=18.8*

IDC ***18*** *23:55:24.9±1.1, 1211N×8745W, h0km, mb4.2/7, mb1 4.4/9, mb1mx4.0/22, mbtmp4.2/9, ML3.9/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/25, Error ellipse: s-maj=40.2km s-min=15.9km az=54.0*

CASC ***18*** *23:55:24.5±2.6, 1173N×8790W, h1km±8km, MD4.1, ML3.5*

NEIC ***18*** *23:55:29.5±0.7, 1208N×8748W, h35km, Error ellipse: s-maj=20.3km s-min=9.0km az=225.0*

ISC 18 23:55:23.3±2.2, 1182N±009×8799W±006, h6km±12km**, n48, σ0º92/34, mb4.2/7, 17C-4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEON	**Leon**	**1.23**	**61**	*eP*	**Pg**	**23 55 47.1**	**+0.1**
LEON				*eP*		23 55 47.2	
TEL3	**Telica 3**	**1.35**	**56**	*eP*	**Pn**	**23 55 48.8**	**+0.1**
TELN	**Telica**	**1.38**	**55**	*eP*	**Pn**	**23 55 49.5**	**+0.4**
COPN	**Copaltepe**	**1.42**	**75**	*iP*	**Pn**	**23 55 49.8**	**+0.1**
CNGN	**Cerro Negro**	**1.44**	**62**	*eP*	**Pn**	**23 55 50.0**	**+0.2**
CNCH	**Conchagua**	**1.46**	**6**	*eP*	x	23 55 52.3	
MOMN	**Momotombo**	**1.54**	**68**	*eP*	**Pn**	**23 55 51.4**	**+0.1**
CSAN		**1.58**	**77**	*iP*	**Pn**	**23 55 52.1**	**+0.3**
VSM	**San Miguel**	**1.62**	**350**	*eP*	x	23 55 55.2	
VSM				*eP*	x	23 55 55.6	
BLLM	**Bellamira**	**1.63**	**352**	*eP*	x	23 55 55.1	
BLLM				*eP*	x	23 55 55.2	
APYN	**Apoyeque**	**1.66**	**75**	*eP*	**Pn**	**23 55 52.9**	**-0.1**
XAVN	**Gruta Xavier**	**1.66**	**79**	*eP*	**Pn**	**23 55 52.8**	**-0.2**
CRUN	**El Crucero**	**1.67**	**84**	*eP*	**Pn**	**23 55 53.7**	**+0.6**
TISN	**Laguna Tiscapa**	**1.72**	**79**	*eP*	**Pn**	**23 55 53.5**	**-0.3**
TICN	**Ticuantepe**	**1.74**	**83**	*eP*	**Pn**	**23 55 54.2**	**+0.2**
MGAN	**Managua**	**1.74**	**79**	*eP*	**Pn**	**23 55 53.7**	**-0.4**
WILN	**Americas 2**	**1.80**	**79**	*eP*	**Pn**	**23 55 54.7**	**-0.2**
WILN				*eS*	**Sn**	**23 56 22.3**	**+4.3**
MASN	**Masaya**	**1.81**	**85**	AML	AML	23 56 26.6	
	comp=Z,517nm,0.5s						
HUEN		**1.85**	**74**	*iP*	**Pn**	**23 55 55.5**	**-0.2**
HUEN				*eS*	**Sn**	**23 56 19.5**	**+0.1**
APON	**Apoyo**	**1.89**	**87**	*eP*	**Pn**	**23 55 55.8**	**-0.4**
CAHU	**Cacacuatique**	**1.95**	**354**	*eP*	x	23 56 00.3	
SNVI	**San Vicente**	**1.96**	**335**	*eP*	x	23 56 01.1	
SNVI				*eS*	x	23 56 29.9	
LFRS	**El Faro**	**2.07**	**330**	*eP*	x	23 56 02.0	
LFRS				*eS*	x	23 56 33.6	
LBRS	**Las Brisas**	**2.16**	**332**	*eP*	x	23 56 03.7	
LBRS				*eS*	x	23 56 33.3	
LFU	**La Fuente**	**2.21**	**330**	*eP*	x	23 56 04.3	
LFU				*eS*	x	23 56 33.3	
BOQS	**Boqueron**	**2.28**	**327**	*eP*	x	23 56 05.2	
TGUH	**Tegucigalpa,Un**	**2.33**	**17**	*eP*	**Pn**	**23 56 04.0**	**+1.8**
CONN	**Concepcion**	**2.33**	**96**	*eP*	**Pn**	**23 56 02.2**	**0.0**
RTR	**El Retiro**	**2.62**	**322**	*eP*	x	23 56 11.4	
RBDL	**Robledal**	**2.81**	**324**	*eP*	x	23 56 12.9	
MTO2	**Montecristo 2**	**2.89**	**333**	*eP*	x	23 56 14.5	
JTS	**JuntasAbangare**	**3.35**	**117**	Pn	**Pn**	**23 56 13.8**	**-2.4**
	comp=Z,111nm,0.3s,baz=228,slow=6.7,SNR=1.6						
JTS				LR	LR	23 57 10.2	
	comp=Z,307nm,20.7s,baz=193,slow=35						
TEIG	**Tepich**	**8.36**	**358**	LR	LR	00 00 44.0	
	comp=Z,93nm,20.2s,baz=132,slow=39						
CMIG	**Matias Romero**	**8.48**	**309**	Pn	**Pn**	**23 57 31.9**	**+5.1**
	comp=Z,1.9nm,0.3s,baz=142,slow=9.4,SNR=14						
CMIG				Sn	**Sn**	**23 59 02.3**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=259,slow=21,SNR=1.8						
CHI2		**15.80**	**116**	*eP*	Px	23 55 47.6	
CHI2				*eP*	Px	23 55 47.6	
BRAL	**Brewton**	**19.12**	**2**	P	**Pn**	**23 59 45.7**	**-2.1**
MTP	**Monte Pirata**	**22.55**	**71**	*eP*	**P**	**00 00 20.3**	**-4.0**
TXAR	**Lajitas Array**	**22.73**	**322**	P	**P**	**00 00 30.6**	**+4.5**
	comp=Z,5.5nm,0.5s,mb4.2,baz=136,slow=9.3,SNR=30						
TKL	**Tuckaleechee C**	**24.04**	**8**	P	**P**	**00 00 39.6**	**+0.5**
	comp=Z,7.0nm,0.6s,mb4.3,baz=176,slow=8.4,SNR=9.3						
SADO	**Sadowa**	**33.70**	**11**	P	**P**	**00 02 04.5**	**-0.7**
	baz=236,slow=10						
SADO	**Sadowa**	**33.70**	**11**	P	**P**	**00 02 04.5**	**-0.7**
PDAR	**Pinedale Array**	**36.08**	**333**	P	**P**	**00 02 28.5**	**+2.7**
	comp=Z,0.9nm,0.6s,mb3.9,baz=123,slow=11,SNR=6.5						
PDAR				PcP	PcP	00 04 54.6	+2.7
	comp=Z,0.6nm,0.7s,baz=120,slow=6.4,SNR=4.1						
NVAR	**Mina Array Bea**	**37.83**	**320**	PcP	PcP	00 05 01.2	+3.9
	comp=Z,0.7nm,0.7s,baz=146,slow=6.6,SNR=3.5						
SIV	**San Ignacio**	**38.38**	**135**	P	**P**	**00 02 46.9**	**+1.2**
	comp=Z,7.0nm,0.8s,mb4.4,baz=317,slow=9.5,SNR=16						
SCHQ	**Schefferville**	**46.03**	**17**	P	**P**	**00 03 45.8**	**-1.7**
	comp=Z,2.5nm,0.5s,mb4.4,baz=241,slow=8.9,SNR=6.8						
BDFB	**Brasilia**	**48.07**	**124**	P	**P**	**00 04 04.6**	**+0.6**
	comp=Z,3.5nm,0.7s,mb4.5,baz=273,slow=8.0,SNR=3.4						
YKA	**Yellowknife A**	**54.08**	**345**	P	**P**	**00 04 49.0**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=150,slow=6.3,SNR=2.8						
CMAR	**Chiang Mai Arr**	**149.15**	**347**	PKPbc	PKPbc	00 15 15.9	+2.3
	comp=Z,1.9nm,0.3s,baz=352,slow=3.8,SNR=7.9						

IDC ***19*** *00:05:57.5±0.7, 305S×10123E, h0km, mb4.6/18, mb1 4.7/19, mb1mx4.5/25, mbtmp4.6/19, ML4.5/1, MS3.6/7, Ms1 3.6/7, ms1mx3.4/22, Error ellipse: s-maj=30.2km s-min=11.8km az=50.0*

BJI ***19*** *00:06:01.1, 314S×101.10E, h42km, mB5.3, mb5.0, Ms5.2, Msz4.7*

NEIC ***19*** *00:06:02.8±0.3, 304S×10130E, h35km, mb4.7/14, Error ellipse: s-maj=9.1km s-min=5.9km az=223.0*

MOS ***19*** *00:06:03.2±1.0, 293S×10140E, h51km, mb4.9/25, Error ellipse: s-maj=14.5km s-min=7.3km az=111.9*

DJA ***19*** *00:06:06, 307S×10132E, h20km, MLv4.7/8*

ISCJB ***19*** *00:06:06.1±0.9, 299S±007×10138E±006, h78km±7km, mb4.8/53, Error ellipse: s-maj=13.6km s-min=5.5km az=41.4*

ISC 19 00:06:07.4±0.8, **304S**±007×**10136E**±006, **h74**km±6km, **n140, σ0º90/139, mb4.8/53, 9C-14D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.37**	**116**	P	**Pn**	**00 06 28.6**	**-2.2**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**2.74**	**339**	P	**Pn**	**00 06 47.4**	**-1.7**
	0.0nm,0.0s						
RGRI	**Rengat**	**2.84**	**20**	P	**Pn**	**00 06 51.1**	**+0.6**
	0.0nm,0.0s						
KLI	**Kotabumi**	**3.93**	**118**	P	**Pn**	**00 07 06.7**	**+1.4**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.10**	**52**	P	**Pn**	**00 07 08.6**	**+1.0**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**4.85**	**80**	P	**Pn**	**00 07 17.7**	**-0.2**
	0.0nm,0.0s						
GSI	**Gunungsitoli**	**5.74**	**319**	*eP*	**Pn**	**00 07 30.0**	**0.0**
TPI	**Tanjungpandan**	**6.29**	**88**	P	**Pn**	**00 07 39.0**	**+1.4**
	0.0nm,0.0s						
KSM	**Kuching**	**10.00**	**64**	*ePn*	**Pn**	**00 08 24.0**	**-4.3**
COCO	**West Island**	**10.14**	**206**	*ePn*	**Pn**	**00 08 23.3**	**-6.9**
SJI	**Sawahan**	**11.36**	**115**	P	**Pn**	**00 08 46.9**	**+0.1**
	0.0nm,0.0s						
BBKI	**Banjar Baru**	**13.46**	**92**	P	**Pn**	**00 09 19.2**	**+3.9**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**17.36**	**59**	*ePn*	**Pn**	**00 10 02.9**	**-2.1**
KAPI	**Kappang**	**18.45**	**97**	P	**Pn**	**00 10 17.1**	**-1.1**
	1.6nm,0.3s,baz=286,slow=9.6,SNR=8.0						
KAPI				LR	LR	00 16 42.5	
	comp=Z,62nm,21.4s,baz=281,slow=35						
KAPI	**Kappang**	**18.45**	**97**	*eP*	**Pn**	**00 10 16.5**	**-1.6**
	36nm,1.4s						
KAPI				LR	LR	00 16 42.5	
PCI	**Palu**	**18.58**	**84**	P	**Pn**	**00 10 20.5**	**+0.7**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**21.49**	**354**	P	**P**	**00 10 47.0**	**-3.1**
	4.7nm,0.6s,mb4.0,baz=184,slow=8.8,SNR=17						
CMAR				LR	LR	00 19 31.4	
	comp=Z,128nm,18.6s,baz=185,slow=38						
CMAR	**Chiang Mai Arr**	**21.49**	**354**	*iP*	**P**	**00 10 51.0**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BATI	**Baumata**	**23.25**	**109**	P	**P**	**00 11 09.5**	**+0.9**
	comp=Z,0.0nm,0.0s						
BATI	**Baumata**	**23.25**	**109**	P	**P**	**00 11 09.7**	**+1.1**
	comp=Z,14nm,0.5s,mb4.5,baz=324,slow=8.7,SNR=3.2						
MBWA	**Marble Bar**	**25.38**	**137**	*eP*	**P**	**00 11 28.1**	**+0.3**
	comp=Z,1.7nm,0.4s,mb3.8						
FITZ	**Fitzroy Crossi**	**28.11**	**124**	P	**P**	**00 11 52.1**	**-0.4**
	comp=Z,3.7nm,0.6s,mb4.1,baz=255,slow=6.2,SNR=12						
ODAN	**Odare**	**32.64**	**336**	*eP*	**P**	**00 12 32.7**	**+0.3**
	comp=Z,60nm,0.8s,mb5.5						
TAPN	**Taplejung**	**32.96**	**337**	*eP*	**P**	**00 12 35.9**	**+0.8**
	comp=Z,113nm,0.9s,mb5.7						
RAMN	**Ramite**	**33.05**	**335**	*eP*	**P**	**00 12 36.7**	**+0.8**
	comp=Z,30nm,0.8s,mb5.2						
JIRN	**Jiri**	**33.84**	**335**	*eP*	**P**	**00 12 43.7**	**+0.9**
PKI	**Pulchoki**	**34.09**	**334**	*eP*	**P**	**00 12 45.2**	**+0.2**
PKIN	**Phulchoki**	**34.11**	**334**	*eP*	**P**	**00 12 45.2**	**+0.1**
	comp=Z,5.4nm,0.4s,mb4.7						
GUN	**Gumba**	**34.19**	**335**	*eP*	**P**	**00 12 46.4**	**+0.6**
	comp=Z,103nm,0.8s,mb5.7						
DMN	**Daman**	**34.26**	**334**	*eP*	**P**	**00 12 46.8**	**+0.4**
	comp=Z,30nm,0.8s,mb5.2						
KKN	**Kakani**	**34.34**	**334**	*eP*	**P**	**00 12 47.3**	**+0.2**
	comp=Z,60nm,0.9s,mb5.4						
GKN	**Gorkha**	**34.81**	**334**	*eP*	**P**	**00 12 51.5**	**+0.4**
	comp=Z,63nm,1.0s,mb5.4						
KOLN	**Koldanda**	**35.08**	**332**	*eP*	**P**	**00 12 54.0**	**+0.5**
	comp=Z,62nm,0.7s,mb5.5						
DANN	**Dangsing**	**35.50**	**333**	*eP*	**P**	**00 12 57.6**	**+0.5**
	comp=Z,56nm,0.5s,mb5.8						
WRA	**Warramunga Arr**	**36.30**	**120**	P	**P**	**00 13 03.6**	**-0.4**
	comp=Z,8.9nm,0.5s,mb5.0,baz=304,slow=8.9,SNR=125						
WRA				PcP	PcP	00 15 27.3	-0.3
	comp=Z,0.8nm,0.6s,baz=302,slow=2.1,SNR=4.0						
WRA				S	**S**	**00 18 38.5**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=291,slow=16,SNR=4.8						
WRA				ScP	ScP	00 19 15.7	+7.9
	comp=Z,0.8nm,0.9s,baz=304,slow=3.4,SNR=3.1						
WRA	**Warramunga Arr**	**36.30**	**120**	P	**P**	**00 13 03.6**	**-0.5**
WRA						00 15 27.3	
WRA				S	**S**	**00 18 38.5**	**-1.2**
WRA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA				smax			
	comp=N,1.0nm,0.8s						
WRA				pmax	pmax		
	comp=N,1.0nm,0.9s						
WRAB	**Tennant Creek**	**36.30**	**120**	*eP*	**P**	**00 13 03.7**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
WRAB	**Tennant Creek**	**36.30**	**120**	*eP*	**P**	**00 13 03.7**	**-0.4**
	comp=Z,12nm,0.7s,mb4.9						
ASAR	**Alice Springs**	**37.55**	**126**	P	**P**	**00 13 14.9**	**+0.3**
	comp=Z,5.2nm,0.5s,mb4.6,baz=301,slow=8.4,SNR=54						
ASAR				PcP	PcP	00 15 32.2	+0.8
	comp=Z,1.0nm,0.8s,baz=303,slow=1.8,SNR=4.4						
ASAR				S	**S**	**00 18 57.9**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=301,slow=15,SNR=7.6						
ASAR	**Alice Springs**	**37.55**	**126**	P	**P**	**00 13 15.0**	**+0.4**
ASAR						00 15 32.3	
ASAR				S	**S**	**00 18 57.9**	**-0.7**
ASAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR				smax			
	comp=N,1.0nm,0.8s						
NJ2	**Nanjing**	**38.65**	**24**	*eP*	**P**	**00 13 24.3**	**+0.6**
NJ2				AP	pP	00 13 34.1	-7.6
NJ2				XP	sP	00 13 38.1	-12
NJ2				PP	PP	00 14 57.6	+4.0
NJ2				S	**S**	**00 19 20.0**	**+5.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,910nm,3.7s						
NJ2				LR	LR		
	comp=N,760nm,22.7s						
NJ2				LR	LR		
	comp=E,4μm,23.6s						
NJ2				LR	LR		
	comp=Z,4μm,17.3s						
NDI	**New Delhi**	**39.15**	**325**	*eP*	**P**	**00 13 27.0**	**-1.0**
JAY	**Jayapura**	**39.30**	**90**	P	**P**	**00 13 33.9**	**+4.4**
	comp=Z,0.0nm,0.0s						
BJT	**Baijiatuau**	**44.95**	**16**	P	**P**	**00 14 12.4**	**-2.6**
CTA	**Charters Tower**	**46.93**	**115**	P	**P**	**00 14 31.0**	**0.0**
	comp=Z,9.3nm,0.7s,mb4.6,baz=288,slow=9.1,SNR=11						
CTA	**Charters Tower**	**46.93**	**115**	P	**P**	**00 14 31.0**	**+0.1**
CTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CTAO	**Charters Tower**	**46.93**	**115**	*eP*	**P**	**00 14 31.0**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
CTAO	**Charters Tower**	**46.93**	**115**	*eP*	**P**	**00 14 31.0**	**+0.1**
	comp=Z,7.3nm,0.6s,mb4.6						
KSRS	**Korea Array**	**47.24**	**29**	P	**P**	**00 14 32.0**	**-1.0**
	comp=Z,4.9nm,1.1s,mb4.2,baz=233,slow=8.7,SNR=5.7						
KSRS				LR	LR	00 35 10.3	
	comp=Z,42nm,18.7s,baz=63,slow=37						
KSRS	**Korea Array**	**47.24**	**29**	P	**P**	**00 14 32.1**	**-0.9**
KSRS				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
KSRS				MLR	MLR		
	comp=Z,42nm,18.7s						
STKA	**Stephens Creek**	**47.45**	**132**	P	**P**	**00 14 35.2**	**+0.4**
	comp=Z,3.3nm,0.5s,mb4.3,baz=284,slow=6.4,SNR=9.8						
STKA				LR	LR	00 34 17.7	
	comp=Z,216nm,21.6s,baz=20,slow=36						
STKA	**Stephens Creek**	**47.45**	**132**	*eP*	**P**	**00 14 35.5**	**+0.7**
	comp=Z,10.0nm,0.8s,mb4.6						
STKA				LR	LR	00 34 17.6	
KBL	**Kabul**	**48.17**	**324**	*eP*	**P**	**00 14 39.4**	**-0.9**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
KBL	**Kabul**	**48.17**	**324**	*eP*	**P**	**00 14 39.4**	**-1.0**
	comp=Z,3.7nm,0.7s,mb4.3						
WMQ	**Urumqi**	**48.24**	**347**	P	**P**	**00 14 41.5**	**+0.8**
WMQ				AMB	AMB		
	comp=Z,51nm,0.9s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,143nm,3.5s						
SONM	**Songino Array**	**50.85**	**4**	P	**P**	**00 15 01.6**	**+1.2**
	comp=Z,6.3nm,0.6s,mb4.8,baz=187,slow=9.3,SNR=46						
SONM				PcP	PcP	00 16 16.6	+0.4
	comp=Z,1.3nm,0.5s,baz=182,slow=4.2,SNR=6.0						
SONM	**Songino Array**	**50.85**	**4**	P	**P**	**00 15 01.6**	**+1.1**
SONM						00 16 16.6	
SONM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ULN	**Ulaanbaatar**	**50.94**	**5**	*eP*	**P**	**00 15 01.3**	**+0.2**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
ULN	**Ulaanbaatar**	**50.94**	**5**	*eP*	**P**	**00 15 01.2**	**+0.2**
	comp=Z,2.5nm,0.4s,mb4.6						
UCH	**Uchtor**	**51.21**	**335**	P	**P**	**00 15 00.5**	**-2.8**
TKM2	**Tokmak 2**	**51.32**	**336**	*eP*	**P**	**00 15 04.1**	**0.0**
TKM2				*e*		00 15 17.1	
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
TKM2	**Tokmak 2**	**51.32**	**336**	P	**P**	**00 15 04.5**	**+0.4**
	SNR=25						
TKM2	**Tokmak 2**	**51.32**	**336**	*eP*	**P**	**00 15 04.1**	**0.0**
	comp=Z,9.4nm,0.8s,mb4.9						
TKM2				*e*		00 15 17.1	
KBK	**Karagaybulak**	**51.37**	**335**	P	**P**	**00 15 05.5**	**+1.0**
	SNR=6.4						
AML	**Almayashu**	**51.49**	**334**	P	**P**	**00 15 06.1**	**+0.8**
	SNR=11						
AML	**Almayashu**	**51.49**	**334**	*eP*	**P**	**00 15 05.8**	**+0.4**
	comp=Z,9.1nm,0.8s,mb4.9						
AML				*e*		00 15 18.9	
EKS2	**Erkin-Say**	**51.88**	**334**	P	**P**	**00 15 08.9**	**+0.6**
	SNR=34						
EKS2	**Erkin-Say**	**51.88**	**334**	*eP*	**P**	**00 15 08.6**	**+0.3**
	comp=Z,20nm,0.8s,mb5.2						
EKS2				*e*		00 15 21.6	
USP	**Ospenovka**	**52.06**	**335**	P	**P**	**00 15 09.9**	**+0.3**
	SNR=7.5						
MJAR	**Matsushiro Arr**	**52.24**	**38**	P	**P**	**00 15 11.1**	**+0.1**
	comp=Z,0.8nm,0.4s,mb4.1,baz=223,slow=7.8,SNR=4.1						
MJAR				LR	LR	00 38 13.5	
	comp=Z,74nm,18.4s,baz=250,slow=37						
MJAR	**Matsushiro Arr**	**52.24**	**38**	P	**P**	**00 15 11.1**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR				MLR	MLR		
	comp=Z,74nm,18.4s						
MK31	**Makanchi Array**	**52.40**	**344**	*iP*	**P**	**00 15 11.3**	**-0.7**
MK31				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.0						
MK31	**Makanchi Array**	**52.40**	**344**	*eP*	**P**	**00 15 11.4**	**-0.6**
MK31				*e*	pP	00 15 25.4	-5.4
MKAR	**Makanchi Array**	**52.40**	**344**	P	**P**	**00 15 11.8**	**-0.2**
	comp=Z,8.0nm,0.5s,mb5.0,baz=153,slow=8.1,SNR=73						
MKAR				LR	LR	00 39 59.6	
	comp=Z,44nm,18.0s,baz=288,slow=39						
MKAR	**Makanchi Array**	**52.40**	**344**	P	**P**	**00 15 11.8**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MKAR				MLR	MLR		
	comp=Z,44nm,18.0s						
MKAR	**Makanchi Array**	**52.40**	**344**	P	**P**	**00 15 11.8**	**-0.2**
MKAR				LR	LR	00 39 59.5	
ZAK	**Zakamensk**	**53.23**	**2**	*eP*	**P**	**00 15 18.4**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
KK31	**Karatay Array**	**53.70**	**332**	*iP*	**P**	**00 15 21.1**	**-0.5**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
MOY	**Mondy**	**54.50**	**360**	*eP*	**P**	**00 15 27.3**	**0.0**
TLY	**Talaya**	**54.54**	**2**	*eP*	**P**	**00 15 28.8**	**+1.2**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
TLY				MLR	MLR		
	comp=Z,59nm,16.0s						
TLY	**Talaya**	**54.54**	**2**	*eP*	**P**	**00 15 28.9**	**+1.2**
KURK	**Kurchatov**	**56.98**	**343**	P	**P**	**00 15 44.2**	**-0.9**
	comp=Z,5.3nm,0.6s,mb4.8,baz=163,slow=7.1,SNR=40						
KURK	**Kurchatov**	**56.98**	**343**	*cP*	**P**	**00 15 44.6**	**-0.5**
KURK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
KURK	**Kurchatov**	**56.98**	**343**	*eP*	**P**	**00 15 44.3**	**-0.8**
KURK				*e*		00 15 57.4	
KLR	**Kul'dur**	**58.33**	**23**	*eP*	**P**	**00 15 51.0**	**-3.6**
ZAA0	**Zalesovo Array**	**58.44**	**349**	*eP*	**P**	**00 15 54.6**	**-0.6**
ZALV	**Zalesovo Beam**	**58.44**	**349**	P	**P**	**00 15 54.8**	**-0.4**
	comp=Z,36nm,0.7s,mb5.5,baz=160,slow=4.7,SNR=138						
ZALV	**Zalesovo Beam**	**58.44**	**349**	P	**P**	**00 15 54.8**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.5						
KRAR	**Krasnoyarsk**	**59.26**	**354**	*eP*	**P**	**00 16 01.1**	**+0.2**
NVS	**Novosibirsk**	**59.60**	**348**	*iP*	**P**	**00 16 01.6**	**-1.7**
NVS				pmax	pmax		
	comp=N,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
NVS				pmax	pmax		
	comp=E,5.0nm,1.1s						
BOD	**Bodaibo**	**61.51**	**8**	*eP*	**P**	**00 16 16.1**	**-0.1**
BOD				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
YSS	**Yuzh-Sakhalins**	**61.65**	**31**	*eP*	**P**	**00 16 18.2**	**+0.8**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
BRVK	**Borovoye**	**61.69**	**339**	*eP*	**P**	**00 16 16.4**	**-1.1**
BRVK				*e*		00 16 29.9	
BRVK				pmax	pmax	

comp=Z,3.3nm,0.7s,mb4.4
PKSM Moragy 87.14 316 ⇓*i*P **P P 00 18 45.4 +0.2**
PKSM Moragy 87.14 316 ⇓P **P P 00 18 45.4 +0.2**
ARCES ARCESS Array B 87.91 340 P **P P 00 18 49.1 +0.6**
comp=Z,2.6nm,0.9s,mb4.3,baz=100,slow=4.7,SNR=6.3
ARCES ARCESS Array B 87.91 340 P **P P 00 18 49.1 +0.7**
ARCES pmax pmax
comp=Z,3.0nm,0.9s
MORC Moravsky Berou 88.30 320 ⇓*i*P **P P 00 18 51.7 +1.0**
GERES GERESS Array B 90.72 319 P **P P 00 19 02.9 +0.8**
comp=Z,1.6nm,0.7s,mb4.2,baz=98,slow=4.0,SNR=15
GERES GERESS Array B 90.72 319 P **P P 00 19 02.9 +0.8**
GERES pmax pmax
comp=Z,2.0nm,0.7s
NVAR Mina Array Bea 129.52 41 PKP PKPdf 00 25 09.2 +1.1
comp=Z,0.5nm,0.6s,baz=287,slow=1.9,SNR=3.0
ULM Lac du Bonnet 130.74 15 PKP PKPdf 00 25 09.7 -0.3
comp=Z,2.6nm,0.6s,baz=110,slow=4.5,SNR=5.2
PDAR Pinedale Array 131.80 31 PKP PKPdf 00 25 12.3 +0.1
comp=Z,0.4nm,0.6s,baz=148,slow=3.3,SNR=3.9
TXAR Lajitas Array 144.66 40 PKP PKPdf 00 25 36.2 0.0
comp=Z,5.8nm,0.6s,baz=298,slow=1.1,SNR=41
TXAR Lajitas Array 144.66 40 PKIKP PKPdf 00 25 36.3 +0.1
TXAR pmax pmax
comp=Z,6.0nm,0.6s

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*CSEM **19** 00:19:58.7±0.1, 3764N×2673E, h2km, ML3.6, Error ellipse: s-maj=1.5km s-min=1.3km az=160.0*
*ATH **19** 00:19:58.0, 3770N×2679E, h19km, MD3.6/15, ML3.6*
*ISCJB **19** 00:19:58.5±0.4, 3767N±002×2671E±002, h0km±3km, Error ellipse: s-maj=2.8km s-min=2.7km az=140.9*
*DDA **19** 00:19:59.3, 3771N×2682E, h22km±2km, Md3.3*
*NEIC **19** 00:19:59.5, 3769N×2689E, h5km, MD3.4(ISK), ML3.6(ATH), After ISK.*
*ISK **19** 00:19:59.6, 3770N×2689E, h5km, MD3.4*
*THE **19** 00:20:00.2, 3769N×2670E, h2km, ML3.7*

ISC 19 00:19:59.1±0.4,**3766N**±002×**2670E**±002,**h0**km±3km,**n78,** σ1§**02**/102,**2C-1D,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.12**	**66**	*e*PB	**Pg**	**00 20 01.7**	**+0.3**
SMG				*e*SB	**Sg**	**00 20 03.4**	**+0.4**
GCAM	**G?zelcaml?**	**0.42**	**85**	⇓*i*P	**Pg**	**00 20 07.1**	**-0.2**
GCAM				*i* S	**Sg**	**00 20 12.1**	**-0.7**
URLA	**Izmir**	**0.70**	**353**	⇑*i*P	**Pg**	**00 20 12.3**	**-0.3**
URLA				*i* S	**Sg**	**00 20 22.0**	**+0.2**
BODT	**Bodrum**	**0.77**	**141**	*e*PG	**Pg**	**00 20 14.7**	**+0.8**
BODT				*e*SG	**Sg**	**00 20 25.5**	**+1.6**
BODT	**Bodrum**	**0.77**	**141**	Pg	**Pg**	**00 20 14.7**	**+0.8**
BODT				Sg	**Sg**	**00 20 25.7**	**+1.8**
BDRM	**Kayabasi**	**0.84**	**135**	*i* P	**Pg**	**00 20 15.4**	**+0.2**
BDRM				*i* S	**Sg**	**00 20 27.1**	**+1.0**
IZM	**Izmir**	**0.86**	**31**	*e*PG	**Pg**	**00 20 14.7**	**-0.9**
IZM				*e*SG	**Sg**	**00 20 27.1**	**+0.3**
KDAG	**Bornova**	**0.86**	**31**	⇑*i*P	**Pg**	**00 20 14.7**	**-1.0**
KDAG				*i* S	**Sg**	**00 20 25.9**	**-1.1**
CHOS	**Chios island**	**0.89**	**325**	*e*Pg	**Pg**	**00 20 16.7**	**+0.6**
CHOS				*e*Sg	**Sg**	**00 20 29.8**	**+2.1**
MLSB	**Milas**	**0.93**	**113**	*e*PG	**Pg**	**00 20 16.3**	**-0.6**
MLSB				*e*SG	**Sg**	**00 20 28.9**	**-0.2**
MLSB	**Milas**	**0.93**	**113**	Pg	**Pg**	**00 20 16.0**	**-0.9**
AYDN	**Tasoluk**	**0.94**	**90**	*i* P	**Pg**	**00 20 16.4**	**-0.6**
AYDN				*i* S	**Sg**	**00 20 28.4**	**-0.8**
APE	**Apeiranthos**	**1.10**	**238**	*e*Pg	**Pg**	**00 20 20.9**	**+0.6**
APE				*e*Sg	**Sg**	**00 20 37.0**	**+2.4**
APE	**Apeiranthos**	**1.10**	**238**	*e*Pn	**Pn**	**00 20 21.0**	**-0.8**
APE				*e*Sn	**Sn**	**00 20 37.5**	**-0.2**
YER	**Yerkesik**	**1.37**	**112**	*e*PN	**Pn**	**00 20 24.4**	**-1.0**
YER	**Yerkesik**	**1.37**	**112**	Pn	**Pn**	**00 20 24.0**	**-1.4**
AKS	**Akhisar**	**1.50**	**35**	*e*PN	**Pn**	**00 20 26.4**	**-0.8**
THR4	**Thira Island,**	**1.59**	**221**	*e*Pg	**Pn**	**00 20 28.4**	**-0.1**
PRK	**Paraskevi**	**1.62**	**348**	*e*Pg	**Pn**	**00 20 28.0**	**-0.9**
PRK				*e*Sg	**Sn**	**00 20 49.3**	**-1.2**
PRK	**Paraskevi**	**1.62**	**348**	*e*PN	**Pn**	**00 20 27.1**	**-1.8**
PRK				*e*SN	**Sn**	**00 20 49.5**	**-1.0**
PRK	**Paraskevi**	**1.62**	**348**	*e*Pg	**Pn**	**00 20 28.0**	**-0.9**
PRK				*e*Sg	**Sg**	**00 20 49.3**	**-1.8**
PRK				*e*Sn	**Sn**	**00 20 49.5**	**-1.0**
THR3	**Thira Island,**	**1.62**	**220**	*e*Pb	**Pn**	**00 20 28.6**	**-0.4**
THR3	**Thira Island,**	**1.62**	**220**	*e*Pb	**Pn**	**00 20 28.5**	**-0.5**
SANT	**Santorini**	**1.63**	**218**	*e*Pb	**Pb**	**00 20 29.2**	**-0.8**
THR1	**Thera Island**	**1.63**	**218**	*e*Pb	**Pb**	**00 20 29.4**	**-0.6**
AYVA	**Ayvalik**	**1.65**	**360**	*i* P	**Pn**	**00 20 30.0**	**+0.7**
AYVA				*i* S	**Sn**	**00 20 52.2**	**+1.1**
THR5	**Thira Island,**	**1.65**	**221**	*e*Pb	**Pb**	**00 20 29.1**	**-1.2**
THR6	**Thira Island,**	**1.67**	**219**	*e*Pb	**Pn**	**00 20 29.4**	**-0.2**
TURN	**Turunc**	**1.71**	**117**	*i* P	**Pn**	**00 20 26.2**	**-3.9**
TURN				*i* S	**Sn**	**00 20 45.4**	**-7.3**
KULA	**Kula-Manisa**	**1.77**	**61**	*e*PN	**Pn**	**00 20 30.5**	**-0.4**
ARG	**Arkhangelos**	**1.84**	**141**	*e*PN	**Pn**	**00 20 30.9**	**-1.0**
DNZL	**Cakiroluk**	**1.86**	**88**	*i* P	**Pn**	**00 20 31.2**	**-1.0**
DNZL	**Cakiroluk**	**1.86**	**88**	*i* P	**Pn**	**00 20 31.2**	**-1.1**
DEMI	**Demirci**	**2.10**	**48**	*i* P	**Pn**	**00 20 36.6**	**+1.1**
DEMI				*i* S	**Sn**	**00 21 01.7**	**-0.7**
KARP	**Karpathos**	**2.14**	**170**	*e*PB	**Pn**	**00 20 35.1**	**-1.0**
BALB	**Balikesir**	**2.18**	**25**	*e*PN	**Pn**	**00 20 37.6**	**+0.9**
EZN	**Ezine**	**2.18**	**352**	*e*PN	**Pn**	**00 20 38.3**	**+1.6**
BALY	**Balya**	**2.20**	**19**	*i* P	**Pn**	**00 20 34.5**	**-2.4**
BALY				*i* S	**Sn**	**00 21 06.1**	**+1.4**
PTL	**Penteli**	**2.28**	**281**	*e*PN	**Pn**	**00 20 37.5**	**-0.5**
GOLH	**Golhisar**	**2.32**	**100**	*i* P	**Pn**	**00 20 38.3**	**-0.2**
KHL	**Karahalli**	**2.33**	**73**	*e*PN	**Pn**	**00 20 38.3**	**-0.3**
KHL	**Karahalli**	**2.33**	**73**	Pn	**Pn**	**00 20 39.2**	**+0.6**
KHL	**Karahalli**	**2.33**	**73**	Pn	**Pn**	**00 20 39.1**	**+0.5**
KVR	**Kavouri**	**2.33**	**275**	*e*PN	**Pn**	**00 20 38.0**	**-0.7**
ATH	**Athens Observa**	**2.38**	**278**	*e*PN	**Pn**	**00 20 38.8**	**-0.6**
DST	**Dursunbey**	**2.46**	**37**	*e*PN	**Pn**	**00 20 41.3**	**+0.8**
LIA	**Limnos Island**	**2.53**	**333**	*e*Pn	**Pn**	**00 20 40.3**	**-1.1**
LIA	**Limnos Island**	**2.53**	**333**	*e*Pn	**Pn**	**00 20 40.4**	**-1.0**
NAIG	**Nisos Aigina**	**2.55**	**273**	*e*PN	**Pn**	**00 20 41.0**	**-0.7**
NPS	**Neapolis**	**2.55**	**200**	*e*PN	**Pn**	**00 20 41.1**	**-0.6**
GDZ	**Gediz**	**2.61**	**56**	*i* P	**Pb**	**00 20 47.1**	**+0.4**
GDZ				*i* S	**Sb**	**00 21 19.2**	**-0.2**
LPK	**Lapseki**	**2.71**	**1**	*e*PN	**Pn**	**00 20 45.5**	**+1.6**
ELL	**Elmali**	**2.72**	**109**	*e*PN	**Pn**	**00 20 44.7**	**+0.7**
AKAS	**Kas**	**2.73**	**121**	*i* P	**Pn**	**00 20 44.8**	**+0.7**
AKAS				*i* S	**Sn**	**00 21 20.8**	**+3.0**
DID	**Didima**	**2.75**	**268**	*e*Pn	**Pn**	**00 20 44.3**	**-0.2**
EDC	**Edincik**	**2.83**	**18**	*e*PN	**Pn**	**00 20 46.7**	**+1.1**
BNT	**Bandirma**	**2.85**	**19**	*e*PN	**Pn**	**00 20 47.0**	**+1.1**
TKTP	**Tekketepe**	**2.89**	**81**	*i* P	**Pn**	**00 20 43.3**	**-3.1**
ALT	**Altintas**	**3.02**	**62**	*e*PN	**Pn**	**00 20 48.0**	**-0.2**
ALT	**Altintas**	**3.02**	**62**	Pn	**Pn**	**00 20 48.8**	**+0.6**
ALT	**Altintas**	**3.02**	**62**	Pn	**Pn**	**00 20 48.8**	**+0.6**
RKY	**Sarkoy-Tekirda**	**3.04**	**7**	*e*PN	**Pn**	**00 20 49.9**	**+1.4**
SART	**Tekirdag**	**3.05**	**7**	*i* P	**Pn**	**00 20 46.1**	**-2.4**
LKR	**Lokris**	**3.08**	**290**	*e*PN	**Pn**	**00 20 49.0**	**0.0**
ENEZ	**Enez**	**3.10**	**352**	*e*PN	**Pn**	**00 20 51.3**	**+2.0**
VLI	**Veliai**	**3.15**	**254**	*e*PN	**Pn**	**00 20 50.0**	**+0.1**
SHUT	**Suhut-Afyon**	**3.17**	**72**	*e*PN	**Pn**	**00 20 50.9**	**+0.7**
NEO	**Neokhori**	**3.19**	**302**	*e*PN	**Pn**	**00 20 50.2**	**-0.2**
PAIG	**Paliouri**	**3.27**	**315**	*e*Pn	**Pn**	**00 20 51.3**	**-0.3**
ALN	**Alexandroupoli**	**3.27**	**351**	*e*Pn	**Pn**	**00 20 50.5**	**-1.1**
ALN				*e*Sn	**Sn**	**00 21 30.8**	**-0.5**
OUR	**Ouranopolis**	**3.41**	**322**	*e*Pn	**Pn**	**00 20 52.9**	**-0.6**
CRLT	**Corlu**	**3.56**	**13**	*e*PN	**Pn**	**00 20 57.1**	**+1.6**
RDO	**Rodhopi**	**3.59**	**346**	*e*PN	**Pn**	**00 20 55.2**	**-0.9**
ADVT	**Abdulvahap**	**3.64**	**40**	*e*PN	**Pn**	**00 20 58.2**	**+1.5**
ITM	**Ithomi**	**3.83**	**264**	*e*Pn	**Pn**	**00 21 01.0**	**+1.7**
GULT	**Gulveren**	**4.06**	**46**	*e*PN	**Pn**	**00 21 03.0**	**+0.6**
THL	**Klokotos Trika**	**4.13**	**299**	*e*PN	**Pn**	**00 21 04.3**	**+0.8**
HDMB	**Hadim**	**4.67**	**97**	*e*PN	**Pn**	**00 21 11.4**	**+0.6**

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*CSEM **19** 01:01:06.3±0.1, 3815N×3858E, h2km, MD3.1, Error ellipse: s-maj=2.4km s-min=2.0km az=90.0*
*ISCJB **19** 01:01:07.2±0.6, 3815N±003×3852E±003, h1km±8km, Error ellipse: s-maj=5.4km s-min=4.5km az=163.1*
*ISK **19** 01:01:07.3, 3816N×3857E, h7km, MD3.1*
*DDA **19** 01:01:07.5, 3806N×3855E, h6km±2km, Md2.8*

ISC 19 01:01:07.8±0.5,**3815N**±003×**3852E**±003,**h1**km±7km,**n16,** σ1§**03**/23,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYA	**Malataya**	**0.19**	**337**	PG	**Pg**	**01 01 12.0**	**+0.5**
MYA				*e*SG	**Sg**	**01 01 15.2**	**+1.2**
AKCD	**Akcadag**	**0.49**	**287**	*i* P	**Pg**	**01 01 17.2**	**-0.1**
AKCD				*i* S	**Sg**	**01 01 24.3**	**+0.6**
SVRC	**Sivrice-ELAZID**	**0.66**	**70**	*e*PG	**Pg**	**01 01 20.1**	**-0.4**
SVRC				*e*SG	**Sg**	**01 01 28.9**	**-0.1**
URFA	**Urfa**	**0.75**	**161**	*e*PG	**Pg**	**01 01 21.3**	**-0.9**
URFA				*e*SG	**Sg**	**01 01 33.5**	**+1.7**
DARE	**Darende-Malaty**	**0.98**	**325**	*e*PG	**Pg**	**01 01 25.4**	**-1.2**
PTK	**Pertek**	**1.01**	**43**	*e*PG	**Pg**	**01 01 25.8**	**-1.3**
PTK				*e*SG	**Sg**	**01 01 40.8**	**+0.5**
GZT	**Gaziantep**	**1.10**	**224**	*i* P	**Pg**	**01 01 28.4**	**-0.5**
GZT				*i* S	**Sg**	**01 01 42.5**	**-0.6**
GAZ	**Gaziantep**	**1.43**	**227**	*e*PN	**Pn**	**01 01 34.6**	**-0.2**
KMRS	**Kahramanmaras**	**1.44**	**244**	*e*PN	**Pn**	**01 01 34.5**	**-0.5**
ANDN	**Andirin**	**1.81**	**252**	*i* P	**Pn**	**01 01 38.4**	**-1.8**
ANDN				*i* S	**Sg**	**01 02 06.5**	**+0.4**
EZC	**Erzincan**	**1.89**	**32**	*e*PN	**Pn**	**01 01 38.1**	**-3.1**
SVSK	**Karacayir**	**2.12**	**327**	*e*PN	**Pn**	**01 01 44.7**	**+0.2**
BEST	**Besiri**	**2.19**	**96**	*i* P	**Pn**	**01 01 47.1**	**+1.8**
BNN	**Bunyan**	**2.21**	**289**	*e*PN	**Pn**	**01 01 46.0**	**+0.4**
KOZT	**Kozan**	**2.23**	**253**	*e*PN	**Pn**	**01 01 46.6**	**+0.6**
COBT	**Iskenderun**	**2.43**	**229**	*i* P	**Pn**	**01 01 52.0**	**+3.3**

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*CSEM **19** 01:08:58.9±0.1, 3814N×3855E, h2km, MD3.3, Error ellipse: s-maj=2.0km s-min=1.5km az=139.0*
*ISCJB **19** 01:08:59.7±0.7, 3814N±004×3858E±004, h3km±7km, Error ellipse: s-maj=6.5km s-min=5.1km az=168.0*
*ISK **19** 01:08:59.8, 3814N×3855E, h7km, MD3.3*
*DDA **19** 01:08:59.4, 3820N×3850E, h7km±5km, Md3.1*

ISC 19 01:09:00.3±0.6,**3814N**±003×**3857E**±004,**h5**km±5km,**n19,** σ0§**91**/25,**1C,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYA	**Malataya**	**0.22**	**329**	PG	**Pg**	**01 09 04.9**	**+0.2**
MYA				*e*SG	**Sg**	**01 09 08.0**	**+0.4**
AKCD	**Akcadag**	**0.53**	**287**	⇑*i*P	**Pg**	**01 09 10.1**	**-0.5**
AKCD				*i* S	**Sg**	**01 09 17.4**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.63**	**67**	*e*PG	**Pg**	**01 09 12.6**	**+0.2**
SVRC				*e*SG	**Sg**	**01 09 22.4**	**+1.9**
URFA	**Urfa**	**0.72**	**164**	*e*PG	**Pg**	**01 09 14.3**	**+0.1**
PTK	**Pertek**	**0.99**	**40**	*e*PG	**Pg**	**01 09 18.9**	**-0.5**
DARE	**Darende-Malaty**	**1.01**	**324**	*e*PG	**Pg**	**01 09 18.2**	**-1.5**
GZT	**Gaziantep**	**1.12**	**226**	*i* P	**Pg**	**01 09 20.8**	**-0.9**
GZT				*i* S	**Sg**	**01 09 37.6**	**+1.3**
GAZ	**Gaziantep**	**1.45**	**229**	*e*PN	**Pn**	**01 09 26.8**	**-0.3**
KMRS	**Kahramanmaras**	**1.47**	**245**	*e*PN	**Pn**	**01 09 26.9**	**-0.5**
ANDN	**Andirin**	**1.85**	**253**	*i* P	**Pn**	**01 09 31.8**	**-0.8**
ANDN				*i* S	**Sn**	**01 09 59.1**	**+2.8**
EZC	**Erzincan**	**1.88**	**31**	*e*PN	**Pn**	**01 09 31.1**	**-2.0**
MARD	**Mardin**	**1.94**	**114**	*i* P	**Pn**	**01 09 33.0**	**-0.8**
MARD				*i* S	**Sn**	**01 10 04.1**	**+5.5**
SVSK	**Karacayir**	**2.16**	**326**	*e*PN	**Pn**	**01 09 37.4**	**+0.5**
BNN	**Bunyan**	**2.25**	**289**	*e*PN	**Pn**	**01 09 38.6**	**+0.4**
KOZT	**Kozan**	**2.27**	**254**	*e*PN	**Pn**	**01 09 38.8**	**+0.4**
GUMT	**Gumushane**	**2.42**	**17**	*e*PN	**Pn**	**01 09 40.9**	**+0.3**
RSDY	**Resadiye-TOKAT**	**2.45**	**337**	*e*PN	**Pn**	**01 09 41.5**	**+0.5**
ESPY	**Espiye-Giresun**	**2.78**	**2**	*e*PN	**Pn**	**01 09 46.1**	**+0.6**
HTY	**Hatay**	**2.80**	**225**	*e*PN	**Pn**	**01 09 45.2**	**-0.5**

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*ISCJB **19** 01:13:21.7±1.0, 2087S±008×692W±02, h144km±10km, mb3.4/2, Error ellipse: s-maj=25.3km s-min=13.5km az=3.6*
*IDC **19** 01:13:22.2±1.4, 2083S×6922W, h134km±14km, mb3.5/3, mb1 3.4/6, mb1mx3.3/17, mbtmp3.2/6, Error ellipse: s-maj=27.3km s-min=17.2km az=92.0*
*NEIC **19** 01:13:22.2±1.0, 2085S×6917W, h134km±10km, Error ellipse: s-maj=19.4km s-min=10.9km az=95.0*

ISC 19 01:13:22.8±1.0,**2085S**±008×**691W**±02,**h137**km±10km,**n13,** σ0§**81**/16,**mb3.4/2,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.77**	**173**	P	**Pn**	**01 13 54.9**	**+0.6**
	17nm,0.3s,baz=349,slow=9.8,SNR=134						
LVC				S	**Sn**	**01 14 19.1**	**+0.5**
	50nm,0.3s,baz=294,slow=20,SNR=28						
LVC	**Limon Verde**	**1.77**	**173**	P	**Pn**	**01 13 54.9**	**+0.6**
LVC				S	**Sn**	**01 14 19.1**	**+0.5**
LPAZ	**La Paz**	**4.64**	**12**	P	**Pn**	**01 14 31.1**	**-0.1**
	1.0nm,0.3s,baz=190,slow=3.0,SNR=20						
LPAZ				S	**Sn**	**01 15 16.9**	**-7.5**
	1.0nm,0.3s,baz=252,slow=9.8,SNR=4.0						
SIV	**San Ignacio**	**9.05**	**59**	P	**Pn**	**01 15 25.8**	**-4.6**
	0.8nm,0.3s,baz=253,slow=11,SNR=24						
CFAA	**Coronel Fontan**	**10.74**	**176**	P	**Pn**	**01 15 50.9**	**-1.9**
	0.0nm,0.3s,baz=8.1,slow=14,SNR=3.5						
CPUP	**Villa Florida**	**12.11**	**119**	P	**Pn**	**01 16 10.3**	**-0.6**
	0.3nm,0.3s,baz=297,slow=9.6,SNR=3.2						
CPUP	**Villa Florida**	**12.11**	**119**	P	**Pn**	**01 16 10.3**	**-0.7**
PLCA	**Paso Flores**	**19.86**	**183**	P	**P**	**01 17 43.4**	**+0.4**
	0.1nm,0.3s,baz=314,slow=10,SNR=2.7						
PLCA	**Paso Flores**	**19.86**	**183**	P	**P**	**01 17 43.4**	**+0.4**
BDFB	**Brasilia**	**20.70**	**79**	P	**P**	**01 17 52.4**	**0.0**
	2.1nm,0.3s,baz=224,slow=10,SNR=4.5						
PDAR	**Pinedale Array**	**73.45**	**330**	P	**P**	**01 24 39.4**	**-0.6**
	0.2nm,0.4s,mb3.2,baz=138,slow=5.8,SNR=5.4						
TOA0	**Torodi Ar. Sit**	**77.33**	**71**	*e*P	**P**	**01 25 03.9**	**+1.0**
TORD	**Torodi Ar. Bea**	**77.33**	**71**	P	**P**	**01 25 03.6**	**+0.7**
	0.5nm,0.4s,mb3.5,baz=254,slow=5.3,SNR=26						

IGQ 19 01:42:35.2,311S×7889W,h12km±6km,**Mb4.0,Ms3.8,2D, Error ellipse: s-maj=19.5km s-min=2.9km az=15.1, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARRY	**Arrayan**	**1.65**	**15**	P	Pn	01 43 06.0	+1.9
ARRY	**Arrayan**	**1.65**	**15**	S	Sn	01 43 28.4	+3.2
PATA	**Patacocha**	**1.66**	**16**	⇓P	Pn	01 43 06.3	+2.1
PATA	**Patacocha**	**1.66**	**16**	⇓S	Sn	01 43 28.6	+3.2
ULBA	**Ulba**	**1.72**	**16**	P	Pn	01 43 08.4	+3.5
ULBA	**Ulba**	**1.72**	**16**	S	Sn	01 43 31.0	+4.1
JUI6	**Juive**	**1.73**	**14**	P	Pn	01 43 07.7	+2.7
RUN5	**Runtun**	**1.75**	**15**	P	Pn	01 43 07.7	+2.3
QIL2	**Quilotoa**	**2.23**	**359**	P	Pn	01 43 23.3	+11
CAMI	**Rancho Maria**	**2.45**	**9**	P	Pn	01 43 19.6	+4.5
TAMB	**Tambo**	**2.46**	**12**	P	Pn	01 43 19.9	+4.8
VC1	**Cotopaxi 1**	**2.50**	**11**	P	Pn	01 43 20.8	+5.1
VC1	**Cotopaxi 1**	**2.50**	**11**	S	Sn	01 43 56.0	+10
ANTI	**Antisana**	**2.74**	**15**	P	Pn	01 43 22.5	+3.4
ANTI	**Antisana**	**2.74**	**15**	S	Sn	01 43 59.1	+7.0
TERV	**Terraza Guagua**	**2.93**	**5**	P	Pn	01 43 29.9	+8.2
GGP	**Refugio Guagua**	**2.93**	**6**	P	Pn	01 43 28.9	+7.2
CAYA	**Cayambe**	**3.29**	**16**	P	Pn	01 43 36.0	+9.5

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*ISCJB **19** 01:44:06.9±0.2, 4738N±001×9.10E±001, h13km±1km, Error ellipse: s-maj=2.1km s-min=1.6km az=13.0*
*ZUR **19** 01:44:07.9, 4738N×9.15E, h6km±2km, ML2.4/13*
*PRU **19** 01:44:07.0, 4731N×9.29E, h0km*
*VIE **19** 01:44:07.6±0.2, 4740N×9.13E, h10km±1km, mb1.5/2, ML2.7/6, Error ellipse: s-maj=1.5km s-min=1.0km az=84.0 19 km W of St.Gallen*
*NEIC **19** 01:44:07.9, 4738N×9.15E, h6km, ML2.4(ZUR), ML2.6(FUR), ML2.6(STR), ML2.8(LDG), ML2.9(SZGRF), After ZUR.*
*CSEM **19** 01:44:08.3±0.0, 4739N×9.15E, h12km, ML2.8/24, Error ellipse: s-maj=0.8km s-min=0.7km az=171.0*
*LDG **19** 01:44:08.2±0.1, 4737N×9.13E, h7km, Md2.9/2, Ml2.8/22, Error ellipse: s-maj=1.4km s-min=0.9km az=127.0*
*LEDBW **19** 01:44:08.6±0.1, 47.395N±0.009×9.148E±0.005, h7km±2km, ML2.7, Error ellipse: s-maj=3.0km s-min=1.8km az=4.0*
*BGR **19** 01:44:09.0±0.3, 4742N×9.15E, h10km, ML2.6/6, Error ellipse: s-maj=3.3km s-min=2.2km az=171.0*
*STR **19** 01:44:09.7±0.6, 4746N×905E, h10km, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ROM **19** 01:44:11.4±0.9, 4728N×9.14E, h10km, Md2.5/6, Ml1.8/1, Error ellipse: s-maj=9.9km s-min=7.9km az=152.0*

ISC 19 01:44:07.6±0.2,**4738N**±001×**910E**±001,**h16**km±1km,**n169,** σ1§**14**/341,**17C-24D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WILA	**Wila**	**0.14**	**285**	⇑*i*Pg	**Pg**	**01 44 11.9**	**+0.4**
	9µm,0.2s						
WILA				*i* Sg	**Sg**	**01 44 14.9**	**+0.8**
	9µm,0.2s						
WILA	**Wila**	**0.14**	**285**	⇑*i*Pg	**Pg**	**01 44 11.9**	**+0.5**
WILA				*i* Sg	**Sg**	**01 44 14.9**	**+0.9**
WEIN	**Weingarten**	**0.17**	**332**	*i* Sg	**Sg**	**01 44 12.1**	**-2.7**
	1µm,0.3s						
WEIN	**Weingarten**	**0.17**	**332**	⇓*i*Pg	**Pg**	**01 44 15.3**	**+3.4**
	1µm,0.3s						
LIENZ	**Kamor/St.Gall**	**0.28**	**108**	*e*Pg	**Pg**	**01 44 13.7**	**+0.1**
	SNR=33						
LIENZ				*e*Sg	**Sg**	**01 44 18.0**	**+0.3**
	SNR=13						
LIENZ	**Kamor/St.Gall**	**0.28**	**108**	⇑Pg	**Pg**	**01 44 13.6**	**0.0**
LIENZ				Sg	**Sg**	**01 44 18.0**	**+0.3**
LIENZ	**Kamor/St.Gall**	**0.28**	**108**	⇑*i*Pg	**Pg**	**01 44 13.6**	**0.0**
	1µm,0.1s						
LIENZ				Sg	**Sg**	**01 44 18.0**	**+0.3**
	SNR=13						
SISB	**Singen-Schiene**	**0.32**	**343**	⇓*i*P*	**Pg**	**01 44 14.8**	**+0.5**
SISB				S*	**Sg**	**01 44 20.2**	**+1.2**
STEIN	**Stein am Rhein**	**0.33**	**331**	⇓*i*Pg	**Pg**	**01 44 15.2**	**+0.6**
	397nm,0.2s						
ZUR	**Degenried**	**0.36**	**269**	⇑*i*Pg	**Pg**	**01 44 16.1**	**+1.1**
	2µm,0.4s						
ZUR				*i* Sg	**Sg**	**01 44 21.9**	**+2.0**
	2µm,0.4s						
ZUR	**Degenried**	**0.36**	**269**	⇑*i*Pg	**Pg**	**01 44 16.1**	**+1.2**
ZUR				*i* Sg	**Sg**	**01 44 21.9**	**+2.0**
PLONS	**Plons/SG**	**0.38**	**150**	⇓*i*Pg	**Pg**	**01 44 15.8**	**+0.4**
	228nm,0.2s						
TRULL	**Truellikon**	**0.39**	**313**	⇓*i*Pg	**Pg**	**01 44 16.6**	**+1.0**
	910nm,0.3s						
FLACH	**Flaach**	**0.41**	**298**	⇑*i*Pg	**Pg**	**01 44 17.1**	**+1.1**
	765nm,0.2s						
MUO	**Muotathal**	**0.52**	**218**	⇑*i*Pg	**Pg**	**01 44 19.0**	**+1.1**
	286nm,0.7s						
DAVA	**Damuels**	**0.54**	**100**	⇑*e*Pg	**Pg**	**01 44 18.3**	**+0.1**
	SNR=11						
DAVA				⇓*i*Sg	**Sg**	**01 44 25.9**	**+0.5**
	87nm,0.2s						
DAVA	**Damuels**	**0.54**	**100**	*e*Pg	**Pg**	**01 44 18.3**	**0.0**
DAVA				*e*Sg	**Sg**	**01 44 25.9**	**+0.5**
LLS	**Linth-Limmern**	**0.54**	**187**	⇑*i*Pg	**Pg**	**01 44 19.1**	**+0.9**
	308nm,0.2s						
LLS				*i* Sg	**Sg**	**01 44 26.6**	**+1.2**
	308nm,0.2s						
SLE	**Schleitheim**	**0.57**	**313**	⇓*i*P*	**Pb**	**01 44 19.5**	**+0.4**
SLE				PmP		01 44 21.9	
SLE				*i* S*	**Sb**	**01 44 27.5**	**+0.6**
SLE				SmS		01 44 29.7	
SLE	**Schleitheim**	**0.57**	**313**	⇓*i*Pg	**Pg**	**01 44 19.5**	**+0.7**
	629nm,0.3s						
SLE	**Schleitheim**	**0.57**	**313**	PmP		01 44 21.9	
SLE				*i* Sg	**Sb**	**01 44 27.5**	**+0.6**
SLE				Sx		01 44 29.7	
SULZ	**Cheisacher**	**0.69**	**283**	⇓P*	**Pb**	**01 44 22.1**	**+0.9**
SULZ				S*	**Sb**	**01 44 31.8**	**+1.3**
SULZ	**Cheisacher**	**0.69**	**283**	⇓Pg	**Pb**	**01 44 22.1**	**+0.9**
SULZ				Sg	**Sb**	**01 44 31.8**	**+1.3**
GUT	**Gutenstein**	**0.69**	**1**	⇓*i*P*	**Pb**	**01 44 21.3**	**+0.1**
GUT				PmP		01 44 23.2	
GUT				S*	**Sb**	**01 44 30.7**	**+0.2**
GUT				SmS		01 44 34.0	
GUT	**G

HDH	**Heidenheim-Cha**	**1.42**	**31**	P	**Pn**	01 44 32.7	+0.1	
HDH				Pg	**Pg**	01 44 34.6	-0.2	
HDH				S	**Sn**	01 44 51.0	+0.1	
HDH				Sg	**Sg**	01 44 53.4	+0.1	
HDH	**Heidenheim-Cha**	**1.42**	**31**	Pn	**Pn**	01 44 32.7	+0.1	
HDH				Sn	**Sn**	01 44 51.0	+0.1	
HDH	**Heidenheim-Cha**	**1.42**	**31**	P	**Pg**	01 44 34.6	-0.2	
HDH				S	**Sg**	01 44 53.4	+0.1	
MOF	**Molkenrain**	**1.42**	**290**	Pg	**Pg**	01 44 35.3	+0.5	
MOF				Sg	**Sg**	01 44 53.9	+0.6	
MOF	**Molkenrain**	**1.42**	**290**	Sg	**Sg**	01 44 54.5	+1.2	
VAI	**Varese**	**1.53**	**189**	Pg	**Pg**	01 44 37.8	+0.8	
	9.0nm,0.2s							
ECH	**Echery**	**1.56**	**303**	Pg	**Pg**	01 44 36.8	-0.7	
ECH				Sg	**Sg**	01 44 57.8	0.0	
HINF	**Hinteralfeld**	**1.58**	**287**	*e*Pg	**Pg**	01 44 37.8	-0.3	
HINF				*e*Sn	**Sn**	01 44 55.2	+0.1	
HINF				*e*Sg	**Sg**	01 44 58.9	+0.2	
	39nm,0.2s							
HINF	**Hinteralfeld**	**1.58**	**287**	*e*Pg	**Pg**	01 44 37.8	-0.3	
HINF				*e*Sn	**Sn**	01 44 55.2	+0.1	
HINF				*e*Sg	**Sg**	01 44 58.9	+0.2	
	19nm,0.2s							
HINF	**Hinteralfeld**	**1.58**	**287**	*e*Pn	**Pn**	01 44 35.2	+0.2	
HINF				*e*Pg	**Pg**	01 44 37.8	-0.3	
HINF				*e*Sn	**Sn**	01 44 55.2	+0.1	
HINF				*e*Sg	**Sg**	01 44 58.9	+0.2	
CDF	**Champ du Feu**	**1.61**	**311**	*e*Pg	**Pg**	01 44 38.3	-0.2	
	SNR=1.0							
CDF				*e*Sn	**Sn**	01 44 56.3	+0.7	
	SNR=1.0							
CDF				*e*Sg	**Sg**	01 44 59.9	+0.5	
	38nm,0.3s							
CDF	**Champ du Feu**	**1.61**	**311**	*e*Pg	**Pg**	01 44 38.3	-0.2	
	SNR=1.0							
CDF				*e*Sn	**Sn**	01 44 56.3	+0.7	
	SNR=1.0							
CDF				*e*Sg	**Sg**	01 44 59.9	+0.5	
	19nm,0.3s							
CDF	**Champ du Feu**	**1.61**	**311**	*e*Pn	**Pn**	01 44 35.9	+0.6	
CDF				*e*Pg	**Pg**	01 44 38.3	-0.2	
CDF				*e*Sn	**Sn**	01 44 56.3	+0.7	
CDF				*e*Sg	**Sg**	01 44 59.9	+0.5	
MDI	**Monti di Nese**	**1.66**	**165**	Pg	**Pg**	01 44 39.9	+0.5	
FUR	**Furstenfeldbru**	**1.66**	**61**	*e*Pg	**Pg**	01 44 39.2	-0.3	
	SNR=3.0							
FUR				*e*Sg	**Sg**	01 45 00.9	-0.3	
	SNR=6.2							
FUR	**Furstenfeldbru**	**1.66**	**61**	*e*Pg	**Pg**	01 44 39.1	-0.5	
FUR				*e*Sg	**Sg**	01 45 00.9	-0.3	
	SNR=6.2							
FUR	**Furstenfeldbru**	**1.66**	**61**	*e*Pg	**Pg**	01 44 39.1	-0.5	
FUR				*e*Sg	**Sg**	01 45 01.7	+0.5	
WATA	**Walderalm**	**1.68**	**91**	⇑*i*Pg	**Pg**	01 44 39.1	-0.8	
WATA				⇑*i*Sn	**Sn**	01 44 59.7	+2.3	
WATA				⇓*i*Sg	**Sg**	01 45 02.3	+0.5	
	10nm,0.2s							
APPI	**Appiano**	**1.71**	**121**	Pg	**Pg**	01 44 41.7	+1.2	
WTTA	**Wattenberg**	**1.73**	**93**	⇑*i*Pg	**Pg**	01 44 40.4	-0.4	
WTTA				⇓*i*Sg	**Sg**	01 45 04.1	+0.9	
	13nm,0.2s							
WTTA	**Wattenberg**	**1.73**	**93**	*e*Pg	**Pg**	01 44 40.4	-0.4	
WTTA				*e*Sg	**Sg**	01 45 03.3	+0.1	
LANF	**Langenberg**	**1.82**	**332**	*e*Pg	**Pg**	01 44 43.1	+0.5	
	SNR=4.6							
HAU	**Haudompre**	**1.96**	**290**	*e*Pg	**Pg**	01 44 44.9	-0.4	
HAU				*e*Sn	**Sn**	01 45 03.7	-0.7	
	SNR=1.0							
HAU				*e*Sg	**Sg**	01 45 10.0	-0.8	
	55nm,0.4s,SNR=1.0							
HAU	**Haudompre**	**1.96**	**290**	*e*Pg	**Pg**	01 44 44.9	-0.4	
HAU				*e*Sg	**Sg**	01 45 10.0	-0.8	
	27nm,0.4s,SNR=1.0							
HAU	**Haudompre**	**1.96**	**290**	*e*Pn	**Pn**	01 44 40.5	+0.3	
HAU				*e*Pg	**Pg**	01 44 44.9	-0.4	
HAU				*e*Sn	**Sn**	01 45 03.7	-0.7	
HAU				*e*Sg	**Sg**	01 45 10.0	-0.8	
SIND	**Sindeldorf**	**2.00**	**9**	⇓P	**Pn**	01 44 40.1	-0.6	
SIND				Pg	**Pg**	01 44 45.6	-0.3	
SIND				S	**Sn**	01 45 04.3	-1.0	
SIND				Sg	**Sg**	01 45 11.2	-0.7	
SIND	**Sindeldorf**	**2.00**	**9**	⇓Pn	**Pn**	01 44 40.1	-0.6	
SIND				Sn	**Sn**	01 45 04.3	-1.0	
SIND	**Sindeldorf**	**2.00**	**9**	P	**Pg**	01 44 45.6	-0.3	
SIND				S	**Sg**	01 45 11.2	-0.7	
SWS	**Schriesheim-Wi**	**2.12**	**353**	P	**Pn**	01 44 42.8	+0.5	
CTI	**Castel Tesino**	**2.20**	**126**	Pg	**Pg**	01 44 50.1	+0.3	
CABF	**La Chapelle**	**2.20**	**251**	*e*Pg	**Pg**	01 44 50.2	+0.3	
	SNR=1.0							
CABF				*e*Sg	**Sg**	01 45 18.4	0.0	
	11nm,0.2s,SNR=1.0							
CABF	**La Chapelle**	**2.20**	**251**	*e*Pg	**Pg**	01 44 50.2	+0.3	
	SNR=1.0							
CABF				*e*Sg	**Sg**	01 45 18.4	0.0	
	5.6nm,0.2s,SNR=1.0							
CABF	**La Chapelle**	**2.20**	**251**	*e*Pn	**Pn**	01 44 43.9	+0.5	
CABF				*e*Pg	**Pg**	01 44 50.2	+0.3	
CABF				*e*Sg	**Sg**	01 45 18.4	0.0	
TOD	**Tromm**	**2.24**	**355**	Pn	**Pn**	01 44 44.1	+0.2	
TOD				Pg	**Pg**	01 44 50.2	-0.3	
TOD				Sg	**Sg**	01 45 19.1	-0.4	
THEF	**They Montfort**	**2.27**	**293**	Pg	**Pg**	01 44 51.3	+0.2	
THEF				Sg	**Sg**	01 45 20.4	0.0	
LPL	**La Plagne**	**2.48**	**222**	*e*Pg	**Pg**	01 44 54.7	-0.5	
	SNR=1.0							
LPL				*e*Sg	**Sg**	01 45 26.8	-0.6	
	4.0nm,0.3s,SNR=1.0							
LPL	**La Plagne**	**2.48**	**222**	*e*Pg	**Pg**	01 44 54.7	-0.5	
	SNR=1.0							
LPL				*e*Sg	**Sg**	01 45 26.8	-0.6	
	2.0nm,0.3s,SNR=1.0							
LPG	**La Plagne**	**2.49**	**222**	*e*Pg	**Pg**	01 44 54.5	-0.8	
LPG				*e*Sg	**Sg**	01 45 26.3	-1.2	
	2.4nm,0.2s							
LPG	**La Plagne**	**2.49**	**222**	*e*Pg	**Pg**	01 44 54.5	-0.8	
LPG				*e*Sg	**Sg**	01 45 26.3	-1.2	
	1.2nm,0.2s							
RUP	**Ruppelstein**	**2.69**	**330**	Pg	**Pg**	01 44 59.1	-0.1	
RUP	**Ruppelstein**	**2.69**	**330**	Px	Px	01 44 59.1		
RUP	**Ruppelstein**	**2.69**	**330**	Pg	**Pg**	01 44 59.0	-0.2	
GRA1	**Grafenberg Arr**	**2.71**	**31**	Pg	**Pg**	01 44 58.7	-0.8	
GRA1				Sn	**Sn**	01 45 22.1	-0.7	
GRA1				Sg	**Sg**	01 45 32.0	-2.6	
	SNR=13							
GRA1	**Grafenberg Arr**	**2.71**	**31**	*e*Pg	**Pg**	01 44 58.7	-0.8	
GRA1				*e*Sn	**Sn**	01 45 22.1	-0.7	
GRA1				*e*Sg	**Sg**	01 45 33.7	-0.9	
GRF	**Grafenberg Arr**	**2.71**	**31**	*e*Pg	**Pg**	01 44 58.7	-0.8	
GRF				*e*Sn	**Sn**	01 45 22.1	-0.7	
GRF				*e*Sg	**Sg**	01 45 32.0	-2.6	
	SNR=13							
GRF	**Grafenberg Arr**	**2.71**	**31**	*e*Pg	**Pg**	01 44 58.7	-0.8	
GRF				*e*Sn	**Sn**	01 45 22.1	-0.7	
GRF	**Grafenberg Arr**	**2.71**	**31**	*e*Pg	**Pg**	01 44 58.7	-0.8	
GRF				*e*Sn	**Sn**	01 45 22.1	-0.7	
GRF				*e*Sg	**Sg**	01 45 33.7	-0.9	
RFYF	**Reffroy**	**2.74**	**298**	*e*Pn	**Pn**	01 44 51.0	+0.2	
	baz=125							
RFYF				*e*Sg	**Sg**	01 45 35.0	-0.6	
	14nm,0.3s							
RFYF	**Reffroy**	**2.74**	**298**	*e*Pn	**Pn**	01 44 51.0	+0.2	
RFYF				*e*Sg	**Sg**	01 45 35.0	-0.6	
	7.2nm,0.3s							
SFTF	**Sexfontaines**	**2.86**	**288**	*e*Pg	**Pg**	01 45 01.2	-1.3	
	baz=120							
SFTF				*e*Sn	**Sn**	01 45 25.4	-1.2	
SFTF				*e*Sg	**Sg**	01 45 38.7	-0.8	
	10nm,0.2s							
SFTF	**Sexfontaines**	**2.86**	**288**	*e*Pg	**Pg**	01 45 01.2	-1.3	
SFTF				*e*Sn	**Sn**	01 45 25.4	-1.2	
SFTF				*e*Sg	**Sg**	01 45 38.7	-0.8	
	5.2nm,0.2s							
SFTF	**Sexfontaines**	**2.86**	**288**	*e*Pn	**Pn**	01 44 52.3	-0.2	
SFTF				*e*Pg	**Pg**	01 45 01.2	-1.3	
SFTF				*e*Sn	**Sn**	01 45 25.4	-1.2	
SFTF				*e*Sg	**Sg**	01 45 38.7	-0.8	
TNS	**Taunus Mts**	**2.88**	**352**	P	**Pn**	01 44 53.5	+0.8	
TNS				*e*Pn	**Pn**	01 44 53.5	+0.8	
	SNR=2.5							
MEZF	**Maizieres J'vi**	**2.95**	**294**	*e*P	**Pn**	01 44 56.6	+2.9	
MEZF				*e*Sn	**Sn**	01 45 27.5	-1.2	
MEZF				*e*Sg	**Sg**	01 45 41.8	-0.4	
	8.5nm,0.3s,baz=116,SNR=1.0							
MEZF	**Maizieres J'vi**	**2.95**	**294**	*e*P	**Pn**	01 44 56.6	+2.9	
MEZF				*e*Sn	**Sn**	01 45 27.5	-1.2	
MEZF				*e*Sg	**Sg**	01 45 41.8	-0.4	
	4.2nm,0.3s,SNR=1.0							
WET	**Wettzell**	**3.08**	**54**	*e*Pn	**Pn**	01 44 55.7	+0.2	
	SNR=2.1							
MBDF	**Montbardon**	**3.11**	**212**	*e*Pg	**Pg**	01 45 05.5	-1.7	
MBDF				*e*Sg	**Sg**	01 45 46.1	-1.4	
	3.9nm,0.4s							
MBDF	**Montbardon**	**3.11**	**212**	*e*Pg	**Pg**	01 45 05.5	-1.7	
MBDF				*e*Sg	**Sg**	01 45 46.1	-1.4	
	2.0nm,0.4s							
MBDF	**Montbardon**	**3.11**	**212**	*e*Pn	**Pn**	01 44 55.5	-0.4	
MBDF				*e*Pg	**Pg**	01 45 05.5	-1.7	
MBDF				*e*Sg	**Sg**	01 45 46.1	-1.4	
ORIF	**Oris-en-Rattie**	**3.33**	**223**	*e*Pg	**Pg**	01 45 10.2	-1.2	
ORIF				*e*Sg	**Sg**	01 45 52.9	-1.6	
	3.2nm,0.3s							
ORIF	**Oris-en-Rattie**	**3.33**	**223**	*e*Pg	**Pg**	01 45 10.2	-1.2	
ORIF				*e*Sg	**Sg**	01 45 52.9	-1.6	
	1.6nm,0.3s							
GEC2	**GERESS Array S**	**3.41**	**63**	*e*Pn	**Pn**	01 45 01.0	+1.0	
	SNR=1.9							
GEC2	**GERESS Array S**	**3.41**	**63**	*e*Pn	**Pn**	01 44 59.7	-0.4	
GEC2	**GERESS Array S**	**3.41**	**63**	*e*Pg	**Pg**	01 45 10.8	-2.1	
GEC2	**GERESS Array S**	**3.41**	**63**	*e*Pn	**Pn**	01 44 59.7	-0.4	
GEC2				*e*Pg	**Pg**	01 45 10.8	-2.1	
GEC2				*e*Sg	**Sg**	01 45 54.1	-3.1	
KHC	**Kasperske Hory**	**3.46**	**58**	*e*Pn	**Pn**	01 45 01.0	+0.2	
KHC				*e*PG	**Pg**	01 45 08.9	-5.1	
KHC				*e*SN	**Sn**	01 45 39.5	-1.9	
KHC				*e*SG	**Sg**	01 45 55.6	-3.2	
	comp=Z,6.5nm,0.3s							
LOR	**Lormes**	**3.57**	**270**	*e*Pg	**Pg**	01 45 14.5	-1.5	
	baz=88,SNR=1.0							
LOR				*e*Sn	**Sn**	01 45 42.1	-1.9	
	baz=82,SNR=1.0							
LOR				*e*Sg	**Sg**	01 46 01.2	-1.0	
	comp=Z,6.2nm,0.2s,baz=85,SNR=1.0							
LOR	**Lormes**	**3.57**	**270**	*e*Pg	**Pg**	01 45 14.5	-1.5	
	SNR=1.0							
LOR				*e*Sn	**Sn**	01 45 42.1	-1.9	
	SNR=1.0							
LOR				*e*Sg	**Sg**	01 46 01.2	-1.0	
	comp=Z,3.1nm,0.2s,SNR=1.0							
LOR	**Lormes**	**3.57**	**270**	*e*P	**Pn**	01 45 05.0	+2.8	
LOR				*e*Pg	**Pg**	01 45 14.5	-1.5	
LOR				*e*Sn	**Sn**	01 45 42.1	-1.9	
LOR				*e*Sg	**Sg**	01 46 01.2	-1.0	
NKC	**Novy Kostel**	**3.61**	**36**	*e*PG	**Pg**	01 45 13.1	-3.6	
NKC				*e*SN	**Sn**	01 45 42.6	-2.4	
NKC				*e*SG	**Sg**	01 46 02.2	-1.3	
	comp=Z,6.6nm,0.3s							
MOX	**Moxa**	**3.66**	**26**	*e*Sg	**Sg**	01 46 03.2	-1.9	
	SNR=3.7							
MOX	**Moxa**	**3.66**	**26**	*e*SG	**Sg**	01 46 04.1	-1.0	
GUNZ	**Gunzen**	**3.67**	**34**	*e*Sg	**Sg**	01 46 02.6	-2.7	
	SNR=3.9							
SMF	**Signal de Mont**	**3.67**	**260**	*e*Pg	**Pg**	01 45 16.5	-1.5	
	SNR=1.0							
SMF				*e*Sg	**Sg**	01 46 03.2	-2.4	
	comp=Z,3.9nm,0.2s,SNR=1.0							
SMF	**Signal de Mont**	**3.67**	**260**	*e*Pg	**Pg**	01 45 16.5	-1.5	
	SNR=1.0							
SMF				*e*Sg	**Sg**	01 46 03.2	-2.4	
	comp=Z,2.0nm,0.2s,SNR=1.0							
SMF	**Signal de Mont**	**3.67**	**260**	*e*Pn	**Pn**	01 45 03.9	+0.2	
SMF				*e*Pg	**Pg**	01 45 16.5	-1.5	
SMF				*e*Sg	**Sg**	01 46 03.2	-2.4	
WERD	**Werda**	**3.73**	**33**	*e*Sg	**Sg**	01 46 04.7	-2.5	
	SNR=4.1							
TANN	**Tannenbergstha**	**3.76**	**35**	*e*Sg	**Sg**	01 46 05.2	-3.0	
	SNR=4.3							
SSF	**Saint Saulge**	**3.83**	**267**	*e*Pg	**Pg**	01 45 19.1	-1.8	
SSF				*e*Sg	**Sg**	01 46 08.7	-1.8	
	comp=Z,2.5nm,0.2s,SNR=1.0							
SSF	**Saint Saulge**	**3.83**	**267**	*e*Pg	**Pg**	01 45 19.1	-1.8	
SSF				*e*Sg	**Sg**	01 46 08.7	-1.8	
	comp=Z,1.2nm,0.2s,SNR=1.0							
SSF	**Saint Saulge**	**3.83**	**267**	*e*Pn	**Pn**	01 45 06.1	+0.3	
SSF				*e*P		01 45 08.3		
SSF				*e*Pg	**Pg**	01 45 19.1	-1.8	
SSF				*e*Sg	**Sg**	01 46 08.7	-1.8	
AVF	**Avril sur Loir**	**3.97**	**264**	*e*Pg	**Pg**	01 45 21.6	-2.1	
	SNR=1.0							
AVF				*e*Sg	**Sg**	01 46 12.9	-2.2	
	comp=Z,3.9nm,0.6s,SNR=1.0							
AVF	**Avril sur Loir**	**3.97**	**264**	*e*Pg	**Pg**	01 45 21.6	-2.1	
	SNR=1.0							
AVF				*e*Sg	**Sg**	01 46 12.9	-2.2	
	comp=Z,2.0nm,0.6s,SNR=1.0							
AVF	**Avril sur Loir**	**3.97**	**264**	*e*P	**Pn**	01 45 10.2	+2.4	
AVF				*e*Pg	**Pg**	01 45 21.6	-2.1	
AVF				*e*Sn	**Sn**	01 45 52.3	-1.9	
AVF				*e*Sg	**Sg**	01 46 13.4	-2.0	
VIVF	**Saint-Julien-l**	**3.98**	**232**	*e*Pg	**Pg**	01 45 21.8	-2.1	
	SNR=1.0							
VIVF				*e*Sn	**Sn**	01 45 52.3	-1.9	
	SNR=1.0							
VIVF				*e*Sg	**Sg**	01 46 13.4	-2.0	
	comp=Z,2.0nm,0.2s							
VIVF	**Saint-Julien-l**	**3.98**	**232**	*e*Pg	**Pg**	01 45 21.8	-2.1	
	SNR=1.0							
VIVF				*e*Sn	**Sn**	01 45 52.3	-1.9	
	SNR=1.0							
VIVF				*e*Sg	**Sg**	01 46 13.4	-2.0	
	comp=Z,1.0nm,0.2s							
VIVF	**Saint-Julien-l**	**3.98**	**232**	*e*Pn	**Pn**	01 45 08.4	+0.5	
VIVF				*e*Pg	**Pg**	01 45 21.8	-2.1	
VIVF				*e*Sn	**Sn**	01 45 52.3	-1.9	
VIVF				*e*Sg	**Sg**	01 46 13.4	-2.0	
BAIF	**Baives**	**4.21**	**311**	*e*Pg	**Pg**	01 45 25.9	-2.2	
BAIF				*e*Sg	**Sg**	01 46 20.3	-2.3	
	comp=Z,0.8nm,0.2s							
BAIF	**Baives**	**4.21**	**311**	*e*Pg	**Pg**	01 45 25.9	-2.2	
BAIF				*e*Sg	**Sg**	01 46 20.3	-2.3	
	comp=Z,0.4nm,0.2s							
BAIF	**Baives**	**4.21**	**311**	*e*P	**Pn**	01 45 13.6	+2.6	
BAIF				*e*Pg	**Pg**	01 45 25.9	-2.2	
BAIF				*e*Sg	**Sg**	01 46 20.3	-2.3	
BGF	**Bois d'Agland**	**4.36**	**261**	*e*Pg	**Pg**	01 45 29.2	-1.9	
	SNR=1.0							
BGF				*e*Sg	**Sg**	01 46 24.3	-3.3	
	comp=Z,6.5nm,0.4s,SNR=1.0							
BGF	**Bois d'Agland**	**4.36**	**261**	*e*Pg	**Pg**	01 45 29.2	-1.9	
	SNR=1.0							
BGF				*e*Sg	**Sg**	01 46 24.3	-3.3	
	comp=Z,3.2nm,0.4s,SNR=1.0							
BGF	**Bois d'Agland**	**4.36**	**261**	*e*Pn	**Pn**	01 45 13.8	+0.7	
BGF				*e*Pg	**Pg**	01 45 29.2	-1.9	
BGF				*e*Sg	**Sg**	01 46 24.3	-3.3	
HYF	**Humbligny**	**4.40**	**271**	*e*Pg	**Pg**	01 45 29.6	-2.2	
HYF				*e*Sg	**Sg**	01 46 26.3	-2.4	
PRU	**Pruhonice**	**4.45**	**52**	*e*SG	**Sg**	01 46 26.0	-4.3	
CLL	**Collm**	**4.69**	**32**	*e*Sg	**Sg**	01 46 36.8	-1.1	
	SNR=2.6							
CLL	**Collm**	**4.69**	**32**	*e*Sg	**Sg**	01 46 37.0	-0.9	
BRG	**Berggiesshubel**	**4.72**	**40**	SG	**Sg**	01 46 38.4	-0.7	
	comp=Z,1.7nm,0.3s							
TCF	**Toulx Ste Croi**	**4.86**	**260**	*e*Pn	**Pn**	01 45 21.0	+1.1	
	SNR=1.0							
TCF				*e*Sn	**Sn**	01 46 13.7	-2.0	
	comp=Z,0.9nm,0.2s,SNR=1.0							
TCF	**Toulx Ste Croi**	**4.86**	**260**	*e*Pn	**Pn**	01 45 21.0	+1.1	
	SNR=1.0							
TCF				*e*Sn	**Sn**	01 46 13.7	-2.0	
	comp=Z,0.4nm,0.2s,SNR=1.0							
CAF	**Calviac**	**5.47**	**246**	*e*Pn	**Pn**	01 45 27.6	-0.8	
DPC	**Dobruska-Polom**	**5.61**	**55**	*e*SG	**Sg**	01 47 04.4	-3.3	

CASC 19 02:12:57.7±2.9,1509N×8712W,h0km±12km,MD4.3, ML3.9,2C,Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**1.03**	**188**	*e*P	Pg	02 13 15.7	-1.8
TGUH				*e*S	Sg	02 13 35.6	+4.6
TGUH				AML	AML	02 13 36.3	
	comp=N,3µm,0.3s						
CAHU	**Cacacuatique**	**1.68**	**219**	*e*P	x	02 13 27.1	
CAHU				*e*S	x	02 13 52.2	
CNCH	**Conchagua**	**1.93**	**201**	*e*P	x	02 13 31.2	
CNCH				*e*S	x	02 13 58.2	
BLLM	**Bellamira**	**1.96**	**214**	*e*P	x	02 13 31.0	
BLLM				*e*S	x	02 13 58.8	
VSM	**San Miguel**	**1.99**	**214**	*e*P	x	02 13 32.0	
VSM				*e*S	x	02 13 58.2	
SNVI	**San Vicente**	**2.22**	**229**	⇑*e*P	x	02 13 35.7	
SNVI				*e*S	x	02 14 05.8	
MTO2	**Montecristo 2**	**2.27**	**253**	*e*P	x	02 13 37.0	
LBRS	**Las Brisas**	**2.30**	**235**	*e*P	x	02 13 36.9	
LFRS	**El Faro**	**2.38**	**233**	*e*P	x	02 13 38.1	
LFRS				*e*S	x	02 14 09.8	
BOQS	**Boqueron**	**2.49**	**238**	*e*P	x	02 13 39.8	
BOQS				*e*S	x	02 14 12.4	
RBDL	**Robledal**	**2.67**	**249**	*e*P	x	02 13 42.7	
RBDL				*e*S	x	02 14 19.1	
SNJE	**San Jose**	**2.69**	**244**	⇑*e*P	x	02 13 43.5	
RTR	**El Retiro**	**2.72**	**245**	*e*P	x	02 13 43.8	
MOMN	**Momotombo**	**2.72**	**168**	*e*S	Sn	02 14 19.9	+3.6
SBLS	**San Blas**	**2.72**	**243**	*e*P	x	02 13 43.5	
APYN	**Apoyeque**	**2.93**	**165**	*e*P	Pn	02 13 46.0	+0.4
CHI2		**16.76**	**127**	*e*P		02 13 40.7	

JMA 19 02:15:33.6±0.6,3192N×14207E,h0km,M4.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**2.88**	**342**	P	Pn	02 16 22.0	+1.3
BSO1				*e*S	Sn	02 16 57.4	+1.4
BSO2	**Boso 2**	**3.03**	**339**	*e*S	Sn	02 17 01.7	+1.9
BSO3	**Boso 3**	**3.16**	**336**	P	Pn	02 16 26.3	+1.8
BSO3				*e*S	Sn	02 17 05.7	+2.8
JHO	**Hitachi**	**4.84**	**346**	*e*S	Sn	02 17 42.1	-2.4

IDC 19 02:27:38.8±4.2,316S×10097E,h0km,mb3.6/4,mb1 3.7/4, mb1mx3.6/19,mbtmp3.6/4,Error ellipse: s-maj=172.8km s-min=24.5km az=56.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.58**	**120**	P	P	02 34 45.8	-1.0
	0.2nm,0.3s,baz=299,slow=8.4,SNR=10						
ASAR	**Alice Springs**	**37.80**	**126**	P	P	02 34 58.1	+1.0
	0.3nm,0.4s,baz=300,slow=7.5,SNR=5.8						
SONM	**Songino Array**	**51.00**	**5**	P	P	02 36 42.8	+0.5
	0.7nm,0.6s,baz=182,slow=8.7,SNR=4.9						
MKAR	**Makanchi Array**	**52.40**	**344**	P	P	02 36 52.4	-0.4
	0.4nm,0.4s,baz=146,slow=8.8,SNR=4.1						
TXAR	**Lajitas Array**	**145.00**	**39**	PKPbc	PKPbc	02 47 17.5	-0.5
	0.6nm,0.6s,baz=307,slow=3.6,SNR=9.1						

MOS ***19*** *02:37:38.9±0.9,4702N×15569E,h10km,mb3.9/4,Error ellipse: s-maj=40.7km s-min=22.1km az=86.1*
IDC ***19*** *02:37:39.6±0.8,4695N×15571E,h0km,mb3.7/8, mb1 3.9/9,mb1mx3.7/22,mbtmp3.6/9,ML3.2/1,MS3.7/2, Ms1 3.7/2,ms1mx2.6/35,Error ellipse: s-maj=26.3km s-min=21.6km az=159.0*
NEIC ***19*** *02:37:41.2±0.6,4702N×15570E,h10km,Error ellipse: s-maj=16.9km s-min=13.7km az=128.0*
ISCJB ***19*** *02:37:42.6±0.8,469N±02×1557E±02,h33km,mb3.7/8, Error ellipse: s-maj=23.3km s-min=18.3km az=163.3*
ISC 19 02:37:44.8±0.8,470N±01×1557E±02,h35km,n17, σ0s86/13,mb3.7/8,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.22**	**11**	Pn	**Pn**	**02 39 11.8**	**-2.2**
	0.5nm,0.3s,baz=179,slow=13,SNR=5.4						
ASAJ	**Asahikawa**	**9.65**	**257**	LR	LR	02 42 47.0	
	comp=Z,54nm,21.1s,baz=146,slow=32						
SONM	**Songino Array**	**32.92**	**290**	P	**P**	**02 44 15.8**	**+0.3**
	0.4nm,0.5s,mb3.6,baz=100,slow=8.1,SNR=2.7						
ZALV	**Zalesovo Beam**	**43.89**	**306**	P	**P**	**02 45 48.0**	**+0.4**
	0.4nm,0.3s,mb3.6,baz=72,slow=11,SNR=3.3						
BBB	**Bella Bella**	**47.51**	**54**	LR	LR	03 02 24.6	
	comp=Z,690nm,21.8s,baz=311,slow=31						
MKAR	**Makanchi Array**	**48.39**	**298**	P	**P**	**02 46 23.4**	**+0.4**
	0.5nm,0

TAP 19 02:51:31.1, 2203N×12049E, h41km, ML3.7, 5D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEN	**Hengchun**	**0.23**	**96**	*i* P	Pn	02 51 38.9	+0.1
	baz=96						
HEN				S	Sn	02 51 45.3	+1.1
	baz=96						
TWK1	**Hengchun**	**0.31**	**107**	*i* P	Pn	02 51 39.6	0.0
	baz=106						
TWK1				S	Sn	02 51 46.5	+1.0
	baz=106						
TWP	**Hsiaoliuchiu**	**0.33**	**339**	P	Pn	02 51 40.4	+0.5
	baz=339						
TWP				*e*S	Sn	02 51 48.0	+2.0
	baz=339						
SCZT	**Fangliau**	**0.36**	**20**	*i* P	Pn	02 51 40.3	+0.1
	baz=19						
SCZT				S	Sn	02 51 47.5	+1.0
	baz=19						
TSEB	**Hengchuen, Pin**	**0.40**	**109**	*i* P	Pn	02 51 41.2	+0.5
	baz=110						
TSEB				*e*S	Sn	02 51 47.9	+0.5
	baz=110						
EAST	**Anshuo**	**0.48**	**44**	*i* P	Pn	02 51 42.3	+0.6
	baz=43						
EAST				S	Sn	02 51 50.4	+1.3
	baz=43						
TAW	**Tawu**	**0.50**	**49**	P	Pn	02 51 42.4	+0.5
	baz=49						
TAW				*e*S	Sn	02 51 49.7	+0.2
	baz=49						
KAU	**Kaohsiung**	**0.56**	**343**	*e*P	Pn	02 51 43.1	+0.4
	baz=342						
KAU				*e*S	Sn	02 51 52.4	+1.5
	baz=342						
ECL	**Taimali**	**0.71**	**37**	*i* P	Pn	02 51 45.3	+0.6
	baz=37						
ECL				S	Sn	02 51 55.1	+0.6
	baz=37						
SSD	**Sandimen**	**0.72**	**11**	P	Pn	02 51 45.2	+0.3
	baz=10.0						
SSD				*e*S	Sn	02 51 55.8	+1.0
	baz=10.0						
TWM1	**Shoushan**	**0.79**	**356**	*e*P	Pn	02 51 46.7	+0.9
	baz=355						
TWG	**Pinlang**	**0.95**	**34**	P	Pn	02 51 48.9	+0.9
	baz=34						
TWG				S	Sn	02 52 01.8	+1.3
	baz=34						
LAY	**Lan-yu**	**0.98**	**89**	*e*P	Pn	02 51 47.9	-0.6
	baz=89						
LAY				*e*S	Sn	02 52 01.1	-0.2
	baz=89						
TAI1	**Yung-k'ang**	**1.03**	**347**	*e*P	Pn	02 51 49.6	+0.5
	baz=346						
TAI1				*e*S	Sn	02 52 03.8	+1.4
	baz=346						
SGST	**Jiashian**	**1.05**	**5**	*e*P	Pn	02 51 49.9	+0.5
	baz=4.0						
SGST				*e*S	Sn	02 52 04.2	+1.4
	baz=4.0						
CHN1	**Nanshi**	**1.15**	**2**	*e*P	Pn	02 51 51.8	+1.1
	baz=1.0						
CHN1				*e*S	Sn	02 52 06.8	+1.5
	baz=1.0						
STYT	**Tauyuan**	**1.15**	**12**	*e*P	Pn	02 51 51.6	+0.8
	baz=12						
STYT				*e*S	Sn	02 52 06.8	+1.4
	baz=12						
SCLT	**Jiali**	**1.17**	**347**	*e*P	Pn	02 51 51.5	+0.5
	baz=346						
SCLT				*e*S	Sn	02 52 07.0	+1.2
	baz=346						
WTP	**Ta-pu**	**1.21**	**5**	*e*P	Pn	02 51 52.8	+1.1
	baz=5.0						
WTP				*e*S	Sn	02 52 07.9	+1.1
	baz=5.0						
TWK	**Hsinying**	**1.23**	**360**	*e*P	Pn	02 51 52.9	+1.0
	baz=359						
TWK				*e*S	Sn	02 52 07.6	+0.4
	baz=359						
ELDTW	**Lidau**	**1.25**	**23**	*e*P	Pn	02 51 53.3	+1.2
	baz=22						
ELDTW				*e*S	Sn	02 52 08.9	+1.2
	baz=22						
CHN4	**Tsaushan**	**1.32**	**4**	*e*P	Pn	02 51 53.1	+0.1
	baz=4.0						
CHN4				*e*S	Sn	02 52 10.1	+0.7
	baz=4.0						
CHKT	**Chengkung**	**1.34**	**37**	*e*P	Pn	02 51 54.3	+1.0
	baz=37						
CHKT				*e*S	Sn	02 52 11.3	+1.4
	baz=37						
CHN2	**Minshiung**	**1.49**	**360**	*e*P	Pn	02 51 56.6	+1.1
	baz=359						
CHN2				*e*S	Sn	02 52 15.1	+1.3
	baz=359						
ALS	**Alishan**	**1.50**	**11**	*e*P	Pn	02 51 56.5	+0.9
	baz=11						
ALS				*e*S	Sn	02 52 15.3	+1.4
	baz=11						
TWF1	**Yuli**	**1.51**	**29**	P	Pn	02 51 56.9	+1.2
	baz=29						
TWF1				*e*S	Sn	02 52 16.1	+1.9
	baz=29						
YUS	**Yu-Shan**	**1.51**	**16**	*e*P	Pn	02 51 57.3	+1.6
	baz=16						
YUS				*e*S	Sn	02 52 15.4	+1.2
	baz=16						
CHN5	**Tsauling**	**1.57**	**6**	*e*P	Pn	02 51 57.0	+0.5
	baz=6.0						
CHN5				*e*S	Sn	02 52 16.0	+0.4
	baz=6.0						
WSF	**Szhu**	**1.62**	**351**	*e*P	Pn	02 51 57.7	+0.5
	baz=351						
WSF				*e*S	Sn	02 52 17.0	+0.2
	baz=351						
WGK	**Gukeng**	**1.65**	**2**	*e*P	Pn	02 51 58.6	+1.0
	baz=2.0						
WGK				*e*S	Sn	02 52 18.9	+1.3
	baz=2.0						
EHY	**Hungye**	**1.66**	**27**	P	Pn	02 51 58.6	+0.9
	baz=27						
EHY				*e*S	Sn	02 52 19.3	+1.5
	baz=27						
SMLT	**Sun Moon Lake**	**1.88**	**12**	*e*P	Pn	02 52 01.7	+0.9
	baz=11						
SMLT				*e*S	Sn	02 52 24.8	+1.5
	baz=11						
TYC	**Yuchr**	**1.89**	**10**	*e*P	Pn	02 52 02.3	+1.3
	baz=10.0						
TYC				*e*S	Sn	02 52 24.9	+1.3
	baz=10.0						
ESL	**Shilin**	**1.98**	**26**	*e*P	Pn	02 52 03.5	+1.4
	baz=26						
ESL				*e*S	Sn	02 52 26.2	+0.6
	baz=26						
TCU	**Taichung**	**2.11**	**5**	*e*P	Pn	02 52 05.6	+1.6
	baz=4.0						
TCU				*e*S	Sn	02 52 30.0	+1.0
	baz=4.0						
WHF	**Hehuan Shan**	**2.22**	**19**	*e*P	Pn	02 52 07.1	+1.7
	baz=18						
WHF				*e*S	Sn	02 52 33.0	+1.3
	baz=18						
TWD	**Chiawan**	**2.28**	**26**	*e*P	Pn	02 52 07.6	+1.4
	baz=26						
TWD				*e*S	Sn	02 52 33.8	+0.7
	baz=26						
TWT	**Tachien**	**2.30**	**16**	*e*P	Pn	02 52 07.6	+1.0
	baz=15						
TWT				*e*S	Sn	02 52 34.4	+0.8
	baz=15						
TWQ1	**Liyutan**	**2.32**	**6**	*e*P	Pn	02 52 07.4	+0.5
	baz=6.0						
TWQ1				*e*S	Sn	02 52 35.0	+0.8
	baz=6.0						
NNS	**Nan Shan**	**2.53**	**19**	*e*P	Pn	02 52 11.1	+1.3
	baz=18						
NNS				*e*S	Sn	02 52 40.1	+0.7
	baz=18						
NSTT	**Nanjuang**	**2.63**	**10**	*e*P	Pn	02 52 12.3	+1.2
	baz=10.0						
NSTT				*e*S	Sn	02 52 42.2	+0.5
	baz=10.0						
ENA	**Nanau**	**2.65**	**26**	*e*P	Pn	02 52 13.7	+2.3
	baz=25						
ENA				*e*S	Sn	02 52 42.5	+0.3
	baz=25						
ENTT	**Nioudou**	**2.78**	**21**	*e*P	Pn	02 52 14.2	+1.1
	baz=20						
ENTT				*e*S	Sn	02 52 47.2	+1.8
	baz=20						
TWC	**Suao**	**2.85**	**26**	*e*P	Pn	02 52 15.4	+1.3
	baz=25						
TWC				*e*S	Sn	02 52 50.5	+3.2
	baz=25						

*ISCJB **19** 03:16:08.6±1.1, 3927N±004×2003E±008, h6km±6km, Error ellipse: s-maj=10.8km s-min=6.3km az=175.3*
*THE **19** 03:16:10.4, 3926N×2017E, h8km, ML2.5*
*ATH **19** 03:16:10.6, 3925N×2023E, h15km±4km, MD3.2/4*
*NEIC **19** 03:16:10.6, 3925N×2023E, h15km, MD3.2(ATH), After ATH.*
*CSEM **19** 03:16:11.1±0.2, 3926N×2024E, h8km, MD3.2, Error ellipse: s-maj=5.3km s-min=3.2km az=80.0*

ISC 19 03:16:10.6±0.8, 3923N±004×2022E±007, h1km±8km, n11, σ0§64/17, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.32**	**15**	*e*Pg	**Pg**	**03 16 15.9**	**-0.7**
IGT				*e*Sg	**Sg**	**03 16 21.3**	**+0.5**
KEK	**Kerkira**	**0.59**	**326**	*e*PN	**Pg**	**03 16 21.9**	**+0.1**
KEK				*e*SN	**Sg**	**03 16 29.8**	**+0.3**
LKD	**Levkas**	**0.62**	**147**	*e*Pg	**Pg**	**03 16 23.1**	**+0.7**
JAN	**Janina**	**0.65**	**48**	*e*PB	**Pg**	**03 16 22.3**	**-0.7**
JAN				*e*SN	**Sg**	**03 16 31.2**	**-0.2**
MEV	**Metsovon**	**0.96**	**54**	*e*Pg	**Pg**	**03 16 28.4**	**-0.6**
VLS	**Valsamata**	**1.09**	**165**	*e*Pg	**Pg**	**03 16 31.9**	**+0.5**
VLS	**Valsamata**	**1.09**	**165**	*e*PN	**Pn**	**03 16 31.5**	**-1.4**
VLS				*e*SN	**Sn**	**03 16 47.8**	**-0.7**
VLS	**Valsamata**	**1.09**	**165**	*e*Pg	**Pg**	**03 16 31.9**	**+0.5**
VLS				*e*Sn	**Sn**	**03 16 47.8**	**-0.7**
EVR	**Evrytania**	**1.27**	**104**	*e*PN	**Pn**	**03 16 35.7**	**+0.3**
THL	**Klokotos Trika**	**1.43**	**76**	*e*PN	**Pn**	**03 16 38.3**	**+0.7**
THL				*e*SN	**Sn**	**03 16 57.4**	**+0.5**
RLS	**Riolos of Patr**	**1.52**	**140**	*e*PN	**Pn**	**03 16 39.5**	**+0.7**

*ISCJB **19** 03:26:30.9±1.6, 469N±0.1×1530E±02, h62km±14km, mb3.7/7, Error ellipse: s-maj=30.7km s-min=12.3km az=136.3*
*IDC **19** 03:26:33.2±3.1, 4687N×15301E, h70km±28km, mb3.4/8, mb1 3.7/11, mb1mx3.5/26, mbtmp3.5/11, MS2.8/1, Ms1 2.8/1, ms1mx2.0/28, Error ellipse: s-maj=30.7km s-min=21.4km az=136.0*
*NEIC **19** 03:26:33.3±1.4, 4688N×15308E, h71km±13km, Error ellipse: s-maj=21.6km s-min=11.4km az=126.0*
*MOS **19** 03:26:37.5±3.0, 4698N×15357E, h139km, mb3.9/5, Error ellipse: s-maj=21.8km s-min=16.0km az=51.1*

ISC 19 03:26:33.2±1.4, 469N±01×1531E±02, h67km±12km, n24, σ0§85/21, mb3.5/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.97**	**247**	*e*PN	Px	03 27 46.0	
KUR				pmax	pmax		
	comp=Z,120nm,0.5s						
SKR	**Severo-Kuril's**	**4.29**	**27**	*e*PN	**Pn**	**03 27 36.0**	**0.0**
SKR				*e*		03 28 19.5	
PETK	**Petropavlovsk-**	**6.90**	**24**	P	**Pn**	**03 28 11.7**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=187,slow=10,SNR=3.5						
YSS	**Yuzh-Sakhalins**	**7.05**	**274**	*e*PN	Px	03 28 27.8	
ASAJ	**Asahikawa**	**7.85**	**253**	P	**Pn**	**03 28 24.1**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=56,slow=21,SNR=5.1						
ASAJ				LR	LR	03 31 10.7	
	comp=Z,68nm,20.9s,baz=8.0,slow=36						
ASAJ	**Asahikawa**	**7.85**	**253**	PN	**Pn**	**03 28 24.1**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,68nm,20.9s						
MJAR	**Matsushiro Arr**	**15.13**	**232**	P	**Pn**	**03 30 03.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=26,slow=7.8,SNR=4.2						
MJAR	**Matsushiro Arr**	**15.13**	**232**	*e*P	**Pn**	**03 30 06.0**	**+3.0**
KSRS	**Korea Array**	**20.80**	**252**	P	**P**	**03 31 08.3**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=56,slow=10.0,SNR=3.2						
KSRS	**Korea Array**	**20.80**	**252**	P	**P**	**03 31 08.3**	**-0.6**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ULN	**Ulaanbaatar**	**30.81**	**289**	*e*P	pP	03 32 55.9	-2.6
MKAR	**Makanchi Array**	**46.83**	**297**	P	**P**	**03 34 56.8**	**+0.7**
	comp=Z,0.2nm,0.3s,mb3.3,baz=61,slow=7.6,SNR=3.1						
KURK	**Kurchatov**	**47.20**	**303**	P	**P**	**03 34 59.0**	**-0.2**
	comp=Z,0.2nm,0.4s,mb3.2,baz=70,slow=8.5,SNR=2.1						
CMAR	**Chiang Mai Arr**	**52.36**	**256**	*i* P	**P**	**03 35 41.2**	**+2.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	**NORSAR Subarra**	**68.07**	**341**	P	**P**	**03 37 24.7**	**-0.5**
	comp=Z,1.0nm,0.6s,mb3.8,baz=25,slow=6.5						
NOA	**NORSAR Array B**	**68.07**	**341**	P	**P**	**03 37 25.2**	**0.0**
	comp=Z,1.9nm,0.7s,mb4.0,baz=26,slow=6.3,SNR=5.5						
NOA	**NORSAR Array B**	**68.07**	**341**	P	**P**	**03 37 25.2**	**0.0**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**68.64**	**199**	P	**P**	**03 37 28.3**	**-0.9**
	comp=Z,0.3nm,0.9s,mb3.1,baz=1.4,slow=14,SNR=3.1						
AKASG	**Malin Array Be**	**71.40**	**326**	P	**P**	**03 37 44.9**	**-0.9**
	comp=Z,0.8nm,0.4s,mb4.0,baz=33,slow=6.3,SNR=3.9						
AKASG	**Malin Array Be**	**71.40**	**326**	P	**P**	**03 37 44.9**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MLR	**Muntele Rosu**	**76.92**	**325**	P	**P**	**03 38 17.9**	**-0.1**
	comp=Z,1.7nm,0.8s,mb3.8,baz=106,slow=6.6,SNR=4.6						
MLR	**Muntele Rosu**	**76.92**	**325**	P	**P**	**03 38 17.9**	**-0.1**
MLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR	**Lajitas Array**	**77.46**	**61**	P	**P**	**03 38 21.6**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.3,baz=302,slow=4.3,SNR=5.5						
TXAR	**Lajitas Array**	**77.46**	**61**	*e*P	**P**	**03 38 21.6**	**+0.3**

*TEH **19** 03:38:19.3, 3737N×5005E, h3km, ML3.8*
*ISCJB **19** 03:38:59.7±0.5, 3740N±005×50.11E±004, h10km, Error ellipse: s-maj=7.0km s-min=4.5km az=7.0*
*CSEM **19** 03:39:00.2±0.1, 3737N×5006E, h20km, ML3.8, Error ellipse: s-maj=2.8km s-min=1.7km az=16.0*
*THR **19** 03:39:01.5±0.5, 3720N×4996E, h18km±4km, ML3.8*

ISC 19 03:39:01.4±0.4, 3729N±004×5007E±004, h10km, n42, σ0§97/50, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZNJK	**Zanjan**	**1.27**	**241**	*e*Pg	**Pg**	**03 39 23.1**	**-2.8**
ZNJK				*e*Sg	**Sg**	**03 39 38.7**	**-3.8**
ZNJK				AML	AML	03 39 40.7	
	comp=N,2μm,0.4s						
ZNJK				AML	AML	03 39 44.6	
	comp=E,1μm,0.3s						
THKV	**Tehran--Karaj**	**1.52**	**155**	*e*Pg	**Pg**	**03 39 28.9**	**-1.7**
THKV				*e*Sg	**Sg**	**03 39 49.1**	**-1.2**
THKV				AML	AML	03 39 51.7	
	comp=N,3μm,0.4s						
THKV	**Tehran--Karaj**	**1.52**	**155**	*e*Pg	**Pg**	**03 39 28.9**	**-1.7**
	SNR=92						
THKV				*e*Sg	**Sg**	**03 39 49.1**	**-1.2**
	SNR=92						
IMHD	**Mahdasht**	**1.67**	**163**	*e*Pn	**Pn**	**03 39 30.7**	**-0.1**
IMHD				*e*		03 39 55.6	
IRAZ	**Razeghan**	**1.89**	**184**	*e*Pn	**Pn**	**03 39 33.9**	**+0.2**
IRAZ				*e*		03 40 00.3	
IAFJ	**Afjeh**	**1.95**	**137**	*e*Pn	**Pn**	**03 39 34.9**	**+0.3**
IAFJ				*e*		03 40 07.5	
ISRB	**Sarab**	**1.98**	**286**	*e*Pn	**Pn**	**03 39 34.4**	**-0.7**
IPRN	**Peran**	**2.10**	**119**	*e*Pn	**Pn**	**03 39 35.9**	**-0.7**
IPRN				*e*		03 40 13.9	
DAMV	**Damavand**	**2.26**	**137**	*e*Pn	**Pn**	**03 39 40.1**	**+1.3**
IDMV	**Damavand**	**2.33**	**137**	*e*Pn	**Pn**	**03 39 40.8**	**+1.0**
IDMV				*e*		03 40 21.1	
IALA	**Alasht**	**2.51**	**118**	*e*Pn	**Pn**	**03 39 40.9**	**-1.4**
IALA				*e*		03 40 25.3	
IBST	**Bostanabad**	**2.56**	**280**	*e*Pn	**Pn**	**03 39 41.8**	**-1.2**
IHRS	**Heris**	**2.61**	**294**	*e*Pn	**Pn**	**03 39 43.0**	**-0.7**
IVRN	**Varamin**	**2.66**	**149**	*e*Pn	**Pn**	**03 39 45.0**	**+0.7**
IVRN				*e*Sg	**Sg**	**03 40 24.9**	**-1.8**
IVRN	**Varamin**	**2.66**	**149**	*e*Pn	**Pn**	**03 39 45.0**	**+0.7**
IVRN				*e*Lg		03 40 25.1	
IVRN				*e*		03 40 28.6	
IFIR	**Firoozkooh**	**2.72**	**127**	*e*Pn	**Pn**	**03 39 46.3**	**+1.2**
IFIR				*e*		03 40 37.2	
ASAO	**Ashtian**	**2.74**	**181**	*e*Pn	**Pn**	**03 39 45.8**	**+0.3**
ASAO				*e*Sg	**Sg**	**03 40 24.4**	**-5.0**
GHVR	**GHOM**	**2.98**	**160**	*e*Pn	**Pn**	**03 39 49.2**	**+0.5**
GHVR				AML	AML	03 40 43.1	
	comp=N,218nm,0.8s						
GHVR				AML	AML	03 40 43.5	
	comp=E,301nm,0.4s						
ISHM	**Shahmirzad**	**2.99**	**119**	*e*Pn	**Pn**	**03 39 49.5**	**+0.7**
ISHM				*e*		03 40 43.0	
IKIA	**Kiasar**	**3.10**	**109**	*e*Pn	**Pn**	**03 39 50.5**	**+0.2**
IKIA				*e*Sn	**Sn**	**03 40 27.1**	**-0.3**
IKIA	**Kiasar**	**3.10**	**109**	*e*Pn	**Pn**	**03 39 50.5**	**+0.2**
IKIA				*e*Sn	**Sn**	**03 40 27.1**	**-0.3**
IKIA				*e*		03 40 48.9	
IGLO	**Ghaloghah**	**3.11**	**104**	*e*Pn	**Pn**	**03 39 50.4**	**-0.2**
IGLO				*e*		03 40 32.8	
ISFB	**Sefidab**	**3.42**	**148**	*e*Pn	**Pb**	**03 40 02.4**	**+0.3**
ISFB				*e*	**Sg**	**03 40 50.2**	**-1.2**
ILIN	**Lien**	**3.46**	**228**	*e*Pn	**Pn**	**03 39 55.9**	**+0.6**
ILIN				*e*		03 40 56.2	
IANJ	**Anjilo**	**3.59**	**119**	*e*Pn	**Pn**	**03 39 57.9**	**+0.7**
IANJ				*e*		03 41 00.2	
ISHB	**Shabestar**	**3.67**	**287**	*e*Pn	**Pn**	**03 39 57.3**	**-0.9**
IKOM	**Komasi**	**3.75**	**215**	*e*Pn	**Pn**	**03 40 00.7**	**+1.4**
IKOM				*e*		03 41 02.5	
IVIS	**Veis**	**3.80**	**224**	*e*Pn	**Pn**	**03 40 00.9**	**+0.8**
IVIS				*e*		03 41 05.1	
IGHG	**Ghaleghazi**	**4.11**	**225**	*e*Pn	**Pb**	**03 40 16.9**	**+3.1**
IGHG				*e*		03 41 22.0	
IKLH	**Kolahrood**	**4.15**	**162**	*e*Pn	**Pn**	**03 40 05.7**	**+0.8**
IKLH				*e*		03 41 10.5	
IPIR	**Pirpir**	**4.65**	**171**	*e*Pn	**Pn**	**03 40 13.1**	**+1.4**
IPIR				*e*		03 41 31.0	
IZEF	**Zefreh**	**4.76**	**156**	*e*Pn	**Pn**	**03 40 14.1**	**+0.9**
IZEF	**Zefreh**	**4.76**	**156**	*e*Pn	**Pn**	**03 40 14.3**	**+1.1**
IZEF				*e*		03 41 34.0	
ISHV	**Shirvan**	**6.08**	**85**	*e*Pn	**Pn**	**03 40 30.6**	**-0.7**
ISHV				*e*		03 41 42.6	
ISAD	**Sadrabad**	**6.14**	**150**	*e*Pn	**Pn**	**03 40 32.9**	**+0.8**
ISAD				*e*		03 41 04.2	
ISFR	**Sfrayin**	**6.33**	**90**	*e*Pn	**Pn**	**03 40 34.3**	**-0.5**
ISFR				*e*		03 40 38.5	
IKRD	**Kardeh**	**6.77**	**92**	*e*Pn	**Pb**	**03 40 51.6**	**-7.6**
IKRD				*e*		03 40 54.1	
IEMG	**Emamgholi**	**6.83**	**86**	*e*Pn	**Pn**	**03 40 41.3**	**-0.4**
IEMG				*e*		03 42 03.6	
IAKL	**Akhelmad**	**6.99**	**93**	*e*Pn	**Pn**	**03 40 43.7**	**-0.1**
IAKL				*e*		03 40 48.6	
IPAY	**Payeh**	**7.20**	**94**	*e*Pn	**Pn**	**03 40 47.1**	**+0.4**
IPAY				*e*		03 40 47.9	
IMOG	**Moghan**	**7.54**	**96**	*e*Pn	**Pn**	**03 40 51.5**	**+0.1**
IMOG				*e*		03 40 53.5	
IMYA	**Miami**	**8.10**	**94**	*e*Pn	**Pn**	**03 40 58.9**	**-0.2**
IMYA				*e*		03 41 00.8	

*ISCJB **19** 03:42:25.6±1.5, 3517S±007×17986E±008, h64km±12km, mb4.6/19, Error ellipse: s-maj=12.7km s-min=10.9km az=158.7*
*IDC **19** 03:42:26.3±2.2, 3505S×17986E, h62km±18km, mb4.4/11, mb1 4.5/13, mb1mx4.4/19, mbtmp4.4/13, MS4.1/11, Ms1 4.1/11, ms1mx3.9/17, Error ellipse: s-maj=18.3km s-min=12.3km az=162.0*
*NEIC **19** 03:42:26.9±1.4, 3515S×17991E, h66km±12km, mb4.6/9, Error ellipse: s-maj=11.4km s-min=10.5km az=209.0*

ISC 19 03:42:27.1±1.3, 3515S±008×17988E±008, h63km±12km, n53, σ0§92/37, mb4.6/19, 3C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**3.82**	**215**	P	**Pn**	**03 43 22.7**	**-0.7**
	26nm,0.3s,baz=30,slow=4.7,SNR=89						
URZ				S	**Sn**	**03 44 07.1**	**-0.1**
	21nm,0.3s,baz=354,slow=17,SNR=3.5						
RAO	**Raoul Island**	**6.17**	**18**	LR	LR	03 45 56.2	
	comp=Z,836nm,19.3s,baz=168,slow=34						
SNZO	**South Karori**	**7.38**	**212**	*e*Pn	**Pn**	**03 44 07.0**	**-5.1**
SNZO				*e*Sn	**Sn**	**03 45 27.5**	**-6.8**
RPZ	**Rata Peaks**	**10.94**	**216**	P	**Pn**	**03 45 00.8**	**+0.1**
	2.1nm,0.3s,baz=85,slow=2.5,SNR=6.9						
RPZ				S	**Sn**	**03 46 50.2**	**-11**
	2.7nm,0.3s,baz=286,slow=20,SNR=4.1						
DZM	**Mont Dzumac**	**17.55**	**314**	*e*P	**Pn**	**03 46 28.4**	**+1.0**
RAR	**Rarotonga**	**22.62**	**58**	P	**P**	**03 47 20.9**	**-1.7**
	35nm,0.9s,mb4.8,baz=177,slow=12,SNR=4.4						
RAR				LR	LR	03 53 29.7	
	comp=Z,341nm,20.9s,baz=59,slow=29						
ARMA	**Armidale**	**24.18**	**273**	*e*P	**P**	**03 47 42.7**	**+5.2**
STKA	**Stephens Creek**	**31.96**	**265**	*e*P	**P**	**03 48 50.2**	**+3.2**
	5.6nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**31.96**	**265**	P	**P**	**03 48 49.2**	**+2.2**
	8.7nm,1.1s,mb4.5,baz=104,slow=7.4,SNR=4.3						
PPT	**Papeete**	**32.30**	**65**	*e*LR	LR	03 57 11.2	
	814nm,26.8s,baz=231						
PPT	**Papeete**	**32.30**	**65**	LR	LR	03 58 44.3	
	comp=Z,358nm,18.9s,baz=189,slow=30						
CTA	**Charters Tower**	**33.17**	**288**	P	**P**	**03 48 58.3**	**+0.7**
	3.6nm,0.4s,mb4.6,baz=124,slow=7.1,SNR=6.8						
COEN	**Coen**	**39.18**	**293**	*e*P	**P**	**03 49 49.4**	**+0.5**
	6.8nm,0.9s,mb4.4						
RKT	**Rikitea**	**40.90**	**85**	*e*LR	LR	04 01 13.9	
	706nm,27.8s						
ASAR	**Alice Springs**	**41.33**	**273**	P	**P**	**03 50 06.6**	**-0.1**
	12nm,0.6s,mb4.8,baz=115,slow=7.1,SNR=49						
ASAR				S	**S**	**03 56 16.6**	**-0.1**
	1.5nm,1.1s,baz=202,slow=23,SNR=4.3						
WB2	**Warramunga Arr**	**42.74**	**278**	*i* P	**P**	**03 50 18.1**	**-0.2**
WRAB	**Tennant Creek**	**42.75**	**278**	*e*P	**P**	**03 50 18.0**	**-0.3**
	10nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**42.75**	**278**	P	**P**	**03 50 18.1**	**-0.2**
	9.5nm,0.7s,mb4.6,baz=119,slow=7.7,SNR=65						
WRA				S	**S**	**03 56 35.8**	**-1.9**
	0.4nm,0.8s,baz=120,slow=14,SNR=3.0						
WRA				LR	LR	04 08 48.4	
	comp=Z,392nm,19.5s,baz=130,slow=37						
TAOE	**Nuku Hiva Isla**	**44.90**	**64**	*e*LR	LR	04 02 41.4	
	1μm,28.3s						
CASY	**Casey**	**50.13**	**210**	*e*P	**P**	**03 51 14.9**	**-0.6**
CASY				*e*	pP	03 51 27.8	-4.0
FITZ	**Fitzroy Crossi**	**50.77**	**275**	*e*P	**P**	**03 51 20.1**	**-0.9**
	8.0nm,0.7s,mb4.8						
QSPA	**South Pole Qui**	**54.98**	**180**	P	**P**	**03 51 52.5**	**+1.4**
	15nm,1.0s,mb5.0,baz=22,slow=4

TXAR	**Lajitas Array**	**96.41**	**59**	LR	LR	04 27 52.3		
	comp=Z,82nm,20.7s,baz=185,slow=28							
LPAZ	**La Paz**	**97.76**	**116**	LR	LR	04 30 11.9		
	comp=Z,58nm,18.1s,baz=47,slow=29							
CPUP	**Villa Florida**	**98.36**	**130**	LR	LR	04 32 50.2		
	comp=Z,169nm,18.5s,baz=188,slow=31							
MKAR	**Makanchi Array**	**119.39**	**309**	PKP	PKPdf	04 01 07.1		-1.7
	0.3nm,0.5s,baz=139,slow=3.1,SNR=3.7							
ARCES	**ARCESS Array B**	**142.78**	**345**	PKhKP		04 01 46.5		
	3.5nm,0.8s,baz=57,slow=1.7,SNR=6.0							
ARCES				PKP	PKPdf	04 01 53.0		+0.9
	4.0nm,0.8s,baz=90,slow=1.8,SNR=6.2							
JOF	**Joensuu**	**146.05**	**335**	*e*pkp	PKPdf	04 01 56.4		-1.5
	4.1nm,0.5s							
KAF	**Kangasniemi**	**148.30**	**337**	*e*pkp	PKPdf	04 02 02.3		+0.6
	2.9nm,0.5s							
NB2	**NORSAR Subarra**	**153.09**	**348**	PKP	PKPbc	04 02 14.4		-2.1
	comp=Z,2.3nm,0.8s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	**153.09**	**348**	PKPbc	PKPbc	04 02 14.4		-2.2
	comp=Z,2.8nm,0.8s,baz=30,slow=2.0,SNR=11							
NOA	**NORSAR Array B**	**153.09**	**348**	PKPbc	PKPbc	04 02 14.3		-2.2
AKASG	**Malin Array Be**	**153.71**	**315**	PKPbc	PKPbc	04 02 15.9		-2.3
	comp=Z,0.3nm,0.2s,baz=94,slow=2.1,SNR=4.0							
AKASG				PKPab	PKPab	04 02 29.1		-2.2
	comp=Z,0.6nm,0.4s,baz=56,slow=3.3,SNR=4.3							
TORD	**Torodi Ar. Bea**	**158.04**	**185**	PKP	PKPdf	04 02 16.0		-1.2
	comp=Z,1.5nm,1.1s,baz=236,slow=0.8,SNR=4.3							
TORD				PKPab	PKPab	04 02 49.7		-0.9
	comp=Z,5.4nm,0.9s,baz=176,slow=3.6,SNR=14							
TORD	**Torodi Ar. Bea**	**158.04**	**185**	PKP	PKPdf	04 02 16.0		-1.2
TORD				PKPab	PKPab	04 02 49.7		-0.9

FUNV 19 04:15:13.2, 678N×7315W, h164km, MW3.5, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.36**	**37**	⇓*i*P	Pn	04 15 41.9	-0.5
CAPV				*e*S	Sn	04 16 03.2	-1.7
VIGV	**El Vigia**	**2.70**	**41**	*e*P	Pn	04 15 56.4	-1.1
VIGV				*e*S	Sn	04 16 28.3	-3.5
SOCV	**Socops**	**2.72**	**57**	*e*P	Pn	04 15 56.8	-0.8
SOCV				*e*S	Sn	04 16 28.7	-3.3
VIRV	**Villa del Rosa**	**3.77**	**11**	*e*P	Pn	04 16 09.3	-1.6
VIRV				*e*S	Sn	04 16 51.4	-4.4
CURV	**Curarigua**	**4.50**	**44**	*e*P	Pn	04 16 18.9	-1.4

ATH 19 04:31:58.0, 3823N×2101E, h53km±3km, MD3.1/3
ISCJB 19 04:31:59.6±1.0, 3781N±005×2093E±007, h10km, Error ellipse: s-maj=9.7km s-min=5.0km az=136.9
CSEM 19 04:32:00.4±0.3, 3792N×2108E, h10km, MD3.1, Error ellipse: s-maj=10.8km s-min=4.7km az=44.0
THE 19 04:32:00.9, 3785N×2088E, h18km
ISC 19 04:32:00.1±1.0, 3781N±005×2093E±007, h10km, n7, σ0§85/13, 1C-2D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.32**	**340**	*e*Pg	**Pg**	**04 32 06.0**	**-0.5**
KFL				*e*Sg	**Sg**	**04 32 12.1**	**+1.3**
VLS	**Valsamata**	**0.45**	**324**	*e*Pg	**Pg**	**04 32 08.8**	**-0.2**
VLS				*e*Sg	**Sg**	**04 32 15.7**	**+0.7**
VLS	**Valsamata**	**0.45**	**324**	⇑*i*P	**Pg**	**04 32 08.8**	**-0.2**
VLS				*e*S	**Sg**	**04 32 16.1**	**+1.1**
RLS	**Riolos of Patr**	**0.50**	**60**	⇓*i*P	**Pg**	**04 32 08.7**	**-1.1**
RLS				*e*S	**Sg**	**04 32 17.0**	**+0.7**
LKD	**Levkas**	**0.92**	**347**	*e*Pg	**Pg**	**04 32 16.4**	**-1.4**
LKD				*e*Sg	**Sg**	**04 32 29.5**	**-0.4**
ITM	**Ithomi**	**1.01**	**128**	⇓*i*P	**Pg**	**04 32 20.3**	**+0.7**
ITM				*e*S	**Sg**	**04 32 37.1**	**+4.3**
PYL	**PYLOS**	**1.12**	**144**	*e*Pg	**Pg**	**04 32 21.5**	**-0.1**

MOS 19 04:53:24.4±1.9, 4988N×8785E, h10km, mb4.0/1, Error ellipse: s-maj=32.0km s-min=19.5km az=80.0
ISCJB 19 04:53:27.1±4.1, 5019N±009×876E±01, h17km±44km, Error ellipse: s-maj=15.2km s-min=11.2km az=153.9
NNC 19 04:53:27.6±2.6, 5018N×8747E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=20.2km s-min=13.2km az=66.0
ISC 19 04:53:27.0±3.8, 5017N±009×877E±01, h3km±29km, n9, σ1§16/12, 7C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UKR	**Ust'-Kan**	**1.99**	**294**	*e*PN	**Pn**	**04 54 02.4**	**+0.8**
UKR				*e*		04 54 29.6	
TASR	**Tashtagol**	**2.59**	**3**	*e*PN	**Pn**	**04 54 11.6**	**+1.8**
TASR				*e*		04 54 47.1	
ELT	**Yel'tsovka**	**3.21**	**345**	*e*PN	**Pn**	**04 54 22.2**	**+3.9**
ELT				*e*		04 55 04.8	
HVS	**Khovu-Aksy**	**3.96**	**74**	⇓*e*PN	**Pn**	**04 54 25.2**	**-3.4**
HVS				*e*		04 54 35.5	
HVS				*e*		04 55 10.4	
BLRR	**Bol'shaya Rech**	**4.13**	**44**	⇓*e*PN	**Pn**	**04 54 29.5**	**-1.4**
BLRR				*e*		04 54 42.7	
BLRR						04 55 34.9	
KZLR	**Kyzyl**	**4.56**	**68**	⇓*e*PN	**Pn**	**04 54 38.1**	**+1.2**
KZLR				*e*		04 54 46.3	
KZLR				*e*		04 55 44.4	
MK31	**Makanchi Array**	**4.92**	**229**	Pn	**Pn**	**04 54 42.0**	**+0.3**
MK31				⇑Sn	**Sn**	**04 55 39.8**	**+0.8**
	5.2nm,0.4s,baz=57,slow=27,SNR=6.1						
MK31				⇑Lg		04 55 59.4	
	15nm,0.5s,baz=48,slow=33,SNR=9.9						
KURK	**Kurchatov**	**5.80**	**279**	⇑Pn	**Pn**	**04 54 52.8**	**-1.1**
	5.7nm,0.5s						
KURK				⇑Sn	**Sn**	**04 55 60.0**	**-0.9**
	3.8nm,0.5s						
KURK				⇑Lg		04 56 25.5	
	16nm,0.6s						
KURBB	**Kurchatov Arra**	**5.86**	**278**	⇓Pn	**Pn**	**04 54 53.8**	**-0.8**
	1.8nm,0.4s						
KURBB				⇑Sn	**Sn**	**04 56 02.3**	**+0.1**
	0.7nm,0.3s						
KURBB				⇑Lg		04 56 29.9	
	2.9nm,0.5s						

IDC 19 04:55:25.4±4.2, 208S×9959E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.7/19, mbtmp3.9/5, Error ellipse: s-maj=179.4km s-min=21.9km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.30**	**120**	P	P	05 02 47.6	-0.4
	0.6nm,0.5s,baz=303,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**39.53**	**126**	P	P	05 02 58.4	+0.1
	0.5nm,0.6s,baz=301,slow=8.3,SNR=5.0						
SONM	**Songino Array**	**50.06**	**6**	P	P	05 04 21.9	0.0
	1.2nm,0.6s,baz=191,slow=10,SNR=5.1						
MKAR	**Makanchi Array**	**51.00**	**345**	P	P	05 04 28.6	-0.4
	0.9nm,0.5s,baz=151,slow=8.5,SNR=7.2						
ZALV	**Zalesovo Beam**	**57.17**	**350**	P	P	05 05 13.8	-0.1
	1.0nm,0.4s,baz=176,slow=4.3,SNR=5.5						
TXAR	**Lajitas Array**	**145.01**	**37**	PKPbc	PKPbc	05 15 04.9	+0.2
	0.8nm,0.6s,baz=287,slow=1.0,SNR=14						

DDA 19 04:58:39.9, 3871N×2490E, h16km±2km, Md3.3
ISCJB 19 04:58:40.7±0.5, 3877N±002×2486E±002, h6km±4km, Error ellipse: s-maj=3.4km s-min=2.9km az=1.8
ISK 19 04:58:41.7, 3875N×2507E, h5km, MD3.5
ATH 19 04:58:42.5, 3878N×2487E, h32km±8km, MD3.5/11, ML3.3
CSEM 19 04:58:43.2±0.1, 3878N×2489E, h51km±2km, ML3.7, Error ellipse: s-maj=1.5km s-min=1.2km az=146.0
THE 19 04:58:43.4, 3876N×2485E, h19km, ML3.7
NEIC 19 04:58:44.2, 3877N×2485E, h46km, MD3.5(ATH), After THE.
ISC 19 04:58:41.4±0.5, 3876N±002×2484E±002, h9km±4km, n67, σ0§98/85, 9C-3D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.86**	**299**	*e*Pg	**Pg**	**04 58 59.2**	**+1.4**
AOS				*e*Sg	**Sg**	**04 59 11.3**	**+2.3**
CHOS	**Chios island**	**1.02**	**111**	*e*Pg	**Pg**	**04 59 01.9**	**+0.9**
CHOS				*e*Sg	**Sg**	**04 59 15.3**	**+1.1**
LIA	**Limnos Island**	**1.17**	**13**	*e*Pg	**Pg**	**04 59 03.3**	**-0.5**
LIA				*e*Sg	**Sg**	**04 59 19.7**	**+0.7**
LIA	**Limnos Island**	**1.17**	**13**	⇓*i*PN	**Pn**	**04 59 03.4**	**-0.5**
ATH	**Athens Observa**	**1.18**	**229**	⇑*i*PN	**Pn**	**04 59 04.9**	**+0.8**
LOS	**Limnos**	**1.19**	**9**	*e*Pg	**Pg**	**04 59 04.1**	**-0.1**
PRK	**Paraskevi**	**1.22**	**66**	⇑*i*PN	**Pn**	**04 59 04.8**	**+0.2**
PRK				*e*SN	**Sb**	**04 59 20.5**	**+0.1**
PRK	**Paraskevi**	**1.22**	**66**	*e*Pg	**Pg**	**04 59 04.7**	**0.0**
PRK	**Paraskevi**	**1.22**	**66**	⇑*i*P	**Pb**	**04 59 05.4**	**+0.8**
PRK				*e*S	**Sb**	**04 59 20.5**	**+0.1**
PRK	**Paraskevi**	**1.22**	**66**	⇑*i*P	**Pb**	**04 59 05.4**	**+0.8**
PRK				*e*S	**Sb**	**04 59 20.5**	**+0.1**
KVR	**Kavouri**	**1.25**	**223**	*e*PN	**Pn**	**04 59 05.8**	**+0.7**
KVR	**Kavouri**	**1.25**	**223**	*e*P	**Pn**	**04 59 05.0**	**-0.1**
NEO	**Neokhori**	**1.38**	**294**	*e*PN	**Pn**	**04 59 07.3**	**+0.6**
XOR	**Xorichti**	**1.42**	**296**	*e*Pg	**Pg**	**04 59 07.6**	**-1.0**
XOR				*e*Sg	**Sg**	**04 59 25.8**	**-1.3**
XOR	**Xorichti**	**1.42**	**296**	P	**Pn**	**04 59 07.6**	**+0.3**
XOR				S	**Sn**	**04 59 26.1**	**-0.1**
URLA	**Izmir**	**1.43**	**106**	*i* P	**Pn**	**04 59 07.5**	**0.0**
LKR	**Lokris**	**1.45**	**266**	*e*Pg	**Pg**	**04 59 07.2**	**-2.0**
LKR	**Lokris**	**1.45**	**266**	⇑*i*P	**Pn**	**04 59 08.1**	**+0.4**
PAIG	**Paliouri**	**1.48**	**323**	*e*Pg	**Pn**	**04 59 08.1**	**0.0**
PAIG				*e*Sg	**Sg**	**04 59 27.8**	**-1.0**
PAIG	**Paliouri**	**1.48**	**323**	P	**Pn**	**04 59 08.1**	**0.0**
PAIG				S	**Sn**	**04 59 26.0**	**-1.6**
AYVA	**Ayvalik**	**1.54**	**68**	*i* P	**Pn**	**04 59 08.3**	**-0.7**
EZN	**Ezine**	**1.57**	**47**	*e*PN	**Pn**	**04 59 08.6**	**-0.9**
EZN				*e*SN	**Sn**	**04 59 29.5**	**-0.3**
LTK	**Loutraki**	**1.65**	**244**	*e*Pb	**Pb**	**04 59 11.0**	**-0.9**
LTK				*e*Sb	**Sb**	**04 59 31.5**	**-1.2**
OUR	**Ouranopolis**	**1.71**	**337**	*e*Pb	**Pb**	**04 59 11.2**	**-1.8**
OUR	**Ouranopolis**	**1.71**	**337**	*e*Pb	**Pb**	**04 59 11.1**	**-1.9**
APE	**Apeiranthos**	**1.77**	**162**	*e*Pb	**Pb**	**04 59 11.9**	**-2.1**
APE				*e*Sb	**Sb**	**04 59 34.8**	**-1.6**
APE	**Apeiranthos**	**1.77**	**162**	⇑*i*PN	**Pn**	**04 59 12.7**	**+0.5**
APE	**Apeiranthos**	**1.77**	**162**	*e*Pb	**Pb**	**04 59 11.9**	**-2.1**
APE	**Apeiranthos**	**1.77**	**162**	⇑*i*P	**Pn**	**04 59 12.3**	**+0.1**
APE				*e*Sb	**Sb**	**04 59 34.8**	**-1.5**
APE	**Apeiranthos**	**1.77**	**162**	⇑*i*P	**Pn**	**04 59 12.3**	**+0.1**
SMG	**Samos**	**1.89**	**123**	⇓*i*PB	**Pb**	**04 59 14.9**	**-1.1**
IZM	**Izmir**	**1.93**	**100**	*e*PN	**Pn**	**04 59 13.4**	**-1.0**
KDAG	**Bornova**	**1.93**	**100**	*i* P	**Pn**	**04 59 13.6**	**-0.8**
PLG	**Polygyros**	**1.94**	**327**	⇑*i*PN	**Pn**	**04 59 15.1**	**+0.6**
AGG	**Agios Georgios**	**1.98**	**278**	*e*Pn	**Pn**	**04 59 15.4**	**+0.4**
GCAM	**G?zelcaml?**	**2.16**	**119**	*i* P	**Pn**	**04 59 17.2**	**-0.3**
LPK	**Lapseki**	**2.19**	**42**	*e*PN	**Pn**	**04 59 19.0**	**+1.0**
ENEZ	**Enez**	**2.22**	**27**	*e*PN	**Pn**	**04 59 19.4**	**+1.1**
LIT	**Litokhoron**	**2.26**	**307**	*e*Pn	**Pn**	**04 59 19.2**	**+0.3**
LIT	**Litokhoron**	**2.26**	**307**	*e*Pn	**Pn**	**04 59 19.2**	**+0.3**
AKS	**Akhisar**	**2.32**	**86**	*e*PN	**Pn**	**04 59 19.3**	**-0.5**
AKHS	**Akhisar**	**2.33**	**86**	*i* P	**Pn**	**04 59 25.8**	**+6.0**
ALN	**Alexandroupoli**	**2.33**	**23**	*e*Pn	**Pn**	**04 59 19.4**	**-0.5**
ALN				*e*Sn	**Sn**	**04 59 48.5**	**-0.2**
ALN	**Alexandroupoli**	**2.33**	**23**	*e*Pn	**Pn**	**04 59 19.4**	**-0.5**
ALN				S	**Sn**	**04 59 46.8**	**-1.8**
ALN	**Alexandroupoli**	**2.33**	**23**	P	**Pn**	**04 59 19.4**	**-0.5**
ALN				S	**Sn**	**04 59 46.8**	**-1.8**
BALY	**Balya**	**2.37**	**65**	*i* P	**Pn**	**04 59 20.3**	**-0.1**
THR5	**Thira Island,**	**2.37**	**170**	*e*Pn	**Pn**	**04 59 20.7**	**+0.3**
EVR	**Evrytania**	**2.37**	**275**	*e*PN	**Pn**	**04 59 21.8**	**+1.3**
EVR	**Evrytania**	**2.37**	**275**	*e*P	**Pn**	**04 59 22.0**	**+1.5**
VLX	**Vlachokerasia**	**2.39**	**235**	*e*Pn	**Pn**	**04 59 21.9**	**+1.2**
RDO	**Rodhopi**	**2.44**	**12**	*e*PN	**Pn**	**04 59 21.2**	**-0.3**
BALB	**Balikesir**	**2.52**	**69**	*e*PN	**Pn**	**04 59 22.4**	**-0.1**
VLI	**Veliai**	**2.53**	**217**	⇓*i*PN	**Pn**	**04 59 24.0**	**+1.3**
BODT	**Bodrum**	**2.58**	**130**	*e*PN	**Pn**	**04 59 23.7**	**+0.3**
RKY	**Sarkoy-Tekirda**	**2.64**	**42**	*e*PN	**Pn**	**04 59 24.1**	**0.0**
SART	**Tekirdag**	**2.64**	**42**	*i* P	**Pn**	**04 59 27.6**	**-0.4**
SART				*i* S	**Sn**	**04 59 58.0**	**+1.7**
ITM	**Ithomi**	**2.79**	**237**	*e*P	**Pn**	**04 59 28.6**	**+2.4**
KYTH	**Kithira**	**2.86**	**211**	*e*PN	**Pn**	**04 59 28.5**	**+1.4**
KYTH	**Kithira**	**2.86**	**211**	*e*P	**Pn**	**04 59 27.5**	**+0.4**
BNT	**Bandirma**	**2.87**	**55**	*e*PN	**Pn**	**04 59 27.4**	**+0.2**
DURS	**Dursunbey**	**2.95**	**72**	*i* P	**Pn**	**04 59 28.5**	**+0.1**
KULA	**Kula-Manisa**	**3.00**	**93**	*e*PN	**Pn**	**04 59 28.8**	**-0.3**
EDRB	**Edirne**	**3.41**	**25**	*e*PN	**Pn**	**04 59 36.6**	**+1.8**
SLVT	**Silivri**	**3.58**	**45**	*e*PN	**Pn**	**04 59 38.1**	**+1.1**
ULDT	**Uludag**	**3.60**	**66**	*i* P	**Pn**	**04 59 45.2**	**+7.8**
GDZ	**Gediz**	**3.63**	**83**	*i* P	**Pn**	**04 59 35.9**	**-1.8**
KHL	**Karahalli**	**3.70**	**95**	*e*PN	**Pn**	**04 59 38.7**	**0.0**

NEIC 19 05:15:02.0, 3127S×7068W, h88km, MG3.1(GUC), After GUC.
GUC 19 05:15:02.0±0.7, 3127S×7068W, h88km±6km, MD3.5, ML3.1, 8C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OVCH	**Ovalle**	**0.80**	**326**	⇑*i*P	Pn	05 15 19.8	+0.5
OVCH				*i* S	Sn	05 15 33.2	+1.1
CHNG	**Los Chungos**	**0.93**	**229**	⇓*i*P	Pn	05 15 21.0	+0.2
CHNG				*i* S	Sn	05 15 35.2	+0.5
PTCH	**Petorca**	**1.01**	**192**	*e*P	Pn	05 15 21.7	0.0
PTCH				*i* S	Sn	05 15 36.7	+0.2
PTCH				AML	AML	05 15 38.3	
	comp=E,379nm,0.1s						
PTCH	**Petorca**	**1.01**	**192**	*e*P	Pn	05 15 21.7	0.0
PTCH				*i* S	Sn	05 15 36.7	+0.2
TLL	**Tololo Astrono**	**1.10**	**354**	⇑*i*P	Pn	05 15 23.5	+0.8
TLL				*i* S	Sn	05 15 39.8	+1.6
TLL				AML	AML	05 15 40.9	
	comp=N,343nm,0.4s						
TLL	**Tololo Astrono**	**1.10**	**354**	⇑*i*P	Pn	05 15 23.5	+0.8
TLL				*i* S	Sn	05 15 39.8	+1.6
JACH	**Jahuel**	**1.41**	**177**	⇑*i*P	Pn	05 15 27.3	+0.8
JACH				*i* S	Sn	05 15 46.2	+1.2
PACH	**Papudo**	**1.42**	**207**	*i* S	Sn	05 15 46.1	+0.9
LSCH	**La Serena**	**1.44**	**340**	⇓*i*P	Pn	05 15 27.0	+0.1
LSCH				*i* S	Sn	05 15 46.0	+0.4
FCH	**Farellones**	**2.08**	**171**	*e*P	Pn	05 15 36.8	+1.6
FCH				*i* S	Sn	05 16 02.5	+2.1
FCH				AML	AML	05 16 05.4	
	comp=E,182nm,0.2s						
CLCH	**Cerro Calan**	**2.12**	**177**	⇑*i*P	Pn	05 15 36.5	+0.8
CLCH				*i* S	Sn	05 16 02.6	+1.1
CLCH				AML	AML	05 16 04.9	
	comp=N,123nm,0.5s						
LCO	**Las Campanas**	**2.25**	**360**	*e*Pn	Pn	05 15 38.2	+0.8
LCO				*e*Sn	Sn	05 16 04.0	-0.5
ANTU	**Antumapu**	**2.29**	**179**	*e*P	Pn	05 15 38.8	+0.8
ANTU				*i* S	Sn	05 16 06.0	+0.5
ANTU				AML	AML	05 16 07.5	
	comp=E,140nm,0.2s						
ANTU	**Antumapu**	**2.29**	**179**	*e*P	Pn	05 15 38.8	+0.8
ANTU				*i* S	Sn	05 16 06.0	+0.5
PCH	**Pirque**	**2.35**	**177**	*e*P	Pn	05 15 39.6	+0.9
TACH	**Talagante**	**2.39**	**185**	⇑*i*P	Pn	05 15 39.3	0.0
TACH				*i* S	Sn	05 16 07.5	-0.3
LMEL	**Las Melosas**	**2.60**	**171**	⇑*i*P	Pn	05 15 43.2	+1.1
LMEL				*i* S	Sn	05 16 14.1	+1.2
LMEL				AML	AML	05 16 19.7	
	comp=N,171nm,0.1s						
LMEL	**Las Melosas**	**2.60**	**171**	⇑*i*P	Pn	05 15 43.2	+1.1
LMEL				*i* S	Sn	05 16 14.1	+1.2

IDC 19 05:32:31.2±2.0, 2440N×10959W, h0km, mb1 3.5/3, mb1mx3.4/21, mbtmp3.0/3, ML3.2/3, Error ellipse: s-maj=33.6km s-min=9.5km az=143.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**0.72**	**246**	Pg	Pg	05 32 45.6	+0.6
	311nm,0.3s,baz=67,slow=0.6,SNR=253						
LPIG				Lg		05 32 54.8	
	618nm,0.3s,baz=182,slow=20,SNR=75						
TXAR	**Lajitas Array**	**7.22**	**46**	Pn	Pn	05 34 18.0	-0.1
	0.1nm,0.3s,baz=233,slow=14,SNR=4.3						
TXAR				Sn	Sn	05 35 39.6	-1.2
	0.1nm,0.3s,baz=232,slow=20,SNR=4.9						
TXAR				Lg		05 36 21.6	
	0.0nm,0.3s,baz=237,slow=32,SNR=3.0						
NVAR	**Mina Array Bea**	**15.83**	**334**	Pn	Pn	05 36 18.8	+3.3
	0.0nm,0.3s,baz=170,slow=13,SNR=4.3						
PDAR	**Pinedale Array**	**18.32**	**0**	P	Pn	05 36 46.4	-0.4
	0.0nm,0.3s,baz=177,slow=8.9,SNR=5.3						

ISCJB 19 05:55:55.3±0.7, 2826S×6741W±009, h130km±14km, Error ellipse: s-maj=13.2km s-min=8.5km az=175.3
IDC 19 05:55:55.9±1.4, 2824S×6749W, h121km±14km, mb3.7/2, mb1 3.3/7, mb1mx3.2/19, mbtmp3.2/7, Error ellipse: s-maj=29.3km s-min=13.1km az=100.0
NEIC 19 05:55:56.6±0.6, 2826S×6738W, h131km±11km, Error ellipse: s-maj=12.4km s-min=9.0km az=88.0
ISC 19 05:55:56.3±0.6, 2825S±005×6739W±009, h125km±13km, n16, σ0§86/17, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**3.00**	**255**	*e*Pn	**Pn**	**05 56 43.2**	**+0.3**
LCO				*e*Sn	**Sn**	**05 57 18.5**	**-0.2**
CFAA	**Coronel Fontan**	**3.43**	**192**	P	**Pn**	**05 56 48.9**	**+0.6**
	2.2nm,0.3s,baz=356,slow=10,SNR=684						
CFAA				S	**Sn**	**05 57 27.8**	**-0.8**
	5.5nm,0.3s,baz=131,slow=21,SNR=24						
CFAA	**Coronel Fontan**	**3.43**	**192**	P	**Pn**	**05 56 48.9**	**+0.6**
CFAA				S	**Sn**	**05 57 27.8**	**-0.8**
LVC	**Limon Verde**	**5.78**	**346**	P	**Pn**	**05 57 21.0**	**+1.2**
	3.1nm,0.3s,baz=172,slow=6.9,SNR=37						
LVC				S	**Sn**	**05 58 22.5**	**-2.4**
	1.3nm,0.3s,baz=156,slow=5.9,SNR=3.6						
LVC	**Limon Verde**	**5.78**	**346**	*e*Pn	**Pn**	**05 57 21.7**	**+1.9**
LVC				*e*Sn	**Sn**	**05 58 25.6**	**+0.7**
CPUP	**Villa Florida**	**9.15**	**80**	P	**Pn**	**05 58 04.8**	**-0.6**
	0.4nm,0.3s,baz=245,slow=9.3,SNR=5.0						
TRQA	**Tornquist**	**10.78**	**157**	*e*Pn	**Pn**	**05 58 27.5**	**+0.4**
LPAZ	**La Paz**	**11.92**	**357**	P	**Pn**	**05 58 40.5**	**-1.8**
	0.1nm,0.3s,baz=196,slow=7.1,SNR=4.2						
LPAZ	**La Paz**	**11.92**	**357**	Pn	**Pn**	**05 58 43.0**	**+0.7**
SIV	**San Ignacio**	**13.53**	**27**	P	**Pn**	**05 59 03.0**	**-0.2**
	0.1nm,0.3s,baz=194,slow=17,SNR=3.1						
TORD	**Torodi Ar. Bea**	**78.44**	**68**	P	**P**	**06 07 44.5**	**+0.7**
	3.7nm,0.7s,baz=265,slow=5.3,SNR=23						
PDAR	**Pinedale Array**	**80.62**	**330**	P	**P**	**06 07 54.1**	**-0.7**
	0.3nm,0.5s,baz=116,slow=6.8,SNR=3.5						
WRA	**Warramunga Arr**	**127.69**	**206**	PKP	PKPdf	06 14 46.9	-0.6
	0.3nm,0.7s,baz=163,slow=1.9,SNR=5.4						
ZALV	**Zalesovo Beam**	**147.26**	**31**	PKPbc	PKPbc	06 15 24.4	-0.2
	1.9nm,0.3s,baz=293,slow=3.4,SNR=8.5						
MKAR	**Makanchi Array**	**149.92**	**44**	PKP	PKPdf	06 15 25.2	-1.4
	1.4nm,0.8s,baz=114,slow=0.6,SNR=4.8						
MKAR				PKPbc	PKPbc	06 15 32.4	+0.8
	1.5nm,0.8s,baz=278,slow=2.0,SNR=10						
MKAR	**Makanchi Array**	**149.92**	**44**	PKP	PKPdf	06 15 25.2	-1.4
MKAR				PKPbc	PKPbc	06 15 32.4	+0.8

IDC 19 05:56:26.6±0.7, 3499S×17989W, h0km, mb4.7/8, mb1 4.8/10, mb1mx4.6/18, mbtmp4.6/10, ML4.2/2, MS3.9/11, Ms1 3.9/11, ms1mx3.7/21, Error ellipse: s-maj=22.7km s-min=19.8km az=72.0
ISCJB 19 05:56:32.3±1.2, 3518S±006×1799E±0.1, h45km±10km, mb4.6/12, MS3.9/10, Error ellipse: s-maj=15.9km s-min=8.0km az=25.4
NEIC 19 05:56:32.8±0.6, 3513S×17998E, h35km, mb4.7/5, Error ellipse: s-maj=13.2km s-min=10.5km az=97.0
ISC 19 05:56:34.9±1.0, 3518S±006×1798E±01, h52km±9km, n44, σ1§03/29, mb4.6/12, MS3.9/10, 2C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**3.77**	**215**	Pn	**Pn**	**05 57 31.1**	**+0.5**
	23nm,0.3s,baz=34,slow=5.2,SNR=114						
URZ				Sn	**Sn**	**05 58 16.2**	**+2.5**
	84nm,0.3s,baz=159,slow=18,SNR=6.6						
RAO	**Raoul Island**	**6.21**	**18**	Sn	**Sn**	**05 59 13.5**	**-0.2**
	53nm,0.3s,baz=325,slow=22,SNR=2.8						
RAO				LR	LR	05 59 55.5	
	comp=Z,408nm,18.3s,baz=214,slow=35						
SNZO	**South Karori**	**7.33**	**212**	*e*Pn	**Pn**	**05 58 18.8**	**-0.5**
	72nm,0.8s						
SNZO				Sn	**Sn**	**05 59 39.7**	**-1.4**
RPZ	**Rata Peaks**	**10.89**	**216**	Pn	**Pn**	**05 59 06.0**	**-2.0**
	1.1nm,0.3s,baz=3.2,slow=2.3,SNR=4.7						
RPZ				Sn	**Sn**	**06 00 57.4**	**-11**
	2.8nm,0.3s,baz=359,slow

comp=Z,0.6nm,0.5s,baz=51,slow=3.1,SNR=2.8
AKASG PKPab PKPab 06 16 38.2 -2.3
comp=Z,0.8nm,0.4s,baz=53,slow=2.5,SNR=4.9
TOA0 Torodi Ar. Sit 158.00 185 *e*PKPab PKPab 06 16 59.2 -0.4
TORD Torodi Ar. Bea 158.00 185 PKPbc PKPdf 06 16 39.8 +13
comp=Z,1.1nm,1.1s,baz=194,slow=0.6,SNR=3.6
TORD PKPab PKPab 06 16 57.9 -1.7
comp=Z,5.0nm,0.9s,baz=184,slow=3.7,SNR=15
TORD Torodi Ar. Bea 158.00 185 PKPbc PKPdf 06 16 39.8 +13
TORD PKPab PKPab 06 16 57.9 -1.7

TRN 19 06:02:07.4, 1788N×6260W, h109km, MD3.4, M3.5(FDF), M3.5(FDF), Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STMA	**St. Maarten, A**	**0.51**	**288**	*e*P	Pn	06 02 25.8	+1.6
STMA				*e*S	Sn	06 02 38.1	+1.4
BPA	**Boggy Peak**	**1.09**	**139**	*e*P	Pn	06 02 31.2	+1.8
BPA				*e*S	Sn	06 02 47.5	+1.4
LZG	**Guadaloupe-1**	**1.90**	**155**	*e*P	Pn	06 02 39.4	+0.3
LZG				*e*S	Sn	06 03 05.2	+1.9

IDC 19 06:12:08.8±8.7, 383S×10177E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.4/18, mbtmp3.3/3, Error ellipse: s-maj=431.2km s-min=30.8km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.56**	**119**	P	P	06 19 07.9	-0.1
	0.3nm,1.0s,baz=292,slow=8.4,SNR=3.1						
ASAR	**Alice Springs**	**36.76**	**125**	P	P	06 19 18.9	+0.6
	0.2nm,0.3s,baz=304,slow=7.8,SNR=5.0						
MKAR	**Makanchi Array**	**53.26**	**343**	P	P	06 21 30.1	+0.9
	0.1nm,0.3s,baz=142,slow=7.3,SNR=3.0						
TXAR	**Lajitas Array**	**145.00**	**41**	PKPbc	PKPbc	06 31 46.0	-2.1
	0.1nm,0.5s,baz=234,slow=2.1,SNR=5.1						

IDC 19 06:14:59.7±2.5, 2955S×13932E, h0km, mb1 3.1/3, mb1mx3.1/14, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=196.2km s-min=17.2km az=52.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.03**	**140**	Pn	Pn	06 15 50.0	+1.1
	0.7nm,0.3s,baz=304,slow=14,SNR=5.2						
STKA				Pg	Pg	06 15 56.0	-1.8
	0.7nm,0.3s,baz=288,slow=9.0,SNR=4.1						
STKA				Lg		06 16 34.1	
	1.9nm,0.3s,baz=351,slow=19,SNR=6.2						
ASAR	**Alice Springs**	**7.61**	**319**	Pn	Pn	06 16 51.3	-0.5
	0.1nm,0.3s,baz=174,slow=7.9,SNR=4.6						
WRA	**Warramunga Arr**	**10.58**	**334**	Pn	Pn	06 17 32.4	-0.2
	0.1nm,0.3s,baz=156,slow=13,SNR=4.7						

BJI 19 06:38:00.4, 4054N×7803E, h20km, ML3.2, 1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.88**	**238**	*e*P	Pn	06 38 32.0	+0.6
KSH				S	Sn	06 39 00.3	+5.8
KSH				Smax			
	comp=N,755nm,0.3s						
KSH				Smax			
	comp=E,994nm,0.5s						
TKM2	**Tokmak 2**	**3.00**	**323**	P	Pn	06 38 51.8	+5.0
	SNR=6.7						
KBK	**Karagaybulak**	**3.13**	**313**	P	Pn	06 38 57.2	+8.6
	SNR=8.7						
AAK	**Ala-Archa**	**3.38**	**309**	P	Pn	06 39 01.8	+10
	SNR=9.8						
CHMS	**Chumysh**	**3.47**	**316**	P	Pn	06 39 03.3	+10
	SNR=6.2						
USP	**Ospenovka**	**3.79**	**317**	P	Pn	06 39 08.9	+11
	SNR=25						
EKS2	**Erkin-Say**	**3.83**	**305**	P	Pn	06 39 11.0	+13
	SNR=8.7						
KK31	**Karatay Array**	**6.17**	**297**	P	Pn	06 39 52.4	+22
	comp=E,2.3nm,0.8s,baz=111,slow=14,SNR=13						
KK31				⇓S	Sn	06 41 12.4	+32
	comp=E,1.3nm,0.5s,baz=106,slow=28,SNR=3.6						

ISCJB ***19*** *06:48:23.7±0.7, 5481S×009×15W±02, h10km, mb4.3/7, MS4.0/8, Error ellipse: s-maj=20.1km s-min=12.2km az=160.8*

IDC ***19*** *06:48:24.1±0.9, 5485S×158W, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.1/16, mbtmp4.2/7, MS4.0/8, Ms1 4.0/8, ms1mx3.8/22, Error ellipse: s-maj=26.5km s-min=23.3km az=126.0*

NEIC ***19*** *06:48:25.6±0.6, 5481S×157W, h10km, mb4.8/1, Error ellipse: s-maj=19.4km s-min=13.7km az=89.0*

ISC 19 06:48:25.9±0.8, 5482S±009×16W±03, h10km, n19, σ0s70/12, mb4.3/7, MS4.0/8, 1C, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**16.93**	**181**	Pn	**Pn**	**06 52 23.0**	**+0.6**
	120nm,1.6s						
MAIT	**Maitri**	**17.05**	**165**	*e*P	**Pn**	**06 52 24.1**	**+0.1**
SYO	**Syowa Base**	**23.40**	**143**⇑	*e*P	**P**	**06 53 30.6**	**-3.9**
SUR	**Sutherland**	**27.44**	**44**	LR	LR	07 01 47.0	
	comp=Z,352nm,21.5s,MS3.9,baz=214,slow=29						
MAW	**Mawson**	**31.89**	**139**	LR	LR	07 05 21.2	
	comp=Z,234nm,18.1s,MS3.9,baz=73,slow=32						
BOSA	**Boshof**	**32.57**	**47**	LR	LR	07 06 05.5	
	comp=Z,168nm,21.5s,MS3.7,baz=210,slow=33						
QSPA	**South Pole Qui**	**35.42**	**180**	P	**P**	**06 55 21.0**	**-0.3**
	9.5nm,0.8s,mb4.8,baz=224,slow=4.8,SNR=35						
QSPA	**South Pole Qui**	**35.42**	**180**	P	**P**	**06 55 21.0**	**-0.3**
TSUM	**Tsumeb**	**38.43**	**30**	P	**P**	**06 55 47.8**	**+0.3**
	3.5nm,0.9s,mb4.1,baz=142,slow=13,SNR=6.8						
PLCA	**Paso Flores**	**46.55**	**258**	P	**P**	**06 56 53.1**	**-0.3**
	2.4nm,1.1s,mb4.0,baz=157,slow=7.7,SNR=3.2						
PLCA				LR	LR	07 13 50.1	
	comp=Z,97nm,18.4s,MS3.8,baz=163,slow=33						
CPUP	**Villa Florida**	**49.32**	**282**	P	**P**	**06 57 13.7**	**-1.3**
	1.3nm,0.8s,mb4.0,baz=68,slow=8.8,SNR=3.0						
CPUP				LR	LR	07 14 04.3	
	comp=Z,154nm,19.7s,MS4.0,baz=150,slow=31						
BDFB	**Brasilia**	**52.95**	**299**	P	**P**	**06 57 43.1**	**+0.9**
	5.2nm,1.0s,mb4.4,baz=151,slow=10,SNR=3.1						
BDFB				LR	LR	07 15 57.8	
	comp=Z,209nm,19.3s,MS4.2,baz=148,slow=31						
LPAZ	**La Paz**	**63.37**	**280**	P	**P**	**06 58 56.0**	**+0.7**
	19nm,1.1s,mb5.1,baz=207,slow=6.4,SNR=10						
LPAZ				LR	LR	07 23 36.8	
	comp=Z,95nm,21.6s,MS3.9,baz=288,slow=33						
LPAZ	**La Paz**	**63.37**	**280**	P	**P**	**06 58 56.0**	**+0.7**
LPAZ				LR	LR	07 23 36.8	
TORD	**Torodi Ar. Bea**	**67.75**	**3**	P	**P**	**06 59 23.1**	**-0.3**
	1.4nm,1.0s,mb3.9,baz=206,slow=6.4,SNR=6.6						
TORD				LR	LR	07 22 51.1	
	comp=Z,312nm,20.9s,MS4.5,baz=175,slow=30						
NVAR	**Mina Array Bea**	**135.19**	**276**	PKP	PKPdf	07 07 46.6	+1.8
	0.7nm,0.8s,baz=182,slow=4.2,SNR=2.9						
YKA	**Yellowknife Ar**	**145.85**	**310**	PKPbc	PKPbc	07 08 02.2	-1.6
	5.2nm,0.9s,baz=99,slow=2.5,SNR=6.0						
YKA	**Yellowknife Ar**	**145.85**	**310**	PKPbc	PKPbc	07 08 02.2	-1.6
MJAR	**Matsushiro Arr**	**147.06**	**107**	PKPbc	PKPbc	07 08 07.8	-0.4
	2.2nm,0.9s,baz=200,slow=3.7,SNR=5.5						

BJI ***19*** *06:54:19.2, 260N×12840E, h142km, mB5.2, mb5.0*

MOS ***19*** *06:54:20.8±1.0, 265N×12837E, h154km, mb4.7/28, Error ellipse: s-maj=18.4km s-min=7.6km az=111.2*

NEIC ***19*** *06:54:21.3±2.0, 255N×12838E, h143km±20km, mb4.8/16, Error ellipse: s-maj=12.4km s-min=6.4km az=72.0*

IDC ***19*** *06:54:22.8±1.6, 254N×12832E, h159km±14km, mb4.3/14, mb1 4.4/15, mb1mx4.3/19, mbtmp4.3/15, Error ellipse: s-maj=19.3km s-min=7.8km az=78.0*

ISCJB ***19*** *06:54:22.2±0.8, 255N±004×12835E±005, h170km±8km, mb4.8/54, Error ellipse: s-maj=9.0km s-min=6.4km az=166.4*

DJA ***19*** *06:54:26, 221N×12809E, h169km, Mw5.2/4*

ISC 19 06:54:23.1±0.8, 254N±004×12835E±006, h161km±8km, h166km±3.0km: pP-P, n116, σ0s93/111, mb4.8/54, 4C-2D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**3.27**	**195**	P	**Pn**	**06 55 15.2**	**+0.9**
	0.0nm,0.0s						
MNI	**Manado**	**3.67**	**253**	P	**Pn**	**06 55 18.2**	**-1.3**
	0.0nm,0.0s						
SWI	**Sorong**	**4.45**	**139**	P	**Pn**	**06 55 31.0**	**+1.4**
	0.0nm,0.0s						
KDI	**Kendari**	**8.63**	**222**	P	**Pn**	**06 56 23.1**	**-1.8**
	0.0nm,0.0s						
PCI	**Palu**	**9.18**	**248**	P	**Pn**	**06 56 30.9**	**-1.2**
	0.0nm,0.0s						
KAPI	**Kappang**	**11.41**	**229**	P	**Pn**	**06 56 59.4**	**-2.1**
	6.0nm,0.3s,baz=22,slow=5.8,SNR=16						
KAPI				S	**Sn**	**06 59 01.3**	**-6.5**
	3.1nm,0.3s,baz=121,slow=23,SNR=11						
KAPI	**Kappang**	**11.41**	**229**	*e*Pn	**Pn**	**06 57 00.1**	**-1.4**
KAPI				Sn	**Sn**	**06 59 04.2**	**-3.6**
SMKI	**Samarinda**	**11.53**	**255**	P	**Pn**	**06 57 03.2**	**+0.1**
	0.0nm,0.0s						
BBKI	**Banjar Baru**	**14.76**	**246**	P	**Pn**	**06 57 44.1**	**-0.1**
	0.0nm,0.0s						
KHKI	**Kahang-Kahang**	**16.70**	**229**	P	**Pn**	**06 58 09.0**	**+1.1**
	0.0nm,0.0s						
STKI	**Sintang**	**17.05**	**262**	P	**Pn**	**06 58 12.7**	**+0.6**
	0.0nm,0.0s						
DNP	**Denpasar**	**17.20**	**229**	P	**Pn**	**06 58 14.5**	**+0.6**
	0.0nm,0.0s						
SJI	**Sawahan**	**19.44**	**238**	P	**P**	**06 58 39.0**	**+1.6**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**20.68**	**187**	*e*P	**P**	**06 58 50.0**	**-0.6**
	4.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.68**	**187**	P	**P**	**06 58 49.7**	**-0.9**
	3.1nm,0.7s,baz=13,slow=13,SNR=7.4						
YHNB	**Yeheng**	**23.01**	**344**	*e*P	**P**	**06 59 13.8**	**-0.2**
	28nm,0.5s,mb5.0						
YHNB				*e*PcP	PcP	07 02 56.1	-2.6
WRAB	**Tennant Creek**	**23.09**	**165**	*e*P	**P**	**06 59 15.0**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**23.09**	**165**	*e*P	**P**	**06 59 15.0**	**+0.2**
	comp=Z,13nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**23.10**	**166**	P	**P**	**06 59 14.7**	**-0.2**
	comp=Z,13nm,0.6s,mb4.5,baz=344,slow=10.0,SNR=151						
WRA				S	**S**	**07 03 14.6**	**+0.7**
	comp=Z,4.1nm,0.9s,baz=340,slow=18,SNR=7.4						
WRA				ScP	ScP	07 06 20.3	-1.6
	comp=Z,1.1nm,0.6s,baz=338,slow=3.0,SNR=8.7						
WRA	**Warramunga Arr**	**23.10**	**166**	P	**P**	**06 59 14.7**	**-0.2**
WRA				S	**S**	**07 03 14.6**	**+0.7**
WRA				pmax	pmax		
	comp=Z,13nm,0.6s						
WRA				smax			
	comp=N,4.0nm,0.9s						
WRA				pmax	pmax		
	comp=N,1.0nm,0.6s						
WB2	**Warramunga Arr**	**23.10**	**165**	*e*P	**P**	**06 59 14.9**	**0.0**
WB2				*e*S	**S**	**07 03 08.9**	**-5.0**
JOW	**Kunigami**	**24.16**	**360**	P	**P**	**06 59 24.1**	**-0.4**
	comp=N,32nm,0.8s,mb4.9,baz=170,slow=13,SNR=6.8						
ASAR	**Alice Springs**	**26.60**	**169**	P	**P**	**06 59 46.3**	**-0.2**
	comp=N,2.3nm,0.8s,mb3.9,baz=352,slow=8.0,SNR=24						
ASAR				PcP	PcP	07 03 06.6	-0.1
	comp=N,3.1nm,0.5s,baz=347,slow=2.1,SNR=20						
ASAR				S	**S**	**07 04 06.6**	**-2.8**
	comp=N,1.3nm,0.8s,baz=352,slow=20,SNR=4.4						
ASAR				ScP	ScP	07 06 30.8	-0.9
	comp=N,1.7nm,0.8s,baz=351,slow=2.5,SNR=10						
ASAR	**Alice Springs**	**26.60**	**169**	P	**P**	**06 59 46.3**	**-0.2**
ASAR						07 03 06.6	
ASAR				S	**S**	**07 04 06.6**	**-2.8**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ASAR				smax			
	comp=N,1.0nm,0.8s						
ASAR				pmax	pmax		
	comp=N,2.0nm,0.8s						
CTA	**Charters Tower**	**28.53**	**143**	P	**P**	**07 00 05.0**	**+1.2**
	comp=N,2.0nm,0.5s,mb4.1,baz=117,slow=23,SNR=3.0						
CTA	**Charters Tower**	**28.53**	**143**	P	**P**	**07 00 05.0**	**+1.2**
CTA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**32.87**	**301**	P	**P**	**07 00 42.8**	**+0.8**
	comp=Z,6.2nm,0.7s,mb4.4,baz=117,slow=7.4,SNR=23						
CMAR				PcP	PcP	07 03 24.1	+1.0
	comp=Z,1.1nm,0.3s,baz=110,slow=0.8,SNR=6.7						
CMAR	**Chiang Mai Arr**	**32.87**	**301**	P	**P**	**07 00 42.8**	**+0.8**
CMAR						07 03 24.1	
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CHTO	**Chiang Mai**	**33.02**	**301**	*e*P	**P**	**07 00 44.6**	**+1.3**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
CHTO	**Chiang Mai**	**33.02**	**301**	*e*P	**P**	**07 00 44.6**	**+1.3**
	comp=Z,9.7nm,0.6s,mb4.7						
KMI	**Kunming**	**33.37**	**315**	P	**P**	**07 00 47.8**	**+1.6**
KMI				AMB	AMB		
	comp=Z,29nm,0.7s,mb5.1						
KSRS	**Korea Array**	**34.75**	**359**	P	**P**	**07 00 57.7**	**-0.3**
	comp=Z,14nm,0.6s,mb4.8,baz=176,slow=9.5,SNR=35						
KSRS	**Korea Array**	**34.75**	**359**	P	**P**	**07 00 57.7**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.8						
MAJO	**Matsushiro**	**35.04**	**14**	*e*P	**P**	**07 00 59.5**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.0						
MAJO	**Matsushiro**	**35.04**	**14**	*e*P	**P**	**07 00 59.5**	**-1.0**
	comp=Z,28nm,0.7s,mb5.0						
MAT	**Matsushiro**	**35.04**	**14**	P	**P**	**07 01 00.0**	**-0.5**
MJAR	**Matsushiro Arr**	**35.04**	**14**	P	**P**	**07 00 59.1**	**-1.3**
	comp=Z,18nm,0.8s,mb4.8,baz=186,slow=9.7,SNR=42						
MJAR	**Matsushiro Arr**	**35.04**	**14**	P	**P**	**07 00 59.2**	**-1.3**
MJAR				pmax	pmax		
	comp=Z,18nm,0.8s						
STKA	**Stephens Creek**	**36.46**	**161**	*e*P	**P**	**07 01 12.9**	**+0.3**
	comp=Z,4.8nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**36.46**	**161**	P	**P**	**07 01 12.6**	**-0.1**
	comp=Z,5.3nm,0.4s,mb4.6,baz=334,slow=8.9,SNR=22						
STKA				PcP	PcP	07 03 33.2	0.0
	comp=Z,3.7nm,1.0s,baz=29,slow=7.0,SNR=3.9						
STKA				ScP	ScP	07 07 05.2	+0.5
	comp=Z,5.0nm,0.9s,baz=335,slow=6.2,SNR=3.2						
BJT	**Baijiatuau**	**38.91**	**345**	*e*P	**P**	**07 01 33.2**	**+0.1**
BJT				pmax	pmax		
	comp=Z,66nm,1.1s						
BJT	**Baijiatuau**	**38.91**	**345**	*e*P	**P**	**07 01 33.1**	**+0.1**
	comp=Z,66nm,1.1s,mb5.2						
BJI	**Beijing**	**38.93**	**345**	P	**P**	**07 01 33.1**	**-0.2**
BJI				AMB	AMB		
	comp=Z,42nm,0.8s,mb5.1						
LZH	**Lanzhou**	**40.35**	**329**	*e*P	**P**	**07 01 46.9**	**+1.8**
LZH				AP	pP	07 02 21.8	+1.6
LZH				AMB	AMB		
	comp=Z,76nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,180nm,4.0s						
MDJ	**Mudanjiang**	**41.92**	**1**	P	**P**	**07 01 57.9**	**+0.2**
MDJ				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,152nm,5.7s						
MDJ	**Mudanjiang**	**41.92**	**1**	*e*P	**P**	**07 01 58.3**	**+0.6**
	comp=Z,12nm,1.0s,mb4.5						
LSA	**Lhasa**	**44.44**	**311**	*e*P	**P**	**07 02 20.1**	**+1.9**
LSA				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.8						
LSA	**Lhasa**	**44.44**	**311**	*e*P	**P**	**07 02 20.1**	**+1.9**
	comp=Z,16nm,0.6s,mb4.8						
GTA	**Gaotai**	**44.95**	**328**	⇑P	**P**	**07 02 23.1**	**+1.0**
GTA				AMB	AMB		
	comp=Z,16nm,0.9s,mb4.7						
KLR	**Kul'dur**	**46.61**	**3**	*e*P	**P**	**07 02 31.0**	**-3.9**
GUN	**Gumba**	**47.73**	**306**	*e*P	**P**	**07 02 44.5**	**+0.5**
	comp=Z,158nm,0.7s,mb5.8						
PKI	**Pulchoki**	**47.98**	**306**	*e*P	**P**	**07 02 46.3**	**+0.4**
KKN	**Kakani**	**48.17**	**306**	*e*P	**P**	**07 02 47.8**	**+0.5**
	comp=Z,46nm,0.6s,mb5.3						
DMN	**Daman**	**48.24**	**305**	*e*P	**P**	**07 02 48.3**	**+0.4**
	comp=Z,93nm,0.9s,mb5.4						
ULN	**Ulaanbaatar**	**48.76**	**341**	*e*P	**P**	**07 02 52.1**	**+0.6**
ULN				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.9						
ULN	**Ulaanbaatar**	**48.76**	**341**	*e*P	**P**	**07 02 52.1**	**+0.6**
	comp=Z,25nm,0.8s,mb4.9						
GKN	**Gorkha**	**48.78**	**306**	*e*P	**P**	**07 02 52.3**	**+0.3**
SONM	**Songino Array**	**48.95**	**340**	P	**P**	**07 02 53.3**	**+0.3**
	comp=Z,12nm,0.6s,mb4.7,baz=150,slow=8.0,SNR=56						
SONM				PcP	PcP	07 04 15.1	+0.5
	comp=Z,2.9nm,0.7s,baz=148,slow=3.7,SNR=6.2						
SONM	**Songino Array**	**48.95**	**340**	P	**P**	**07 02 53.3**	**+0.4**
SONM						07 04 15.1	
SONM				pmax	pmax		
	comp=Z,12nm,0.6s						
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KOLN	**Koldanda**	**49.53**	**305**	*e*P	**P**	**07 02 58.6**	**+0.9**
	comp=Z,112nm,0.6s,mb5.7						
DANN	**Dangsing**	**49.62**	**306**	*e*P	**P**	**07 02 59.1**	**+0.7**
	comp=Z,174nm,0.6s,mb5.8						
ZAK	**Zakamensk**	**52.19**	**340**	*e*P	**P**	**07 03 16.2**	**-0.9**
ZAK				*e*		07 04 27.4	
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
TLY	**Talaya**	**53.17**	**341**	*e*P	**P**	**07 03 24.5**	**+0.2**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
WMQ	**Urumqi**	**54.63**	**325**⇓	*i*P	**P**	**07 03 36.1**	**+1.0**
WMQ				AMB	AMB		
	comp=Z,25nm,0.7s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,150nm,3.8s						
WMQ				LR	LR		
	comp=Z,101nm,18.8s						
PETK	**Petropavlovsk-**	**55.94**	**21**	P	**P**	**07 03 44.9**	**+0.6**
	comp=Z,9.7nm,0.8s,mb4.7,baz=191,slow=5.6,SNR=12						
PETK				PcP	PcP	07 04 40.5	-0.3
	comp=Z,3.0nm,0.8s,baz=119,slow=1.8,SNR=2.6						
PETK	**Petropavlovsk-**	**55.94**	**21**	P	**P**	**07 03 44.9**	**+0.6**
PETK						07 04 40.5	
PETK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
PETK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
BOD	**Bodaibo**	**56.28**	**351**	*e*P	**P**	**07 03 46.6**	**0.0**
BOD				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
YAK	**Yakutsk**	**59.36**	**1**	*e*P	**P**	**07 04 07.7**	**-0.3**
YAK				pmax	pmax		
	comp=N,13nm,1.1s						
YAK				pmax	pmax		
	comp=Z,47nm,0.8s,mb5.4						
MK31	**Makanchi Array**	**59.45**	**325**	*i*P	**P**	**07 04 08.9**	**0.0**
MK31				pmax	pmax		
	comp=Z,12nm,0.4s,mb5.1						
MK31	**Makanchi Array**	**59.45**	**325**	*e*P	**P**	**07 04 09.2**	**+0.3**
MKAR	**Makanchi Array**	**59.45**	**325**	P	**P**	**07 04 09.1**	**+0.2**
	comp=Z,20nm,0.5s,mb5.2,baz=119,slow=8.3,SNR=168						
MKAR				PcP	PcP	07 04 54.6	-0.3
	comp=Z,6.0nm,0.7s,baz=120,slow=4.3,SNR=11						
MKAR	**Makanchi Array**	**59.45**	**325**	P	**P**	**07 04 09.1**	**+0.2**
MKAR						07 04 54.6	
MKAR				pmax	pmax		
	comp=Z,20nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH	**Kashi**	**60.03**	**315**	*e*P	**P**	**07 04 18.8**	**+5.8**
TKM2	**Tokmak 2**	**61.71**	**318**	*e*P	**P**	**07 04 24.8**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
TKM2	**Tokmak 2**	**61.71**	**318**	*e*P	**P**	**07 04 24.8**	**+0.5**
	comp=Z,7.4nm,0.7s,mb4.6						
ZAA0	**Zalesovo Array**	**62.38**	**333**	*e*P	**P**	**07 04 27.4**	**-1.1**
ZALV	**Zalesovo Beam**	**62.38**	**333**	P	**P**	**07 04 26.9**	**-1.6**
	comp=Z,5.4nm,0.7s,mb4.5,baz=104,slow=6.3,SNR=12						
ZALV				PcP	PcP	07 05 05.4	-1.2
	comp=Z,1.9nm,0.6s,baz=183,slow=2.6,SNR=3.0						
ZALV	**Zalesovo Beam**	**62.38**	**333**	P	**P**	**07 04 26.9**	**-1.6**
ZALV					pP	07 05 05.4	-1.1
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
AML	**Almayashu**	**62.66**	**317**	*e*P	**P**	**07 04 31.6**	**+1.0**
	comp=Z,26nm,1.0s,mb5.0						
EKS2	**Erkin-Say**	**62.82**	**317**	*e*P	**P**	**07 04 32.4**	**+0.7**
	comp=Z,11nm,0.8s,mb4.7						
SEY	**Seymchan**	**62.84**	**12**⇑	*e*P	**P**	**07 04 31.4**	**0.0**
KBL	**Kabul**	**63.53**	**308**	*e*P	**P**	**07 04 36.5**	**0.0**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
KBL	**Kabul**	**63.53**	**308**	*e*P	**P**	**07 04 36.5**	**-0.1**
	comp=Z,5.5nm,0.7s,mb4.5						
KURK	**Kurchatov**	**63.61**	**327**	*e*P	**P**	**07 04 36.4**	**-0.3**
KURK				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.3						
KURK	**Kurchatov**	**63.61**	**327**	*e*P	**P**	**07 04 36.4**	**-0.3**
	comp=Z,30nm,0.6s,mb5.3						
NVS	**Novosibirsk**	**63.66**	**333**	*i*P	**P**	**07 04 35.7**	**-1.3**
NVS				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.9						
NVS				pmax	pmax		
	comp=N,7.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,13nm,0.9s						
KK31	**Karatay Array**	**65.20**	**317**	*i*P	**P**	**07 04 46.7**	**-0.6**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
BVA0	**Borovoye Array**	**69.20**	**327**	*i*P	**P**	**07 05 11.5**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
BILL	**Bilibino**	**70.30**	**14**	*e*P	**P**	**07 05 18.3**	**-0.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
AB31	**Akbulak array**	**74.09**	**321**	*i*P	**P**	**07 05 40.5**	**-1.0**
AB31				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
AKTO	**Aktyubinsk**	**75.59**	**322**	*i*P	**P**	**07 05 49.3**	**-0.8**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
ARU	**Arti**	**76

PLCA	**Paso Flores**	**138.31**	**158**	PKP	PKPdf	07 13 30.5	+0.9	
	comp=Z,2.1nm,0.7s,baz=126,slow=1.6,SNR=7.9							
PLCA	**Paso Flores**	**138.31**	**158**	PKIKP	PKPdf	07 13 30.5	+0.9	
PLCA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
CPUP	**Villa Florida**	**155.72**	**168**	PKPab	PKPab	07 14 25.6	+0.2	
	comp=Z,2.1nm,0.9s,baz=176,slow=13,SNR=2.6							
CPUP	**Villa Florida**	**155.72**	**168**	PKP2	PKPab	07 14 25.6	+0.1	
CPUP				pmax	pmax			
	comp=Z,2.0nm,0.9s							
LPAZ	**La Paz**	**158.79**	**131**	PKPab	PKPab	07 14 39.2	+0.1	
	comp=Z,1.0nm,0.8s,baz=213,slow=8.6,SNR=4.9							
LPAZ	**La Paz**	**158.79**	**131**	PKP2	PKPab	07 14 39.2	+0.1	
LPAZ				pmax	pmax			
	comp=Z,1.0nm,0.8s							

IDC 19 07:11:10.2±5.6, 3195S×13858E, h0km, mb1 3.1/3, mb1mx3.1/14, mbtmp2.9/3, ML2.7/3, Error ellipse: s-maj=79.7km s-min=17.8km az=26.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**2.57**	**89**	Pn	Pn	07 11 51.8	-1.3
	1.2nm,0.3s,baz=236,slow=11,SNR=12						
STKA				Pg	Pg	07 11 58.6	-0.8
	1.9nm,0.3s,baz=232,slow=13,SNR=13						
STKA				Lg		07 12 31.4	
	2.1nm,0.3s,baz=255,slow=11,SNR=3.5						
ASAR	**Alice Springs**	**9.23**	**332**	Pn	Pn	07 13 25.4	+0.8
	0.0nm,0.3s,baz=164,slow=12,SNR=3.7						
ASAR				Sn	Sn	07 15 11.3	+2.1
	0.1nm,0.3s,baz=157,slow=22,SNR=3.6						
WRA	**Warramunga Arr**	**12.55**	**341**	Pn	Pn	07 14 09.4	-0.7
	0.1nm,0.3s,baz=156,slow=12,SNR=5.4						
WRA				Sn	Sn	07 16 31.2	+0.5
	0.0nm,0.3s,baz=173,slow=22,SNR=2.7						

*IDC **19** 07:27:44.9±0.3, 272S×100 95E, h0km, mb5.2/29, mb1 5.3/30, mb1mx5.3/30, mbtmp5.3/30, ML5.5/1, MS5.6/23, Ms1 5.6/23, ms1mx5.6/28, Error ellipse: s-maj=12.6km s-min=9.0km az=37.0*

*BJI **19** 07:27:46.1, 304S×100 83E, h35km, mB6.1, mb5.4, Ms6.1, Msz5.9*

*MOS **19** 07:27:48.6±1.1, 260S×101 01E, h29km, mb5.9/76, MS5.7/88, Error ellipse: s-maj=8.1km s-min=4.1km az=119.2*

*ISCJB **19** 07:27:49.3±0.1, 275S±002×100 86E±002, h36km, mb5.7/180, MS5.8/260, Error ellipse: s-maj=3.5km s-min=2.3km az=29.7*

*NEIC **19** 07:27:50.7±0.1, 275S×100 89E, h35km, mb5.7/77, ME5.7, MS5.8/205, MW5.9, Error ellipse: s-maj=5.0km s-min=3.5km az=41.0, Moment Tensor Solution. s70 Moment tensor: Scale 10^{17}Nm; M_{rr}5.23; $M_{\theta\theta}$-0.84; $M_{\phi\phi}$-4.39; $M_{r\theta}$4.85; $M_{\theta\phi}$2.55; $M_{\phi r}$-2.46; Best double couple: M_o7.70000×10^{17} NP1:ϕ_s129.00000°, δ68.00000°, λ71.00000°. NP2:ϕ_s352.00000°, δ29.00000°, λ129.00000°. Principal axes: T 7.9900, Plg62.0000°, Azm9.0000°; N -0.5500, Plg17.0000°, Azm136.0000°; P -7.4400, Plg20.0000°, Azm233.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [IV] at Kerinci and Mukomuko; [III] at Bengkulu and Padang, Sumatra.

*GCMT **19** 07:27:50.7±0.1, 302S×100 60E, h46km, MW6.0/109, Moment Tensor Solution. s109,c240; s107,c324; Duration: 2s4 Moment tensor: Scale 10^{18}Nm; M_{rr}0.81±.01; $M_{\theta\theta}$-0.38±.01; $M_{\phi\phi}$-0.42±.01; $M_{r\theta}$0.65±.01; $M_{\theta\phi}$0.55±.01; $M_{\phi r}$-0.37±.01; Best double couple: M_o1.15700×10^{18} NP1:ϕ_s330.00000°, δ27.00000°, λ113.00000°. NP2:ϕ_s125.00000°, δ66.00000°, λ79.00000°. Principal axes: T 1.1040, Plg68.0000°, Azm14.0000°; N 0.1080, Plg10.0000°, Azm129.0000°; P -1.2110, Plg20.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*DJA **19** 07:27:51, 289S×100 52E, h60km, Mw6.1/31*

*SZGRF **19** 07:27:54.5, 280S×100 29E, h48km, mb6.1, MS5.6, Southern Sumatera, Indonesia*

ISC 19 07:27:51.2±0.1, 278S±002×10083E±002, h38km, h38km±1.1km: pP-P, n1348, σ1s03/767, mb5.7/180, MS5.8/260, 321C-212D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**0.93**	**43**	P	Pn	07 28 09.5	+1.7
	0.0nm,0.0s						
KSI	**Kapahiang**	**1.96**	**116**	P	Pn	07 28 21.5	-0.5
	0.0nm,0.0s						
PPI	**Padang Panjang**	**2.34**	**349**	P	Pn	07 28 29.8	+2.5
	0.0nm,0.0s						
RGRI	**Rengat**	**2.84**	**32**	P	Pn	07 28 37.0	+2.9
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.03**	**68**	P	Pn	07 28 38.7	+2.0
	0.0nm,0.0s						
DSRI	**Dabo**	**4.38**	**59**	P	Pn	07 28 57.3	+2.0
	0.0nm,0.0s						
KLI	**Kotabumi**	**4.52**	**117**	P	Pn	07 28 59.3	+2.1
	0.0nm,0.0s						
BLSI	**Bandar Lampung**	**5.10**	**120**	P	Pn	07 29 07.1	+1.9
	0.0nm,0.0s						
TRSI	**Tarutung**	**5.12**	**339**	P	Pn	07 29 07.2	+1.7
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.34**	**84**	P	Pn	07 29 09.4	+1.0
	0.0nm,0.0s						
MYKOM	**Kota Tinggi**	**5.45**	**34**	⇓P	Pn	07 29 13.3	+3.3
FRIM	**Kepong**	**6.03**	**8**	⇑P	Pn	07 29 21.0	+3.1
SBJI	**Serang**	**6.24**	**122**	P	Pn	07 29 20.4	-0.4
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**6.81**	**90**	P	Pn	07 29 30.1	+1.4
	0.0nm,0.0s						
DBJI	**Dramaga**	**6.99**	**123**	P	Pn	07 29 32.1	+0.9
	0.0nm,0.0s						
SKJI	**Sukabumi**	**7.08**	**127**	P	Pn	07 29 36.2	+3.8
	0.0nm,0.0s						
IPM	**Ipoh**	**7.21**	**2**	⇑P	Pn	07 29 37.0	+2.8
LEM	**Lembang**	**7.87**	**121**	P	Pn	07 29 43.8	+0.6
	0.0nm,0.0s						
JCJI	**Jatiwangi**	**8.28**	**117**	P	Pn	07 29 52.0	+3.1
	0.0nm,0.0s						
XMIS	**Christmas Isla**	**9.03**	**148**	*e*Pn	Pn	07 29 52.9	-6.2
XMIS				Sn	Sn	07 31 27.6	-12
SNG	**Songkhla**	**9.89**	**359**	P	Pn	07 30 12.0	+1.1
	2µm,1.0s						
BSI	**Banda Aceh**	**9.90**	**326**	P	Pn	07 30 11.0	-0.1
	0.0nm,0.0s						
BJII	**Banjamegara**	**9.93**	**117**	P	Pn	07 30 13.0	+1.5
	0.0nm,0.0s						
COCO	**West Island**	**10.16**	**203**	*e*Pn	Pn	07 30 13.0	-1.6
	352nm,0.6s						
KSM	**Kuching**	**10.37**	**66**	⇓P	Pn	07 30 20.1	+2.6
KSM	**Kuching**	**10.37**	**66**	Pn	Pn	07 30 20.4	+2.8
STKI	**Sintang**	**11.01**	**75**	P	Pn	07 30 28.9	+2.6
	0.0nm,0.0s						
SJI	**Sawahan**	**11.95**	**115**	P	Pn	07 30 39.2	0.0
	0.0nm,0.0s						
SBUM	**Sibu**	**12.51**	**66**	⇓P	Pn	07 30 51.4	+4.5
KRKI	**Karangkates**	**12.74**	**115**	P	Pn	07 30 51.0	+1.0
	0.0nm,0.0s						
BTM	**Bintulu**	**13.61**	**64**	⇑P	Pn	07 31 05.8	+4.0
KMMI	**Kalianget**	**13.76**	**108**	P	Pn	07 31 04.9	+1.1
	0.0nm,0.0s						
BBKI	**Banjar Baru**	**14.01**	**93**	P	Pn	07 31 09.7	+2.4
	0.0nm,0.0s						
NNT	**Nongplab**	**15.30**	**356**	P	Pn	07 31 26.0	+1.4
	665nm,0.8s						
KHKI	**Kahang-Kahang**	**15.72**	**111**	P	Pn	07 31 27.7	-2.3
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**17.68**	**60**	⇓P	Pn	07 31 56.5	+1.7
KKM	**Kota Kinabalu**	**17.68**	**60**	Pn	Pn	07 31 57.1	+2.3
NST	**Nakhon Sawan**	**18.34**	**358**	P	Pn	07 31 58.8	-4.0
	66nm,1.2s						
SDKM	**Sandakan**	**18.36**	**63**	⇓P	Pn	07 32 04.5	+1.5
UBT	**Ubonrachathani**	**18.38**	**13**	⇓P	Pn	07 32 03.9	+0.7
	285nm,0.7s						
TSM	**Tawau**	**18.42**	**68**	⇓P	Pn	07 32 04.9	+1.1
KAPI	**Kappang**	**19.01**	**97**	P	Pn	07 32 08.7	-2.2
	3µm,0.9s,SNR=33						
KAPI	**Kappang**	**19.01**	**97**	P	Pn	07 32 08.3	-2.6
	1µm,0.8s,SNR=33						
KAPI	**Kappang**	**19.01**	**97**	P	**Pn**	**07 32 08.6**	**-2.3**
	14nm,0.3s,baz=282,slow=9.4,SNR=34						
KAPI				S	**S**	**07 35 40.4**	**-3.5**
	0.5nm,0.3s,baz=26,slow=22,SNR=2.2						
KAPI				LR	LR	07 41 26.9	
	comp=Z,1.5µm,18.4s,baz=58,slow=44						
KAPI	**Kappang**	**19.01**	**97**	*e*Pn	**Pn**	**07 32 08.7**	**-2.2**
PCI	**Palu**	**19.09**	**85**	P	**Pn**	**07 32 11.9**	**+0.1**
	0.0nm,0.0s						
KKTK	**Khon Kaen**	**19.09**	**6**	P	**Pn**	**07 32 10.0**	**-1.8**
	864nm,0.5s						
MYLDM	**Lahad Datu**	**19.34**	**66**	⇓P	**Pn**	**07 32 16.2**	**+1.4**
BDT	**Bhumibol Dam**	**19.97**	**355**	P	**Pn**	**07 32 19.0**	**-3.3**
	40nm,0.9s						
BATP	**Bataraza**	**20.45**	**56**	*e*P	**P**	**07 32 26.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**21.18**	**355**	⇑P	**P**	**07 32 31.1**	**-2.3**
	30nm,0.6s,mb4.8,baz=184,slow=10,SNR=78						
CMAR				ScP	ScP	07 40 12.8	+0.4
	4.2nm,0.8s,baz=253,slow=2.0,SNR=4.4						
CMAR				LR	LR	07 41 28.3	
	comp=Z,23µm,19.1s,MS5.6,baz=179,slow=39						
CMAR	**Chiang Mai Arr**	**21.18**	**355**	⇑*e*P	**P**	**07 32 31.2**	**-2.2**
NANT	**Nan**	**21.44**	**360**	⇑P	**P**	**07 32 32.0**	**-4.2**
	819nm,1.0s,mb6.0						
CHG	**Chiang Mai**	**21.53**	**355**	⇑P	**P**	**07 32 35.2**	**-2.0**
	66nm,0.9s,mb5.1						
CHTO	**Chiang Mai**	**21.53**	**355**	*e*P	**P**	**07 32 36.0**	**-1.2**
CHTO						07 36 35.1	
CHTO				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.0						
CHTO				MLR	MLR		
	comp=Z,23µm,19.0s,MS5.6						
CHTO	**Chiang Mai**	**21.53**	**355**	*e*P	**P**	**07 32 36.0**	**-1.2**
	comp=Z,45nm,0.8s,mb5.0						
CHTO				Sn	**S**	**07 36 35.1**	**+1.2**
CHTO				LR	LR		
	comp=Z,23µm,19.0s,MS5.6						
KDI	**Kendari**	**21.78**	**94**	P	**P**	**07 32 40.6**	**+0.6**
	comp=Z,0.0nm,0.0s						
BBSI	**Bau Bau**	**21.85**	**98**	P	**P**	**07 32 41.6**	**+0.9**
	comp=Z,0.0nm,0.0s						
PALK	**Pallekele**	**22.43**	**297**	*e*P	**P**	**07 32 47.4**	**+0.5**
	comp=Z,244nm,1.3s,mb5.5						
PALK				LR	LR		
	comp=Z,18µm,21.0s,MS5.5						
ENPP	**El Nido**	**23.13**	**53**	*e*P	**P**	**07 32 54.2**	**-0.1**
QIZ	**Qiongzhong**	**23.41**	**22**	P	**P**	**07 32 57.5**	**+0.4**
QIZ				XP	sP	07 33 09.8	-2.1
QIZ				S	**S**	**07 37 09.0**	**+1.5**
QIZ				AMB	AMB		
	comp=Z,129nm,2.2s,mb5.0						
QIZ				LR	LR		
	comp=N,17µm,17.5s,MS5.7						
QIZ				LR	LR		
	comp=E,13µm,16.9s,MS5.7						
QIZ				LR	LR		
	comp=Z,27µm,20.3s,MS5.7						
QIZ	**Qiongzhong**	**23.41**	**22**	*e*P	**P**	**07 32 57.1**	**+0.1**
	comp=Z,327nm,1.5s,mb5.5						
QIZ				LR	LR		
	comp=Z,28µm,20.0s,MS5.7						
BATI	**Baumata**	**23.84**	**109**	P	**P**	**07 32 57.7**	**-3.4**
	comp=Z,0.0nm,0.0s						
BATI	**Baumata**	**23.84**	**109**	P	**P**	**07 32 58.8**	**-2.4**
	comp=Z,226nm,1.1s,mb5.5,baz=17,slow=1.4,SNR=6.0						
BATI				S	**S**	**07 37 08.7**	**-6.0**
	comp=Z,131nm,0.5s,baz=299,slow=2.2,SNR=8.0						
BUSP	**Coron**	**24.21**	**52**	*e*P	**P**	**07 33 04.9**	**+0.4**
MNI	**Manado**	**24.37**	**80**	P	**P**	**07 33 06.4**	**+0.5**
	comp=Z,0.0nm,0.0s						
SJMP	**San Jose**	**25.21**	**53**	*e*P	**P**	**07 33 13.2**	**-0.3**
GUIM	**Jordan**	**25.42**	**58**	*e*P	**P**	**07 33 16.2**	**+0.7**
MDRS	**Chennai**	**25.79**	**308**	*e*P	**P**	**07 33 18.1**	**-0.8**
MDRS				*ex*	x	07 37 52.0	
OTRP	**Odiongan**	**25.87**	**54**	*e*P	**P**	**07 33 19.6**	**0.0**
MBWA	**Marble Bar**	**25.93**	**136**	*e*P	**P**	**07 33 19.6**	**-0.5**
	comp=Z,167nm,1.0s,mb5.5						
MBWA				LR	LR		
	comp=Z,8µm,20.0s,MS5.2						
TRD	**Trivandrum**	**26.31**	**295**	*e*P	**P**	**07 33 24.1**	**+0.6**
BUKP	**Musuan**	**26.39**	**66**	*e*P	**P**	**07 33 25.9**	**+1.6**
DAV	**Davao City (W)**	**26.57**	**68**	P	**P**	**07 33 25.3**	**-0.7**
	comp=Z,204nm,0.4s,mb6.0,baz=152,slow=10,SNR=4.8						
DAV				LR	LR	07 44 56.8	
	comp=Z,21µm,21.4s,MS5.7,baz=67,slow=39						
DAV	**Davao City (W)**	**26.57**	**68**	⇑*i*P	**P**	**07 33 24.3**	**-1.6**
KOD	**Kodaikanal**	**26.61**	**299**	*e*P	**P**	**07 33 27.6**	**+1.3**
KOD				AMb	AMB	07 33 46.0	
	comp=Z,115nm,1.5s,mb5.2						
VIS	**Vishakhapatnam**	**26.69**	**320**	*e*P	**P**	**07 33 27.9**	**+0.9**
VIS				AMb	AMB	07 34 02.0	
	comp=Z,268nm,1.4s,mb5.6						
VIS				*i* S	**S**	**07 38 01.0**	**+1.0**
LBMI	**Labuha**	**26.74**	**86**	P	**P**	**07 33 26.6**	**-0.9**
	comp=Z,0.0nm,0.0s						
BWNR	**Bhubaneshwar**	**27.26**	**328**	*e*P	**P**	**07 33 31.0**	**-1.0**
BWNR				*e*S	**S**	**07 38 09.0**	**+0.2**
AAI	**Ambon**	**27.34**	**93**	P	**P**	**07 33 34.1**	**+1.2**
	comp=Z,0.0nm,0.0s						
BALP	**Baler**	**27.56**	**47**	*e*P	**P**	**07 33 33.9**	**-0.9**
BIPH	**Bislig**	**27.69**	**67**	⇑*e*P	**P**	**07 33 34.6**	**-1.4**
KMI	**Kunming**	**27.79**	**4**	P	**P**	**07 33 36.9**	**+0.1**
KMI				AP	pP	07 33 45.6	-1.8
KMI				XP	sP	07 33 48.9	-3.2
KMI				PP		07 34 24.3	
KMI				S	**S**	**07 38 12.5**	**-4.7**
KMI				AMB	AMB		
	comp=Z,38nm,0.7s,mb5.1						
KMI				AMB	AMB		
	comp=Z,2µm,10.5s						
KMI				LR	LR		
	comp=N,30µm,19.7s,MS6.0						
KMI				LR	LR		
	comp=E,26µm,16.0s,MS6.0						
KMI				LR	LR		
	comp=Z,36µm,19.7s,MS6.0						
CAL	**Calcutta**	**27.96**	**335**	*e*P	**P**	**07 33 37.8**	**-0.5**
CAL				*e*S	**S**	**07 38 21.9**	**+2.0**
HKC	**Hong Kong Obse**	**28.13**	**27**	⇑*i*P	**P**	**07 33 40.0**	**+0.2**
IMP	**Imphal**	**28.20**	**347**	*e*P	**P**	**07 33 40.0**	**-0.4**
IMP				*e*S	**S**	**07 38 25.0**	**+1.4**
GZH	**Guangzhou**	**28.45**	**25**	P	**P**	**07 33 47.1**	**+4.4**
GZH				LR	LR		
	comp=N,7µm,20.0s,MS5.6						
GZH				LR	LR		
	comp=E,13µm,18.4s,MS5.6						
GZH				LR	LR		
	comp=Z,20µm,17.0s,MS5.8						
DGAR	**Diego Garcia**	**28.63**	**260**	PFAKE		07 34 00.0	+16
DGAR				LR	LR		
	comp=Z,16µm,20.0s,MS5.6						
FITZ	**Fitzroy Crossi**	**28.69**	**124**	⇑*i*P	**P**	**07 33 43.3**	**-1.6**
	comp=Z,126nm,0.8s,mb5.7						
FITZ				*e*S	**S**	**07 38 25.1**	**-6.5**
FITZ				*e*SCS	ScS	07 44 24.4	-2.8
FITZ	**Fitzroy Crossi**	**28.69**	**124**	P	**P**	**07 33 43.3**	**-1.6**
	comp=Z,48nm,0.9s,mb5.2,baz=305,slow=8.0,SNR=52						
FITZ				S	**S**	**07 38 25.3**	**-6.3**
	comp=Z,23nm,1.1s,baz=99,slow=19,SNR=3.3						
GYA	**Guiyang**	**29.60**	**11**	⇑*i*P	**P**	**07 33 52.3**	**-0.5**
GYA				AP	pP	07 34 02.1	-1.5
GYA				XP	sP	07 34 06.3	-1.9
GYA				S	**S**	**07 38 46.8**	**+1.2**
GYA				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.3						
HYB	**Hyderabad**	**29.76**	**313**	*i* P	**P**	**07 33 58.0**	**+3.7**
HYB				*e*S	**S**	**07 38 52.0**	**+3.7**
HYB				LR	LR	07 45 32.0	
	comp=Z,13nm,20.0s						
BOK	**Bokaro**	**30.15**	**332**	*e*P	**P**	**07 33 59.3**	**+1.6**
BOK				AMb	AMB	07 34 19.9	
	comp=Z,461nm,1.0s,mb6.2						
BOK				*e*S	**S**	**07 38 53.8**	**-0.6**
MNGI	**Mangalore**	**30.18**	**302**	*i* P	**P**	**07 33 58.9**	**+0.8**
MNGI				AMb	AMB	07 35 14.5	
	comp=Z,67nm,1.1s,mb5.3						
MNGI				*i* S	**S**	**07 38 56.7**	**+1.8**
SWI	**Sorong**	**30.47**	**87**	P	**P**	**07 33 59.3**	**-1.5**
	comp=Z,316nm,1.5s,mb5.8						
NGP	**Nagpur**	**31.94**	**319**	*e*P	**P**	**07 34 11.9**	**-1.6**
NGP				*e*S	**S**	**07 39 20.4**	**-2.1**
ODAN	**Odare**	**32.19**	**337**	*e*P	**P**	**07 34 16.9**	**+1.2**
	comp=Z,686nm,0.8s,mb6.5						
GOA	**Goa**	**32.30**	**305**	⇑*e*P	**P**	**07 34 17.2**	**+0.4**
GOA				*e*S	**S**	**07 39 28.4**	**+0.3**
MUN	**Mundaring**	**32.45**	**155**	*e*P	**P**	**07 34 19.5**	**+1.6**
QZH	**Quanzhou**	**32.50**	**31**	⇑*i*P	**P**	**07 34 17.0**	**-1.4**
QZH				S	**S**	**07 39 29.5**	**-1.6**
QZH				AMB	AMB		
	comp=Z,330nm,1.3s,mb6.1						
QZH				LR	LR		
	comp=N,32µm,20.8s,MS6.1						
QZH				LR	LR		
	comp=E,21µm,17.2s,MS6.1						
QZH				LR	LR		
	comp=Z,37µm,23.7s						
TAPN	**Taplejung**	**32.51**	**338**	*e*P	**P**	**07 34 20.1**	**+1.6**
	comp=Z,994nm,0.8s,mb6.8						
RAMN	**Ramite**	**32.59**	**336**	*e*P	**P**	**07 34 20.8**	**+1.6**
	comp=Z,406nm,0.8s,mb6.4						
KLBR	**Kellerberrin**	**32.80**	**153**	*e*P	**P**	**07 34 21.8**	**+0.8**
	comp=Z,819nm,3.0s						
JBP	**Jabalpur**	**32.83**	**323**	*e*P	**P**	**07 34 22.2**	**+0.9**
JBP				*e*S	**S**	**07 39 35.8**	**-0.4**
KAD	**Karad**	**33.01**	**308**	*e*P	**P**	**07 34 24.3**	**+1.4**
KAD				AMb	AMB	07 34 39.8	
	comp=Z,92nm,1.2s,mb5.6						
AKL	**Akola**	**33.01**	**316**	*e*P	**P**	**07 34 21.5**	**-1.4**
JIRN	**Jiri**	**33.38**	**336**	*e*P	**P**	**07 34 27.6**	**+1.5**
	comp=Z,385nm,0.6s,mb6.5						
NACB	**Ninganchiao**	**33.55**	**36**	P	**P**	**07 34 27.9**	**+0.3**
	comp=Z,386nm,0.9s,mb6.3						
LSA	**Lhasa**	**33.59**	**345**	P	**P**	**07 34 29.0**	**+1.1**
LSA				AP	pP	07 34 36.4	-2.3
LSA				XP	sP	07 34 40.4	-2.9
LSA				PP	PP	07 35 41.4	-3.1
LSA				S	**S**	**07 39 39.0**	**-8.9**
LSA				LR	LR		
	comp=N,6µm,33.7s,MS5.2						
LSA				LR	LR		
	comp=E,6µm,32.5s,MS5.2						
LSA				LR	LR		
	comp=Z,10µm,32.5s,MS5.3						
LSA	**Lhasa**	**33.59**	**345**	P	**P**	**07 34 29.1**	**+1.2**
	comp=Z,121nm,0.6s,mb6.0						
LSA				LR	LR		
	comp=Z,8µm,22.0s,MS5.4						
CD2	**Chengdu**	**33.61**	**5**	P	**P**	**07 34 26.8**	**-1.2**
CD2				AP	pP	07 34 36.0	-2.8
CD2				XP	sP	07 34 39.5	-3.9
CD2				PP	PP	07 35 39.4	-5.3
CD2				PCP	PcP	07 37 06.5	-1.3
CD2				S	**S**	**07 39 45.3**	**-2.8**
CD2				PCS	PcS	07 40 51.3	-2.4
CD2				SS	SS	07 41 51.0	-24
CD2				SCS	ScS	07 44 47.3	-3.6
CD2				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.6						
CD2				AMB	AMB		
	comp=Z,2µm,6.3s						
CD2				LR	LR		
	comp=N,38µm,19.2s,MS6.2						
CD2				LR	LR		
	comp=E,26µm,19.0s,MS6.2						
CD2				LR	LR		
	comp=Z,40µm,19.2s,MS6.2						
PKI	**Pulchoki**	**33.63**	**335**	*e*P	**P**	**07 34 29.3**	**+1.0**
	comp=Z,289nm,0.8s,mb6.3						
PKIN	**Phulchoki**	**33.64**	**335**	*e*P	**P**	**07 34 29.2**	**+0.8**
	comp=Z,225nm,0.7s,mb6.2						
NWAO	**Narrogin (SRO)**	**33.71**	**155**	P	**P**	**07 34 28.0**	**-0.9**
	comp=Z,27nm,0.8s,mb5.2,baz=328,slow=10.0,SNR=9.3						
NWAO				LR	LR	07 46 24.5	
	comp=Z,20µm,21.8s,MS5.8,baz=330,slow=33						
NWAO	**Narrogin (SRO)**	**33.71**	**155**	*e*P	**P**	**07 34 30.1**	**+1.2**
NWAO				pmax	pmax		
	comp=Z,118nm,1.3s						
NWAO				MLR	MLR		
	comp=Z,15µm,21.0s						
NWAO	**Narrogin (SRO)**	**33.71**	**155**	*e*P	**P**	**07 34 30.1**	**+1.2**
	comp=Z,118nm,1.3s,mb5.7						
NWAO				LR	LR		
	comp=Z,15µm,21.0s,MS5.7						
GUN	**Gumba**	**33.73**	**336**	*e*P	**P**	**07 34 30.8**	**+1.7**
	comp=Z,1µm,0.6s,mb6.9						
DMN	**Daman**	**33.79**	**334**	*e*P	**P**	**07 34 30.8**	**+1.1**
	comp=Z,538nm,0.8s,mb6.5						
YHNB	**Yeheng**	**33.80**	**35**	P	**P**	**07 34 30.3**	**+0.5**
	comp=Z,162nm,1.1s,mb5.9						
YHNB				LR	LR		
	comp=Z,14µm,22.0s,MS5.7						
KKN	**Kakani**	**33.88**	**335**	*e*P	**P**	**07 34 31.4**	**+1.0**
	comp=Z,644nm,0.7s,mb6.7						
POO	**Poona**	**33.97**	**310**	*e*P	**P**	**07 34 32.6**	**+1.3**
POO				AMb	AMB	07 34 48.0	
	comp=Z,91nm,1.1s,mb5.6						
POO				*i* PCP	PcP	07 37 08.0	-1.1
POO				*e*SCS	ScS	07 44 51.5	-1.8
TATO	**Taipei**	**34.10**	**35**	PFAKE		07 34 40.0	+7.6
TATO				LR	LR		
	comp=Z,11µm,22.0s,MS5.5						
GKN	**Gorkha**	**34.34**	**334**	*e*P	**P**	**07 34 35.5**	**+1.1**
	comp=Z,1µm,1.2s,mb6.8						
KOLN	**Koldanda**	**34.61**	**332**	*e*P	**P**	**07 34 38.1**	**+1.4**
	comp=Z,262nm,0.6s,mb6.3						
DANN	**Dangsing**	**35.03**	**333**	*e*P	**P**	**07 34 41.6**	**+1.2**
	comp=Z,597nm,0.5s,mb6.7						
WHN	**Wuhan**	**35.56**	**20**	⇑P	**P**	**07 34 44.4**	**-0.5**
WHN				AP	pP	07 34 53.6	-2.1
WHN				XP	sP	07 34 58.1	-2.2
WHN				S	**S**	**07 40 11.6**	**-6.6**
WHN				AMB	AMB		
	comp=Z,4µm,9.8s						
WHN				LR	LR		
	comp=N,43µm,13.3s,MS6.4						
WHN				LR	LR		
	comp=E,10µm,12.8s,MS6.4						
WHN				LR	LR		
	comp=Z,63µm,14.8s,MS6.5						
WRA	**Warramunga Arr**	**36.89**	**120**	P	**P**	**07 34 54.4**	**-2.1**
	comp=Z,82nm,0.8s,mb5.6,baz=297,slow=9.2,SNR=321						
WRA				PcP	PcP	07 37 17.9	+0.3
	comp=Z,12nm,0.8s,baz=301,slow=2.6,SNR=4.2						
WRA				S	**S**	**07 40 32.2**	**-6.6**
	comp=Z

comp=E,56nm,0.7s,mb5.4,baz=300,slow=7.8,SNR=168
ASAR S **S** **07 40 52.6 -5.0**
comp=E,28nm,0.9s,baz=297,slow=16,SNR=21
ASAR Alice Springs 38.13 126 P **P** **07 35 05.8 -1.1**
ASAR S **S** **07 40 52.7 -4.9**
ASAR pmax pmax
comp=Z,56nm,0.7s
ASAR smax
comp=N,28nm,0.9s
AJM Ajmer 38.55 321 *e*P **P** **07 35 11.0 +0.6**
AJM AMb AMB 07 35 28.4
comp=Z,143nm,1.6s,mb5.5
NDI New Delhi 38.63 326 *e*P **P** **07 35 09.0 -2.0**
NDI *e*S **S** **07 41 04.0 -1.0**
NJ2 Nanjing 38.63 25 *e*P **P** **07 35 10.6 -0.4**
NJ2 AP pP 07 35 20.4 -1.5
NJ2 XP sP 07 35 24.0 -2.5
NJ2 PP PP 07 36 42.5 +2.5
NJ2 S **S** **07 41 01.0 -3.9**
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.7
NJ2 LR LR
comp=N,8μm,19.3s,MS5.9
NJ2 LR LR
comp=E,15μm,20.8s,MS5.9
NJ2 LR LR
comp=Z,15μm,20.8s,MS5.8
LZH Lanzhou 38.76 4 ⇓P **P** **07 35 11.8 -0.2**
LZH AP pP 07 35 20.8 -2.1
LZH XP sP 07 35 24.4 -3.1
LZH PP PP 07 36 45.3 +4.0
LZH PCP PcP 07 37 23.8 +0.7
LZH S **S** **07 41 05.0 -1.8**
LZH SS SS 07 43 49.0 -10
LZH SCS ScS 07 45 17.8 -1.4
LZH AMB AMB
comp=Z,232nm,1.8s,mb5.6
LZH AMB AMB
comp=Z,690nm,4.1s
LZH LR LR
comp=N,26μm,16.2s
LZH LR LR
comp=Z,39μm,17.6s,MS6.3
SSE Sheshan 38.87 28 P **P** **07 35 13.1 +0.2**
SSE XP sP 07 35 26.8 -1.6
SSE PP PP 07 36 47.3 +4.7
SSE S **S** **07 41 08.8 +0.3**
SSE AMB AMB
comp=Z,76nm,1.2s,mb5.3
SSE AMB AMB
comp=Z,1μm,4.4s
SSE LR LR
comp=N,18μm,17.8s,MS6.0
SSE LR LR
comp=E,9μm,18.1s,MS6.0
SSE LR LR
comp=Z,14μm,21.2s,MS5.8
BHJ Bhuj 39.91 312 *e*P **P** **07 35 21.8 +0.1**
BHJ AMb AMB 07 35 40.2
comp=Z,128nm,1.7s,mb5.4
SMLA Simla 40.55 328 *i* P **P** **07 35 26.9 -0.1**
SMLA *ex* x 07 35 29.3
comp=Z,574nm,0.7s
SMLA *i* S **S** **07 41 33.0 -0.8**
SDNR Sundarnagar 40.95 328 *e*P **P** **07 35 31.0 +0.7**
SDNR *ex* x 07 41 37.6
TIA Tai'an 41.66 20 *e*P **P** **07 35 34.6 -1.4**
TIA S **S** **07 41 56.0 +5.9**
TIA LR LR
comp=N,5μm,15.0s,MS5.6
TIA LR LR
comp=E,3μm,15.0s,MS5.6
TIY Taiyuan 41.70 14 P **P** **07 35 37.5 +1.2**
TIY S **S** **07 41 51.9 +1.3**
TIY XS sS 07 42 14.0 +5.2
TIY AMB AMB
comp=Z,2μm,5.6s
TIY LR LR
comp=N,10μm,15.9s,MS5.9
TIY LR LR
comp=E,7μm,15.3s,MS5.9
TIY LR LR
comp=Z,14μm,15.4s,MS5.9
PONG Pong 41.84 328 *ex* **P** **07 35 35.0 -2.6**
GTA Gaotai 41.99 359 ⇑P **P** **07 35 38.0 -0.6**
GTA AP pP 07 35 48.3 -1.3
GTA XP sP 07 35 52.3 -1.9
GTA PCP PcP 07 37 33.3 -0.1
GTA SCP ScP 07 41 19.6 -1.4
GTA PCS PcS 07 41 23.6 -1.4
GTA S **S** **07 41 54.3 -0.5**
GTA SS SS 07 44 56.3 -6.7
GTA SCS ScS 07 45 34.9 -3.4
GTA AMB AMB
comp=Z,35nm,1.6s,mb4.7
GTA AMB AMB
comp=Z,2μm,5.1s
GTA LR LR
comp=N,14μm,21.3s,MS6.0
GTA LR LR
comp=E,13μm,17.4s,MS6.0
GTA LR LR
comp=Z,21μm,22.5s
DLH Dalhousie 42.29 328 *e*P **P** **07 35 43.0 +1.8**
THN Thein Dam 42.34 328 *e*P **P** **07 35 40.7 -0.9**
THN *ex* x 07 42 09.4
COEN Coen 43.26 107 *e*P **P** **07 35 46.6 -2.7**
comp=Z,18nm,1.1s,mb4.7
BTO Baotou 43.98 10 *e*P **P** **07 35 53.8 -1.0**
HHC Hu-ho-hao-te 44.51 12 ⇑*i*P **P** **07 35 59.6 +0.6**
HHC AP pP 07 36 09.6 -0.4
HHC XP sP 07 36 14.3 -0.3
HHC PCP PcP 07 37 43.3 +1.5
HHC PP PP 07 37 45.3 +1.9
HHC SCP ScP 07 41 31.1 -0.1
HHC PCS PcS 07 41 35.1 0.0
HHC S **S** **07 42 32.4 +0.7**
HHC XS sS 07 42 49.0 -1.0
HHC SS SS 07 45 43.5 -8.8
HHC SCS ScS 07 45 52.5 -1.4
HHC AMB AMB
comp=Z,97nm,1.4s,mb5.4
HHC AMB AMB
comp=Z,3μm,6.6s
HHC LR LR
comp=N,11μm,13.5s,MS6.1
HHC LR LR
comp=E,10μm,14.1s,MS6.1
HHC LR LR
comp=Z,12μm,13.5s,MS6.0
BJT Baijiatuau 44.85 17 *e*P **P** **07 36 01.8 +0.1**
BJT pmax pmax
comp=Z,192nm,1.4s
BJT MLR MLR
comp=Z,41μm,20.0s
BJT Baijiatuau 44.85 17 *e*P **P** **07 36 01.8 +0.1**
comp=Z,192nm,1.4s,mb5.7
BJT LR LR
comp=Z,41μm,20.0s,MS6.3
BJI Beijing 44.87 17 P **P** **07 36 01.8 -0.1**
BJI XP sP 07 36 14.6 -2.9
BJI SCP ScP 07 41 30.8 -1.9
BJI S **S** **07 42 35.3 -1.7**
BJI XS sS 07 42 53.4 -1.9
BJI AMB AMB
comp=Z,3μm,10.8s
BJI LR LR
comp=N,29μm,18.4s,MS6.3
BJI LR LR
comp=E,12μm,19.4s,MS6.3
BJI LR LR
comp=Z,28μm,19.2s,MS6.2
MSEY Mahe Island 45.29 266 PFAKE 07 36 20.0 +14
MSEY LR LR
comp=Z,9μm,22.0s,MS5.6
DL2 Dalian 45.70 23 ⇑*i*P **P** **07 36 07.0 -1.4**
DL2 XP sP 07 36 19.3 -4.8
DL2 PP PP 07 38 00.9 +4.9
DL2 S **S** **07 42 45.9 -3.1**
DL2 XS sS 07 43 10.3 +3.0
DL2 AMB AMB
comp=Z,50nm,1.2s,mb5.3
DL2 AMB AMB
comp=Z,1μm,6.6s
DL2 LR LR
comp=N,5μm,19.4s,MS5.7
DL2 LR LR
comp=E,6μm,19.1s,MS5.7
DL2 LR LR
comp=Z,6μm,16.0s,MS5.7
PMG Port Moresby 46.50 100 P **P** **07 36 12.6 -2.6**
PMG pmax pmax
comp=Z,38nm,1.1s
PMG MLR MLR
comp=Z,3μm,22.0s
PMG Port Moresby 46.50 100 P **P** **07 36 12.6 -2.6**
comp=Z,38nm,1.1s,mb5.2
PMG LR LR
comp=Z,3μm,22.0s,MS5.3
GUMO Guam 46.61 68 *e*P **P** **07 36 13.0 -3.0**
GUMO pmax pmax
comp=Z,82nm,0.6s,mb5.8
GUMO MLR MLR
comp=Z,4μm,22.0s,MS5.3
GUMO Guam 46.61 68 *e*P **P** **07 36 13.0 -3.1**
comp=Z,82nm,0.6s,mb5.8
GUMO LR LR
comp=Z,4μm,22.0s,MS5.3
INCN Inchon 46.67 28 PFAKE 07 36 30.0 +14
INCN LR LR
comp=Z,7μm,21.0s,MS5.6
KSRS Korea Array 47.27 30 P **P** **07 36 19.6 -1.2**
comp=Z,13nm,0.6s,mb5.0,baz=227,slow=7.6,SNR=32
KSRS LR LR 07 58 07.6
comp=Z,6μm,18.0s,MS5.6,baz=244,slow=39
KSRS Korea Array 47.27 30 P **P** **07 36 19.6 -1.2**
KSRS pmax pmax
comp=Z,13nm,0.6s,mb5.0
KSRS MLR MLR
comp=Z,6μm,18.0s,MS5.6
CTA Charters Tower 47.52 115 ⇑*i*P **P** **07 36 21.9 -1.2**
comp=Z,58nm,0.8s,mb5.7
CTA *es*P sP 07 36 37.0 -1.7
CTA *e*S **S** **07 43 11.0 -4.7**
CTA Charters Tower 47.52 115 S **S** **07 43 12.4 -3.2**
comp=Z,1.4nm,0.3s,baz=3.8,slow=22,SNR=2.3
CTA LR LR 07 58 37.9
comp=Z,6μm,21.3s,MS5.5,baz=49,slow=39
CTA Charters Tower 47.52 115 ⇑*i*P **P** **07 36 21.9 -1.2**
CTA *e**SP sP 07 36 37.0 -1.7
CTA *e*S **S** **07 43 11.0 -4.7**
CTA pmax pmax
comp=Z,58nm,0.8s
CTAO Charters Tower 47.52 115 *e*P **P** **07 36 22.2 -0.9**
CTAO pmax pmax
comp=Z,136nm,1.2s,mb5.8
CTAO MLR MLR
comp=Z,5μm,21.0s,MS5.5
CTAO Charters Tower 47.52 115 *e*P **P** **07 36 22.2 -0.9**
comp=Z,136nm,1.2s,mb5.8
CTAO LR LR
comp=Z,5μm,21.0s,MS5.5
KBL Kabul 47.64 324 *e*P **P** **07 36 24.2 +0.4**
KBL pmax pmax
comp=Z,46nm,0.6s,mb5.7
KBL Kabul 47.64 324 *e*P **P** **07 36 24.2 +0.4**
comp=Z,46nm,0.6s,mb5.7
WMQ Urumqi 47.86 347 ⇑*i*P **P** **07 36 26.1 +0.8**
WMQ AP pP 07 36 36.0 -0.4
WMQ XP sP 07 36 40.0 -1.0
WMQ PCP PcP 07 37 54.0 +0.5
WMQ PP PP 07 38 17.0 -0.5
WMQ SCP ScP 07 41 46.0 +0.9
WMQ S **S** **07 43 19.0 -0.8**
WMQ XS sS 07 43 34.0 -4.2
WMQ SCS ScS 07 46 14.0 -1.6
WMQ SS SS 07 46 42.0 -7.0
WMQ AMB AMB
comp=Z,3μm,4.2s
WMQ LR LR
comp=N,10μm,17.9s,MS6.1
WMQ LR LR
comp=E,14μm,16.0s,MS6.1
WMQ LR LR
comp=Z,12μm,23.6s
KSH Kashi 47.89 334 ⇑*i*P **P** **07 36 26.5 +0.9**
KSH *e*AP pP 07 36 31.1 -5.6
KSH *e*PCP PcP 07 37 57.0 +3.3
KSH *e*PP PP 07 38 16.1 -1.7
KSH *e*PCS PcS 07 41 51.5 +2.2
KSH *e*S **S** **07 43 18.4 -1.9**
KSH *e*SCS ScS 07 46 17.3 +1.3
KSH LR LR
comp=N,4μm,11.8s,MS6.0
KSH LR LR
comp=E,8μm,12.2s,MS6.0
KSH LR LR
comp=Z,6μm,17.1s,MS5.7
STKA Stephens Creek 48.02 132 ⇑*i*P **P** **07 36 26.0 -0.8**
comp=Z,74nm,0.6s,mb5.9
STKA *e*S **S** **07 43 19.0 -3.4**
STKA Stephens Creek 48.02 132 P **P** **07 36 26.2 -0.5**
comp=Z,56nm,0.7s,mb5.7,baz=307,slow=7.1,SNR=60
STKA S **S** **07 43 19.9 -2.6**
comp=Z,22nm,1.0s,baz=172,slow=17,SNR=5.5
STKA LR LR 07 57 26.8
comp=Z,6μm,21.6s,MS5.5,baz=293,slow=37
SNY Shenyang 48.97 23 ⇑P **P** **07 36 32.6 -1.2**
SNY PP PP 07 38 26.4 -1.2
SNY S **S** **07 43 29.8 -5.6**
SNY AMB AMB
comp=Z,60nm,2.2s,mb5.2
SNY AMB AMB
comp=Z,2μm,4.0s
SNY LR LR
comp=N,9μm,18.3s,MS6.0
SNY LR LR
comp=E,9μm,16.4s,MS6.0
SNY LR LR
comp=Z,8μm,18.6s,MS5.7
ULHL Ulahol 50.04 336 P **P** **07 36 44.0 +1.9**
SNR=49
KZA Kyzart 50.31 335 P **P** **07 36 46.0 +1.9**
SNR=12
SONM Songino Array 50.63 5 P **P** **07 36 46.4 0.0**
comp=Z,116nm,0.8s,mb5.9,baz=186,slow=8.2,SNR=198
SONM PcP PcP 07 38 04.9 +1.3
comp=Z,8.7nm,0.5s,baz=186,slow=2.0,SNR=3.1
SONM ScP ScP 07 41 55.6 -1.2
comp=Z,5.0nm,0.9s,baz=178,slow=5.1,SNR=4.0
SONM S **S** **07 44 06.3 +7.8**
comp=Z,0.4nm,0.5s,baz=166,slow=6.0,SNR=2.5
SONM LR LR 08 00 52.7
comp=Z,12μm,20.4s,MS5.9,baz=185,slow=39
SONM PKPPKP 08 07 37.5
comp=Z,0.7nm,0.9s,baz=97,slow=1.1,SNR=3.6
SONM Songino Array 50.63 5 P **P** **07 36 46.4 0.0**
SONM 07 38 04.9
SONM S **S** **07 44 06.3 +7.8**
SONM pmax pmax
comp=Z,116nm,0.8s
SONM pmax pmax
comp=N,5.0nm,0.9s
SONM MLR MLR
comp=Z,12μm,20.4s
SONM pmax pmax
comp=Z,1.0nm,0.9s
AAA Alma-Ata 50.64 338 *i* P **P** **07 36 46.3 -0.2**
AAA *i* S **S** **07 43 58.8 +0.1**
AAA pmax pmax
comp=Z,6μm,5.4s
AAA smax
comp=E,7μm,8.3s
AAA MLR MLR
comp=Z,5μm,17.0s,MS5.6
ULN Ulaanbaatar 50.72 5 *e*P **P** **07 36 47.6 +0.5**
ULN pmax pmax
comp=Z,80nm,0.9s,mb5.7
ULN MLR MLR
comp=Z,11μm,20.0s,MS5.9
ULN Ulaanbaatar 50.72 5 *e*P **P** **07 36 47.6 +0.5**
comp=Z,80nm,0.9s,mb5.7
ULN LR LR
comp=Z,11μm,20.0s,MS5.9
TKM2 Tokmak 2 50.87 336 *e*P **P** **07 36 49.3 +1.0**
TKM2 *e**PP pP 07 36 59.9 +0.4
comp=Z,120nm,0.5s,mb6.1
TKM2 MLR MLR
comp=Z,4μm,20.0s,MS5.4
TKM2 Tokmak 2 50.87 336 *e*P **P** **07 36 49.3 +1.0**
SNR=167
TKM2 *e*pP pP 07 36 59.9 +0.4
TKM2 LR LR
comp=Z,4μm,20.0s,MS5.5
KBK Karagaybulak 50.91 335 P **P** **07 36 50.1 +1.5**
SNR=17
AML Almayashu 51.02 334 P **P** **07 36 50.8 +1.4**
SNR=61
AML Almayashu 51.02 334 *e*P **P** **07 36 50.7 +1.3**
comp=Z,220nm,0.8s,mb6.1
AML LR LR
comp=Z,4μm,21.0s,MS5.4
AAK Ala-Archa 51.09 335 P **P** **07 36 51.2 +1.3**
SNR=28
FRU Bishkek 51.20 335 ⇑*i*P **P** **07 36 50.0 -0.8**
FRU *i* pP 07 36 58.0 -4.0
FRU *e* 07 38 50.0
FRU *i* S **S** **07 44 08.0 +1.5**
FRU pmax pmax
comp=Z,920nm,2.5s,mb6.3
FRU pmax pmax
comp=Z,1μm,2.3s,mb6.5
FRU smax
comp=N,5μm,9.0s
FRU MLR MLR
comp=Z,6μm,21.0s,MS5.6
CHMS Chumysh 51.28 336 P **P** **07 36 51.5 +0.1**
SNR=28
CN2 Changchun 51.37 23 ⇑P **P** **07 36 50.9 -1.1**
CN2 *e*AP pP 07 36 59.9 -3.3
CN2 PP PP 07 38 50.5 +1.1
CN2 AMB AMB
comp=Z,90nm,0.7s,mb5.8
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,10μm,20.0s,MS5.9
CN2 LR LR
comp=E,5μm,20.0s,MS5.9
CN2 LR LR
comp=Z,7μm,22.0s,MS5.7
EKS2 Erkin-Say 51.41 335 P **P** **07 36 53.5 +1.2**
SNR=432
EKS2 Erkin-Say 51.41 335 *e*P **P** **07 36 53.7 +1.4**
comp=Z,444nm,0.9s,mb6.4
EKS2 LR LR
comp=Z,5μm,22.0s,MS5.5
USP Ospenovka 51.60 336 P **P** **07 36 54.2 +0.4**
SNR=194
MK31 Makanchi Array 52.00 344 *i* P **P** **07 36 55.9 -0.7**
MK31 pmax pmax
comp=Z,80nm,0.5s,mb5.9
MKAR Makanchi Array 52.00 344 P **P** **07 36 56.3 -0.4**
comp=Z,113nm,0.6s,mb6.0,baz=151,slow=7.7,SNR=218
MKAR S **S** **07 44 18.8 +1.5**
comp=Z,3.4nm,0.9s,baz=156,slow=11,SNR=3.2
MKAR LR LR 08 04 02.3
comp=Z,5μm,21.4s,MS5.5,baz=159,slow=42
MKAR PKPPKP 08 07 33.0
comp=Z,0.6nm,0.8s,baz=0.0,slow=0.4,SNR=2.8
MKAR Makanchi Array 52.00 344 P **P** **07 36 56.3 -0.3**
MKAR S **S** **07 44 18.8 +1.5**
MKAR pmax pmax
comp=Z,113nm,0.6s
MKAR smax
comp=N,3.0nm,0.9s
MKAR MLR MLR
comp=Z,5μm,21.4s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MAJO Matsushiro 52.36 38 *e*P **P** **07 36 58.1 -1.4**
MAJO pmax pmax
comp=Z,89nm,1.3s,mb5.5
MAJO MLR MLR
comp=Z,4μm,20.0s,MS5.5
MAJO Matsushiro 52.36 38 *e*P **P** **07 36 58.1 -1.5**
comp=Z,89nm,1.3s,mb5.5
MAJO LR LR
comp=Z,4μm,20.0s,MS5.5
MAT Matsushiro 52.36 38 P **P** **07 36 58.7 -0.8**
MAT S **S** **07 44 16.0 -6.7**
MJAR Matsushiro Arr 52.36 38 P **P** **07 36 58.0 -1.5**
comp=Z,18nm,0.8s,mb5.0,baz=211,slow=7.0,SNR=26
MJAR ScP ScP 07 42 03.6 -1.0
comp=Z,4.0nm,0.9s,baz=215,slow=5.4,SNR=6.3
MJAR LR LR 07 59 51.4
comp=Z,3μm,20.3s,MS5.4,baz=230,slow=37
ZAK Zakamensk 52.99 2 ⇓*i*P **P** **07 37 03.9 0.0**
ZAK *e* 07 46 47.5
ZAK pmax pmax
comp=Z,62nm,2.0s,mb5.2
KK31 Karatay Array 53.22 333 *i* P **P** **07 37 05.2 -0.6**
KK31 pmax pmax
comp=Z,93nm,0.8s,mb5.8
VLA Vladivostok 53.58 28 *d**i*P **P** **07 37 07.4 -1.0**
VLA *e**PP pP 07 37 19.3 -0.4
VLA *e* 07 38 13.8
VLA *e*S **S** **07 44 37.9 -1.2**
VLA *e**SS sS 07 44 57.4 -0.3
VLA pmax pmax
comp=Z,224nm,2.1s,mb5.7
VLA MLR MLR
comp=Z,7μm,17.8s,MS5.8
VLA Vladivostok 53.58 28 *i* P **P** **07 37 07.5 -0.9**
TOO Toolangi 53.58 136 *e*P **P** **07 37 07.4 -1.2**
TOO *e*S **S** **07 44 40.8 +1.5**
MDJ Mudanjiang 53.72 25 P **P** **07 37 09.0 -0.4**
MDJ AP pP 07 37 17.3 -3.4
MDJ XP sP 07 37 21.0 -4.2
MDJ PP PP 07 39 09.1 -1.6
MDJ SCP ScP 07 42 08.6 -1.7
MDJ PCS PcS 07 42 13.0 -1.2
MDJ S **S** **07 44 37.6 -3.4**
MDJ XS sS 07 44 54.4 -5.2
MDJ AMB AMB
comp=Z,30nm,1.9s,mb4.9
MDJ AMB AMB
comp=Z,2μm,10.8s
MDJ LR LR
comp=N,6μm,25.8s,MS5.8
MDJ LR LR
comp=E,9μm,21.9s,MS5.8
MDJ LR LR
comp=Z,13μm,22.6s,MS5.9
MDJ Mudanjiang 53.72 25 P **P** **07 37 10.0 +0.6**
comp=Z,38nm,0.9s,mb5.3
MDJ LR LR
comp=Z,15μm,20.0s,MS6.0
MOY Mondy 54.23 0 *e*P **P** **07 37 13.3 +0.3**
MOY pmax pmax
comp=Z,504nm,2.7s,mb6.0
TLY Talaya 54.30 2 *c**i*P **P** **07 37 14.2 +0.7**
TLY *e* 07 38 17.0
TLY *e* 07 39 19.8
TLY *e*S **S** **07 44 49.7 +1.2**
TLY *e*PS 07 45 06.8
TLY pmax pmax
comp=Z,144nm,1.2s,mb5.8
TLY MLR MLR
comp=Z,15μm,18.0s,MS6.1
TLY Talaya 54.30 2 *e*P **P** **07 37 14.2 +0.7**
comp=Z,220nm,1.4s,mb5.9
TLY LR LR
comp=Z,12μm,21.0s,MS5.9
HIA Hailar 54.36 15 *e*P **P** **07 37 13.2 -0.8**
HIA pmax pmax
comp=Z,21nm,0.6s
HIA MLR MLR
comp=Z,18μm,20.0s
HIA Hailar 54.36 15 *e*P **P** **07 37 13.2 -0.8**
comp=Z,20nm,0.6s,mb5.2
HIA LR LR
comp=Z,18μm,20.0s,MS6.1
OPO Ambohidratompo 54.77 249 P **P** **07 37 18.4 +0.8**
comp=Z,3.7nm,0.9s,mb4.4
ABPO Ambohimpanom 54.81 249 PFAKE 07 37 30.0 +12
ABPO LR LR
comp=Z,13μm,20.0s,MS6.0
IRK Irkutsk 54.89 3 ⇑*i*P **P** **07 37 17.9 +0.1**
IRK *e* 07 44 55.7
IRK pmax pmax
comp=Z,731nm,3.1s
CAN Canberra 55.08 132 *e*P **P** **07 37 19.7 +0.2**

ARMA Armidale 55.28 125 *e*P **P** **07 37 21.6 +0.5**
ARMA *es*P sP 07 37 35.4 -1.5
ARMA *e*S **S** **07 45 03.8 +1.3**
CNB Canberra Magne 55.35 132 *e*P **P** **07 37 21.1 -0.4**
CNB *e*S **S** **07 45 01.6 -1.6**
RIV Riverview 56.12 129 *e*P **P** **07 37 31.4 +4.4**
ABKT Ailbek 56.57 320 P **P** **07 37 30.3 +0.2**
comp=Z,618nm,1.2s,mb6.5,SNR=21
KURK Kurchatov 56.58 343 P **P** **07 37 28.9 -1.1**
comp=Z,58nm,0.7s,mb5.7,baz=160,slow=7.1,SNR=78
KURK S **S** **07 45 15.3 -3.7**
comp=Z,2.9nm,0.7s,baz=43,slow=17,SNR=5.8
KURK LR LR 08 07 08.4
comp=Z,5µm,21.4s,MS5.5,baz=190,slow=42
KURK PKP2bc 08 07 37.8
comp=Z,0.9nm,0.8s,baz=323,slow=2.1,SNR=4.3
KURK Kurchatov 56.58 343 P **P** **07 37 28.9 -1.0**
KURK S **S** **07 45 15.3 -3.7**
KURK pmax pmax
comp=Z,58nm,0.7s,mb5.7
KURK smax
comp=N,3.0nm,0.7s
KURK MLR MLR
comp=Z,5µm,21.4s,MS5.5
KURK pmax pmax
comp=Z,1.0nm,0.9s
KURK Kurchatov 56.58 343 *e*P **P** **07 37 29.8 -0.1**
comp=Z,169nm,0.8s,mb6.1
KURK LR LR
comp=Z,7µm,19.0s,MS5.8
TAU Tasmania Unive 57.46 141 PFAKE 07 37 50.0 +14
TAU LR LR
comp=Z,6µm,21.0s,MS5.7
ZAA0 Zalesovo Array 58.08 349 *e*P **P** **07 37 40.1 -0.4**
ZALV Zalesovo Beam 58.08 349 P **P** **07 37 40.0 -0.4**
comp=Z,172nm,0.8s,mb6.1,baz=180,slow=4.3,SNR=78
ZALV S **S** **07 45 37.0 -1.6**
comp=Z,5.7nm,0.7s,baz=163,slow=14,SNR=5.9
ZALV LR LR 08 05 58.0
comp=Z,5µm,21.6s,MS5.6,baz=160,slow=40
ZALV Zalesovo Beam 58.08 349 P **P** **07 37 40.1 -0.3**
ZALV S **S** **07 45 37.0 -1.6**
ZALV pmax pmax
comp=Z,172nm,0.8s,mb6.1
ZALV smax
comp=N,6.0nm,0.7s
ZALV MLR MLR
comp=Z,5µm,21.6s,MS5.6
ZALV Zalesovo Beam 58.08 349 P **P** **07 37 40.0 -0.4**
ZALV S **S** **07 45 37.0 -1.6**
ZALV LR LR 08 05 58.0
KLR Kul'dur 58.30 23⇓ *i*P **P** **07 37 37.5 -4.6**
KLR *e* 07 39 46.5
KLR *e*S **S** **07 45 34.5 -7.2**
KLR pmax pmax
comp=N,720nm,2.0s
KLR pmax pmax
comp=E,100nm,2.0s
KLR pmax pmax
comp=Z,370nm,2.0s,mb6.1
KLR pmax pmax
comp=N,1µm,7.5s
KLR pmax pmax
comp=Z,2µm,7.5s
KLR MLR MLR
comp=Z,10µm,16.0s,MS6.0
ERM Erimo 58.79 36 PFAKE 07 38 00.0 +14
ERM LR LR
comp=Z,3µm,19.0s,MS5.4
KRAR Krasnoyarsk 58.95 355*c* *i*P **P** **07 37 46.1 -0.4**
KRAR pmax pmax
comp=Z,291nm,1.3s,mb6.2
KRAR MLR MLR
comp=Z,9µm,17.0s,MS6.0
HNR Honiara 59.09 99 *e*P **P** **07 37 45.9 -2.4**
HNR pmax pmax
comp=Z,257nm,0.9s,mb6.3
HNR MLR MLR
comp=Z,2µm,20.0s,MS5.2
HNR Honiara 59.09 99 *e*P **P** **07 37 45.9 -2.4**
comp=Z,257nm,0.9s,mb6.3
HNR LR LR
comp=Z,2µm,20.0s,MS5.2
NVS Novosibirsk 59.23 348 *i*P **P** **07 37 46.7 -1.8**
NVS *i*S **S** **07 45 44.5 -9.1**
NVS pmax pmax
comp=N,286nm,1.9s
NVS pmax pmax
comp=Z,247nm,1.9s,mb5.9
NVS pmax pmax
comp=E,84nm,1.5s
NVS smax
comp=N,239nm,1.9s
NVS smax
comp=E,198nm,2.0s
RDF Al-Radifah 59.98 306 *e*P **P** **07 37 54.3 +0.2**
baz=306
RDF AMb AMB 07 37 56.8
comp=Z,123nm,0.8s,mb6.0,baz=306
UMR Umm Al-Rimmam 60.08 306 *e*P **P** **07 37 55.1 +0.3**
baz=306
UMR AMb AMB 07 37 56.5
comp=Z,145nm,0.8s,mb6.1,baz=306
NAY Al-Naaiem 60.35 306 *e*P **P** **07 37 56.6 -0.1**
baz=306
NAY AMb AMB 07 37 58.0
comp=Z,59nm,0.6s,mb5.8,baz=306
MIB Mutribah 60.48 307 *e*P **P** **07 37 57.9 +0.3**
baz=306
MIB AMb AMB 07 37 58.7
comp=Z,150nm,1.0s,mb6.0,baz=306
RST Umm Al-Ruwaisa 60.64 306 *e*P **P** **07 37 58.4 -0.3**
baz=306
RST AMb AMB 07 37 59.3
comp=Z,90nm,1.1s,mb5.8,baz=306
BVA0 Borovoye Array 61.19 340 *i*P **P** **07 38 00.7 -1.2**
BVA0 pmax pmax
comp=Z,28nm,1.2s,mb5.3
BVAR Borovoye Array 61.19 340 P **P** **07 38 01.0 -0.9**
comp=Z,47nm,0.6s,mb5.8,baz=143,slow=8.9,SNR=152
BVAR S **S** **07 46 24.2 +5.4**
comp=Z,5.0nm,0.8s,baz=135,slow=15,SNR=4.9
BVAR LR LR 08 09 36.1
comp=Z,5µm,18.1s,MS5.7,baz=145,slow=41
BVAR Borovoye Array 61.19 340 P **P** **07 38 01.0 -0.9**
BVAR S **S** **07 46 24.2 +5.4**
BVAR pmax pmax
comp=Z,47nm,0.6s
BVAR smax
comp=N,5.0nm,0.8s
BVAR MLR MLR
comp=Z,5µm,18.1s
BOD Bodaibo 61.32 8 *e*P **P** **07 38 02.0 -0.7**
BOD pmax pmax
comp=Z,99nm,0.8s,mb6.0
YUK Yuzh-Kuril'sk 61.59 35 *e*P **P** **07 38 03.0 -1.8**
YUK *e*SP 07 38 17.0
YUK *e* 07 40 25.0
YUK *e*PPP 07 41 48.0
YUK S S 07 46 45.0 +21
YUK pmax pmax
comp=Z,4µm,5.0s
YUK MLR MLR
comp=N,6µm,17.0s,MS5.9
YUK MLR MLR
comp=E,3µm,17.0s,MS5.9
YUK MLR MLR
comp=Z,7µm,17.0s,MS5.9
YSS Yuzh-Sakhalins 61.70 31α *i*P **P** **07 38 05.0 -0.5**
YSS *e* 07 38 40.6
YSS *e* 07 40 20.0
YSS *e*S **S** **07 46 22.0 -3.5**
YSS *e*PS 07 46 38.0
YSS pmax pmax
comp=Z,210nm,1.4s,mb6.1
YSS pmax pmax
comp=Z,1µm,11.0s
YSS MLR MLR
comp=N,2µm,16.0s,MS5.5
YSS MLR MLR
comp=E,2µm,16.0s,MS5.5
YSS MLR MLR
comp=Z,4µm,16.0s,MS5.7
YSS Yuzh-Sakhalins 61.70 31 *e*P **P** **07 38 05.3 -0.2**
comp=Z,60nm,0.6s,mb5.9
YSS pP pP 07 38 15.2 -1.7
YSS LR LR
comp=Z,944nm,19.0s,MS5.0
CLNS Chul'man 62.54 15*c* *i*P **P** **07 38 10.7 -0.2**
CLNS *e**PP pP 07 38 18.5 -3.9
CLNS *e* 07 38 49.2
CLNS *e* 07 40 24.3
CLNS *e*S **S** **07 46 30.2 -5.5**
CLNS pmax pmax
comp=Z,46nm,1.0s,mb5.6
CLNS pmax pmax
comp=N,27nm,0.9s
CLNS pmax pmax
comp=E,32nm,1.1s
CLNS smax
comp=N,38µm,1.5s
CLNS smax
comp=E,24µm,1.4s
CLNS MLR MLR
comp=Z,16µm,18.0s,MS6.2
CLNS MLR MLR
comp=E,7µm,19.0s,MS6.2
CLNS MLR MLR
comp=N,12µm,17.0s,MS6.2
AB31 Akbulak array 62.71 331 *i*P **P** **07 38 11.3 -0.9**
AB31 pmax pmax
comp=Z,106nm,0.6s,mb6.2
AB31 Akbulak array 62.71 331⇑ *e*P **P** **07 38 11.4 -0.8**
KMBO Kilima Mbogo 63.56 270 P **P** **07 38 19.5 +0.9**
comp=Z,3.6nm,0.8s,mb4.5,baz=54,slow=11,SNR=7.8
KMBO LR LR 08 00 23.5
comp=Z,7µm,22.0s,MS5.8,baz=77,slow=31
KMBO Kilima Mbogo 63.56 270 *e*P **P** **07 38 21.0 +2.5**
KMBO pmax pmax
comp=Z,17nm,1.0s
KMBO MLR MLR
comp=Z,6µm,20.0s
KMBO Kilima Mbogo 63.56 270 *e*P **P** **07 38 20.9 +2.4**
comp=Z,17nm,1.0s,mb5.0
KMBO LR LR
comp=Z,6µm,20.0s,MS5.7
CASY Casey 63.75 176 *e*P **P** **07 38 20.5 +1.7**
comp=Z,94nm,1.4s,mb5.6
CASY LR LR
comp=Z,8µm,21.0s,MS5.9
MIR Mirnyy 63.89 183⇑ *i*P **P** **07 38 21.0 +1.3**
MIR *i* pP 07 38 35.0 +3.8
MIR *i* 07 38 58.0
MIR *i*S **S** **07 46 53.0 +0.7**
MIR *e*PS 07 47 10.0
MIR pmax pmax
comp=Z,100nm,1.5s,mb5.6
MIR MLR MLR
comp=Z,5µm,19.0s,MS5.7
AKTK Aktyubinsk 64.43 331 P **P** **07 38 22.8 -0.7**
AKTK S **S** **07 46 55.9 -3.6**
AKTO Aktyubinsk 64.43 331 P **P** **07 38 22.8 -0.7**
comp=Z,19nm,0.6s,mb5.3,baz=132,slow=6.7,SNR=54
AKTO S **S** **07 46 55.9 -3.6**
comp=Z,1.7nm,0.6s,baz=344,slow=22,SNR=8.7
AKTO Aktyubinsk 64.43 331 P **P** **07 38 22.8 -0.7**
AKTO S **S** **07 46 55.9 -3.6**
AKTO pmax pmax
comp=Z,19nm,0.6s,mb5.3
AKTO smax
comp=N,2.0nm,0.6s
MAK Makhachkala 66.09 320*c* *i*P **P** **07 38 34.5 +0.1**
MAK *i* 07 39 03.6
MAK *e* 07 41 02.6
MAK *e*PPP 07 42 33.9
MAK *i*S S 07 47 17.8 -2.3
MAK pmax pmax
comp=N,60nm,0.4s
MAK pmax pmax
comp=E,431nm,1.5s
MAK pmax pmax
comp=Z,441nm,2.0s,mb6.1
MAK pmax pmax
comp=Z,2504µm,4.6s
MAK pmax pmax
comp=N,1291µm,4.8s
MAK pmax pmax
comp=E,860µm,3.3s
MAK smax
comp=N,3937µm,5.8s
MAK smax
comp=E,2453µm,6.6s
MAK MLR MLR
comp=Z,2µm,19.0s,MS5.3
HAKT HAKKARI 66.31 313⇑ *i*P **P** **07 38 36.0 0.0**
DZM Mont Dzumac 66.39 113 *e*P **P** **07 38 36.0 -0.8**
DZM *e*pP pP 07 38 47.4 -1.0
GNI Garni 66.66 316 *e*P **P** **07 38 38.7 +0.6**
GNI Garni 66.66 316 P **P** **07 38 37.7 -0.5**
comp=Z,6.3nm,0.4s,mb5.0,baz=328,slow=20,SNR=7.0
GNI S S 07 47 28.7 +1.6
comp=Z,2.0nm,0.3s,baz=278,slow=23,SNR=2.9
GNI Garni 66.66 316 P **P** **07 38 37.7 -0.4**
GNI S S 07 47 28.7 +1.6
GNI pmax pmax
comp=Z,6.0nm,0.4s
GNI smax
comp=N,2.0nm,0.3s
GNI Garni 66.66 316 *e*P **P** **07 38 39.4 +1.2**
comp=N,500nm,1.6s,mb6.3
GNI LR LR
comp=Z,2µm,22.0s,MS5.3
CLDR Caldiran 66.81 315 *e*P **P** **07 38 39.8 +0.6**
VANB Van 66.96 314 *e*P **P** **07 38 39.6 -0.5**
DYDN Diyadin 67.14 315⇑ *i*P **P** **07 38 42.1 +0.9**
TBLG Delisi 67.34 318 P **P** **07 38 43.0 +0.5**
AGRB Hanur-Agry 67.64 315 *e*P **P** **07 38 44.7 +0.3**
SVE Sverdlovsk 67.71 337⇓ *e*P **P** **07 38 44.4 -0.1**
SVE *e* 07 39 06.3
SVE *e* 07 41 10.8
SVE *e*S S 07 47 39.4 +0.3
SVE *e*SS SS 07 51 56.5 -4.4
SVE pmax pmax
comp=Z,251nm,1.5s,mb6.0
SVE MLR MLR
comp=Z,3µm,21.0s,MS5.5
DIGO Kars 67.72 316⇑ *i*P **P** **07 38 45.1 +0.3**
KARS Kars 67.99 316 *e*P **P** **07 38 47.4 +0.8**
ARU Arti 68.25 336*c* *i*P **P** **07 38 47.2 -0.6**
ARU *e* 07 39 09.7
ARU *e* 07 41 14.2
ARU *e*PPP 07 43 00.0
ARU *e*S S 07 47 47.1 +1.6
ARU *e* 07 48 42.8
ARU *e*SS SS 07 52 02.2 -7.0
ARU pmax pmax
comp=Z,125nm,1.7s,mb5.7
ARU MLR MLR
comp=Z,4µm,18.0s,MS5.7
ARU Arti 68.25 336 *e*P **P** **07 38 47.3 -0.5**
comp=Z,204nm,1.3s,mb6.0
ARU LR LR
comp=Z,6µm,21.0s,MS5.8
YAK Yakutsk 68.28 14*c* *i*P **P** **07 38 46.5 -1.4**
YAK *e**PP pP 07 38 55.1 -4.4
YAK *e* 07 39 13.4
YAK *e* 07 41 14.1
YAK *e*PPP 07 42 59.2
YAK *e*S S 07 47 40.2 -5.6
YAK *e* 07 48 37.9
YAK *e*SS SS 07 52 04.0 -5.6
YAK *e*SSS 07 55 05.9
YAK pmax pmax
comp=E,83nm,2.0s
YAK pmax pmax
comp=N,85nm,1.4s
YAK pmax pmax
comp=Z,172nm,0.9s,mb6.1
YAK pmax pmax
comp=N,235nm,2.2s
YAK pmax pmax
comp=E,176nm,4.2s
YAK pmax pmax
comp=Z,564nm,4.9s
YAK smax
comp=N,1224µm,10.8s
YAK smax
comp=E,143µm,2.0s
YAK MLR MLR
comp=N,12µm,17.0s,MS6.3
YAK MLR MLR
comp=Z,22µm,20.0s,MS6.4
YAK MLR MLR
comp=E,8µm,19.0s,MS6.3
YAK Yakutsk 68.28 14 *e*P **P** **07 38 46.7 -1.3**
comp=E,200nm,0.7s,mb6.3
YAK LR LR
comp=Z,20µm,19.0s,MS6.4
MARD Mardin 68.38 312⇑ *i*P **P** **07 38 49.2 +0.1**
EZM Erzurum 68.92 315 *e*P **P** **07 38 54.0 +1.6**
ARTV Artvin 69.03 316⇑ *i*P **P** **07 38 52.6 -0.4**
DIYA Diyarbakir 69.08 312⇑ *i*P **P** **07 38 54.2 +0.8**
BCA Borcka 69.35 316 *e*P **P** **07 38 54.9 -0.2**
DRV Dumont d'Urvil 69.36 164 P **P** **07 38 59.0 +4.4**
DRV S S 07 47 53.0 -5.4
DRV SS SS 07 52 21.0 -4.9
DRV L 07 56 00.0
DRV R 07 59 00.0
KOPT Kop Dagi 69.58 315⇑ *i*P **P** **07 38 57.0 +0.6**
KIV Kislovodsk 69.67 319 P **P** **07 38 57.0 +0.1**
comp=Z,771nm,1.2s,mb6.5,SNR=10
KIV Kislovodsk 69.67 319 *e*P **P** **07 38 57.4 +0.5**
KIV *e* 07 41 32.9
KIV *e*PPP 07 43 13.5
KIV *e*S S 07 48 02.7 -0.2
KIV pmax pmax
comp=Z,64nm,1.1s,mb5.5
KIV pmax pmax
comp=Z,946nm,5.5s
KIV MLR MLR
comp=Z,1µm,19.0s,MS5.2
KIV Kislovodsk 69.67 319⇑ *i*P **P** **07 38 57.2 +0.3**
KIV Kislovodsk 69.67 319 *e*P **P** **07 38 57.7 +0.7**
comp=Z,595nm,1.7s,mb6.2
KIV LR LR
comp=Z,1µm,20.0s,MS5.2
MAW Mawson 69.74 195⇓ *i*P **P** **07 38 57.6 +0.6**
comp=Z,13nm,0.9s,mb4.8
MAW *e*S S 07 48 04.5 +1.5
MAW Mawson 69.74 195 P **P** **07 38 57.7 +0.7**
comp=Z,11nm,1.0s,mb4.7,baz=29,slow=7.8,SNR=24
MAW LR LR 08 03 01.2
comp=Z,11µm,21.9s,MS6.0,baz=38,slow=30
MAW Mawson 69.74 195⇓ *i*P **P** **07 38 57.6 +0.6**
MAW *e*S S 07 48 04.5 +1.5
MAW pmax pmax
comp=Z,13nm,0.9s
MAW MLR MLR
comp=Z,1µm,21.0s
MAW Mawson 69.74 195⇓ *i*P **P** **07 38 57.6 +0.6**
comp=Z,13nm,0.9s,mb4.8
MAW *e*S S 07 48 04.5 +1.5
MAW LR LR
comp=Z,1µm,21.0s,MS5.1
SLAT Slait 69.83 288 *i*P **P** **07 38 50.4 -8.0**
SLAT *i*S S 07 48 00.8 -4.9
SVRC Sivrice-ELAZID 69.84 313 *e*P **P** **07 38 58.4 +0.2**
URFA Urfa 69.88 312 *e*P **P** **07 38 59.2 +0.8**
JAWL J.Aulia 69.93 287 *i*P **P** **07 38 52.2 -6.9**
JAWL AMb AMB 07 39 11.9
comp=Z,244nm,2.1s,mb5.8
JAWL *i*S S 07 48 00.8 -6.1
PTK Pertek 69.96 313 *e*P **P** **07 38 59.0 +0.1**
EZC Erzincan 69.97 314 *e*P **P** **07 39 01.5 +2.6**
MRKH Merkhyat 70.11 288 AMb AMB 07 39 20.8
comp=Z,164nm,1.6s,mb5.7
ELZG Elazig 70.12 313⇑ *i*P **P** **07 39 00.5 +0.7**
ATAB Bozova 70.28 311⇑ *i*P **P** **07 39 01.6 +0.7**
KTUT Trabzon 70.46 315 *e*P **P** **07 39 01.9 0.0**
GUMT Gumushane 70.47 315 *e*P **P** **07 39 02.3 +0.4**
MALT Malatya 70.47 312 *e*P **P** **07 39 00.6 -1.4**
MALT pmax pmax
comp=Z,93nm,1.3s,mb5.5
MALT MLR MLR
comp=Z,4µm,22.0s,MS5.6
MALT Malatya 70.47 312⇓ *i*P **P** **07 39 00.4 -1.6**
MALT Malatya 70.47 312 *e*P **P** **07 39 00.6 -1.4**
comp=Z,93nm,1.3s,mb5.5
MALT LR LR
comp=Z,4µm,22.0s,MS5.6
MYA Malataya 70.48 312 *e*P **P** **07 39 02.4 +0.3**
GZT Gaziantep 70.79 311⇑ *i*P **P** **07 39 04.5 +0.5**
AKCD Akcadag 70.84 312⇑ *i*P **P** **07 39 04.6 +0.3**
GAZ Gaziantep 71.00 311 *e*P **P** **07 39 05.8 +0.5**
SKR Severo-Kuril's 71.05 34 *e*P **P** **07 39 04.5 -0.7**
SKR *e* pP 07 39 17.0 +0.1
SKR *e* 07 41 40.0
SKR *e*S S 07 48 12.0 -6.7
SKR *e* 07 48 36.0
SKR *e*SS SS 07 52 53.0 +0.3
SKR pmax pmax
comp=Z,140nm,0.8s,mb5.9
SKR pmax pmax
comp=E,2µm,4.0s
SKR pmax pmax
comp=Z,3µm,4.0s
SKR smax
comp=N,2µm,6.0s
SKR MLR MLR
comp=N,4µm,20.0s,MS5.9
SKR MLR MLR
comp=E,6µm,20.0s,MS5.9
SKR MLR MLR
comp=Z,6µm,20.0s,MS5.9
HWQ Hawqa 71.09 308⇑ *e*P **P** **07 39 06.7 +0.9**
ESPY Espiye-Giresun 71.17 315 *e*P **P** **07 39 06.4 +0.2**
BHL Bhannes 71.21 307⇑ *e*P **P** **07 39 07.3 +0.7**
KMRS Kahramanmaras 71.34 311 *e*P **P** **07 39 07.6 +0.3**
SOC Sochi 71.48 318*c* *i*P **P** **07 39 07.1 -0.9**
SOC *e**PP pP 07 39 15.7 -3.9
SOC *e**SP sP 07 39 20.9 -3.2
SOC *e* 07 39 24.9
SOC *e* 07 41 44.9
SOC *e*PPP 07 43 27.4
SOC *i*S S 07 48 20.7 -3.3
SOC *e* 07 49 08.0
SOC *e*SS SS 07 52 56.4 -3.2
SOC pmax pmax
comp=Z,40nm,0.6s,mb5.5
SOC pmax pmax
comp=Z,344nm,4.8s
SOC MLR MLR
comp=Z,342nm,21.0s,MS4.6
SOC Sochi 71.48 318 *i*P **P** **07 39 07.6 -0.4**
COBT Iskenderun 71.52 310⇑ *i*P **P** **07 39 08.8 +0.4**
ANDN Andirin 71.78 311⇑ *i*P **P** **07 39 10.4 +0.4**
RSDY Resadiye-TOKAT 71.98 314 *e*P **P** **07 39 11.5 +0.4**
CEYT Ceyhan 72.06 310 *e*P **P** **07 39 12.2 +0.6**
SVSK Karacayir 72.06 313 *e*P **P** **07 39 11.6 0.0**
YURE YUREĞİR 72.09 310⇑ *i*P **P** **07 39 12.1 +0.3**
KOZT Kozan 72.14 311 *e*P **P** **07 39 15.1 +2.9**
LSZ Lusaka 72.53 255 *e*P **P** **07 39 17.6 +2.7**
LSZ pmax pmax
comp=Z,42nm,1.1s,mb5.3
LSZ MLR MLR
comp=Z,5µm,19.0s,MS5.8
LSZ Lusaka 72.53 255 *e*P **P** **07 39 17.6 +2.7**
comp=Z,42nm,1.1s,mb5.3
LSZ LR LR
comp=Z,5µm,19.0s,MS5.8
BNN Bunyan 72.56 312 *e*P **P** **07 39 14.4 -0.2**
KARA Karaisali 72.66 310 *e*P **P** **07 39 15.2 -0.1**
MERS Mersin 72.95 310 *e*P **P** **07 39 15.9 -1.1**
PEA0B Petropavlovsk- 73.10 32 *e*P **P** **07 39 17.1 -0.3**
PETK Petropavlovsk- 73.10 32 P **P** **07 39 15.9 -1.6**
comp=Z,24nm,0.7s,mb5.2,baz=222,slow=1.5,SNR=28
PETK LR LR 08 12 19.0
comp=Z,2µm,21.1s,MS5.4,baz=247,slow=37
KVT Kavak 73.13 314 *e*P **P** **07 39 18.6 +0.7**
LFK Lefkose 73.28 308 *e*P **P** **07 39 19.6 +0.7**
CSS Prodhromos 73.35 308 *e*P **P** **07 39 19.7 +0.3**
comp=Z,85nm,0.9s,mb5.7
CSS pP pP 07 39 31.1 0.0
CSS LR LR
comp=Z,4µm,22.0s,MS5.7
IKL Isikli 73.42 309 *e*P **P** **07 39 20.3 +0.6**
VRHR Novokhopersk 73.43 326 *e*P **P** **07 39 18.2 -1.3**
VRHR *e**SP sP 07 39 33.1 -2.4
VRHR pmax pmax
comp=N,60nm,0.6s
VRHR pmax pmax
comp=Z,110nm,0.6s,mb6.0
VRHR pmax pmax
comp=E,110nm,1.1s
VRHR MLR MLR

comp=Z,2µm,22.0s,MS5.4
VRHR MLR MLR
comp=N,1µm,18.0s,MS5.4
VRHR MLR MLR
comp=E,1µm,20.0s,MS5.4
ANN Anapa 73.46 318*c* *i*P **P** **07 39 17.8 -2.0**
ANN *i* 07 39 33.4
ANN *i* 07 42 00.4
ANN *i*S S 07 48 42.6 -4.0
ANN pmax pmax
comp=Z,988nm,6.9s
ANN MLR MLR
comp=Z,1µm,22.0s,MS5.2
PET Petropavlovsk 73.56 32α *i*P **P** **07 39 19.2 -1.0**
PET *e* 07 42 03.3
PET *e*S S 07 48 43.2 -4.2
PET pmax pmax
comp=Z,112nm,1.2s,mb5.7
PET pmax pmax
comp=Z,2µm,5.9s
PET pmax pmax
comp=Z,2µm,15.2s
PET pmax pmax
comp=Z,800nm,5.6s
PET pmax pmax
comp=Z,700nm,11.7s
PET smax
comp=N,800nm,11.6s
PET smax
comp=N,600nm,12.4s
PET MLR MLR
comp=Z,4µm,20.0s,MS5.7
PET MLR MLR
comp=Z,3µm,20.0s
PET Petropavlovsk 73.56 32 *e*P **P** **07 39 19.3 -0.9**
comp=Z,106nm,0.9s,mb5.8
PET pP pP
PET LR LR 07 39 29.0 -2.9
comp=Z,4µm,21.0s,MS5.7
LEF Lefka 73.74 308 *e*P **P** **07 39 21.5 -0.2**
RPZ Rata Peaks 73.85 135 P **P** **07 39 21.0 -1.1**
comp=Z,25nm,0.6s,mb5.3,baz=231,slow=2.1,SNR=28
CORM Corum 73.86 313 *e*P **P** **07 39 21.9 -0.3**
DIKM Dikmen 73.88 315 *e*P **P** **07 39 21.8 -0.5**
CDAG Cicekdag 73.88 313⇑ *i*P **P** **07 39 21.8 -0.6**
CTKT Corum 73.89 314⇑ *i*P **P** **07 39 22.0 -0.3**
KAMT Kaman 74.30 312 *e*P **P** **07 39 24.2 -0.6**
HDMB Hadim 74.55 309 *e*P **P** **07 39 26.3 -0.1**
TOS Tosya 74.57 314 *e*P **P** **07 39 25.1 -1.2**
CANT Cankiri 74.73 313 *e*P **P** **07 39 27.3 0.0**
ILGA Ilgaz 74.79 314⇑ *i*P **P** **07 39 26.9 -0.8**
ELDT Eldivan 74.83 313⇑ *i*P **P** **07 39 27.6 -0.3**
KONT Konya--Tatoy 74.91 310 *e*P **P** **07 39 28.3 -0.1**
LADK Ladik-KONYA 74.97 311 *e*P **P** **07 39 28.0 -0.7**
ANTO Ankara 75.12 312 *e*P **P** **07 39 29.3 -0.2**
ANTO Ankara 75.12 312 *e*P **P** **07 39 29.7 +0.2**
ANTO pmax pmax
comp=Z,109nm,1.4s,mb5.6
ANTO MLR MLR
comp=Z,1µm,19.0s,MS5.3
ANTO Ankara 75.12 312⇑ *i*P **P** **07 39 29.2 -0.3**
ANTO Ankara 75.12 312 *e*P **P** **07 39 29.7 +0.1**
comp=Z,109nm,1.4s,mb5.6
ANTO LR LR
comp=Z,1µm,19.0s,MS5.3
LOD Lodumlu 75.15 312 *e*P **P** **07 39 29.0 -0.7**
BALT Daday 75.17 314⇑ *i*P **P** **07 39 29.9 0.0**
KDHN Kadinhani 75.25 311⇑ *i*P **P** **07 39 29.3 -1.1**
LBTB Lobatse 75.45 245 *e*P **P** **07 39 33.3 +1.5**
LBTB pmax pmax
comp=Z,95nm,1.5s,mb5.5
LBTB MLR MLR
comp=Z,6µm,20.0s,MS5.9
LBTB Lobatse 75.45 245 *e*P **P** **07 39 33.3 +1.5**
comp=Z,95nm,1.5s,mb5.5
LBTB LR LR
comp=Z,6µm,20.0s,MS5.9
KIZT Kizilcal 75.53 311 *e*P **P** **07 39 31.4 -0.6**
SAFT Safranbolu 75.59 314 *e*P **P** **07 39 32.0 -0.3**
SIM Simferopol' 75.73 318*ce*P **P** **07 39 32.9 0.0**
SIM PPP 07 44 07.4
SIM *e*S S 07 49 08.1 -3.9
SIM pmax pmax
comp=Z,670nm,12.0s
SIM pmax pmax
comp=Z,91nm,1.2s,mb5.6
SGKT Sivrigoynuk 75.86 313 *i*P **P** **07 39 32.4 -1.4**
BOSA Boshof 76.01 241 P **P** **07 39 35.2 +0.3**
comp=Z,8.1nm,0.8s,mb4.7,baz=104,slow=6.7,SNR=11
BOSA LR LR 08 09 30.4
comp=Z,5µm,18.2s,MS5.8,baz=80,slow=33
SEY Seymchan 76.03 22⇑ *e*P **P** **07 39 33.7 -0.6**
SNZO South Karori 76.08 132 *e*P **P** **07 39 34.0 -1.1**
comp=Z,69nm,0.9s,mb5.6
SNZO LR LR
comp=Z,8µm,22.0s,MS6.0
BCK Bucak 76.14 310 *e*P **P** **07 39 33.0 -2.5**
ISP Isparta 76.30 310 *e*P **P** **07 39 35.6 -0.7**
ISP Isparta 76.30 310 *e*P **P** **07 39 35.2 -1.1**
ISP Isparta 76.30 310 P **P** **07 39 35.2 -1.1**
ISP LR LR
comp=Z,2µm,19.0s,MS5.5
SHUT Suhut-Afyon 76.44 311 *e*P **P** **07 39 35.8 -1.4**
MDU Mudurnu 76.45 313 *e*P **P** **07 39 37.0 -0.1**
ESKT Eskisehir 76.47 312⇑ *i*P **P** **07 39 36.5 -0.8**
TIXI Tiksi 76.49 9*c* *i*P **P** **07 39 35.0 -1.7**
TIXI *e* pP 07 39 48.7 +0.3
TIXI *e* 07 42 28.2
TIXI *e*S S 07 49 12.0 -7.3
TIXI *e* 07 49 40.6
TIXI pmax pmax
comp=Z,125nm,1.1s,mb5.8
TIXI MLR MLR
comp=N,7µm,16.0s,MS6.1
TIXI MLR MLR
comp=Z,11µm,15.0s,MS6.3
TIXI MLR MLR
comp=E,675nm,12.0s,MS6.1
TIXI Tiksi 76.49 9 *e*P **P** **07 39 35.2 -1.5**
comp=E,95nm,0.9s,mb5.7
TIXI LR LR
comp=Z,18µm,20.0s,MS6.4
TKTP Tekketepe 76.49 310⇑ *i*P **P** **07 39 36.5 -0.9**
ELL Elmali 76.49 309 *e*P **P** **07 39 36.7 -0.7**
KDZE Karadeniz Ereo 76.51 314 *e*P **P** **07 39 35.3 -2.2**
AKAS Kas 76.61 308⇑ *i*P **P** **07 39 36.3 -1.8**
GOLH Golhisar 76.88 309⇑ *i*P **P** **07 39 39.1 -0.5**
ALT Altintas 76.90 311 *e*P **P** **07 39 39.2 -0.5**
GULT Gulveren 76.95 312 *e*P **P** **07 39 39.6 -0.4**
DNZL Cakiroluk 77.38 309⇑ *i*P **P** **07 39 41.4 -1.1**
GDZ Gediz 77.39 311⇑ *i*P **P** **07 39 41.8 -0.7**
SYO Syowa Base 77.41 199⇓ *e*P **P** **07 39 42.0 +0.1**
SYO Syowa Base 77.41 199‖ *e*PcP PcP 07 39 50.8 -1.5
ADVT Abdulvahap 77.53 312 *e*P **P** **07 39 42.6 -0.6**
TURN Turunc 77.54 309⇑ *i*P **P** **07 39 44.5 +1.1**
MOS Moscow 77.58 329 *e*P **P** **07 39 42.1 -1.1**
MOS *e* pP 07 39 52.7 -2.2
MOS *i* 07 39 56.8
MOS *e* 07 42 35.0
MOS *e*S S 07 49 27.9 -3.9
MOS *i* 07 49 53.8
MOS pmax pmax
comp=Z,263nm,1.5s,mb5.9
MOS pmax pmax
comp=Z,1100µm,2.5s
MOS MLR MLR
comp=Z,4µm,23.0s,MS5.7
ARG Arkhangelos 77.77 308 *e*P **P** **07 39 44.5 -0.1**
SILT Sile 77.78 313 *e*P **P** **07 39 43.5 -1.1**
YLV Yalova 77.83 312 *e*P **P** **07 39 44.3 -0.6**
YER Yerkesik 77.85 309 *e*P **P** **07 39 42.5 -2.6**
KULA Kula-Manisa 77.87 310 *e*P **P** **07 39 45.4 +0.2**
OBN Obninsk 77.89 328*c* *i*P **P** **07 39 44.6 -0.3**
OBN *i* pP 07 39 55.2 -1.4
OBN *i* pP 07 39 58.1 +1.5
OBN *i* 07 42 40.0
OBN *e*PPP 07 44 37.2
OBN *i*S S 07 49 30.9 -4.2
OBN *i* 07 49 56.5
OBN *i* 07 50 21.3
OBN *i*PS 07 50 29.9
OBN *i*SS SS 07 54 34.5 -1.9
OBN pmax pmax
comp=Z,115nm,0.9s,mb5.8
OBN MLR MLR
comp=Z,4µm,22.0s,MS5.7
OBN Obninsk 77.89 328 *e*P **P** **07 39 44.8 -0.1**
comp=Z,183nm,1.0s,mb6.0
OBN LR LR
comp=Z,3µm,20.0s,MS5.6
ULDT Uludag 77.90 312⇑ *i*P **P** **07 39 45.1 -0.2**
GEMT Gemlik 77.93 312 *e*P **P** **07 39 45.5 0.0**
DEMI Demirci 77.95 311⇑ *i*P **P** **07 39 45.1 -0.5**
ISK Istanbul-Kandi 78.18 313 *e*P **P** **07 39 46.7 -0.1**
KLYT Kilyos 78.24 313 *e*P **P** **07 39 45.4 -1.8**
DURS Dursunbey 78.27 311⇑ *i*P **P** **07 39 46.8 -0.5**
MLSB Milas 78.28 309 *e*P **P** **07 39 47.3 -0.2**
AYDN Tasoluk 78.28 309⇑ *i*P **P** **07 39 47.7 +0.2**
KAP Karpathos 78.38 307 *e*P **P** **07 39 48.5 +0.4**
BODT Bodrum 78.59 309 *e*P **P** **07 39 48.3 -0.9**
AKHS Akhisar 78.60 310⇑ *i*P **P** **07 39 48.9 -0.3**
ELBA Catalca 78.66 313⇑ *i*P **P** **07 39 48.7 -0.8**
BALB Balikesir 78.72 311 *e*P **P** **07 39 46.8 -3.0**
GCAM G?zelcaml? 78.79 309⇑ *i*P **P** **07 39 50.4 +0.2**
SLVT Silivri 78.84 313 *e*P **P** **07 39 50.2 -0.3**
BNT Bandirma 78.86 312 *e*P **P** **07 39 50.7 +0.1**
KDAG Bornova 78.91 310⇑ *i*P **P** **07 39 51.3 +0.3**
IZM Izmir 78.92 310 *e*P **P** **07 39 49.7 -1.2**
BALY Balya 78.94 311⇑ *i*P **P** **07 39 50.5 -0.5**
BLCB Balcova 79.08 310 *e*P **P** **07 39 52.7 +0.9**
SMG Samos 79.10 309 *e*P **P** **07 39 51.9 0.0**
MRMT Marmara Adasi 79.15 312 *e*P **P** **07 39 51.2 -1.0**
TLCR 79.39 317 P pP 07 40 04.2 -1.0
URLA Izmir 79.42 310⇑ *i*P **P** **07 39 53.4 -0.3**
MFT Murefte 79.43 312 *e*P **P** **07 39 52.3 -1.4**
SART Tekirdag 79.48 312⇑ *i*P **P** **07 39 53.1 -0.9**
RKY Sarkoy-Tekirda 79.48 312 *e*P **P** **07 39 53.8 -0.2**
TIRR Tirgusor 79.48 316 *e*P **P** **07 39 53.9 0.0**
TIRR *PP pP 07 40 04.7 -1.0
TIRR pmax pmax
comp=Z,117nm,1.0s,mb5.8
TIRR Tirgusor 79.48 316⇑ *i*P **P** **07 39 53.7 -0.2**
TIRR Tirgusor 79.48 316 *e*P **P** **07 39 53.9 0.0**
comp=Z,116nm,1.0s,mb5.8
TIRR pP pP 07 40 04.7 -1.0
NPS Neapolis 79.58 306 *e*P **P** **07 39 54.8 +0.2**
CHOS Chios island 79.84 310 *e*P **P** **07 39 56.3 +0.3**
PRK Paraskevi 79.85 311 *e*P **P** **07 39 56.0 -0.1**
PRK Paraskevi 79.85 311 *e*P **P** **07 39 56.0 0.0**
KIS Kishinev 79.86 319 *e*P **P** **07 39 54.0 -1.9**
KIS *i* 07 40 10.0
KIS *e* 07 42 57.0
KIS *e*PPP 07 44 55.0
KIS *i*S S 07 49 52.0 -4.5
KIS *e* 07 50 07.0
KIS *e*SS SS 07 55 04.0 -2.4
KIS pmax pmax
comp=Z,1µm,11.0s
KIS pmax pmax
comp=Z,2µm,13.0s
KIS Kishinev 79.86 319 *e*P **P** **07 39 54.0 -1.9**
comp=Z,1µm,11.0s
KIS Kishinev 79.86 319 *e*PP PP 07 42 57.0 -0.7
SANT Santorini 79.91 308 *e*P **P** **07 39 55.9 -0.5**
SANT Santorini 79.91 308 P **P** **07 39 55.9 -0.5**
SANT LR LR
comp=Z,2µm,22.0s,MS5.4
APE Apeiranthos 79.99 308 *e*P **P** **07 39 56.1 -0.7**
APE Apeiranthos 79.99 308 *e*P **P** **07 39 56.1 -0.7**
APE Apeiranthos 79.99 308⇑ *i*P pP 07 40 06.8 -1.8
EDRB Edirne 80.06 313 *e*P **P** **07 39 57.2 +0.1**
SUR Sutherland 80.09 238 LR LR 08 09 36.0
comp=Z,8µm,19.9s,MS6.0,baz=98,slow=31
SUR Sutherland 80.09 238 *e*P **P** **07 40 00.3 +2.8**
comp=Z,31nm,0.8s,mb5.3
SUR LR LR
comp=Z,8µm,19.0s,MS6.1
ENEZ Enez 80.25 312 *e*P **P** **07 39 58.4 +0.2**
JMB Yambol 80.31 314 *e*P **P** **07 39 59.2 +0.8**
ALN Alexandroupoli 80.37 312 *e*P **P** **07 39 58.5 -0.2**
AKASG Malin Array Be 80.60 322 P **P** **07 39 59.0 -0.8**
comp=Z,7.2nm,0.7s,mb4.7,baz=96,slow=4.2,SNR=18
AKASG Malin Array Be 80.60 322 *i*P **P** **07 39 59.0 -0.8**
AKASG pmax pmax
comp=Z,7.0nm,0.7s
KIEV Kiev 80.61 322 *e*P **P** **07 39 59.2 -0.6**
KIEV *e**PP pP 07 40 09.8 -1.8
KIEV pmax pmax
comp=Z,36nm,0.9s,mb5.3
KIEV MLR MLR
comp=Z,3µm,22.0s,MS5.6
KIEV Kiev 80.61 322 *e*P **P** **07 39 59.2 -0.6**
comp=Z,36nm,0.9s,mb5.3
KIEV *e*pP pP 07 40 09.8 -1.9
KIEV LR LR
comp=Z,3µm,22.0s,MS5.6
VAM Vamos 80.74 306 *e*P **P** **07 40 02.7 +1.8**
LIA Limnos Island 80.81 311 *e*P **P** **07 40 00.7 -0.5**
LIA Limnos Island 80.81 311 *e*P **P** **07 40 00.8 -0.4**
KARN Karanos 80.97 306 *e*P **P** **07 40 02.6 +0.5**
VRI Vrincioaia 80.98 317⇑ *i*P **P** **07 40 02.6 +0.7**
VRI Vrincioaia 80.98 317 P **P** **07 40 02.9 +1.0**
RAO Raoul Island 81.02 119 PFAKE 07 40 10.0 +7.5
RAO LR LR
comp=Z,3µm,21.0s,MS5.6
PLOR Plostina 81.03 317 P **P** **07 40 03.4 +1.2**
PLOR Plostina 81.03 317⇑ *i*P **P** **07 40 02.6 +0.4**
MLR Muntele Rosu 81.43 317⇑ *i*P **P** **07 40 04.9 +0.6**
MLR Muntele Rosu 81.43 317 P **P** **07 40 05.3 +1.0**
ATH Athens Observa 81.57 309 *e*P **P** **07 40 04.5 -0.8**
PLD Plovdiv 81.60 313 *e*P **P** **07 40 05.1 -0.2**
DID Didima 81.86 308 *e*P **P** **07 40 05.5 -1.3**
PAIG Paliouri 81.95 311 *e*P **P** **07 40 06.8 -0.4**
VLI Veliai 81.97 307 *e*P **P** **07 40 08.4 +1.0**
VOIR 82.03 316⇑ *i*P **P** **07 40 07.7 +0.2**
VOIR 82.03 316 P **P** **07 40 08.1 +0.6**
SMY Shemya 82.14 36 PFAKE 07 40 20.0 +12
SMY LR LR
comp=Z,1µm,20.0s,MS5.3
LTK Loutraki 82.16 309 *e*P **P** **07 40 06.9 -1.5**
PLG Polygyros 82.20 311 *e*P **P** **07 40 07.9 -0.7**
SBA Scott Base 82.34 169 *e*P **P** **07 40 10.4 +1.9**
SBA pmax pmax
comp=Z,46nm,1.1s,mb5.3
SBA MLR MLR
comp=Z,4µm,22.0s,MS5.7
SBA Scott Base 82.34 169 *e*P **P** **07 40 10.4 +1.8**
comp=Z,46nm,1.1s,mb5.3
SBA LR LR
comp=Z,4µm,22.0s,MS5.7
BURAR Bucovina Array 82.39 319⇓ *i*P **P** **07 40 10.5 +1.2**
BUR08 Bucovina Ar. S 82.40 319 *e*P **P** **07 40 10.4 +1.0**
BUR08 *e*pP pP 07 40 21.7 +0.5
MNK Minsk 82.45 326‖ *e*P **P** **07 40 06.0 -3.5**
MNK *e* pP 07 40 18.0 -3.3
MNK *e* 07 43 16.0
MNK *e*S S 07 50 16.0 -7.1
MNK pmax pmax
comp=Z,250nm,1.5s,mb5.9
MNK MLR MLR
comp=Z,5µm,16.0s,MS6.0
VLX Vlachokerasia 82.52 308 *e*P **P** **07 40 09.9 -0.3**
THE Thessaloniki 82.61 311 *e*P **P** **07 40 09.6 -1.1**
PUL Pulkovo 82.70 331‖ *e*P **P** **07 40 11.5 +0.9**
TSUM Tsumeb 82.72 251 *e*P **P** **07 40 13.4 +1.8**
comp=Z,27nm,1.1s,mb5.2
TSUM LR LR
comp=Z,9µm,20.0s,MS6.1
VTS Vitosha 82.78 313⇓ *i*P **P** **07 40 11.4 -0.1**
VTS Vitosha 82.78 313 P **P** **07 40 11.7 +0.3**
AGG Agios Georgios 82.82 310 *e*P **P** **07 40 10.5 -1.3**
ITM Ithomi 82.84 308 *e*P **P** **07 40 11.5 -0.4**
LIT Litokhoron 82.88 311 *e*P **P** **07 40 11.2 -0.9**
PYL PYLOS 82.94 308 *e*P **P** **07 40 11.4 -1.0**
VAY Valandovo 83.03 312 *e*P **P** **07 40 11.5 -1.3**
VAY Valandovo 83.03 312⇑ *i*P **P** **07 40 11.4 -1.3**
GRG Griva 83.09 312 *e*P **P** **07 40 12.4 -0.7**
THL Klokotos Trika 83.15 310 *e*P **P** **07 40 12.3 -1.2**
EVR Evrytania 83.21 310 *e*P **P** **07 40 13.4 -0.4**
JOF Joensuu 83.27 334 ep **P** **07 40 12.8 -0.7**
comp=Z,15nm,0.6s,mb5.2
JOF pmax pmax
comp=Z,15nm,0.6s,mb5.2
JOF Joensuu 83.27 334 *e*P **P** **07 40 12.8 -0.7**
RLS Riolos of Patr 83.34 309 *e*P **P** **07 40 14.8 +0.3**
KZN Kozani 83.45 311 *e*P **P** **07 40 13.9 -1.1**
BILL Bilibino 83.59 20*c* *i*P **P** **07 40 13.4 -1.7**
BILL *i* pP 07 40 23.3 -3.7
BILL *e*S S 07 50 21.8 -12
BILL *i*PS 07 51 20.0
BILL pmax pmax
comp=Z,16nm,1.0s,mb5.1
BILL MLR MLR
comp=Z,11µm,22.0s,MS6.2
BILL Bilibino 83.59 20 *e*P **P** **07 40 14.1 -1.0**
BILL LR LR
comp=Z,10µm,19.0s,MS6.2
LVV L'vov 83.62 321*d* *i*P **P** **07 40 14.0 -1.6**
LVV *e* 07 40 30.8
LVV *i*PPP 07 43 27.2
LVV *e*S S 07 50 32.0 -3.2
LVV *i*PS 07 51 43.0
LVZ Lovozero 83.79 340⇑ *e*P **P** **07 40 15.8 -0.3**
LVZ pmax pmax
comp=Z,30nm,0.7s,mb5.5
FNA Florina 83.83 311 *e*P **P** **07 40 15.8 -1.2**
DRGR 83.89 317⇑ *i*P **P** **07 40 17.5 +0.4**
DRGR 83.89 317 P **P** **07 40 18.0 +0.9**
SKO Skopje 83.97 313 *e*P **P** **07 40 16.9 -0.7**
SKO Skopje 83.97 313⇑ *i*P **P** **07 40 16.5 -1.1**
KRUS Krusevo 84.01 312⇑ *i*P **P** **07 40 17.3 -0.6**
VLS Valsamata 84.04 309 *e*P **P** **07 40 17.7 -0.4**
VLS Valsamata 84.04 309 *e*P **P** **07 40 17.6 -0.5**
JAN Janina 84.05 310 *e*P **P** **07 40 18.3 +0.2**
LKD Levkas 84.07 309 *e*P **P** **07 40 18.2 0.0**
MIDW Midway 84.08 61 PFAKE 07 40 30.0 +11
MIDW LR LR
comp=Z,2µm,20.0s,MS5.5
APA Apatity 84.10 339⇑ *i*P **P** **07 40 16.3 -1.4**
APA *i* 07 40 24.5
APA *i*S S 07 50 37.0 -2.3
APA *e*SS SS 07 56 05.0 -3.6
APA pmax pmax
comp=Z,83nm,1.5s,mb5.6
APA pmax pmax
comp=Z,2µm,7.8s
APA MLR MLR
comp=Z,6µm,24.0s,MS5.9
OHR Ohrid 84.31 312 *e*P **P** **07 40 17.9 -1.5**
OHR Ohrid 84.31 312⇑ *i*P **P** **07 40 17.9 -1.5**
KWP Kalwaria 84.43 320 *e*P **P** **07 40 20.3 +0.5**
KWP *e* 07 40 35.1
KWP LMZ 08 26 28.8
comp=Z,2µm,22.9s
KWP Kalwaria 84.43 320⇑ *e*P **P** **07 40 20.3 +0.5**
KWP *e* 07 40 35.1
KWP Kalwaria 84.43 320⇑ *i*P **P** **07 40 20.2 +0.4**
KWP Kalwaria 84.43 320⇑ *e*P **P** **07 40 20.3 +0.5**
KWP *e* 07 40 35.1
KWP LR LR
comp=Z,2µm,22.0s,MS5.5
BZS Buzias 84.44 316⇑ *i*P **P** **07 40 20.0 +0.1**
BZS Buzias 84.44 316 P **P** **07 40 20.0 +0.1**
UZH Uzhgorod 84.51 319⇓ *i*P **P** **07 40 20.3 +0.1**
UZH *i* pP 07 40 31.0 -1.1
UZH *i* 07 43 38.0
UZH *e*PPP 07 45 35.0
UZH *i*S S 07 50 44.0 -0.1
UZH *i*SP 07 51 33.0
UZH *e*SS SS 07 56 15.0 -0.5
KOLS Kolonicke sedl 84.58 320 *e*P **P** **07 40 21.9 +1.4**
KOLS *e*pP pP 07 40 27.3 -5.1
KOLS *e*S S 07 50 44.9 +0.1
KEK Kerkira 84.86 310 *e*P **P** **07 40 21.3 -0.9**
SUW Suwalki 84.99 325 *e*P **P** **07 40 22.4 -0.1**
SUW *e* pP 07 40 36.6 +2.2
SUW LMZ 08 24 38.5
comp=Z,3µm,21.9s
SUW Suwalki 84.99 325⇑ *e*P **P** **07 40 22.5 0.0**
SUW *e* pP 07 40 36.6 +2.2
TIR Tirane 85.04 312 *e*P **P** **07 40 22.9 -0.2**
TIR Tirane 85.04 312 P **P** **07 40 22.9 -0.2**
TIR LR LR
comp=Z,2µm,21.0s,MS5.5
CRVS Cervenica-Dubn 85.10 319 *e*P **P** **07 40 24.1 +0.9**
CRVS *e*pP pP 07 40 37.4 +2.4
CRVS *e*S S 07 50 49.2 -0.8
KAF Kangasniemi 85.25 333 ep **P** **07 40 23.2 -0.4**
comp=Z,33nm,0.7s,mb5.6,baz=100,slow=4.7
KAF Kangasniemi 85.25 333 *e*P **P** **07 40 23.2 -0.4**
KAF pmax pmax
comp=Z,33nm,0.7s,mb5.6
STHS Stebnicka Huta 85.33 320 *e*P **P** **07 40 25.1 +0.8**
STHS *e* pP 07 40 36.1 -0.1
STHS pmax pmax
comp=Z,71nm,1.0s,mb5.8
STHS Stebnicka Huta 85.33 320 *e*P **P** **07 40 25.1 +0.8**
comp=Z,71nm,1.0s,mb5.8
STHS *e* pP 07 40 36.1 -0.1
STHS *e* 07 40 40.0
DIVS Divibare 85.34 314 *e*P **P** **07 40 24.5 0.0**
NIE Niedzica 85.93 320 *e*P **P** **07 40 27.9 +0.6**
NIE *e*sP sP 07 40 42.5 -1.0
WAR Warsaw 85.94 323 *e*P **P** **07 40 28.6 +1.3**
WAR *e* pP 07 40 42.8 +3.6
WAR LMZ 08 25 38.3
comp=Z,4µm,23.2s
WAR Warsaw 85.94 323 *e*P **P** **07 40 28.6 +1.3**
WAR *e* pP 07 40 42.7 +3.5
WAR Warsaw 85.94 323 *e*P **P** **07 40 28.6 +1.3**
WAR *e* pP 07 40 42.7 +3.5
WAR LR LR
comp=Z,4µm,23.2s,MS5.7
PSZ Piszkesteto 85.97 318⇑ *e*P **P** **07 40 27.8 +0.3**
PSZ Piszkesteto 85.97 318⇑ *i*P **P** **07 40 27.9 +0.4**
PSZ Piszkesteto 85.97 318 *e*P **P** **07 40 27.9 +0.4**
comp=Z,172nm,1.5s,mb6.1
PSZ LR LR
comp=Z,1µm,20.0s,MS5.4
OJC Ojcow 86.38 321⇑ *i*P **P** **07 40 29.5 0.0**
OJC *e**SP sP 07 40 44.2 -1.5
OJC *e* 07 43 49.4
OJC *e* 07 50 52.3
OJC *e*S S 07 51 04.0 +1.5
OJC Ojcow 86.38 321⇑ *i*P **P** **07 40 29.5 0.0**
OJC *e*sP sP 07 40 44.2 -1.5
OJC *e*PP PP 07 43 49.4 -1.6
OJC *e*SKSac SKSac 07 50 52.3 -0.6
OJC *e*S S 07 51 04.0 +1.5
OJC LR LR
comp=Z,3µm,23.3s,MS5.6
BUD Budapest 86.49 318⇑ *e*P **P** **07 40 30.4 +0.3**
PKSM Moragy 86.58 316⇑ *i*P **P** **07 40 30.7 +0.1**
PKSM Moragy 86.58 316 P **P** **07 40 30.6 0.0**
VYHS Vyhne 86.75 319 *e*pP pP 07 40 42.2 -1.1
VYHS *e*S S 07 51 05.1 -1.1
VYHS Vyhne 86.75 319 *e*P pP 07 40 42.2 -1.1
VYHS *e*S S 07 51 05.1 -1.1
VYHS LR LR
comp=Z,800nm,23.2s,MS5.1
AFI Afiamalu 86.81 104 PFAKE 07 40 40.0 +7.6
AFI LR LR
comp=Z,2µm,21.0s,MS5.5
KEV Kevo 87.03 340 *e*P **P** **07 40 30.5 -1.8**
comp=Z,20nm,0.8s,mb5.4
KEV LR LR
comp=Z,3µm,20.0s,MS5.7
KOLL Kolacno 87.05 319 *e*P **P** **07 40 30.3 -2.5**
KOLL *e*pP pP 07 40 48.0 +3.3
NVL N'lazarevskaya 87.07 199 *e*P **P** **07 40 34.9 +2.4**
NVL *e* pP 07 40 48.8 +4.5
NVL *e*S S 07 50 52.0 -16
MAIT Maitri 87.10 199 *e*P **P** **07 40 35.3 +2.7**
TIP Timpagrande 87.14 309 PFAKE 07 40 40.0 +6.5
TIP LR LR
comp=Z,2µm,20.0s,MS5.5
OKC Ostrava-Krasne 87.38 320 *e*P **P** **07 40 35.4 +1.0**
OKC *e*pP pP 07 40 45.5 -0.8
OKC *e*S S 07 51 11.5 -0.7
OKC AMS AMS 08 29 10.0
comp=Z,2µm,19.8s
OKC Ostrava-Krasne 87.38 320 *e*P **P** **07 40 35.4 +1.0**
OKC *e* pP 07 40 45.5 -0.8
OKC *e*SKS 07 51 11.5
RAC Raciborz 87.38 320 *e*P **P** **07 40 35.6 +1.2**
ARCES ARCESS Array B 87.48 340 P **P** **07 40 34.0 -0.5**
comp=Z,22nm,0.7s,mb5.5,baz=100,slow=5.3,SNR=84
ARCES LR LR 08 23 16.3

comp=Z,4µm,21.8s,MS5.8,baz=12,slow=38
ARCES ARCESS Array B 87.48 340 P **P** **07 40 34.0 -0.4**
ARCES pmax pmax
comp=Z,22nm,0.7s
ARCES MLR MLR
comp=Z,4µm,21.8s
ARCES ARCESS Array B 87.48 340 P **P** **07 40 34.0 -0.5**
ARCES LR LR 08 23 16.3
ARCES ARCESS Array S 87.48 340 *eP* **P** **07 40 34.7 +0.3**
ADK Adak 87.52 38 PFAKE 07 40 50.0 +15
ADK LR LR
comp=Z,4µm,21.0s,MS5.8
CEL Celeste 87.72 308 PFAKE 07 40 50.0 +14
CEL LR LR
comp=Z,95µm,19.0s,MS7.2
MORC Moravsky Berou 87.76 320 *eP* **P** **07 40 36.4 +0.2**
MORC pmax pmax
comp=Z,149nm,1.5s,mb6.0
MORC Moravsky Berou 87.76 320⇑*iP* **P** **07 40 36.8 +0.6**
MORC Moravsky Berou 87.76 320 *eP* **P** **07 40 36.4 +0.2**
comp=Z,149nm,1.5s,mb6.0
MODS Modra-Piesok 87.77 318 *eP* **P** **07 40 36.7 +0.4**
MODS *e* pP 07 40 47.7 -0.5
MODS *e* 07 44 03.6
MODS *eS* S 07 51 15.8 -0.2
MODS Modra-Piesok 87.77 318 *eP* **P** **07 40 36.7 +0.4**
MODS *epP* pP 07 40 47.7 -0.5
MODS *ePP* PP 07 44 03.6 +1.3
MODS *eS* S 07 51 15.8 -0.2
MODS *epS* 07 51 30.9
ZST Bratislava 87.86 318 *eP* **P** **07 40 35.2 -1.5**
ZST *e* pP 07 40 47.8 -0.9
ZST *e* 07 44 04.0
ZST *eS* S 07 51 23.8 +6.9
ZST pmax pmax
comp=Z,80nm,1.6s,mb5.7
ZST Bratislava 87.86 318 *eP* **P** **07 40 35.2 -1.5**
ZST *epP* pP 07 40 47.8 -0.9
ZST *esP* sP 07 40 51.5 -1.5
ZST *ePP* PP 07 44 04.0 +0.9
ZST *eS* S 07 51 23.8 +6.9
ZST LR LR
comp=Z,1µm,21.1s,MS5.3
CUC Castrocucco 87.94 310 *eP* **P** **07 40 36.9 -0.4**
comp=Z,38nm,0.9s,mb5.6
CUC LR LR
comp=Z,3µm,21.0s,MS5.7
KTK1 Kautokeino 88.14 339 *eP* **P** **07 40 37.4 -0.2**
KTK1 AMb AMB 07 40 44.3
comp=Z,129nm,1.9s,mb5.8
KTK1 Kautokeino 88.14 339 *eP* **P** **07 40 37.4 -0.2**
comp=Z,129nm,1.9s,mb5.8
SOP Sopron 88.17 318⇑*eP* **P** **07 40 38.3 +0.1**
GKP Gorka Klasztor 88.37 323 *eP* **P** **07 40 39.1 +0.2**
GKP *e* 07 40 54.1
GKP LMZ 08 26 43.1
comp=Z,3µm,21.0s
GKP Gorka Klasztor 88.37 323⇑*eP* **P** **07 40 39.2 +0.2**
GKP *e* 07 40 54.1
GKP Gorka Klasztor 88.37 323⇑*eP* **P** **07 40 39.2 +0.2**
GKP *e* 07 40 54.1
GKP LR LR
comp=Z,3µm,21.0s,MS5.6
DPC Dobruska-Polom 88.61 320 *eP* **P** **07 40 41.2 +1.0**
DPC *e* pP 07 40 52.0 -0.1
DPC *e* 07 51 22.8
DPC MLR MLR
comp=Z,3µm,23.6s,MS5.6
DPC Dobruska-Polom 88.61 320 *eP* **P** **07 40 41.2 +1.0**
DPC *epP* pP 07 40 52.0 -0.1
DPC *ex* x 07 43 53.6
DPC *eS* S 07 51 22.8 -1.1
DPC AMS AMS 08 26 40.0
comp=Z,3µm,23.6s
GOLS Golise 88.64 316 *iP* **P** **07 40 41.2 +0.7**
GOLS *i* 07 40 55.9
GOLS *ePP* PP 07 44 13.6 +4.2
CONA Conrad Observa 88.66 318⇑*iP* **P** **07 40 40.6 +0.1**
comp=Z,797nm,6.0s
CSNA Conrad Observa 88.67 318⇑*iP* **P** **07 40 40.6 +0.1**
comp=Z,785nm,6.0s
KSP Ksiaz 88.68 321 *eP* **P** **07 40 41.6 +1.1**
KSP *e* pP 07 40 55.9 +3.4
KSP LMZ 08 27 27.2
comp=Z,6µm,23.2s
KSP Ksiaz 88.68 321⇑*eP* **P** **07 40 41.3 +0.8**
KSP *e**PP pP 07 40 51.7 -0.7
KSP *e**SP sP 07 40 55.8 -1.0
KSP *e* 07 44 07.0
KSP *eS* S 07 51 23.0 -1.5
KSP Ksiaz 88.68 321⇑*eP* **P** **07 40 41.3 +0.8**
KSP *epP* pP 07 40 51.7 -0.7
KSP *esP* sP 07 40 55.8 -1.0
KSP *ePP* PP 07 44 07.0 -2.5
KSP *eS* S 07 51 23.0 -1.5
KSP LR LR
comp=Z,6µm,23.2s,MS6.0
UPC Upice 88.82 321 *eP* **P** **07 40 41.9 +0.7**
UPC *epP* pP 07 40 53.3 +0.2
ARSA Arzberg 88.83 317⇑*iP* **P** **07 40 41.8 +0.5**
comp=Z,794nm,3.9s
BOJS Bojanci 88.86 315 *eP* **P** **07 40 41.9 +0.4**
BOJS *eS* S 07 51 24.5 -2.0
BOJS *e* 07 51 52.3
PERS Pernice 89.05 317 *eP* **P** **07 40 42.9 +0.6**
PERS *ePP* PP 07 44 15.1 +2.5
PERS *eSKSac* SKSac 07 51 06.6 -2.7
PERS *eS* S 07 51 27.9 -0.3
ZAVS Zavodnje 89.09 316 *eP* **P** **07 40 43.1 +0.6**
ZAVS *i* 07 40 57.9
SOKA Soboth 89.11 317⇑*iP* **P** **07 40 43.3 +0.7**
SOKA Soboth 89.11 317⇑*iPcP* PcP 07 40 43.3 -0.8
LJU Ljubljana 89.41 316 *eP* **P** **07 40 44.8 +0.7**
LJU *i* 07 40 59.5
LJU *eS* S 07 51 30.4 -1.2
LJU Ljubljana 89.41 316 *eP* **P** **07 40 44.8 +0.7**
LJU *i* 07 40 59.5
LJU *eSKSac* SKSac 07 51 08.4 -3.0
LJU *eS* S 07 51 30.4 -1.1
LJU *e* 07 51 58.5
LJU *e* 08 04 29.5
PRU Pruhonice 89.71 320 *eP* **P** **07 40 45.9 +0.5**
PRU *e* pP 07 40 56.9 -0.4
PRU *e* 07 51 32.7
PRU MLR MLR
comp=Z,2µm,18.9s,MS5.6
PRU Pruhonice 89.71 320 *eP* **P** **07 40 45.9 +0.5**
PRU *epP* pP 07 40 56.9 -0.4
PRU *ex* x 07 44 03.6
PRU *eS* S 07 51 32.7 -1.5
PRU AMS AMS 08 27 20.0
comp=Z,2µm,18.9s
MOA Molln 89.73 318⇑*iP* **P** **07 40 45.6 +0.1**
comp=Z,575nm,4.6s
PVCC Panska Ves 89.74 320 *eP* **P** **07 40 46.2 +0.7**
PVCC *epP* pP 07 40 57.1 -0.3
PVCC AMS AMS 08 27 30.0
comp=Z,4µm,21.6s
TRO Tromso 89.76 340 *eP* **P** **07 40 44.9 -0.3**
TRO AMb AMB 07 41 00.4
comp=Z,154nm,1.8s,mb6.0
TRO *ePP* PP 07 44 17.9 +0.3
TRO AMS AMS 08 22 06.1
comp=Z,3µm,26.9s,MS5.6
VOY Vojsko 89.85 316 *eP* **P** **07 40 46.3 +0.2**
VOY *e* pP 07 40 55.4 -2.7
VOY *e* 07 41 01.3
MYKA Terra Mystica 90.06 317⇑*iP* **P** **07 40 47.3 +0.2**
comp=Z,19µm,4.8s
BRG Berggiesshubel 90.16 321 *iP* **P** **07 40 48.3 +0.8**
BRG *i* pP 07 40 59.1 -0.3
BRG *e* 07 51 18.9
BRG S S 07 51 41.0 +2.6
BRG SP SP 07 52 54.0 +10
BRG SS SS 07 57 42.0 +4.1
BRG pmax pmax
comp=Z,18nm,1.2s,mb5.3
BRG pmax pmax
comp=Z,20nm,0.8s,mb5.5
BRG pmax pmax
comp=Z,137nm,1.7s,mb6.0
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
BRG MLR MLR
comp=N,872nm,17.5s,MS5.5
BRG MLR MLR
comp=E,1µm,21.9s,MS5.5
BRG MLR MLR
comp=Z,2µm,20.4s,MS5.5
BRG Berggiesshubel 90.16 321 *eP* **P** **07 40 48.2 +0.7**
comp=Z,222nm,1.7s,mb6.2
BRG *epP* pP 07 41 02.1 +2.7
BRG *eL* 08 28 34.2
comp=Z,3µm,22.0s
BRG Berggiesshubel 90.16 321 *iP* **P** **07 40 48.3 +0.8**
comp=Z,30nm,1.2s,mb5.5
BRG *i* pP 07 40 59.1 -0.3
comp=Z,33nm,0.8s
BRG *i* 07 41 03.8
comp=Z,229nm,1.7s
BRG PP PP 07 44 15.0 -6.4
BRG *e* 07 51 18.9
comp=Z,3.7nm,0.8s
BRG S S 07 51 41.0 +2.6
BRG SP SP 07 52 54.0 +10
BRG SS SS 07 57 42.0 +4.1
BRG
comp=N,2µm,17.5s
BRG
comp=E,2µm,21.9s
BRG
comp=Z,3µm,20.4s
BRG Berggiesshubel 90.16 321 *iP* **P** **07 40 48.3 +0.8**
comp=Z,18nm,1.2s,mb5.3
BRG *i* pP 07 40 59.1 -0.3
BRG *i* 07 41 03.8
BRG PP PP 07 44 15.0 -6.4
BRG *e* 07 51 18.9
BRG S S 07 51 41.0 +2.6
BRG SP SP 07 52 54.0 +10
BRG SS SS 07 57 42.0 +4.1
BRG LR LR
comp=Z,2µm,20.4s,MS5.5
GEC2 GERESS Array S 90.17 319 *eP* **P** **07 40 48.3 +0.7**
comp=Z,223nm,1.6s,mb6.2
GEC2 *epP* pP 07 41 02.3 +2.8
GEC2 *eL* 08 31 17.3
comp=Z,2µm,20.0s
GERES GERESS Array B 90.17 319 P **P** **07 40 48.2 +0.6**
comp=Z,6.6nm,0.7s,mb5.1,baz=90,slow=4.5,SNR=43
GERES GERESS Array B 90.17 319 P **P** **07 40 48.2 +0.6**
GERES pmax pmax
comp=Z,7.0nm,0.7s
KHC Kasperske Hory 90.28 319 *eP* **P** **07 40 48.2 +0.2**
KHC *e* pP 07 40 59.1 -0.9
KHC *e* 07 51 38.5
KHC MLR MLR
comp=Z,3µm,20.3s,MS5.7
KHC Kasperske Hory 90.28 319 *eP* **P** **07 40 48.2 +0.2**
KHC *epP* pP 07 40 59.1 -0.9
KHC *esP* sP 07 41 03.0 -1.3
KHC *ex* x 07 43 54.1
KHC *eSKS* 07 51 38.5
KHC AMS AMS 08 30 10.0
comp=Z,3µm,20.3s
RUE Ruedersdorf 90.38 322 *eP* **P** **07 40 49.2 +0.8**
comp=Z,676nm,1.8s,mb6.7
RUE *eL* 08 28 15.5
comp=Z,2µm,22.0s
RUE Ruedersdorf 90.38 322 *eP* **P** **07 40 49.8 +1.4**
comp=Z,903nm,1.8s,mb6.8
RUE *epP* pP 07 41 00.7 +0.3
BJO Bjornoya 90.42 345 *eP* **P** **07 40 52.1 +3.9**
BJO AMS AMS 08 27 22.2
comp=Z,6µm,23.8s,MS6.0
FBE Freiberg 90.54 321 *eP* **P** **07 40 50.0 +0.8**
comp=Z,336nm,1.8s,mb6.4
RJOB Jochberg 90.71 318 *eP* **P** **07 40 49.9 -0.2**
comp=Z,217nm,2.2s,mb6.1
RJOB *eL* 08 30 53.8
comp=Z,1µm,21.5s
WET Wettzell 90.73 319 *eP* **P** **07 40 50.7 +0.5**
comp=Z,238nm,1.8s,mb6.2
WET *epP* pP 07 41 04.6 +2.5
WET *eL* 08 31 07.0
comp=Z,3µm,21.7s
CLL Collm 90.78 321⇑*iP* **P** **07 40 50.5 +0.1**
CLL *i* *PP pP 07 41 01.4 -0.9
CLL *eS* S 07 51 43.0 -1.0
CLL pmax pmax
comp=Z,207nm,2.6s,mb6.0
CLL MLR MLR
comp=Z,3µm,21.6s,MS5.7
CLL Collm 90.78 321 *eP* **P** **07 40 50.6 +0.2**
comp=Z,182nm,1.8s,mb6.1
CLL *epP* pP 07 41 04.6 +2.3
CLL *eL* 08 28 48.0
comp=Z,3µm,21.6s
CLL Collm 90.78 321⇑*iP* **P** **07 40 50.5 +0.1**
comp=Z,207nm,2.6s,mb6.0
CLL *ePlp* 07 40 51.0
comp=Z,900nm,11.8s
CLL *i* pP pP 07 41 01.4 -0.9
CLL *esP* sP 07 41 05.0 -1.6
CLL *ePP* PP 07 44 30.0 +3.7
CLL *ePP* PP 07 44 30.0 +3.7
comp=Z,400nm,12.5s
CLL *eS* S 07 51 43.0 -1.0
comp=N,1µm,16.0s
CLL *esS* sS 07 52 10.0 +6.0
CLL *ePS* PS 07 52 54.0 -2.4
CLL *eSS* SS 07 57 50.0 +3.1
CLL *eSSS* 08 01 36.0
CLL *eSSSS* 08 04 36.0
CLL Collm 90.78 321⇑*iP* **P** **07 40 50.5 +0.1**
comp=N,207nm,2.6s,mb6.0
CLL *i* pP pP 07 41 01.4 -0.9
CLL *esP* sP 07 41 05.0 -1.6
CLL *eS* S 07 51 43.0 -1.0
CLL LR LR
comp=Z,3µm,21.6s,MS5.7
RGN Rugen 90.79 324 *eL* 08 28 50.5
comp=Z,4µm,21.4s
MOR8 Moi Rana 91.05 336 *eP* **P** **07 40 50.9 -0.3**
MOR8 *epP* pP 07 41 00.9 -2.3
MOR8 AMb AMB 07 41 08.8
comp=Z,97nm,1.1s,mb6.1
MOR8 Moi Rana 91.05 336 *eP* **P** **07 40 50.9 -0.3**
comp=Z,97nm,1.1s,mb6.0
NKC Novy Kostel 91.08 320 *eP* **P** **07 40 51.2 -0.5**
NKC *epP* pP 07 41 01.7 -2.0
NKC *eS* S 07 51 46.4 -0.4
NKC AMS AMS 08 28 20.0
comp=Z,4µm,22.5s
NKC Novy Kostel 91.08 320 *eP* **P** **07 40 51.2 -0.5**
NKC *e* pP 07 41 01.7 -2.0
NKC *eSKS* 07 51 46.4
TANN Tannenbergstha 91.08 320 *eP* **P** **07 40 52.3 +0.6**
comp=Z,152nm,1.8s,mb6.0
TANN *epP* pP 07 41 06.1 +2.4
TANN *eL* 08 30 06.6
comp=Z,2µm,21.0s
WERN Wernitzgruen 91.12 320 *eP* **P** **07 40 52.6 +0.6**
comp=Z,585nm,3.2s
GUNZ Gunzen 91.16 320 *eP* **P** **07 40 52.8 +0.7**
comp=Z,175nm,1.8s,mb6.1
GUNZ *epP* pP 07 41 06.7 +2.6
WERD Werda 91.18 320 *eP* **P** **07 40 52.6 +0.4**
comp=Z,173nm,2.0s,mb6.0
MANZ Manzenberg 91.28 320 *eP* **P** **07 40 53.8 +1.1**
comp=Z,274nm,1.8s,mb6.3
MANZ *eL* 08 30 27.9
comp=Z,3µm,21.2s
COP Copenhagen 91.36 326 *iP* **P** **07 40 52.7 -0.3**
COP *e* 07 44 13.9
COP *i* 07 46 35.7
COP *e* 07 51 23.8
COP *iS* S 07 51 51.3 +2.1
COP
comp=Z,1µm,22.0s
WTTA Wattenberg 91.47 317⇑*iP* **P** **07 40 53.6 0.0**
comp=Z,281nm,2.9s,mb6.1
SPITS Spitsbergen Ar 91.56 348 LR LR 08 28 10.8
comp=Z,4µm,20.3s,MS5.8,baz=15,slow=40
MOX Moxa 91.63 320 *eP* **P** **07 40 54.6 +0.3**
MOX *e* 07 41 09.6
comp=Z,159nm,1.9s
MOX
comp=Z,2µm,23.0s
MOX Moxa 91.63 320 *eP* **P** **07 40 54.6 +0.3**
MOX *e* 07 41 09.6
MOX pmax pmax
comp=Z,159nm,1.9s,mb6.0
MOX MLR MLR
comp=Z,2µm,23.0s,MS5.5
MOX Moxa 91.63 320 *eP* **P** **07 40 54.7 +0.4**
comp=Z,177nm,1.9s,mb6.1
MOX *epP* pP 07 41 08.9 +2.7
MOX *eL* 08 29 19.4
comp=Z,3µm,21.3s
MOX Moxa 91.63 320 *eP* **P** **07 40 54.6 +0.3**
comp=Z,159nm,1.9s,mb6.0
MOX *e* 07 41 09.6
MOX LR LR
comp=Z,2µm,23.0s,MS5.5
STOK Stokkvaagen 91.64 336 *eP* **P** **07 40 56.1 +2.1**
SNAA Sanae 91.67 198 *eP* **P** **07 40 56.0 +1.9**
SNAA pmax pmax
comp=Z,14nm,1.0s
SNAA Sanae 91.67 198 *eP* **P** **07 40 56.0 +1.9**
comp=Z,14nm,1.0s,mb5.2
FUR Furstenfeldbru 91.75 318 *eL* 08 32 10.4
comp=Z,2µm,20.8s
MOTA Moosalm 91.83 317⇑*iP* **P** **07 40 55.2 -0.1**
comp=Z,71nm,1.3s,mb5.8
GRFO Grafenberg 91.84 319 *eP* **P** **07 40 56.3 +1.0**
comp=Z,232nm,1.8s,mb6.2
GRFO *epP* pP 07 41 10.3 +3.0
GRFO *eL* 08 31 09.8
comp=Z,2µm,21.1s
RETA Reutte 92.07 317⇓*iP* **P** **07 40 56.4 0.0**
comp=Z,401nm,3.7s
FETA Feichten 92.08 317⇑*iP* **P** **07 40 56.5 +0.1**
comp=Z,478nm,3.6s
NB2 NORSAR Subarra 92.22 331 P **P** **07 40 56.5 -0.3**
comp=Z,13nm,0.8s,mb5.3,baz=95,slow=5.3
NOA NORSAR Array B 92.22 331 P **P** **07 40 56.3 -0.5**
comp=Z,9.1nm,0.7s,mb5.2,baz=93,slow=4.6,SNR=26
NOA LR LR 08 27 34.8
comp=Z,3µm,21.7s,MS5.7,baz=65,slow=39
NOA NORSAR Array B 92.22 331 P **P** **07 40 56.3 -0.5**
NOA LR LR 08 27 34.8
VLC Villacollemand 92.23 314 PFAKE 07 41 10.0 +13
VLC LR LR
comp=Z,2µm,22.0s,MS5.5
KBS Kingsbay 92.49 349 *eP* **P** **07 40 58.4 +0.6**
KBS *ePP* PP 07 44 38.8 -0.2
KBS AMS AMS 08 30 31.0
comp=Z,5µm,18.5s,MS6.0
BSEG Bad Segeberg 92.53 324 *eP* **P** **07 40 58.8 +0.4**
comp=Z,135nm,2.0s,mb6.0
BSEG *eL* 08 29 58.6
comp=Z,4µm,21.2s
NRDL Niedersach Rie 92.62 322 *eP* **P** **07 40 59.6 +0.8**
comp=Z,238nm,2.1s,mb6.2
NRDL *eL* 08 33 45.6
comp=Z,2µm,19.8s
UBBA Unterbreizbach 92.66 321 *eP* **P** **07 40 59.1 +0.1**
comp=Z,123nm,1.9s,mb6.0
UBBA *epP* pP 07 41 13.3 +2.3
UBBA *eL* 08 29 46.5
comp=Z,2µm,20.7s
DAVA Damuels 92.67 317⇑*iP* **P** **07 40 59.6 +0.4**
comp=Z,603nm,4.0s,SNR=8.1
DAVA Damuels 92.67 317⇑*iPcP* PcP 07 40 59.6 -0.2
comp=Z,603nm,4.0s,SNR=8.1
KEST Kesra 92.81 305 P **P** **07 40 60.0 -0.1**
comp=Z,5.7nm,0.9s,mb5.0,baz=288,slow=3.7,SNR=14
KEST LR LR 08 23 29.6
comp=Z,1µm,20.1s,MS5.3,baz=145,slow=36
VSL Villasalto 92.87 309 PFAKE 07 41 10.0 +10
VSL LR LR
comp=Z,1µm,22.0s,MS5.4
KONO Kongsberg 93.00 329 *eP* **P** **07 41 01.5 +1.1**
KONO *ePP* PP 07 44 43.6 +0.1
KONO *eSKS* 07 51 30.4
KONO *e* 07 51 59.7
TUE Stuetta 93.02 316 PFAKE 07 41 10.0 +9.2
TUE LR LR
comp=Z,2µm,19.0s,MS5.6
STU Stuttgart 93.15 319 *eP* **P** **07 41 01.8 +0.4**
comp=Z,179nm,1.9s,mb6.2
STU *eL* 08 28 57.5
comp=Z,2µm,21.8s
MUD Monsted U'grnd 93.21 326 *iP* **P** **07 41 03.6 +2.1**
MUD *iS* S 07 52 06.2 +0.5
MUD MLR MLR
comp=Z,3µm,19.0s,MS5.8
MUD Monsted U'grnd 93.21 326 *iP* **P** **07 41 03.6 +2.1**
MUD *e* 07 44 30.2
MUD *iS* S 07 52 06.2 +0.5
MUD *i* 07 52 34.5
MUD
comp=Z,3µm,19.0s
MUD Monsted U'grnd 93.21 326 *iP* **P** **07 41 03.6 +2.1**
MUD *e* 07 44 30.2
MUD *iS* S 07 52 06.2 +0.5
MUD *i* 07 52 34.5
TOD Tromm 93.41 319 *eP* **P** **07 41 02.2 -0.4**
SPAK Spaichingen-Ko 93.42 318 *eP* **P** **07 41 02.4 -0.2**
TNS Taunus Mts 93.64 320 *eP* **P** **07 41 04.2 +0.6**
comp=Z,199nm,2.0s,mb6.2
TNS *epP* pP 07 41 18.2 +2.6
TNS *eL* 08 30 31.5
comp=Z,2µm,20.0s
BFO Black Forest 93.72 318 *eP* **P** **07 41 03.9 -0.1**
comp=Z,68nm,1.7s,mb5.8
BFO *eL* 08 33 00.0
comp=Z,2µm,19.6s
FELD Feldberg im Sc 93.94 318 *eP* **P** **07 41 04.3 -0.7**
HLG Helgoland 93.96 324 *eL* 08 29 02.8
comp=Z,3µm,21.6s
IBBN Ibbenburen 94.06 322 *eL* 08 31 36.7
comp=Z,3µm,21.3s
LANF Langenberg 94.07 319 *eP* **P** **07 41 04.1 -1.5**
BUG Bochum--Univer 94.38 321 *eL* 08 31 58.2
comp=Z,3µm,21.0s
CDF Champ du Feu 94.42 318 *eP* **P** **07 41 06.9 -0.3**
comp=Z,22nm,1.0s,mb5.2
CDF Champ du Feu 94.42 318 *eP* **P** **07 41 06.9 -0.3**
CDF pmax pmax
comp=Z,11nm,1.0s,mb5.2
CDF Champ du Feu 94.42 318 *eP* **P** **07 41 06.9 -0.3**
comp=Z,11nm,1.0s,mb5.2
ECH Echery 94.50 318 *eP* **P** **07 41 09.5 +1.9**
ECH Echery 94.50 318 *eP* **P** **07 41 07.5 -0.1**
ECH *epP* pP 07 41 18.9 -0.7
MOF Molkenrain 94.53 318 *eP* **P** **07 41 06.4 -1.3**
RUP Ruppelstein 94.54 319 *eP* **P** **07 40 58.2 -10**
HINF Hinteralfeld 94.72 318 *eP* **P** **07 41 08.1 -0.5**
LPG La Plagne 94.83 315 *eP* **P** **07 41 09.4 +0.2**
comp=Z,24nm,0.8s,mb5.4
LPG La Plagne 94.83 315 *eP* **P** **07 41 09.4 +0.2**
LPG pmax pmax
comp=Z,12nm,0.8s,mb5.4
LPG La Plagne 94.83 315 *eP* **P** **07 41 09.4 +0.2**
comp=Z,12nm,0.8s,mb5.4
LPL La Plagne 94.84 315 *eP* **P** **07 41 09.4 +0.2**
comp=Z,40nm,0.8s,mb5.6
LPL La Plagne 94.84 315 *eP* **P** **07 41 09.4 +0.2**
LPL pmax pmax
comp=Z,20nm,0.8s,mb5.6
LPL La Plagne 94.84 315 *eP* **P** **07 41 09.4 +0.2**
comp=Z,20nm,0.8s,mb5.6
BNI Bardonecchia 94.89 315 PFAKE 07 41 20.0 +11
BNI LR LR
comp=Z,2µm,20.0s,MS5.5
HAU Haudompre 95.05 318 *eP* **P** **07 41 09.7 -0.4**
comp=Z,38nm,0.9s,mb5.5
HAU *e*MLR MLR
comp=Z,3µm,22.8s,MS5.4
HAU Haudompre 95.05 318 *eP* **P** **07 41 09.7 -0.4**
HAU pmax pmax
comp=Z,19nm,0.9s,mb5.5
HAU MLR MLR
comp=Z,3µm,22.8s,MS5.7
HAU Haudompre 95.05 318 *eP* **P** **07 41 09.7 -0.4**
comp=Z,19nm,0.9s,mb5.5

HAU LR LR
comp=Z,3µm,22.8s,MS5.7
BER Bergen 95.12 330 *e*P **P 07 41 10.0 -0.2**
BER *e*PP PP 07 45 03.7 +3.7
BER *e* 07 52 16.8
WLF Walferdange 95.13 319 *e*P **P 07 41 10.8 +0.3**
comp=Z,86nm,1.7s,mb5.9
WLF *e*L 08 30 23.7
comp=Z,2µm,19.7s
WLF Walferdange 95.13 319 PFAKE 07 41 20.0 +10
WLF LR LR
comp=Z,2µm,20.0s,MS5.7
CABF La Chapelle 95.27 316 *e*P **P 07 41 11.4 +0.3**
comp=Z,72nm,1.3s,mb5.7
CABF La Chapelle 95.27 316 *e*P **P 07 41 11.4 +0.3**
CABF pmax pmax
comp=Z,36nm,1.3s,mb5.6
CABF La Chapelle 95.27 316 *e*P **P 07 41 11.4 +0.3**
comp=Z,36nm,1.3s,mb5.6
THEF They Montfort 95.29 318 *e*P **P 07 41 09.7 -1.5**
ORIF Oris-en-Rattie 95.46 315 *e*P **P 07 41 12.3 +0.2**
comp=Z,35nm,1.1s,mb5.4
ORIF *e*MLR MLR
comp=Z,3µm,22.0s,MS5.5
ORIF Oris-en-Rattie 95.46 315 *e*P **P 07 41 12.3 +0.2**
ORIF pmax pmax
comp=Z,18nm,1.1s,mb5.4
ORIF Oris-en-Rattie 95.46 315 *e*P **P 07 41 12.3 +0.2**
comp=Z,18nm,1.1s,mb5.4
BAIF Baives 96.37 320 *e*P **P 07 41 16.2 +0.1**
LOR Lormes 96.76 317 *e*P **P 07 41 17.7 -0.2**
comp=Z,26nm,0.8s,mb5.4
LOR *e*MLR MLR
comp=Z,2µm,20.0s,MS5.2
LOR Lormes 96.76 317 *e*P **P 07 41 17.7 -0.2**
LOR pmax pmax
comp=Z,13nm,0.8s,mb5.4
LOR MLR MLR
comp=Z,2µm,20.0s,MS5.5
LOR Lormes 96.76 317 *e*P **P 07 41 17.7 -0.2**
comp=Z,13nm,0.8s,mb5.4
LOR LR LR
comp=Z,2µm,20.0s,MS5.5
SMF Signal de Mont 96.81 316 *e*P **P 07 41 17.8 -0.4**
comp=Z,48nm,1.1s,mb5.5
SMF Signal de Mont 96.81 316 *e*P **P 07 41 17.8 -0.4**
SMF pmax pmax
comp=Z,24nm,1.1s,mb5.5
SMF Signal de Mont 96.81 316 *e*P **P 07 41 17.8 -0.4**
comp=Z,24nm,1.1s,mb5.5
SSF Saint Saulge 97.02 317 *e*P **P 07 41 18.8 -0.3**
comp=Z,18nm,1.1s,mb5.1
SSF Saint Saulge 97.02 317 *e*P **P 07 41 18.8 -0.3**
SSF pmax pmax
comp=Z,9.0nm,1.1s,mb5.1
SSF Saint Saulge 97.02 317 *e*P **P 07 41 18.8 -0.3**
comp=Z,8.8nm,1.1s,mb5.1
AVF Avril sur Loir 97.14 317 *e*P **P 07 41 19.4 -0.2**
BGF Bois d'Agland 97.50 316 *e*P **P 07 41 21.5 +0.2**
RAR Rarotonga 97.75 112 PFAKE 07 41 30.0 +7.0
RAR LR LR
comp=Z,992nm,21.0s,MS5.3
JMIC Jan Mayen 98.85 342 *e*PP PP 07 45 29.7 +1.3
DAG Danmarks Havn 99.21 348 *i* P **P 07 41 27.0 -1.3**
DAG
comp=Z,4µm,21.0s
DAG Danmarks Havn 99.21 348 *e*P **P 07 41 27.0 -1.3**
DAG LR LR
comp=Z,4µm,21.0s,MS5.8
LDF La Druitiere 99.32 319 *e*P **P 07 41 29.0 -0.4**
TORD Torodi Ar. Bea 99.52 283 P **P 07 41 30.2 -0.8**
comp=Z,1.1nm,0.9s,baz=78,slow=4.2,SNR=6.2
TORD PKKPbc PKKPbc 07 57 51.1 -2.2
comp=Z,0.6nm,0.7s,baz=300,slow=3.2,SNR=6.6
TORD LR LR 08 26 01.8
comp=Z,2µm,19.8s,MS5.7,baz=90,slow=35
FLN La Foliniere 99.54 319 *e*P **P 07 41 30.0 -0.4**
FLN *e*MLR MLR
comp=Z,4µm,22.8s,MS5.6
FLN La Foliniere 99.54 319 *e*P **P 07 41 30.0 -0.4**
FLN LR LR
comp=Z,4µm,22.8s,MS5.9
MFF Saint Martin d 99.55 317 *e*P Pdif 07 41 30.7 +0.4
ESK Eskdalemuir 100.25 326 PFAKE 07 41 40.0 +6.6
ESK LR LR
comp=Z,2µm,20.0s,MS5.7
KDAK Kodiak Island 101.15 32 PFAKE 07 41 50.0 +13
KDAK LR LR
comp=Z,963nm,19.0s,MS5.3
KIP Kipapa 101.39 69 PFAKE 07 41 50.0 +12
KIP LR LR
comp=Z,3µm,20.0s,MS5.8
COLA College 101.45 24 PFAKE 07 41 50.0 +11
COLA LR LR
comp=Z,3µm,21.0s,MS5.7
XMAS Kiritimati 101.80 88 PFAKE 07 41 50.0 +10
XMAS LR LR
comp=Z,2µm,22.0s,MS5.6
PMR Palmer 101.88 27 PFAKE 07 41 50.0 +9.4
PMR LR LR
comp=Z,3µm,20.0s,MS5.8
ESLA Sonseca Array 103.14 310 PFAKE 07 42 00.0 +14
ESLA LR LR
comp=Z,6µm,20.0s,MS6.2
PAB San Pablo 103.46 310 PFAKE 07 42 00.0 +12
PAB LR LR
comp=Z,1µm,21.0s,MS5.5
POHA Pohakuloa 103.77 70 PFAKE 07 42 00.0 +11
POHA LR LR
comp=Z,2µm,20.0s,MS5.6
SHEL Horse Pasture 105.13 253 PFAKE 07 46 20.0 +10
SHEL LR LR
comp=Z,6µm,20.0s,MS6.1
MVO Moncorvo 105.24 312 *e*PP PP 07 46 11.9 -5.4
MVO *e*SKS Sdif 07 53 46.0 -1.7
MVO *i* P PS 07 55 31.2 -1.9
MVO Moncorvo 105.24 312 *e*LQ 08 12 51.3
MVO *e*LR LR 08 19 14.6
comp=Z,1µm,20.0s
SFS San Fernando 105.33 307 PFAKE 07 46 20.0 +10
SFS LR LR
comp=Z,2µm,20.0s,MS5.8
PBAR Barrancos 105.73 309 *e*PP PP 07 46 15.0 -6.1
PBAR *e*SKS Sdif 07 53 50.6 -1.3
PBAR Barrancos 105.73 309 *e*LQ 08 15 32.1
PBAR *e*LR LR 08 23 15.9
comp=Z,1µm,20.0s
MTE Manteigas 105.75 311 *e*PP PP 07 46 15.0 -6.1
MTE *e*SKS Sdif 07 53 52.9 +0.9
MTE *i* P PS 07 55 43.6 +5.1
MTE Manteigas 105.75 311 *e*LQ 08 12 05.1
MTE *e*LR LR 08 20 13.7
comp=Z,1µm,20.0s
MTE Manteigas 105.75 311 PFAKE 07 46 20.0 +9.0
MTE LR LR
comp=Z,1µm,20.0s,MS5.5
PMRV Marv??o 105.80 310 *e*PP PP 07 46 19.1 -2.4
PMRV *e*SKS Sdif 07 53 50.6 -1.8
PMRV Marv??o 105.80 310 *e*LR LR 08 20 37.2
comp=Z,1µm,22.0s
PESTR Estremoz 106.05 310 *e*PP PP 07 46 22.1 -1.3
PESTR *e*SKS Sdif 07 53 57.1 +2.6
PESTR *i* P PS 07 55 41.7 0.0
PESTR Estremoz 106.05 310 *e*LR LR 08 20 28.4
comp=Z,949nm,20.0s
RTC Rabat Centre 106.19 304 PFAKE 07 46 20.0 +8.0
RTC LR LR
comp=Z,2µm,20.0s,MS5.6
PVAQ Vaqueiros 106.39 308 *e*PP PP 07 46 20.1 -5.8
PVAQ *e*SKS Sdif 07 53 53.1 -4.2
PVAQ Vaqueiros 106.39 308 *e*LQ 08 15 21.1
PVAQ *e*LR LR 08 22 58.6
comp=Z,2µm,20.0s
TRIS Tristan da Cun 106.57 230 PFAKE 07 46 20.0 +7.4
TRIS LR LR
comp=Z,4µm,21.0s,MS6.0
PBDV Barranco-do-Ve 106.58 308 *e*PP PP 07 46 23.1 -4.2
PBDV *e*SKS Sdif 07 54 01.8 +2.9
PBDV *i* P PS 07 55 45.9 -1.3
MORF Marmelete 107.14 308 *e*PP PP 07 46 32.3 +0.9
MORF *e*SKS Sdif 07 54 06.9 +3.3
MORF *i* P PS 07 55 57.7 +4.8
MORF Marmelete 107.14 308 A 08 44 18.4
comp=Z,1µm,20.0s
LIS Lisbon 107.27 310 *e*P Pdif 07 42 05.2 +0.5
LIS *e*PP PP 07 46 31.4 -1.0
PFVI Vila Bisbo 107.30 308 *e*PP PP 07 46 30.2 -2.5
PFVI *e*SKS Sdif 07 54 01.8 -3.2
PFVI *i* P PS 07 55 58.4 +3.7
PMAFR Mafra 107.33 310 *e*P PP 07 46 36.1 +3.3
PMAFR *e*SKS Sdif 07 54 06.7 +1.5
PMAFR Mafra 107.33 310 *e*LQ 08 12 57.5
PMAFR *e*LR LR 08 21 26.4
comp=Z,1µm,20.0s
PPT Papeete 107.76 109 *e*PP PP 07 46 26.5 -10
comp=Z,395nm,27.2s
PPT Papeete 107.76 109 *e*PS PS 07 55 56.7 -3.4
comp=Z,1µm,25.8s
PPT Papeete 107.76 109 *e*LR LR 08 17 44.9
comp=Z,2µm,24.2s
PPT Papeete 107.76 109 *e*PP PP 07 46 26.5 -10
PPT *e*PS PS 07 55 56.7 -3.4
SIT Sitka 110.14 29 PFAKE 07 46 30.0 +11
SIT LR LR
comp=Z,5µm,21.0s,MS6.0
PMSA Palmer Station 111.70 187 PFAKE 07 46 30.0 +8.6
PMSA LR LR
comp=Z,7µm,22.0s,MS6.2
DLBC Dease Lake 111.87 26 PKPdf PKiKP 07 46 23.1 +1.2
WRAK Wrangell Islan 111.88 29 PFAKE 07 46 30.0 +8.0
WRAK LR LR
comp=Z,3µm,20.0s,MS5.9
SFJD Kangerlussuaq 112.90 348 PFAKE 07 46 40.0 +16
SFJD LR LR
comp=Z,4µm,21.0s,MS6.0
ASCN Ascension 114.49 260 PFAKE 07 46 40.0 +12
ASCN LR LR
comp=Z,3µm,20.0s,MS5.9
YKA Yellowknife Ar 114.86 17 PKP PKiKP 07 46 25.3 -2.2
comp=Z,2.4nm,1.0s,baz=345,slow=1.7,SNR=5.0
YKA Yellowknife Ar 114.86 17 PKIKP PKiKP 07 46 25.3 -2.2
YKA pmax pmax
comp=Z,2.0nm,1.0s
RKT Rikitea 119.87 119 *e*LR LR 08 23 26.3
comp=Z,3µm,27.5s
NLWA Neilton Lookou 121.18 34 PFAKE 07 46 50.0 +10
NLWA LR LR
comp=Z,2µm,19.0s,MS5.8
A05A Maple Falls 121.20 32 ⇑P PKPdf 07 46 39.3 -0.8
baz=121
A06A Chilliwack 121.45 31 ⇑P PKPdf 07 46 39.4 -1.2
baz=121
HDW Hoodsport 121.48 33 P PKPdf 07 46 41.0 +0.3
C04A Brinnon 121.48 33 ⇑P PKPdf 07 46 39.9 -0.8
baz=121
B05A Bryant 121.63 32 ⇑P PKPdf 07 46 40.4 -0.6
baz=121
GNW Green Mountain 121.66 33 *e*PKPdf PKPdf 07 46 41.1 +0.1
JCW Jim Creek 121.77 32 *e*PKPdf PKPdf 07 46 41.1 -0.2
B06A Malemount 121.80 32 ⇑P PKPdf 07 46 39.9 -1.4
baz=122
E03A Lebam 121.83 35 ⇓P PKPdf 07 46 40.7 -0.7
baz=122
USHA Ushuaia 121.91 187 PKP PKPdf 07 46 41.9 +0.6
comp=Z,4.2nm,0.8s,baz=138,slow=11,SNR=2.9
A07A Ashnola River, 122.05 31 ⇓P PKPdf 07 46 41.0 -0.8
baz=122
F03A Seaside 122.18 35 ⇑P PKPdf 07 46 41.4 -0.7
baz=122
C05A Tolt Reservoir 122.19 33 ⇑P PKPdf 07 46 41.8 -0.3
baz=122
D05A Enumclaw 122.34 33 ⇓P PKPdf 07 46 41.3 -1.0
baz=122
EDM Edmonton 122.36 24 *e*PKIKP PKPdf 07 46 41.2 -1.0
C06A Tall Timber Ra 122.48 32 ⇑P PKPdf 07 46 41.6 -1.0
baz=122
B07A Winthrop 122.55 31 ⇓P PKPdf 07 46 41.7 -1.0
baz=122
ERK Elk Rock 122.66 34 P PKPdf 07 46 43.2 +0.2
A08A Turner Farm, O 122.67 30 ⇑P PKPdf 07 46 42.1 -0.8
baz=122
TDL Tradedollar La 122.70 34 P PKPdf 07 46 42.8 -0.3
F04A Amboy 122.83 35 ⇓P PKPdf 07 46 42.3 -1.1
baz=123
E05A Randle 122.83 34 ⇓P PKPdf 07 46 42.1 -1.3
baz=123
EFI East Falkland 122.86 195 PFAKE 07 46 50.0 +6.7
EFI LR LR
comp=Z,2µm,22.0s,MS5.8
D06A Cle Elum 122.95 33 ⇑P PKPdf 07 46 42.1 -1.4
baz=123
TWW Teanaway 122.98 33 P PKPdf 07 46 43.5 0.0
ETW Entiat 122.98 32 *e*PKPdf PKPdf 07 46 43.3 -0.3
A09A Danville 123.00 30 ⇑P PKPdf 07 46 41.8 -1.8
baz=123
B08A Colville Reser 123.02 31 ⇓P PKPdf 07 46 42.1 -1.6
baz=123
H03A Soap Creek Ran 123.04 36 ⇑P PKPdf 07 46 43.1 -0.8
baz=123
C07A Waterville 123.07 32 ⇓P PKPdf 07 46 42.9 -0.9
baz=123
COR Corvallis 123.09 36 PFAKE 07 47 00.0 +16
COR LR LR
comp=Z,2µm,22.0s,MS5.8
G04A Mulino 123.22 35 ⇓P PKPdf 07 46 42.8 -1.3
baz=123
E06A Yakima 123.28 33 ⇓P PKPdf 07 46 42.9 -1.3
baz=123
EBG Ellensburg 123.28 33 P PKPdf 07 46 44.1 -0.1
VLMM Larch Mountain 123.28 35 P PKPdf 07 46 44.3 +0.1
F05A White Salmon 123.41 34 ⇓P PKPdf 07 46 43.2 -1.3
baz=123
D07A Quincy 123.42 32 ⇑P PKPdf 07 46 43.6 -0.9
baz=123
I03A Eugene 123.44 37 ⇓P PKPdf 07 46 43.8 -0.8
baz=123
A10A Northport 123.50 29 ⇑P PKPdf 07 46 43.9 -0.6
baz=123
C08A Higginbotham F 123.54 31 ⇓P PKPdf 07 46 44.0 -0.7
baz=123
B09A Rice 123.58 30 ⇓P PKPdf 07 46 44.1 -0.7
baz=123
J02A Umpqua 123.59 38 ⇓P PKPdf 07 46 44.3 -0.6
baz=123
H04A Detroit Lake 123.69 36 ⇑P PKPdf 07 46 43.9 -1.1
baz=124
F06A Goldendale 123.86 34 ⇓P PKPdf 07 46 44.6 -0.7
baz=124
G05A Wamic 123.87 35 ⇑P PKPdf 07 46 44.0 -1.3
baz=124
E07A Sunnyside 123.88 33 ⇑P PKPdf 07 46 44.1 -1.3
baz=124
C09A Chrisman Ranch 123.92 31 ⇑P PKPdf 07 46 44.3 -1.1
baz=124
OD2 Odessa Site #2 123.96 31 *e*PKPdf PKPdf 07 46 45.5 +0.1
K02A Glendale 123.97 38 ⇓P PKPdf 07 46 45.2 -0.4
baz=124
I04A Tendick Farm, 124.06 37 ⇓P PKPdf 07 46 45.2 -0.6
baz=124
D08A Wollman Farm, 124.07 32 ⇑P PKPdf 07 46 45.0 -0.7
baz=124
A11A Hall Mountain, 124.10 29 ⇓P PKPdf 07 46 45.0 -0.6
baz=124
RSW Rattlesnake Hi 124.13 33 *e*PKPdf PKPdf 07 46 46.1 +0.3
HAWA Hanford 124.16 33 *e*PKPdf PKPdf 07 46 45.6 -0.3
HAWA LR LR
comp=Z,2µm,19.0s,MS5.8
NEW Newport 124.20 30 *e*PKIKP PKPdf 07 46 46.0 +0.1
NEW MLR MLR
comp=Z,3µm,20.0s
L02A Cave Junction 124.23 39 ⇑P PKPdf 07 46 45.7 -0.5
baz=124
F07A Phinny Hill Vi 124.25 33 ⇓P PKPdf 07 46 45.0 -1.1
baz=124
G06A Carlson Farm, 124.26 34 ⇑P PKPdf 07 46 45.5 -0.6
baz=124
H05A Madras 124.27 35 ⇑P PKPdf 07 46 45.6 -0.6
baz=124
E08A Dider Farm, El 124.35 32 ⇓P PKPdf 07 46 45.9 -0.3
baz=124
D09A Jones Farm, Ri 124.39 32 ⇓P PKPdf 07 46 45.8 -0.5
baz=124
HUMO Hull Mountain 124.39 38 ⇑P PKPdf 07 46 46.1 -0.3
baz=124
HUMO Hull Mountain 124.39 38 *e*PKPdf PKPdf 07 46 46.5 0.0
HUMO LR LR
comp=Z,2µm,22.0s,MS5.8
C10A Spilker Farm, 124.40 30 ⇑P PKPdf 07 46 45.8 -0.5
baz=124
B11A Sandpoint 124.45 29 ⇑P PKPdf 07 46 45.5 -0.9
baz=124
A12A Yaak River Ran 124.45 28 ⇑P PKPdf 07 46 46.1 -0.3
baz=124
I05A Bend 124.53 36 ⇑P PKPdf 07 46 45.9 -0.8
baz=124
J04A Umpqua Nationa 124.56 37 ⇓P PKPdf 07 46 46.3 -0.4
baz=124
JCC Jacoby Creek 124.66 41 ⇑P PKPdf 07 46 47.1 +0.1
baz=124
VIPM Ingram Point 124.70 35 PKIKP PKPdf 07 46 46.9 -0.1
H06A Lindquist Farm 124.73 35 ⇑P PKPdf 07 46 46.8 -0.2
baz=124
G07A Ruggs Ranch, H 124.78 34 ⇑P PKPdf 07 46 46.2 -1.0
baz=125
E09A Wood Farm, Sta 124.82 32 ⇑P PKPdf 07 46 46.6 -0.5
baz=125
C11A Tepee Creek (N 124.91 30 ⇓P PKPdf 07 46 46.8 -0.5
baz=125
D10A Wagner Farm, O 124.92 31 ⇓P PKPdf 07 46 46.4 -0.9
baz=125
F08A Pendleton 124.94 33 ⇓P PKPdf 07 46 46.7 -0.8
baz=125
FFC Flin Flon 124.98 16 *e*PKIKP PKPdf 07 46 46.3 -0.9
MLR MLR
comp=Z,7µm,22.0s,MS6.2
BUOR Burton Butte 125.01 38 P PKPdf 07 46 47.5 -0.2
YBH Yreka Blue Hor 125.02 39 ⇑P PKPdf 07 46 47.4 -0.3
baz=125
YBH Yreka Blue Hor 125.02 39 PFAKE 07 47 00.0 +12
YBH LR LR
comp=Z,2µm,19.0s,MS5.7
A13A Flathead Natio 125.04 28 ⇓P PKPdf 07 46 47.0 -0.5
baz=125
J05A Fort Rock 125.06 37 ⇓P PKPdf 07 46 47.3 -0.5
baz=125
M02C Callahan 125.11 39 ⇓P PKPdf 07 46 47.2 -0.7
baz=125
G08A Pilot Rock 125.16 34 ⇓P PKPdf 07 46 46.9 -1.0
baz=125
LNOR Lincton Mounta 125.16 33 *e*PKIKP PKPdf 07 46 47.4 -0.4
H07A Lands Inn, Kim 125.25 35 ⇑P PKPdf 07 46 48.1 0.0
baz=125
I06A Prineville 125.27 36 ⇓P PKPdf 07 46 47.9 -0.2
baz=125
L04A Klamath Falls 125.28 38 ⇓P PKPdf 07 46 47.7 -0.5
baz=125
E10A Myers Farm, Un 125.39 31 ⇑P PKPdf 07 46 47.3 -0.9
baz=125
C12B Naegeli Ranch, 125.39 29 ⇑P PKPdf 07 46 47.7 -0.5
baz=125
B13A Whitefish 125.41 28 ⇓P PKPdf 07 46 47.5 -0.7
baz=125
D11A Klaveano Farm, 125.41 30 ⇓P PKPdf 07 46 47.0 -1.3
baz=125
A14A Double T Ranch 125.47 27 ⇑P PKPdf 07 46 47.3 -1.1
baz=125
F09A S2 Ranch, Elgi 125.47 33 ⇓P PKPdf 07 46 47.3 -1.1
baz=125
M04C Macdoel 125.53 39 ⇑P PKPdf 07 46 48.2 -0.5
baz=125
K05A Summer Lake 125.58 37 ⇓P PKPdf 07 46 48.4 -0.3
baz=125
I07A Izee 125.60 35 ⇑P PKPdf 07 46 47.9 -0.8
baz=125
M03C McCloud 125.64 39 ⇑P PKPdf 07 46 48.2 -0.7
baz=125
F10A Beach Ranch, E 125.66 32 ⇑P PKPdf 07 46 48.4 -0.4
baz=125
J06A Christmas Vall 125.72 36 ⇑P PKPdf 07 46 49.1 +0.1
baz=126
WDC Whiskeytown Da 125.75 40 ⇑P PKPdf 07 46 48.2 -0.9
baz=126
WDC Whiskeytown Da 125.75 40 PFAKE 07 47 00.0 +11
WDC LR LR
comp=Z,2µm,22.0s,MS5.6
H08A Prairie City 125.80 34 ⇑P PKPdf 07 46 48.3 -0.8
baz=126
O02C Red Bluff 125.80 41 ⇑P PKPdf 07 46 48.9 -0.4
baz=126
G09A Cove 125.81 33 ⇓P PKPdf 07 46 47.9 -1.2
baz=126
C13A Hot Springs 125.85 29 ⇓P PKPdf 07 46 48.0 -1.1
baz=126
D12A Red Ives Fores 125.90 30 ⇓P PKPdf 07 46 48.3 -0.9
baz=126
K06A Valley Falls 125.92 37 ⇓P PKPdf 07 46 48.7 -0.7
baz=126
E11A Bogner Ranch, 125.94 31 ⇑P PKPdf 07 46 48.4 -0.9
baz=126
L05A Lakeview 126.01 38 ⇓P PKPdf 07 46 49.4 -0.1
baz=126
LTIM Timbered Crate 126.09 39 P PKPdf 07 46 49.5 -0.3
GASB Alder Springs 126.12 41 ⇓P PKPdf 07 46 49.7 -0.2
baz=126
J07A Hines 126.14 36 ⇓P PKPdf 07 46 49.5 -0.3
baz=126
G10A Bishop Farm, J 126.16 33 ⇑P PKPdf 07 46 48.6 -1.2
baz=126
C14A Swan Lake 126.18 28 ⇑P PKPdf 07 46 48.4 -1.3
baz=126
M05C Lookout 126.20 39 ⇓P PKPdf 07 46 49.6 -0.3
baz=126
HOPS Hopland 126.23 42 ⇑P PKPdf 07 46 49.3 -0.8
baz=126
HOPS Hopland 126.23 42 PFAKE 07 47 00.0 +10
HOPS LR LR
comp=Z,2µm,22.0s,MS5.8
I08A Drewsey 126.23 35 ⇓P PKPdf 07 46 49.3 -0.6
baz=126
H09A Durkee 126.27 33 ⇑P PKPdf 07 46 49.4 -0.6
baz=126
F11A Grangeville 126.28 31 ⇓P PKPdf 07 46 49.0 -1.0
baz=126
D13A Huson 126.31 29 ⇑P PKPdf 07 46 48.7 -1.3
baz=126
B15A Bradely Ranch, 126.34 27 ⇑P PKPdf 07 46 48.7 -1.3
baz=126
BMO Blue Mountains 126.34 33 *e*PKIKP PKPdf 07 46 49.6 -0.5
BMO MLR MLR
comp=Z,2µm,20.0s,MS5.8
MOD Modoc 126.41 38 ⇓P PKPdf 07 46 50.6 +0.2
baz=126
MOD Modoc 126.41 38 *e*PKPdf PKPdf 07 46 50.8 +0.5
MOD LR LR
comp=Z,2µm,21.0s,MS5.8
G11A Walters Elk Ra 126.54 32 ⇑P PKPdf 07 46 49.5 -1.0
baz=126
K07A Rock Creek Ran 126.58 36 ⇓P PKPdf 07 46 50.5 -0.1
baz=126
J08A Circle Bar Ran 126.63 35 ⇓P PKPdf 07 46 51.0 +0.3
baz=126
I09A Lost Marbles R 126.66 34 ⇑P PKPdf 07 46 49.9 -0.8
baz=126
M06C Likely Place G 126.71 38 ⇑P PKPdf 07 46 49.8 -1.1
baz=126
MNRC McLaughlin Nat 126.71 42 ⇓P PKPdf 07 46 51.3 +0.3
baz=126
C15A Salmond Ranch, 126.71 28 ⇑P PKPdf 07 46 50.4 -0.4
baz=126
MSO Missoula 126.75 29 *e*PKPdf PKPdf 07 46 50.2 -0.6
MSO LR LR
comp=Z,3µm,21.0s,MS6.0
D14A Greenough 126.78 29 ⇑P PKPdf 07 46 50.0 -0.9
baz=126
MCCM Marconi Confer 126.79 43 PFAKE 07 47 00.0 +8.8
MCCM LR LR
comp=Z,2µm,22.0s,MS5.8
H10A Noah's Angus R 126.82 33 ⇑P PKPdf 07 46 50.4 -0.6
baz=127
O04C Chester 126.82 40 ⇑P PKPdf 07 46 50.6 -0.6
baz=127
F12A Elk City 126.83 31 ⇓P PKPdf 07 46 50.0 -1.0
baz=127
ELFS Eagle Lake Fie 126.88 39 ⇓P PKPdf 07 46 50.9 -0.4
baz=127
E13A Victor 126.90 30 ⇓P PKPdf 07 46 50.6 -0.6
baz=127
L07A Adell 126.93 37 ⇓P PKPdf 07 46 51.6 +0.2
baz=127
ORV Oroville 126.97 41 ⇑P PKPdf 07 46 50.5 -1.0
baz=127
K08A Mann Creek Ran 127.01 36 ⇑P PKPdf 07 46 51.9 +0.4
baz=127
CHMT Chamberlain Mo 127.02 29 *e*PKPdf PKPdf 07 46 51.3 -0.1
J09A Fry Pan Ranch, 127.05 35 ⇓P PKPdf 07 46 51.6 +0.1
baz=127
C16A Fuhringer Ranc 127.08 27 ⇓P PKPdf 07 46 50.5 -0.9
baz=127
WVOR Wild Horse Val 127.10 36 *e*PKIKP PKPdf 07 46 52.0 +0.4

WVOR MLR MLR
comp=Z,2µm,20.0s,MS5.9
I10A Payette 127.11 33 ⇓P PKPdf 07 46 51.5 -0.1
baz=127
O05C Quincy 127.12 40 ⇑P PKPdf 07 46 51.2 -0.6
baz=127
H11A Donnelly 127.14 32 ⇑P PKPdf 07 46 51.4 -0.3
baz=127
SCHQ Schefferville 127.14 351 PKP PKPdf 07 46 50.1 -1.2
comp=Z,6.1nm,0.9s,baz=68,slow=1.5,SNR=5.9
SCHQ Schefferville 127.14 351 PKP PKPdf 07 46 50.1 -1.2
SCHQ LR LR
comp=Z,4µm,20.0s,MS6.1
E14A Clinton 127.26 29 ⇑P PKPdf 07 46 51.0 -0.8
baz=127
D15A Lincoln 127.28 28 ⇑P PKPdf 07 46 50.7 -1.1
baz=127
F13A Darby 127.28 30 ⇑P PKPdf 07 46 50.7 -1.2
baz=127
N06A Buffalo Meadow 127.37 39 ⇑P PKPdf 07 46 51.8 -0.4
baz=127
M07A Soldier Meadow 127.40 38 ⇓P PKPdf 07 46 52.3 0.0
baz=127
L08A Fields 127.42 36 ⇓P PKPdf 07 46 52.3 0.0
baz=127
Q04C Lincoln 127.43 41 ⇑P PKPdf 07 46 52.2 -0.2
baz=127
K09A Rome 127.47 35 ⇓P PKPdf 07 46 52.2 -0.1
baz=127
BEKR Beckwourth 127.53 40 ⇑P PKPdf 07 46 52.2 -0.4
baz=127
J10A Berg Farm, Mel 127.56 34 ⇑P PKPdf 07 46 52.4 -0.1
baz=127
C17A Wharram Farm, 127.65 27 ⇓P PKPdf 07 46 51.2 -1.3
baz=127
E15A Deer Lodge 127.67 29 ⇑P PKPdf 07 46 50.9 -1.7
baz=127
P05C Yuba Gap, Truc 127.69 40 ⇓P PKPdf 07 46 52.4 -0.4
baz=128
I11A Placerville 127.69 33 ⇑P PKPdf 07 46 52.6 -0.1
baz=128
O06A Flanigan 127.70 39 ⇓P PKPdf 07 46 52.3 -0.6
baz=128
F14A Wisdom 127.75 30 ⇑P PKPdf 07 46 52.5 -0.2
baz=128
EGMT Eagleton 127.80 26 ⇑P PKPdf 07 46 52.2 -0.6
baz=128
EGMT Eagleton 127.80 26 PFAKE 07 47 00.0 +7.2
EGMT LR LR
comp=Z,3µm,20.0s,MS6.0
G13A Cobalt 127.81 31 ⇓P PKPdf 07 46 53.0 +0.1
baz=128
HRY Holter Researc 127.85 28 *e*PKPdf PKPdf 07 46 54.0 +1.0
M08A Happy Creek Ra 127.85 37 ⇑P PKPdf 07 46 53.1 0.0
baz=128
H12A Diamond D Ranc 127.86 32 ⇑P PKPdf 07 46 52.7 -0.3
baz=128
N07B Gerlach 127.88 38 ⇑P PKPdf 07 46 53.8 +0.6
baz=128
LAVA Lava Cap Winer 127.90 41 ⇑P PKPdf 07 46 53.0 -0.3
baz=128
K10A MacKenzie Ranc 127.91 35 ⇓P PKPdf 07 46 53.4 +0.2
baz=128
L09A Wilkinson Ranc 127.92 36 ⇑P PKPdf 07 46 53.8 +0.6
baz=128
P06A Stead Airport, 127.93 40 ⇓P PKPdf 07 46 52.9 -0.4
baz=128
R04C Big Horse Ranc 128.04 42 ⇓P PKPdf 07 46 52.5 -1.0
baz=128
MFID Camas Ranch 128.09 34 ⇓P PKPdf 07 46 53.4 -0.1
baz=128
G14A Jackson 128.10 30 ⇑P PKPdf 07 46 52.8 -0.6
baz=128
F15A Butte 128.16 29 ⇓P PKPdf 07 46 53.3 -0.3
baz=128
H13A Challis 128.16 32 ⇓P PKPdf 07 46 53.1 -0.5
baz=128
WCN Washoe City 128.24 40 ⇓P PKPdf 07 46 54.0 +0.1
baz=128
PAHR Pah Rah Range 128.24 39 *e*PKPdf PKPdf 07 46 54.1 +0.2
PAHR *e*PP PP 07 49 03.6 +6.0
O07A Toulon 128.30 39 ⇑P PKPdf 07 46 53.8 -0.2
baz=128
R05C Kirkwood Meado 128.36 41 ⇑P PKPdf 07 46 54.5 +0.3
baz=128
K11A Parker Ranch, 128.39 34 ⇑P PKPdf 07 46 54.1 0.0
baz=128
N08A GE Springer Mi 128.39 38 ⇓P PKPdf 07 46 54.2 0.0
baz=128
M09A Marrel Ranch, 128.42 36 ⇓P PKPdf 07 46 54.4 +0.2
baz=128
DLMT Dillon 128.45 30 *e*PKPdf PKPdf 07 46 54.4 +0.2
DLMT *e*pPKPdf pPKPdf 07 47 05.6 -0.8
SAO San Andreas Ge 128.47 44 PFAKE 07 47 10.0 +16
SAO LR LR
comp=Z,2µm,22.0s,MS5.7
CMB Columbia Colle 128.52 42 ⇓P PKPdf 07 46 53.6 -0.9
baz=128
CMB Columbia Colle 128.52 42 *e*PKPdf PKPdf 07 46 55.3 +0.8
CMB *e*PP PP 07 48 56.7 -2.8
CMB LR LR
comp=Z,3µm,22.0s,MS5.9
L10A Juniper Basin 128.58 35 ⇓P PKPdf 07 46 54.7 +0.2
baz=128
H14A Leadore 128.59 31 ⇑P PKPdf 07 46 54.3 -0.1
baz=128
J12A Stokes Ranch, 128.59 33 ⇑P PKPdf 07 46 54.5 0.0
baz=128
G15A Dillon 128.64 30 ⇓P PKPdf 07 46 54.6 +0.1
baz=128
P07A Fallon 128.65 39 ⇑P PKPdf 07 46 53.9 -0.8
baz=128
O08A Rochester Mine 128.67 38 ⇑P PKPdf 07 46 54.3 -0.4
baz=128
I13A Wildhorse Cree 128.68 32 ⇓P PKPdf 07 46 54.5 -0.1
baz=128
MCMT McKenzie Canyo 128.70 30 *e*PKPdf PKPdf 07 46 54.9 +0.3
BOZ Bozeman (W) 128.72 29 ⇑P PKPdf 07 46 54.4 -0.3
baz=128
BOZ Bozeman (W) 128.72 29 *e*PKPdf PKPdf 07 46 54.8 +0.2
BOZ LR LR
comp=Z,3µm,19.0s,MS6.0
N09A Rock Creek Ran 128.72 37 ⇑P PKPdf 07 46 54.8 0.0
baz=128
HLID Hailey 128.76 33 ⇑P PKPdf 07 46 55.4 +0.6
baz=128
HLID Hailey 128.76 33 *e*PKPdf PKPdf 07 46 55.4 +0.6
HLID *e*pPKPdf pPKPdf 07 47 06.7 -0.4
HLID LR LR
comp=Z,3µm,22.0s,MS5.9
R06C Coleville 128.87 41 ⇑P PKPdf 07 46 55.2 +0.1
baz=129
M10A I.L. Ranch, Tu 128.89 36 ⇑P PKPdf 07 46 55.3 +0.2
baz=129
S05C Merced 128.93 42 ⇓P PKPdf 07 46 54.2 -1.1
baz=129
L11A Cat Creek Ranc 128.94 35 ⇓P PKPdf 07 46 55.5 +0.4
baz=129
H15A Lima 128.95 30 ⇑P PKPdf 07 46 54.8 -0.3
baz=129
S06C San Francisco 128.96 42 ⇓P PKPdf 07 46 55.0 -0.3
baz=129
J13A Cove Ranch, Pi 129.00 33 ⇑P PKPdf 07 46 55.3 0.0
baz=129
I14A Mackay 129.02 32 ⇑P PKPdf 07 46 55.3 +0.1
baz=129
Q07A Schurz 129.05 40 ⇓P PKPdf 07 46 55.8 +0.3
baz=129
P08A Dixie Valley 129.07 39 ⇓P PKPdf 07 46 55.4 -0.1
baz=129
K12A Draper Farm, C 129.11 34 ⇓P PKPdf 07 46 55.7 +0.2
baz=129
BMN Battle Mountai 129.16 37 PFAKE 07 47 10.0 +14
BMN LR LR
comp=Z,2µm,20.0s,MS5.8
O09A Fish Creek Ran 129.34 38 ⇓P PKPdf 07 46 56.3 +0.3
baz=129
L12A House Creek Ra 129.37 34 ⇑P PKPdf 07 46 56.2 +0.2
baz=129
R07C Lee Vining 129.38 41 ⇓P PKPdf 07 46 54.7 -1.4
baz=129
M11A Holland Ranch, 129.38 35 ⇓P PKPdf 07 46 56.4 +0.4
baz=129
J14A Carey 129.40 32 ⇑P PKPdf 07 46 56.4 +0.4
baz=129,SNR=7.0
QLMT Earthquake Lak 129.41 29 *e*PKPdf PKPdf 07 46 56.9 +0.9
N10A Dunphy 129.41 37 ⇓P PKPdf 07 46 56.3 +0.1
baz=129

I15A Monteview 129.47 31 ⇓P PKPdf 07 46 56.4 +0.2
baz=129,SNR=5.1
PKD Parkfield 129.52 44 ⇑P PKPdf 07 46 56.7 +0.2
baz=129
T06C Millerton Lake 129.53 42 ⇓P PKPdf 07 46 55.9 -0.5
baz=129,SNR=5.8
GCMT Greycliff 129.53 27 *e*PKPdf PKPdf 07 46 57.0 +0.8
K13A Stover Farm, H 129.55 33 ⇑P PKPdf 07 46 57.1 +0.8
baz=129
H16A Russell Place, 129.59 29 ⇓P PKPdf 07 46 57.0 +0.6
baz=129
KCC Kaiser Creek 129.62 42 ⇓P PKPdf 07 46 55.9 -0.7
baz=129
Q08A Gabbs 129.65 39 ⇑P PKPdf 07 46 56.7 +0.1
baz=129,SNR=5.1
DGMT Dagmar 129.66 21 PFAKE 07 47 10.0 +14
DGMT LR LR
comp=Z,3µm,20.0s,MS6.0
NVAR Mina Array Bea 129.66 40 PKP PKPdf 07 46 56.3 -0.3
comp=Z,3.7nm,0.6s,baz=268,slow=2.1,SNR=22
NVAR SKPbc 07 50 14.8
comp=Z,4.7nm,0.8s,baz=280,slow=4.3,SNR=7.5
O10A Cortez Mining, 129.68 37 ⇑P PKPdf 07 46 56.8 +0.1
baz=129
P09A Austin 129.74 38 ⇑P PKPdf 07 46 57.1 +0.3
baz=130
YMR Madison River 129.75 29 *e*PKPdf PKPdf 07 46 57.2 +0.6
YMR LR LR
comp=Z,2µm,19.0s,MS5.7
MLAC Mammoth Lakes 129.77 41 ⇓P PKPdf 07 46 56.8 -0.1
baz=130
N11A Elko Archery C 129.81 36 ⇓P PKPdf 07 46 56.4 -0.4
baz=130
R08A Mina 129.84 40 ⇓P PKPdf 07 46 57.3 +0.3
baz=130
M12A Wells 129.90 35 ⇑P PKPdf 07 46 57.0 0.0
baz=130,SNR=8.2
J15A Blackfoot 129.92 31 ⇑P PKPdf 07 46 57.4 +0.4
baz=130,SNR=8.4
L13A Double Diamond 130.00 34 ⇓P PKPdf 07 46 57.7 +0.6
baz=130
I16A Newdale 130.07 30 ⇑P PKPdf 07 46 57.5 +0.2
baz=130,SNR=5.3
LKWY Lake 130.10 29 PFAKE 07 47 10.0 +13
LKWY LR LR
comp=Z,5µm,19.0s,MS6.2
MTUM Tungsten Hills 130.10 41 *e*PKPdf PKPdf 07 46 59.0 +1.4
K14A Jones Ranch, D 130.11 33 ⇑P PKPdf 07 46 56.8 -0.6
baz=130,SNR=13
P10A Eureka 130.11 38 ⇓P PKPdf 07 46 57.0 -0.5
baz=130
Q09A Carvers 130.14 39 ⇓P PKPdf 07 46 57.1 -0.5
baz=130
ELK Elko 130.14 36 *e*PKIKP PKPdf 07 46 58.4 +0.9
ELK MLR MLR
comp=Z,1µm,21.0s
HELL Mitchell Peak 130.17 42 ⇓P PKPdf 07 46 57.5 -0.2
baz=130,SNR=5.5
N12A Clover Valley, 130.19 36 ⇑P PKPdf 07 46 57.5 -0.1
baz=130,SNR=7.7
RCTC Rector, Farmer 130.22 43 ⇑P PKPdf 07 46 57.0 -0.7
baz=130
RLMT Red Lodge 130.22 28 *e*PKPdf PKPdf 07 46 58.1 +0.6
RLMT LR LR
comp=Z,3µm,20.0s,MS6.0
S08C White Hen Res 130.28 41 ⇑P PKPdf 07 46 58.5 +0.6
baz=130,SNR=8.3
O11A Cowboy Ranch, 130.28 37 ⇓P PKPdf 07 46 58.5 +0.7
baz=130,SNR=9.6
LAO LASA Array 130.34 24 *e*PKPdf PKPdf 07 46 58.7 +1.0
LAO LR LR
comp=Z,4µm,20.0s,MS6.1
M13A Montello 130.36 35 ⇑P PKPdf 07 46 57.7 -0.2
baz=130,SNR=13
K15A Arbon 130.36 32 ⇓P PKPdf 07 46 57.7 -0.2
baz=130,SNR=5.1
L14A Malta 130.43 33 ⇓P PKPdf 07 46 57.8 -0.2
baz=130,SNR=7.7
J16A Bone 130.43 31 ⇓P PKPdf 07 46 58.2 +0.2
baz=130,SNR=6.4
TIN Tinemaha 130.49 42 ⇓P PKPdf 07 46 57.0 -1.3
baz=130
RRI2 Red Ridge 130.53 31 *e*PKPdf PKPdf 07 46 58.6 +0.5
MOOW Moose Ponds 130.53 30 *e*PKPdf PKPdf 07 46 58.2 +0.1
R09A Tonopah 130.56 40 ⇑P PKPdf 07 46 58.2 -0.1
baz=130,SNR=15
TPH Tonopah 130.56 40 PFAKE 07 47 10.0 +12
TPH LR LR
comp=Z,2µm,22.0s,MS5.8
PKM Peak Mountain 130.57 45 ⇑P PKPdf 07 46 56.8 -1.7
baz=130,SNR=5.6
VES Vestal, Richgr 130.58 43 ⇓P PKPdf 07 46 57.3 -1.1
baz=130,SNR=7.6
P11A Circle Ranch, 130.59 37 ⇑P PKPdf 07 46 57.1 -1.2
baz=130,SNR=5.4
TPAW Tetonia Pass 130.61 30 *e*PKPdf PKPdf 07 46 59.0 +0.7
ULM Lac du Bonnet 130.62 14 PKP PKPdf 07 46 56.2 -1.9
comp=Z,9.8nm,0.8s,baz=344,slow=2.7,SNR=12
ULM SKPbc SKPbc 07 50 14.9 -4.0
comp=Z,7.0nm,1.0s,baz=349,slow=5.7,SNR=5.3
ULM Lac du Bonnet 130.62 14 PKP PKPdf 07 46 56.2 -1.9
ULM SKPbc SKPbc 07 50 14.9 -4.0
Q10A Clear Creek Ra 130.64 39 ⇑P PKPdf 07 46 58.4 -0.1
baz=130,SNR=8.9
N13A Wendover, West 130.67 35 ⇓P PKPdf 07 46 58.6 +0.1
baz=130,SNR=8.3
LOHW Long Hollow 130.70 30 *e*PKPdf PKPdf 07 46 59.8 +1.4
M14A Sheep Mountain 130.73 34 ⇓P PKPdf 07 46 58.2 -0.4
baz=130,SNR=17
SNOW Snow King Moun 130.73 30 *e*PKPdf PKPdf 07 46 59.4 +0.8
O12A Currie 130.74 36 ⇑P PKPdf 07 46 58.8 +0.1
baz=130,SNR=16
REDW Red Top Meadow 130.75 30 *e*PKPdf PKPdf 07 46 59.3 +0.8
K16A Soda Springs 130.76 31 ⇓P PKPdf 07 46 58.4 -0.2
baz=130,SNR=10
S09A Goldfield 130.77 40 ⇑P PKPdf 07 46 58.4 -0.3
baz=130,SNR=14
HVU Hansel Valley 130.85 33 *e*PKIKP PKPdf 07 46 59.8 +1.0
HVU *e* 07 47 10.5
SBC Santa Barbara 130.87 45 ⇓P PKPdf 07 46 57.9 -1.2
baz=131
L15A Malad City 130.91 33 ⇓P PKPdf 07 46 58.5 -0.4
baz=131,SNR=11
CWC Cottonwood Cre 130.93 42 ⇓P PKPdf 07 46 58.2 -0.9
baz=131
R10A Warm Springs 131.02 39 ⇓P PKPdf 07 46 59.5 +0.2
baz=131,SNR=13
S10A Tonopah Range, 131.05 40 ⇓P PKPdf 07 46 59.4 0.0
baz=131,SNR=10
AHID Auburn Hatcher 131.06 31 PFAKE 07 47 10.0 +11
AHID LR LR
comp=Z,3µm,20.0s,MS6.0
Q11A Duckwater 131.09 38 ⇓P PKPdf 07 46 59.2 -0.1
baz=131,SNR=8.6
GRAC Grapevine Rang 131.09 41 ⇓P PKPdf 07 46 59.4 0.0
baz=131,SNR=6.8
ISA Isabella 131.09 43 ⇓P PKPdf 07 46 59.1 -0.4
baz=131,SNR=7.5
ISA Isabella 131.09 43 PFAKE 07 47 10.0 +11
ISA LR LR
comp=Z,2µm,21.0s,MS5.7
ARVC Arvin 131.14 44 ⇓P PKPdf 07 46 59.3 -0.2
baz=131,SNR=8.3
P12A McGill 131.15 37 ⇑P PKPdf 07 46 59.0 -0.5
baz=131,SNR=25
BSC Santa Cruz Isl 131.16 46 ⇓P PKPdf 07 46 59.0 -0.6
baz=131
M15A Larsen Ranch, 131.25 33 ⇓P PKPdf 07 46 59.1 -0.4
baz=131,SNR=5.9
N14A Grayback Hills 131.25 34 ⇓P PKPdf 07 46 59.1 -0.5
baz=131,SNR=21
BGU Big Grassy Mou 131.29 34 *e*PKPdf PKPdf 07 47 00.8 +1.2
DAC Darwin (Calif) 131.35 42 PFAKE 07 47 10.0 +10
DAC LR LR
comp=Z,2µm,22.0s,MS5.8
L16A Fish Haven 131.41 32 ⇓P PKPdf 07 46 59.3 -0.6
baz=131,SNR=8.0
R11A Troy Canyon, C 131.43 39 ⇓P PKPdf 07 46 59.5 -0.5
baz=131,SNR=14
Q12A Willow Creek R 131.47 37 ⇓P PKPdf 07 46 59.4 -0.7
baz=131,SNR=10
OSI Osito Adit 131.48 45 ⇑P PKPdf 07 46 59.2 -1.0
baz=131
BLG Laguna Peak 131.51 45 ⇑P PKPdf 07 46 59.5 -0.8
baz=131
MPMC Manual Prospec 131.54 42 ⇓P PKPdf 07 47 00.1 -0.2
baz=131,SNR=15

N15A Stansbury Isla 131.60 34 ⇑P PKPdf 07 46 59.8 -0.5
baz=131
SNCC San Nicolas Is 131.61 47 PFAKE 07 47 10.0 +9.5
SNCC LR LR
comp=Z,1µm,19.0s,MS5.6
HWUT Hardware Ranch 131.63 33 *e*PKPdf PKPdf 07 47 01.3 +1.0
HWUT LR LR
comp=Z,3µm,20.0s,MS6.0
P13A Bates Ranch, G 131.69 36 ⇑P PKPdf 07 47 00.2 -0.3
baz=132,SNR=12
FURC Furnace Creek, 131.73 41 ⇑P PKPdf 07 47 00.4 -0.2
baz=132,SNR=12
LRMC Laurel Mountai 131.73 43 ⇓P PKPdf 07 47 00.1 -0.6
baz=132
S11A Rachel 131.76 39 ⇓P PKPdf 07 47 00.5 -0.2
baz=132,SNR=6.8
M16A Huntsville 131.80 33 ⇑P PKPdf 07 46 60.0 -0.6
baz=132,SNR=8.2
BW06 Boulder Array 131.84 30 PFAKE 07 47 10.0 +9.3
BW06 LR LR
comp=Z,2µm,20.0s,MS5.9
PDAR Pinedale Array 131.84 30 PKP PKPdf 07 46 59.4 -1.3
comp=Z,2.7nm,0.7s,baz=135,slow=0.2,SNR=16
PDAR SKPbc SKPbc 07 50 21.3 -2.4
comp=Z,5.9nm,1.0s,baz=281,slow=0.8,SNR=9.9
TPNV Topopah Spring 131.85 40 ⇓P PKPdf 07 47 00.3 -0.6
baz=132,SNR=10
TPNV Topopah Spring 131.85 40 PFAKE 07 47 10.0 +9.1
TPNV LR LR
comp=Z,2µm,21.0s,MS5.8
EDW2 Edwards Air Fo 131.85 44 ⇑P PKPdf 07 47 00.7 -0.3
baz=132,SNR=14
DUG Dugway 131.90 35 ⇓P PKPdf 07 47 00.6 -0.3
baz=132,SNR=16
DUG Dugway 131.90 35 *e*PKPdf PKPdf 07 47 02.4 +1.6
DUG LR LR
comp=Z,2µm,21.0s,MS5.9
DECC Green Verdugo 131.95 45 ⇓P PKPdf 07 47 00.1 -1.0
baz=132
NOQ North Oquirrh 131.98 34 *e*PKPdf PKPdf 07 47 02.4 +1.4
Q13A Wheeler Ranch, 132.01 37 ⇓P PKPdf 07 47 00.4 -0.7
baz=132,SNR=9.0
O15A The Old Anders 132.04 34 ⇑P PKPdf 07 47 01.0 -0.1
baz=132,SNR=7.4
R12A Pony Springs, 132.05 38 ⇑P PKPdf 07 47 00.8 -0.4
baz=132,SNR=6.2
U10A Ash Meadows, A 132.11 41 ⇓P PKPdf 07 47 01.1 -0.2
baz=132,SNR=7.4
MWC Mount Wilson 132.16 45 PFAKE 07 47 10.0 +8.5
MWC LR LR
comp=Z,2µm,21.0s,MS5.8
P14A Drum Mountains 132.16 36 ⇓P PKPdf 07 47 00.8 -0.5
baz=132,SNR=10
N16A Rees Ranch, Co 132.20 33 ⇑P PKPdf 07 47 00.5 -0.9
baz=132
FMP Fort Macarthur 132.26 45 ⇑P PKPdf 07 47 01.1 -0.7
baz=132
T11A Corn Creek, Al 132.34 39 ⇓P PKPdf 07 47 01.8 0.0
baz=132,SNR=11
CIS Catalina Islan 132.34 46 ⇓P PKPdf 07 47 01.4 -0.5
baz=132
S12A Delamar Landin 132.34 39 ⇑P PKPdf 07 47 01.4 -0.4
baz=132,SNR=9.4
JLU Jordanelle 132.39 33 *e*PKPdf PKPdf 07 47 03.1 +1.4
BFSC Mount Baldy St 132.43 44 ⇓P PKPdf 07 47 01.0 -1.0
baz=132
GSC Goldstone 132.43 43 ⇑P PKPdf 07 47 01.9 -0.1
baz=132,SNR=16
GSC Goldstone 132.43 43 *e*PKPdf PKPdf 07 47 02.9 +0.9
GSC LR LR
comp=Z,1µm,22.0s,MS5.6
AGMN Agassiz Refuge 132.43 15 *e*PKPdf PKPdf 07 47 01.2 -0.3
AGMN LR LR
comp=Z,3µm,20.0s,MS6.0
Q14A Sevier Lake (B 132.43 36 ⇓P PKPdf 07 47 01.5 -0.3
baz=132,SNR=8.0
SHOC Shoshone 132.44 42 ⇓P PKPdf 07 47 01.8 -0.2
baz=132
SCI San Clemente I 132.46 46 ⇑P PKPdf 07 47 02.4 +0.3
baz=132
NLU North Lily Min 132.48 34 *e*PKPdf PKPdf 07 47 02.3 +0.4
N17A Moffit Pass 132.49 33 ⇑P PKPdf 07 47 01.1 -0.9
baz=132,SNR=5.6
R13A O'Grain Ranch, 132.53 38 ⇓P PKPdf 07 47 01.0 -1.1
baz=132
P15A Leamington 132.63 35 ⇓P PKPdf 07 47 01.9 -0.3
baz=132
O16A Springville 132.63 34 ⇓P PKPdf 07 47 01.4 -0.9
baz=132
MPU Maple Canyon 132.69 34 *e*PKPdf PKPdf 07 47 03.8 +1.4
MPU LR LR
comp=Z,2µm,22.0s,MS5.8
BBRC Big Bear Sol-O 132.93 44 ⇓P PKPdf 07 47 02.5 -0.5
baz=133
TUQ Turquoise Moun 132.94 42 ⇑P PKPdf 07 47 02.7 -0.3
baz=133,SNR=6.5
Q15A Fillmore 132.95 36 ⇑P PKPdf 07 47 02.1 -0.7
baz=133,SNR=5.3
P16A Fountain Green 132.95 35 ⇓P PKPdf 07 47 02.7 -0.1
baz=133
S13A Holt Ranch, En 132.98 38 ⇓P PKPdf 07 47 02.8 -0.2
baz=133
HEC Hector,Ludlow 133.01 43 ⇓P PKPdf 07 47 02.8 -0.3
baz=133
V11A Goodsprings 133.04 41 ⇑P PKPdf 07 47 02.9 -0.2
baz=133
O17A Robinson Place 133.06 33 ⇓P PKPdf 07 47 02.7 -0.3
baz=133
N18A Larsen Ranch, 133.08 32 ⇑P PKPdf 07 47 01.8 -1.2
baz=133
MURC Murrieta 133.09 45 ⇓P PKPdf 07 47 02.8 -0.5
baz=133
ARUT Antelope Range 133.10 38 *e*PKIKP PKPdf 07 47 04.6 +1.4
U12A Valley of Fire 133.26 40 ⇑P PKPdf 07 47 03.5 0.0
baz=133
S14A Cedar City 133.29 38 ⇑P PKPdf 07 47 03.5 0.0
baz=133
T13A Saint George 133.30 39 ⇓P PKPdf 07 47 03.7 +0.2
baz=133
CCUT Cedar City 133.30 38 *e*PKPdf PKPdf 07 47 05.1 +1.5
RSSD Black Hills 133.32 25 *e*PKIKP PKPdf 07 47 03.2 -0.2
RSSD MLR MLR
comp=Z,3µm,22.0s,MS5.9
MVU Marysvale 133.38 36 PFAKE 07 47 20.0 +16
MVU LR LR
comp=Z,2µm,20.0s,MS5.8
MSU Marysvale 133.39 36 *e*PKIKP PKPdf 07 47 04.8 +1.1
N19A John Jarvie Ra 133.40 31 ⇑P PKPdf 07 47 02.2 -1.4
baz=133
O18A Roosevelt 133.41 33 ⇓P PKPdf 07 47 02.6 -1.1
baz=133
TMUT Trail Mountain 133.42 35 *e*PKPdf PKPdf 07 47 04.4 +0.6
V12A Nelson 133.48 41 ⇓P PKPdf 07 47 04.3 +0.3
baz=133
GMRC Granite Mounta 133.50 42 ⇑P PKPdf 07 47 04.7 +0.7
baz=133
R15A Junction 133.53 36 ⇓P PKPdf 07 47 04.2 +0.2
baz=133
109C Camp Elliot, M 133.54 46 ⇑P PKPdf 07 47 03.5 -0.7
baz=133
P17A Butcher Ranch, 133.56 34 ⇑P PKPdf 07 47 03.5 -0.5
baz=133
PFO Pinyon Flat Ob 133.61 44 PKP PKPdf 07 47 03.6 -0.7
comp=Z,6.7nm,0.8s,baz=311,slow=0.9,SNR=12
PFO SKPbc SKPbc 07 50 28.2 -1.9
comp=Z,14nm,1.0s,baz=316,slow=3.2,SNR=12
PFO Pinyon Flat Ob 133.61 44 ⇑P PKPdf 07 47 04.1 -0.1
baz=133
PFO Pinyon Flat Ob 133.61 44 *e*PKPdf PKPdf 07 47 06.4 +2.1
PFO LR LR
comp=Z,1µm,22.0s,MS5.7
U13A Pakoon Wash 133.64 39 ⇑P PKPdf 07 47 04.2 -0.1
baz=133
LDFC Landfair 133.69 42 *e*PKPdf PKPdf 07 47 06.1 +1.7
Q16A Castle Valley 133.70 35 ⇓P PKPdf 07 47 03.9 -0.4
baz=134
BELC Belle Mtn. 133.71 44 ⇑P PKPdf 07 47 03.8 -0.7
baz=134
P18A Preston Nutter 133.73 33 ⇓P PKPdf 07 47 04.2 -0.2
baz=134
EYMN Ely 133.76 11 *e*PKPdf PKPdf 07 47 04.7 +0.6
EYMN LR LR
comp=Z,6µm,22.0s,MS6.2
T14A Hurricane 133.78 38 ⇓P PKPdf 07 47 04.8 +0.3
baz=134
RWWY Rawlins 133.80 29 *e*PKPdf PKPdf 07 47 05.0 +0.7
S15A Panguitch 133.83 37 ⇑P PKPdf 07 47 04.9 +0.4

	baz=134								
O19A	Miners Draw (B	133.86	32	⇓P		PKPdf	07 47 03.6	-0.9	
	baz=134								
SRU	San Rafael	133.94	34	⇓P		PKPdf	07 47 03.6	-1.1	
	baz=134								
SRU	San Rafael	133.94	34	*e*PKPdf		PKPdf	07 47 05.9	+1.2	
R16A	Teasdale	133.95	36	⇓P		PKPdf	07 47 03.8	-1.0	
	baz=134								
BAR	Barrett	133.96	45	PFAKE			07 47 20.0	+15	
BAR				LR		LR			
	comp=Z,1μm,21.0s,MS5.6								
V13A	Grand Canyon W	133.97	40	⇑P		PKPdf	07 47 04.0	-0.8	
	baz=134								
MONP	Monument Peak	134.02	45	⇑P		PKPdf	07 47 04.9	-0.2	
	baz=134								
U14A	Mt Trumbull	134.13	39	⇑P		PKPdf	07 47 05.1	-0.1	
	baz=134								
Q18A	Rafter H Ranch	134.16	34	⇓P		PKPdf	07 47 04.8	-0.4	
	baz=134								
IRM	Iron Mountain	134.20	43	⇑P		PKPdf	07 47 04.9	-0.5	
	baz=134								
NEE2	Needles Airpor	134.20	42	⇓P		PKPdf	07 47 04.9	-0.5	
	baz=134								
T15A	Red Dirt Ranch	134.24	38	⇑P		PKPdf	07 47 04.9	-0.4	
	baz=134								
S16A	Weppner Ranch,	134.26	36	⇓P		PKPdf	07 47 05.1	-0.2	
	baz=134								
BC3	Big Chuckw Mtn	134.28	44	⇑P		PKPdf	07 47 05.2	-0.3	
	baz=134								
R17A	Hanksville Air	134.30	35	⇑P		PKPdf	07 47 05.2	-0.2	
	baz=134								
DVTC	Desert V Tower	134.37	45	⇑P		PKPdf	07 47 06.0	+0.2	
	baz=134								
P19A	Cripple Cowboy	134.41	33	⇓P		PKPdf	07 47 05.2	-0.4	
	baz=134								
SWSC	Sam W. Stewart	134.44	45	⇑P		PKPdf	07 47 05.5	-0.3	
	baz=134								
W13A	Hualapai Mount	134.49	41	⇑P		PKPdf	07 47 06.0	+0.1	
	baz=134								
V14A	Boquillas Ranc	134.67	40	⇓P		PKPdf	07 47 06.5	+0.3	
	baz=134								
U15A	North Rim	134.68	38	⇑P		PKPdf	07 47 06.7	+0.5	
	baz=134								
Q19A	Hogan Spring (	134.74	33	⇓P		PKPdf	07 47 06.0	-0.2	
	baz=134								
S17A	Black Ridge (B	134.78	36	⇑P		PKPdf	07 47 05.9	-0.4	
	baz=134								
R18A	Canyonlands Na	134.79	34	⇓P		PKPdf	07 47 05.7	-0.6	
	baz=135								
PDMCI	Parker Dam,Lak	134.80	42	⇓P		PKPdf	07 47 06.3	-0.1	
	baz=135								
T16A	Glen Canyon Da	134.80	37	⇑P		PKPdf	07 47 05.8	-0.6	
	baz=135								
X13A	Yucca	134.83	41	⇑P		PKPdf	07 47 06.6	+0.1	
	baz=135								
Y12C	Blythe	134.86	43	⇓P		PKPdf	07 47 07.0	+0.4	
	baz=135								
PHWY	Pilot Hill	134.94	28	*e*PKPdf		PKPdf	07 47 06.1	-0.4	
PHWY				*ep*PKPdf		pPKPdf	07 47 18.1	-0.7	
W14A	Seligman	134.94	40	⇑P		PKPdf	07 47 07.2	+0.5	
	baz=135								
GLA	Glamis	135.05	44	⇓P		PKPdf	07 47 07.2	+0.2	
	baz=135								
GLA	Glamis	135.05	44	*e*PKPdf		PKPdf	07 47 07.8	+0.8	
GLA				LR		LR			
	comp=Z,1μm,20.0s,MS5.7								
V15A	Kaibab Nationa	135.14	39	⇑P		PKPdf	07 47 07.7	+0.7	
	baz=135								
T17A	Navajo Res., N	135.21	37	⇑P		PKPdf	07 47 07.3	+0.1	
	baz=135								
S18A	Hurst Farm, BI	135.21	35	⇓P		PKPdf	07 47 06.7	-0.4	
	baz=135								
Y13A	Salome	135.29	42	⇓P		PKPdf	07 47 07.5	0.0	
	baz=135								
W15A	Williams	135.48	40	⇓P		PKPdf	07 47 08.2	+0.4	
	baz=135								
112A	Yuma	135.51	44	⇓P		PKPdf	07 47 07.1	-0.8	
	baz=135								
X14A	Yava	135.52	41	⇑P		PKPdf	07 47 07.7	-0.1	
	baz=135								
U17A	Shonto	135.56	37	⇑P		PKPdf	07 47 08.3	+0.5	
	baz=135								
U16A	Tuba City	135.58	38	⇓P		PKPdf	07 47 07.6	-0.3	
	baz=135								
T18A	Mexican Hat	135.66	36	⇑P		PKPdf	07 47 08.1	+0.1	
	baz=135								
S19A	Harvey Farm, M	135.67	35	⇑P		PKPdf	07 47 07.2	-0.8	
	baz=135								
Y14A	Wickenburg	135.77	42	⇑P		PKPdf	07 47 08.5	+0.2	
	baz=136								
WUAZ	Wupatki	135.83	39	⇑P		PKPdf	07 47 08.4	+0.1	
	baz=136								
WUAZ	Wupatki	135.83	39	*e*PKPdf		PKPdf	07 47 10.3	+1.9	
WUAZ				LR		LR			
	comp=Z,1μm,21.0s,MS5.7								
X15A	Humboldt	135.94	40	⇑P		PKPdf	07 47 09.2	+0.6	
	baz=136								
113A	Mohawk Valley,	135.94	43	⇓P		PKPdf	07 47 08.1	-0.6	
	baz=136								
COWI	Conover	135.98	10	PFAKE			07 47 20.0	+12	
COWI				LR		LR			
	comp=Z,4μm,20.0s,MS6.1								
PLCA	Paso Flores	135.99	189	PKhKP			07 47 04.5		
	comp=Z,1.9nm,0.9s,baz=149,slow=3.0,SNR=5.7								
PLCA				PKP		PKPdf	07 47 10.2	+1.7	
	comp=Z,2.0nm,0.8s,baz=159,slow=1.9,SNR=5.5								
PLCA				SKPbc		SKPbc	07 50 40.8	+3.3	
	comp=Z,5.9nm,1.1s,baz=192,slow=5.8,SNR=2.3								
PLCA	Paso Flores	135.99	189	*i* PKIKP			07 47 04.5		
PLCA						PKPdf	07 47 10.2	+1.7	
PLCA				pmax		pmax			
	comp=Z,2.0nm,0.9s								
PLCA				pmax		pmax			
	comp=Z,2.0nm,0.8s								
PLCA	Paso Flores	135.99	189	PKP			07 47 04.5		
PLCA				PKP		PKPdf	07 47 10.2	+1.7	
PLCA				SKPbc		SKPbc	07 50 40.8	+3.3	
PLCA				LR		LR			
	comp=Z,2μm,20.0s,MS5.9								
W16A	Flagstaff	136.00	39	⇑P		PKPdf	07 47 08.8	+0.1	
	baz=136								
ISCO	Idaho Springs	136.03	30	*e*PKIKP		PKPdf	07 47 10.3	+1.7	
ISCO				MLR		MLR			
	comp=Z,2μm,20.0s,MS5.9								
Z14A	Wintersburg	136.15	42	⇓P		PKPdf	07 47 09.2	+0.2	
	baz=136								
U18A	Rough Rock, Ch	136.15	36	⇑P		PKPdf	07 47 09.0	+0.1	
	baz=136								
Y15A	Casa Rosa Ranc	136.20	41	⇑P		PKPdf	07 47 09.5	+0.4	
	baz=136								
TRQA	Tornquist	136.37	200	PFAKE			07 47 20.0	+11	
TRQA				LR		LR			
	comp=Z,3μm,22.0s,MS6.0								
T19A	Beclabito	136.37	35	⇑P		PKPdf	07 47 09.6	+0.3	
	baz=136								
ECSD	EROS,Sioux Fal	136.38	18	*e*PKPdf		PKPdf	07 47 10.0	+0.9	
ECSD				LR		LR			
	comp=Z,4μm,21.0s,MS6.2								
MVCO	Mesa Verde	136.40	35	⇓P		PKPdf	07 47 09.3	-0.1	
	baz=136								
MVCO	Mesa Verde	136.40	35	PFAKE			07 47 20.0	+11	
MVCO				LR		LR			
	comp=Z,3μm,21.0s,MS6.0								
X16A	Lo Mia Camp, P	136.49	40	⇑P		PKPdf	07 47 10.0	+0.4	
	baz=136								
W17A	Winslow	136.53	39	⇓P		PKPdf	07 47 09.5	-0.2	
	baz=136								
V18A	Ganado	136.59	37	⇑P		PKPdf	07 47 09.8	+0.1	
	baz=136								
Z15A	Gila River Ind	136.72	42	⇓P		PKPdf	07 47 09.5	-0.6	
	baz=136								
OGNE	Ogallala	136.77	25	PFAKE			07 47 20.0	+10	
OGNE				LR		LR			
	comp=Z,3μm,21.0s,MS6.1								
PKME	Peaks-Kenny Pk	136.80	350	PFAKE			07 47 20.0	+10	
PKME				LR		LR			
	comp=Z,3μm,20.0s,MS6.0								
Y16A	Circle Bar Ran	136.80	41	⇓P		PKPdf	07 47 10.8	+0.6	
	baz=137								
X17A	Forest Lakes	136.95	39	⇑P		PKPdf	07 47 10.5	0.0	
	baz=137								
115A	Sonoran Desert	137.03	42	⇓P		PKPdf	07 47 10.8	+0.2	
	baz=137								
214A	Organ Pipe Nat	137.07	44	⇓P		PKPdf	07 47 10.7	0.0	
	baz=137								
W18A	Petrified Fore	137.10	38	⇓P		PKPdf	07 47 11.0	+0.2	
	baz=137								
V19A	Window Rock	137.12	37	⇑P		PKPdf	07 47 11.2	+0.4	
	baz=137								
Z16A	Peralta Trail,	137.17	41	⇓P		PKPdf	07 47 10.9	0.0	
	baz=137								
W19A	Sanders	137.32	37	⇑P		PKPdf	07 47 11.4	+0.2	
	baz=137								
Y17A	Roosevelt	137.33	40	⇑P		PKPdf	07 47 11.8	+0.6	
	baz=137								
X18A	Snowflake	137.36	39	⇑P		PKPdf	07 47 11.6	+0.4	
	baz=137								
116A	Eloy	137.47	42	⇑P		PKPdf	07 47 11.8	+0.3	
	baz=137								
SDCO	Great Sand Dun	137.64	31	*e*PKPdf		PKPdf	07 47 11.6	-0.1	
SDCO				LR		LR			
	comp=Z,2μm,20.0s,MS5.9								
Y18A	Canyon Day Jun	137.80	40	⇑P		PKPdf	07 47 12.6	+0.5	
	baz=138								
Z17A	San Carlos Hig	137.82	40	⇑P		PKPdf	07 47 12.5	+0.3	
	baz=138								
X19A	St. Johns	137.84	38	⇓P		PKPdf	07 47 12.3	+0.2	
	baz=138								
GLMI	Grayling	137.85	6	PFAKE			07 47 20.0	+8.2	
GLMI				LR		LR			
	comp=Z,5μm,21.0s,MS6.2								
216A	Three Points,	137.97	43	⇓P		PKPdf	07 47 11.8	-0.6	
	baz=138								
117A	Oracle	138.10	41	⇓P		PKPdf	07 47 13.4	+0.7	
	baz=138								
LONY	Lake Ozonia	138.13	355	PFAKE			07 47 20.0	+7.6	
LONY				LR		LR			
	comp=Z,4μm,22.0s,MS6.1								
Y19A	Nutrioso	138.17	39	⇑P		PKPdf	07 47 13.3	+0.5	
	baz=138								
LBNH	Lisbon	138.22	352	PFAKE			07 47 20.0	+7.5	
LBNH				LR		LR			
	comp=Z,3μm,20.0s,MS6.1								
TUC	Tucson	138.23	42	*e*PKIKP		PKPdf	07 47 12.3	-0.6	
TUC				MLR		MLR			
	comp=Z,1μm,22.0s,MS5.6								
Z18A	Geronimo	138.24	40	⇓P		PKPdf	07 47 12.7	-0.2	
	baz=138								
217A	Green Valley	138.54	42	⇓P		PKPdf	07 47 13.6	+0.1	
	baz=138								
118A	Homack Ranch,	138.56	41	⇑P		PKPdf	07 47 13.5	-0.1	
	baz=138								
Z19A	T-Link Ranch,	138.60	39	⇓P		PKPdf	07 47 13.7	+0.1	
	baz=138								
NCB	Newcomb	138.75	355	PFAKE			07 47 30.0	+17	
NCB				LR		LR			
	comp=Z,5μm,22.0s,MS6.2								
JFWS	Jewell Farm	138.83	12	PFAKE			07 47 30.0	+16	
JFWS				LR		LR			
	comp=Z,3μm,20.0s,MS6.0								
119A	Ashpeak Ranch,	138.92	40	⇓P		PKPdf	07 47 14.3	+0.1	
	baz=139								
218A	Dragoon	138.93	42	⇓P		PKPdf	07 47 14.3	+0.1	
	baz=139								
SCIA	State Center	139.05	16	*e*PKPdf		PKPdf	07 47 13.8	-0.3	
SCIA				LR		LR			
	comp=Z,3μm,21.0s,MS6.0								
LAZ	Ladron	139.16	36	*e*PKPdf		PKPdf	07 47 15.2	+0.7	
ANMO	Albuquerque	139.17	35	*e*PKIKP		PKPdf	07 47 15.0	+0.5	
ANMO				MLR		MLR			
	comp=Z,3μm,19.0s								
318A	Bisbee	139.30	42	⇑P		PKPdf	07 47 14.6	-0.3	
	baz=139								
219A	White Tail Can	139.44	41	⇑P		PKPdf	07 47 14.8	-0.3	
	baz=139								
Y22C	IRIS PASSCAL I	139.51	37	⇑P		PKPdf	07 47 15.0	-0.2	
	baz=139								
LPM	Los Pinos Moun	139.52	36	*e*PKPdf		PKPdf	07 47 16.2	+1.0	
CBKS	Cedar Bluff	139.52	25	PFAKE			07 47 30.0	+15	
CBKS				LR		LR			
	comp=Z,4μm,21.0s,MS6.2								
BNM	Barren Site	139.63	36	*e*PKPdf		PKPdf	07 47 14.7	-0.7	
319A	Douglas	139.81	42	⇓P		PKPdf	07 47 15.5	-0.3	
	baz=140								
HRV	Adam Dziewonsk	139.86	351	PFAKE			07 47 30.0	+14	
HRV				LR		LR			
	comp=Z,2μm,19.0s,MS5.9								
WES	Weston	139.94	351	PFAKE			07 47 30.0	+14	
WES				LR		LR			
	comp=Z,2μm,20.0s,MS5.8								
KSU1	Kansas State U	140.51	22	PKPdf		PKPdf	07 47 16.4	-0.5	
KSU1				LR		LR			
	comp=Z,4μm,20.0s,MS6.2								
BINY	Binghamton	140.65	356	*e*PKPdf		PKPdf	07 47 16.6	-0.5	
BINY				*e*PP		PP	07 50 16.5	+1.2	
BINY				LR		LR			
	comp=Z,4μm,21.0s,MS6.1								
AMTX	Amarillo	141.81	31	PFAKE			07 47 30.0	+11	
AMTX				LR		LR			
	comp=Z,3μm,20.0s,MS6.0								
SSPA	Standing Stone	142.29	358	PFAKE			07 47 30.0	+10	
SSPA				LR		LR			
	comp=Z,2μm,19.0s,MS5.9								
ACSO	Alum Creek Sta	142.56	5	*e*PKPdf		PKPdf	07 47 20.0	-0.5	
ACSO				LR		LR			
	comp=Z,4μm,20.0s,MS6.2								
LMEL	Las Melosas	142.60	192	*e*P		PKiKP	07 47 28.9	+5.1	
FCH	Farellones	143.12	192	*e*P		PKPdf	07 47 16.5	-5.3	
CCM	Cathedral Cave	143.19	16	PFAKE			07 47 30.0	+8.3	
CCM				LR		LR			
	comp=Z,3μm,21.0s,MS6.1								
MCWV	Mont Chateau	143.28	1	PFAKE			07 47 30.0	+8.2	
MCWV				LR		LR			
	comp=Z,4μm,21.0s,MS6.1								
OLIL	Olney	143.29	12	PKPdf		PKPdf	07 47 19.9	-1.9	
WMOK	Wichita Mounta	143.34	28	PKIKP		PKPdf	07 47 17.9	-4.2	
WMOK				MLR		MLR			
	comp=Z,4μm,21.0s,MS6.1								
FVM	French Village	143.47	15	*e*PKIKP		PKPdf	07 47 19.2	-3.0	
SIUC	Southern Illin	144.03	14	PKPdf		PKPdf	07 47 20.8	-2.4	
SIUC				*e*PP		PP	07 50 36.2	+0.3	
WCI	Wyandotte Cave	144.12	10	PKIKP		PKPdf	07 47 21.4	-1.9	
WCI				MLR		MLR			
	comp=Z,3μm,20.0s,MS6.1								
USIN	University of	144.12	11	PKPdf		PKPdf	07 47 20.2	-3.1	
BDFB	Brasilia	144.16	238	PKP		PKPdf	07 47 22.2	-1.8	
	comp=Z,8.1nm,0.6s,baz=104,slow=3.8,SNR=15								
BDFB	Brasilia	144.16	238	PKP		PKPdf	07 47 22.2	-1.8	
BDFB				LR		LR			
	comp=Z,3μm,19.0s,MS6.1								
CPUP	Villa Florida	144.18	215	PKP		PKPdf	07 47 21.7	-2.1	
	comp=Z,11nm,0.8s,baz=123,slow=3.5,SNR=24								
CPUP	Villa Florida	144.18	215	*e*PKPdf		PKPdf	07 47 22.4	-1.4	
CFAA	Coronel Fontan	144.26	196	PKP		PKPdf	07 47 22.3	-1.5	
	comp=Z,1.5nm,0.7s,baz=163,slow=2.2,SNR=32								
CBN	Corbin	144.70	358	*e*PKPdf		PKPdf	07 47 22.9	-1.5	
CBN				LR		LR			
	comp=Z,2μm,20.0s,MS6.0								
TXAR	Lajitas Array	144.80	39	PKP		PKPdf	07 47 23.4	-1.4	
	comp=Z,32nm,0.5s,baz=230,slow=0.8,SNR=348								
TXAR				SKPbc		SKPbc	07 51 02.1	+0.8	
	comp=Z,2.2nm,0.6s,baz=298,slow=1.9,SNR=4.7								
PARMO	Parma	144.89	15	*e*PKPdf		PKPdf	07 47 23.1	-1.6	
PVMO	Portageville	145.14	15	*e*PKPbc		PKPbc	07 47 24.0	-0.7	
URVA	University of	145.34	358	*e*PKPbc		PKPbc	07 47 24.7	-0.6	
GLAT	Glass	145.38	14	*e*PKPbc		PKPbc	07 47 24.9	-0.5	
UTMT	University of	145.42	14	*e*PKPbc		PKPbc	07 47 25.2	-0.4	
GNAR	Gosnell	145.48	16	*e*PKPbc		PKPbc	07 47 25.0	-0.7	
MIAR	Mount Ida	145.66	21	*e*PKIKP		PKPdf	07 47 25.8	-0.3	
MIAR				MLR		MLR			
	comp=Z,3μm,20.0s,MS6.0								
ELN	Prospectdale	145.68	2	*e*PKPbc		PKPbc	07 47 25.0	-1.4	
HBAR	Harrisburg	145.69	17	*e*PKPbc		PKPbc	07 47 25.9	-0.6	
HALT	Halls	145.71	15	*e*PKPbc		PKPbc	07 47 25.7	-0.8	
BLA	Blacksburg	145.71	2	*e*PKIKP		PKPdf	07 47 25.4	-0.7	
BLA				MLR		MLR			
	comp=Z,5μm,22.0s,MS6.3								
WVT	Waverly	145.86	13	*e*PKP2		PKPab	07 47 25.9	-1.4	
WVT				MLR		MLR			
	comp=Z,4μm,20.0s,MS6.1								
UALR	University of	145.88	20	*e*PKPbc		PKPbc	07 47 27.1	0.0	
TZTN	Tazewell	146.16	6	*e*PKPbc		PKPbc	07 47 27.9	0.0	
TZTN				LR		LR			
	comp=Z,4μm,21.0s,MS6.2								
JCT	Junction City	146.23	33	*e*PKP2		PKPab	07 47 27.8	-1.2	
JCT				MLR		MLR			
	comp=Z,3μm,22.0s,MS6.0								
TKL	Tuckaleechee C	147.00	7	*e*PKP2		PKPab	07 47 29.4	-2.4	
OXF	Oxford	147.02	16	*e*PKP2		PKPab	07 47 30.2	-1.6	
OXF				MLR		MLR			
	comp=Z,4μm,22.0s,MS6.2								
CPCT	Cooper Cave	147.11	8	*e*PKPbc		PKPbc	07 47 30.1	-0.5	
SWET	Sewanee	147.12	10	*e*PKPbc		PKPbc	07 47 30.5	-0.2	
LCO	Las Campanas	147.37	194	*e*PKPbc		PKPbc	07 47 31.9	+0.4	
LCO				LR		LR			
	comp=Z,2μm,19.0s,MS5.9								
BBSR	BB Station	147.57	337	PKPbc		PKPbc	07 47 31.6	-0.4	
BBSR				LR		LR			
	comp=Z,2μm,20.0s,MS5.9								
CNNC	Cliffs of the	147.68	358	*e*PKPbc		PKPbc	07 47 32.0	-0.2	
CNNC				LR		LR			
	comp=Z,4μm,20.0s,MS6.2								
NATX	Nacogdoches	147.69	25	*e*PKPbc		PKPbc	07 47 32.2	-0.1	
NATX				LR		LR			
	comp=Z,4μm,22.0s,MS6.2								
JSC	Jenkinsville	148.59	3	PKP2		PKPbc	07 47 34.0	-0.7	
HKT	Hockley	148.69	29	*e*PKP2		PKPbc	07 47 35.3	+0.2	
HKT				MLR		MLR			
	comp=Z,5μm,22.0s,MS6.2								
VBMS	Vicksburg	148.83	19	*e*PKPbc		PKPbc	07 47 35.0	-0.3	
VBMS				LR		LR			
	comp=Z,4μm,20.0s,MS6.2								
LRAL	Lakeview Retre	149.02	13	*e*PKPbc		PKPbc	07 47 36.3	+0.5	
LRAL				LR		LR			
	comp=Z,4μm,20.0s,MS6.2								
GOGA	Godfrey	149.26	7	*e*PKP2		PKPbc	07 47 35.9	-0.5	
GOGA				MLR		MLR			
	comp=Z,3μm,20.0s,MS6.1								
COW	Cow Castle Cre	149.52	3	*e*PKPbc		PKPbc	07 47 37.2	+0.2	
KVTX	Kingsville	149.55	34	PKPbc		PKPbc	07 47 38.4	+1.2	
KVTX				LR		LR			
	comp=Z,4μm,21.0s,MS6.2								
NHSC	New Hope	149.81	2	*e*PKPbc		PKPbc	07 47 38.0	+0.3	
NHSC				LR		LR			
	comp=Z,4μm,20.0s,MS6.3								
BRAL	Brewton	150.94	14	*e*PKPbc		PKPbc	07 47 40.5	-0.1	
BRAL				LR		LR			
	comp=Z,3μm,20.0s,MS6.1								
LVC	Limon Verde	152.85	201	PKP		PKPdf	07 47 37.6	-0.4	
	comp=Z,2.5nm,0.8s,baz=186,slow=9.2,SNR=2.6								
LVC				PKPbc		PKPbc	07 47 46.2	+1.1	
	comp=Z,8.4nm,0.7s,baz=315,slow=1.3,SNR=11								
LVC	Limon Verde	152.85	201	PKP		PKPdf	07 47 37.6	-0.4	
LVC				PKPbc		PKPbc	07 47 46.2	+1.1	
LVC				LR		LR			
	comp=Z,2μm,20.0s,MS6.0								
SIV	San Ignacio	154.16	223	PKP		PKPdf	07 47 39.6	-0.3	
	comp=Z,2.0nm,0.8s,baz=151,slow=2.5,SNR=11								
SIV				PKPbc		PKPbc	07 47 47.5	-0.6	
	comp=Z,4.5nm,0.7s,baz=120,slow=2.3,SNR=16								
DWPF	Disney	154.71	5	PFAKE			07 47 50.0	+10	
DWPF				LR		LR			
	comp=Z,3μm,19.0s,MS6.2								
BBGH	Gun Hill	158.04	299	PFAKE			07 48 00.0	+15	
BBGH				LR		LR			
	comp=Z,4μm,21.0s,MS6.2								
LPAZ	La Paz	158.14	210	PKP		PKPdf	07 47 46.1	+0.9	
	comp=Z,4.3nm,0.9s,baz=71,slow=3.9,SNR=15								
LPAZ	La Paz	158.14	210	*e*PKPdf		PKPdf	07 47 47.5	+2.4	
LPAZ				LR		LR			
	comp=Z,3μm,20.0s,MS6.2								
MTP	Monte Pirata	159.75	320	*e*PKPdf		PKPdf	07 47 48.0	+0.9	
HUMP	Col San Antoni	159.91	320	*e*PKPdf		PKPdf	07 47 47.1	-0.1	
CPD	Cerro la Pandu	160.03	320	*e*PKIKP		PKPdf	07 47 47.2	-0.1	
GRGR	Grenville	160.32	299	PFAKE			07 48 00.0	+12	
GRGR				LR		LR			
	comp=Z,2μm,22.0s								
TEIG	Tepich	160.51	26	*e*PKPab		PKPab	07 48 27.8	-1.1	
TEIG				LR		LR			
	comp=Z,3μm,22.0s								
NNA	Nana	165.15	189	PFAKE			07 48 00.0	+7.5	
NNA				LR		LR			
	comp=Z,2μm,22.0s								
TGUH	Tegucigalpa,Un	166.23	35	PFAKE			07 48 00.0	+6.7	
TGUH				LR		LR			
	comp=Z,3μm,22.0s								
PAYG	Puerto Ayora	168.37	107	PFAKE			07 48 10.0	+15	
PAYG				LR		LR			
	comp=Z,2μm,22.0s								
SDV	Santo Domingo	169.56	306	PFAKE			07 48 10.0	+14	
SDV				LR		LR			
	comp=Z,1μm,22.0s								
ATAH	Atahualpa	170.26	185	PKP		PKPdf	07 47 56.4	+0.2	
	comp=Z,3.5nm,0.7s,baz=108,slow=20,SNR=2.8								
JTS	JuntasAbangare	170.58	37	PFAKE			07 48 10.0	+14	
JTS				LR		LR			
	comp=Z,2μm,21.0s								
BCIP	Isla Barro Col	173.62	6	PFAKE			07 48 10.0	+12	
BCIP				LR		LR			
	comp=Z,2μm,20.0s								
ROSC	El Rosal	174.75	293	PKP		PKPdf	07 47 57.5	-0.6	
	comp=Z,3.5nm,0.7s,baz=258,slow=22,SNR=6.2								
ROSC	El Rosal	174.75	293	*e*PKPdf		PKPdf	07 47 58.2	+0.1	
OTAV	Otavalo	177.38	196	*e*PKPdf		PKPdf	07 47 58.9	+0.2	
OTAV				LR		LR			
	comp=Z,4μm,21.0s								

*TRN **19** 07:34:55.4, 1908N×6335W,

OUR				*e*Sg	**Sg**	**07 39 31.1**	**+0.6**
PAIG	**Paliouri**	**0.70**	**167**	*e*Pg	**Pg**	**07 39 27.6**	**-0.9**
PAIG				*e*Sg	**Sg**	**07 39 38.4**	**+0.7**
KNT	**Kendrikon**	**0.70**	**322**	*e*Pg	**Pg**	**07 39 28.2**	**-0.4**
KNT				*e*Sg	**Sg**	**07 39 37.9**	**+0.1**
NVR	**Nevrokopi**	**0.80**	**22**	*e*P	**Pg**	**07 39 30.3**	**-0.1**
GRG	**Griva**	**0.89**	**293**	*e*Pg	**Pg**	**07 39 31.8**	**-0.2**
GRG				*e*Sg	**Sg**	**07 39 45.2**	**+1.6**
LIT	**Litokhoron**	**0.91**	**236**	*e*Pg	**Pg**	**07 39 32.0**	**-0.4**
VAY	**Valandovo**	**0.99**	**316**	*i* Pg	**Pg**	**07 39 32.5**	**-1.4**
VAY				*i* Sg	**Sg**	**07 39 46.2**	**-0.6**
VAY	**Valandovo**	**0.99**	**316**	*e*Pg	**Pg**	**07 39 33.6**	**-0.4**
MMB	**Musomiste**	**1.00**	**11**	P	**Pg**	**07 39 33.4**	**-0.8**
KKB	**Krupnik**	**1.29**	**347**	P	**Pn**	**07 39 39.0**	**-0.1**
NEO	**Neokhori**	**1.31**	**189**	*e*P	**Pn**	**07 39 39.3**	**-0.1**
RZN	**Rozhen**	**1.43**	**41**	Pg	**Pg**	**07 39 47.7**	**+5.3**
AOS	**Alonnisos**	**1.47**	**168**	*e*Pg	**Pn**	**07 39 40.2**	**-1.4**
KDZ	**Kurdzhali**	**1.80**	**54**	P	**Pn**	**07 39 47.3**	**+1.2**
KRUS	**Krusevo**	**1.85**	**295**	*i* Pn	**Pn**	**07 39 47.8**	**+1.0**
TIP	**Timpagrande** 59nm,1.8s	**5.36**	**257**	*e*Pn	**Pn**	**07 40 34.1**	**-0.9**
TIP				Sn	**Sn**	**07 41 37.6**	**+0.8**

IDC 19 07:41:25.0±7.0, 177S×10273E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.5/18, mbtmp3.7/2, Error ellipse: s-maj=375.0km s-min=94.9km az=48.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=292,slow=7.6,SNR=10	**35.79**	**123**	P	P	07 48 26.1	-0.2
ASAR	**Alice Springs** 0.4nm,0.3s,baz=302,slow=7.8,SNR=11	**37.22**	**128**	P	P	07 48 38.5	+0.1
TXAR	**Lajitas Array** 0.2nm,0.5s,baz=190,slow=0.7,SNR=5.2	**142.82**	**40**	PKP	PKPdf	08 01 01.2	0.0

MOS ***19*** *08:07:15.6±0.8, 085S×12752E, h32km, mb4.9/15, Error ellipse: s-maj=21.1km s-min=8.6km az=106.0*
BJI ***19*** *08:07:19.5, 090S×12770E, h41km, mB5.5, mb4.9, Ms5.0, Msz4.6*
IDC ***19*** *08:07:23.7±2.4, 092S×12768E, h90km±21km, mb4.3/17, mb1 4.4/19, mb1mx4.3/23, mbtmp4.3/19, MS3.7/1, Ms1 3.7/1, ms1mx3.4/28, Error ellipse: s-maj=18.2km s-min=8.8km az=78.0*
NEIC ***19*** *08:07:24.9±1.6, 093S×12769E, h102km±14km, mb4.7/12, Error ellipse: s-maj=12.5km s-min=6.2km az=59.0*
ISCJB ***19*** *08:07:24.9±0.5, 094S±003×12775E±004, h115km±4km, mb4.7/37, Error ellipse: s-maj=6.7km s-min=4.3km az=143.1*
DJA ***19*** *08:07:26, 090S×12769E, h82km, Mw5.6/5*

ISC 19 08:07:26.0±0.5, 095S±004×12774E±004, h107km±4km, h34km±1.3km:pP-P, n123, σ1§14/125, mb4.7/37, 5C-7D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha** 0.0nm,0.0s	**0.39**	**321**	P	**Pn**	**08 07 41.4**	**-0.5**
MSAI	**Masohi** 0.0nm,0.0s	**2.66**	**154**	P	**Pn**	**08 08 08.6**	**+1.1**
AAI	**Ambon** 0.0nm,0.0s	**2.76**	**171**	P	**Pn**	**08 08 08.8**	**0.0**
AAI	**Ambon** 0.0nm,0.0s	**2.76**	**171**	P	**Pn**	**08 08 08.9**	**+0.1**
SWI	**Sorong** 0.0nm,0.0s	**3.52**	**89**	P	**Pn**	**08 08 19.3**	**+0.5**
MNI	**Manado** 0.0nm,0.0s	**3.75**	**309**	P	**Pn**	**08 08 20.9**	**-1.1**
KDI	**Kendari** 0.0nm,0.0s	**5.93**	**240**	P	**Pn**	**08 08 51.0**	**-0.4**
TLE	**Tual** 0.0nm,0.0s	**6.82**	**133**	P	**Pn**	**08 09 02.4**	**-1.2**
BBSI	**Bau Bau** 0.0nm,0.0s	**6.86**	**229**	P	**Pn**	**08 09 06.5**	**+2.5**
PCI	**Palu** 0.0nm,0.0s	**7.91**	**270**	P	**Pn**	**08 09 17.1**	**-1.2**
BAKI	**Biak** 0.0nm,0.0s	**8.37**	**92**	P	**Pn**	**08 09 25.7**	**+1.2**
KAPI	**Kappang** 53nm,0.3s,baz=60,slow=4.8,SNR=79	**8.95**	**243**	P	**Pn**	**08 09 31.4**	**-1.0**
KAPI	16nm,0.3s,baz=239,slow=23,SNR=6.0			S	**Sn**	**08 11 07.5**	**-3.9**
KAPI	comp=Z,464nm,20.6s,baz=279,slow=32			LR	LR	08 12 08.4	
KAPI	**Kappang** 231nm,0.3s	**8.95**	**243**	*e*Pn	**Pn**	**08 09 31.5**	**-0.9**
KAPI				*e*Sn	**Sn**	**08 11 10.6**	**-0.8**
BATI	**Baumata** 0.0nm,0.0s	**10.06**	**204**	P	**Pn**	**08 09 49.6**	**+2.1**
BATI	**Baumata** 8.8nm,0.3s,baz=153,slow=1.0,SNR=10	**10.06**	**204**	P	**Pn**	**08 09 49.8**	**+2.3**
SMKI	**Samarinda** 0.0nm,0.0s	**10.55**	**273**	P	**Pn**	**08 09 53.8**	**-0.4**
SDKM	**Sandakan**	**12.40**	**302**	⇑P	**Pn**	**08 10 19.3**	**+0.5**
BBKI	**Banjar Baru** 0.0nm,0.0s	**13.13**	**259**	P	**Pn**	**08 10 30.2**	**+1.7**
BTM	**Bintulu**	**15.22**	**286**	⇑P	**Pn**	**08 10 54.4**	**-0.9**
SBUM	**Sibu**	**15.88**	**282**	⇓P	**Pn**	**08 11 03.7**	**+0.2**
STKI	**Sintang** 0.0nm,0.0s	**16.30**	**273**	P	**Pn**	**08 11 08.3**	**-0.4**
FITZ	**Fitzroy Crossi** 53nm,0.7s	**17.18**	**187**	⇑ *i*P	**Pn**	**08 11 17.3**	**-2.1**
FITZ	**Fitzroy Crossi** 1.4nm,0.3s,baz=19,slow=12,SNR=59	**17.18**	**187**	P	**Pn**	**08 11 17.4**	**-2.0**
FITZ	**Fitzroy Crossi** 118nm,0.7s	**17.18**	**187**	*e*P	**Pn**	**08 11 17.4**	**-2.0**
KSM	**Kuching**	**17.60**	**278**	⇓P	**Pn**	**08 11 25.0**	**+0.4**
KSM	**Kuching**	**17.60**	**278**	*e*P	**Pn**	**08 11 24.1**	**-0.5**
BJII	**Banjamegara** 0.0nm,0.0s	**19.07**	**250**	P	**P**	**08 11 43.3**	**+3.2**
WRAB	**Tennant Creek**	**19.95**	**162**	*e*P	**P**	**08 11 49.0**	**-0.6**
WRAB				*e*S	**S**	**08 15 21.9**	**-6.4**
WRAB	comp=Z,60nm,0.6s			pmax	pmax		
WRAB	**Tennant Creek** comp=Z,60nm,0.6s	**19.95**	**162**	*e*P	**P**	**08 11 49.0**	**-0.7**
WRAB				*e*S	**S**	**08 15 21.9**	**-6.5**
WRA	**Warramunga Arr** comp=Z,12nm,0.3s,baz=343,slow=11,SNR=437	**19.95**	**162**	P	**P**	**08 11 48.3**	**-1.4**
WRA	comp=Z,0.1nm,0.3s,baz=340,slow=21,SNR=4.9			S	**S**	**08 15 24.2**	**-4.2**
WRA	**Warramunga Arr**	**19.95**	**162**	P	**P**	**08 11 48.3**	**-1.4**
WRA				S	**S**	**08 15 24.2**	**-4.2**
WRA	comp=Z,12nm,0.3s			pmax	pmax		
WB2	**Warramunga Arr**	**19.96**	**162**	*e*P	**P**	**08 11 48.2**	**-1.5**
WB2				*e*S	**S**	**08 15 23.4**	**-5.1**
COEN	**Coen** comp=Z,20nm,1.1s	**20.01**	**131**	*e*P	**P**	**08 11 51.4**	**+1.1**
COEN				*e*S	**S**	**08 15 30.1**	**+0.5**
TPI	**Tanjungpandan** comp=Z,0.0nm,0.0s	**20.16**	**265**	P	**P**	**08 11 52.8**	**+0.8**
PMG	**Port Moresby**	**21.07**	**114**	*e*P	**P**	**08 12 01.8**	**0.0**
MBWA	**Marble Bar** comp=Z,34nm,1.1s,mb4.6	**21.56**	**201**	*e*P	**P**	**08 12 04.7**	**-2.3**
PPBI	**Pangkal Pinang** comp=Z,0.0nm,0.0s	**21.63**	**267**	P	**P**	**08 12 09.0**	**+1.2**
ASAR	**Alice Springs** comp=Z,39nm,0.5s,mb5.0,baz=347,slow=13,SNR=445	**23.36**	**166**	P	**P**	**08 12 24.3**	**-0.7**
ASAR	comp=Z,9.4nm,1.0s,baz=345,slow=20,SNR=14			S	**S**	**08 16 32.3**	**+2.4**
ASAR	**Alice Springs**	**23.36**	**166**	P	**P**	**08 12 24.3**	**-0.7**
ASAR				S	**S**	**08 16 32.3**	**+2.4**
ASAR	comp=Z,39nm,0.5s			pmax	pmax		
ASAR	comp=N,9.0nm,1.0s			smax			
MYKOM	**Kota Tinggi**	**24.04**	**276**	⇓P	**P**	**08 12 32.7**	**+1.4**
KGM	**Kluang**	**24.60**	**277**	⇑P	**P**	**08 12 39.2**	**+2.8**
CTA	**Charters Tower** comp=N,2.1nm,0.6s,mb3.7,baz=315,slow=14,SNR=3.2	**26.27**	**138**	P	**P**	**08 12 51.2**	**-0.2**
CTA	**Charters Tower** comp=Z,2.0nm,0.6s	**26.27**	**138**	P	**P**	**08 12 51.3**	**-0.1**
CTA				pmax	pmax		
FRIM	**Kepong**	**26.44**	**279**	⇓P	**P**	**08 12 54.8**	**+1.7**
IPM	**Ipoh**	**27.23**	**282**	⇑P	**P**	**08 13 06.2**	**+6.0**
FORT	**Forrest** comp=Z,54nm,0.6s,mb5.4	**29.67**	**179**	*e*P	**P**	**08 13 21.3**	**-0.3**
KLBR	**Kellerberrin** comp=Z,24nm,0.7s,mb5.0	**31.91**	**196**	*e*P	**P**	**08 13 37.3**	**-4.1**
MUN	**Mundaring**	**32.73**	**198**	*e*P	**P**	**08 13 48.7**	**+0.2**
NWAO	**Narrogin (SRO)** comp=Z,7.9nm,0.6s,mb4.7,baz=352,slow=8.8,SNR=6.6	**33.31**	**196**	P	**P**	**08 13 52.2**	**-1.4**
NWAO	**Narrogin (SRO)** comp=Z,8.0nm,0.6s	**33.31**	**196**	P	**P**	**08 13 52.2**	**-1.4**
NWAO				pmax	pmax		
NWAO	**Narrogin (SRO)** comp=Z,37nm,0.8s,mb5.3	**33.31**	**196**	*e*P	**P**	**08 13 53.1**	**-0.5**
STKA	**Stephens Creek** comp=Z,19nm,0.4s,mb5.3,baz=333,slow=9.0,SNR=78	**33.43**	**158**	⇓ *i*P	**P**	**08 13 54.8**	**+0.2**
STKA	**Stephens Creek**	**33.43**	**158**	P	**P**	**08 13 54.8**	**+0.2**
NJ2	**Nanjing**	**33.88**	**346**	*e*P	**P**	**08 14 01.9**	**+3.4**
NJ2	comp=Z,20nm,1.0s,mb4.9			AMB	AMB		
CMAR	**Chiang Mai Arr** comp=Z,2.0nm,0.6s,mb4.1,baz=132,slow=7.5,SNR=7.0	**34.26**	**306**	P	**P**	**08 14 02.6**	**+0.6**
CMAR	**Chiang Mai Arr** comp=Z,2.0nm,0.6s	**34.26**	**306**	P	**P**	**08 14 02.6**	**+0.6**
CMAR				pmax	pmax		
KMI	**Kunming**	**35.46**	**319**	P	**P**	**08 14 13.0**	**+0.8**
KMI	comp=Z,13nm,0.5s,mb5.0			AMB	AMB		
ARMA	**Armidale**	**37.06**	**145**	*e*P	**P**	**08 14 27.1**	**+1.3**
KSRS	**Korea Array** comp=Z,3.3nm,0.7s,mb4.3,baz=176,slow=10,SNR=8.8	**38.21**	**0**	P	**P**	**08 14 34.9**	**-0.4**
KSRS	**Korea Array** comp=Z,3.0nm,0.7s,mb4.2	**38.21**	**0**	P	**P**	**08 14 34.9**	**-0.4**
KSRS				pmax	pmax		
MJAR	**Matsushiro Arr** comp=Z,1.0nm,0.4s,mb4.0,baz=186,slow=9.0,SNR=5.7	**38.54**	**14**	P	**P**	**08 14 36.6**	**-1.6**
MJAR	**Matsushiro Arr** comp=Z,1.0nm,0.4s	**38.54**	**14**	P	**P**	**08 14 36.6**	**-1.6**
MJAR				pmax	pmax		
CD2	**Chengdu**	**39.03**	**326**	P	**P**	**08 14 45.3**	**+3.0**
CD2				AP	pP	08 14 54.8	-12
CD2				XP	sP	08 14 59.1	-20
CD2				PP	PP	08 16 19.9	+5.9
CD2				S	**S**	**08 20 43.1**	**+9.5**
CD2				XS	sS	08 20 59.3	-17
CD2				SS	SS	08 23 29.1	-1.1
CD2	comp=Z,10.0nm,0.6s,mb4.8			AMB	AMB		
CAN	**Canberra**	**39.52**	**152**	*e*P	**P**	**08 14 47.8**	**+1.5**
CAN				pP	pP	08 15 14.4	+3.6
CNB	**Canberra Magne**	**39.68**	**152**	*e*P	**P**	**08 14 47.8**	**+0.1**
TOO	**Toolangi**	**39.95**	**158**	*e*P	**P**	**08 14 51.4**	**+1.6**
LZH	**Lanzhou**	**43.04**	**331**	*e*P	**P**	**08 15 15.1**	**0.0**
LZH				AP	pP	08 15 24.9	-15
LZH				XP	sP	08 15 29.8	-22
LZH	comp=Z,25nm,1.5s,mb4.7			AMB	AMB		
LZH	comp=Z,90nm,4.6s			AMB	AMB		
HHC	**Hu-ho-hao-te**	**44.13**	**342**	*e*P	**P**	**08 15 25.3**	**+1.6**
HHC				AP	pP	08 15 35.5	-13
HHC				XP	sP	08 15 39.8	-21
HHC				PCP	PcP	08 17 09.4	+2.4
HHC				SCP	ScP	08 20 57.8	+8.6
HHC				PCS	PcS	08 21 01.4	+1.2
HHC				S	**S**	**08 21 56.4**	**+7.8**
HHC				XS	sS	08 22 12.8	-19
HHC				SS	SS	08 25 06.9	-3.3
HHC				SCS	ScS	08 25 18.6	+7.2
HHC	comp=Z,13nm,0.6s,mb4.8			AMB	AMB		
HHC	comp=Z,548nm,8.1s			AMB	AMB		
HHC	comp=N,301nm,13.1s			LR	LR		
HHC	comp=E,327nm,14.3s			LR	LR		
HHC	comp=Z,492nm,14.0s			LR	LR		
MDJ	**Mudanjiang**	**45.39**	**2**	P	**P**	**08 15 36.6**	**+2.9**
MDJ	comp=Z,11nm,1.7s,mb4.3			AMB	AMB		
GTA	**Gaotai**	**47.62**	**331**	*e*P	**P**	**08 15 51.1**	**-0.1**
GTA	comp=Z,4.0nm,0.9s,mb4.2			AMB	AMB		
TAPN	**Taplejung** comp=Z,9.9nm,0.4s,mb5.0	**47.66**	**309**	*e*P	**P**	**08 15 51.8**	**0.0**
RAMN	**Ramite** comp=Z,36nm,0.5s,mb5.5	**48.34**	**308**	*e*P	**P**	**08 15 57.7**	**+0.7**
JIRN	**Jiri**	**48.99**	**309**	*e*P	**P**	**08 16 02.4**	**+0.4**
GUN	**Gumba**	**49.36**	**309**	*e*P	**P**	**08 16 04.6**	**-0.1**
PKI	**Pulchoki**	**49.56**	**308**	*e*P	**P**	**08 16 06.2**	**-0.1**
DMN	**Daman** comp=Z,14nm,0.7s,mb5.0	**49.82**	**308**	*e*P	**P**	**08 16 08.4**	**+0.1**
GKN	**Gorkha** comp=Z,9.0nm,0.4s,mb5.1	**50.37**	**308**	*e*P	**P**	**08 16 12.5**	**+0.1**
HIA	**Hailar**	**50.49**	**353**	*e*P	**P**	**08 16 12.0**	**-0.9**
KOLN	**Koldanda** comp=Z,31nm,0.6s,mb5.5	**51.08**	**308**	*e*P	**P**	**08 16 18.2**	**+0.4**
DANN	**Dangsing** comp=Z,41nm,0.6s,mb5.6	**51.22**	**308**	*e*P	**P**	**08 16 19.0**	**+0.2**
ULN	**Ulaanbaatar**	**51.85**	**342**	*e*P	**P**	**08 16 20.6**	**-2.5**
SONM	**Songino Array** comp=Z,0.9nm,0.7s,mb3.9,baz=156,slow=7.1,SNR=4.0	**52.02**	**342**	P	**P**	**08 16 23.3**	**-1.1**
SONM	comp=Z,1.0nm,0.7s			pmax	pmax		
WMQ	**Urumqi**	**57.13**	**326**	*e*P	**P**	**08 17 03.5**	**+2.1**
PETK	**Petropavlovsk-** comp=Z,4.2nm,0.7s,mb4.6,baz=174,slow=3.3,SNR=7.3	**59.39**	**20**	P	**P**	**08 17 17.6**	**+0.6**
PETK	**Petropavlovsk-** comp=Z,4.0nm,0.7s,mb4.6	**59.39**	**20**	P	**P**	**08 17 17.6**	**+0.7**
PETK				pmax	pmax		
MK31	**Makanchi Array**	**61.96**	**326**	*e*P	**P**	**08 17 33.9**	**-0.6**
MKAR	**Makanchi Array** comp=Z,3.8nm,0.5s,mb4.7,baz=124,slow=8.1,SNR=25	**61.96**	**326**	P	**P**	**08 17 33.9**	**-0.7**
MKAR	**Makanchi Array** comp=Z,4.0nm,0.5s	**61.96**	**326**	P	**P**	**08 17 33.9**	**-0.6**
MKAR				pmax	pmax		
TKM2	**Tokmak 2** comp=Z,2.0nm,0.6s,mb4.1	**63.92**	**320**	*e*P	**P**	**08 17 47.6**	**0.0**
TKM2				pmax	pmax		
TKM2	**Tokmak 2** comp=Z,2.5nm,0.6s,mb4.2	**63.92**	**320**	*e*P	**P**	**08 17 47.5**	**-0.1**
EKS2	**Erkin-Say** comp=Z,2.4nm,0.9s,mb4.0	**64.99**	**319**	*e*P	**P**	**08 17 54.8**	**+0.3**
KURK	**Kurchatov** comp=Z,6.5nm,0.6s,mb4.6,baz=128,slow=6.4,SNR=8.8	**66.21**	**328**	*d i*P	**P**	**08 18 01.1**	**-1.2**
KURK	**Kurchatov** comp=Z,8.0nm,0.9s,mb4.5	**66.21**	**328**	*d i*P	**P**	**08 18 01.2**	**-1.1**
KURK				pmax	pmax		
KURK	**Kurchatov** comp=Z,6.6nm,0.9s,mb4.5	**66.21**	**328**	*e*P	**P**	**08 18 01.1**	**-1.1**
CASY	**Casey**	**66.34**	**188**	*e*P	**P**	**08 18 02.5**	**-0.3**
BVAR	**Borovoye Array** comp=Z,1.5nm,0.4s,mb4.2,baz=142,slow=7.5,SNR=9.2	**71.78**	**328**	P	**P**	**08 18 35.4**	**-1.3**
BVAR	**Borovoye Array** comp=Z,2.0nm,0.4s	**71.78**	**328**	P	**P**	**08 18 35.4**	**-1.2**
BVAR				pmax	pmax		
TIXI	**Tiksi** comp=Z,20nm,1.3s,mb4.8	**72.47**	**0**	*e*P	**P**	**08 18 39.7**	**-0.8**
TIXI				pmax	pmax		
AKTK	**Aktyubinsk**	**77.94**	**322**	P	**P**	**08 19 11.2**	**-1.0**
AKTO	**Aktyubinsk** comp=Z,2.5nm,0.6s,mb4.2,baz=104,slow=9.5,SNR=8.8	**77.94**	**322**	P	**P**	**08 19 11.2**	**-1.0**
AKTO	**Aktyubinsk** comp=Z,3.0nm,0.6s,mb4.2	**77.94**	**322**	P	**P**	**08 19 11.2**	**-1.0**
AKTO				pmax	pmax		
SBA	**Scott Base**	**79.60**	**172**	*e*P	**P**	**08 19 21.8**	**+1.0**
SBA				*e*		08 19 29.6	
SBA	comp=Z,31nm,2.0s,mb4.8			pmax	pmax		
SBA	**Scott Base** comp=Z,31nm,2.0s,mb4.8	**79.60**	**172**	*e*P	**P**	**08 19 21.8**	**+1.0**
SBA				*e*PcP	PcP	08 19 29.6	+1.3
MAW	**Mawson** comp=Z,5.1nm,0.9s,mb4.3	**79.76**	**201**	*e*P	**P**	**08 19 21.4**	**-0.4**
MAW	**Mawson** comp=Z,5.5nm,0.8s,mb4.4,baz=52,slow=4.6,SNR=20	**79.76**	**201**	P	**P**	**08 19 21.5**	**-0.3**
MAW	**Mawson** comp=Z,6.0nm,0.8s	**79.76**	**201**	P	**P**	**08 19 21.5**	**-0.3**
MAW				pmax	pmax		
OPO	**Ambohidratompo** comp=Z,1.6nm,0.5s,mb4.1,baz=37,slow=6.1,SNR=5.2	**80.75**	**251**	P	**P**	**08 19 27.8**	**-0.4**
KDAK	**Kodiak Island** comp=Z,16nm,1.0s,mb4.9,baz=168,slow=7.9,SNR=3.5	**85.28**	**32**	P	**P**	**08 19 50.2**	**-0.4**
KDAK	**Kodiak Island** comp=Z,16nm,1.0s,mb4.9	**85.28**	**32**	P	**P**	**08 19 50.3**	**-0.4**
KDAK				pmax	pmax		
SYO	**Syowa Base**	**88.46**	**201**	⇓*e*X	**P**	**08 20 04.0**	**-1.8**
ARCES	**ARCESS Array B**	**95.16**	**340**	P	**P**	**08 20 34.4**	**-2.4**
ARCES	comp=Z,8.8nm,1.2s,mb5.1,baz=76,slow=5.1,SNR=5.7			pmax	pmax		
ARCES	**ARCESS Array B** comp=Z,9.0nm,1.2s	**95.16**	**340**	P	**P**	**08 20 34.4**	**-2.4**
ARCES				pmax	pmax		
SCHQ	**Schefferville** comp=Z,1.5nm,0.5s,baz=6.3,slow=9.2,SNR=4.0	**124.98**	**10**	PKP	PKPdf	08 26 13.3	-0.1
TORD	**Torodi Ar. Bea** comp=Z,1.8nm,0.6s,baz=62,slow=1.7,SNR=19	**125.23**	**285**	PKP	PKPdf	08 26 14.4	-0.7
PLCA	**Paso Flores** comp=Z,0.7nm,0.7s,baz=240,slow=2.6,SNR=2.9	**135.30**	**160**	PKhKP		08 26 30.1	
PLCA	**Paso Flores** comp=Z,1.0nm,0.7s	**135.30**	**160**	PKIKP	PKPdf	08 26 30.1	-3.4
PLCA				pmax	pmax		
CFAA	**Coronel Fontan** comp=Z,0.4nm,0.6s,baz=236,slow=4.3,SNR=10	**144.26**	**156**	PKP	PKPdf	08 26 48.2	-1.8
LVC	**Limon Verde** comp=Z,2.0nm,0.5s,baz=245,slow=4.9,SNR=6.3	**151.51**	**146**	PKPbc	PKPbc	08 27 09.9	+1.5
CPUP	**Villa Florida** comp=Z,1.5nm,0.5s,baz=173,slow=1.6,SNR=11	**152.45**	**170**	PKPbc	PKPbc	08 27 10.3	-0.1
CPUP	comp=Z,1.7nm,0.6s,baz=196,slow=6.2,SNR=3.0			PKPab	PKPab	08 27 21.1	+0.4
CPUP	**Villa Florida**	**152.45**	**170**	PKIKP	PKPbc	08 27 10.3	-0.1
CPUP						08 27 21.1	
CPUP	comp=Z,2.0nm,0.5s			pmax	pmax		
CPUP	comp=Z,2.0nm,0.6s			pmax	pmax		
CPUP	**Villa Florida**	**152.45**	**170**	PKPbc	PKPbc	08 27 10.3	-0.1
CPUP				PKPab	PKPab	08 27 21.1	+0.4
SIV	**San Ignacio** comp=Z,0.7nm,0.7s,baz=270,slow=1.0	**161.05**	**153**	PKP	PKPdf	08 27 14.5	-0.2
SIV	comp=Z,2.0nm,0.7s,baz=201,slow=5.1,SNR=9.3			PKPab	PKPab	08 27 57.9	-0.1

NNC 19 08:16:06.0±13.0, 5372N×8829E, h0km, mb3.9, mpv3.7, 5C-1D, Error ellipse: s-maj=136.6km s-min=78.3km az=85.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov** 5.8nm,0.6s	**6.66**	**247**	⇓Pn	Pn	08 17 50.1	+5.2
KURK	24nm,0.9s			⇑Lg		08 19 35.7	
KURBB	**Kurchatov Arra** 1.0nm,0.6s,baz=63,slow=14	**6.75**	**247**	⇑Pn	Pn	08 17 51.2	+5.0
KURBB	6.0nm,1.1s			⇑Lg		08 19 38.1	
MK31	**Makanchi Array** 4.7nm,0.8s,baz=117,slow=7.5,SNR=20	**7.92**	**211**	Pn	Pn	08 17 59.7	-2.6
MK31	6.8nm,1.1s,baz=24,slow=31,SNR=4.8			⇑Sn	Sn	08 19 32.9	+0.4
MK31				Lg		08 20 13.5	
VOSK	**Vostochnaya** 2.9nm,0.4s	**10.43**	**272**	⇑Pn	Pn	08 18 31.8	-4.8
BVA0	**Borovoye Array** 0.3nm,0.6s,baz=129,slow=8.6,SNR=12	**10.72**	**274**	Pn	Pn	08 18 35.4	-5.2

NEIC 19 08:17:33.3, 4459S×16811E, h82km, ML4.5(WEL), After WEL., South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.15**	**237**	P	Pn	08 17 45.3	+0.2
MSZ				S	Sn	08 17 53.2	-0.7
WKZ	**Wanaka**	**0.69**	**111**	P	Pn	08 17 49.2	+0.2
WKZ				S	Sn	08 17 59.7	-0.9
JCZ	**Jackson Bay**	**0.69**	**42**	P	Pn	08 17 49.4	+0.4
JCZ				S	Sn	08 18 00.7	0.0
MLZ	**Mavora Lakes**	**0.76**	**177**	P	Pn	08 17 50.0	+0.3
EAZ	**Earnscleugh**	**1.07**	**127**	P	Pn	08 17 53.1	-0.1
DCZ	**Deep Cove**	**1.12**	**217**	P	Pn	08 17 53.3	-0.5
FOZ	**Fox Glacier**	**1.53**	**49**	P	Pn	08 17 59.4	+0.3
SNZO	**South Karori**	**5.84**	**58**	*e*Pn	Pn	08 18 57.3	0.0
SNZO				*e*Sn	Sn	08 19 56.7	-6.2
WTAZ	**Waiatarua**	**9.08**	**35**	P	Pn	08 19 42.8	+1.3

CSEM ***19*** *08:20:43.2±0.4, 3767N×1958E, h2km, ML3.5, Error ellipse: s-maj=7.8km s-min=5.3km az=66.0*
THE ***19*** *08:20:43.4, 3769N×1961E, h0km, ML3.5*
ATH ***19*** *08:20:57.4, 3827N×2055E, h10km, MD3.6/3*

ISC 19 08:20:42.0±2.3, 3768N±008×195E±01, h9km±11km, n10, σ0§89/14, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.97**	**59**	*e*Pg	**Pg**	**08 21 00.4**	**-0.4**
VLS				*e*Sg	**Sg**	**08 21 13.8**	**+0.4**
VLS	**Valsamata**	**0.97**	**59**	*e*PG	**Pg**	**08 21 00.3**	**-0.4**
KFL	**Anninata**	**1.08**	**66**	*e*Pg	**Pg**	**08 21 02.1**	**-0.7**
KFL				*e*Sg	**Sg**	**08 21 17.9**	**+1.1**
LKD	**Levkas**	**1.35**	**40**	*e*Pg	**Pg**	**08 21 08.0**	**-0.1**
PYL	**PYLOS**	**1.92**	**113**	*e*Pb	**Pb**	**08 21 16.4**	**-0.9**
PYL				*e*Sb	**Sb**	**08 21 41.3**	**0.0**
IGT	**Igoumenitsa**	**1.96**	**18**	*e*Pb	**Pb**	**08 21 17.1**	**-0.7**
KEK	**Kerkira**	**2.04**	**6**	*e*PB	**Pg**	**08 21 26.5**	**+5.3**
EVR	**Evrytania**	**2.18**	**55**	*e*PB	**Pn**	**08 21 19.5**	**+1.1**
AGG	**Agios Georgios**	**2.58**	**58**	*e*Pn	**Pn**	**08 21 25.2**	**+1.3**
AGG				*e*Sn	**Sb**	**08 21 58.3**	**-1.9**
LTK	**Loutraki**	**2.74**	**82**	*e*Pn	**Pn**	**08 21 26.6**	**+0.5**

IDC 19 08:20:53.1±4.6, 342N×9475E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/20, mbtmp3.8/3, Error ellipse: s-maj=324.4km s-min=29.6km az=49.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 1.5nm,0.5s,baz=302,slow=9.1,SNR=14	**45.29**	**122**	P	P	08 29 13.9	+0.9
ASAR	**Alice Springs** 0.2nm,0.4s,baz=300,slow=8.0,SNR=3.6	**46.68**	**127**	P	P	08 29 22.7	-1.2
ARCES	**ARCESS Array B** 1.8nm,0.7s,baz=116,slow=8.2,SNR=7.9	**79.63**	**340**	P	P	08 33 02.1	+0.1

IDC 19 08:25:09.6±1.5, 038N×12579E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/17, mbtmp3.9/4, MS3.6/1, Ms1 3.6/1, ms1mx3.2/23, Error ellipse: s-maj=167.4km s-min=20.6km az=65.0, Northern Molucca Sea

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

7.9nm,0.3s,baz=175,slow=22,SNR=15

USP	**Ospenovka**	**6.45**	**19**	P		**Pn**	**08 27 04.2**	**+0.1**
	SNR=8.0							
TKM2	**Tokmak 2**	**6.48**	**27**	⇑P		**Pn**	**08 27 05.0**	**+0.5**
	7.9nm,1.0s							
TKM2				⇑S		**Sn**	**08 28 16.3**	**-0.5**
	3.2nm,0.6s							
TKM2	**Tokmak 2**	**6.48**	**27**	P		**Pn**	**08 27 05.2**	**+0.8**
	SNR=7.3							
TKM2	**Tokmak 2**	**6.48**	**27**	*e*Pn		**Pn**	**08 27 05.2**	**+0.8**
SMLA	**Simla**	**7.62**	**141**	*i* P		**Pn**	**08 27 18.9**	**-1.1**
SMLA				*i* S		**Sn**	**08 28 36.9**	**-7.8**
SMLA				*i* S		**Sn**	**08 28 37.0**	**-7.7**
SMLA				*ex*	x		08 28 42.5	
	comp=N,215nm,0.4s							
SMLA				*ex*	x		08 28 43.3	
	comp=E,295nm,0.3s							
MKAR	**Makanchi Array**	**12.44**	**36**	P		**Pn**	**08 28 24.5**	**-0.3**
	comp=E,0.2nm,0.3s,baz=221,slow=14,SNR=4.5							
KURK	**Kurchatov**	**14.41**	**18**	P		**Pn**	**08 28 52.7**	**+2.3**
	comp=E,0.1nm,0.3s,baz=206,slow=10,SNR=7.3							
KURK	**Kurchatov**	**14.41**	**18**	P		**Pn**	**08 28 52.7**	**+2.3**
BVAR	**Borovoye Array**	**15.84**	**357**	P		**Pn**	**08 29 06.5**	**-1.9**
	comp=E,0.2nm,0.3s,baz=165,slow=12,SNR=3.3							
AKTK	**Aktyubinsk**	**16.42**	**328**	P		**Pn**	**08 29 15.2**	**-0.4**
AKTO	**Aktyubinsk**	**16.42**	**328**	P		**Pn**	**08 29 15.2**	**-0.4**
	comp=E,1.6nm,0.3s,baz=136,slow=11,SNR=23							
ZALV	**Zalesovo Beam**	**19.08**	**24**	P		**P**	**08 29 45.4**	**-0.2**
	comp=E,0.6nm,0.3s,baz=223,slow=12,SNR=4.4							
NOA	**NORSAR Array B**	**44.11**	**323**	P		**P**	**08 33 29.6**	**+0.7**
	comp=E,1.1nm,0.9s,baz=96,slow=8.3,SNR=2.5							

*NEIC **19** 08:25:40.5, 1632N×9966W, h5km, MD4.4(MEX), After MEX.*

MEX 19 08:25:42.0±0.5, 1635N×9960W, h17km±14km, MD4.4, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.60**	**330**	*i* P	Pg	08 25 50.3	-3.5
ACX	**Acapulco**	**0.60**	**330**	*i* P	Pg	08 25 50.2	-3.6
ACX				*i* S	Sg	08 25 55.7	-6.1
CAIG	**El Cayaco**	**0.94**	**318**	*e*P	Pb	08 25 57.0	-2.9
CAIG				*i* S	Sb	08 26 08.3	-3.8
CAIG	**El Cayaco**	**0.94**	**318**	*e*P	Pb	08 25 57.0	-2.9
CAIG				*i* S	Sb	08 26 09.3	-2.8
PNIG	**Pinotepa**	**1.42**	**88**	*e*P	Pn	08 26 03.9	-3.1
PNIG				*i* S	Sn	08 26 20.3	-4.9
PNIG	**Pinotepa**	**1.42**	**88**	*e*P	Pn	08 26 03.9	-3.1
PNIG				*i* S	Sn	08 26 23.0	-2.3
PLIG	**Platanillo**	**2.03**	**3**	*e*P	Pn	08 26 12.2	-3.3
PLIG				*i* S	Sn	08 26 36.7	-3.8
PLIG	**Platanillo**	**2.03**	**3**	*e*P	Pn	08 26 12.2	-3.3
PLIG				*i* S	Sn	08 26 37.6	-2.9
ZIIG	**Zihuatanejo**	**2.18**	**305**	*e*P	Pn	08 26 14.9	-2.6
ZIIG				*i* S	Sn	08 26 38.6	-5.4
YAIG	**Yautepec**	**2.55**	**11**	*i* P	Pn	08 26 19.5	-3.1
YAIG				*i* S	Sn	08 26 48.7	-4.5
YAIG	**Yautepec**	**2.55**	**11**	*e*P	Pn	08 26 21.7	-0.9
YAIG				*e*S	Sn	08 26 51.4	-1.8
VHO	**Vista Hermosa**	**2.84**	**75**	*e*P	Pn	08 26 24.7	-1.9
VHO				*i* S	Sn	08 26 57.5	-3.0
VHO	**Vista Hermosa**	**2.84**	**75**	*e*P	Pn	08 26 24.7	-1.9
VHO				*i* S	Sn	08 26 59.2	-1.3
PPM	**Popocatepetl**	**2.86**	**19**	*i* P	Pn	08 26 24.9	-1.9
PPM				*i* S	Sn	08 26 58.5	-2.3
PPM	**Popocatepetl**	**2.86**	**19**	*i* P	Pn	08 26 28.4	+1.5
PPM				*i* S	Sn	08 27 04.0	+3.2
SZVM	**Salazar**	**2.96**	**4**	*i* P	Pn	08 26 25.3	-3.0
SZVM				*i* S	Sn	08 27 01.5	-2.0
TPIG	**Tehuac#an**	**2.97**	**46**	*i* P	Pn	08 26 25.2	-3.1
TPIG				*i* S	Sn	08 26 59.9	-3.7
UNM	**Universidad Na**	**2.99**	**8**	*i* P	Pn	08 26 26.9	-1.7
UNM				*i* S	Sn	08 27 01.3	-2.9
UNM	**Universidad Na**	**2.99**	**8**	*e*P	Pn	08 26 28.4	-0.2
UNM				*i* S	Sn	08 27 06.0	+1.9
PBVM	**Pinon**	**3.12**	**9**	*i* P	Pn	08 26 27.3	-3.0
PBVM				*i* S	Sn	08 27 03.0	-4.2
PBVM	**Pinon**	**3.12**	**9**	*e*P	Pn	08 26 30.8	+0.4
PBVM				*i* S	Sn	08 27 07.0	-0.2
PTVM	**Pico Tres Padr**	**3.26**	**8**	*e*P	Pn	08 26 29.8	-2.6
PTVM				*i* S	Sn	08 27 08.5	-2.3
PTVM	**Pico Tres Padr**	**3.26**	**8**	*e*P	Pn	08 26 34.1	+1.7
IIO	**Organos**	**3.33**	**14**	*i* P	Pn	08 26 31.5	-1.9
IIO				*i* S	Sn	08 27 08.9	-3.6
IIO	**Organos**	**3.33**	**14**	*e*P	Pn	08 26 33.6	+0.3
HUIG	**Huatulco**	**3.41**	**99**	*i* S	Sn	08 27 09.5	-4.9
HUIG	**Huatulco**	**3.41**	**99**	*i* P	Pg	08 26 44.8	-2.6
MOIG	**Morelia**	**3.64**	**336**	*i* P	Pn	08 26 35.3	-2.3
MOIG				*i* S	Sn	08 27 17.9	-2.2
MOIG	**Morelia**	**3.64**	**336**	*i* P	Pn	08 26 39.1	+1.5
MOIG				*i* S	Sn	08 27 27.3	+7.2
DEIG	**Demacu**	**3.97**	**8**	*i* P	Pn	08 26 39.3	-2.8
DEIG				*i* S	Sn	08 27 24.2	-4.1
CMIG	**Matias Romero**	**4.58**	**80**	*i* P	Pn	08 26 48.2	-2.4
CMIG				*i* S	Sn	08 27 40.8	-2.6
CMIG	**Matias Romero**	**4.58**	**80**	*i* P	Pn	08 26 48.2	-2.4
CMIG				*i* S	Sn	08 27 38.5	-4.9
EZ5V		**4.92**	**310**	*i* P	Pn	08 26 52.4	-2.8
EZ5V				*i* S	Sn	08 27 48.5	-3.2
R15V		**5.03**	**305**	*i* P	Pn	08 26 53.3	-3.3
R15V				*i* S	Sn	08 27 52.0	-2.4
GDLC		**5.60**	**321**	*i* P	Pn	08 27 05.0	+0.4

IDC 19 08:27:47.4±3.5, 577S×15089E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.3/14, mbtmpg3.3/2, MS3.9/1, Ms1 3.9/1, ms1mx2.8/17, Error ellipse: s-maj=140.9km s-min=48.0km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.38**	**227**	P	P	08 32 36.9	+0.2
	0.4nm,0.3s,baz=53,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**24.16**	**221**	P	P	08 33 05.7	+0.3
	0.6nm,0.6s,baz=57,slow=9.4,SNR=5.9						
FITZ	**Fitzroy Crossi**	**27.52**	**241**	LR	LR	08 44 03.1	
	comp=Z,240nm,18.9s,baz=327,slow=36						
TORD	**Torodi Ar. Bea**	**148.76**	**286**	PKPbc	PKPbc	08 47 37.1	-0.8
	0.7nm,0.7s,baz=94,slow=2.9,SNR=3.7						

*NIED **19** 08:35:35.8, 1637N×9958W, h5km, MD4.2(MEX), After MEX.*

MEX 19 08:35:35.5±1.3, 1631N×9963W, h5km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.62**	**333**	*i* P	Pg	08 35 45.2	-2.2
ACX				*i* S	Sg	08 35 56.5	+1.0
ACX	**Acapulco**	**0.62**	**333**	*i* P	Pg	08 35 45.2	-2.2
ACX				*i* S	Sg	08 35 51.8	-3.7
CAIG	**El Cayaco**	**0.96**	**320**	*e*P	Pg	08 35 52.3	-1.6
CAIG				*i* S	Sg	08 36 04.8	-1.5
PNIG	**Pinotepa**	**1.44**	**87**	*i* P	Pn	08 35 58.9	-3.3
PNIG				*e*P		08 35 59.2	
PNIG	**Pinotepa**	**1.44**	**87**	*e*P	Pn	08 35 59.3	-3.0
PNIG				*i* S	Sb	08 36 15.4	-6.1
PLIG	**Platanillo**	**2.07**	**3**	*e*P	Pn	08 36 07.3	-3.7
PLIG				*i* S	Sn	08 36 31.8	-5.4
ZIIG	**Zihuatanejo**	**2.18**	**306**	*e*P	Pn	08 36 10.3	-2.2
ZIIG				*i* S	Sn	08 36 34.9	-5.0
ZIIG	**Zihuatanejo**	**2.18**	**306**	*e*P	Pn	08 36 10.3	-2.2
ZIIG				*i* S	Sn	08 36 38.0	-1.9
YAIG	**Yautepec**	**2.59**	**12**	*i* P	Pn	08 36 15.8	-2.3
YAIG				*i* S	Sn	08 36 45.4	-4.6
YAIG	**Yautepec**	**2.59**	**12**	*i* P	Pn	08 36 16.1	-2.0
YAIG				*i* S	Sn	08 36 45.4	-4.6
MOIG	**Morelia**	**3.66**	**336**	*i* P	Pn	08 36 30.2	-2.6
MOIG				*i* S	Sn	08 37 13.5	-2.9
MOIG	**Morelia**	**3.66**	**336**	*i* P	Pn	08 36 37.0	+4.1
MOIG				*i* S	Sn	08 37 23.9	+7.4

*NIED **19** 08:38:00, 31.10N×13170E, h26km, Mw4.2 Best double couple: M₀2.26000×10¹⁵ NP1:φs322.00000°, δ67.00000°, λ-145.00000°. NP2:φs217.00000°, δ58.00000°, λ-27.00000°.*

*ISCJB **19** 08:38:48.4±0.8, 31.14N±004×13170E±008, h51km±7km, mb4.1/8, Error ellipse: s-maj=11.8km s-min=6.3km az=17.2*

*JMA **19** 08:38:48.3±0.1, 31.13N×13172E, h37km±1km, M3.8*

JMA Felt I J1.

*IDC **19** 08:38:48.8±6.2, 3121N×13148E, h32km±48km, mb4.0/8, mb1 4.1/10, mb1mx3.8/27, mbtmp4.0/10, ML3.7/2, Error ellipse: s-maj=28.3km s-min=16.1km az=73.0*

*NEIC **19** 08:38:48.3, 31.13N×13172E, h37km, MG4.4(JMA), After JMA.*

ISC 19 08:38:48.9±1.0, 3113N±004×13169E±006, h33km±7km, n21, σ0°75/29, mb4.1/8, 2C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNAR	**Kushima--Naru**	**0.53**	**319**	⇑P	**Pb**	**08 38 59.6**	**-0.4**
JNAR				S	**Sb**	**08 39 08.0**	**+0.4**
JTSR	**Tashiro 2**	**0.66**	**274**	⇑P	**Pn**	**08 39 01.4**	**-0.5**
JTSR				S	**Sn**	**08 39 11.6**	**+0.5**
JTN	**Tanegashima 3**	**0.77**	**232**	⇓P	**Pn**	**08 39 03.5**	**+0.1**
JTN				*e*S	**Sn**	**08 39 14.6**	**+0.8**
JTZ	**Takazaki**	**0.93**	**327**	P	**Pn**	**08 39 05.3**	**-0.3**
JTZ				*e*S	**Sn**	**08 39 18.0**	**+0.2**
JSU	**Suzuyama**	**1.12**	**290**	P	**Pn**	**08 39 08.2**	**-0.1**
JSU				*e*S	**Sn**	**08 39 23.1**	**+0.6**
JTSN	**Tsuno**	**1.13**	**352**	P	**Pn**	**08 39 08.3**	**-0.1**
JTSN				*e*S	**Sn**	**08 39 22.5**	**-0.2**
JZO	**Okuchi**	**1.37**	**318**	P	**Pn**	**08 39 12.0**	**+0.3**
JZO				S	**Sn**	**08 39 29.2**	**+0.4**
JKC	**Kuchinoerabu**	**1.44**	**243**	P	**Pn**	**08 39 12.8**	**+0.1**
JKC				*e*S	**Sn**	**08 39 30.8**	**+0.3**
JIU2	**Izumi 2**	**1.60**	**333**	P	**Pn**	**08 39 15.6**	**+0.8**
JSJ	**Shimokoshiki**	**1.77**	**289**	P	**Pn**	**08 39 17.0**	**-0.2**
JOW	**Kunigami**	**5.22**	**216**	Pn	**Pn**	**08 40 04.0**	**-0.6**
	7.6nm,0.3s,baz=98,slow=19,SNR=13						
JOW				Sn	**Sn**	**08 41 00.7**	**-3.0**
	2.2nm,0.3s,baz=90,slow=20,SNR=3.9						
MJAR	**Matsushiro Arr**	**7.66**	**43**	Pn	**Pn**	**08 40 38.4**	**+0.3**
	0.8nm,0.3s,baz=236,slow=14,SNR=8.5						
SONM	**Songino Array**	**25.51**	**318**	P	**P**	**08 44 13.2**	**-1.0**
	0.7nm,0.4s,mb3.5,baz=96,slow=6.0,SNR=4.3						
CMAR	**Chiang Mai Arr**	**32.16**	**255**	P	**P**	**08 45 12.2**	**-1.6**
	1.1nm,0.3s,mb4.1,baz=60,slow=6.4,SNR=4.1						
KURK	**Kurchatov**	**43.56**	**312**	P	**P**	**08 46 48.4**	**-1.1**
	1.2nm,0.6s,mb3.8,baz=101,slow=9.8,SNR=2.0						
BVAR	**Borovoye Array**	**48.80**	**315**	P	**P**	**08 47 29.5**	**-1.2**
	1.9nm,0.4s,mb4.4,baz=87,slow=9.4,SNR=6.1						
FITZ	**Fitzroy Crossi**	**49.29**	**188**	P	**P**	**08 47 35.7**	**+1.0**
	1.8nm,0.6s,mb4.3,baz=71,slow=11,SNR=6.3						
WRA	**Warramunga Arr**	**50.84**	**177**	P	**P**	**08 47 46.8**	**+0.4**
	3.7nm,0.8s,mb4.3,baz=352,slow=8.1,SNR=15						
CTA	**Charters Tower**	**52.81**	**163**	P	**P**	**08 48 02.2**	**+1.1**
	3.9nm,0.8s,mb4.4,baz=8.1,slow=7.1,SNR=3.4						
ASAR	**Alice Springs**	**54.52**	**178**	P	**P**	**08 48 14.5**	**+0.9**
	1.6nm,0.6s,mb4.2,baz=11,slow=13,SNR=34						
TORD	**Torodi Ar. Bea**	**114.87**	**305**	PKP	PKiKP	08 57 25.4	-1.5
	0.2nm,0.6s,baz=340,slow=1.1,SNR=2.9						

IDC 19 08:45:14.6±3.3, 645S×14705E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.5/15, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=101.8km s-min=41.6km az=118.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.23**	**221**	P	Pn	08 49 30.1	+0.9
	0.1nm,0.3s,baz=49,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**21.28**	**215**	P	P	08 50 03.6	+0.9
	0.6nm,0.3s,baz=34,slow=13,SNR=13						
FITZ	**Fitzroy Crossi**	**23.88**	**239**	P	P	08 50 28.4	-1.7
	1.4nm,0.7s,baz=10,slow=11,SNR=2.8						
TORD	**Torodi Ar. Bea**	**145.25**	**284**	PKPbc	PKPbc	09 04 54.8	-0.3
	0.4nm,0.4s,baz=74,slow=3.9,SNR=8.5						

*BJI **19** 09:13:22.5, 270N×12870E, h206km, mB4.9, mb4.8*

*ISCJB **19** 09:13:26.5±0.9, 275N±005×12872E±006, h240km±9km, mb4.6/30, Error ellipse: s-maj=10.0km s-min=7.3km az=173.8*

*IDC **19** 09:13:27.1±1.6, 273N×12869E, h230km±16km, mb4.1/15, mb1 4.2/18, mb1mx4.1/22, mbtmp4.2/18, Error ellipse: s-maj=15.6km s-min=7.7km az=88.0*

*NEIC **19** 09:13:27.5±1.5, 274N×12871E, h236km±16km, mb4.8/8, Error ellipse: s-maj=10.0km s-min=5.2km az=88.0*

ISC 19 09:13:27.5±0.8, 274N±005×12871E±007, h233km±9km, n53, σ0°79/53, mb4.6/30, 2D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**3.56**	**200**	P	**Pn**	**09 14 25.1**	**-0.3**
	0.0nm,0.0s						
MNI	**Manado**	**4.08**	**252**	P	**Pn**	**09 14 29.8**	**-1.7**
	0.0nm,0.0s						
SWI	**Sorong**	**4.39**	**144**	P	**Pn**	**09 14 37.5**	**+2.2**
	0.0nm,0.0s						
KAPI	**Kappang**	**11.81**	**229**	P	**Pn**	**09 16 09.3**	**+0.1**
	0.7nm,0.3s,baz=66,slow=10.0,SNR=3.5						
KAPI				S	**S**	**09 18 16.7**	**-4.4**
	2.0nm,0.3s,baz=221,slow=20,SNR=7.7						
KAPI	**Kappang**	**11.81**	**229**	*e*Pn	**Pn**	**09 16 09.4**	**+0.2**
KAPI				S	**S**	**09 18 17.7**	**-3.4**
BATI	**Baumata**	**13.80**	**201**	P	**Pn**	**09 16 33.8**	**-0.2**
	15nm,0.3s,baz=163,slow=6.0,SNR=6.2						
KHKI	**Kahang-Kahang**	**17.10**	**230**	P	**P**	**09 17 14.2**	**+2.7**
	0.0nm,0.0s						
GUMO	**Guam**	**19.27**	**55**	P	**P**	**09 17 35.0**	**0.0**
	5.5nm,0.3s,baz=225,slow=17,SNR=4.8						
SJI	**Sawahan**	**19.85**	**238**	P	**P**	**09 17 43.0**	**+1.8**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**20.93**	**188**	*e*P	**P**	**09 17 51.5**	**-1.1**
	12nm,0.4s						
FITZ	**Fitzroy Crossi**	**20.93**	**188**	P	**P**	**09 17 51.6**	**-0.9**
	7.2nm,0.5s,baz=18,slow=11,SNR=35						
WRAB	**Tennant Creek**	**23.20**	**166**	*e*P	**P**	**09 18 13.8**	**-0.2**
	11nm,0.4s,mb4.8						
WRA	**Warramunga Arr**	**23.20**	**166**	P	**P**	**09 18 13.7**	**-0.3**
	7.0nm,0.4s,mb4.6,baz=343,slow=10,SNR=136						
WRA				ScP	ScP	09 25 10.3	-0.6
	1.2nm,0.6s,baz=341,slow=3.0,SNR=11						
WB2	**Warramunga Arr**	**23.21**	**166**	*e*P	**P**	**09 18 13.7**	**-0.4**
JOW	**Kunigami**	**23.96**	**359**	P	**P**	**09 18 20.9**	**0.0**
	36nm,0.9s,mb5.0,baz=276,slow=4.3,SNR=3.8						
ASAR	**Alice Springs**	**26.73**	**169**	P	**P**	**09 18 45.6**	**-0.1**
	6.5nm,0.5s,mb4.5,baz=354,slow=7.5,SNR=155						
ASAR				ScP	ScP	09 25 20.2	-0.6
	2.3nm,0.8s,baz=350,slow=2.3,SNR=15						
CMAR	**Chiang Mai Arr**	**33.08**	**300**	P	**P**	**09 19 42.0**	**+0.3**
	3.0nm,0.4s,mb4.2,baz=118,slow=7.3,SNR=11						
FORT	**Forrest**	**33.33**	**181**	*e*P	**P**	**09 19 43.5**	**-0.2**
	75nm,0.6s,mb5.4						
KSRS	**Korea Array**	**34.56**	**359**	P	**P**	**09 19 54.5**	**+0.3**
	10nm,0.7s,mb4.5,baz=176,slow=9.8,SNR=22						
MJAR	**Matsushiro Arr**	**34.76**	**13**	P	**P**	**09 19 54.7**	**-1.3**
	11nm,0.7s,mb4.5,baz=188,slow=9.6,SNR=46						
MJAR	**Matsushiro Arr**	**34.76**	**13**	P	**P**	**09 19 54.7**	**-1.3**
MAJO	**Matsushiro**	**34.77**	**13**	*e*P	**P**	**09 19 54.8**	**-1.1**
	20nm,0.8s,mb4.7						
MAT	**Matsushiro**	**34.77**	**13**	P	**P**	**09 19 55.6**	**-0.4**
KLBR	**Kellerberrin**	**35.69**	**196**	*e*P	**P**	**09 20 03.3**	**-0.6**
	18nm,0.5s,mb4.8						
MUN	**Mundaring**	**36.51**	**198**	*e*P	**P**	**09 20 10.3**	**-0.5**
STKA	**Stephens Creek**	**36.53**	**161**	*e*P	**P**	**09 20 10.9**	**-0.1**
	7.7nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**36.53**	**161**	P	**P**	**09 20 11.0**	**0.0**
	7.9nm,0.4s,mb4.6,baz=340,slow=8.9,SNR=18						
NWAO	**Narrogin (SRO)**	**37.09**	**196**	P	**P**	**09 20 15.8**	**+0.1**
	14nm,0.4s,mb4.8,baz=16,slow=7.9,SNR=24						
NWAO	**Narrogin (SRO)**	**37.09**	**196**	*e*P	**P**	**09 20 15.9**	**+0.1**
ARMA	**Armidale**	**39.57**	**148**	*e*P	**P**	**09 20 37.2**	**+0.8**
LZH	**Lanzhou**	**40.37**	**328**	⇓P	**P**	**09 20 44.4**	**+1.5**
LZH				AMB	AMB		
	comp=Z,36nm,1.2s,mb4.7						
LZH				AMB	AMB		
	comp=Z,130nm,4.6s						
GTA	**Gaotai**	**44.97**	**328**	⇓P	**P**	**09 21 20.3**	**+0.6**
GTA				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.3						
TAPN	**Taplejung**	**46.20**	**306**	*e*P	**P**	**09 21 29.9**	**+0.4**
	comp=Z,24nm,0.7s,mb4.6						
ODAN	**Odare**	**46.25**	**305**	*e*P	**P**	**09 21 30.3**	**+0.3**
	comp=Z,37nm,0.6s,mb4.9						
RAMN	**Ramite**	**46.94**	**305**	*e*P	**P**	**09 21 35.7**	**+0.4**
	comp=Z,45nm,0.5s,mb5.1						
JIRN	**Jiri**	**47.55**	**306**	*e*P	**P**	**09 21 40.5**	**+0.5**
	comp=Z,40nm,0.5s,mb5.0						
GUN	**Gumba**	**47.91**	**306**	*e*P	**P**	**09 21 43.0**	**+0.3**
PKI	**Pulchoki**	**48.15**	**305**	*e*P	**P**	**09 21 44.6**	**0.0**
KKN	**Kakani**	**48.34**	**305**	*e*P	**P**	**09 21 45.9**	**-0.2**
	comp=Z,25nm,0.8s,mb4.6						
DMN	**Daman**	**48.42**	**305**	*e*P	**P**	**09 21 46.5**	**-0.1**
	comp=Z,32nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**48.69**	**341**	*e*P	**P**	**09 21 48.8**	**+0.5**
	comp=Z,14nm,1.0s,mb4.3						
SONM	**Songino Array**	**48.88**	**340**	P	**P**	**09 21 50.0**	**+0.2**
	comp=Z,3.3nm,0.6s,mb3.8,baz=155,slow=7.1,SNR=12						
GKN	**Gorkha**	**48.95**	**305**	*e*P	**P**	**09 21 50.4**	**-0.3**
KOLN	**Koldanda**	**49.71**	**305**	*e*P	**P**	**09 21 56.8**	**+0.4**
	comp=Z,45nm,0.6s,mb5.0						
DANN	**Dangsing**	**49.80**	**305**	*e*P	**P**	**09 21 57.0**	**-0.1**
	comp=Z,59nm,0.6s,mb5.1						
PETK	**Petropavlovsk-**	**55.63**	**21**	P	**P**	**09 22 39.8**	**+0.6**
	comp=Z,4.4nm,0.5s,mb4.3,baz=173,slow=2.5,SNR=6.5						
MKAR	**Makanchi Array**	**59.50**	**325**	P	**P**	**09 23 06.0**	**-0.2**
	comp=Z,4.7nm,0.4s,mb4.4,baz=118,slow=8.1,SNR=42						
MKAR				PcP	PcP	09 23 51.3	0.0
	comp=Z,1.0nm,0.7s,baz=129,slow=5.0,SNR=4.1						
ZALV	**Zalesovo Beam**	**62.37**	**332**	P	**P**	**09 23 24.1**	**-1.3**
	comp=Z,2.3nm,0.4s,mb4.2,baz=104,slow=6.3,SNR=10						
KURK	**Kurchatov**	**63.64**	**327**	*e*P	**P**	**09 23 33.5**	**-0.4**
	comp=Z,15nm,0.6s,mb4.8						
MAW	**Mawson**	**83.52**	**201**	P	**P**	**09 25 29.3**	**+0.3**
	comp=Z,1.1nm,0.6s,mb3.8,baz=12,slow=5.3,SNR=6.4						
ARCES	**ARCESS Array B**	**92.06**	**340**	P	**P**	**09 26 08.6**	**-1.2**
	comp=Z,1.7nm,0.4s,mb4.3,baz=84,slow=5.6,SNR=17						
TORD	**Torodi Ar. Bea**	**125.11**	**288**	PKP	PKPdf	09 32 01.0	-0.2
	comp=Z,0.5nm,0.9s,baz=70,slow=1.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**125.11**	**288**	PKP	PKPdf	09 32 01.0	-0.2

IDC 19 09:23:29.8±3.4, 495S×14942E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.7/15, mbtmp3.9/3, MS4.4/1, Ms1 4.4/1, ms1mx2.8/29, Error ellipse: s-maj=106.4km s-min=45.2km az=116.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WB2	**Warramunga Arr**	**20.91**	**223**	*e*P	P	09 28 14.7	+0.6
WRA	**Warramunga Arr**	**20.92**	**223**	P	P	09 28 14.9	+0.7
	1.4nm,0.5s,baz=49,slow=10,SNR=27						
ASAR	**Alice Springs**	**23.88**	**217**	P	P	09 28 44.9	-0.4
	0.7nm,0.3s,baz=53,slow=8.4,SNR=17						
FITZ	**Fitzroy Crossi**	**26.67**	**239**	*e*P	P	09 29 09.8	-0.9
	5.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**26.67**	**239**	P	P	09 29 10.0	-0.8
	2.9nm,0.7s,baz=64,slow=11,SNR=15						
NWAO	**Narrogin (SRO)**	**40.93**	**223**	LR	LR	09 48 04.8	
	comp=Z,430nm,18.7s,baz=149,slow=36						
TORD	**Torodi Ar. Bea**	**147.14**	**287**	PKPbc	PKPbc	09 43 16.1	+0.1
	0.4nm,0.3s,baz=79,slow=2.9,SNR=6.6						

*BJI **19** 09:30:43.9, 430S×10098E, h41km, mB5.3, mb5.1, Ms4.9, Msz4.7*

*ISCJB **19** 09:30:44.3±0.4, 403S±004×10088E±004, h28km, mb5.0/65, MS4.6/19, Error ellipse: s-maj=7.5km s-min=4.0km az=42.5*

*MOS **19** 09:30:45.4±0.9, 389S×10104E, h33km, mb5.1/27, Error ellipse: s-maj=14.5km s-min=7.9km az=103.6*

*DJA **19** 09:30:46, 400S×10082E, h26km, Mw5.4/5*

*NEIC **19** 09:30:46.4±3.9, 397S×10099E, h27km±25km, mb4.8/16, Error ellipse: s-maj=16.8km s-min=6.3km az=53.0*

*IDC **19** 09:30:48.7±0.7, 366S×10142E, h28km±3km, mb4.5/16, mb1 4.7/17, mb1mx4.5/22, mbtmp4.6/17, ML4.3/1, MS4.3/5, Ms1 4.3/5, ms1mx3.6/46, Error ellipse: s-maj=19.1km s-min=9.7km az=54.0*

ISC 19 09:30:46.8±0.4, 401S±004×10092E±004, h30km, h30km±7km: pP-P, n175, σ1s05/157, mb5.0/65, MS4.6/19, 13C-10D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.71**	**78**	P	**Pn**	**09 31 14.8**	**+0.3**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.57**	**352**	P	**Pn**	**09 31 37.5**	**-2.6**
	0.0n

KMI LR LR
comp=N,979nm,16.6s,MS4.6
KMI LR LR
comp=E,727nm,13.8s,MS4.6
KMI LR LR
comp=Z,747nm,16.6s,MS4.4
SWI Sorong 30.47 85 P **P** **09 36 55.8 -1.5**
comp=Z,0.0nm,0.0s
GYA Guiyang 30.79 10⇑*i*P **P** **09 36 59.6 -0.3**
GYA AP pP 09 37 09.3 +0.6
GYA XP sP 09 37 13.4 +1.0
GYA PP PP 09 37 59.8 -10
GYA S **S** **09 41 57.4 -4.1**
GYA AMB AMB
comp=Z,50nm,0.9s,mb5.3
GYA AMB AMB
comp=Z,260nm,4.5s
GYA LR LR
comp=N,880nm,12.0s,MS4.8
GYA LR LR
comp=E,760nm,11.8s,MS4.8
GYA LR LR
comp=Z,900nm,13.4s,MS4.6
ODAN Odare 33.36 338 *e*P **P** **09 37 23.5 +1.1**
comp=Z,134nm,1.2s,mb5.8
TAPN Taplejung 33.68 339 *e*P **P** **09 37 26.6 +1.3**
comp=Z,152nm,0.9s,mb5.9
RAMN Ramite 33.75 337 *e*P **P** **09 37 27.4 +1.6**
comp=Z,54nm,0.9s,mb5.5
JIRN Jiri 34.54 337 *e*P **P** **09 37 34.0 +1.3**
comp=Z,127nm,1.0s,mb5.8
LSA Lhasa 34.80 345 P **P** **09 37 37.0 +2.1**
LSA Lhasa 34.80 345 *e*P **P** **09 37 36.0 +1.1**
LSA pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
LSA Lhasa 34.80 345 *e*P **P** **09 37 36.0 +1.1**
comp=Z,6.2nm,1.0s,mb4.5
CD2 Chengdu 34.83 4 P **P** **09 37 34.3 -0.8**
CD2 AP pP 09 37 44.0 0.0
CD2 XP sP 09 37 47.9 +0.2
CD2 PP PP 09 38 52.1 -2.4
CD2 PCP PcP 09 40 07.4 -0.6
CD2 S **S** **09 43 01.8 -2.4**
CD2 PCS PcS 09 43 52.6 -2.1
CD2 SS SS 09 45 16.1 -20
CD2 SCS ScS 09 47 51.0 -3.9
CD2 AMB AMB
comp=Z,50nm,1.1s,mb5.4
CD2 AMB AMB
comp=Z,180nm,8.2s
CD2 LR LR
comp=N,810nm,16.6s,MS4.8
CD2 LR LR
comp=E,1μm,19.0s,MS4.8
CD2 LR LR
comp=Z,1μm,15.4s,MS4.7
GUN Gumba 34.89 336 *e*P **P** **09 37 37.1 +1.4**
comp=Z,170nm,1.2s,mb5.8
DMN Daman 34.94 335 *e*P **P** **09 37 37.4 +1.2**
comp=Z,9.1nm,0.3s,mb5.1
KKN Kakani 35.03 335 *e*P **P** **09 37 37.7 +0.8**
comp=Z,25nm,0.7s,mb5.2
GKN Gorkha 35.48 335 *e*P **P** **09 37 41.6 +0.8**
comp=Z,36nm,0.8s,mb5.4
KOLN Koldanda 35.74 333 *e*P **P** **09 37 43.7 +0.7**
comp=Z,28nm,0.7s,mb5.3
DANN Dangsing 36.16 334 *e*P **P** **09 37 48.1 +1.4**
comp=Z,40nm,0.4s,mb5.7
WRA Warramunga Arr 36.21 119 P **P** **09 37 46.5 -0.7**
comp=Z,11nm,0.9s,mb4.8,baz=292,slow=10.0,SNR=46
WRA pP pP 09 37 54.5 -1.6
comp=Z,11nm,0.5s,baz=298,slow=9.1,SNR=22
WRA S **S** **09 43 24.9 -0.8**
comp=Z,3.4nm,0.9s,baz=293,slow=15,SNR=9.3
WRA Warramunga Arr 36.21 119 P **P** **09 37 46.5 -0.7**
WRA *PP pP 09 37 54.5 -1.6
WRA S **S** **09 43 24.9 -0.8**
WRA pmax pmax
comp=Z,11nm,0.9s
WRA pmax pmax
comp=Z,11nm,0.5s
WRA smax
comp=N,3.0nm,1.0s
WRAB Tennant Creek 36.22 119 P **P** **09 37 47.0 -0.3**
comp=N,203nm,0.6s,mb6.2,SNR=10
WRAB Tennant Creek 36.22 119 *e*P **P** **09 37 46.8 -0.5**
WRAB *e**PP pP 09 37 55.1 -1.1
WRAB pmax pmax
comp=Z,20nm,0.7s,mb5.2
WRAB Tennant Creek 36.22 119 *e*P **P** **09 37 46.8 -0.5**
comp=Z,20nm,0.7s,mb5.2
WRAB epP pP 09 37 55.1 -1.1
WB2 Warramunga Arr 36.22 119 *e*P **P** **09 37 46.6 -0.7**
WB2 epP pP 09 37 54.9 -1.3
WHN Wuhan 36.68 20 P **P** **09 37 50.5 -0.5**
WHN AMB AMB
comp=Z,64nm,0.9s,mb5.5
WHN LR LR
comp=Z,2μm,15.8s,MS4.9
ASAR Alice Springs 37.35 125 P **P** **09 37 57.0 +0.1**
comp=Z,9.9nm,1.0s,mb4.6,baz=298,slow=7.9,SNR=51
ASAR PcP PcP 09 40 16.6 +0.9
comp=Z,0.9nm,0.8s,baz=298,slow=2.0,SNR=2.5
ASAR pPcP 09 40 24.2
comp=Z,3.5nm,1.0s,baz=316,slow=3.8,SNR=5.5
ASAR S **S** **09 43 43.1 +0.1**
comp=Z,1.3nm,0.8s,baz=300,slow=16,SNR=6.9
ASAR Alice Springs 37.35 125 P **P** **09 37 57.0 +0.1**
ASAR 09 40 16.6
ASAR S **S** **09 43 43.2 +0.2**
ASAR pmax pmax
comp=Z,10.0nm,1.0s
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ASAR pmax pmax
comp=Z,4.0nm,1.0s
ASAR smax
comp=N,1.0nm,0.8s
ASAR Alice Springs 37.35 125 P **P** **09 37 57.0 +0.1**
ASAR PcP PcP 09 40 16.6 +0.9
ASAR S **S** **09 43 43.1 +0.1**
NDI New Delhi 39.70 326 *e*P **P** **09 38 22.0 +5.5**
NJ2 Nanjing 39.71 24 *e*P **P** **09 38 17.3 +0.7**
NJ2 AP pP 09 38 27.0 +1.5
NJ2 XP sP 09 38 31.0 +1.8
NJ2 PP PP 09 39 52.8 +4.6
NJ2 S **S** **09 44 19.0 +0.6**
NJ2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.5
NJ2 AMB AMB
comp=Z,60nm,6.3s
NJ2 LR LR
comp=N,580nm,27.7s,MS4.8
NJ2 LR LR
comp=E,2μm,23.3s,MS4.8
NJ2 LR LR
comp=Z,2μm,23.3s,MS4.8
LZH Lanzhou 39.98 4 *e*P **P** **09 38 19.5 +0.8**
LZH AP pP 09 38 27.1 -0.6
LZH XP sP 09 38 34.0 +2.7
LZH PP PP 09 39 56.3 +5.2
LZH S **S** **09 44 23.0 +0.7**
LZH XS sS 09 44 38.3 +1.2
LZH SS SS 09 47 15.3 -4.8
LZH AMB AMB
comp=Z,125nm,1.2s,mb5.5
LZH AMB AMB
comp=Z,220nm,4.0s
LZH LR LR
comp=E,1μm,13.5s
LZH LR LR
comp=Z,2μm,16.2s,MS5.0
GTA Gaotai 43.22 359 *e*P **P** **09 38 45.6 +0.4**
GTA AP pP 09 38 53.4 -0.8
GTA XP sP 09 38 57.1 -0.7
GTA S **S** **09 45 10.8 +0.6**
GTA SS SS 09 48 18.3 -5.8
GTA AMB AMB
comp=Z,18nm,1.2s,mb4.7
GTA AMB AMB
comp=Z,155nm,3.9s
GTA LR LR
comp=N,406nm,16.2s,MS4.6
GTA LR LR
comp=E,501nm,16.5s,MS4.6
GTA LR LR
comp=Z,612nm,16.2s,MS4.6
HHC Hu-ho-hao-te 45.69 11 ⇑P **P** **09 39 05.6 +0.6**
HHC AP pP 09 39 16.0 +2.0
HHC XP sP 09 39 19.9 +2.3
HHC PCP PcP 09 40 43.9 +1.2
HHC PP PP 09 40 53.3 +0.9
HHC SCP ScP 09 44 33.5 -0.2
HHC PCS PcS 09 44 36.4 -0.3
HHC S **S** **09 45 46.4 +0.3**
HHC XS sS 09 46 03.1 +2.0
HHC SCS ScS 09 48 56.3 -2.8
HHC SS SS 09 49 01.8 -9.1
HHC AMB AMB
comp=Z,41nm,0.9s,mb5.4
HHC AMB AMB
comp=Z,171nm,7.3s
HHC LR LR
comp=N,683nm,14.2s,MS4.8
HHC LR LR
comp=E,488nm,13.7s,MS4.8
HHC LR LR
comp=Z,586nm,13.6s,MS4.7
BJI Beijing 46.02 16 P **P** **09 39 07.3 -0.3**
BJI S **S** **09 45 49.3 -1.6**
BJI AMB AMB
comp=Z,28nm,1.2s,mb5.1
BJI LR LR
comp=N,275nm,17.8s,MS4.6
BJI LR LR
comp=E,651nm,21.1s,MS4.6
BJI LR LR
comp=Z,376nm,20.6s,MS4.3
PMG Port Moresby 46.20 99 P **P** **09 39 08.7 -0.8**
PMG pmax pmax
comp=Z,22nm,1.1s
PMG Port Moresby 46.20 99 P **P** **09 39 08.7 -0.8**
comp=Z,22nm,1.1s,mb5.0
CTA Charters Tower 46.94 114 *e*P **P** **09 39 14.8 -0.3**
comp=Z,9.9nm,1.1s,mb4.7
CTA epP pP 09 39 23.3 -0.9
CTA Charters Tower 46.94 114 P **P** **09 39 15.1 0.0**
comp=Z,18nm,1.1s,mb4.9,baz=313,slow=7.9,SNR=8.1
CTA Charters Tower 46.94 114 *e*P **P** **09 39 14.8 -0.3**
CTA *e**PP pP 09 39 23.3 -0.9
CTA pmax pmax
comp=Z,10.0nm,1.1s
CTAO Charters Tower 46.94 114 *e*P **P** **09 39 15.0 -0.1**
CTAO *e**PP pP 09 39 23.6 -0.6
CTAO pmax pmax
comp=Z,21nm,1.0s,mb5.0
CTAO Charters Tower 46.94 114 *e*P **P** **09 39 15.0 -0.1**
comp=Z,21nm,1.0s,mb5.0
CTAO epP pP 09 39 23.6 -0.6
STKA Stephens Creek 47.14 131 *e*P **P** **09 39 17.1 +0.5**
comp=Z,9.3nm,1.2s,mb4.6
STKA epP pP 09 39 25.4 -0.3
STKA Stephens Creek 47.14 131 P **P** **09 39 17.1 +0.5**
comp=Z,7.6nm,0.8s,mb4.7,baz=314,slow=6.3,SNR=7.7
STKA Stephens Creek 47.14 131 *e*P **P** **09 39 17.4 +0.8**
comp=Z,7.0nm,1.2s,mb4.5
STKA epP pP 09 39 25.4 -0.3
KSRS Korea Array 48.30 29 P **P** **09 39 24.5 -0.9**
comp=Z,15nm,1.0s,mb5.0,baz=214,slow=8.5,SNR=26
KSRS pP pP 09 39 33.0 -1.4
comp=Z,11nm,0.9s,baz=216,slow=8.2,SNR=9.8
KSRS Korea Array 48.30 29 P **P** **09 39 24.5 -0.9**
KSRS *PP pP 09 39 33.1 -1.4
KSRS pmax pmax
comp=Z,15nm,1.0s,mb5.0
KSRS pmax pmax
comp=Z,11nm,0.9s,mb4.9
WMQ Urumqi 49.08 347⇑*i*P **P** **09 39 32.0 +0.7**
WMQ AP pP 09 39 41.0 +0.6
WMQ XP sP 09 39 45.5 +1.5
WMQ PCP PcP 09 40 56.0 +1.4
WMQ *eS* **S** **09 46 33.0 -1.2**
WMQ XS sS 09 46 50.0 +0.8
WMQ AMB AMB
comp=Z,31nm,1.0s,mb5.3
WMQ AMB AMB
comp=Z,140nm,3.8s
WMQ LR LR
comp=N,326nm,12.2s,MS4.8
WMQ LR LR
comp=E,587nm,16.3s,MS4.8
WMQ LR LR
comp=Z,469nm,25.2s
SONM Songino Array 51.85 5 P **P** **09 39 53.0 +0.9**
comp=Z,28nm,0.9s,mb5.2,baz=185,slow=8.8,SNR=110
SONM Songino Array 51.85 5 P **P** **09 39 53.0 +0.9**
SONM pmax pmax
comp=Z,28nm,0.9s
ULN Ulaanbaatar 51.94 5 *e*P **P** **09 39 53.5 +0.7**
ULN pmax pmax
comp=Z,17nm,0.8s,mb5.0
ULN Ulaanbaatar 51.94 5 *e*P **P** **09 39 53.5 +0.7**
comp=Z,17nm,0.8s,mb5.0
TKM2 Tokmak 2 52.03 337 *e*P **P** **09 39 54.0 +0.4**
TKM2 *e**PP pP 09 40 02.8 +0.1
TKM2 pmax pmax
comp=Z,23nm,0.9s,mb5.1
TKM2 Tokmak 2 52.03 337 *e*P **P** **09 39 54.0 +0.4**
comp=Z,23nm,0.9s,mb5.1
TKM2 epP pP 09 40 02.8 +0.1
AML Almayashu 52.16 334 *e*P **P** **09 39 55.6 +1.1**
comp=Z,6.2nm,0.6s,mb4.7
FRU Bishkek 52.35 336 *i*P **P** **09 39 56.0 0.0**
CN2 Changchun 52.47 22 *e*P **P** **09 39 56.1 -0.7**
CN2 *eS* **S** **09 47 19.3 -1.9**
CN2 AMB AMB
comp=Z,40nm,1.0s,mb5.3
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,800nm,17.0s,MS5.0
CN2 LR LR
comp=E,900nm,17.0s,MS5.0
CN2 LR LR
comp=Z,700nm,18.0s,MS4.7
EKS2 Erkin-Say 52.56 335 *e*P **P** **09 39 58.3 +0.8**
comp=Z,19nm,0.9s,mb5.0
EKS2 epP pP 09 40 06.9 +0.2
MK31 Makanchi Array 53.20 344 *i*P **P** **09 40 01.7 -0.4**
MK31 pmax pmax
comp=Z,15nm,0.6s,mb5.1
MKAR Makanchi Array 53.20 344 P **P** **09 40 02.1 0.0**
comp=Z,26nm,0.8s,mb5.2,baz=147,slow=8.1,SNR=134
MKAR Makanchi Array 53.20 344 P **P** **09 40 02.1 0.0**
MKAR pmax pmax
comp=Z,26nm,0.9s
MAT Matsushiro 53.27 37 P **P** **09 40 02.1 -0.8**
MAT S **S** **09 47 29.6 -2.9**
MJAR Matsushiro Arr 53.27 38 P **P** **09 40 01.7 -1.2**
comp=Z,7.9nm,0.9s,mb4.7,baz=218,slow=7.8,SNR=25
MJAR pP pP 09 40 08.8 -3.4
comp=Z,9.1nm,0.8s,baz=212,slow=7.0,SNR=12
MJAR Matsushiro Arr 53.27 38 P **P** **09 40 01.7 -1.2**
MJAR *PP pP 09 40 08.8 -3.3
MJAR pmax pmax
comp=Z,8.0nm,0.9s
MJAR pmax pmax
comp=Z,9.0nm,0.8s
MJAR Matsushiro Arr 53.27 38 P **P** **09 40 01.7 -1.2**
MJAR pP pP 09 40 08.8 -3.4
ZAK Zakamensk 54.21 2 *e*P **P** **09 40 09.7 +0.2**
ZAK pmax pmax
comp=Z,6.0nm,1.5s,mb4.3
OPO Ambohidratompo 54.42 250 P **P** **09 40 20.0 +8.4**
comp=Z,7.6nm,1.1s,mb4.6,baz=51,slow=7.6,SNR=3.9
MDJ Mudanjiang 54.80 25 P **P** **09 40 14.3 +0.4**
MDJ AP pP 09 40 23.3 +0.2
MDJ S **S** **09 47 52.4 -0.4**
MDJ AMB AMB
comp=Z,11nm,1.1s,mb4.8
MDJ AMB AMB
comp=Z,71nm,4.5s
MDJ LR LR
comp=N,268nm,22.9s,MS4.4
MDJ LR LR
comp=E,235nm,21.9s,MS4.4
MDJ LR LR
comp=Z,352nm,23.9s,MS4.3
TLY Talaya 55.52 2 *e*P **P** **09 40 19.3 +0.3**
TLY pmax pmax
comp=Z,14nm,1.1s,mb4.9
TLY MLR MLR
comp=Z,597nm,16.0s,MS4.8
KURK Kurchatov 57.78 343 *e*P **P** **09 40 35.1 +0.1**
KURK *e**PP pP 09 40 43.3 -1.0
KURK pmax pmax
comp=Z,33nm,1.0s,mb5.3
KURK Kurchatov 57.78 343 *e*P **P** **09 40 35.0 0.0**
comp=Z,33nm,1.0s,mb5.3
KURK epP pP 09 40 43.3 -1.0
ZAA0 Zalesovo Array 59.30 349 *e*P **P** **09 40 45.3 -0.3**
ZAA0 epP pP 09 40 54.0 -0.8
ZALV Zalesovo Beam 59.30 349 P **P** **09 40 45.2 -0.4**
comp=Z,31nm,0.8s,mb5.4,baz=172,slow=4.3,SNR=74
ZALV Zalesovo Beam 59.30 349 P **P** **09 40 45.2 -0.4**
ZALV pmax pmax
comp=Z,31nm,0.8s,mb5.4
ZALV Zalesovo Beam 59.30 349 P **P** **09 40 45.2 -0.4**
KLR Kul'dur 59.40 23 *e*P **P** **09 40 41.8 -4.5**
NVS Novosibirsk 60.45 348 *i*P **P** **09 40 52.1 -1.4**
NVS pmax pmax
comp=N,14nm,1.3s
NVS pmax pmax
comp=Z,17nm,1.3s,mb4.9
NVS pmax pmax
comp=E,6.0nm,1.1s
NAY Al-Naaiem 61.14 306 *e*P **P** **09 41 04.0 +5.3**
MIB Mutribah 61.28 307 *e*P **P** **09 41 03.7 +4.1**
MIB AMb AMB 09 41 09.1
comp=Z,27nm,1.2s,mb5.2
BVA0 Borovoye Array 62.37 340 *i*P **P** **09 41 05.3 -1.2**
BVA0 pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
BOD Bodaibo 62.53 8 *e*P **P** **09 41 06.7 -0.7**
BOD pmax pmax
comp=Z,19nm,1.0s,mb5.2
YSS Yuzh-Sakhalins 62.71 31 *e*P **P** **09 41 08.0 -0.8**
YSS *e* pP 09 41 16.5 -1.7
YSS pmax pmax
comp=Z,50nm,1.2s,mb5.5
YSS Yuzh-Sakhalins 62.71 31 *e*P **P** **09 41 09.1 +0.3**
KMBO Kilima Mbogo 63.65 271 LR LR 10 07 22.8
comp=Z,245nm,18.1s,MS4.4,baz=270,slow=34
CLNS Chul'man 63.71 14 *e*P **P** **09 41 13.7 -1.6**
CLNS pmax pmax
comp=Z,11nm,0.8s,mb4.9
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS pmax pmax
comp=N,10.0nm,1.2s
CLNS MLR MLR
comp=Z,419nm,18.0s,MS4.7
CLNS MLR MLR
comp=N,401nm,14.0s,MS4.8
CLNS MLR MLR
comp=E,219nm,15.0s,MS4.8
AB31 Akbulak array 63.83 331 *i*P **P** **09 41 15.4 -0.8**
AB31 pmax pmax
comp=Z,22nm,0.9s,mb5.2
MAW Mawson 68.58 195 *e*P **P** **09 41 47.1 +0.7**
comp=Z,2.1nm,0.9s,mb4.1
MAW Mawson 68.58 195 P **P** **09 41 52.6 +6.2**
comp=Z,2.8nm,0.9s,mb4.2,baz=27,slow=9.0,SNR=7.3
MAW Mawson 68.58 195 P **P** **09 41 52.6 +6.2**
MAW pmax pmax
comp=Z,3.0nm,0.9s
ARU Arti 69.40 336*d*iP **P** **09 41 51.3 -0.4**
ARU PPP 09 45 59.6
ARU *e*S S 09 50 56.9 +0.2
ARU *e*SS SS 09 55 16.9 -7.5
ARU pmax pmax
comp=Z,18nm,1.7s,mb4.7
YAK Yakutsk 69.45 14⇑*e*P **P** **09 41 50.4 -1.4**
YAK pmax pmax
comp=Z,62nm,1.1s,mb5.5
MALT Malatya 71.36 313 *e*P **P** **09 42 03.0 -1.1**
MALT pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
MALT Malatya 71.36 313 *e*P **P** **09 42 03.0 -1.1**
comp=Z,2.4nm,1.0s,mb4.1
MMAI Mount Meron Ar 71.96 306 LR LR 10 13 32.1
comp=Z,201nm,19.4s,MS4.4,baz=120,slow=36
PETK Petropavlovsk- 74.09 32 P **P** **09 42 18.1 -1.8**
comp=Z,5.1nm,1.0s,mb4.4,baz=200,slow=7.5,SNR=3.5
PETK Petropavlovsk- 74.09 32 P **P** **09 42 18.1 -1.8**
PETK pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BOSA Boshof 75.50 242 LR LR 10 10 47.0
comp=Z,270nm,20.2s,MS4.5,baz=184,slow=32
SYO Syowa Base 76.28 199⇑*eX* 09 42 43.0
SEY Seymchan 77.14 22⇑*e*P **P** **09 42 36.6 -0.6**
OBN Obninsk 78.97 328⇑*e*P **P** **09 42 47.3 -0.2**
OBN *i* pP 09 42 55.5 -1.6
OBN pmax pmax
comp=Z,27nm,1.1s,mb5.1
SUR Sutherland 79.51 238 P **P** **09 42 59.4 +8.4**
comp=Z,7.5nm,0.9s,mb4.6,baz=110,slow=7.0,SNR=4.1
AKASG Malin Array Be 81.62 322 *i*P **P** **09 42 56.7 -5.2**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
BILL Bilibino 84.71 20 *e*P **P** **09 43 15.8 -1.7**
BILL pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ARCES ARCESS Array B 88.66 340 P **P** **09 43 36.9 +0.2**
comp=Z,3.8nm,0.8s,mb4.8,baz=102,slow=5.1,SNR=6.6
ARCES ARCESS Array B 88.66 340 P **P** **09 43 36.9 +0.2**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
GERES GERESS Array B 91.15 319 P **P** **09 43 49.7 +0.9**
comp=Z,0.3nm,0.3s,mb4.1,baz=90,slow=4.0,SNR=3.8
NOA NORSAR Array B 93.33 331 LR LR 10 31 21.5
comp=Z,55nm,21.7s,MS4.0,baz=35,slow=39
HAWA Hanford 125.14 33 *e*PKPdf PKPdf 09 49 45.5 +1.0
DLMT Dillon 129.47 30 *e*PKPdf PKPdf 09 49 54.6 +1.8
NVAR Mina Array Bea 130.54 41 PKP PKPdf 09 49 56.6 +1.5
comp=Z,1.3nm,0.8s,baz=248,slow=2.8,SNR=8.3
NVAR pPKP pPKPdf 09 50 05.2 +0.2
comp=Z,1.5nm,0.9s,baz=327,slow=0.8,SNR=5.5
NVAR Mina Array Bea 130.54 41 PKP PKPdf 09 49 56.6 +1.5
NVAR pPKP pPKPdf 09 50 05.2 +0.2
HWUT Hardware Ranch 132.61 33 PKPdf PKPdf 09 50 00.6 +1.7
PDAR Pinedale Array 132.85 31 PKP PKPdf 09 50 00.5 +1.1
comp=Z,0.3nm,0.5s,baz=144,slow=3.3,SNR=4.1
RSSD Black Hills 134.39 25 *e*PKIKP PKPdf 09 50 02.7 +0.5
ANMO Albuquerque 140.11 36⇑*i*PKIKP PKPdf 09 50 10.3 -2.7
CCM Cathedral Cave 144.34 17 *e*PKIKP PKPdf 09 50 18.1 -2.3
WMOK Wichita Mounta 144.38 28 *e*PKIKP PKPdf 09 50 18.4 -2.2
OLIL Oliney 144.47 12 *e*PKPdf PKPdf 09 50 19.0 -1.7
FVM French Village 144.63 16 *e*PKIKP PKPdf 09 50 19.1 -1.9
SIUC Southern Illin 145.19 14 *e*PKPbc PKPbc 09 50 21.3 -0.2
USIN University of 145.31 12 *e*PKPbc PKPbc 09 50 21.5 -0.3
WCI Wyandotte Cave 145.31 10 *e*PKIKP PKPdf 09 50 21.7 -0.4
TXAR Lajitas Array 145.69 40 PKPbc PKPbc 09 50 24.1 +0.8
comp=Z,21nm,0.9s,baz=279,slow=1.8,SNR=127
TXAR pPKPbc pPKPbc 09 50 32.7 -0.6
comp=Z,20nm,0.8s,baz=321,slow=1.3,SNR=23
TXAR Lajitas Array 145.69 40 PKP2 PKPab 09 50 24.1 +0.4
TXAR pmax pmax
comp=Z,21nm,0.9s
TXAR pmax pmax
comp=Z,20nm,0.8s
TXAR Lajitas Array 145.69 40 PKPbc PKPbc 09 50 24.1 +0.8
TXAR pPKPbc pPKPbc 09 50 32.7 -0.6
PARMO Parma 146.05 15 *e*PKPbc PKPbc 09 50 24.3 0.0
URVA University of 146.57 358 *e*PKPbc PKPbc 09 50 26.2 +0.5
GNAR Gosnell 146.64 16 *e*PKPbc PKPbc 09 50 26.1 +0.2
MIAR Mount Ida 146.77 22 *e*PKP2 PKPab 09 50 26.6 -1.0
UALR University of 147.01 20 *e*PKPbc PKPbc 09 50 26.9 -0.2
WVT Waverly 147.03 13 *e*PKP2 PKPab 09 50 26.9 -1.7
JCT Junction City 147.20 34 *e*PKP2 PKPab 09 50 28.3 -1.1
TZTN Tazewell 147.36 7 *e*PKPbc PKPbc 09 50 27.8 -0.3
SWET Sewanee 148.31 11 *e*PKPbc PKPbc 09 50 29.9 -0.7
CPCT Cooper Cave 148.31 8 *e*PKPbc PKPbc 09 50 30.8 +0.2
HKT Hockley 149.72 30 *e*PKP2 PKPbc 09 50 35.4 +1.0
VBMS Vicksburg 149.96 20 *e*PKPbc PKPbc 09 50 35.4 +0.5

IDC 19 09:40:01.8±2.9, 416S×10073E, h0km, mb4.2/7, mb1 4.3/7, mb1mx3.9/20, mbtmp4.2/7, Error ellipse: s-maj=117.7km s-min=19.2km az=56.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.55**	**356**	P	P	09 45 04.2	+0.6
	2.8nm,0.6s,baz=181,slow=8.9,SNR=14						

WRA	**Warramunga Arr**	**36.30**	**118**	P		P	09 47 06.3	-1.1
	0.5nm,0.7s,baz=299,slow=10.0,SNR=7.8							
ASAR	**Alice Springs**	**37.42**	**124**	P		P	09 47 17.6	+0.7
	1.0nm,1.0s,baz=292,slow=7.5,SNR=4.3							
SONM	**Songino Array**	**52.02**	**5**	P		P	09 49 12.9	0.0
	3.4nm,0.8s,baz=185,slow=9.6,SNR=14							
MKAR	**Makanchi Array**	**53.29**	**344**	P		P	09 49 22.7	+0.3
	3.3nm,0.8s,baz=-141,slow=7.8,SNR=13							
KURK	**Kurchatov**	**57.87**	**344**	P		P	09 49 54.4	-1.0
	2.9nm,0.9s,baz=158,slow=6.8,SNR=3.8							
ZALV	**Zalesovo Beam**	**59.41**	**349**	P		P	09 50 05.1	-0.9
	2.9nm,0.3s,baz=145,slow=5.4,SNR=4.7							
TXAR	**Lajitas Array**	**145.93**	**40**	PKPbc		PKPbc	09 59 44.5	+0.4
	2.5nm,0.9s,baz=278,slow=1.9,SNR=20							

IDC ***19*** *09:46:00.4±1.3, 37.75N×71.62E, h0km, mb3.9/3, mb1 4.0/6, mb1mx3.7/25, mbtmp3.9/6, ML3.5/3, Error ellipse: s-maj=25.9km s-min=23.4km az=100.0*

NNC ***19*** *09:46:01.2±8.1, 38.06N×70.82E, h0km±157km, mb3.9, mpv3.7, Error ellipse: s-maj=143.5km s-min=24.4km az=179.0*

ISCJB ***19*** *09:46:06.8±0.7, 38.27N±0.05×70.8E±0.1, h33km, mb3.8/3, Error ellipse: s-maj=13.7km s-min=6.2km az=8.9*

NEIC ***19*** *09:46:22.5±7.6, 39.18N×71.73E, h121km±33km, Error ellipse: s-maj=94.6km s-min=24.9km az=187.0*

ISC 19 09:46:08.9±0.6, 3828N±0.05×707E±0.1, h35km, n19, σ1§36/23, mb3.8/3, 1C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.47**	**30**	*e*Pn		**Pn**		**09 47 13.1**	**-0.9**
AML				*e*Sn		**Sn**		**09 48 06.5**	**+1.8**
CEP	**Cherat**	**4.55**	**168**	P		**Pn**		**09 47 15.5**	**+0.3**
CEP				S		**Sn**		**09 48 13.0**	**+6.2**
KK31	**Karatay Array**	**4.82**	**358**	⇓Pn		**Pn**		**09 47 18.2**	**-0.7**
	6.4nm,0.5s,baz=178,slow=13,SNR=40								
KK31				⇑Sn		**Sn**		**09 48 18.2**	**+4.8**
	15nm,0.6s,baz=178,slow=22,SNR=3.7								
EKS2	**Erkin-Say**	**4.96**	**27**	*e*Pn		**Pn**		**09 47 20.4**	**-0.3**
EKS2				*e*Sn		**Sn**		**09 48 18.9**	**+2.1**
CHCP	**Chirah Chowk**	**5.05**	**155**	P		**Pn**		**09 47 20.6**	**-1.5**
THW	**Thamme Wali**	**5.54**	**171**	P		**Pn**		**09 47 30.3**	**+1.6**
TKM2	**Tokmak 2**	**5.93**	**37**	⇓Pn		**Pn**		**09 47 32.0**	**-2.1**
	3.9nm,0.6s								
TKM2	**Tokmak 2**	**5.93**	**37**	*e*Pn		**Pn**		**09 47 32.4**	**-1.8**
MKAR	**Makanchi Array**	**12.03**	**41**	Pn		**Pn**		**09 48 53.2**	**-4.5**
	0.2nm,0.3s,baz=224,slow=12,SNR=10								
MKAR	**Makanchi Array**	**12.03**	**41**	Pn		**Pn**		**09 48 53.2**	**-4.5**
AB31	**Akbulak array**	**13.44**	**328**	⇓P		**Pn**		**09 49 15.2**	**-1.7**
	0.7nm,0.6s,baz=146,slow=13,SNR=17								
BVAR	**Borovoye Array**	**14.75**	**359**	Pn		**Pn**		**09 49 33.8**	**-0.9**
	0.3nm,0.3s,baz=185,slow=14,SNR=3.2								
AKTK	**Aktyubinsk**	**15.15**	**327**	Pn		**Pn**		**09 49 45.4**	**+5.3**
AKTO	**Aktyubinsk**	**15.15**	**327**	⇓P		**Pn**		**09 49 41.4**	**+1.4**
	1.1nm,0.9s								
AKTO	**Aktyubinsk**	**15.15**	**327**	Pn		**Pn**		**09 49 45.4**	**+5.3**
	0.2nm,0.3s,baz=134,slow=7.7,SNR=16								
ARCES	**ARCESS Array B**	**39.42**	**337**	P		**P**		**09 53 36.7**	**+1.7**
	4.7nm,1.0s,mb4.2,baz=101,slow=7.5,SNR=3.8								
ARCES	**ARCESS Array B**	**39.42**	**337**	P		**P**		**09 53 36.7**	**+1.7**
TORD	**Torodi Ar. Bea**	**65.56**	**268**	P		**P**		**09 56 49.8**	**+0.6**
	0.5nm,0.5s,mb3.8,baz=48,slow=5.7,SNR=12								
WRA	**Warramunga Arr**	**83.11**	**122**	P		**P**		**09 58 24.8**	**-6.3**
	0.4nm,1.1s,mb3.4,baz=328,slow=5.2,SNR=6.6								

ISCJB ***19*** *10:07:33.7±2.5, 6.1S±0.1×146.4E±0.1, h42km±25km, mb4.0/14, Error ellipse: s-maj=25.6km s-min=14.4km az=28.6*

IDC ***19*** *10:07:34.7±7.1, 6.12S×146.40E, h34km±53km, mb4.0/13, mb1 4.1/15, mb1mx4.1/17, mbtmp4.0/15, ML3.7/2, MS3.7/2, Ms1 3.7/2, ms1mx2.5/25, Error ellipse: s-maj=33.7km s-min=17.5km az=85.0*

NEIC ***19*** *10:07:36.5±2.3, 6.16S×146.59E, h62km±26km, mb4.4/2, Error ellipse: s-maj=27.7km s-min=15.2km az=117.0*

ISC 19 10:07:36.2±2.1, 61S±0.1×1465E±0.1, h50km±23km, n29, σ0§92/26, mb4.0/14, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.33**	**168**	*e*Pn		**Pn**		**10 08 24.6**	**-1.2**
PMG				*e*Sn		**Sn**		**10 09 09.8**	**+5.7**
COEN	**Coen**	**8.42**	**202**	*e*Pn		**Pn**		**10 09 36.6**	**+0.9**
	7.6nm,0.6s								
COEN				*e*Sn		**Sn**		**10 11 09.5**	**+0.1**
CTA	**Charters Tower**	**13.88**	**181**	Pn		**Pn**		**10 10 50.9**	**+0.7**
	0.2nm,0.3s,baz=12,slow=14,SNR=1.9								
CTAO	**Charters Tower**	**13.88**	**181**	*e*Pn		**Pn**		**10 10 50.6**	**+0.4**
WRAB	**Tennant Creek**	**18.07**	**219**	*e*Pn		**Pn**		**10 11 43.4**	**-0.3**
	12nm,0.9s								
WB2	**Warramunga Arr**	**18.08**	**219**	*e*P		**Pn**		**10 11 43.9**	**+0.1**
WRA	**Warramunga Arr**	**18.09**	**219**	P		**Pn**		**10 11 44.1**	**+0.2**
	0.4nm,0.3s,baz=44,slow=12,SNR=42								
WRA				PcP		PcP		10 16 17.2	+0.9
	0.0nm,0.3s,baz=28,slow=1.9,SNR=3.8								
WRA				LR		LR		10 19 40.4	
	comp=Z,216nm,18.2s,baz=305,slow=40								
ASAR	**Alice Springs**	**21.21**	**213**	P		**P**		**10 12 17.9**	**+0.1**
	1.2nm,0.5s,mb3.5,baz=56,slow=8.6,SNR=20								
FITZ	**Fitzroy Crossi**	**23.54**	**238**	*e*P		**P**		**10 12 41.5**	**-0.7**
	22nm,0.8s,mb4.6								
FITZ	**Fitzroy Crossi**	**23.54**	**238**	P		**P**		**10 12 41.6**	**-0.7**
	12nm,0.8s,mb4.4,baz=78,slow=9.8,SNR=27								
STKA	**Stephens Creek**	**26.01**	**189**	*e*P		**P**		**10 12 56.4**	**-8.2**
	8.2nm,1.7s,mb4.0								
STKA	**Stephens Creek**	**26.01**	**189**	P		**P**		**10 13 02.7**	**-1.9**
	4.2nm,0.8s,mb4.0,baz=42,slow=13,SNR=6.2								
MJAR	**Matsushiro Arr**	**43.14**	**350**	P		**P**		**10 15 28.8**	**-3.1**
	1.4nm,0.9s,mb3.7,baz=176,slow=7.3,SNR=4.5								
KSRS	**Korea Array**	**46.68**	**340**	P		**P**		**10 15 59.7**	**-0.3**
	1.3nm,0.8s,mb3.9,baz=156,slow=9.0,SNR=4.9								
CMAR	**Chiang Mai Arr**	**52.83**	**299**	P		**P**		**10 16 48.6**	**+1.5**
	4.3nm,0.5s,mb4.6,baz=125,slow=5.9,SNR=17								
PETK	**Petropavlovsk-**	**59.78**	**8**	P		**P**		**10 17 36.5**	**+0.5**
	3.4nm,0.9s,mb4.4,baz=172,slow=7.4,SNR=4.4								
PETK				LR		LR		10 38 21.1	
	comp=Z,66nm,20.9s,baz=3.3,slow=31								
PETK	**Petropavlovsk-**	**59.78**	**8**	P		**P**		**10 17 36.5**	**+0.5**
PETK				LR		LR		10 38 21.1	
SONM	**Songino Array**	**64.25**	**331**	P		**P**		**10 18 06.7**	**+0.6**
	0.6nm,0.6s,mb3.8,baz=152,slow=9.5,SNR=3.3								
MKAR	**Makanchi Array**	**77.25**	**321**	P		**P**		**10 19 25.2**	**+0.1**
	0.7nm,0.5s,mb3.9,baz=95,slow=9.0,SNR=6.8								
ZALV	**Zalesovo Beam**	**78.83**	**328**	P		**P**		**10 19 32.5**	**-1.2**
	1.6nm,0.4s,mb4.3,baz=111,slow=6.3,SNR=2.6								
KURK	**Kurchatov**	**80.99**	**323**	P		**P**		**10 19 45.5**	**0.0**
	0.6nm,0.3s,mb4.1,baz=130,slow=4.3,SNR=2.0								
MAW	**Mawson**	**81.92**	**203**	P		**P**		**10 19 50.1**	**0.0**
	0.6nm,0.6s,mb3.7,baz=96,slow=9.2,SNR=3.2								
BVAR	**Borovoye Array**	**86.55**	**324**	P		**P**		**10 20 13.1**	**-0.7**
	0.8nm,0.4s,mb4.3,baz=92,slow=4.3,SNR=3.6								
NVAR	**Mina Array Bea**	**97.88**	**52**	P		**P**		**10 21 08.8**	**+2.1**
	0.2nm,0.6s,mb3.9,baz=253,slow=0.9,SNR=2.6								
PLCA	**Paso Flores**	**122.31**	**147**	PKP		PKPdf		10 26 27.7	+1.6
	0.9nm,0.7s,baz=239,slow=3.4,SNR=3.5								
KEST	**Kesra**	**130.87**	**313**	PKP		PKPdf		10 26 42.8	+0.2
	1.1nm,0.6s,baz=45,slow=2.9,SNR=4.1								
LPAZ	**La Paz**	**139.17**	**124**	PKP		PKPdf		10 26 59.3	+0.8
	0.6nm,0.6s,baz=256,slow=4.2,SNR=2.6								
TORD	**Torodi Ar. Bea**	**144.59**	**284**	PKP		PKPdf		10 27 07.8	-0.5
	9.2nm,0.8s,baz=80,slow=3.5,SNR=48								
DBIC	**Dimbokro**	**151.46**	**270**	PKPbc		PKPbc		10 27 26.0	+0.1
	3.4nm,0.6s,baz=117,slow=2.6,SNR=3.5								

IDC ***19*** *10:16:46.0±5.8, 6.84S×129.62E, h155km±53km, mb3.9/7, mb1 4.1/11, mb1mx3.8/18, mbtmp4.0/11, Error ellipse: s-maj=65.0km s-min=15.7km az=57.0*

ISCJB ***19*** *10:16:48.1±1.4, 7.08S±0.07×129.53E±0.06, h195km±16km, mb4.0/7, Error ellipse: s-maj=12.0km s-min=7.7km az=32.1*

NEIC ***19*** *10:16:54.9±1.9, 7.39S×129.65E, h268km±24km, mb4.6/1, Error ellipse: s-maj=22.1km s-min=11.4km az=215.0*

ISC 19 10:16:46.4±1.3, 699S±0.08×12966E±0.06, h163km±14km, n22, σ1§16/32, mb4.1/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.74**	**241**	P		**Pn**		**10 18 24.5**	**+1.5**
	13nm,0.3s,baz=311,slow=8.2,SNR=7.7								
BATI				S		**Sn**		**10 19 37.5**	**-1.5**
	37nm,0.3s,baz=88,slow=4.2,SNR=8.8								
KAPI	**Kappang**	**10.05**	**281**	P		**Pn**		**10 19 15.2**	**+8.3**
	0.8nm,0.3s,baz=74,slow=11,SNR=4.4								
KAPI				S		**Sn**		**10 20 48.9**	**-10**
	0.3nm,0.3s,baz=193,slow=16,SNR=3.6								
KAPI	**Kappang**	**10.05**	**281**	P		**Pn**		**10 19 15.2**	**+8.2**
KAPI				S		**Sn**		**10 20 48.9**	**-10**
FITZ	**Fitzroy Crossi**	**11.72**	**199**	*e*P		**Pn**		**10 19 28.5**	**-0.2**
	10nm,0.3s								
FITZ				*e*S		**Sn**		**10 21 31.8**	**-6.8**
FITZ	**Fitzroy Crossi**	**11.72**	**199**	P		**Pn**		**10 19 28.6**	**-0.2**
	1.8nm,0.3s,baz=29,slow=13,SNR=41								
FITZ				S		**Sn**		**10 21 33.2**	**-5.4**
	2.8nm,0.3s,baz=132,slow=23,SNR=5.1								
FITZ	**Fitzroy Crossi**	**11.72**	**199**	*e*Pn		**Pn**		**10 19 28.9**	**+0.2**
FITZ				*e*Sn		**Sn**		**10 21 30.4**	**-8.2**
FITZ				*e*S		**Sn**		**10 21 31.8**	**-6.8**
WRAB	**Tennant Creek**	**13.65**	**161**	*e*Pn		**Pn**		**10 19 53.5**	**+0.2**
	28nm,0.8s								
WRAB				*e*Sn		**Sn**		**10 22 19.5**	**-5.4**
WRA	**Warramunga Arr**	**13.65**	**161**	P		**Pn**		**10 19 53.6**	**+0.2**
	2.1nm,0.3s,baz=331,slow=13,SNR=43								
WRA				S		**Sn**		**10 22 20.7**	**-4.3**
	5.2nm,0.3s,baz=326,slow=22,SNR=11								
WB2	**Warramunga Arr**	**13.66**	**161**	*e*P		**Pn**		**10 19 53.3**	**-0.2**
WB2				*e*S		**Sn**		**10 22 18.1**	**-7.0**
COEN	**Coen**	**14.98**	**119**	*e*Pn		**Pn**		**10 20 13.3**	**+3.3**
COEN				*e*Sn		**Sn**		**10 22 55.7**	**-1.2**
MBWA	**Marble Bar**	**17.05**	**213**	*e*Pn		**Pn**		**10 20 36.7**	**+1.5**
MBWA				*e*Sn		**Sn**		**10 23 36.8**	**-10**
ASAR	**Alice Springs**	**17.07**	**167**	P		**Pn**		**10 20 38.3**	**+2.8**
	4.3nm,0.3s,baz=344,slow=9.5,SNR=343								
ASAR				S		**S**		**10 23 43.5**	**-0.7**
	1.4nm,0.3s,baz=347,slow=25,SNR=8.9								
STKA	**Stephens Creek**	**27.15**	**157**	P		**P**		**10 22 16.4**	**+2.0**
	2.6nm,0.4s,mb4.2,baz=312,slow=12,SNR=7.5								
CMAR	**Chiang Mai Arr**	**39.47**	**310**	P		**P**		**10 24 00.7**	**-0.4**
	2.0nm,0.5s,mb4.0,baz=137,slow=7.3,SNR=10								
SONM	**Songino Array**	**58.33**	**342**	P		**P**		**10 26 25.0**	**+0.9**
	0.8nm,0.7s,mb3.6,baz=160,slow=9.2,SNR=3.0								
MKAR	**Makanchi Array**	**68.03**	**327**	P		**P**		**10 27 27.7**	**-0.4**
	3.2nm,0.4s,mb4.4,baz=118,slow=9.0,SNR=21								
ZALV	**Zalesovo Beam**	**71.42**	**334**	P		**P**		**10 27 47.4**	**-1.3**
	2.7nm,0.4s,mb4.3,baz=137,slow=5.2,SNR=5.4								
KURK	**Kurchatov**	**72.33**	**329**	P		**P**		**10 27 53.6**	**-0.5**
	1.6nm,0.4s,mb4.1,baz=141,slow=3.8,SNR=6.2								
BVAR	**Borovoye Array**	**77.88**	**328**	P		**P**		**10 28 25.5**	**-0.3**
	1.9nm,0.8s,mb3.8,baz=123,slow=5.5,SNR=4.6								
TXAR	**Lajitas Array**	**125.21**	**59**	PKP		PKPdf		10 35 29.4	+1.2
	0.1nm,0.4s,baz=212,slow=3.2,SNR=5.2								
TORD	**Torodi Ar. Bea**	**128.48**	**281**	PKP		PKPdf		10 35 34.9	+0.1
	0.3nm,0.7s,baz=84,slow=3.0,SNR=2.6								
CPUP	**Villa Florida**	**146.19**	**169**	PKPbc		PKPbc		10 36 08.8	+0.5
	0.9nm,0.5s,baz=127,slow=5.1,SNR=2.9								

ISCJB ***19*** *10:16:55.7±0.5, 36.49N±0.04×70.56E±0.07, h219km±6km, mb3.7/8, Error ellipse: s-maj=9.1km s-min=5.0km az=157.1*

MOS ***19*** *10:16:55.8±1.2, 36.53N×70.49E, h226km, mb4.0/8, Error ellipse: s-maj=19.5km s-min=11.1km az=79.2*

BJI ***19*** *10:16:56.4, 36.71N×70.49E, h202km, mB4.9, mb4.4*

NEIC ***19*** *10:16:56.9±2.4, 36.61N×70.52E, h211km±23km, Error ellipse: s-maj=23.0km s-min=13.7km az=193.0*

IDC ***19*** *10:16:58.4±3.7, 36.53N×70.50E, h239km±39km, mb3.4/8, mb1 3.5/12, mb1mx3.3/27, mbtmp3.4/12, Error ellipse: s-maj=21.1km s-min=14.1km az=26.0*

ISC 19 10:16:55.9±0.6, 3653N±004×7047E±007, h209km±6km, n58, σ1§15/72, mb3.7/8, 2C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.95**	**156**	⇑P		**Pn**		**10 17 46.6**	**+1.2**
CEP				S		**Sn**		**10 18 23.0**	**-1.2**
CHCP	**Chirah Chowk**	**3.67**	**141**	P		**Pn**		**10 17 55.2**	**+1.2**
THW	**Thamme Wali**	**3.87**	**164**	⇑P		**Pn**		**10 17 57.5**	**+1.0**
SARP	**Sargodha**	**4.95**	**158**	P		**Pn**		**10 18 10.9**	**+1.0**
KSH	**Kashi**	**5.27**	**54**	P		**Pn**		**10 18 14.0**	**+0.2**
KSH				S		**Sn**		**10 19 14.8**	**-0.7**
KSH				Smax					
	comp=N,444nm,0.3s								
KSH				Smax					
	comp=E,708nm,0.4s								
THN	**Thein Dam**	**5.96**	**132**	*e*P		**Pn**		**10 18 22.0**	**-0.7**
THN				*e*x		x		10 19 29.1	
DLH	**Dalhousie**	**6.04**	**130**	*e*P		**Pn**		**10 18 24.0**	**+0.3**
DLH				*e*x		x		10 19 33.0	
AML	**Almayashu**	**6.12**	**23**	*e*Pn		**Pn**		**10 18 25.9**	**+1.1**
	comp=E,266nm,0.5s								
KK31	**Karatay Array**	**6.56**	**0**	Pn		**Pn**		**10 18 23.9**	**-6.5**
	comp=E,2.0nm,0.3s,baz=127,slow=18,SNR=70								
SDNR	**Sundarnagar**	**7.37**	**131**	*e*P		**Pn**		**10 18 39.4**	**-1.6**
SDNR				*e*S		**Sn**		**10 19 57.0**	**-7.6**
SMLA	**Simla**	**7.75**	**132**	*i* P		**Pn**		**10 18 45.2**	**-0.7**
SMLA				*i* S		**Sn**		**10 20 08.9**	**-4.8**
SMLA				*e*x		x		10 20 13.9	
	comp=N,700nm,0.3s								
SMLA				*e*x		x		10 20 15.9	
	comp=E,644nm,0.5s								
KLP	**Kalpa**	**8.16**	**125**	*e*P		**Pn**		**10 18 50.4**	**-0.8**
KLP				*e*S		**Sn**		**10 20 17.1**	**-6.2**
KLP				AML		AML		10 20 40.5	
	comp=N,96nm,0.8s								
KLP				AML		AML		10 20 43.8	
	comp=E,88nm,0.5s								
KHET	**Khetri**	**9.56**	**150**	*e*P		**Pn**		**10 19 08.3**	**-1.1**
KHET				*e*S		**Sn**		**10 20 47.2**	**-9.4**
JOSI	**Joshimath**	**9.64**	**126**	*e*P		**Pn**		**10 19 10.3**	**-0.1**
JOSI				*e*S		**Sn**		**10 20 50.1**	**-8.4**
JOSI				AML		AML		10 20 55.9	
	comp=E,117nm,0.6s								
JOSI				AML		AML		10 20 57.3	
	comp=N,131nm,0.4s								
NDI	**New Delhi**	**9.67**	**142**	*e*P		**Pn**		**10 19 09.0**	**-1.8**
NDI				*e*x		x		10 20 08.0	
SONA	**Sohna**	**9.97**	**144**	*e*P		**Pn**		**10 19 12.9**	**-1.7**
SONA				*e*S		**Sn**		**10 20 56.8**	**-10**
MK31	**Makanchi Array**	**13.52**	**37**	*e*P		**Pn**		**10 19 59.4**	**+0.1**
MKAR	**Makanchi Array**	**13.52**	**37**	P		**Pn**		**10 19 59.0**	**-0.3**
	comp=N,0.7nm,0.3s,baz=228,slow=13,SNR=27								
MKAR	**Makanchi Array**	**13.52**	**37**	P		**Pn**		**10 19 59.1**	**-0.2**
MKAR				pmax		pmax			
	comp=Z,1.0nm,0.3s								
DANN	**Dangsing**	**13.87**	**122**	*e*P		**Pn**		**10 20 03.4**	**-0.4**
	comp=Z,43nm,0.4s								
KOLN	**Koldanda**	**14.13**	**124**	*e*P		**Pn**		**10 20 06.4**	**-0.7**
	comp=Z,12nm,0.3s								
GKN	**Gorkha**	**14.68**	**121**	*e*P		**Pn**		**10 20 14.0**	**+0.1**
	comp=Z,68nm,0.5s								
WMQ	**Urumqi**	**15.03**	**56**	*e*P		**Pn**		**10 20 18.3**	**+0.3**
WMQ				AMB		AMB			
	comp=Z,8.0nm,0.6s								
DMN	**Daman**	**15.25**	**122**	*e*P		**Pn**		**10 20 20.6**	**-0.2**
	comp=Z,34nm,0.4s								
KKN	**Kakani**	**15.26**	**121**	*e*P		**Pn**		**10 20 20.3**	**-0.6**
	comp=Z,91nm,0.6s								
KURK	**Kurchatov**	**15.34**	**20**	P		**Pn**		**10 20 19.3**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=213,slow=11,SNR=9.5								
PKI	**Pulchoki**	**15.49**	**121**	*e*P		**Pn**		**10 20 24.5**	**+0.9**
	comp=Z,102nm,0.6s								
GUN	**Gumba**	**15.61**	**119**	*e*P		**Pn**		**10 20 25.1**	**0.0**
	comp=Z,93nm,0.9s								
JIRN	**Jiri**	**15.98**	**119**	*e*P		**Pn**		**10 20 29.9**	**+0.4**
	comp=Z,144nm,0.6s								
BVAR	**Borovoye Array**	**16.49**	**360**	P		**P**		**10 20 35.2**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=153,slow=13,SNR=6.0								
BVAR				S		**S**		**10 23 34.8**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=159,slow=25,SNR=2.8								
BVAR	**Borovoye Array**	**16.49**	**360**	P		**P**		**10 20 35.2**	**+0.8**
BVAR				S		**S**		**10 23 34.8**	**-1.1**
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.3s								
AKTK	**Aktyubinsk**	**16.54**	**331**	P		**P**		**10 20 36.4**	**+1.4**
AKTK				S		**S**		**10 23 34.8**	**-2.2**
AKTO	**Aktyubinsk**	**16.54**	**331**	P		**P**		**10 20 36.4**	**+1.4**
	comp=Z,2.7nm,0.3s,baz=145,slow=8.3,SNR=33								
AKTO				S		**S**		**10 23 34.8**	**-2.2**
	baz=108,slow=20,SNR=2.2								
AKTO	**Aktyubinsk**	**16.54**	**331**	P		**P**		**10 20 36.4**	**+1.5**
AKTO				S		**S**		**10 23 34.8**	**-2.2**
AKTO				pmax		pmax			
	comp=Z,3.0nm,0.3s								
RAMN	**Ramite**	**16.70**	**120**	*e*P		**P**		**10 20 37.5**	**+0.6**
	comp=Z,78nm,0.6s								
TAPN	**Taplejung**	**17.24**	**117**	*e*P		**P**		**10 20 44.7**	**+1.9**
	comp=Z,36nm,0.7s								
ODAN	**Odare**	**17.31**	**119**	*e*P		**P**		**10 20 45.4**	**+1.8**
	comp=Z,55nm,0.7s								
ZALV	**Zalesovo Beam**	**20.07**	**25**	P		**P**		**10 21 12.8**	**-0.3**
	comp=Z,9.9nm,0.8s,baz=221,slow=11,SNR=6.4								
ZALV	**Zalesovo Beam**	**20.07**	**25**	P		**P**		**10 21 12.8**	**-0.3**
ZALV				pmax		pmax			
	comp=Z,10.0nm,0.8s								
ZALV	**Zalesovo Beam**	**20.07**	**25**	P		**P**		**10 21 12.8**	**-0.3**
NVS	**Novosibirsk**	**20.31**	**22**	*e*P		**P**		**10 21 15.6**	**0.0**
NVS				*e*S		**S**		**10 24 45.5**	**-5.8**
NVS				pmax		pmax			
	comp=Z,16nm,1.4s								
NVS				pmax		pmax			
	comp=N,19nm,1.6s								
NVS				smax					
	comp=N,15nm,1.9s								
GNI	**Garni**	**20.48**	**288**	P		**P**		**10 21 18.6**	**+1.0**
	comp=N,2.7nm,0.3s,baz=51,slow=6.5,SNR=2.8								
GNI	**Garni**	**20.48**	**288**	P		**P**		**10 21 18.6**	**+1.0**
GNI				pmax		pmax			
	comp=Z,3.0nm,0.3s								
GTA	**Gaotai**	**23.27**	**74**	*e*P		**P**		**10 21 47.3**	**+2.5**
GTA				AMB		AMB			
	comp=Z,6.0nm,1.2s,mb4.0								
ZAK	**Zakamensk**	**27.29**	**49**	*e*P		**P**		**10 22 22.4**	**+1.6**
ZAK				pmax		pmax			
	comp=Z,13nm,0.8s,mb4.6								
SONM	**Songino Array**	**28.67**	**55**	P		**P**		**10 22 34.7**	**+1.6**
	comp=Z,1.8nm,0.7s,mb3.8,baz=266,slow=11,SNR=6.7								
SONM	**Songino Array**	**28.67**	**55**	P		**P**		**10 22 34.7**	**+1.6**
SONM				pmax		pmax			
	comp=Z,2.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**30.85**	**118**	P		**P**		**10 22 53.1**	**+0.6**
	comp=Z,1.0nm,0.5s,mb3.7,baz=303,slow=9.7,SNR=6.6								
CMAR	**Chiang Mai Arr**	**30.85**	**118**	P		**P**		**10 22 53.2**	**+0.6**
CMAR				pmax		pmax			
	comp=Z,1.0nm,0.5s								
ARCES	**ARCESS Array B**	**40.95**	**338**	P		**P**		**10 24 18.3**	**+0.7**
	comp=Z,1.7nm,0.6s,mb3.6,baz=111,slow=9.2,SNR=5.3								
ARCES	**ARCESS Array B**	**40.95**	**338**	P		**P**		**10 24 18.3**	**+0.7**
ARCES				pmax		pmax			
	comp=Z,2.0nm,0.6s								
ARCES	**ARCESS Array B**	**40.95**	**338**	P		**P**		**10 24 18.3**	**+0.7**
NOA	**NORSAR Array B**	**44.10**	**323**	P		**P**		**10 24 43.0**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.0,baz=102,slow=8.0,SNR=2.5								
NOA	**NORSAR Array B**	**44.10**	**323**	P		**P**		**10 24 43.0**	**0.0**
WRA	**Warramunga Arr**	**82.37**	**122**	P		**P**		**10 28 52.5**	**-2.1**
	comp=Z,0.9nm,0.7s,mb3.5,baz=319,slow=4.9,SNR=5.0								
WRA	**Warramunga Arr**	**82.37**	**122**	P		**P**		**10 28 52.5**	**-2.1**
WRA				pmax		pmax			
	comp=Z,1.0nm,0.7s								
ASAR	**Alice Springs**	**84.62**	**125**	P		**P**		**10 29 04.5**	**-1.5**
	comp=Z,0.8nm,0.7s,mb3.6,baz=301,slow=5.0,SNR=4.8								
ASAR

KAPI	Kappang	18.91	95	*e*P		Pn	11 17 17.7	-1.6
CMAR	Chiang Mai Arr	22.06	355	P		P	11 17 49.0	-3.1
	6.6nm,0.7s,mb4.1,baz=187,slow=8.3,SNR=24							
CMAR				LR		LR	11 25 47.1	
	comp=Z,412nm,20.1s,baz=8.5,slow=35							
CMAR	Chiang Mai Arr	22.06	355	P		P	11 17 49.0	-3.1
CMAR				pmax	pmax			
	comp=Z,7.0nm,0.7s							
CMAR				MLR	MLR			
	comp=Z,412nm,20.2s							
CHTO	Chiang Mai	22.42	355	*e*P		P	11 17 55.1	-0.8
CHTO				pmax	pmax			
	comp=Z,30nm,1.5s,mb4.4							
CHTO	Chiang Mai	22.42	355	*e*P		P	11 17 55.1	-0.8
	comp=Z,30nm,1.5s,mb4.4							
BATI	Baumata	23.56	107	P		P	11 18 06.2	-1.1
	comp=Z,35nm,0.7s,mb4.8,baz=309,slow=6.5,SNR=3.1							
FITZ	Fitzroy Crossi	28.20	122	*e*P		P	11 18 49.2	-0.1
	comp=Z,15nm,1.1s,mb4.4							
FITZ	Fitzroy Crossi	28.20	122	P		P	11 18 49.2	-0.1
	comp=Z,3.7nm,0.8s,mb4.0,baz=279,slow=4.3,SNR=4.3							
FITZ	Fitzroy Crossi	28.20	122	*e*P		P	11 18 49.9	+0.5
	comp=Z,18nm,1.0s,mb4.5							
ODAN	Odare	33.01	338	*e*P		P	11 19 32.5	+0.9
	comp=Z,156nm,1.4s,mb5.7							
TAPN	Taplejung	33.34	338	*e*P		P	11 19 35.9	+1.5
	comp=Z,171nm,1.2s							
RAMN	Ramite	33.40	336	*e*P		P	11 19 36.5	+1.5
JIRN	Jiri	34.20	336	*e*P		P	11 19 43.1	+1.2
PKI	Pulchoki	34.44	335	*e*P		P	11 19 44.7	+0.7
LSA	Lhasa	34.45	345	P		P	11 19 45.0	+0.9
GUN	Gumba	34.55	336	*e*P		P	11 19 46.1	+1.2
	comp=Z,90nm,0.7s,mb5.7							
DMN	Daman	34.60	335	*e*P		P	11 19 45.8	+0.4
KKN	Kakani	34.68	335	*e*P		P	11 19 46.7	+0.6
	comp=Z,78nm,1.0s,mb5.5							
GKN	Gorkha	35.14	335	*e*P		P	11 19 50.5	+0.4
KOLN	Koldanda	35.40	333	*e*P		P	11 19 52.9	+0.7
	comp=Z,17nm,0.5s,mb5.1							
DANN	Dangsing	35.82	334	*e*P		P	11 19 56.4	+0.5
WRA	Warramunga Arr	36.44	119	P		P	11 20 01.5	+0.2
	comp=Z,2.5nm,0.6s,mb4.3,baz=310,slow=9.0,SNR=53							
WRA				LR	LR		11 36 43.4	
	comp=Z,404nm,19.9s,baz=335,slow=39							
WRA	Warramunga Arr	36.44	119	P		P	11 20 01.5	+0.2
WRA				pmax	pmax			
	comp=Z,3.0nm,0.6s							
WRA				MLR	MLR			
	comp=Z,404nm,19.9s							
WRAB	Tennant Creek	36.45	119	*e*P		P	11 20 01.8	+0.4
WRAB	Tennant Creek	36.45	119	*e*P		P	11 20 01.6	+0.2
WB2	Warramunga Arr	36.45	119	*e*P		P	11 20 01.3	-0.1
ASAR	Alice Springs	37.61	125	P		P	11 20 11.7	+0.5
	comp=Z,1.7nm,0.3s,mb4.3,baz=300,slow=7.6,SNR=37							
ASAR	Alice Springs	37.61	125	P		P	11 20 11.7	+0.5
ASAR				pmax	pmax			
	comp=Z,2.0nm,0.4s							
NJ2	Nanjing	39.43	24	*e*P		P	11 20 26.5	+0.2
NJ2				AMB	AMB			
	comp=Z,20nm,0.8s,mb5.0							
SSE	Sheshan	39.64	28	P		P	11 20 28.4	+0.3
SSE				S	S		11 26 38.6	+12
SSE				AMB	AMB			
	comp=Z,35nm,0.8s,mb5.2							
SSE				AMB	AMB			
	comp=Z,343nm,3.7s							
SSE				LR	LR			
	comp=N,202nm,16.9s							
SSE				LR	LR			
	comp=E,301nm,16.7s							
SSE				LR	LR			
	comp=Z,328nm,14.7s							
LZH	Lanzhou	39.64	4	*e*P		P	11 20 28.8	+0.8
LZH				AP	pP		11 20 37.0	-7.4
LZH				AMB	AMB			
	comp=Z,86nm,1.6s,mb5.3							
LZH				AMB	AMB			
	comp=Z,180nm,4.0s							
LZH				LR	LR			
	comp=E,886nm,14.1s							
LZH				LR	LR			
	comp=Z,1µm,14.8s							
DDI	Dehra Dun	40.21	329	*ex*		P	11 20 30.1	-2.7
JOW	Kunigami	40.28	40	P		P	11 20 33.5	0.0
	comp=Z,13nm,0.7s,mb4.9,baz=130,slow=4.8,SNR=3.0							
GTA	Gaotai	42.87	359	⇑P		P	11 20 55.0	+0.6
GTA				S		S	11 27 19.8	+5.5
GTA				AMB	AMB			
	comp=Z,15nm,1.4s,mb4.5							
GTA				AMB	AMB			
	comp=Z,174nm,5.1s							
GTA				LR	LR			
	comp=N,504nm,15.9s							
GTA				LR	LR			
	comp=E,715nm,17.4s							
GTA				LR	LR			
	comp=Z,583nm,16.2s							
HHC	Hu-ho-hao-te	45.37	11	*e*P		P	11 21 15.8	+1.4
HHC				AMB	AMB			
	comp=Z,19nm,0.6s,mb5.0							
HHC				AMB	AMB			
	comp=Z,173nm,6.1s							
BJI	Beijing	45.72	16	P		P	11 21 17.8	+0.6
BJI				AMB	AMB			
	comp=Z,15nm,1.4s,mb4.5							
BJI				LR	LR			
	comp=N,1µm,16.1s							
BJI				LR	LR			
	comp=E,331nm,16.1s							
BJI				LR	LR			
	comp=Z,637nm,17.0s							
CTA	Charters Tower	47.15	114	LR		LR	11 41 21.8	
	comp=Z,274nm,19.6s,baz=277,slow=36							
STKA	Stephens Creek	47.43	131	*e*P		P	11 21 32.1	+1.4
	comp=Z,5.7nm,0.9s,mb4.3							
STKA	Stephens Creek	47.43	131	P		P	11 21 31.6	+0.9
	comp=Z,3.7nm,0.9s,mb4.1,baz=297,slow=10,SNR=4.9							
KSRS	Korea Array	48.04	29	P		P	11 21 34.1	-1.2
	comp=Z,8.9nm,1.0s,mb4.6,baz=223,slow=9.0,SNR=19							
KSRS	Korea Array	48.04	29	P		P	11 21 34.1	-1.2
KSRS				pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.5							
CBIJ	Chichi jima	50.27	50	LR		LR	11 41 22.7	
	comp=Z,103nm,19.2s,baz=182,slow=34							
SONM	Songino Array	51.52	5	P		P	11 22 02.3	+0.8
	comp=Z,7.9nm,0.6s,mb4.9,baz=187,slow=9.6,SNR=62							
SONM	Songino Array	51.52	5	P		P	11 22 02.3	+0.8
SONM				pmax	pmax			
	comp=Z,8.0nm,0.6s							
ULN	Ulaanbaatar	51.60	5	*e*P		P	11 22 03.4	+1.2
ULN				pmax	pmax			
	comp=Z,70nm,2.0s,mb5.3							
ULN	Ulaanbaatar	51.60	5	*e*P		P	11 22 03.4	+1.2
	comp=Z,70nm,2.0s,mb5.3							
CN2	Changchun	52.18	22	*e*P		P	11 22 06.6	0.0
CN2				AMB	AMB			
	comp=Z,20nm,1.0s,mb5.1							
EKS2	Erkin-Say	52.22	335	*e*P		P	11 22 07.7	+0.9
	comp=Z,12nm,1.0s,mb4.9							
MK31	Makanchi Array	52.85	344	*i* P		P	11 22 11.1	-0.3
MK31				pmax	pmax			
	comp=Z,16nm,0.9s,mb5.0							
MKAR	Makanchi Array	52.85	344	P		P	11 22 11.4	-0.1
	comp=Z,8.1nm,0.7s,mb4.8,baz=148,slow=7.8,SNR=47							
MKAR	Makanchi Array	52.85	344	P		P	11 22 11.4	0.0
MKAR				pmax	pmax			
	comp=Z,8.0nm,0.7s							
MJAR	Matsushiro Arr	53.05	38	P		P	11 22 12.6	-0.5
	comp=Z,2.4nm,0.6s,mb4.4,baz=218,slow=7.3,SNR=9.4							
MJAR				LR	LR		11 47 03.1	
	comp=Z,187nm,18.2s,baz=240,slow=39							
MJAR	Matsushiro Arr	53.05	38	P		P	11 22 12.6	-0.6
MJAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
MJAR				MLR	MLR			
	comp=Z,187nm,18.3s							
ZAK	Zakamensk	53.88	2	*e*P		P	11 22 27.8	+8.9
ZAK				pmax	pmax			
	comp=Z,5.0nm,1.9s,mb4.2							
TLY	Talaya	55.19	2	*e*P		P	11 22 29.7	+1.3
TLY				*e*			11 22 38.7	
TLY				pmax	pmax			
	comp=Z,14nm,1.7s,mb4.7							
TLY				MLR	MLR			
	comp=Z,461nm,16.0s							
TLY	Talaya	55.19	2	*e*P		P	11 22 29.4	+1.0
KURK	Kurchatov	57.43	343	P		P	11 22 43.5	-0.8
	comp=Z,5.4nm,0.7s,mb4.7,baz=164,slow=6.8,SNR=17							
KURK	Kurchatov	57.43	343	P		P	11 22 43.6	-0.8
KURK				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.7							
KURK	Kurchatov	57.43	343	*e*P		P	11 22 43.9	-0.5
ZAA0	Zalesovo Array	58.95	349	*e*P		P	11 22 55.0	0.0
ZALV	Zalesovo Beam	58.95	349	P		P	11 22 54.6	-0.3
	comp=Z,11nm,0.8s,mb5.0,baz=178,slow=5.1,SNR=22							
ZALV	Zalesovo Beam	58.95	349	P		P	11 22 54.6	-0.3
ZALV				pmax	pmax			
	comp=Z,11nm,0.8s,mb4.9							
KLR	Kul'dur	59.11	23	*e*P		P	11 22 53.0	-3.2
NVS	Novosibirsk	60.10	348	*e*P		P	11 23 01.5	-1.3
NVS				pmax	pmax			
	comp=Z,16nm,1.4s,mb4.9							
NVS				pmax	pmax			
	comp=N,13nm,1.5s							
NVS				pmax	pmax			
	comp=E,9.0nm,1.4s							
ASAJ	Asahikawa	60.52	33	P		P	11 23 06.0	+0.1
	comp=E,6.2nm,0.6s,mb4.8,baz=158,slow=4.5,SNR=7.3							
ASAJ	Asahikawa	60.52	33	P		P	11 23 06.1	+0.2
ASAJ				pmax	pmax			
	comp=Z,6.0nm,0.6s							
VOSK	Vostochnaya	61.57	340	P		P	11 23 11.8	-1.1
VOSK				pmax	pmax			
	comp=Z,7.0nm,0.7s,mb4.8							
BVA0	Borovoye Array	62.03	340	*i* P		P	11 23 14.3	-1.6
BVA0				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.3							
BVAR	Borovoye Array	62.03	340	P		P	11 23 15.2	-0.7
	comp=Z,6.5nm,0.6s,mb4.8,baz=145,slow=9.0,SNR=26							
BVAR	Borovoye Array	62.03	340	P		P	11 23 15.2	-0.7
BVAR				pmax	pmax			
	comp=Z,7.0nm,0.6s							
BRVK	Borovoye	62.09	340	*e*P		P	11 23 15.8	-0.5
BOD	Bodaibo	62.20	8	*e*P		P	11 23 17.0	0.0
BOD				pmax	pmax			
	comp=Z,6.0nm,1.6s,mb4.4							
YSS	Yuzh-Sakhalins	62.45	31	⇑*e*P		P	11 23 19.1	+0.2
YSS				pmax	pmax			
	comp=Z,25nm,1.1s,mb5.2							
YSS	Yuzh-Sakhalins	62.45	31	*e*P		P	11 23 19.2	+0.3
AB31	Akbulak array	63.49	331	*i* P		P	11 23 24.7	-1.1
AB31				pmax	pmax			
	comp=Z,14nm,0.8s,mb4.9							
AKTK	Aktyubinsk	65.21	331	P		P	11 23 34.6	-2.3
AKTO	Aktyubinsk	65.21	331	P		P	11 23 34.6	-2.3
	comp=Z,2.7nm,0.8s,mb4.1,baz=126,slow=5.0,SNR=5.5							
AKTO	Aktyubinsk	65.21	331	P		P	11 23 34.6	-2.4
AKTO				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.2							
MAW	Mawson	68.89	195	LR		LR	11 47 04.1	
	comp=Z,242nm,20.1s,baz=186,slow=30							
ARU	Arti	69.06	336	*d* iP		P	11 24 00.3	-0.9
ARU				*e*		pP	11 24 22.2	+3.2
ARU				*e*			11 26 29.6	
ARU				*e*S		S	11 33 02.8	+1.6
ARU				*e*SS		SS	11 37 25.5	-2.9
ARU				pmax	pmax			
	comp=Z,17nm,1.7s,mb4.6							
ARU	Arti	69.06	336	*e*P		P	11 24 00.6	-0.6
	comp=Z,21nm,1.5s,mb4.8							
YAK	Yakutsk	69.14	14	⇑*e*P		P	11 24 00.6	-1.0
YAK				pmax	pmax			
	comp=Z,32nm,1.4s,mb5.0							
EIL	Elat	71.12	303	P		P	11 24 14.8	+0.3
	comp=Z,2.1nm,0.5s,mb4.2,baz=79,slow=10,SNR=3.6							
RPZ	Rata Peaks	73.22	135	P		P	11 24 28.2	+1.5
	comp=Z,2.9nm,0.8s,mb4.2,baz=310,slow=7.9,SNR=2.5							
PETK	Petropavlovsk-	73.84	32	P		P	11 24 30.6	+0.5
	comp=Z,2.8nm,1.0s,mb4.0,baz=266,slow=1.8,SNR=4.2							
PETK	Petropavlovsk-	73.84	32	P		P	11 24 30.6	+0.5
PETK				pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.0							
BOSA	Boshof	75.60	242	P		P	11 24 41.0	+0.2
	comp=Z,2.6nm,0.9s,mb4.0,baz=104,slow=4.2,SNR=2.9							
BOSA				LR	LR		11 50 57.7	
	comp=Z,172nm,19.9s,baz=140,slow=30							
URZ	Urewera	76.96	128	P		P	11 24 52.1	+3.7
	comp=Z,5.2nm,0.8s,mb4.3,baz=251,slow=8.9,SNR=2.3							
OBN	Obninsk	78.64	328	*e*P		P	11 24 56.5	-0.8
OBN				*e*			11 25 05.7	
OBN				*e*		pP	11 25 17.9	+2.5
OBN				pmax	pmax			
	comp=Z,6.0nm,1.3s,mb4.3							
SUR	Sutherland	79.63	238	LR		LR	11 53 29.0	
	comp=Z,161nm,19.9s,baz=78,slow=31							
ARCES	ARCESS Array B	88.31	340	P		P	11 25 45.8	-0.8
	comp=Z,3.7nm,0.7s,mb4.5,baz=103,slow=4.2,SNR=5.4							
ARCES	ARCESS Array B	88.31	340	P		P	11 25 45.8	-0.8
ARCES				pmax	pmax			
	comp=Z,4.0nm,0.7s							
GERES	GERESS Array B	90.85	319	P		P	11 25 58.3	-0.5
	comp=Z,0.4nm,0.3s,mb4.0,baz=108,slow=4.3,SNR=6.3							
TORD	Torodi Ar. Bea	99.72	283	LR		LR	12 08 12.9	
	comp=Z,123nm,19.9s,baz=125,slow=33							
NVAR	Mina Array Bea	130.33	41	PKP		PKPdf	11 32 07.7	+1.8
	comp=Z,0.7nm,0.6s,baz=262,slow=4.5,SNR=3.3							
ELK	Elko	130.85	36	PKP		PKPdf	11 32 09.8	+2.9
	comp=Z,0.3nm,0.3s,baz=243,slow=2.3,SNR=3.2							
TXAR	Lajitas Array	145.47	40	PKPbc		PKPbc	11 32 35.7	+1.7
	comp=Z,8.6nm,0.7s,baz=280,slow=0.7,SNR=58							
TXAR	Lajitas Array	145.47	40	PKIKP		PKPbc	11 32 35.7	+1.7
TXAR				pmax	pmax			
	comp=Z,9.0nm,0.7s							
TKL	Tuckaleechee C	147.88	7	PKPbc		PKPbc	11 32 41.0	+0.3
	comp=Z,5.0nm,0.6s,baz=243,slow=4.5,SNR=5.0							
TKL	Tuckaleechee C	147.88	7	PKP2		PKPbc	11 32 41.0	+0.2
TKL				pmax	pmax			
	comp=Z,5.0nm,0.6s							
LVC	Limon Verde	152.03	201	PKPbc		PKPbc	11 32 49.9	-1.3
	comp=Z,1.9nm,0.2s,baz=326,slow=3.6,SNR=17							

*IDC **19** 11:14:15.6±2.0, 3626N×6894E, h0km, mb3.8/5, mb1 3.8/9, mb1mx3.7/26, mbtmp3.7/9, ML3.3/4, Error ellipse: s-maj=38.8km s-min=21.0km az=154.0*

*ISCJB **19** 11:14:16.9±0.5, 3656N±004×6871E±009, h10km, mb3.6/4, Error ellipse: s-maj=10.0km s-min=5.7km az=12.6*

*NNC **19** 11:14:18.5±4.7, 3649N×6881E, h4km±27km, mb3.9, mpv3.8, Error ellipse: s-maj=35.1km s-min=24.9km az=161.0*

*NEIC **19** 11:14:18.4±0.7, 3653N×6877E, h10km, Error ellipse: s-maj=13.2km s-min=9.6km az=122.0*

*MOS **19** 11:14:19.6±0.8, 3659N×6880E, h33km, mb4.1/3, Error ellipse: s-maj=24.2km s-min=10.8km az=77.5*

ISC 19 11:14:18.6±0.6, 3651N±004×6865E±009, h10km, n34, σ1º27/37, mb3.6/4, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBL	Kabul	1.99	171	*e*Pn		Pn	11 14 52.4	+0.2
KBL				Sn		Sn	11 15 17.9	+0.7
KK31	Karatay Array	6.74	12	⇓Pn		Pn	11 15 58.8	+1.2
	1.3nm,0.4s,baz=184,slow=10,SNR=20							
KK31				⇑Sn		Sn	11 17 16.7	+2.4
	3.0nm,0.5s,baz=205,slow=25							
KK31				⇑Lg			11 17 52.2	
	8.7nm,0.6s,baz=192,slow=27							
AML	Almayashu	6.84	33	P		Pn	11 15 60.0	+1.0
	SNR=9.3							
AML	Almayashu	6.84	33	*e*Pn		Pn	11 15 59.9	+1.0
	39nm,0.6s							
EKS2	Erkin-Say	7.31	31	P		Pn	11 16 06.3	+0.9
	SNR=5.9							
EKS2	Erkin-Say	7.31	31	*e*Pg		Pn	11 16 06.7	+1.3
AAK	Ala-Archa	7.60	35	P		Pn	11 16 10.4	+1.0
	SNR=16							
KBK	Karagaybulak	7.83	36	P		Pn	11 16 14.8	+2.3
	SNR=11							
CHMS	Chumysh	8.01	34	P		Pn	11 16 15.1	+0.2
	SNR=13							
USP	Ospenovka	8.11	32	P		Pn	11 16 16.0	-0.3
	SNR=13							
TKM2	Tokmak 2	8.35	38	⇑Pn		Pn	11 16 19.6	0.0
	5.8nm,0.6s							
TKM2				⇑Sn		Sn	11 17 54.7	+0.9
	4.7nm,0.7s							
TKM2				⇓Lg			11 18 42.1	
	8.9nm,1.1s							
TKM2	Tokmak 2	8.35	38	P		Pn	11 16 20.0	+0.4
TKM2				pmax	pmax			
	comp=Z,9.0nm,0.6s							
TKM2	Tokmak 2	8.35	38	P		Pn	11 16 19.7	+0.1
	SNR=16							
TKM2	Tokmak 2	8.35	38	Pn		Pn	11 16 20.0	+0.4
	comp=Z,9.0nm,0.6s							
AB31	Akbulak array	14.24	336	⇑P		Pn	11 17 38.7	-1.4
	comp=Z,1.9nm,0.6s,baz=151,slow=12,SNR=28							
MK31	Makanchi Array	14.46	40	*e*P		Pn	11 17 41.5	-1.6
MKAR	Makanchi Array	14.46	40	Pn		Pn	11 17 41.1	-2.0
	comp=Z,0.1nm,0.3s,baz=231,slow=14,SNR=21							
AKTK	Aktyubinsk	15.89	334	Pn		Pn	11 18 02.0	-0.2
AKTO	Aktyubinsk	15.89	334	⇓P		Pn	11 18 06.6	+4.4
	comp=Z,0.4nm,0.9s							
AKTO	Aktyubinsk	15.89	334	Pn		Pn	11 18 02.0	-0.2
	comp=Z,0.0nm,0.3s,baz=154,slow=17,SNR=3.4							
KURK	Kurchatov	15.91	24	Pn		Pn	11 17 57.5	-5.0
	comp=Z,0.1nm,0.3s,baz=210,slow=12,SNR=5.1							
BVAR	Borovoye Array	16.56	4	Pn		Pn	11 18 09.0	-1.8
	comp=Z,0.4nm,0.3s,baz=180,slow=2.3,SNR=2.6							
ZAA0	Zalesovo Array	20.74	28	*e*P		P	11 18 57.8	-1.4
ZALV	Zalesovo Beam	20.74	28	P		P	11 18 57.9	-1.2
	comp=Z,5.3nm,0.8s,baz=230,slow=9.3,SNR=11							
ZALV	Zalesovo Beam	20.74	28	P		P	11 18 57.9	-1.3
ZALV				pmax	pmax			
	comp=Z,5.0nm,0.8s							
ZALV	Zalesovo Beam	20.74	28	P		P	11 18 57.9	-1.2
NVS	Novosibirsk	20.90	24	*e*P		P	11 18 58.7	-2.2
SONM	Songino Array	29.89	56	P		P	11 20 24.7	-1.5
	comp=Z,1.5nm,0.9s,mb3.7,baz=258,slow=8.9,SNR=6.5							
SONM	Songino Array	29.89	56	P		P	11 20 24.7	-1.6
SONM				pmax	pmax			
	comp=Z,2.0nm,0.9s							
AKASG	Malin Array Be	31.47	309	P		P	11 20 41.7	+1.5
	comp=Z,0.2nm,0.3s,mb3.4,baz=84,slow=8.4,SNR=4.3							
NOA	NORSAR Array B	43.24	323	P		P	11 22 20.0	+0.4
	comp=Z,1.1nm,0.6s,mb3.7,baz=100,slow=8.1,SNR=4.5							
NOA	NORSAR Array B	43.24	323	P		P	11 22 20.0	+0.3
NOA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
NOA	NORSAR Array B	43.24	323	P		P	11 22 20.0	+0.4
TORD	Torodi Ar. Bea	63.83	267	P		P	11 24 52.0	+0.6
	comp=Z,0.6nm,0.8s,mb3.7,baz=37,slow=4.9,SNR=4.3							

*ISCJB **19** 11:15:23.6±0.7, 5021N±005×1906E±004, h0km, Error ellipse: s-maj=7.7km s-min=3.6km az=11.7*

*NEIC **19** 11:15:24.9±1.5, 5018N×1911E, h5km, MG2.5(WAR), Error ellipse: s-maj=20.7km s-min=8.1km az=170.0*

*WAR **19** 11:15:25.4, 50.11N×1921E, ML2.4, Mining Induced*

ISC 19 11:15:25.3±0.7, 5015N±005×1912E±004, h0km, n13, σ1º33/24, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OJC	Ojcow	0.44	81	*e*Pg		Pg	11 15 32.8	-0.9
OJC				*e*Sg		Sg	11 15 38.5	-0.9
NIE	Niedzica	1.06	133	*e*Pg		Pg	11 15 45.3	-0.4
NIE				*e*Sg		Sg	11 16 01.1	+1.7
MORC	Moravsky Berou	1.09	250	*e*Pg		Pg	11 15 45.8	-0.3
MORC				*e*Sg		Sg	11 16 01.9	+1.7
STHS	Stebnicka Huta	1.56	117	*e*PN		Pn	11 15 54.0	-0.2
STHS				*e*SN		Sn	11 16 18.3	+3.2
STHS	Stebnicka Huta	1.56	117	*e*Pn		Pn	11 15 54.0	-0.2
STHS				*e*Sn		Sn	11 16 18.4	+3.3
KOLL	Kolacno	1.64	197	*e*PN		Pn	11 15 55.1	-0.3
KOLL				*e*SN		Sn	11 16 16.3	-0.8
KOLL	Kolacno	1.64	197	*e*Pn		Pn	11 15 55.1	-0.3
KOLL				*e*Sn		Sn	11 16 16.3	-0.8
VYHS	Vyhne	1.67	187	*e*PN		Pn	11 15 54.0	-1.7
VYHS				*e*SN		Sn	11 16 15.3	-2.5
VYHS	Vyhne	1.67	187	*e*Pn		Pn	11 15 54.1	-1.6
VYHS				*e*Sn		Sn	11 16 15.3	-2.5
CRVS	Cervenica-Dubn	1.97	128	*e*PN		Pn	11 16 00.5	+0.6
CRVS				*e*SN		Sn	11 16 27.9	+2.6
CRVS	Cervenica-Dubn	1.97	128	*e*Pn		Pn	11 16 00.5	+0.6
CRVS				*e*Sn		Sn	11 16 27.9	+2.6
BRG	Berggiesshubel	3.38	284	SG		Sg	11 17 13.1	-0.8
	2.2nm,0.4s							
CLL	Collm	4.06	289	*e*Sg		Sg	11 17 37.0	+1.5

*NEIC **19** 11:15:31.9, 3137S×7133W, h46km, MD4.0(GUC), After GUC.*

GUC 19 11:15:31.9±0.6, 3137S×7133W, h46km±3km, MD4.0, ML3.6, 4C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHNG	Los Chungos	0.53	196	⇑*i*P		Pn	11 15 43.5	+0.2
CHNG				*i* S		Sn	11 15 51.9	+0.4
OVCH	Ovalle	0.77	8	*e*P		Pn	11 15 47.0	+0.6
OVCH				*i* S		Sn	11 15 58.4	+1.5
PTCH	Petorca	0.95	159	⇑*i*P		Pn	11 15 49.2	+0.4
PTCH				*i* S		Sn	11 16 02.3	+1.0
PTCH				AML		AML	11 16 06.8	
	comp=E,2µm,0.1s							
PTCH	Petorca	0.95	159	⇑*i*P		Pn	11 15 49.2	+0.4
PTCH				*i* S		Sn	11 16 02.3	+1.0
PACH	Papudo	1.17	185	⇓*i*P		Pn	11 15 52.5	+0.7
PACH				*i* S		Sn	11 16 07.6	+1.1
TLL	Tololo Astrono	1.28	21	*e*P		Pn	11 15 54.3	+0.9
TLL				*i* S		Sn	11 16 11.4	+2.0
TLL				AML		AML	11 16 13.5	
	comp=N,599nm,0.5s							
TLL	Tololo Astrono	1.28	21	*e*P		Pn	11 15 54.3	+0.9
TLL				*i* S		Sn	11 16 11.4	+2.0
JACH	Jahuel	1.45	155	*i* P

2.2nm,0.3s,baz=13,slow=12,SNR=25
WRA Sn **Sn** **11 23 35.3 -0.7**
0.3nm,0.3s,baz=8.9,slow=23,SNR=4.8
WRA Lg 11 25 10.6
0.5nm,0.3s,baz=19,slow=30,SNR=5.3
WRA Warramunga Arr 15.65 191 Pn **Pn** **11 20 43.2 +0.5**
WRA Sn **Sn** **11 23 35.3 -0.7**
FITZ Fitzroy Crossi 17.74 219 P **Pn** **11 21 04.3 -4.9**
0.1nm,0.3s,baz=30,slow=14,SNR=2.5
FITZ S Sn 11 24 09.4 -17
0.2nm,0.3s,baz=40,slow=22,SNR=3.7
CTA Charters Tower 17.77 152 P **Pn** **11 21 09.1 -0.5**
0.3nm,0.3s,baz=334,slow=10,SNR=3.3
ASAR Alice Springs 19.36 190 P **Pn** **11 21 25.9 -3.0**
0.8nm,0.3s,baz=13,slow=9.8,SNR=20
KSRS Korea Array 42.63 349 LR LR 11 40 03.1
comp=Z,80nm,19.2s,baz=225,slow=32
CMAR Chiang Mai Arr 44.19 302 P **P** **11 25 11.6 +0.2**
2.1nm,0.8s,mb3.9,baz=123,slow=6.2,SNR=8.9
MKAR Makanchi Array 70.37 323 P **P** **11 28 16.2 +0.2**
1.6nm,0.6s,mb4.2,baz=106,slow=7.9,SNR=8.5
MKAR Makanchi Array 70.37 323 P **P** **11 28 16.2 +0.2**
KURK Kurchatov 74.39 326 P **P** **11 28 39.5 -0.4**
0.7nm,0.6s,mb3.8,baz=117,slow=4.6,SNR=3.4
BVAR Borovoye Array 79.99 326 P **P** **11 29 11.2 0.0**
1.6nm,0.5s,mb4.2,baz=115,slow=6.8,SNR=6.3

*MEX **19** 11:20:26.0±0.7, 1346N×9272W, h15km±73km, MD4.2*
*ISCJB **19** 11:20:27.5±0.9, 1365N±006×9281W±004, h33km, mb4.0/3, Error ellipse: s-maj=9.4km s-min=5.5km az=14.0*
*IDC **19** 11:20:27.4±2.9, 1392N×9263W, h0km, mb3.9/2, mb1 4.0/5, mb1mx3.7/23, mbtmp3.7/5, ML3.3/3, MS3.5/2, Ms1 3.5/2, ms1mx2.7/35, Error ellipse: s-maj=46.6km s-min=38.7km az=177.0*
*CASC **19** 11:20:29.2±4.2, 1432N×9245W, h160km±143km, MD4.6, mb4.1(NEIC)*
*NEIC **19** 11:20:33.3±2.1, 1407N×9266W, h35km, mb4.1/1, Error ellipse: s-maj=38.9km s-min=13.6km az=199.0*
ISC 19 11:20:29.7±0.9, 1371N±007×9274W±004, h35km, n25, σ1ᵗ18/29, mb4.0/3, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THIG		**1.28**	**21**	*i* P		**Pn**	**11 20 48.2**	**-3.0**
THIG				*i* S		**Sn**	**11 21 07.1**	**-0.1**
FUG	**Fuego 3**	**1.98**	**68**	*e*P		**Pn**	**11 21 00.2**	**-0.6**
FG6		**1.99**	**65**	*e*P		**Pn**	**11 21 00.7**	**-0.3**
NBG	**Las Nubes**	**2.48**	**69**	*e*P		**Pn**	**11 21 08.8**	**+1.1**
CCIG	**Comitan**	**2.63**	**13**	*e*P		**Pn**	**11 21 09.3**	**-0.3**
CCIG				*i* S		**Sn**	**11 21 41.5**	**+1.1**
RBDL	**Robledal**	**2.99**	**82**	*e*P	x		11 21 10.8	
SNJE	**San Jose**	**3.05**	**87**	*e*P	x		11 21 15.6	
TGIG		**3.08**	**353**	*e*P		**Pn**	**11 21 15.0**	**-0.9**
TGIG				*i* S		**Sn**	**11 21 52.8**	**+1.3**
BQQS	**Boqueron**	**3.36**	**89**	*e*P	x		11 21 18.3	
CMIG	**Matias Romero**	**3.95**	**329**	Pn		**Pn**	**11 21 26.8**	**-1.1**
	0.7nm,0.3s,baz=142,slow=14,SNR=10							
CMIG				S		**Sn**	**11 22 16.2**	**+3.2**
	3.2nm,0.3s,baz=135,slow=14,SNR=3.8							
CMIG	**Matias Romero**	**3.95**	**329**	*i* P		**Pn**	**11 21 26.9**	**-0.9**
CMIG				*i* S		**Sn**	**11 22 13.8**	**+0.8**
CMIG	**Matias Romero**	**3.95**	**329**	Pn		**Pn**	**11 21 26.8**	**-1.1**
CMIG				S		**Sn**	**11 22 16.2**	**+3.2**
VHO	**Vista Hermosa**	**5.10**	**312**	*i* P		**Pn**	**11 21 42.1**	**-1.6**
VHO				*i* S		**Sn**	**11 22 41.5**	**0.0**
TGUH	**Tegucigalpa,Un**	**5.32**	**86**	Pn		**Pn**	**11 21 48.7**	**+1.9**
PNIG	**Pinotepa**	**5.85**	**298**	*i* P		**Pn**	**11 21 53.4**	**-0.6**
PNIG				*i* S		**Sn**	**11 22 60.0**	**+0.1**
TEIG	**Tepich**	**7.76**	**33**	Pn		**Pn**	**11 22 19.7**	**-0.6**
	2.0nm,0.3s,baz=232,slow=3.4,SNR=7.3							
TEIG				S		**Sn**	**11 23 45.3**	**-1.8**
	0.6nm,0.3s,baz=180,slow=19,SNR=2.4							
TEIG				LR		LR	11 25 46.2	
	comp=Z,138nm,18.8s,baz=57,slow=42							
TEIG	**Tepich**	**7.76**	**33**	*e*Pn		**Pn**	**11 22 19.5**	**-0.8**
TEIG				LR		LR	11 25 46.2	
TXAR	**Lajitas Array**	**18.56**	**329**	P		**Pn**	**11 24 43.7**	**-0.3**
	0.0nm,0.3s,baz=149,slow=15,SNR=6.4							
TXAR	**Lajitas Array**	**18.56**	**329**	P		**Pn**	**11 24 43.7**	**-0.3**
AMTX	**Amarillo**	**22.58**	**341**	P		**P**	**11 25 28.6**	**+1.5**
	4.7nm,0.6s,mb4.1							
NVAR	**Mina Array Bea**	**33.45**	**322**	P		**P**	**11 27 08.7**	**+3.3**
	0.5nm,0.6s,mb3.6,baz=129,slow=8.5,SNR=5.8							
YKA	**Yellowknife Ar**	**51.15**	**347**	P		**P**	**11 29 29.6**	**+0.6**
	2.0nm,0.7s,mb4.2,baz=151,slow=7.5,SNR=5.2							
YKA	**Yellowknife Ar**	**51.15**	**347**	P		**P**	**11 29 29.6**	**+0.6**
RAR	**Rarotonga**	**74.39**	**243**	LR		LR	11 56 08.9	
	comp=Z,77nm,20.7s,baz=147,slow=29							
CMAR	**Chiang Mai Arr**	**146.03**	**340**	PKPbc		PKPbc	11 40 08.8	+2.0
	1.2nm,0.8s,baz=344,slow=2.9,SNR=5.1							

*MOS **19** 11:22:22.7±1.1, 6153N×14607W, h25km, mb4.5/23, Error ellipse: s-maj=13.7km s-min=7.7km az=110.7*
*BJI **19** 11:22:24.5, 6140N×146.10W, h30km, mB5.0, mb4.8, Ms4.8, Msz4.6*
*ISCJB **19** 11:22:24.8±0.3, 6142N±002×146.15W±004, h37km±3km, mb4.4/50, MS3.9/17, Error ellipse: s-maj=4.0km s-min=2.4km az=29.2*
*NEIC **19** 11:22:26.6, 6138N×146.11W, h31km, mb4.5/14, ML4.4(AEIC), ML4.7(PMR), After AEIC.*
NEIC Felt [IV] at Copper Center and Valdez; [III] at Anchorage. Also felt at Cordova, Eagle River, Girdwood, Glennallen, Palmer and Wasilla.
*IDC **19** 11:22:26.0±0.4, 6145N×146.15W, h43km±3km, mb4.0/24, mb1 4.1/27, mb1mx4.1/35, mbtmp4.0/27, ML3.9/3, MS3.5/13, Ms1 3.5/13, ms1mx3.4/35, Error ellipse: s-maj=14.9km s-min=8.8km az=28.0*
*PGC **19** 11:22:27.3, 6141N×145.46W, h1km, Mb4.5(AEIC), ML4.4(AEIC), 56km Ene of Valdez, Ak Southern Alaska*
ISC 19 11:22:25.7±0.5, 6141N±002×14615W±003, h28km±3km, h38km±2.5km; pP-P, n445, σ0ᵗ76/460, mb4.4/50, MS3.9/17, 135C-144D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DIV	**Divide**	**0.33**	**147**	P		**Pb**	**11 22 33.6**	**+0.2**
DIV				S		**Sb**	**11 22 39.4**	**+0.7**
BMRM	**Bremner River**	**0.87**	**120**	*e*Pg		**Pn**	**11 22 40.5**	**-1.4**
BMRM				S		**Sb**	**11 22 52.3**	**-1.0**
EYAK	**Cordova Ski Ar**	**0.89**	**167**	*e*Pg		**Pn**	**11 22 41.4**	**-0.7**
EYAK				S		**Sb**	**11 22 53.1**	**-0.6**
EYAK				Sg		**Sb**	**11 22 54.6**	**+0.8**
HARP	**HAARP**	**1.11**	**25**	P		**Pn**	**11 22 45.5**	**+0.3**
HARP				S		**Sn**	**11 23 00.7**	**+1.2**
GHO	**Glory Hole Cre**	**1.38**	**287**	P		**Pn**	**11 22 49.2**	**+0.3**
PMR	**Palmer**	**1.44**	**279**	*e*Pn		**Pn**	**11 22 50.0**	**+0.2**
PMR				*e*Sn		**Sn**	**11 23 09.2**	**+1.4**
RC01	**Rabbit Creek A**	**1.77**	**261**	*e*Pn		**Pn**	**11 22 54.4**	**+0.2**
RC01				*e*Sn		**Sn**	**11 23 15.9**	**+0.2**
MENT	**Mentasta**	**1.91**	**36**	*e*P		**Pn**	**11 22 56.8**	**+0.6**
FIB	**Fire Island**	**1.96**	**265**	P		**Pn**	**11 22 57.0**	**+0.1**
MID	**Middleton Isla**	**1.99**	**183**	P		**Pn**	**11 22 56.9**	**-0.5**
SEW	**Seward**	**2.08**	**233**	*e*Sn		**Sn**	**11 23 23.4**	**-0.2**
SLKM	**Skilak Lake**	**2.18**	**247**	*e*P		**Pn**	**11 23 00.1**	**+0.1**
BCA3	**Beaver Creek A**	**2.63**	**49**	P		**Pn**	**11 23 07.0**	**+0.8**
KTH	**Kantishna Hill**	**3.09**	**316**	*e*Pn		**Pn**	**11 23 13.4**	**+1.0**
KTH				*e*Sn		**Sn**	**11 23 51.4**	**+3.1**
PPLA	**Purkeypile**	**3.20**	**300**	P		**Pn**	**11 23 14.5**	**+0.5**
IL1	**Eielson Array**	**3.39**	**355**	P		**Pn**	**11 23 16.4**	**-0.2**
ILB	**Eielson Array**	**3.39**	**355**	P		**Pn**	**11 23 16.4**	**-0.2**
COLA	**College**	**3.56**	**348**	*e*P		**Pn**	**11 23 19.1**	**+0.2**
PNL	**Peninsula**	**3.76**	**115**	*e*Pn		**Pn**	**11 23 22.1**	**+0.4**
CHUM	**Lake Minchumin**	**3.78**	**314**	*e*Pn		**Pn**	**11 23 22.1**	**+0.2**
DAWY	**Dawson**	**4.09**	**46**	⇓Pn		**Pn**	**11 23 27.3**	**+1.1**
DAWY	**Dawson**	**4.09**	**46**	*e*Pn		**Pn**	**11 23 27.4**	**+1.2**
AUL	**Augustine Lava**	**4.15**	**244**	P		**Pn**	**11 23 27.4**	**+0.4**
HYT	**Haines Junctio**	**4.23**	**94**	⇑Pn		**Pn**	**11 23 27.6**	**-0.5**
HYT	**Haines Junctio**	**4.23**	**94**	*e*Pn		**Pn**	**11 23 27.7**	**-0.5**
HYT				*e*Sn		**Sn**	**11 24 16.7**	**+0.1**
SVW2	**Sparrevohn**	**4.57**	**270**	*e*Pn		**Pn**	**11 23 31.8**	**-0.9**
SVW2				*e*Sn		**Sn**	**11 24 26.1**	**+1.3**
TT01	**Tatalina**	**4.87**	**292**	P		**Pn**	**11 23 36.0**	**-0.9**
TTA	**Tatalina**	**4.87**	**293**	*e*Pn		**Pn**	**11 23 36.0**	**-0.8**
TTA				Sn		**Sn**	**11 24 33.0**	**+0.8**
KDAK	**Kodiak Island**	**4.89**	**225**	P		**Pn**	**11 23 36.5**	**-0.7**
	16nm,0.3s,baz=39,slow=12,SNR=79							
KDAK				S		**Sn**	**11 24 27.4**	**-5.4**
	46nm,0.3s,baz=312,slow=20,SNR=16							
KDAK				LR		LR	11 25 48.5	
	comp=Z,348nm,21.6s,baz=94,slow=41							
KDAK	**Kodiak Island**	**4.89**	**225**	P		**Pn**	**11 23 36.5**	**-0.7**
KDAK				S		**Sn**	**11 24 27.4**	**-5.3**
KDAK				pmax		pmax		
	comp=Z,16nm,0.3s							
KDAK				smax				
	comp=N,46nm,0.3s							
KDAK				MLR		MLR		
	comp=Z,348nm,21.7s							
KDAK	**Kodiak Island**	**4.89**	**225**	*e*Pn		**Pn**	**11 23 35.8**	**-1.4**
OHAK	**Old Harbor**	**5.57**	**224**	P		**Pn**	**11 23 45.3**	**-1.2**
IM3	**Indian Mountai**	**5.70**	**327**	P		**Pn**	**11 23 48.1**	**-0.1**
SKAG	**Skagway**	**5.70**	**105**	*e*Pn		**Pn**	**11 23 48.5**	**+0.1**
	comp=Z,117nm,0.6s							
SKAG				*e*Sn		**Sn**	**11 24 51.9**	**-0.8**
IMA2	**Indian Mountai**	**5.75**	**328**	*e*Pn		**Pn**	**11 23 49.3**	**+0.4**
IMA2				S		**Sn**	**11 24 58.2**	**+4.4**
GCSA	**Galena City Sc**	**5.91**	**309**	P		**Pn**	**11 23 51.1**	**0.0**
BM3	**Burnt Mountain**	**6.07**	**6**	P		**Pn**	**11 23 53.8**	**+0.5**
COLD	**Coldfoot**	**6.10**	**345**	*e*Pn		**Pn**	**11 23 54.4**	**+0.7**
SIT	**Sitka**	**7.06**	**123**	*e*Pn		**Pn**	**11 24 05.7**	**-1.2**
SIT				*e*Sn		**Sn**	**11 25 22.1**	**-4.0**
CHGN	**Chignik**	**8.16**	**237**	*e*P		**Pn**	**11 24 21.8**	**-0.2**
DLBC	**Dease Lake**	**8.62**	**103**	P		**Pn**	**11 24 28.1**	**-0.3**
	baz=287,slow=10							
DLBC				S		**Sn**	**11 25 55.8**	**-8.7**
	baz=270,slow=20							
DLBC	**Dease Lake**	**8.62**	**103**	⇑Pn		**Pn**	**11 24 27.7**	**-0.6**
DLBC	**Dease Lake**	**8.62**	**103**	*e*Pn		**Pn**	**11 24 28.0**	**-0.3**
DLBC				S		**Sn**	**11 25 55.8**	**-8.7**
WRAK	**Wrangell Islan**	**8.71**	**119**	*e*pP			11 24 28.9	
CRAG	**Craig**	**9.05**	**125**	*e*Pn		**Pn**	**11 24 33.3**	**-0.9**
CRAG				*e*Sn		**Sn**	**11 26 14.2**	**-0.8**
SDPT	**Sand Point**	**9.66**	**237**	*e*Pn		**Pn**	**11 24 42.5**	**0.0**
SDPT				Sn		**Sn**	**11 26 27.8**	**-2.1**
NDB	**Naden**	**10.27**	**131**	⇓Pn		**Pn**	**11 24 49.5**	**-1.4**
VIB	**Van Inlet**	**10.97**	**132**	⇓Pn		**Pn**	**11 24 58.8**	**-1.7**
VIB				⇓Sn		**Sn**	**11 26 54.7**	**-7.4**
RUBB	**Prince Rupert**	**11.02**	**123**	⇓Pn		**Pn**	**11 25 01.4**	**+0.2**
DIB	**Dawson Inlet,**	**11.04**	**132**	⇓Pn		**Pn**	**11 25 00.1**	**-1.3**
DIB				⇓Sn		**Sn**	**11 26 55.9**	**-7.8**
MOBC	**Moresby Island**	**11.27**	**131**	⇑Pn		**Pn**	**11 25 05.0**	**+0.5**
FNBB	**Fort Nelson**	**11.78**	**92**	⇑Pn		**Pn**	**11 25 10.3**	**-1.3**
BNB	**Barry Inlet**	**11.80**	**132**	⇑Pn		**Pn**	**11 25 10.8**	**-1.1**
UNV	**Unalaska Valle**	**13.23**	**244**	*e*Pn		**Pn**	**11 25 29.8**	**-1.5**
BBB	**Bella Bella**	**13.48**	**125**	P		**Pn**	**11 25 35.8**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=132,slow=22,SNR=6.3							
BBB				S		**Sn**	**11 28 00.1**	**-3.3**
	comp=Z,0.3nm,0.3s,baz=103,slow=18,SNR=2.2							
BBB				LR		LR	11 30 32.8	
	comp=Z,179nm,21.0s,baz=150,slow=36							
YKW3	**Yellowknife Ar**	**14.78**	**72**	⇑Pn		**Pn**	**11 25 53.6**	**+1.1**
YKW3	**Yellowknife Ar**	**14.78**	**72**	*e*Pn		**Pn**	**11 25 57.6**	**+5.2**
YKA	**Yellowknife Ar**	**14.80**	**72**	P		**Pn**	**11 25 52.6**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=170,slow=34,SNR=10							
YKA				sP		sP	11 26 06.6	-2.8
	comp=Z,0.6nm,0.3s,baz=278,slow=13,SNR=30							
YKA				LR		LR	11 31 47.0	
	comp=Z,145nm,18.5s,baz=240,slow=38							
MNB	**Mounoet Dainar**	**17.64**	**109**	⇑Pn		**Pn**	**11 26 31.6**	**+2.5**
SLEB	**Sale Mountain**	**18.47**	**111**	⇓Pn		**Pn**	**11 26 39.8**	**+0.6**
A06A	**Chilliwack**	**18.55**	**120**	⇑P		**Pn**	**11 26 40.7**	**+0.6**
	baz=18							
B05A	**Bryant**	**18.95**	**123**	⇓P		**Pn**	**11 26 44.7**	**-0.4**
	baz=19							
B06A	**Marblemount**	**19.00**	**122**	⇑P		**Pn**	**11 26 45.4**	**-0.2**
	baz=19							
C04A	**Brinnon**	**19.05**	**125**	⇓P		**Pn**	**11 26 45.9**	**-0.3**
	baz=19							
EDM	**Edmonton**	**19.33**	**100**	*e*P		**Pn**	**11 26 47.3**	**-2.2**
EDM	**Edmonton**	**19.33**	**100**	⇓Pn		**Pn**	**11 26 48.1**	**-1.4**
C05A	**Tolt Reservoir**	**19.57**	**123**	⇓P		**Pn**	**11 26 50.6**	**-1.9**
	baz=20							
B07A	**Winthrop**	**19.61**	**120**	⇑P		**Pn**	**11 26 52.1**	**-0.8**
	baz=20							
D05A	**Enumclaw**	**19.87**	**125**	⇑P		**Pn**	**11 26 55.3**	**-0.6**
	baz=20							
A09A	**Danville**	**19.87**	**116**	⇑P		**Pn**	**11 26 55.0**	**-1.0**
	baz=20							
B08A	**Colville Reser**	**20.02**	**119**	⇓P		**P**	**11 26 56.7**	**+0.8**
	baz=20							
E04A	**Onalaska**	**20.07**	**127**	⇑P		**P**	**11 26 56.9**	**+0.5**
	baz=20							
C07A	**Waterville**	**20.24**	**121**	⇑P		**P**	**11 26 58.9**	**+0.7**
	baz=20							
A10A	**Northport**	**20.31**	**115**	⇑P		**P**	**11 26 59.5**	**+0.5**
	baz=20							
B09A	**Rice**	**20.48**	**117**	⇓P		**P**	**11 27 02.1**	**+1.2**
	baz=20,SNR=7.2							
D07A	**Quinault**	**20.67**	**122**	⇑P		**P**	**11 27 03.5**	**+0.5**
	baz=21							
F04A	**Amboy**	**20.74**	**128**	⇓P		**P**	**11 27 04.4**	**+0.7**
	baz=21							
E06A	**Yakima**	**20.79**	**124**	⇓P		**P**	**11 27 04.8**	**+0.6**
	baz=21							
A11A	**Hall Mountain,**	**20.85**	**113**	⇑P		**P**	**11 27 05.5**	**+0.6**
	baz=21							
BILL	**Bilibino**	**20.87**	**309**	*e*P		**P**	**11 27 02.1**	**-2.9**
BILL				*i*			11 27 27.5	
BILL				*e*			11 31 28.0	
BILL				pmax		pmax		
	comp=Z,8.0nm,1.0s							
BILL				MLR		MLR		
	comp=Z,200nm,21.0s,MS3.5							
C09A	**Chrisman Ranch**	**20.90**	**118**	⇑P		**P**	**11 27 06.2**	**+0.8**
	baz=21							
NEW	**Newport**	**21.04**	**115**	*e*P		**P**	**11 27 07.7**	**+0.8**
NEW				pmax		pmax		
	comp=Z,19nm,1.1s							
NEW	**Newport**	**21.04**	**115**	*e*P		**P**	**11 27 07.7**	**+0.7**
	comp=Z,19nm,1.1s,mb4.3							
F05A	**White Salmon**	**21.15**	**126**	⇑P		**P**	**11 27 08.8**	**+0.7**
	baz=21							
A12A	**Yaak River Ran**	**21.19**	**112**	⇓P		**P**	**11 27 09.2**	**+0.7**
	baz=21							
D08A	**Wollman Farm,**	**21.22**	**120**	⇓P		**P**	**11 27 09.5**	**+0.7**
	baz=21							
E07A	**Sunnyside**	**21.23**	**122**	⇑P		**P**	**11 27 09.7**	**+0.7**
	baz=21							
C10A	**Spilker Farm,**	**21.30**	**117**	⇓P		**P**	**11 27 10.4**	**+0.6**
	baz=21							
G04A	**Mulino**	**21.33**	**129**	⇑P		**P**	**11 27 11.2**	**+1.1**
	baz=21							
D09A	**Jones Farm, Ri**	**21.47**	**119**	⇑P		**P**	**11 27 12.2**	**+0.6**
	baz=21							
H03A	**Soap Creek Ran**	**21.48**	**131**	⇑P		**P**	**11 27 12.8**	**+1.2**
	baz=21							
F06A	**Goldendale**	**21.51**	**125**	⇓P		**P**	**11 27 13.9**	**+2.0**
	baz=21,SNR=6.5							
B12A	**Libby**	**21.56**	**113**	⇓P		**P**	**11 27 14.2**	**+1.7**
	baz=21,SNR=17							
G05A	**Wamic**	**21.74**	**127**	⇑P		**P**	**11 27 14.7**	**+0.2**
	baz=22							
A13A	**Flathead Natio**	**21.74**	**111**	⇓P		**P**	**11 27 14.3**	**-0.2**
	baz=22,SNR=10							
C11A	**Tepee Creek (N**	**21.74**	**115**	⇓P		**P**	**11 27 13.8**	**-0.6**
	baz=22,SNR=6.2							
F07A	**Phinny Hill Vi**	**21.74**	**124**	⇓P		**P**	**11 27 15.2**	**+0.7**
	baz=22,SNR=6.0							
WALA	**Waterton Lakes**	**21.88**	**110**	*e*P		**P**	**11 27 15.5**	**-0.4**
	comp=Z,15nm,0.8s,mb4.5							
H04A	**Detroit Lake**	**21.88**	**129**	⇑P		**P**	**11 27 15.9**	**-0.1**
	baz=22							
D10A	**Wagner Farm, O**	**21.91**	**118**	⇓P		**P**	**11 27 16.4**	**+0.1**
	baz=22,SNR=7.9							
E09A	**Wood Farm, Sta**	**21.97**	**120**	⇓P		**P**	**11 27 16.9**	**0.0**
	baz=22							
G06A	**Carlson Farm,**	**22.01**	**126**	⇑P		**P**	**11 27 17.8**	**+0.5**
	baz=22							
I03A	**Eugene**	**22.09**	**132**	⇑P		**P**	**11 27 18.9**	**+0.7**
	baz=22							
B13A	**Whitefish**	**22.13**	**112**	⇑P		**P**	**11 27 19.0**	**+0.4**
	baz=22,SNR=9.1							
A14A	**Double T Ranch**	**22.16**	**109**	⇑P		**P**	**11 27 18.7**	**-0.2**
	baz=22,SNR=8.4							
C12B	**Naegeli Ranch,**	**22.18**	**114**	⇓P		**P**	**11 27 19.5**	**+0.3**
	baz=22							
H05A	**Madras**	**22.27**	**127**	⇓P		**P**	**11 27 20.5**	**+0.4**
	baz=22							
F08A	**Pendleton**	**22.29**	**122**	⇑P		**P**	**11 27 20.5**	**+0.2**
	baz=22							
D11A	**Klaveano Farm,**	**22.32**	**116**	⇑P		**P**	**11 27 20.2**	**-0.4**
	baz=22,SNR=11							
G07A	**Ruggs Ranch, H**	**22.36**	**124**	⇑P		**P**	**11 27 21.6**	**+0.5**
	baz=22							
H06A	**Lindquist Farm**	**22.54**	**126**	⇑P		**P**	**11 27 22.9**	**-0.1**
	baz=22,SNR=5.7							
I04A	**Tendick Farm,**	**22.56**	**131**	⇑P		**P**	**11 27 23.6**	**+0.4**
	baz=22							
C13A	**Hot Springs**	**22.60**	**113**	⇑P		**P**	**11 27 23.6**	**0.0**
	baz=22							
G08A	**Pilot Rock**	**22.63**	**123**	⇓P		**P**	**11 27 23.6**	**-0.3**
	baz=22							
I05A	**Bend**	**22.67**	**128**	⇑P		**P**	**11 27 24.5**	**+0.2**
	baz=23,SNR=6.6							
D12A	**Red Ives Fores**	**22.74**	**115**	⇑P		**P**	**11 27 24.8**	**-0.3**
	baz=23							
F10A	**Beach Ranch, E**	**22.79**	**119**	⇑P		**P**	**11 27 25.5**	**-0.1**
	baz=23							
C14A	**Swan Lake**	**22.90**	**112**	⇑P		**P**	**11 27 26.8**	**-0.1**
	baz=23							
E11A	**Bogner Ranch,**	**22.91**	**117**	⇑P		**P**	**11 27 26.3**	**-0.6**
	baz=23,SNR=5.9							
H07A	**Lands Inn, Kim**	**22.96**	**125**	⇑P		**P**	**11 27 26.8**	**-0.6**
	baz=23,SNR=7.3							
B15A	**Bradely Ranch,**	**23.03**	**109**	⇓P		**P**	**11 27 27.0**	**-1.2**
	baz=23,SNR=10							
K02A	**Glendale**	**23.07**	**134**	⇑P		**P**	**11 27 29.6**	**+1.0**
	baz=23							
D13A	**Huson**	**23.10**	**114**	⇓P		**P**	**11 27 28.2**	**-0.6**
	baz=23,SNR=6.2							
G09A	**Cove**	**23.12**	**121**	⇑P		**P**	**11 27 28.5**	**-0.6**
	baz=23							
E12A	**Beaver Dam Sad**	**23.14**	**116**	⇓P		**P**	**11 27 28.6**	**-0.7**
	baz=23,SNR=12							
J04A	**Umpqua Nationa**	**23.15**	**131**	⇑P		**P**	**11 27 29.9**	**+0.4**
	baz=23							
I06A	**Prineville**	**23.26**	**127**	⇑P		**P**	**11 27 30.3**	**-0.2**
	baz=23							
F11A	**Grangeville**	**23.31**	**118**	⇓P		**P**	**11 27 30.7**	**-0.3**
	baz=23							
G10A	**Bishop Farm, J**	**23.38**	**120**	⇓P		**P**	**11 27 30.9**	**-0.9**
	baz=23							
H08A	**Prairie City**	**23.38**	**124**	⇓P		**P**	**11 27 31.2**	**-0.6**
	baz=23,SNR=6.1							
HUMO	**Hull Mountain**	**23.40**	**133**	⇑P		**P**	**11 27 32.3**	**+0.2**
	baz=23							
HUMO	**Hull Mountain**	**23.40**	**133**	*e*P		**P**	**11 27 33.2**	**+1.1**
C15A	**Salmond Ranch,**	**23.41**	**110**	⇑P		**P**	**11 27 31.6**	**-0.6**
	baz=23,SNR=15							
I07A	**Izee**	**23.41**	**126**	⇑P		**P**	**11 27 32.2**	**0.0**
	baz=23,SNR=12							
J05A	**Fort Rock**	**23.43**	**129**	⇑P		**P**	**11 27 32.7**	**+0.3**
	baz=23,SNR=7.0							
D14A	**Greenough**	**23.53**	**113**	⇑P		**P**	**11 27 32.4**	**-0.9**
	baz=23,SNR=10.0							
MSO	**Missoula**	**23.53**	**114**	*e*P		**P**	**11 27 32.6**	**-0.7**
L02A	**Cave Junction**	**23.57**	**135**	⇓P		**P**	**11 27 33.9**	**+0.2**
	baz=24							
G11A	**Walters Elk Ra**	**23.65**	**119**	⇓P		**P**	**11 27 33.4**	**-1.0**
	baz=24,SNR=15							
BMO	**Blue Mountains**	**23.66**	**121**	*e*P		**P**	**11 27 34.0**	**-0.4**
H09A	**Durkee**	**23.67**	**122**	⇑P		**P**	**11 27 34.3**	**-0.2**
	baz=24							
E13A	**Victor**	**23.72**	**115**	⇑P		**P**	**11 27 33.8**	**-1.2**
	baz=24							
CHMT	**Chamberlain Mo**	**23.77**	**113**	*e*P		**P**	**11 27 34.9**	**-0.6**
C16A	**Fuhringer Ranc**	**23.78**	**109**	⇓P		**P**	**11 27 34.0**	**-1.6**
	baz=24,SNR=10.0							
F12A	**Elk City**	**23.80**	**117**	⇑P		**P**	**11 27 36.2**	**+0.5**
	baz=24,SNR=8.0							
J06A	**Christmas Vall**	**23.87**	**128**	⇑P		**P**	**11 27 36.7**	**+0.4**
	baz=24,SNR=15							
I08A	**Drewsey**	**23.93**	**124**	⇑P		**P**	**11 27 37.1**	**+0.2**
	baz=24,SNR=8.1							
D15A	**Lincoln**	**24.00**	**111**	⇓P		**P**	**11 27 36.6**	**-0.9**
	baz=24							
K05A	**Summer Lake**	**24.04**	**129**	⇑P		**P**	**11 27 39.0**	**+1.0**
	baz=24							
E14A	**Clinton**	**24.05**	**114**	⇑P		**P**	**11

baz=25
M06C Likely Place G 25.52 131 ⇓P P 11 27 51.5 +0.2
baz=25
K10A MacKenzie Ranc 25.55 123 ⇑P P 11 27 51.4 -0.3
baz=25,SNR=7.9
I13A Wildhorse Cree 25.75 118 ⇑P P 11 27 52.9 -0.6
baz=26,SNR=17
H15A Lima 25.82 115 ⇓P P 11 27 54.0 -0.2
baz=26
M07A Soldier Meadow 25.84 128 ⇑P P 11 27 54.3 0.0
baz=26,SNR=7.2
J12A Stokes Ranch, 25.89 120 ⇑P P 11 27 54.5 -0.2
baz=26
K11A Parker Ranch, 25.90 122 ⇓P P 11 27 54.7 -0.1
baz=26
HLID Hailey 25.91 119 ⇓P P 11 27 54.7 -0.2
baz=26,SNR=5.7
HLID Hailey 25.91 119 *eP* P 11 27 54.3 -0.7
comp=Z,38nm,2.2s,mb4.5
I14A Mackay 26.03 117 ⇑P P 11 27 55.5 -0.5
baz=26,SNR=5.4
M08A Happy Creek Ra 26.09 127 ⇓P P 11 27 57.1 +0.5
baz=26
GASB Alder Springs 26.11 136 ⇓P P 11 27 57.5 +0.7
baz=26
N06A Buffalo Meadow 26.15 130 ⇑P P 11 27 57.4 +0.3
baz=26
QLMT Earthquake Lak 26.19 113 *eP* P 11 27 58.2 +0.8
L10A Juniper Basin 26.30 124 ⇑P P 11 27 58.2 -0.3
baz=26,SNR=7.6
H16A Russell Place, 26.37 113 ⇑P P 11 27 59.1 +0.1
baz=26,SNR=12
I15A Monteview 26.39 116 ⇑P P 11 27 59.6 +0.3
baz=26
J14A Carey 26.49 118 ⇑P P 11 28 00.3 +0.1
baz=26
BEKR Beckwourth 26.73 132 ⇓P P 11 28 02.5 +0.1
baz=27
M10A I.L. Ranch, Tu 26.74 124 ⇓P P 11 28 02.9 +0.5
baz=27
N08A GE Springer Mi 26.76 128 ⇓P P 11 28 02.5 -0.1
baz=27,SNR=11
K13A Stover Farm, H 26.80 120 ⇓P P 11 28 03.3 +0.3
baz=27
L12A House Creek Ra 26.83 122 ⇓P P 11 28 03.6 +0.3
baz=27,SNR=13
I16A Newdale 26.92 115 ⇓P P 11 28 04.2 +0.2
baz=27
RLMT Red Lodge 26.93 110 *eP* P 11 28 04.9 +0.8
N09A Rock Creek Ran 26.93 127 ⇓P P 11 28 04.3 +0.1
baz=27
O07A Toulon 27.02 129 ⇓P P 11 28 05.3 +0.4
baz=27
M11A Holland Ranch, 27.12 124 ⇓P P 11 28 06.2 +0.3
baz=27
O08A Rochester Mine 27.18 128 ⇓P P 11 28 06.8 +0.4
baz=27
K14A Jones Ranch, D 27.27 119 ⇓P P 11 28 07.4 +0.3
baz=27,SNR=9.6
MOOW Moose Ponds 27.34 114 *eP* P 11 28 09.0 +1.1
J16A Bone 27.35 116 ⇑P P 11 28 08.3 +0.5
baz=27,SNR=5.3
RRI2 Red Ridge 27.41 115 *eP* P 11 28 09.2 +0.7
comp=Z,7.9nm,0.7s,mb4.3
TPAW Teton Pass 27.46 115 *eP* P 11 28 10.1 +1.2
comp=Z,12nm,0.9s,mb4.4
M12A Wells 27.49 122 ⇓P P 11 28 09.6 +0.4
baz=27,SNR=8.3
LOHW Long Hollow 27.52 114 *eP* P 11 28 10.3 +1.0
comp=Z,12nm,1.3s,mb4.3
SNOW Snow King Moun 27.57 114 *eP* P 11 28 11.0 +1.1
LAVA Lava Cap Winer 27.59 134 ⇓P P 11 28 09.8 -0.3
baz=28
REDW Red Top Meadow 27.61 115 *eP* P 11 28 11.2 +1.1
comp=Z,7.5nm,0.9s,mb4.3
O09A Fish Creek Ran 27.65 127 ⇑P P 11 28 11.1 +0.5
baz=28
L14A Malta 27.66 119 ⇑P P 11 28 11.2 +0.5
baz=28
N11A Elko Archery C 27.66 124 ⇑P P 11 28 11.4 +0.7
baz=28
M13A Montello 27.84 121 ⇑P P 11 28 12.7 +0.4
baz=28
R05C Kirkwood Meado 27.87 133 ⇑P P 11 28 12.3 -0.3
baz=28
N12A Clover Valley, 27.91 123 ⇑P P 11 28 13.4 +0.4
baz=28
ELK Elko 27.92 124 P P 11 28 13.6 +0.6
comp=Z,4.3nm,0.9s,mb4.1,baz=320,slow=7.1,SNR=22
ELK LR LR 11 39 10.7
comp=Z,78nm,18.7s,MS3.3,baz=270,slow=36
ELK Elko 27.92 124 P P 11 28 13.6 +0.6
ELK pmax pmax
comp=Z,4.0nm,0.9s
ELK MLR MLR
comp=Z,79nm,18.7s
ELK Elko 27.92 124 *eP* P 11 28 14.1 +1.1
L15A Malad City 28.05 118 ⇓P P 11 28 14.4 +0.3
baz=28
M14A Sheep Mountain 28.06 120 ⇓P P 11 28 14.8 +0.5
baz=28
N13A Wendover, West 28.25 122 ⇓P P 11 28 16.6 +0.7
baz=28
O11A Cowboy Ranch, 28.28 125 ⇑P P 11 28 16.7 +0.5
baz=28,SNR=7.6
L16A Fish Haven 28.45 117 ⇑P P 11 28 17.8 +0.1
baz=28
Q08A Gabbs 28.51 129 ⇓P P 11 28 18.4 +0.2
baz=28
O12A Currie 28.52 123 ⇓P P 11 28 18.7 +0.3
baz=28
BW06 Boulder Array 28.65 114 *eP* P 11 28 20.0 +0.5
PDAR Pinedale Array 28.65 114 P P 11 28 19.4 -0.1
comp=Z,3.0nm,0.9s,mb4.0,baz=318,slow=6.9,SNR=24
PDAR LR LR 11 40 03.5
comp=Z,159nm,20.7s,MS3.6,baz=357,slow=37
N14A Grayback Hills 28.67 121 ⇑P P 11 28 19.7 0.0
baz=29
S06C San Francisco 28.68 133 ⇑P P 11 28 19.9 +0.1
baz=29
NVAR Mina Array Bea 28.75 130 P P 11 28 20.6 +0.2
comp=Z,2.9nm,0.7s,mb4.1,baz=310,slow=8.6,SNR=24
NVAR PcP PcP 11 31 28.9 -1.0
comp=Z,1.3nm,0.7s,baz=292,slow=2.4,SNR=7.7
NVAR pPcP 11 31 42.5
comp=Z,0.9nm,0.8s,baz=274,slow=2.4,SNR=3.7
NVAR Mina Array Bea 28.75 130 P P 11 28 20.6 +0.2
NVAR PcP PcP 11 31 28.9 -1.0
NVAR pPcP 11 31 42.5
M16A Huntsville 28.94 118 ⇓P P 11 28 22.2 +0.1
baz=29
Q10A Clear Creek Ra 29.12 127 ⇑P P 11 28 23.3 -0.3
baz=29
P12A McGill 29.14 124 ⇓P P 11 28 23.9 0.0
baz=29
KCC Kaiser Creek 29.37 133 ⇑P P 11 28 25.9 0.0
baz=29
DUG Dugway 29.37 121 ⇓P P 11 28 25.7 -0.2
baz=29
R09A Tonopah 29.37 129 ⇓P P 11 28 25.8 -0.2
baz=29,SNR=8.8
Q11A Duckwater 29.39 126 ⇓P P 11 28 26.1 0.0
baz=29,SNR=12
P13A Bates Ranch, G 29.51 123 ⇓P P 11 28 27.1 0.0
baz=29
T06C Millerton Lake 29.52 134 ⇓P P 11 28 27.5 +0.3
baz=29
Q12A Willow Creek R 29.54 125 ⇑P P 11 28 27.6 +0.1
baz=29
ULM Lac du Bonnet 29.59 89 LR LR 11 40 43.3
comp=Z,213nm,18.1s,MS3.8,baz=3.2,slow=37
R10A Warm Springs 29.62 128 ⇓P P 11 28 28.7 +0.5
baz=30
S08C White Mtn Res 29.62 131 ⇓P P 11 28 28.6 +0.5
baz=30
S09A Goldfield 29.77 129 ⇓P P 11 28 29.5 +0.1
baz=30
P14A Drum Mountains 29.78 122 ⇑P P 11 28 29.4 -0.2
baz=30,SNR=6.6
S10A Tonopah Range, 29.83 128 ⇑P P 11 28 30.1 0.0
baz=30
R11A Troy Canyon, C 29.84 127 ⇑P P 11 28 29.9 -0.2
baz=30,SNR=8.6
NLU North Lily Min 29.88 120 *eP* P 11 28 30.1 -0.4
O16A Springville 29.91 119 ⇑P P 11 28 30.3 -0.3
baz=30
HELL Mitchell Peak 30.05 133 ⇓P P 11 28 32.1 +0.1
baz=30

RSSD Black Hills 30.09 106 *eP* P 11 28 31.9 -0.4
RSSD pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
RSSD Black Hills 30.09 106 *eP* P 11 28 31.9 -0.3
comp=Z,8.4nm,0.6s,mb4.7
Q14A Sevier Lake (B 30.21 123 ⇓P P 11 28 33.0 -0.3
baz=30,SNR=7.2
O17A Robinson Place 30.24 118 ⇓P P 11 28 33.6 0.0
baz=30
RCTC Rector, Farmer 30.30 134 ⇑P P 11 28 34.4 +0.2
baz=30
N19A John Jarvie Ra 30.34 115 ⇑P P 11 28 33.9 -0.5
baz=30,SNR=6.1
O18A Roosevelt 30.49 117 ⇓P P 11 28 35.9 0.0
baz=30
Q15A Fillmore 30.56 122 ⇑P P 11 28 36.7 +0.2
baz=30
PETK Petropavlovsk- 30.57 280 P P 11 28 36.4 -0.1
comp=Z,0.7nm,0.4s,mb3.8,baz=53,slow=13,SNR=2.7
PETK sP sP 11 28 51.0 +2.9
comp=Z,3.4nm,0.7s,baz=72,slow=11,SNR=4.7
PETK PcP PcP 11 31 30.7 -3.6
comp=Z,2.8nm,0.5s,baz=29,slow=3.3,SNR=5.9
PETK LR LR 11 39 55.0
comp=Z,82nm,20.1s,MS3.4,baz=231,slow=34
PETK Petropavlovsk- 30.57 280 P P 11 28 36.4 0.0
PETK *SP sP 11 28 51.0 +2.9
PETK 11 31 30.7
PETK pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
PETK pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
PETK pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
PETK MLR MLR
comp=Z,82nm,20.1s,MS3.4
R13A O'Grain Ranch, 30.62 125 ⇓P P 11 28 36.9 -0.1
baz=30
S12A Delamar Landin 30.77 126 ⇓P P 11 28 38.2 -0.1
baz=31
VES Vestal, Richgr 30.78 134 ⇓P P 11 28 38.6 +0.1
baz=31
TPNV Topopah Spring 30.82 129 ⇓P P 11 28 38.4 -0.3
baz=31
P18A Preston Nutter 30.92 118 ⇓P P 11 28 40.5 +0.9
baz=31,SNR=5.9
SMMC Simmler 30.95 136 ⇓P P 11 28 40.1 +0.1
baz=31
T11A Corn Creek, Al 30.95 127 ⇓P P 11 28 39.7 -0.2
baz=31
MSU Marysvale 31.06 122 *eP* P 11 28 41.7 +0.8
Q16A Castle Valley 31.13 120 ⇓P P 11 28 42.0 +0.5
baz=31,SNR=9.8
MPMC Manual Prospec 31.15 131 ⇓P P 11 28 42.3 +0.6
baz=31
ISA Isabella 31.16 133 *eP* P 11 28 42.2 +0.5
ISA pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
ISA Isabella 31.16 133 ⇑P P 11 28 42.0 +0.2
baz=31
ISA Isabella 31.16 133 *eP* P 11 28 42.2 +0.5
comp=Z,5.8nm,0.8s,mb4.5
S13A Holt Ranch, En 31.18 125 ⇓P P 11 28 42.1 +0.1
baz=31,SNR=14
SRU San Rafael 31.24 119 ⇓P P 11 28 42.6 +0.1
baz=31,SNR=13
SRU San Rafael 31.24 119 *eP* P 11 28 43.2 +0.8
R15A Junction 31.28 122 ⇑P P 11 28 43.6 +0.8
baz=31,SNR=5.0
S14A Cedar City 31.30 124 ⇑P P 11 28 43.1 +0.1
baz=31
PKM Peak Mountain 31.39 136 ⇓P P 11 28 44.8 +1.0
baz=31,SNR=6.9
Q18A Rafter H Ranch 31.41 119 ⇓P P 11 28 44.0 0.0
baz=31
P19A Cripple Cowboy 31.46 117 ⇓P P 11 28 44.1 -0.3
baz=31
R16A Teasdale 31.54 121 ⇓P P 11 28 45.9 +0.8
baz=31,SNR=7.3
T13A Saint George 31.65 126 ⇓P P 11 28 46.3 +0.2
baz=32,SNR=6.8
R17A Hanksville Air 31.75 120 ⇑P P 11 28 46.7 -0.2
baz=32
Q19A Hogan Spring (31.90 118 ⇑P P 11 28 47.6 -0.6
baz=32,SNR=5.3
T14A Hurricane 31.94 124 ⇓P P 11 28 48.9 +0.2
baz=32,SNR=5.9
S16A Weppner Ranch, 31.97 122 ⇓P P 11 28 49.4 +0.6
baz=32,SNR=9.6
EDW2 Edwards Air Fo 32.03 133 ⇑P P 11 28 49.3 -0.1
baz=32
GSC Goldstone 32.08 131 *eP* P 11 28 50.9 +1.1
GSC pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
GSC Goldstone 32.08 131 ⇑P P 11 28 50.3 +0.5
baz=32
GSC Goldstone 32.08 131 *eP* P 11 28 50.9 +1.0
comp=Z,4.7nm,0.6s,mb4.5
V11A Goodsprings 32.11 129 ⇓P P 11 28 50.5 +0.4
baz=32
U13A Pakoon Wash 32.16 126 ⇓P P 11 28 50.7 +0.1
baz=32
T15A Red Dirt Ranch 32.26 124 ⇓P P 11 28 51.9 +0.5
baz=32,SNR=7.6
TUQ Turquoise Moun 32.28 130 ⇑P P 11 28 51.9 +0.3
baz=32
S17A Black Ridge (B 32.37 121 ⇓P P 11 28 52.7 +0.3
baz=32,SNR=9.3
V12A Nelson 32.42 128 ⇓P P 11 28 53.0 +0.2
baz=32
U14A Mt Trumbull 32.46 125 ⇑P P 11 28 53.4 +0.2
baz=32,SNR=15
V13A Grand Canyon W 32.65 127 ⇓P P 11 28 55.2 +0.4
baz=32
BFSC Mount Baldy St 32.73 133 ⇓P P 11 28 55.8 +0.2
baz=33
U15A North Rim 32.81 124 ⇑P P 11 28 56.7 +0.5
baz=33,SNR=8.2
LDFC Landfair 32.90 129 *eP* P 11 28 57.4 +0.3
T17A Navajo Res., N 32.92 122 ⇑P P 11 28 56.8 -0.3
baz=33
GMRC Granite Mounta 32.96 130 ⇑P P 11 28 58.0 +0.4
baz=33
BBRC Big Bear Sol-O 32.97 132 ⇑P P 11 28 57.9 +0.2
baz=33
V14A Boquillas Ranc 33.18 126 ⇑P P 11 28 59.8 +0.4
baz=33,SNR=5.9
T18A Mexican Hat 33.18 120 ⇓P P 11 28 58.9 -0.6
baz=33,SNR=6.6
U17A Shonto 33.32 122 ⇑P P 11 29 00.2 -0.5
baz=33
W13A Hualapai Mount 33.35 127 ⇑P P 11 29 00.9 0.0
baz=33
V15A Kaibab Nationa 33.38 124 ⇓P P 11 29 01.7 +0.5
baz=33,SNR=26
U16A Tuba City 33.52 123 ⇑P P 11 29 02.5 +0.1
baz=33
BELC Belle Mtn. 33.53 131 ⇑P P 11 29 02.2 -0.4
baz=33
W14A Seligman 33.55 126 ⇑P P 11 29 03.1 +0.4
baz=34,SNR=9.1
SCI San Clemente I 33.56 135 ⇓P P 11 29 03.1 +0.3
baz=34
MVCO Mesa Verde 33.70 118 ⇑P P 11 29 03.9 0.0
baz=34
IRM Iron Mountain 33.70 130 ⇑P P 11 29 04.4 +0.3
baz=34
PFO Pinyon Flat Ob 33.72 132 LR LR 11 44 01.6
comp=Z,63nm,18.4s,MS3.4,baz=312,slow=38
PFO Pinyon Flat Ob 33.72 132 ⇓P P 11 29 04.3 +0.1
baz=34
T19A Beclabito 33.80 119 ⇑P P 11 29 04.5 -0.4
baz=34
U18A Rough Rock, Ch 33.80 121 ⇓P P 11 29 04.2 -0.6
baz=34
ECSD EROS,Sioux Fal 33.88 98 *eP* P 11 29 04.2 -1.3
comp=Z,8.7nm,1.1s,mb4.6
PDMCI Parker Dam,Lak 33.96 128 ⇓P P 11 29 05.6 -0.6
baz=34
WUAZ Wupatki 33.96 124 ⇑P P 11 29 06.9 +0.6
baz=34,SNR=7.0
WUAZ Wupatki 33.96 124 *eP* P 11 29 07.3 +1.0
BC3 Big Chuckw Mtn 34.04 130 ⇓P P 11 29 06.5 -0.6
baz=34
W16A Flagstaff 34.27 124 ⇑P P 11 29 09.6 +0.7
baz=34,SNR=5.1
X14A Yava 34.28 126 ⇓P P 11 29 09.5 +0.4
baz=34,SNR=10

Y12C Blythe 34.30 129 ⇓P P 11 29 08.7 -0.6
baz=34
V18A Ganado 34.38 122 ⇓P P 11 29 09.9 0.0
baz=34,SNR=13
MONP Monument Peak 34.38 132 ⇑P P 11 29 09.9 0.0
baz=34
Y13A Salome 34.51 128 ⇑P P 11 29 10.9 -0.1
baz=34
X15A Humboldt 34.52 126 ⇑P P 11 29 11.3 +0.1
baz=34
SDCO Great Sand Dun 34.54 114 *eP* P 11 29 12.1 +0.8
Y14A Wickenburg 34.71 127 ⇓P P 11 29 12.6 -0.1
baz=35
GLA Glamis 34.81 130 ⇓P P 11 29 12.9 -0.8
baz=35
X16A Lo Mia Camp, P 34.90 125 ⇓P P 11 29 14.7 +0.3
baz=35,SNR=9.8
Y15A Casa Rosa Ranc 34.95 126 ⇓P P 11 29 15.3 +0.4
baz=35,SNR=5.1
Y16A Circle Bar Ran 35.35 125 ⇑P P 11 29 18.1 -0.3
baz=35
X18A Snowflake 35.40 123 ⇑P P 11 29 19.1 +0.4
baz=35,SNR=7.8
X19A St. Johns 35.75 122 ⇓P P 11 29 22.0 +0.3
baz=36,SNR=7.5
Y17A Roosevelt 35.77 124 ⇑P P 11 29 22.2 +0.3
baz=36,SNR=6.8
Y18A Canyon Day Jun 36.02 123 ⇑P P 11 29 24.3 +0.3
baz=36,SNR=6.7
Y19A Nutrioso 36.18 122 ⇑P P 11 29 26.3 +0.9
baz=36,SNR=11
Z17A San Carlos Hig 36.26 124 ⇓P P 11 29 26.3 +0.2
baz=36
116A Eloy 36.43 126 ⇓P P 11 29 27.9 +0.4
baz=36
ANMO Albuquerque 36.48 118 P P 11 29 26.2 -1.8
comp=Z,0.4nm,0.4s,mb3.7,baz=17,slow=14,SNR=3.6
ANMO LR LR 11 45 05.1
comp=Z,83nm,19.5s,MS3.5,baz=68,slow=37
ANMO Albuquerque 36.48 118 P P 11 29 26.2 -1.8
ANMO MLR MLR
comp=Z,83nm,19.5s
ANMO Albuquerque 36.48 118 P P 11 29 26.2 -1.8
ANMO LR LR 11 45 05.0
117A Oracle 36.80 125 ⇑P P 11 29 31.2 +0.5
baz=37,SNR=15
TUC Tucson 37.01 125 *eP* P 11 29 33.5 +1.0
118A Homack Ranch, 37.04 124 ⇓P P 11 29 32.8 +0.1
baz=37
119A Ashpeak Ranch, 37.20 123 ⇓P P 11 29 34.9 +0.8
baz=37,SNR=6.1
217A Green Valley 37.47 126 ⇑P P 11 29 36.4 0.0
baz=37
218A Dragoon 37.60 125 ⇓P P 11 29 38.1 +0.6
baz=38,SNR=5.1
219A White Tail Can 37.89 124 ⇓P P 11 29 40.5 +0.6
baz=38,SNR=9.4
SFJD Kangerlussuaq 38.01 39 P P 11 29 38.7 -1.8
comp=Z,9.1nm,0.9s,mb4.5,baz=341,slow=4.9,SNR=3.3
SFJD Kangerlussuaq 38.01 39 P P 11 29 38.7 -1.8
SFJD pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
318A Bisbee 38.09 125 ⇓P P 11 29 41.9 +0.3
baz=38,SNR=7.1
319A Douglas 38.43 124 ⇓P P 11 29 45.0 +0.5
baz=38
SCHQ Schefferville 39.94 62 P P 11 29 55.4 -1.5
comp=Z,9.2nm,0.5s,mb4.8,baz=318,slow=8.4,SNR=29
WMOK Wichita Mounta 40.04 110 *eP* P 11 29 57.4 -0.5
comp=Z,18nm,1.5s,mb4.6
TXAR Lajitas Array 42.52 119 P P 11 30 18.0 -0.3
comp=Z,2.7nm,0.6s,mb4.2,baz=329,slow=6.5,SNR=52
TXAR PcP PcP 11 32 08.5 -2.0
comp=Z,1.0nm,0.8s,baz=351,slow=0.9,SNR=4.7
TXAR LR LR 11 49 48.6
comp=Z,53nm,21.5s,MS3.4,baz=0.0,slow=39
TXAR Lajitas Array 42.52 119 P P 11 30 18.0 -0.3
TXAR 11 32 08.5
TXAR pmax pmax
comp=Z,3.0nm,0.6s
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR MLR MLR
comp=Z,53nm,21.5s
JCT Junction City 43.19 114 *eP* P 11 30 23.2 -0.5
BOD Bodaibo 45.85 313 *eP* P 11 30 42.4 -2.2
BOD *e* 11 30 54.6
BOD pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BOD pmax pmax
comp=Z,15nm,0.9s,mb4.9
TKL Tuckaleechee C 46.33 94 P P 11 30 47.0 -1.8
comp=Z,3.0nm,0.7s,mb4.4,baz=270,slow=5.1,SNR=2.8
TKL pP pP 11 31 00.7 +3.5
comp=Z,3.1nm,0.5s,baz=30,slow=7.2,SNR=2.7
TKL LR LR 11 50 58.7
comp=Z,146nm,18.7s,MS4.0,baz=66,slow=37
TKL Tuckaleechee C 46.33 94 P P 11 30 47.0 -1.7
TKL *PP pP 11 31 00.7 +3.5
TKL pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
TKL pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
TKL MLR MLR
comp=Z,146nm,18.7s,MS4.0
TKL Tuckaleechee C 46.33 94 P P 11 30 47.0 -1.8
TKL pP pP 11 31 00.7 +3.5
TKL LR LR 11 50 58.7
LHS Liberty Hill 48.72 92 *eP* P 11 31 04.2 -3.0
MDJ Mudanjiang 49.61 291 P P 11 31 14.1 +0.2
MDJ XP sP 11 31 23.9 -2.0
MDJ PP PP 11 33 08.3 +0.2
MDJ SCP ScP 11 36 30.5 +2.4
MDJ S S 11 38 20.1 +0.1
MDJ AMB AMB
comp=Z,11nm,2.1s,mb4.5
MDJ AMB AMB
comp=Z,87nm,4.6s
MDJ LR LR
comp=E,216nm,19.8s
MDJ LR LR
comp=Z,251nm,21.6s,MS4.2
MJAR Matsushiro Arr 51.99 278 P P 11 31 31.4 -0.6
comp=Z,0.8nm,0.5s,mb3.9,baz=14,slow=6.8,SNR=4.1
MJAR pP pP 11 31 44.1 +3.5
comp=Z,1.7nm,0.7s,baz=357,slow=8.8,SNR=4.6
MJAR Matsushiro Arr 51.99 278 P P 11 31 31.4 -0.6
MJAR *PP pP 11 31 44.1 +3.5
MJAR pmax pmax
comp=Z,1.0nm,0.5s
MJAR pmax pmax
comp=Z,2.0nm,0.7s
CN2 Changchun 52.09 293 *eP* P 11 31 35.4 +2.8
ZAK Zakamensk 55.58 313 *eP* pP 11 32 08.5 +1.8
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
KSRS Korea Array 56.08 287 P P 11 32 01.2 -0.6
comp=Z,2.0nm,0.9s,mb4.1,baz=38,slow=8.1,SNR=3.9
KSRS pP pP 11 32 13.2 +2.7
comp=Z,3.3nm,0.9s,baz=35,slow=7.6,SNR=5.9
KSRS LR LR 11 55 53.6
comp=Z,50nm,21.7s,MS3.6,baz=225,slow=36
KSRS Korea Array 56.08 287 P P 11 32 01.2 -0.6
KSRS *PP pP 11 32 13.2 +2.7
KSRS pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
KSRS MLR MLR
comp=Z,50nm,21.7s,MS3.6
ULN Ulaanbaatar 56.32 309 *eP* P 11 32 04.5 +1.1
SONM Songino Array 56.59 310 P P 11 32 05.0 -0.3
comp=Z,1.6nm,0.8s,mb4.1,baz=30,slow=5.8,SNR=8.5
SONM pP pP 11 32 16.9 +2.9
comp=Z,7.7nm,0.9s,baz=31,slow=7.7,SNR=18
SONM Songino Array 56.59 310 P P 11 32 05.0 -0.3
SONM *PP pP 11 32 16.9 +2.9
SONM pmax pmax
comp=Z,2.0nm,0.8s
SONM pmax pmax
comp=Z,8.0nm,0.9s
CMIG Matias Romero 57.05 117 P P 11 32 07.2 -1.7
comp=Z,8.5nm,0.8s,mb4.8,baz=324,slow=5.5,SNR=11
TEIG Tepich 57.21 109 P P 11 32 08.0 -2.0
comp=Z,6.8nm,0.6s,mb4.9,baz=19,slow=3.7,SNR=4.7
TEIG Tepich 57.21 109 P P 11 32 08.0 -2.0
NVS Novosibirsk 57.73 329 *eP* pP 11 32 22.3 +0.4

ZALV	**Zalesovo Beam**	**58.13**	**327**	P	**P**	**11**	**32**	**15.0 -1.0**
	comp=Z,1.0nm,0.4s,mb4.2,baz=46,slow=6.2,SNR=2.7							
ZALV				pP	pP	11	32	26.1 +1.4
	comp=Z,5.0nm,0.9s,baz=29,slow=6.8,SNR=6.2							
ZALV				sP	sP	11	32	32.9 +4.8
	comp=Z,4.1nm,0.8s,baz=12,slow=7.6,SNR=4.7							
ZALV	**Zalesovo Beam**	**58.13**	**327**	P	**P**	**11**	**32**	**15.0 -1.0**
ZALV				*PP	pP	11	32	26.2 +1.5
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.2							
ZALV				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.5							
ZALV				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.5							
HHC	**Hu-ho-hao-te**	**60.43**	**302**	*eP*	**P**	**11**	**32**	**30.5 -1.6**
HHC				PCP	PcP	11	33	15.8 -0.9
HHC				PP	PP	11	34	45.0 0.0
HHC				SCP	ScP	11	37	14.4 -1.2
HHC				PCS	PcS	11	37	16.9 -2.2
HHC				S	**S**	**11**	**40**	**41.6 -3.4**
HHC				SCS	ScS	11	42	16.0 -4.4
HHC				SS	SS	11	44	39.9 -2.4
HHC				AMB	AMB			
	comp=Z,14nm,0.6s,mb5.2							
HHC				AMB	AMB			
	comp=Z,167nm,7.5s							
HHC				LR	LR			
	comp=N,168nm,17.9s,MS4.4							
HHC				LR	LR			
	comp=E,156nm,18.1s,MS4.4							
HHC				LR	LR			
	comp=Z,143nm,17.4s,MS4.2							
ARU	**Arti**	**60.91**	**345**	*dP*	**P**	**11**	**32**	**33.4 -1.7**
ARU				*e*		11	33	16.3
ARU				*eS*	**S**	**11**	**40**	**48.6 -2.1**
ARU				*eSS*	SS	11	44	42.2 -6.9
ARU				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.8							
ARU	**Arti**	**60.91**	**345**	*eP*	**P**	**11**	**32**	**33.6 -1.5**
BVAR	**Borovoye Array**	**62.28**	**336**	P	**P**	**11**	**32**	**43.2 -1.2**
	comp=Z,1.3nm,0.6s,mb4.2,baz=28,slow=6.7,SNR=5.2							
BVAR				pP	pP	11	32	54.9 +1.7
	comp=Z,5.3nm,0.8s,baz=49,slow=6.8,SNR=10							
BVAR				sP	sP	11	32	59.8 +3.2
	comp=Z,3.1nm,0.6s,baz=37,slow=6.1,SNR=8.9							
BVAR	**Borovoye Array**	**62.28**	**336**	P	**P**	**11**	**32**	**43.2 -1.2**
BVAR				*PP	pP	11	32	54.9 +1.7
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
BVAR				pmax	pmax			
	comp=Z,5.0nm,0.8s							
BVAR				pmax	pmax			
	comp=Z,3.0nm,0.6s							
KURK	**Kurchatov**	**62.64**	**330**	P	**P**	**11**	**32**	**45.1 -1.8**
	comp=Z,0.7nm,0.5s,mb4.0,baz=28,slow=6.6,SNR=5.8							
KURK				pP	pP	11	32	57.6 +2.0
	comp=Z,2.7nm,0.8s,baz=26,slow=6.7,SNR=11							
KURK	**Kurchatov**	**62.64**	**330**	P	**P**	**11**	**32**	**45.1 -1.8**
KURK				*PP	pP	11	32	57.7 +2.1
KURK				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.2							
KURK				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.4							
OBN	**Obninsk**	**63.80**	**358**	*iP*	pP	11	33	06.3 +3.0
OBN				pmax	pmax			
	comp=Z,12nm,0.5s,mb5.2							
NJ2	**Nanjing**	**64.70**	**291**	*eP*	**P**	**11**	**33**	**04.8 +4.1**
NJ2				AP	pP	11	33	12.6 +3.1
NJ2				XP	sP	11	33	15.8 +2.9
NJ2				PP	PP	11	35	29.4 +6.6
NJ2				S	**S**	**11**	**41**	**41.0 +2.1**
NJ2				XS	sS	11	41	54.0 +0.6
NJ2				AMB	AMB			
	comp=Z,20nm,0.6s,mb5.3							
NJ2				AMB	AMB			
	comp=Z,20nm,4.3s							
NJ2				LR	LR			
	comp=N,2μm,16.1s,MS5.4							
NJ2				LR	LR			
	comp=E,810nm,19.9s,MS5.4							
NJ2				LR	LR			
	comp=Z,820nm,20.3s,MS4.9							
MKAR	**Makanchi Array**	**65.31**	**326**	P	**P**	**11**	**33**	**02.4 -2.1**
	comp=Z,0.4nm,0.4s,mb3.8,baz=46,slow=6.2,SNR=2.6							
MKAR				pP	pP	11	33	15.2 +2.0
	comp=Z,1.1nm,0.5s,baz=51,slow=7.9,SNR=3.3							
MKAR	**Makanchi Array**	**65.31**	**326**	P	**P**	**11**	**33**	**02.4 -2.1**
MKAR				*PP	pP	11	33	15.3 +2.0
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**65.31**	**326**	P	**P**	**11**	**33**	**02.4 -2.1**
MKAR				pP	pP	11	33	15.2 +2.0
GTA	**Gaotai**	**66.26**	**309**	P	**P**	**11**	**33**	**10.8 +0.1**
GTA				AP	pP	11	33	18.4 -1.2
GTA				XP	sP	11	33	22.1 -0.8
GTA				S	S	11	41	57.9 +0.1
GTA				XS	sS	11	42	10.4 -2.0
GTA				AMB	AMB			
	comp=Z,7.0nm,0.8s,mb4.7							
GTA				LR	LR			
	comp=N,82nm,15.9s,MS4.3							
GTA				LR	LR			
	comp=E,117nm,16.2s,MS4.3							
GTA				LR	LR			
	comp=Z,79nm,16.8s,MS4.0							
WMQ	**Urumqi**	**66.46**	**320**	*eP*	**P**	**11**	**33**	**14.0 +2.1**
AKTK	**Aktyubinsk**	**66.84**	**343**	P	**P**	**11**	**33**	**12.6 -1.7**
AKTK				pP	pP	11	33	25.3 +2.2
AKTO	**Aktyubinsk**	**66.84**	**343**	P	**P**	**11**	**33**	**12.6 -1.7**
	comp=Z,1.6nm,0.7s,mb4.2,baz=34,slow=8.7,SNR=5.3							
AKTO				pP	pP	11	33	25.3 +2.2
	comp=Z,14nm,0.7s,baz=19,slow=6.4,SNR=24							
AKTO	**Aktyubinsk**	**66.84**	**343**	P	**P**	**11**	**33**	**12.6 -1.6**
AKTO				*PP	pP	11	33	25.3 +2.2
AKTO				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.3							
AKTO				pmax	pmax			
	comp=Z,14nm,0.7s,mb5.1							
LZH	**Lanzhou**	**67.62**	**305**	*eP*	**P**	**11**	**33**	**20.1 +0.7**
LZH				AP	pP	11	33	27.5 -0.8
LZH				XP	sP	11	33	30.5 -1.1
LZH				AMB	AMB			
	comp=Z,13nm,1.0s,mb4.9							
AKASG	**Malin Array Be**	**68.18**	**3**	P	**P**	**11**	**33**	**19.9 -2.8**
	comp=Z,1.4nm,0.5s,mb4.3,baz=1.5,slow=6.6,SNR=7.5							
AKASG				pP	pP	11	33	33.9 +2.4
	comp=Z,2.6nm,0.6s,baz=359,slow=6.2,SNR=5.4							
AKASG	**Malin Array Be**	**68.18**	**3**	P	**P**	**11**	**33**	**19.9 -2.8**
AKASG				*PP	pP	11	33	33.9 +2.4
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.6s							
CD2	**Chengdu**	**72.18**	**302**	P	**P**	**11**	**33**	**47.4 -0.1**
CD2				AP	pP	11	33	53.8 -2.6
CD2				PP	PP	11	36	29.1 +1.6
CD2				S	S	11	43	06.8 -1.1
CD2				XS	sS	11	43	22.5 -0.1
CD2				AMB	AMB			
	comp=Z,10.0nm,0.5s,mb5.0							
CD2				AMB	AMB			
	comp=Z,20nm,5.2s							
CD2				LR	LR			
	comp=E,220nm,14.2s							
CD2				LR	LR			
	comp=Z,250nm,10.8s,MS4.8							
ESDC	**Sonseca Array**	**74.68**	**29**	P	**P**	**11**	**34**	**02.1 0.0**
	comp=Z,0.4nm,0.4s,mb3.7,baz=343,slow=5.7,SNR=3.5							
ESDC				pP	pP	11	34	13.3 +2.3
	comp=Z,1.1nm,0.5s,baz=342,slow=6.3,SNR=3.3							
GYA	**Guiyang**	**74.87**	**297**	*iP*	**P**	**11**	**34**	**04.8 +1.4**
GYA				AP	pP	11	34	13.6 +1.3
GYA				XP	sP	11	34	17.5 +1.9
GYA				PCP	PcP	11	34	19.3 +2.1
GYA				PP	PP	11	36	54.0 +3.5
GYA				S	S	11	43	38.0 -0.4
GYA				SKS		11	44	06.3
GYA				AMB	AMB			
	comp=Z,10.0nm,1.0s,mb4.7							
GYA				AMB	AMB			
	comp=Z,70nm,5.2s							
GYA				LR	LR			
	comp=N,280nm,19.0s,MS4.7							
GYA				LR	LR			
	comp=E,260nm,18.8s,MS4.7							
GYA				LR	LR			
	comp=Z,200nm,19.4s,MS4.4							
SDV	**Santo Domingo**	**75.32**	**98**	P	**P**	**11**	**34**	**03.1 -2.9**
	comp=Z,5.6nm,0.5s,mb4.7,baz=18,slow=6.3,SNR=4.9							
KMI	**Kunming**	**77.70**	**300**	P	**P**	**11**	**34**	**22.3 +2.8**
KMI				AP	pP	11	34	29.4 +1.0
KMI				XP	sP	11	34	32.3 +0.6
KMI				AMB	AMB			
	comp=Z,5.0nm,0.9s,mb4.4							
CMAR	**Chiang Mai Arr**	**85.21**	**300**	P	**P**	**11**	**34**	**58.2 -1.0**
	comp=Z,0.4nm,0.4s,mb4.0,baz=15,slow=4.7,SNR=3.8							
CMAR				pP	pP	11	35	10.4 +2.1
	comp=Z,1.5nm,0.9s,baz=0.2,slow=5.8,SNR=4.1							
CMAR	**Chiang Mai Arr**	**85.21**	**300**	P	**P**	**11**	**34**	**58.3 -1.0**
CMAR				*PP	pP	11	35	10.5 +2.2
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.9s							
BOSA	**Boshof**	**146.71**	**14**	PKPbc	PKPbc	11	42	01.6 -2.5
	comp=Z,5.4nm,0.8s,baz=49,slow=3.4,SNR=7.2							
BOSA				pPKPbc	pPKPbc	11	42	14.3 +0.9
	comp=Z,3.7nm,0.7s,baz=267,slow=2.8,SNR=3.2							
BOSA	**Boshof**	**146.71**	**14**	PKP2	PKPbc	11	42	01.6 -2.5
BOSA				pmax	pmax			
	comp=Z,5.0nm,0.8s							
BOSA				pmax	pmax			
	comp=Z,4.0nm,0.7s							
BOSA	**Boshof**	**146.71**	**14**	PKPbc	PKPbc	11	42	01.6 -2.5
BOSA				pPKPbc	pPKPbc	11	42	14.3 +0.9
CASY	**Casey**	**147.84**	**228**	*eP*	PKPdf	11	42	03.5 +0.4
QSPA	**South Pole Qui**	**151.22**	**180**	PKPbc	PKPbc	11	42	11.8 -2.3
	comp=Z,2.4nm,0.6s,baz=186,slow=0.5,SNR=28							
QSPA				PKPab	PKPab	11	42	20.2 -2.0
	comp=Z,5.3nm,0.8s,baz=32,slow=1.7,SNR=5.5							
MAW	**Mawson**	**166.16**	**231**	PKPab	PKPab	11	43	23.5 -3.7
	comp=Z,0.3nm,0.4s,baz=118,slow=4.0,SNR=6.6							

*MOS **19** 11:23:58.1±2.2, 46.38N×141.72E, h17km, mb4.2/2, Error ellipse: s-maj=53.1km s-min=32.2km az=75.1*
MOS Felt (III) at Nevel'sk.
*JMA **19** 11:23:58.2±0.4, 46.89N×141.74E, h17km, M3.4*
*ISCJB **19** 11:24:01.0±1.1, 46.70N±0.03°×141.7E±0.1, h14km±8km, Error ellipse: s-maj=12.8km s-min=5.1km az=174.0*
*SKHL **19** 11:24:00.0±0.4, 46.65N×141.70E, h10km, mb4.1/1*
SKHL Felt (III) at Nevel'sk.

ISC 19 11:24:02.9±1.2, 46.67N±0.03°×141.8E±0.1, h20km±9km, n17, σ0°87/21, 2D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**0.70**	**66**	*d iPN*	**Pg**	**11 24 15.7**	**-1.0**
YSS				*eS*	**Sg**	**11 24 26.6**	**+0.6**
YSS	**Yuzh-Sakhalins**	**0.70**	**66**	*i Pg*	**Pg**	**11 24 15.6**	**-1.1**
YSS				AMB	AMB	11 24 16.9	
	77nm,0.2s						
YSS				*eSg*	**Sg**	**11 24 26.4**	**+0.4**
YSS				A		11 24 28.3	
	1μm,0.4s						
JWK2	**Keihoku**	**1.35**	**178**	P	**Pn**	**11 24 25.9**	**-0.8**
JWK2				*eS*	**Sn**	**11 24 45.6**	**+1.6**
JRR	**Rishiri**	**1.57**	**193**	P	**Pn**	**11 24 29.2**	**-0.5**
JSE	**Soyaes**	**1.79**	**162**	P	**Pn**	**11 24 32.2**	**-0.5**
JSS	**Shosan**	**2.27**	**180**	P	**Pn**	**11 24 39.0**	**-0.2**
UGL	**Uglegorsk**	**2.42**	**4**	*e*Pg	**Pg**	**11 24 48.0**	**-1.2**
UGL				*eS*	**Sn**	**11 25 09.0**	**-1.2**
UGL				*e*Sg	**Sg**	**11 25 22.0**	**+1.4**
UGL				A		11 25 26.0	
	240nm,0.8s						
ASAJ	**Asahikawa**	**2.61**	**168**	P	**Pn**	**11 24 43.9**	**0.0**
JKK2	**Kamakawa 2**	**2.87**	**167**	P	**Pn**	**11 24 48.4**	**+0.9**
JMP	**Maruseppu**	**2.87**	**157**	P	**Pn**	**11 24 48.1**	**+0.6**
JTKR	**Abashiri--Toko**	**3.07**	**151**	P	**Pn**	**11 24 49.3**	**-1.0**
TYV	**Tymovskoe**	**4.23**	**7**	*e*Pg	**Pg**	**11 25 24.8**	**+0.9**
KLR	**Kul'dur**	**7.24**	**294**	*e*Sg	Sx	11 28 06.4	
EKMR	**Ekimchan**	**8.59**	**321**	*e*rx	rx	11 28 30.5	
SEY	**Seymchan**	**17.36**	**16**	*e*P	**Pn**	**11 28 04.6**	**+1.0**
KURK	**Kurchatov**	**40.79**	**300**	*e*P	**P**	**11 31 42.4**	**-0.1**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ARU	**Arti**	**49.63**	**314**	*e*P	**P**	**11 32 52.0**	**-0.5**
ARU				*eS*	**S**	**11 40 00.4**	**+0.9**
ARU				SS	SS	11 43 24.5	-6.7

*HLW **19** 11:26:56.6, 29.84N×36.67E, h18km, Mb3.1*
*ISCJB **19** 11:26:57.3±0.8, 29.84N±0.003°×36.25E±0.005°, h0km, Error ellipse: s-maj=6.1km s-min=4.6km az=153.9*
*SGS **19** 11:26:57.5, 30.15N×36.19E, h14km*
*CSEM **19** 11:26:58.5±0.9, 29.71N×36.23E, h2km, ML3.1, Error ellipse: s-maj=20.2km s-min=13.2km az=48.0*
*GII **19** 11:26:58.5±0.7, 29.89N×36.12E, h0km, ML2.4/3, EXPLOSION*

ISC 19 11:26:57.4±0.8, 29.83N±0.003°×36.29E±0.005°, h0km, n20, σ0°63/31, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.08**	**265**	Pg	**Pg**	**11 27 18.1**	**-0.1**
HRFI	**Mount Harif**	**1.11**	**281**	Pg	**Pg**	**11 27 18.1**	**-0.6**
HRFI				Sg	**Sg**	**11 27 33.5**	**+0.4**
EIL	**Elat**	**1.18**	**262**	Pg	**Pg**	**11 27 19.9**	**-0.1**
EIL				Sg	**Sg**	**11 27 36.1**	**+0.8**
HQLS		**1.20**	**244**	P	**Pg**	**11 27 19.2**	**-1.1**
HQLS		**1.20**	**244**	P	**Pg**	**11 27 19.2**	**-1.1**
HQLS				S	**Sg**	**11 27 35.5**	**-0.3**
MBRI	**Mt Berech**	**1.20**	**269**	Pg	**Pg**	**11 27 20.1**	**-0.2**
MBRI				Sg	**Sg**	**11 27 36.6**	**+0.7**
ZFRI	**Zfri**	**1.20**	**307**	Pg	**Pg**	**11 27 19.9**	**-0.6**
ZFRI				Sg	**Sg**	**11 27 35.5**	**-0.6**
PRNI	**Paran**	**1.23**	**295**	Pg	**Pg**	**11 27 20.1**	**-0.9**
PRNI				Sg	**Sg**	**11 27 37.3**	**+0.3**
JLOS		**1.30**	**213**	P	**Pg**	**11 27 22.5**	**+0.2**
KRMI	**Paran Flat**	**1.39**	**282**	Pg	**Pg**	**11 27 22.9**	**-1.2**
KRMI				Sg	**Sg**	**11 27 42.1**	**0.0**
HBST	**Basata**	**1.49**	**246**	P	**Pn**	**11 27 25.7**	**+0.3**
TBKS	**Tabuk**	**1.62**	**172**	P	**Pn**	**11 27 28.2**	**+1.0**
MZDA	**Masada**	**1.68**	**332**	Pn	**Pn**	**11 27 28.2**	**+0.2**
MZDA				Sn	**Sn**	**11 27 50.9**	**+0.7**
BDAS	**Al Bad'**	**1.74**	**217**	P	**Pn**	**11 27 28.6**	**-0.3**
DSI	**Dead Sea**	**1.90**	**336**	Pn	**Pn**	**11 27 32.2**	**+1.1**
KZIT	**Kziot**	**1.96**	**304**	Pn	**Pn**	**11 27 31.6**	**-0.3**
KZIT				Sn	**Sn**	**11 27 56.6**	**-0.5**
HNKL	**Nakhl**	**2.01**	**273**	P	**Pn**	**11 27 33.2**	**+0.6**
HNKL				S	**Sn**	**11 27 59.5**	**+1.1**
RSHS		**2.01**	**221**	P	**Pn**	**11 27 31.7**	**-0.9**
HKAT	**Jabal Katrina**	**2.40**	**238**	P	**Pn**	**11 27 37.8**	**0.0**
HKAT				S	**Sn**	**11 28 08.4**	**+0.4**
TR2		**2.67**	**238**	P	**Pn**	**11 27 41.3**	**-0.3**

*MEX **19** 11:35:08.9±0.6, 13.45N×92.75W, h10km±79km, MD4.5*
*IDC **19** 11:35:09.8±3.1, 13.78N×92.52W, h0km, mb4.0/2, mb1 4.2/5, mb1mx3.8/23, mbtmp3.9/5, ML3.6/3, MS3.5/2, Ms1 3.5/2, ms1mx2.8/30, Error ellipse: s-maj=55.6km s-min=40.1km az=155.0*
*NEIC **19** 11:35:10.5, 13.48N×92.75W, h16km, MD4.5(MEX), After MEX.*
*CASC **19** 11:35:10.4±4.0, 16.15N×92.03W, h12km±221km, MD4.5*

ISC 19 11:35:09.6±1.8, 13.73N±0.07°×92.74W±0.06°, h0km±10km, n24, σ1°10/27, mb4.1/2, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.25**	**22**	*e*P	**Pg**	**11 35 32.4**	**-1.3**
THIG				*i* S	**Sg**	**11 35 50.9**	**+0.9**
FUG	**Fuego 3**	**1.98**	**69**	*e*P	**Pn**	**11 35 44.1**	**-0.2**
FG6		**1.98**	**65**	*e*P	**Pn**	**11 35 44.6**	**+0.3**
CCIG	**Comitan**	**2.60**	**13**	*e*P	**Pn**	**11 35 53.1**	**+0.2**
CCIG				*i* S	**Sn**	**11 36 26.7**	**+1.5**
CCIG	**Comitan**	**2.60**	**13**	*e*P	**Pn**	**11 35 54.5**	**+1.6**
CCIG				*i* S	**Sn**	**11 36 26.7**	**+1.5**
RBDL	**Robledal**	**2.99**	**82**	*e*P	x	11 35 58.6	
SNJE	**San Jose**	**3.05**	**87**	*e*P	x	11 35 59.8	
SNJE				*e*S	x	11 36 41.6	
TGIG		**3.05**	**353**	*e*P	**Pn**	**11 35 58.3**	**-0.8**
TGIG				*i* S	**Sn**	**11 36 36.7**	**+0.5**
BOQS	**Boqueron**	**3.36**	**90**	*e*P	x	11 36 03.9	
LFRS	**El Faro**	**3.58**	**91**	*e*P	x	11 36 12.3	
CMIG	**Matias Romero**	**3.93**	**329**	Pn	**Pn**	**11 36 11.2**	**0.0**
	1.6nm,0.3s,baz=151,slow=14,SNR=4.9						
CMIG				Sn	**Sn**	**11 36 57.2**	**-0.7**
	4.6nm,0.3s,baz=171,slow=7.6,SNR=4.4						
CMIG	**Matias Romero**	**3.93**	**329**	*i* P	**Pn**	**11 36 11.1**	**0.0**
CMIG				*i* S	**Sn**	**11 36 58.1**	**+0.2**
VHO	**Vista Hermosa**	**5.08**	**311**	*i* P	**Pn**	**11 36 26.9**	**-0.2**
VHO				*i* S	**Sn**	**11 37 25.4**	**-1.1**
VHO	**Vista Hermosa**	**5.08**	**311**	*i* P	**Pn**	**11 36 27.8**	**+0.8**
VHO				*i* S	**Sn**	**11 37 24.0**	**-2.5**
TEIG	**Tepich**	**7.74**	**33**	Pn	**Pn**	**11 37 02.8**	**-0.8**
	3.6nm,0.3s,baz=238,slow=9.0,SNR=10.0						
TEIG				Sn	**Sn**	**11 38 29.1**	**-2.9**
	2.3nm,0.3s,baz=233,slow=20,SNR=2.5						
TEIG				LR	LR	11 40 21.7	
	comp=Z,241nm,20.3s,baz=290,slow=41						
TEIG	**Tepich**	**7.74**	**33**	*e*Pn	**Pn**	**11 37 03.4**	**-0.2**
TEIG				LR	LR	11 40 21.7	
PPM	**Popocatepetl**	**7.75**	**314**	*i* P	**Pn**	**11 37 10.6**	**+6.9**
TXAR	**Lajitas Array**	**18.53**	**329**	P	**Pn**	**11 39 28.2**	**+0.4**
	0.0nm,0.3s,baz=141,slow=12,SNR=8.3						
NVAR	**Mina Array Bea**	**33.43**	**322**	P	**P**	**11 41 52.7**	**+2.6**
	0.7nm,0.7s,mb3.7,baz=133,slow=8.7,SNR=6.6						
NVAR	**Mina Array Bea**	**33.43**	**322**	P	**P**	**11 41 52.7**	**+2.6**
SCHQ	**Schefferville**	**45.72**	**21**	LR	LR	12 03 35.8	
	comp=Z,76nm,19.9s,baz=63,slow=37						
YKA	**Yellowknife Ar**	**51.12**	**347**	P	**P**	**11 44 13.5**	**-0.3**
	3.5nm,0.7s,mb4.4,baz=152,slow=7.5,SNR=11						
YKA	**Yellowknife Ar**	**51.12**	**347**	P	**P**	**11 44 13.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**146.00**	**340**	PKPbc	PKPbc	11 54 51.3	-0.9
	2.4nm,0.8s,baz=336,slow=3.5,SNR=7.2						

*ISCJB **19** 11:57:17.3±1.0, 5024N±0.03°×17754W±0.02, h0km±6km, mb5.2/223, MS4.4/180, Error ellipse: s-maj=5.2km s-min=2.2km az=9.9*
*MOS **19** 11:57:20.5±0.9, 5022N×17756W, h22km, mb5.4/99, MS4.3/58, Error ellipse: s-maj=6.9km s-min=4.3km az=96.8*
*BJI **19** 11:57:20.1, 5070N×17777W, h17km, mB5.4, mb5.1, Ms4.8, Msz4.5*
*NEIC **19** 11:57:21.5±1.3, 5026N×17755W, h17km±7km, mb5.2/136, ML4.8(AEIC), Error ellipse: s-maj=4.5km s-min=2.0km az=186.0*
*GCMT **19** 11:57:21.5±0.2, 5026N×17765W, h12km, MW5.1/93, Moment Tensor Solution. s44,c61; s93,c167; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=5.55±.12; Mθθ=6.20±.10; Mφφ=-0.64±.11; Mrθ=-0.34±.31; Mrφ=-1.75±.10; Mθφ=0.31±.41; Best double couple: Mw=6.1 0500×10^16 NP1:φs=281.00000°, δ43.00000°, λ=-94.00000°. NP2: φs=106.00000°, δ47.00000°, λ=-86.00000°. Principal axes: T 6.6350, Plg2.0000°, Azm194.0000°; N -1.0570, Plg3.0000°, Azm284.0000°; P -5.5740, Plg87.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **19** 11:57:22, 5023N×17789W, h10km, mb5.2/11*
*IDC **19** 11:57:23.0±3.1, 5024N×17758W, h29km±21km, mb4.7/29, mb1 4.8/30, mb1mx4.8/32, mbtmp4.7/30, ML4.8/1, MS4.2/19, Ms1 4.2/19, ms1mx4.1/32, Error ellipse: s-maj=15.1km s-min=9.2km az=168.0*
*SZGRF **19** 11:57:33.1, 5074N×179.06W, h68km, mb5.5, Andreanof Islands, Aleutian Islands, United States*

ISC 19 11:57:21.3±1.1, 5028N±0.03°×17755W±0.02, h15km±6km, h21km±1.5km:pP-P, n1042, σ0°66/979, mb5.1/223, MS4.4/180, 231C-196D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.70**	**18**	P	**Pn**	**11 57 49.0**	**-1.4**
ADK				S	**Sn**	**11 58 10.5**	**-1.4**
ADK	**Adak**	**1.70**	**18**	*e*Pn	**Pn**	**11 57 49.1**	**-1.3**
ADK				*e*Sn	**Sn**	**11 58 10.5**	**-1.4**
AMKA	**Amchitka**	**2.28**	**300**	*e*Pn	**Pn**	**11 57 57.0**	**-1.4**
AMKA				*e*Sn	**Sn**	**11 58 23.4**	**-2.8**
SMY	**Shemya**	**5.76**	**298**	*e*Pn	**Pn**	**11 58 48.1**	**+1.9**
SMY				Sn	**Sn**	**11 59 50.2**	**-1.8**
FX1	**Attu Island--F**	**6.35**	**298**	P	**Pn**	**11 58 54.4**	**+0.2**
OKCD	**Okmok Cone D**	**6.65**	**58**	P	**Pn**	**11 58 57.2**	**-1.1**
UNV	**Unalaska Valle**	**7.69**	**58**	P	**Pn**	**11 59 11.8**	**-0.8**
AKLV	**Akutan Long Va**	**8.11**	**57**	P	**Pn**	**11 59 18.4**	**0.0**
SPIA	**Saint Paul Isl**	**8.15**	**29**	P	**Pn**	**11 59 19.4**	**+0.4**
AKUT	**Akutan**	**8.20**	**57**	P	**Pn**	**11 59 18.7**	**-0.9**
SDPT	**Sand Point**	**11.50**	**57**	*e*Pn	**Pn**	**12 00 03.0**	**-1.8**
PET	**Petropavlovsk**	**15.01**	**290**	*e*P	**Pn**	**12 00 52.5**	**-0.1**
PET				*e*S	**Sn**	**12 03 37.4**	**-1.0**
PET				pmax	pmax		
	comp=Z,111nm,1.7s						
PET				pmax	pmax		
	comp=Z,900nm,4.5s						
PET				pmax	pmax		
	comp=Z,100nm,9.3s						
PET				MLR	MLR		
	comp=Z,600nm,11.0s						
PET				MLR	MLR		
	comp=Z,600nm,11.0s						
PET	**Petropavlovsk**	**15.01**	**290**	*e*Pn	**Pn**	**12 00 53.4**	**+0.8**
PET				*e*Sn	**Sn**	**12 03 37.6**	**-0.8**
PEA0B	**Petropavlovsk-**	**15.58**	**290**	*e*Pn	**Pn**	**12 01 00.8**	**+0.6**
PEA0B				*e*Sn	**Sn**	**12 03 53.5**	**+1.1**
PETK	**Petropavlovsk-**	**15.58**	**290**	Pn	**Pn**	**12 00 59.9**	**-0.3**
	comp=Z,3.9nm,0.3s,baz=87,slow=7.4,SNR=115						
PETK				Sn	**Sn**	**12 03 50.1**	**-2.4**
	comp=Z,0.5nm,0.3s,baz=96,slow=21,SNR=4.0						
OHAK	**Old Harbor**	**15.89**	**55**	*e*P	**Pn**	**12 01 05.0**	**+0.9**
	comp=Z,8.1

COLD Coldfoot 21.82 29 *e*P P 12 02 13.2 +0.6
comp=E,56nm,1.2s,mb4.9
PNL Peninsula 23.52 52 *e*P P 12 02 30.8 +0.2
comp=Z,43nm,0.8s,mb4.9
HYT Haines Junctio 24.59 49 *e*P P 12 02 41.1 +0.7
SKAG Skagway 25.56 53 *e*P P 12 02 50.4 +1.2
comp=Z,32nm,1.4s,mb4.7
SIT Sitka 25.58 58 *e*P P 12 02 51.1 +1.7
SIT pmax pmax
comp=Z,174nm,1.4s,mb5.4
SIT MLR MLR
comp=Z,700nm,20.0s,MS4.2
SIT Sitka 25.58 58 *e*P P 12 02 51.1 +1.7
comp=Z,174nm,1.4s,mb5.4
SIT LR LR
comp=Z,700nm,20.0s,MS4.2
YSS Yuzh-Sakhalins 26.23 278k*e*P P 12 02 56.0 +0.5
YSS *e*S S 12 07 27.0 0.0
YSS *e*SS 12 08 44.0
YSS pmax pmax
comp=E,120nm,1.4s
YSS pmax pmax
comp=Z,130nm,1.4s,mb5.3
YSS MLR MLR
comp=Z,500nm,14.0s,MS4.2
YSS Yuzh-Sakhalins 26.23 278 *e*P P 12 02 56.3 +0.8
comp=Z,204nm,1.8s,mb5.3
YSS LR LR
comp=Z,135nm,21.0s
CRAG Craig 26.95 62 *e*P P 12 03 04.2 +2.4
comp=Z,202nm,1.4s,mb5.5
CRAG LR LR
comp=Z,600nm,20.0s,MS4.2
WRAK Wrangell Islan 27.27 59 *e*P P 12 03 06.9 +2.2
comp=Z,101nm,1.4s,mb5.2
WRAK LR LR
comp=Z,673nm,20.0s,MS4.2
ASAJ Asahikawa 27.52 273 P P 12 03 07.4 +0.4
comp=Z,9.8nm,0.8s,mb4.5,baz=142,slow=4.9,SNR=7.3
ASAJ LR LR 12 11 45.8
comp=Z,201nm,20.1s,MS3.7,baz=124,slow=31
ERM Erimo 28.17 268 PFAKE 12 03 20.0 +7.1
ERM LR LR
comp=Z,637nm,19.0s,MS4.2
DLBC Dease Lake 28.33 55 P P 12 03 15.8 +1.6
baz=278,slow=6.9
DLBC Dease Lake 28.33 55 *e*P P 12 03 16.6 +2.5
DLBC *e*PcP PcP 12 06 27.7 +1.2
YAK Yakutsk 30.75 313 *e*P P 12 03 34.3 -1.2
YAK *e**PP pP 12 03 44.7 +4.7
YAK *e* 12 06 30.8
YAK *e*S S 12 08 36.0 -1.7
YAK *e**SS sS 12 08 47.7 +2.6
YAK *e* 12 14 08.3
YAK pmax pmax
comp=E,32nm,1.5s
YAK pmax pmax
comp=Z,34nm,1.1s,mb5.1
YAK smax
comp=N,187μm,2.0s
YAK smax
comp=E,88μm,1.2s
YAK MLR MLR
comp=Z,383nm,16.0s,MS4.2
YAK MLR MLR
comp=E,404nm,18.0s,MS4.3
YAK MLR MLR
comp=N,350nm,16.0s,MS4.3
YAK Yakutsk 30.75 313⇑*i*P P 12 03 34.0 -1.5
YAK LR LR
comp=Z,411nm,20.0s,MS4.1
TIXI Tiksi 31.99 331 PFAKE 12 04 00.0 +14
TIXI LR LR
comp=Z,572nm,21.0s,MS4.2
KLR Kul'dur 32.26 288⇑*e*P P 12 03 44.5 -4.5
KLR *e*S S 12 09 07.0 +5.4
KLR *e* 12 14 16.0
KLR pmax pmax
comp=E,120nm,1.6s
KLR pmax pmax
comp=Z,170nm,1.6s,mb5.6
C03A Quillayute Air 34.16 73⇑P P 12 04 05.9 +0.4
baz=34
MAJO Matsushiro 34.42 264 *e*P P 12 04 08.3 +0.4
MAJO pmax pmax
comp=Z,35nm,1.5s,mb5.1
MAJO MLR MLR
comp=Z,165nm,19.0s,MS3.8
MAJO Matsushiro 34.42 264 *e*P P 12 04 08.3 +0.3
comp=Z,35nm,1.5s,mb5.1
MAJO LR LR
comp=Z,165nm,19.0s,MS3.8
MAT Matsushiro 34.42 264 P P 12 04 08.9 +1.0
MAT S S 12 09 39.0 +3.7
MJAR Matsushiro Arr 34.42 264 P P 12 04 07.9 0.0
comp=Z,3.8nm,0.7s,mb4.4,baz=56,slow=4.5,SNR=15
MJAR PcP PcP 12 06 42.9 -0.3
comp=Z,3.8nm,0.9s,baz=253,slow=0.9,SNR=11
MJAR LR LR 12 19 32.8
comp=Z,165nm,18.3s,MS3.8,baz=60,slow=39
MJAR Matsushiro Arr 34.42 264 P P 12 04 07.9 0.0
MJAR 12 06 42.9
MJAR pmax pmax
comp=Z,4.0nm,0.7s
MJAR MLR MLR
comp=Z,165nm,18.3s
NLWA Neilton Lookou 34.82 74⇑P P 12 04 11.6 +0.3
baz=35
VLA Vladivostok 34.83 278 *e*P P 12 04 10.6 -0.8
VLA pmax pmax
comp=Z,142nm,1.8s,mb5.6
VLA Vladivostok 34.83 278⇑*i*P P 12 04 10.8 -0.6
D03A Wishkah Elem. 35.00 74⇓P P 12 04 13.0 +0.2
baz=35
VDB Vedder Mountai 35.22 70 P P 12 04 15.0 +0.3
A05A Maple Falls 35.24 70⇓P P 12 04 14.7 -0.2
baz=35
GNW Green Mountain 35.38 73 *e*P P 12 04 17.0 +0.9
comp=Z,41nm,1.6s,mb5.1
YKW3 Yellowknife Ar 35.41 45 *e*P P 12 04 16.8 +0.6
YKA Yellowknife Ar 35.43 46 P P 12 04 16.8 +0.5
comp=Z,6.7nm,0.4s,mb5.0,baz=276,slow=8.9,SNR=47
YKA LR LR 12 20 34.8
comp=Z,324nm,18.4s,MS4.1,baz=225,slow=39
YKA Yellowknife Ar 35.43 46 P P 12 04 16.8 +0.5
YKA pmax pmax
comp=Z,7.0nm,0.4s
YKA MLR MLR
comp=Z,325nm,18.4s
CMW Cultus Mountai 35.45 71 P P 12 04 18.0 +1.3
B05A Bryant 35.53 71⇓P P 12 04 17.6 +0.2
baz=35,SNR=5.9
MDJ Mudanjiang 35.55 282 P P 12 04 16.3 -1.3
MDJ PP PP 12 05 35.5 -2.7
MDJ PCP PcP 12 06 46.1 -0.2
MDJ S S 12 09 51.3 -1.3
MDJ PCS PcS 12 10 34.0 +0.7
MDJ AMB AMB
comp=Z,16nm,0.9s,mb5.0
MDJ AMB AMB
comp=Z,92nm,4.8s
MDJ LR LR
comp=N,230nm,22.5s
MDJ LR LR
comp=Z,214nm,19.6s,MS3.9
MDJ Mudanjiang 35.55 282 *e*P P 12 04 17.1 -0.5
comp=Z,11nm,0.6s,mb5.0
MDJ LR LR
comp=Z,353nm,19.0s,MS4.1
A06A Chilliwack 35.57 70⇑P P 12 04 17.6 -0.1
baz=35
BMW Boistfort Moun 35.61 75 *e*P P 12 04 16.0 -2.1
F03A Seaside 35.65 76⇑P P 12 04 18.8 +0.3
baz=36
JCW Jim Creek 35.67 71 *e*P P 12 04 19.4 +0.9
JCW *e*PcP PcP 12 06 47.2 +0.6
B06A Marblemount 35.80 71⇑P P 12 04 19.7 0.0
baz=36
C05A Tolt Reservoir 36.02 72⇓P P 12 04 22.0 +0.4
baz=36
D05A Enumclaw 36.06 73⇑P P 12 04 21.8 -0.1
baz=36
G03A Yamhill 36.11 76⇑P P 12 04 22.5 +0.2
baz=36
A07A Ashnola River, 36.24 69⇑P P 12 04 23.5 0.0
baz=36
TDL Tradedollar La 36.29 74 P P 12 04 25.0 +1.1
F04A Amboy 36.36 75⇑P P 12 04 24.8 +0.3
baz=36
I02A Mapleton 36.39 79⇑P P 12 04 24.7 -0.1
baz=36
C06A Tall Timber Ra 36.41 71⇓P P 12 04 24.9 0.0
baz=36
COR Corvallis 36.44 77 PFAKE 12 04 40.0 +15
COR LR LR
comp=Z,594nm,19.0s,MS4.4
E05A Randle 36.48 74⇑P P 12 04 25.3 -0.2
baz=36
B07A Winthrop 36.65 70⇑P P 12 04 27.2 +0.3
baz=36,SNR=8.5
D06A Cle Elum 36.76 72⇓P P 12 04 27.9 0.0
baz=37
J02A Umpqua 36.87 79⇓P P 12 04 29.2 +0.3
baz=37,SNR=5.4
ETW Entiat 36.89 71 P P 12 04 29.6 +0.6
A08A Turner Farm, O 36.95 69⇓P P 12 04 29.7 +0.2
baz=37,SNR=9.0
E06A Yakima 36.97 73⇑P P 12 04 29.3 -0.4
baz=37
F05A White Salmon 36.98 75⇑P P 12 04 30.0 +0.3
baz=37
C07A Waterville 37.02 71⇓P P 12 04 30.0 -0.1
baz=37
EBG Ellensburg 37.05 73 P P 12 04 31.1 +0.7
H04A Detroit Lake 37.09 77⇓P P 12 04 30.4 -0.3
baz=37,SNR=7.3
B08A Colville Reser 37.17 70⇓P P 12 04 31.5 +0.1
baz=37,SNR=15
K02A Glendale 37.23 80⇓P P 12 04 32.4 +0.4
baz=37
D07A Quincy 37.29 72⇑P P 12 04 32.5 +0.1
baz=37
M01C Crescent City 37.30 82⇓P P 12 04 32.9 +0.3
baz=37
A09A Danville 37.35 69⇑P P 12 04 33.0 +0.1
baz=37,SNR=5.3
G05A Wamic 37.37 75⇓P P 12 04 33.3 +0.3
baz=37
I04A Tendick Farm, 37.39 78⇓P P 12 04 33.8 +0.5
baz=37,SNR=18
F06A Goldendale 37.45 74⇑P P 12 04 33.8 0.0
baz=37
L02A Cave Junction 37.47 81⇓P P 12 04 34.8 +0.8
baz=37,SNR=5.5
C08A Higginbotham F 37.59 71⇑P P 12 04 34.8 -0.1
baz=38
HUMO Hull Mountain 37.65 80⇓P P 12 04 35.8 +0.3
baz=38,SNR=7.3
HUMO Hull Mountain 37.65 80 *e*P P 12 04 35.8 +0.4
HUMO LR LR
comp=Z,410nm,19.0s,MS4.2
H05A Madras 37.71 76⇓P P 12 04 36.5 +0.5
baz=38,SNR=8.4
G06A Carlson Farm, 37.79 75⇑P P 12 04 36.7 0.0
baz=38
B09A Rice 37.85 69⇑P P 12 04 37.2 +0.1
baz=38
J04A Umpqua Nationa 37.86 79⇓P P 12 04 38.0 +0.8
baz=38,SNR=8.5
RSW Rattlesnake Hi 37.89 73 *e*P P 12 04 38.3 +0.8
F07A Phinny Hill Vi 37.92 74⇑P P 12 04 38.2 +0.5
baz=38
I05A Bend 37.92 77⇑P P 12 04 38.4 +0.6
baz=38,SNR=6.7
HAWA Hanford 37.93 73 *e*P P 12 04 38.0 +0.2
HAWA LR LR
comp=Z,344nm,20.0s,MS4.2
A10A Northport 37.96 68⇑P P 12 04 38.0 0.0
baz=38
OD2 Odessa Site #2 37.97 71 P P 12 04 38.0 -0.1
D08A Wollman Farm, 37.99 72⇑P P 12 04 38.1 -0.3
baz=38
C09A Chrisman Ranch 38.05 70⇓P P 12 04 38.7 -0.2
baz=38
E08A Dider Farm, El 38.17 72⇓P P 12 04 39.4 -0.4
baz=38
H06A Lindquist Farm 38.22 76⇓P P 12 04 40.7 +0.4
baz=38,SNR=8.9
YBH Yreka Blue Hor 38.26 81 P P 12 04 42.1 +1.4
comp=Z,14nm,1.0s,mb4.7,baz=299,slow=2.9,SNR=13
YBH LR LR 12 15 52.1
comp=Z,97nm,21.9s,baz=298,slow=29
YBH Yreka Blue Hor 38.26 81 *e*P P 12 04 41.8 +1.1
YBH pmax pmax
comp=Z,13nm,1.1s
YBH MLR MLR
comp=Z,391nm,21.0s
YBH Yreka Blue Hor 38.26 81⇑P P 12 04 41.3 +0.7
baz=38,SNR=7.9
YBH Yreka Blue Hor 38.26 81 *e*P P 12 04 41.8 +1.2
comp=Z,13nm,1.1s,mb4.6
YBH LR LR
comp=Z,391nm,21.0s,MS4.2
M02C Callahan 38.35 82⇑P P 12 04 42.2 +0.8
baz=38,SNR=10
D09A Jones Farm, Ri 38.36 71⇑P P 12 04 41.1 -0.4
baz=38
N02C Big Bar 38.37 83⇑P P 12 04 42.3 +0.7
baz=38,SNR=5.2
G07A Ruggs Ranch, H 38.38 74⇑P P 12 04 41.5 -0.1
baz=38
J05A Fort Rock 38.38 78⇓P P 12 04 42.3 +0.6
baz=38,SNR=12
K04A Chilquin 38.42 79⇓P P 12 04 42.6 +0.6
baz=38
NEW Newport 38.53 69 *e*P P 12 04 42.6 -0.3
NEW pmax pmax
comp=Z,10.0nm,1.0s
NEW MLR MLR
comp=Z,327nm,19.0s
NEW Newport 38.53 69 *e*P P 12 04 42.6 -0.3
comp=Z,10.0nm,1.0s,mb4.5
NEW LR LR
comp=Z,327nm,19.0s,MS4.2
L04A Klamath Falls 38.55 80⇓P P 12 04 43.8 +0.8
baz=38
CN2 Changchun 38.55 283⇓P P 12 04 42.3 -0.8
CN2 eXP sP 12 04 49.5 +0.1
CN2 *e*S S 12 10 36.8 -1.4
CN2 AMB AMB
comp=Z,30nm,0.7s,mb5.1
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,14.0s,MS4.5
CN2 LR LR
comp=E,200nm,14.0s,MS4.5
CN2 LR LR
comp=Z,400nm,16.0s,MS4.3
C10A Spilker Farm, 38.62 70⇓P P 12 04 43.5 -0.2
baz=38
EDM Edmonton 38.67 60 *e*P P 12 04 44.3 +0.3
F08A Pendleton 38.67 73⇑P P 12 04 44.3 +0.2
baz=38
A11A Hall Mountain, 38.68 68⇑P P 12 04 44.6 +0.4
baz=38,SNR=14
I06A Prineville 38.69 77⇑P P 12 04 44.6 +0.4
baz=39,SNR=7.7
E09A Wood Farm, Sta 38.72 72⇓P P 12 04 44.2 -0.3
baz=39,SNR=8.5
H07A Lands Inn, Kim 38.77 75⇑P P 12 04 44.9 0.0
baz=39
M04C Macdoel 38.79 81⇑P P 12 04 45.6 +0.5
baz=39,SNR=14
G08A Pilot Rock 38.80 74⇓P P 12 04 45.0 -0.2
baz=39,SNR=5.9
K05A Sumer Lake 38.89 79⇑P P 12 04 46.8 +0.9
baz=39,SNR=23
B11A Sandpoint 38.91 68⇓P P 12 04 45.7 -0.3
baz=39
WDC Whiskeytown Da 38.99 83 *e*P P 12 04 48.0 +1.2
WDC pmax pmax
comp=Z,21nm,1.2s,mb4.7
WDC MLR MLR
comp=Z,214nm,19.0s,MS4.0
WDC Whiskeytown Da 38.99 83⇑P P 12 04 47.5 +0.7
baz=39,SNR=7.2
WDC Whiskeytown Da 38.99 83 *e*P P 12 04 48.0 +1.1
comp=Z,21nm,1.2s,mb4.7
WDC LR LR
comp=Z,214nm,19.0s,MS4.0
D10A Wagner Farm, O 38.99 71⇑P P 12 04 45.8 -0.9
baz=39,SNR=5.3
O02C Red Bluff 39.06 83⇓P P 12 04 47.5 +0.2
baz=39,SNR=7.1
I07A Izee 39.06 76⇑P P 12 04 47.3 0.0
baz=39,SNR=18
J06A Christmas Vall 39.08 78⇑P P 12 04 47.9 +0.4
baz=39,SNR=18
A12A Yaak River Ran 39.11 67⇓P P 12 04 47.8 +0.1
baz=39
F09A S2 Ranch, Elgi 39.24 73⇓P P 12 04 48.2 -0.7
baz=39
C11A Tepee Creek (N 39.25 69⇓P P 12 04 48.5 -0.3
baz=39
K06A Valley Falls 39.25 78⇑P P 12 04 49.3 +0.4
baz=39,SNR=13
BOD Bodaibo 39.28 308 *e*P P 12 04 48.0 -1.0
BOD *e* 12 10 44.6
BOD pmax pmax
comp=Z,46nm,0.7s,mb5.3
L05A Lakeview 39.28 80⇑P P 12 04 49.2 0.0
baz=39,SNR=12
LTIM Timbered Crate 39.34 81 P P 12 04 50.5 +0.8
E10A Myers Farm, Un 39.36 71⇑P P 12 04 49.2 -0.7
baz=39
H08A Prairie City 39.36 75⇓P P 12 04 49.8 0.0
baz=39,SNR=8.8
GASB Alder Springs 39.39 84⇓P P 12 04 51.0 +0.8
baz=39,SNR=6.8
HIA Hailar 39.44 294 *e*P P 12 04 49.8 -0.7
HIA *e* 12 06 58.3
HIA pmax pmax
comp=Z,62nm,1.5s
HIA MLR MLR
comp=Z,263nm,19.0s
HIA Hailar 39.44 294 *e*P P 12 04 49.8 -0.7
comp=Z,62nm,1.5s,mb5.1
HIA *e*PcP PcP 12 06 58.2 +0.1
HIA LR LR
comp=Z,263nm,19.0s,MS4.1
M05C Lookout 39.45 81⇑P P 12 04 51.2 +0.5
baz=39,SNR=13
F10A Beach Ranch, E 39.53 72⇑P P 12 04 50.9 -0.4
baz=39
G09A Cove 39.53 73⇑P P 12 04 50.7 -0.5
baz=39,SNR=7.4
HOPS Hopland 39.54 85 PFAKE 12 05 00.0 +8.6
HOPS LR LR
comp=Z,616nm,19.0s,MS4.5
J07A Hines 39.54 77⇓P P 12 04 51.7 +0.4
baz=39,SNR=19
D11A Klaveano Farm, 39.56 70⇑P P 12 04 50.8 -0.7
baz=39
LBCM Butte Creek Ri 39.61 82 P P 12 04 52.6 +0.7
MOD Modoc 39.69 79⇓P P 12 04 53.4 +0.7
baz=40,SNR=13
MOD Modoc 39.69 79 P P 12 04 53.3 +0.7
MOD LR LR
comp=Z,305nm,20.0s,MS4.1
I08A Drewsey 39.73 76⇓P P 12 04 52.9 0.0
baz=40,SNR=18
A13A Flathead Natio 39.84 67⇓P P 12 04 53.2 -0.6
baz=40
H09A Durkee 39.91 74⇓P P 12 04 54.4 0.0
baz=40
G10A Bishop Farm, J 39.93 73⇓P P 12 04 54.4 -0.2
baz=40,SNR=15
K07A Rock Creek Ran 39.94 78⇓P P 12 04 55.2 +0.5
baz=40,SNR=24
M06C Likely Place G 39.96 80⇓P P 12 04 55.1 +0.3
baz=40,SNR=14
MNRC McLaughlin Nat 40.01 85⇓P P 12 04 55.9 +0.5
baz=40
BMO Blue Mountains 40.04 74 *e*P P 12 04 55.7 +0.2
comp=Z,12nm,1.3s,mb4.5
BMO LR LR
comp=Z,300nm,19.0s,MS4.2
O04C Chester 40.06 82⇓P P 12 04 56.4 +0.6
baz=40,SNR=8.4
B13A Whitefish 40.07 67⇑P P 12 04 55.3 -0.3
baz=40,SNR=6.2
J08A Circle Bar Ran 40.08 76⇓P P 12 04 56.4 +0.6
baz=40,SNR=13
WALA Waterton Lakes 40.08 66 *e*P P 12 04 55.9 +0.1
comp=Z,47nm,1.4s,mb5.0
WALA *e*PcP PcP 12 07 01.1 +0.9
ELFS Eagle Lake Fie 40.12 81⇑P P 12 04 56.9 +0.6
baz=40
D12A Red Ives Fores 40.16 70⇓P P 12 04 56.0 -0.5
baz=40
I09A Lost Marbles R 40.21 75⇑P P 12 04 56.7 -0.3
baz=40
ORV Oroville 40.23 83⇓P P 12 04 56.6 -0.5
baz=40,SNR=11
F11A Grangeville 40.23 72⇓P P 12 04 56.1 -0.9
baz=40
L07A Adell 40.24 79⇓P P 12 04 57.3 +0.1
baz=40,SNR=22
C13A Hot Springs 40.33 68⇓P P 12 04 57.2 -0.6
baz=40,SNR=6.2
E12A Beaver Dam Sad 40.33 71⇑P P 12 04 57.5 -0.3
baz=40,SNR=7.4
O05C Quincy 40.37 82⇑P P 12 04 58.7 +0.4
baz=40,SNR=13
K08A Mann Creek Ran 40.40 77⇓P P 12 04 58.7 +0.2
baz=40,SNR=18
G11A Walters Elk Ra 40.40 72⇓P P 12 04 57.9 -0.6
baz=40
A14A Double T Ranch 40.41 66⇓P P 12 04 58.2 -0.3
baz=40,SNR=20
Q03C Winters 40.42 85⇑P P 12 04 58.8 0.0
baz=40
WVOR Wild Horse Val 40.46 78 *e*P P 12 04 59.4 +0.4
WVOR pmax pmax
comp=Z,27nm,1.0s,mb4.9
WVOR MLR MLR
comp=Z,279nm,19.0s,MS4.1
WVOR Wild Horse Val 40.46 78 *e*P P 12 04 59.4 +0.4
comp=Z,27nm,1.0s,mb4.9
WVOR LR LR
comp=Z,279nm,19.0s,MS4.1
KSRS Korea Array 40.47 273 P P 12 04 59.5 +0.4
comp=Z,8.8nm,0.6s,mb4.7,baz=57,slow=8.2,SNR=42
KSRS PcP PcP 12 07 01.8 +0.1
comp=Z,1.8nm,0.6s,baz=67,slow=1.8,SNR=7.3
KSRS LR LR 12 21 03.7
comp=Z,56nm,21.7s,baz=45,slow=35
KSRS Korea Array 40.47 273 P P 12 04 59.5 +0.4
KSRS 12 07 01.8
KSRS pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
KSRS MLR MLR
comp=Z,56nm,21.7s
H10A Noah's Angus R 40.51 74⇑P P 12 04 59.2 -0.2
baz=40,SNR=27
J09A Fry Pan Ranch, 40.53 76⇑P P 12 04 59.6 +0.1
baz=40,SNR=25
N06A Buffalo Meadow 40.62 81⇑P P 12 05 00.6 +0.2
baz=40,SNR=26
D13A Huson 40.67 69⇑P P 12 04 59.7 -1.0
baz=40
M07A Soldier Meadow 40.69 79⇑P P 12 05 01.5 +0.6
baz=41,SNR=38
Q04C Lincoln 40.71 84⇑P P 12 05 01.0 -0.1
baz=41
I10A Payette 40.74 74⇑P P 12 05 01.5 +0.2
baz=41,SNR=8.7
SNY Shenyang 40.76 281⇑P P 12 05 02.0 +0.5
SNY AMB AMB
comp=Z,35nm,1.7s,mb4.7
L08A Fields 40.77 78⇑P P 12 05 01.8 +0.2
baz=41,SNR=21
BEKR Beckwourth 40.78 82⇓P P 12 05 01.8 +0.1
baz=41,SNR=8.8
F12A Elk City 40.84 71⇑P P 12 05 01.7 -0.5
baz=41,SNR=10
K09A Rome 40.89 77⇑P P 12 05 02.5 0.0
baz=41,SNR=8.7
H11A Donnelly 40.91 73⇓P P 12 05 02.4 -0.3
baz=41
P05C Yuba Gap, Truc 40.94 83⇓P P 12 05 03.1 +0.1
baz=41,SNR=7.0
O06A Flanigan 40.95 81⇓P P 12 05 03.2 +0.1
baz=41,SNR=14
J10A Berg Farm, Mel 41.10 75⇑P P 12 05 04.2 -0.1
baz=41
MSO Missoula 41.11 69 *e*P P 12 05 04.2 -0.1
comp=Z,13nm,1.3s,mb4.4
MSO LR LR
comp=Z,197nm,21.0s,MS4.0

N07B **Gerlach** 41.15 80 ⇓P P 12 05 04.8 +0.1
baz=41
E13A **Victor** 41.15 70 ⇓P P 12 05 04.3 -0.3
baz=41
M08A **Happy Creek Ra** 41.15 79 ⇑P P 12 05 05.1 +0.3
baz=41,SNR=17
LAVA **Lava Cap Winer** 41.17 84 ⇓P P 12 05 04.9 0.0
baz=41,SNR=8.7
P06A **Stead Airport,** 41.17 82 ⇑P P 12 05 05.2 +0.2
baz=41,SNR=5.8
WENL **Wente Vineyard** 41.18 86 ⇑P P 12 05 05.2 +0.2
baz=41
B15A **Bradely Ranch,** 41.22 67 ⇑P P 12 05 04.6 -0.6
baz=41,SNR=24
D14A **Greenough** 41.25 69 ⇓P P 12 05 04.5 -1.0
baz=41,SNR=9.5
INCN **Inchon** 41.27 274 PFAKE 12 05 20.0 +14
INCN LR LR
comp=Z,577nm,21.0s,MS4.4
L09A **Wilkinson Ranc** 41.29 78 ⇓P P 12 05 05.9 +0.1
baz=41,SNR=9.5
R04C **Big Horse Ranc** 41.33 84 ⇑P P 12 05 06.4 +0.2
baz=41
I11A **Placerville** 41.35 74 ⇑P P 12 05 06.0 -0.3
baz=41,SNR=14
K10A **MacKenzie Ranc** 41.38 76 ⇑P P 12 05 06.3 -0.3
baz=41,SNR=24
F13A **Darby** 41.39 71 ⇓P P 12 05 06.1 -0.5
baz=41
C15A **Salmond Ranch,** 41.45 67 ⇓P P 12 05 07.1 0.0
baz=41,SNR=15
WCN **Washoe City** 41.48 82 ⇓P P 12 05 07.7 +0.3
baz=41,SNR=8.2
CHMT **Chamberlain Mo** 41.48 69 eP P 12 05 06.9 -0.5
PAHR **Pah Rah Range** 41.49 82 eP P 12 05 08.1 +0.6
comp=Z,54nm,1.2s,mb5.0
O07A **Toulon** 41.55 81 ⇑P P 12 05 08.4 +0.4
baz=41,SNR=25
E14A **Clinton** 41.58 70 ⇑P P 12 05 07.7 -0.5
baz=41,SNR=6.6
R05C **Kirkwood Meado** 41.62 83 ⇓P P 12 05 08.8 +0.1
baz=42,SNR=10.0
N08A **GE Springer Mi** 41.67 80 ⇑P P 12 05 09.1 +0.1
baz=42,SNR=5.7
MFID **Camas Ranch** 41.69 75 ⇓P P 12 05 09.2 0.0
baz=42,SNR=6.2
H12A **Diamond D Ranc** 41.70 73 ⇑P P 12 05 08.7 -0.5
baz=42
M09A **Marrel Ranch,** 41.75 78 ⇑P P 12 05 09.6 0.0
baz=42,SNR=7.9
CIT **Chita** 41.77 300 eP P 12 05 09.4 -0.3
G13A **Cobalt** 41.80 72 ⇑P P 12 05 09.4 -0.6
baz=42,SNR=7.7
CMB **Columbia Colle** 41.81 84 eP P 12 05 11.0 +0.8
CMB pmax pmax
comp=Z,34nm,1.3s,mb4.8
CMB MLR MLR
comp=Z,214nm,20.0s,MS4.0
CMB **Columbia Colle** 41.81 84 ⇑P P 12 05 10.2 0.0
baz=42,SNR=18
CMB **Columbia Colle** 41.81 84 eP P 12 05 11.0 +0.8
comp=Z,34nm,1.3s,mb4.8
CMB LR LR
comp=Z,214nm,20.0s,MS4.0
PACP **Pacheco Peak** 41.85 86 ⇓P P 12 05 10.8 +0.3
baz=42
D15A **Lincoln** 41.86 68 ⇓P P 12 05 09.8 -0.6
baz=42,SNR=7.6
P07A **Fallon** 41.90 82 ⇓P P 12 05 11.2 +0.4
baz=42
K11A **Parker Ranch,** 41.90 76 ⇑P P 12 05 10.6 -0.3
baz=42,SNR=15
O08A **Rochester Mine** 41.94 80 ⇑P P 12 05 11.3 +0.1
baz=42,SNR=16
C16A **Fuhringer Ranc** 41.95 67 ⇑P P 12 05 10.2 -1.0
baz=42,SNR=9.4
F14A **Wisdom** 41.96 70 ⇑P P 12 05 10.9 -0.4
baz=42,SNR=8.4
L10A **Juniper Basin** 42.01 77 ⇑P P 12 05 11.6 -0.1
baz=42,SNR=15
N09A **Rock Creek Ran** 42.02 79 ⇓P P 12 05 11.9 +0.1
baz=42
H13A **Challis** 42.06 72 ⇑P P 12 05 11.4 -0.7
baz=42
E15A **Deer Lodge** 42.09 69 ⇓P P 12 05 11.6 -0.7
baz=42,SNR=6.9
R06C **Coleville** 42.12 83 ⇑P P 12 05 12.7 0.0
baz=42,SNR=10
WAKR **Walker** 42.14 83 eP P 12 05 14.2 +1.3
G14A **Jackson** 42.19 71 ⇑P P 12 05 12.1 -1.1
baz=42
J12A **Stokes Ranch,** 42.23 75 ⇑P P 12 05 13.7 +0.2
baz=42,SNR=12
S06C **San Francisco** 42.25 84 ⇑P P 12 05 13.7 0.0
baz=42,SNR=19
S05C **Merced** 42.26 85 ⇑P P 12 05 13.8 0.0
baz=42,SNR=6.6
M10A **I.L. Ranch, Tu** 42.27 78 ⇑P P 12 05 13.9 +0.1
baz=42,SNR=16
P08A **Dixie Valley** 42.32 81 ⇓P P 12 05 14.9 +0.6
baz=42,SNR=5.4
L11A **Cat Creek Ranc** 42.40 76 ⇑P P 12 05 14.9 -0.1
baz=42,SNR=29
HRY **Holter Researc** 42.43 68 eP P 12 05 15.0 -0.2
BMN **Battle Mountai** 42.44 79 eP P 12 05 15.3 0.0
BMN pmax pmax
comp=Z,20nm,1.2s,mb4.6
BMN MLR MLR
comp=Z,290nm,19.0s,MS4.2
BMN **Battle Mountai** 42.44 79 eP P 12 05 15.3 0.0
comp=Z,20nm,1.2s,mb4.6
BMN LR LR
comp=Z,290nm,19.0s,MS4.2
F15A **Butte** 42.47 70 ⇑P P 12 05 14.6 -0.9
baz=42
V03C **Hunter Liggett** 42.48 87 ⇑P P 12 05 15.9 +0.3
baz=42
I13A **Wildhorse Cree** 42.48 73 ⇑P P 12 05 15.3 -0.2
baz=42,SNR=14
HLID **Hailey** 42.48 74 ⇓P P 12 05 15.8 +0.2
baz=42,SNR=21
HLID **Hailey** 42.48 74 eP P 12 05 15.8 +0.2
comp=Z,17nm,1.3s,mb4.5
HLID LR LR
comp=Z,267nm,22.0s,MS4.1
LRM **Limekiln Ridge** 42.51 70 eP P 12 05 15.5 -0.3
U04C **Hernandez Rese** 42.56 87 ⇑P P 12 05 16.5 +0.2
baz=42,SNR=6.8
H14A **Leadore** 42.57 72 ⇓P P 12 05 15.7 -0.6
baz=42,SNR=6.1
C17A **Wharram Farm,** 42.61 67 ⇑P P 12 05 15.8 -0.8
baz=42,SNR=7.8
O09A **Fish Creek Ran** 42.61 80 ⇑P P 12 05 16.6 0.0
baz=42,SNR=15
DLMT **Dillon** 42.66 71 eP P 12 05 17.2 +0.2
K12A **Draper Farm, C** 42.68 75 ⇑P P 12 05 17.1 -0.1
baz=42,SNR=13
J13A **Cove Ranch, Pi** 42.72 74 ⇓P P 12 05 17.3 -0.2
baz=43,SNR=21
MCMT **McKenzie Canyo** 42.78 71 P P 12 05 17.6 -0.3
M11A **Holland Ranch,** 42.78 77 ⇑P P 12 05 18.4 +0.3
baz=43,SNR=18
G15A **Dillon** 42.82 71 ⇓P P 12 05 17.7 -0.6
baz=43,SNR=10
T06C **Millerton Lake** 42.86 85 ⇓P P 12 05 18.5 -0.2
baz=43,SNR=17
L12A **House Creek Ra** 42.88 76 ⇑P P 12 05 18.8 0.0
baz=43,SNR=33
I14A **Mackay** 42.88 73 ⇑P P 12 05 18.5 -0.4
baz=43,SNR=11
Q08A **Gabbs** 42.89 82 ⇑P P 12 05 19.0 0.0
baz=43,SNR=17
NVAR **Mina Array Bea** 42.91 82 P P 12 05 19.5 +0.4
comp=Z,12nm,0.9s,mb4.6,baz=292,slow=8.0,SNR=46
NVAR PcP PcP 12 07 09.5 -0.2
comp=Z,9.1nm,1.1s,baz=268,slow=4.0,SNR=8.2
NVAR ScP ScP 12 10 59.0 -0.9
comp=Z,0.6nm,0.8s,baz=280,slow=4.2,SNR=3.6
KCC **Kaiser Creek** 42.92 84 ⇓P P 12 05 18.9 -0.2
baz=43,SNR=22
PKD **Parkfield** 42.97 87 ⇓P P 12 05 19.7 +0.1
baz=43
O10A **Cortez Mining,** 42.98 79 ⇓P P 12 05 19.8 +0.2
baz=43,SNR=6.0
P09A **Austin** 43.00 80 ⇑P P 12 05 20.0 +0.2
baz=43,SNR=9.0
EGMT **Eagleton** 43.01 66 ⇑P P 12 05 19.1 -0.7
baz=43,SNR=12
EGMT **Eagleton** 43.01 66 eP P 12 05 19.9 +0.2
comp=Z,49nm,1.1s,mb5.2
EGMT LR LR
comp=Z,322nm,19.0s,MS4.2
H15A **Lima** 43.01 71 ⇑P P 12 05 19.5 -0.4
baz=43,SNR=6.1
R08A **Mina** 43.08 82 ⇑P P 12 05 20.4 -0.1
baz=43,SNR=10
BOZ **Bozeman (W)** 43.09 70 eP P 12 05 20.3 -0.2
BOZ pmax pmax
comp=Z,17nm,1.3s,mb4.6
BOZ MLR MLR
comp=Z,225nm,20.0s,MS4.1
BOZ **Bozeman (W)** 43.09 70 ⇑P P 12 05 19.9 -0.6
baz=43
BOZ **Bozeman (W)** 43.09 70 eP P 12 05 20.3 -0.2
comp=Z,17nm,1.3s,mb4.6
BOZ LR LR
comp=Z,225nm,20.0s,MS4.1
N11A **Elko Archery C** 43.16 78 ⇑P P 12 05 21.3 +0.2
baz=43,SNR=8.8
J14A **Carey** 43.16 74 ⇓P P 12 05 21.4 +0.3
baz=43,SNR=10
K13A **Stover Farm, H** 43.18 75 ⇓P P 12 05 21.0 -0.2
baz=43,SNR=7.0
M12A **Wells** 43.34 77 ⇓P P 12 05 23.0 +0.4
baz=43,SNR=25
P10A **Eureka** 43.38 80 ⇑P P 12 05 23.3 +0.3
baz=43,SNR=6.6
Q09A **Carvers** 43.38 81 ⇓P P 12 05 23.3 +0.3
baz=43
V05C **Boulder Hill,** 43.42 87 ⇓P P 12 05 23.6 +0.3
baz=43
I15A **Monteview** 43.44 72 ⇓P P 12 05 23.3 0.0
baz=43
HELL **Mitchell Peak** 43.49 85 ⇑P P 12 05 23.6 -0.2
baz=43,SNR=34
ELK **Elko** 43.52 78 eP P 12 05 24.3 +0.3
ELK *PP pP 12 05 30.2 +1.6
ELK pmax pmax
comp=Z,13nm,1.0s
ELK MLR MLR
comp=Z,446nm,19.0s
ELK **Elko** 43.52 78 eP P 12 05 24.3 +0.3
comp=Z,13nm,1.0s,mb4.6
ELK pP pP 12 05 30.2 +1.6
ELK LR LR
comp=Z,446nm,19.0s,MS4.4
S08C **White Mtn Res** 43.54 83 ⇓P P 12 05 24.5 +0.2
baz=43,SNR=14
L13A **Double Diamond** 43.57 75 ⇑P P 12 05 24.8 +0.4
baz=43,SNR=18
RCTC **Rector, Farmer** 43.58 86 ⇓P P 12 05 24.8 +0.3
baz=44
N12A **Clover Valley,** 43.58 77 ⇑P P 12 05 24.8 +0.3
baz=43,SNR=22
O11A **Cowboy Ranch,** 43.60 79 ⇓P P 12 05 25.0 +0.3
baz=44,SNR=14
QLMT **Earthquake Lak** 43.64 71 eP P 12 05 25.5 +0.6
SMMC **Simmler** 43.70 87 ⇓P P 12 05 25.9 +0.3
baz=44
TIN **Tinemaha** 43.77 84 ⇑P P 12 05 26.5 +0.4
baz=44
J15A **Blackfoot** 43.79 73 ⇓P P 12 05 26.0 -0.1
baz=44
R09A **Tonopah** 43.80 82 ⇓P P 12 05 26.3 0.0
baz=44,SNR=34
TPH **Tonopah** 43.80 82 eP P 12 05 26.8 +0.5
TPH pmax pmax
comp=Z,25nm,1.1s,mb4.9
TPH MLR MLR
comp=Z,295nm,20.0s,MS4.2
TPH **Tonopah** 43.80 82 eP P 12 05 26.8 +0.5
comp=Z,25nm,1.1s,mb4.8
TPH LR LR
comp=Z,295nm,20.0s,MS4.2
H16A **Russell Place,** 43.81 71 ⇓P P 12 05 26.1 -0.3
baz=44,SNR=9.4
M13A **Montello** 43.84 76 ⇓P P 12 05 26.7 +0.2
baz=44,SNR=11
P11A **Circle Ranch,** 43.87 79 ⇑P P 12 05 27.1 +0.2
baz=44,SNR=9.0
Q10A **Clear Creek Ra** 43.89 81 ⇑P P 12 05 27.2 +0.2
baz=44,SNR=31
VES **Vestal, Richgr** 43.97 86 ⇓P P 12 05 27.3 -0.4
baz=44,SNR=5.9
YMR **Madison River** 44.00 70 eP P 12 05 28.0 +0.2
comp=Z,32nm,1.2s,mb4.9
S09A **Goldfield** 44.01 83 ⇓P P 12 05 28.1 +0.1
baz=44,SNR=11
L14A **Malta** 44.04 75 ⇑P P 12 05 28.6 +0.4
baz=44,SNR=10
PKM **Peak Mountain** 44.08 88 ⇓P P 12 05 29.0 +0.4
baz=44,SNR=5.4
O12A **Currie** 44.09 78 ⇑P P 12 05 28.9 +0.3
baz=44,SNR=50
N13A **Wendover, West** 44.10 77 ⇑P P 12 05 29.0 +0.3
baz=44,SNR=6.5
I16A **Newdale** 44.11 72 ⇑P P 12 05 29.0 +0.2
baz=44
K15A **Arbon** 44.12 74 ⇑P P 12 05 29.1 +0.3
baz=44,SNR=10
FFC **Flin Flon** 44.15 54 PFAKE 12 05 40.0 +11
FFC LR LR
comp=Z,613nm,19.0s,MS4.5
GCMT **Greycliff** 44.19 68 eP P 12 05 29.6 +0.3
CWC **Cottonwood Cre** 44.24 85 ⇑P P 12 05 29.9 0.0
baz=44
R10A **Warm Springs** 44.26 81 ⇑P P 12 05 30.4 +0.3
baz=44,SNR=27
M14A **Sheep Mountain** 44.27 76 ⇓P P 12 05 30.3 +0.3
baz=44,SNR=10
S10A **Tonopah Range,** 44.29 82 ⇓P P 12 05 30.5 +0.2
baz=44,SNR=27
Q11A **Duckwater** 44.35 80 ⇑P P 12 05 30.7 +0.1
baz=44,SNR=20
GRAC **Grapevine Rang** 44.35 83 ⇑P P 12 05 31.0 +0.3
baz=44
J16A **Bone** 44.36 73 ⇑P P 12 05 31.0 +0.2
baz=44,SNR=8.1
LKWY **Lake** 44.40 70 eP P 12 05 32.4 +1.4
LKWY pmax pmax
comp=Z,12nm,1.3s,mb4.5
LKWY MLR MLR
comp=Z,215nm,19.0s,MS4.1
LKWY **Lake** 44.40 70 eP P 12 05 32.4 +1.4
comp=Z,12nm,1.3s,mb4.5
LKWY LR LR
comp=Z,215nm,19.0s,MS4.1
IMW **Indian Meadow** 44.43 71 eP P 12 05 31.6 +0.3
comp=Z,3.2nm,0.7s,mb4.2
DCID1 **Drake Creek** 44.45 72 eP P 12 05 34.8 +3.3
P12A **McGill** 44.45 79 ⇑P P 12 05 31.6 +0.1
baz=44,SNR=17
ISA **Isabella** 44.47 86 ⇑P P 12 05 31.2 -0.5
baz=44,SNR=17
ISA **Isabella** 44.47 86 eP P 12 05 31.6 -0.1
ISA LR LR
comp=Z,387nm,19.0s,MS4.3
RRI2 **Red Ridge** 44.50 72 eP P 12 05 32.6 +0.8
comp=Z,22nm,1.4s,mb4.7
ARVC **Arvin** 44.57 87 ⇑P P 12 05 31.9 -0.6
baz=44
L15A **Malad City** 44.59 74 ⇑P P 12 05 32.2 -0.4
baz=44,SNR=7.5
K16A **Soda Springs** 44.62 73 ⇑P P 12 05 33.5 +0.7
baz=44,SNR=20
MOOW **Moose Ponds** 44.63 71 eP P 12 05 33.2 +0.3
TPAW **Teton Pass** 44.65 72 eP P 12 05 34.0 +0.9
comp=Z,18nm,1.4s,mb4.7
DAC **Darwin (Calif)** 44.65 84 PFAKE 12 05 40.0 +6.9
DAC LR LR
comp=Z,298nm,19.0s,MS4.2
R11A **Troy Canyon, C** 44.68 81 ⇓P P 12 05 33.3 0.0
baz=44
N14A **Grayback Hills** 44.74 76 ⇑P P 12 05 33.8 0.0
baz=45,SNR=5.2
Q12A **Willow Creek R** 44.75 79 ⇑P P 12 05 34.2 +0.3
baz=45,SNR=23
BSC **Santa Cruz Isl** 44.77 88 ⇑P P 12 05 34.4 +0.3
baz=45
REDW **Red Top Meadow** 44.78 72 eP P 12 05 33.8 -0.2
comp=Z,51nm,1.9s,mb5.0
RLMT **Red Lodge** 44.78 69 eP P 12 05 34.4 +0.3
comp=Z,44nm,1.1s,mb5.2
RLMT LR LR
comp=Z,333nm,19.0s,MS4.3
LOHW **Long Hollow** 44.79 72 eP P 12 05 34.5 +0.3
MPMC **Manual Prospec** 44.85 85 ⇑P P 12 05 34.7 0.0
baz=45,SNR=19
M15A **Larsen Ranch,** 44.85 75 ⇓P P 12 05 34.7 0.0
baz=45
AHID **Auburn Hatcher** 44.95 73 PFAKE 12 05 50.0 +15
AHID LR LR
comp=Z,259nm,21.0s,MS4.1
S11A **Rachel** 45.00 82 ⇓P P 12 05 36.2 +0.3
baz=45
FURC **Furnace Creek,** 45.00 84 ⇓P P 12 05 35.7 -0.3
baz=45,SNR=16
P13A **Bates Ranch, G** 45.02 78 ⇓P P 12 05 36.1 0.0
baz=45
TPNV **Topopah Spring** 45.10 83 eP P 12 05 36.7 0.0
TPNV pmax pmax
comp=Z,34nm,1.0s,mb5.1
TPNV MLR MLR
comp=Z,252nm,19.0s,MS4.2
TPNV **Topopah Spring** 45.10 83 ⇓P P 12 05 36.8 +0.1
baz=45,SNR=24
TPNV **Topopah Spring** 45.10 83 eP P 12 05 36.7 0.0
comp=Z,34nm,1.0s,mb5.1
TPNV LR LR
comp=Z,252nm,19.0s,MS4.2
N15A **Stansbury Isla** 45.13 76 ⇑P P 12 05 36.5 -0.4
baz=45
L16A **Fish Haven** 45.17 74 ⇓P P 12 05 36.8 -0.4
baz=45,SNR=7.0
EDW2 **Edwards Air Fo** 45.26 86 ⇓P P 12 05 37.4 -0.6
baz=45,SNR=10
SNCC **San Nicolas Is** 45.31 89 ⇑P P 12 05 37.9 -0.5
baz=45
Q13A **Wheeler Ranch,** 45.31 79 ⇑P P 12 05 38.1 -0.3
baz=45,SNR=24
R12A **Pony Springs,** 45.31 80 ⇑P P 12 05 38.1 -0.3
baz=45,SNR=19
HWUT **Hardware Ranch** 45.32 74 eP P 12 05 38.8 +0.5
comp=Z,10nm,1.1s,mb4.6
HWUT LR LR
comp=Z,108nm,21.0s,MS3.8
DUG **Dugway** 45.35 77 eP P 12 05 38.9 +0.3
DUG pmax pmax
comp=Z,40nm,1.2s,mb5.1
DUG MLR MLR
comp=Z,309nm,20.0s,MS4.2
DUG **Dugway** 45.35 77 ⇑P P 12 05 38.7 0.0
baz=45
DUG **Dugway** 45.35 77 eP P 12 05 38.9 +0.3
comp=Z,40nm,1.2s,mb5.1
DUG LR LR
comp=Z,309nm,20.0s,MS4.2
U10A **Ash Meadows, A** 45.37 83 ⇓P P 12 05 39.0 +0.1
baz=45,SNR=11
M16A **Huntsville** 45.44 75 ⇓P P 12 05 38.9 -0.5
baz=45,SNR=16
O15A **The Old Anders** 45.51 77 ⇓P P 12 05 39.8 -0.1
baz=45
NOQ **North Oquirrh** 45.52 76 eP P 12 05 40.5 +0.6
comp=Z,45nm,1.4s,mb5.2
P14A **Drum Mountains** 45.54 78 ⇑P P 12 05 39.9 -0.2
baz=45,SNR=16
T11A **Corn Creek, Al** 45.58 82 ⇓P P 12 05 40.7 +0.2
baz=45,SNR=63
S12A **Delamar Landin** 45.59 81 ⇓P P 12 05 40.5 0.0
baz=46,SNR=17
MWC **Mount Wilson** 45.63 87 eP P 12 05 41.4 +0.5
MWC pmax pmax
comp=Z,37nm,1.2s,mb5.2
MWC **Mount Wilson** 45.63 87 eP P 12 05 41.4 +0.5
comp=Z,37nm,1.2s,mb5.2
SHOC **Shoshone** 45.72 84 ⇑P P 12 05 41.5 -0.1
baz=46,SNR=16
CTU **Camp Tracy** 45.72 76 eP P 12 05 41.9 +0.3
LAO **LASA Array** 45.75 66 eP P 12 05 42.1 +0.3
comp=Z,47nm,1.3s,mb5.2
LAO LR LR
comp=Z,446nm,19.0s,MS4.4
GSC **Goldstone** 45.76 85 eP P 12 05 42.2 +0.3
GSC pmax pmax
comp=Z,47nm,1.1s,mb5.3
GSC MLR MLR
comp=Z,345nm,19.0s,MS4.3
GSC **Goldstone** 45.76 85 ⇑P P 12 05 41.9 0.0
baz=46,SNR=28
GSC **Goldstone** 45.76 85 eP P 12 05 42.2 +0.3
comp=Z,47nm,1.1s,mb5.3
GSC LR LR
comp=Z,345nm,19.0s,MS4.3
Q14A **Sevier Lake (B** 45.76 79 ⇑P P 12 05 42.0 0.0
baz=46,SNR=41
R13A **O'Grain Ranch,** 45.80 80 ⇑P P 12 05 42.5 +0.2
baz=46,SNR=13
N16A **Rees Ranch, Co** 45.80 75 ⇓P P 12 05 41.9 -0.4
baz=46
BFSC **Mount Baldy St** 45.88 87 ⇑P P 12 05 42.8 -0.1
baz=46,SNR=12
BW06 **Boulder Array** 45.90 72 PFAKE 12 05 50.0 +7.1
BW06 LR LR
comp=Z,218nm,20.0s,MS4.1
PDAR **Pinedale Array** 45.90 72 P P 12 05 42.5 -0.4
comp=Z,12nm,1.1s,mb4.7,baz=306,slow=5.0,SNR=50
NLU **North Lily Min** 45.95 77 eP P 12 05 43.8 +0.4
JLU **Jordanelle** 45.96 76 eP P 12 05 44.1 +0.6
U11A **Corn Creek** 45.97 83 ⇑P P 12 05 43.6 0.0
baz=46,SNR=13
DGMT **Dagmar** 45.99 62 eP P 12 05 43.5 -0.1
comp=Z,68nm,1.3s,mb5.4
DGMT LR LR
comp=Z,253nm,20.0s,MS4.2
SHPR **Sheep Range** 46.06 83 eP P 12 05 44.6 +0.3
N17A **Moffit Pass** 46.15 75 ⇑P P 12 05 44.6 -0.4
baz=46,SNR=7.2
MPU **Maple Canyon** 46.19 76 eP P 12 05 45.7 +0.4
MPU LR LR
comp=Z,870nm,20.0s,MS4.7
DAU **Daniels Canyon** 46.19 76 eP P 12 05 46.3 +1.0
T12A **Moapa** 46.21 82 ⇑P P 12 05 45.2 -0.3
baz=46
S13A **Holt Ranch, En** 46.23 80 ⇓P P 12 05 45.7 +0.1
baz=46,SNR=33
TUQ **Turquoise Moun** 46.23 84 ⇑P P 12 05 45.7 0.0
baz=46,SNR=10
V11A **Goodsprings** 46.30 83 ⇑P P 12 05 46.1 -0.1
baz=46,SNR=7.0
Q15A **Fillmore** 46.32 78 ⇑P P 12 05 46.1 -0.2
baz=46
BBRC **Big Bear Sol-O** 46.33 86 ⇓P P 12 05 46.3 -0.2
baz=46
HEC **Hector,Ludlow** 46.35 85 ⇑P P 12 05 46.4 -0.3
baz=46,SNR=13
BJI **Beijing** 46.39 284 P P 12 05 46.8 -0.1
BJI PP PP 12 07 37.8 +2.2
BJI S S 12 12 38.5 +4.7
BJI AMB AMB
comp=Z,38nm,0.7s,mb5.4
BJI AMB AMB
comp=Z,373nm,5.2s
BJI LR LR
comp=N,425nm,16.4s,MS4.6
BJI LR LR
comp=E,339nm,16.4s,MS4.6
BJI LR LR
comp=Z,190nm,19.8s,MS4.0
P16A **Fountain Green** 46.41 77 ⇓P P 12 05 46.9 -0.1
baz=46
BJT **Baijiatuan** 46.41 284 eP P 12 05 47.0 0.0
BJT pmax pmax
comp=Z,29nm,0.7s
BJT MLR MLR
comp=Z,280nm,20.0s
BJT **Baijiatuan** 46.41 284 eP P 12 05 47.0 0.0
comp=Z,28nm,0.7s,mb5.3
BJT LR LR
comp=Z,280nm,20.0s,MS4.2
U12A **Valley of Fire** 46.50 82 ⇓P P 12 05 47.6 -0.2
baz=46,SNR=7.9
T13A **Saint George** 46.54 81 ⇓P P 12 05 48.2 +0.1
baz=46,SNR=32
S14A **Cedar City** 46.56 80 ⇓P P 12 05 48.1 -0.2
baz=46
CCUT **Cedar City** 46.57 80 eP P 12 05 48.6 +0.4
MURC **Murrieta** 46.58 87 ⇓P P 12 05 48.0 -0.4
baz=46
O17A **Robinson Place** 46.64 76 ⇑P P 12 05 48.7 -0.1
baz=46,SNR=7.0
IRK **Irkutsk** 46.71 304 eP P 12 05 49.1 -0.1
IRK e 12 06 03.5

IRK pmax pmax
comp=Z,73nm,2.2s,mb5.2
MVU Marysvale 46.72 78 PFAKE 12 06 00.0 +11
MVU LR LR
comp=Z,434nm,19.0s,MS4.4
V12A Nelson 46.74 83 ⇑P **P 12 05 49.6 0.0**
baz=47,SNR=7.9
GMRC Granite Mounta 46.81 85 ⇑P **P 12 05 50.1 -0.1**
baz=47,SNR=12
N18A Larsen Ranch, 46.84 74 ⇑P **P 12 05 49.5 -0.9**
baz=47
R15A Junction 46.85 79 ⇑P **P 12 05 50.3 -0.2**
baz=47
TMUT Trail Mountain 46.88 77 *e*P **P 12 05 51.4 +0.7**
U13A Pakoon Wash 46.88 82 ⇑P **P 12 05 50.8 +0.1**
baz=47,SNR=39
LDFC Landfair 46.98 84 *e*P **P 12 05 51.2 -0.4**
comp=Z,53nm,1.3s,mb5.3
T14A Hurricane 47.04 81 ⇓P **P 12 05 51.8 -0.2**
baz=47,SNR=12
PFO Pinyon Flat Ob 47.05 87 P **P 12 05 51.7 -0.4**
comp=Z,75nm,1.0s,mb5.6,SNR=5.4
PFO Pinyon Flat Ob 47.05 87 P **P 12 05 51.9 -0.2**
comp=Z,12nm,1.1s,mb4.8,baz=329,slow=5.7,SNR=9.2
PFO PcP PcP 12 07 23.5 -0.5
comp=Z,6.2nm,1.0s,baz=276,slow=4.4,SNR=3.9
PFO Pinyon Flat Ob 47.05 87 P **P 12 05 51.9 -0.2**
PFO 12 07 23.5
PFO pmax pmax
comp=Z,12nm,1.1s,mb4.7
PFO Pinyon Flat Ob 47.05 87 ⇑P **P 12 05 51.9 -0.2**
baz=47,SNR=7.2
O18A Roosevelt 47.05 75 ⇑P **P 12 05 52.0 0.0**
baz=47
P17A Butcher Ranch, 47.06 76 ⇓P **P 12 05 52.2 0.0**
baz=47,SNR=6.1
BELC Belle Mtn. 47.09 86 ⇑P **P 12 05 51.7 -0.7**
baz=47,SNR=10
109C Camp Elliot, M 47.09 88 ⇓P **P 12 05 52.4 -0.1**
baz=47
S15A Panguitch 47.12 79 ⇑P **P 12 05 52.8 +0.2**
baz=47,SNR=6.9
Q16A Castle Valley 47.12 77 ⇓P **P 12 05 52.8 +0.1**
baz=47,SNR=15
N19A John Jarvie Ra 47.20 74 ⇓P **P 12 05 52.3 -0.9**
baz=47,SNR=6.5
V13A Grand Canyon W 47.21 82 ⇑P **P 12 05 53.2 -0.2**
baz=47
P18A Preston Nutter 47.28 76 ⇓P **P 12 05 54.2 +0.4**
baz=47,SNR=13
R16A Teasdale 47.31 78 ⇑P **P 12 05 54.2 +0.2**
baz=47,SNR=25
TLY Talaya 47.33 304 P **P 12 05 54.6 +0.5**
comp=Z,157nm,0.7s,SNR=9.1
TLY Talaya 47.33 304 *e*P **P 12 05 54.3 +0.2**
TLY *e* 12 07 45.4
TLY *e*S **S 12 12 54.1 +7.2**
TLY pmax pmax
comp=Z,23nm,0.8s,mb5.2
TLY MLR MLR
comp=Z,291nm,19.0s,MS4.3
TLY Talaya 47.33 304 *i* P **P 12 05 54.2 +0.1**
TLY LR LR
comp=Z,309nm,20.0s,MS4.3
U14A Mt Trumbull 47.37 81 ⇓P **P 12 05 54.9 +0.3**
baz=47,SNR=19
SRU San Rafael 47.41 77 *e*P **P 12 05 55.1 +0.2**
SRU pmax pmax
comp=Z,13nm,1.0s,mb4.8
SRU San Rafael 47.41 77 ⇓P **P 12 05 54.9 0.0**
baz=47,SNR=19
SRU San Rafael 47.41 77 *e*P **P 12 05 55.0 +0.2**
comp=Z,13nm,1.0s,mb4.8
ULN Ulaanbaatar 47.47 298⇑ *e*P **P 12 05 55.6 +0.4**
ULN LR LR
comp=Z,342nm,19.0s,MS4.3
BAR Barrett 47.51 88 *e*P **P 12 05 55.6 -0.1**
comp=Z,15nm,1.0s,mb5.0
T15A Red Dirt Ranch 47.51 80 ⇑P **P 12 05 55.7 +0.1**
baz=47,SNR=6.8
IRM Iron Mountain 47.53 85 ⇑P **P 12 05 55.9 +0.1**
baz=47,SNR=9.5
MONP Monument Peak 47.53 87 ⇓P **P 12 05 55.8 -0.1**
baz=47,SNR=7.0
S16A Weppner Ranch, 47.58 79 ⇓P **P 12 05 56.2 0.0**
baz=47,SNR=12
O19A Miners Draw (B 47.58 74 ⇑P **P 12 05 55.8 -0.4**
baz=47,SNR=5.6
BC3 Big Chuckw Mtn 47.66 86 ⇑P **P 12 05 56.0 -0.8**
baz=48
GUMO Guam 47.66 233 LR LR 12 26 28.5
comp=Z,116nm,18.0s,MS3.9,baz=90,slow=37
Q18A Rafter H Ranch 47.66 76 ⇑P **P 12 05 56.2 -0.6**
baz=48,SNR=17
R17A Hanksville Air 47.71 78 ⇑P **P 12 05 56.6 -0.6**
baz=48,SNR=26
W13A Hualapai Mount 47.75 83 ⇓P **P 12 05 56.9 -0.6**
baz=48,SNR=6.9
SONM Songino Array 47.86 298 P **P 12 05 58.7 +0.5**
comp=Z,9.1nm,0.7s,mb4.9,baz=53,slow=8.8,SNR=44
SONM PcP PcP 12 07 26.1 -0.5
comp=Z,9.5nm,0.6s,baz=72,slow=2.7,SNR=13
SONM LR LR 12 27 12.9
comp=Z,293nm,18.0s,MS4.3,baz=60,slow=37
SONM Songino Array 47.86 298 P **P 12 05 58.7 +0.5**
SONM 12 07 26.1
SONM pmax pmax
comp=Z,9.0nm,0.7s
SONM MLR MLR
comp=Z,293nm,18.0s
V14A Boquillas Ranc 47.91 82 ⇑P **P 12 05 58.3 -0.4**
baz=48,SNR=20
U15A North Rim 47.93 81 ⇑P **P 12 05 59.2 +0.3**
baz=48,SNR=30
RWWY Rawlins 47.94 72 *e*P **P 12 05 58.5 -0.4**
comp=Z,24nm,1.2s,mb5.1
P19A Cripple Cowboy 48.06 75 ⇓P **P 12 05 59.3 -0.6**
baz=48,SNR=13
T16A Glen Canyon Da 48.08 80 ⇓P **P 12 05 59.4 -0.7**
baz=48
PDMCI Parker Dam,Lak 48.09 84 ⇑P **P 12 05 59.8 -0.4**
baz=48,SNR=6.9
X13A Yucca 48.10 84 ⇑P **P 12 05 59.8 -0.5**
baz=48,SNR=13
S17A Black Ridge (B 48.13 78 ⇑P **P 12 06 00.4 -0.1**
baz=48,SNR=24
W14A Seligman 48.19 82 ⇑P **P 12 06 00.5 -0.4**
baz=48,SNR=15
Y12C Blythe 48.19 85 ⇑P **P 12 06 00.4 -0.6**
baz=48,SNR=18
ZAK Zakamensk 48.21 303⇑ *i*P **P 12 06 01.1 +0.2**
ZAK *e* 12 07 27.8
ZAK pmax pmax
comp=Z,33nm,1.3s,mb5.2
R18A Canyonlands Na 48.24 77 ⇓P **P 12 06 00.2 -1.1**
baz=48,SNR=9.6
Q19A Hogan Spring (48.29 76 ⇑P **P 12 06 00.4 -1.2**
baz=48,SNR=15
V15A Kaibab Nationa 48.38 81 ⇑P **P 12 06 02.6 +0.2**
baz=48,SNR=26
GLA Glamis 48.45 86 *e*P **P 12 06 02.8 -0.2**
GLA pmax pmax
comp=Z,31nm,1.1s,mb5.2
GLA Glamis 48.45 86 ⇓P **P 12 06 02.5 -0.5**
baz=48,SNR=12
GLA Glamis 48.45 86 *e*P **P 12 06 02.8 -0.2**
comp=Z,31nm,1.1s,mb5.3
RSSD Black Hills 48.45 67 *e*P **P 12 06 02.3 -0.6**
RSSD pmax pmax
comp=Z,11nm,1.2s,mb4.8
RSSD Black Hills 48.45 67 *e*P **P 12 06 02.3 -0.6**
comp=Z,12nm,1.2s,mb4.8
T17A Navajo Res., N 48.52 79 ⇑P **P 12 06 02.4 -1.1**
baz=48,SNR=13
Y13A Salome 48.60 84 ⇑P **P 12 06 03.4 -0.7**
baz=48,SNR=7.5
S18A Hurst Farm, Bl 48.60 78 ⇑P **P 12 06 03.4 -0.7**
baz=48,SNR=19
W15A Williams 48.73 82 ⇓P **P 12 06 05.3 +0.2**
baz=49,SNR=8.8
MOY Mondy 48.74 305 *e*P **P 12 06 05.6 +0.6**
MOY pmax pmax
comp=Z,97nm,2.4s,mb5.4
HHC Hu-ho-hao-te 48.77 288 *e*P **P 12 06 03.6 -1.7**
HHC AP pP 12 06 09.0 -0.9
HHC XP sP 12 06 11.9 +0.2
HHC PCP PcP 12 07 29.5 -0.5
HHC PP PP 12 07 56.3 -1.9
HHC SCP ScP 12 11 22.3 -1.9
HHC PCS PcS 12 11 23.9 -2.2
HHC S **S 12 13 03.8 -3.7**
HHC XS sS 12 13 12.6 -2.5
HHC SCS ScS 12 15 51.9 -5.1
HHC SS SS 12 16 28.8 -8.7
HHC AMB AMB
comp=Z,15nm,0.6s,mb5.2
HHC AMB AMB
comp=Z,311nm,7.5s
HHC LR LR
comp=N,305nm,16.2s,MS4.5
HHC LR LR
comp=E,266nm,16.1s,MS4.5
HHC LR LR
comp=Z,206nm,16.3s,MS4.2
X14A Yava 48.78 83 ⇑P **P 12 06 05.3 -0.1**
baz=49,SNR=14
U16A Tuba City 48.84 80 ⇓P **P 12 06 05.4 -0.6**
baz=49,SNR=8.7
T18A Mexican Hat 49.02 78 ⇑P **P 12 06 06.3 -1.0**
baz=49,SNR=25
Y14A Wickenburg 49.04 84 ⇑P **P 12 06 07.1 -0.4**
baz=49,SNR=13
WUAZ Wupatki 49.08 81 ⇓P **P 12 06 07.6 -0.2**
baz=49,SNR=9.7
WUAZ Wupatki 49.08 81 *e*P **P 12 06 08.0 +0.2**
WUAZ comp=Z,39nm,1.2s,mb5.3 LR LR
comp=Z,312nm,19.0s,MS4.3
S19A Harvey Farm, M 49.10 77 ⇑P **P 12 06 07.6 -0.4**
baz=49,SNR=21
X15A Humboldt 49.18 83 ⇓P **P 12 06 08.4 -0.1**
baz=49,SNR=12
W16A Flagstaff 49.24 82 ⇓P **P 12 06 08.6 -0.4**
baz=49,SNR=7.2
113A Mohawk Valley, 49.31 85 ⇑P **P 12 06 08.6 -1.0**
baz=49
Z14A Wintersburg 49.45 84 ⇑P **P 12 06 09.9 -0.7**
baz=49
Y15A Casa Rosa Ranc 49.46 83 ⇓P **P 12 06 10.5 -0.3**
baz=49,SNR=9.9
U18A Rough Rock, Ch 49.47 79 ⇑P **P 12 06 09.0 -1.7**
baz=49,SNR=10
ULM Lac du Bonnet 49.63 56 P **P 12 06 10.6 -1.2**
comp=Z,16nm,1.1s,mb5.0,baz=315,slow=9.1,SNR=8.5
ULM LR LR 12 27 16.2
comp=Z,494nm,21.5s,MS4.5,baz=86,slow=36
ULM Lac du Bonnet 49.63 56 P **P 12 06 10.6 -1.2**
ULM LR LR 12 27 16.2
NJ2 Nanjing 49.66 274 *e*P **P 12 06 12.4 +0.2**
NJ2 AP pP 12 06 16.9 0.0
NJ2 XP sP 12 06 19.4 +0.7
NJ2 PP PP 12 08 07.9 +1.4
NJ2 S **S 12 13 23.0 +2.8**
NJ2 XS sS 12 13 32.0 +4.2
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.3
NJ2 AMB AMB
comp=Z,190nm,5.5s
NJ2 LR LR
comp=N,1µm,24.7s
NJ2 LR LR
comp=E,1µm,17.2s
NJ2 LR LR
comp=Z,950nm,23.0s,MS4.7
X16A Lo Mia Camp, P 49.73 82 ⇑P **P 12 06 12.6 -0.1**
baz=50,SNR=12
T19A Beclabito 49.74 78 ⇓P **P 12 06 12.1 -0.7**
baz=50,SNR=41
W17A Winslow 49.77 81 ⇑P **P 12 06 12.4 -0.7**
baz=50
MVCO Mesa Verde 49.84 77 ⇓P **P 12 06 12.8 -0.7**
baz=50
MVCO Mesa Verde 49.84 77 *e*P **P 12 06 13.3 -0.2**
comp=Z,36nm,1.3s,mb5.2
MVCO pP pP 12 06 19.6 +1.5
MVCO LR LR
comp=Z,213nm,21.0s,MS4.1
BTO Baotou 49.85 288 *e*P **P 12 06 13.8 +0.2**
V18A Ganado 49.87 80 ⇑P **P 12 06 13.1 -0.7**
baz=50,SNR=9.2
ISCO Idaho Springs 50.04 73 *e*P **P 12 06 15.4 +0.4**
ISCO pmax pmax
comp=Z,11nm,1.2s,mb4.8
ISCO MLR MLR
comp=Z,255nm,21.0s,MS4.2
ISCO Idaho Springs 50.04 73 *e*P **P 12 06 15.4 +0.3**
comp=Z,11nm,1.2s,mb4.8
ISCO LR LR
comp=Z,255nm,21.0s,MS4.2
Y16A Circle Bar Ran 50.05 83 ⇑P **P 12 06 15.3 +0.1**
baz=50,SNR=7.6
X17A Forest Lakes 50.19 82 ⇑P **P 12 06 16.5 +0.2**
baz=50,SNR=5.8
115A Sonoran Desert 50.34 84 ⇓P **P 12 06 17.4 0.0**
baz=50,SNR=8.2
W18A Petrified Fore 50.37 80 ⇑P **P 12 06 17.0 -0.6**
baz=50,SNR=5.9
V19A Window Rock 50.43 79 ⇓P **P 12 06 18.1 +0.1**
baz=50
Z16A Peralta Trail, 50.43 83 ⇓P **P 12 06 17.5 -0.6**
baz=50
214A Organ Pipe Nat 50.45 86 ⇑P **P 12 06 17.8 -0.5**
baz=50,SNR=14
Y17A Roosevelt 50.58 82 ⇑P **P 12 06 19.0 -0.1**
baz=50,SNR=15
W19A Sanders 50.59 80 ⇓P **P 12 06 19.4 +0.1**
baz=50,SNR=10.0
X18A Snowflake 50.61 81 ⇑P **P 12 06 19.2 -0.2**
baz=50,SNR=7.7
AGMN Agassiz Refuge 50.74 59 *e*P **P 12 06 19.0 -1.2**
AGMN comp=Z,58nm,1.3s,mb5.3 LR LR
comp=Z,450nm,20.0s,MS4.5
116A Eloy 50.76 84 ⇓P **P 12 06 20.0 -0.6**
baz=51
Y18A Canyon Day Jun 51.04 82 ⇑P **P 12 06 22.8 +0.1**
baz=51,SNR=22
Z17A San Carlos Hig 51.07 83 ⇓P **P 12 06 22.5 -0.4**
baz=51
X19A St. Johns 51.09 81 ⇓P **P 12 06 22.8 -0.3**
baz=51,SNR=6.1
216A Three Points, 51.29 85 ⇑P **P 12 06 24.3 -0.2**
baz=51
SDCO Great Sand Dun 51.37 75 *e*P **P 12 06 25.2 +0.1**
comp=Z,20nm,1.4s,mb4.9
SDCO LR LR
comp=Z,154nm,20.0s,MS4.0
117A Oracle 51.37 83 ⇓P **P 12 06 24.9 -0.2**
baz=51,SNR=12
Y19A Nutrioso 51.42 81 ⇓P **P 12 06 25.6 +0.1**
baz=51,SNR=6.8
TUC Tucson 51.52 84 *e*P **P 12 06 25.9 -0.4**
TUC *e* 12 07 40.9
TUC pmax pmax
comp=Z,22nm,1.4s,mb4.9
TUC MLR MLR
comp=Z,185nm,19.0s,MS4.1
TUC Tucson 51.52 84 *e*P **P 12 06 25.9 -0.4**
comp=Z,22nm,1.4s,mb4.9
TUC *e*PcP PcP 12 07 40.9 +0.6
TUC LR LR
comp=Z,185nm,19.0s,MS4.1
OGNE Ogallala 51.52 70 PFAKE 12 06 40.0 +14
OGNE LR LR
comp=Z,299nm,20.0s,MS4.3
SPITS Spitsbergen Ar 51.53 356 P **P 12 06 25.3 -0.5**
comp=Z,9.6nm,0.5s,mb5.0,baz=40,slow=6.4,SNR=27
SPITS Spitsbergen Ar 51.53 356 P **P 12 06 25.3 -0.5**
SPITS pmax pmax
comp=Z,10.0nm,0.5s
118A Homack Ranch, 51.82 83 ⇑P **P 12 06 28.6 +0.1**
baz=52,SNR=22
Z19A T-Link Ranch, 51.84 82 ⇑P **P 12 06 28.3 -0.4**
baz=52
217A Green Valley 51.85 84 ⇓P **P 12 06 28.9 +0.2**
baz=52
119A Ashpeak Ranch, 52.16 82 ⇑P **P 12 06 30.8 -0.3**
baz=52,SNR=15
218A Dragoon 52.21 84 ⇑P **P 12 06 31.2 -0.2**
baz=52,SNR=11
LAZ Ladron 52.47 79 *e*P **P 12 06 33.9 +0.5**
ANMO Albuquerque 52.54 78 *e*P **P 12 06 33.8 -0.1**
ANMO pmax pmax
comp=Z,16nm,1.4s
ANMO MLR MLR
comp=Z,245nm,21.0s
ANMO Albuquerque 52.54 78 *e*P **P 12 06 33.8 -0.1**
comp=Z,16nm,1.4s,mb4.8
ANMO LR LR
comp=Z,245nm,21.0s,MS4.2
318A Bisbee 52.59 84 ⇑P **P 12 06 33.7 -0.6**
baz=52,SNR=7.8
219A White Tail Can 52.69 83 ⇑P **P 12 06 34.9 -0.1**
baz=53,SNR=13
LENM Lemitar 52.72 79 *e*P **P 12 06 35.6 +0.4**
LPM Los Pinos Moun 52.84 79 *e*P **P 12 06 36.5 +0.4**
BNM Barren Site 52.95 79 *e*P **P 12 06 37.1 +0.2**
BNM *e*pP pP 12 06 44.2 +2.7
ECSD EROS,Sioux Fal 53.01 64 *e*P **P 12 06 35.7 -1.5**
comp=Z,9.8nm,1.0s,mb4.7
ECSD LR LR
comp=Z,330nm,20.0s,MS4.4
319A Douglas 53.09 84 ⇓P **P 12 06 37.9 -0.1**
baz=53,SNR=9.3
EYMN Ely 53.31 57 PFAKE 12 06 50.0 +11
EYMN LR LR
comp=Z,577nm,20.0s,MS4.6
SUMG Summit 54.18 14 *e*P **P 12 06 46.6 +1.2**
comp=Z,10nm,0.9s,mb4.8
CBKS Cedar Bluff 54.23 70 *e*P **P 12 06 45.9 -0.3**
CBKS pmax pmax
comp=Z,43nm,1.2s,mb5.2
CBKS Cedar Bluff 54.23 70 *e*P **P 12 06 45.9 -0.3**
comp=Z,43nm,1.2s,mb5.2
ZAA0 Zalesovo Array 55.37 315 *e*P **P 12 06 53.6 -0.7**
ZALV Zalesovo Beam 55.37 315 P **P 12 06 52.9 -1.4**
comp=Z,3.9nm,0.5s,mb4.7,baz=56,slow=6.5,SNR=5.5
ZALV PcP PcP 12 07 54.6 +0.1
comp=Z,2.5nm,0.5s,baz=45,slow=3.5,SNR=3.8
ZALV LR LR 12 31 49.9
comp=Z,143nm,19.0s,MS4.1,baz=212,slow=37
ZALV Zalesovo Beam 55.37 315 P **P 12 06 52.9 -1.3**
ZALV 12 07 54.6
ZALV pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
ZALV MLR MLR
comp=Z,143nm,19.0s,MS4.1
NVS Novosibirsk 55.51 316⇓ *i*P **P 12 06 54.2 -1.1**
NVS *e* 12 07 53.8
NVS pmax pmax
comp=Z,67nm,2.0s,mb5.3
NVS pmax pmax
comp=N,26nm,1.8s
NVS pmax pmax
comp=E,32nm,1.8s
AMTX Amarillo 55.57 75 *e*P **P 12 06 55.6 -0.4**
comp=E,12nm,1.1s,mb4.8
AMTX LR LR
comp=Z,210nm,19.0s,MS4.2
COWI Conover 55.72 57 PFAKE 12 07 10.0 +13
COWI LR LR
comp=Z,435nm,20.0s,MS4.5
KSU1 Kansas State U 55.92 68 *e*P **P 12 06 57.2 -1.2**
comp=Z,10nm,0.7s,mb5.0
KSU1 LR LR
comp=Z,276nm,19.0s,MS4.4
SCIA State Center 56.11 63 *e*P **P 12 06 59.2 -0.5**
comp=Z,25nm,0.8s,mb5.3
SCIA LR LR
comp=Z,420nm,21.0s,MS4.5
LZH Lanzhou 56.46 288 ⇑P **P 12 07 03.3 +0.9**
LZH AP pP 12 07 08.8 +1.8
LZH XP sP 12 07 12.9 +4.1
LZH PP PP 12 09 10.3 +2.5
LZH S **S 12 14 51.3 -1.5**
LZH SS SS 12 18 38.0 -1.5
LZH AMB AMB
comp=Z,108nm,1.5s,mb5.7
LZH AMB AMB
comp=Z,280nm,4.0s
LZH LR LR
comp=E,353nm,11.8s
LZH LR LR
comp=Z,678nm,14.4s,MS4.9
GTA Gaotai 56.72 293 ⇓P **P 12 07 04.3 +0.2**
GTA AP pP 12 07 10.4 +1.6
GTA XP sP 12 07 13.3 +2.7
GTA S **S 12 14 56.5 +0.4**
GTA XS sS 12 15 07.3 +3.5
GTA AMB AMB
comp=Z,27nm,1.3s,mb5.1
GTA AMB AMB
comp=Z,263nm,4.8s
GTA LR LR
comp=N,295nm,18.9s,MS4.6
GTA LR LR
comp=E,325nm,18.9s,MS4.6
GTA LR LR
comp=Z,251nm,18.6s,MS4.3
ENH Enshi 56.81 279 PFAKE 12 07 20.0 +15
ENH LR LR
comp=Z,4.0nm,19.0s
JFWS Jewell Farm 57.14 61 *e*P **P 12 07 05.7 -1.4**
JFWS pmax pmax
comp=Z,24nm,1.1s,mb5.1
JFWS MLR MLR
comp=Z,401nm,22.0s,MS4.5
JFWS Jewell Farm 57.14 61 *e*P **P 12 07 05.7 -1.4**
comp=Z,24nm,1.1s,mb5.1
JFWS LR LR
comp=Z,401nm,22.0s,MS4.5
WMOK Wichita Mounta 57.45 73 *e*P **P 12 07 08.8 -0.6**
WMOK pmax pmax
comp=Z,28nm,1.4s,mb5.1
WMOK MLR MLR
comp=Z,187nm,20.0s,MS4.2
WMOK Wichita Mounta 57.45 73 *e*P **P 12 07 08.8 -0.6**
comp=Z,28nm,1.4s,mb5.1
WMOK LR LR
comp=Z,187nm,20.0s,MS4.2
TXAR Lajitas Array 58.04 81 P **P 12 07 12.5 -1.1**
comp=Z,11nm,1.0s,mb4.8,baz=297,slow=4.3,SNR=61
TXAR PcP PcP 12 08 05.4 0.0
comp=Z,6.2nm,1.0s,baz=328,slow=1.4,SNR=5.2
TXAR ScP ScP 12 12 02.5 -2.3
comp=Z,0.1nm,0.4s,baz=316,slow=3.5,SNR=3.6
KEV Kevo 58.94 350 *ep* **P 12 07 18.6 -0.7**
GLMI Grayling 58.97 56 PFAKE 12 07 30.0 +10
GLMI LR LR
comp=Z,470nm,20.0s,MS4.6
HDIL Hopedale 59.23 62 *e*P **P 12 07 20.4 -1.3**
comp=Z,24nm,0.8s,mb5.3
HDIL LR LR
comp=Z,336nm,22.0s,MS4.4
ARCES ARCESS Array B 59.31 351 P **P 12 07 21.5 -0.4**
comp=Z,10nm,0.5s,mb5.1,baz=29,slow=7.8,SNR=108
ARCES LR LR 12 34 07.1
comp=Z,346nm,18.4s,MS4.5,baz=16,slow=37
ARCES ARCESS Array B 59.31 351 P **P 12 07 21.5 -0.3**
ARCES pmax pmax
comp=Z,10.0nm,0.5s
ARCES MLR MLR
comp=Z,346nm,18.4s
JCT Junction City 59.69 78 *e*P **P 12 07 23.6 -1.5**
JCT pmax pmax
comp=Z,24nm,1.2s,mb5.1
JCT MLR MLR
comp=Z,182nm,20.0s,MS4.2
JCT Junction City 59.69 78 *e*P **P 12 07 23.6 -1.4**
comp=Z,24nm,1.2s,mb5.1
JCT LR LR
comp=Z,182nm,20.0s,MS4.2
LVZ Lovozero 59.70 346 PFAKE 12 07 40.0 +15
LVZ LR LR
comp=Z,305nm,19.0s,MS4.5
CCM Cathedral Cave 59.77 66 PFAKE 12 07 40.0 +15
CCM LR LR
comp=Z,244nm,19.0s,MS4.4
CD2 Chengdu 59.99 283⇓ *i*P **P 12 07 26.5 -0.6**
CD2 AP pP 12 07 32.6 +0.8
CD2 XP sP 12 07 35.8 +2.2
CD2 PCP PcP 12 08 12.8 -0.3
CD2 PP PP 12 09 40.3 +1.2
CD2 S **S 12 15 35.1 -3.8**
CD2 XS sS 12 15 45.3 -1.4
CD2 SCS ScS 12 17 12.1 -4.9
CD2 SS SS 12 19 32.4 -2.7
CD2 AMB AMB
comp=Z,20nm,1.2s,mb5.0
CD2 AMB AMB

comp=Z,40nm,6.2s
CD2 LR LR
comp=N,300nm,19.0s,MS4.6
CD2 LR LR
comp=E,330nm,17.8s,MS4.6
CD2 LR LR
comp=Z,240nm,14.2s,MS4.5
APA Apatity 60.19 347 ⇓ *i* P **P 12 07 28.2 +0.3**
APA pmax pmax
comp=Z,77nm,1.5s,mb5.5
APA MLR MLR
comp=Z,1μm,22.0s,MS5.0
KURK Kurchatov 60.36 315 P **P 12 07 29.1 -0.2**
comp=Z,264nm,0.6s,SNR=28
KURK Kurchatov 60.36 315 P **P 12 07 29.3 0.0**
SNR=19
KURK Kurchatov 60.36 315 P **P 12 07 29.4 0.0**
comp=Z,24nm,0.6s,mb5.4,baz=43,slow=6.6,SNR=79
KURK PcP PcP 12 08 13.9 -0.3
comp=Z,1.2nm,0.4s,baz=34,slow=3.2,SNR=4.4
KURK PP PP 12 09 42.7 +0.8
comp=Z,1.9nm,0.7s,baz=49,slow=10,SNR=3.5
KURK Kurchatov 60.36 315 P **P 12 07 29.4 +0.1**
KURK 12 08 13.9
KURK 12 09 42.7
KURK pmax pmax
comp=Z,24nm,0.6s,mb5.4
KURK pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KURK Kurchatov 60.36 315 P **P 12 07 29.4 0.0**
KURK PcP PcP 12 08 13.9 -0.3
KURK PP PP 12 09 42.7 +0.8
KURK LR LR
comp=Z,422nm,20.0s,MS4.6
SCHQ Schefferville 60.38 38 P **P 12 07 28.8 -0.6**
comp=Z,11nm,0.8s,mb4.9,baz=325,slow=7.1,SNR=9.5
SCHQ LR LR 12 35 41.8
comp=Z,551nm,18.5s,MS4.7,baz=130,slow=38
WMQ Urumqi 60.61 304 P **P 12 07 31.5 +0.3**
WMQ AP pP 12 07 36.0 +0.1
WMQ XP sP 12 07 38.5 +0.8
WMQ PCP PcP 12 08 16.0 +0.6
WMQ S **S** **12 15 46.0 -0.6**
WMQ XS sS 12 15 59.0 +4.7
WMQ SCS ScS 12 17 18.0 -3.3
WMQ AMB AMB
comp=Z,24nm,0.8s,mb5.4
WMQ AMB AMB
comp=Z,173nm,4.6s
WMQ LR LR
comp=N,611nm,26.4s,MS4.8
WMQ LR LR
comp=E,634nm,22.7s,MS4.8
WMQ LR LR
comp=Z,529nm,19.2s,MS4.7
MIAR Mount Ida 60.76 70 *e*P **P 12 07 31.3 -1.0**
MIAR pmax pmax
comp=Z,33nm,1.4s,mb5.3
MIAR MLR MLR
comp=Z,233nm,20.0s,MS4.3
MIAR Mount Ida 60.76 70 *e*P **P 12 07 31.2 -1.0**
comp=Z,32nm,1.4s,mb5.3
MIAR LR LR
comp=Z,233nm,20.0s,MS4.3
GYA Guiyang 61.24 278 ⇑ *i* P **P 12 07 36.3 +0.6**
GYA AP pP 12 07 43.0 +2.6
GYA XP sP 12 07 46.5 +4.3
GYA PP PP 12 09 55.1 +4.8
GYA S **S** **12 15 54.6 -0.4**
GYA XS sS 12 16 03.3 +0.5
GYA SS SS 12 19 56.4 +1.5
GYA AMB AMB
comp=Z,20nm,1.2s,mb5.1
GYA AMB AMB
comp=Z,520nm,6.3s
GYA LR LR
comp=N,580nm,19.0s,MS4.8
GYA LR LR
comp=E,410nm,18.6s,MS4.8
GYA LR LR
comp=Z,494nm,19.3s,MS4.7
MK31 Makanchi Array 61.34 310 *i* P **P 12 07 34.9 -1.2**
MK31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.8
MK31 Makanchi Array 61.34 310 *e*P **P 12 07 35.2 -0.8**
MKAR Makanchi Array 61.34 310 P **P 12 07 35.3 -0.8**
comp=Z,3.0nm,0.5s,mb4.7,baz=51,slow=7.1,SNR=24
MKAR LR LR 12 35 28.1
comp=Z,203nm,21.7s,MS4.2,baz=28,slow=37
MKAR Makanchi Array 61.34 310 P **P 12 07 35.3 -0.8**
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR MLR MLR
comp=Z,203nm,21.7s
NATX Nacogdoches 62.01 73 PFAKE 12 07 50.0 +9.2
NATX LR LR
comp=Z,247nm,20.0s,MS4.4
BRVK Borovoye 62.26 321 ⇑ *e*P **P 12 07 42.3 +0.1**
WCI Wyandotte Cave 62.51 63 PFAKE 12 08 00.0 +16
WCI LR LR
comp=Z,313nm,19.0s,MS4.5
HKT Hockley 62.54 75 *e*P **P 12 07 43.9 -0.4**
HKT pmax pmax
comp=Z,14nm,1.2s,mb5.0
HKT MLR MLR
comp=Z,146nm,20.0s,MS4.1
HKT Hockley 62.54 75 *e*P **P 12 07 43.9 -0.5**
comp=Z,14nm,1.2s,mb5.0
HKT LR LR
comp=Z,146nm,20.0s,MS4.1
HNR Honiara 62.61 205 PFAKE 12 08 00.0 +15
HNR LR LR
comp=Z,372nm,20.0s,MS4.5
SVE Sverdlovsk 62.95 328 ⇑ *e*P **P 12 07 47.5 +0.8**
SVE pmax pmax
comp=Z,80nm,1.3s,mb5.7
ACSO Alum Creek Sta 62.98 59 PFAKE 12 08 00.0 +13
ACSO LR LR
comp=Z,334nm,20.0s,MS4.5
WVT Waverly 63.08 65 *e*P **P 12 07 47.2 -0.7**
WVT pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
WVT MLR MLR
comp=Z,339nm,19.0s,MS4.5
WVT Waverly 63.08 65 *e*P **P 12 07 47.2 -0.6**
comp=Z,4.8nm,0.9s,mb4.6
WVT LR LR
comp=Z,339nm,19.0s,MS4.5
OXF Oxford 63.27 68 PFAKE 12 08 00.0 +11
OXF LR LR
comp=Z,197nm,20.0s,MS4.3
ALLY Alegheny Colle 63.52 56 *e*P **P 12 07 50.6 -0.1**
comp=Z,116nm,1.0s
DAV Davao City (W) 63.78 248 PFAKE 12 08 00.0 +7.3
DAV LR LR
comp=Z,4.0nm,19.0s
ARU Arti 63.96 329 P **P 12 07 53.5 +0.1**
comp=Z,387nm,0.5s,SNR=16
ARU Arti 63.96 329 *d* iP **P 12 07 53.6 +0.2**
ARU *e* 12 08 24.0
ARU *e*S **S** **12 16 30.1 +1.7**
ARU *e*SS SS 12 20 32.8 -3.1
ARU pmax pmax
comp=Z,137nm,1.7s,mb5.7
ARU Arti 63.96 329 ⇑ *e*P **P 12 07 53.2 -0.2**
ARU LR LR
comp=Z,376nm,19.0s,MS4.6
VBMS Vicksburg 64.21 70 PFAKE 12 08 10.0 +15
VBMS LR LR
comp=Z,157nm,19.0s,MS4.2
LONY Lake Ozonia 64.27 51 PFAKE 12 08 10.0 +14
LONY LR LR
comp=Z,420nm,20.0s,MS4.6
KMI Kunming 64.67 279 P **P 12 07 58.5 0.0**
KMI AMB AMB
comp=Z,21nm,1.9s,mb4.8
KMI LR LR
comp=Z,146nm,24.3s,MS4.1
JOF Joensuu 64.86 346 *ep* **P 12 07 57.7 -1.5**
comp=Z,22nm,0.5s,mb5.4
JOF Joensuu 64.86 346 *e*P **P 12 07 57.7 -1.5**
JOF pmax pmax
comp=Z,22nm,0.5s,mb5.4
NCB Newcomb 64.92 51 PFAKE 12 08 10.0 +10
NCB LR LR
comp=Z,453nm,20.0s,MS4.7

MCWV Mont Chateau 65.09 58 PFAKE 12 08 10.0 +8.9
MCWV LR LR
comp=Z,610nm,20.0s,MS4.8
TZTN Tazewell 65.25 62 PFAKE 12 08 10.0 +7.9
TZTN LR LR
comp=Z,477nm,19.0s,MS4.7
BINY Binghamton 65.31 53 *e*P **P 12 08 02.3 -0.1**
comp=Z,63nm,1.2s,mb5.5
BINY LR LR
comp=Z,486nm,20.0s,MS4.7
SSPA Standing Stone 65.44 56 *e*P **P 12 08 02.8 -0.6**
comp=Z,75nm,1.4s,mb5.5
SSPA LR LR
comp=Z,346nm,19.0s,MS4.6
ACCN Adirondack Com 65.62 51 *e*P **P 12 08 04.1 -0.4**
comp=Z,48nm,1.3s,mb5.4
LRAL Lakeview Retre 65.74 67 PFAKE 12 08 20.0 +15
LRAL LR LR
comp=Z,115nm,21.0s,MS4.1
LBNH Lisbon 65.86 49 PFAKE 12 08 20.0 +14
LBNH LR LR
comp=Z,489nm,20.0s,MS4.7
ELN Prospectdale 66.33 60 *e*P **P 12 08 08.4 -0.7**
PKME Peaks-Kenny Pk 66.36 47 PFAKE 12 08 20.0 +11
PKME LR LR
comp=Z,562nm,22.0s,MS4.7
KAF Kangasniemi 66.36 348 *ep* **P 12 08 07.7 -1.1**
comp=Z,15nm,0.5s,mb5.3,baz=13,slow=5.8
KAF Kangasniemi 66.36 348 *e*P **P 12 08 07.7 -1.1**
KAF pmax pmax
comp=Z,15nm,0.5s,mb5.3
BLA Blacksburg 66.53 60 *e*P **P 12 08 10.4 +0.1**
BLA pmax pmax
comp=Z,51nm,1.0s,mb5.5
BLA MLR MLR
comp=Z,540nm,22.0s,MS4.7
BLA Blacksburg 66.53 60 *e*P **P 12 08 10.3 0.0**
comp=Z,51nm,1.0s,mb5.5
BLA LR LR
comp=Z,540nm,22.0s,MS4.7
SDMD Soldier's Deli 66.88 56 *e*P **P 12 08 12.0 -0.6**
comp=Z,9.0nm,0.5s,mb5.1
SDMD *ep*P pP 12 08 19.8 +2.4
PMG Port Moresby 66.91 218 PFAKE 12 08 20.0 +7.1
PMG LR LR
comp=Z,403nm,20.0s,MS4.6
HRV Adam Dziewonsk 67.32 50 PFAKE 12 08 30.0 +15
HRV LR LR
comp=Z,382nm,21.0s,MS4.6
TKM2 Tokmak 2 67.43 310 *e*P **P 12 08 16.4 +0.4**
TKM2 pmax pmax
comp=Z,43nm,1.4s,mb5.3
TKM2 MLR MLR
comp=Z,220nm,21.0s,MS4.4
TKM2 Tokmak 2 67.43 310 P **P 12 08 16.4 +0.4**
SNR=20
TKM2 Tokmak 2 67.43 310 *e*P **P 12 08 16.4 +0.4**
comp=Z,43nm,1.4s,mb5.3
TKM2 LR LR
comp=Z,220nm,21.0s,MS4.4
CBN Corbin 67.48 57 PFAKE 12 08 30.0 +14
CBN LR LR
comp=Z,586nm,20.0s,MS4.8
WES Weston 67.53 50 PFAKE 12 08 30.0 +13
WES LR LR
comp=Z,528nm,22.0s,MS4.7
GOGA Godfrey 67.53 65 PFAKE 12 08 30.0 +13
GOGA LR LR
comp=Z,454nm,20.0s,MS4.7
USP Ospenovka 67.70 311 P **P 12 08 18.4 +0.7**
SNR=20
CHMS Chumysh 67.78 311 P **P 12 08 19.0 +0.7**
SNR=5.5
KBK Karagaybulak 67.95 311 P **P 12 08 20.2 +1.0**
SNR=6.3
FRU Bishkek 67.97 311 ⇑ *i* P **P 12 08 19.0 -0.4**
FRU pmax pmax
comp=Z,160nm,2.0s,mb5.7
AAK Ala-Archa 68.18 311 P **P 12 08 21.5 +0.7**
SNR=19
UCH Uchtor 68.48 311 PFAKE 12 08 40.0 +17
UCH LR LR
comp=Z,53nm,22.0s,MS3.7
EKS2 Erkin-Say 68.51 311 P **P 12 08 24.0 +1.2**
SNR=7.6
EKS2 Erkin-Say 68.51 311 *e*P **P 12 08 23.6 +0.8**
comp=Z,31nm,0.6s,mb5.4
EKS2 LR LR
comp=Z,234nm,19.0s,MS4.4
LSA Lhasa 68.57 291 *e*P **P 12 08 25.2 +1.9**
LSA pmax pmax
comp=Z,22nm,0.6s,mb5.3
LSA MLR MLR
comp=Z,194nm,22.0s,MS4.3
LSA Lhasa 68.57 291 *e*P **P 12 08 25.1 +1.8**
comp=Z,22nm,0.6s,mb5.3
LSA LR LR
comp=Z,194nm,22.0s,MS4.3
NOA NORSAR Array B 68.81 355 P **P 12 08 24.5 +0.2**
comp=Z,11nm,0.8s,mb4.9,baz=6.8,slow=6.6,SNR=32
NOA LR LR 12 36 18.0
comp=Z,212nm,21.2s,MS4.3,baz=350,slow=34
NOA NORSAR Array B 68.81 355 P **P 12 08 24.5 +0.2**
NOA LR LR 12 36 18.0
AML Almayashu 68.95 311 *e*P **P 12 08 27.0 +1.5**
comp=Z,10nm,0.6s,mb4.9
AML LR LR
comp=Z,254nm,20.0s,MS4.5
AKTK Aktyubinsk 69.04 326 *i* P **P 12 08 26.2 +0.2**
AKTO Aktyubinsk 69.04 326 *i* P **P 12 08 26.1 +0.1**
AKTO pmax pmax
comp=Z,12nm,0.9s,mb4.8
AB31 Akbulak array 69.30 324 ⇑ *e*P **P 12 08 27.4 -0.2**
CNNC Cliffs of the 69.36 60 PFAKE 12 08 40.0 +12
CNNC LR LR
comp=Z,495nm,19.0s,MS4.8
KK31 Karatay Array 69.72 314 *i* P **P 12 08 30.1 -0.2**
KK31 pmax pmax
comp=Z,17nm,0.5s,mb5.2
KK31 Karatay Array 69.72 314 *i* P **P 12 08 30.2 -0.1**
KONO Kongsberg 70.28 356 ⇑ *e*P **P 12 08 32.6 -0.8**
KKM Kota Kinabalu 70.28 255 PFAKE 12 08 50.0 +16
KKM LR LR
comp=Z,223nm,20.0s,MS4.4
MOS Moscow 70.37 340 *e*P **P 12 08 33.1 -0.9**
MOS pmax pmax
comp=Z,147nm,0.7s
MOS pmax pmax
comp=Z,200μm,0.7s
MOS Moscow 70.37 340 ⇑ *i* P **P 12 08 33.7 -0.3**
OBN Obninsk 71.18 340 *d* iP **P 12 08 39.1 +0.1**
OBN *e* 12 08 59.0
OBN *e* 12 11 15.3
OBN pmax pmax
comp=Z,203nm,1.3s
OBN MLR MLR
comp=Z,300nm,17.0s,MS4.6
OBN Obninsk 71.18 340 ⇑ *e*P **P 12 08 39.2 +0.2**
OBN LR LR
comp=Z,300nm,26.0s,MS4.4
CHTO Chiang Mai 71.66 277 *e*P **P 12 08 42.0 -0.4**
CHTO *e* 12 11 21.6
CHTO pmax pmax
comp=Z,12nm,1.0s,mb4.8
CHTO MLR MLR
comp=Z,353nm,19.0s,MS4.7
CHTO Chiang Mai 71.66 277 *e*P **P 12 08 42.0 -0.4**
comp=Z,12nm,1.0s,mb4.8
CHTO *e*PP PP 12 11 21.6 +0.3
CHTO LR LR
comp=Z,353nm,19.0s,MS4.7
PPT Papeete 71.91 152 *e*S S 12 18 07.4 +3.3
comp=Z,560nm,26.2s
PPT Papeete 71.91 152 *e*LR LR 12 30 33.6
comp=Z,629nm,29.5s,baz=347
PPT Papeete 71.91 152 LR LR 12 32 04.0
comp=Z,217nm,21.2s,MS4.4,baz=340,slow=29
CMAR Chiang Mai Arr 71.93 277 P **P 12 08 43.3 -0.7**
comp=Z,5.6nm,0.6s,mb4.7,baz=29,slow=6.1,SNR=22
CMAR Chiang Mai Arr 71.93 277 P **P 12 08 43.3 -0.7**
CMAR pmax pmax
comp=Z,6.0nm,0.6s
TAPN Taplejung 72.34 292 *e*P **P 12 08 47.0 +0.6**
ODAN Odare 72.89 291 *e*P **P 12 08 49.9 +0.2**
GUN Gumba 73.01 293 *e*P **P 12 08 51.2 +0.8**
comp=Z,113nm,0.6s

JIRN Jiri 73.01 293 *e*P **P 12 08 51.4 +1.0**
comp=Z,141nm,0.8s
RAMN Ramite 73.30 292 *e*P **P 12 08 52.5 +0.4**
comp=Z,168nm,0.7s
MNK Minsk 73.45 345 ⇑ *e*P **P 12 08 50.0 -2.5**
MNK pmax pmax
comp=Z,260nm,2.0s,mb5.8
KKN Kakani 73.45 294 *e*P **P 12 08 53.5 +0.5**
comp=Z,58nm,0.5s,mb5.8
KKN Kakani 73.45 294 *e*P **P 12 08 53.7 +0.7**
PKI Pulchoki 73.54 293 *e*P **P 12 08 53.9 +0.4**
GKN Gorkha 73.67 294 *e*P **P 12 08 54.6 +0.3**
DMN Daman 73.69 294 *e*P **P 12 08 55.0 +0.6**
DANN Dangsing 73.93 295 *e*P **P 12 08 56.3 +0.5**
comp=Z,50nm,0.7s,mb5.5
TEIG Tepich 74.26 77 PFAKE 12 09 10.0 +12
TEIG LR LR
comp=Z,177nm,21.0s,MS4.3
KOLN Koldanda 74.45 295 *e*P **P 12 08 58.6 -0.3**
RGN Rugen 75.15 353 *e*P **P 12 09 03.4 +1.0**
comp=Z,168nm,0.9s
DDI Dehra Dun 75.68 300 *ex* **P 12 09 03.8 -2.1**
BSEG Bad Segeberg 75.95 355 *e*P **P 12 09 07.9 +0.9**
BSEG *e**PP pP 12 09 24.8 +13
BSEG pmax pmax
comp=Z,116nm,1.4s,mb5.6
BSEG Bad Segeberg 75.95 355 *e*P **P 12 09 07.9 +0.9**
comp=Z,116nm,1.4s,mb5.6
BSEG *ep*P pP 12 09 24.8 +13
AKASG Malin Array Be 76.84 343 P **P 12 09 11.7 -0.4**
comp=Z,4.4nm,0.4s,mb4.8,baz=16,slow=5.5,SNR=62
AKASG LR LR 12 46 31.9
comp=Z,182nm,21.4s,MS4.4,baz=10.0,slow=38
AKASG Malin Array Be 76.84 343 P **P 12 09 11.7 -0.4**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG MLR MLR
comp=Z,182nm,21.4s
KIEV Kiev 76.85 343 *e*P **P 12 09 12.0 -0.2**
KIEV pmax pmax
comp=Z,117nm,1.4s,mb5.6
KIEV MLR MLR
comp=Z,295nm,20.0s,MS4.6
KIEV Kiev 76.85 343 *e*P **P 12 09 12.0 -0.2**
comp=Z,117nm,1.4s,mb5.6
KIEV LR LR
comp=Z,295nm,20.0s,MS4.6
KAPI Kappang 76.90 245 P **P 12 09 11.6 -1.4**
comp=Z,6.1nm,0.3s,mb5.0,baz=39,slow=11,SNR=4.0
KAPI Kappang 76.90 245 P **P 12 09 11.6 -1.4**
KAPI LR LR
comp=Z,366nm,19.0s,MS4.7
CTA Charters Tower 77.01 215 *e*P **P 12 09 12.4 -0.9**
comp=Z,9.6nm,1.2s,mb4.6
CTA Charters Tower 77.01 215 *e*P **P 12 09 12.4 -0.9**
CTA pmax pmax
comp=Z,10.0nm,1.2s
CTAO Charters Tower 77.01 215 *e*P **P 12 09 12.9 -0.4**
CTAO pmax pmax
comp=Z,27nm,1.2s,mb5.0
CTAO MLR MLR
comp=Z,991nm,19.0s,MS5.2
CTAO Charters Tower 77.01 215 *e*P **P 12 09 12.9 -0.4**
comp=Z,27nm,1.2s,mb5.1
CTAO LR LR
comp=Z,991nm,19.0s,MS5.2
KBL Kabul 77.14 309 *e*P **P 12 09 13.7 -0.4**
KBL pmax pmax
comp=Z,43nm,1.3s,mb5.2
KBL Kabul 77.14 309 *e*P **P 12 09 13.7 -0.4**
comp=Z,43nm,1.3s,mb5.2
NRDL Niedersach Rie 77.40 355 *e*P **P 12 09 15.8 +0.5**
comp=Z,59nm,1.4s,mb5.3
KSM Kuching 77.51 257 *e*P **P 12 09 16.6 +0.2**
IBBN Ibbenburen 77.69 357 *e*P **P 12 09 17.8 +0.9**
comp=Z,175nm,1.4s,mb5.8
WTSB Winterswijk 78.07 357 *e*P **P 12 09 19.7 +0.7**
comp=Z,53nm,1.0s,mb5.4
CLL Collm 78.40 353 ⇓ *i* P **P 12 09 20.7 -0.1**
CLL pmax pmax
comp=Z,58nm,1.6s,mb5.3
CLL Collm 78.40 353 *e*P **P 12 09 20.6 -0.2**
comp=Z,58nm,1.6s,mb5.3
CLL *es*P sP 12 09 47.4 +20
CLL Collm 78.40 353 ⇓ *i*P **P 12 09 20.7 -0.1**
comp=Z,58nm,1.6s,mb5.3
CLL *ex* x 12 09 48.0
CLL Collm 78.40 353 ⇓ *i*P **P 12 09 20.7 -0.1**
comp=Z,58nm,1.6s,mb5.3
KSP Ksiaz 78.57 351 *e*P **P 12 09 22.3 +0.6**
KSP Ksiaz 78.57 351 ⇓ *e*P **P 12 09 21.7 -0.1**
BUG Bochum--Univer 78.58 357 *e*P **P 12 09 22.1 +0.3**
comp=Z,112nm,1.6s,mb5.5
LVV L'vov 78.59 346 *c* iP **P 12 09 21.8 -0.1**
FBE Freiberg 78.75 353 *e*P **P 12 09 23.0 +0.2**
comp=Z,92nm,1.5s,mb5.5
FBE *es*P sP 12 09 50.0 +21
BRG Berggiesshubel 78.75 353 *i* P **P 12 09 22.9 +0.1**
BRG pmax pmax
comp=Z,25nm,1.4s,mb5.0
BRG MLR MLR
comp=N,132nm,19.4s,MS4.3
BRG MLR MLR
comp=E,105nm,24.2s,MS4.3
BRG MLR MLR
comp=Z,182nm,19.2s,MS4.4
BRG Berggiesshubel 78.75 353 *e*P **P 12 09 22.8 0.0**
comp=Z,46nm,1.4s,mb5.2
BRG Berggiesshubel 78.75 353 *i* P **P 12 09 22.9 +0.1**
comp=Z,42nm,1.4s,mb5.2
BRG
comp=N,220nm,19.4s
BRG
comp=E,175nm,24.2s
BRG
comp=Z,304nm,19.2s
OJC Ojcow 78.79 349 *e*P **P 12 09 23.2 +0.2**
BATI Baumata 78.91 239 P **P 12 09 23.5 -0.6**
comp=Z,23nm,0.6s,mb5.3,baz=40,slow=3.4,SNR=2.7
UPC Upice 78.93 351 *e*P **P 12 09 24.2 +0.4**
KWP Kalwaria 78.97 347 *e*P **P 12 09 25.3 +1.3**
KWP Kalwaria 78.97 347 *e*P **P 12 09 25.3 +1.3**
KWP LR LR
comp=Z,585nm,19.0s,MS4.9
PVCC Panska Ves 79.04 352 *e*P **P 12 09 24.6 +0.2**
PVCC *ex* x 12 09 52.9
PVCC AMS AMS 12 39 50.0
comp=Z,400nm,28.5s
DPC Dobruska-Polom 79.06 351 *e*P **P 12 09 24.9 +0.4**
DPC *ex* x 12 09 52.5
DPC AMS AMS 12 40 40.0
comp=Z,300nm,21.1s
UBBA Unterbreizbach 79.08 355 *e*P **P 12 09 24.6 0.0**
comp=Z,76nm,1.7s,mb5.3
UBBA *es*P sP 12 09 50.9 +20
MOX Moxa 79.16 354 *e*P **P 12 09 25.5 +0.5**
comp=Z,84nm,1.9s,mb5.3
MOX Moxa 79.16 354 *e*P **P 12 09 25.5 +0.5**
MOX pmax pmax
comp=Z,84nm,1.9s,mb5.3
MOX Moxa 79.16 354 *e*P **P 12 09 25.2 +0.2**
comp=Z,66nm,1.5s,mb5.3
MOX *ep*P pP 12 09 43.5 +14
RAO Raoul Island 79.17 180 LR LR 12 41 35.9
comp=Z,346nm,19.4s,MS4.7,baz=61,slow=34
RAO Raoul Island 79.17 180 PFAKE 12 09 40.0 +15
RAO LR LR
comp=Z,1μm,20.0s,MS5.2
BEBN Eben Emael 79.27 358 P **P 12 09 26.6 +1.0**
HGN Heimansgroeve 79.30 358 *e*P **P 12 09 26.5 +0.8**
comp=Z,68nm,2.3s,mb5.2
WERD Werda 79.30 354 *e*P **P 12 09 26.0 +0.2**
comp=Z,53nm,1.5s,mb5.2
TANN Tannenbergstha 79.33 354 *e*P **P 12 09 26.0 +0.1**
comp=Z,56nm,1.6s,mb5.2
OKC Ostrava-Krasne 79.36 350 *e*P **P 12 09 26.5 +0.3**
OKC *ex* x 12 09 55.0
OKC AMS AMS 12 45 10.0
comp=Z,300nm,25.4s
OKC Ostrava-Krasne 79.36 350 *e*P **P 12 09 26.5 +0.3**
OKC *e* 12 09 55.0
GUNZ Gunzen 79.39 354 *e*P **P 12 09 26.4 +0.1**
comp=Z,76nm,1.6s,mb5.4
STHS Stebnicka Huta 79.39 348 *e*P **P 12 09 27.5 +1.2**
STHS pmax pmax
comp=Z,35nm,1.3s,mb5.1

STHS Stebnicka Huta 79.39 348 *e*P **P** **12 09 27.5 +1.2**
comp=Z,35nm,1.3s,mb5.1
MEM Membach 79.45 358 P **P** **12 09 27.4 +0.8**
WERN Wernitzgruen 79.46 354 *e*P **P** **12 09 27.2 +0.5**
comp=Z,75nm,1.5s,mb5.4
MORC Moravsky Berou 79.49 350⇑ *i*P **P** **12 09 27.8 +0.9**
MORC Moravsky Berou 79.49 350 P **P** **12 09 27.9 +1.1**
NKC Novy Kostel 79.51 353 *e*P **P** **12 09 27.4 +0.5**
NKC *ex* x 12 09 55.7
NKC AMS AMS 12 39 00.0
comp=Z,300nm,18.6s
NKC Novy Kostel 79.51 353 *e*P **P** **12 09 27.4 +0.5**
NKC *e* 12 09 55.7
TGUH Tegucigalpa,Un 79.51 81 *e*P **P** **12 09 28.1 +0.7**
comp=Z,34nm,1.1s,mb5.2
TGUH LR LR
comp=Z,170nm,21.0s,MS4.4
NIE Niedzica 79.51 348 *e*P **P** **12 09 28.2 +1.2**
MENF Mencas 79.55 0 *e*P **P** **12 09 26.2 -0.9**
PRU Pruhonice 79.58 352 *e*P **P** **12 09 27.5 +0.2**
PRU *ex* x 12 09 55.9
PRU AMS AMS 12 40 00.0
comp=Z,300nm,27.0s
SNF Seneffe 79.58 359 P **P** **12 09 28.4 +1.1**
comp=Z,40nm,1.9s,mb5.0
BCLA Clavier 79.66 358 P **P** **12 09 27.7 0.0**
comp=Z,33nm,1.8s,mb5.0
KOLS Kolonicke sedl 79.72 347 *e*P **P** **12 09 29.0 +0.9**
TNS Taunus Mts 79.75 356 *e*P **P** **12 09 28.7 +0.5**
TNS pmax pmax
comp=Z,74nm,1.6s,mb5.4
TNS Taunus Mts 79.75 356 *e*P **P** **12 09 28.7 +0.5**
comp=Z,74nm,1.6s,mb5.4
TNS *es*P sP 12 09 55.9 +21
MANZ Manzenberg 79.78 354 *e*P **P** **12 09 28.7 +0.3**
comp=Z,33nm,1.5s,mb5.0
KIV Kislovodsk 79.82 332 *e*P **P** **12 09 27.8 -0.9**
KIV *e*S S 12 19 29.6 -1.4
KIV pmax pmax
comp=Z,31nm,1.2s,mb5.1
KIV MLR MLR
comp=Z,208nm,20.0s,MS4.5
KIV Kislovodsk 79.82 332 *e*P **P** **12 09 27.9 -0.8**
KIV LR LR
comp=Z,287nm,22.0s,MS4.6
CRVS Cervenica-Dubn 79.86 347 *e*P **P** **12 09 29.8 +0.9**
GIVF Givet 79.98 358 *e*P **P** **12 09 29.1 -0.4**
comp=Z,162nm,1.4s,mb5.5
GIVF Givet 79.98 358 *e*P **P** **12 09 29.1 -0.4**
GIVF pmax pmax
comp=Z,81nm,1.4s,mb5.5
GIVF Givet 79.98 358 *e*P **P** **12 09 29.1 -0.4**
comp=Z,81nm,1.4s,mb5.5
DOU Dourbes 79.99 359 P **P** **12 09 29.9 +0.4**
comp=Z,26nm,1.6s,mb4.9
UZH Uzhgorod 80.01 347⇓ *i*P **P** **12 09 30.2 +0.5**
BAIF Baives 80.03 359 *e*P **P** **12 09 29.6 -0.2**
comp=Z,201nm,1.4s,mb5.5
BAIF Baives 80.03 359 *e*P **P** **12 09 29.6 -0.2**
BAIF pmax pmax
comp=Z,101nm,1.4s,mb5.6
BAIF Baives 80.03 359 *e*P **P** **12 09 29.6 -0.2**
comp=Z,101nm,1.4s,mb5.6
VRAC Vranov 80.06 351⇓ *i*P **P** **12 09 31.0 +1.1**
VRAC Vranov 80.06 351 P **P** **12 09 30.2 +0.3**
ABH Alteburg 80.13 357 *e*P **P** **12 09 30.8 +0.5**
GRFO Grafenberg 80.13 354 *e*P **P** **12 09 31.2 +0.9**
GRFO pmax pmax
comp=Z,90nm,1.4s,mb5.5
GRFO Grafenberg 80.13 354 *e*P **P** **12 09 31.2 +0.9**
comp=Z,90nm,1.4s,mb5.5
GRA2 Grafenberg Arr 80.16 354 *e*P **P** **12 09 31.2 +0.7**
RUP Ruppelstein 80.33 357 *e*P **P** **12 09 31.9 +0.5**
TOD Tromm 80.35 356 *e*P **P** **12 09 31.2 -0.3**
WLF Walferdange 80.39 358 P **P** **12 09 33.0 +1.3**
comp=Z,37nm,2.0s,mb5.0
WLF Walferdange 80.39 358 *e*P **P** **12 09 32.6 +0.9**
comp=Z,76nm,1.5s,mb5.4
WLF *es*P sP 12 09 59.3 +21
WLF Walferdange 80.39 358 PFAKE 12 09 40.0 +8.3
WLF LR LR
comp=Z,303nm,22.0s,MS4.6
KIS Kishinev 80.46 342 *i* P **P** **12 09 32.0 -0.2**
KIS pmax pmax
comp=Z,250nm,2.0s,mb5.8
KIS MLR MLR
comp=Z,500nm,20.0s,MS4.9
KIS MLR MLR
comp=Z,500nm,20.0s
KIS Kishinev 80.46 342 *i* P **P** **12 09 32.0 -0.2**
comp=Z,300nm,2.0s
KIS LRM 12 47 58.0
comp=Z,500nm,20.0s
BUR08 Bucovina Ar. S 80.51 345 *e*P **P** **12 09 33.3 +0.9**
KHC Kasperske Hory 80.52 353 *e*P **P** **12 09 32.9 +0.5**
KHC *ex* x 12 10 01.2
KHC AMS AMS 12 40 00.0
comp=Z,300nm,28.2s
BURAR Bucovina Array 80.53 345⇑ *i*P **P** **12 09 33.1 +0.6**
BURAR Bucovina Array 80.53 345 ⇑P **P** **12 09 33.1 +0.5**
ANN Anapa 80.54 336 *e*P **P** **12 09 27.6 -5.0**
ANN pmax pmax
comp=Z,16nm,0.7s,mb5.1
ANN MLR MLR
comp=Z,196nm,18.0s,MS4.5
WET Wettzell 80.56 353 *e*P **P** **12 09 33.1 +0.5**
WET pmax pmax
comp=Z,43nm,1.6s,mb5.1
WET Wettzell 80.56 353 *e*P **P** **12 09 33.1 +0.5**
comp=Z,43nm,1.6s,mb5.1
WET *es*P sP 12 09 59.7 +20
VYHS Vyhne 80.61 349 *e*P **P** **12 09 33.2 +0.3**
VYHS pmax pmax
comp=Z,9.0nm,1.5s,mb4.5
VYHS Vyhne 80.61 349 *e*P **P** **12 09 33.2 +0.3**
comp=Z,8.9nm,1.5s,mb4.5
KTD Kalmit 80.67 356 *e*P **P** **12 09 34.2 +1.0**
GEC2 GERESS Array S 80.79 352 *e*P **P** **12 09 34.0 +0.1**
GEC2 pmax pmax
comp=Z,43nm,1.5s,mb5.2
GEC2 GERESS Array S 80.79 352 *e*P **P** **12 09 34.0 +0.1**
comp=Z,43nm,1.5s,mb5.2
GERES GERESS Array B 80.79 352 P **P** **12 09 34.0 +0.2**
comp=Z,2.6nm,0.6s,mb4.3,baz=24,slow=1.6,SNR=26
GERES LR LR 12 43 56.4
comp=Z,136nm,21.7s,MS4.3,baz=358,slow=35
MODS Modra-Piesok 80.91 350 *i* P **P** **12 09 36.1 +1.6**
LANF Langenberg 81.02 356 *e*P **P** **12 09 34.9 -0.2**
PSZ Piszkesteto 81.04 348⇓ *i*P **P** **12 09 36.2 +1.0**
PSZ Piszkesteto 81.04 348 P **P** **12 09 36.6 +1.4**
PSZ LR LR
comp=Z,269nm,21.0s,MS4.6
ZST Bratislava 81.10 350 *e*P **P** **12 09 36.3 +0.8**
comp=Z,54nm,1.4s,mb5.3
ZST LR LR
comp=Z,100nm,22.4s,MS4.1
STU Stuttgart 81.16 355 *e*P **P** **12 09 35.9 0.0**
comp=Z,60nm,1.4s,mb5.3
FLN La Foliniere 81.31 2 *e*P **P** **12 09 36.3 -0.4**
FLN *e*MLR MLR
comp=Z,180nm,21.8s,MS4.1
FLN La Foliniere 81.31 2 *e*P **P** **12 09 36.3 -0.4**
FLN LR LR
comp=Z,180nm,21.8s,MS4.4
LDF La Druitiere 81.49 2 *e*P **P** **12 09 37.2 -0.4**
comp=Z,66nm,1.0s,mb5.2
LDF La Druitiere 81.49 2 *e*P **P** **12 09 37.2 -0.4**
LDF pmax pmax
comp=Z,33nm,1.0s,mb5.2
LDF La Druitiere 81.49 2 *e*P **P** **12 09 37.2 -0.4**
comp=Z,33nm,1.0s,mb5.2
CONA Conrad Observa 81.50 351⇓ *i*P **P** **12 09 38.5 +0.8**
comp=Z,41nm,1.5s,mb5.2,SNR=14
MEZF Maizieres J'vi 81.58 358 *e*P **P** **12 09 37.9 -0.2**
CDF Champ du Feu 81.61 357 *e*P **P** **12 09 37.9 -0.3**
comp=Z,54nm,1.2s,mb5.0
CDF Champ du Feu 81.61 357 *e*P **P** **12 09 37.9 -0.3**
CDF pmax pmax
comp=Z,27nm,1.2s,mb5.0
CDF Champ du Feu 81.61 357 *e*P **P** **12 09 37.9 -0.3**
comp=Z,27nm,1.2s,mb5.1
BFO Black Forest 81.65 356 *e*P **P** **12 09 38.6 +0.2**
comp=Z,30nm,1.4s,mb5.0
BFO LR LR
comp=Z,282nm,20.0s,MS4.6

FUR Furstenfeldbru 81.65 354 *e*P **P** **12 09 38.7 +0.3**
FUR pmax pmax
comp=Z,63nm,1.5s,mb5.3
FUR Furstenfeldbru 81.65 354 *e*P **P** **12 09 38.7 +0.3**
comp=Z,63nm,1.5s,mb5.3
ROSF Rostrenen 81.65 4 *e*P **P** **12 09 38.5 +0.1**
comp=Z,131nm,1.5s,mb5.3
ROSF Rostrenen 81.65 4 *e*P **P** **12 09 38.5 +0.1**
ROSF pmax pmax
comp=Z,65nm,1.5s,mb5.3
ROSF Rostrenen 81.65 4 *e*P **P** **12 09 38.5 +0.1**
comp=Z,65nm,1.5s,mb5.3
GRR Gorron 81.68 2 *e*P **P** **12 09 38.1 -0.5**
comp=Z,88nm,1.1s,mb5.3
GRR Gorron 81.68 2 *e*P **P** **12 09 38.1 -0.5**
GRR pmax pmax
comp=Z,44nm,1.1s,mb5.3
GRR Gorron 81.68 2 *e*P **P** **12 09 38.1 -0.5**
comp=Z,44nm,1.1s,mb5.3
MOA Molln 81.73 352⇓ *i*P **P** **12 09 40.0 +1.1**
comp=Z,12nm,1.4s,mb4.7
DRGR 81.74 346⇓ *i*P **P** **12 09 39.3 +0.3**
DRGR 81.74 346 P **P** **12 09 39.4 +0.5**
SGMF Saint Gilles 81.76 3 *e*P **P** **12 09 38.8 -0.2**
comp=Z,80nm,1.1s,mb5.3
SGMF Saint Gilles 81.76 3 *e*P **P** **12 09 38.8 -0.2**
SGMF pmax pmax
comp=Z,40nm,1.1s,mb5.3
SGMF Saint Gilles 81.76 3 *e*P **P** **12 09 38.8 -0.2**
comp=Z,40nm,1.1s,mb5.3
WRAB Tennant Creek 81.77 225 *e*P **P** **12 09 38.1 -1.2**
WRAB pmax pmax
comp=Z,17nm,1.3s,mb4.8
WRAB MLR MLR
comp=Z,725nm,21.0s,MS5.0
WRAB Tennant Creek 81.77 225 *e*P **P** **12 09 38.1 -1.2**
comp=Z,18nm,1.3s,mb4.8
WRAB LR LR
comp=Z,725nm,21.0s,MS5.0
WB2 Warramunga Arr 81.77 225 *e*P **P** **12 09 37.5 -1.8**
WB2 *e* pP 12 09 41.2 -3.0
WB2 *e* 12 09 48.6
WB2 *e* 12 09 59.0
WB2 Warramunga Arr 81.77 225 *e*P **P** **12 09 41.2 +1.9**
WB2 *e* 12 09 48.6
WRA Warramunga Arr 81.78 225 P **P** **12 09 38.1 -1.3**
comp=Z,4.7nm,0.5s,mb4.7,baz=33,slow=5.8,SNR=101
WRA Warramunga Arr 81.78 225 P **P** **12 09 38.1 -1.3**
WRA pmax pmax
comp=Z,5.0nm,0.5s
ECH Echery 81.81 357 *e*P **P** **12 09 38.4 -0.9**
THEF They Montfort 81.83 358 *e*P **P** **12 09 38.2 -1.2**
SPAK Spaichingen-Ko 81.85 356 *e*P **P** **12 09 39.7 +0.2**
LIBD Limburg 81.86 357 *e*P **P** **12 09 39.7 +0.2**
VRI Vrincioaia 81.95 343⇓ *i*P **P** **12 09 40.8 +0.7**
VRI Vrincioaia 81.95 343 ⇓P **P** **12 09 40.8 +0.7**
RJOB Jochberg 81.96 353 *e*P **P** **12 09 40.5 +0.4**
comp=Z,26nm,1.5s,mb4.9
HAU Haudompre 82.04 357 *e*P **P** **12 09 40.0 -0.5**
comp=Z,18nm,0.8s,mb4.8
HAU *e*MLR MLR
comp=Z,265nm,22.2s,MS4.2
HAU Haudompre 82.04 357 *e*P **P** **12 09 40.0 -0.5**
HAU pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
HAU MLR MLR
comp=Z,260nm,22.3s,MS4.5
HAU Haudompre 82.04 357 *e*P **P** **12 09 40.0 -0.5**
comp=Z,9.1nm,0.8s,mb4.8
HAU LR LR
comp=Z,260nm,22.3s,MS4.5
QUIF Quistinic 82.07 4 *e*P **P** **12 09 40.7 0.0**
comp=Z,208nm,1.6s,mb5.5
QUIF Quistinic 82.07 4 *e*P **P** **12 09 40.7 0.0**
QUIF pmax pmax
comp=Z,104nm,1.6s,mb5.5
QUIF Quistinic 82.07 4 *e*P **P** **12 09 40.7 0.0**
comp=Z,104nm,1.6s,mb5.5
FELD Feldberg im Sc 82.11 356 *e*P **P** **12 09 39.9 -1.0**
MOF Molkenrain 82.17 357 *e*P **P** **12 09 41.0 -0.2**
ARSA Arzberg 82.20 351⇓ *i*P **P** **12 09 41.7 +0.4**
comp=Z,37nm,1.5s,mb5.1
HINF Hinteralfeld 82.22 357 *e*P **P** **12 09 40.6 -0.8**
WATA Walderalm 82.45 354⇓ *e*P **P** **12 09 43.3 +0.6**
comp=Z,65nm,1.6s,mb5.3
MLR Muntele Rosu 82.46 344⇓ *i*P **P** **12 09 43.5 +0.7**
MLR Muntele Rosu 82.46 344 P **P** **12 09 44.4 +1.7**
MOTA Moosalm 82.47 354⇓ *i*P **P** **12 09 43.2 +0.3**
comp=Z,28nm,1.2s,mb5.1
WTTA Wattenberg 82.52 354⇓ *i*P **P** **12 09 42.4 -0.6**
comp=Z,34nm,1.1s,mb5.3
KBA Koelnbreinsper 82.57 353⇓ *i*P **P** **12 09 44.5 +1.2**
comp=Z,64nm,1.4s,mb5.5,SNR=9.2
KBA Koelnbreinsper 82.57 353⇓ *i*PcP **P** **12 09 44.5 +1.2**
comp=Z,64nm,1.4s,mb5.5,SNR=9.2
GNI Garni 82.60 329 *e*P **P** **12 09 46.0 +2.4**
GNI pmax pmax
comp=Z,89nm,1.6s
GNI MLR MLR
comp=Z,249nm,19.0s
GNI Garni 82.60 329 *e*P **P** **12 09 46.0 +2.4**
comp=Z,90nm,1.6s,mb5.5
GNI LR LR
comp=Z,249nm,19.0s,MS4.6
DAVA Damuels 82.61 355⇑ *i*P **P** **12 09 44.4 +0.9**
comp=Z,18nm,1.6s,mb4.8
VOIR 82.67 344⇓ *i*P **P** **12 09 45.1 +1.2**
VOIR 82.67 344 P **P** **12 09 45.4 +1.5**
SOKA Soboth 82.82 351⇓ *i*P **P** **12 09 45.3 +0.7**
comp=Z,50nm,1.5s,mb5.3
FETA Feichten 82.82 354⇓ *i*P **P** **12 09 45.2 +0.5**
comp=Z,13nm,0.9s,mb5.0
LOR Lormes 82.83 359 *e*P **P** **12 09 44.4 -0.3**
comp=Z,174nm,1.8s,mb5.5
LOR *e*MLR MLR
comp=Z,198nm,21.8s,MS4.1
LOR Lormes 82.83 359 *e*P **P** **12 09 44.4 -0.3**
LOR pmax pmax
comp=Z,87nm,1.8s,mb5.5
LOR MLR MLR
comp=Z,200nm,21.8s,MS4.5
LOR Lormes 82.83 359 *e*P **P** **12 09 44.4 -0.3**
comp=Z,87nm,1.8s,mb5.5
LOR LR LR
comp=Z,200nm,21.8s,MS4.5
HYF Humbligny 82.84 360 *e*P **P** **12 09 44.6 -0.1**
PERS Pernice 82.85 351 *i* P **P** **12 09 45.2 +0.5**
PKSM Moragy 82.88 349⇓ *i*P **P** **12 09 44.7 -0.2**
PKSM Moragy 82.88 349 ⇓P **P** **12 09 44.7 -0.2**
ABTA Abfaltersbach 82.97 353⇓ *e*P **P** **12 09 45.6 +0.2**
comp=Z,16nm,1.1s,mb4.9
TIRR Tirgusor 82.98 342⇑ *i*P **P** **12 09 45.8 +0.3**
TIRR Tirgusor 82.98 342 ⇑P **P** **12 09 45.8 +0.3**
MYKA Terra Mystica 82.99 352⇓ *e*P **P** **12 09 43.9 -1.6**
comp=Z,82nm,1.7s,mb5.5
OBKA Obir 83.03 352⇓ *i*P **P** **12 09 45.1 -0.6**
comp=Z,28nm,1.1s,mb5.2
SSF Saint Saulge 83.04 359 *e*P **P** **12 09 45.5 -0.3**
comp=Z,158nm,1.7s,mb5.5
SSF Saint Saulge 83.04 359 *e*P **P** **12 09 45.5 -0.3**
SSF pmax pmax
comp=Z,79nm,1.7s,mb5.5
SSF Saint Saulge 83.04 359 *e*P **P** **12 09 45.5 -0.3**
comp=Z,79nm,1.7s,mb5.5
BZS Buzias 83.05 347⇑ *i*P **P** **12 09 45.9 +0.1**
BZS Buzias 83.05 347 P **P** **12 09 46.0 +0.2**
AVF Avril sur Loir 83.31 359 *e*P **P** **12 09 46.7 -0.5**
comp=Z,121nm,1.4s,mb5.4
AVF Avril sur Loir 83.31 359 *e*P **P** **12 09 46.7 -0.5**
AVF pmax pmax
comp=Z,60nm,1.4s,mb5.4
AVF Avril sur Loir 83.31 359 *e*P **P** **12 09 46.7 -0.5**
comp=Z,60nm,1.4s,mb5.4
ROBS Robic 83.39 352 *i* P **P** **12 09 47.2 -0.3**
CABF La Chapelle 83.44 357 *e*P **P** **12 09 47.8 0.0**
comp=Z,100nm,1.4s,mb5.4
CABF La Chapelle 83.44 357 *e*P **P** **12 09 47.8 0.0**
CABF pmax pmax
comp=Z,50nm,1.4s,mb5.3
CABF La Chapelle 83.44 357 *e*P **P** **12 09 47.8 0.0**
comp=Z,50nm,1.4s,mb5.3
TUE Stuetta 83.45 355 *e*P **P** **12 09 48.7 +0.9**
comp=Z,41nm,1.3s,mb5.3
TUE LR LR
comp=Z,325nm,21.0s,MS4.7
SMF Signal de Mont 83.45 359 *e*P **P** **12 09 47.5 -0.4**
comp=Z,279nm,1.5s,mb5.8
SMF Signal de Mont 83.45 359 *e*P **P** **12 09 47.5 -0.4**
SMF pmax pmax
comp=Z,139nm,1.5s,mb5.8
SMF Signal de Mont 83.45 359 *e*P **P** **12 09 47.5 -0.4**
comp=Z,139nm,1.5s,mb5.8
MFF Saint Martin d 83.48 2 *e*P **P** **12 09 47.8 -0.2**
comp=Z,235nm,1.4s,mb5.7
MFF Saint Martin d 83.48 2 *e*P **P** **12 09 47.8 -0.2**
MFF pmax pmax
comp=Z,117nm,1.4s,mb5.7
MFF Saint Martin d 83.48 2 *e*P **P** **12 09 47.8 -0.2**
comp=Z,117nm,1.4s,mb5.7
BGF Bois d'Agland 83.55 360 *e*P **P** **12 09 48.0 -0.4**
comp=Z,135nm,1.4s,mb5.6
BGF Bois d'Agland 83.55 360 *e*P **P** **12 09 48.0 -0.4**
BGF pmax pmax
comp=Z,67nm,1.4s,mb5.6
BGF Bois d'Agland 83.55 360 *e*P **P** **12 09 48.0 -0.4**
comp=Z,67nm,1.4s,mb5.6
GCIS Gornji Cirnik 83.56 351 *e*P **P** **12 09 49.1 +0.7**
AGRB Hanur-Agry 83.69 330 *e*P **P** **12 09 49.4 +0.2**
PSI Prapat 83.71 267⇓ *e*P **P** **12 09 48.8 -0.9**
CLDR Caldiran 83.78 329 *e*P **P** **12 09 50.9 +1.1**
TCF Toulx Ste Croi 83.82 0 *e*P **P** **12 09 49.4 -0.4**
comp=Z,95nm,1.4s,mb5.4
TCF Toulx Ste Croi 83.82 0 *e*P **P** **12 09 49.4 -0.4**
TCF pmax pmax
comp=Z,48nm,1.4s,mb5.4
TCF Toulx Ste Croi 83.82 0 *e*P **P** **12 09 49.4 -0.4**
comp=Z,48nm,1.4s,mb5.4
JTS JuntasAbangare 83.83 81 PFAKE 12 10 00.0 +10
JTS LR LR
comp=Z,110nm,20.0s,MS4.2
EZM Erzurum 83.91 331 *e*P **P** **12 09 51.8 +1.4**
GUMT Gumushane 83.98 332 *e*P **P** **12 09 51.3 +0.6**
DIKM Dikmen 84.05 336 *e*P **P** **12 09 50.9 -0.2**
AGO Saint Agoulin 84.05 360 *e*P **P** **12 09 51.7 +0.7**
PLDF La Plantade 84.13 359 *e*P **P** **12 09 51.9 +0.5**
PYM Petit Puy Mans 84.36 360 *e*P **P** **12 09 52.9 +0.4**
KVT Kavak 84.37 335 *e*P **P** **12 09 53.2 +0.5**
FITZ Fitzroy Crossi 84.42 233 *e*P **P** **12 09 52.4 -0.7**
comp=Z,18nm,0.5s,mb5.5
FITZ *e* 12 10 03.3
FITZ Fitzroy Crossi 84.42 233 P **P** **12 09 52.6 -0.4**
comp=Z,12nm,0.5s,mb5.3,baz=26,slow=5.1,SNR=39
LPL La Plagne 84.52 357 *e*P **P** **12 09 54.0 +0.7**
LPG La Plagne 84.54 357 *e*P **P** **12 09 54.2 +0.8**
comp=Z,111nm,1.5s,mb5.5
LPG La Plagne 84.54 357 *e*P **P** **12 09 54.2 +0.8**
LPG pmax pmax
comp=Z,55nm,1.5s,mb5.5
LPG La Plagne 84.54 357 *e*P **P** **12 09 54.2 +0.8**
comp=Z,56nm,1.5s,mb5.5
RJF Les Rejaudoux 84.80 1 *e*P **P** **12 09 53.9 -0.9**
comp=Z,104nm,1.4s,mb5.5
RJF *e*MLR MLR
comp=Z,231nm,20.8s,MS4.2
RJF Les Rejaudoux 84.80 1 *e*P **P** **12 09 53.9 -0.9**
RJF pmax pmax
comp=Z,52nm,1.4s,mb5.5
RJF MLR MLR
comp=Z,230nm,20.8s,MS4.5
RJF Les Rejaudoux 84.80 1 *e*P **P** **12 09 53.9 -0.9**
comp=Z,52nm,1.4s,mb5.5
RJF LR LR
comp=Z,230nm,20.8s,MS4.5
ARMA Armidale 84.86 206 *e*P **P** **12 09 56.0 +1.0**
LBL Lubilhac 84.87 359 *e*P **P** **12 09 54.8 -0.3**
TOS Tosya 84.95 337 *e*P **P** **12 09 57.1 +1.5**
BNI Bardonecchia 84.98 357 PFAKE 12 10 10.0 +14
BNI LR LR
comp=Z,449nm,21.0s,MS4.8
SAFT Safranbolu 85.09 338 *e*P **P** **12 09 57.0 +0.7**
ORIF Oris-en-Rattie 85.14 358 *e*P **P** **12 09 56.9 +0.4**
comp=Z,112nm,1.6s,mb5.5
ORIF *e*MLR MLR
comp=Z,162nm,22.8s,MS4.1
ORIF Oris-en-Rattie 85.14 358 *e*P **P** **12 09 56.9 +0.4**
ORIF pmax pmax
comp=Z,56nm,1.6s,mb5.4
ORIF Oris-en-Rattie 85.14 358 *e*P **P** **12 09 56.9 +0.4**
comp=Z,56nm,1.6s,mb5.4
LFF La Frestale 85.16 1 *e*P **P** **12 09 56.3 -0.3**
comp=Z,156nm,1.4s,mb5.7
LFF La Frestale 85.16 1 *e*P **P** **12 09 56.3 -0.3**
LFF pmax pmax
comp=Z,78nm,1.4s,mb5.7
LFF La Frestale 85.16 1 *e*P **P** **12 09 56.3 -0.3**
comp=Z,78nm,1.4s,mb5.7
CAF Calviac 85.18 0 *e*P **P** **12 09 56.3 -0.4**
comp=Z,96nm,1.4s,mb5.5
CAF Calviac 85.18 0 *e*P **P** **12 09 56.3 -0.4**
CAF pmax pmax
comp=Z,48nm,1.4s,mb5.4
CAF Calviac 85.18 0 *e*P **P** **12 09 56.3 -0.4**
comp=Z,48nm,1.4s,mb5.4
SVSK Karacayir 85.19 334 *e*P **P** **12 09 57.6 +0.7**
ASAR Alice Springs 85.22 224 P **P** **12 09 56.0 -0.9**
comp=Z,4.7nm,0.7s,mb4.7,baz=23,slow=5.8,SNR=76
ASAR Alice Springs 85.22 224 P **P** **12 09 56.1 -0.9**
ASAR pmax pmax
comp=Z,5.0nm,0.7s
VIVF Saint-Julien-l 85.23 358 *e*P **P** **12 09 56.8 -0.1**
comp=Z,85nm,1.4s,mb5.4
VIVF Saint-Julien-l 85.23 358 *e*P **P** **12 09 56.8 -0.1**
VIVF pmax pmax
comp=Z,43nm,1.4s,mb5.4
VIVF Saint-Julien-l 85.23 358 *e*P **P** **12 09 56.8 -0.1**
comp=Z,43nm,1.4s,mb5.4
MBDF Montbardon 85.31 357 *e*P **P** **12 09 57.7 +0.4**
comp=Z,54nm,1.2s,mb5.2
MBDF Montbardon 85.31 357 *e*P **P** **12 09 57.7 +0.4**
MBDF pmax pmax
comp=Z,27nm,1.2s,mb5.2
MBDF Montbardon 85.31 357 *e*P **P** **12 09 57.7 +0.4**
comp=Z,27nm,1.2s,mb5.2
HYB Hyderabad 85.35 292 *i* P **P** **12 09 56.5 -1.5**
PTK Pertek 85.45 332 *e*P **P** **12 09 59.5 +1.3**
CANT Cankiri 85.45 337 *e*P **P** **12 09 58.9 +0.8**
CORM Corum 85.59 336 *e*P **P** **12 09 58.4 -0.4**
VLC Villacollemand 85.69 354 PFAKE 12 10 10.0 +11
VLC LR LR
comp=Z,354nm,20.0s,MS4.8
SVRC Sivrice-ELAZID 85.94 332 *e*P **P** **12 10 01.8 +1.1**
LASF Ste Croix 86.02 359 *e*P **P** **12 10 00.4 -0.5**
comp=Z,22nm,0.8s,mb5.2
MALT Malatya 86.27 332 *e*P **P** **12 10 00.3 -1.9**
MALT Malatya 86.27 332⇓ *i*P **P** **12 10 00.4 -1.8**
MALT Malatya 86.27 332 ⇓P **P** **12 10 00.4 -1.8**
MALT LR LR
comp=Z,177nm,21.0s,MS4.4
BR131 Keskin Array S 86.28 336 *e*P **P** **12 10 02.5 +0.3**
comp=Z,0.1nm,0.2s,mb3.7
ANTO Ankara 86.36 337 PFAKE 12 10 10.0 +7.4
ANTO LR LR
comp=Z,292nm,22.0s,MS4.6
GULT Gulveren 86.37 339 *e*P **P** **12 10 01.8 -0.9**
FRF La Foret Royal 86.47 357 *e*P **P** **12 10 02.5 -0.6**
BNN Bunyan 86.51 334 *e*P **P** **12 10 03.2 -0.2**
ADVT Abdulvahap 86.55 339 *e*P **P** **12 10 03.6 +0.1**
KAMT Kaman 86.59 336 *e*P **P** **12 10 04.1 +0.3**
LMR La Mourre 86.71 357 *e*P **P** **12 10 03.8 -0.5**
MTLF Montolieu 86.77 0 *e*P **P** **12 10 03.9 -0.7**
comp=Z,7.5nm,0.8s,mb4.7
MTLF Montolieu 86.77 0 *e*P **P** **12 10 03.9 -0.7**
MTLF pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
MTLF Montolieu 86.77 0 *e*P **P** **12 10 03.9 -0.7**
comp=Z,3.8nm,0.8s,mb4.7
SJPF Ste Jean 86.94 3 *e*P **P** **12 10 05.4 0.0**
ETSF Etsaut 87.17 2 *e*P **P** **12 10 06.0 -0.5**
comp=Z,40nm,1.3s,mb5.2
ETSF Etsaut 87.17 2 *e*P **P** **12 10 06.0 -0.5**
ETSF pmax pmax
comp=Z,20nm,1.3s,mb5.2
ETSF Etsaut 87.17 2 *e*P **P** **12 10 06.0 -0.5**
comp=Z,20nm,1.3s,mb5.2
POO Poona 87.24 296 *ex* **P** **12 10 05.5 -1.8**
TIR Tirane 87.49 347 PFAKE 12 10 20.0 +12
TIR LR LR
comp=Z,254nm,20.0s,MS4.6
BCIP Isla Barro Col 87.92 78 PFAKE 12 10 20.0 +9.4
BCIP LR LR
comp=Z,151nm,20.0s,MS4.4

ISP	**Isparta**	**88.84**	**338**	PFAKE		12 10 30.0	+15
ISP				LR	LR		
	comp=Z,232nm,21.0s,MS4.6						
MTE	**Manteigas**	**89.28**	**8**	PFAKE		12 10 30.0	+13
MTE				LR	LR		
	comp=Z,318nm,19.0s,MS4.8						
CUC	**Castrocucco**	**89.35**	**350**	PFAKE		12 10 30.0	+13
CUC				LR	LR		
	comp=Z,262nm,22.0s,MS4.6						
STKA	**Stephens Creek**	**89.44**	**214**	*eP*	**P**	**12 10 16.8**	**-0.3**
	comp=Z,27nm,1.6s,mb5.3						
STKA				*e*		12 10 27.9	
STKA				*e*		12 11 19.5	
STKA	**Stephens Creek**	**89.44**	**214**	P	**P**	**12 10 16.6**	**-0.5**
	comp=Z,15nm,0.7s,mb5.4,baz=24,slow=3.4,SNR=29						
MTP	**Monte Pirata**	**89.53**	**62**	*eP*	**P**	**12 10 17.8**	**-0.3**
ESDC	**Sonseca Array**	**90.25**	**5**	P	**P**	**12 10 20.3**	**-0.9**
	comp=Z,4.2nm,0.6s,mb4.9,baz=356,slow=4.4,SNR=21						
ESDC				LR	LR	12 52 32.6	
	comp=Z,71nm,18.7s,MS4.1,baz=20,slow=37						
ESLA	**Sonseca Array**	**90.25**	**5**	PFAKE		12 10 30.0	+8.8
ESLA				LR	LR		
	comp=Z,1μm,19.0s,MS5.3						
PAB	**San Pablo**	**90.36**	**5**	PFAKE		12 10 30.0	+8.3
PAB				LR	LR		
	comp=Z,247nm,20.0s,MS4.6						
MIB	**Mutribah**	**90.91**	**322**	*eP*	**P**	**12 10 23.4**	**-1.0**
	baz=322						
MIB				AMb	AMB	12 10 24.9	
	comp=Z,20nm,0.9s,mb5.5,baz=322						
CEL	**Celeste**	**91.05**	**349**	PFAKE		12 10 40.0	+15
CEL				LR	LR		
	comp=Z,46μm,19.0s						
SANT	**Santorini**	**91.36**	**342**	PFAKE		12 10 40.0	+14
SANT				LR	LR		
	comp=Z,133nm,20.0s,MS4.4						
NAY	**Al-Naaiem**	**91.44**	**322**	*eP*	**P**	**12 10 25.6**	**-1.2**
	baz=322						
NAY				AMb	AMB	12 10 27.5	
	comp=Z,14nm,1.4s,mb5.1,baz=322						
SNZO	**South Karori**	**91.46**	**186**	PFAKE		12 10 40.0	+14
SNZO				LR	LR		
	comp=Z,576nm,20.0s,MS5.0						
RDF	**Al-Radifah**	**91.60**	**322**	*eP*	**P**	**12 10 26.2**	**-1.4**
	baz=322						
RDF				AMb	AMB	12 10 30.8	
	comp=Z,42nm,1.4s,mb5.6,baz=322						
SFS	**San Fernando**	**93.30**	**7**	PFAKE		12 10 50.0	+15
SFS				LR	LR		
	comp=Z,321nm,20.0s,MS4.8						
SDV	**Santo Domingo**	**93.83**	**71**	PFAKE		12 10 50.0	+12
SDV				LR	LR		
	comp=Z,74nm,22.0s,MS4.1						
RPZ	**Rata Peaks**	**94.14**	**188**	PKKPbc	PKKPbc	12 27 32.6	-7.5
	comp=Z,15nm,0.8s,baz=230,slow=3.7,SNR=8.7						
RPZ				LR	LR	12 45 23.3	
	comp=Z,718nm,19.4s,MS5.1,baz=29,slow=31						
KEST	**Kesra**	**94.15**	**354**	P	**P**	**12 10 38.8**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.5,baz=236,slow=1.8,SNR=3.6						
OTAV	**Otavalo**	**95.64**	**83**	PFAKE		12 11 00.0	+14
OTAV				LR	LR		
	comp=Z,155nm,21.0s,MS4.5						
RTC	**Rabat Centre**	**95.70**	**8**	PFAKE		12 11 00.0	+14
RTC				LR	LR		
	comp=Z,201nm,21.0s,MS4.6						
COCO	**West Island**	**96.48**	**259**	PFAKE		12 11 00.0	+10
COCO				LR	LR		
	comp=Z,647nm,19.0s,MS5.1						
GRGR	**Grenville**	**96.54**	**62**	PFAKE		12 11 00.0	+10
GRGR				LR	LR		
	comp=Z,210nm,19.0s,MS4.6						
TORD	**Torodi Ar. Bea**	**116.85**	**1**	PKP	PKPdf	12 16 03.2	-2.2
	comp=Z,0.8nm,0.5s,baz=342,slow=2.6,SNR=8.8						
TORD				PKKPbc	PKKPbc	12 26 28.9	-0.5
	comp=Z,0.8nm,0.5s,baz=159,slow=2.8,SNR=5.9						
TORD	**Torodi Ar. Bea**	**116.85**	**1**	PKP	PKPdf	12 16 03.2	-2.2
TORD				PKKPbc	PKKPbc	12 26 28.9	-0.5
KMBO	**Kilima Mbogo**	**122.80**	**317**	PKP	PKPdf	12 16 16.2	-0.7
	comp=Z,1.0nm,0.5s,baz=71,slow=18,SNR=4.7						
KMBO	**Kilima Mbogo**	**122.80**	**317**	PKP	PKPdf	12 16 16.2	-0.7
KMBO				LR	LR		
	comp=Z,173nm,20.0s,MS4.7						
DBIC	**Dimbokro**	**122.94**	**9**	PKP	PKPdf	12 16 15.9	-1.2
	comp=Z,2.1nm,0.5s,baz=352,slow=2.3,SNR=7.1						
DBIC	**Dimbokro**	**122.94**	**9**	PKP	PKPdf	12 16 15.9	-1.2
DBIC				LR	LR		
	comp=Z,161nm,21.0s,MS4.7						
BDFB	**Brasilia**	**126.80**	**68**	PKP	PKPdf	12 16 23.3	-1.1
	comp=Z,1.9nm,0.4s,baz=304,slow=7.3,SNR=2.5						
BDFB	**Brasilia**	**126.80**	**68**	PKIKP	PKPdf	12 16 23.3	-1.0
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SBA	**Scott Base**	**128.22**	**184**	PFAKE		12 16 40.0	+15
SBA				LR	LR		
	comp=Z,232nm,20.0s,MS4.9						
CASY	**Casey**	**128.38**	**209**	PFAKE		12 16 40.0	+14
CASY				LR	LR		
	comp=Z,246nm,20.0s,MS4.9						
CPUP	**Villa Florida**	**128.92**	**85**	PKP	PKPdf	12 16 26.1	-2.0
	comp=Z,0.6nm,0.5s,baz=248,slow=5.4,SNR=3.0						
CPUP	**Villa Florida**	**128.92**	**85**	PKIKP	PKPdf	12 16 26.1	-2.0
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PLCA	**Paso Flores**	**129.88**	**109**	PKP	PKPdf	12 16 28.6	-0.8
	comp=Z,3.9nm,0.7s,baz=259,slow=2.6,SNR=9.4						
PLCA	**Paso Flores**	**129.88**	**109**	PKIKP	PKPdf	12 16 28.6	-0.9
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
OPO	**Ambohidratompo**	**132.46**	**295**	PKP	PKPdf	12 16 35.1	+0.1
	comp=Z,2.6nm,0.8s,baz=63,slow=14,SNR=3.2						
MAW	**Mawson**	**146.08**	**217**	*eP*	PKPdf	12 16 58.0	-0.2
	comp=Z,6.4nm,0.4s						
MAW	**Mawson**	**146.08**	**217**	PKPbc	PKPbc	12 16 57.8	-1.4
	comp=Z,10nm,0.5s,baz=94,slow=3.8,SNR=85						
MAW	**Mawson**	**146.08**	**217**	*eP*	PKPdf	12 16 58.0	-0.2
MAW				LR	LR		
	comp=Z,375nm,19.0s,MS5.2						
TSUM	**Tsumeb**	**146.73**	**333**	PKPbc	PKPbc	12 17 02.2	-0.3
	comp=Z,10nm,1.0s,baz=57,slow=17,SNR=8.2						
LBTB	**Lobatse**	**149.07**	**316**	*e*PKP2	PKPbc	12 17 08.7	0.0
BOSA	**Boshof**	**152.31**	**313**	PKPbc	PKPbc	12 17 15.8	-0.4
	comp=Z,14nm,0.6s,baz=17,slow=2.5,SNR=59						
BOSA				PKPab	PKPab	12 17 27.1	+0.8
	comp=Z,8.6nm,0.6s,baz=34,slow=1.5,SNR=9.4						
BOSA	**Boshof**	**152.31**	**313**	PKIKP	PKPbc	12 17 15.8	-0.4
BOSA						12 17 27.1	
BOSA				pmax	pmax		
	comp=Z,14nm,0.6s						
BOSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HOPE	**Hope Point**	**156.06**	**115**	PFAKE		12 17 20.0	+6.1
HOPE				LR	LR		
	comp=Z,5.0nm,20.0s,MS3.3						

*ISCJB **19** 12:04:11.7±0.8, 88S±02×1103E±02, h33km, mb4.5/10, Error ellipse: s-maj=31.3km s-min=12.7km az=43.0*
*IDC **19** 12:04:15.0±9.5, 891S×11028E, h50km±89km, mb4.1/7, mb1 4.1/8, mb1mx3.9/17, mbtmp4.1/8, ML3.7/1, Error ellipse: s-maj=62.3km s-min=21.0km az=61.0*
*DJA **19** 12:04:23, 702S×11138E, h168km, MLv4.4/4*
ISC 19 12:04:13.9±0.8, 89S±02×1103E±02, h35km, n11, σ0.9 90/11, mb4.5/10, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**17.54**	**123**	P	**Pn**	**12 08 17.2**	**+1.5**
	0.2nm,0.3s,baz=274,slow=7.4,SNR=9.6						
WRA	**Warramunga Arr**	**25.75**	**118**	P	**P**	**12 09 41.1**	**-0.3**
	1.4nm,0.5s,mb3.7,baz=288,slow=12,SNR=35						
ASAR	**Alice Springs**	**26.99**	**126**	P	**P**	**12 09 51.3**	**-1.3**
	1.1nm,0.5s,mb3.6,baz=306,slow=9.7,SNR=28						
ASAR				PcP	PcP	12 13 13.5	-0.3
	0.5nm,0.6s,baz=312,slow=1.3,SNR=5.1						
KSRS	**Korea Array**	**48.94**	**19**	P	**P**	**12 12 58.0**	**+1.3**
	3.6nm,0.9s,mb4.4,baz=196,slow=9.2,SNR=7.4						
MJAR	**Matsushiro Arr**	**52.23**	**29**	P	**P**	**12 13 19.9**	**-1.6**
	1.4nm,0.7s,mb4.0,baz=212,slow=8.2,SNR=7.2						
SONM	**Songino Array**	**56.53**	**357**	P	**P**	**12 13 53.1**	**+0.5**
	4.7nm,0.7s,mb4.7,baz=178,slow=8.0,SNR=39						
MKAR	**Makanchi Array**	**60.75**	**338**	P	**P**	**12 14 22.0**	**0.0**
	7.9nm,0.5s,mb5.1,baz=147,slow=7.5,SNR=35						
ZALV	**Zalesovo Beam**	**66.16**	**344**	P	**P**	**12 14 57.1**	**-0.4**
	5.4nm,0.4s,mb5.0,baz=153,slow=4.3,SNR=15						
UMR	**Umm Al-Rimmam**	**71.22**	**305**	*eP*	**P**	**12 15 30.4**	**+0.7**
	baz=311						
UMR				AMb	AMB	12 15 32.9	
	comp=Z,14nm,0.4s,mb5.2,baz=311						
NAY	**Al-Naaiem**	**71.49**	**305**	*eP*	**P**	**12 15 31.1**	**-0.2**
	baz=310						
NAY				AMb	AMB	12 15 32.6	
	comp=Z,5.0nm,1.5s,mb4.2,baz=310						
RST	**Umm Al-Ruwaisa**	**71.78**	**305**	*eP*	**P**	**12 15 32.9**	**-0.2**
	baz=310						
RST				AMb	AMB	12 15 36.2	
	comp=Z,15nm,0.7s,mb5.0,baz=310						

*IDC **19** 12:20:23.4±0.5, 4665S×11887E, h0km, mb4.7/14, mb1 4.9/15, mb1mx4.8/18, mbtmp4.8/15, ML3.7/1, MS4.1/8, Ms1 4.1/8, ms1mx3.9/21, Error ellipse: s-maj=26.6km s-min=13.5km az=115.0*
*ISCJB **19** 12:20:23.6±0.3, 4656S±004×11872E±009, h10km, mb4.8/32, MS4.2/13, Error ellipse: s-maj=9.5km s-min=5.6km az=16.9*
*MOS **19** 12:20:23.8±1.3, 4648S×11874E, h10km, mb5.2/9, Error ellipse: s-maj=19.1km s-min=9.1km az=76.1*
*NEIC **19** 12:20:24.7±0.2, 4656S×11867E, h10km, mb5.0/14, Error ellipse: s-maj=8.8km s-min=5.8km az=107.0*
*GCMT **19** 12:20:24.7±0.4, 4639S×11882E, h29km±1km, MW5.0/48, Moment Tensor Solution. s26,c29; s48,c66; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.73±.24; Mθθ-1.63±.20; Mφφ3.36±.19; Mrθ1.70±.30; Mθφ-2.11±.16; Mφr-0.47±.28; Best double couple: M0 3.95500×10^16 NP1:φs303.00000°,δ51.00000°,λ-143.00000°. Principal axes: T 4.3160, Plg10.0000°, Azm68.0000°; N -0.7210, Plg49.0000°, Azm326.0000°; P -3.5940, Plg40.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **19** 12:20:24.7, 4660S×11870E, h10km, mB5.2, mb4.9, Ms4.8, Msz4.3*
*DJA **19** 12:20:24, 4669S×11920E, h0km, mb5.0/8*
ISC 19 12:20:25.4±0.3, 4658S±004×11875E±010, h10km, (h12km±1.0km:pP-P), n201, σ1.9 24/77, mb4.8/32, MS4.2/13, 35C-36D, South of Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**13.68**	**355**	Pn	**Pn**	**12 23 38.7**	**-0.6**
	17nm,0.3s,baz=168,slow=12,SNR=133						
NWAO				LR	LR	12 27 43.8	
	comp=Z,1μm,18.9s,baz=233,slow=32						
NWAO	**Narrogin (SRO)**	**13.68**	**355**	*e*P	**Pn**	**12 23 38.6**	**-0.7**
NWAO				pmax	pmax		
	comp=Z,66nm,0.6s						
NWAO	**Narrogin (SRO)**	**13.68**	**355**	*e*Pn	**Pn**	**12 23 38.6**	**-0.8**
	comp=Z,66nm,0.6s						
NWAO				*e*Sn	**Sn**	**12 25 58.1**	**-13**
MUN	**Mundaring**	**14.71**	**351**	*e*P	**Pn**	**12 23 50.5**	**-2.9**
MUN				*i* pP	pP	12 23 52.9	-9.5
MUN				*e*S	**Sn**	**12 26 21.0**	**-15**
KLBR	**Kellerberrin**	**14.98**	**357**	*e*P	**Pn**	**12 23 56.0**	**-1.1**
	comp=Z,18nm,0.7s						
KLBR				*e*S	**Sn**	**12 26 41.3**	**-1.8**
FORT	**Forrest**	**17.35**	**28**	*e*P	**Pn**	**12 24 28.4**	**+0.9**
	comp=Z,13nm,0.7s						
FORT				*e*pP	pP	12 24 31.1	-0.5
FORT				*e*		12 25 35.0	
FORT	**Forrest**	**17.35**	**28**	*e*Pn	**Pn**	**12 24 27.5**	**0.0**
	comp=Z,4.9nm,0.8s						
FORT				*e*pP	pP	12 24 31.1	-0.5
FORT				*e*		12 25 35.0	
CASY	**Casey**	**20.23**	**190**	*i*P	**P**	**12 24 59.1**	**-1.1**
CASY				*e*pP		12 25 03.7	
CASY				*e*		12 25 08.4	
CASY	**Casey**	**20.23**	**190**	*e*P	**P**	**12 24 59.6**	**-0.7**
CASY				*e*pP		12 25 03.7	
CASY				*e*		12 25 08.4	
TAU	**Tasmania Unive**	**20.57**	**90**	*e*P	**P**	**12 25 03.1**	**-1.0**
TAU				pmax	pmax		
	comp=Z,134nm,1.5s						
TAU	**Tasmania Unive**	**20.57**	**90**	*e*P	**P**	**12 25 03.1**	**-1.0**
	comp=Z,134nm,1.5s						
TOO	**Toolangi**	**21.71**	**75**	*e*P	**P**	**12 25 18.0**	**+1.5**
TOO				*e*pP		12 25 21.8	
TOO				*e*S	**S**	**12 29 21.9**	**+5.3**
STKA	**Stephens Creek**	**22.88**	**58**	*e*P	**P**	**12 25 28.5**	**-0.5**
	comp=Z,14nm,0.7s,mb4.5						
STKA				*e*S	**S**	**12 29 34.2**	**-4.5**
STKA	**Stephens Creek**	**22.88**	**58**	P	**P**	**12 25 28.5**	**-0.5**
	comp=Z,16nm,0.7s,mb4.6,baz=201,slow=9.3,SNR=23						
STKA				LR	LR	12 33 30.3	
	comp=Z,364nm,19.4s,MS3.8,baz=324,slow=34						
STKA	**Stephens Creek**	**22.88**	**58**	*e*P	**P**	**12 25 28.5**	**-0.5**
	comp=Z,105nm,1.9s,mb4.9						
STKA				*e*S	**S**	**12 29 34.2**	**-4.5**
MIR	**Mirnyy**	**24.19**	**205**	*i*P	**P**	**12 25 41.0**	**-0.5**
MIR				*i*		12 26 11.0	
MIR				pmax	pmax		
	comp=Z,200nm,0.8s,mb5.6						
CAN	**Canberra**	**25.31**	**74**	*e*P	**P**	**12 25 52.4**	**+0.4**
MBWA	**Marble Bar**	**25.37**	**2**	*e*P	**P**	**12 25 53.6**	**+1.0**
	comp=Z,35nm,1.4s,mb4.7						
CNB	**Canberra Magne**	**25.56**	**75**	*e*P	**P**	**12 25 54.7**	**+0.4**
ASAR	**Alice Springs**	**25.91**	**33**	P	**P**	**12 25 56.0**	**-1.5**
	comp=Z,31nm,0.9s,mb4.9,baz=205,slow=9.0,SNR=159						
FITZ	**Fitzroy Crossi**	**28.96**	**14**	*e*P	**P**	**12 26 24.3**	**-0.6**
	comp=Z,6.4nm,0.6s,mb4.5						
FITZ				*e*pP	pP	12 26 27.1	-0.8
FITZ	**Fitzroy Crossi**	**28.96**	**14**	P	**P**	**12 26 24.1**	**-0.7**
	comp=Z,12nm,1.0s,mb4.5,baz=194,slow=12,SNR=13						
FITZ				LR	LR	12 37 08.6	
	comp=Z,441nm,20.2s,MS4.1,baz=148,slow=35						
FITZ	**Fitzroy Crossi**	**28.96**	**14**	*e*P	**P**	**12 26 24.7**	**-0.2**
	comp=Z,12nm,0.6s,mb4.8						
FITZ				*e*pP	pP	12 26 27.1	-0.8
WRA	**Warramunga Arr**	**29.48**	**31**	P	**P**	**12 26 27.9**	**-1.6**
	comp=Z,21nm,0.9s,mb4.9,baz=202,slow=8.6,SNR=72						
WRA				LR	LR	12 37 35.4	
	comp=Z,479nm,19.9s,MS4.1,baz=230,slow=35						
WB2	**Warramunga Arr**	**29.48**	**31**	*e*P	**P**	**12 26 27.7**	**-1.8**
WB2				*e*pP	pP	12 26 30.8	-1.8
WB2				*e*		12 26 36.3	
WRAB	**Tennant Creek**	**29.49**	**31**	*e*P	**P**	**12 26 28.3**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
WRAB	**Tennant Creek**	**29.49**	**31**	*e*P	**P**	**12 26 28.3**	**-1.3**
	comp=Z,28nm,1.0s,mb5.0						
CTA	**Charters Tower**	**34.69**	**50**	*e*P	**P**	**12 27 14.7**	**-0.5**
	comp=Z,10nm,0.9s,mb4.8						
CTA	**Charters Tower**	**34.69**	**50**	P	**P**	**12 27 14.4**	**-0.8**
	comp=Z,13nm,0.9s,mb4.9,baz=214,slow=9.3,SNR=9.6						
CTA	**Charters Tower**	**34.69**	**50**	*e*P	**P**	**12 27 14.7**	**-0.5**
CTA				pmax	pmax		
	comp=Z,10,0nm,0.9s						
CTAO	**Charters Tower**	**34.69**	**50**	*e*P	**P**	**12 27 14.7**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
CTAO	**Charters Tower**	**34.69**	**50**	*e*P	**P**	**12 27 14.7**	**-0.5**
	comp=Z,22nm,1.3s,mb4.9						
MAW	**Mawson**	**35.21**	**213**	*i*P	**P**	**12 27 18.9**	**-0.4**
	comp=Z,11nm,0.6s,mb5.0						
MAW	**Mawson**	**35.21**	**213**	P	**P**	**12 27 19.1**	**-0.1**
	comp=Z,12nm,0.6s,mb5.0,baz=81,slow=9.3,SNR=67						
MAW				LR	LR	12 39 39.9	
	comp=Z,316nm,18.1s,MS4.1,baz=290,slow=33						
MAW	**Mawson**	**35.21**	**213**	*e*P	**P**	**12 27 19.3**	**0.0**
MAW				pmax	pmax		
	comp=Z,22nm,0.6s						
MAW	**Mawson**	**35.21**	**213**	*e*P	**P**	**12 27 19.3**	**0.0**
	comp=Z,22nm,0.6s,mb5.3						
SBA	**Scott Base**	**36.36**	**165**	*e*P	**P**	**12 27 29.5**	**+0.5**
SBA				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.1						
SBA	**Scott Base**	**36.36**	**165**	*e*P	**P**	**12 27 29.5**	**+0.5**
	comp=Z,35nm,1.4s,mb5.1						
COEN	**Coen**	**38.44**	**40**	*e*P	**P**	**12 27 47.1**	**-0.1**
	comp=Z,10nm,0.9s,mb4.5						
KAPI	**Kappang**	**41.41**	**2**	P	**P**	**12 28 13.4**	**+1.5**
	comp=Z,6.5nm,0.7s,mb4.3,baz=202,slow=5.9,SNR=4.5						
QSPA	**South Pole Qui**	**43.55**	**180**	P	**P**	**12 28 28.5**	**-0.2**
	comp=Z,12nm,0.7s,mb4.8,baz=324,slow=3.4,SNR=68						
QSPA				PcP	PcP	12 30 15.1	-1.0
	comp=Z,5.0nm,0.8s,baz=278,slow=5.5,SNR=3.2						
SYO	**Syowa Base**	**43.77**	**211**	*e*P	**P**	**12 28 28.4**	**-2.1**
SYO	**Syowa Base**	**43.77**	**211**	*e*pP	pP	12 28 33.2	-0.4
PMG	**Port Moresby**	**44.26**	**42**	*e*P	**P**	**12 28 35.5**	**+0.5**
KSM	**Kuching**	**48.42**	**349**	*e*P	**P**	**12 29 10.2**	**+2.5**
HNR	**Honiara**	**50.95**	**57**	LR	LR	12 49 48.1	
	comp=Z,170nm,19.3s,MS4.1,baz=229,slow=35						
NVL	**N'lazarevskaya**	**51.94**	**204**	P	**P**	**12 29 31.2**	**-2.5**
NVL				*e*		12 29 38.4	
NVL				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.3						
MAIT	**Maitri**	**51.96**	**204**	*e*P	**P**	**12 29 33.7**	**-0.2**
PSI	**Prapat**	**52.19**	**335**	*e*P	**P**	**12 29 36.6**	**+0.3**
SNAA	**Sanae**	**55.08**	**199**	*e*P	**P**	**12 29 56.5**	**-0.3**
SNAA				pmax	pmax		
	comp=Z,83nm,1.0s						
SNAA	**Sanae**	**55.08**	**199**	*e*P	**P**	**12 29 56.5**	**-0.3**
	comp=Z,83nm,1.0s,mb5.7						
CMAR	**Chiang Mai Arr**	**67.16**	**340**	P	**P**	**12 31 20.0**	**+0.8**
	comp=Z,8.2nm,1.1s,mb4.7,baz=190,slow=6.0,SNR=19						
BOSA	**Boshof**	**72.06**	**247**	P	**P**	**12 31 49.1**	**-0.5**
	comp=Z,6.8nm,0.8s,mb4.7,baz=150,slow=7.9,SNR=7.1						
SUR	**Sutherland**	**72.23**	**242**	*e*P	**P**	**12 31 51.0**	**+0.5**
	comp=Z,33nm,1.7s,mb5.0						
KMI	**Kunming**	**72.82**	**345**	P	**P**	**12 31 57.8**	**+3.9**
KMI				AP	pP	12 32 01.3	+4.1
KMI				PP	PP	12 34 43.3	+6.9
KMI				S	S	12 41 24.5	+4.8
KMI				XS	sS	12 41 30.4	+5.3
KMI				AMB	AMB		
	comp=Z,12nm,1.3s,mb4.7						
KMI				AMB	AMB		
	comp=Z,91nm,5.4s						
KMI				LR	LR		
	comp=N,182nm,21.9s,MS4.5						
KMI				LR	LR		
	comp=E,175nm,21.9s,MS4.5						
KMI				LR	LR		
	comp=Z,183nm,21.9s,MS4.3						
GYA	**Guiyang**	**73.51**	**349**	*i*P	**P**	**12 32 02.4**	**+4.4**
GYA				PCP	PcP	12 32 17.6	+3.6
GYA				PP	PP	12 34 48.9	+6.6
GYA				S	S	12 41 32.5	+5.0
GYA				SKS		12 42 04.8	
GYA				SS	SS	12 46 18.5	+7.5
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,290nm,5.0s						
GYA				LR	LR		
	comp=N,480nm,19.6s,MS4.9						
GYA				LR	LR		
	comp=E,360nm,18.9s,MS4.9						
GYA				LR	LR		
	comp=Z,400nm,19.7s,MS4.7						
CD2	**Chengdu**	**78.31**	**347**	*i*P	**P**	**12 32 27.9**	**+2.6**
CD2				AP	pP	12 32 32.6	+4.0
CD2				PP	PP	12 35 28.3	+5.6
CD2				S	S	12 42 23.9	+3.6
CD2				XS	sS	12 42 31.9	+6.2
CD2				SS	SS	12 47 31.4	+7.8
CD2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
CD2				AMB	AMB		
	comp=Z,40nm,6.8s						
CD2				LR	LR		
	comp=N,320nm,20.2s						
CD2				LR	LR		
	comp=Z,240nm,14.2s						
LSZ	**Lusaka**	**79.45**	**259**	*e*P	**P**	**12 32 32.5**	**+0.4**
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
LSZ	**Lusaka**	**79.45**	**259**	*e*P	**P**	**12 32 32.5**	**+0.4**
	comp=Z,9.5nm,0.9s,mb4.7						
LSA	**Lhasa**	**79.92**	**336**	P	**P**	**12 32 33.3**	**-0.8**
LSA	**Lhasa**	**79.92**	**336**	*e*P	**P**	**12 32 33.7**	**-0.4**
LSA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
LSA	**Lhasa**	**79.92**	**336**	*e*P	**P**	**12 32 33.7**	**-0.4**
	comp=Z,11nm,0.8s,mb4.8						
LZH	**Lanzhou**	**83.37**	**348**	*e*P	**P**	**12 32 56.0**	**+3.8**
LZH				AP	pP	12 33 00.0	+4.5
LZH				XP	sP	12 33 01.8	+5.1
LZH				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,110nm,4.5s						
KSRS	**Korea Array**	**84.06**	**7**	P	**P**	**12 32 57.5**	**+1.9**
	comp=Z,4.0nm,1.1s,mb4.5,baz=191,slow=5.6,SNR=6.8						
KSRS				LR	LR	13 13 52.3	
	comp=Z,59nm,18.1s,MS4.0,baz=200,slow=38						
MJAR	**Matsushiro Arr**	**84.57**	**16**	P	**P**	**12 32 59.8**	**+1.5**
	comp=Z,6.5nm,1.1s,mb4.7,baz=196,slow=7.3,SNR=11						
GTA	**Gaotai**	**87.26**	**345**	*e*P	**P**	**12 33 11.3**	**-0.3**
GTA				SKS		12 43 36.6	
GTA				S	S	12 43 51.1	-0.1
GTA				XS	sS	12 43 58.8	+2.1
GTA				SS	SS	12 49 37.9	+1.5
GTA				AMB	AMB		
	comp=Z,3.0nm,1.3s,mb4.4						
GTA				AMB	AMB		
	comp=Z,160nm,7.8s						
GTA				LR	LR		
	comp=N,132nm,17.4s,MS4.5						
GTA				LR	LR		
	comp=E,108nm,17.4s,MS4.5						
GTA				LR	LR		
	comp=Z,104nm,18.6s,MS4.3						
HHC	**Hu-ho-hao-te**	**87.28**	**355**	*e*P	**P**	**12 33 14.1**	**+2.5**
HHC				AP	pP	12 33 17.6	+2.7
HHC				XP	sP	12 33 19.1	+3.0
HHC				PP	PP	12 36 42.3	+6.0
HHC				SKS		12 43 39.5	
HHC				S	S	12 43 53.8	+2.6
HHC				XS	sS	12 43 59.4	+2.6
HHC				SS	SS	12 49 43.5	+6.9
HHC			

ESDC	Sonseca Array	138.42	282		PKP	PKPdf	12 39 48.8	-1.7		
	comp=Z,0.9nm,0.5s,baz=79,slow=2.3,SNR=4.7									
W14A	Seligman	139.88	87	⇑	P	PKPdf	12 39 47.9	-5.4		
	baz=140									
U16A	Tuba City	141.72	87	⇓	P	PKPdf	12 39 51.8	-4.8		
	baz=142									
G11A	Walters Elk Ra	142.41	71	⇑	P	PKPdf	12 39 53.5	-4.1		
	baz=142									
DUG	Dugway	142.55	81	*e*	PKIKP	PKPdf	12 39 58.1	+0.1		
S17A	Black Ridge (B	142.71	86	⇓	P	PKPdf	12 39 54.2	-4.2		
	baz=143									
TXAR	Lajitas Array	142.90	102		PKhKP		12 39 54.4			
	comp=Z,0.9nm,0.6s,baz=196,slow=6.4,SNR=11									
HLID	Hailey	142.92	75	⇓	P	PKPdf	12 39 55.6	-2.9		
	baz=143									
HLID	Hailey	142.92	75	*e*	P	PKPdf	12 39 58.9	+0.3		
J13A	Cove Ranch, Pi	143.02	75	⇑	P	PKPdf	12 39 54.2	-4.4		
	baz=143									
L14A	Malta	143.08	78	⇑	P	PKPdf	12 39 54.1	-4.7		
	baz=143									
Q16A	Castle Valley	143.08	84	⇓	P	PKPdf	12 39 55.4	-3.5		
	baz=143									
T18A	Mexican Hat	143.09	87	⇑	P	PKPdf	12 39 54.8	-4.2		
	baz=143									
R17A	Hanksville Air	143.15	85	⇓	P	PKPdf	12 39 54.6	-4.5		
	baz=143									
F12A	Elk City	143.21	71	⇑	P	PKPdf	12 39 55.0	-4.0		
	baz=143									
TMUT	Trail Mountain	143.23	83	*e*	PKPbc	PKPdf	12 39 59.6	+0.5		
E12A	Beaver Dam Sad	143.24	70	⇑	P	PKPdf	12 39 55.0	-3.9		
	baz=143									
I13A	Wildhorse Cree	143.26	74	⇑	P	PKPdf	12 39 56.4	-2.7		
	baz=143									
MPU	Maple Canyon	143.28	82	*e*	P	PKPdf	12 39 57.4	-1.9		
HVU	Hansel Valley	143.28	78	*e*	PKIKP	PKPdf	12 39 57.3	-1.9		
S18A	Hurst Farm, Bl	143.29	86	⇓	P	PKPdf	12 39 55.0	-4.3		
	baz=143									
A11A	Hall Mountain,	143.56	66	⇑	P	PKPdf	12 39 57.5	-2.0		
	baz=144									
SRU	San Rafael	143.61	84	⇓	P	PKPdf	12 39 56.4	-3.5		
	baz=144,SNR=18									
SRU	San Rafael	143.61	84	*e*	PKPdf	PKPdf	12 39 57.1	-2.7		
G13A	Cobalt	143.63	73	⇓	P	PKPdf	12 39 56.8	-2.9		
	baz=144									
P17A	Butcher Ranch,	143.63	83	⇓	P	PKPdf	12 39 57.4	-2.5		
	baz=144,SNR=8.5									
L15A	Malad City	143.64	78	⇑	P	PKPdf	12 39 56.8	-3.0		
	baz=144,SNR=7.8									
JLU	Jordanelle	143.66	81	*e*	PKPdf	PKPdf	12 39 58.1	-1.8		
R18A	Canyonlands Na	143.70	85	⇓	P	PKPdf	12 39 57.1	-2.9		
	baz=144,SNR=13									
I14A	Mackay	143.71	75	⇓	P	PKPdf	12 39 57.4	-2.4		
	baz=144,SNR=11									
BNM	Barren Site	143.75	94	*e*	PKPdf	PKPdf	12 39 57.8	-2.5		
N16A	Rees Ranch, Co	143.80	80	⇑	P	PKPdf	12 39 57.6	-2.6		
	baz=144									
F13A	Darby	143.82	71	⇑	P	PKPdf	12 39 57.0	-3.0		
	baz=144,SNR=11									
K15A	Arbon	143.83	77	⇑	P	PKPdf	12 39 57.5	-2.6		
	baz=144,SNR=7.3									
Q18A	Rafter H Ranch	143.88	84	⇓	P	PKPdf	12 39 57.3	-3.0		
	baz=144,SNR=20									
S19A	Harvey Farm, M	143.91	87	⇑	P	PKPdf	12 39 58.0	-2.5		
	baz=144,SNR=11									
O17A	Robinson Place	143.97	82	⇑	P	PKPdf	12 39 58.5	-2.0		
	baz=144,SNR=38									
HWUT	Hardware Ranch	144.03	79	*e*	PKPdf	PKPdf	12 39 58.4	-2.1		
H14A	Leadore	144.03	74	⇑	P	PKPdf	12 39 58.6	-1.8		
	baz=144,SNR=16									
P18A	Preston Nutter	144.04	83	⇓	P	PKPdf	12 39 58.6	-2.0		
	baz=144,SNR=18									
MVCO	Mesa Verde	144.08	88	⇓	P	PKPdf	12 39 59.0	-1.7		
	baz=144									
MVCO	Mesa Verde	144.08	88	*e*	PKPdf	PKPdf	12 39 59.6	-1.1		
J15A	Blackfoot	144.18	76	⇓	P	PKPdf	12 39 59.0	-1.7		
	baz=144,SNR=16									
G14A	Jackson	144.20	73	⇑	P	PKPdf	12 39 58.7	-2.0		
	baz=144,SNR=9.6									
N17A	Moffit Pass	144.24	81	⇑	P	PKPdf	12 39 59.2	-1.7		
	baz=144,SNR=6.6									
L16A	Fish Haven	144.29	79	⇑	P	PKPdf	12 39 59.4	-1.5		
	baz=144									
ANMO	Albuquerque	144.30	93	*e*	PKIKP	PKPdf	12 39 59.7	-1.5		
C13A	Hot Springs	144.30	68	⇓	P	PKPdf	12 39 59.6	-1.2		
	baz=144									
I15A	Monteview	144.38	75	⇑	P	PKPdf	12 39 59.6	-1.5		
	baz=144									
Q19A	Hogan Spring (	144.41	85	⇑	P	PKPdf	12 39 59.2	-2.1		
	baz=144,SNR=20									
MCMT	McKenzie Canyo	144.45	74	*e*	PKPdf	PKPdf	12 40 00.1	-1.1		
O18A	Roosevelt	144.50	82	⇓	P	PKPdf	12 39 59.4	-2.0		
	baz=145,SNR=8.4									
H15A	Lima	144.51	74	⇓	P	PKPdf	12 40 00.1	-1.1		
	baz=145,SNR=8.0									
K16A	Soda Springs	144.52	77	⇓	P	PKPdf	12 40 00.0	-1.3		
	baz=145,SNR=7.3									
B13A	Whitefish	144.59	67	⇑	P	PKPdf	12 39 59.9	-1.3		
	baz=145									
E14A	Clinton	144.59	71	⇓	P	PKPdf	12 39 59.9	-1.4		
	baz=145									
J16A	Bone	144.68	77	⇓	P	PKPdf	12 40 00.4	-1.1		
	baz=145,SNR=49									
A13A	Flathead Natio	144.79	66	⇓	P	PKPdf	12 40 00.7	-0.8		
	baz=145									
D14A	Greenough	144.80	70	⇑	P	PKPdf	12 40 00.1	-1.5		
	baz=145,SNR=5.7									
DLMT	Dillon	144.81	73	*e*	PKPdf	PKPdf	12 40 01.1	-0.6		
G15A	Dillon	144.81	73	⇓	P	PKPdf	12 40 00.7	-1.1		
	baz=145,SNR=16									
AHID	Auburn Hatcher	144.82	78	*e*	PKPdf	PKPdf	12 40 01.3	-0.6		
C14A	Swan Lake	144.86	68	⇑	P	PKPdf	12 40 00.7	-1.0		
	baz=145,SNR=9.0									
RRI2	Red Ridge	144.91	77	*e*	PKPdf	PKPdf	12 40 01.8	-0.2		
CHMT	Chamberlain Mo	144.91	70	*e*	PKPdf	PKPdf	12 40 00.8	-1.0		
P19A	Cripple Cowboy	144.91	84	⇓	P	PKPdf	12 40 01.0	-1.1		
	baz=145									
I16A	Newdale	145.00	76	⇓	P	PKPbc	12 40 01.7	+0.3		
	baz=145,SNR=16									
N18A	Larsen Ranch,	145.04	81	⇑	P	PKPbc	12 40 01.8	+0.1		
	baz=145									
F15A	Butte	145.04	72	⇑	P	PKPbc	12 40 01.7	+0.1		
	baz=145,SNR=34									
LRM	Limekiln Ridge	145.06	72	*e*	P	PKPbc	12 40 01.8	+0.1		
DCID1	Drake Creek	145.09	76	*e*	P	PKPbc	12 40 02.7	+0.8		
O19A	Miners Draw (B	145.12	83	⇓	P	PKPbc	12 40 02.1	+0.1		
	baz=145,SNR=32									
WALA	Waterton Lakes	145.14	66	*e*	PKPdf	PKPdf	12 40 02.1	-0.1		
E15A	Deer Lodge	145.15	71	⇓	P	PKPbc	12 40 01.6	-0.3		
	baz=145,SNR=26									
TPAW	Teton Pass	145.21	77	*e*	PKPbc	PKPbc	12 40 02.9	+0.7		
REDW	Red Top Meadow	145.22	77	*e*	PKPbc	PKPbc	12 40 02.8	+0.5		
DAG	Danmarks Havn	145.23	344	⇓	*i* PKIKP	PKPdf	12 39 59.8	-1.8		
DAG					pmax	pmax				
	comp=Z,23nm,1.0s									
DAG	Danmarks Havn	145.23	344	⇓	*i* P	PKPbc	12 39 59.8	-1.6		
	comp=Z,23nm,1.0s									
SNOW	Snow King Moun	145.33	77	*e*	PKPbc	PKPbc	12 40 03.3	+0.7		
N19A	John Jarvie Ra	145.34	82	⇑	P	PKPbc	12 40 02.4	-0.3		
	baz=145									
IMW	Indian Meadow	145.37	76	*e*	PKPbc	PKPbc	12 40 03.4	+0.6		
QLMT	Earthquake Lak	145.39	74	*e*	PKPbc	PKPbc	12 40 03.8	+1.1		
A14A	Double T Ranch	145.42	66	⇓	P	PKPdf	12 40 02.7	0.0		
	baz=146									
D15A	Lincoln	145.42	70	⇑	P	PKPdf	12 40 02.8	0.0		
	baz=146									
MOOW	Moose Ponds	145.45	76	*e*	PKPbc	PKPbc	12 40 03.3	+0.4		
H16A	Russell Place,	145.47	74	⇓	P	PKPdf	12 40 03.2	+0.3		
	baz=146,SNR=14									
BOZ	Bozeman (W)	145.54	73	*e*	PKIKP	PKPdf	12 40 03.8	+0.8		
C15A	Salmond Ranch,	145.59	69	⇓	P	PKPdf	12 40 02.8	-0.2		
	baz=146,SNR=34									
TEIG	Tepich	145.68	131	*e*	PKPbc	PKPbc	12 40 04.1	-0.2		
HRY	Holter Researc	145.77	71	*e*	PKPbc	PKPbc	12 40 04.2	+0.3		
B15A	Bradely Ranch,	145.78	68	⇑	P	PKPdf	12 40 03.3	0.0		
	baz=146									
BW06	Boulder Array	145.86	78	*e*	P	PKPdf	12 40 03.7	0.0		
PDAR	Pinedale Array	145.86	78		PKPbc	PKPbc	12 40 03.6	-0.7		
	comp=Z,3.3nm,0.8s,baz=195,slow=1.1,SNR=17									
JCT	Junction City	146.22	105	*e*	PKP2	PKPab	12 40 05.3	-1.2		
YKA	Yellowknife Ar	146.34	42		PKPbc	PKPbc	12 40 04.1	-1.0		
	comp=Z,12nm,1.0s,baz=279,slow=2.5,SNR=11									
YKA	Yellowknife Ar	146.34	42		PKPbc	PKPbc	12 40 04.1	-1.0		
SDCO	Great Sand Dun	146.41	89	*e*	PKPbc	PKPbc	12 40 06.3	+0.2		
EDM	Edmonton	146.44	59	*e*	PKP2	PKPab	12 40 04.8	-1.8		
C17A	Wharram Farm,	146.74	70	⇑	P	PKPdf	12 40 05.8	+0.8		
	baz=147									
GCMT	Greycliff	146.89	73	*e*	PKPbc	PKPbc	12 40 07.9	+0.7		
RLMT	Red Lodge	146.93	75	*e*	PKPbc	PKPbc	12 40 08.3	+1.0		
ISCO	Idaho Springs	147.30	86	*e*	PKP2	PKPab	12 40 09.5	-0.9		
EGMT	Eagleton	147.50	69	⇑	P	PKPdf	12 40 08.1	+1.8		
	baz=148									
EGMT	Eagleton	147.50	69	*e*	PKPbc	PKPbc	12 40 08.5	-0.4		
AMTX	Amarillo	147.55	96	*e*	PKPbc	PKPbc	12 40 09.4	0.0		
PHWY	Pilot Hill	148.06	83	*e*	PKPbc	PKPbc	12 40 10.9	+0.3		
LAO	LASA Array	149.44	73	*e*	PKPbc	PKPbc	12 40 14.7	+0.8		
WMOK	Wichita Mounta	149.45	99	*e*	PKP2	PKPbc	12 40 14.0	-0.3		
RSSD	Black Hills	150.10	79	*e*	PKIKP	PKPbc	12 40 15.5	-0.1		
NATX	Nacogdoches	150.43	108	*e*	PKPbc	PKPbc	12 40 16.8	-0.1		
CBKS	Cedar Bluff	150.90	91	*e*	PKIKP	PKPbc	12 40 17.8	+0.1		
DGMT	Dagmar	151.22	70	*e*	PKPbc	PKPbc	12 40 18.0	-0.1		
CPD	Cerro la Pandu	151.28	171	*e*	PKIKP	PKPbc	12 40 17.6	-1.6		
MTP	Monte Pirata	151.38	171	*e*	PKPbc	PKPbc	12 40 17.9	-1.5		
HUMP	Col San Antoni	151.39	171	*e*	PKPbc	PKPbc	12 40 18.2	-1.2		
AOPR	Arecibo Observ	151.48	169	*e*	PKPbc	PKPbc	12 40 18.0	-1.6		

IDC 19 12:37:28.0±2.6, 5200N×17760W, h0km, mb3.7/5, mb1 4.1/7, mb1mx3.8/25, mbtmp3.8/7, ML3.8/2, Error ellipse: s-maj=63.5km s-min=28.8km az=15.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	15.05	284	Pn		Pn	12 41 00.2	-1.6
	0.4nm,0.3s,baz=88,slow=18,SNR=17							
KDAK	Kodiak Island	15.46	58	Pn		Pn	12 41 05.8	-1.2
	0.4nm,0.3s,baz=38,slow=8.0,SNR=3.6							
YKA	Yellowknife Ar	34.26	47	P		P	12 44 15.0	-0.2
	0.5nm,0.4s,baz=275,slow=8.8,SNR=5.6							
NVAR	Mina Array Bea	42.74	84	P		P	12 45 27.9	+1.2
	0.6nm,0.8s,baz=292,slow=7.8,SNR=3.5							
PDAR	Pinedale Array	45.41	74	P		P	12 45 47.6	-0.5
	0.5nm,0.6s,baz=313,slow=4.3,SNR=4.8							
ARCES	ARCESS Array B	57.60	351	P		P	12 47 19.4	+0.4
	5.2nm,1.0s,baz=24,slow=7.0,SNR=9.0							
TXAR	Lajitas Array	57.82	82	P		P	12 47 21.1	0.0
	0.4nm,0.7s,baz=302,slow=4.9,SNR=3.8							

*BJI **19** 12:43:41.6, 9.15N×9352E, h35km, mB5.0, mb4.7, Ms4.8, Msz5.1*
*ISCJB **19** 12:43:58.0±0.8, 1002N±004×9364E±004, h125km±8km, mb4.7/32, Error ellipse: s-maj=8.8km s-min=4.4km az=135.5*
*MOS **19** 12:43:58.3±1.1, 1005N×9369E, h131km, mb4.3/15, Error ellipse: s-maj=16.0km s-min=8.4km az=97.3*
*NEIC **19** 12:43:58.3±2.1, 1002N×9363E, h116km±18km, mb4.8/14, Error ellipse: s-maj=17.5km s-min=5.4km az=56.0*
*IDC **19** 12:43:59.1±0.9, 1001N×9364E, h121km±7km, mb4.2/14, mb1 4.3/15, mb1mx4.1/22, mbtmp4.2/15, MS3.6/2, Ms1 3.7/2, ms1mx3.2/29, Error ellipse: s-maj=19.0km s-min=10.4km az=64.0*
*DJA **19** 12:44:09, 1021N×9481E, h100km, mb4.8/7*
ISC 19 12:43:58.8±0.7, 1001N±004×9362E±004, h114km±6km, h114km±7.0km:pP-P,n139,σ1º06/133, mb4.7/32, 13C-7D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	1.85	332	*e*	P	x	12 45 04.0	
PBA				*e*	S	x	12 45 24.5	
NNT	Nongplab	6.52	66		P	Pn	12 45 32.3	0.0
NST	Nakhon Sawan	8.49	48		P	Pn	12 45 57.8	-1.1
BDT	Bhumibol Dam	8.89	35	⇑	P	Pn	12 46 04.8	+0.4
	20nm,0.9s							
PSI	Prapat	8.89	143	⇓	*e* P	Pn	12 46 04.6	+0.1
IPM	Ipoh	9.18	126	⇑	P	Pn	12 46 07.2	-1.1
CMAR	Chiang Mai Arr	9.86	31		P	Pn	12 46 17.0	-0.5
	2.0nm,0.3s,baz=220,slow=14,SNR=64							
CMAR	Chiang Mai Arr	9.86	31		P	Pn	12 46 17.0	-0.5
CMAR					pmax	pmax		
	comp=Z,2.0nm,0.3s							
CHG	Chiang Mai	10.16	30	⇑	P	Pn	12 46 24.9	+3.4
	comp=Z,46nm,1.0s							
CHTO	Chiang Mai	10.16	30	*e*	P	Pn	12 46 21.0	-0.5
CHTO					pmax	pmax		
	comp=Z,38nm,0.8s							
CHTO	Chiang Mai	10.16	30	*e*	Pn	Pn	12 46 21.0	-0.5
	comp=Z,38nm,0.8s							
FRIM	Kepong	10.42	130	⇓	P	Pn	12 46 24.7	-0.4
KTGM	Kuala Trenggan	10.52	116	⇑	P	Pn	12 46 27.0	+0.5
NANT	Nan	11.11	37	⇓	P	Pn	12 46 34.0	-0.2
	comp=Z,302nm,1.0s							
CHRT	Chiangrai	11.47	31		P	Pn	12 46 39.0	-0.1
KGM	Kluang	12.49	129	⇓	P	Pn	12 46 53.0	+0.3
VIS	Vishakhapatnam	12.58	309	*e*	P	Pn	12 46 53.1	-0.7
VIS				*e*	S	Sn	12 48 59.5	-13
VIS					AMb	AMB	12 49 03.2	
	comp=Z,183nm,0.4s							
BWNR	Bhubaneshwar	12.70	325	*e*	P	Pn	12 46 54.0	-1.3
BWNR				*e*	S	Sn	12 49 01.0	-14
MYKOM	Kota Tinggi	13.04	128	⇑	P	Pn	12 47 03.2	+3.3
MDRS	Chennai	13.45	284	*e*	S	Sn	12 49 21.6	-12
IMP	Imphal	14.69	1	*e*	P	Pn	12 47 19.0	-2.0
IMP				*ex*		x	12 50 10.0	
SHL	Shillong	15.56	354	*ex*		x	12 47 13.0	
SHL				*ex*		x	12 50 18.0	
BOK	Bokaro	15.57	333	*e*	P	Pn	12 47 32.1	+0.1
BOK					AMb	AMB	12 47 36.4	
	comp=Z,164nm,0.6s							
BOK				*ex*		x	12 50 07.2	
KOD	Kodaikanal	15.90	272	*e*	P	Pn	12 47 37.2	+1.0
KOD					AMb	AMB	12 47 43.0	
	comp=Z,38nm,0.7s							
HYB	Hyderabad	16.37	298	*i*	P	Pn	12 47 45.0	+3.0
HYB				*e*	S	S	12 50 43.0	-5.5
KMI	Kunming	17.35	29		P	Pn	12 47 56.3	+2.4
KMI					AMB	AMB		
	comp=Z,26nm,1.1s							
ODAN	Odare	17.76	341	*e*	P	Pn	12 47 58.6	-0.2
	comp=Z,143nm,0.3s							
NGP	Nagpur	17.86	310	*e*	P	Pn	12 47 58.3	-1.7
NGP					AMb	AMB	12 48 00.5	
	comp=Z,37nm,1.5s							
NGP				*ex*		x	12 51 09.2	
RAMN	Ramite	18.11	339	*e*	P	P	12 48 03.4	+1.6
	comp=Z,548nm,0.7s							
TAPN	Taplejung	18.12	343	*e*	P	P	12 48 02.9	+0.9
	comp=Z,129nm,0.3s							
KSM	Kuching	18.64	116	⇑	P	P	12 48 08.4	+0.7
KSM	Kuching	18.64	116	*e*	P	P	12 48 07.5	-0.3
JIRN	Jiri	18.90	339	*e*	P	P	12 48 11.7	+1.2
	comp=Z,334nm,0.4s							
PKI	Pulchoki	19.10	337	*e*	P	P	12 48 13.7	+1.0
AKL	Akola	19.20	306	*e*	P	P	12 48 14.3	+0.5
AKL					AMb	AMB	12 48 19.1	
	comp=Z,44nm,1.4s							
AKL				*e*	S	S	12 51 42.1	-3.2
GUN	Gumba	19.24	339	*e*	P	P	12 48 15.2	+1.1
	comp=Z,397nm,0.5s							
DMN	Daman	19.25	337	*e*	P	P	12 48 15.3	+1.0
	comp=Z,156nm,0.8s							
KKN	Kakani	19.35	337	*e*	P	P	12 48 16.0	+0.6
	comp=Z,194nm,0.5s							
KKN	Kakani	19.35	337	*e*	P	P	12 48 16.1	+0.7
	comp=Z,176nm,0.5s							
LSA	Lhasa	19.72	354		P	P	12 48 18.0	-1.4
LSA					AP		12 48 26.0	
LSA					XP	sP	12 48 30.0	-25
LSA					S	S	12 51 58.8	+3.2
LSA					XS	sS	12 52 20.0	-11
LSA					LR	LR		
	comp=N,640nm,4.3s							
LSA					LR	LR		
	comp=Z,2μm,4.0s							
LSA	Lhasa	19.72	354	*e*	P	P	12 48 19.3	-0.1
LSA					pmax	pmax		
	comp=Z,124nm,0.6s							
LSA	Lhasa	19.72	354	*e*	P	P	12 48 19.3	-0.1
	comp=Z,124nm,0.6s							
LSA				*e*	Sn	Sn	12 52 02.6	-1.5
GKN	Gorkha	19.79	336	*e*	P	P	12 48 21.0	+0.8
	comp=Z,1μm,0.6s							
SBUM	Sibu	19.95	111	⇓	P	P	12 48 23.1	+1.0
KOLN	Koldanda	20.02	333	*e*	P	P	12 48 23.7	+1.0
	comp=Z,459nm,0.7s							
DANN	Dangsing	20.46	334	*e*	P	P	12 48 28.1	+0.7
	comp=Z,916nm,0.6s							
BTM	Bintulu	20.48	108	⇓	P	P	12 48 29.0	+1.2
POO	Poona	20.93	296	*e*	P	P	12 48 33.0	+0.5
POO				*i*	S	S	12 52 21.0	+1.5
BOM	Bombay	21.98	296	*ex*		x	12 50 30.7	
BOM				*ex*		x	12 50 43.7	
	comp=Z,59nm,1.9s							
BOM				*e*	S	S	12 52 38.7	-0.4
KKM	Kota Kinabalu	22.72	98	⇑	P	P	12 48 53.0	+1.5
CD2	Chengdu	22.83	23		P	P	12 48 51.0	-1.3
CD2					AMB	AMB		
	comp=Z,30nm,0.6s,mb4.8							
PTH	Pithoragarh	23.13	329	*e*	P	P	12 48 56.0	+1.0
PTH				*ex*		x	12 53 02.0	
SDKM	Sandakan	23.75	99	⇑	P	P	12 49 02.0	+1.1
NDI	New Delhi	24.12	323	*e*	P	P	12 49 04.0	0.0
NDI				*ex*		x	12 53 32.0	
AJM	Ajmer	24.29	315	*e*	P	P	12 49 06.0	+0.3
AJM					AMb	AMB	12 49 08.4	
	comp=Z,33nm,0.3s,mb5.1							
AJM				*ex*		x	12 53 37.9	
TSM	Tawau	24.72	102	⇓	P	P	12 49 10.2	+0.5
DDI	Dehra Dun	24.88	327	*e*	P	P	12 49 09.0	-1.9
DDI				*ex*		x	12 53 52.0	
MYLDM	Lahad Datu	25.12	99	⇑	P	P	12 49 14.7	+1.3
THN	Thein Dam	27.77	326	*e*	P	P	12 49 35.6	-1.3
GTA	Gaotai	29.79	10	*e*	P	P	12 49 55.0	+0.2
GTA					AP	pP	12 50 01.5	-18
GTA					XP	sP	12 50 04.4	-29
GTA					AMB	AMB		
	comp=Z,11nm,1.0s,mb4.4							
KAPI	Kappang	30.01	119		P	P	12 49 56.7	-0.3
	comp=Z,7.6nm,0.5s,mb4.6,baz=306,slow=6.7,SNR=4.4							
TKM2	Tokmak 2	36.37	337	*e*	P	P	12 50 51.5	-0.3
TKM2					pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7							
TKM2	Tokmak 2	36.37	337		P	P	12 50 51.6	-0.2
	SNR=14							
TKM2	Tokmak 2	36.37	337	*e*	P	P	12 50 51.5	-0.4
	comp=Z,6.2nm,0.6s,mb4.7							
KBK	Karagaybulak	36.39	337		P	P	12 50 53.4	+1.3
	SNR=14							
AML	Almayashu	36.46	335		P	P	12 50 53.8	+1.1
	SNR=14							
AML	Almayashu	36.46	335	*e*	P	P	12 50 53.6	+1.0
	comp=Z,57nm,0.8s,mb5.5							
AAK	Ala-Archa	36.55	336		P	P	12 50 54.3	+0.8
	SNR=15							
FRU	Bishkek	36.67	336	*i*	P	P	12 50 55.0	+0.6
CHMS	Chumysh	36.76	337		P	P	12 50 55.3	+0.2
	SNR=8.6							
EKS2	Erkin-Say	36.87	335		P	P	12 50 56.9	+0.8
	SNR=25							
EKS2	Erkin-Say	36.87	335	*e*	P	P	12 50 56.8	+0.7
	comp=Z,26nm,0.8s,mb5.2							
EKS2				*e*	pP	pP	12 51 22.9	+1.2
USP	Ospenovka	37.08	337		P	P	12 50 58.1	+0.2
	SNR=20							
MKAR	Makanchi Array	37.90	347		P	P	12 51 04.0	-0.8
	comp=Z,6.1nm,0.8s,mb4.5,baz=162,slow=8.6,SNR=30							
MKAR					pP	pP	12 51 26.8	-3.7
	comp=Z,2.7nm,0.6s,baz=164,slow=8.3,SNR=3.5							
MKAR					LR	LR	13 10 43.1	
	comp=Z,62nm,18.0s,baz=167,slow=42							
MKAR	Makanchi Array	37.90	347		P	P	12 51 04.0	-0.8
MKAR					pmax	pmax		
	comp=Z,6.0nm,0.8s							
MKAR					pmax	pmax		
	comp=Z,3.0nm,0.6s							
MKAR					MLR	MLR		
	comp=Z,62nm,18.0s							
MKAR	Makanchi Array	37.90	347		P	P	12 51 04.0	-0.8
MKAR					pP	pP	12 51 26.8	-3.7
MKAR					LR	LR	13 10 43.0	
SONM	Songino Array	39.21	14		P	P	12 51 15.5	-0.2
	comp=Z,2.1nm,0.5s,mb4.2,baz=196,slow=9.1,SNR=16							
SONM					pP	pP	12 51 44.4	+2.9
	comp=Z,1.0nm,0.7s,baz=220,slow=8.2,SNR=1.9

WB2	**Warramunga Arr**	**49.94**	**127**	*eP*	**P**	**12 52 40.0**	**-1.3**
ASAR	**Alice Springs**	**51.69**	**131**	P	**P**	**12 52 53.0**	**-1.3**
	comp=Z,17nm,0.6s,mb5.3,baz=304,slow=6.9,SNR=299						
ASAR				pP	pP	12 53 20.9	-0.4
	comp=Z,1.6nm,0.7s,baz=307,slow=7.5,SNR=1.6						
ASAR				PcP	PcP	12 54 06.0	-0.4
	comp=Z,4.2nm,0.8s,baz=305,slow=3.8,SNR=9.8						
ASAR				ScP	ScP	12 57 50.1	-2.7
	comp=Z,1.0nm,0.9s,baz=328,slow=3.7,SNR=4.6						
ASAR	**Alice Springs**	**51.69**	**131**	P	**P**	**12 52 53.1**	**-1.3**
ASAR				*PP	pP	12 53 21.0	-0.4
ASAR						12 54 06.0	
ASAR	comp=Z,17nm,0.6s			pmax	pmax		
ASAR	comp=Z,2.0nm,0.7s			pmax	pmax		
ASAR	comp=Z,4.0nm,0.8s			pmax	pmax		
ASAR	comp=N,1.0nm,0.9s			pmax	pmax		
GNI	**Garni**	**52.59**	**313⇑**	*eP*	**P**	**12 53 02.9**	**+2.0**
ARU	**Arti**	**53.73**	**337⇑**	*eP*	**P**	**12 53 08.7**	**-0.2**
ARU	**Arti**	**53.73**	**337**	*eP*	**P**	**12 53 08.4**	**-0.6**
	comp=N,5.0nm,0.3s,mb5.0						
KIV	**Kislovodsk**	**55.40**	**317⇑**	*eP*	**P**	**12 53 22.4**	**+1.2**
YSS	**Yuzh-Sakhalins**	**55.44**	**39⇑**	*eP*	**P**	**12 53 22.8**	**+1.4**
CTA	**Charters Tower**	**59.81**	**120**	*eP*	**P**	**12 53 52.0**	**-0.5**
	comp=N,4.7nm,0.9s,mb4.5						
CTA	**Charters Tower**	**59.81**	**120**	*eP*	**P**	**12 53 52.0**	**-0.5**
CTA	comp=Z,5.0nm,0.9s			pmax	pmax		
STKA	**Stephens Creek**	**61.95**	**134**	*eP*	**P**	**12 54 06.6**	**-0.2**
	comp=Z,11nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**61.95**	**134**	P	**P**	**12 54 06.6**	**-0.2**
	comp=Z,11nm,0.5s,mb5.1,baz=300,slow=5.3,SNR=25						
AKASG	**Malin Array Be**	**66.17**	**321**	P	**P**	**12 54 31.8**	**-2.3**
	comp=Z,0.5nm,0.3s,mb3.8,baz=83,slow=4.7,SNR=4.3						
AKASG	**Malin Array Be**	**66.17**	**321**	P	**P**	**12 54 31.8**	**-2.3**
AKASG	comp=Z,1.0nm,0.3s			pmax	pmax		
TOO	**Toolangi**	**67.77**	**138**	*eP*	**P**	**12 54 45.2**	**+0.8**
CNB	**Canberra Magne**	**69.27**	**134**	*eP*	**P**	**12 54 54.0**	**+0.3**
ARCES	**ARCESS Array B**	**73.09**	**340**	P	**P**	**12 55 16.1**	**-0.1**
	comp=Z,2.9nm,0.3s,mb4.5,baz=100,slow=7.1,SNR=45						
ARCES	**ARCESS Array B**	**73.09**	**340**	P	**P**	**12 55 16.2**	**0.0**
ARCES	comp=Z,3.0nm,0.3s			pmax	pmax		
GERES	**GERESS Array B**	**75.90**	**318**	P	**P**	**12 55 32.8**	**-0.1**
	comp=Z,1.2nm,0.7s,mb3.8,baz=67,slow=4.5,SNR=8.7						
GERES				pP	pP	12 55 57.3	-4.4
	comp=Z,0.9nm,0.4s,baz=76,slow=5.6,SNR=3.0						
GERES	**GERESS Array B**	**75.90**	**318**	P	**P**	**12 55 32.8**	**-0.1**
GERES	comp=Z,1.0nm,0.7s			pmax	pmax		
GERES	comp=Z,1.0nm,0.4s			pmax	pmax		
BOSA	**Boshof**	**76.29**	**237**	P	**P**	**12 55 34.7**	**-0.7**
	comp=Z,6.1nm,0.7s,mb4.4,baz=89,slow=6.1,SNR=12						
BOSA	**Boshof**	**76.29**	**237**	P	**P**	**12 55 34.7**	**-0.7**
BOSA	comp=Z,6.0nm,0.7s,mb4.4			pmax	pmax		
BOSA	**Boshof**	**76.29**	**237**	P	**P**	**12 55 34.7**	**-0.7**
NB2	**NORSAR Subarra**	**77.63**	**330**	P	**P**	**12 55 41.1**	**-1.2**
	comp=Z,1.6nm,0.6s,mb3.9,baz=90,slow=5.3						
NOA	**NORSAR Array B**	**77.63**	**330**	P	**P**	**12 55 40.8**	**-1.5**
	comp=Z,1.3nm,0.6s,mb3.8,baz=93,slow=5.7,SNR=3.6						
NOA				LR	LR	13 36 25.8	
	comp=Z,47nm,18.0s,baz=330,slow=40						
MAW	**Mawson**	**80.51**	**191**	*eP*	**P**	**12 55 58.3**	**+0.6**
	comp=Z,2.4nm,0.7s,mb4.1						
MAW	**Mawson**	**80.51**	**191**	P	**P**	**12 55 57.9**	**+0.2**
	comp=Z,2.8nm,0.6s,mb4.2,baz=4.1,slow=5.1,SNR=8.1						
MAW	**Mawson**	**80.51**	**191**	*eP*	**P**	**12 55 58.3**	**+0.6**
MAW	comp=Z,2.0nm,0.7s			pmax	pmax		
TORD	**Torodi Ar. Bea**	**89.61**	**283**	P	**P**	**12 56 44.2**	**-0.1**
	comp=Z,0.5nm,1.1s,mb3.6,baz=315,slow=0.4,SNR=2.6						
TORD				pP	pP	12 57 09.5	-4.5
	comp=Z,0.9nm,0.9s,baz=83,slow=4.0,SNR=3.7						
TORD				PP	PP	13 00 17.4	-0.2
	comp=Z,0.7nm,0.9s,baz=64,slow=7.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**89.61**	**283**	P	**P**	**12 56 44.2**	**-0.1**
TORD				pP	pP	12 57 09.5	-4.5
TORD				PP	PP	13 00 17.4	-0.2
NVAR	**Mina Array Bea**	**123.35**	**30**	PKP	PKPdf	13 02 43.7	+0.9
	comp=Z,2.1nm,0.7s,baz=296,slow=2.0,SNR=14						
NVAR	**Mina Array Bea**	**123.35**	**30**	PKP	PKPdf	13 02 43.7	+0.9
PDAR	**Pinedale Array**	**123.36**	**20**	PKP	PKPdf	13 02 42.4	-0.4
	comp=Z,1.2nm,0.7s,baz=68,slow=0.8,SNR=11						
TXAR	**Lajitas Array**	**137.48**	**23**	PKhKP		13 03 01.0	
	comp=Z,0.3nm,0.8s,baz=11,slow=0.7,SNR=3.5						
TXAR				PKP	PKPdf	13 03 10.2	+0.3
	comp=Z,0.8nm,0.6s,baz=211,slow=0.9,SNR=10						
TXAR	**Lajitas Array**	**137.48**	**23**	PKP	PKPdf	13 03 01.0	-8.8
TXAR				PKP	PKPdf	13 03 10.2	+0.3
PLCA	**Paso Flores**	**146.34**	**202**	PKPbc	PKPbc	13 03 27.0	+0.5
	comp=Z,5.0nm,0.2s,baz=149,slow=3.0,SNR=66						
PLCA	**Paso Flores**	**146.34**	**202**	PKP2	PKPbc	13 03 27.0	+0.4
PLCA	comp=Z,5.0nm,0.2s			pmax	pmax		
PLCA	**Paso Flores**	**146.34**	**202**	*e*PKPbc	PKPbc	13 03 27.0	+0.5
CPUP	**Villa Florida**	**148.09**	**236**	PKPbc	PKPbc	13 03 30.6	-1.3
	comp=Z,2.9nm,0.9s,baz=24,slow=2.7,SNR=4.7						
CPUP	**Villa Florida**	**148.09**	**236**	PKP2	PKPbc	13 03 30.6	-1.3
CPUP	comp=Z,3.0nm,0.9s			pmax	pmax		

*NIED **19** 13:16:00,46.70N×152.60E,h11km,Mw4.0 Best double couple: M₀1.03000×10¹⁵ NP1:φ145.00000°,δ75.00000°, λ36.00000°. NP2:φ45.00000°,δ56.00000°,λ162.00000°.*

*ISCJB **19** 13:16:11.6±1.6,46.14N±0.08×152.89E±0.10,h12km±11km, mb4.0/13,Error ellipse: s-maj=17.4km s-min=5.0km az=142.3*

*SKHL **19** 13:16:12.3±1.9,45.93N×153.21E,h57km±17km,mb5.3/3*

*MOS **19** 13:16:14.9±1.2,46.16N×152.93E,h39km,mb4.3/6,Error ellipse: s-maj=15.9km s-min=10.4km az=47.8*

*NEIC **19** 13:16:16.7±2.2,46.20N×152.82E,h34km±16km,mb4.4/1, Error ellipse: s-maj=13.4km s-min=7.4km az=131.0*

*BJI **19** 13:16:16.7,46.30N×152.80E,h34km,mB4.7,mb4.5*

*IDC **19** 13:16:18.1±2.8,46.21N×152.84E,h46km±25km,mb3.7/11, mb1 3.9/14,mb1mx3.8/24,mbtmp3.7/14,ML3.7/3,Error ellipse: s-maj=22.0km s-min=16.3km az=128.0*

ISC 19 13:16:15.5±1.6,4617N±008×15288E±010,h25km±12km, n71,σ1§24/80,mb4.0/13,2D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.63**	**257**	⇓*i*PN	**Pn**	**13 17 08.8**	**-1.3**
KUR				*i* S	**Sn**	**13 17 52.5**	**+0.4**
KUR				pmax	pmax		
	comp=N,210nm,0.3s						
KUR				pmax	pmax		
	comp=E,80nm,0.3s						
KUR				pmax	pmax		
	comp=Z,520nm,0.3s						
KUR				smax			
	comp=N,220nm,0.8s						
KUR				smax			
	comp=E,510nm,0.8s						
KUR	**Kuril'sk**	**3.63**	**257**	⇓*i*P	**Pn**	**13 17 08.8**	**-1.3**
KUR				AMB	AMB	13 17 09.9	
	comp=E,207nm,0.3s						
KUR				AMB	AMB	13 17 09.9	
	comp=E,81nm,0.3s						
KUR				AMB	AMB	13 17 09.9	
	comp=E,522nm,0.3s						
KUR				*e*S	**Sn**	**13 17 52.5**	**+0.4**
KUR				A		13 18 01.5	
	comp=E,215nm,0.8s						
KUR				A		13 18 01.5	
	comp=E,505nm,0.8s						
SKR	**Severo-Kuril's**	**5.01**	**24**	*e*PN	**Pn**	**13 17 28.4**	**-0.6**
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,70nm,1.0s						
SKR	**Severo-Kuril's**	**5.01**	**24**	*eP*	**Pn**	**13 17 28.4**	**-0.6**
SKR				AMB	AMB	13 17 32.0	
	comp=E,50nm,0.5s						
SKR				AMB	AMB	13 17 32.0	
	comp=E,80nm,0.5s						
SKR				AMB	AMB	13 17 32.0	
	comp=E,70nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**5.40**	**249**	*e*PN	**Pn**	**13 17 35.2**	**+0.8**
SKR				*e*S	**Sn**	**13 18 24.0**	**-2.0**
YUK	**Yuzh-Kuril'sk**	**5.40**	**249**	*e*PN	**Pn**	**13 17 35.2**	**+0.8**
YUK				*e*S	**Sn**	**13 18 37.5**	**+1.8**
YUK				pmax	pmax		
	comp=Z,210nm,0.4s						
YUK				smax			
	comp=N,380nm,0.5s						
YUK				smax			
	comp=E,190nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.40**	**249**	*e*P	**Pn**	**13 17 35.2**	**+0.8**
YUK				AMB	AMB	13 17 36.5	
	comp=E,210nm,0.4s						
YUK				*e*S	**Sn**	**13 18 37.5**	**+1.8**
YUK				A		13 18 44.7	
	comp=E,380nm,0.5s						
YUK				A		13 18 44.7	
	comp=E,190nm,0.5s						
NEM2	**Nemuro 2**	**5.80**	**244**	P	**Pn**	**13 17 38.3**	**-1.5**
NEM2				*e*S	**Sn**	**13 18 41.2**	**-4.3**
JRA	**Rausu**	**5.93**	**251**	P	**Pn**	**13 17 42.8**	**+1.2**
JNK	**Nakash**	**6.34**	**249**	P	**Pn**	**13 17 47.9**	**+0.6**
JAK	**Akkeshi**	**6.64**	**244**	P	**Pn**	**13 17 49.7**	**-1.8**
JTKR	**Abashiri--Toko**	**6.72**	**254**	P	**Pn**	**13 17 53.8**	**+1.3**
YSS	**Yuzh-Sakhalins**	**7.02**	**280**	*e*P	**Pn**	**13 18 01.0**	**+4.4**
JMP	**Maruseppu**	**7.07**	**256**	P	**Pn**	**13 17 59.7**	**+2.4**
JAR	**Ashorobuto**	**7.09**	**249**	P	**Pn**	**13 17 58.0**	**+0.4**
JAR				*e*S	**Sn**	**13 19 17.3**	**0.0**
JOB	**Onbets**	**7.24**	**246**	P	**Pn**	**13 17 59.3**	**-0.3**
JOB				*e*S	**Sn**	**13 19 17.6**	**-3.3**
ASAJ	**Asahikawa**	**7.55**	**258**	P	**Pn**	**13 18 06.0**	**+2.2**
	comp=E,1.5nm,0.3s,baz=295,slow=29,SNR=9.2						
ASAJ	**Asahikawa**	**7.55**	**258**	P	**Pn**	**13 18 06.4**	**+2.5**
ASAJ	**Asahikawa**	**7.55**	**258**	PN	**Pn**	**13 18 06.1**	**+2.2**
ASAJ	comp=Z,2.0nm,0.3s			pmax	pmax		
PEA0B	**Petropavlovsk-**	**7.62**	**22**	*e*Pn	**Pn**	**13 18 05.0**	**+0.2**
PETK	**Petropavlovsk-**	**7.62**	**22**	P	**Pn**	**13 18 05.1**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=175,slow=12,SNR=53						
JCH	**Churui**	**7.68**	**246**	P	**Pn**	**13 18 05.1**	**-0.6**
JCH				*e*S	**Sn**	**13 19 27.6**	**-4.3**
PET	**Petropavlovsk**	**7.82**	**27**	*e*PN	**Pn**	**13 18 09.5**	**+2.0**
PET	**Petropavlovsk**	**7.82**	**27**	*e*Pn	**Pn**	**13 18 07.4**	**-0.1**
JFR	**Furan**	**7.92**	**251**	P	**Pn**	**13 18 11.2**	**+2.2**
JAB	**Ashibetsu**	**8.03**	**254**	P	**Pn**	**13 18 12.9**	**+2.5**
JEM	**Erimo**	**8.13**	**243**	P	**Pn**	**13 18 12.4**	**+0.5**
ERM	**Erimo**	**8.13**	**243**	*e*PN	**Pn**	**13 18 12.4**	**+0.5**
JNBK	**Urakawa-nobuka**	**8.24**	**245**	P	**Pn**	**13 18 12.0**	**-1.4**
JBT2	**Biratori 2**	**8.24**	**250**	P	**Pn**	**13 18 13.5**	**+0.1**
JNB	**Noboribetsu**	**9.26**	**251**	P	**Pn**	**13 18 26.7**	**-0.5**
JKB	**Kayabe**	**9.54**	**248**	P	**Pn**	**13 18 29.8**	**-1.4**
JKB				*e*S	**Sn**	**13 20 10.3**	**-7.2**
JYM2	**Yakumo 2**	**9.86**	**250**	P	**Pn**	**13 18 34.6**	**-0.9**
JANG	**Nango**	**10.10**	**239**	P	**Pn**	**13 18 34.8**	**-4.1**
JANG				*e*S	**Sn**	**13 20 20.9**	**-10**
JSR	**Shiriuchi**	**10.12**	**247**	P	**Pn**	**13 18 37.5**	**-1.6**
JTM	**Tenmabayashi**	**10.12**	**242**	P	**Pn**	**13 18 36.5**	**-2.6**
JTH	**Tanohata**	**10.18**	**236**	P	**Pn**	**13 18 35.9**	**-4.0**
JTH				*e*S	**Sn**	**13 20 21.7**	**-11**
JOSM	**Okushiri--Mats**	**10.46**	**252**	P	**Pn**	**13 18 43.1**	**-0.7**
OFUJ	**Ofunato**	**10.87**	**233**	*e*S	**Sn**	**13 20 40.1**	**-10**
JIO	**Ouri**	**11.49**	**232**	*e*S	**Sn**	**13 20 53.0**	**-12**
MJAR	**Matsushiro Arr**	**14.60**	**234**	P	**Pn**	**13 19 40.8**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=36,slow=12,SNR=4.3						
KSRS	**Korea Array**	**20.47**	**254**	P	**P**	**13 20 53.5**	**+2.4**
	comp=Z,1.9nm,0.7s,baz=58,slow=11,SNR=6.6						
KSRS	**Korea Array**	**20.47**	**254**	*e*P	**P**	**13 20 54.4**	**+3.2**
KSRS	comp=Z,2.0nm,0.7s			pmax	pmax		
NJ2	**Nanjing**	**29.67**	**254**	*e*P	**P**	**13 22 21.5**	**+2.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
GTA	**Gaotai**	**38.90**	**280**	*e*P	**P**	**13 23 40.1**	**+1.3**
GTA				AP	pP	13 23 47.1	+0.7
GTA				XP	sP	13 23 49.8	+0.3
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.0						
MKAR	**Makanchi Array**	**47.07**	**298**	P	**P**	**13 24 43.9**	**-0.9**
	comp=Z,0.5nm,0.4s,mb3.8,baz=70,slow=7.9,SNR=6.4						
MKAR	**Makanchi Array**	**47.07**	**298**	P	**P**	**13 24 43.9**	**-0.9**
MKAR	comp=Z,1.0nm,0.4s			pmax	pmax		
KURK	**Kurchatov**	**47.55**	**304**	*e*P	**P**	**13 24 47.3**	**-1.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.4						
KURK	**Kurchatov**	**47.55**	**304**	*e*P	**P**	**13 24 47.3**	**-1.2**
	comp=Z,5.8nm,1.5s,mb4.4						
CMAR	**Chiang Mai Arr**	**52.07**	**257**	P	**P**	**13 25 24.1**	**+0.8**
	comp=Z,1.2nm,0.8s,mb3.9,baz=32,slow=7.8,SNR=7.0						
CMAR	**Chiang Mai Arr**	**52.07**	**257**	*e*P	**P**	**13 25 24.1**	**+0.8**
CMAR	comp=Z,1.0nm,0.8s			pmax	pmax		
ARCES	**ARCESS Array B**	**58.35**	**341**	P	**P**	**13 26 07.5**	**-0.3**
	comp=Z,2.7nm,0.8s,mb4.3,baz=39,slow=7.9,SNR=8.5						
ARCES	**ARCESS Array B**	**58.35**	**341**	P	**P**	**13 26 07.6**	**-0.3**
ARCES	comp=Z,3.0nm,0.8s			pmax	pmax		
NVAR	**Mina Array Bea**	**62.85**	**62**	P	**P**	**13 26 40.4**	**+1.3**
	comp=Z,0.6nm,0.6s,mb3.9,baz=292,slow=7.8,SNR=3.6						
WRA	**Warramunga Arr**	**67.91**	**199**	P	**P**	**13 27 10.8**	**-1.0**
	comp=Z,0.5nm,0.7s,mb3.7,baz=17,slow=6.7,SNR=5.9						
WRA	**Warramunga Arr**	**67.91**	**199**	P	**P**	**13 27 10.8**	**-1.0**
WRA	comp=Z,1.0nm,0.7s			pmax	pmax		
NB2	**NORSAR Subarra**	**68.73**	**341**	P	**P**	**13 27 16.1**	**-0.4**
	comp=Z,1.4nm,0.4s,mb4.2,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**68.73**	**341**	P	**P**	**13 27 16.2**	**-0.3**
	comp=Z,1.6nm,0.4s,mb4.3,baz=28,slow=6.3,SNR=11						
NOA	**NORSAR Array B**	**68.73**	**341**	P	**P**	**13 27 16.3**	**-0.2**
NOA	comp=Z,2.0nm,0.4s			pmax	pmax		
ASAR	**Alice Springs**	**71.60**	**198**	P	**P**	**13 27 34.6**	**+0.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=13,slow=6.2,SNR=9.8						
ASAR	**Alice Springs**	**71.60**	**198**	*e*P	**P**	**13 27 34.6**	**+0.2**
AKASG	**Malin Array Be**	**71.94**	**326**	P	**P**	**13 27 35.5**	**-0.9**
	comp=Z,0.9nm,0.3s,mb4.2,baz=32,slow=6.1,SNR=8.5						
AKASG	**Malin Array Be**	**71.94**	**326**	P	**P**	**13 27 35.5**	**-0.8**
AKASG	comp=Z,1.0nm,0.3s			pmax	pmax		
AKASG	**Malin Array Be**	**71.94**	**326**	P	**P**	**13 27 35.5**	**-0.9**
BUR08	**Bucovina Ar. S**	**75.97**	**327**	*e*P	**P**	**13 28 00.5**	**+0.5**
TXAR	**Lajitas Array**	**77.92**	**60**	P	**P**	**13 28 11.3**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=301,slow=4.1,SNR=13						
TXAR	**Lajitas Array**	**77.92**	**60**	*e*P	**P**	**13 28 11.3**	**0.0**
TXAR	comp=Z,1.0nm,0.6s			pmax	pmax		
TXAR	**Lajitas Array**	**77.92**	**60**	P	**P**	**13 28 11.3**	**+0.1**
GERES	**GERESS Array B**	**78.91**	**334**	P	**P**	**13 28 16.9**	**+0.6**
	comp=Z,0.4nm,0.3s,mb3.8,baz=32,slow=7.8,SNR=4.5						
CFAA	**Coronel Fontan**	**145.26**	**80**	PKPbc	PKPbc	13 35 49.9	-0.6
	comp=Z,0.2nm,0.4s,baz=56,slow=3.6,SNR=3.9						
PLCA	**Paso Flores**	**148.31**	**96**	PKPbc	PKPbc	13 35 59.1	+0.1
	comp=Z,1.6nm,0.7s,baz=98,slow=5.0,SNR=5.0						
PLCA	**Paso Flores**	**148.31**	**96**	PKP2	PKPbc	13 35 59.1	+0.2
PLCA	comp=Z,2.0nm,0.7s			pmax	pmax		

*ISCJB **19** 13:17:55.5±0.9,1387N±0.07×9276W±0.07,h33km,mb4.2/7, MS3.6/4,Error ellipse: s-maj=9.9km s-min=9.3km az=171.9*

*MEX **19** 13:17:56.0±1.4,1377N×9285W,h19km±67km,MD4.3*

*IDC **19** 13:18:11.8±2.4,1506N×9236W,h102km±17km,mb3.6/3, mb1 3.8/7,mb1mx3.6/24,mbtmp3.5/7,MS3.4/6,Ms1 3.4/6, ms1mx3.1/30,Error ellipse: s-maj=27.5km s-min=15.3km az=12.0*

*NEIC **19** 13:18:11.6±1.0,1498N×9246W,h99km±8km,mb4.3/5, Error ellipse: s-maj=18.4km s-min=10.3km az=211.0*

ISC 19 13:17:58.2±0.9,1393N±0.07×9273W±0.07,h35km,n31, σ1§32/38,mb4.2/7,MS3.6/4,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.07**	**25**	*e*P	**Pn**	**13 18 14.4**	**-2.3**
THIG				*i* S	**Sn**	**13 18 31.1**	**+0.8**
CCIG	**Comitan**	**2.41**	**14**	*e*P	**Pn**	**13 18 35.9**	**+0.8**
CCIG				*i* S	**Sn**	**13 19 04.6**	**+1.2**
CCIG	**Comitan**	**2.41**	**14**	*e*P	**Pn**	**13 18 36.4**	**+1.3**
CCIG				*i* S	**Sn**	**13 19 07.2**	**+3.8**
TGIG		**2.86**	**352**	*e*P	**Pn**	**13 18 40.6**	**-0.7**
TGIG				*i* S	**Sn**	**13 19 14.5**	**+0.1**
CMIG	**Matias Romero**	**3.77**	**327**	P	**Pn**	**13 18 59.0**	**+5.1**
	comp=Z,151nm,19.6s,baz=330,slow=47						
CMIG	**Matias Romero**	**3.77**	**327**	*i* P	**Pn**	**13 18 51.9**	**-2.0**
CMIG				*i* S	**Sn**	**13 19 35.0**	**-2.0**
CMIG	**Matias Romero**	**3.77**	**327**	P	**Pn**	**13 18 59.0**	**+5.1**
CMIG				S	**Sn**	**13 19 37.1**	**+0.2**
CMIG				LR	LR	13 20 40.2	
VHO	**Vista Hermosa**	**4.97**	**309**	*e*P	**Pn**	**13 19 06.3**	**-4.0**
VHO	**Vista Hermosa**	**4.97**	**309**	*e*P	**Pn**	**13 19 14.6**	**+4.2**
VHO				*i* S	**Sn**	**13 20 15.4**	**+8.8**
TGUH	**Tegucigalpa,Un**	**5.29**	**88**	P	**Pn**	**13 19 15.0**	**+0.1**
PNIG	**Pinotepa**	**5.76**	**296**	*i* P	**Pn**	**13 19 18.6**	**-2.6**
PNIG				*i* S	**Sn**	**13 20 20.8**	**-5.3**
TEIG	**Tepich**	**7.57**	**34**	P	**Pn**	**13 19 44.5**	**-1.6**
	2.0nm,0.3s,baz=222,slow=6.3,SNR=14						
TEIG				S	**Sn**	**13 20 56.3**	**-14**
	baz=12,slow=20,SNR=1.9						
TEIG				LR	LR	13 22 41.0	
	comp=Z,224nm,21.6s,baz=344,slow=42						
TEIG	**Tepich**	**7.57**	**34**	*e*Pn	**Pn**	**13 19 44.7**	**-1.4**
TEIG				S	**Sn**	**13 20 56.3**	**-14**
TEIG				LR	LR	13 22 41.0	
PPM	**Popocatepetl**	**7.62**	**313**	*i* P	**Pn**	**13 19 53.4**	**+6.5**
PPM				*i* S	**Sn**	**13 21 27.4**	**+15**
JTS	**JuntasAbangare**	**8.42**	**115**	P	**Pn**	**13 20 15.1**	**+17**
	0.6nm,0.3s,baz=341,slow=18,SNR=5.1						
JTS	**JuntasAbangare**	**8.42**	**115**	*e*Pn	**Pn**	**13 20 15.0**	**+17**
TXAR	**Lajitas Array**	**18.37**	**328**	P	**Pn**	**13 22 10.8**	**+0.5**
	0.0nm,0.3s,baz=153,slow=14,SNR=8.9						
MIAR	**Mount Ida**	**20.54**	**358**	*e*P	**P**	**13 22 30.7**	**-2.9**
	0.6nm,0.9s						
AMTX	**Amarillo**	**22.37**	**340**	*e*P	**P**	**13 22 51.7**	**-1.7**
	13nm,0.8s,mb4.4						
TKL	**Tuckaleechee C**	**23.08**	**19**	LR	LR	13 33 11.9	
	comp=Z,145nm,19.8s,MS3.4,baz=239,slow=41						
SDCO	**Great Sand Dun**	**26.30**	**337**	*e*P	**P**	**13 23 31.3**	**+0.7**
	7.3nm,1.5s,mb4.0						
PDAR	**Pinedale Array**	**32.20**	**336**	P	**P**	**13 24 23.2**	**+0.3**
	0.7nm,1.0s,mb3.4,baz=128,slow=9.6,SNR=4.2						
REDW	**Red Top Meadow**	**33.21**	**336**	*e*P	**P**	**13 24 32.0**	**+0.3**
	9.3nm,1.1s,mb4.6						
NVAR	**Mina Array Bea**	**33.28**	**322**	P	**P**	**13 24 34.8**	**+2.3**
	0.9nm,0.7s,mb3.8,baz=138,slow=9.0,SNR=5.2						
RRI2	**Red Ridge**	**33.39**	**335**	*e*P	**P**	**13 24 34.3**	**+1.0**
	8.5nm,1.4s,mb4.5						
MCMT	**McKenzie Canyo**	**35.23**	**335**	*e*P	**P**	**13 24 50.8**	**+1.5**
SCHQ	**Schefferville**	**45.53**	**21**	LR	LR	13 45 57.4	
	comp=Z,145nm,20.6s,MS3.9,baz=93,slow=38						
YKA	**Yellowknife Ar**	**50.93**	**347**	P	**P**	**13 26 55.3**	**-0.5**
	5.0nm,0.8s,mb4.5,baz=150,slow=7.3,SNR=16						
CPUP	**Villa Florida**	**52.79**	**139**	LR	LR	13 52 12.3	
	comp=Z,98nm,19.2s,MS3.9,baz=321,slow=38						
NOA	**NORSAR Array B**	**84.54**	**28**	LR	LR	14 08 35.9	
	comp=Z,9.6nm,18.1s,MS3.2,baz=90,slow=36						
CMAR	**Chiang Mai Arr**	**145.82**	**340**	PKP	PKPdf	13 37 35.0	+0.8
	3.1nm,0.8s,baz=334,slow=3.7,SNR=13						

CASC 19 13:31:52.8±1.1,864N×8361W,h18km±5km,MD3.5, MW4.0,2C-4D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.43**	**88**	⇓*e*P	Pg	13 32 01.1	-0.6
ACR				*e*S	Sg	13 32 08.0	+0.4
BAR1		**0.67**	**26**	*e*P	Pb	13 32 05.2	-0.7
BAR1				*e*S	Sb	13 32 15.6	+0.7
BRU2	**Volcan**	**0.92**	**80**	*e*P	Pb	13 32 09.7	-0.5
BRU2				*e*S	Sb	13 32 24.3	+1.2
BUS	**Buena Vista**	**0.93**	**351⇑**	*e*P	Pb	13 32 09.9	-0.4
BUS				*e*S	Sb	13 32 24.1	+1.8
TBS2		**0.95**	**80⇓**	*e*P	Pb	13 32 17.1	+6.3
TBS2				*e*S	Sb	13 32 31.3	+8.3
LCR2	**La Lucha 2**	**1.17**	**340⇓**	*e*P	Pn	13 32 13.6	-0.7
LCR2				*e*S	Sb	13 32 30.1	+0.9
PRS1	**Puriscal**	**1.51**	**333⇓**	*e*P	Pn	13 32 18.1	-0.8
PRS1				*e*S	Sn	13 32 37.5	-0.7
CGA2	**Cerro Gallo 2**	**1.61**	**328⇑**	*e*P	Pn	13 32 20.8	+0.4
CGA2				*e*S	Sn	13 32 42.0	+1.3
PTP	**Ponta Puerca**	**19.91**	**60**	*e*P		13 32 08.8	

*ISC

1.1nm,0.7s,baz=316,slow=3.3,SNR=2.7
MKAR Makanchi Array 145.12 36 PKPbc PKPbc 13 57 21.7 +0.6
MKAR pPKPbc 13 57 54.1

NIED ***19*** *13:50:00,46.50N×152.70E,h44km,Mw4.1 Best double couple: M₀1.88000×10¹⁵ NP1:φs89.00000°,δ64.00000°, λ-111.00000° NP2:φs310.00000°,δ32.00000°, λ-54.00000°.*

ISCJB ***19*** *13:50:10.9±2.2,46.20N±0.10×152.9E±0.1,h1km±14km, mb4.0/12,MS3.0/2, Error ellipse: s-maj=21.0km s-min=6.2km az=139.6*

JMA ***19*** *13:50:14.9±0.7,46.54N×152.71E,h30km,M4.3*

MOS ***19*** *13:50:15.2±1.9,46.18N×152.99E,h36km,mb4.2/5, Error ellipse: s-maj=14.5km s-min=10.9km az=145.3*

BJI ***19*** *13:50:17.7,46.34N×152.99E,h60km,mB4.7,mb4.5,Ms4.6, Msz4.2*

NEIC ***19*** *13:50:18.1±2.8,46.31N×152.72E,h35km±21km, Error ellipse: s-maj=20.3km s-min=9.0km az=134.0*

IDC ***19*** *13:50:20.1±3.3,46.41N×152.78E,h51km±29km,mb3.5/10, mb1 3.8/12,mb1mx3.7/23,mbtmp3.6/12,ML3.7/2,MS3.1/3, Ms1 3.1/3,ms1mx2.6/32, Error ellipse: s-maj=26.8km s-min=17.1km az=152.0*

ISC 19 13:50:16.7±1.9,4624N±0.10×1528E±0.1,h25km±15km,n54, σ1§28/57,mb3.9/12,MS3.0/2,1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.60**	**256**	*i* P	Pn	**13 51 08.7**	**-2.2**
KUR				pmax	pmax		
	comp=N,90nm,0.3s						
KUR				pmax	pmax		
	comp=Z,320nm,0.3s						
SKR	**Severo-Kuril's**	**4.96**	**25**	*e* Pn	Pn	**13 51 29.5**	**0.0**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.38**	**248**	*e* PN	Pn	**13 51 36.2**	**+0.8**
YUK				*e*S	Sn	**13 52 40.0**	**+3.5**
YUK				pmax	pmax		
	comp=Z,170nm,0.4s						
YUK				smax			
	comp=N,200nm,0.5s						
YUK				smax			
	comp=E,200nm,0.5s						
NEM2	**Nemuro 2**	**5.79**	**243**	P	Pn	**13 51 38.8**	**-2.1**
NEM2				*e*S	Sn	**13 52 41.1**	**-5.4**
JRA	**Rausu**	**5.91**	**250**	P	Pn	**13 51 43.2**	**+0.7**
JNK	**Nakash**	**6.33**	**248**	P	Pn	**13 51 47.9**	**-0.4**
JAK	**Akkeshi**	**6.63**	**244**	P	Pn	**13 51 50.7**	**-1.8**
JTKR	**Abashiri--Toko**	**6.69**	**253**	P	Pn	**13 51 54.0**	**+0.7**
YSS	**Yuzh-Sakhalins**	**6.96**	**279**	*e* PN	Pn	**13 52 03.6**	**+6.6**
JMP	**Maruseppu**	**7.05**	**255**	P	Pn	**13 51 59.5**	**+1.4**
JAR	**Ashorobuto**	**7.07**	**249**	P	Pn	**13 51 58.1**	**-0.4**
JAR				*e*S	Sn	**13 53 16.2**	**-1.8**
JKK2	**Kamakawa 2**	**7.51**	**255**	P	Pn	**13 52 05.5**	**+1.0**
ASAJ	**Asahikawa**	**7.52**	**257**	P	Pn	**13 52 06.5**	**+1.9**
	comp=E,1.6nm,0.3s,baz=80,slow=18,SNR=13						
ASAJ				LR	LR	13 55 02.6	
	comp=E,101nm,18.7s,baz=338,slow=38						
ASAJ	**Asahikawa**	**7.52**	**257**	PN	Pn	**13 52 06.6**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,101nm,18.7s						
PEA0B	**Petropavlovsk-**	**7.57**	**23**	*e* P	Pn	**13 52 05.5**	**+0.2**
PETK	**Petropavlovsk-**	**7.57**	**23**	P	Pn	**13 52 05.5**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=180,slow=12,SNR=13						
JCH	**Churui**	**7.67**	**245**	P	Pn	**13 52 05.5**	**-1.2**
JCH				*e*S	Sn	**13 53 26.7**	**-6.0**
JFR	**Furan**	**7.90**	**251**	P	Pn	**13 52 12.1**	**+2.2**
ERM	**Erimo**	**8.12**	**242**	*e* PN	Pn	**13 52 13.8**	**+0.9**
JNBK	**Urakawa-nobuka**	**8.23**	**245**	P	Pn	**13 52 14.1**	**-0.3**
JKB	**Kayabe**	**9.53**	**247**	P	Pn	**13 52 30.0**	**-2.1**
JANG	**Nango**	**10.10**	**239**	*e*S	Sn	**13 54 21.4**	**-11**
JTH	**Tanohata**	**10.18**	**236**	*e*S	Sn	**13 54 23.1**	**-11**
JIO	**Ouri**	**11.50**	**231**	*e*S	Sn	**13 54 55.8**	**-11**
MJAR	**Matsushiro Arr**	**14.61**	**234**	P	Pn	**13 53 40.7**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=32,slow=11,SNR=5.4						
MJAR	**Matsushiro Arr**	**14.61**	**234**	*e* P	Pn	**13 53 40.7**	**-0.9**
KSRS	**Korea Array**	**20.45**	**253**	P	P	**13 54 54.1**	**+2.0**
	comp=Z,4.0nm,1.0s,baz=58,slow=12,SNR=5.2						
KSRS				LR	LR	14 01 54.1	
	comp=Z,34nm,21.6s,MS2.7,baz=215,slow=34						
KSRS	**Korea Array**	**20.45**	**253**	*e* P	P	**13 54 55.7**	**+3.6**
KSRS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HIA	**Hailar**	**22.33**	**290**	*e* P	P	**13 55 12.9**	**+0.6**
BILL	**Bilibino**	**22.93**	**13**	*e* P	P	**13 55 17.1**	**-1.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.7						
NJ2	**Nanjing**	**29.65**	**253**	*e* P	P	**13 56 20.9**	**+0.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
ULN	**Ulaanbaatar**	**30.87**	**290**	*e* P	P	**13 56 33.0**	**+2.3**
SONM	**Songino Array**	**31.30**	**290**	P	P	**13 56 36.3**	**+1.8**
	comp=Z,0.4nm,0.7s,mb3.4,baz=74,slow=11,SNR=2.4						
GTA	**Gaotai**	**38.84**	**279**	*e* P	P	**13 57 40.8**	**+1.3**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.0s,mb3.8						
ZALV	**Zalesovo Beam**	**42.74**	**306**	LR	LR	14 17 07.9	
	comp=Z,46nm,19.8s,MS3.4,baz=136,slow=38						
MK31	**Makanchi Array**	**46.99**	**298**	*e* P	P	**13 58 44.1**	**-1.3**
MKAR	**Makanchi Array**	**46.99**	**298**	P	P	**13 58 44.0**	**-1.4**
	comp=Z,0.4nm,0.4s,mb3.7,baz=69,slow=9.1,SNR=3.7						
MKAR	**Makanchi Array**	**46.99**	**298**	P	P	**13 58 44.0**	**-1.4**
CMAR	**Chiang Mai Arr**	**52.04**	**256**	P	P	**13 59 24.9**	**+0.6**
	comp=Z,0.7nm,0.7s,mb3.7,baz=36,slow=6.7,SNR=4.6						
CMAR	**Chiang Mai Arr**	**52.04**	**256**	P	P	**13 59 24.9**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**58.26**	**341**	P	P	**14 00 07.6**	**-0.8**
	comp=Z,3.4nm,0.9s,mb4.4,baz=325,slow=10,SNR=3.4						
ARCES	**ARCESS Array B**	**58.26**	**341**	P	P	**14 00 07.6**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NVAR	**Mina Array Bea**	**62.86**	**62**	P	P	**14 00 41.9**	**+1.6**
	comp=Z,0.3nm,0.4s,mb3.8,baz=312,slow=5.8,SNR=3.4						
NB2	**NORSAR Subarra**	**68.64**	**341**	P	P	**14 01 16.3**	**-0.8**
	comp=Z,2.8nm,0.8s,mb4.2,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**68.64**	**341**	P	P	**14 01 16.5**	**-0.6**
	comp=Z,0.9nm,0.5s,mb4.0,baz=28,slow=6.4,SNR=5.8						
NOA	**NORSAR Array B**	**68.64**	**341**	*e* P	P	**14 01 16.5**	**-0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**68.64**	**341**	P	P	**14 01 16.5**	**-0.6**
ASAR	**Alice Springs**	**71.66**	**198**	P	P	**14 01 37.0**	**+1.0**
	comp=Z,0.3nm,0.7s,mb3.3,baz=14,slow=5.7,SNR=4.4						
ASAR	**Alice Springs**	**71.66**	**198**	*e* P	P	**14 01 36.9**	**+0.9**
AKASG	**Malin Array Be**	**71.85**	**326**	P	P	**14 01 35.8**	**-1.2**
	comp=Z,2.1nm,0.6s,mb4.2,baz=34,slow=6.5,SNR=6.0						
AKASG	**Malin Array Be**	**71.85**	**326**	P	P	**14 01 35.8**	**-1.2**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BUR08	**Bucovina Ar. S**	**75.88**	**326**	*e* P	P	**14 02 00.3**	**-0.3**
TXAR	**Lajitas Array**	**77.93**	**60**	P	P	**14 02 11.4**	**-1.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=301,slow=4.2,SNR=10.0						
TXAR	**Lajitas Array**	**77.93**	**60**	P	P	**14 02 11.4**	**-1.1**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

NEIC ***19*** *14:07:39.7,1772N×9904W,h41km,MD4.0(MEX), After MEX.*

MEX 19 14:07:39.6±0.7,1775N×9908W,h55km±15km,MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLIG	**Platanillo**	**0.76**	**328**	*i* P	Pn	14 07 53.0	-1.3
PLIG				*i* S	Sn	14 08 03.5	-1.5
YAIG	**Yautepec**	**1.11**	**1**	*i* P	Pn	14 07 57.5	-1.4
YAIG				*i* S	Sn	14 08 11.4	-1.9
ACX	**Acapulco**	**1.19**	**222**	*i* P	Pn	14 07 57.7	-2.3
ACX				*i* S	Sn	14 08 13.5	-1.6
CAIG	**El Cayaco**	**1.33**	**239**	*i* P	Pn	14 08 00.8	-1.1
CAIG				*i* S	Sn	14 08 16.4	-2.1
PPM	**Popocatepetl**	**1.38**	**18**	*i* P	Pn	14 08 02.0	-0.6
PPM				*i* S	Sn	14 08 19.5	-0.3
PPM	**Popocatepetl**	**1.38**	**18**	*i* P	Pn	14 08 01.6	-1.0
PPM				*i* S	Sn	14 08 19.5	-0.3
PNIG	**Pinotepa**	**1.63**	**146**	*i* P	Pn	14 08 05.0	-1.0
PNIG				*i* S	Sn	14 08 24.2	-1.6
PNIG	**Pinotepa**	**1.63**	**146**	*i* P	Pn	14 08 04.7	-1.3
PNIG				*i* S	Sn	14 08 21.1	-4.7
ZIIG	**Zihuatanejo**	**2.28**	**267**	*i* P	Pn	14 08 13.5	-1.3
ZIIG				*i* S	Sn	14 08 40.3	-1.4
VHO	**Vista Hermosa**	**2.34**	**106**	*i* P	Pn	14 08 14.5	-1.2
VHO				*i* S	Sn	14 08 41.5	-1.7
VHO	**Vista Hermosa**	**2.34**	**106**	*i* P	Pn	14 08 11.3	-4.3
VHO				*i* S	Sn	14 08 41.5	-1.7

NEIC ***19*** *14:10:43.6±0.9,202N×12763E,h35km,mb4.3/1, Error ellipse: s-maj=59.7km s-min=11.5km az=70.0*

IDC 19 14:10:38.5±1.3,202N×12755E,h0km,mb3.9/6,mb1 4.1/7, mb1mx3.8/18,mbtmp4.0/7,ML3.7/1, Error ellipse: s-maj=68.4km s-min=17.7km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**12.75**	**198**	Pn	Pn	14 13 41.2	0.0
	0.4nm,0.3s,baz=287,slow=17,SNR=2.4						
FITZ	**Fitzroy Crossi**	**20.08**	**185**	P	P	14 15 14.2	+0.5
	0.7nm,0.6s,baz=108,slow=20,SNR=3.3						
WRA	**Warramunga Arr**	**22.82**	**163**	P	P	14 15 43.7	+0.4
	6.8nm,0.5s,baz=343,slow=11,SNR=101						
WB2	**Warramunga Arr**	**22.82**	**163**	*e* P	P	14 15 43.6	+0.3
ASAR	**Alice Springs**	**26.27**	**167**	P	P	14 16 15.3	-0.4
	0.5nm,0.4s,baz=341,slow=7.3,SNR=24						
STKA	**Stephens Creek**	**36.25**	**160**	*e* P	P	14 17 43.2	-0.4
	3.3nm,0.8s						
STKA	**Stephens Creek**	**36.25**	**160**	P	P	14 17 43.4	-0.2
	2.2nm,0.4s,baz=349,slow=7.5,SNR=9.0						
MKAR	**Makanchi Array**	**59.42**	**325**	P	P	14 20 43.6	+0.7
	0.7nm,0.5s,baz=118,slow=8.7,SNR=9.0						
KURK	**Kurchatov**	**63.61**	**328**	P	P	14 21 10.8	-0.4
	0.7nm,0.5s,baz=126,slow=6.1,SNR=5.8						

IDC 19 14:58:15.7±1.7,682S×12940E,h0km,mb4.0/2,mb1 4.2/4, mb1mx3.8/14,mbtmp4.1/4,ML4.2/2, Error ellipse: s-maj=110.0km s-min=26.1km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.80**	**198**	*e* P	Pn	15 01 03.9	-1.5
	6.6nm,0.4s						
FITZ				*e*S	Sn	15 03 01.8	-16
WRA	**Warramunga Arr**	**13.90**	**160**	Pn	Pn	15 01 33.1	-0.9
	1.3nm,0.3s,baz=339,slow=13,SNR=24						
WRA				Sn	Sn	15 03 53.6	-16
	1.7nm,0.3s,baz=336,slow=22,SNR=16						
WB2	**Warramunga Arr**	**13.90**	**160**	*e* P	Pn	15 01 33.2	-0.9
WB2				*e*S	Sn	15 03 54.1	-15
ASAR	**Alice Springs**	**17.30**	**166**	P	Pn	15 02 17.8	-1.0
	0.6nm,0.3s,baz=345,slow=10,SNR=44						
ASAR				S	Sn	15 05 15.4	-17
	0.5nm,0.3s,baz=240,slow=14,SNR=6.3						
STKA	**Stephens Creek**	**27.41**	**157**	P	P	15 04 03.8	+0.8
	1.4nm,0.5s,baz=343,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**67.75**	**327**	P	P	15 09 15.2	0.0
	0.5nm,0.5s,baz=114,slow=8.1,SNR=6.0						

NIED ***19*** *15:06:00,3180N×13190E,h26km,Mw4.0 Best double couple: M₀1.20000×10¹⁵ NP1:φs31.00000°,δ67.00000°, λ101.00000° NP2:φs184.00000°,δ25.00000°,λ65.00000°.*

NEIC ***19*** *15:06:49.2±9.6,3175N×13167E,h8km±61km,mb4.2/1, Error ellipse: s-maj=22.6km s-min=14.0km az=57.0*

ISCJB ***19*** *15:06:51.1±1.1,3177N±0.05×13195E±0.07,h31km±7km, mb3.8/7,MS3.7/3, Error ellipse: s-maj=11.2km s-min=6.6km az=41.9*

JMA ***19*** *15:06:52.0±0.1,3178N×13192E,h28km±1km,M4.0 Broadband fault plane solution: P waves. NP1: φs257.00000°,δ14.00000°,λ132.00000°. NP2: φs34.00000°,δ80.00000°,λ81.00000°. Principal axes: T Plg54.0000°, Azm293.0000°; N Plg9.0000°, Azm36.0000°; P Plg34.0000°, Azm132.0000°;*

JMA Felt I J1.

IDC ***19*** *15:06:53.4±5.0,3177N×13172E,h37km±45km,mb3.7/6, mb1 3.7/8,mb1mx3.5/24,mbtmp3.6/8,ML3.0/2,MS3.7/3, Ms1 3.7/3,ms1mx3.0/43 Error ellipse: s-maj=40.4km s-min=21.2km az=63.0*

ISC 19 15:06:51.9±1.2,3179N±0.05×13191E±0.07,h25km±8km, n19,σ0§73/22,mb3.8/7,MS3.7/3,2C-3D,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTSN	**Tsuno**	**0.57**	**323**	⇓P	Pb	**15 07 03.3**	**-0.1**
JTSN				S	Sb	**15 07 11.1**	**-0.1**
JNAR	**Kushima--Naru**	**0.60**	**245**	⇓P	Pb	**15 07 03.9**	**0.0**
JNAR				*e*S	Sb	**15 07 11.9**	**-0.1**
JTZ	**Takazaki**	**0.71**	**280**	⇓P	Pb	**15 07 05.5**	**-0.1**
JTZ				*e*S	Sb	**15 07 14.8**	**-0.2**
JZO	**Okuchi**	**1.17**	**288**	P	Pn	**15 07 12.5**	**-0.1**
JIU2	**Izumi 2**	**1.20**	**309**	⇑P	Pn	**15 07 13.6**	**+0.6**
JSU	**Suzuyama**	**1.27**	**258**	P	Pn	**15 07 13.9**	**-0.1**
JSU				S	Sn	**15 07 31.4**	**+1.1**
JTO	**Tosashimizu**	**1.31**	**35**	P	Pn	**15 07 13.8**	**-0.8**
JTO				*e*S	Sn	**15 07 30.9**	**-0.3**
JTN	**Tanegashima 3**	**1.38**	**216**	⇑P	Pn	**15 07 15.4**	**-0.1**
KSRS	**Korea Array**	**6.54**	**331**	Pn	Pn	**15 08 27.9**	**+1.4**
	0.3nm,0.3s,baz=141,slow=15,SNR=3.3						
MJAR	**Matsushiro Arr**	**7.05**	**46**	Pn	Pn	**15 08 35.1**	**+1.6**
	0.3nm,0.3s,baz=223,slow=14,SNR=4.2						
ULN	**Ulaanbaatar**	**24.79**	**318**	*e* P	P	**15 12 11.0**	**-0.6**
	8.9nm,1.7s,mb4.0						
SONM	**Songino Array**	**25.16**	**317**	P	P	**15 12 14.2**	**-0.7**
	2.7nm,0.8s,mb3.9,baz=129,slow=9.6,SNR=15						
SONM				LR	LR	15 21 33.6	
	comp=Z,65nm,19.8s,MS3.1,baz=303,slow=35						
MKAR	**Makanchi Array**	**40.54**	**306**	P	P	**15 14 26.9**	**-2.0**
	0.4nm,0.4s,mb3.4,baz=90,slow=9.8,SNR=4.0						
WRA	**Warramunga Arr**	**51.48**	**177**	P	P	**15 15 54.9**	**-0.3**
	0.5nm,0.8s,mb3.5,baz=351,slow=8.2,SNR=5.5						
ASAR	**Alice Springs**	**55.17**	**178**	P	P	**15 16 22.6**	**+0.2**
	0.4nm,0.7s,mb3.5,baz=8.6,slow=13,SNR=6.1						
ARCES	**ARCESS Array B**	**66.04**	**338**	LR	LR	15 48 00.5	
	comp=Z,70nm,18.3s,MS3.9,baz=276,slow=37						
AKASG	**Malin Array Be**	**73.41**	**320**	P	P	**15 18 21.6**	**-0.1**
	0.3nm,0.3s,mb3.8,baz=148,slow=11,SNR=4.4						
GERES	**GERESS Array B**	**82.67**	**324**	LR	LR	16 00 36.9	
	comp=Z,86nm,18.1s,MS4.2,baz=122,slow=39						
ULM	**Lac du Bonnet**	**88.02**	**28**	P	P	**15 19 40.3**	**+0.6**
	3.4nm,0.7s,mb4.7,baz=302,slow=9.5,SNR=3.3						

ISCJB ***19*** *15:20:27.9±3.2,0.1N±0.1×1234E±0.2,h128km±32km, mb4.3/17, Error ellipse: s-maj=33.6km s-min=11.2km az=140.5*

IDC ***19*** *15:20:29.4±3.1,005N×12355E,h128km±31km,mb3.5/7, mb1 3.7/10,mb1mx3.6/19,mbtmp3.5/10, Error ellipse: s-maj=34.4km s-min=13.0km az=67.0*

DJA ***19*** *15:20:32.0,47S×12331E,h150km,MLv4.1/4*

NEIC ***19*** *15:20:34.4±2.2,006N×12363E,h178km±24km,mb4.1/1, Error ellipse: s-maj=25.1km s-min=8.4km az=62.0*

ISC 19 15:20:28.6±2.8,01N±01×1235E±02,h119km±28km,n27, σ0§69/27,mb4.4/17,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**6.25**	**216**	P	Pn	**15 21 58.1**	**-0.3**
	0.6nm,0.3s,baz=93,slow=22,SNR=2.7						
KKM	**Kota Kinabalu**	**9.35**	**310**	*e* Pn	Pn	**15 22 47.3**	**+6.9**
BATI	**Baumata**	**10.21**	**179**	P	Pn	**15 22 52.2**	**+0.2**
	1.0nm,0.3s,baz=134,slow=18,SNR=1.9						
KSM	**Kuching**	**13.21**	**276**	*e* P	Pn	**15 23 37.9**	**+6.1**
FITZ	**Fitzroy Crossi**	**18.18**	**173**	*e* P	P	**15 24 32.6**	**+0.5**
	4.8nm,0.9s						
FITZ	**Fitzroy Crossi**	**18.18**	**173**	P	P	**15 24 32.7**	**+0.5**
	0.4nm,0.3s,baz=188,slow=23,SNR=13						
FITZ	**Fitzroy Crossi**	**18.18**	**173**	*e* P	P	**15 24 32.5**	**+0.4**
WRA	**Warramunga Arr**	**22.57**	**152**	P	P	**15 25 18.7**	**-0.5**
	2.4nm,0.5s,mb3.8,baz=332,slow=10,SNR=52						
WRA				PcP	PcP	15 29 06.6	-1.9
	0.4nm,0.6s,baz=330,slow=2.5,SNR=4.6						
WB2	**Warramunga Arr**	**22.57**	**152**	*e* P	P	**15 25 19.2**	**-0.1**
ASAR	**Alice Springs**	**25.68**	**157**	P	P	**15 25 48.0**	**+0.3**
	0.4nm,0.5s,mb3.1,baz=331,slow=8.9,SNR=17						
ASAR				PcP	PcP	15 29 14.1	-1.1
	0.8nm,0.4s,baz=350,slow=2.1,SNR=19						
CMAR	**Chiang Mai Arr**	**30.22**	**309**	P	P	**15 26 31.0**	**+2.8**
	2.0nm,0.7s,mb3.9,baz=132,slow=6.6,SNR=14						
STKA	**Stephens Creek**	**36.11**	**153**	P	P	**15 27 19.2**	**+0.1**
	2.0nm,0.7s,mb4.2,baz=310,slow=13,SNR=3.8						
STKA				PcP	PcP	15 29 41.8	-0.9
	1.8nm,0.5s,baz=124,slow=6.7,SNR=5.8						
MJAR	**Matsushiro Arr**	**38.79**	**19**	P	P	**15 27 41.7**	**0.0**
	1.9nm,0.6s,mb4.1,baz=192,slow=9.5,SNR=8.3						
LSA	**Lhasa**	**42.61**	**317**	*e* P	P	**15 28 14.7**	**+1.6**
	2.9nm,0.6s,mb4.2						
ODAN	**Odare**	**43.72**	**310**	*e* P	P	**15 28 22.1**	**-0.1**
TAPN	**Taplejung**	**43.74**	**311**	*e* P	P	**15 28 22.4**	**+0.1**
	7.3nm,0.5s,mb4.7						
RAMN	**Ramite**	**44.37**	**310**	*e* P	P	**15 28 27.1**	**-0.3**
	14nm,0.5s,mb4.9						
JIRN	**Jiri**	**45.05**	**311**	*e* P	P	**15 28 32.9**	**+0.2**
	15nm,0.6s,mb4.9						
GUN	**Gumba**	**45.41**	**311**	*e* P	P	**15 28 35.6**	**0.0**
	20nm,0.6s,mb5.0						
KKN	**Kakani**	**45.81**	**310**	*e* P	P	**15 28 38.3**	**-0.4**
	15nm,0.8s,mb4.8						
DMN	**Daman**	**45.85**	**310**	*e* P	P	**15 28 38.9**	**-0.1**
	10nm,0.7s,mb4.7						
GKN	**Gorkha**	**46.41**	**310**	*e* P	P	**15 28 43.0**	**-0.4**
	17nm,0.7s,mb4.9						
KOLN	**Koldanda**	**47.09**	**309**	*e* P	P	**15 28 47.8**	**-0.9**
	16nm,0.6s,mb5.0						
DANN	**Dangsing**	**47.25**	**310**	*e* P	P	**15 28 49.7**	**-0.3**
	29nm,0.6s,mb5.2						
SONM	**Songino Array**	**49.84**	**345**	P	P	**15 29 09.7**	**+0.3**
	1.4nm,0.7s,mb4.0,baz=160,slow=8.7,SNR=12						
MKAR	**Makanchi Array**	**58.79**	**328**	P	P	**15 30 13.1**	**-1.2**
	0.4nm,0.4s,mb3.8,baz=124,slow=8.5,SNR=4.0						
MKAR	**Makanchi Array**	**58.79**	**328**	P	P	**15 30 13.1**	**-1.2**

IDC 19 15:20:33.8±4.6,426S×10099E,h0km,mb3.7/3,mb1 3.7/3, mb1mx3.4/19,mbtmp3.7/3, Error ellipse: s-maj=201.2km s-min=29.0km az=57.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**37.15**	**124**	P	P	15 27 46.5	-0.2
	0.4nm,0.6s,baz=295,slow=7.7,SNR=3.7						
SONM	**Songino Array**	**52.09**	**5**	P	P	15 29 45.6	+0.1
	0.7nm,0.7s,baz=186,slow=8.6,SNR=4.7						
MKAR	**Makanchi Array**	**53.45**	**344**	P	P	15 29 55.4	-0.3
	0.8nm,0.6s,baz=144,slow=8.6,SNR=6.1						
TXAR	**Lajitas Array**	**145.83**	**40**	PKPbc	PKPbc	15 40 15.6	-0.2
	0.4nm,0.8s,baz=251,slow=2.5,SNR=3.3						

MAN 19 15:39:12,604N×12455E,h33km,mb4.7,ML3.6,MS3.6, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.40**	**84**	⇑*e* P	Pb	15 39 26.3	+5.2
GSPH				*e*S	Sb	15 39 36.2	+8.9
CTBH	**Cotabato--PC H**	**1.21**	**346**	⇓*i* P	Pn	15 39 32.9	+0.3
CTBH				*i* S	Sn	15 39 47.0	-0.9
BUKP	**Musuan**	**1.90**	**16**	*e* P	Pn	15 39 44.6	+2.6
BUKP				*e*S	Sn	15 40 05.9	+1.1
PAGZ	**Pagadian**	**2.13**	**327**	*e* P	Pn	15 39 46.7	+1.3
PAGZ				*e*S	Sn	15 39 53.3	-17
IPIL	**Ipil**	**2.62**	**312**	*e* P	Pn	15 39 53.6	+1.6
IPIL				*e*S	Sn	15 39 59.9	-23

ISCJB ***19*** *15:41:58.3±0.9,650S±0.1×1775E±0.5,h10km,mb4.2/8, MS4.2/10, Error ellipse: s-maj=31.6km s-min=11.7km az=162.4*

IDC ***19*** *15:41:58.7±1.2,6486S×17782E,h0km,mb4.2/7, mb1 4.3/7,mb1mx4.1/13,mbtmp4.2/7,MS4.2/10, Ms1 4.2/10,ms1mx3.9/26, Error ellipse: s-maj=50.0km s-min=19.5km az=58.0*

NEIC ***19*** *15:42:00.2±0.7,6496S×17753E,h10km,mb4.3/1, Error ellipse: s-maj=25.5km s-min=9.3km az=73.0*

GCMT ***19*** *15:42:00.2±0.3,6498S×17779E,h15km±2km,MW5.0/67, Moment Tensor Solution. s21,c21; s67,c87; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.35±.16; Mθθ2.66±.15; Mφφ-2.31±.12; Mrθ-2.52±.54; Mrφ-0.45±.10; Mθφ0.51±.27; Best double couple: M₀3.30000×10¹⁶ NP1:φs223.00000°,δ55.00000°,λ171.00000°. NP2: φs318.00000°,δ83.00000°,λ35.00000°. Principal axes: T 4.1540, Plg30.0000°, Azm186.0000°; N -1.7060, Plg54.0000°, Azm328.0000°; P -2.4450, Plg19.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 19 15:42:00.4±0.8,6496S±0.10×1775E±0.5,h10km,n26, σ0§63/10,mb4.2/8,MS4.2/10,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**13.36**	**190**	*e* P	Pn	**15 45 08.8**	**-0.8**
	16nm,0.8s						
RPZ	**Rata Peaks**	**21.59**	**347**	P	P	**15 46 50.1**	**+0.2**
	7.5nm,0.9s,mb4.1,baz=195,slow=9.0,SNR=4.7						
RPZ				LR	LR	15 53 31.8	
	comp=Z,633nm,18.5s,MS4.0,baz=21,slow=32						
QSPA	**South Pole Qui**	**25.13**	**180**	P	P	**15 47 26.2**	**+1.4**
	22nm,1.0s,mb4

STKA	**Stephens Creek**	**49.05**	**132**	LR	LR	16 32 48.3	
	comp=Z,184nm,20.5s,baz=204,slow=37						
SONM	**Songino Array**	**49.80**	**5**	P	P	16 11 44.9	+1.0
	0.4nm,0.6s,baz=191,slow=5.9,SNR=4.3						
MKAR	**Makanchi Array**	**50.98**	**344**	P	P	16 11 52.1	-0.7
	0.3nm,0.3s,baz=169,slow=9.0,SNR=4.4						

IDC ***19*** *16:08:08.7±1.6, 3428N×2598E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.7/3, Error ellipse: s-maj=29.4km s-min=26.0km az=30.0*

NEIC ***19*** *16:08:09.9±1.3, 3422N×2603E, h10km, MD3.4(ATH), Error ellipse: s-maj=19.4km s-min=15.9km az=52.0*

ISCJB ***19*** *16:08:10.5±0.6, 3423N±005×2597E±009, h10km, mb3.5/3, Error ellipse: s-maj=11.4km s-min=5.3km az=156.7*

HLW ***19*** *16:08:15.6, 3420N×2594E, h33km, Mb3.0*

ATH ***19*** *16:08:18.1, 3455N×2556E, h5km, MD3.4/3*

CSEM ***19*** *16:08:21.3±0.5, 3470N×2554E, h2km, MD3.4, Error ellipse: s-maj=13.1km s-min=7.2km az=175.0*

ISC 19 16:08:13.2±1.4, 3432N±005×258E±01, h27km±14km, n15, σ1§12/18, mb3.5/3, 1C-1D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**0.96**	**349**	*e*PG	**Pn**	**16 08 31.5**	**+0.6**
NPS				*e*SB	**Sb**	**16 08 41.5**	**-2.1**
SIVA	**Sivas**	**1.10**	**310**	P	**Pn**	**16 08 35.0**	**+2.2**
IDI	**Anoyia**	**1.25**	**321**	Pn	**Pn**	**16 08 35.1**	**+0.3**
	2.9nm,0.3s,baz=150,slow=20,SNR=5.9						
IDI				Sn	**Sn**	**16 08 56.3**	**+5.6**
	16nm,0.3s,baz=192,slow=23,SNR=11						
KARP	**Karpathos**	**1.64**	**41**	*e*PB	**Pb**	**16 08 49.5**	**+6.8**
VAM	**Vamos**	**1.74**	**309**	*e*PB	**Pb**	**16 08 45.0**	**+0.6**
SLUM		**2.87**	**191**	⇑P	**Pn**	**16 08 57.4**	**+0.3**
SLUM				S	**Sn**	**16 09 28.1**	**-2.5**
HMAT	**Matruh**	**3.38**	**161**	P	**Pn**	**16 09 04.1**	**-0.1**
SWA2		**5.07**	**184**	⇓P	**Pn**	**16 09 27.5**	**+0.1**
GLL	**Jalalah**	**6.87**	**132**	P	**Pn**	**16 09 52.7**	**+0.6**
AMAG	**Maghara**	**7.22**	**118**	P	**Pn**	**16 09 57.6**	**+0.7**
TORD	**Torodi Ar. Bea**	**30.39**	**232**	P	**P**	**16 14 23.2**	**0.0**
	0.2nm,0.4s,mb3.2,baz=23,slow=9.6,SNR=4.6						
TORD	**Torodi Ar. Bea**	**30.39**	**232**	P	**P**	**16 14 23.2**	**0.0**
ARCES	**ARCESS Array B**	**35.27**	**360**	P	**P**	**16 15 03.4**	**-1.8**
	1.4nm,0.8s,mb4.0,baz=177,slow=8.0,SNR=4.7						
MKAR	**Makanchi Array**	**43.77**	**56**	P	**P**	**16 16 16.3**	**0.0**
	0.6nm,0.6s,mb3.5,baz=284,slow=6.6,SNR=6.7						
MKAR	**Makanchi Array**	**43.77**	**56**	P	**P**	**16 16 16.3**	**0.0**

MAN 19 16:20:58, 747N×12529E, h22km, mb4.5, ML3.4, MS3.3, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**0.47**	**331**	*e*P	Pb	16 21 09.2	+1.6
BUKP				*e*S	Sb	16 21 18.8	+4.7
KCP	**Kidapawan**	**0.50**	**204**	⇓*i*P	Pb	16 21 08.8	+0.7
KCP				*i* S	Sb	16 21 15.3	+0.4
CTBH	**Cotabato--PC H**	**1.06**	**257**	⇑*i*P	Pn	16 21 17.6	0.0
CTBH				*i* S	Sb	16 21 32.1	+0.9
MATI	**Mati**	**1.09**	**118**	*e*P	Pn	16 21 17.0	-1.0
MATI				*e*S	Sb	16 21 33.4	+1.4
GSPH	**General Santos**	**1.41**	**194**	⇑*e*P	Pn	16 21 22.4	0.0
GSPH				*e*S	Sn	16 21 42.9	+2.6
BUTP	**Butuan**	**1.53**	**12**	*e*P	Pn	16 21 28.6	+4.6
BUTP				*e*S	Sn	16 21 48.8	+5.6
PAGZ	**Pagadian**	**1.93**	**281**	*e*P	Pn	16 21 31.2	+1.7
PAGZ				*e*S	Sn	16 21 43.6	-9.5

IDC ***19*** *16:20:53.2±3.8, 591S×15381E, h0km, mb3.8/8, mb1 3.8/8, mb1mx3.7/18, mbtmp3.8/8, MS2.6/1, Ms1 2.6/1, ms1mx1.9/34, Error ellipse: s-maj=123.2km s-min=23.9km az=113.0*

NEIC 19 16:21:02.7±7.2, 594S×15358E, h64km±41km, Error ellipse: s-maj=98.6km s-min=19.0km az=105.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.21**	**119**	LR	LR	16 25 08.2	
	comp=Z,54nm,20.9s,baz=238,slow=36						
PMG	**Port Moresby**	**7.23**	**241**	*e*P	Pn	16 22 45.8	-0.1
WRA	**Warramunga Arr**	**23.31**	**232**	P	P	16 26 06.1	+0.8
	0.3nm,0.5s,baz=59,slow=8.9,SNR=8.2						
ASAR	**Alice Springs**	**25.87**	**225**	P	P	16 26 28.6	+0.1
	0.3nm,0.6s,baz=58,slow=9.2,SNR=9.3						
FITZ	**Fitzroy Crossi**	**29.82**	**244**	P	P	16 27 03.3	-0.6
	1.0nm,0.8s,baz=75,slow=13,SNR=2.9						
SONM	**Songino Array**	**67.69**	**328**	P	P	16 31 53.5	+0.4
	0.3nm,0.5s,baz=141,slow=7.0,SNR=3.4						
MKAR	**Makanchi Array**	**81.68**	**319**	P	P	16 33 14.7	+0.6
	0.5nm,0.4s,baz=120,slow=5.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**82.52**	**326**	P	P	16 33 18.0	-0.3
	1.4nm,0.6s,baz=115,slow=6.6,SNR=6.7						
KURK	**Kurchatov**	**85.13**	**322**	P	P	16 33 32.2	+0.5
	0.8nm,0.6s,baz=106,slow=3.8,SNR=5.0						
KURK	**Kurchatov**	**85.13**	**322**	P	P	16 33 32.2	+0.5
BVAR	**Borovoye Array**	**90.61**	**323**	P	P	16 33 57.6	-0.3
	0.9nm,0.6s,baz=95,slow=7.4,SNR=6.7						
TORD	**Torodi Ar. Bea**	**151.38**	**287**	PKPbc	PKPbc	16 40 50.3	+0.1
	0.5nm,0.7s,baz=69,slow=2.1,SNR=4.8						

NIED ***19*** *16:37:00, 4650N×15290E, h35km, Mw4.2 Best double couple: M0 1.99000×10^15 NP1:φs=253.00000°, δ81.00000°, λ96.00000°. NP2:φs39.00000°, δ11.00000°, λ.56.00000°.*

ISCJB ***19*** *16:37:50.9±0.6, 4622N±008×1528E±01, h33km, mb4.0/14, Error ellipse: s-maj=14.4km s-min=4.1km az=137.3*

MOS ***19*** *16:37:51.4±1.4, 4624N×15287E, h40km, mb4.2/6, Error ellipse: s-maj=13.9km s-min=11.0km az=142.5*

NEIC ***19*** *16:37:53.4±1.0, 4620N×15286E, h37km±9km, mb4.3/1, Error ellipse: s-maj=13.7km s-min=7.6km az=130.0*

IDC ***19*** *16:37:54.4±2.8, 4620N×15291E, h45km±26km, mb3.5/12, mb1 3.8/15, mb1mx3.7/24, mbtmp3.6/15, ML3.7/3, MS3.0/1, Ms1 3.0/1, ms1mx2.2/37, Error ellipse: s-maj=22.2km s-min=16.8km az=132.0*

ISC 19 16:37:53.2±0.6, 4620N±008×1528E±01, h35km, n67, σ1§16/73, mb4.0/14, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.61**	**256**	*e*PN	**Pn**	**16 38 44.9**	**-1.6**
KUR				*e*S	**Sn**	**16 39 33.0**	**+5.1**
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				pmax	pmax		
	comp=Z,380nm,0.5s						
KUR				smax			
	comp=N,250nm,0.8s						
KUR				smax			
	comp=E,350nm,0.8s						
SKR	**Severo-Kuril's**	**4.99**	**25**	*e*PN	**Pn**	**16 39 05.0**	**-0.6**
SKR				*e*S	**Sn**	**16 40 01.2**	**-0.8**
SKR				pmax	pmax		
	comp=Z,70nm,0.5s						
SKR				smax			
	comp=E,20nm,0.4s						
SKR				smax			
	comp=N,120nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**5.38**	**249**	*e*PN	**Pn**	**16 39 11.5**	**+0.5**
YUK				*e*S	**Sn**	**16 40 19.5**	**+7.8**
YUK				pmax	pmax		
	comp=Z,260nm,0.5s						
YUK				smax			
	comp=N,200nm,0.5s						
YUK				smax			
	comp=E,200nm,0.5s						
NEM2	**Nemuro 2**	**5.78**	**243**	P	**Pn**	**16 39 14.6**	**-1.9**
NEM2				*e*S	**Sn**	**16 40 18.0**	**-3.5**
JRA	**Rausu**	**5.91**	**250**	P	**Pn**	**16 39 19.1**	**+1.0**
JNK	**Nakash**	**6.33**	**249**	P	**Pn**	**16 39 23.6**	**-0.3**
JNK				*e*S	**Sn**	**16 40 35.2**	**+0.4**
JAK	**Akkeshi**	**6.63**	**244**	P	**Pn**	**16 39 26.2**	**-1.9**
JAK				*e*S	**Sn**	**16 40 40.2**	**-2.1**
JTKR	**Abashiri--Toko**	**6.70**	**254**	P	**Pn**	**16 39 29.8**	**+0.8**
YSS	**Yuzh-Sakhalins**	**6.99**	**280**	*e*PN	**Pn**	**16 39 37.0**	**+4.1**
JMP	**Maruseppu**	**7.05**	**255**	P	**Pn**	**16 39 35.7**	**+1.9**
JAR	**Ashorobuto**	**7.07**	**249**	P	**Pn**	**16 39 34.3**	**+0.2**
JOB	**Onbets**	**7.22**	**246**	P	**Pn**	**16 39 35.5**	**-0.7**
JKK2	**Kamakawa 2**	**7.51**	**256**	P	**Pn**	**16 39 41.7**	**+1.6**
ASAJ	**Asahikawa**	**7.53**	**258**	P	**Pn**	**16 39 42.2**	**+1.9**
	comp=E,2.0nm,0.3s,baz=123,slow=15,SNR=14						
ASAJ				LR	LR	16 42 37.3	
	comp=E,93nm,18.6s,baz=156,slow=37						
ASAJ	**Asahikawa**	**7.53**	**258**	PN	**Pn**	**16 39 42.3**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,93nm,18.6s						
PEA0B	**Petropavlovsk-**	**7.60**	**23**	*e*P	**Pn**	**16 39 41.6**	**+0.3**
PETK	**Petropavlovsk-**	**7.60**	**23**	P	**Pn**	**16 39 41.4**	**0.0**
	comp=Z,0.7nm,0.3s,baz=176,slow=12,SNR=9.1						
JCH	**Churui**	**7.67**	**246**	P	**Pn**	**16 39 41.0**	**-1.3**
JCH				*e*S	**Sn**	**16 41 03.2**	**-4.6**
JFR	**Furan**	**7.90**	**251**	P	**Pn**	**16 39 47.5**	**+2.0**
JAB	**Ashibetsu**	**8.00**	**254**	P	**Pn**	**16 39 49.6**	**+2.7**
JEM	**Erimo**	**8.12**	**242**	P	**Pn**	**16 39 49.7**	**+1.2**
ERM	**Erimo**	**8.12**	**242**	*e*PN	**Pn**	**16 39 49.3**	**+0.8**
ERM	**Erimo**	**8.12**	**242**	*e*P	**Pn**	**16 39 48.5**	**0.0**
JBT2	**Biratori 2**	**8.23**	**249**	P	**Pn**	**16 39 50.4**	**+0.4**
JNBK	**Urakawa-nobuka**	**8.23**	**245**	P	**Pn**	**16 39 49.9**	**-0.1**
JNB	**Noboribetsu**	**9.23**	**250**	P	**Pn**	**16 40 04.0**	**+0.2**
JKB	**Kayabe**	**9.52**	**247**	P	**Pn**	**16 40 06.1**	**-1.6**
JKB				*e*S	**Sn**	**16 41 46.3**	**-7.2**
JSH	**Shimam**	**9.81**	**253**	P	**Pn**	**16 40 12.5**	**+0.8**
JYM2	**Yakumo 2**	**9.84**	**250**	P	**Pn**	**16 40 11.1**	**-0.9**
JANG	**Nango**	**10.09**	**239**	P	**Pn**	**16 40 11.1**	**-4.4**
JANG				*e*S	**Sn**	**16 41 57.9**	**-10**
JTM	**Tenmabayashi**	**10.11**	**242**	P	**Pn**	**16 40 13.5**	**-2.3**
JOSM	**Okushiri--Mats**	**10.44**	**252**	P	**Pn**	**16 40 19.4**	**-0.9**
OFUJ	**Ofunato**	**10.86**	**233**	*e*S	**Sn**	**16 42 14.8**	**-12**
MJAR	**Matsushiro Arr**	**14.59**	**234**	P	**Pn**	**16 41 17.9**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=29,slow=11,SNR=3.3						
KSRS	**Korea Array**	**20.45**	**254**	P	**P**	**16 42 30.4**	**+3.0**
	comp=Z,1.5nm,0.6s,baz=60,slow=10,SNR=7.8						
KSRS	**Korea Array**	**20.45**	**254**	*e*P	**P**	**16 42 31.0**	**+3.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YAK	**Yakutsk**	**20.68**	**328**	*e*P	**P**	**16 42 28.4**	**-1.4**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
YAK	**Yakutsk**	**20.68**	**328**	*e*P	**P**	**16 42 28.4**	**-1.5**
	comp=Z,7.9nm,0.5s						
HIA	**Hailar**	**22.36**	**290**	*e*P	**P**	**16 42 44.4**	**-3.5**
ULN	**Ulaanbaatar**	**30.90**	**290**	*e*P	**P**	**16 44 05.5**	**-0.7**
SONM	**Songino Array**	**31.34**	**290**	P	**P**	**16 44 11.4**	**+1.4**
	comp=Z,0.3nm,0.5s,mb3.4,baz=94,slow=9.5,SNR=3.3						
SONM	**Songino Array**	**31.34**	**290**	P	**P**	**16 44 11.4**	**+1.4**
MKAR	**Makanchi Array**	**47.02**	**298**	P	**P**	**16 46 20.6**	**-0.2**
	comp=Z,0.4nm,0.3s,mb3.9,baz=66,slow=8.1,SNR=4.3						
MKAR	**Makanchi Array**	**47.02**	**298**	*i* P	**P**	**16 46 20.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**52.05**	**257**	P	**P**	**16 47 00.9**	**+1.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=39,slow=7.1,SNR=5.8						
CMAR	**Chiang Mai Arr**	**52.05**	**257**	*e*P	**P**	**16 47 00.9**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**58.31**	**341**	P	**P**	**16 47 43.4**	**-0.5**
	comp=Z,4.4nm,1.0s,mb4.5,baz=25,slow=6.9,SNR=5.8						
ARCES	**ARCESS Array B**	**58.31**	**341**	P	**P**	**16 47 43.4**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NVAR	**Mina Array Bea**	**62.87**	**62**	P	**P**	**16 48 16.5**	**+1.0**
	comp=Z,0.5nm,0.6s,mb3.9,baz=302,slow=8.4,SNR=2.9						
WRA	**Warramunga Arr**	**67.92**	**199**	P	**P**	**16 48 46.7**	**-1.5**
	comp=Z,0.5nm,0.8s,mb3.6,baz=16,slow=6.4,SNR=4.5						
WRA	**Warramunga Arr**	**67.92**	**199**	P	**P**	**16 48 46.7**	**-1.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**68.69**	**341**	P	**P**	**16 48 52.3**	**-0.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**68.69**	**341**	P	**P**	**16 48 52.3**	**-0.3**
	comp=Z,1.5nm,0.7s,mb4.0,baz=28,slow=6.2,SNR=7.1						
NOA	**NORSAR Array B**	**68.69**	**341**	P	**P**	**16 48 52.3**	**-0.2**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**71.62**	**198**	P	**P**	**16 49 10.8**	**0.0**
	comp=Z,0.1nm,0.5s,mb3.0,baz=14,slow=6.4,SNR=8.2						
AKASG	**Malin Array Be**	**71.90**	**326**	P	**P**	**16 49 12.0**	**-0.3**
	comp=Z,0.5nm,0.3s,mb4.0,baz=34,slow=6.7,SNR=5.7						
AKASG	**Malin Array Be**	**71.90**	**326**	*e*P	**P**	**16 49 12.0**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BUR08	**Bucovina Ar. S**	**75.92**	**326**	*e*P	**P**	**16 49 36.7**	**+0.7**
TXAR	**Lajitas Array**	**77.94**	**60**	P	**P**	**16 49 47.6**	**0.0**
	comp=Z,0.5nm,0.5s,mb3.7,baz=308,slow=5.0,SNR=8.3						
TXAR	**Lajitas Array**	**77.94**	**60**	P	**P**	**16 49 47.6**	**0.0**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**78.87**	**334**	P	**P**	**16 49 53.2**	**+0.8**
	comp=Z,0.4nm,0.5s,mb3.6,baz=28,slow=6.0,SNR=4.8						
RST	**Umm Al-Ruwaisa**	**79.21**	**301**	*e*P	**P**	**16 49 54.4**	**-0.2**
	baz=301						
RST				AMb	AMB	16 49 56.3	
	comp=Z,9.0nm,0.6s,mb4.9,baz=301						
NAY	**Al-Naaiem**	**79.25**	**301**	*e*P	**P**	**16 49 54.9**	**+0.1**
	baz=301						
NAY				AMb	AMB	16 49 56.6	
	comp=Z,5.0nm,1.0s,mb4.4,baz=301						
RDF	**Al-Radifah**	**79.30**	**301**	*e*P	**P**	**16 49 55.3**	**+0.2**
	baz=300						
RDF				AMb	AMB	16 49 57.2	
	comp=Z,20nm,0.9s,mb5.0,baz=300						
CFAA	**Coronel Fontan**	**145.28**	**80**	PKPbc	PKPbc	16 57 25.8	-0.9
	comp=Z,0.1nm,0.4s,baz=272,slow=8.1,SNR=3.8						
PLCA	**Paso Flores**	**148.35**	**96**	PKPbc	PKPbc	16 57 35.6	+0.4
	comp=Z,0.8nm,0.7s,baz=290,slow=5.1,SNR=4.0						
PLCA	**Paso Flores**	**148.35**	**96**	PKP2	PKPbc	16 57 35.7	+0.5
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

ISCJB ***19*** *16:46:34.7±0.6, 4106S±009×920W±0.1, h10km, mb4.2/12, MS4.0/17, Error ellipse: s-maj=16.0km s-min=12.9km az=176.3*

IDC ***19*** *16:46:34.6±0.8, 4099S×9199W, h0km, mb4.2/9, mb1 4.4/9, mb1mx4.2/18, mbtmp4.2/9, MS4.1/18, Ms1 4.1/18, ms1mx3.9/28, Error ellipse: s-maj=29.8km s-min=18.0km az=90.0*

NEIC ***19*** *16:46:36.2±0.6, 4100S×92.12W, h10km, mb4.3/3, Error ellipse: s-maj=15.9km s-min=12.8km az=76.0*

ISC 19 16:46:36.5±0.6, 4104S±009×921W±01, h10km, n33, σ1§06/19, mb4.2/12, MS4.0/17, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**16.30**	**96**	Pn	**Pn**	**16 50 27.5**	**+2.0**
	0.1nm,0.3s,baz=131,slow=2.5,SNR=2.8						
PLCA				LR	LR	16 55 48.2	
	comp=Z,501nm,18.1s,baz=244,slow=34						
USHA	**Ushuaia**	**20.89**	**139**	LR	LR	16 57 38.4	
	comp=Z,263nm,20.2s,MS3.6,baz=287,slow=32						
CFAA	**Coronel Fontan**	**21.36**	**71**	P	**P**	**16 51 23.2**	**-0.7**
	0.1nm,0.4s,baz=225,slow=8.1,SNR=3.5						
CFAA				LR	LR	16 57 41.3	
	comp=Z,136nm,20.8s,MS3.3,baz=249,slow=31						
CFAA	**Coronel Fontan**	**21.36**	**71**	P	**P**	**16 51 23.2**	**-0.7**
CFAA				LR	LR	16 57 41.3	
LVC	**Limon Verde**	**26.81**	**54**	LR	LR	17 00 06.9	
	comp=Z,634nm,19.6s,MS4.2,baz=223,slow=30						
PMSA	**Palmer Station**	**28.72**	**155**	P	**P**	**16 52 32.4**	**-1.0**
	7.0nm,0.4s,mb4.7,baz=258,slow=22,SNR=6.8						
PMSA				LR	LR	17 00 18.9	
	comp=Z,638nm,18.9s,MS4.2,baz=97,slow=29						
NNA	**Nana**	**31.89**	**29**	LR	LR	17 02 38.4	
	comp=Z,194nm,19.7s,MS3.8,baz=149,slow=30						
LPAZ	**La Paz**	**32.21**	**47**	P	**P**	**16 53 03.8**	**-1.0**
	1.1nm,0.3s,mb4.1,baz=229,slow=5.4,SNR=9.0						
LPAZ				LR	LR	17 03 09.2	
	comp=Z,262nm,19.2s,MS3.9,baz=242,slow=31						
LPAZ	**La Paz**	**32.21**	**47**	*e*P	**P**	**16 53 04.0**	**-0.8**
	1.2nm,0.4s,mb4.1						
LPAZ				LR	LR	17 03 09.2	
ATAH	**Atahualpa**	**36.03**	**24**	P	**P**	**16 53 39.8**	**+1.8**
	4.8nm,0.7s,mb4.5,baz=165,slow=9.6,SNR=4.1						
ATAH				LR	LR	17 04 39.5	
	comp=Z,378nm,20.6s,MS4.1,baz=214,slow=30						
SIV	**San Ignacio**	**36.63**	**56**	P	**P**	**16 53 42.3**	**-0.8**
	0.7nm,0.5s,mb3.8,baz=247,slow=10,SNR=5.3						
RKT	**Rikitea**	**40.02**	**283**	*e*LR	LR	17 05 20.9	
	1μm,28.2s,baz=134						
BDFB	**Brasilia**	**45.68**	**70**	LR	LR	17 13 27.9	
	comp=Z,764nm,18.2s,MS4.7,baz=205,slow=35						
ROSC	**El Rosal**	**48.49**	**24**	LR	LR	17 14 03.6	
	comp=Z,98nm,18.0s,MS3.8,baz=88,slow=34						
QSPA	**South Pole Qui**	**49.19**	**180**	P	**P**	**16 55 25.1**	**+1.0**
	1.1nm,0.6s,mb4.1,baz=103,slow=0.9,SNR=24						
QSPA	**South Pole Qui**	**49.19**	**180**	P	**P**	**16 55 25.1**	**+1.0**
SNAA	**Sanae**	**51.43**	**156**	*e*P	**P**	**16 55 40.9**	**-0.2**
	3.5nm,1.0s,mb4.2						
JTS	**JuntasAbangare**	**51.49**	**9**	LR	LR	17 12 26.0	
	comp=Z,154nm,19.4s,MS4.0,baz=174,slow=30						
PPT	**Papeete**	**54.25**	**278**	*e*S	**S**	**17 03 40.1**	**-0.1**
	236nm,25.0s						
PPT				*e*LR	LR	17 11 49.2	
	841nm,27.5s,baz=133						
PPT	**Papeete**	**54.25**	**278**	LR	LR	17 13 52.7	
	comp=Z,138nm,20.4s,MS4.0,baz=160,slow=30						
CMIG	**Matias Romero**	**57.89**	**357**	LR	LR	17 15 09.3	
	comp=Z,99nm,21.6s,MS3.9,baz=201,slow=30						
RAR	**Rarotonga**	**59.77**	**267**	LR	LR	17 15 45.3	
	comp=Z,258nm,20.9s,MS4.3,baz=322,slow=29						
TEIG	**Tepich**	**61.05**	**4**	LR	LR	17 18 56.0	
	comp=Z,22nm,20.3s,MS3.3,baz=55,slow=32						
URZ	**Urewera**	**66.72**	**239**	LR	LR	17 19 02.0	
	comp=Z,326nm,20.2s,MS4.5,baz=95,slow=29						
RPZ	**Rata Peaks**	**67.35**	**231**	LR	LR	17 18 38.3	
	comp=Z,241nm,19.3s,MS4.4,baz=5.4,slow=28						
MAW	**Mawson**	**70.04**	**170**	P	**P**	**16 57 47.6**	**-0.3**
	3.8nm,0.8s,mb4.4,baz=209,slow=7.0,SNR=11						
TXAR	**Lajitas Array**	**70.83**	**349**	P	**P**	**16 57 52.0**	**-1.2**
	1.1nm,0.8s,mb3.8,baz=171,slow=9.3,SNR=9.9						
URVA	**University of**	**79.36**	**12**	*e*P	**P**	**16 58 40.3**	**-1.8**
NVAR	**Mina Array Bea**	**82.63**	**340**	P	**P**	**16 59 00.3**	**+0.7**
	0.3nm,0.4s,mb3.7,baz=171,slow=7.3,SNR=3.6						
ELK	**Elko**	**84.07**	**343**	P	**P**	**16 59 07.8**	**+0.9**
	1.2nm,0.9s,mb4.0,baz=191,slow=7.7,SNR=4.4						
PDAR	**Pinedale Array**	**84.90**	**347**	P	**P**	**16 59 11.2**	**+0.2**
	3.3nm,0.8s,mb4.5,baz=145,slow=5.4,SNR=17						
TPAW	**Teton Pass**	**85.84**	**346**	*e*P	**P**	**16 59 16.5**	**+0.8**
	5.4nm,0.9s,mb4.8						
HNR	**Honiara**	**97.09**	**251**	LR	LR	17 34 17.6	
	comp=Z,107nm,19.4s,MS4.3,baz=140,slow=30						

CSEM ***19*** *16:57:50.7±0.1, 4041N×4685E, h20km, mb4.3, Error ellipse: s-maj=2.1km s-min=1.7km az=17.0*

MOS ***19*** *16:57:50.6±1.6, 4036N×4689E, h18km, mb4.3/15, Error ellipse: s-maj=8.4km s-min=5.5km az=93.8*

IDC ***19*** *16:57:51.8±0.9, 4031N×4668E, h19km±5km, mb3.9/14, mb1 4.0/17, mb1mx3.9/26, mbtmp3.9/17, ML3.9/3, MS3.4/2, Ms1 3.4/2, ms1mx2.6/42, Error ellipse: s-maj=18.3km s-min=7.4km az=162.0*

THR ***19*** *16:57:51.5±0.3, 4025N×4678E, h15km, ML3.9*

NEIC ***19*** *16:57:52.9±0.6, 4036N×4684E, mb4.1/9, Error ellipse: s-maj=13.9km s-min=7.3km az=174.0*

TIF ***19*** *16:57:52.1, 4033N×4667E, h7km±2km*

ISCJB ***19*** *16:57:53.2±0.3, 4032N±002×4691E±003, h47km±3km, mb4.0/21, Error ellipse: s-maj=4.1km s-min=3.2km az=170.0*

NNC ***19*** *16:57:59.8±3.4, 4077N×4798E, h0km, mb4.1, Error ellipse: s-maj=64.6km s-min=25.5km az=105.0*

NSSP ***19*** *16:58:48.2, 4028N×4670E, h10km, ML4.1*

ISC 19 16:57:53.9±0.5, 4039N±003×4686E±003, h30km±4km, n148, σ1§141/180, mb4.0/20, 8C-4D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRDA	**Brd**	**0.27**	**116**	P	**Pb**	**16 58 00.0**	**-0.9**
	SNR=1000						
BRDA				S	**Sb**	**16 58 07.3**	**+1.6**
GANJ	**Ganja**	**0.49**	**303**	P	**Pb**	**16 58 01.6**	**-2.5**
	SNR=1000						
SEKA	**Sheki**	**0.86**	**17**	P	**Pn**	**16 58 10.2**	**+0.2**
	SNR=105						
GRS	**Goris**	**0.97**	**205**	⇓P	**Pn**	**16 58 08.0**	**-3.5**
GRS				S	**Sn**	**16 58 20.0**	**-4.3**
AKT	**Akhty**	**1.28**	**31**	PG	**Pn**	**16 58 16.0**	**+0.3**
AKT				S	**Sn**	**16 58 36.0**	**+4.2**
KSMR	**Kasumkent**	**1.55**	**38**	*i* Pg	**Pn**	**16 58 17.0**	**-2.4**
KSMR				*i* Sg	**Sn**	**16 58 41.5**	**+3.0**
DGRG	**David-gareji**	**1.55**	**314**	P	**Pn**	**16 58 20.5**	**+1.0**
DGRG				S	**Sn**	**16 58 42.5**	**+4.0**
NAX	**Nakhchivan**	**1.60**	**221**	P	**Pn**	**16 58 19.8**	**-0.4**
	SNR=233						
NAX				S	**Sn**	**16 58 38.6**	**-1.2**
GNI	**Garni**	**1.64**	**262**	Pg	**Pn**	**16 58 20.6**	**0.0**
	324nm,0.3s,baz=253,slow=0.5,SNR=545

SIRT	**Sirnak**	**4.49**	**232**	*e*PN		**Pn**	**16 59 01.7**	**+1.8**
SHAR	**Shatzhatmas**	**4.58**	**318**	*e*PN		**Pn**	**16 59 01.2**	**+0.1**
PYA	**Pyatigorsk**	**4.61**	**323**	*e*PN		**Pn**	**16 59 05.3**	**+3.8**
KIV	**Kislovodsk**	**4.73**	**320**	*e*PN		**Pn**	**16 59 06.5**	**+3.4**
KIV	**Kislovodsk**	**4.73**	**320**	*e*P		**Pn**	**16 59 06.2**	**+3.1**
MSL	**Mosul**	**5.05**	**217**	*ex*		x	16 59 05.0	
MSL				*ex*		x	17 00 08.0	
SNGE	**Sanandaj**	**5.30**	**176**	*e*Pn		**Pn**	**16 59 10.8**	**-0.2**
THKV	**Tehran--Karaj**	**5.47**	**143**	*e*Pn		**Pn**	**16 59 13.9**	**+0.5**
THKV					AML	AML	17 00 20.5	
	comp=N,60nm,0.4s							
THKV					AML	AML	17 00 21.0	
	comp=E,154nm,0.5s							
GUMT	**Gumushane**	**5.63**	**273**	*e*PN		**Pn**	**16 59 19.6**	**+4.1**
PTK	**Pertek**	**5.95**	**258**	*e*PN		**Pn**	**16 59 22.3**	**+2.3**
SVRC	**Sivrice-ELAZID**	**6.18**	**254**	*e*PN		**Pn**	**16 59 25.9**	**+2.8**
DAMV	**Damavand**	**6.23**	**138**	*e*Pn		**Pn**	**16 59 24.3**	**+0.5**
DAMV					AML	AML	17 00 41.1	
	comp=N,34nm,0.6s							
DAMV					AML	AML	17 00 44.0	
	comp=E,34nm,0.7s							
ASAO	**Ashtian**	**6.35**	**156**	*e*Pn		**Pn**	**16 59 25.6**	**+0.2**
MALT	**Malatya**	**6.86**	**255**	*e*P		**Pn**	**16 59 32.1**	**-0.2**
MALT					pmax	pmax		
	comp=Z,3.0nm,0.7s							
MALT	**Malatya**	**6.86**	**255**	*e*P		**Pn**	**16 59 32.1**	**-0.2**
	comp=Z,3.0nm,0.7s							
MALT	**Malatya**	**6.86**	**255**	*e*Pn		**Pn**	**16 59 32.1**	**-0.2**
	comp=Z,2.8nm,0.7s							
ANN	**Anapa**	**8.23**	**305**	*e*P		**Pn**	**16 59 49.3**	**-1.9**
ANN				*e*S		**Sn**	**17 01 21.6**	**-1.6**
ANN					pmax	pmax		
	comp=Z,13nm,1.0s							
ANN	**Anapa**	**8.23**	**305**	*e*P		**Pn**	**16 59 49.3**	**-1.9**
	comp=Z,13nm,1.0s							
MMAI	**Mount Meron Ar**	**11.77**	**235**	LR		LR	17 05 53.0	
	comp=Z,146nm,18.4s,baz=75,slow=41							
AKTK	**Aktyubinsk**	**12.73**	**34**	Pn		**Pn**	**17 00 50.5**	**-2.2**
AKTK	**Aktyubinsk**	**12.73**	**34**	Pn		**Pn**	**17 00 50.5**	**-2.2**
AKTK				Sn		**Sn**	**17 03 08.8**	**-4.5**
AKTO	**Aktyubinsk**	**12.73**	**34**	⇑Pn		**Pn**	**17 00 50.9**	**-1.8**
	comp=Z,0.8nm,0.5s							
AKTO				⇑Sn		**Sn**	**17 03 06.8**	**-6.5**
	comp=Z,1.1nm,0.6s							
AKTO	**Aktyubinsk**	**12.73**	**34**	Pn		**Pn**	**17 00 50.5**	**-2.2**
	comp=Z,1.0nm,0.3s,baz=204,slow=12,SNR=12							
AKTO				Sn		**Sn**	**17 03 08.8**	**-4.5**
	comp=Z,1.1nm,0.3s,baz=348,slow=20,SNR=5.7							
AKTO	**Aktyubinsk**	**12.73**	**34**	P		**Pn**	**17 00 50.5**	**-2.2**
AKTO							17 03 08.8	
AKTO					pmax	pmax		
	comp=Z,1.0nm,0.3s							
AKTO					smax			
	comp=N,1.0nm,0.3s							
AB31	**Akbulak array**	**12.83**	**42**	⇑Pn		**Pn**	**17 00 52.6**	**-1.5**
	comp=N,2.7nm,0.5s,baz=225,slow=13,SNR=52							
AB31				⇓Sn		**Sn**	**17 03 07.8**	**-7.9**
	comp=N,1.3nm,0.3s,baz=345,slow=45,SNR=5.2							
AKASG	**Malin Array Be**	**16.05**	**316**	Pn		**Pn**	**17 01 35.2**	**-2.1**
	comp=N,0.3nm,0.3s,baz=129,slow=8.8,SNR=3.6							
AKASG	**Malin Array Be**	**16.05**	**316**	Pn		**Pn**	**17 01 35.2**	**-2.1**
KIEV	**Kiev**	**16.06**	**316**	*e*P		**Pn**	**17 01 39.6**	**+2.2**
KIEV					pmax	pmax		
	comp=Z,4.0nm,0.7s							
KIEV	**Kiev**	**16.06**	**316**	*e*P		**Pn**	**17 01 39.6**	**+2.2**
	comp=Z,4.4nm,0.7s							
OBN	**Obninsk**	**16.25**	**338**	*e*P		**Pn**	**17 01 39.3**	**-0.5**
OBN					pmax	pmax		
	comp=Z,8.0nm,1.2s							
OBN					MLR	MLR		
	comp=Z,100nm,19.0s							
OBN	**Obninsk**	**16.25**	**338**	*e*P		**Pn**	**17 01 39.3**	**-0.5**
	comp=Z,100nm,19.0s							
BUR08	**Bucovina Ar. S**	**17.15**	**302**	*e*P		**Pn**	**17 01 53.4**	**+2.2**
ARU	**Arti**	**17.79**	**22**	*d*/P		**Pn**	**17 01 59.0**	**-0.1**
ARU				*e*S		**Sn**	**17 05 19.9**	**+3.6**
ARU					pmax	pmax		
	comp=Z,6.0nm,0.7s							
ARU	**Arti**	**17.79**	**22**	*i* P		**Pn**	**17 01 59.0**	**-0.1**
	comp=Z,6.0nm,0.7s							
ARU	**Arti**	**17.79**	**22**	*e*P		**Pn**	**17 01 55.3**	**-3.7**
	comp=Z,5.5nm,0.4s							
KK31	**Karatay Array**	**17.85**	**73**	P		**Pn**	**17 01 58.5**	**-1.3**
	comp=Z,18nm,0.9s,baz=277,slow=13,SNR=51							
IDI	**Anoyia**	**18.07**	**261**	P		**Pn**	**17 02 00.7**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=220,slow=14,SNR=4.4							
IDI				LR		LR	17 10 16.1	
	comp=Z,122nm,18.6s,baz=256,slow=42							
KBL	**Kabul**	**18.53**	**101**	P		**Pn**	**17 02 10.3**	**+2.0**
KBL					pmax	pmax		
	comp=Z,3.0nm,0.7s							
KBL	**Kabul**	**18.53**	**101**	P		**Pn**	**17 02 10.3**	**+2.0**
	comp=Z,2.8nm,0.7s							
KBL	**Kabul**	**18.53**	**101**	P		**Pn**	**17 02 10.3**	**+2.1**
	comp=Z,2.9nm,0.7s							
SVE	**Sverdlovsk**	**18.75**	**24**	⇓*e*P		**Pn**	**17 02 08.4**	**-2.3**
SVE				*e*S		**Sn**	**17 05 33.4**	**-5.9**
SVE					pmax	pmax		
	comp=Z,20nm,0.6s							
SVE	**Sverdlovsk**	**18.75**	**24**	*e*P		**Pn**	**17 02 08.4**	**-2.3**
	comp=Z,20nm,0.6s							
AML	**Almayashu**	**20.22**	**76**	*e*P		**P**	**17 02 24.6**	**-1.8**
	comp=Z,14nm,0.8s							
EKS2	**Erkin-Say**	**20.25**	**75**	*e*P		**P**	**17 02 27.7**	**+1.0**
	comp=Z,73nm,0.6s							
EKS2	**Erkin-Say**	**20.25**	**75**	*e*P		**P**	**17 02 27.7**	**+1.1**
	comp=Z,73nm,0.6s							
BRVK	**Borovoye**	**20.34**	**44**	*e*P		**P**	**17 02 26.8**	**-0.8**
BRVK					pmax	pmax		
	comp=Z,10.0nm,0.6s							
BRVK	**Borovoye**	**20.34**	**44**	*e*P		**P**	**17 02 26.8**	**-0.8**
	comp=Z,10.0nm,0.6s							
BRVK	**Borovoye**	**20.34**	**44**	*e*P		**P**	**17 02 26.8**	**-0.8**
	comp=Z,10.0nm,0.6s							
BVA0	**Borovoye Array**	**20.38**	**44**	⇑P		**P**	**17 02 28.8**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=261,slow=9.2,SNR=27							
BVA0	**Borovoye Array**	**20.38**	**44**	P		**P**	**17 02 28.8**	**+0.8**
	comp=Z,0.9nm,0.7s,SNR=27							
BVAR	**Borovoye Array**	**20.38**	**44**	P		**P**	**17 02 28.3**	**+0.3**
	comp=Z,1.8nm,0.4s,baz=231,slow=9.4,SNR=21							
BVAR					pP		17 02 35.0	
	comp=Z,2.8nm,0.4s,baz=226,slow=12,SNR=14							
BVAR	**Borovoye Array**	**20.38**	**44**	P		**P**	**17 02 28.3**	**+0.3**
BVAR				*PP			17 02 35.0	
BVAR					pmax	pmax		
	comp=Z,2.0nm,0.4s							
BVAR					pmax	pmax		
	comp=Z,3.0nm,0.4s							
VOSK	**Vostochnaya**	**20.56**	**45**	⇑P		**P**	**17 02 29.7**	**-0.1**
	comp=Z,4.3nm,0.5s							
FRU	**Bishkek**	**20.86**	**74**	*i* P		**P**	**17 02 40.0**	**+6.7**
SUW	**Suwalki**	**20.95**	**318**	*e*P		**P**	**17 02 34.4**	**+0.2**
SUW					pmax	pmax		
	comp=Z,47nm,1.0s							
SUW	**Suwalki**	**20.95**	**318**	*e*P		**P**	**17 02 34.4**	**+0.2**
	comp=Z,47nm,1.0s							
SUW	**Suwalki**	**20.95**	**318**	*e*P		**P**	**17 02 34.4**	**+0.2**
	comp=Z,47nm,1.0s							
TKM2	**Tokmak 2**	**21.58**	**74**	⇑P		**P**	**17 02 40.3**	**-0.7**
	comp=Z,11nm,0.8s,mb4.3							
KURK	**Kurchatov**	**24.35**	**54**	⇑P		**P**	**17 03 09.4**	**+0.6**
	comp=Z,5.7nm,0.8s,mb4.0							
KURK	**Kurchatov**	**24.35**	**54**	P		**P**	**17 03 09.0**	**+0.1**
	comp=Z,1.5nm,0.7s,mb3.5,baz=262,slow=9.3,SNR=10							
KURK					pP		17 03 15.9	
	comp=Z,2.2nm,0.6s,baz=261,slow=9.5,SNR=10.0							
KURK	**Kurchatov**	**24.35**	**54**	P		**P**	**17 03 09.0**	**+0.1**
KURK				*PP			17 03 15.9	
KURK					pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7							
KURK					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7							
KURK	**Kurchatov**	**24.35**	**54**	*e*P		**P**	**17 03 09.6**	**+0.7**
KURK					pP		17 03 15.9	
JOF	**Joensuu**	**24.41**	**343**	*e*p		**P**	**17 03 08.6**	**-0.7**
	comp=Z,11nm,0.6s,mb4.5							
JOF	**Joensuu**	**24.41**	**343**	*e*P		**P**	**17 03 08.6**	**-0.7**
JOF					pmax	pmax		
	comp=Z,11nm,0.6s,mb4.5							
FINES	**FINESS Array B**	**24.61**	**336**	*e*P		**P**	**17 03 10.1**	**-1.1**
GEC2	**GERESS Array S**	**24.91**	**301**	*e*P		**P**	**17 03 14.5**	**+0.4**
GERES	**GERESS Array B**	**24.91**	**301**	P		**P**	**17 03 14.1**	**0.0**
	comp=Z,8.1nm,0.8s,mb4.3,baz=120,slow=6.8,SNR=50							
GERES	**GERESS Array B**	**24.91**	**301**	P		**P**	**17 03 14.1**	**0.0**
GERES					pmax	pmax		
	comp=Z,8.0nm,0.8s							
KHC	**Kasperske Hory**	**25.03**	**302**	⇑*e*P		**P**	**17 03 14.9**	**-0.3**
KAF	**Kangasniemi**	**25.06**	**337**	*ep*		**P**	**17 03 15.3**	**+0.1**
	comp=Z,3.7nm,0.5s,mb4.2							
KAF	**Kangasniemi**	**25.06**	**337**	*e*P		**P**	**17 03 15.3**	**+0.1**
KAF					pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.2							
BRG	**Berggiesshubel**	**25.10**	**306**	*e*P		**P**	**17 03 17.4**	**+1.7**
BRG					pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8							
BRG	**Berggiesshubel**	**25.10**	**306**	*e*(P)		**P**	**17 03 17.4**	**+1.6**
	comp=Z,3.0nm,0.7s,mb3.9							
CLL	**Collm**	**25.77**	**306**	*e*(P)		**P**	**17 03 24.0**	**+2.2**
	comp=Z,9.0nm,1.0s,mb4.2							
MKAR	**Makanchi Array**	**26.29**	**64**	P		**P**	**17 03 26.9**	**+0.3**
	comp=Z,1.4nm,0.5s,mb3.8,baz=267,slow=8.9,SNR=12							
MKAR	**Makanchi Array**	**26.29**	**64**	P		**P**	**17 03 26.9**	**+0.3**
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**26.29**	**64**	P		**P**	**17 03 26.9**	**+0.3**
MK31	**Makanchi Array**	**26.29**	**64**	P		**P**	**17 03 29.6**	**+3.0**
	comp=Z,2.6nm,0.6s,mb4.0,baz=271,slow=8.9,SNR=18							
NVS	**Novosibirsk**	**28.09**	**47**	*e*P		**P**	**17 03 48.3**	**+5.7**
HFS	**Hagfors**	**28.51**	**325**	P		**P**	**17 03 45.6**	**-0.7**
	comp=Z,3.2nm,0.5s,mb4.3,baz=122,slow=9.8,SNR=17							
HFS	**Hagfors**	**28.51**	**325**	P		**P**	**17 03 45.6**	**-0.7**
HFS					pmax	pmax		
	comp=Z,3.0nm,0.5s							
ZALV	**Zalesovo Beam**	**28.77**	**49**	P		**P**	**17 03 48.2**	**-0.5**
	comp=Z,0.6nm,0.3s,mb3.8,baz=261,slow=5.7,SNR=2.6							
ZALV					pP	pP	17 03 55.3	-2.1
	comp=Z,1.1nm,0.4s,baz=269,slow=8.1,SNR=3.5							
ZALV	**Zalesovo Beam**	**28.77**	**49**	P		**P**	**17 03 48.2**	**-0.5**
ZALV				*PP		pP	17 03 55.3	-2.0
ZALV					pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0							
ZALV					pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9							
ZALV	**Zalesovo Beam**	**28.77**	**49**	P		**P**	**17 03 48.2**	**-0.5**
ZALV					pP	pP	17 03 55.3	-2.1
NB2	**NORSAR Subarra**	**30.01**	**325**	P		**P**	**17 03 57.9**	**-1.7**
	comp=Z,1.5nm,0.5s,mb4.0,baz=119,slow=8.6							
NOA	**NORSAR Array B**	**30.01**	**325**	P		**P**	**17 03 58.5**	**-1.1**
	comp=Z,1.5nm,0.5s,mb4.0,baz=119,slow=8.3,SNR=6.3							
NOA	**NORSAR Array B**	**30.01**	**325**	P		**P**	**17 03 58.5**	**-1.1**
NOA					pmax	pmax		
	comp=Z,2.0nm,0.5s							
ARCES	**ARCESS Array B**	**31.31**	**346**	P		**P**	**17 04 10.8**	**-0.2**
	comp=Z,0.7nm,0.3s,mb3.9,baz=160,slow=9.2,SNR=14							
ARCES	**ARCESS Array B**	**31.31**	**346**	P		**P**	**17 04 10.8**	**-0.2**
ARCES					pmax	pmax		
	comp=Z,1.0nm,0.3s							
ARCES	**ARCESS Array B**	**31.31**	**346**	P		**P**	**17 04 10.8**	**-0.2**
ESDC	**Sonseca Array**	**38.48**	**286**	P		**P**	**17 05 12.0**	**-1.2**
	comp=Z,0.8nm,0.5s,mb3.7,baz=66,slow=8.6,SNR=3.8							
SONM	**Songino Array**	**42.45**	**59**	P		**P**	**17 05 46.4**	**+0.6**
	comp=Z,0.3nm,0.5s,mb3.1,baz=280,slow=8.6,SNR=3.4							
ULN	**Ulaanbaatar**	**42.88**	**59**	*e*P		**P**	**17 05 51.8**	**+2.5**
ULN					pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7							
ULN	**Ulaanbaatar**	**42.88**	**59**	*e*P		**P**	**17 05 51.8**	**+2.5**
	comp=Z,1.5nm,0.6s,mb3.9							
BOD	**Bodaibo**	**45.25**	**44**	*e*P		**P**	**17 06 08.4**	**+0.2**
TORD	**Torodi Ar. Bea**	**47.90**	**249**	P		**P**	**17 06 27.2**	**-2.2**
	comp=Z,1.0nm,0.7s,mb3.9,baz=40,slow=7.7,SNR=6.7							
KSRS	**Korea Array**	**60.97**	**64**	P		**P**	**17 08 04.8**	**+0.6**
	comp=Z,2.3nm,0.6s,mb4.5,baz=296,slow=6.7,SNR=10							
KSRS	**Korea Array**	**60.97**	**64**	P		**P**	**17 08 04.9**	**+0.6**
KSRS					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4							
SCHQ	**Schefferville**	**69.59**	**326**	P		**P**	**17 08 59.5**	**-0.3**
	comp=Z,2.6nm,0.9s,mb4.2,baz=58,slow=9.5,SNR=3.8							
SCHQ	**Schefferville**	**69.59**	**326**	P		**P**	**17 08 59.5**	**-0.3**
BOSA	**Boshof**	**71.52**	**200**	P		**P**	**17 09 11.3**	**-0.4**
	comp=Z,1.7nm,1.0s,mb3.9,baz=27,slow=6.8,SNR=2.9							
BOSA	**Boshof**	**71.52**	**200**	P		**P**	**17 09 11.3**	**-0.4**
BOSA					pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0							
BOSA	**Boshof**	**71.52**	**200**	P		**P**	**17 09 11.3**	**-0.4**

ISCJB ***19*** *17:08:41.8±1.0, 3560N±005×255E±0.1, h33km, Error ellipse: s-maj=12.3km s-min=6.8km az=172.6*
CSEM ***19*** *17:08:41.5, 3567N×2547E, h10km, MD3.4/3, After ATH*
ATH ***19*** *17:08:41.5, 3567N×2547E, h10km, MD3.4/3*

ISC 19 17:08:42.0±1.0, 3561N±005×255E±01, h15km±16km, n9, σ0°45°/9, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**0.37**	**161**	*e*PB	**Pg**	**17 08 49.5**	**0.0**
THR6	**Thira Island,**	**0.74**	**356**	*e*P	**Sg**	**17 09 06.1**	**-0.1**
SANT	**Santorini**	**0.76**	**360**	*e*P	**Sg**	**17 09 07.3**	**+0.7**
THR1	**Thera Island**	**0.76**	**360**	*e*P	**Sg**	**17 09 07.2**	**+0.5**
THR3	**Thira Island,**	**0.80**	**356**	*e*P	**Sg**	**17 09 07.7**	**-0.2**
THR5	**Thira Island,**	**0.81**	**353**	*e*P	**Sg**	**17 09 07.4**	**-0.9**
VAM	**Vamos**	**1.05**	**259**	*e*PB	**Pb**	**17 09 02.0**	**+0.1**
KARP	**Karpathos**	**1.39**	**92**	*e*PB	**Pb**	**17 09 07.5**	**-0.1**
APE	**Apeiranthos**	**1.45**	**2**	*e*P	**Pg**	**17 09 15.9**	**+5.9**

ISCJB ***19*** *17:13:30.2±1.1, 185N±01×6606W±004, h99km±10km,*
Error ellipse: s-maj=24.0km s-min=5.8km az=7.1
NEIC ***19*** *17:13:31.2, 1846N×6607W, h98km, MD3.1(RSPR), After RSPR.*
RSPR ***19*** *17:13:31.2, 1846N×6607W, h98km±1km, MD3.1/15, MD3.1/15*

ISC 19 17:13:30.4±1.1, 185N±01×6605W±004, h100km±10km, n58, σ0°40/76, 29C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	**0.34**	**196**	⇑*e*P	**Pn**	**17 13 45.6**	**+0.4**
SJG	**San Juan**	**0.34**	**196**	*e*S	**Sn**	**17 13 56.9**	**+0.6**
SJG	**San Juan**	**0.34**	**196**	⇓*e*P	**Pn**	**17 13 45.1**	**-0.2**
SJG	**San Juan**	**0.34**	**196**	⇑*e*P	**Pn**	**17 13 44.9**	**-0.4**
SJG	**San Juan**	**0.34**	**196**	*e*S	**Sn**	**17 13 56.5**	**+0.2**
SJG	**San Juan**	**0.34**	**196**	⇑*e*P	**Pn**	**17 13 44.8**	**-0.4**
SJG				*e*S	**Sn**	**17 13 55.6**	**-0.7**
SJG	**San Juan**	**0.34**	**196**	⇑*e*P	**Pn**	**17 13 44.9**	**-0.4**
SJG				*e*S	**Sn**	**17 13 56.5**	**+0.2**
HUMP	**Col San Antoni**	**0.36**	**148**	⇑*e*P	**Pn**	**17 13 45.5**	**+0.2**
HUMP	**Col San Antoni**	**0.36**	**148**	*e*S	**Sn**	**17 13 56.7**	**+0.3**
HUMP	**Col San Antoni**	**0.36**	**148**	⇑*e*P	**Pn**	**17 13 45.4**	**+0.1**
HUMP	**Col San Antoni**	**0.36**	**148**	*e*S	**Sn**	**17 13 56.7**	**+0.3**
HUMP	**Col San Antoni**	**0.36**	**148**	⇑*e*P	**Pn**	**17 13 45.4**	**+0.1**
HUMP				*e*S	**Sn**	**17 13 56.7**	**+0.3**
CPD	**Cerro la Pandu**	**0.43**	**162**	⇑*e*P	**Pn**	**17 13 45.8**	**+0.1**
CPD	**Cerro la Pandu**	**0.43**	**162**	*e*S	**Sn**	**17 13 57.4**	**+0.2**
CPD	**Cerro la Pandu**	**0.43**	**162**	⇑*e*P	**Pn**	**17 13 45.7**	**0.0**
CPD	**Cerro la Pandu**	**0.43**	**162**	*e*S	**Sn**	**17 13 57.4**	**+0.3**
CPD	**Cerro la Pandu**	**0.43**	**162**	⇑*e*P	**Pn**	**17 13 45.7**	**0.0**
CPD				*e*S	**Sn**	**17 13 57.4**	**+0.3**
MTP	**Monte Pirata**	**0.59**	**126**	⇓*e*P	**Pn**	**17 13 47.5**	**+0.6**
MTP	**Monte Pirata**	**0.59**	**126**	*e*S	**Sn**	**17 14 00.2**	**+1.0**
MTP	**Monte Pirata**	**0.59**	**126**	⇑*e*P	**Pn**	**17 13 47.4**	**+0.5**
MTP	**Monte Pirata**	**0.59**	**126**	*e*S	**Sn**	**17 13 59.6**	**+0.4**
MTP	**Monte Pirata**	**0.59**	**126**	⇑*e*P	**Pn**	**17 13 47.4**	**+0.5**
MTP				*e*S	**Sn**	**17 13 59.6**	**+0.4**
CELP	**Cerrillos**	**0.62**	**234**	⇑*e*P	**Pn**	**17 13 47.0**	**-0.1**
CELP				*e*S	**Sn**	**17 13 59.4**	**-0.3**
CELP	**Cerrillos**	**0.62**	**234**	⇑*i*P	**Pn**	**17 13 47.0**	**-0.1**
CELP				*e*S	**Sn**	**17 13 59.2**	**-0.5**
CELP	**Cerrillos**	**0.62**	**234**	⇑*e*P	**Pn**	**17 13 47.0**	**-0.1**
CELP				*e*S	**Sn**	**17 13 59.2**	**-0.5**
OBIP	**Obispado Ponce**	**0.66**	**233**	⇑*i*P	**Pn**	**17 13 47.4**	**-0.1**
OBIP	**Obispado Ponce**	**0.66**	**233**	⇑*e*P	**Pn**	**17 13 47.5**	**0.0**
OBIP				*e*S	**Sn**	**17 13 59.9**	**-0.4**
AOPR	**Arecibo Observ**	**0.67**	**262**	⇑*e*P	**Pn**	**17 13 47.6**	**0.0**
AOPR	**Arecibo Observ**	**0.67**	**262**	*e*S	**Sn**	**17 14 00.5**	**0.0**
AOPR	**Arecibo Observ**	**0.67**	**262**	⇑*i*P	**Pn**	**17 13 47.6**	**0.0**
AOPR	**Arecibo Observ**	**0.67**	**262**	*e*S	**Sn**	**17 14 00.3**	**-0.1**
AOPR	**Arecibo Observ**	**0.67**	**262**	⇑*i*P	**Pn**	**17 13 47.6**	**0.0**
AOPR				*e*S	**Sn**	**17 14 00.3**	**-0.1**
ICM	**Isla Caja Muer**	**0.71**	**219**	*e*S	**Sn**	**17 14 01.1**	**+0.1**
ICM	**Isla Caja Muer**	**0.71**	**219**	*e*S	**Sn**	**17 14 00.9**	**-0.1**
ICM	**Isla Caja Muer**	**0.71**	**219**	⇑*e*P	**Pn**	**17 13 47.9**	**-0.1**
ICM				*e*S	**Sn**	**17 14 00.9**	**-0.1**
LRS	**Lares**	**0.77**	**259**	⇑*e*P	**Pn**	**17 13 48.2**	**-0.2**
LRS				*e*S	**Sn**	**17 14 01.7**	**-0.3**
LRS	**Lares**	**0.77**	**259**	⇑*i*P	**Pn**	**17 13 48.2**	**-0.3**
LRS				*e*S	**Sn**	**17 14 01.6**	**-0.4**
GBPR	**Guanica, Bosqu**	**0.92**	**239**	⇑*e*P	**Pn**	**17 13 50.1**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.92**	**239**	⇓*i*P	**Pn**	**17 13 50.1**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.92**	**239**	*e*S	**Sn**	**17 14 05.2**	**+0.6**
AGPR	**Aguadilla, PR**	**1.01**	**271**	⇓*e*P	**Pn**	**17 13 50.9**	**0.0**
AGPR	**Aguadilla, PR**	**1.01**	**271**	*e*S	**Sn**	**17 14 06.2**	**-0.1**
AGPR	**Aguadilla, PR**	**1.01**	**271**	⇑*e*P	**Pn**	**17 13 50.7**	**-0.1**
AGPR	**Aguadilla, PR**	**1.01**	**271**	*e*S	**Sn**	**17 14 06.2**	**-0.1**
AGPR	**Aguadilla, PR**	**1.01**	**271**	⇑*e*P	**Pn**	**17 13 50.7**	**-0.1**
AGPR				*e*S	**Sn**	**17 14 06.2**	**-0.1**
LSP	**Las Mesas**	**1.02**	**255**	⇑*e*P	**Pn**	**17 13 51.7**	**+0.6**
LSP	**Las Mesas**	**1.02**	**255**	⇑*e*P	**Pn**	**17 13 51.0**	**0.0**
LSP	**Las Mesas**	**1.02**	**255**	*e*S	**Sn**	**17 14 06.5**	**-0.1**
LSP	**Las Mesas**	**1.02**	**255**	⇑*e*P	**Pn**	**17 13 51.0**	**0.0**
LSP				*e*S	**Sn**	**17 14 06.5**	**-0.1**
MPR	**Mayaguez**	**1.06**	**257**	⇓*e*P	**Pn**	**17 13 51.4**	**0.0**
MPR	**Mayaguez**	**1.06**	**257**	⇓*e*P	**Pn**	**17 13 51.4**	**0.0**
MPR				*e*S	**Sn**	**17 14 07.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.10**	**247**	⇑*e*P	**Pn**	**17 13 52.7**	**+0.8**
CRPR	**Cabo Rojo, PR**	**1.10**	**247**	*e*S	**Sn**	**17 14 08.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.10**	**247**	⇑*i*P	**Pn**	**17 13 52.8**	**+0.9**
CRPR	**Cabo Rojo, PR**	**1.10**	**247**	⇑*i*P	**Pn**	**17 13 52.8**	**+0.9**
CRPR				*e*S	**Sn**	**17 14 08.3**	**+0.2**
CDVI	**St. Croix**	**1.40**	**119**	⇑*e*P	**Pn**	**17 13 55.5**	**0.0**
CDVI	**St. Croix**	**1.40**	**119**	⇑*e*P	**Pn**	**17 13 55.5**	**0.0**
CDVI				*e*S	**Sn**	**17 14 13.3**	**-1.2**

JMA 19 17:15:33.3±0.1, 2628N×12939E, h44km, M3.7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**1.14**	**299**	P	Pn	17 15 53.4	+0.6
JOW				S	Sn	17 16 06.6	-0.7
JIH	**Iheya**	**1.48**	**301**	P	Pn	17 15 58.4	+1.0
JIH				S	Sn	17 16 15.8	+0.2
JJT2	**Tamagusuku 2**	**1.48**	**265**	P	Pn	17 15 58.3	+0.8
NAH1	**Naha**	**1.53**	**268**	P	Pn	17 15 58.8	+0.7
NAH1				*e*S	Sn	17 16 16.9	+0.1
JTK	**Tokunoshima**	**1.55**	**345**	P	Pn	17 15 59.3	+0.9
JTK				*e*S	Sn	17 16 17.8	+0.5
JMZ	**Minamidaito 2**	**1.71**	**105**	P	Pn	17 16 01.3	+0.7
JMZ				S	Sn	17 16 20.7	-0.6
JAGN	**Aguni-jima**	**1.95**	**280**	P	Pn	17 16 05.1	+1.2
JAGN				S	Sn	17 16 27.0	-0.2
JZK	**Kikaishima**	**2.09**	**14**	P	Pn	17 16 07.5	+1.6
JZK				*e*S	S

PLCA LR LR 17 39 53.7
comp=Z,1µm,19.9s,MS4.8,baz=92,slow=30
SYO Syowa Base 47.41 157 ⇑*iP* **P 17 25 19.2 -1.4**
SYO Syowa Base 47.41 157 ⇓*i*pP pP 17 25 20.8 -2.9
TOA0 Torodi Ar. Sit 47.53 21 *eP* **P 17 25 21.3 -0.7**
TORD Torodi Ar. Bea 47.53 21 P **P 17 25 20.9 -1.2**
comp=Z,36nm,0.9s,mb5.4,baz=198,slow=8.2,SNR=145
TORD LR LR 17 41 32.0
comp=Z,873nm,19.6s,MS4.7,baz=195,slow=31
LPAZ La Paz 51.41 275 P **P 17 25 51.0 -0.8**
comp=Z,2.8nm,0.5s,mb4.5,baz=103,slow=5.5,SNR=18
LPAZ LR LR 17 46 20.1
comp=Z,2µm,21.1s,MS5.1,baz=129,slow=35
MAW Mawson 55.63 153 ⇓*iP* **P 17 26 22.2 +0.1**
comp=Z,83nm,0.9s,mb5.8
MAW Mawson 55.63 153 P **P 17 26 22.5 +0.4**
comp=Z,101nm,0.8s,mb5.9,baz=265,slow=7.1,SNR=206
MAW LR LR 17 44 26.3
comp=Z,1µm,22.0s,MS4.9,baz=277,slow=30
MAW Mawson 55.63 153 ⇓*iP* **P 17 26 22.2 +0.1**
MAW pmax pmax
comp=Z,83nm,0.9s
ABPO Ambohimpanom 56.01 92 *eP* **P 17 26 26.9 +1.3**
comp=Z,45nm,1.4s,mb5.3
OPO Ambohidratompo 56.18 92 P **P 17 26 26.9 +0.2**
comp=Z,5.9nm,0.9s,mb4.6,baz=253,slow=12,SNR=5.1
KMBO Kilima Mbogo 57.19 68 P **P 17 26 35.3 +1.3**
comp=Z,4.0nm,0.8s,mb4.5,baz=238,slow=12,SNR=7.3
KMBO LR LR 17 49 47.5
comp=Z,1µm,18.3s,MS5.1,baz=276,slow=35
TAM Tamanrasset 57.78 21 *eP* **P 17 26 38.6 +0.7**
MIR Mirnyy 67.19 155 ⇓*iP* **P 17 27 40.0 -0.3**
MIR *i* 17 27 48.0
MIR pmax pmax
comp=Z,400nm,1.5s,mb6.2
MIR MLR MLR
comp=Z,600nm,18.0s,MS4.9
SDV Santo Domingo 67.79 297 *eP* **P 17 27 45.3 +0.4**
comp=Z,41nm,1.1s,mb5.1
ROSC El Rosal 68.15 291 LR LR 17 56 39.6
comp=Z,2µm,18.2s,MS5.5,baz=195,slow=35
OTAV Otavalo 68.77 284 *eP* **P 17 27 51.8 +0.8**
comp=Z,14nm,0.9s,mb4.9
EMIJ Mijas 68.97 8 P **P 17 27 46.4 -5.3**
comp=Z,62nm,2.1s,mb5.2
ESPR Espera 69.15 7 P **P 17 27 52.1 -0.7**
comp=Z,173nm,2.8s,mb5.5
PBDV Barranco-do-Ve 69.34 5 *eP* **P 17 27 54.4 +0.4**
comp=Z,36nm,1.4s,mb5.1
MORF Marmelete 69.35 4 *eP* **P 17 27 54.1 0.0**
comp=Z,46nm,1.5s,mb5.2
PVAQ Vaqueiros 69.52 5 *eP* **P 17 27 55.4 +0.3**
comp=Z,36nm,1.4s,mb5.1
EGRO El Granado 69.67 5 P **P 17 27 54.9 -1.1**
comp=Z,184nm,3.1s
ECOG Cogollos-Vega 69.82 9 P **P 17 27 56.1 -0.9**
EMIN Mina Concepcio 69.97 6 P **P 17 27 57.5 -0.3**
comp=Z,158nm,2.8s,mb5.5
SBA Scott Base 70.17 180 *eP* **P 17 27 59.7 +1.0**
SBA pmax pmax
comp=Z,110nm,1.3s,mb5.6
SBA Scott Base 70.17 180 *eP* **P 17 27 59.7 +1.0**
comp=Z,110nm,1.3s,mb5.6
ECAB El Cabril 70.39 7 P **P 17 27 60.0 -0.4**
comp=Z,180nm,3.5s
EQES Quesada 70.40 9 P **P 17 27 57.2 -3.4**
comp=Z,206nm,3.1s
EHUE Huescar 70.48 9 P **P 17 28 00.3 -0.7**
EHUE pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
EHUE Huescar 70.48 9 P **P 17 28 00.3 -0.6**
comp=Z,9.5nm,1.0s,mb4.7
EADA Adamuz 70.58 8 P **P 17 28 00.6 -1.0**
comp=Z,39nm,1.4s,mb5.2
EVO Evora 70.62 5 *eP* **P 17 28 01.5 -0.3**
comp=Z,50nm,1.2s,mb5.0
EVO *eMLR* MLR
comp=Z,740nm,19.8s,MS4.6
EVO Evora 70.62 5 *eP* **P 17 28 02.3 +0.5**
comp=Z,24nm,1.6s,mb4.9
EBAN Banos Encina 70.67 8 P **P 17 27 58.2 -3.9**
EMUR La Murta 70.71 11 P **P 17 28 01.6 -0.8**
comp=Z,161nm,2.6s,mb5.5
EBAD Badajoz 70.92 6 P **P 17 28 04.2 +0.6**
comp=Z,236nm,2.8s,mb5.6
PESTR Estremoz 70.98 5 *eP* **P 17 28 04.3 +0.3**
comp=Z,48nm,1.8s,mb5.1
KEST Kesra 71.04 20 P **P 17 28 04.9 +0.5**
comp=Z,15nm,0.9s,mb4.9,baz=166,slow=3.0,SNR=30
KEST LR LR 17 57 18.0
comp=Z,473nm,18.3s,MS4.8,baz=161,slow=34
EVIA Vianos 71.30 9 P **P 17 28 08.1 +2.1**
ESDC Sonseca Array 72.14 8 P **P 17 28 10.7 -0.3**
comp=Z,0.4nm,0.3s,mb3.8,baz=184,slow=6.4,SNR=7.6
ESDC LR LR 17 57 32.3
comp=Z,212nm,19.1s,MS4.4,baz=195,slow=34
ESDC Sonseca Array 72.14 8 P **P 17 28 10.5 -0.5**
comp=Z,0.9nm,0.6s,mb3.9
ECHE Chera 72.46 10 P **P 17 28 12.9 0.0**
CASY Casey 73.05 160 ⇓*iP* **P 17 28 16.6 +0.4**
GUD Guadarrama 73.07 8 P **P 17 28 16.4 -0.1**
GUD pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
GUD Guadarrama 73.07 8 P **P 17 28 16.4 -0.1**
comp=Z,4.7nm,0.6s,mb4.6
EMOS Mosqueruela 73.30 11 P **P 17 28 17.9 +0.1**
comp=Z,278nm,4.0s
MVO Moncorvo 73.31 5 *eP* **P 17 28 18.2 +0.3**
comp=Z,40nm,2.0s,mb5.0
ETOR Torete 73.51 9 P **P 17 28 17.9 -1.2**
ETOR pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
ETOR Torete 73.51 9 P **P 17 28 17.9 -1.2**
comp=Z,6.3nm,1.3s,mb4.4
ELOB Lobios 73.93 5 P **P 17 28 23.6 +2.0**
comp=Z,139nm,2.5s,mb5.4
ERTA Horta de San J 74.00 11 P **P 17 28 22.6 +0.6**
comp=Z,177nm,2.8s,mb5.5
ECAL Calabor 74.10 6 P **P 17 28 21.6 -0.9**
comp=Z,109nm,1.8s,mb5.5
EPOB Poblet 74.51 12 P **P 17 28 24.1 -0.9**
comp=Z,128nm,2.0s,mb5.5
ESAC San Caprasio 74.62 10 P **P 17 28 26.8 +1.3**
comp=Z,49nm,1.6s,mb5.2
EMIR Miracle 75.14 12 P **P 17 28 27.6 -1.0**
comp=Z,30nm,1.4s,mb5.0
EPON Pontenova 75.45 5 P **P 17 28 29.9 -0.4**
comp=Z,168nm,2.1s,mb5.6
EARI Arriondas 75.59 7 P **P 17 28 30.1 -1.0**
comp=Z,169nm,2.0s,mb5.6
EBIE Bielsa 75.66 11 P **P 17 28 30.3 -1.2**
comp=Z,97nm,2.3s,mb5.3
ELAN Lanestosa 75.71 8 P **P 17 28 31.7 -0.1**
comp=Z,96nm,1.5s,mb5.5
ETSF Etsaut 75.76 10 *eP* **P 17 28 32.2 +0.1**
comp=Z,30nm,0.9s,mb4.9
ETSF Etsaut 75.76 10 *eP* **P 17 28 32.2 +0.1**
ETSF pmax pmax
comp=Z,15nm,0.9s,mb4.9
ETSF Etsaut 75.76 10 *eP* **P 17 28 32.2 +0.1**
comp=Z,15nm,0.9s,mb4.9
LARF Larrau 75.83 10 *eP* **P 17 28 33.3 +0.8**
SJPF Ste Jean 75.88 10 *eP* **P 17 28 33.1 +0.4**
comp=Z,29nm,0.9s,mb4.9
SJPF Ste Jean 75.88 10 *eP* **P 17 28 33.1 +0.4**
SJPF pmax pmax
comp=Z,14nm,0.9s,mb4.9
SJPF Ste Jean 75.88 10 *eP* **P 17 28 33.1 +0.4**
comp=Z,14nm,0.9s,mb4.9
SALF Salau 75.90 11 *eP* **P 17 28 33.5 +0.6**
EALK Alkurruntz 75.94 9 P **P 17 28 33.6 +0.5**
comp=Z,101nm,1.8s,mb5.5
REYF Montagne du Re 75.95 10 *eP* **P 17 28 33.9 +0.7**
EPF Esparros 76.03 11 *eP* **P 17 28 33.5 -0.1**
comp=Z,35nm,1.1s,mb4.9
EPF Esparros 76.03 11 *eP* **P 17 28 33.5 -0.1**
EPF pmax pmax
comp=Z,18nm,1.1s,mb4.9
EPF Esparros 76.03 11 *eP* **P 17 28 33.5 -0.1**
comp=Z,18nm,1.1s,mb4.9
PYL PYLOS 76.42 29 *eP* **P 17 28 35.9 -0.1**
TIP Timpagrande 76.55 24 *eP* **P 17 28 36.4 -0.2**
comp=Z,64nm,1.3s,mb5.4
MTLF Montolieu 76.64 12 *eP* **P 17 28 36.2 -0.9**
comp=Z,51nm,1.3s,mb5.0
MTLF Montolieu 76.64 12 *eP* **P 17 28 36.2 -0.9**
MTLF pmax pmax
comp=Z,25nm,1.3s,mb5.0
MTLF Montolieu 76.64 12 *eP* **P 17 28 36.2 -0.9**
comp=Z,26nm,1.3s,mb5.0
VLX Vlachokerasia 77.09 29 *eP* **P 17 28 40.9 +1.2**
PGF Pioggiola 77.33 17 *eP* **P 17 28 40.3 -0.7**
comp=Z,104nm,1.2s,mb5.3
PGF Pioggiola 77.33 17 *eP* **P 17 28 40.3 -0.7**
PGF pmax pmax
comp=Z,52nm,1.2s,mb5.3
PGF Pioggiola 77.33 17 *eP* **P 17 28 40.3 -0.7**
comp=Z,52nm,1.2s,mb5.3
LMR La Mourre 77.49 15 *eP* **P 17 28 41.5 -0.4**
comp=Z,79nm,1.4s,mb5.1
LMR La Mourre 77.49 15 *eP* **P 17 28 41.5 -0.4**
LMR pmax pmax
comp=Z,40nm,1.4s,mb5.2
LMR La Mourre 77.49 15 *eP* **P 17 28 41.5 -0.4**
comp=Z,40nm,1.4s,mb5.2
DID Didima 77.56 29 *eP* **P 17 28 42.1 -0.3**
LASF Ste Croix 77.66 13 *eP* **P 17 28 42.5 -0.3**
comp=Z,50nm,1.1s,mb5.1
FRF La Foret Royal 77.74 15 *eP* **P 17 28 42.9 -0.3**
comp=Z,28nm,0.9s,mb4.9
FRF La Foret Royal 77.74 15 *eP* **P 17 28 42.9 -0.3**
FRF pmax pmax
comp=Z,14nm,0.9s,mb4.9
FRF La Foret Royal 77.74 15 *eP* **P 17 28 42.9 -0.3**
comp=Z,14nm,0.9s,mb4.9
SMRF Simiane la Rot 77.90 14 *eP* **P 17 28 44.5 +0.3**
comp=Z,112nm,1.4s,mb5.3
SMRF Simiane la Rot 77.90 14 *eP* **P 17 28 44.5 +0.3**
comp=Z,112nm,1.4s,mb5.6
LFF La Frestale 77.95 11 *eP* **P 17 28 44.5 +0.1**
comp=Z,76nm,1.2s,mb5.2
LFF La Frestale 77.95 11 *eP* **P 17 28 44.5 +0.1**
LFF pmax pmax
comp=Z,38nm,1.2s,mb5.2
LFF La Frestale 77.95 11 *eP* **P 17 28 44.5 +0.1**
comp=Z,38nm,1.2s,mb5.2
IGT Igoumenitsa 78.15 26 *eP* **P 17 28 45.8 +0.2**
CAF Calviac 78.16 12 *eP* **P 17 28 45.4 -0.1**
comp=Z,28nm,1.0s,mb4.8
CAF Calviac 78.16 12 *eP* **P 17 28 45.4 -0.1**
CAF pmax pmax
comp=Z,14nm,1.0s,mb4.8
CAF Calviac 78.16 12 *eP* **P 17 28 45.4 -0.1**
comp=Z,14nm,1.0s,mb4.8
APE Apeiranthos 78.17 31 ⇓*iP* **P 17 28 45.5 -0.3**
APE Apeiranthos 78.17 31 ⇓*iP* **P 17 28 45.5 -0.4**
SBF Sospel 78.20 16 *eP* **P 17 28 45.7 -0.1**
comp=Z,40nm,0.8s,mb5.1
SBF Sospel 78.20 16 *eP* **P 17 28 45.7 -0.1**
SBF pmax pmax
comp=Z,20nm,0.8s,mb5.1
SBF Sospel 78.20 16 *eP* **P 17 28 45.7 -0.1**
comp=Z,20nm,0.8s,mb5.1
RJF Les Rejaudoux 78.43 11 *eP* **P 17 28 47.0 -0.1**
comp=Z,54nm,1.3s,mb5.0
RJF *eMLR* MLR
comp=Z,267nm,17.5s,MS4.3
RJF Les Rejaudoux 78.43 11 *eP* **P 17 28 47.0 -0.1**
RJF pmax pmax
comp=Z,27nm,1.3s,mb5.0
RJF MLR MLR
comp=Z,270nm,17.5s,MS4.6
RJF Les Rejaudoux 78.43 11 *eP* **P 17 28 47.0 -0.1**
comp=Z,27nm,1.3s,mb5.0
RJF LR LR
comp=Z,270nm,17.5s,MS4.6
LKR Lokris 78.43 29 *eP* **P 17 28 47.1 -0.1**
AGG Agios Georgios 78.48 28 *eP* **P 17 28 47.5 0.0**
VIVF Saint-Julien-l 78.56 13 *eP* **P 17 28 47.9 +0.1**
comp=Z,85nm,1.2s,mb5.3
VIVF Saint-Julien-l 78.56 13 *eP* **P 17 28 47.9 +0.1**
VIVF pmax pmax
comp=Z,42nm,1.2s,mb5.2
VIVF Saint-Julien-l 78.56 13 *eP* **P 17 28 47.9 +0.1**
comp=Z,42nm,1.2s,mb5.2
THL Klokotos Trika 78.82 28 *eP* **P 17 28 49.6 +0.2**
ORIF Oris-en-Rattie 78.87 14 *eP* **P 17 28 49.9 +0.4**
comp=Z,55nm,0.9s,mb5.2
ORIF *eMLR* MLR
comp=Z,393nm,18.8s,MS4.5
ORIF Oris-en-Rattie 78.87 14 *eP* **P 17 28 49.9 +0.4**
ORIF pmax pmax
comp=Z,27nm,0.9s,mb5.2
ORIF Oris-en-Rattie 78.87 14 *eP* **P 17 28 49.9 +0.4**
comp=Z,27nm,0.9s,mb5.2
MBDF Montbardon 78.87 15 *eP* **P 17 28 49.9 +0.4**
comp=Z,54nm,0.9s,mb5.2
MBDF Montbardon 78.87 15 *eP* **P 17 28 49.9 +0.4**
MBDF pmax pmax
comp=Z,27nm,0.9s,mb5.2
MBDF Montbardon 78.87 15 *eP* **P 17 28 49.9 +0.4**
comp=Z,27nm,0.9s,mb5.2
SSB Saint Sauveur 78.94 13 *eP* **P 17 28 50.2 +0.3**
BDRM Kayabasi 79.03 33 *i* P **P 17 28 50.5 0.0**
XOR Xorichti 79.12 28 *eP* **P 17 28 51.3 +0.2**
BNI Bardonecchia 79.16 15 *eP* **P 17 28 51.9 +0.8**
BNI pmax pmax
comp=Z,14nm,1.0s,mb4.8
BNI Bardonecchia 79.16 15 *eP* **P 17 28 51.9 +0.8**
comp=Z,14nm,1.0s,mb4.8
TURN Turunc 79.40 33 *i* P **P 17 28 50.6 -2.0**
AGO Saint Agoulin 79.43 12 *eP* **P 17 28 52.9 +0.4**
PLDF La Plantade 79.44 12 *eP* **P 17 28 53.0 +0.4**
MFF Saint Martin d 79.45 10 *eP* **P 17 28 52.7 +0.1**
comp=Z,62nm,1.5s,mb5.0
MFF Saint Martin d 79.45 10 *eP* **P 17 28 52.7 +0.1**
MFF pmax pmax
comp=Z,31nm,1.5s,mb5.0
MFF Saint Martin d 79.45 10 *eP* **P 17 28 52.7 +0.1**
comp=Z,31nm,1.5s,mb5.0
LIT Litokhoron 79.47 28 *eP* **P 17 28 52.4 -0.6**
TCF Toulx Ste Croi 79.50 11 *eP* **P 17 28 53.2 +0.3**
comp=Z,38nm,1.1s,mb4.9
TCF Toulx Ste Croi 79.50 11 *eP* **P 17 28 53.2 +0.3**
TCF pmax pmax
comp=Z,19nm,1.1s,mb4.9
TCF Toulx Ste Croi 79.50 11 *eP* **P 17 28 53.2 +0.3**
comp=Z,19nm,1.1s,mb4.9
TIR Tirane 79.56 25 *eP* **P 17 28 54.1 +0.7**
TIR pmax pmax
comp=Z,39nm,0.8s,mb5.4
TIR Tirane 79.56 25 *eP* **P 17 28 54.1 +0.8**
comp=Z,39nm,0.8s,mb5.4
LPG La Plagne 79.60 15 *eP* **P 17 28 54.1 +0.6**
comp=Z,76nm,0.9s,mb5.3
LPG La Plagne 79.60 15 *eP* **P 17 28 54.1 +0.6**
LPG pmax pmax
comp=Z,38nm,0.9s,mb5.3
LPG La Plagne 79.60 15 *eP* **P 17 28 54.1 +0.6**
comp=Z,38nm,0.9s,mb5.3
LPL La Plagne 79.62 15 *eP* **P 17 28 54.1 +0.5**
comp=Z,86nm,0.9s,mb5.4
LPL La Plagne 79.62 15 *eP* **P 17 28 54.1 +0.5**
LPL pmax pmax
comp=Z,43nm,0.9s,mb5.4
LPL La Plagne 79.62 15 *eP* **P 17 28 54.1 +0.5**
comp=Z,43nm,0.9s,mb5.4
FNA Florina 79.63 26 *eP* **P 17 28 53.6 -0.2**
OHR Ohrid 79.70 26 *i* P **P 17 28 54.6 +0.5**
URLA Izmir 79.71 31 *i* P **P 17 28 52.9 -1.4**
RSL Roselend 79.76 14 *eP* **P 17 28 53.7 -0.6**
PAIG Palioúri 79.80 28 *eP* **P 17 28 54.8 +0.1**
BGF Bois d'Agland 79.87 12 *eP* **P 17 28 54.9 0.0**
PLG Polygyros 80.08 28 *eP* **P 17 28 56.2 0.0**
KRUS Krusevo 80.09 26 *i* P **P 17 28 56.5 +0.3**
SMF Signal de Mont 80.13 12 *eP* **P 17 28 56.3 0.0**
comp=Z,76nm,1.1s,mb5.2
SMF Signal de Mont 80.13 12 *eP* **P 17 28 56.3 0.0**
SMF pmax pmax
comp=Z,38nm,1.1s,mb5.2
SMF Signal de Mont 80.13 12 *eP* **P 17 28 56.3 0.0**
comp=Z,38nm,1.1s,mb5.2
GOLH Gohisar 80.15 34 *i* P **P 17 28 57.9 +1.2**
AVF Avril sur Loir 80.18 12 *eP* **P 17 28 56.8 +0.2**
comp=Z,89nm,1.0s,mb5.3
AVF Avril sur Loir 80.18 12 *eP* **P 17 28 56.8 +0.2**
AVF pmax pmax
comp=Z,44nm,1.0s,mb5.3
AVF Avril sur Loir 80.18 12 *eP* **P 17 28 56.8 +0.2**
comp=Z,44nm,1.0s,mb5.3
DNZL Cakiroluk 80.27 33 *i* P **P 17 28 56.6 -0.7**
PRK Paraskevi 80.31 31 *eP* **P 17 28 58.1 +0.7**
QUIF Quistinic 80.36 7 *eP* **P 17 28 57.5 0.0**
comp=Z,101nm,1.4s,mb5.2
QUIF Quistinic 80.36 7 *eP* **P 17 28 57.5 0.0**
QUIF pmax pmax
comp=Z,50nm,1.4s,mb5.2
QUIF Quistinic 80.36 7 *eP* **P 17 28 57.5 0.0**
comp=Z,50nm,1.4s,mb5.3
LIA Limnos Island 80.39 29 *eP* **P 17 28 57.9 +0.1**
SSF Saint Saulge 80.47 12 *eP* **P 17 28 58.1 0.0**
comp=Z,53nm,1.0s,mb5.1
SSF Saint Saulge 80.47 12 *eP* **P 17 28 58.1 0.0**
SSF pmax pmax
comp=Z,27nm,1.0s,mb5.1
SSF Saint Saulge 80.47 12 *eP* **P 17 28 58.1 0.0**
comp=Z,26nm,1.0s,mb5.1
HYF Humbligny 80.53 11 *eP* **P 17 28 58.8 +0.4**
CABF La Chapelle 80.53 14 *eP* **P 17 28 58.2 -0.3**
comp=Z,52nm,1.0s,mb5.1
CABF La Chapelle 80.53 14 *eP* **P 17 28 58.2 -0.3**
CABF pmax pmax
comp=Z,26nm,1.0s,mb5.1
CABF La Chapelle 80.53 14 *eP* **P 17 28 58.2 -0.3**
comp=Z,26nm,1.0s,mb5.1
VAY Valandovo 80.55 27 *i* P **P 17 28 54.4 -4.3**
SKO Skopje 80.69 26 *i* P **P 17 28 59.8 +0.4**
MANT Manisa 80.70 32 *i* P **P 17 29 00.7 +1.1**
LOR Lormes 80.74 12 *eP* **P 17 28 59.5 0.0**
comp=Z,45nm,1.1s,mb5.0
LOR *eMLR* MLR
comp=Z,368nm,20.5s,MS4.4
LOR Lormes 80.74 12 *eP* **P 17 28 59.5 0.0**
LOR pmax pmax
comp=Z,22nm,1.1s,mb5.0
LOR MLR MLR
comp=Z,370nm,20.5s,MS4.7
LOR Lormes 80.74 12 *eP* **P 17 28 59.5 0.0**
comp=Z,22nm,1.1s,mb5.0
LOR LR LR
comp=Z,370nm,20.5s,MS4.7
SGMF Saint Gilles 80.76 8 *eP* **P 17 28 59.5 -0.2**
ROSF Rostrenen 80.77 7 *eP* **P 17 28 59.8 +0.1**
comp=Z,7nm,1.1s,mb5.2
ROSF Rostrenen 80.77 7 *eP* **P 17 28 59.8 +0.1**
ROSF pmax pmax
comp=Z,34nm,1.1s,mb5.2
ROSF Rostrenen 80.77 7 *eP* **P 17 28 59.8 +0.1**
comp=Z,34nm,1.1s,mb5.2
GRR Gorron 81.10 9 *eP* **P 17 29 01.2 -0.3**
comp=Z,48nm,1.3s,mb5.0
GRR Gorron 81.10 9 *eP* **P 17 29 01.2 -0.3**
GRR pmax pmax
comp=Z,24nm,1.3s,mb5.0
GRR Gorron 81.10 9 *eP* **P 17 29 01.2 -0.3**
comp=Z,24nm,1.3s,mb5.0
TUE Stuetta 81.11 16 *eP* **P 17 29 00.2 -1.4**
comp=Z,9.5nm,0.9s,mb4.7
TKTP Tekketepe 81.15 34 *i* P **P 17 29 01.6 -0.4**
MMB Musomiste 81.23 28 P **P 17 29 02.7 +0.4**
BALY Balya 81.30 31 *i* P **P 17 29 02.2 -0.5**
LDF La Druitiere 81.40 9 *eP* **P 17 29 02.9 -0.2**
comp=Z,60nm,1.3s,mb5.1
LDF La Druitiere 81.40 9 *eP* **P 17 29 02.9 -0.2**
LDF pmax pmax
comp=Z,30nm,1.3s,mb5.1
LDF La Druitiere 81.40 9 *eP* **P 17 29 02.9 -0.2**
comp=Z,30nm,1.3s,mb5.1
FLN La Foliniere 81.52 9 *eP* **P 17 29 03.6 -0.1**
comp=Z,75nm,1.1s,mb5.2
FLN *eMLR* MLR
comp=Z,829nm,19.2s,MS4.8
FLN La Foliniere 81.52 9 *eP* **P 17 29 03.6 -0.1**
FLN pmax pmax
comp=Z,38nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,830nm,19.3s,MS5.1
FLN La Foliniere 81.52 9 *eP* **P 17 29 03.6 -0.1**
comp=Z,38nm,1.1s,mb5.2
FLN LR LR
comp=Z,830nm,19.3s,MS5.1
DURS Dursunbey 81.56 32 *i* P **P 17 29 04.2 +0.1**
ALN Alexandroupoli 81.58 29 *eP* **P 17 29 04.3 +0.1**
GDZ Gediz 81.60 33 *i* P **P 17 29 05.2 +0.9**
HINF Hinteralfeld 81.84 14 *eP* **P 17 29 04.7 -0.7**
VOY Vojsko 81.86 19 *eP* **P 17 29 05.9 +0.3**
VOY *e* 17 29 13.6
VTS Vitosha 81.88 27 ⇑*iP* **P 17 29 06.3 +0.5**
VTS Vitosha 81.88 27 P **P 17 29 06.4 +0.6**
VTS Vitosha 81.88 27 ⇑P **P 17 29 06.3 +0.5**
SART Tekirdag 81.89 30 *i* P **P 17 29 04.6 -1.3**
HAU Haudompre 81.91 14 *eP* **P 17 29 05.4 -0.4**
comp=Z,26nm,1.0s,mb4.8
HAU *eMLR* MLR
comp=Z,310nm,18.8s,MS4.4
HAU Haudompre 81.91 14 *eP* **P 17 29 05.4 -0.4**
HAU pmax pmax
comp=Z,13nm,1.0s,mb4.8
HAU MLR MLR
comp=Z,310nm,18.8s,MS4.7
HAU Haudompre 81.91 14 *eP* **P 17 29 05.4 -0.4**
comp=Z,13nm,1.0s,mb4.8
HAU LR LR
comp=Z,310nm,18.8s,MS4.7
MOF Molkenrain 81.93 14 *eP* **P 17 29 05.8 -0.1**
FETA Feichten 81.95 17 ⇓*iP* **P 17 29 05.3 -0.8**
comp=Z,19nm,1.0s,mb5.0,SNR=7.5
DAVA Damuels 82.00 16 ⇓*iP* **P 17 29 06.0 -0.3**
comp=Z,42nm,1.2s,mb5.3,SNR=8.4
LJU Ljubljana 82.05 20 *eP* **P 17 29 06.3 -0.3**
THEF They Montfort 82.05 13 *eP* **P 17 29 06.6 +0.1**
FELD Feldberg im Sc 82.13 15 *eP* **P 17 29 06.8 -0.1**
MEZF Maizieres J'vi 82.14 13 *eP* **P 17 29 07.2 +0.2**
ABTA Abfaltersbach 82.15 18 ⇓*iP* **P 17 29 07.5 +0.4**
comp=Z,27nm,1.1s,mb5.1,SNR=7.2
GCIS Gornji Cirnik 82.21 20 *eP* **P 17 29 07.7 +0.3**
ECH Echery 82.28 14 *eP* **P 17 29 07.3 -0.4**
ULDT Uludag 82.30 32 *i* P **P 17 29 08.6 +0.6**
LIBD Limburg 82.31 14 *eP* **P 17 29 07.4 -0.4**
MYKA Terra Mystica 82.34 19 ⇓*iP* **P 17 29 08.3 +0.2**
comp=Z,15nm,1.0s,mb4.9
MOTA Moosalm 82.35 17 ⇑*iP* **P 17 29 07.9 -0.2**
KDHN Kadinhani 82.39 35 *i* P **P 17 29 07.7 -0.8**
RETA Reutte 82.40 17 ⇓*iP* **P 17 29 07.7 -0.6**
comp=Z,10nm,1.0s,mb4.7
WTTA Wattenberg 82.41 17 ⇓*iP* **P 17 29 08.0 -0.4**
comp=Z,21nm,0.9s,mb5.1,SNR=6.6
WATA Walderalm 82.46 17 ⇓*iP* **P 17 29 08.2 -0.5**
comp=Z,5.1nm,0.6s,mb4.6
OBKA Obir 82.48 19 ⇓*iP* **P 17 29 09.4 +0.6**
comp=Z,10nm,0.9s,mb4.8
CDF Champ du Feu 82.49 14 *eP* **P 17 29 08.2 -0.6**
SPAK Spaichingen-Ko 82.52 15 *eP* **P 17 29 08.1 -0.8**
ESKT Eskisehir 82.58 33 *i* P **P 17 29 09.9 +0.4**
BFO Black Forest 82.63 15 P **P 17 29 09.5 0.0**
comp=Z,132nm,1.0s,mb5.9,SNR=7.8
BFO Black Forest 82.63 15 *eP* **P 17 29 09.2 -0.3**
BFO pmax pmax
comp=Z,28nm,1.1s,mb5.2
BFO Black Forest 82.63 15 *eP* **P 17 29 09.2 -0.3**
comp=Z,28nm,1.1s,mb5.2
KBA Koelnbreinsper 82.68 18 ⇓*iP* **P 17 29 09.8 0.0**
comp=Z,12nm,0.9s,mb4.9
PERS Pernice 82.76 20 *eP* **P 17 29 10.1 -0.1**
SOKA Soboth 82.78 20 ⇓*iP* **P 17 29 10.9 +0.6**
comp=Z,19nm,0.9s,mb5.1
RJOB Jochberg 83.14 18 *eP* **P 17 29 11.4 -0.8**
comp=Z,16nm,0.9s,mb5.0
LANF Langenberg 83.14 14 *eP* **P 17 29 11.9 -0.2**
FUR Furstenfeldbru 83.16 17 *eP* **P 17 29 12.1 -0.2**
FUR pmax pmax
comp=Z,48nm,1.1s,mb5.4
FUR Furstenfeldbru 83.16 17 *eP* **P 17 29 12.1 -0.2**
comp=Z,48nm,1.1s,mb5.4
STU Stuttgart 83.24 15 *eP* **P 17 29 12.6 -0.1**
comp=Z,53nm,1.4s,mb5.4
ARSA Arzberg 83.44 20 ⇓*iP* **P 17 29 14.1 +0.4**
comp=Z,23nm,1.1s,mb5.1,SNR=7.0
PKSM Moragy 83.44 22 ⇓*iP* **P 17 29 14.0 +0.2**
PKSM Moragy 83.44 22 P **P 17 29 13.9 +0.1**
WLF Walferdange 83.46 13 P **P 17 29 14.5 +0.7**
comp=Z,22nm,1.4s,mb5.0
WLF Walferdange 83.46 13 *eP* **P 17 29 14.4 +0.6**
WLF pmax pmax
comp=Z,41nm,1.3s,mb5.3
WLF Walferdange 83.46 13 *eP* **P 17 29 14.2 +0.4**
comp=Z,48nm,1.5s,mb5.3
WLF Walferdange 83.46 13 *eP* **P 17 29 14.4 +0.6**
comp=Z,41nm,1.3s,mb5.3

BAIF	**Baives**	**83.49**	**12**	*e*P		**P**	**17 29 13.9**	**0.0**
KTD	**Kalmit**	**83.52**	**14**	*e*P		**P**	**17 29 14.4**	**+0.3**
SZH	**Strazhica**	**83.52**	**28**	P		**P**	**17 29 14.6**	**+0.3**
DOU	**Dourbes**	**83.59**	**12**	P		**P**	**17 29 15.0**	**+0.5**
	comp=Z,18nm,3.0s							
MOA	**Molln**	**83.63**	**19**⇓	*i*P		**P**	**17 29 14.3**	**-0.4**
	comp=Z,23nm,0.9s,mb5.3							
GIVF	**Givet**	**83.64**	**12**	*e*P		**P**	**17 29 14.7**	**0.0**
HENT	**Hendek**	**83.64**	**33**	*i*P		**P**	**17 29 14.7**	**-0.3**
RUP	**Ruppelstein**	**83.67**	**14**	*e*P		**P**	**17 29 14.8**	**-0.1**
BZS	**Buzias**	**83.91**	**24**⇓	*i*P		**P**	**17 29 15.9**	**-0.3**
BZS	**Buzias**	**83.91**	**24**	P		**P**	**17 29 16.8**	**+0.6**
ABH	**Alteburg**	**83.94**	**14**	*e*P		**P**	**17 29 16.2**	**-0.1**
TOD	**Tromm**	**83.94**	**15**	*e*P		**P**	**17 29 16.1**	**-0.2**
BCLA	**Clavier**	**84.03**	**12**	P		**P**	**17 29 17.2**	**+0.5**
	comp=Z,28nm,2.5s,mb5.0							
SOP	**Sopron**	**84.13**	**20**⇓	*e*P		**P**	**17 29 17.4**	**+0.1**
GZR	**Gura Zlata**	**84.13**	**25**⇑	*i*P		**P**	**17 29 17.6**	**+0.3**
GZR	**Gura Zlata**	**84.13**	**25**	P		**P**	**17 29 17.9**	**+0.5**
CONA	**Conrad Observa**	**84.15**	**20**⇓	*i*P		**P**	**17 29 18.1**	**+0.7**
	comp=Z,32nm,1.5s,mb5.2,SNR=11							
RDF	**Al-Radifah**	**84.28**	**51**	*e*P		**P**	**17 29 19.8**	**+1.3**
	baz=51							
RDF					AMb	AMB	17 29 21.1	
	comp=Z,57nm,1.2s,mb5.6,baz=51							
NAY	**Al-Naaiem**	**84.30**	**50**	*e*P		**P**	**17 29 19.9**	**+1.3**
	baz=50							
NAY					AMb	AMB	17 29 21.6	
	comp=Z,34nm,1.8s,mb5.2,baz=50							
RST	**Umm Al-Ruwaisa**	**84.31**	**50**	*e*P		**P**	**17 29 19.6**	**+0.9**
	baz=50							
RST					AMb	AMB	17 29 23.7	
	comp=Z,48nm,1.8s,mb5.3,baz=50							
CDAG	**Cicekdag**	**84.35**	**35**	*i*P		**P**	**17 29 17.8**	**-0.8**
GERES	**GERESS Array B**	**84.40**	**18**	P		**P**	**17 29 18.2**	**-0.4**
	comp=Z,4.7nm,0.9s,mb4.6,baz=193,slow=5.5,SNR=24							
GERES					PP	PP	17 32 34.3	+0.1
	comp=Z,1.1nm,0.7s,baz=183,slow=10,SNR=4.1							
GERES					LR	LR	18 03 43.5	
	comp=Z,357nm,20.0s,MS4.8,baz=203,slow=33							
GERES	**GERESS Array B**	**84.40**	**18**	P		**P**	**17 29 18.2**	**-0.4**
GERES							17 32 34.3	
WET	**Wettzell**	**84.46**	**17**	*e*P		**P**	**17 29 18.4**	**-0.5**
WET					pmax	pmax		
	comp=Z,29nm,1.1s,mb5.3							
WET	**Wettzell**	**84.46**	**17**	*e*P		**P**	**17 29 18.4**	**-0.5**
	comp=Z,29nm,1.1s,mb5.3							
GRA2	**Grafenberg Arr**	**84.56**	**16**	*e*P		**P**	**17 29 20.0**	**+0.6**
GRFO	**Grafenberg**	**84.56**	**16**	*e*P		**P**	**17 29 19.5**	**+0.1**
GRFO					pmax	pmax		
	comp=Z,37nm,1.1s,mb5.4							
GRFO	**Grafenberg**	**84.56**	**16**	*e*P		**P**	**17 29 19.5**	**+0.1**
	comp=Z,37nm,1.1s,mb5.4							
KHC	**Kasperske Hory**	**84.63**	**18**	*e*P		**P**	**17 29 19.3**	**-0.5**
KHC					AMS	AMS	18 02 40.0	
	comp=Z,400nm,25.5s							
BUD	**Budapest**	**84.69**	**22**⇓	*e*PcP		PcP	17 29 19.9	-3.7
ZST	**Bratislava**	**84.75**	**20**	*e*P		**P**	**17 29 20.2**	**-0.2**
	comp=Z,21nm,1.0s,mb5.2							
ZST					LR	LR		
	comp=Z,200nm,19.3s,MS4.5							
MODS	**Modra-Piesok**	**84.96**	**20**	*e*P		**P**	**17 29 22.0**	**+0.6**
VOIR		**85.00**	**26**⇑	*i*P		**P**	**17 29 21.9**	**+0.2**
VOIR		**85.00**	**26**	⇑P		**P**	**17 29 21.9**	**+0.2**
MANZ	**Manzenberg**	**85.05**	**17**	*e*P		**P**	**17 29 21.9**	**0.0**
	comp=Z,48nm,2.1s,mb5.3							
DRGR		**85.31**	**24**⇓	*i*P		**P**	**17 29 23.4**	**+0.1**
DRGR		**85.31**	**24**	P		**P**	**17 29 23.8**	**+0.5**
UBBA	**Unterbreizbach**	**85.34**	**15**	*e*P		**P**	**17 29 23.5**	**+0.2**
	comp=Z,24nm,1.6s,mb5.1							
PSZ	**Piszkesteto**	**85.35**	**22**⇓	*e*PcP		PcP	17 29 23.6	-2.9
PSZ	**Piszkesteto**	**85.35**	**22**⇑	*i*P		**P**	**17 29 24.0**	**+0.6**
PSZ	**Piszkesteto**	**85.35**	**22**	P		**P**	**17 29 24.0**	**+0.6**
NKC	**Novy Kostel**	**85.36**	**17**	*e*P		**P**	**17 29 23.6**	**+0.2**
NKC					AMS	AMS	18 05 20.0	
	comp=Z,200nm,22.3s							
MLR	**Muntele Rosu**	**85.39**	**27**⇑	*i*P		**P**	**17 29 24.0**	**+0.3**
MLR	**Muntele Rosu**	**85.39**	**27**	P		**P**	**17 29 24.2**	**+0.5**
WERN	**Wernitzgruen**	**85.39**	**17**	*e*P		**P**	**17 29 23.6**	**0.0**
	comp=Z,15nm,1.1s,mb5.0							
GUNZ	**Gunzen**	**85.45**	**17**	*e*P		**P**	**17 29 24.0**	**+0.1**
	comp=Z,36nm,1.4s,mb5.3							
KOLL	**Kolacno**	**85.48**	**21**	*e*P		**P**	**17 29 24.3**	**+0.3**
WERD	**Werda**	**85.53**	**16**	*e*P		**P**	**17 29 24.1**	**-0.1**
	comp=Z,20nm,1.1s,mb5.3							
TANN	**Tannenbergstha**	**85.53**	**17**	*e*P		**P**	**17 29 24.4**	**+0.1**
	comp=Z,22nm,1.2s,mb5.3							
VYHS	**Vyhne**	**85.53**	**21**	*e*P		**P**	**17 29 24.5**	**+0.2**
VYHS					pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.7							
VYHS	**Vyhne**	**85.53**	**21**	*e*P		**P**	**17 29 24.5**	**+0.2**
	comp=Z,8.4nm,1.6s,mb4.7							
MOX	**Moxa**	**85.55**	**16**	*e*P		**P**	**17 29 24.5**	**+0.2**
	comp=Z,26nm,1.8s,mb5.2							
MOX								
	comp=Z,300nm,21.0s							
MOX	**Moxa**	**85.55**	**16**	*e*P		**P**	**17 29 24.5**	**+0.2**
MOX					pmax	pmax		
	comp=Z,26nm,1.8s,mb5.2							
MOX					MLR	MLR		
	comp=Z,300nm,21.0s,MS4.7							
MOX	**Moxa**	**85.55**	**16**	*e*P		**P**	**17 29 24.4**	**+0.1**
	comp=Z,13nm,1.2s,mb5.0							
VRAC	**Vranov**	**85.60**	**19**⇑	*i*P		**P**	**17 29 24.8**	**+0.2**
VRAC	**Vranov**	**85.60**	**19**	⇑P		**P**	**17 29 24.8**	**+0.1**
PRU	**Pruhonice**	**85.66**	**18**	*e*P		**P**	**17 29 25.3**	**+0.4**
PRU					AMS	AMS	18 04 10.0	
	comp=Z,400nm,24.8s							
ELZG	**Elazig**	**85.86**	**39**	*i*P		**P**	**17 29 26.8**	**+0.6**
VRI	**Vrincioaia**	**86.00**	**27**⇓	*i*P		**P**	**17 29 26.0**	**-0.7**
VRI	**Vrincioaia**	**86.00**	**27**	⇓P		**P**	**17 29 26.0**	**-0.7**
PVCC	**Panska Ves**	**86.17**	**18**	*e*P		**P**	**17 29 28.0**	**+0.6**
PVCC					AMS	AMS	18 04 30.0	
	comp=Z,200nm,16.4s							
FBE	**Freiberg**	**86.22**	**17**	*e*P		**P**	**17 29 27.9**	**+0.2**
	comp=Z,29nm,1.4s,mb5.3							
MORC	**Moravsky Berou**	**86.30**	**20**⇑	*i*P		**P**	**17 29 28.5**	**+0.4**
MORC	**Moravsky Berou**	**86.30**	**20**	P		**P**	**17 29 28.8**	**+0.7**
BRG	**Berggiesshubel**	**86.32**	**17**	*e*P		**P**	**17 29 28.2**	**0.0**
BRG	**Berggiesshubel**	**86.32**	**17**	*e*P		**P**	**17 29 28.2**	**+0.1**
	comp=Z,19nm,1.3s,mb5.2							
BRG								
	comp=N,232nm,14.9s							
BRG								
	comp=E,92nm,13.4s							
BRG								
	comp=Z,371nm,24.9s							
DPC	**Dobruska-Polom**	**86.47**	**19**	*e*P		**P**	**17 29 29.3**	**+0.4**
DPC					AMS	AMS	18 02 40.0	
	comp=Z,400nm,28.6s							
CLL	**Collm**	**86.49**	**17**⇓	*i*P		**P**	**17 29 29.1**	**+0.1**
CLL				*e*S		S	17 40 06.0	+1.1
CLL					pmax	pmax		
	comp=Z,20nm,1.1s,mb5.3							
CLL	**Collm**	**86.49**	**17**	*e*P		**P**	**17 29 29.2**	**+0.2**
	comp=Z,20nm,1.1s,mb5.3							
CLL	**Collm**	**86.49**	**17**⇓	*i*P		**P**	**17 29 29.1**	**+0.1**
	comp=Z,20nm,1.1s,mb5.3							
CLL					LmV		17 05 00.0	
	comp=Z,200nm,21.2s							
CLL				*e*S		S	17 40 06.0	+1.1
CLL				*e*SS		SS	17 45 48.0	+1.8
CLL	**Collm**	**86.49**	**17**⇓	*i*P		**P**	**17 29 29.1**	**+0.1**
	comp=Z,20nm,1.1s,mb5.3							
CLL				*e*S		S	17 40 06.0	+1.1
OKC	**Ostrava-Krasne**	**86.53**	**20**	*e*P		**P**	**17 29 29.5**	**+0.3**
OKC					AMS	AMS	18 06 20.0	
	comp=Z,200nm,15.4s							
UPC	**Upice**	**86.53**	**19**	*e*P		**P**	**17 29 29.8**	**+0.6**
CRVS	**Cervenica-Dubn**	**86.72**	**22**	*e*P		**P**	**17 29 30.5**	**+0.3**
UZH	**Uzhgorod**	**86.76**	**23**⇑	*e*P		**P**	**17 29 30.0**	**-0.4**
UZH				*e*			17 29 36.7	
NIE	**Niedzica**	**86.81**	**22**	*e*P		**P**	**17 29 31.4**	**+0.8**
BURAR	**Bucovina Array**	**86.90**	**25**⇓	*i*P		**P**	**17 29 31.6**	**+0.5**
BURAR	**Bucovina Array**	**86.90**	**25**	⇓P		**P**	**17 29 31.6**	**+0.5**
BUR08	**Bucovina Ar. S**	**86.92**	**25**	*e*P		**P**	**17 29 31.6**	**+0.5**
KOLS	**Kolonicke sedl**	**87.01**	**23**	*e*P		**P**	**17 29 32.2**	**+0.6**
KOLS	**Kolonicke sedl**	**87.01**	**23**	*e*P		**P**	**17 29 32.3**	**+0.7**
STHS	**Stebnicka Huta**	**87.10**	**22**	*e*P		**P**	**17 29 32.1**	**+0.1**
STHS					pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.7							
STHS	**Stebnicka Huta**	**87.10**	**22**	*e*P		**P**	**17 29 32.1**	**+0.1**
	comp=Z,5.1nm,1.1s,mb4.7							
OJC	**Ojcow**	**87.36**	**21**	*e*P		**P**	**17 29 33.3**	**+0.1**
KWP	**Kalwaria**	**87.76**	**23**	*e*P		**P**	**17 29 36.0**	**+0.9**
KWP	**Kalwaria**	**87.76**	**23**⇑	*i*P		**P**	**17 29 35.9**	**+0.7**
KWP	**Kalwaria**	**87.76**	**23**	*e*P		**P**	**17 29 36.0**	**+0.8**
TEIG	**Tepich**	**88.17**	**295**	LR		LR	18 09 21.3	
	comp=Z,856nm,19.6s,MS5.2,baz=295,slow=36							
TEIG	**Tepich**	**88.17**	**295**	*e*P		**P**	**17 29 37.6**	**-0.2**
	comp=Z,29nm,1.1s,mb5.4							
LVV	**L'vov**	**88.36**	**23**	*e*P		**P**	**17 29 37.2**	**-0.8**
LVV					MLR	MLR		
	comp=N,100nm,18.0s,MS4.4							
LVV					MLR	MLR		
	comp=E,100nm,18.0s,MS4.4							
LVV					MLR	MLR		
	comp=Z,100nm,18.0s,MS4.3							
ANN	**Anapa**	**89.76**	**34**	*e*P		**P**	**17 29 40.0**	**-4.7**
ANN				*e*S		S	17 40 07.6	-29
ANN					pmax	pmax		
	comp=Z,21nm,1.3s,mb5.3							
GNI	**Garni**	**90.17**	**41**	P		**P**	**17 29 48.4**	**+1.6**
	comp=Z,1.8nm,0.4s,mb4.7,baz=161,slow=24,SNR=5.3							
GNI	**Garni**	**90.17**	**41**⇑	*e*P		**P**	**17 29 47.6**	**+0.8**
GNI					pmax	pmax		
	comp=Z,25nm,1.9s							
KIEV	**Kiev**	**90.92**	**26**	*e*P		**P**	**17 29 49.0**	**-1.0**
KIEV					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.9							
KIEV	**Kiev**	**90.92**	**26**	*e*P		**P**	**17 29 49.0**	**-1.0**
	comp=Z,5.3nm,0.8s,mb4.9							
AKASG	**Malin Array Be**	**90.94**	**26**	P		**P**	**17 29 50.0**	**0.0**
	comp=Z,3.0nm,0.7s,mb4.7,baz=223,slow=4.2,SNR=8.7							
AKASG	**Malin Array Be**	**90.94**	**26**	*i*P		**P**	**17 29 50.0**	**-0.1**
AKASG					pmax	pmax		
	comp=Z,3.0nm,0.7s							
ONI	**Oni**	**91.16**	**38**	P		**P**	**17 29 53.5**	**+2.2**
TBLG	**Delisi**	**91.25**	**40**	P		**P**	**17 29 52.1**	**+0.3**
MTA	**Mtatsminda**	**91.26**	**40**	P		**P**	**17 29 52.5**	**+0.7**
DGRG	**David-gareji**	**91.41**	**40**	P		**P**	**17 29 50.2**	**-2.3**
CMIG	**Matias Romero**	**91.60**	**289**	LR		LR	18 10 43.4	
	comp=Z,760nm,21.0s,MS5.1,baz=58,slow=35							
SUW	**Suwalki**	**91.69**	**21**	*e*P		**P**	**17 29 54.4**	**+0.9**
SUW	**Suwalki**	**91.69**	**21**	*e*P		**P**	**17 29 54.4**	**+0.9**
KIV	**Kislovodsk**	**91.73**	**37**	*e*P		**P**	**17 29 51.6**	**-2.3**
KIV				*e*			17 40 20.6	
KIV				*e*SS		SS	17 47 03.5	+0.9
KIV					pmax	pmax		
	comp=Z,13nm,1.2s,mb5.1							
MNK	**Minsk**	**93.57**	**23**	*e*P		**P**	**17 30 00.0**	**-2.2**
NOA	**NORSAR Array B**	**95.17**	**12**	LR		LR	18 11 20.5	
	comp=Z,205nm,19.0s,MS4.6,baz=210,slow=34							
SCHQ	**Schefferville**	**97.89**	**332**	LR		LR	18 10 47.6	
	comp=Z,394nm,18.4s,MS4.9,baz=115,slow=33							
TXAR	**Lajitas Array**	**104.81**	**295**	PP		PP	17 35 14.0	+0.3
	comp=Z,1.5nm,1.0s,baz=120,slow=7.4,SNR=10.0							
DAG	**Danmarks Havn**	**108.78**	**359**	*i*P		PP	17 35 48.0	+6.1
BVAR	**Borovoye Array**	**111.85**	**40**	PKiKP		PKiKP	17 35 21.0	-0.1
	comp=Z,1.1nm,0.8s,baz=304,slow=2.6,SNR=5.1							
BVAR					PP	PP	17 35 58.2	-6.3
	comp=Z,1.0nm,0.6s,baz=183,slow=5.9,SNR=4.5							
STKA	**Stephens Creek**	**112.16**	**158**	PP		PP	17 36 02.9	-2.8
	comp=Z,5.0nm,1.0s,baz=260,slow=6.0,SNR=3.6							
TAOE	**Nuku Hiva Isla**	**114.45**	**241**	*e*LR		LR	18 09 50.4	
	comp=Z,3μm,32.1s							
PPT	**Papeete**	**114.78**	**227**	*e*SS		SS	17 52 25.8	+6.4
	comp=Z,205nm,25.0s							
PPT	**Papeete**	**114.78**	**227**	*e*LR		LR	18 10 01.8	
	comp=Z,534nm,30.0s							
PDAR	**Pinedale Array**	**114.87**	**306**	PP		PP	17 36 26.8	+0.5
	comp=Z,0.8nm,0.9s,baz=131,slow=4.9,SNR=3.8							
KURK	**Kurchatov**	**115.69**	**45**	PKP		PKPdf	17 35 28.8	+0.3
	comp=Z,1.9nm,0.7s,baz=249,slow=2.3,SNR=8.9							
KURK					PP	PP	17 36 30.7	-1.1
	comp=Z,0.7nm,0.8s,baz=253,slow=6.5,SNR=4.2							
KURK	**Kurchatov**	**115.69**	**45**	PKP		PKPdf	17 35 28.8	+0.3
KURK					PP	PP	17 36 30.7	-1.1
ASAR	**Alice Springs**	**116.47**	**147**	PKP		PKPdf	17 35 30.1	-0.9
	comp=Z,2.1nm,0.6s,baz=201,slow=1.5,SNR=37							
ASAR					PP	PP	17 36 35.6	-0.9
	comp=Z,1.2nm,0.9s,baz=209,slow=8.0,SNR=5.0							
MK31	**Makanchi Array**	**116.65**	**50**	*e*PKIKP		PKPdf	17 35 30.0	-0.5
MKAR	**Makanchi Array**	**116.65**	**50**	PKP		PKPdf	17 35 30.1	-0.4
	comp=Z,1.1nm,0.7s,baz=266,slow=3.6,SNR=8.0							
MKAR					PP	PP	17 36 33.6	-5.1
	comp=Z,0.8nm,0.8s,baz=263,slow=7.2,SNR=4.4							
CMAR	**Chiang Mai Arr**	**118.65**	**85**	PKP		PKPdf	17 35 35.2	+0.1
	comp=Z,2.5nm,0.8s,baz=239,slow=3.7,SNR=13							
CHTO	**Chiang Mai**	**118.81**	**85**	*e*PKIKP		PKPdf	17 35 35.5	0.0
WMQ	**Urumqi**	**119.31**	**54**	*e*PKP		PKPdf	17 35 36.0	+0.3
WMQ				*e*PP		PP	17 37 01.0	+3.7
WMQ				PKS			17 39 11.0	
WMQ				SKS		SKSdf	17 42 45.0	-2.7
WMQ				SS		SS	17 53 16.0	-3.6
WMQ				PP		PP		
	comp=Z,142nm,3.9s							
WMQ					LR	LR		
	comp=N,674nm,19.6s,MS5.4							
WMQ					LR	LR		
	comp=E,592nm,16.8s,MS5.4							
WMQ					LR	LR		
	comp=Z,815nm,21.2s,MS5.3							
NVS	**Novosibirsk**	**119.60**	**41**	*e*PKIKP		PKPdf	17 35 34.7	-1.2
NVS					pmax	pmax		
	comp=Z,29nm,2.0s							
NVAR	**Mina Array Bea**	**119.61**	**299**	PKP		PKPdf	17 35 36.6	+0.2
	comp=Z,0.7nm,0.7s,baz=132,slow=2.2,SNR=4.5							
NVAR				PKKPbc		PKKPbc	17 45 47.3	0.0
	comp=Z,4.3nm,1.1s,baz=272,slow=4.1,SNR=7.4							
WRA	**Warramunga Arr**	**119.87**	**145**	PKP		PKPdf	17 36 35.5	-1.1
	comp=Z,2.5nm,0.8s,baz=237,slow=1.8,SNR=16							
WRA					PP	PP	17 36 55.6	-4.5
	comp=Z,1.2nm,0.9s,baz=211,slow=5.7,SNR=5.0							
ZALV	**Zalesovo Beam**	**120.27**	**43**	PKP		PKPdf	17 35 36.6	-0.6
	comp=Z,1.6nm,0.7s,baz=251,slow=5.3,SNR=6.9							
YKA	**Yellowknife Ar**	**122.90**	**327**	PKP		PKPdf	17 35 40.8	-1.2
	comp=Z,3.3nm,0.7s,baz=94,slow=2.0,SNR=16							
YKA				PKKPbc		PKKPbc	17 45 35.5	+0.2
	comp=Z,1.9nm,0.9s,baz=271,slow=4.6,SNR=6.0							
YKA	**Yellowknife Ar**	**122.90**	**327**	PKP		PKPdf	17 35 40.8	-1.2
YKA				PKKPbc		PKKPbc	17 45 35.5	+0.2
KMI	**Kunming**	**124.66**	**80**	PKP		PKPdf	17 35 45.0	-1.6
KMI				XPKP			17 35 51.6	
KMI				PP		PP	17 37 38.3	+4.3
KMI				SS		SS	17 54 30.8	+2.3
KMI				PP		PP		
	comp=Z,207nm,5.1s							
KMI					LR	LR		
	comp=N,341nm,21.5s,MS5.2							
KMI					LR	LR		
	comp=E,376nm,21.5s,MS5.2							
KMI					LR	LR		
	comp=Z,446nm,19.7s,MS5.1							
GTA	**Gaotai**	**126.85**	**62**	PKP		PKPdf	17 35 51.0	+0.7
GTA				PP		PP	17 37 55.5	+7.1
GTA				SKS		SKSdf	17 43 01.3	-0.8
GTA				PP		PP		
	comp=Z,115nm,5.4s							
GTA					LR	LR		
	comp=N,262nm,22.8s,MS5.1							
GTA					LR	LR		
	comp=E,453nm,24.0s,MS5.1							
GTA					LR	LR		
	comp=Z,571nm,26.1s,MS5.1							
CD2	**Chengdu**	**127.55**	**74**	PKP		PKPdf	17 35 51.8	-0.2
CD2				XPKP			17 36 00.5	
CD2				PP		PP	17 37 56.9	+3.7
CD2				PKS			17 39 26.9	
CD2				SKS		SKSdf	17 42 58.3	-5.5
CD2				SKKS		SKKSac	17 44 45.8	-4.8
CD2				SS		SS	17 55 04.9	+0.2
CD2				PP		PP		
	comp=Z,210nm,6.6s							
CD2					LR	LR		
	comp=N,340nm,16.8s,MS5.2							
CD2					LR	LR		
	comp=E,390nm,19.2s,MS5.2							
CD2					LR	LR		
	comp=Z,380nm,21.6s,MS5.0							
LZH	**Lanzhou**	**129.12**	**68**	*e*PKP		PKPdf	17 35 52.4	-2.4
LZH				XPKP			17 35 58.6	
LZH				PP		PP	17 38 06.0	+2.6
LZH				PKS			17 39 28.0	
LZH				SKKS		SKKSac	17 44 53.3	-6.9
LZH				SS		SS	17 55 20.0	-3.9
LZH				PP		PP		
	comp=Z,150nm,5.8s							
LZH					LR	LR		
	comp=E,429nm,19.7s							
LZH					LR	LR		
	comp=Z,795nm,21.0s,MS5.4							
ZAK	**Zakamensk**	**130.97**	**49**	*e*PKIKP		PKPdf	17 35 55.2	-2.6
ZAK				*e*			17 38 14.2	
ZAK				pmax		pmax		
	comp=Z,8.0nm,1.4s							
TLY	**Talaya**	**131.25**	**47**	*e*PKIKP		PKPdf	17 35 59.3	+1.0
TLY				pmax		pmax		
	comp=Z,11nm,1.1s							
SONM	**Songino Array**	**132.87**	**53**	PKP		PKPdf	17 36 01.9	+0.4
	comp=Z,5.2nm,0.8s,baz=221,slow=2.6,SNR=27							
SONM				PP		PP	17 38 26.5	-0.8
	comp=Z,2.4nm,1.2s,baz=288,slow=6.1,SNR=6.9							
ULN	**Ulaanbaatar**	**133.31**	**53**	*e*PKIKP		PKPdf	17 36 02.7	+0.4
HHC	**Hu-ho-hao-te**	**135.97**	**63**	*e*PKP		PKPdf	17 36 02.6	-4.9
HHC				PP		PP	17 38 45.8	-1.4
HHC				PKS			17 39 37.4	
HHC				SKS		SKSdf	17 43 12.4	-6.1
HHC				SKKS		SKKSac	17 45 37.3	-4.5
HHC				SS		SS	17 56 44.3	-2.6
HHC				PP		PP		
	comp=Z,80nm,7.6s							
HHC					LR	LR		
	comp=N,230nm,19.7s,MS5.2							
HHC					LR	LR		
	comp=E,356nm,19.3s,MS5.2							
HHC					LR	LR		
	comp=Z,329nm,19.6s,MS5.1							
BOD	**Bodaibo**	**136.64**	**38**	*e*PKHKP			17 35 54.8	
BOD					pmax	pmax		
	comp=Z,12nm,0.9s							
CIT	**Chita**	**137.38**	**46**	*e*PKIKP		PKPdf	17 36 11.4	+1.6
IMA2	**Indian Mountai**	**138.47**	**337**	*e*PKPdf		PKPdf	17 36 09.3	-2.0
BJI	**Beijing**	**139.38**	**64**	PKP		PKPdf	17 36 13.5	-0.3
BJI				PP		PP	17 39 08.3	-0.2
BJI				PP		PP		
	comp=Z,133nm,5.6s							
BJI					LR	LR		
	comp=N,337nm,21.4s							
BJI					LR	LR		
	comp=E,342nm,26.7s							
BJI					LR	LR		
	comp=Z,322nm,30.5s							
NJ2	**Nanjing**	**140.26**	**77**	*e*PKP		PKPdf	17 36 11.8	-3.9
YAK	**Yakutsk**	**142.15**	**27**	*e*PKIKP		PKPdf	17 36 15.8	-2.3
YAK				pmax		pmax		
	comp=Z,22nm,1.4s							
BILL	**Bilibino**	**144.15**	**360**⇑	*i*PKIKP		PKPdf	17 36 22.7	+1.2
BILL				pmax		pmax		
	comp=Z,33nm,1.4s							
BILL	**Bilibino**	**144.15**	**360**	*e*PKPdf		PKPdf	17 36 22.9	+1.4
SNY	**Shenyang**	**145.04**	**62**	PKP		PKPdf	17 36 22.9	-1.0
CN2	**Changchun**	**146.28**	**58**	*e*PKP		PKPdf	17 36 26.3	+0.4
CN2				PP		PP	17 39 54.3	+4.3
CN2				PP		PP		
	comp=Z,200nm,4.0s							
CN2					LR	LR		
	comp=N,200nm,18.0s,MS5.3							
CN2					LR	LR		
	comp=E,400nm,18.0s,MS5.3							
CN2					LR	LR		
	comp=Z,400nm,20.0s,MS5.2							
JOW	**Kunigami**	**146.78**	**89**	PKPbc		PKPbc	17 36 29.8	+0.7
	comp=Z,85nm,1.1s,baz=210,slow=4.0,SNR=5.4							
INCN	**Incheon**	**147.37**	**70**	*e*PKPbc		PKPbc	17 36 30.1	-0.3
SEY	**Seymchan**	**148.06**	**12**⇑	*i*PKIKP		PKPdf	17 36 28.0	-0.3
KSRS	**Korea Array**	**148.39**	**70**	PKP		PKPdf	17 36 29.2	-0.4
	comp=Z,10.0nm,0.9s,baz=290,slow=3.1,SNR=10.0							
KSRS				PKPbc		PKPbc	17 36 32.6	-0.5
	comp=Z,22nm,1.0s,baz=269,slow=2.1,SNR=31							
MDJ	**Mudanjiang**	**149.10**	**56**	PKP		PKPdf	17 36 30.3	-0.3
MDJ				XPKP			17 36 34.4	
MDJ				PP		PP	17 40 06.1	-0.4
MDJ				SS		SS	17 59 23.5	+4.9
MDJ				PP		PP		
	comp=Z,112nm,5.6s							
MDJ					LR	LR		
	comp=E,253nm,32.2s							
MDJ					LR	LR		
	comp=Z,308nm,30.3s,MS4.9							
MDJ	**Mudanjiang**	**149.10**	**56**	*e*PKPbc		PKPbc	17 36 34.6	-0.1
KLR	**Kul'dur**	**149.27**	**46**⇑	*e*PKIKP		PKPdf	17 36 30.5	-0.2
KLR				*i*			17 36 30.6	
KLR				pmax		pmax		
	comp=E,37nm,1.6s							
KLR				pmax		pmax		
	comp=Z,130nm,1.6s							
VLA

BVAR				pP		pP	17 26 34.9	-1.0	
	2.1nm,0.9s,baz=138,slow=7.6,SNR=6.7								
AKTK	**Aktyubinsk**	**48.48**	**332**	P		**P**	**17 26 49.9**	**-0.1**	
AKTK				pP		pP	17 26 56.9	-0.9	
AKTO	**Aktyubinsk**	**48.48**	**332**	P		**P**	**17 26 49.9**	**-0.1**	
	0.7nm,0.5s,mb4.0,baz=103,slow=15,SNR=3.7								
AKTO				pP		pP	17 26 56.9	-1.0	
	1.6nm,0.7s,baz=117,slow=18,SNR=4.8								
MJAR	**Matsushiro Arr**	**48.98**	**50**	P		**P**	**17 26 53.8**	**-0.4**	
	0.2nm,0.3s,mb3.6,baz=181,slow=5.4,SNR=2.6								
MJAR				pP		pP	17 27 01.0	-1.0	
	1.1nm,0.7s,baz=237,slow=6.1,SNR=3.8								
WRA	**Warramunga Arr**	**51.64**	**126**	P		**P**	**17 27 14.2**	**-0.2**	
	3.1nm,0.4s,mb4.6,baz=300,slow=10.0,SNR=79								
WRA				pP		pP	17 27 21.8	-0.5	
	5.3nm,0.8s,baz=306,slow=8.3,SNR=14								
WRAB	**Tennant Creek**	**51.64**	**126**	*e*P		**P**	**17 27 14.1**	**-0.3**	
	5.1nm,0.5s,mb4.7								
WRAB				*e*pP		pP	17 27 22.6	+0.3	
WB2	**Warramunga Arr**	**51.65**	**126**	⇓*i*P		**P**	**17 27 13.9**	**-0.6**	
ASAR	**Alice Springs**	**53.35**	**130**	P		**P**	**17 27 27.2**	**+0.1**	
	4.3nm,0.8s,mb4.4,baz=307,slow=7.3,SNR=60								
ASAR				pP		pP	17 27 34.6	-0.4	
	8.8nm,0.8s,baz=306,slow=7.7,SNR=25								
STKA	**Stephens Creek**	**63.58**	**134**	*e*P		**P**	**17 28 39.4**	**+1.0**	
	6.7nm,0.9s,mb4.7								
STKA				*e*		pP	17 28 47.1	+0.7	
STKA	**Stephens Creek**	**63.58**	**134**	P		**P**	**17 28 39.0**	**+0.7**	
	8.1nm,0.8s,mb4.8,baz=286,slow=5.6,SNR=14								
ARCES	**ARCESS Array B**	**71.93**	**340**	P		**P**	**17 29 29.9**	**-0.4**	
	8.2nm,1.2s,mb4.5,baz=77,slow=5.5,SNR=4.8								
ARCES	**ARCESS Array B**	**71.93**	**340**	P		**P**	**17 29 29.9**	**-0.4**	
NIKO	**Nikolski**	**87.06**	**37**	*e*P		**P**	**17 30 52.8**	**-0.1**	
TORD	**Torodi Ar. Bea**	**87.86**	**283**	pP		pP	17 31 04.9	-1.0	
	2.2nm,1.1s,baz=95,slow=4.7,SNR=4.8								
PLCA	**Paso Flores**	**146.29**	**204**	PKPbc		PKPbc	17 37 49.0	+0.7	
	2.0nm,0.8s,baz=166,slow=6.2,SNR=6.7								
PLCA	**Paso Flores**	**146.29**	**204**	PKPbc		PKPbc	17 37 49.0	+0.7	
CPUP	**Villa Florida**	**147.08**	**238**	PKPbc		PKPbc	17 37 50.2	-0.8	
	0.4nm,0.4s,baz=62,slow=3.1,SNR=3.2								

ISCJB ***19*** *17:20:09.7±0.6, 1051N×008×9159E×009, h24km, mb4.0/8, Error ellipse: s-maj=14.0km s-min=9.6km az=149.8*
IDC ***19*** *17:20:12.2±1.4, 1055N×9170E, h23km×4km, mb3.9/8, mb1 4.1/9, mb1mx3.7/23, mbtmp3.9/9, ML3.6/1, Error ellipse: s-maj=55.8km s-min=12.2km az=64.0*
NEIC ***19*** *17:20:13.6±1.1, 1053N×9158E, h38km±12km, mb4.7/1, Error ellipse: s-maj=10.3km s-min=7.2km az=62.0*
ISC 19 17:20:12.2±0.6, 1053N±008×9160E±009, h26km, h26km±4km: pP-P, n18, σ0§59/18, mb4.0/8, 1C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.61**	**41**	Pn			**Pn**	**17 22 43.4**	**+0.8**
	0.1nm,0.3s,baz=235,slow=15,SNR=5.0								
PALK	**Pallekele**	**11.24**	**254**	*e*Pn			**Pn**	**17 22 51.6**	**+0.3**
	37nm,0.7s								
LSA	**Lhasa**	**19.08**	**359**	*e*P			**Pn**	**17 24 33.1**	**-0.7**
KSM	**Kuching**	**20.65**	**115**	*e*P			**P**	**17 24 50.8**	**+0.7**
AML	**Almayashu**	**35.17**	**337**	*e*P			**P**	**17 27 04.3**	**+0.3**
MK31	**Makanchi Array**	**37.00**	**349**	*e*P			**P**	**17 27 19.5**	**0.0**
MKAR	**Makanchi Array**	**37.00**	**349**	P			**P**	**17 27 20.0**	**+0.5**
	1.0nm,0.6s,mb3.8,baz=169,slow=8.3,SNR=4.3								
MKAR				pP			pP	17 27 27.4	+0.2
	1.1nm,0.6s,baz=175,slow=8.2,SNR=4.0								
MKAR	**Makanchi Array**	**37.00**	**349**	P			**P**	**17 27 20.0**	**+0.5**
MKAR				pP			pP	17 27 27.4	+0.2
SONM	**Songino Array**	**39.22**	**16**	P			**P**	**17 27 37.6**	**-0.6**
	1.1nm,0.8s,mb3.6,baz=209,slow=5.9,SNR=3.5								
SONM				pP			pP	17 27 45.0	-1.0
	0.6nm,0.5s,baz=191,slow=6.9,SNR=3.5								
KURK	**Kurchatov**	**41.47**	**348**	P			**P**	**17 27 56.3**	**-0.5**
	0.8nm,0.8s,mb3.4,baz=166,slow=7.2,SNR=3.2								
KURK				pP			pP	17 28 03.4	-1.2
	1.9nm,1.0s,baz=168,slow=7.8,SNR=5.5								
ZALV	**Zalesovo Beam**	**43.64**	**354**	P			**P**	**17 28 14.5**	**+0.1**
	0.6nm,0.6s,mb3.5,baz=178,slow=8.7,SNR=2.9								
ZALV				pP			pP	17 28 22.2	-0.1
	0.5nm,0.4s,baz=168,slow=7.4,SNR=3.0								
FITZ	**Fitzroy Crossi**	**44.03**	**130**	*e*P			**P**	**17 28 17.3**	**-0.7**
	14nm,0.9s,mb4.7								
FITZ				*e*			pP	17 28 24.3	-1.6
FITZ	**Fitzroy Crossi**	**44.03**	**130**	P			**P**	**17 28 17.2**	**-0.8**
	6.7nm,0.8s,mb4.4,baz=292,slow=7.9,SNR=9.4								
FITZ				pP			pP	17 28 24.7	-1.2
	4.0nm,0.8s,baz=310,slow=2.7,SNR=4.8								
WRA	**Warramunga Arr**	**51.84**	**126**	P			**P**	**17 29 17.9**	**-0.5**
	4.1nm,0.6s,mb4.5,baz=306,slow=8.4,SNR=20								
WRA				pP			pP	17 29 25.1	-1.4
	1.1nm,0.4s,baz=301,slow=10.0,SNR=5.1								
WRAB	**Tennant Creek**	**51.84**	**126**	*e*P			**P**	**17 29 18.1**	**-0.4**
WB2	**Warramunga Arr**	**51.85**	**126**	⇑*i*P			**P**	**17 29 18.0**	**-0.5**
ASAR	**Alice Springs**	**53.53**	**130**	P			**P**	**17 29 30.9**	**-0.1**
	2.4nm,0.6s,mb4.3,baz=306,slow=7.2,SNR=17								
ASAR				pP			pP	17 29 38.5	-0.5
	3.2nm,0.7s,baz=305,slow=7.1,SNR=11								
STKA	**Stephens Creek**	**63.74**	**133**	P			**P**	**17 30 43.3**	**+1.4**
	3.6nm,0.6s,mb4.6,baz=303,slow=7.0,SNR=6.9								

IDC 19 17:25:29.0±4.1, 446S×10224E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/18, mbtmp3.6/5, MS4.1/1, Ms1 4.1/1, ms1mx2.8/26, Error ellipse: s-maj=167.1km s-min=21.1km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**23.00**	**352**	P			P	17 30 36.0	+0.4
	0.7nm,0.6s,baz=185,slow=9.0,SNR=7.7								
WRA	**Warramunga Arr**	**34.84**	**119**	P			P	17 32 21.7	-0.4
	0.6nm,0.4s,baz=309,slow=9.0,SNR=9.0								
ASAR	**Alice Springs**	**36.02**	**125**	P			P	17 32 32.6	+0.5
	0.3nm,0.3s,baz=304,slow=7.7,SNR=6.9								
ASAR				pP				17 32 38.4	
	0.6nm,0.3s,baz=301,slow=7.7,SNR=17								
SONM	**Songino Array**	**52.20**	**4**	P			P	17 34 41.6	0.0
	0.5nm,0.5s,baz=178,slow=9.9,SNR=5.3								
MJAR	**Matsushiro Arr**	**52.84**	**36**	LR			LR	17 55 59.5	
	comp=Z,189nm,20.4s,baz=110,slow=35								
MKAR	**Makanchi Array**	**53.99**	**343**	P			P	17 34 54.7	-0.2
	0.4nm,0.4s,baz=151,slow=9.0,SNR=7.1								
TXAR	**Lajitas Array**	**145.16**	**42**	PKPbc			PKPbc	17 45 08.2	-0.7
	0.4nm,0.6s,baz=309,slow=1.0,SNR=4.7								

ISCJB ***19*** *17:25:44.6±0.4, 4283N±003×4623E±002, h10km, Error ellipse: s-maj=4.0km s-min=2.4km az=4.2*
MOS ***19*** *17:25:44.2±1.2, 4280N×4631E, h9km, mb4.1/1, Error ellipse: s-maj=14.9km s-min=7.8km az=15.8*
CSEM ***19*** *17:25:44.2, 4280N×4631E, h9km, mb4.1, After OBN TIF* ***19*** *17:25:44.9, 4273N×4610E, h4km±2km*
ISC 19 17:25:45.2±0.4, 4281N±003×4624E±003, h8km±5km, n21, σ1§07/38, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DLMR	**Dylym**	**0.39**	**48**	*i* Pg			**Pg**	**17 25 51.7**	**-1.1**
DLMR				*i* S			**Sg**	**17 25 59.0**	**+1.0**
DLMR				pmax			pmax		
	comp=Z,115nm,0.2s								
DLMR	**Dylym**	**0.39**	**48**	*i* Pg			**Pg**	**17 25 51.7**	**-1.1**
	comp=Z,115nm,0.2s								
DLMR				*i* Sg			**Sg**	**17 25 59.0**	**+1.0**
DBC	**Dubki**	**0.48**	**64**	*i* PG			**Pg**	**17 25 53.0**	**-1.6**
DBC				*e*S			**Sg**	**17 26 02.0**	**+1.0**
KRNR	**Karanay**	**0.49**	**88**	*i* PG			**Pg**	**17 25 52.7**	**-2.1**
KRNR				*i* S			**Sg**	**17 26 01.7**	**+0.4**
KRNR				pmax			pmax		
	comp=Z,57nm,0.2s								
KRNR	**Karanay**	**0.49**	**88**	*i* Pg			**Pg**	**17 25 52.7**	**-2.1**
	comp=Z,57nm,0.2s								
KRNR				*i* Sg			**Sg**	**17 26 01.7**	**+0.4**
BUJR	**Buynaksk**	**0.64**	**88**	*e*Pg			**Pg**	**17 25 59.0**	**+1.4**
SNJR	**Sundja**	**1.08**	**284**	*e*Pg			**Pg**	**17 26 05.1**	**-0.8**
SNJR				*e*Sg			**Sg**	**17 26 20.4**	**+0.5**
URKR	**Urkarakh**	**1.22**	**121**	*i* Pg			**Pg**	**17 26 07.0**	**-1.6**
URKR				*i* Sg			**Sg**	**17 26 25.0**	**+0.6**
BTKR	**Batakoyurt**	**1.36**	**295**	*i* Pg			**Pg**	**17 26 11.2**	**-0.2**
BTKR				*i* Sg			**Sg**	**17 26 30.0**	**+1.0**
LACR	**Lac**	**1.43**	**271**	*i* Pg			**Pn**	**17 26 09.8**	**-1.6**
LACR				*e*Sg			**Sn**	**17 26 29.1**	**-1.2**
TRKR	**Terskaya**	**1.43**	**310**	*e*Pg			**Pg**	**17 26 12.4**	**-0.2**
TRKR				*e*Sg			**Sg**	**17 26 32.2**	**+1.0**
ARNR	**Ardon**	**1.48**	**285**	*e*Pg			**Pn**	**17 26 12.0**	**-0.1**
ARNR				*e*Sg			**Sg**	**17 26 32.5**	**-0.5**
DGRG	**David-gareji**	**1.50**	**206**	P			**Pb**	**17 26 14.0**	**+0.7**
DGRG				S			**Sg**	**17 26 35.3**	**+1.8**
KMSR	**Komsomolskaya**	**1.53**	**292**	*i* Pg			**Pg**	**17 26 13.2**	**-1.4**
KMSR				*e*Sg			**Sg**	**17 26 34.9**	**+0.5**
MTA	**Mtatsminda**	**1.55**	**224**	P			**Pn**	**17 26 13.0**	**0.0**
MTA				S			**Sn**	**17 26 32.5**	**-0.7**
TBLG	**Delisi**	**1.55**	**226**	S			**Sn**	**17 26 32.7**	**-0.5**
KORR	**Kora**	**1.62**	**281**	*e*Pn			**Pn**	**17 26 13.6**	**-0.3**
KORR				*i* Sg			**Sg**	**17 26 35.5**	**-1.6**
PRTR	**Priterechnaya**	**1.71**	**304**	*i* Pn			**Pn**	**17 26 16.7**	**+1.5**
PRTR				*i* Sg			**Sg**	**17 26 40.4**	**+0.2**
ZEI	**Tsey**	**1.72**	**269**	*e*Pn			**Pn**	**17 26 14.9**	**-0.5**
LSNR	**Lesken**	**1.83**	**285**	*e*Pn			**Pn**	**17 26 17.9**	**+0.9**
ONI	**Oni**	**2.07**	**265**	P			**Pn**	**17 26 21.1**	**+1.0**
ONI				S			**Sn**	**17 26 48.4**	**+2.3**

HLW ***19*** *17:29:34.6, 3488N×3384E, h33km, Mb3.9*
ISCJB ***19*** *17:29:36.3±0.5, 3459N±002×3340E±003, h12km±4km, Error ellipse: s-maj=4.3km s-min=2.9km az=159.0*
DDA ***19*** *17:29:36.3, 3451N×3342E, h18km, Md3.3*
CSEM ***19*** *17:29:36.4±0.1, 3456N×3343E, h20km, MD3.3, Error ellipse: s-maj=4.8km s-min=1.8km az=87.0*
GII ***19*** *17:29:37.1±0.6, 3462N×3340E, h10km, ML2.9/7, Mw2.3/5*
ISK ***19*** *17:29:38.8, 3474N×3340E, h17km, MD3.3*
NIC ***19*** *17:29:38.4±0.2, 3472N×3337E, h12km, ML3.1, MW3.1*
ISC 19 17:29:37.3±0.5, 3461N±002×3338E±003, h14km±4km, n42, σ0§81/63, 1C-4D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CSS	**Prodhromos**	**0.35**	**353**	⇓P			**Pg**	**17 29 43.5**	**-1.0**
	18nm,0.3s								
CSS				S			**Sg**	**17 29 48.1**	**-1.2**
SZAC	**Souni-Zanaja**	**0.44**	**289**	P			**Pg**	**17 29 47.0**	**+1.0**
SZAC				S			**Sg**	**17 29 53.5**	**+1.6**
MAMC	**Mammari**	**0.57**	**346**	P			**Pg**	**17 29 47.6**	**-1.0**
	17nm,0.4s								
MAMC				S			**Sg**	**17 29 52.2**	**-4.0**
LEF	**Lefka**	**0.65**	**321**	*e*PG			**Pg**	**17 29 50.7**	**+0.7**
LEF				*e*SG			**Sg**	**17 30 00.3**	**+1.8**
PHNC	**Paralimni**	**0.66**	**54**	⇓P			**Pg**	**17 29 50.5**	**+0.2**
	14nm,0.6s								
PHNC				S			**Sg**	**17 29 59.2**	**+0.2**
LFK	**Lefkose**	**0.68**	**10**	*e*PG			**Pg**	**17 29 49.3**	**-1.2**
LFK				*e*SG			**Sg**	**17 29 58.6**	**-0.9**
ALFC	**Alevga**	**0.84**	**310**	P			**Pg**	**17 29 53.1**	**-0.6**
ALFC				S			**Sg**	**17 30 04.3**	**-0.4**
PPCY	**Paphos**	**0.90**	**288**	P			**Pb**	**17 29 54.2**	**-0.4**
AKMC	**Akamas**	**0.96**	**296**	⇑P			**Pb**	**17 29 55.9**	**+0.2**
	6.8nm,0.1s								
AKMC				S			**Sb**	**17 30 07.2**	**-1.0**
EREN	**Erenkoy**	**1.12**	**35**	*e*PG			**Pg**	**17 29 58.9**	**0.0**
EREN				*e*SG			**Sg**	**17 30 14.2**	**+0.6**
IKL	**Isikli**	**1.64**	**9**	*e*PN			**Pn**	**17 30 05.2**	**-0.5**
IKL				*e*SN			**Sn**	**17 30 24.9**	**-1.7**
ERMK	**Ermenek**	**2.06**	**349**	*i* P			**Pn**	**17 30 11.9**	**+0.4**
ERMK				*i* S			**Sn**	**17 30 38.0**	**+1.0**
MEST	**Erdemli**	**2.07**	**17**	*i* P			**Pn**	**17 30 11.3**	**-0.3**
MEST				*i* S			**Sn**	**17 30 36.6**	**-0.5**
MMB3	**Mount Meron ar**	**2.31**	**133**	Pn			**Pn**	**17 30 15.1**	**+0.1**
MMA0B	**Mount Meron ar**	**2.32**	**133**	Pn			**Pn**	**17 30 15.1**	**+0.1**
MMA0B				Sn			**Sn**	**17 30 43.8**	**+0.6**
MMC3	**Mount Meron ar**	**2.32**	**133**	Pn			**Pn**	**17 30 15.0**	**-0.1**
KSDI	**Kefar Szold**	**2.37**	**126**	Pn			**Pn**	**17 30 15.5**	**-0.1**
KSDI				Sn			**Sn**	**17 30 43.6**	**-0.9**
HRI	**Mount Hermon**	**2.37**	**124**	Sn			**Sn**	**17 30 45.0**	**+0.4**
OFRI	**'Ofer**	**2.39**	**146**	Pn			**Pn**	**17 30 16.1**	**0.0**
OFRI				Sn			**Sn**	**17 30 44.1**	**-1.1**
HDMB	**Hadim**	**2.46**	**343**	*e*PN			**Pn**	**17 30 18.5**	**+1.6**
KSHT	**Keshet**	**2.59**	**128**	Pn			**Pn**	**17 30 19.1**	**+0.3**
SLTI	**Sal'it**	**2.74**	**149**	Pn			**Pn**	**17 30 21.1**	**+0.2**
MMLI	**Mount Malkishu**	**2.76**	**141**	Pn			**Pn**	**17 30 21.0**	**0.0**
MMLI				Sn			**Sn**	**17 30 54.8**	**+0.6**
HMDT	**Nahal Hemdat**	**2.96**	**142**	Pn			**Pn**	**17 30 24.4**	**+0.6**
HMDT				Sn			**Sn**	**17 30 59.9**	**+0.8**
KARA	**Karaisali**	**2.97**	**27**	*e*PN			**Pn**	**17 30 24.8**	**+0.8**
CEYT	**Ceyhan**	**3.07**	**38**	*e*PN			**Pn**	**17 30 27.1**	**+1.8**
KONT	**Konya--Tatoy**	**3.43**	**346**	*e*PN			**Pn**	**17 30 30.9**	**+0.7**
DSI	**Dead Sea**	**3.47**	**151**	Pn			**Pn**	**17 30 30.6**	**-0.3**
DSI				Sn			**Sn**	**17 31 12.2**	**+0.6**
RSH		**3.65**	**175**	P			**Pn**	**17 30 32.2**	**-1.2**
RSH				S			**Sn**	**17 31 14.6**	**-1.7**
MZDA	**Masada**	**3.69**	**153**	Pn			**Pn**	**17 30 34.1**	**+0.2**
MZDA				Sn			**Sn**	**17 31 17.9**	**+0.7**
RTMI	**Retamim**	**3.71**	**162**	Pn			**Pn**	**17 30 35.0**	**+0.8**
KZIT	**Kziot**	**3.79**	**167**	Pn			**Pn**	**17 30 35.0**	**-0.3**
AMAG	**Maghara**	**3.96**	**182**	P			**Pn**	**17 30 37.2**	**-0.4**
AMAG				S			**Sn**	**17 31 23.0**	**-0.9**
PRNI	**Paran**	**4.46**	**162**	Pn			**Pn**	**17 30 45.1**	**+0.6**
KRMI	**Paran Flat**	**4.62**	**165**	Pn			**Pn**	**17 30 47.1**	**+0.4**
HNKL	**Nakhl**	**4.70**	**174**	P			**Pn**	**17 30 47.1**	**-0.6**
HNKL	**Nakhl**	**4.70**	**174**	P			**Pn**	**17 30 47.1**	**-0.6**
	617nm,0.1s								
HRFI	**Mount Harif**	**4.77**	**162**	Pn			**Pn**	**17 30 49.1**	**+0.3**
SUZ		**4.78**	**186**	⇓P			**Pn**	**17 30 49.0**	**+0.1**
MBRI	**Mt Berech**	**4.98**	**164**	Pn			**Pn**	**17 30 51.8**	**+0.3**
HKAT	**Jabal Katrina**	**6.09**	**175**	P			**Pn**	**17 31 05.8**	**-1.1**
TR2		**6.21**	**177**	⇓P			**Pn**	**17 31 08.0**	**-0.6**

IDC 19 17:29:51.2±17.0, 1020N×9323E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.5/21, mbtmp3.9/4, Error ellipse: s-maj=351.6km s-min=275.6km az=165.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**42.60**	**131**	P			P	17 37 49.1	-0.3
	1.3nm,0.6s,baz=335,slow=12,SNR=5.5								
WRA	**Warramunga Arr**	**50.35**	**127**	P			P	17 38 50.3	0.0
	0.8nm,0.5s,baz=306,slow=8.5,SNR=21								
WRA				pP				17 38 57.0	
	0.7nm,0.5s,baz=307,slow=8.3,SNR=8.9								
ASAR	**Alice Springs**	**52.10**	**131**	P			P	17 39 03.6	+0.3
	0.7nm,0.6s,baz=307,slow=7.1,SNR=15								
ASAR				pP				17 39 09.9	
	1.2nm,0.8s,baz=303,slow=7.8,SNR=7.4								
STKA	**Stephens Creek**	**62.36**	**134**	P			P	17 40 15.7	-0.2
	1.7nm,0.6s,baz=319,slow=5.9,SNR=3.6								

IDC 19 17:38:15.0±5.9, 683S×12998E, h149km±58km, mb3.4/1, mb1 3.3/5, mb1mx3.1/16, mbtmp3.2/5, Error ellipse: s-maj=50.7km s-min=22.0km az=52.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**7.09**	**241**	P			Pn	17 39 57.8	+1.5
	0.9nm,0.3s,baz=255,slow=20,SNR=4.3								
BATI				S			Sn	17 41 16.4	+0.7
	2.8nm,0.3s,baz=187,slow=18,SNR=6.6								
FITZ	**Fitzroy Crossi**	**11.98**	**200**	*e*P			Pn	17 41 01.0	0.0
	3.1nm,0.8s								
FITZ				*e*S			Sn	17 43 08.0	-5.5
FITZ	**Fitzroy Crossi**	**11.98**	**200**	P			Pn	17 40 59.8	-1.2
	0.3nm,0.3s,baz=36,slow=13,SNR=25								
FITZ				S			Sn	17 43 08.7	-4.8
	0.4nm,0.3s,baz=220,slow=20,SNR=6.0								
WRA	**Warramunga Arr**	**13.71**	**162**	P			Pn	17 41 22.5	-0.7
	0.5nm,0.3s,baz=338,slow=13,SNR=22								
WRA				S			Sn	17 43 50.2	-4.9
	0.6nm,0.3s,baz=356,slow=24,SNR=6.9								
WB2	**Warramunga Arr**	**13.71**	**162**	*e*P			Pn	17 41 22.3	-1.0
ASAR	**Alice Springs**	**17.16**	**168**	P			Pn	17 42 07.2	+1.4
	0.2nm,0.3s,baz=342,slow=9.6,SNR=26								
ASAR				S			S	17 45 15.8	-0.5
	0.1nm,0.3s,baz=359,slow=27,SNR=5.1								
MKAR	**Makanchi Array**	**68.07**	**327**	P			P	17 48 58.2	-0.2
	0.5nm,0.4s,baz=119,slow=7.7,SNR=5.2								

IDC 19 17:59:17.9±3.2, 411S×10041E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.7/19, mbtmp3.7/6, Error ellipse: s-maj=129.5km s-min=19.2km az=57.0, Southwest of Sumatera

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

CMAR	**Chiang Mai Arr**	**22.47**	**356**	P			P	18 04 19.9	+1.1
	1.0nm,0.6s,baz=184,slow=9.4,SNR=7.7								
WRA	**Warramunga Arr**	**36.61**	**118**	P			P	18 06 25.2	-1.0
	0.4nm,0.5s,baz=301,slow=9.8,SNR=12								
ASAR	**Alice Springs**	**37.71**	**124**	P			P	18 06 36.6	+1.1
	0.5nm,0.7s,baz=305,slow=7.5,SNR=14								
SONM	**Songino Array**	**51.99**	**5**	P			P	18 08 28.7	-0.2
	0.8nm,0.5s,baz=188,slow=8.5,SNR=10								
MKAR	**Makanchi Array**	**53.16**	**345**	P			P	18 08 37.5	-0.1
	1.3nm,0.8s,baz=146,slow=8.8,SNR=12								
ZALV	**Zalesovo Beam**	**59.30**	**349**	P			P	18 09 21.1	-0.2
	0.5nm,0.3s,baz=179,slow=6.7,SNR=6.1								
TXAR	**Lajitas Array**	**146.09**	**40**	PKPbc			PKPbc	18 18 60.0	-0.7
	0.9nm,0.9s,baz=304,slow=0.3,SNR=7.4								
TXAR				pPKPbc				18 19 07.3	
	0.5nm,0.7s,baz=244,slow=0.4,SNR=5.3								

ISCJB ***19*** *18:05:07.2±0.6, 1038N±004×8631W±004, h10km, mb4.0/7, Error ellipse: s-maj=7.1km s-min=3.7km az=38.1*
CASC ***19*** *18:05:08.6±3.7, 1041N×8632W, h13km±13km, MD4.0, ML3.6, mb4.3(NEIC)*
IDC ***19*** *18:05:12.2±2.5, 1100N×8574W, h28km±23km, mb3.9/6, mb1 4.1/7, mb1mx3.8/22, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=52.7km s-min=22.1km az=42.0*
NEIC ***19*** *18:05:12.7±1.3, 1074N×8590W, h42km±11km, mb4.3/1, Error ellipse: s-maj=29.4km s-min=11.2km az=222.0*
ISC 19 18:05:08.7±1.3, 1044N±004×8622W±005, h11km±9km, n52, σ0§92/44, mb4.0/7, 10C-2D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VCR	**Vista de Mar**	**0.66**	**118**	*e*P			**Pg**	**18 05 22.0**	**+0.5**
2RIO	**Dos Rios de Up**	**0.98**	**84**	⇑*e*P			**Pg**	**18 05 26.7**	**-0.9**
2RIO				*e*S			**Sg**	**18 05 42.6**	**+2.3**
CUI		**1.05**	**77**	⇑*e*P			**Pb**	**18 05 28.6**	**-0.4**
CUI				*e*S			**Sg**	**18 05 43.2**	**+0.4**
MADN	**Villa Maderas**	**1.18**	**35**	⇑*e*P			**Pb**	**18 05 31.1**	**-0.1**
MADN				*e*S			**Sb**	**18 05 45.3**	**-1.2**
JCR	**Jicaral**	**1.24**	**118**	*e*P			**Pn**	**18 05 31.0**	**-1.0**
JTS	**JuntasAbangare**	**1.26**	**96**	Pg			**Pg**	**18 05 31.1**	**-1.8**
	88nm,0.3s,baz=314,slow=18,SNR=98								
JTS				Lg				18 05 47.1	
	141nm,0.3s,baz=193,slow=23,SNR=12								
CONN	**Concepcion**	**1.27**	**28**	⇑*i*P			**Pn**	**18 05 32.3**	**0.0**
CAO	**Cobano**	**1.32**	**123**	⇑*e*P			**Pn**	**18 05 31.6**	**-1.4**
APON	**Apoyo**	**1.48**	**6**	*e*P			**Pn**	**18 05 36.3**	**+1.0**
CRUN	**El Crucero**	**1.54**	**357**	*e*P			**Pn**	**18 05 37.6**	**+1.5**
MASN	**Masaya**	**1.54**	**3**	⇓*e*P			**Pn**	**18 05 35.7**	**-0.4**
TICN	**Ticuantepe**	**1.59**	**360**	*e*P			**Pn**	**18 05 36.9**	**+0.1**
TISN	**Laguna Tiscapa**	**1.70**	**359**	*e*P			**Pn**	**18 05 38.0**	**-0.2**
MGAN	**Managua**	**1.70**	**359**	⇑*e*P			**Pn**	**18 05 37.8**	**-0.5**
MGAN				AML			AML	18 06 17.5	
	comp=E,789nm,0.3s								
XAVN	**Gruta Xavier**	**1.71**	**357**	*e*P			**Pn**	**18 05 38.3**	**-0.1**
**CGA

*NEIC **19** 18:40:42.2±1.0, 472S×154.16E, h421km±11km, mb4.5/10, Error ellipse: s-maj=10.5km s-min=9.2km az=175.0*
*IDC **19** 18:40:42.4±1.6, 475S×154.08E, h421km±18km, mb3.6/14, mb1 3.7/16, mb1mx3.7/19, mbtmp3.6/16, Error ellipse: s-maj=14.2km s-min=9.5km az=105.0*
ISC 19 18:40:42.6±1.1, 475S±008×154.16E±008, h428km±13km, n36, σ0°81/32, mb3.9/18, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.39**	**129**	P	**P**	**18 42 29.6**	**-1.5**
	12nm,0.3s,baz=251,slow=3.2,SNR=5.5						
PMG	**Port Moresby**	**8.34**	**236**	*e*P	**P**	**18 42 42.1**	**+0.6**
	56nm,0.6s						
COEN	**Coen**	**14.17**	**229**	*e*P	**P**	**18 43 47.0**	**+1.5**
	30nm,0.6s						
CTA	**Charters Tower**	**17.08**	**206**	*e*P	**P**	**18 44 17.2**	**+0.8**
	11nm,0.4s						
CTA				*e*		18 44 19.3	
CTA	**Charters Tower**	**17.08**	**206**	P	**P**	**18 44 17.2**	**+0.8**
	2.5nm,0.3s,baz=31,slow=11,SNR=29						
CTAO	**Charters Tower**	**17.08**	**206**	*e*P	**P**	**18 44 17.1**	**+0.7**
	30nm,0.8s						
DZM	**Mont Dzumac**	**20.93**	**146**	*e*P	**P**	**18 44 54.4**	**+0.6**
DZM	**Mont Dzumac**	**20.93**	**146**	*e*P	**P**	**18 44 54.2**	**+0.4**
WRAB	**Tennant Creek**	**24.49**	**230**	*e*P	**P**	**18 45 25.6**	**-0.4**
	3.0nm,0.6s,mb3.9						
WB2	**Warramunga Arr**	**24.49**	**230**	*e*P	**P**	**18 45 25.8**	**-0.2**
WRA	**Warramunga Arr**	**24.50**	**230**	P	**P**	**18 45 26.0**	**-0.1**
	2.5nm,0.4s,mb4.0,baz=54,slow=9.3,SNR=79						
WRA				pP		18 46 31.3	
	1.6nm,0.7s,baz=52,slow=10.0,SNR=1.8						
WRA				PcP	PcP	18 48 51.8	+0.8
	2.1nm,0.7s,baz=52,slow=2.4,SNR=6.7						
WRA				S	**S**	**18 49 15.1**	**0.0**
	1.7nm,0.7s,baz=54,slow=14,SNR=4.8						
ASAR	**Alice Springs**	**27.11**	**224**	P	**P**	**18 45 48.5**	**-0.6**
	1.3nm,0.3s,mb3.9,baz=54,slow=9.0,SNR=98						
ASAR				pP		18 47 00.7	
	1.2nm,0.7s,baz=63,slow=8.2,SNR=2.3						
ASAR				PcP	PcP	18 48 57.6	+0.6
	1.1nm,0.6s,baz=58,slow=2.3,SNR=5.4						
ASAR				S	**S**	**18 49 55.5**	**-0.6**
	2.0nm,0.8s,baz=53,slow=14,SNR=8.5						
STKA	**Stephens Creek**	**29.45**	**202**	*e*P	**P**	**18 46 09.0**	**-0.6**
	3.7nm,0.9s,mb3.7						
STKA	**Stephens Creek**	**29.45**	**202**	P	**P**	**18 46 08.7**	**-0.9**
	2.2nm,0.4s,mb3.8,baz=42,slow=11,SNR=11						
FITZ	**Fitzroy Crossi**	**30.88**	**242**	*e*P	**P**	**18 46 21.1**	**-1.1**
	4.6nm,0.9s,mb3.8						
FORT	**Forrest**	**35.69**	**220**	*e*P	**P**	**18 47 02.9**	**-0.2**
	18nm,0.5s,mb4.7						
URZ	**Urewera**	**39.36**	**151**	P	**P**	**18 47 34.0**	**+0.7**
	8.7nm,0.7s,mb4.2,baz=159,slow=4.0,SNR=7.5						
RPZ	**Rata Peaks**	**41.58**	**161**	P	**P**	**18 47 51.9**	**+0.9**
	12nm,0.7s,mb4.4,baz=6.7,slow=2.4,SNR=10						
KLBR	**Kellerberrin**	**43.33**	**228**	*e*P	**P**	**18 48 02.2**	**-3.0**
	44nm,1.6s,mb4.5						
KSRS	**Korea Array**	**48.58**	**332**	P	**P**	**18 48 44.7**	**-0.6**
	1.5nm,0.8s,mb3.4,baz=135,slow=8.2,SNR=6.1						
PETK	**Petropavlovsk-**	**57.72**	**3**	P	**P**	**18 49 50.5**	**-0.2**
	1.6nm,0.5s,mb3.6,baz=164,slow=6.1,SNR=5.8						
CMAR	**Chiang Mai Arr**	**59.08**	**295**	P	**P**	**18 50 01.7**	**+1.1**
	1.2nm,0.8s,mb3.2,baz=117,slow=5.6,SNR=7.0						
SONM	**Songino Array**	**67.01**	**327**	P	**P**	**18 50 52.3**	**+0.9**
	1.7nm,0.6s,mb3.9,baz=139,slow=4.9,SNR=17						
CASY	**Casey**	**68.46**	**197**	*e*P	**P**	**18 51 00.4**	**+0.3**
MKAR	**Makanchi Array**	**81.18**	**319**	P	**P**	**18 52 12.6**	**+0.3**
	3.3nm,0.6s,mb4.3,baz=103,slow=6.5,SNR=34						
ZALV	**Zalesovo Beam**	**81.86**	**326**	P	**P**	**18 52 14.9**	**-0.7**
	1.1nm,0.3s,mb4.0,baz=108,slow=4.8,SNR=7.8						
MAW	**Mawson**	**86.14**	**203**	*e*P	**P**	**18 52 36.9**	**+0.2**
	2.3nm,0.6s,mb4.1						
MAW	**Mawson**	**86.14**	**203**	P	**P**	**18 52 37.1**	**+0.4**
	2.5nm,0.6s,mb4.1,baz=103,slow=5.0,SNR=16						
NVAR	**Mina Array Bea**	**90.99**	**52**	P	**P**	**18 53 00.4**	**+0.4**
	0.6nm,0.6s,mb3.6,baz=251,slow=7.4,SNR=4.6						
YKA	**Yellowknife Ar**	**94.75**	**28**	P	**P**	**18 53 16.4**	**-0.3**
	0.5nm,0.6s,mb3.7,baz=275,slow=4.6,SNR=3.6						
GERES	**GERESS Array B**	**124.71**	**329**	PKP	PKPdf	18 58 53.2	+0.6
	1.0nm,0.6s,baz=50,slow=2.1,SNR=8.1						
LPAZ	**La Paz**	**133.25**	**117**	PKP	PKPdf	18 59 12.0	+2.3
	1.1nm,0.6s,baz=270,slow=2.2,SNR=6.1						
CPUP	**Villa Florida**	**136.59**	**137**	PKP	PKPdf	18 59 17.6	+1.9
	2.1nm,0.8s,baz=287,slow=10,SNR=3.1						
TAM	**Tamanrasset**	**144.78**	**304**	*e*PKPdf	PKPdf	18 59 30.8	+0.3
BDFB	**Brasilia**	**150.13**	**133**	PKPbc	PKPbc	18 59 45.6	+0.6
	4.1nm,0.3s,baz=200,slow=4.4,SNR=7.2						
TORD	**Torodi Ar. Bea**	**151.57**	**289**	PKPbc	PKPbc	18 59 47.8	-0.5
	4.8nm,0.7s,baz=88,slow=1.5,SNR=43						
TORD				PKPab	PKPab	18 59 58.5	-0.3
	1.1nm,0.6s,baz=83,slow=3.6,SNR=4.9						

*MOS **19** 18:44:59.9±1.2, 4355N×14722E, h50km, mb4.2/7, Error ellipse: s-maj=14.2km s-min=10.9km az=113.3*
*ISCJB **19** 18:45:00.9±0.8, 4359N±005×147.11E±007, h53km±7km, mb4.0/13, MS4.0/2, Error ellipse: s-maj=9.7km s-min=6.6km az=139.7*
*JMA **19** 18:45:00.4±0.4, 4346N×147.08E, h29km±4km, M4.0*
*IDC **19** 18:45:02.5±2.7, 4359N×147.07E, h54km±24km, mb3.7/9, mb1 3.9/12, mb1mx3.7/23, mbtmp3.7/12, ML3.5/3, MS3.7/3, Ms1 3.7/3, ms1mx3.1/30, Error ellipse: s-maj=19.6km s-min=17.3km az=142.0*
*NEIC **19** 18:45:02.7±1.1, 4352N×147.10E, h57km±9km, mb4.0/2, Error ellipse: s-maj=13.9km s-min=8.9km az=132.0*
ISC 19 18:45:02.3±0.8, 4357N±005×147.10E±007, h47km±7km, n49, σ1°12/58, mb4.0/13, MS4.0/2, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.01**	**298**	⇓*i*PN	**Pn**	**18 45 18.6**	**-1.4**
YUK				*i* S	**Sn**	**18 45 32.0**	**-1.1**
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
NEM2	**Nemuro 2**	**1.01**	**259**	P	**Pn**	**18 45 18.1**	**-1.9**
NEM2				*e*S	**Sn**	**18 45 31.2**	**-1.9**
JRA	**Rausu**	**1.48**	**285**	P	**Pn**	**18 45 25.9**	**-0.5**
JNK	**Nakash**	**1.73**	**271**	P	**Pn**	**18 45 28.7**	**-1.2**
JNK				*e*S	**Sn**	**18 45 50.0**	**-0.7**
KUR	**Kuril'sk**	**1.75**	**18**	*e*PN	**Pn**	**18 45 28.0**	**-2.1**
KUR				*e*S	**Sn**	**18 45 44.0**	**-7.2**
KUR				pmax	pmax		
	comp=Z,260nm,0.8s						
KUR				smax			
	comp=N,910nm,0.5s						
KUR				smax			
	comp=E,680nm,0.5s						
KUR				smax			
	comp=N,4μm,2.0s						
JAK	**Akkeshi**	**1.85**	**253**	P	**Pn**	**18 45 30.1**	**-1.4**
JTKR	**Abashiri--Toko**	**2.34**	**281**	P	**Pn**	**18 45 38.7**	**+0.4**
JAR	**Ashorobuto**	**2.44**	**265**	P	**Pn**	**18 45 39.2**	**-0.4**
JAR				*e*S	**Sn**	**18 46 08.7**	**+0.5**
JOB	**Onbets**	**2.48**	**255**	P	**Pn**	**18 45 40.1**	**0.0**
JCH	**Churui**	**2.90**	**252**	P	**Pn**	**18 45 46.0**	**+0.1**
JKK2	**Kamakawa 2**	**3.17**	**277**	P	**Pn**	**18 45 51.6**	**+2.0**
JEM	**Erimo**	**3.29**	**243**	P	**Pn**	**18 45 53.1**	**+1.8**
ERM	**Erimo**	**3.29**	**243**	*e*PN	**Pn**	**18 45 53.1**	**+1.8**
ASAJ	**Asahikawa**	**3.30**	**281**	P	**Pn**	**18 45 53.1**	**+1.7**
	comp=N,3.8nm,0.3s,baz=144,slow=11,SNR=32						
ASAJ				S	**Sn**	**18 46 28.8**	**-0.6**
	comp=N,5.4nm,0.3s,baz=152,slow=30,SNR=4.8						
ASAJ				LR	LR	18 47 30.8	
	comp=N,366nm,20.0s,baz=98,slow=45						
ASAJ	**Asahikawa**	**3.30**	**281**	PN	**Pn**	**18 45 53.2**	**+1.8**
ASAJ				S	**Sn**	**18 46 28.8**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,366nm,20.0s						
JFR	**Furan**	**3.31**	**264**	P	**Pn**	**18 45 52.3**	**+0.8**
JFR				*e*S	**Sn**	**18 46 30.6**	**+1.0**
JNBK	**Urakawa-nobuka**	**3.44**	**249**	P	**Pn**	**18 45 53.5**	**+0.1**
JNBK				*e*S	**Sn**	**18 46 33.6**	**+0.7**
YSS	**Yuzh-Sakhalins**	**4.56**	**319**	*e*PN	**Pn**	**18 46 09.8**	**+1.1**
YSS				*e*S	**Sn**	**18 47 00.5**	**+0.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				smax			
	comp=E,60nm,1.0s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**4.56**	**319**	*e*P	**Pn**	**18 46 10.1**	**+1.3**
MJAR	**Matsushiro Arr**	**9.78**	**227**	P	**Pn**	**18 47 19.2**	**-1.1**
	comp=E,0.2nm,0.3s,baz=256,slow=41,SNR=2.8						
PEA0B	**Petropavlovsk-**	**11.85**	**33**	*e*P	**Pn**	**18 47 50.1**	**+1.6**
PETK	**Petropavlovsk-**	**11.85**	**33**	P	**Pn**	**18 47 49.0**	**+0.6**
	comp=E,0.5nm,0.3s,baz=205,slow=11,SNR=15						
KLR	**Kul'dur**	**12.00**	**303**	*e*PN	**Pn**	**18 47 52.2**	**+1.6**
ULN	**Ulaanbaatar**	**28.06**	**293**	*e*P	**P**	**18 50 50.3**	**+1.3**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
ULN	**Ulaanbaatar**	**28.06**	**293**	*e*P	**P**	**18 50 50.3**	**+1.3**
	comp=Z,1.3nm,0.7s,mb3.7						
ZAK	**Zakamensk**	**30.30**	**299**	*e*P	**P**	**18 51 10.5**	**+1.7**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
IMA2	**Indian Mountai**	**38.84**	**34**	*e*P	**P**	**18 52 23.2**	**+0.9**
MKAR	**Makanchi Array**	**44.63**	**298**	P	**P**	**18 53 10.1**	**+0.3**
	comp=Z,0.7nm,0.5s,mb3.7,baz=51,slow=4.8,SNR=7.1						
MKAR	**Makanchi Array**	**44.63**	**298**	P	**P**	**18 53 10.1**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**55.97**	**34**	P	**P**	**18 54 36.1**	**+0.8**
	comp=Z,0.5nm,0.6s,mb3.7,baz=304,slow=6.8,SNR=5.0						
YKA	**Yellowknife Ar**	**55.97**	**34**	P	**P**	**18 54 36.1**	**+0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**59.40**	**340**	P	**P**	**18 54 58.3**	**-1.0**
	comp=Z,4.2nm,1.0s,mb4.4,baz=37,slow=6.9,SNR=5.7						
ARCES	**ARCESS Array B**	**59.40**	**340**	P	**P**	**18 54 58.3**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JOF	**Joensuu**	**62.23**	**332**	*e*p	**P**	**18 55 17.4**	**-1.2**
	comp=Z,3.6nm,0.4s,mb4.8						
JOF	**Joensuu**	**62.23**	**332**	*e*P	**P**	**18 55 17.4**	**-1.2**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.9						
WRA	**Warramunga Arr**	**64.28**	**193**	P	**P**	**18 55 31.9**	**-0.6**
	comp=Z,0.7nm,0.7s,mb3.8,baz=9.2,slow=6.5,SNR=5.9						
WRA	**Warramunga Arr**	**64.28**	**193**	*e*P	**P**	**18 55 31.9**	**-0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KAF	**Kangasniemi**	**64.45**	**333**	*e*p	**P**	**18 55 32.6**	**-0.7**
	comp=Z,2.2nm,0.5s,mb4.4,baz=42,slow=6.2						
KAF	**Kangasniemi**	**64.45**	**333**	*e*P	**P**	**18 55 32.6**	**-0.7**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ASAR	**Alice Springs**	**68.00**	**193**	P	**P**	**18 55 56.6**	**+0.2**
	comp=Z,0.8nm,0.9s,mb3.7,baz=10,slow=5.9,SNR=5.4						
ASAR	**Alice Springs**	**68.00**	**193**	P	**P**	**18 55 56.6**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NB2	**NORSAR Subarra**	**69.75**	**339**	P	**P**	**18 56 06.6**	**-0.3**
	comp=Z,2.7nm,0.5s,mb4.4,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**69.75**	**339**	P	**P**	**18 56 06.2**	**-0.7**
	comp=Z,2.3nm,0.6s,mb4.3,baz=33,slow=6.2,SNR=14						
NOA	**NORSAR Array B**	**69.75**	**339**	*e*P	**P**	**18 56 06.7**	**-0.2**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PDAR	**Pinedale Array**	**70.05**	**50**	P	**P**	**18 56 07.5**	**-1.5**
	comp=Z,0.4nm,0.6s,mb3.5,baz=292,slow=3.4,SNR=1.7						
AKASG	**Malin Array Be**	**71.70**	**324**	P	**P**	**18 56 17.9**	**-1.0**
	comp=Z,1.0nm,0.5s,mb4.0,baz=45,slow=6.0,SNR=6.1						
AKASG	**Malin Array Be**	**71.70**	**324**	*e*P	**P**	**18 56 18.3**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SCHQ	**Schefferville**	**77.80**	**19**	LR	LR	19 31 26.0	
	comp=Z,86nm,20.0s,MS4.1,baz=297,slow=36						
TXAR	**Lajitas Array**	**82.78**	**56**	P	**P**	**18 57 20.9**	**-0.5**
	comp=Z,0.2nm,0.6s,mb3.3,baz=265,slow=5.3,SNR=3.0						
TXAR				LR	LR	19 29 08.3	
	comp=Z,70nm,21.9s,MS4.0,baz=105,slow=32						

*DJA **19** 18:47:45, 221S×99.91E, h30km, MLv3.9/2*
IDC 19 18:47:43.2±3.1, 200S×10023E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/19, mbtmp3.5/6, Error ellipse: s-maj=130.1km s-min=20.3km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.37**	**356**	P	P	18 52 21.1	-0.4
	0.6nm,0.5s,baz=187,slow=9.9,SNR=7.5						
WRA	**Warramunga Arr**	**37.79**	**121**	P	P	18 55 00.8	-0.7
	0.7nm,0.9s,baz=301,slow=10.0,SNR=4.3						
ASAR	**Alice Springs**	**39.06**	**126**	P	P	18 55 12.9	+0.8
	0.4nm,0.8s,baz=304,slow=8.5,SNR=6.4						
SONM	**Songino Array**	**49.92**	**5**	P	P	18 56 39.1	+0.6
	0.3nm,0.6s,baz=186,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**51.09**	**344**	P	P	18 56 47.4	-0.1
	0.8nm,0.5s,baz=146,slow=7.8,SNR=9.4						
ZALV	**Zalesovo Beam**	**57.21**	**349**	P	P	18 57 32.1	+0.2
	0.4nm,0.3s,baz=132,slow=8.6,SNR=3.0						
TXAR	**Lajitas Array**	**144.56**	**38**	PKP	PKPdf	19 07 21.1	-1.4
	0.2nm,0.5s,baz=188,slow=1.3,SNR=3.8						

*NEIC **19** 18:52:32.1, 3042S×7078W, h78km, MD3.8(GUC), After GUC.*
GUC 19 18:52:32.1±0.8, 3042S×7078W, h78km±4km, MD3.8, ML3.9, 5C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	**0.25**	**355**	*e*P	Pn	18 52 44.9	+0.9
TLL				*i* S	Sn	18 52 54.5	+1.9
TLL				AML	AML	18 52 56.0	
	comp=E,3μm,0.3s						
TLL	**Tololo Astrono**	**0.25**	**355**	*e*P	Pn	18 52 44.9	+0.9
TLL				*i* S	Sn	18 52 54.5	+1.9
OVCH	**Ovalle**	**0.41**	**243**	⇓*i*P	Pn	18 52 45.2	+0.3
OVCH				*i* S	Sn	18 52 54.9	+0.4
LSCH	**La Serena**	**0.65**	**321**	⇑*i*P	Pn	18 52 47.3	+0.2
LSCH				*i* S	Sn	18 52 58.7	+0.4
LCO	**Las Campanas**	**1.41**	**3**	*e*P	Pn	18 52 56.5	+0.3
LCO				*i* S	Sn	18 53 16.1	+1.8
CHNG	**Los Chungos**	**1.58**	**203**	*e*P	Pn	18 52 59.0	+0.5
CHNG				*i* S	Sn	18 53 18.9	+0.6
VACH	**Vallenar**	**1.84**	**0**	⇑*i*P	Pn	18 53 02.8	+1.0
VACH				*i* S	Sn	18 53 25.1	+0.7
PTCH	**Petorca**	**1.84**	**184**	⇑*i*P	Pn	18 53 02.0	+0.2
PTCH				*i* S	Sn	18 53 24.6	+0.2
JACH	**Jahuel**	**2.26**	**176**	⇑*i*P	Pn	18 53 08.4	+1.0
JACH				*i* S	Sn	18 53 35.3	+0.9
PEL	**Peldehue**	**2.72**	**178**	⇑*i*P	Pn	18 53 14.3	+0.8
PEL				*i* S	Sn	18 53 46.1	+0.7
PEL				AML	AML	18 53 56.4	
	comp=N,576nm,0.5s						
FCH	**Farellones**	**2.93**	**172**	*e*P	Pn	18 53 18.5	+2.1
FCH				*i* S	Sn	18 53 53.3	+2.8
FCH				AML	AML	18 54 04.0	
	comp=E,338nm,0.2s						
CLCH	**Cerro Calan**	**2.97**	**176**	*e*P	Pn	18 53 18.1	+1.1
CLCH				*i* S	Sn	18 53 52.4	+0.7
CLCH				AML	AML	18 54 18.7	
	comp=E,411nm,0.5s						
ANTU	**Antumapu**	**3.14**	**178**	*i* S	Sn	18 53 56.5	+0.8
ANTU				AML	AML	18 54 10.0	
	comp=N,288nm,0.4s						
PCH	**Pirque**	**3.20**	**176**	*e*P	Pn	18 53 21.2	+1.1
TACH	**Talagante**	**3.23**	**182**	*e*P	Pn	18 53 21.0	+0.6
SFDO	**San Fernando**	**4.19**	**183**	*e*P	Pn	18 53 33.8	+0.3

*ISCJB **19** 18:59:35.1±1.3, 3863N±005×4888E±007, h4km±10km, Error ellipse: s-maj=10.1km s-min=7.1km az=145.9*
*CSEM **19** 18:59:35.6±0.1, 3860N×4878E, h2km, ML3.2, Error ellipse: s-maj=3.9km s-min=2.6km az=45.0*
*THR **19** 18:59:36.8±0.5, 3860N×4877E, h14km±7km, ML3.2*
*NNC **19** 18:59:53.9±15.0, 3907N×5129E, h0km, mb3.5, Error ellipse: s-maj=180.5km s-min=105.7km az=83.0*
ISC 19 18:59:36.9±1.1, 3863N±005×4880E±007, h6km±8km, n17, σ1°41/24, 3C, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLBA	**Clilabad**	**0.69**	**333**	P	**Pg**	**18 59 50.7**	**+0.5**
	SNR=534						
GLBA				S	**Sg**	**18 59 59.9**	**+0.7**
ALIB	**Ii-Bayraml**	**1.34**	**7**	P	**Pn**	**19 00 04.2**	**+2.1**
	SNR=7.2						
ZNJK	**Zanjan**	**1.96**	**183**	*e*Pg	**Pg**	**19 00 12.1**	**-2.3**
ZNJK				AML	AML	19 00 41.8	
	comp=E,206nm,0.1s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRDA	**Brd**	**2.06**	**323**	P	**Pn**	**19 00 11.5**	**-0.6**
	SNR=25						
PQL	**Pirkuli**	**2.16**	**356**	P	**Pn**	**19 00 13.6**	**+0.1**
	SNR=5.3						
PQL				S	**Sn**	**19 00 44.1**	**+3.5**
SIZA	**Siyzn**	**2.45**	**2**	P	**Pn**	**19 00 19.8**	**+2.4**
	SNR=9.5						
NAX	**Nakhchivan**	**2.64**	**283**	P	**Pn**	**19 00 20.2**	**+0.2**
	SNR=5.2						
NAX				S	**Sn**	**19 00 53.5**	**+1.2**
GANJ	**Ganja**	**2.78**	**317**	P	**Pn**	**19 00 20.0**	**-1.9**
	SNR=10						
GANJ				S	**Sn**	**19 00 52.8**	**-3.0**
SEKA	**Sheki**	**2.86**	**335**	P	**Pn**	**19 00 22.0**	**-1.0**
	SNR=16						
THKV	**Tehran--Karaj**	**3.17**	**148**	*e*Pn	**Pn**	**19 00 28.5**	**+1.1**
THKV				AML	AML	19 01 11.7	
	comp=N,160nm,0.4s						
MAKU	**Maku**	**3.29**	**284**	*e*Pn	**Pn**	**19 00 29.9**	**+0.9**
MAKU				AML	AML	19 01 15.6	
	comp=E,52nm,0.3s						
MAKU				AML	AML	19 01 25.1	
	comp=N,76nm,0.8s						
SNGE	**Sanandaj**	**3.72**	**199**	*e*Pn	**Pn**	**19 00 35.4**	**+0.5**
SNGE				AML	AML	19 01 24.1	
	comp=E,18nm,0.0s						
MRVT	**Maraveh tapeh**	**5.83**	**97**	*e*Pn	**Pn**	**19 01 05.1**	**+1.2**
AB31	**Akbulak array**	**13.30**	**33**	⇑P	**Pn**	**19 02 43.9**	**-2.2**
	comp=E,0.2nm,0.3s,baz=207,slow=14,SNR=8.1						
AB31				S	**Sn**	**19 05 01.2**	**-13**
	comp=E,0.5nm,0.3s,baz=211,slow=25,SNR=7.1						
AB31	**Akbulak array**	**13.30**	**33**	P	**Pn**	**19 02 43.9**	**-2.2**
	comp=E,0.2nm,0.3s,SNR=8.1						
AB31				S	**Sn**	**19 05 01.2**	**-13**
	comp=E,0.5nm,0.3s,SNR=7.1						
AKTO	**Aktyubinsk**	**13.50**	**26**	⇑P	**Pn**	**19 02 49.3**	**+0.5**
	comp=E,0.6nm,1.1s						
AKTO				⇑S	**Sn**	**19 05 09.1**	**-10**
	comp=E,0.4nm,0.6s						
KK31	**Karatay Array**	**17.01**	**68**	P	**Pn**	**19 03 30.2**	**-5.1**
	comp=E,1.4nm,0.6s,baz=0.0,slow=0.1,SNR=8.1						

IDC 19 19:56:19.3±6.1, 792S×12860E, h196km±66km, mb3.2/1, mb1 3.2/5, mb1mx3.0/16, mbtmp3.1/5, Error ellipse: s-maj=64.7km s-min=21.8km az=44.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.38**	**245**	P	Pn	19 57 39.4	+0.9
	1.3nm,0.3s,baz=254,slow=19,SNR=5.8						
BATI				S	Sn	19 58 41.2	+0.2
	8.0nm,0.3s,baz=285,slow=23,SNR=11						
FITZ	**Fitzroy Crossi**	**10.52**	**196**	P	Pn	19 58 45.3	0.0
	0.5nm,0.3s,baz=25,slow=13,SNR=32						
FITZ				S	Sn	20 00 42.9	+0.2
	0.3nm,0.3s,baz=8.2,slow=20,SNR=3.7						
WRA	**Warramunga Arr**	**13.18**	**156**	P	Pn	19 59 17.4	-1.8
	0.7nm,0.3s,baz=329,slow=14,SNR=47						
WRA				S	Sn	20 01 41.1	-5.1
	0.5nm,0.3s,baz=340,slow=22,SNR=6.3						
ASAR	**Alice Springs**	**16.46**	**163**	P	Pn	20 00 00.6	+1.2
	0.2nm,0.3s,baz=340,slow=9.3,SNR=13						
MKAR	**Makanchi Array**	**68.25**	**328**	P	P	20 06 58.8	0.0
	0.4nm,0.4s,baz=124,slow=7.8,SNR=4.2						

IDC 19 20:06:06.4±1.8, 145N×12415E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.5/3, Error ellipse: s-maj=193.9km s-min=25.2km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.49**	**155**	P	P	20 11 18.0	-0.1
	0.5nm,0.4s,baz=334,slow=11,SNR=15						
WB2	**Warramunga Arr**	**23.49**	**155**	*e*P	P	20 11 18.9	+0.7
ASAR	**Alice Springs**	**26.70**	**160**	P	P	20 11 47.8	+0.3
	0.2nm,0.3s,baz=343,slow=9.1,SNR=9.1						
MKAR	**Makanchi Array**	**58.01**	**327**	P	P	20 16 00.9	-0.1
	0.4nm,0.4s,baz=118,slow=7.9,SNR=5.5						

*ISCJB **19** 20:17:31.7±0.8, 139N±0.1×1448E±0.2, h134km±7km, mb3.8/8, Error ellipse: s-maj=37.0km s-min=19.1km az=19.2*
*IDC **19** 20:17:32.5±0.6, 1384N×14489E, h129km±4km, mb3.6/7, mb1 3.8/7, mb1mx3.5/22, mbtmp3.6/7, Error ellipse: s-maj=34.0km s-min=18.7km az=105.0*
*NEIC **19** 20:17:33.0±0.9, 1386N×14489E, h136km±8km,

*IDC **19** 20:43:06.1±0.8, 1548N×1220.3E, h0^km, mb4.0/10, mb1 4.1/10, mb1mx4.0/21, mbtmp4.1/10, Error ellipse: s-maj=37.4km s-min=14.1km az=68.0*
*NEIC **19** 20:43:08.2±0.7, 1537N×1218.1E, h10^km, mb4.8/2, Error ellipse: s-maj=30.7km s-min=13.8km az=61.0*
NEIC Felt [III PIVS] at Baler and Maria Aurora.
*ISCJB **19** 20:43:11.9±0.3, 1550N±002×12182E±004, h56^km±4^km, mb4.1/11, Error ellipse: s-maj=7.1km s-min=3.9km az=165.2*
*MAN **19** 20:43:11, 1552N×12181E, h23^km, mb4.8, ML3.7, MS3.7*
MAN INTENSITY III - BALER PROPER MARIA AURORA TOWN.

ISC 19 20:43:12.8±0.3, 1550N±002×12181E±004, h45^km±5^km, n41, σ1°21/52, mb4.1/11, 4C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.32**	**317**	*eP*		**Pn**		**20 43 19.5**	**-2.2**
BALP				*eS*		**Sn**		**20 43 25.6**	**-2.3**
PCPH	**Palayan**	**0.69**	**275**	⇑*iP*		**Pn**		**20 43 24.7**	**-1.4**
PCPH				*i* S		**Sn**		**20 43 24.6**	**-11**
POLP	**Polilio Island**	**0.78**	**170**	*eP*		**Pn**		**20 43 27.1**	**-0.3**
POLP				*eS*		**Sn**		**20 43 39.9**	**+1.8**
CAUP	**Cauayan**	**1.43**	**1**	*eP*		**Pn**		**20 43 35.8**	**-0.5**
CAUP				*eS*		**Sn**		**20 43 53.6**	**-0.3**
BCPH	**Baguio City Da**	**1.47**	**307**	⇑*eP*		**Pn**		**20 43 37.1**	**+0.4**
BCPH				*eS*		**Sn**		**20 43 56.2**	**+1.5**
LBPH	**Los Banos**	**1.47**	**204**	⇑*eP*		**Pn**		**20 43 37.4**	**+0.6**
NBP	**Mount Natib**	**1.54**	**241**	⇑*eP*		**Pn**		**20 43 38.4**	**+0.6**
NBP				*eS*		**Sn**		**20 43 54.9**	**-1.7**
PALP	**Palanan**	**1.66**	**21**	*eP*		**Pn**		**20 43 38.4**	**-1.1**
PALP				*eS*		**Sn**		**20 43 59.6**	**+0.1**
GQP	**Guinayangan**	**1.71**	**159**	⇓*eP*		**Pn**		**20 43 40.8**	**+0.7**
GQP				*eS*		**Sn**		**20 44 03.1**	**+2.4**
SCZP	**Santa Cruz**	**1.84**	**279**	*eP*		**Pn**		**20 43 41.1**	**-0.8**
BOLP	**Bolinao**	**2.02**	**296**	*eP*		**Pn**		**20 43 44.3**	**0.0**
BOLP				*eS*		**Sn**		**20 43 57.3**	**-11**
LUBP	**Lubang**	**2.32**	**221**	*eP*		**Pn**		**20 43 47.7**	**-0.8**
LUBP				*eS*		**Sn**		**20 43 59.2**	**-17**
AUQP	**San Andres**	**2.33**	**159**	*eP*		**Pn**		**20 43 50.8**	**+2.2**
AUQP				*eS*		**Sn**		**20 44 14.6**	**-1.4**
ABRA	**Dolores**	**2.38**	**334**	*eP*		**Pn**		**20 43 50.1**	**+0.9**
ABRA				*eS*		**Sn**		**20 44 17.4**	**-0.1**
SIPP	**Brgy, Tapao**	**2.73**	**332**	⇓*iP*		**Pn**		**20 43 55.8**	**+1.7**
SIPP				*i* S		**Sn**		**20 44 28.6**	**+2.7**
SGCP	**Mt. Cagua**	**2.73**	**5**	*eP*		**Pn**		**20 43 54.3**	**+0.1**
PVCP	**Virac**	**2.96**	**130**	*eP*		**Pn**		**20 43 57.1**	**-0.1**
PVCP				*eS*		Sn		20 44 08.6	-23
PIP	**Pasuquin**	**3.03**	**338**	*eP*		**Pn**		**20 44 00.5**	**+2.3**
SJMP	**San Jose**	**3.10**	**192**	*eP*		**Pn**		**20 44 02.3**	**+3.1**
OTRP	**Odiongan**	**3.13**	**176**	*eP*		**Pn**		**20 44 00.4**	**+0.8**
BUSP	**Coron**	**3.81**	**204**	*eP*		**Pn**		**20 44 09.3**	**+0.3**
CNP	**Catarman**	**4.07**	**137**	*eP*		**Pn**		**20 44 11.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**22.06**	**281**	P		**P**		**20 48 05.3**	**+1.3**
	1.1nm,0.6s,mb3.5,baz=95,slow=8.1,SNR=10								
KSRS	**Korea Array**	**22.52**	**13**	P		**P**		**20 48 07.0**	**-1.7**
	1.0nm,0.9s,mb3.3,baz=227,slow=2.7,SNR=4.1								
BATI	**Baumata**	**25.61**	**176**	P		**P**		**20 48 36.7**	**-1.4**
	17nm,0.7s,mb4.7,baz=124,slow=0.7,SNR=5.6								
SONM	**Songino Array**	**34.66**	**342**	P		**P**		**20 49 57.7**	**-0.2**
	0.8nm,0.6s,mb3.8,baz=161,slow=9.9,SNR=8.1								
WRA	**Warramunga Arr**	**37.32**	**160**	P		**P**		**20 50 18.7**	**-2.2**
	1.5nm,0.8s,mb3.9,baz=340,slow=9.3,SNR=9.5								
ASAR	**Alice Springs**	**40.69**	**163**	P		**P**		**20 50 48.0**	**-1.0**
	1.2nm,0.4s,mb3.9,baz=329,slow=6.7,SNR=15								
MKAR	**Makanchi Array**	**45.25**	**322**	P		**P**		**20 51 26.6**	**+0.8**
	2.2nm,0.9s,mb4.0,baz=119,slow=9.8,SNR=13								
ZALV	**Zalesovo Beam**	**47.97**	**331**	P		**P**		**20 51 46.9**	**0.0**
	2.8nm,1.0s,mb4.3,baz=126,slow=7.5,SNR=7.2								
ZALV	**Zalesovo Beam**	**47.97**	**331**	P		**P**		**20 51 46.9**	**0.0**
KURK	**Kurchatov**	**49.31**	**325**	P		**P**		**20 51 58.2**	**+1.0**
	6.6nm,0.7s,mb4.8,baz=121,slow=8.2,SNR=15								
KURK	**Kurchatov**	**49.31**	**325**	*eP*		**P**		**20 51 58.0**	**+0.7**
	12nm,0.8s,mb5.0								
STKA	**Stephens Creek**	**50.79**	**158**	P		**P**		**20 52 08.2**	**-0.4**
	2.4nm,0.8s,mb4.2,baz=276,slow=6.6,SNR=4.0								
BRVK	**Borovoye**	**54.98**	**325**	*eP*		**P**		**20 52 39.8**	**+0.5**
	6.5nm,1.0s,mb4.6								
MIB	**Mutribah**	**69.16**	**296**	*eP*		**P**		**20 54 14.7**	**-0.3**
	baz=302								
NAY	**Al-Naaiem**	**69.31**	**296**	*eP*		**P**		**20 54 15.6**	**-0.2**
	baz=301								
RST	**Umm Al-Ruwaisa**	**69.49**	**296**	*eP*		**P**		**20 54 16.2**	**-0.8**
	baz=302								
BPAW	**Bear Paw Mtn.**	**74.97**	**27**	*eP*		**P**		**20 54 52.9**	**+3.9**
TXAR	**Lajitas Array**	**117.44**	**45**	PKP		PKPdf		21 01 55.0	+0.8
	0.3nm,0.8s,baz=132,slow=1.9,SNR=3.6								
TXAR	**Lajitas Array**	**117.44**	**45**	PKP		PKPdf		21 01 55.0	+0.8

IDC 19 20:44:34.5±3.0, 3005S×13851E, h0^km, mb1 3.1/4, mb1mx3.1/15, mbtmp2.9/4, ML2.7/4, Error ellipse: s-maj=97.4km s-min=16.9km az=44.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.22**	**125**	Pn		Pn		20 45 26.1	-0.2
	0.3nm,0.3s,baz=306,slow=18,SNR=14								
STKA				Pg		Pg		20 45 37.4	+1.1
	1.4nm,0.3s,baz=308,slow=13,SNR=18								
STKA				Sn		Sn		20 46 01.5	-3.9
	1.5nm,0.3s,baz=306,slow=12,SNR=4.7								
STKA				Lg				20 46 16.9	
	4.2nm,0.3s,baz=304,slow=12,SNR=4.5								
ASAR	**Alice Springs**	**7.57**	**326**	Pn		Pn		20 46 27.4	+1.3
	0.1nm,0.3s,baz=175,slow=8.4,SNR=9.3								
ASAR				Sn		Sn		20 47 49.9	-2.8
	0.2nm,0.3s,baz=152,slow=22,SNR=6.5								
WRA	**Warramunga Arr**	**10.75**	**338**	Pn		Pn		20 47 09.8	+0.1
	0.1nm,0.3s,baz=158,slow=12,SNR=8.3								
WRA				Sn		Sn		20 49 10.2	-0.5
	0.1nm,0.3s,baz=167,slow=24,SNR=4.7								
FITZ	**Fitzroy Crossi**	**16.70**	**313**	Pn		Pn		20 48 29.2	-0.8
	0.1nm,0.3s,baz=148,slow=15,SNR=2.6								

*CSEM **19** 20:51:24.0±0.1, 3719N×3095E, h122^km±1^km, MD3.3, Error ellipse: s-maj=1.8km s-min=1.5km az=2.0*
*ISCJB **19** 20:51:26.0±0.6, 3712N±004×3093E±005, h121^km±8^km, Error ellipse: s-maj=6.9km s-min=6.2km az=167.0*
*ISK **19** 20:51:28.0, 3721N×3092E, h91^km, MD3.3*
*DDA **19** 20:51:29.3, 37.16N×3103E, h10^km, Md3.4*
*HLW **19** 20:51:33.2, 3650N×3094E, h33^km, Mb3.3*

ISC 19 20:51:27.2±0.6, 3713N±004×3094E±005, h111^km±8^km, n32, σ1°17/42, 2D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.32**	**225**	*ePG*		**Pn**		**20 51 42.5**	**-0.7**
ANTB				*eSG*		**Sn**		**20 51 52.7**	**-2.4**
BCK	**Bucak**	**0.43**	**320**	*ePG*		**Pn**		**20 51 42.7**	**-1.0**
ISP	**Isparta**	**0.79**	**335**	*ePG*		**Pn**		**20 51 45.3**	**-1.1**
ELL	**Elmali**	**0.91**	**246**	*ePG*		**Pn**		**20 51 48.6**	**+1.1**
TKTP	**Tekketepe**	**1.04**	**332**	*iP*		**Pn**		**20 51 48.8**	**0.0**
TKTP				*i* S		**Sn**		**20 52 05.5**	**+0.2**
GOLH	**Golhisar**	**1.10**	**276**	*iP*		**Pn**		**20 51 50.6**	**+1.0**
GOLH				*i* S		**Sn**		**20 52 06.3**	**-0.1**
GOLH	**Golhisar**	**1.10**	**276**	*iP*		**Pn**		**20 51 50.6**	**+1.0**
GOLH				*i* S		**Sn**		**20 52 06.3**	**-0.2**
HDMB	**Hadim**	**1.25**	**97**	*ePN*		**Pn**		**20 51 52.0**	**+0.9**
AKAS	**Kas**	**1.39**	**231**	*iP*		**Pn**		**20 51 54.4**	**+1.5**
AKAS				*i* S		**Sn**		**20 52 13.7**	**+1.5**
AKAS	**Kas**	**1.39**	**231**	*iP*		**Pn**		**20 51 54.3**	**+1.5**
AKAS				*i* S		**Sn**		**20 52 13.7**	**+1.5**
KONT	**Konya--Tatoy**	**1.40**	**54**	*ePN*		**Pn**		**20 51 53.0**	**+0.1**
SHUT	**Suhut-Afyon**	**1.46**	**348**	*ePN*		**Pn**		**20 51 53.8**	**+0.2**
LADK	**Ladik-KONYA**	**1.56**	**46**	*ePN*		**Pn**		**20 51 54.8**	**0.0**
KHL	**Karahalli**	**1.64**	**317**	*ePN*		**Pn**		**20 51 55.8**	**+0.1**
ERMK	**Ermenek**	**1.66**	**106**	*iP*		**Pn**		**20 51 57.7**	**+1.8**
ERMK				*i* S		**Sn**		**20 52 17.6**	**-0.2**
ERMK	**Ermenek**	**1.66**	**106**	*iP*		**Pn**		**20 51 57.7**	**+1.8**
ERMK				*i* S		**Sn**		**20 52 17.6**	**-0.2**
KDHN	**Kadinhani**	**1.68**	**33**	*iP*		**Pn**		**20 51 56.1**	**-0.1**
KDHN				*i* S		**Sn**		**20 52 16.5**	**-1.8**
KIZT	**Kizilcal**	**1.90**	**23**	*ePN*		**Pn**		**20 51 59.0**	**0.0**
ALT	**Altintas**	**2.03**	**342**	*ePN*		**Pn**		**20 52 00.1**	**-0.5**
ALT	**Altintas**	**2.03**	**342**	*ePn*		**Pn**		**20 52 00.1**	**-0.5**
YER	**Yerkesik**	**2.12**	**271**	*ePN*		**Pn**		**20 52 02.4**	**+0.6**
KULA	**Kula-Manisa**	**2.27**	**308**	*ePN*		**Pn**		**20 52 04.2**	**+0.5**
IKL	**Isikli**	**2.38**	**111**	*ePN*		**Pn**		**20 52 06.9**	**+1.8**
LEF	**Lefka**	**2.55**	**141**	*ePN*		**Pn**		**20 52 09.8**	**+2.4**
LFK	**Lefkose**	**2.79**	**131**	*ePN*		**Pn**		**20 52 13.2**	**+2.7**
BODT	**Bodrum**	**2.90**	**270**	*ePN*		**Pn**		**20 52 12.7**	**+0.8**
AMAG	**Maghara**	**6.74**	**163**	P		**Pn**		**20 53 02.6**	**-0.9**
HMAT	**Matruh**	**6.81**	**209**	⇓P		**Pn**		**20 53 03.8**	**-0.8**
HMAT				S		**Sn**		**20 54 10.1**	**-10**
KOT	**Kottamia**	**7.22**	**174**	P		**Pn**		**20 53 08.1**	**-2.0**
HSAF	**As Saff**	**7.50**	**176**	⇓P		**Pn**		**20 53 12.2**	**-1.8**
AWBH		**8.95**	**192**	P		**Pn**		**20 53 32.4**	**-1.1**
HFRF	**Wahat Farafira**	**10.19**	**193**	P		**Pn**		**20 53 49.1**	**-1.4**

*IDC **19** 21:09:57.6±0.7, 1079N×9210E, h0^km, mb4.1/11, mb1 4.2/12, mb1mx4.0/24, mbtmp4.1/12, ML3.5/1, Error ellipse: s-maj=34.6km s-min=13.7km az=62.0*
*ISCJB **19** 21:09:59.4±0.5, 1075N±006×9223E±008, h23^km, mb4.2/16, Error ellipse: s-maj=12.6km s-min=7.5km az=149.2*
*BJI **19** 21:10:01.5, 1124N×9207E, h14^km, mb4.0*
*NEIC **19** 21:10:02.5±3.0, 1082N×9220E, h32^km±21^km, mb4.5/7, Error ellipse: s-maj=10.0km s-min=7.7km az=65.0*

ISC 19 21:10:01.8±0.5, 1077N±006×9222E±008, h24^km, h24^km±2.1^km: pP-P, n37, σ0°90/35, mb4.2/16, 1C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.04**	**40**	Pn		**Pn**		**21 12 23.8**	**-0.7**
	0.1nm,0.3s,baz=236,slow=15,SNR=5.8								
PALK	**Pallekele**	**11.89**	**254**	*ePn*		**Pn**		**21 12 49.8**	**-0.1**
PALK				*eSn*		**Sn**		**21 14 44.6**	**-17**
ODAN	**Odare**	**16.64**	**345**	*eP*		**Pn**		**21 13 52.7**	**-0.8**
RAMN	**Ramite**	**16.94**	**343**	*eP*		**Pn**		**21 13 57.0**	**-0.3**
TAPN	**Taplejung**	**17.03**	**346**	*eP*		**Pn**		**21 13 57.7**	**-0.7**
PKI	**Pulchoki**	**17.90**	**340**	*eP*		**Pn**		**21 14 09.5**	**+0.3**
DMN	**Daman**	**18.04**	**339**	*eP*		**Pn**		**21 14 12.1**	**+1.2**
GKN	**Gorkha**	**18.56**	**339**	*eP*		**Pn**		**21 14 18.1**	**+0.8**
KOLN	**Koldanda**	**18.75**	**336**	*eP*		**Pn**		**21 14 21.1**	**+1.5**
LSA	**Lhasa**	**18.86**	**357**	*eP*		**Pn**		**21 14 21.6**	**+0.7**
	7.2nm,0.7s								
GYA	**Guiyang**	**20.73**	**39**	⇑*iP*		**P**		**21 14 41.5**	**+0.9**
GYA					AMB	AMB			
	comp=Z,10.0nm,0.8s								
DDI	**Dehra Dun**	**23.50**	**328**	*ex*		**P**		**21 15 11.2**	**+1.1**
GTA	**Gaotai**	**29.31**	**12**	*eP*		**P**		**21 16 04.4**	**+2.0**
GTA					AP	pP		21 16 08.8	-0.9
GTA					XP	sP		21 16 11.3	-1.4
GTA					AMB	AMB			
	comp=Z,3.0nm,1.1s,mb3.9								
AML	**Almayashu**	**35.20**	**336**	*eP*		**P**		**21 16 53.6**	**-0.4**
	comp=Z,6.5nm,0.7s,mb4.7								
AML				*e*		pP		21 17 01.1	-0.2
EKS2	**Erkin-Say**	**35.62**	**336**	*eP*		**P**		**21 16 57.4**	**-0.2**
	comp=Z,3.9nm,0.9s,mb4.3								
EKS2				*e*		pP		21 17 05.7	+0.8
MKAR	**Makanchi Array**	**36.88**	**349**	P		**P**		**21 17 07.8**	**-0.5**
	comp=Z,1.4nm,0.7s,mb3.9,baz=170,slow=7.8,SNR=17								
MKAR					PcP	PcP		21 19 29.0	-0.7
	comp=Z,0.3nm,0.6s,baz=153,slow=2.8,SNR=2.4								
MKAR	**Makanchi Array**	**36.88**	**349**	P		**P**		**21 17 07.8**	**-0.5**
MKAR					PcP	PcP		21 19 29.0	-0.7
SONM	**Songino Array**	**38.82**	**15**	P		**P**		**21 17 24.7**	**-0.1**
	comp=Z,1.4nm,0.8s,mb3.7,baz=196,slow=7.1,SNR=12								
KURK	**Kurchatov**	**41.37**	**347**	P		**P**		**21 17 44.5**	**-1.3**
	comp=Z,0.7nm,0.4s,mb3.6,baz=169,slow=7.6,SNR=6.1								
KURK	**Kurchatov**	**41.37**	**347**	*eP*		**P**		**21 17 45.9**	**+0.1**
	comp=Z,3.2nm,1.1s,mb3.9								
KURK				*e*		pP		21 17 52.6	-0.6
ZALV	**Zalesovo Beam**	**43.47**	**354**	P		**P**		**21 18 02.3**	**-0.5**
	comp=Z,0.4nm,0.3s,mb3.7,baz=167,slow=7.4,SNR=7.5								
FITZ	**Fitzroy Crossi**	**43.72**	**131**	*eP*		**P**		**21 18 05.2**	**-0.1**
	comp=Z,1.6nm,1.0s,mb4.7								
FITZ	**Fitzroy Crossi**	**43.72**	**131**	P		**P**		**21 18 05.1**	**-0.3**
	comp=Z,9.2nm,0.8s,mb4.5,baz=308,slow=5.7,SNR=17								
BVAR	**Borovoye Array**	**45.66**	**342**	P		**P**		**21 18 18.4**	**-1.9**
	comp=Z,0.6nm,0.5s,mb3.8,baz=134,slow=8.2,SNR=3.3								
MDJ	**Mudanjiang**	**46.56**	**37**	P		**P**		**21 18 25.5**	**-2.0**
WRA	**Warramunga Arr**	**51.48**	**126**	P		**P**		**21 19 05.6**	**-0.1**
	comp=Z,5.2nm,0.6s,mb4.6,baz=306,slow=8.5,SNR=68								
WRAB	**Tennant Creek**	**51.49**	**126**	*eP*		**P**		**21 19 06.1**	**+0.4**
	comp=Z,4.0nm,0.4s,mb4.7								
WRAB				*e*		pP		21 19 13.3	+0.1
WB2	**Warramunga Arr**	**51.49**	**126**	*eP*		**P**		**21 19 05.8**	**+0.1**
ASAR	**Alice Springs**	**53.22**	**130**	P		**P**		**21 19 18.8**	**+0.2**
	comp=Z,3.0nm,0.6s,mb4.4,baz=305,slow=7.2,SNR=41								
STKA	**Stephens Creek**	**63.47**	**134**	*eP*		**P**		**21 20 31.0**	**+1.0**
	comp=Z,3.5nm,0.6s,mb4.7								
STKA	**Stephens Creek**	**63.47**	**134**	P		**P**		**21 20 30.8**	**+0.8**
	comp=Z,5.0nm,0.7s,mb4.8,baz=328,slow=9.3,SNR=13								
ARCES	**ARCESS Array B**	**71.92**	**340**	P		**P**		**21 21 22.8**	**+0.2**
	comp=Z,1.4nm,0.8s,mb4.0,baz=101,slow=9.4,SNR=3.4								
GERES	**GERESS Array B**	**74.42**	**318**	P		**P**		**21 21 36.5**	**-1.3**
	comp=Z,1.2nm,1.0s,mb3.8,baz=90,slow=9.3,SNR=5.3								
NB2	**NORSAR Subarra**	**76.29**	**330**	P		**P**		**21 21 54.2**	**+5.8**
	comp=Z,2.3nm,0.8s,mb4.2,baz=92,slow=5.9								
PLCA	**Paso Flores**	**146.50**	**204**	PKPbc		PKPbc		21 29 41.3	+0.1
	comp=Z,1.7nm,0.8s,baz=216,slow=7.4,SNR=5.1								
CFAA	**Coronel Fontan**	**152.49**	**218**	PKPbc		PKPbc		21 29 56.2	-0.4
	comp=Z,0.2nm,0.4s,baz=154,slow=2.5,SNR=4.9								
CFAA	**Coronel Fontan**	**152.49**	**218**	PKPbc		PKPbc		21 29 56.2	-0.4

*NEIC **19** 21:25:14.7±3.2, 3145S×17958W, h219^km±27^km, mb4.4/1, Error ellipse: s-maj=32.2km s-min=13.4km az=207.0*
*IDC **19** 21:25:16.4±5.2, 3156S×17963W, h234^km±42^km, mb3.7/6, mb1 3.8/7, mb1mx3.6/17, mbtmp3.7/7, Error ellipse: s-maj=42.1km s-min=16.6km az=37.0*
*ISCJB **19** 21:25:20.5±6.1, 3205±004×18006E±013, h266^km±44^km, mb3.8/6, Error ellipse: s-maj=76.8km s-min=23.0km az=33.5*

ISC 19 21:25:19.8±6.3, 3195±004×17997W±03, h249^km±47^km, n19, σ0°74/11, mb3.9/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.82**	**200**	P		**Pn**		**21 26 58.9**	**+0.7**
	3.9nm,0.3s,baz=269,slow=2.0,SNR=17								
RPZ	**Rata Peaks**	**13.80**	**209**	P		**Pn**		**21 28 23.9**	**-1.4**
	1.8nm,0.4s,mb3.9,baz=317,slow=3.7,SNR=6.2								
STKA	**Stephens Creek**	**32.57**	**260**	P		**P**		**21 31 27.9**	**-0.1**
	1.8nm,0.4s,mb3.9,baz=109,slow=8.0,SNR=13								
STKA	**Stephens Creek**	**32.57**	**260**	*eP*		**P**		**21 31 28.2**	**+0.2**
	17nm,1.6s,mb4.3								
ASAR	**Alice Springs**	**41.42**	**269**	P		**P**		**21 32 42.5**	**+0.2**
	2.3nm,0.5s,mb3.8,baz=106,slow=7.4,SNR=58								
WB2	**Warramunga Arr**	**42.54**	**275**	*eP*		**P**		**21 32 51.3**	**0.0**
WRA	**Warramunga Arr**	**42.55**	**275**	P		**P**		**21 32 51.4**	**-0.1**
	3.0nm,0.3s,mb4.2,baz=112,slow=7.8,SNR=151								
FITZ	**Fitzroy Crossi**	**50.74**	**272**	P		**P**		**21 33 54.9**	**+0.1**
	1.7nm,0.8s,mb3.5,baz=120,slow=16,SNR=3.2								
QSPA	**South Pole Qui**	**58.24**	**180**	P		**P**		**21 34 48.9**	**+1.3**
	3.9nm,0.6s,mb4.2,baz=5.3,slow=0.8,SNR=32								
PLCA	**Paso Flores**	**82.69**	**134**	P		**P**		**21 37 14.8**	**-0.8**
	0.8nm,0.6s,mb3.6,baz=328,slow=9.8,SNR=3.6								
PLCA	**Paso Flores**	**82.69**	**134**	P		**P**		**21 37 14.8**	**-0.8**
MKAR	**Makanchi Array**	**117.46**	**310**	PKP		PKPdf		21 43 32.8	-2.6
	0.3nm,0.2s,baz=100,slow=0.6,SNR=3.2								
BVAR	**Borovoye Array**	**126.30**	**315**	PKP		PKPdf		21 43 50.3	-1.9
	0.8nm,0.5s,baz=111,slow=3.3,SNR=6.1								
JOF	**Joensuu**	**143.15**	**337**	*epkp*		PKPdf		21 44 18.0	-5.2
KAF	**Kangasniemi**	**145.35**	**339**	*epkp*		PKPdf		21 44 25.3	-1.8
	2.5nm,0.5s								
NB2	**NORSAR Subarra**	**149.92**	**349**	PKP		PKPdf		21 44 37.3	+2.7
	comp=Z,0.5nm,0.5s,baz=17,slow=2.6								
NOA	**NORSAR Array B**	**149.92**	**349**	PKPbc		PKPbc		21 44 37.5	-2.2
	comp=Z,1.0nm,0.7s,baz=18,slow=4.2,SNR=4.3								
AKASG	**Malin Array Be**	**151.42**	**320**	PKPbc		PKPbc		21 44 41.7	-1.9
	comp=Z,0.4nm,0.3s,baz=86,slow=1.1,SNR=5.0								
TORD	**Torodi Ar. Bea**	**161.30**	**185**	PKPab		PKPab		21 45 34.3	-1.9
	comp=Z,0.3nm,0.4s,baz=172,slow=4.6,SNR=14								

*MOS **19** 21:43:23.0±0.9, 4945N×15627E, h127^km, mb3.6/2, Error ellipse: s-maj=40.3km s-min=12.7km az=79.3*
*KRSC **19** 21:43:29.5±0.6, 5009N×15673E, h5^km±5^km, ML4.3*
*IDC **19** 21:43:35.5±1.4, 5253N×15323E, h0^km, mb3.6/4, mb1 3.6/5, mb1mx3.4/24, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=43.8km s-min=28.0km az=15.0*

ISC 19 21:43:29.0±1.7, 499N±02×1559E±02, h120^km±8^km, n19, σ1°10/24, mb3.6/3, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.76**	**10**	⇓*iPN*		**Pn**		**21 43 48.6**	**-0.1**
SKR				*i* S		**Sn**		**21 44 02.5**	**-1.2**
SKR					pmax	pmax			
	comp=N,340nm,0.4s								
SKR					pmax	pmax			
	comp=E,170nm,0.4s								
SKR					pmax	pmax			
	comp=Z,820nm,0.4s								
SKR					smax				
	comp=N,1μm,0.5s								
SKR					smax				
	comp=E,1μm,0.5s								
ALID	**Alaid**	**0.96**	**346**	P		**Pn**		**21 43 51.3**	**+0.7**
MIPR	**Malaya Ipel'ka**	**2.40**	**12**	*eP*		**Pn**		**21 44 08.0**	**+0.6**
MIPR				*eS*		**Sn**		**21 44 36.9**	**-0.1**
RUS	**Russkaya**	**2.99**	**32**	*eP*		**Pn**		**21 44 14.2**	**-0.8**
RUS				*eS*		**Sn**		**21 44 47.3**	**-3.2**
PETK	**Petropavlovsk-**	**3.37**	**19**	Pn		**Pn**		**21 44 21.1**	**+1.2**
	comp=E,5.3nm,0.3s,baz=186,slow=12,SNR=19								
NLC	**Nalytchevo**	**3.88**	**32**	P		**Pn**		**21 44 25.0**	**-1.8**
NLC				S		**Sn**		**21 45 06.1**	**-5.6**
GNL	**Ganaly**	**3.97**	**18**	*eP*		**Pn**		**21 44 29.0**	**+1.0**
SPN	**Mys Shipunski**	**4.08**	**37**	*eP*		**Pn**		**21 44 29.1**	**-0.3**
SPN				*eS*		**Sn**		**21 45 11.2**	**-5.1**
KMNR	**Kamenistaya**	**6.39**	**22**	*eP*		**Pn**		**21 45 02.8**	**+2.3**
BZMR	**Bezymyannaya**	**6.61**	**23**	P		**Pn**		**21 45 04.6**	**+1.0**
BZWR	**Bezymyannyi-We**	**6.64**	**23**	P		**Pn**		**21 45 04.8**	**+0.9**
ZLN	**Zelenaya**	**6.77**	**24**	P		**Pn**		**21 45 06.4**	**+0.8**
KRSR	**Krestovskiy**	**6.89**	**22**	P		**Pn**		**21 45 08.1**	**+0.9**
KBTR	**Krutoberegovo**	**7.53**	**31**	P		**Pn**		**21 45 16.3**	**+0.3**
MKAR	**Makanchi Array**	**47.18**	**296**	P		**P**		**21 51 48.6**	**-0.6**
	comp=E,0.2nm,0.3s,mb3.4,baz=58,slow=6.8,SNR=2.6								
KURK	**Kurchatov**	**47.20**	**302**	P		**P**		**21 51 48.6**	**-0.7**
	comp=E,0.8nm,0.5s,mb3.7,baz=66,slow=8.4,SNR=4.5								
KURK	**Kurchatov**	**47.20**	**302**	P		**P**		**21 51 48.6**	**-0.7**
KURK					pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.8								
BVAR	**Borovoye Array**	**50.31**	**309**	P		**P**		**21 52 11.1**	**-1.8**
	comp=Z,0.5nm,0.5s,mb3.7,baz=60,slow=5.8,SNR=4.4								
BVAR	**Borovoye Array**	**50.31**	**309**	P		**P**		**21 52 11.1**	**-1.9**
BVAR					pmax	pmax			
	comp=Z,1.0nm,0.5s								

*IDC **19** 21:52:36.3±1.9, 823S×12956E, h0

	comp=Z,5.9nm,0.8s,mb4.4							
CMAR	**Chiang Mai Arr**	**40.62**	**264**	P	**P**	**22**	**18**	**23.1 +0.2**
	comp=Z,1.3nm,0.4s,mb3.9,baz=81,slow=4.5,SNR=10.0							
CMAR				LR	LR	22	35	09.6
	comp=Z,154nm,18.3s,MS3.9,baz=315,slow=36							
CMAR	**Chiang Mai Arr**	**40.62**	**264**	P	**P**	**22**	**18**	**23.1 +0.3**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
CMAR				MLR	MLR			
	comp=Z,154nm,18.3s							
ZALV	**Zalesovo Beam**	**47.74**	**318**	P	**P**	**22**	**19**	**19.8 +0.4**
	comp=Z,4.2nm,0.8s,mb4.5,baz=102,slow=6.2,SNR=18							
ZALV				LR	LR	22	40	33.2
	comp=Z,63nm,18.2s,MS3.6,baz=321,slow=38							
ZALV	**Zalesovo Beam**	**47.74**	**318**	P	**P**	**22**	**19**	**19.8 +0.4**
ZALV				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.5							
ZALV				MLR	MLR			
	comp=Z,63nm,18.2s,MS3.6							
NVS	**Novosibirsk**	**48.77**	**319**	*e*P	**P**	**22**	**19**	**27.2 -0.1**
NVS				pmax	pmax			
	comp=Z,18nm,1.8s,mb4.8							
NVS				pmax	pmax			
	comp=N,13nm,2.0s							
NVS				pmax	pmax			
	comp=E,10.0nm,1.2s							
MK31	**Makanchi Array**	**48.97**	**308**	*i* P	**P**	**22**	**19**	**29.1 +0.1**
MK31				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.3							
MKAR	**Makanchi Array**	**48.97**	**308**	P	**P**	**22**	**19**	**29.4 +0.4**
	comp=Z,3.8nm,0.8s,mb4.5,baz=94,slow=9.8,SNR=18							
MKAR	**Makanchi Array**	**48.97**	**308**	P	**P**	**22**	**19**	**29.5 +0.5**
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.8s							
WRAB	**Tennant Creek**	**49.49**	**189**	*e*P	**P**	**22**	**19**	**32.9 -0.3**
WRAB				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.5							
WRAB	**Tennant Creek**	**49.49**	**189**	*e*P	**P**	**22**	**19**	**32.9 -0.2**
	comp=Z,2.3nm,0.4s,mb4.6							
WB2	**Warramunga Arr**	**49.50**	**189**	*e*P	**P**	**22**	**19**	**32.8 -0.4**
WRA	**Warramunga Arr**	**49.51**	**189**	P	**P**	**22**	**19**	**33.1 -0.1**
	comp=Z,2.5nm,0.5s,mb4.5,baz=9.4,slow=8.1,SNR=47							
WRA	**Warramunga Arr**	**49.51**	**189**	P	**P**	**22**	**19**	**33.1 -0.1**
WRA				pmax	pmax			
	comp=Z,3.0nm,0.5s							
KURK	**Kurchatov**	**51.35**	**313**	P	**P**	**22**	**19**	**48.2 +1.3**
	comp=Z,5.2nm,0.5s,mb4.7,baz=90,slow=6.8,SNR=32							
KURK	**Kurchatov**	**51.35**	**313**	P	**P**	**22**	**19**	**46.4 -0.5**
KURK				pmax	pmax			
	comp=Z,16nm,1.1s,mb4.9							
ASAR	**Alice Springs**	**53.23**	**189**	P	**P**	**22**	**20**	**00.5 -0.6**
	comp=Z,0.4nm,0.4s,mb3.7,baz=1.2,slow=5.3,SNR=15							
TKM2	**Tokmak 2**	**54.05**	**304**	*e*P	**P**	**22**	**20**	**06.5 -0.5**
TKM2				pmax	pmax			
	comp=Z,5.0nm,1.4s,mb4.2							
TKM2	**Tokmak 2**	**54.05**	**304**	*e*P	**P**	**22**	**20**	**06.5 -0.6**
	comp=Z,4.6nm,1.4s,mb4.2							
EKS2	**Erkin-Say**	**55.41**	**304**	*e*P	**P**	**22**	**20**	**17.5 +0.6**
	comp=Z,1.4nm,0.7s,mb4.1							
BVA0	**Borovoye Array**	**56.33**	**316**	P	**P**	**22**	**20**	**23.6 +0.3**
BVA0				pmax	pmax			
	comp=Z,1.0nm,0.7s,mb4.0							
BVAR	**Borovoye Array**	**56.33**	**316**	P	**P**	**22**	**20**	**24.4 +1.1**
	comp=Z,4.8nm,0.6s,mb4.7,baz=95,slow=8.9,SNR=34							
BVAR	**Borovoye Array**	**56.33**	**316**	P	**P**	**22**	**20**	**24.4 +1.1**
BVAR				pmax	pmax			
	comp=Z,5.0nm,0.6s							
BRVK	**Borovoye**	**56.39**	**317**	*e*P	**P**	**22**	**20**	**22.0 -1.7**
BRVK				pmax	pmax			
	comp=Z,12nm,0.8s,mb5.0							
BRVK	**Borovoye**	**56.39**	**317**	*e*P	**P**	**22**	**20**	**22.0 -1.7**
	comp=Z,12nm,0.8s,mb5.0							
KK31	**Karatay Array**	**57.69**	**305**	*i* P	**P**	**22**	**20**	**33.6 +0.5**
KK31				pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.7							
STKA	**Stephens Creek**	**60.84**	**180**	P	**P**	**22**	**20**	**54.2 -0.6**
	comp=Z,2.9nm,0.9s,mb4.4,baz=243,slow=9.1,SNR=3.1							
STKA	**Stephens Creek**	**60.84**	**180**	P	**P**	**22**	**20**	**54.2 -0.6**
ARU	**Arti**	**62.60**	**322**	P	**P**	**22**	**21**	**06.9 +0.4**
ARU	**Arti**	**62.60**	**322**	*e*P	**P**	**22**	**21**	**06.3 -0.2**
	comp=Z,9.6nm,1.1s,mb4.8							
AB31	**Akbulak array**	**63.46**	**314**	*e*P	**P**	**22**	**21**	**12.7 +0.4**
AB31				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.6							
AKTK	**Aktyubinsk**	**64.36**	**315**	P	**P**	**22**	**21**	**18.8 +0.6**
AKTO	**Aktyubinsk**	**64.36**	**315**	P	**P**	**22**	**21**	**18.8 +0.6**
	comp=Z,2.4nm,0.6s,mb4.4,baz=84,slow=7.9,SNR=11							
AKTO	**Aktyubinsk**	**64.36**	**315**	P	**P**	**22**	**21**	**18.8 +0.6**
AKTO				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.3							
NVAR	**Mina Array Bea**	**79.29**	**52**	P	**P**	**22**	**22**	**48.5 +0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=296,slow=5.8,SNR=4.2							
AKASG	**Malin Array Be**	**80.76**	**324**	P	**P**	**22**	**22**	**55.8 0.0**
	comp=Z,0.2nm,0.3s,mb3.6,baz=51,slow=6.9,SNR=3.7							
NOA	**NORSAR Array B**	**81.52**	**338**	P	**P**	**22**	**22**	**59.4 -0.2**
	comp=Z,0.5nm,0.7s,mb3.5,baz=47,slow=5.2,SNR=2.9							
NOA				LR	LR	23	04	12.9
	comp=Z,33nm,18.2s,MS3.7,baz=255,slow=39							
NOA	**NORSAR Array B**	**81.52**	**338**	P	**P**	**22**	**22**	**59.4 -0.2**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
NOA				MLR	MLR			
	comp=Z,33nm,18.2s							
PDAR	**Pinedale Array**	**82.77**	**45**	P	**P**	**22**	**23**	**07.1 +0.6**
	comp=Z,0.6nm,0.8s,mb3.7,baz=261,slow=4.5,SNR=2.9							
ULM	**Lac du Bonnet**	**85.70**	**33**	LR	LR	23	02	17.3
	comp=Z,50nm,18.6s,MS3.9,baz=9.5,slow=36							
TXAR	**Lajitas Array**	**94.42**	**53**	P	**P**	**22**	**24**	**03.8 +1.1**
	comp=Z,0.7nm,0.8s,mb4.1,baz=304,slow=2.9,SNR=5.7							
TXAR	**Lajitas Array**	**94.42**	**53**	P	**P**	**22**	**24**	**03.8 +1.1**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**123.01**	**312**	PKP	PKPdf	22	29	38.6 -0.9
	comp=Z,0.5nm,1.0s,baz=105,slow=2.5,SNR=4.2							
LPAZ	**La Paz**	**149.45**	**72**	PKPbc	PKPbc	22	30	33.2 +1.0
	comp=Z,0.8nm,0.7s,baz=43,slow=11,SNR=3.9							
LPAZ	**La Paz**	**149.45**	**72**	PKP2	PKPbc	22	30	33.2 +1.0
LPAZ				pmax	pmax			
	comp=Z,1.0nm,0.7s							
PLCA	**Paso Flores**	**151.16**	**122**	PKPbc	PKPbc	22	30	36.4 +0.8
	comp=Z,3.2nm,1.2s,baz=195,slow=12,SNR=2.3							
PLCA	**Paso Flores**	**151.16**	**122**	PKIKP	PKPbc	22	30	36.4 +0.8
PLCA				pmax	pmax			
	comp=Z,3.0nm,1.2s							

BJI 19 22:17:18.6, 4806N×13061E, h21km, ML3.5,
Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDJ	**Mudanjiang**	**3.52**	**192**	PG	Pn	22 18 21.6	+10
MDJ				SG	Sn	22 19 05.8	+13
MDJ				Smax			
	comp=N,29nm,0.7s						
MDJ				Smax			
	comp=E,51nm,0.7s						

*ISCJB **19** 22:21:03.1±0.5, 3951N×003×2067E×005, h10km, Error ellipse: s-maj=5.4km s-min=4.3km az=33.7*
*THE **19** 22:21:03.6, 3947N×2069E, h0km, ML3.0*
*ATH **19** 22:21:03.2, 3947N×2066E, h14km±2km, MD3.3/4*
*CSEM **19** 22:21:03.6±0.1, 3949N×2067E, h8km, MD3.3, Error ellipse: s-maj=2.2km s-min=1.8km az=127.0*
*NEIC **19** 22:21:03.2, 3948N×2065E, h13km, MD3.3(ATH), After ATH.*

ISC 19 22:21:03.0±0.6, 3949N±003×2064E±005, h3km±7km, n22,
σ0$77/28, 6C-1D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.23**	**45**	⇑*i*PG	**Pg**	**22 21 08.4**	**+0.9**
IGT	**Igoumenitsa**	**0.24**	**280**	*e*Pg	**Pg**	**22 21 09.0**	**+1.4**
MEV	**Metsovon**	**0.54**	**57**	*e*Pg	**Pg**	**22 21 13.9**	**+0.5**
MEV	**Metsovon**	**0.54**	**57**	*e*Pg	**Pg**	**22 21 13.9**	**+0.5**
KEK	**Kerkira**	**0.69**	**289**	⇑*i*PB	**Pb**	**22 21 16.6**	**-1.0**
LKD	**Levkas**	**0.79**	**179**	*e*Pg	**Pg**	**22 21 18.1**	**+0.1**
THL	**Klokotos Trika**	**1.07**	**86**	*e*Pg	**Pg**	**22 21 22.9**	**-0.6**
THL	**Klokotos Trika**	**1.07**	**86**	⇑*i*Pb	**Pb**	**22 21 23.3**	**-0.8**
EVR	**Evrytania**	**1.08**	**122**	⇓*i*PG	**Pg**	**22 21 22.9**	**-0.7**
KZN	**Kozani**	**1.19**	**47**	*e*PG	**Pg**	**22 21 25.5**	**-0.4**
VLS	**Valsamata**	**1.31**	**182**	⇑*i*PB	**Pb**	**22 21 28.2**	**-0.1**
VLS				*e*SB	**Sb**	**22 21 45.8**	**+0.3**
VLS	**Valsamata**	**1.31**	**182**	*e*Pg	**Pg**	**22 21 27.3**	**-0.9**
VLS	**Valsamata**	**1.31**	**182**	⇑*i*Pb	**Pb**	**22 21 28.2**	**-0.1**
VLS				*e*Sb	**Sb**	**22 21 45.8**	**+0.3**
AGG	**Agios Georgios**	**1.40**	**109**	*e*Pg	**Pn**	**22 21 28.2**	**-1.1**
AGG				*e*Sg	**Sg**	**22 21 49.3**	**+1.4**
AGG	**Agios Georgios**	**1.40**	**109**	*e*Pg	**Pn**	**22 21 28.2**	**-1.1**
AGG				*e*Sg	**Sg**	**22 21 49.3**	**+1.5**
FNA	**Florina**	**1.41**	**23**	*e*Pg	**Pg**	**22 21 29.6**	**-0.5**
LIT	**Litokhoron**	**1.55**	**66**	*e*Pg	**Pn**	**22 21 31.2**	**-0.2**
LIT				*e*Sg	**Sg**	**22 21 51.9**	**-0.9**
RLS	**Riolos of Patr**	**1.57**	**155**	⇑*i*Pb	**Pb**	**22 21 33.3**	**+0.6**
BIA	**Bitola**	**1.61**	**19**	*e*Pb	**Pb**	**22 21 33.4**	**0.0**
KRUS	**Krusevo**	**1.93**	**14**	*i* Pn	**Pg**	**22 21 40.2**	**+0.1**
KRUS	**Krusevo**	**1.93**	**14**	*i* Pn	**Pg**	**22 21 40.1**	**+0.1**
PLG	**Polygyros**	**2.33**	**67**	*e*PN	**Pn**	**22 21 43.5**	**+1.3**
PLG				*e*SN	**Sn**	**22 22 11.9**	**+0.6**

*NEIC **19** 22:31:41.3, 1682N×100.14W, h5km, MD3.5(MEX), After MEX.*

MEX 19 22:31:41.3±0.5, 1682N×10014W, h5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.21**	**78**	*i* P	Pg	22 31 45.2	-0.3
ACX				*i* S	Sg	22 31 48.3	-0.1
CAIG	**El Cayaco**	**0.26**	**331**	*i* P	Pg	22 31 45.7	-0.6
CAIG				*i* S	Sg	22 31 50.2	+0.5
ZIIG	**Zihuatanejo**	**1.49**	**302**	*i* P	Pn	22 32 04.8	-4.0
ZIIG				*i* S	Sn	22 32 24.4	-4.2
PNIG	**Pinotepa**	**1.97**	**102**	*i* P	Pn	22 32 12.8	-2.5
PNIG				*i* S	Sn	22 32 36.0	-4.5

*CSEM **19** 22:35:28.7±0.1, 4331N×1777E, h10km, ML2.6/9, Error ellipse: s-maj=2.4km s-min=1.2km az=69.0*
*ISCJB **19** 22:35:29.5±0.5, 4342N×002×1781E±004, h10km, Error ellipse: s-maj=4.1km s-min=2.9km az=140.8*
*PDG **19** 22:35:30.1±0.1, 4329N×1776E, h8km, MD2.7/1, ML2.6/9, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*BEO **19** 22:35:32.2±0.9, 4347N×1784E, h14km±6km, ML2.4/2*

ISC 19 22:35:30.0±0.6, 4341N±002×1779E±004, h1km±5km, n23,
σ1$06/39, 8C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.54**	**187**	*e*Pg	**Pg**	**22 35 40.9**	**+0.5**
STON				Sg	**Sg**	**22 35 49.2**	**+1.9**
STON	**Ston**	**0.54**	**187**	*e*Pg	**Pg**	**22 35 40.8**	**+0.5**
STON				Sg	**Sg**	**22 35 49.2**	**+1.9**
BRY	**Bratogost**	**0.75**	**132**	⇑*i*Pg	**Pg**	**22 35 43.0**	**-1.4**
BRY				*e*Sg	**Sg**	**22 35 54.0**	**-0.1**
UPM	**Unac-Piva**	**0.84**	**104**	⇑*i*Pg	**Pg**	**22 35 45.3**	**-0.9**
UPM				*e*Sg	**Sg**	**22 35 58.7**	**+1.6**
NKY	**Niksic**	**1.07**	**123**	⇑*i*Pg	**Pg**	**22 35 49.0**	**-1.5**
NKY				*e*Sg	**Sg**	**22 36 05.5**	**+1.2**
HCY	**Herceg Novi**	**1.09**	**151**	⇓*i*Pg	**Pg**	**22 35 48.4**	**-2.5**
HCY				*e*Sg	**Sg**	**22 36 04.7**	**-0.4**
PLE	**Pljevlja**	**1.17**	**93**	⇑*i*Pg	**Pg**	**22 35 51.9**	**-0.6**
PLE				*e*Sg	**Sg**	**22 36 11.0**	**+3.3**
BBLS	**Lazići**	**1.26**	**68**	*e*Pg	**Pg**	**22 35 54.0**	**-0.2**
BBLS				*e*Sg	**Sg**	**22 36 11.0**	**+0.5**
BUM	**Brajici-Budva**	**1.38**	**143**	⇓*i*Pg	**Pg**	**22 35 54.0**	**-2.4**
BUM				*e*Sg	**Sg**	**22 36 14.6**	**+0.4**
BLY	**Banja Luka**	**1.41**	**342**	*e*Pg	**Pg**	**22 35 57.7**	**+0.7**
BLY				*e*Sg	**Sg**	**22 36 18.4**	**+1.1**
PDG	**Podgorica**	**1.46**	**132**	⇑*i*Pg	**Pn**	**22 35 55.8**	**-1.7**
TTG	**Podgorica**	**1.46**	**132**	⇑*i*Pg	**Pn**	**22 35 55.8**	**-1.7**
TTG				*e*Sg	**Sg**	**22 36 17.9**	**+1.0**
SJES	**Sjenica**	**1.60**	**95**	*e*Pg	**Pg**	**22 36 00.4**	**-0.3**
BEY	**Berane**	**1.64**	**108**	⇓*i*Pg	**Pn**	**22 36 00.1**	**+0.2**
IVA	**Berane**	**1.64**	**108**	⇓*i*Pn	**Pn**	**22 36 00.1**	**+0.2**
IVA				*e*Sn	**Sg**	**22 36 23.7**	**+1.2**
DIVS	**Divibare**	**1.74**	**66**	*e*Pg	**Pg**	**22 36 01.6**	**-1.7**
DIVS				*e*Sg	**Sg**	**22 36 25.4**	**-0.5**
PVY	**Plav**	**1.80**	**116**	⇑*i*Pn	**Pn**	**22 36 02.3**	**+0.2**
PVY				*e*Sn	**Sb**	**22 36 27.1**	**+0.4**
ULC	**Ulcinj**	**1.80**	**143**	⇑*i*Pn	**Pn**	**22 36 01.9**	**-0.3**
ULC				*e*Sn	**Sn**	**22 36 26.3**	**+0.6**
GRUS	**Gruza**	**2.18**	**76**	*e*Pn	**Pn**	**22 36 07.4**	**0.0**
FGSL	**Fruska Gora**	**2.27**	**39**	*e*Pn	**Pg**	**22 36 08.9**	**+0.2**
NVLJ	**Novalja**	**2.40**	**300**	*e*Pn	**Pg**	**22 36 15.7**	**-0.3**
NVLJ				Sg	**Sg**	**22 36 50.8**	**+3.7**
PKSM	**Moragy**	**2.87**	**12**	*e*Pn	**Pn**	**22 36 16.5**	**-0.3**
BARS	**Barje**	**3.01**	**100**	*e*Pn	**Pn**	**22 36 19.2**	**+0.4**

*ISCJB **19** 22:59:10.7±0.5, 3922N×002×2163E±003, h2km±4km, Error ellipse: s-maj=4.0km s-min=3.6km az=150.5*
*NEIC **19** 22:59:11.9, 3922N×2167E, h18km, ML3.5(ATH), ML3.8(THE), After ATH.*
*ATH **19** 22:59:11.8, 3921N×2167E, h20km±1km, MD3.6/9, ML3.5*
*THE **19** 22:59:12.5, 3922N×2160E, h9km, ML3.8*
*CSEM **19** 22:59:12.0±0.1, 3923N×2160E, h10km, ML3.5, Error ellipse: s-maj=1.4km s-min=1.4km az=132.0*
*SOF **19** 22:59:21.3, 3987N×2228E, h9km, MD3.0*

ISC 19 22:59:11.6±0.5, 3922N±002×2164E±003, h0km±4km, n75,
σ1$30/84, 16C-12D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.33**	**157**	⇓*i*PB	**Pg**	**22 59 18.7**	**+0.8**
THL	**Klokotos Trika**	**0.45**	**40**	*e*Pg	**Pg**	**22 59 21.2**	**+1.1**
THL				*e*Sg	**Sg**	**22 59 29.1**	**+3.1**
THL	**Klokotos Trika**	**0.45**	**40**	⇑*i*PB	**Pg**	**22 59 21.2**	**+1.1**
AGG	**Agios Georgios**	**0.57**	**110**	*e*Pg	**Pg**	**22 59 23.5**	**+1.0**
AGG				*e*Sg	**Sg**	**22 59 33.1**	**+3.2**
MEV	**Metsovon**	**0.65**	**330**	*e*Pg	**Pg**	**22 59 24.1**	**+0.1**
JAN	**Janina**	**0.75**	**305**	⇓*i*PB	**Pb**	**22 59 26.1**	**-1.4**
LKD	**Levkas**	**0.93**	**237**	*e*Pg	**Pg**	**22 59 29.1**	**-0.2**
LKD	**Levkas**	**0.93**	**237**	*e*Pg	**Pg**	**22 59 29.1**	**-0.3**
IGT	**Igoumenitsa**	**1.06**	**287**	*e*Pg	**Pg**	**22 59 31.5**	**-0.5**
IGT				*e*Sg	**Sg**	**22 59 47.1**	**+1.4**
KZN	**Kozani**	**1.09**	**5**	⇓*i*PN	**Pn**	**22 59 32.2**	**-1.8**
KZN				*e*SN	**Sn**	**22 59 48.7**	**-1.0**
LIT	**Litokhoron**	**1.09**	**36**	*e*Pg	**Pg**	**22 59 32.4**	**-0.1**
LIT				*e*Sg	**Sg**	**22 59 49.7**	**+3.0**
RLS	**Riolos of Patr**	**1.17**	**187**	⇑*i*PN	**Pn**	**22 59 34.1**	**-1.1**
LKR	**Lokris**	**1.20**	**118**	*e*Pg	**Pg**	**22 59 35.1**	**+0.5**
LKR	**Lokris**	**1.20**	**118**	⇓*i*Pn	**Pn**	**22 59 35.2**	**-0.4**
XOR	**Xorichti**	**1.21**	**83**	*e*Pg	**Pg**	**22 59 35.1**	**+0.3**
NEO	**Neokhori**	**1.23**	**86**	⇓*i*PN	**Pn**	**22 59 35.5**	**-0.5**
KFL	**Anninata**	**1.30**	**211**	*e*Pg	**Pg**	**22 59 35.7**	**-0.8**
VLS	**Valsamata**	**1.33**	**219**	*e*Pg	**Pg**	**22 59 35.5**	**-1.6**
KEK	**Kerkira**	**1.51**	**289**	⇑*i*PN	**Pn**	**22 59 40.9**	**+1.1**
KEK	**Kerkira**	**1.51**	**289**	⇑*i*Pn	**Pn**	**22 59 41.1**	**+1.6**
FNA	**Florina**	**1.57**	**353**	*e*Pg	**Pg**	**22 59 40.4**	**-1.4**
FNA				*e*Sg	**Sg**	**23 00 01.0**	**-1.1**
FNA	**Florina**	**1.57**	**353**	*e*Pg	**Pg**	**22 59 40.3**	**-1.4**
FNA				*e*Sg	**Sg**	**23 00 01.0**	**-1.1**
LTK	**Loutraki**	**1.58**	**139**	*e*Pg	**Pg**	**22 59 41.0**	**-0.9**
PAIG	**Palioure**	**1.72**	**65**	*e*Pb	**Pb**	**22 59 41.8**	**-2.3**
AOS	**Alonnisos**	**1.74**	**91**	*e*Pb	**Pb**	**22 59 42.4**	**-1.9**
HORT	**Hortiatis**	**1.77**	**39**	*e*Pb	**Pb**	**22 59 42.2**	**-2.7**
PLG	**Polygyros**	**1.80**	**50**	*e*Pb	**Pb**	**22 59 42.7**	**-2.7**
PLG	**Polygyros**	**1.80**	**50**	⇑*i*Pb	**Pb**	**22 59 42.7**	**-2.7**
BIA	**Bitola**	**1.81**	**352**	*e*Pb	**Pb**	**22 59 44.1**	**-1.5**
BIA	**Bitola**	**1.81**	**352**	*i* Pn	**Pn**	**22 59 43.9**	**0.0**
GRG	**Griva**	**1.83**	**18**	*e*Pb	**Pb**	**22 59 43.4**	**-2.4**
GRG				*e*Sb	**Sb**	**23 00 07.4**	**-1.8**
OHR	**Ohrid**	**1.99**	**341**	*e*Pn	**Pn**	**22 59 48.8**	**+2.3**
OHR	**Ohrid**	**1.99**	**341**	*e*Pn	**Pn**	**22 59 48.7**	**+2.2**
ATH	**Athens Observa**	**2.05**	**127**	*e*PB	**Pb**	**22 59 48.5**	**-4.1**
ITM	**Ithomi**	**2.05**	**174**	P	**Pn**	**22 59 51.5**	**+4.2**
SOH	**Sokhos**	**2.07**	**39**	*e*Pn	**Pn**	**22 59 47.2**	**-0.2**
SOH				*e*Sn	**Sn**	**23 00 13.6**	**-0.3**
PTL	**Penteli**	**2.10**	**123**	*e*PB	**Pb**	**22 59 47.0**	**-3.5**
OUR	**Ouranopolis**	**2.12**	**58**	*e*Pn	**Pn**	**22 59 47.9**	**-0.2**
DID	**Didima**	**2.12**	**143**	*e*Pn	**Pn**	**22 59 47.9**	**-0.3**
KNT	**Kendrikon**	**2.16**	**26**	*e*Pn	**Pn**	**22 59 48.9**	**+0.1**
KRUS	**Krusevo**	**2.16**	**352**	*i* Pn	**Pn**	**22 59 49.6**	**+0.8**
KVR	**Kavouri**	**2.17**	**129**	*e*PN	**Pn**	**22 59 49.0**	**+0.1**
KVR	**Kavouri**	**2.17**	**129**	*e*Pn	**Pn**	**22 59 50.0**	**+1.1**
VAY	**Valandovo**	**2.21**	**18**	*e*Pn	**Pn**	**22 59 49.1**	**-0.3**
VAY	**Valandovo**	**2.21**	**18**	*e*Pn	**Pn**	**22 59 49.1**	**-0.4**
STIP	**Stip**	**2.50**	**9**	*e*Pn	**Pn**	**22 59 53.7**	**+0.3**
STIP	**Stip**	**2.50**	**9**	*i* Pn	**Pn**	**22 59 53.7**	**+0.3**
NVR	**Nevrokopi**	**2.72**	**38**	⇑*i*PN	**Pn**	**22 59 56.5**	**+0.1**
LIA	**Limnos Island**	**2.82**	**75**	⇓*i*PN	**Pn**	**22 59 57.3**	**-0.5**
MMB	**Musomiste**	**2.85**	**33**	Pg	**Pg**	**23 00 01.5**	**-4.7**
KKB	**Krupnik**	**2.86**	**22**	P	**Pn**	**22 59 57.6**	**-0.8**
RZN	**Rozhen**	**3.40**	**43**	P	**Pn**	**23 00 05.8**	**0.0**
CHOS	**Chios island**	**3.55**	**102**	*e*Pn	**Pn**	**23 00 08.5**	**+0.7**
VTS	**Vitosha**	**3.57**	**19**	⇑*i*P	**Pn**	**23 00 10.6**	**+2.5**
VTS	**Vitosha**	**3.57**	**19**	P	**Pn**	**23 00 08.9**	**+0.8**
VTS	**Vitosha**	**3.57**	**19**	⇑P	**Pn**	**23 00 10.6**	**+2.5**
APE	**Apeiranthos**	**3.74**	**124**	⇑*i*PN	**Pn**	**23 00 11.7**	**+1.2**
APE	**Apeiranthos**	**3.74**	**124**	⇑*i*P	**Pn**	**23 00 11.2**	**+0.7**
KDZ	**Kurdzhali**	**3.76**	**49**	P	**Pn**	**23 00 09.3**	**-1.5**
TIP	**Timpagrande**	**3.79**	**271**	P	**Pn**	**23 00 11.9**	**+0.7**
SG1	**Sgolgore (BA)**	**4.14**	**295**	*e*Pn	**Pn**	**23 00 17.3**	**+1.4**
SMG	**Samos**	**4.35**	**109**	P	**Pn**	**23 00 27.3**	**+5.5**
CUC	**Castrocucco**	**4.57**	**282**	P	**Pn**	**23 00 23.7**	**+5.5**
BZS	**Buzias**	**6.39**	**360**	⇓*i*P	**Pn**	**23 00 48.2**	**+1.4**
VOIR		**6.70**	**21**	⇑*i*P	**Pn**	**23 00 51.6**	**+0.5**
MLR	**Muntele Rosu**	**7.03**	**26**	⇑*i*P	**Pn**	**23 00 59.8**	**+4.2**
MLR	**Muntele Rosu**	**7.03**	**26**	⇑P	**Pn**	**23 00 59.8**	**+4.2**
PKSM	**Moragy**	**7.33**	**343**	⇓*i*P	**Pn**	**23 01 00.2**	**+0.5**
PKSM	**Moragy**	**7.33**	**343**	⇓P	**Pn**	**23 01 00.2**	**+0.5**
PLOR	**Plostina**	**7.58**	**28**	⇓*i*P	**Pn**	**23 01 05.6**	**+2.4**
DRGR		**7.60**	**6**	⇑*i*P	**Pn**	**23 01 05.7**	**+2.2**
DRGR		**7.60**	**6**	⇑P	**Pn**	**23 01 05.7**	**+2.2**
VRI	**Vrincioaia**	**7.62**	**28**	⇑*i*P	**Pn**	**23 01 06.3**	**+2.5**
PSZ	**Piszkesteto**	**8.78**	**352**	⇓*i*P	**Pn**	**23 01 20.1**	**+0.4**
PSZ	**Piszkesteto**	**8.78**	**352**	⇓P	**Pn**	**23 01 20.1**	**+0.4**

*ISCJB **19** 23:07:17.0±0.8, 3567N±003×2634E±007, h9km±7km, Error ellipse: s-maj=10.0km s-min=5.4km az=165.9*
*ATH **19** 23:07:16.5, 3566N×2634E, h5km, MD3.1/4*
*NEIC **19** 23:07:16.5, 3566N×2634E, h5km, MD3.1(ATH), After ATH.*
*CSEM **19** 23:07:17.6±0.2, 3559N×2637E, h20km, MD3.1, Error ellipse: s-maj=3.8km s-min=3.6km az=52.0*
*THE **19** 23:07:20.2, 3560N×2617E, h19km*

ISC 19 23:07:17.4±0.8, 3566N±003×2634E±007, h20km±8km, n15,
σ1$10/20, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.56**	**191**	*e*Pg	**Pg**	**23 07 29.8**	**+1.3**
ZKR				*e*Sg	**Sg**	**23 07 37.2**	**+1.2**
KARP	**Karpathos**	**0.68**	**99**	*e*PB	**Pb**	**23 07 29.5**	**-1.0**
NPS	**Neapolis**	**0.72**	**237**	*e*PG	**Pg**	**23 07 30.0**	**-1.5**
NPS				*e*SB	**Sb**	**23 07 39.0**	**-1.6**
LAST	**Lasithi**	**0.86**	**235**	*e*Pg	**Pg**	**23 07 33.3**	**-1.0**
THR1	**Thera Island**	**1.01**	**315**	*e*Pg	**Pg**	**23 07 37.2**	**+0.2**
THR1				*e*Sg	**Sg**	**23 07 50.5**	**+0.2**

PLOR	Plostina	5.82	12⇑	*i*P	Pn	23 24 47.9	+1.2
DRGR		6.83	347⇑	*i*P	Pn	23 25 08.7	+8.3
BURAR	Bucovina Array	7.45	1⇑	*i*P	Pn	23 25 10.3	+1.2

ISCJB **19** *23:32:10.0±1.0, 468S±003×13138E±004, h24km±7km, mb5.2/67, MS4.4/23, Error ellipse: s-maj=6.1km s-min=4.6km az=153.5*

MOS **19** *23:32:11.6±0.9, 466S×13131E, h33km, mb5.3/23, MS4.2/6, Error ellipse: s-maj=14.6km s-min=7.0km az=113.4*

DJA **19** *23:32:12, 455S×13154E, h20km, Mw5.6/13*

BJI **19** *23:32:13.2, 460S×13140E, h40km, mB5.2, mb5.0, Ms4.7, Msz4.4*

NEIC **19** *23:32:14.2±0.9, 463S×13136E, h40km±8km, mb5.2/23, Error ellipse: s-maj=7.5km s-min=4.4km az=61.0*

GCMT **19** *23:32:14.2±0.1, 456S×13140E, h41km, MW5.4/99, Moment Tensor Solution. s78,c134; s99,c181; Duration: 1ŝ3 Moment tensor: Scale 10^17 Nm; Mrr-0.07±.02; Mθθ-0.63±.02; Mϕϕ0.70±.02; Mrθ0.07±.02; Mθϕ-1.32±.02; Mϕr0.84±.03; Best double couple: Mo1.69900×10^17 NP1:ϕs283.00000°, δ61.00000°, λ179.00000°. NP2:ϕs13.00000°, δ89.00000°, λ29.00000°. Principal axes: T 1.7750, Plg21.0000°, Azm242.0000°; N -0.1510, Plg61.0000°, Azm15.0000°; P -1.6230, Plg20.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC **19** *23:32:15.5±2.1, 462S×13134E, h50km±19km, mb4.7/16, mb1 4.8/18, mb1mx4.8/19, mbtmp4.8/18, ML5.4/3, MS4.4/11, Ms1 4.4/11, ms1mx4.2/18 Error ellipse: s-maj=17.7km s-min=10.8km az=72.0*

ISC 19 23:32:13.1±1.1, 470S±003×13133E±004, h31km±7km, h34km±6km: pP-P, n239, σ1ŝ13/233, mb5.2/66, MS4.4/23, 13C-13D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**2.75**	**299**	P		**Pn**	**23 32 56.5**	**+1.5**
	0.0nm,0.0s							
AAI	**Ambon**	**3.29**	**288**	P		**Pn**	**23 33 04.5**	**+2.1**
	0.0nm,0.0s							
SWI	**Sorong**	**3.81**	**359**	P		**Pn**	**23 33 06.8**	**-2.9**
	0.0nm,0.0s							
LBMI	**Labuha**	**5.56**	**316**	P		**Pn**	**23 33 33.2**	**-0.5**
	0.0nm,0.0s							
KDI	**Kendari**	**8.72**	**275**	P		**Pn**	**23 34 20.8**	**+3.7**
	0.0nm,0.0s							
MNI	**Manado**	**8.90**	**313**	P		**Pn**	**23 34 19.2**	**-0.5**
	0.0nm,0.0s							
BATI	**Baumata**	**9.37**	**234**	P		**Pn**	**23 34 29.3**	**+3.3**
	0.0nm,0.0s							
BATI	**Baumata**	**9.37**	**234**	P		**Pn**	**23 34 29.1**	**+3.1**
	207nm,0.3s,baz=123,slow=2.0,SNR=105							
BATI				S		**Sn**	**23 36 14.9**	**+4.6**
	55nm,0.3s,baz=104,slow=15,SNR=3.4							
JAY	**Jayapura**	**9.60**	**77**	P		**Pn**	**23 34 21.2**	**-8.1**
	0.0nm,0.0s							
KAPI	**Kappang**	**11.54**	**268**	Pn		**Pn**	**23 34 59.0**	**+3.2**
	1μm,0.7s,SNR=13							
KAPI	**Kappang**	**11.54**	**268**	P		**Pn**	**23 35 01.5**	**+5.7**
	SNR=12							
KAPI	**Kappang**	**11.54**	**268**	P		**Pn**	**23 34 58.6**	**+2.7**
	5.6nm,0.3s,baz=105,slow=6.5,SNR=24							
KAPI	**Kappang**	**11.54**	**268**	*e*Pn		**Pn**	**23 34 58.1**	**+2.3**
PCI	**Palu**	**12.08**	**288**	P		**Pn**	**23 35 06.4**	**+3.2**
	0.0nm,0.0s							
DAV	**Davao City (W)**	**13.02**	**334**	P		**Pn**	**23 35 16.9**	**+0.8**
	19nm,0.3s,baz=237,slow=16,SNR=7.5							
BUKP	**Musuan**	**13.97**	**333**	*e*P		**Pn**	**23 35 28.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**14.44**	**202**	*e*P		**Pn**	**23 35 31.4**	**-4.0**
	170nm,0.4s							
FITZ				*e*S		**Sn**	**23 38 03.9**	**-11**
FITZ	**Fitzroy Crossi**	**14.44**	**202**	P		**Pn**	**23 35 32.0**	**-3.4**
	23nm,0.3s,baz=31,slow=12,SNR=184							
FITZ				S		**Sn**	**23 38 04.7**	**-10**
	27nm,0.3s,baz=162,slow=13,SNR=15							
FITZ				LR		LR	23 41 47.0	
	comp=Z,1μm,21.5s,baz=26,slow=39							
SMKI	**Samarinda**	**14.72**	**286**	P		**Pn**	**23 35 42.3**	**+3.0**
	0.0nm,0.0s							
COEN	**Coen**	**14.87**	**129**	*e*Pn		**Pn**	**23 35 38.3**	**-2.9**
	154nm,0.7s							
COEN				*e*Sn		**Sn**	**23 38 14.6**	**-10**
WRAB	**Tennant Creek**	**15.43**	**169**	Pn		**Pn**	**23 35 44.0**	**-4.5**
	2μm,0.7s							
WRAB	**Tennant Creek**	**15.43**	**169**	*e*Pn		**Pn**	**23 35 44.0**	**-4.5**
WRAB				*e*Sn		**Sn**	**23 38 26.8**	**-12**
WRA	**Warramunga Arr**	**15.43**	**169**	P		**Pn**	**23 35 43.8**	**-4.9**
	21nm,0.3s,baz=355,slow=13,SNR=113							
WRA				S		**Sn**	**23 38 26.5**	**-12**
	32nm,0.3s,baz=346,slow=22,SNR=12							
WB2	**Warramunga Arr**	**15.44**	**169**	*e*P		**Pn**	**23 35 44.1**	**-4.6**
WB2				*e*S		**Sn**	**23 38 27.2**	**-12**
MTNI	**Mataram**	**15.55**	**255**	P		**Pn**	**23 35 47.9**	**-2.4**
	0.0nm,0.0s							
KHKI	**Kahang-Kahang**	**16.04**	**256**	P		**Pn**	**23 35 56.1**	**-0.4**
	0.0nm,0.0s							
MYLDM	**Lahad Datu**	**16.14**	**307**	⇓P		**Pn**	**23 35 55.5**	**-2.3**
TSM	**Tawau**	**16.14**	**303**	⇓P		**Pn**	**23 35 58.0**	**+0.1**
PMG	**Port Moresby**	**16.39**	**107**	*e*Pn		**Pn**	**23 36 00.5**	**-0.5**
PMG						**Sn**	**23 38 46.3**	**-16**
BBKI	**Banjar Baru**	**16.49**	**274**	P		**Pn**	**23 36 05.1**	**+2.8**
	0.0nm,0.0s							
IGBI	**Denpasar**	**16.58**	**255**	P		**Pn**	**23 36 03.2**	**-0.2**
	0.0nm,0.0s							
KMMI	**Kalianget**	**17.43**	**261**	P		**Pn**	**23 36 16.7**	**+2.6**
	0.0nm,0.0s							
SDKM	**Sandakan**	**17.46**	**306**	⇓P		**Pn**	**23 36 17.6**	**+3.2**
RCP	**Roxas**	**18.27**	**332**	⇑*e*P		**Pn**	**23 36 24.2**	**-0.2**
KKM	**Kota Kinabalu**	**18.48**	**305**	⇑P		**Pn**	**23 36 30.1**	**+3.1**
KKM	**Kota Kinabalu**	**18.48**	**305**	*e*P		**Pn**	**23 36 27.8**	**+0.8**
KKM				*e*			23 36 42.1	
ASAR	**Alice Springs**	**19.02**	**173**	P		**Pn**	**23 36 31.9**	**-1.5**
	35nm,0.3s,baz=354,slow=9.2,SNR=662							
ASAR				S		**Sn**	**23 39 55.2**	**-10**
	13nm,0.3s,baz=4.5,slow=18,SNR=8.7							
ASAR	**Alice Springs**	**19.02**	**173**	P		**Pn**	**23 36 31.9**	**-1.5**
ASAR				S		**Sn**	**23 39 55.2**	**-10**
ASAR				pmax		pmax		
	comp=Z,35nm,0.3s							
ASAR				smax				
	comp=N,13nm,0.3s							
KRKI	**Karangkates**	**19.07**	**259**	P		**Pn**	**23 36 32.9**	**-1.2**
	comp=N,0.0nm,0.0s							
SJI	**Sawahan**	**19.68**	**260**	P		**Pn**	**23 36 38.6**	**-2.8**
	comp=N,0.0nm,0.0s							
PBKI	**Pangkalan Bun**	**19.72**	**275**	P		**Pn**	**23 36 42.8**	**+0.9**
	comp=N,0.0nm,0.0s							
BTM	**Bintulu**	**19.85**	**293**	⇑P		**Pn**	**23 36 44.0**	**+0.6**
MBWA	**Marble Bar**	**19.86**	**214**	P		**Pn**	**23 36 42.2**	**-1.3**
	SNR=9.0							
MBWA	**Marble Bar**	**19.86**	**214**	*e*P		**Pn**	**23 36 41.5**	**-2.0**
	comp=N,105nm,0.7s							
SBUM	**Sibu**	**20.37**	**290**	⇑P		**P**	**23 36 48.9**	**+1.5**
STKI	**Sintang**	**20.39**	**283**	P		**P**	**23 36 46.5**	**-1.1**
	comp=N,0.0nm,0.0s							
CTA	**Charters Tower**	**21.10**	**138**	*e*P		**P**	**23 36 55.9**	**+0.7**
	comp=N,93nm,0.8s,mb5.2							
CTA				*e*S		**S**	**23 40 49.2**	**+0.8**
CTA	**Charters Tower**	**21.10**	**138**	P		**P**	**23 36 56.2**	**+1.1**
	comp=N,130nm,0.9s,mb5.2,baz=321,slow=13,SNR=33							
CTA	**Charters Tower**	**21.10**	**138**	*e*P		**P**	**23 36 55.9**	**+0.7**
CTA				*e*S		**S**	**23 40 49.2**	**+0.8**
CTA				pmax		pmax		
	comp=Z,93nm,0.8s							
CTAO	**Charters Tower**	**21.10**	**138**	*e*P		**P**	**23 36 56.1**	**+0.9**
CTAO				pmax		pmax		
	comp=Z,121nm,0.8s,mb5.3							
CTAO	**Charters Tower**	**21.10**	**138**	*e*P		**P**	**23 36 56.1**	**+0.9**
	comp=Z,121nm,0.8s,mb5.3							
LUBP	**Lubang**	**21.36**	**329**	*e*P		**P**	**23 36 58.5**	**+0.4**
BJII	**Banjamegara**	**21.66**	**262**	P		**P**	**23 37 01.4**	**+0.1**
	comp=Z,0.0nm,0.0s							
KSM	**Kuching**	**21.88**	**286**	⇑P		**P**	**23 37 04.1**	**+0.5**
KSM	**Kuching**	**21.88**	**286**	*e*P		**P**	**23 37 03.1**	**-0.5**
BALP	**Baler**	**22.49**	**335**	*e*P		**P**	**23 37 07.9**	**-2.2**
CAUP	**Cauayan**	**23.47**	**337**	*e*P		**P**	**23 37 21.7**	**+1.4**
LEM	**Lembang**	**23.69**	**264**	P		**P**	**23 37 19.7**	**-2.7**
	comp=Z,0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**25.27**	**275**	P		**P**	**23 37 32.9**	**-4.0**
	comp=Z,0.0nm,0.0s							
FORT	**Forrest**	**26.12**	**186**	*e*P		**P**	**23 37 46.0**	**+1.6**
	comp=Z,122nm,0.7s,mb5.5							
MYKOM	**Kota Tinggi**	**28.20**	**283**	⇓P		**P**	**23 38 02.9**	**-0.5**
STKA	**Stephens Creek**	**28.70**	**162**	⇓*i*P		**P**	**23 38 08.2**	**+0.7**
	comp=Z,30nm,0.4s,mb5.4							
STKA	**Stephens Creek**	**28.70**	**162**	P		**P**	**23 38 08.2**	**+0.7**
	comp=Z,58nm,0.5s,mb5.6,baz=338,slow=8.3,SNR=73							
STKA				LR		LR	23 50 59.9	
	comp=Z,2μm,19.5s,MS4.8,baz=332,slow=39							
KGM	**Kluang**	**28.77**	**283**	⇑P		**P**	**23 38 07.3**	**-1.1**
KLBR	**Kellerberrin**	**29.63**	**204**	*e*P		**P**	**23 38 15.9**	**+0.1**
	comp=Z,70nm,0.5s,mb5.6							
KTGM	**Kuala Trenggan**	**29.87**	**289**	⇓P		**P**	**23 38 18.2**	**+0.1**
MUN	**Mundaring**	**30.62**	**206**	*e*P		**P**	**23 38 24.5**	**0.0**
FRIM	**Kepong**	**30.71**	**284**	⇓P		**P**	**23 38 24.3**	**-1.2**
NWAO	**Narrogin (SRO)**	**31.02**	**203**	P		**P**	**23 38 28.4**	**+0.4**
	comp=Z,34nm,0.9s,mb5.2,baz=36,slow=9.2,SNR=16							
NWAO				LR		LR	23 51 55.9	
	comp=Z,912nm,18.8s,MS4.5,baz=24,slow=38							
NWAO	**Narrogin (SRO)**	**31.02**	**203**	P		**P**	**23 38 28.4**	**+0.4**
NWAO				pmax		pmax		
	comp=Z,34nm,0.9s							
NWAO				MLR		MLR		
	comp=Z,912nm,18.8s							
NWAO	**Narrogin (SRO)**	**31.02**	**203**	*e*P		**P**	**23 38 28.4**	**+0.5**
	comp=Z,62nm,1.3s,mb5.3							
PPI	**Padang Panjang**	**31.18**	**277**	P		**P**	**23 38 27.1**	**-2.6**
	comp=Z,0.0nm,0.0s							
IPM	**Ipoh**	**31.61**	**286**	⇑P		**P**	**23 38 33.4**	**-0.2**
QIZ	**Qiongzhong**	**31.68**	**319**	P		**P**	**23 38 35.1**	**+1.1**
QIZ				S		**S**	**23 43 37.0**	**-4.6**
QIZ				AMB		AMB		
	comp=Z,18nm,1.5s,mb4.7							
QIZ				AMB		AMB		
	comp=Z,170nm,11.0s							
QIZ				LR		LR		
	comp=N,668nm,14.3s,MS4.5							
QIZ				LR		LR		
	comp=E,603nm,17.5s,MS4.5							
QIZ				LR		LR		
	comp=Z,763nm,19.7s,MS4.4							
ARMA	**Armidale**	**31.95**	**146**	*e*P		**P**	**23 38 37.7**	**+1.4**
QZH	**Quanzhou**	**31.96**	**338**	P		**P**	**23 38 39.3**	**+2.9**
QZH				S		**S**	**23 43 39.9**	**-6.0**
QZH				LR		LR		
	comp=Z,1μm,25.9s,MS4.5							
SNG	**Songkhla**	**32.84**	**291**	P		**P**	**23 38 44.0**	**-0.3**
	comp=Z,140nm,1.0s,mb5.8							
PSI	**Prapat**	**33.22**	**282**	⇓*e*P		**P**	**23 38 46.5**	**-1.1**
CAN	**Canberra**	**34.57**	**154**	*e*P		**P**	**23 39 00.1**	**+1.1**
CNB	**Canberra Magne**	**34.73**	**154**	*e*P		**P**	**23 39 01.9**	**+1.5**
KKTK	**Khon Kaen**	**35.10**	**307**	P		**P**	**23 39 04.0**	**+0.2**
	comp=Z,679nm,0.5s							
TOO	**Toolangi**	**35.19**	**160**	*e*P		**P**	**23 39 06.3**	**+2.0**
SSE	**Sheshan**	**36.89**	**345**	P		**P**	**23 39 19.5**	**+0.6**
SSE				S		**S**	**23 45 02.3**	**+0.5**
SSE				AMB		AMB		
	comp=Z,18nm,0.8s,mb5.0							
SSE				AMB		AMB		
	comp=Z,295nm,4.1s							
SSE				LR		LR		
	comp=N,86nm,33.3s,MS4.1							
SSE				LR		LR		
	comp=E,516nm,33.3s,MS4.1							
SSE				LR		LR		
	comp=Z,337nm,23.4s							
NST	**Nakhon Sawan**	**36.93**	**304**	P		**P**	**23 39 18.6**	**-0.9**
BSI	**Banda Aceh**	**37.38**	**285**	P		**P**	**23 39 21.6**	**-1.9**
	comp=Z,0.0nm,0.0s							
DZM	**Mont Dzumac**	**38.12**	**120**	*e*P		**P**	**23 39 27.7**	**-1.9**
DZM	**Mont Dzumac**	**38.12**	**120**	*e*P		**P**	**23 39 29.6**	**0.0**
NANT	**Nan**	**38.15**	**309**	⇑P		**P**	**23 39 27.5**	**-2.3**
	comp=Z,838nm,1.0s							
NJ2	**Nanjing**	**38.43**	**343**	*e*P		**P**	**23 39 33.6**	**+1.7**
NJ2				AP		pP	23 39 43.4	+2.2
NJ2				XP		sP	23 39 47.3	+2.3
NJ2				PP		PP	23 41 05.5	+5.2
NJ2				S		**S**	**23 45 24.0**	**-1.1**
NJ2				XS		sS	23 45 40.0	-0.4
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.6							
NJ2				AMB		AMB		
	comp=Z,220nm,5.0s							
NJ2				LR		LR		
	comp=N,510nm,19.9s							
NJ2				LR		LR		
	comp=E,440nm,27.0s							
NJ2				LR		LR		
	comp=Z,580nm,17.8s,MS4.4							
WHN	**Wuhan**	**38.62**	**336**	P		**P**	**23 39 33.5**	**-0.1**
WHN				S		**S**	**23 45 33.6**	**+5.5**
WHN				LR		LR		
	comp=N,2μm,36.7s							
WHN				LR		LR		
	comp=E,1μm,26.8s							
WHN				LR		LR		
	comp=Z,2μm,31.4s							
BDT	**Bhumibol Dam**	**38.66**	**305**	P		**P**	**23 39 34.0**	**-0.1**
	comp=Z,22nm,0.8s,mb4.9							
GYA	**Guiyang**	**39.11**	**324**	P		**P**	**23 39 37.1**	**-0.7**
GYA				PP		PP	23 41 10.0	+2.1
GYA				PCP		PcP	23 41 47.8	+0.6
GYA				S		**S**	**23 45 30.9**	**-4.7**
GYA				SCP		ScP	23 45 32.4	-1.2
GYA				SS		SS	23 48 24.4	-4.7
GYA				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb4.7							
GYA				AMB		AMB		
	comp=Z,230nm,6.0s							
GYA				LR		LR		
	comp=N,480nm,16.7s,MS4.5							
GYA				LR		LR		
	comp=E,490nm,17.2s,MS4.5							
GYA				LR		LR		
	comp=Z,540nm,17.8s,MS4.4							
CMAR	**Chiang Mai Arr**	**39.35**	**307**	P		**P**	**23 39 40.0**	**+0.1**
	comp=Z,24nm,0.7s,mb5.0,baz=138,slow=7.7,SNR=87							
CMAR				ScP		ScP	23 45 32.3	-2.4
	comp=Z,1.3nm,0.3s,baz=144,slow=3.2,SNR=5.5							
CMAR	**Chiang Mai Arr**	**39.35**	**307**	P		**P**	**23 39 40.0**	**+0.1**
CMAR							23 45 32.3	
CMAR				pmax		pmax		
	comp=Z,24nm,0.7s							
CMAR				pmax		pmax		
	comp=N,1.0nm,0.3s							
CHRT	**Chiangrai**	**39.47**	**309**	⇑P		**P**	**23 39 41.0**	**+0.1**
	comp=N,210nm,0.9s,mb5.9							
CHTO	**Chiang Mai**	**39.54**	**307**	⇑P		**P**	**23 39 42.2**	**+0.7**
	SNR=9.2							
CHTO	**Chiang Mai**	**39.54**	**307**	*e*P		**P**	**23 39 41.2**	**-0.3**
CHTO				pmax		pmax		
	comp=Z,33nm,0.8s,mb5.1							
CHTO	**Chiang Mai**	**39.54**	**307**	*e*P		**P**	**23 39 41.2**	**-0.3**
	comp=Z,33nm,0.8s,mb5.1							
KMI	**Kunming**	**40.63**	**318**	P		**P**	**23 39 51.3**	**+0.9**
KMI				AP		pP	23 40 00.5	+0.8
KMI				XP		sP	23 40 04.3	+0.8
KMI				PP		PP	23 41 28.0	+3.6
KMI				PCS		PcS	23 45 44.9	+1.9
KMI				S		**S**	**23 45 56.0**	**-2.4**
KMI				XS		sS	23 46 12.0	-1.7
KMI				SS		SS	23 48 49.1	-10
KMI				AMB		AMB		
	comp=Z,18nm,0.6s,mb4.9							
KMI				AMB		AMB		
	comp=Z,151nm,5.6s							
KMI				LR		LR		
	comp=N,480nm,19.0s,MS4.5							
KMI				LR		LR		
	comp=E,394nm,18.2s,MS4.5							
KMI				LR		LR		
	comp=Z,501nm,33.9s							
MJAR	**Matsushiro Arr**	**41.53**	**8**	P		**P**	**23 39 57.3**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=159,slow=5.6,SNR=3.3							
MJAR	**Matsushiro Arr**	**41.53**	**8**	P		**P**	**23 39 57.3**	**-0.3**
MJAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
MAJO	**Matsushiro**	**41.53**	**8**	*e*P		**P**	**23 39 56.6**	**-1.0**
MAJO							23 41 31.5	
KSRS	**Korea Array**	**42.05**	**356**	P		**P**	**23 40 02.3**	**+0.4**
	comp=Z,3.1nm,0.7s,baz=182,slow=8.8,SNR=9.7							
KSRS				LR		LR	23 56 55.9	
	comp=Z,339nm,18.1s,MS4.3,baz=175,slow=35							
KSRS	**Korea Array**	**42.05**	**356**	P		**P**	**23 40 02.3**	**+0.4**
KSRS				pmax		pmax		
	comp=Z,3.0nm,0.7s							
KSRS				MLR		MLR		
	comp=Z,339nm,18.1s,MS4.3							
XAN	**Xi'an**	**43.96**	**333**	P		**P**	**23 40 15.8**	**-1.6**
XAN				AP		pP	23 40 25.6	-1.2
XAN				XP		sP	23 40 30.4	-0.2
XAN				AMB		AMB		
	comp=Z,48nm,1.2s,mb5.1							
CD2	**Chengdu**	**44.13**	**325**	*e*P		**P**	**23 40 20.5**	**+1.7**
CD2				AP		pP	23 40 30.3	+2.1
CD2				XP		sP	23 40 34.3	+2.3
CD2				PP		PP	23 42 04.9	+2.8
CD2				PCS		PcS	23 45 57.0	+0.2
CD2				S		**S**	**23 46 50.9**	**+1.1**
CD2				XS		sS	23 47 07.3	+2.0
CD2				SS		SS	23 50 00.8	-7.5
CD2				SCS		ScS	23 50 13.8	-1.7
CD2				AMB		AMB		
	comp=Z,20nm,0.9s,mb4.8							
CD2				AMB		AMB		
	comp=Z,190nm,7.2s							
CD2				LR		LR		
	comp=N,600nm,24.0s,MS4.5							
CD2				LR		LR		
	comp=E,500nm,27.4s,MS4.5							
CD2				LR		LR		
	comp=Z,290nm,24.0s,MS4.1							
BJT	**Baijiatuan**	**46.63**	**344**	*e*P		**P**	**23 40 38.7**	**+0.2**
BJT				*e*			23 42 09.2	
BJT				pmax		pmax		
	comp=Z,29nm,0.9s							
BJT	**Baijiatuan**	**46.63**	**344**	*e*P		**P**	**23 40 38.6**	**+0.1**
	comp=Z,28nm,0.9s,mb5.2							
BJT				*e*PcP		PcP	23 42 09.2	-2.9
BJI	**Beijing**	**46.65**	**344**	P		**P**	**23 40 39.8**	**+1.1**
BJI				XP		sP	23 40 53.6	+1.8
BJI				S		**S**	**23 47 21.1**	**-4.9**
BJI				XS		sS	23 47 44.4	+2.9
BJI				AMB		AMB		
	comp=Z,28nm,0.8s,mb5.2							
BJI				LR		LR		
	comp=N,337nm,19.0s,MS4.5							
BJI				LR		LR		
	comp=E,440nm,19.8s,MS4.5							
BJI				LR		LR		
	comp=Z,416nm,26.9s							
LZH	**Lanzhou**	**48.05**	**330**	*e*P		**P**	**23 40 50.5**	**+0.9**
LZH				AP		pP	23 40 59.5	+0.4
LZH				XP		sP	23 41 03.6	+0.8
LZH				PP		PP	23 42 42.5	+0.4
LZH				S		**S**	**23 47 41.5**	**-4.5**
LZH				XS		sS	23 47 59.0	-2.6
LZH				SS		SS	23 51 10.5	-5.0
LZH				AMB		AMB		
	comp=Z,42nm,1.5s,mb5.2							
LZH				AMB		AMB		
	comp=Z,130nm,4.0s							
LZH				LR		LR		
	comp=E,450nm,14.3s							
LZH				LR		LR		
	comp=Z,790nm,16.0s,MS4.8							
HHC	**Hu-ho-hao-te**	**48.81**	**340**	*e*P		**P**	**23 40 55.4**	**0.0**
HHC				AP		pP	23 41 05.6	+0.7
HHC				XP		sP	23 41 10.1	+1.5
HHC				PCP		PcP	23 42 19.9	0.0
HHC				PP		PP	23 42 48.4	-0.5
HHC				SCP		ScP	23 46 10.4	-2.4
HHC				PCS		PcS	23 46 14.8	-1.2
HHC				S		**S**	**23 47 55.4**	**-1.2**
HHC				XS		sS	23 48 12.8	+0.6
HHC				SCS		ScS	23 50 41.9	-3.7
HHC				SS		SS	23 51 22.0	-5.6
HHC				AMB		AMB		
	comp=Z,23nm,0.6s,mb5.4							
HHC				AMB		AMB		
	comp=Z,148nm,8.5s							
HHC				LR		LR		
	comp=N,254nm,14.8s,MS4.5							
HHC				LR		LR		
	comp=E,270nm,15.2s,MS4.5							
HHC				LR		LR		
	comp=Z,296nm,16.0s,MS4.4							
MDJ	**Mudanjiang**	**49.12**	**358**	P		**P**	**23 40 58.9**	**+1.2**
MDJ				AP		pP	23 41 07.8	+0.7
MDJ				XP		sP	23 41 11.8	+0.9
MDJ				S		**S**	**23 48 02.9**	**+2.2**
MDJ				AMB		AMB		
	comp=Z,12nm,0.8s,mb5.0							
MDJ				AMB		AMB		
	comp=Z,63nm,5.2s							
MDJ				LR		LR		
	comp=N,186nm,22.6s							
MDJ				LR		LR		
	comp=Z,230nm,22.6s,MS4.1							
MDJ	**Mudanjiang**	**49.12**	**358**	*e*P		**P**	**23 40 56.9**	**-0.8**
	comp=Z,8.0nm,0.6s,mb4.9							
MDJ				*e*		pP	23 41 07.9	+0.8
MDJ				PcP		PcP	23 42 18.0	-2.8
LSA	**Lhasa**	**51.51**	**314**	*e*P		**P**	**23 41 16.5**	**+0.4**
LSA				pmax		pmax		
	comp=Z,29nm,0.8s,mb5.3							
LSA	**Lhasa**	**51.51**	**314**	*e*P		**P**	**23 41 16.5**	**+0.4**
	comp=Z,29nm,0.8s,mb5.2							
PALK	**Pallekele**	**51.90**	**283**	*e*P		**P**	**23 41 19.8**	**+0.5**
	comp=Z,23nm,0.8s,mb5.2							
RPZ	**Rata Peaks**	**52.27**	**144**	P		**P**	**23 41 23.0**	**+1.5**
	comp=Z,14nm,0.5s,mb5.2,baz=259,slow=2.6,SNR=5.5							
GTA	**Gaotai**	**52.64**	**329**	⇑P		**P**	**23 41 24.9**	**+0.6**
GTA				AP		pP	23 41 35.4	+1.5
GTA				XP		sP	23 41 39.3	+1.7
GTA				S		**S**	**23 48 50.6**	**+0.8**
GTA				XS		sS	23 49 07.8	+2.3
GTA				SS		SS	23 52 29.3	+0.6
GTA				AMB		AMB		
	comp=Z,9.0nm,0.9s,mb4.7							
GTA				AMB		AMB		
	comp=Z,98nm,5.4s							
GTA				LR		LR		
	comp=N,222nm,17.4s,MS4.6							
GTA				LR		LR		
	comp=E,384nm,17.4s,MS4.6							
GTA				LR		LR		
	comp=Z,468nm,21.6s,MS4.5							
TAPN	**Taplejung**	**52.80**	**310**	*e*P		**P**	**23 41 25.3**	**-0.4**
	comp=Z,56nm,0.4s,mb5.8							
ODAN	**

ZAK	**Zakamensk**	**59.96**	**340**	*e*P		**P**		**23 42 18.8**	**+2.5**
ZAK				pmax		pmax			
	comp=Z,6.0nm,1.4s,mb4.4								
TLY	**Talaya**	**60.93**	**341**	*e*P		**P**		**23 42 27.3**	**+4.4**
TLY				*e*S		**S**		**23 50 40.7**	**+1.8**
TLY				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.5								
POO	**Poona**	**61.14**	**294**	*e*P		**P**		**23 42 23.0**	**-2.0**
NDI	**New Delhi**	**61.67**	**306**	*ex*		x		23 42 25.0	
DDI	**Dehra Dun**	**61.67**	**308**	*ex*		x		23 42 44.3	
PETK	**Petropavlovsk-**	**61.74**	**18**	P		**P**		**23 42 28.5**	**+0.1**
	comp=Z,1.8nm,0.6s,mb4.4,baz=252,slow=41,SNR=2.8								
MOY	**Mondy**	**61.83**	**339**	*e*P		pP		23 42 39.5	+0.8
WMQ	**Urumqi**	**62.23**	**326**	P		**P**		**23 42 33.3**	**+1.5**
WMQ				AP		pP		23 42 43.4	+1.9
WMQ				XP		sP		23 42 47.5	+2.3
WMQ				PCP		PcP		23 43 13.0	+1.4
WMQ				*e*S		**S**		**23 50 55.0**	**-0.6**
WMQ				AMB		AMB			
	comp=Z,30nm,1.2s,mb5.3								
WMQ				AMB		AMB			
	comp=Z,156nm,5.0s								
WMQ				LR		LR			
	comp=N,564nm,23.8s,MS4.7								
WMQ				LR		LR			
	comp=E,433nm,27.4s,MS4.7								
WMQ				LR		LR			
	comp=Z,613nm,25.5s,MS4.7								
SMLA	**Simla**	**62.71**	**309**	*i* P		**P**		**23 42 35.0**	**-0.3**
CASY	**Casey**	**63.17**	**189**	*e*P		**P**		**23 42 37.5**	**-0.2**
BOD	**Bodaibo**	**63.87**	**350**	*e*P		**P**		**23 42 43.2**	**+0.8**
BOD				pmax		pmax			
	comp=Z,18nm,1.3s,mb4.9								
THN	**Thein Dam**	**64.37**	**309**	*e*P		**P**		**23 42 44.4**	**-1.9**
YAK	**Yakutsk**	**66.55**	**359**	*e*P		pP		23 43 10.9	+1.4
YAK				*e**PP		sP		23 43 21.6	+8.4
YAK				*e*S		S		23 51 43.3	-5.1
YAK				*e*				23 52 55.1	
YAK				*e*SS		SS		23 56 03.2	-2.9
YAK				pmax		pmax			
	comp=E,3.0nm,1.0s								
YAK				pmax		pmax			
	comp=Z,32nm,1.0s,mb5.3								
YAK				pmax		pmax			
	comp=N,9.0nm,1.1s								
YAK				smax					
	comp=N,160µm,14.1s								
YAK				smax					
	comp=E,54µm,13.1s								
MK31	**Makanchi Array**	**67.06**	**326**	*i* P		**P**		**23 43 03.0**	**-0.3**
MK31				pmax		pmax			
	comp=Z,8.0nm,0.3s,mb5.2								
MKAR	**Makanchi Array**	**67.06**	**326**	P		**P**		**23 43 03.1**	**-0.2**
	comp=Z,12nm,0.4s,mb5.3,baz=113,slow=7.6,SNR=206								
MKAR				LR		LR		00 15 48.1	
	comp=Z,165nm,21.1s,MS4.2,baz=246,slow=39								
MKAR	**Makanchi Array**	**67.06**	**326**	P		**P**		**23 43 03.2**	**-0.1**
MKAR				pmax		pmax			
	comp=Z,13nm,0.4s								
MKAR				MLR		MLR			
	comp=Z,165nm,21.1s								
MIR	**Mirnyy**	**67.20**	**196**	⇓ *i* P		**P**		**23 43 05.0**	**+1.1**
MIR				pmax		pmax			
	comp=Z,200nm,1.2s,mb6.0								
KSH	**Kashi**	**67.25**	**316**	*e*P		**P**		**23 43 05.6**	**+0.9**
KSH				*e*AP		pP		23 43 15.6	+1.1
KSH				*e*XP		sP		23 43 19.6	+1.4
KSH				*e*PCP		PcP		23 43 33.5	+1.1
KSH				*e*PP		PP		23 45 34.6	+1.3
KSH				*e*SCP				23 47 33.0	
KSH				*e*PCS				23 47 37.3	
KSH				*e*S		S		23 51 54.0	-3.7
KSH				*e*XS		sS		23 52 12.1	-1.7
KSH				*e*SCS		ScS		23 52 56.3	-4.2
KSH				*e*SS		SS		23 56 15.0	-2.8
KSH				LR		LR			
	comp=N,472nm,7.7s								
KSH				LR		LR			
	comp=E,537nm,6.2s								
KSH				LR		LR			
	comp=Z,393nm,5.1s								
TKM2	**Tokmak 2**	**69.08**	**319**	*e*P		**P**		**23 43 16.4**	**+0.3**
TKM2				pmax		pmax			
	comp=Z,21nm,0.7s,mb5.2								
TKM2	**Tokmak 2**	**69.08**	**319**	P		**P**		**23 43 16.5**	**+0.4**
	SNR=37								
TKM2	**Tokmak 2**	**69.08**	**319**	*e*P		**P**		**23 43 16.4**	**+0.2**
	comp=Z,21nm,0.7s,mb5.2								
SEY	**Seymchan**	**69.32**	**10**	*e*P		**P**		**23 43 18.0**	**+0.9**
KBK	**Karagaybulak**	**69.38**	**319**	P		**P**		**23 43 18.8**	**+0.8**
	SNR=9.6								
CHMS	**Chumysh**	**69.67**	**319**	P		**P**		**23 43 19.1**	**-0.6**
	SNR=6.3								
FRU	**Bishkek**	**69.68**	**319**	⇓ *e*P		**P**		**23 43 20.0**	**+0.2**
FRU				*e*				23 43 36.0	
USP	**Ospenovka**	**69.95**	**319**	P		**P**		**23 43 21.6**	**+0.1**
	SNR=46								
AML	**Almayashu**	**69.97**	**318**	P		**P**		**23 43 22.6**	**+1.0**
	SNR=24								
AML	**Almayashu**	**69.97**	**318**	*e*P		**P**		**23 43 22.6**	**+1.0**
	comp=Z,22nm,0.8s,mb5.1								
ZALV	**Zalesovo Beam**	**70.13**	**333**	P		**P**		**23 43 21.1**	**-1.3**
	comp=Z,8.9nm,0.8s,mb4.7,baz=119,slow=5.9,SNR=14								
ZALV				LR		LR		00 16 14.8	
	comp=Z,82nm,19.1s,MS4.0,baz=144,slow=38								
ZALV	**Zalesovo Beam**	**70.13**	**333**	P		**P**		**23 43 21.1**	**-1.2**
ZALV				pmax		pmax			
	comp=Z,9.0nm,0.8s,mb4.8								
ZALV				MLR		MLR			
	comp=Z,82nm,19.1s,MS4.0								
EKS2	**Erkin-Say**	**70.15**	**319**	P		**P**		**23 43 23.2**	**+0.5**
	SNR=18								
EKS2	**Erkin-Say**	**70.15**	**319**	*e*P		**P**		**23 43 22.9**	**+0.1**
	comp=Z,16nm,0.8s,mb5.0								
EKS2				*e*				23 43 34.2	
KURK	**Kurchatov**	**71.27**	**328**	P		**P**		**23 43 29.6**	**+0.2**
	comp=Z,133nm,1.0s,mb5.8,SNR=8.9								
KURK	**Kurchatov**	**71.27**	**328**	P		**P**		**23 43 30.8**	**+1.4**
	SNR=13								
KURK	**Kurchatov**	**71.27**	**328**	⇑ *e*P		**P**		**23 43 29.7**	**+0.3**
KURK				pmax		pmax			
	comp=Z,33nm,1.7s,mb5.0								
KURK	**Kurchatov**	**71.27**	**328**	*e*P		**P**		**23 43 29.2**	**-0.2**
	comp=Z,25nm,0.9s,mb5.1								
NVS	**Novosibirsk**	**71.42**	**333**	*e*P		**P**		**23 43 29.1**	**-1.0**
NVS				*e*S		S		23 52 40.7	-5.5
NVS				pmax		pmax			
	comp=N,15nm,1.4s								
NVS				pmax		pmax			
	comp=E,16nm,1.4s								
NVS				pmax		pmax			
	comp=Z,24nm,1.4s,mb4.9								
NVS				smax					
	comp=E,68nm,2.0s								
KK31	**Karatay Array**	**72.51**	**318**	*i* P		**P**		**23 43 36.5**	**-0.5**
KK31				pmax		pmax			
	comp=Z,16nm,0.7s,mb5.1								
SBA	**Scott Base**	**75.43**	**173**	*e*P		**P**		**23 43 53.6**	**+0.1**
WBK	**Wadi Bani Khal**	**75.64**	**295**	P		**P**		**23 43 56.1**	**+0.4**
	SNR=9.1								
SMDO	**Samad**	**76.56**	**295**	P		**P**		**23 44 01.1**	**+0.2**
	SNR=24								
BIDO	**Bidbid**	**76.58**	**295**	P		**P**		**23 44 01.5**	**+0.5**
	SNR=30								
BVA0	**Borovoye Array**	**76.85**	**327**	*i* P		**P**		**23 44 01.2**	**-0.7**
BVA0				pmax		pmax			
	comp=Z,3.0nm,0.9s,mb4.2								
BVAR	**Borovoye Array**	**76.85**	**327**	P		**P**		**23 44 01.0**	**-0.8**
	comp=Z,3.8nm,0.7s,mb4.4,baz=123,slow=7.3,SNR=16								
BVAR	**Borovoye Array**	**76.85**	**327**	P		**P**		**23 44 01.0**	**-0.9**
BVAR				pmax		pmax			
	comp=Z,4.0nm,0.7s								
BRVK	**Borovoye**	**76.92**	**327**	P		**P**		**23 44 01.2**	**-1.1**
	comp=Z,196nm,0.9s,mb6.0,SNR=6.2								
BRVK	**Borovoye**	**76.92**	**327**	P		**P**		**23 44 02.4**	**+0.1**
	SNR=10								
BRVK	**Borovoye**	**76.92**	**327**	*e*P		**P**		**23 44 01.7**	**-0.6**
BRVK				pmax		pmax			
	comp=Z,39nm,1.0s,mb5.3								
BRVK	**Borovoye**	**76.92**	**327**	*e*P		**P**		**23 44 01.7**	**-0.5**
	comp=Z,39nm,1.0s,mb5.3								
BSY	**Bisya**	**77.27**	**294**	P		**P**		**23 44 04.9**	**0.0**
	SNR=9.1								
HOQ	**Hoqain**	**77.33**	**295**	P		**P**		**23 44 05.9**	**+0.6**
	SNR=20								
MAW	**Mawson**	**77.56**	**201**	*e*P		**P**		**23 44 06.3**	**+0.6**
	comp=Z,16nm,1.0s,mb4.9								
MAW	**Mawson**	**77.56**	**201**	P		**P**		**23 44 06.5**	**+0.8**
	comp=Z,16nm,0.8s,mb5.0,baz=64,slow=6.3,SNR=48								
MAW				LR		LR		00 18 15.9	
	comp=Z,308nm,19.3s,MS4.6,baz=64,slow=36								
MAW	**Mawson**	**77.56**	**201**	P		**P**		**23 44 06.5**	**+0.8**
MAW				pmax		pmax			
	comp=Z,16nm,0.8s								
MAW				MLR		MLR			
	comp=Z,308nm,19.3s								
PPT	**Papeete**	**78.21**	**107**	*e*S		S		23 54 03.6	+0.1
	comp=Z,960nm,31.8s								
PPT				*e*SS		SS		23 59 12.3	+6.2
	comp=Z,187nm,32.0s								
PPT				*e*LR		LR		00 08 27.2	
	comp=Z,824nm,36.0s,baz=276								
PPT	**Papeete**	**78.21**	**107**	LR		LR		00 14 45.2	
	comp=Z,194nm,18.5s,MS4.5,baz=236,slow=33								
HATD	**Hatta, Dubai**	**78.61**	**296**	P		**P**		**23 44 13.0**	**+0.6**
	SNR=6.2								
ASHO	**Ashiyiah**	**78.66**	**296**	P		**P**		**23 44 13.2**	**+0.6**
	SNR=7.2								
BANOM	**Banah**	**78.67**	**297**	⇑ P		**P**		**23 44 13.1**	**+0.4**
	SNR=6.1								
WHFO	**Wadi Hawf**	**79.66**	**289**	P		**P**		**23 44 17.7**	**-0.5**
	SNR=5.8								
ABTO	**Aybut**	**80.02**	**288**	P		**P**		**23 44 20.3**	**+0.2**
	SNR=5.1								
AB31	**Akbulak array**	**81.55**	**321**	*i* P		**P**		**23 44 26.6**	**-1.1**
AB31				pmax		pmax			
	comp=Z,4.0nm,0.5s,mb4.6								
ABPO	**Ambohimpanom**	**82.92**	**251**	*e*P		**P**		**23 44 35.7**	**+0.1**
	comp=Z,14nm,0.8s,mb5.0								
AKTK	**Aktyubinsk**	**83.08**	**322**	P		**P**		**23 44 35.2**	**-0.5**
AKTO	**Aktyubinsk**	**83.08**	**322**	P		**P**		**23 44 35.2**	**-0.5**
	comp=Z,4.3nm,0.7s,mb4.6,baz=107,slow=4.9,SNR=18								
AKTO	**Aktyubinsk**	**83.08**	**322**	*i* P		**P**		**23 44 35.7**	**0.0**
AKTO				pmax		pmax			
	comp=Z,1.0nm,0.7s								
SVE	**Sverdlovsk**	**83.50**	**329**	*e*P		**P**		**23 44 37.1**	**-0.6**
SVE				*e*PPP				23 49 41.4	
SVE				*e*S		S		23 54 52.5	-4.6
SVE				pmax		pmax			
	comp=Z,27nm,1.3s,mb5.2								
ARU	**Arti**	**84.47**	**328**	*d i* P		**P**		**23 44 42.9**	**+0.3**
ARU				*e*				23 47 55.5	
ARU				*e*S		S		23 55 03.4	-3.4
ARU				pmax		pmax			
	comp=Z,15nm,1.7s,mb4.8								
ARU	**Arti**	**84.47**	**328**	*e*P		**P**		**23 44 41.3**	**-1.4**
	comp=Z,28nm,1.4s,mb5.2								
ARU				*e*				23 44 53.2	
SYO	**Syowa Base**	**86.27**	**201**	⇓ *e*P		**P**		**23 44 50.0**	**-1.4**
SYO	**Syowa Base**	**86.27**	**201**	⇓ *e*PcP		PcP		23 44 52.6	-1.4
CHUM	**Lake Minchumin**	**88.22**	**25**	*e*P		**P**		**23 45 01.2**	**+0.4**
	comp=Z,11nm,0.6s,mb5.2								
RAGM	**Ragged Mountai**	**91.08**	**30**	P		**P**		**23 45 11.7**	**-2.7**
KMBO	**Kilima Mbogo**	**93.97**	**269**	P		**P**		**23 45 29.1**	**+0.3**
	comp=Z,8.1nm,0.8s,mb5.2,baz=58,slow=9.9,SNR=11								
KMBO				LR		LR		00 22 18.9	
	comp=Z,280nm,21.3s,MS4.7,baz=95,slow=32								
KMBO	**Kilima Mbogo**	**93.97**	**269**	*e*P		**P**		**23 45 29.4**	**+0.6**
KMBO				pmax		pmax			
	comp=Z,15nm,1.1s								
KMBO	**Kilima Mbogo**	**93.97**	**269**	*e*P		**P**		**23 45 29.4**	**+0.6**
	comp=Z,15nm,1.1s,mb5.3								
KMBO				LR		LR		00 22 18.9	
ARCES	**ARCESS Array B**	**99.89**	**340**	P		Pdif		23 45 53.0	-1.6
	comp=Z,0.7nm,0.5s,baz=308,slow=18,SNR=4.4								
ARCES				LR		LR		00 37 20.0	
	comp=Z,144nm,19.1s,MS4.5,baz=204,slow=39								
ARCES	**ARCESS Array B**	**99.89**	**340**	P		Pdif		23 45 53.0	-1.6
ARCES				LR		LR		00 37 20.0	
BOSA	**Boshof**	**101.76**	**240**	P		Pdif		23 46 03.1	+0.2
	comp=Z,3.1nm,0.5s,baz=91,slow=5.0,SNR=15								
BOSA	**Boshof**	**101.76**	**240**	P		Pdif		23 46 03.2	+0.3
BOSA				pmax		pmax			
	comp=Z,3.0nm,0.5s								
BOSA	**Boshof**	**101.76**	**240**	*e*Pdif		Pdif		23 46 04.1	+1.2
PDAR	**Pinedale Array**	**114.34**	**45**	PKP		PKiKP		23 50 50.0	0.0
	comp=Z,0.3nm,0.4s,baz=338,slow=1.9,SNR=2.5								
PDAR				PKKPbc		PKKPbc		00 01 34.8	+3.8
	comp=Z,0.6nm,0.5s,baz=118,slow=5.4,SNR=4.6								
KEST	**Kesra**	**118.48**	**308**	PKP		PKPdf		23 50 58.1	-0.1
	comp=Z,1.3nm,1.1s,baz=267,slow=18,SNR=3.5								
TXAR	**Lajitas Array**	**122.61**	**58**	PKP		PKPdf		23 51 05.9	-0.4
	comp=Z,0.5nm,0.7s,baz=230,slow=1.7,SNR=7.1								
TXAR				PKKPbc		PKKPbc		00 01 00.1	-0.4
	comp=Z,0.5nm,0.5s,baz=123,slow=5.5,SNR=7.6								
TXAR	**Lajitas Array**	**122.61**	**58**	PKIKP		PKPdf		23 51 05.9	-0.4
TXAR				pmax		pmax			
	comp=Z,1.0nm,0.7s								
TXAR				pmax		pmax			
	comp=Z,1.0nm,0.5s								
JCT	**Junction City**	**125.52**	**56**	*e*PKIKP		PKPdf		23 51 12.1	+0.2
TOA0	**Torodi Ar. Sit**	**129.62**	**283**	*e*PKPdf		PKPdf		23 51 20.2	+0.1
TOA0				*e*PP		PP		23 53 31.5	+0.7
TORD	**Torodi Ar. Bea**	**129.62**	**283**	PKhKP				23 51 08.6	
	comp=Z,0.2nm,0.4s,baz=82,slow=2.0,SNR=8.1								
TORD				PKP		PKPdf		23 51 20.1	0.0
	comp=Z,2.0nm,0.6s,baz=92,slow=2.2,SNR=17								
TORD				SKPbc				23 54 36.5	
	comp=Z,3.5nm,0.7s,baz=65,slow=3.9,SNR=12								
TORD	**Torodi Ar. Bea**	**129.62**	**283**	PKP		PKPdf		23 51 20.1	0.0
TORD				SKPbc				23 54 36.5	
PLCA	**Paso Flores**	**130.54**	**158**	SKPbc		SKPbc		23 54 41.0	-1.5
	comp=Z,4.2nm,0.8s,baz=213,slow=6.4,SNR=7.4								
KIC	**Kosan Boka**	**136.25**	**274**	*e*PKIKP		PKPdf		23 51 34.4	+1.8
	comp=Z,142nm,1.8s								
DBIC	**Dimbokro**	**136.37**	**275**	PKhKP				23 51 24.4	
	comp=Z,1.5nm,0.6s,baz=114,slow=18,SNR=5.3								
DBIC				SKPbc		SKPbc		23 54 59.1	-4.0
	comp=Z,4.6nm,0.6s,baz=89,slow=3.1,SNR=9.5								
DBIC	**Dimbokro**	**136.37**	**275**	PKHKP				23 51 24.4	
DBIC				*e*				23 51 32.3	
DBIC	**Dimbokro**	**136.37**	**275**	PKP		PKPdf		23 51 24.4	-8.5
DBIC				*e*PKPdf		PKPdf		23 51 32.3	-0.5
DBIC				SKPbc		SKPbc		23 54 59.1	-3.9
TIC	**Toumodi**	**136.53**	**275**	*e*PKIKP		PKPdf		23 51 34.0	+0.9
	comp=Z,142nm,1.5s								
LIC	**Lamto**	**136.54**	**274**	*e*PKIKP		PKPdf		23 51 34.4	+1.2
	comp=Z,78nm,1.5s								
LVC	**Limon Verde**	**146.41**	**145**	*e*PKP		PKPbc		23 51 53.7	+1.9
CPUP	**Villa Florida**	**148.03**	**165**	PKPbc		PKPbc		23 51 57.0	+0.7
	comp=Z,3.2nm,0.5s,baz=193,slow=1.7,SNR=18								
CPUP	**Villa Florida**	**148.03**	**165**	PKP2		PKPbc		23 51 57.0	+0.7
CPUP				pmax		pmax			
	comp=Z,3.0nm,0.5s								
LPAZ	**La Paz**	**151.62**	**138**	PKPbc		PKPbc		23 52 06.6	+1.3
	comp=Z,3.7nm,0.4s,baz=32,slow=6.5,SNR=26								
LPAZ	**La Paz**	**151.62**	**138**	PKIKP		PKPbc		23 52 06.6	+1.3
LPAZ				pmax		pmax			
	comp=Z,4.0nm,0.4s								
HUMP	**Col San Antoni**	**158.54**	**50**	*e*PKPdf		PKPdf		23 52 07.5	-0.9
HUMP				*e*PKPab		PKPab		23 52 43.9	+0.6

*ISCJB **19** 23:35:39.1±0.6, 1087N±004×6232W±003, h88km±6km, Error ellipse: s-maj=6.2km s-min=4.1km az=178.9*
*FUNV **19** 23:35:40.6, 1091N×6223W, h77km, MW3.4*
*TRN **19** 23:35:41.7, 1094N×6225W, h70km, MD3.6*
*NEIC **19** 23:35:41.7, 1094N×6225W, h70km, MD3.6(TRN), After TRN.*

ISC 19 23:35:40.0±0.6, 1089N±004×6231W±002, h81km±7km, n21, σ0s89/40, 5C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.25**	**160**	⇑ *i* P		P	**Pn**	**23 35 52.4**	**+0.2**
GUIV				*e*S		S	**Sn**	**23 36 01.1**	**-0.2**
TCE	**Chacachacare**	**0.58**	**109**	⇑ *i* P		P	**Pn**	**23 35 55.2**	**+0.6**
TCE				*e*S		S	**Sn**	**23 36 05.4**	**0.0**
TRN	**Trinidad (W)**	**0.92**	**105**	⇑ *i* P		P	**Pn**	**23 35 58.8**	**+0.5**
TRN				*e*S		S	**Sn**	**23 36 10.7**	**-1.2**
ITEV	**Isla Los Testi**	**0.93**	**300**	⇓ *i* P		P	**Pn**	**23 35 58.8**	**+0.5**
ITEV				*e*S		S	**Sn**	**23 36 12.1**	**0.0**
CRUV	**Carupano**	**0.93**	**257**	⇓ *i* P		P	**Pn**	**23 35 58.9**	**+0.5**
CRUV				*e*S		S	**Sn**	**23 36 12.1**	**0.0**
GUNV	**Guanoco**	**0.95**	**221**	⇑ *i* P		P	**Pn**	**23 35 59.8**	**+1.2**
GUNV				*e*S		S	**Sn**	**23 36 13.2**	**+0.7**
TPP	**Pointe-a-Pierr**	**1.02**	**124**	*e*P		P	**Pn**	**23 36 00.5**	**+1.1**
TPP				*e*S		S	**Sn**	**23 36 13.9**	**+0.1**
TBH	**Brigand Hill**	**1.29**	**108**	⇑ *i* P		P	**Pn**	**23 36 03.4**	**+0.7**
TBH				*e*S		S	**Sn**	**23 36 19.3**	**-0.4**
GRGR	**Grenville**	**1.40**	**27**	*e*P		P	**Pn**	**23 36 04.5**	**+0.4**
GRGR				*e*S		S	**Sn**	**23 36 19.4**	**-2.8**
GRW	**Mount Saint Ca**	**1.42**	**27**	*e*P		P	**Pn**	**23 36 05.1**	**+0.8**
GRW				*e*S		S	**Sn**	**23 36 21.4**	**-1.3**
TPR	**Prospect**	**1.53**	**79**	*i* P		P	**Pn**	**23 36 06.8**	**+1.0**
TPR				*e*S		S	**Sn**	**23 36 25.5**	**+0.1**
BOT	**Bacolet**	**1.59**	**80**	*e*P		P	**Pn**	**23 36 07.1**	**+0.6**
BOT				*e*S		S	**Sn**	**23 36 25.9**	**-0.7**
ORIV	**Oritupano**	**2.10**	**211**	*e*P		P	**Pn**	**23 36 14.3**	**+0.9**
PCRV	**Puerto La Cruz**	**2.39**	**253**	*e*P		P	**Pn**	**23 36 18.1**	**+0.9**
IBAV	**Isla La Blanqu**	**2.41**	**293**	*e*P		P	**Pn**	**23 36 18.0**	**+0.6**
IBAV				*e*S		S	**Sn**	**23 36 45.3**	**-0.8**
RIOV	**Rio Grande**	**2.84**	**170**	*e*P		P	**Pn**	**23 36 23.6**	**+0.3**
RIOV				*e*S		S	**Sn**	**23 36 54.7**	**-1.9**
CUPV	**Cœpira**	**3.52**	**257**	*e*P		P	**Pn**	**23 36 33.3**	**+0.8**
CUPV				*e*S		S	**Sn**	**23 37 12.0**	**-1.0**
BIRV	**Birongo**	**3.91**	**264**	*e*P		P	**Pn**	**23 36 38.5**	**+0.7**
BIRV				*e*S		S	**Sn**	**23 37 21.5**	**-1.1**
LUEV	**Luepa**	**5.08**	**170**	*e*P		P	**Pn**	**23 36 52.6**	**-1.2**
LUEV				*e*S		S	**Sn**	**23 37 45.9**	**-5.3**
CAOV	**Caicara del Or**	**5.31**	**229**	*e*P		P	**Pn**	**23 36 56.3**	**-0.6**
CAOV				*e*S		S	**Sn**	**23 37 53.2**	**-3.6**
BAUV	**El Baul**	**5.97**	**252**	*e*P		P	**Pn**	**23 37 05.6**	**-0.2**
BAUV				*e*S		S	**Sn**	**23 38 09.1**	**-3.7**

*IDC **19** 23:45:12.8±1.5, 432S×10127E, h0km, mb4.1/11, mb1 4.2/11, mb1mx4.0/20, mbtmp4.1/11, MS4.1/4, Ms1 4.1/4, ms1mx3.6/24, Error ellipse: s-maj=56.2km s-min=15.1km az=57.0*
*ISCJB **19** 23:45:16.5±0.7, 42S±01×1015E±02, h33km, mb4.1/14, MS4.2/4, Error ellipse: s-maj=25.9km s-min=11.1km az=145.8*
*NEIC **19** 23:45:18.8±0.5, 4.17S×10148E, h35km, mb4.4/3, Error ellipse: s-maj=21.8km s-min=8.7km az=55.0*

ISC 19 23:45:18.8±0.7, 42S±01×1015E±02, h35km, n21, σ0s73/16, mb4.1/14, MS4.2/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.63**	**354**	P		P	**P**	**23 50 16.3**	**-0.6**
	4.0nm,0.8s,mb3.9,baz=184,slow=8.3,SNR=16								
FITZ	**Fitzroy Crossi**	**27.39**	**122**	P		P	**P**	**23 51 00.5**	**-0.7**
	2.9nm,0.9s,mb3.8,baz=222,slow=15,SNR=4.7								
WRA	**Warramunga Arr**	**35.64**	**119**	P		P	**P**	**23 52 13.6**	**-0.1**
	0.5nm,0.4s,mb3.8,baz=302,slow=9.3,SNR=3.5								
ASAR	**Alice Springs**	**36.79**	**125**	P		P	**P**	**23 52 23.3**	**-0.2**
	0.4nm,0.5s,mb3.5,baz=300,slow=7.7,SNR=4.7								
STKA	**Stephens Creek**	**46.61**	**131**	P		P	**P**	**23 53 43.9**	**+0.1**
	1.8nm,0.8s,mb4.1,baz=292,slow=13,SNR=2.1								
KSRS	**Korea Array**	**48.18**	**28**	P		P	**P**	**23 53 56.7**	**+0.9**
	2.6nm,0.8s,mb4.3,baz=220,slow=7.5,SNR=6.4								
SONM	**Songino Array**	**51.98**	**4**	P		P	**P**	**23 54 26.1**	**+1.7**
	4.7nm,0.9s,mb4.4,baz=189,slow=9.5,SNR=22								
SONM				PcP		PcP		23 55 36.3	-0.2
	1.1nm,0.4s,baz=194,slow=4.3,SNR=6.9								
TKM2	**Tokmak 2**	**52.41**	**336**	*e*P		P	**P**	**23 54 28.1**	**+0.4**
	1.8nm,0.4s,mb4.3								
TKM2				*e*		pP		23 54 36.1	-2.1
EKS2	**Erkin-Say**	**52.95**	**335**	*e*P		P	**P**	**23 54 32.0**	**+0.3**
	3.4nm,0.9s,mb4.3								
MJAR	**Matsushiro Art**	**53.07**	**37**	P		P	**P**	**23 54 32.8**	**+0.1**
	0.6nm,0.4s,mb3.9,baz=224,slow=7.0,SNR=4.4								
MKAR	**Makanchi Array**	**53.52**	**344**	P		P	**P**	**23 54 36.0**	**+0.2**
	3.1nm,0.8s,mb4.3,baz=147,slow=8.5,SNR=19								
ZALV	**Zalesovo Beam**	**59.58**	**349**	P		P	**P**	**23 55 18.3**	**-0.5**
	1.7nm,0.5s,mb4.3,baz=188,slow=5.3,SNR=9.2								
BVAR	**Borovoye Array**	**62.73**	**339**	P		P	**P**	**23 55 39.1**	**-1.1**
	1.3nm,0.5s,mb4.3,baz=149,slow=8.7,SNR=11								
BRVK	**Borovoye**	**62.79**

TWQ1	**Liyutan**	**1.45**	**247**	P	**Pn**	**00 01 36.3**	**-0.1**
	baz=244						
TWQ1				*e*S	**Sn**	**00 01 55.5**	**-1.0**
	baz=244						
IRIF	**Iriomote-Funau**	**1.49**	**113**	P	**Pn**	**00 01 36.8**	**-0.1**
IRIF				*e*S	**Sn**	**00 01 57.5**	**0.0**
SMLT	**Sun Moon Lake**	**1.60**	**230**	*e*P	**Pn**	**00 01 38.5**	**+0.3**
	baz=233						
SMLT				*e*S	**Sn**	**00 01 59.6**	**-0.1**
	baz=233						
TYC	**Yuchr**	**1.62**	**231**	P	**Pn**	**00 01 38.6**	**+0.2**
	baz=236						
TYC				S	**Sn**	**00 02 00.2**	**+0.1**
	baz=236						
HATJ	**Hateruma jima**	**1.68**	**121**	*e*S	**Sn**	**00 02 02.1**	**+0.6**
JKRS	**Kuro-shima**	**1.76**	**113**	P	**Pn**	**00 01 40.4**	**+0.3**
JKRS				S	**Sn**	**00 02 03.7**	**+0.4**
TWF1	**Yuli**	**1.79**	**209**	*e*P	**Pn**	**00 01 39.2**	**-1.2**
	baz=207						
YUS	**Yu-Shan**	**1.85**	**219**	*e*P	**Pn**	**00 01 42.3**	**+1.1**
	baz=211						
YUS				*e*S	**Sn**	**00 02 06.8**	**+1.6**
	baz=211						
ALS	**Alishan**	**1.92**	**223**	*e*P	**Pn**	**00 01 42.6**	**+0.5**
	baz=229						
ALS				*e*S	**Sn**	**00 02 08.1**	**+1.3**
	baz=229						
CHN5	**Tsauling**	**1.94**	**227**	*e*P	**Pn**	**00 01 42.0**	**-0.3**
	baz=225						
CHN5				*e*S	**Sn**	**00 02 07.5**	**+0.3**
	baz=225						
ELDTW	**Lidau**	**2.06**	**213**	*e*P	**Pn**	**00 01 43.3**	**-0.5**
	baz=205						
CHN4	**Tsaushan**	**2.17**	**224**	*e*P	**Pn**	**00 01 45.5**	**+0.3**
	baz=223						
CHN4				*e*S	**Sn**	**00 02 13.5**	**+1.2**
	baz=223						
CHY	**Chiayi**	**2.18**	**229**	*e*P	**Pn**	**00 01 44.8**	**-0.6**
	baz=228						
STYT	**Tauyuan**	**2.22**	**218**	*e*P	**Pn**	**00 01 45.4**	**-0.4**
	baz=211						
STYT				*e*S	**Sn**	**00 02 15.5**	**+2.1**
	baz=211						
WTP	**Ta-pu**	**2.23**	**222**	*e*P	**Pn**	**00 01 46.0**	**0.0**
	baz=221						
JTJ	**Tarama**	**2.27**	**97**	P	**Pn**	**00 01 46.9**	**+0.5**
JTJ				*e*S	**Sn**	**00 02 13.9**	**-0.6**
TWK	**Hsinying**	**2.30**	**224**	*e*P	**Pn**	**00 01 46.0**	**-0.8**
	baz=223						
CHN1	**Nanshi**	**2.33**	**222**	*e*P	**Pn**	**00 01 46.9**	**-0.4**
	baz=221						
CHN1				*e*S	**Sn**	**00 02 15.0**	**-1.1**
	baz=221						
TWG	**Pinlang**	**2.35**	**207**	*e*P	**Pn**	**00 01 46.5**	**-1.0**
	baz=203						
SGST	**Jiashian**	**2.38**	**220**	*e*P	**Pn**	**00 01 47.5**	**-0.3**
	baz=226						

*ISCJB **20** 00:01:30.0±1.5, 4358N±008×7394E±007, h6km±10km, Error ellipse: s-maj=14.5km s-min=6.8km az=19.0*
*KNET **20** 00:01:30.4±0.6, 4353N×7396E, h31km±4km, ml2.6, Error ellipse: s-maj=4.1km s-min=2.4km az=159.0*
ISC 20 00:01:30.5±2.0, 4357N±009×7394E±006, h10km±11km, n9, σ0°80/17, 6C-9D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
USP	**Ospenovka**	**0.51**	**127**	P	**Pg**	**00 01 40.6**	**+0.3**
	44nm,0.1s,SNR=401						
USP				⇑S	**Sg**	**00 01 48.4**	**+1.4**
	955nm,0.3s						
CHMS	**Chumysh**	**0.82**	**134**	⇓P	**Pg**	**00 01 45.8**	**-0.5**
	30nm,0.1s,SNR=10						
CHMS				⇑S	**Sg**	**00 01 57.6**	**+0.6**
	154nm,0.2s						
EKS2	**Erkin-Say**	**0.92**	**188**	⇓P	**Pg**	**00 01 47.1**	**-1.1**
	45nm,0.1s,SNR=283						
EKS2				⇑S	**Sg**	**00 02 00.6**	**+0.5**
	77nm,0.1s						
AAK	**Ala-Archa**	**1.02**	**157**	⇑P	**Pg**	**00 01 49.3**	**-0.8**
	21nm,0.1s,SNR=23						
AAK				⇓S	**Sg**	**00 02 02.9**	**-0.5**
	224nm,0.2s						
KBK	**Karagaybulak**	**1.18**	**141**	⇓P	**Pb**	**00 01 52.2**	**-0.7**
	21nm,0.1s,SNR=14						
KBK				⇑S	**Sg**	**00 02 08.7**	**+0.4**
	160nm,0.2s						
TKM2	**Tokmak 2**	**1.37**	**118**	⇓P	**Pn**	**00 01 54.9**	**-0.7**
	5.1nm,0.3s						
TKM2				⇑S	**Sb**	**00 02 13.7**	**-0.1**
	67nm,0.1s						
TKM2	**Tokmak 2**	**1.37**	**118**	P	**Pn**	**00 01 55.1**	**-0.6**
	13nm,0.1s,SNR=25						
TKM2				⇓S	**Sb**	**00 02 14.1**	**+0.3**
	128nm,0.1s						
AML	**Almayashu**	**1.45**	**187**	⇓P	**Pn**	**00 01 56.3**	**-0.5**
	15nm,0.2s,SNR=48						
KK31	**Karatay Array**	**2.55**	**261**	⇓Pn	**Pn**	**00 02 12.3**	**+0.5**
	3.2nm,0.5s,baz=77,slow=16,SNR=17						
KK31				⇓Sn	**Sn**	**00 02 46.2**	**+3.3**
	8.4nm,0.3s,baz=73,slow=26						

*ISCJB **20** 00:27:57.3±1.6, 215S±02×179.1W±0.1, h544km±23km, mb3.8/9, Error ellipse: s-maj=30.4km s-min=13.9km az=146.0*
*NEIC **20** 00:27:58.3±1.2, 2161S×17890W, h557km±15km, mb4.2/1, Error ellipse: s-maj=23.3km s-min=11.2km az=148.0*
*IDC **20** 00:28:04.2±2.6, 2154S×179.16W, h618km±29km, mb3.2/9, mb1 3.5/9, mb1mx3.3/16, mbtmp3.2/9, Error ellipse: s-maj=35.0km s-min=13.0km az=160.0*
ISC 20 00:27:57.7±1.5, 216S±02×1790W±01, h539km±20km, n28, σ0°45/17, mb3.8/9, 4C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**10.26**	**43**	P	**P**	**00 30 18.2**	**-0.1**
	3.4nm,0.3s,baz=56,slow=20,SNR=4.6						
URZ	**Urewera**	**16.95**	**191**	P	**P**	**00 31 26.0**	**-0.3**
	1.8nm,0.3s,baz=10,slow=4.3,SNR=7.5						
CTA	**Charters Tower**	**32.49**	**266**	P	**P**	**00 33 44.8**	**+0.6**
	2.2nm,0.3s,mb4.1,baz=92,slow=7.7,SNR=4.4						
CTAO	**Charters Tower**	**32.49**	**266**	*e*P	**P**	**00 33 45.0**	**+0.8**
	2.7nm,0.4s,mb4.1						
STKA	**Stephens Creek**	**36.50**	**245**	P	**P**	**00 34 17.8**	**+0.2**
	1.3nm,0.3s,mb3.9,baz=62,slow=10,SNR=4.5						
STKA	**Stephens Creek**	**36.50**	**245**	P	**P**	**00 34 17.8**	**+0.2**
ASAR	**Alice Springs**	**43.39**	**258**	P	**P**	**00 35 13.2**	**+0.3**
	2.4nm,0.4s,mb4.1,baz=93,slow=7.8,SNR=47						
ASAR				PcP	PcP	00 36 48.4	-1.0
	0.7nm,0.5s,baz=111,slow=3.9,SNR=7.6						
ASAR				S	**S**	**00 40 58.1**	**-3.9**
	1.4nm,0.8s,baz=94,slow=15,SNR=12						
WB2	**Warramunga Arr**	**43.55**	**263**	*e*P	**P**	**00 35 13.7**	**-0.5**
WRA	**Warramunga Arr**	**43.56**	**263**	P	**P**	**00 35 14.0**	**-0.3**
	1.4nm,0.3s,mb4.0,baz=96,slow=7.0,SNR=13						
WRA				S	**S**	**00 40 58.1**	**-6.4**
	0.8nm,1.1s,baz=102,slow=14,SNR=2.5						
PETK	**Petropavlovsk-**	**77.09**	**346**	P	**P**	**00 38 54.4**	**-0.8**
	6.2nm,0.9s,mb4.0,baz=156,slow=5.7,SNR=3.0						
NVAR	**Mina Array Bea**	**82.44**	**44**	P	**P**	**00 39 23.9**	**+0.3**
	0.7nm,0.7s,mb3.2,baz=215,slow=8.4,SNR=4.8						
NVAR	**Mina Array Bea**	**82.44**	**44**	P	**P**	**00 39 23.9**	**+0.3**
TXAR	**Lajitas Array**	**88.41**	**58**	P	**P**	**00 39 53.1**	**+0.4**
	0.3nm,0.8s,mb3.0,baz=212,slow=4.4,SNR=3.8						
CMAR	**Chiang Mai Arr**	**89.62**	**290**	P	**P**	**00 39 58.9**	**+0.4**
	0.9nm,0.3s,mb4.0,baz=131,slow=3.7,SNR=6.5						
PDAR	**Pinedale Array**	**90.38**	**44**	P	**P**	**00 40 01.3**	**-0.2**
	0.4nm,0.4s,mb3.6,baz=212,slow=3.2,SNR=3.4						
ARCES	**ARCESS Array B**	**129.82**	**349**	PKP	PKPdf	00 46 03.4	-1.7
	1.9nm,0.7s,baz=5.0,slow=2.8,SNR=8.5						
AKASG	**Malin Array Be**	**143.50**	**330**	PKP	PKPdf	00 46 27.1	-3.7
	3.1nm,0.6s,baz=42,slow=4.3,SNR=13						
KWP	**Kalwaria**	**147.17**	**334**	⇑*i*P	PKPbc	00 46 39.0	-1.2
BURAR	**Bucovina Array**	**147.54**	**329**	⇑P	PKPbc	00 46 41.2	-0.1
STHS	**Stebnicka Huta**	**147.93**	**335**	*e*PKP	PKPbc	00 46 41.2	-1.0
STHS	**Stebnicka Huta**	**147.93**	**335**	*e*P	PKPbc	00 46 41.2	-1.0
CLL	**Collm**	**148.90**	**345**	*i* PKPbc	PKPbc	00 46 43.4	-1.1
	comp=Z,12nm,1.2s						
DRGR		**149.31**	**330**	⇓*i*P	PKPbc	00 46 44.8	-0.9
BZS	**Buzias**	**150.70**	**330**	⇑*i*P	PKPbc	00 46 47.4	-1.6
GERES	**GERESS Array B**	**150.98**	**343**	PKPbc	PKPbc	00 46 48.1	-1.4
	comp=Z,1.4nm,0.6s,baz=38,slow=2.4,SNR=14						
PKSM	**Moragy**	**151.54**	**334**	⇑*i*P	PKPbc	00 46 49.3	-1.6
TORD	**Torodi Ar. Bea**	**171.58**	**184**	PKP	PKPdf	00 47 02.4	-2.8
	comp=Z,0.3nm,0.7s,baz=175,slow=3.5,SNR=4.3						
TORD				PKPab	PKPab	00 48 29.3	-0.8
	comp=Z,0.4nm,0.8s,baz=156,slow=4.1,SNR=3.1						
TORD	**Torodi Ar. Bea**	**171.58**	**184**	PKP	PKPdf	00 47 02.4	-2.8
TORD				PKPab	PKPab	00 48 29.3	-0.8

*BJI **20** 00:50:12.9, 487S×10125E, h27km, mB5.2, mb5.3, Ms4.9, Msz4.8*
*IDC **20** 00:50:14.9±0.4, 438S×10129E, h0km, mb5.0/22, mb1 5.0/23, mb1mx5.0/24, mbtmp5.0/23, ML4.4/1, MS4.4/11, Ms1 4.5/11, ms1mx4.3/23, Error ellipse: s-maj=14.2km s-min=9.4km az=45.0*
*ISCJB **20** 00:50:17.6±0.2, 436S±003×10118E±003, h28km, mb5.3/107, MS4.6/35, Error ellipse: s-maj=4.7km s-min=3.1km az=33.6*
*DJA **20** 00:50:17, 452S×10096E, h20km, Mw5.5/16*
*MOS **20** 00:50:19.2±1.1, 418S×10131E, h34km, mb5.5/40, MS4.6/7, Error ellipse: s-maj=10.4km s-min=5.6km az=109.4*
*GCMT **20** 00:50:19.4±0.5, 447S×10092E, h31km±1km, MW5.0/47, Moment Tensor Solution. s33,c44; s47,c60; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.74±.22; Mθθ-0.56±.12; Mφφ-3.18±.20; Mre1.81±.21; Mθφ1.28±.13; Mθr-0.66±.27; Best double couple: Mo4.17000×10^16 NP1:φs140.00000°, δ57.00000°, λ70.00000°. Principal axes: T 4.4050, Plg70.0000°, Azm4.0000°; N -0.4720, Plg17.0000°, Azm151.0000°; P -3.9350, Plg10.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **20** 00:50:19.4±0.1, 430S×10123E, mb5.2/34, MS4.3/1 Error ellipse: s-maj=6.6km s-min=4.7km az=48.0*
NEIC Felt [IV] at Bengkulu.
ISC 20 00:50:19.8±0.2, 437S±003×10117E±003, h30km, h30km±.8km: pP-P, n588, σ0°99/289, mb5.3/107, MS4.6/35, 124C-147D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.58**	**63**	P	**Pn**	**00 50 46.1**	**+0.3**
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.67**	**42**	P	**Pn**	**00 51 15.9**	**+1.4**
	0.0nm,0.0s						
KLI	**Kotabumi**	**3.70**	**98**	P	**Pn**	**00 51 15.5**	**+0.5**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.96**	**349**	P	**Pn**	**00 51 18.5**	**0.0**
	0.0nm,0.0s						
RGRI	**Rengat**	**4.16**	**16**	P	**Pn**	**00 51 22.0**	**+0.8**
	0.0nm,0.0s						
BLSI	**Bandar Lampung**	**4.18**	**104**	P	**Pn**	**00 51 22.3**	**+0.8**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.15**	**41**	P	**Pn**	**00 51 35.9**	**+1.1**
	0.0nm,0.0s						
SBJI	**Serang**	**5.23**	**110**	P	**Pn**	**00 51 36.2**	**+0.2**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.42**	**66**	P	**Pn**	**00 51 39.3**	**+0.7**
	0.0nm,0.0s						
TNG	**Tangerang**	**5.74**	**108**	P	**Pn**	**00 51 43.6**	**+0.6**
	0.0nm,0.0s						
DBJI	**Dramaga**	**5.96**	**112**	P	**Pn**	**00 51 46.0**	**0.0**
	1μm,1.2s						
CBJI	**Citeko**	**6.01**	**110**	P	**Pn**	**00 51 49.0**	**+2.3**
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**6.66**	**76**	P	**Pn**	**00 51 56.1**	**+0.4**
	0.0nm,0.0s						
MYKOM	**Kota Tinggi**	**6.68**	**24**	⇓P	**Pn**	**00 51 57.4**	**+1.5**
KGM	**Kluang**	**6.69**	**19**	⇓P	**Pn**	**00 51 56.5**	**+0.4**
LEM	**Lembang**	**6.86**	**111**	P	**Pn**	**00 51 59.4**	**+1.0**
	0.0nm,0.0s						
JCJI	**Jatiwangi**	**7.37**	**107**	P	**Pn**	**00 52 06.1**	**+0.7**
	0.0nm,0.0s						
FRIM	**Kepong**	**7.57**	**3**	⇑P	**Pn**	**00 52 08.2**	**+0.1**
IPM	**Ipoh**	**8.79**	**359**	⇑P	**Pn**	**00 52 26.5**	**+1.6**
COCO	**West Island**	**8.88**	**209**	*e*Pn	**Pn**	**00 52 22.0**	**-4.1**
BJII	**Banjamegara**	**8.99**	**110**	P	**Pn**	**00 52 27.6**	**0.0**
	0.0nm,0.0s						
KTGM	**Kuala Trenggan**	**9.83**	**12**	⇓P	**Pn**	**00 52 42.2**	**+3.0**
KSM	**Kuching**	**10.82**	**58**	⇓P	**Pn**	**00 52 55.0**	**+2.3**
KSM	**Kuching**	**10.82**	**58**	*e*Pn	**Pn**	**00 52 53.2**	**+0.5**
SJI	**Sawahan**	**11.05**	**108**	P	**Pn**	**00 52 55.3**	**-0.6**
	0.0nm,0.0s						
STKI	**Sintang**	**11.20**	**67**	P	**Pn**	**00 52 59.9**	**+2.0**
	0.0nm,0.0s						
BSI	**Banda Aceh**	**11.42**	**329**	P	**Pn**	**00 52 59.5**	**-1.5**
	0.0nm,0.0s						
SNG	**Songkhla**	**11.48**	**357**	P	**Pn**	**00 53 00.0**	**-1.8**
	220nm,1.0s						
KMMI	**Kalianget**	**13.01**	**102**	P	**Pn**	**00 53 22.9**	**+0.2**
	0.0nm,0.0s						
BTM	**Bintulu**	**14.08**	**58**	⇑P	**Pn**	**00 53 41.3**	**+4.0**
KKM	**Kota Kinabalu**	**18.24**	**56**	⇑P	**Pn**	**00 54 32.3**	**+1.5**
KKM	**Kota Kinabalu**	**18.24**	**56**	*e*Pn	**Pn**	**00 54 30.3**	**-0.5**
KAPI	**Kappang**	**18.53**	**93**	P	**Pn**	**00 54 32.1**	**-2.3**
	1.3nm,0.3s,baz=294,slow=8.3,SNR=12						
KAPI				LR	LR	01 02 33.9	
	comp=Z,940nm,18.6s,baz=278,slow=40						
KAPI	**Kappang**	**18.53**	**93**	*e*P	**Pn**	**00 54 31.6**	**-2.8**
TSM	**Tawau**	**18.77**	**63**	⇓P	**Pn**	**00 54 37.6**	**+0.3**
SDKM	**Sandakan**	**18.84**	**58**	⇑P	**Pn**	**00 54 38.6**	**+0.5**
PCI	**Palu**	**18.95**	**80**	P	**Pn**	**00 54 39.2**	**-0.4**
	0.0nm,0.0s						
MYLDM	**Lahad Datu**	**19.73**	**61**	⇓P	**Pn**	**00 54 49.1**	**+0.2**
KKTK	**Khon Kaen**	**20.64**	**4**	P	**P**	**00 54 55.5**	**-1.5**
BBSI	**Bau Bau**	**21.35**	**94**	P	**P**	**00 55 03.4**	**-1.4**
	0.0nm,0.0s						
KDI	**Kendari**	**21.39**	**90**	P	**P**	**00 55 04.5**	**-0.8**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**22.79**	**355**	P	**P**	**00 55 19.2**	**-0.9**
	65nm,0.9s,mb5.0,baz=183,slow=8.5,SNR=74						
CMAR				PcP	PcP	00 59 09.9	-1.3
	3.8nm,0.8s,baz=210,slow=3.8,SNR=6.3						
CMAR				LR	LR	01 05 58.9	
	comp=Z,2μm,18.3s,MS4.5,baz=180,slow=41						
CMAR	**Chiang Mai Arr**	**22.79**	**355**	P	**P**	**00 55 19.2**	**-0.8**
CMAR						00 59 09.9	
NANT	**Nan**	**23.03**	**359**	P	**P**	**00 55 20.5**	**-2.0**
BATI	**Baumata**	**23.04**	**106**	P	**P**	**00 55 20.1**	**-2.7**
	0.0nm,0.0s						
BATI	**Baumata**	**23.04**	**106**	P	**P**	**00 55 20.6**	**-2.3**
	79nm,0.5s,mb5.4,baz=282,slow=0.8,SNR=15						
BATI				S	**S**	**00 59 21.3**	**-11**
	28nm,0.5s,baz=229,slow=12,SNR=4.3						
CHTO	**Chiang Mai**	**23.14**	**355**	P	**P**	**00 55 23.7**	**0.0**
	SNR=16						
CHTO	**Chiang Mai**	**23.14**	**355**	*e*P	**P**	**00 55 23.3**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**23.14**	**355**	*e*P	**P**	**00 55 23.3**	**-0.4**
	comp=Z,67nm,1.0s,mb5.0						
MNI	**Manado**	**24.34**	**77**	P	**P**	**00 55 35.6**	**+0.3**
	comp=Z,0.0nm,0.0s						
MBWA	**Marble Bar**	**24.57**	**134**	*e*P	**P**	**00 55 38.5**	**+1.3**
QIZ	**Qiongzhong**	**24.77**	**20**	P	**P**	**00 55 39.3**	**+0.3**
QIZ				S	**S**	**01 00 01.3**	**+1.7**
QIZ				AMB	AMB		
	comp=Z,67nm,1.2s,mb5.0						
QIZ				AMB	AMB		
	comp=Z,332nm,6.2s						
QIZ				LR	LR		
	comp=E,956nm,18.7s						
QIZ				LR	LR		
	comp=Z,919nm,22.6s,MS4.2						
QIZ	**Qiongzhong**	**24.77**	**20**	*e*P	**P**	**00 55 38.4**	**-0.6**
	comp=Z,67nm,1.0s,mb5.1						
QIZ				*e*		00 55 48.1	
QIZ				*e*PcP	PcP	00 59 15.1	-0.3
LBMI	**Labuha**	**26.56**	**83**	P	**P**	**00 55 55.6**	**+0.2**
	comp=Z,0.0nm,0.0s						
RCP	**Roxas**	**26.66**	**53**	⇓*i*P	**P**	**00 55 56.4**	**+0.1**
FITZ	**Fitzroy Crossi**	**27.55**	**122**	*e*P	**P**	**00 56 03.5**	**-0.7**
	comp=Z,47nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**27.55**	**122**	P	**P**	**00 56 03.6**	**-0.7**
	comp=Z,28nm,0.9s,mb4.9,baz=288,slow=7.2,SNR=52						
KMI	**Kunming**	**29.35**	**3**	P	**P**	**00 56 21.4**	**+1.2**
KMI				AP	pP	00 56 28.9	0.0
KMI				XP	sP	00 56 34.4	+1.8
KMI				PP	PP	00 57 17.1	-10
KMI				S	**S**	**01 01 14.6**	**+2.7**
KMI				XS	sS	01 01 30.8	+4.4
KMI				SS	SS	01 02 47.5	-30
KMI				AMB	AMB		
	comp=Z,54nm,1.0s,mb5.2						
KMI				AMB	AMB		
	comp=Z,225nm,6.2s						
KMI				LR	LR		
	comp=N,1μm,18.3s,MS4.8						
KMI				LR	LR		
	comp=E,2μm,16.3s,MS4.8						
KMI				LR	LR		
	comp=Z,1μm,18.8s,MS4.6						
SWI	**Sorong**	**30.25**	**84**	P	**P**	**00 56 26.2**	**-2.1**
	comp=Z,70nm,1.2s,mb5.3						
GYA	**Guiyang**	**31.10**	**10**	⇑*i*P	**P**	**00 56 35.6**	**0.0**
GYA				AP	pP	00 56 45.3	+0.9
GYA				XP	sP	00 56 49.1	+1.1
GYA				PP	PP	00 57 36.6	-10
GYA				PCP	PcP	00 59 32.0	+1.2
GYA				S	**S**	**01 01 37.0**	**-2.4**
GYA				XS	sS	01 01 51.3	-2.5
GYA				SCP	ScP	01 03 11.0	-0.7
GYA				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.3						
GYA				AMB	AMB		
	comp=Z,320nm,5.4s						
GYA				LR	LR		
	comp=N,530nm,16.4s,MS4.5						
GYA				LR	LR		
	comp=E,620nm,15.7s,MS4.5						
GYA				LR	LR		
	comp=Z,680nm,14.2s,MS4.5						
NWAO	**Narrogin (SRO)**	**32.13**	**154**	P	**P**	**00 56 44.6**	**0.0**
	comp=Z,19nm,1.0s,mb4.9,baz=332,slow=12,SNR=4.8						
NWAO	**Narrogin (SRO)**	**32.13**	**154**	*e*P	**P**	**00 56 45.9**	**+1.2**
NWAO				pmax	pmax		
	comp=Z,40nm,0.9s						
NWAO	**Narrogin (SRO)**	**32.13**	**154**	*e*P	**P**	**00 56 45.9**	**+1.2**
	comp=Z,40nm,0.9s,mb5.2						
ODAN	**Odare**	**33.78**	**337**	*e*P	**P**	**00 57 00.0**	**+0.8**
	comp=Z,223nm,1.0s,mb6.0						
TAPN	**Taplejung**	**34.11**	**338**	*e*P	**P**	**00 57 03.3**	**+1.3**
	comp=Z,327nm,1.0s,mb6.2						
RAMN	**Ramite**	**34.17**	**336**	*e*P	**P**	**00 57 03.9**	**+1.4**
	comp=Z,161nm,1.0s,mb5.9						
JIRN	**Jiri**	**34.97**	**336**	*e*P	**P**	**00 57 10.7**	**+1.3**
	comp=Z,323nm,1.0s,mb6.2						
CD2	**Chengdu**	**35.16**	**4**	⇑*i*P	**P**	**00 57 10.4**	**-0.6**
CD2				AP	pP	00 57 20.1	+0.2
CD2				XP	sP	00 57 24.0	+0.5
CD2				PP	PP	00 58 30.5	-0.8
CD2				PCP	PcP	00 59 40.3	-1.7
CD2				S	**S**	**01 02 41.9**	**-0.5**
CD2				XS	sS	01 02 57.5	+0.6
CD2				PCS	PcS	01 03 26.0	-3.0
CD2				SCS	ScS	01 07 25.3	-4.5
CD2				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.7						
CD2				AMB	AMB		
	comp=Z,290nm,9.6s						
CD2				LR	LR		
	comp=Z,2μm,19.2s,MS4.8						
PKI	**Pulchoki**	**35.21**	**335**	*e*P	**P**	**00 57 12.2**	**+0.7**
	comp=Z,117nm,1.3s,mb5.7						
LSA	**Lhasa**	**35.21**	**345**	P	**P**	**00 57 12.6**	**+1.1**
LSA	**Lhasa**	**35.21**	**345**	*e*P	**P**	**00 57 11.6**	**+0.1**
LSA				*e*	pP	00 57 21.0	+0.7
LSA				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
LSA	**Lhasa**	**35.21**	**345**	*e*P	**P**	**00 57 11.6**	**+0.2**
	comp=Z,33nm,1.0s,mb5.2						
LSA				*e*	pP	00 57 21.0	+0.7
GUN	**Gumba**	**35.32**	**336**	*e*P	**P**	**00 57 13.8**	**+1.4**
	comp=Z,286nm,0.9s,mb6.2						
DMN	**Daman**	**35.37**	**335**	*e*P	**P**	**00 57 13.8**	**+0.9**
	comp=Z,95nm,1.1s,mb5.6						
KKN	**Kakani**	**35.46**	**335**	*e*P	**P**	**00 57 14.6**	**+1.0**
	comp=Z,122nm,1.0s,mb5.8						
WRA	**Warramunga Arr**	**35.82**	**118**	P	**P**	**00 57 15.9**	**-0.9**
	comp=Z,24nm,0.9s,mb5.2,baz=292,slow=9.9,SNR=62						
WRA				S	**S**	**01 02 53.0**	**+0.2**
	comp=Z,4.2nm,1.0s,baz=295,slow=16,SNR=4.8						
WRAB	**Tennant Creek**	**35.82**	**118**	P	**P**	**00 57 16.0**	**-0.9**
	comp=Z,248nm,0.9s,mb6.1,SNR=16						
WRAB	**Tennant Creek**	**35.82**	**118**	*e*P	**P**	**00 57 16.2**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.3						
WRAB	**Tennant Creek**	**35.82**	**118**	*e*P	**P**	**00 57 16.2**	**-0.7**
	comp=Z,38nm,0.9s,mb5.3						
WB2	**Warramunga Arr**	**35.83**	**118**	⇑*i*P	**P**	**00 57 15.9**	**-1.0**
GKN	**Gorkha**	**35.91**	**335**	*e*P	**P**	**00 57 18.3**	**+0.8**
	comp=Z,226nm,1.1s,mb6.0						
KOLN	**Koldanda**	**36.17**	**333**	*e*P	**P**	**00 57 20.9**	**+1.2**
	comp=Z,108nm,1.1s,mb5.7						
DANN	**Dangsing**	**36.60**	**334**	*e*P	**P**	**00 57 24.3**	**+0.9**
	comp=Z,303nm,1.1s,mb6.1						
ASAR	**Alice Springs**	**36.94**	**124**	P	**P**	**00 57 26.0**	**-0.4**
	comp=Z,9.3nm,0.9s,mb4.6,baz=296,slow=7.7,SNR=62						
ASAR				PcP	PcP	00 59 47.8	+0.3
	comp=Z,4.0nm,0.8s,baz=303,slow=3.9,SNR=4.9						
ASAR				S	**S**	**01 03 09.7**	**-0.1**
	comp=Z,3.4nm,1.1s,baz=293,slow=15,SNR=6.0						
PTH	**Pithoragarh**	**39.26**	**330**	*e*P	**P**	**00 57 47.1**	**+1.2**
NJ2	**Nanjing**	**39.93**	**24**	*e*P	**P**	**00 57 52.4**	**+1.0**
NJ2				AP	pP	00 58 02.3	+2.0
NJ2				XP	sP	00 58 04.3	+0.4
NJ2				PP	PP	00 59 28.5

HHC AP pP 00 58 51.3 +1.9
HHC XP sP 00 58 55.1 +2.1
HHC PCP PcP 01 00 16.3 -0.4
HHC PP PP 01 00 29.3 +0.7
HHC SCP ScP 01 04 06.3 -1.6
HHC PCS PcS 01 04 10.3 -0.7
HHC S **S** **01 05 23.5 0.0**
HHC XS sS 01 05 40.5 +2.2
HHC SCS ScS 01 08 31.3 -2.7
HHC SS SS 01 08 41.3 -7.6
HHC AMB AMB
comp=Z,44nm,1.1s,mb5.3
HHC AMB AMB
comp=Z,276nm,7.2s
HHC LR LR
comp=N,1µm,14.4s,MS5.1
HHC LR LR
comp=E,777nm,14.4s,MS5.1
HHC LR LR
comp=Z,1µm,14.1s,MS5.0
BJT Baijiatuau 46.27 16 *e*P **P 00 58 42.0 -0.5**
BJT *e* 01 00 17.9
BJT pmax pmax
comp=Z,85nm,1.1s
BJT Baijiatuau 46.27 16 *e*P **P 00 58 42.0 -0.5**
comp=Z,84nm,1.1s,mb5.6
BJT *e*PcP PcP 01 00 17.9 +0.2
BJI Beijing 46.29 16 P **P 00 58 42.4 -0.3**
BJI PP PP 01 00 35.8 +4.0
BJI AMB AMB
comp=Z,71nm,1.1s,mb5.5
BJI LR LR
comp=N,551nm,18.8s,MS4.9
BJI LR LR
comp=E,1µm,18.2s,MS4.9
BJI LR LR
comp=Z,664nm,20.1s,MS4.6
CTA Charters Tower 46.56 114 *e*P **P 00 58 44.9 -0.3**
comp=Z,32nm,1.0s,mb5.2
CTA Charters Tower 46.56 114 *e*P **P 00 58 44.9 -0.3**
CTA pmax pmax
comp=Z,32nm,1.0s
CTAO Charters Tower 46.56 114 *e*P **P 00 58 44.8 -0.4**
CTAO pmax pmax
comp=Z,68nm,1.1s,mb5.5
CTAO Charters Tower 46.56 114 *e*P **P 00 58 44.8 -0.3**
comp=Z,68nm,1.1s,mb5.5
STKA Stephens Creek 46.72 131 *e*P **P 00 58 46.5 +0.2**
comp=Z,13nm,0.6s,mb5.0
STKA Stephens Creek 46.72 131 P **P 00 58 46.1 -0.2**
comp=Z,12nm,0.8s,mb4.9,baz=314,slow=8.4,SNR=16
KSRS Korea Array 48.49 29 P **P 00 58 59.5 -0.3**
comp=Z,55nm,0.9s,mb5.6,baz=215,slow=8.2,SNR=89
KSRS PcP PcP 01 00 25.9 +0.2
comp=Z,7.4nm,0.9s,baz=214,slow=4.1,SNR=5.1
KSH Kashi 49.46 334⇑ *i*P **P 00 59 07.5 +0.2**
KSH *e*AP pP 00 59 17.0 +0.6
KSH *e*XP sP 00 59 21.1 +1.2
KSH *e*PCP PcP 01 00 30.0 +0.9
KSH *e*PP PP 01 01 02.0 +0.3
KSH *e*SCP ScP 01 04 21.1 -1.5
KSH *e*PCS PcS 01 04 25.3 -0.4
KSH *e*S **S** **01 06 09.3 -3.5**
KSH *e*XS sS 01 06 28.0 +0.3
KSH *e*SCS ScS 01 08 54.1 -3.0
KSH *e*SS SS 01 09 39.0 -6.1
KSH AMB AMB
comp=Z,444nm,2.7s,mb6.0
KSH LR LR
comp=N,300nm,5.9s
KSH LR LR
comp=E,539nm,5.8s
KSH LR LR
comp=Z,832nm,13.7s,MS4.9
WMQ Urumqi 49.48 347⇑ *i*P **P 00 59 07.8 +0.5**
WMQ AP pP 00 59 17.0 +0.6
WMQ XP sP 00 59 21.0 +1.0
WMQ PCP PcP 01 00 30.0 +0.9
WMQ PP PP 01 01 02.0 +0.2
WMQ SCP ScP 01 04 21.0 -1.6
WMQ S **S** **01 06 11.0 -1.9**
WMQ XS sS 01 06 28.0 +0.1
WMQ SCS ScS 01 08 54.0 -3.0
WMQ AMB AMB
comp=Z,74nm,0.9s,mb5.7
WMQ AMB AMB
comp=Z,250nm,3.7s
WMQ LR LR
comp=N,931nm,16.9s,MS5.0
WMQ LR LR
comp=E,1µm,19.6s,MS5.0
WMQ LR LR
comp=Z,927nm,21.1s,MS4.8
SMDO Samad 50.14 305 P pP 00 59 22.7 +0.9
SNR=5.9
BIDO Bidbid 50.29 305 P pP 00 59 23.9 +0.9
SNR=5.7
SNY Shenyang 50.30 22⇑↑P **P 00 59 11.8 -1.8**
SNY AMB AMB
comp=Z,33nm,1.2s,mb5.2
SNY AMB AMB
comp=Z,137nm,3.9s
SNY LR LR
comp=N,705nm,17.2s,MS4.9
SNY LR LR
comp=E,572nm,12.2s,MS4.9
SNY LR LR
comp=Z,708nm,17.8s
BSY Bisya 50.70 304 P pP 00 59 27.0 +0.9
SNR=5.4
HOQ Hoqain 50.99 305 P pP 00 59 28.5 +0.3
SNR=6.8
SONM Songino Array 52.18 4 P **P 00 59 28.4 +0.8**
comp=Z,61nm,0.9s,mb5.5,baz=185,slow=8.2,SNR=268
SONM PcP PcP 01 00 39.2 +0.2
comp=Z,7.3nm,0.7s,baz=180,slow=4.0,SNR=7.1
SONM LR LR 01 23 36.7
comp=Z,467nm,18.1s,MS4.6,baz=186,slow=38
SONM Songino Array 52.18 4 P **P 00 59 28.4 +0.8**
SONM 01 00 39.2
ULN Ulaanbaatar 52.27 5⇓P **P 00 59 28.1 -0.1**
SNR=22
ULN Ulaanbaatar 52.27 5 *e*P **P 00 59 29.0 +0.8**
ULN pmax pmax
comp=Z,64nm,1.1s,mb5.5
ULN Ulaanbaatar 52.27 5 *e*P **P 00 59 29.0 +0.7**
comp=Z,64nm,1.1s,mb5.5
TKM2 Tokmak 2 52.46 336 *e*P **P 00 59 30.0 +0.3**
TKM2 01 00 39.5
TKM2 pmax pmax
comp=Z,34nm,0.9s,mb5.3
TKM2 Tokmak 2 52.46 336 P **P 00 59 30.3 +0.5**
SNR=28
TKM2 Tokmak 2 52.46 336 *e*P **P 00 59 30.0 +0.3**
comp=Z,34nm,0.9s,mb5.3
TKM2 PcP PcP 01 00 39.5 -0.6
KBK Karagaybulak 52.50 336 P **P 00 59 30.8 +0.8**
SNR=11
AML Almayashu 52.59 334 P **P 00 59 31.6 +0.8**
SNR=7.3
AML Almayashu 52.59 334 *e*P **P 00 59 31.3 +0.6**
comp=Z,19nm,0.9s,mb5.0
AML *e* pP 00 59 39.8 -0.1
AML *e*PcP PcP 01 00 41.4 +0.7
AAK Ala-Archa 52.66 335 P **P 00 59 32.5 +1.2**
SNR=5.5
CN2 Changchun 52.70 22⇑↑P **P 00 59 30.8 -0.7**
CN2 *e*AP pP 00 59 38.4 -2.3
CN2 PCP PcP 01 00 41.1 0.0
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,600nm,14.0s,MS4.9
CN2 LR LR
comp=E,500nm,14.0s,MS4.9
CN2 LR LR
comp=Z,600nm,14.0s,MS4.8
FRU Bishkek 52.78 336⇑ *i*P **P 00 59 32.0 -0.1**
FRU *i* pP 00 59 41.0 -0.3
FRU pmax pmax
comp=Z,60nm,2.0s,mb5.2
CHMS Chumysh 52.86 336 P **P 00 59 33.1 +0.4**
SNR=8.5

EKS2 Erkin-Say 52.99 335 P **P 00 59 34.3 +0.6**
SNR=52
EKS2 Erkin-Say 52.99 335 *e*P **P 00 59 34.1 +0.5**
comp=Z,46nm,0.9s,mb5.4
EKS2 *e* pP 00 59 42.4 -0.4
EKS2 *e*PcP PcP 01 00 43.3 +1.1
USP Ospenovka 53.19 336 P **P 00 59 35.2 0.0**
SNR=17
MAJO Matsushiro 53.40 37 *e*P **P 00 59 35.0 -1.9**
MAJO pmax pmax
comp=Z,44nm,1.0s,mb5.3
MAJO Matsushiro 53.40 37 *e*P **P 00 59 35.0 -1.9**
comp=Z,44nm,1.0s,mb5.3
MAT Matsushiro 53.40 37 P **P 00 59 35.9 -1.0**
MJAR Matsushiro Arr 53.40 37 P **P 00 59 35.3 -1.5**
comp=Z,38nm,1.0s,mb5.3,baz=218,slow=7.6,SNR=69
MJAR PcP PcP 01 00 44.4 +0.5
comp=Z,5.8nm,0.9s,baz=208,slow=4.0,SNR=4.1
MK31 Makanchi Array 53.61 344 *i* P **P 00 59 37.7 -0.5**
MK31 pmax pmax
comp=Z,43nm,0.8s,mb5.4
MK31 Makanchi Array 53.61 344 *i* P **P 00 59 37.8 -0.4**
MKAR Makanchi Array 53.61 344 P **P 00 59 38.0 -0.1**
comp=Z,35nm,0.8s,mb5.3,baz=148,slow=8.1,SNR=139
MKAR LR LR 01 26 26.6
comp=Z,243nm,21.4s,MS4.2,baz=158,slow=40
ARMA Armidale 54.09 125 *e*P **P 00 59 43.9 +1.8**
OPO Ambohidratompo 54.54 250 P **P 00 59 46.0 +0.5**
comp=Z,8.7nm,1.1s,mb4.7,baz=105,slow=13,SNR=4.6
ZAK Zakamensk 54.56 2 *e*P **P 00 59 44.6 -0.4**
ZAK *e* 01 00 48.0
ZAK *e* 01 01 46.4
ZAK pmax pmax
comp=Z,17nm,1.0s,mb5.0
KK31 Karatay Array 54.78 333 *i* P **P 00 59 45.3 -1.5**
KK31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KK31 Karatay Array 54.78 333 *i* P **P 00 59 45.4 -1.4**
VLA Vladivostok 54.82 27 *e*P **P 00 59 46.3 -0.8**
VLA pmax pmax
comp=Z,62nm,1.0s,mb5.6
VLA Vladivostok 54.82 27 *e*P **P 00 59 46.4 -0.7**
MDJ Mudanjiang 55.01 25 P **P 00 59 47.8 -0.6**
MDJ AP pP 00 59 56.8 -0.8
MDJ XP sP 01 00 01.0 -0.2
MDJ SCP ScP 01 04 45.5 -1.1
MDJ PCS PcS 01 04 49.1 -0.5
MDJ S **S** **01 07 27.6 -1.1**
MDJ XS sS 01 07 43.8 0.0
MDJ SS SS 01 11 12.8 -0.1
MDJ AMB AMB
comp=Z,37nm,1.1s,mb5.3
MDJ AMB AMB
comp=Z,67nm,3.7s
MDJ LR LR
comp=N,517nm,18.5s,MS4.7
MDJ LR LR
comp=E,347nm,16.3s,MS4.7
MDJ LR LR
comp=Z,400nm,24.1s
MDJ Mudanjiang 55.01 25 *e*P **P 00 59 48.2 -0.2**
comp=Z,42nm,1.0s,mb5.4
MDJ *e* pP 00 59 55.1 -2.5
HIA Hailar 55.80 15 *e*P **P 00 59 53.6 -0.4**
HIA *e* 01 00 50.7
HIA pmax pmax
comp=Z,13nm,1.0s
HIA Hailar 55.80 15 *e*P **P 00 59 53.6 -0.4**
comp=Z,13nm,1.0s,mb4.9
HIA *e*PcP PcP 01 00 50.7 -2.1
TLY Talaya 55.87 2 P **P 00 59 55.2 +0.7**
comp=Z,193nm,1.0s,mb6.1,SNR=14
TLY Talaya 55.87 2⇓P **P 00 59 54.6 +0.2**
SNR=12
TLY Talaya 55.87 2 *e*P **P 00 59 55.2 +0.7**
TLY *e* pP 01 00 02.9 -0.8
TLY *e*S **S** **01 07 55.6 +16**
TLY pmax pmax
comp=Z,39nm,1.0s,mb5.4
TLY MLR MLR
comp=Z,712nm,17.0s,MS4.8
TLY Talaya 55.87 2 *e*P **P 00 59 55.3 +0.9**
comp=Z,36nm,1.0s,mb5.4
IRK Irkutsk 56.46 2 *e*P **P 00 59 58.7 +0.1**
IRK *e* pP 01 00 08.2 +0.4
IRK pmax pmax
comp=Z,62nm,2.3s,mb5.2
KURK Kurchatov 58.20 343 P **P 01 00 10.1 -0.8**
comp=Z,310nm,1.0s,mb6.3,SNR=24
KURK Kurchatov 58.20 343⇓P **P 01 00 12.0 +1.1**
SNR=27
KURK Kurchatov 58.20 343 P **P 01 00 10.9 -0.1**
comp=Z,27nm,0.9s,mb5.3,baz=164,slow=6.9,SNR=41
KURK Kurchatov 58.20 343⇓ *e*P **P 01 00 10.6 -0.3**
KURK pmax pmax
comp=Z,74nm,1.1s,mb5.6
KURK Kurchatov 58.20 343 *e*P **P 01 00 10.5 -0.4**
KLR Kul'dur 59.62 23⇓ *i*P **P 01 00 16.2 -4.7**
KLR pmax pmax
comp=E,47nm,1.2s
KLR pmax pmax
comp=Z,100nm,1.2s,mb5.7
ZALV Zalesovo Beam 59.70 349 P **P 01 00 20.8 -0.5**
comp=Z,63nm,1.0s,mb5.6,baz=160,slow=4.7,SNR=133
ZALV LR LR 01 30 05.6
comp=Z,314nm,18.4s,MS4.5,baz=180,slow=40
KRAR Krasnoyarsk 60.56 355 *e*P **P 01 00 26.0 -1.1**
KRAR pmax pmax
comp=Z,72nm,1.3s,mb5.6
NVS Novosibirsk 60.85 348⇓ *i*P **P 01 00 28.1 -1.1**
NVS *e*S **S** **01 08 41.4 -3.3**
NVS pmax pmax
comp=Z,25nm,1.3s,mb5.2
NVS pmax pmax
comp=N,24nm,1.5s
NVS pmax pmax
comp=E,13nm,1.2s
NVS smax
comp=N,18nm,1.6s
NVS smax
comp=E,13nm,1.8s
RDF Al-Radifah 61.18 306 *e*P **P 01 00 31.4 -0.5**
baz=306
RDF AMb AMB 01 00 41.6
comp=Z,56nm,1.1s,mb5.6,baz=306
UMR Umm Al-Rimmam 61.30 307 *e*P **P 01 00 32.6 -0.2**
baz=307
UMR AMb AMB 01 00 42.5
comp=Z,46nm,1.0s,mb5.6,baz=307
NAY Al-Naaiem 61.56 307 *e*P **P 01 00 33.8 -0.7**
baz=306
NAY AMb AMB 01 00 43.9
comp=Z,28nm,1.0s,mb5.3,baz=306
MIB Mutribah 61.70 307 *e*P **P 01 00 35.1 -0.4**
baz=307
MIB AMb AMB 01 00 45.2
comp=Z,74nm,1.2s,mb5.7,baz=307
RST Umm Al-Ruwaisa 61.85 307 *e*P **P 01 00 35.9 -0.6**
baz=307
RST AMb AMB 01 00 45.8
comp=Z,44nm,0.9s,mb5.6,baz=307
CASY Casey 62.15 176 *e*P **P 01 00 37.6 -0.2**
VOSK Vostochnaya 62.34 340 P **P 01 00 37.9 -1.4**
VOSK pmax pmax
comp=Z,25nm,1.1s,mb5.3
BVA0 Borovoye Array 62.80 340 *i* P **P 01 00 40.6 -1.7**
BVA0 pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
BOD Boadibo 62.84 8 *e*P **P 01 00 41.7 -0.8**
BOD pmax pmax
comp=Z,37nm,1.1s,mb5.4
BRVK Borovoye 62.86 340⇓P **P 01 00 44.2 +1.5**
SNR=8.8
BRVK Borovoye 62.86 340 *e*P **P 01 00 41.9 -0.9**
YSS Yuzh-Sakhalins 62.88 31⇑ *e*P **P 01 00 42.0 -1.0**
YSS *e* pP 01 00 50.0 -2.3
YSS pmax pmax
comp=Z,120nm,1.0s,mb6.0
YSS Yuzh-Sakhalins 62.88 31 *e*P **P 01 00 42.6 -0.4**
KMBO Kilima Mbogo 63.91 271 P **P 01 00 52.0 +1.5**
comp=Z,0.6nm,0.4s,baz=14,slow=22,SNR=2.0
KMBO LR LR 01 23 45.8
comp=Z,126nm,18.1s,MS4.1,baz=163,slow=31
CLNS Chul'man 63.99 14 *e*P **P 01 00 49.0 -1.1**
CLNS *e**PP pP 01 01 02.3 +2.9
CLNS *e* 01 01 24.7
CLNS *e* 01 03 07.7
CLNS *e*S **S** **01 09 23.1 -1.0**
CLNS *e* 01 10 30.2
CLNS pmax pmax
comp=Z,31nm,1.0s,mb5.3
CLNS pmax pmax
comp=N,28nm,1.0s
CLNS pmax pmax
comp=E,22nm,1.0s
CLNS smax
comp=N,34µm,10.8s
CLNS smax
comp=E,83µm,11.9s
CLNS MLR MLR
comp=Z,543nm,14.0s,MS4.9
CLNS MLR MLR
comp=E,331nm,13.0s,MS4.9
CLNS MLR MLR
comp=N,382nm,13.0s,MS4.9
CLNS Chul'man 63.99 14 *e*P **P 01 00 49.1 -1.0**
CLNS *e*S **S** **01 09 23.0 -1.1**
AB31 Akbulak array 64.27 331 *i* P **P 01 00 50.8 -1.3**
AB31 pmax pmax
comp=Z,26nm,0.8s,mb5.3
AB31 Akbulak array 64.27 331⇑ *e*P **P 01 00 50.9 -1.2**
AKTK Aktyubinsk 65.98 331 *i* P **P 01 01 01.4 -1.8**
AKTO Aktyubinsk 65.98 331 *i* P **P 01 01 01.3 -1.9**
AKTO pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
GNI Garni 68.04 316 P **P 01 01 16.3 -0.2**
comp=Z,2.0nm,0.5s,mb4.4,baz=116,slow=14,SNR=3.7
GNI Garni 68.04 316⇑ *e*P **P 01 01 16.4 -0.1**
GNI pmax pmax
comp=Z,14nm,1.8s
MAW Mawson 68.30 195 *e*P **P 01 01 17.8 +0.1**
comp=Z,7.8nm,1.0s,mb4.7
MAW Mawson 68.30 195 P **P 01 01 17.4 -0.3**
comp=Z,11nm,1.0s,mb4.8,baz=32,slow=9.8,SNR=17
MAW LR LR 01 25 31.8
comp=Z,560nm,18.1s,MS4.8,baz=52,slow=31
MAW Mawson 68.30 195 *e*P **P 01 01 17.8 +0.1**
MAW pmax pmax
comp=Z,8.0nm,1.0s
SVE Sverdlovsk 69.30 338⇓ *e*P **P 01 01 24.0 0.0**
SVE *e* pP 01 01 32.4 -1.1
SVE *e*S S 01 10 31.5 +3.0
SVE pmax pmax
comp=Z,72nm,1.1s,mb5.5
SVE MLR MLR
comp=Z,549nm,20.0s,MS4.8
YAK Yakutsk 69.73 14 *e*P **P 01 01 25.3 -1.3**
YAK *e**PP pP 01 01 36.5 +0.5
YAK *e* 01 01 49.8
YAK *e*S S 01 10 29.3 -4.0
YAK *e* 01 11 24.1
YAK *e*SS SS 01 15 05.9 +3.7
YAK pmax pmax
comp=Z,92nm,0.9s,mb5.7
YAK pmax pmax
comp=E,26nm,1.2s
YAK pmax pmax
comp=N,36nm,1.1s
YAK smax
comp=N,82µm,2.5s
YAK smax
comp=E,40µm,2.3s
YAK MLR MLR
comp=Z,937nm,18.0s,MS5.1
YAK MLR MLR
comp=N,563nm,17.0s,MS4.9
YAK MLR MLR
comp=E,299nm,17.0s,MS4.9
YAK Yakutsk 69.73 14 *e*P **P 01 01 25.7 -0.9**
ARU Arti 69.83 336 P **P 01 01 26.8 -0.5**
comp=E,162nm,1.0s,mb5.9,SNR=10
ARU Arti 69.83 336 *c* *i*P **P 01 01 26.6 -0.7**
ARU *e* 01 01 45.3
ARU *e*S S 01 10 34.3 -0.4
ARU *e*SS SS 01 14 59.3 -4.7
ARU pmax pmax
comp=Z,45nm,1.2s,mb5.3
ARU MLR MLR
comp=Z,294nm,18.0s,MS4.6
ARU Arti 69.83 336 *e*P **P 01 01 26.3 -1.0**
KIV Kislovodsk 71.09 319 *e*P **P 01 01 35.0 -0.3**
KIV *e* 01 01 53.6
KIV *e*S S 01 10 48.8 -1.1
KIV pmax pmax
comp=Z,23nm,1.1s,mb5.0
KIV MLR MLR
comp=Z,125nm,17.0s,MS4.2
KIV Kislovodsk 71.09 319 *e*P **P 01 01 35.1 -0.2**
MALT Malatya 71.79 313⇑ *i*P **P 01 01 38.4 -1.2**
MALT Malatya 71.79 313 *e*P **P 01 01 37.4 -2.2**
LSZ Lusaka 72.46 255 P **P 01 01 44.1 +0.1**
comp=Z,3.8nm,1.0s,mb4.3,baz=116,slow=3.2,SNR=5.3
SOC Sochi 72.89 318 *e*P **P 01 01 51.4 +5.3**
SOC *e* pP 01 02 00.3 +4.8
SOC *e*S S 01 11 01.0 -10
SOC *e* 01 11 52.3
SOC *e*SS SS 01 15 47.4 -4.0
SOC pmax pmax
comp=Z,23nm,1.0s,mb5.1
PETK Petropavlovsk- 74.26 31 P **P 01 01 53.2 -0.7**
comp=Z,12nm,0.8s,mb4.8,baz=222,slow=3.5,SNR=8.3
PETK Petropavlovsk- 74.26 31 P **P 01 01 53.2 -0.7**
PET Petropavlovsk 74.72 32 *e*P **P 01 01 56.0 -0.6**
PET *e*S S 01 11 33.4 +2.6
PET pmax pmax
comp=Z,67nm,1.0s,mb5.5
PET pmax pmax
comp=Z,100nm,16.2s
PET MLR MLR
comp=Z,100nm,19.0s,MS4.1
PET Petropavlovsk 74.72 32 *e*P **P 01 01 55.7 -0.9**
comp=Z,58nm,1.0s,mb5.5
ANN Anapa 74.87 319 *e*P **P 01 01 49.5 -8.2**
ANN pmax pmax
comp=Z,55nm,5.3s
BOSA Boshof 75.56 242 P **P 01 02 02.4 +0.3**
comp=Z,8.6nm,1.3s,mb4.5,baz=102,slow=14,SNR=2.6
BOSA LR LR 01 30 29.9
comp=Z,369nm,18.5s,MS4.7,baz=99,slow=32
BR131 Keskin Array S 75.78 313 *e*P **P 01 02 01.7 -1.2**
comp=Z,9.3nm,1.0s,mb4.7
BR131 *e* pP 01 02 10.1 -2.4
SYO Syowa Base 76.02 199⇑ *e*X 01 02 02.4
VSR Storozhevoye 76.38 325 *e*P **P 01 02 05.0 -1.1**
VSR pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
VSR pmax pmax
comp=N,4.0nm,0.9s
VSR pmax pmax
comp=E,8.0nm,0.8s
ANTO Ankara 76.44 313 *e*P **P 01 02 06.3 -0.5**
ANTO *e* pP 01 02 14.6 -1.7
ANTO pmax pmax
comp=Z,29nm,1.4s,mb5.0
ANTO Ankara 76.44 313⇑ *i*P **P 01 02 06.8 0.0**
ANTO Ankara 76.44 313 *e*P **P 01 02 06.3 -0.5**
comp=Z,29nm,1.4s,mb5.0
ANTO *e* pP 01 02 14.6 -1.6
SIM Simferopol' 77.13 318 *e*P **P 01 02 11.0 +0.5**
SIM S S 01 12 01.0 +3.3
SIM pmax pmax
comp=Z,18nm,1.0s,mb5.0
SEY Seymchan 77.38 21⇑ *e*P **P 01 02 10.3 -1.2**
TIXI Tiksi 78.00 9⇑ *e*P **P 01 02 13.3 -1.5**
TIXI pmax pmax
comp=Z,48nm,1.4s,mb5.2
MOS Moscow 79.12 329 *e*P **P 01 02 17.4 -3.9**
MOS *i* 01 02 28.6
MOS *e* 01 02 36.4
OBN Obninsk 79.41 328⇑ *i*P **P 01 02 22.3 -0.6**
OBN *i* pP 01 02 31.1 -1.4
OBN *e*S S 01 12 30.0 +8.2
OBN pmax pmax
comp=Z,49nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,200nm,19.0s,MS4.5
OBN Obninsk 79.41 328⇑ *e*P **P 01 02 22.3 -0.6**
SBA Scott Base 80.72 169 *e*P **P 01 02 31.9 +2.2**
KIS Kishinev 81.27 319 *e*P **P 01 02 41.0 +7.9**
KIS *e* pP 01 02 52.0 +9.3
KIS Kishinev 81.27 319 *e*UNK **P 01 02 41.0 +7.9**

AKASG **Malin Array Be** 82.06 322 P P 01 02 36.1 -1.1
comp=Z,1.8nm,0.6s,mb4.2,baz=89,slow=3.4,SNR=11
VRI **Vrincioaia** 82.37 317⇑ *i*P P 01 02 39.9 +0.9
MLR **Muntele Rosu** 82.81 317⇑ *i*P P 01 02 41.3 0.0
BURAR **Bucovina Array** 83.80 319⇑ *i*P P 01 02 47.7 +1.4
BUR08 **Bucovina Ar. S** 83.82 319 *e*P P 01 02 47.1 +0.7
BUR08 *e* pP 01 02 56.1 +0.1
MNK **Minsk** 83.96 326 *e*P P 01 02 51.0 +4.1
BILL **Bilibino** 84.96 20⇓ *e*P P 01 02 51.7 0.0
BILL pmax pmax
comp=Z,14nm,0.5s,mb5.3
BILL MLR MLR
comp=Z,1μm,18.0s,MS5.4
LVV **L'vov** 85.06 321 *e*P P 01 02 53.1 +0.5
DRGR 85.29 318⇑ *i*P P 01 02 54.9 +1.0
BZS **Buzias** 85.81 316⇑ *i*P P 01 02 55.6 -0.9
KWP **Kalwaria** 85.86 320 P P 01 02 56.9 +0.3
KWP *e* pP 01 03 05.4 -0.8
KWP pmax pmax
comp=Z,32nm,1.3s,mb5.4
KWP **Kalwaria** 85.86 320⇑ *i*P P 01 02 57.4 +0.8
KWP **Kalwaria** 85.86 320 P P 01 02 56.9 +0.3
comp=Z,32nm,1.3s,mb5.4
KWP *e* pP 01 03 05.4 -0.9
UZH **Uzhgorod** 85.93 319 *e*P P 01 02 57.4 +0.4
UZH *e* pP 01 03 04.8 -1.8
UZH *i* 01 03 13.2
KOLS **Kolonicke sedl** 86.00 320 *e*P P 01 02 58.1 +0.8
KOLS *e* pP 01 03 08.9 +1.9
KOLS **Kolonicke sedl** 86.00 320 *e*P P 01 02 58.1 +0.8
KOLS *e*pP pP 01 03 08.9 +1.9
KOLS **Kolonicke sedl** 86.00 320 *e*P P 01 02 58.1 +0.8
KOLS *e* pP 01 03 08.9 +1.9
SUW **Suwalki** 86.48 325 *e*P P 01 02 59.4 -0.2
SUW **Suwalki** 86.48 325 *e*P P 01 02 59.4 -0.2
CRVS **Cervenica-Dubn** 86.52 319 *e*P P 01 03 00.9 +1.0
CRVS *e*pP pP 01 03 14.5 +5.0
STHS **Stebnicka Huta** 86.76 320 *e*P P 01 03 02.1 +1.1
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
STHS **Stebnicka Huta** 86.76 320 *e*P P 01 03 02.1 +1.1
comp=Z,5.5nm,0.9s,mb4.8
NIE **Niedzica** 87.36 320 *e*P P 01 03 04.7 +0.7
PKSM **Moragy** 87.96 316⇑ *i*P P 01 03 05.7 -1.2
VYHS **Vyhne** 88.17 319 *e*P P 01 03 07.7 -0.2
VYHS *e* pP 01 03 16.4 -1.1
VYHS pmax pmax
comp=Z,7.0nm,1.6s,mb4.6
VYHS **Vyhne** 88.17 319 *e*P P 01 03 07.7 -0.2
comp=Z,6.6nm,1.6s,mb4.6
VYHS *e* pP 01 03 16.4 -1.1
KOLL **Kolacno** 88.47 319 *e*P P 01 03 09.4 +0.1
OKC **Ostrava-Krasne** 88.81 320 *e*P P 01 03 11.2 +0.3
OKC *e*pP pP 01 03 19.6 -0.9
ARCES **ARCESS Array B** 89.08 340 P P 01 03 12.2 +0.4
comp=Z,14nm,0.9s,mb5.3,baz=116,slow=5.5,SNR=14
ARCES LR LR 01 46 56.6
comp=Z,378nm,21.8s,MS4.8,baz=15,slow=38
MODS **Modra-Piesok** 89.18 318 *e*P pP 01 03 21.8 -0.5
MODS **Modra-Piesok** 89.18 318 *e*pP pP 01 03 21.8 -0.5
MORC **Moravsky Berou** 89.19 320 *e*P P 01 03 13.0 +0.4
MORC *e* pP 01 03 21.6 -0.7
MORC *e* 01 06 45.5
MORC pmax pmax
comp=Z,14nm,1.3s,mb5.1
MORC **Moravsky Berou** 89.19 320⇑ *i*P P 01 03 12.4 -0.2
MORC **Moravsky Berou** 89.19 320 *e*P P 01 03 13.0 +0.3
comp=Z,14nm,1.3s,mb5.1
MORC *e* pP 01 03 21.6 -0.8
MORC *e*PP PP 01 06 45.5 +2.2
ZST **Bratislava** 89.27 318 *e*P P 01 03 13.7 +0.6
ZST *e*pP pP 01 03 21.3 -1.4
ZST **Bratislava** 89.27 318 *e*P P 01 03 13.7 +0.6
comp=Z,17nm,1.3s,mb5.2
ZST *e* pP 01 03 21.3 -1.4
ZST LR LR
comp=Z,100nm,17.1s,MS4.3
DPC **Dobruska-Polom** 90.04 320 *e*P P 01 03 17.9 +1.3
DPC *e*pP pP 01 03 25.7 -0.6
KSP **Ksiaz** 90.12 321 *e*P P 01 03 17.6 +0.6
KSP *e**PP pP 01 03 25.9 -0.7
BOJS **Bojanci** 90.22 315 *i* P pP 01 03 25.6 -1.6
UPC **Upice** 90.26 320 *e*P P 01 03 17.5 -0.1
SNAA **Sanae** 90.27 198 *e*P P 01 03 18.1 +0.8
SNAA *e* pP 01 03 26.7 -0.2
SNAA pmax pmax
comp=Z,18nm,1.3s
SNAA **Sanae** 90.27 198 *e*P P 01 03 18.1 +0.9
comp=Z,18nm,1.3s,mb5.2
SNAA *e* pP 01 03 26.7 -0.2
PERS **Pernice** 90.43 317 *i* P pP 01 03 27.1 -1.1
VISS **Visnje** 90.54 316 *i* P pP 01 03 27.4 -1.3
PRU **Pruhonice** 91.14 320 *e*P P 01 03 22.1 +0.3
PRU *e*pP pP 01 03 30.1 -1.3
PRU AMS AMS 01 50 40.0
comp=Z,100nm,18.9s
PVCC **Panska Ves** 91.18 320 *e*P P 01 03 23.1 +1.2
PVCC *e*pP pP 01 03 30.9 -0.7
GEC2 **GERESS Array S** 91.59 319 *e*P P 01 03 24.0 +0.1
GEC2 *e**PP pP 01 03 31.8 -1.7
GEC2 pmax pmax
comp=Z,18nm,1.3s,mb5.2
GEC2 **GERESS Array S** 91.59 319 *e*P P 01 03 24.0 +0.1
comp=Z,18nm,1.3s,mb5.2
GEC2 *e*pP pP 01 03 31.8 -1.7
GERES **GERESS Array B** 91.59 319 P P 01 03 24.4 +0.6
comp=Z,2.7nm,1.0s,mb4.5,baz=109,slow=3.2,SNR=14
BRG **Berggiesshubel** 91.61 321 *e*P P 01 03 24.5 +0.6
BRG *e* pP 01 03 33.2 -0.3
BRG pmax pmax
comp=Z,5.0nm,1.4s,mb4.7
BRG pmax pmax
comp=Z,8.0nm,1.3s,mb4.9
BRG **Berggiesshubel** 91.61 321 *e*P P 01 03 23.7 -0.2
comp=Z,13nm,1.3s,mb5.1
BRG *e*pP pP 01 03 32.4 -1.1
BRG **Berggiesshubel** 91.61 321 *e*P P 01 03 24.5 +0.6
comp=Z,8.2nm,1.4s,mb4.9
BRG *e* pP 01 03 33.2 -0.3
comp=Z,12nm,1.3s
KHC **Kasperske Hory** 91.69 319 *e*P P 01 03 24.6 +0.3
KHC *e*pP pP 01 03 34.0 0.0
WET **Wettzell** 92.15 319 *e*P P 01 03 26.2 -0.3
WET *e**PP pP 01 03 34.2 -1.9
WET pmax pmax
comp=Z,14nm,1.4s,mb5.1
WET pmax pmax
comp=Z,14nm,1.4s,mb5.1
WET **Wettzell** 92.15 319 *e*P P 01 03 26.2 -0.3
comp=Z,14nm,1.4s,mb5.1
WET *e*pP pP 01 03 34.2 -1.9
comp=Z,14nm,1.4s
CLL **Collm** 92.23 321 *e*P pP 01 03 35.0 -1.4
CLL **Collm** 92.23 321 *e*pP pP 01 03 35.0 -1.4
WERD **Werda** 92.61 320 *e*P P 01 03 28.3 -0.2
comp=Z,9.0nm,1.3s,mb5.0
WERD *e*pP pP 01 03 36.9 -1.3
comp=Z,9.0nm,1.3s
MOX **Moxa** 93.06 320 *e*P pP 01 03 39.2 -1.1
GRA1 **Grafenberg Arr** 93.27 319 *e*P P 01 03 31.4 -0.2
comp=Z,43nm,2.0s,mb5.5
GRF **Grafenberg Arr** 93.27 319 *e*P P 01 03 31.4 -0.2
GRF pmax pmax
comp=Z,43nm,2.0s,mb5.5
GRF **Grafenberg Arr** 93.27 319 *e*P P 01 03 31.4 -0.2
GRF pmax pmax
comp=Z,43nm,2.0s,mb5.5
GRF **Grafenberg Arr** 93.27 319 *e*P P 01 03 31.4 -0.2
comp=Z,43nm,2.0s,mb5.5
NB2 **NORSAR Subarra** 93.77 331 P P 01 03 34.0 +0.4
comp=Z,6.0nm,1.1s,mb4.9,baz=94,slow=5.3
NOA **NORSAR Array B** 93.77 331 P P 01 03 32.9 -0.8
comp=Z,4.5nm,1.1s,mb4.8,baz=93,slow=4.8,SNR=3.0
NOA LR LR 01 50 32.4
comp=Z,121nm,19.1s,MS4.4,baz=90,slow=39
KEST **Kesra** 94.01 305 LR LR 01 50 20.6
comp=Z,73nm,18.1s,MS4.2,baz=336,slow=38
C04A **Brinnon** 122.61 34 ⇑P PKPdf 01 09 13.4 +0.8
baz=122
B05A **Bryant** 122.78 33 ⇓P PKPdf 01 09 13.5 +0.6
baz=123
JCW **Jim Creek** 122.91 33 *e*PKPdf PKPdf 01 09 13.3 +0.2
JCW *e* 01 09 21.5
E03A **Lebam** 122.93 35 ⇓P PKPdf 01 09 13.9 +0.7
baz=123
A07A **Ashnola River,** 123.22 31 ⇑P PKPdf 01 09 13.2 -0.5
baz=123,SNR=6.0
F03A **Seaside** 123.27 36 ⇑P PKPdf 01 09 13.6 -0.4
baz=123
C05A **Tolt Reservoir** 123.33 33 ⇓P PKPdf 01 09 13.9 -0.1
baz=123
D05A **Enumclaw** 123.46 34 ⇓P PKPdf 01 09 14.8 +0.5
baz=123
B07A **Winthrop** 123.72 32 ⇓P PKPdf 01 09 14.8 +0.1
baz=124
TDL **Tradedollar La** 123.81 35 P PKPdf 01 09 16.2 +1.3
FL2 **Flat Top 2** 123.82 35 P PKPdf 01 09 16.3 +1.3
A08A **Turner Farm, O** 123.86 31 ⇓P PKPdf 01 09 15.0 +0.1
baz=124
F04A **Amboy** 123.93 35 ⇓P PKPdf 01 09 15.0 -0.2
baz=124
E05A **Randle** 123.95 35 ⇓P PKPdf 01 09 15.2 0.0
baz=124
ETW **Entiat** 124.13 33 *e*PKPdf PKPdf 01 09 15.6 0.0
ETW *e* 01 09 24.0
I02A **Mapleton** 124.14 38 ⇑P PKPdf 01 09 15.7 +0.1
baz=124
B08A **Colville Reser** 124.20 32 ⇓P PKPdf 01 09 15.2 -0.4
baz=124,SNR=5.2
C07A **Waterville** 124.22 33 ⇓P PKPdf 01 09 15.6 -0.1
baz=124
TBM **Table Mountain** 124.24 33 P PKPdf 01 09 16.5 +0.8
WTV **Waterville** 124.27 33 P PKPdf 01 09 15.9 +0.1
E06A **Yakima** 124.40 34 ⇑P PKPdf 01 09 15.8 -0.2
baz=124
D07A **Quincy** 124.57 33 ⇑P PKPdf 01 09 16.2 -0.2
baz=124
C08A **Higginbotham F** 124.70 32 ⇑P PKPdf 01 09 16.4 -0.2
baz=124
A10A **Northport** 124.71 30 ⇓P PKPdf 01 09 16.3 -0.3
baz=124
H04A **Detroit Lake** 124.76 37 ⇑P PKPdf 01 09 17.3 +0.4
baz=125
B09A **Rice** 124.77 31 ⇑P PKPdf 01 09 16.8 +0.1
baz=125,SNR=5.8
F06A **Goldendale** 124.97 35 ⇓P PKPdf 01 09 17.7 +0.5
baz=125
K02A **Glendale** 124.99 39 ⇓P PKPdf 01 09 17.9 +0.5
baz=125
C09A **Chrisman Ranch** 125.10 32 ⇓P PKPdf 01 09 17.4 0.0
baz=125
I04A **Tendick Farm,** 125.11 38 ⇓P PKPdf 01 09 17.6 0.0
baz=125
D08A **Wollman Farm,** 125.22 33 ⇓P PKPdf 01 09 17.8 +0.1
baz=125
L02A **Cave Junction** 125.23 40 ⇓P PKPdf 01 09 17.2 -0.6
baz=125
RSW **Rattlesnake Hi** 125.26 34 *e*PKPdf PKPdf 01 09 18.1 +0.4
HAWA **Hanford** 125.30 34 *e*PKPdf PKPdf 01 09 18.0 +0.2
HAWA *e* 01 09 25.7
A11A **Hall Mountain,** 125.31 29 ⇓P PKPdf 01 09 18.3 +0.5
baz=125
G06A **Carlson Farm,** 125.36 35 ⇑P PKPdf 01 09 17.9 -0.1
baz=125
NEW **Newport** 125.39 31 *e*PKIKP PKPdf 01 09 18.4 +0.5
NEW *e* 01 09 27.1
REDWA **Red Mountain** 125.40 34 P PKPdf 01 09 19.2 +1.2
HUMO **Hull Mountain** 125.41 39 ⇑P PKPdf 01 09 18.4 +0.3
baz=125
HUMO **Hull Mountain** 125.41 39 *e*PKPdf PKPdf 01 09 19.1 +1.0
E08A **Dider Farm, El** 125.50 33 ⇓P PKPdf 01 09 18.3 +0.1
baz=125
D09A **Jones Farm, Ri** 125.55 32 ⇓P PKPdf 01 09 18.4 +0.1
baz=125
J04A **Umpqua Nationa** 125.60 38 ⇑P PKPdf 01 09 19.0 +0.5
baz=125
A12A **Yaak River Ran** 125.68 29 ⇓P PKPdf 01 09 18.9 +0.4
baz=126
H06A **Lindquist Farm** 125.82 36 ⇓P PKPdf 01 09 19.2 +0.3
baz=126
G07A **Ruggs Ranch, H** 125.89 35 ⇑P PKPdf 01 09 18.9 -0.1
baz=126
E09A **Wood Farm, Sta** 125.98 33 ⇓P PKPdf 01 09 19.2 +0.1
baz=126
F08A **Pendleton** 126.08 34 ⇓P PKPdf 01 09 19.3 -0.1
baz=126
D10A **Wagner Farm, O** 126.10 32 ⇑P PKPdf 01 09 19.3 0.0
baz=126
M02C **Callahan** 126.11 40 ⇓P PKPdf 01 09 19.5 0.0
baz=126
J05A **Fort Rock** 126.11 38 ⇑P PKPdf 01 09 20.1 +0.6
baz=126
C11A **Tepee Creek (N** 126.11 30 ⇑P PKPdf 01 09 19.0 -0.4
baz=126,SNR=6.4
A13A **Flathead Natio** 126.27 28 ⇓P PKPdf 01 09 20.4 +0.8
baz=126
G08A **Pilot Rock** 126.28 34 ⇓P PKPdf 01 09 20.0 +0.3
baz=126
LNOR **Lincton Mounta** 126.30 33 PKIKP PKPdf 01 09 20.1 +0.3
L04A **Klamath Falls** 126.31 39 ⇑P PKPdf 01 09 19.2 -0.6
baz=126
H07A **Lands Inn, Kim** 126.35 35 ⇑P PKPdf 01 09 20.4 +0.5
baz=126
I06A **Prineville** 126.35 36 ⇓P PKPdf 01 09 20.1 +0.1
baz=126
E10A **Myers Farm, Un** 126.55 32 ⇓P PKPdf 01 09 20.5 +0.3
baz=126
M04C **Macdoel** 126.55 39 ⇑P PKPdf 01 09 20.4 +0.1
baz=126
D11A **Klaveano Farm,** 126.59 31 ⇓P PKPdf 01 09 19.9 -0.4
baz=126
K05A **Summer Lake** 126.63 38 ⇓P PKPdf 01 09 21.0 +0.5
baz=126
B13A **Whitefish** 126.63 29 ⇑P PKPdf 01 09 20.4 +0.1
baz=126
M03C **McCloud** 126.64 40 ⇑P PKPdf 01 09 21.1 +0.6
baz=126
I07A **Izee** 126.69 36 ⇑P PKPdf 01 09 21.1 +0.5
baz=126
WDC **Whiskeytown Da** 126.72 41 ⇑P PKPdf 01 09 20.9 +0.2
baz=126
J06A **Christmas Vall** 126.78 37 ⇑P PKPdf 01 09 21.1 +0.4
baz=127
F10A **Beach Ranch, E** 126.81 33 ⇑P PKPdf 01 09 20.9 +0.2
baz=127,SNR=7.6
H08A **Prairie City** 126.91 35 ⇓P PKPdf 01 09 21.2 +0.3
baz=127
K06A **Valley Falls** 126.98 38 ⇑P PKPdf 01 09 21.7 +0.6
baz=127
L05A **Lakeview** 127.04 39 ⇓P PKPdf 01 09 21.9 +0.6
baz=127
C13A **Hot Springs** 127.06 30 ⇓P PKPdf 01 09 20.7 -0.4
baz=127
D12A **Red Ives Fores** 127.09 31 ⇑P PKPdf 01 09 20.7 -0.5
baz=127
E11A **Bogner Ranch,** 127.11 32 ⇓P PKPdf 01 09 20.5 -0.8
baz=127,SNR=10
G10A **Bishop Farm, J** 127.30 33 ⇓P PKPdf 01 09 21.5 -0.2
baz=127
I08A **Drewsey** 127.33 36 ⇑P PKPdf 01 09 22.3 +0.5
baz=127
LBCM **Butte Creek Ri** 127.36 40 P PKPdf 01 09 23.2 +1.2
C14A **Swan Lake** 127.40 29 ⇑P PKPdf 01 09 21.4 -0.4
baz=127
E12A **Beaver Dam Sad** 127.40 31 ⇓P PKPdf 01 09 22.3 +0.4
baz=127
F11A **Grangeville** 127.44 32 ⇓P PKPdf 01 09 21.7 -0.2
baz=127
MOD **Modoc** 127.45 39 ⇑P PKPdf 01 09 22.0 -0.1
baz=127
D13A **Huson** 127.52 30 ⇑P PKPdf 01 09 21.8 -0.3
baz=127
B15A **Bradely Ranch,** 127.58 28 ⇑P PKPdf 01 09 21.8 -0.3
baz=127
K07A **Rock Creek Ran** 127.65 37 ⇓P PKPdf 01 09 23.3 +0.8
baz=127
G11A **Walters Elk Ra** 127.70 33 ⇓P PKPdf 01 09 22.1 -0.3
baz=128
M06C **Likely Place G** 127.72 39 ⇑P PKPdf 01 09 22.7 0.0
baz=128
I09A **Lost Marbles R** 127.77 35 ⇑P PKPdf 01 09 23.2 +0.6
baz=128
O04C **Chester** 127.81 41 ⇑P PKPdf 01 09 23.1 +0.3
baz=128
ORV **Oroville** 127.94 42 ⇓P PKPdf 01 09 22.8 -0.2
baz=128
C15A **Salmond Ranch,** 127.94 28 ⇑P PKPdf 01 09 23.2 +0.4
baz=128
H10A **Noah's Angus R** 127.95 34 ⇓P PKPdf 01 09 22.3 -0.7
baz=128,SNR=5.2
MSO **Missoula** 127.96 30 *e*PKPdf PKPdf 01 09 21.6 -1.3
MSO *e* 01 09 31.1
D14A **Greenough** 128.00 30 ⇓P PKPdf 01 09 22.6 -0.3
baz=128
F12A **Elk City** 128.00 32 ⇑P PKPdf 01 09 22.4 -0.6
baz=128
Q03C **Winters** 128.06 43 ⇓P PKPdf 01 09 22.9 -0.4
baz=128
K08A **Mann Creek Ran** 128.08 37 ⇓P PKPdf 01 09 23.3 +0.1
baz=128
E13A **Victor** 128.10 31 ⇑P PKPdf 01 09 23.4 +0.2
baz=128
J09A **Fry Pan Ranch,** 128.14 36 ⇓P PKPdf 01 09 23.2 -0.2
baz=128
WVOR **Wild Horse Val** 128.16 37 *e*PKIKP PKPdf 01 09 24.1 +0.7
WVOR *e* 01 09 32.9
WVOR *e* 01 11 28.8
CHMT **Chamberlain Mo** 128.24 30 *e*PKPdf PKPdf 01 09 23.4 0.0
CHMT *e* 01 09 32.4
H11A **Donnelly** 128.28 33 ⇑P PKPdf 01 09 23.8 +0.2
baz=128,SNR=5.9
C16A **Fuhringer Ranc** 128.33 28 ⇓P PKPdf 01 09 23.0 -0.5
baz=128
N06A **Buffalo Meadow** 128.38 39 ⇑P PKPdf 01 09 23.8 -0.1
baz=128
M07A **Soldier Meadow** 128.44 38 ⇑P PKPdf 01 09 24.3 +0.3
baz=128
E14A **Clinton** 128.46 30 ⇓P PKPdf 01 09 24.0 +0.2
baz=128
F13A **Darby** 128.46 31 ⇓P PKPdf 01 09 24.1 +0.3
baz=128
L08A **Fields** 128.48 37 ⇑P PKPdf 01 09 25.0 +0.9
baz=128
JRSC **Jasper Ridge** 128.50 44 ⇓P PKPdf 01 09 23.8 -0.4
baz=128
D15A **Lincoln** 128.51 29 ⇑P PKPdf 01 09 24.2 +0.3
baz=128
K09A **Rome** 128.55 36 ⇑P PKPdf 01 09 24.7 +0.6
baz=128
P05C **Yuba Gap, Truc** 128.66 41 ⇓P PKPdf 01 09 24.4 0.0
baz=128
O06A **Flanigan** 128.70 40 ⇓P PKPdf 01 09 24.1 -0.4
baz=128
I11A **Placerville** 128.82 34 ⇓P PKPdf 01 09 24.8 +0.2
baz=129
LAVA **Lava Cap Winer** 128.85 42 ⇑P PKPdf 01 09 25.1 +0.2
baz=129
E15A **Deer Lodge** 128.88 30 ⇓P PKPdf 01 09 24.9 +0.3
baz=129
M08A **Happy Creek Ra** 128.89 38 ⇓P PKPdf 01 09 25.4 +0.5
baz=129
C17A **Wharram Farm,** 128.91 27 ⇑P PKPdf 01 09 24.4 -0.2
baz=129
N07B **Gerlach** 128.91 39 ⇓P PKPdf 01 09 25.1 +0.3
baz=129
G13A **Cobalt** 128.98 32 ⇓P PKPdf 01 09 23.9 -1.0
baz=129
H12A **Diamond D Ranc** 129.01 33 ⇓P PKPdf 01 09 25.7 +0.7
baz=129,SNR=5.7
EGMT **Eagleton** 129.07 26 ⇓P PKPdf 01 09 25.0 +0.1
baz=129
MFID **Camas Ranch** 129.21 34 ⇑P PKPdf 01 09 26.5 +1.1
baz=129,SNR=6.0
WCN **Washoe City** 129.22 41 ⇑P PKPdf 01 09 25.9 +0.3
baz=129
G14A **Jackson** 129.28 31 ⇓P PKPdf 01 09 26.1 +0.6
baz=129
O07A **Toulon** 129.31 40 ⇑P PKPdf 01 09 26.4 +0.7
baz=129
R05C **Kirkwood Meado** 129.32 42 ⇑P PKPdf 01 09 26.1 +0.3
baz=129
F15A **Butte** 129.36 30 ⇓P PKPdf 01 09 26.0 +0.4
baz=129
N08A **GE Springer Mi** 129.43 39 ⇓P PKPdf 01 09 26.6 +0.7
baz=129
CMB **Columbia Colle** 129.46 43 ⇓P PKPdf 01 09 26.2 +0.2
baz=129
K11A **Parker Ranch,** 129.49 35 ⇑P PKPdf 01 09 26.6 +0.7
baz=129
DLMT **Dillon** 129.65 31 *e*PKPdf PKPdf 01 09 26.7 +0.5
DLMT *e* 01 09 35.3
L10A **Juniper Basin** 129.67 36 ⇓P PKPdf 01 09 26.4 +0.1
baz=130
O08A **Rochester Mine** 129.70 39 ⇑P PKPdf 01 09 27.1 +0.7
baz=130
J12A **Stokes Ranch,** 129.72 34 ⇓P PKPdf 01 09 25.3 -1.1
baz=130,SNR=5.3
H14A **Leadore** 129.76 32 ⇓P PKPdf 01 09 26.1 -0.3
baz=130
N09A **Rock Creek Ran** 129.76 38 ⇓P PKPdf 01 09 26.5 0.0
baz=130
I13A **Wildhorse Cree** 129.83 33 ⇓P PKPdf 01 09 27.7 +1.2
baz=130,SNR=6.7
R06C **Coleville** 129.84 42 ⇑P PKPdf 01 09 27.2 +0.4
baz=130
G15A **Dillon** 129.84 31 ⇑P PKPdf 01 09 27.0 +0.5
baz=130
MCMT **McKenzie Canyo** 129.88 31 *e*PKPdf PKPdf 01 09 27.3 +0.7
HLID **Hailey** 129.90 33 ⇓P PKPdf 01 09 27.4 +0.7
baz=130,SNR=5.7
HLID **Hailey** 129.90 33 *e*PKPdf PKPdf 01 09 27.0 +0.4
HLID *e* 01 09 35.5
HLID *e*PP PP 01 11 38.7 +0.8
S06C **San Francisco** 129.91 43 ⇑P PKPdf 01 09 27.0 +0.2
baz=130
BOZ **Bozeman (W)** 129.93 30 ⇑P PKPdf 01 09 28.0 +1.4
baz=130
BOZ **Bozeman (W)** 129.93 30 *e*PKPdf PKPdf 01 09 27.8 +1.1
BOZ *e* 01 09 36.2
BOZ *e*PP PP 01 11 43.5 +5.6
L11A **Cat Creek Ranc** 130.03 36 ⇓P PKPdf 01 09 28.0 +1.0
baz=130,SNR=7.7
H15A **Lima** 130.14 31 ⇓P PKPdf 01 09 28.2 +1.1
baz=130
J13A **Cove Ranch, Pi** 130.14 33 ⇓P PKPdf 01 09 28.0 +0.9
baz=130,SNR=5.1
O09A **Fish Creek Ran** 130.37 39 ⇓P PKPdf 01 09 27.6 0.0
baz=130
PKD **Parkfield** 130.41 45 ⇓P PKPdf 01 09 27.5 -0.4
baz=130
T06C **Millerton Lake** 130.45 44 ⇓P PKPdf 01 09 28.6 +0.6
baz=130
M11A **Holland Ranch,** 130.46 36 ⇑P PKPdf 01 09 28.3 +0.5
baz=130
L12A **House Creek Ra** 130.47 35 ⇑P PKPdf 01 09 28.3 +0.5
baz=130
J14A **Carey** 130.55 33 ⇓P PKPdf 01 09 28.0 0.0
baz=130
KCC **Kaiser Creek** 130.56 43 ⇑P PKPdf 01 09 28.5 +0.4
baz=130
QLMT **Earthquake Lak** 130.61 30 *e*PKPdf PKPdf 01 09 29.2 +1.2
QLMT *e* 01 09 38.3
NVAR **Mina Array Bea** 130.64 41 PKP PKPdf 01 09 29.0 +0.7
comp=Z,2.6nm,0.7s,baz=263,slow=2.0,SNR=14
K13A **Stover Farm, H** 130.68 34 ⇑P PKPdf 01 09 29.3 +1.1
baz=130
H16A **Russell Place,** 130.79 30 ⇓P PKPdf 01 09 29.3 +0.9
baz=131
N11A **Elko Archery C** 130.87 37 ⇓P PKPdf 01 09 29.2 +0.6
baz=131
M12A **Wells** 130.99 36 ⇓P PKPdf 01 09 30.0 +1.2
baz=131,SNR=6.6
J15A **Blackfoot** 131.08 32 ⇓P PKPdf 01 09 29.8 +0.9
baz=131
ELK **Elko** 131.22 37 *e*PKIKP PKPdf 01 09 30.4 +1.1
ELK *e* 01 09 39.6
K14A **Jones Ranch, D** 131.25 34 ⇑P PKPdf 01 09 29.7 +0.4
baz=131
N12A **Clover Valley,** 131.27 37 ⇓P PKPdf 01 09 30.1 +0.7
baz=131
O11A **Cowboy Ranch,** 131.34 38 ⇑P PKPdf 01 09 30.2 +0.7
baz=131
M13A **Montello** 131.46 36 ⇑P PKPdf 01 09 31.4 +1.7
baz=131
K15A **Arbon** 131.51 33 ⇑P PKPdf 01 09 30.6 +0.9
baz=131
J16A **Bone** 131.60 32 ⇑P PKPdf 01 09 30.2 +0.3
baz=131
RRI2 **Red Ridge** 131.70 32 *e*PKPdf PKPdf 01 09 31.2 +1.0
RRI2 *e* 01 09 40.0
O12A **Currie** 131.81 37 ⇓P PKPdf 01 09 30.9 +0.5
baz=132
M14A **Sheep Mountain** 131.84 35 ⇑P PKPdf 01 09 31.4 +1.0
baz=132,SNR=9.9
REDW **Red Top Meadow** 131.94 31 *e*PKPdf PKPdf 01 09 30.6 +0.1
REDW *e* 01 09 40.5
REDW *e*PP PP 01 11 50.6 -0.4
ISA **Isabella** 132.00 44 ⇑P PKPdf 01 09 31.4 +0.4
baz=132

L15A	Malad City	132.05	34	⇓P		PKPdf	01 09 31.6 +0.8
	baz=132						
ULM	Lac du Bonnet	132.07	15	PKP		PKPdf	01 09 31.0 +0.4
	comp=Z,6.9nm,0.9s,baz=10,slow=1.8,SNR=7.3						
ULM	Lac du Bonnet	132.07	15	PKP		PKPdf	01 09 31.0 +0.4
Q11A	Duckwater	132.11	39	⇑P		PKPdf	01 09 31.7 +0.6
	baz=132						
P12A	McGill	132.19	38	⇑P		PKPdf	01 09 31.5 +0.3
	baz=132						
N14A	Grayback Hills	132.35	35	⇓P		PKPdf	01 09 32.9 +1.4
	baz=132,SNR=6.4						
R11A	Troy Canyon, C	132.44	40	⇓P		PKPdf	01 09 33.2 +1.5
	baz=132						
MPMC	Manual Prospec	132.47	43	⇓P		PKPdf	01 09 32.7 +0.9
	baz=132						
Q12A	Willow Creek R	132.51	38	⇓P		PKPdf	01 09 32.9 +1.1
	baz=132						
N15A	Stansbury Isla	132.71	35	⇑P		PKPdf	01 09 33.1 +1.0
	baz=132						
EDW2	Edwards Air Fo	132.74	45	⇓P		PKPdf	01 09 32.9 +0.5
	baz=132						
P13A	Bates Ranch, G	132.75	37	⇑P		PKPdf	01 09 33.3 +1.1
	baz=132						
HWUT	Hardware Ranch	132.77	34	*e*PKPdf		PKPdf	01 09 32.8 +0.6
HWUT				*e*			01 09 41.1
DUG	Dugway	133.00	36	⇓P		PKPdf	01 09 33.2 +0.5
	baz=133						
DUG	Dugway	133.00	36	*e*PKPdf		PKPdf	01 09 33.4 +0.8
DUG				*e*			01 09 43.3
Q13A	Wheeler Ranch,	133.06	38	⇑P		PKPdf	01 09 33.2 +0.3
	baz=133,SNR=5.8						
T11A	Corn Creek, Al	133.33	41	⇓P		PKPdf	01 09 34.2 +0.8
	baz=133						
GSC	Goldstone	133.35	44	⇓P		PKPdf	01 09 34.2 +0.8
	baz=133						
GSC	Goldstone	133.35	44	*e*PKPdf		PKPdf	01 09 33.6 +0.1
Q14A	Sevier Lake (B	133.49	37	⇓P		PKPdf	01 09 34.6 +1.0
	baz=133						
N17A	Moffit Pass	133.62	34	⇓P		PKPdf	01 09 34.8 +1.0
	baz=133						
S13A	Holt Ranch, En	134.00	39	⇓P		PKPdf	01 09 35.9 +1.3
	baz=134						
Q15A	Fillmore	134.02	37	⇓P		PKPdf	01 09 35.6 +1.0
	baz=134						
O17A	Robinson Place	134.19	34	⇓P		PKPdf	01 09 36.1 +1.2
	baz=134						
U12A	Valley of Fire	134.24	41	⇑P		PKPdf	01 09 35.6 +0.5
	baz=134						
T13A	Saint George	134.30	40	⇑P		PKPdf	01 09 36.1 +0.9
	baz=134,SNR=5.6						
GMRC	Granite Mounta	134.42	44	⇓P		PKPdf	01 09 36.7 +1.2
	baz=134						
V12A	Nelson	134.44	42	⇑P		PKPdf	01 09 36.1 +0.6
	baz=134						
MSU	Marysvale	134.46	37	*e*PKIKP		PKPdf	01 09 35.5 0.0
PLCA	Paso Flores	134.48	189	PKP		PKPdf	01 09 33.3 -2.2
	comp=Z,1.8nm,1.0s,baz=239,slow=7.2,SNR=3.0						
PFO	Pinyon Flat Ob	134.49	46	⇑P		PKPdf	01 09 36.0 +0.3
	baz=134						
O18A	Roosevelt	134.55	34	⇑P		PKPdf	01 09 36.3 +0.7
	baz=134						
N19A	John Jarvie Ra	134.56	33	⇑P		PKPdf	01 09 35.4 -0.2
	baz=134						
BELC	Belle Mtn.	134.60	45	⇓P		PKPdf	01 09 36.2 +0.3
	baz=134						
RSSD	Black Hills	134.61	26	*e*PKIKP		PKPdf	01 09 35.4 -0.2
RSSD				*e*			01 12 07.6
P17A	Butcher Ranch,	134.67	35	⇑P		PKPdf	01 09 36.4 +0.6
	baz=134						
T14A	Hurricane	134.80	39	⇓P		PKPdf	01 09 36.9 +0.8
	baz=135						
P18A	Preston Nutter	134.85	35	⇓P		PKPdf	01 09 37.3 +1.2
	baz=135						
R16A	Teasdale	135.02	37	⇓P		PKPdf	01 09 37.7 +1.2
	baz=135						
SRU	San Rafael	135.04	35	⇑P		PKPdf	01 09 37.7 +1.2
	baz=135						
U14A	Mt Trumbull	135.13	40	⇑P		PKPdf	01 09 37.8 +1.0
	baz=135						
BC3	Big Chuckw Mtn	135.17	45	⇓P		PKPdf	01 09 37.6 +0.7
	baz=135						
Q18A	Rafter H Ranch	135.27	35	⇑P		PKPdf	01 09 38.0 +1.1
	baz=135						
S16A	Weppner Ranch,	135.31	38	⇓P		PKPdf	01 09 39.1 +2.0
	baz=135,SNR=7.5						
R17A	Hanksville Air	135.39	36	⇓P		PKPdf	01 09 38.3 +1.1
	baz=135						
W13A	Hualapai Mount	135.44	42	⇓P		PKPdf	01 09 38.9 +1.5
	baz=135						
P19A	Cripple Cowboy	135.55	34	⇑P		PKPdf	01 09 38.9 +1.4
	baz=135						
V14A	Boquillas Ranc	135.65	41	⇓P		PKPdf	01 09 39.4 +1.6
	baz=135						
U15A	North Rim	135.69	40	⇓P		PKPdf	01 09 39.4 +1.6
	baz=136						
PDMCI	Parker Dam,Lak	135.73	43	⇑P		PKPdf	01 09 39.0 +1.1
	baz=136						
X13A	Yucca	135.77	43	⇓P		PKPdf	01 09 39.0 +0.9
	baz=136						
Q19A	Hogan Spring (	135.87	35	⇓P		PKPdf	01 09 39.1 +1.1
	baz=136						
R18A	Canyonlands Na	135.89	36	⇓P		PKPdf	01 09 39.0 +0.9
	baz=136						
W14A	Seligman	135.91	41	⇓P		PKPdf	01 09 40.2 +1.9
	baz=136,SNR=5.0						
GLA	Glamis	135.94	45	⇓P		PKPdf	01 09 39.2 +0.8
	baz=136						
V15A	Kaibab Nationa	136.14	40	⇑P		PKPdf	01 09 40.6 +2.0
	baz=136						
Y13A	Salome	136.22	44	⇑P		PKPdf	01 09 40.5 +1.7
	baz=136						
T17A	Navajo Res., N	136.26	38	⇓P		PKPdf	01 09 40.4 +1.5
	baz=136						
S18A	Hurst Farm, BI	136.30	36	⇓P		PKPdf	01 09 40.5 +1.6
	baz=136						
W15A	Williams	136.47	41	⇑P		PKPdf	01 09 41.6 +2.3
	baz=136						
X14A	Yava	136.48	42	⇓P		PKPdf	01 09 41.1 +1.8
	baz=136						
U17A	Shonto	136.60	38	⇑P		PKPdf	01 09 41.7 +2.2
	baz=136						
Y14A	Wickenburg	136.71	43	⇓P		PKPdf	01 09 41.2 +1.4
	baz=136						
T18A	Mexican Hat	136.73	37	⇓P		PKPdf	01 09 41.2 +1.5
	baz=136						
X15A	Humboldt	136.90	42	⇓P		PKPdf	01 09 41.8 +1.7
	baz=137						
Y15A	Casa Rosa Ranc	137.15	42	⇓P		PKPdf	01 09 42.0 +1.4
	baz=137						
U18A	Rough Rock, Ch	137.21	38	⇓P		PKPdf	01 09 42.5 +1.8
	baz=137						
X16A	Lo Mia Camp, P	137.47	41	⇓P		PKPdf	01 09 42.8 +1.6
	baz=137						
V18A	Ganado	137.63	39	⇓P		PKPdf	01 09 43.5 +2.0
	baz=137						
ECSD	EROS,Sioux Fal	137.76	19	*e*PKPdf		PKPdf	01 09 41.6 +0.2
Y16A	Circle Bar Ran	137.77	42	⇓P		PKPdf	01 09 43.8 +2.0
	baz=138						
X17A	Forest Lakes	137.94	41	⇑P		PKPdf	01 09 44.1 +2.0
	baz=138						
214A	Organ Pipe Nat	137.96	45	⇓P		PKPdf	01 09 44.5 +2.3
	baz=138						
Y17A	Roosevelt	138.30	42	⇓P		PKPdf	01 09 44.4 +1.6
	baz=138						
Y18A	Canyon Day Jun	138.78	41	⇓P		PKPdf	01 09 45.2 +1.6
	baz=139						
SDCO	Great Sand Dun	138.80	33	*e*PKPdf		PKPdf	01 09 43.6 0.0
SDCO				*e*			01 09 52.3
SDCO				*e*PP		PP	01 12 35.6 +1.3
X19A	St. Johns	138.85	40	⇓P		PKPdf	01 09 45.5 +1.7
	baz=139						
TUC	Tucson	139.17	43	*e*PKIKP		PKPdf	01 09 44.3 -0.1
Y19A	Nutrioso	139.18	40	⇓P		PKPdf	01 09 45.7 +1.3
	baz=139						
217A	Green Valley	139.46	44	⇑P		PKPdf	01 09 46.3 +1.4
	baz=139						
118A	Homack Ranch,	139.52	42	⇓P		PKPdf	01 09 46.2 +1.2
	baz=139						
ANMO	Albuquerque	140.25	37	*e*PKHKP			01 09 40.0
JFWS	Jewell Farm	140.30	13	PKIKP		PKPdf	01 09 44.6 -1.5
219A	White Tail Can	140.39	42	⇓P		PKPdf	01 09 48.0 +1.4
	baz=140						
BNM	Barren Site	140.69	38	*e*PKPdf		PKPdf	01 09 50.2 +3.1
319A	Douglas	140.75	43	⇑P		PKPdf	01 09 49.4 +2.1
	baz=141						
CPUP	Villa Florida	143.06	213	PKP		PKPdf	01 09 51.2 -0.4
	comp=Z,0.7nm,0.6s,baz=173,slow=15,SNR=2.9						
BDFB	Brasilia	143.59	236	PKP		PKPdf	01 09 53.3 +0.6
	comp=Z,1.2nm,0.5s,baz=66,slow=16,SNR=2.4						
ACSO	Alum Creek Sta	144.10	5	*e*PKPdf		PKPdf	01 09 49.0 -3.9
WMOK	Wichita Mounta	144.57	29	*e*PKIKP		PKPdf	01 09 51.7 -2.2
CCM	Cathedral Cave	144.60	17	*e*PKIKP		PKPdf	01 09 51.9 -2.0
BLO	Bloomington	144.66	10	*e*PKIKP		PKPdf	01 09 52.0 -2.0
OLIL	Olney	144.77	13	*e*PKIKP		PKPdf	01 09 52.4 -1.7
MCWV	Mont Chateau	144.86	1	*e*PKPdf		PKPdf	01 09 52.9 -1.4
FVM	French Village	144.91	16	*e*PKIKP		PKPdf	01 09 52.6 -1.8
SDMD	Soldier's Deli	145.07	357	*e*PKP		PKPdf	01 09 53.3 -1.4
SIUC	Southern Illin	145.48	15	*e*PKPdf		PKPdf	01 09 55.2 -0.3
USIN	University of	145.60	12	*e*PKPdf		PKPdf	01 09 54.9 -0.7
USIN				*e*			01 10 03.2
WCI	Wyandotte Cave	145.62	10	*e*PKIKP		PKPdf	01 09 55.4 -0.2
TXAR	Lajitas Array	145.79	41	PKPbc		PKPbc	01 09 57.0 +0.3
	comp=Z,62nm,1.0s,baz=282,slow=1.6,SNR=295						
GLAT	Glass	146.82	16	*e*PKPdf		PKPdf	01 09 58.2 +0.5
UTMT	University of	146.87	15	*e*PKP		PKPdf	01 09 58.7 +0.9
GNAR	Gosnell	146.91	17	*e*PKP		PKPdf	01 09 57.1 -0.8
URVA	University of	146.93	358	*e*PKPdf		PKPdf	01 09 59.5 +1.6
URVA				*e*			01 10 07.7
MIAR	Mount Ida	147.00	23	*e*PKP2		PKPab	01 09 59.8 -1.7
HBAR	Harrisburg	147.10	18	*e*PKP		PKPdf	01 09 57.6 -0.7
HALT	Halls	147.15	16	*e*PKP		PKPdf	01 09 58.6 +0.3
ELN	Prospectdale	147.25	3	*e*PKPdf		PKPdf	01 09 58.7 +0.3
UALR	University of	147.25	21	*e*PKPdf		PKPdf	01 09 59.0 +0.5
BLA	Blacksburg	147.28	2	*e*PKP2		PKPbc	01 09 58.7 -2.1
WVT	Waverly	147.32	14	*e*PKIKP		PKPdf	01 09 58.5 -0.1
WVT				*e*			01 10 09.1
JCT	Junction City	147.35	35	*e*PKP2		PKPbc	01 09 59.4 -1.8
TZTN	Tazewell	147.69	7	*e*PKPdf		PKPdf	01 09 59.2 0.0
TZTN				*e*			01 10 09.3
OXF	Oxford	148.44	17	*e*PKP2		PKPbc	01 10 03.4 -0.6
TKL	Tuckaleechee C	148.53	8	*e*PKP		PKPbc	01 10 03.3 -0.9
TKL				*e*			01 10 11.8
SWET	Sewanee	148.61	11	*e*PKP		PKPdf	01 10 01.6 +0.9
CPCT	Cooper Cave	148.63	9	*e*PKPdf		PKPdf	01 10 01.4 +0.6
CPCT				*e*PKPbc		PKPbc	01 10 04.4 0.0
CPCT				*e*PKPab		PKPab	01 10 07.7 -0.2
CPCT				*e*			01 10 12.3
NATX	Nacogdoches	148.96	27	*e*PKP		PKPbc	01 10 06.0 +0.5
CNNC	Cliffs of the	149.27	358	*e*PKPbc		PKPbc	01 10 05.8 -0.3
HKT	Hockley	149.90	30	*e*PKHKP			01 10 04.2
HKT				*e*			01 10 08.7
JSC	Jenkinsville	150.15	4	*e*PKP2		PKPbc	01 10 07.8 -0.5
VBMS	Vicksburg	150.21	20	*e*PKPdf		PKPdf	01 10 03.8 +0.4
VBMS				*e*PKPbc		PKPbc	01 10 08.9 +0.4
LRAL	Lakeview Retre	150.48	14	*e*PKPdf		PKPdf	01 10 03.8 0.0
LRAL				*e*PKPbc		PKPbc	01 10 08.5 -0.6
LRAL				*e*			01 10 14.6
GOGA	Godfrey	150.78	8	*e*PKIKP		PKPdf	01 10 03.5 -0.7
GOGA				*e*			01 10 09.6
LVC	Limon Verde	151.49	199	*e*PKPdf		PKPdf	01 10 06.3 +0.7
LVC				*e*PKPbc		PKPbc	01 10 13.8 +2.1
LVC				*e*PKPab		PKPab	01 10 21.6 +1.6
LPAZ	La Paz	156.91	207	PKP		PKPdf	01 10 12.6 -0.8
	comp=Z,0.5nm,0.6s,baz=144,slow=8.7,SNR=2.1						
LPAZ				PKPab		PKPab	01 10 45.0 +1.9
	comp=Z,2.0nm,1.1s,baz=78,slow=9.2,SNR=3.3						
LPAZ	La Paz	156.91	207	PKP		PKPdf	01 10 12.6 -0.8
LPAZ				PKPab		PKPab	01 10 45.0 +1.9
OTAV	Otavalo	175.88	185	*e*PKPdf		PKPdf	01 10 28.7 +0.6

IDC 20 00:50:46.8±6.4, 2191S×7011W, h306km±116km, mb3.7/1, mb1 3.2/3, mb1mx3.0/17, mbtmp3.1/3, Error ellipse: s-maj=574.6km s-min=22.6km az=108.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	5.90	19	P	Pn	00 52 15.7	+0.6
	0.7nm,0.3s,baz=186,slow=9.2,SNR=16						
LPAZ				S	S	00 53 27.9	+1.6
	0.1nm,0.3s,baz=19,slow=18,SNR=2.1						
PLCA	Paso Flores	18.77	181	P	P	00 54 44.3	+0.2
	0.1nm,0.3s,baz=356,slow=11,SNR=4.4						
TORD	Torodi Ar. Bea	78.54	71	P	P	01 02 15.2	+0.1
	1.4nm,0.4s,baz=255,slow=5.8,SNR=60						

*NIED **20** 01:00:00, 2390N×125.00E, h35km, Mw3.7 Best double couple: M₀4.48000×10¹⁴ NP1:φ₈45.00000°, δ77.00000°, λ89.00000°. NP2:φ₈230.00000°, δ13.00000°, λ95.00000°.*
*JMA **20** 01:00:34.9±0.3, 2390N×124.96E, h21km, M3.5*

ISC 20 01:00:33.9±3.0, 239N±01×12497E±009, h16km±13km, n6, σ0°34/10, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTJ	Tarama	0.82	343	P	Pg	01 00 49.4	-0.4
JKRS	Kuro-shima	0.96	294	P	Pb	01 00 52.5	+0.4
JKRS				*e*S	Sg	01 01 05.3	+0.3
JOGS	Gusukube	0.98	24	P	Pb	01 00 52.7	+0.1
JOGS				S	Sb	01 01 05.9	+0.6
JMJ	Miyako jima 2	1.00	17	P	Pb	01 00 52.5	-0.3
JMJ				S	Sb	01 01 05.4	-0.3
HATJ	Hateruma jima	1.08	281	P	Pb	01 00 54.4	+0.1
HATJ				*e*S	Sb	01 01 07.9	-0.3
YOJ	Yonaguni jima	1.89	289	P	Pn	01 01 05.4	-0.1

*BJI **20** 01:25:43.8, 433S×100.27E, h15km, mB4.9, mb4.9, Ms4.6, Msz4.6*
*NEIC **20** 01:25:47.9±8.1, 389S×100.57E, h9km±48km, mb4.5/13, Error ellipse: s-maj=27.2km s-min=7.1km az=51.0*
*IDC **20** 01:25:47.2±1.3, 382S×100.70E, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.2/22, mbtmp4.2/13, ML4.4/1, MS3.9/1, Ms1 4.1/1, ms1mx3.1/26, Error ellipse: s-maj=45.5km s-min=14.7km az=55.0*
*DJA **20** 01:25:51, 377S×100.47E, h20km, MLv4.6/6*
*ISCJB **20** 01:25:54.0±1.8, 38S±0.1×100.8E±0.1, h67km±13km, mb4.5/32, Error ellipse: s-maj=28.2km s-min=7.7km az=144.9*

ISC 20 01:25:54.9±1.8, 38S±01×1007E±01, h56km±13km, n55, σ1§14/48, mb4.6/32, MS4.2/2, 1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	Kerinci	1.81	23	P	Pn	01 26 23.7	0.0
	0.0nm,0.0s						
KSI	Kapahiang	1.85	87	P	Pn	01 26 24.3	0.0
	0.0nm,0.0s						
PPI	Padang Panjang	3.30	354	P	Pn	01 26 41.5	-2.6
	0.0nm,0.0s						
RGRI	Rengat	3.75	25	P	Pn	01 26 49.6	-0.6
	0.0nm,0.0s						
DBJI	Dramaga	6.59	115	P	Pn	01 27 29.1	-0.2
	0.0nm,0.0s						
SKJI	Sukabumi	6.62	119	P	Pn	01 27 32.7	+3.0
	0.0nm,0.0s						
LEM	Lembang	7.49	114	P	Pn	01 27 43.4	+1.8
	0.0nm,0.0s						
KAPI	Kappang	19.00	94	P	Pn	01 30 11.3	-2.0
	1.2nm,0.3s,baz=275,slow=8.9,SNR=4.4						
CMAR	Chiang Mai Anr	22.15	355	P	P	01 30 44.5	-1.6
	5.0nm,0.7s,mb4.0,baz=184,slow=9.2,SNR=18						
CMAR				LR	LR	01 41 04.2	
	comp=Z,299nm,18.5s,MS3.7,baz=60,slow=41						
CHTO	Chiang Mai	22.50	356	*e*P	P	01 30 49.6	-0.2
	7.6nm,1.1s,mb4.0						
FITZ	Fitzroy Crossi	28.23	122	*e*P	P	01 31 42.3	-0.4
	8.6nm,1.2s,mb4.3						
FITZ	Fitzroy Crossi	28.23	122	P	P	01 31 42.5	-0.3
	2.6nm,1.1s,mb3.8,baz=283,slow=11,SNR=3.7						
ODAN	Odare	33.07	338	*e*P	P	01 32 29.5	+4.2
	17nm,0.5s,mb5.2						
TAPN	Taplejung	33.39	339	*e*P	P	01 32 28.1	0.0
	35nm,0.9s,mb5.3						
RAMN	Ramite	33.45	337	*e*P	P	01 32 33.5	+4.9
JIRN	Jiri	34.25	337	*e*P	P	01 32 38.3	+2.8
	19nm,0.6s,mb5.2						
PKI	Pulchoki	34.48	336	*e*P	P	01 32 42.5	+4.9
	5.7nm,0.5s,mb4.8						
LSA	Lhasa	34.52	345	*e*P	P	01 32 38.6	+0.8
	8.0nm,0.4s,mb5.0						
GUN	Gumba	34.59	336	*e*P	P	01 32 42.2	+3.7
	36nm,0.4s,mb5.6						
DMN	Daman	34.65	335	*e*P	P	01 32 45.3	+6.3
KKN	Kakani	34.73	336	*e*P	P	01 32 43.3	+3.6
GKN	Gorkha	35.19	335	*e*P	P	01 32 48.2	+4.6
	11nm,0.4s,mb5.2						
DANN	Dangsing	35.87	334	*e*P	P	01 32 55.0	+5.5
	31nm,0.5s,mb5.5						
WRA	Warramunga Arr	36.48	119	P	P	01 32 54.5	-0.4
	2.3nm,0.5s,mb4.4,baz=295,slow=9.3,SNR=8.4						
WRAB	Tennant Creek	36.49	119	*e*P	P	01 32 54.6	-0.3
	4.1nm,0.6s,mb4.5						
WB2	Warramunga Arr	36.49	119	*e*P	P	01 32 55.1	+0.1
ASAR	Alice Springs	37.63	125	P	P	01 33 04.0	-0.5
	0.9nm,0.8s,mb3.6,baz=294,slow=7.9,SNR=9.3						
LZH	Lanzhou	39.75	4	*e*P	P	01 33 23.0	+0.9
LZH				AP	pP	01 33 30.6	-6.0
LZH				XP	sP	01 33 34.0	-9.2
LZH				AMB	AMB		
	comp=Z,29nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,110nm,4.9s						
LZH				LR	LR		
	comp=E,345nm,10.8s						
LZH				LR	LR		
	comp=Z,515nm,12.0s,MS4.6						
CTA	Charters Tower	47.20	114	P	P	01 34 21.2	-1.1
	comp=Z,3.9nm,1.0s,mb4.3,baz=286,slow=7.7,SNR=4.7						
CTAO	Charters Tower	47.20	114	*e*P	P	01 34 22.2	-0.2
	comp=Z,5.3nm,0.9s,mb4.5						
STKA	Stephens Creek	47.44	131	P	P	01 34 23.3	-0.7
	comp=Z,3.3nm,0.7s,mb4.4,baz=312,slow=9.5,SNR=5.0						
KSRS	Korea Array	48.17	29	P	P	01 34 30.4	+0.9
	comp=Z,1.0nm,0.5s,mb4.1,baz=221,slow=9.0,SNR=5.2						
WMQ	Urumqi	48.80	347	⇓*i*P	P	01 34 34.8	+0.5
WMQ				AMB	AMB		
	comp=Z,25nm,0.9s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,142nm,4.8s						
SONM	Songino Array	51.62	5	P	P	01 34 56.8	+1.2
	comp=Z,2.4nm,0.5s,mb4.4,baz=186,slow=9.1,SNR=26						
ULN	Ulaanbaatar	51.71	5	*e*P	P	01 34 57.4	+1.1
	comp=Z,7.7nm,1.1s,mb4.5						
TKM2	Tokmak 2	51.73	337	*e*P	P	01 34 55.3	-1.3
	comp=Z,3.3nm,0.5s,mb4.5						
EKS2	Erkin-Say	52.26	335	*e*P	P	01 34 59.2	-1.3
	comp=Z,3.6nm,0.8s,mb4.3						
MKAR	Makanchi Array	52.92	344	P	P	01 35 04.4	-0.8
	comp=Z,3.2nm,0.8s,mb4.3,baz=149,slow=9.1,SNR=23						
MJAR	Matsushiro Arr	53.19	38	P	P	01 35 08.3	+0.9
	comp=Z,0.9nm,0.4s,mb4.0,baz=171,slow=8.3,SNR=3.4						
TLY	Talaya	55.29	2	*e*P	P	01 35 23.1	+0.7
	comp=Z,2.8nm,0.7s,mb4.4						
KURK	Kurchatov	57.50	344	*e*P	P	01 35 36.7	-1.4
	comp=Z,3.2nm,0.8s,mb4.4						
ZALV	Zalesovo Beam	59.03	349	P	P	01 35 47.9	-0.9
	comp=Z,6.5nm,0.8s,mb4.7,baz=177,slow=5.5,SNR=26						
BRVK	Borovoye	62.15	340	*e*P	P	01 36 09.5	-0.5
	comp=Z,3.6nm,0.6s,mb4.7						
KIV	Kislovodsk	70.35	319	*e*P	P	01 37 03.0	+0.2
	comp=Z,13nm,1.1s,mb4.8						
MALT	Malatya	71.07	313	*e*P	P	01 37 06.3	-1.0
	comp=Z,3.0nm,1.0s,mb4.2						
BUR08	Bucovina Ar. S	83.08	319	*e*P	P	01 38 13.6	-0.9
GERES	GERESS Array B	90.86	319	P	P	01 38 54.5	+2.3
	comp=Z,1.1nm,0.9s,mb4.2,baz=45,slow=2.5,SNR=6.6						
GERES	GERESS Array B	90.86	319	P	P	01 38 54.5	+2.3
DUG	Dugway	132.76	35	*e*PKPdf	PKPdf	01 45 04.4	+0.5
WMOK	Wichita Mounta	144.25	28	*e*PKPdf	PKPdf	01 45 22.6	-2.5
TXAR	Lajitas Array	145.61	40	PKPbc	PKPbc	01 45 29.0	+1.2
	comp=Z,3.0nm,0.8s,baz=296,slow=1.1,SNR=24						
TXAR	Lajitas Array	145.61	40	PKPbc	PKPbc	01 45 29.0	+1.2
MIAR	Mount Ida	146.61	22	*e*PKPbc	PKPbc	01 45 32.2	+1.5
WVT	Waverly	146.84	13	*e*PKPbc	PKPbc	01 45 30.4	-0.9
JCT	Junction City	147.10	34	*e*PKPbc	PKPbc	01 45 32.4	+0.2

*ISCJB **20** 01:54:20.0±1.0, 580S±0.1×264W±0.4, h10km, mb4.0/5, Error ellipse: s-maj=33.0km s-min=16.3km az=159.1*
*IDC **20** 01:54:19.9±1.2, 5809S×2666W, h0km, mb4.0/4, mb1 4.0/4, mb1mx3.8/15, mbtmp4.0/4, Error ellipse: s-maj=45.8km s-min=28.2km az=57.0*
*NEIC **20** 01:54:27.8±0.8, 5809S×2637W, mb4.0/3, Error ellipse: s-maj=28.4km s-min=15.0km az=68.0*

ISC 20 01:54:21.9±1.0, 580S±01×264W±04, h10km, n10, σ0§65/9, mb4.0/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	16.78	154	*e*Pn	Pn	01 58 17.2	+0.5
	13nm,1.0s						
SNAA				Sn	Sn	02 01 08.2	-15
MAW	Mawson	38.32	142	P	P	02 01 41.8	-0.4
	0.6nm,0.5s,mb3.6,baz=246,slow=12,SNR=4.0						
LPAZ	La Paz	51.88	306	P	P	02 03 29.9	-0.5
	0.7nm,0.8s,mb3.6,baz=166,slow=8.3,SNR=3.2						
LPAZ	La Paz	51.88	306	*e*P	P	02 03 29.9	-0.4
	0.8nm,0.7s,mb3.8						
LSZ	Lusaka	58.69	67	*e*P	P	02 04 18.3	-1.2
	2.2nm,0.8s,mb4.2						
DBIC	Dimbokro	66.77	23	P	P	02 05 13.7	+0.4
	1.4nm,0.5s,mb4.2,baz=170,slow=6.8,SNR=6

comp=Z,200nm,1.8s,mb5.3
STKA Stephens Creek 27.16 346 *e*P **P 02 29 51.1 +0.2**
comp=Z,13nm,1.0s,mb4.4
STKA *e* 02 34 47.9
STKA Stephens Creek 27.16 346 P **P 02 29 50.4 -0.5**
comp=Z,10nm,1.0s,mb4.3,baz=169,slow=11,SNR=9.3
STKA LR LR 02 38 00.6
comp=Z,880nm,20.5s,MS4.3,baz=175,slow=31
URZ Urewera 27.21 54 P **P 02 29 50.2 -1.2**
comp=Z,44nm,1.0s,mb4.9,baz=285,slow=5.8,SNR=6.3
URZ LR LR 02 40 05.5
comp=Z,3µm,18.1s,MS4.9,baz=212,slow=35
FORT Forrest 31.26 324 *e*P **P 02 30 27.1 -0.3**
comp=Z,55nm,0.7s,mb5.5
QSPA South Pole Qui 31.54 180 P **P 02 30 29.0 -0.5**
comp=Z,15nm,0.8s,mb4.9,baz=356,slow=3.9,SNR=35
NWAO Narrogin (SRO) 33.35 306 LR LR 02 39 46.8
comp=Z,369nm,19.5s,MS4.1,baz=147,slow=28
KLBR Kellerberrin 34.29 308 *e*P **P 02 30 54.6 +0.7**
comp=Z,26nm,1.0s,mb5.1
ASAR Alice Springs 36.50 336 P **P 02 31 12.6 -0.4**
comp=Z,10.0nm,0.9s,mb4.6,baz=166,slow=9.0,SNR=40
ASAR PcP PcP 02 33 34.7 -1.8
comp=Z,5.9nm,1.0s,baz=168,slow=3.2,SNR=7.4
MAW Mawson 36.88 220 *e*P **P 02 31 15.7 0.0**
comp=Z,13nm,1.0s,mb4.7
MAW *e*S **S 02 37 14.0 +14**
MAW Mawson 36.88 220 P **P 02 31 16.0 +0.3**
comp=Z,8.3nm,0.7s,mb4.7,baz=121,slow=11,SNR=38
MAW LR LR 02 46 12.7
comp=Z,4µm,18.4s,MS5.2,baz=100,slow=36
MAW Mawson 36.88 220 *e*P **P 02 31 15.7 0.0**
MAW pmax pmax
comp=Z,13nm,1.0s
RAO Raoul Island 37.05 52 LR LR 02 44 42.5
comp=Z,2µm,19.8s,MS4.8,baz=176,slow=33
CTA Charters Tower 38.47 356 *e*P **P 02 31 29.9 +0.2**
comp=Z,30nm,1.1s,mb4.9
CTA Charters Tower 38.47 356 *e*P **P 02 31 29.9 +0.2**
CTA pmax pmax
comp=Z,30nm,1.1s
CTAO Charters Tower 38.47 356 *e*P **P 02 31 29.9 +0.2**
CTAO pmax pmax
comp=Z,77nm,1.2s,mb5.3
CTAO Charters Tower 38.47 356 *e*P **P 02 31 29.9 +0.2**
comp=Z,77nm,1.2s,mb5.3
WB2 Warramunga Arr 40.03 338 *e*P **P 02 31 41.4 -1.2**
WB2 *e*SS SS 02 40 38.9 -6.3
WRA Warramunga Arr 40.03 338 P **P 02 31 41.5 -1.2**
comp=Z,15nm,0.8s,mb4.8,baz=166,slow=7.2,SNR=43
WRA LR LR 02 46 09.5
comp=Z,885nm,20.1s,MS4.6,baz=170,slow=33
WRAB Tennant Creek 40.03 338 P **P 02 31 42.0 -0.7**
comp=Z,151nm,1.1s,mb5.6,SNR=11
WRAB Tennant Creek 40.03 338 *e*P **P 02 31 41.3 -1.4**
WRAB pmax pmax
comp=Z,117nm,1.7s,mb5.3
WRAB Tennant Creek 40.03 338 *e*P **P 02 31 41.3 -1.4**
comp=Z,117nm,1.7s,mb5.3
MBWA Marble Bar 42.93 318 *e*P **P 02 32 06.3 -0.2**
comp=Z,53nm,0.9s,mb5.3
SYO Syowa Base 42.99 210⇑*e*P **P 02 32 04.0 -2.5**
SYO Syowa Base 42.99 210⇓*e*pP pP 02 32 06.0 -3.6
FITZ Fitzroy Crossi 43.90 327 *e*P **P 02 32 14.0 -0.3**
comp=Z,14nm,0.8s,mb4.8
COEN Coen 44.73 352 *e*P **P 02 32 20.5 -0.5**
comp=Z,33nm,1.3s,mb5.0
NVL N'lazarevskaya 47.47 198*c i*P **P 02 32 40.8 -1.2**
NVL *e**PP pP 02 32 46.7 +1.6
NVL *e*S **S 02 39 38.8 +2.9**
NVL pmax pmax
comp=Z,98nm,1.2s,mb5.6
NVL MLR MLR
comp=N,4µm,25.0s,MS5.3
NVL MLR MLR
comp=E,2µm,25.0s,MS5.3
NVL MLR MLR
comp=Z,6µm,25.0s,MS5.4
MAIT Maitri 47.48 198 *e*P **P 02 32 41.9 -0.1**
SNAA Sanae 48.58 191 *e*P **P 02 32 49.8 -0.8**
comp=Z,73nm,1.1s,mb5.6
PMG Port Moresby 49.06 358 *e*P **P 02 32 54.9 +0.1**
PMG pmax pmax
comp=Z,68nm,1.3s
PMG Port Moresby 49.06 358 *e*P **P 02 32 54.9 0.0**
comp=Z,68nm,1.3s,mb5.5
HNR Honiara 49.72 14 LR LR 02 49 36.5
comp=Z,1µm,21.1s,MS4.8,baz=140,slow=31
PPT Papeete 60.32 75 *e*S **S 02 42 27.9 -3.0**
comp=Z,496nm,26.8s
PPT *e*SS SS 02 46 23.8 -4.3
comp=Z,356nm,24.0s
PPT *e*LQ 02 49 29.6
comp=Z,624nm,25.2s
PPT *e*LR LR 02 52 05.1
comp=Z,654nm,22.5s,baz=208
PPT Papeete 60.32 75 LR LR 02 54 16.5
comp=Z,354nm,19.7s,MS4.5,baz=202,slow=30
RKT Rikitea 63.29 91 *e*LR LR 02 53 22.5
comp=Z,640nm,25.8s
KSM Kuching 67.23 317 *e*P **P 02 35 02.4 +0.4**
PLCA Paso Flores 75.72 150 P **P 02 35 53.0 -0.1**
comp=Z,2.8nm,0.9s,mb4.2,baz=217,slow=7.9,SNR=5.6
PLCA Paso Flores 75.72 150 *e*P **P 02 35 53.1 +0.1**
PLCA pmax pmax
comp=Z,38nm,1.9s
PLCA Paso Flores 75.72 150 *e*P **P 02 35 53.1 +0.1**
comp=Z,38nm,1.9s,mb5.0
SUR Sutherland 79.67 222 *e*P **P 02 36 15.8 +0.6**
comp=Z,28nm,1.0s,mb5.1
TRQA Tornquist 80.32 156 *e*P **P 02 36 18.9 +0.3**
comp=Z,5.4nm,0.8s,mb4.5
OPO Ambohidratompo 80.37 250 LR LR 03 02 18.9
comp=Z,26nm,21.1s,baz=180,slow=28
BOSA Boshof 81.41 228 P **P 02 36 23.1 -1.4**
comp=Z,14nm,1.0s,mb4.9,baz=149,slow=3.9,SNR=19
BOSA LR LR 03 08 02.1
comp=Z,617nm,19.4s,MS5.0,baz=155,slow=32
BOSA Boshof 81.41 228 *e*P **P 02 36 24.0 -0.6**
BOSA pmax pmax
comp=Z,21nm,1.1s,mb5.0
BOSA Boshof 81.41 228 *e*P **P 02 36 24.0 -0.6**
comp=Z,21nm,1.1s,mb5.0
QIZ Qiongzhong 83.78 323 *e*P **P 02 36 39.3 +2.5**
QIZ S S 02 47 04.9 +5.2
QIZ LR LR
comp=N,334nm,18.5s
QIZ LR LR
comp=Z,353nm,23.9s
LBTB Lobatse 84.50 230 *e*P **P 02 36 40.3 -0.3**
LBTB pmax pmax
comp=Z,21nm,1.0s,mb5.2
LBTB Lobatse 84.50 230 *e*P **P 02 36 40.3 -0.3**
comp=Z,21nm,1.0s,mb5.2
CMAR Chiang Mai Arr 87.07 313 P **P 02 36 53.5 +0.3**
comp=Z,5.4nm,0.8s,mb4.8,baz=185,slow=4.5,SNR=18
CMAR PP PP 02 40 15.9 -1.1
comp=Z,0.6nm,0.3s,baz=177,slow=7.8,SNR=5.0
CMAR LR LR 03 14 24.9
comp=Z,380nm,19.6s,MS4.8,baz=85,slow=35
CMAR Chiang Mai Arr 87.07 313 P **P 02 36 53.5 +0.3**
CMAR 02 40 15.9
CHTO Chiang Mai 87.39 313 *e*P **P 02 36 55.2 +0.4**
CHTO pmax pmax
comp=Z,21nm,1.0s,mb5.3
CHTO Chiang Mai 87.39 313 *e*P **P 02 36 55.1 +0.4**
comp=Z,20nm,1.0s,mb5.3
GYA Guiyang 91.74 323 P **P 02 37 17.4 +2.4**
GYA PP PP 02 40 59.3 +5.1
GYA SKS 02 47 49.5
GYA S S 02 48 17.3 +1.9
GYA SS SS 02 54 29.6 +6.1
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.4
GYA AMB AMB
comp=Z,120nm,6.2s
GYA LR LR
comp=N,530nm,20.4s,MS5.1
GYA LR LR
comp=E,420nm,21.7s,MS5.1
GYA LR LR
comp=Z,480nm,20.2s,MS4.9
KMI Kunming 91.80 319 P **P 02 37 18.5 +3.2**
KMI AP pP 02 37 21.3 +2.6
KMI PP PP 02 40 55.0 +0.3
KMI S S 02 48 17.8 +1.8
KMI XS sS 02 48 23.1 +1.6
KMI SS SS 02 54 28.8 +4.4
KMI AMB AMB
comp=Z,8.0nm,0.9s,mb5.0
KMI AMB AMB
comp=Z,110nm,6.9s
KMI LR LR
comp=N,392nm,27.4s,MS4.8
KMI LR LR
comp=E,193nm,23.5s,MS4.8
KMI LR LR
comp=Z,547nm,24.5s,MS4.9
LSZ Lusaka 92.10 236 *e*P **P 02 37 17.8 +0.7**
LSZ pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
LSZ Lusaka 92.10 236 *e*P **P 02 37 17.8 +0.6**
comp=Z,8.8nm,1.2s,mb5.0
CPUP Villa Florida 92.62 156 P **P 02 37 20.2 +0.8**
comp=Z,6.4nm,0.9s,mb5.1,baz=176,slow=4.6,SNR=13
CPUP Villa Florida 92.62 156 *e*P **P 02 37 19.8 +0.4**
CPUP pmax pmax
comp=Z,23nm,0.9s
CPUP Villa Florida 92.62 156 *e*P **P 02 37 19.8 +0.3**
comp=Z,23nm,0.9s,mb5.6
TSUM Tsumeb 92.85 225 *e*P **P 02 37 20.3 -0.2**
comp=Z,4.2nm,1.0s,mb4.8
LVC Limon Verde 93.23 145 *e*P **P 02 37 23.6 +1.4**
comp=Z,12nm,1.2s,mb5.2
CD2 Chengdu 96.80 322 P **P 02 37 40.3 +2.2**
CD2 AP pP 02 37 45.1 +3.6
CD2 XP sP 02 37 48.1 +5.5
CD2 PP PP 02 41 40.0 +6.3
CD2 SKS 02 48 15.0
CD2 S S 02 48 59.0 -0.5
CD2 XS sS 02 49 07.1 +2.0
CD2 SS SS 02 55 39.3 +3.6
CD2 AMB AMB
comp=Z,20nm,1.2s,mb5.4
CD2 AMB AMB
comp=Z,100nm,6.2s
CD2 LR LR
comp=N,340nm,22.8s,MS4.8
CD2 LR LR
comp=E,210nm,21.6s,MS4.8
CD2 LR LR
comp=Z,370nm,22.8s,MS4.8
LPAZ La Paz 99.42 144 LR LR 03 15 29.4
comp=Z,240nm,19.1s,MS4.7,baz=165,slow=31
LPAZ La Paz 99.42 144 *e*P **P 02 37 52.1 +1.7**
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
LPAZ La Paz 99.42 144 *e*P **P 02 37 52.1 +1.6**
comp=Z,1.2nm,0.8s,mb4.5
LZH Lanzhou 101.55 324 *e*P Pdif 02 38 00.3 +0.3
LZH AP 02 38 03.8
LZH XP 02 38 06.6
LZH AMB AMB
comp=Z,13nm,1.0s
BJI Beijing 101.99 335 P Pdif 02 38 02.0 +0.1
BJI AMB AMB
comp=Z,9.0nm,1.0s
ULN Ulaanbaatar 111.55 331⇑*i*PKIKP PKiKP 02 42 39.7 -1.4
WMQ Urumqi 113.94 316 *e*PKP PKiKP 02 42 48.0 +2.2
WMQ *e*PP PP 02 43 47.0 +6.6
WMQ PKS 02 46 23.0
WMQ SKS SKSdf 02 49 57.0 -0.3
WMQ SS SS 02 59 34.0 +4.3
WMQ PP PP
comp=Z,114nm,4.3s
WMQ LR LR
comp=N,335nm,25.5s,MS4.9
WMQ LR LR
comp=E,269nm,27.2s,MS4.9
WMQ LR LR
comp=Z,360nm,25.5s,MS4.9
TKM2 Tokmak 2 117.92 307 *e*PKIKP PKPdf 02 42 53.5 +0.1
MKAR Makanchi Array 118.47 314 PKP PKPdf 02 42 53.0 -1.3
comp=Z,0.8nm,0.8s,baz=198,slow=2.3,SNR=5.4
KURK Kurchatov 123.08 314⇑*i*PKIKP PKPdf 02 43 02.1 -1.0
KURK Kurchatov 123.08 314 *e*PKPdf PKPdf 02 43 01.2 -1.9
NVAR Mina Array Bea 123.10 69 PKP PKPdf 02 43 02.9 -0.6
comp=Z,0.5nm,0.7s,baz=191,slow=3.0,SNR=3.5
NVAR Mina Array Bea 123.10 69 PKP PKPdf 02 43 02.9 -0.6
TXAR Lajitas Array 123.44 88 PKP PKPdf 02 43 04.5 0.0
comp=Z,0.5nm,0.8s,baz=194,slow=4.8,SNR=6.8
TXAR PKKPab PKKPab 02 52 54.0 +1.3
comp=Z,0.3nm,0.8s,baz=63,slow=3.4,SNR=3.9
TXAR Lajitas Array 123.44 88 PKP PKPdf 02 43 04.5 0.0
TXAR PKKPab PKKPab 02 52 54.0 +1.3
DBIC Dimbokro 124.47 212 *e*PKIKP PKPdf 02 43 06.3 -0.7
WVOR Wild Horse Val 126.02 66 *e*PKIKP PKPdf 02 43 10.1 +1.1
MSU Marysvale 126.21 74 *e*PKIKP PKPdf 02 43 11.2 +1.7
ELK Elko 126.39 70 *e*PKIKP PKPdf 02 43 09.9 +0.1
DUG Dugway 127.17 72 *e*PKIKP PKPdf 02 43 12.3 +1.0
SRU San Rafael 127.50 75 *e*PKIKP PKPdf 02 43 13.5 +1.5
BRVK Borovoye 128.12 311 *e*PKIKP PKPdf 02 43 13.1 +0.4
TOA0 Torodi Ar. Sit 128.50 222 *e*PKPdf PKPdf 02 43 14.4 -0.2
TORD Torodi Ar. Bea 128.50 222 PKP PKPdf 02 43 13.2 -1.5
comp=Z,3.6nm,0.9s,baz=114,slow=0.6,SNR=17
TORD PP PP 02 45 17.3 -2.0
comp=Z,2.4nm,1.3s,baz=148,slow=4.3,SNR=3.6
HWUT Hardware Ranch 128.86 72 *e*PKPdf PKPdf 02 43 15.1 +0.7
SDCO Great Sand Dun 129.03 80 *e*PKPdf PKPdf 02 43 15.7 +0.8
WMOK Wichita Mounta 130.23 88 *e*PKIKP PKPdf 02 43 17.7 +0.4
GNI Garni 130.26 283 *e*PKIKP PKPdf 02 43 17.2 0.0
PDAR Pinedale Array 130.72 72 PKP PKPdf 02 43 18.7 +0.7
comp=Z,0.2nm,0.6s,baz=288,slow=1.4,SNR=5.1
MOOW Moose Ponds 130.85 71 *e*PKPdf PKPdf 02 43 19.0 +0.8
MALT Malatya 132.15 277 *e*PKIKP PKPdf 02 43 20.0 -0.8
RSSD Black Hills 134.47 75 *e*PKIKP PKPdf 02 43 24.9 -0.1
TAM Tamanrasset 135.81 232 *e*PKIKP PKPdf 02 43 29.0 +0.8
WVT Waverly 137.03 96 *e*PKIKP PKPdf 02 43 29.5 -0.6
ULM Lac du Bonnet 142.70 74 PKiKP 02 43 35.5
comp=Z,6.1nm,1.0s,baz=255,slow=2.2,SNR=6.4
COWI Conover 143.50 84 *e*PKPdf PKPdf 02 43 38.0 -3.4
VRI Vrincioaia 143.62 275⇓*i*P PKPdf 02 43 39.3 -2.3
VRI Vrincioaia 143.62 275⇓P PKPdf 02 43 39.3 -2.3
MLR Muntele Rosu 143.78 274⇑*i*P PKPdf 02 43 39.8 -2.1
MLR Muntele Rosu 143.78 274⇑P PKPdf 02 43 39.8 -2.2
MOS Moscow 144.16 296 *e*PKIKP PKPdf 02 43 38.8 -3.4
VOIR 144.21 274⇑*i*P PKPdf 02 43 43.2 +0.5
VOIR 144.21 274⇑P PKPdf 02 43 43.2 +0.5
OBN Obninsk 144.31 295⇓*i*PKIKP PKPdf 02 43 40.7 -1.8
OBN *e* 02 47 01.6
OBN pmax pmax
comp=Z,42nm,1.1s
OBN Obninsk 144.31 295 *e*PKPdf PKPdf 02 43 41.0 -1.6
KEST Kesra 145.13 247 PKPbc PKPbc 02 43 44.9 +0.7
comp=Z,19nm,1.1s,baz=258,slow=2.4,SNR=24
SDMD Soldier's Deli 145.20 103 *e*PKPbc PKPbc 02 43 43.2 -1.1
GZR Gura Zlata 145.37 272⇑*i*P PKPbc 02 43 45.3 +0.7
GZR Gura Zlata 145.37 272⇑P PKPbc 02 43 45.2 +0.6
AKASG Malin Array Be 145.39 284 PKPbc PKPbc 02 43 43.2 -1.3
comp=Z,12nm,1.0s,baz=94,slow=2.1,SNR=26
AKASG Malin Array Be 145.39 284 PKPbc PKPbc 02 43 43.2 -1.3
AKBB Malin Array Si 145.39 284 *e*PKIKP PKPdf 02 43 44.3 -0.2
KIEV Kiev 145.39 284 *e*PKP2 PKPab 02 43 43.1 -1.6
BURAR Bucovina Array 145.55 277⇑*i*P PKPdf 02 43 46.7 +1.8
BURAR Bucovina Array 145.55 277⇑P PKPdf 02 43 46.7 +1.8
BUR08 Bucovina Ar. S 145.57 277 *e*PKPbc PKPbc 02 43 46.0 +0.8
BZS Buzias 146.13 271⇑*i*P PKPdf 02 43 46.6 +0.6
BZS Buzias 146.13 271⇑P PKPdf 02 43 46.6 +0.7
DRGR 146.32 274⇑*i*P PKPdf 02 43 47.3 +1.0
DRGR 146.32 274⇑P PKPdf 02 43 47.3 +1.1
LVV L'vov 147.53 279 *e*PKP2 PKPab 02 43 51.6 -1.4
BINY Binghamton 147.69 100 *e*PKPbc PKPbc 02 43 49.4 -2.2
UZH Uzhgorod 147.71 276 *e*PKP2 PKPbc 02 43 49.6 -1.8
KOLS Kolonicke sedl 147.91 276 *e*PKP PKPbc 02 43 52.8 +0.9
KOLS *e* 02 43 57.8
PKSM Moragy 148.08 269⇑*i*P PKPbc 02 43 52.2 -0.2
PKSM Moragy 148.08 269⇑P PKPbc 02 43 52.2 -0.3
KWP Kalwaria 148.10 278 *e*PKP PKPbc 02 43 53.2 +0.8
KWP Kalwaria 148.10 278⇑*i*P PKPbc 02 43 53.2 +0.8
KWP Kalwaria 148.10 278 *e*PKP PKPbc 02 43 53.2 +0.8
MNK Minsk 148.23 289 *e*PKIKP PKPdf 02 43 50.0 +0.8
CRVS Cervenica-Dubn 148.31 276 *e*PKP PKPbc 02 43 53.6 +0.7
PSZ Piszkesteto 148.52 273⇓*e*PKP PKPbc 02 43 54.6 +1.1
PSZ Piszkesteto 148.52 273⇑*i*P PKPab 02 44 02.2 +5.2
PSZ Piszkesteto 148.52 273 *e*PKPbc PKPbc 02 43 54.1 +0.6
BUD Budapest 148.70 272⇓*e*PKP PKPbc 02 43 54.6 +0.6
STHS Stebnicka Huta 148.74 276 *e*PKP PKPbc 02 43 56.1 +2.1
NIE Niedzica 149.22 275 *e*P PKPbc 02 43 55.8 +0.6
VYHS Vyhne 149.43 273 *e*PKP PKPbc 02 43 56.1 +0.3
VYHS *e* 02 44 08.8
KOLL Kolacno 149.71 273 *e*PKP PKPbc 02 43 57.4 +0.9
KOLL *e* 02 44 02.2
NCB Newcomb 149.85 100 *e*PKPdf PKPbc 02 43 50.5 -1.6
NCB *e*PKPbc PKPbc 02 43 56.6 -0.3
OJC Ojcow 149.97 276 *e*PKP2 PKPbc 02 43 56.6 -0.4
LONY Lake Ozonia 150.12 98 *e*PKPdf PKPdf 02 43 51.6 -1.0
LONY *e*PKPbc PKPbc 02 43 56.5 -1.1
SOP Sopron 150.12 270⇑*e*pPKP pPKPdf 02 43 58.3 +2.4
ZST Bratislava 150.15 271 *e*PKP PKPbc 02 43 57.7 +0.1
ZST *e* 02 44 01.5
ZST Bratislava 150.15 271 *e*PKP PKPbc 02 43 57.7 +0.1
ZST *e* 02 44 01.5
ZST LR LR
comp=Z,300nm,19.0s,MS5.1
SOKA Soboth 150.27 267⇑*i*P PKPbc 02 43 59.0 +1.1
comp=Z,20nm,1.0s
SUW Suwalki 150.31 285 *e*PKP PKPbc 02 43 57.8 +0.1
JOF Joensuu 150.32 305 *e*p PKPbc 02 43 56.6 -0.9
comp=Z,5.6nm,0.7s
JOF Joensuu 150.32 305 *e*PKIKP PKPbc 02 43 56.6 -0.9
JOF pmax pmax
comp=Z,6.0nm,0.7s
ARSA Arzberg 150.39 268⇓*i*P PKPbc 02 43 57.9 -0.2
comp=Z,28nm,1.1s
PGF Pioggiola 150.54 255 *e*PKP1 PKPbc 02 43 59.0 +0.3
comp=Z,58nm,1.1s
OKC Ostrava-Krasne 150.60 274 *e*PKPbc PKPbc 02 43 58.8 +0.2
CONA Conrad Observa 150.64 270⇑*i*P PKPbc 02 43 59.0 +0.3
comp=Z,8.6nm,1.3s
CSNA Conrad Observa 150.64 270⇑*i*P PKPbc 02 43 59.0 +0.2
comp=Z,7.8nm,1.2s
MORC Moravsky Berou 150.88 274⇑*i*P PKPbc 02 43 59.6 +0.4
MORC Moravsky Berou 150.88 274 *e*PKPdf PKPdf 02 43 53.3 -0.3
MORC *e*PKPbc PKPbc 02 43 59.2 -0.1
VRAC Vranov 151.10 272⇑*i*P PKPbc 02 44 00.7 +0.9
VRAC Vranov 151.10 272⇑P PKPbc 02 44 00.7 +1.0
LBNH Lisbon 151.22 102 *e*PKIKP PKPbc 02 43 59.3 -0.9
CART Cartagena 151.41 236 *e*PKPbc PKPbc 02 44 00.4 -0.5
DPC Dobruska-Polom 151.86 274 *e*PKPbc PKPbc 02 44 01.6 +0.1
DPC AMS AMS 04 03 00.0
comp=Z,100nm,11.6s
UPC Upice 152.11 274 *e*PKPbc PKPbc 02 44 02.7 +0.7
RJOB Jochberg 152.12 267 *e*PKPbc PKPbc 02 44 01.0 -1.2
KAF Kangasniemi 152.24 302 *e*p PKPbc 02 44 02.4 +0.4
comp=Z,5.6nm,0.8s
KAF Kangasniemi 152.24 302 *e*PKIKP PKPbc 02 44 02.4 +0.4
KAF pmax pmax
comp=Z,6.0nm,0.8s
SBF Sospel 152.28 255 *e*PKP1 PKPbc 02 44 03.0 +0.3
comp=Z,116nm,1.4s
GEC2 GERESS Array S 152.34 269 *e*PKIKP PKPdf 02 43 56.7 +0.9
GEC2 *e* 02 44 02.1
GEC2 *e* 02 44 02.5
GEC2 GERESS Array S 152.34 269 *e*PKPbc PKPbc 02 44 02.1 -0.5
GEC2 GERESS Array S 152.34 269 *e*PKPdf PKPdf 02 43 56.7 +0.9
GEC2 *e*PKPbc PKPbc 02 44 02.1 -0.5
GEC2 *e*PKPbc PKPbc 02 44 02.5 -0.1
GERES GERESS Array B 152.34 269 PKP PKPdf 02 43 57.2 +1.4
comp=Z,2.5nm,0.9s,baz=148,slow=5.7,SNR=4.8
GERES PKPbc PKPbc 02 44 00.7 -1.9
comp=Z,3.5nm,0.9s,baz=169,slow=1.6,SNR=19
LMR La Mourre 152.37 253 *e*PKP1 PKPbc 02 44 03.4 +0.5
comp=Z,47nm,1.3s
WTTA Wattenberg 152.43 265⇑*i*P PKPbc 02 44 03.5 +0.6
comp=Z,24nm,1.0s
FRF La Foret Royal 152.47 254 *e*PKP1 PKPbc 02 44 02.7 -0.4
comp=Z,25nm,0.9s
ETOB Tobarra 152.53 236 PKP PKPbc 02 44 01.1 -2.3
KHC Kasperske Hory 152.57 270 *e*PKIKP PKPbc 02 44 02.0 -1.1
KHC *e* 02 44 10.0
KHC Kasperske Hory 152.57 270 *e*PKPbc PKPbc 02 44 02.0 -1.1
KHC *e*PKPab PKPab 02 44 10.0 -3.8
KHC *ex* x 02 44 24.5
PRU Pruhonice 152.58 272 *e*PKPbc PKPbc 02 44 05.4 +2.3
PRU AMS AMS 04 04 50.0
comp=Z,200nm,24.8s
FETA Feichten 152.74 263⇑*i*P PKPbc 02 44 03.6 0.0
comp=Z,16nm,1.0s
MOTA Moosalm 152.76 264⇑*i*P PKPbc 02 44 03.1 -0.4
comp=Z,14nm,1.1s
MBDF Montbardon 153.23 256 *e*PKP1 PKPbc 02 44 05.4 +0.7
comp=Z,24nm,0.9s
BRG Berggiesshubel 153.40 273 *e*PKIKP PKPbc 02 44 05.0 +0.1
BRG pmax pmax
comp=Z,2.0nm,0.8s
BRG Berggiesshubel 153.40 273 *e*P PKPbc 02 44 05.0 +0.1
comp=Z,3.2nm,0.8s
LPG La Plagne 153.78 257 *e*PKP1 PKPbc 02 44 06.3 +0.4
comp=Z,22nm,1.0s
LPL La Plagne 153.80 257 *e*PKP1 PKPbc 02 44 06.5 +0.6
comp=Z,21nm,1.1s
ORIF Oris-en-Rattie 153.82 255 *e*PKP1 PKPbc 02 44 07.1 +1.1
PBDV Barranco-do-Ve 153.93 225 *e*PKPab PKPab 02 44 21.1 +1.3
ARCES ARCESS Array B 154.04 318 PKP PKPdf 02 43 55.3 -2.4
comp=Z,3.3nm,0.8s,baz=2.4,slow=32,SNR=2.8
ARCES PKPab PKPab 02 44 19.6 +0.2
comp=Z,8.3nm,0.9s,baz=339,slow=2.7,SNR=6.2
CLL Collm 154.13 273 *e*PKIKP PKPbc 02 44 06.0 -0.5
CLL pmax pmax
comp=Z,4.0nm,0.8s
CLL Collm 154.13 273 *e*PKPdiff PKPbc 02 44 06.0 -0.5
comp=Z,4.0nm,0.8s
CLL *e*PKPab PKPab 02 44 20.0 -0.3
CLL L 04 07 00.0
comp=Z,200nm,18.2s
GRA1 Grafenberg Arr 154.14 269 *e*PKPbc PKPbc 02 44 07.0 +0.5
GRF Grafenberg Arr 154.14 269 *e*PKPbc PKPbc 02 44 07.0 +0.5
LASF Ste Croix 154.23 251 *e*PKP1 PKPbc 02 44 07.1 +0.2
MORF Marmelete 154.25 224 *e*PKPab PKPab 02 44 21.8 +0.7
ESDC Sonseca Array 154.43 234 PKP PKPdf 02 43 59.1 -0.1
comp=Z,0.8nm,0.7s,baz=17,slow=1.0,SNR=4.1
ESDC PKPbc PKPbc 02 44 07.1 -0.3
comp=Z,2.3nm,0.9s,baz=51,slow=0.5,SNR=6.8
ESDC PKPab PKPab 02 44 18.6 -3.2
comp=Z,4.8nm,0.8s,baz=156,slow=4.2,SNR=10
MOX Moxa 154.49 271 *e*(PKP) pPKPbc 02 44 15.7 +5.0
comp=Z,30nm,1.9s
MOX Moxa 154.49 271 *e*PKIKP pPKPbc 02 44 15.7 +5.0
MOX pmax pmax
comp=Z,30nm,1.9s
MTLF Montolieu 154.50 248 *e*PKP1 PKPbc 02 44 07.3 -0.2
CABF La Chapelle 154.87 258 *e*PKP1 PKPbc 02 44 08.5 +0.3
EVO Evora 155.09 227 *e*PKP2 PKPab 02 44 24.5 -0.2
comp=Z,20nm,1.0s
EVO Evora 155.09 227 *e*PKPab PKPab 02 44 25.0 +0.3
PESTR Estremoz 155.22 228 *e*PKPab PKPab 02 44 25.3 +0.1
PMRV Marv??o 155.62 229 *e*PKPab PKPab 02 44 28.0 +1.0
PCBR Castelo Branco 156.01 229 *e*PKPab PKPab 02 44 27.9 -0.7
PTOM Tomar 156.19 227 *e*PKPab PKPab 02 44 27.6 -1.8

THE ***20*** *02:31:50.5,34.92N,2546E,h0km*
ISCJB ***20*** *02:31:51.8±0.7,3512N±007'2541E±004,h11km±9km,*
Error ellipse: s-maj=11.5km s-min=5.7km az=170.9
CSEM ***20*** *02:31:52.0±0.2,3504N,2539E,h12km,MD3.2,Error*
ellipse: s-maj=3.7km s-min=1.8km az=166.0
ATH ***20*** *02:31:52.2,35.12N,2539E,h10km,MD3.2/3*
ISC 20 02:31:52.0±0.8,3508N±007'2542E±004,h16km±9km,n11,
σ0.976/13,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	**Lasithi**	**0.09**	**33**	*e*Pg	**Pg**	**02 31 55.8**	**+0.5**
SIVA	**Sivas**	**0.50**	**263**	*e*Pg	**Pg**	**02 32 01.1**	**-0.9**
SIVA				*e*Sg	**Sg**	**02 32 10.3**	**+1.5**
ZKR	**Zakros**	**0.66**	**87**	*e*Pg	**Pg**	**02 32 03.6**	**-1.3**
ZKR				*e*Sg	**Sg**	**02 32 13.9**	**+0.3**
VAM	**Vamos**	**1.05**	**288**	*e*PB	**Pb**	**02 32 11.5**	**-0.2**
GVD	**Gavdhos**	**1.12**	**258**	*e*PB	**Pb**	**02 32 13.0**	**+0.1**
KARN	**Karanos**	**1.27**	**285**	*e*Pg	**Pg**	**02 32 15.5**	**-1.0**
THR6	**Thira Island,**	**1.27**	**359**	*e*Pg	**Pg**	**02 32 16.0**	**-0.4**
SANT	**Santorini**	**1.28**	**1**	*e*Pg	**Pg**	**02 32 17.0**	**+0.3**
THR1	**Thera Island**	**1.28**	**1**	*e*Pg	**Pg**	**02 32 17.0**	**+0.3**
THR3	**Thira Island,**	**1.32**	**359**	*e*Pg	**Pg**	**02 32 17.4**	**-0.1**
KARP	**Karpathos**	**1.50**	**72**	*e*PB	**Pb**	**02 32 20.5**	**+1.1**

IDC 20 02:34:24.3±5.5,2342S×17790W,h0km,mb4.3/3,
mb1 4.5/3,mb1mx4.0/15,mbtmp4.3/3,Error ellipse:
s-maj=170.7km s-min=48.9km az=21.0,South of Fiji
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.41 269**		*e*P	P	02 41 09.2	+4.4
	3.4nm,0.3s						
STKA	**Stephens Creek**	**36.69 248**		P	P	02 41 32.2	-0.8
	1.1nm,0.6s,baz=69,slow=8.6,SNR=4.6						
ASAR	**Alice Springs**	**44.02 260**		P	P	02 42 33.7	-0.2
	1.4nm,0.3s,baz=95,slow=7.2,SNR=36						
WB2	**Warramunga Arr**	**44.35 265**		*e*P	P	02 42 36.9	+0.3
WRA	**Warramunga Arr**	**44.37 265**		P	P	02 42 37.3	+0.5
	3.1nm,0.3s,baz=102,slow=8.3,SNR=24						
TORD	**Torodi Ar. Bea**	**169.77 178**		PKPab	PKPab	02 55 48.2	-0.3
	0.3nm,0.8s,baz=189,slow=3.7,SNR=5.6						

NEIC ***20*** *03:01:51.0±2.5, 8.74S×124.25E, h61km±24km, mb4.0/4, Error ellipse: s-maj=23.3km s-min=15.5km az=45.0*
ISCJB ***20*** *03:01:52.9±0.7, 8.9S±0.1×124.2E±0.2, h100km, mb3.9/7, Error ellipse: s-maj=25.8km s-min=9.0km az=149.3*
IDC ***20*** *03:01:54.4±3.8, 8.68S×124.46E, h91km±38km, mb3.6/4, mb1 3.9/6,mb1mx3.6/16,mbtmp3.7/6, Error ellipse: s-maj=42.7km s-min=20.1km az=44.0*

ISC 20 03:01:55.0±2.0,**88S**±02×**124.5E**±01**, h101**km±22km**, n17, σ1⇕04/18, mb3.9/7, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.63 209**		P	**Pn**	**03 02 24.2**	**+1.2**
	79nm,0.3s,baz=45,slow=3.0,SNR=37						
BATI				S	**Sn**	**03 02 44.3**	**+0.1**
	49nm,0.3s,baz=197,slow=1.5,SNR=6.6						
FITZ	**Fitzroy Crossi**	**9.34 173**		*e*P	**Pn**	**03 04 04.7**	**-2.1**
	11nm,0.8s						
FITZ				*e*S	Sx	03 05 33.1	
FITZ	**Fitzroy Crossi**	**9.34 173**		P	**Pn**	**03 04 03.7**	**-3.0**
	1.0nm,0.3s,baz=23,slow=10,SNR=32						
FITZ				S	**Sn**	**03 05 41.7**	**-8.3**
	2.7nm,0.3s,baz=116,slow=20,SNR=12						
WRA	**Warramunga Arr**	**14.64 140**		P	**Pn**	**03 05 16.6**	**-0.6**
	0.6nm,0.3s,baz=316,slow=13,SNR=28						
WRA				S	Sx	03 07 48.4	
	0.8nm,0.3s,baz=313,slow=23,SNR=16						
WRAB	**Tennant Creek**	**14.64 140**		*e*Pn	**Pn**	**03 05 15.7**	**-1.5**
	13nm,0.6s						
WRAB				*e*P		03 05 23.2	
WB2	**Warramunga Arr**	**14.65 140**		*e*P	**Pn**	**03 05 16.5**	**-0.8**
WB2				*e*		03 05 23.8	
WB2				*e*S	Sx	03 07 40.6	
ASAR	**Alice Springs**	**17.34 150**		P	**Pn**	**03 05 51.1**	**+0.3**
	0.5nm,0.3s,baz=325,slow=12,SNR=43						
ASAR				S	**S**	**03 08 54.6**	**-10**
	0.5nm,0.3s,baz=319,slow=22,SNR=11						
COEN	**Coen**	**19.04 107**		*e*P	**Pn**	**03 06 13.0**	**+1.9**
	2.4nm,0.7s						
FORT	**Forest**	**22.14 172**		*e*P	**P**	**03 06 42.8**	**+0.2**
	3.2nm,0.8s,mb3.7						
CTA	**Charters Tower**	**23.87 120**		P	**P**	**03 06 59.6**	**+0.3**
	3.7nm,0.8s,mb3.8,baz=287,slow=12,SNR=5.4						
STKA	**Stephens Creek**	**27.95 148**		P	**P**	**03 07 38.1**	**+2.1**
	2.5nm,0.9s,mb3.8,baz=302,slow=14,SNR=3.0						
SONM	**Songino Array**	**58.59 346**		P	**P**	**03 11 41.3**	**+0.1**
	0.6nm,0.7s,mb3.8,baz=159,slow=9.8,SNR=3.5						
MKAR	**Makanchi Array**	**66.85 330**		P	**P**	**03 12 35.8**	**-0.3**
	1.3nm,0.8s,mb3.8,baz=132,slow=7.6,SNR=6.6						
KURK	**Kurchatov**	**71.30 331**		*e*P	**P**	**03 13 03.2**	**-0.3**
	2.3nm,0.7s,mb4.1						
BRVK	**Borovoye**	**76.81 330**		*e*P	**P**	**03 13 34.9**	**-0.7**
	4.9nm,0.6s,mb4.4						
TOA0	**Torodi Ar. Sit**	**123.75 280**		*e*PKPdf	PKPdf	03 20 43.0	+1.0
TORD	**Torodi Ar. Bea**	**123.75 280**		PKP	PKPdf	03 20 42.5	+0.5
	0.4nm,0.6s,baz=73,slow=2.1,SNR=6.7						

CSEM ***20*** *03:23:21.9, 4227N×4794E, h10km, mb3.9, Error ellipse: s-maj=24.0km s-min=14.9km az=328.0, After OBN*

MOS 20 03:23:21.9±1.8,**4227N×4794E, h10**km**, mb3.9**/**1, 1D, Error ellipse: s-maj=24.0km s-min=14.9km az=122.8, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSMR	**Kasumkent**	**0.68 168**		*e*Pg	Pg	03 23 37.5	+2.5
KSMR				*i* Sg	Sg	03 23 48.5	+4.6
AKT	**Akhty**	**0.80 191**		⇓*i*PG	Pg	03 23 35.5	-1.9
AKT				*i* S	Sg	03 23 44.5	-3.3
AKT				pmax	pmax		
	comp=Z,97nm,0.2s						
AKT	**Akhty**	**0.80 191**		*i* Pg	Pg	03 23 35.5	-1.9
	comp=Z,97nm,0.2s						
AKT				*i* Sg	Sg	03 23 44.5	-3.3
DBC	**Dubki**	**1.11 313**		PG	Pg	03 23 41.0	-2.2
DBC				*i* S	Sg	03 23 55.0	-2.7
SNJR	**Sundja**	**2.44 290**		*e*Pn	Pn	03 24 03.4	+1.6
LACR	**Lac**	**2.75 283**		*e*Pn	Pn	03 24 09.0	+3.0
LACR				*i* Sn	Sn	03 24 38.8	-0.5
KORR	**Kora**	**2.97 287**		*e*Pn	Pn	03 24 10.3	+1.3
ZEI	**Tsey**	**3.03 281**		*e*Pn	Pn	03 24 12.8	+2.9
ZEI				*e*Sn	Sn	03 24 45.5	-0.7

THE ***20*** *03:27:50.8, 4048N×2350E, h14km, ML2.7*
ISCJB ***20*** *03:27:51.1±0.5, 4047N±003×2345E±005, h10km, Error ellipse: s-maj=5.9km s-min=4.0km az=164.5*
ATH ***20*** *03:27:51.8, 4052N×2348E, h8km, MD3.2/3*
CSEM ***20*** *03:27:51.3±0.1, 4048N×2349E, h12km, ML2.7, Error ellipse: s-maj=1.8km s-min=1.0km az=84.0*

ISC 20 03:27:51.5±0.7,**4049N**±004×**2347E**±008**, h8**km±12km**, n11,** σ0⇕**82**/20**, 1C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLG	**Polygyros**	**0.11 191**		*e*Pg	**Pg**	**03 27 54.5**	**+0.5**
PLG				*e*Sg	**Sg**	**03 27 56.5**	**+0.7**
PLG	**Polygyros**	**0.11 191**		⇑*i*PG	**Pg**	**03 27 54.5**	**+0.4**
PLG				*e*SG	**Sg**	**03 27 56.5**	**+0.7**
PLG	**Polygyros**	**0.11 191**		*e*Pg	**Pg**	**03 27 54.5**	**+0.4**
PLG				*e*Sg	**Sg**	**03 27 56.5**	**+0.7**
HORT	**Hortiatis**	**0.31 292**		*e*Pg	**Pg**	**03 27 57.8**	**+0.2**
HORT				*e*Sg	**Sg**	**03 28 02.1**	**+0.5**
SOH	**Sokhos**	**0.35 345**		*e*Pg	**Pg**	**03 27 58.2**	**-0.1**
SOH				*e*Sg	**Sg**	**03 28 03.1**	**+0.2**
OUR	**Ouranopolis**	**0.42 111**		*e*Pg	**Pg**	**03 27 58.8**	**-0.8**
PAIG	**Paliouri**	**0.58 164**		*e*Pg	**Pg**	**03 28 01.8**	**-0.9**
PAIG				*e*Sg	**Sg**	**03 28 09.7**	**-0.6**
PAIG	**Paliouri**	**0.58 164**		*e*Pg	**Pg**	**03 28 01.8**	**-0.9**
PAIG				*e*Sg	**Sg**	**03 28 09.6**	**-0.7**
KNT	**Kendrikon**	**0.80 327**		*e*Pg	**Pg**	**03 28 06.4**	**-0.6**
NVR	**Nevrokopi**	**0.91 19**		*e*PG	**Pg**	**03 28 08.3**	**-0.7**
NVR				*e*SB	**Sb**	**03 28 20.7**	**-1.2**
RDO	**Rodhopi**	**1.70 67**		⇓*i*PB	**Pb**	**03 28 24.2**	**+1.2**
RDO				*e*SB	**Sb**	**03 28 46.3**	**+1.8**

MAN ***20*** *03:31:05, 1951N×12125E, h16km, mb5.5, ML4.5, MS4.8*
MAN INTENSITY III - LAOAG, PASUQUIN I. NORTE; INTENSITY II STO DOMINGO, ILOCOS SUR.
MOS ***20*** *03:31:07.6±1.0, 1924N×12126E, h33km, mb5.1/37, MS4.8/14, Error ellipse: s-maj=11.6km s-min=6.0km az=117.1*
ISCJB ***20*** *03:31:09.5±0.4, 1930N±002×12125E±003, h48km±4km, mb4.8/87, MS4.7/32, Error ellipse: s-maj=5.3km s-min=3.4km az=0.1*
GCMT ***20*** *03:31:09.7±0.2, 1945N×12100E, h31km, MW5.3/91, Moment Tensor Solution. s75,c115; s91,c162; Duration: 1⇕1 Moment tensor: Scale 10^17 Nm; Mrr 0.96±.03; Mθθ 0.04±.02; Mφφ 0.92±.02; Mrθ 0.24±.02; Mθφ 0.39±.01; Mφr 0.55±.03; Best double couple: M0 1.17900×10^17 NP1:φs 19.00000°, δ 30.00000°, λ 87.00000°. NP2:φs 202.00000°, δ 60.00000°, λ 92.00000°. Principal axes: T 1.1260, Plg 75.0000°, Azm 117.0000°; N 0.1070, Plg 2.0000°, Azm 21.0000°; P -1.2320, Plg 15.0000°, Azm 291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***20*** *03:31:09.0±2.7, 1928N×12124E, h30km±19km, mb4.6/22, mb1 4.7/24, mb1mx4.7/27, mbtmp4.6/24, ML4.4/2, MS4.6/17, Ms1 4.7/17, ms1mx4.5/26 Error ellipse: s-maj=16.3km s-min=10.3km az=84.0*
NEIC ***20*** *03:31:09.7±0.8, 1925N×12126E, h37km±6km, mb5.0/39, Error ellipse: s-maj=6.1km s-min=4.2km az=77.0*

NEIC Felt [III PIVS] at Laoag and Pasuquin and [II PIVS] at Santo Domingo, Luzon.
BJI ***20*** *03:31:11.1, 1960N×12086E, h32km, mB5.1, mb4.7, ML4.2, Ms4.8, Msz4.7*
DJA ***20*** *03:31:18, 1944N×12122E, h120km, Mw5.2/7*
SZGRF ***20*** *03:31:18.9, 1956N×12220E, h33km, mb5.1, MS4.7, Philippine Islands region*

ISC 20 03:31:11.4±0.4,**1929N**±002×**12126E**±004**, h52**km±3km**, h43**km±4.4km**: pP-P, n253,** σ1⇕**07**/253**, mb4.8**/86**, MS4.7**/32**, 13C-13D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**1.13 213**		⇓*i*P	**Pn**	**03 31 28.3**	**-2.7**
PIP				*i* S	**Sn**	**03 31 42.5**	**-3.0**
APYP	**Conner**	**1.42 181**		*e*P	**Pn**	**03 31 33.9**	**-0.9**
APYP				*e*S	**Sn**	**03 31 56.2**	**+3.8**
SIPP	**Brgy, Tapao**	**1.56 209**		⇓*e*P	**Pn**	**03 31 34.4**	**-2.3**
SIPP				*e*S	**Sn**	**03 31 59.9**	**+4.1**
ABRA	**Dolores**	**1.71 198**		*e*P	**Pn**	**03 31 37.5**	**-1.4**
ABRA				*e*S	**Sn**	**03 32 05.2**	**+5.7**
CAUP	**Cauayan**	**2.39 167**		*e*P	**Pn**	**03 31 50.8**	**+2.6**
PALP	**Palanan**	**2.47 153**		⇓*e*P	**Pn**	**03 31 51.1**	**+1.9**
PALP				*e*S	**Sn**	**03 32 13.8**	**-4.5**
BCPH	**Baguio City Da**	**2.96 193**		⇑*e*P	**Pn**	**03 31 54.7**	**-1.3**
BCPH				*e*S	**Sn**	**03 32 34.8**	**+4.6**
BOLP	**Bolinao**	**3.16 204**		*e*P	**Pn**	**03 31 58.7**	**0.0**
BOLP				*e*S	**Sn**	**03 32 42.1**	**+6.9**
BALP	**Baler**	**3.54 175**		*e*P	**Pn**	**03 32 04.6**	**+0.7**
BALP				*e*S	**Sn**	**03 32 49.0**	**+4.5**
PCPH	**Palayan**	**3.71 182**		⇑*i*P	**Pn**	**03 32 07.5**	**+1.3**
PCPH				*i* S	**Sn**	**03 32 57.0**	**+8.4**
SCZP	**Santa Cruz**	**3.72 200**		*e*P	**Pn**	**03 32 05.7**	**-0.7**
SCZP				*e*S	**Sn**	**03 32 57.8**	**+8.8**
POLP	**Polilio Island**	**4.58 172**		*e*P	**Pn**	**03 32 19.3**	**+1.2**
POLP				*e*S	**Sn**	**03 33 14.4**	**+4.3**
NBP	**Mount Natib**	**4.59 190**		⇑*e*P	**Pn**	**03 32 19.1**	**+0.8**
NACB	**Ninganchiao**	**4.87 4**		*e*Pn	**Pn**	**03 32 20.8**	**-1.3**
NACB				*e*Sn	**Sn**	**03 33 19.1**	**+1.9**
YHNB	**Yeheng**	**5.36 1**		*e*Pn	**Pn**	**03 32 27.4**	**-1.4**
	182nm,0.6s						
GQP	**Guinayangan**	**5.47 168**		⇑*i*P	**Pn**	**03 32 31.5**	**+1.1**
GQP				*i* S	**Sn**	**03 33 37.6**	**+5.6**
LUBP	**Lubang**	**5.61 190**		*e*P	**Pn**	**03 32 33.5**	**+1.3**
TATO	**Taipei**	**5.67 2**		*e*Pn	**Pn**	**03 32 33.2**	**+0.2**
QZH	**Quanzhou**	**6.15 337**		P	**Pn**	**03 32 34.8**	**-4.9**
QZH				S	**Sn**	**03 33 38.6**	**-10**
QZH				Smax			
	comp=N,210nm,1.0s						
QZH				Smax			
	comp=E,240nm,0.8s						
QZH				LR	LR		
	comp=N,9μm,14.6s						
QZH				LR	LR		
	comp=E,2μm,10.6s						
QZH				LR	LR		
	comp=Z,13μm,19.7s						
PVCP	**Virac**	**6.30 153**		*e*P	**Pn**	**03 32 42.2**	**+0.4**
SJMP	**San Jose**	**6.79 181**		*e*P	**Pn**	**03 32 54.9**	**+6.4**
OTRP	**Odiongan**	**6.92 174**		*e*P	**Pn**	**03 32 51.2**	**+0.9**
BUSP	**Coron**	**7.31 188**		*e*P	**Pn**	**03 32 55.2**	**-0.4**
GZH	**Guangzhou**	**8.30 298**		P	**Pn**	**03 33 03.0**	**-6.1**
GZH				LR	LR		
	comp=N,4μm,16.3s						
GZH				LR	LR		
	comp=E,5μm,16.2s						
JOW	**Kunigami**	**9.90 39**		Pn	**Pn**	**03 33 30.5**	**-0.6**
	comp=E,7.2nm,0.3s,baz=243,slow=14,SNR=16						
JOW				LR	LR	03 37 29.0	
	comp=E,3μm,20.3s,baz=233,slow=38						
QIZ	**Qiongzhong**	**10.79 271**		P	**Pn**	**03 33 37.8**	**-5.5**
QIZ				AMB	AMB		
	comp=Z,46nm,0.8s						
QIZ				LR	LR		
	comp=E,4μm,14.5s						
QIZ				LR	LR		
	comp=Z,5μm,13.8s						
QIZ	**Qiongzhong**	**10.79 271**		*e*Pn	**Pn**	**03 33 37.3**	**-6.0**
	comp=Z,57nm,0.8s						
SSE	**Sheshan**	**11.76 360**		⇓P	**Pn**	**03 33 55.3**	**-1.1**
SSE				AP		03 34 02.3	
SSE				XP		03 34 07.1	
SSE				S	**Sn**	**03 36 06.6**	**+0.4**
SSE				XS		03 36 18.6	
SSE				AMB	AMB		
	comp=Z,38nm,0.7s						
SSE				AMB	AMB		
	comp=Z,196nm,3.6s						
SSE				LR	LR		
	comp=N,726nm,19.1s						
SSE				LR	LR		
	comp=E,2μm,19.1s						
SSE				LR	LR		
	comp=Z,3μm,22.7s						
WHN	**Wuhan**	**12.84 332**		*e*P	**Pn**	**03 34 05.8**	**-5.4**
WHN				LR	LR		
	comp=N,8μm,15.6s						
WHN				LR	LR		
	comp=E,6μm,18.6s						
WHN				LR	LR		
	comp=Z,9μm,17.5s						
DAV	**Davao City (W)**	**12.85 160**		LR	LR	03 39 54.2	
	comp=Z,5μm,19.1s,baz=7.3,slow=41						
NJ2	**Nanjing**	**12.89 351**		*e*P	**Pn**	**03 34 13.6**	**+1.7**
NJ2				AP		03 34 20.3	
NJ2				XP		03 34 25.1	
NJ2				S	**Sn**	**03 36 38.0**	**+4.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,1μm,5.2s						
NJ2				LR	LR		
	comp=N,1μm,17.1s						
NJ2				LR	LR		
	comp=E,3μm,17.2s						
NJ2				LR	LR		
	comp=Z,3μm,16.2s						
KKM	**Kota Kinabalu**	**14.05 201**		⇑P	**Pn**	**03 34 33.2**	**+5.5**
KKM	**Kota Kinabalu**	**14.05 201**		*e*Pn	**Pn**	**03 34 27.3**	**-0.5**
SDKM	**Sandakan**	**14.13 197**		⇓P	**Pn**	**03 34 34.4**	**+5.6**
MYLDM	**Lahad Datu**	**14.28 191**		⇓P	**Pn**	**03 34 34.7**	**+3.9**
GYA	**Guiyang**	**15.22 301**		P	**Pn**	**03 34 44.3**	**+1.2**
GYA				AP	pP	03 34 45.9	-13
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
GYA				AMB	AMB		
	comp=Z,130nm,4.2s						
GYA				LR	LR		
	comp=N,3μm,12.0s						
GYA				LR	LR		
	comp=E,4μm,13.2s						
GYA				LR	LR		
	comp=Z,3μm,14.4s						
TSM	**Tawau**	**15.26 193**		⇓P	**Pn**	**03 34 45.1**	**+1.4**
JNU	**Nakatsue**	**16.24 30**		Pn	**Pn**	**03 34 53.9**	**-2.2**
	baz=177,slow=17						
BTM	**Bintulu**	**17.88 208**		⇓P	**Pn**	**03 35 16.5**	**0.0**
KMI	**Kunming**	**18.10 292**		P	**Pn**	**03 35 17.6**	**-1.6**
KMI				AP	pP	03 35 28.3	-2.4
KMI				XP	sP	03 35 33.5	-3.7
KMI				S	**S**	**03 38 34.3**	**-10**
KMI				AMB	AMB		
	comp=Z,25nm,1.9s						
KMI				AMB	AMB		
	comp=Z,695nm,7.2s						
KMI				LR	LR		
	comp=N,3μm,14.5s						
KMI				LR	LR		
	comp=E,3μm,14.5s						
KMI				LR	LR		
	comp=Z,4μm,16.4s						
SBUM	**Sibu**	**18.93 209**		⇑P	**Pn**	**03 35 29.3**	**+0.1**
KSRS	**Korea Array**	**19.02 16**		P	**Pn**	**03 35 28.6**	**-1.5**
	comp=Z,1.7nm,0.3s,baz=200,slow=12,SNR=24						
KSRS				LR	LR	03 43 50.5	
	comp=Z,2μm,19.2s,baz=199,slow=40						
CD2	**Chengdu**	**19.60 310**		⇓*i*P	**Pn**	**03 35 34.8**	**-2.3**
CD2				AP	pP	03 35 44.3	-2.8
CD2				XP	sP	03 35 50.3	-3.3
CD2				PP		03 35 52.6	
CD2				S	**S**	**03 39 08.8**	**-5.0**
CD2				AMB	AMB		
	comp=Z,70nm,0.9s						
CD2				AMB	AMB		
	comp=Z,1μm,6.0s						
CD2				LR	LR		
	comp=N,3μm,15.6s						
CD2				LR	LR		
	comp=E,5μm,15.6s						
CD2				LR	LR		
	comp=Z,3μm,15.6s						
TIY	**Taiyuan**	**19.91 339**		*e*P	**Pn**	**03 35 41.1**	**+0.4**
TIY				AP	pP	03 35 50.6	+0.1
TIY				LR	LR		
	comp=N,3μm,16.4s						
TIY				LR	LR		
	comp=E,648nm,11.8s						
TIY				LR	LR		
	comp=Z,3μm,18.2s						
KSM	**Kuching**	**20.70 213**		⇑P	**P**	**03 35 47.8**	**+0.3**
KSM	**Kuching**	**20.70 213**		*e*P	**P**	**03 35 47.2**	**-0.3**
CBIJ	**Chichi jima**	**20.73 64**		P	**P**	**03 35 46.5**	**-1.2**
	comp=Z,131nm,0.7s,baz=14,slow=5.9,SNR=8.9						
CBIJ				LR	LR	03 42 23.8	
	comp=Z,1μm,20.1s,MS4.3,baz=8.8,slow=32						
CHTO	**Chiang Mai**	**21.10 272**		*e*P	**P**	**03 35 50.8**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,224nm,2.1s,mb5.1						
CHTO	**Chiang Mai**	**21.10 272**		*e*P	**P**	**03 35 50.8**	**-1.0**
	comp=Z,224nm,2.1s,mb5.1						
BJT	**Baijiatuau**	**21.12 349**		*e*P	**P**	**03 35 53.2**	**+1.4**
BJT				pmax	pmax		
	comp=Z,51nm,0.9s						
BJT	**Baijiatuau**	**21.12 349**		*e*P	**P**	**03 35 53.2**	**+1.4**
	comp=Z,51nm,0.9s,mb4.9						
CMAR	**Chiang Mai Arr**	**21.14 271**		P	**P**	**03 35 51.6**	**-0.5**
	comp=Z,11nm,0.8s,mb4.2,baz=73,slow=9.6,SNR=44						
CMAR				PcP	PcP	03 39 58.0	+1.3
	comp=Z,3.1nm,0.6s,baz=73,slow=0.6,SNR=9.8						
CMAR				ScP	ScP	03 43 30.5	+1.2
	comp=Z,0.9nm,0.3s,baz=161,slow=1.0,SNR=5.2						
CMAR				LR	LR	03 44 19.7	
	comp=Z,882nm,18.4s,MS4.2,baz=74,slow=37						
CMAR	**Chiang Mai Arr**	**21.14 271**		P	**P**	**03 35 51.6**	**-0.5**
CMAR						03 39 58.0	
BJI	**Beijing**	**21.14 349**		P	**P**	**03 35 53.8**	**+1.8**
BJI				S	**S**	**03 39 44.1**	**-0.2**
BJI				AMB	AMB		
	comp=Z,17nm,0.7s,mb4.5						
BJI				AMB	AMB		
	comp=Z,232nm,3.8s						
BJI				LR	LR		
	comp=N,2μm,16.6s,MS4.6						
BJI				LR	LR		
	comp=E,937nm,19.7s,MS4.6						
BJI				LR	LR		
	comp=Z,1μm,19.7s,MS4.4						
JHJ	**Hachijo jima 2**	**21.54 47**		LR	LR	03 42 59.7	
	comp=Z,2μm,18.1s,MS4.5,baz=258,slow=33						
KTGM	**Kuala Trenggan**	**22.46 234**		⇓P	**P**	**03 36 07.7**	**+1.4**
SNY	**Shenyang**	**22.56 5**		⇑P	**P**	**03 36 06.8**	**-0.2**
SNY				AP		03 36 17.9	
SNY				XP	sP	03 36 23.5	-2.0
SNY				PP		03 36 32.9	
SNY				S	**S**	**03 40 07.5**	**-3.6**
SNY				XS	sS	03 40 20.8	-11
SNY				SS		03 40 40.8	
SNY				AMB	AMB		
	comp=Z,21nm,1.2s,mb4.4						
SNY				AMB	AMB		
	comp=Z,152nm,3.6s						
SNY				LR	LR		
	comp=N,867nm,13.3s,MS4.6						
SNY				LR	LR		
	comp=E,1μm,15.7s,MS4.6						
SNY				LR	LR		
	comp=Z,1μm,15.5s,MS4.5						
LZH	**Lanzhou**	**22.70 321**		⇑P	**P**	**03 36 08.5**	**-0.1**
LZH				AP		03 36 18.8	
LZH				XP	sP	03 36 23.0	-4.1
LZH				PP		03 36 38.1	
LZH				AMB	AMB		
	comp=Z,83nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,260nm,6.3s						
LZH				LR	LR		
	comp=N,3μm,15.4s						
LZH				LR	LR		
	comp=Z,3μm,17.0s,MS4.8						
MAJO	**Matsushiro**	**22.74 37**		*e*P	**P**	**03 36 08.7**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,46nm,1.2s,mb4.8						
MAJO	**Matsushiro**	**22.74 37**		*e*P	**P**	**03 36 08.7**	**-0.3**
	comp=Z,46nm,1.2s,mb4.8						
MAT	**Matsushiro**	**22.74 37**		P	**P**	**03 36 09.9**	**+0.9**
MAT				S	**S**	**03 40 17.0**	**+2.8**
MJAR	**Matsushiro Arr**	**22.74 37**		P	**P**	**03 36 08.3**	**-0.7**
	comp=Z,4.2nm,0.8s,mb3.9,baz=225,slow=9.1,SNR=12						
MJAR				ScP	ScP	03 43 34.6	+1.5
	comp=Z,0.3nm,0.4s,baz=217,slow=1.2,SNR=4.9						
MJAR				LR	LR	03 44 16.1	
	comp=Z,706nm,20.3s,MS4.1,baz=225,slow=35						
HHC	**Hu-ho-hao-te**	**23.04 341**		*e*P	**P**	**03 36 11.6**	**-0.6**
HHC				AP		03 36 22.3	
HHC				XP	sP	03 36 26.8	-3.9
HHC				PP		03 36 42.0	
HHC				PCP	PcP	03 40 01.4	+1.3
HHC				S	**S**	**03 40 16.3**	**-2.7**
HHC				SCP	ScP	03 43 35.4	+1.6
HHC				PCS	PcS	03 43 39.1	0.0
HHC				AMB	AMB		
	comp=Z,14nm,0.5s,mb4.7						
HHC				AMB	AMB		
	comp=Z,470nm,5.0s						
HHC				LR	LR		
	comp=N,3μm,14.6s,MS4.9						
HHC				LR	LR		
	comp=E,1μm,14.8s,MS4.9						
HHC				LR	LR		
	comp=Z,3μm,13.7s,MS4.9						
GUMO	**Guam**	**23.33 100**		LR	LR	03 43 51.5	
	comp=Z,2μm,19.6s,MS4.5,baz=285,slow=33						
KAPI	**Kappang**	**24.19 184**		P	**P**	**03 36 22.7**	**-0.5**
	comp=Z,30nm,0.7s,mb4.8,baz=338,slow=7.5,SNR=12						
KAPI	**Kappang**	**24.19 184**		*e*P	**P**	**03 36 22.0**	**-1.2**
	comp=Z,31nm,0.8s,mb4.8						
MYKOM	**Kota Tinggi**	**24.35 227**		⇓P	**P**	**03 36 25.3**	**+0.6**
KGM	**Kluang**	**24.56 228**		⇓P	**P**	**03 36 27.1**	**+0.6**
KGM	**Kluang**	**24.56 228**		⇑P	**P**	**03 36 30.7**	**+3.7**
IPM	**Ipoh**	**24.62 236**		⇓P	**P**	**03 36 26.7**	**-0.5**
FRIM	**Kepong**	**24.95 233**		⇑P	**P**	**03 36 30.2**	**+0.1**
MDJ	**Mudanjiang**	**26.20 14**		P	**P**	**03 36 41.5**	**+0.4**
MDJ				AP	pP	03 36 50.4	-3.9
MDJ				XP	sP	03 36 54.0	-6.4
MDJ				S	**S**	**03 41 12.3**	**+2.8**
MDJ				XS	sS	03 41 27.0	-4.8
MDJ				SCP	ScP	03 43 45.3	+2.8
MDJ				PCS	PcS	03 43 48.9	+1.1
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,155nm,5.7s						
MDJ				LR	LR		
	comp=N,1μm,21.7s,MS4.4						
MDJ				LR	LR		
	comp=E,546nm,21.3s,MS4

ULN **Ulaanbaatar 30.76 341**↑ *e*P P **03 37 22.6 +0.9**
ULN **Ulaanbaatar 30.76 341** *e*P P **03 37 22.5 +0.8**
SONM **Songino Array 30.94 340** P P **03 37 24.0 +0.7**
comp=Z,6.3nm,0.9s,mb4.5,baz=158,slow=8.5,SNR=14
SONM LR LR 03 51 05.4
comp=Z,2μm,18.1s,MS4.9,baz=155,slow=39
KLR Kul'dur 31.04 13 *e*P P **03 37 23.2 -1.0**
KLR MLR MLR
comp=E,500nm,13.5s
KLR MLR MLR
comp=Z,1μm,13.5s,MS4.8
TAPN Taplejung 31.77 291 *e*P P **03 37 30.7 -0.2**
comp=Z,21nm,0.7s,mb5.1
ODAN Odare 31.99 290 *e*P P **03 37 32.8 0.0**
comp=Z,43nm,0.8s,mb5.3
RAMN Ramite 32.70 290 *e*P P **03 37 39.0 -0.1**
comp=Z,48nm,0.7s,mb5.5
YSS Yuzh-Sakhalins 32.73 28 *e*P P **03 37 36.1 -2.9**
YSS pmax pmax
comp=Z,12nm,1.3s,mb4.7
GUN Gumba 33.45 292 *e*P P **03 37 45.5 -0.1**
comp=Z,68nm,0.8s,mb5.6
PKI Pulchoki 33.82 291 *e*P P **03 37 48.0 -0.8**
KKN Kakani 33.96 291 *e*P P **03 37 49.6 -0.4**
comp=Z,24nm,0.8s,mb5.2
DMN Daman 34.09 291 *e*P P **03 37 50.6 -0.6**
comp=Z,52nm,1.1s,mb5.4
ZAK Zakamensk 34.17 339 *e*P P **03 37 56.5 +5.0**
ZAK *e* 03 40 36.0
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
GKN Gorkha 34.55 292 *e*P P **03 37 54.3 -0.8**
comp=Z,63nm,1.2s,mb5.4
TLY Talaya 35.17 341 *e*P P **03 38 02.5 +2.3**
TLY *e* 03 39 26.2
TLY *e*S S **03 43 33.1 +3.5**
TLY *e* 03 43 52.7
TLY *e* 03 46 21.8
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TLY MLR MLR
comp=Z,2μm,18.0s,MS4.8
DANN Dangsing 35.36 292 *e*P P **03 38 01.6 -0.5**
KOLN Koldanda 35.44 291 *e*P P **03 38 02.1 -0.7**
comp=Z,54nm,1.2s,mb5.3
WMQ Urumqi 37.23 319 *e*P P **03 38 20.0 +2.1**
WMQ AP pP 03 38 29.3 -2.0
WMQ XP sP 03 38 33.4 -4.0
WMQ PP PP 03 39 47.3 +3.8
WMQ S S **03 44 05.0 +3.8**
WMQ PCS PcS 03 44 26.0 +1.0
WMQ AMB AMB
comp=Z,18nm,0.7s,mb5.0
WMQ AMB AMB
comp=Z,151nm,4.1s
WMQ LR LR
comp=N,2μm,17.2s,MS5.1
WMQ LR LR
comp=E,1μm,15.2s,MS5.1
WMQ LR LR
comp=Z,1μm,17.2s,MS4.7
FITZ Fitzroy Crossi 37.40 173 *e*P P **03 38 18.1 -1.4**
comp=Z,12nm,0.6s,mb4.9
FITZ *e*PCP PcP 03 40 38.5 +0.9
PMG Port Moresby 38.27 136 *e*P P **03 38 25.1 -1.8**
BOD Bodaibo 38.85 354 *e*P P **03 38 31.7 +0.4**
BOD pmax pmax
comp=Z,4.0nm,1.8s,mb3.9
COEN Coen 39.46 145 *e*P P **03 38 34.6 -2.2**
comp=Z,3.2nm,0.6s,mb4.2
MBWA Marble Bar 40.22 182 *e*P P **03 38 42.1 -1.0**
comp=Z,32nm,0.8s,mb5.1
WRAB Tennant Creek 41.03 161 P P **03 38 48.0 -1.8**
comp=Z,133nm,0.5s,mb5.8,SNR=27
WRAB Tennant Creek 41.03 161 *e*P P **03 38 47.7 -2.1**
WRAB pmax pmax
comp=Z,64nm,1.6s,mb5.0
WRAB Tennant Creek 41.03 161 *e*P P **03 38 47.7 -2.1**
comp=Z,64nm,1.6s,mb5.0
WRA Warramunga Arr 41.04 161 P P **03 38 47.9 -2.0**
comp=Z,10.0nm,0.4s,mb4.8,baz=343,slow=9.1,SNR=31
WRA PcP PcP 03 40 50.0 +0.9
comp=Z,5.4nm,0.7s,baz=343,slow=3.7,SNR=10
WRA Warramunga Arr 41.04 161 P P **03 38 47.9 -2.0**
WRA PcP PcP 03 40 50.0 +0.9
WB2 Warramunga Arr 41.04 161 *e*P P **03 38 47.8 -2.1**
WB2 *e*PCP PcP 03 40 50.1 +1.0
PALK Pallekele 41.13 259 *e*P P **03 38 50.9 +0.1**
comp=Z,31nm,1.0s,mb4.9
MK31 Makanchi Array 42.00 320 *i* P P **03 38 58.0 +0.5**
MK31 pmax pmax
comp=Z,28nm,1.0s,mb4.8
MKAR Makanchi Array 42.00 320 P P **03 38 58.1 +0.6**
comp=Z,14nm,0.8s,mb4.6,baz=113,slow=9.5,SNR=63
MKAR LR LR 03 57 32.4
comp=Z,644nm,19.1s,MS4.5,baz=119,slow=38
KSH Kashi 43.77 307 *e*P P **03 39 07.5 -4.5**
KSH *e*XP sP 03 39 21.6 -10
KSH *e*SCP ScP 03 44 44.6 -0.8
KSH *e*PCS PcS 03 44 48.5 -2.3
KSH *e*S S **03 45 29.5 -9.4**
KSH *e*XS sS 03 45 55.0 -6.9
KSH *e*SCS ScS 03 49 02.0 -4.7
KSH AMB AMB
comp=Z,412nm,5.2s
KSH LR LR
comp=N,3μm,15.5s,MS5.5
KSH LR LR
comp=E,3μm,12.6s,MS5.5
KSH LR LR
comp=Z,2μm,13.8s,MS5.2
PETK Petropavlovsk- 43.94 31 P P **03 39 12.8 -0.3**
comp=Z,7.2nm,0.7s,mb4.5,baz=224,slow=4.1,SNR=8.1
PETK PcP PcP 03 40 58.5 +0.3
comp=Z,4.6nm,0.8s,baz=246,slow=3.4,SNR=5.2
PETK LR LR 03 58 58.9
comp=Z,253nm,18.7s,MS4.2,baz=223,slow=38
PET Petropavlovsk 44.36 32 *e*P P **03 39 15.9 -0.5**
PET *e*S S **03 45 46.7 -0.3**
PET pmax pmax
comp=Z,200nm,16.5s
PET MLR MLR
comp=Z,300nm,19.0s,MS4.2
ASAR Alice Springs 44.44 163 P P **03 39 16.4 -1.0**
comp=Z,14nm,0.6s,mb4.9,baz=341,slow=6.7,SNR=130
ZALV Zalesovo Beam 44.44 330 P P **03 39 17.5 +0.4**
comp=Z,2.1nm,0.4s,mb4.2,baz=118,slow=8.3,SNR=3.6
ZALV LR LR 03 58 47.0
comp=Z,721nm,21.0s,MS4.6,baz=352,slow=37
TKM2 Tokmak 2 44.95 312 *e*P P **03 39 22.2 +0.8**
TKM2 pmax pmax
comp=Z,24nm,0.6s,mb5.2
TKM2 Tokmak 2 44.95 312 *e*P P **03 39 22.2 +0.8**
comp=Z,24nm,0.6s,mb5.2
UCH Uchtor 45.53 311 *e*P P **03 39 27.9 +1.9**
comp=Z,15nm,1.0s,mb4.9
FRU Bishkek 45.62 312 *e*P P **03 39 33.0 +6.4**
NVS Novosibirsk 45.72 330 *e*P P **03 39 24.2 -3.0**
KURK Kurchatov 45.96 323 P P **03 39 29.6 +0.4**
comp=Z,98nm,0.8s,mb5.8,SNR=13
KURK Kurchatov 45.96 323 *e*P P **03 39 29.4 +0.2**
KURK pmax pmax
comp=Z,68nm,1.7s,mb5.3
KURK Kurchatov 45.96 323 *e*P P **03 39 29.4 +0.3**
comp=Z,68nm,1.7s,mb5.3
AML Almayashu 46.09 310 *e*P P **03 39 30.6 +0.2**
comp=Z,17nm,1.0s,mb4.9
CTA Charters Tower 46.16 147 *e*P P **03 39 32.3 +1.2**
comp=Z,5.7nm,0.8s,mb4.5
CTA Charters Tower 46.16 147 *e*P P **03 39 32.3 +1.2**
CTA pmax pmax
comp=Z,6.0nm,0.8s
CTAO Charters Tower 46.16 147 *e*P P **03 39 31.5 +0.4**
EKS2 Erkin-Say 46.17 311 *e*P P **03 39 31.4 +0.4**
comp=Z,7.3nm,0.9s,mb4.6
KK31 Karatay Array 48.60 311 *i* P P **03 39 50.5 +0.6**
KK31 pmax pmax
comp=Z,20nm,1.1s,mb5.1
FORT Forrest 50.20 172 *e*P P **03 40 01.9 -0.2**
comp=Z,87nm,0.7s,mb5.9
KLBR Kellerberrin 50.70 184 *e*P P **03 40 04.9 -0.9**
comp=Z,36nm,0.5s,mb5.6
BRVK Borovoye 51.63 323 *e*P P **03 40 13.3 +0.7**
BRVK pmax pmax
comp=Z,18nm,0.9s,mb5.0
BRVK Borovoye 51.63 323 *e*P P **03 40 13.3 +0.7**
comp=Z,18nm,0.9s,mb5.0
NWAO Narrogin (SRO) 52.06 184 P P **03 40 16.0 0.0**
comp=Z,38nm,0.5s,mb5.5,baz=7.7,slow=7.1,SNR=46
NWAO Narrogin (SRO) 52.06 184 *e*P P **03 40 16.1 +0.1**
NWAO *e* 03 41 28.9
NWAO pmax pmax
comp=Z,31nm,0.6s
NWAO Narrogin (SRO) 52.06 184 *e*P P **03 40 16.1 +0.2**
comp=Z,31nm,0.6s,mb5.4
NWAO *e*PcP PcP 03 41 28.9 +1.3
STKA Stephens Creek 54.48 159 *e*P P **03 40 33.6 -0.2**
comp=Z,9.4nm,0.6s,mb4.9
STKA Stephens Creek 54.48 159 P P **03 40 33.9 +0.1**
comp=Z,12nm,0.6s,mb5.0,baz=334,slow=7.0,SNR=22
BILL Bilibino 56.26 19 *e*P P **03 40 45.4 -0.8**
BILL pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BILL MLR MLR
comp=Z,500nm,22.0s,MS4.6
AB31 Akbulak array 56.97 317 *i* P P **03 40 51.7 +0.2**
AB31 pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
SVE Sverdlovsk 58.06 326 *e*P P **03 41 07.2 +8.1**
SVE *e* 03 41 53.3
SVE *e* 03 43 04.7
SVE *e*S S **03 48 56.7 +0.7**
SVE pmax pmax
comp=Z,29nm,0.9s,mb5.3
SVE MLR MLR
comp=Z,621nm,21.0s,MS4.7
AKTO Aktyubinsk 58.38 318 *i* P P **03 41 01.5 +0.1**
AKTO pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
ARU Arti 59.09 325*c* *i*P P **03 41 06.6 +0.4**
ARU *e**PP pP 03 41 17.9 -2.6
ARU *e* 03 41 50.1
ARU *e*S S **03 49 12.0 +2.6**
ARU *e*SS SS 03 53 05.2 +1.4
ARU pmax pmax
comp=Z,19nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,1μm,19.0s,MS5.0
ARU Arti 59.09 325 *e*P P **03 41 06.4 +0.2**
comp=Z,12nm,0.6s,mb5.1
CNB Canberra Magne 60.49 154 *e*P P **03 41 17.0 +0.9**
TOO Toolangi 60.98 158 *e*P P **03 41 20.3 +1.0**
MAK Makhachkala 65.36 309 P P **03 41 51.6 +3.1**
MAK *i* 03 42 24.9
MAK *e*PPP 03 45 49.3
MAK S S 03 50 32.9 +4.1
MAK *e* 03 51 40.4
MAK *e*SS SS 03 54 41.1 -1.3
MAK pmax pmax
comp=Z,385nm,1.4s
MAK MLR MLR
comp=Z,484nm,14.0s,MS4.8
KIV Kislovodsk 68.77 311 *e*P P **03 42 10.6 +0.6**
KIV *e* 03 42 36.4
KIV *e*S S 03 51 11.5 +1.7
KIV *e*SS SS 03 55 39.6 +4.5
KIV pmax pmax
comp=Z,17nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,473nm,17.0s,MS4.8
KIV Kislovodsk 68.77 311 *e*P P **03 42 10.7 +0.7**
comp=Z,16nm,0.9s,mb5.0
VSR Storozhevoye 70.31 319 *e*P P **03 42 18.5 -0.9**
VSR pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
VSR pmax pmax
comp=N,4.0nm,0.7s
VSR pmax pmax
comp=E,8.0nm,1.1s
MOS Moscow 70.73 323 *e*P P **03 42 26.1 +4.2**
OBN Obninsk 71.40 323 *e*P P **03 42 25.2 -0.8**
OBN pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
OBN MLR MLR
comp=Z,400nm,16.0s,MS4.8
PPLA Purkeypile 71.47 29 *e*P P **03 42 26.8 +0.6**
comp=Z,8.5nm,0.7s,mb4.8
KDAK Kodiak Island 71.87 34 *e*P P **03 42 28.9 +0.1**
ANN Anapa 72.37 312 *e*P P **03 42 37.3 +5.3**
ANN *e**PP pP 03 42 53.9 +7.3
ANN pmax pmax
comp=Z,19nm,1.0s,mb5.0
MALT Malatya 72.82 305 *e*P P **03 42 33.1 -1.7**
MALT pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MALT Malatya 72.82 305 *e*P P **03 42 33.1 -1.7**
comp=Z,8.6nm,1.0s,mb4.6
JOF Joensuu 73.01 331 *ep* P **03 42 33.8 -1.6**
comp=Z,5.1nm,0.7s,mb4.6
JOF Joensuu 73.01 331 *e*P P **03 42 33.8 -1.6**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
PMR Palmer 73.06 30 *e*P P **03 42 35.3 -0.4**
PMR pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
PMR Palmer 73.06 30 *e*P P **03 42 35.3 -0.4**
comp=Z,9.4nm,0.9s,mb4.7
COLA College 73.10 26 *e*P P **03 42 36.0 0.0**
COLA pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
COLA College 73.10 26 *e*P P **03 42 36.0 0.0**
comp=Z,3.9nm,0.7s,mb4.5
KEV Kevo 73.54 339 *ep* P **03 42 38.1 -0.3**
comp=Z,7.1nm,0.6s,mb4.8
KEV Kevo 73.54 339 *e*P P **03 42 38.1 -0.3**
KEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
ARCES ARCESS Array B 74.10 339 P P **03 42 41.4 -0.4**
comp=Z,2.6nm,0.6s,mb4.4,baz=47,slow=7.1,SNR=17
ARCES LR LR 04 19 05.2
comp=Z,539nm,19.9s,MS4.8,baz=197,slow=39
SIM Simferopol' **74.66 313** P P **03 42 45.0 -0.4**
SIM *e*S S 03 52 15.0 -2.6
SIM pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KAF Kangasniemi 75.44 331 *ep* P **03 42 44.8 -4.8**
comp=Z,3.6nm,0.7s,mb4.4
KAF Kangasniemi 75.44 331 *e*P P **03 42 44.8 -4.8**
KAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
AKASG Malin Array Be 76.58 319 P P **03 42 55.4 -1.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=62,slow=5.3,SNR=4.9
AKASG LR LR 04 18 44.1
comp=Z,361nm,18.8s,MS4.7,baz=65,slow=37
DAWY Dawson 76.86 26 *e*P P **03 42 58.0 +0.3**
RPZ Rata Peaks 77.52 145 P P **03 43 03.3 +1.8**
comp=Z,30nm,0.7s,mb5.3,baz=316,slow=0.9,SNR=21
HYT Haines Junctio 78.69 29 *e*P P **03 43 09.0 +1.1**
SUW Suwalki 79.24 324 *e*P P **03 43 10.8 -0.2**
SUW pmax pmax
comp=Z,20nm,0.4s,mb5.4
SUW Suwalki 79.24 324 *e*P P **03 43 10.8 -0.2**
comp=Z,20nm,0.4s,mb5.4
BUR08 Bucovina Ar. S 79.95 317 *e*P P **03 43 15.2 +0.2**
KWP Kalwaria 80.91 319 *e*P P **03 43 19.9 -0.2**
KWP pmax pmax
comp=Z,32nm,1.3s,mb5.1
KWP Kalwaria 80.91 319 *e*P P **03 43 19.9 -0.2**
comp=Z,32nm,1.3s,mb5.1
DAG Danmarks Havn 81.20 351 *i* P P **03 43 21.0 -0.2**
DAG Danmarks Havn 81.20 351 *e*P P **03 43 21.0 -0.2**
KOLS Kolonicke sedl 81.40 319 *e*P P **03 43 22.8 +0.1**
OPO Ambohidratompo 81.84 247 P P **03 43 25.7 +0.2**
comp=Z,9.5nm,0.8s,mb4.8,baz=52,slow=7.7,SNR=6.8
STHS Stebnicka Huta 81.88 319 *e*P P **03 43 29.5 +4.3**
CRVS Cervenica-Dubn 81.92 319 *e*P P **03 43 25.9 +0.4**
NB2 NORSAR Subarra 82.58 333 P P **03 43 27.7 -1.0**
comp=Z,6.4nm,0.8s,mb4.7,baz=64,slow=5.3
NOA NORSAR Array B 82.58 333 P P **03 43 27.9 -0.8**
comp=Z,2.2nm,0.9s,mb4.2,baz=64,slow=5.0,SNR=5.4
NOA LR LR 04 23 18.5
comp=Z,1μm,19.4s,MS5.2,baz=35,slow=38
OKC Ostrava-Krasne 83.60 321 *e*P P **03 43 39.2 +5.0**
OKC *e*S S 03 53 57.2 +4.8
OKC AMS AMS 04 24 30.0
comp=Z,300nm,15.8s
OKC Ostrava-Krasne 83.60 321 *e*P P **03 43 39.2 +5.0**
OKC *e*S S 03 53 57.2 +4.8
VYHS Vyhne 83.69 319 *e*P P **03 43 33.6 -1.1**
DPC Dobruska-Polom 84.49 322 *e*P P **03 43 39.5 +0.8**
DPC *e*S S 03 54 00.3 -1.0
DPC AMS AMS 04 24 40.0
comp=Z,500nm,18.1s
UPC Upice 84.61 322 *e*P P **03 43 39.7 +0.4**
MODS Modra-Piesok 84.69 319 *e*P P **03 43 39.7 -0.1**
KMBO Kilima Mbogo 84.71 267 P P **03 43 41.2 +0.7**
comp=Z,6.4nm,1.0s,mb4.7,baz=40,slow=8.1,SNR=7.3
KMBO Kilima Mbogo 84.71 267 *e*P P **03 43 41.5 +1.0**
KMBO pmax pmax
comp=Z,24nm,1.5s
KMBO Kilima Mbogo 84.71 267 *e*P P **03 43 41.5 +1.0**
comp=Z,24nm,1.5s,mb5.1
PVCC Panska Ves 85.44 322 *e*P P **03 43 43.6 +0.2**
PVCC *e*S S 03 54 07.9 -2.8
PVCC AMS AMS 04 25 10.0
comp=Z,300nm,14.6s
BRG Berggiesshubel 85.65 323 *e*P P **03 43 44.5 0.0**
BRG pmax pmax
comp=Z,6.0nm,1.4s,mb4.6
BRG Berggiesshubel 85.65 323 *e*P P **03 43 44.5 0.0**
comp=Z,9.2nm,1.4s,mb4.8
PRU Pruhonice 85.68 322 *e*P P **03 43 45.2 +0.5**
PRU *e*S S 03 54 05.3 -7.8
PRU AMS AMS 04 25 20.0
comp=Z,500nm,17.2s
CASY Casey 85.69 184 *e*P P **03 43 45.4 +1.3**
FBE Freiberg 85.97 323 *e*P P **03 43 53.6 +7.5**
comp=Z,8.0nm,0.8s,mb5.0
CLL Collm 86.00 323 *e*P P **03 43 46.0 -0.2**
CLL *e*S S 03 54 19.0 +2.9
KHC Kasperske Hory 86.61 321 *e*P P **03 43 50.1 +0.8**
KHC *e*pP pP 03 44 04.5 +0.2
KHC *e*SKS 03 54 07.2
KHC AMS AMS 04 29 50.0
comp=Z,300nm,15.7s
GERES GERESS Array B 86.66 321 P P **03 43 49.3 -0.2**
comp=Z,0.7nm,0.7s,mb4.0,baz=123,slow=4.9,SNR=4.2
GERES LR LR 04 28 20.3
comp=Z,381nm,18.6s,MS4.8,baz=62,slow=40
NKC Novy Kostel 86.79 322 AMS AMS 04 25 40.0
comp=Z,600nm,15.2s
YKA Yellowknife Ar 87.44 23 P P **03 43 53.4 +0.4**
comp=Z,14nm,0.7s,mb5.3,baz=314,slow=4.7,SNR=27
YKA Yellowknife Ar 87.44 23 P P **03 43 53.4 +0.4**
GRA1 Grafenberg Arr 87.74 322 *e*P pP 03 44 05.4 -4.3
GRA1 LR LR
comp=Z,300nm,21.1s,MS4.7
GRF Grafenberg Arr 87.74 322 *e*P pP 03 44 05.4 -4.3
comp=Z,29nm,1.7s
GRF *e*L 04 28 32.5
comp=Z,280nm,21.1s
CDF Champ du Feu 90.63 322 *e*P P **03 44 08.2 -0.1**
HINF Hinteralfeld 91.18 322 *e*P P **03 44 10.1 -0.8**
CABF La Chapelle 92.25 321 *e*P P **03 44 15.7 -0.1**
comp=Z,18nm,0.9s,mb5.1
CABF La Chapelle 92.25 321 *e*P P **03 44 15.7 -0.1**
CABF pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
CABF La Chapelle 92.25 321 *e*P P **03 44 15.7 -0.1**
comp=Z,8.9nm,0.9s,mb5.1
LPG La Plagne 92.42 320 *e*P P **03 44 16.3 -0.4**
comp=Z,15nm,0.8s,mb5.0
LPG La Plagne 92.42 320 *e*P P **03 44 16.3 -0.4**
LPG pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
LPG La Plagne 92.42 320 *e*P P **03 44 16.3 -0.4**
comp=Z,7.3nm,0.8s,mb5.1
LPL La Plagne 92.42 320 *e*P P **03 44 16.2 -0.5**
comp=Z,28nm,1.3s,mb5.1
LPL La Plagne 92.42 320 *e*P P **03 44 16.2 -0.5**
LPL pmax pmax
comp=Z,14nm,1.3s,mb5.1
LPL La Plagne 92.42 320 *e*P P **03 44 16.2 -0.5**
comp=Z,14nm,1.3s,mb5.1
ETW Entiat 93.58 37 *e*P P **03 44 22.9 +1.0**
AVF Avril sur Loir 93.74 323 *e*P P **03 44 22.8 +0.1**
comp=Z,11nm,1.1s,mb4.9
AVF Avril sur Loir 93.74 323 *e*P P **03 44 22.8 +0.1**
AVF pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
AVF Avril sur Loir 93.74 323 *e*P P **03 44 22.8 +0.1**
comp=Z,5.7nm,1.1s,mb4.9
EDM Edmonton 93.82 29 *e*P P **03 44 23.2 +0.3**
PPT Papeete 94.89 107 *e*S S 03 55 38.0 -1.0
comp=Z,574nm,32.5s
PPT *e*SS SS 04 02 16.9 +12
comp=Z,190nm,29.0s
PPT Papeete 94.89 107 *e*LR LR 04 14 54.1
comp=Z,514nm,25.2s
PPT Papeete 94.89 107 LR LR 04 22 38.9
comp=Z,280nm,18.4s,MS4.8,baz=322,slow=33
FFC Flin Flon 97.57 24 *e*P P **03 44 40.4 +0.4**
FFC pmax pmax
comp=Z,11nm,1.2s,mb5.3
FFC Flin Flon 97.57 24 *e*P P **03 44 40.4 +0.4**
comp=Z,11nm,1.2s,mb5.2
LSZ Lusaka 97.75 257 *e*P P **03 44 41.2 -0.3**
LSZ pmax pmax
comp=Z,5.0nm,1.0s,mb5.0
LSZ Lusaka 97.75 257 *e*P P **03 44 41.1 -0.4**
comp=Z,4.5nm,1.0s,mb5.0
HLID Hailey 99.31 37 *e*Pdif P **03 44 49.6 +1.6**
NVAR Mina Array Bea 99.94 43 P Pdif 03 44 53.1 +2.5
comp=Z,0.8nm,0.6s,baz=282,slow=5.4,SNR=3.1
RKT Rikitea 109.58 108 *e*LR LR 04 21 45.2
comp=Z,296nm,27.2s
TORD Torodi Ar. Bea 112.32 294 PKiKP PKiKP 03 49 40.9 -1.6
comp=Z,0.7nm,0.9s,baz=12,slow=2.0,SNR=4.0
TORD PKKPbc PKKPbc 04 00 32.4 +0.3
comp=Z,1.0nm,0.7s,baz=269,slow=2.0,SNR=6.5
TORD Torodi Ar. Bea 112.32 294 PKPdf PKiKP 03 49 40.9 -1.6
TORD PKKPbc PKKPbc 04 00 32.4 +0.2
TXAR Lajitas Array 115.08 43 PKP PKiKP 03 49 48.2 +0.9
comp=Z,1.9nm,0.7s,baz=236,slow=0.4,SNR=33
TXAR Lajitas Array 115.08 43 PKP PKiKP 03 49 48.2 +0.8
JCT Junction City 116.69 39 *e*PKIKP PKPdf 03 49 51.3 +0.9
WVT Waverly 118.39 27 *e*PKIKP PKPdf 03 49 53.7 +0.1
BCIP Isla Barro Col 144.90 38 *e*PKPdf PKPdf 03 50 42.5 -1.2
FDF Fort de France 146.11 4 *e*PKP2 PKPab 03 50 46.2 -1.0
EFI East Falkland 147.67 181 *e*PKP2 PKPab 03 50 50.9 -1.4
SDV Santo Domingo 149.65 24 *e*PKPbc PKPbc 03 50 56.5 +0.3
ROSC El Rosal 151.52 34 PKP PKPdf 03 50 55.5 +1.0
comp=Z,3.0nm,0.3s,baz=102,slow=23,SNR=5.8
ROSC PKPbc PKPbc 03 51 01.4 +0.7
comp=Z,18nm,0.6s,baz=79,slow=13,SNR=14
ROSC El Rosal 151.52 34 *e*PKPdf PKPdf 03 50 56.8 +2.2
ROSC *e*PKPbc PKPbc 03 51 02.3 +1.6
OTAV Otavalo 152.60 47 *e*PKPdf PKPdf 03 50 57.9 +1.7
OTAV *e*PKPbc PKPbc 03 51 04.6 +1.4
PLCA Paso Flores 156.35 157 PKP PKPdf 03 51 00.2 -0.3
comp=Z,0.9nm,0.8s,baz=0.0,slow=5.1,SNR=2.7
PLCA PKPbc PKPdf 03 51 10.1 +10
comp=Z,1.5nm,0.7s,baz=268,slow=3.3,SNR=5.4
PLCA PKPab PKPab 03 51 31.1 +2.3
comp=Z,3.7nm,0.7s,baz=231,slow=5.5,SNR=6.6
PLCA Paso Flores 156.35 157 PKIKP PKPdf 03 51 00.3 -0.2
PLCA 03 51 10.1
LPAZ La Paz 170.57 73 PKP PKPdf 03 51 16.6 +2.1
comp=Z,1.7nm,0.9s,baz=22,slow=3.7,SNR=7.7
LPAZ PKPab PKPab 03 52 37.0 +5.0
comp=Z,1.0nm,0.6s,baz=345,slow=2.1,SNR=4.6
LPAZ La Paz 170.57 73 *e*PKPdf PKPdf 03 51 16.5 +2.0
CPUP Villa Florida 172.87 190 PKPab PKPab 03 52 42.9 +1.3
comp=Z,0.6nm,0.4s,baz=164,slow=1.9,SNR=4.3
CPUP Villa Florida 172.87 190 *e*PKPab PKPab 03 52 41.9 +0.3

ISCJB ***20*** *03:37:15.0±0.6, 4969S±007°×1259E±02, h10km, mb4.3/8, MS4.2/7, Error ellipse: s-maj=17.8km s-min=9.6km az=18.3*

IDC ***20*** *03:37:15.4±0.9, 4968S×12583E, h0km, mb4.4/6, mb1 4.5/7, mb1mx4.3/14, mbtmp4.4/7, ML2.9/1, MS4.3/8, Ms1 4.3/8, ms1mx4.1/14, Error ellipse: s-maj=43.8km s-min=18.1km az=105.0*

NEIC ***20*** *03:37:17.1±0.5, 4969S×12587E, h10km, mb4.6/5, Error ellipse: s-maj=15.9km s-min=9.1km az=107.0*

ISC 20 03:37:16.9±0.6, 4969S±007°×1259E±02, h10km, n19, σ0 93/13, mb4.3/8, MS4.2/7, 1C, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAU	**Tasmania Unive**	**16.26**	**74**	*e*Pn	**Pn**	**03 41 05.2**	**-0.1**
	82nm,1.4s						
NWAO	**Narrogin (SRO)**	**17.94**	**336**	P	**Pn**	**03 41 27.6**	**+1.2**

1.8nm,0.3s,baz=154,slow=8.3,SNR=7.0
NWAO LR LR 03 46 43.9
comp=Z,2µm,19.3s,baz=152,slow=32
CASY Casey 18.42 200 *eP* **Pn 03 41 31.1 -0.9**
19nm,1.1s
STKA Stephens Creek 21.33 39 P **P 03 42 03.0 -0.9**
7.2nm,0.9s,mb4.0,baz=186,slow=11,SNR=4.4
STKA LR LR 03 49 12.5
comp=Z,420nm,18.1s,MS3.9,baz=204,slow=34
STKA Stephens Creek 21.33 39 *eP* **P 03 42 03.9 0.0**
14nm,0.8s,mb4.3
STKA LR LR 03 49 12.5
ASAR Alice Springs 26.73 17 P **P 03 42 55.6 -0.8**
6.0nm,0.6s,mb4.3,baz=192,slow=9.1,SNR=22
WRA Warramunga Arr 30.44 16 P **P 03 43 29.1 -0.5**
1.1nm,0.5s,mb3.9,baz=193,slow=8.4,SNR=3.2
WRA LR LR 03 55 06.0
comp=Z,268nm,20.8s,MS3.9,baz=350,slow=35
RPZ Rata Peaks 31.17 96 LR LR 03 53 30.9
comp=Z,660nm,20.1s,MS4.3,baz=242,slow=31
SBA Scott Base 32.09 165 *eP* **P 03 43 44.9 +1.3**
8.6nm,0.9s,mb4.6
MAW Mawson 35.38 216 P **P 03 44 10.9 -1.4**
3.4nm,1.1s,mb4.2,baz=80,slow=16,SNR=6.0
MAW LR LR 03 56 02.3
comp=Z,207nm,21.3s,MS3.9,baz=84,slow=32
BATI Baumata 39.40 357 LR LR 03 59 53.2
comp=Z,853nm,20.1s,MS4.6,baz=158,slow=34
QSPA South Pole Qui 40.43 180 P **P 03 44 55.4 +0.7**
15nm,1.0s,mb4.7,baz=331,slow=4.5,SNR=23
SYO Syowa Base 43.58 211⇑ *eX* **P 03 45 19.6 -0.9**
SNAA Sanae 53.64 198 *eP* **P 03 46 39.3 +1.4**
13nm,0.9s,mb4.8
CMAR Chiang Mai Arr 71.92 333 P **P 03 48 40.6 +0.4**
0.7nm,0.3s,mb4.1,baz=165,slow=7.5,SNR=3.7
CMAR LR LR 04 22 54.3
comp=Z,139nm,19.1s,MS4.2,baz=155,slow=38
SONM Songino Array 98.59 347 LR LR 04 39 08.4
comp=Z,237nm,19.0s,MS4.7,baz=348,slow=38
TORD Torodi Ar. Bea 121.83 252 PKP PKPdf 03 56 11.2 -0.1
0.2nm,0.7s,baz=224,slow=2.7,SNR=2.8
TXAR Lajitas Array 137.61 100 PKP PKPdf 03 56 41.6 +0.8
0.4nm,0.9s,baz=102,slow=3.1,SNR=3.0
YKA Yellowknife Ar 145.29 45 PKPbc PKPbc 03 56 54.8 +1.4
5.7nm,1.0s,baz=267,slow=3.1,SNR=6.4

*ISCJB **20** 03:41:41.9±1.0, 1090N±007×6226W±003, h71km±10km, Error ellipse: s-maj=12.3km s-min=5.4km az=0.7*
*FUNV **20** 03:41:41.8, 1089N×6222W, h74km, MWZ.5*
*TRN **20** 03:41:43.5, 1087N×6221W, h69km, MD3.1*
*NEIC **20** 03:41:43.8, 1085N×6220W, h70km, MD3.1(TRN), After TRN.*
ISC 20 03:41:42.4±1.0, 1088N±003×6227W±003, h70km±11km, n10, σ0°77/20, 2C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.24**	**170**⇑	*i*	P		**Pn**	**03 41 52.9**	**-0.3**
GUIV					S		**Sn**	**03 42 01.1**	**+0.1**
TCE	**Chacachacare**	**0.54**	**110**⇑	*e*	P		**Pn**	**03 41 56.2**	**+0.6**
TCE					S		**Sn**	**03 42 05.9**	**+0.7**
TRN	**Trinidad (W)**	**0.88**	**105**	*e*	P		**Pn**	**03 41 59.8**	**+0.4**
TRN					S		**Sn**	**03 42 11.2**	**-0.8**
ITEV	**Isla Los Testi**	**0.97**	**299**⇓	*i*	P		**Pn**	**03 42 00.1**	**-0.4**
ITEV					S		**Sn**	**03 42 13.9**	**-0.1**
CRUV	**Carupano**	**0.98**	**258**⇓	*i*	P		**Pn**	**03 42 00.2**	**-0.3**
CRUV					S		**Sn**	**03 42 14.0**	**-0.1**
GUNV	**Guanoco**	**0.98**	**223**	*e*	P		**Pn**	**03 42 00.7**	**0.0**
GUNV					S		**Sn**	**03 42 14.1**	**0.0**
TBH	**Brigand Hill**	**1.24**	**108**	*e*	P		**Pn**	**03 42 04.8**	**+0.8**
TBH					S		**Sn**	**03 42 20.1**	**0.0**
TPR	**Prospect**	**1.49**	**78**	*e*	P		**Pn**	**03 42 08.1**	**+0.8**
TPR					S		**Sn**	**03 42 26.0**	**0.0**
TOSP	**Speyside**	**1.75**	**76**	*e*	P		**Pn**	**03 42 09.1**	**-1.6**
TOSP					S		**Sn**	**03 42 29.0**	**-3.1**
SVB	**Belmont**	**2.57**	**23**	*e*	P		**Pn**	**03 42 23.1**	**+1.3**
SVB					S		**Sn**	**03 42 57.7**	**+5.6**

*DDA **20** 03:51:17.4, 3535N×2709E, h5km±2km, Md3.7*
*ISCJB **20** 03:51:19.8±0.6, 3551N±005×2698E±003, h10km, Error ellipse: s-maj=7.5km s-min=3.4km az=161.0*
*CSEM **20** 03:51:19.6±0.1, 3558N×2699E, h5km, MD3.4, Error ellipse: s-maj=3.9km s-min=1.8km az=7.0*
*ATH **20** 03:51:19.9, 3555N×2706E, h12km±3km, MD3.4/4*
*NEIC **20** 03:51:19.9, 3556N×2704E, h11km, MD3.4(ATH), After ATH.*
ISC 20 03:51:19.7±0.7, 3557N±004×2697E±003, h0km±6km, n28, σ0°76/38, 2C-5D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.16**	**97**⇓	*i*	PG		**Pg**	**03 51 22.4**	**-0.4**
KARP					SG		**Sg**	**03 51 24.6**	**-0.2**
ZKR	**Zakros**	**0.76**	**234**	*e*	P		**Pg**	**03 51 34.2**	**-0.1**
ARG	**Arkhangelos**	**1.14**	**55**⇓	*i*	PB		**Pb**	**03 51 41.2**	**-1.1**
NPS	**Neapolis**	**1.15**	**255**⇓	*i*	PG		**Pg**	**03 51 42.6**	**+0.9**
LAST	**Lasithi**	**1.28**	**252**	*e*	P		**Pg**	**03 51 44.5**	**+0.2**
THR1	**Thera Island**	**1.46**	**304**	*e*	P		**Pn**	**03 51 46.3**	**-1.1**
SANT	**Santorini**	**1.47**	**304**	*e*	P		**Pn**	**03 51 46.6**	**-0.8**
SANT	**Santorini**	**1.47**	**304**	*e*	Pn		**Pn**	**03 51 46.8**	**-0.6**
SANT	**Santorini**	**1.47**	**304**	*e*	Pg		**Pg**	**03 51 49.5**	**+1.7**
SANT	**Santorini**	**1.47**	**304**	*e*	Pn		**Pn**	**03 51 49.8**	**-0.6**
SANT				*e*	Pg		**Pg**	**03 51 49.5**	**+1.7**
SANT				*e*	Sn		**Sn**	**03 52 06.9**	**-0.3**
THR6	**Thira Island,**	**1.50**	**302**	*e*	P		**Pn**	**03 51 47.6**	**-0.3**
BODT	**Bodrum**	**1.52**	**10**	*e*	PN		**Pn**	**03 51 47.9**	**-0.2**
MLSB	**Milas**	**1.84**	**20**	*e*	PN		**Pn**	**03 51 52.0**	**-0.7**
SIVA	**Sivas**	**1.85**	**253**	*e*	P		**Pg**	**03 51 55.1**	**-0.1**
TURN	**Turunc**	**1.86**	**45**	*i*	P		**Pn**	**03 51 48.2**	**-4.6**
TURN				*i*	S		**Sn**	**03 52 10.6**	**-6.4**
YER	**Yerkesik**	**1.89**	**34**	*e*	PN		**Pn**	**03 51 52.7**	**-0.5**
APE	**Apeiranthos**	**1.90**	**323**⇑	*i*	PN		**Pb**	**03 51 55.0**	**-0.2**
APE	**Apeiranthos**	**1.90**	**323**⇑	*i*	Pb		**Pn**	**03 51 53.0**	**-0.3**
GCAM	**G?zelcaml?**	**2.14**	**6**	*e*	P		**Pb**	**03 51 59.5**	**+0.2**
GCAM				*e*	S		**Sg**	**03 52 28.7**	**+0.2**
SMG	**Samos**	**2.14**	**357**	*e*	PN		**Pn**	**03 51 58.0**	**+1.3**
AYDN	**Tasoluk**	**2.22**	**19**	*i*	P		**Pb**	**03 52 00.7**	**0.0**
AYDN				*i*	S		**Sn**	**03 52 26.5**	**+0.7**
AYDN	**Tasoluk**	**2.22**	**19**	*i*	P		**Pb**	**03 52 00.6**	**-0.1**
AYDN				*i*	S		**Sn**	**03 52 26.5**	**+0.7**
AKAS	**Kas**	**2.24**	**72**	*i*	P		**Pn**	**03 51 57.6**	**-0.4**
AKAS				*i*	S		**Sn**	**03 52 28.0**	**+1.5**
VAM	**Vamos**	**2.27**	**267**	*i*	PN		**Pb**	**03 52 00.5**	**-1.0**
KARN	**Karanos**	**2.50**	**267**	*e*	P		**Pn**	**03 52 02.2**	**+0.6**
ELL	**Elmali**	**2.66**	**63**	*e*	PN		**Pn**	**03 52 04.8**	**+1.1**
GOLH	**Golhisar**	**2.67**	**51**⇓	*i*	P		**Pn**	**03 52 05.4**	**+1.4**
GOLH				*i*	S		**Sb**	**03 52 41.5**	**-0.4**
DNZL	**Cakiroluk**	**2.70**	**38**	*e*	P		**Pb**	**03 52 08.1**	**-0.8**
DNZL				*e*	S		**Sb**	**03 52 42.1**	**-0.5**

*NEIC **20** 04:40:20.5, 1832N×6847W, h151km, MD3.7(RSPR), After RSPR.*
RSPR 20 04:40:20.5, 1832N×6847W, h151km±1km, MD3.7/16, MD3.7/16, 12C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IMO	**Isla Mona**	**0.57**	**111**⇑	*e*	P		Pn	04 40 42.0	-0.3
IMO					S		Sn	04 40 58.9	+0.1
DR12	**Loma Pena Alta**	**0.98**	**298**⇑	*e*	P		Pn	04 40 44.9	-0.3
DR12					S		Sn	04 41 04.1	0.0
AGPR	**Aguadilla, PR**	**1.29**	**83**⇑	*e*	P		Pn	04 40 48.7	+0.7
AGPR					S		Sn	04 41 09.8	+0.7
LSP	**Las Mesas**	**1.32**	**96**⇑	*e*	P		Pn	04 40 48.0	-0.3
LSP					S		Sn	04 41 09.9	+0.4
CRPR	**Cabo Rojo, PR**	**1.33**	**103**⇑	*e*	P		Pn	04 40 48.7	+0.3
CRPR					S		Sn	04 41 09.8	+0.2
LRS	**Lares**	**1.54**	**91**⇑	*e*	P		Pn	04 40 51.0	+0.4
LRS					S		Sn	04 41 14.7	+1.2
GBPR	**Guanica, Bosqu**	**1.55**	**103**⇑	*e*	P		Pn	04 40 50.6	0.0
GBPR	**Guanica, Bosqu**	**1.55**	**103**	*e*	S		Sn	04 41 13.6	0.0
DR08	**Loma La Naviza**	**1.61**	**294**	*e*	S		Sn	04 41 14.9	+0.1
AOPR	**Arecibo Observ**	**1.63**	**89**⇑	*e*	P		Pn	04 40 51.4	0.0
AOPR					S		Sn	04 41 15.6	+0.4
OBIP	**Obispado Ponce**	**1.79**	**99**⇑	*e*	P		Pn	04 40 53.4	+0.2
OBIP					S		Sn	04 41 19.2	+0.8
CELP	**Cerrillos**	**1.81**	**97**⇓	*i*	P		Pn	04 40 53.5	0.0
CELP					S		Sn	04 41 19.0	+0.2
ICM	**Isla Caja Muer**	**1.90**	**103**⇓	*e*	P		Pn	04 40 54.2	-0.2
ICM					S		Sn	04 41 20.6	0.0
SJG	**San Juan**	**2.21**	**95**⇓	*e*	P		Pn	04 40 58.2	+0.1
SJG					S		Sn	04 41 27.7	+0.6
SJG	**San Juan**	**2.21**	**95**⇓	*i*	P		Pn	04 40 58.2	+0.1
SJG					S		Sn	04 41 27.4	+0.3
CPD	**Cerro la Pandu**	**2.44**	**96**⇑	*e*	P		Pn	04 41 01.4	+0.5
CPD					S		Sn	04 41 32.0	-0.1
CBYP	**Canovanas**	**2.48**	**91**⇑	*e*	P		Pn	04 41 01.2	-0.2
CBYP					S		Sn	04 41 33.1	+0.2
HUMP	**Col San Antoni**	**2.49**	**94**⇓	*e*	P		Pn	04 41 01.3	-0.2
HUMP					S		Sn	04 41 33.3	+0.1
MTP	**Monte Pirata**	**2.78**	**94**⇑	*e*	P		Pn	04 41 05.2	+0.1
MTP					S		Sn	04 41 40.7	+1.2

*ISCJB **20** 04:52:24.4±0.7, 1554S±009×7144W±007, h163km±7km, mb3.6/4, Error ellipse: s-maj=16.3km s-min=9.3km az=24.7*
*NEIC **20** 04:52:25.5±0.9, 1557S×7132W, h154km±10km, mb4.3/1, Error ellipse: s-maj=18.7km s-min=13.6km az=216.0*
*IDC **20** 04:52:26.6±1.5, 1548S×7127W, h165km±14km, mb3.3/4, mb1 3.4/8, mb1mx3.3/22, mbtmp3.2/8, Error ellipse: s-maj=26.4km s-min=15.0km az=24.0*
ISC 20 04:52:25.7±0.8, 1557S±010×7140W±007, h159km±7km, n12, σ1°24/16, mb3.6/4, 1C, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**0.89**	**186**⇑	*i*	P		**Pn**	**04 52 50.1**	**-0.4**
ARE				*i*	S		**Sn**	**04 53 09.4**	**-0.2**
LPAZ	**La Paz**	**3.22**	**103**		P		**Pn**	**04 53 18.1**	**+1.9**
LPAZ	4.5nm,0.3s,baz=302,slow=10.0,SNR=176				S		**Sn**	**04 53 56.4**	**+1.0**
NNA	1.4nm,0.3s,baz=185,slow=25,SNR=10.0 **Nana**	**6.38**	**303**		P		**Pn**	**04 53 57.9**	**+0.4**
NNA	2.8nm,0.3s,baz=124,slow=12,SNR=8.5				S		**Sn**	**04 55 05.6**	**-3.9**
LVC	6.3nm,0.3s,baz=28,slow=21,SNR=13 **Limon Verde**	**7.39**	**162**		P		**Pn**	**04 54 09.0**	**-1.9**
LVC	6.8nm,0.3s,baz=337,slow=9.2,SNR=99				S		**Sn**	**04 55 27.1**	**-6.6**
LVC	1.4nm,0.3s,baz=217,slow=23,SNR=5.4 **Limon Verde**	**7.39**	**162**	*e*	Pn		**Pn**	**04 54 08.9**	**-2.0**
LVC	4.9nm,0.5s			*e*	Sn		**Sn**	**04 55 28.4**	**-5.3**
SIV	**San Ignacio**	**9.95**	**94**		P		**Pn**	**04 54 42.5**	**-2.5**
CFAA	1.2nm,0.3s,baz=272,slow=11,SNR=20 **Coronel Fontan**	**16.22**	**170**		P		**Pn**	**04 56 05.5**	**+0.9**
BDFB	0.1nm,0.3s,baz=354,slow=12,SNR=11 **Brasilia**	**22.52**	**93**		P		**P**	**04 57 12.1**	**-0.3**
PLCA	2.3nm,0.4s,mb4.0,baz=248,slow=9.1,SNR=8.0 **Paso Flores**	**25.08**	**178**		P		**P**	**04 57 36.8**	**+1.4**
TXAR	2.8nm,1.2s,mb3.7,baz=342,slow=10,SNR=3.0 **Lajitas Array**	**54.44**	**325**		P		**P**	**05 01 37.4**	**+0.8**
TORD	0.2nm,0.6s,mb3.0,baz=146,slow=6.6,SNR=3.2 **Torodi Ar. Bea**	**77.72**	**73**		P		**P**	**05 04 04.2**	**-1.3**
SONM	0.7nm,0.5s,mb3.5,baz=260,slow=4.6,SNR=26 **Songino Array**	**147.78**	**3**		PKPbc	PKPbc	PKPbc	05 11 53.7	+2.1
	0.5nm,0.5s,baz=322,slow=3.5,SNR=4.1								

*ISCJB **20** 05:09:46.0±1.0, 3790N±004×27.17E±0.10, h8km±13km, Error ellipse: s-maj=13.8km s-min=5.3km az=163.1*
*DDA **20** 05:09:45.9, 3788N×27.13E, h7km±2km, Md2.9, Ml3.2*
*CSEM **20** 05:09:45.4±0.1, 3793N×2722E, h2km, MD2.7, Error ellipse: s-maj=6.1km s-min=2.4km az=81.0*
*ISK **20** 05:09:46.0, 3793N×2720E, h10km, MD2.7*
ISC 20 05:09:46.3±1.1, 3790N±004×272E±01, h10km±12km, n6, σ0°30/10, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.21**	**164**	*i*	P		**Pg**	**05 09 50.3**	**-0.3**
GCAM				*i*	S		**Sg**	**05 09 53.3**	**-0.2**
BLCB	**Balcova**	**0.49**	**349**	*e*	PG		**Pg**	**05 09 55.7**	**-0.2**
BLCB				*e*	SG		**Sg**	**05 10 02.8**	**+0.4**
IZM	**Izmir**	**0.50**	**9**	*e*	PG		**Pg**	**05 09 55.7**	**-0.4**
IZM				*e*	SG		**Sg**	**05 10 02.8**	**+0.1**
AYDN	**Tasoluk**	**0.62**	**113**	*i*	P		**Pg**	**05 09 58.4**	**+0.1**
AYDN				*i*	S		**Sg**	**05 10 06.5**	**+0.1**
BODT	**Bodrum**	**0.85**	**172**	*e*	PG		**Pg**	**05 10 03.2**	**+0.6**
KULA	**Kula-Manisa**	**1.33**	**62**	*e*	PN		**Pn**	**05 10 10.7**	**-0.2**

*ISCJB **20** 05:12:33.8±0.7, 1144S±009×16625E±0.10, h51km, mb4.4/18, MS3.7/12, Error ellipse: s-maj=15.5km s-min=11.2km az=142.3*
*NEIC **20** 05:12:34.8±0.6, 1133S×16636E, mb4.4/7, Error ellipse: s-maj=13.1km s-min=10.7km az=53.0*
*IDC **20** 05:12:35.0±0.9, 1138S×16633E, h50km±6km, mb4.2/15, mb1 4.3/16, mb1mx4.2/23, mbtmp4.3/16, MS3.7/13, Ms1 3.7/13, ms1mx3.5/28, Error ellipse: s-maj=19.7km s-min=17.2km az=89.0*
ISC 20 05:12:35.6±0.7, 1138S±009×16629E±010, h53km, h53km±2.1km:pP-P, n42, σ0°86/33, mb4.4/18, MS3.7/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.54**	**287**		P		**Pn**	**05 14 10.7**	**+1.5**
HNR	77nm,0.3s,baz=157,slow=4.5,SNR=9.9				LR	LR	15	15 32.5	
HNR	comp=Z,117nm,20.6s,baz=38,slow=27 **Honiara**	**6.54**	**287**	*e*	Pn		**Pn**	**05 14 10.2**	**+1.1**
HNR					LR	LR	15	15 32.5	
DZM	**Mont Dzumac**	**10.63**	**179**	*e*	P		**Pn**	**05 15 05.7**	**+0.5**
DZM				*e*	S		**Sn**	**05 16 55.4**	**-7.5**
DZM	**Mont Dzumac**	**10.63**	**179**	*e*	Pn		**Pn**	**05 15 05.6**	**+0.3**
DZM				*e*	Sn		**Sn**	**05 16 57.4**	**-5.5**
CTA	**Charters Tower**	**21.12**	**243**	*e*	P		**P**	**05 17 18.4**	**+2.3**
CTA	6.0nm,0.8s,mb4.0 **Charters Tower**	**21.12**	**243**		P		**P**	**05 17 17.8**	**+1.7**
CTA	7.4nm,0.7s,mb4.1,baz=82,slow=12,SNR=9.7				LR	LR	05	23 32.2	
CTAO	comp=Z,246nm,22.0s,MS3.5,baz=54,slow=31 **Charters Tower**	**21.12**	**243**	*e*	P		**P**	**05 17 18.2**	**+2.2**
AFI	10nm,0.8s,mb4.2 **Afiamalu**	**21.54**	**99**		LR	LR	05	24 20.1	
ARMA	comp=Z,79nm,18.5s,MS3.1,baz=202,slow=33 **Armidale**	**23.33**	**214**	*e*	P		**P**	**05 17 40.4**	**+1.2**
URZ	**Urewera**	**28.46**	**162**		P		**P**	**05 18 27.0**	**+1.4**
URZ	14nm,1.1s,mb4.5,baz=245,slow=16,SNR=4.1				LR	LR	05	27 21.4	
STKA	comp=Z,180nm,18.2s,MS3.7,baz=358,slow=31 **Stephens Creek**	**30.57**	**224**	*e*	P		**P**	**05 18 45.0**	**+0.7**
STKA	5.2nm,0.8s,mb4.4 **Stephens Creek**	**30.57**	**224**		P		**P**	**05 18 45.0**	**+0.7**
STKA	5.4nm,0.7s,mb4.5,baz=60,slow=11,SNR=10				LR	LR	05	30 24.9	
WRAB	comp=Z,165nm,20.2s,MS3.7,baz=29,slow=35 **Tennant Creek**	**31.86**	**251**	*e*	P		**P**	**05 18 55.0**	**-0.8**
WB2	2.8nm,0.7s,mb4.2 **Warramunga Arr**	**31.86**	**251**	*e*	P		**P**	**05 18 55.4**	**-0.5**
WB2				*e*			pP	05 19 10.7	+1.2
WRA	**Warramunga Arr**	**31.88**	**251**		P		**P**	**05 18 55.3**	**-0.6**
WRA	4.3nm,0.8s,mb4.3,baz=82,slow=9.2,SNR=24				pP		pP	05 19 08.4	-1.1
WRA	5.8nm,0.9s,baz=82,slow=9.0,SNR=9.9				PcP	PcP	PcP	05 21 45.5	-0.3
RPZ	1.6nm,0.9s,baz=69,slow=3.2,SNR=6.4 **Rata Peaks**	**32.48**	**174**		P		**P**	**05 19 00.7**	**-0.2**
ASAR	12nm,0.5s,mb5.0,baz=302,slow=3.5,SNR=15 **Alice Springs**	**33.13**	**244**		P		**P**	**05 19 05.8**	**-1.0**
ASAR	5.8nm,0.8s,mb4.6,baz=74,slow=9.4,SNR=68				pP		pP	05 19 19.2	-1.3
ASAR	5.1nm,0.8s,baz=75,slow=9.3,SNR=10.0				PcP	PcP	PcP	05 21 48.5	-0.6
ASAR	1.6nm,0.8s,baz=72,slow=2.7,SNR=10				ScP	ScP	ScP	05 25 30.2	+1.1
FITZ	1.7nm,1.1s,baz=57,slow=3.4,SNR=6.5 **Fitzroy Crossi**	**39.81**	**255**	*e*	P		**P**	**05 20 03.9**	**0.0**
FITZ	7.3nm,0.6s,mb4.6 **Fitzroy Crossi**	**39.81**	**255**		P		**P**	**05 20 03.7**	**-0.2**
PPT	3.6nm,0.7s,mb4.2,baz=106,slow=9.0,SNR=17 **Papeete**	**43.10**	**104**	*e*	S		Sx	05 27 15.8	
PPT	56nm,24.5s				eLR	LR	LR	05 32 52.9	
PPT	148nm,27.8s **Papeete**	**43.10**	**104**		LR	LR	LR	05 34 21.1	
KLBR	comp=Z,121nm,22.0s,MS3.8,baz=7.2,slow=30 **Kellerberrin**	**48.98**	**238**	*e*	P		**P**	**05 21 15.8**	**-1.2**
	15nm,0.8s,mb5.1								

NWAO Narrogin (SRO) 49.72 236 P **P 05 21 22.3 -0.3**
9.4nm,0.7s,mb4.9,baz=92,slow=6.2,SNR=5.9
MUN Mundaring 50.35 238 *eP* **P 05 21 27.2 -0.2**
JOW Kunigami 52.97 316 LR LR 05 44 03.0
comp=Z,70nm,18.8s,MS3.7,baz=137,slow=36
MJAR Matsushiro Arr 54.51 332 pP pP 05 22 12.1 -0.4
2.3nm,0.7s,baz=167,slow=8.8,SNR=5.8
MJAR LR LR 05 40 54.9
comp=Z,113nm,21.4s,MS3.9,baz=40,slow=31
KSRS Korea Array 60.45 325 LR LR 05 47 56.1
comp=Z,38nm,20.0s,MS3.5,baz=230,slow=35
CASY Casey 66.27 201 *eP* **P 05 23 16.8 -1.1**
SBA Scott Base 66.47 180 *eP* **P 05 23 18.7 -0.3**
9.4nm,1.1s,mb4.7
CMAR Chiang Mai Arr 72.74 293 P **P 05 23 59.5 +0.9**
0.7nm,0.4s,mb4.0,baz=121,slow=5.9,SNR=5.0
CMAR pP pP 05 24 14.7 +1.0
1.9nm,0.6s,baz=113,slow=4.8,SNR=2.4
KDAK Kodiak Island 76.69 21 LR LR 05 51 25.8
comp=Z,80nm,19.6s,MS4.0,baz=184,slow=30
QSPA South Pole Qui 78.63 180 P **P 05 24 30.7 -0.5**
12nm,0.9s,mb4.8,baz=11,slow=2.7,SNR=28
SONM Songino Array 79.25 324 P **P 05 24 35.7 +0.7**
0.4nm,0.6s,mb3.6,baz=140,slow=5.9,SNR=5.3
SONM pP pP 05 24 49.5 -0.8
1.1nm,0.5s,baz=139,slow=6.2,SNR=5.9
MAW Mawson 84.62 202 P **P 05 25 02.6 -0.4**
1.3nm,0.9s,mb4.1,baz=86,slow=11,SNR=3.6
PDAR Pinedale Array 93.38 47 LR LR 06 01 49.1
comp=Z,28nm,19.8s,MS3.7,baz=245,slow=32
MKAR Makanchi Array 94.13 317 P **P 05 25 48.0 -0.4**
2.2nm,0.6s,mb4.8,baz=97,slow=6.3,SNR=13
MKAR pP pP 05 26 02.2 -1.7
2.1nm,0.7s,baz=94,slow=6.4,SNR=3.8
MKAR Makanchi Array 94.13 317 P **P 05 25 48.0 -0.4**
MKAR pP pP 05 26 02.2 -1.7
ZALV Zalesovo Beam 94.14 324 P **P 05 25 47.4 -0.9**
0.6nm,0.3s,mb4.5,baz=106,slow=5.3,SNR=3.8
TXAR Lajitas Array 95.52 61 P **P 05 25 55.8 +0.6**
0.2nm,0.5s,mb3.8,baz=233,slow=4.2,SNR=3.1
TXAR LR LR 06 01 19.3
comp=Z,51nm,21.6s,MS4.0,baz=180,slow=31
KURK Kurchatov 97.24 320 LR LR 06 06 08.0
comp=Z,54nm,20.1s,MS4.0,baz=155,slow=33
ARCES ARCESS Array B 116.79 346 PKP PKPdf 05 31 11.9 -1.6
2.5nm,0.9s,baz=73,slow=2.1,SNR=13
TORD Torodi Ar. Bea 164.84 278 PKPab PKPab 05 33 30.8 -0.1
0.8nm,0.8s,baz=86,slow=2.5,SNR=4.2

*ATH **20** 05:15:22.8, 3850N×2157E, h52km±2km, MD2.9/3*
*CSEM **20** 05:15:23.3±0.2, 3848N×2168E, h31km, MD2.9, Error ellipse: s-maj=8.2km s-min=3.5km az=122.0*
*ISCJB **20** 05:15:25.1±0.8, 3852N±006×2149E±009, h33km±10km, Error ellipse: s-maj=13.3km s-min=7.0km az=38.9*
*THE **20** 05:15:25.5, 3848N×2150E, h7km*
ISC 20 05:15:25.1±1.4, 3850N±007×215E±01, h39km±31km, n6, σ0°74/9, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.45**	**186**	*e*	P		**Pn**	**05 15 34.1**	**-1.0**
RLS					S		**Sn**	**05 15 42.5**	**+0.5**
EVR	**Evrytania**	**0.47**	**28**	*e*	P		**Pn**	**05 15 34.3**	**-1.0**
EVR					S		**Sn**	**05 15 42.6**	**+0.1**
KFL	**Anninata**	**0.70**	**236**	*e*	Pg		**Pn**	**05 15 38.4**	**-0.2**
LKD	**Levkas**	**0.72**	**287**	*e*	Pg		**Pn**	**05 15 38.7**	**0.0**
VLS	**Valsamata**	**0.81**	**247**	*e*	Pg		**Pn**	**05 15 39.5**	**-0.5**
VLS				*e*	Sg		**Sn**	**05 15 51.5**	**+0.8**
AGG	**Agios Georgios**	**0.81**	**50**	*e*	Pg		**Pn**	**05 15 41.4**	**+1.4**

BJI 20 05:41:22.9, 4728N×13015E, h21km, ML3.6, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MDJ	**Mudanjiang**	**2.69**	**189**		P		Pn	05 42 03.9	-1.0
MDJ					SG		Sn	05 42 44.8	+7.9
MDJ					Smax				
MDJ	comp=N,85nm,0.5s				Smax				
CN2	comp=E,234nm,0.8s **Changchun**	**4.80**	**225**	*e*	PG		Pn	05 42 51.8	+18
CN2				*e*	SG		Sn	05 43 52.8	+24
CN2					Smax				
CN2	comp=N,100nm,0.8s				Smax				
	comp=E,100nm,0.8s								

IDC 20 05:59:29.6±4.4, 389S×10181E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, Error ellipse: s-maj=165.1km s-min=28.3km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.39**	**353**		P		P	06 04 30.6	+1.0
WRA	1.0nm,0.3s,baz=176,slow=8.3,SNR=4.9 **Warramunga Arr**	**35.49**	**119**		P		P	06 06 28.1	-0.1
SONM	0.2nm,0.3s,baz=302,slow=9.2,SNR=5.1 **Songino Array**	**51.67**	**4**		P		P	06 08 38.9	+0.8
MKAR	0.8nm,0.7s,baz=181,slow=6.8,SNR=4.7 **Makanchi Array**	**53.34**	**343**		P		P	06 08 49.1	-1.4
TXAR	0.3nm,0.5s,baz=132,slow=8.4,SNR=3.7 **Lajitas Array**	**145.02**	**41**		PKPbc	PKPbc	PKPbc	06 19 08.4	-0.5
	0.3nm,0.6s,baz=301,slow=2.6,SNR=3.6								

*ISCJB **20** 06:07:39.8±0.7, 1941S±005×6913W±008, h112km±8km, mb3.7/5, Error ellipse: s-maj=12.8km s-min=7.3km az=167.5*
*IDC **20** 06:07:40.8±2.6, 1944S×6909W, h104km±25km, mb3.6/6, mb1 3.8/9, mb1mx3.6/20, mbtmp3.7/9, Error ellipse: s-maj=26.3km s-min=18.2km az=130.0*
*NEIC **20** 06:07:41.6±0.9, 1945S×6912W, h114km±9km, Error ellipse: s-maj=14.6km

az=16.6

IDC ***20*** *06:08:55.6±0.7, 4895S×12142E, h0km, mb4.5/9, mb1 4.6/10,mb1mx4.4/15,mbtmp4.5/10,ML2.6/1,MS4.2/15, Ms1 4.2/15,ms1mx4.0/24,Error ellipse: s-maj=37.1km s-min=15.7km az=108.0*

GCMT ***20*** *06:08:56.8±0.3, 4900S×12139E, h14km±1km, MW4.9/61, Moment Tensor Solution. s21,c23; s61,c83; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.23±.20; Mθθ 1.95±.14; Mϕϕ 0.28±.13; Mrθ 0.24±.29; Mϕθ -0.88±.08; Mϕr 2.24±.41; Best double couple: M◎3.04800×10¹⁶ NP1:ϕ◎272.00000°, δ41.00000°, λ-137.00000°. NP2: ϕs147.00000°, δ63.00000°, λ-57.00000°. Principal axes: T 2.4760, Plg13.0000°, Azm214.0000°; N 1.1450, Plg29.0000°, Azm311.0000°; P -3.6210, Plg58.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***20*** *06:08:56.8±0.4, 4889S×12121E, h10km, mb4.5/7 Error ellipse: s-maj=17.1km s-min=8.0km az=106.0*

BJI ***20*** *06:08:58.5, 4803S×12201E, h10km, mB5.4, mb4.9, Ms4.7, Msz4.4*

ISC 20 06:08:57.1±0.4, 4891S±007×1213E±02, h10km, n56, σ1θ01/31, mb4.7/19, MS4.2/18, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**16.25**	**348**	Pn	**Pn**	**06 12 46.6**	**+1.3**
	1.0nm,0.3s,baz=156,slow=17,SNR=6.8						
NWAO				LR	LR	06 17 38.1	
	comp=Z,1μm,18.9s,baz=180,slow=32						
CASY	**Casey**	**18.29**	**194**	*e*P	**P**	**06 13 10.1**	**-0.4**
TOO	**Toolangi**	**20.87**	**66**	*e*P	**P**	**06 13 40.3**	**+1.2**
STKA	**Stephens Creek**	**22.89**	**49**	*e*P	**P**	**06 14 01.4**	**+0.8**
	12nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**22.89**	**49**	P	**P**	**06 14 01.6**	**+0.9**
	7.9nm,1.0s,mb4.1,baz=207,slow=9.0,SNR=6.7						
STKA				LR	LR	06 21 16.0	
	comp=Z,770nm,20.1s,MS4.1,baz=208,slow=32						
ASAR	**Alice Springs**	**27.10**	**26**	P	**P**	**06 14 39.6**	**-0.3**
	7.5nm,1.0s,mb4.2,baz=192,slow=9.0,SNR=34						
ASAR				PcP	PcP	06 18 00.2	-0.4
	0.7nm,0.6s,baz=185,slow=2.1,SNR=5.6						
MBWA	**Marble Bar**	**27.72**	**357**	*e*P	**P**	**06 14 42.8**	**-2.6**
	19nm,1.2s,mb4.6						
WRA	**Warramunga Arr**	**30.75**	**25**	P	**P**	**06 15 11.9**	**-0.5**
	5.0nm,1.0s,mb4.3,baz=198,slow=9.1,SNR=11						
WRA				PcP	PcP	06 18 09.5	-0.3
	1.8nm,1.0s,baz=212,slow=2.8,SNR=4.7						
WRA				LR	LR	06 26 30.0	
	comp=Z,560nm,19.9s,MS4.2,baz=185,slow=34						
WB2	**Warramunga Arr**	**30.75**	**25**	*e*P	**P**	**06 15 12.1**	**-0.3**
WRAB	**Tennant Creek**	**30.76**	**25**	P	**P**	**06 15 11.6**	**-0.9**
FITZ	**Fitzroy Crossi**	**30.94**	**8**	*e*P	**P**	**06 15 15.4**	**+1.4**
	8.5nm,1.0s,mb4.5						
FITZ	**Fitzroy Crossi**	**30.94**	**8**	P	**P**	**06 15 15.7**	**+1.7**
	4.8nm,1.0s,mb4.3,baz=179,slow=12,SNR=6.8						
FITZ				LR	LR	06 26 35.4	
	comp=Z,348nm,18.9s,MS4.0,baz=210,slow=34						
FITZ	**Fitzroy Crossi**	**30.94**	**8**	*e*P	**P**	**06 15 12.4**	**-1.7**
	6.6nm,0.9s,mb4.5						
FITZ				LR	LR	06 26 35.4	
MAW	**Mawson**	**34.25**	**215**	*e*P	**P**	**06 15 43.1**	**+0.5**
	12nm,1.1s,mb4.7						
MAW	**Mawson**	**34.25**	**215**	P	**P**	**06 15 43.2**	**+0.6**
	7.4nm,0.9s,mb4.6,baz=78,slow=9.9,SNR=20						
MAW				LR	LR	06 28 26.6	
	comp=Z,231nm,18.1s,MS4.0,baz=60,slow=34						
CTAO	**Charters Tower**	**35.05**	**44**	*e*P	**P**	**06 15 49.1**	**-0.9**
	6.4nm,1.2s,mb4.4						
QSPA	**South Pole Qui**	**41.21**	**180**	P	**P**	**06 16 41.8**	**+0.5**
	19nm,1.1s,mb4.7,baz=330,slow=3.6,SNR=32						
QSPA	**South Pole Qui**	**41.21**	**180**	P	**P**	**06 16 41.8**	**+0.5**
KAPI	**Kappang**	**43.76**	**358**	LR	LR	06 34 52.7	
	comp=Z,103nm,21.4s,MS3.7,baz=18,slow=36						
HNR	**Honiara**	**50.91**	**53**	LR	LR	06 38 26.1	
	comp=Z,179nm,18.4s,MS4.1,baz=173,slow=35						
SNAA	**Sanae**	**53.43**	**199**	*e*P	**P**	**06 18 16.4**	**-0.1**
	21nm,1.1s,mb5.0						
AFI	**Afiamalu**	**64.51**	**82**	LR	LR	06 41 37.1	
	comp=Z,116nm,19.5s,MS4.1,baz=327,slow=30						
GUMO	**Guam**	**65.64**	**25**	LR	LR	06 48 47.0	
	comp=Z,105nm,18.9s,MS4.1,baz=269,slow=36						
PMSA	**Palmer Station**	**66.58**	**178**	LR	LR	06 47 01.3	
	comp=Z,521nm,21.6s,MS4.7,baz=254,slow=34						
CMAR	**Chiang Mai Arr**	**69.95**	**337**	P	**P**	**06 20 09.5**	**+1.1**
	1.5nm,0.8s,mb4.0,baz=182,slow=5.3,SNR=8.1						
CMAR				LR	LR	06 46 01.5	
	comp=Z,137nm,21.6s,MS4.2,baz=103,slow=32						
BOSA	**Boshof**	**72.71**	**246**	LR	LR	06 46 04.3	
	comp=Z,173nm,19.7s,MS4.3,baz=271,slow=31						
KMI	**Kunming**	**75.54**	**343**	P	**P**	**06 20 42.3**	**+0.9**
KMI				AP	pP	06 20 45.0	+0.3
KMI				XP	sP	06 20 46.6	+0.7
KMI				PP	PP	06 23 33.4	+2.2
KMI				S	S	06 30 24.4	+2.5
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
KMI				LR	LR		
	comp=N,193nm,21.1s,MS4.5						
KMI				LR	LR		
	comp=E,173nm,21.1s,MS4.5						
KMI				LR	LR		
	comp=Z,196nm,17.8s,MS4.5						
NJ2	**Nanjing**	**80.63**	**358**	*e*P	**P**	**06 21 08.5**	**-1.0**
NJ2				AMB	AMB		
	comp=Z,160nm,1.2s,mb5.8						
CD2	**Chengdu**	**80.99**	**345**	*e*P	**P**	**06 21 12.6**	**+1.1**
CD2				XP	sP	06 21 19.8	+3.8
CD2				PP	PP	06 24 19.8	+3.1
CD2				S	S	06 31 19.3	-1.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,6.2s						
MJAR	**Matsushiro Arr**	**86.40**	**14**	P	**P**	**06 21 38.6**	**-0.4**
	comp=Z,2.6nm,0.9s,mb4.5,baz=197,slow=7.0,SNR=6.9						
MJAR				LR	LR	06 59 39.6	
	comp=Z,115nm,18.0s,MS4.3,baz=225,slow=35						
MAT	**Matsushiro**	**86.40**	**14**	P	**P**	**06 21 40.3**	**+1.2**
HHC	**Hu-ho-hao-te**	**89.79**	**353**	*e*P	**P**	**06 21 53.3**	**-1.8**
HHC				PP	PP	06 25 28.4	+0.3
HHC				SKS		06 32 22.4	
HHC				S	S	06 32 43.4	-3.2
HHC				XS	sS	06 32 49.5	-2.6
HHC				AMB	AMB		
	comp=Z,16nm,0.7s,mb5.5						
HHC				AMB	AMB		
	comp=Z,110nm,7.7s						
HHC				LR	LR		
	comp=N,130nm,17.2s,MS4.7						
HHC				LR	LR		
	comp=E,211nm,16.3s,MS4.7						
HHC				LR	LR		
	comp=Z,135nm,16.9s,MS4.4						
GTA	**Gaotai**	**89.97**	**344**	*e*P	**P**	**06 22 02.3**	**+6.3**
GTA				AP	pP	06 22 05.9	+6.5
GTA				XP	sP	06 22 07.3	+6.8
GTA				AMB	AMB		
	comp=Z,2.0nm,1.4s,mb4.2						
GTA				AMB	AMB		
	comp=Z,125nm,5.1s						
GTA				LR	LR		
	comp=N,151nm,18.0s,MS4.5						
GTA				LR	LR		
	comp=E,100nm,17.4s,MS4.5						
GTA				LR	LR		
	comp=Z,127nm,19.5s,MS4.4						
PLCA	**Paso Flores**	**90.13**	**171**	P	**P**	**06 21 57.2**	**+0.1**
	comp=Z,6.0nm,1.2s,mb4.8,baz=183,slow=7.8,SNR=4.4						
PLCA				LR	LR	07 01 56.5	
	comp=Z,156nm,20.5s,MS4.4,baz=227,slow=35						
PLCA	**Paso Flores**	**90.13**	**171**	*e*P	**P**	**06 21 56.2**	**-1.0**
	comp=Z,2.3nm,1.1s,mb4.4						
MDJ	**Mudanjiang**	**93.43**	**6**	P	**P**	**06 22 12.4**	**+0.5**
MDJ				AMB	AMB		
	comp=Z,7.0nm,2.4s,mb4.7						
WMQ	**Urumqi**	**96.93**	**336**	*e*P	**P**	**06 22 27.0**	**-0.9**
WMQ				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb5.2						
WMQ				LR	LR		
	comp=Z,119nm,19.3s,MS4.4						
SONM	**Songino Array**	**97.22**	**350**	LR	LR	07 08 10.1	
	comp=Z,116nm,19.2s,MS4.4,baz=58,slow=36						
TORD	**Torodi Ar. Bea**	**119.15**	**256**	PKP	PKPdf	06 27 45.8	-0.5
	comp=Z,1.1nm,0.9s,baz=121,slow=0.9,SNR=5.5						
TXAR	**Lajitas Array**	**140.72**	**103**	PKhKP		06 28 20.1	
	comp=Z,0.3nm,0.7s,baz=193,slow=3.7,SNR=3.7						
TPAW	**Teton Pass**	**144.05**	**78**	*e*PKPdf	PKPdf	06 28 31.0	-1.1
QLMT	**Earthquake Lak**	**144.34**	**76**	*e*PKPdf	PKPdf	06 28 32.3	-0.3
YMR	**Madison River**	**144.56**	**77**	*e*PKPdf	PKPdf	06 28 31.2	-1.8
PDAR	**Pinedale Array**	**144.61**	**80**	PKP	PKPdf	06 28 31.8	-1.3
	comp=Z,2.3nm,1.0s,baz=183,slow=2.7,SNR=16						
RWWY	**Rawlins**	**145.63**	**83**	*e*PKPbc	PKPbc	06 28 35.0	-0.2
ISCO	**Idaho Springs**	**145.74**	**87**	*e*PKPbc	PKPbc	06 28 36.5	+0.9
RLMT	**Red Lodge**	**145.85**	**77**	*e*PKPbc	PKPbc	06 28 36.4	+0.6
GCMT	**Greyciiff**	**145.87**	**76**	*e*PKPbc	PKPbc	06 28 37.2	+1.4
EKA	**Eskdalemuir Ar**	**146.09**	**302**	PKPbc	PKPbc	06 28 36.0	-0.2
	comp=Z,3.6nm,1.0s,baz=93,slow=7.8,SNR=4.9						
HKT	**Hockley**	**146.09**	**110**	*e*PKPbc	PKPbc	06 28 37.4	+0.4
EDM	**Edmonton**	**146.11**	**62**	*e*PKPbc	PKPbc	06 28 36.3	0.0
YKA	**Yellowknife Ar**	**146.87**	**45**	PKPbc	PKPbc	06 28 38.5	+0.3
	comp=Z,4.1nm,0.8s,baz=274,slow=2.0,SNR=3.7						
WMOK	**Wichita Mounta**	**147.37**	**101**	*e*PKPbc	PKPbc	06 28 40.4	-0.1
NATX	**Nacogdoches**	**148.07**	**109**	*e*PKPbc	PKPbc	06 28 42.6	+0.1
LAO	**LASA Array**	**148.42**	**76**	*e*PKPbc	PKPbc	06 28 44.3	+1.4
RSSD	**Black Hills**	**148.81**	**81**	*e*PKPbc	PKPbc	06 28 44.3	+0.2

ISCJB ***20*** *06:18:51.9±0.4, 3923N±002×2940E±002, h5km±3km, mb3.7/6, Error ellipse: s-maj=2.6km s-min=2.3km az=178.7*

ISK ***20*** *06:18:51.9, 3923N×2942E, h6km, ML4.0*

CSEM ***20*** *06:18:51.1±0.0, 3923N×2942E, h2km, ML4.2, Error ellipse: s-maj=1.0km s-min=0.9km az=1.0*

DDA ***20*** *06:18:51.7, 3922N×2939E, h17km±1km, Md3.7, Ml4.2*

NEIC ***20*** *06:18:51.0, 3924N×2943E, h5km, ML3.6(ATH), ML4.0(ISK), After ISK.*

THE ***20*** *06:18:53.5, 3917N×2933E, h0km, ML4.7*

MOS ***20*** *06:18:53.5±1.8, 3928N×2930E, h10km, mb4.0/1, Error ellipse: s-maj=11.3km s-min=8.1km az=81.6*

IDC ***20*** *06:18:56.4±5.1, 3918N×2927E, h31km±44km, mb3.6/5, mb1 3.8/8,mb1mx3.6/27,mbtmp3.7/8,ML3.9/3,MS2.8/1, Ms1 2.8/1,ms1mx2.2/36,Error ellipse: s-maj=19.3km s-min=15.6km az=99.0*

ISC 20 06:18:52.4±0.4, 3923N±001×2940E±002, h1km±3km, n134, σ0s98/165, mb3.8/6, 5C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.16**	**156**	*i* P	**Pg**	**06 18 55.6**	**+0.2**
GDZ				*i* S	**Sg**	**06 18 57.8**	**+0.3**
DEMI	**Demirci**	**0.56**	**250**	*i* P	**Pg**	**06 19 03.5**	**+0.3**
DEMI				*i* S	**Sg**	**06 19 11.1**	**+0.5**
ALT	**Altintas**	**0.58**	**108**	PG	**Pg**	**06 19 02.9**	**-0.7**
ALT				SG	**Sg**	**06 19 11.3**	**+0.2**
DST	**Dursunbey**	**0.70**	**302**	PG	**Pg**	**06 19 06.5**	**+0.6**
DST	**Dursunbey**	**0.70**	**302**	Pg	**Pg**	**06 19 06.6**	**+0.7**
DURS	**Dursunbey**	**0.80**	**297**	*i* P	**Pg**	**06 19 08.3**	**+0.5**
DURS				*i* S	**Sg**	**06 19 19.6**	**+1.3**
KHL	**Karahalli**	**0.92**	**174**	PG	**Pg**	**06 19 09.6**	**-0.4**
KULA	**Kula-Manisa**	**0.92**	**219**	PG	**Pg**	**06 19 09.4**	**-0.6**
ULDT	**Uludag**	**0.93**	**347**	*i* P	**Pg**	**06 19 10.3**	**+0.1**
ULDT				*i* S	**Sg**	**06 19 20.8**	**-1.5**
BORA	**Eskisehir**	**1.04**	**51**	*i* P	**Pg**	**06 19 12.1**	**-0.3**
BORA				*i* S	**Sg**	**06 19 26.7**	**+0.8**
SHUT	**Suhut-Afyon**	**1.13**	**127**	PN	**Pn**	**06 19 14.4**	**-0.9**
SHUT				*e*SN	**Sn**	**06 19 29.5**	**-2.0**
ESKT	**Eskisehir**	**1.16**	**75**	*i* P	**Pg**	**06 19 13.4**	**-1.3**
SEYT	**Eskypehyr**	**1.16**	**75**	*i* P	**Pg**	**06 19 13.4**	**-1.3**
GEMT	**Gemlik**	**1.21**	**352**	PN	**Pn**	**06 19 15.5**	**-1.0**
ADVT	**Abdulvahap**	**1.23**	**12**	PN	**Pn**	**06 19 15.9**	**-0.8**
BALB	**Balikesir**	**1.24**	**289**	*e*PN	**Pn**	**06 19 16.6**	**-0.3**
GPA	**Golpazari**	**1.27**	**33**	*e*PN	**Pn**	**06 19 16.6**	**-0.6**
AKHS	**Akhisar**	**1.28**	**254**	*i* P	**Pg**	**06 19 16.2**	**-0.8**
AKHS				*i* S	**Sg**	**06 19 33.4**	**-0.3**
AKS	**Akhisar**	**1.28**	**254**	*e*PN	**Pn**	**06 19 17.2**	**-0.3**
KCT	**Karacabey**	**1.31**	**322**	*e*PN	**Pn**	**06 19 17.8**	**0.0**
YLV	**Yalova**	**1.33**	**359**	*e*PN	**Pn**	**06 19 18.3**	**+0.1**
TKTP	**Tekketepe**	**1.39**	**149**	*i* P	**Pn**	**06 19 17.6**	**-1.4**
TKTP				*i* S	**Sg**	**06 19 39.5**	**+2.3**
BALY	**Balya**	**1.47**	**291**	*i* P	**Pn**	**06 19 19.7**	**-0.3**
BALY				*i* S	**Sg**	**06 19 39.2**	**-0.4**
GULT	**Gulveren**	**1.47**	**35**	*e*PN	**Pn**	**06 19 19.7**	**-0.4**
DNZL	**Cakiroluk**	**1.57**	**190**	*i* P	**Pn**	**06 19 19.8**	**-1.6**
DNZL				*i* S	**Sn**	**06 19 44.5**	**+2.3**
BNT	**Bandirma**	**1.60**	**315**	*e*PN	**Pn**	**06 19 21.5**	**-0.3**
HRT	**Hereke**	**1.60**	**7**	*e*PN	**Pn**	**06 19 20.9**	**-0.9**
EDC	**Edincik**	**1.62**	**314**	*e*PN	**Pn**	**06 19 22.0**	**-0.2**
BADT	**Buyukada**	**1.63**	**352**	*e*PN	**Pn**	**06 19 21.9**	**-0.4**
ISP	**Isparta**	**1.64**	**148**	*e*PN	**Pn**	**06 19 21.0**	**-1.4**
ISP	**Isparta**	**1.64**	**148**	*e*Pg	**Pg**	**06 19 22.1**	**-1.7**
ISP	**Isparta**	**1.64**	**148**	P	**Pn**	**06 19 24.5**	**+2.1**
ISK	**Istanbul-Kandi**	**1.85**	**352**	*e*PN	**Pn**	**06 19 24.8**	**-0.4**
KDAG	**Bornova**	**1.86**	**244**	*i* P	**Pn**	**06 19 24.6**	**-0.8**
KDAG				*i* S	**Sn**	**06 19 51.0**	**+1.5**
MDU	**Mudurnu**	**1.86**	**48**	*e*PN	**Pn**	**06 19 25.3**	**-0.1**
IZM	**Izmir**	**1.87**	**244**	*e*PN	**Pn**	**06 19 25.4**	**-0.1**
SILT	**Sile**	**1.93**	**6**	*e*PN	**Pn**	**06 19 26.4**	**0.0**
MRMT	**Marmara Adasi**	**1.95**	**315**	*e*PN	**Pn**	**06 19 27.3**	**+0.7**
HENT	**Hendek**	**1.96**	**36**	*i* P	**Pn**	**06 19 26.4**	**-0.4**
HENT				*i* S	**Sn**	**06 19 54.4**	**+2.4**
KIZT	**Kizilcal**	**1.96**	**100**	*e*PN	**Pn**	**06 19 26.4**	**-0.4**
AYDN	**Tasoluk**	**1.97**	**218**	*i* P	**Pn**	**06 19 25.4**	**-1.6**
AYDN				*i* S	**Sn**	**06 19 54.5**	**+2.2**
GOLH	**Golhisar**	**2.00**	**176**	*i* P	**Pn**	**06 19 26.2**	**-1.0**
GOLH				*i* S	**Sg**	**06 19 58.6**	**+2.0**
BGKT	**Bogazkoy**	**2.00**	**346**	*e*PN	**Pn**	**06 19 26.4**	**-0.9**
BLCB	**Balcova**	**2.03**	**246**	*e*PN	**Pn**	**06 19 27.5**	**-0.2**
KLYT	**Kilyos**	**2.04**	**352**	*e*PN	**Pn**	**06 19 27.3**	**-0.5**
CTT	**Catalca**	**2.05**	**339**	*e*PN	**Pn**	**06 19 27.6**	**-0.4**
AYVA	**Ayvalik**	**2.10**	**273**	*i* P	**Pn**	**06 19 28.0**	**-0.8**
AYVA				*i* S	**Sn**	**06 19 59.5**	**+3.9**
SLVT	**Silivri**	**2.19**	**336**	*e*PN	**Pn**	**06 19 30.1**	**+0.2**
KDHN	**Kadinhani**	**2.24**	**108**	*i* P	**Pn**	**06 19 29.9**	**-0.7**
KDHN				*i* S	**Sn**	**06 19 59.3**	**+0.5**
RKY	**Sarkoy-Tekirda**	**2.24**	**311**	*e*PN	**Pn**	**06 19 31.1**	**+0.5**
MFT	**Murefte**	**2.25**	**314**	*e*PN	**Pn**	**06 19 31.1**	**+0.4**
TKR	**Tekirdag**	**2.26**	**321**	*e*PN	**Pn**	**06 19 31.4**	**+0.5**
YER	**Yerkesik**	**2.27**	**203**	*e*PN	**Pn**	**06 19 31.4**	**+0.3**
MLSB	**Milas**	**2.32**	**214**	*e*PN	**Pn**	**06 19 32.6**	**+0.9**
LPK	**Lapseki**	**2.33**	**300**	*e*PN	**Pn**	**06 19 32.8**	**+0.9**
URLA	**Izmir**	**2.36**	**249**	*i* P	**Pn**	**06 19 36.2**	**+4.0**
URLA				*i* S	**Sn**	**06 20 06.6**	**+4.8**
PRK	**Paraskevi**	**2.43**	**271**	*e*Pn	**Pn**	**06 19 32.7**	**-0.5**
PRK				*e*Sn	**Sn**	**06 20 02.6**	**-0.9**
PRK	**Paraskevi**	**2.43**	**271**	P	**Pn**	**06 19 33.4**	**+0.2**
EZN	**Ezine**	**2.45**	**285**	*e*PN	**Pn**	**06 19 33.8**	**+0.3**
ELL	**Elmali**	**2.51**	**171**	*e*PN	**Pn**	**06 19 34.5**	**+0.1**
SMG	**Samos**	**2.52**	**234**	*e*P	**Pn**	**06 19 38.8**	**+4.3**
SMG	**Samos**	**2.52**	**234**	P	**Pn**	**06 19 33.8**	**-0.7**
LADK	**Ladik-KONYA**	**2.54**	**113**	*e*PN	**Pn**	**06 19 34.6**	**-0.1**
KDZE	**Karadeniz Ereo**	**2.60**	**36**	*e*PN	**Pn**	**06 19 35.1**	**-0.5**
BDRM	**Kayabasi**	**2.66**	**216**	*i* P	**Pn**	**06 19 35.1**	**-1.2**
BDRM				*i* S	**Sn**	**06 20 06.3**	**-2.9**
LOD	**Lodumlu**	**2.68**	**75**	*e*PN	**Pn**	**06 19 37.1**	**+0.4**
ANTO	**Ankara**	**2.70**	**75**	*e*PN	**Pn**	**06 19 37.4**	**+0.4**
ANTO	**Ankara**	**2.70**	**75**	⇑*i*P	**Pn**	**06 19 41.9**	**+5.0**
ANTO	**Ankara**	**2.70**	**75**	*e*Pn	**Pn**	**06 19 42.3**	**+5.4**
CHOS	**Chios island**	**2.75**	**253**	*e*Pn	**Pn**	**06 19 36.6**	**-1.0**
CHOS				*e*Sn	**Sn**	**06 20 11.1**	**-0.2**
ENEZ	**Enez**	**2.91**	**302**	*e*PN	**Pn**	**06 19 40.0**	**+0.1**
ALN	**Alexandroupoli**	**3.06**	**304**	*e*Pn	**Pn**	**06 19 41.5**	**-0.4**
ALN				*e*Sn	**Sn**	**06 20 19.7**	**+0.6**
ALN	**Alexandroupoli**	**3.06**	**304**	*e*Pn	**Pn**	**06 19 41.5**	**-0.4**
ALN				*e*Sn	**Sn**	**06 20 19.7**	**+0.5**
ARG	**Arkhangelos**	**3.18**	**199**	*e*P	**Pn**	**06 19 44.0**	**+0.5**
SAFT	**Safranbolu**	**3.22**	**50**	*e*PN	**Pn**	**06 19 44.8**	**+0.7**
LIA	**Limnos Island**	**3.33**	**283**	*e*Pn	**Pn**	**06 19 45.0**	**-0.5**
LIA	**Limnos Island**	**3.33**	**283**	*e*P	**Pn**	**06 19 45.6**	**+0.1**
LIA	**Limnos Island**	**3.33**	**283**	*e*Pn	**Pn**	**06 19 45.0**	**-0.5**
KAMT	**Kaman**	**3.35**	**86**	*e*PN	**Pn**	**06 19 46.4**	**+0.5**
RDO	**Rodhopi**	**3.52**	**304**	*e*P	**Pn**	**06 19 48.3**	**+0.1**
CANT	**Cankiri**	**3.52**	**66**	*e*PN	**Pn**	**06 19 48.5**	**+0.2**
APE	**Apeiranthos**	**3.74**	**236**	*e*Pn	**Pn**	**06 19 49.8**	**-1.4**
APE	**Apeiranthos**	**3.74**	**236**	*e*P	**Pn**	**06 19 49.9**	**-1.3**
APE	**Apeiranthos**	**3.74**	**236**	⇓*i*P	**Pn**	**06 19 50.0**	**-1.2**
APE	**Apeiranthos**	**3.74**	**236**	P	**Pn**	**06 19 51.4**	**+0.2**
APE	**Apeiranthos**	**3.74**	**236**	P	**Pn**	**06 19 51.4**	**+0.2**
BALT	**Daday**	**3.81**	**52**	*i* P	**Pn**	**06 19 51.6**	**-0.7**
BALT				*i* S	**Sg**	**06 20 54.2**	**-0.7**
CDAG	**Cicekdag**	**3.87**	**83**	*i* P	**Pn**	**06 19 53.4**	**+0.3**
CDAG	**Cicekdag**	**3.87**	**83**	*i* P	**Pn**	**06 19 53.3**	**+0.3**
JMB	**Yambol**	**3.87**	**327**	*e*Pn	**Pn**	**06 19 54.1**	**+1.1**
TOS	**Tosya**	**3.98**	**62**	*e*PN	**Pn**	**06 19 55.2**	**+0.7**
KARP	**Karpathos**	**4.09**	**207**	*e*P	**Pn**	**06 19 55.0**	**-1.0**
KARP	**Karpathos**	**4.09**	**207**	P	**Pn**	**06 19 55.5**	**-0.5**
CORM	**Corum**	**4.14**	**75**	*e*PN	**Pn**	**06 19 58.1**	**+1.3**
SANT	**Santorini**	**4.23**	**229**	P	**Pn**	**06 19 58.3**	**+0.3**
BZK	**Bozkurt**	**4.44**	**51**	*e*PN	**Pn**	**06 20 01.8**	**+1.0**
IKL	**Isikli**	**4.53**	**130**	*e*PN	**Pn**	**06 20 03.7**	**+1.7**
PLD	**Plovdiv**	**4.58**	**310**	*e*Pn	**Pn**	**06 20 03.0**	**+0.2**
BYBT	**Boyabat**	**4.67**	**60**	*e*PN	**Pn**	**06 20 05.4**	**+1.4**
PLG	**Polygyros**	**4.72**	**286**	*e*P	**Pn**	**06 20 04.3**	**-0.5**
PLG	**Polygyros**	**4.72**	**286**	P	**Pn**	**06 20 05.3**	**+0.5**
NVR	**Nevrokopi**	**4.73**	**298**	*e*P	**Pn**	**06 20 05.1**	**+0.2**
NPS	**Neapolis**	**4.98**	**218**	P	**Pn**	**06 20 09.6**	**+1.3**
TIRR	**Tirgusor**	**5.27**	**352**	*e*P	**Pn**	**06 20 12.0**	**-0.3**
TIRR				pmax	pmax		
	comp=Z,85nm,0.3s						
TIRR	**Tirgusor**	**5.27**	**352**	⇓*i*P	**Pn**	**06 20 12.4**	**+0.1**
TIRR	**Tirgusor**	**5.27**	**352**	*e*Pn	**Pn**	**06 20 11.9**	**-0.4**
	comp=Z,85nm,0.3s						
TIRR	**Tirgusor**	**5.27**	**352**	*e*Pn	**Pn**	**06 20 11.9**	**-0.3**
	comp=Z,85nm,0.3s						
IDI	**Anoyia**	**5.33**	**224**	Pn	**Pn**	**06 20 12.9**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=300,slow=21,SNR=6.8						
IDI				Sn	**Sn**	**06 21 09.2**	**-6.0**
	comp=Z,0.4nm,0.3s,baz=157,slow=23,SNR=2.1						
VTS	**Vitosha**	**5.76**	**308**	⇑*i*P	**Pn**	**06 20 19.1**	**0.0**
SVSK	**Karacayir**	**5.91**	**81**	*e*PN	**Pn**	**06 20 22.3**	**+1.2**
TLCR		**5.96**	**356**	⇑*i*P	**Pn**	**06 20 22.0**	**+0.2**
YAL	**Yalta**	**6.34**	**33**	*e*P	**Pn**	**06 20 26.8**	**-0.1**
YAL				*e*S	**Sn**	**06 21 37.4**	**-2.5**
YAL				pmax	pmax		
	comp=Z,18nm,0.7s						
YAL				smax			
	comp=N,10.0nm,0.7s						
YAL				smax			
	comp=E,5.0nm,0.7s						
YAL	**Yalta**	**6.34**	**33**	*e*P	**Pn**	**06 20 26.8**	**-0.1**
	comp=E,18nm,0.7s						
ALU	**Alushta**	**6.60**	**33**	*e*P	**Pn**	**06 20 34.5**	**+4.0**
ALU				*e*S	**Sn**	**06 21 47.0**	**+0.7**
ALU				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ALU				smax			
	comp=N,21nm,0.5s						
ALU				smax			
	comp=E,8.0nm,0.5s						
SIM	**Simferopol'**	**6.70**	**30**	*e*P	**Pn**	**06 20 32.2**	**+0.3**
SIM				*e*S	**Sn**	**06 21 46.2**	**-2.6**
SIM				pmax	pmax		
	comp=Z,19nm,0.7s						
SIM				smax			
	comp=E,47nm,0.8s						
SIM				smax			
	comp=N,33nm,0.9s						
SIM	**Simferopol'**	**6.70**	**30**	*e*P	**Pn**	**06 20 32.2**	**+0.3**
	comp=N,19nm,0.7s						
MLR	**Muntele Rosu**	**6.75**	**339**	Pn	**Pn**	**06 20 33.8**	**+1.2**
	comp=N,1.2nm,0.3s,baz=219,slow=7.1,SNR=9.8						
MLR				S

NVAR	Mina Array Bea	86.29	44	P		P		06 45 49.1	-0.3
	0.3nm,0.4s,mb3.3,baz=220,slow=6.7,SNR=2.4								
TXAR	Lajitas Array	91.57	58	P		P		06 46 14.6	+0.4
	0.1nm,0.6s,mb2.9,baz=210,slow=5.2,SNR=4.0								

IDC 20 06:48:44.7±3.4, 177S×9972E, h0 km, mb3.4/4, mb1 3.5/4, mb1mx3.4/19, mbtmp3.4/4, Error ellipse: s-maj=145.3km s-min=26.1km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	38.34	121	P		P	06 56 06.9	-0.8
	0.2nm,0.3s,baz=295,slow=12,SNR=3.1							
ASAR	Alice Springs	39.61	126	P		P	06 56 19.0	+0.7
	0.3nm,0.8s,baz=297,slow=7.6,SNR=3.1							
SONM	Songino Array	49.75	6	P		P	06 57 39.6	+0.8
	0.5nm,0.8s,baz=190,slow=7.5,SNR=4.8							
MKAR	Makanchi Array	50.74	345	P		P	06 57 46.0	-0.3
	0.3nm,0.4s,baz=152,slow=8.1,SNR=3.7							
TXAR	Lajitas Array	144.69	37	PKP		PKPdf	07 08 23.4	-0.9
	0.6nm,0.6s,baz=190,slow=0.6,SNR=9.3							

IDC 20 06:53:42.0±3.9, 396S×10136E, h0 km, mb3.6/4, mb1 3.7/4, mb1mx3.6/18, mbtmp3.6/4, Error ellipse: s-maj=162.0km s-min=24.6km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	35.85	119	P		P	07 00 43.7	0.0
	0.6nm,0.7s,baz=299,slow=8.8,SNR=4.6							
ASAR	Alice Springs	37.02	125	P		P	07 00 53.5	-0.1
	0.3nm,0.8s,baz=293,slow=8.3,SNR=4.1							
SONM	Songino Array	51.76	4	P		P	07 02 52.1	+0.9
	1.1nm,0.6s,baz=183,slow=9.4,SNR=8.0							
MKAR	Makanchi Array	53.27	344	P		P	07 03 01.9	-0.5
	1.4nm,0.7s,baz=152,slow=8.2,SNR=8.6							
TXAR	Lajitas Array	145.36	41	PKPbc		PKPbc	07 13 21.5	-0.9
	0.9nm,1.0s,baz=250,slow=1.6,SNR=5.0							

ISC 20 06:54:07.0±2.2, 372N×01N×718E×04, h179 km±17 km, n19, σ0°53/21, 2C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AML	Almayashu	5.18	16	P		Pn	06 55 23.1	+0.1
	SNR=17							
UCH	Uchtor	5.48	22	P		Pn	06 55 26.8	-0.3
	SNR=11							
EKS2	Erkin-Say	5.70	15	P		Pn	06 55 30.2	+0.3
	SNR=20							
THN	Thein Dam	5.72	144	eP		Pn	06 55 30.9	+0.6
THN				eS		Sn	06 56 35.7	0.0
AAK	Ala-Archa	5.85	20	P		Pn	06 55 31.9	0.0
	SNR=13							
KK31	Karatay Array	6.01	351	⇑Pn		Pn	06 55 33.8	-0.2
	2.5nm,0.2s,baz=175,slow=13,SNR=48							
KK31				⇑Lg			06 56 34.8	
	20nm,0.5s,baz=168,slow=22							
TKM2	Tokmak 2	6.45	26	P		Pn	06 55 39.7	0.0
	SNR=6.3							
DANN	Dangsing	13.36	128	eP		Pn	06 57 08.8	-0.9
KOLN	Koldanda	13.67	130	eP		Pn	06 57 13.0	-0.6
	12nm,0.5s							
KOLN				eS		Sn	06 59 36.4	-9.3
GKN	Gorkha	14.16	126	eP		Pn	06 57 18.5	-1.1
KKN	Kakani	14.72	126	eP		Pn	06 57 26.1	-0.5
DMN	Daman	14.73	126	eP		Pn	06 57 26.2	-0.5
PKIN	Phulchoki	14.94	126	eP		Pn	06 57 29.8	+0.5
	9.6nm,0.3s							
PKI	Pulchoki	14.95	126	eP		Pn	06 57 29.3	-0.1
GUN	Gumba	15.03	124	eP		Pn	06 57 30.5	+0.1
JIRN	Jiri	15.40	124	eP		Pn	06 57 35.2	+0.2
RAMN	Ramite	16.15	125	eP		Pn	06 57 44.6	+0.6
TAPN	Taplejung	16.63	121	eP		Pn	06 57 50.7	+0.9
	11nm,0.5s							
ODAN	Odare	16.73	123	eP		Pn	06 57 51.9	+0.9
	9.5nm,0.5s							

*NEIC **20** 07:02:32.8, 1562N×6146W, h3 km, MD3.6(TRN), After TRN.*

TRN 20 07:02:32.8, 1562N×6146W, h3 km, MD3.6, 6C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DVCT	Vielle Casse P	0.05	97	⇑iP		Pg	07 02 33.9	0.0
DVCT				eS		Sg	07 02 35.5	+0.8
DWS	Wesley	0.15	110	⇑iP		Pg	07 02 35.3	-0.4
DWS				eS		Sg	07 02 38.6	+0.9
TBG	Guadaloupe-3	0.29	322	⇑iP		Pg	07 02 34.6	-3.8
MDN	Morne-Daniel	0.31	168	⇑eP		Pg	07 02 38.7	0.0
MDN				eS		Sg	07 02 44.2	+1.5
MGG	Marie-Galante	0.33	25	⇑iP		Pg	07 02 35.8	-3.3
DBCT	Belle View Cho	0.36	163	eP		Pg	07 02 39.7	-0.1
DBCT				eS		Sg	07 02 44.7	+0.1
DPMT	Pointe Michel	0.37	168	eP		Pg	07 02 39.9	+0.1
DPMT				eS		Sg	07 02 45.2	+0.6
DPMT	Pointe Michel	0.37	168	eP		Pg	07 02 39.9	+0.1
DPMT				eS		Sg	07 02 45.2	+0.6
DSHT	Scott's Head	0.41	169	eP		Pg	07 02 40.5	-0.2
DSHT				eS		Sg	07 02 46.6	+0.5
SCG	Saint Claude	0.46	332	⇑iP		Pg	07 02 37.8	-3.8
LZG	Guadaloupe-1	0.60	330	eP		Pg	07 02 40.0	-4.3
DEG	La Desirade	0.79	29	eP		Pg	07 02 42.9	-5.0
FDF	Fort de France	0.93	161	⇓eP		Pg	07 02 48.2	-2.5
FDF				⇓eS		Sg	07 03 02.5	-0.2
FDF	Fort de France	0.93	161	ePg		Pg	07 02 48.0	-2.7
FDF				eSg		Sg	07 03 02.6	-0.2
BIM	Bigot	1.16	161	eP		Pg	07 02 52.4	-2.6
BPA	Boggy Peak	1.47	345	eP		Pn	07 02 55.4	-4.8
BPA				eS		Sb	07 03 13.6	-6.3

IDC 20 07:18:14.7±3.7, 310S×13988E, h0 km, mb3.4/3, mb1 3.8/4, mb1mx3.6/14, mbtmp3.6/4, ML4.1/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/16, Error ellipse: s-maj=119.7km s-min=27.9km az=92.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	Guam	17.31	17	LR		LR	07 27 43.6	
	comp=Z,47nm,19.4s,baz=99,slow=33							
WRA	Warramunga Arr	17.59	197	P		Pn	07 22 20.6	-0.8
	0.6nm,0.3s,baz=15,slow=12,SNR=16							
FITZ	Fitzroy Crossi	20.42	222	P		P	07 22 53.7	+0.1
	1.6nm,0.5s,baz=59,slow=12,SNR=7.5							
ASAR	Alice Springs	21.24	195	P		P	07 23 02.9	+0.4
	3.0nm,0.7s,baz=25,slow=9.5,SNR=15							
MKAR	Makanchi Array	70.81	322	P		P	07 29 33.3	+0.1
	0.3nm,0.5s,baz=104,slow=6.1,SNR=3.3							

IGQ 20 07:20:43.8, 355S×8007W, h25 km±31 km, Mb4.3, Ms4.1, 8C-6D, Error ellipse: s-maj=26.8km s-min=9.2km az=114.0, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IGUA	Igualata	2.50	35	P		Pn	07 21 24.0	+1.1
IGUA	Igualata	2.50	35	S		Sn	07 21 55.7	+3.1
ARRY	Arrayan	2.60	39	⇑P		Pn	07 21 25.5	+1.2
BIL2	Estacion Bilba	2.61	37	⇓P		Pn	07 21 27.9	+3.5
BIL2	Estacion Bilba	2.61	37	⇓S		Sn	07 22 00.0	+4.7
PATA	Patacocha	2.61	39	P		Pn	07 21 26.3	+1.9
PATA	Patacocha	2.61	39	S		Sn	07 21 59.2	+3.8
RETU	Refugio	2.65	38	⇓P		Pn	07 21 28.1	+3.2
RETU	Refugio	2.65	38	⇓S		Sn	07 22 00.4	+4.1
JUI6	Juive	2.65	37	⇑P		Pn	07 21 27.2	+2.2
JUI6	Juive	2.65	37	⇑S		Sn	07 21 59.8	+3.3
ULBA	Ulba	2.67	39	P		Pn	07 21 28.3	+3.1
RUN5	Runtun	2.69	38	⇓P		Pn	07 21 28.4	+3.0
RUN5	Runtun	2.69	38	⇓S		Sn	07 22 01.4	+4.2
QIL2	Quilotoa	2.91	23	P		Pn	07 21 30.2	+1.8
PISA	Pisayambo	3.00	34	⇑P		Pn	07 21 33.0	+3.3
PISA	Pisayambo	3.00	34	⇑S		Sn	07 22 13.4	+8.5
CAMI	Rancho Maria	3.26	29	P		Pn	07 21 37.2	+3.9
CAMI	Rancho Maria	3.26	29	S		Sn	07 22 22.0	+11
TAMB	Tambo	3.31	31	P		Pn	07 21 38.0	+4.0
VC1	Cotopaxi 1	3.34	30	P		Pn	07 21 37.6	+3.2
MAG1	Magdalena	3.47	5	P		Pn	07 21 37.1	+0.8
ANTI	Antisana	3.63	32	⇑P		Pn	07 21 42.4	+4.0
TERV	Terraza Guagua	3.66	24	P		Pn	07 21 43.0	+4.1
GGP	Refugio Guagua	3.67	24	⇑P		Pn	07 21 42.2	+3.3
GGP	Refugio Guagua	3.67	24	⇑S		Sn	07 22 28.3	+6.9
PINO	Pino	3.68	24	P		Pn	07 21 42.6	+3.5
YANA	Yana	3.73	24	P		Pn	07 21 42.8	+3.0
CAYA	Cayambe	4.16	30	P		Pn	07 21 51.4	+5.7
CONE	Cono NE Rev Vo	4.23	35	P		Pn	07 21 53.7	+7.0
CONE	Cono NE Rev Vo	4.23	35	S		Sn	07 22 51.5	+16
COTA	Cotacachi	4.23	24	P		Pn	07 21 50.6	+3.8

*MOS **20** 07:30:36.1±1.1, 1598S×7379W, h51 km, mb5.1/22, Error ellipse: s-maj=12.7km s-min=7.6km az=121.8*
*ISCJB **20** 07:30:36.5±0.2, 1604S±003×7383W±004, h58 km, mb4.9/73, MS4.2/11, Error ellipse: s-maj=6.5km s-min=3.6km az=146.5*
*IDC **20** 07:30:38.3±0.4, 1602S×7373W, h59 km±3 km, mb4.6/15, mb1 4.6/20, mb1mx4.6/23, mbtmp4.6/20, MS4.1/11, Ms1 4.1/11, ms1mx3.9/24, Error ellipse: s-maj=13.9km s-min=9.4km az=62.0*
*GCMT **20** 07:30:38.2±0.2, 1618S×7384W, h84 km±3 km, MW5.1/65, Moment Tensor Solution. s44,c59; s65,c96; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~1.95±.20; Mθθ~2.00±.17; Mφφ3.96±.21; Mrθ~3.27±.09; Mrφ~-1.06±.18; Mθφ~3.50±.15; Best double couple: M≈5.95500×10^16 NP1:ϕ=208.00000°, δ30.00000°, λ-24.00000°. NP2: ϕs=319.00000°, δ78.00000°, λ-118.00000°. Principal axes: T 6.3000, Plg28.0000°, Azm71.0000°; N -0.6810, Plg27.0000°, Azm325.0000°; P -5.6090, Plg49.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **20** 07:30:38.1±0.2, 1604S×7373W, mb5.0/48 Error ellipse: s-maj=6.7km s-min=3.7km az=62.0*
NEIC Felt [IV] at Caraveli and Chala.
*BJI **20** 07:30:39.0, 1600S×7370W, h58 km, mB4.9, Ms5.1, Msz5.0*

ISC 20 07:30:38.6±0.2, 1607S±003×7378W±004, h60 km, h60 km±.8 km: pP-P, n437, σ1°06/169, mb4.9/73, 118C-114D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARE	Arequipa	2.24	100	⇑iP		Pn	07 31 13.6	+0.3
ARE				eS		Sn	07 31 41.1	+1.3
NNA	Nana	5.03	323	Pn		Pn	07 31 50.0	-1.5
	3μm,0.4s,SNR=32							
NNA	Nana	5.03	323	P		Pn	07 31 50.2	-1.3
	12nm,0.3s,baz=140,slow=10,SNR=23							
NNA				S		Sn	07 32 47.5	-0.8
	149nm,0.3s,baz=171,slow=9.4,SNR=5.4							
NNA	Nana	5.03	323	ePn		Pn	07 31 50.3	-1.2
NNA				eSn		Sn	07 32 47.4	-0.8
LPAZ	La Paz	5.44	93	P		Pn	07 32 00.9	+3.8
	47nm,0.3s,baz=270,slow=12,SNR=363							
LPAZ				LR		LR	07 34 15.7	
	comp=Z,1μm,19.0s,baz=271,slow=40							
LPAZ	La Paz	5.44	93	eP		Pn	07 31 57.7	+0.6
LPAZ				pmax		pmax		
	comp=Z,1μm,1.2s							
LPAZ	La Paz	5.44	93	ePn		Pn	07 31 57.6	+0.6
	comp=Z,1μm,1.2s							
LPAZ				LR		LR	07 34 15.7	
LVC	Limon Verde	7.97	146	P		Pn	07 32 31.8	0.0
	comp=Z,26nm,0.3s,baz=308,slow=8.8,SNR=193							
LVC				S		Sn	07 33 54.8	-5.7
	comp=Z,35nm,0.3s,baz=103,slow=17,SNR=7.7							
LVC	Limon Verde	7.97	146	ePn		Pn	07 32 31.5	-0.3
LVC				eSn		Sn	07 33 54.5	-6.0
CEN1	Los Morros	8.03	156	⇓iP		Pn	07 32 31.0	-1.6
CEN1				iS		Sn	07 33 56.2	-5.8
ANCH	Antofagasta	8.21	158	eP		Pn	07 32 32.4	-2.8
ANCH				iS		Sn	07 33 59.2	-7.3
ATAH	Atahualpa	10.08	333	P		Pn	07 33 04.9	+4.2
	comp=Z,1.4nm,0.3s,baz=122,slow=5.1,SNR=9.1							
SIV	San Ignacio	12.22	91	P		Pn	07 33 28.3	-1.6
	comp=Z,5.9nm,0.3s,baz=269,slow=13,SNR=56							
LCO	Las Campanas	13.19	168	ePn		Pn	07 33 42.9	-0.2
	comp=Z,81nm,1.0s							
TLL	Tololo Astrono	14.30	169	iP		Pn	07 33 58.2	+0.3
CFAA	Coronel Fontan	16.27	163	P		Pn	07 34 23.6	+0.4
	comp=Z,0.3nm,0.3s,baz=337,slow=12,SNR=40							
CFAA				S		S	07 37 31.6	-1.0
	comp=Z,0.0nm,0.3s,baz=307,slow=11,SNR=3.1							
CFAA				LR		LR	07 40 00.1	
	comp=Z,57nm,20.9s,baz=350,slow=34							
OTAV	Otavalo	16.84	344	Pn		Pn	07 34 29.2	-1.3
	comp=Z,5.2nm,0.8s							
FCH	Farellones	17.47	170	eP		Pn	07 34 38.1	0.0
LMEL	Las Melosas	18.00	170	⇓iP		Pn	07 34 44.9	+0.4
CPUP	Villa Florida	18.41	126	P		Pn	07 34 47.9	-1.8
	comp=Z,1.7nm,0.3s,baz=282,slow=12,SNR=18							
CPUP	Villa Florida	18.41	126	eP		Pn	07 34 48.5	-1.1
CPUP				pmax		pmax		
	comp=Z,61nm,1.0s							
CPUP	Villa Florida	18.41	126	ePn		Pn	07 34 48.5	-1.1
	comp=Z,61nm,1.0s							
ROSC	El Rosal	20.80	358	P		P	07 35 15.7	+0.7
	comp=Z,26nm,0.8s,baz=127,slow=3.0,SNR=24							
ROSC	El Rosal	20.80	358	eP		P	07 35 16.0	+1.0
TRQA	Tornquist	24.25	157	eP		P	07 35 49.0	-0.9
	comp=Z,50nm,1.4s,mb4.8							
TRQA				epP			07 36 00.2	
PLCA	Paso Flores	24.74	174	P		P	07 35 54.0	-0.4
	comp=Z,39nm,0.9s,mb4.9,baz=344,slow=11,SNR=57							
PLCA				PcP		PcP	07 39 30.6	+0.7
	comp=Z,3.7nm,0.9s,baz=356,slow=3.5,SNR=3.5							
PLCA	Paso Flores	24.74	174	eP		P	07 35 53.9	-0.4
PLCA				pmax		pmax		
	comp=Z,74nm,1.1s							
PLCA	Paso Flores	24.74	174	eP		P	07 35 53.9	-0.5
	comp=Z,74nm,1.1s,mb5.1							
BDFB	Brasilia	24.79	93	P		P	07 35 54.9	-0.2
	comp=Z,71nm,1.0s,mb5.2,baz=252,slow=12,SNR=66							
BDFB				LR		LR	07 46 28.2	
	comp=Z,409nm,20.2s,baz=78,slow=38							
SDV	Santo Domingo	24.99	7	P		P	07 35 56.9	+0.1
	comp=Z,9.3nm,0.4s,mb4.7,baz=22,slow=5.1,SNR=4.4							
SDV				LR		LR	07 46 35.2	
	comp=Z,458nm,21.4s,baz=288,slow=38							
SDV	Santo Domingo	24.99	7	eP		P	07 35 57.3	+0.5
	comp=Z,31nm,0.9s,mb4.8							
SPB	Sao Paulo	25.87	111	eP		P	07 36 04.1	-0.7
PCRV	Puerto La Cruz	27.60	20	P		P	07 36 20.0	-0.4
	comp=Z,7.6nm,0.7s,mb4.5,baz=151,slow=2.6,SNR=7.4							
PCRV				LR		LR	07 48 13.9	
	comp=Z,2μm,19.1s,baz=199,slow=38							
JTS	JuntasAbangare	28.43	336	LR		LR	07 46 58.9	
	comp=Z,207nm,19.6s,baz=160,slow=34							
MPR	Mayaguez	34.69	11	eP		P	07 37 21.8	-0.9
MPR				epP		pP	07 37 36.2	-1.6
RPN	Rapa Nui	34.73	245	P		P	07 37 23.6	+0.6
	comp=Z,339μm,0.6s,baz=60,slow=5.4,SNR=3.5							
CPD	Cerro la Pandu	34.76	13	eP		P	07 37 21.7	-1.6
CPD				pmax		pmax		
	comp=Z,18nm,0.8s,mb5.0							
CPD	Cerro la Pandu	34.76	13	eP		P	07 37 21.7	-1.6
	comp=Z,18nm,0.8s,mb5.1							
SJG	San Juan	34.78	13	eP		P	07 37 21.9	-1.6
SJG				pmax		pmax		
	comp=Z,18nm,0.7s							
SJG	San Juan	34.78	13	eP		P	07 37 21.9	-1.7
	comp=Z,18nm,0.7s,mb5.1							
HUMP	Col San Antoni	34.88	13	eP		P	07 37 23.2	-1.1
	comp=Z,20nm,0.9s,mb5.0							
AOPR	Arecibo Observ	34.89	12	eP		P	07 37 23.2	-1.2
	comp=Z,12nm,0.8s,mb4.9							
MTP	Monte Pirata	34.90	14	eP		P	07 37 22.5	-2.0
CBYP	Canovanas	35.00	13	eP		P	07 37 24.1	-1.3
EFI	East Falkland	37.67	164	⇑iP		P	07 37 48.1	+0.3
TEIG	Tepich	38.77	338	eP		P	07 37 57.0	-0.4
TEIG				epP		pP	07 38 12.7	0.0
USHA	Ushuaia	38.91	175	P		P	07 37 58.5	+0.3
	comp=Z,30nm,0.9s,mb5.0,baz=325,slow=6.1,SNR=19							
PMSA	Palmer Station	49.11	174	P		P	07 39 20.3	+0.6
	comp=Z,22nm,0.9s,mb5.2,baz=343,slow=6.3,SNR=4.0							
LRAL	Lakeview Retre	50.43	346	eP		P	07 39 29.0	-1.2
	comp=Z,39nm,1.9s,mb5.1							
LRAL				epP		pP	07 39 44.6	-1.3
ELN	Prospectdale	53.41	353	eP		P	07 39 52.9	+0.6
ELN				epP		pP	07 40 08.3	+0.2
ELN				esP		sP	07 40 15.2	+0.2
TXAR	Lajitas Array	53.57	327	P		P	07 39 52.7	-0.9
	comp=Z,1.1nm,0.6s,mb3.9,baz=148,slow=9.6,SNR=12							
TXAR				pP		pP	07 40 09.1	-0.4
	comp=Z,5.8nm,0.8s,baz=144,slow=9.1,SNR=23							
TXAR				LR		LR	08 00 35.5	
	comp=Z,66nm,21.5s,baz=185,slow=34							
TXAR	Lajitas Array	53.57	327	P		P	07 39 52.7	-0.8
TXAR				*PP		pP	07 40 09.1	-0.4
TXAR	Lajitas Array	53.57	327	P		P	07 39 52.7	-0.9
TXAR				pP		pP	07 40 09.1	-0.4
TXAR				LR		LR	08 00 35.5	
WCI	Wyandotte Cave	55.27	348	eP		P	07 40 04.8	-0.9
WCI				e*PP		pP	07 40 20.3	-1.4
WCI				e*SP		sP	07 40 27.0	-1.5
WCI				pmax		pmax		
	comp=Z,25nm,0.9s,mb5.2							
WCI	Wyandotte Cave	55.27	348	eP		P	07 40 04.8	-0.9
	comp=Z,24nm,0.9s,mb5.2							
WCI				epP		pP	07 40 20.2	-1.4
WCI				esP		sP	07 40 27.0	-1.5
USIN	University of	55.30	347	eP		P	07 40 05.1	-0.9
	comp=Z,50nm,1.1s,mb5.5							
USIN				epP		pP	07 40 20.5	-1.4
USIN				esP		sP	07 40 27.5	-1.3
WMOK	Wichita Mounta	55.83	335	P		P	07 40 10.9	+1.1
WMOK				pmax		pmax		
	comp=Z,7.0nm,1.0s,mb4.7							
WMOK	Wichita Mounta	55.83	335	P		P	07 40 10.9	+1.0
	comp=Z,6.8nm,1.0s,mb4.6							
FVM	French Village	55.99	344	eP		P	07 40 08.9	-2.0
FVM				e*PP		pP	07 40 23.7	-3.2
FVM				pmax		pmax		
	comp=Z,10.0nm,1.3s,mb4.7							
FVM	French Village	55.99	344	eP		P	07 40 08.9	-2.0
	comp=Z,10nm,1.3s,mb4.7							
FVM				epP		pP	07 40 23.7	-3.1
ACSO	Alum Creek Sta	56.66	352	eP		P	07 40 14.5	-1.1
	comp=Z,19nm,0.9s,mb5.1							
ACSO				epP		pP	07 40 29.8	-1.8
BRYW	Bryant College	57.73	2	eP		P	07 40 23.4	+0.3
RKT	Rikitea	57.73	253	eLR		LR	07 57 34.9	
	comp=Z,814nm,29.5s							
RKT	Rikitea	57.73	253	eT			08 42 20.2	
	comp=Z,18nm,0.3s							
BINY	Binghamton	58.01	358	eP		P	07 40 24.4	-0.7
	comp=Z,28nm,1.1s,mb5.2							
BINY				epP		pP	07 40 41.2	+0.1
319A	Douglas	58.20	324	⇓P		pP	07 40 42.7	0.0
	baz=58							
318A	Bisbee	58.65	324	⇓P		pP	07 40 45.5	-0.3
	baz=59,SNR=6.0							
219A	White Tail Can	58.65	325	⇓P		pP	07 40 45.7	-0.2
	baz=59							
BNM	Barren Site	58.92	328	P		P	07 40 30.5	-1.1
BNM				epP		pP	07 40 47.0	-0.7
LPM	Los Pinos Moun	59.05	328	eP		P	07 40 33.9	+1.4
LPM				epP		pP	07 40 48.8	+0.2
218A	Dragoon	59.08	324	⇑P		pP	07 40 48.4	-0.4
	baz=59							
LENM	Lemitar	59.11	328	eP		P	07 40 32.4	-0.5
LENM				epP		pP	07 40 49.3	+0.3
119A	Ashpeak Ranch,	59.26	325	⇓P		pP	07 40 49.8	-0.3
	baz=60							
217A	Green Valley	59.37	323	⇓P		pP	07 40 50.9	0.0
	baz=60							
LAZ	Ladron	59.38	328	eP		P	07 40 35.5	+0.7
LAZ				epP		pP	07 40 51.3	+0.4
ANMO	Albuquerque	59.47	329	P		P	07 40 34.9	-0.5
ANMO				e*PP		pP	07 40 51.5	0.0
ANMO				pmax		pmax		
	comp=Z,11nm,1.0s							
ANMO	Albuquerque	59.47	329	P		P	07 40 34.9	-0.5
	comp=Z,11nm,1.0s,mb4.8							
ANMO				epP		pP	07 40 51.5	-0.1
118A	Homack Ranch,	59.53	325	⇓P		pP	07 40 51.8	-0.2
	baz=60,SNR=5.7							
Z19A	T-Link Ranch,	59.64	326	⇑P		pP	07 40 52.7	0.0
	baz=60							
TUC	Tucson	59.74	324	eP		P	07 40 37.8	+0.5
TUC				e*PP		pP	07 40 53.3	-0.2
TUC				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.3							
TUC	Tucson	59.74	324	eP		P	07 40 37.8	+0.5
	comp=Z,2.7nm,0.9s,mb4.3							
TUC				epP		pP	07 40 53.3	-0.2
216A	Three Points,	59.90	323	⇓P		pP	07 40 54.6	0.0
	baz=60							
Z18A	Geronimo	59.90	325	⇓P		pP	07 40 55.0	+0.4
	baz=60							
117A	Oracle	59.91	324	⇑P		pP	07 40 54.3	-0.3
	baz=60							
Y19A	Nutrioso	60.14	326	⇑P		pP	07 40 56.6	+0.5
	baz=60							
Y18A	Canyon Day Jun	60.42	326	⇓P		pP	07 40 58.2	+0.1
	baz=61							
116A	Eloy	60.45	323	⇓P		pP	07 40 58.5	+0.1
	baz=61							
X19A	St. Johns	60.52	327	⇓P		pP	07 40 58.7	0.0
	baz=61,SNR=5.4							
214A	Organ Pipe Nat	60.66	322	⇑P		pP	07 40 59.6	-0.2
	baz=61							
Y17A	Roosevelt	60.81	325	⇑P		pP	07 41 00.8	0.0
	baz=61							
115A	Sonoran Desert	60.85	323	⇓P		pP	07 41 01.1	0.0
	baz=61							
Z16A	Peralta Trail,	60.87	324	⇓P		pP	07 41 00.9

Y12C Blythe 62.95 322 ⇑P pP 07 41 14.7 -0.5
baz=63
S19A Harvey Farm, M 63.00 329 ⇑P pP 07 41 15.2 -0.3
baz=63,SNR=7.4
ISCO Idaho Springs 63.00 333 *e*P **P** **07 41 00.2 +1.0**
ISCO *e**PP pP 07 41 15.5 +0.1
ISCO pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
ISCO Idaho Springs 63.00 333 *e*P **P** **07 41 00.2 +1.0**
comp=Z,7.8nm,1.2s,mb4.7
ISCO *e*pP pP 07 41 15.4 0.0
ECSD EROS,Sioux Fal 63.07 342 *e*P **P** **07 40 59.0 -0.6**
comp=Z,21nm,1.1s,mb5.2
ECSD *e*pP pP 07 41 14.4 -1.4
PDMCI Parker Dam,Lak 63.11 323 ⇑P pP 07 41 15.6 -0.7
baz=63
V15A Kaibab Nationa 63.11 326 ⇓P pP 07 41 15.6 -0.6
baz=63
X13A Yucca 63.14 323 ⇑P pP 07 41 16.5 0.0
baz=63
W14A Seligman 63.17 324 ⇑P pP 07 41 16.6 -0.1
baz=63
T17A Navajo Res., N 63.27 327 ⇑P pP 07 41 17.8 +0.5
baz=64
S18A Hurst Farm, Bl 63.39 328 ⇓P pP 07 41 17.5 -0.6
baz=64
V14A Boquillas Ranc 63.49 325 ⇑P pP 07 41 19.2 +0.4
baz=64,SNR=6.7
BAR Barrett 63.49 320 P **P** **07 41 01.9 -0.7**
comp=Z,8.8nm,0.9s,mb4.9
BAR *e*pP pP 07 41 19.2 +0.3
W13A Hualapai Mount 63.54 324 ⇑P pP 07 41 19.4 +0.3
baz=64
IRM Iron Mountain 63.60 322 ⇑P pP 07 41 19.5 0.0
baz=64
T16A Glen Canyon Da 63.63 327 ⇑P pP 07 41 19.8 +0.1
baz=64
U15A North Rim 63.63 326 ⇑P pP 07 41 20.2 +0.5
baz=64,SNR=5.3
S17A Black Ridge (B 63.76 328 ⇑P pP 07 41 20.8 +0.3
baz=64
R18A Canyonlands Na 63.88 329 ⇓P pP 07 41 20.9 -0.3
baz=64
109C Camp Elliot, M 63.90 320 ⇓P pP 07 41 21.1 -0.5
baz=64
BELC Belle Mtn. 63.99 322 ⇓P pP 07 41 22.1 -0.1
baz=64
PFO Pinyon Flat Ob 64.00 321 *e*P **P** **07 41 07.3 +1.4**
PFO *e**PP pP 07 41 22.8 +0.6
PFO pmax pmax
comp=Z,14nm,1.1s,mb4.9
PFO Pinyon Flat Ob 64.00 321 ⇑P pP 07 41 22.5 +0.3
baz=64
PFO Pinyon Flat Ob 64.00 321 *e*P **P** **07 41 07.3 +1.5**
comp=Z,14nm,1.1s,mb4.9
PFO *e*pP pP 07 41 22.8 +0.6
Q19A Hogan Spring (64.01 330 ⇑P pP 07 41 21.5 -0.7
baz=64,SNR=5.2
U14A Mt Trumbull 64.11 325 ⇓P pP 07 41 22.9 +0.1
baz=64
T15A Red Dirt Ranch 64.12 326 ⇑P pP 07 41 23.4 +0.5
baz=64
V13A Grand Canyon W 64.14 324 ⇑P pP 07 41 22.7 -0.3
baz=64
S16A Weppner Ranch, 64.23 327 ⇑P pP 07 41 23.1 -0.5
baz=64,SNR=6.3
BBTS Babate 64.27 65 P **P** **07 41 07.2 -0.8**
comp=Z,6.2nm,0.3s,mb5.1,baz=262,slow=6.6,SNR=3.7
R17A Hanksville Air 64.31 328 ⇑P pP 07 41 24.1 0.0
baz=64,SNR=8.0
GMRC Granite Mounta 64.34 322 ⇓P pP 07 41 24.6 +0.2
baz=65
P19A Cripple Cowboy 64.41 330 ⇓P pP 07 41 24.7 -0.1
baz=65
MURC Murrieta 64.44 321 ⇑P pP 07 41 25.1 0.0
baz=65
T14A Hurricane 64.53 326 ⇓P pP 07 41 26.1 +0.6
baz=65,SNR=5.4
U13A Pakoon Wash 64.54 325 ⇑P pP 07 41 25.8 +0.2
baz=65
V12A Nelson 64.54 324 ⇑P pP 07 41 25.8 +0.1
baz=65
Q18A Rafter H Ranch 64.55 329 ⇑P pP 07 41 25.5 -0.2
baz=65,SNR=5.4
R16A Teasdale 64.60 328 ⇑P pP 07 41 26.0 0.0
baz=65
SRU San Rafael 64.75 329 *e*P **P** **07 41 11.4 +0.8**
SRU *e**PP pP 07 41 27.0 0.0
SRU pmax pmax
comp=Z,11nm,1.3s,mb4.7
SRU San Rafael 64.75 329 ⇑P pP 07 41 26.8 -0.2
baz=65
SRU San Rafael 64.75 329 *e*P **P** **07 41 11.3 +0.7**
comp=Z,11nm,1.3s,mb4.7
SRU *e*pP pP 07 41 27.0 0.0
U12A Valley of Fire 64.87 324 ⇑P pP 07 41 28.2 +0.4
baz=65
Q16A Castle Valley 64.92 328 ⇓P pP 07 41 28.0 -0.1
baz=65
T13A Saint George 64.94 325 ⇓P pP 07 41 28.4 0.0
baz=65
V11A Goodsprings 64.95 323 ⇑P pP 07 41 28.5 +0.1
baz=65
TUQ Turquoise Moun 64.95 323 ⇓P pP 07 41 28.2 -0.2
baz=65
R15A Junction 64.95 327 ⇓P pP 07 41 28.4 +0.1
baz=65
O19A Miners Draw (B 65.00 331 ⇑P pP 07 41 28.4 -0.2
baz=65
S14A Cedar City 65.09 326 ⇑P pP 07 41 28.9 -0.3
baz=65
MSU Marysvale 65.13 328 *e*P **P** **07 41 14.7 +1.6**
MSU *e**PP pP 07 41 30.7 +1.2
P17A Butcher Ranch, 65.13 329 ⇑P pP 07 41 29.1 -0.4
baz=65
T12A Moapa 65.18 325 ⇑P pP 07 41 30.1 +0.3
baz=65
RWWY Rawlins 65.24 333 *e*P **P** **07 41 13.9 +0.1**
comp=Z,34nm,1.7s,mb5.1
RWWY *e*pP pP 07 41 30.6 +0.4
ARUT Antelope Range 65.25 326 *e*P **P** **07 41 15.9 +1.9**
ARUT *e**PP pP 07 41 31.8 +1.5
SHPR Sheep Range 65.27 324 *e*P **P** **07 41 20.1 +6.0**
S13A Holt Ranch, En 65.33 326 ⇑P pP 07 41 31.6 +0.8
baz=66,SNR=7.6
GSC Goldstone 65.37 322 *e*P **P** **07 41 15.1 +0.3**
GSC *e**PP pP 07 41 30.0 -1.2
GSC pmax pmax
comp=Z,12nm,1.4s,mb4.7
GSC Goldstone 65.37 322 ⇓P pP 07 41 30.7 -0.5
baz=66
GSC Goldstone 65.37 322 *e*P **P** **07 41 15.1 +0.3**
comp=Z,12nm,1.4s,mb4.7
GSC *e*pP pP 07 41 30.0 -1.2
O18A Roosevelt 65.39 330 ⇑P pP 07 41 31.7 +0.5
baz=66
SHOC Shoshone 65.48 323 ⇑P pP 07 41 32.0 +0.2
baz=66
N19A John Jarvie Ra 65.49 331 ⇓P pP 07 41 31.4 -0.4
baz=66
Q15A Fillmore 65.60 328 ⇓P pP 07 41 32.7 +0.2
baz=66
EYMN Ely 65.66 347 *e*P **P** **07 41 15.9 -0.4**
comp=Z,15nm,0.9s,mb5.0
EYMN *e*pP pP 07 41 31.3 -1.4
O17A Robinson Place 65.69 330 ⇓P pP 07 41 33.4 +0.3
baz=66,SNR=5.6
N18A Larsen Ranch, 65.79 331 ⇓P pP 07 41 33.6 -0.1
baz=66
R13A O'Grain Ranch, 65.82 326 ⇑P pP 07 41 34.4 +0.4
baz=66
T11A Corn Creek, Al 65.83 325 ⇓P pP 07 41 34.3 +0.2
baz=66,SNR=5.4
RSSD Black Hills 65.96 337 *e*P **P** **07 41 18.6 +0.2**
RSSD *e**PP pP 07 41 34.7 -0.1
RSSD pmax pmax
comp=Z,27nm,1.9s,mb5.0
RSSD Black Hills 65.96 337 *e*P **P** **07 41 18.6 +0.2**
comp=Z,27nm,1.9s,mb5.0
RSSD *e*pP pP 07 41 34.7 0.0
MPU Maple Canyon 65.99 329 *e*P **P** **07 41 21.9 +3.3**
MPU *e*pP pP 07 41 35.3 +0.3
Q14A Sevier Lake (B 66.05 327 ⇓P pP 07 41 35.8 +0.3
baz=66,SNR=7.6
O16A Springville 66.07 329 ⇓P pP 07 41 35.7 +0.1
baz=66,SNR=6.6
DAU Daniels Canyon 66.11 329 *e*P **P** **07 41 21.2 +1.8**
DAU *e**PP pP 07 41 36.5 +0.7
TPNV Topopah Spring 66.20 324 *e*P **P** **07 41 18.7 -1.4**
TPNV *e**PP pP 07 41 37.7 +1.2
TPNV pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
TPNV Topopah Spring 66.20 324 ⇑P pP 07 41 36.9 +0.4
baz=66
TPNV Topopah Spring 66.20 324 *e*P **P** **07 41 18.7 -1.4**
comp=Z,8.4nm,1.0s,mb4.7
TPNV *e*pP pP 07 41 37.7 +1.2
R12A Pony Springs, 66.28 326 ⇓P pP 07 41 37.3 +0.4
baz=66,SNR=6.1
MPMC Manual Prospec 66.30 322 ⇓P pP 07 41 36.9 -0.2
baz=66
N17A Moffit Pass 66.31 330 ⇑P pP 07 41 37.1 0.0
baz=66
JLU Jordanelle 66.35 329 *e*P **P** **07 41 21.9 +1.0**
JLU *e*pP pP 07 41 37.7 +0.3
P14A Drum Mountains 66.39 328 ⇓P pP 07 41 38.0 +0.3
baz=67,SNR=6.3
Q13A Wheeler Ranch, 66.42 327 ⇓P pP 07 41 38.1 +0.3
baz=67,SNR=6.3
N16A Rees Ranch, Co 66.56 330 ⇑P pP 07 41 38.8 +0.1
baz=67
O15A The Old Anders 66.61 329 ⇑P pP 07 41 39.1 +0.1
baz=67
ISA Isabella 66.61 321 *e*P **P** **07 41 23.6 +0.8**
ISA *e**PP pP 07 41 40.3 +1.1
ISA pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
ISA Isabella 66.61 321 ⇑P pP 07 41 39.0 -0.1
baz=67
ISA Isabella 66.61 321 *e*P **P** **07 41 23.6 +0.9**
comp=Z,9.9nm,1.1s,mb4.8
ISA *e*pP pP 07 41 40.3 +1.1
DUG Dugway 66.72 328 *e*P **P** **07 41 23.1 -0.2**
DUG *e**PP pP 07 41 40.1 +0.4
DUG pmax pmax
comp=Z,21nm,1.1s,mb5.1
DUG Dugway 66.72 328 ⇓P pP 07 41 39.7 -0.1
baz=67
DUG Dugway 66.72 328 *e*P **P** **07 41 23.1 -0.2**
comp=Z,21nm,1.1s,mb5.1
DUG *e*pP pP 07 41 40.1 +0.4
P13A Bates Ranch, G 66.78 327 ⇓P pP 07 41 40.2 0.0
baz=67,SNR=6.7
Q12A Willow Creek R 66.91 326 ⇑P pP 07 41 41.4 +0.4
baz=67
M16A Huntsville 66.98 330 ⇑P pP 07 41 40.7 -0.7
baz=67
S10A Tonopah Range, 67.08 324 ⇑P pP 07 41 41.9 -0.2
baz=67
VES Vestal, Richgr 67.10 321 ⇑P pP 07 41 42.0 -0.3
baz=67
PDAR Pinedale Array 67.15 332 P **P** **07 41 26.1 +0.1**
comp=Z,0.3nm,0.9s,baz=204,slow=17,SNR=2.7
R10A Warm Springs 67.17 325 ⇓P pP 07 41 42.6 -0.1
baz=67
HWUT Hardware Ranch 67.17 330 P **P** **07 41 26.9 +0.7**
comp=Z,7.1nm,1.0s,mb4.7
HWUT *e*pP pP 07 41 42.1 -0.5
Q11A Duckwater 67.22 326 ⇓P pP 07 41 43.1 +0.2
baz=67,SNR=7.7
P12A McGill 67.27 326 ⇓P pP 07 41 43.6 +0.4
baz=68,SNR=6.5
S09A Goldfield 67.30 324 ⇑P pP 07 41 43.6 +0.2
baz=68
SMMC Simmler 67.31 320 ⇓P pP 07 41 43.5 -0.1
baz=68
N14A Grayback Hills 67.40 329 ⇓P pP 07 41 43.8 -0.2
baz=68
R09A Tonopah 67.57 324 ⇓P pP 07 41 44.9 -0.3
baz=68
HELL Mitchell Peak 67.63 322 ⇓P pP 07 41 44.9 -0.7
baz=68
S08C White Mtn Res 67.68 323 ⇑P pP 07 41 45.7 -0.3
baz=68
L15A Malad City 67.87 330 ⇓P pP 07 41 46.1 -0.9
baz=68
HVU Hansel Valley 67.89 329 *e*P **P** **07 41 30.7 0.0**
HVU *e**PP pP 07 41 46.8 -0.4
HVU pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
HVU Hansel Valley 67.89 329 *e*P **P** **07 41 30.7 0.0**
comp=Z,7.0nm,0.9s,mb4.7
HVU *e*pP pP 07 41 46.8 -0.4
M14A Sheep Mountain 67.97 329 ⇓P pP 07 41 47.2 -0.5
baz=68,SNR=6.2
K16A Soda Springs 68.13 331 ⇓P pP 07 41 47.7 -0.9
baz=68
KCC Kaiser Creek 68.23 322 ⇓P pP 07 41 48.9 -0.5
baz=68
SNOW Snow King Moun 68.24 332 P **P** **07 41 31.7 -1.2**
SNOW *e*pP pP 07 41 49.2 -0.1
LOHW Long Hollow 68.29 332 *e*P **P** **07 41 35.0 +1.9**
comp=Z,2.5nm,0.9s,mb4.2
LOHW *e*pP pP 07 41 48.9 -0.7
L14A Malta 68.31 329 ⇑P pP 07 41 49.0 -0.8
baz=68
NVAR Mina Array Bea 68.40 324 P **P** **07 41 34.0 0.0**
comp=Z,0.2nm,0.3s,baz=147,slow=35,SNR=3.0
NVAR pP pP 07 41 50.7 +0.3
comp=Z,3.1nm,1.0s,baz=141,slow=6.6,SNR=5.8
NVAR Mina Array Bea 68.40 324 P **P** **07 41 34.0 0.0**
NVAR pP pP 07 41 50.7 +0.3
K15A Arbon 68.46 330 ⇓P pP 07 41 50.0 -0.7
baz=69
J16A Bone 68.48 331 ⇓P pP 07 41 50.1 -0.8
baz=69
Q08A Gabbs 68.48 324 ⇑P pP 07 41 50.1 -0.9
baz=69
IMW Indian Meadow 68.66 332 *e*P **P** **07 41 32.8 -2.7**
comp=Z,2.3nm,0.8s,mb4.2
IMW *e*pP pP 07 41 52.0 +0.1
K14A Jones Ranch, D 68.67 330 ⇓P pP 07 41 51.7 -0.3
baz=69
L13A Double Diamond 68.70 329 ⇓P pP 07 41 52.5 +0.3
baz=69
O10A Cortez Mining, 68.71 326 ⇑P pP 07 41 52.7 +0.4
baz=69
ULM Lac du Bonnet 68.84 345 P **P** **07 41 35.5 -1.0**
comp=Z,2.9nm,1.0s,mb4.2,baz=130,slow=7.6,SNR=3.5
ULM pP pP 07 41 51.2 -1.7
comp=Z,14nm,0.9s,baz=149,slow=5.6,SNR=12
ULM LR LR 08 14 25.7
comp=Z,86nm,19.3s,baz=77,slow=38
S05C Merced 68.85 322 ⇓P pP 07 41 53.8 +0.5
baz=69
SNAA Sanae 68.89 161 *e*P **P** **07 41 36.6 +0.1**
SNAA pmax pmax
comp=Z,30nm,0.8s
SNAA Sanae 68.89 161 *e*P **P** **07 41 36.6 +0.1**
comp=Z,30nm,0.8s,mb5.3
S06C San Francisco 68.92 322 ⇓P pP 07 41 53.8 +0.1
baz=69
J15A Blackfoot 68.96 331 ⇓P pP 07 41 53.6 -0.2
baz=69
O09A Fish Creek Ran 68.99 326 ⇑P pP 07 41 54.0 -0.1
baz=69
R06C Coleville 69.12 323 ⇓P pP 07 41 55.8 +0.8
baz=69
P08A Dixie Valley 69.15 325 ⇓P pP 07 41 55.3 +0.2
baz=69
M11A Holland Ranch, 69.15 327 ⇑P pP 07 41 55.6 +0.6
baz=69
K13A Stover Farm, H 69.19 329 ⇓P pP 07 41 55.3 0.0
baz=69
L12A House Creek Ra 69.28 328 ⇑P pP 07 41 56.6 +0.7
baz=70
CMB Columbia Colle 69.34 322 ⇓P pP 07 41 56.1 -0.2
baz=70
J14A Carey 69.42 330 ⇑P pP 07 41 56.9 +0.3
baz=70
H16A Russell Place, 69.43 332 ⇓P pP 07 41 56.7 -0.1
baz=70
K12A Draper Farm, C 69.58 329 ⇓P pP 07 41 57.8 +0.1
baz=70
R05C Kirkwood Meado 69.60 323 ⇑P pP 07 41 57.9 -0.1
baz=70
GCMT Greycliff 69.60 334 *e*P **P** **07 41 43.2 +1.9**
GCMT *e*pP pP 07 41 57.4 -0.4
L11A Cat Creek Ranc 69.67 328 ⇑P pP 07 41 58.4 +0.2
baz=70
DGMT Dagmar 69.73 339 P **P** **07 41 43.0 +1.1**
comp=Z,29nm,1.1s,mb5.1
DGMT *e*pP pP 07 41 58.3 -0.2
J13A Cove Ranch, Pi 69.79 330 ⇓P pP 07 41 58.9 -0.1
baz=70
WCN Washoe City 69.82 324 ⇓P pP 07 41 59.6 +0.3
baz=70
I14A Mackay 69.84 331 ⇑P pP 07 41 59.6 +0.3
baz=70
PAHR Pah Rah Range 69.88 324 *e*pP pP 07 42 00.7 +1.0
O07A Toulon 69.91 325 ⇑P pP 07 41 59.7 -0.2
baz=70
N08A GE Springer Mi 69.93 326 ⇓P pP 07 41 59.8 -0.1
baz=70
L10A Juniper Basin 69.97 328 ⇓P pP 07 42 00.2 0.0
baz=70,SNR=5.0
M09A Marrel Ranch, 70.02 326 ⇑P pP 07 41 59.9 -0.5
baz=70
HLID Hailey 70.03 330 ⇑P pP 07 42 00.2 -0.3
baz=70
HLID Hailey 70.03 330 *e*P **P** **07 41 45.4 +1.5**
comp=Z,15nm,1.5s,mb4.7
HLID *e*pP pP 07 42 01.0 +0.5
J12A Stokes Ranch, 70.13 329 ⇓P pP 07 42 01.1 0.0
baz=70
MCMT McKenzie Canyo 70.25 332 *e*P **P** **07 41 43.6 -1.7**
MCMT *e*pP pP 07 42 01.8 0.0
K11A Parker Ranch, 70.25 328 ⇑P pP 07 42 01.8 -0.1
baz=70
P05C Yuba Gap, Truc 70.31 323 ⇑P pP 07 42 01.9 -0.3
baz=70
G15A Dillon 70.34 332 ⇑P pP 07 42 02.9 +0.5
baz=71
Q04C Lincoln 70.45 322 ⇑P pP 07 42 03.5 +0.4
baz=71
MFID Camas Ranch 70.61 329 ⇓P pP 07 42 04.2 +0.2
baz=71
K10A MacKenzie Ranc 70.68 328 ⇓P pP 07 42 04.4 -0.1
baz=71
N06A Buffalo Meadow 70.85 325 ⇓P pP 07 42 05.3 -0.2
baz=71
SCHQ Schefferville 70.86 4 P **P** **07 41 48.3 -0.4**
comp=Z,7.4nm,0.9s,mb4.6,baz=176,slow=5.8,SNR=4.4
SCHQ pP pP 07 42 03.6 -1.7
comp=Z,13nm,1.0s,baz=168,slow=4.1,SNR=5.5
SCHQ LR LR 08 12 57.7
comp=Z,61nm,20.5s,baz=221,slow=36
H12A Diamond D Ranc 70.98 330 ⇓P pP 07 42 06.3 +0.1
baz=71
ORV Oroville 71.00 323 ⇑P pP 07 42 06.8 +0.4
baz=71
L08A Fields 71.03 327 ⇑P pP 07 42 06.9 +0.2
baz=71
I11A Placerville 71.04 329 ⇑P pP 07 42 06.8 +0.2
baz=71
K09A Rome 71.06 327 ⇓P pP 07 42 06.8 0.0
baz=71
G13A Cobalt 71.09 331 ⇓P pP 07 42 06.6 -0.3
baz=71
E15A Deer Lodge 71.38 333 ⇑P pP 07 42 08.3 -0.4
baz=72
EGMT Eagleton 71.43 335 ⇓P pP 07 42 08.3 -0.6
baz=72
C17A Wharram Farm, 71.53 335 ⇓P pP 07 42 08.9 -0.6
baz=72
LIC Lamto 71.54 78 *e*P **P** **07 41 52.6 -1.2**
comp=Z,76nm,0.9s,mb5.6
H11A Donnelly 71.65 330 ⇑P pP 07 42 09.5 -0.8
baz=72
F13A Darby 71.66 331 ⇓P pP 07 42 10.2 -0.2
baz=72
TIC Toumodi 71.68 77 *e*P **P** **07 41 53.5 -1.1**
comp=Z,115nm,1.1s,mb5.7
TIC Toumodi 71.68 77 *e*P **P** **07 41 53.5 -1.1**
TIC pmax pmax
comp=Z,115nm,1.1s,mb5.7
TVO Taravao 71.74 256 *e*T 08 59 57.3
comp=Z,36nm,0.2s
E14A Clinton 71.75 332 ⇑P pP 07 42 11.1 +0.2
baz=72
DBIC Dimbokro 71.84 77 P **P** **07 41 54.7 -0.9**
comp=Z,32nm,0.8s,mb5.3,baz=239,slow=5.5,SNR=24
DBIC LR LR 08 12 04.6
comp=Z,248nm,19.7s,baz=229,slow=35
DBIC Dimbokro 71.84 77 *e*P **P** **07 41 54.6 -1.0**
DBIC pmax pmax
comp=Z,38nm,0.9s
DBIC Dimbokro 71.84 77 *e*P **P** **07 41 54.6 -1.0**
comp=Z,38nm,0.9s,mb5.3
KIC Kosan Boka 71.85 78 *e*P **P** **07 41 54.7 -1.0**
comp=Z,255nm,0.9s
TIAR Tiarei 71.87 256 *e*T 09 00 09.0
comp=Z,148nm,0.2s
J08A Circle Bar Ran 71.92 327 ⇑P pP 07 42 11.7 -0.3
baz=72
M05C Lookout 71.99 324 ⇑P pP 07 42 12.2 -0.2
baz=72
F12A Elk City 72.06 331 ⇑P pP 07 42 12.7 -0.1
baz=72
C16A Fuhringer Ranc 72.07 334 ⇓P pP 07 42 12.3 -0.5
baz=72
PPT Papeete 72.08 256 *e*S S 07 51 28.9 +14
comp=Z,85nm,25.8s
PPT Papeete 72.08 256 *e*LR LR 08 04 17.3
comp=Z,442nm,25.0s
PPT Papeete 72.08 256 LR LR 08 05 27.6
comp=Z,289nm,20.0s,baz=146,slow=29
E13A Victor 72.08 332 ⇓P pP 07 42 12.7 -0.2
baz=72
L05A Lakeview 72.28 325 ⇑P pP 07 42 13.3 -0.9
baz=72
G11A Walters Elk Ra 72.28 330 ⇑P pP 07 42 13.5 -0.6
baz=72
I08A Drewsey 72.36 328 ⇓P pP 07 42 14.1 -0.5
baz=73
BMO Blue Mountains 72.39 329 *e*P **P** **07 41 55.5 -2.7**
BMO *e**PP pP 07 42 13.8 -1.0
BMO pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BMO Blue Mountains 72.39 329 *e*P **P** **07 41 55.5 -2.7**
comp=Z,2.1nm,0.8s,mb4.1
BMO *e*pP pP 07 42 13.8 -1.0
C15A Salmond Ranch, 72.41 334 ⇓P pP 07 42 14.4 -0.4
baz=73
K06A Valley Falls 72.47 326 ⇑P pP 07 42 15.2 -0.1
baz=73
M03C McCloud 72.48 324 ⇑P pP 07 42 14.6 -0.8
baz=73
G10A Bishop Farm, J 72.61 329 ⇓P pP 07 42 15.9 -0.3
baz=73
D13A Huson 72.70 332 ⇓P pP 07 42 16.3 -0.3
baz=73
J06A Christmas Vall 72.73 326 ⇓P pP 07 42 16.5 -0.3
baz=73
B15A Bradely Ranch, 72.81 334 ⇑P pP 07 42 16.9 -0.3
baz=73
H08A Prairie City 72.83 328 ⇑P pP 07 42 16.9 -0.5
baz=73
C14A Swan Lake 72.90 333 ⇓P pP 07 42 17.8 +0.1
baz=73
G09A Cove 72.93 329 ⇑P pP 07 42 18.1 +0.1
baz=73
L04A Klamath Falls 72.95 325 ⇓P pP 07 42 17.9 -0.3
baz=73
E11A Bogner Ranch, 72.95 331 ⇑P pP 07 42 17.2 -0.9
baz=73
I07A Izee 72.96 327 ⇑P pP 07 42 17.7 -0.5
baz=73
D12A Red Ives Fores 73.07 332 ⇓P pP 07 42 18.2 -0.6
baz=73
C13A Hot Springs 73.19 333 ⇑P pP 07 42 19.4 -0.1
baz=73
J05A Fort Rock 73.33 326 ⇓P pP 07 42 21.3 +0.9
baz=74
H07A Lands Inn, Kim 73.34 328 ⇑P pP 07 42 20.5 0.0
baz=74
MAIT Maitri 73.48 160 *e*P **P** **07 42 04.8 +0.5**
NVL N'lazarevskaya 73.51 160 *e*P **P** **07 42 04.4 -0.1**
NVL pmax pmax
comp=Z,48nm,1.6s,mb5.2
D11A Klaveano Farm, 73.52 331 ⇑P pP 07 42 21.2 -0.2
baz=74
G08A Pilot Rock 73.52 329 ⇓P pP 07 42 21.4 -0.1
baz=74
A14A Double T Ranch 73.68 334 ⇑P pP 07 42 21.5 -0.8
baz=74
G07A Ruggs Ranch, H 73.87 328 ⇓P pP 07 42 22.8 -0.7
baz=74
D10A Wagner Farm, O 73.97 331 ⇓P pP 07 42 23.7 -0.4
baz=74
E09A Wood Farm, Sta 73.99 330 ⇓P pP 07 42 23.2 -1.0
baz=74

C11A	**Tepee Creek (N**	**74.07**	**332**	⇓P		pP		07 42 24.1	-0.5
	baz=74								
A13A	**Flathead Natio**	**74.07**	**333**	⇑P		pP		07 42 24.6	-0.1
	baz=74								
B12A	**Libby**	**74.24**	**333**	⇑P		pP		07 42 25.9	+0.3
	baz=74								
G06A	**Carlson Farm,**	**74.34**	**328**	⇑P		pP		07 42 26.5	+0.2
	baz=75								
D09A	**Jones Farm, Ri**	**74.46**	**330**	⇓P		pP		07 42 27.0	+0.1
	baz=75								
A12A	**Yaak River Ran**	**74.61**	**333**	⇓P		pP		07 42 27.7	-0.1
	baz=75								
OD2	**Odessa Site #2**	**74.89**	**330**	*e*P		**P**		**07 42 13.4**	**+0.7**
OD2					*e*pP	pP		07 42 29.8	+0.4
A11A	**Hall Mountain,**	**74.94**	**332**	⇓P		pP		07 42 29.3	-0.4
	baz=75								
C09A	**Chrisman Ranch**	**74.97**	**331**	⇑P		pP		07 42 29.5	-0.4
	baz=75								
D07A	**Quincy**	**75.36**	**329**	⇑P		pP		07 42 32.1	-0.1
	baz=76								
B09A	**Rice**	**75.36**	**331**	⇑P		pP		07 42 31.7	-0.4
	baz=76								
F04A	**Amboy**	**75.73**	**327**	⇑P		pP		07 42 34.0	-0.3
	baz=76								
C07A	**Waterville**	**75.75**	**330**	⇑P		pP		07 42 34.2	-0.3
	baz=76								
B08A	**Colville Reser**	**75.87**	**331**	⇓P		pP		07 42 34.4	-0.7
	baz=76								
A09A	**Danville**	**75.96**	**331**	⇓P		pP		07 42 35.0	-0.6
	baz=76								
A08A	**Turner Farm, O**	**76.26**	**331**	⇓P		pP		07 42 36.6	-0.7
	baz=76								
B07A	**Winthrop**	**76.31**	**330**	⇓P		pP		07 42 36.9	-0.8
	baz=76								
D05A	**Enumclaw**	**76.36**	**328**	⇓P		pP		07 42 37.3	-0.6
	baz=77								
A07A	**Ashnola River,**	**76.85**	**331**	⇑P		pP		07 42 40.5	-0.2
	baz=77								
EDM	**Edmonton**	**76.94**	**337**	*e*P		**P**		**07 42 24.0**	**-0.3**
EDM					*e**PP	pP		07 42 39.8	-1.3
B05A	**Bryant**	**77.14**	**329**	⇑P		pP		07 42 41.5	-0.8
	baz=77								
TOA0	**Torodi Ar. Sit**	**80.06**	**73**	*e*P		**P**		**07 42 41.9**	**-0.4**
TORD	**Torodi Ar. Bea**	**80.06**	**73**	P		**P**		**07 42 41.8**	**-0.6**
	comp=Z,41nm,0.8s,mb5.4,baz=258,slow=5.1,SNR=170								
TORD					pP	pP		07 42 57.7	-1.5
	comp=Z,10nm,0.8s,baz=270,slow=5.7,SNR=4.0								
TORD					LR	LR		08 17 12.0	
	comp=Z,259nm,19.2s,baz=250,slow=35								
SBA	**Scott Base**	**80.29**	**191**	*e*P		**P**		**07 42 43.8**	**+1.3**
SBA					pmax	pmax			
	comp=Z,30nm,1.1s,mb5.1								
SBA	**Scott Base**	**80.29**	**191**	*e*P		**P**		**07 42 43.8**	**+1.3**
	comp=Z,30nm,1.1s,mb5.1								
PFVI	**Vila Bisbo**	**80.80**	**47**	*e*P		**P**		**07 42 47.4**	**+1.5**
	comp=Z,33nm,1.7s,mb5.0								
PFVI	**Vila Bisbo**	**80.80**	**47**	*e*LR		LR		08 11 54.8	
	comp=Z,204nm,21.5s								
MORF	**Marmelete**	**81.00**	**47**	*e*P		**P**		**07 42 48.5**	**+1.5**
	comp=Z,24nm,1.5s,mb4.9								
MORF					A			08 17 02.8	
	comp=Z,244nm,22.1s								
PTEO	**Sao Teotonio**	**81.06**	**47**	*e*P		**P**		**07 42 48.9**	**+1.6**
	comp=Z,28nm,0.8s,mb5.2								
PMAFR	**Mafra**	**81.34**	**45**	*e*LR		LR		08 11 10.0	
	comp=Z,220nm,20.0s								
PBDV	**Barranco-do-Ve**	**81.48**	**47**	*e*P		**P**		**07 42 50.7**	**+1.2**
PBDV	**Barranco-do-Ve**	**81.48**	**47**	*e*LR		LR		08 09 40.4	
	comp=Z,165nm,22.4s								
PVAQ	**Vaqueiros**	**81.71**	**47**	*e*P		**P**		**07 42 52.0**	**+1.3**
	comp=Z,17nm,1.3s,mb4.8								
PVAQ	**Vaqueiros**	**81.71**	**47**	*e*LR		LR		08 11 07.9	
	comp=Z,166nm,17.5s								
PBEJ	**Beja**	**81.89**	**47**	*e*P		**P**		**07 42 53.0**	**+1.4**
	comp=Z,13nm,0.9s,mb4.8								
EVO	**Evora**	**82.02**	**46**	*e*P		**P**		**07 42 52.6**	**+0.3**
PESTR	**Estremoz**	**82.47**	**46**	*e*LR		LR		08 10 10.9	
	comp=Z,87nm,22.1s								
PBAR	**Barrancos**	**82.54**	**47**	*e*P		**P**		**07 42 54.6**	**-0.4**
	comp=Z,9.8nm,0.9s,mb4.8								
PBAR	**Barrancos**	**82.54**	**47**	*e*LR		LR		08 11 18.4	
	comp=Z,156nm,21.5s								
PMRV	**Marv??o**	**82.86**	**46**	*e*P		**P**		**07 42 57.5**	**+0.8**
	comp=Z,15nm,1.7s,mb4.7								
PMRV	**Marv??o**	**82.86**	**46**	*e*LR		LR		08 11 53.4	
	comp=Z,158nm,17.0s								
PCBR	**Castelo Branco**	**83.00**	**45**	*e*P		**P**		**07 42 58.3**	**+1.0**
	comp=Z,17nm,1.2s,mb5.0								
PVIS	**Viseu**	**83.12**	**44**	*e*P		**P**		**07 42 59.1**	**+1.1**
	comp=Z,30nm,1.5s,mb5.1								
SYO	**Syowa Base**	**83.16**	**161**	⇑*e*P		**P**		**07 42 56.1**	**-1.6**
MTE	**Manteigas**	**83.21**	**45**	*e*P		**P**		**07 42 59.9**	**+1.5**
	comp=Z,25nm,1.5s,mb5.0								
MTE	**Manteigas**	**83.21**	**45**	*e*LR		LR		08 13 02.2	
	comp=Z,281nm,21.3s								
PCAB	**Cabril**	**83.50**	**43**	*e*P		**P**		**07 43 00.9**	**+1.0**
	comp=Z,37nm,1.3s,mb5.3								
PVRL	**Vila Real**	**83.50**	**44**	*e*P		**P**		**07 43 00.9**	**+1.0**
	comp=Z,16nm,1.8s,mb4.8								
MVO	**Moncorvo**	**83.91**	**44**	*e*P		**P**		**07 43 03.0**	**+1.0**
	comp=Z,15nm,0.8s,mb5.2								
MVO	**Moncorvo**	**83.91**	**44**	*e*LR		LR		08 13 11.9	
	comp=Z,214nm,21.8s								
PBRG	**Braganca**	**84.39**	**44**	*e*P		**P**		**07 43 05.1**	**+0.7**
	comp=Z,37nm,1.6s,mb5.3								
YKA	**Yellowknife Ar**	**84.59**	**342**	P		**P**		**07 43 04.7**	**-0.2**
	comp=Z,2.2nm,0.7s,mb4.4,baz=134,slow=5.8,SNR=3.4								
YKA					pP	pP		07 43 20.6	-1.3
	comp=Z,4.2nm,0.8s,baz=134,slow=4.9,SNR=4.0								
PAB	**San Pablo**	**85.03**	**47**	*e*P		**P**		**07 43 08.3**	**+0.6**
PAB					*e**PP	pP		07 43 24.7	0.0
PAB					pmax	pmax			
	comp=Z,20nm,1.0s,mb5.2								
PAB	**San Pablo**	**85.03**	**47**	*e*P		**P**		**07 43 08.3**	**+0.6**
	comp=Z,20nm,1.0s,mb5.2								
PAB					*e*pP	pP		07 43 24.7	0.0
ESDC	**Sonseca Array**	**85.35**	**47**	P		**P**		**07 43 09.9**	**+0.6**
	comp=Z,2.9nm,0.6s,mb4.6,baz=255,slow=5.2,SNR=19								
ESDC					pP	pP		07 43 25.6	-0.7
	comp=Z,7.2nm,0.9s,baz=256,slow=5.0,SNR=4.6								
TSUM	**Tsumeb**	**86.09**	**109**	*e*P		**P**		**07 43 14.1**	**+0.6**
	comp=Z,26nm,1.7s,mb5.2								
TAM	**Tamanrasset**	**86.64**	**65**	*e*P		**P**		**07 43 17.8**	**+1.8**
TAM					*e**PP	pP		07 43 33.8	+0.7
MAW	**Mawson**	**90.80**	**165**	*e*P		**P**		**07 43 34.8**	**-0.1**
	comp=Z,6.0nm,1.3s,mb4.8								
MAW	**Mawson**	**90.80**	**165**	P		**P**		**07 43 34.9**	**0.0**
	comp=Z,5.5nm,0.7s,mb5.0,baz=228,slow=5.7,SNR=17								
MAW	**Mawson**	**90.80**	**165**	*e*P		**P**		**07 43 34.8**	**-0.1**
MAW					pmax	pmax			
	comp=Z,6.0nm,1.3s								
SUMG	**Summit**	**91.49**	**10**	*e*P		**P**		**07 43 39.1**	**+1.3**
	comp=Z,15nm,1.0s,mb5.3								
SUMG					*e*pP	pP		07 43 55.4	+0.5
EIDS	**Eidsvold**	**119.95**	**227**	*e*PKPdf		pPKPdf		07 49 33.1	-7.6
STKA	**Stephens Creek**	**121.49**	**215**	*e*P		PKPdf		07 49 25.3	-0.5
	comp=Z,1.8nm,0.6s								
STKA	**Stephens Creek**	**121.49**	**215**	PKP		PKPdf		07 49 25.4	-0.5
	comp=Z,2.2nm,0.7s,baz=72,slow=4.1,SNR=6.0								
ASAR	**Alice Springs**	**132.13**	**215**	PKP		PKPdf		07 49 45.9	-0.4
	comp=Z,4.6nm,0.9s,baz=127,slow=1.9,SNR=26								
ASAR					SKPbc	SKPbc		07 53 05.5	-2.2
	comp=Z,2.3nm,1.1s,baz=150,slow=3.4,SNR=5.1								
WB2	**Warramunga Arr**	**134.78**	**219**	*e*P		PKPdf		07 49 50.9	-0.5
WRA	**Warramunga Arr**	**134.78**	**219**	PKP		PKPdf		07 49 50.9	-0.5
	comp=Z,6.7nm,0.8s,baz=147,slow=1.6,SNR=6.2								
WRA					pPKP	pPKPdf		07 50 09.5	+0.4
	comp=Z,3.4nm,0.9s,baz=142,slow=1.5,SNR=4.9								
WRA					SKPbc	SKPbc		07 53 15.9	-0.8
	comp=Z,1.6nm,1.1s,baz=138,slow=2.7,SNR=4.0								
WRA	**Warramunga Arr**	**134.78**	**219**	PKIKP		PKPdf		07 49 50.9	-0.5
WRA								07 50 09.5	
WRAB	**Tennant Creek**	**134.78**	**219**	*e*PKIKP		PKPdf		07 49 51.4	0.0
ZALV	**Zalesovo Beam**	**138.68**	**19**	PKP		PKPdf		07 49 58.0	+0.5
	comp=Z,1.2nm,0.3s,baz=302,slow=3.2,SNR=2.8								
ZALV					pPKP	pPKPdf		07 50 14.6	-0.7
	comp=Z,4.4nm,0.6s,baz=338,slow=0.8,SNR=2.7								
ZALV	**Zalesovo Beam**	**138.68**	**19**	PKP		PKPdf		07 49 58.0	+0.5
ZALV					pPKP	pPKPdf		07 50 14.6	-0.7
FITZ	**Fitzroy Crossi**	**141.03**	**210**	*e*P				07 49 55.7	
	comp=Z,6.0nm,0.8s								
FITZ	**Fitzroy Crossi**	**141.03**	**210**	PKhKP				07 49 55.7	
	comp=Z,1.3nm,0.6s,baz=219,slow=8.3,SNR=5.3								
FITZ					PKP	PKPdf		07 50 03.0	+0.1
	comp=Z,3.0nm,0.8s,baz=185,slow=3.6,SNR=5.5								
FITZ	**Fitzroy Crossi**	**141.03**	**210**	PKP		PKPdf		07 50 03.0	+0.1
MKAR	**Makanchi Array**	**143.48**	**28**	PKP		PKPdf		07 50 03.9	-2.5
	comp=Z,0.9nm,0.7s,baz=321,slow=1.7,SNR=6.6								
MKAR					pPKP	pPKPdf		07 50 21.2	-2.9
	comp=Z,2.4nm,0.8s,baz=329,slow=2.1,SNR=7.7								
MKAR	**Makanchi Array**	**143.48**	**28**	PKP		PKPdf		07 50 03.9	-2.5
MKAR					pPKP	pPKPdf		07 50 21.2	-2.9
MJAR	**Matsushiro Arr**	**145.06**	**312**	PKPbc		PKPbc		07 50 08.4	-0.6
	comp=Z,4.6nm,0.8s,baz=113,slow=1.4,SNR=14								
MJAR					pPKPbc			07 50 26.5	
	comp=Z,2.5nm,0.7s,baz=127,slow=1.9,SNR=3.0								
MAJO	**Matsushiro**	**145.06**	**312**	*e*PKIKP		PKPdf		07 50 08.6	-0.9
MAT	**Matsushiro**	**145.06**	**312**	PKP		PKPdf		07 50 08.9	-0.6
MDJ	**Mudanjiang**	**145.37**	**330**	PKP		PKPdf		07 50 08.8	-0.9
ZAK	**Zakamensk**	**145.69**	**3**	*e*PKP2		PKPab		07 50 10.9	0.0
ZAK					pmax	pmax			
	comp=Z,6.0nm,1.3s								
WMQ	**Urumqi**	**148.17**	**26**	*e*PKP		PKPdf		07 50 15.0	+0.5
ULN	**Ulaanbaatar**	**148.28**	**359**	*e*PKP2		PKPab		07 50 18.4	-2.7
SONM	**Songino Array**	**148.32**	**360**	PKPbc		PKPbc		07 50 18.5	+0.4
	comp=Z,4.9nm,0.8s,baz=301,slow=1.5,SNR=24								
SONM					pPKPbc	pPKPbc		07 50 35.1	-0.5
	comp=Z,15nm,1.0s,baz=343,slow=1.8,SNR=17								
DDI	**Dehra Dun**	**150.59**	**56**	*ex*		PKPbc		07 50 24.2	0.0
KSRS	**Korea Array**	**151.33**	**322**	PKPbc		PKPbc		07 50 25.9	+0.2
	comp=Z,8.7nm,0.9s,baz=350,slow=1.9,SNR=15								
KSRS					pPKPbc	pPKPbc		07 50 43.0	-0.5
	comp=Z,6.6nm,0.9s,baz=14,slow=1.2,SNR=5.4								
HHC	**Hu-ho-hao-te**	**154.88**	**350**	*e*PKP		PKPdf		07 50 18.3	-6.4
HHC					XPKP			07 50 43.1	
HHC					PP	PP			
	comp=Z,72nm,9.8s								
KAPI	**Kappang**	**155.14**	**214**	PKPbc		PKPdf		07 50 35.1	+9.1
	comp=Z,10nm,1.0s,baz=91,slow=19,SNR=3.5								
KAPI					PKPab	PKPab		07 50 50.1	-0.5
	comp=Z,11nm,0.7s,baz=7.2,slow=3.2,SNR=4.2								
LZH	**Lanzhou**	**159.95**	**6**	*e*PKP		PKPdf		07 50 29.3	-1.9
LZH					APKP			07 50 47.5	
LZH					XPKP			07 50 54.5	
LZH					PP	PP		07 54 53.0	+1.6
LZH					SKKS	SKKSac		08 01 39.0	+2.9
LZH					SS	SS		08 14 58.0	+3.1
LZH					PP	PP			
	comp=Z,190nm,4.7s								
LZH					LR	LR			
	comp=E,170nm,18.9s								
LZH					LR	LR			
	comp=Z,225nm,20.2s								
NJ2	**Nanjing**	**160.37**	**326**	*e*PKP		PKPdf		07 50 25.8	-6.0
CD2	**Chengdu**	**165.06**	**8**	*e*PKP		PKPdf		07 50 34.3	-2.2
CD2					APKP			07 50 52.3	
CD2					PKP2	PKPab		07 51 33.3	+0.1
CD2					PP	PP		07 55 20.8	+2.3
CD2					SKS	SKSdf		07 57 33.1	-2.7
CD2					SKKS	SKKSac		08 02 02.8	+0.5
CD2					SS	SS		08 15 49.8	+1.9
CD2					PP	PP			
	comp=Z,120nm,10.2s								
CD2					LR	LR			
	comp=N,180nm,18.4s								
CD2					LR	LR			
	comp=Z,160nm,16.2s								
KMI	**Kunming**	**170.42**	**19**	PKP		PKPdf		07 50 35.0	-5.4
KMI					APKP			07 50 53.0	
KMI					XPKP			07 51 01.3	

IDC 20 07:35:46.0±3.8, 311S×10047E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.6/20, mbtmp3.6/5, Error ellipse: s-maj=168.9km s-min=22.5km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.03**	**119**	P	P	07 42 57.3	-0.6
	0.3nm,0.4s,baz=303,slow=9.1,SNR=8.5						
ASAR	**Alice Springs**	**38.23**	**125**	P	P	07 43 08.2	+0.2
	0.4nm,0.8s,baz=299,slow=7.1,SNR=4.9						
SONM	**Songino Array**	**51.00**	**5**	P	P	07 44 50.4	+0.8
	0.4nm,0.8s,baz=178,slow=5.6,SNR=3.5						
MKAR	**Makanchi Array**	**52.22**	**344**	P	P	07 44 58.4	-0.4
	1.2nm,0.7s,baz=141,slow=7.8,SNR=7.5						
KURK	**Kurchatov**	**56.80**	**344**	P	P	07 45 30.9	-1.1
	0.8nm,0.8s,baz=162,slow=7.7,SNR=2.6						
TXAR	**Lajitas Array**	**145.28**	**39**	PKPbc	PKPbc	07 55 26.4	+0.1
	1.1nm,0.8s,baz=281,slow=0.7,SNR=11						

*BJI **20** 08:31:10.2, 229S×10005E, h30km, mB6.7, mb5.9, Ms6.9, Msz6.9*

*ISCJB **20** 08:31:13.0±0.1, 200S±002×10006E±002, h29km, mb6.2/255, MS6.7/286, Error ellipse: s-maj=3.4km s-min=2.2km az=20.5*

*SZGRF **20** 08:31:13.9, 207S×10049E, h33km, mb6.8, MS6.4, Southern Sumatera, Indonesia*

*GCMT **20** 08:31:14.5±0.1, 224S×9985E, h32km, MW6.7/123, Moment Tensor Solution. s123,c308; s115,c504; Duration: 5s4 Moment tensor: Scale 10^19Nm; Mrr 0.79±.01; Mθθ-0.52±.00; Mφφ-0.27±.00; Mrθ 0.89±.01; Mθφ 0.47±.00; Mφr-0.56±.01; Best double couple: Ms 1.33900×10^19 NP1:φs 313.00000°, δ 19.00000°, λ 99.00000°. NP2:φs 123.00000°, δ 71.00000°, λ 87.00000°. Principal axes: T 1.2970, Plg64.0000°, Azm28.0000°; N 0.0840, Plg3.0000°, Azm124.0000°; P -1.3810, Plg26.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s.*

*NEIC **20** 08:31:14.5±0.1, 200S×100.14E, h30km, mb6.3/136, ME6.9, MS6.8/221 Error ellipse: s-maj=4.3km s-min=2.8km az=35.0 Broadband fault plane solution: P waves. NP1: φs 315.00000°, δ 10.00000°, λ 90.00000°. NP2: φs 135.00000°, δ 80.00000°, λ 90.00000°. Principal axes: T Plg55.0000°, Azm45.0000°; N Plg0.0000°, Azm0.0000°; P Plg35.0000°, Azm225.0000°; Complex earthquake observed on broadband displacement seismograms. A small event is followed by a larger event about 6 seconds later. Depth from synthetics of broadband displacement seismograms based on larger event. Complex earthquake observed on broadband displacement seismograms. A small event is followed by a larger event about 6 seconds later. Depth from synthetics of broadband displacement seismograms based on larger event. Energy computed from BB mechanism.*

NEIC Felt [V] at Painan; [IV] at Kerinci, Merangin and Padangpanjang; [III] at Kapahiang, Muaro Jambi and Padang; [II] at Bukittinggi. Also felt [III] in Singapore.

*IDC **20** 08:31:14.4±0.4, 199S×10031E, h26km±2km, mb5.4/39, mb1 5.4/40, mb1mx5.4/40, mbtmp5.4/40, ML5.5/1, MS6.6/25, Ms1 6.6/25, ms1mx6.6/30 Error ellipse: s-maj=8.7km s-min=5.7km az=35.0*

*MOS **20** 08:31:15.1±0.9, 189S×10024E, h46km, mb6.5/90, MS6.6/96, Error ellipse: s-maj=7.7km s-min=3.5km az=125.4*

*DJA **20** 08:31:18, 203S×10001E, h55km, Mw6.8/47*

ISC 20 08:31:14.9±0.1, 202S±002×10006E±002, h31km, h31km±.4km: pP-P, n1377, σ1s 00/1099, mb6.2/255, MS6.7/286, 109C-24D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRJI	**Kerinci**	**1.40**	**93**	P	**Pn**	**08 31 38.8**	**+0.4**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**1.59**	**12**	P	**Pn**	**08 31 41.7**	**+0.7**
	0.0nm,0.0s						
KSI	**Kapahiang**	**3.00**	**123**	P	**Pn**	**08 32 02.2**	**+1.7**
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.60**	**84**	P	**Pn**	**08 32 11.8**	**+3.1**
	0.0nm,0.0s						
GSI	**Gunungsitoli**	**4.13**	**323**	⇑*e*P	**Pn**	**08 32 17.0**	**+1.0**
TRSI	**Tarutung**	**4.17**	**345**	P	**Pn**	**08 32 20.8**	**+4.3**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.77**	**71**	P	**Pn**	**08 32 25.8**	**+1.1**
	0.0nm,0.0s						
MYKOM	**Kota Tinggi**	**5.36**	**45**	⇑P	**Pn**	**08 32 35.9**	**+3.1**
FRIM	**Kepong**	**5.45**	**17**	⇓P	**Pn**	**08 32 37.2**	**+3.1**
KLI	**Kotabumi**	**5.56**	**121**	P	**Pn**	**08 32 38.1**	**+2.5**
	8µm,1.0s						
PPBI	**Pangkal Pinang**	**6.08**	**91**	P	**Pn**	**08 32 49.0**	**+6.3**
	954nm,1.2s						
BLSI	**Bandar Lampung**	**6.15**	**123**	P	**Pn**	**08 32 48.1**	**+4.4**
	4µm,0.9s						
SBJI	**Serang**	**7.30**	**124**	P	**Pn**	**08 33 04.3**	**+4.8**
	5µm,1.0s						
TPI	**Tanjungpandan**	**7.62**	**96**	P	**Pn**	**08 33 08.3**	**+4.3**
	1µm,1.1s						
TPI	**Tanjungpandan**	**7.62**	**96**	⇑*e*P	**Pn**	**08 33 05.0**	**+1.0**
TPI				*e*S	**Sn**	**08 34 34.0**	**+4.6**
TNG	**Tangerang**	**7.76**	**122**	P	**Pn**	**08 33 11.3**	**+5.5**
	9µm,1.2s						
DBJI	**Dramaga**	**8.05**	**124**	P	**Pn**	**08 33 11.2**	**+1.4**
	4µm,0.8s						
CBJI	**Citeko**	**8.06**	**123**	P	**Pn**	**08 33 15.4**	**+5.5**
	16µm,0.9s						
SKJI	**Sukabumi**	**8.15**	**128**	P	**Pn**	**08 33 15.6**	**+4.4**
	4µm,1.0s						
BSI	**Banda Aceh**	**8.85**	**328**	P	**Pn**	**08 33 21.0**	**+0.1**
	725nm,0.8s						
LEM	**Lembang**	**8.92**	**123**	P	**Pn**	**08 33 24.3**	**+2.5**
	4µm,1.2s						
SNG	**Songkhla**	**9.15**	**3**	P	**Pn**	**08 33 25.0**	**0.0**
	2µm,1.0s						
JCJI	**Jatiwangi**	**9.31**	**119**	P	**Pn**	**08 33 32.4**	**+5.2**
	3µm,1.0s						
XMIS	**Christmas Isla**	**10.07**	**147**	*e*Pn	**Pn**	**08 33 30.6**	**-7.0**
XMIS				*e*Sn	**Sn**	**08 35 14.2**	**-15**
COCO	**West Island**	**10.60**	**197**	*e*Pn	**Pn**	**08 33 42.8**	**-1.9**
COCO				*e*Sn	**Sn**	**08 35 30.0**	**-12**
KSM	**Kuching**	**10.82**	**71**	⇓P	**Pn**	**08 33 52.3**	**+4.5**
KSM	**Kuching**	**10.82**	**71**	*e*Pn	**Pn**	**08 33 50.4**	**+2.6**
BJII	**Banjarnegara**	**10.97**	**119**	P	**Pn**	**08 33 51.9**	**+2.0**
	853nm,0.9s						
SJI	**Sawahan**	**12.97**	**116**	P	**Pn**	**08 34 16.6**	**-0.6**
	1µm,0.9s						
TRT	**Tretes**	**13.74**	**115**	⇑*e*P	**Pn**	**08 34 28.0**	**+0.2**
KRKI	**Karangkates**	**13.76**	**117**	P	**Pn**	**08 34 30.9**	**+2.8**
	2µm,1.3s						
BTM	**Bintulu**	**14.01**	**68**	⇑P	**Pn**	**08 34 37.6**	**+6.0**
NNT	**Nongplab**	**14.52**	**359**	P	**Pn**	**08 34 40.0**	**+1.6**
KMMI	**Kaliangket**	**14.73**	**110**	P	**Pn**	**08 34 41.5**	**+0.2**
	3µm,1.3s						
BBKI	**Banjar Baru**	**14.83**	**96**	P	**Pn**	**08 34 45.4**	**+2.7**
	2µm,1.4s						
KHKI	**Kahang-Kahang**	**16.71**	**113**	P	**Pn**	**08 35 07.9**	**+0.9**
	1µm,1.1s						
SMKI	**Samarinda**	**17.22**	**85**	P	**Pn**	**08 35 16.8**	**+3.5**
	2µm,1.4s						
MTNI	**Mataram**	**17.33**	**113**	P	**Pn**	**08 35 17.0**	**+2.3**
	643nm,1.1s						
NST	**Nakhon Sawan**	**17.58**	**0**	P	**Pn**	**08 35 15.0**	**-2.8**
	175nm,0.7s						
UBT	**Ubonrachathani**	**17.84**	**16**	P	**Pn**	**08 35 23.5**	**+2.5**
	486nm,0.9s						
KKM	**Kota Kinabalu**	**18.01**	**63**	⇓P	**Pn**	**08 35 25.1**	**+2.0**
KKM	**Kota Kinabalu**	**18.01**	**63**	*e*Pn	**Pn**	**08 35 23.4**	**+0.2**
KKTK	**Khon Kaen**	**18.44**	**8**	PG	**Pn**	**08 35 27.0**	**-1.4**
KKTK				SG	pP	08 35 36.0	-0.3
SDKM	**Sandakan**	**18.73**	**66**	⇓P	**Pn**	**08 35 25.1**	**-6.8**
TSM	**Tawau**	**18.87**	**71**	⇓P	**Pn**	**08 35 35.1**	**+1.4**
KDM	**Kudat**	**18.95**	**62**	⇑P	**Pn**	**08 35 36.0**	**+1.4**
MYLDM	**Lahad Datu**	**19.76**	**69**	⇑P	**Pn**	**08 35 45.2**	**+0.9**
PCI	**Palu**	**19.80**	**87**	P	**Pn**	**08 35 43.8**	**-1.0**
	5µm,1.4s						
KAPI	**Kappang**	**19.88**	**99**	P	**Pn**	**08 35 42.3**	**-3.4**
	12µm,1.1s,SNR=49						
KAPI	**Kappang**	**19.88**	**99**	P	**Pn**	**08 35 41.1**	**-4.5**
	13nm,0.3s,baz=288,slow=11,SNR=37						
KAPI				S	**Sn**	**08 39 28.0**	**-0.4**
	baz=38,slow=19,SNR=2.5						
KAPI				LR	LR	08 44 27.9	
	comp=Z,203µm,18.9s,baz=55,slow=40						
KAPI	**Kappang**	**19.88**	**99**	*e*P	**Pn**	**08 35 42.2**	**-3.4**
	3µm,1.2s						
KAPI				*e*S	**Sn**	**08 39 30.5**	**+2.1**
CM31	**Chiang Mai Arr**	**20.38**	**357**	PFAKE		08 36 00.0	+11
CM31				LR	LR		
	comp=Z,251µm,20.0s,MS6.6						
CMAR	**Chiang Mai Arr**	**20.38**	**357**	P	**P**	**08 35 47.9**	**-1.4**
	comp=Z,86nm,0.6s,baz=185,slow=9.5,SNR=156						
CMAR				S	**S**	**08 39 42.6**	**+6.5**
	comp=Z,2.3nm,0.4s,baz=320,slow=26,SNR=2.1						
CMAR				PcP	PcP	08 40 03.4	+1.8
	comp=Z,21nm,1.1s,baz=276,slow=0.8,SNR=3.3						
CMAR				pPcP		08 40 11.2	
	comp=Z,27nm,0.8s,baz=210,slow=3.1,SNR=5.0						
CMAR				LR	LR

BOLP Bolinao 26.81 46 *e*P **P** **08 36 54.6 +1.9**
DMPH Davao City--Mi 26.96 70 *i*P **P** **08 36 58.4 +4.4**
CAL Calcutta 26.96 336 *e*P pP 08 37 04.9 +2.0
CAL *e*S **S** **08 41 43.1 +14**
MBWA Marble Bar 27.01 136 *e*P **P** **08 36 54.0 -0.4**
comp=Z,1μm,2.0s,mb6.1
MBWA *e*S **S** **08 41 38.1 +8.0**
MBWA LR LR
comp=Z,199μm,20.0s,MS6.7
DAV Davao City (W) 27.02 70 P **P** **08 36 53.1 -1.6**
comp=Z,194nm,0.4s,mb6.0,baz=203,slow=7.7,SNR=2.6
DAV LR LR 08 49 16.3
comp=Z,143μm,20.4s,MS6.5,baz=99,slow=40
DAV Davao City (W) 27.02 70⇑ *e*P **P** **08 36 53.5 -1.1**
KMI Kunming 27.11 5 P **P** **08 36 55.9 +0.7**
KMI AP pP 08 37 04.5 +0.3
KMI XP sP 08 37 08.3 +0.4
KMI PP 08 37 45.9
KMI S **S** **08 41 36.8 +5.2**
KMI XS sS 08 41 51.6 +5.2
KMI AMB AMB
comp=Z,99nm,0.9s,mb5.3
KMI LR LR
comp=N,119μm,20.7s,MS6.7
KMI LR LR
comp=E,177μm,16.8s,MS6.7
KMI LR LR
comp=Z,215μm,18.7s,MS6.7
GQP Guinayangan 27.26 54⇓ *e*P **P** **08 37 00.9 +4.3**
BCPH Baguio City Da 27.30 47⇑ *e*P **P** **08 36 56.9 -0.1**
IMP Imphal 27.30 348 *i* P **P** **08 36 57.0 +0.1**
IMP *e*S **S** **08 41 34.0 -0.6**
LBMI Labuha 27.47 88 P **P** **08 36 58.5 -0.1**
comp=Z,3μm,1.4s,mb6.6
MSLP Maasin 27.48 63 *e*P **P** **08 37 01.6 +2.8**
BALP Baler 27.64 50 *e*P **P** **08 37 03.2 +3.1**
HKC Hong Kong Obse 27.83 29 *i*P **P** **08 37 04.0 +2.3**
HKC S **S** **08 41 42.0 -1.0**
DGAR Diego Garcia 28.02 258 PFAKE 08 37 20.0 +16
DGAR LR LR
comp=Z,210μm,21.0s,MS6.7
PLP Palo 28.03 62⇓ *e*P **P** **08 37 01.6 -2.0**
BIPH Bislig 28.12 69⇑ *e*P **P** **08 37 02.2 -2.3**
CNP Catarman 28.38 59 *e*P **P** **08 37 10.2 +3.4**
CAUP Cauayan 28.57 48 *e*P **P** **08 37 05.7 -2.7**
PIP Pasuquin 28.61 44⇑ *e*P **P** **08 37 08.0 -0.8**
HYB Hyderabad 28.68 313 *e*P **P** **08 37 10.0 +0.6**
HYB *e* 08 37 31.0
HYB *e*S **S** **08 41 50.0 -6.6**
HYB pmax pmax
comp=Z,475nm,1.4s,mb6.0
HYB Hyderabad 28.68 313 *i* P **P** **08 37 10.0 +0.6**
comp=Z,475nm,1.4s,mb6.0
HYB *e* 08 37 31.0
HYB *e*S **S** **08 42 02.0 +5.4**
HYB LR LR 08 48 28.0
comp=Z,149nm,20.0s
HYB Hyderabad 28.68 313 *e*P **P** **08 37 10.0 +0.6**
comp=Z,475nm,1.4s,mb6.0
HYB *e* 08 37 31.0
HYB *e*S **S** **08 41 50.0 -6.6**
HYB *e* 08 48 28.0
APYP Conner 28.74 46 *e*P **P** **08 37 10.0 +0.1**
GYA Guiyang 29.02 12⇑ *i*P **P** **08 37 11.3 -1.0**
GYA AP pP 08 37 26.4 +5.1
GYA XP sP 08 37 30.3 +5.3
GYA PP PP 08 38 11.8 -6.4
GYA S **S** **08 42 08.6 +6.9**
GYA XS sS 08 42 21.3 +4.7
GYA SS SS 08 43 36.3 -29
GYA AMB AMB
comp=Z,260nm,1.0s,mb5.9
GYA LR LR
comp=N,169μm,21.5s,MS7.0
GYA LR LR
comp=E,305μm,18.9s,MS7.0
GYA LR LR
comp=Z,113μm,22.4s,MS6.4
BOK Bokaro 29.13 333 *e*P **P** **08 37 14.4 +1.1**
BOK AMb AMB 08 37 29.3
comp=Z,871nm,1.2s,mb6.4
FITZ Fitzroy Crossi 29.75 124 *e*P **P** **08 37 17.2 -1.7**
comp=Z,164nm,1.0s,mb5.7
FITZ *e*pP pP 08 37 26.7 -1.2
FITZ *e*S **S** **08 42 10.3 -3.1**
FITZ Fitzroy Crossi 29.75 124 P **P** **08 37 17.2 -1.7**
comp=Z,76nm,0.9s,mb5.4,baz=302,slow=7.9,SNR=122
FITZ S **S** **08 42 15.4 +2.0**
comp=Z,43nm,1.0s,baz=179,slow=22,SNR=5.8
NGP Nagpur 30.87 319 *e*P **P** **08 37 28.9 +0.2**
NGP *ex* x 08 37 49.5
comp=Z,3μm,2.6s
NGP *e*S **S** **08 42 33.3 +2.3**
GTK Gangtok 31.20 340 *e*P **P** **08 37 31.0 -0.5**
SWI Sorong 31.21 88 P **P** **08 37 30.1 -1.8**
comp=Z,2μm,1.2s,mb6.7
GOA Goa 31.24 305⇑ *i*P **P** **08 37 41.2 +9.2**
GOA AMb AMB 08 37 58.2
comp=Z,742nm,2.5s,mb6.1
GOA *i* S **S** **08 42 48.4 +12**
JBP Jabalpur 31.77 323 *e*P **P** **08 37 37.4 +0.8**
JBP *e*S **S** **08 42 48.2 +3.3**
AKL Akola 31.93 316 *e*P **P** **08 37 40.8 +2.7**
AKL AMb AMB 08 38 03.3
comp=Z,474nm,1.6s,mb6.1
KAD Karad 31.94 308 *e*P **P** **08 37 38.8 +0.6**
KAD AMb AMB 08 37 51.5
comp=Z,215nm,1.2s,mb5.8
QZH Quanzhou 32.27 33⇑ *i*P **P** **08 37 41.4 +0.4**
QZH AP pP 08 37 50.3 +0.3
QZH S **S** **08 42 58.3 +5.6**
QZH AMB AMB
comp=Z,2μm,1.5s,mb6.7
QZH LR LR
comp=N,248μm,15.3s,MS7.1
QZH LR LR
comp=E,238μm,18.2s,MS7.1
QZH LR LR
comp=Z,425μm,16.7s,MS7.2
ALBI Allahabad 32.42 328 *e*P **P** **08 37 43.0 +0.7**
LSA Lhasa 32.67 346 P **P** **08 37 45.6 +1.1**
LSA AP pP 08 37 54.8 +1.3
LSA XP sP 08 37 58.5 +1.3
LSA S **S** **08 43 05.8 +7.0**
LSA LR LR
comp=N,60μm,28.5s,MS6.3
LSA LR LR
comp=E,68μm,28.5s,MS6.3
LSA LR LR
comp=Z,100μm,25.5s,MS6.4
LSA Lhasa 32.67 346 *e*P **P** **08 37 45.9 +1.4**
LSA pmax pmax
comp=Z,367nm,0.6s,mb6.5
LSA MLR MLR
comp=Z,98μm,22.0s,MS6.5
LSA Lhasa 32.67 346 *e*P **P** **08 37 45.9 +1.4**
comp=Z,367nm,0.6s,mb6.5
LSA LR LR
comp=Z,98μm,22.0s,MS6.5
POO Poona 32.90 310⇓ *i*P **P** **08 37 47.0 +0.4**
comp=Z,1μm,1.2s,mb6.6
CD2 Chengdu 32.94 6 P **P** **08 37 45.1 -1.7**
CD2 AP pP 08 37 54.5 -1.3
CD2 XP sP 08 37 58.0 -1.5
CD2 PP PP 08 38 56.0 -5.6
CD2 PCP PcP 08 40 28.6 -2.1
CD2 S **S** **08 43 00.5 -2.4**
CD2 PCS PcS 08 44 12.9 -3.2
CD2 AMB AMB
comp=Z,170nm,1.0s,mb5.9
CD2 AMB AMB
comp=Z,12μm,11.2s
CD2 LR LR
comp=N,245μm,20.4s,MS7.0
CD2 LR LR
comp=E,196μm,19.2s,MS7.0
CD2 LR LR
comp=Z,218μm,19.2s,MS6.9
NACB Ninganchiao 33.41 38 *e*P **P** **08 37 49.6 -1.3**
comp=Z,2μm,1.0s,mb7.0
NACB *e*S **S** **08 43 20.4 +10**
MUN Mundaring 33.46 155 *e*P **P** **08 37 52.0 +0.7**
MUN *e*pP pP 08 38 02.3 +1.9
MUN *e*PCP PcP 08 40 52.7 +21
MUN *e*S **S** **08 43 15.9 +4.9**
MUN *e*SCP ScP 08 44 17.9 +3.2
MUN Mundaring 33.46 155 *e*P **P** **08 37 52.0 +0.7**
MUN *e**PP pP 08 38 02.3 +1.9
MUN *e*S **S** **08 43 15.9 +4.9**
YHNB Yeheng 33.65 37 *e*P **P** **08 37 52.9 -0.2**
comp=Z,694nm,1.1s,mb6.5
YHNB *e*pP pP 08 38 03.2 +1.1
YHNB *e*S **S** **08 43 33.3 +19**
YHNB LR LR
comp=Z,163μm,20.0s,MS6.8
KLBR Kellerberrin 33.82 152 *e*P **P** **08 37 54.3 -0.2**
comp=Z,38nm,0.7s,mb5.4
KLBR *e*pP pP 08 38 04.1 +0.6
KLBR *e*PCP PcP 08 40 55.6 +22
KLBR *e*S **S** **08 43 24.0 +7.3**
KLBR *e* 08 44 06.7
BOM Bombay 33.91 309 *i* P **P** **08 37 57.8 +2.4**
BOM *ex* x 08 38 17.0
comp=Z,2μm,1.6s
BOM *e*S **S** **08 43 20.5 +2.2**
TATO Taipei 33.94 36 *e*P **P** **08 37 54.9 -0.7**
TATO *e*pP pP 08 38 05.8 +1.1
TATO *e*S **S** **08 43 27.5 +8.9**
TATO LR LR
comp=Z,112μm,20.0s,MS6.6
NWAO Narrogin (SRO) 34.72 154 LR LR 08 50 33.8
comp=Z,223μm,21.7s,MS6.9,baz=323,slow=34
NWAO Narrogin (SRO) 34.72 154 *e*P **P** **08 38 02.2 0.0**
NWAO *e**PP pP 08 38 12.8 +1.5
NWAO *e*S **S** **08 43 36.3 +5.9**
NWAO pmax pmax
comp=Z,560nm,1.3s
NWAO MLR MLR
comp=Z,188μm,22.0s
NWAO Narrogin (SRO) 34.72 154 *e*P **P** **08 38 02.1 -0.1**
comp=Z,560nm,1.3s,mb6.3
NWAO *e*pP pP 08 38 12.8 +1.5
NWAO *e*S **S** **08 43 36.3 +5.9**
NWAO LR LR
comp=Z,188μm,22.0s,MS6.8
WHN Wuhan 35.13 22 ⇑P **P** **08 38 05.4 -0.4**
WHN S **S** **08 43 44.0 +7.1**
WHN LR LR
comp=N,533μm,15.0s,MS7.4
WHN LR LR
comp=E,252μm,16.6s,MS7.4
WHN LR LR
comp=Z,754μm,17.5s,MS7.5
PTH Pithoragarh 36.69 330 *e*P **P** **08 38 19.9 +0.7**
PTH *ex* x 08 44 10.2
XAN Xi'an 36.83 12 P **P** **08 38 18.5 -1.8**
XAN AMB AMB
comp=Z,271nm,0.8s,mb6.1
XAN LR LR
comp=N,72μm,21.2s,MS7.0
XAN LR LR
comp=E,207μm,16.9s,MS7.0
XAN LR LR
comp=Z,313μm,17.4s,MS7.2
AJM Ajmer 37.48 321 *e*P **P** **08 38 25.0 -1.0**
WRA Warramunga Arr 37.93 120 P **P** **08 38 27.7 -2.2**
comp=Z,165nm,0.7s,mb5.9,baz=296,slow=9.3,SNR=392
WRA pP pP 08 38 35.7 -3.3
comp=Z,960nm,1.1s,baz=299,slow=9.3,SNR=32
WRA pPcP 08 40 54.4
comp=Z,54nm,0.8s,baz=313,slow=2.5,SNR=4.5
WRA S **S** **08 44 17.2 -2.7**
comp=Z,86nm,1.0s,baz=292,slow=16,SNR=6.6
WRA LR LR 08 57 13.7
comp=Z,61μm,18.9s,MS6.4,baz=315,slow=41
WRA P3KPbc 09 08 43.5
comp=Z,1.6nm,1.0s,baz=119,slow=3.9,SNR=5.0
WRA Warramunga Arr 37.93 120 P **P** **08 38 27.7 -2.2**
WRA *PP pP 08 38 35.7 -3.3
WRA S **S** **08 44 17.2 -2.7**
WRA Warramunga Arr 37.93 120 P **P** **08 38 27.7 -2.2**
WRA pP pP 08 38 35.7 -3.3
WRA pPcP 08 40 54.4
WRA S **S** **08 44 17.2 -2.7**
WRA LR LR 08 57 13.7
WRA *e* 09 08 43.5
WRAB Tennant Creek 37.94 120 P **P** **08 38 28.0 -1.9**
comp=Z,5μm,1.1s,mb7.2
WRAB Tennant Creek 37.94 120 *e*P **P** **08 38 28.1 -1.8**
WRAB *e*S **S** **08 44 12.9 -7.1**
WRAB pmax pmax
comp=Z,933nm,1.1s,mb6.4
WRAB MLR MLR
comp=Z,78μm,20.0s,MS6.5
WRAB Tennant Creek 37.94 120 *e*P **P** **08 38 28.1 -1.9**
comp=Z,933nm,1.1s,mb6.4
WRAB *e*S **S** **08 44 12.9 -7.1**
WRAB LR LR
comp=Z,78μm,20.0s,MS6.5
WB2 Warramunga Arr 37.94 120 *i*P **P** **08 38 27.7 -2.3**
WB2 *e*pP pP 08 38 37.5 -1.6
WB2 *e*S **S** **08 44 15.5 -4.6**
LZH Lanzhou 38.08 5 ⇑P **P** **08 38 30.8 0.0**
LZH AP pP 08 38 38.8 -1.2
LZH XP sP 08 38 42.8 -0.9
LZH PCP PcP 08 40 45.3 -0.4
LZH S **S** **08 44 23.0 +1.4**
LZH XS sS 08 44 38.0 +1.3
LZH AMB AMB
comp=Z,3μm,1.8s,mb6.7
LZH AMB AMB
comp=Z,7μm,5.6s
LZH LR LR
comp=E,224μm,19.6s
LZH LR LR
comp=Z,274μm,21.2s,MS7.0
NJ2 Nanjing 38.29 26 *e*P **P** **08 38 35.3 +2.6**
NJ2 AP pP 08 38 44.0 +2.2
NJ2 XP sP 08 38 49.0 +3.4
NJ2 PP PP 08 40 06.8 +6.1
NJ2 S **S** **08 44 32.5 +7.5**
NJ2 AMB AMB
comp=Z,380nm,1.2s,mb6.0
NJ2 AMB AMB
comp=Z,4μm,6.0s
NJ2 LR LR
comp=N,35μm,14.9s,MS6.7
NJ2 LR LR
comp=E,72μm,15.0s,MS6.7
NJ2 LR LR
comp=Z,62μm,15.0s,MS6.5
DDI Dehra Dun 38.41 329⇑ *i*P **P** **08 38 33.2 -0.5**
DDI *e*S **S** **08 44 27.0 +0.1**
SSE Sheshan 38.59 30 ⇑P **P** **08 38 35.6 +0.4**
SSE AP pP 08 38 46.1 +1.8
SSE XP sP 08 38 51.5 +3.4
SSE PCP PcP 08 40 46.8 -0.6
SSE S **S** **08 44 27.8 -1.7**
SSE XS sS 08 44 43.6 -1.0
SSE SCS ScS 08 48 44.5 +0.6
SSE AMB AMB
comp=Z,106nm,0.9s,mb5.6
SSE LR LR
comp=N,137μm,18.9s,MS6.9
SSE LR LR
comp=E,110μm,18.9s,MS6.9
SSE LR LR
comp=Z,179μm,20.4s,MS6.9
BHJ Bhuj 38.83 312 *e*P **P** **08 38 38.5 +1.1**
BHJ AMb AMB 08 39 02.6
comp=Z,991nm,0.7s,mb6.7
FORT Forrest 38.99 140 *e*P **P** **08 38 38.8 +0.2**
comp=Z,42nm,0.5s,mb5.4
FORT *e* pP 08 38 47.4 -0.4
FORT *e*S **S** **08 44 44.1 +8.5**
ASAR Alice Springs 39.19 126 P **P** **08 38 39.2 -1.2**
comp=Z,106nm,0.7s,mb5.7,baz=302,slow=7.6,SNR=247
ASAR PcP PcP 08 40 49.7 +0.2
comp=Z,17nm,0.5s,baz=328,slow=3.3,SNR=1.9
ASAR pPcP 08 40 58.8
comp=Z,80nm,0.8s,baz=316,slow=2.5,SNR=5.5
ASAR S **S** **08 44 36.6 -2.2**
comp=Z,48nm,1.0s,baz=293,slow=14,SNR=9.2
ASAR P3KPbc 09 08 40.0
comp=Z,0.7nm,0.9s,baz=112,slow=3.8,SNR=4.6
ASAR P3KP 09 10 23.6
comp=Z,0.7nm,0.8s,baz=85,slow=1.4,SNR=4.4
ASAR Alice Springs 39.19 126 P **P** **08 38 39.2 -1.2**
ASAR 08 40 49.7
ASAR S **S** **08 44 36.7 -2.2**
ASAR Alice Springs 39.19 126 P **P** **08 38 39.2 -1.2**
ASAR PcP PcP 08 40 49.7 +0.2
ASAR pPcP 08 40 58.8
ASAR PKKKP 09 10 23.6
SMLA Simla 39.51 328 *i* P **P** **08 38 43.1 +0.1**
SMLA *ex* x 08 38 46.0
comp=Z,374nm,0.5s
SMLA *i* S **S** **08 44 46.2 +2.8**
SDNR Sundarnagar 39.91 329 *e*P **P** **08 38 46.6 +0.3**
SDNR *ex* x 08 44 02.0
BHK Bhakra 40.13 328 *e*P **P** **08 38 48.8 +0.7**
JAY Jayapura 40.62 91 P **P** **08 38 53.4 +1.0**
comp=Z,320nm,1.4s,mb5.8
PONG Pong 40.80 328 *ex* x 08 38 40.0
PONG *ex* x 08 39 50.0
TIY Taiyuan 41.16 15⇑ *e*P **P** **08 38 59.4 +2.9**
TIY AMB AMB
comp=Z,6μm,5.5s
TIY LR LR
comp=N,84μm,16.9s,MS6.8
TIY LR LR
comp=E,60μm,15.5s,MS6.8
TIY LR LR
comp=Z,105μm,22.6s
GTA Gaotai 41.23 360 ⇑P **P** **08 38 56.8 -0.2**
GTA AP pP 08 39 06.9 +0.7
GTA XP sP 08 39 11.0 +1.0
GTA S **S** **08 45 07.6 -1.3**
GTA XS sS 08 45 23.5 -0.5
GTA AMB AMB
comp=Z,2μm,8.1s
GTA LR LR
comp=N,50μm,20.1s,MS6.8
GTA LR LR
comp=E,122μm,17.4s,MS6.8
GTA LR LR
comp=Z,89μm,21.0s,MS6.6
TIA Tai'an 41.23 21 P **P** **08 38 56.3 -0.8**
TIA S **S** **08 45 06.0 -3.0**
TIA AMB AMB
comp=Z,58nm,0.8s,mb5.3
TIA AMB AMB
comp=Z,2μm,8.0s
TIA LR LR
comp=N,187μm,18.0s
TIA LR LR
comp=E,94μm,6.0s
DLH Dalhousie 41.25 328 *e*P **P** **08 38 58.0 +0.7**
DLH *ex* x 08 39 19.0
THN Thein Dam 41.30 328 *e*P **P** **08 38 56.0 -1.7**
THN *ex* x 08 45 26.8
HHC Hu-ho-hao-te 43.94 13 ⇑P **P** **08 39 18.6 -0.4**
HHC AP pP 08 39 29.1 +0.8
HHC XP sP 08 39 32.8 +0.8
HHC PP PP 08 41 03.3 +1.5
HHC SCP ScP 08 44 51.9 -2.5
HHC PCS PcS 08 44 56.3 -1.3
HHC S **S** **08 45 47.8 -0.9**
HHC XS sS 08 46 05.8 +1.9
HHC AMB AMB
comp=Z,42nm,1.3s
HHC AMB AMB
comp=Z,12μm,6.6s
HHC LR LR
comp=N,133μm,17.3s,MS7.0
HHC LR LR
comp=E,84μm,18.8s,MS7.0
HHC LR LR
comp=Z,123μm,17.9s,MS6.9
COEN Coen 44.22 108 *e*P **P** **08 39 17.8 -3.9**
comp=Z,37nm,1.0s
COEN *e*pP pP 08 39 27.8 -3.1
BJT Baijiatuau 44.36 18 *e*P **P** **08 39 22.3 -0.2**
BJT *e**PP pP 08 39 31.6 -0.1
BJT *e*S **S** **08 46 03.0 +8.1**
BJT pmax pmax
comp=Z,3μm,1.6s
BJT MLR MLR
comp=Z,90μm,22.0s
BJT Baijiatuau 44.36 18 *e*P **P** **08 39 22.2 -0.2**
comp=Z,3μm,1.6s,mb6.7
BJT *e*pP pP 08 39 31.6 -0.1
BJT *e*S **S** **08 46 03.0 +8.1**
BJT LR LR
comp=Z,90μm,22.0s,MS6.7
BJI Beijing 44.38 18 P **P** **08 39 22.3 -0.3**
BJI XP sP 08 39 37.6 +2.0
BJI PP PP 08 41 07.1 +0.5
BJI S **S** **08 45 59.0 +3.8**
BJI XS sS 08 46 15.1 +4.7
BJI AMB AMB
comp=Z,96nm,1.4s,mb5.3
BJI AMB AMB
comp=Z,15μm,6.4s
BJI LR LR
comp=N,174μm,16.4s,MS7.1
BJI LR LR
comp=E,40μm,16.9s,MS7.1
BJI LR LR
comp=Z,122μm,18.4s,MS6.9
MSEY Mahe Island 44.58 265 PFAKE 08 39 40.0 +15
MSEY LR LR
comp=Z,109μm,22.0s,MS6.7
DL2 Dalian 45.31 24⇑ *i*P **P** **08 39 32.0 +2.0**
DL2 XP sP 08 39 46.8 +3.8
DL2 S **S** **08 46 12.6 +3.9**
DL2 XS sS 08 46 27.1 +3.1
DL2 SS SS 08 49 23.3 -9.5
DL2 AMB AMB
comp=Z,570nm,1.5s,mb6.2
DL2 AMB AMB
comp=Z,5μm,5.1s
DL2 LR LR
comp=N,51μm,18.8s,MS6.6
DL2 LR LR
comp=E,41μm,19.0s,MS6.6
DL2 LR LR
comp=Z,56μm,18.4s,MS6.5
INCN Inchon 46.38 29 *e*P **P** **08 39 37.9 -0.7**
comp=Z,1μm,1.6s,mb6.5
INCN *e*pP pP 08 39 46.4 -1.4
INCN LR LR
comp=Z,82μm,21.0s,MS6.7
KSH Kashi 46.88 334⇑ *i*P **P** **08 39 43.0 +0.6**
KSH *e*AP pP 08 39 52.0 +0.3
KSH *e*XP sP 08 39 56.3 +0.9
KSH *e*PCP PcP 08 41 16.1 +1.2
KSH *e*PP PP 08 41 32.1 -0.9
KSH *e*SCP ScP 08 45 06.1 -0.5
KSH *e*PCS PcS 08 45 09.0 -0.8
KSH *e*S **S** **08 46 30.3 -0.9**
KSH *e*XS sS 08 46 46.0 -0.5
KSH *e*SCS ScS 08 49 32.3 -2.5
KSH *e*SS SS 08 49 49.0 -9.3
KSH AMB AMB
comp=Z,20μm,3.7s
KSH LR LR
comp=N,53μm,15.7s,MS6.8
KSH LR LR
comp=E,60μm,15.6s,MS6.8
KSH LR LR
comp=Z,39μm,15.3s,MS6.5
WMQ Urumqi 46.97 348⇑ *i*P **P** **08 39 44.1 +1.1**
WMQ AP pP 08 39 53.4 +1.1
WMQ XP sP 08 39 57.6 +1.6
WMQ PCP PcP 08 41 16.5 +1.4
WMQ PP PP 08 41 36.0 +2.2
WMQ SCP ScP 08 45 07.8 +0.9
WMQ S **S** **08 46 33.0 +0.7**
WMQ XS sS 08 46 50.8 +3.2
WMQ AMB AMB
comp=Z,2μm,1.1s,mb6.9
WMQ AMB AMB
comp=Z,2μm,3.9s
WMQ LR LR
comp=N,42μm,19.3s,MS6.6
WMQ LR LR
comp=E,42μm,18.4s,MS6.6
WMQ LR LR
comp=Z,46μm,28.8s
KSRS Korea Array 47.01 31 P **P** **08 39 42.6 -0.8**

comp=Z,166nm,0.9s,mb6.0,baz=225,slow=8.3,SNR=93
KSRS pP pP 08 39 51.5 -1.2
comp=Z,540nm,1.2s,baz=228,slow=8.3,SNR=21
KSRS pPcP 08 41 23.9
comp=Z,19nm,1.0s,baz=222,slow=3.2,SNR=4.1
KSRS S **S** **08 46 36.4 +3.2**
comp=Z,1.7nm,0.8s,baz=204,slow=26,SNR=3.1
KSRS LR LR 08 59 18.6
comp=Z,68μm,21.5s,MS6.6,baz=233,slow=36
KSRS Korea Array 47.01 31 P **P** **08 39 42.6 -0.8**
KSRS *PP pP 08 39 51.5 -1.2
KSRS S **S** **08 46 36.4 +3.3**
KSRS pmax pmax
comp=Z,166nm,0.9s,mb6.0
KSRS smax
comp=N,2.0nm,0.8s
KSRS MLR MLR
comp=Z,68μm,21.5s,MS6.6
GUMO Guam 47.06 69 P **P** **08 39 42.7 -1.5**
comp=Z,37nm,0.4s,mb5.7,baz=195,slow=8.5,SNR=11
GUMO Guam 47.06 69 P **P** **08 39 39.7 -4.5**
GUMO *e* 08 41 16.2
GUMO pmax pmax
comp=Z,239nm,1.0s,mb6.1
GUMO MLR MLR
comp=Z,34μm,22.0s,MS6.3
GUMO Guam 47.06 69 P **P** **08 39 39.7 -4.5**
comp=Z,239nm,1.0s,mb6.1
GUMO *e*PcP PcP 08 41 16.2 +0.1
GUMO LR LR
comp=Z,34μm,22.0s,MS6.3
RER Riviere de l'E 47.15 243 *e*P **P** **08 39 47.8 +3.0**
PMG Port Moresby 47.39 101 *e*P **P** **08 39 44.6 -2.2**
PMG *e**PP pP 08 39 55.7 -0.4
PMG pmax pmax
comp=Z,69nm,0.7s
PMG MLR MLR
comp=Z,45μm,20.0s
PMG Port Moresby 47.39 101 *e*P **P** **08 39 44.6 -2.3**
comp=Z,69nm,0.7s,mb5.7
PMG *e*pP pP 08 39 55.7 -0.5
PMG LR LR
comp=Z,45μm,20.0s,MS6.4
CTA Charters Tower 48.53 115 *e*P **P** **08 39 53.6 -2.0**
comp=Z,113nm,1.1s,mb5.8
CTA *e*pP pP 08 40 03.5 -1.4
CTA *e*S **S** **08 46 46.2 -9.1**
CTA Charters Tower 48.53 115 P **P** **08 39 54.4 -1.2**
comp=Z,118nm,0.9s,mb5.9,baz=289,slow=9.5,SNR=90
CTA pP pP 08 40 03.6 -1.3
comp=Z,465nm,1.1s,baz=294,slow=11,SNR=28
CTA S **S** **08 46 54.2 -1.1**
comp=Z,8.4nm,1.1s,baz=30,slow=20,SNR=2.6
CTA Charters Tower 48.53 115 *e*P **P** **08 39 53.6 -2.0**
CTA *e**PP pP 08 40 03.5 -1.4
CTA *e*S **S** **08 46 46.2 -9.1**
CTA pmax pmax
comp=Z,113nm,1.1s
CTAO Charters Tower 48.53 115 *e*P **P** **08 39 54.0 -1.6**
CTAO *e**PP pP 08 40 04.2 -0.7
CTAO *e*S **S** **08 46 50.5 -4.8**
CTAO pmax pmax
comp=Z,711nm,1.2s,mb6.6
CTAO MLR MLR
comp=Z,66μm,21.0s,MS6.6
CTAO Charters Tower 48.53 115 *e*P **P** **08 39 54.0 -1.6**
comp=Z,711nm,1.2s,mb6.6
CTAO *e*pP pP 08 40 04.2 -0.7
CTAO *e*S **S** **08 46 50.5 -4.9**
CTAO LR LR
comp=Z,66μm,21.0s,MS6.6
SNY Shenyang 48.58 23 ⇑P **P** **08 39 54.3 -1.2**
SNY XP sP 08 40 12.1 +3.6
SNY PP PP 08 41 52.5 +3.8
SNY LR LR
comp=N,48μm,22.0s
SNY LR LR
comp=E,29μm,16.7s
SNY LR LR
comp=Z,48μm,26.7s,MS6.3
STKA Stephens Creek 49.09 132 *e*P **P** **08 39 59.0 -0.7**
comp=Z,189nm,0.6s,mb6.3
STKA *e*S **S** **08 47 01.1 -1.8**
STKA *e*SCS ScS 08 49 53.7 +3.8
STKA Stephens Creek 49.09 132 P **P** **08 39 59.1 -0.5**
comp=Z,55nm,0.7s,mb5.7,baz=304,slow=7.3,SNR=66
STKA S **S** **08 46 59.5 -3.4**
comp=Z,14nm,0.9s,baz=250,slow=11,SNR=2.7
STKA LR LR 09 02 57.4
comp=Z,110μm,19.9s,MS6.8,baz=292,slow=39
AAA Alma-Ata 49.65 338 *i* P **P** **08 40 10.5 +6.8**
AAA *i* S **S** **08 47 17.8 +7.5**
AAA pmax pmax
comp=Z,18μm,3.2s
AAA smax
comp=E,29μm,7.0s
AAA MLR MLR
comp=Z,42μm,21.0s,MS6.4
UCH Uchtor 49.74 335 P **P** **08 40 05.7 +1.3**
SNR=115
UCH Uchtor 49.74 335 *e*P **P** **08 40 05.8 +1.3**
comp=Z,562nm,1.1s,mb6.5
UCH LR LR
comp=Z,34μm,22.0s,MS6.3
TKM2 Tokmak 2 49.88 337 *e*P **P** **08 40 06.3 +0.9**
TKM2 pmax pmax
comp=Z,700nm,0.8s,mb6.7
TKM2 MLR MLR
comp=Z,61μm,20.0s,MS6.6
TKM2 Tokmak 2 49.88 337 P **P** **08 40 06.4 +1.0**
SNR=258
TKM2 Tokmak 2 49.88 337 *e*P **P** **08 40 06.3 +0.9**
comp=Z,700nm,0.8s,mb6.7
TKM2 LR LR
comp=Z,61μm,20.0s,MS6.6
KBK Karagaybulak 49.92 336 P **P** **08 40 07.2 +1.5**
SNR=131
SONM Songino Array 49.96 6 P **P** **08 40 06.2 +0.2**
comp=Z,146nm,0.7s,mb6.1,baz=186,slow=8.1,SNR=157
SONM pP pP 08 40 14.8 -0.5
comp=Z,388nm,1.0s,baz=193,slow=7.0,SNR=18
SONM ScP ScP 08 45 21.2 +1.8
comp=Z,10nm,1.0s,baz=193,slow=5.9,SNR=3.9
SONM S **S** **08 47 14.0 -0.5**
comp=Z,2.3nm,1.0s,baz=61,slow=20,SNR=2.0
SONM LR LR 09 04 39.5
comp=Z,128μm,18.8s,MS7.0,baz=189,slow=40
SONM PKPPKP 09 10 56.0
comp=Z,1.1nm,0.8s,baz=67,slow=0.5,SNR=3.6
SONM Songino Array 49.96 6 P **P** **08 40 06.2 +0.2**
SONM *PP pP 08 40 14.8 -0.5
SONM S **S** **08 47 14.0 -0.4**
AML Almayashu 50.01 334 P **P** **08 40 07.8 +1.3**
SNR=16
AML Almayashu 50.01 334 *e*P **P** **08 40 07.6 +1.1**
comp=Z,393nm,0.7s,mb6.5
AML *e*pP pP 08 40 17.2 +1.4
AML LR LR
comp=Z,35μm,21.0s,MS6.3
ULN Ulaanbaatar 50.06 6 *e*P **P** **08 40 06.8 +0.1**
ULN *e**PP pP 08 40 16.1 +0.1
ULN *e*S **S** **08 47 17.7 +1.9**
ULN pmax pmax
comp=Z,2μm,1.8s,mb6.9
ULN MLR MLR
comp=Z,162μm,19.0s,MS7.0
ULN Ulaanbaatar 50.06 6 *e*P **P** **08 40 06.8 +0.1**
comp=Z,2μm,1.8s,mb6.9
ULN *e*pP pP 08 40 16.1 +0.1
ULN *e*S **S** **08 47 17.7 +1.9**
ULN LR LR
comp=Z,162μm,19.0s,MS7.0
AAK Ala-Archa 50.08 335 P **P** **08 40 08.1 +1.1**
SNR=61
FRU Bishkek 50.20 336 ⇑*i*P **P** **08 40 08.0 +0.1**
FRU *e* 08 41 25.0
FRU *e* 08 42 07.0
FRU *e*S **S** **08 47 22.0 +4.1**
FRU pmax pmax
comp=Z,3μm,2.5s,mb6.9
FRU pmax pmax
comp=Z,14μm,8.0s
FRU smax
comp=N,3μm,4.0s
FRU smax
comp=N,16μm,7.5s
FRU smax
comp=E,14μm,7.5s
FRU MLR MLR
comp=N,36μm,20.0s,MS6.5
FRU MLR MLR
comp=E,38μm,20.0s,MS6.5
FRU MLR MLR
comp=Z,48μm,20.0s,MS6.5
CHMS Chumysh 50.28 336 P **P** **08 40 09.1 +0.6**
SNR=68
EKS2 Erkin-Say 50.41 335 P **P** **08 40 10.7 +1.3**
SNR=420
EKS2 Erkin-Say 50.41 335 *e*P **P** **08 40 10.6 +1.2**
comp=Z,513nm,0.8s,mb6.6
EKS2 LR LR
comp=Z,37μm,22.0s,MS6.3
USP Ospenovka 50.61 336 P **P** **08 40 11.6 +0.6**
CN2 Changchun 50.98 24 ⇑P **P** **08 40 12.5 -1.3**
CN2 *e*AP pP 08 40 20.1 -3.0
CN2 AMB AMB
comp=Z,90nm,0.9s,mb5.7
CN2 LR LR
comp=N,95μm,18.0s,MS6.9
CN2 LR LR
comp=E,65μm,18.0s,MS6.9
CN2 LR LR
comp=Z,107μm,18.0s,MS6.9
MK31 Makanchi Array 51.06 344 *e*P **P** **08 40 14.7 +0.4**
MK31 *e*S **S** **08 47 33.5 +3.7**
MKAR Makanchi Array 51.06 344 P **P** **08 40 14.6 +0.3**
comp=Z,229nm,0.6s,mb6.3,baz=148,slow=7.8,SNR=744
MKAR pP pP 08 40 23.8 +0.1
comp=Z,512nm,0.7s,baz=148,slow=8.1,SNR=24
MKAR S **S** **08 47 33.3 +3.5**
comp=Z,8.4nm,1.0s,baz=181,slow=14,SNR=3.1
MKAR LR LR 09 05 57.7
comp=Z,29μm,20.4s,MS6.3,baz=159,slow=41
MKAR PKPPKP 09 10 58.4
comp=Z,1.0nm,0.7s,baz=304,slow=2.8,SNR=3.6
MKAR Makanchi Array 51.06 344 P **P** **08 40 14.6 +0.3**
MKAR *PP pP 08 40 23.8 +0.1
MKAR S **S** **08 47 33.3 +3.5**
MKAR Makanchi Array 51.06 344 P **P** **08 40 14.6 +0.3**
MKAR pP pP 08 40 23.8 +0.1
MKAR S **S** **08 47 33.3 +3.5**
MKAR LR LR 09 05 57.7
MKAR P'P' 09 10 58.4
KK31 Karatay Array 52.20 333 *i* P **P** **08 40 22.5 -0.4**
KK31 pmax pmax
comp=Z,547nm,1.4s,mb6.3
KK31 Karatay Array 52.20 333 *i* P **P** **08 40 22.6 -0.3**
MAJO Matsushiro 52.25 39 *e*P **P** **08 40 21.8 -1.6**
MAJO *e**PP pP 08 40 31.4 -1.4
MAJO pmax pmax
comp=Z,1μm,1.5s,mb6.5
MAJO MLR MLR
comp=Z,66μm,19.0s,MS6.7
MAJO Matsushiro 52.25 39 *e*P **P** **08 40 21.8 -1.7**
comp=Z,1μm,1.5s,mb6.5
MAJO *e*pP pP 08 40 31.4 -1.4
MAJO LR LR
comp=Z,66μm,19.0s,MS6.7
MAT Matsushiro 52.25 39 P **P** **08 40 22.5 -0.9**
MAT S **S** **08 47 43.0 -3.6**
MJAR Matsushiro Arr 52.25 39 P **P** **08 40 22.4 -1.0**
comp=Z,57nm,1.0s,mb5.4,baz=217,slow=7.6,SNR=51
MJAR pP pP 08 40 31.4 -1.4
comp=Z,183nm,0.9s,baz=217,slow=6.5,SNR=20
MJAR LR LR 09 04 27.0
comp=Z,58μm,19.2s,MS6.6,baz=220,slow=38
MJAR Matsushiro Arr 52.25 39 P **P** **08 40 22.5 -0.9**
MJAR *PP pP 08 40 31.4 -1.4
ZAK Zakamensk 52.27 3 ⇑*i*P **P** **08 40 23.2 -0.1**
ZAK *e* 08 41 37.7
ZAK *e* 08 47 59.9
ZAK *e* 08 50 06.6
ZAK pmax pmax
comp=Z,296nm,1.5s,mb6.0
VLA Vladivostok 53.28 29 *e*P **P** **08 40 28.9 -2.0**
VLA *e*S **S** **08 48 04.3 +3.9**
VLA pmax pmax
comp=Z,296nm,2.7s,mb5.7
VLA MLR MLR
comp=Z,41μm,16.3s,MS6.6
VLA Vladivostok 53.28 29 ⇓*i*P **P** **08 40 30.1 -0.8**
MDJ Mudanjiang 53.38 26 P **P** **08 40 31.3 -0.3**
MDJ AP pP 08 40 40.3 -0.7
MDJ XP sP 08 40 44.3 -0.4
MDJ SCP ScP 08 45 34.3 -0.1
MDJ PCS PcS 08 45 37.8 +0.3
MDJ AMB AMB
comp=Z,39nm,1.2s
MDJ AMB AMB
comp=Z,1μm,5.7s
MDJ LR LR
comp=N,109μm,22.7s,MS7.0
MDJ LR LR
comp=E,96μm,19.1s,MS7.0
MDJ LR LR
comp=Z,138μm,21.5s,MS7.0
MDJ Mudanjiang 53.38 26 *e*P **P** **08 40 30.9 -0.6**
comp=Z,372nm,1.2s,mb6.2
MDJ *e*pP pP 08 40 40.8 -0.2
MDJ *e*S **S** **08 48 07.4 +5.7**
MDJ LR LR
comp=Z,140μm,20.0s,MS7.0
MOY Mondy 53.49 1 *e*P **P** **08 40 32.1 -0.2**
MOY pmax pmax
comp=Z,1μm,2.8s,mb6.4
TLY Talaya 53.59 3 *c i*P **P** **08 40 33.5 +0.5**
TLY *e* 08 41 46.8
TLY *e*S **S** **08 48 10.7 +6.5**
TLY pmax pmax
comp=Z,197nm,0.7s,mb6.2
TLY Talaya 53.59 3 *e*P **P** **08 40 33.6 +0.6**
comp=Z,222nm,0.8s,mb6.1
TLY *e*pP pP 08 40 42.8 +0.4
TLY *e*S **S** **08 48 07.2 +3.0**
TLY LR LR
comp=Z,111μm,19.0s,MS6.9
HIA Hailar 53.85 16 *e*P **P** **08 40 34.0 -0.9**
HIA pmax pmax
comp=Z,641nm,1.4s
HIA MLR MLR
comp=Z,160μm,19.0s
HIA Hailar 53.85 16 *e*P **P** **08 40 34.0 -0.9**
comp=Z,641nm,1.4s,mb6.4
HIA LR LR
comp=Z,160μm,19.0s,MS7.1
IRK Irkutsk 54.18 3 *e*P **P** **08 40 37.0 -0.3**
IRK *e* 08 41 34.4
IRK *e*S **S** **08 48 23.5 +11**
IRK pmax pmax
comp=E,2μm,2.2s
OPO Ambohidratompo 54.32 249 P **P** **08 40 40.6 +1.7**
comp=E,26nm,0.9s,baz=79,slow=7.9,SNR=2.3
OPO pP pP 08 40 49.3 +1.0
comp=E,42nm,0.9s,baz=76,slow=8.5,SNR=4.1
ABPO Ambohimpanom 54.37 248 *e*P **P** **08 40 40.2 +0.9**
comp=E,112nm,1.3s,mb5.6
ABPO LR LR
comp=Z,172μm,20.0s,MS7.1
TOO Toolangi 54.65 136 *e*P **P** **08 40 42.2 +1.1**
TOO *e* pP 08 40 51.2 +0.7
TOO *e*S **S** **08 48 23.0 +3.8**
CIT Chita 55.04 10 *e*P **P** **08 40 47.6 +4.1**
CIT *e* 08 41 07.5
CIT *e* 08 48 36.3
CIT pmax pmax
comp=Z,4μm,2.0s,mb7.0
ABKT Ailbek 55.50 320 P **P** **08 40 46.9 -0.3**
comp=Z,881nm,1.0s,mb6.8,SNR=18
KURK Kurchatov 55.64 344 S **S** **08 48 32.8 +0.9**
comp=Z,3.2nm,0.7s,baz=156,slow=8.2,SNR=3.6
KURK Kurchatov 55.64 344 *e*P **P** **08 40 47.9 0.0**
KURK *e*S **S** **08 48 31.7 -0.2**
KURK pmax pmax
comp=Z,762nm,1.0s,mb6.7
KURK MLR MLR
comp=Z,43μm,20.0s,MS6.5
KURK Kurchatov 55.64 344 *e*P **P** **08 40 47.9 0.0**
comp=Z,762nm,1.0s,mb6.7
KURK *e*S **S** **08 48 31.7 -0.2**
KURK LR LR
comp=Z,43μm,20.0s,MS6.5
CAN Canberra 56.15 132 *e*P **P** **08 40 51.2 -0.7**
CAN *e*S **S** **08 48 45.2 +5.9**
ARMA Armidale 56.34 126 *e*S **S** **08 48 47.3 +5.3**
CNB Canberra Magne 56.42 132 *e*P **P** **08 40 53.8 0.0**
CNB *e* pP 08 41 03.1 -0.2
CNB *e*S **S** **08 48 34.0 -8.8**
LBOS 56.56 288 *e*P **P** **08 40 56.5 +1.4**
ZALV Zalesovo Beam 57.20 349 P **P** **08 40 58.5 -0.4**
comp=Z,114nm,0.3s,mb6.4,baz=177,slow=5.3,SNR=83
ZALV S **S** **08 48 52.7 +0.3**
comp=Z,4.8nm,0.4s,baz=150,slow=15,SNR=4.2
ZALV LR LR 09 09 37.7
comp=Z,28μm,21.0s,MS6.3,baz=165,slow=40
ZALV PKP2ab 09 11 18.1
comp=Z,2.6nm,0.3s,baz=298,slow=3.1,SNR=3.7
ZALV Zalesovo Beam 57.20 349 P **P** **08 40 58.6 -0.3**
ZALV S **S** **08 48 52.7 +0.3**
TRBA At Turbah 57.52 287 *e*P **P** **08 41 03.2 +1.3**
DHBB Dhamar BB 57.52 289 *e*P **P** **08 41 03.4 +1.4**
DHBB AMb AMB 08 41 05.9
comp=Z,1μm,2.2s,mb6.5
KLR Kul'dur 57.93 24 *e*P **P** **08 41 00.0 -4.1**
KLR *e*S **S** **08 49 00.0 -2.1**
KLR *e* 08 52 47.0
NVS Novosibirsk 58.35 349 ⇑*i*P **P** **08 41 06.0 -1.0**
NVS *i* S **S** **08 49 09.9 +2.5**
NVS *e* 08 50 46.7
NVS pmax pmax
comp=Z,1μm,1.8s,mb6.6
NVS pmax pmax
comp=N,1μm,1.9s
NVS pmax pmax
comp=E,556nm,1.9s
NVS smax
comp=N,240nm,1.8s
NVS smax
comp=E,600nm,2.1s
TAU Tasmania Unive 58.53 141 *e*P **P** **08 41 09.0 +0.5**
TAU *e**PP pP 08 41 18.9 +0.9
TAU pmax pmax
comp=Z,315nm,1.3s,mb6.2
TAU MLR MLR
comp=Z,60μm,21.0s,MS6.7
TAU Tasmania Unive 58.53 141 *e*P **P** **08 41 09.0 +0.5**
comp=Z,315nm,1.3s,mb6.2
TAU *e*pP pP 08 41 18.9 +0.9
TAU LR LR
comp=Z,60μm,21.0s,MS6.7
ERM Erimo 58.64 37 P **P** **08 41 10.0 +0.7**
comp=Z,2μm,0.9s,mb7.1,SNR=5.4
ERM Erimo 58.64 37 *e*P **P** **08 41 09.2 -0.1**
ERM *e**PP pP 08 41 18.7 -0.1
ERM pmax pmax
comp=Z,276nm,0.8s,mb6.3
ERM MLR MLR
comp=Z,32μm,20.0s,MS6.4
ERM Erimo 58.64 37 *e*P **P** **08 41 09.2 -0.1**
comp=Z,276nm,0.8s,mb6.3
ERM *e*pP pP 08 41 18.7 -0.1
ERM *e*ScP ScP 08 45 36.8 -21
ERM LR LR
comp=Z,32μm,20.0s,MS6.4
KBD Kabd 58.89 306 *e*P **P** **08 41 10.8 -0.5**
baz=306
KBD AMb AMB 08 41 35.3
comp=Z,747nm,1.4s,mb6.5,baz=306
RDF Al-Radifah 58.91 306 *e*P **P** **08 41 10.6 -0.9**
baz=306
RDF AMb AMB 08 41 35.3
comp=Z,1μm,1.5s,mb6.8,baz=306
UMR Umm Al-Rimmam 59.02 306 *e*P **P** **08 41 11.5 -0.6**
baz=306
UMR AMb AMB 08 41 36.1
comp=Z,1μm,1.2s,mb6.8,baz=306
NAY Al-Naaiem 59.28 306 *e*P **P** **08 41 13.0 -1.0**
baz=306
NAY AMb AMB 08 41 37.7
comp=Z,468nm,1.5s,mb6.3,baz=306
MIB Mutribah 59.41 307 *e*P **P** **08 41 15.0 +0.1**
baz=306
MIB AMb AMB 08 41 38.9
comp=Z,1μm,1.0s,mb6.9,baz=306
RST Umm Al-Ruwaisa 59.58 306 *e*P **P** **08 41 15.2 -0.8**
baz=306
RST AMb AMB 08 41 41.6
comp=Z,712nm,1.2s,mb6.6,baz=306
HNR Honiara 59.97 100 P **P** **08 41 17.5 -1.5**
comp=Z,667nm,1.2s,mb6.6,baz=205,slow=8.6,SNR=5.1
HNR Honiara 59.97 100 P **P** **08 41 17.5 -1.5**
HNR LR LR
comp=Z,19μm,21.0s,MS6.2
BVA0 Borovoye Array 60.22 340 *i* P **P** **08 41 18.9 -1.1**
BVA0 pmax pmax
comp=Z,105nm,1.4s,mb5.7
BVAR Borovoye Array 60.22 340 S **S** **08 49 36.1 +4.3**
comp=Z,5.3nm,0.8s,baz=139,slow=5.3,SNR=3.2
BRVK Borovoye 60.29 340 *e*P **P** **08 41 19.7 -0.7**
BRVK *e**PP pP 08 41 28.2 -1.8
BRVK *e*S **S** **08 49 33.8 +1.2**
BRVK pmax pmax
comp=Z,647nm,1.1s,mb6.6
BRVK MLR MLR
comp=Z,110μm,22.0s,MS7.0
BRVK Borovoye 60.29 340 *e*P **P** **08 41 19.7 -0.8**
comp=Z,647nm,1.1s,mb6.6
BRVK *e*pP pP 08 41 28.2 -1.7
BRVK *e*S **S** **08 49 33.8 +1.2**
BRVK LR LR
comp=Z,110μm,22.0s,MS7.0
BOD Bodaibo 60.69 9 *e*P **P** **08 41 22.7 -0.4**
BOD pmax pmax
comp=Z,865nm,2.2s,mb6.5
YUK Yuzh-Kuril'sk 61.43 36 *e*P **P** **08 41 30.0 +1.6**
YUK *e*S **S** **08 49 52.0 +4.5**
YUK pmax pmax
comp=E,6μm,3.0s
YUK pmax pmax
comp=Z,15μm,3.0s
YUK pmax pmax
comp=N,8μm,4.0s
YUK pmax pmax
comp=Z,2μm,1.0s,mb7.1
YUK smax
comp=N,6μm,5.0s
YUK smax
comp=E,5μm,4.0s
YUK MLR MLR
comp=E,44μm,18.0s,MS6.7
YUK MLR MLR
comp=Z,41μm,18.0s,MS6.6
YUK MLR MLR
comp=N,12μm,17.0s,MS6.7
YSS Yuzh-Sakhalins 61.47 32 *cxe*P **P** **08 41 27.9 -0.7**
YSS *e**PP pP 08 41 36.8 -1.3
YSS *e**SP sP 08 41 43.7 +1.9
YSS *e* 08 43 49.0
YSS *e*S **S** **08 49 52.0 +4.1**
YSS *e*PPS 08 50 14.0
YSS pmax pmax
comp=N,260nm,1.0s
YSS pmax pmax
comp=E,290nm,1.0s
YSS pmax pmax
comp=Z,960nm,1.0s,mb6.9
YSS pmax pmax
comp=N,3μm,6.0s
YSS pmax pmax
comp=E,2μm,6.0s
YSS pmax pmax
comp=Z,6μm,6.0s
YSS smax
comp=N,3μm,8.0s
YSS smax
comp=E,2μm,10.0s
YSS MLR MLR
comp=Z,39μm,16.0s,MS6.7
YSS MLR MLR
comp=N,23μm,15.0s,MS6.7
YSS MLR MLR
comp=E,31μm,17.0s,MS6.7
YSS Yuzh-Sakhalins 61.47 32 *e*P **P** **08 41 28.4 -0.2**
comp=E,1μm,0.9s,mb7.1
YSS *e*pP pP 08 41 37.8 -0.3
YSS LR LR
comp=Z,10μm,19.0s,MS6.0

AB31	**Akbulak array**	**61.69**	**331**	*i*	P		**P**	**08 41 29.1**	**-0.9**
AB31					pmax	pmax			
	comp=Z,849nm,1.1s,mb6.8								
AB31	**Akbulak array**	**61.69**	**331**‖	*e*	P		**P**	**08 41 29.2**	**-0.8**
CLNS	**Chul'man**	**62.02**	**15**	*c i*	P		**P**	**08 41 31.7**	**-0.4**
CLNS					*e*	*PP	pP	08 41 39.5	-2.1
CLNS					*e*			08 42 15.5	
CLNS					*e*			08 43 45.8	
CLNS					*e*	S	**S**	**08 49 48.2**	**-6.2**
CLNS					*e*	SS	SS	08 53 48.3	-9.2
CLNS					pmax	pmax			
	comp=Z,467nm,1.0s,mb6.6								
CLNS					pmax	pmax			
	comp=E,157nm,0.8s								
CLNS					pmax	pmax			
	comp=N,245nm,1.0s								
CLNS					smax				
	comp=E,3074μm,13.5s								
CLNS					smax				
	comp=N,2997μm,12.0s								
CLNS					MLR	MLR			
	comp=Z,93μm,18.0s,MS7.0								
CLNS					MLR	MLR			
	comp=N,81μm,19.0s,MS7.0								
CLNS					MLR	MLR			
	comp=E,42μm,15.0s,MS7.0								
FURI	**Furi**	**62.12**	**281**	*e*	P		pP	08 41 43.6	+0.5
KMBO	**Kilima Mbogo**	**62.79**	**270**		P		**P**	**08 41 39.5**	**+1.4**
	comp=E,7.9nm,0.9s,baz=53,slow=10,SNR=13								
KMBO					S		**S**	**08 50 11.1**	**+5.3**
	comp=E,0.7nm,0.4s,baz=163,slow=19,SNR=2.0								
KMBO					LR	LR		09 06 01.6	
	comp=E,81μm,19.7s,MS6.9,baz=82,slow=33								
KMBO	**Kilima Mbogo**	**62.79**	**270**	*e*	P		**P**	**08 41 39.3**	**+1.1**
	comp=E,78nm,1.0s,mb5.8								
KMBO					*e*	pP	pP	08 41 48.5	+0.8
KMBO					LR	LR			
	comp=Z,75μm,20.0s,MS6.9								
BHD	**Baghdad**	**63.07**	**309**	*e*	x		x	08 41 37.0	
BHD				*e*	x		x	08 41 45.0	
BHD				*i*	x		x	08 41 58.0	
BHD				*e*	x		x	08 50 20.0	
AKTK	**Aktyubinsk**	**63.40**	**331**		P		**P**	**08 41 40.5**	**-0.9**
AKTK					S		**S**	**08 50 15.6**	**+3.5**
AKTK					P'P'ab			09 10 48.8	
AKTK					LR	LR		09 11 42.8	
AKTO	**Aktyubinsk**	**63.40**	**331**		P		**P**	**08 41 40.5**	**-0.9**
	comp=Z,24nm,0.6s,mb5.5,baz=143,slow=8.0,SNR=12								
AKTO					S		**S**	**08 50 15.6**	**+3.5**
	comp=Z,2.6nm,0.8s,baz=232,slow=19,SNR=3.5								
AKTO					PKP2ab			09 10 48.8	
	comp=Z,4.0nm,1.0s,baz=296,slow=4.5,SNR=4.6								
AKTO					LR	LR		09 11 42.8	
	comp=Z,15μm,20.0s,MS6.2,baz=332,slow=38								
AKTO	**Aktyubinsk**	**63.40**	**331**		P		**P**	**08 41 40.6**	**-0.9**
AKTO					S		**S**	**08 50 15.6**	**+3.5**
CASY	**Casey**	**64.56**	**175**	*e*	P		**P**	**08 41 48.9**	**+0.1**
CASY				*e*				08 43 48.0	
CASY				*e*	S		**S**	**08 50 34.7**	**+8.8**
CASY	**Casey**	**64.56**	**175**	*e*	P		**P**	**08 41 48.9**	**+0.1**
CASY				*e*				08 43 48.0	
CASY				*e*	S		**S**	**08 50 34.7**	**+8.8**
CASY					LR	LR			
	comp=Z,83μm,22.0s,MS6.9								
MIR	**Mirnyy**	**64.59**	**183**ĸ	*i*	P		**P**	**08 41 50.0**	**+1.0**
MIR				*i*				08 42 26.0	
MIR				*i*	PS			08 51 10.0	
MIR					pmax	pmax			
	comp=Z,100nm,0.8s,mb5.9								
MIR					pmax	pmax			
	comp=Z,1μm,7.0s								
MIR					MLR	MLR			
	comp=Z,20μm,18.0s,MS6.3								
MAK	**Makhachkala**	**65.02**	**320**	*e*	P		**P**	**08 41 52.5**	**+0.3**
MAK				*e*				08 42 32.8	
MAK				*e*	PPP			08 45 59.1	
MAK				*i*	S		S	08 50 33.0	+0.6
MAK				*e*				08 51 33.7	
MAK				*e*	SS		SS	08 54 47.5	+2.5
MAK					pmax	pmax			
	comp=Z,1μm,1.6s,mb6.7								
MAK					pmax	pmax			
	comp=N,1μm,1.9s								
MAK					pmax	pmax			
	comp=E,2μm,2.1s								
MAK					MLR	MLR			
	comp=Z,23μm,18.0s,MS6.4								
MAK					MLR	MLR			
	comp=N,37μm,20.0s,MS6.7								
MAK					MLR	MLR			
	comp=E,29μm,22.0s,MS6.7								
MSL	**Mosul**	**65.23**	**312**	*e*	x		x	08 41 56.0	
MSL				*e*	x		x	08 50 40.0	
HAKT	**HAKKARI**	**65.24**	**313**	*i*	P		**P**	**08 41 53.1**	**-0.7**
GNI	**Garni**	**65.58**	**316**		P		**P**	**08 41 56.1**	**+0.2**
	comp=E,67nm,0.9s,mb5.7,baz=125,slow=3.9,SNR=8.4								
GNI					S		S	08 50 46.7	+7.3
	comp=E,3.0nm,0.3s,baz=0.0,slow=20,SNR=1.9								
GNI	**Garni**	**65.58**	**316**	*e*	P		**P**	**08 41 56.1**	**+0.2**
GNI				*e*	S		S	08 50 36.8	-2.6
GNI					LR	LR			
	comp=Z,15μm,20.0s,MS6.2								
DGRG	**David-gareji**	**65.72**	**318**		P		**P**	**08 41 57.9**	**+1.1**
DGRG					S		S	08 50 49.4	+8.4
CLDR	**Caldiran**	**65.73**	**315**	*e*	P		**P**	**08 41 57.7**	**+0.8**
VANB	**Van**	**65.89**	**314**	*e*	P		**P**	**08 42 00.2**	**+2.3**
DYDN	**Diyadin**	**66.06**	**315**	*i*	P		**P**	**08 41 59.6**	**+0.6**
MTA	**Mtatsminda**	**66.22**	**318**		P		**P**	**08 42 00.2**	**+0.2**
MTA					S		S	08 50 48.4	+1.3
TBLG	**Delisi**	**66.27**	**318**		P		**P**	**08 42 00.9**	**+0.6**
TBLG					S		S	08 50 55.0	+7.2
DIGO	**Kars**	**66.64**	**316**	*i*	P		**P**	**08 42 03.0**	**+0.3**
SVE	**Sverdlovsk**	**66.72**	**338**‖	*e*	P		**P**	**08 42 02.7**	**-0.2**
SVE				*e*				08 42 25.1	
SVE				*e*				08 44 34.9	
SVE				*e*	S		S	08 50 45.1	-7.5
SVE				*e*				08 51 58.1	
SVE					pmax	pmax			
	comp=Z,680nm,1.1s,mb6.6								
SVE					pmax	pmax			
	comp=Z,7μm,14.1s								
SVE					MLR	MLR			
	comp=Z,54μm,21.0s,MS6.7								
GOR	**Gori**	**66.81**	**318**		P		**P**	**08 42 04.5**	**+0.8**
KARS	**Kars**	**66.92**	**316**	*e*	P		**P**	**08 42 03.0**	**-1.5**
ARU	**Arti**	**67.25**	**336**	*c i*	P		**P**	**08 42 05.5**	**-0.7**
ARU				*e*				08 42 31.4	
ARU				*e*				08 44 36.8	
ARU				*e*	PPP			08 46 15.0	
ARU				*e*	S		S	08 50 59.3	+0.3
ARU				*e*				08 52 02.0	
ARU				*e*	SS		SS	08 55 17.5	-1.5
ARU				*e*	SSS			08 58 17.2	
ARU					pmax	pmax			
	comp=Z,102nm,1.0s,mb5.8								
ARU					pmax	pmax			
	comp=Z,10μm,21.3s								
ARU					MLR	MLR			
	comp=Z,63μm,20.0s,MS6.8								
ARU	**Arti**	**67.25**	**336**	*e*	P		**P**	**08 42 05.6**	**-0.7**
	comp=Z,1μm,1.6s,mb6.8								
ARU				*e*	pP		pP	08 42 13.2	-2.7
ARU				*e*	S		S	08 50 58.1	-0.9
ARU					LR	LR			
	comp=Z,64μm,20.0s,MS6.8								
MARD	**Mardin**	**67.30**	**312**	*i*	P		**P**	**08 42 07.1**	**+0.1**
DZM	**Mont Dzumac**	**67.39**	**113**	*e*	P		**P**	**08 42 07.1**	**-0.8**
DZM	**Mont Dzumac**	**67.39**	**113**	*e*	P		**P**	**08 42 06.8**	**-1.1**
DZM				*e*	pP		pP	08 42 16.8	-0.7
HOMI	**Horasan**	**67.52**	**315**	*i*	P		**P**	**08 42 08.9**	**+0.6**
BNGL	**BINGOL**	**67.64**	**314**	*i*	P		**P**	**08 42 09.6**	**+0.6**
YAK	**Yakutsk**	**67.75**	**15**	*c i*	P		**P**	**08 42 07.9**	**-1.4**
YAK				*e*	*PP		pP	08 42 16.4	-2.5
YAK				*e*				08 42 30.0	
YAK				*e*				08 44 39.9	
YAK				*e*	S		S	08 51 02.8	-2.0
YAK				*e*				08 52 06.6	
YAK					pmax	pmax			
	comp=Z,1μm,1.2s,mb6.9								
YAK					pmax	pmax			
	comp=E,190nm,1.5s								
YAK					pmax	pmax			
	comp=N,247nm,1.0s								
YAK					pmax	pmax			
	comp=Z,362nm,1.9s,mb6.1								
YAK					pmax	pmax			
	comp=N,419nm,1.8s								
YAK					pmax	pmax			
	comp=E,211nm,1.6s								
YAK					smax				
	comp=N,3386μm,5.8s								
YAK					smax				
	comp=E,1988μm,6.4s								
YAK					MLR	MLR			
	comp=Z,130μm,19.0s,MS7.2								
YAK					MLR	MLR			
	comp=N,62μm,20.0s,MS7.0								
YAK					MLR	MLR			
	comp=E,70μm,19.0s,MS7.0								
YAK	**Yakutsk**	**67.75**	**15**	*e*	P		**P**	**08 42 08.0**	**-1.3**
	comp=E,3μm,1.2s,mb7.2								
YAK				*e*	pP		pP	08 42 17.0	-1.9
YAK					LR	LR			
	comp=Z,119μm,19.0s,MS7.1								
ERZM	**Erzurum**	**67.85**	**315**	*i*	P		**P**	**08 42 11.4**	**+1.0**
EZM	**Erzurum**	**67.85**	**315**	*e*	P		**P**	**08 42 11.9**	**+1.5**
ARTV	**Artvin**	**67.96**	**316**	*i*	P		**P**	**08 42 11.2**	**+0.1**
DIYA	**Diyarbakir**	**68.01**	**312**	*i*	P		**P**	**08 42 11.7**	**+0.3**
BCA	**Borcka**	**68.27**	**316**	*e*	P		**P**	**08 42 12.9**	**-0.1**
KOPT	**Kop Dagi**	**68.51**	**315**	*i*	P		**P**	**08 42 15.3**	**+0.8**
KIV	**Kislovodsk**	**68.60**	**319**		P		**P**	**08 42 14.8**	**-0.2**
	comp=Z,2μm,1.2s,mb7.0,SNR=33								
KIV	**Kislovodsk**	**68.60**	**319**	*c i*	P		**P**	**08 42 14.7**	**-0.3**
KIV				*e*				08 42 32.9	
KIV				*e*				08 44 45.8	
KIV				*e*	PPP			08 46 27.6	
KIV				*e*	S		S	08 51 15.1	-0.5
KIV					pmax	pmax			
	comp=Z,320nm,1.1s,mb6.2								
KIV					pmax	pmax			
	comp=Z,3μm,8.8s								
KIV					MLR	MLR			
	comp=Z,13μm,19.0s,MS6.2								
KIV	**Kislovodsk**	**68.60**	**319**	*e*	P		**P**	**08 42 15.0**	**0.0**
	comp=Z,2μm,1.5s,mb6.9								
KIV					LR	LR			
	comp=Z,14μm,20.0s,MS6.2								
ASF	**Jabal al Asfar**	**68.65**	**306**		P		**P**	**08 42 16.5**	**+0.9**
	comp=Z,44nm,1.0s,mb5.4,baz=331,slow=3.8,SNR=31								
ASF					S		S	08 51 23.2	+6.5
	comp=Z,0.8nm,0.4s,baz=270,slow=20,SNR=1.8								
SVRC	**Sivrice-ELAZID**	**68.77**	**313**	*e*	P		**P**	**08 42 16.7**	**+0.5**
URFA	**Urfa**	**68.81**	**312**	*e*	P		**P**	**08 42 17.1**	**+0.7**
GOF	**Gofitskoye**	**68.85**	**320**	*e*	P		**P**	**08 42 11.0**	**-5.6**
GOF				*i*	S		S	08 51 18.5	-0.1
GOF					pmax	pmax			
	comp=Z,250nm,1.0s,mb6.1								
GOF					smax				
	comp=E,60nm,1.7s								
SLAT	**Slait**	**68.87**	**288**	*i*	P		**P**	**08 42 14.1**	**-3.1**
SLAT				*i*	S		S	08 51 18.4	-1.4
PTK	**Pertek**	**68.89**	**313**	*e*	P		**P**	**08 42 17.2**	**+0.3**
EZC	**Erzincan**	**68.89**	**314**	*e*	P		**P**	**08 42 19.5**	**+2.6**
JAWL	**J.Aulia**	**68.97**	**287**	*i*	P		**P**	**08 42 15.8**	**-2.1**
JAWL					AMb		AMB	08 42 39.3	
	comp=Z,388nm,1.4s,mb6.1								
JAWL				*i*	S		S	08 51 18.7	-2.3
ELZG	**Elazig**	**69.05**	**313**	*i*	P		**P**	**08 42 18.4**	**+0.5**
MRKH	**Merkhyat**	**69.15**	**288**	*i*	P		**P**	**08 42 16.2**	**-2.8**
MRKH					AMb		AMB	08 42 48.3	
	comp=Z,256nm,1.1s,mb6.1								
MRKH				*i*	S		S	08 51 22.3	-0.8
ATAB	**Bozova**	**69.21**	**311**	*i*	P		**P**	**08 42 19.6**	**+0.6**
MACK	**Trabzon**	**69.37**	**315**	*i*	P		**P**	**08 42 20.0**	**+0.2**
KTUT	**Trabzon**	**69.39**	**315**	*e*	P		**P**	**08 42 21.9**	**+1.9**
GUMT	**Gumushane**	**69.39**	**315**	*e*	P		**P**	**08 42 20.5**	**+0.4**
MALT	**Malatya**	**69.40**	**312**	*e*	P		**P**	**08 42 17.7**	**-2.4**
MALT	**Malatya**	**69.40**	**312**	*e*	P		**P**	**08 42 17.9**	**-2.2**
MALT					pmax	pmax			
	comp=Z,998nm,1.7s,mb6.5								
MALT					MLR	MLR			
	comp=Z,33μm,22.0s,MS6.5								
MALT	**Malatya**	**69.40**	**312**‖	*i*	P		**P**	**08 42 17.7**	**-2.4**
MALT	**Malatya**	**69.40**	**312**	*e*	P		**P**	**08 42 17.9**	**-2.2**
	comp=Z,998nm,1.7s,mb6.5								
MALT					LR	LR			
	comp=Z,33μm,22.0s,MS6.5								
MYA	**Malataya**	**69.40**	**312**	*e*	P		**P**	**08 42 20.8**	**+0.6**
EIL	**Elat**	**69.58**	**303**		P		**P**	**08 42 21.8**	**+0.3**
	comp=Z,58nm,0.9s,mb5.5,baz=125,slow=2.2,SNR=25								
EIL					S		S	08 51 33.6	+5.8
	comp=Z,2.1nm,0.4s,baz=204,slow=20,SNR=1.8								
GZT	**Gaziantep**	**69.72**	**311**	*i*	P		**P**	**08 42 22.7**	**+0.6**
AKCD	**Akcadag**	**69.76**	**312**	*i*	P		**P**	**08 42 22.7**	**+0.3**
RCY	**Rachaya**	**69.89**	**307**	*e*	P		**P**	**08 42 24.2**	**+1.0**
GAZ	**Gaziantep**	**69.93**	**311**	*e*	P		**P**	**08 42 24.2**	**+0.8**
HWQ	**Hawqa**	**70.02**	**308**	*e*	P		**P**	**08 42 24.6**	**+0.6**
DARE	**Darende-Malaty**	**70.07**	**313**	*e*	P		**P**	**08 42 25.7**	**+1.4**
ESPY	**Espiye-Giresun**	**70.09**	**315**	*e*	P		**P**	**08 42 24.2**	**-0.1**
MMAI	**Mount Meron Ar**	**70.10**	**306**		P		**P**	**08 42 25.1**	**+0.6**
	comp=Z,72nm,0.9s,mb5.6,baz=99,slow=8.5,SNR=31								
MMAI					S		S	08 51 40.7	+7.0
	comp=Z,0.7nm,0.3s,baz=20,slow=26,SNR=2.8								
BHL	**Bhannes**	**70.15**	**307**	*e*	P		**P**	**08 42 25.6**	**+0.8**
KMRS	**Kahramanmaras**	**70.27**	**311**	*e*	P		**P**	**08 42 25.9**	**+0.5**
MAW	**Mawson**	**70.28**	**194**	*e*	P		**P**	**08 42 25.5**	**+0.6**
	comp=Z,37nm,0.9s,mb5.3								
MAW					*e*	S		S	08 51 44.3	+10
MAW	**Mawson**	**70.28**	**194**		P		**P**	**08 42 25.7**	**+0.8**
	comp=Z,12nm,0.7s,baz=15,slow=6.1,SNR=30								
MAW					S		S	08 51 42.2	+7.6
	comp=Z,0.4nm,0.3s,baz=0.0,slow=8.1,SNR=1.5								
MAW					LR		LR	09 06 45.9	
	comp=Z,107μm,21.4s,MS7.1,baz=29,slow=30								
MAW					PKP2ab			09 10 22.2	
	comp=Z,10nm,1.0s,baz=191,slow=6.3,SNR=10.0								
MAW	**Mawson**	**70.28**	**194**		P		**P**	**08 42 25.7**	**+0.8**
MAW					S		S	08 51 42.2	+7.6
MAW	**Mawson**	**70.28**	**194**	*e*	P		**P**	**08 42 25.5**	**+0.6**
	comp=Z,37nm,0.9s,mb5.3								
MAW					*e*	S		S	08 51 44.3	+10
MAW					LR	LR			
	comp=Z,161μm,20.0s,MS7.3								
DRV	**Dumont d'Urvil**	**70.28**	**164**		P		sP	08 42 47.0	+8.7
DRV					S		S	08 51 41.0	+6.3
DRV					SS		SS	08 55 52.0	-13
DRV					L			08 59 00.0	
DRV					R			09 03 00.0	
KZIT	**Kziot**	**70.36**	**304**		P		**P**	**08 42 26.4**	**+0.2**
SOC	**Sochi**	**70.41**	**318**	*e*	P		**P**	**08 42 25.4**	**-0.8**
SOC				*e*				08 42 38.4	
SOC				*e*				08 42 46.8	
SOC				*e*				08 44 59.4	
SOC				*e*	PPP			08 46 47.2	
SOC				*e*	S		S	08 51 35.4	-1.6
SOC				*e*				08 52 20.0	
SOC					pmax	pmax			
	comp=Z,108nm,0.8s,mb5.8								
SOC	**Sochi**	**70.41**	**318**	*i*	P		**P**	**08 42 25.5**	**-0.7**
HTY	**Hatay**	**70.42**	**309**	*e*	P		**P**	**08 42 25.7**	**-0.8**
COBT	**Iskenderun**	**70.45**	**310**	*i*	P		**P**	**08 42 26.8**	**+0.1**
ANDN	**Andirin**	**70.71**	**311**	*i*	P		**P**	**08 42 28.4**	**+0.2**
MCQ	**Macquarie Isla**	**70.75**	**148**	*e*	P		pP	08 42 40.0	+2.2
MCQ				*e*	S		S	08 51 49.0	+8.4
MCQ	**Macquarie Isla**	**70.75**	**148**	*e*	P		**P**	**08 42 14.4**	**-14**
RSDY	**Resadiye-TOKAT**	**70.91**	**314**	*e*	P		**P**	**08 42 29.6**	**+0.2**
SVSK	**Karacayir**	**70.98**	**314**	*e*	P		**P**	**08 42 30.4**	**+0.6**
CEYT	**Ceyhan**	**70.99**	**310**	*e*	P		**P**	**08 42 30.4**	**+0.5**
YURE	**YUREGIR**	**71.02**	**310**	*i*	P		**P**	**08 42 30.4**	**+0.3**
KOZT	**Kozan**	**71.07**	**311**	*e*	P		**P**	**08 42 33.1**	**+2.7**
BNN	**Bunyan**	**71.48**	**312**	*e*	P		**P**	**08 42 32.8**	**-0.1**
KARA	**Karaisali**	**71.59**	**310**	*e*	P		**P**	**08 42 33.6**	**+0.1**
EREN	**Erenkoy**	**71.78**	**308**	*e*	P		**P**	**08 42 36.5**	**+1.8**
MERS	**Mersin**	**71.88**	**310**	*e*	P		**P**	**08 42 35.1**	**-0.2**
LSZ	**Lusaka**	**71.98**	**255**		P		**P**	**08 42 37.6**	**+1.4**
	comp=Z,6.9nm,0.8s,baz=24,slow=1.0,SNR=8.4								
LSZ					S		S	08 52 02.7	+6.5
	comp=Z,1.2nm,0.6s,baz=183,slow=18,SNR=2.1								
LSZ					LR		LR	09 08 57.9	
	comp=Z,42μm,20.1s,MS6.7,baz=73,slow=31								
LSZ	**Lusaka**	**71.98**	**255**		P		**P**	**08 42 37.6**	**+1.3**
LSZ					S		S	08 52 02.7	+6.5
LSZ					smax				
	comp=N,1.0nm,0.6s								
LSZ	**Lusaka**	**71.98**	**255**	*e*	P		**P**	**08 42 37.7**	**+1.4**
	comp=N,151nm,1.3s,mb5.8								
LSZ					*e*P		pP	08 42 46.2	+0.2
LSZ					*e*S		S	08 51 56.8	+0.6
LSZ					LR	LR			
	comp=Z,53μm,20.0s,MS6.8								
KVT	**Kavak**	**72.06**	**314**	*e*	P		**P**	**08 42 36.5**	**+0.3**
MEST	**Erdemli**	**72.09**	**309**	*i*	P		**P**	**08 42 35.9**	**-0.6**
LFK	**Lefkose**	**72.21**	**308**	*e*	P		**P**	**08 42 38.0**	**+0.7**
CSS	**Prodhromos**	**72.28**	**308**		P		**P**	**08 42 37.7**	**0.0**
	comp=Z,8.1nm,1.1s								
CSS	**Prodhromos**	**72.28**	**308**	*e*	P		**P**	**08 42 37.6**	**-0.1**
	comp=Z,986nm,1.5s,mb6.5								
CSS					LR	LR			
	comp=Z,38μm,19.0s,MS6.7								
IKL	**Isikli**	**72.35**	**309**	*e*	P		**P**	**08 42 39.8**	**+1.7**
VRHR	**Novokhopersk**	**72.38**	**326**	*e*	P		**P**	**08 42 36.5**	**-1.4**
VRHR				*e*	*PP		pP	08 42 44.9	-2.7
VRHR				*e*	S		S	08 51 55.9	-3.6
VRHR					pmax	pmax			
	comp=Z,120nm,0.7s,mb5.9								
VRHR					pmax	pmax			
	comp=N,60nm,0.9s								
VRHR					pmax	pmax			
	comp=E,90nm,0.9s								
VRHR					smax				
	comp=N,9μm,7.6s								
VRHR					smax				
	comp=Z,1μm,8.2s								
VRHR					smax				
	comp=E,5μm,9.7s								
VRHR					MLR	MLR			
	comp=N,11μm,22.0s,MS6.3								
VRHR					MLR	MLR			
	comp=E,15μm,22.0s,MS6.3								
VRHR					MLR	MLR			
	comp=Z,21μm,22.0s,MS6.4								
ANN	**Anapa**	**72.39**	**318**	*e*	P		**P**	**08 42 36.0**	**-2.1**
ANN				*e*				08 42 55.4	
ANN				*e*	S		S	08 51 56.1	-3.7
ANN				*e*				08 52 46.4	
ANN					pmax	pmax			
	comp=Z,4μm,7.6s								
ANN					MLR	MLR			
	comp=E,6μm,22.0s								
ANN					MLR	MLR			
	comp=Z,11μm,22.0s,MS6.1								
MAMC	**Mammari**	**72.43**	**308**		P		**P**	**08 42 38.8**	**+0.2**
LEF	**Lefka**	**72.67**	**308**	*e*	P		**P**	**08 42 39.6**	**-0.4**
CORM	**Corum**	**72.79**	**313**	*e*	P		**P**	**08 42 40.6**	**0.0**
DIKM	**Dikmen**	**72.80**	**315**	*e*	P		**P**	**08 42 42.2**	**+1.5**
CDAG	**Cicekdag**	**72.81**	**313**	*i*	P		**P**	**08 42 39.9**	**-0.9**
CTKT	**Corum**	**72.81**	**314**	*i*	P		**P**	**08 42 40.5**	**-0.3**
PETK	**Petropavlovsk-**	**72.87**	**32**		P		**P**	**08 42 40.2**	**-0.6**
	comp=Z,75nm,0.9s,mb5.6,baz=288,slow=1.0,SNR=32								
PETK					pP		pP	08 42 48.9	-1.6
	comp=Z,72nm,0.7s,baz=195,slow=1.9,SNR=14								
PETK					LR	LR		09 15 39.2	
	comp=Z,19μm,20.2s,MS6.4,baz=253,slow=37								
PETK	**Petropavlovsk-**	**72.87**	**32**		P		**P**	**08 42 40.2**	**-0.6**
PETK					pP		pP	08 42 48.9	-1.6
PETK					LR	LR		09 15 39.2	
ALFC	**Alevga**	**72.91**	**308**		P		**P**	**08 42 41.4**	**-0.1**
	comp=Z,2.5nm,0.6s								
PPCY	**Paphos**	**73.05**	**307**		P		**P**	**08 42 42.0**	**-0.3**
KAMT	**Kaman**	**73.22**	**312**	*e*	P		**P**	**08 42 42.9**	**-0.3**
PET	**Petropavlovsk**	**73.34**	**33**‖	*e*	P		**P**	**08 42 42.7**	**-0.9**
PET					pmax	pmax			
	comp=Z,376nm,1.1s,mb6.2								
PET					MLR	MLR			
	comp=Z,19μm,18.0s,MS6.4								
PET	**Petropavlovsk**	**73.34**	**33**	*e*	P		**P**	**08 42 42.8**	**-0.8**
	comp=Z,1μm,1.3s,mb6.7								
PET					*e*pP		pP	08 42 52.3	-1.0
PET					LR	LR			
	comp=Z,24μm,19.0s,MS6.5								
HDMB	**Hadim**	**73.48**	**309**	*e*	P		**P**	**08 42 44.6**	**-0.2**
TOS	**Tosya**	**73.49**	**314**	*e*	P		**P**	**08 42 42.6**	**-2.1**
CANT	**Cankiri**	**73.66**	**313**	*e*	P		**P**	**08 42 45.9**	**+0.2**
ILGA	**Ilgaz**	**73.72**	**314**	*i*	P		**P**	**08 42 46.0**	**-0.1**
ELDT	**Eldivan**	**73.76**	**313**	*i*	P		**P**	**08 42 45.8**	**-0.6**
BZK	**Bozkurt**	**73.79**	**315**	*e*	P		**P**	**08 42 46.1**	**-0.4**
VSR	**Storozhevoye**	**73.83**	**325**	*e*	P		**P**	**08 42 44.8**	**-1.7**
VSR				*e*	*PP		pP	08 42 53.3	-2.9
VSR				*e*				08 43 02.3	
VSR				*e*				08 45 34.8	
VSR				*e*	S		S	08 52 11.4	-4.5
VSR					pmax	pmax			
	comp=Z,40nm,0.8s,mb5.4								
VSR					pmax	pmax			
	comp=N,20nm,0.9s								
VSR					pmax	pmax			
	comp=E,70nm,0.9s								
VSR					pmax	pmax			
	comp=Z,40nm,2.1s								
VSR					pmax	pmax			
	comp=N,70nm,1.0s								
VSR					pmax	pmax			
	comp=E,100nm,1.2s								
VSR					smax				
	comp=N,2μm,4.9s								
VSR					smax				
	comp=Z,180nm,5.8s								
VSR					smax				
	comp=E,520nm,4.2s								
KONT	**Konya--Tatoy**	**73.84**	**310**	*e*	P		**P**	**08 42 46.4**	**-0.4**
LADK	**Ladik-KONYA**	**73.90**	**311**	*e*	P		**P**	**08 42 47

ELL	**Elmali**	**75.42**	**309**	*e*P		**P**	**08 42 55.8**	**-0.2**
KDZE	**Karadeniz Ereo**	**75.44**	**314**	*e*P		**P**	**08 42 53.5**	**-2.6**
AKAS	**Kas**	**75.54**	**308**	*i* P		**P**	**08 42 54.2**	**-2.6**
SEY	**Seymchan**	**75.62**	**22**⇑	*e*P		**P**	**08 42 56.0**	**-0.7**
BOSA	**Boshof**	**75.70**	**241**	P		**P**	**08 42 59.2**	**+1.3**
	comp=Z,9.9nm,0.7s,baz=103,slow=7.1,SNR=22								
BOSA				S		S	08 52 42.8	+5.0	
	comp=Z,4.7nm,1.1s,baz=62,slow=15,SNR=2.0								
BOSA				PKP2ab			09 09 50.2		
	comp=Z,1.8nm,0.4s,baz=117,slow=4.5,SNR=2.9								
BOSA				LR		LR	09 11 21.4		
	comp=Z,93μm,19.7s,MS7.1,baz=85,slow=32								
BOSA	**Boshof**	**75.70**	**241**	P		**P**	**08 42 59.2**	**+1.3**
BOSA				S		S	08 52 42.8	+5.1	
BOSA				smax					
	comp=N,5.0nm,1.1s								
BOSA	**Boshof**	**75.70**	**241**	*e*P		**P**	**08 42 58.1**	**+0.2**
	comp=N,292nm,1.4s,mb6.0								
BOSA				LR		LR			
	comp=Z,92μm,20.0s,MS7.1								
HENT	**Hendek**	**75.70**	**313**	*i* P		**P**	**08 42 56.7**	**-0.8**
BORA	**Eskisehir**	**75.78**	**312**	*i* P		**P**	**08 42 57.1**	**-1.0**
GOLH	**Golhisar**	**75.81**	**309**	*i* P		**P**	**08 42 57.3**	**-1.0**
ALT	**Altintas**	**75.83**	**311**	*e*P		**P**	**08 42 58.7**	**+0.3**
ALT	**Altintas**	**75.83**	**311**	*i* P		sP	08 43 14.0	+2.3	
TIXI	**Tiksi**	**75.87**	**9***c*	*i* P		**P**	**08 42 56.3**	**-1.6**
TIXI				*e*			08 45 46.6		
TIXI				*e*S		S	08 52 35.0	-2.9	
TIXI				*e*			08 53 06.1		
TIXI				*e*SS		SS	08 57 27.3	-3.3	
TIXI				*e*SSS			09 00 48.2		
TIXI				pmax		pmax			
	comp=Z,2μm,2.2s,mb6.6								
TIXI				pmax		pmax			
	comp=N,317nm,1.6s								
TIXI				pmax		pmax			
	comp=E,273nm,1.6s								
TIXI	**Tiksi**	**75.87**	**9**	*e*P		**P**	**08 42 56.4**	**-1.5**
	comp=E,2μm,1.5s,mb6.9								
TIXI				LR		LR			
	comp=Z,122μm,21.0s,MS7.2								
GULT	**Gulveren**	**75.88**	**312**	*e*P		**P**	**08 42 58.2**	**-0.4**
DNZL	**Cakiroluk**	**76.31**	**309**	*i* P		**P**	**08 42 59.7**	**-1.4**
GDZ	**Gediz**	**76.31**	**311**	*i* P		**P**	**08 43 00.1**	**-1.0**
TURN	**Turunc**	**76.47**	**309**	*i* P		**P**	**08 43 03.0**	**+1.0**
MOS	**Moscow**	**76.55**	**329**	*e*P		**P**	**08 43 00.8**	**-1.2**
MOS				*i*			08 43 23.2		
MOS				*e*			08 45 54.6		
MOS				*i* S		S	08 52 45.1	-0.8	
MOS				*e*			08 53 14.4		
MOS				pmax		pmax			
	comp=Z,741nm,1.6s,mb6.4								
HRT	**Hereke**	**76.60**	**313**	*e*P		**P**	**08 43 02.2**	**-0.5**
ARG	**Arkhangelos**	**76.70**	**308**	*e*P		**P**	**08 43 03.0**	**-0.4**
SILT	**Sile**	**76.70**	**313**	*e*P		**P**	**08 43 08.1**	**+4.8**
YLV	**Yalova**	**76.75**	**312**	*e*P		**P**	**08 43 02.7**	**-0.9**
YER	**Yerkesik**	**76.78**	**309**	*e*P		**P**	**08 43 02.9**	**-0.9**
KULA	**Kula-Manisa**	**76.80**	**310**	*e*P		**P**	**08 43 03.7**	**-0.1**
ULDT	**Uludag**	**76.83**	**312**	*i* P		**P**	**08 43 03.6**	**-0.4**
OBN	**Obninsk**	**76.84**	**328**⇑	*e*P		**P**	**08 43 11.5**	**+7.8**
OBN				*i*		pP	08 43 19.2	+5.7	
OBN				*i*			08 43 25.2		
OBN				*i* S		S	08 52 47.4	-1.8	
OBN				*i* PS			08 53 12.1		
OBN				*i* SS		SS	08 57 48.3	+2.4	
OBN				pmax		pmax			
	comp=Z,332nm,0.9s,mb6.3								
OBN				MLR		MLR			
	comp=Z,26μm,19.0s,MS6.6								
OBN	**Obninsk**	**76.84**	**328**	*e*P		**P**	**08 43 03.3**	**-0.5**
	comp=Z,3μm,1.6s,mb7.0								
OBN				LR		LR			
	comp=Z,30μm,21.0s,MS6.6								
GEMT	**Gemlik**	**76.86**	**312**	*e*P		**P**	**08 43 02.4**	**-1.7**
DEMI	**Demirci**	**76.88**	**311**	*i* P		**P**	**08 43 03.9**	**-0.4**
ISK	**Istanbul-Kandi**	**77.11**	**313**	*e*P		**P**	**08 43 04.8**	**-0.8**
SNZO	**South Karori**	**77.15**	**132**	*e*P		**P**	**08 43 05.0**	**-0.9**
	comp=Z,194nm,0.9s,mb6.0								
SNZO				LR		LR			
	comp=Z,114μm,20.0s,MS7.2								
KLYT	**Kilyos**	**77.17**	**313**	*e*P		**P**	**08 43 11.9**	**+6.0**
DURS	**Dursunbey**	**77.19**	**311**	*i* P		**P**	**08 43 03.6**	**-2.5**
AYDN	**Tasoluk**	**77.21**	**309**	*i* P		**P**	**08 43 06.0**	**-0.3**
MLSB	**Milas**	**77.21**	**309**	*e*P		**P**	**08 43 10.9**	**+4.7**
KARP	**Karpathos**	**77.33**	**307**	*e*P		**P**	**08 43 06.6**	**-0.3**
BGKT	**Bogazkoy**	**77.35**	**313**	*e*P		**P**	**08 43 07.6**	**+0.7**
BDRM	**Kayabasi**	**77.42**	**309**	*i* P		**P**	**08 43 05.8**	**-1.6**
BODT	**Bodrum**	**77.52**	**309**	*e*P		**P**	**08 43 07.3**	**-0.7**
AKHS	**Akhisar**	**77.53**	**310**	*i* P		**P**	**08 43 07.2**	**-0.7**
AKS	**Akhisar**	**77.53**	**310**	*e*P		**P**	**08 43 08.2**	**+0.2**
ELBA	**Catalca**	**77.59**	**313**	*i* P		**P**	**08 43 14.2**	**+6.0**
BALB	**Balikesir**	**77.65**	**311**	*e*P		**P**	**08 43 09.0**	**+0.4**
GCAM	**G?zlcaml?**	**77.72**	**309**	*i* P		**P**	**08 43 08.8**	**-0.2**
KDAG	**Bornova**	**77.84**	**310**	*i* P		**P**	**08 43 09.8**	**+0.1**
IZM	**Izmir**	**77.84**	**310**	*e*P		**P**	**08 43 10.2**	**+0.5**
SYO	**Syowa Base**	**77.87**	**199**⇑	*e*P		**P**	**08 43 08.2**	**-1.0**
SYO	**Syowa Base**	**77.87**	**199**⇓	*i* PcP		PcP	08 43 17.6	-1.4	
BALY	**Balya**	**77.87**	**311**	*i* P		**P**	**08 43 09.3**	**-0.5**
BLCB	**Balcova**	**78.01**	**310**	*e*P		**P**	**08 43 10.9**	**+0.3**
SMG	**Samos**	**78.03**	**309**	*e*P		**P**	**08 43 09.2**	**-1.6**
TLCR		**78.32**	**317**	P		**P**	**08 43 12.2**	**0.0**
URLA	**Izmir**	**78.35**	**310**	*i* P		**P**	**08 43 12.4**	**-0.1**
MFT	**Murefte**	**78.35**	**312**	*e*P		**P**	**08 43 14.2**	**+1.7**
PSN	**Preselentsi**	**78.38**	**315**	*i* P		**P**	**08 43 12.0**	**-0.6**
SART	**Tekirdag**	**78.41**	**312**	*i* P		**P**	**08 43 19.5**	**+6.7**
RKY	**Sarkoy-Tekirda**	**78.41**	**312**	*e*P		**P**	**08 43 18.9**	**+6.1**
TIRR	**Tirgusor**	**78.41**	**316**	*e*P		**P**	**08 43 12.3**	**-0.4**
TIRR				pmax		pmax			
	comp=Z,546nm,1.4s,mb6.3								
TIRR	**Tirgusor**	**78.41**	**316**⇓	*i* P		**P**	**08 43 12.1**	**-0.6**
TIRR	**Tirgusor**	**78.41**	**316**	*e*P		**P**	**08 43 12.3**	**-0.4**
	comp=Z,546nm,1.4s,mb6.3								
AYVA	**Ayvalik**	**78.47**	**311**	*i* P		**P**	**08 43 12.9**	**-0.3**
NPS	**Neapolis**	**78.51**	**306**	*e*P		**P**	**08 43 13.7**	**+0.2**
URZ	**Urewera**	**78.59**	**128**	P		**P**	**08 43 13.3**	**-0.6**
	comp=Z,26nm,0.8s,baz=334,slow=10,SNR=8.9								
URZ				S		S	08 53 09.4	+0.6	
	comp=Z,12nm,1.1s,baz=171,slow=19,SNR=1.9								
URZ				LR		LR	09 18 46.4		
	comp=Z,40μm,21.4s,MS6.7,baz=279,slow=36								
CHOS	**Chios island**	**78.77**	**310**	*e*P		**P**	**08 43 14.7**	**-0.1**
PRK	**Paraskevi**	**78.78**	**311**	*e*P		**P**	**08 43 14.1**	**-0.8**
KIS	**Kishinev**	**78.79**	**319**	*e*P		**P**	**08 43 14.0**	**-0.8**
KIS				*i*		pP	08 43 22.0	-2.6	
KIS				*i*			08 43 32.0		
KIS				*e*S		S	08 53 08.0	-2.5	
KIS				*i* PS			08 53 50.0		
KIS				smax					
	comp=N,8μm,10.0s								
KIS	**Kishinev**	**78.79**	**319**	*e*P		**P**	**08 43 14.0**	**-0.8**
	comp=N,9μm,13.0s								
KIS	**Kishinev**	**78.79**	**319**	*i* PP		PP	08 46 26.0	+13	
KIS	**Kishinev**	**78.79**	**319**	*e*PPP			08 48 18.0		
KIS				*e*S		S	08 53 08.0	-2.5	
	comp=N,8μm,10.0s								
PRD	**Provadia**	**78.82**	**315**	*i* P		**P**	**08 43 14.7**	**-0.3**
SANT	**Santorini**	**78.84**	**308**	*e*P		**P**	**08 43 14.5**	**-0.8**
	comp=N,853nm,1.4s,mb6.5								
SANT				LR		LR			
	comp=Z,22μm,21.0s,MS6.5								
EZN	**Ezine**	**78.86**	**311**	*e*P		**P**	**08 43 13.3**	**-2.0**
APE	**Apeiranthos**	**78.92**	**308**	*e*P		**P**	**08 43 14.4**	**-1.3**
APE	**Apeiranthos**	**78.92**	**308**⇑	*i*P		**P**	**08 43 15.4**	**-0.3**
FUNA	**Funafuti**	**78.96**	**98**	*e*P		**P**	**08 43 14.9**	**-1.5**
	comp=Z,1μm,2.0s,mb6.5								
FUNA				LR		LR			
	comp=Z,18μm,20.0s,MS6.4								
EDRB	**Edirne**	**78.98**	**313**	*e*P		**P**	**08 43 17.5**	**+1.6**
IDI	**Anoyia**	**79.10**	**306**	P		**P**	**08 43 17.3**	**+0.6**
	comp=Z,96nm,0.9s,mb5.8,baz=91,slow=6.9,SNR=31								
ENEZ	**Enez**	**79.18**	**312**	*e*P		**P**	**08 43 23.1**	**+6.0**
JMB	**Yambol**	**79.24**	**314**	*e*P		**P**	**08 43 17.6**	**+0.3**
JMB	**Yambol**	**79.24**	**314**	*e*P		**P**	**08 43 17.4**	**+0.1**
ALN	**Alexandroupoli**	**79.29**	**312**	*e*P		**P**	**08 43 16.7**	**-0.9**
AKASG	**Malin Array Be**	**79.54**	**322**	P		**P**	**08 43 17.3**	**-1.4**
	comp=Z,30nm,0.9s,baz=85,slow=4.1,SNR=42								
AKASG				S		S	08 53 21.4	+3.1	
	comp=Z,0.2nm,0.3s,baz=112,slow=10,SNR=5.8								
AKASG				PKPPKP			09 10 19.9		
	comp=Z,0.6nm,0.4s,baz=268,slow=3.3,SNR=5.6								
AKASG				LR		LR	09 24 07.4		
	comp=Z,15μm,20.1s,MS6.3,baz=105,slow=40								
AKASG	**Malin Array Be**	**79.54**	**322**	P		**P**	**08 43 17.3**	**-1.5**
AKASG				S		S	08 53 21.5	+3.2	
AKASG	**Malin Array Be**	**79.54**	**322**	P		**P**	**08 43 17.3**	**-1.4**
AKASG				S		S	08 53 21.4	+3.1	
AKASG				P'P'			09 10 19.9		
AKASG				LR		LR	09 24 07.4		
AKBB	**Malin Array Si**	**79.54**	**322**	*e*P		**P**	**08 43 18.0**	**-0.8**
KIEV	**Kiev**	**79.55**	**322**	*e*P		**P**	**08 43 17.7**	**-1.1**
	comp=Z,558nm,1.6s,mb6.2								
KIEV				LR		LR			
	comp=Z,22μm,20.0s,MS6.5								
VAM	**Vamos**	**79.67**	**306**	*e*P		**P**	**08 43 21.2**	**+1.3**
RDO	**Rodhopi**	**79.72**	**312**	*e*P		**P**	**08 43 19.3**	**-0.7**
LIA	**Limnos Island**	**79.73**	**311**	*e*P		**P**	**08 43 19.2**	**-0.9**
SUR	**Sutherland**	**79.84**	**238**	P		**P**	**08 43 22.7**	**+1.9**
	comp=Z,526nm,1.1s,mb6.4,SNR=15								
SUR	**Sutherland**	**79.84**	**238**	P		**P**	**08 43 20.7**	**-0.1**
	comp=Z,30nm,0.9s,baz=89,slow=4.1,SNR=19								
SUR	**Sutherland**	**79.84**	**238**	*e*P		**P**	**08 43 21.9**	**+1.1**
	comp=Z,286nm,1.1s,mb6.1								
SUR				LR		LR			
	comp=Z,135μm,20.0s,MS7.3								
SZH	**Strazhica**	**79.88**	**314**	*e*P		**P**	**08 43 20.3**	**-0.5**
KARN	**Karanos**	**79.90**	**306**	*e*P		**P**	**08 43 20.9**	**-0.2**
VRI	**Vrincioaia**	**79.91**	**317**⇓	*i*P		**P**	**08 43 19.8**	**-1.1**
VRI	**Vrincioaia**	**79.91**	**317**	P		**P**	**08 43 21.3**	**+0.4**
DIM	**Dimitrovgrad**	**79.91**	**313**	*i* P		**P**	**08 43 20.6**	**-0.4**
PLOR	**Plostina**	**79.96**	**317**	P		**P**	**08 43 21.9**	**+0.7**
PVL	**Pavlikeni**	**80.30**	**314**	*e*P		**P**	**08 43 23.4**	**+0.3**
MLR	**Muntele Rosu**	**80.36**	**317**⇑	*i*P		**P**	**08 43 23.2**	**-0.1**
MLR	**Muntele Rosu**	**80.36**	**317**	P		**P**	**08 43 23.6**	**+0.3**
ZIMR		**80.36**	**315**	P		**P**	**08 43 23.6**	**+0.2**
RZN	**Rozhen**	**80.43**	**313**	*e*P		**P**	**08 43 23.4**	**-0.4**
ATH	**Athens Observa**	**80.50**	**309**	*e*P		**P**	**08 43 23.0**	**-1.3**
PLD	**Plovdiv**	**80.53**	**313**	*e*P		**P**	**08 43 24.1**	**-0.2**
PLD	**Plovdiv**	**80.53**	**313**	*e*P		**P**	**08 43 23.7**	**-0.6**
DID	**Didima**	**80.80**	**308**	*e*P		**P**	**08 43 24.0**	**-1.9**
VLI	**Veliai**	**80.90**	**308**	*e*P		**P**	**08 43 26.1**	**-0.4**
VOIR		**80.96**	**316**⇑	*i*P		**P**	**08 43 26.1**	**-0.5**
VOIR		**80.96**	**316**	P		**P**	**08 43 25.9**	**-0.6**
NVR	**Nevrokopi**	**81.00**	**312**	*e*P		**P**	**08 43 27.3**	**+0.4**
LTK	**Loutraki**	**81.09**	**309**	*e*P		**P**	**08 43 25.7**	**-1.8**
PLG	**Polygyros**	**81.13**	**311**	*e*P		**P**	**08 43 27.1**	**-0.5**
PLG	**Polygyros**	**81.13**	**311**	*e*P		**P**	**08 43 30.4**	**+2.8**
LKR	**Lokris**	**81.17**	**309**	*e*P		**P**	**08 43 25.7**	**-2.2**
LKR	**Lokris**	**81.17**	**309**	*e*P		**P**	**08 43 26.3**	**-1.6**
SOH	**Sokhos**	**81.28**	**312**	*e*P		**P**	**08 43 27.0**	**-1.4**
BURAR	**Bucovina Array**	**81.31**	**319**⇑	*i*P		**P**	**08 43 28.8**	**+0.4**
BURAR	**Bucovina Array**	**81.31**	**319**⇑	P		**P**	**08 43 28.8**	**+0.4**
BUR08	**Bucovina Ar. S**	**81.33**	**319**	*e*P		**P**	**08 43 29.1**	**+0.6**
MNK	**Minsk**	**81.40**	**326**⇑	*i*P		**P**	**08 43 25.0**	**-3.7**
MNK				*e*			08 43 38.0		
MNK				*e*			08 46 36.0		
MNK				*e*PPP			08 48 34.0		
MNK				*e*S		S	08 53 34.0	-3.7	
MNK				*e*SS		SS	08 58 52.0	-2.4	
MNK				pmax		pmax			
	comp=Z,15μm,7.0s								
MNK				pmax		pmax			
	comp=Z,700nm,1.0s,mb6.5								
MNK				smax					
	comp=N,12μm,8.0s								
HORT	**Hortiatis**	**81.43**	**311**	*e*P		**P**	**08 43 27.8**	**-1.4**
VLX	**Vlachokerasia**	**81.45**	**308**	*e*P		**P**	**08 43 28.7**	**-0.6**
THE	**Thessaloniki**	**81.54**	**311**	*e*P		**P**	**08 43 30.1**	**+0.4**
KKB	**Krupnik**	**81.67**	**313**	*e*P		**P**	**08 43 29.5**	**-0.9**
PUL	**Pulkovo**	**81.67**	**331**⇑	*e*P		**P**	**08 43 30.2**	**+0.2**
KNT	**Kendrikon**	**81.68**	**312**	*e*P		**P**	**08 43 29.5**	**-1.0**
VTS	**Vitosha**	**81.70**	**313**	*i*P		**P**	**08 43 30.6**	**0.0**
VTS	**Vitosha**	**81.70**	**313**	*e*P		**P**	**08 43 30.4**	**-0.2**
VTS	**Vitosha**	**81.70**	**313**	P		**P**	**08 43 30.4**	**-0.1**
AGG	**Agios Georgios**	**81.75**	**310**	*e*P		**P**	**08 43 30.8**	**-0.2**
ITM	**Ithomi**	**81.78**	**308**	*e*P		**P**	**08 43 30.5**	**-0.6**
LIT	**Litokhoron**	**81.81**	**311**	*e*P		**P**	**08 43 30.0**	**-1.2**
PYL	**PYLOS**	**81.88**	**308**	*e*P		**P**	**08 43 30.6**	**-1.0**
VAY	**Valandovo**	**81.95**	**312**	*e*P		**P**	**08 43 29.8**	**-2.1**
VAY	**Valandovo**	**81.95**	**312**	*i* P		**P**	**08 43 29.2**	**-2.7**
VAY				*i* PcP		PcP	08 43 38.5	+1.0	
SMY	**Shemya**	**81.99**	**36**	*e*P		**P**	**08 43 30.3**	**-1.6**
SMY				*e**PP		pP	08 43 39.8	-1.9	
SMY				pmax		pmax			
	comp=Z,1μm,1.4s,mb6.6								
SMY				MLR		MLR			
	comp=Z,21μm,21.0s,MS6.5								
SMY	**Shemya**	**81.99**	**36**	*e*P		**P**	**08 43 30.3**	**-1.5**
	comp=Z,1μm,1.4s,mb6.6								
SMY				*e*pP		pP	08 43 39.8	-1.9	
SMY				LR		LR			
	comp=Z,21μm,21.0s,MS6.5								
GRG	**Griva**	**82.02**	**312**	*e*P		**P**	**08 43 31.2**	**-1.0**
RAO	**Raoul Island**	**82.05**	**119**	PFAKE			08 43 40.0	+7.3	
RAO				LR		LR			
	comp=Z,36μm,20.0s,MS6.7								
THL	**Klokotos Trika**	**82.08**	**310**	*e*P		**P**	**08 43 31.3**	**-1.3**
THL	**Klokotos Trika**	**82.08**	**310**	*e*P		**P**	**08 43 31.0**	**-1.6**
EVR	**Evrytania**	**82.14**	**310**	*e*P		**P**	**08 43 32.2**	**-0.7**
TSUM	**Tsumeb**	**82.23**	**251**	P		**P**	**08 43 35.9**	**+2.1**
	comp=Z,11nm,0.9s,baz=230,slow=22,SNR=16								
TSUM	**Tsumeb**	**82.23**	**251**	*e*P		**P**	**08 43 35.3**	**+1.4**
	comp=Z,94nm,1.0s,mb5.7								
TSUM				LR		LR			
	comp=Z,103μm,21.0s,MS7.2								
JOF	**Joensuu**	**82.26**	**335**	*e*p		**P**	**08 43 32.9**	**-0.1**
	comp=Z,81nm,0.7s,mb5.8								
JOF	**Joensuu**	**82.26**	**335**	*e*P		**P**	**08 43 32.9**	**-0.1**
JOF				pmax		pmax			
	comp=Z,81nm,0.7s,mb5.8								
RLS	**Riolos of Patr**	**82.27**	**309**	*e*P		**P**	**08 43 33.6**	**-0.1**
KZN	**Kozani**	**82.38**	**311**	*e*P		**P**	**08 43 40.6**	**+6.4**
GZR	**Gura Zlata**	**82.52**	**316**	P		**P**	**08 43 35.1**	**+0.3**
LVV	**L'vov**	**82.55**	**321**	*e*P		**P**	**08 43 34.6**	**-0.3**
LVV				*e*		pP	08 43 45.9	+1.2	
LVV				*e*S		S	08 53 46.8	-3.0	
LVV				*e*PS			08 55 01.0		
LVV				*e*SS		SS	08 59 11.8	+0.1	
FNA	**Florina**	**82.75**	**311**	*e*P		**P**	**08 43 34.5**	**-1.6**
BARS	**Barje**	**82.76**	**313**	P		**P**	**08 43 35.2**	**-0.9**
KFL	**Anninata**	**82.81**	**309**	*e*P		**P**	**08 43 36.5**	**0.0**
LVZ	**Lovozero**	**82.82**	**340**	PFAKE			08 43 50.0	+14	
LVZ				LR		LR			
	comp=Z,31μm,22.0s,MS6.6								
DRGR		**82.82**	**317**⇑	*i*P		**P**	**08 43 36.6**	**+0.3**
DRGR		**82.82**	**317**	P		**P**	**08 43 36.9**	**+0.6**
SKO	**Skopje**	**82.89**	**313**	*i* P		**P**	**08 43 35.4**	**-1.4**
SKO				*i* PcP		PcP	08 43 44.1	+2.6	
KRUS	**Krusevo**	**82.94**	**312**⇑	*i*P		**P**	**08 43 36.3**	**-0.8**
VLS	**Valsamata**	**82.97**	**309**	*e*P		**P**	**08 43 36.8**	**-0.5**
JAN	**Janina**	**82.98**	**310**	*e*P		**P**	**08 43 36.7**	**-0.6**
LKD	**Levkas**	**83.00**	**309**	*e*P		**P**	**08 43 37.1**	**-0.4**
APA	**Apatity**	**83.13**	**339**⇓	*i*P		**P**	**08 43 37.0**	**-0.5**
APA				*i* PPP			08 48 48.0		
APA				*i* S		S	08 53 55.0	0.0	
APA				*i* PS			08 54 40.0		
APA				*i* SS		SS	08 59 23.0	+3.6	
APA				pmax		pmax			
	comp=Z,460nm,1.6s,mb6.3								
APA				pmax		pmax			
	comp=Z,12μm,16.0s								
APA				MLR		MLR			
	comp=Z,43μm,22.0s,MS6.8								
BILL	**Bilibino**	**83.16**	**20**⇓	*i*P		**P**	**08 43 36.4**	**-1.2**
BILL				*i*		pP	08 43 45.8	-1.7	
BILL				*i*			08 43 55.3		
BILL				*i*			08 46 46.7		
BILL				*i* S		S	08 53 59.9	+4.7	
BILL				*i* PS			08 54 54.8		
BILL				pmax		pmax			
	comp=Z,19nm,0.8s								
BILL				MLR		MLR			
	comp=Z,28μm,22.0s,MS6.6								
BILL	**Bilibino**	**83.16**	**20**	*e*P		**P**	**08 43 37.1**	**-0.5**
	comp=Z,1μm,2.1s,mb6.6								
BILL				*e*pP		pP	08 43 46.0	-1.5	
BILL				LR		LR			
	comp=Z,95μm,19.0s,MS7.2								
SBA	**Scott Base**	**83.22**	**169**	*e*P		**P**	**08 43 38.6**	**+0.8**
SBA				pmax		pmax			
	comp=Z,306nm,1.5s,mb6.1								
SBA				MLR		MLR			
	comp=Z,18μm,19.0s,MS6.5								
SBA	**Scott Base**	**83.22**	**169**	*e*P		**P**	**08 43 38.6**	**+0.8**
	comp=Z,306nm,1.5s,mb6.1								
SBA				LR		LR			
	comp=Z,18μm,19.0s,MS6.5								
OHR	**Ohrid**	**83.24**	**312**	*i* P		**P**	**08 43 36.0**	**-2.6**
OHR				*i* PcP		PcP	08 43 44.9	+1.8	
KWP	**Kalwaria**	**83.36**	**320**	*e*P		**P**	**08 43 39.0**	**-0.1**
KWP				*e*		pP	08 43 47.5	-1.3	
KWP				*e*			08 44 01.5		
KWP				*e*S		S	08 54 03.6	+5.7	
KWP				LMZ			09 25 33.0		
	comp=Z,17μm,22.4s								
KWP	**Kalwaria**	**83.36**	**320**	*e*P		**P**	**08 43 39.0**	**0.0**
KWP				*e*		pP	08 43 47.5	-1.4	
KWP				*e*			08 44 01.5		
KWP				*e*S		S	08 54 03.6	+5.6	
KWP	**Kalwaria**	**83.36**	**320**	*e*P		**P**	**08 43 39.0**	**0.0**
KWP				*e*		pP	08 43 47.5	-1.4	
KWP				*e*			08 44 01.5		
KWP				*e*S		S	08 54 03.6	+5.6	
KWP				LR		LR			
	comp=Z,16μm,22.0s,MS6.4								
BZS	**Buzias**	**83.36**	**316**⇑	*i*P		**P**	**08 43 39.0**	**-0.2**
BZS	**Buzias**	**83.36**	**316**	P		**P**	**08 43 39.2**	**+0.1**
UZH	**Uzhgorod**	**83.44**	**319**	*e*P		**P**	**08 43 39.0**	**-0.5**
UZH				*i*			08 43 56.4		
UZH				*i* S		S	08 53 58.0	-0.8	
UZH				*e*PS			08 54 59.0		
KOLS	**Kolonicke sedl**	**83.51**	**320**	*e*P		**P**	**08 43 40.5**	**+0.7**
KOLS				*e*S		S	08 54 02.5	+3.0	
KEK	**Kerkira**	**83.79**	**310**	*e*P		**P**	**08 43 40.9**	**-0.6**
SUW	**Suwalki**	**83.94**	**325**	*e*P		**P**	**08 43 41.6**	**-0.3**
SUW				*e*		pP	08 43 49.9	-1.9	
SUW				*e*			08 44 03.8		
SUW				*e*S		S	08 54 07.5	+3.9	
SUW				LMZ			09 28 49.9		
	comp=Z,18μm,21.4s								
SUW	**Suwalki**	**83.94**	**325**	*e*P		**P**	**08 43 41.6**	**-0.3**
SUW				*e*		pP	08 43 49.8	-2.0	
SUW				*e*			08 44 03.8		
SUW				*e*S		S	08 54 07.5	+3.9	
BCI	**Bajram Curri**	**83.96**	**313**	*e*P		**P**	**08 43 50.1**	**+7.8**
QSH	**Qafa e Shtames**	**83.96**	**312**	*e*P		**P**	**08 43 52.0**	**+10**
TIR	**Tirane**	**83.97**	**312**	*e*P		**P**	**08 43 41.7**	**-0.7**
TIR				pmax		pmax			
	comp=Z,328nm,1.2s,mb6.3								
TIR				MLR		MLR			
	comp=Z,22μm,22.0s,MS6.5								
TIR	**Tirane**	**83.97**	**312**	*e*P		**P**	**08 43 49.8**	**+7.4**
TIR	**Tirane**	**83.97**	**312**	*e*P		**P**	**08 43 41.7**	**-0.7**
	comp=Z,328nm,1.2s,mb6.3								
TIR				LR		LR			
	comp=Z,22μm,22.0s,MS6.5								
CRVS	**Cervenica-Dubn**	**84.03**	**319**	*e*P		**P**	**08 43 44.5**	**+2.0**
CRVS				*e*S		S	08 54 09.6	+4.9	
CRVS	**Cervenica-Dubn**	**84.03**	**319**	*e*P		**P**	**08 43 44.5**	**+2.0**
CRVS				*e*S		S	08 54 09.6	+4.9	
PUK	**Puka**	**84.04**	**312**	*e*P		**P**	**08 43 50.5**	**+7.8**
IVA	**Berane**	**84.16**	**313**⇑	*i*P		**P**	**08 43 42.4**	**-0.9**
FINES	**FINESS Array B**	**84.16**	**332**	P		**P**	**08 43 42.0**	**-0.9**

comp=Z,37µm,21.0s,MS6.8,baz=110,slow=38
ARE0 ARCESS Array S 86.51 340 *e*P **P 08 43 53.9 -0.6**
CEL Celeste 86.65 308 PFAKE 08 44 10.0 +14
CEL LR LR
comp=Z,29µm,20.0s,MS6.7
MORC Moravsky Berou 86.69 320 *e*P **P 08 43 56.0 +0.2**
MORC *e*S S 08 54 33.4 +2.4
MORC pmax pmax
comp=Z,44nm,0.7s,mb5.8
MORC Moravsky Berou 86.69 320 ⇑*i*P **P 08 43 56.2 +0.4**
MORC Moravsky Berou 86.69 320 *e*P **P 08 43 56.0 +0.2**
comp=Z,44nm,0.7s,mb5.8
MORC *e*S S 08 54 33.4 +2.4
MODS Modra-Piesok 86.70 319 *e*P **P 08 43 55.9 +0.1**
MODS pmax pmax
comp=Z,100nm,1.5s,mb5.8
MODS Modra-Piesok 86.70 319 *e*P **P 08 43 55.9 +0.1**
MODS *e*S S 08 54 32.0 +0.9
MODS Modra-Piesok 86.70 319 *e*P **P 08 43 55.9 +0.1**
comp=Z,100nm,1.5s,mb5.8
MODS *e*S S 08 54 32.0 +0.9
PTRP Pietrapertosa 86.73 311 P **P 08 43 57.5 +1.3**
MTTG Motta San Giov 86.79 308 P **P 08 43 57.5 +1.0**
ZST Bratislava 86.79 318 *e*P **P 08 43 56.6 +0.3**
ZST pmax pmax
comp=Z,65nm,0.9s,mb5.9
ZST Bratislava 86.79 318 *e*P **P 08 43 56.6 +0.3**
comp=Z,65nm,0.9s,mb5.9
ZST *e*S S 08 54 36.6 +4.6
ZST *e*S S 08 54 36.8 +4.8
SCLL Scilla 86.79 308 P **P 08 43 59.2 +2.7**
CUC Castrocucco 86.87 310 *e*P **P 08 43 56.6 -0.2**
comp=Z,443nm,1.6s,mb6.4
CUC LR LR
comp=Z,25µm,21.0s,MS6.6
SISC Sisak 87.00 316 *i*P **P 08 43 57.9 +0.5**
HAVL Avola 87.15 307 P **P 08 44 00.6 +2.3**
KTK1 Kautokeino 87.17 339 *e*P **P 08 43 57.4 -0.3**
KTK1 *e*pP pP 08 44 05.9 -1.7
SSY Sortino 87.21 307 P **P 08 44 00.4 +1.8**
VRAC Vranov 87.25 319 P **P 08 43 59.4 +0.9**
GKP Gorka Klasztor 87.31 323 *e*P **P 08 43 58.1 -0.5**
GKP *e* pP 08 44 07.3 -1.3
GKP *e* 08 44 21.0
GKP *e*S S 08 54 42.2 +5.4
GKP LMZ 09 31 13.8
comp=Z,28µm,20.4s
GKP Gorka Klasztor 87.31 323 *e*P **P 08 43 58.1 -0.6**
GKP *e* pP 08 44 07.3 -1.3
GKP *e* 08 44 21.0
GKP *e*S S 08 54 42.2 +5.4
GKP Gorka Klasztor 87.31 323 *e*P **P 08 43 58.1 -0.6**
GKP *e* pP 08 44 07.3 -1.3
GKP *e* 08 44 21.0
GKP *e*S S 08 54 42.2 +5.4
GKP LR LR
comp=Z,28µm,20.4s,MS6.7
SGO Sicignano 87.31 311 P **P 08 43 59.6 +0.6**
KRUC Moravsky 87.36 319 P **P 08 43 59.4 +0.4**
ADK Adak 87.41 38 *e*P **P 08 43 58.3 -0.9**
ADK *e**PP pP 08 44 07.3 -1.8
ADK pmax pmax
comp=Z,2µm,1.6s,mb7.0
ADK MLR MLR
comp=Z,17µm,22.0s,MS6.4
ADK Adak 87.41 38 *e*P **P 08 43 58.3 -0.9**
comp=Z,2µm,1.6s,mb7.0
ADK *e*pP pP 08 44 07.3 -1.8
ADK LR LR
comp=Z,17µm,22.0s,MS6.4
HMDC Modica 87.42 307 P **P 08 44 02.0 +2.4**
NVL N'lazarevskaya 87.52 199 *d i*P **P 08 44 08.7 +9.3**
NVL *e**PP pP 08 44 19.1 +10
NVL *i*S S 08 54 24.3 -14
NVL pmax pmax
comp=Z,126nm,2.1s,mb5.8
DPC Dobruska-Polom 87.54 320 *e*P **P 08 44 00.7 +0.8**
DPC *e**PP pP 08 44 10.4 +0.6
DPC *e* 08 44 18.2
DPC *e*S S 08 54 40.6 +1.5
DPC MLR MLR
comp=Z,15µm,20.0s,MS6.4
DPC Dobruska-Polom 87.54 320 *e*P **P 08 44 00.7 +0.8**
DPC *e*pP pP 08 44 10.4 +0.6
DPC *e*sP sP 08 44 18.2 +4.9
DPC *ex* x 08 44 23.6
DPC *e*PP PP 08 47 40.2 +15
DPC *e*S S 08 54 40.6 +1.5
DPC AMS AMS 09 31 50.0
comp=Z,15µm,20.0s
CSSN Cassano Irpino 87.55 311 P **P 08 44 00.7 +0.6**
MAIT Maitri 87.55 199 *e*P **P 08 44 01.3 +1.8**
CONA Conrad Observa 87.59 318 ⇑*i*P **P 08 44 00.0 -0.1**
comp=Z,51nm,1.3s,mb5.6,SNR=17
KSP Ksiaz 87.61 321 *e*P **P 08 44 00.9 +0.7**
KSP *e* pP 08 44 08.9 -1.2
KSP *e* 08 44 23.5
KSP *e*S S 08 54 46.1 +6.3
KSP LMZ 09 31 32.9
comp=Z,31µm,22.1s
KSP Ksiaz 87.61 321 ⇑*e*P **P 08 44 00.6 +0.4**
KSP *e* 08 44 07.7
KSP *e*pP pP 08 44 16.1 +6.0
KSP *e*sP sP 08 44 22.9 +9.2
KSP *e*PP PP 08 47 30.0 +4.4
KSP *e*PPP 08 49 27.5
KSP *e*S S 08 54 39.5 -0.3
KSP LR LR
comp=Z,36µm,23.6s,MS6.7
GROS Grobnik 87.69 316 *e*P **P 08 44 00.8 +0.1**
AFI Afiamalu 87.74 104 P **P 08 44 02.3 +0.7**
comp=Z,161nm,1.1s,mb6.2,baz=262,slow=12,SNR=7.5
AFI Afiamalu 87.74 104 P **P 08 44 02.3 +0.7**
AFI LR LR
comp=Z,10µm,20.0s,MS6.2
PSB1 Pescosannita 87.74 311 P **P 08 44 01.2 +0.1**
UPC Upice 87.75 321 *e*P **P 08 44 01.8 +0.9**
UPC *e**PP pP 08 44 11.2 +0.4
UPC *e* 08 44 19.3
UPC Upice 87.75 321 *e*P **P 08 44 01.8 +0.9**
UPC *e*pP pP 08 44 11.2 +0.4
UPC *e*sP sP 08 44 19.3 +4.9
UPC *ex* x 08 44 24.4
ARSA Arzberg 87.75 317 ⇑*i*P **P 08 44 01.6 +0.6**
comp=Z,25nm,1.0s,mb5.4,SNR=14
ARSA Arzberg 87.75 317 P **P 08 44 01.3 +0.3**
VAE Valguarnera 87.76 307 P **P 08 44 03.1 +1.9**
comp=Z,62nm,0.9s,mb5.8,baz=180,slow=6.8,SNR=8.3
BOJS Bojanci 87.78 316 *i*P **P 08 44 01.3 +0.2**
BOJS *i* pP 08 44 09.5 -1.6
BOJS *e*SKSac SKSac 08 54 41.2 +14
BOJS *e*S S 08 55 07.1 +25
QSPA South Pole Qui 87.94 180 PKPPKP 09 09 50.0
comp=Z,7.1nm,1.1s,baz=211,slow=1.3,SNR=8.4
QSPA LR LR 09 20 30.5
comp=Z,70µm,19.4s,MS7.1,baz=317,slow=34
NVLJ Novalja 87.97 315 *i*P **P 08 44 04.2 +2.2**
PERS Pernice 87.98 317 *i*P **P 08 44 02.4 +0.4**
PERS *i* pP 08 44 10.4 -1.5
PERS *e*S S 08 54 45.3 +1.8
SOKA Soboth 88.04 317 ⇑*i*P **P 08 44 02.7 +0.4**
SGG Gregorio Mates 88.08 311 P **P 08 44 02.3 -0.3**
VISS Visnje 88.10 316 *i*P **P 08 44 02.5 -0.1**
VISS *i* pP 08 44 10.9 -1.6
VISS *e*S S 08 54 43.9 -0.7
MIDA Miranda 88.19 312 P **P 08 44 03.4 +0.2**
LJU Ljubljana 88.33 316 *e*P **P 08 44 03.5 -0.2**
LJU Ljubljana 88.33 316 P **P 08 44 04.7 +0.9**
OBKA Obir 88.36 316 ⇑*i*P **P 08 44 04.4 +0.6**
comp=Z,41nm,1.0s,mb5.6
OBKA Obir 88.36 316 P sP 08 44 27.0 +10
comp=Z,386nm,1.8s
OBKA Obir 88.36 316 ⇑*i*PcP PcP 08 44 04.4 -1.1
comp=Z,41nm,1.0s
OBKA ⇑*i*pP pP 08 44 12.7 -1.0
comp=Z,386nm,1.8s
OBKA Obir 88.36 316 P **P 08 44 04.6 +0.8**
RFI Roccamonfina 88.37 311 P **P 08 44 05.0 +1.0**
SDI San Donato 88.53 312 P **P 08 44 04.5 -0.3**
JAVS Javornik 88.64 316 *i*P **P 08 44 05.0 -0.2**
JAVS *i* pP 08 44 13.2 -1.9
JAVS *e*S S 08 54 55.1 +5.3
PRU Pruhonice 88.64 320 *e*P **P 08 44 05.6 +0.5**
PRU *e* pP 08 44 14.2 -0.8
PRU *e* 08 44 22.7
PRU *e*S S 08 54 51.4 +1.7
PRU MLR MLR
comp=Z,14µm,19.0s,MS6.4
PRU Pruhonice 88.64 320 *e*P **P 08 44 05.6 +0.5**
PRU *e*pP pP 08 44 14.2 -0.8
PRU *e*sP sP 08 44 22.7 +4.1
PRU *ex* x 08 44 28.3
PRU *e*PP PP 08 47 43.7 +10
PRU *e*S S 08 54 51.4 +1.7
PRU AMS AMS 09 32 50.0
comp=Z,14µm,19.0s
MOA Molln 88.65 318 ⇑*i*P **P 08 44 05.0 -0.2**
comp=Z,19nm,0.8s,mb5.5,SNR=9.9
MOA Molln 88.65 318 P **P 08 44 05.3 +0.1**
PVCC Panska Ves 88.67 320 *e*P **P 08 44 06.2 +1.0**
PVCC *e**PP pP 08 44 15.7 +0.5
PVCC *e* 08 44 23.5
PVCC *e*S S 08 54 52.8 +2.9
PVCC MLR MLR
comp=Z,16µm,18.3s,MS6.5
PVCC Panska Ves 88.67 320 *e*P **P 08 44 06.2 +1.0**
PVCC *e*pP pP 08 44 15.7 +0.5
PVCC *e*sP sP 08 44 23.5 +4.8
PVCC *ex* x 08 44 29.1
PVCC *e*x x 08 47 49.5
PVCC *e*S S 08 54 52.8 +2.9
PVCC AMS AMS 09 34 10.0
comp=Z,16µm,18.3s
VVLD Villa Vallelon 88.68 312 P **P 08 44 05.3 -0.2**
VOY Vojsko 88.77 316 *e*P **P 08 44 05.7 -0.1**
VOY *e* 08 44 22.5
TRO Tromso 88.79 340 *e*P **P 08 44 05.0 -0.4**
TRO AMb AMB 08 44 17.7
comp=Z,579nm,0.4s,mb7.2
TRO *e*SKS 08 54 35.4
TRO AMS AMS 09 28 09.1
comp=Z,31µm,18.9s,MS6.8
USI Ustica 88.81 309 P **P 08 44 07.0 +0.8**
PTQR Pietraquaria 88.85 312 P **P 08 44 06.9 +0.6**
AQU L'Aquila 88.87 312 P **P 08 44 07.3 +0.9**
MYKA Terra Mystica 88.99 317 P sP 08 44 30.5 +10
comp=Z,943nm,1.6s
MYKA Terra Mystica 88.99 317 ⇑*i*P **P 08 44 07.0 +0.2**
comp=Z,58nm,1.3s,mb5.8
MYKA ⇑*i*pP pP 08 44 15.0 -1.8
comp=Z,671nm,1.9s
FIAM Fiamignano 89.08 312 P **P 08 44 07.6 +0.2**
CING Cingoli 89.09 313 P **P 08 44 07.7 +0.3**
BRG Berggiesshubel 89.10 321 *i*P **P 08 44 07.8 +0.6**
BRG *SP sP 08 44 25.3 +4.6
BRG 08 47 38.0
BRG S S 08 54 58.0 +4.1
BRG pmax pmax
comp=Z,22nm,1.0s,mb5.4
BRG MLR MLR
comp=N,7µm,19.5s,MS6.3
BRG MLR MLR
comp=E,10µm,19.5s,MS6.3
BRG MLR MLR
comp=Z,14µm,19.3s,MS6.4
BRG Berggiesshubel 89.10 321 *e*P **P 08 44 07.7 +0.5**
comp=Z,951nm,1.6s,mb6.9
BRG *e*S S 08 54 56.4 +2.5
BRG Berggiesshubel 89.10 321 *i*P **P 08 44 07.8 +0.5**
comp=Z,36nm,1.0s,mb5.7
BRG pP pP 08 44 15.9 -1.2
comp=Z,109nm,1.3s
BRG sP sP 08 44 25.3 +4.6
comp=Z,382nm,1.6s
BRG *i* 08 44 30.3
comp=Z,950nm,1.6s
BRG PP PP 08 47 38.0 +0.5
BRG S S 08 54 58.0 +4.1
BRG PS PS 08 56 11.0 +8.8
BRG *i* 09 07 29.0
BRG PKPPKP 09 09 54.9
comp=Z,2.3nm,0.6s
BRG
comp=N,11µm,19.5s
BRG
comp=E,17µm,19.5s
BRG
comp=Z,22µm,19.3s
BRG Berggiesshubel 89.10 321 *i*P **P 08 44 07.8 +0.5**
comp=Z,22nm,1.0s,mb5.4
BRG pP pP 08 44 15.9 -1.2
BRG sP sP 08 44 25.3 +4.6
BRG *i* 08 44 30.3
BRG PP PP 08 47 38.0 +0.5
BRG S S 08 54 58.0 +4.1
BRG PS PS 08 56 11.0 +8.8
GEC2 GERESS Array S 89.10 319 *e*P **P 08 44 07.8 +0.5**
GEC2 *e*S S 08 54 55.6 +1.5
GEC2 pmax pmax
comp=Z,1µm,1.6s,mb7.0
GEC2 GERESS Array S 89.10 319 *e*P **P 08 44 07.8 +0.5**
comp=Z,1µm,1.6s,mb7.0
GEC2 *e*S S 08 54 55.6 +1.5
GERES GERESS Array B 89.10 319 P **P 08 44 07.4 +0.1**
comp=Z,12nm,0.9s,baz=46,slow=20,SNR=30
GERES PKKPbc PKKPbc 09 01 58.7 +12
comp=Z,1.1nm,0.7s,baz=279,slow=2.6,SNR=3.8
CERT Cerreto 89.16 312 P **P 08 44 07.3 -0.4**
PTCC Patocco-Chiusa 89.17 316 P **P 08 44 07.8 +0.1**
KHC Kasperske Hory 89.20 319 *e*P **P 08 44 08.0 +0.2**
KHC *e**PP pP 08 44 17.1 -0.6
KHC *e* 08 44 25.6
KHC *e*S S 08 54 56.5 +1.5
KHC MLR MLR
comp=Z,18µm,21.4s,MS6.5
KHC Kasperske Hory 89.20 319 *e*P **P 08 44 08.0 +0.2**
KHC *e*pP pP 08 44 17.1 -0.6
KHC *e*sP sP 08 44 25.6 +4.3
KHC *ex* x 08 44 30.8
KHC *e*x x 08 47 49.2
KHC *e*S S 08 54 56.5 +1.5
KHC AMS AMS 09 33 40.0
comp=Z,18µm,21.4s
GMNA Gemona 89.24 316 P **P 08 44 08.4 +0.4**
SNTG Esanatoglia 89.27 313 P **P 08 44 08.8 +0.6**
RUE Ruedersdorf 89.31 322 *e*P **P 08 44 08.6 +0.4**
comp=Z,2µm,1.6s,mb7.3
RUE *e*S S 08 54 55.8 -0.1
RUE Ruedersdorf 89.31 322 *e*P **P 08 44 08.7 +0.5**
comp=Z,2µm,1.6s,mb7.2
RUE *e*pP pP 08 44 17.4 -0.7
MTCE Montecelio 89.34 312 P **P 08 44 10.2 +1.6**
RDP Rocca di Papa 89.35 312 P **P 08 44 08.7 +0.1**
MNS Montasola 89.41 312 P **P 08 44 08.5 -0.4**
FSSB Fossombrone 89.41 314 P **P 08 44 09.6 +0.7**
ASS Assisi 89.47 313 P **P 08 44 08.9 -0.3**
FBE Freiberg 89.47 321 *e*P **P 08 44 09.5 +0.5**
comp=Z,1µm,1.6s,mb6.9
BJO Bjornoya 89.49 345 *e*P **P 08 44 10.2 +1.6**
BJO AMS AMS 09 31 13.9
comp=Z,31µm,21.2s,MS6.7
RJOB Jochberg 89.64 318 *e*P **P 08 44 09.4 -0.4**
comp=Z,537nm,1.8s,mb6.6
RJOB *e*S S 08 54 58.9 -0.2
WET Wettzell 89.67 319 *e*P **P 08 44 10.3 +0.4**
WET *e*S S 08 55 02.0 +2.7
WET pmax pmax
comp=Z,894nm,1.7s,mb6.8
WET Wettzell 89.67 319 *e*P **P 08 44 10.3 +0.4**
comp=Z,894nm,1.7s,mb6.8
WET *e*S S 08 55 02.0 +2.7
CLL Collm 89.72 321 ⇑*i*P **P 08 44 10.1 0.0**
CLL *e*S S 08 55 00.0 +0.3
CLL pmax pmax
comp=Z,50nm,1.2s,mb5.7
CLL MLR MLR
comp=Z,15µm,23.3s,MS6.4
CLL Collm 89.72 321 *e*P **P 08 44 10.2 +0.1**
comp=Z,696nm,1.7s,mb6.7
CLL *e*S S 08 55 00.8 +1.1
CLL Collm 89.72 321 ⇑*i*P **P 08 44 10.1 0.0**
comp=Z,50nm,1.2s,mb5.7
CLL *i* P2 pP 08 44 18.4 -1.7
comp=Z,152nm,1.5s
CLL *e*P3 08 44 28.0
comp=Z,188nm,1.3s
CLL *e*Pmax 08 44 32.0
CLL *e*PP PP 08 47 54.0 +12
CLL *e*PPP 08 49 52.0
CLL *e*PPPP 08 51 36.0
CLL *e*SKSac SKSac 08 54 40.0 +1.5
CLL *e*S S 08 55 00.0 +0.3
comp=N,12µm,20.8s
CLL *e*S S 08 55 00.0 +0.3
comp=E,2µm,12.3s
CLL *e*PS PS 08 56 15.0 +6.0
CLL *e*SS SS 09 00 42.0 -15
CLL *i* PKKPbc PKKPbc 09 01 42.6 -2.8
CLL *e*SSS 09 04 47.0
CLL *e*SSSS 09 08 00.0
CLL *e*PKPPKPdf 09 10 13.0
CLL Collm 89.72 321 ⇑*i*P **P 08 44 10.1 0.0**
comp=E,50nm,1.2s,mb5.7
CLL *e*S S 08 55 00.0 +0.3
CLL *i* PKKP PKKPbc 09 01 42.6 -2.8
CLL LR LR
comp=Z,15µm,23.3s,MS6.4
RGN Rugen 89.73 324 *e*P **P 08 44 10.8 +0.7**
comp=Z,2µm,1.6s,mb7.2
RGN *e*S S 08 55 01.2 +1.5
RGN Rugen 89.73 324 *e*P **P 08 44 10.4 +0.3**
comp=Z,2µm,1.5s,mb7.1
ABTA Abfaltersbach 89.77 317 ⇑*i*P **P 08 44 10.2 -0.3**
comp=Z,33nm,1.0s,mb5.6,SNR=12
ABTA ⇑*i*P 08 44 27.7
comp=Z,80nm,1.1s
STEI Steigen 89.90 338 *e*P **P 08 44 10.8 +0.2**
HFA0 Hagfors New Ar 89.93 330 P **P 08 44 15.0 +4.1**
SEST Monte Rota 89.97 317 P **P 08 44 11.6 +0.2**
NKC Novy Kostel 90.01 320 *e*P **P 08 44 12.1 +0.6**
NKC *e**PP pP 08 44 21.0 -0.4
NKC *e* 08 44 29.7
NKC MLR MLR
comp=Z,20µm,20.3s,MS6.5
NKC Novy Kostel 90.01 320 *e*P **P 08 44 12.1 +0.6**
NKC *e*pP pP 08 44 21.0 -0.4
NKC *e*sP sP 08 44 29.7 +4.7
NKC *ex* x 08 44 34.6
NKC *e*PP PP 08 47 55.0 +10
NKC *e*S S 08 55 10.2 +7.8
NKC AMS AMS 09 30 00.0
comp=Z,20µm,20.3s
NKC Novy Kostel 90.01 320 *e*P **P 08 44 12.1 +0.6**
NKC *e*pP pP 08 44 21.0 -0.4
NKC *e* 08 44 29.7
NKC *e* 08 44 34.6
NKC *e*PP PP 08 47 55.0 +10
NKC *e*S S 08 55 10.2 +7.8
TANN Tannenbergstha 90.01 320 *e*P **P 08 44 11.9 +0.4**
comp=Z,543nm,1.6s,mb6.6
TANN *e*S S 08 55 05.6 +3.2
WERN Wernitzgruen 90.06 320 *e*P **P 08 44 12.3 +0.6**
comp=Z,359nm,1.5s,mb6.5
MOR8 Moi Rana 90.06 336 *e*P **P 08 44 11.1 -0.2**
MOR8 AMb AMB 08 44 37.2
comp=Z,588nm,1.9s,mb6.6
GUNZ Gunzen 90.09 320 *e*P **P 08 44 12.4 +0.5**
comp=Z,676nm,1.6s,mb6.7
SFI Santa Sofia 90.10 314 P **P 08 44 13.2 +1.1**
WERD Werda 90.11 320 *e*P **P 08 44 12.3 +0.3**
comp=Z,592nm,1.7s,mb6.6
MANZ Manzenberg 90.21 320 *e*P **P 08 44 13.3 +0.8**
comp=Z,1µm,1.8s,mb7.0
MANZ *e*S S 08 55 07.8 +3.5
COP Copenhagen 90.31 326 ⇑*i*P **P 08 44 21.2 +8.4**
COP *i* 08 44 35.5
COP *i* S S 08 55 09.9 +4.9
COP pmax pmax
comp=Z,110nm,1.2s,mb6.1
COP MLR MLR
comp=Z,8µm,21.0s,MS6.1
COP Copenhagen 90.31 326 ⇑*i*P **P 08 44 21.2 +8.4**
comp=Z,113nm,1.2s,mb6.1
COP *i* 08 44 35.5
COP *i* S S 08 55 09.9 +4.9
COP
comp=Z,8µm,21.0s
VMG Vicchio 90.32 314 P **P 08 44 14.0 +0.9**
CTI Castel Tesino 90.33 316 P **P 08 44 13.7 +0.6**
WTTA Wattenberg 90.40 317 P sP 08 44 36.5 +10
comp=Z,375nm,1.6s
WTTA Wattenberg 90.40 317 ⇑*i*P **P 08 44 13.0 -0.4**
comp=Z,72nm,0.9s,mb6.0,SNR=22
WTTA ⇑*i*pP pP 08 44 21.4 -1.9
comp=Z,375nm,1.6s
WTTA Wattenberg 90.40 317 P **P 08 44 13.5 +0.1**
WATA Walderalm 90.44 317 ⇑*i*P **P 08 44 13.3 -0.3**
comp=Z,31nm,0.6s,mb5.8
SEI Scarperia 90.46 314 P **P 08 44 15.0 +1.2**
MAON Monte Argentar 90.56 312 P **P 08 44 14.8 +0.5**
LOF Lofoten 90.56 338 *e*P **P 08 44 16.8 +3.1**
MOX Moxa 90.56 320 *ce*P **P 08 44 14.7 +0.6**
comp=Z,259nm,1.9s,mb6.2
MOX *e* 08 44 31.9
comp=Z,772nm,1.8s
MOX
comp=Z,15µm,21.0s
MOX Moxa 90.56 320 *ce*P **P 08 44 14.7 +0.6**
MOX *e* 08 44 31.9
MOX pmax pmax
comp=Z,259nm,1.9s,mb6.2
MOX MLR MLR
comp=Z,15µm,21.0s,MS6.4
MOX Moxa 90.56 320 *e*P **P 08 44 14.5 +0.4**
comp=Z,763nm,1.7s,mb6.8
MOX *e*S S 08 55 09.9 +2.4
FNVD Fontana Vidola 90.63 314 P **P 08 44 15.7 +1.1**
STOK Stokkvaagen 90.64 336 *e*P **P 08 44 14.8 +0.7**
FUR Furstenfeldbru 90.68 318 *e*P **P 08 44 14.4 -0.3**
FUR *e*S S 08 55 08.9 +0.2
FUR pmax pmax
comp=Z,763nm,1.8s,mb6.7
FUR Furstenfeldbru 90.68 318 *e*P **P 08 44 14.4 -0.3**
comp=Z,763nm,1.8s,mb6.7
FUR *e*S S 08 55 08.9 +0.2
SQTA Sankt Quirin 90.69 317 ⇑*i*P **P 08 44 14.8 0.0**
comp=Z,23nm,0.7s,mb5.6
SQTA ⇑*i*P pP 08 44 23.5 -1.1
comp=Z,52nm,0.7s
SQTA Sankt Quirin 90.69 317 ⇑*i*P **P 08 44 14.8 0.0**
comp=Z,23nm,0.7s,mb5.6
SQTA ⇑*i*pP pP 08 44 23.5 -1.2
comp=Z,52nm,0.7s
HSP Hornsund 90.72 347 *e*P **P 08 44 13.5 -0.8**
MOTA Moosalm 90.76 317 ⇑*i*P **P 08 44 14.9 -0.2**
comp=Z,58nm,1.0s,mb5.9,SNR=20
MOTA Moosalm 90.76 317 P **P 08 44 15.1 0.0**
GRA1 Grafenberg Arr 90.77 320 *e*P **P 08 44 15.8 +0.7**
comp=Z,1µm,1.8s,mb7.0
GRA1 *e*S S 08 55 12.4 +2.9
GRA1 LR LR
comp=Z,15µm,20.2s,MS6.4
GRF Grafenberg Arr 90.77 320 *e*P **P 08 44 15.8 +0.7**
GRF *e*S S 08 55 12.4 +2.9
GRF pmax pmax
comp=Z,1µm,1.8s,mb7.0
GRF MLR MLR
comp=Z,15µm,20.2s,MS6.4
GRF Grafenberg Arr 90.77 320 *e*P **P 08 44 15.8 +0.7**
comp=Z,1µm,1.8s,mb7.0
GRF *e*S S 08 55 12.4 +2.9
GRF *e*L 09 33 53.6
comp=Z,15µm,20.2s
GRFO Grafenberg 90.77 320 P **P 08 44 16.3 +1.2**
NSS Namsos 90.99 334 *e*P **P 08 44 14.2 -1.5**
NSS AMb AMB 08 44 41.1
comp=Z,641nm,2.0s,mb6.6
NSS *e*SS SS 09 01 15.5 +1.2
NSS AMS AMS 09 31 46.0
comp=Z,23µm,18.0s,MS6.7
RETA Reutte 91.00 317 P sP 08 44 39.1 +9.4
comp=Z,372nm,1.5s
RETA Reutte 91.00 317 ⇑*i*P **P 08 44 16.3 +0.1**
comp=Z,63nm,0.8s,mb6.0,SNR=13
RETA ⇑*i*pP pP 08 44 24.6 -1.5
comp=Z,372nm,1.5s
BDI Bagni Di Lucca 91.00 314 P **P 08 44 16.1 -0.2**
FETA Feichten 91.01 317 P sP 08 44 39.4 +10
comp=Z,295nm,1.4s
FETA Feichten 91.01 317 ⇑*i*P **P 08 44 16.4 +0.1**
comp=Z,35nm,1.0s,mb5.7,SNR=14
FETA ⇑*i*pP pP 08 44 25.0 -1.2

comp=Z,295nm,1.4s
PII Pisa 91.05 314 P **P** **08 44 17.3 +0.8**
MABI Malga Bissina 91.12 316 P **P** **08 44 17.4 +0.6**
ERBM Eremo 91.15 314 P **P** **08 44 18.6 +1.6**
VLC Villacollemand 91.16 314 P **P** **08 44 14.7 -2.3**
comp=Z,86nm,1.0s,mb6.0
VLC LR LR
comp=Z,12µm,20.0s,MS6.3
NB2 NORSAR Subarra 91.19 331 P **P** **08 44 16.3 -0.5**
comp=Z,496nm,1.7s,mb6.6,baz=95,slow=4.6
NB2 NORSAR Subarra 91.19 331 P **P** **08 44 17.0 +0.2**
NOA NORSAR Array B 91.19 331 P **P** **08 44 16.0 -0.8**
comp=Z,11nm,0.8s,baz=94,slow=4.6,SNR=19
NOA PP PP 08 47 38.7 -15
comp=Z,5.0nm,0.8s,baz=124,slow=6.9,SNR=3.5
NOA LR LR 09 34 14.9
comp=Z,13µm,18.0s,MS6.4,baz=100,slow=41
NOA NORSAR Array B 91.19 331 P **P** **08 44 16.0 -0.8**
NOA PP PP 08 47 38.7 -15
NOA LR LR 09 34 14.9
BRMO Bormio 91.23 316 P **P** **08 44 17.9 +0.6**
NAO01 NORSAR Array S 91.35 331 *eP* **P** **08 44 17.4 -0.1**
comp=Z,301nm,1.5s,mb6.4
NAO01 LR LR
comp=Z,23µm,21.0s,MS6.6
HDH Heidenheim-Cha 91.40 318 P **P** **08 44 18.5 +0.5**
UBR Ueberruh 91.45 317 P **P** **08 44 18.5 +0.2**
BSEG Bad Segeberg 91.47 324 *eP* **P** **08 44 18.7 +0.5**
BSEG *eS* S 08 55 17.2 +1.6
BSEG pmax pmax
comp=Z,691nm,1.7s,mb6.7
BSEG Bad Segeberg 91.47 324 *eP* **P** **08 44 18.7 +0.5**
comp=Z,691nm,1.7s,mb6.7
BSEG *eS* S 08 55 17.2 +1.6
NRDL Niedersach Rie 91.56 322 *eP* **P** **08 44 19.3 +0.6**
comp=Z,1µm,1.8s,mb6.9
NRDL *eS* S 08 55 17.2 +0.7
UBBA Unterbreizbach 91.59 321 *eP* **P** **08 44 19.0 +0.1**
comp=Z,656nm,1.8s,mb6.7
UBBA *eS* S 08 55 18.3 +1.4
DAVA Damuels 91.59 317⇑*iP* **P** **08 44 19.5 +0.5**
comp=Z,95nm,0.9s,mb6.1,SNR=29
DAVA Damuels 91.59 317 P sP 08 44 42.9 +10
comp=Z,541nm,1.4s
DAVA Damuels 91.59 317⇑*i*PcP PcP 08 44 19.5 -0.4
comp=Z,95nm,0.9s,SNR=29
DAVA ⇑*i*pP pP 08 44 27.6 -1.3
comp=Z,541nm,1.4s
DAVA Damuels 91.59 317 P **P** **08 44 19.3 +0.3**
KBS Kingsbay 91.61 349 *eP* **P** **08 44 17.8 -0.6**
KBS AMS AMS 09 32 31.9
comp=Z,54µm,21.0s,MS7.0
KBS Kingsbay 91.61 349 *eP* **P** **08 44 16.1 -2.3**
KBS pmax pmax
comp=Z,107nm,1.1s,mb6.1
KBS MLR MLR
comp=Z,59µm,22.0s,MS7.0
KBS Kingsbay 91.61 349 *eP* **P** **08 44 16.1 -2.3**
comp=Z,107nm,1.1s,mb6.1
KBS LR LR
comp=Z,59µm,22.0s,MS7.0
KEST Kesra 91.75 306 P **P** **08 44 21.4 +1.4**
comp=Z,38nm,0.9s,mb5.7,baz=32,slow=1.2,SNR=42
KEST LR LR 09 27 08.0
comp=Z,10µm,18.7s,MS6.3,baz=211,slow=36
VSL Villasalto 91.80 309 *eP* **P** **08 44 19.6 -0.5**
comp=Z,146nm,1.0s,mb6.3
VSL *e*PP PP 08 47 52.4 -6.9
VSL LR LR
comp=Z,12µm,21.0s,MS6.3
SIND Sindeldorf 91.81 319 P **P** **08 44 20.5 +0.6**
TUE Stuetta 91.94 316 *eP* **P** **08 44 20.6 +0.1**
comp=Z,329nm,1.4s,mb6.5
TUE LR LR
comp=Z,15µm,20.0s,MS6.4
KONO Kongsberg 91.96 329 *eP* **P** **08 44 20.1 -0.3**
KONO *e*PP PP 08 47 59.3 -0.7
KONO *e*SKS 08 54 52.3
KONO AMS AMS 09 32 14.8
comp=Z,19µm,17.4s,MS6.6
KONO Kongsberg 91.96 329⇑*eP* **P** **08 44 20.6 +0.2**
BUCH Bad Urach 91.97 318 P **P** **08 44 21.2 +0.5**
CORF Corte 92.02 312 *eP* **P** **08 44 20.7 -0.4**
STU Stuttgart 92.08 319 *eP* **P** **08 44 21.8 +0.6**
STU pmax pmax
comp=Z,32nm,0.8s,mb5.7
STU Stuttgart 92.08 319 *eP* **P** **08 44 21.2 0.0**
comp=Z,645nm,1.7s,mb6.7
STU *eS* S 08 55 22.6 +1.2
STU Stuttgart 92.08 319 *eP* **P** **08 44 21.8 +0.6**
comp=Z,32nm,0.8s,mb5.7
GUT Gutenstein 92.12 318 P **P** **08 44 21.8 +0.4**
PGF Pioggiola 92.14 312 *eP* **P** **08 44 21.6 0.0**
comp=Z,764nm,1.6s,mb6.5
PGF Pioggiola 92.14 312 *eP* **P** **08 44 21.6 0.0**
PGF pmax pmax
comp=Z,382nm,1.6s,mb6.5
PGF Pioggiola 92.14 312 *eP* **P** **08 44 21.6 0.0**
comp=Z,382nm,1.6s,mb6.5
SNAA Sanae 92.14 198 *eP* **P** **08 44 21.5 +0.5**
SNAA pmax pmax
comp=Z,33nm,1.0s
SNAA Sanae 92.14 198 *eP* **P** **08 44 21.5 +0.5**
comp=Z,33nm,1.0s,mb5.6
MUD Monsted U'grnd 92.16 326 *eP* pP 08 44 32.6 +1.3
MUD *i* S S 08 55 25.3 +3.5
MUD pmax pmax
comp=Z,360nm,1.5s,mb6.5
MUD MLR MLR
comp=Z,21µm,20.0s,MS6.6
MUD Monsted U'grnd 92.16 326⇑*iP* pP 08 44 30.4 -0.9
MUD Monsted U'grnd 92.16 326 *iP* **P** **08 44 32.6 +11**
comp=Z,359nm,1.5s,mb6.5
MUD *i* 08 47 51.8
MUD *i* S S 08 55 25.3 +3.5
MUD *i* 08 58 43.6
MUD
comp=Z,21µm,20.0s
NIKO Nikolski 92.26 37 *eP* **P** **08 44 20.7 -1.2**
comp=Z,261nm,0.9s,mb6.6
NIKO *e*pP pP 08 44 29.8 -2.0
VAI Varese 92.34 316 P **P** **08 44 22.1 -0.3**
TOD Tromm 92.34 319 *eP* **P** **08 44 22.6 +0.2**
SPAK Spaichingen-Ko 92.34 318 *eP* **P** **08 44 22.6 +0.2**
TNS Taunus Mts 92.57 320 *eP* **P** **08 44 23.9 +0.5**
TNS *eS* S 08 55 28.0 +2.3
TNS pmax pmax
comp=Z,609nm,1.7s,mb6.8
TNS Taunus Mts 92.57 320 *eP* **P** **08 44 23.9 +0.5**
comp=Z,609nm,1.7s,mb6.8
TNS *eS* S 08 55 28.0 +2.3
BFO Black Forest 92.65 318 P **P** **08 44 23.1 -0.7**
comp=Z,198nm,1.0s,mb6.5,SNR=11
BFO Black Forest 92.65 318 *eP* **P** **08 44 23.5 -0.3**
comp=Z,309nm,1.7s,mb6.5
BFO *eS* S 08 55 27.5 +1.0
BFO Black Forest 92.65 318 *eP* **P** **08 44 23.5 -0.3**
comp=Z,309nm,1.7s,mb6.5
BFO *eS* S 08 55 27.5 +1.0
BFO LR LR
comp=Z,11µm,21.0s,MS6.3
FIN Finale Ligure 92.73 314 P **P** **08 44 24.2 -0.1**
KTD Kalmit 92.81 319 *eP* **P** **08 44 25.5 +1.0**
FELD Feldberg im Sc 92.87 318 *eP* **P** **08 44 26.0 +1.2**
HLG Helgoland 92.90 324 *eS* S 08 55 29.7 +1.2
KIZ Kirchzarten 92.92 318 P **P** **08 44 25.3 +0.2**
MOL Molde 92.94 332 *eP* **P** **08 44 25.6 +0.7**
MOL AMS AMS 09 33 34.2
comp=Z,24µm,21.4s,MS6.6
LANF Langenberg 93.00 319 *eP* **P** **08 44 26.0 +0.6**
IBBN Ibbenburen 93.00 322 *eS* S 08 55 30.6 +1.2
LIBD Limburg 93.14 318 *eP* **P** **08 44 25.6 -0.5**
ABH Alteburg 93.16 320 *eP* **P** **08 44 24.5 -1.6**
SAOF Saorge 93.20 314 *eP* **P** **08 44 26.5 0.0**
BBS Basel-Blauen 93.20 317 *eP* **P** **08 44 25.6 -0.8**
SBF Sospel 93.28 314 *eP* **P** **08 44 26.7 -0.2**
comp=Z,883nm,1.6s,mb6.7
SBF Sospel 93.28 314 *eP* **P** **08 44 26.7 -0.2**
SBF pmax pmax
comp=Z,441nm,1.6s,mb6.6
SBF Sospel 93.28 314 *eP* **P** **08 44 26.7 -0.2**
comp=Z,442nm,1.6s,mb6.6
AUTN L'Aution 93.29 314 *eP* **P** **08 44 27.7 +0.8**
BUG Bochum--Univer 93.31 321 *eP* **P** **08 44 26.9 +0.1**
comp=Z,465nm,1.8s,mb6.6
BUG *eS* S 08 55 34.1 +1.9
REVF Revere 93.33 314 *eP* **P** **08 44 26.6 -0.5**
LUCF Luceram 93.35 314 *eP* **P** **08 44 27.4 +0.2**
CDF Champ du Feu 93.35 318 *eP* **P** **08 44 26.7 -0.4**
comp=Z,575nm,1.8s,mb6.4
CDF Champ du Feu 93.35 318 *eP* **P** **08 44 26.7 -0.4**
CDF pmax pmax
comp=Z,288nm,1.8s,mb6.4
CDF Champ du Feu 93.35 318 *eP* **P** **08 44 26.7 -0.4**
comp=Z,288nm,1.8s,mb6.4
TOUF Mont Tournerai 93.42 314 *eP* **P** **08 44 27.7 +0.2**
ECH Echery 93.43 318 *eP* **P** **08 44 27.4 0.0**
ECH Echery 93.43 318 *eP* **P** **08 44 27.2 -0.2**
MOF Molkenrain 93.45 318 *eP* **P** **08 44 27.9 +0.4**
RUP Ruppelstein 93.47 319 *eP* **P** **08 44 27.7 +0.1**
MVIF Mont Vial 93.49 314 *eP* **P** **08 44 27.7 -0.1**
BLS5 Blasjo 93.57 329 *eP* **P** **08 44 31.1 +3.3**
WTSB Winterswijk 93.59 322 *eP* **P** **08 44 36.4 +8.3**
WTSB Winterswijk 93.59 322 *ex* x 08 44 50.1
comp=Z,207nm,2.2s
HINF Hinteralfeld 93.64 318 *eP* **P** **08 44 27.7 -0.7**
comp=Z,320nm,1.6s,mb6.2
HINF Hinteralfeld 93.64 318 *eP* **P** **08 44 27.7 -0.7**
HINF pmax pmax
comp=Z,160nm,1.6s,mb6.2
HINF Hinteralfeld 93.64 318 *eP* **P** **08 44 27.7 -0.7**
comp=Z,160nm,1.6s,mb6.2
UNV Unalaska Valle 93.66 36 P **P** **08 44 28.1 -0.2**
comp=Z,71nm,1.0s,mb6.0
CALN Calern 93.68 314 *eP* **P** **08 44 26.6 -2.1**
MBDF Montbardon 93.75 315 *eP* **P** **08 44 28.2 -0.8**
comp=Z,189nm,1.4s,mb6.0
MBDF Montbardon 93.75 315 *eP* **P** **08 44 28.2 -0.8**
MBDF pmax pmax
comp=Z,95nm,1.4s,mb6.0
MBDF Montbardon 93.75 315 *eP* **P** **08 44 28.2 -0.8**
comp=Z,94nm,1.4s,mb6.0
LPG La Plagne 93.75 315 *eP* **P** **08 44 29.1 +0.1**
comp=Z,453nm,1.7s,mb6.3
LPG La Plagne 93.75 315 *eP* **P** **08 44 29.1 +0.1**
LPG pmax pmax
comp=Z,227nm,1.7s,mb6.3
LPG La Plagne 93.75 315 *eP* **P** **08 44 29.1 +0.1**
comp=Z,227nm,1.7s,mb6.3
LPL La Plagne 93.77 315 *eP* **P** **08 44 29.1 +0.1**
comp=Z,570nm,1.6s,mb6.5
LPL La Plagne 93.77 315 *eP* **P** **08 44 29.1 +0.1**
LPL pmax pmax
comp=Z,285nm,1.6s,mb6.5
LPL La Plagne 93.77 315 *eP* **P** **08 44 29.1 +0.1**
comp=Z,285nm,1.6s,mb6.5
BNI Bardonecchia 93.81 315 *eP* **P** **08 44 27.8 -1.5**
BNI pmax pmax
comp=Z,98nm,1.3s,mb6.1
BNI MLR MLR
comp=Z,18µm,22.0s,MS6.5
BNI Bardonecchia 93.81 315 *eP* **P** **08 44 27.8 -1.5**
comp=Z,98nm,1.3s,mb6.1
BNI LR LR
comp=Z,18µm,22.0s,MS6.5
RSL Roselend 93.84 315 *eP* **P** **08 44 29.5 +0.1**
FRF La Foret Royal 93.86 313 *eP* **P** **08 44 29.5 0.0**
comp=Z,518nm,1.6s,mb6.4
FRF La Foret Royal 93.86 313 *eP* **P** **08 44 29.5 0.0**
FRF pmax pmax
comp=Z,259nm,1.6s,mb6.4
FRF La Foret Royal 93.86 313 *eP* **P** **08 44 29.5 0.0**
comp=Z,259nm,1.6s,mb6.4
LMR La Mourre 93.96 313 *eP* **P** **08 44 30.0 0.0**
comp=Z,347nm,1.6s,mb6.2
LMR La Mourre 93.96 313 *eP* **P** **08 44 30.0 0.0**
LMR pmax pmax
comp=Z,174nm,1.6s,mb6.2
LMR La Mourre 93.96 313 *eP* **P** **08 44 30.0 0.0**
comp=Z,174nm,1.6s,mb6.2
HAU Haudompre 93.98 318 *eP* **P** **08 44 29.4 -0.6**
comp=Z,823nm,1.7s,mb6.6
HAU *e*MLR MLR
comp=Z,17µm,22.5s,MS6.1
HAU Haudompre 93.98 318 *eP* **P** **08 44 29.4 -0.6**
HAU pmax pmax
comp=Z,412nm,1.7s,mb6.6
HAU MLR MLR
comp=Z,17µm,22.5s,MS6.4
HAU Haudompre 93.98 318 *eP* **P** **08 44 29.4 -0.6**
comp=Z,412nm,1.7s,mb6.6
HAU LR LR
comp=Z,17µm,22.5s,MS6.4
WLF Walferdange 94.06 319 P **P** **08 44 31.0 +0.7**
comp=Z,150nm,2.1s,mb6.1
WLF AP pP 08 44 39.4 -0.8
WLF Walferdange 94.06 319 *eP* **P** **08 44 27.8 -2.5**
WLF pmax pmax
comp=Z,303nm,1.6s,mb6.5
WLF MLR MLR
comp=Z,15µm,21.0s,MS6.4
WLF Walferdange 94.06 319 *eP* **P** **08 44 30.7 +0.4**
comp=Z,426nm,1.8s,mb6.6
WLF *eS* S 08 55 41.1 +2.2
WLF Walferdange 94.06 319 *eP* **P** **08 44 27.8 -2.5**
comp=Z,303nm,1.6s,mb6.5
WLF LR LR
comp=Z,15µm,21.0s,MS6.4
AKUT Akutan 94.08 36 *eP* **P** **08 44 31.3 +1.0**
comp=Z,408nm,1.3s,mb6.7
AKUT LR LR
comp=Z,16µm,20.0s,MS6.5
BER Bergen 94.09 330 *eP* **P** **08 44 38.1 +7.9**
BER *e*SS SS 09 01 59.8 +0.8
BER AMS AMS 09 32 28.4
comp=Z,21µm,22.4s,MS6.5
MEM Membach 94.13 320 P **P** **08 44 30.3 -0.3**
comp=Z,60nm,2.1s,mb5.7
MEM AP pP 08 44 39.8 -0.7
HGN Heimansgroeve 94.17 321 *eP* **P** **08 44 38.6 +7.8**
comp=Z,82nm,2.3s,mb5.7
HGN Heimansgroeve 94.17 321 *ex* x 08 44 52.7
comp=Z,145nm,2.2s
HGN Heimansgroeve 94.17 321 *e*PP PP 08 48 35.7 +18
HGN Heimansgroeve 94.17 321 *e*PPP 08 50 33.2
HGN Heimansgroeve 94.17 321 *e*S S 08 55 33.6 -6.2
HGN Heimansgroeve 94.17 321 *e*SS SS 09 01 35.1 -26
CABF La Chapelle 94.19 316 *eP* **P** **08 44 31.2 +0.2**
comp=Z,705nm,1.7s,mb6.5
CABF La Chapelle 94.19 316 *eP* **P** **08 44 31.2 +0.2**
CABF pmax pmax
comp=Z,353nm,1.7s,mb6.5
CABF La Chapelle 94.19 316 *eP* **P** **08 44 31.2 +0.2**
comp=Z,353nm,1.7s,mb6.5
THEF They Montfort 94.22 318 *eP* **P** **08 44 31.2 +0.2**
TAVF Tavernes 94.29 313 *eP* **P** **08 44 31.2 -0.3**
ORIF Oris-en-Rattie 94.38 315 *eP* **P** **08 44 32.0 +0.1**
comp=Z,475nm,1.6s,mb6.4
ORIF *e*MLR MLR
comp=Z,25µm,21.8s,MS6.3
ORIF Oris-en-Rattie 94.38 315 *eP* **P** **08 44 32.0 +0.1**
ORIF pmax pmax
comp=Z,238nm,1.6s,mb6.4
ORIF Oris-en-Rattie 94.38 315 *eP* **P** **08 44 32.0 +0.1**
comp=Z,238nm,1.6s,mb6.4
STOF St-Etienne Org 94.39 314 *eP* **P** **08 44 31.8 -0.1**
VILF Villemus 94.53 314 *eP* **P** **08 44 31.1 -1.5**
PUYF Puyloubier 94.55 313 *eP* **P** **08 44 31.5 -1.2**
BERF Bertagne 94.56 313 *eP* **P** **08 44 31.5 -1.2**
BCLA Clavier 94.58 320 P **P** **08 44 34.2 +1.5**
comp=Z,67nm,2.1s,mb5.7
SMRF Simiane la Rot 94.63 314 *eP* **P** **08 44 33.5 +0.5**
comp=Z,415nm,1.8s,mb6.3
SMRF Simiane la Rot 94.63 314 *eP* **P** **08 44 33.5 +0.5**
comp=Z,415nm,1.8s,mb6.6
GELF Grande-Etoile 94.75 313 *eP* **P** **08 44 31.3 -2.3**
TREF Trevaresse 94.78 313 *eP* **P** **08 44 31.8 -1.9**
MEZF Maizieres J'vi 94.83 318 *eP* **P** **08 44 33.7 -0.1**
comp=Z,754nm,1.8s,mb6.5
MEZF Maizieres J'vi 94.83 318 *eP* **P** **08 44 33.7 -0.1**
comp=Z,754nm,1.8s,mb6.8
GIVF Givet 94.91 320 *eP* **P** **08 44 33.9 -0.3**
comp=Z,377nm,1.7s,mb6.2
GIVF Givet 94.91 320 *eP* **P** **08 44 33.9 -0.3**
GIVF pmax pmax
comp=Z,188nm,1.7s,mb6.2
GIVF Givet 94.91 320 *eP* **P** **08 44 33.9 -0.3**
comp=Z,188nm,1.7s,mb6.2
TAM Tamanrasset 94.96 293 *eP* **P** **08 44 36.4 +1.4**
DOU Dourbes 95.05 320 P **P** **08 44 35.0 +0.2**
comp=Z,77nm,2.4s,mb5.7
DOU AP pP 08 44 43.4 -1.3
SNF Seneffe 95.23 320 P **P** **08 44 36.4 +0.8**
comp=Z,86nm,2.1s,mb5.8
SNF AP pP 08 44 44.8 -0.7
VIVF Saint-Julien-l 95.24 315 *eP* **P** **08 44 35.5 -0.3**
comp=Z,307nm,1.9s,mb6.1
VIVF Saint-Julien-l 95.24 315 *eP* **P** **08 44 35.5 -0.3**
VIVF pmax pmax
comp=Z,153nm,1.9s,mb6.1
VIVF Saint-Julien-l 95.24 315 *eP* **P** **08 44 35.5 -0.3**
comp=Z,153nm,1.9s,mb6.1
BAIF Baives 95.31 320 *eP* **P** **08 44 35.9 -0.1**
comp=Z,566nm,1.7s,mb6.4
BAIF Baives 95.31 320 *eP* **P** **08 44 35.9 -0.1**
BAIF pmax pmax
comp=Z,283nm,1.7s,mb6.4
BAIF Baives 95.31 320 *eP* **P** **08 44 35.9 -0.1**
comp=Z,283nm,1.7s,mb6.4
SSB Saint Sauveur 95.32 315 *eP* **P** **08 44 36.1 -0.1**
LOR Lormes 95.69 317 *eP* **P** **08 44 37.5 -0.3**
comp=Z,520nm,1.8s,mb6.4
LOR *e*MLR MLR
comp=Z,15µm,22.0s,MS6.1
LOR Lormes 95.69 317 *eP* **P** **08 44 37.5 -0.3**
LOR pmax pmax
comp=Z,260nm,1.8s,mb6.4
LOR MLR MLR
comp=Z,15µm,22.0s,MS6.4
LOR Lormes 95.69 317 *eP* **P** **08 44 37.5 -0.3**
comp=Z,260nm,1.8s,mb6.4
LOR LR LR
comp=Z,15µm,22.0s,MS6.4
SMF Signal de Mont 95.74 316 *eP* **P** **08 44 37.6 -0.4**
comp=Z,378nm,1.7s,mb6.2
SMF Signal de Mont 95.74 316 *eP* **P** **08 44 37.6 -0.4**
SMF pmax pmax
comp=Z,189nm,1.7s,mb6.2
SMF Signal de Mont 95.74 316 *eP* **P** **08 44 37.6 -0.4**
comp=Z,189nm,1.7s,mb6.2
LASF Ste Croix 95.86 314 *eP* **P** **08 44 38.7 0.0**
comp=Z,207nm,1.6s,mb6.0
PLDF La Plantade 95.93 316 *eP* **P** **08 44 39.2 +0.3**
SSF Saint Saulge 95.94 317 *eP* **P** **08 44 38.6 -0.4**
comp=Z,363nm,1.7s,mb6.2
SSF Saint Saulge 95.94 317 *eP* **P** **08 44 38.6 -0.4**
SSF pmax pmax
comp=Z,182nm,1.7s,mb6.2
SSF Saint Saulge 95.94 317 *eP* **P** **08 44 38.6 -0.4**
comp=Z,182nm,1.7s,mb6.2
AVF Avril sur Loir 96.06 317 *eP* **P** **08 44 39.2 -0.3**
comp=Z,267nm,1.6s,mb6.1
AVF Avril sur Loir 96.06 317 *eP* **P** **08 44 39.2 -0.3**
AVF pmax pmax
comp=Z,134nm,1.5s,mb6.2
AVF Avril sur Loir 96.06 317 *eP* **P** **08 44 39.2 -0.3**
comp=Z,134nm,1.5s,mb6.2
LBL Lubilhac 96.23 315 *eP* **P** **08 44 39.3 -1.0**
AGO Saint Agoulin 96.26 316 *eP* **P** **08 44 39.0 -1.4**
PYM Petit Puy Mans 96.37 316 *eP* **P** **08 44 39.0 -1.9**
BGF Bois d'Agland 96.43 316 *eP* **P** **08 44 41.2 0.0**
comp=Z,584nm,1.8s,mb6.4
BGF Bois d'Agland 96.43 316 *eP* **P** **08 44 41.2 0.0**
BGF pmax pmax
comp=Z,292nm,1.8s,mb6.4
BGF Bois d'Agland 96.43 316 *eP* **P** **08 44 41.2 0.0**
comp=Z,292nm,1.8s,mb6.4
TCF Toulx Ste Croi 96.89 316 *eP* **P** **08 44 43.2 -0.1**
comp=Z,248nm,1.9s,mb6.0
TCF Toulx Ste Croi 96.89 316 *eP* **P** **08 44 43.2 -0.1**
TCF pmax pmax
comp=Z,124nm,1.9s,mb6.0
TCF Toulx Ste Croi 96.89 316 *eP* **P** **08 44 43.2 -0.1**
comp=Z,124nm,1.9s,mb6.0
SDPT Sand Point 97.04 35 *eP* **P** **08 44 43.5 -0.3**
comp=Z,112nm,1.0s,mb6.2
SDPT LR LR
comp=Z,10µm,17.0s,MS6.4
CAF Calviac 97.09 315 *eP* **P** **08 44 44.3 +0.1**
comp=Z,206nm,1.6s,mb6.0
CAF Calviac 97.09 315 *eP* **P** **08 44 44.3 +0.1**
CAF pmax pmax
comp=Z,103nm,1.6s,mb6.0
CAF Calviac 97.09 315 *eP* **P** **08 44 44.3 +0.1**
comp=Z,103nm,1.6s,mb6.0
MTLF Montolieu 97.09 313 *eP* **P** **08 44 44.2 -0.1**
comp=Z,176nm,1.5s,mb6.0
MTLF Montolieu 97.09 313 *eP* **P** **08 44 44.2 -0.1**
MTLF pmax pmax
comp=Z,88nm,1.5s,mb6.0
MTLF Montolieu 97.09 313 *eP* **P** **08 44 44.2 -0.1**
comp=Z,88nm,1.5s,mb6.0
LRW Lerwick 97.34 330 *eP* **P** **08 44 53.2 +8.2**
LRW AMb AMB 08 45 02.0
comp=Z,178nm,1.6s,mb6.2
RJF Les Rejaudoux 97.45 315 *eP* **P** **08 44 46.0 +0.2**
comp=Z,367nm,1.7s,mb6.2
RJF *e*MLR MLR
comp=Z,18µm,21.2s,MS6.2
RJF Les Rejaudoux 97.45 315 *eP* **P** **08 44 46.0 +0.2**
RJF pmax pmax
comp=Z,183nm,1.7s,mb6.2
RJF MLR MLR
comp=Z,18µm,21.3s,MS6.5
RJF Les Rejaudoux 97.45 315 *eP* **P** **08 44 46.0 +0.2**
comp=Z,183nm,1.7s,mb6.2
RJF LR LR
comp=Z,18µm,21.3s,MS6.5
LFF La Frestale 98.03 315 *eP* **P** **08 44 48.7 +0.3**
comp=Z,223nm,1.5s,mb6.2
LFF La Frestale 98.03 315 *eP* **P** **08 44 48.7 +0.3**
LFF pmax pmax
comp=Z,111nm,1.5s,mb6.2
LFF La Frestale 98.03 315 *eP* **P** **08 44 48.7 +0.3**
comp=Z,111nm,1.5s,mb6.2
TTA Tatalina 98.12 27 *eP* **P** **08 44 48.9 +0.5**
TTA pmax pmax
comp=Z,178nm,1.5s,mb6.4
TTA Tatalina 98.12 27 *eP* **P** **08 44 48.9 +0.5**
comp=Z,178nm,1.5s,mb6.4
LDF La Druitiere 98.25 319 *eP* **P** **08 44 48.9 -0.5**
comp=Z,307nm,1.8s,mb6.2
LDF La Druitiere 98.25 319 *eP* **P** **08 44 48.9 -0.5**
LDF pmax pmax
comp=Z,154nm,1.8s,mb6.2
LDF La Druitiere 98.25 319 *eP* **P** **08 44 48.9 -0.5**
comp=Z,154nm,1.8s,mb6.2
DAG Danmarks Havn 98.32 348⇑*iP* **P** **08 44 47.9 -1.2**
DAG pmax pmax
comp=Z,19nm,0.9s,mb5.6
DAG MLR MLR
comp=Z,58µm,20.0s,MS7.1
DAG Danmarks Havn 98.32 348⇑*iP* **P** **08 44 47.9 -1.2**
comp=Z,19nm,0.9s,mb5.6
DAG
comp=Z,58µm,20.0s
IMA2 Indian Mountai 98.40 23 *eP* **P** **08 44 49.2 -0.4**
FLN La Foliniere 98.47 319 *eP* **P** **08 44 49.7 -0.6**
comp=Z,170nm,1.5s,mb6.0
FLN *e*MLR MLR
comp=Z,20µm,22.2s,MS6.3
FLN La Foliniere 98.47 319 *eP* **P** **08 44 49.7 -0.6**
FLN pmax pmax
comp=Z,85nm,1.5s,mb6.0
FLN MLR MLR
comp=Z,20µm,22.3s,MS6.6
FLN La Foliniere 98.47 319 *eP* **P** **08 44 49.7 -0.6**
comp=Z,85nm,1.5s,mb6.0
FLN LR LR
comp=Z,20µm,22.3s,MS6.6
MFF Saint Martin d 98.48 317 *eP* **P** **08 44 50.0 -0.4**
comp=Z,234nm,1.6s,mb6.2
MFF Saint Martin d 98.48 317 *eP* **P** **08 44 50.0 -0.4**
MFF pmax pmax
comp=Z,117nm,1.6s,mb6.2
MFF Saint Martin d 98.48 317 *eP* **P** **08 44 50.0 -0.4**
comp=Z,117nm,1.6s,mb6.2
EPF Esparros 98.48 313 *eP* **P** **08 44 50.1 -0.4**
KBI1 Birley Grange 98.55 323 *eP* pP 08 44 59.2 -1.4
TOA0 Torodi Ar. Sit 98.60 283 *eP* **P** **08 44 51.5 -0.2**
TORD Torodi Ar. Bea 98.60 283 P **P** **08 44 51.6 0.0**
comp=Z,4.3nm,1.0s,baz=89,slow=3.8,SNR=15
TORD PP PP 08 49 00.8 +8.1
comp=Z,4.0nm,1.1s,baz=119,slow=8.4,SNR=3.5
TORD PKKP PKKPbc 09 01 23.2 +2.5
comp=Z,2.1nm,1.1s,baz=294,slow=3.0,SNR=4.5
TORD LR LR 09 27 42.7
comp=Z,28µm,19.4s,MS6.8,baz=90,slow=34

SVW2	Sparrevohn	98.69	28	eP		pP		08 44 59.5	-1.5	
XAL	Allendale	98.71	325	eP		pP		08 45 00.4	-0.8	
RAR	Rarotonga	98.74	112		PFAKE			08 45 00.0	+7.8	
RAR					LR	LR				
	comp=Z,15µm,20.0s,MS6.5									
GRR	Gorron	98.76	319	eP		P		08 44 51.4	-0.2	
	comp=Z,144nm,1.5s,mb6.0									
GRR	Gorron	98.76	319	eP		P		08 44 51.4	-0.2	
GRR					pmax	pmax				
	comp=Z,72nm,1.5s,mb6.0									
GRR	Gorron	98.76	319	eP		P		08 44 51.4	-0.2	
	comp=Z,72nm,1.5s,mb6.0									
SWN1	Swindon	98.96	322	eP		pP		08 45 00.8	-1.6	
SWN1					AMb	AMB		08 45 06.0		
	comp=Z,166nm,1.8s,mb6.3									
STNC	Stoke	98.97	323	eP		pP		08 45 00.3	-2.2	
STNC					AMb	AMB		08 45 03.4		
	comp=Z,66nm,1.8s,mb5.9									
ETSF	Etsaut	99.15	313	eP		P		08 44 53.8	+0.3	
	comp=Z,31nm,1.2s,mb5.4									
ETSF	Etsaut	99.15	313	eP		P		08 44 53.8	+0.3	
ETSF					pmax	pmax				
	comp=Z,16nm,1.2s,mb5.4									
ETSF	Etsaut	99.15	313	eP		P		08 44 53.8	+0.3	
	comp=Z,16nm,1.2s,mb5.4									
ESK	Eskdalemuir	99.20	326		PFAKE			08 45 00.0	+6.6	
ESK					LR	LR				
	comp=Z,16µm,22.0s,MS6.5									
COLD	Coldfoot	99.42	22	eP		P		08 44 54.0	-0.1	
SJPF	Ste Jean	99.62	313	eP		Pdif		08 44 55.8	+0.5	
	comp=Z,163nm,1.8s									
SJPF	Ste Jean	99.62	313	eP		Pdif		08 44 55.8	+0.5	
SJPF					pmax	pmax				
	comp=Z,81nm,1.8s,mb5.8									
SJPF	Ste Jean	99.62	313	eP		Pdif		08 44 55.8	+0.5	
	comp=Z,81nm,1.8s									
MCH1	Michaelchurch	99.62	322	eP				08 45 04.1		
MCH1					AMb	AMB		08 45 14.6		
	comp=Z,68nm,1.7s,mb5.8									
PGBU	Glenifferbraes	99.82	326	eP				08 45 05.7		
PGBU					AMb	AMB		08 45 06.0		
	comp=Z,151nm,1.1s,mb6.3									
PPLA	Purkeypile	99.83	26	ePdif		Pdif		08 44 57.4	+1.2	
SGMF	Saint Gilles	99.90	319	eP		Pdif		08 44 56.3	-0.3	
	comp=Z,266nm,1.8s									
SGMF	Saint Gilles	99.90	319	eP		Pdif		08 44 56.3	-0.3	
SGMF					pmax	pmax				
	comp=Z,133nm,1.8s,mb6.1									
SGMF	Saint Gilles	99.90	319	eP		Pdif		08 44 56.3	-0.3	
	comp=Z,133nm,1.8s									
KSB	Sheil Bridge	100.05	328	eP				08 45 07.4		
QUIF	Quistinic	100.35	318	eP		Pdif		08 44 58.0	-0.6	
	comp=Z,160nm,1.5s									
QUIF	Quistinic	100.35	318	eP		Pdif		08 44 58.0	-0.6	
QUIF					pmax	pmax				
	comp=Z,80nm,1.5s									
QUIF	Quistinic	100.35	318	eP		Pdif		08 44 58.0	-0.6	
	comp=Z,80nm,1.5s									
KDAK	Kodiak Island	100.91	31		PFAKE			08 45 10.0	+8.9	
KDAK					LR	LR				
	comp=Z,9µm,20.0s,MS6.3									
COLA	College	101.08	24	eP		Pdif		08 45 03.9	+2.1	
COLA					pmax	pmax				
	comp=Z,62nm,1.6s									
COLA					MLR	MLR				
	comp=Z,29µm,19.0s,MS6.8									
COLA	College	101.08	24	ePdif		Pdif		08 45 03.9	+2.1	
	comp=Z,62nm,1.6s									
COLA					LR	LR				
	comp=Z,29µm,19.0s,MS6.8									
PMR	Palmer	101.57	27	eP		Pdif		08 45 04.1	+0.1	
PMR					pmax	pmax				
	comp=Z,6.0nm,0.6s									
PMR					MLR	MLR				
	comp=Z,22µm,19.0s,MS6.7									
PMR	Palmer	101.57	27	eP		Pdif		08 45 04.1	+0.1	
	comp=Z,6.0nm,0.6s									
PMR					LR	LR				
	comp=Z,22µm,19.0s,MS6.7									
KIP	Kipapa	101.84	69		PFAKE			08 45 20.0	+15	
KIP					LR	LR				
	comp=Z,10µm,21.0s,MS6.3									
ESDC	Sonseca Array	102.07	310	P		Pdif		08 45 08.2	+2.0	
	comp=Z,0.4nm,0.4s,baz=46,slow=5.5,SNR=3.2									
ESDC					PKKP	PKKPbc		09 01 19.5	+8.0	
	comp=Z,2.6nm,0.8s,baz=283,slow=3.6,SNR=8.5									
PAB	San Pablo	102.39	310		PFAKE			08 45 20.0	+12	
PAB					LR	LR				
	comp=Z,12µm,20.0s,MS6.4									
XMAS	Kiritimati	102.55	88		PFAKE			08 45 20.0	+12	
XMAS					LR	LR				
	comp=Z,11µm,22.0s,MS6.3									
MDT	Midelt	103.42	303		PP	PP		08 49 31.7	+3.0	
	comp=Z,3.7nm,0.9s,baz=106,slow=9.6,SNR=4.4									
PBRG	Braganca	103.84	313	ePdif				08 45 26.3		
PBRG	Braganca	103.84	313	ePP		PP		08 49 44.3	+13	
MVO	Moncorvo	104.16	312	ePdif				08 45 25.4		
MVO	Moncorvo	104.16	312	ePP		PP		08 49 42.9	+8.9	
MVO				*i* P		Sdif		08 57 08.2	+4.0	
MVO				*e*SS		SS		09 04 54.9	+34	
MVO	Moncorvo	104.16	312	eLQ				09 16 01.1		
MVO				eLR		LR		09 22 04.4		
POHA	Pohakuloa	104.24	70		PFAKE			08 45 30.0	+14	
POHA					LR	LR				
	comp=Z,9µm,22.0s,MS6.3									
SFS	San Fernando	104.26	307		PFAKE			08 45 30.0	+14	
SFS					LR	LR				
	comp=Z,34µm,20.0s,MS6.9									
SHEL	Horse Pasture	104.61	253		PFAKE			08 45 30.0	+12	
SHEL					LR	LR				
	comp=Z,54µm,20.0s,MS7.1									
PVRL	Vila Real	104.66	312	ePdif				08 45 32.5		
PVRL	Vila Real	104.66	312	ePP		PP		08 49 50.4	+13	
PBAR	Barrancos	104.66	309	ePdif				08 45 26.5		
PBAR	Barrancos	104.66	309	ePP		PP		08 49 48.2	+10	
PBAR				*i* P		Sdif		08 57 15.1	+6.7	
PBAR				*e*SS		SS		09 04 41.0	+13	
PBAR	Barrancos	104.66	309	eLR		LR		09 29 12.6		
MTE	Manteigas	104.68	311	ePdif				08 45 27.3		
MTE	Manteigas	104.68	311	ePP		PP		08 49 46.6	+8.8	
MTE				*i* P				08 56 27.9		
MTE				*e*SS		SS		09 04 54.6	+26	
MTE	Manteigas	104.68	311	eLR		LR		09 23 05.0		
MTE	Manteigas	104.68	311	PFAKE				08 45 30.0	+12	
MTE					LR	LR				
	comp=Z,12µm,20.0s,MS6.4									
PCBR	Castelo Branco	104.73	311	ePdif				08 45 30.5		
PCBR	Castelo Branco	104.73	311	ePP		PP		08 49 52.8	+15	
PMRV	Marv??o	104.73	310	ePdif				08 45 28.0		
PMRV	Marv??o	104.73	310	ePP		PP		08 49 47.6	+9.3	
PMRV				*i* P		Sdif		08 57 12.9	+3.9	
PMRV				*e*SS		SS		09 04 43.9	+15	
PMRV	Marv??o	104.73	310	eLR		LR		09 21 58.4		
DAWV	Dawson	104.76	23	ePdif		Pdif		08 45 14.4	-3.8	
BORG	Borgarnes	104.77	338		PFAKE			08 45 30.0	+12	
BORG					LR	LR				
	comp=Z,23µm,22.0s,MS6.7									
PCAB	Cabril	104.81	313	ePdif				08 45 32.5		
PCAB	Cabril	104.81	313	ePP		PP		08 49 42.9	+4.2	
PVIS	Viseu	104.89	312	ePP		PP		08 49 48.6	+9.2	
PESTR	Estremoz	104.98	310	ePdif				08 45 32.5		
PESTR	Estremoz	104.98	310	ePP		PP		08 49 53.8	+14	
PESTR				*i* P		Sdif		08 56 24.4	-47	
PESTR				*e*SS		SS		09 04 48.2	+16	
PESTR	Estremoz	104.98	310	eLR		LR		09 31 09.5		
DBIC	Dimbokro	105.04	276	Pdiff		Pdif		08 45 22.7	+3.2	
	comp=Z,6.1nm,1.1s,baz=69,slow=8.6,SNR=3.0									
DBIC					PP	PP		08 49 43.1	+1.6	
	comp=Z,4.7nm,1.0s,baz=58,slow=13,SNR=2.4									
DBIC	Dimbokro	105.04	276	Pdif		Pdif		08 45 22.7	+3.2	
DBIC					PP	PP		08 49 43.1	+1.7	
DBIC					LR	LR				
	comp=Z,43µm,21.0s,MS7.0									
RTC	Rabat Centre	105.14	305		PFAKE			08 49 50.0	+15	
RTC					LR	LR				
	comp=Z,14µm,19.0s,MS6.5									
PVAQ	Vaqueiros	105.32	308	ePdif				08 45 32.1		
PVAQ	Vaqueiros	105.32	308	ePP		PP		08 49 50.1	+7.4	
PVAQ				*i* P		Sdif		08 56 29.2	-45	
PVAQ				*e*SS		SS		09 04 41.1	+4.0	
PVAQ	Vaqueiros	105.32	308	eLR		LR		09 25 39.8		
PBEJ	Beja	105.33	309	ePdif				08 45 33.0		
PBEJ	Beja	105.33	309	ePP		PP		08 49 58.6	+16	
EVO	Evora	105.36	309	ePdif				08 45 31.3		
EVO	Evora	105.36	309	ePP		PP		08 49 51.6	+8.6	
PTOM	Tomar	105.47	311	ePP		PP		08 49 56.5	+13	
PBDV	Barranco-do-Ve	105.51	308	ePdif				08 45 32.0		
PBDV	Barranco-do-Ve	105.51	308	ePP		PP		08 49 56.5	+12	
PBDV				*i* P		Sdif		08 56 28.6	-47	
PBDV				*e*SS		SS		09 04 43.8	+4.0	
PBDV	Barranco-do-Ve	105.51	308	eLR		LR		09 25 38.7		
MORF	Marmelete	106.07	308	ePdif				08 45 39.0		
MORF	Marmelete	106.07	308	ePP		PP		08 49 56.2	+8.0	
MORF				*i* P		Sdif		08 57 32.6	+12	
MORF				*e*SS		SS		09 05 16.9	+30	
MORF	Marmelete	106.07	308	eLQ				09 22 51.0		
MORF				eLR		LR		09 26 21.0		
PTEO	Sao Teotonio	106.08	308	ePP		PP		08 50 01.7	+13	
LIS	Lisbon	106.20	310	eP		Pdif		08 45 33.8	+9.2	
PFVI	Vila Bisbo	106.24	308	ePdif				08 45 38.1		
PFVI	Vila Bisbo	106.24	308	ePP		PP		08 49 57.8	+8.3	
PFVI				*i* P		Sdif		08 57 23.5	+2.0	
PFVI				*e*SS		SS		09 05 18.4	+29	
PFVI	Vila Bisbo	106.24	308	eLR		LR		09 23 15.0		
PMAFR	Mafra	106.26	310	ePdif				08 45 38.7		
PMAFR	Mafra	106.26	310	ePP		PP		08 49 58.0	+8.4	
PMAFR				*i* P		Sdif		08 57 29.8	+8.1	
PMAFR				*e*SS		SS		09 05 08.6	+19	
TRIS	Tristan da Cun	106.45	230		PFAKE			08 49 50.0	+13	
TRIS					LR	LR				
	comp=Z,34µm,20.0s,MS6.9									
PPT	Papeete	108.74	109	ePP		PP		08 50 04.8	-3.6	
	comp=Z,3µm,27.5s									
PPT	Papeete	108.74	109	ePS		PS		08 59 33.5	-1.0	
	comp=Z,9µm,26.0s									
PPT	Papeete	108.74	109	eLR		LR		09 21 44.2		
	comp=Z,21µm,22.0s									
PPT	Papeete	108.74	109		PFAKE			08 49 50.0	+8.0	
PPT					LR	LR				
	comp=Z,919nm,20.0s,MS5.3									
SIT	Sitka	109.85	29		PFAKE			08 49 50.0	+7.1	
SIT					LR	LR				
	comp=Z,40µm,20.0s,MS7.0									
WRAK	Wrangell Islan	111.59	28	ePKPdf		PKiKP		08 49 54.8	+8.6	
WRAK					LR	LR				
	comp=Z,26µm,21.0s,MS6.8									
SFJD	Kangerlussuaq	112.00	348	*i* P				08 46 04.5		
SFJD				*e*				08 50 12.0		
SFJD				*i*				08 56 36.6		
SFJD				*i*				08 58 17.3		
SFJD				*e*				09 06 05.0		
SFJD										
	comp=Z,29µm,21.0s									
SFJD	Kangerlussuaq	112.00	348		PFAKE			08 50 00.0	+13	
SFJD					LR	LR				
	comp=Z,36µm,22.0s,MS6.9									
PMSA	Palmer Station	112.35	187		PFAKE			08 50 00.0	+13	
PMSA					LR	LR				
	comp=Z,44µm,22.0s,MS7.0									
PMAR	Madeira	113.64	305	ePP		PP		08 50 56.2	+13	
ASCN	Ascension	113.86	260		PFAKE			08 50 00.0	+8.2	
ASCN					LR	LR				
	comp=Z,37µm,20.0s,MS7.0									
YKA	Yellowknife Ar	114.37	17	PKP		PKiKP		08 49 50.2	-1.1	
	comp=Z,8.6nm,1.0s,baz=321,slow=1.7,SNR=4.6									
YKA					pPKP			08 49 58.1		
	comp=Z,9.8nm,0.8s,baz=319,slow=2.2,SNR=8.8									
YKA					PP	PP		08 50 41.1	-5.9	
	comp=Z,12nm,1.0s,baz=329,slow=7.6,SNR=5.9									
YKA					PKKP	PKKPbc		09 00 48.7	+15	
	comp=Z,4.1nm,0.9s,baz=143,slow=3.3,SNR=4.3									
YKA	Yellowknife Ar	114.37	17	PKiKP		PKiKP		08 49 50.2	-1.2	
YKA								08 49 58.2		
YKA	Yellowknife Ar	114.37	17	PKP		PKiKP		08 49 50.2	-1.1	
YKA					pPKP			08 49 58.1		
YKA					PP	PP		08 50 41.1	-5.9	
YKA					PKKP	PKKPbc		09 00 48.7	+15	
CMLA	Cha da Macela	118.83	313	ePP		PP		08 51 23.5	+4.3	
CMLA				*i* P		PS		09 01 19.9	+4.7	
CMLA				*e*SS		SS		09 07 30.7	-5.8	
CMLA	Cha da Macela	118.83	313	*i* LQ				09 21 04.1		
CMLA				eLR		LR		09 27 30.0		
CMLA	Cha da Macela	118.83	313		PFAKE			08 50 10.0	+9.3	
CMLA					LR	LR				
	comp=Z,12µm,19.0s,MS6.5									
PDA	Ponta Delgada	118.94	313	*i* PP		PP		08 51 29.0	+9.0	
PDA				*i* P		PS		09 01 23.0	+15	
PDA				*e*SS		SS		09 07 27.0	-11	
PDA	Ponta Delgada	118.94	313	eLQ				09 20 39.0		
PDA				eLR		LR		09 27 20.0		
PGC	Sidney	120.46	32	ePKPdf		PKPdf		08 50 00.6	-2.9	
RKT	Rikitea	120.91	118	ePP		PP		08 51 36.7	+2.7	
	comp=Z,2µm,27.5s									
RKT	Rikitea	120.91	118	ePS		PS		09 01 25.4	-1.0	
	comp=Z,10µm,27.0s									
RKT					eSS	SS		09 08 02.0	-2.2	
	comp=Z,13µm,31.8s									
RKT	Rikitea	120.91	118	eLR		LR		09 27 24.4		
	comp=Z,25µm,29.8s									
NLWA	Neilton Lookou	120.98	33	ePKPdf		PKPdf		08 50 04.1	-0.4	
NLWA				epPKPdf		pPKPdf		08 50 13.8	-0.9	
NLWA					LR	LR				
	comp=Z,19µm,21.0s,MS6.7									
GNW	Green Mountain	121.45	33	ePKPdf		PKPdf		08 50 04.9	-0.5	
GNW				epPKPdf		pPKPdf		08 50 14.4	-1.2	
JCW	Jim Creek	121.54	32	ePKPdf		PKPdf		08 50 05.0	-0.6	
JCW				epPKPdf		pPKPdf		08 50 14.4	-1.4	
RPW	Rockport	121.60	31	ePKPdf		PKPdf		08 50 04.9	-0.8	
BMW	Boistfort Moun	121.88	34	ePKIKP		PKPdf		08 50 06.0	-0.3	
BMW				*e*				08 50 15.5		
FCC	Fort Churchill	122.34	9	ePKIKP		PKPdf		08 50 06.1	-0.7	
FCC				*e*				08 50 14.7		
LON	Longmire	122.49	33	ePKIKP		PKPdf		08 50 06.8	-0.7	
LON				*e*				08 50 15.9		
ETW	Entiat	122.75	31	ePKPdf		PKPdf		08 50 07.4	-0.5	
ETW				epPKPdf		pPKPdf		08 50 16.3	-1.9	
COR	Corvallis	122.94	36	PFAKE				08 50 20.0	+12	
COR					LR	LR				
	comp=Z,14µm,22.0s,MS6.6									
EFI	East Falkland	123.37	196		PFAKE			08 50 20.0	+11	
EFI					LR	LR				
	comp=Z,31nm,22.0s,MS6.9									
OD2	Odessa Site #2	123.72	31	ePKPdf		PKPdf		08 50 09.2	-0.6	
OD2				epPKPdf		pPKPdf		08 50 18.3	-1.7	
RSW	Rattlesnake Hi	123.91	32	ePKPdf		PKPdf		08 50 10.2	0.0	
RSW				epPKPdf		pPKPdf		08 50 19.6	-0.9	
NEW	Newport	123.92	29	ePKIKP		PKPdf		08 50 09.5	-0.7	
NEW				*e*				08 51 57.7		
NEW					MLR	MLR				
	comp=Z,24µm,19.0s									
HAWA	Hanford	123.94	32	ePKPdf		PKPdf		08 50 10.3	0.0	
HAWA				epPKPdf		pPKPdf		08 50 19.3	-1.2	
HAWA					LR	LR				
	comp=Z,21µm,20.0s,MS6.8									
HUMO	Hull Mountain	124.27	38	ePKPdf		PKPdf		08 50 11.1	+0.1	
HUMO				epPKPdf		pPKPdf		08 50 20.3	-0.9	
HUMO					LR	LR				
	comp=Z,13µm,20.0s,MS6.6									
FFC	Flin Flon	124.47	15	ePKIKP		PKPdf		08 50 10.0	-1.0	
FFC				*e*				08 51 54.5		
FFC					MLR	MLR				
	comp=Z,23µm,20.0s,MS6.8									
PTCN	Pitcairn Islan	124.47	122		PFAKE			08 50 20.0	+8.1	
PTCN					LR	LR				
	comp=Z,23µm,20.0s,MS6.8									
WALA	Waterton Lakes	124.86	27	ePKPdf		PKPdf		08 50 11.3	-0.7	
WALA				epPKPdf		pPKPdf		08 50 20.5	-1.6	
YBH	Yreka Blue Hor	124.92	38	ePKIKP		PKPdf		08 50 11.9	-0.4	
YBH				*e*				08 50 20.7		
YBH					MLR	MLR				
	comp=Z,11µm,22.0s									
LNOR	Lincton Mounta	124.94	32	ePKIKP		PKPdf		08 50 11.3	-0.9	
LNOR				*e*				08 50 20.7		
KCPM	Cahto Peak	125.48	41	ePKPdf		PKPdf		08 50 12.6	-0.8	
KIPM	Iron Peak	125.48	41	ePKPdf		PKPdf		08 50 13.6	+0.2	
KIPM				epPKPdf		pPKPdf		08 50 23.3	-0.3	
WDC	Whiskeytown Da	125.66	39	ePKIKP		PKPdf		08 50 13.2	-0.5	
WDC				*e*				08 50 22.0		
WDC					MLR	MLR				
	comp=Z,17µm,20.0s,MS6.7									
BMO	Blue Mountains	126.13	32	ePKIKP		PKPdf		08 50 13.8	-0.7	
BMO					MLR	MLR				
	comp=Z,17µm,21.0s,MS6.7									
HOPS	Hopland	126.18	41	ePKPdf		PKPdf		08 50 14.7	-0.1	
HOPS					LR	LR				
	comp=Z,17µm,21.0s,MS6.7									
SCHQ	Schefferville	126.28	351	PKP		PKPdf		08 50 14.1	-0.4	
	comp=Z,20nm,0.9s,baz=12,slow=1.5,SNR=12									
SCHQ					pPKP	pPKPdf		08 50 22.2	-2.5	
	comp=Z,40nm,0.9s,baz=26,slow=3.3,SNR=14									
SCHQ					PP	PP		08 52 11.7	+3.3	
	comp=Z,16nm,0.9s,baz=25,slow=14,SNR=2.9									
SCHQ	Schefferville	126.28	351	ePKPdf		PKPdf		08 50 14.0	-0.5	
SCHQ					LR	LR				
	comp=Z,37µm,22.0s,MS7.0									
MOD	Modoc	126.28	37	ePKPdf		PKPdf		08 50 14.7	-0.2	
MOD				epPKPdf		pPKPdf		08 50 24.1	-1.0	
MOD					LR	LR				
	comp=Z,16µm,21.0s,MS6.7									
MSO	Missoula	126.47	29		PFAKE			08 50 30.0	+15	
MSO					LR	LR				
	comp=Z,26µm,19.0s,MS6.9									
CHMT	Chamberlain Mo	126.73	28	ePKPdf		PKPdf		08 50 15.0	-0.6	
CHMT				epPKPdf		pPKPdf		08 50 23.9	-1.9	
NSHM	Saint Helena R	126.74	42	ePKPdf		PKPdf		08 50 16.6	+0.7	
MCCM	Marconi Confer	126.76	42	ePKPdf		PKPdf		08 50 13.2	-2.7	
MCCM					LR	LR				
	comp=Z,13µm,19.0s,MS6.6									
WVOR	Wild Horse Val	126.94	35	ePKIKP		PKPdf		08 50 16.5	+0.4	
WVOR				*e*				08 50 25.4		
WVOR					MLR	MLR				
	comp=Z,13µm,22.0s,MS6.6									
EGMT	Eagleton	127.45	25	ePKPdf		PKPdf		08 50 16.6	-0.3	
EGMT					LR	LR				
	comp=Z,22µm,19.0s,MS6.8									
HRY	Holter Researc	127.54	27	ePKPdf		PKPdf		08 50 16.7	-0.4	
PAHR	Pah Rah Range	128.15	39	ePKPdf		PKPdf		08 50 18.5	0.0	
PAHR				epPKPdf		pPKPdf		08 50 27.6	-1.1	
DLMT	Dillon	128.17	29	ePKPdf		PKPdf		08 50 18.6	+0.2	
DLMT				epPKPdf		pPKPdf		08 50 28.1	-0.5	
BOZ	Bozeman (W)	128.43	28	ePKIKP		PKPdf		08 50 18.1	-0.8	
BOZ				*e*				08 50 28.1		
BOZ					MLR	MLR				
	comp=Z,24µm,21.0s,MS6.8									
MCMT	McKenzie Canyo	128.44	30	ePKPdf		PKPdf		08 50 19.2	+0.3	
SAO	San Andreas Ge	128.45	43	ePKIKP		PKPdf		08 50 18.4	-0.8	
SAO					MLR	MLR				
	comp=Z,10µm,20.0s,MS6.5									
CMB	Columbia Colle	128.47	41	ePKIKP		PKPdf		08 50 19.0	-0.2	
CMB					MLR	MLR				
	comp=Z,16µm,22.0s,MS6.7									
HLID	Hailey	128.53	32	ePKPdf		PKPdf		08 50 19.5	+0.4	
HLID					LR	LR				
	comp=Z,27µm,21.0s,MS6.9									
BMN	Battle Mountai	129.02	37		PFAKE			08 50 30.0	+10	
BMN					LR	LR				
	comp=Z,9µm,21.0s,MS6.4									
QLMT	Earthquake Lak	129.13	29	ePKPdf		PKPdf		08 50 20.8	+0.6	
GCMT	Greycliff	129.22	27	eP		PKPdf		08 50 20.8	+0.5	
DGMT	Dagmar	129.24	21	ePKPdf		PKPdf		08 50 20.7	+0.4	
DGMT					LR	LR				
	comp=Z,36µm,21.0s,MS7.0									
YMR	Madison River	129.47	28	ePKPdf		PKPdf		08 50 20.5	-0.4	
YMR					LR	LR				
	comp=Z,29µm,19.0s,MS7.0									
YNR	Norris Junctio	129.57	28	ePKPdf		PKPdf		08 50 22.4	+1.3	
NVAR	Mina Array Bea	129.58	39	PKP		PKPdf		08 50 21.7	+0.4	
	comp=Z,13nm,0.8s,baz=255,slow=2.1,SNR=19									
NVAR					pPKP	pPKPdf		08 50 30.6	-0.9	
	comp=Z,29nm,0.8s,baz=256,slow=1.9,SNR=22									
NVAR					PP	PP		08 52 31.0	0.0	
	comp=Z,16nm,1.1s,baz=288,slow=7.5,SNR=4.3									
NVAR	Mina Array Bea	129.58	39	PKP		PKPdf		08 50 21.7	+0.4	
NVAR					pPKP	pPKPdf		08 50 30.6	-0.9	
NVAR					PP	PP		08 52 31.0	0.0	
LKWY	Lake	129.81	28	ePKIKP		PKPdf		08 50 23.2	+1.7	
LKWY					MLR	MLR				
	comp=Z,39µm,19.0s,MS7.1									
PTRM	Twissleman Ran	129.89	43	ePKPdf		PKPdf		08 50 23.1	+1.2	
RLMT	Red Lodge	129.91	27	ePKPdf		PKPdf		08 50 21.1	-0.6	
RLMT					LR	LR				
	comp=Z,34µm,19.0s,MS7.1									
LAO	LASA Array	129.96	23	ePKPdf		PKPdf		08 50 22.0	+0.2	
LAO					LR	LR				
	comp=Z,28µm,22.0s,MS6.9									
ELK	Elko	129.98	35	PKP		PKPdf		08 50 21.9	-0.1	
	comp=Z,8.0nm,0.7s,baz=285,slow=

JLU	**Jordanelle**	**132.18**	**32**	*e*PKPdf	PKPdf	08 50 26.1	-0.1
GSC	**Goldstone**	**132.39**	**42**	*e*PKIKP	PKPdf	08 50 26.5	-0.2
GSC				MLR	MLR		
	comp=Z,15μm,21.0s,MS6.7						
DAU	**Daniels Canyon**	**132.42**	**33**	*e*PKIKP	PKPdf	08 50 27.1	+0.5
MPU	**Maple Canyon**	**132.49**	**33**	*e*PKPdf	PKPdf	08 50 27.2	+0.4
MPU				LR	LR		
	comp=Z,26μm,20.0s,MS6.9						
RSSD	**Black Hills**	**132.95**	**24**	*e*PKIKP	PKPdf	08 50 26.9	-0.6
RSSD				MLR	MLR		
	comp=Z,23μm,22.0s,MS6.8						
CCUT	**Cedar City**	**133.17**	**37**	*e*PKPdf	PKPdf	08 50 29.9	+1.8
EYMN	**Ely**	**133.18**	**11**	*e*PKPdf	PKPdf	08 50 27.1	-0.7
EYMN				*ep*PKPdf	pPKPdf	08 50 37.0	-1.0
EYMN				LR	LR		
	comp=Z,31μm,21.0s,MS7.0						
MVU	**Marysvale**	**133.21**	**35**	PFAKE		08 50 40.0	+12
MVU				LR	LR		
	comp=Z,21μm,21.0s,MS6.8						
MSU	**Marysvale**	**133.23**	**35**	*e*PKIKP	PKPdf	08 50 30.0	+1.8
TMUT	**Trail Mountain**	**133.23**	**34**	*e*PKPdf	PKPdf	08 50 28.5	+0.3
RWWY	**Rawlins**	**133.52**	**28**	*e*PKPdf	PKPdf	08 50 27.9	-0.7
PFO	**Pinyon Flat Ob**	**133.60**	**43**	PKP	PKPdf	08 50 27.9	-1.1
	comp=Z,16nm,0.9s,baz=182,slow=1.6,SNR=1.3						
PFO				PP	PP	08 52 56.5	-0.6
	comp=Z,10nm,1.1s,baz=295,slow=3.2,SNR=2.4						
PFO				SKP		08 54 03.3	
	comp=Z,19nm,1.1s,baz=340,slow=2.5,SNR=3.6						
PFO	**Pinyon Flat Ob**	**133.60**	**43**	*e*PKPdf	PKPdf	08 50 28.9	-0.2
PFO				LR	LR		
	comp=Z,11μm,20.0s,MS6.6						
LDFC	**Landfair**	**133.64**	**41**	*e*PKPdf	PKPdf	08 50 27.6	-1.5
SRU	**San Rafael**	**133.74**	**33**	*e*PKIKP	PKPdf	08 50 28.3	-0.8
BAR	**Barrett**	**133.97**	**44**	PFAKE		08 50 40.0	+10
BAR				LR	LR		
	comp=Z,11μm,21.0s,MS6.5						
GLA	**Glamis**	**135.03**	**43**	PFAKE		08 50 40.0	+8.3
GLA				LR	LR		
	comp=Z,13μm,22.0s,MS6.6						
CAM3	**Guarapari**	**135.26**	**238**	*i*P	PKPdf	08 50 41.6	+9.1
CAM3				*i*		08 50 51.4	
CAM3				*i*		08 51 03.2	
CAM3				*i*		08 51 16.7	
COWI	**Conover**	**135.37**	**9**	*e*PKPdf	PKPdf	08 50 31.5	-0.5
COWI				LR	LR		
	comp=Z,32μm,21.0s,MS7.0						
WUAZ	**Wupatki**	**135.72**	**38**	*e*PKPdf	PKPdf	08 50 31.9	-1.0
WUAZ				LR	LR		
	comp=Z,10μm,20.0s,MS6.6						
ISCO	**Idaho Springs**	**135.75**	**29**	*e*PKIKP	PKPdf	08 50 32.1	-0.8
ISCO				MLR	MLR		
	comp=Z,15μm,19.0s,MS6.8						
ECSD	**EROS,Sioux Fal**	**135.90**	**17**	PKPdf	PKPdf	08 50 22.0	-11
ECSD				LR	LR		
	comp=Z,30μm,21.0s,MS7.0						
PKME	**Peaks-Kenny Pk**	**135.93**	**349**	*e*PKPdf	PKPdf	08 50 30.4	-2.7
PKME				LR	LR		
	comp=Z,19μm,19.0s,MS6.8						
MVCO	**Mesa Verde**	**136.21**	**33**	PFAKE		08 50 50.0	+16
MVCO				LR	LR		
	comp=Z,26μm,21.0s,MS6.9						
OGNE	**Ogallala**	**136.41**	**24**	*e*PKPdf	PKPdf	08 50 29.8	-4.3
OGNE				LR	LR		
	comp=Z,28μm,21.0s,MS7.0						
PLCA	**Paso Flores**	**136.59**	**190**	PKhKP		08 50 31.7	
	comp=Z,3.8nm,1.0s,baz=144,slow=12,SNR=6.2						
PLCA	**Paso Flores**	**136.59**	**190**	*e*PKPdf	PKPdf	08 50 34.2	-0.3
PLCA				LR	LR		
	comp=Z,33μm,20.0s,MS7.1						
TRQA	**Tornquist**	**136.80**	**201**	*e*PKPdf	PKPdf	08 50 32.8	-2.1
TRQA				LR	LR		
	comp=Z,32μm,19.0s,MS7.1						
FRNY	**Flat Rock**	**137.00**	**353**	*e*PKPdf	PKPdf	08 50 35.4	+0.3
GLMI	**Grayling**	**137.18**	**5**	*e*PKPdf	PKPdf	08 50 33.5	-1.8
GLMI				LR	LR		
	comp=Z,32μm,22.0s,MS7.0						
LONY	**Lake Ozonia**	**137.32**	**354**	*e*PKPdf	PKPdf	08 50 31.9	-3.7
LONY				LR	LR		
	comp=Z,19μm,20.0s,MS6.8						
LBNH	**Lisbon**	**137.36**	**351**	PFAKE		08 50 50.0	+14
LBNH				LR	LR		
	comp=Z,34μm,20.0s,MS7.1						
SDCO	**Great Sand Dun**	**137.40**	**30**	*e*PKPdf	PKPdf	08 50 34.7	-1.3
SDCO				LR	LR		
	comp=Z,23μm,20.0s,MS6.9						
SADO	**Sadowa**	**137.43**	**359**	PKP	PKPdf	08 50 35.4	-0.4
	baz=342,slow=4.0						
SADO				PP	PP	08 53 27.0	+6.9
	baz=360,slow=7.6						
MDV	**Middlebury**	**137.77**	**353**	*e*PKPdf	PKPdf	08 50 36.0	-0.5
LPA	**La Plata**	**137.86**	**207**	*ce*P	Pdif	08 47 46.0	+0.7
LPA				*e*SKP		08 54 15.0	
LPA				*e*PKS		08 54 18.0	
LPA							
	comp=Z,51μm,19.0s						
NCB	**Newcomb**	**137.92**	**354**	*e*PKPdf	PKPdf	08 50 36.0	-0.8
NCB				LR	LR		
	comp=Z,23μm,20.0s,MS6.9						
FFD	**Franklin Falls**	**138.07**	**351**	*e*PKPdf	PKPdf	08 50 35.9	-1.2
TUC	**Tucson**	**138.18**	**41**	*e*PKIKP	PKPdf	08 50 31.6	-6.0
TUC				MLR	MLR		
	comp=Z,15μm,20.0s,MS6.7						
JFWS	**Jewell Farm**	**138.26**	**11**	*e*PKHKP		08 50 29.2	
JFWS				MLR	MLR		
	comp=Z,32μm,20.0s,MS7.1						
ACCN	**Adirondack Com**	**138.44**	**353**	*e*PKPdf	PKPdf	08 50 35.0	-2.8
SCIA	**State Center**	**138.54**	**15**	*e*PKPdf	PKPdf	08 50 35.0	-2.9
SCIA				LR	LR		
	comp=Z,32μm,22.0s,MS7.0						
ANMO	**Albuquerque**	**138.99**	**34**	PKhKP		08 50 31.7	
	comp=Z,9.9nm,0.9s,baz=289,slow=2.2,SNR=20						
ANMO				PP	PP	08 53 42.4	+12
	comp=Z,9.3nm,1.1s,baz=225,slow=3.9,SNR=4.4						
ANMO	**Albuquerque**	**138.99**	**34**	*e*PKPdf	PKPdf	08 50 31.5	-7.5
ANMO				LR	LR		
	comp=Z,25μm,20.0s,MS7.0						
LAZ	**Ladron**	**139.00**	**35**	*e*PKPpre		08 50 34.6	
HRV	**Adam Dziewonsk**	**139.00**	**351**	*e*PKIKP	PKPdf	08 50 38.1	-0.7
HRV				MLR	MLR		
	comp=Z,29μm,20.0s,MS7.0						
WES	**Weston**	**139.08**	**350**	PFAKE		08 50 50.0	+11
WES				LR	LR		
	comp=Z,25μm,21.0s,MS6.9						
CBKS	**Cedar Bluff**	**139.16**	**24**	*e*PKHKP		08 50 30.5	
CBKS				MLR	MLR		
	comp=Z,31μm,22.0s,MS7.0						
QUA2	**Belchertown**	**139.35**	**351**	*e*PKPdf	PKPdf	08 50 38.7	-0.7
LPM	**Los Pinos Moun**	**139.35**	**35**	*e*PKPpre		08 50 33.9	
VAO	**Valinhos**	**139.37**	**230**	(P)	PKPdf	08 50 48.8	+8.8
VAO				*i*		08 51 02.0	
VAO				*i*		08 51 14.0	
VAO				*i*		08 51 22.0	
SPB	**Sao Paulo**	**139.40**	**229**	*e*PKPdf	PKPdf	08 50 40.7	+0.7
BRYW	**Bryant College**	**139.57**	**350**	*e*PKPdf	PKPdf	08 50 36.5	-3.4
BINY	**Binghamton**	**139.84**	**355**	PFAKE		08 50 50.0	+10
BINY				LR	LR		
	comp=Z,26μm,21.0s,MS7.0						
KSU1	**Kansas State U**	**140.08**	**20**	*e*PKPdf	PKPdf	08 50 40.0	-0.9
KSU1				LR	LR		
	comp=Z,30μm,21.0s,MS7.0						
ERPA	**Erie**	**140.08**	**0**	*e*PKPdf	PKPdf	08 50 40.0	-0.8
ERPA				LR	LR		
	comp=Z,39μm,21.0s,MS7.1						
ALLY	**Alegheny Colle**	**140.55**	**0**	*e*PKPdf	PKPdf	08 50 40.0	-1.6
HDIL	**Hopedale**	**140.72**	**11**	*e*PKPpre		08 50 35.9	
HDIL				LR	LR		
	comp=Z,37μm,20.0s,MS7.1						
PAL	**Palisades**	**140.81**	**353**	*e*PKIKP	PKPdf	08 50 40.4	-1.7
CPNY	**Central Park**	**141.03**	**353**	*e*PKPdf	PKPdf	08 50 40.6	-1.9
SSPA	**Standing Stone**	**141.52**	**357**	*e*PKPpre		08 50 37.8	
SSPA				LR	LR		
	comp=Z,24μm,20.0s,MS7.0						
AMTX	**Amarillo**	**141.55**	**29**	*e*PKPdf	PKPdf	08 50 40.6	-3.1
AMTX				LR	LR		
	comp=Z,22μm,22.0s,MS6.9						
ACSO	**Alum Creek Sta**	**141.87**	**4**	*e*PKPpre		08 50 37.5	
ACSO				LR	LR		
	comp=Z,46μm,22.0s,MS7.2						
MCWV	**Mont Chateau**	**142.54**	**360**	PFAKE		08 51 00.0	+15
MCWV				LR	LR		
	comp=Z,37μm,20.0s,MS7.2						
BLO	**Bloomington**	**142.54**	**8**	*e*PKHKP		08 50 39.7	
CCM	**Cathedral Cave**	**142.67**	**15**	*e*PKHKP		08 50 38.1	
CCM				MLR	MLR		
	comp=Z,30μm,22.0s,MS7.0						
SDMD	**Soldier's Deli**	**142.68**	**356**	*e*PKPdf	PKPdf	08 50 50.0	+4.5
FVM	**French Village**	**142.94**	**14**	*e*PKHKP		08 50 40.0	
WMOK	**Wichita Mounta**	**143.02**	**26**	*e*PKIKP	PKPdf	08 50 41.3	-5.0
WMOK				MLR	MLR		
	comp=Z,29μm,22.0s,MS7.0						
LMEL	**Las Melosas**	**143.16**	**194**	*e*P	PKPdf	08 50 50.7	+4.1
LPIG	**La Paz**	**143.34**	**51**	PKP	PKPdf	08 50 44.3	-2.8
	comp=Z,19nm,1.0s,baz=299,slow=1.8,SNR=3.3						
LPIG				pPKP	pPKPdf	08 50 53.5	-3.8
	comp=Z,44nm,0.7s,baz=330,slow=2.4,SNR=8.3						
LPIG				PP	PP	08 54 02.0	+4.2
	comp=Z,30nm,1.1s,baz=334,slow=5.2,SNR=2.1						
SIUC	**Southern Illin**	**143.47**	**12**	*e*PKPdf	PKPdf	08 50 42.7	-4.3
WCI	**Wyandotte Cave**	**143.50**	**8**	*e*PKIKP	PKPdf	08 50 42.8	-4.2
WCI				MLR	MLR		
	comp=Z,39μm,19.0s,MS7.2						
USIN	**University of**	**143.53**	**10**	*e*PKPdf	PKPdf	08 50 45.4	-1.7
CLCH	**Cerro Calan**	**143.67**	**193**	*e*P	PKPdf	08 50 48.0	+0.5
BDFB	**Brasilia**	**143.88**	**240**	PKP	PKPdf	08 50 48.2	0.0
	comp=Z,20nm,0.9s,baz=74,slow=2.3,SNR=13						
BDFB	**Brasilia**	**143.88**	**240**	PKP	PKPdf	08 50 48.2	0.0
BDFB				LR	LR		
	comp=Z,84μm,21.0s,MS7.5						
CBN	**Corbin**	**143.91**	**357**	PKPdf	PKPdf	08 50 42.9	-4.9
CBN				LR	LR		
	comp=Z,37μm,22.0s,MS7.1						
CPUP	**Villa Florida**	**144.34**	**216**	PKP	PKPdf	08 50 47.0	-1.9
	comp=Z,36nm,0.7s,baz=104,slow=2.5,SNR=68						
CPUP	**Villa Florida**	**144.34**	**216**	*e*PKPdf	PKPdf	08 50 46.9	-1.9
CPUP				LR	LR		
	comp=Z,4μm,20.0s,MS6.2						
URVA	**University of**	**144.55**	**357**	*e*PKPdf	PKPdf	08 50 46.4	-2.5
TXAR	**Lajitas Array**	**144.68**	**37**	PKP	PKPdf	08 50 48.1	-1.2
	comp=Z,106nm,0.7s,baz=274,slow=1.1,SNR=422						
TXAR				pPKP	pPKPdf	08 50 57.2	-2.3
	comp=Z,315nm,0.8s,baz=267,slow=1.5,SNR=33						
TXAR				PP	PP	08 54 12.2	+6.9
	comp=Z,18nm,1.0s,baz=263,slow=3.5,SNR=4.0						
TXAR	**Lajitas Array**	**144.68**	**37**	PKP	PKPdf	08 50 48.1	-1.2
TXAR				pPKP	pPKPdf	08 50 57.2	-2.3
TXAR				PP	PP	08 54 12.2	+6.9
GLAT	**Glass**	**144.84**	**13**	*e*PKPdf	PKPdf	08 50 47.8	-1.6
UTMT	**University of**	**144.87**	**13**	*e*PKPdf	PKPdf	08 50 46.4	-3.1
ELN	**Prospectdale**	**144.96**	**1**	*e*PKPdf	PKPdf	08 50 47.1	-2.5
GNAR	**Gosnell**	**144.96**	**14**	*e*PKPdf	PKPdf	08 50 48.2	-1.4
BLA	**Blacksburg**	**144.98**	**1**	*e*PKIKP	PKPdf	08 50 47.6	-2.0
BLA				MLR	MLR		
	comp=Z,30μm,20.0s,MS7.1						
HALT	**Halls**	**145.17**	**13**	*e*PKPbc	PKPbc	08 50 48.7	-0.9
HBAR	**Harrisburg**	**145.18**	**15**	*e*PKPbc	PKPbc	08 50 49.0	-0.6
MIAR	**Mount Ida**	**145.23**	**20**	*e*PKIKP	PKPdf	08 50 49.2	-0.9
MIAR				MLR	MLR		
	comp=Z,20μm,20.0s,MS6.9						
WVT	**Waverly**	**145.28**	**11**	*e*PKIKP	PKPdf	08 50 48.8	-1.4
WVT				MLR	MLR		
	comp=Z,32μm,21.0s,MS7.1						
TZTN	**Tazewell**	**145.49**	**5**	PFAKE		08 51 00.0	+9.5
TZTN				LR	LR		
	comp=Z,27μm,19.0s,MS7.0						
JCT	**Junction City**	**146.01**	**32**	*e*PKP2	PKPab	08 50 52.1	-0.8
JCT				MLR	MLR		
	comp=Z,21μm,22.0s,MS6.9						
TKL	**Tuckaleechee C**	**146.34**	**6**	PKPbc	PKPbc	08 50 51.9	-1.3
	comp=Z,109nm,0.9s,baz=128,slow=2.5,SNR=52						
TKL				PP	PP	08 54 19.7	+5.4
	comp=Z,52nm,1.0s,baz=1.5,slow=5.9,SNR=4.2						
TKL	**Tuckaleechee C**	**146.34**	**6**	PKP2	PKPbc	08 50 51.9	-1.3
TKL						08 54 19.7	
TKL				pmax	pmax		
	comp=Z,109nm,0.9s						
TKL				pmax	pmax		
	comp=Z,52nm,1.0s						
TKL	**Tuckaleechee C**	**146.34**	**6**	*e*PKPdf	PKPdf	08 50 51.6	-0.4
CPCT	**Cooper Cave**	**146.47**	**7**	*e*PKPdf	PKPdf	08 50 52.0	-0.2
OXF	**Oxford**	**146.49**	**14**	PFAKE		08 51 00.0	+7.7
OXF				LR	LR		
	comp=Z,30μm,21.0s,MS7.1						
SWET	**Sewanee**	**146.51**	**9**	*e*PKPdf	PKPdf	08 50 51.5	-0.8
BBSR	**BB Station**	**146.58**	**336**	*e*PKPbc	PKPbc	08 50 53.9	-0.1
BBSR				LR	LR		
	comp=Z,21μm,21.0s,MS6.9						
TLL	**Tololo Astrono**	**146.82**	**195**	*e*P	PKPbc	08 50 55.1	+0.3
CNNC	**Cliffs of the**	**146.90**	**357**	*e*PKPbc	PKPbc	08 50 54.7	-0.1
CNNC				*e*PKPab	PKPab	08 50 56.9	+0.8
CNNC				*ep*PKPdf	pPKPdf	08 51 03.3	+0.2
CNNC				*es*PKPdf		08 51 07.7	
CNNC				LR	LR		
	comp=Z,47μm,22.0s,MS7.2						
NATX	**Nacogdoches**	**147.32**	**24**	*e*PKPdf	PKPdf	08 50 53.6	-0.2
NATX				*e*PKPbc	PKPbc	08 50 55.8	-0.3
NATX				*e*PKPab	PKPab	08 50 58.0	+0.1
NATX				LR	LR		
	comp=Z,30μm,21.0s,MS7.0						
JSC	**Jenkinsville**	**147.88**	**2**	*e*PKP2	PKPbc	08 50 56.8	-0.8
LCO	**Las Campanas**	**147.90**	**195**	*e*PKPdf	PKPdf	08 50 55.4	+0.6
LCO				LR	LR		
	comp=Z,24μm,21.0s,MS7.0						
VBMS	**Vicksburg**	**148.35**	**17**	PFAKE		08 51 10.0	+15
VBMS				LR	LR		
	comp=Z,27μm,22.0s,MS7.0						
HKT	**Hockley**	**148.39**	**27**	*e*PKP2	PKPbc	08 50 58.3	-0.7
HKT				MLR	MLR		
	comp=Z,24μm,20.0s,MS7.0						
LRAL	**Lakeview Retre**	**148.45**	**11**	*e*PKPdf	PKPdf	08 50 54.6	-1.0
LRAL				*e*PKPbc	PKPbc	08 50 58.0	-1.1
LRAL				LR	LR		
	comp=Z,41μm,20.0s,MS7.2						
GOGA	**Godfrey**	**148.60**	**6**	*e*PKP2	PKPbc	08 50 58.9	-0.6
GOGA				MLR	MLR		
	comp=Z,36μm,22.0s,MS7.1						
NHSC	**New Hope**	**149.08**	**0**	PFAKE		08 51 10.0	+13
NHSC				LR	LR		
	comp=Z,34μm,20.0s,MS7.1						
KVTX	**Kingsville**	**149.35**	**32**	*e*PKPbc	PKPbc	08 51 02.2	+0.6
KVTX				LR	LR		
	comp=Z,23μm,20.0s,MS7.0						
BRAL	**Brewton**	**150.39**	**12**	*e*PKPdf	PKPdf	08 50 58.5	-0.3
BRAL				*e*PKPbc	PKPbc	08 51 03.5	-0.5
BRAL				LR	LR		
	comp=Z,23μm,20.0s,MS7.0						
LVC	**Limon Verde**	**153.25**	**203**	*e*PKPbc	PKPbc	08 51 11.9	+1.1
LVC				LR	LR		
	comp=Z,31μm,21.0s,MS7.1						
DWPF	**Disney**	**154.02**	**3**	*e*PKPbc	PKPbc	08 51 14.2	+1.9
DWPF				LR	LR		
	comp=Z,25μm,22.0s,MS7.0						
BPA	**Boggy Peak**	**156.78**	**311**	*e*	PKPdf	08 51 15.1	+6.9
BBGH	**Gun Hill**	**157.00**	**300**	PFAKE		08 51 20.0	+11
BBGH				LR	LR		
	comp=Z,39μm,21.0s,MS7.2						
DWS	**Wesley**	**157.23**	**307**	*e*	pPKPdf	08 51 17.2	-1.9
DBCT	**Belle View Cho**	**157.42**	**307**	*e*	PKPdf	08 51 09.9	+0.9
MDN	**Morne-Daniel**	**157.43**	**307**	*e*	pPKPdf	08 51 17.2	-2.2
DFBT	**Forest Bistro**	**157.45**	**307**	*e*	PKPdf	08 51 07.3	-1.8
DSHT	**Scott's Head**	**157.48**	**307**	*e*	PKPdf	08 51 11.4	+2.3
SSV	**Crater Summit**	**158.31**	**302**	*e*	PKPdf	08 51 12.5	+2.3
LPAZ	**La Paz**	**158.39**	**212**	PKP	PKPdf	08 51 11.3	+1.1
	comp=Z,5.4nm,1.0s,baz=67,slow=3.3,SNR=16						
LPAZ				PP	PP	08 55 32.0	+8.5
	comp=Z,1.2nm,0.8s,baz=270,slow=6.1,SNR=1.5						
LPAZ	**La Paz**	**158.39**	**212**	*e*PKPdf	PKPdf	08 51 11.2	+0.9
LPAZ				*e*PKPab	PKPab	08 51 46.1	+1.5
LPAZ				LR	LR		
	comp=Z,34μm,22.0s,MS7.1						
MTP	**Monte Pirata**	**158.68**	**319**	*e*PKPdf	PKPdf	08 51 09.7	-0.8
HUMP	**Col San Antoni**	**158.84**	**320**	*e*PKPdf	PKPdf	08 51 10.5	-0.3
CPD	**Cerro la Pandu**	**158.96**	**320**	*e*PKIKP	PKPdf	08 51 11.1	+0.2
CMIG	**Matias Romero**	**159.02**	**44**	PKP	PKPdf	08 51 11.2	+0.2
	comp=Z,8.6nm,0.9s,baz=277,slow=6.6,SNR=7.6						
CMIG				PP	PP	08 55 31.9	+4.4
	comp=Z,7.1nm,1.0s,baz=321,slow=6.5,SNR=3.5						
SJG	**San Juan**	**159.05**	**321**	*e*PKIKP	PKPdf	08 51 10.4	-0.6
SJG				MLR	MLR		
	comp=Z,22μm,22.0s						
SOR	**Soroa**	**159.14**	**8**	*e*P	PKPdf	08 51 14.4	+3.4
GRGR	**Grenville**	**159.28**	**300**	*e*PKPdf	PKPdf	08 51 09.9	-1.5
GRGR				LR	LR		
	comp=Z,17μm,21.0s,MS6.9						
TRN	**Trinidad (W)**	**159.69**	**296**	*e*	PKPdf	08 51 13.3	+1.5
MGV	**Manicaragua**	**160.03**	**0**	*e*P	PKPdf	08 51 14.9	+2.9
TEIG	**Tepich**	**160.16**	**24**	PKP	PKPdf	08 51 12.4	+0.2
	comp=Z,18nm,1.1s,baz=334,slow=10,SNR=4.7						
TEIG				PP	PP	08 55 40.8	+8.0
	comp=Z,19nm,1.1s,baz=354,slow=5.6,SNR=5.0						
TEIG	**Tepich**	**160.16**	**24**	*e*PKPdf	PKPdf	08 51 12.1	-0.2
TEIG				LR	LR		
	comp=Z,21μm,20.0s						
MOAC	**Moa**	**160.85**	**346**	*e*P	pPKPdf	08 51 20.9	-2.3
MASC	**Masc**	**161.12**	**343**	*e*P	pPKPdf	08 51 21.1	-2.4
RCC	**Rio Carpintero**	**161.66**	**347**	*e*P	PKPdf	08 51 14.9	+1.1
LMGC	**Las Mercedes**	**161.84**	**351**	*e*P	PKPdf	08 51 15.7	+1.7
PCRV	**Puerto La Cruz**	**162.77**	**299**	PP	PP	08 55 57.5	+9.1
	comp=Z,5.7nm,1.0s,baz=24,slow=20,SNR=1.8						
CVJ	**Coleyville**	**163.72**	**352**	*e*P	PKPab	08 52 06.8	-0.8
GWJ	**Greenwich**	**163.74**	**349**	*e*P	PKPab	08 52 09.4	+1.6
STH	**Stony Hill**	**163.75**	**349**	*e*P	PKPab	08 52 07.0	-0.7
PCJ	**Portland Cotta**	**164.14**	**350**	*e*P	PKPab	08 52 12.6	+3.1
NNA	**Nana**	**165.75**	**192**	*e*PKPdf	PKPdf	08 51 24.8	+7.1
NNA				*e*PKPab	PKPab	08 52 39.4	+23
NNA				LR	LR		
	comp=Z,20μm,20.0s						
TGUH	**Tegucigalpa,Un**	**166.02**	**31**	*e*PKPdf	PKPdf	08 51 17.1	-0.8
TGUH				LR	LR		
	comp=Z,22μm,19.0s						
SDV	**Santo Domingo**	**168.50**	**307**	PKP	PKPdf	08 51 20.3	+0.4
	comp=Z,8.8nm,0.5s,baz=16,slow=7.3,SNR=2.0						
SDV				PP	PP	08 56 27.0	+9.2
	comp=Z,18nm,0.7s,baz=343,slow=6.1,SNR=3.2						
SDV	**Santo Domingo**	**168.50**	**307**	PKP	PKPdf	08 51 20.3	+0.4
SDV				PP	PP	08 56 27.1	+9.2
SDV				LR	LR		
	comp=Z,12μm,19.0s						
PAYG	**Puerto Ayora**	**169.32**	**104**	PFAKE		08 51 30.0	+10
PAYG				LR	LR		
	comp=Z,20μm,20.0s						
JTS	**JuntasAbangare**	**170.39**	**31**	PKP	PKPdf	08 51 21.1	+0.1
	comp=Z,2.8nm,0.5s,baz=328,slow=17,SNR=2.3						
JTS				PP	PP	08 56 30.1	+3.7
	comp=Z,1.9nm,0.3s,baz=331,slow=19,SNR=2.3						
JTS	**JuntasAbangare**	**170.39**	**31**	PKP	PKPdf	08 51 21.1	+0.1
JTS				PP	PP	08 56 30.1	+3.7
JTS				LR	LR		
	comp=Z,23μm,21.0s						
ATAH	**Atahualpa**	**170.91**	**190**	PP	PP	08 56 41.6	+13
	comp=Z,2.8nm,0.8s,baz=2.3,slow=18,SNR=2.2						
BCIP	**Isla Barro Col**	**172.90**	**359**	*e*PKPdf	PKPdf	08 51 21.2	-1.0
BCIP				*e*PKPab	PKPab	08 52 53.1	+4.9
BCIP				LR	LR		
	comp=Z,20μm,19.0s						
ROSC	**El Rosal**	**173.73**	**297**	PKP	PKPdf	08 51 21.0	-1.6
	comp=Z,13nm,0.9s,baz=263,slow=24,SNR=6.5						
ROSC				PP	PP	08 56 52.5	+8.2
	comp=Z,9.8nm,0.7s,baz=90,slow=20,SNR=3.4						
ROSC	**El Rosal**	**173.73**	**297**	*e*PKPdf	PKPdf	08 51 22.0	-0.5
OTAV	**Otavalo**	**177.69**	**220**	*e*PKPdf	PKPdf	08 51 23.8	+0.2
OTAV				LR	LR		
	comp=Z,41μm,21.0s						

LDG ***20*** *08:35:25.7±0.3, 1352S×16775E, h10km, Mb5.1/1, Error ellipse: s-maj=41.3km s-min=12.7km az=92.0*
BJI ***20*** *08:35:40.7, 1445S×16659E, h168km, mB5.0, mb4.6*
ISCJB ***20*** *08:35:42.9±1.7, 1435S±008×167.13E±005, h172km±17km, mb4.7/45, Error ellipse: s-maj=12.5km s-min=8.3km az=5.3*
IDC ***20*** *08:35:43.6±1.4, 1438S×16731E, h165km±11km, mb4.6/20, mb1 4.8/20, mb1mx4.8/21, mbtmp4.6/20, Error ellipse: s-maj=14.8km s-min=13.0km az=143.0*
NEIC ***20*** *08:35:45.1±1.1, 1443S×16732E, h182km±11km, mb4.7/18, Error ellipse: s-maj=7.7km s-min=7.4km az=203.0*
ISC 20 08:35:44.3±1.5, 1438S±007×16722E±005, h173km±15km, n485, σ0 51/393, mb4.7/45, 179C-158D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.69**	**185**	*e*P	**Pn**	**08 37 33.4**	**-0.1**
DZM				*e*S	**Sn**	**08 38 58.4**	**-1.4**
DZM	**Mont Dzumac**	**7.69**	**185**	*e*Pn	**Pn**	**08 37 31.8**	**-1.7**
DZM				*e*Sn	**Sn**	**08 39 00.1**	**+0.3**
NOUC	**Port Laguerre**	**7.73**	**186**	*e*P	**Pn**	**08 37 34.6**	**+0.5**
NOUC				*e*S	**Sn**	**08 38 59.6**	**-1.2**
HNR	**Honiara**	**8.64**	**304**	P	**Pn**

comp=Z,12nm,1.8s,mb4.2
PMR Palmer 83.19 19 eP P 08 47 50.1 -0.6
comp=Z,12nm,0.7s,mb4.7
O01C Eel River Cons 83.78 46 ⇑P P 08 47 54.7 +0.4
baz=84
V03C Hunter Liggett 84.02 51 ⇑P P 08 47 56.2 +0.6
baz=84
MNRC McLaughlin Nat 84.25 48 ⇑P P 08 47 56.7 +0.1
baz=85
SNCC San Nicolas Is 84.30 54 ⇑P P 08 47 57.2 +0.1
baz=85
PACP Pacheco Peak 84.36 50 ⇑P P 08 47 57.2 -0.1
baz=85,SNR=5.1
GASB Alder Springs 84.36 47 ⇓P P 08 47 57.5 +0.3
baz=85
N02C Big Bar 84.42 46 ⇓P P 08 47 57.5 0.0
baz=85
Q03C Winters 84.45 48 ⇑P P 08 47 58.4 +0.7
baz=85
U04C Hernandez Rese 84.48 50 ⇓P P 08 47 58.5 +0.6
baz=85
O02C Red Bluff 84.52 46 ⇑P P 08 47 58.6 +0.6
baz=85
PKM Peak Mountain 84.67 52 ⇑P P 08 47 59.7 +0.8
baz=85
SMMC Simmler 84.68 52 ⇑P P 08 47 59.2 +0.2
baz=85
L02A Cave Junction 84.77 44 ⇑P P 08 47 59.5 +0.3
baz=85
WDC Whiskeytown Da 84.86 46 ⇓P P 08 47 59.8 +0.1
baz=85
WDC Whiskeytown Da 84.86 46 eP P 08 47 59.5 -0.2
M02C Callahan 84.97 45 ⇓P P 08 48 00.5 +0.3
baz=85
ORV Oroville 85.18 47 ⇓P P 08 48 01.0 -0.3
baz=86
S05C Merced 85.19 50 ⇑P P 08 48 01.3 -0.1
baz=86,SNR=7.7
YBH Yreka Blue Hor 85.20 45 ⇓P P 08 48 01.5 +0.2
baz=86
YBH Yreka Blue Hor 85.20 45 eP P 08 48 01.0 -0.3
comp=Z,8.3nm,0.7s,mb4.6
J02A Umpqua 85.29 43 ⇑P P 08 48 02.0 +0.3
baz=86
I02A Mapleton 85.39 43 ⇓P P 08 48 02.3 +0.1
baz=86
HUMO Hull Mountain 85.39 44 ⇑P P 08 48 02.5 +0.3
baz=86
HUMO Hull Mountain 85.39 44 eP P 08 48 02.0 -0.3
comp=Z,13nm,0.8s,mb4.7
CMB Columbia Colle 85.41 49 ⇑P P 08 48 02.1 -0.4
baz=86,SNR=7.5
CMB Columbia Colle 85.41 49 eP P 08 48 01.9 -0.5
comp=Z,8.7nm,0.8s,mb4.5
LAVA Lava Cap Winer 85.42 48 ⇓P P 08 48 02.4 -0.2
baz=86
M03C McCloud 85.42 46 ⇓P P 08 48 02.1 -0.3
baz=86
T06C Millerton Lake 85.53 50 ⇑P P 08 48 02.4 -0.6
baz=86,SNR=8.8
VES Vestal, Richgr 85.58 51 ⇑P P 08 48 02.7 -0.6
baz=86
P05C Yuba Gap, Truc 85.72 48 ⇑P P 08 48 04.0 0.0
baz=86
BUOR Burton Butte 85.74 45 P P 08 48 04.0 0.0
S06C San Francisco 85.75 49 ⇑P P 08 48 03.8 -0.3
baz=86,SNR=10
O05C Quincy 85.75 47 ⇓P P 08 48 03.8 -0.3
baz=86
O04C Chester 85.77 47 ⇑P P 08 48 04.0 -0.2
baz=86
LBCM Butte Creek Ri 85.79 46 P P 08 48 04.0 -0.2
M04C Macdoel 85.82 45 ⇓P P 08 48 04.2 -0.3
baz=86
R05C Kirkwood Meado 85.88 49 ⇓P P 08 48 04.5 -0.3
baz=86
HELL Mitchell Peak 85.92 51 ⇑P P 08 48 04.5 -0.6
baz=86,SNR=12
KCC Kaiser Creek 85.93 50 ⇓P P 08 48 04.8 -0.3
baz=86,SNR=9.5
L04A Klamath Falls 85.94 45 ⇑P P 08 48 05.2 +0.2
baz=86
ISA Isabella 85.97 52 ⇑P P 08 48 05.1 -0.2
baz=86
ISA Isabella 85.97 52 eP P 08 48 04.9 -0.4
H03A Soap Creek Ran 86.02 42 ⇑P P 08 48 05.5 +0.2
baz=86
EDW2 Edwards Air Fo 86.07 53 ⇓P P 08 48 05.7 -0.1
baz=87
BFSC Mount Baldy St 86.10 53 ⇓P P 08 48 05.6 -0.4
baz=87
BEKR Beckwourth 86.12 47 ⇑P P 08 48 05.8 -0.1
baz=87
M05C Lookout 86.13 46 ⇓P P 08 48 06.0 +0.1
baz=87
I04A Tendick Farm, 86.24 43 ⇑P P 08 48 06.1 -0.3
baz=87
MURC Murrieta 86.24 54 ⇓P P 08 48 06.3 -0.4
baz=87
R06C Coleville 86.27 49 ⇑P P 08 48 06.8 +0.1
baz=87
WAKR Walker 86.28 49 eP P 08 48 06.9 +0.2
M06C Likely Place G 86.54 46 ⇓P P 08 48 08.2 +0.3
baz=87
CWC Cottonwood Cre 86.54 51 ⇑P P 08 48 08.2 +0.1
baz=87
O06A Flanigan 86.61 47 ⇓P P 08 48 08.6 +0.3
baz=87
MONP Monument Peak 86.62 55 ⇓P P 08 48 09.2 +0.6
baz=87
E03A Lebam 86.63 40 ⇓P P 08 48 08.5 +0.3
baz=87,SNR=5.6
D03A Wishkah Elem. 86.74 40 ⇑P P 08 48 09.0 +0.3
baz=87
H04A Detroit Lake 86.75 42 ⇑P P 08 48 08.5 -0.3
baz=87
OOW Octopus West 86.75 39 P P 08 48 09.3 +0.5
NLWA Neilton Lookou 86.80 39 ⇑P P 08 48 09.3 +0.2
baz=87
OTR Olympics--Tyee 86.80 39 P P 08 48 09.6 +0.5
N06A Buffalo Meadow 86.82 47 ⇓P P 08 48 09.2 -0.1
baz=87
J05A Fort Rock 86.82 44 ⇓P P 08 48 09.6 +0.3
baz=87
PFO Pinyon Flat Ob 86.83 54 ⇓P P 08 48 09.5 0.0
baz=87
K05A Summer Lake 86.83 45 ⇓P P 08 48 09.7 +0.3
baz=87
S08C White Mtn Res 86.85 50 ⇓P P 08 48 09.8 +0.3
baz=87,SNR=6.4
MPMC Manual Prospec 86.86 52 ⇑P P 08 48 09.7 +0.1
baz=87,SNR=8.0
MOD Modoc 86.92 45 ⇓P P 08 48 09.5 -0.3
baz=87
NVAR Mina Array Bea 87.08 49 P P 08 48 10.5 -0.1
comp=Z,6.0nm,0.9s,mb4.4,baz=228,slow=6.5,SNR=18
F04A Amboy 87.10 41 ⇓P P 08 48 10.3 -0.2
baz=88
GSC Goldstone 87.12 53 ⇑P P 08 48 10.9 -0.1
baz=88
I05A Bend 87.14 43 ⇑P P 08 48 10.9 +0.2
baz=88
O07A Toulon 87.28 47 ⇑P P 08 48 11.8 +0.2
baz=88
K06A Valley Falls 87.30 45 ⇑P P 08 48 11.7 +0.2
baz=88
B04A Port Angeles 87.30 39 ⇓P P 08 48 12.0 +0.6
baz=88
BELC Belle Mtn. 87.32 54 ⇑P P 08 48 12.0 +0.1
baz=88,SNR=9.2
HEC Hector,Ludlow 87.33 53 ⇓P P 08 48 11.5 -0.5
baz=88,SNR=7.1
D04A Dobbs Creek Ra 87.34 40 ⇑P P 08 48 12.3 +0.7
baz=88
H05A Madras 87.36 43 ⇓P P 08 48 11.7 -0.1
baz=88
N07B Gerlach 87.44 47 ⇑P P 08 48 12.7 +0.5
baz=88
FURC Furnace Creek, 87.48 52 ⇑P P 08 48 12.8 +0.2
baz=88
C04A Brinnon 87.48 39 ⇓P P 08 48 12.9 +0.6
baz=88
Q08A Gabbs 87.50 49 ⇑P P 08 48 12.5 -0.1
baz=88
GNW Green Mountain 87.51 40 eP P 08 48 11.8 -0.6
comp=Z,13nm,0.6s,mb4.9
M07A Soldier Meadow 87.52 46 ⇓P P 08 48 12.8 +0.2
baz=88
G05A Wamic 87.53 42 ⇑P P 08 48 12.5 -0.1
baz=88
J06A Christmas Vall 87.54 44 ⇓P P 08 48 12.6 -0.1
baz=88
S09A Goldfield 87.63 50 ⇓P P 08 48 13.1 -0.1
baz=88
L07A Adell 87.64 46 ⇑P P 08 48 13.1 -0.1
baz=88
BC3 Big Chuckw Mtn 87.64 55 ⇓P P 08 48 13.4 0.0
baz=88
F05A White Salmon 87.69 41 ⇓P P 08 48 13.1 -0.3
baz=88
SHOC Shoshone 87.73 52 ⇑P P 08 48 13.7 -0.1
baz=88
I06A Prineville 87.76 44 ⇓P P 08 48 13.7 0.0
baz=88,SNR=7.4
E05A Randle 87.77 41 ⇑P P 08 48 13.5 -0.2
baz=88
LON Longmire 87.81 41 eP P 08 48 12.9 -1.0
comp=Z,2.6nm,0.7s,mb4.2
GMRC Granite Mounta 87.84 53 ⇓P P 08 48 14.1 -0.2
baz=88,SNR=7.7
O08A Rochester Mine 87.84 48 ⇑P P 08 48 14.2 -0.1
baz=88
TUQ Turquoise Moun 87.85 53 ⇓P P 08 48 14.1 -0.2
baz=88,SNR=12
U10A Ash Meadows, A 87.86 52 ⇓P P 08 48 14.9 +0.5
baz=88
D05A Enumclaw 87.88 40 ⇓P P 08 48 14.4 +0.2
baz=88
R09A Tonopah 87.92 50 ⇑P P 08 48 14.4 -0.3
baz=88
GLA Glamis 87.94 55 ⇑P P 08 48 15.5 +0.7
baz=88
K07A Rock Creek Ran 87.95 45 ⇑P P 08 48 14.7 0.0
baz=88
H06A Lindquist Farm 87.98 43 ⇑P P 08 48 14.5 -0.3
baz=88
N08A GE Springer Mi 88.03 47 ⇓P P 08 48 15.2 +0.1
baz=88
IRM Iron Mountain 88.04 54 ⇑P P 08 48 15.3 0.0
baz=89,SNR=6.4
A04A Legoe Bay, Lum 88.06 39 ⇑P P 08 48 15.7 +0.6
baz=88
F06A Goldendale 88.08 42 ⇑P P 08 48 15.0 -0.2
baz=88
M08A Happy Creek Ra 88.10 46 ⇑P P 08 48 15.8 +0.4
baz=89
RMW Rattlesnake Mo 88.10 40 P P 08 48 15.1 -0.2
TPNV Topopah Spring 88.10 51 ⇓P P 08 48 15.6 +0.1
baz=89
TPNV Topopah Spring 88.10 51 eP P 08 48 15.5 0.0
comp=Z,7.1nm,0.7s,mb4.6
J07A Hines 88.15 44 ⇓P P 08 48 15.4 -0.2
baz=89
S10A Tonopah Range, 88.17 50 ⇓P P 08 48 15.6 -0.2
baz=89,SNR=5.2
B05A Bryant 88.25 39 ⇓P P 08 48 15.8 -0.1
baz=89
E06A Yakima 88.26 41 ⇑P P 08 48 15.8 -0.2
baz=89
C05A Tolt Reservoir 88.27 40 ⇓P P 08 48 16.1 0.0
baz=89
WVOR Wild Horse Val 88.27 45 eP P 08 48 15.8 -0.4
comp=Z,5.5nm,1.2s,mb4.3
I07A Izee 88.28 44 ⇑P P 08 48 16.3 +0.1
baz=89,SNR=10
V11A Goodsprings 88.36 52 ⇑P P 08 48 16.9 +0.1
baz=89,SNR=11
LDFC Landfair 88.36 53 eP P 08 48 17.1 +0.3
comp=Z,18nm,0.7s,mb5.0
L08A Fields 88.39 46 ⇑P P 08 48 16.7 0.0
baz=89
Y12C Blythe 88.40 55 ⇓P P 08 48 17.4 +0.4
baz=89
H07A Lands Inn, Kim 88.43 43 ⇑P P 08 48 16.7 -0.2
baz=89,SNR=6.4
K08A Mann Creek Ran 88.48 45 ⇓P P 08 48 17.3 +0.1
baz=89
O09A Fish Creek Ran 88.50 48 ⇓P P 08 48 17.2 -0.1
baz=89,SNR=5.4
R10A Warm Springs 88.51 50 ⇓P P 08 48 17.6 +0.2
baz=89
A05A Maple Falls 88.55 38 ⇓P P 08 48 17.3 0.0
baz=89
U11A Corn Creek 88.58 52 ⇓P P 08 48 18.3 +0.5
baz=89
D06A Cle Elum 88.60 40 ⇓P P 08 48 17.7 +0.2
baz=89,SNR=5.6
Q10A Clear Creek Ra 88.61 49 ⇑P P 08 48 17.9 +0.1
baz=89
G07A Ruggs Ranch, H 88.62 43 ⇑P P 08 48 17.2 -0.6
baz=89,SNR=6.4
W12A Cal Nev Ari 88.62 53 ⇓P P 08 48 18.4 +0.4
baz=89
EBG Ellensburg 88.66 41 P P 08 48 18.0 +0.1
F07A Phinny Hill Vi 88.69 42 ⇑P P 08 48 18.1 +0.1
baz=89
113A Mohawk Valley, 88.70 56 ⇓P P 08 48 18.8 +0.4
baz=89
S11A Rachel 88.71 51 ⇑P P 08 48 18.3 -0.1
baz=89
J08A Circle Bar Ran 88.72 45 ⇑P P 08 48 18.1 -0.1
baz=89,SNR=11
V12A Nelson 88.77 53 ⇑P P 08 48 18.8 +0.1
baz=89
SHPR Sheep Range 88.78 52 eP P 08 48 19.0 +0.3
P10A Eureka 88.83 49 ⇑P P 08 48 18.8 -0.1
baz=89
I08A Drewsey 88.85 44 ⇑P P 08 48 19.0 +0.1
baz=89,SNR=7.6
PDMCI Parker Dam,Lak 88.88 54 ⇑P P 08 48 19.5 +0.2
baz=89,SNR=6.2
A06A Chilliwack 88.95 39 ⇓P P 08 48 19.1 -0.1
baz=89
Y13A Salome 88.97 55 ⇓P P 08 48 19.9 +0.2
baz=90,SNR=5.1
T11A Corn Creek, Al 88.97 51 ⇓P P 08 48 19.4 -0.2
baz=90,SNR=6.3
E07A Sunnyside 88.98 41 ⇑P P 08 48 19.8 +0.4
baz=89
K09A Rome 89.00 45 ⇑P P 08 48 19.4 -0.1
baz=90
H08A Prairie City 89.00 43 ⇓P P 08 48 19.3 -0.3
baz=90,SNR=6.2
SYO Syowa Base 89.03 197⇑ eP P 08 48 15.8 -3.5
SYO Syowa Base 89.03 197⇑ ePcP PcP 08 48 19.8 -0.9
O10A Cortez Mining, 89.03 48 ⇓P P 08 48 19.8 0.0
baz=90
R11A Troy Canyon, C 89.06 50 ⇓P P 08 48 19.9 -0.1
baz=90
ETW Entiat 89.08 40 eP P 08 48 19.3 -0.6
RSW Rattlesnake Hi 89.09 42 eP P 08 48 19.8 -0.1
G08A Pilot Rock 89.09 43 ⇑P P 08 48 20.1 +0.2
baz=90,SNR=17
HAWA Hanford 89.13 42 eP P 08 48 20.1 0.0
comp=Z,10nm,0.8s,mb4.8
D07A Quincy 89.15 41 ⇓P P 08 48 19.6 -0.6
baz=90,SNR=7.5
Q11A Duckwater 89.17 50 ⇓P P 08 48 20.4 -0.1
baz=90,SNR=11
N10A Dunphy 89.17 48 ⇑P P 08 48 20.6 +0.1
baz=90
J09A Fry Pan Ranch, 89.20 45 ⇓P P 08 48 20.6 +0.1
baz=90,SNR=12
X13A Yucca 89.21 54 ⇑P P 08 48 20.5 -0.3
baz=90,SNR=6.2
214A Organ Pipe Nat 89.22 57 ⇑P P 08 48 21.4 +0.5
baz=90
U12A Valley of Fire 89.23 52 ⇑P P 08 48 21.5 +0.7
baz=90
C07A Waterville 89.28 40 ⇓P P 08 48 20.1 -0.6
baz=90
W13A Hualapai Mount 89.32 54 ⇑P P 08 48 21.5 +0.2
baz=90,SNR=5.1
P11A Circle Ranch, 89.33 49 ⇓P P 08 48 21.6 +0.4
baz=90
S12A Delamar Landin 89.37 51 ⇑P P 08 48 21.8 +0.3
baz=90,SNR=6.3
F08A Pendleton 89.40 42 ⇓P P 08 48 21.0 -0.3
baz=90,SNR=6.0
M10A I.L. Ranch, Tu 89.42 47 ⇑P P 08 48 21.6 0.0
baz=90,SNR=8.1
I09A Lost Marbles R 89.43 44 ⇓P P 08 48 21.0 -0.6
baz=90,SNR=7.3
E08A Dider Farm, El 89.47 42 ⇓P P 08 48 21.3 -0.4
baz=90,SNR=7.8
V13A Grand Canyon W 89.48 53 ⇓P P 08 48 22.0 -0.1
baz=90
B07A Winthrop 89.53 39 ⇓P P 08 48 21.7 -0.3
baz=90,SNR=5.3
Z14A Wintersburg 89.54 55 ⇓P P 08 48 22.4 +0.1
baz=90
O11A Cowboy Ranch, 89.59 48 ⇑P P 08 48 22.4 0.0
baz=90,SNR=9.1
A07A Ashnola River, 89.60 39 ⇑P P 08 48 22.2 0.0
baz=90
K10A MacKenzie Ranc 89.61 46 ⇓P P 08 48 22.2 -0.3
baz=90,SNR=6.2
L10A Juniper Basin 89.66 46 ⇑P P 08 48 22.5 -0.2
baz=90,SNR=6.2
Y14A Wickenburg 89.66 55 ⇓P P 08 48 23.4 +0.5
baz=90
U13A Pakoon Wash 89.67 52 ⇑P P 08 48 22.9 +0.1
baz=90,SNR=9.5
H09A Durkee 89.73 44 ⇓P P 08 48 22.7 -0.2
baz=90,SNR=7.6
LNOR Lincton Mounta 89.74 42 eP P 08 48 22.2 -0.8
D08A Wollman Farm, 89.76 41 ⇑P P 08 48 22.7 -0.4
baz=90,SNR=5.0
R12A Pony Springs, 89.78 50 ⇓P P 08 48 23.1 -0.2
baz=90,SNR=7.1
Q12A Willow Creek R 89.84 50 ⇓P P 08 48 23.6 0.0
baz=90,SNR=10
G09A Cove 89.86 43 ⇓P P 08 48 23.2 -0.3
baz=90,SNR=5.2
T13A Saint George 89.90 52 ⇑P P 08 48 24.1 +0.2
baz=90,SNR=24
J10A Berg Farm, Mel 89.91 45 ⇓P P 08 48 23.9 +0.1
baz=90
X14A Yava 89.91 54 ⇑P P 08 48 24.3 +0.2
baz=90,SNR=8.2
115A Sonoran Desert 89.92 56 ⇓P P 08 48 24.6 +0.5
baz=90
M11A Holland Ranch, 89.92 47 ⇑P P 08 48 24.4 +0.5
baz=90,SNR=8.6
P12A McGill 89.92 49 ⇓P P 08 48 24.0 0.0
baz=90,SNR=6.9
F09A S2 Ranch, Elgi 89.93 43 ⇑P P 08 48 23.5 -0.4
baz=90
B08A Colville Reser 89.98 40 ⇓P P 08 48 23.8 -0.3
baz=90
W14A Seligman 89.98 54 ⇓P P 08 48 24.7 +0.3
baz=90,SNR=6.0
OD2 Odessa Site #2 90.02 41 eP P 08 48 23.8 -0.4
BMO Blue Mountains 90.03 44 eP P 08 48 24.0 -0.4
comp=Z,7.2nm,0.8s,mb4.7
E09A Wood Farm, Sta 90.06 42 ⇑P P 08 48 24.2 -0.2
baz=90,SNR=7.9
V14A Boquillas Ranc 90.09 53 ⇑P P 08 48 25.2 +0.3
baz=91,SNR=8.8
I10A Payette 90.11 44 ⇓P P 08 48 24.8 0.0
baz=91,SNR=5.3
S13A Holt Ranch, En 90.11 51 ⇓P P 08 48 25.1 +0.1
baz=91,SNR=10
Z15A Gila River Ind 90.14 56 ⇑P P 08 48 25.5 +0.3
baz=91
D09A Jones Farm, Ri 90.15 41 ⇑P P 08 48 24.6 -0.3
baz=91,SNR=7.9
L11A Cat Creek Ranc 90.19 46 ⇓P P 08 48 25.4 +0.2
baz=91,SNR=12
K11A Parker Ranch, 90.19 46 ⇑P P 08 48 25.0 -0.2
baz=91,SNR=6.9
Y15A Casa Rosa Ranc 90.20 55 ⇑P P 08 48 25.4 -0.1
baz=91,SNR=11
R13A O'Grain Ranch, 90.21 51 ⇓P P 08 48 25.8 +0.4
baz=91,SNR=7.3
A08A Turner Farm, O 90.24 39 ⇓P P 08 48 25.2 -0.1
baz=91,SNR=6.2
N12A Clover Valley, 90.27 48 ⇓P P 08 48 25.7 +0.1
baz=91,SNR=12
U14A Mt Trumbull 90.27 53 ⇓P P 08 48 26.1 +0.4
baz=91,SNR=11
O12A Currie 90.29 48 ⇑P P 08 48 25.4 -0.3
baz=91,SNR=10
116A Eloy 90.30 57 ⇓P P 08 48 26.4 +0.5
baz=91,SNR=6.4
G10A Bishop Farm, J 90.31 43 ⇑P P 08 48 25.6 0.0
baz=91,SNR=36
H10A Noah's Angus R 90.31 44 ⇓P P 08 48 25.1 -0.6
baz=91,SNR=24
Q13A Wheeler Ranch, 90.41 50 ⇑P P 08 48 26.3 0.0
baz=91,SNR=16
X15A Humboldt 90.43 55 ⇓P P 08 48 26.8 +0.3
baz=91,SNR=7.6
C09A Chrisman Ranch 90.44 41 ⇓P P 08 48 25.5 -0.7
baz=91
F10A Beach Ranch, E 90.47 42 ⇓P P 08 48 25.9 -0.5
baz=91,SNR=16
ARUT Antelope Range 90.49 51 eP P 08 48 26.6 -0.1
M12A Wells 90.54 47 ⇓P P 08 48 26.8 0.0
baz=91,SNR=9.9
T14A Hurricane 90.54 52 ⇓P P 08 48 26.8 -0.1
baz=91
MFID Camas Ranch 90.55 45 ⇓P P 08 48 26.5 -0.3
baz=91,SNR=7.6
P13A Bates Ranch, G 90.57 49 ⇓P P 08 48 27.0 0.0
baz=91,SNR=12
I11A Placerville 90.62 45 ⇑P P 08 48 26.7 -0.5
baz=91,SNR=9.2
A09A Danville 90.67 39 ⇓P P 08 48 27.1 -0.1
baz=91
S14A Cedar City 90.69 51 ⇓P P 08 48 27.7 +0.1
baz=91
L12A House Creek Ra 90.70 47 ⇓P P 08 48 27.7 +0.2
baz=91,SNR=14
B09A Rice 90.74 40 ⇓P P 08 48 27.4 -0.2
baz=91
Z16A Peralta Trail, 90.75 56 ⇓P P 08 48 27.9 -0.1
baz=91,SNR=7.0
217A Green Valley 90.80 58 ⇑P P 08 48 28.6 +0.3
baz=91
D10A Wagner Farm, O 90.81 41 ⇓P P 08 48 27.3 -0.7
baz=91,SNR=11
H11A Donnelly 90.85 44 ⇓P P 08 48 27.9 -0.2
baz=91,SNR=9.7
Y16A Circle Bar Ran 90.86 55 ⇑P P 08 48 28.8 +0.3
baz=91,SNR=6.4
N13A Wendover, West 90.87 48 ⇓P P 08 48 28.4 +0.1
baz=91
V15A Kaibab Nationa 90.87 53 ⇓P P 08 48 29.0 +0.5
baz=91
G11A Walters Elk Ra 90.91 43 ⇓P P 08 48 27.9 -0.5
baz=91,SNR=13
K12A Draper Farm, C 90.94 46 ⇓P P 08 48 28.4 -0.2
baz=91,SNR=9.5
U15A North Rim 90.96 53 ⇓P P 08 48 29.3 +0.4
baz=92,SNR=7.4
TUC Tucson 90.97 57 eP P 08 48 28.8 -0.2
comp=Z,3.0nm,0.7s,mb4.4
Q14A Sevier Lake (B 90.97 50 ⇑P P 08 48 29.0 +0.1
baz=92,SNR=15
J12A Stokes Ranch, 91.00 46 ⇑P P 08 48 28.8 -0.1
baz=92,SNR=12
X16A Lo Mia Camp, P 91.04 55 ⇓P P 08 48 29.5 +0.2
baz=92,SNR=7.0
M13A Montello 91.06 48 ⇓P P 08 48 29.1 -0.1
baz=92,SNR=11
C10A Spilker Farm, 91.06 41 ⇑P P 08 48 28.6 -0.4
baz=92
T15A Red Dirt Ranch 91.06 52 ⇓P P 08 48 29.5 +0.1
baz=92
117A Oracle 91.08 57 ⇓P P 08 48 29.7 +0.2
baz=92,SNR=10
W16A Flagstaff 91.16 54 ⇑P P 08 48 30.4 +0.5
baz=92
E11A Bogner Ranch, 91.27 42 ⇑P P 08 48 29.3 -0.8
baz=92
A10A Northport 91.30 40 ⇑P P 08 48 29.8 -0.3
baz=92
P14A Drum Mountains 91.31 50 ⇑P P 08 48 30.4 0.0
baz=92
Y17A Roosevelt 91.31 56 ⇑P P 08 48 30.5 -0.1
baz=92
NEW Newport 91.33 40 eP P 08 48 29.4 -0.9
comp=Z,7.1nm,0.8s,mb4.8
318A Bisbee 91.38 58 ⇑P P 08 48 31.4 +0.4
baz=92
WUAZ Wupatki 91.41 54 ⇓P P 08 48 31.1 +0.1
baz=92
D11A Klaveano Farm, 91.42 42 ⇑P P 08 48 30.2 -0.6
baz=92,SNR=15
L13A Double Diamond 91.44 47 ⇑P P 08 48 31.2 +0.3
baz=92
218A Dragoon 91.48 57 ⇓P P 08 48 31.5 0.0
baz=92,SNR=5.3

K13A	Stover Farm, H	91.51	46	⇑P		P	08 48 31.7	+0.4
	baz=92							
X17A	Forest Lakes	91.52	55	⇓P		P	08 48 31.9	+0.4
	baz=92,SNR=8.3							
HLID	Hailey	91.57	45	⇓P		P	08 48 31.5	0.0
	baz=92							
H12A	Diamond D Ranc	91.58	44	⇑P		P	08 48 31.2	-0.4
	baz=92,SNR=6.8							
N14A	Grayback Hills	91.60	48	⇓P		P	08 48 31.4	-0.3
	baz=92							
Q15A	Fillmore	91.65	50	⇑P		P	08 48 32.7	+0.7
	baz=92							
MSU	Marysvale	91.66	51	*e*P		P	08 48 33.0	+1.0
DUG	Dugway	91.68	49	⇑P		P	08 48 32.2	+0.1
	baz=92							
DUG	Dugway	91.68	49	*e*P		P	08 48 31.5	-0.6
	comp=Z,4.0nm,1.0s,mb4.4							
J13A	Cove Ranch, Pi	91.68	46	⇓P		P	08 48 32.3	+0.3
	baz=92							
M14A	Sheep Mountain	91.69	48	⇑P		P	08 48 32.0	-0.1
	baz=92							
F12A	Elk City	91.70	43	⇑P		P	08 48 31.4	-0.7
	baz=92,SNR=9.5							
E12A	Beaver Dam Sad	91.70	42	⇑P		P	08 48 31.5	-0.6
	baz=92							
118A	Homack Ranch,	91.73	57	⇑P		P	08 48 32.8	+0.3
	baz=92,SNR=6.0							
C11A	Tepee Creek (N	91.73	41	⇓P		P	08 48 32.1	-0.1
	baz=92							
U16A	Tuba City	91.78	53	⇓P		P	08 48 33.3	+0.6
	baz=92							
B11A	Sandpoint	91.86	40	⇓P		P	08 48 32.5	-0.2
	baz=92							
S16A	Weppner Ranch,	91.87	52	⇑P		P	08 48 32.9	-0.2
	baz=92							
I13A	Wildhorse Cree	91.88	45	⇓P		P	08 48 32.8	-0.1
	baz=92							
P15A	Leamington	91.89	50	⇑P		P	08 48 32.8	-0.3
	baz=92							
L14A	Malta	91.92	47	⇑P		P	08 48 33.2	0.0
	baz=92							
319A	Douglas	91.95	58	⇓P		P	08 48 33.6	0.0
	baz=92,SNR=5.6							
Y18A	Canyon Day Jun	91.98	56	⇑P		P	08 48 34.2	+0.5
	baz=92							
A11A	Hall Mountain,	92.04	40	⇓P		P	08 48 34.1	+0.5
	baz=92							
D12A	Red Ives Fores	92.05	42	⇑P		P	08 48 33.1	-0.6
	baz=92							
N15A	Stansbury Isla	92.10	48	⇓P		P	08 48 34.1	0.0
	baz=93							
R16A	Teasdale	92.11	51	⇑P		P	08 48 34.7	+0.6
	baz=93							
K14A	Jones Ranch, D	92.12	47	⇓P		P	08 48 34.4	+0.3
	baz=93							
219A	White Tail Can	92.13	58	⇑P		P	08 48 35.0	+0.5
	baz=93							
G13A	Cobalt	92.17	44	⇑P		P	08 48 33.9	-0.4
	baz=93,SNR=6.2							
C12B	Naegeli Ranch,	92.19	41	⇓P		P	08 48 34.2	-0.1
	baz=93							
X18A	Snowflake	92.26	55	⇓P		P	08 48 35.3	+0.4
	baz=93							
T17A	Navajo Res., N	92.27	53	⇑P		P	08 48 35.3	+0.3
	baz=93							
119A	Ashpeak Ranch,	92.30	57	⇓P		P	08 48 35.2	0.0
	baz=93							
F13A	Darby	92.32	43	⇑P		P	08 48 34.9	-0.1
	baz=93							
I14A	Mackay	92.34	45	⇓P		P	08 48 35.2	+0.1
	baz=93							
B12A	Libby	92.36	41	⇓P		P	08 48 34.9	-0.1
	baz=93							
WMQ	Urumqi	92.44	315	*e*P		P	08 48 31.0	-4.6
S17A	Black Ridge (B	92.45	52	⇑P		P	08 48 35.6	-0.2
	baz=93							
A12A	Yaak River Ran	92.47	40	⇓P		P	08 48 35.7	+0.1
	baz=93							
L15A	Malad City	92.52	47	⇑P		P	08 48 35.8	-0.1
	baz=93							
W18A	Petrified Fore	92.58	55	⇑P		P	08 48 36.7	+0.2
	baz=93							
V18A	Ganado	92.59	54	⇑P		P	08 48 36.8	+0.3
	baz=93							
H14A	Leadore	92.61	45	⇓P		P	08 48 36.8	+0.4
	baz=93							
K15A	Arbon	92.62	47	⇑P		P	08 48 36.6	+0.2
	baz=93							
E13A	Victor	92.62	43	⇓P		P	08 48 36.7	+0.4
	baz=93							
O16A	Springville	92.64	49	⇓P		P	08 48 37.1	+0.5
	baz=93							
D13A	Huson	92.64	42	⇑P		P	08 48 36.3	-0.1
	baz=93							
Y19A	Nutrioso	92.66	56	⇑P		P	08 48 37.2	+0.4
	baz=93							
R17A	Hanksville Air	92.73	51	⇓P		P	08 48 36.8	-0.2
	baz=93							
G14A	Jackson	92.74	44	⇓P		P	08 48 36.8	-0.1
	baz=93							
JLU	Jordanelle	92.79	49	*e*P		P	08 48 37.5	+0.3
U18A	Rough Rock, Ch	92.83	53	⇑P		P	08 48 37.6	+0.1
	baz=93							
W19A	Sanders	92.86	55	⇑P		P	08 48 38.0	+0.3
	baz=93							
M16A	Huntsville	92.86	48	⇓P		P	08 48 37.4	-0.1
	baz=93							
N16A	Rees Ranch, Co	92.88	49	⇓P		P	08 48 38.0	+0.4
	baz=93							
J15A	Blackfoot	92.89	46	⇓P		P	08 48 38.0	+0.3
	baz=93							
T18A	Mexican Hat	93.02	53	⇓P		P	08 48 38.6	+0.2
	baz=94							
I15A	Monteview	93.03	45	⇓P		P	08 48 38.6	+0.3
	baz=94							
B13A	Whitefish	93.04	41	⇓P		P	08 48 37.7	-0.5
	baz=93							
SRU	San Rafael	93.06	51	⇑P		P	08 48 38.4	-0.1
	baz=94							
SRU	San Rafael	93.06	51	*e*P		P	08 48 37.9	-0.6
	comp=Z,1.6nm,0.7s,mb4.3							
E14A	Clinton	93.07	43	⇓P		P	08 48 38.1	-0.2
	baz=94							
S18A	Hurst Farm, Bl	93.08	52	⇓P		P	08 48 38.8	+0.2
	baz=94							
H15A	Lima	93.10	45	⇓P		P	08 48 38.9	+0.3
	baz=94							
O17A	Robinson Place	93.20	49	⇓P		P	08 48 38.9	-0.2
	baz=94							
A13A	Flathead Natio	93.25	40	⇑P		P	08 48 39.3	+0.2
	baz=94							
N17A	Moffit Pass	93.34	49	⇑P		P	08 48 39.7	0.0
	baz=94							
R18A	Canyonlands Na	93.34	51	⇓P		P	08 48 40.0	+0.1
	baz=94							
Q18A	Rafter H Ranch	93.35	51	⇑P		P	08 48 39.3	-0.6
	baz=94							
G15A	Dillon	93.37	44	⇑P		P	08 48 39.7	-0.1
	baz=94							
P18A	Preston Nutter	93.41	50	⇓P		P	08 48 40.3	+0.1
	baz=94							
J16A	Bone	93.43	46	⇓P		P	08 48 40.3	+0.2
	baz=94							
I16A	Newdale	93.69	46	⇑P		P	08 48 41.6	+0.3
	baz=94							
S19A	Harvey Farm, M	93.75	52	⇑P		P	08 48 41.7	0.0
	baz=94							
O18A	Roosevelt	93.76	50	⇓P		P	08 48 41.6	-0.2
	baz=94							
Q19A	Hogan Spring (	93.97	51	⇑P		P	08 48 42.8	+0.1
	baz=94							
C15A	Salmond Ranch,	94.05	42	⇑P		P	08 48 42.7	-0.2
	baz=94							
B15A	Bradely Ranch,	94.23	41	⇓P		P	08 48 43.2	-0.5
	baz=95							
P19A	Cripple Cowboy	94.35	50	⇑P		P	08 48 43.9	-0.6
	baz=95							
O19A	Miners Draw (B	94.42	50	⇑P		P	08 48 43.9	-0.8
	baz=95							
C16A	Fuhringer Ranc	94.61	42	⇑P		P	08 48 45.1	-0.3
	baz=95							
PDAR	Pinedale Array	94.74	47	P		P	08 48 44.6	-1.5
	comp=Z,0.8nm,0.7s,mb4.0,baz=228,slow=1.8,SNR=5.7							
ANMO	Albuquerque	95.14	55	P		P	08 48 47.3	-0.9
	comp=Z,1.3nm,0.8s,mb4.2,baz=276,slow=9.2							
TXAR	Lajitas Array	96.15	61	P		P	08 48 52.2	-0.7
	comp=Z,0.6nm,0.7s,mb4.0,baz=221,slow=5.7,SNR=9.6							
MKAR	Makanchi Array	96.91	316	P		P	08 48 56.8	+0.9
	comp=Z,9.3nm,0.7s,mb5.2,baz=94,slow=5.7,SNR=5.0							
MKAR					S	SKSac	08 59 15.8	-0.6
	comp=Z,0.3nm,0.3s,baz=91,slow=9.7,SNR=4.7							
MKAR	**Makanchi Array**	**96.91**	**316**		P	**P**	**08 48 56.8**	**+0.9**
MKAR					S	SKSac	08 59 15.8	-0.6
YKA	**Yellowknife Ar**	**97.26**	**27**		P	**P**	**08 48 55.8**	**-1.2**
	comp=Z,3.6nm,0.7s,mb4.8,baz=260,slow=5.0,SNR=4.5							
BVAR	Borovoye Array	105.44	322		PKiKP	PKiKP	08 53 44.7	-1.8
	comp=Z,0.9nm,0.4s,baz=149,slow=3.4,SNR=3.7							
AKTO	Aktyubinsk	113.17	319		PKiKP	PKiKP	08 54 01.1	0.0
	comp=Z,3.7nm,0.6s,baz=78,slow=3.2,SNR=7.7							
KEV	Kevo	119.37	345	*e*pkp		PKPdf	08 54 10.9	-1.6
	comp=Z,5.4nm,0.6s							
ARCES	ARCESS Array B	119.90	345		PKP	PKPdf	08 54 12.8	-0.7
	comp=Z,7.6nm,0.3s,baz=74,slow=1.9,SNR=149							
ARE0	ARCESS Array S	119.90	345	*e*PKPdf		PKPdf	08 54 12.9	-0.6
JOF	Joensuu	122.54	338	*e*pkp		PKPdf	08 54 16.8	-2.0
	comp=Z,19nm,0.8s							
RDF	Al-Radifah	122.63	295	*e*P		PKPdf	08 54 19.3	-0.7
	baz=47							
RDF					AMb	AMB	08 54 24.6	
	comp=Z,35nm,1.3s,baz=47							
NAY	Al-Naaiem	122.89	296	*e*P		PKPdf	08 54 19.5	-1.0
	baz=47							
NAY					AMb	AMB	08 54 21.6	
	comp=Z,12nm,1.7s,baz=47							
RST	Umm Al-Ruwaisa	123.10	296	*e*P		PKPdf	08 54 19.4	-1.5
	baz=47							
RST					AMb	AMB	08 54 21.3	
	comp=Z,20nm,0.5s,baz=47							
SUR	Sutherland	123.47	214		PKP	PKPdf	08 54 21.6	0.0
	comp=Z,3.7nm,0.9s,baz=174,slow=9.2,SNR=3.5							
BOSA	Boshof	123.61	221		PKP	PKPdf	08 54 21.2	-0.8
	comp=Z,2.0nm,0.6s,baz=200,slow=4.4,SNR=5.7							
KAF	Kangasniemi	124.85	339	*e*pkp		PKPdf	08 54 22.0	-1.2
	comp=Z,8.3nm,0.5s							
LBTB	Lobatse	125.84	224		PKP	PKPdf	08 54 25.2	-1.1
	comp=Z,3.4nm,0.6s,baz=101,slow=2.7,SNR=5.4							
BORG	Borgarnes	129.34	5		PKP	PKPdf	08 54 31.6	-0.1
	comp=Z,35nm,1.2s,baz=276,slow=10							
LSZ	Lusaka	129.91	236		PKP	PKPdf	08 54 34.2	-0.1
	comp=Z,2.6nm,0.6s,baz=132,slow=3.6,SNR=4.2							
LSZ					SKPbc		08 57 41.1	
	comp=Z,2.6nm,0.9s,baz=236,slow=1.5,SNR=3.0							
NB2	NORSAR Subarra	130.27	345		PKPdf	PKPdf	08 54 33.8	+0.2
	comp=Z,4.7nm,0.8s,baz=31,slow=1.9							
NOA	NORSAR Array B	130.27	345		PKP	PKPdf	08 54 33.7	+0.1
	comp=Z,4.7nm,0.8s,baz=32,slow=2.0,SNR=11							
NOA					SKPbc	SKPbc	08 57 41.5	+0.9
	comp=Z,16nm,0.8s,baz=32,slow=3.0,SNR=30							
AKASG	Malin Array Be	130.41	326		PKP	PKPdf	08 54 33.9	-0.3
	comp=Z,1.9nm,0.5s,baz=50,slow=2.2,SNR=5.3							
AKASG					SKPbc	SKPbc	08 57 41.2	-0.4
	comp=Z,0.7nm,0.4s,baz=41,slow=4.9,SNR=4.5							
MMAI	Mount Meron Ar	132.58	302		PKP	PKPdf	08 54 40.8	+1.9
	comp=Z,0.6nm,0.3s,baz=57,slow=5.8,SNR=2.8							
MMAI					SKPbc	SKPbc	08 57 51.2	+1.3
	comp=Z,2.2nm,0.5s,baz=57,slow=5.3,SNR=3.0							
BBSP	Saint Philip	134.70	86	*e*		Pdif	08 51 42.1	-1.9
BRG	Berggiesshubel	137.67	335	*e*PKP		PKPdf	08 54 49.6	+1.8
	comp=Z,8.5nm,0.9s							
BRG	Berggiesshubel	137.67	335	*e*		PKPdf	08 54 49.7	+1.9
BRG	Berggiesshubel	137.67	335	*e*		PKPdf	08 54 49.7	+1.9
	comp=Z,8.5nm,0.9s							
CLL	Collm	137.71	336	*e*PKPdf		PKPdf	08 54 49.6	+1.8
	comp=Z,13nm,1.0s							
GERES	GERESS Array B	139.31	333		PKhKP		08 54 44.6	
	comp=Z,1.0nm,0.6s,baz=35,slow=3.6,SNR=3.1							
GERES					PKP	PKPdf	08 54 51.8	+0.9
	comp=Z,3.6nm,0.8s,baz=59,slow=2.6,SNR=7.3							
GERES					SKPbc	SKPbc	08 58 10.5	+0.4
	comp=Z,1.7nm,0.8s,baz=23,slow=5.3,SNR=4.9							
CDF	Champ du Feu	142.23	338	⇑*i*PKP1		PKPdf	08 54 51.4	-4.7
	comp=Z,8.9nm,0.6s							
HINF	Hinterlfeld	142.88	338	*e*PKP1		PKPdf	08 54 53.4	-3.9
	comp=Z,12nm,0.6s							
HAU	Haudompre	142.91	339	*e*PKP1		PKPdf	08 54 53.7	-3.6
	comp=Z,23nm,0.9s							
TUE	Stuetta	143.01	334	*e*PKPdf		PKPdf	08 54 55.8	-1.8
CABF	La Chapelle	144.18	338	*e*PKP1		PKPdf	08 54 59.0	-0.6
	comp=Z,98nm,1.0s							
FLN	La Foliniere	144.24	346	*e*PKP1		PKPdf	08 54 57.9	-1.7
	comp=Z,66nm,0.8s							
CUC	Castrocucco	144.25	321	*e*PKPdf		PKPdf	08 54 57.6	-2.3
LDF	La Druitiere	144.31	346	⇑*i*PKP1		PKPdf	08 54 58.2	-1.6
	comp=Z,73nm,0.8s							
LOR	Lormes	144.39	340	⇑*i*PKP1		PKPdf	08 54 59.2	-0.7
	comp=Z,139nm,1.2s							
GRR	Gorron	144.68	346	⇑*i*PKP1		PKPdf	08 54 59.8	-0.6
	comp=Z,191nm,0.7s							
SSF	Saint Saulge	144.69	341	⇑*i*PKP1		PKPdf	08 55 00.2	-0.3
	comp=Z,259nm,0.8s							
HYF	Humbligny	144.77	342	*e*PKP1		PKPdf	08 55 00.7	+0.1
LPL	La Plagne	144.85	336	⇑*i*PKP1		PKPdf	08 55 01.3	+0.5
	comp=Z,151nm,0.9s							
LPG	La Plagne	144.86	336	⇑*i*PKP1		PKPdf	08 55 01.4	+0.6
	comp=Z,189nm,0.9s							
SMF	Signal de Mont	144.94	340	⇑*i*PKP1		PKPdf	08 55 00.9	0.0
	comp=Z,216nm,0.9s							
AVF	Avril sur Loir	144.97	341	⇑*i*PKP1		PKPdf	08 55 00.9	-0.1
	comp=Z,180nm,1.0s							
SGMF	Saint Gilles	145.17	348	⇑*i*PKP1		PKPbc	08 55 01.3	+0.1
	comp=Z,217nm,0.9s							
ROSF	Rostrenen	145.24	349	⇑*i*PKP1		PKPbc	08 55 01.5	+0.1
	comp=Z,199nm,1.0s							
BGF	Bois d'Agland	145.34	341	⇑*i*PKP1		PKPbc	08 55 02.2	+0.4
	comp=Z,198nm,1.0s							
GDM	Grand'Maison	145.35	336		PKP	PKPdf	08 55 02.4	+0.7
GRN	Grenoble	145.46	337		PKP	PKPdf	08 55 03.2	+1.3
MBDF	Montbardon	145.49	335	⇑*i*PKP1		PKPbc	08 55 02.7	+0.4
	comp=Z,70nm,0.7s							
PLDF	La Plantade	145.61	340		PKP	PKPdf	08 55 02.8	+0.7
QUIF	Quistinic	145.62	349	⇑*i*PKP1		PKPbc	08 55 02.4	-0.2
	comp=Z,54nm,0.9s							
SURF	Saint Ours	145.67	335		PKP	PKPdf	08 55 03.4	+1.2
ORIF	Oris-en-Rattie	145.68	336	⇑*i*PKP1		PKPbc	08 55 03.6	+0.7
	comp=Z,163nm,0.7s							
AGO	Saint Agoulin	145.70	340		PKP	PKPdf	08 55 02.8	+0.6
SAOF	Saorge	145.76	334		PKP	PKPdf	08 55 02.8	+0.4
TCF	Toulx Ste Croi	145.78	341	⇑*i*PKP1		PKPbc	08 55 03.6	+0.4
	comp=Z,49nm,0.7s							
AUTN	L'Aution	145.80	334		PKP	PKPdf	08 55 02.7	+0.2
TOUF	Mont Tournerai	145.87	334		PKP	PKPdf	08 55 03.4	+0.8
SSB	Saint Sauveur	145.88	338	*e*PKPbc		PKPbc	08 55 04.1	+0.6
SBF	Sospel	145.91	334	⇑*i*PKP1		PKPbc	08 55 03.7	+0.1
	comp=Z,238nm,0.8s							
LUCF	Luceram	145.92	334		PKP	PKPdf	08 55 03.7	+1.0
MVIF	Mont Vial	146.00	334		PKP	PKPdf	08 55 03.5	+0.7
PYM	Petit Puy Mans	146.00	340		PKP	PKPdf	08 55 03.7	+0.9
REVF	Revere	146.03	333		PKP	PKPdf	08 55 03.3	+0.4
MFF	Saint Martin d	146.17	344	⇑*i*PKP1		PKPbc	08 55 04.6	+0.3
	comp=Z,143nm,0.8s							
VIVF	Saint-Julien-l	146.20	337	⇑*i*PKP1		PKPbc	08 55 05.0	+0.6
	comp=Z,81nm,0.9s							
PGF	Pioggiola	146.22	330	⇑*i*PKP1		PKPbc	08 55 04.9	+0.3
	comp=Z,212nm,0.9s							
CALN	Calern	146.23	334		PKP	PKPdf	08 55 04.1	+0.9
CORF	Corte	146.34	330		PKP	PKPdf	08 55 04.7	+1.2
LBL	Lubilhac	146.38	339		PKP	PKPbc	08 55 05.9	+0.9
STOF	St-Etienne Org	146.44	335		PKP	PKPdf	08 55 04.8	+1.2
FRF	La Foret Royal	146.49	334	⇑*i*PKP1		PKPbc	08 55 05.4	+0.1
	comp=Z,225nm,1.0s							
SMRF	Simiane la Rot	146.59	336	⇑*i*PKP1		PKPbc	08 55 06.4	+0.8
	comp=Z,133nm,1.0s							
VILF	Villemus	146.63	335		PKP	PKPbc	08 55 06.4	+0.7
TAVF	Tavernes	146.69	335		PKP	PKPdf	08 55 05.5	+1.5
LMR	La Mourre	146.73	334	⇑*i*PKP1		PKPbc	08 55 06.2	+0.2
	comp=Z,166nm,1.0s							
RJF	Les Rejaudoux	146.88	341	⇑*i*PKP1		PKPbc	08 55 06.8	+0.4
	comp=Z,60nm,0.7s							
PRAF	Pradon	146.89	336		PKP	PKPdf	08 55 06.2	+1.9
PUYF	Puyloubier	146.91	335		PKP	PKPdf	08 55 06.2	+1.8
TREF	Trevaresse	146.96	335		PKP	PKPbc	08 55 06.7	0.0
CAF	Calviac	147.04	340	⇑*i*PKP1		PKPbc	08 55 07.5	+0.6
	comp=Z,88nm,1.0s							
BERF	Bertagne	147.09	335		PKP	PKPdf	08 55 05.5	+0.8
GELF	Grande-Etoile	147.14	335		PKP	PKPdf	08 55 05.7	+0.9
LASF	Ste Croix	147.16	338	⇑*i*PKP1		PKPbc	08 55 07.8	+0.6
	comp=Z,129nm,0.9s							
LFF	La Frestale	147.44	342	⇑*i*PKP1		PKPbc	08 55 08.3	+0.3
	comp=Z,148nm,0.8s							
MTLF	Montolieu	148.39	339	⇑*i*PKP1		PKPbc	08 55 11.0	+0.5
	comp=Z,119nm,0.9s							
MLS	Moulis	149.11	340		PKP	PKPbc	08 55 12.2	-0.1
VALF	Valcebollere	149.29	338		PKP	PKPbc	08 55 12.9	+0.1
EPF	Esparros	149.29	341	*e*PKP1		PKPbc	08 55 13.0	+0.2
	comp=Z,55nm,0.9s							
LABF	Labassere	149.36	341		PKP	PKPbc	08 55 12.5	-0.5
REYF	Montagne du Re	149.48	342		PKP	PKPbc	08 55 13.6	+0.3
ATE	Arette	149.56	342		PKP	PKPbc	08 55 13.3	-0.1
SJPF	Ste Jean	149.69	343	*e*PKP1		PKPbc	08 55 14.4	+0.7
	comp=Z,72nm,1.0s							
ETSF	Etsaut	149.69	342	⇑*i*PKP1		PKPbc	08 55 14.7	+0.9
	comp=Z,72nm,0.7s							
KEST	Kesra	150.91	321		PKPbc	PKPbc	08 55 17.6	+0.7
	comp=Z,14nm,0.6s,baz=324,slow=0.7,SNR=35							
ESDC	Sonseca Array	153.63	345		PKPbc	PKPbc	08 55 23.0	+0.1
	comp=Z,3.9nm,0.8s,baz=19,slow=2.0,SNR=7.8							
ESDC					PKPab	PKPab	08 55 36.7	+0.7
	comp=Z,6.5nm,0.8s,baz=18,slow=4.3,SNR=12							
EVO	Evora	155.57	351	*e*PKP2		PKPab	08 55 44.8	+0.5
	comp=Z,33nm,1.1s							
TORD	Torodi Ar. Bea	165.88	267		PKP	PKPdf	08 55 28.5	-1.0
	comp=Z,2.1nm,0.9s,baz=7.7,slow=0.6,SNR=4.1							

ATH ***20*** *08:45:59.5, 3660N×2565E, h22km±2km, MD3.6/10*
NEIC ***20*** *08:45:59.4, 3662N×2570E, h0km, MD3.6(ATH),*
ML3.1(THE), After THE.
THE ***20*** *08:45:59.4, 3662N×2570E, h0km, ML3.1*
DDA ***20*** *08:46:00.7, 3660N×2569E, h6km±5km, Md3.1*
ISCJB ***20*** *08:46:00.3±0.5, 3664N±003×2556E±005, h13km±5km,*
Error ellipse: s-maj=6.6km s-min=5.6km az=17.9
CSEM ***20*** *08:46:00.7±0.1, 3658N×2559E, h20km, ML3.1, Error*
ellipse: s-maj=2.5km s-min=1.5km az=147.0

ISC 20 08:46:00.8±0.5, 3660N±004×2560E±005, h12km±6km, n37, σ1§05/42, 2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
THR4	Thira Island,	0.22	229	*e*Pg		Pg	08 46 05.7	+0.2
THR3	Thira Island,	0.25	220	*e*Pg		Pg	08 46 06.3	+0.2
SANT	Santorini	0.26	207	*e*Pg		Pg	08 46 05.9	-0.3
SANT				*e*Sg		Sg	08 46 11.3	+1.5
THR1	Thera Island	0.26	207	*e*Pg		Pg	08 46 06.0	-0.2
THR5	Thira Island,	0.28	228	*e*Pg		Pg	08 46 06.8	+0.2
THR6	Thira Island,	0.30	214	*e*Pg		Pg	08 46 07.0	+0.1
APE	Apeiranthos	0.47	353	*e*Pg		Pg	08 46 08.7	-1.4
APE	Apeiranthos	0.47	353	*e*PB		Pg	08 46 08.9	-1.1
APE	Apeiranthos	0.47	353	*e*Pg		Pg	08 46 08.6	-1.4
APE	Apeiranthos	0.47	353	Pb		Pg	08 46 08.9	-1.1
NISR	Nisiros	1.23	89	*e*PN		Pn	08 46 22.3	-1.5
NISR	Nisiros	1.23	89	*e*Pn		Pn	08 46 23.0	-0.8
NPS	Neapolis	1.34	180	*e*PN		Pn	08 46 24.7	-0.6
NPS	Neapolis	1.34	180	⇓Pn		Pn	08 46 25.0	-0.3
BODT	Bodrum	1.44	71	*e*PN		Pn	08 46 26.8	0.0
SMG	Samos	1.48	41	*e*PN		Pn	08 46 26.8	-0.4
SMG					SN	Sn	08 46 46.6	+0.1
SMG	Samos	1.48	41	Pb		Pb	08 46 25.8	-2.4
SMG					Sn	Sn	08 46 46.6	+0.1
BDRM	Kayabasi	1.55	72	*i* P		Pn	08 46 28.0	-0.2
BDRM				*i* S		Sn	08 46 50.2	+2.0
ZKR	Zakros	1.57	161	*e*Pg		Pn	08 46 27.3	-1.2
KARP	Karpathos	1.64	129	*e*PB		Pn	08 46 28.0	-1.5
KARP	Karpathos	1.64	129	Pb		Pn	08 46 27.5	-2.0
VAM	Vamos	1.65	224	*e*PN		Pn	08 46 29.9	+0.3
GCAM	G?zelcaml?	1.70	49	*i* P		Pn	08 46 24.9	-5.4
GCAM				*i* S		Sn	08 46 55.9	+3.9
CHOS	Chios island	1.82	11	*e*Pb		Pb	08 46 30.5	-3.5
MLSB	Milas	1.87	68	*e*PN		Pn	08 46 33.3	+0.7
PTL	Penteli	2.00	317	P		Pg	08 46 39.8	+0.6
ATH	Athens Observa	2.03	313	*e*PN		Pn	08 46 35.5	+0.7
ARG	Arkhangelos	2.07	100	P		Pn	08 46 34.4	-1.0
KYTH	Kithira	2.10	262	*e*PN		Pn	08 46 36.0	+0.3
BLCB	Balcova	2.12	32	*e*PN		Pn	08 46 37.1	+1.1

*ISCJB **20** 09:24:17.9±0.5, 38.34N×005×3879E×003, h6km±8km, Error ellipse: s-maj=7.9km s-min=3.7km az=163.3*
*ISK **20** 09:24:17.4, 38.38N×3880E, h5km, MD2.8*
*DDA **20** 09:24:18.5, 38.31N×3885E, h7km±4km, Md2.9*
ISC 20 09:24:18.5±0.5, 3836N±005×3881E±003, h10km±7km, n13, σ0ᵒ66/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.19**	**44**	*i* P	**Pg**	**09 24 22.7**	**+0.1**
ELZG				*i* S	**Sg**	**09 24 26.6**	**+1.2**
MYA	**Malataya**	**0.31**	**264**	PG	**Pg**	**09 24 23.9**	**-0.7**
MYA				*e*SG	**Sg**	**09 24 28.4**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.39**	**87**	*e*PG	**Pg**	**09 24 25.4**	**-0.7**
SVRC				*e*SG	**Sg**	**09 24 31.6**	**+0.3**
PTK	**Pertek**	**0.70**	**40**	*e*PG	**Pg**	**09 24 31.6**	**-0.4**
AKCD	**Akcadag**	**0.70**	**265**	*i* P	**Pg**	**09 24 31.0**	**-1.0**
AKCD				*i* S	**Sg**	**09 24 41.5**	**+0.3**
URFA	**Urfa**	**0.92**	**180**	*e*PG	**Pg**	**09 24 35.8**	**-0.2**
DARE	**Darende-Malaty**	**0.99**	**307**	*e*PG	**Pg**	**09 24 37.6**	**+0.1**
DIYA	**Diyarbakir**	**1.12**	**112**	*i* P	**Pb**	**09 24 39.5**	**-0.3**
DIYA				*i* S	**Sb**	**09 24 54.5**	**+0.1**
DIYA	**Diyarbakir**	**1.12**	**112**	*i* P	**Pb**	**09 24 39.5**	**-0.3**
DIYA				*i* S	**Sb**	**09 24 54.5**	**+0.1**
GZT	**Gaziantep**	**1.41**	**225**	*i* P	**Pg**	**09 24 45.6**	**+0.1**
GZT				*i* S	**Sg**	**09 25 04.6**	**+1.0**
KMRS	**Kahramanmaras**	**1.73**	**241**	*e*PN	**Pn**	**09 24 49.2**	**+0.7**
ANDN	**Andirin**	**2.10**	**249**	*i* P	**Pg**	**09 24 57.3**	**-1.4**
ANDN				*i* S	**Sg**	**09 25 27.0**	**+1.1**
SVSK	**Karacayir**	**2.10**	**318**	*e*PN	**Pn**	**09 24 53.9**	**+0.2**

*NEIC **20** 09:24:31.3, 3248S×7186W, h10km, ML3.8(GUC), After GUC.*
GUC 20 09:24:31.3±0.5, 3248S×7186W, h10km±2km, MD3.8, ML3.8, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.57**	**162**	*e*P	Pg	09 24 42.4	-0.1
IHA				*i* S	Sg	09 24 51.2	+1.2
CHNG	**Los Chungos**	**0.67**	**27**	*i* P	Pg	09 24 43.9	-0.4
CHNG				*i* S	Sg	09 24 53.7	+0.7
PTCH	**Petorca**	**0.81**	**75**	⇓*i*P	Pg	09 24 46.6	-0.4
ROCH	**El Roble**	**0.86**	**125**	*i* P	Pg	09 24 47.8	-0.2
ROCH				*i* S	Sg	09 25 00.6	+1.4
LCCH	**Las Cruces**	**1.02**	**166**	*i* P	Pg	09 24 49.7	-1.2
LCCH				*i* S	Sg	09 25 03.7	-0.5
JACH	**Jahuel**	**1.08**	**101**	⇑*i*P	Pb	09 24 50.8	-1.3
JACH				*i* S	Sg	09 25 06.2	-0.1
PEL	**Peldehue**	**1.19**	**124**	⇑*i*P	Pb	09 24 52.8	-1.1
PEL				*i* S	Sb	09 25 08.4	-0.8
PEL				AML	AML	09 25 13.5	
	comp=E,6μm,0.3s						
TACH	**Talagante**	**1.40**	**147**	*e*P	Pn	09 24 55.9	-0.9
TACH				*i* S	Sn	09 25 14.5	-0.8
CLCH	**Cerro Calan**	**1.44**	**130**	⇓*i*P	Pn	09 24 56.5	-0.8
CLCH				*i* S	Sn	09 25 15.5	-0.7
CLCH				AML	AML	09 25 21.8	
	comp=E,2μm,0.7s						
ANTU	**Antumapu**	**1.49**	**137**	*i* P	Pn	09 24 57.7	-0.4
ANTU				*i* S	Sn	09 25 17.3	-0.3
ANTU				AML	AML	09 25 26.3	
	comp=N,1μm,0.4s						
ANTU	**Antumapu**	**1.49**	**137**	*i* P	Pn	09 24 57.7	-0.4
ANTU				*i* S	Sn	09 25 17.3	-0.3
FSR	**Penalolen**	**1.49**	**132**	*i* P	Pn	09 24 57.7	-0.4
FSR				*i* S	Sn	09 25 17.1	-0.5
FCH	**Farellones**	**1.56**	**123**	AML	AML	09 25 24.6	
	comp=E,1μm,0.2s						
PCH	**Pirque**	**1.60**	**136**	*i* P	Pn	09 24 59.2	-0.3
PCH				*i* S	Sn	09 25 20.6	+0.3
CHCH	**Chadas Angostu**	**1.76**	**145**	*e*P	Pn	09 25 01.8	0.0
CHCH				*i* S	Sn	09 25 24.9	+0.6
YECH	**El Yeso**	**1.90**	**129**	*i* P	Pn	09 25 04.3	+0.6
YECH				*i* S	Sn	09 25 29.5	+1.8
YECH				AML	AML	09 25 42.8	
	comp=N,673nm,0.4s						
LMEL	**Las Melosas**	**1.94**	**135**	⇑*i*P	Pn	09 25 04.5	+0.2
LMEL				*i* S	Sn	09 25 30.2	+1.4
LMEL				AML	AML	09 25 40.9	
	comp=N,1μm,0.3s						
LMEL	**Las Melosas**	**1.94**	**135**	⇑*i*P	Pn	09 25 04.5	+0.2
LMEL				*i* S	Sn	09 25 30.2	+1.4
OVCH	**Ovalle**	**1.95**	**17**	AML	AML	09 25 40.5	
	comp=N,1μm,0.9s						
SFDO	**San Fernando**	**2.24**	**162**	*i* P	Pn	09 25 09.3	+0.9
SFDO				*i* S	Sn	09 25 38.0	+2.0
TLL	**Tololo Astrono**	**2.48**	**22**	*i* P	Pn	09 25 13.3	+1.6
TLL				*i* S	Sn	09 25 45.2	+3.3
TLL				AML	AML	09 25 52.8	
	comp=E,1μm,0.6s						
TLL	**Tololo Astrono**	**2.48**	**22**	*i* P	Pn	09 25 13.3	+1.6
TLL				*i* S	Sn	09 25 45.2	+3.3
LCO	**Las Campanas**	**3.60**	**16**	*e*Pn	Pn	09 25 26.6	-0.6
LCO				*e*Sn	Sn	09 26 09.4	-0.2

*BJI **20** 09:29:07.9, 11.17S×117.45E, h35km, mB5.9, mb5.5, Ms6.6, Msz5.4*
*ISCJB **20** 09:29:15.8±0.2, 10.30S±003×117.14E±003, h37km, mb5.5/116, MS5.4/16, Error ellipse: s-maj=4.8km s-min=3.4km az=41.5*
*IDC **20** 09:29:15.0±2.6, 10.15S×117.06E, h12km±15km, mb5.3/24, mb1 5.3/25, mb1mx5.3/26, mbtmp5.3/25, ML4.9/1, MS5.4/10, Ms1 5.4/10, ms1mx5.0/38, Error ellipse: s-maj=14.4km s-min=10.7km az=69.0*
*DJA **20** 09:29:16, 10.71S×116.84E, h14km, Mw6.0/16*
*MOS **20** 09:29:17.3±1.3, 9.96S×117.07E, h33km, mb5.7/40, Error ellipse: s-maj=11.9km s-min=6.7km az=112.3*
*GCMT **20** 09:29:18.1±0.4, 10.64S×116.98E, h32km±1km, MW5.7/74, Moment Tensor Solution. s31,c41; s74,c116; Duration: 1s8 Moment tensor: Scale 10¹⁷Nm; Mrr4.14±.27; Mθθ-3.79±.15; Mϕϕ-0.34±.17; Mrθ2.17±.17; Mrϕ0.73±.11; Mθϕ-0.90±.24; Best double couple: M○4.67100×10¹⁷ NP1:ϕ○277.00000°, δ30.00000°, λ81.00000°. NP2: ϕ○107.00000°, δ60.00000°, λ95.00000°. Principal axes: T 4.7880, Plg74.0000°, Azm30.0000°; N -0.2320, Plg4.0000°, Azm284.0000°; P -4.5540, Plg15.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **20** 09:29:18.1±0.2, 10.38S×117.01E, h35km, mb5.5/44 Error ellipse: s-maj=8.9km s-min=5.1km az=63.0*
NEIC Felt [II] at Bima.
ISC 20 09:29:18.0±0.2, 1031S±003×11712E±003, h39km, h39km±1.7km: pP-P, n422, σ1s13/321, mb5.5/116, MS5.4/16, 26C-16D, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTNI	**Mataram**	**1.90**	**331**	P	**Pn**	**09 29 49.0**	**+1.0**
	0.0nm,0.0s						
BMNI	**Bima**	**2.35**	**42**	P	**Pn**	**09 29 58.7**	**+4.6**
	0.0nm,0.0s						
KHKI	**Kahang-Kahang**	**2.44**	**322**	P	**Pn**	**09 29 56.4**	**+1.1**
	0.0nm,0.0s						
IGBI	**Denpasar**	**2.44**	**307**	P	**Pn**	**09 29 54.5**	**-0.9**
	0.0nm,0.0s						
DNP	**Denpasar**	**2.48**	**311**	P	**Pn**	**09 29 56.8**	**+0.9**
	0.0nm,0.0s						
KMMI	**Kalianget**	**4.49**	**316**	P	**Pn**	**09 30 26.2**	**+2.6**
	0.0nm,0.0s						
KRKI	**Karangkates**	**5.07**	**294**	P	**Pn**	**09 30 30.5**	**-1.1**
	6μm,1.0s						
TRT	**Tretes**	**5.13**	**300**	⇑*e*P	**Pn**	**09 30 32.5**	**+0.2**
SJI	**Sawahan**	**5.87**	**295**	P	**Pn**	**09 30 41.7**	**-0.8**
	924nm,0.8s						
KAPI	**Kappang**	**5.87**	**27**	Pn	**Pn**	**09 30 45.3**	**+2.7**
	4μm,0.8s,SNR=38						
KAPI	**Kappang**	**5.87**	**27**	Pn	**Pn**	**09 30 45.6**	**+3.0**
	4μm,0.8s,SNR=38						
KAPI	**Kappang**	**5.87**	**27**	Pn	**Pn**	**09 30 45.8**	**+3.2**
	18nm,0.3s,baz=222,slow=11,SNR=72						
KAPI				Sn	**Sn**	**09 31 50.9**	**+2.2**
	30nm,0.3s,baz=107,slow=19,SNR=4.2						
KAPI				LR	LR	09 33 26.2	
	comp=Z,55μm,18.6s,baz=223,slow=44						
KAPI	**Kappang**	**5.87**	**27**	*e*Pn	**Pn**	**09 30 45.6**	**+3.0**
KAPI				*e*Sn	**Sn**	**09 31 49.3**	**+0.7**
BATI	**Baumata**	**6.45**	**90**	P	**Pn**	**09 31 00.8**	**+10**
	308nm,0.9s						
BATI	**Baumata**	**6.45**	**90**	Pn	**Pn**	**09 30 50.9**	**+0.5**
	24nm,0.3s,baz=298,slow=18,SNR=15						
BATI				Sn	**Sn**	**09 32 04.6**	**+1.8**
	91nm,0.3s,baz=180,slow=23,SNR=6.6						
BBKI	**Banjar Baru**	**7.17**	**341**	P	**Pn**	**09 31 06.4**	**+6.1**
	1μm,0.9s						
BBSI	**Bau Bau**	**7.22**	**49**	P	**Pn**	**09 31 05.9**	**+4.8**
	802nm,1.2s						
BJII	**Banjamegara**	**7.89**	**291**	P	**Pn**	**09 31 11.8**	**+1.5**
	337nm,1.0s						
KDI	**Kendari**	**8.34**	**41**	P	**Pn**	**09 31 21.8**	**+5.3**
	332nm,0.9s						
PLKI	**Palangkaraya**	**8.62**	**338**	P	**Pn**	**09 31 30.3**	**+10**
	580nm,1.0s						
PBKI	**Pangkalan Bun**	**9.29**	**324**	P	**Pn**	**09 31 33.7**	**+4.2**
	1μm,1.0s						
PCI	**Palu**	**9.72**	**16**	P	**Pn**	**09 31 44.2**	**+8.7**
	512nm,1.1s						
LEM	**Lembang**	**10.01**	**289**	P	**Pn**	**09 31 40.0**	**+0.6**
	320nm,1.3s						
DBJI	**Dramaga**	**10.91**	**289**	P	**Pn**	**09 31 50.9**	**-0.8**
	373nm,1.1s						
MBWA	**Marble Bar**	**11.08**	**167**	*e*Pn	**Pn**	**09 31 47.3**	**-6.7**
MBWA				Sn	**Sn**	**09 33 41.5**	**-15**
FITZ	**Fitzroy Crossi**	**11.32**	**134**	*e*P	**Pn**	**09 31 53.8**	**-3.5**
	226nm,0.8s						
FITZ				*e*S	**Sn**	**09 33 49.5**	**-13**
FITZ	**Fitzroy Crossi**	**11.32**	**134**	Pn	**Pn**	**09 31 54.0**	**-3.3**
	5.9nm,0.3s,baz=326,slow=12,SNR=190						
FITZ				Sn	**Sn**	**09 33 54.8**	**-7.8**
	9.7nm,0.3s,baz=187,slow=18,SNR=7.1						
FITZ				LR	LR	09 36 26.4	
	comp=Z,11μm,18.1s,baz=134,slow=38						
FITZ	**Fitzroy Crossi**	**11.32**	**134**	*e*Pn	**Pn**	**09 31 53.6**	**-3.8**
FITZ				*e*S	**Sn**	**09 33 49.5**	**-13**
STKI	**Sintang**	**11.73**	**331**	P	**Pn**	**09 32 06.7**	**+3.7**
	281nm,1.0s						
TPI	**Tanjungpandan**	**12.02**	**308**	P		09 32 17.8	
	93nm,1.7s						
TPI	**Tanjungpandan**	**12.02**	**308**	⇑*e*P	**Pn**	**09 32 13.0**	**+6.1**
AAI	**Ambon**	**12.81**	**60**	P	**Pn**	**09 32 25.6**	**+7.9**
	240nm,1.2s						
KLI	**Kotabumi**	**13.30**	**293**	P	**Pn**	**09 32 32.8**	**+8.4**
	291nm,0.9s						
KSM	**Kuching**	**13.52**	**330**	⇓P	**Pn**	**09 32 29.9**	**+2.4**
KSM	**Kuching**	**13.52**	**330**	*e*Pn	**Pn**	**09 32 29.2**	**+1.8**
SBUM	**Sibu**	**13.58**	**339**	⇓P	**Pn**	**09 32 32.5**	**+4.3**
PPBI	**Pangkal Pinang**	**13.58**	**306**	P	**Pn**	**09 32 33.5**	**+5.3**
	96nm,1.2s						
MNI	**Manado**	**13.98**	**34**	P	**Pn**	**09 32 39.7**	**+6.1**
	1μm,1.1s						
BTM	**Bintulu**	**14.01**	**343**	⇓P	**Pn**	**09 32 41.4**	**+7.4**
LBMI	**Labuha**	**14.10**	**48**	P	**Pn**	**09 32 42.8**	**+7.4**
	574nm,0.8s						
TSM	**Tawau**	**14.52**	**3**	⇓P	**Pn**	**09 32 47.9**	**+6.8**
MYLDM	**Lahad Datu**	**15.45**	**5**	⇑P	**Pn**	**09 33 01.0**	**+7.7**
DSRI	**Dabo**	**15.84**	**307**	P	**Pn**	**09 33 05.7**	**+7.4**
	57nm,1.3s						
SDKM	**Sandakan**	**15.84**	**0**	⇑P	**Pn**	**09 33 05.0**	**+6.6**
KSI	**Kapahiang**	**15.85**	**294**	P	**Pn**	**09 32 54.0**	**-4.5**
	480nm,0.9s						
KKM	**Kota Kinabalu**	**16.27**	**357**	⇑P	**Pn**	**09 33 07.2**	**+3.4**
KKM	**Kota Kinabalu**	**16.27**	**357**	*e*P	**Pn**	**09 33 06.5**	**+2.7**
SWI	**Sorong**	**16.90**	**57**	P	**Pn**	**09 33 10.5**	**-1.3**
	402nm,0.9s						
KDM	**Kudat**	**17.11**	**359**	⇑P	**Pn**	**09 33 20.4**	**+6.0**
MYKOM	**Kota Tinggi**	**17.85**	**312**	⇑P	**Pn**	**09 33 24.5**	**+0.9**
KGM	**Kluang**	**18.40**	**311**	⇑P	**Pn**	**09 33 31.3**	**+1.1**
WRA	**Warramunga Arr**	**19.17**	**122**	P	**Pn**	**09 33 37.6**	**-2.0**
	1.1nm,0.3s,baz=296,slow=13,SNR=121						
WRA				S	**S**	**09 36 59.9**	**-14**
	1.3nm,0.3s,baz=292,slow=25,SNR=4.9						
WRA				LR	LR	09 41 18.2	
	comp=Z,7μm,18.4s,baz=300,slow=38						
WRA				P3KPbc		10 08 09.7	
	0.1nm,0.3s,baz=122,slow=4.3,SNR=19						
WRA	**Warramunga Arr**	**19.17**	**122**	P	**Pn**	**09 33 37.6**	**-2.0**
WRA				S	**S**	**09 36 59.9**	**-14**
WRAB	**Tennant Creek**	**19.18**	**122**	P	**Pn**	**09 33 38.3**	**-1.3**
	338nm,0.6s,SNR=15						
WRAB	**Tennant Creek**	**19.18**	**122**	*e*P	**Pn**	**09 33 37.6**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,17nm,0.8s						
WRAB	**Tennant Creek**	**19.18**	**122**	*e*P	**Pn**	**09 33 37.6**	**-2.0**
	comp=Z,17nm,0.8s						
WRAB				*e*S	**S**	**09 36 59.6**	**-14**
WB2	**Warramunga Arr**	**19.18**	**122**	*e*P	**Pn**	**09 33 37.5**	**-2.2**
WB2				*e*S	**S**	**09 36 56.1**	**-18**
WB2				*e*SCS	ScS	09 45 14.3	-1.9
DAV	**Davao City (W)**	**19.21**	**26**	LR	LR	09 41 38.7	
	comp=Z,12μm,20.2s,baz=202,slow=39						
PPI	**Padang Panjang**	**19.29**	**299**	P	**Pn**	**09 33 37.8**	**-3.2**
	comp=Z,290nm,1.1s						
FRIM	**Kepong**	**20.47**	**310**	⇑P	**P**	**09 33 53.0**	**+0.4**
ASAR	**Alice Springs**	**20.81**	**132**	P	**P**	**09 33 56.2**	**+0.1**
	comp=Z,115nm,0.8s,baz=305,slow=9.5,SNR=889						
ASAR				S	**S**	**09 37 39.4**	**-7.0**
	comp=Z,22nm,1.0s,baz=311,slow=23,SNR=3.7						
ASAR				P3KPbc		10 08 01.9	
	comp=Z,0.8nm,1.0s,baz=143,slow=4.1,SNR=4.4						
ASAR	**Alice Springs**	**20.81**	**132**	P	**P**	**09 33 56.2**	**+0.1**
ASAR				S	**S**	**09 37 39.4**	**-7.0**
KTGM	**Kuala Trenggan**	**20.86**	**317**	⇑P	**P**	**09 33 58.6**	**+1.8**
KLBR	**Kellerberrin**	**21.19**	**178**	⇓*i*P	**P**	**09 33 58.9**	**-1.3**
	comp=Z,421nm,1.0s,mb5.7						
KLBR				*e*S	**S**	**09 37 37.4**	**-16**
MUN	**Mundaring**	**21.58**	**182**	⇓*i*P	**P**	**09 34 02.8**	**-1.6**
MUN				*e*		09 34 10.0	
MUN				*e*S	**S**	**09 37 46.7**	**-15**
IPM	**Ipoh**	**21.74**	**312**	⇓P	**P**	**09 34 06.7**	**+0.5**
NWAO	**Narrogin (SRO)**	**22.51**	**180**	P	**P**	**09 34 12.7**	**-1.6**
	comp=Z,72nm,0.8s,mb5.2,baz=352,slow=9.7,SNR=28						
NWAO				S	**S**	**09 38 06.0**	**-13**
	comp=Z,74nm,0.6s,baz=282,slow=18,SNR=2.5						
NWAO				LR	LR	09 43 14.3	
	comp=Z,8μm,20.7s,MS5.2,baz=164,slow=37						
NWAO	**Narrogin (SRO)**	**22.51**	**180**	*e*P	**P**	**09 34 12.6**	**-1.7**
NWAO				*e*		09 38 09.8	
NWAO				pmax	pmax		
	comp=Z,44nm,0.7s						
NWAO	**Narrogin (SRO)**	**22.51**	**180**	*e*P	**P**	**09 34 12.6**	**-1.7**
	comp=Z,44nm,0.7s,mb5.0						
NWAO				*e*PcP	PcP	09 38 09.8	+2.4
FORT	**Forrest**	**22.77**	**155**	*e*P	**P**	**09 34 16.2**	**-0.9**
	comp=Z,262nm,0.8s,mb5.7						
FORT	**Forrest**	**22.77**	**155**	*e*P	**P**	**09 34 15.9**	**-1.2**
	comp=Z,26nm,0.9s,mb4.7						
SNG	**Songkhla**	**23.91**	**316**	P	**P**	**09 34 27.0**	**-1.5**
	comp=Z,420nm,1.0s,mb5.8						
JAY	**Jayapura**	**24.67**	**73**	P	**P**	**09 34 39.4**	**+3.9**
	comp=Z,72nm,0.8s,mb5.2						
COEN	**Coen**	**25.73**	**101**	*e*P	**P**	**09 34 47.3**	**+2.2**
	comp=Z,22nm,0.8s,mb4.7						
BSI	**Banda Aceh**	**26.81**	**305**	P	**P**	**09 34 54.6**	**-0.2**
	comp=Z,376nm,1.1s,mb5.8						
CTA	**Charters Tower**	**29.71**	**113**	*e*P	**P**	**09 35 22.0**	**+1.4**
	comp=Z,9.6nm,0.8s,mb4.6						
CTA	**Charters Tower**	**29.71**	**113**	P	**P**	**09 35 22.0**	**+1.4**
	comp=Z,12nm,0.9s,mb4.6,baz=275,slow=11,SNR=17						
CTA	**Charters Tower**	**29.71**	**113**	*e*P	**P**	**09 35 22.0**	**+1.4**
CTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CTAO	**Charters Tower**	**29.71**	**113**	*e*P	**P**	**09 35 22.6**	**+2.0**
CTAO				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.9						
CTAO	**Charters Tower**	**29.71**	**113**	*e*P	**P**	**09 35 22.6**	**+2.0**
	comp=Z,21nm,0.8s,mb4.9						
KKTK	**Khon Kaen**	**30.01**	**332**	P	**P**	**09 35 23.0**	**-0.3**
QIZ	**Qiongzhong**	**30.02**	**346**	P	**P**	**09 35 20.9**	**-2.4**
QIZ	**Qiongzhong**	**30.02**	**346**	*e*P	**P**	**09 35 24.2**	**+0.9**
	comp=Z,39nm,1.2s,mb5.0						
STKA	**Stephens Creek**	**31.20**	**137**	*e*P	**P**	**09 35 34.5**	**+0.8**
	comp=Z,22nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**31.20**	**137**	P	**P**	**09 35 34.9**	**+1.2**
	comp=Z,22nm,0.8s,mb5.1,baz=311,slow=8.6,SNR=39						
STKA				LR	LR	09 48 54.7	
	comp=Z,8μm,19.1s,MS5.4,baz=293,slow=38						
STKA	**Stephens Creek**	**31.20**	**137**	*e*P	**P**	**09 35 35.0**	**+1.3**
	comp=Z,56nm,0.9s,mb5.4						
CM31	**Chiang Mai Arr**	**33.74**	**328**	*e*P	**P**	**09 35 56.3**	**+0.2**
	comp=Z,16nm,0.8s,mb5.0						
CMAR	**Chiang Mai Arr**	**33.74**	**328**	P	**P**	**09 35 55.5**	**-0.5**
	comp=Z,18nm,0.8s,mb5.0,baz=156,slow=6.9,SNR=56						
CMAR				PcP	PcP	09 38 36.7	+1.6
	comp=Z,9.8nm,1.0s,baz=160,slow=2.9,SNR=4.7						
CMAR				LR	LR	09 51 57.5	
	comp=Z,6μm,18.5s,MS5.3,baz=155,slow=41						
CMAR	**Chiang Mai Arr**	**33.74**	**328**	P	**P**	**09 35 55.5**	**-0.5**
CMAR				PcP	PcP	09 38 36.7	+1.6
CHTO	**Chiang Mai**	**34.04**	**328**	*e*P	**P**	**09 35 58.4**	**-0.2**
CHTO				*e*		09 38 37.5	
CHTO				pmax	pmax		
	comp=Z,54nm,1.5s,mb5.3						
CHTO	**Chiang Mai**	**34.04**	**328**	*e*P	**P**	**09 35 58.4**	**-0.2**
	comp=Z,54nm,1.5s,mb5.3						
CHTO				*e*PcP	PcP	09 38 37.5	+1.5
YHNB	**Yeheng**	**35.01**	**7**	*e*P	**P**	**09 36 07.3**	**+0.3**
	comp=Z,37nm,0.6s,mb5.5						
EIDS	**Eidsvold**	**35.50**	**119**	*e*P	**P**	**09 36 07.3**	**-4.0**
GUMO	**Guam**	**36.36**	**50**	P	**P**	**09 36 18.1**	**-0.6**
	comp=Z,51nm,0.7s,mb5.6,baz=198,slow=11,SNR=8.7						
GUMO	**Guam**	**36.36**	**50**	*e*P	**P**	**09 36 20.0**	**+1.3**
GUMO				pmax	pmax		
	comp=Z,69nm,0.8s,mb5.6						
GUMO	**Guam**	**36.36**	**50**	*e*P	**P**	**09 36 20.0**	**+1.3**
	comp=Z,69nm,0.8s,mb5.6						
TOO	**Toolangi**	**37.26**	**141**	*e*P	**P**	**09 36 27.7**	**+1.6**
TOO				*e*	pP	09 36 40.2	+3.1
ARMA	**Armidale**	**37.81**	**127**	*e*P	**P**	**09 36 29.4**	**-1.5**
KMI	**Kunming**	**37.90**	**339**	P	**P**	**09 36 32.4**	**+0.8**
KMI				AP	pP	09 36 45.3	+2.7
KMI				XP	sP	09 36 49.9	+2.7
KMI				PP	PP	09 38 06.8	+8.0
KMI				S	**S**	**09 42 26.8**	**+6.1**
KMI				AMB	AMB		
	comp=Z,34nm,0.9s,mb5.1						
KMI				LR	LR		
	comp=N,5μm,15.9s						
KMI				LR	LR		
	comp=E,4μm,21.3s						
KMI				LR	LR		
	comp=Z,5μm,18.2s,MS5.4						
GYA	**Guiyang**	**37.93**	**345**	P	**P**	**09 36 36.4**	**+4.6**
GYA				AP	pP	09 36 45.8	+3.0
GYA				XP	sP	09 36 50.4	+3.0
GYA				PP	PP	09 38 06.3	+7.2
GYA				S	**S**	**09 42 26.9**	**+5.8**
GYA				SS	SS	09 45 05.8	-3.2
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,250nm,5.2s						
GYA				LR	LR		
	comp=N,640nm,16.8s,MS4.6						
GYA				LR	LR		
	comp=E,570nm,15.9s,MS4.6						
GYA				LR	LR		
	comp=Z,760nm,14.8s,MS4.6						
CAN	**Canberra**	**38.22**	**136**	*e*P	**P**	**09 36 36.7**	**+2.4**
CNB	**Canberra Magne**	**38.47**	**135**	*e*P	**P**	**09 36 37.3**	**+1.0**
JOW	**Kunigami**	**38.47**	**16**	P	**P**	**09 36 36.8**	**+0.4**
	comp=Z,89nm,0.6s,mb5.6,baz=198,slow=7.8,SNR=9.0						
PALK	**Pallekele**	**40.24**	**294**	P	**P**	**09 36 51.7**	**+0.3**
	comp=Z,828nm,1.0s,mb6.4,SNR=7.8						
PALK	**Pallekele**	**40.24**	**294**	*e*P	**P**	**09 36 51.5**	**+0.1**
	comp=Z,169nm,1.0s,mb5.7						
WHN	**Wuhan**	**40.70**	**356**	*e*P	**P**	**09 36 54.0**	**-0.9**
NJ2	**Nanjing**	**42.15**	**2**	*e*P	**P**	**09 37 07.6**	**+0.8**
NJ2				AP	pP	09 37 17.5	-0.4
NJ2				XP	sP	09 37 21.3	-1.2
NJ2				PP	PP	09 38 49.0	+4.0
NJ2				S	**S**	**09 43 24.5**	**+0.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,762nm,6.3s						
NJ2				LR	LR		
	comp=N,760nm,11.6s,MS5.3						
NJ2				LR	LR		
	comp=E,3μm,11.9s,MS5.3						
NJ2				LR	LR		
	comp=Z,3μm,12.9s,MS5.3						
HNR	**Honiara**	**42.18**	**93**	P	**P**	**09 37 09.8**	**+2.4**
	comp=Z,93nm,0.7s,mb5.5,baz=210,slow=4.5,SNR=3.8						
CD2	**Chengdu**	**42.94**	**343**	*e*P	**P**	**09 37 12.6**	**-0.6**
CD2				AP	pP	09 37 22.5	-1.8
CD2				XP	sP	09 37 26.3	-2.6
CD2				PP	PP	09 38 54.9	+1.4
CD2				S	**S**	**09 43 36.8**	**+1.1**
CD2				SCS	ScS	09 47 07.1	-4.0
CD2				AMB	AMB		
	comp=Z,100nm,0.5s,mb5.8						
CD2				LR	LR		
	comp=N,3μm,19.2s,MS5.4						
CD2				LR	LR		
	comp=E,4μm,15.6s,MS5.4						
CD2				LR	LR		
	comp=Z,4μm,15.6s,MS5.4						
MDRS	**Chennai**	**43.35**	**302**	*e*P	**P**	**09 37 15.8**	**-1.0**
MDRS				AMb	AMB	09 38 01.3	
	comp=Z,102nm,0.3s,mb6.0						
VIS	**Vishakhapatnam**	**43.47**	**310**	*e*P	**P**	**09 37 17.1**	**-0

NGP Nagpur 48.74 310 *ex* **P 09 37 56.0 -3.2**
NGP AMb AMB 09 37 56.9
comp=Z,127nm,1.2s,mb5.8
DMN Daman 48.81 321 *eP* **P 09 37 58.7 -0.9**
comp=Z,178nm,0.8s,mb6.1
KKN Kakani 48.83 322 *eP* **P 09 37 58.7 -1.1**
comp=Z,112nm,0.7s,mb6.0
DL2 Dalian 49.14 5 P **P 09 38 01.4 -0.5**
DL2 AMB AMB
comp=Z,50nm,0.7s,mb5.7
GKN Gorkha 49.38 321 *eP* **P 09 38 02.9 -1.1**
comp=Z,87nm,0.6s,mb6.0
KOLN Koldanda 49.86 320 *eP* **P 09 38 06.5 -1.1**
comp=Z,134nm,0.7s,mb6.1
GOA Goa 49.95 300 *eP* **P 09 38 07.9 -0.6**
GOA AMb AMB 09 38 09.5
comp=Z,243nm,1.5s,mb6.0
AKL Akola 50.04 308 *eP* **P 09 38 08.0 -1.1**
AKL AMb AMB 09 38 09.2
comp=Z,79nm,0.7s,mb5.9
BJT Baijiatuau 50.08 359 *eP* **P 09 38 08.6 -0.4**
BJT pmax pmax
comp=Z,38nm,0.5s
BJT Baijiatuau 50.08 359 *eP* **P 09 38 08.6 -0.4**
comp=Z,38nm,0.5s,mb5.7
BJI Beijing 50.10 359 P **P 09 38 08.3 -0.9**
BJI AMB AMB
comp=Z,68nm,0.9s,mb5.7
DANN Dangsing 50.17 321 *eP* **P 09 38 08.8 -1.2**
comp=Z,235nm,0.6s,mb6.4
KAD Karad 50.53 303 *eP* **P 09 38 12.0 -0.8**
KAD AMb AMB 09 38 13.8
comp=Z,83nm,0.9s,mb5.7
MAJO Matsushiro 50.65 22 *eP* **P 09 38 12.3 -1.1**
MAJO *e* 09 39 32.2
MAJO pmax pmax
comp=Z,47nm,1.0s,mb5.4
MAJO Matsushiro 50.65 22 *eP* **P 09 38 12.3 -1.1**
comp=Z,47nm,1.0s,mb5.4
MAJO *e*PcP PcP 09 39 32.2 +1.7
MAT Matsushiro 50.65 22 P **P 09 38 13.1 -0.3**
MJAR Matsushiro Arr 50.65 22 P **P 09 38 12.2 -1.2**
comp=Z,40nm,0.9s,mb5.4,baz=198,slow=7.5,SNR=100
MJAR PcP PcP 09 39 32.2 +1.7
comp=Z,8.7nm,0.9s,baz=199,slow=4.4,SNR=5.5
HHC Hu-ho-hao-te 51.16 355 *eP* **P 09 38 16.3 -0.8**
HHC AP pP 09 38 27.0 -1.5
HHC XP sP 09 38 31.0 -2.0
HHC PCP PcP 09 39 30.8 -1.5
HHC PP PP 09 40 14.3 0.0
HHC SCP ScP 09 43 23.3 -2.5
HHC PCS PcS 09 43 26.8 -3.0
HHC S **S** **09 45 32.3 -0.3**
HHC XS sS 09 45 49.5 -1.8
HHC SCS ScS 09 48 01.0 -3.6
HHC SS SS 09 49 06.0 -2.6
HHC AMB AMB
comp=Z,26nm,0.8s,mb5.2
HHC AMB AMB
comp=Z,1μm,8.3s
HHC LR LR
comp=N,3μm,15.3s,MS5.5
HHC LR LR
comp=E,2μm,15.9s,MS5.5
HHC LR LR
comp=Z,2μm,15.8s,MS5.3
GTA Gaotai 52.01 343 ⇑P **P 09 38 23.8 +0.2**
GTA AP pP 09 38 34.3 -0.6
GTA XP sP 09 38 38.3 -1.2
GTA S **S** **09 45 44.5 +0.1**
GTA XS sS 09 46 01.3 -1.9
GTA AMB AMB
comp=Z,31nm,1.2s,mb5.1
GTA AMB AMB
comp=Z,988nm,5.4s
GTA LR LR
comp=N,3μm,18.0s,MS5.5
GTA LR LR
comp=E,3μm,19.2s,MS5.5
GTA LR LR
comp=Z,5μm,18.6s,MS5.5
SNY Shenyang 52.22 6 ⇑P **P 09 38 24.0 -1.0**
SNY AMB AMB
comp=Z,40nm,0.6s,mb5.5
PTH Pithoragarh 53.24 319 *eP* **P 09 38 30.9 -2.0**
CN2 Changchun 54.38 7 *eP* **P 09 38 39.4 -1.5**
VLA Vladivostok 54.85 13 *eP* **P 09 38 43.0 -1.4**
VLA *e* pP 09 38 55.5 -0.3
VLA pmax pmax
comp=Z,105nm,1.0s,mb5.8
VLA Vladivostok 54.85 13 *i* P **P 09 38 43.7 -0.7**
AJM Ajmer 55.13 312 *eP* **P 09 38 45.0 -1.6**
AJM AMb AMB 09 38 46.2
comp=Z,65nm,0.6s,mb5.8
DDI Dehra Dun 55.15 318 *ex* x 09 39 05.0
MDJ Mudanjiang 55.82 11 P **P 09 38 50.9 -0.4**
MDJ AP pP 09 39 00.0 -2.7
MDJ XP sP 09 39 03.8 -3.5
MDJ PCS PcS 09 43 50.3 +0.2
MDJ S **S** **09 46 35.6 -0.1**
MDJ XS sS 09 46 50.6 -4.0
MDJ AMB AMB
comp=Z,104nm,0.9s,mb5.9
MDJ LR LR
comp=N,2μm,23.9s,MS5.3
MDJ LR LR
comp=E,2μm,23.3s,MS5.3
MDJ LR LR
comp=Z,3μm,21.1s,MS5.4
MDJ Mudanjiang 55.82 11 *eP* **P 09 38 51.3 0.0**
comp=Z,159nm,1.2s,mb5.9
CASY Casey 56.08 183 *eP* **P 09 38 52.5 -0.4**
CASY Casey 56.08 183 *eP* **P 09 38 52.9 0.0**
comp=Z,12nm,1.0s,mb4.9
SMLA Simla 56.26 319 *i* P **P 09 38 53.1 -1.6**
SMLA *i* x x 09 46 31.9
RPZ Rata Peaks 57.15 136 P **P 09 39 02.5 +1.6**
comp=Z,53nm,1.0s,mb5.5,baz=30,slow=2.2,SNR=9.2
RPZ LR LR 10 03 22.5
comp=Z,8μm,18.8s,MS5.9,baz=190,slow=36
BHJ Bhuj 57.17 306 *eP* **P 09 39 01.0 -0.3**
BHJ AMb AMB 09 39 02.9
comp=Z,147nm,0.9s,mb6.0
DLH Dalhousie 57.95 319 *eP* **P 09 39 05.0 -1.6**
THN Thein Dam 58.04 319 *eP* **P 09 39 07.2 -0.1**
MIR Mirnyy 58.51 191 ⇓*iP* **P 09 39 10.0 0.0**
MIR *i* 09 40 00.0
MIR pmax pmax
comp=Z,100nm,1.5s,mb5.6
ULN Ulaanbaatar 58.60 352 P **P 09 39 10.7 -0.1**
SNR=13
ULN Ulaanbaatar 58.60 352 *eP* **P 09 39 10.7 -0.2**
ULN pmax pmax
comp=Z,34nm,0.9s,mb5.4
ULN Ulaanbaatar 58.60 352 *eP* **P 09 39 10.7 -0.1**
comp=Z,34nm,0.9s,mb5.4
SONM Songino Array 58.66 352 P **P 09 39 10.7 -0.6**
comp=Z,57nm,0.8s,mb5.7,baz=169,slow=8.5,SNR=326
ASAJ Asahikawa 58.90 21 P **P 09 39 12.8 -0.2**
comp=Z,16nm,0.7s,mb5.2,baz=253,slow=19,SNR=10
SNZO South Karori 59.05 132 *eP* **P 09 39 20.7 +6.4**
HIA Hailar 59.36 2 *eP* **P 09 39 15.5 -0.6**
HIA pmax pmax
comp=Z,24nm,0.8s
HIA Hailar 59.36 2 *eP* **P 09 39 15.5 -0.6**
comp=Z,24nm,0.8s,mb5.3
WMQ Urumqi 60.15 336 P **P 09 39 21.4 -0.2**
WMQ AP pP 09 39 31.5 -1.7
WMQ XP sP 09 39 36.0 -1.7
WMQ PCP PcP 09 40 06.5 -0.5
WMQ *e*S **S** **09 47 29.0 -3.3**
WMQ AMB AMB
comp=Z,35nm,0.8s,mb5.4
WMQ AMB AMB
comp=Z,328nm,4.2s
WMQ LR LR
comp=N,3μm,22.0s,MS5.5
WMQ LR LR
comp=E,2μm,19.5s,MS5.5
WMQ LR LR
comp=Z,3μm,23.6s,MS5.4
URZ Urewera 60.20 128 LR LR 10 06 22.4
comp=Z,4μm,18.3s,MS5.6,baz=18,slow=37
KLR Kul'dur 60.66 11 ⇓*iP* **P 09 39 20.6 -4.5**
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,120nm,1.8s,mb5.7
YSS Yuzh-Sakhalins 61.43 20⇑*eP* **P 09 39 30.1 -0.2**
YSS pmax pmax
comp=Z,64nm,1.5s,mb5.5
ZAK Zakamensk 61.63 350 ⇓*iP* **P 09 39 30.4 -1.2**
ZAK *e* pP 09 39 43.7 +0.6
ZAK *e* 09 40 13.3
ZAK pmax pmax
comp=Z,15nm,1.1s,mb5.0
KSH Kashi 62.57 325 P **P 09 39 39.1 +0.9**
KSH *e*AP pP 09 39 48.3 -1.4
KSH *e*XP sP 09 39 52.1 -2.1
KSH *e*PCP PcP 09 40 17.1 +0.2
KSH *e*PP PP 09 41 57.1 +0.8
KSH *e*SCP ScP 09 44 15.0 -1.2
KSH *e*PCS PcS 09 44 19.0 -1.2
KSH *e*S **S** **09 47 59.9 -3.5**
KSH *e*SCS ScS 09 49 23.0 -4.6
KSH AMB AMB
comp=Z,5μm,11.1s
KSH LR LR
comp=N,5μm,10.8s
KSH LR LR
comp=E,8μm,18.2s
KSH LR LR
comp=Z,8μm,23.3s
TLY Talaya 62.82 351 P **P 09 39 39.5 0.0**
comp=Z,125nm,0.8s,mb6.1,SNR=5.0
TLY Talaya 62.82 351 P **P 09 39 39.5 -0.1**
SNR=7.6
TLY Talaya 62.82 351 *eP* **P 09 39 39.1 -0.4**
TLY pmax pmax
comp=Z,22nm,0.9s,mb5.3
TLY Talaya 62.82 351 *eP* **P 09 39 39.6 +0.1**
comp=Z,19nm,0.9s,mb5.2
IRK Irkutsk 63.27 351 *eP* **P 09 39 38.8 -3.7**
IRK pmax pmax
comp=Z,105nm,2.7s,mb5.5
KZA Kyzart 64.73 327 P **P 09 39 52.9 +0.5**
SNR=44
MK31 Makanchi Array 64.79 334 *i* P **P 09 39 51.8 -0.8**
MKAR Makanchi Array 64.79 334 P **P 09 39 52.0 -0.7**
comp=Z,44nm,0.8s,mb5.6,baz=141,slow=7.8,SNR=249
TKM2 Tokmak 2 65.12 328 *eP* **P 09 39 55.0 +0.1**
TKM2 pmax pmax
comp=Z,67nm,1.0s,mb5.6
TKM2 Tokmak 2 65.12 328 P **P 09 39 54.5 -0.4**
SNR=58
TKM2 Tokmak 2 65.12 328 *eP* **P 09 39 55.0 +0.1**
comp=Z,67nm,1.0s,mb5.6
UCH Uchtor 65.23 326 P **P 09 39 56.0 +0.4**
SNR=48
UCH Uchtor 65.23 326 *eP* **P 09 39 56.0 +0.5**
comp=Z,34nm,1.0s,mb5.3
KBK Karagaybulak 65.29 327 P **P 09 39 56.1 +0.2**
SNR=48
AAK Ala-Archa 65.52 327 P **P 09 39 57.6 +0.2**
SNR=62
FRU Bishkek 65.59 327⇑*iP* **P 09 39 56.5 -1.4**
FRU pmax pmax
comp=Z,200nm,2.0s,mb5.8
AML Almayashu 65.61 326 P **P 09 39 58.5 +0.4**
SNR=13
AML Almayashu 65.61 326 *eP* **P 09 39 58.8 +0.7**
comp=Z,129nm,0.9s,mb6.0
CHMS Chumysh 65.63 327 P **P 09 39 58.0 -0.2**
SNR=12
EKS2 Erkin-Say 65.92 326 P **P 09 39 59.8 -0.2**
SNR=124
EKS2 Erkin-Say 65.92 326 *eP* **P 09 40 00.4 +0.3**
comp=Z,160nm,0.9s,mb6.0
USP Ospenovka 65.95 327 P **P 09 39 59.8 -0.4**
SNR=38
CLNS Chul'man 67.21 5 *eP* **P 09 40 07.4 -0.5**
CLNS *e**PP pP 09 40 16.9 -2.7
CLNS *e* 09 42 37.7
CLNS *e*PPP 09 44 14.2
CLNS *e*S S 09 49 05.0 +5.3
CLNS *e* 09 50 05.0
CLNS *e*SSS 09 53 22.5
CLNS pmax pmax
comp=Z,48nm,0.9s,mb5.5
CLNS pmax pmax
comp=N,26nm,0.8s
CLNS pmax pmax
comp=E,7.0nm,0.7s
CLNS smax
comp=N,2128μm,14.4s
CLNS smax
comp=E,801μm,12.5s
CLNS MLR MLR
comp=Z,2μm,15.0s,MS5.4
CLNS MLR MLR
comp=E,538nm,14.0s,MS5.4
CLNS MLR MLR
comp=N,2μm,16.0s,MS5.4
MAW Mawson 67.39 200 *eP* **P 09 40 09.4 +0.4**
comp=N,11nm,1.1s,mb4.8
MAW Mawson 67.39 200 P **P 09 40 09.7 +0.7**
comp=N,2.9nm,0.8s,mb4.4,baz=68,slow=7.3,SNR=11
MAW PKP2ab 10 08 35.5
comp=N,2.2nm,0.8s,baz=235,slow=6.2,SNR=4.5
MAW Mawson 67.39 200 *eP* **P 09 40 10.5 +1.5**
MAW pmax pmax
comp=Z,20nm,1.1s
MAW Mawson 67.39 200 *eP* **P 09 40 10.4 +1.4**
comp=Z,20nm,1.1s,mb5.1
BOD Bodaibo 67.93 358 *eP* **P 09 40 11.6 -0.9**
BOD pmax pmax
comp=Z,55nm,0.9s,mb5.6
KK31 Karatay Array 68.03 325 *i* P **P 09 40 12.4 -1.0**
KURK Kurchatov 69.36 335 P **P 09 40 20.1 -1.5**
comp=Z,552nm,1.0s,mb6.4,SNR=60
KURK Kurchatov 69.36 335 P **P 09 40 21.1 -0.4**
SNR=39
KURK Kurchatov 69.36 335 P **P 09 40 20.4 -1.1**
comp=Z,44nm,0.9s,mb5.4,baz=147,slow=4.8,SNR=130
KURK Kurchatov 69.36 335 *eP* **P 09 40 21.1 -0.5**
KURK pmax pmax
comp=Z,74nm,1.1s,mb5.5
KURK Kurchatov 69.36 335 *eP* **P 09 40 21.1 -0.4**
comp=Z,74nm,1.1s,mb5.5
ZALV Zalesovo Beam 69.61 340 P **P 09 40 21.7 -1.3**
comp=Z,51nm,0.7s,mb5.6,baz=143,slow=4.3,SNR=49
NVS Novosibirsk 70.88 340⇑*iP* **P 09 40 28.8 -2.0**
NVS *i* pP 09 40 38.7 -3.8
NVS *e*S S 09 49 37.4 -5.8
NVS pmax pmax
comp=Z,62nm,1.2s,mb5.4
NVS pmax pmax
comp=N,43nm,1.4s
NVS pmax pmax
comp=E,34nm,1.2s
NVS smax
comp=N,32nm,2.2s
NVS smax
comp=E,350nm,3.9s
PETK Petropavlovsk- 72.02 24 P **P 09 40 38.2 +0.6**
comp=E,29nm,0.7s,mb5.3,baz=199,slow=4.6,SNR=28
SBA Scott Base 72.02 170 *eP* **P 09 40 39.6 +2.2**
SBA pmax pmax
comp=Z,14nm,0.9s,mb4.9
SBA Scott Base 72.02 170 *eP* **P 09 40 39.6 +2.2**
comp=Z,14nm,0.9s,mb4.9
PET Petropavlovsk 72.34 25⇑*eP* **P 09 40 40.5 +0.9**
YAK Yakutsk 72.78 6*c iP* **P 09 40 41.6 -0.4**
YAK *e* pP 09 40 54.2 +0.4
YAK *e**PP pP 09 41 02.0 +8.2
YAK *e* 09 43 23.4
YAK *e*S S 09 50 01.5 -3.2
YAK *e* 09 50 42.0
YAK *e**SS sS 09 50 48.0 +24
YAK pmax pmax
comp=Z,105nm,0.9s,mb5.8
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK pmax pmax
comp=N,44nm,1.2s
YAK pmax pmax
comp=Z,26nm,0.9s,mb5.2
YAK smax
comp=N,161μm,2.2s
YAK smax
comp=E,137μm,2.8s
YAK Yakutsk 72.78 6 *eP* **P 09 40 42.0 -0.1**
comp=E,90nm,0.9s,mb5.7
ABKT Ailbek 73.02 315 P **P 09 40 44.2 +0.2**
comp=E,335nm,1.0s,mb6.2,SNR=20
BVAR Borovoye Array 74.58 333 P **P 09 40 52.4 -0.4**
comp=E,61nm,0.7s,mb5.6,baz=140,slow=7.8,SNR=209
BRVK Borovoye 74.66 333 *eP* **P 09 40 53.0 -0.2**
BRVK pmax pmax
comp=Z,83nm,0.9s,mb5.7
BRVK Borovoye 74.66 333 *eP* **P 09 40 53.0 -0.2**
comp=Z,83nm,0.9s,mb5.7
SYO Syowa Base 75.97 201⇓*eP* **P 09 41 00.0 -0.6**
SYO Syowa Base 75.97 201⇓*epP* pP 09 41 12.0 -0.4
AB31 Akbulak array 77.57 326 *i* P **P 09 41 09.7 -0.2**
SEY Seymchan 77.91 16⇑*eP* **P 09 41 12.2 +0.7**
AKTK Aktyubinsk 79.25 326 P **P 09 41 19.2 +0.1**
AKTO Aktyubinsk 79.25 326 P **P 09 41 19.2 +0.1**
comp=Z,86nm,0.7s,mb5.8,baz=114,slow=5.6,SNR=237
QSPA South Pole Qui 79.70 180 P **P 09 41 22.5 +1.3**
comp=Z,5.2nm,0.8s,mb4.5,baz=338,slow=2.0,SNR=27
KMBO Kilima Mbogo 79.83 271 P **P 09 41 24.8 +1.6**
comp=Z,6.8nm,0.8s,mb4.6,baz=57,slow=5.4,SNR=13
KMBO Kilima Mbogo 79.83 271 *eP* **P 09 41 24.8 +1.6**
SVE Sverdlovsk 81.36 332⇓*eP* **P 09 41 30.2 -0.1**
SVE pmax pmax
comp=Z,57nm,1.1s,mb5.4
ARU Arti 82.10 331 P **P 09 41 33.0 -1.3**
comp=Z,206nm,1.2s,mb5.9,SNR=6.3
ARU Arti 82.10 331*d iP* **P 09 41 33.4 -0.9**
ARU *e*S S 09 51 44.6 -1.4
ARU pmax pmax
comp=Z,79nm,1.7s,mb5.4
ARU Arti 82.10 331 *eP* **P 09 41 33.9 -0.4**
comp=Z,48nm,1.4s,mb5.2
TIXI Tiksi 82.15 4⇑*eP* **P 09 41 33.3 -0.9**
TIXI pmax pmax
comp=Z,46nm,1.0s,mb5.4
TIXI Tiksi 82.15 4 *eP* **P 09 41 33.4 -0.8**
comp=Z,64nm,1.1s,mb5.5
DGRG David-gareji 83.42 314 P **P 09 41 43.9 +2.4**
GNI Garni 83.44 313⇑*eP* **P 09 41 43.1 +1.5**
GNI pmax pmax
comp=Z,70nm,1.9s
GNI Garni 83.44 313 *eP* **P 09 41 42.2 +0.6**
comp=Z,84nm,1.8s,mb5.5
MTA Mtatsminda 83.92 314 P **P 09 41 44.8 +0.8**
TBLG Delisi 83.97 314 P **P 09 41 45.6 +1.4**
MAIT Maitri 85.34 199 *eP* **P 09 41 52.1 +1.4**
HOMI Horasan 85.47 312 *i* P **P 09 41 53.7 +1.7**
MARD Mardin 85.52 309 *i* P **P 09 41 54.0 +1.8**
BILL Bilibino 85.56 17⇑*iP* **P 09 41 52.0 +0.3**
BILL pmax pmax
comp=Z,11nm,0.7s,mb5.2
BNGL BINGOL 85.71 311 *i* P **P 09 41 55.9 +2.7**
ARTV Artvin 85.80 313 *i* P **P 09 41 55.0 +1.5**
ERZM Erzurum 85.83 312 *i* P **P 09 41 55.6 +2.0**
KIV Kislovodsk 86.11 316⇑*iP* **P 09 41 55.9 +0.9**
KIV pmax pmax
comp=Z,49nm,1.3s,mb5.6
KIV Kislovodsk 86.11 316 *eP* **P 09 41 56.3 +1.3**
comp=Z,45nm,1.3s,mb5.5
GOF Gofitskoye 86.22 317⇑*iP* **P 09 41 51.0 -4.5**
GOF pmax pmax
comp=Z,130nm,1.0s,mb6.1
LSZ Lusaka 86.31 255 *eP* **P 09 41 58.0 +1.4**
LSZ pmax pmax
comp=Z,17nm,0.7s,mb5.4
LSZ Lusaka 86.31 255 *eP* **P 09 41 58.0 +1.4**
comp=Z,17nm,0.7s,mb5.4
KOPT Kop Dagi 86.50 312 *i* P **P 09 41 59.8 +2.8**
BOSA Boshof 86.75 242 P **P 09 42 00.5 +1.9**
comp=Z,24nm,0.9s,mb5.4,baz=101,slow=4.1,SNR=19
BOSA Boshof 86.75 242 *eP* **P 09 42 00.1 +1.5**
BOSA pmax pmax
comp=Z,22nm,1.0s,mb5.3
BOSA Boshof 86.75 242 *eP* **P 09 42 00.1 +1.5**
comp=Z,22nm,1.0s,mb5.3
LBTB Lobatse 87.07 245 *eP* **P 09 42 01.5 +1.3**
LBTB pmax pmax
comp=Z,37nm,0.9s,mb5.6
LBTB Lobatse 87.07 245 *eP* **P 09 42 01.5 +1.3**
comp=Z,37nm,0.9s,mb5.6
MALT Malatya 87.59 309 *eP* **P 09 42 01.6 -0.7**
MALT pmax pmax
comp=Z,62nm,1.0s,mb5.8
MALT Malatya 87.59 309 *eP* **P 09 42 01.6 -0.7**
comp=Z,62nm,1.0s,mb5.8
AKCD Akcadag 87.97 309 *i* P **P 09 42 06.2 +2.1**
GZT Gaziantep 88.00 308 *i* P **P 09 42 05.8 +1.5**
SOC Sochi 88.06 315 *eP* **P 09 42 04.7 +0.3**
SOC pmax pmax
comp=Z,37nm,0.7s,mb5.7
SOC Sochi 88.06 315 *i* P **P 09 42 04.9 +0.5**
COBT Iskenderun 88.82 307 *i* P **P 09 42 09.5 +1.3**
ANDN Andirin 89.00 308 *i* P **P 09 42 10.7 +1.7**
SNAA Sanae 89.25 196 *eP* **P 09 42 11.4 +1.8**
SNAA pmax pmax
comp=Z,29nm,1.0s
SNAA Sanae 89.25 196 *eP* **P 09 42 11.4 +1.9**
comp=Z,29nm,1.0s,mb5.6
ANN Anapa 89.96 316 *eP* **P 09 42 12.8 -0.6**
ANN *e* 09 52 40.6
ANN *e* 09 52 52.8
ANN pmax pmax
comp=Z,85nm,0.9s,mb6.1
MEST Erdemli 90.49 307 *i* P **P 09 42 16.7 +0.7**
VSR Storozhevoye 90.52 322 *eP* **P 09 42 15.2 -0.6**
VSR pmax pmax
comp=Z,30nm,1.3s,mb5.5
VSR pmax pmax
comp=N,7.0nm,1.0s
VSR pmax pmax
comp=E,20nm,0.9s
CSS Prodhromos 90.80 305 *eP* **P 09 42 18.6 +1.1**
comp=E,9.0nm,0.5s,mb5.4
CTKT Corum 90.87 311 *i* P **P 09 42 18.6 +0.8**
CTKT Corum 90.87 311 *i* P sP 09 42 37.6 +3.5
CDAG Cicekdag 90.97 310 *i* P **P 09 42 18.0 -0.2**
CDAG Cicekdag 90.97 310 *i* P sP 09 42 40.3 +5.7
BALT Daday 92.11 312 *i* P **P 09 42 24.3 +0.9**
SIM Simferopol' 92.29 315 *eP* **P 09 42 25.0 +0.8**
SIM pmax pmax
comp=Z,27nm,0.7s,mb5.7
SGKT Sivrigoynuk 92.90 311 *i* P **P 09 42 26.8 -0.3**
OBN Obninsk 93.02 325*c iP* **P 09 42 27.2 -0.1**
OBN pmax pmax
comp=Z,66nm,1.6s,mb5.8
OBN Obninsk 93.02 325 *eP* **P 09 42 27.7 +0.4**
comp=Z,36nm,0.8s,mb5.8
ESKT Eskisehir 93.62 309 *i* P **P 09 42 30.6 +0.2**
HENT Hendek 93.81 311 *i* P **P 09 42 29.9 -1.4**
KDAG Bornova 96.20 308 *i* P **P 09 42 42.5 +0.3**
KIS Kishinev 96.29 317 *i* P sP 09 43 12.0 +13
AKASG Malin Array Be 96.56 320 P **P 09 42 42.7 -0.9**
comp=Z,6.7nm,0.6s,mb5.3,baz=75,slow=4.1,SNR=22
AKASG PP PP 09 46 35.7 -2.6
comp=Z,0.7nm,0.4s,baz=76,slow=8.4,SNR=4.9
AKASG Malin Array Be 96.56 320 P **P 09 42 42.7 -0.9**
AKASG PP PP 09 46 35.7 -2.6
KIEV Kiev 96.56 320 *eP* **P 09 42 42.7 -0.9**
KIEV *e**PP pP 09 42 55.4 -0.3
KIEV pmax pmax
comp=Z,8.0nm,0.7s,mb5.3
KIEV Kiev 96.56 320 *eP* **P 09 42 42.7 -0.9**
comp=Z,8.2nm,0.7s,mb5.3
KIEV *ep*P pP 09 42 55.4 -0.3
JOF Joensuu 97.19 333 *ep* **P 09 42 44.5 -1.6**
comp=Z,8.9nm,0.8s,mb5.2
JOF Joensuu 97.19 333 *eP* **P 09 42 44.5 -1.6**
JOF pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
VRI Vrincioaia 97.58 315⇑*iP* **P 09 42 49.0 +0.7**
SNX Sinaia 98.36 315⇓*iP* sP 09 43 19.6 +11
BURAR Bucovina Array 98.80 317⇑*iP* **P 09 42 54.7 +0.9**
KAF Kangasniemi 99.41 332 *ep* **P 09 42 54.9 -1.2**
comp=Z,17nm,0.7s,mb5.7,baz=85,slow=4.2
KAF Kangasniemi 99.41 332 *eP* **P 09 42 54.9 -1.2**
KAF pmax pmax
comp=Z,17nm,0.7s,mb5.7
ARCES ARCESS Array B 100.14 339 P Pdif 09 42 58.9 -0.8
comp=Z,9.2nm,0.9s,baz=77,slow=7.6,SNR=9.0
KOLS Kolonicke sedl 100.86 318 PDIF Pdif 09 43 03.8 +1.0
KOLS Kolonicke sedl 100.86 318 *eP* Pdif 09 43 03.8 +1.0
GERES GERESS Array B 106.52 318 Pdiff Pdif 09 43 28.2 +0.2
comp=Z,1.9nm,1.0s,baz=96,slow=4.0,SNR=3.9

GERES PKiKP PKiKP 09 47 40.1 +1.3
comp=Z,1.3nm,0.8s,baz=70,slow=4.4,SNR=4.6
GERES PP PP 09 47 50.0 -3.3
comp=Z,0.6nm,0.5s,baz=86,slow=6.3,SNR=3.9
NOA NORSAR Array B 106.65 331 Pdiff Pdif 09 43 28.1 -0.5
comp=Z,0.9nm,0.7s,baz=76,slow=4.5,SNR=2.6
NOA PP PP 09 47 52.2 -1.7
comp=Z,1.8nm,0.8s,baz=80,slow=7.2,SNR=3.6
LPG La Plagne 111.54 315 *e*PKiKP PKiKP 09 47 50.0 +1.6
MBDF Montbardon 111.63 314 *e*PKiKP PKiKP 09 47 48.4 -0.1
CABF La Chapelle 111.85 316 *e*PKiKP PKiKP 09 47 48.8 -0.1
comp=Z,14nm,0.9s
LMR La Mourre 111.98 313 *e*PKiKP PKiKP 09 47 49.2 -0.1
ORIF Oris-en-Rattie 112.23 314 *e*PKiKP PKiKP 09 47 50.7 +1.0
SMRF Simiane la Rot 112.57 313 *e*PKiKP PKiKP 09 47 50.2 -0.2
LOR Lormes 113.25 317 *e*PKiKP PKiKP 09 47 51.8 +0.2
SMF Signal de Mont 113.38 316 *e*PKiKP PKiKP 09 47 51.6 -0.2
SSF Saint Saulge 113.53 317 *e*PKiKP PKiKP 09 47 53.3 +1.2
comp=Z,16nm,0.9s
AVF Avril sur Loir 113.68 317 *e*PKiKP PKiKP 09 47 52.2 -0.2
CAF Calviac 114.91 315 *e*PKiKP PKiKP 09 47 55.4 +0.6
RJF Les Rejaudoux 115.22 315 *e*PKiKP PKiKP 09 47 55.8 +0.4
MFF Saint Martin d 116.08 317 *e*PKiKP PKPdf 09 47 57.2 +0.2
YKA Yellowknife Ar 116.14 24 PKP PKPdf 09 47 57.1 +0.5
comp=Z,5.4nm,0.8s,baz=293,slow=2.1,SNR=8.7
TOA0 Torodi Ar. Sit 116.85 280 *e*PKPdf PKPdf 09 48 00.3 +0.9
TORD Torodi Ar. Bea 116.85 280 PKP PKPdf 09 47 59.9 +0.5
comp=Z,3.3nm,0.8s,baz=68,slow=2.0,SNR=17
SJPF Ste Jean 117.59 313 *e*PKiKP PKPdf 09 48 00.3 +0.3
comp=Z,18nm,1.1s
RPW Rockport 118.28 40 *e*PKPdf PKPdf 09 48 03.0 +1.9
ETW Entiat 119.29 41 *e*PKPdf PKPdf 09 48 05.1 +1.9
RSW Rattlesnake Hi 120.14 42 *e*PKPdf PKPdf 09 48 03.5 -1.3
HAWA Hanford 120.18 42 *e*PKPdf PKPdf 09 48 07.3 +2.4
ESDC Sonseca Array 120.34 310 PKP PKPdf 09 48 06.7 +1.3
comp=Z,0.4nm,0.3s,baz=24,slow=2.9,SNR=7.4
NEW Newport 121.10 39 *e*PKiKP PKPdf 09 48 08.5 +1.9
LNOR Lincton Mounta 121.17 42 *e*PKiKP PKPdf 09 48 08.8 +2.0
EDM Edmonton 121.25 33 *e*PKiKP PKPdf 09 48 08.5 +1.8
WVOR Wild Horse Val 121.97 46 *e*PKiKP PKPdf 09 48 11.1 +2.6
KIC Kosan Boka 122.40 271 *e*PKiKP pPKPdf 09 48 24.0 +1.4
comp=Z,93nm,1.3s
PTRM Twissleman Ran 122.40 54 *e*PKPdf PKPdf 09 48 12.7 +3.1
LIC Lamto 122.66 271 *e*PKiKP pPKPdf 09 48 24.4 +1.3
comp=Z,55nm,1.4s
TIC Toumodi 122.71 271 *e*PKiKP pPKPdf 09 48 24.4 +1.2
comp=Z,70nm,1.1s
NVAR Mina Array Bea 123.28 51 PKP PKPdf 09 48 13.7 +2.5
comp=Z,8.1nm,0.7s,baz=248,slow=2.1,SNR=48
EVO Evora 123.67 310 *e*PKiKP PKPdf 09 48 13.7 +1.8
comp=Z,14nm,1.0s
CHMT Chamberlain Mo 124.04 40 *e*PKPdf PKPdf 09 48 13.8 +1.5
MCMT McKenzie Canyo 125.12 42 *e*PKPdf PKPdf 09 48 17.2 +2.7
PFO Pinyon Flat Ob 125.85 56 *e*PKiKP PKPdf 09 48 18.6 +2.4
LDFC Landfair 126.59 54 *e*PKPdf PKPdf 09 48 20.8 +3.2
GCMT Greycliff 126.76 40 *e*PKPdf PKPdf 09 48 20.1 +2.5
GCMT *e*PP PP 09 50 14.5 -0.1
MSU Marysvale 127.86 49 *e*PKiKP PKPdf 09 48 23.6 +3.7
PDAR Pinedale Array 128.13 43 PKP PKPdf 09 48 21.9 +1.7
comp=Z,1.4nm,0.7s,baz=78,slow=1.9,SNR=12
TMUT Trail Mountain 128.31 48 *e*PKPdf PKPdf 09 48 24.5 +3.8
PLCA Paso Flores 128.73 173 PKP PKPdf 09 48 23.9 +2.4
comp=Z,3.4nm,1.1s,baz=320,slow=7.9,SNR=2.6
PLCA Paso Flores 128.73 173 PKP PKPdf 09 48 23.9 +2.4
RWWY Rawlins 130.17 43 *e*PKPdf PKPdf 09 48 26.5 +2.3
MVCO Mesa Verde 131.04 49 *e*PKPdf PKPdf 09 48 30.2 +4.2
ULM Lac du Bonnet 131.77 28 PKP PKPdf 09 48 27.7 +0.8
comp=Z,4.5nm,0.7s,baz=203,slow=1.4,SNR=6.8
ULM SKPbc SKPbc 09 51 52.9 +3.1
comp=Z,1.1nm,0.4s,baz=211,slow=5.9,SNR=2.3
ULM Lac du Bonnet 131.77 28 PKP PKPdf 09 48 27.7 +0.8
ULM SKPbc SKPbc 09 51 52.9 +3.1
ISCO Idaho Springs 132.09 45 *e*PKiKP PKPdf 09 48 30.5 +2.6
LAZ Ladron 133.06 52 *e*PKPdf PKPdf 09 48 33.6 +3.7
LENM Lemitar 133.27 52 *e*PKPdf PKPdf 09 48 33.5 +3.2
LPM Los Pinos Moun 133.49 52 *e*PKPdf PKPdf 09 48 34.1 +3.4
BNM Barren Site 133.54 52 *e*PKPdf PKPdf 09 48 34.3 +3.5
BNM *e*PP PP 09 51 00.2 +1.0
SCHQ Schefferville 135.48 3 PKP PKPdf 09 48 35.1 +1.3
comp=Z,8.2nm,0.9s,baz=214,slow=4.7,SNR=4.5
TXAR Lajitas Array 137.50 58 PKhKP 09 48 29.5
comp=Z,1.3nm,0.7s,baz=257,slow=2.3,SNR=18
TXAR PKP PKPdf 09 48 42.0 +3.7
comp=Z,4.3nm,0.7s,baz=216,slow=2.8,SNR=20
TXAR SKPbc SKPbc 09 52 11.6 +2.6
comp=Z,3.1nm,1.0s,baz=272,slow=3.4,SNR=6.9
TXAR Lajitas Array 137.50 58 PKP PKPdf 09 48 29.5 -8.8
TXAR PKP PKPdf 09 48 42.0 +3.7
TXAR SKPbc SKPbc 09 52 11.6 +2.6
CFAA Coronel Fontan 138.01 173 PKP PKPdf 09 48 40.8 +1.5
comp=Z,0.6nm,0.8s,baz=197,slow=2.6,SNR=6.6
CFAA SKPbc SKPbc 09 52 12.5 +2.0
comp=Z,0.5nm,0.8s,baz=240,slow=6.2,SNR=4.0
FVM French Village 142.98 37 *e*PKiKP PKPdf 09 48 45.3 -2.7
CPUP Villa Florida 143.19 188 PKhKP 09 48 46.5
comp=Z,0.6nm,0.4s,baz=218,slow=4.0,SNR=3.3
HKT Hockley 143.61 53 *e*PKiKP PKPdf 09 48 50.0 +0.7
UALR University of 143.73 43 *e*PKPdf PKPdf 09 48 48.6 -0.8
OLIL Olney 143.81 34 *e*PKPdf PKPdf 09 48 48.6 -0.8
SIUC Southern Illin 143.87 37 *e*PKPdf PKPdf 09 48 48.6 -0.9
SIUC *ep*PKPdf pPKPdf 09 49 02.6 +0.6
BLO Bloomington 144.35 32 *e*PKiKP PKPdf 09 48 50.0 -0.4
LONY Lake Ozonia 144.35 14 *e*PKPdf PKPdf 09 48 49.9 -0.3
HBAR Harrisburg 144.38 41 *e*PKPdf PKPdf 09 48 50.9 +0.4
GNAR Gosnell 144.53 40 *e*PKPdf PKPdf 09 48 51.2 +0.5
USIN University of 144.59 35 *e*PKPdf PKPdf 09 48 51.1 +0.3
PKME Peaks-Kenny Pk 144.74 8 *e*PKPdf PKPdf 09 48 51.3 +0.5
ERPA Erie 144.94 22 *e*PKPbc PKPdf 09 48 51.8 +1.5
UTMT University of 145.00 38 *e*PKPbc PKPbc 09 48 52.6 +1.7
NCB Newcomb 145.05 14 *e*PKPbc PKPbc 09 48 52.3 +1.5
WCI Wyandotte Cave 145.16 33 *e*PKiKP PKPdf 09 48 52.5 +0.7
MDV Middlebury 145.27 13 *e*PKPbc PKPbc 09 48 52.9 +1.4
ACSO Alum Creek Sta 145.27 28 *e*PKPbc PKPbc 09 48 53.0 +1.3
ALLY Alegheny Colle 145.28 23 *e*PKPbc PKPbc 09 48 52.6 +1.0
LBNH Lisbon 145.30 11 *e*PKiKP PKPdf 09 48 53.2 +1.4
ACCN Adirondack Com 145.74 14 *e*PKPbc PKPbc 09 48 54.4 +1.4
HNH Hanover 145.74 12 *e*PKPbc PKPbc 09 48 55.0 +1.9
WVT Waverly 145.76 37 *e*PKPbc PKPbc 09 48 54.6 +1.3
WVT *ep*PKPdf pPKPdf 09 49 05.7 +0.4
WVT *es*PKPdf 09 49 09.1
OXF Oxford 145.83 41 *e*PKP2 PKPab 09 48 55.0 +1.0
FFD Franklin Falls 146.09 11 *e*PKPbc PKPbc 09 48 55.8 +1.7
BINY Binghamton 146.22 18 *e*PKPbc PKPbc 09 48 55.9 +1.4
VBMS Vicksburg 146.44 45 *e*PKPbc PKPbc 09 48 57.8 +2.3
LVC Limon Verde 146.76 170 PKPbc PKPbc 09 48 58.8 +2.2
comp=Z,12nm,0.7s,baz=236,slow=1.9,SNR=16
LVC Limon Verde 146.76 170 PKPbc PKPbc 09 48 58.8 +2.2
SSPA Standing Stone 147.00 21 *e*PKPbc PKPbc 09 48 58.2 +1.4
HRV Adam Dziewonsk 147.04 12 *e*PKP2 PKPab 09 48 58.2 -0.2
QUA2 Belchertown 147.09 13 *e*PKPbc PKPbc 09 48 58.4 +1.3
MCWV Mont Chateau 147.10 24 *e*PKPbc PKPbc 09 48 58.6 +1.5
WES Weston 147.20 12 *e*PKP2 PKPab 09 48 58.5 -0.5
SWET Sewanee 147.51 37 *e*PKPbc PKPbc 09 48 59.6 +1.2
BRYW Bryant College 147.61 12 *e*PKPbc PKPbc 09 48 59.8 +1.4
TZTN Tazewell 147.88 32 *e*PKPbc PKPbc 09 49 00.8 +1.5
PAL Palisades 147.91 16 *e*PKP2 PKPab 09 49 00.9 -1.0
BRNJ Basking Ridge 148.03 17 *e*PKPbc PKPbc 09 49 02.3 +2.6
CPNY Central Park 148.10 16 *e*PKPbc PKPbc 09 49 01.5 +1.6
CPCT Cooper Cave 148.16 35 *e*PKPbc PKPbc 09 49 01.6 +1.4
LRAL Lakeview Retre 148.31 41 *e*PKPbc PKPbc 09 49 02.1 +1.4
TKL Tuckaleechee C 148.42 34 *e*PKP2 PKPab 09 49 02.5 -1.6
SDMD Soldier's Deli 148.46 21 *e*PKPbc PKPbc 09 49 02.2 +1.4
ELN Prospectdale 148.72 28 *e*PKPbc PKPbc 09 49 02.5 +0.9
BLA Blacksburg 148.89 28 *e*PKP2 PKPbc 09 49 03.4 +1.4
BRAL Brewton 149.54 44 *e*PKPbc PKPbc 09 49 06.1 +2.3
URVA University of 149.82 24 *e*PKPbc PKPbc 09 49 05.8 +1.5
GOGA Godfrey 150.23 36 *e*PKP2 PKPbc 09 49 07.3 +1.9
BDFB Brasilia 150.31 210 PKPbc PKPbc 09 49 07.7 +1.6
comp=Z,16nm,0.8s,baz=137,slow=3.2,SNR=16
JSC Jenkinsville 150.81 32 *e*PKiKP PKPbc 09 49 08.3 +1.5
COW Cow Castle Cre 151.79 33 *e*PKPbc PKPbc 09 49 11.7 +2.5
LPAZ La Paz 153.07 169 PKP PKPdf 09 49 07.4 +2.3
comp=Z,1.5nm,0.9s,baz=50,slow=6.3,SNR=6.5
LPAZ PKPbc PKPbc 09 49 15.5 +3.1
comp=Z,6.9nm,0.9s,baz=129,slow=4.2,SNR=24
LPAZ La Paz 153.07 169 PKP PKPdf 09 49 07.4 +2.3
LPAZ PKPbc PKPbc 09 49 15.5 +3.1
TEIG Tepich 153.63 65 *e*PKPbc PKPbc 09 49 16.0 +2.4
SIV San Ignacio 153.81 184 PKP PKPdf 09 49 07.6 +1.5
comp=Z,3.3nm,1.0s,baz=185,slow=2.7,SNR=10
SIV PKPbc PKPbc 09 49 16.0 +2.0
comp=Z,4.5nm,0.8s,baz=161,slow=2.3,SNR=5.6
HUMP Col San Antoni 171.70 20 *e*PKPdf PKPdf 09 49 24.3 +0.9

FDF Fort de France 175.29 339 *e*PKIKP PKPdf 09 49 26.5 +1.7

*ISCJB **20** 09:37:49.8±0.7,24.64N±0.003×122.59E±0.002,h10km±6km, Error ellipse: s-maj=5.3km s-min=2.7km az=13.9*
*TAP **20** 09:37:49.8,24.66N×122.55E,h15km,ML3.6,C*
*JMA **20** 09:37:49.9±0.2,24.78N×122.66E,h13km,M2.9*
ISC 20 09:37:49.8±0.4,2464N±003×12259E±002,h10km±3km, n38,σ0°81/61,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.42**	**115**	P		**Pg**		**09 37 58.7**	**+0.5**
YOJ				*e*S		**Sg**		**09 38 04.9**	**+1.1**
EGS		**0.63**	**289**	↑*i*P		**Pg**		**09 38 02.1**	**0.0**
	baz=288								
EGS				S		**Sg**		**09 38 11.4**	**+1.1**
	baz=288								
TWB1	**Santiao Chiao**	**0.66**	**304**	P		**Pg**		**09 38 03.0**	**+0.5**
	baz=304								
TWB1				S		**Sg**		**09 38 11.2**	**0.0**
	baz=304								
TWC	**Suao**	**0.67**	**267**	*i*P		**Pg**		**09 38 02.2**	**-0.7**
	baz=265								
TWC				*e*S		**Sg**		**09 38 11.8**	**+0.1**
	baz=265								
ILA	**Ilan**	**0.78**	**279**	P		**Pg**		**09 38 04.7**	**-0.1**
	baz=277								
ILA				S		**Sg**		**09 38 16.0**	**+1.1**
	baz=277								
ENA	**Nanau**	**0.80**	**255**	*e*P		**Pg**		**09 38 04.6**	**-0.7**
	baz=252								
TWE	**Neicheng**	**0.84**	**276**	*i*P		**Pg**		**09 38 05.6**	**-0.5**
	baz=273								
TWE				S		**Sg**		**09 38 17.4**	**+0.4**
	baz=273								
NWF	**Wu-fen Shan**	**0.85**	**300**	P		**Pg**		**09 38 06.6**	**+0.3**
	baz=299								
NWF				S		**Sg**		**09 38 17.6**	**+0.3**
	baz=299								
ENTT	**Nioudou**	**0.93**	**270**	P		**Pg**		**09 38 07.1**	**-0.7**
	baz=267								
ENTT				*e*S		**Sg**		**09 38 19.9**	**0.0**
	baz=267								
TWA	**Mucha**	**0.97**	**290**	*e*P		**Pg**		**09 38 08.2**	**-0.4**
	baz=288								
TWA				S		**Sg**		**09 38 21.0**	**-0.3**
	baz=288								
TWD	**Chiawan**	**1.06**	**238**	*e*P		**Pb**		**09 38 09.4**	**-0.9**
	baz=244								
TWD				*e*S		**Sg**		**09 38 23.1**	**-1.1**
	baz=244								
IRIF	**Iriomote-Funau**	**1.08**	**106**	P		**Pb**		**09 38 09.5**	**-1.2**
IRIF				*e*S		**Sb**		**09 38 25.1**	**+0.2**
PCYT	**Pengchaiyu**	**1.09**	**335**	*e*P		**Pb**		**09 38 10.4**	**-0.3**
	baz=335								
TWY	**Chenhua**	**1.10**	**305**	*e*P		**Pb**		**09 38 11.1**	**+0.2**
	baz=304								
TWY				*e*S		**Sb**		**09 38 24.3**	**-1.0**
	baz=304								
NSK	**Sanguang**	**1.12**	**272**	P		**Pb**		**09 38 10.7**	**-0.6**
	baz=269								
NSK				S		**Sb**		**09 38 25.2**	**-0.7**
	baz=269								
NNS	**Nan Shan**	**1.13**	**260**	P		**Pb**		**09 38 10.8**	**-0.6**
	baz=248								
NNS				S		**Sb**		**09 38 25.2**	**-0.9**
	baz=248								
TWS1	**Kuangyinshan**	**1.16**	**293**	*e*P		**Pb**		**09 38 12.5**	**+0.6**
	baz=291								
TWS1				*e*S		**Sb**		**09 38 26.6**	**-0.4**
	baz=291								
HATJ	**Hateruma jima**	**1.25**	**118**	P		**Pn**		**09 38 13.2**	**-0.2**
HATJ				*e*S		**Sb**		**09 38 30.0**	**+0.2**
WHF	**Hehuan Shan**	**1.30**	**248**	*e*P		**Pn**		**09 38 13.8**	**-0.3**
	baz=253								
WHF				*e*S		**Sb**		**09 38 30.3**	**-1.0**
	baz=253								
ESL	**Shilin**	**1.34**	**232**	P		**Pn**		**09 38 13.6**	**-1.0**
	baz=229								
ESL				*e*S		**Sb**		**09 38 32.0**	**-0.2**
	baz=229								
TWT	**Tachien**	**1.34**	**254**	*e*P		**Pn**		**09 38 15.0**	**+0.3**
	baz=234								
JKRS	**Kuro-shima**	**1.36**	**107**	P		**Pn**		**09 38 13.9**	**-0.9**
JKRS				*e*S		**Sb**		**09 38 31.7**	**-1.0**
NSTT	**Nanjuang**	**1.45**	**270**	*e*P		**Pn**		**09 38 15.8**	**-0.2**
	baz=267								
NSTT				*e*S		**Sn**		**09 38 35.4**	**+0.3**
	baz=267								
EHY	**Hungye**	**1.62**	**226**	*e*P		**Pn**		**09 38 17.6**	**-0.8**
	baz=222								
NSY	**Sanyi**	**1.68**	**263**	*e*P		**Pn**		**09 38 22.2**	**+2.9**
	baz=272								
TWQ1	**Liyutan**	**1.68**	**260**	*e*P		**Pn**		**09 38 21.0**	**+1.7**
	baz=270								
SMLT	**Sun Moon Lake**	**1.72**	**244**	*e*P		**Pn**		**09 38 20.1**	**+0.3**
	baz=227								
TYC	**Yuchr**	**1.74**	**245**	*e*P		**Pn**		**09 38 20.8**	**+0.7**
	baz=228								
TYC				*e*S		**Sn**		**09 38 42.9**	**+0.5**
	baz=228								
TWF1	**Yuli**	**1.75**	**223**	*e*P		**Pn**		**09 38 18.8**	**-1.4**
	baz=207								
YUS	**Yu-Shan**	**1.89**	**233**	*e*P		**Pn**		**09 38 22.7**	**+0.6**
	baz=216								
JTJ	**Tarama**	**1.92**	**90**	P		**Pn**		**09 38 22.6**	**0.0**
JTJ				*e*S		**Sn**		**09 38 46.9**	**0.0**
ALS	**Alishan**	**1.98**	**236**	*e*P		**Pn**		**09 38 24.2**	**+0.8**
	baz=217								
CHN5	**Tsauling**	**2.03**	**240**	*e*P		**Pn**		**09 38 25.1**	**+1.0**
	baz=235								
ELDTW	**Lidau**	**2.04**	**225**	*e*P		**Pn**		**09 38 23.4**	**-0.8**
	baz=221								
CHN4	**Tsaushan**	**2.23**	**235**	*e*P		**Pn**		**09 38 26.1**	**-0.8**
	baz=230								
WTP	**Ta-pu**	**2.28**	**233**	*e*P		**Pn**		**09 38 29.2**	**+1.7**
	baz=216								
CHN1	**Nanshi**	**2.38**	**233**	*e*P		**Pn**		**09 38 30.7**	**+1.8**
	baz=229								
CHN1				*e*S		**Sn**		**09 38 59.9**	**+1.8**
	baz=229								
SSD	**Sandimen**	**2.60**	**224**	*e*P		**Pn**		**09 38 32.8**	**+0.8**
	baz=210								

IDC 20 09:41:36.0±2.5,461S×10057E,h31km±5km,mb3.8/8, mb1 3.9/8,mb1mx3.7/21,mbtmp3.8/8,Error ellipse: s-maj=103.9km s-min=14.8km az=56.0,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.98**	**356**	P		P		09 46 38.1	0.0
	1.7nm,0.5s,baz=180,slow=8.7,SNR=6.5								
FITZ	**Fitzroy Crossi**	**27.94**	**121**	P		P		09 47 23.1	-0.7
	1.4nm,0.8s,baz=333,slow=11,SNR=2.9								
FITZ				pP		pP		09 47 32.1	-0.7
	3.1nm,0.8s,baz=274,slow=11,SNR=3.8								
WRA	**Warramunga Arr**	**36.23**	**118**	P		P		09 48 36.4	-0.1
	0.4nm,0.3s,baz=321,slow=11,SNR=5.0								
WRA				pP		pP		09 48 45.8	+0.3
	3.4nm,0.9s,baz=294,slow=9.3,SNR=9.1								
ASAR	**Alice Springs**	**37.30**	**124**	P		P		09 48 45.5	-0.1
	0.7nm,0.8s,baz=297,slow=7.9,SNR=6.1								
ASAR				pP		pP		09 48 54.1	-0.5
	1.7nm,0.6s,baz=299,slow=7.4,SNR=9.6								
STKA	**Stephens Creek**	**47.02**	**130**	P		P		09 50 05.1	+0.4
	3.0nm,1.0s,baz=307,slow=15,SNR=2.3								
SONM	**Songino Array**	**52.47**	**5**	P		P		09 50 46.2	+0.3
	2.6nm,0.9s,baz=186,slow=8.9,SNR=9.0								
MKAR	**Makanchi Array**	**53.68**	**344**	P		P		09 50 54.2	-0.6
	2.7nm,1.0s,baz=150,slow=7.8,SNR=7.1								
KURK	**Kurchatov**	**58.26**	**344**	P		P		09 51 26.0	-1.4
	0.7nm,0.4s,baz=159,slow=6.7,SNR=4.1								
TXAR	**Lajitas Array**	**146.37**	**40**	PKPbc		PKPbc		10 01 15.0	+0.5
	0.9nm,0.7s,baz=278,slow=1.8,SNR=11								
TXAR				pPKPbc		pPKPbc		10 01 24.5	-0.1
	1.1nm,0.7s,baz=317,slow=1.0,SNR=7.6								

*NEIC **20** 09:56:23.6±0.7,1642S×173.12W,h15km, Error ellipse: s-maj=27.1km s-min=14.5km az=127.0*
IDC 20 09:56:21.2±1.1,1642S×17309W,h0km,mb4.0/6, mb1 4.1/6,mb1mx3.9/20,mbtmp4.0/6,MS3.6/1,Ms1 3.6/1, ms1mx2.6/39,Error ellipse: s-maj=40.4km s-min=24.1km az=135.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.80**	**27**	Sn		Sn		09 57 32.5	-9.3
	144nm,0.3s,baz=205,slow=18,SNR=11								
AFI				LR		LR		09 58 06.1	
	comp=Z,990nm,20.2s,baz=112,slow=37								
URZ	**Urewera**	**23.40**	**200**	P		P		10 01 32.0	+0.1
	9.8nm,0.6s,baz=10,slow=3.2,SNR=12								
STKA	**Stephens Creek**	**43.80**	**241**	P		P		10 04 29.4	+0.4
	0.7nm,0.5s,baz=90,slow=7.1,SNR=5.3								
WRA	**Warramunga Arr**	**49.91**	**258**	P		P		10 05 17.2	+0.2
	0.2nm,0.4s,baz=96,slow=6.6,SNR=13								
ASAR	**Alice Springs**	**50.09**	**253**	P		P		10 05 17.2	-1.1
	0.3nm,0.4s,baz=88,slow=9.2,SNR=9.7								
QSPA	**South Pole Qui**	**73.63**	**180**	P		P		10 07 56.5	+0.5
	1.5nm,1.0s,baz=186,slow=1.0,SNR=4.4								
NVAR	**Mina Array Bea**	**74.89**	**42**	P		P		10 08 03.8	-0.1
	0.4nm,0.7s,baz=225,slow=10.0,SNR=3.0								
WRAK	**Wrangell Islan**	**80.18**	**22**	*e*P		P		10 08 33.4	+0.3
	12nm,0.6s								
GERES	**GERESS Array B**	**147.19**	**352**	PKPbc		PKPbc		10 16 07.1	+0.8
	0.2nm,0.3s,baz=343,slow=1.0,SNR=3.8								

*ISCJB **20** 10:14:34.1±0.4,3833N±003×2208E±003,h10km,Error ellipse: s-maj=4.0km s-min=3.3km az=144.8*
*THE **20** 10:14:34.7,3835N×2206E,h0km,ML3.3*
*CSEM **20** 10:14:34.9±0.1,3835N×2204E,h12km,MD3.2,Error ellipse: s-maj=1.7km s-min=1.5km az=32.0*
*ATH **20** 10:14:35.2,3833N×2208E,h12km±3km,MD3.2/8*
*NEIC **20** 10:14:35.2,3834N×2208E,h12km,MD3.2(ATH),After ATH.*
ISC 20 10:14:34.7±0.4,3833N±003×2208E±003,h10km±6km,n21, σ0°89/34,4D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.56**	**241**	*e*PG		**Pg**		**10 14 45.8**	**+0.4**
RLS				SB		**Sb**		**10 14 54.5**	**+0.1**
EVR	**Evrytania**	**0.62**	**340**	*e*PG		**Pg**		**10 14 46.8**	**+0.1**
EVR				SB		**Sb**		**10 14 56.3**	**0.0**
EVR	**Evrytania**	**0.62**	**340**	⇓Pb		**Pb**		**10 14 46.3**	**-1.3**
EVR				Sb		**Sb**		**10 14 56.3**	**0.0**
AGG	**Agios Georgios**	**0.72**	**16**	*e*Pg		**Pg**		**10 14 47.6**	**-0.9**
AGG				*e*Sg		**Sg**		**10 14 58.1**	**+0.3**
LTK	**Loutraki**	**0.77**	**114**	*e*Pg		**Pg**		**10 14 50.1**	**+0.7**
LKR	**Lokris**	**0.79**	**66**	*e*Pg		**Pg**		**10 14 49.2**	**-0.7**
LKR				*e*Sg		**Sg**		**10 15 01.7**	**+1.5**
LKR	**Lokris**	**0.79**	**66**	*e*PB		**Pb**		**10 14 49.6**	**-0.8**
LKR				SB		**Sb**		**10 15 01.9**	**+0.7**
LKR	**Lokris**	**0.79**	**66**	⇓Pb		**Pb**		**10 14 49.6**	**-0.8**
LKR				*e*Sg		**Sg**		**10 15 01.7**	**+1.5**
LKR				Sb		**Sb**		**10 15 01.9**	**+0.7**
VLX	**Vlachokerasia**	**0.99**	**166**	*e*Pg		**Pg**		**10 14 53.2**	**-0.4**
KFL	**Aninnata**	**1.04**	**258**	*e*Pg		**Pg**		**10 14 54.3**	**-0.3**
ITM	**Ithomi**	**1.16**	**186**	*e*PN		**Pn**		**10 14 56.9**	**0.0**
LKD	**Levkas**	**1.18**	**289**	*e*Pg		**Pg**		**10 14 56.6**	**-0.8**
VLS	**Valsamata**	**1.18**	**263**	*e*Pg		**Pg**		**10 14 56.4**	**-0.9**
VLS				*e*Sg		**Sg**		**10 15 14.5**	**+1.8**
VLS	**Valsamata**	**1.18**	**263**	*e*PN		**Pn**		**10 14 56.9**	**-0.3**
VLS				SB		**Sb**		**10 15 14.8**	**+2.3**
VLS	**Valsamata**	**1.18**	**263**	⇓Pb		**Pb**		**10 14 56.5**	**-0.7**
VLS				Sb		**Sb**		**10 15 14.8**	**+2.3**
THL	**Klokotos Trika**	**1.23**	**358**	*e*Pg		**Pg**		**10 14 57.1**	**-1.2**
THL				*e*Sg		**Sg**		**10 15 16.2**	**+1.9**
THL	**Klokotos Trika**	**1.23**	**358**	*e*PN		**Pn**		**10 14 57.9**	**0.0**
THL	**Klokotos Trika**	**1.23**	**358**	⇓Pn		**Pn**		**10 14 57.9**	**0.0**
THL				*e*Sg		**Sg**		**10 15 16.2**	**+1.9**
DID	**Didima**	**1.23**	**132**	*e*Pg		**Pg**		**10 14 58.6**	**+0.3**
JAN	**Janina**	**1.63**	**324**	*e*PG		**Pg**		**10 15 05.5**	**-0.5**
VLI	**Veliai**	**1.75**	**157**	*e*PG		**Pg**		**10 15 07.9**	**-0.3**

*BJI **20** 10:23:37.1,2.16N×12630E,h14km,mB5.5,mb4.9,Ms5.2, Msz4.8*
*IDC **20** 10:23:38.7±0.5,273N×12703E,h0km,mb4.4/13, mb1 4.5/13,mb1mx4.4/18,mbtmp4.4/13,Error ellipse: s-maj=31.4km s-min=12.3km az=76.0*
*NEIC **20** 10:23:40.2±0.3,275N×127.16E,h10km,mb4.8/9,Error ellipse: s-maj=14.0km s-min=6.3km az=79.0*
*ISCJB **20** 10:23:46.4±1.2,266N±006×12699E±008,h77km±11km, mb4.5/21,Error ellipse: s-maj=14.5km s-min=8.7km az=158.0*
ISC 20 10:23:47.7±1.0,266N±005×12700E±008,h70km±10km, n38,σ0°87/35,mb4.5/21,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**2.48**	**241**	P		**Pn**		**10 24 26.6**	**+0.8**
	0.0nm,0.0s								
LBMI	**Labuha**	**3.32**	**171**	P		**Pn**		**10 24 37.9**	**+0.6**
	0.0nm,0.0s								
SWI	**Sorong**	**5.51**	**129**	P		**Pn**		**10 25 08.5**	**+1.3**
	0.0nm,0.0s								
AAI	**Ambon**	**6.42**	**169**	P		**P

comp=Z,1.0nm,0.6s,mb3.8,baz=91,slow=8.9,SNR=7.4
ARCES ARCESS Array B 91.54 340 P **P** **10 36 45.2 -1.0**
comp=Z,2.3nm,0.7s,mb4.5,baz=67,slow=6.9,SNR=6.3
TXAR Lajitas Array 122.03 53 PKP PKPdf 10 42 35.9 +1.0
comp=Z,0.3nm,0.6s,baz=257,slow=1.1,SNR=6.0
TORD Torodi Ar. Bea 123.50 288 PKP PKPdf 10 42 38.3 +0.2
comp=Z,0.9nm,0.7s,baz=80,slow=1.5,SNR=5.7
CPUP Villa Florida 156.10 170 PKPbc PKPdf 10 43 49.1 +14
comp=Z,0.3nm,0.3s,baz=124,slow=2.4,SNR=2.9
CPUP PKPab PKPab 10 44 03.2 +0.9
comp=Z,1.1nm,0.6s,baz=132,slow=6.7,SNR=5.1
CPUP Villa Florida 156.10 170 PKPbc PKPdf 10 43 49.1 +14
CPUP PKPab PKPab 10 44 03.2 +0.9

*ISCJB **20** 10:25:20.5±0.5, 2477N±002×122.11E±003, h3km±5km, Error ellipse: s-maj=4.2km s-min=3.5km az=37.4*
*TAP **20** 10:25:21.5, 2482N×122.03E, h11km, ML3.1, C*
*JMA **20** 10:25:22.5±0.2, 2487N×122.11E, h38km, M2.3*
ISC 20 10:25:21.2±0.4, **2480N**±002×**12209E**±003, **h10**km±4km, **n32**, σ0**°60**/51, **1C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.15**	**288**	⇓*iP*	**Pg**	**10 25 24.6**	**-0.1**
	baz=287						
EGS				*i* S	**Sg**	**10 25 26.7**	**-0.3**
	baz=287						
TWB1	**Santiao Chiao**	**0.23**	**336**	⇓*iP*	**Pg**	**10 25 26.0**	**0.0**
	baz=349						
TWB1				*i* S	**Sg**	**10 25 29.2**	**0.0**
	baz=349						
TWC	**Suao**	**0.29**	**230**	⇓*iP*	**Pg**	**10 25 27.2**	**+0.1**
	baz=219						
TWC				*e*S	**Sg**	**10 25 30.4**	**-0.5**
	baz=219						
ILA	**Ilan**	**0.32**	**264**	*e*P	**Pg**	**10 25 27.2**	**-0.3**
	baz=259						
NWF	**Wu-fen Shan**	**0.39**	**314**	P	**Pg**	**10 25 29.3**	**+0.3**
	baz=310						
NWF				S	**Sg**	**10 25 34.4**	**+0.2**
	baz=310						
TWE	**Neicheng**	**0.40**	**259**	⇑*iP*	**Pg**	**10 25 28.9**	**-0.1**
	baz=254						
TWE				*e*S	**Sg**	**10 25 34.3**	**0.0**
	baz=254						
ENA	**Nanau**	**0.49**	**221**	*e*P	**Pg**	**10 25 31.0**	**+0.3**
	baz=215						
ENA				*e*S	**Sg**	**10 25 37.7**	**+0.5**
	baz=215						
TWA	**Mucha**	**0.50**	**292**	*e*P	**Pg**	**10 25 31.1**	**+0.1**
	baz=282						
TWA				*e*S	**Sg**	**10 25 37.6**	**+0.1**
	baz=282						
ENTT	**Nioudou**	**0.51**	**252**	*e*P	**Pg**	**10 25 30.7**	**-0.3**
	baz=248						
ENTT				*e*S	**Sg**	**10 25 37.8**	**0.0**
	baz=248						
TWY	**Chenhua**	**0.66**	**317**	*e*P	**Pg**	**10 25 33.9**	**-0.1**
	baz=316						
NSK	**Sanguang**	**0.68**	**260**	P	**Pg**	**10 25 33.7**	**-0.7**
	baz=257						
NSK				*e*S	**Sg**	**10 25 42.0**	**-1.3**
	baz=257						
TWS1	**Kuangyinshan**	**0.69**	**296**	*e*P	**Pg**	**10 25 34.1**	**-0.3**
	baz=295						
NNS	**Nan Shan**	**0.75**	**242**	*e*P	**Pg**	**10 25 35.5**	**-0.1**
	baz=243						
PCYT	**Pengchaiyu**	**0.83**	**359**	*e*P	**Pg**	**10 25 37.8**	**+0.6**
	baz=355						
TWD	**Chiawan**	**0.85**	**213**	*e*P	**Pg**	**10 25 37.4**	**-0.1**
	baz=202						
TWD				*e*S	**Sg**	**10 25 48.7**	**+0.1**
	baz=202						
YOJ	**Yonaguni jima**	**0.90**	**112**	P	**Pg**	**10 25 39.1**	**+0.6**
YOJ				*e*S	**Sg**	**10 25 51.1**	**+0.9**
TWT	**Tachien**	**1.00**	**237**	*e*P	**Pg**	**10 25 40.9**	**+0.5**
	baz=230						
WHF	**Hehuan Shan**	**1.00**	**230**	P	**Pg**	**10 25 40.4**	**0.0**
	baz=227						
WHF				S	**Sg**	**10 25 53.9**	**+0.5**
	baz=227						
ESL	**Shilin**	**1.15**	**212**	*e*P	**Pb**	**10 25 43.0**	**-0.2**
	baz=218						
ESL				*e*S	**Sb**	**10 25 58.1**	**0.0**
	baz=218						
TWQ1	**Liyutan**	**1.28**	**250**	*e*P	**Pn**	**10 25 46.1**	**+0.9**
	baz=262						
SMLT	**Sun Moon Lake**	**1.42**	**230**	*e*P	**Pn**	**10 25 47.7**	**+0.6**
	baz=231						
TYC	**Yuchr**	**1.44**	**232**	*e*P	**Pn**	**10 25 48.1**	**+0.8**
	baz=224						
IRIF	**Iriomote-Funau**	**1.56**	**107**	P	**Pn**	**10 25 48.4**	**-0.6**
YUS	**Yu-Shan**	**1.67**	**219**	*e*P	**Pg**	**10 25 53.1**	**-0.1**
	baz=209						
HATJ	**Hateruma jima**	**1.73**	**115**	*e*S	**Sn**	**10 26 12.8**	**-0.5**
ALS	**Alishan**	**1.74**	**223**	*e*P	**Pg**	**10 25 54.9**	**+0.3**
	baz=209						
ALS				*e*S	**Sg**	**10 26 18.6**	**+1.5**
	baz=209						
CHN5	**Tsauling**	**1.76**	**228**	*e*P	**Pg**	**10 25 55.2**	**+0.2**
	baz=230						
JKRS	**Kuro-shima**	**1.83**	**107**	P	**Pn**	**10 25 52.9**	**+0.2**
JKRS				*e*S	**Sn**	**10 26 15.1**	**-0.9**
JIJ	**Ishigaki jima**	**1.91**	**103**	P	**Pn**	**10 25 54.1**	**+0.2**
JIJ				*e*S	**Sn**	**10 26 16.9**	**-1.1**
CHN4	**Tsaushan**	**1.99**	**224**	*e*P	**Pg**	**10 25 58.3**	**-1.1**
	baz=226						
CHN4				*e*S	**Sg**	**10 26 25.5**	**+0.3**
	baz=226						
TWK	**Hsinying**	**2.12**	**224**	*e*P	**Pn**	**10 25 58.4**	**+1.7**
	baz=228						
TWK				*e*S	**Sg**	**10 26 28.5**	**-0.7**
	baz=228						
CHN1	**Nanshi**	**2.15**	**222**	*e*P	**Pb**	**10 25 59.8**	**-0.5**
	baz=226						
CHN1				*e*S	**Sg**	**10 26 29.0**	**-1.4**
	baz=226						

*CSEM **20** 10:30:36.1, 3954N×1977E, h10km, MD2.9/3, After ATH*
ATH 20 10:30:36.1, 3954N×1977E, h10km, **MD3.0/3, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.17**	**7**	*e*Pg	Pg	10 30 40.0	+0.1
JAN	**Janina**	**0.84**	**82**	*e*PB	Pb	10 30 52.0	-0.8
EVR	**Evrytania**	**1.70**	**111**	*e*PN	Pn	10 31 08.0	+2.2
KRUS	**Krusevo**	**2.15**	**31**	*e*Pn	Pn	10 31 04.1	-7.9

*IDC **20** 10:46:57.5±0.7, 1328N×8902W, h64km±5km, mb3.7/11, mb1 4.0/14, mb1mx3.8/25, mbtmp3.8/14, MS4.0/1, Ms1 4.0/1, ms1mx3.3/41, Error ellipse: s-maj=22.3km s-min=12.3km az=53.0*
*NEIC **20** 10:46:57.2±0.5, 1311N×8923W, mb4.5/7, MD4.9(SNET), Error ellipse: s-maj=14.0km s-min=7.6km az=46.0*
NEIC Felt [III] at Santa Tecla. Also felt at Nueva San Salvador and San Salvador.
*ISCJB **20** 10:46:58.2±0.5, 1326N±007×89.11W±006, h80km±5km, mb4.2/16, Error ellipse: s-maj=14.5km s-min=4.3km az=37.2*
*CASC **20** 10:46:58.5±1.8, 1317N×8921W, h49km±12km, MD4.2, ML4.5, mb4.5(NEIC)*
ISC 20 10:46:59.5±0.4, **1330N**±007×**8909W**±006, **h74**km±5km, **n81**, σ0**°99**/63, **mb4.2**/16, **1C-9D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIES		**0.16**	**12**	*e*P	x	10 47 07.7	
AIES				*e*S	x	10 47 14.8	
LFRS	**El Faro**	**0.32**	**4**	⇓*iP*	x	10 47 09.4	
SNVI	**San Vicente**	**0.39**	**38**	⇓*iP*	x	10 47 10.7	
SNVI				*e*S	x	10 47 20.8	
SNET	**Serv Nac Est T**	**0.41**	**340**	*e*P	x	10 47 10.0	
SNET				*e*S	x	10 47 19.1	
SNET				*i*		10 47 20.5	
	comp=Z,41µm,0.3s						
LBRS	**Las Brisas**	**0.43**	**5**	⇓*iP*	x	10 47 11.3	
LFU	**La Fuente**	**0.44**	**357**	*e*P	x	10 47 11.1	
BOQS	**Boqueron**	**0.47**	**336**	*e*P	x	10 47 10.8	
BOQS				⇑*iP*	x	10 47 10.9	
SBLS	**San Blas**	**0.75**	**316**	*e*P	x	10 47 13.1	
SBLS				⇓*iP*	x	10 47 13.3	
SONS		**0.75**	**305**	*e*P	x	10 47 12.2	
SONS				*e*S	x	10 47 23.1	
SONS				*i*		10 47 24.6	
	comp=Z,12µm,0.2s						
SNJE	**San Jose**	**0.76**	**318**	⇓*iP*	x	10 47 13.4	
VSM	**San Miguel**	**0.80**	**81**	*e*P	x	10 47 16.0	
VSM				⇓*iP*	x	10 47 16.2	
RTR	**El Retiro**	**0.80**	**317**	⇓*iP*	x	10 47 14.3	
BLLM	**Bellamira**	**0.84**	**80**	*e*P	x	10 47 16.3	
CAHU	**Cacacuatique**	**0.97**	**61**	*e*P	x	10 47 18.4	
RBDL	**Robledal**	**0.99**	**324**	⇓*iP*	x	10 47 17.0	
MTO2	**Montecristo 2**	**1.12**	**346**	⇓*iP*	x	10 47 19.7	
CNCH	**Conchagua**	**1.22**	**91**	*e*P	x	10 47 20.9	
NBG	**Las Nubes**	**1.77**	**316**	*e*P	**Pn**	**10 47 28.5**	**+0.3**
PCG	**Pacaya**	**1.83**	**306**	*e*P	**Pn**	**10 47 29.4**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.92**	**67**	*e*P	**Pn**	**10 47 31.0**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.92**	**67**	*e*Pn	**Pn**	**10 47 31.0**	**+0.9**
FUG	**Fuego 3**	**2.05**	**304**	*e*P	**Pn**	**10 47 31.4**	**-0.5**
FG6		**2.15**	**306**	*e*P	**Pn**	**10 47 32.5**	**-0.7**
TEL3	**Telica 3**	**2.30**	**108**	*e*P	**Pn**	**10 47 34.3**	**-1.0**
TELN	**Telica**	**2.31**	**107**	*e*P	**Pn**	**10 47 34.5**	**-0.9**
LEON	**Leon**	**2.31**	**112**	*e*P	**Pn**	**10 47 33.9**	**-1.6**
CNGN	**Cerro Negro**	**2.46**	**109**	*e*P	**Pn**	**10 47 36.6**	**-0.9**
MOMN	**Momotombo**	**2.64**	**109**	*e*P	**Pn**	**10 47 39.1**	**-0.7**
CSAN		**2.83**	**113**	*e*P	**Pn**	**10 47 42.8**	**+0.3**
APYN	**Apoyeque**	**2.87**	**111**	*e*P	**Pn**	**10 47 42.2**	**-0.9**
XAVN	**Gruta Xavier**	**2.93**	**113**	*e*P	**Pn**	**10 47 44.2**	**+0.4**
TISN	**Laguna Tiscapa**	**2.98**	**112**	*e*P	**Pn**	**10 47 44.6**	**+0.1**
MGAN	**Managua**	**3.00**	**112**	*e*P	**Pn**	**10 47 44.2**	**-0.6**
MGAN				*e*S	**Sn**	**10 48 18.7**	**-1.0**
MGAN				AML	AML	10 48 26.0	
	comp=N,1µm,0.3s						
HUEN		**3.00**	**108**	*e*P	**Pn**	**10 47 44.1**	**-0.7**
CRUN	**El Crucero**	**3.02**	**115**	*e*P	**Pn**	**10 47 45.6**	**+0.6**
WILN	**Americas 2**	**3.05**	**112**	*e*P	**Pn**	**10 47 46.3**	**+0.9**
TICN	**Ticuantepe**	**3.06**	**114**	*e*P	**Pn**	**10 47 45.2**	**-0.4**
APON	**Apoyo**	**3.25**	**115**	*e*P	**Pn**	**10 47 48.0**	**-0.2**
CONN	**Concepcion**	**3.80**	**117**	*e*P	**Pn**	**10 47 56.5**	**+0.8**
JTS	**JuntasAbangare**	**5.03**	**126**	P	**Pn**	**10 48 12.5**	**-0.1**
	comp=N,3.2nm,0.3s,baz=285,slow=17,SNR=10.0						
JTS				S	**Sn**	**10 49 10.5**	**+1.0**
	comp=N,3.4nm,0.3s,baz=277,slow=18,SNR=2.0						
JTS	**JuntasAbangare**	**5.03**	**126**	*e*Pn	**Pn**	**10 48 11.4**	**-1.2**
JTS				S	**Sn**	**10 49 10.5**	**+1.0**
JTS				*e*Sn	**Sn**	**10 49 14.1**	**+4.6**
JCR	**Jicaral**	**5.19**	**131**	*e*P	**Pn**	**10 48 14.5**	**-0.2**
CAO	**Cobano**	**5.30**	**132**	*e*P	**Pn**	**10 48 15.7**	**-0.4**
CGA2	**Cerro Gallo 2**	**5.58**	**125**	*e*P	**Pn**	**10 48 21.6**	**+1.5**
PRS1	**Puriscal**	**5.72**	**125**	*e*P	**Pn**	**10 48 23.7**	**+1.7**
LCR2	**La Lucha 2**	**6.11**	**125**	*e*P	**Pn**	**10 48 29.6**	**+2.3**
BUS	**Buena Vista**	**6.41**	**125**	*e*P	**Pn**	**10 48 33.2**	**+1.7**
CMIG	**Matias Romero**	**6.75**	**305**	P	**Pn**	**10 48 34.1**	**-1.9**
	comp=N,2.5nm,0.3s,baz=133,slow=9.1,SNR=30						
CMIG				S	**Sn**	**10 49 50.9**	**-0.5**
	comp=N,5.7nm,0.3s,baz=23,slow=19,SNR=5.8						
CMIG				LR	LR	10 51 15.0	
	comp=N,1µm,19.2s,baz=76,slow=38						
TEIG	**Tepich**	**6.93**	**6**	P	**Pn**	**10 48 39.2**	**+0.8**
	comp=N,13nm,0.3s,baz=23,slow=0.7,SNR=83						
TEIG	**Tepich**	**6.93**	**6**	*e*Pn	**Pn**	**10 48 40.6**	**+2.1**
ACR	**Cerro Adams**	**7.42**	**128**	*e*P	**Pn**	**10 48 46.8**	**+1.6**
ROSC	**El Rosal**	**16.80**	**119**	P	**Pn**	**10 50 49.8**	**-0.5**
	comp=N,2.2nm,0.3s,baz=106,slow=19,SNR=2.5						
CHI2		**17.42**	**118**	*e*P	Px	10 47 31.9	
SDV	**Santo Domingo**	**18.63**	**102**	P	**Pn**	**10 51 10.7**	**-1.8**
	comp=N,0.9nm,0.3s,baz=320,slow=11,SNR=12						
SDV	**Santo Domingo**	**18.63**	**102**	*e*P	**Pn**	**10 51 10.6**	**-1.9**
	comp=N,6.1nm,0.6s						
TXAR	**Lajitas Array**	**20.91**	**322**	P	**P**	**10 51 37.1**	**+1.0**
	comp=N,2.9nm,0.5s,baz=143,slow=9.7,SNR=74						
TXAR				pP		10 51 50.6	
	comp=N,1.4nm,0.6s,baz=126,slow=9.9,SNR=3.4						
MIAR	**Mount Ida**	**21.54**	**350**	*e*P	**P**	**10 51 44.4**	**+1.7**
	comp=N,9.1nm,0.8s,mb4.2						
TKL	**Tuckaleechee C**	**22.77**	**11**	P	**P**	**10 51 55.9**	**+0.1**
	comp=N,1.3nm,0.3s,mb3.7,baz=185,slow=11,SNR=3.6						
TKL				sP	sP	10 52 16.2	-4.2
	comp=N,15nm,1.1s,baz=179,slow=5.2,SNR=5.0						
AMTX	**Amarillo**	**24.32**	**334**	*e*P	**P**	**10 52 10.8**	**+0.5**
	comp=N,8.0nm,0.4s,mb4.4						
PDAR	**Pinedale Array**	**34.28**	**333**	P	**P**	**10 53 39.0**	**+0.3**
	comp=N,0.7nm,0.6s,mb3.7,baz=124,slow=11,SNR=7.2						
PDAR				sP	sP	10 54 00.7	-4.2
	comp=N,0.4nm,0.7s,baz=108,slow=14,SNR=3.0						
PDAR				PcP	PcP	10 56 12.4	-1.1
	comp=N,0.4nm,0.4s,baz=95,slow=5.6,SNR=6.0						
REDW	**Red Top Meadow**	**35.33**	**332**	*e*P	**P**	**10 53 48.4**	**+0.7**
	comp=N,7.6nm,0.7s,mb4.6						
SNOW	**Snow King Moun**	**35.37**	**332**	*e*P	**P**	**10 53 48.9**	**+0.9**
	comp=N,8.5nm,0.6s,mb4.8						
ELK	**Elko**	**35.65**	**325**	P	**P**	**10 53 50.9**	**+0.5**
	comp=N,0.7nm,0.5s,mb3.9,baz=110,slow=6.5,SNR=4.9						
ELK	**Elko**	**35.65**	**325**	P	**P**	**10 53 50.9**	**+0.5**
LPAZ	**La Paz**	**35.97**	**144**	P	**P**	**10 53 53.6**	**+0.3**
	comp=N,0.9nm,0.7s,mb3.8,baz=326,slow=9.3,SNR=5.3						
NVAR	**Mina Array Bea**	**36.02**	**319**	P	**P**	**10 53 54.1**	**+0.5**
	comp=N,0.3nm,0.4s,mb3.6,baz=133,slow=8.3,SNR=7.7						
NVAR				pP	pP	10 54 10.2	-1.2
	comp=N,1.1nm,0.8s,baz=132,slow=7.4,SNR=6.3						
NVAR				PcP	PcP	10 56 19.1	+0.5
	comp=N,1.2nm,0.7s,baz=140,slow=4.2,SNR=8.1						
RLMT	**Red Lodge**	**36.06**	**335**	*e*P	**P**	**10 53 54.2**	**+0.3**
	comp=N,2.3nm,0.8s,mb4.2						
DGMT	**Dagmar**	**37.24**	**343**	*e*P	**P**	**10 54 04.4**	**+0.6**
	comp=N,13nm,0.6s,mb5.0						
ULM	**Lac du Bonnet**	**37.26**	**353**	P	**P**	**10 54 02.2**	**-1.8**
	comp=N,1.8nm,0.5s,mb4.3,baz=158,slow=10,SNR=6.5						
SCHQ	**Schefferville**	**44.95**	**18**	P	**P**	**10 55 05.6**	**-1.4**
	comp=N,1.2nm,0.4s,mb4.0,baz=223,slow=16,SNR=3.7						
SCHQ				PcP	PcP	10 56 45.3	-1.8
	comp=N,1.4nm,0.3s,baz=206,slow=4.5,SNR=6.7						
YKA	**Yellowknife Ar**	**52.38**	**345**	P	**P**	**10 56 02.9**	**-0.9**
	comp=N,3.8nm,0.6s,mb4.6,baz=132,slow=8.6,SNR=9.4						
YKA	**Yellowknife Ar**	**52.38**	**345**	P	**P**	**10 56 02.9**	**-0.9**
PLCA	**Paso Flores**	**56.44**	**163**	P	**P**	**10 56 32.5**	**-1.1**
	comp=N,1.3nm,0.8s,mb4.0,baz=243,slow=7.4,SNR=3.0						
PLCA	**Paso Flores**	**56.44**	**163**	P	**P**	**10 56 32.5**	**-1.1**
ARCES	**ARCESS Array B**	**85.90**	**19**	P	**P**	**10 59 29.9**	**-1.0**
	comp=N,1.7nm,0.9s,mb4.0,baz=327,slow=6.5,SNR=3.7						
ARCES	**ARCESS Array B**	**85.90**	**19**	P	**P**	**10 59 29.9**	**-1.0**
SONM	**Songino Array**	**117.59**	**348**	PKP	PKPdf	11 05 35.9	-1.2
	comp=N,0.4nm,0.4s,baz=336,slow=0.4,SNR=3.7						
WRA	**Warramunga Arr**	**137.96**	**255**	PKP	PKPdf	11 06 15.7	-0.9
	comp=N,0.8nm,0.7s,baz=88,slow=2.6,SNR=13						
WRA				pPKP	pPKPdf	11 06 33.8	-3.8
	comp=N,2.2nm,0.9s,baz=85,slow=1.4,SNR=8.3						
WRA				SKP		11 09 48.7	
	comp=N,0.3nm,0.8s,baz=76,slow=2.2,SNR=4.8						
ASAR	**Alice Springs**	**138.09**	**249**	PKP	PKPdf	11 06 13.5	-3.2
	comp=N,0.4nm,0.6s,baz=107,slow=2.9,SNR=5.4						
ASAR				pPKP	pPKPdf	11 06 34.0	-3.8
	comp=N,0.9nm,0.8s,baz=126,slow=2.9,SNR=5.6						
FITZ	**Fitzroy Crossi**	**146.27**	**257**	PKPbc	PKPbc	11 06 30.1	-2.5
	comp=N,1.5nm,0.5s,baz=136,slow=7.7,SNR=11						
FITZ				pPKPbc	pPKPbc	11 06 49.5	-3.9
	comp=N,3.3nm,0.6s,baz=131,slow=4.4,SNR=7.3						
CMAR	**Chiang Mai Arr**	**147.46**	**346**	PKPbc	PKPbc	11 06 33.5	-2.5
	comp=N,1.5nm,0.6s,baz=340,slow=3.4,SNR=8.0						

ISC 20 10:47:47.8±0.8, **4893N**±006×**2042E**±007, **h0**km, **n5, σ1°39/10, 1C, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRVS	**Cervenica-Dubn**	**0.69**	**92**	*e*PG	**Pg**	**10 48 00.2**	**-0.8**
CRVS				*e*SG	**Sg**	**10 48 09.4**	**-0.5**
STHS	**Stebnicka Huta**	**0.73**	**48**	*e*PG	**Pg**	**10 48 02.8**	**+1.1**
STHS				*e*SG	**Sg**	**10 48 13.6**	**+2.4**
PSZ	**Piszkesteto**	**1.07**	**199**	⇑*e*Pg	**Pg**	**10 48 10.1**	**+1.8**
PSZ				*e*Sg	**Sg**	**10 48 23.7**	**+1.5**
VYHS	**Vyhne**	**1.14**	**248**	*e*PN	**Pn**	**10 48 10.4**	**-0.5**
VYHS				*e*SN	**Sn**	**10 48 25.1**	**-2.1**
KOLS	**Kolonicke sedl**	**1.22**	**89**	*e*PN	**Pn**	**10 48 10.8**	**-1.3**
KOLS				*e*SN	**Sn**	**10 48 28.2**	**-1.2**

*ISCJB **20** 10:47:56.8±0.6, 5061N±005×13012W±008, h10km, Error ellipse: s-maj=9.4km s-min=4.0km az=136.0*
*PGC **20** 10:47:58.4, 5048N×13028W, h10km, ML3.2, Mw3.8, 203km west of Pt. Hardy, Bc Vancouver Island Region*
ISC 20 10:47:59.0±0.6, **5070N**±005×**13007W**±008, **h10**km, **n39, σ0°95/45, 13C-22D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.23**	**92**	⇑P	**Pn**	**10 48 21.6**	**-0.7**
HOLB				⇓Sn	**Sn**	**10 48 37.4**	**-1.5**
BPBC	**Brooks Peninsu**	**1.56**	**109**	⇑P	**Pn**	**10 48 24.6**	**-2.2**
BPBC				⇓Sn	**Sn**	**10 48 43.2**	**-3.9**
PHC	**Port Hardy**	**1.68**	**89**	⇑P	**Pn**	**10 48 28.2**	**-0.2**
PHC				⇓Sn	**Sn**	**10 48 48.8**	**-1.1**
MAYB	**Maynard**	**1.87**	**98**	⇑P	**Pn**	**10 48 30.2**	**-0.8**
BBB	**Bella Bella**	**1.93**	**39**	⇓P	**Pn**	**10 48 33.2**	**+1.4**
BBB				⇓Sn	**Sn**	**10 48 56.5**	**+0.4**
EDB	**Eliza Dome**	**2.06**	**112**	⇑P	**Pn**	**10 48 31.5**	**-2.2**
BNB	**Barry Inlet**	**2.15**	**331**	⇑P	**Pn**	**10 48 34.4**	**-0.5**
BNB				⇓Sn	**Sn**	**10 49 00.7**	**-1.0**
WOSB	**Woss**	**2.30**	**102**	⇑P	**Pn**	**10 48 36.4**	**-0.5**
ETB	**Estevan Point**	**2.63**	**119**	⇓P	**Pn**	**10 48 39.4**	**-2.1**
MOBC	**Moresby Island**	**2.72**	**335**	⇓P	**Pn**	**10 48 43.2**	**+0.5**
GDR	**Gold River**	**2.75**	**108**	⇓P	**Pn**	**10 48 41.9**	**-1.2**
DIB	**Dawson Inlet,**	**2.92**	**330**	⇑P	**Pn**	**10 48 44.7**	**-0.7**
DIB				⇓Sn	**Sn**	**10 49 20.8**	**+0.2**
B04A	**Port Angeles**	**5.04**	**119**	⇑P	**Pn**	**10 49 13.9**	**-0.6**
	baz=5.0						
A04A	**Legoe Bay, Lum**	**5.17**	**110**	⇓P	**Pn**	**10 49 16.9**	**+0.5**
	baz=5.2,SNR=17						
NLWA	**Neilton Lookou**	**5.25**	**127**	⇓P	**Pn**	**10 49 16.8**	**-0.7**
	baz=5.2						
A05A	**Maple Falls**	**5.44**	**105**	⇑P	**Pn**	**10 49 20.6**	**+0.6**
	baz=5.5,SNR=85						
C04A	**Brinnon**	**5.52**	**120**	⇑P	**Pn**	**10 49 21.0**	**-0.2**
	baz=5.5						
B05A	**Bryant**	**5.74**	**112**	⇓P	**Pn**	**10 49 24.7**	**+0.5**
	baz=5.8,SNR=42						
A06A	**Chilliwack**	**5.78**	**103**	⇑P	**Pn**	**10 49 25.5**	**+0.8**
	baz=5.8,SNR=6.2						
B06A	**Marblemount**	**5.99**	**108**	⇓P	**Pn**	**10 49 27.6**	**0.0**
	baz=6.0,SNR=18						
A07A	**Ashnola River,**	**6.47**	**101**	⇑P	**Pn**	**10 49 35.3**	**+1.0**
	baz=6.5,SNR=8.4						
B07A	**Winthrop**	**6.84**	**105**	⇑P	**Pn**	**10 49 40.6**	**+1.2**
	baz=6.9,SNR=80						
E05A	**Randle**	**6.89**	**124**	⇑P	**Pn**	**10 49 40.8**	**+0.9**
	baz=6.9						
F04A	**Amboy**	**6.98**	**130**	⇓P	**Pn**	**10 49 41.7**	**+0.5**
	baz=6.9						
D06A	**Cle Elum**	**7.01**	**116**	⇓P	**Pn**	**10 49 42.8**	**+1.1**
	baz=7.0,SNR=12						
A08A	**Turner Farm, O**	**7.20**	**100**	⇑P	**Pn**	**10 49 45.6**	**+1.4**
	baz=7.3,SNR=7.4						
C07A	**Waterville**	**7.21**	**111**	⇓P	**Pn**	**10 49 45.2**	**+0.8**
	baz=7.2,SNR=21						
C08A	**Higginbotham F**	**7.78**	**108**	⇓P	**Pn**	**10 49 52.9**	**+0.8**
	baz=7.8,SNR=5.8						
B09A	**Rice**	**8.08**	**102**	⇑P	**Pn**	**10 49 57.4**	**+1.2**
	baz=8.1						
D08A	**Wollman Farm,**	**8.20**	**112**	⇓P	**Pn**	**10 49 58.2**	**+0.2**
	baz=8.2,SNR=11						
C09A	**Chrisman Ranch**	**8.24**	**106**	⇑P	**Pn**	**10 49 58.7**	**+0.2**
	baz=8.3						
D09A	**Jones Farm, Ri**	**8.56**	**111**	⇑P	**Pn**	**10 50 02.8**	**-0.1**
	baz=8.6,SNR=8.9						
D10A	**Wagner Farm, O**	**9.18**	**108**	⇓P	**Pn**	**10 50 11.8**	**+0.4**
	baz=9.2,SNR=6.0						
E11A	**Bogner Ranch,**	**10.16**	**110**	⇓P	**Pn**	**10 50 25.0**	**+0.2**
	baz=10,SNR=6.9						
E12A	**Beaver Dam Sad**	**10.52**	**108**	⇑P	**Pn**	**10 50 30.2**	**+0.5**
	baz=10						
J08A	**Circle Bar Ran**	**10.79**	**128**	⇓P	**Pn**	**10 50 30.3**	**-3.1**
	baz=11						
F12A	**Elk City**	**11.04**	**111**	P	**Pn**	**10 50 37.1**	**+0.3**
	baz=11,SNR=5.9						
F13A	**Darby**	**11.58**	**109**	⇓P	**Pn**	**10 50 44.7**	**+0.4**
	baz=12						
G13A	**Cobalt**	**12.01**	**112**	⇑P	**Pn**	**10 50 50.6**	**+0.5**
	baz=12						

*ISCJB **20** 10:50:47.5±2.0, 244N±002×1094W±01, h10km, Error ellipse: s-maj=31.2km s-min=9.3km az=149.2*
*IDC **20** 10:50:49.4±1.8, 2465N×10963W, h0km, mb1 4.0/4, mb1mx3.8/22, mbtmp3.6/4, ML3.7/4, Error ellipse: s-maj=39.0km s-min=9.0km az=131.0*
*NEIC **20** 10:50:49.7±1.9, 2444N×10946W, h10km, Error ellipse: s-maj=31.3km s-min=12.0km az=140.0*
ISC 20 10:50:49.6±1.9, **244N**±002×**1094W**±01, **h10**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMT	**Gumushane**	**0.78**	**53**	**Pg**	**Pg**	**11 16 55.2**	**-0.4**
GUMT				*e*SG	**Sg**	**11 17 06.0**	**+0.3**
ESPY	**Espiye-Giresun**	**0.93**	**3**	*e*PG	**Pg**	**11 16 58.5**	**+0.1**
RSDY	**Resadiye-TOKAT**	**1.10**	**292**	*e*PN	**Pn**	**11 17 02.1**	**-0.6**
RSDY				*e*SN	**Sn**	**11 17 18.0**	**-0.2**
PTK	**Pertek**	**1.23**	**153**	*e*PN	**Pn**	**11 17 03.1**	**-1.4**
DARE	**Darende-Malaty**	**1.23**	**213**	*e*PN	**Pn**	**11 17 10.7**	**+6.2**
MACK	**Trabzon**	**1.27**	**41**	*i* P	**Pg**	**11 17 04.8**	**-0.1**
MACK				*i* S	**Sg**	**11 17 21.8**	**+0.5**
SVSK	**Karacayir**	**1.29**	**267**	*e*PN	**Pn**	**11 17 05.3**	**+0.1**
ELZG	**Elazig**	**1.51**	**171**	*i* P	**Pn**	**11 17 07.1**	**-1.2**
ELZG				*i* S	**Sn**	**11 17 29.5**	**+1.1**
MYA	**Malataya**	**1.67**	**187**	*e*PN	**Pn**	**11 17 10.3**	**-0.2**
SVRC	**Sivrice-ELAZID**	**1.69**	**163**	*e*PN	**Pn**	**11 17 10.6**	**-0.1**
AKCD	**Akcadag**	**1.79**	**199**	*i* P	**Pn**	**11 17 13.5**	**+1.3**
AKCD				*i* S	**Sn**	**11 17 40.1**	**+4.9**
YOZ	**Yozgat**	**2.60**	**263**	*e*PN	**Pn**	**11 17 24.0**	**+0.7**

*SGS **20** 11:24:21.6, 3009N×3615E, h8km*
*CSEM **20** 11:24:21.6, 3009N×3615E, h8km, ML2.9, After SNSN*
*ISCJB **20** 11:24:22.4±0.7, 2981N±003×3617E±004, h0km, Error ellipse: s-maj=5.4km s-min=3.9km az=160.3*
*GII **20** 11:24:23.2±0.8, 2987N×3606E, h0km, ML2.3/4, EXPLOSION*

ISC 20 11:24:22.5±0.7, 2980N±003×3620E±004, h0km, n18, σ0s74/28, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.00**	**266**	Pg	**Pg**	**11 24 41.7**	**-0.1**
HRFI	**Mount Harif**	**1.04**	**283**	Pg	**Pg**	**11 24 41.8**	**-0.6**
HRFI				Sg	**Sg**	**11 24 56.4**	**+0.6**
EIL	**Elat**	**1.10**	**263**	Pg	**Pg**	**11 24 43.6**	**0.0**
EIL				Sg	**Sg**	**11 24 58.5**	**+0.8**
HQLS		**1.11**	**243**	P	**Pg**	**11 24 43.3**	**-0.5**
HQLS		**1.11**	**243**	P	**Pg**	**11 24 43.3**	**-0.6**
HQLS				S	**Sg**	**11 24 59.2**	**+0.9**
MBRI	**Mt Berech**	**1.12**	**270**	Pg	**Pg**	**11 24 43.5**	**-0.5**
MBRI				Sg	**Sg**	**11 24 59.4**	**+0.9**
ZFRI	**Zfri**	**1.16**	**310**	Pg	**Pg**	**11 24 44.1**	**-0.6**
ZFRI				Sg	**Sg**	**11 24 59.2**	**-0.6**
PRNI	**Paran**	**1.17**	**298**	Pg	**Pg**	**11 24 44.1**	**-0.9**
PRNI				Sg	**Sg**	**11 25 00.0**	**-0.2**
JLOS		**1.23**	**210**	P	**Pg**	**11 24 45.4**	**-0.8**
KRMI	**Paran Flat**	**1.32**	**284**	Pg	**Pg**	**11 24 46.8**	**-1.0**
KRMI				Sg	**Sg**	**11 25 05.0**	**+0.1**
TBKS	**Tabuk**	**1.61**	**169**	S	**Sn**	**11 25 15.6**	**+2.0**
TBKS	**Tabuk**	**1.61**	**169**	P	**Pn**	**11 24 52.1**	**0.0**
MZDA	**Masada**	**1.67**	**334**	Pn	**Pn**	**11 24 52.3**	**-0.6**
MZDA				Sn	**Sn**	**11 25 15.3**	**+0.3**
BDAS	**Al Bad'**	**1.68**	**215**	P	**Pn**	**11 24 52.6**	**-0.5**
DSI	**Dead Sea**	**1.90**	**338**	Pn	**Pn**	**11 24 56.1**	**0.0**
DSI				Sn	**Sn**	**11 25 21.9**	**+1.2**
KZIT	**Kziot**	**1.91**	**306**	Pn	**Pn**	**11 24 56.7**	**+0.4**
KZIT				Sn	**Sn**	**11 25 21.1**	**+0.1**
RSHS		**1.94**	**220**	P	**Pn**	**11 24 55.7**	**-1.0**
HMDT	**Nahal Hemdat**	**2.51**	**347**	Sn	**Sn**	**11 25 37.0**	**+1.1**

IDC 20 12:04:58.4±1.8, 1833S×17604W, h0km, mb3.9/6, mb1 4.2/6, mb1mx3.9/17, mbtmp3.9/6, Error ellipse: s-maj=147.2km s-min=22.8km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.41**	**242**	P	P	12 12 39.1	+0.6
	0.7nm,0.6s,baz=90,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**46.77**	**260**	P	P	12 13 29.5	-0.4
	1.4nm,0.4s,baz=96,slow=7.5,SNR=63						
ASAR	**Alice Springs**	**46.84**	**254**	P	P	12 13 30.2	-0.2
	4.6nm,0.7s,baz=91,slow=8.5,SNR=73						
FITZ	**Fitzroy Crossi**	**55.18**	**260**	P	P	12 14 33.4	+0.1
	0.3nm,0.4s,baz=90,slow=7.1,SNR=3.8						
NVAR	**Mina Array Bea**	**78.18**	**43**	P	P	12 17 00.9	+1.2
	0.5nm,0.7s,baz=222,slow=8.8,SNR=3.8						
TXAR	**Lajitas Array**	**84.33**	**57**	P	P	12 17 32.2	-0.5
	0.3nm,0.8s,baz=202,slow=8.7,SNR=3.2						

*GRAL **20** 12:18:10.6±0.3, 3358N×3697E, h15km±74km, MD3.2*
*GII **20** 12:18:10.8±1.1, 3383N×3656E, h0km, ML2.6/3, EXPLOSION*

ISC 20 12:18:11.6±1.3, 3370N±005×3681E±007, h0km, n14, σ1s04/22, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.86**	**256**	*e*P	**Pg**	**12 18 27.2**	**-0.9**
RCY				*e*S	**Sg**	**12 18 39.3**	**+0.1**
HWQ	**Hawqa**	**0.92**	**309**	*e*P	**Pg**	**12 18 29.5**	**+0.2**
HWQ				*e*S	**Sg**	**12 18 43.7**	**+2.3**
BHL	**Bhannes**	**0.99**	**282**	*e*P	**Pg**	**12 18 30.3**	**-0.3**
HRI	**Mount Hermon**	**1.00**	**245**	Pg	**Pg**	**12 18 29.3**	**-1.5**
HRI				Sg	**Sg**	**12 18 43.5**	**-0.2**
KSDI	**Kefar Szold**	**1.09**	**243**	Pg	**Pg**	**12 18 30.9**	**-1.6**
KSDI				Sg	**Sg**	**12 18 46.6**	**0.0**
KSHT	**Keshet**	**1.10**	**230**	Pg	**Pg**	**12 18 31.9**	**-0.8**
MMA0B	**Mount Meron ar**	**1.36**	**240**	Pg	**Pg**	**12 18 36.0**	**-1.7**
MMA0B				Sg	**Sg**	**12 18 55.6**	**+0.2**
HNTI	**Hanita**	**1.50**	**246**	Sn	**Sn**	**12 18 59.3**	**-0.7**
MMLI	**Mount Malkishu**	**1.72**	**223**	Pn	**Pn**	**12 18 42.5**	**-0.2**
MMLI				Sn	**Sn**	**12 19 06.4**	**+1.0**
HMDT	**Nahal Hemdat**	**1.80**	**217**	Pn	**Pn**	**12 18 43.3**	**-0.7**
HMDT				Sn	**Sn**	**12 19 09.0**	**+1.5**
OFRI	**'Ofer**	**1.87**	**235**	Pn	**Pn**	**12 18 44.9**	**0.0**
SLTI	**Sal'it**	**2.08**	**226**	Pn	**Pn**	**12 18 47.7**	**0.0**
SLTI				Sn	**Sn**	**12 19 15.1**	**+0.7**
DSI	**Dead Sea**	**2.44**	**210**	Sn	**Sn**	**12 19 25.7**	**+2.4**
KZIT	**Kziot**	**3.45**	**217**	Pn	**Pn**	**12 19 07.8**	**+1.1**

IDC 20 12:23:51.0±1.2, 575N×12686E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.8/18, mbtmp3.8/6, Error ellipse: s-maj=129.6km s-min=17.6km az=68.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.57**	**164**	P	P	12 29 31.1	+0.1
	1.3nm,0.5s,baz=342,slow=10,SNR=6.6						
ASAR	**Alice Springs**	**30.03**	**167**	P	P	12 30 01.9	+0.1
	0.9nm,0.6s,baz=358,slow=9.0,SNR=8.6						
ASAR				PcP	PcP	12 33 04.0	-0.2
	0.3nm,0.5s,baz=350,slow=2.5,SNR=5.7						
STKA	**Stephens Creek**	**39.97**	**160**	P	P	12 31 27.1	-0.2
	1.0nm,0.4s,baz=347,slow=6.5,SNR=3.4						
SONM	**Songino Array**	**45.44**	**341**	P	P	12 32 11.0	-0.7
	0.2nm,0.5s,baz=152,slow=7.8,SNR=2.5						
MKAR	**Makanchi Array**	**55.99**	**324**	P	P	12 33 31.8	+0.5
	0.3nm,0.3s,baz=114,slow=6.5,SNR=3.0						
KURK	**Kurchatov**	**60.13**	**327**	P	P	12 34 00.5	+0.2
	1.4nm,0.5s,baz=127,slow=6.5,SNR=9.4						

*ISCJB **20** 12:24:41.3±1.7, 855±0.1×1179E±0.2, h162km±12km, mb4.0/5, Error ellipse: s-maj=38.0km s-min=10.5km az=144.4*
*IDC **20** 12:24:48.0±2.2, 8.17S×11854E, h193km±15km, mb3.6/4, mb1 3.6/8, mb1mx3.4/19, mbtmp3.5/8, Error ellipse: s-maj=47.9km s-min=11.5km az=56.0*
*NEIC **20** 12:24:47.4±3.0, 8.19S×11837E, h198km±26km, mb4.1/3, Error ellipse: s-maj=61.3km s-min=11.1km az=62.0*

ISC 20 12:24:46.0±1.4, 83S±01×1183E±02, h177km±10km, n15, σ0s97/22, mb4.0/5, 1D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.39**	**126**	*e*P	**Pn**	**12 25 26.6**	**-0.7**
WSI				*e*S	**Sn**	**12 25 37.5**	**-17**
KAPI	**Kappang**	**3.54**	**24**	P	**Pn**	**12 25 42.3**	**+1.1**
	2.2nm,0.3s,baz=149,slow=2.4,SNR=14						
BATI	**Baumata**	**5.60**	**110**	P	**Pn**	**12 26 06.7**	**-1.1**
	5.5nm,0.3s,baz=271,slow=17,SNR=7.6						
BATI				S	**Sn**	**12 27 04.3**	**-7.2**
	14nm,0.3s,baz=77,slow=4.1,SNR=5.4						
FITZ	**Fitzroy Crossi**	**12.08**	**145**	*e*P	**Pn**	**12 27 34.7**	**+2.1**
	3.4nm,0.6s						
FITZ				*e*S	**Sn**	**12 29 40.4**	**-6.4**
FITZ	**Fitzroy Crossi**	**12.08**	**145**	P	**Pn**	**12 27 33.4**	**+0.8**
	0.4nm,0.3s,baz=321,slow=9.3,SNR=27						
FITZ				S	**Sn**	**12 29 39.3**	**-7.5**
	0.4nm,0.3s,baz=186,slow=20,SNR=11						
WRA	**Warramunga Arr**	**19.36**	**128**	P	**P**	**12 28 57.8**	**-0.4**
	0.9nm,0.3s,baz=301,slow=12,SNR=78						
WRA				S	**S**	**12 32 26.7**	**-1.0**
	0.1nm,0.3s,baz=308,slow=21,SNR=4.3						
WRA				ScP	ScP	12 36 29.5	-2.5
	0.0nm,0.3s,baz=317,slow=2.1,SNR=6.2						
WRAB	**Tennant Creek**	**19.36**	**128**	*e*P	**P**	**12 28 58.1**	**-0.1**
	3.4nm,0.6s						
WB2	**Warramunga Arr**	**19.37**	**128**	*e*P	**P**	**12 28 58.0**	**-0.3**
WB2				*e*S	**S**	**12 32 29.0**	**+1.1**
WB2	**Warramunga Arr**	**19.37**	**128**	*e*P	**P**	**12 28 58.0**	**-0.3**
WB2				*e*S	**S**	**12 32 29.0**	**+1.1**
ASAR	**Alice Springs**	**21.37**	**138**	P	**P**	**12 29 19.9**	**+0.3**
	5.2nm,0.4s,mb4.2,baz=316,slow=9.0,SNR=125						
ASAR				ScP	ScP	12 36 34.6	-2.2
	0.5nm,0.7s,baz=336,slow=1.7,SNR=5.9						
STKA	**Stephens Creek**	**31.93**	**141**	P	**P**	**12 30 56.0**	**+1.0**
	0.9nm,0.6s,mb3.7,baz=295,slow=11,SNR=2.9						
SONM	**Songino Array**	**56.86**	**350**	P	**P**	**12 34 12.3**	**+0.3**
	1.0nm,0.5s,mb3.9,baz=167,slow=7.6,SNR=7.6						
MKAR	**Makanchi Array**	**63.51**	**333**	P	**P**	**12 34 57.2**	**-0.1**
	0.6nm,0.5s,mb3.7,baz=134,slow=8.7,SNR=5.2						
MKAR	**Makanchi Array**	**63.51**	**333**	P	**P**	**12 34 57.2**	**-0.1**
UCH	**Uchtor**	**64.23**	**325**	*e*P	**P**	**12 34 59.4**	**-2.7**
	5.0nm,0.9s,mb4.3						

*ISCJB **20** 12:41:37.1±0.3, 3977S±003×17450E±007, h145km±4km, mb3.8/5, Error ellipse: s-maj=9.1km s-min=4.9km az=21.7*
*IDC **20** 12:41:37.4±1.7, 3981S×17463E, h128km±17km, mb3.6/4, mb1 3.8/6, mb1mx3.7/16, mbtmp3.8/6, MS3.0/1, Ms1 3.0/1, ms1mx2.8/17, Error ellipse: s-maj=22.6km s-min=21.4km az=10.0*
*NEIC **20** 12:41:38.7, 3975S×17456E, h142km, MG4.9(WEL), After WEL.*
NEIC Felt at Hawera, Nelson and Wellington.

ISC 20 12:41:38.0±0.3, 3978S±003×17453E±007, h142km±4km, n64, σ0s97/66, mb3.8/5, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.35**	**87**	P	**Pn**	**12 41 58.8**	**+1.1**
WAZ				S	**Sn**	**12 42 13.1**	**+0.5**
RAEZ	**Rainy Point**	**0.50**	**347**	P	**Pn**	**12 41 58.8**	**+0.4**
DFE	**Dawson Falls**	**0.56**	**323**	P	**Pn**	**12 41 59.2**	**+0.5**
NEZ	**North Egmont**	**0.61**	**326**	P	**Pn**	**12 41 59.3**	**+0.3**
VRZ	**Vera Road**	**0.67**	**15**	*e*P	**Pn**	**12 41 59.5**	**+0.1**
VRZ				S	**Sn**	**12 42 14.9**	**-0.7**
PKE	**Pukeiti**	**0.72**	**324**	P	**Pn**	**12 41 59.9**	**+0.2**
NWEZ	**Newall Road**	**0.72**	**314**	P	**Pn**	**12 42 00.3**	**+0.6**
WNVZ	**Wahianoa**	**0.94**	**62**	P	**Pn**	**12 42 01.9**	**+0.5**
DRZ	**Dome Shelter**	**0.94**	**58**	P	**Pn**	**12 42 01.9**	**+0.5**
FWVZ	**Far West T-bar**	**0.94**	**57**	P	**Pn**	**12 42 01.8**	**+0.3**
WPVZ	**Whakapapa**	**0.97**	**54**	P	**Pn**	**12 42 01.9**	**+0.2**
TWVZ	**Taurewa**	**0.99**	**45**	P	**Pn**	**12 42 01.8**	**-0.1**
TUVZ	**Tukino**	**1.00**	**60**	P	**Pn**	**12 42 02.5**	**+0.5**
MOVZ	**Moawhango**	**1.01**	**69**	P	**Pn**	**12 42 02.0**	**-0.1**
NGZ	**Ngauruhoe**	**1.02**	**54**	P	**Pn**	**12 42 02.4**	**+0.3**
WTVZ	**West Tongariro**	**1.05**	**52**	P	**Pn**	**12 42 02.6**	**+0.2**
KIW	**Kapiti Island**	**1.12**	**165**	P	**Pn**	**12 42 03.9**	**+0.8**
TSZ	**Takapari Road**	**1.13**	**105**	P	**Pn**	**12 42 03.6**	**+0.4**
MRZ	**Mangatainoka R**	**1.19**	**138**	P	**Pn**	**12 42 04.4**	**+0.7**
KATZ	**Kakaramea**	**1.20**	**49**	P	**Pn**	**12 42 04.2**	**+0.3**
HIZ	**Hauiti**	**1.28**	**11**	P	**Pn**	**12 42 04.3**	**-0.4**
RITZ	**Rihia Road**	**1.30**	**53**	P	**Pn**	**12 42 05.1**	**+0.3**
RATZ	**Rangitukua**	**1.32**	**47**	P	**Pn**	**12 42 05.3**	**+0.3**
CAW	**Cannon Point**	**1.39**	**163**	P	**Pn**	**12 42 06.7**	**+0.9**
WATZ	**Wairara**	**1.41**	**42**	P	**Pn**	**12 42 06.2**	**+0.2**
MRW	**Makara Radio**	**1.46**	**175**	P	**Pn**	**12 42 07.4**	**+1.0**
HATZ	**Hinemaiaia**	**1.50**	**54**	P	**Pn**	**12 42 06.3**	**-0.6**
WEL	**Wellington**	**1.52**	**173**	P	**Pn**	**12 42 07.9**	**+0.8**
SNZO	**South Karori**	**1.54**	**175**	*e*Pn	**Pn**	**12 42 07.6**	**+0.3**
SNZO				*e*Sn	**Sn**	**12 42 30.1**	**+0.3**
MTW	**Mount Morrison**	**1.57**	**152**	P	**Pn**	**12 42 08.2**	**+0.6**
BKZ	**Black Stump Fm**	**1.63**	**69**	P	**Pn**	**12 42 08.1**	**-0.3**
BHW	**Baring Head**	**1.65**	**171**	P	**Pn**	**12 42 09.2**	**+0.6**
PAWZ	**Paruwai Farm**	**1.74**	**157**	P	**Pn**	**12 42 10.2**	**+0.6**
UTU	**Utuhina**	**2.05**	**40**	P	**Pn**	**12 42 13.2**	**-0.1**
TOZ	**Tahuroa Road**	**2.18**	**21**	P	**Pn**	**12 42 13.7**	**-1.1**
KARZ	**Kaharoa**	**2.20**	**38**	P	**Pn**	**12 42 14.8**	**-0.2**
URZ	**Urewera**	**2.51**	**54**	P	**Pn**	**12 42 17.5**	**-1.4**
	161nm,0.3s,baz=252,slow=8.3,SNR=816						
URZ				S	**Sn**	**12 42 46.2**	**-4.1**
	77nm,0.3s,baz=26,slow=19,SNR=10.0						
KNZ	**Kokohu**	**2.55**	**74**	P	**Pn**	**12 42 18.5**	**-0.8**
MWZ	**Matawai**	**2.74**	**59**	P	**Pn**	**12 42 20.4**	**-1.3**
KHZ	**Kahutara**	**2.75**	**196**	P	**Pn**	**12 42 22.4**	**+0.7**
WTAZ	**Waiatarua**	**2.84**	**1**	P	**Pn**	**12 42 23.0**	**0.0**
PUZ	**Puketiti**	**3.37**	**61**	P	**Pn**	**12 42 27.9**	**-1.8**
MXZ	**Matakaoa Point**	**3.69**	**54**	P	**Pn**	**12 42 32.5**	**-1.4**
WCZ	**Waipu Caves**	**3.83**	**358**	*e*P	**Pn**	**12 42 35.7**	**-0.1**
CRLZ	**Canterbury Las**	**4.06**	**200**	P	**Pn**	**12 42 37.2**	**-1.5**
WVZ	**Waitaha Valley**	**4.36**	**220**	P	**Pn**	**12 42 41.2**	**-1.5**
RPZ	**Rata Peaks**	**4.72**	**212**	P	**Pn**	**12 42 46.0**	**-1.5**
	28nm,0.3s,baz=56,slow=1.0,SNR=154						
RPZ				S	**Sn**	**12 43 37.4**	**-4.1**
	205nm,0.3s,baz=16,slow=19,SNR=36						
RPZ				LR	LR	12 44 16.7	
	comp=Z,177nm,20.4s,baz=304,slow=34						
RPZ	**Rata Peaks**	**4.72**	**212**	*e*P	**Pn**	**12 42 46.0**	**-1.5**
FOZ	**Fox Glacier**	**5.24**	**222**	*e*P	**Pn**	**12 42 51.1**	**-3.3**
ODZ	**Otahua Downs**	**6.00**	**207**	P	**Pn**	**12 43 03.1**	**-1.4**
WKZ	**Wanaka**	**6.50**	**217**	*e*P	**Pn**	**12 43 08.1**	**-3.1**
EAZ	**Earnscleugh**	**6.68**	**214**	*e*P	**Pn**	**12 43 11.0**	**-2.6**
MSZ	**Milford Sound**	**6.93**	**223**	*e*P	**Pn**	**12 43 14.8**	**-2.1**
MLZ	**Mavora Lakes**	**7.28**	**218**	*e*P	**Pn**	**12 43 20.6**	**-1.1**
ASAR	**Alice Springs**	**37.76**	**283**	P	**P**	**12 48 41.9**	**+1.6**
	0.5nm,0.3s,mb3.6,baz=120,slow=6.7,SNR=19						
WB2	**Warramunga Arr**	**39.65**	**288**	*e*P	**P**	**12 48 57.3**	**+1.2**
WRA	**Warramunga Arr**	**39.66**	**288**	P	**P**	**12 48 57.2**	**+1.0**
	1.2nm,0.4s,mb3.9,baz=125,slow=8.2,SNR=33						
FITZ	**Fitzroy Crossi**	**47.26**	**283**	*e*P	**P**	**12 49 58.4**	**+1.4**
	1.8nm,0.4s,mb4.0						
FITZ	**Fitzroy Crossi**	**47.26**	**283**	P	**P**	**12 49 58.5**	**+1.5**
	1.1nm,0.4s,mb3.8,baz=147,slow=9.6,SNR=12						
QSPA	**South Pole Qui**	**50.35**	**180**	P	**P**	**12 50 23.3**	**+3.5**
	1.1nm,0.3s,mb3.9,baz=209,slow=3.6,SNR=42						
MAW	**Mawson**	**61.34**	**204**	P	**P**	**12 51 39.2**	**+1.1**
	0.6nm,0.3s,mb3.8,baz=68,slow=5.4,SNR=6.4						
ARCES	**ARCESS Array B**	**145.99**	**341**	PKPbc	PKPbc	13 00 59.8	-0.1
	5.3nm,0.8s,baz=44,slow=3.1,SNR=9.7						
DBIC	**Dimbokro**	**147.04**	**181**	PKPbc	PKPbc	13 01 05.8	+1.3
	2.2nm,0.7s,baz=154,slow=4.9,SNR=3.7						
DBIC				pPKPbc	pPKPbc	13 01 41.2	-0.5
	2.1nm,0.7s,baz=192,slow=9.1,SNR=1.4						
TORD	**Torodi Ar. Bea**	**152.74**	**195**	PKPbc	PKPbc	13 01 18.6	+0.1
	0.5nm,0.4s,baz=160,slow=3.6,SNR=19						
TORD				PKPab	PKPab	13 01 30.3	+0.7
	0.4nm,0.5s,baz=183,slow=4.1,SNR=4.6						
TORD				pPKPbc	pPKPbc	13 01 55.1	-0.8
	0.5nm,0.5s,baz=164,slow=3.3,SNR=2.2						

*BJI **20** 12:50:47.4, 5226N×16777W, h66km, mB4.8, mb4.5, Ms3.9, Msz4.0*
*ISCJB **20** 12:50:48.7±0.8, 5256N±008×16868W±005, h42km±6km, mb4.3/36, Error ellipse: s-maj=12.9km s-min=4.2km az=165.4*
*IDC **20** 12:50:50.7±3.3, 5261N×16883W, h43km±30km, mb4.0/23, mb1 4.2/24, mb1mx4.2/29, mbtmp4.0/24, Error ellipse: s-maj=20.4km s-min=10.7km az=2.0*
*NEIC **20** 12:50:50.8±0.8, 5261N×16871W, h44km±6km, mb4.5/10, ML4.2(AEIC), Error ellipse: s-maj=11.1km s-min=4.9km az=168.0*

ISC 20 12:50:50.8±0.7, 5263N±007×16868W±005, h42km±5km, h46km±1.3km: pP-P, n85, σ0s91/91, mb4.3/36, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.36**	**343**	*e*Pn	**Pn**	**12 50 59.1**	**-0.8**
NIKO				Sn	**Sn**	**12 51 06.8**	**+0.6**
OKCE	**Okmok Cone E**	**0.86**	**21**	P	**Pn**	**12 51 06.4**	**0.0**
OKCD	**Okmok Cone D**	**0.88**	**23**	P	**Pn**	**12 51 06.6**	**0.0**
UNV	**Unalaska Valle**	**1.79**	**46**	*e*Pn	**Pn**	**12 51 18.2**	**-0.9**
UNV				S	**Sn**	**12 51 42.6**	**+2.0**
AKLV	**Akutan Long Va**	**2.24**	**46**	P	**Pn**	**12 51 25.1**	**-0.3**
AKGG	**Akutan Green G**	**2.25**	**45**	P	**Pn**	**12 51 25.5**	**0.0**
AKUT	**Akutan**	**2.31**	**48**	*e*Pn	**Pn**	**12 51 26.2**	**-0.1**
AKUT				Sn	**Sn**	**12 51 52.5**	**-0.8**
FALS	**False Pass**	**3.84**	**52**	P	**Pn**	**12 51 48.0**	**+0.6**
SPIA	**Saint Paul Isl**	**4.65**	**349**	P	**Pn**	**12 52 00.6**	**+2.1**
ADK	**Adak**	**4.97**	**265**	*e*Pn	**Pn**	**12 52 03.1**	**+0.3**
ADK				*e*Sn	**Sn**	**12 52 58.4**	**-0.7**
SDPT	**Sand Point**	**5.55**	**57**	*e*Pn	**Pn**	**12 52 11.1**	**+0.3**
SDPT				*e*Sn	**Sn**	**12 53 12.6**	**-0.7**
CHGN	**Chignik**	**7.02**	**54**	*e*P	**Pn**	**12 52 32.7**	**+1.8**
AMKA	**Amchitka**	**7.53**	**265**	*e*Pn	**Pn**	**12 52 38.1**	**+0.3**
AMKA				Sn	**Sn**	**12 54 01.5**	**-0.3**
OHAK	**Old Harbor**	**9.98**	**56**	*e*Pn	**Pn**	**12 53 10.8**	**-0.6**
OHAK				Sn	**Sn**	**12 55 00.2**	**-1.6**
KDAK	**Kodiak Island**	**10.54**	**54**	P	**Pn**	**12 53 18.1**	**-0.9**
	5.8nm,0.3s,baz=239,slow=6.8,SNR=34						
KDAK				S	**Sn**	**12 55 10.7**	**-4.8**
	0.2nm,0.3s,baz=335,slow=22,SNR=4.1						
SLKM	**Skilak Lake**	**12.84**	**45**	*e*Pn	**Pn**	**12 53 50.9**	**+0.4**
SEW	**Seward**	**12.99**	**47**	*e*Pn	**Pn**	**12 53 52.1**	**-0.4**
RC01	**Rabbit Creek A**	**13.34**	**43**	*e*Pn	**Pn**	**12 53 56.8**	**-0.5**
PPLA	**Purkeypile**	**13.49**	**34**	Pn	**Pn**	**12 54 03.7**	**+4.3**
	12nm,0.7s						
PMR	**Palmer**	**13.85**	**42**	*e*Pn	**Pn**	**12 54 04.8**	**+0.5**
	4.4nm,0.4s						
KTH	**Kantishna Hill**	**14.36**	**33**	*e*Pn	**Pn**	**12 54 13.1**	**+2.0**
	15nm,1.1s						
DIV	**Divide**	**15.07**	**47**	*e*Pn	**Pn**	**12 54 19.1**	**-1.4**
	10nm,0.7s						
RAGM	**Ragged Mountai**	**15.29**	**50**	*e*Pn	**Pn**	**12 54 22.8**	**-0.6**
RAGM				*e*Pn	**Pn**	**12 54 24.0**	**+0.6**
BMRM	**Bremner River**	**15.53**	**48**	*e*Pn	**Pn**	**12 54 24.6**	**-1.9**
COLA	**College**	**16.24**	**33**	*e*P	**Pn**	**12 54 35.5**	**-0.1**
	11nm,1.0s						
MENT	**Mentasta**	**16.72**	**42**	*e*P	**Pn**	**12 54 41.5**	**-0.1**
COLD	**Coldfoot**	**17.20**	**25**	Pn	**Pn**	**12 54 48.6**	**+1.0**
	117nm,0.9s						
DAWY	**Dawson**	**18.96**	**41**	*e*P	**Pn**	**12 55 07.8**	**-1.2**
SKAG	**Skagway**	**19.68**	**56**	*e*P	**Pn**	**12 55 16.7**	**-1.0**
	10nm,1.3s						
PETK	**Petropavlovsk-**	**20.20**	**285**	P	**P**	**12 55 20.8**	**-1.0**
	10nm,0.5s,baz=83,slow=14,SNR=80						
PETK	**Petropavlovsk-**	**20.20**	**285**	P	**P**	**12 55 20.8**	**-1.0**
DLBC	**Dease Lake**	**22.39**	**60**	P	**P**	**12 55 46.6**	**+1.5**
	baz=225,slow=1.4						
YKA	**Yellowknife Ar**	**29.75**	**49**	P	**P**	**12 56 53.2**	**+0.4**
	2.4nm,0.6s,mb4.1,baz=275,slow=8.5,SNR=5.6						
YKA	**Yellowknife Ar**	**29.75**	**49**	P	**P**	**12 56 53.2**	**+0.4**
YBH	**Yreka Blue Hor**	**32.56**	**91**	P	**P**	**12 57 19.6**	**+1.9**
	2.0nm,0.6s,mb4.2,baz=285,slow=12,SNR=3.4						
MCMT	**McKenzie Canyo**	**36.81**	**79**	*e*P	**P**	**12 57 54.6**	**+0.2**
NVAR	**Mina Array Bea**	**37.25**	**92**	P	**P**	**12 58 00.6**	**+2.4**
	1.1nm,0.9s,mb3.7,baz=298,slow=7.7,SNR=4.6						
NVAR				PcP	PcP	13 00 17.2	+0.2
	0.4nm,0.6s,baz=256,slow=2.6,SNR=3.2						
ELK	**Elko**	**37.69**	**86**	P	**P**	**12 58 02.9**	**+1.0**
	0.5nm,0.5s,mb3.5,baz=237,slow=7.6,SNR=5.0						
REDW	**Red Top Meadow**	**38.82**	**80**	*e*P	**P**	**12 58 11.4**	**0.0**
	9.2nm,1.4s,mb4.3						
REDW				*e*pP	pP	12 58 23.9	+1.0
PDAR	**Pinedale Array**	**39.94**	**80**	P	**P**	**12 58 21.1**	**+0.4**
	1.2nm,0.5s,mb3.9,baz=308,slow=3.0,SNR=

1µm,0.3s,baz=247,slow=23,SNR=28
TXAR Lajitas Array 7.28 46 Pn Pn 12 55 34.0 -0.2
0.2nm,0.3s,baz=220,slow=12,SNR=9.4
TXAR Sn Sn 12 56 57.1 -0.5
0.0nm,0.3s,baz=228,slow=24,SNR=3.0
TXAR Lg 12 57 37.5
0.1nm,0.3s,baz=233,slow=27,SNR=3.9
ANMO Albuquerque 10.88 14 Pn Pn 12 56 26.6 +3.0
baz=227,slow=19,SNR=4.9
PFO Pinyon Flat Ob 10.92 329 Pn Pn 12 56 25.6 +1.4
0.1nm,0.3s,baz=146,slow=10,SNR=4.1
NVAR Mina Array Bea 15.79 334 Pn Pn 12 57 34.6 +4.3
0.1nm,0.3s,baz=164,slow=13,SNR=18
ELK Elko 16.95 345 Pn Pn 12 57 47.0 +2.0
0.1nm,0.3s,baz=184,slow=16,SNR=4.3
PDAR Pinedale Array 18.32 0 P Pn 12 58 03.0 +1.0
0.1nm,0.3s,baz=161,slow=5.7,SNR=5.2

*IDC **20** 14:04:09.1±3.1, 378S×10033E, h0km, mb4.1/6, mb1 4.3/6, mb1mx3.9/19, mbtmp4.1/6, Error ellipse: s-maj=126.0km s-min=18.7km az=57.0*
*ISCJB **20** 14:04:12.7±1.4, 36S±02×1005E±03, h33km, mb4.1/13, Error ellipse: s-maj=57.4km s-min=10.2km az=146.0*
*NEIC **20** 14:04:15.3±1.1, 355S×10060E, h35km, mb4.2/6, Error ellipse: s-maj=45.8km s-min=8.6km az=56.0*
ISC 20 14:04:15.4±1.3, 36S±02×1006E±03, h35km, n21, σ0s84/19, mb4.1/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CMAR	**Chiang Mai Arr**	**21.93**	**356**	P		P	**14 09 06.3**	**+0.5**
	2.1nm,0.7s,mb3.7,baz=185,slow=9.1,SNR=12							
CHTO	**Chiang Mai**	**22.28**	**356**	*e*P		P	**14 09 08.6**	**-1.1**
	5.1nm,1.1s,mb3.9							
MBWA	**Marble Bar**	**25.55**	**135**	P		P	**14 09 41.9**	**+0.8**
	18nm,1.4s,mb4.4							
FITZ	**Fitzroy Crossi**	**28.47**	**122**	*e*P		P	**14 10 12.6**	**+5.2**
	18nm,4.4s							
FITZ	**Fitzroy Crossi**	**28.47**	**122**	P		P	**14 10 12.7**	**+5.2**
	1.1nm,0.7s,mb3.6,baz=325,slow=12,SNR=3.4							
WRA	**Warramunga Arr**	**36.71**	**119**	P		P	**14 11 18.7**	**-0.8**
	1.1nm,0.4s,mb4.0,baz=306,slow=8.6,SNR=26							
WRAB	**Tennant Creek**	**36.72**	**119**	*e*P		P	**14 11 19.2**	**-0.3**
WB2	**Warramunga Arr**	**36.72**	**119**	*e*P		P	**14 11 20.4**	**+0.8**
WB2	**Warramunga Arr**	**36.72**	**119**	*e*P		P	**14 11 19.6**	**+0.1**
ASAR	**Alice Springs**	**37.88**	**125**	P		P	**14 11 28.9**	**-0.4**
	1.4nm,0.4s,mb4.0,baz=303,slow=8.2,SNR=54							
SONM	**Songino Array**	**51.42**	**5**	P		P	**14 13 18.1**	**+1.2**
	3.7nm,0.8s,mb4.4,baz=188,slow=9.3,SNR=25							
TKM2	**Tokmak 2**	**51.48**	**337**	*e*P		P	**14 13 17.3**	**-0.1**
	2.3nm,0.8s,mb4.2							
ULN	**Ulaanbaatar**	**51.51**	**6**	P		P	**14 13 18.2**	**+0.7**
	2.1nm,0.8s,mb4.1							
EKS2	**Erkin-Say**	**52.01**	**335**	*e*P		P	**14 13 22.6**	**+1.3**
	4.6nm,0.9s,mb4.4							
MK31	**Makanchi Array**	**52.67**	**344**	*e*P		P	**14 13 26.2**	**0.0**
MKAR	**Makanchi Array**	**52.67**	**344**	P		P	**14 13 25.7**	**-0.5**
	1.1nm,0.3s,mb4.2,baz=144,slow=8.5,SNR=11							
MKAR	**Makanchi Array**	**52.67**	**344**	P		P	**14 13 25.7**	**-0.5**
KURK	**Kurchatov**	**57.25**	**344**	P		P	**14 13 57.2**	**-2.0**
	1.5nm,0.8s,mb4.1							
ZALV	**Zalesovo Beam**	**58.79**	**349**	P		P	**14 14 09.9**	**0.0**
	3.5nm,0.9s,mb4.4,baz=174,slow=5.8,SNR=9.7							
TXAR	**Lajitas Array**	**145.54**	**39**	PKPbc		PKPbc	14 23 51.9	+1.2
	2.6nm,0.8s,baz=303,slow=0.8,SNR=23							
TXAR	**Lajitas Array**	**145.54**	**39**	PKPbc		PKPbc	14 23 51.9	+1.2

IDC 20 14:21:11.9±1.4, 217N×12716E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.6/15, mbtmp3.6/4, Error ellipse: s-maj=138.1km s-min=20.6km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WRA	**Warramunga Arr**	**23.07**	**163**	P		P	14 26 19.0	-0.3
	0.7nm,0.4s,baz=341,slow=11,SNR=11							
WB2	**Warramunga Arr**	**23.08**	**163**	*e*P		P	14 26 19.3	0.0
ASAR	**Alice Springs**	**26.50**	**166**	P		P	14 26 51.6	+0.4
	0.2nm,0.2s,baz=353,slow=15,SNR=7.6							
SONM	**Songino Array**	**48.91**	**342**	P		P	14 29 59.0	-0.6
	0.3nm,0.5s,baz=165,slow=6.0,SNR=2.9							
MKAR	**Makanchi Array**	**59.08**	**326**	P		P	14 31 14.6	+0.6
	1.1nm,0.4s,baz=118,slow=8.0,SNR=10							

IDC 20 14:21:43.6±5.1, 1016S×11172E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.6/17, mbtmp3.7/5, ML3.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.8/22, Error ellipse: s-maj=202.3km s-min=42.8km az=45.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KAPI	**Kappang**	**9.46**	**58**	LR		LR	14 28 14.5	
	comp=Z,153nm,20.7s,baz=311,slow=41							
FITZ	**Fitzroy Crossi**	**15.63**	**122**	*e*P		Pn	14 25 28.2	+2.9
	2.0nm,0.9s							
FITZ				*e*S		Sn	14 28 05.4	-14
FITZ	**Fitzroy Crossi**	**15.63**	**122**	Pn		Pn	14 25 25.7	+0.4
	0.1nm,0.3s,baz=312,slow=11,SNR=3.2							
FITZ				Sn		Sn	14 28 07.8	-12
	0.1nm,0.3s,baz=225,slow=19,SNR=3.8							
CMAR	**Chiang Mai Arr**	**31.10**	**336**	P		P	14 28 04.5	+0.7
	1.0nm,0.6s,baz=168,slow=8.4,SNR=5.6							
SONM	**Songino Array**	**57.93**	**356**	P		P	14 31 37.6	+0.2
	0.3nm,0.6s,baz=166,slow=7.4,SNR=2.9							
MKAR	**Makanchi Array**	**62.49**	**338**	P		P	14 32 08.6	-0.2
	0.9nm,0.5s,baz=153,slow=7.4,SNR=5.2							
ZALV	**Zalesovo Beam**	**67.81**	**343**	P		P	14 32 43.0	-0.1
	0.4nm,0.4s,baz=142,slow=4.9,SNR=2.5							

*IDC **20** 14:34:52.5±0.9, 3729N×7109E, h0km, mb4.1/7, mb1 4.1/10, mb1mx3.9/24, mbtmp3.9/10, ML3.3/2, Error ellipse: s-maj=21.4km s-min=20.7km az=158.0*
*BJI **20** 14:34:53.9, 37.11N×7087E, h91km, mB5.2, mb4.6*
*MOS **20** 14:35:01.2±1.3, 3729N×7157E, h109km, mb4.1/9, Error ellipse: s-maj=14.0km s-min=7.2km az=92.4*
*ISCJB **20** 14:35:02.2±0.4, 3723N±002×7182E±005, h139km±6km, mb4.1/14, Error ellipse: s-maj=6.0km s-min=3.7km az=173.3*
*NEIC **20** 14:35:02.2±1.0, 3723N×7163E, h112km±11km, mb4.2/9, Error ellipse: s-maj=14.7km s-min=10.3km az=134.0*
*NNC **20** 14:35:11.1±4.3, 3788N×7159E, h165km±43km, mb3.2, mpv4.4, Error ellipse: s-maj=41.6km s-min=22.3km az=25.0*
ISC 20 14:35:03.2±0.3, 3722N±002×7184E±004, h132km±5km, n96, σ1s29/115, mb4.1/14, 8C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CEP	**Cherat**	**3.38**	**179**	⇓P		Pn	**14 35 56.1**	**+1.2**
CEP				S		Sn	**14 36 37.0**	**+2.1**
KBL	**Kabul**	**3.50**	**221**	*e*Pn		Pn	**14 35 53.3**	**-3.1**
KBL				*e*Sn		Sn	**14 36 36.0**	**-1.6**
CHCP	**Chirah Chowk**	**3.74**	**161**	⇓P		Pn	**14 36 02.0**	**+2.5**
KSH	**Kashi**	**3.98**	**54**	P		Pn	**14 36 05.8**	**+3.1**
KSH				S		Sn	**14 36 48.0**	**-0.8**
KSH	comp=N,948nm,0.6s			Smax				
	comp=E,997nm,0.4s			Smax				
AML	**Almayashu**	**5.11**	**16**	P		Pn	**14 36 18.5**	**+0.8**
	SNR=24							
AML	**Almayashu**	**5.11**	**16**	*e*Pn		Pn	**14 36 18.3**	**+0.6**
	comp=E,235nm,0.4s							
AML				*e*Sn		Sn	**14 37 14.8**	**-1.0**
JMU	**Jammu**	**5.14**	**150**	*e*S		Sn	**14 37 15.0**	**-1.7**
SARP	**Sargodha**	**5.33**	**172**	P		Pn	**14 36 21.6**	**+0.9**
UCH	**Uchtor**	**5.41**	**22**	P		Pn	**14 36 23.0**	**+1.2**
	SNR=15							
UCH	**Uchtor**	**5.41**	**22**	*e*Pn		Pn	**14 36 21.5**	**-0.3**
	comp=E,60nm,0.5s							
UCH				*e*Sn		Sn	**14 37 20.7**	**-2.3**
EKS2	**Erkin-Say**	**5.64**	**15**	P		Pn	**14 36 25.8**	**+1.0**
	SNR=45							
EKS2	**Erkin-Say**	**5.64**	**15**	*e*Pn		Pn	**14 36 25.3**	**+0.6**
	comp=E,32nm,0.6s							
EKS2				*e*Sn		Sn	**14 37 22.8**	**-5.6**
THN	**Thein Dam**	**5.74**	**145**	*e*P		Pn	**14 36 27.3**	**+1.1**
THN				*ex*		x	14 37 31.8	
DLH	**Dalhousie**	**5.77**	**143**	*e*P		Pn	**14 36 29.0**	**+2.4**
DLH				*ex*		x	14 37 31.0	
AAK	**Ala-Archa**	**5.78**	**20**	P		Pn	**14 36 28.2**	**+1.5**
	SNR=32							
KBK	**Karagaybulak**	**5.94**	**23**	P		Pn	**14 36 30.3**	**+1.5**
	SNR=9.6							
KK31	**Karatay Array**	**5.97**	**351**	⇑P		Pn	**14 36 28.2**	**-0.9**
	comp=E,38nm,0.3s,baz=172,slow=12,SNR=599							
KK31				⇑S		Sn	**14 37 30.1**	**-6.2**
	comp=E,35nm,0.3s,baz=168,slow=21							
KK31	**Karatay Array**	**5.97**	**351**	*i* PN		Pn	**14 36 28.2**	**-1.0**
KK31				pmax		pmax		
	comp=Z,58nm,0.2s							
CHMS	**Chumysh**	**6.19**	**20**	P		Pn	**14 36 33.3**	**+1.1**
	SNR=23							
PONG	**Pong**	**6.25**	**146**	*e*P		Pn	**14 36 35.5**	**+2.4**
PONG				*ex*		x	14 37 45.5	
USP	**Ospenovka**	**6.38**	**18**	P		Pn	**14 36 35.3**	**+0.6**
	SNR=28							
TKM2	**Tokmak 2**	**6.39**	**26**	⇓Pn		Pn	**14 36 36.0**	**+1.2**
	comp=Z,9.2nm,0.5s							
TKM2	**Tokmak 2**	**6.39**	**26**	*i* PN		Pn	**14 36 36.0**	**+1.2**
TKM2				pmax		pmax		
	comp=Z,9.0nm,0.5s							
TKM2	**Tokmak 2**	**6.39**	**26**	P		Pn	**14 36 36.2**	**+1.4**
	SNR=27							
TKM2	**Tokmak 2**	**6.39**	**26**	*e*Pn		Pn	**14 36 35.9**	**+1.1**
	comp=Z,13nm,0.6s							
BHK	**Bhakra**	**6.91**	**145**	*e*S		Sn	**14 37 53.6**	**-5.7**
SDNR	**Sundarnagar**	**7.11**	**142**	*e*P		Pn	**14 36 45.0**	**+0.4**
SDNR				*e*S		Sn	**14 38 10.0**	**+6.1**
SMLA	**Simla**	**7.51**	**142**	*i* P		Pn	**14 36 50.2**	**+0.2**
SMLA				*i* S		Sn	**14 38 08.2**	**-5.4**
KLP	**Kalpa**	**7.76**	**135**	*e*P		Pn	**14 36 54.7**	**+1.3**
KLP				*e*S		Sn	**14 38 15.1**	**-4.6**
KLP				AML		AML	14 38 31.7	
	comp=E,408nm,0.6s							
KLP				AML		AML	14 38 33.2	
	comp=N,256nm,0.5s							
DDI	**Dehra Dun**	**8.60**	**141**	*e*P		Pn	**14 37 05.0**	**+0.2**
DDI				*ex*		x	14 38 40.2	
JOSI	**Joshimath**	**9.23**	**134**	*e*P		Pn	**14 37 15.5**	**+2.3**
JOSI				*e*S		Sn	**14 38 49.7**	**-5.7**
KUDL	**Kundal**	**9.86**	**155**	*e*P		Pn	**14 37 20.1**	**-1.5**
KUDL				*e*S		Sn	**14 39 02.5**	**-7.9**
KUDL				AML		AML	14 39 11.3	
	comp=N,37nm,0.5s							
SONA	**Sohna**	**9.97**	**152**	*e*P		Pn	**14 37 21.9**	**-1.2**
SONA				*e*S		Sn	**14 39 06.9**	**-6.3**
SONA				AML		AML	14 39 10.2	
	comp=E,102nm,0.5s							
SONA				AML		AML	14 39 10.9	
	comp=N,59nm,0.4s							
PTH	**Pithoragarh**	**10.37**	**135**	*e*P		Pn	**14 37 27.9**	**-0.4**
PTH				*e*S		Sn	**14 39 16.9**	**-5.8**
MK31	**Makanchi Array**	**12.32**	**36**	*e*P		Pn	**14 37 52.2**	**-1.7**
MKAR	**Makanchi Array**	**12.32**	**36**	Pn		Pn	**14 37 54.9**	**+1.0**
	comp=N,0.2nm,0.3s,baz=222,slow=14,SNR=5.4							
DANN	**Dangsing**	**13.36**	**128**	*e*P		Pn	**14 38 06.4**	**-1.2**
	comp=N,60nm,0.3s							
DANN				*e*S		Sn	**14 40 25.2**	**-10**
KOLN	**Koldanda**	**13.67**	**130**	*e*P		Pn	**14 38 10.1**	**-1.5**
	comp=N,79nm,0.5s							
KOLN				*e*S		Sn	**14 40 33.1**	**-10**
GKN	**Gorkha**	**14.16**	**127**	*e*P		Pn	**14 38 16.4**	**-1.4**
	comp=N,139nm,0.5s							
KURBB	**Kurbatov Arra**	**14.23**	**18**	⇓Pn		Pn	**14 38 18.3**	**-0.2**
	comp=N,0.6nm,0.6s							
KURK	**Kurchatov**	**14.34**	**18**	Pn		Pn	**14 38 13.3**	**-6.6**
	comp=N,0.0nm,0.3s,baz=208,slow=12,SNR=2.9							
KURK	**Kurchatov**	**14.34**	**18**	Pn		Pn	**14 38 13.3**	**-6.6**
KKN	**Kakani**	**14.72**	**126**	*e*P		Pn	**14 38 23.5**	**-1.3**
	comp=N,48nm,0.5s							
DMN	**Daman**	**14.73**	**127**	*e*P		Pn	**14 38 23.8**	**-1.2**
	comp=N,33nm,0.3s							
AB31	**Akbulak array**	**14.81**	**328**	⇑Pn		Pn	**14 38 22.7**	**-3.0**
	comp=N,4.6nm,0.4s,baz=160,slow=10,SNR=204							
AB31				⇓Sn		Sn	**14 40 57.7**	**-12**
	comp=N,18nm,0.6s							
AB31	**Akbulak array**	**14.81**	**328**	*e*P		Pn	**14 38 22.9**	**-2.9**
AB31				pmax		pmax		
	comp=Z,9.0nm,0.4s							
PKIN	**Phulchoki**	**14.94**	**126**	*e*P		Pn	**14 38 27.3**	**-0.3**
GUN	**Gumba**	**15.03**	**124**	*e*P		Pn	**14 38 27.9**	**-0.8**
	comp=Z,170nm,0.8s							
JIRN	**Jiri**	**15.40**	**124**	*e*P		Pn	**14 38 33.0**	**-0.3**
	comp=Z,104nm,0.4s							
VOSK	**Vostochnaya**	**15.52**	**358**	⇑Pn		Pn	**14 38 33.4**	**-1.2**
	comp=Z,3.6nm,0.9s							
VOSK	**Vostochnaya**	**15.52**	**358**	P		Pn	**14 38 33.1**	**-1.5**
VOSK				pmax		pmax		
	comp=Z,4.0nm,0.9s							
BVA0	**Borovoye Array**	**15.84**	**357**	⇑Pn		Pn	**14 38 39.5**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=171,slow=11,SNR=20							
BVA0				Sn		Sn	**14 41 24.7**	**-10**
	comp=Z,0.3nm,1.0s,baz=172,slow=26,SNR=5.5							
BVA0	**Borovoye Array**	**15.84**	**357**	*i* P		Pn	**14 38 39.5**	**+0.9**
BVA0				pmax		pmax		
	comp=Z,1.0nm,0.6s							
BVAR	**Borovoye Array**	**15.84**	**357**	Pn		Pn	**14 38 37.2**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=159,slow=8.4,SNR=15							
BVAR				Sn		Sn	**14 41 24.2**	**-10**
	comp=Z,0.1nm,0.3s,baz=162,slow=24,SNR=4.6							
RAMN	**Ramite**	**16.15**	**125**	*e*P		Pn	**14 38 41.8**	**-0.8**
	comp=Z,75nm,0.4s							
AKTK	**Aktyubinsk**	**16.52**	**327**	Pn		Pn	**14 38 43.9**	**-3.0**
AKTK				Sn		Sn	**14 41 34.9**	**-16**
AKTO	**Aktyubinsk**	**16.52**	**327**	⇓Pn		Pn	**14 38 46.0**	**-0.9**
	comp=Z,2.9nm,0.8s							
AKTO				⇓Sn		Sn	**14 41 41.2**	**-9.4**
	comp=Z,2.7nm,0.8s							
AKTO	**Aktyubinsk**	**16.52**	**327**	Pn		Pn	**14 38 43.9**	**-3.0**
	comp=Z,2.1nm,0.3s,baz=143,slow=14,SNR=27							
AKTO				Sn		Sn	**14 41 34.9**	**-16**
	comp=Z,0.2nm,0.3s,baz=330,slow=16,SNR=3.0							
TAPN	**Taplejung**	**16.62**	**122**	*e*P		Pn	**14 38 48.2**	**-0.2**
	comp=Z,37nm,0.3s							
ODAN	**Odare**	**16.73**	**124**	*e*P		Pn	**14 38 49.9**	**+0.2**
	comp=Z,29nm,0.5s							
LSA	**Lhasa**	**17.76**	**109**	P		Pn	**14 39 05.6**	**+3.6**
LSA	**Lhasa**	**17.76**	**109**	P		Pn	**14 39 05.5**	**+3.5**
LSA				pmax		pmax		
	comp=Z,8.0nm,0.8s							
LSA	**Lhasa**	**17.76**	**109**	P		Pn	**14 39 05.5**	**+3.4**
	comp=Z,8.0nm,0.8s							
ZALV	**Zalesovo Beam**	**18.99**	**24**	P		P	**14 39 15.8**	**+1.7**
	comp=Z,1.0nm,0.3s,baz=211,slow=8.8,SNR=10.0							
ZALV	**Zalesovo Beam**	**18.99**	**24**	P		P	**14 39 15.8**	**+1.6**
NVS	**Novosibirsk**	**19.28**	**20**	*e*P		P	**14 39 16.2**	**-1.1**
SVE	**Sverdlovsk**	**21.00**	**343**	*e*P		P	**14 39 33.9**	**-1.9**
SVE				pmax		pmax		
	comp=Z,10.0nm,0.6s							
ARU	**Arti**	**21.19**	**339**	*c* iP		P	**14 39 38.7**	**+0.9**
ARU				*e*			14 40 10.3	
ARU				*e*S		S	**14 43 30.1**	**+4.4**
ARU				*e*SS			14 43 56.3	
ARU				pmax		pmax		
	comp=Z,9.0nm,1.2s,mb4.0							
ARU	**Arti**	**21.19**	**339**	*e*P		P	**14 39 37.8**	**0.0**
	comp=Z,5.6nm,0.8s,mb4.0							
GNI	**Garni**	**21.32**	**286**	*e*P		P	**14 39 40.8**	**+1.4**
GNI				pmax		pmax		
	comp=Z,33nm,1.3s							
GNI	**Garni**	**21.32**	**286**	*e*P		P	**14 39 40.8**	**+1.4**
	comp=Z,33nm,1.3s,mb4.5							
UMR	**Umm Al-Rimmam**	**21.50**	**256**	*e*P		P	**14 39 42.3**	**+0.8**
	baz=297							
MIB	**Mutribah**	**21.69**	**257**	*e*P		P	**14 39 43.0**	**-0.4**
	baz=298							
GTA	**Gaotai**	**22.03**	**76**	⇑*e*P		P	**14 39 52.1**	**+5.2**
GTA				AP			14 40 08.8	
GTA				XP		sP	14 40 17.8	-10
GTA				AMB		AMB		
	comp=Z,5.0nm,0.9s,mb3.9							
RST	**Umm Al-Ruwaisa**	**22.09**	**257**	*e*P		P	**14 39 43.6**	**-4.0**
	baz=297							
KRAR	**Krasnoyarsk**	**23.54**	**30**	⇑*i* P		P	**14 40 02.4**	**+1.3**
KRAR				pmax		pmax		
	comp=Z,9.0nm,0.5s,mb4.6							
MALT	**Malatya**	**26.36**	**283**	P		P	**14 40 26.8**	**0.0**
MALT				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb3.8							
MALT	**Malatya**	**26.36**	**283**	P		P	**14 40 26.8**	**0.0**
	comp=Z,2.3nm,0.9s,mb3.8							
ULN	**Ulaanbaatar**	**27.82**	**56**	P		P	**14 40 39.5**	**-0.3**
ULN				pmax		pmax		
	comp=Z,7.0nm,1.4s,mb4.2							
ULN	**Ulaanbaatar**	**27.82**	**56**	P		P	**14 40 39.5**	**-0.3**
	comp=Z,7.3nm,1.4s,mb4.2							
OBN	**Obninsk**	**29.84**	**318**	*i* P		P	**14 40 57.9**	**+0.3**
BR131	**Keskin Array S**	**29.86**	**287**	P		P	**14 40 56.7**	**-1.3**
	comp=Z,1.1nm,0.6s,mb3.8							
AKASG	**Malin Array Be**	**33.03**	**308**	P		P	**14 41 26.7**	**+1.1**
	comp=Z,0.4nm,0.4s,mb3.5,baz=74,slow=6.9,SNR=4.2							
JOF	**Joensuu**	**35.59**	**329**	*e*p		P	**14 41 48.3**	**+0.8**
	comp=Z,4.8nm,0.7s,mb4.2							
JOF	**Joensuu**	**35.59**	**329**	*e*P		P	**14 41 48.3**	**+0.8**
JOF				pmax		pmax		
	comp=Z,5.0nm,0.7s,mb4.2							
NJ2	**Nanjing**	**38.72**	**83**	*e*P		P	**14 42 14.6**	**+0.3**
NJ2				AMB		AMB		
	comp=Z,20nm,0.5s,mb5.0							
ARCES	**ARCESS Array B**	**40.74**	**337**	P		P	**14 42 32.5**	**+2.0**
	comp=Z,5.4nm,0.7s,mb4.3,baz=119,slow=9.2,SNR=23							
NB2	**NORSAR Subarra**	**44.22**	**323**	P		P	**14 42 59.7**	**+1.0**
	comp=Z,4.7nm,0.6s,mb4.3,baz=92,slow=7.9							
NOA	**NORSAR Array B**	**44.22**	**323**	P		P	**14 43 00.0**	**+1.3**
	comp=Z,4.4nm,0.6s,mb4.2,baz=94,slow=7.8,SNR=15							
ESDC	**Sonseca Array**	**57.72**	**298**	P		P	**14 44 41.2**	**+1.2**
	comp=Z,1.1nm,0.6s,mb3.9,baz=69,slow=6.9,SNR=4.8							
TOA0	**Torodi Ar. Sit**	**66.40**	**269**	*e*P		P	**14 45 38.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**66.40**	**269**	P		P	**14 45 38.2**	**0.0**
	comp=Z,1.3nm,0.6s,mb4.0,baz=41,slow=5.2,SNR=8.8							
WRA	**Warramunga Arr**	**81.80**	**123**	P		PcP	14 47 16.4	+3.6
	comp=Z,0.5nm,0.7s,baz=322,slow=4.9,SNR=7.8							
WRA	**Warramunga Arr**	**81.80**	**123**	P		PcP	14 47 16.4	+3.6
WRA				pmax		pmax		
	comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**84.12**	**125**	P		PcP	14 47 28.8	+5.8
	comp=Z,0.5nm,0.6s,baz=311,slow=5.1,SNR=9.9							
ASAR	**Alice Springs**	**84.12**	**125**	P		PcP	14 47 28.8	+5.9
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							

*IDC **20** 14:39:22.5±4.4, 331S×10059E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.6/19, mbtmp3.6/5, Error ellipse: s-maj=183.7km s-min=22.5km az=56.0*
*ISCJB **20** 14:39:24.3±3.1, 35S±05×1003E±07, h33km, mb3.8/8, Error ellipse: s-maj=116.4km s-min=15.6km az=146.7*
*NEIC **20** 14:39:27.2±2.3, 338S×10045E, h35km, mb4.0/3, Error ellipse: s-maj=90.3km s-min=13.0km az=57.0*
ISC 20 14:39:27.3±2.9, 34S±04×1005E±06, h35km, n10, σ0s72/8, mb3.8/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CHTO	**Chiang Mai**	**22.09**	**356**	P		P	**14 44 19.4**	**-0.2**
	2.7nm,1.0s,mb3.6							
MBWA	**Marble Bar**	**25.77**	**135**	P		P	**14 44 45.7**	**-9.4**
	3.3nm,0.9s,mb3.9							
WRA	**Warramunga Arr**	**36.92**	**119**	P		P	**14 46 31.7**	**-1.5**
	0.2nm,0.4s,mb3.3,baz=307,slow=8.7,SNR=7.8							
ASAR	**Alice Springs**	**38.09**	**125**	P		P	**14 46 43.5**	**+0.4**
	0.4nm,0.3s,mb3.6,baz=300,slow=8.0,SNR=8.2							
CTAO	**Charters Tower**	**47.62**	**114**	P		P	**14 48 01.4**	**+1.1**
	3.2nm,0.9s,mb4.3							
SONM	**Songino Array**	**51.26**	**5**	P		P	**14 48 27.9**	**+0.3**
	0.9nm,0.7s,mb3.8,baz=188,slow=9.4,SNR=6.5							
MKAR	**Makanchi Array**	**52.46**	**344**	P		P	**14 48 36.6**	**0.0**
	0.2nm,0.3s,mb3.5,baz=167,slow=7.1,SNR=3.5							
ZALV	**Zalesovo Beam**	**58.59**	**349**	P		P	**14 49 20.4**	**-0.1**
	0.4nm,0.4s,mb3.9,baz=134,slow=8.3,SNR=2.9							
TXAR	**Lajitas Array**	**145.49**	**39**	PKPbc		PKPbc	14 59 02.4	-0.1
	0.3nm,0.6s,baz=246,slow=2.4,SNR=5.1							
TXAR	**Lajitas Array**	**145.49**	**39**	PKPbc		PKPbc	14 59 02.4	-0.1

*NEIC **20** 14:53:18.6, 18.14N×6905W, h102km, MD3.7(RSPR), After RSPR.*
RSPR 20 14:53:18.6, 1814N×6905W, h102km±7km, MD3.6/9, MD3.6/9, 7C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
STDO	**Santo Domingo**	**0.89**	**290**	*e*S		Sn	14 53 52.0	-0.4
CRPR	**Cabo Rojo, PR**	**1.85**	**94**	⇓*e*P		Pn	14 53 49.4	+0.1
LSP	**Las Mesas**	**1.87**	**89**	⇑*e*P		Pn	14 53 49.5	0.0
LSP				*e*S		Sn	14 54 15.1	+2.0
AGPR	**Aguadilla, PR**	**1.87**	**80**	⇑*e*P		Pn	14 53 48.7	-0.8
AGPR				*e*S		Sn	14 54 13.4	+0.2
LRS	**Lares**	**2.10**	**86**	⇑*e*P		Pn	14 53 52.2	-0.3
LRS				*e*S		Sn	14 54 18.5	0.0
AOPR	**Arecibo Observ**	**2.19**	**84**	⇓*e*P		Pn	14 53 54.2	+0.5
AOPR				*e*S		Sn	14 54 21.0	+0.4
CELP	**Cerrillos**	**2.35**	**91**	⇑*e*P

comp=Z,29nm,0.3s,baz=278,slow=28,SNR=19
ULN Ulaanbaatar 6.31 94 *e*PN **Pn** 15 09 58.1 **+0.6**
ULN *e* 15 10 21.4
ULN pmax pmax
comp=Z,8.0nm,0.5s
ULN Ulaanbaatar 6.31 94 *e*Pn **Pn** 15 09 58.1 **+0.6**
comp=Z,8.5nm,0.5s
ULN *e*Pg **Pg** 15 10 21.4 **-3.9**
ULN *e*Sg **Sg** 15 11 45.3 **-1.6**
KAB Kabansk 6.62 57 *e*PN **Pg** 15 10 27.2 **-4.1**
KAB pmax pmax
comp=Z,145nm,0.4s
TRG Tyrgan 6.81 50 *e*PN **Pg** 15 10 27.8 **-7.1**
TRG pmax pmax
comp=Z,6.0nm,0.4s
ZALV Zalesovo Beam 9.59 308 Pn **Pn** 15 10 42.9 **+0.4**
comp=Z,0.2nm,0.3s,baz=116,slow=8.2,SNR=2.6
ZALV Pg Pn 15 11 17.0 +35
comp=Z,0.2nm,0.3s,baz=119,slow=15,SNR=4.8
ZALV Lg 15 13 25.6
comp=Z,0.3nm,0.3s,baz=122,slow=25,SNR=5.7
MK31 Makanchi Array 10.55 265 *e*P **Pn** 15 10 54.6 **-1.0**
MKAR Makanchi Array 10.55 265 Pn **Pn** 15 10 55.3 **-0.4**
comp=Z,0.1nm,0.3s,baz=79,slow=13,SNR=5.8
MKAR Pg Pn 15 11 40.2 +45
comp=Z,0.3nm,0.3s,baz=74,slow=18,SNR=3.8
MKAR Lg 15 13 56.0
comp=Z,0.4nm,0.3s,baz=77,slow=33,SNR=6.2
KURK Kurchatov 12.50 286 Pn **Pn** 15 11 21.9 **-0.3**
comp=Z,0.2nm,0.3s,baz=96,slow=13,SNR=8.1
KURK Lg 15 15 00.3
comp=Z,0.1nm,0.3s,baz=94,slow=35,SNR=7.2
KURK Kurchatov 12.50 286 Pn **Pn** 15 11 21.9 **-0.3**
KURK Lg 15 15 00.3
TKM2 Tokmak 2 16.43 258 P **Pn** 15 12 14.8 **-0.3**
TKM2 pmax pmax
comp=Z,2.0nm,0.9s
TKM2 Tokmak 2 16.43 258 Pn **Pn** 15 12 14.8 **-0.3**
comp=Z,2.2nm,0.9s
UCH Uchtor 17.47 257 Pn **Pn** 15 12 31.2 **+3.1**
comp=Z,2.1nm,0.8s
BVAR Borovoye Array 17.70 294 P **Pn** 15 12 30.9 **0.0**
baz=104,slow=12,SNR=3.7
ARU Arti 24.70 303 ⇑*i*P **P** 15 13 44.7 **-0.7**
ARU pmax pmax
comp=Z,9.0nm,1.7s,mb4.0
ARU MLR MLR
comp=Z,100nm,17.0s
ASAR Alice Springs 79.01 147 P **P** 15 20 31.2 **+2.8**
comp=Z,0.3nm,0.8s,mb3.3,baz=336,slow=5.1,SNR=4.1

FUNV 20 15:15:36.1, 1111N×6727W, h16km, MW3.5, 5C-4D, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUNV	**FUNVISIS**	**0.78**	**145**	⇓*i*P	Pb	15 15 51.2	-0.1
FUNV				*e*S	Sb	15 16 01.2	-0.5
TURV	**Turiamo**	**0.87**	**220**	⇑*i*P	Pb	15 15 52.2	-0.6
TURV				*e*S	Sb	15 16 03.2	-0.9
BIRV	**Birongo**	**1.17**	**123**	⇓*i*P	Pn	15 15 57.0	-0.8
BIRV				*e*S	Sb	15 16 13.4	+0.6
JACV	**Jacura**	**1.53**	**269**	⇓*e*P	Pn	15 16 02.2	-0.6
CUPV	**Cœpira**	**1.79**	**126**	*e*P	Pn	15 16 06.4	0.0
CUPV				*e*S	Sn	15 16 27.6	-1.3
MERV	**Las Mercedes**	**2.08**	**153**	⇓*e*P	Pn	15 16 10.4	0.0
MERV				*e*S	Sn	15 16 34.5	-1.5
TEPV	**Terepaima**	**2.21**	**239**	⇑*i*P	Pn	15 16 11.7	-0.4
TEPV				*e*S	Sn	15 16 37.2	-1.9
BAUV	**El Baul**	**2.29**	**200**	⇑*i*P	Pn	15 16 12.6	-0.6
BAUV				*e*S	Sn	15 16 39.9	-1.1
SIQV	**Siquisique**	**2.54**	**260**	⇑*e*P	Pn	15 16 15.9	-0.7
SIQV				*e*S	Sn	15 16 45.3	-1.9
PCRV	**Puerto La Cruz**	**2.75**	**110**	*e*P	Pn	15 16 19.0	-0.6
CURV	**Curarigua**	**2.87**	**248**	⇑*e*P	Pn	15 16 20.5	-0.6
CURV				*e*S	Sn	15 16 53.0	-2.3
DABV	**Dabajuro**	**3.31**	**267**	*e*P	Pn	15 16 26.7	-0.6
PRGV	**PARIAGUAN**	**3.48**	**132**	*e*P	Pn	15 16 28.6	-1.1
IMOV	**Isla Los Monje**	**3.77**	**290**	*e*P	Pn	15 16 32.0	-1.6
CAOV	**Caicara del Or**	**3.88**	**166**	*e*P	Pn	15 16 34.4	-0.7
ITEV	**Isla Los Testi**	**4.07**	**86**	*e*P	Pn	15 16 35.8	-1.8
GUNV	**Guanoco**	**4.36**	**102**	*e*P	Pn	15 16 40.3	-1.4
SOCV	**Socops**	**4.52**	**232**	*e*P	Pn	15 16 42.8	-1.1
VIGV	**El Vigia**	**4.62**	**241**	*e*P	Pn	15 16 43.9	-1.5
ELOV	**Elorza**	**4.63**	**208**	*e*P	Pn	15 16 44.4	-1.1
VIRV	**Villa del Rosa**	**5.08**	**264**	*e*P	Pn	15 16 50.4	-1.3
GURV	**El Guri**	**5.30**	**129**	*e*P	Pn	15 16 52.9	-1.8
LUEV	**Luepa**	**7.77**	**132**	*e*P	Pn	15 17 26.5	-2.2

*ISCJB **20** 15:28:21.4±0.6, 3899N±003×2066E±005, h0km±9km, Error ellipse: s-maj=7.1km s-min=4.5km az=174.3*
*THE **20** 15:28:21.9, 3897N×2049E, h15km, ML3.3*
*ATH **20** 15:28:22.3, 3893N×2066E, h5km, MD3.3/6*
*NEIC **20** 15:28:22.3, 3894N×2066E, h4km, MD3.3(ATH), After ATH.*
*CSEM **20** 15:28:22.2±0.1, 3898N×2065E, h12km, ML3.3, Error ellipse: s-maj=3.9km s-min=1.9km az=102.0*
ISC 20 15:28:21.9±0.5, 3898N±003×2062E±006, h15km±7km, n17, σ0s71/22, 3D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKD	**Levkas**	**0.27**	**175**	*e*Pg	**Pg**	**15 28 28.2**	**+0.6**
LKD				*e*Sg	**Sg**	**15 28 32.5**	**+1.0**
IGT	**Igoumenitsa**	**0.60**	**338**	*e*Pg	**Pg**	**15 28 32.7**	**-1.0**
IGT				*e*Sg	**Sg**	**15 28 42.2**	**+0.5**
JAN	**Janina**	**0.70**	**14**	*e*PB	**Pb**	**15 28 35.7**	**-0.2**
JAN				SB	**Sb**	**15 28 46.1**	**+0.7**
JAN	**Janina**	**0.70**	**14**	⇓Pg	**Pg**	**15 28 35.3**	**-0.3**
JAN				Sg	**Sb**	**15 28 46.1**	**+0.7**
VLS	**Valsamata**	**0.80**	**182**	*e*Pg	**Pg**	**15 28 36.8**	**-0.6**
VLS	**Valsamata**	**0.80**	**182**	*e*PB	**Pb**	**15 28 37.0**	**-0.5**
VLS	**Valsamata**	**0.80**	**182**	⇓Pb	**Pb**	**15 28 37.0**	**-0.5**
KFI	**Anninata**	**0.87**	**171**	*e*Pg	**Pg**	**15 28 38.5**	**-0.3**
EVR	**Evrytania**	**0.93**	**93**	*e*PB	**Pb**	**15 28 39.3**	**-0.4**
MEV	**Metsovon**	**0.94**	**30**	*e*Pg	**Pg**	**15 28 39.7**	**-0.3**
KEK	**Kerkira**	**0.97**	**319**	*e*PB	**Pb**	**15 28 41.7**	**+1.2**
RLS	**Riolos of Patr**	**1.13**	**144**	*e*PB	**Pb**	**15 28 42.7**	**-0.4**
THL	**Klokotos Trika**	**1.23**	**61**	*e*Pg	**Pg**	**15 28 44.6**	**-1.0**
THL	**Klokotos Trika**	**1.23**	**61**	*e*PB	**Pb**	**15 28 45.8**	**+1.0**
THL	**Klokotos Trika**	**1.23**	**61**	⇓Pb	**Pb**	**15 28 45.8**	**+1.0**
AGG	**Agios Georgios**	**1.33**	**87**	*e*Pg	**Pg**	**15 28 47.0**	**-0.5**
AGG				*e*Sg	**Sg**	**15 29 05.9**	**+1.1**
KRUS	**Krusevo**	**2.44**	**11**	*e*Pn	**Pg**	**15 29 08.0**	**-0.7**

*IDC **20** 15:34:41.5±2.8, 485N×12691E, h18km±16km, mb4.2/15, mb1 4.3/15, mb1mx4.3/19, mbtmp4.2/15, MS4.1/10, Ms1 4.1/10, ms1mx3.7/27, Error ellipse: s-maj=29.1km s-min=11.9km az=78.0*
*MOS **20** 15:34:42.3±1.4, 491N×12694E, h35km, mb4.8/31, MS4.1/9, Error ellipse: s-maj=18.7km s-min=7.9km az=109.0*
*ISCJB **20** 15:34:45.0±0.6, 486N±003×127.18E±005, h66km±6km, mb4.6/58, Error ellipse: s-maj=9.1km s-min=4.6km az=170.8*
*BJI **20** 15:34:47.0, 490N×12700E, h53km, mB5.0, mb4.8, Ms4.5, Msz4.2*
*NEIC **20** 15:34:48.6±1.3, 488N×12702E, h83km±12km, mb4.7/24, Error ellipse: s-maj=13.0km s-min=5.6km az=74.0*
*DJA **20** 15:34:53, 461N×12704E, h97km, Mw5.3/4*
ISC 20 15:34:47.1±0.6, 485N±003×12709E±006, h67km±5km, h50km±6.8km: pP-P, n139, σ1s26/139, mb4.6/58, 6C-8D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**2.24**	**338**	*e*P	**Pn**	**15 35 19.9**	**-2.1**
GSPH	**General Santos**	**2.46**	**300**	⇑*e*P	**Pn**	**15 35 20.1**	**-4.8**
DAV	**Davao City (W)**	**2.67**	**326**	Pn	**Pn**	**15 35 28.9**	**+1.1**
	73nm,0.3s,baz=225,slow=16,SNR=4.8						
DAV				Sn	**Sn**	**15 36 04.4**	**+5.4**
	71nm,0.3s,baz=287,slow=20,SNR=4.8						
DAV	**Davao City (W)**	**2.67**	**326**	Pn	**Pn**	**15 35 28.9**	**+1.1**
DAV				Sn	**Sn**	**15 36 04.4**	**+5.4**
DMPH	**Davao City--Mi**	**2.72**	**325**	⇑*i*P	**Pn**	**15 35 29.8**	**+1.2**
DMPH				*i* S	Sn	15 36 34.6	+34
BIPH	**Bislig**	**3.39**	**348**	⇓*e*P	**Pn**	**15 35 36.5**	**-1.2**
BUKP	**Musuan**	**3.62**	**326**	*e*P	**Pn**	**15 35 39.5**	**-1.3**
MNI	**Manado**	**4.06**	**214**	P	**Pn**	**15 35 45.0**	**-1.8**
	0.0nm,0.0s						
BUTP	**Butuan**	**4.34**	**341**	*e*P	**Pn**	**15 35 53.1**	**+2.4**
PAGZ	**Pagadian**	**4.74**	**309**	*e*P	**Pn**	**15 35 56.7**	**+0.7**
SCPH	**Surigao**	**5.15**	**342**	*e*P	**Pn**	**15 36 01.3**	**-0.4**
SCPH				*e*S	**Sn**	**15 37 01.9**	**+2.0**
LBMI	**Labuha**	**5.46**	**176**	P	**Pn**	**15 36 04.5**	**-1.6**
	0.0nm,0.0s						
SWI	**Sorong**	**7.04**	**144**	P	**Pn**	**15 36 23.6**	**-4.0**
	0.0nm,0.0s						
AAI	**Ambon**	**8.55**	**173**	P	**Pn**	**15 36 47.6**	**-0.7**
	0.0nm,0.0s						
MYLDM	**Lahad Datu**	**8.56**	**273**	⇓P	**Pn**	**15 36 52.9**	**+4.5**
TSM	**Tawau**	**9.20**	**267**	⇓P	**Pn**	**15 36 57.5**	**+0.3**
PCI	**Palu**	**9.22**	**232**	P	**Pn**	**15 37 00.7**	**+3.2**
	0.0nm,0.0s						
KDI	**Kendari**	**9.82**	**207**	P	**Pn**	**15 37 02.4**	**-3.2**
	0.0nm,0.0s						
SDKM	**Sandakan**	**9.88**	**275**	⇑P	**Pn**	**15 37 11.2**	**+4.7**
BBKI	**Banjar Baru**	**14.76**	**236**	P	**Pn**	**15 38 12.9**	**+0.6**
	0.0nm,0.0s						
SBUM	**Sibu**	**15.03**	**261**	⇓P	**Pn**	**15 38 20.3**	**+4.6**
BATI	**Baumata**	**15.34**	**193**	Pn	**Pn**	**15 38 21.5**	**+1.8**
	3.5nm,0.3s,baz=351,slow=6.7,SNR=6.5						
JAY	**Jayapura**	**15.45**	**118**	P	**Pn**	**15 38 16.3**	**-4.9**
	0.0nm,0.0s						
STKI	**Sintang**	**16.30**	**253**	P	**Pn**	**15 38 32.4**	**+0.5**
	0.0nm,0.0s						
KSM	**Kuching**	**17.08**	**259**	⇓P	**Pn**	**15 38 40.0**	**-1.7**
KSM	**Kuching**	**17.08**	**259**	*e*Pn	**Pn**	**15 38 42.7**	**+1.0**
PBKI	**Pangkalan Bun**	**17.13**	**244**	P	**Pn**	**15 38 43.4**	**+1.1**
	0.0nm,0.0s						
MTNI	**Mataram**	**17.26**	**219**	P	**Pn**	**15 38 43.7**	**-0.1**
	0.0nm,0.0s						
GUMO	**Guam**	**19.57**	**62**	LR	LR	15 46 12.0	
	comp=Z,338nm,18.2s,baz=241,slow=35						
SJI	**Sawahan**	**19.74**	**231**	P	**Pn**	**15 39 09.6**	**-4.1**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**22.85**	**184**	*e*P	**P**	**15 39 44.9**	**0.0**
	20nm,0.9s,mb4.4						
FITZ				*e*S	**S**	**15 43 53.6**	**+4.2**
FITZ	**Fitzroy Crossi**	**22.85**	**184**	P	**P**	**15 39 44.7**	**-0.1**
	5.4nm,0.5s,mb4.1,baz=10,slow=9.3,SNR=16						
KGM	**Kluang**	**23.89**	**264**	⇓P	**P**	**15 39 57.1**	**+2.3**
WRAB	**Tennant Creek**	**25.64**	**164**	*e*P	**P**	**15 40 10.8**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	**25.64**	**164**	*e*P	**P**	**15 40 10.8**	**+0.1**
	comp=Z,24nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**25.65**	**164**	P	**P**	**15 40 09.8**	**-0.9**
	comp=Z,11nm,0.7s,mb4.4,baz=342,slow=10.0,SNR=64						
WRA				ScP	ScP	15 47 20.4	+6.6
	comp=Z,1.5nm,0.8s,baz=342,slow=3.2,SNR=7.0						
WRA	**Warramunga Arr**	**25.65**	**164**	P	**P**	**15 40 09.8**	**-0.9**
WRA				pmax	pmax		
	comp=Z,11nm,0.7s						
WRA				pmax	pmax		
	comp=N,2.0nm,0.8s						
WB2	**Warramunga Arr**	**25.65**	**164**	*e*P	**P**	**15 40 09.9**	**-0.8**
WB2				*e*S	**S**	**15 44 39.2**	**+4.8**
CBIJ	**Chichi jima**	**26.40**	**31**	LR	LR	15 49 33.4	
	comp=N,405nm,20.7s,baz=127,slow=34						
SSE	**Sheshan**	**26.69**	**349**	*e*P	**P**	**15 40 18.4**	**-1.7**
SSE				S	**S**	**15 44 52.6**	**+1.9**
SSE				SCS	ScS	15 51 05.5	-1.9
SSE				AMB	AMB		
	comp=Z,38nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,142nm,3.5s						
SSE				LR	LR		
	comp=N,234nm,23.2s						
SSE				LR	LR		
	comp=Z,340nm,21.6s						
MBWA	**Marble Bar**	**26.83**	**195**	*e*P	**P**	**15 40 21.4**	**0.0**
	comp=Z,25nm,1.1s,mb4.7						
NJ2	**Nanjing**	**28.14**	**345**	*e*P	**P**	**15 40 33.3**	**+0.3**
NJ2				AMB	AMB		
	comp=Z,110nm,0.8s,mb5.4						
ASAR	**Alice Springs**	**29.11**	**167**	P	**P**	**15 40 41.3**	**-0.4**
	comp=Z,2.1nm,0.6s,mb4.0,baz=342,slow=6.1,SNR=50						
ASAR				PcP	PcP	15 43 49.1	+0.8
	comp=Z,0.9nm,0.6s,baz=347,slow=2.2,SNR=4.4						
ASAR				ScP	ScP	15 47 29.4	+5.1
	comp=Z,0.5nm,0.8s,baz=325,slow=1.5,SNR=4.3						
ASAR	**Alice Springs**	**29.11**	**167**	P	**P**	**15 40 41.3**	**-0.4**
ASAR						15 43 49.1	
ASAR						15 47 29.4	
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR				pmax	pmax		
	comp=N,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.63**	**299**	P	**P**	**15 40 54.2**	**-1.1**
	comp=N,1.0nm,0.6s,mb3.7,baz=105,slow=6.8,SNR=4.6						
CMAR				ScP	ScP	15 47 33.6	+4.3
	comp=N,0.3nm,0.4s,baz=108,slow=2.3,SNR=5.4						
CMAR				LR	LR	15 53 32.9	
	comp=N,266nm,19.8s,baz=223,slow=37						
CMAR	**Chiang Mai Arr**	**30.63**	**299**	P	**P**	**15 40 54.2**	**-1.1**
CMAR						15 47 33.7	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR				MLR	MLR		
	comp=Z,266nm,19.8s						
CHTO	**Chiang Mai**	**30.77**	**299**	P	**P**	**15 40 54.1**	**-2.4**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
CHTO	**Chiang Mai**	**30.77**	**299**	P	**P**	**15 40 54.1**	**-2.4**
	comp=Z,6.3nm,1.1s,mb4.3						
KMI	**Kunming**	**30.86**	**313**	P	**P**	**15 41 02.0**	**+4.8**
KMI				AP	pP	15 41 16.4	+3.0
KMI				XP	sP	15 41 23.1	+1.8
KMI				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.6						
KMI				AMB	AMB		
	comp=Z,81nm,4.2s						
KMI				LR	LR		
	comp=N,412nm,15.9s						
KMI				LR	LR		
	comp=E,336nm,20.0s						
KMI				LR	LR		
	comp=Z,424nm,20.0s						
CTAO	**Charters Tower**	**31.13**	**143**	P	**P**	**15 41 02.0**	**+2.4**
CTAO				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
CTAO	**Charters Tower**	**31.13**	**143**	P	**P**	**15 41 02.0**	**+2.4**
	comp=Z,7.9nm,1.2s,mb4.3						
KSRS	**Korea Array**	**32.46**	**1**	P	**P**	**15 41 11.3**	**+0.3**
	comp=Z,0.8nm,0.6s,mb3.6,baz=181,slow=9.2,SNR=4.0						
KSRS	**Korea Array**	**32.46**	**1**	P	**P**	**15 41 11.4**	**+0.3**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
MJAR	**Matsushiro Arr**	**33.16**	**17**	P	**P**	**15 41 15.6**	**-1.6**
	comp=Z,0.4nm,0.4s,mb3.6,baz=181,slow=7.3,SNR=3.4						
MJAR				LR	LR	15 54 45.6	
	comp=Z,271nm,19.5s,baz=195,slow=36						
XAN	**Xi'an**	**33.59**	**332**	P	**P**	**15 41 25.0**	**+4.0**
XAN				AP	pP	15 41 33.3	-4.0
XAN				AMB	AMB		
	comp=Z,25nm,1.3s,mb4.9						
XAN				AMB	AMB		
	comp=Z,56nm,4.6s						
FORT	**Forrest**	**35.44**	**179**	*e*P	**P**	**15 41 37.5**	**+0.5**
	comp=Z,29nm,0.8s,mb5.2						
HNR	**Honiara**	**35.69**	**113**	LR	LR	15 55 03.6	
	comp=Z,219nm,20.3s,baz=162,slow=34						
BJT	**Baijiatuan**	**36.37**	**346**	P	**P**	**15 41 48.6**	**+3.7**
BJT				pmax	pmax		
	comp=Z,20nm,0.6s						
BJT	**Baijiatuan**	**36.37**	**346**	P	**P**	**15 41 48.6**	**+3.8**
	comp=Z,20nm,0.6s,mb5.2						
BJI	**Beijing**	**36.39**	**346**	P	**P**	**15 41 48.8**	**+3.8**
BJI				S	**S**	**15 47 29.4**	**+7.8**
BJI				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.0						
BJI				AMB	AMB		
	comp=Z,250nm,3.8s						
BJI				LR	LR		
	comp=N,379nm,21.7s						
BJI				LR	LR		
	comp=E,229nm,25.5s						
BJI				LR	LR		
	comp=Z,283nm,21.0s						
KLBR	**Kellerberrin**	**37.31**	**193**	*e*P	**P**	**15 41 53.9**	**+1.0**
	comp=Z,19nm,1.1s,mb4.9						
LZH	**Lanzhou**	**37.73**	**329**	*e*P	**P**	**15 41 59.5**	**+3.0**
LZH				AP	pP	15 42 11.0	-2.0
LZH				XP	sP	15 42 14.4	-6.4
LZH				AMB	AMB		
	comp=Z,51nm,1.1s,mb5.3						
LZH				AMB	AMB		
	comp=Z,160nm,4.2s						
LZH				LR	LR		
	comp=E,434nm,13.2s						
LZH				LR	LR		
	comp=Z,610nm,15.5s						
MUN	**Mundaring**	**38.06**	**195**	*e*P	**P**	**15 42 00.4**	**+1.2**
NWAO	**Narrogin (SRO)**	**38.71**	**193**	P	**P**	**15 42 05.4**	**+0.7**
NWAO				pmax	pmax		
	comp=Z,17nm,1.1s						
NWAO	**Narrogin (SRO)**	**38.71**	**193**	P	**P**	**15 42 05.4**	**+0.7**
	comp=Z,17nm,1.1s,mb4.8						
STKA	**Stephens Creek**	**39.05**	**160**	*e*P	**P**	**15 42 07.4**	**-0.1**
	comp=Z,24nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**39.05**	**160**	P	**P**	**15 42 07.1**	**-0.5**
	comp=Z,12nm,0.8s,mb4.7,baz=334,slow=7.1,SNR=18						
STKA	**Stephens Creek**	**39.05**	**160**	*e*P	**P**	**15 42 05.8**	**-1.7**
	comp=Z,39nm,1.0s,mb5.2						
ASAJ	**Asahikawa**	**41.42**	**17**	P	**P**	**15 42 28.1**	**+1.0**
	comp=Z,5.6nm,0.7s,mb4.5,baz=227,slow=21,SNR=5.1						
ASAJ	**Asahikawa**	**41.42**	**17**	P	**P**	**15 42 28.1**	**+1.1**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LSA	**Lhasa**	**41.98**	**310**	P	**P**	**15 42 33.0**	**+1.2**
LSA	**Lhasa**	**41.98**	**310**	*e*P	**P**	**15 42 32.5**	**+0.7**
LSA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
LSA	**Lhasa**	**41.98**	**310**	*e*P	**P**	**15 42 32.5**	**+0.6**
	comp=Z,13nm,1.0s,mb4.6						
GTA	**Gaotai**	**42.33**	**328**	P	**P**	**15 42 36.4**	**+1.9**
GTA				AMB	AMB		
	comp=Z,4.0nm,2.0s,mb3.8						
TAPN	**Taplejung**	**43.66**	**305**	*e*P	**P**	**15 42 44.3**	**-1.1**
	comp=Z,11nm,0.4s,mb5.0						
ODAN	**Odare**	**43.72**	**304**	*e*P	**P**	**15 42 44.7**	**-1.3**
	comp=Z,30nm,0.8s,mb5.1						
RAMN	**Ramite**	**44.41**	**304**	*e*P	**P**	**15 42 50.8**	**-0.7**
GUN	**Gumba**	**45.37**	**305**	*e*P	**P**	**15 42 57.6**	**-1.5**
TOO	**Toolangi**	**45.55**	**159**	*e*P	**P**	**15 43 01.8**	**+1.5**
KKN	**Kakani**	**45.81**	**305**	*e*P	**P**	**15 43 01.5**	**-1.1**
	comp=Z,7.9nm,0.5s,mb4.7						
DMN	**Daman**	**45.89**	**304**	*e*P	**P**	**15 43 02.4**	**-0.8**
	comp=Z,25nm,1.0s,mb4.9						
ULN	**Ulaanbaatar**	**46.18**	**341**	*e*P	**P**	**15 43 04.9**	**-0.2**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	**46.18**	**341**	*e*P	**P**	**15 43 04.9**	**-0.2**
	comp=Z,8.7nm,0.9s,mb4.5						
SONM	**Songino Array**	**46.36**	**341**	P	**P**	**15 43 07.1**	**+0.6**
	comp=Z,3.2nm,0.7s,mb4.1,baz=154,slow=8.5,SNR=14						
SONM				PcP	PcP	15 44 41.2	+0.6
	comp=Z,0.9nm,0.6s,baz=162,slow=3.3,SNR=2.6						
SONM				LR	LR	16 02 35.4	
	comp=Z,250nm,21.5s,baz=156,slow=36						
SONM	**Songino Array**	**46.36**	**341**	P	**P**	**15 43 07.1**	**+0.6**
SONM						15 44 41.2	
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,250nm,21.5s						
GKN	**Gorkha**	**46.42**	**305**	*e*P	**P**	**15 43 05.8**	**-1.6**
	comp=Z,13nm,0.8s,mb4.7						
KOLN	**Koldanda**	**47.19**	**304**	*e*P	**P**	**15 43 12.4**	**-1.0**
	comp=Z,24nm,0.6s,mb5.1						
DANN	**Dangsing**	**47.27**	**305**	*e*P	**P**	**15 43 12.9**	**-1.1**
	comp=Z,33nm,0.6s,mb5.2						
ZAK	**Zakamensk**	**49.60**	**340**	*e*P	**P**	**15 43 26.4**	**-5.1**
ZAK				*e*		15 44 50.4	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
TLY	**Talaya**	**50.59**	**341**	*e*P	**P**	**15 43 39.9**	**+0.9**
TLY				*e*S	**S**	**15 50 58.9**	**+10**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
TLY				MLR	MLR		
	comp=Z,209nm,17.0s						
TLY	**Talaya**	**50.59**	**341**	P	**P**	**15 43 39.7**	**+0.7**
	comp=Z,13nm,1.0s,mb4.9						
BOD	**Bodaibo**	**53.82**	**351**	*e*P	**P**	**15 44 01.5**	**-1.3**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.4						
PETK	**Petropavlovsk-**	**54.27**	**22**	P	**P**	**15 44 07.3**	**+1.1**
	comp=Z,4.1nm,0.7s,mb4.6,baz=201,slow=3.0,SNR=11						
PETK	**Petropavlovsk-**	**54.27**	**22**	P	**P**	**15 44 07.3**	**+1.1**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
PETK	**Petropavlovsk-**	**54.27**	**22**	P	**P**	**15 44 07.3**	**+1.1**
PET	**Petropavlovsk**	**54.57**	**23**	*e*P	**P**	**15 44 15.3**	**+7.0**
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
MK31	**Makanchi Array**	**56.85**	**325**	*e*P	**P**	**15 44 23.6**	**-1.2**
MKAR	**Makanchi Array**	**56.85**	**325**	P	**P**	**15 44 24.3**	**-0.5**
	comp=Z,2.7nm,0.4s,mb4.6,baz=118,slow=8.2,SNR=24						
MKAR				LR	LR	16 08 26.6	
	comp=Z,199nm,21.3s,baz=99,slow=36						
MKAR	**Makanchi Array**	**56.85**	**325**	P	**P**	**15 44 24.3**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MKAR				MLR	MLR		
	comp=Z,199nm,21.3s						
YAK	**Yakutsk**	**57.09**	**1**	⇓*i*P	**P**	**15 44 26.0**	**-0.2**
YAK				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
TKM2	**Tokmak 2**	**59.15**	**318**	*e*P	**P**	**15 44 40.0**	**-1.0**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
TKM2	**Tokmak 2**	**59.15**	**318**	*e*P	**P**	**15 44 40.0**	**-1.0**
	comp=Z,3.5nm,0.8s,mb4.4						
UCH	**Uchtor

KIV	**Kislovodsk**	**82.63**	**314**	*e*P		**P**	**15 47 06.4**	**+3.1**
KIV				pmax		pmax		
	comp=Z,10.0nm,1.1s,mb4.6							
DIV	**Divide**	**84.41**	**29**	P		**P**	**15 47 12.2**	**+0.2**
	comp=Z,18nm,1.0s,mb4.8							
MAW	**Mawson**	**84.92**	**200**	P		**P**	**15 47 16.7**	**+2.2**
	comp=Z,2.5nm,0.9s,mb4.1,baz=9.8,slow=6.5,SNR=3.8							
MAW	**Mawson**	**84.92**	**200**	P		**P**	**15 47 16.7**	**+2.3**
MAW				pmax		pmax		
	comp=Z,3.0nm,0.9s							
MAW	**Mawson**	**84.92**	**200**	*e*P		**P**	**15 47 13.7**	**-0.8**
	comp=Z,4.9nm,1.1s,mb4.3							
SBA	**Scott Base**	**85.39**	**172**	*e*P		**P**	**15 47 10.5**	**-6.1**
SBA				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.7							
SBA	**Scott Base**	**85.39**	**172**	*e*P		**P**	**15 47 10.5**	**-6.1**
	comp=Z,7.9nm,0.8s,mb4.7							
MOS	**Moscow**	**85.72**	**325**	*e*P		**P**	**15 47 22.6**	**+3.8**
MOS				pmax		pmax		
	comp=Z,36nm,0.9s,mb5.3							
MALT	**Malatya**	**85.98**	**308**	*e*P		**P**	**15 47 18.6**	**-1.8**
MALT				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.3							
MALT	**Malatya**	**85.98**	**308**	*e*P		**P**	**15 47 18.6**	**-1.8**
	comp=Z,3.3nm,0.7s,mb4.4							
OBN	**Obninsk**	**86.36**	**325**⇑	*i*P		**P**	**15 47 23.4**	**+1.5**
OBN				*i*			15 47 36.5	
OBN				pmax		pmax		
	comp=Z,70nm,1.6s,mb5.3							
OBN				MLR		MLR		
	comp=Z,200nm,19.0s							
OBN	**Obninsk**	**86.36**	**325**	P		**P**	**15 47 22.6**	**+0.7**
	comp=Z,35nm,1.3s,mb5.1							
ANN	**Anapa**	**86.37**	**314**	*e*P		**P**	**15 47 30.6**	**+8.4**
ANN				pmax		pmax		
	comp=Z,15nm,1.0s,mb4.9							
ARCES	**ARCESS Array B**	**89.53**	**340**	P		**P**	**15 47 36.2**	**-0.6**
	comp=Z,3.1nm,0.6s,mb4.6,baz=80,slow=6.3,SNR=34							
ARCES				LR		LR	16 32 35.0	
	comp=Z,103nm,19.9s,baz=266,slow=39							
ARCES	**ARCESS Array B**	**89.53**	**340**	P		**P**	**15 47 36.2**	**-0.5**
ARCES				pmax		pmax		
	comp=Z,3.0nm,0.6s							
ARCES				MLR		MLR		
	comp=Z,103nm,19.9s							
ARCES	**ARCESS Array B**	**89.53**	**340**	P		**P**	**15 47 36.2**	**-0.6**
ARCES				LR		LR	16 32 35.0	
AKASG	**Malin Array Be**	**91.25**	**321**	P		**P**	**15 47 44.5**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.4,baz=61,slow=3.6,SNR=6.3							
AKASG	**Malin Array Be**	**91.25**	**321**	P		**P**	**15 47 44.5**	**-0.7**
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.6s							
NOA	**NORSAR Array B**	**97.95**	**334**	LR		LR	16 36 53.2	
	comp=Z,137nm,18.3s,baz=70,slow=38							
TXAR	**Lajitas Array**	**120.64**	**52**	PKP		PKPdf	15 53 34.4	+2.4
	comp=Z,0.3nm,0.8s,baz=143,slow=1.9,SNR=2.7							
TORD	**Torodi Ar. Bea**	**122.90**	**289**	PKP		PKPdf	15 53 36.7	-0.1
	comp=Z,0.6nm,0.6s,baz=48,slow=0.8,SNR=4.6							
TORD	**Torodi Ar. Bea**	**122.90**	**289**	PKP		PKPdf	15 53 36.7	-0.1
LPAZ	**La Paz**	**161.23**	**128**	PKPab		PKPab	15 55 28.5	+3.7
	comp=Z,1.4nm,0.8s,baz=0.0,slow=5.1,SNR=3.7							

*ISCJB **20** 15:54:25.9±1.2,3649N±006×2800E±006,h10km, Error ellipse: s-maj=9.4km s-min=5.0km az=32.4*
*ISK **20** 15:54:27.3,3655N×2803E,h28km,MD3.0*
*DDA **20** 15:54:27.2,3731N×2903E,h8km±3km,Md3.1,Ml3.3*
*CSEM **20** 15:54:27.3,3655N×2803E,h28km,MD3.0,After ISK*

ISC 20 15:54:28.1±1.9,3657N±009×280E±01,h33km±10km,n7, σ0§97/13,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.54**	**56**	*i* P	**Pb**	**15 54 38.5**	**-0.8**
TURN				*i* S	**Sb**	**15 54 46.3**	**-0.7**
YER	**Yerkesik**	**0.59**	**19**	*e*PG	**Pn**	**15 54 40.6**	**+0.4**
YER				*e*SG	**Sb**	**15 54 50.1**	**+1.7**
MLSB	**Milas**	**0.75**	**344**	*e*PG	**Pn**	**15 54 42.4**	**0.0**
MLSB				*e*SG	**Sn**	**15 54 53.0**	**+0.4**
BODT	**Bodrum**	**0.77**	**310**	*e*PG	**Pn**	**15 54 42.3**	**-0.2**
BODT				*e*SG	**Sn**	**15 54 53.8**	**+0.8**
AYDN	**Tasoluk**	**1.09**	**353**	*i* P	**Pn**	**15 54 46.4**	**-0.7**
AYDN				*i* S	**Sn**	**15 54 59.7**	**-1.4**
AKAS	**Kas**	**1.30**	**105**	*i* P	**Pn**	**15 54 49.2**	**-0.8**
AKAS				*i* S	**Sn**	**15 55 09.1**	**+2.8**
ELL	**Elmali**	**1.51**	**83**	*e*PN	**Pn**	**15 54 52.9**	**+0.1**

*IDC **20** 16:20:52.1±1.2,2057S×17428W,h0km,mb4.0/5, mb1 4.2/6,mb1mx4.0/18,mbtmp4.1/6,ML2.5/1,MS3.5/2, Ms1 3.5/2,ms1mx2.8/25,Error ellipse: s-maj=54.6km s-min=22.4km az=140.0*
*NEIC **20** 16:20:54.0±0.8,2049S×17439W,h10km,mb4.3/3,Error ellipse: s-maj=30.3km s-min=14.8km az=129.0*
*ISCJB **20** 16:20:54.4±0.9,2035±0.1×1744W±0.2,h33km,mb4.1/7, Error ellipse: s-maj=28.7km s-min=9.5km az=31.6*

ISC 20 16:20:56.7±0.8,204S±01×1744W±02,h35km,n16, σ1§03/13,mb4.1/7,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.89**	**22**	Pn	**Pn**	**16 22 36.1**	**+0.9**
	5.1nm,0.3s,baz=135,slow=10.0,SNR=7.1						
AFI				Sn	**Sn**	**16 23 50.5**	**-1.9**
	1.6nm,0.3s,baz=230,slow=19,SNR=2.1						
AFI	**Afiamalu**	**6.89**	**22**	*e*Pn	**Pn**	**16 22 35.1**	**-0.1**
AFI				Sn	**Sn**	**16 23 50.5**	**-1.9**
AFI				*e*Sn	**Sn**	**16 23 53.3**	**+0.9**
RAR	**Rarotonga**	**13.69**	**96**	LR	LR	16 28 11.9	
	comp=Z,195nm,19.0s,baz=157,slow=32						
PPT	**Papeete**	**23.61**	**87**	LR	LR	16 33 40.3	
	comp=Z,128nm,20.0s,baz=240,slow=33						
CTAO	**Charters Tower**	**36.88**	**263**	P	**P**	**16 28 01.0**	**-1.1**
	11nm,1.4s,mb4.5						
STKA	**Stephens Creek**	**40.91**	**245**	P	**P**	**16 28 36.0**	**+0.3**
	2.4nm,0.9s,mb3.8,baz=86,slow=9.5,SNR=5.3						
STKA	**Stephens Creek**	**40.91**	**245**	*e*P	**P**	**16 28 34.3**	**-1.4**
	2.4nm,0.7s,mb3.9						
ASAR	**Alice Springs**	**47.85**	**256**	P	**P**	**16 29 32.2**	**+0.9**
	2.5nm,0.9s,mb4.2,baz=86,slow=8.7,SNR=22						
WRA	**Warramunga Arr**	**47.98**	**261**	P	**P**	**16 29 33.2**	**+0.8**
	1.2nm,0.7s,mb4.0,baz=98,slow=6.8,SNR=15						
SBA	**Scott Base**	**58.25**	**185**	*e*P	**P**	**16 30 46.0**	**-1.1**
	2.5nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	**78.63**	**42**	P	**P**	**16 32 56.4**	**+1.4**
	0.9nm,0.6s,mb3.9,baz=226,slow=8.3,SNR=7.6						
MAW	**Mawson**	**82.81**	**199**	P	**P**	**16 33 17.0**	**+0.1**
	1.0nm,0.8s,mb3.9,baz=128,slow=10,SNR=6.1						
AKASG	**Malin Array Be**	**144.47**	**334**	PKP	PKPdf	16 40 29.8	+0.7
	2.8nm,0.5s,baz=37,slow=4.1,SNR=12						
MALT	**Malatya**	**146.51**	**309**	*e*PKPbc	PKPbc	16 40 35.9	+1.4
KHC	**Kasperske Hory**	**150.60**	**349**	*e*PKPab	PKPbc	16 40 47.5	+2.8
GERES	**GERESS Array B**	**150.86**	**349**	PKPbc	PKPbc	16 40 48.4	+3.0
	0.6nm,0.6s,baz=46,slow=3.9,SNR=5.2						

*CSEM **20** 16:23:32.6±0.1,3944N×4000E,h5km,MD3.1,Error ellipse: s-maj=3.0km s-min=2.0km az=113.0*
*ISCJB **20** 16:23:34.0±0.5,3946N±004×3996E±005,h10km,Error ellipse: s-maj=6.4km s-min=4.0km az=136.9*
*ISK **20** 16:23:33.2,3946N×3997E,h5km,MD3.0*
*DDA **20** 16:23:33.4,3943N×3996E,h8km±4km,Md3.1*

ISC 20 16:23:34.0±0.6,3944N±004×3998E±005,h8km±7km,n12, σ1§02/19,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.70**	**35**	*i* P	**Pg**	**16 23 45.7**	**-1.8**
KOPT				*i* S	**Sg**	**16 23 58.7**	**+2.1**
PTK	**Pertek**	**0.71**	**220**	*e*PG	**Pg**	**16 23 47.9**	**+0.1**
PTK				*e*SG	**Sg**	**16 23 57.9**	**+0.9**
BNGL	**BINGOL**	**1.03**	**118**	*i* P	**Pg**	**16 23 53.0**	**-0.9**
BNGL				*i* S	**Sg**	**16 24 07.4**	**+0.2**
GUMT	**Gumushane**	**1.09**	**339**	*e*PG	**Pg**	**16 23 54.1**	**-0.8**
EZM	**Erzurum**	**1.16**	**66**	*e*PN	**Pn**	**16 23 55.8**	**-0.8**
ERZM	**Erzurum**	**1.17**	**66**	*i* P	**Pg**	**16 23 55.8**	**-0.6**
ERZM				*i* S	**Sg**	**16 24 13.5**	**+2.0**
SVRC	**Sivrice-ELAZID**	**1.19**	**206**	*e*PN	**Pn**	**16 23 56.7**	**-0.3**
ELZG	**Elazig**	**1.22**	**220**	*i* P	**Pg**	**16 23 56.2**	**-1.3**
ELZG				*i* S	**Sg**	**16 24 13.8**	**+0.5**
ESPY	**Espiye-Giresun**	**1.76**	**327**	*e*PN	**Pn**	**16 24 04.7**	**-0.1**
AKCD	**Akcadag**	**1.97**	**235**	*i* P	**Pn**	**16 24 08.8**	**+1.0**
AKCD				*i* S	**Sn**	**16 24 36.9**	**+4.2**
MARD	**Mardin**	**2.22**	**163**	*i* P	**Pn**	**16 24 10.7**	**-0.4**
MARD				*i* S	**Sn**	**16 24 43.3**	**+4.6**
SVSK	**Karacayir**	**2.35**	**283**	*e*PN	**Pn**	**16 24 13.4**	**+0.5**

*DDA **20** 16:56:01.2,3562N×2878E,h20km±2km,Md3.7,Ml3.8*
*ATH **20** 16:56:01.6,3591N×2934E,h20km±3km,MD4.1/11*
*HLW **20** 16:56:01.3,3639N×2877E,h22km,Mb3.7*
*ISK **20** 16:56:03.9,3578N×2882E,h11km,ML3.9*
*NIC **20** 16:56:05.4±0.3,3612N×2874E,h25km,mb4.0,ML3.6, MW3.4*
*CSEM **20** 16:56:06.7±0.0,3583N×2893E,h49km,mb4.0/4,Mw3.4, Error ellipse: s-maj=1.5km s-min=1.0km az=54.0*
*ISCJB **20** 16:56:07.0±0.2,3580N±002×2896E±002,h60km±3km, mb3.9/14,Error ellipse: s-maj=3.2km s-min=1.9km az=44.6*
*GII **20** 16:56:08.1±0.6,3588N×2898E,h32km,mb4.1/4,ML3.9/4*
*IDC **20** 16:56:08.4±3.5,3595N×2901E,h33km±31km,mb3.6/8, mb1 3.9/15,mb1mx3.8/28,mbtmp3.7/15,ML3.8/7,MS3.0/5, Ms1 3.0/5,ms1mx2.7/33,Error ellipse: s-maj=18.3km s-min=13.6km az=15.0*
*MOS **20** 16:56:08.0±1.3,3599N×2893E,h54km,mb4.2/8,Error ellipse: s-maj=8.3km s-min=6.0km az=134.4*
*NEIC **20** 16:56:09.1±0.4,3596N×2895E,h49km±5km,mb4.1/15, MD4.1(ATH),Error ellipse: s-maj=6.7km s-min=4.5km az=185.0*

ISC 20 16:56:08.7±0.2,3585N±002×2895E±002,h52km±4km, n207,σ1§05/242,mb3.9/14,MS3.0/2,8C,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.66**	**54**	*i* P	**Pn**	**16 56 18.1**	**-3.9**
AKAS				*i* S	**Sn**	**16 56 32.3**	**+0.7**
ARG	**Arkhangelos**	**0.76**	**299**	*e*PN	**Pn**	**16 56 21.3**	**-2.0**
ARG				SN	**Sn**	**16 56 35.7**	**+1.8**
TURN	**Turunc**	**1.06**	**345**	*i* P	**Pn**	**16 56 25.1**	**-2.1**
TURN				*i* S	**Sn**	**16 56 42.5**	**+1.5**
ELL	**Elmali**	**1.19**	**41**	*e*PN	**Pn**	**16 56 29.0**	**0.0**
ELL				*e*SN	**Sn**	**16 56 46.7**	**+2.6**
YER	**Yerkesik**	**1.39**	**338**	*e*PN	**Pn**	**16 56 30.3**	**-1.5**
YER				*e*SN	**Sn**	**16 56 49.7**	**+0.7**
GOLH	**Golhisar**	**1.47**	**20**	*i* P	**Pn**	**16 56 32.5**	**-0.4**
GOLH				*i* S	**Sn**	**16 56 55.1**	**+4.2**
KARP	**Karpathos**	**1.48**	**259**	*e*PN	**Pn**	**16 56 33.4**	**+0.4**
NISR	**Nisiros**	**1.65**	**298**	*e*PN	**Pn**	**16 56 35.5**	**+0.2**
BDRM	**Kayabasi**	**1.71**	**316**	*i* P	**Pn**	**16 56 34.9**	**-1.2**
BDRM				*i* S	**Sn**	**16 57 00.7**	**+3.8**
MLSB	**Milas**	**1.72**	**327**	*e*PN	**Pn**	**16 56 34.7**	**-1.5**
ANTB	**Antalya**	**1.73**	**52**	*e*PN	**Pn**	**16 56 36.7**	**+0.3**
BODT	**Bodrum**	**1.79**	**313**	*e*PN	**Pn**	**16 56 35.2**	**-1.9**
DNZL	**Cakiroluk**	**1.84**	**3**	*i* P	**Pn**	**16 56 37.1**	**-0.7**
DNZL				*i* S	**Sn**	**16 57 02.7**	**+2.8**
AYDN	**Tasoluk**	**2.00**	**335**	*i* P	**Pn**	**16 56 39.4**	**-0.7**
AYDN				*i* S	**Sn**	**16 57 05.4**	**+1.5**
BCK	**Bucak**	**2.08**	**39**	*e*PN	**Pn**	**16 56 41.3**	**+0.2**
GCAM	**G?zelcaml?**	**2.30**	**324**	*i* P	**Pn**	**16 56 43.5**	**-0.6**
GCAM				*i* S	**Sn**	**16 57 10.5**	**-0.8**
ZKR	**Zakros**	**2.34**	**253**	*e*P	**Pn**	**16 56 46.1**	**+1.4**
ISP	**Isparta**	**2.35**	**32**	*e*PN	**Pn**	**16 56 44.8**	**0.0**
ISP	**Isparta**	**2.35**	**32**	*e*P	**Pn**	**16 56 44.5**	**-0.4**
ISP	**Isparta**	**2.35**	**32**	*e*Pn	**Pn**	**16 56 44.2**	**-0.6**
ISP				P		16 56 44.5	
TKTP	**Tekketepe**	**2.45**	**26**	*i* P	**Pn**	**16 56 45.7**	**-0.4**
TKTP				*i* S	**Sn**	**16 57 18.6**	**+3.7**
SMG	**Samos**	**2.51**	**318**	*e*PN	**Pn**	**16 56 45.8**	**-1.2**
KHL	**Karahalli**	**2.51**	**10**	*e*PN	**Pn**	**16 56 46.8**	**-0.3**
KULA	**Kula-Manisa**	**2.67**	**355**	*e*PN	**Pn**	**16 56 49.1**	**-0.1**
NPS	**Neapolis**	**2.78**	**259**	*e*PN	**Pn**	**16 56 51.8**	**+1.1**
NPS	**Neapolis**	**2.78**	**259**	Pn	**Pn**	**16 56 52.8**	**+2.1**
SANT	**Santorini**	**2.87**	**281**	*e*P	**Pn**	**16 56 51.8**	**-0.2**
SANT	**Santorini**	**2.87**	**281**	*e*Pn	**Pn**	**16 56 51.5**	**-0.4**
SANT	**Santorini**	**2.87**	**281**	P	**Pn**	**16 56 51.8**	**-0.1**
SANT	**Santorini**	**2.87**	**281**	*e*Pn	**Pn**	**16 56 51.5**	**-0.5**
SANT				P		16 56 51.8	
SANT				*e*Pg	**Pn**	**16 57 00.0**	**+8.1**
THR1	**Thera Island**	**2.87**	**281**	*e*P	**Pn**	**16 56 52.1**	**+0.1**
IZM	**Izmir**	**2.88**	**333**	*e*PN	**Pn**	**16 56 51.3**	**-0.8**
KDAG	**Bornova**	**2.88**	**333**	*i* P	**Pn**	**16 56 51.1**	**-1.0**
KDAG				*i* S	**Sn**	**16 57 31.6**	**+6.1**
AKMC	**Akamas**	**2.88**	**106**	P	**Pn**	**16 56 51.8**	**-0.3**
LAST	**Lasithi**	**2.91**	**257**	*e*P	**Pn**	**16 56 53.8**	**+1.3**
THR6	**Thira Island,**	**2.92**	**281**	*e*P	**Pn**	**16 56 53.2**	**+0.6**
THR3	**Thira Island,**	**2.92**	**282**	*e*P	**Pn**	**16 56 52.7**	**+0.1**
PPCY	**Paphos**	**2.94**	**108**	P	**Pn**	**16 56 52.8**	**-0.1**
BLCB	**Balcova**	**2.95**	**330**	*e*PN	**Pn**	**16 56 51.8**	**-1.3**
THR5	**Thira Island,**	**2.97**	**282**	*e*P	**Pn**	**16 56 53.2**	**0.0**
SHUT	**Suhut-Afyon**	**2.99**	**25**	*e*PN	**Pn**	**16 56 54.1**	**+0.5**
APE	**Apeiranthos**	**3.01**	**295**	*e*PN	**Pn**	**16 56 54.5**	**+0.7**
ALFC	**Alevga**	**3.06**	**102**	P	**Pn**	**16 56 54.0**	**-0.6**
	4.9nm,0.6s						
ALFC				S	**Sn**	**16 57 31.8**	**+1.9**
HDMB	**Hadim**	**3.07**	**68**	*e*PN	**Pn**	**16 56 55.6**	**+1.0**
URLA	**Izmir**	**3.13**	**324**	*i* P	**Pn**	**16 56 55.2**	**-0.3**
URLA				*i* S	**Sn**	**16 57 50.1**	**+18**
AKS	**Akhisar**	**3.16**	**344**	*e*PN	**Pn**	**16 56 56.1**	**+0.3**
ERMK	**Ermenek**	**3.30**	**75**	*i* P	**Pn**	**16 56 59.9**	**+2.0**
ERMK				*i* S	**Sn**	**16 57 39.9**	**+4.0**
ALT	**Altintas**	**3.33**	**16**	*e*PN	**Pn**	**16 56 59.2**	**+0.9**
IDI	**Anoyia**	**3.35**	**262**	Pn	**Pn**	**16 56 59.5**	**+0.9**
	23nm,0.3s,baz=61,slow=13,SNR=93						
CHOS	**Chios island**	**3.43**	**319**	*e*P	**Pn**	**16 56 59.1**	**-0.5**
KONT	**Konya--Tatoy**	**3.45**	**52**	*e*PN	**Pn**	**16 57 00.9**	**+1.0**
MAMC	**Mammari**	**3.55**	**100**	P	**Pn**	**16 57 00.9**	**-0.4**
LADK	**Ladik-KONYA**	**3.60**	**48**	*e*PN	**Pn**	**16 57 03.0**	**+0.9**
KDHN	**Kadinhani**	**3.68**	**43**	*i* P	**Pn**	**16 57 02.7**	**-0.3**
KDHN				*i* S	**Sn**	**16 57 44.1**	**-1.0**
CSS	**Prodhromos**	**3.69**	**103**	P	**Pn**	**16 57 03.1**	**-0.1**
	1.2nm,0.4s						
CSS				S	**Sn**	**16 57 48.6**	**+3.2**
CSS	**Prodhromos**	**3.69**	**103**	*e*Pn	**Pn**	**16 57 02.8**	**-0.4**
CSS				S	**Sn**	**16 57 48.6**	**+3.2**
CSS	**Prodhromos**	**3.69**	**103**	*e*Pn	**Pn**	**16 57 02.8**	**-0.3**
DST	**Dursunbey**	**3.76**	**356**	*e*PN	**Pn**	**16 57 04.2**	**+0.1**
KIZT	**Kizilcal**	**3.82**	**37**	*e*PN	**Pn**	**16 57 04.9**	**-0.2**
BALB	**Balikesir**	**3.88**	**348**	*e*PN	**Pn**	**16 57 06.2**	**+0.5**
VAM	**Vamos**	**3.89**	**265**	*e*PN	**Pn**	**16 57 08.0**	**+2.1**
VAM	**Vamos**	**3.89**	**265**	⇑Pn	**Pn**	**16 57 09.0**	**+3.1**
PRK	**Paraskevi**	**4.00**	**329**	*e*P	**Pn**	**16 57 06.8**	**-0.7**
PRK	**Paraskevi**	**4.00**	**329**	*e*PN	**Pn**	**16 57 06.6**	**-0.8**
PHNC	**Paralimni**	**4.24**	**100**	P	**Pn**	**16 57 12.7**	**+2.0**
PHNC				S	**Sn**	**16 58 08.6**	**+10**
MEST	**Erdemli**	**4.27**	**79**	*i* S	**Sn**	**16 57 51.1**	**-8.6**
EZN	**Ezine**	**4.48**	**333**	*e*PN	**Pn**	**16 57 13.9**	**-0.1**
GEMT	**Gemlik**	**4.58**	**2**	*e*PN	**Pn**	**16 57 16.4**	**+1.0**
KYTH	**Kithira**	**4.81**	**277**	*e*PN	**Pn**	**16 57 20.5**	**+2.0**
KYTH	**Kithira**	**4.81**	**277**	*e*Pn	**Pn**	**16 57 19.5**	**+1.0**
GULE	**Gulek**	**4.91**	**71**	*i* S	**Sn**	**16 58 06.6**	**-8.8**
VLI	**Veliai**	**4.93**	**282**	*e*PN	**Pn**	**16 57 22.5**	**+2.3**
HMAT	**Matruh**	**4.99**	**199**	⇑P	**Pn**	**16 57 20.7**	**-0.3**
HMAT				S	**Sn**	**16 58 20.1**	**+2.7**
LIA	**Limnos Island**	**5.02**	**325**	*e*PN	**Pn**	**16 57 21.4**	**0.0**
ANTO	**Ankara**	**5.04**	**36**	*e*Pn	**Pn**	**16 57 23.2**	**+1.6**
ANTO	**Ankara**	**5.04**	**36**	*e*Pn	**Pn**	**16 57 23.2**	**+1.5**
SLUM		**5.34**	**217**	P	**Pn**	**16 57 24.2**	**-1.7**
SLUM				S	**Sn**	**16 58 25.1**	**-1.0**
HNTI	**Hanita**	**5.84**	**116**	Sn	**Sn**	**16 58 37.1**	**-1.1**
BHL	**Bhannes**	**5.84**	**107**	*e*Pn	**Pn**	**16 57 31.7**	**-1.0**
OFRI	**'Ofer**	**5.95**	**121**	Pn	**Pn**	**16 57 32.5**	**-1.7**
HWQ	**Hawqa**	**5.95**	**103**	*e*Pn	**Pn**	**16 57 33.6**	**-0.6**
MMA0B	**Mount Meron ar**	**6.04**	**116**	Pn	**Pn**	**16 57 34.4**	**-1.0**
MMA0B				Sn	**Sn**	**16 58 42.8**	**-0.4**
MMAI	**Mount Meron Ar**	**6.04**	**116**	Pn	**Pn**	**16 57 34.7**	**-0.7**
	12nm,0.3s,baz=316,slow=12,SNR=32						
MMAI				Sn	**Sn**	**16 58 42.4**	**-0.8**
	4.6nm,0.3s,baz=302,slow=25,SNR=3.6						
HRSH	**Kfar Ka'horesh**	**6.11**	**119**	⇑P	**Pn**	**16 57 38.6**	**+2.2**
RCY	**Rachaya**	**6.14**	**111**	*e*Pn	**Pn**	**16 57 36.0**	**-0.8**
KSDI	**Kefar Szold**	**6.14**	**114**	Pn	**Pn**	**16 57 36.3**	**-0.5**
KSDI				Sn	**Sn**	**16 58 44.5**	**-1.2**
SLTI	**Sal'it**	**6.21**	**124**	Pn	**Pn**	**16 57 36.6**	**-1.1**
SLTI				Sn	**Sn**	**16 58 47.4**	**+0.1**
AMAG	**Maghara**	**6.30**	**144**	P	**Pn**	**16 57 39.1**	**+0.1**
RSH		**6.30**	**139**	P	**Pn**	**16 57 38.6**	**-0.4**
KSHT	**Keshet**	**6.35**	**115**	Pn	**Pn**	**16 57 39.9**	**+0.1**
HNAT	**Natroun**	**6.36**	**167**	⇑P	**Pn**	**16 57 40.4**	**+0.6**
MMLI	**Mount Malkishu**	**6.36**	**121**	Pn	**Pn**	**16 57 38.9**	**-0.9**
MMLI				Sn	**Sn**	**16 58 50.2**	**-0.8**
KOT	**Kottamia**	**6.38**	**157**	P	**Pn**	**16 57 40.6**	**+0.5**
FYM	**Al Fayyum**	**6.39**	**163**	P	**Pn**	**16 57 40.7**	**+0.5**
HHAG	**Hagoal**	**6.45**	**155**	P	**Pn**	**16 57 42.1**	**+1.0**
HMDT	**Nahal Hemdat**	**6.53**	**121**	Pn	**Pn**	**16 57 42.1**	**-0.1**
HMDT				Sn	**Sn**	**16 58 54.2**	**-1.1**
HSAF	**As Saff**	**6.59**	**160**	P	**Pn**	**16 57 43.6**	**+0.6**
GLL	**Jalalah**	**6.67**	**159**	⇑P	**Pn**	**16 57 44.1**	**0.0**
KZIT	**Kziot**	**6.71**	**136**	Pn	**Pn**	**16 57 44.8**	**+0.1**
KZIT				Sn	**Sn**	**16 58 59.0**	**-0.8**
RTMI	**Retamim**	**6.78**	**133**	Pn	**Pn**	**16 57 44.7**	**-0.8**
NVR	**Nevrokopi**	**6.78**	**326**	P	**Pn**	**16 57 47.1**	**+1.6**
YTIR	**Yattir**	**6.82**	**129**	Pn	**Pn**	**16 57 45.1**	**-1.0**
SUZ		**6.83**	**150**	P	**Pn**	**16 57 46.6**	**+0.4**
DSI	**Dead Sea**	**6.85**	**127**	Pn	**Pn**	**16 57 46.0**	**-0.6**
MZDA	**Masada**	**7.01**	**128**	Pn	**Pn**	**16 57 48.2**	**-0.6**
MZDA				Sn	**Sn**	**16 59 06.5**	**-0.6**
ZAF		**7.22**	**154**	P	**Pn**	**16 57 52.0**	**+0.4**
ZNM		**7.25**	**152**	⇑P	**Pn**	**16 57 52.8**	**+0.7**
HNKL	**Nakhl**	**7.26**	**143**	⇑P	**Pn**	**16 57 52.3**	**+0.1**
HNKL				S	**Sn**	**16 59 14.3**	**+1.1**
ZFRI	**Zfri**	**7.43**	**134**	Pn	**Pn**	**16 57 53.7**	**-0.7**
PRNI	**Paran**	**7.47**	**135**	Pn	**Pn**	**16 57 54.6**	**-0.5**
PRNI				Sn	**Sn**	**16 59 18.9**	**+0.4**
AWBH		**7.51**	**180**	P	**Pn**	**16 57 55.3**	**-0.2**
ASF	**Jabal al Asfar**	**7.55**	**117**	Pn	**Pn**	**16 57 56.8**	**+0.6**
	1.0nm,0.3s,baz=193,slow=14,SNR=9.6						
ASF				Sn	**Sn**	**16 59 23.3**	**+3.0**
	baz=125,slow=20,SNR=1.7						
ASF				LR	LR	17 01 53.6	
	comp=Z,82nm,19.2s,baz=57,slow=46						
ASF	**Jabal al Asfar**	**7.55**	**117**	P	**Pn**	**16 57 56.8**	**+0.7**
ASF				S	**Sn**	**16 59 23.3**	**+2.9**
HRFI	**Mount Harif**	**7.73**	**137**	Pn	**Pn**	**16 57 57.9**	**-0.7**
MBRI	**Mt Berech**	**7.85**	**139**	Pn	**Pn**	**16 57 59.6**	**-0.7**
MBRI				Sn	**Sn**	**16 59 28.6**	**+0.9**
MALT	**Malatya**	**7.97**	**69**	*e*P	**Pn**	**16 58 02.4**	**+0.6**
MALT				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MALT	**Malatya**	**7.97**	**69**	*e*P	**Pn**	**16 58 02.4**	**+0.6**
	comp=Z,2.0nm,0.5s						
MALT	**Malatya**	**7.97**	**69**	*e*Pn	**Pn**	**16 58 02.4**	**+0.6**
	comp=Z,2.1nm,0.5s						
EIL	**Elat**	**7.97**	**139**	Pn	**Pn**	**16 58 02.6**	**+0.7**
	comp=Z,2.5nm,0.3s,baz=312,slow=14,SNR=8.8						
EIL				Sn	**Sn**	**16 59 31.0**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=18,slow=19,SNR=3.2						
EIL				LR	LR	17 02 22.4	
	comp=Z,46nm,18.2s,baz=329,slow=47						
EIL	**Elat**	**7.97**	**139**	Pn	**Pn**	**16 58 02.6**	**+0.7**
EIL				Sn	**Sn**	**16 59 31.0**	**+0.4**
EIL				LR	LR	17 02 22.4	
KEK	**Kerkira**	**8.20**	**301**	P	**Pn**	**16 58 10.0**	**+5.0**
HBST	**Basata**	**8.22**	**142**	P	**Pn**	**16 58 05.3**	**0.0**
HBST	**Basata**	**8.

comp=Z,7.6nm,0.8s,mb4.2

BGF	**Bois d'Agland**	**22.26**	**307**	*eP*		**P**	**17 01 00.2**	**-0.9**
	comp=Z,16nm,0.9s,mb4.2							
BGF	**Bois d'Agland**	**22.26**	**307**	*eP*		**P**	**17 01 00.2**	**-0.9**
BGF				pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.2							
BGF	**Bois d'Agland**	**22.26**	**307**	*eP*		**P**	**17 01 00.2**	**-0.9**
	comp=Z,8.8nm,0.9s,mb4.2							
TCF	**Toulx Ste Croi**	**22.59**	**306**	*eP*		**P**	**17 01 03.5**	**-1.1**
	comp=Z,5.4nm,0.7s,mb3.8							
TCF	**Toulx Ste Croi**	**22.59**	**306**	*eP*		**P**	**17 01 03.5**	**-1.1**
TCF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb3.8							
TCF	**Toulx Ste Croi**	**22.59**	**306**	*eP*		**P**	**17 01 03.5**	**-1.1**
	comp=Z,2.7nm,0.7s,mb3.8							
TAM	**Tamanrasset**	**24.14**	**244**	*eP*		**P**	**17 01 23.0**	**+3.2**
AKTK	**Aktyubinsk**	**25.53**	**46**	P		**P**	**17 01 32.0**	**-0.2**
AKTO	**Aktyubinsk**	**25.53**	**46**	P		**P**	**17 01 32.0**	**-0.2**
	comp=Z,0.6nm,0.4s,mb3.5,baz=282,slow=11,SNR=3.3							
ESDC	**Sonseca Array**	**26.21**	**288**	P		**P**	**17 01 39.4**	**+1.0**
	comp=Z,1.7nm,0.5s,mb3.8,baz=83,slow=9.9,SNR=7.5							
NOA	**NORSAR Array B**	**27.63**	**341**	LR		LR	17 13 40.5	
	comp=Z,25nm,18.2s,MS2.8,baz=130,slow=38							
SFS	**San Fernando**	**28.30**	**282**	P		**P**	**17 01 55.7**	**-1.5**
	comp=Z,400nm,1.0s							
SFS	**San Fernando**	**28.30**	**282**	P		**P**	**17 01 55.7**	**-1.5**
	comp=Z,400nm,1.0s							
TOA0	**Torodi Ar. Sit**	**33.35**	**234**	*eP*		**P**	**17 02 44.0**	**+2.1**
TOA0	**Torodi Ar. Sit**	**33.35**	**234**	*eP*		**P**	**17 02 44.0**	**+2.1**
TORD	**Torodi Ar. Bea**	**33.35**	**234**	P		**P**	**17 02 44.4**	**+2.5**
	comp=Z,1.6nm,0.6s,mb4.2,baz=36,slow=9.0,SNR=16							
TORD				LR		LR	17 19 58.6	
	comp=Z,39nm,18.7s,MS3.1,baz=210,slow=43							
ARCES	**ARCESS Array B**	**33.80**	**358**	P		**P**	**17 02 45.7**	**+0.5**
	comp=Z,2.6nm,0.9s,mb4.1,baz=168,slow=7.3,SNR=10							
ARCES	**ARCESS Array B**	**33.80**	**358**	P		**P**	**17 02 45.7**	**+0.5**
KURK	**Kurchatov**	**38.34**	**51**	*eP*		**P**	**17 03 24.8**	**+0.5**
KURK				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.0							
KURK	**Kurchatov**	**38.34**	**51**	*eP*		**P**	**17 03 24.8**	**+0.5**
	comp=Z,2.6nm,0.9s,mb4.0							
MK31	**Makanchi Array**	**40.81**	**58**	P		**P**	**17 03 42.9**	**-2.0**
MK31	**Makanchi Array**	**40.81**	**58**	P		**P**	**17 03 42.9**	**-2.0**
MKAR	**Makanchi Array**	**40.81**	**58**	P		**P**	**17 03 45.4**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.4,baz=269,slow=9.8,SNR=3.5							
ZALV	**Zalesovo Beam**	**42.29**	**47**	P		**P**	**17 03 58.0**	**+1.1**
	comp=Z,0.4nm,0.3s,mb3.5,baz=258,slow=7.2,SNR=2.9							
SONM	**Songino Array**	**56.65**	**52**	P		**P**	**17 05 48.5**	**+2.1**
	comp=Z,0.2nm,0.5s,mb3.5,baz=295,slow=7.0,SNR=3.6							
CMAR	**Chiang Mai Arr**	**63.43**	**86**	P		**P**	**17 06 34.6**	**+1.3**
	comp=Z,1.2nm,0.8s,mb4.1,baz=296,slow=7.6,SNR=7.4							

*IDC **20** 16:57:48.2±6.0, 481N×12690E, h48km±59km, mb3.9/13, mb1 4.0/13,mb1mx3.9/20,mbtmp3.9/13,MS3.3/3, Ms1 3.4/3,ms1mx2.8/32,Error ellipse: s-maj=41.2km s-min=15.1km az=68.0*

*ISCJB **20** 16:57:49.4±1.0, 487N×006×1270E±0.1, h80km±8km, mb4.3/26,Error ellipse: s-maj=18.4km s-min=8.3km az=159.8*

*NEIC **20** 16:57:52.5±1.2, 481N×12700E, h93km±11km, mb4.3/9, Error ellipse: s-maj=15.9km s-min=6.2km az=72.0*

*MAN **20** 16:58:00, 558N×12661E, h30km, mb5.1, ML4.0, MS4.2*

ISC 20 16:57:50.8±0.9, 486N±006×1270E±01, h76km±7km, n50, σ0s99/50, mb4.4/26, 2C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MATI	**Mati**	**2.22**	**340**	*eP*		**Pn**	**16 58 23.5**	**-2.0**
GSPH	**General Santos**	**2.41**	**301**	↑*eP*		**Pn**	**16 58 24.7**	**-3.4**
DAV	**Davao City (W)**	**2.63**	**327**	P		**Pn**	**16 58 33.2**	**+2.0**
	82nm,0.3s,baz=286,slow=8.0,SNR=3.8							
DAV				S		**Sn**	**16 59 11.1**	**+8.9**
	89nm,0.3s,baz=249,slow=22,SNR=6.5							
DMPH	**Davao City--Mi**	**2.68**	**326**	↓*iP*		**Pn**	**16 58 30.9**	**-0.9**
DMPH				*i* S		**Sn**	**16 58 53.0**	**-10**
KCP	**Kidapawan**	**2.88**	**318**	↑*eP*		**Pn**	**16 58 35.6**	**+1.1**
KCP				*i* S		**Sn**	**16 59 19.4**	**+11**
BUKP	**Musuan**	**3.59**	**327**	*eP*		**Pn**	**16 58 41.8**	**-2.3**
BUTP	**Butuan**	**4.32**	**341**	*eP*		**Pn**	**16 58 54.2**	**+0.1**
PAGZ	**Pagadian**	**4.69**	**310**	*eP*		**Pn**	**16 59 00.1**	**+1.0**
BATI	**Baumata**	**15.33**	**193**	P		**Pn**	**17 01 27.5**	**+4.6**
	0.8nm,0.3s,baz=189,slow=24,SNR=2.8							
KSM	**Kuching**	**17.03**	**259**	*eP*		**Pn**	**17 01 45.9**	**+1.6**
GUMO	**Guam**	**19.61**	**63**	LR		LR	17 09 25.7	
	comp=Z,74nm,20.3s,baz=253,slow=35							
FITZ	**Fitzroy Crossi**	**22.85**	**183**	*eP*		**P**	**17 02 48.6**	**+0.7**
	6.1nm,0.8s,mb4.0							
FITZ	**Fitzroy Crossi**	**22.85**	**183**	P		**P**	**17 02 46.9**	**-0.9**
	1.6nm,0.7s,mb3.5,baz=8.1,slow=13,SNR=9.8							
WRAB	**Tennant Creek**	**25.66**	**164**	*eP*		**P**	**17 03 13.2**	**-0.4**
	8.5nm,0.7s,mb4.3							
WRA	**Warramunga Arr**	**25.67**	**164**	P		**P**	**17 03 13.4**	**-0.4**
	3.7nm,0.6s,mb4.0,baz=342,slow=10,SNR=32							
WB2	**Warramunga Arr**	**25.67**	**164**	*eP*		**P**	**17 03 13.4**	**-0.3**
WB2	**Warramunga Arr**	**25.67**	**164**	*eP*		**P**	**17 03 12.8**	**-0.9**
CBIJ	**Chichi jima**	**26.42**	**32**	LR		LR	17 13 22.1	
	comp=Z,79nm,21.6s,baz=107,slow=35							
MBWA	**Marble Bar**	**26.83**	**195**	P		**P**	**17 03 22.7**	**-1.5**
	4.4nm,0.8s,mb4.0							
ASAR	**Alice Springs**	**29.13**	**167**	P		**P**	**17 03 44.6**	**0.0**
	0.8nm,0.5s,mb3.6,baz=345,slow=7.0,SNR=31							
ASAR				PcP		PcP	17 06 52.3	+1.4
	0.4nm,0.5s,baz=346,slow=2.1,SNR=5.8							
CMAR	**Chiang Mai Arr**	**30.59**	**299**	P		**P**	**17 03 58.0**	**+0.3**
	0.4nm,0.3s,mb3.7,baz=91,slow=6.2,SNR=3.5							
CMAR				LR		LR	17 17 00.8	
	comp=Z,68nm,18.5s,baz=180,slow=38							
MUN	**Mundaring**	**38.05**	**195**	*eP*		**P**	**17 05 04.3**	**+2.3**
STKA	**Stephens Creek**	**39.07**	**160**	*eP*		**P**	**17 05 11.3**	**+0.8**
	5.4nm,0.9s,mb4.4							
STKA	**Stephens Creek**	**39.07**	**160**	P		**P**	**17 05 11.1**	**+0.5**
	5.9nm,0.8s,mb4.5,baz=326,slow=7.8,SNR=6.3							
LSA	**Lhasa**	**41.94**	**310**	*eP*		**P**	**17 05 34.1**	**-0.2**
	2.5nm,0.5s,mb4.2							
TAPN	**Taplejung**	**43.61**	**305**	*eP*		**P**	**17 05 47.8**	**0.0**
	10nm,0.4s,mb4.9							
ODAN	**Odare**	**43.68**	**304**	*eP*		**P**	**17 05 47.9**	**-0.5**
	19nm,0.7s,mb4.9							
RAMN	**Ramite**	**44.36**	**304**	*eP*		**P**	**17 05 53.2**	**-0.7**
	16nm,0.7s,mb4.9							
GUN	**Gumba**	**45.32**	**305**	*eP*		**P**	**17 06 01.7**	**+0.2**
	15nm,0.6s,mb4.9							
KKN	**Kakani**	**45.77**	**305**	*eP*		**P**	**17 06 04.6**	**-0.4**
DMN	**Daman**	**45.84**	**304**	*eP*		**P**	**17 06 05.3**	**-0.3**
ULN	**Ulaanbaatar**	**46.15**	**341**	*eP*		**P**	**17 06 08.5**	**+0.8**
	2.8nm,0.9s,mb4.0							
SONM	**Songino Array**	**46.34**	**341**	P		**P**	**17 06 09.8**	**+0.6**
	1.0nm,0.6s,mb3.7,baz=152,slow=8.8,SNR=8.5							
SONM				PcP		PcP	17 07 44.5	+1.4
	0.9nm,0.6s,baz=158,slow=3.8,SNR=4.9							
GKN	**Gorkha**	**46.37**	**305**	*eP*		**P**	**17 06 09.2**	**-0.6**
KOLN	**Koldanda**	**47.15**	**304**	*eP*		**P**	**17 06 14.5**	**-1.3**
	12nm,0.5s,mb4.9							
DANN	**Dangsing**	**47.22**	**305**	*eP*		**P**	**17 06 16.1**	**-0.3**
	15nm,0.5s,mb4.9							
TLY	**Talaya**	**50.56**	**341**	*eP*		**P**	**17 06 42.9**	**+1.4**
	6.5nm,1.1s,mb4.6							
PETK	**Petropavlovsk-**	**54.28**	**22**	P		**P**	**17 07 10.4**	**+1.4**
	2.4nm,0.6s,mb4.4,baz=153,slow=3.7,SNR=5.9							
MK31	**Makanchi Array**	**56.81**	**325**	*eP*		**P**	**17 07 25.4**	**-1.9**
MKAR	**Makanchi Array**	**56.81**	**325**	P		**P**	**17 07 27.6**	**+0.3**
	2.3nm,0.5s,mb4.5,baz=115,slow=7.8,SNR=22							
ZALV	**Zalesovo Beam**	**59.73**	**333**	P		**P**	**17 07 47.2**	**-0.3**
	1.6nm,0.4s,mb4.4,baz=139,slow=6.6,SNR=6.6							
EKS2	**Erkin-Say**	**60.23**	**317**	P		**P**	**17 07 51.8**	**+0.6**
	3.3nm,0.8s,mb4.4							
KURK	**Kurchatov**	**60.96**	**327**	*eP*		**P**	**17 07 55.6**	**-0.4**
	4.3nm,0.6s,mb4.7							
AKTK	**Aktyubinsk**	**72.97**	**321**	P		**P**	**17 09 12.1**	**-0.1**
AKTO	**Aktyubinsk**	**72.97**	**321**	P		**P**	**17 09 12.1**	**-0.1**
	1.7nm,0.7s,mb4.0,baz=97,slow=8.1,SNR=6.9							
ARCES	**ARCESS Array B**	**89.50**	**340**	P		**P**	**17 10 39.4**	**+0.2**
	1.7nm,0.5s,mb4.5,baz=82,slow=6.7,SNR=19							
ARCES	**ARCESS Array B**	**89.50**	**340**	P		**P**	**17 10 39.4**	**+0.2**
AKASG	**Malin Array Be**	**91.22**	**321**	P		**P**	**17 10 47.8**	**+0.2**
	1.4nm,0.6s,mb4.3,baz=68,slow=4.7,SNR=4.2							
HFS	**Hagfors**	**97.17**	**332**	P		**P**	**17 11 14.8**	**+0.1**
	1.8nm,0.8s,mb4.6,baz=70,slow=8.3,SNR=3.5							
TORD	**Torodi Ar. Bea**	**122.85**	**289**	PKP		PKPdf	17 16 39.8	+0.5
	0.5nm,0.6s,baz=38,slow=1.6,SNR=3.8							

*BJI **20** 17:08:42.9, 52.11N×178.31E, h42km, mB5.3, mb4.9, Ms4.7, Msz4.3*

*ISCJB **20** 17:08:44.4±0.1, 5178N±004×17880E±002, h71km, mb5.0/135, Error ellipse: s-maj=5.9km s-min=2.1km az=4.3*

*MOS **20** 17:08:45.7±1.0, 5179N×17880E, h85km, mb5.0/44, Error ellipse: s-maj=8.0km s-min=7.8km az=176.1*

*GCMT **20** 17:08:45.5±0.3, 5168N×17888E, h65km±3km, MW5.0/85, Moment Tensor Solution. s28,c33; s85,c120; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.75±.16; Mθθ-2.07±.15; Mφφ 1.33±.14; Mrθ0.67±.11; Mθφ-2.13±.11; Mφr-1.93±.07; Best double couple: M◎3.42500×10^16 NP1:φs104.00000°, δ63.00000°, λ157.00000°. NP2: φs204.00000°, δ70.00000°, λ29.00000°. Principal axes: T 3.7380, Plg34.0000°, Azm66.0000°; N -0.6190, Plg55.0000°, Azm237.0000°; P -3.1120, Plg4.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **20** 17:08:46.0±0.3, 5175N×17881E, h71km±2km, mb4.5/31, mb1 4.6/33,mb1mx4.6/38,mbtmp4.5/33,MS3.8/19, Ms1 3.8/19,ms1mx3.7/38 Error ellipse: s-maj=12.0km s-min=6.6km az=168.0*

*NEIC **20** 17:08:45.5±0.2, 5166N×178.79E, mb5.1/83, ML4.8(AEIC), Error ellipse: s-maj=8.0km s-min=3.9km az=176.0*

*DJA **20** 17:09:10, 4908N×17075E, h10km, mb5.2/5*

ISC 20 17:08:46.5±0.1, 5180N±004×17882E±002, h73km, h73km±1.2km:pP-P, n649, σ0s75/641, mb5.0/135, 184C-179D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AMKA	**Amchitka**	**0.52**	**145**	P		**Pn**	**17 08 57.5**	**-2.2**
AMKA				S		**Sn**	**17 09 07.0**	**-2.4**
ADK	**Adak**	**2.79**	**87**	P		**Pn**	**17 09 28.9**	**+0.2**
ADK				S		**Sn**	**17 10 02.0**	**+0.7**
SMY	**Shemya**	**3.05**	**290**	P		**Pn**	**17 09 32.8**	**+0.6**
SMY				S		**Sn**	**17 10 08.4**	**+0.8**
FX1	**Attu Island--F**	**3.63**	**290**	P		**Pn**	**17 09 40.1**	**-0.1**
FX1				S		**Sn**	**17 10 23.9**	**+2.0**
NIKO	**Nikolski**	**7.63**	**76**	P		**Pn**	**17 10 36.4**	**+1.6**
OKCD	**Okmok Cone D**	**8.12**	**73**	P		**Pn**	**17 10 43.7**	**+2.3**
SPIA	**Saint Paul Isl**	**8.33**	**45**	P		**Pn**	**17 10 48.2**	**+3.9**
UNV	**Unalaska Valle**	**9.12**	**71**	P		**Pn**	**17 10 57.9**	**+2.8**
AKGG	**Akutan Green G**	**9.47**	**69**	P		**Pn**	**17 11 02.8**	**+3.0**
AKLV	**Akutan Long Va**	**9.48**	**70**	P		**Pn**	**17 11 03.0**	**+2.9**
PET	**Petropavlovsk**	**12.37**	**284**	*eP*		**Pn**	**17 11 48.1**	**+8.7**
PET				*eS*		**Sn**	**17 14 05.1**	**+10**
PET				pmax	pmax			
	comp=Z,40nm,1.1s							
PET				smax				
	comp=E,64nm,1.1s							
PET				smax				
	comp=N,41nm,1.3s							
PET				MLR	MLR			
	comp=Z,100nm,18.0s							
SDPT	**Sand Point**	**12.79**	**66**	*eP*		**Pn**	**17 11 44.8**	**-0.3**
	comp=Z,108nm,0.4s							
PETK	**Petropavlovsk-**	**12.95**	**284**	P		**Pn**	**17 11 47.8**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=91,slow=14,SNR=28							
PETK				S		**Sn**	**17 14 04.4**	**-4.8**
	comp=Z,1.1nm,0.3s,baz=93,slow=29,SNR=5.3							
PETK				LR		LR	17 16 37.8	
	comp=Z,209nm,20.9s,baz=93,slow=36							
CHGN	**Chignik**	**14.08**	**62**	*eP*		**Pn**	**17 12 01.7**	**-0.5**
SKR	**Severo-Kuril's**	**14.26**	**274**	*eP*		**Pn**	**17 12 08.0**	**+3.5**
SVW2	**Sparrevohn**	**16.82**	**46**	*eP*		**Pn**	**17 12 40.9**	**+3.9**
BILL	**Bilibino**	**17.39**	**344**	*diP*		**Pn**	**17 12 45.2**	**+1.3**
BILL				pmax	pmax			
	comp=Z,80nm,0.9s							
BILL				MLR	MLR			
	comp=Z,200nm,17.0s							
BILL	**Bilibino**	**17.39**	**344**	*eP*		**Pn**	**17 12 48.3**	**+4.4**
	comp=Z,68nm,0.9s							
TTA	**Tatalina**	**17.42**	**41**	*eP*		**Pn**	**17 12 47.7**	**+3.4**
KDAK	**Kodiak Island**	**17.45**	**59**	Pn		**Pn**	**17 12 43.0**	**-1.7**
	comp=Z,323nm,0.4s,SNR=45							
KDAK	**Kodiak Island**	**17.45**	**59**	P		**Pn**	**17 12 43.4**	**-1.4**
	comp=Z,18nm,0.3s,baz=255,slow=5.0,SNR=82							
KDAK				LR		LR	17 20 08.3	
	comp=Z,360nm,19.7s,baz=256,slow=39							
KDAK	**Kodiak Island**	**17.45**	**59**	*eP*		**Pn**	**17 12 42.8**	**-1.9**
	comp=Z,93nm,1.1s							
SEY	**Seymchan**	**17.94**	**319**	↑*iP*		**Pn**	**17 12 51.8**	**+1.2**
PPLA	**Purkeypile**	**18.99**	**43**	*eP*		**Pn**	**17 13 05.2**	**+2.0**
	comp=Z,280nm,1.4s							
SLKM	**Skilak Lake**	**19.15**	**51**	*eP*		**Pn**	**17 13 03.9**	**-1.2**
CHUM	**Lake Minchumin**	**19.34**	**40**	*eP*		**Pn**	**17 13 07.9**	**+0.6**
	comp=Z,70nm,1.0s							
SEW	**Seward**	**19.44**	**52**	*eP*		**Pn**	**17 13 06.0**	**-2.6**
RC01	**Rabbit Creek A**	**19.52**	**49**	*eP*		**Pn**	**17 13 08.5**	**-1.0**
	comp=Z,40nm,0.4s							
KTH	**Kantishna Hill**	**19.77**	**42**	*eP*		**Pn**	**17 13 12.6**	**+0.2**
	comp=Z,161nm,0.9s							
IMA2	**Indian Mountai**	**19.89**	**34**	*eP*		**Pn**	**17 13 13.8**	**+0.1**
PMR	**Palmer**	**19.93**	**48**	*eP*		**Pn**	**17 13 12.9**	**-1.4**
PMR				pmax	pmax			
	comp=Z,17nm,0.5s							
PMR				MLR	MLR			
	comp=Z,300nm,18.0s							
PMR	**Palmer**	**19.93**	**48**	*eP*		**Pn**	**17 13 12.9**	**-1.4**
	comp=Z,17nm,0.5s							
PMR				LR	LR			
	comp=Z,300nm,18.0s							
COLA	**College**	**21.51**	**40**	*eP*		**P**	**17 13 30.9**	**+1.9**
COLA				pmax	pmax			
	comp=Z,44nm,1.1s,mb4.7							
COLA	**College**	**21.51**	**40**	*eP*		**P**	**17 13 30.9**	**+1.8**
	comp=Z,44nm,1.1s,mb4.7							
COLD	**Coldfoot**	**21.68**	**33**	*eP*		**P**	**17 13 31.7**	**+1.0**
	comp=Z,161nm,0.4s,mb5.7							
RAGM	**Ragged Mountai**	**21.84**	**53**	*eP*		**P**	**17 13 33.0**	**+0.5**
MENT	**Mentasta**	**22.70**	**46**	*eP*		**P**	**17 13 42.1**	**+0.5**
YSS	**Yuzh-Sakhalins**	**23.81**	**273**	*eP*		**P**	**17 13 52.0**	**-0.4**
YSS				*e**SP		sP	17 14 14.0	-3.8
YSS				*e*			17 14 31.4	
YSS				*e*			17 18 54.0	
YSS				*e*SS			17 19 13.0	
YSS				pmax	pmax			
	comp=Z,40nm,1.1s,mb4.7							
YSS				pmax	pmax			
	comp=E,50um,1.2s							
YSS	**Yuzh-Sakhalins**	**23.81**	**273**	*eP*		**P**	**17 13 52.5**	**+0.2**
	comp=E,30nm,1.0s,mb4.6							
PNL	**Peninsula**	**24.44**	**55**	*eP*		**P**	**17 13 57.2**	**-0.8**
	comp=E,44nm,0.4s,mb5.1							
DAWY	**Dawson**	**24.82**	**44**	*eP*		**P**	**17 14 01.8**	**+0.4**
ASAJ	**Asahikawa**	**25.24**	**267**	P		**P**	**17 14 06.0**	**+0.6**
	comp=E,27nm,0.9s,mb4.7,baz=28,slow=6.4,SNR=24							
ASAJ				pP		pP	17 14 22.1	-0.2
	comp=E,94nm,1.1s,baz=46,slow=8.0,SNR=15							
ASAJ				LR		LR	17 23 00.9	
	comp=E,135nm,19.4s,baz=62,slow=34							
ASAJ	**Asahikawa**	**25.24**	**267**	P		**P**	**17 14 06.0**	**+0.6**
ASAJ				*PP		pP	17 14 22.1	-0.2
ASAJ				pmax	pmax			
	comp=Z,27nm,0.9s							
ASAJ				pmax	pmax			
	comp=Z,94nm,1.1s							
ASAJ				MLR	MLR			
	comp=Z,135nm,19.4s							
HYT	**Haines Junctio**	**25.39**	**52**	*eP*		**P**	**17 14 06.5**	**-0.1**
ERM	**Erimo**	**26.02**	**262**	↑*iP*		**P**	**17 14 12.3**	**-0.2**
YAK	**Yakutsk**	**28.02**	**311**	*eP*		**P**	**17 14 28.5**	**-1.7**
YAK				pmax	pmax			
	comp=Z,12nm,1.1s,mb4.3							
YAK				pmax	pmax			
	comp=E,6.0nm,1.1s							
DLBC	**Dease Lake**	**29.36**	**57**	P		**P**	**17 14 42.7**	**+0.6**
	baz=279,slow=6.6							
KLR	**Kul'dur**	**29.64**	**284**	*eP*		**P**	**17 14 40.3**	**-4.4**
KLR				pmax	pmax			
	comp=E,50nm,1.2s							
KLR				pmax	pmax			
	comp=Z,56nm,1.2s,mb5.1							
MAJO	**Matsushiro**	**32.40**	**258**	*eP*		**P**	**17 15 09.8**	**+0.7**
MAJO				*e**PP		pP	17 15 25.6	-0.8
MAJO				pmax	pmax			
	comp=Z,21nm,1.1s,mb4.8							
MAJO	**Matsushiro**	**32.40**	**258**	*eP*		**P**	**17 15 09.8**	**+0.7**
	comp=Z,21nm,1.1s,mb4.8							
MAJO				*e*pP		pP	17 15 25.6	-0.7
MAT	**Matsushiro**	**32.40**	**258**	P		**P**	**17 15 10.7**	**+1.6**
MJAR	**Matsushiro Ar**	**32.40**	**258**	P		**P**	**17 15 09.0**	**-0.1**
	comp=Z,4.1nm,0.7s,mb4.3,baz=46,slow=7.3,SNR=14							
MJAR				pP		pP	17 15 26.0	-0.4
	comp=Z,3.7nm,0.8s,baz=47,slow=7.6,SNR=5.3							
MJAR				LR		LR	17 26 36.8	
	comp=Z,132nm,20.4s,baz=230,slow=33							
MJAR	**Matsushiro Ar**	**32.40**	**258**	P		**P**	**17 15 09.0**	**-0.1**
MJAR				*PP		pP	17 15 26.0	-0.4
MDJ	**Mudanjiang**	**33.04**	**277**	P		**P**	**17 15 12.9**	**-1.7**
MDJ				AP		pP	17 15 27.8	-4.1
MDJ				XP		sP	17 15 35.1	-5.3
MDJ				PP		PP	17 16 27.9	-2.5
MDJ				S		**S**	**17 20 26.8**	**-1.1**
MDJ				SCP		ScP	17 21 34.6	+0.6
MDJ				AMB	AMB			
	comp=Z,9.0nm,1.8s,mb4.3							
MDJ				AMB	AMB			
	comp=Z,93nm,4.5s							
MDJ				LR	LR			
	comp=N,212nm,27.1s							
MDJ				LR	LR			
	comp=E,203nm,30.5s							
MDJ				LR	LR			
	comp=Z,299nm,27.1s							
CN2	**Changchun**	**36.02**	**279**	*eP*		**P**	**17 15 39.0**	**-1.3**
YKA	**Yellowknife Ar**	**36.02**	**46**	P		**P**	**17 15 40.4**	**+0.4**
	comp=Z,7.3nm,0.5s,mb4.9,baz=281,slow=9.2,SNR=30							
YKA				pP		pP	17 15 58.7	+1.2
	comp=Z,8.3nm,0.6s,baz=282,slow=8.3,SNR=7.0							
YKA				LR		LR	17 31 12.7	
	comp=Z,130nm,21.5s,baz=220,slow=37							
YKA	**Yellowknife Ar**	**36.02**	**46**	P		**P**	**17 15 40.4**	**+0.4**
YKA				*PP		pP	17 15 58.7	+1.2
YKA	**Yellowknife Ar**	**36.02**	**46**	P		**P**	**17 15 40.4**	**+0.4**
YKA				pP		pP	17 15 58.7	+1.2
YKA				LR		LR	17 31 12.7	
BOD	**Bodaibo**	**36.53**	**306**	*eP*		**P**	**17 15 43.6**	**-0.9**
BOD				pmax	pmax			
	comp=Z,15nm,1.0s,mb4.9							
NLWA	**Neilton Lookou**	**36.58**	**74**	↑P		**P**	**17 15 46.1**	**+1.1**
	baz=36							
NLWA	**Neilton Lookou**	**36.58**	**74**	*eP*		**P**	**17 15 45.6**	**+0.6**
	comp=Z,26nm,1.0s,mb5.1							
C04A	**Brinnon**	**36.96**	**73**	↑P		**P**	**17 15 48.7**	**+0.4**
	baz=37							
GNW	**Green Mountain**	**37.12**	**73**	*eP*		**P**	**17 15 49.8**	**+0.2**
	comp=Z,9.2nm,0.8s,mb4.8							
E03A	**Lebam**	**37.18**	**75**	↑P		**P**	**17 15 50.9**	**+0.8**
	baz=37							
A06A	**Chilliwack**	**37.19**	**70**	↑P		**P**	**17 15 49.9**	**-0.2**
	baz=37							
B05A	**Bryant**	**37.22**	**71**	↓P		**P**	**17 15 50.5**	**+0.1**
	baz=37							
JCW	**Jim Creek**	**37.35**	**71**	*eP*		**P**	**17 15 51.6**	**+0.1**
B06A	**Marblemount**	**37.45**	**71**	↑P		**P**	**17 15 52.2**	**-0.3**
	baz=37							
C05A	**Tolt Reservoir**	**37.73**	**72**	↑P		**P**	**17 15 54.9**	**+0.2**
	baz=38							
D05A	**Enumclaw**	**37.80**	**73**	↓P		**P**	**17 15 55.4**	**0.0**
	baz=38							
A07A	**Ashnola River,**	**37.85**	**69**	↑P		**P**	**17 15 55.6**	**-0.1**
	baz=38,SNR=12							
FL2	**Flat Top 2**	**38.08**	**74**	P		**P**	**17 15 58.4**	**+0.7**
KSRS	**Korea Array**	**38.16**	**268**	P		**P**	**17 15 59.2**	**+0.7**
	comp=Z,5.6nm,0.7s,mb4.5,baz=58,slow=7.7,SNR=19							
KSRS				pP		pP	17 16 16.1	+0.1
	comp=Z,10nm,0.9s,baz=60,slow=8.0,SNR=11							
KSRS				LR		LR	17 29 55.5	
	comp=Z,95nm,20.1s,baz=54,slow=33							
KSRS	**Korea Array**	**38.16**	**268**	P		**P**	**17 15 59.2**	**+0.7**
KSRS				*PP		pP	17 16 16.1	+0.1
KSRS				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.5							
KSRS				pmax	pmax			
	comp=Z

baz=40,SNR=29
YBH Yreka Blue Hor 40.28 81 *e*P P 17 16 17.5 +1.4
comp=Z,49nm,1.0s,mb5.3
J05A Fort Rock 40.30 78 ⇑P P 17 16 16.8 +0.5
baz=40,SNR=19
K04A Chilquin 40.38 79 ⇑P P 17 16 17.7 +0.8
baz=40
M02C Callahan 40.39 81 ⇓P P 17 16 18.4 +1.3
baz=40,SNR=15
E09A Wood Farm, Sta 40.41 72 ⇓P P 17 16 16.7 -0.5
baz=40
F08A Pendleton 40.42 73 ⇑P P 17 16 16.9 -0.3
baz=40
N02C Big Bar 40.44 82 ⇓P P 17 16 18.3 +0.8
baz=40,SNR=10
B11A Sandpoint 40.47 68 ⇑P P 17 16 17.2 -0.4
baz=40
O01C Eel River Cons 40.53 83 ⇑P P 17 16 19.5 +1.3
baz=40
L04A Klamath Falls 40.53 80 ⇓P P 17 16 18.8 +0.6
baz=40,SNR=12
I06A Prineville 40.56 76 ⇓P P 17 16 18.6 +0.2
baz=40
G08A Pilot Rock 40.58 74 ⇓P P 17 16 18.1 -0.4
baz=40,SNR=7.0
H07A Lands Inn, Kim 40.59 75 ⇑P P 17 16 18.5 -0.2
baz=40
D10A Wagner Farm, O 40.65 71 ⇓P P 17 16 18.0 -1.1
baz=40,SNR=11
LNOR Lincton Mounta 40.67 73 *e*P P 17 16 16.9 -2.4
M04C Macdoel 40.78 80 ⇑P P 17 16 21.1 +0.9
baz=41,SNR=28
K05A Summer Lake 40.83 78 ⇓P P 17 16 21.6 +1.0
baz=41,SNR=19
C11A Tepee Creek (N 40.84 69 ⇓P P 17 16 19.4 -1.2
baz=41,SNR=8.7
I07A Izee 40.91 76 ⇑P P 17 16 21.2 -0.1
baz=41,SNR=17
KCPM Cahto Peak 40.95 84 *e*P P 17 16 22.6 +0.9
J06A Christmas Vall 40.98 77 ⇓P P 17 16 22.5 +0.7
baz=41,SNR=19
F09A S2 Ranch, Elgi 40.98 73 ⇑P P 17 16 21.3 -0.5
baz=41,SNR=10
E10A Myers Farm, Un 41.04 71 ⇓P P 17 16 21.4 -0.9
baz=41,SNR=12
WDC Whiskeytown Da 41.05 82 *e*P P 17 16 23.3 +0.8
WDC pmax pmax
comp=Z,39nm,1.0s,mb5.2
WDC Whiskeytown Da 41.05 82 ⇓P P 17 16 23.0 +0.5
baz=41,SNR=14
WDC Whiskeytown Da 41.05 82 *e*P P 17 16 23.3 +0.8
comp=Z,39nm,1.0s,mb5.2
O02C Red Bluff 41.14 83 ⇑P P 17 16 24.7 +1.4
baz=41,SNR=12
H08A Prairie City 41.17 75 ⇑P P 17 16 23.2 -0.2
baz=41
K06A Valley Falls 41.17 78 ⇓P P 17 16 24.2 +0.8
baz=41,SNR=26
D11A Klaveano Farm, 41.20 70 ⇑P P 17 16 22.1 -1.5
baz=41
F10A Beach Ranch, E 41.24 72 ⇑P P 17 16 23.3 -0.6
baz=41,SNR=8.0
L05A Lakeview 41.25 79 ⇓P P 17 16 25.1 +1.0
baz=41,SNR=15
G09A Cove 41.29 73 ⇓P P 17 16 23.7 -0.7
baz=41,SNR=12
A13A Flathead Natio 41.34 67 ⇓P P 17 16 23.6 -1.2
baz=41
C12B Naegeli Ranch, 41.35 69 ⇓P P 17 16 24.4 -0.4
baz=41
J07A Hines 41.42 76 ⇑P P 17 16 25.7 +0.3
baz=41,SNR=14
M05C Lookout 41.45 80 ⇓P P 17 16 26.4 +0.6
baz=41,SNR=35
GASB Alder Springs 41.50 83 ⇓P P 17 16 27.0 +0.8
baz=41,SNR=13
WALA Waterton Lakes 41.56 66 *e*P P 17 16 26.0 -0.6
comp=Z,41nm,1.2s,mb5.0
I08A Drewsey 41.56 75 ⇓P P 17 16 26.2 -0.4
baz=42,SNR=9.2
B13A Whitefish 41.59 67 ⇓P P 17 16 26.3 -0.6
baz=42,SNR=8.4
LBCM Butte Creek Ri 41.64 81 P P 17 16 28.2 +0.9
E11A Bogner Ranch, 41.64 71 ⇓P P 17 16 26.0 -1.2
baz=42,SNR=7.5
MOD Modoc 41.65 79 ⇓P P 17 16 28.3 +0.9
baz=42,SNR=22
MOD Modoc 41.65 79 *e*P P 17 16 27.9 +0.5
comp=Z,34nm,0.7s,mb5.2
G10A Bishop Farm, J 41.67 73 ⇓P P 17 16 26.8 -0.7
baz=42,SNR=25
HOPS Hopland 41.68 84 ⇑P P 17 16 28.0 +0.4
baz=42,SNR=5.6
HOPS Hopland 41.68 84 *e*P P 17 16 28.2 +0.6
comp=Z,103nm,1.4s,mb5.4
H09A Durkee 41.69 74 ⇓P P 17 16 27.2 -0.4
baz=42
D12A Red Ives Fores 41.77 69 ⇓P P 17 16 27.0 -1.2
baz=42
BMO Blue Mountains 41.80 73 *e*P P 17 16 27.4 -1.1
comp=Z,22nm,1.1s,mb4.8
K07A Rock Creek Ran 41.84 77 ⇓P P 17 16 29.6 +0.6
baz=42,SNR=51
A14A Double T Ranch 41.88 66 ⇓P P 17 16 28.6 -0.5
baz=42,SNR=24
J08A Circle Bar Ran 41.93 76 ⇓P P 17 16 29.7 0.0
baz=42,SNR=6.5
M06C Likely Place G 41.95 80 ⇑P P 17 16 30.4 +0.6
baz=42,SNR=7.5
E12A Beaver Dam Sad 41.98 70 ⇑P P 17 16 29.0 -1.0
baz=42,SNR=18
O04C Chester 42.10 81 ⇑P P 17 16 32.3 +1.2
baz=42,SNR=15
G11A Walters Elk Ra 42.12 72 ⇓P P 17 16 30.5 -0.6
baz=42,SNR=13
MNRC McLaughlin Nat 42.14 84 ⇑P P 17 16 31.9 +0.5
baz=42
ELFS Eagle Lake Fie 42.15 81 ⇓P P 17 16 32.6 +1.2
baz=42,SNR=6.7
L07A Adell 42.17 78 ⇑P P 17 16 32.4 +0.7
baz=42,SNR=26
NSHM Saint Helena R 42.26 84 *e*P P 17 16 32.7 +0.3
D13A Huson 42.27 69 ⇑P P 17 16 32.0 -0.3
baz=42,SNR=5.2
H10A Noah's Angus R 42.28 73 ⇑P P 17 16 31.8 -0.7
baz=42,SNR=17
K08A Mann Creek Ran 42.28 77 ⇑P P 17 16 32.3 -0.2
baz=42,SNR=11
ORV Oroville 42.31 82 ⇑P P 17 16 32.4 -0.3
baz=42,SNR=19
WVOR Wild Horse Val 42.36 77 *e*P P 17 16 33.4 +0.3
WVOR pmax pmax
comp=Z,28nm,0.9s,mb5.0
WVOR Wild Horse Val 42.36 77 *e*P P 17 16 33.4 +0.3
comp=Z,28nm,0.9s,mb5.0
J09A Fry Pan Ranch, 42.37 75 ⇓P P 17 16 32.9 -0.3
baz=42,SNR=18
O05C Quincy 42.42 82 ⇓P P 17 16 34.1 +0.4
baz=42,SNR=12
CVS Carmenet Viney 42.45 85 ⇑P P 17 16 34.0 0.0
baz=42
F12A Elk City 42.52 71 ⇑P P 17 16 33.7 -0.6
baz=42,SNR=26
I10A Payette 42.52 74 ⇓P P 17 16 34.5 +0.1
baz=42
N06A Buffalo Meadow 42.62 80 ⇑P P 17 16 35.8 +0.6
baz=42,SNR=13
M07A Soldier Meadow 42.64 79 ⇓P P 17 16 36.0 +0.6
baz=42
H11A Donnelly 42.65 73 ⇑P P 17 16 34.8 -0.7
baz=42
L08A Fields 42.68 77 ⇑P P 17 16 35.7 0.0
baz=43,SNR=19
MSO Missoula 42.71 69 *e*P P 17 16 34.9 -1.0
comp=Z,10nm,0.7s,mb4.7
B15A Bradely Ranch, 42.71 66 ⇓P P 17 16 34.7 -1.2
baz=43,SNR=20
K09A Rome 42.76 76 ⇓P P 17 16 36.3 -0.1
baz=43,SNR=11
E13A Victor 42.77 70 ⇑P P 17 16 35.3 -1.1
baz=43,SNR=9.7
BEKR Beckwourth 42.82 81 ⇓P P 17 16 36.9 -0.1
baz=43,SNR=21
D14A Greenough 42.82 68 ⇑P P 17 16 35.6 -1.2
baz=43,SNR=15
O06A Flanigan 42.97 81 ⇓P P 17 16 38.0 0.0
baz=43,SNR=47
C15A Salmond Ranch, 42.97 67 ⇓P P 17 16 37.4 -0.6
baz=43,SNR=30
P05C Yuba Gap, Truc 43.01 82 ⇑P P 17 16 38.9 +0.4
baz=43,SNR=16
F13A Darby 43.04 70 ⇓P P 17 16 38.0 -0.6
baz=43,SNR=7.6
CHMT Chamberlain Mo 43.06 69 *e*P P 17 16 37.4 -1.3
M08A Happy Creek Ra 43.09 78 ⇓P P 17 16 39.7 +0.6
baz=43,SNR=19
N07B Gerlach 43.12 79 ⇓P P 17 16 39.8 +0.5
baz=43,SNR=60
I11A Placerville 43.13 74 ⇓P P 17 16 38.6 -0.7
baz=43,SNR=7.0
JRSC Jasper Ridge 43.18 86 ⇑P P 17 16 39.5 -0.3
baz=43
E14A Clinton 43.19 69 ⇓P P 17 16 38.9 -0.9
baz=43,SNR=14
P06A Stead Airport, 43.22 81 ⇓P P 17 16 41.0 +0.9
baz=43,SNR=6.3
K10A MacKenzie Ranc 43.23 76 ⇓P P 17 16 40.3 +0.1
baz=43,SNR=34
LAVA Lava Cap Winer 43.26 83 ⇓P P 17 16 40.7 +0.2
baz=43,SNR=21
D15A Lincoln 43.41 68 ⇑P P 17 16 40.6 -1.0
baz=43,SNR=8.3
H12A Diamond D Ranc 43.42 72 ⇑P P 17 16 40.6 -1.0
baz=43,SNR=8.4
C16A Fuhringer Ranc 43.45 67 ⇑P P 17 16 40.7 -1.2
baz=43,SNR=9.9
G13A Cobalt 43.48 71 ⇓P P 17 16 41.3 -0.9
baz=43,SNR=24
MFID Camas Ranch 43.49 74 ⇑P P 17 16 41.6 -0.6
baz=43,SNR=7.5
PAHR Pah Rah Range 43.52 81 *e*P P 17 16 43.2 +0.7
comp=Z,108nm,1.1s,mb5.5
WCN Washoe City 43.53 82 ⇑P P 17 16 43.3 +0.7
baz=43,SNR=17
O07A Toulon 43.55 80 ⇓P P 17 16 43.5 +0.7
baz=43,SNR=48
N08A GE Springer Mi 43.63 79 ⇑P P 17 16 43.7 +0.2
baz=44,SNR=11
M09A Marrel Ranch, 43.67 78 ⇑P P 17 16 44.1 +0.4
baz=44,SNR=7.9
E15A Deer Lodge 43.68 69 ⇓P P 17 16 42.5 -1.2
baz=44,SNR=15
R05C Kirkwood Meado 43.70 82 ⇑P P 17 16 44.6 +0.6
baz=44,SNR=21
K11A Parker Ranch, 43.73 75 ⇑P P 17 16 44.1 -0.1
baz=44,SNR=11
G14A Jackson 43.85 71 ⇑P P 17 16 44.3 -0.9
baz=44,SNR=7.1
L10A Juniper Basin 43.88 76 ⇓P P 17 16 44.7 -0.6
baz=44,SNR=29
O08A Rochester Mine 43.91 79 ⇑P P 17 16 46.2 +0.5
baz=44,SNR=5.3
P07A Fallon 43.92 81 ⇑P P 17 16 46.1 +0.3
baz=44
CMB Columbia Colle 43.93 83 *e*P P 17 16 46.4 +0.6
CMB pmax pmax
comp=Z,47nm,1.0s,mb5.2
CMB Columbia Colle 43.93 83 ⇓P P 17 16 46.2 +0.4
baz=44,SNR=19
CMB Columbia Colle 43.93 83 *e*P P 17 16 46.4 +0.6
comp=Z,47nm,1.0s,mb5.2
N09A Rock Creek Ran 43.96 78 ⇑P P 17 16 46.2 +0.1
baz=44,SNR=21
PACP Pacheco Peak 44.02 85 ⇑P P 17 16 46.7 +0.1
baz=44,SNR=11
J12A Stokes Ranch, 44.02 74 ⇑P P 17 16 46.3 -0.2
baz=44,SNR=17
SAO San Andreas Ge 44.07 86 *e*P P 17 16 47.2 +0.2
SAO pmax pmax
comp=Z,31nm,1.2s,mb4.9
SAO San Andreas Ge 44.07 86 *e*P P 17 16 47.2 +0.2
comp=Z,31nm,1.2s,mb4.9
F15A Butte 44.09 69 ⇑P P 17 16 45.5 -1.5
baz=44,SNR=16
C17A Wharram Farm, 44.10 66 ⇑P P 17 16 45.9 -1.2
baz=44
M10A I.L. Ranch, Tu 44.16 77 ⇑P P 17 16 47.9 +0.2
baz=44,SNR=18
R06C Coleville 44.20 82 ⇑P P 17 16 48.8 +0.8
baz=44
I13A Wildhorse Cree 44.22 73 ⇑P P 17 16 47.5 -0.6
baz=44,SNR=41
HLID Hailey 44.24 73 ⇓P P 17 16 48.0 -0.3
baz=44,SNR=25
HLID Hailey 44.24 73 *e*P P 17 16 48.0 -0.3
comp=Z,18nm,1.0s,mb4.8
L11A Cat Creek Ranc 44.26 76 ⇓P P 17 16 48.2 -0.2
baz=44,SNR=43
H14A Leadore 44.26 71 ⇓P P 17 16 47.8 -0.7
baz=44,SNR=33
DLMT Dillon 44.29 70 *e*P P 17 16 47.3 -1.3
comp=Z,3.2nm,0.4s,mb4.4
S06C San Francisco 44.35 83 ⇓P P 17 16 49.8 +0.5
baz=44,SNR=58
S05C Merced 44.39 84 ⇓P P 17 16 49.7 +0.2
baz=44,SNR=12
BMN Battle Mountai 44.40 79 *e*P P 17 16 50.1 +0.5
BMN *e*PP pP 17 17 16.7 +9.2
BMN pmax pmax
comp=Z,37nm,0.8s,mb5.2
BMN Battle Mountai 44.40 79 *e*P P 17 16 50.1 +0.5
comp=Z,37nm,0.8s,mb5.2
BMN *e*pP pP 17 17 16.6 +9.2
MCMT McKenzie Canyo 44.45 71 *e*P P 17 16 48.9 -1.0
EGMT Eagleton 44.46 65 ⇓P P 17 16 49.4 -0.6
baz=44,SNR=7.8
EGMT Eagleton 44.46 65 *e*P P 17 16 48.8 -1.1
comp=Z,11nm,0.5s,mb4.8
G15A Dillon 44.47 70 ⇑P P 17 16 48.9 -1.1
baz=44,SNR=7.8
J13A Cove Ranch, Pi 44.48 73 ⇑P P 17 16 50.1 -0.1
baz=44,SNR=16
K12A Draper Farm, C 44.49 75 ⇑P P 17 16 50.2 -0.1
baz=44,SNR=8.7
O09A Fish Creek Ran 44.58 79 ⇑P P 17 16 51.4 +0.5
baz=44,SNR=40
TLY Talaya 44.58 301 *e*P P 17 16 50.4 -0.4
TLY *e* pP 17 17 09.1 +0.3
TLY pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
TLY MLR MLR
comp=Z,210nm,20.0s
TLY Talaya 44.58 301 *e*P P 17 16 51.4 +0.6
comp=Z,3.3nm,0.6s,mb4.2
I14A Mackay 44.60 72 ⇑P P 17 16 51.1 -0.1
baz=44,SNR=22
M11A Holland Ranch, 44.67 77 ⇑P P 17 16 52.2 +0.5
baz=45,SNR=21
V03C Hunter Liggett 44.68 86 ⇓P P 17 16 52.6 +0.8
baz=45,SNR=7.6
H15A Lima 44.69 71 ⇑P P 17 16 50.6 -1.2
baz=45,SNR=8.7
BOZ Bozeman (W) 44.70 69 *e*P P 17 16 51.1 -0.8
BOZ pmax pmax
comp=Z,24nm,0.5s,mb5.2
BOZ Bozeman (W) 44.70 69 *e*P P 17 16 51.1 -0.8
comp=Z,24nm,0.5s,mb5.2
L12A House Creek Ra 44.71 75 ⇓P P 17 16 52.3 +0.3
baz=45,SNR=23
U04C Hernandez Rese 44.74 86 ⇑P P 17 16 53.0 +0.6
baz=45
ULN Ulaanbaatar 44.74 295 *e*P P 17 16 52.5 +0.3
ULN pmax pmax
comp=Z,15nm,0.8s,mb4.8
ULN Ulaanbaatar 44.74 295 *e*P P 17 16 52.5 +0.3
comp=Z,15nm,0.8s,mb4.8
J14A Carey 44.92 73 ⇓P P 17 16 53.8 +0.2
baz=45,SNR=23
O10A Cerro Mining, 44.92 78 ⇑P P 17 16 54.5 +0.7
baz=45,SNR=17
Q08A Gabbs 44.92 81 ⇑P P 17 16 54.3 +0.6
baz=45,SNR=42
NVAR Mina Array Bea 44.96 82 P P 17 16 55.0 +0.9
comp=Z,47nm,0.8s,mb5.2,baz=293,slow=7.9,SNR=137
NVAR pP pP 17 17 12.9 +0.8
comp=Z,7.2nm,0.7s,baz=296,slow=7.9,SNR=2.9
NVAR sP sP 17 17 20.1 -0.2
comp=Z,6.0nm,0.7s,baz=291,slow=7.7,SNR=2.3
NVAR PcP PcP 17 18 34.7 +0.6
comp=Z,4.0nm,0.8s,baz=289,slow=2.8,SNR=3.2
NVAR ScP ScP 17 22 18.5 -1.3
comp=Z,1.9nm,0.7s,baz=284,slow=4.9,SNR=7.0
K13A Stover Farm, H 44.97 74 ⇑P P 17 16 54.7 +0.7
baz=45
P09A Austin 44.98 80 ⇑P P 17 16 54.9 +0.7
baz=45,SNR=5.6
T06C Millerton Lake 44.99 84 ⇑P P 17 16 54.5 +0.2
baz=45,SNR=22
KCC Kaiser Creek 45.03 83 ⇑P P 17 16 54.9 +0.3
baz=45,SNR=38
N11A Elko Archery C 45.07 77 ⇓P P 17 16 55.6 +0.7
baz=45
SONM Songino Array 45.13 295 P P 17 16 56.0 +0.8
comp=Z,11nm,0.6s,mb4.8,baz=62,slow=8.3,SNR=80
SONM pP pP 17 17 12.8 -0.4
comp=Z,6.4nm,0.8s,baz=50,slow=8.8,SNR=6.8
SONM ScP ScP 17 22 19.5 -0.8
comp=Z,4.2nm,0.9s,baz=62,slow=1.3,SNR=15
SONM pScP 17 22 55.7
comp=Z,1.0nm,0.8s,baz=92,slow=2.6,SNR=3.9
SONM LR LR 17 36 06.9
comp=Z,132nm,20.8s,baz=67,slow=36
SONM Songino Array 45.13 295 P P 17 16 56.0 +0.8
SONM *PP pP 17 17 12.8 -0.4
R08A Mina 45.13 82 ⇓P P 17 16 56.1 +0.7
baz=45,SNR=18
PKD Parkfield 45.16 86 ⇑P P 17 16 56.2 +0.5
baz=45,SNR=12
M12A Wells 45.20 76 ⇑P P 17 16 56.5 +0.5
baz=45,SNR=13
QLMT Earthquake Lak 45.28 70 *e*P P 17 16 55.7 -0.7
P10A Eureka 45.35 79 ⇓P P 17 16 57.7 +0.6
baz=45,SNR=10
L13A Double Diamond 45.39 75 ⇑P P 17 16 58.3 +0.9
baz=45
Q09A Carvers 45.40 80 ⇑P P 17 16 58.5 +0.9
baz=45,SNR=9.7
ELK Elko 45.41 77 P P 17 16 58.1 +0.5
comp=Z,12nm,0.5s,mb4.9,baz=297,slow=7.5,SNR=57
ELK sP sP 17 17 24.4 +0.5
comp=Z,12nm,0.8s,baz=296,slow=7.8,SNR=5.9
ELK ScP ScP 17 22 20.4 -1.3
comp=Z,0.7nm,0.4s,baz=334,slow=5.2,SNR=3.6
ELK LR LR 17 33 34.2
comp=Z,72nm,18.6s,baz=322,slow=33
ELK Elko 45.41 77 *e*P P 17 16 57.9 +0.3
comp=Z,13nm,0.5s,mb4.9
ELK *e* 17 17 24.3
H16A Russell Place, 45.45 70 ⇓P P 17 16 57.3 -0.5
baz=45,SNR=24
ZAK Zakamensk 45.46 300 *e*P P 17 16 56.8 -1.0
ZAK pmax pmax
comp=Z,9.0nm,1.5s,mb4.3
N12A Clover Valley, 45.47 77 ⇑P P 17 16 58.3 +0.2
baz=45,SNR=24
MTUM Tungsten Hills 45.48 83 *e*P P 17 16 59.3 +1.1
O11A Cowboy Ranch, 45.53 78 ⇑P P 17 16 59.0 +0.5
baz=45,SNR=10
PTRM Twissleman Ran 45.55 86 *e*P P 17 16 59.4 +0.7
V05C Boulder Hill, 45.60 85 ⇓P P 17 17 00.1 +0.9
baz=46
HELL Mitchell Peak 45.62 84 ⇓P P 17 16 59.6 +0.3
baz=46,SNR=46
S08C White Mtn Res 45.63 82 ⇑P P 17 17 00.5 +1.2
baz=46,SNR=39
M13A Montello 45.69 76 ⇓P P 17 17 00.3 +0.5
baz=46,SNR=17
I16A Newdale 45.79 71 ⇑P P 17 17 00.9 +0.3
baz=46
P11A Circle Ranch, 45.83 79 ⇓P P 17 17 01.5 +0.6
baz=46,SNR=9.5
R09A Tonopah 45.84 81 ⇑P P 17 17 01.3 +0.3
baz=46,SNR=102
L14A Malta 45.84 74 ⇑P P 17 17 00.9 -0.1
baz=46,SNR=11
TPH Tonopah 45.85 81 *e*P P 17 17 01.5 +0.4
TPH pmax pmax
comp=Z,89nm,1.0s,mb5.5
TPH Tonopah 45.85 81 *e*P P 17 17 01.5 +0.4
comp=Z,89nm,1.0s,mb5.5
TIN Tinemaha 45.88 83 ⇓P P 17 17 02.2 +0.9
baz=46,SNR=6.9
K15A Arbon 45.88 73 ⇓P P 17 17 01.4 +0.2
baz=46,SNR=23
Q10A Clear Creek Ra 45.88 80 ⇑P P 17 17 01.8 +0.5
baz=46,SNR=22
SMMC Simmler 45.90 86 ⇓P P 17 17 02.1 +0.5
baz=46
N13A Wendover, West 45.97 76 ⇓P P 17 17 02.1 +0.1
baz=46
O12A Currie 46.00 77 ⇑P P 17 17 02.4 +0.1
baz=46,SNR=18
S09A Goldfield 46.07 82 ⇓P P 17 17 02.9 +0.1
baz=46,SNR=36
J16A Bone 46.07 72 ⇓P P 17 17 02.8 +0.1
baz=46,SNR=8.2
M14A Sheep Mountain 46.09 75 ⇓P P 17 17 02.7 -0.2
baz=46,SNR=13
IMW Indian Meadow 46.10 71 *e*P P 17 17 02.7 -0.3
comp=Z,7.3nm,0.4s,mb4.8
VES Vestal, Richgr 46.13 85 ⇑P P 17 17 03.1 -0.2
baz=46,SNR=18
HHC Hu-ho-hao-te 46.15 284 *e*P P 17 17 01.4 -2.0
HHC AP pP 17 17 18.4 -3.0
HHC PCP PcP 17 18 37.6 -0.6
HHC PP PP 17 18 50.5 -2.1
HHC SCP ScP 17 22 23.4 -1.3
HHC PCS PcS 17 22 30.4 -2.3
HHC S **S** **17 23 40.9 -2.9**
HHC SCS ScS 17 26 48.0 -3.5
HHC SS SS 17 26 58.8 -11
HHC AMB AMB
comp=Z,22nm,0.6s,mb5.1
HHC AMB AMB
comp=Z,147nm,7.2s
HHC LR LR
comp=N,147nm,14.4s
HHC LR LR
comp=E,202nm,13.9s
HHC LR LR
comp=Z,157nm,14.4s
RRI2 Red Ridge 46.20 72 *e*P P 17 17 04.2 +0.4
comp=Z,8.6nm,0.5s,mb4.7
HVU Hansel Valley 46.27 74 *e*P P 17 17 04.2 -0.1
HVU pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
HVU Hansel Valley 46.27 74 *e*P P 17 17 04.2 -0.1
comp=Z,9.5nm,0.5s,mb4.8
R10A Warm Springs 46.28 80 ⇑P P 17 17 05.0 +0.6
baz=46,SNR=6.0
PKM Peak Mountain 46.29 86 ⇑P P 17 17 05.3 +0.7
baz=46,SNR=6.6
Q11A Duckwater 46.33 79 ⇓P P 17 17 05.3 +0.5
baz=46,SNR=38
S10A Tonopah Range, 46.33 81 ⇓P P 17 17 05.0 +0.2
baz=46,SNR=40
TPAW Teton Pass 46.34 71 *e*P P 17 17 04.7 -0.1
comp=Z,4.4nm,0.6s,mb4.4
K16A Soda Springs 46.35 72 ⇑P P 17 17 05.4 +0.4
baz=46,SNR=9.3
CWC Cottonwood Cre 46.36 84 ⇓P P 17 17 05.4 +0.3
baz=46
RLMT Red Lodge 46.36 68 *e*P P 17 17 03.5 -1.5
comp=Z,13nm,0.5s,mb4.9
L15A Malad City 46.37 74 ⇓P P 17 17 05.0 -0.1
baz=46,SNR=8.7
P12A McGill 46.39 78 ⇑P P 17 17 05.5 +0.2
baz=46,SNR=20
GRAC Grapevine Rang 46.44 82 ⇓P P 17 17 06.3 +0.6
baz=46,SNR=17
LOHW Long Hollow 46.47 71 *e*P P 17 17 05.6 -0.3
comp=Z,4.6nm,0.7s,mb4.3
N14A Grayback Hills 46.59 76 ⇑P P 17 17 06.7 -0.1
baz=46,SNR=7.3
ISA Isabella 46.62 85 *e*P P 17 17 06.6 -0.5
ISA pmax pmax
comp=Z,44nm,1.1s,mb5.1
ISA Isabella 46.62 85 ⇑P P 17 17 06.6 -0.6
baz=46,SNR=16
ISA Isabella 46.62 85 *e*P P 17 17 06.6 -0.5
comp=Z,44nm,1.1s,mb5.1
BGU Big Grassy Mou 46.63 75 *e*P P 17 17 07.0 -0.2
SBC Santa Barbara 46.65 87 ⇑P P 17 17 07.7 +0.3
baz=46
M15A Larsen Ranch, 46.66 74 ⇓P P 17 17 07.1 -0.2
baz=46
R11A Troy Canyon, C 46.68 80 ⇑P P 17 17 07.4 -0.2
baz=47,SNR=70
Q12A Willow Creek R 46.71 79 ⇓P P 17 17 08.1 +0.3
baz=47,SNR=12
ARVC Arvin 46.75 85 ⇓P P 17 17 07.8 -0.3
baz=47
GUMO Guam 46.86 228 P P 17 17 06.5 -2.7

comp=Z,20nm,0.4s,mb5.2,baz=58,slow=9.5,SNR=8.5
L16A Fish Haven 46.93 73 ⇓P **P 17 17 09.4 -0.1**
baz=47,SNR=24
P13A Bates Ranch, G 46.95 78 ⇑P **P 17 17 09.5 -0.1**
baz=47,SNR=23
N15A Stansbury Isla 46.96 75 ⇑P **P 17 17 09.8 0.0**
baz=47
MPMC Manual Prospec 46.97 84 ⇓P **P 17 17 10.1 +0.2**
baz=47,SNR=30
BSC Santa Cruz Isl 47.00 87 ⇓P **P 17 17 10.2 +0.1**
baz=47
S11A Rachel 47.02 81 ⇑P **P 17 17 10.9 +0.6**
baz=47,SNR=8.4
FURC Furnace Creek, 47.09 83 ⇑P **P 17 17 11.0 +0.2**
baz=47,SNR=10
HWUT Hardware Ranch 47.10 74 *e*P **P 17 17 10.1 -0.7**
comp=Z,7.0nm,0.6s,mb4.6
OSI Osito Adit 47.15 86 ⇓P **P 17 17 11.6 +0.3**
baz=47
TPNV Topopah Spring 47.16 82 *e*P **P 17 17 11.8 +0.4**
TPNV pmax pmax
comp=Z,116nm,1.0s,mb5.6
TPNV Topopah Spring 47.16 82 ⇑P **P 17 17 11.8 +0.4**
baz=47,SNR=123
TPNV Topopah Spring 47.16 82 *e*P **P 17 17 11.8 +0.4**
comp=Z,116nm,1.0s,mb5.6
DUG Dugway 47.21 76 *e*P **P 17 17 11.7 0.0**
DUG pmax pmax
comp=Z,28nm,0.5s,mb5.2
DUG Dugway 47.21 76 ⇓P **P 17 17 11.5 -0.3**
baz=47,SNR=36
DUG Dugway 47.21 76 *e*P **P 17 17 11.7 0.0**
comp=Z,28nm,0.5s,mb5.2
BTO Baotou 47.22 285 *e*P **P 17 17 12.5 +0.7**
LRMC Laurel Mountai 47.22 84 ⇓P **P 17 17 11.4 -0.4**
baz=47,SNR=9.7
M16A Huntsville 47.24 74 ⇓P **P 17 17 11.5 -0.4**
baz=47,SNR=9.2
Q13A Wheeler Ranch, 47.25 78 ⇑P **P 17 17 12.1 +0.1**
baz=47,SNR=23
BLG Laguna Peak 47.27 87 ⇓P **P 17 17 11.5 -0.7**
baz=47
R12A Pony Springs, 47.29 79 ⇑P **P 17 17 12.0 -0.3**
baz=47,SNR=12
NJ2 Nanjing 47.32 270 *e*P **P 17 17 12.8 +0.1**
NJ2 AMB AMB
comp=Z,60nm,1.0s,mb5.3
O15A The Old Anders 47.37 76 ⇓P **P 17 17 13.0 +0.1**
baz=47
EDW2 Edwards Air Fo 47.43 85 ⇑P **P 17 17 13.2 -0.2**
baz=47,SNR=12
P14A Drum Mountains 47.43 77 ⇓P **P 17 17 13.3 -0.1**
baz=47,SNR=24
U10A Ash Meadows, A 47.45 82 ⇓P **P 17 17 14.2 +0.6**
baz=47,SNR=7.7
SNCC San Nicolas Is 47.56 88 ⇓P **P 17 17 14.3 -0.2**
baz=47
PDAR Pinedale Array 47.59 71 P **P 17 17 13.9 -0.6**
comp=Z,14nm,0.4s,mb5.1,baz=348,slow=3.8,SNR=70
PDAR pP pP 17 17 34.0 +1.4
comp=Z,7.1nm,0.8s,baz=316,slow=4.1,SNR=3.7
PDAR ScP ScP 17 22 28.7 -2.0
comp=Z,4.5nm,1.0s,baz=318,slow=2.0,SNR=11
PDAR pScP 17 23 03.2
comp=Z,1.5nm,0.9s,baz=270,slow=1.5,SNR=4.3
PDAR LR LR 17 34 00.7
comp=Z,120nm,20.5s,baz=297,slow=32
S12A Delamar Landin 47.60 80 ⇓P **P 17 17 15.1 +0.3**
baz=48,SNR=12
T11A Corn Creek, Al 47.61 81 ⇓P **P 17 17 14.9 +0.1**
baz=48,SNR=63
N16A Rees Ranch, Co 47.61 74 ⇑P **P 17 17 14.6 -0.2**
baz=48
Q14A Sevier Lake (B 47.68 78 ⇓P **P 17 17 15.6 +0.2**
baz=48,SNR=36
KRAR Krasnoyarsk 47.69 311 ⇓*i*P **P 17 17 14.8 -0.4**
KRAR pmax pmax
comp=Z,44nm,0.8s,mb5.3
R13A O'Grain Ranch, 47.77 79 ⇑P **P 17 17 16.0 0.0**
baz=48,SNR=17
SHOC Shoshone 47.82 83 ⇓P **P 17 17 16.8 +0.3**
baz=48,SNR=9.0
GSC Goldstone 47.88 84 *e*P **P 17 17 17.3 +0.3**
GSC pmax pmax
comp=Z,79nm,0.9s,mb5.5
GSC Goldstone 47.88 84 ⇓P **P 17 17 17.0 0.0**
baz=48,SNR=37
GSC Goldstone 47.88 84 *e*P **P 17 17 17.3 +0.3**
comp=Z,79nm,0.9s,mb5.5
P15A Leamington 47.92 76 ⇓P **P 17 17 17.2 0.0**
baz=48,SNR=7.8
N17A Moffit Pass 47.94 74 ⇑P **P 17 17 16.9 -0.5**
baz=48
DAU Daniels Canyon 48.01 75 *e*P **P 17 17 19.4 +1.5**
FMP Fort Macarthur 48.01 87 ⇑P **P 17 17 17.7 -0.3**
baz=48
BFSC Mount Baldy St 48.06 86 ⇓P **P 17 17 18.2 -0.1**
baz=48,SNR=14
CIS Catalina Islan 48.15 87 ⇓P **P 17 17 18.4 -0.6**
baz=48
Q15A Fillmore 48.22 77 ⇓P **P 17 17 19.4 -0.1**
baz=48,SNR=5.4
S13A Holt Ranch, En 48.22 79 ⇓P **P 17 17 19.7 +0.2**
baz=48,SNR=33
TUQ Turquoise Moun 48.34 83 ⇓P **P 17 17 20.6 +0.1**
baz=48,SNR=25
ARUT Antelope Range 48.34 79 *e*P **P 17 17 20.3 -0.2**
V11A Goodsprings 48.38 82 ⇑P **P 17 17 21.1 +0.3**
baz=48,SNR=14
O17A Robinson Place 48.46 75 ⇓P **P 17 17 21.4 0.0**
baz=48
HEC Hector,Ludlow 48.49 84 ⇑P **P 17 17 21.8 +0.2**
baz=48,SNR=8.6
S14A Cedar City 48.53 79 ⇓P **P 17 17 21.9 0.0**
baz=48
CCUT Cedar City 48.54 79 *e*P **P 17 17 22.5 +0.5**
U12A Valley of Fire 48.54 81 ⇓P **P 17 17 22.4 +0.3**
baz=48,SNR=10
T13A Saint George 48.55 80 ⇓P **P 17 17 22.3 +0.2**
baz=48,SNR=24
N18A Larsen Ranch, 48.61 73 ⇓P **P 17 17 22.0 -0.5**
baz=48,SNR=6.2
MSU Marysvale 48.65 77 *e*P **P 17 17 23.3 +0.5**
TMUT Trail Mountain 48.74 76 *e*P **P 17 17 23.6 +0.1**
MURC Murrieta 48.77 86 ⇓P **P 17 17 23.7 -0.1**
baz=49
R15A Junction 48.78 78 ⇓P **P 17 17 24.1 +0.2**
baz=49
V12A Nelson 48.81 82 ⇓P **P 17 17 24.4 +0.3**
baz=49,SNR=16
O18A Roosevelt 48.85 74 ⇓P **P 17 17 24.5 +0.1**
baz=49
U13A Pakoon Wash 48.91 81 ⇑P **P 17 17 25.6 +0.8**
baz=49,SNR=45
P17A Butcher Ranch, 48.91 75 ⇑P **P 17 17 24.9 +0.1**
baz=49,SNR=8.1
GMRC Granite Mounta 48.94 84 ⇑P **P 17 17 25.0 -0.1**
baz=49,SNR=29
N19A John Jarvie Ra 48.96 73 ⇑P **P 17 17 24.4 -0.7**
baz=49,SNR=7.8
Q16A Castle Valley 49.00 76 ⇓P **P 17 17 25.5 0.0**
baz=49,SNR=9.4
T14A Hurricane 49.03 79 ⇓P **P 17 17 26.2 +0.5**
baz=49,SNR=7.0
S15A Panguitch 49.07 78 ⇑P **P 17 17 27.0 +1.0**
baz=49
LDFC Landfair 49.08 83 *e*P **P 17 17 25.8 -0.3**
comp=Z,32nm,0.5s,mb5.5
W12A Cal Nev Ari 49.08 82 ⇓P **P 17 17 26.3 +0.2**
baz=49
P18A Preston Nutter 49.11 75 ⇓P **P 17 17 26.3 0.0**
baz=49,SNR=7.0
R16A Teasdale 49.22 77 ⇑P **P 17 17 27.6 +0.5**
baz=49,SNR=28
PFO Pinyon Flat Ob 49.22 85 P **P 17 17 27.4 +0.1**
comp=Z,122nm,1.0s,mb5.8,SNR=5.4
PFO Pinyon Flat Ob 49.22 85 P **P 17 17 27.2 -0.1**
comp=Z,18nm,1.0s,mb5.0,baz=296,slow=4.0,SNR=7.7
PFO Pinyon Flat Ob 49.22 85 P **P 17 17 27.2 -0.1**
PFO pmax pmax
comp=Z,18nm,1.0s,mb5.0
PFO Pinyon Flat Ob 49.22 85 ⇓P **P 17 17 27.3 0.0**
baz=49
PFO Pinyon Flat Ob 49.22 85 *e*P **P 17 17 26.9 -0.3**
comp=Z,30nm,1.1s,mb5.1
BELC Belle Mtn. 49.24 85 ⇓P **P 17 17 26.9 -0.6**
baz=49,SNR=13
V13A Grand Canyon W 49.26 81 ⇑P **P 17 17 27.9 +0.3**
baz=49,SNR=21
SRU San Rafael 49.27 76 *e*P **P 17 17 27.3 -0.3**
SRU pmax pmax
comp=Z,16nm,0.5s,mb5.2
SRU San Rafael 49.27 76 ⇑P **P 17 17 27.4 -0.1**
baz=49,SNR=39
SRU San Rafael 49.27 76 *e*P **P 17 17 27.3 -0.2**
comp=Z,16nm,0.5s,mb5.2
109C Camp Elliot, M 49.30 86 ⇑P **P 17 17 27.9 0.0**
baz=49
O19A Miners Draw (B 49.36 74 ⇑P **P 17 17 28.0 -0.2**
baz=49,SNR=22
U14A Mt Trumbull 49.38 80 ⇑P **P 17 17 28.9 +0.5**
baz=49,SNR=19
T15A Red Dirt Ranch 49.48 79 ⇑P **P 17 17 29.8 +0.6**
baz=49,SNR=5.1
S16A Weppner Ranch, 49.51 78 ⇓P **P 17 17 29.6 +0.2**
baz=49,SNR=14
Q18A Rafter H Ranch 49.51 75 ⇑P **P 17 17 29.0 -0.4**
baz=49,SNR=32
NEE2 Needles Airpor 49.59 83 ⇑P **P 17 17 30.0 -0.1**
baz=50
R17A Hanksville Air 49.60 76 ⇓P **P 17 17 29.8 -0.3**
baz=50,SNR=13
IRM Iron Mountain 49.66 84 ⇑P **P 17 17 30.2 -0.4**
baz=50,SNR=28
BAR Barrett 49.71 86 *e*P **P 17 17 31.1 +0.1**
comp=Z,44nm,1.0s,mb5.3
BC3 Big Chuckw Mtn 49.81 84 ⇑P **P 17 17 31.1 -0.7**
baz=50,SNR=8.0
W13A Hualapai Mount 49.82 82 ⇑P **P 17 17 31.6 -0.2**
baz=50,SNR=12
P19A Cripple Cowboy 49.86 74 ⇓P **P 17 17 31.6 -0.5**
baz=50,SNR=7.5
U15A North Rim 49.92 80 ⇑P **P 17 17 33.0 +0.5**
baz=50,SNR=50
V14A Boquillas Ranc 49.94 81 ⇑P **P 17 17 32.9 +0.2**
baz=50,SNR=43
S17A Black Ridge (B 50.05 77 ⇑P **P 17 17 33.5 0.0**
baz=50,SNR=11
SWSC Sam W. Stewart 50.08 85 ⇑P **P 17 17 33.7 -0.1**
baz=50
R18A Canyonlands Na 50.11 76 ⇑P **P 17 17 33.1 -0.9**
baz=50,SNR=22
Q19A Hogan Spring (50.13 75 ⇓P **P 17 17 33.3 -0.7**
baz=50,SNR=8.8
X13A Yucca 50.19 82 ⇑P **P 17 17 34.1 -0.4**
baz=50,SNR=12
PDMCI Parker Dam,Lak 50.19 83 ⇓P **P 17 17 34.2 -0.5**
baz=50,SNR=13
W14A Seligman 50.23 81 ⇑P **P 17 17 34.9 0.0**
baz=50,SNR=21
Y12C Blythe 50.32 84 ⇑P **P 17 17 35.4 -0.2**
baz=50,SNR=9.9
V15A Kaibab Nationa 50.39 80 ⇓P **P 17 17 36.7 +0.6**
baz=50,SNR=77
T17A Navajo Res., N 50.46 78 ⇑P **P 17 17 36.3 -0.3**
baz=50,SNR=6.1
S18A Hurst Farm, BI 50.50 77 ⇑P **P 17 17 36.6 -0.3**
baz=50,SNR=24
GLA Glamis 50.60 85 *e*P **P 17 17 37.6 -0.1**
GLA pmax pmax
comp=Z,86nm,1.2s,mb5.7
GLA Glamis 50.60 85 ⇓P **P 17 17 37.8 +0.1**
baz=50,SNR=12
GLA Glamis 50.60 85 *e*P **P 17 17 37.6 -0.1**
comp=Z,86nm,1.2s,mb5.7
ULM Lac du Bonnet 50.68 56 P **P 17 17 36.5 -1.5**
comp=Z,4.2nm,0.5s,mb4.7,baz=303,slow=8.7,SNR=9.6
ULM LR LR 17 39 30.1
comp=Z,148nm,20.9s,baz=357,slow=36
Y13A Salome 50.71 83 ⇑P **P 17 17 38.3 -0.2**
baz=51,SNR=12
W15A Williams 50.76 81 ⇓P **P 17 17 39.5 +0.6**
baz=51,SNR=9.7
U17A Shonto 50.80 78 ⇑P **P 17 17 38.9 -0.3**
baz=51,SNR=11
U16A Tuba City 50.82 79 ⇑P **P 17 17 39.3 0.0**
baz=51,SNR=9.0
X14A Yava 50.85 82 ⇓P **P 17 17 39.9 +0.3**
baz=51,SNR=21
T18A Mexican Hat 50.93 77 ⇑P **P 17 17 39.3 -0.9**
baz=51,SNR=28
S19A Harvey Farm, M 50.98 76 ⇑P **P 17 17 39.9 -0.6**
baz=51,SNR=25
WUAZ Wupatki 51.08 80 ⇓P **P 17 17 41.3 0.0**
baz=51,SNR=17
WUAZ Wupatki 51.08 80 *e*P **P 17 17 41.9 +0.6**
comp=Z,70nm,1.1s,mb5.6
Y14A Wickenburg 51.13 82 ⇓P **P 17 17 41.5 -0.2**
baz=51,SNR=12
WHN Wuhan 51.16 272 ⇓P **P 17 17 41.5 -0.4**
X15A Humboldt 51.24 81 ⇑P **P 17 17 42.8 +0.3**
baz=51,SNR=20
W16A Flagstaff 51.26 80 ⇑P **P 17 17 43.3 +0.6**
baz=51,SNR=9.3
U18A Rough Rock, Ch 51.40 78 ⇑P **P 17 17 43.5 -0.1**
baz=51,SNR=8.5
Y15A Casa Rosa Ranc 51.53 82 ⇓P **P 17 17 44.9 +0.2**
baz=51,SNR=17
Z14A Wintersburg 51.55 83 ⇑P **P 17 17 44.6 -0.3**
baz=51
T19A Beclabito 51.64 77 ⇑P **P 17 17 45.2 -0.3**
baz=52,SNR=46
MVCO Mesa Verde 51.71 76 ⇓P **P 17 17 45.7 -0.2**
baz=52,SNR=6.8
MVCO Mesa Verde 51.71 76 *e*P **P 17 17 45.6 -0.4**
comp=Z,8.7nm,0.5s,mb5.0
ISCO Idaho Springs 51.76 72 *e*P **P 17 17 46.0 -0.3**
ISCO pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
ISCO Idaho Springs 51.76 72 *e*P **P 17 17 46.0 -0.3**
comp=Z,2.9nm,0.5s,mb4.6
X16A Lo Mia Camp, P 51.77 81 ⇑P **P 17 17 46.9 +0.5**
baz=52,SNR=21
W17A Winslow 51.77 80 ⇑P **P 17 17 46.7 +0.2**
baz=52
V18A Ganado 51.83 79 ⇑P **P 17 17 46.9 0.0**
baz=52
Y16A Circle Bar Ran 52.11 81 ⇓P **P 17 17 49.3 +0.3**
baz=52,SNR=16
XAN Xi'an 52.13 279 P **P 17 17 48.5 -0.6**
XAN AP pP 17 17 58.4 -9.0
XAN XP sP 17 18 03.4 -12
XAN AMB AMB
comp=Z,9.0nm,1.3s,mb4.6
X17A Forest Lakes 52.21 80 ⇓P **P 17 17 50.0 +0.2**
baz=52
W18A Petrified Fore 52.34 79 ⇓P **P 17 17 50.9 +0.2**
baz=52,SNR=6.9
V19A Window Rock 52.37 78 ⇓P **P 17 17 50.9 0.0**
baz=52
115A Sonoran Desert 52.45 83 ⇑P **P 17 17 51.6 +0.1**
baz=52,SNR=11
Z16A Peralta Trail, 52.50 82 ⇓P **P 17 17 52.0 +0.1**
baz=52,SNR=6.6
W19A Sanders 52.56 79 ⇓P **P 17 17 52.5 +0.2**
baz=52
214A Organ Pipe Nat 52.59 84 ⇓P **P 17 17 52.4 -0.2**
baz=52,SNR=5.8
X18A Snowflake 52.61 80 ⇓P **P 17 17 52.8 +0.1**
baz=52,SNR=11
Y17A Roosevelt 52.62 81 ⇓P **P 17 17 53.0 +0.2**
baz=52,SNR=28
ZALV Zalesovo Beam 52.66 312 P **P 17 17 52.1 -0.6**
comp=Z,2.0nm,0.4s,mb4.5,baz=48,slow=6.6,SNR=14
ZALV ScP ScP 17 22 51.6 -0.6
comp=Z,0.9nm,0.7s,baz=98,slow=4.4,SNR=3.9
NVS Novosibirsk 52.81 314 ⇓*i*P **P 17 17 53.5 -0.4**
NVS *e* pP 17 18 12.9 +0.7
NVS pmax pmax
comp=E,14nm,1.7s
NVS pmax pmax
comp=Z,24nm,1.7s,mb5.0
116A Eloy 52.86 83 ⇓P **P 17 17 54.7 +0.1**
baz=53
Y18A Canyon Day Jun 53.06 80 ⇓P **P 17 17 56.4 +0.4**
baz=53,SNR=11
X19A St. Johns 53.08 79 ⇓P **P 17 17 56.2 +0.1**
baz=53,SNR=20
Z17A San Carlos Hig 53.12 81 ⇓P **P 17 17 57.1 +0.6**
baz=53,SNR=5.7
SDCO Great Sand Dun 53.16 74 *e*P **P 17 17 56.7 0.0**
comp=Z,3.0nm,0.6s,mb4.5
SUMG Summit 53.23 13 *e*P **P 17 17 57.8 +1.1**
comp=Z,8.2nm,0.8s,mb4.8
216A Three Points, 53.40 83 ⇑P **P 17 17 58.7 +0.2**
baz=53
Y19A Nutrioso 53.42 80 ⇑P **P 17 17 59.0 +0.4**
baz=53,SNR=12
117A Oracle 53.45 82 ⇑P **P 17 17 58.9 0.0**
baz=53,SNR=14
Z18A Geronimo 53.53 81 ⇓P **P 17 17 59.8 +0.4**
baz=53
TUC Tucson 53.60 82 *e*P **P 17 18 00.2 +0.2**
TUC pmax pmax
comp=Z,36nm,1.2s,mb5.3
TUC Tucson 53.60 82 *e*P **P 17 18 00.2 +0.2**
comp=Z,36nm,1.2s,mb5.3
LZH Lanzhou 53.84 284 *e*P **P 17 18 03.0 +1.3**
LZH PP PP 17 20 06.1 +2.9
LZH S **S 17 25 31.3 +0.3**
LZH SS SS 17 29 11.0 -1.3
LZH AMB AMB
comp=Z,44nm,1.2s,mb5.4
LZH AMB AMB
comp=Z,170nm,4.8s
LZH LR LR
comp=E,230nm,14.0s
LZH LR LR
comp=Z,440nm,15.0s
Z19A T-Link Ranch, 53.86 80 ⇓P **P 17 18 02.2 +0.4**
baz=54,SNR=5.2
118A Homack Ranch, 53.88 81 ⇑P **P 17 18 02.1 +0.1**
baz=54,SNR=36
217A Green Valley 53.95 83 ⇓P **P 17 18 02.4 -0.1**
baz=54,SNR=6.7
GTA Gaotai 54.03 290 ⇓P **P 17 18 03.6 +0.6**
GTA S **S 17 25 36.5 +3.1**
GTA AMB AMB
comp=Z,16nm,0.7s,mb5.2
GTA AMB AMB
comp=Z,108nm,5.1s
GTA LR LR
comp=N,117nm,17.4s
GTA LR LR
comp=E,153nm,17.4s
GTA LR LR
comp=Z,122nm,17.4s
119A Ashpeak Ranch, 54.20 81 ⇑P **P 17 18 04.7 +0.4**
baz=54,SNR=18
218A Dragoon 54.29 82 ⇑P **P 17 18 05.1 +0.1**
baz=54,SNR=16
ECSD EROS,Sioux Fal 54.37 63 *e*P **P 17 18 02.8 -2.6**
comp=Z,3.5nm,0.4s,mb4.7
EYMN Ely 54.37 56 *e*P **P 17 18 04.2 -1.2**
comp=Z,23nm,1.0s,mb5.2
LAZ Ladron 54.41 78 *e*P **P 17 18 06.3 +0.5**
ANMO Albuquerque 54.45 77 P **P 17 18 06.0 -0.1**
comp=Z,4.2nm,0.8s,mb4.5,baz=304,slow=8.1,SNR=9.1
ANMO pP pP 17 18 23.5 -1.1
comp=Z,2.7nm,1.0s,baz=305,slow=12,SNR=3.0
ANMO sP sP 17 18 32.5 -0.2
comp=Z,3.2nm,0.8s,baz=316,slow=10.0,SNR=3.7
ANMO Albuquerque 54.45 77 P **P 17 18 06.0 -0.1**
ANMO *PP pP 17 18 23.5 -1.1
ANMO *SP sP 17 18 32.6 -0.1
ANMO pmax pmax
comp=Z,4.0nm,0.8s
ANMO Albuquerque 54.45 77 *e*P **P 17 18 05.9 -0.2**
comp=Z,8.2nm,1.1s,mb4.7
LENM Lemitar 54.67 78 *e*P **P 17 18 07.8 +0.1**
318A Bisbee 54.69 83 ⇑P **P 17 18 07.8 -0.1**
baz=55,SNR=12
219A White Tail Can 54.75 81 ⇑P **P 17 18 08.5 +0.1**
baz=55,SNR=20
LPM Los Pinos Moun 54.77 78 *e*P **P 17 18 08.3 -0.2**
LPM *e*pP pP 17 18 28.6 +1.7
BNM Barren Site 54.89 78 *e*P **P 17 18 09.7 +0.4**
BNM *e* 17 18 36.4
319A Douglas 55.17 82 ⇓P **P 17 18 11.4 0.0**
baz=55,SNR=17
CBKS Cedar Bluff 55.84 69 *e*P **P 17 18 15.0 -1.1**
CBKS pmax pmax
comp=Z,22nm,0.8s,mb5.2
CBKS Cedar Bluff 55.84 69 *e*P **P 17 18 15.0 -1.1**
comp=Z,22nm,0.8s,mb5.2
COWI Conover 56.80 56 *e*P **P 17 18 21.6 -1.2**
comp=Z,7.8nm,0.7s,mb4.8
AMTX Amarillo 57.36 74 *e*P **P 17 18 26.5 -0.4**
comp=Z,14nm,0.5s,mb5.2
ARCES ARCESS Array B 57.41 349 P **P 17 18 26.7 0.0**
comp=Z,3.7nm,1.0s,mb4.3,baz=21,slow=7.6,SNR=10
ARCES LR LR 17 41 36.5
comp=Z,92nm,21.1s,baz=252,slow=34
CD2 Chengdu 57.44 280 P **P 17 18 27.4 -0.1**
CD2 AP pP 17 18 44.8 -1.3
CD2 PCP PcP 17 19 21.3 +0.8
CD2 PP PP 17 20 36.3 +0.9
CD2 S **S 17 26 15.8 -3.2**
CD2 SCS ScS 17 28 07.3 -2.8
CD2 SS SS 17 30 06.1 -3.0
CD2 AMB AMB
comp=Z,20nm,1.2s,mb5.0
CD2 AMB AMB
comp=Z,40nm,5.8s
CD2 LR LR
comp=N,220nm,13.2s
CD2 LR LR
comp=E,340nm,14.4s
CD2 LR LR
comp=Z,260nm,13.2s
KURK Kurchatov 57.65 312 P **P 17 18 28.2 -0.5**
comp=Z,140nm,0.6s,SNR=19
KURK Kurchatov 57.65 312 *e*P **P 17 18 28.5 -0.2**
KURK *e*PP pP 17 18 45.4 -1.9
KURK pmax pmax
comp=Z,32nm,1.0s,mb5.3
KURK Kurchatov 57.65 312 *e*P **P 17 18 28.5 -0.1**
comp=Z,32nm,1.0s,mb5.3
KURK *e*pP pP 17 18 45.4 -1.9
WMQ Urumqi 57.86 301 P **P 17 18 30.9 +0.6**
WMQ PCP PcP 17 19 22.0 0.0
WMQ *e*S **S 17 26 25.0 +0.9**
WMQ AMB AMB
comp=Z,14nm,0.9s,mb5.0
WMQ AMB AMB
comp=Z,140nm,3.8s
WMQ LR LR
comp=N,476nm,28.7s
WMQ LR LR
comp=E,293nm,30.2s
WMQ LR LR
comp=Z,274nm,22.8s
JFWS Jewell Farm 58.37 60 *e*P **P 17 18 32.1 -1.8**
JFWS pmax pmax
comp=Z,20nm,0.6s,mb5.3
JFWS Jewell Farm 58.37 60 *e*P **P 17 18 32.1 -1.8**
comp=Z,20nm,0.6s,mb5.3
MK31 Makanchi Array 58.60 307 *i* P **P 17 18 34.7 -0.7**
MK31 pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
MKAR Makanchi Array 58.60 307 P **P 17 18 34.9 -0.5**
comp=Z,5.7nm,0.4s,mb4.9,baz=52,slow=6.5,SNR=35
MKAR pP pP 17 18 53.3 -0.8
comp=Z,7.2nm,0.8s,baz=53,slow=8.1,SNR=6.6
MKAR LR LR 17 44 51.2
comp=Z,79nm,20.1s,baz=251,slow=37
MKAR Makanchi Array 58.60 307 P **P 17 18 34.9 -0.5**
MKAR *PP pP 17 18 53.3 -0.8
MKAR Makanchi Array 58.60 307 P **P 17 18 34.9 -0.5**
MKAR pP pP 17 18 53.3 -0.8
MKAR LR LR 17 44 51.2
WMOK Wichita Mounta 59.18 72 *e*P **P 17 18 38.9 -0.7**
WMOK *e*PP pP 17 18 58.4 +0.1
WMOK pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
WMOK Wichita Mounta 59.18 72 *e*P **P 17 18 38.9 -0.7**
comp=Z,7.6nm,0.8s,mb4.8
WMOK *e*pP pP 17 18 58.4 +0.1
VOSK Vostochnaya 59.57 318 P **P 17 18 41.9 -0.1**
VOSK pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
BVA0 Borovoye Array 59.60 318 P **P 17 18 42.6 +0.4**
BVA0 pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
TXAR Lajitas Array 60.05 80 P **P 17 18 45.5 -0.1**
comp=Z,13nm,0.6s,mb5.2,baz=304,slow=5.4,SNR=144
TXAR pP pP 17 19 04.5 +0.1
comp=Z,3.2nm,0.5s,baz=298,slow=5.5,SNR=3.6
TXAR sP sP 17 19 12.4 0.0
comp=Z,12nm,0.9s,baz=285,slow=4.9,SNR=5.1
TXAR ScP ScP 17 23 23.0 -2.2
comp=Z,0.4nm,0.5s,baz=279,slow=2.1,SNR=3.8

TXAR					LR	LR	17 40 58.8		
	comp=Z,54nm,19.6s,baz=185,slow=32								
TXAR	**Lajitas Array**	**60.05**	**80**	P		**P**	**17 18 45.5**	**-0.1**	
TXAR				*PP		pP	17 19 04.5	+0.1	
TXAR				*SP		sP	17 19 12.4	-0.1	
SVE	**Sverdlovsk**	**60.43**	**326**	*eP*		**P**	**17 18 48.1**	**+0.3**	
SVE				pmax	pmax				
	comp=Z,12nm,0.7s,mb5.0								
SCHQ	**Schefferville**	**60.58**	**37**	P		**P**	**17 18 48.7**	**-0.2**	
	comp=Z,9.4nm,0.4s,mb5.1,baz=330,slow=6.6,SNR=12								
SCHQ				LR		LR	17 43 27.2		
	comp=Z,109nm,21.7s,baz=167,slow=34								
CCM	**Cathedral Cave**	**61.20**	**64**	*eP*		**P**	**17 18 50.9**	**-2.5**	
CCM				pmax	pmax				
	comp=Z,5.0nm,0.4s,mb4.9								
CCM	**Cathedral Cave**	**61.20**	**64**	*eP*		**P**	**17 18 50.9**	**-2.5**	
	comp=Z,4.6nm,0.4s,mb4.9								
ARU	**Arti**	**61.45**	**327**	P		**P**	**17 18 55.5**	**+0.8**	
	comp=Z,168nm,0.5s,SNR=7.3								
ARU	**Arti**	**61.45**	**327**	*d iP*		**P**	**17 18 55.7**	**+1.0**	
ARU				*e*PP		pP	17 19 14.5	+1.0	
ARU				*e*			17 19 36.9		
ARU				*e*			17 21 10.0		
ARU				*e*S		**S**	**17 27 13.6**	**+3.7**	
ARU				pmax	pmax				
	comp=Z,15nm,0.7s,mb5.1								
ARU	**Arti**	**61.45**	**327**	*eP*		**P**	**17 18 55.4**	**+0.7**	
	comp=Z,8.4nm,0.5s,mb5.0								
JCT	**Junction City**	**61.58**	**76**	*eP*		**P**	**17 18 54.9**	**-1.1**	
JCT				pmax	pmax				
	comp=Z,14nm,0.9s,mb5.0								
JCT	**Junction City**	**61.58**	**76**	*eP*		**P**	**17 18 54.9**	**-1.1**	
	comp=Z,14nm,0.9s,mb5.0								
KMI	**Kunming**	**62.20**	**276**	P		**P**	**17 19 00.6**	**+0.3**	
KMI				PP		PP	17 21 20.3	+2.7	
KMI				S		**S**	**17 27 18.8**	**-1.5**	
KMI				SS		SS	17 31 22.8	-1.2	
KMI				AMB		AMB			
	comp=Z,6.0nm,1.4s,mb4.4								
KMI				AMB		AMB			
	comp=Z,47nm,3.6s								
KMI				LR		LR			
	comp=N,167nm,11.2s								
KMI				LR		LR			
	comp=E,175nm,12.8s								
KMI				LR		LR			
	comp=Z,158nm,17.4s								
OLIL	**Olney**	**62.46**	**62**	*eP*		**P**	**17 19 00.7**	**-1.1**	
	comp=Z,23nm,0.8s,mb5.3								
SADO	**Sadowa**	**62.75**	**52**	P		**P**	**17 19 02.5**	**-1.1**	
	baz=324,slow=8.8								
ACSO	**Alum Creek Sta**	**64.12**	**57**	*eP*		**P**	**17 19 11.2**	**-1.6**	
	comp=Z,13nm,0.7s,mb4.9								
WVT	**Waverly**	**64.48**	**64**	*eP*		**P**	**17 19 13.9**	**-1.3**	
WVT				pmax	pmax				
	comp=Z,12nm,0.9s,mb4.7								
WVT	**Waverly**	**64.48**	**64**	*eP*		**P**	**17 19 13.9**	**-1.3**	
	comp=Z,12nm,0.9s,mb4.7								
TKM2	**Tokmak 2**	**64.69**	**308**	*eP*		**P**	**17 19 16.3**	**-0.1**	
TKM2				*e*PP		pP	17 19 35.5	+0.1	
TKM2				pmax	pmax				
	comp=Z,12nm,1.1s,mb4.6								
TKM2	**Tokmak 2**	**64.69**	**308**	*eP*		**P**	**17 19 16.3**	**-0.1**	
	comp=Z,12nm,1.1s,mb4.6								
TKM2				*e*pP		pP	17 19 35.5	+0.1	
OXF	**Oxford**	**64.77**	**66**	*eP*		**P**	**17 19 15.9**	**-1.2**	
OXF				pmax	pmax				
	comp=Z,89nm,0.9s,mb5.6								
OXF	**Oxford**	**64.77**	**66**	*eP*		**P**	**17 19 15.9**	**-1.2**	
	comp=Z,90nm,0.9s,mb5.6								
BINY	**Binghamton**	**66.19**	**52**	*eP*		**P**	**17 19 25.1**	**-1.0**	
	comp=Z,22nm,0.5s,mb5.2								
SWET	**Sewanee**	**66.20**	**63**	*eP*		**P**	**17 19 24.4**	**-1.9**	
SSPA	**Standing Stone**	**66.43**	**54**	*eP*		**P**	**17 19 26.5**	**-1.2**	
	comp=Z,8.9nm,0.6s,mb4.8								
AKTK	**Aktyubinsk**	**66.47**	**323**	P		**P**	**17 19 28.6**	**+0.9**	
AKTK				pP		pP	17 19 47.4	+0.6	
AKTO	**Aktyubinsk**	**66.47**	**323**	P		**P**	**17 19 28.6**	**+0.9**	
	comp=Z,17nm,0.5s,mb5.1,baz=56,slow=7.5,SNR=82								
AKTO				pP		pP	17 19 47.4	+0.6	
	comp=Z,10nm,0.7s,baz=59,slow=5.7,SNR=6.6								
AB31	**Akbulak array**	**66.69**	**321**	P		**P**	**17 19 29.8**	**+0.6**	
AB31				pmax	pmax				
	comp=Z,6.0nm,0.5s,mb4.7								
KK31	**Karatay Array**	**67.00**	**311**	*i* P		**P**	**17 19 31.3**	**+0.1**	
KK31				pmax	pmax				
	comp=Z,7.0nm,0.5s,mb4.8								
TKL	**Tuckaleechee C**	**67.06**	**61**	P		**P**	**17 19 30.6**	**-1.1**	
	comp=Z,12nm,0.9s,mb4.7,baz=271,slow=3.1,SNR=6.6								
NB2	**NORSAR Subarra**	**67.07**	**353**	P		**P**	**17 19 30.8**	**-0.6**	
	comp=Z,1.6nm,0.6s,mb4.0,baz=10,slow=6.5								
NOA	**NORSAR Array B**	**67.07**	**353**	P		**P**	**17 19 30.6**	**-0.8**	
	comp=Z,1.9nm,0.7s,mb4.0,baz=9.8,slow=6.4,SNR=9.9								
HFS	**Hagfors**	**67.78**	**352**	P		**P**	**17 19 35.3**	**-0.6**	
	comp=Z,2.4nm,0.5s,mb4.2,baz=76,slow=6.1,SNR=6.2								
KONO	**Kongsberg**	**68.56**	**354**	*i* P		**P**	**17 19 40.8**	**0.0**	
OBN	**Obninsk**	**68.93**	**338**	*eP*		**P**	**17 19 42.1**	**-1.1**	
OBN				*e*		pP	17 20 03.8	+1.5	
OBN				pmax	pmax				
	comp=Z,49nm,2.5s,mb4.9								
OBN				MLR		MLR			
	comp=Z,100nm,18.0s								
CMAR	**Chiang Mai Arr**	**69.50**	**274**	P		**P**	**17 19 47.3**	**+0.1**	
	comp=Z,3.2nm,0.8s,mb4.2,baz=27,slow=6.5,SNR=14								
CMAR				pP		pP	17 20 04.8	-1.6	
	comp=Z,4.0nm,0.9s,baz=27,slow=7.3,SNR=6.4								
CMAR				LR		LR	17 51 08.9		
	comp=Z,123nm,18.1s,baz=253,slow=37								
CMAR	**Chiang Mai Arr**	**69.50**	**274**	P		**P**	**17 19 47.3**	**+0.1**	
CMAR				*PP		pP	17 20 04.8	-1.6	
TAPN	**Taplejung**	**69.67**	**288**	*eP*		**P**	**17 19 48.0**	**-0.1**	
ODAN	**Odare**	**70.22**	**288**	*eP*		**P**	**17 19 51.9**	**+0.3**	
	comp=Z,14nm,0.5s,mb5.1								
GUN	**Gumba**	**70.32**	**290**	*eP*		**P**	**17 19 52.9**	**+0.8**	
	comp=Z,38nm,0.4s,mb5.6								
JIRN	**Jiri**	**70.33**	**290**	*eP*		**P**	**17 19 52.2**	**0.0**	
RAMN	**Ramite**	**70.62**	**289**	*eP*		**P**	**17 19 54.4**	**+0.4**	
	comp=Z,50nm,0.5s,mb5.6								
KKN	**Kakani**	**70.76**	**291**	*eP*		**P**	**17 19 55.6**	**+0.8**	
	comp=Z,58nm,0.9s,mb5.4								
PKIN	**Phulchoki**	**70.85**	**290**	*eP*		**P**	**17 19 55.7**	**+0.3**	
	comp=Z,23nm,0.5s,mb5.2								
GKN	**Gorkha**	**70.97**	**291**	*eP*		**P**	**17 19 56.4**	**+0.3**	
	comp=Z,96nm,1.0s,mb5.6								
DMN	**Daman**	**71.00**	**291**	*eP*		**P**	**17 19 56.9**	**+0.6**	
	comp=Z,79nm,1.1s,mb5.5								
DANN	**Dangsing**	**71.22**	**292**	*eP*		**P**	**17 19 58.3**	**+0.7**	
	comp=Z,132nm,0.9s,mb5.8								
KOLN	**Koldanda**	**71.75**	**292**	*eP*		**P**	**17 20 01.2**	**+0.4**	
	comp=Z,43nm,0.8s,mb5.3								
KLP	**Kalpa**	**71.90**	**298**	*eP*		**P**	**17 20 01.8**	**+0.1**	
KLP				*e*S		pP	17 20 21.3	+0.4	
KLP				AML		AML	17 20 22.9		
	comp=N,39nm,0.9s								
KLP				AML		AML	17 20 25.1		
	comp=E,70nm,0.4s								
JOSI	**Joshimath**	**71.92**	**296**	*e*S		**P**	**17 20 05.0**	**+3.2**	
JOSI				AML		AML	17 20 33.4		
	comp=N,64nm,0.7s								
JOSI				AML		AML	17 20 35.5		
	comp=E,50nm,0.7s								
PMOR	**Pomariorio Ree**	**72.54**	**146**	*e*T			18 38 56.9		
	comp=E,17nm,0.2s								
SMLA	**Simla**	**72.81**	**298**	*i* P		**P**	**17 20 05.0**	**-2.1**	
SMLA				*i* S		x	17 20 24.7		
SMLA				*ex*		pP	17 20 27.2	+0.9	
	comp=N,48nm,0.4s								
SMLA				*ex*		x	17 20 28.3		
	comp=E,35nm,0.4s								
DDI	**Dehra Dun**	**72.94**	**297**	*ex*		**P**	**17 20 07.5**	**-0.3**	
EKA	**Eskdalemuir Ar**	**73.22**	**1**	P		**P**	**17 20 09.1**	**0.0**	
	comp=E,5.1nm,0.9s,mb4.4,baz=348,slow=3.6,SNR=6.2								
EKA				pP		pP	17 20 28.8	+0.4	
	comp=E,1.7nm,0.8s,baz=6.2,slow=7.2,SNR=1.8								
PPT	**Papeete**	**74.37**	**149**	*e*LR		LR	17 43 09.7		
	comp=E,164nm,25.0s								
TIAR	**Tiarei**	**74.44**	**149**	*e*T			18 41 18.1		
	comp=E,85nm,0.3s								
PAE	**Paea**	**74.46**	**149**	*e*T			18 41 17.3		
	comp=E,83nm,0.3s								
CMIG	**Matias Romero**	**74.49**	**82**	P		**P**	**17 20 17.2**	**+0.2**	
	comp=E,25nm,1.0s,mb4.9,baz=319,slow=5.1,SNR=19								
AKASG	**Malin Array Be**	**74.67**	**341**	P		**P**	**17 20 17.0**	**-0.6**	
	comp=E,2.1nm,0.4s,mb4.2,baz=19,slow=6.1,SNR=7.8								
AKASG				LR		LR	17 54 02.0		
	comp=E,39nm,18.8s,baz=10.0,slow=36								

SONA	**Sohna**	**75.07**	**297**	*e*S		x	17 20 34.4		
SONA				AML		AML	17 20 40.5		
	comp=N,8.5nm,0.5s								
SONA				AML		AML	17 20 43.5		
	comp=E,10nm,0.3s								
KUDL	**Kundal**	**75.48**	**297**	*e*S		pP	17 20 41.5	-0.6	
KUDL				AML		AML	17 20 43.1		
	comp=N,5.6nm,0.7s								
KHET	**Khetri**	**75.92**	**297**	*ex*		pP	17 20 43.0	-1.6	
KHET				AML		AML	17 20 45.5		
	comp=N,1.3nm,0.2s								
KHET				AML		AML	17 20 45.9		
	comp=E,1.5nm,0.2s								
CLL	**Collm**	**76.57**	**351**	*eP*		**P**	**17 20 30.0**	**+1.6**	
CTA	**Charters Tower**	**77.04**	**211**	*eP*		**P**	**17 20 30.6**	**-0.7**	
	comp=E,5.1nm,0.8s,mb4.3								
CTA				*e*		pP	17 20 49.3	-1.5	
CTA	**Charters Tower**	**77.04**	**211**	P		**P**	**17 20 30.7**	**-0.6**	
	comp=E,8.3nm,0.9s,mb4.5,baz=18,slow=6.4,SNR=8.9								
CTA				pP		pP	17 20 49.0	-1.8	
	comp=E,5.6nm,0.6s,baz=23,slow=7.3,SNR=4.7								
CTA	**Charters Tower**	**77.04**	**211**	*eP*		**P**	**17 20 30.6**	**-0.7**	
CTA				*e*		pP	17 20 49.3	-1.5	
CTA				pmax	pmax				
	comp=Z,5.0nm,0.8s								
BATI	**Baumata**	**77.81**	**236**	P		**P**	**17 20 35.3**	**-0.5**	
	comp=Z,22nm,0.7s,mb5.0,baz=105,slow=7.8,SNR=4.5								
BUR08	**Bucovina Ar. S**	**78.39**	**342**	*eP*		**P**	**17 20 38.8**	**+0.2**	
TRPA	**Tarpa**	**78.40**	**344**	*i* P		**P**	**17 20 39.9**	**+1.2**	
BURAR	**Bucovina Array**	**78.41**	**342**	*i* P		**P**	**17 20 39.0**	**+0.2**	
GERES	**GERESS Array B**	**78.93**	**350**	P		**P**	**17 20 42.0**	**+0.4**	
	comp=Z,0.4nm,0.5s,baz=22,slow=5.5,SNR=3.7								
GERES				pP		pP	17 20 59.9	-1.2	
	comp=Z,0.4nm,0.4s,baz=38,slow=5.0,SNR=2.2								
GERES				LR		LR	17 57 49.4		
	comp=Z,44nm,18.5s,baz=127,slow=37								
GERES	**GERESS Array B**	**78.93**	**350**	P		**P**	**17 20 42.0**	**+0.4**	
GERES				*PP		pP	17 20 59.9	-1.2	
VRI	**Vrincioaia**	**79.79**	**341**	*i* P		**P**	**17 20 43.9**	**-2.4**	
MLR	**Muntele Rosu**	**80.31**	**341**	*i* P		**P**	**17 20 50.5**	**+1.4**	
GZR	**Gura Zlata**	**81.01**	**343**	*i* P		**P**	**17 20 53.6**	**+0.7**	
WRAB	**Tennant Creek**	**81.30**	**222**	*i* P		**P**	**17 20 48.7**	**-5.9**	
TGUH	**Tegucigalpa,Un**	**81.48**	**78**	*eP*		**P**	**17 20 56.8**	**+0.9**	
	comp=Z,77nm,1.1s,mb5.4								
FITZ	**Fitzroy Crossi**	**83.58**	**230**	*eP*		**P**	**17 21 06.1**	**-0.4**	
	comp=Z,13nm,0.6s,mb4.9								
FITZ				*e*		pP	17 21 24.4	-1.8	
FITZ	**Fitzroy Crossi**	**83.58**	**230**	P		**P**	**17 21 06.1**	**-0.3**	
	comp=Z,7.4nm,0.6s,mb4.7,baz=14,slow=5.9,SNR=14								
FITZ				pP		pP	17 21 24.5	-1.6	
	comp=Z,4.9nm,0.6s,baz=355,slow=2.1,SNR=5.1								
MALT	**Malatya**	**83.82**	**330**	*eP*		**P**	**17 21 05.9**	**-1.8**	
MALT				pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.1								
MALT	**Malatya**	**83.82**	**330**	*eP*		**P**	**17 21 05.9**	**-1.8**	
	comp=Z,3.5nm,0.9s,mb4.2								
ASAR	**Alice Springs**	**84.82**	**221**	P		**P**	**17 21 12.1**	**-0.6**	
	comp=Z,4.4nm,0.9s,mb4.4,baz=23,slow=5.4,SNR=6.9								
ASAR				pP		pP	17 21 30.5	-1.9	
	comp=Z,1.7nm,0.7s,baz=20,slow=6.0,SNR=3.5								
MIB	**Mutribah**	**88.28**	**319**	*eP*		pP	17 21 48.6	-1.0	
	baz=319								
MIB				AMb		AMB	17 21 49.6		
	comp=Z,35nm,0.9s,mb5.4,baz=319								
UMR	**Umm Al-Rimmam**	**88.34**	**319**	*eP*		pP	17 21 48.8	-1.1	
	baz=319								
UMR				AMb		AMB	17 21 49.7		
	comp=Z,19nm,0.8s,mb5.2,baz=319								
RST	**Umm Al-Ruwaisa**	**88.68**	**319**	*eP*		pP	17 21 49.8	-1.7	
	baz=319								
RST				AMb		AMB	17 21 52.9		
	comp=Z,17nm,0.9s,mb5.1,baz=319								
RDF	**Al-Radifah**	**88.96**	**319**	*eP*		pP	17 21 51.6	-1.3	
	baz=319								
RDF				AMb		AMB	17 21 52.7		
	comp=Z,44nm,1.0s,mb5.4,baz=319								
STKA	**Stephens Creek**	**89.50**	**211**	*eP*		**P**	**17 21 35.0**	**-0.1**	
	comp=Z,6.0nm,0.8s,mb4.8								
STKA				*e*		pP	17 21 53.8	-1.2	
STKA	**Stephens Creek**	**89.50**	**211**	P		**P**	**17 21 34.8**	**-0.3**	
	comp=Z,8.1nm,0.8s,mb4.9,baz=354,slow=6.8,SNR=7.2								
STKA				pP		pP	17 21 53.3	-1.7	
	comp=Z,3.9nm,0.7s,baz=10,slow=7.3,SNR=2.7								
ROSC	**El Rosal**	**96.51**	**74**	LR		LR	18 10 16.9		
	comp=Z,51nm,18.6s,baz=152,slow=38								
TORD	**Torodi Ar. Bea**	**115.28**	**357**	PKP		PKPdf	17 27 18.4	-1.3	
	comp=Z,0.4nm,0.4s,baz=341,slow=2.8,SNR=8.2								
TORD				pPKP			17 27 37.9		
	comp=Z,0.2nm,0.4s,baz=342,slow=1.8,SNR=3.2								
TORD				PKKPbc		PKKPbc	17 37 58.0	+5.8	
	comp=Z,0.5nm,0.9s,baz=189,slow=2.6,SNR=5.0								
TORD	**Torodi Ar. Bea**	**115.28**	**357**	PKP		PKPdf	17 27 18.4	-1.3	
TORD				pPKP			17 27 37.9		
TORD				PKKPbc		PKKPbc	17 37 58.0	+5.8	
DBIC	**Dimbokro**	**121.67**	**4**	PKP		PKPdf	17 27 31.1	-1.0	
	comp=Z,1.3nm,0.5s,baz=273,slow=0.4,SNR=3.6								
CPUP	**Villa Florida**	**131.01**	**81**	SKPbc		SKPbc	17 31 05.4	-1.9	
	comp=Z,4.2nm,0.6s,baz=295,slow=2.8,SNR=12								
PLCA	**Paso Flores**	**132.51**	**105**	PKP		PKPdf	17 27 52.4	+0.7	
	comp=Z,1.7nm,0.8s,baz=317,slow=2.3,SNR=3.3								
PLCA				SKPbc		SKPbc	17 31 13.0	+0.9	
	comp=Z,5.7nm,1.1s,baz=349,slow=3.1,SNR=5.8								
MAW	**Mawson**	**145.91**	**218**	*eP*		PKPdf	17 28 15.5	+0.3	
	comp=Z,5.5nm,0.6s								
MAW				*e*			17 28 34.8		
MAW	**Mawson**	**145.91**	**218**	PKPbc		PKPbc	17 28 15.8	-0.2	
	comp=Z,7.1nm,0.6s,baz=92,slow=5.1,SNR=33								
MAW				pPKPbc		pPKPbc	17 28 34.2	-2.3	
	comp=Z,3.6nm,0.6s,baz=77,slow=6.2,SNR=4.6								
BOSA	**Boshof**	**149.58**	**309**	PKPbc		PKPbc	17 28 27.2	0.0	
	comp=Z,4.4nm,0.5s,baz=35,slow=4.4,SNR=13								
BOSA				pPKPbc		pPKPbc	17 28 47.1	-0.7	
	comp=Z,6.9nm,0.8s,baz=37,slow=0.9,SNR=4.3								
SYO	**Syowa Base**	**154.24**	**213**	*i eP*		PKPdf	pPKPdf	17 28 48.5	-0.5
SYO	**Syowa Base**	**154.24**	**213**	*i eP*		PKPab	PKPab	17 28 51.2	+0.3

*ISCJB **20** 17:13:33.2±1.0,261S±008×1393E±02, h33km, mb3.9/5, MS3.7/3, Error ellipse: s-maj=25.6km s-min=10.6km az=173.7*

*IDC **20** 17:13:34.4±5.2, 263S×139.17E, h26km±34km, mb3.7/6, mb1 3.9/8, mb1mx3.8/15, mbtmp3.7/8, ML4.0/3, MS3.7/5, Ms1 3.7/5, ms1mx3.3/27, Error ellipse: s-maj=46.0km s-min=14.1km az=89.0*

*NEIC **20** 17:13:36.1±6.4, 262S×139.26E, h42km±62km, mb4.0/2, Error ellipse: s-maj=35.5km s-min=19.9km az=222.0*

ISC 20 17:13:33.7±4.2, 261S±008×1393E±02, h21km±30km, n20, σ0s82/17, mb3.9/5, MS3.7/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GUMO	**Guam**	**17.03**	**19**	LR		LR	17 23 33.6	
	comp=Z,64nm,21.6s,baz=229,slow=35							
BATI	**Baumata**	**17.22**	**243**	P		**Pn**	**17 17 33.0**	**0.0**
	1.1nm,0.3s,baz=141,slow=6.5,SNR=2.5							
WRAB	**Tennant Creek**	**17.87**	**195**	*eP*		**Pn**	**17 17 42.1**	**+0.9**
	7.2nm,0.6s							
WB2	**Warramunga Arr**	**17.88**	**195**	*eP*		**Pn**	**17 17 41.0**	**-0.2**
WRA	**Warramunga Arr**	**17.88**	**195**	P		**Pn**	**17 17 40.5**	**-0.8**
	0.7nm,0.3s,baz=15,slow=12,SNR=32							
WRA				S		**Sn**	**17 20 50.3**	**-10**
	0.2nm,0.3s,baz=12,slow=21,SNR=7.6							
CTA	**Charters Tower**	**18.67**	**159**	*eP*		**Pn**	**17 17 54.9**	**+4.0**
	2.1nm,0.8s							
CTA	**Charters Tower**	**18.67**	**159**	P		**Pn**	**17 17 51.4**	**+0.5**
	0.1nm,0.3s,baz=346,slow=12,SNR=2.6							
CTA				LR		LR	17 25 33.8	
	comp=Z,329nm,20.3s,baz=151,slow=38							
CTAO	**Charters Tower**	**18.67**	**159**	*eP*		**Pn**	**17 17 51.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**20.37**	**220**	*eP*		**P**	**17 18 11.6**	**+2.4**
	12nm,1.3s							
FITZ	**Fitzroy Crossi**	**20.37**	**220**	P		**P**	**17 18 08.6**	**-0.5**
	3.3nm,0.8s,baz=45,slow=14,SNR=8.8							
FITZ				LR		LR	17 26 14.0	
	comp=Z,91nm,21.4s,MS3.1,baz=217,slow=37							
ASAR	**Alice Springs**	**21.56**	**193**	P		**P**	**17 18 21.2**	**-0.7**
	1.5nm,0.5s,mb3.7,baz=17,slow=11,SNR=51							
ASAR				S		**S**	**17 22 20.2**	**+0.1**
	1.2nm,0.8s,baz=19,slow=26,SNR=3.8							
STKA	**Stephens Creek**	**29.20**	**176**	LR		LR	17 32 31.7	
	comp=Z,286nm,19.6s,MS3.9,baz=217,slow=39							
CMAR	**Chiang Mai Arr**	**44.85**	**299**	P		**P**	**17 21 46.0**	**-0.8**
	0.8nm,0.6s,mb3.7,baz=117,slow=6.1,SNR=4.8							
LSA	**Lhasa**	**56.07**	**309**	*eP*		**P**	**17 23 12.5**	**+1.0**

SONM	**Songino Array**	**57.86**	**334**	P		**P**	**17 23 24.5**	**+0.7**	
	0.7nm,0.6s,mb3.9,baz=159,slow=6.5,SNR=4.2								
RAR	**Rarotonga**	**62.07**	**113**	LR		LR	17 45 15.6		
	comp=Z,165nm,19.2s,MS4.2,baz=131,slow=31								
MKAR	**Makanchi Array**	**70.03**	**322**	P		**P**	**17 24 44.1**	**+0.1**	
	1.9nm,0.7s,mb4.2,baz=106,slow=8.9,SNR=10								
ZALV	**Zalesovo Beam**	**72.12**	**330**	P		**P**	**17 24 55.3**	**-1.2**	
	4.2nm,0.7s,mb3.9,baz=132,slow=6.6,SNR=3.8								
TORD	**Torodi Ar. Bea**	**136.74**	**286**	PKP		PKPdf	17 32 54.8	-0.8	
	0.5nm,0.7s,baz=59,slow=1.2,SNR=2.8								
DBIC	**Dimbokro**	**144.00**	**278**	PKhKP			17 33 05.2		
	4.1nm,0.8s,baz=47,slow=4.1,SNR=3.5								

IDC 20 17:21:15.6±2.5, 1802S×17331W, h0km, mb4.0/3, mb1 4.4/4, mb1mx4.0/18, mbtmp4.1/4, ML2.4/1, MS3.7/2, Ms1 3.8/2, ms1mx2.9/34, Error ellipse: s-maj=104.8km s-min=26.0km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.34**	**20**	Pn		Pn	17 22 23.4	+0.6
	12nm,0.3s,baz=225,slow=10.0,SNR=20							
AFI				Sn		Sn	17 22 59.6	-15
	94nm,0.3s,baz=49,slow=23,SNR=20							
RAO	**Raoul Island**	**11.95**	**200**	LR		LR	17 27 10.4	
	comp=Z,171nm,19.7s,baz=280,slow=30							
WRA	**Warramunga Arr**	**49.38**	**259**	P		P	17 30 07.1	-0.2
	0.2nm,0.3s,baz=96,slow=7.6,SNR=9.5							
ASAR	**Alice Springs**	**49.43**	**254**	P		P	17 30 07.8	+0.2
	5.2nm,0.5s,baz=88,slow=8.6,SNR=163							
NVAR	**Mina Array Bea**	**76.22**	**41**	P		P	17 33 06.0	+0.1
	1.0nm,0.7s,baz=239,slow=10,SNR=4.3							
LPAZ	**La Paz**	**98.84**	**110**	LR		LR	18 12 19.2	
	comp=Z,52nm,18.4s,baz=314,slow=31							

*TAP **20** 17:38:24.6, 2456N×122.44E, h16km, ML2.8, C*

*JMA **20** 17:38:24.4±0.1, 2494N×12256E, h10km, M2.3*

*ISCJB **20** 17:38:25.8±0.5, 2458N±005×12245E±002, h17km±9km, Error ellipse: s-maj=8.2km s-min=3.6km az=7.7*

ISC 20 17:38:25.6±0.5, 2457N±005×12244E±002, h15km±4km, n19, σ0s77/32, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EGS		**0.53**	**301**	*eP*		**Pg**	**17 38 35.3**	**-0.9**
	baz=303							
EGS				*e*S		**Sg**	**17 38 44.3**	**+1.0**
	baz=303							
YOJ	**Yonaguni jima**	**0.53**	**102**	P		**Pg**	**17 38 36.5**	**+0.4**
YOJ				*e*S		**Sg**	**17 38 44.9**	**+1.6**
TWC	**Suao**	**0.54**	**274**	P		**Pg**	**17 38 35.2**	**-1.0**
	baz=276							
TWC				*e*S		**Sg**	**17 38 43.9**	**+0.6**
	baz=276							
TWB1	**Santiao Chiao**	**0.60**	**317**	P		**Pg**	**17 38 37.3**	**0.0**
	baz=318							
TWB1				*e*S		**Sg**	**17 38 44.8**	**-0.4**
	baz=318							
ENA	**Nanau**	**0.65**	**257**	P		**Pg**	**17 38 37.5**	**-0.8**
	baz=259							
ENA				S		**Sg**	**17 38 46.6**	**-0.3**
	baz=259							
TWE	**Neicheng**	**0.72**	**282**	P		**Pg**	**17 38 38.9**	**-0.6**
	baz=284							
TWE				S		**Sg**	**17 38 49.2**	**+0.1**
	baz=284							
NWF	**Wu-fen Sh

	3.1nm,0.8s,mb4.3,baz=230,slow=11,SNR=9.8							
KSRS	Korea Array	75.96	316	LR	LR		18 18 11.8	
	comp=Z,33nm,20.9s,MS3.6,baz=240,slow=30							
WVOR	Wild Horse Val	76.51	39	*e*P	P		17 52 16.3	-1.8
	7.3nm,1.3s,mb4.5							
HLID	Hailey	79.71	39	*e*P	P		17 52 36.0	+0.2
	5.0nm,1.0s,mb4.4							
TXAR	Lajitas Array	80.75	56	P	P		17 52 42.5	+0.6
	2.1nm,1.0s,mb4.0,baz=217,slow=6.0,SNR=10							
TXAR				LR	LR		18 21 45.7	
	comp=Z,53nm,18.0s,MS3.9,baz=185,slow=31							
TXAR	Lajitas Array	80.75	56	P	P		17 52 42.5	+0.6
TXAR				LR	LR		18 21 45.7	
MCMT	McKenzie Canyo	81.34	39	*e*P	P		17 52 45.0	+0.4
PDAR	Pinedale Array	82.36	42	P	P		17 52 50.0	0.0
	1.4nm,0.8s,mb3.9,baz=209,slow=2.7,SNR=8.1							
PDAR				LR	LR		18 23 51.4	
	comp=Z,75nm,18.4s,MS4.1,baz=250,slow=32							
MAW	Mawson	87.79	199	P	P		17 53 17.4	+0.5
	4.0nm,0.6s,mb4.8,baz=143,slow=7.7,SNR=13							
YKA	Yellowknife Ar	90.12	23	LR	LR		18 26 43.0	
	comp=Z,57nm,21.6s,MS4.0,baz=200,slow=31							
ULM	Lac du Bonnet	94.01	39	LR	LR		18 30 51.2	
	comp=Z,90nm,21.9s,MS4.2,baz=327,slow=32							
MORC	Moravsky Berou	144.47	348	⇓*i*P	PKPdf		18 00 13.3	+9.0
PLOR	Plostina	145.14	335	⇓*i*P	PKPbc		18 00 04.1	-1.0
BAIF	Baives	145.32	2	*e*PKP1	PKPbc		18 00 06.6	+1.0
VYHS	Vyhne	145.38	345	*e*PKP	PKPdf		18 00 05.8	-0.1
VYHS	Vyhne	145.38	345	*e*P	PKPbc		18 00 05.8	0.0
GRA1	Grafenberg Arr	145.51	354	*e*PKP	PKPdf		18 00 06.4	+0.3
GRF	Grafenberg Arr	145.51	354	*e*PKP	PKPdf		18 00 06.4	+0.3
MLR	Muntele Rosu	145.72	335	⇓*i*P	PKPdf		18 00 04.4	-2.2
KHC	Kasperske Hory	145.78	352	*e*P	PKPdf		18 00 05.0	-1.6
MODS	Modra-Piesok	145.85	347	*e*PKP	PKPdf		18 00 08.2	+1.5
MODS	Modra-Piesok	145.85	347	*e*P	PKPdf		18 00 08.3	+1.6
BR131	Keskin Array S	145.97	321	*e*PKPdf	PKPdf		18 00 07.2	0.0
GERES	GERESS Array B	146.05	351	PKPbc	PKPbc		18 00 06.7	-1.2
	0.6nm,0.4s,baz=38,slow=2.4,SNR=9.9							
GZR	Gura Zlata	147.00	339	⇑*i*P	PKPdf		18 00 07.6	-1.2
CDF	Champ du Feu	147.01	359	*e*PKP1	PKPbc		18 00 10.4	-0.3
	15nm,1.1s							
BZS	Buzias	147.20	340	⇑*i*P	PKPdf		18 00 09.8	+0.7
PKSM	Moragy	147.55	344	⇑*i*P	PKPdf		18 00 11.5	+1.9
SSF	Saint Saulge	148.28	4	*e*PKP1	PKPbc		18 00 13.6	-0.6
AVF	Avril sur Loir	148.54	4	*e*PKP1	PKPbc		18 00 13.9	-1.0
LPL	La Plagne	149.91	360	*e*PKP1	PKPbc		18 00 19.0	+0.6
LPG	La Plagne	149.93	359	*e*PKP1	PKPbc		18 00 19.2	+0.8
	27nm,1.2s							
ORIF	Oris-en-Rattie	150.51	1	*e*PKP1	PKPbc		18 00 19.8	0.0
VIVF	Saint-Julien-l	150.54	2	*e*PKP1	PKPbc		18 00 19.9	0.0
MBDF	Montbardon	150.70	359	*e*PKP1	PKPbc		18 00 20.4	+0.1
	6.7nm,0.9s							
LASF	Ste Croix	151.27	4	*e*PKP1	PKPbc		18 00 21.7	+0.1
	6.4nm,0.9s							
SMRF	Simiane la Rot	151.44	1	*e*PKP1	PKPbc		18 00 22.6	+0.6

NIED ***20*** *17:58:00, 44.90N×14.250E, h280km, Mw3.9 Best double couple: M0 7.39000×10^14 NP1:φs 184.00000°, δ54.00000°, λ73.00000°. NP2:φs 30.00000°, δ40.00000°, λ111.00000°.*

ISCJB ***20*** *17:58:44.0±0.3, 44.92N±0.005×14.256E±0.007, h290km±2km, mb3.6/15, Error ellipse: s-maj=8.5km s-min=7.4km az=39.3*

MOS ***20*** *17:58:43.9±1.0, 45.00N×14.249E, h290km, mb4.2/1, Error ellipse: s-maj=19.4km s-min=12.4km az=98.9*

JMA ***20*** *17:58:44.1±0.3, 44.94N×14.250E, h291km±2km, M4.1*

NEIC ***20*** *17:58:44.5±0.6, 44.98N×14.250E, h280km±6km, mb4.0/1, Error ellipse: s-maj=10.6km s-min=9.1km az=103.0*

IDC ***20*** *17:58:45.0±0.5, 45.01N×14.247E, h282km±5km, mb3.3/14, mb1 3.5/16, mb1mx3.4/23, mbtmp3.3/16, Error ellipse: s-maj=15.6km s-min=13.6km az=167.0*

ISC 20 17:58:44.9±0.3, 44.91N±0.005×14.256E±0.007, h285km±2km, n49,σ0 89/68, mb3.6/15, 17C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JSE	Soyaes	0.05	17	⇑P		Pn	17 59 21.2	+0.3
JSE				*e*S		S	17 59 49.9	+0.3
JWK2	Keihoku	0.62	311	⇑P		Pn	17 59 22.0	+0.1
JWK2				*e*S		S	17 59 50.3	-1.0
JSS	Shosan	0.72	225	⇑P		Pn	17 59 22.7	+0.3
ASAJ	Asahikawa	0.80	178	P		Pn	17 59 23.4	+0.6
	186nm,0.3s,baz=296,slow=6.0,SNR=1911							
ASAJ				S		S	17 59 53.4	+0.7
	baz=153,slow=33,SNR=7.5							
ASAJ	Asahikawa	0.80	178	⇑P		Pn	17 59 23.3	+0.6
ASAJ				*e*S		S	17 59 53.5	+0.8
ASAJ	Asahikawa	0.80	178	PN		Pn	17 59 23.4	+0.7
ASAJ				S		S	17 59 53.4	+0.7
ASAJ				pmax		pmax		
	comp=Z,186nm,0.3s							
JRR	Rishiri	0.92	285	⇑P		Pn	17 59 22.9	-0.2
JRR				*e*S		S	17 59 53.2	-0.2
JYG	Yagishiri	0.94	240	⇑P		Pn	17 59 23.3	0.0
JYG				*e*S		S	17 59 53.9	+0.2
JKK2	Kamakawa 2	1.05	173	⇑P		Pn	17 59 24.5	+0.7
JKK2				*e*S		S	17 59 55.7	+1.0
JMP	Maruseppu	1.07	147	⇑P		Pn	17 59 24.6	+0.7
JMP				*e*S		S	17 59 55.4	+0.5
JHR	Hokuryu	1.31	208	⇑P		Pn	17 59 25.8	+0.5
JTKR	Abashiri--Toko	1.35	134	⇑P		Pn	17 59 26.4	+0.9
JTKR				*e*S		S	17 59 56.2	+0.5
JFR	Furan	1.75	179	⇑P		Pn	17 59 28.5	+0.2
JFR				*e*S		S	18 00 02.7	-0.1
JAR	Ashorobuto	1.83	151	⇑P		Pn	17 59 29.7	+0.8
JAR				*e*S		S	18 00 03.8	-0.1
YSS	Yuzh-Sakhalins	2.05	4	*e*PN		Pn	17 59 30.0	-0.5
YSS				*e*S		S	18 00 01.0	-5.8
JSK	Shakotan	2.17	225	⇑P		Pn	17 59 31.6	0.0
JEW	Eniwo	2.22	202	⇑P		Pn	17 59 32.7	+0.5
JEW				*e*S		S	18 00 09.6	-0.2
JCH	Churui	2.37	166	⇑P		Pn	17 59 32.5	-1.0
JCH				*e*S		S	18 00 08.5	-3.6
JAK	Akkeshi	2.46	140	⇑P		Pn	17 59 33.7	-0.6
JAK				*e*S		S	18 00 11.3	-2.3
YUK	Yuzh-Kuril'sk	2.52	109	PN		Pn	17 59 36.0	+1.2
YUK				*e*S		S	18 00 15.5	+1.0
YUK				smax				
	comp=N,140nm,0.5s							
YUK				smax				
	comp=E,190nm,0.5s							
JNBK	Urakawa-nobuka	2.63	177	P		Pn	17 59 35.5	-0.5
JNBK				*e*S		S	18 00 14.1	-2.5
NEM2	Nemuro 2	2.76	123	P		Pn	17 59 36.2	-1.0
NEM2				*e*S		S	18 00 16.0	-2.8
ERM	Erimo	2.93	171	*e*PN		Pn	17 59 38.6	-0.2
JKB	Kayabe	3.22	201	⇑P		Pn	17 59 41.0	-0.9
MJAR	Matsushiro Arr	8.99	203	P		Pn	18 00 50.1	-0.4
	comp=E,0.4nm,0.3s,baz=11,slow=14,SNR=4.1							
KSRS	Korea Array	13.29	241	P		Pn	18 01 44.8	+1.5
	comp=E,0.3nm,0.3s,baz=52,slow=11,SNR=8.9							
ULN	Ulaanbaatar	24.54	290	*e*P		P	18 03 39.0	+0.2
ULN				pmax		pmax		
	comp=Z,7.0nm,1.3s,mb3.9							
ULN	Ulaanbaatar	24.54	290	*e*P		P	18 03 39.0	+0.2
	comp=Z,6.8nm,1.3s,mb3.9							
SONM	Songino Array	24.98	290	P		P	18 03 43.2	+0.4
	comp=Z,4.9nm,0.6s,mb4.1,baz=85,slow=8.8,SNR=29							
ZALV	Zalesovo Beam	37.66	305	P		P	18 05 31.8	-0.9
	comp=Z,0.3nm,0.3s,mb3.1,baz=65,slow=8.1,SNR=2.9							
ZALV				PcP		PcP	18 07 43.4	-0.1
	comp=Z,0.7nm,0.5s,baz=119,slow=1.9,SNR=4.3							
IMA2	Indian Mountai	39.59	35	*e*P		P	18 05 47.2	-1.3
MKAR	Makanchi Array	41.12	295	P		P	18 06 01.2	-0.1
	comp=Z,0.7nm,0.6s,mb3.1,baz=84,slow=9.7,SNR=6.8							
MKAR				PcP		PcP	18 07 53.9	-0.7
	comp=Z,0.3nm,0.7s,baz=69,slow=4.9,SNR=4.3							
MKAR	Makanchi Array	41.12	295	P		P	18 06 01.2	-0.1
MKAR				PcP		PcP	18 07 53.9	-0.7
KURK	Kurchatov	42.13	302	P		P	18 06 09.6	+0.2
	comp=Z,0.9nm,0.6s,mb3.2,baz=71,slow=8.8,SNR=4.2							
KEV	Kevo	56.43	338	*e*p		P	18 07 54.8	-1.8
YKA	Yellowknife Ar	56.64	33	P		P	18 07 58.2	+0.1
	comp=Z,1.3nm,0.5s,mb3.6,baz=306,slow=7.1,SNR=5.3							
YKA	Yellowknife Ar	56.64	33	P		P	18 07 58.2	+0.1
ARCES	ARCESS Array B	56.98	338	P		P	18 07 59.7	-0.7
	comp=Z,3.0nm,0.9s,mb3.7,baz=41,slow=8.4,SNR=3.1							
WRA	Warramunga Arr	64.97	189	P		P	18 08 55.3	+0.8
	comp=Z,0.3nm,0.7s,mb3.0,baz=7.0,slow=6.3,SNR=3.5							
NOA	NORSAR Array B	67.28	337	P		P	18 09 08.0	-0.6
	comp=Z,1.6nm,1.0s,mb3.7,baz=35,slow=6.3,SNR=3.3							
NOA	NORSAR Array B	67.28	337	P		P	18 09 08.0	-0.6
AKASG	Malin Array Be	68.65	321	P		P	18 09 16.1	-1.2
	comp=Z,0.5nm,0.4s,mb3.6,baz=49,slow=5.1,SNR=4.1							
ASAR	Alice Springs	68.70	189	P		P	18 09 19.1	+1.2
	comp=Z,0.5nm,0.5s,mb3.5,baz=3.8,slow=5.3,SNR=9.9							
NVAR	Mina Array Bea	69.70	56	P		P	18 09 25.4	+1.5
	comp=Z,0.5nm,0.5s,mb3.5,baz=54,slow=3.8,SNR=3.4							
PDAR	Pinedale Array	71.62	48	P		P	18 09 36.2	+0.9
	comp=Z,1.8nm,0.5s,mb4.0,baz=318,slow=2.0,SNR=13							
ULM	Lac du Bonnet	72.50	35	P		P	18 09 40.2	-0.2
	comp=Z,3.3nm,0.5s,mb4.2,baz=284,slow=5.9,SNR=6.6							
ULM	Lac du Bonnet	72.50	35	P		P	18 09 40.2	-0.2
TXAR	Lajitas Array	84.67	53	P		P	18 10 48.0	+1.1
	comp=Z,1.1nm,0.8s,mb3.8,baz=291,slow=3.8,SNR=11							
TXAR	Lajitas Array	84.67	53	P		P	18 10 48.0	+1.1

ISCJB ***20*** *17:58:47.2±1.2, 1886S±0.009×16923E±0.006, h264km±11km, mb4.4/18, Error ellipse: s-maj=15.9km s-min=7.3km az=158.0*

IDC ***20*** *17:58:48.7±2.1, 1891S×16928E, h263km±18km, mb3.9/8, mb1 4.2/9, mb1mx3.8/16, mbtmp4.0/9, Error ellipse: s-maj=33.2km s-min=12.7km az=153.0*

NEIC ***20*** *17:58:50.6±3.5, 1881S×16925E, h287km±32km, mb4.5/8, Error ellipse: s-maj=25.5km s-min=14.6km az=114.0*

BJI ***20*** *17:58:52.7, 1808S×16880E, h287km, mB4.8, mb4.5*

ISC 20 17:58:48.1±1.2, 1882S±0.009×16925E±0.006, h259km±11km, n133,σ0 6/59/130, mb4.4/18, 45C-53D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	Mont Dzumac	4.17	219	*e*P		Pn	17 59 52.9	-1.3
HNR	Honiara	12.98	315	P		Pn	18 01 45.3	+1.8
	6.9nm,0.3s,baz=199,slow=2.4,SNR=18							
HNR	Honiara	12.98	315	*e*P		Pn	18 01 45.2	+1.6
	113nm,0.8s							
ARMA	Armidale	19.72	231	*e*P		P	18 03 01.0	+2.4
CTA	Charters Tower	21.72	263	*e*P		P	18 03 19.2	+0.3
	7.7nm,0.4s,mb4.4							
CTA	Charters Tower	21.72	263	P		P	18 03 19.8	+0.8
	8.1nm,0.4s,mb4.4,baz=86,slow=11,SNR=43							
CTAO	Charters Tower	21.72	263	*e*P		P	18 03 19.1	+0.2
	7.7nm,0.4s,mb4.4							
CNB	Canberra Magne	24.08	223	*e*P		P	18 03 41.0	+0.8
TOO	Toolangi	27.93	223	*e*P		P	18 04 14.9	+0.3
STKA	Stephens Creek	28.08	237	*e*P		P	18 04 16.6	+0.6
	9.7nm,0.6s,mb4.4							
STKA	Stephens Creek	28.08	237	P		P	18 04 17.0	+1.0
	11nm,0.6s,mb4.5,baz=60,slow=7.7,SNR=47							
WB2	Warramunga Arr	32.91	262	⇓*i*P		P	18 04 58.0	-0.5
WRAB	Tennant Creek	32.91	262	*e*P		P	18 04 57.9	-0.6
	16nm,1.0s,mb4.5							
WRA	Warramunga Arr	32.92	262	P		P	18 04 57.8	-0.8
	6.1nm,0.4s,mb4.5,baz=91,slow=8.5,SNR=68							
WRA				S		S	18 09 57.2	+0.1
	0.9nm,0.9s,baz=91,slow=14,SNR=5.6							
WRA				ScP		ScP	18 10 57.9	+2.1
	0.4nm,0.9s,baz=90,slow=3.7,SNR=4.6							
ASAR	Alice Springs	33.24	255	P		P	18 05 01.4	+0.1
	61nm,0.4s,mb5.4,baz=81,slow=8.9,SNR=2556							
ASAR				S		S	18 10 02.4	+0.3
	0.5nm,0.6s,baz=80,slow=16,SNR=5.0							
FITZ	Fitzroy Crossi	41.30	264	⇓*i*P		P	18 06 09.4	+0.6
	19nm,0.4s,mb4.7							
FITZ	Fitzroy Crossi	41.30	264	P		P	18 06 09.6	+0.7
	14nm,0.6s,mb4.4,baz=106,slow=8.4,SNR=90							
MBWA	Marble Bar	46.45	258	*e*P		P	18 06 49.6	0.0
	25nm,0.8s,mb4.6							
KLBR	Kellerberrin	47.91	244	*e*P		P	18 06 59.4	-1.3
	11nm,0.8s,mb4.2							
SBA	Scott Base	59.08	181	*e*P		P	18 08 20.4	-0.4
NJ2	Nanjing	69.92	316	*e*P		P	18 09 29.9	-1.5
PETK	Petropavlovsk-	72.32	353	P		P	18 09 46.3	+1.0
	2.7nm,0.7s,mb4.0,baz=132,slow=5.0,SNR=8.1							
MDJ	Mudanjiang	72.76	331	P		P	18 09 47.4	-0.7
MDJ				AMB		AMB		
	comp=Z,7.0nm,1.2s,mb4.2							
MDJ				AMB		AMB		
	comp=Z,100nm,4.6s							
KMI	Kunming	78.06	302	P		P	18 10 18.8	+0.2
KMI				AMB		AMB		
	comp=Z,5.0nm,1.5s,mb4.0							
CMAR	Chiang Mai Arr	78.34	294	P		P	18 10 22.4	+2.2
	comp=Z,0.7nm,0.6s,mb3.5,baz=138,slow=4.8,SNR=5.5							
HHC	Hu-ho-hao-te	79.91	319	*e*P		P	18 10 25.4	-2.9
HHC				PCP		PcP	18 10 32.4	-2.5
HHC				AP		pP	18 11 37.9	+8.6
HHC				PP		PP	18 13 34.0	-0.1
HHC				S		S	18 20 01.6	-8.2
HHC				SKS			18 20 08.1	
HHC				SCS		ScS	18 20 17.8	-11
HHC				AMB		AMB		
	comp=Z,14nm,0.6s,mb4.9							
HHC				AMB		AMB		
	comp=Z,99nm,6.7s							
HHC				LR		LR		
	comp=N,138nm,17.8s							
HHC				LR		LR		
	comp=E,154nm,17.0s							
HHC				LR		LR		
	comp=Z,102nm,17.3s							
CD2	Chengdu	79.99	307	*e*P		P	18 10 27.8	-1.1
CD2				PP		PP	18 13 36.1	+1.1
CD2				S		S	18 20 03.0	-8.1
CD2				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.7							
LZH	Lanzhou	82.46	312	*e*P		P	18 10 40.8	-1.0
LZH				AP		pP	18 11 51.1	+7.9
LZH				AMB		AMB		
	comp=Z,13nm,1.0s,mb4.6							
PKM	Peak Mountain	85.88	51	⇓P		P	18 10 59.4	+0.4
	baz=86							
O02C	Red Bluff	86.20	45	⇓P		P	18 11 01.1	+0.7
	baz=86							
WDC	Whiskeytown Da	86.55	45	⇓P		P	18 11 02.3	+0.2
	baz=87							
L02A	Cave Junction	86.61	43	⇓P		P	18 11 00.7	-1.6
	baz=87							
M02C	Callahan	86.73	44	⇓P		P	18 11 03.5	+0.6
	baz=87							
ORV	Oroville	86.78	46	⇓P		P	18 11 03.1	-0.1
	baz=87							
CMB	Columbia Colle	86.87	48	⇓P		P	18 11 03.1	-0.5
	baz=87							
T06C	Millerton Lake	86.89	49	⇓P		P	18 11 03.6	-0.2
	baz=87							
YBH	Yreka Blue Hor	86.99	44	⇓P		P	18 11 04.5	+0.3
	baz=87							
S06C	San Francisco	87.18	48	⇓P		P	18 11 04.7	-0.4
	baz=87							
ISA	Isabella	87.20	51	⇓P		P	18 11 05.1	-0.3
	baz=87,SNR=5.2							
ISA	Isabella	87.20	51	*e*P		P	18 11 05.3	0.0
	comp=Z,5.3nm,1.1s,mb4.3							
BFSC	Mount Baldy St	87.21	53	⇓P		P	18 11 05.2	-0.2
	baz=87							
EDW2	Edwards Air Fo	87.23	52	⇓P		P	18 11 05.2	-0.3
	baz=87							
HELL	Mitchell Peak	87.24	50	⇓P		P	18 11 05.0	-0.5
	baz=87							
P05C	Yuba Gap, Truc	87.28	47	⇑P		P	18 11 05.5	-0.1
	baz=87							
BMRM	Bremner River	87.69	21	*e*P		P	18 11 04.4	-2.6
LRMC	Laurel Mountai	87.70	51	⇓P		P	18 11 07.8	+0.1
	baz=88							
M05C	Lookout	87.85	45	⇑P		P	18 11 08.5	+0.3
	baz=88							
SWSC	Sam W. Stewart	88.09	54	⇑P		P	18 11 09.5	-0.1
	baz=88							
MPMC	Manual Prospec	88.10	51	⇓P		P	18 11 09.5	0.0
	baz=88							
I04A	Tendick Farm,	88.16	42	⇑P		P	18 11 09.6	0.0
	baz=88							
O06A	Flanigan	88.21	46	⇓P		P	18 11 10.2	+0.2
	baz=88							
BELC	Belle Mtn.	88.36	53	⇓P		P	18 11 10.8	-0.1
	baz=88							
NVAR	Mina Array Bea	88.51	49	P		P	18 11 11.8	+0.4
	comp=Z,1.9nm,0.8s,mb4.0,baz=220,slow=8.3,SNR=6.0							
K05A	Summer Lake	88.64	44	⇓P		P	18 11 12.4	+0.4
	baz=89							
J05A	Fort Rock	88.68	43	⇑P		P	18 11 12.2	+0.1
	baz=89,SNR=6.2							
H04A	Detroit Lake	88.72	42	⇓P		P	18 11 12.5	+0.2
	baz=89							
O07A	Toulon	88.86	47	⇑P		P	18 11 13.0	0.0
	baz=89							
GLA	Glamis	88.88	55	⇑P		P	18 11 13.2	-0.1
	baz=89							
SHOC	Shoshone	88.92	51	⇑P		P	18 11 12.8	-0.7
	baz=89							
TUQ	Turquoise Moun	89.00	52	⇓P		P	18 11 13.9	+0.1
	baz=89							
K06A	Valley Falls	89.10	44	⇑P		P	18 11 14.0	-0.1
	baz=89							
M07A	Soldier Meadow	89.19	46	⇓P		P	18 11 14.5	0.0
	baz=89							
L07A	Adell	89.36	45	⇓P		P	18 11 15.4	+0.1
	baz=90,SNR=7.0							
J06A	Christmas Vall	89.37	44	⇑P		P	18 11 15.4	0.0
	baz=90							
TPNV	Topopah Spring	89.37	51	⇓P		P	18 11 15.4	-0.2
	baz=90							
N08A	GE Springer Mi	89.64	46	⇑P		P	18 11 16.7	+0.1
	baz=90,SNR=5.5							
I06A	Prineville	89.64	43	⇑P		P	18 11 16.5	-0.1
	baz=90,SNR=5.3							
K07A	Rock Creek Ran	89.71	44	⇑P		P	18 11 17.0	0.0
	baz=90,SNR=7.6							
M08A	Happy Creek Ra	89.76	46	⇑P		P	18 11 17.1	0.0
	baz=90							
E05A	Randle	89.87	40	⇑P		P	18 11 17.6	0.0
	baz=90							
PDMCI	Parker Dam,Lak	89.90	54	⇑P		P	18 11 18.4	+0.4
	baz=90							
H06A	Lindquist Farm	89.92	42	⇓P		P	18 11 17.8	0.0
	baz=90,SNR=8.0							
V12A	Nelson	89.92	52	⇑P		P	18 11 17.9	-0.2
	baz=90							
J07A	Hines	89.97	44	⇓P		P	18 11 18.4	+0.3
	baz=90							
N09A	Rock Creek Ran	90.09	47	⇑P		P	18 11 18.7	-0.1
	baz=90							
L08A	Fields	90.10	45	⇓P		P	18 11 19.2	+0.5
	baz=90,SNR=10							
I07A	Izee	90.16	43	⇑P		P	18 11 19.0	+0.1
	baz=90,SNR=7.9							
K08A	Mann Creek Ran	90.24	45	⇑P		P	18 11 19.7	+0.4
	baz=90							
X13A	Yucca	90.25	53	⇓P		P	18 11 19.6	0.0
	baz=90							
E06A	Yakima	90.34	40	⇑P		P	18 11 20.0	+0.2
	baz=90							
H07A	Lands Inn, Kim	90.34	43	⇓P		P	18 11 20.1	+0.3
	baz=90,SNR=6.6							
R11A	Troy Canyon, C	90.42	49	⇑P		P	18 11 20.5	+0.1
	baz=90							
B05A	Bryant	90.47	38	⇑P		P	18 11 19.8	-0.5
	baz=91							
J08A	Circle Bar Ran	90.51	44	⇑P		P	18 11 20.8	+0.1
	baz=91							
Q11A	Duckwater	90.57	49	⇑P		P	18 11 21.1	+0.1
	baz=91							
G07A	Ruggs Ranch, H	90.58	42	⇓P		P	18 11 20.7	-0.2
	baz=91							
V13A	Grand Canyon W	90.62	52	⇓P		P	18 11 21.2	-0.1
	baz=91							
S12A	Delamar Landin	90.66	50	⇓P		P	18 11 21.7	+0.2
	baz=91							
K09A	Rome	90.73	45	⇑P		P	18 11 21.8	+0.1
	baz=91,SNR=6.8							
U13A	Pakoon Wash	90.85	52	⇑P		P	18 11 22.4	0.0
	baz=91							
H08A	Prairie City	90.89	43	⇓P		P	18 11 22.4	0.0
	baz=91							
X14A	Yava	90.92	54	⇑P		P	18 11 22.8	+0.1
	baz=91							
J09A	Fry Pan Ranch,	90.98	44	⇓P		P	18 11 22.6	-0.3
	baz=91							
G08A	Pilot Rock	91.04	42	⇓P		P	18 11 23.2	+0.2
	baz=91,SNR=6.9							
M10A	I.L. Ranch, Tu	91.04	46	⇓P		P	18 11 23.4	+0.3
	baz=91,SNR=5.3							
T13A	Saint George	91.12	51	⇓P		P	18 11 23.4	-0.2
	baz=91							
Y15A	Casa Rosa Ranc	91.15	55	⇑P		P	18 11 23.9	+0.1
	baz=91							
V14A	Boquillas Ranc	91.19	53	⇓P		P	18 11 23.9	-0.1
	baz=91							
L10A	Juniper Basin	91.31	46	⇑P		P	18 11 24.5	+0.1
	baz=91,SNR=5.5							
K10A	MacKenzie Ranc	91.33	45	⇓P		P	18 11 24.4	0.0
	baz=91							
F08A	Pendleton	91.37	42	⇓P		P	18 11 25.0	+0.4
	baz=92							
S13A	Holt Ranch, En	91.37	51	⇑P		P	18 11 25.2	+0.4
	baz=92							
X15A

AVH	**Avacha**	**2.87**	**356**	*e*P	Pn	18 00 23.1	+2.4
AVH				*i* S	Sn	18 00 57.1	+3.0
BZMR	**Bezymyannaya**	**5.60**	**8**	P	Pn	18 01 02.6	+4.4
KIRR	**Kirishev**	**5.60**	**7**	P	Pn	18 01 02.3	+4.0
KPT	**Kopyto**	**5.61**	**6**	P	Pn	18 01 02.7	+4.4
KOZ	**Kozyrevsk**	**5.68**	**4**	P	Pn	18 01 03.7	+4.4
ZLN	**Zelenaya**	**5.71**	**10**	*e*P	Pn	18 01 03.9	+4.2
SRDR	**Sredinnyy**	**5.93**	**3**	P	Pn	18 01 06.8	+4.1
KBTR	**Krutoberegovo**	**6.22**	**19**	P	Pn	18 01 09.0	+2.3

IDC 20 18:18:48.0±0.7, 2937S×17853W, h170km±11km, mb3.1/2, mb1 3.3/2, mb1mx3.1/14, mbtmp3.1/2, Error ellipse: s-maj=65.5km s-min=33.2km az=9.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.55**	**77**	P	Pn	18 19 12.6	+0.8
	168nm,0.3s,baz=270,slow=20,SNR=14						
RAO				S	Sn	18 19 30.9	+0.8
	139nm,0.3s,baz=114,slow=20,SNR=3.8						
ASAR	**Alice Springs**	**42.71**	**266**	P	P	18 26 27.9	-0.4
	0.3nm,0.5s,baz=99,slow=7.5,SNR=7.3						
ASAR				PcP	PcP	18 28 18.3	+1.4
	0.2nm,0.5s,baz=115,slow=4.0,SNR=5.5						
WRA	**Warramunga Arr**	**43.60**	**271**	P	P	18 26 35.4	-0.1
	0.4nm,0.4s,baz=109,slow=8.1,SNR=11						
AKASG	**Malin Array Be**	**150.21**	**323**	PKPbc	PKPbc	18 38 17.5	-0.8
	0.8nm,0.6s,baz=62,slow=3.3,SNR=5.5						
TORD	**Torodi Ar. Bea**	**163.85**	**181**	PKPab	PKPab	18 39 23.6	-0.9
	0.4nm,0.6s,baz=162,slow=3.1,SNR=5.9						

IDC 20 18:19:15.4±2.6, 1216S×16729E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.6/16, mbtmp3.6/4, Error ellipse: s-maj=94.4km s-min=37.8km az=132.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.55**	**252**	P	P	18 25 48.9	+0.4
	0.2nm,0.7s,baz=84,slow=8.4,SNR=2.7						
ASAR	**Alice Springs**	**33.67**	**245**	P	P	18 25 58.0	-0.3
	0.2nm,0.8s,baz=67,slow=10,SNR=2.8						
ASAR				PcP	PcP	18 28 38.2	-0.3
	0.3nm,0.7s,baz=83,slow=2.0,SNR=6.1						
SONM	**Songino Array**	**80.46**	**323**	P	P	18 31 29.4	+0.4
	0.4nm,0.4s,baz=144,slow=5.9,SNR=4.3						
MKAR	**Makanchi Array**	**95.37**	**317**	P	P	18 32 41.3	-0.3
	0.3nm,0.3s,baz=109,slow=5.5,SNR=6.9						
ARCES	**ARCESS Array B**	**117.79**	**346**	PKP	PKPdf	18 38 03.3	+0.1
	1.3nm,0.8s,baz=98,slow=1.9,SNR=6.2						

*IDC **20** 18:37:40.3±2.5, 389S×99.39E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.7/21, mbtmp3.7/8, Error ellipse: s-maj=102.4km s-min=19.2km az=55.0*

*ISCJB **20** 18:37:43.1±2.0, 39S±03×994E±05, h33km, mb3.8/9, Error ellipse: s-maj=82.7km s-min=15.5km az=144.7*

*NEIC **20** 18:37:46.1±1.5, 377S×9958E, h35km, mb4.2/1, Error ellipse: s-maj=64.5km s-min=12.7km az=55.0*

ISC 20 18:37:46.2±1.9, 38S±03×996E±05, h35km, n12, σ0s87/11, mb3.8/9, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.11**	**358**	P	**P**	**18 42 37.1**	**-1.6**
	0.6nm,0.4s,mb3.4,baz=187,slow=10,SNR=5.9						
LSA	**Lhasa**	**34.26**	**347**	P	**P**	**18 44 30.2**	**+1.2**
	1.8nm,0.5s,mb4.3						
LSA				*e*	pP	18 44 39.8	+0.7
WRA	**Warramunga Arr**	**37.50**	**118**	P	**P**	**18 44 57.7**	**+0.7**
	0.6nm,0.4s,mb3.6,baz=305,slow=9.0,SNR=8.1						
ASAR	**Alice Springs**	**38.59**	**124**	P	**P**	**18 45 05.2**	**-0.9**
	0.4nm,0.5s,mb3.4,baz=299,slow=8.1,SNR=4.1						
SONM	**Songino Array**	**51.75**	**6**	P	**P**	**18 46 51.5**	**+1.4**
	1.0nm,0.6s,mb3.9,baz=186,slow=10,SNR=5.6						
MK31	**Makanchi Array**	**52.62**	**345**	*e*P	**P**	**18 46 57.0**	**+0.4**
MKAR	**Makanchi Array**	**52.62**	**345**	P	**P**	**18 46 56.5**	**-0.1**
	1.1nm,0.7s,mb3.9,baz=151,slow=8.5,SNR=5.2						
KURK	**Kurchatov**	**57.19**	**344**	P	**P**	**18 47 29.2**	**-0.4**
	0.5nm,0.7s,mb3.7,baz=169,slow=7.3,SNR=2.6						
ZALV	**Zalesovo Beam**	**58.83**	**350**	P	**P**	**18 47 40.9**	**-0.1**
	1.0nm,0.5s,mb4.1,baz=177,slow=5.5,SNR=6.4						
ZALV	**Zalesovo Beam**	**58.83**	**350**	P	**P**	**18 47 40.9**	**-0.1**
BVAR	**Borovoye Array**	**61.70**	**340**	P	**P**	**18 48 00.1**	**-0.6**
	0.7nm,0.5s,mb4.0,baz=144,slow=10,SNR=6.2						
TXAR	**Lajitas Array**	**146.37**	**38**	PKPbc	PKPbc	18 57 23.9	-0.1
	0.5nm,0.7s,baz=179,slow=0.4,SNR=4.4						

*NIED **20** 18:49:00.3760N×14090E, h107km, Mw3.6 Best double couple: M0 2.40000×10^14 NP1:φs171.00000°, δ77.00000°, λ-61.00000°. NP2:φs284.00000°, δ32.00000°, λ-154.00000°.*

*IDC **20** 18:49:46.6±1.8, 3762N×14121E, h83km±18km, mb3.2/3, mb1 3.3/7, mb1mx3.2/25, mbtmp3.3/7, MS3.4/1, Ms1 3.4/1, ms1mx2.6/12, Error ellipse: s-maj=20.7km s-min=11.5km az=105.0*

*ISCJB **20** 18:49:48.5±0.6, 3761N±004×14098E±006, h112km±4km, mb3.5/3, Error ellipse: s-maj=9.6km s-min=4.9km az=32.9*

*JMA **20** 18:49:50.1±0.1, 3763N×14090E, h104km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φs292.00000°, δ30.00000°, λ-126.00000°. NP2: φs152.00000°, δ66.00000°, λ-71.00000°. Principal axes: T Plg19.0000°, Azm228.0000°; N Plg17.0000°, Azm324.0000°; P Plg64.0000°, Azm93.0000°;*

JMA Felt I J1.

ISC 20 18:49:49.5±0.6, 3761N±004×14098E±006, h106km±4km, n24, σ0s77/41, mb3.5/3, 5C-9D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.26**	**199**	⇓P	**Pn**	**18 50 05.3**	**+0.7**
JFK				S	**Sn**	18 50 16.5	+0.6
JMM	**Marumori**	**0.29**	**330**	⇑P	**Pn**	18 50 05.0	+0.2
JMM				S	**Sn**	18 50 16.0	-0.2
JFT	**Otama**	**0.52**	**260**	⇓P	**Pn**	18 50 06.1	+0.1
JFT				S	**Sn**	18 50 18.7	+0.2
JOU	**Okura**	**0.79**	**342**	P	**Pn**	18 50 08.8	+0.5
JOU				S	**Sn**	18 50 22.9	+0.4
JIO	**Ouri**	**0.89**	**19**	⇑P	**Pn**	18 50 09.7	+0.4
JIO				S	**Sn**	18 50 23.9	-0.3
JYS	**Shirataka**	**0.95**	**310**	⇓P	**Pn**	18 50 10.0	+0.2
JYS				S	**Sn**	18 50 24.9	-0.2
JFY	**Yanaizu**	**1.03**	**259**	⇓P	**Pn**	18 50 10.6	-0.1
JFY				S	**Sn**	18 50 25.7	-1.0
JNS	**Sasagawa**	**1.33**	**279**	⇓P	**Pn**	18 50 14.0	-0.1
JNS				*e*S	**Sn**	18 50 31.7	-1.0
JMK	**Ichinoseki**	**1.35**	**8**	⇑P	**Pn**	18 50 14.7	+0.4
JMK				S	**Sn**	18 50 33.1	0.0
JYK	**Kaneyama**	**1.39**	**340**	⇓P	**Pn**	18 50 15.0	+0.2
JYK				S	**Sn**	18 50 33.7	-0.3
JYA	**Atsumi**	**1.40**	**315**	⇓P	**Pn**	18 50 15.0	+0.1
JYA				S	**Sn**	18 50 33.9	-0.2
JHK	**Hiroka**	**1.60**	**258**	⇓P	**Pn**	18 50 17.3	0.0
JHK				S	**Sn**	18 50 37.6	-0.9
JAW	**Awa shima**	**1.61**	**302**	⇓P	**Pn**	18 50 17.0	-0.3
JAG	**Ashikaga**	**1.70**	**226**	⇑P	**Pn**	18 50 18.8	+0.3
JAG				S	**Sn**	18 50 40.1	-0.5
JOM	**Ohasama**	**1.88**	**7**	⇑P	**Pn**	18 50 21.1	+0.4
JOM				S	**Sn**	18 50 44.5	0.0
MJAR	**Matsushiro Arr**	**2.46**	**245**	P	**Pn**	18 50 27.7	-0.5
	6.0nm,0.3s,baz=68,slow=11,SNR=59						
MJAR				S	**Sn**	18 50 58.3	+0.3
	2.5nm,0.3s,baz=99,slow=15,SNR=8.8						
MAT	**Matsushiro**	**2.46**	**245**	P	**Pn**	18 50 29.4	+1.2
MAT				S	**Sn**	18 50 59.7	+1.7
JHJ	**Hachijo jima 2**	**4.59**	**193**	P	**Pn**	18 50 55.1	-1.6
	8.8nm,0.3s,baz=72,slow=20,SNR=6.4						
JHJ				S	**Sn**	18 51 45.5	-3.3
	23nm,0.3s,baz=64,slow=23,SNR=6.9						
ASAJ	**Asahikawa**	**6.61**	**10**	P	**Pn**	18 51 21.9	-2.2
	0.4nm,0.3s,baz=237,slow=9.9,SNR=7.1						
ASAJ				S	**Sn**	18 52 33.2	-4.7
	0.3nm,0.3s,baz=171,slow=19,SNR=3.5						
KSRS	**Korea Array**	**10.37**	**273**	P	**Pn**	18 52 17.2	+2.0
	0.1nm,0.3s,baz=83,slow=12,SNR=4.1						
SONM	**Songino Array**	**27.18**	**303**	LR	LR	19 06 24.7	
	comp=Z,78nm,19.5s,baz=247,slow=36						
KURK	**Kurchatov**	**45.31**	**308**	P	**P**	**18 57 56.1**	**-0.3**
	0.3nm,0.5s,mb3.3,baz=83,slow=7.8,SNR=4.1						
WRA	**Warramunga Arr**	**57.58**	**187**	P	**P**	**18 59 28.1**	**0.0**
	0.4nm,0.4s,mb3.8,baz=4.8,slow=7.3,SNR=9.9						
ASAR	**Alice Springs**	**61.31**	**187**	P	**P**	**18 59 54.2**	**+0.5**
	0.3nm,0.9s,mb3.3,baz=0.1,slow=4.5,SNR=3.7						

IDC 20 18:55:54.3±6.7, 2754S×17737W, h88km±46km, mb3.4/3, mb1 3.5/3, mb1mx3.4/14, mbtmp3.4/3, Error ellipse: s-maj=63.1km s-min=36.4km az=40.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.77**	**196**	P	Pn	18 56 23.8	+0.3
	68nm,0.3s,baz=275,slow=24,SNR=7.2						
RAO				S	Sn	18 56 45.8	+0.2
	221nm,0.3s,baz=76,slow=22,SNR=10						
STKA	**Stephens Creek**	**35.76**	**253**	P	P	19 02 45.5	+0.7
	0.5nm,0.3s,baz=98,slow=13,SNR=5.4						
ASAR	**Alice Springs**	**43.90**	**264**	P	P	19 03 52.2	-0.1
	0.2nm,0.4s,baz=104,slow=6.9,SNR=6.7						
WRA	**Warramunga Arr**	**44.63**	**269**	P	P	19 03 57.7	-0.5
	0.5nm,0.3s,baz=107,slow=7.9,SNR=16						
TORD	**Torodi Ar. Bea**	**165.66**	**176**	PKPab	PKPab	19 16 48.0	-0.4
	0.3nm,0.7s,baz=156,slow=3.1,SNR=3.5						

*ISCJB **20** 20:04:51.1±0.1, 47755N±0010×1285E±001, h10km, Error ellipse: s-maj=1.4km s-min=1.3km az=15.5*

*VIE **20** 20:04:51.6±0.1, 4774N×1286E, h2km±1km, mb2.9/18, ML3.3/19, Error ellipse: s-maj=1.1km s-min=0.7km az=173.0*

*NEIC **20** 20:04:52.7±0.2, 4778N×1288E, h10km, ML3.3(FUR), ML3.4(LDG), ML3.4(STR), ML3.5(SZGRF), Error ellipse: s-maj=3.3km s-min=2.8km az=159.0*

*BGR **20** 20:04:52.5±0.2, 4773N×1290E, h2km, ML3.3/35, Error ellipse: s-maj=2.2km s-min=1.1km az=12.0*

BGR Felt V EMS.

*CSEM **20** 20:04:52.5±0.1, 4773N×1294E, h0km, ML3.5/24, Error ellipse: s-maj=0.8km s-min=0.8km az=153.0*

*PRU **20** 20:04:52.5, 4773N×1293E, h0km*

*IPEC **20** 20:04:52.6±0.1, 4773N×1290E, h6km, ML3.1/4, Error ellipse: s-maj=0.9km s-min=0.7km az=132.0*

*LDG **20** 20:04:53.4±0.1, 4776N×1300E, h10km, Ml3.4/19, Error ellipse: s-maj=3.2km s-min=2.3km az=13.0*

*BNS **20** 20:04:55.0±0.4, 4774N×1287E, h10km, ML3.1*

*STR **20** 20:04:59.7±0.3, 4792N×1243E, h10km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 20 20:04:52.1±0.2, 47745N±0009×1288E±001, h2km±1km, n196, σ0s97/409, 30C-20D, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RNON	**Nonn-Bad Reich**	**0.01**	**227**	⇓*i*Pg	**Pg**	**20 04 51.9**	**-0.5**
RNON				⇓*i*Sg	**Sg**	20 04 52.3	-0.3
RMOA	**Moar Alm**	**0.02**	**337**	⇑*i*Pg	**Pg**	20 04 51.9	-0.7
RMOA				⇑*i*Sg	**Sg**	20 04 52.2	-0.7
RJOB	**Jochberg**	**0.05**	**261**	*e*Pg	**Pg**	20 04 52.6	-0.6
RJOB				*e*Sg	**Sg**	20 04 53.7	-0.1
RWMO	**Wildenmoos**	**0.10**	**269**	⇑*i*Pg	**Pg**	20 04 53.3	-0.7
RWMO				⇑*i*Sg	**Sg**	20 04 54.9	-0.4
BGLD	**Berchtesgaden**	**0.13**	**135**	⇓*i*Pg	**Pg**	20 04 54.6	0.0
KBA	**Koelnbreinsper**	**0.74**	**154**	⇓*e*Pg	**Pg**	20 05 05.4	-0.8
	17nm,0.3s,SNR=16						
KBA				⇑Sg	**Sg**	20 05 17.0	+1.2
	73nm,0.5s						
KBA	**Koelnbreinsper**	**0.74**	**154**	*e*Pg	**Pg**	20 05 05.4	-0.8
KBA				*e*Sg	**Sg**	20 05 16.9	+1.0
KBA	**Koelnbreinsper**	**0.74**	**154**	Pg	**Pg**	20 05 05.4	-0.9
	17nm,0.3s,SNR=16						
KBA				*e*Sg	**Sg**	20 05 15.1	-0.7
MOA	**Molln**	**0.94**	**83**	⇑Pg	**Pg**	20 05 09.9	-0.3
	36nm,0.3s,SNR=111						
MOA				⇑*i*Sg	**Sg**	20 05 24.0	+1.7
	42nm,0.2s						
MOA	**Molln**	**0.94**	**83**	*e*Pg	**Pg**	20 05 10.0	-0.2
MOA				*e*Sg	**Sg**	20 05 24.8	+2.4
MOA	**Molln**	**0.94**	**83**	Pg	**Pg**	20 05 09.9	-0.3
	36nm,0.3s,SNR=111						
MOA				*e*Sg	**Sg**	20 05 22.2	-0.2
WTTA	**Wattenberg**	**0.97**	**241**	⇑*e*Pg	**Pg**	20 05 10.0	-0.6
	23nm,0.2s,SNR=12						
WTTA				⇓*i*Sg	**Sg**	20 05 22.7	-0.5
	123nm,0.5s						
WTTA	**Wattenberg**	**0.97**	**241**	*e*Pg	**Pg**	20 05 10.5	-0.2
WTTA	**Wattenberg**	**0.97**	**241**	Pg	**Pg**	20 05 10.5	-0.1
WTTA				Sg	**Sg**	20 05 22.7	-0.5
	123nm,0.5s						
WATA	**Walderalm**	**0.97**	**246**	⇑*e*Pg	**Pg**	20 05 10.3	-0.4
	24nm,0.2s,SNR=5.5						
WATA				⇑*i*Sg	**Sg**	20 05 23.3	+0.1
	46nm,0.3s						
ABTA	**Abfaltersbach**	**1.03**	**194**	⇓*e*Pg	**Pg**	20 05 11.1	-0.7
	53nm,0.6s,SNR=27						
ABTA				⇓*i*Sg	**Sg**	20 05 27.0	+1.9
	109nm,0.5s						
FUR	**Furstenfeldbru**	**1.15**	**292**	*e*Pg	**Pg**	20 05 14.7	+0.5
FUR				*e*Sg	**Sg**	20 05 32.2	+3.1
FUR	**Furstenfeldbru**	**1.15**	**292**	Pg	**Pg**	20 05 14.7	+0.5
FUR				Sg	**Sg**	20 05 32.2	+3.1
FUR	**Furstenfeldbru**	**1.15**	**292**	*e*Pg	**Pg**	20 05 14.7	+0.5
FUR				*e*Sg	**Sg**	20 05 32.3	+3.2
GEC2	**GERESS Array S**	**1.23**	**26**	*e*Pn	**Pn**	20 05 15.7	-0.6
GEC2				*e*Pg	**Pg**	20 05 16.7	+1.0
GEC2				*e*Sg	**Sg**	20 05 33.9	+2.2
GEC2	**GERESS Array S**	**1.23**	**26**	*e*Pg	**Pg**	20 05 15.6	-0.1
GEC2				*e*Sg	**Sg**	20 05 31.3	-0.3
GEC2	**GERESS Array S**	**1.23**	**26**	*e*Pn	**Pn**	20 05 15.7	-0.6
GEC2				*e*Pg	**Pg**	20 05 16.7	+1.0
GEC2				*e*Sg	**Sg**	20 05 33.9	+2.3
MYKA	**Terra Mystica**	**1.23**	**155**	⇓*i*Pg	**Pg**	20 05 14.6	-1.1
	16nm,0.2s						
MYKA				⇓*i*Sg	**Sg**	20 05 32.0	+0.4
	127nm,0.7s						
MOTA	**Moosalm**	**1.27**	**252**	⇓Pg	**Pg**	20 05 15.9	-0.4
	98nm,0.4s,SNR=129						
MOTA				⇑*i*Sg	**Sg**	20 05 33.0	+0.3
	164nm,0.5s						
MOTA	**Moosalm**	**1.27**	**252**	*e*Pn	**Pn**	20 05 16.3	-0.5
	SNR=2.6						
WET	**Wettzell**	**1.40**	**0**	*e*Pg	**Pg**	20 05 18.1	-0.8
WET				*e*Sg	**Sg**	20 05 39.6	+2.6
WET	**Wettzell**	**1.40**	**0**	*e*Pg	**Pg**	20 05 18.1	-0.8
WET				*e*Sg	**Sg**	20 05 39.6	+2.5
GRC3	**Grafenberg Arr**	**1.43**	**324**	*e*Pn	**Pn**	20 05 18.5	-0.6
GRC3				*e*Pg	**Pg**	20 05 19.6	+0.1
GRC3				*e*Sg	**Sg**	20 05 39.7	+1.5
GRC3	**Grafenberg Arr**	**1.43**	**324**	Pn	**Pn**	20 05 18.5	-0.6
RETA	**Reutte**	**1.45**	**261**	⇑*e*Pg	**Pg**	20 05 19.9	-0.1
	67nm,0.5s,SNR=39						
RETA				⇑*i*Sg	**Sg**	20 05 39.3	+0.6
	213nm,0.5s						
RETA	**Reutte**	**1.45**	**261**	Pg	**Pg**	20 05 19.9	0.0
	67nm,0.5s,SNR=39						
RETA				Sg	**Sg**	20 05 39.3	+0.6
	213nm,0.5s						
KHC	**Kasperske Hory**	**1.46**	**18**	*e*Pn	**Pn**	20 05 19.3	-0.2
KHC				*e*Pg	**Pg**	20 05 20.5	+0.4
KHC				*e*Sg	**Sg**	20 05 41.7	+2.6
KHC	**Kasperske Hory**	**1.46**	**18**	Pg	**Pg**	20 05 20.5	+0.4
KHC				*e*Sg	**Sg**	20 05 39.8	+0.7
KHC	**Kasperske Hory**	**1.46**	**18**	*e*PG	**Pg**	20 05 20.5	+0.4
KHC				*e*SG	**Sg**	20 05 40.3	+1.2
	comp=Z,833nm,0.8s						
GRC2	**Grafenberg Arr**	**1.50**	**319**	*e*Pg	**Pg**	20 05 20.8	-0.1
GRC2				*e*Sg	**Sg**	20 05 41.6	+1.2
GRC1	**Grafenberg Arr**	**1.54**	**325**	*e*Pn	**Pn**	20 05 20.0	-0.6
GRC1				*e*Pg	**Pg**	20 05 21.5	-0.1
GRC1				*e*Sg	**Sg**	20 05 43.0	+1.4
GRB5	**Grafenberg Arr**	**1.58**	**330**	*e*Pn	**Pn**	20 05 20.6	-0.6
GRB5				*e*Pg	**Pg**	20 05 22.8	+0.4
GRB5				*e*Sn	**Sn**	20 05 43.0	+0.8
GRB5				*e*Sg	**Sg**	20 05 45.2	+2.3
GRB5	**Grafenberg Arr**	**1.58**	**330**	Pg	**Pg**	20 05 22.8	+0.4
GRB5				Sn	**Sn**	20 05 43.0	+0.8
GRB5				Sg	**Sg**	20 05 45.2	+2.3
GRC4	**Grafenberg Arr**	**1.61**	**327**	*e*Pn	**Pn**	20 05 20.7	-0.9
GRC4				*e*Pg	**Pg**	20 05 23.3	+0.3
GRC4				*e*Sg	**Sg**	20 05 45.2	+1.3
GORS	**Gorjuse**	**1.62**	**151**	*i* Pn	**Pn**	20 05 21.8	+0.2
FETA	**Feichten**	**1.63**	**244**	⇑*e*Pg	**Pg**	20 05 22.3	-1.0
	comp=Z,76nm,0.8s,SNR=85						
FETA				⇑*i*Sg	**Sg**	20 05 45.8	+1.4
	comp=Z,101nm,0.7s						
CADS	**Cadrg**	**1.63**	**158**	*i* Pn	**Pn**	20 05 22.7	+1.0
OBKA	**Obir**	**1.68**	**137**	⇓*e*Pg	**Pg**	20 05 23.9	-0.4
	comp=Z,27nm,0.4s,SNR=29						
OBKA				⇑*i*Sg	**Sg**	20 05 46.5	+0.3
	comp=Z,125nm,0.7s						
OBKA	**Obir**	**1.68**	**137**	*e*Pg	**Pg**	20 05 24.2	-0.1
	SNR=16						
OBKA				*e*Sg	**Sg**	20 05 48.3	+2.1
	SNR=5.1						
OBKA	**Obir**	**1.68**	**137**	*e*Pn	**Pn**	20 05 22.5	0.0
OBKA	**Obir**	**1.68**	**137**	Pg	**Pg**	20 05 23.9	-0.4
	comp=Z,27nm,0.4s,SNR=29						
OBKA				Sg	**Sg**	20 05 46.5	+0.3
	comp=Z,125nm,0.7s						
GRB2	**Grafenberg Arr**	**1.73**	**333**	*e*Pn	**Pn**	20 05 22.5	-0.6
GRB2				*e*Pg	**Pg**	20 05 25.3	+0.2
GRB2				*e*Sg	**Sg**	20 05 48.5	+1.0
GRB3	**Grafenberg Arr**	**1.75**	**336**	*e*Pn	**Pn**	20 05 22.7	-0.8
GRB3				*e*Pg	**Pg**	20 05 25.9	+0.2
GRB3				*e*Sg	**Sg**	20 05 49.3	+1.0
OBER	**Oberstdorf**	**1.78**	**260**	⇑*i*Pn	**Pn**	20 05 25.6	+1.7
SOKA	**Soboth**	**1.82**	**125**	⇑*i*Pn	**Pn**	20 05 25.3	+0.9
SOKA				⇓*i*Pg	**Pg**	20 05 26.6	-0.4
	comp=Z,26nm,0.6s						
SOKA				⇓*i*Sn	**Sn**	20 05 48.7	+0.7
SOKA				⇓*i*Sg	**Sg**	20 05 52.1	+1.6
	comp=Z,39nm,0.7s						
GRB1	**Grafenberg Arr**	**1.84**	**334**	*e*Pn	**Pn**	20 05 23.8	-0.9
GRB1				*e*Pg	**Pg**	20 05 27.7	+0.4
GRB1				*e*Sg	**Sg**	20 05 52.7	+1.6
VOY	**Vojsko**	**1.85**	**157**	*e*Pn	**Pn**	20 05 27.0	+2.2
VOY				*e*		20 05 55.0	
VOY				*e*		20 05 59.5	
ARSA	**Arzberg**	**1.86**	**104**	*e*Pn	**Pn**	20 05 26.2	+1.2
	SNR=53						
ARSA				⇑*i*Pg	**Pg**	20 05 27.4	-0.4
	comp=Z,24nm,0.4s						
ARSA				⇑*i*Sg	**Sg**	20 05 53.1	+1.2
	comp=Z,69nm,0.8s						
ARSA	**Arzberg**	**1.86**	**104**	*e*Pn	**Pn**	20 05 26.1	+1.1
	SNR=3.8						
ARSA				*e*Pg	**Pg**	20 05 27.5	-0.3
ARSA				*e*Sg	**Sg**	20 05 53.3	+1.4
ARSA	**Arzberg**	**1.86**	**104**	Pg	**Pg**	20 05 27.4	-0.4
	comp=Z,24nm,0.4s						
ARSA				*e*Sg	**Sg**	20 05 51.1	-0.8
GRB4	**Grafenberg Arr**	**1.93**	**334**	*e*Pg	**Pg**	20 05 28.9	-0.2
GRB4				*e*Sg	**Sg**	20 05 55.8	+1.7
CSNA	**Conrad Observa**	**2.02**	**84**	⇓*i*Pn	**Pn**	20 05 27.4	+0.3
CSNA				⇓*i*Pg	**Pg**	20 05 30.6	-0.2
	comp=Z,11nm,0.3s						
CSNA				⇑*i*Sn	**Sn**	20 05 53.9	+1.0
CSNA				⇑*i*Sg	**Sg**	20 05 58.8	+1.8
	comp=Z,64nm,0.5s						
CONA	**Conrad Observa**	**2.02**	**84**	⇓*e*Pn	**Pn**	20 05 27.5	+0.3
	SNR=30						
CONA				⇑*i*Pg	**Pg**	20 05 30.8	0.0
	comp=Z,8.0nm,0.2s						
CONA				⇓*i*Sn	**Sn**	20 05 54.1	+1.1
CONA				⇑*i*Sg	**Sg**	20 05 58.9	+1.9
	comp=Z,65nm,0.6s						
GRA4	**Grafenberg Arr**	**2.06**	**333**	*e*Pg	**Pg**	20 05 31.8	+0.3
GRA4				*e*Sg	**Sg**	20 05 59.8	+1.6
DAVA	**Damuels**	**2.08**	**258**	⇑Pg	**Pg**	20 05 31.0	-1.0
	comp=Z,28nm,0.2s,SNR=22						
DAVA				⇑*i*Sn	**Sn**	20 05 54.4	-0.1
DAVA				⇓*i*Sg	**Sg**	20 06 00.4	+1.5
	comp=Z,132nm,0.5s						
DAVA	**Damuels**	**2.08**	**258**	*e*Pn	**Pn**	20 05 29.2	+1.2
	SNR=2.3						
DAVA				*e*Pg	**Pg**	20 05 31.0	-1.0
DAVA				*e*Sg	**Sg**	20 06 00.8	+1.9
DAVA	**Damuels**	**2.08**	**258**	Pg	**Pg**	20 05 31.0	-1.0
	comp=Z,28nm,0.2s,SNR=22						
DAVA				Sn	**Sn**	20 05 54.4	-0.1
DAVA				Sg	**Sg**	20 06 00.8	+1.9
GRA2	**Grafenberg Arr**	**2.16**	**333**	*e*Pn	**Pn**	20 05 28.2	-0.9
GRA2				*e*Pg	**Pg**	20 05 33.5	0.0
GRA2				*e*Sg	**Sg**	20 06 03.4	+2.0
GRA1	**Grafenberg Arr**	**2.23**	**331**	Pg

PVCC					*e*SG	**Sg**	**20 06 29.2**	**+0.8**
	comp=Z,153nm,0.6s							
MOX	**Moxa**	**3.02**	**345**		*e*Pn	**Pn**	**20 05 40.0**	**-0.9**
MOX					*e*Pg	**Pg**	**20 05 49.5**	**-0.4**
MOX					*e*Sg	**Sg**	**20 06 28.8**	**-0.2**
MOX	**Moxa**	**3.02**	**345**		*e*PN	**Pn**	**20 05 40.0**	**-0.9**
MOX					*e*PG	**Pg**	**20 05 49.9**	**0.0**
MOX					*e*SG	**Sg**	**20 06 28.9**	**-0.1**
MODS	**Modra-Piesok**	**3.02**	**76**		*e*PN	**Pn**	**20 05 41.0**	**+0.1**
MODS					*e*PG	**Pg**	**20 05 48.9**	**-1.0**
MODS					*e*SG	**Sg**	**20 06 32.1**	**+3.1**
MODS	**Modra-Piesok**	**3.02**	**76**		*e*Pn	**Pn**	**20 05 41.0**	**+0.1**
MODS					*e*Pg	**Pg**	**20 05 48.9**	**-1.0**
MODS					*e*Sg	**Sg**	**20 06 32.1**	**+3.1**
BFO	**Black Forest**	**3.11**	**283**		*e*Pn	**Pn**	**20 05 42.6**	**+0.5**
BFO					*e*Pg	**Pg**	**20 05 51.1**	**-0.5**
BFO					*e*Sg	**Sg**	**20 06 32.4**	**+0.6**
BFO	**Black Forest**	**3.11**	**283**		*e*Pn	**Pn**	**20 05 42.6**	**+0.5**
BFO					*e*Pg	**Pg**	**20 05 51.1**	**-0.5**
BFO					*e*Sg	**Sg**	**20 06 32.4**	**+0.6**
BRG	**Berggiesshubel**	**3.21**	**12**		*e*Pn	**Pn**	**20 05 44.2**	**+0.7**
BRG					*e*Pg	**Pg**	**20 05 52.3**	**-1.2**
BRG					*e*Sg	**Sg**	**20 06 34.6**	**-0.5**
BRG	**Berggiesshubel**	**3.21**	**12**		PN	**Pn**	**20 05 43.4**	**-0.1**
BRG					PG	**Pg**	**20 05 52.2**	**-1.3**
BRG					SN	**Sn**	**20 06 20.5**	**-1.8**
BRG					SG	**Sg**	**20 06 34.1**	**-1.0**
	comp=Z,88nm,0.9s							
TOD	**Tromm**	**3.28**	**306**		Pn	**Pn**	**20 05 44.8**	**+0.4**
TOD					Sg	**Sg**	**20 06 36.1**	**-1.2**
FELD	**Feldberg im Sc**	**3.29**	**274**		Pn	**Pn**	**20 05 44.6**	**0.0**
FELD					Pg	**Pg**	**20 05 55.8**	**+0.8**
FELD					Sg	**Sg**	**20 06 36.3**	**-1.3**
UPC	**Upice**	**3.45**	**36**		*e*PG	**Pg**	**20 05 56.6**	**-1.5**
UPC					*e*SG	**Sg**	**20 06 43.8**	**+1.0**
DPC	**Dobruska-Polom**	**3.46**	**40**		*e*Pg	**Pg**	**20 05 56.7**	**-1.6**
DPC					*e*Sg	**Sg**	**20 06 42.9**	**-0.1**
DPC	**Dobruska-Polom**	**3.46**	**40**		Pg	**Pg**	**20 05 56.7**	**-1.6**
DPC					Sg	**Sg**	**20 06 42.9**	**-0.1**
	comp=Z,57nm,0.8s							
DPC	**Dobruska-Polom**	**3.46**	**40**		*e*PG	**Pg**	**20 05 56.6**	**-1.7**
DPC					*e*SG	**Sg**	**20 06 42.9**	**-0.1**
	comp=Z,57nm,0.8s							
NEUB	**Neuenburg**	**3.54**	**349**		*e*Sg	**Sg**	**20 06 46.0**	**+0.2**
	SNR=4.2							
KTD	**Kalmit**	**3.55**	**298**		Pn	**Pn**	**20 05 48.7**	**+0.5**
KTD					Pg	**Pg**	**20 06 01.2**	**+1.1**
KTD					Sg	**Sg**	**20 06 44.2**	**-2.0**
CLL	**Collm**	**3.57**	**1**		*e*Pn	**Pn**	**20 05 48.5**	**+0.1**
CLL					*e*Sg	**Sg**	**20 06 46.4**	**-0.2**
CLL	**Collm**	**3.57**	**1**		*e*Pn	**Pn**	**20 05 48.0**	**-0.4**
	comp=Z,9.0nm,0.5s							
CLL					*e*Pg	**Pg**	**20 05 59.0**	**-1.4**
CLL					*ex*	x	20 06 02.0	
CLL					*e*Sn	**Sn**	**20 06 31.0**	**-0.1**
CLL					*e*Sg	**Sg**	**20 06 46.0**	**-0.6**
	comp=Z,86nm,1.0s							
LIBD	**Limburg**	**3.57**	**278**		Pg	**Pg**	**20 06 01.0**	**+0.6**
LANF	**Langenberg**	**3.60**	**292**		Pn	**Pn**	**20 05 49.1**	**+0.2**
LANF					Pg	**Pg**	**20 06 01.9**	**+0.9**
LANF					Sg	**Sg**	**20 06 46.2**	**-1.4**
UBBA	**Unterbreizbach**	**3.61**	**330**		*e*Pg	**Pg**	**20 06 02.6**	**+1.5**
	SNR=5.6							
UBBA					*e*Sg	**Sg**	**20 06 47.2**	**-0.7**
	SNR=3.8							
BBS	**Basel-Blauen**	**3.64**	**268**		Pn	**Pn**	**20 05 49.4**	**0.0**
BBS					Pg	**Pg**	**20 06 03.8**	**+2.0**
MORC	**Moravsky Berou**	**3.70**	**55**		*e*Pn	**Pn**	**20 05 49.8**	**-0.4**
MORC					*e*Pg	**Pg**	**20 05 58.3**	**-4.6**
MORC					*e*Sg	**Sg**	**20 06 50.2**	**-0.6**
MORC	**Moravsky Berou**	**3.70**	**55**	⇓	*i*P	**Pn**	**20 05 49.9**	**-0.3**
MORC	**Moravsky Berou**	**3.70**	**55**		*e*Pn	**Pn**	**20 05 48.8**	**-1.4**
CDF	**Champ du Feu**	**3.81**	**282**		*e*Pg	**Pg**	**20 06 04.1**	**-1.0**
CDF					*e*Sg	**Sg**	**20 06 55.3**	**+0.8**
	comp=Z,107nm,0.8s							
CDF	**Champ du Feu**	**3.81**	**282**		*e*Pg	**Pg**	**20 06 04.1**	**-1.0**
CDF					*e*Sg	**Sg**	**20 06 55.3**	**+0.8**
	comp=Z,54nm,0.8s							
CDF	**Champ du Feu**	**3.81**	**282**		*e*Pn	**Pn**	**20 05 51.6**	**-0.2**
CDF					*e*Pg	**Pg**	**20 06 04.1**	**-1.0**
CDF					*e*Sg	**Sg**	**20 06 55.3**	**+0.8**
KSP	**Ksiaz**	**3.82**	**35**		*e*Pg	**Pg**	**20 06 04.3**	**-1.0**
KSP					*e*Sg	**Sg**	**20 06 52.8**	**-2.0**
TNS	**Taunus Mts**	**3.83**	**312**		*e*Pn	**Pn**	**20 05 52.8**	**+0.8**
TNS	**Taunus Mts**	**3.83**	**312**		*e*Pn	**Pn**	**20 05 52.8**	**+0.8**
ECH	**Echery**	**3.87**	**279**		Pn	**Pn**	**20 05 52.7**	**+0.1**
ECH					Pg	**Pg**	**20 06 07.3**	**+1.1**
ECH					Sg	**Sg**	**20 06 56.2**	**-0.1**
MOF	**Molkenrain**	**3.87**	**274**		Pn	**Pn**	**20 05 52.4**	**-0.2**
MOF					Pg	**Pg**	**20 06 07.9**	**+1.6**
HINF	**Hinteralfeld**	**4.06**	**273**		*e*Pg	**Pg**	**20 06 11.0**	**+1.1**
HINF					*e*Sg	**Sg**	**20 07 03.3**	**+0.8**
	comp=Z,57nm,0.7s							
HINF	**Hinteralfeld**	**4.06**	**273**		*e*Pg	**Pg**	**20 06 11.0**	**+1.1**
HINF					*e*Sg	**Sg**	**20 07 03.3**	**+0.8**
	comp=Z,28nm,0.7s							
HINF	**Hinteralfeld**	**4.06**	**273**		*e*Pn	**Pn**	**20 05 54.9**	**-0.3**
HINF					*e*Pg	**Pg**	**20 06 11.0**	**+1.1**
HINF					*e*Sg	**Sg**	**20 07 03.3**	**+0.8**
VYHS	**Vyhne**	**4.06**	**77**		*e*PN	**Pn**	**20 05 54.6**	**-0.6**
VYHS					*e*PG	**Pg**	**20 06 02.9**	**-7.0**
VYHS					*e*SG	**Sg**	**20 06 54.7**	**-7.8**
VYHS	**Vyhne**	**4.06**	**77**		*e*Pn	**Pn**	**20 05 54.6**	**-0.6**
VYHS					*e*Pg	**Pg**	**20 06 02.9**	**-7.0**
VYHS					*e*Sg	**Sg**	**20 06 54.7**	**-7.8**
OKC	**Ostrava-Krasne**	**4.07**	**57**		*e*PG	**Pg**	**20 06 06.8**	**-3.2**
OKC					*e*SG	**Sg**	**20 07 01.7**	**-0.9**
	comp=Z,59nm,0.8s							
ABH	**Alteburg**	**4.12**	**303**		Pn	**Pn**	**20 05 56.3**	**+0.3**
ABH					Sg	**Sg**	**20 07 02.7**	**-1.6**
PKSM	**Moragy**	**4.24**	**109**	⇓	*i*P	**Pn**	**20 05 57.0**	**-0.6**
KOE	**Koeppel**	**4.31**	**310**		*e*Pn	**Pn**	**20 05 59.5**	**+0.8**
RUP	**Ruppelstein**	**4.32**	**299**		Pn	**Pn**	**20 05 59.3**	**+0.6**
RUP					Sg	**Sg**	**20 07 08.5**	**-2.2**
BGG	**Burgeitz**	**4.40**	**306**		*e*Pn	**Pn**	**20 06 00.1**	**+0.2**
BGG					*e*Sn	**Sn**	**20 06 50.4**	**-1.3**
	comp=Z,12nm,0.7s							
HAU	**Haudompre**	**4.40**	**276**		*e*Pg	**Pg**	**20 06 14.9**	**-1.5**
HAU					*e*Sg	**Sg**	**20 07 13.0**	**-0.4**
	comp=Z,45nm,0.6s							
HAU	**Haudompre**	**4.40**	**276**		*e*Pg	**Pg**	**20 06 14.9**	**-1.5**
HAU					*e*Sg	**Sg**	**20 07 13.0**	**-0.4**
	comp=Z,22nm,0.6s							
HAU	**Haudompre**	**4.40**	**276**		*e*Pn	**Pn**	**20 05 59.6**	**-0.3**
HAU					*e*Pg	**Pg**	**20 06 14.9**	**-1.5**
HAU					*e*Sg	**Sg**	**20 07 13.0**	**-0.4**
THEF	**They Montfort**	**4.65**	**278**		Pn	**Pn**	**20 06 03.3**	**0.0**
THEF					Sg	**Sg**	**20 07 21.4**	**0.0**
CABF	**La Chapelle**	**4.77**	**259**		*e*Pn	**Pn**	**20 06 04.4**	**-0.5**
CABF					*e*Sg	**Sg**	**20 07 25.9**	**+0.8**
	comp=Z,31nm,0.8s							
CABF	**La Chapelle**	**4.77**	**259**		*e*Pn	**Pn**	**20 06 04.4**	**-0.5**
CABF					*e*Sg	**Sg**	**20 07 25.9**	**+0.8**
	comp=Z,15nm,0.8s							
LPG	**La Plagne**	**4.78**	**244**		*e*Pn	**Pn**	**20 06 05.4**	**+0.3**
LPG					*e*Sg	**Sg**	**20 07 25.2**	**-0.4**
	comp=Z,21nm,0.9s							
LPG	**La Plagne**	**4.78**	**244**		*e*Pn	**Pn**	**20 06 05.4**	**+0.3**
LPG					*e*Sg	**Sg**	**20 07 25.2**	**-0.4**
	comp=Z,11nm,0.9s							
LPL	**La Plagne**	**4.78**	**244**		*e*Pn	**Pn**	**20 06 05.2**	**+0.1**
LPL					*e*Sg	**Sg**	**20 07 25.7**	**+0.1**
	comp=Z,13nm,0.9s							
LPL	**La Plagne**	**4.78**	**244**		*e*Pn	**Pn**	**20 06 05.2**	**+0.1**
LPL					*e*Sg	**Sg**	**20 07 25.7**	**+0.1**
	comp=Z,6.5nm,0.9s							
HILG	**Hillesheim**	**4.81**	**304**		*e*Pn	**Pn**	**20 06 06.4**	**+0.9**
WLF	**Walferdange**	**4.85**	**296**		*e*Pn	**Pn**	**20 06 07.4**	**+1.4**
WLF	**Walferdange**	**4.85**	**296**		PN	**Pn**	**20 06 07.4**	**+1.4**
WLF					SN	**Sn**	**20 07 04.5**	**+1.8**
	comp=N,6.7nm,0.0s							
WLF	**Walferdange**	**4.85**	**296**		Pn	**Pn**	**20 06 07.4**	**+1.4**
WLF					Sn	**Sn**	**20 07 04.4**	**+1.7**
WLF	**Walferdange**	**4.85**	**296**		*e*Pn	**Pn**	**20 06 06.2**	**+0.2**
HOBG	**Hohbusch**	**4.86**	**314**		*e*Pn	**Pn**	**20 06 07.4**	**+1.2**
RFYF	**Reffroy**	**5.03**	**283**		*e*Pn	**Pn**	**20 06 07.4**	**-1.1**
	baz=98							
RFYF	**Reffroy**	**5.03**	**283**		*e*Pg	**Pg**	**20 06 27.7**	**-0.7**
	baz=106							
RFYF					*e*Sg	**Sg**	**20 07 33.4**	**-0.1**
	comp=N,28nm,0.7s							
RFYF	**Reffroy**	**5.03**	**283**		*e*Pg	**Pg**	**20 06 27.7**	**-0.7**
RFYF					*e*Sg	**Sg**	**20 07 33.4**	**-0.1**
	comp=N,14nm,0.7s							
RFYF	**Reffroy**	**5.03**	**283**		*e*Pn	**Pn**	**20 06 07.4**	**-1.1**
RFYF					*e*Pg	**Pg**	**20 06 27.7**	**-0.7**
RFYF					*e*Sg	**Sg**	**20 07 33.4**	**-0.1**
MBDF	**Montbardon**	**5.20**	**237**		*e*P	**Pn**	**20 06 14.0**	**+3.1**
MBDF					*e*Sg	**Sg**	**20 07 38.5**	**-0.5**
	comp=N,6.4nm,0.7s							
MBDF	**Montbardon**	**5.20**	**237**		*e*P	**Pn**	**20 06 14.0**	**+3.1**
MBDF					*e*Sg	**Sg**	**20 07 38.5**	**-0.5**
	comp=N,3.2nm,0.7s							
MBDF	**Montbardon**	**5.20**	**237**		*e*Pn	**Pn**	**20 06 09.9**	**-1.0**
MBDF					*e*P		20 06 14.0	
MBDF					*e*Sg	**Sg**	**20 07 38.5**	**-0.5**
DREG	**Dreilaegerbach**	**5.24**	**306**		*e*Pn	**Pn**	**20 06 11.6**	**+0.2**
SFTF	**Sexfontaines**	**5.28**	**278**		*e*Pg	**Pg**	**20 06 31.2**	**-2.1**
	baz=102							
SFTF					*e*Sg	**Sg**	**20 07 41.6**	**-0.1**
	comp=N,41nm,0.8s							
SFTF	**Sexfontaines**	**5.28**	**278**		*e*Pg	**Pg**	**20 06 31.2**	**-2.1**
SFTF					*e*Sg	**Sg**	**20 07 41.6**	**-0.1**
	comp=N,20nm,0.8s							
SFTF	**Sexfontaines**	**5.28**	**278**		*e*Pn	**Pn**	**20 06 11.3**	**-0.7**
SFTF					*e*Pg	**Pg**	**20 06 31.2**	**-2.1**
SFTF					*e*Sg	**Sg**	**20 07 41.6**	**-0.1**
MEZF	**Maizieres J'vi**	**5.29**	**281**		*e*Pn	**Pn**	**20 06 11.6**	**-0.5**
MEZF					*e*Sg	**Sg**	**20 07 41.8**	**-0.2**
	comp=N,41nm,0.8s,baz=98							
MEZF	**Maizieres J'vi**	**5.29**	**281**		*e*Pn	**Pn**	**20 06 11.6**	**-0.5**
MEZF					*e*Sg	**Sg**	**20 07 41.8**	**-0.2**
	comp=N,21nm,0.8s							
MEM	**Membach**	**5.34**	**305**		PN	**Pn**	**20 06 13.2**	**+0.4**
MEM					SN	**Sn**	**20 07 13.8**	**-1.0**
	comp=N,11nm,0.0s							
MEM	**Membach**	**5.34**	**305**		Pn	**Pn**	**20 06 13.1**	**+0.4**
MEM					Sn	**Sn**	**20 07 13.7**	**-1.1**
ORIF	**Oris-en-Rattie**	**5.61**	**242**		*e*Pn	**Pn**	**20 06 16.0**	**-0.5**
	SNR=1.0							
ORIF					*e*Sn	**Sn**	**20 07 14.9**	**-6.5**
	SNR=1.0							
ORIF					*e*Sg	**Sg**	**20 07 51.0**	**-1.1**
	comp=N,7.6nm,0.8s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**5.61**	**242**		*e*Pn	**Pn**	**20 06 16.0**	**-0.5**
	SNR=1.0							
ORIF					*e*Sg	**Sg**	**20 07 51.0**	**-1.1**
	comp=N,3.8nm,0.8s,SNR=1.0							
GIVF	**Givet**	**5.81**	**297**		*e*Pn	**Pn**	**20 06 19.1**	**-0.1**
DOU	**Dourbes**	**5.94**	**296**		PN	**Pn**	**20 06 22.4**	**+1.4**
FRF	**La Foret Royal**	**6.05**	**228**		*e*Pn	**Pn**	**20 06 22.0**	**-0.5**
LOR	**Lormes**	**6.13**	**269**		*e*Pn	**Pn**	**20 06 23.1**	**-0.5**
	baz=88							
LOR					*e*Sg	**Sg**	**20 08 08.1**	**-0.7**
	comp=N,7.8nm,0.6s							
LOR	**Lormes**	**6.13**	**269**		*e*Pn	**Pn**	**20 06 23.1**	**-0.5**
LOR					*e*Sg	**Sg**	**20 08 08.1**	**-0.7**
	comp=N,3.9nm,0.6s							
BAIF	**Baives**	**6.17**	**295**		*e*Pn	**Pn**	**20 06 23.2**	**-0.9**
SMF	**Signal de Mont**	**6.25**	**263**		*e*Pn	**Pn**	**20 06 24.6**	**-0.7**
SMF					*e*Sn	**Sn**	**20 07 32.5**	**-4.8**
	comp=N,10.0nm,0.7s							
SMF	**Signal de Mont**	**6.25**	**263**		*e*Pn	**Pn**	**20 06 24.6**	**-0.7**
SMF					*e*Sn	**Sn**	**20 07 32.5**	**-4.8**
	comp=N,5.0nm,0.7s							
VIVF	**Saint-Julien-l**	**6.37**	**246**		*e*Pn	**Pn**	**20 06 26.2**	**-0.8**
VIVF					*e*Sn	**Sn**	**20 07 35.2**	**-5.1**
	comp=N,5.8nm,0.8s							
VIVF	**Saint-Julien-l**	**6.37**	**246**		*e*Pn	**Pn**	**20 06 26.2**	**-0.8**
VIVF					*e*Sn	**Sn**	**20 07 35.2**	**-5.1**
	comp=N,2.9nm,0.8s							
SSF	**Saint Saulge**	**6.40**	**267**		*e*Pn	**Pn**	**20 06 26.9**	**-0.4**
	SNR=1.0							
AVF	**Avril sur Loir**	**6.55**	**265**		*e*Pn	**Pn**	**20 06 29.2**	**-0.2**
	SNR=1.0							
BGF	**Bois d'Agland**	**6.94**	**264**		*e*Pn	**Pn**	**20 06 33.9**	**-0.9**
	SNR=1.0							
BGF					*e*Sn	**Sn**	**20 07 49.6**	**-4.7**
	comp=N,12nm,0.5s							
BGF	**Bois d'Agland**	**6.94**	**264**		*e*Pn	**Pn**	**20 06 33.9**	**-0.9**
	SNR=1.0							
BGF					*e*Sn	**Sn**	**20 07 49.6**	**-4.7**
	comp=N,5.8nm,0.5s							
LASF	**Ste Croix**	**7.28**	**243**		*e*Pn	**Pn**	**20 06 39.0**	**-0.4**
LASF					*e*Sn	**Sn**	**20 07 57.8**	**-4.8**
	comp=N,8.8nm,0.7s							
LASF	**Ste Croix**	**7.28**	**243**		*e*Pn	**Pn**	**20 06 39.0**	**-0.4**
LASF					*e*Sn	**Sn**	**20 07 57.8**	**-4.8**
	comp=N,4.4nm,0.7s							
TCF	**Toulx Ste Croi**	**7.43**	**263**		*e*Pn	**Pn**	**20 06 40.8**	**-0.7**
	SNR=1.0							
TCF					*e*Sn	**Sn**	**20 08 01.6**	**-4.8**
	comp=N,12nm,0.7s							
TCF	**Toulx Ste Croi**	**7.43**	**263**		*e*Pn	**Pn**	**20 06 40.8**	**-0.7**
	SNR=1.0							
TCF					*e*Sn	**Sn**	**20 08 01.6**	**-4.8**
	comp=N,5.8nm,0.7s							
CAF	**Calviac**	**8.00**	**253**		*e*Pn	**Pn**	**20 06 48.3**	**-0.9**
	SNR=1.0							
RJF	**Les Rejaudoux**	**8.21**	**257**		*e*Pn	**Pn**	**20 06 51.3**	**-0.8**
MFF	**Saint Martin d**	**8.95**	**267**		*e*Pn	**Pn**	**20 07 01.6**	**-0.6**

*ISCJB **20** 20:16:29.6±1.2,3442N±004×3206E±009,h15km±10km, Error ellipse: s-maj=13.9km s-min=4.9km az=20.5*
*CSEM **20** 20:16:29.0±0.2,3446N×3205E,h15km,Mw2.9,Error ellipse: s-maj=7.1km s-min=2.3km az=110.0*
*NIC **20** 20:16:30.6±0.2,3458N×3199E,h36km,ML3.1,MW2.9*
*HLW **20** 20:16:31.1,3454N×3190E,h33km,Mb2.5*
*ISK **20** 20:16:32.6,3468N×3217E,h12km,MD3.3*

ISC 20 20:16:30.2±0.8,3443N±004×3218E±007,h7km±5km,n20, σ1§03/28,3C,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.47**	**17**	P		**Pg**	**20 16 39.8**	**+0.4**
AKMC	**Akamas**	**0.61**	**12**	⇑*i*P		**Pg**	**20 16 41.9**	**0.0**
SZAC	**Souni-Zanaja**	**0.66**	**61**	P		**Pg**	**20 16 44.6**	**+1.6**
ALFC	**Alevga**	**0.80**	**25**	⇑P		**Pg**	**20 16 45.0**	**-0.6**
	13nm,0.1s							
ALFC				S		**Sg**	**20 16 55.9**	**-0.2**
ALFC	**Alevga**	**0.80**	**25**	⇑*i*P		**Pg**	**20 16 45.0**	**-0.6**
	13nm,0.1s							
LEF	**Lefka**	**0.90**	**40**	*e*PG		**Pg**	**20 16 47.3**	**-0.2**
LEF				*e*SG		**Sg**	**20 16 56.8**	**-2.4**
CSS	**Prodhromos**	**1.08**	**61**	P		**Pg**	**20 16 50.7**	**-0.4**
	3.4nm,0.2s							
CSS				S		**Sg**	**20 17 06.2**	**+1.0**
LFK	**Lefkose**	**1.40**	**52**	*e*PN		**Pn**	**20 16 55.9**	**-0.1**
LFK				*e*SN		**Sn**	**20 17 15.2**	**+0.5**
EREN	**Erenkoy**	**1.97**	**56**	*e*PN		**Pn**	**20 17 05.5**	**+1.6**
EREN				*e*SN		**Sn**	**20 17 28.7**	**-0.1**
IKL	**Isikli**	**2.18**	**34**	*e*PN		**Pn**	**20 17 06.8**	**-0.1**
IKL				*e*SN		**Sn**	**20 17 31.9**	**-2.2**
HDMB	**Hadim**	**2.54**	**6**	*e*PN		**Pn**	**20 17 11.9**	**+0.1**
HRSH	**Kfar Ka'horesh**	**3.11**	**123**	P		**Pg**	**20 17 28.5**	**-1.4**
KARA	**Karaisali**	**3.66**	**39**	*e*PN		**Pn**	**20 17 28.9**	**+1.6**
RSH		**3.70**	**159**	P		**Pn**	**20 17 28.5**	**+0.8**
AMAG	**Maghara**	**3.88**	**167**	P		**Pn**	**20 17 31.1**	**+0.9**
SUZ		**4.61**	**173**	P		**Pn**	**20 17 40.7**	**+0.4**
HNKL	**Nakhl**	**4.74**	**161**	P		**Pn**	**20 17 42.7**	**+0.7**
HNKL				S		**Sn**	**20 18 35.6**	**-1.7**
HNKL	**Nakhl**	**4.74**	**161**	P		**Pn**	**20 17 42.7**	**+0.6**
	157nm,0.2s							
HNKL				S		**Sn**	**20 18 35.6**	**-1.7**
GLL	**Jalalah**	**4.86**	**185**	P		**Pn**	**20 17 43.7**	**0.0**
HFRF	**Wahat Farafira**	**7.99**	**206**	P		**Pn**	**20 18 25.3**	**-1.4**

IDC 20 20:18:42.6±6.4,387N×9607E,h0km,mb3.7/4,mb1 3.9/4, mb1mx3.6/19,mbtmp3.7/4,Error ellipse: s-maj=316.0km s-min=23.1km az=57.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**44.40**	**346**	P		P	20 26 54.9	-0.1
	0.4nm,0.7s,baz=155,slow=9.2,SNR=5.0							
WRA	**Warramunga Arr**	**44.42**	**124**	P		P	20 26 55.6	0.0
	1.1nm,0.7s,baz=303,slow=9.3,SNR=18							
ASAR	**Alice Springs**	**45.91**	**128**	P		P	20 27 07.2	-0.1
	0.9nm,0.8s,baz=292,slow=7.3,SNR=10.0							
ZALV	**Zalesovo Beam**	**50.76**	**351**	P		P	20 27 44.2	-0.1
	0.7nm,0.4s,baz=175,slow=8.0,SNR=5.8							

*MOS **20** 20:21:45.5±1.9,5617N×11676E,h9km,mb4.4/1,Error ellipse: s-maj=17.5km s-min=12.9km az=137.9*

BYKL 20 20:21:46.1±0.2,5617N×11676E,h11km±15km,6C-6D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NLYR	**Nelyaty**	**0.67**	**299**	*e*PG		Pg	20 21 57.4	-1.7
NLYR				*e*			20 22 06.8	
NLYR				pmax		pmax		
	comp=Z,420nm,0.4s							
NLYR				smax				
	comp=N,2μm,0.8s							
NLYR	**Nelyaty**	**0.67**	**299**	*i* Pg		Pg	20 21 57.7	-1.4
NLYR				*e*Sg		Sg	20 22 06.9	-1.0
NLYR				Pmax				
	comp=N,351nm,0.2s							
NLYR				Smax				
	comp=N,2μm,0.8s							
CRS	**Chara**	**1.11**	**48**	*e*PG		Pg	20 22 05.7	-1.7
CRS				*e*			20 22 20.3	
CRS				pmax		pmax		
	comp=Z,558nm,0.3s							
CRS				smax				
	comp=E,459nm,0.5s							
CRS	**Chara**	**1.11**	**48**	⇓*i* Pg		Pg	20 22 05.8	-1.6
	comp=E,107nm,0.6s							
CRS				⇓*i* Pg		Pg	20 22 05.8	-1.6
	comp=E,67nm,0.6s							
CRS				⇓*i* Pg		Pg	20 22 05.8	-1.6
	comp=E,322nm,0.6s							
CRS				⇑*i* Pb		Pb	20 22 08.0	+0.7
CRS				*e*Sg		Sg	20 22 20.9	-1.0
CRS				*e*Sb		Sb	20 22 24.7	+3.0
CRS				max				
	comp=E,661nm,0.8s							
CRS				max				
	comp=E,624nm,1.0s							
SVKR	**Severomuysk**	**1.79**	**270**	*e*PN		Pn	20 22 17.8	+0.9
SVKR				*e*			20 22 18.6	
SVKR				*e*S		Sn	20 22 40.7	+1.1
SVKR				*e*			20 22 41.9	
SVKR				pmax		pmax		
	comp=Z,266nm,0.3s							
SVKR				smax				
	comp=N,3μm,1.6s							
SVKR	**Severomuysk**	**1.79**	**270**	*e*Pg		Pg	20 22 18.0	-2.4
SVKR				⇑*i*			20 22 23.3	
SVKR				*e*Sg		Sg	20 22 42.4	-1.3
SVKR				max				
	comp=N,283nm,0.2s							
SVKR				Smax				
	comp=N,3μm,0.8s							
UKT	**Uakit**	**1.90**	**250**	*e*PN		Pn	20 22 19.2	+0.9
UKT				*e*			20 22 43.0	
UKT				pmax		pmax		
	comp=Z,144nm,0.2s							
UKT				smax				
	comp=N,583nm,0.5s							
UKT	**Uakit**	**1.90**	**250**	⇑*i* Pg		Pg	20 22 19.5	-2.9
	comp=N,49nm,0.5s							
UKT				⇑*i* Pg		Pg	20 22 19.5	-2.9
	comp=N,106nm,0.5s							
UKT				⇓*i* Pg		Pg	20 22 19.5	-2.9
	comp=N,115nm,0.5s							
UKT				*e*Sg		Sg	20 22 44.4	-2.5
UKT				Pmax				
	comp=N,146nm,0.6s							
UKT				Smax				
	comp=N,651nm,0.7s							
BOD	**Bodaibo**	**2.24**	**319**	*e*PN		Pn	20 22 25.4	+2.4
BOD				*e*			20 22 55.1	
BOD				pmax		pmax		
	comp=Z,179nm,0.3s							
BOD				smax				
	comp=N,597nm,0.3s							
BOD	**Bodaibo**	**2.24**	**319**	*e*Pn		Pn	20 22 22.7	-0.3
BOD				⇑*i* Pg		Pg	20 22 25.7	-3.3
BOD				*e*Sg		Sg	20 22 55.4	-2.5
BOD				Pmax				
	comp=N,176nm,0.4s							
BOD				Smax				
	comp=N,607nm,0.3s	

MXMB	**Maximikha**	**5.48**	**241**	*e*Pg	Pg	20	23	25.1 -5.9
MXMB				*e*Sg	Sg	20	24	36.5 -5.4
MXMB				Pmax				
	comp=N,2.0nm,0.2s							
MXMB				Smax				
	comp=N,239nm,0.8s							
OGRR	**Ongureny**	**5.86**	**248**	*e*PN	Pn	20	23	13.1 +0.3
OGRR				*e*		20	23	30.7
OGRR				*e*		20	24	45.7
OGRR				pmax	pmax			
	comp=Z,3.0nm,0.7s							
OGRR				smax				
	comp=N,67nm,1.1s							
OGRR	**Ongureny**	**5.86**	**248**	*e*Pn	Pn	20	23	13.1 +0.3
OGRR				*e*Pg	Pg	20	23	31.9 -6.3
OGRR				*e*Sg	Sg	20	24	48.3 -5.8
OGRR				Smax				
	comp=N,67nm,1.1s							
KROS	**Kirovskiy**	**6.09**	**102**	*e*Sg	Sg	20	24	52.9 -8.4
UUDB	**Ulan-Yde**	**6.88**	**235**	*e*Sg	Sg	20	25	20.0 -6.6
UUDB				Smax				
	comp=N,183nm,1.1s							
TRG	**Tyrgan**	**6.96**	**245**	*e*Pn	Pn	20	23	30.2 +2.3
TRG				*e*Sg	Sg	20	25	21.1 -8.3
TRG				max				
	comp=N,1.0nm,0.3s							
TRG				Smax				
	comp=N,31nm,0.9s							
KPC	**Khapcheranga**	**7.00**	**204**	*e*PN	Pn	20	23	26.9 -1.5
KPC				*e*		20	23	51.6
KPC				*e*		20	25	23.5
KPC				pmax	pmax			
	comp=Z,37nm,2.5s							
KPC				smax				
	comp=E,148nm,1.4s							
KPC	**Khapcheranga**	**7.00**	**204**	*e*Pg	Pg	20	23	52.2 -7.7
KPC				*e*Sg	Sg	20	25	23.4 -7.0
KPC				Pmax				
	comp=E,4.0nm,0.5s							
KPC				Smax				
	comp=E,148nm,2.2s							
HIA	**Hailar**	**7.15**	**164**	*e*Sg	Sg	20	25	26.6 -8.7
LSTR	**Listvyanka**	**8.24**	**243**	*e*Sg	Sn	20	26	01.2 +43
LSTR				Smax				
	comp=E,33nm,2.2s							
ARS	**Arshan**	**9.44**	**249**	*e*Sg	Sn	20	26	38.6 +51
ARS				Smax				
	comp=E,54nm,1.2s							
ULN	**Ulaanbaatar**	**10.23**	**220**	*e*Sg	Sn	20	27	02.9 +56
MOY	**Mondy**	**10.33**	**251**	*e*Sg	Sn	20	27	04.4 +55
MOY				Smax				
	comp=E,30nm,1.9s							

IDC 20 20:28:47.1±1.6, 1526S×17371W, h0km, mb4.0/5, mb1 4.4/6, mb1mx4.1/17, mbtmp4.1/6, ML2.5/1, Error ellipse: s-maj=113.2km s-min=18.7km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
AFI	**Afiamalu**	**2.31**	**55**	Pn	Pn	20 29 26.4		0.0
	78nm,0.3s,baz=49,slow=3.2,SNR=46							
AFI				Sn	Sn	20 29 47.6		-7.9
	140nm,0.3s,baz=153,slow=22,SNR=7.0							
STKA	**Stephens Creek**	**43.84**	**240**	P	P	20 36 55.5		+0.2
	0.8nm,0.5s,baz=95,slow=12,SNR=3.9							
WRA	**Warramunga Arr**	**49.58**	**257**	P	P	20 37 39.9		-0.5
	1.7nm,0.6s,baz=96,slow=7.8,SNR=55							
ASAR	**Alice Springs**	**49.87**	**252**	P	P	20 37 42.4		-0.2
	9.7nm,0.7s,baz=86,slow=8.1,SNR=118							
TXAR	**Lajitas Array**	**80.78**	**56**	P	P	20 41 03.7		+0.8
	0.5nm,0.9s,baz=202,slow=6.3,SNR=4.2							
PDAR	**Pinedale Array**	**82.36**	**42**	P	P	20 41 10.3		-0.7
	0.4nm,0.4s,baz=251,slow=2.8,SNR=3.5							
MLR	**Muntele Rosu**	**145.61**	**335**	PKPbc	PKPbc	20 48 27.5		-0.2
	3.0nm,0.7s,baz=157,slow=4.0,SNR=6.2							
GERES	**GERESS Array B**	**145.96**	**351**	PKPbc	PKPbc	20 48 28.6		-0.1
	1.0nm,0.6s,baz=11,slow=3.4,SNR=12							
FLN	**La Foliniere**	**146.13**	**8**	*e*PKP1	PKPbc	20 48 28.7		-0.5
LDF	**La Druitiere**	**146.34**	**8**	*e*PKP1	PKPbc	20 48 29.3		-0.6
GRR	**Gorron**	**146.44**	**9**	*e*PKP1	PKPbc	20 48 30.0		-0.2
CDF	**Champ du Feu**	**146.93**	**359**	*e*PKP1	PKPbc	20 48 31.1		-0.5
	8.0nm,0.9s							
HAU	**Haudompre**	**147.35**	**360**	*e*PKP1	PKPbc	20 48 32.2		-0.6
	6.4nm,0.7s							
HINF	**Hinteralfeld**	**147.53**	**359**	*e*PKP1	PKPbc	20 48 32.4		-0.9
LOR	**Lormes**	**148.02**	**3**	*e*PKP1	PKPbc	20 48 34.1		-0.5
	6.9nm,0.8s							
SSF	**Saint Saulge**	**148.21**	**4**	*e*PKP1	PKPbc	20 48 34.6		-0.5
	10nm,0.9s							
DAVOX	**Davos/Dischmat**	**148.43**	**355**	PKPbc	PKPbc	20 48 35.6		-0.2
	2.8nm,0.5s,baz=323,slow=2.0,SNR=8.2							
AVF	**Avril sur Loir**	**148.47**	**4**	*e*PKP1	PKPbc	20 48 35.0		-0.8
	4.0nm,0.7s							
SMF	**Signal de Mont**	**148.64**	**3**	*e*PKP1	PKPbc	20 48 35.6		-0.7
BGF	**Bois d'Agland**	**148.66**	**5**	*e*PKP1	PKPbc	20 48 35.7		-0.6
	9.1nm,0.9s							
CABF	**La Chapelle**	**148.74**	**0**	*e*PKP1	PKPbc	20 48 36.6		+0.1
	9.0nm,0.6s							
TCF	**Toulx Ste Croi**	**148.88**	**5**	*e*PKP1	PKPbc	20 48 36.0		-0.9
LPL	**La Plagne**	**149.84**	**359**	*e*PKP1	PKPbc	20 48 39.8		+0.5
	6.1nm,0.8s							
LPG	**La Plagne**	**149.85**	**359**	*e*PKP1	PKPbc	20 48 40.0		+0.6
	8.2nm,0.7s							
ORIF	**Oris-en-Rattie**	**150.43**	**1**	*e*PKP1	PKPbc	20 48 41.3		+0.5
VIVF	**Saint-Julien-l**	**150.47**	**2**	*e*PKP1	PKPbc	20 48 40.7		-0.2
MBDF	**Montbardon**	**150.62**	**359**	*e*PKP1	PKPbc	20 48 41.2		0.0
	5.3nm,0.8s							
LASF	**Ste Croix**	**151.20**	**4**	*e*PKP1	PKPbc	20 48 42.5		-0.1
	11nm,1.0s							
SMRF	**Simiane la Rot**	**151.37**	**1**	*e*PKP1	PKPbc	20 48 43.3		+0.3
	5.0nm,0.7s							

IDC 20 21:28:57.5±5.4, 2021S×17389W, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.8/17, mbtmp3.8/2, MS3.8/1, Ms1 3.8/1, ms1mx3.0/21, Error ellipse: s-maj=328.3km s-min=75.4km az=155.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
STKA	**Stephens Creek**	**41.39**	**244**	LR	LR	21 52 34.2		
	comp=Z,141nm,20.5s,baz=314,slow=34							
ASAR	**Alice Springs**	**48.34**	**256**	P	P	21 37 41.0		-0.1
	1.4m,0.7s,baz=102,slow=7.7,SNR=19							
WRA	**Warramunga Arr**	**48.46**	**261**	P	P	21 37 42.3		+0.1
	0.2nm,0.3s,baz=96,slow=7.8,SNR=7.3							
AKASG	**Malin Array Be**	**144.53**	**335**	PKP	PKPdf	21 48 34.9		-0.8
	1.8nm,0.7s,baz=39,slow=3.9,SNR=7.6							

*TRN **20** 21:34:51.3, 1868N×6432W, h34km, MD3.5(RSPR)*
*RSPR **20** 21:34:52.6, 1876N×6424W, h36km±2km, MD3.5/10, MD3.5/10*
*NEIC **20** 21:34:52.6, 1876N×6424W, h36km, MD3.5(RSPR), After RSPR.*

ISC 20 21:34:52.4±1.5, 187N±01×6428W±009, h37km±9km, n15, σ0§41/29, 12C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
ABV	**Anegada**	**0.04**	**272**	⇓*e*P	Pn	21 34 58.1		-0.3
ABV				*e*S	Sn	21 35 02.7		+0.1
TBVI	**Tortola**	**0.44**	**226**	⇑*i*P	Pn	21 35 02.2		-0.1
TBVI				*e*S	Sn	21 35 09.6		+0.5
MTP	**Monte Pirata**	**1.36**	**243**	⇑*e*P	Pn	21 35 14.6		-0.3
MTP				*e*S	Sn	21 35 31.6		-0.1
CBYP	**Canovanas**	**1.56**	**253**	⇑*e*P	Pn	21 35 17.4		-0.3
CBYP				*e*S	Sn	21 35 36.3		-0.3
HUMP	**Col San Antoni**	**1.60**	**249**	⇑*e*P	Pn	21 35 17.6		-0.5
HUMP				*e*S	Sn	21 35 36.9		-0.6
CPD	**Cerro la Pandu**	**1.69**	**246**	⇑*e*P	Pn	21 35 19.6		+0.2
CPD				*e*S	Sn	21 35 39.6		-0.3
SJG	**San Juan**	**1.87**	**251**	*e*S	Sn	21 35 44.4		0.0
SJG	**San Juan**	**1.87**	**251**	⇑*e*P	Pn	21 35 21.5		-0.4
SJG				*e*S	Sn	21 35 44.0		-0.4
SJG	**San Juan**	**1.87**	**251**	⇑*e*P	Pn	21 35 21.3		-0.7
SJG				*e*S	Sn	21 35 44.0		-0.4
SJG	**San Juan**	**1.87**	**251**	⇑*e*P	Pn	21 35 21.3		-0.7
SJG				*e*S	Sn	21 35 44.4		0.0
CELP	**Cerrillos**	**2.27**	**254**	⇓*e*P	Pn	21 35 27.5		+0.1
CELP				*e*S	Sn	21 35 54.0		-0.3
ICM	**Isla Caja Muer**	**2.28**	**249**	⇑*e*P	Pn	21 35 27.9		+0.3
ICM				*e*S	Sn	21 35 55.3		+0.9
OBIP	**Obispado Ponce**	**2.31**	**253**	⇑*e*P	Pn	21 35 28.0		+0.1
OBIP				*e*S	Sn	21 35 55.0		-0.1
AOPR	**Arecibo Observ**	**2.37**	**261**	⇑*e*P	Pn	21 35 29.3		+0.5
AOPR				*e*S	Sn	21 35 57.2		+0.5
CRPR	**Cabo Rojo, PR**	**2.78**	**255**	⇑*e*P	Pn	21 35 35.3		+0.9
CRPR				*e*S	Sn	21 36 06.5		-0.1

*IDC **20** 21:37:01.1±3.2, 881S×147.18E, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.9/14, mbtmp3.8/9, ML3.6/2, MS3.1/2, Ms1 3.1/2, ms1mx2.8/18, Error ellipse: s-maj=92.3km s-min=23.6km az=113.0*
*ISCJB **20** 21:37:05.0±0.7, 886S±006×14688E±0.10, h33km, mb3.8/7, Error ellipse: s-maj=13.9km s-min=8.2km az=164.8*
*NEIC **20** 21:37:05.9±1.1, 889S×147.16E, h35km, Error ellipse: s-maj=29.4km s-min=12.1km az=99.0*

ISC 20 21:37:05.5±3.6, 92S±02×1476E±04, h58km±16km, n12, σ0§83/12, mb3.8/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
PMG	**Port Moresby**	**0.48**	**243**	*e*P	Pn	21 37 16.6		-0.5
PMG				*e*S	Sn	21 37 26.1		+0.5
HNR	**Honiara**	**12.20**	**92**	LR	LR	21 44 21.8		
	comp=Z,55nm,18.7s,baz=117,slow=35							
WRA	**Warramunga Arr**	**16.69**	**229**	Pn	Pn	21 40 53.8		-1.7
	0.2nm,0.3s,baz=52,slow=12,SNR=13							
ASAR	**Alice Springs**	**19.46**	**221**	P	Pn	21 41 30.9		+1.6
	0.1nm,0.3s,baz=43,slow=11,SNR=30							
ASAR				S	S	21 44 57.4		-7.2
	0.1nm,0.3s,baz=42,slow=22,SNR=4.2							
FITZ	**Fitzroy Crossi**	**23.08**	**245**	P	P	21 42 06.2		-0.3
	2.0nm,0.8s,mb3.6,baz=118,slow=15,SNR=5.2							
MJAR	**Matsushiro Arr**	**46.33**	**350**	P	P	21 45 25.3		-0.4
	0.4nm,0.5s,mb3.6,baz=179,slow=9.3,SNR=4.8							
KSRS	**Korea Array**	**49.92**	**340**	P	P	21 45 53.2		-0.2
	1.6nm,0.7s,mb4.1,baz=157,slow=11,SNR=4.2							
KSRS				LR	LR	22 04 33.9		
	comp=Z,26nm,18.2s,baz=230,slow=33							
CMAR	**Chiang Mai Arr**	**55.30**	**300**	P	P	21 46 33.5		0.0
	1.1nm,0.7s,mb4.0,baz=116,slow=6.2,SNR=6.0							
SONM	**Songino Array**	**67.46**	**331**	P	P	21 47 55.5		+0.4
	0.3nm,0.3s,mb3.8,baz=122,slow=1.9,SNR=3.9							
MKAR	**Makanchi Array**	**80.31**	**321**	P	P	21 49 11.4		+1.1
	0.7nm,0.7s,mb3.7,baz=98,slow=6.7,SNR=5.4							
ZALV	**Zalesovo Beam**	**82.00**	**328**	P	P	21 49 18.5		-0.5
	0.6nm,0.6s,mb3.7,baz=117,slow=8.3,SNR=3.0							
TORD	**Torodi Ar. Bea**	**146.33**	**280**	PKPbc	PKPbc	21 56 43.1		+2.3
	2.2nm,1.0s,baz=93,slow=4.5,SNR=10							

IDC 20 22:04:36.3±6.8, 281S×10054E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/19, mbtmp3.5/4, Error ellipse: s-maj=330.2km s-min=23.7km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
WRA	**Warramunga Arr**	**37.12**	**120**	P	P	22 11 47.9		-1.1
	0.3nm,0.5s,baz=294,slow=8.5,SNR=3.7							
ASAR	**Alice Springs**	**38.35**	**126**	P	P	22 12 00.2		+0.9
	0.2nm,0.3s,baz=298,slow=8.2,SNR=3.8							
MKAR	**Makanchi Array**	**51.95**	**344**	P	P	22 13 47.3		+0.3
	0.7nm,0.6s,baz=152,slow=8.2,SNR=5.4							
ZALV	**Zalesovo Beam**	**58.05**	**349**	P	P	22 14 30.6		-0.5
	0.3nm,0.3s,baz=174,slow=6.0,SNR=3.6							
TXAR	**Lajitas Array**	**145.00**	**39**	PKPbc	PKPbc	22 24 15.1		-0.5
	0.5nm,0.8s,baz=319,slow=3.3,SNR=4.8							

*DDA **20** 22:14:39.7, 3689N×2789E, h7km±6km, Md3.0*
*ISK **20** 22:14:42.9, 3698N×2769E, h5km, MD3.0*
*ISCJB **20** 22:14:43.9±1.0, 3697N±006×2771E±005, h9km±6km, Error ellipse: s-maj=10.8km s-min=6.8km az=3.8*
*CSEM **20** 22:14:43.0±0.2, 3703N×2769E, h2km, MD3.0, Error ellipse: s-maj=5.0km s-min=2.6km az=179.0*

ISC 20 22:14:43.6±1.3, 3694N±007×2773E±005, h6km±8km, n11, σ0§81/17, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
BDRM	**Kayabasi**	**0.26**	**298**	*i* P	Pg	22 14 48.3		-0.4
BDRM				*i* S	Sg	22 14 52.5		+0.2
MLSB	**Milas**	**0.35**	**6**	*e*PG	Pg	22 14 49.9		-0.6
MLSB				*e*SG	Sg	22 14 56.1		+1.0
BODT	**Bodrum**	**0.36**	**289**	*e*PG	Pg	22 14 50.0		-0.6
BODT				*e*SG	Sg	22 14 55.8		+0.5
YER	**Yerkesik**	**0.48**	**66**	*e*PG	Pg	22 14 53.7		+0.8
TURN	**Turunc**	**0.70**	**95**	*i* P	Pg	22 14 51.5		-5.6
TURN				*i* S	Sg	22 14 58.6		-7.6
GCAM	**G?zelcaml?**	**0.85**	**332**	*i* P	Pg	22 14 58.9		-1.1
GCAM				*i* S	Sg	22 15 11.2		+0.1
DNZL	**Cakiroluk**	**1.28**	**54**	*i* P	Pg	22 15 07.6		-0.7
BLCB	**Balcova**	**1.54**	**339**	*e*PN	Pn	22 15 12.3		+0.6
MANT	**Manisa**	**1.68**	**23**	*i* P	Pn	22 15 12.6		-0.9
MANT				*i* S	Sn	22 15 34.6		-0.8
KULA	**Kula-Manisa**	**1.73**	**25**	*e*PN	Pn	22 15 15.0		+0.8
ELL	**Elmali**	**1.76**	**96**	*e*PN	Pn	22 15 16.4		+1.8

IDC 20 22:16:42.8±1.9, 1048S×11673E, h0km, mb3.8/3, mb1 3.8/6, mb1mx3.7/17, mbtmp3.7/6, ML3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.8/24, Error ellipse: s-maj=79.2km s-min=21.3km az=44.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
KAPI	**Kappang**	**6.20**	**29**	LR	LR	22 21 18.4		
	comp=Z,187nm,19.0s,baz=137,slow=44							
BATI	**Baumata**	**6.82**	**88**	Pn	Pn	22 18 24.6		+0.3
	1.6nm,0.3s,baz=251,slow=18,SNR=2.4							
FITZ	**Fitzroy Crossi**	**11.48**	**132**	Pn	Pn	22 19 26.3		-1.8
	0.3nm,0.3s,baz=317,slow=19,SNR=8.3							
FITZ				Sn	Sn	22 21 24.5		-13
	0.2nm,0.3s,baz=150,slow=16,SNR=3.6							
WRA	**Warramunga Arr**	**19.40**	**121**	P	Pn	22 21 10.5		-1.1
	0.1nm,0.3s,baz=296,slow=10,SNR=3.5							
ASAR	**Alice Springs**	**20.97**	**131**	P	P	22 21 28.8		+1.0
	3.0nm,0.7s,baz=305,slow=10,SNR=41							
MKAR	**Makanchi Array**	**64.79**	**335**	P	P	22 27 23.9		+0.7
	0.6nm,0.4s,baz=133,slow=6.4,SNR=7.0							
ZALV	**Zalesovo Beam**	**69.65**	**341**	P	P	22 27 53.1		-0.9
	0.7nm,0.6s,baz=137,slow=5.4,SNR=4.0							

NEIC 20 22:21:10.1, 4062S×17645E, h42km, ML3.8(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
MRZ	**Mangatainoka R**	**0.66**	**266**	P	Pn	22 21 22.9		-0.2
TSZ	**Takapari Road**	**0.67**	**326**	P	Pn	22 21 22.9		-0.3
TSZ				S	Sn	22 21 33.1		+0.5
MTW	**Mount Morrison**	**0.90**	**233**	P	Pn	22 21 26.2		-0.1
SNZO	**South Karori**	**1.49**	**242**	P	Pn	22 21 34.5		+0.1
SNZO					Sn	22 21 54.6		+2.0

IDC 20 22:22:28.3±4.0, 380S×10127E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.7/6, Error ellipse: s-maj=182.2km s-min=21.8km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
WRA	**Warramunga Arr**	**36.01**	**119**	P	P	22 29 31.2		-0.2
	0.3nm,0.4s,baz=302,slow=9.1,SNR=4.6							
ASAR	**Alice Springs**	**37.19**	**125**	P	P	22 29 41.4		0.0
	0.2nm,0.4s,baz=305,slow=8.0,SNR=4.6							
SONM	**Songino Array**	**51.61**	**4**	P	P	22 31 36.7		+0.3
	0.4nm,0.3s,baz=186,slow=7.5,SNR=2.9							
MKAR	**Makanchi Array**	**53.09**	**344**	P	P	22 31 47.4		0.0
	1.0nm,0.5s,baz=140,slow=8.3,SNR=9.2							
KURK	**Kurchatov**	**57.68**	**343**	P	P	22 32 20.4		0.0
	0.4nm,0.2s,baz=167,slow=7.1,SNR=2.2							
ZALV	**Zalesovo Beam**	**59.16**	**349**	P	P	22 32 30.1		-0.6
	1.0nm,0.4s,baz=162,slow=4.7,SNR=7.6							
TXAR	**Lajitas Array**	**145.30**	**40**	PKPbc	PKPbc	22 42 08.3		-0.2
	0.6nm,0.6s,baz=323,slow=0.4,SNR=8.1							

*CASC **20** 22:28:55.5±1.9, 1339N×9178W, h21km±17km, MD4.2, mb4.2(NEIC)*
*ISCJB **20** 22:28:57.6±0.9, 1340N±006×9170W±004, h52km±7km, mb4.1/11, MS3.5/5, Error ellipse: s-maj=11.1km s-min=5.5km az=27.4*
*MEX **20** 22:28:57.9±0.8, 1323N×9195W, h60km, MD4.6*
*IDC **20** 22:28:58.2±1.1, 1436N×9107W, h0km, mb4.0/6, mb1 4.3/9, mb1mx3.9/24, mbtmp4.0/9, ML3.8/3, MS3.5/6, Ms1 3.5/6, ms1mx3.0/35, Error ellipse: s-maj=38.0km s-min=15.5km az=43.0*
*NEIC **20** 22:29:03.0±1.2, 1388N×9168W, h46km±11km, mb4.2/5, Error ellipse: s-maj=15.8km s-min=9.9km az=190.0*

ISC 20 22:29:00.5±0.8, 1356N±006×9161W±005, h54km±7km, n53, σ1§31/50, mb4.1/10, MS3.5/5, 3C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
FUG	**Fuego 3**	**1.16**	**40**	*e*P	Pn	22 29 19.1		-1.4
FG6		**1.22**	**35**	*e*P	Pn	22 29 20.2		-1.1
FG6				*e*S	Sn	22 29 42.4		+5.5
PCG	**Pacaya**	**1.28**	**49**	*e*P	Pn	22 29 21.3		-0.8
THIG		**1.49**	**335**	*i* P	Pn	22 29 23.1		-1.8
THIG				*i* S	Sn	22 29 43.9		+0.7
NBG	**Las Nubes**	**1.60**	**50**	⇑*e*P	Pn	22 29 26.3		-0.1
NBG				*e*S	Sn	22 29 47.6		+1.6
RTR	**El Retiro**	**1.94**	**80**	*e*P	x	22 29 30.0		
RBDL	**Robledal**	**1.95**	**73**	*e*P	x	22 29 30.5		
SBLS	**San Blas**	**1.95**	**81**	*e*P	x	22 29 29.7		
SBLS				*e*S	x	22 29 56.4		
SNJE	**San Jose**	**1.98**	**81**	*e*P	x	22 29 30.2		
BOQS	**Boqueron**	**2.27**	**85**	⇑*e*P	x	22 29 34.5		
BOQS				*e*S	x	22 30 04.8		
LFRS	**El Faro**	**2.48**	**88**	*e*P	x	22 29 38.1		
SNVI	**San Vicente**	**2.70**	**88**	⇑*e*P	x	22 29 40.9		
SNVI				*e*S	x	22 30 15.3		
CCIG	**Comitan**	**2.76**	**349**	*e*P	Pn	22 29 43.4		+1.1
CCIG				*i* S	Sn	22 30 18.6		+4.2
VSM	**San Miguel**	**3.25**	**92**	*e*P	x	22 29 49.2		
CAHU	**Cacacuatique**	**3.31**	**86**	*e*P	x	22 29 48.9		
SCX	**San Cristobal**	**3.31**	**343**	*i* P	Pn	22 29 52.5		+2.6
TGIG		**3.52**	**336**	*i* P	Pn	22 29 52.2		-0.5
TGIG				*i* S	Sn	22 30 34.0		+0.8
CNCH	**Conchagua**	**3.69**	**94**	⇓*e*P	x	22 29 53.9		
CNCH				*e*S	x	22 30 39.1		
TGUH	**Tegucigalpa,Un**	**4.25**	**83**	*e*Pn	Pn	22 30 05.6		+2.9
TGUH				*e*Sn	Sn	22 30 55.3		+4.4
CMIG	**Matias Romero**	**4.72**	**318**	Pn	Pn	22 30 07.6		-1.6
	2.7nm,0.3s,baz=131,slow=9.9,SNR=26							
CMIG				Sn	Sn	22 31 03.0		+0.3
	6.1nm,0.3s,baz=229,slow=20,SNR=3.3							
CMIG				Lg		22 31 20.3		
	14nm,0.3s,baz=33,slow=22,SNR=7.3							
CMIG	**Matias Romero**	**4.72**	**318**	*e*P	Pn	22 30 07.7		-1.6
CMIG				*i* S	Sn	22 30 59.7		-3.1
CMIG	**Matias Romero**	**4.72**	**318**	*e*P	Pn	22 30 07.7		-1.6
CMIG				*i* S	Sn	22 31 02.1		-0.7
VHO	**Vista Hermosa**	**6.05**	**306**	*i* P	Pn	22 30 22.6		-4.8
VHO				*i* S	Sn	22 31 30.5		-4.9
PNIG	**Pinotepa**	**6.90**	**295**	*i* P	Pn	22 30 37.5		-1.6
PNIG				*i* S	Sn	22 31 49.0		-7.2
JTS	**JuntasAbangare**	**7.28**	**116**	Pn	Pn	22 30 44.8		+0.5
	1.1nm,0.3s,baz=337,slow=22,SNR=5.2							
JTS				Sn	Sn	22 32 05.5		-0.1
	3.0nm,0.3s,baz=232,slow=21,SNR=12							
JTS				LR	LR	22 33 40.7		
	comp=Z,237nm,19.5s,baz=92,slow=39							
TEIG	**Tepich**	**7.36**	**25**	Pn	Pn	22 30 45.5		+0.1
	25nm,0.3s,baz=269,slow=0.6,SNR=194							
PPM	**Popocatepetl**	**8.68**	**310**	*i* P	Pn	22 31 05.9		+2.4
ZIIG	**Zihuatanejo**	**10.31**	**294**	*i* P	Pn	22 31 26.1		+0.3
TXAR	**Lajitas Array**	**19.27**	**326**	P	Pn	22 33 22.4		+0.2
	0.1nm,0.3s,baz=154,slow=12,SNR=25							
LRAL	**Lakeview Retre**	**19.84**	**11**	*e*P	Pn	22 33 27.4		-1.6
	17nm,1.2s							
LPIG	**La Paz**	**20.55**	**303**	LR	LR	22 41 52.7		
	comp=Z,85nm,18.6s,MS3.1,baz=168,slow=38							
MIAR		**20.97**	**355**	*e*P	P	22 33 39.9		+0.8
	6.8nm,0.9s							
MIAR				*e*S	S	22 37 29.4		-0.4
GOGA	**Godfrey**	**21.11**	**19**	*e*P	P	22 33 40.1		-0.5
	7.5nm,0.7s,mb4.1							
SWET	**Sewanee**	**22.17**	**12**	*e*P	P	22 33 51.8		-0.2
TKL	**Tuckaleechee C**	**23.11**	**16**	P	P	22 34 01.1		-0.8
	11nm,0.6s,mb4.4,baz=180,slow=10,SNR=19							
TKL				LR	LR	22 44 00.7		
	comp=Z,156nm,20.6s,MS3.4,baz=12,slow=41							
TZTN	**Tazewell**	**24.01**	**16**	*e*P	P	22 34 09.6		-0.6
	4.3nm,0.5s,mb4.1							
CCM	**Cathedral Cave**	**24.40**	**1**	*e*P	P	22 34 12.1		-1.7
	12nm,0.8s,mb4.4							
BNM	**Barren Site**	**24.62**	**329**	*e*P	P	22 34 18.2		+2.5
ANMO	**Albuquerque**	**25.18**	**

THL				SB	**Sb**	22 33 57.9	+1.1
THL	**Klokotos Trika**	**1.31**	**299**	Pb	**Pb**	**22 33 40.5**	**+0.6**
THL				*e*Sg	**Sg**	22 33 57.3	0.0
THL				Sb	**Sb**	22 33 57.9	+1.1
EVR	**Evrytania**	**1.31**	**270**	*e*PB	**Pb**	22 33 40.4	+0.4
LIT	**Litokhoron**	**1.40**	**327**	*e*Pg	**Pg**	22 33 40.4	-1.7
DID	**Didima**	**1.44**	**188**	*e*Pg	**Pg**	22 33 41.2	-1.6
DID				*e*Sg	**Sg**	22 34 00.3	-1.2
PLG	**Polygyros**	**1.44**	**359**	*e*Pg	**Pg**	22 33 41.0	-1.8
PLG	**Polygyros**	**1.44**	**359**	Pb	**Pb**	22 33 40.8	-1.4
PLG	**Polygyros**	**1.44**	**359**	*e*Pg	**Pg**	22 33 41.0	-1.9
OUR	**Ouranopolis**	**1.45**	**15**	*e*Pg	**Pg**	22 33 41.2	-1.9
LIA	**Limnos Island**	**1.63**	**53**	*e*Pb	**Pb**	22 33 44.2	-1.2
LIA				*e*Sb	**Sb**	22 34 06.9	+0.9
LIA	**Limnos Island**	**1.63**	**53**	*e*PB	**Pb**	22 33 47.4	+2.0
HORT	**Hortiatis**	**1.69**	**350**	*e*Pb	**Pb**	22 33 44.8	-1.6
THE	**Thessaloniki**	**1.75**	**347**	*e*Pb	**Pb**	22 33 45.9	-1.5
VLX	**Vlachokerasia**	**1.79**	**210**	*e*Pb	**Pb**	22 33 46.9	-1.2
RLS	**Riolos of Patr**	**1.81**	**242**	Pb	**Pb**	22 33 47.5	-1.0
SOH	**Sokhos**	**1.89**	**357**	*e*Pb	**Pb**	22 33 47.8	-2.0
CHOS	**Chios island**	**2.08**	**104**	*e*Pn	**Pn**	22 33 50.5	+0.2
ITM	**Ithomi**	**2.14**	**216**	*e*PN	**Pn**	22 33 53.1	+2.0
PRK	**Paraskevi**	**2.19**	**81**	*e*Pn	**Pn**	22 33 51.7	0.0
KNT	**Kendrikon**	**2.27**	**349**	*e*Pn	**Pn**	22 33 53.4	+0.5
NVR	**Nevrokopi**	**2.43**	**7**	Pn	**Pn**	22 33 55.1	0.0
FNA	**Florina**	**2.46**	**319**	*e*Pn	**Pn**	22 33 56.6	+1.1
APE	**Apeiranthos**	**2.46**	**138**	*e*Pn	**Pn**	22 33 55.8	+0.3
ALN	**Alexandroupoli**	**2.78**	**44**	*e*Pn	**Pn**	22 34 00.2	+0.4

NEIC ***20*** *22:35:15.6, 36.77N×11.13W, h0km, MN3.3(MDD), After MDD.*
ISCJB ***20*** *22:35:17.9±0.7, 36.94N±0.04×10.81W±0.04, h10km, Error ellipse: s-maj=5.7km s-min=4.2km az=42.3*
MDD ***20*** *22:35:17.4±1.3, 36.83N×10.99W, h0km, mbLg3.3/18, Error ellipse: s-maj=11.8km s-min=8.5km az=46.0, PRIMO*
LDG ***20*** *22:35:17.8±0.4, 36.73N×11.22W, h20km, Ml3.5/4, Error ellipse: s-maj=7.0km s-min=5.4km az=53.0*
IGIL ***20*** *22:35:18.4, 36.67N×11.15W, h31km, ML2.9*
INMG ***20*** *22:35:18.8±1.3, 36.66N×11.12W, h29km±5.7km, MD3.1, ML2.9, Error ellipse: s-maj=44.0km s-min=5.3km az=57.0*
CSEM ***20*** *22:35:18.5±0.2, 36.75N×11.01W, h10km, ML3.9/15, Error ellipse: s-maj=3.7km s-min=3.1km az=47.0*
CNRM ***20*** *22:35:19.9, 36.53N×10.79W, h33km, MD3.7*

ISC 20 22:35:19.5±0.7, 3694N±003×1082W±004, h10km, n120, σ0§94/225, 2D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PFVI	**Vila Bisbo**	**1.61**	**83**	*e*Pn	**Pn**		**22 35 47.6**	**-0.3**
PFVI				*e*Sn	**Sn**		**22 36 08.9**	**+0.2**
PFVI				A			22 36 10.7	
	101nm,0.1s							
MORF	**Marmelete**	**1.77**	**78**	*e*Pn	**Pn**		**22 35 50.2**	**0.0**
MORF				*e*Sn	**Sn**		**22 36 13.1**	**+0.3**
MORF				A			22 36 18.5	
	74nm,0.1s							
MORF	**Marmelete**	**1.77**	**78**	*e*Pn	**Pn**		**22 35 50.2**	**0.0**
MORF				*e*Sn	**Sn**		**22 36 13.1**	**+0.3**
	74nm,0.1s							
PTEO	**Sao Teotonio**	**1.78**	**70**	*e*Pn	**Pn**		**22 35 50.5**	**+0.2**
PTEO				*e*Sn	**Sn**		**22 36 14.3**	**+1.4**
PTEO				A			22 36 18.1	
	58nm,0.2s							
PTEO	**Sao Teotonio**	**1.78**	**70**	*e*Pn	**Pn**		**22 35 50.5**	**+0.2**
PTEO				*e*Sn	**Sn**		**22 36 14.3**	**+1.4**
	58nm,0.2s							
PBDV	**Barranco-do-Ve**	**2.33**	**82**	*e*Pn	**Pn**		**22 35 57.9**	**0.0**
PBDV				*e*Sn	**Sn**		**22 36 26.6**	**+0.1**
PBDV				A			22 36 33.7	
	23nm,0.3s							
PBDV	**Barranco-do-Ve**	**2.33**	**82**	*e*Pn	**Pn**		**22 35 57.9**	**0.0**
PBDV				*e*Sn	**Sn**		**22 36 26.6**	**+0.1**
	23nm,0.3s							
PMAFR	**Mafra**	**2.35**	**31**	*e*Pn	**Pn**		**22 35 58.4**	**+0.3**
PMAFR				*e*Sn	**Sn**		**22 36 28.6**	**+1.6**
PMAFR				A			22 36 30.6	
	183nm,0.1s							
MOE	**Montemor**	**2.52**	**50**	*e*Pn	**Pn**		**22 36 01.0**	**+0.6**
MOE				*e*Sn	**Sn**		**22 36 33.0**	**+1.9**
PVAQ	**Vaqueiros**	**2.52**	**79**	*e*Pn	**Pn**		**22 36 00.7**	**+0.2**
PVAQ				*e*Sn	**Sn**		**22 36 32.1**	**+0.8**
PVAQ				A			22 36 34.6	
	23nm,0.2s							
PVAQ	**Vaqueiros**	**2.52**	**79**	Pn	**Pn**		**22 36 00.7**	**+0.2**
PVAQ				Sn	**Sn**		**22 36 32.1**	**+0.8**
	11nm,0.2s							
PBEJ	**Beja**	**2.59**	**64**	*e*Pn	**Pn**		**22 36 01.6**	**+0.2**
PBEJ				*e*Sn	**Sn**		**22 36 34.2**	**+1.3**
PBEJ				A			22 36 35.9	
	17nm,0.2s							
PBEJ	**Beja**	**2.59**	**64**	*e*Pn	**Pn**		**22 36 01.6**	**+0.2**
PBEJ				*e*Sn	**Sn**		**22 36 34.2**	**+1.3**
	17nm,0.2s							
EVOP	**Sao Brissos**	**2.66**	**53**	*e*Pn	**Pn**		**22 36 02.5**	**+0.1**
EVOP				*e*Sn	**Sn**		**22 36 34.7**	**0.0**
	28nm,0.3s							
EGRO	**El Granado**	**2.73**	**76**	P	**Pn**		**22 36 03.4**	**+0.1**
	0.8nm,0.1s,SNR=17							
EGRO				S	**Sn**		**22 36 37.4**	**+1.0**
	26nm,0.1s,SNR=9.0							
EGRO	**El Granado**	**2.73**	**76**	P	**Pn**		**22 36 03.4**	**+0.1**
	2.0nm,0.3s,SNR=17							
EGRO				S	**Sn**		**22 36 37.4**	**+1.0**
	19nm,0.2s,SNR=9.0							
EVO	**Evora**	**2.73**	**54**	*e*Pn	**Pn**		**22 36 02.5**	**-0.9**
EVO				*e*Sn	**Sn**		**22 36 34.7**	**-1.8**
	55nm,0.3s							
EVO	**Evora**	**2.73**	**54**	*e*Pn	**Pn**		**22 36 03.9**	**+0.5**
EVO				*e*Sn	**Sn**		**22 36 38.1**	**+1.6**
EVO				A			22 36 40.9	
	54nm,0.1s							
EVO	**Evora**	**2.73**	**54**	*e*Pn	**Pn**		**22 36 03.9**	**+0.5**
EVO				*e*Sn	**Sn**		**22 36 38.1**	**+1.6**
	54nm,0.1s							
ALMR	**Almeirim**	**2.83**	**38**	*e*P	**Pn**		**22 36 05.5**	**+0.7**
ALMR				*e*S	**Sn**		**22 36 40.2**	**+1.3**
ALMR				*e*S	**Sn**		**22 36 40.3**	**+1.3**
ALMR				AML	AML		22 36 42.6	
	comp=N,50nm,0.2s							
ALMR	**Almeirim**	**2.83**	**38**	*e*P	**Pn**		**22 36 05.5**	**+0.7**
ALMR				*e*S	**Sn**		**22 36 40.3**	**+1.4**
ALMR	**Almeirim**	**2.83**	**38**	P	**Pn**		**22 36 05.5**	**+0.7**
ALMR				S	**Sn**		**22 36 40.2**	**+1.3**
PESTR	**Estremoz**	**3.20**	**52**	*e*Pn	**Pn**		**22 36 10.9**	**+1.1**
PESTR				*e*Sn	**Sn**		**22 36 49.4**	**+1.5**
PESTR				A			22 36 53.5	
	comp=N,15nm,0.4s							
PESTR	**Estremoz**	**3.20**	**52**	*e*Pn	**Pn**		**22 36 10.9**	**+1.1**
PESTR				*e*Sn	**Sn**		**22 36 49.4**	**+1.5**
	comp=N,15nm,0.4s							
PBAR	**Barrancos**	**3.25**	**67**	*e*Pn	**Pn**		**22 36 10.8**	**+0.3**
PBAR				*e*Sn	**Sn**		**22 36 48.2**	**-1.0**
PBAR				A			22 36 53.3	
	comp=N,12nm,0.2s							
PBAR	**Barrancos**	**3.25**	**67**	*e*Pn	**Pn**		**22 36 10.8**	**+0.3**
PBAR				*e*Sn	**Sn**		**22 36 48.2**	**-1.0**
	comp=N,12nm,0.2s							
PTOM	**Tomar**	**3.28**	**35**	*e*Pn	**Pn**		**22 36 12.5**	**+1.6**
EMIN	**Mina Concepcio**	**3.41**	**75**	⇓P	**Pn**		**22 36 12.5**	**-0.2**
	comp=N,0.6nm,0.1s,SNR=18							
EMIN				S	**Sn**		**22 36 53.4**	**+0.3**
	comp=N,12nm,0.1s,SNR=6.8							
EMIN	**Mina Concepcio**	**3.41**	**75**	P	**Pn**		**22 36 12.5**	**-0.2**
	comp=N,0.6nm,0.1s,SNR=18							
EMIN				S	**Sn**		**22 36 53.4**	**+0.3**
	comp=N,3.8nm,0.1s,SNR=6.8							
EMIN	**Mina Concepcio**	**3.41**	**75**	⇓P	**Pn**		**22 36 12.5**	**-0.1**
EMIN				S	**Sn**		**22 36 53.4**	**+0.3**
EBAD	**Badajoz**	**3.52**	**58**	P	**Pn**		**22 36 14.6**	**+0.5**
	comp=N,2.0nm,0.1s,SNR=24							
EBAD				S	**Sn**		**22 36 56.9**	**+1.1**
	comp=N,29nm,0.2s,SNR=11							
EBAD	**Badajoz**	**3.52**	**58**	P	**Pn**		**22 36 14.3**	**+0.1**
	comp=N,1.3nm,0.3s,SNR=24							
EBAD				S	**Sn**		**22 36 57.3**	**+1.5**
	comp=N,29nm,0.2s,SNR=11							
EBAD	**Badajoz**	**3.52**	**58**	P	**Pn**		**22 36 14.3**	**+0.1**
EBAD				S	**Sn**		**22 36 57.4**	**+1.6**
PMRV	**Marv??o**	**3.67**	**46**	*e*Pn	**Pn**		**22 36 16.4**	**+0.1**
PMRV				*e*Sn	**Sn**		**22 37 00.1**	**+0.5**
PMRV				A			22 37 04.0	
	comp=N,24nm,0.2s							
PMRV	**Marv??o**	**3.67**	**46**	*e*Pn	**Pn**		**22 36 16.4**	**+0.1**
PMRV				*e*Sn	**Sn**		**22 37 00.1**	**+0.5**
	comp=N,24nm,0.2s							
PCBR	**Castelo Branco**	**3.91**	**41**	*e*Pn	**Pn**		**22 36 20.0**	**+0.4**
PCBR				*e*Sn	**Sn**		**22 37 06.2**	**+0.7**
PCBR				A			22 37 07.3	
	comp=N,13nm,0.3s							
PCBR	**Castelo Branco**	**3.91**	**41**	*e*Pn	**Pn**		**22 36 20.0**	**+0.4**
PCBR				*e*Sn	**Sn**		**22 37 06.2**	**+0.7**
	comp=N,13nm,0.3s							
ESPR	**Espera**	**3.98**	**90**	P	**Pn**		**22 36 20.0**	**-0.5**
	comp=N,7.6nm,0.1s,SNR=10							
ESPR				S	**Sn**		**22 37 06.5**	**-0.7**
	comp=N,87nm,0.2s,SNR=7.0							
ESPR	**Espera**	**3.98**	**90**	P	**Pn**		**22 36 19.9**	**-0.6**
	comp=N,6.9nm,0.1s,SNR=10							
ESPR				S	**Sn**		**22 37 06.5**	**-0.7**
	comp=N,85nm,0.3s,SNR=7.0							
ESPR	**Espera**	**3.98**	**90**	P	**Pn**		**22 36 19.9**	**-0.6**
ESPR				S	**Sn**		**22 37 06.5**	**-0.7**
MTE	**Manteigas**	**4.30**	**36**	*e*Pn	**Pn**		**22 36 25.6**	**+0.7**
MTE				*e*Sn	**Sn**		**22 37 15.4**	**+0.3**
MTE				A			22 37 20.5	
	comp=N,15nm,0.2s							
MTE	**Manteigas**	**4.30**	**36**	*e*Pn	**Pn**		**22 36 25.6**	**+0.7**
MTE				*e*Sn	**Sn**		**22 37 15.4**	**+0.3**
	comp=N,15nm,0.2s							
PVIS	**Viseu**	**4.41**	**30**	*e*Pn	**Pn**		**22 36 26.6**	**+0.2**
PVIS				*e*Sn	**Sn**		**22 37 18.6**	**+0.8**
PVIS				A			22 37 20.9	
	comp=N,22nm,0.1s							
PVIS	**Viseu**	**4.41**	**30**	*e*Pn	**Pn**		**22 36 26.6**	**+0.2**
PVIS				*e*Sn	**Sn**		**22 37 18.6**	**+0.8**
	comp=N,22nm,0.1s							
ECAB	**El Cabril**	**4.44**	**74**	P	**Pn**		**22 36 26.9**	**0.0**
	comp=N,5.2nm,0.1s,SNR=31							
ECAB				S	**Sn**		**22 37 18.2**	**-0.4**
	comp=N,16nm,0.3s,SNR=5.9							
ECAB	**El Cabril**	**4.44**	**74**	P	**Pn**		**22 36 26.9**	**0.0**
	comp=N,5.1nm,0.3s,SNR=31							
ECAB				S	**Sn**		**22 37 18.6**	**0.0**
	comp=N,14nm,0.3s,SNR=5.9							
ECAB	**El Cabril**	**4.44**	**74**	P	**Pn**		**22 36 26.9**	**0.0**
ECAB				S	**Sn**		**22 37 18.6**	**-0.1**
AVE	**Averroes**	**4.58**	**141**	P	**Pn**		**22 36 21.1**	**-7.8**
EMIJ	**Mijas**	**4.87**	**93**	P	**Pn**		**22 36 32.9**	**+0.1**
	comp=N,0.7nm,0.2s,SNR=7.9							
EMIJ				S	**Sn**		**22 37 27.6**	**-1.7**
	comp=N,8.4nm,0.4s,SNR=7.9							
EMIJ	**Mijas**	**4.87**	**93**	P	**Pn**		**22 36 32.9**	**+0.1**
	SNR=7.9							
EMIJ				S	**Sn**		**22 37 27.2**	**-2.0**
	comp=N,19nm,0.7s,SNR=7.9							
EMIJ	**Mijas**	**4.87**	**93**	P	**Pn**		**22 36 32.9**	**+0.1**
EMIJ				S	**Sn**		**22 37 27.2**	**-2.0**
PVRL	**Vila Real**	**4.96**	**28**	*e*Sn	**Sn**		**22 37 30.3**	**-1.0**
PVRL				A			22 37 32.9	
	comp=N,17nm,0.3s							
PVRL	**Vila Real**	**4.96**	**28**	*e*Sn	**Sn**		**22 37 30.3**	**-1.0**
	comp=N,17nm,0.3s							
EADA	**Adamuz**	**5.11**	**74**	P	**Pn**		**22 36 36.0**	**-0.1**
	comp=N,1.3nm,0.1s,SNR=20							
EADA				S	**Sn**		**22 37 34.6**	**-0.5**
	comp=N,6.6nm,0.2s,SNR=6.9							
EADA	**Adamuz**	**5.11**	**74**	P	**Pn**		**22 36 36.0**	**-0.1**
	comp=N,2.0nm,0.3s,SNR=20							
EADA				S	**Sn**		**22 37 35.0**	**-0.1**
	comp=N,4.5nm,0.1s,SNR=6.9							
EADA	**Adamuz**	**5.11**	**74**	P	**Pn**		**22 36 36.0**	**0.0**
EADA				S	**Sn**		**22 37 35.0**	**-0.1**
MVO	**Moncorvo**	**5.15**	**34**	*e*Pn	**Pn**		**22 36 36.6**	**0.0**
MVO				*e*Sn	**Sn**		**22 37 35.0**	**-1.0**
MVO				A			22 37 38.5	
	comp=N,18nm,0.4s							
MVO	**Moncorvo**	**5.15**	**34**	*e*Pn	**Pn**		**22 36 36.6**	**0.0**
MVO				*e*Sn	**Sn**		**22 37 35.0**	**-1.0**
	comp=N,18nm,0.4s							
PCAB	**Cabril**	**5.23**	**24**	*e*Pn	**Pn**		**22 36 37.7**	**0.0**
PCAB				*e*Sn	**Sn**		**22 37 37.5**	**-0.6**
PCAB				A			22 37 39.8	
	comp=N,11nm,0.1s							
PCAB	**Cabril**	**5.23**	**24**	*e*Pn	**Pn**		**22 36 37.7**	**0.0**
PCAB				*e*Sn	**Sn**		**22 37 37.5**	**-0.6**
	comp=N,11nm,0.1s							
ELOB	**Lobios**	**5.36**	**23**	P	**Pn**		**22 36 39.2**	**-0.3**
	comp=N,2.8nm,0.1s,SNR=18							
ELOB				S	**Sn**		**22 37 39.8**	**-1.6**
	comp=N,11nm,0.1s,SNR=18							
ELOB	**Lobios**	**5.36**	**23**	P	**Pn**		**22 36 39.2**	**-0.3**
ELOB				S	**Sn**		**22 37 40.3**	**-1.0**
CIA	**Chichaoua**	**5.63**	**162**	*i* P	**Pn**		**22 36 35.0**	**-8.2**
CIA				*i* S	**Sn**		**22 37 31.0**	**-17**
EBAN	**Banos Encina**	**5.72**	**76**	P	**Pn**		**22 36 44.1**	**-0.4**
	comp=N,0.6nm,0.1s,SNR=7.9							
EBAN				S	**Sn**		**22 37 50.2**	**0.0**
	comp=N,2.3nm,0.1s,SNR=7.9							
EBAN	**Banos Encina**	**5.72**	**76**	P	**Pn**		**22 36 44.1**	**-0.4**
EBAN				S	**Sn**		**22 37 50.2**	**0.0**
PBRG	**Braganca**	**5.79**	**32**	*e*Pn	**Pn**		**22 36 45.4**	**-0.1**
PBRG				*e*Sn	**Sn**		**22 37 50.3**	**-1.6**
PBRG				A			22 37 52.2	
	comp=N,8.9nm,0.2s							
PBRG	**Braganca**	**5.79**	**32**	*e*Pn	**Pn**		**22 36 45.4**	**-0.1**
PBRG				*e*Sn	**Sn**		**22 37 50.3**	**-1.6**
	comp=N,8.9nm,0.2s							
EGUA	**Guajares**	**5.82**	**89**	S	**Sn**		**22 37 52.2**	**-0.3**
	comp=N,4.3nm,0.2s,SNR=7.9							
KIB	**El Ksiba**	**5.87**	**137**	P	**Pn**		**22 36 40.0**	**-6.5**
KIB				S	**Sn**		**22 37 40.0**	**-14**
KIB	**El Ksiba**	**5.87**	**137**	*e*P	**Pn**		**22 36 40.0**	**-6.5**
ECAL	**Calabor**	**5.91**	**31**	P	**Pn**		**22 36 47.0**	**-0.1**
	comp=N,2.0nm,0.2s,SNR=16							
ECAL				S	**Sn**		**22 37 54.3**	**-0.4**
	comp=N,30nm,0.3s,SNR=10							
ECAL	**Calabor**	**5.91**	**31**	P	**Pn**		**22 36 47.0**	**0.0**
ECAL				S	**Sn**		**22 37 54.3**	**-0.4**
EQUE	**Quentar**	**5.91**	**85**	P	**Pn**		**22 36 46.5**	**-0.5**
	comp=N,0.0nm,0.0s,SNR=4.0							
EQUE				S	**Sn**		**22 37 54.6**	**-0.2**
	comp=N,2.5nm,0.2s,SNR=7.9							
EQUE	**Quentar**	**5.91**	**85**	S	**Sn**		**22 37 54.6**	**-0.2**
	comp=N,4.6nm,0.4s,SNR=7.9							
TZC	**Tazercounte**	**5.97**	**142**	*i* P	**Pn**		**22 36 41.0**	**-6.9**
TZC				*i* S	**Sn**		**22 37 42.0**	**-14**
ESDC	**Sonseca Array**	**6.04**	**61**	P	**Pn**		**22 36 49.1**	**+0.2**
	comp=N,0.9nm,0.2s,baz=245,slow=14,SNR=18							
ESDC				S	**Sn**		**22 37 57.2**	**-0.9**
	SNR=7.9							
ESDC	**Sonseca Array**	**6.04**	**61**	P	**Pn**		**22 36 49.1**	**+0.2**
	comp=N,0.9nm,0.2s,SNR=18							
ERUA	**La Rua**	**6.14**	**26**	P	**Pn**		**22 36 49.8**	**-0.4**
	comp=N,1.9nm,0.1s,SNR=7.9							
ERUA				S	**Sn**		**22 37 58.5**	**-1.9**
	comp=N,4.7nm,0.2s,SNR=7.9							
CZD	**Col de Zad**	**6.14**	**128**	P	**Pn**		**22 36 46.0**	**-4.2**
CZD				S	**Sn**		**22 37 47.0**	**-13**
CZD	**Col de Zad**	**6.14**	**128**	*i* P	**Pn**		**22 36 46.0**	**-4.2**
EMAZ	**Mazaricos**	**6.17**	**13**	P	**Pn**		**22 36 48.7**	**-1.9**
	comp=N,0.3nm,0.1s,SNR=7.9							
EMAZ				S	**Sn**		**22 37 56.1**	**-5.0**
	comp=N,13nm,0.2s,SNR=9.7							
EMAZ	**Mazaricos**	**6.17**	**13**	P	**Pn**		**22 36 47.9**	**-2.7**
EMAZ				S	**Sn**		**22 37 55.7**	**-5.3**
STS	**Santiago**	**6.19**	**16**	P	**Pn**		**22 36 49.9**	**-1.0**
	comp=N,1.5nm,0.1s,SNR=4.0							
STS				S	**Sn**		**22 37 58.8**	**-2.9**
	comp=N,6.6nm,0.1s,SNR=7.9							
OUK	**Oukaimeden**	**6.22**	**156**	*i* P	**Pn**		**22 36 44.0**	**-7.4**
OUK				*i* S	**Sn**		**22 37 47.0**	**-16**
EQES	**Quesada**	**6.23**	**80**	P	**Pn**		**22 36 51.5**	**+0.1**
	comp=N,2.0nm,0.3s,SNR=8.1							
EQES				S	**Sn**		**22 38 01.7**	**-1.0**
	comp=N,4.6nm,0.2s,SNR=15							
EQES	**Quesada**	**6.23**	**80**	P	**Pn**		**22 36 51.5**	**0.0**
	comp=N,3.3nm,0.8s,SNR=8.1							
EQES				S	**Sn**		**22 38 03.4**	**+0.6**
	comp=N,5.5nm,0.3s,SNR=15							
EQES	**Quesada**	**6.23**	**80**	P	**Pn**		**22 36 51.5**	**+0.1**
EQES				S	**Sn**		**22 38 03.4**	**+0.6**
EBER	**Berja**	**6.35**	**88**	S	**Sn**		**22 38 05.4**	**-0.4**
	comp=N,0.1nm,0.0s,SNR=7.9							
EBER	**Berja**	**6.35**	**88**	S	**Sn**		**22 38 05.4**	**-0.4**
	comp=N,20nm,0.8s,SNR=7.9							
GUD	**Guadarrama**	**6.38**	**53**	P	**Pn**		**22 36 53.8**	**+0.2**
	comp=N,0.6nm,0.3s,SNR=7.9							
GUD				S	**Sn**		**22 38 06.1**	**-0.4**
	comp=N,3.8nm,0.4s,SNR=7.9							
EHUE	**Huescar**	**6.61**	**80**	P	**Pn**		**22 36 58.4**	**+1.7**
	comp=N,0.6nm,0.4s,SNR=4.0							
EHUE				S	**Sn**		**22 38 10.6**	**-1.5**
	comp=N,0.9nm,0.1s,SNR=7.9							
EHUE	**Huescar**	**6.61**	**80**	S	**Sn**		**22 38 11.3**	**-0.8**
	comp=N,1.3nm,0.2s,SNR=7.9							
EHUE	**Huescar**	**6.61**	**80**	P	**Pn**		**22 36 58.4**	**+1.7**
EHUE				S	**Sn**		**22 38 11.3**	**-0.8**
EVIA	**Vianos**	**6.80**	**73**	P	**Pn**		**22 36 59.0**	**-0.3**
	comp=N,0.6nm,0.1s,SNR=7.9							
EVIA				S	**Sn**		**22 38 14.7**	**-2.0**
	comp=N,1.7nm,0.2s,SNR=7.9							
EVIA	**Vianos**	**6.80**	**73**	P	**Pn**		**22 36 58.5**	**-0.8**
	SNR=7.9							
EVIA	**Vianos**	**6.80**	**73**	P	**Pn**		**22 36 58.5**	**-0.8**
EVIA				S	**Sn**		**22 38 14.2**	**-2.6**
EPON	**Pontenova**	**6.97**	**23**	P	**Pn**		**22 37 00.9**	**-0.6**
	comp=N,2.1nm,0.2s,SNR=7.9							
EPON				S	**Sn**		**22 38 18.3**	**-2.5**
	comp=N,4.2nm,0.2s,SNR=7.9							
EPON	**Pontenova**	**6.97**	**23**	P	**Pn**		**22 37 01.0**	**-0.6**
EPON				S	**Sn**		**22 38 18.7**	**-2.1**
ZFT	**Errachidia**	**7.24**	**131**	P	**Pn**		**22 36 59.0**	**-6.4**
ZFT				S	**Sn**		**22 38 12.0**	**-16**
ZFT	**Errachidia**	**7.24**	**131**	*i* P	**Pn**		**22 36 59.0**	**-6.4**
ETOB	**Tobarra**	**7.54**	**74**	P	**Pn**		**22 37 08.7**	**-0.7**
	comp=N,0.2nm,0.1s,SNR=6.4							
ETOB				S	**Sn**		**22 38 33.9**	**-1.0**
	comp=N,2.2nm,0.3s,SNR=7.9							
ETOB	**Tobarra**	**7.54**	**74**	P	**Pn**		**22 37 08.7**	**-0.7**
	comp=N,2.3nm,0.6s,SNR=6.4							
ETOB				S	**Sn**		**22 38 34.8**	**-0.1**
	comp=N,2.2nm,0.3s,SNR=7.9							
ETOB	**Tobarra**	**7.54**	**74**	P	**Pn**		**22 37 08.7**	**-0.7**
ETOB				S	**Sn**		**22 38 34.8**	**0.0**
EARI	**Arriondas**	**7.67**	**32**	P	**Pn**		**22 37 12.2**	**+1.0**
	comp=N,0.3nm,0.2s,SNR=7.9							
EARI				S	**Sn**		**22 38 36.9**	**-1.2**
	comp=N,1.7nm,0.2s,SNR=7.9							
EARI	**Arriondas**	**7.67**	**32**	P	**Pn**		**22 37 13.4**	**+2.2**
	SNR=7.9							
EARI	**Arriondas**	**7.67**	**32**	P	**Pn**		**22 37 13.4**	**+2.2**
EARI				S	**Sn**		**22 38 37.6**	**-0.5**
ETOR	**Torete**	**7.86**	**58**	P	**Pn**		**22 37 14.1**	**+0.3**
	comp=N,4.2nm,0.2s,SNR=12							
ETOR				S	**Sn**		**22 38 40.0**	**-2.7**
	comp=N,12nm,0.3s,SNR=7.9							
ETOR	**Torete**	**7.86**	**58**	P	**Pn**		**22 37 14.1**	**+0.3**
ETOR				S	**Sn**		**22 38 41.3**	**-1.4**
ELAN	**Lanestosa**	**8.45**	**40**	P	**Pn**		**22 37 25.3**	**+3.3**
	comp=N,0.2nm,0.1s,SNR=7.9							
ELAN				S	**Sn**		**22 38 56.1**	**-1.3**
	comp=N,2.9nm,0.3s,SNR=7.9							
ELAN	**Lanestosa**	**8.45**	**40**	P	**Pn**		**22 37 25.3**	**+3.3**
	SNR=7.9							
ELAN	**Lanestosa**	**8.45**	**40**	P	**Pn**		**22 37 25.3**	**+3.3**
ELAN				S	**Sn**		**22 38 56.4**	**-1.0**
EMOS	**Mosqueruela**	**8.79**	**64**	P	**Pn**		**22 37 28.1**	**+1.6**
	comp=N,0.7nm,0.2s,SNR=4.0							
EMOS				S	**Sn**		**22 39 04.5**	**-1.1**
	comp=N,1.0nm,0.2s,SNR=7.9							
EMOS	**Mosqueruela**	**8.79**	**64**	P	**Pn**		**22 37 28.2**	**+1.7**
	SNR=4.0							
EMOS				S	**Sn**		**22 39 05.1**	**-0.5**
	comp=N,5.5nm,0.5s,SNR=7.9							
EMOS	**Mosqueruela**	**8.79**	**64**	P	**Pn

VOIR		3.13	91	⇓	*e*P	**Pn**	**22 46 57.3**	**+1.7**
VOIR		3.13	91	⇓	P	**Pn**	**22 46 57.4**	**+1.7**
VYHS	**Vyhne**	3.16	338		*e*Pn	**Pn**	**22 46 56.8**	**+0.8**
VYHS					*e*Sn	**Sn**	**22 47 32.2**	**-0.9**
TREB	**Trebinje**	3.29	210		*e*Pn	**Pn**	**22 46 54.4**	**-3.3**
TREB					*e*Sn	**Sn**	**22 47 34.5**	**-1.8**
KOLL	**Kolacno**	3.36	334		*e*Pn	**Pn**	**22 46 59.4**	**+0.7**
KOLL					*e*SN	**Sn**	**22 47 36.5**	**-1.5**
KOLL	**Kolacno**	3.36	334		*e*Pn	**Pn**	**22 46 59.4**	**+0.7**
KOLL					*e*Sn	**Sn**	**22 47 36.5**	**-1.5**
KOLL	**Kolacno**	3.36	334		*e*Pn	**Pn**	**22 46 59.4**	**+0.7**
KOLL					*e*Sn	**Sn**	**22 47 36.5**	**-1.5**
CRVS	**Cervenica-Dubn**	3.38	10		*e*SN	**Sg**	**22 47 59.8**	**+4.1**
STON	**Ston**	3.41	219		*e*Pn	**Pn**	**22 47 00.1**	**+0.6**
STON					Sn	**Sn**	**22 47 40.9**	**+1.4**
STON	**Ston**	3.41	219		*e*Pn	**Pn**	**22 47 00.0**	**+0.5**
STON					Sn	**Sn**	**22 47 40.9**	**+1.4**
SOP	**Sopron**	3.49	309		*e*Pn	**Pn**	**22 46 55.3**	**-5.2**
SOP					*e*Sn	**Sn**	**22 47 41.7**	**+0.4**
KOLS	**Kolonicke sedl**	3.55	18		*e*PN	**Pn**	**22 47 02.8**	**+1.5**
KOLS					*e*		22 47 18.6	
KOLS	**Kolonicke sedl**	3.55	18		*e*Pn	**Pn**	**22 47 02.8**	**+1.5**
KOLS	**Kolonicke sedl**	3.55	18		*e*Pn	**Pn**	**22 47 02.8**	**+1.5**
KOLS					*e*		22 47 18.6	
ZST	**Bratislava**	3.55	319		*e*PN	**Pn**	**22 47 02.1**	**+0.7**
ZST					*e*		22 47 09.9	
ZST	**Bratislava**	3.55	319		*e*SN	**Sn**	**22 47 42.0**	**-0.8**
ZST	**Bratislava**	3.55	319		*e*Pn	**Pn**	**22 47 02.1**	**+0.7**
ZST					*e*Sn	**Sn**	**22 47 42.0**	**-0.8**
ZST	**Bratislava**	3.55	319		*e*Pn	**Pn**	**22 47 02.1**	**+0.7**
ZST					*e*		22 47 09.9	
ZST					*e*Sn	**Sn**	**22 47 42.0**	**-0.8**
MODS	**Modra-Piesok**	3.60	322		*e*PN	**Pn**	**22 47 03.4**	**+1.3**
MODS					*e*		22 47 12.5	
MODS	**Modra-Piesok**	3.60	322		*e*SN	**Sn**	**22 47 42.7**	**-1.5**
MODS	**Modra-Piesok**	3.60	322		*e*Pn	**Pn**	**22 47 03.4**	**+1.3**
MODS					*e*		22 47 12.5	
MODS					*e*Sn	**Sn**	**22 47 42.7**	**-1.5**
CRES	**Cresnjev**	3.61	276		*e*Pn	**Pn**	**22 47 03.9**	**+1.7**
DOBS	**Dobrina**	3.63	281		*e*Pn	**Pn**	**22 47 02.1**	**-0.3**
MLR	**Muntele Rosu**	3.76	89	⇑	*e*P	**Pn**	**22 47 04.7**	**+0.5**
MLR	**Muntele Rosu**	3.76	89	⇑	P	**Pn**	**22 47 04.7**	**+0.4**
BURAR	**Bucovina Array**	3.78	56	⇑	*e*P	**Pn**	**22 47 04.7**	**+0.2**
BURAR	**Bucovina Array**	3.78	56	⇓	P	**Pn**	**22 47 04.7**	**+0.1**
BUR08	**Bucovina Ar. S**	3.79	55		*e*Pn	**Pn**	**22 47 04.7**	**+0.1**
BUR08	**Bucovina Ar. S**	3.79	55		*e*Pg	**Pg**	**22 47 18.8**	**-0.9**
BUR08	**Bucovina Ar. S**	3.79	55		*e*Pn	**Pn**	**22 47 04.7**	**+0.1**
BUR08					*e*Pg	**Pg**	**22 47 18.8**	**-1.0**
BUR08					*e*Sn	**Sn**	**22 47 47.1**	**-1.6**
BUR08					*e*Sg	**Sg**	**22 48 08.7**	**0.0**
NIE	**Niedzica**	3.85	357		*e*Pn	**Pn**	**22 47 07.9**	**+2.4**
NIE					*e*Sn	**Sn**	**22 47 51.1**	**+0.9**
STHS	**Stebnicka Huta**	3.87	6		*e*PN	**Pn**	**22 47 07.0**	**+1.3**
STHS					*e*		22 47 27.6	
STHS	**Stebnicka Huta**	3.87	6		*e*Pn	**Pn**	**22 47 07.0**	**+1.3**
STHS	**Stebnicka Huta**	3.87	6		*e*Pn	**Pn**	**22 47 07.0**	**+1.3**
STHS					*e*		22 47 27.7	
ARSA	**Arzberg**	3.89	297	⇓	*i*Pn	**Pn**	**22 47 06.9**	**+0.9**
ARSA				⇓	*i*Sn	**Sn**	**22 47 49.7**	**-1.5**
CONA	**Conrad Observa**	4.02	308	⇓	*i*Pn	**Pn**	**22 47 07.5**	**-0.3**
CONA				⇑	*i*Sn	**Sn**	**22 47 53.7**	**-0.6**
CSNA	**Conrad Observa**	4.02	308	⇑	*i*Pn	**Pn**	**22 47 07.3**	**-0.5**
CSNA				⇑	*i*Sn	**Sn**	**22 47 53.3**	**-1.1**
VISS	**Visnje**	4.04	275		*i* Pn	**Pn**	**22 47 08.6**	**+0.5**
NVLJ	**Novalja**	4.18	258		*e*Pn	**Pn**	**22 47 11.6**	**+1.5**
NVLJ	**Novalja**	4.18	258		*e*Pn	**Pn**	**22 47 11.5**	**+1.4**
OBKA	**Obir**	4.31	285	⇑	*i*Pn	**Pn**	**22 47 12.0**	**+0.1**
OBKA				⇑	*i*Sn	**Sn**	**22 48 00.6**	**-1.0**
CEY	**Cerknica**	4.33	274		*e*Pn	**Pn**	**22 47 14.2**	**+2.1**
CEY					*e*Sn	**Sn**	**22 48 06.4**	**+4.3**
OKC	**Ostrava-Krasne**	4.57	340		*e*PN	**Pn**	**22 47 11.0**	**-4.4**
OKC					*e*SN	**Sn**	**22 48 07.0**	**-1.0**
VRAC	**Vranov**	4.62	325	⇓	*i*P	**Pn**	**22 47 16.4**	**+0.4**
VRAC	**Vranov**	4.62	325		*e*Pn	**Pn**	**22 47 16.4**	**+0.4**
VRAC					*e*Sn	**Sn**	**22 48 07.7**	**-1.4**
VRAC	**Vranov**	4.62	325	⇑	P	**Pn**	**22 47 16.4**	**+0.4**
MORC	**Moravsky Berou**	4.68	335	⇑	*e*P	**Pn**	**22 47 17.6**	**+0.7**
MORC					*i* S	**Sn**	**22 48 08.8**	**-1.9**
MORC	**Moravsky Berou**	4.68	335		*e*Pn	**Pn**	**22 47 15.3**	**-1.6**
MORC	**Moravsky Berou**	4.68	335	⇑	*e*P	**Pn**	**22 47 17.6**	**+0.7**
MORC					*e*Sn	**Sn**	**22 48 08.4**	**-2.3**
MORC	**Moravsky Berou**	4.68	335		*e*Pn	**Pn**	**22 47 15.3**	**-1.6**
DPC	**Dobruska-Polom**	5.57	331		*e*SN	**Sn**	**22 48 40.1**	**+7.5**
GEC2	**GERESS Array S**	5.72	307		*e*Pn	**Pn**	**22 47 32.7**	**+1.5**
GEC2					*e*Sn	**Sn**	**22 48 37.0**	**+0.6**
KHC	**Kasperske Hory**	5.95	309		*e*PN	**Pn**	**22 47 36.5**	**+2.2**
KHC					*e*SN	**Sn**	**22 48 52.6**	**+11**
PRU	**Pruhonice**	6.01	319		*e*PN	**Pn**	**22 47 37.9**	**+2.8**
PRU					*e*SN	**Sn**	**22 48 52.6**	**+9.2**

CSEM ***20*** *22:51:12.9±0.2, 41.18N×3437E, h2km, MD2.5, Error ellipse: s-maj=4.3km s-min=3.0km az=136.0*
ISCJB ***20*** *22:51:14.0±0.5, 41.17N±003×3441E±004, h10km, Error ellipse: s-maj=4.8km s-min=3.8km az=147.1*
ISK ***20*** *22:51:13.3, 41.19N×3437E, h5km, MD2.5*
DDA ***20*** *22:51:14.6, 41.11N×3436E, h12km±1km, Md2.8*
ISC 20 22:51:14.4±0.5**, 4115N**±004×**3441E**±004**, h3**km±9km**, n9,** σ0**63/16, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOS	**Tosya**	**0.32**	**248**	*e*PG	**Pg**	**22 51 19.5**	**-1.0**
TOS				*e*SG	**Sg**	**22 51 24.5**	**0.0**
BYBT	**Boyabat**	**0.41**	**40**	*e*PG	**Pg**	**22 51 22.3**	**0.0**
BYBT				*e*SG	**Sg**	**22 51 28.0**	**+0.3**
ILGA	**Ilgaz**	**0.54**	**259**	*i* P	**Pg**	**22 51 24.4**	**-0.3**
ILGA				*i* S	**Sg**	**22 51 31.8**	**+0.2**
CTKT	**Corum**	**0.60**	**152**	*i* P	**Pg**	**22 51 25.5**	**-0.5**
CTKT				*i* S	**Sg**	**22 51 34.9**	**+1.1**
DIKM	**Dikmen**	**0.81**	**52**	*e*PG	**Pg**	**22 51 28.5**	**-1.4**
DIKM				*e*SG	**Sg**	**22 51 40.9**	**+0.5**
BALT	**Daday**	**0.86**	**296**	*i* P	**Pg**	**22 51 30.9**	**-0.1**
BALT				*i* S	**Sg**	**22 51 43.3**	**+1.2**
CORM	**Corum**	**0.99**	**170**	*e*PG	**Pg**	**22 51 33.5**	**+0.1**
CDAG	**Cicekdag**	**1.53**	**181**	*i* P	**Pn**	**22 51 42.4**	**-0.3**
CDAG				*i* S	**Sn**	**22 52 03.3**	**+0.2**
KAMT	**Kaman**	**1.86**	**197**	*e*PN	**Pn**	**22 51 47.2**	**-0.1**

NIED ***20*** *22:54:00, 35.20N×141.20E, h20km, Mw4.9 Best double couple: M0 2.98000×10^16 NP1:φs57.00000°, δ83.00000°, λ83.00000°. NP2:φs282.00000°, δ9.00000°, λ135.00000°.*
SZGRF ***20*** *22:54:26.0, 35.16N×142.25E, h25km, mb5.2, MS4.9, Off east coast of Honshu, Japan*
JMA ***20*** *22:54:26.7±0.1, 35.25N×141.22E, h35km±3km, M5.1*
JMA Felt II J1.
BJI ***20*** *22:54:26.9, 35.29N×141.18E, h44km, mB5.0, mb4.8, Ms4.9, Msz4.7*
ISCJB ***20*** *22:54:27.6±0.1, 35.19N±002×140.89E±002, h24km, mb5.0/177, MS4.7/50, Error ellipse: s-maj=2.9km s-min=2.1km az=171.9*
MOS ***20*** *22:54:30.2±0.9, 35.13N×140.82E, h47km, mb5.3/80, MS4.8/28, Error ellipse: s-maj=8.6km s-min=4.6km az=113.6*
IDC ***20*** *22:54:30.1±2.4, 35.18N×140.97E, h35km±18km, mb4.6/29, mb1 4.7/32, mb1mx4.6/35, mbtmp4.6/32, ML4.3/3, MS4.5/23, Ms1 4.5/23, ms1mx4.3/31, Error ellipse: s-maj=13.4km s-min=8.8km az=96.0*
DJA ***20*** *22:54:30, 35.86N×142.07E, h53km, mb5.3/17*
NEIC ***20*** *22:54:31.5±0.7, 35.19N×140.83E, h45km±5km, mb5.1/88, MS4.9/6, MW4.9(NIED), Error ellipse: s-maj=4.0km s-min=3.5km az=130.0*
NEIC Felt at Narita, Tokyo and Yokohama. Recorded [2 JMA] in Chiba, Ibaraki and Saitama; [1 JMA] in Kanagawa and Tokyo Prefectures.
GCMT ***20*** *22:54:31.5±0.3, 35.05N×141.27E, h36km±1km, MW5.0/64, Moment Tensor Solution. s36,c47; s64,c97; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr 2.90±.20; Mθθ -2.10±.12; Mφφ -0.80±.12; Mrθ 2.16±.13; Mφθ -1.15±.07; Mφr 1.14±.12; Best double couple: M0 3.74200×10^16 NP1:φs238.00000°, δ25.00000°, λ87.00000°. NP2: φs61.00000°, δ65.00000°, λ91.00000°. Principal axes: T 3.8080, Plg70.0000°, Azm334.0000°; N -0.1310, Plg1.0000°, Azm241.0000°; P -3.6770, Plg20.0000°,*

Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
ISC 20 22:54:29.5±0.1**, 3522N**±002×**14088E**±002**, h26**km**,**
h26km±.9km**: pP-P, n767,** σ0**88/782, mb5.0/177, MS4.7/50,**
142C-118D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTR	**Katsuura**	**0.47**	**262**	P	**Pb**	**22 54 41.3**	**+2.1**
KTR				S	**Sb**	**22 54 50.4**	**+4.7**
CHOJ	**Chosi**	**0.49**	**358**	⇓P	**Pb**	**22 54 37.7**	**-1.8**
CHOJ				S	**Sb**	**22 54 44.9**	**-1.4**
BSO4	**Boso 4**	**0.50**	**243**	P	**Pb**	**22 54 41.3**	**+1.6**
BSO4				S	**Sb**	**22 54 51.2**	**+4.6**
BSO3	**Boso 3**	**0.51**	**216**	⇓P	**Pb**	**22 54 40.5**	**+0.6**
BSO1	**Boso 1**	**0.57**	**172**	P	**Pb**	**22 54 38.7**	**-2.1**
JCN	**Nagara**	**0.59**	**290**	P	**Pb**	**22 54 43.3**	**+2.1**
JCN				S	**Sb**	**22 54 56.1**	**+6.9**
JYT	**Yasato**	**1.15**	**331**	P	**Pn**	**22 54 49.0**	**-1.0**
JIM2	**Oshima 3**	**1.29**	**248**	P	**Pn**	**22 54 51.2**	**-0.6**
JHO	**Hitachi**	**1.42**	**350**	P	**Pn**	**22 54 50.9**	**-2.6**
JOD2	**Odawara 2**	**1.47**	**272**	P	**Pn**	**22 54 54.2**	**-0.1**
AJI	**Ajiro2**	**1.48**	**264**	P	**Pn**	**22 54 54.4**	**0.0**
JAG	**Ashikaga**	**1.67**	**317**	P	**Pn**	**22 54 56.7**	**-0.4**
JRY	**Ryogami san**	**1.80**	**297**	P	**Pn**	**22 54 59.8**	**+1.0**
ONAJ	**Iwakimizuishiy**	**1.88**	**358**	P	**Pn**	**22 54 57.8**	**-2.2**
JYN	**Shimob**	**1.93**	**279**	P	**Pn**	**22 55 01.1**	**+0.5**
JKT	**Katashina**	**2.04**	**320**	P	**Pn**	**22 55 02.8**	**+0.7**
JFK	**Kawauchi**	**2.15**	**360**	P	**Pn**	**22 55 01.2**	**-2.4**
SHZ3	**Shizuoka 3**	**2.19**	**267**	P	**Pn**	**22 55 05.3**	**+1.1**
JHJ	**Hachijo jima 2**	**2.28**	**204**	Pn	**Pn**	**22 55 05.0**	**-0.4**
	126nm,0.3s,baz=68,slow=17,SNR=20						
JHJ				Sn	**Sn**	**22 55 30.6**	**-2.0**
	228nm,0.3s,baz=53,slow=20,SNR=6.8						
JHJ				LR	LR	22 55 52.3	
	comp=Z,2μm,21.8s,baz=48,slow=36						
JNT	**Takato**	**2.33**	**287**	P	**Pn**	**22 55 07.5**	**+1.4**
JFT	**Otama**	**2.34**	**349**	P	**Pn**	**22 55 05.5**	**-0.7**
JNY	**Yasuok**	**2.47**	**274**	P	**Pn**	**22 55 10.0**	**+1.9**
JHK	**Hiroka**	**2.53**	**324**	P	**Pn**	**22 55 09.6**	**+0.8**
MJAR	**Matsushiro Arr**	**2.54**	**302**	Pn	**Pn**	**22 55 11.1**	**+2.1**
	25nm,0.3s,baz=92,slow=13,SNR=309						
MJAR				LR	LR	22 56 15.2	
	comp=Z,9μm,20.4s,baz=110,slow=41						
MAJO	**Matsushiro**	**2.54**	**302**	*e*P	**Pn**	**22 55 11.1**	**+2.1**
MAT	**Matsushiro**	**2.54**	**302**	P	**Pn**	**22 55 11.1**	**+2.1**
MAT				S	**Sn**	**22 55 38.9**	**-0.3**
MAT	**Matsushiro**	**2.54**	**302**	P	**Pn**	**22 55 11.5**	**+2.5**
JNG	**Nsakai**	**2.55**	**299**	P	**Pn**	**22 55 11.2**	**+2.0**
JYZW	**Yoshizawa**	**2.59**	**266**	P	**Pn**	**22 55 11.2**	**+1.5**
JMM	**Marumori**	**2.65**	**358**	P	**Pn**	**22 55 08.4**	**-2.1**
JJN	**Nakama**	**2.90**	**311**	P	**Pn**	**22 55 17.3**	**+3.4**
JIZZ	**Izumozaki**	**2.90**	**323**	P	**Pn**	**22 55 16.8**	**+2.8**
JGF	**Kuroka**	**2.90**	**279**	P	**Pn**	**22 55 16.0**	**+2.0**
JGN	**Niukaw**	**3.07**	**290**	P	**Pn**	**22 55 18.8**	**+2.5**
JTT	**Ttatey**	**3.20**	**297**	P	**Pn**	**22 55 21.9**	**+3.9**
JIO	**Ouri**	**3.25**	**6**	P	**Pn**	**22 55 15.9**	**-2.9**
JAW	**Awa shima**	**3.49**	**338**	P	**Pn**	**22 55 23.3**	**+1.3**
JYA	**Atsumi**	**3.50**	**345**	P	**Pn**	**22 55 22.4**	**+0.2**
JSD	**Sado**	**3.52**	**324**	P	**Pn**	**22 55 23.5**	**+1.1**
JSZ	**Suzu**	**3.61**	**309**	P	**Pn**	**22 55 26.5**	**+2.8**
JYK	**Kaneyama**	**3.72**	**354**	P	**Pn**	**22 55 24.6**	**-0.6**
OFUJ	**Ofunato**	**3.91**	**9**	P	**Pn**	**22 55 25.5**	**-2.3**
JRG	**Rokugo**	**4.18**	**357**	P	**Pn**	**22 55 30.7**	**-0.8**
JKZ	**Kuzumaki**	**4.77**	**4**	P	**Pn**	**22 55 37.7**	**-2.0**
JTH	**Tanohata**	**4.78**	**9**	P	**Pn**	**22 55 37.1**	**-2.7**
ERM	**Erimo**	**7.02**	**14**	*e*P	**Pn**	**22 56 05.9**	**-4.6**
ERM				*e*		22 57 29.8	
ERM				pmax	pmax		
	comp=Z,153nm,0.8s						
ERM	**Erimo**	**7.02**	**14**	*e*Pn	**Pn**	**22 56 05.9**	**-4.7**
	comp=Z,153nm,0.8s						
ERM				*e*Sn	**Sn**	**22 57 29.8**	**+0.4**
CBIJ	**Chichi jima**	**8.17**	**172**	Pn	**Pn**	**22 56 24.2**	**-2.2**
	comp=Z,25nm,0.3s,baz=346,slow=12,SNR=7.8						
CBIJ				Sn	**Sn**	**22 57 50.0**	**-7.9**
	comp=Z,5.9nm,0.3s,baz=270,slow=20,SNR=1.4						
ASAJ	**Asahikawa**	**8.99**		8 Pn	**Pn**	**22 56 33.0**	**-4.5**
	comp=Z,4.7nm,0.3s,baz=206,slow=11,SNR=30						
ASAJ				Sn	**Sn**	**22 58 11.1**	**-6.8**
	comp=Z,0.7nm,0.3s,baz=108,slow=20,SNR=2.5						
ASAJ				LR	LR	23 01 18.7	
	comp=Z,3μm,18.8s,baz=146,slow=45						
YUK	**Yuzh-Kuril'sk**	**9.61**	**22**	*e*P	**Pn**	**22 56 43.5**	**-2.5**
YUK				pmax	pmax		
	comp=Z,2μm,0.8s						
YUK				pmax	pmax		
	comp=Z,200nm,0.5s						
YUK				MLR	MLR		
	comp=N,3μm,14.0s						
YUK				MLR	MLR		
	comp=E,3μm,14.0s						
YUK				MLR	MLR		
	comp=Z,3μm,14.0s						
VLA	**Vladivostok**	**10.53**	**321**	*e*P	**Pn**	**22 56 55.6**	**-3.0**
VLA				*e*		22 58 50.0	
VLA				MLR	MLR		
	comp=Z,2μm,14.4s						
VLA	**Vladivostok**	**10.53**	**321**	⇑*i*P	**Pn**	**22 56 59.5**	**+0.9**
KSRS	**Korea Array**	**10.69**	**286**	Pn	**Pn**	**22 57 06.8**	**+6.0**
	comp=Z,0.7nm,0.3s,baz=96,slow=14,SNR=39						
KSRS				LR	LR	23 01 26.0	
	comp=Z,5μm,18.4s,baz=90,slow=38						
KSRS	**Korea Array**	**10.69**	**286**	P	**Pn**	**22 57 06.9**	**+6.0**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,5μm,18.4s						
KS15	**Wonju Array Si**	**10.72**	**286**	*e*Pn	**Pn**	**22 57 01.8**	**+0.6**
INCN	**Inchon**	**11.71**	**285**	*e*Pn	**Pn**	**22 57 15.2**	**+0.4**
YSS	**Yuzh-Sakhalins**	**11.81**	**6**	⇑*i*P	**Pn**	**22 57 12.0**	**-4.2**
YSS				pmax	pmax		
	comp=Z,140nm,0.9s						
YSS				MLR	MLR		
	comp=Z,4μm,17.0s						
YSS				MLR	MLR		
	comp=N,4μm,18.0s						
YSS				MLR	MLR		
	comp=E,2μm,18.0s						
YSS	**Yuzh-Sakhalins**	**11.81**	**6**	*e*Pn	**Pn**	**22 57 11.9**	**-4.2**
MDJ	**Mudanjiang**	**12.76**	**321**	P	**Pn**	**22 57 28.8**	**-0.4**
MDJ				S	**Sn**	**22 59 49.3**	**-1.1**
MDJ				PCS	PcS	23 06 39.9	+1.3
MDJ				AMB	AMB		
	comp=Z,12nm,2.0s						
MDJ				AMB	AMB		
	comp=Z,213nm,3.5s						
MDJ				LR	LR		
	comp=N,1μm,18.7s						
MDJ				LR	LR		
	comp=E,1μm,14.7s						
MDJ				LR	LR		
	comp=Z,3μm,15.5s						
MDJ	**Mudanjiang**	**12.76**	**321**	*e*Pn	**Pn**	**22 57 30.9**	**+1.8**
	comp=Z,46nm,1.0s						
JOW	**Kunigami**	**13.65**	**236**	Pn	**Pn**	**22 57 44.7**	**+3.3**
	comp=Z,1.1nm,0.3s,baz=311,slow=20,SNR=2.8						
UGL	**Uglegorsk**	**13.88**		3 P	**Pn**	**22 57 40.0**	**-4.4**
UGL				*e*		23 00 22.0	
UGL				pmax	pmax		
	comp=Z,500nm,3.0s						
UGL				MLR	MLR		
	comp=N,4μm,16.0s						
UGL				MLR	MLR		
	comp=E,2μm,16.0s						
UGL				MLR	MLR		
	comp=Z,4μm,16.0s						
CN2	**Changchun**	**14.66**	**310**	*e*P	**Pn**	**22 57 56.9**	**+1.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,2μm,14.0s						
CN2				LR	LR		
	comp=E,2μm,14.0s						
SNY	**Shenyang**	**15.05**	**301**	⇑P	**Pn**	**22 58 04.4**	**+4.0**
SNY				AMB	AMB		
	comp=Z,20nm,1.1s						
SNY				AMB	AMB		
	comp=Z,462nm,8.6s						
SNY				LR	LR		
	comp=N,3μm,12.5s						
SNY				LR	LR		
	comp=E,3μm,18.4s						
SNY				LR	LR		
	comp=Z,3μm,19.0s						
DL2	**Dalian**	**15.80**	**289**	P	**Pn**	**22 58 14.6**	**+4.4**
DL2				S	**Sn**	**23 01 11.4**	**+6.9**
DL2				AMB	AMB		
	comp=Z,30nm,0.9s						
DL2				AMB	AMB		
	comp=Z,360nm,4.9s						
DL2				LR	LR		
	comp=N,780nm,12.4s						
DL2				LR	LR		
	comp=E,2μm,14.3s						
DL2				LR	LR		
	comp=Z,3μm,16.1s						
SSE	**Sheshan**	**16.99**	**262**	*e*P	**Pn**	**22 58 24.3**	**-1.0**
SSE				S	**Sn**	**23 01 32.0**	**-1.5**
SSE				AMB	AMB		
	comp=Z,26nm,0.8s						
SSE				AMB	AMB		
	comp=Z,259nm,3.5s						
SSE				LR	LR		
	comp=N,3μm,18.7s						
SSE				LR	LR		
	comp=E,930nm,18.7s						
SSE				LR	LR		
	comp=Z,4μm,14.7s						
NJ2	**Nanjing**	**18.61**	**267**	*e*P	**Pn**	**22 58 46.3**	**+1.1**
NJ2				AP	pP	22 58 51.8	0.0
NJ2				XP	sP	22 58 56.3	+1.2
NJ2				PP		22 59 02.1	
NJ2				S	**Sn**	**23 02 08.0**	**-4.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,2μm,5.2s						
NJ2				LR	LR		
	comp=N,580nm,17.5s						
NJ2				LR	LR		
	comp=E,1μm,12.3s						
YHNB	**Yeheng**	**19.87**	**243**	P	**Pn**	**22 58 59.2**	**-1.2**
NACB	**Ninganchiao**	**20.01**	**242**	P	**P**	**22 59 00.2**	**-0.1**
BJI	**Beijing**	**20.13**	**291**	P	**P**	**22 58 59.5**	**-1.9**
BJI				S	**S**	**23 02 46.8**	**+0.6**
BJI				AMB	AMB		
	comp=Z,57nm,1.8s						
BJI				LR	LR		
	comp=N,790nm,15.7s,MS4.4						
BJI				LR	LR		
	comp=E,1μm,19.8s,MS4.4						
BJI				LR	LR		
	comp=Z,1μm,22.6s,MS4.2						
BJT	**Baijiatuan**	**20.13**	**291**	*e*P	**P**	**22 58 59.3**	**-2.2**
BJT				*e*S	**S**	**23 02 43.9**	**-2.3**
BJT				pmax	pmax		
	comp=Z,69nm,0.9s						
BJT	**Baijiatuan**	**20.13**	**291**	*e*P	**P**	**22 58 59.3**	**-2.2**
	comp=Z,69nm,0.9s						
BJT				*e*S	**S**	**23 02 43.9**	**-2.3**
HIA	**Hailar**	**20.93**	**319**	*e*P	**P**	**22 59 07.3**	**-2.7**
PETK	**Petropavlovsk-**	**21.48**	**28**	P	**P**	**22 59 14.0**	**-1.9**
	comp=Z,16nm,1.0s,mb4.3,baz=217,slow=7.5,SNR=9.7						
PETK				LR	LR	23 07 00.3	
	comp=Z,481nm,19.6s,MS3.9,baz=218,slow=35						
QZH	**Quanzhou**	**21.79**	**248**	*e*P	**P**	**22 59 18.3**	**-1.2**
QZH				S	**S**	**23 03 11.0**	**-8.2**
QZH				LR	LR		
	comp=Z,1μm,17.0s,MS4.4						
PET	**Petropavlovsk**	**21.80**	**30**	*e*P	**P**	**22 59 18.5**	**-0.8**
PET				*e*S	**S**	**23 03 19.2**	**+0.4**
PET				pmax	pmax		
	comp=Z,400nm,15.5s						
PET				pmax	pmax		
	comp=Z,600nm,9.8s						
PET				MLR	MLR		
	comp=Z,900nm,20.0s,MS4.2						
PET				MLR	MLR		
	comp=Z,800nm,21.0s						
PET	**Petropavlovsk**	**21.80**	**30**	*e*P	**P**	**22 59 19.7**	**+0.4**
GUMO	**Guam**	**21.83**	**170**	P	**P**	**22 59 19.9**	**0.0**
	comp=Z,24nm,0.3s,mb5.1,baz=175,slow=24,SNR=6.1						
GUMO	**Guam**	**21.83**	**170**	P	**P**	**22 59 19.9**	**0.0**
GUMO				pmax	pmax		
	comp=Z,24nm,0.3s,mb5.1						
GUMO	**Guam**	**21.83**	**170**	*e*P	**P**	**22 59 20.6**	**+0.6**
WHN	**Wuhan**	**22.73**	**266**	P	**P**	**22 59 27.5**	**-2.0**
HHC	**Hu-ho-hao-te**	**23.70**	**292**	⇑P	**P**	**22 59 36.5**	**-2.8**
HHC				AP		22 59 43.8	
HHC				PP		23 00 09.0	
HHC				PCP	PcP	23 03 23.0	+0.2
HHC				S	**S**	**23 03 46.4**	**-6.2**
HHC				SS		23 04 34.8	
HHC				SCP	ScP	23 06 57.8	-1.5
HHC				PCS	PcS	23 07 01.3	-0.9
HHC				AMB	AMB		
	comp=Z,26nm,1.1s,mb4.6						
HHC				AMB	AMB		
	comp=Z,169nm,5.3s						
HHC				LR	LR		
	comp=N,934nm,12.9s,MS4.6						
HHC				LR	LR		
	comp=E,1μm,12.8s,MS4.6						
HHC				LR	LR		
	comp=Z,1μm,13.2s,MS4.6

LZH XP sP 23 00 47.6 +0.9
LZH PP PP 23 01 33.5 -10
LZH *e*S **S** **23 05 30.0 -2.3**
LZH SS SS 23 07 06.3 -34
LZH AMB AMB
comp=Z,71nm,1.6s,mb5.2
LZH AMB AMB
comp=Z,130nm,4.1s
LZH LR LR
comp=E,3µm,15.8s
LZH LR LR
comp=Z,3µm,17.6s,MS4.9
ZAK Zakamensk 31.09 311 *e*P **P** **23 00 44.9 -0.5**
ZAK pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
TLY Talaya 31.23 313 *e*P **P** **23 00 48.2 +1.6**
TLY *e*S **S** **23 05 48.2 -3.1**
TLY *e*SS SS 23 07 34.0 -31
TLY pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
TLY MLR MLR
comp=Z,1µm,15.0s,MS4.7
TLY Talaya 31.23 313 *e*P **P** **23 00 48.3 +1.7**
CD2 Chengdu 31.29 273 P **P** **23 00 43.8 -3.6**
CD2 PP PP 23 01 46.3 -12
CD2 S **S** **23 05 44.8 -7.8**
CD2 AMB AMB
comp=Z,20nm,0.6s,mb5.1
CD2 AMB AMB
comp=Z,40nm,5.2s
CD2 LR LR
comp=N,3µm,14.4s
CD2 LR LR
comp=Z,4µm,15.0s,MS5.2
DAV Davao City (W) 31.34 210 LR LR 23 11 17.5
comp=Z,641nm,20.0s,MS4.3,baz=53,slow=32
DAV Davao City (W) 31.34 210 *e*P **P** **23 00 46.0 -2.0**
QIZ Qiongzhong 31.81 248 P **P** **23 00 52.8 +0.7**
QIZ S **S** **23 06 02.4 +1.4**
QIZ LR LR
comp=E,644nm,14.8s
QIZ LR LR
comp=Z,595nm,14.0s,MS4.4
GTA Gaotai 32.73 290 P **P** **23 00 59.8 -0.1**
GTA AP pP 23 01 07.3 -0.3
GTA S **S** **23 06 14.8 -0.1**
GTA SS SS 23 08 16.8 -19
GTA AMB AMB
comp=Z,8.0nm,0.8s,mb4.7
GTA AMB AMB
comp=Z,102nm,4.8s
GTA LR LR
comp=N,1µm,15.6s,MS4.8
GTA LR LR
comp=E,1µm,18.0s,MS4.8
GTA LR LR
comp=Z,1µm,18.0s,MS4.7
MOY Mondy 32.81 313 *e*P **P** **23 01 02.6 +2.1**
KMI Kunming 34.29 264 P **P** **23 01 18.5 +4.8**
KMI AP pP 23 01 28.3 +6.9
KMI XP sP 23 01 32.9 +8.4
KMI S **S** **23 06 36.3 -3.2**
KMI SS SS 23 08 51.6 -17
KMI AMB AMB
comp=Z,12nm,0.9s,mb4.8
KMI AMB AMB
comp=Z,127nm,6.5s
KMI LR LR
comp=N,1µm,13.9s,MS5.0
KMI LR LR
comp=E,2µm,14.8s,MS5.0
KMI LR LR
comp=Z,2µm,13.4s,MS5.0
BILL Bilibino 35.89 16*c* *i*P **P** **23 01 25.3 -1.7**
BILL pmax pmax
comp=Z,29nm,1.6s,mb5.0
BILL MLR MLR
comp=Z,600nm,17.0s,MS4.4
BILL Bilibino 35.89 16 *e*P **P** **23 01 26.6 -0.4**
KKM Kota Kinabalu 36.86 224 *e*P **P** **23 01 35.8 -0.1**
TIXI Tiksi 37.04 354 *e*P **P** **23 01 35.6 -1.2**
TIXI pmax pmax
comp=Z,38nm,1.0s,mb5.2
TIXI MLR MLR
comp=Z,1µm,17.0s,MS4.8
TIXI Tiksi 37.04 354 *e*P **P** **23 01 35.8 -0.9**
comp=Z,30nm,0.9s,mb5.1
KRAR Krasnoyarsk 38.50 318⇓ *i*P **P** **23 01 49.2 0.0**
KRAR pmax pmax
comp=Z,116nm,1.7s,mb5.3
NIKO Nikolski 39.31 47 *e*P **P** **23 01 54.9 -1.2**
CHTO Chiang Mai 40.45 257 *e*P **P** **23 02 05.3 -0.7**
CMAR Chiang Mai Arr 40.64 257 P **P** **23 02 06.9 -0.6**
comp=Z,2.4nm,0.9s,mb3.9,baz=44,slow=8.2,SNR=10
CMAR PcP PcP 23 04 10.7 +1.5
comp=Z,1.0nm,0.4s,baz=43,slow=1.6,SNR=4.8
CMAR LR LR 23 21 37.2
comp=Z,336nm,18.2s,MS4.2,baz=241,slow=40
CMAR Chiang Mai Arr 40.64 257 P **P** **23 02 06.9 -0.6**
CMAR 23 04 10.7
WMQ Urumqi 41.30 299⇑ *i*P **P** **23 02 13.5 +0.8**
WMQ AP pP 23 02 21.0 +0.5
WMQ XP sP 23 02 24.5 +0.9
WMQ PP PP 23 03 52.0 +3.9
WMQ S **S** **23 08 26.0 +0.7**
WMQ XS sS 23 08 39.0 +0.9
WMQ SS SS 23 11 25.0 -4.1
WMQ AMB AMB
comp=Z,37nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,189nm,3.7s
WMQ LR LR
comp=N,2µm,15.1s,MS5.2
WMQ LR LR
comp=E,2µm,15.1s,MS5.2
WMQ LR LR
comp=Z,1µm,19.2s,MS4.7
LSA Lhasa 41.97 277 P **P** **23 02 20.6 +2.2**
LSA Lhasa 41.97 277 *e*P **P** **23 02 18.5 +0.1**
LSA pmax pmax
comp=Z,12nm,0.8s,mb4.6
LSA Lhasa 41.97 277 *e*P **P** **23 02 18.5 +0.1**
comp=Z,12nm,0.8s,mb4.6
ZALV Zalesovo Beam 42.84 314 P **P** **23 02 25.1 0.0**
comp=Z,18nm,0.6s,mb5.0,baz=93,slow=6.8,SNR=79
ZALV PcP PcP 23 04 16.7 +0.8
comp=Z,4.3nm,0.8s,baz=74,slow=5.1,SNR=3.4
ZALV LR LR 23 21 09.4
comp=Z,354nm,18.1s,MS4.3,baz=74,slow=37
ZALV Zalesovo Beam 42.84 314 P **P** **23 02 25.1 0.0**
ZALV 23 04 16.7
KSM Kuching 43.99 227 *e*P **P** **23 02 32.9 -2.0**
KAPI Kappang 44.68 211 P **P** **23 02 38.8 -1.5**
comp=Z,74nm,0.6s,mb4.7,baz=100,slow=9.2,SNR=3.1
MK31 Makanchi Array 44.74 304 P **P** **23 02 40.5 0.0**
MK31 pmax pmax
comp=Z,15nm,0.7s,mb4.9
MK31 Makanchi Array 44.74 304 *e*P **P** **23 02 40.9 +0.4**
MKAR Makanchi Array 44.74 304 P **P** **23 02 40.7 +0.2**
comp=Z,8.8nm,0.6s,mb4.8,baz=85,slow=8.9,SNR=90
MKAR LR LR 23 22 19.6
comp=Z,1µm,18.2s,MS4.9,baz=85,slow=37
MKAR Makanchi Array 44.74 304 P **P** **23 02 40.7 +0.2**
MKAR LR LR 23 22 19.6
PMG Port Moresby 44.77 171 P **P** **23 02 40.9 -0.1**
PMG pmax pmax
comp=Z,35nm,1.2s
PMG Port Moresby 44.77 171 P **P** **23 02 40.9 -0.1**
comp=Z,35nm,1.2s,mb5.1
TAPN Taplejung 45.66 275 *e*P **P** **23 02 48.9 +0.8**
ODAN Odare 46.12 275 *e*P **P** **23 02 53.0 +1.3**
comp=Z,56nm,1.0s,mb5.4
RAMN Ramite 46.73 276 *e*P **P** **23 02 57.4 +1.0**
comp=Z,64nm,0.7s,mb5.7
KURK Kurchatov 46.73 309 P **P** **23 02 56.8 +0.6**
comp=Z,41nm,0.8s,mb5.4,baz=86,slow=8.0,SNR=48
KURK LR LR 23 23 22.2
comp=Z,828nm,18.9s,MS4.7,baz=75,slow=37
KURK Kurchatov 46.73 309 P **P** **23 02 56.8 +0.6**
KURK pmax pmax
comp=Z,41nm,0.8s,mb5.4
KURK MLR MLR
comp=Z,828nm,18.9s,MS4.7
KURK Kurchatov 46.73 309 *e*P **P** **23 02 55.0 -1.1**
GUN Gumba 46.93 277 *e*P **P** **23 02 59.2 +1.2**
comp=Z,78nm,1.0s,mb5.6
SVW2 Sparrevohn 47.23 36 *e*P **P** **23 03 00.4 +0.5**
KKN Kakani 47.46 277 *e*P **P** **23 03 02.6 +0.4**
comp=Z,42nm,0.8s,mb5.4
DMN Daman 47.68 277 *e*P **P** **23 03 04.4 +0.6**
GKN Gorkha 47.90 278 *e*P **P** **23 03 06.0 +0.4**
comp=Z,108nm,0.9s,mb5.9
BATI Baumata 48.02 203 P **P** **23 03 06.7 +0.2**
comp=Z,44nm,0.8s,mb5.5,baz=323,slow=3.2,SNR=5.0
IMA2 Indian Mountai 48.47 30 *e*P **P** **23 03 10.0 +0.6**
DANN Dangsing 48.47 279 *e*P **P** **23 03 10.2 +0.2**
comp=Z,97nm,0.7s,mb6.0
KDAK Kodiak Island 48.75 41 P **P** **23 03 10.8 -0.8**
comp=Z,11nm,0.7s,mb5.0,baz=340,slow=14,SNR=7.3
KDAK Kodiak Island 48.75 41 P **P** **23 03 10.8 -0.8**
KOLN Koldanda 48.83 278 *e*P **P** **23 03 13.6 +0.8**
comp=Z,38nm,0.9s,mb5.4
CHUM Lake Minchumin 48.89 33 *e*P **P** **23 03 10.5 -2.2**
comp=Z,16nm,1.2s,mb4.9
PPLA Purkeypile 48.91 34 *e*P **P** **23 03 14.2 +1.3**
comp=Z,57nm,1.6s,mb5.3
COEN Coen 48.95 177 *e*P **P** **23 03 13.1 -0.5**
comp=Z,21nm,1.0s,mb5.1
KTH Kantishna Hill 49.50 33 *e*P **P** **23 03 17.3 -0.1**
comp=Z,51nm,1.7s,mb5.3
TKM2 Tokmak 2 50.13 300 *e*P **P** **23 03 23.8 +1.3**
TKM2 pmax pmax
comp=Z,27nm,0.6s,mb5.5
TKM2 Tokmak 2 50.13 300 P **P** **23 03 23.7 +1.2**
SNR=14
TKM2 Tokmak 2 50.13 300 *e*P **P** **23 03 23.8 +1.3**
comp=Z,27nm,0.6s,mb5.5
PMR Palmer 50.34 36 P **P** **23 03 24.6 +0.8**
PMR pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
PMR Palmer 50.34 36 P **P** **23 03 24.6 +0.8**
comp=Z,5.1nm,0.9s,mb4.5
KBK Karagaybulak 50.66 299 P **P** **23 03 27.4 +0.9**
SNR=32
CHMS Chumysh 50.72 300 P **P** **23 03 27.6 +0.7**
SNR=5.6
KSH Kashi 50.77 295 *e*P **P**
KSH *e*AP pP 23 03 36.3 +1.0
KSH *e*XP sP 23 03 39.1 +0.7
KSH *e*PCP PcP 23 04 46.1 +2.0
KSH *e*PCS PcS 23 08 42.0 +0.5
KSH *e*S **S** **23 10 40.0 -1.4**
KSH *e*SCS ScS 23 13 15.0 -1.4
KSH *e*SS SS 23 14 12.3 -3.5
KSH AMB AMB
comp=Z,331nm,2.5s,mb5.8
KSH LR LR
comp=N,991nm,7.2s
KSH LR LR
comp=E,2µm,14.3s
KSH LR LR
comp=Z,2µm,16.6s,MS5.2
USP Ospenovka 50.83 300 P **P** **23 03 28.3 +0.6**
SNR=18
COLA College 50.85 31 *e*P **P** **23 03 27.3 -0.2**
AAK Ala-Archa 50.99 300 P **P** **23 03 30.0 +1.0**
SNR=12
UCH Uchtor 51.08 299 P **P** **23 03 31.2 +1.6**
SNR=18
UCH Uchtor 51.08 299 *e*P **P** **23 03 31.0 +1.3**
comp=Z,21nm,0.8s,mb5.1
BVA0 Borovoye Array 51.49 313 *i* P **P** **23 03 32.3 -0.2**
BVA0 pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
BVAR Borovoye Array 51.49 313 P **P** **23 03 32.3 -0.2**
comp=Z,6.3nm,0.6s,mb4.7,baz=90,slow=7.6,SNR=36
BVAR LR LR 23 26 29.8
comp=Z,570nm,19.5s,MS4.6,baz=78,slow=37
EKS2 Erkin-Say 51.49 300 P **P** **23 03 33.7 +0.9**
SNR=5.3
EKS2 Erkin-Say 51.49 300 *e*P **P** **23 03 33.4 +0.7**
comp=Z,3.1nm,0.3s,mb4.7
AML Almayashu 51.70 299 P **P** **23 03 36.3 +2.0**
SNR=12
AML Almayashu 51.70 299 *e*P **P** **23 03 35.6 +1.4**
comp=Z,196nm,0.8s,mb6.1
AML *e* 23 03 45.9
DDI Dehra Dun 52.29 283 *e*x **P** **23 03 39.0 +0.2**
BMRM Bremner River 52.57 36 *e*P **P** **23 03 40.9 +0.4**
BMRM *e*PcP PcP 23 04 54.6 +4.2
SMLA Simla 52.68 285 *i* P **P** **23 03 41.5 -0.2**
KK31 Karatay Array 53.68 301 *i* P **P** **23 03 48.7 -0.2**
KK31 pmax pmax
comp=Z,28nm,1.0s,mb5.2
DAWY Dawson 54.56 32 *e*P **P** **23 03 55.6 +0.6**
FITZ Fitzroy Crossi 54.96 198⇓ *i*P **P** **23 03 57.8 -0.6**
comp=Z,20nm,0.6s,mb5.3
FITZ Fitzroy Crossi 54.96 198 P **P** **23 03 58.2 -0.2**
comp=Z,12nm,0.7s,mb5.0,baz=12,slow=7.8,SNR=32
FITZ Fitzroy Crossi 54.96 198 *e*P **P** **23 03 58.1 -0.3**
comp=Z,20nm,0.6s,mb5.3
FITZ PcP PcP 23 04 57.2 -2.8
WRAB Tennant Creek 55.19 187*d* *i*P **P** **23 03 58.3 -1.7**
WRAB Tennant Creek 55.19 187 *e*P **P** **23 03 58.8 -1.2**
WB2 Warramunga Arr 55.20 187⇓ *i*P **P** **23 03 58.4 -1.7**
WB2 Warramunga Arr 55.20 187 *e*P **P** **23 03 58.7 -1.4**
WRA Warramunga Ar 55.20 188 P **P** **23 03 58.4 -1.7**
comp=Z,45nm,0.8s,mb5.5,baz=5.6,slow=7.6,SNR=89
WRA LR LR 23 25 54.8
comp=Z,322nm,21.4s,MS4.4,baz=335,slow=34
CTA Charters Tower 55.23 174 P **P** **23 03 58.7 -1.6**
comp=Z,3.3nm,0.8s,mb4.4,baz=3.2,slow=10,SNR=5.5
CTA Charters Tower 55.23 174 P **P** **23 03 58.7 -1.6**
CTAO Charters Tower 55.23 174 *e*P **P** **23 04 00.4 +0.1**
HYT Haines Junctio 56.02 36 *e*P **P** **23 04 05.4 -0.2**
SVE Sverdlovsk 56.23 319⇓ *e*P **P** **23 04 07.1 0.0**
SVE *e* 23 04 58.3
SVE *e*S **S** **23 11 49.5 -5.5**
SVE pmax pmax
comp=Z,33nm,0.9s,mb5.4
SVE MLR MLR
comp=Z,1µm,16.0s,MS5.0
ARU Arti 57.44 319*c* *i*P **P** **23 04 15.2 -0.5**
ARU *e* 23 05 06.2
ARU *e*S **S** **23 12 11.1 +0.1**
ARU *e*SS SS 23 15 55.3 -5.0
ARU pmax pmax
comp=Z,32nm,0.7s,mb5.5
ARU MLR MLR
comp=Z,633nm,17.0s,MS4.8
ARU Arti 57.44 319 *e*P **P** **23 04 14.6 -1.2**
HYB Hyderabad 57.74 269 *i* P **P** **23 04 21.5 +3.1**
HYB Hyderabad 57.74 269 *e*P **P** **23 04 21.5 +3.1**
AB31 Akbulak array 58.79 311 *i* P **P** **23 04 24.8 -0.5**
AB31 pmax pmax
comp=Z,16nm,0.7s,mb5.2
ASAR Alice Springs 58.93 187 P **P** **23 04 25.3 -1.1**
comp=Z,5.2nm,0.7s,mb4.7,baz=8.0,slow=7.3,SNR=22
ASAR S **S** **23 12 29.1 -1.9**
comp=Z,0.2nm,0.4s,baz=16,slow=14,SNR=4.1
ASAR PKPPKP 23 34 15.9
comp=Z,1.1nm,0.9s,baz=163,slow=2.5,SNR=8.4
ASAR Alice Springs 58.93 187 P **P** **23 04 25.3 -1.1**
ASAR S **S** **23 12 29.1 -1.9**
MBWA Marble Bar 59.55 203 *e*P **P** **23 04 30.5 -0.2**
AKTO Aktyubinsk 59.58 313 P **P** **23 04 30.1 -0.6**
AKTO pmax pmax
comp=Z,8.0nm,1.8s,mb4.5
POO Poona 61.02 273 *e*P **P** **23 04 37.0 -4.1**
DZM Mont Dzumac 61.92 153 *e*P **P** **23 04 46.5 -0.3**
ABKT Ailbek 64.34 300 P **P** **23 05 02.1 -0.9**
comp=Z,106nm,1.3s,mb5.7,SNR=7.7
ARCES ARCESS Array B 65.55 340 P **P** **23 05 09.4 -0.9**
comp=Z,7.3nm,0.8s,mb4.8,baz=53,slow=5.6,SNR=11
ARCES LR LR 23 37 16.2
comp=Z,629nm,19.1s,MS4.8,baz=23,slow=39
ARE0 ARCESS Array S 65.55 340 *e*P **P** **23 05 10.0 -0.2**
YKA Yellowknife Ar 65.60 30 P **P** **23 05 10.4 -0.3**
comp=Z,3.2nm,0.8s,mb4.4,baz=303,slow=6.7,SNR=5.7
YKA LR LR 23 38 19.4
comp=Z,92nm,18.0s,MS4.0,baz=220,slow=40
ARMA Armidale 66.06 170 *e*P **P** **23 05 13.7 -0.3**
STKA Stephens Creek 66.74 179 *e*P **P** **23 05 18.0 -0.3**
comp=Z,6.2nm,0.8s,mb4.7
STKA Stephens Creek 66.74 179 P **P** **23 05 17.7 -0.6**
comp=Z,8.0nm,0.8s,mb4.8,baz=347,slow=7.0,SNR=13
STKA LR LR 23 34 03.0
comp=Z,296nm,19.4s,MS4.5,baz=22,slow=36
STKA Stephens Creek 66.74 179 *e*P **P** **23 05 18.0 -0.2**
comp=Z,8.0nm,0.8s,mb4.8
FORT Forrest 66.74 192 *e*P **P** **23 05 18.1 -0.2**
comp=Z,38nm,0.6s,mb5.6
JOF Joensuu 67.36 332 *e*p **P** **23 05 18.2 -3.8**
comp=Z,3.7nm,0.4s,mb4.8
JOF Joensuu 67.36 332 *e*P **P** **23 05 18.2 -3.8**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
DAG Danmarks Havn 67.55 355⇑ *e*P **P** **23 05 22.3 -0.6**
DAG pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
DAG Danmarks Havn 67.55 355⇑ *i*P **P** **23 05 22.3 -0.6**
comp=Z,6.0nm,1.0s,mb4.6
DAG Danmarks Havn 67.55 355⇑ *e*P **P** **23 05 22.3 -0.6**
comp=Z,6.0nm,1.0s,mb4.6
NLWA Neilton Lookou 68.27 47 *e*P **P** **23 05 28.7 +0.8**
MOS Moscow 68.45 324 *e*P **P** **23 05 27.0 -1.9**
MOS *i* 23 05 53.4
MOS *e* 23 07 55.8
MOS pmax pmax
comp=Z,39nm,1.0s,mb5.4
MOS MLR MLR
comp=Z,900nm,17.0s,MS5.1
A06A Chilliwack 68.83 44⇓ P **P** **23 05 32.1 +0.7**
baz=69
B05A Bryant 68.89 45⇑ P **P** **23 05 32.1 +0.3**
baz=69
JCW Jim Creek 69.02 45 *e*P **P** **23 05 32.4 -0.2**
OBN Obninsk 69.30 323*c* *i*P **P** **23 05 33.3 -0.9**
OBN pmax pmax
comp=Z,57nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,800nm,16.0s,MS5.0
OBN Obninsk 69.30 323 *e*P **P** **23 05 33.9 -0.3**
OBN LR LR
comp=Z,800nm,16.0s,MS5.0
KAF Kangasniemi 69.72 333 *e*p **P** **23 05 34.7 -2.0**
comp=Z,7.2nm,0.6s,mb4.8
KAF Kangasniemi 69.72 333 *e*P **P** **23 05 34.7 -2.0**
KAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
KLBR Kellerberrin 69.92 201 *e*P **P** **23 05 37.8 -0.4**
comp=Z,16nm,0.9s,mb5.0
B07A Winthrop 69.93 44⇓ P **P** **23 05 38.7 +0.5**
baz=70
E05A Randle 69.93 47⇓ P **P** **23 05 38.9 +0.6**
baz=70
VSR Storozhevoye 70.02 319 *e*P **P** **23 05 38.3 -0.4**
VSR pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
VSR pmax pmax
comp=N,7.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.7s
A08A Turner Farm, O 70.16 44⇓ P **P** **23 05 40.1 +0.5**
baz=70
ETW Entiat 70.25 45 *e*P **P** **23 05 40.1 -0.1**
E06A Yakima 70.41 46⇑ P **P** **23 05 42.0 +0.8**
baz=70
B08A Colville Reser 70.43 44⇓ P **P** **23 05 41.8 +0.4**
baz=70
A09A Danville 70.54 43⇓ P **P** **23 05 42.5 +0.6**
baz=70
H04A Detroit Lake 70.62 49⇓ P **P** **23 05 43.1 +0.6**
baz=70
C08A Higginbotham F 70.90 45⇓ P **P** **23 05 44.0 -0.2**
baz=71
I04A Tendick Farm, 70.94 50⇑ P **P** **23 05 44.7 +0.2**
baz=71
B09A Rice 71.07 44⇑ P **P** **23 05 45.5 +0.3**
baz=71
A10A Northport 71.11 43⇓ P **P** **23 05 45.6 +0.2**
baz=71
H05A Madras 71.23 48⇓ P **P** **23 05 47.2 +1.0**
baz=71
G06A Carlson Farm, 71.28 48⇑ P **P** **23 05 47.0 +0.5**
baz=71
OD2 Odessa Site #2 71.30 45 *e*P **P** **23 05 47.0 +0.4**
NWAO Narrogin (SRO) 71.32 201 P **P** **23 05 46.9 +0.2**
comp=E,8.9nm,0.6s,mb4.9,baz=30,slow=3.7,SNR=4.8
NWAO Narrogin (SRO) 71.32 201 P **P** **23 05 46.9 +0.2**
NWAO pmax pmax
comp=Z,9.0nm,0.6s
NWAO Narrogin (SRO) 71.32 201 *e*P **P** **23 05 46.4 -0.3**
C09A Chrisman Ranch 71.33 44⇓ P **P** **23 05 47.2 +0.4**
baz=71
D08A Wollman Farm, 71.35 45⇑ P **P** **23 05 46.8 -0.1**
baz=71
DGRG David-gareji 71.37 308 P **P** **23 05 47.0 -0.1**
J04A Umpqua Nationa 71.41 50⇑ P **P** **23 05 47.4 +0.1**
baz=71
TBLG Delisi 71.63 308 P **P** **23 05 48.6 -0.1**
H06A Lindquist Farm 71.73 48⇑ P **P** **23 05 48.7 -0.5**
baz=72
NEW Newport 71.74 43 *e*P **P** **23 05 49.4 +0.2**
KIV Kislovodsk 71.77 311 *e*P **P** **23 05 49.7 +0.2**
KIV *e* 23 06 08.3
KIV *e*S S 23 15 06.1 -2.0
KIV *e*SS SS 23 19 45.3 +1.7
KIV pmax pmax
comp=Z,53nm,1.1s,mb5.4
KIV pmax pmax
comp=Z,58nm,5.3s
KIV MLR MLR
comp=Z,348nm,19.0s,MS4.6
KIV Kislovodsk 71.77 311⇑ *i*P **P** **23 05 51.0 +1.5**
KIV Kislovodsk 71.77 311 *e*P **P** **23 05 50.2 +0.7**
A11A Hall Mountain, 71.79 43⇑ P **P** **23 05 49.8 +0.3**
baz=72
YBH Yreka Blue Hor 71.80 52 P **P** **23 05 50.3 +0.6**
comp=Z,4.2nm,0.7s,mb4.5,baz=5.9,slow=5.1,SNR=6.7
YBH Yreka Blue Hor 71.80 52⇓ P **P** **23 05 50.0 +0.2**
baz=72
G07A Ruggs Ranch, H 71.85 47⇓ P **P** **23 05 50.4 +0.4**
baz=72
GOR Gori 71.91 309 P **P** **23 05 51.2 +0.9**
J05A Fort Rock 71.93 50⇓ P **P** **23 05 51.1 +0.6**
baz=72
ONI Oni 72.01 310 P **P** **23 05 51.4 +0.4**
E09A Wood Farm, Sta 72.09 45⇓ P **P** **23 05 51.1 -0.3**
baz=72,SNR=6.4
F08A Pendleton 72.10 46⇑ P **P** **23 05 52.1 +0.7**
baz=72
G08A Pilot Rock 72.26 47⇓ P **P** **23 05 52.2 -0.2**
baz=72
M04C Macdoel 72.33 51⇑ P **P** **23 05 53.1 +0.2**
baz=72
LNOR Lincton Mounta 72.35 46 *e*P **P** **23 05 52.0 -0.9**
K05A Summer Lake 72.44 50⇓ P **P** **23 05 53.6 +0.1**
baz=72,SNR=6.4
GNI Garni 72.45 307 *e*P **P** **23 05 55.3 +1.7**
GNI pmax pmax
comp=Z,31nm,1.1s
GNI Garni 72.45 307 *e*P **P** **23 05 55.3 +1.7**
comp=Z,31nm,1.1s,mb5.2
C11A Tepee Creek (N 72.46 44⇑ P **P** **23 05 53.1 -0.4**
baz=72,SNR=6.8
SUMG Summit 72.50 360 *e*P **P** **23 05 53.9 +0.6**
I07A Izee 72.58 48⇑ P **P** **23 05 53.9 -0.4**
baz=72
J06A Christmas Vall 72.62 49⇑ P **P** **23 05 54.4 -0.2**
baz=72
K06A Valley Falls 72.80 50⇑ P **P** **23 05 55.4 -0.3**
baz=73
L05A Lakeview 72.83 50⇑ P **P** **23 05 56.2 +0.3**
baz=73
D11A Klaveano Farm, 72.85 44⇓ P **P** **23 05 55.0 -0.8**
baz=73
H08A Prairie City 72.85 47⇓ P **P** **23 05 56.0 +0.1**
baz=73
A13A Flathead Natio 72.87 42⇓ P **P** **23 05 56.2 +0.2**
baz=73
G09A Cove 72.97 46⇓ P **P** **23 05 56.2 -0.4**
baz=73
J07A Hines 73.08 49⇑ P **P** **23 05 57.5 +0.2**
baz=73,SNR=5.7
WALA Waterton Lakes 73.08 42 *e*P **P** **23 05 57.5 +0.4**
comp=Z,4.0nm,1.0s,mb4.3
B13A Whitefish 73.16 42⇑ P **P** **23 05 57.2 -0.5**
baz=73,SNR=5.5
DIGO Kars 73.20 308 *i* P **P** **23 05 59.3 +1.2**
I08A Drewsey 73.24 48⇑ P **P** **23 05 58.4 +0.2**
baz=73
MOD Modoc 73.25 50⇑ P **P** **23 05 58.3 0.0**
baz=73
E11A Bogner Ranch, 73.30 45⇓ P **P** **23 05 58.2 -0.3**
baz=73
A14A Double T Ranch 73.39 41⇓ P **P** **23 05 58.8 -0.2**
baz=73

D12A **Red Ives Fores** 73.40 44 ⇓P P 23 05 58.9 -0.2
baz=73
K07A **Rock Creek Ran** 73.48 49 ⇑P P 23 05 59.9 +0.2
baz=73,SNR=7.6
BMO **Blue Mountains** 73.48 47 *eP* P 23 05 59.5 -0.1
F11A **Grangeville** 73.59 45 ⇓P P 23 06 00.5 +0.2
baz=73,SNR=5.5
J08A **Circle Bar Ran** 73.60 48 ⇑P P 23 06 00.3 -0.1
baz=73
E12A **Beaver Dam Sad** 73.63 45 ⇑P P 23 06 00.6 0.0
baz=73,SNR=12
I09A **Lost Marbles R** 73.71 48 ⇓P P 23 06 01.3 +0.3
baz=74
ARTV **Artvin** 73.72 309 *i* P P 23 06 02.0 +0.9
ORV **Oroville** 73.73 53 ⇑P P 23 06 00.4 -0.8
baz=74
L07A **Adell** 73.79 50 ⇓P P 23 06 01.2 -0.3
baz=74,SNR=16
SOC **Sochi** 73.79 312 *eP* P 23 06 01.0 -0.5
SOC *i* *PP pP 23 06 11.1 +1.4
SOC *ePPP* 23 10 30.1
SOC *eS* S 23 15 27.7 -3.4
SOC *e* 23 16 03.6
SOC *eSS* SS 23 20 16.6 +2.3
SOC pmax pmax
comp=Z,15nm,1.1s,mb4.8
SOC MLR MLR
comp=Z,107nm,17.0s,MS4.2
G11A **Walters Elk Ra** 73.80 46 ⇓P P 23 06 00.4 -1.1
baz=74,SNR=18
D13A **Huson** 73.89 43 ⇑P P 23 06 01.4 -0.6
baz=74
C14A **Swan Lake** 73.90 43 ⇓P P 23 06 01.8 -0.2
baz=74
K08A **Mann Creek Ran** 73.93 49 ⇓P P 23 06 02.2 -0.2
baz=74
H10A **Noah's Angus R** 73.96 47 ⇑P P 23 06 01.9 -0.6
baz=74
WVOR **Wild Horse Val** 74.00 49 *eP* P 23 06 02.2 -0.5
WVOR *e* 23 06 15.3
WVOR pmax pmax
comp=Z,19nm,1.5s,mb4.8
WVOR **Wild Horse Val** 74.00 49 *eP* P 23 06 02.2 -0.6
comp=Z,20nm,1.5s,mb4.8
WVOR *e* 23 06 15.3
J09A **Fry Pan Ranch,** 74.04 48 ⇓P P 23 06 03.4 +0.4
baz=74,SNR=9.2
F12A **Elk City** 74.19 45 ⇓P P 23 06 03.6 -0.2
baz=74,SNR=12
M07A **Soldier Meadow** 74.24 50 ⇓P P 23 06 04.3 +0.2
baz=74,SNR=13
B15A **Bradely Ranch,** 74.24 42 ⇑P P 23 06 03.7 -0.3
baz=74,SNR=10
BEKR **Beckwourth** 74.30 52 ⇓P P 23 06 04.7 +0.1
baz=74,SNR=6.6
L08A **Fields** 74.31 49 ⇑P P 23 06 04.4 -0.2
baz=74,SNR=9.6
MSO **Missoula** 74.33 43 *eP* P 23 06 05.5 +1.0
MSO *ePP* pP 23 06 12.0 -0.7
H11A **Donnelly** 74.33 46 ⇓P P 23 06 04.6 -0.1
baz=74
K09A **Rome** 74.42 49 ⇓P P 23 06 05.4 +0.2
baz=74,SNR=6.1
D14A **Greenough** 74.43 43 ⇑P P 23 06 04.6 -0.6
baz=74
ANN **Anapa** 74.48 314 *eP* P 23 06 04.1 -1.4
ANN *eS* S 23 15 37.8 -1.0
ANN pmax pmax
comp=Z,45nm,2.5s,mb5.0
ANN MLR MLR
comp=Z,355nm,16.0s,MS4.8
O06A **Flanigan** 74.48 52 ⇑P P 23 06 05.8 +0.2
baz=74,SNR=5.1
HAKT **HAKKARI** 74.50 305 *i* P P 23 06 06.2 +0.4
C15A **Salmond Ranch,** 74.53 42 ⇓P P 23 06 05.6 -0.1
baz=74,SNR=19
N07B **Gerlach** 74.70 51 ⇑P P 23 06 06.9 +0.1
baz=74
F13A **Darby** 74.70 45 ⇓P P 23 06 06.5 -0.2
baz=74
ERZM **Erzurum** 74.77 308 *i* P P 23 06 08.9 +1.7
K10A **MacKenzie Ranc** 74.90 48 ⇓P P 23 06 07.9 -0.1
baz=75,SNR=7.0
C16A **Fuhringer Ranc** 74.98 42 ⇓P P 23 06 08.1 -0.2
baz=75,SNR=8.5
O07A **Toulon** 75.10 51 ⇑P P 23 06 09.2 +0.1
baz=75,SNR=5.4
H12A **Diamond D Ranc** 75.10 46 ⇓P P 23 06 09.2 0.0
baz=75
G13A **Cobalt** 75.16 45 ⇑P P 23 06 09.2 -0.2
baz=75,SNR=5.6
MFID **Camas Ranch** 75.17 47 ⇓P P 23 06 09.1 -0.4
baz=75,SNR=6.7
PACP **Pacheco Peak** 75.24 55 ⇓P P 23 06 10.0 0.0
baz=75
KOPT **Kop Dagi** 75.27 309 *i* P P 23 06 11.2 +1.0
CMB **Columbia Colle** 75.28 54 *eP* P 23 06 10.7 +0.4
CMB pmax pmax
comp=Z,58nm,2.0s,mb5.2
CMB **Columbia Colle** 75.28 54 ⇓P P 23 06 10.1 -0.1
baz=75
CMB **Columbia Colle** 75.28 54 *eP* P 23 06 10.7 +0.4
comp=Z,58nm,2.0s,mb5.2
E15A **Deer Lodge** 75.29 43 ⇑P P 23 06 09.6 -0.6
baz=75
K11A **Parker Ranch,** 75.41 48 ⇓P P 23 06 11.1 +0.2
baz=75,SNR=6.1
FFC **Flin Flon** 75.47 32 *eP* P 23 06 11.2 +0.2
FFC pmax pmax
comp=Z,16nm,1.1s,mb4.9
FFC **Flin Flon** 75.47 32 *eP* P 23 06 11.2 +0.2
comp=Z,16nm,1.1s,mb4.9
AKASG **Malin Array Be** 75.47 322 P P 23 06 10.4 -0.7
comp=Z,4.9nm,0.6s,mb4.6,baz=46,slow=6.2,SNR=26
AKASG LR LR 23 42 23.1
comp=Z,961nm,18.5s,MS5.1,baz=45,slow=38
AKBB **Malin Array Si** 75.47 322 *eP* P 23 06 09.9 -1.2
KIEV **Kiev** 75.48 322 *eP* P 23 06 10.5 -0.7
KIEV pmax pmax
comp=Z,42nm,1.4s,mb5.2
KIEV **Kiev** 75.48 322 *eP* P 23 06 10.5 -0.6
comp=Z,42nm,1.4s,mb5.2
O08A **Rochester Mine** 75.48 51 ⇓P P 23 06 11.7 +0.3
baz=75
L10A **Juniper Basin** 75.53 49 ⇓P P 23 06 11.7 +0.1
baz=75,SNR=6.8
C17A **Wharram Farm,** 75.62 42 ⇓P P 23 06 12.3 +0.3
baz=75
NB2 **NORSAR Subarra** 75.69 337 P P 23 06 11.7 -0.5
comp=Z,36nm,1.0s,mb5.3,baz=41,slow=5.9
NOA **NORSAR Array B** 75.69 337 P P 23 06 11.7 -0.5
comp=Z,10nm,0.8s,mb4.8,baz=40,slow=5.8,SNR=28
NOA LR LR 23 42 28.2
comp=Z,800nm,19.4s,MS5.0,baz=60,slow=38
S05C **Merced** 75.70 54 ⇓P P 23 06 13.0 +0.4
baz=76
F15A **Butte** 75.72 44 ⇑P P 23 06 12.5 -0.1
baz=76,SNR=19
S06C **San Francisco** 75.72 54 ⇓P P 23 06 12.9 +0.1
baz=76
LRM **Limekiln Ridge** 75.75 44 *eP* P 23 06 12.9 +0.1
M10A **I.L. Ranch, Tu** 75.81 49 ⇓P P 23 06 13.1 -0.1
baz=76,SNR=6.5
FCC **Fort Churchill** 75.82 26 *eP* P 23 06 12.2 -0.7
I13A **Wildhorse Cree** 75.90 46 ⇑P P 23 06 13.9 +0.2
baz=76
L11A **Cat Creek Ranc** 75.92 48 ⇓P P 23 06 13.8 -0.1
baz=76,SNR=5.3
HLID **Hailey** 75.93 46 ⇑P P 23 06 14.0 +0.2
baz=76
HLID **Hailey** 75.93 46 *eP* P 23 06 14.2 +0.3
H14A **Leadore** 75.93 45 ⇓P P 23 06 13.9 0.0
baz=76
DLMT **Dillon** 75.94 44 *eP* P 23 06 10.2 -3.6
comp=Z,17nm,0.8s,mb5.0
BMN **Battle Mountai** 76.00 50 *eP* P 23 06 15.8 +1.5
G15A **Dillon** 76.12 44 ⇑P P 23 06 15.1 +0.2
baz=76
MIB **Mutribah** 76.12 297 *eP* P 23 06 14.6 -0.6
baz=297
MIB AMb AMB 23 06 22.7
comp=Z,41nm,1.1s,mb5.3,baz=297
O09A **Fish Creek Ran** 76.16 51 ⇓P P 23 06 14.8 -0.4
baz=76
K12A **Draper Farm, C** 76.17 47 ⇑P P 23 06 15.6 +0.3
baz=76
SUW **Suwalki** 76.19 327 *eP* P 23 06 14.9 -0.2
SUW **Suwalki** 76.19 327 *eP* P 23 06 14.9 -0.2
I14A **Mackay** 76.28 46 ⇓P P 23 06 15.7 -0.2
baz=76,SNR=13
T06C **Millerton Lake** 76.30 54 ⇑P P 23 06 16.2 +0.1
baz=76
BOZ **Bozeman (W)** 76.32 44 *eP* P 23 06 16.2 +0.2
BOZ pmax pmax
comp=Z,65nm,2.6s,mb5.1
BOZ **Bozeman (W)** 76.32 44 *eP* P 23 06 16.2 +0.2
comp=Z,65nm,2.6s,mb5.1
SIM **Simferopol'** 76.32 316 *eP* P 23 06 21.0 +4.9
SIM S S 23 16 01.0 +1.8
SIM pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
SIM MLR MLR
comp=Z,440nm,16.7s,MS4.8
PKD **Parkfield** 76.33 56 ⇑P P 23 06 16.5 +0.2
baz=76
KCC **Kaiser Creek** 76.38 54 ⇓P P 23 06 16.7 +0.1
baz=76
L12A **House Creek Ra** 76.39 48 ⇓P P 23 06 16.4 -0.1
baz=76,SNR=5.8
Q08A **Gabbs** 76.43 52 ⇓P P 23 06 16.7 0.0
baz=76
NVAR **Mina Array Bea** 76.43 53 P P 23 06 16.1 -0.7
comp=Z,3.7nm,0.7s,mb4.5,baz=293,slow=5.5,SNR=9.8
RDF **Al-Radifah** 76.44 296 *eP* P 23 06 16.2 -0.8
baz=296
RDF AMb AMB 23 06 29.5
comp=Z,80nm,0.9s,mb5.7,baz=296
NAY **Al-Naaiem** 76.49 296 *eP* P 23 06 16.6 -0.7
baz=296
NAY AMb AMB 23 06 29.4
comp=Z,39nm,0.8s,mb5.4,baz=296
RST **Umm Al-Ruwaisa** 76.53 297 *eP* P 23 06 16.2 -1.3
baz=297
RST AMb AMB 23 06 25.8
comp=Z,41nm,1.0s,mb5.3,baz=297
MARD **Mardin** 76.59 306 *i* P P 23 06 17.9 +0.2
J14A **Carey** 76.60 46 ⇑P P 23 06 18.0 +0.3
baz=76,SNR=10
K13A **Stover Farm, H** 76.66 47 ⇑P P 23 06 18.5 +0.5
baz=76
M12A **Wells** 76.87 48 ⇑P P 23 06 19.7 +0.4
baz=77,SNR=11
Q09A **Carvers** 76.93 52 ⇓P P 23 06 20.1 +0.4
baz=77
HELL **Mitchell Peak** 76.94 54 ⇓P P 23 06 19.8 +0.1
baz=77
S08C **White Mtn Res** 77.04 53 ⇑P P 23 06 20.9 +0.6
baz=77,SNR=6.5
ELK **Elko** 77.06 49 *eP* P 23 06 21.9 +1.6
L13A **Double Diamond** 77.07 47 ⇑P P 23 06 21.2 +0.9
baz=77
N12A **Clover Valley,** 77.12 49 ⇓P P 23 06 21.3 +0.7
baz=77
K14A **Jones Ranch, D** 77.26 47 ⇑P P 23 06 22.2 +0.8
baz=77
GCMT **Greycliff** 77.33 43 *eP* P 23 06 21.4 -0.4
TPH **Tonopah** 77.33 52 *eP* P 23 06 21.7 -0.2
TPH pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
TPH **Tonopah** 77.33 52 *eP* P 23 06 21.7 -0.2
comp=Z,3.4nm,0.6s,mb4.5
R09A **Tonopah** 77.33 52 ⇑P P 23 06 22.2 +0.3
baz=77
M13A **Montello** 77.36 48 ⇑P P 23 06 22.5 +0.5
baz=77
VES **Vestal, Richgr** 77.37 55 ⇑P P 23 06 22.6 +0.5
baz=77
Q10A **Clear Creek Ra** 77.43 51 ⇓P P 23 06 22.9 +0.4
baz=77
L14A **Malta** 77.52 47 ⇑P P 23 06 23.6 +0.7
baz=77
S09A **Goldfield** 77.53 53 ⇑P P 23 06 23.5 +0.5
baz=77,SNR=5.2
MALT **Malatya** 77.55 308 *eP* P 23 06 21.7 -1.4
MALT pmax pmax
comp=Z,13nm,1.1s,mb4.8
MALT **Malatya** 77.55 308 ⇓*i*P P 23 06 21.0 -2.1
MALT **Malatya** 77.55 308 *eP* P 23 06 21.7 -1.5
comp=Z,13nm,1.1s,mb4.8
O12A **Currie** 77.64 49 ⇑P P 23 06 23.6 +0.1
baz=77,SNR=7.7
CWC **Cottonwood Cre** 77.70 54 ⇑P P 23 06 23.9 0.0
baz=78
J16A **Bone** 77.75 45 ⇑P P 23 06 24.7 +0.5
baz=78
IMW **Indian Meadow** 77.76 45 *eP* P 23 06 25.1 +0.9
comp=Z,16nm,1.1s,mb4.9
M14A **Sheep Mountain** 77.77 48 ⇑P P 23 06 24.3 0.0
baz=78,SNR=7.7
S10A **Tonopah Range,** 77.82 52 ⇑P P 23 06 24.7 +0.1
baz=78,SNR=6.5
GRAC **Grapevine Rang** 77.85 53 ⇓P P 23 06 24.4 -0.4
baz=78
ISA **Isabella** 77.88 55 *eP* P 23 06 24.0 -1.0
HVU **Hansel Valley** 77.95 47 *eP* P 23 06 26.1 +0.8
MOOW **Moose Ponds** 77.97 45 *eP* P 23 06 26.9 +1.6
comp=Z,20nm,1.8s,mb4.7
P12A **McGill** 78.00 50 ⇓P P 23 06 26.2 +0.6
baz=78,SNR=5.8
TPAW **Teton Pass** 78.00 45 *eP* P 23 06 27.3 +1.8
K16A **Soda Springs** 78.03 46 ⇑P P 23 06 26.7 +1.0
baz=78
ATAB **Bozova** 78.12 307 *i* P P 23 06 28.1 +1.8
R11A **Troy Canyon, C** 78.23 51 ⇓P P 23 06 27.2 +0.3
baz=78,SNR=8.4
N14A **Grayback Hills** 78.26 48 ⇓P P 23 06 27.7 +0.7
baz=78
Q12A **Willow Creek R** 78.30 50 ⇑P P 23 06 27.7 +0.4
baz=78
MPMC **Manual Prospec** 78.31 54 ⇑P P 23 06 27.6 +0.2
baz=78,SNR=6.8
M15A **Larsen Ranch,** 78.34 47 ⇓P P 23 06 27.4 -0.1
baz=78,SNR=5.9
FURC **Furnace Creek,** 78.49 54 ⇓P P 23 06 28.8 +0.5
baz=78
LRMC **Laurel Mountai** 78.51 55 ⇑P P 23 06 28.2 -0.3
baz=78
P13A **Bates Ranch, G** 78.57 50 ⇑P P 23 06 28.8 0.0
baz=78
LVV **L'vov** 78.59 324 *eP* P 23 06 28.6 -0.1
LVV MLR MLR
comp=Z,300nm,15.0s,MS4.8
LVV MLR MLR
comp=E,200nm,14.0s,MS4.7
LVV MLR MLR
comp=N,200nm,15.0s,MS4.7
TPNV **Topopah Spring** 78.61 53 ⇓P P 23 06 29.4 +0.3
baz=78
EDW2 **Edwards Air Fo** 78.65 55 ⇑P P 23 06 29.3 +0.1
baz=78,SNR=6.9
GZT **Gaziantep** 78.67 308 *i* P P 23 06 30.9 +1.6
HWUT **Hardware Ranch** 78.78 47 *eP* P 23 06 30.2 +0.4
comp=N,12nm,1.1s,mb4.7
Q13A **Wheeler Ranch,** 78.86 50 ⇑P P 23 06 30.8 +0.4
baz=79
DUG **Dugway** 78.88 49 ⇑P P 23 06 30.5 0.0
baz=79,SNR=8.9
DUG **Dugway** 78.88 49 *eP* P 23 06 30.8 +0.4
ILGA **Ilgaz** 78.88 313 *i* P P 23 06 33.4 +3.0
M16A **Huntsville** 78.92 47 ⇑P P 23 06 30.8 +0.1
baz=79
T11A **Corn Creek, Al** 79.11 52 ⇓P P 23 06 31.9 +0.2
baz=79,SNR=6.4
GSC **Goldstone** 79.20 54 *eP* P 23 06 33.0 +0.7
GSC pmax pmax
comp=Z,25nm,1.8s,mb4.8
GSC **Goldstone** 79.20 54 ⇑P P 23 06 32.7 +0.5
baz=79
GSC **Goldstone** 79.20 54 *eP* P 23 06 33.0 +0.7
comp=Z,25nm,1.8s,mb4.8
BFSC **Mount Baldy St** 79.24 56 ⇑P P 23 06 32.7 +0.2
baz=79
BW06 **Boulder Array** 79.25 45 *eP* P 23 06 32.0 -0.4
comp=Z,5.9nm,0.6s,mb4.7
GKP **Gorka Klasztor** 79.25 329 *eP* P 23 06 33.4 +1.2
GKP **Gorka Klasztor** 79.25 329 *eP* P 23 06 33.4 +1.2
PDAR **Pinedale Array** 79.25 45 P P 23 06 32.0 -0.4
comp=Z,2.9nm,0.7s,mb4.3,baz=275,slow=1.9,SNR=24
Q14A **Sevier Lake (B** 79.31 50 ⇑P P 23 06 33.0 +0.2
baz=79,SNR=9.6
ANDN **Andirin** 79.32 308 *i* P P 23 06 34.1 +1.2
CDAG **Cicekdag** 79.34 311 *i* P P 23 06 33.6 +0.6
KWP **Kalwaria** 79.35 324 *eP* P 23 06 33.6 +0.8
KWP **Kalwaria** 79.35 324 *eP* P 23 06 33.6 +0.8
R13A **O'Grain Ranch,** 79.36 51 ⇑P P 23 06 34.0 +0.9
baz=79
BORG **Borgarnes** 79.39 352 P P 23 06 32.5 -0.3
BUR08 **Bucovina Ar. S** 79.46 322 *eP* P 23 06 33.7 +0.3
BUR08 PcP PcP 23 06 41.9 +0.5
BUR08 *ePP* PP 23 09 32.0 -1.2
BURAR **Bucovina Array** 79.47 322 ⇓*i*P P 23 06 34.0 +0.5
NLU **North Lily Min** 79.47 48 *eP* P 23 06 35.5 +1.8
NLU *ePP* pP 23 06 43.0 +1.1
SHPR **Sheep Range** 79.58 53 *eP* P 23 06 34.9 +0.6
P15A **Leamington** 79.58 49 ⇑P P 23 06 34.9 +0.6
baz=79
DAU **Daniels Canyon** 79.69 48 *eP* P 23 06 36.2 +1.3
TUQ **Turquoise Moun** 79.70 54 ⇓P P 23 06 35.5 +0.4
baz=80,SNR=11
BR131 **Keskin Array S** 79.73 312 *eP* P 23 06 36.1 +1.0
S13A **Holt Ranch, En** 79.78 51 ⇑P P 23 06 36.1 +0.7
baz=80
HEC **Hector,Ludlow** 79.79 55 ⇑P P 23 06 36.2 +0.7
baz=80
V11A **Goodsprings** 79.80 53 ⇑P P 23 06 36.6 +1.1
baz=80
MURC **Murrieta** 79.92 56 ⇑P P 23 06 36.5 +0.2
baz=80
ARUT **Antelope Range** 79.92 51 *eP* P 23 06 35.3 -0.9
U12A **Valley of Fire** 80.03 52 ⇓P P 23 06 37.3 +0.6
baz=80
KOLS **Kolonicke sedl** 80.04 324 *eP* P 23 06 36.9 +0.3
KOLS pmax pmax
comp=Z,13nm,1.4s,mb4.7
KOLS **Kolonicke sedl** 80.04 324 *eP* P 23 06 36.9 +0.3
comp=Z,13nm,1.4s,mb4.7
KOLS *e* pP 23 06 45.0 +0.1
T13A **Saint George** 80.08 52 ⇑P P 23 06 37.7 +0.7
baz=80
O17A **Robinson Place** 80.14 48 ⇓P P 23 06 37.8 +0.5
baz=80,SNR=5.3
ANTO **Ankara** 80.16 312 *eP* P 23 06 36.5 -0.9
ANTO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ANTO **Ankara** 80.16 312 *eP* P 23 06 36.5 -0.9
comp=Z,8.8nm,0.8s,mb4.7
STHS **Stebnicka Huta** 80.19 325 *eP* P 23 06 38.4 +1.0
STHS pmax pmax
comp=Z,11nm,1.0s,mb4.7
STHS **Stebnicka Huta** 80.19 325 *eP* P 23 06 38.4 +1.0
comp=Z,11nm,1.0s,mb4.8
STHS *ePP* pP 23 06 44.9 -0.8
UZH **Uzhgorod** 80.23 324 ⇑*i*P P 23 06 38.0 +0.4
UZH *e* 23 06 56.5
UZH *eS* S 23 16 41.0 -0.1
V12A **Nelson** 80.24 53 ⇑P P 23 06 38.2 +0.3
baz=80
GMRC **Granite Mounta** 80.27 54 ⇑P P 23 06 38.4 +0.3
baz=80,SNR=6.0
MSU **Marysvale** 80.28 50 *eP* P 23 06 39.9 +1.8
N18A **Larsen Ranch,** 80.29 46 ⇑P P 23 06 38.7 +0.6
baz=80
OJC **Ojcow** 80.31 326 *eP* P 23 06 37.7 -0.3
U13A **Pakoon Wash** 80.41 52 ⇓P P 23 06 39.2 +0.4
baz=80,SNR=10
PFO **Pinyon Flat Ob** 80.42 56 P P 23 06 38.0 -0.9
comp=Z,16nm,1.1s,mb4.8,baz=313,slow=5.4,SNR=8.6
PFO **Pinyon Flat Ob** 80.42 56 *eP* P 23 06 38.7 -0.2
PFO pmax pmax
comp=Z,16nm,1.0s,mb4.9
PFO **Pinyon Flat Ob** 80.42 56 ⇑P P 23 06 39.0 +0.1
baz=80,SNR=8.2
PFO **Pinyon Flat Ob** 80.42 56 *eP* P 23 06 38.7 -0.2
comp=Z,16nm,1.0s,mb4.9
CRVS **Cervenica-Dubn** 80.45 324 *eP* P 23 06 39.2 +0.4
TRPA **Tarpa** 80.46 323 ⇓*i*P P 23 06 39.3 +0.4
BELC **Belle Mtn.** 80.50 55 ⇑P P 23 06 39.7 +0.3
baz=80
O18A **Roosevelt** 80.53 47 ⇓P P 23 06 39.9 +0.5
baz=80
P17A **Butcher Ranch,** 80.58 48 ⇑P P 23 06 39.5 -0.2
baz=80
T14A **Hurricane** 80.59 51 ⇓P P 23 06 40.3 +0.5
baz=80
NIE **Niedzica** 80.63 325 *eP* P 23 06 40.2 +0.4
Q16A **Castle Valley** 80.66 49 ⇓P P 23 06 40.5 +0.4
baz=80
V13A **Grand Canyon W** 80.73 53 ⇑P P 23 06 40.6 +0.1
baz=80,SNR=10
P18A **Preston Nutter** 80.79 48 ⇓P P 23 06 41.0 +0.3
baz=81
BAR **Barrett** 80.81 57 *eP* P 23 06 41.2 +0.1
comp=Z,15nm,0.9s,mb4.9
R16A **Teasdale** 80.85 49 ⇑P P 23 06 40.9 -0.2
baz=81,SNR=7.2
U14A **Mt Trumbull** 80.91 52 ⇑P P 23 06 42.2 +0.7
baz=81
SRU **San Rafael** 80.94 48 ⇑P P 23 06 41.5 -0.1
baz=81,SNR=13
SRU **San Rafael** 80.94 48 *eP* P 23 06 41.8 +0.2
IRM **Iron Mountain** 80.97 55 ⇑P P 23 06 42.3 +0.5
baz=81,SNR=6.0
O19A **Miners Draw (B** 81.04 47 ⇑P P 23 06 42.6 +0.5
baz=81
T15A **Red Dirt Ranch** 81.06 51 ⇓P P 23 06 43.0 +0.7
baz=81
BC3 **Big Chuckw Mtn** 81.07 55 ⇑P P 23 06 42.3 -0.1
baz=81,SNR=8.5
S16A **Weppner Ranch,** 81.13 50 ⇓P P 23 06 42.8 +0.1
baz=81,SNR=6.9
W13A **Hualapai Mount** 81.25 53 ⇓P P 23 06 43.8 +0.4
baz=81
RUE **Ruedersdorf** 81.25 330 *eP* P 23 06 42.9 -0.1
comp=Z,45nm,1.1s,mb5.3
SWSC **Sam W. Stewart** 81.26 56 ⇑P P 23 06 43.9 +0.5
baz=81
ULM **Lac du Bonnet** 81.26 33 P P 23 06 41.9 -1.2
comp=Z,4.7nm,0.9s,mb4.4,baz=297,slow=6.8,SNR=4.6
DRGR 81.29 322 ⇑*i*P P 23 06 47.7 +4.4
MEST **Erdemli** 81.32 309 *i* P P 23 06 44.8 +1.1
OKC **Ostrava-Krasne** 81.33 327 *eP* P 23 06 45.2 +1.7
OKC *ePP* pP 23 06 51.8 0.0
OKC AMS AMS 23 46 40.0
comp=Z,900nm,16.2s
OKC **Ostrava-Krasne** 81.33 327 *eP* P 23 06 45.2 +1.7
OKC *ePP* pP 23 06 51.8 0.0
KSP **Ksiaz** 81.42 328 *eP* P 23 06 44.1 +0.2
KSP *ePP* pP 23 06 51.8 -0.4
V14A **Boquillas Ranc** 81.43 52 ⇑P P 23 06 44.7 +0.4
baz=81,SNR=13
U15A **North Rim** 81.48 51 ⇓P P 23 06 44.8 +0.3
baz=81,SNR=8.5
BSEG **Bad Segeberg** 81.48 333 *eP* P 23 06 43.3 -0.9
BSEG pmax pmax
comp=Z,28nm,1.1s,mb5.1
BSEG **Bad Segeberg** 81.48 333 *eP* P 23 06 43.3 -0.9
comp=Z,28nm,1.1s,mb5.1
P19A **Cripple Cowboy** 81.55 47 ⇑P P 23 06 44.5 -0.4
baz=81,SNR=5.8
ESKT **Eskisehir** 81.55 313 *i* P P 23 06 48.6 +3.7
PDMCI **Parker Dam,Lak** 81.56 54 ⇑P P 23 06 45.4 +0.4
baz=81
X13A **Yucca** 81.59 54 ⇓P P 23 06 45.1 -0.1
baz=81,SNR=8.7
Y12C **Blythe** 81.63 55 ⇓P P 23 06 45.5 +0.1
baz=82
MORC **Moravsky Berou** 81.64 327 *eP* P 23 06 45.3 +0.2
MORC pmax pmax
comp=Z,29nm,1.5s,mb5.0
MORC **Moravsky Berou** 81.64 327 ⇑*i*P P 23 06 45.4 +0.3
MORC **Moravsky Berou** 81.64 327 *eP* P 23 06 45.2 +0.1
comp=Z,29nm,1.5s,mb5.0
S17A **Black Ridge (B** 81.68 50 ⇓P P 23 06 45.7 +0.1
baz=82
W14A **Seligman** 81.70 53 ⇓P P 23 06 45.8 0.0
baz=82,SNR=6.0
DPC **Dobruska-Polom** 81.77 328 *eP* P 23 06 46.2 +0.4
DPC *ePP* pP 23 06 54.1 0.0
DPC AMS AMS 23 47 30.0
comp=Z,800nm,16.2s
R18A **Canyonlands Na** 81.77 49 ⇓P P 23 06 45.8 -0.2
baz=82,SNR=5.7
UPC **Upice** 81.78 328 *eP* P 23 06 46.2 +0.3
UPC *ePP* pP 23 06 53.3 -0.9
GLA **Glamis** 81.85 55 *eP* P 23 06 47.1 +0.6
GLA pmax pmax
comp=Z,14nm,0.8s,mb4.9
GLA **Glamis** 81.85 55 *eP* P 23 06 47.1 +0.6
comp=Z,14nm,0.8s,mb5.0
PSZ **Piszkesteto** 81.88 324 *eP* P 23 06 46.6 +0.2

PSZ pmax pmax
comp=Z,18nm,1.1s,mb4.9
PSZ Piszkesteto 81.88 324 *e*P **P 23 06 46.8 +0.4**
PSZ Piszkesteto 81.88 324 ⇓*i*P **P 23 06 47.5 +1.1**
PSZ Piszkesteto 81.88 324 *e*P **P 23 06 46.6 +0.1**
comp=Z,18nm,1.1s,mb4.9
V15A Kaibab Nationa 81.92 52 ⇑P **P 23 06 46.9 0.0**
baz=82,SNR=6.5
VYHS Vyhne 81.97 325 *e*P **P 23 06 47.2 +0.3**
VYHS *e*PCP PcP 23 06 50.9 -1.5
VYHS *e*P pP 23 06 54.3 -0.9
VYHS *e*PP PP 23 09 54.3 +0.3
VYHS Vyhne 81.97 325 *e*P **P 23 06 47.2 +0.3**
comp=Z,0.9nm,0.5s,mb4.0
VYHS *e*PP PcP 23 06 50.9 -1.5
VYHS *e*SP pP 23 06 54.3 -0.9
VYHS *e*PP PP 23 09 54.3 +0.3
KOLL Kolacno 82.11 326 *e*P **P 23 06 48.3 +0.7**
KOLL *e*PCP PcP 23 06 51.9 -1.1
KOLL *e*pP pP 23 06 55.1 -0.8
KOLL Kolacno 82.11 326 *e*P **P 23 06 48.4 +0.8**
KOLL *e*PP PcP 23 06 51.9 -1.1
KOLL *e*SP pP 23 06 55.1 -0.8
S18A Hurst Farm, Bl 82.14 49 ⇓P **P 23 06 47.8 -0.2**
baz=82,SNR=7.4
ULDT Uludag 82.18 314 *i*P **P 23 06 48.1 -0.1**
X14A Yava 82.28 53 ⇑P **P 23 06 49.2 +0.4**
baz=82,SNR=8.2
PVCC Panska Ves 82.39 329 *e*P **P 23 06 49.5 +0.5**
PVCC *e*pP pP 23 06 57.0 -0.3
PVCC AMS AMS 23 50 50.0
comp=Z,600nm,18.7s
U16A Tuba City 82.39 51 ⇑P **P 23 06 49.6 +0.3**
baz=82,SNR=8.9
BRG Berggiesshubel 82.39 329 *e*P **P 23 06 49.0 -0.1**
BRG pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
BRG pmax pmax
comp=Z,16nm,1.5s,mb4.7
BRG Berggiesshubel 82.39 329 *e*P **P 23 06 48.1 -1.0**
comp=Z,27nm,1.5s,mb5.0
BRG Berggiesshubel 82.39 329 *e*P **P 23 06 49.0 -0.1**
comp=Z,14nm,1.2s,mb4.8
BRG *e* pP 23 06 56.0 -1.4
comp=Z,27nm,1.5s
U17A Shonto 82.41 50 ⇓P **P 23 06 49.8 +0.4**
baz=82
CLL Collm 82.45 330 ⇑*i*P **P 23 06 48.8 -0.6**
CLL pmax pmax
comp=Z,18nm,0.9s,mb5.0
CLL Collm 82.45 330 *e*P **P 23 06 48.0 -1.4**
comp=Z,28nm,1.0s,mb5.2
CLL Collm 82.45 330 ⇑*i*P **P 23 06 48.8 -0.6**
comp=Z,18nm,0.9s,mb5.0
CLL *i* (PcP) PcP 23 06 55.6 +1.1
CLL Collm 82.45 330 ⇑*i*P **P 23 06 48.8 -0.6**
comp=Z,18nm,0.9s,mb5.0
Y14A Wickenburg 82.53 54 ⇑P **P 23 06 50.5 +0.4**
baz=82,SNR=5.3
PHWY Pilot Hill 82.54 44 *e*P **P 23 06 48.9 -1.1**
comp=Z,6.8nm,0.6s,mb4.8
T18A Mexican Hat 82.56 50 ⇓P **P 23 06 49.6 -0.6**
baz=82,SNR=6.7
FBE Freiberg 82.60 330 *e*P **P 23 06 49.3 -0.8**
comp=Z,31nm,1.1s,mb5.2
BUD Budapest 82.61 324 ⇓*e*P **P 23 06 50.9 +0.7**
WUAZ Wupatki 82.62 52 ⇓P **P 23 06 51.1 +0.5**
baz=82
WUAZ Wupatki 82.62 52 *e*P **P 23 06 52.0 +1.5**
comp=Z,41nm,1.8s,mb5.2
S19A Harvey Farm, M 82.64 49 ⇓P **P 23 06 50.8 +0.2**
baz=82
BZS Buzias 82.65 322 ⇑*i*P **P 23 06 50.9 +0.4**
NRDL Niedersach Rie 82.69 332 *e*P **P 23 06 49.4 -1.1**
comp=Z,24nm,1.6s,mb5.0
X15A Humboldt 82.70 53 ⇓P **P 23 06 51.7 +0.8**
baz=82,SNR=10
113A Mohawk Valley, 82.73 55 ⇓P **P 23 06 51.3 +0.2**
baz=83
W16A Flagstaff 82.78 52 ⇑P **P 23 06 51.7 +0.3**
baz=83
MODS Modra-Piesok 82.78 326 *e*P **P 23 06 52.1 +1.0**
MODS pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
MODS Modra-Piesok 82.78 326 *e*P **P 23 06 52.1 +1.0**
comp=Z,7.9nm,1.4s,mb4.5
PRU Pruhonice 82.80 328 *e*P **P 23 06 51.5 +0.3**
PRU *e*pP pP 23 06 59.4 -0.1
PRU AMS AMS 23 48 20.0
comp=Z,600nm,13.6s
Y15A Casa Rosa Ranc 82.96 53 ⇓P **P 23 06 52.7 +0.4**
baz=83,SNR=7.6
U18A Rough Rock, Ch 83.02 50 ⇑P **P 23 06 53.3 +0.7**
baz=83,SNR=5.4
X16A Lo Mia Camp, P 83.26 52 ⇓P **P 23 06 54.1 +0.3**
baz=83
T19A Beclabito 83.29 49 ⇑P **P 23 06 54.5 +0.5**
baz=83,SNR=5.9
TANN Tannenbergstha 83.36 330 *e*P **P 23 06 53.2 -0.9**
comp=Z,9.0nm,1.2s,mb4.7
WERD Werda 83.40 330 *e*P **P 23 06 53.3 -1.0**
comp=Z,13nm,1.3s,mb4.8
V18A Ganado 83.42 51 ⇑P **P 23 06 55.1 +0.4**
baz=83,SNR=6.5
ISCO Idaho Springs 83.43 45 *e*P **P 23 06 56.2 +1.5**
GUNZ Gunzen 83.45 330 *e*P **P 23 06 53.7 -0.8**
comp=Z,10.0nm,1.2s,mb4.7
WERN Wernitzgruen 83.49 330 *e*P **P 23 06 54.0 -0.8**
comp=Z,21nm,1.1s,mb5.1
NKC Novy Kostel 83.50 330 *e*P **P 23 06 55.0 +0.2**
NKC *e*pP pP 23 07 02.2 -0.9
NKC AMS AMS 23 51 10.0
comp=Z,800nm,16.8s
NKC Novy Kostel 83.50 330 *e*P **P 23 06 55.0 +0.2**
NKC *e*pP pP 23 07 02.2 -0.9
MOX Moxa 83.53 330 *e*P **P 23 06 54.8 -0.1**
comp=Z,18nm,1.6s,mb5.0
MOX Moxa 83.53 330 *e*P **P 23 06 54.8 -0.1**
MOX pmax pmax
comp=Z,18nm,1.6s,mb5.0
MOX Moxa 83.53 330 *e*P **P 23 06 54.0 -0.9**
comp=Z,12nm,1.1s,mb4.9
Y16A Circle Bar Ran 83.56 53 ⇑P **P 23 06 55.5 0.0**
baz=83
MANT Manisa 83.58 313 *i*P **P 23 06 55.1 -0.4**
SOP Sopron 83.61 326 ⇓*e*P **P 23 06 56.2 +0.8**
PKSM Moragy 83.70 324 ⇑*i*P **P 23 06 56.0 +0.1**
IBBN Ibbenburen 83.72 333 *e*P **P 23 06 54.5 -1.4**
comp=Z,40nm,1.2s,mb5.4
X17A Forest Lakes 83.72 52 ⇓P **P 23 06 56.4 +0.1**
baz=84
CONA Conrad Observa 83.75 326 ⇑*i*P **P 23 06 56.5 +0.4**
comp=Z,19nm,1.2s,mb5.1
CONA Conrad Observa 83.75 326 ⇑*i*PcP **P 23 06 56.5 +0.4**
comp=Z,19nm,1.2s,mb5.1
CSNA Conrad Observa 83.75 326 ⇑*i*P **P 23 06 56.6 +0.4**
comp=Z,17nm,1.2s,mb5.0
CSNA Conrad Observa 83.75 326 ⇑*i*PcP **P 23 06 56.6 +0.4**
comp=Z,17nm,1.2s,mb5.0
115A Sonoran Desert 83.80 54 ⇑P **P 23 06 57.0 +0.3**
baz=84
MANZ Manzenberg 83.83 330 *e*P **P 23 06 55.6 -0.9**
comp=Z,19nm,1.4s,mb5.0
PMOR Pomariorio Ree 83.86 113 *e*T 00 39 09.2
comp=Z,8.4nm,0.2s
214A Organ Pipe Nat 83.86 55 ⇓P **P 23 06 57.3 +0.3**
baz=84
KHC Kasperske Hory 83.86 328 *e*P **P 23 06 56.5 -0.2**
KHC *e*pP pP 23 07 04.8 -0.2
KHC AMS AMS 23 48 50.0
comp=Z,700nm,14.5s
V19A Window Rock 83.98 50 ⇑P **P 23 06 58.2 +0.6**
baz=84
GEC2 GERESS Array S 84.03 328 *e*P **P 23 06 56.4 -1.1**
GEC2 pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
GEC2 GERESS Array S 84.03 328 *e*P **P 23 06 56.4 -1.1**
comp=Z,9.0nm,1.0s,mb4.8
GERES GERESS Array B 84.03 328 P **P 23 06 57.3 -0.2**
comp=Z,3.2nm,0.8s,mb4.5,baz=35,slow=4.9,SNR=24
GERES PP PP 23 10 10.6 -0.2
comp=Z,1.6nm,0.8s,baz=44,slow=7.8,SNR=7.0
GERES LR LR 23 49 58.0
comp=Z,276nm,18.5s,MS4.7,baz=11,slow=40
GERES GERESS Array B 84.03 328 P **P 23 06 57.3 -0.2**
GERES 23 10 10.6

UBBA Unterbreizbach 84.04 331 *e*P **P 23 06 56.3 -1.2**
comp=Z,16nm,1.4s,mb5.0
Y17A Roosevelt 84.09 53 ⇓P **P 23 06 58.7 +0.5**
baz=84,SNR=7.3
W19A Sanders 84.14 51 ⇑P **P 23 06 58.9 +0.5**
baz=84,SNR=13
X18A Snowflake 84.15 52 ⇑P **P 23 06 58.8 +0.4**
baz=84
WET Wettzell 84.15 329 *e*P **P 23 06 57.5 -0.7**
WET pmax pmax
comp=Z,12nm,1.2s,mb4.9
WET Wettzell 84.15 329 *e*P **P 23 06 57.5 -0.7**
comp=Z,12nm,1.2s,mb4.9
PPT Papeete 84.22 116 *e*LR LR 23 33 17.7
comp=Z,341nm,22.0s,baz=306
PPT Papeete 84.22 116 LR LR 23 37 21.2
comp=Z,318nm,19.4s,MS4.7,baz=194,slow=31
GRA1 Grafenberg Arr 84.42 330 *e*P **P 23 06 59.0 -0.5**
comp=Z,46nm,1.2s,mb5.5
GRA1 *e*pP pP 23 07 06.2 -1.7
GRA1 LR LR
comp=Z,500nm,19.2s,MS4.9
GRF Grafenberg Arr 84.42 330 *e*P **P 23 06 59.0 -0.5**
GRF pmax pmax
comp=Z,46nm,1.2s,mb5.5
GRF MLR MLR
comp=Z,500nm,19.2s,MS4.9
GRF Grafenberg Arr 84.42 330 *e*P **P 23 06 59.1 -0.4**
GRF pmax pmax
comp=Z,46nm,1.2s,mb5.5
GRF MLR MLR
comp=Z,500nm,19.2s,MS4.9
GRF Grafenberg Arr 84.42 330 *e*P **P 23 06 59.0 -0.5**
comp=Z,46nm,1.2s,mb5.5
GRF *e*pP pP 23 07 06.2 -1.7
GRF *e*L 23 48 57.5
comp=Z,458nm,19.2s
GRF Grafenberg Arr 84.42 330 *e*P **P 23 06 59.1 -0.4**
comp=Z,46nm,1.2s,mb5.5
GRF *e*pP pP 23 07 06.2 -1.7
GRF LR LR
comp=Z,500nm,19.2s,MS4.9
MOA Molln 84.53 327 ⇑*i*P **P 23 07 00.9 +0.8**
comp=Z,19nm,1.3s,mb5.1
MOA Molln 84.53 327 ⇑*i*PcP **P 23 07 00.9 +0.8**
comp=Z,19nm,1.3s,mb5.1
BUG Bochum-Univer 84.59 333 *e*P **P 23 06 59.0 -1.3**
comp=Z,16nm,1.2s,mb5.0
X19A St. Johns 84.64 51 ⇑P **P 23 07 01.3 +0.4**
baz=84,SNR=12
216A Three Points, 84.74 54 ⇓P **P 23 07 01.9 +0.4**
baz=85
SDCO Great Sand Dun 84.84 47 *e*P **P 23 07 02.3 +0.4**
117A Oracle 84.86 54 ⇑P **P 23 07 02.5 +0.4**
baz=85
Y19A Nutrioso 84.96 52 ⇑P **P 23 07 02.9 +0.4**
baz=85
TUC Tucson 85.00 54 *e*P **P 23 07 03.7 +0.9**
PERS Pernice 85.05 326 *i*P **P 23 07 02.1 -0.6**
SOKA Soboth 85.06 326 ⇑*i*P **P 23 07 02.4 -0.4**
comp=Z,23nm,1.1s,mb5.2
TNS Taunus Mts 85.12 332 *e*P **P 23 07 02.0 -1.0**
TNS pmax pmax
comp=Z,23nm,1.3s,mb5.2
TNS Taunus Mts 85.12 332 *e*P **P 23 07 02.0 -1.0**
comp=Z,23nm,1.3s,mb5.2
RJOB Jochberg 85.26 328 *e*P **P 23 07 03.0 -0.8**
comp=Z,11nm,1.0s,mb4.9
217A Green Valley 85.31 54 ⇑P **P 23 07 05.1 +0.8**
baz=85,SNR=5.1
118A Homack Ranch, 85.32 53 ⇓P **P 23 07 04.8 +0.4**
baz=85,SNR=8.0
FUR Furstenfeldbru 85.58 329 *e*P **P 23 07 04.6 -0.8**
FUR pmax pmax
comp=Z,27nm,1.2s,mb5.3
FUR Furstenfeldbru 85.58 329 *e*P **P 23 07 04.6 -0.8**
comp=Z,27nm,1.2s,mb5.3
ECSD EROS,Sioux Fal 85.61 38 *e*P **P 23 07 05.6 0.0**
comp=Z,43nm,1.7s,mb5.4
HGN Heimansgroeve 85.64 333 *e*P **P 23 07 04.2 -1.4**
comp=Z,25nm,1.6s,mb5.2
119A Ashpeak Ranch, 85.68 53 ⇑P **P 23 07 06.5 +0.4**
baz=86
218A Dragoon 85.69 54 ⇓P **P 23 07 06.6 +0.4**
baz=86
VISS Visnje 85.80 325 *i*P **P 23 07 07.6 +1.1**
STU Stuttgart 85.97 330 *e*P **P 23 07 06.2 -1.1**
comp=Z,35nm,1.3s,mb5.4
STU Stuttgart 85.97 330 *e*P **P 23 07 09.3 +2.0**
STU *e*pP pP 23 07 15.2 -0.4
318A Bisbee 86.07 54 ⇓P **P 23 07 08.1 0.0**
baz=86
ANMO Albuquerque 86.09 49 *e*P **P 23 07 08.5 +0.4**
JAVS Javornik 86.09 326 *i*P **P 23 07 06.3 -1.6**
TAOE Nuku Hiva Isla 86.16 104 *e*LR LR 23 34 15.9
comp=Z,841nm,24.9s
219A White Tail Can 86.19 53 ⇓P **P 23 07 09.1 +0.4**
baz=86,SNR=6.0
WLF Walferdange 86.45 332 *e*P **P 23 07 08.9 -0.7**
comp=Z,25nm,1.5s,mb5.2
BNM Barren Site 86.50 50 *e*P **P 23 07 09.9 -0.3**
BNM *e* 23 07 22.9
BNM *e*PP PP 23 10 36.5 +5.2
GIVF Givet 86.59 333 *e*P **P 23 07 09.4 -0.9**
BFO Black Forest 86.67 330 *e*P **P 23 07 09.2 -1.6**
BFO pmax pmax
comp=Z,29nm,1.3s,mb5.3
BFO Black Forest 86.67 330 *e*P **P 23 07 09.2 -1.6**
comp=Z,29nm,1.3s,mb5.3
BAIF Baives 86.85 334 *e*P **P 23 07 10.7 -0.9**
comp=Z,34nm,1.3s,mb5.1
BAIF Baives 86.85 334 *e*P **P 23 07 10.7 -0.9**
BAIF pmax pmax
comp=Z,17nm,1.3s,mb5.1
BAIF Baives 86.85 334 *e*P **P 23 07 10.7 -0.9**
comp=Z,17nm,1.3s,mb5.1
DAVA Damuels 86.86 329 ⇑*i*P **P 23 07 12.2 +0.6**
comp=Z,21nm,1.1s,mb5.3
DAVA Damuels 86.86 329 ⇑*i*PcP **P 23 07 12.2 +0.6**
comp=Z,21nm,1.1s,mb5.3
CDF Champ du Feu 87.03 331 *e*P **P 23 07 11.7 -0.8**
comp=Z,47nm,1.1s,mb5.3
CDF Champ du Feu 87.03 331 *e*P **P 23 07 11.7 -0.8**
CDF pmax pmax
comp=Z,24nm,1.1s,mb5.3
CDF Champ du Feu 87.03 331 *e*P **P 23 07 11.7 -0.8**
comp=Z,24nm,1.1s,mb5.3
SCHQ Schefferville 87.20 16 P **P 23 07 11.4 -1.8**
comp=Z,7.8nm,0.9s,mb5.0,baz=243,slow=14,SNR=4.0
SCHQ LR LR 23 48 41.4
comp=Z,190nm,19.4s,MS4.5,baz=357,slow=37
SCHQ Schefferville 87.20 16 P **P 23 07 12.8 -0.4**
ECH Echery 87.23 331 *e*P **P 23 07 12.8 -0.7**
HINF Hinteralfeld 87.68 331 *e*P **P 23 07 14.9 -0.7**
HAU Haudompre 87.72 331 *e*P **P 23 07 14.9 -0.9**
comp=Z,21nm,1.0s,mb5.0
HAU *e*MLR MLR
comp=Z,445nm,17.8s,MS4.6
HAU Haudompre 87.72 331 *e*P **P 23 07 14.9 -0.9**
HAU pmax pmax
comp=Z,11nm,1.0s,mb5.0
HAU MLR MLR
comp=Z,440nm,17.8s,MS4.9
HAU Haudompre 87.72 331 *e*P **P 23 07 14.9 -0.9**
comp=Z,11nm,1.0s,mb5.0
HAU LR LR
comp=Z,440nm,17.8s,MS4.9
MEZF Maizieres J'vi 87.82 332 *e*P **P 23 07 15.9 -0.4**
comp=Z,44nm,1.3s,mb5.2
MEZF Maizieres J'vi 87.82 332 *e*P **P 23 07 15.9 -0.4**
comp=Z,44nm,1.3s,mb5.5
TBI Tubuai 87.97 120 *e*LQ 23 30 39.3
comp=Z,215nm,31.0s
TBI *e*LR LR 23 34 53.0
comp=Z,498nm,21.8s,baz=311
KSU1 Kansas State U 88.96 41 *e*P **P 23 07 21.2 -0.7**
KSU1 *e*pP pP 23 07 33.2 +2.9
CABF La Chapelle 88.96 331 *e*P **P 23 07 21.7 0.0**
comp=Z,44nm,1.4s,mb5.3
CABF La Chapelle 88.96 331 *e*P **P 23 07 21.7 0.0**
CABF pmax pmax
comp=Z,22nm,1.4s,mb5.3
CABF La Chapelle 88.96 331 *e*P **P 23 07 21.7 0.0**
comp=Z,22nm,1.4s,mb5.3
AMTX Amarillo 89.05 47 *e*P **P 23 07 23.8 +1.4**
comp=Z,11nm,0.9s,mb5.2
AMTX *e*pP pP 23 07 31.0 +0.3

LOR Lormes 89.29 332 *e*P **P 23 07 22.4 -0.9**
comp=Z,48nm,1.6s,mb5.3
LOR *e*MLR MLR
comp=Z,476nm,19.8s,MS4.6
LOR Lormes 89.29 332 *e*P **P 23 07 22.4 -0.9**
LOR pmax pmax
comp=Z,24nm,1.6s,mb5.3
LOR MLR MLR
comp=Z,480nm,19.8s,MS4.9
LOR Lormes 89.29 332 *e*P **P 23 07 22.4 -0.9**
comp=Z,24nm,1.6s,mb5.3
LOR LR LR
comp=Z,480nm,19.8s,MS4.9
FLN La Foliniere 89.59 336 *e*P **P 23 07 23.3 -1.3**
FLN *e*MLR MLR
comp=Z,655nm,20.0s,MS4.8
FLN La Foliniere 89.59 336 *e*P **P 23 07 23.3 -1.3**
FLN LR LR
comp=Z,660nm,20.0s,MS5.1
LPL La Plagne 89.59 330 *e*P **P 23 07 24.2 -0.5**
comp=Z,12nm,0.8s,mb5.0
LPL La Plagne 89.59 330 *e*P **P 23 07 24.2 -0.5**
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
LPL La Plagne 89.59 330 *e*P **P 23 07 24.2 -0.5**
comp=Z,6.0nm,0.8s,mb5.0
LPG La Plagne 89.59 330 *e*P **P 23 07 24.4 -0.3**
comp=Z,11nm,0.9s,mb4.9
LPG La Plagne 89.59 330 *e*P **P 23 07 24.4 -0.3**
LPG pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
LPG La Plagne 89.59 330 *e*P **P 23 07 24.4 -0.3**
comp=Z,5.7nm,0.9s,mb4.9
SSF Saint Saulge 89.60 332 *e*P **P 23 07 23.9 -0.8**
comp=Z,15nm,1.1s,mb4.9
SSF Saint Saulge 89.60 332 *e*P **P 23 07 23.9 -0.8**
SSF pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
SSF Saint Saulge 89.60 332 *e*P **P 23 07 23.9 -0.8**
comp=Z,7.3nm,1.1s,mb4.9
LDF La Druitiere 89.61 335 *e*P **P 23 07 24.0 -0.7**
comp=Z,81nm,1.7s,mb5.5
LDF La Druitiere 89.61 335 *e*P **P 23 07 24.0 -0.7**
LDF pmax pmax
comp=Z,40nm,1.7s,mb5.5
LDF La Druitiere 89.61 335 *e*P **P 23 07 24.0 -0.7**
comp=Z,40nm,1.7s,mb5.5
SMF Signal de Mont 89.81 332 *e*P **P 23 07 25.0 -0.7**
comp=Z,65nm,1.6s,mb5.4
SMF Signal de Mont 89.81 332 *e*P **P 23 07 25.0 -0.7**
SMF pmax pmax
comp=Z,33nm,1.6s,mb5.4
SMF Signal de Mont 89.81 332 *e*P **P 23 07 25.0 -0.7**
comp=Z,32nm,1.6s,mb5.4
AVF Avril sur Loir 89.88 332 *e*P **P 23 07 25.4 -0.6**
comp=Z,42nm,1.2s,mb5.3
AVF Avril sur Loir 89.88 332 *e*P **P 23 07 25.4 -0.6**
AVF pmax pmax
comp=Z,21nm,1.2s,mb5.3
AVF Avril sur Loir 89.88 332 *e*P **P 23 07 25.4 -0.6**
comp=Z,21nm,1.2s,mb5.3
GRR Gorron 90.04 336 *e*P **P 23 07 26.0 -0.7**
MBDF Montbardon 90.21 329 *e*P **P 23 07 26.4 -1.2**
comp=Z,17nm,1.0s,mb5.0
MBDF Montbardon 90.21 329 *e*P **P 23 07 26.4 -1.2**
MBDF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
MBDF Montbardon 90.21 329 *e*P **P 23 07 26.4 -1.2**
comp=Z,8.7nm,1.0s,mb5.0
BGF Bois d'Agland 90.27 333 *e*P **P 23 07 27.2 -0.6**
GLMI Grayling 90.29 31 *e*P **P 23 07 27.7 -0.3**
ORIF Oris-en-Rattie 90.42 330 *e*P **P 23 07 27.9 -0.7**
comp=Z,8.6nm,1.0s,mb4.8
ORIF *e*MLR MLR
comp=Z,477nm,23.0s,MS4.6
ORIF Oris-en-Rattie 90.42 330 *e*P **P 23 07 27.9 -0.7**
ORIF pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
ORIF Oris-en-Rattie 90.42 330 *e*P **P 23 07 27.9 -0.7**
comp=Z,4.3nm,1.0s,mb4.7
SBF Sospel 90.62 328 *e*P **P 23 07 28.0 -1.6**
comp=Z,40nm,1.1s,mb5.3
SBF Sospel 90.62 328 *e*P **P 23 07 28.0 -1.6**
SBF pmax pmax
comp=Z,20nm,1.1s,mb5.4
SBF Sospel 90.62 328 *e*P **P 23 07 28.0 -1.6**
comp=Z,20nm,1.1s,mb5.4
SGMF Saint Gilles 90.72 337 *e*P **P 23 07 29.2 -0.7**
comp=Z,80nm,1.4s,mb5.6
SGMF Saint Gilles 90.72 337 *e*P **P 23 07 29.2 -0.7**
SGMF pmax pmax
comp=Z,40nm,1.4s,mb5.6
SGMF Saint Gilles 90.72 337 *e*P **P 23 07 29.2 -0.7**
comp=Z,40nm,1.4s,mb5.6
TCF Toulx Ste Croi 90.73 333 *e*P **P 23 07 28.6 -1.4**
comp=Z,22nm,1.1s,mb5.1
TCF Toulx Ste Croi 90.73 333 *e*P **P 23 07 28.6 -1.4**
TCF pmax pmax
comp=Z,11nm,1.1s,mb5.1
TCF Toulx Ste Croi 90.73 333 *e*P **P 23 07 28.6 -1.4**
comp=Z,11nm,1.1s,mb5.1
WMOK Wichita Mounta 90.86 45 *e*P **P 23 07 30.6 -0.2**
WMOK pmax pmax
comp=Z,36nm,2.0s,mb5.4
WMOK Wichita Mounta 90.86 45 *e*P **P 23 07 30.6 -0.2**
comp=Z,36nm,2.0s,mb5.3
ROSF Rostrenen 90.88 337 *e*P **P 23 07 30.0 -0.6**
comp=Z,82nm,1.4s,mb5.6
ROSF Rostrenen 90.88 337 *e*P **P 23 07 30.0 -0.6**
ROSF pmax pmax
comp=Z,41nm,1.4s,mb5.6
ROSF Rostrenen 90.88 337 *e*P **P 23 07 30.0 -0.6**
comp=Z,41nm,1.4s,mb5.6
VIVF Saint-Julien-l 90.97 331 *e*P **P 23 07 30.3 -0.8**
comp=Z,21nm,1.1s,mb5.1
VIVF Saint-Julien-l 90.97 331 *e*P **P 23 07 30.3 -0.8**
VIVF pmax pmax
comp=Z,11nm,1.1s,mb5.1
VIVF Saint-Julien-l 90.97 331 *e*P **P 23 07 30.3 -0.8**
comp=Z,11nm,1.1s,mb5.1
PGF Pioggiola 90.98 327 *e*P **P 23 07 29.9 -1.4**
comp=Z,25nm,1.1s,mb5.1
PGF Pioggiola 90.98 327 *e*P **P 23 07 29.9 -1.4**
PGF pmax pmax
comp=Z,12nm,1.1s,mb5.1
PGF Pioggiola 90.98 327 *e*P **P 23 07 29.9 -1.4**
comp=Z,12nm,1.1s,mb5.2
FRF La Foret Royal 91.21 329 *e*P **P 23 07 30.9 -1.4**
comp=Z,17nm,0.9s,mb5.0
FRF La Foret Royal 91.21 329 *e*P **P 23 07 30.9 -1.4**
FRF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
FRF La Foret Royal 91.21 329 *e*P **P 23 07 30.9 -1.4**
comp=Z,8.3nm,0.9s,mb5.1
QUIF Quistinic 91.21 337 *e*P **P 23 07 31.3 -0.9**
SMRF Simiane la Rot 91.32 329 *e*P **P 23 07 31.2 -1.6**
comp=Z,55nm,1.6s,mb5.3
SMRF Simiane la Rot 91.32 329 *e*P **P 23 07 31.2 -1.6**
comp=Z,55nm,1.6s,mb5.4
MFF Saint Martin d 91.33 334 *e*P **P 23 07 32.4 -0.4**
comp=Z,51nm,1.2s,mb5.4
MFF Saint Martin d 91.33 334 *e*P **P 23 07 32.4 -0.4**
MFF pmax pmax
comp=Z,25nm,1.2s,mb5.4
MFF Saint Martin d 91.33 334 *e*P **P 23 07 32.4 -0.4**
comp=Z,25nm,1.2s,mb5.4
LMR La Mourre 91.45 329 *e*P **P 23 07 32.1 -1.3**
comp=Z,62nm,1.2s,mb5.5
LMR La Mourre 91.45 329 *e*P **P 23 07 32.1 -1.3**
LMR pmax pmax
comp=Z,31nm,1.2s,mb5.5
LMR La Mourre 91.45 329 *e*P **P 23 07 32.1 -1.3**
comp=Z,31nm,1.2s,mb5.5
TXAR Lajitas Array 91.58 52 P **P 23 07 33.8 -0.5**
comp=Z,2.0nm,0.7s,mb4.6,baz=297,slow=2.9,SNR=22
RJF Les Rejaudoux 91.82 333 *e*P **P 23 07 34.8 -0.3**
comp=Z,66nm,1.4s,mb5.5
RJF *e*MLR MLR
comp=Z,478nm,19.0s,MS4.7
RJF Les Rejaudoux 91.82 333 *e*P **P 23 07 34.8 -0.3**
RJF pmax pmax
comp=Z,33nm,1.4s,mb5.5
RJF MLR MLR
comp=Z,480nm,19.0s,MS5.0
RJF Les Rejaudoux 91.82 333 *e*P **P 23 07 34.8 -0.3**
comp=Z,33nm,1.4s,mb5.5
RJF LR LR

comp=Z,480nm,19.0s,MS5.0
CAF Calviac 91.93 332 *e*P **P 23 07 35.6 0.0**
comp=Z,24nm,1.0s,mb5.2
CAF Calviac 91.93 332 *e*P **P 23 07 35.6 0.0**
CAF pmax pmax
comp=Z,12nm,1.0s,mb5.2
CAF Calviac 91.93 332 *e*P **P 23 07 35.6 0.0**
comp=Z,12nm,1.0s,mb5.2
LASF Ste Croix 91.94 331 *e*P **P 23 07 35.1 -0.6**
comp=Z,34nm,1.2s,mb5.2
LFF La Frestale 92.42 333 *e*P **P 23 07 37.7 -0.2**
comp=Z,53nm,1.2s,mb5.5
LFF La Frestale 92.42 333 *e*P **P 23 07 37.7 -0.2**
LFF pmax pmax
comp=Z,27nm,1.2s,mb5.5
LFF La Frestale 92.42 333 *e*P **P 23 07 37.7 -0.2**
comp=Z,27nm,1.2s,mb5.5
MTLF Montolieu 93.21 331 *e*P **P 23 07 41.2 -0.3**
comp=Z,16nm,1.0s,mb5.1
MTLF Montolieu 93.21 331 *e*P **P 23 07 41.2 -0.3**
MTLF pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
MTLF Montolieu 93.21 331 *e*P **P 23 07 41.2 -0.3**
comp=Z,8.1nm,1.0s,mb5.1
MIAR Mount Ida 93.95 42 *e*P **P 23 07 44.9 -0.2**
EPF Esparros 94.20 332 *e*P **P 23 07 45.1 -1.0**
comp=Z,18nm,1.3s,mb5.0
EPF Esparros 94.20 332 *e*P **P 23 07 45.1 -1.0**
EPF pmax pmax
comp=Z,9.0nm,1.3s,mb5.0
EPF Esparros 94.20 332 *e*P **P 23 07 45.1 -1.0**
comp=Z,9.1nm,1.3s,mb5.0
ETSF Etsaut 94.66 333 *e*P **P 23 07 47.2 -1.0**
comp=Z,8.8nm,0.9s,mb4.9
ETSF Etsaut 94.66 333 *e*P **P 23 07 47.2 -1.0**
ETSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
ETSF Etsaut 94.66 333 *e*P **P 23 07 47.2 -1.0**
comp=Z,4.4nm,0.9s,mb4.9
SJPF Ste Jean 94.72 333 *e*P **P 23 07 47.5 -1.0**
KEST Kesra 96.20 322 LR LR 23 58 02.9
comp=Z,177nm,18.6s,MS4.6,baz=342,slow=40
RKT Rikitea 98.47 112 *e*LR LR 23 39 57.8
comp=Z,343nm,22.8s,baz=306
ESDC Sonseca Array 98.72 333 LR LR 23 59 13.2
comp=Z,236nm,18.3s,MS4.7,baz=35,slow=39
JTS JuntasAbangare 117.36 53 PKIKP PKPdf 23 13 12.5 -0.8
TORD Torodi Ar. Bea 118.29 314 PKP PKPdf 23 13 13.7 -1.3
comp=Z,1.3nm,1.0s,baz=13,slow=3.3,SNR=8.5
TORD PKKPbc PKKPbc 23 23 34.4 +2.3
comp=Z,0.9nm,1.0s,baz=225,slow=2.4,SNR=4.2
QSPA South Pole Qui 124.96 180 PKP PKPdf 23 13 25.5 -0.4
comp=Z,6.2nm,0.9s,baz=358,slow=1.0,SNR=16
SYO Syowa Base 126.39 206⇑ *e*P PKPdf 23 13 27.6 -1.2
LPAZ La Paz 147.96 61 PKPbc PKPbc 23 14 13.5 +0.6
comp=Z,5.8nm,0.8s,baz=327,slow=3.7,SNR=22
LPAZ La Paz 147.96 61 PKP2 PKPbc 23 14 13.5 +0.6
LPAZ pmax pmax
comp=Z,6.0nm,0.8s
LPAZ La Paz 147.96 61 *e*PKPbc PKPbc 23 14 13.6 +0.7
LVC Limon Verde 151.17 72 PKPdf PKPdf 23 14 16.0 +1.2
LVC *e*PKPbc PKPbc 23 14 21.5 +0.8
SIV San Ignacio 152.57 51 PKPbc PKPbc 23 14 22.4 -1.7
comp=Z,3.2nm,0.8s,baz=259,slow=4.3,SNR=9.3

ISCJB ***20*** *22:56:07.1±3.2, 145N±008×127.1E±0.1, h63km±30km, mb4.5/12, Error ellipse: s-maj=23.9km s-min=11.0km az=157.6*
IDC ***20*** *22:56:09.9±3.8, 142N×12706E, h71km±37km, mb4.0/9, mb1 4.1/12, mb1mx3.9/19, mbtmp4.0/12, ML4.1/3, Error ellipse: s-maj=34.2km s-min=14.6km az=71.0*
NEIC ***20*** *22:56:11.2±1.9, 142N×12708E, h87km±18km, mb4.7/6, Error ellipse: s-maj=16.1km s-min=7.3km az=67.0*
ISC 20 22:56:09.4±2.3, 142N±008×1271E±01, h67km±22km, n39, σ0§93/32, mb4.4/12, 1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.72**	**229**	P	**Pn**	**22 58 28.4**	**+1.9**
	2.8nm,0.3s,baz=267,slow=11,SNR=3.7						
BATI	**Baumata**	**12.04**	**196**	P	**Pn**	**22 58 57.2**	**-0.9**
	1.0nm,0.3s,baz=146,slow=7.3,SNR=2.9						
FITZ	**Fitzroy Crossi**	**19.45**	**184**	*e*P	**Pn**	**23 00 30.5**	**-1.9**
	9.3nm,1.6s						
FITZ	**Fitzroy Crossi**	**19.45**	**184**	P	**Pn**	**23 00 30.1**	**-2.3**
	0.3nm,0.3s,baz=8.5,slow=17,SNR=8.5						
WRAB	**Tennant Creek**	**22.38**	**162**	*e*P	**P**	**23 01 02.0**	**-0.2**
	14nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**22.39**	**162**	P	**P**	**23 01 02.3**	**+0.1**
	5.9nm,0.3s,mb4.3,baz=334,slow=11,SNR=36						
WB2	**Warramunga Arr**	**22.39**	**162**	⇓*i*P	**P**	**23 01 02.2**	**-0.1**
ASAR	**Alice Springs**	**25.80**	**166**	P	**P**	**23 01 35.1**	**+0.8**
	2.7nm,0.3s,mb4.2,baz=344,slow=14,SNR=53						
FORT	**Forrest**	**32.03**	**178**	*e*P	**P**	**23 02 29.7**	**+0.1**
	12nm,0.5s,mb4.9						
KLBR	**Kellerberrin**	**34.00**	**194**	*e*P	**P**	**23 02 47.3**	**+0.5**
	37nm,1.7s,mb4.9						
STKA	**Stephens Creek**	**35.86**	**159**	*e*P	**P**	**23 03 03.4**	**+0.6**
	1.3nm,0.3s,mb4.3						
STKA	**Stephens Creek**	**35.86**	**159**	P	**P**	**23 03 03.4**	**+0.6**
	3.1nm,0.7s,mb4.3,baz=346,slow=7.3,SNR=6.8						
MJAR	**Matsushiro Arr**	**36.44**	**15**	P	**P**	**23 03 06.6**	**-1.1**
	1.6nm,0.5s,mb4.2,baz=191,slow=9.2,SNR=5.0						
BJT	**Baijiatuau**	**39.68**	**347**	P	**P**	**23 03 34.4**	**-0.5**
PALK	**Pallekele**	**46.59**	**279**	P	**P**	**23 04 30.0**	**-1.1**
ULN	**Ulaanbaatar**	**49.41**	**342**	*e*P	**P**	**23 04 52.7**	**+0.4**
SONM	**Songino Array**	**49.59**	**342**	P	**P**	**23 04 54.2**	**+0.6**
	2.2nm,1.0s,mb4.0,baz=156,slow=7.4,SNR=3.4						
PETK	**Petropavlovsk-**	**57.43**	**21**	P	**P**	**23 05 52.5**	**+1.5**
	2.1nm,0.5s,mb4.4,baz=180,slow=5.0,SNR=8.7						
PETK	**Petropavlovsk-**	**57.43**	**21**	P	**P**	**23 05 52.5**	**+1.5**
MK31	**Makanchi Array**	**59.65**	**326**	*e*P	**P**	**23 06 06.8**	**+0.3**
MKAR	**Makanchi Array**	**59.65**	**326**	P	**P**	**23 06 07.1**	**+0.5**
	3.4nm,0.6s,mb4.5,baz=117,slow=7.1,SNR=12						
MKAR	**Makanchi Array**	**59.65**	**326**	P	**P**	**23 06 07.1**	**+0.5**
TKM2	**Tokmak 2**	**61.71**	**319**	P	**P**	**23 06 21.8**	**+1.2**
EKS2	**Erkin-Say**	**62.79**	**318**	*e*P	**P**	**23 06 25.6**	**-2.3**
ZALV	**Zalesovo Beam**	**62.80**	**333**	P	**P**	**23 06 26.5**	**-1.2**
	1.2nm,0.8s,mb3.9,baz=131,slow=7.9,SNR=2.2						
ZALV	**Zalesovo Beam**	**62.80**	**333**	P	**P**	**23 06 26.5**	**-1.2**
KURK	**Kurchatov**	**63.87**	**328**	P	**P**	**23 06 35.3**	**+0.4**
	2.6nm,0.6s,mb4.2,baz=125,slow=5.7,SNR=4.9						
KURK	**Kurchatov**	**63.87**	**328**	*e*P	**P**	**23 06 34.5**	**-0.3**
ARU	**Arti**	**77.07**	**328**	*e*P	**P**	**23 07 55.0**	**-0.1**
GNI	**Garni**	**83.23**	**310**	*e*P	**P**	**23 08 28.5**	**-0.2**
KIV	**Kislovodsk**	**84.98**	**314**	P	**P**	**23 08 37.4**	**-0.1**
MALT	**Malatya**	**88.07**	**308**	P	**P**	**23 08 53.5**	**+0.8**
BRG	**Berggiesshubel**	**103.29**	**323**	*e*P	Pdif	23 09 57.5	-4.2
	4.0nm,0.4s						
BRG							
	comp=N,397nm,14.6s						
BRG							
	comp=E,419nm,20.3s						
BRG							
	comp=Z,544nm,20.3s						
KHC	**Kasperske Hory**	**104.08**	**322**	*e*P	Pdif	23 10 06.5	+1.3
PHWY	**Pilot Hill**	**116.23**	**42**	*e*Pdif	Pdif	23 10 58.3	-0.9
TXAR	**Lajitas Array**	**122.71**	**53**	PKP	PKPdf	23 14 58.0	-0.2
	comp=Z,0.2nm,0.6s,baz=250,slow=1.8,SNR=3.3						
TORD	**Torodi Ar. Bea**	**123.94**	**287**	PKP	PKPdf	23 15 00.5	-0.4
	comp=Z,0.3nm,0.4s,baz=91,slow=2.0,SNR=8.7						
TORD	**Torodi Ar. Bea**	**123.94**	**287**	PKP	PKPdf	23 15 00.5	-0.4
GOGA	**Godfrey**	**134.96**	**37**	*e*PKPdf	PKPdf	23 15 19.4	-2.0

NEIC 20 22:57:11.2, 4536S×16667E, h22km, ML3.8(WEL)**, After WEL., Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**0.36**	**109**	P	Pb	22 57 18.9	-0.1
DCZ				S	Sb	22 57 23.7	-0.5
WHZ	**Wether Hill Ro**	**1.04**	**121**	P	Pn	22 57 30.2	-0.3
WHZ				S	Sb	22 57 43.8	0.0
MLZ	**Mavora Lakes**	**1.06**	**90**	P	Pn	22 57 29.7	-1.0
MLZ				S	Sb	22 57 43.0	-1.2
MSZ	**Milford Sound**	**1.13**	**53**	P	Pn	22 57 31.0	-0.6

IPEC ***20*** *23:11:48.9±0.3, 5157N×1620E, h0km, ML2.3/4, Error ellipse: s-maj=2.0km s-min=1.5km az=34.0*
ISCJB ***20*** *23:11:49.9±0.6, 5140N±003×16.11E±003, h0km, Error ellipse: s-maj=4.5km s-min=2.4km az=17.4*

NEIC ***20*** *23:11:50.0±1.4, 5154N×1621E, h5km, ML2.8(PRU), Error ellipse: s-maj=16.5km s-min=7.0km az=213.0*
WAR ***20*** *23:11:50.8, 5153N×1614E, ML2.6, Mining Induced*
VIE ***20*** *23:11:51.7±0.4, 5134N×1612E, h0km, mb1.9/2, ML2.7/3, Error ellipse: s-maj=2.3km s-min=2.1km az=177.0, Suspected Mining induced.*
CSEM ***20*** *23:11:51.3±0.3, 5149N×1613E, h2km, ML3.2/10, Error ellipse: s-maj=4.5km s-min=2.5km az=20.0*
PRU ***20*** *23:11:51.9, 5145N×1610E, h0km*
ISC 20 23:11:50.1±0.7, 5150N±003×1614E±003, h0km, n37, σ0§74/72, 3C, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**171**	*e*Pg	**Pg**	**23 12 03.5**	**+0.8**
KSP				*e*Sg	**Sg**	**23 12 12.7**	**+1.4**
KSP				*e*		23 14 10.8	
KSP	**Ksiaz**	**0.66**	**171**	*e*Pg	**Pg**	**23 12 03.1**	**+0.3**
KSP				*e*Sg	**Sg**	**23 12 12.7**	**+1.4**
KSP	**Ksiaz**	**0.66**	**171**	*e*Pg	**Pg**	**23 12 03.5**	**+0.7**
KSP				*e*Sg	**Sg**	**23 12 12.7**	**+1.4**
UPC	**Upice**	**0.99**	**185**	*e*PG	**Pg**	**23 12 09.7**	**+0.6**
DPC	**Dobruska-Polom**	**1.15**	**174**	Pg	**Pg**	**23 12 12.4**	**+0.2**
DPC				*e*Sg	**Sg**	**23 12 27.4**	**+0.3**
DPC	**Dobruska-Polom**	**1.15**	**174**	*e*PG	**Pg**	**23 12 12.4**	**+0.2**
DPC				*e*SG	**Sg**	**23 12 27.8**	**+0.7**
	comp=Z,40nm,0.4s						
PVCC	**Panska Ves**	**1.39**	**226**	*e*Pn	**Pn**	**23 12 16.5**	**-0.1**
PVCC	**Panska Ves**	**1.39**	**226**	Pg	**Pg**	**23 12 17.2**	**+0.6**
PVCC				*e*Sg	**Sg**	**23 12 35.0**	**+0.4**
PVCC	**Panska Ves**	**1.39**	**226**	*e*PG	**Pg**	**23 12 17.2**	**+0.6**
BRG	**Berggiesshubel**	**1.52**	**247**	Pg	**Pg**	**23 12 18.8**	**-0.3**
BRG				Sg	**Sg**	**23 12 39.1**	**+0.4**
BRG	**Berggiesshubel**	**1.52**	**247**	PG	**Pg**	**23 12 18.8**	**-0.3**
BRG				SG	**Sg**	**23 12 39.1**	**+0.4**
	comp=Z,76nm,0.4s						
PRU	**Pruhonice**	**1.82**	**214**	*e*PN	**Pn**	**23 12 22.8**	**+0.2**
PRU				*e*PG	**Pg**	**23 12 24.2**	**-0.7**
PRU				*e*SG	**Sg**	**23 12 49.0**	**+0.5**
	comp=Z,29nm,0.3s						
MORC	**Moravsky Berou**	**1.94**	**152**	*e*Pn	**Pn**	**23 12 23.6**	**-0.7**
MORC				*e*Sg	**Sg**	**23 12 51.4**	**-1.0**
	comp=Z,17nm,0.4s						
MORC	**Moravsky Berou**	**1.94**	**152**	*e*Pn	**Pn**	**23 12 23.6**	**-0.6**
MORC				*e*Sn	**Sn**	**23 12 48.9**	**-0.4**
CLL	**Collm**	**1.97**	**266**	*e*Pn	**Pn**	**23 12 24.0**	**-0.7**
CLL				*e*Pg	**Pg**	**23 12 27.0**	**-0.9**
CLL				*e*Sg	**Sg**	**23 12 53.0**	**-0.4**
CLL				*ex*	x	23 12 28.0	
CLL				*e*Sg	**Sg**	**23 12 53.0**	**-0.4**
	comp=Z,15nm,0.6s						
CLL	**Collm**	**1.97**	**266**	*e*Pn	**Pn**	**23 12 24.0**	**-0.7**
CLL				*e*Pg	**Pg**	**23 12 27.0**	**-0.9**
CLL				*e*Sg	**Sg**	**23 12 53.0**	**-0.4**
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*PN	**Pn**	**23 12 26.2**	**-0.2**
OKC				*e*PG	**Pg**	**23 12 29.6**	**-0.6**
OKC				*e*SG	**Sg**	**23 12 56.9**	**-0.5**
	comp=Z,26nm,0.4s						
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*Pn	**Pn**	**23 12 26.2**	**-0.2**
OKC				*e*Pg	**Pg**	**23 12 29.6**	**-0.6**
OKC				*e*Sg	**Sg**	**23 12 56.8**	**-0.5**
VRAC	**Vranov**	**2.21**	**172**	*e*Pn	**Pn**	**23 12 27.8**	**-0.2**
VRAC				*e*Sg	**Sg**	**23 13 00.3**	**-0.7**
	comp=Z,18nm,0.3s						
KRUC	**Moravsky**	**2.44**	**176**	*e*Pn	**Pn**	**23 12 31.2**	**0.0**
KRUC				*e*Sg	**Sg**	**23 13 07.4**	**-1.1**
	comp=Z,8.9nm,0.4s						
OJC	**Ojcow**	**2.65**	**117**	*e*Pg	**Pg**	**23 12 40.3**	**-0.5**
OJC				*e*Sg	**Sg**	**23 13 15.5**	**+0.3**
NKC	**Novy Kostel**	**2.66**	**243**	*e*PN	**Pn**	**23 12 34.4**	**+0.3**
NKC				*e*PG	**Pg**	**23 12 41.4**	**+0.4**
NKC				*e*SG	**Sg**	**23 13 16.7**	**+1.3**
	comp=Z,38nm,0.3s						
NKC	**Novy Kostel**	**2.66**	**243**	*e*Pn	**Pn**	**23 12 34.4**	**+0.3**
NKC				*e*Pg	**Pg**	**23 12 41.4**	**+0.4**
NKC				*e*Sg	**Sg**	**23 13 16.7**	**+1.3**
JAVC	**Velka Javorina**	**2.82**	**159**	*e*Pn	**Pn**	**23 12 37.3**	**+1.0**
JAVC				*e*Sg	**Sg**	**23 13 21.3**	**+0.7**
	comp=Z,12nm,0.9s						
KHC	**Kasperske Hory**	**2.88**	**216**	*e*PN	**Pn**	**23 12 38.5**	**+1.3**
KHC				*e*PG	**Pg**	**23 12 43.5**	**-1.8**
KHC				*e*SN	**Sn**	**23 13 11.9**	**-0.6**
KHC				*e*SG	**Sg**	**23 13 22.7**	**+0.1**
	comp=Z,10nm,0.4s						
MOX	**Moxa**	**2.98**	**255**	*e*PG	**Pg**	**23 12 46.4**	**-0.7**
MOX				*e*SG	**Sg**	**23 13 26.5**	**+0.8**
WET	**Wettzell**	**3.15**	**223**	*e*Pn	**Pn**	**23 13 02.8**	**-0.1**
WET				*e*Sg	**Sg**	**23 13 30.4**	**-0.7**
MODS	**Modra-Piesok**	**3.21**	**166**	*e*Sg	**Sg**	**23 13 33.1**	**-0.1**
KOLL	**Kolacno**	**3.27**	**153**	*e*SG	**Sg**	**23 13 35.8**	**+0.9**
KOLL	**Kolacno**	**3.27**	**153**	*e*Sg	**Sg**	**23 13 35.9**	**+1.0**
ZST	**Bratislava**	**3.36**	**169**	*e*Sg	**Sg**	**23 13 37.0**	**-1.0**
VYHS	**Vyhne**	**3.47**	**149**	*e*SG	**Sg**	**23 13 41.7**	**+0.1**
VYHS	**Vyhne**	**3.47**	**149**	*e*Sg	**Sg**	**23 13 41.7**	**+0.1**
CSNA	**Conrad Observa**	**3.58**	**183**	⇑*i*Sg	**Sg**	**23 13 44.7**	**-0.2**
	comp=Z,8.9nm,0.3s						
MOA	**Molln**	**3.85**	**199**	⇑*i*Pn	**Pn**	**23 12 50.4**	**-0.1**
MOA				⇑*i*Sg	**Sg**	**23 13 53.5**	**-0.1**
	comp=Z,10nm,0.5s						
STHS	**Stebnicka Huta**	**3.87**	**121**	*e*PG	**Pg**	**23 13 06.6**	**+2.4**
STHS				*e*SG	**Sg**	**23 13 59.6**	**+5.2**
STHS	**Stebnicka Huta**	**3.87**	**121**	*e*Pg	**Pg**	**23 13 06.6**	**+2.4**

ISCJB ***21*** *00:02:25.8±1.1, 1403S±008×7271W±009, h64km±11km, mb4.0/7, Error ellipse: s-maj=19.6km s-min=6.5km az=138.5*
NEIC ***21*** *00:02:28.9±0.9, 1402S×7278W, h77km±9km, mb4.4/2, Error ellipse: s-maj=16.7km s-min=8.4km az=48.0*
IDC ***21*** *00:02:31.0±0.8, 1406S×7285W, h94km±7km, mb3.8/6, mb1 4.0/9, mb1mx3.8/20, mbtmp3.8/9, MS3.5/3, Ms1 3.5/3, ms1mx2.9/36, Error ellipse: s-maj=23.5km s-min=10.8km az=39.0*
ISC 21 00:02:27.6±0.9, 1406S±008×7271W±009, h62km±9km, n32, σ0§86/25, mb4.0/7, 1D, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**2.66**	**154**	⇓*i*P	**Pn**	**00 03 12.9**	**+4.8**
ARE				*e*S	**Sn**	**00 03 38.0**	**-1.2**
NNA	**Nana**	**4.52**	**297**	P	**Pn**	**00 03 33.8**	**+0.2**
	27nm,0.3s,baz=115,slow=12,SNR=35						
NNA				S	**Sn**	**00 04 26.4**	**+1.5**
	68nm,0.3s,baz=243,slow=13,SNR=7.9						
LPAZ	**La Paz**	**4.95**	**117**	P	**Pn**	**00 03 46.0**	**+6.7**
	10nm,0.3s,baz=285,slow=12,SNR=261						
LPAZ				S	Sx	00 04 31.2	
	2.9nm,0.3s,baz=346,slow=10,SNR=5.2						
LPAZ	**La Paz**	**4.95**	**117**	P	**Pn**	**00 03 46.0**	**+6.7**
LPAZ				S	Sx	00 04 31.2	
ATAH	**Atahualpa**	**8.97**	**321**	P	Px	00 04 46.3	
	0.9nm,0.3s,baz=28,slow=6.8,SNR=5.6						
ATAH				S	**Sn**	**00 06 12.2**	**-1.9**
	1.3nm,0.3s,baz=267,slow=5.6,SNR=3.7						
LVC	**Limon Verde**	**9.24**	**158**	P	**Pn**	**00 04 38.6**	**+0.5**
	0.5nm,0.3s,baz=320,slow=14,SNR=6.7						
LVC				S	**Sn**	**00 06 19.4**	**-1.1**
	2.3nm,0.3s,baz=164,slow=18,SNR=8.3						
SIV	**San Ignacio**	**11.41**	**101**	P	**Pn**	**00 05 09.3**	**+1.6**
	3.6nm,0.3s,baz=283,slow=11,SNR=82						
SIV				S	Sx	00 07 09.2	
	baz=224,slow=11,SNR=3.1						
CPUP	**Villa Florida**	**18.88**	**133**	P	**Pn**	**00 06 44.0**	**-0.2**
	0.5nm,0.3s,baz=289,slow=9.6,SNR=7.0						
CPUP	**Villa Florida**	**18.88**	**133**	*e*P	**Pn**	**00 06 44.6**	**+0.5**
	8.1nm,0.6s						
PCRV	**Puerto La Cruz**	**25.38**	**19**	LR	LR	00 18 33.6	
	comp=Z,127nm,18.2s,baz=24,slow=38						
PLCA	**Paso Flores**	**26.64**	**176**	P	**P**	**00 08 00.6**	**+0.2**
	1.4nm,0.8s,mb3.6,baz=21,slow=8.5,SNR=4.5						
PLCA				LR	LR	00 17 11.6	
	comp=Z,66nm,20.1s,baz=94,slow=33						
USHA	**Ushuaia**	**40.81**	**176**	P	**P**	**00 10 03.4**	**+0.6**
	3.2nm,0.5s,mb4.2,baz=3.5,slow=8.8,SNR=5.4						
TXAR	**Lajitas Array**	**52.48**	**326**	P	**P**	**00 11 33.9**	**-0.5**
	1.3nm,0.7s,mb4.0,baz=150,slow=9.6,SNR=17						
TXAR				pP	pP	00 11 57.1	+6.5
	0.9nm,0.7s,baz=152,slow=8.5,SNR=5.6						
LAZ	**Ladron**	**58.26**	**327**	*e*P	**P**	**00 12 15.7**	**-0.2**
SDCO	**Great Sand Dun**	**60.03**	**330**	*e*P	**P**	**00 12 27.9**	**-0.1**
	8.0nm,1.2s,mb4.6						
PDAR	**Pinedale Array**	**65.89**	**331**	P	**P**	**00 13 07.1**	**+0.3**
	0.9nm,1.0s,mb3.8,baz=140,slow=4.8,SNR=8.0						

VNA3	**Neumayer Olymp**	**68.24**	**162**	*e*	**P**	**00 13 21.8**	**+0.5**
VNA3				*e*		00 13 46.2	
VNA1	**Neumayer--Stat**	**68.46**	**161**	*e*	**P**	**00 13 23.5**	**+0.8**
VNA1				*e*		00 13 48.7	
VNA2	**Neumayer--Watz**	**68.82**	**161**	*e*	**P**	**00 13 25.2**	**+0.2**
	baz=279,slow=8.7						
VNA2				*e*		00 13 50.0	
DBIC	**Dimbokro**	**70.40**	**78**	LR	LR	00 45 49.8	
	comp=Z,49nm,20.1s,baz=187,slow=37						
SNAA	**Sanae**	**70.45**	**162**	*e*	**P**	**00 13 34.6**	**-0.3**
SNAA				*e*		00 14 00.0	
TORD	**Torodi Ar. Bea**	**78.49**	**73**	P	**P**	**00 14 22.6**	**-0.1**
	1.9nm,0.8s,mb4.1,baz=260,slow=4.5,SNR=23						
TORD				pP	pP	00 14 47.4	+7.6
	1.7nm,1.1s,baz=242,slow=5.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**78.49**	**73**	P	**P**	**00 14 22.6**	**-0.1**
TORD				pP	pP	00 14 47.4	+7.6
YKA	**Yellowknife Ar**	**83.02**	**342**	P	**P**	**00 14 44.2**	**-1.6**
	1.6nm,0.9s,mb4.0,baz=146,slow=4.5,SNR=5.0						
ESDC	**Sonseca Array**	**83.23**	**46**	pP	pP	00 15 12.3	+7.7
	1.2nm,0.7s,baz=258,slow=3.6,SNR=4.2						
ASAR	**Alice Springs**	**134.35**	**215**	PKP	PKPdf	00 21 38.6	-0.7
	0.4nm,0.6s,baz=101,slow=2.4,SNR=4.5						
ZALV	**Zalesovo Beam**	**136.46**	**19**	PKP	PKPdf	00 21 42.2	0.0
	2.3nm,0.7s,baz=321,slow=2.1,SNR=10						
ZALV				pPKP	pPKPdf	00 22 08.2	+7.8
	2.1nm,0.8s,baz=270,slow=1.5,SNR=3.9						
WRA	**Warramunga Arr**	**136.99**	**219**	PKP	PKPdf	00 21 43.3	-1.0
	0.7nm,0.5s,baz=151,slow=2.0,SNR=5.4						
WRA	**Warramunga Arr**	**136.99**	**219**	PKP	PKPdf	00 21 43.3	-1.0
MKAR	**Makanchi Array**	**141.24**	**28**	PKP	PKPdf	00 21 48.0	-3.2
	0.2nm,0.5s,baz=258,slow=5.9,SNR=3.5						
SONM	**Songino Array**	**146.32**	**1**	PKPbc	PKPbc	00 22 01.9	+0.5
	2.8nm,0.7s,baz=352,slow=2.7,SNR=11						
KSRS	**Korea Array**	**150.34**	**325**	PKPbc	PKPbc	00 22 12.7	+0.4
	2.2nm,0.8s,baz=323,slow=1.9,SNR=6.9						

CSEM ***21*** *00:19:40.6±0.1, 3962N×2755E, h5km, MD2.8, Error ellipse: s-maj=2.3km s-min=1.9km az=169.0*
ISK ***21*** *00:19:40.7, 3963N×2756E, h5km, MD2.8*
DDA ***21*** *00:19:41.0, 3964N×2757E, h7km±2km, Md2.8*
ISCJB ***21*** *00:19:41.1±0.6, 3964N±004×2755E±003, h2km±6km, Error ellipse: s-maj=6.3km s-min=4.5km az=175.2*
ISC 21 00:19:41.6±0.6, 3964N±004×2755E±004, h4km±6km, n15, σ0§68/23, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALY	**Balya**	**0.12**	**29**	*i*P	**Pg**	**00 19 44.0**	**+0.1**
BALY				*i*S	**Sg**	**00 19 46.2**	**+0.6**
BALB	**Balikesir**	**0.26**	**89**	*e*PG	**Pg**	**00 19 46.5**	**-0.1**
BALB				*e*SG	**Sg**	**00 19 50.6**	**+0.6**
DURS	**Dursunbey**	**0.72**	**93**	*e*P	**Pg**	**00 19 54.8**	**-0.6**
DURS				*i*S	**Sg**	**00 20 04.6**	**-0.1**
AYVA	**Ayvalik**	**0.74**	**244**	*i*P	**Pg**	**00 19 56.0**	**+0.2**
AYVA				*i*S	**Sg**	**00 20 06.7**	**+1.3**
DST	**Dursunbey**	**0.84**	**92**	*e*PG	**Pg**	**00 19 57.1**	**-0.5**
DST				*e*SG	**Sg**	**00 20 08.1**	**-0.4**
KCT	**Karacabey**	**0.88**	**45**	*e*PG	**Pg**	**00 19 57.5**	**-1.0**
KCT				*e*SG	**Sg**	**00 20 10.8**	**+0.8**
MRMT	**Marmara Adasi**	**0.96**	**2**	*e*PG	**Pg**	**00 19 59.9**	**-0.2**
DEMI	**Demirci**	**1.08**	**123**	*i*P	**Pg**	**00 20 01.8**	**-0.6**
DEMI				*i*S	**Sg**	**00 20 16.4**	**-0.1**
MFT	**Murefte**	**1.17**	**350**	*e*PN	**Pn**	**00 20 03.4**	**-1.3**
BLCB	**Balcova**	**1.31**	**198**	*e*PN	**Pn**	**00 20 05.6**	**-1.0**
KULA	**Kula-Manisa**	**1.42**	**142**	*e*PN	**Pn**	**00 20 07.8**	**-0.4**
ENEZ	**Enez**	**1.53**	**316**	*e*PN	**Pn**	**00 20 09.4**	**-0.3**
GDZ	**Gediz**	**1.60**	**109**	*e*P	**Pn**	**00 20 11.4**	**+0.8**
GDZ				*i*S	**Sn**	**00 20 32.8**	**+1.1**
YLV	**Yalova**	**1.68**	**56**	*e*PN	**Pn**	**00 20 12.3**	**+0.5**
ADVT	**Abdulvahap**	**1.86**	**64**	*e*PN	**Pn**	**00 20 14.7**	**+0.5**

JMA ***21*** *00:25:49.8±0.1, 3524N×14120E, h35km±2km, M3.1*
ISCJB ***21*** *00:25:50.3±1.0, 3523N±004×141.17E±009, h38km±9km, mb3.8/5, Error ellipse: s-maj=12.6km s-min=6.8km az=0.5*
NEIC ***21*** *00:25:58.8±9.8, 3507N×140.41E, h79km±38km, mb4.5/1, Error ellipse: s-maj=248.6km s-min=18.5km az=68.0*
MOS ***21*** *00:26:00.3±0.8, 3441N×13862E, h63km, mb4.1/4, Error ellipse: s-maj=59.5km s-min=17.9km az=102.9*
*ID

JOSI	**Joshimath**	**9.68**	**125**	*ex*	x	00 54 45.2	
JOSI				AML	AML	00 54 53.8	
	comp=E,54nm,0.6s						
JOSI				AML	AML	00 54 57.1	
	comp=N,58nm,0.9s						
KUDL	**Kundal**	**9.80**	**147**	*e*P	**Pn**	**00 53 09.4**	**-2.2**
KUDL				*e*S	**Sn**	**00 54 50.9**	**-9.0**
KUDL				AML	AML	00 54 59.7	
	comp=N,3.7nm,0.7s						
AB31	**Akbulak array**	**14.84**	**332**	⇑Pn	**Pn**	**00 54 17.9**	**-0.2**
	comp=N,1.0nm,0.6s,baz=144,slow=12,SNR=14						
AB31				⇑Sn	**Sn**	**00 56 50.1**	**-12**
	comp=N,0.3nm,0.4s						
AKTO	**Aktyubinsk**	**16.53**	**331**	⇑Pn	**Pn**	**00 54 39.6**	**+0.3**
	comp=N,0.5nm,0.8s						

IDC 21 00:56:52.7±3.7, 215S×9943E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/20, mbtmp3.8/6, Error ellipse: s-maj=165.7km s-min=21.2km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.41**	**120**	P	P	01 04 15.9	-0.4
	0.3nm,0.6s,baz=303,slow=9.1,SNR=5.8						
ASAR	**Alice Springs**	**39.63**	**126**	P	P	01 04 26.4	-0.1
	0.4nm,0.5s,baz=300,slow=8.2,SNR=5.9						
SONM	**Songino Array**	**50.15**	**6**	P	P	01 05 49.9	+0.1
	1.7nm,0.7s,baz=196,slow=10,SNR=4.9						
MKAR	**Makanchi Array**	**51.02**	**345**	P	P	01 05 56.5	0.0
	1.1nm,0.7s,baz=152,slow=8.1,SNR=6.2						
KURK	**Kurchatov**	**55.59**	**344**	P	P	01 06 29.2	-0.8
	0.4nm,0.7s,baz=157,slow=7.6,SNR=3.9						
ZALV	**Zalesovo Beam**	**57.21**	**350**	P	P	01 06 41.2	-0.3
	1.3nm,0.4s,baz=163,slow=5.6,SNR=10						
TXAR	**Lajitas Array**	**145.16**	**37**	PKPbc	PKPbc	01 16 32.8	+0.2
	0.8nm,0.6s,baz=287,slow=1.2,SNR=13						

KRSC 21 02:00:15.3±0.9, 5248N×15946E, h23km±23km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.58**	**266**	*e*P	Pb	02 00 27.6	+0.8
RUS				*i* S	Sb	02 00 36.2	+1.6
NLC	**Nalytchevo**	**0.70**	**354**	*e*P	Pb	02 00 28.9	+0.2
NLC				*i* S	Sb	02 00 38.6	+0.7
SPN	**Mys Shipunski**	**0.71**	**29**	*e*P	Pb	02 00 29.6	+0.7
SPN				*i* S	Sb	02 00 39.7	+1.5
PET	**Petropavlovsk**	**0.73**	**318**	*e*P	Pb	02 00 29.6	+0.2
PET				*i* S	Sb	02 00 39.6	+0.6
AVH	**Avacha**	**0.90**	**331**	*e*P	Pb	02 00 32.6	+0.4
GNL	**Ganaly**	**1.52**	**324**	*e*P	Pn	02 00 42.0	+0.9
GNL				*i* S	Sn	02 01 01.7	+1.6
MIPR	**Malaya Ipel'ka**	**1.67**	**264**	*e*P	Pn	02 00 44.6	+1.5
MIPR				*i* S	Sn	02 01 06.2	+2.5
SRDR	**Sredinnyy**	**3.85**	**2**	P	Pn	02 01 15.9	+2.9
KBTR	**Krutoberegovo**	**4.22**	**26**	P	Pn	02 01 20.3	+2.2

IDC 21 02:10:30.4±6.9, 196S×9944E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/19, mbtmp3.5/3, Error ellipse: s-maj=322.3km s-min=27.6km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.49**	**120**	P	P	02 17 54.5	-0.2
	0.3nm,0.5s,baz=301,slow=9.0,SNR=8.3						
ASAR	**Alice Springs**	**39.73**	**126**	P	P	02 18 05.4	+0.4
	0.4nm,0.8s,baz=304,slow=7.7,SNR=4.7						
ZALV	**Zalesovo Beam**	**57.02**	**350**	P	P	02 20 18.0	+0.1
	0.8nm,0.6s,baz=152,slow=6.4,SNR=2.7						
TXAR	**Lajitas Array**	**145.00**	**37**	PKPbc	PKPbc	02 30 06.8	-2.9
	0.2nm,0.5s,baz=272,slow=0.7,SNR=5.2						

IDC ***21*** *02:16:13.5±0.7, 263S×13671E, h0km, mb4.3/8, mb1 4.7/13, mb1mx4.6/18, mbtmp4.5/13, ML4.5/5, MS3.9/9, Ms1 3.9/9, ms1mx3.6/25, Error ellipse: s-maj=26.6km s-min=14.8km az=74.0*

MOS ***21*** *02:16:16.7±1.0, 276S×13665E, h39km, mb4.8/7, Error ellipse: s-maj=19.5km s-min=8.8km az=112.0*

DJA ***21*** *02:16:16, 272S×13663E, h12km, Mw5.4/8*

ISCJB ***21*** *02:16:18.7±1.0, 289S±003×13672E±005, h57km±10km, mb4.9/33, MS3.9/6, Error ellipse: s-maj=8.0km s-min=5.2km az=159.2*

NEIC ***21*** *02:16:19.4±1.4, 281S×13669E, h46km±13km, mb4.8/13, Error ellipse: s-maj=10.6km s-min=8.5km az=62.0*

BJI ***21*** *02:16:19.4, 280S×13670E, h46km, mB5.2, mb4.9*

ISC 21 02:16:20.1±0.9, 284S±005×13673E±005, h50km±9km, n107, σ1§07/100, mb4.9/33, MS3.9/6, 4C-3D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**3.98**	**85**	P	**Pn**	**02 17 19.8**	**+1.2**
	0.0nm,0.0s						
SWI	**Sorong**	**5.81**	**290**	P	**Pn**	**02 17 42.5**	**-1.3**
	0.0nm,0.0s						
MMPI	**Merauke**	**6.67**	**147**	P	**Pn**	**02 17 59.6**	**+4.1**
	0.0nm,0.0s						
PMG	**Port Moresby**	**12.24**	**123**	*e*P	**Pn**	**02 19 12.6**	**+0.7**
PMG				pmax	pmax		
	comp=E,34nm,0.9s						
PMG	**Port Moresby**	**12.24**	**123**	*e*Pn	**Pn**	**02 19 12.6**	**+0.7**
	comp=E,34nm,0.9s						
COEN	**Coen**	**12.75**	**150**	*e*Pn	**Pn**	**02 19 19.0**	**+0.2**
	comp=E,28nm,0.8s						
COEN				*e*Sn	**Sn**	**02 21 38.6**	**-0.6**
KDI	**Kendari**	**14.13**	**265**	P	**Pn**	**02 19 36.7**	**-0.9**
	comp=Z,0.0nm,0.0s						
BATI	**Baumata**	**14.90**	**240**	P	**Pn**	**02 19 49.0**	**+1.3**
	comp=Z,0.0nm,0.0s						
BATI	**Baumata**	**14.90**	**240**	Pn	**Pn**	**02 19 46.4**	**-1.3**
	comp=Z,4.9nm,0.3s,baz=305,slow=4.6,SNR=4.8						
KAPI	**Kappang**	**17.08**	**262**	Pn	**Pn**	**02 20 14.9**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=72,slow=19,SNR=2.6						
KAPI				Sn	**Sn**	**02 23 14.5**	**-10**
	comp=Z,2.1nm,0.3s,baz=251,slow=8.7,SNR=2.3						
WRAB	**Tennant Creek**	**17.14**	**188**	*e*P	**Pn**	**02 20 13.8**	**-2.5**
WRAB				*e*		02 23 18.3	
WRAB				pmax	pmax		
	comp=Z,108nm,1.0s						
WRAB	**Tennant Creek**	**17.14**	**188**	*e*P	**Pn**	**02 20 13.8**	**-2.4**
	comp=Z,108nm,1.0s						
WRAB				*e*Sn	**Sn**	**02 23 18.3**	**-7.8**
WB2	**Warramunga Arr**	**17.15**	**188**	*e*P	**Pn**	**02 20 14.6**	**-1.8**
WB2				*e*S	**S**	**02 23 21.7**	**-12**
WRA	**Warramunga Arr**	**17.16**	**188**	P	**Pn**	**02 20 16.0**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=7.9,slow=12,SNR=51						
WRA				S	**S**	**02 23 20.0**	**-14**
	comp=Z,2.7nm,0.3s,baz=11,slow=23,SNR=7.5						
WRA				Lg		02 25 30.3	
	baz=3.4,slow=27,SNR=6.4						
WRA				LR	LR	02 27 41.1	
	comp=Z,2μm,18.1s,baz=10.0,slow=40						
WRA	**Warramunga Arr**	**17.16**	**188**	P	**Pn**	**02 20 16.0**	**-0.4**
WRA				S	**S**	**02 23 20.0**	**-14**
GUMO	**Guam**	**18.21**	**26**	LR	LR	02 27 28.1	
	comp=Z,164nm,18.4s,baz=270,slow=37						
FITZ	**Fitzroy Crossi**	**18.66**	**215**	*e*P	**Pn**	**02 20 34.6**	**-0.2**
FITZ				*e*S	**S**	**02 23 50.9**	**-13**
FITZ	**Fitzroy Crossi**	**18.66**	**215**	P	**Pn**	**02 20 35.9**	**+1.1**
	comp=Z,2.1nm,0.3s,baz=32,slow=13,SNR=48						
FITZ				S	**S**	**02 23 54.7**	**-9.1**
	comp=Z,1.8nm,0.3s,baz=203,slow=16,SNR=4.1						
FITZ				LR	LR	02 28 32.2	
	comp=Z,254nm,18.9s,baz=40,slow=39						
CTA	**Charters Tower**	**19.50**	**152**	*e*P	**Pn**	**02 20 46.7**	**+1.9**
CTA	**Charters Tower**	**19.50**	**152**	P	**Pn**	**02 20 46.2**	**+1.4**
	comp=Z,1.2nm,0.3s,baz=326,slow=12,SNR=20						
CTA				S	**S**	**02 24 15.3**	**-5.6**
	baz=190,slow=22,SNR=2.0						
CTA				Lg		02 26 40.3	
	comp=Z,0.1nm,0.3s,baz=56,slow=22,SNR=3.1						
CTAO	**Charters Tower**	**19.50**	**152**	*e*P	**Pn**	**02 20 44.2**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,33nm,1.0s						
CTAO	**Charters Tower**	**19.50**	**152**	*e*P	**Pn**	**02 20 44.2**	**-0.6**
	comp=Z,33nm,1.0s						
TSM	**Tawau**	**20.14**	**291**	⇑P	**P**	**02 20 54.2**	**+4.0**
ASAR	**Alice Springs**	**20.88**	**187**	P	**P**	**02 20 59.2**	**+1.0**
	comp=Z,15nm,0.6s,baz=12,slow=10,SNR=168						
ASAR				S	**S**	**02 24 47.1**	**-1.2**
	comp=Z,4.8nm,0.7s,baz=5.4,slow=28,SNR=4.3						
ASAR				Lg		02 27 25.9	
	comp=Z,13nm,1.0s,baz=20,slow=30,SNR=4.3						
ASAR	**Alice Springs**	**20.88**	**187**	P	**P**	**02 20 59.2**	**+1.0**
ASAR				S	**S**	**02 24 47.2**	**-1.2**
MTNI	**Mataram**	**21.24**	**253**	P	**P**	**02 21 03.5**	**+1.3**
	comp=Z,0.0nm,0.0s						
SDKM	**Sandakan**	**21.25**	**293**	⇓P	**P**	**02 21 04.8**	**+2.4**
BBKI	**Banjar Baru**	**21.87**	**268**	P	**P**	**02 21 10.1**	**+1.2**
	comp=Z,0.0nm,0.0s						
KMMI	**Kalianget**	**23.06**	**259**	P	**P**	**02 21 23.8**	**+2.3**
	comp=Z,0.0nm,0.0s						
BTM	**Bintulu**	**24.39**	**284**	⇓P	**P**	**02 21 24.4**	**-10**
MBWA	**Marble Bar**	**24.61**	**221**	*e*P	**P**	**02 21 35.8**	**0.0**
	comp=Z,62nm,0.8s,mb5.2						
FORT	**Forrest**	**28.97**	**196**	*e*P	**P**	**02 22 14.9**	**-0.1**
	comp=Z,7.7nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**29.24**	**172**	*e*P	**P**	**02 22 18.0**	**+0.6**
STKA	**Stephens Creek**	**29.24**	**172**	P	**P**	**02 22 18.1**	**+0.7**
	comp=Z,3.8nm,0.7s,mb4.2,baz=355,slow=4.6,SNR=9.3						
PPI	**Padang Panjang**	**36.39**	**273**	P	**P**	**02 23 19.5**	**-0.6**
	comp=Z,0.0nm,0.0s						
WHN	**Wuhan**	**39.48**	**329**	*e*P	**P**	**02 23 46.8**	**+1.0**
KSRS	**Korea Array**	**40.92**	**349**	LR	LR	02 41 13.4	
	comp=Z,113nm,18.3s,MS3.8,baz=163,slow=37						
CMAR	**Chiang Mai Arr**	**42.80**	**301**	P	**P**	**02 24 13.3**	**0.0**
	comp=Z,1.2nm,0.3s,mb4.1,baz=125,slow=6.8,SNR=12						
CMAR				PcP	PcP	02 26 05.0	+1.0
	comp=Z,0.8nm,0.3s,baz=150,slow=1.9,SNR=4.8						
CHTO	**Chiang Mai**	**42.95**	**302**	*e*P	**P**	**02 24 14.0**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
CHTO	**Chiang Mai**	**42.95**	**302**	*e*P	**P**	**02 24 14.0**	**-0.6**
	comp=Z,4.2nm,0.7s,mb4.3						
XAN	**Xi'an**	**45.08**	**327**	P	**P**	**02 24 30.0**	**-1.3**
XAN				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.5						
XAN				AMB	AMB		
	comp=Z,42nm,4.5s						
BJI	**Beijing**	**46.65**	**338**	P	**P**	**02 24 41.8**	**-1.9**
BJI				AMB	AMB		
	comp=Z,11nm,1.4s,mb4.6						
GTA	**Gaotai**	**54.02**	**325**	P	**P**	**02 25 40.1**	**+0.7**
GTA				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.6						
TAPN	**Taplejung**	**55.94**	**306**	*e*P	**P**	**02 25 54.0**	**+0.5**
	comp=Z,83nm,1.1s,mb5.7						
TAPN	**Taplejung**	**55.94**	**306**	*e*P	**P**	**02 25 53.9**	**+0.4**
	comp=Z,83nm,1.1s,mb5.7						
ODAN	**Odare**	**56.00**	**305**	*e*P	**P**	**02 25 54.1**	**+0.2**
	comp=Z,71nm,0.8s,mb5.7						
ODAN	**Odare**	**56.00**	**305**	*e*P	**P**	**02 25 54.3**	**+0.4**
	comp=Z,71nm,0.8s,mb5.7						
RAMN	**Ramite**	**56.68**	**305**	*e*P	**P**	**02 25 59.5**	**+0.7**
	comp=Z,90nm,0.9s,mb5.8						
RAMN	**Ramite**	**56.68**	**305**	*e*P	**P**	**02 25 59.5**	**+0.7**
	comp=Z,90nm,0.9s,mb5.8						
ULN	**Ulaanbaatar**	**56.78**	**337**	⇑*e*P	**P**	**02 25 58.0**	**-1.0**
ULN	**Ulaanbaatar**	**56.78**	**337**	*e*P	**P**	**02 25 56.9**	**-2.1**
	comp=Z,2.6nm,0.6s,mb4.4						
SONM	**Songino Array**	**57.02**	**336**	P	**P**	**02 26 00.5**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=157,slow=4.1,SNR=3.4						
SONM				LR	LR	02 49 50.1	
	comp=Z,164nm,19.1s,MS4.2,baz=114,slow=36						
GUN	**Gumba**	**57.65**	**306**	*e*P	**P**	**02 26 06.3**	**+0.7**
	comp=Z,72nm,0.9s,mb5.7						
GUN	**Gumba**	**57.65**	**306**	*e*P	**P**	**02 26 06.4**	**+0.8**
	comp=Z,72nm,0.9s,mb5.7						
PKIN	**Phulchoki**	**57.91**	**305**	*e*P	**P**	**02 26 07.7**	**+0.2**
	comp=Z,23nm,0.9s,mb5.2						
PKIN	**Phulchoki**	**57.91**	**305**	*e*P	**P**	**02 26 07.8**	**+0.3**
	comp=Z,23nm,0.9s,mb5.2						
KKN	**Kakani**	**58.09**	**305**	*e*P	**P**	**02 26 09.5**	**+0.8**
	comp=Z,83nm,1.0s,mb5.7						
KKN	**Kakani**	**58.09**	**305**	*e*P	**P**	**02 26 09.5**	**+0.8**
	comp=Z,83nm,1.0s,mb5.7						
DMN	**Daman**	**58.16**	**305**	*e*P	**P**	**02 26 09.9**	**+0.7**
	comp=Z,105nm,1.0s,mb5.8						
DMN	**Daman**	**58.16**	**305**	*e*P	**P**	**02 26 09.8**	**+0.6**
	comp=Z,105nm,1.0s,mb5.8						
PETK	**Petropavlovsk-**	**58.47**	**15**	P	**P**	**02 26 10.0**	**-0.8**
	comp=Z,2.0nm,0.6s,mb4.3,baz=170,slow=12,SNR=3.6						
PETK				LR	LR	02 46 57.6	
	comp=Z,48nm,20.5s,MS3.6,baz=9.7,slow=32						
GKN	**Gorkha**	**58.70**	**305**	*e*P	**P**	**02 26 13.6**	**+0.7**
	comp=Z,147nm,1.1s,mb5.9						
GKN	**Gorkha**	**58.70**	**305**	*e*P	**P**	**02 26 13.4**	**+0.5**
	comp=Z,147nm,1.1s,mb5.9						
KOLN	**Koldanda**	**59.46**	**305**	*e*P	**P**	**02 26 19.1**	**+0.9**
	comp=Z,67nm,1.0s,mb5.6						
KOLN	**Koldanda**	**59.46**	**305**	*e*P	**P**	**02 26 19.2**	**+1.0**
	comp=Z,67nm,1.0s,mb5.6						
DANN	**Dangsing**	**59.54**	**305**	*e*P	**P**	**02 26 19.8**	**+1.0**
	comp=Z,37nm,0.7s,mb5.5						
DANN	**Dangsing**	**59.54**	**305**	*e*P	**P**	**02 26 19.6**	**+0.8**
	comp=Z,34nm,0.7s,mb5.5						
ZAK	**Zakamensk**	**60.28**	**336**	*e*P	**P**	**02 26 21.8**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.5						
BOD	**Bodaibo**	**63.17**	**347**	*e*P	**P**	**02 26 41.3**	**-1.4**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.6						
WMQ	**Urumqi**	**63.90**	**323**	*e*P	**P**	**02 26 48.3**	**+0.5**
WMQ				AMB	AMB		
	comp=Z,17nm,1.1s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,135nm,4.2s						
DDI	**Dehra Dun**	**64.90**	**305**	*ex*	x	02 26 54.6	
CASY	**Casey**	**65.94**	**191**	*e*P	**P**	**02 27 01.6**	**+0.9**
	comp=Z,14nm,1.1s,mb4.9						
SEY	**Seymchan**	**66.66**	**8**	⇑*e*P	**P**	**02 27 05.7**	**+0.4**
MK31	**Makanchi Array**	**68.70**	**323**	*e*P	**P**	**02 27 18.2**	**-0.3**
MKAR	**Makanchi Array**	**68.70**	**323**	P	**P**	**02 27 17.4**	**-1.0**
	comp=Z,0.9nm,0.5s,mb4.0,baz=117,slow=7.3,SNR=9.0						
MKAR	**Makanchi Array**	**68.70**	**323**	⇑*e*P	**P**	**02 27 18.6**	**+0.1**
ZALV	**Zalesovo Beam**	**71.07**	**331**	P	**P**	**02 27 30.6**	**-2.3**
	comp=Z,1.6nm,0.8s,mb4.0,baz=111,slow=8.1,SNR=6.4						
ZALV				LR	LR	02 57 15.1	
	comp=Z,53nm,20.8s,MS3.8,baz=75,slow=35						
UCH	**Uchtor**	**71.77**	**316**	*e*P	**P**	**02 27 37.7**	**+0.3**
	comp=Z,20nm,1.3s,mb4.9						
AML	**Almayashu**	**72.31**	**316**	*e*P	**P**	**02 27 41.7**	**+1.1**
	comp=Z,38nm,1.4s,mb5.1						
NVS	**Novosibirsk**	**72.33**	**331**	*e*P	**P**	**02 27 38.0**	**-2.4**
EKS2	**Erkin-Say**	**72.44**	**316**	*e*P	**P**	**02 27 41.8**	**+0.4**
	comp=Z,9.7nm,1.1s,mb4.7						
KURK	**Kurchatov**	**72.70**	**326**	*e*P	**P**	**02 27 42.4**	**-0.3**
KURK				*e**PP	pP	02 27 53.6	-3.3
KURK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
KURK	**Kurchatov**	**72.70**	**326**	*e*P	**P**	**02 27 42.4**	**-0.3**
	comp=Z,9.8nm,1.1s,mb4.7						
KURK				*e*pP	pP	02 27 53.6	-3.4
KBL	**Kabul**	**73.43**	**307**	*e*P	**P**	**02 27 47.1**	**-0.3**
KBL				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
KBL	**Kabul**	**73.43**	**307**	*e*P	**P**	**02 27 47.0**	**-0.4**
	comp=Z,13nm,0.8s,mb4.9						
BRVK	**Borovoye**	**78.37**	**326**	*e*P	**P**	**02 28 14.9**	**-0.3**
BRVK				*e**PP	pP	02 28 26.3	-3.2
CHUM	**Lake Minchumin**	**84.25**	**25**	*e*P	**P**	**02 28 46.6**	**+0.5**
	comp=Z,16μm,0.7s						
AKTO	**Aktyubinsk**	**85.00**	**321**	LR	LR	03 05 48.3	
	comp=Z,40nm,21.4s,MS3.8,baz=245,slow=35						
ARU	**Arti**	**85.83**	**327**	*d*iP	**P**	**02 28 52.2**	**-1.9**
ARU				*e*		02 32 08.5	
ARU				*e*S	S	02 39 14.5	-8.9
ARU				SS	SS	02 45 00.4	-0.9
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.7						
COLA	**College**	**86.40**	**24**	*e*P	**P**	**02 28 56.7**	**-0.1**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.7						
COLA	**College**	**86.40**	**24**	*e*P	**P**	**02 28 56.7**	**-0.1**
	comp=Z,3.1nm,0.6s,mb4.7						
DAWY	**Dawson**	**89.85**	**26**	*e*P	**P**	**02 29 14.8**	**+1.5**
ANN	**Anapa**	**98.60**	**315**	*e*P	**P**	**02 29 44.3**	**-9.5**
ANN				*e*		02 40 18.6	
ARCES	**ARCESS Array B**	**99.98**	**341**	P	Pdif	02 29 58.1	-1.6
	comp=Z,3.8nm,1.0s,baz=81,slow=8.7,SNR=6.4						
ARCES				LR	LR	03 18 19.6	
	comp=Z,82nm,18.4s,MS4.3,baz=132,slow=37						
PLCA	**Paso Flores**	**129.98**	**153**	PKP	PKPdf	02 35 26.2	+1.5
	comp=Z,3.0nm,1.1s,baz=214,slow=13,SNR=3.6						
PLCA	**Paso Flores**	**129.98**	**153**	PKP	PKPdf	02 35 26.2	+1.5
TOA0	**Torodi Ar. Sit**	**134.39**	**286**	*e*PKPdf	PKPdf	02 35 33.6	-0.1
TORD	**Torodi Ar. Bea**	**134.39**	**286**	PKP	PKPdf	02 35 33.2	-0.5
	comp=Z,2.9nm,0.7s,baz=44,slow=0.8,SNR=18						
BCIP	**Isla Barro Col**	**143.12**	**79**	*e*PKPdf	PKPdf	02 35 48.6	-1.1
LVC	**Limon Verde**	**144.41**	**137**	*e*PKPdf	PKPdf	02 35 53.5	+1.8
OTAV	**Otavalo**	**144.74**	**94**	*e*PKPdf	PKPdf	02 35 53.3	+0.7
CPUP	**Villa Florida**	**147.97**	**156**	PKPbc	PKPbc	02 35 59.6	-1.1
	comp=Z,5.9nm,1.0s,baz=189,slow=3.0,SNR=9.3						
CPUP	**Villa Florida**	**147.97**	**156**	*e*PKPbc	PKPbc	02 35 59.5	-1.2
CPUP				*e*PKPab	PKPab	02 36 02.3	-1.0
LPAZ	**La Paz**	**148.94**	**129**	PKP	PKPdf	02 36 02.6	+3.1
	comp=Z,3.4nm,1.0s,baz=298,slow=4.0,SNR=8.0						
LPAZ				PKPbc	PKPbc	02 36 05.9	+2.4
	comp=Z,4.1nm,1.0s,baz=305,slow=2.5,SNR=8.7						
LPAZ	**La Paz**	**148.94**	**129**	*e*PKPbc	PKPbc	02 36 02.0	-1.5
ROSC	**El Rosal**	**148.95**	**85**	PKPbc	PKPbc	02 36 05.1	+1.5
	comp=Z,6.9nm,0.6s,baz=102,slow=20,SNR=6.0						
ROSC	**El Rosal**	**148.95**	**85**	*e*PKPbc	PKPbc	02 36 02.7	-0.9

ISCJB ***21*** *02:23:25.1±0.4, 4023N±002×2333E±003, h1km±3km, Error ellipse: s-maj=3.3km s-min=2.8km az=170.8*

ATH ***21*** *02:23:25.9, 4027N×2331E, h13km±2km, MD3.5/5*

THE ***21*** *02:23:26.1, 4025N×2333E, h3km, ML3.2*

NEIC ***21*** *02:23:26.0, 4027N×2330E, h10km, MD3.4(ATH), After ATH.*

CSEM ***21*** *02:23:26.1±0.1, 4026N×2336E, h10km, MD3.4, Error ellipse: s-maj=1.5km s-min=1.2km az=63.0*

ISC 21 02:23:25.8±0.3, 4024N±002×2334E±003, h4km±3km, n35, σ0§93/61, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLG	**Polygyros**	**0.16**	**31**	*e*Pg	**Pg**	**02 23 28.9**	**0.0**
PLG				*e*Sg	**Sg**	**02 23 31.2**	**+0.1**
PLG	**Polygyros**	**0.16**	**31**	*e*PG	**Pg**	**02 23 29.1**	**+0.1**
PLG				SG	**Sg**	**02 23 31.2**	**+0.1**
HORT	**Hortiatis**	**0.40**	**333**	*e*Pg	**Pg**	**02 23 33.5**	**-0.1**
HORT				*e*Sg	**Sg**	**02 23 39.1**	**+0.3**
HORT	**Hortiatis**	**0.40**	**333**	*e*Pg	**Pg**	**02 23 33.5**	**-0.1**
HORT				*e*Sg	**Sg**	**02 23 39.1**	**+0.2**
PAIG	**Paliouri**	**0.41**	**140**	*e*Pg	**Pg**	**02 23 34.0**	**+0.3**
PAIG				*e*Sg	**Sg**	**02 23 40.9**	**+1.9**
THE	**Thessaloniki**	**0.49**	**324**	*e*Pg	**Pg**	**02 23 35.0**	**-0.2**
THE				*e*Sg	**Sg**	**02 23 41.4**	**-0.1**
OUR	**Ouranopolis**	**0.50**	**79**	*e*Pg	**Pg**	**02 23 35.6**	**+0.1**
SOH	**Sokhos**	**0.58**	**1**	*e*Pg	**Pg**	**02 23 36.8**	**-0.2**
SOH				*e*Sg	**Sg**	**02 23 45.3**	**+0.7**
LIT	**Litokhoron**	**0.66**	**258**	*e*Pg	**Pg**	**02 23 39.3**	**+0.7**
LIT				*e*Sg	**Sg**	**02 23 48.3**	**+1.1**
XOR	**Xorichti**	**0.88**	**187**	*e*Pg	**Pg**	**02 23 43.4**	**+0.7**
NEO	**Neokhori**	**0.93**	**185**	*e*PN	**Pn**	**02 23 44.6**	**-1.1**
NEO				SB	**Sb**	**02 23 57.6**	**+0.3**
KNT	**Kendrikon**	**0.98**	**340**	*e*Pg	**Pg**	**02 23 44.1**	**-0.6**
KNT				*e*Sg	**Sg**	**02 23 58.0**	**+0.6**
GRG	**Griva**	**1.01**	**315**	*e*Pg	**Pg**	**02 23 44.8**	**-0.4**
GRG				*e*Sg	**Sg**	**02 23 59.1**	**+0.7**
AOS	**Alonnisos**	**1.15**	**158**	*e*Pg	**Pg**	**02 23 47.4**	**-0.4**
NVR	**Nevrokopi**	**1.18**	**20**	*e*PG	**Pg**	**02 23 47.5**	**-1.0**
NVR				SB	**Sb**	**02 24 04.3**	**-0.1**
KZN	**Kozani**	**1.20**	**274**	*e*PB	**Pb**	**02 23 48.4**	**-0.7**
THL	**Klokotos Trika**	**1.22**	**237**	*e*Pg	**Pg**	**02 23 48.5**	**-0.7**
THL				*e*Sg	**Sg**	**02 24 06.1**	**+1.1**
THL	**Klokotos Trika**	**1.22**	**237**	*e*PN	**Pn**	**02 23 48.4**	**-1.2**
VAY	**Valandovo**	**1.23**	**332**	*e*Pg	**Pg**	**02 23 48.5**	**-0.9**
VAY				*e*Sg	**Sg**	**02 24 07.0**	**+1.7**
VAY	**Valandovo**	**1.23**	**332**	*e*Pn	**Pn**	**02 23 48.7**	**-1.1**
VAY				*e*Sn	**Sn**	**02 24 05.7**	**-1.0**
VAY	**Valandovo**	**1.23**	**332**	*e*Pg	**Pg**	**02 23 48.5**	**-0.9**
VAY				*e*Sg	**Sg**	**02 24 07.0**	**+1.6**
AGG	**Agios Georgios**	**1.44**	**213**	*e*Pg	**Pg**	**02 23 52.0**	**-1.5**
AGG				*e*

ISC 21 02:49:53.8±1.2, 3521N±004×14129E±007, h15km±5km, n15, σ0892/21, mb3.7/2, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.60**	**325**	P	**Pg**	**02 50 05.7**	**0.0**
CHOJ				S	**Sg**	**02 50 13.8**	**+0.1**
BSO1	**Boso 1**	**0.61**	**205**	P	**Pg**	**02 50 06.4**	**+0.6**
BSO2	**Boso 2**	**0.63**	**224**	*e*S	**Sg**	**02 50 16.2**	**+1.6**
BSO3	**Boso 3**	**0.76**	**238**	P	**Pg**	**02 50 08.3**	**-0.3**
BSO3				*e*S	**Sg**	**02 50 19.2**	**+0.7**
KTR	**Katsuura**	**0.80**	**266**	P	**Pg**	**02 50 08.6**	**-0.8**
KTR				*e*S	**Sg**	**02 50 18.6**	**-1.3**
BSO4	**Boso 4**	**0.81**	**255**	P	**Pg**	**02 50 08.9**	**-0.6**
BSO4				*e*S	**Sg**	**02 50 20.2**	**0.0**
JCN	**Nagara**	**0.91**	**284**	*e*S	**Sb**	**02 50 23.6**	**+0.3**
JYT	**Yasato**	**1.35**	**319**	P	**Pn**	**02 50 17.7**	**-0.5**
JHO	**Hitachi**	**1.52**	**338**	P	**Pn**	**02 50 20.3**	**-0.1**
JIM2	**Oshima 3**	**1.60**	**253**	P	**Pn**	**02 50 19.1**	**-2.5**
JHJ	**Hachijo jima 2**	**2.43**	**211**	Pn	**Pn**	**02 50 31.9**	**-1.1**
	21nm,0.3s,baz=225,slow=19,SNR=8.6						
JHJ				Sn	**Sn**	**02 51 02.0**	**-0.4**
	40nm,0.3s,baz=305,slow=20,SNR=7.7						
MJAR	**Matsushiro Arr**	**2.83**	**299**	Pn	**Pn**	**02 50 39.2**	**+0.7**
	2.6nm,0.3s,baz=318,slow=13,SNR=8.4						
MAT	**Matsushiro**	**2.83**	**299**	P	**Pn**	**02 50 40.8**	**+2.3**
MAT				S	**Sn**	**02 51 13.0**	**+0.6**
WRA	**Warramunga Arr**	**55.24**	**188**	P	**P**	**02 59 26.1**	**-0.2**
	0.8nm,0.5s,mb4.0,baz=7.8,slow=7.7,SNR=41						
ASAR	**Alice Springs**	**58.97**	**188**	P	**P**	**02 59 53.4**	**+0.7**
	0.2nm,0.5s,mb3.4,baz=355,slow=5.4,SNR=5.3						

MOS 21 02:52:08.5±0.3, 4280N×4615E, h19km, mb3.7/1, 1C, Error ellipse: s-maj=77.1km s-min=17.4km az=19.2, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**1.02**	**286**	*e*PG	Pg	02 52 27.0	-1.2
SNJR				*e*S	Sb	02 52 41.4	+1.0
BTKR	**Batakoyurt**	**1.31**	**296**	*e*PG	Pg	02 52 31.9	-1.8
BTKR				*e*S	Sn	02 52 49.8	+1.2
LACR	**Lac**	**1.36**	**272**	↑*i*PG	Pg	02 52 32.9	-1.9
LACR				*e*S	Sn	02 52 51.8	+1.8
ARNR	**Ardon**	**1.42**	**286**	*e*PG	Pg	02 52 34.0	-2.0
ARNR				*e*S	Sn	02 52 53.0	+1.5
KMSR	**Komsomolskaya**	**1.47**	**293**	*e*PG	Pg	02 52 34.5	-2.4
KMSR				*e*S	Sn	02 52 54.4	+1.7
ZEI	**Tsey**	**1.66**	**270**	*e*PN	Pn	02 52 37.1	+0.6
ZEI				*e*S	Sn	02 52 58.8	+1.6

CSEM 21 02:52:35.4±0.8, 3903N×2920W, h0km, ML2.6, Error ellipse: s-maj=8.1km s-min=4.4km az=74.0, After PDA

PDA 21 02:52:35.4±0.8, 3903N×2920W, h0km, MD3.9, ML2.6, Error ellipse: s-maj=8.1km s-min=4.4km az=74.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.59**	**139**	*e*S	Sg	02 52 53.9	-0.4
HOR	**Horta**	**0.67**	**138**	*e*S	Sg	02 52 55.8	-1.0
PICO	**Pico**	**0.80**	**131**	*e*P	Pg	02 52 49.1	-1.6
PICO				*e*S	Sg	02 52 59.0	-2.1
ROSA	**Rosais**	**0.81**	**112**	*e*P	Pg	02 52 48.4	-2.4
ROSA				*e*S	Sg	02 52 58.9	-2.4
PSCM	**Serra do Cume**	**1.66**	**101**	*e*P	Pn	02 53 00.7	-5.0
PSCM				*e*S	Sn	02 53 20.0	-7.6
PSCM				A		02 53 25.6	
	10nm,0.2s						
PSCM	**Serra do Cume**	**1.66**	**101**	*e*P	Pn	02 53 00.7	-5.0
PSCM				*e*S	Sn	02 53 20.0	-7.6
PSET	**Sete Cidades**	**2.98**	**113**	*e*P	Pn	02 53 19.3	-4.6
PDA	**Ponta Delgada**	**3.06**	**114**	*e*P	Pn	02 53 20.4	-4.5
CMLA	**Cha da Macela**	**3.15**	**112**	*e*P	Pn	02 53 22.0	-4.2
CMLA				*e*S	Sn	02 53 56.5	-8.0
CMLA				A		02 54 00.5	
	14nm,0.2s						
CMLA	**Cha da Macela**	**3.15**	**112**	*e*P	Pn	02 53 22.0	-4.2
CMLA				*e*S	Sn	02 53 56.5	-8.0
PSMN	**Pico do Norte,**	**3.84**	**120**	*e*P	Pn	02 53 31.1	-4.6

IDC 21 03:52:35.1±2.6, 2224S×14811E, h0km, mb1 3.3/4, mb1mx3.3/13, mbtmp3.2/4, ML3.2/4, Error ellipse: s-maj=36.2km s-min=20.7km az=65.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**2.75**	**321**	Pn	Pn	03 53 20.7	+0.2
	1.7nm,0.3s,baz=139,slow=16,SNR=28						
CTA				Pg	Pg	03 53 26.1	-1.7
	4.3nm,0.3s,baz=142,slow=18,SNR=41						
CTA				Lg		03 54 01.4	
	6.5nm,0.3s,baz=58,slow=21,SNR=3.7						
STKA	**Stephens Creek**	**11.22**	**210**	Pn	Pn	03 55 15.7	-1.0
	0.2nm,0.3s,baz=14,slow=14,SNR=4.3						
STKA				Lg		03 58 43.2	
	0.1nm,0.3s,baz=155,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**13.05**	**278**	Pn	Pn	03 55 40.8	-1.1
	0.1nm,0.3s,baz=96,slow=11,SNR=7.9						
WRA				Lg		03 59 30.4	
	0.1nm,0.3s,baz=103,slow=28,SNR=5.5						
ASAR	**Alice Springs**	**13.16**	**261**	Pn	Pn	03 55 44.3	+0.9
	0.1nm,0.3s,baz=91,slow=13,SNR=3.1						
ASAR				Sn	Sn	03 58 22.5	+12
	0.1nm,0.3s,baz=87,slow=25,SNR=4.2						
ASAR				Lg		03 59 34.9	
	0.1nm,0.3s,baz=73,slow=26,SNR=5.9						
TORD	**Torodi Ar. Bea**	**146.81**	**260**	PKPbc	PKPbc	04 12 19.5	-0.6
	1.0nm,1.3s,baz=118,slow=5.4,SNR=4.2						

MAN 21 04:14:19, 1318N×12246E, h6km, mb4.3, ML3.2, MS3.0, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.25**	**56**	*e*P	Pg	04 14 25.8	+1.8
AUQP				*e*S	Sg	04 14 35.6	+8.3
GQP	**Guinayangan**	**0.72**	**359**	↓*e*P	Pg	04 14 32.5	-0.4
GQP				*e*S	Sg	04 14 44.5	+2.3
OTRP	**Odiongan**	**0.92**	**208**	*e*P	Pg	04 14 37.2	+0.6
OTRP				*e*S	Sg	04 14 50.3	+1.7
SJMP	**San Jose**	**1.49**	**241**	*e*P	Pn	04 14 46.5	+0.1
SJMP				*e*S	Sn	04 15 09.8	+3.7
POLP	**Polilio Island**	**1.62**	**342**	*e*P	Pn	04 14 47.1	-1.0
POLP				*e*S	Sn	04 15 11.5	+2.3
PVCP	**Virac**	**1.70**	**76**	*e*P	Pn	04 14 49.3	+0.1
LUBP	**Lubang**	**2.22**	**285**	*e*P	Pn	04 14 56.6	+0.3
BUSP	**Coron**	**2.50**	**242**	*e*P	Pn	04 15 00.7	+0.5

IDC 21 04:19:49.8±3.5, 3605×10074E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.8/20, mbtmp3.9/7, Error ellipse: s-maj=158.2km s-min=18.6km az=56.0
ISCJB 21 04:19:52.4±2.8, 365±05×1007E±07, h33km, mb4.0/8, Error ellipse: s-maj=119.4km s-min=14.2km az=145.5
NEIC 21 04:19:55.2±1.8, 3575×10084E, h35km, mb4.0/2, Error ellipse: s-maj=78.2km s-min=9.5km az=55.0

ISC 21 04:19:54.9±2.7, 365±05×1008E±07, h35km, n14, σ0835/12, mb4.0/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**28.29**	**122**	P	**P**	**04 25 44.9**	**-0.4**
	0.5nm,0.5s,mb3.4,baz=251,slow=5.7,SNR=4.5						
FITZ	**Fitzroy Crossi**	**28.29**	**122**	*e*P	**P**	**04 25 44.8**	**-0.5**
	1.5nm,0.7s,mb3.7						
WRA	**Warramunga Arr**	**36.53**	**119**	P	**P**	**04 26 57.6**	**+0.1**
	1.1nm,0.4s,mb4.0,baz=303,slow=8.9,SNR=38						
WRAB	**Tennant Creek**	**36.54**	**119**	*e*P	**P**	**04 26 57.4**	**-0.1**
	1.6nm,0.4s,mb4.2						
WB2	**Warramunga Arr**	**36.54**	**119**	*e*P	**P**	**04 26 57.1**	**-0.4**
ASAR	**Alice Springs**	**37.70**	**125**	P	**P**	**04 27 08.0**	**+0.7**
	0.6nm,0.3s,mb3.8,baz=302,slow=8.0,SNR=12						
STKA	**Stephens Creek**	**47.52**	**131**	P	**P**	**04 28 27.1**	**+0.1**
	3.2nm,0.7s,mb4.5,baz=335,slow=3.2,SNR=4.8						
SONM	**Songino Array**	**51.46**	**5**	P	**P**	**04 28 57.0**	**+0.3**
	1.3nm,0.7s,mb4.0,baz=180,slow=13,SNR=3.7						
MKAR	**Makanchi Array**	**52.77**	**344**	P	**P**	**04 29 06.6**	**+0.1**
	0.6nm,0.3s,mb4.0,baz=152,slow=8.2,SNR=4.3						
MKAR	**Makanchi Array**	**52.77**	**344**	P	**P**	**04 29 06.6**	**+0.1**
ZALV	**Zalesovo Beam**	**58.88**	**349**	P	**P**	**04 29 49.7**	**-0.4**
	0.7nm,0.4s,mb4.1,baz=164,slow=6.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**58.88**	**349**	P	**P**	**04 29 49.7**	**-0.4**
TXAR	**Lajitas Array**	**145.47**	**40**	PKPbc	PKPbc	04 39 30.8	+0.7
	1.0nm,0.7s,baz=313,slow=1.2,SNR=15						
JCT	**Junction City**	**146.95**	**34**	*e*PKPbc	PKPbc	04 39 34.9	+0.4

IDC 21 04:20:59.9±1.5, 3454N×13780E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.5/24, mbtmp3.5/4, ML3.3/1, MS3.1/2, Ms1 3.1/2, ms1mx2.4/20, Error ellipse: s-maj=38.9km s-min=20.4km az=87.0
NIED 21 04:21:00, 3470N×13790E, h8km, Mw3.7 Best double couple: M0≈4.39000×10^14 NP1:φs348.00000°, δ70.00000°, λ23.00000°. NP2:φs250.00000°, δ68.00000°, λ158.00000°.
ISCJB 21 04:21:02.3±0.5, 3465N±003×13790E±004, h14km±3km, mb3.8/4, Error ellipse: s-maj=5.1km s-min=4.6km az=11.1
JMA 21 04:21:02.9, 3470N×13789E, h13km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs350.00000°, δ67.00000°, λ16.00000°. NP2: φs253.00000°, δ75.00000°, λ157.00000°. Principal axes: T Plg27.0000°, Azm210.0000°; N Plg62.0000°, Azm43.0000°; P Plg5.0000°, Azm303.0000°;
JMA Felt II J1.
NEIC 21 04:21:04.6±0.9, 3461N×13795E, h35km, mb4.2/2 Error ellipse: s-maj=30.5km s-min=12.2km az=101.0

ISC 21 04:21:02.5±0.4, 3468N±003×13790E±004, h17km±3km, n24, σ0897/32, mb3.8/4, 6C-4D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKKG	**Kakegawa**	**0.12**	**31**	P	**Pg**	**04 21 05.8**	**-0.4**
JKKG				S	**Sg**	**04 21 08.3**	**-0.4**
JHMK	**Hamakita**	**0.18**	**319**	P	**Pg**	**04 21 06.7**	**-0.2**
HMMJ	**Hamamatsu 2**	**0.23**	**320**	↓P	**Pg**	**04 21 07.6**	**-0.1**
HMMJ				S	**Sg**	**04 21 11.2**	**-0.1**
JSG	**Sagara**	**0.24**	**92**	↓P	**Pg**	**04 21 08.1**	**+0.3**
JSG				S	**Sg**	**04 21 12.5**	**+1.0**
TK04	**Tokai 4**	**0.30**	**184**	↑P	**Pg**	**04 21 09.5**	**+0.7**
SHZ3	**Shizuoka 3**	**0.46**	**34**	↑P	**Pg**	**04 21 11.5**	**-0.3**
SHZ3				*e*S	**Sg**	**04 21 18.0**	**0.0**
TK03	**Tokai 3**	**0.52**	**174**	↑P	**Pg**	**04 21 14.0**	**+1.2**
TK03				S	**Sg**	**04 21 23.4**	**+3.6**
JAA	**Atsumi**	**0.62**	**266**	↓P	**Pg**	**04 21 14.6**	**-0.2**
JAA				*e*S	**Sg**	**04 21 23.6**	**+0.5**
JNY	**Yasuok**	**0.68**	**357**	↑P	**Pg**	**04 21 15.6**	**-0.1**
TK02	**Tokai 2**	**0.74**	**189**	↑P	**Pg**	**04 21 16.6**	**-0.4**
JIZS	**Izushimoda**	**0.81**	**87**	↓P	**Pb**	**04 21 16.8**	**-1.3**
TK01	**Tokai 1**	**0.95**	**196**	P	**Pb**	**04 21 19.1**	**-1.4**
JYN	**Shimob**	**0.97**	**33**	P	**Pb**	**04 21 20.4**	**-0.5**
JIE	**Ise**	**1.03**	**254**	↑P	**Pb**	**04 21 21.2**	**-0.6**
MJAR	**Matsushiro Arr**	**1.87**	**8**	Pn	**Pn**	**04 21 35.3**	**+1.6**
	39nm,0.3s,baz=192,slow=2.0,SNR=108						
MJAR				Sn	**Sn**	**04 22 01.1**	**+4.1**
	53nm,0.3s,baz=203,slow=27,SNR=10						
MAJO	**Matsushiro**	**1.87**	**8**	*e*Pn	**Pn**	**04 21 35.4**	**+1.7**
MAJO				*e*Sg	**Sg**	**04 22 00.8**	**-2.0**
MAT	**Matsushiro**	**1.87**	**8**	P	**Pn**	**04 21 36.4**	**+2.6**
MAT				S	**Sn**	**04 22 00.9**	**+3.9**
JHJ	**Hachijo jima 2**	**2.21**	**134**	Pn	**Pn**	**04 21 38.1**	**-0.2**
	19nm,0.3s,baz=75,slow=21,SNR=4.5						
JHJ				Sn	**Sn**	**04 22 05.0**	**-0.3**
	46nm,0.3s,baz=245,slow=22,SNR=6.1						
ASAJ	**Asahikawa**	**10.10**	**20**	LR	LR	04 27 56.7	
	comp=Z,76nm,18.2s,baz=127,slow=41						
JOW	**Kunigami**	**11.38**	**229**	LR	LR	04 27 43.8	
	comp=Z,126nm,21.1s,baz=169,slow=36						
CHTO	**Chiang Mai**	**37.94**	**256**	*e*P	**P**	**04 28 20.2**	**+0.9**
	1.8nm,0.5s,mb4.1						
UCH	**Uchtor**	**49.20**	**299**	*e*P	**P**	**04 29 49.2**	**-0.4**
	2.0nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**54.42**	**184**	P	**P**	**04 30 27.4**	**-1.4**
	0.3nm,0.5s,mb3.5,baz=0.1,slow=7.9,SNR=7.1						
ASAR	**Alice Springs**	**58.15**	**184**	P	**P**	**04 30 54.7**	**-0.6**
	0.4nm,0.8s,mb3.5,baz=0.0,slow=4.6,SNR=3.5						

IDC 21 04:45:22.3±2.3, 4065×10131E, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.0/19, mbtmp4.1/8, MS3.6/2, Ms1 3.6/2, ms1mx2.9/28, Error ellipse: s-maj=84.9km s-min=16.7km az=57.0
ISCJB 21 04:45:24.2±1.2, 425S±02×10116E±03, h33km, mb4.2/14, MS3.6/2, Error ellipse: s-maj=47.9km s-min=10.3km az=142.2
NEIC 21 04:45:26.0±1.0, 427S×10100E, h35km, mb4.3/7, Error ellipse: s-maj=46.2km s-min=8.5km az=52.0

ISC 21 04:45:26.8±1.2, 41S±02×1012E±03, h35km, n25, σ057/18, mb4.2/14, MS3.6/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.53**	**354**	P	**P**	**04 50 23.3**	**-0.5**
	2.3nm,1.0s,mb3.9,baz=183,slow=8.9,SNR=15						
FITZ	**Fitzroy Crossi**	**27.65**	**122**	P	**P**	**04 51 11.0**	**-0.5**
	2.0nm,1.1s,mb3.7,baz=330,slow=14,SNR=5.8						
FITZ	**Fitzroy Crossi**	**27.65**	**122**	*e*P	**P**	**04 51 11.3**	**-0.2**
	2.2nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**35.90**	**119**	P	**P**	**04 52 23.8**	**-0.1**
	0.9nm,0.5s,mb4.0,baz=302,slow=9.1,SNR=26						
WRA				LR	LR	05 08 48.8	
	comp=Z,96nm,20.0s,MS3.6,baz=220,slow=39						
WRAB	**Tennant Creek**	**35.91**	**119**	*e*P	**P**	**04 52 24.3**	**+0.3**
	2.3nm,0.7s,mb4.2						
WB2	**Warramunga Arr**	**35.91**	**119**	*e*P	**P**	**04 52 23.7**	**-0.3**
ASAR	**Alice Springs**	**37.05**	**125**	P	**P**	**04 52 34.1**	**+0.5**
	1.2nm,0.6s,mb3.9,baz=297,slow=7.8,SNR=21						
STKA	**Stephens Creek**	**46.85**	**131**	*e*P	**P**	**04 54 02.2**	**+8.5**
KSRS	**Korea Array**	**48.24**	**29**	P	**P**	**04 54 03.5**	**-0.8**
	1.7nm,0.6s,mb4.2,baz=212,slow=7.2,SNR=5.5						
SONM	**Songino Array**	**51.92**	**4**	P	**P**	**04 54 33.6**	**+1.6**
	3.1nm,0.7s,mb4.4,baz=187,slow=9.1,SNR=12						
ULN	**Ulaanbaatar**	**52.01**	**5**	*e*P	**P**	**04 54 33.4**	**+0.7**
	2.8nm,0.9s,mb4.2						
TKM2	**Tokmak 2**	**52.24**	**336**	*e*P	**P**	**04 54 34.5**	**0.0**
	2.1nm,0.6s,mb4.2						
AML	**Almayashu**	**52.38**	**334**	*e*P	**P**	**04 54 35.8**	**+0.3**
	2.9nm,0.6s,mb4.4						
EKS2	**Erkin-Say**	**52.77**	**335**	*e*P	**P**	**04 54 38.0**	**-0.5**
	4.4nm,1.0s,mb4.3						
MK31	**Makanchi Array**	**53.38**	**344**	*e*P	**P**	**04 54 42.6**	**-0.2**
MKAR	**Makanchi Array**	**53.38**	**344**	P	**P**	**04 54 43.1**	**+0.4**
	4.5nm,0.7s,mb4.5,baz=143,slow=8.3,SNR=21						
KURK	**Kurchatov**	**57.96**	**343**	*e*P	**P**	**04 55 15.0**	**-0.6**
	2.5nm,0.8s,mb4.3						
ZALV	**Zalesovo Beam**	**59.45**	**349**	P	**P**	**04 55 25.7**	**-0.2**
	2.3nm,0.5s,mb4.5,baz=176,slow=4.3,SNR=6.7						
AKTO	**Aktyubinsk**	**65.78**	**331**	LR	LR	05 30 00.5	
	comp=Z,33nm,18.5s,MS3.6,baz=10.0,slow=41						
WMOK	**Wichita Mounta**	**144.32**	**29**	*e*PKPdf	PKPdf	05 04 57.4	-2.4
TXAR	**Lajitas Array**	**145.57**	**41**	PKPbc	PKPbc	05 05 03.4	+1.2
	1.0nm,0.5s,baz=238,slow=1.0,SNR=27						
TXAR	**Lajitas Array**	**145.57**	**41**	PKPbc	PKPbc	05 05 03.4	+1.2
MIAR	**Mount Ida**	**146.75**	**23**	*e*PKPbc	PKPbc	05 05 07.5	+1.9
WVT	**Waverly**	**147.06**	**14**	*e*PKPbc	PKPbc	05 05 05.7	-0.8
JCT	**Junction City**	**147.11**	**35**	*e*PKPbc	PKPbc	05 05 07.5	+0.6

MOS 21 05:40:56.7±0.7, 2881N×13939E, h454km, mb3.8/14, Error ellipse: s-maj=26.3km s-min=10.2km az=111.9
ISCJB 21 05:40:57.7±0.4, 2887N±005×1397E±01, h475km±6km, mb3.8/18, Error ellipse: s-maj=16.9km s-min=5.4km az=163.3
IDC 21 05:40:57.9±0.6, 2885N×13945E, h446km±9km, mb3.3/13, mb1 3.5/17, mb1mx3.4/27, mbtmp3.4/17, Error ellipse: s-maj=21.1km s-min=8.1km az=74.0
JMA 21 05:40:58.3±0.2, 2894N×13991E, h482km, M4.2
NEIC 21 05:40:58.1±1.1, 2878N×13920E, h442km±13km, mb4.2/6, Error ellipse: s-maj=14.7km s-min=8.6km az=78.0

ISC 21 05:40:58.7±0.4, 2890N±005×1397E±01, h465km±6km, n64, σ1906/80, mb3.8/18, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.85**	**129**	P	**P**	**05 42 06.4**	**+0.5**
	35nm,0.3s,baz=291,slow=14,SNR=16						
CBIJ				S	**S**	**05 42 58.0**	**-2.3**
	358nm,0.3s,baz=272,slow=22,SNR=14						
CBIJ	**Chichi jima**	**2.85**	**129**	P	**P**	**05 42 06.6**	**+0.7**
JHHJ	**Haha-jima-NKT**	**3.16**	**135**	S	**S**	**05 43 05.1**	**+0.6**
JHJ	**Hachijo jima 2**	**4.21**	**1**	P	**P**	**05 42 17.1**	**+0.6**
	59nm,0.3s,baz=72,slow=22,SNR=8.2						
JHJ				S	**S**	**05 43 17.5**	**-2.5**
	30nm,0.3s,baz=64,slow=23,SNR=3.8						
BSO1	**Boso 1**	**5.84**	**11**	P	**P**	**05 42 33.4**	**+1.6**
BSO1				S	**S**	**05 43 47.7**	**-0.4**
JIE	**Ise**	**6.04**	**336**	P	**P**	**05 42 35.8**	**+2.0**
JIE				S	**S**	**05 43 52.2**	**+0.6**
JKN2	**Miekihoku**	**6.07**	**332**	P	**P**	**05 42 35.9**	**+1.8**
JKN2				S	**S**	**05 43 52.7**	**+0.5**
JOD2	**Odawara 2**	**6.37**	**356**	P	**P**	**05 42 37.7**	**+0.6**
JOD2				*e*S	**S**	**05 43 57.5**	**-0.2**
JAO	**Obara**	**6.67**	**343**	P	**P**	**05 42 42.6**	**+2.3**
JAO				S	**S**	**05 44 04.4**	**+0.9**
JHU	**Hanno**	**6.94**	**357**	P	**P**	**05 42 43.7**	**+0.7**
JHU				S	**S**	**05 44 06.5**	**-2.1**
JRY	**Ryogami san**	**7.13**	**355**	P	**P**	**05 42 45.4**	**+0.4**
JRY				*e*S	**S**	**05 44 11.5**	**-0.7**
JAG	**Ashikaga**	**7.51**	**359**	P	**P**	**05 42 48.3**	**-0.7**
JAG				S	**S**	**05 44 14.6**	**-4.9**
MJAR	**Matsushiro Arr**	**7.72**	**351**	P	**P**	**05 42 50.8**	**-0.4**
	1.6nm,0.3s,baz=182,slow=8.1,SNR=11						
MJAR				S	**S**	**05 44 22.3**	**-1.3**
	0.9nm,0.3s,baz=171,slow=16,SNR=5.5						
MJAR	**Matsushiro Arr**	**7.72**	**351**	P	**P**	**05 42 50.8**	**-0.4**
MJAR				S	**S**	**05 44 22.3**	**-1.3**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR				smax			
	comp=N,1.0nm,0.3s						
MAJO	**Matsushiro**	**7.72**	**351**	*e*P	**P**	**05 42 50.9**	**-0.4**
MAJO				*e*S	**S**	**05 44 18.2**	**-5.4**
MAJO				pmax	pmax		
	comp=Z,15nm,0.6s						
MAJO	**Matsushiro**	**7.72**	**351**	*e*P	**P**	**05 42 50.9**	**-0.4**
	comp=Z,15nm,0.6s						
MAJO				*e*S	**S**	**05 44 18.2**	**-5.4**
MAT	**Matsushiro**	**7.72**	**351**	P	**P**	**05 42 52.7**	**+1.4**
MAT				S	**S**	**05 44 24.3**	**+0.7**
JHO	**Hitachi**	**7.73**	**5**	P	**P**	**05 42 52.0**	**+0.7**
JHO				S	**S**	**05 44 21.6**	**-2.1**
KSRS	**Korea Array**	**13.02**	**314**	P	**P**	**05 43 47.7**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=126,slow=11,SNR=18						
KSRS	**Korea Array**	**13.02**	**314**	P	**P**		
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VLA	**Vladivostok**	**15.52**	**338**	*e*P	**P**	**05 44 13.8**	**-1.0**
VLA				pmax	pmax		
	comp=Z,43nm,0.6s						
ULN	**Ulaanbaatar**	**31.50**	**316**	*e*P	**P**	**05 46 40.7**	**-0.1**
SONM	**Songino Array**	**31.89**	**316**	P	**P**	**05 46 44.4**	**+0.2**
	comp=Z,2.1nm,0.4s,mb4.0,baz=125,slow=8.3,SNR=8.6						
SONM	**Songino Array**	**31.89**	**316**	P	**P**	**05 46 44.4**	**+0.2**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**38.57**	**264**	P	**P**	**05 47 38.2**	**-2.3**
	comp=Z,1.3nm,0.3s,mb3.8,baz=54,slow=6.5,SNR=7.4						
CMAR	**Chiang Mai Arr**	**38.57**	**264**	P	**P**	**05 47 38.2**	**-2.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**46.68**	**318**	P	**P**	**05 48 43.3**	**-0.6**
	comp=Z,0.5nm,0.3s,mb3.4,baz=98,slow=5.7,SNR=2.5						
ZALV	**Zalesovo Beam**	**46.68**	**318**	P	**P**	**05 48 43.3**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.7						
MKAR	**Makanchi Array**	**47.63**	**308**	P	**P**	**05 48 50.7**	**-0.5**
	comp=Z,0.8nm,0.4s,mb3.4,baz=94,slow=8.9,SNR=6.0						
MKAR	**Makanchi Array**	**47.63**	**308**	P	**P**	**05 48 50.7**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**47.63**	**308**	P	**P**	**05 48 50.7**	**-0.5**
FITZ	**Fitzroy Crossi**	**48.66**	**198**	*e*P	**P**	**05 48 59.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**48.66**	**198**	P	**P**	**05 48 59.5**	**+0.2**
	comp=Z,3.4nm,0.6s,mb3.9,baz=15,slow=10,SNR=22						
WRAB	**Tennant Creek**	**48.82**	**187**	*e*P	**P**	**05 49 00.0**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
WRAB	**Tennant Creek**	**48.82**	**187**	*e*P	**P**	**05 48 60.0**	**-0.4**
	comp=Z,10nm,0.9s,mb4.2						
WB2	**Warramunga Arr**	**48.83**	**187**	*e*P	**P**	**05 49 00.3**	**-0.2**
WRA	**Warramunga Arr**	**48.83**	**187**	P	**P**	**05 49 00.3**	**-0.2**
	comp=Z,4.9nm,0.4s,mb4.2,baz=2.5,slow=7.8,SNR=69						
WRA	**Warramunga Arr**	**48.83**	**187**	P	**P**	**05 49 00.3**	**-0.2**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KURK	**Kurchatov**	**50.15**	**314**	P	**P**	**05 49 09.3**	**-0.6**
	comp=Z,3.4nm,0.3s,mb4.2,baz=101,slow=7.9,SNR=5.5						
KURK	**Kurchatov**	**50.15**	**314**	P	**P**	**05 49 09.3**	**-0.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.1						
KURK	**Kurchatov**	**50.15**	**314**	*e*P	**P**	**05 49 08.2**	**-1.8**
ASAR	**Alice Springs**	**52.56**	**187**	P	**P**	**05 49 28.1**	**+0.3**
	comp=Z,1.3nm,0.5s,mb3.5,baz=14,slow=10,SNR=20						
ASAR	**Alice Springs**	**52.56**	**187**	P	**P**	**05 49 28.1**	**+0.4**
ASA

BEST				*e*S	**Sb**	**05 42 16.2**	**-0.7**
MYA	**Malataya**	**1.43**	**251**	*e*PN	**Pn**	**05 42 01.2**	**-1.4**
EZM	**Erzurum**	**1.45**	**40**	*e*PN	**Pn**	**05 42 02.6**	**-0.4**
EZM				*e*SN	**Sn**	**05 42 22.2**	**0.0**
ERZM	**Erzurum**	**1.46**	**40**	*e*P	**Pn**	**05 42 02.3**	**-0.7**
ERZM				*e*S	**Sn**	**05 42 23.5**	**+1.2**
MARD	**Mardin**	**1.56**	**161**	⇓*i*P	**Pn**	**05 42 04.2**	**-0.3**
MARD				*i* S	**Sn**	**05 42 25.3**	**+0.4**
URFA	**Urfa**	**1.71**	**218**	*e*PN	**Pn**	**05 42 05.0**	**-1.4**
GUMT	**Gumushane**	**1.74**	**343**	*e*PN	**Pn**	**05 42 06.8**	**-0.1**
SIRT	**Sirnak**	**2.22**	**125**	*e*PN	**Pn**	**05 42 14.9**	**+1.3**
AGRB	**Hanur-Agry**	**2.34**	**70**	*e*PN	**Pn**	**05 42 16.6**	**+1.4**
ESPY	**Espiye-Giresun**	**2.38**	**333**	*e*PN	**Pn**	**05 42 15.2**	**-0.5**
SVSK	**Karacayir**	**2.68**	**296**	*e*PN	**Pn**	**05 42 19.1**	**-0.8**
BCA	**Borcka**	**2.88**	**23**	*e*PN	**Pn**	**05 42 22.2**	**-0.3**

*ISCJB **21** 05:45:54.2±0.5, 1756S±005×6964W±006, h160km±6km, mb4.2/7, Error ellipse: s-maj=9.9km s-min=7.5km az=148.1*
*NEIC **21** 05:45:55.0±0.7, 1753S×6959W, h153km±8km, mb4.3/4, Error ellipse: s-maj=12.1km s-min=9.1km az=55.0*
*IDC **21** 05:45:56.3±1.1, 1759S×6942W, h160km±8km, mb4.1/7, mb1 4.1/9, mb1mx3.7/20, mbtmp4.1/9, Error ellipse: s-maj=17.5km s-min=9.6km az=100.0*

ISC 21 05:45:55.1±0.5, 1757S±005×6964W±006, h155km±6km, n23, σ1§12/34, mb4.2/7, 1C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.93**	**49**	P	**Pn**	**05 46 31.0**	**+1.4**
	190nm,0.3s,baz=245,slow=7.8,SNR=8285						
LPAZ				S	**Sn**	**05 46 56.7**	**+0.5**
	18nm,0.3s,baz=46,slow=19,SNR=3.8						
LPAZ	**La Paz**	**1.93**	**49**	P	**Pn**	**05 46 31.0**	**+1.4**
LPAZ				S	**Sn**	**05 46 56.7**	**+0.5**
LPAZ				*e*Sn	**Sn**	**05 46 57.3**	**+1.1**
ARE	**Arequipa**	**2.08**	**302**	⇑*i*P	**Pn**	**05 46 32.0**	**+0.6**
ARE				*i* S	**Sn**	**05 46 59.0**	**-0.4**
LVC	**Limon Verde**	**5.07**	**172**	P	**Pn**	**05 47 11.0**	**+1.6**
	40nm,0.3s,baz=353,slow=7.0,SNR=893						
LVC				S	**Sn**	**05 48 06.8**	**-0.7**
	36nm,0.3s,baz=112,slow=22,SNR=23						
LVC	**Limon Verde**	**5.07**	**172**	*e*Pn	**Pn**	**05 47 10.7**	**+1.3**
LVC				*e*Sn	**Sn**	**05 48 06.2**	**-1.3**
LVC				S	**Sn**	**05 48 06.8**	**-0.7**
SIV	**San Ignacio**	**8.36**	**80**	P	**Pn**	**05 47 51.0**	**-2.3**
	8.0nm,0.3s,baz=267,slow=11,SNR=137						
SIV				S	**Sn**	**05 49 20.0**	**-6.3**
	1.0nm,0.3s,baz=328,slow=21,SNR=8.5						
NNA	**Nana**	**8.90**	**308**	P	**Pn**	**05 47 58.6**	**-1.9**
	4.2nm,0.3s,baz=136,slow=12,SNR=16						
NNA				S	**Sn**	**05 49 33.3**	**-6.2**
	2.5nm,0.3s,baz=12,slow=23,SNR=4.4						
NNA	**Nana**	**8.90**	**308**	P	**Pn**	**05 47 58.6**	**-1.9**
NNA				S	**Sn**	**05 49 33.3**	**-6.2**
NNA				*e*Sn	**Sn**	**05 49 33.8**	**-5.7**
ATAH	**Atahualpa**	**13.54**	**320**	P	**Pn**	**05 49 00.2**	**-0.8**
	0.3nm,0.3s,baz=291,slow=14,SNR=3.0						
CFAA	**Coronel Fontan**	**14.04**	**175**	P	**Pn**	**05 49 06.5**	**-0.7**
	0.1nm,0.3s,baz=356,slow=12,SNR=27						
CPUP	**Villa Florida**	**14.36**	**130**	P	**Pn**	**05 49 11.4**	**+0.1**
	0.2nm,0.3s,baz=303,slow=12,SNR=2.8						
BDFB	**Brasilia**	**20.82**	**88**	P	**P**	**05 50 23.7**	**-0.9**
	4.2nm,0.4s,baz=247,slow=9.0,SNR=9.7						
BDFB	**Brasilia**	**20.82**	**88**	*e*P	**P**	**05 50 22.9**	**-1.7**
	14nm,0.8s						
TRQA	**Tornquist**	**21.49**	**163**	*e*P	**P**	**05 50 31.9**	**+0.5**
	9.7nm,1.4s,mb3.9						
PLCA	**Paso Flores**	**23.10**	**182**	P	**P**	**05 50 49.9**	**+2.7**
	6.7nm,0.8s,mb4.1,baz=348,slow=10,SNR=16						
PLCA	**Paso Flores**	**23.10**	**182**	*e*P	**P**	**05 50 48.4**	**+1.2**
	6.5nm,0.8s,mb4.1						
JTS	**JuntasAbangare**	**31.54**	**330**	P	**P**	**05 52 05.5**	**+2.6**
	7.9nm,1.0s,mb4.4,baz=315,slow=22,SNR=3.7						
JTS	**JuntasAbangare**	**31.54**	**330**	*e*P	**P**	**05 52 04.2**	**+1.3**
	19nm,1.6s,mb4.6						
DBIC	**Dimbokro**	**68.34**	**75**	P	**P**	**05 56 40.1**	**-0.1**
	6.6nm,0.6s,mb4.5,baz=227,slow=7.5,SNR=15						
ULM	**Lac du Bonnet**	**71.38**	**343**	P	**P**	**05 56 57.9**	**0.0**
	2.4nm,0.4s,mb4.2,baz=146,slow=6.5,SNR=13						
TORD	**Torodi Ar. Bea**	**76.73**	**71**	P	**P**	**05 57 29.4**	**-0.4**
	7.5nm,0.7s,mb4.4,baz=256,slow=5.4,SNR=41						
YKA	**Yellowknife Ar**	**87.27**	**341**	P	**P**	**05 58 24.4**	**+0.8**
	1.0nm,0.5s,mb3.9,baz=134,slow=4.8,SNR=8.7						
YKA	**Yellowknife Ar**	**87.27**	**341**	P	**P**	**05 58 24.4**	**+0.8**

*IDC **21** 06:08:27.4±16.0, 201S×10199E, h198km±134km, mb3.3/7, mb1 3.4/7, mb1mx3.3/19, mbtmp3.3/7, Error ellipse: s-maj=221.9km s-min=13.5km az=57.0*

NEIC 21 06:08:05.6±2.2, 309S×10042E, h35km, Error ellipse: s-maj=94.6km s-min=12.2km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.46**	**356**	P	P	06 12 52.0	+0.9
	0.6nm,0.4s,baz=185,slow=33,SNR=4.4						
FITZ	**Fitzroy Crossi**	**28.87**	**123**	*e*P	P	06 14 01.2	0.0
FITZ	**Fitzroy Crossi**	**28.87**	**123**	P	P	06 14 00.4	-0.8
	0.5nm,0.6s,baz=160,slow=16,SNR=4.3						
WRA	**Warramunga Arr**	**37.09**	**119**	P	P	06 15 12.4	-0.5
	0.5nm,0.4s,baz=299,slow=9.9,SNR=17						
WRAB	**Tennant Creek**	**37.10**	**119**	*e*P	P	06 15 12.5	-0.5
WB2	**Warramunga Arr**	**37.10**	**119**	*e*P	P	06 15 12.6	-0.4
ASAR	**Alice Springs**	**38.28**	**125**	P	P	06 15 23.9	+1.0
	1.2nm,0.4s,baz=299,slow=8.1,SNR=23						
STKA	**Stephens Creek**	**48.12**	**131**	*e*P	P	06 16 43.1	+0.8
STKA	**Stephens Creek**	**48.12**	**131**	P	P	06 16 44.3	+1.9
	1.9nm,0.6s,baz=300,slow=9.9,SNR=6.2						
MKAR	**Makanchi Array**	**52.18**	**344**	P	P	06 17 13.7	+0.9
	0.6nm,0.4s,baz=150,slow=8.4,SNR=5.0						
ZALV	**Zalesovo Beam**	**58.31**	**349**	P	P	06 17 54.7	-2.1
	0.6nm,0.3s,baz=177,slow=5.2,SNR=4.3						
ZALV	**Zalesovo Beam**	**58.31**	**349**	P	P	06 17 54.7	-2.1
TXAR	**Lajitas Array**	**145.30**	**39**	PKP	PKPdf	06 27 40.9	+0.4
	0.3nm,0.5s,baz=214,slow=1.0,SNR=7.7						

MAN 21 06:41:29, 1783N×12125E, h35km, mb4.0, ML2.8, MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**0.03**	**347**	*e*P	Pn	06 41 35.9	+1.1
APYP				*e*S	Sn	06 41 38.5	-0.3
ABRA	**Dolores**	**0.54**	**251**	*e*P	Pn	06 41 42.9	+2.7
ABRA				*e*S	Sn	06 41 50.4	+2.2
CVP	**Callao Caves**	**0.56**	**103**	*e*P	Pn	06 41 42.2	+1.7
CVP				*e*S	Sn	06 41 49.1	+0.6
CAUP	**Cauayan**	**1.04**	**148**	*e*P	Pn	06 41 52.6	+5.5
CAUP				*e*S	Sn	06 42 01.3	+1.0

MAN 21 07:12:30, 1677N×12081E, h22km, mb4.0, ML2.8, MS2.5, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BCPH	**Baguio City Da**	**0.44**	**209**	⇑*e*P	Pb	07 12 33.0	-6.2
BCPH				*e*S	Sb	07 12 44.0	-1.3
ABRA	**Dolores**	**0.88**	**354**	*e*P	Pb	07 12 46.3	-0.4
BOLP	**Bolinao**	**0.94**	**246**	*e*P	Pb	07 12 47.3	-0.3
BOLP				*e*S	Sb	07 13 02.3	+2.7
CAUP	**Cauayan**	**0.99**	**80**	*e*P	Pb	07 12 49.8	+1.4
CAUP				*e*S	Sb	07 13 11.4	+10
APYP	**Conner**	**1.17**	**21**	*e*P	Pn	07 12 51.2	+0.2
APYP				*e*S	Sb	07 13 07.1	+1.0
SIPP	**Brgy, Tapao**	**1.20**	**344**	⇓*i*P	Pn	07 12 50.9	-0.5
SIPP				*i* S	Sn	07 13 07.6	+0.5
BALP	**Baler**	**1.26**	**144**	*e*P	Pn	07 12 52.3	0.0
BALP				*e*S	Sn	07 13 09.6	+1.1
SCZP	**Santa Cruz**	**1.31**	**221**	*e*P	Pn	07 12 53.5	+0.5
SCZP				*e*S	Sn	07 13 19.8	+10
LUBP	**Lubang**	**3.06**	**190**	*e*P	Pn	07 13 19.0	+1.8

*ISCJB **21** 07:27:02.4±1.3, 79N±0.1×754W±0.1, h83km±16km, mb3.4/5, Error ellipse: s-maj=21.6km s-min=12.3km az=138.2*
*NEIC **21** 07:27:03.5±1.2, 773N×7543W, h79km±13km, mb3.6/1, Error ellipse: s-maj=20.1km s-min=13.7km az=219.0*
*IDC **21** 07:27:05.0±2.7, 784N×7525W, h86km±24km, mb3.3/5, mb1 3.5/7, mb1mx3.3/22, mbtmp3.3/7, Error ellipse: s-maj=32.9km s-min=19.1km az=81.0*

ISC 21 07:27:03.9±1.1, 787N±010×754W±01, h79km±14km, n12, σ1§02/13, mb3.4/5, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**3.19**	**160**	P	**Pn**	**07 27 52.3**	**+0.5**
	5.1nm,0.3s,baz=56,slow=1.6,SNR=24						
ROSC				S	**Sn**	**07 28 29.5**	**+0.7**
	7.3nm,0.3s,baz=270,slow=23,SNR=4.4						
ROSC	**El Rosal**	**3.19**	**160**	*e*Pn	**Pn**	**07 27 51.8**	**-0.1**
ROSC				P		07 27 52.3	
ROSC				S	**Sn**	**07 28 29.5**	**+0.7**
ROSC				*e*Sn	**Sn**	**07 28 31.8**	**+3.0**
BCIP	**Isla Barro Col**	**4.54**	**287**	*e*Pn	**Pn**	**07 28 09.4**	**-0.8**
PCRV	**Puerto La Cruz**	**10.90**	**77**	P	**Pn**	**07 29 36.9**	**-0.2**
	0.5nm,0.3s,baz=48,slow=16,SNR=3.2						
LPAZ	**La Paz**	**25.07**	**163**	P	**P**	**07 32 21.3**	**+0.3**
	0.7nm,0.7s,mb3.2,baz=270,slow=7.0,SNR=5.3						
LPAZ	**La Paz**	**25.07**	**163**	P	**P**	**07 32 17.6**	**-3.5**
	3.2nm,1.2s,mb3.6						
SIV	**San Ignacio**	**27.64**	**149**	P	**P**	**07 32 42.6**	**-1.7**
	0.5nm,0.6s,mb3.2,baz=323,slow=12,SNR=5.4						
PDAR	**Pinedale Array**	**45.90**	**325**	P	**P**	**07 35 20.1**	**+1.6**
	0.3nm,0.7s,mb3.1,baz=102,slow=8.5,SNR=2.9						
YKA	**Yellowknife Ar**	**61.51**	**341**	P	**P**	**07 37 12.5**	**+0.4**
	0.9nm,0.6s,mb4.0,baz=136,slow=6.9,SNR=5.4						
TORD	**Torodi Ar. Bea**	**75.77**	**78**	P	**P**	**07 38 41.8**	**-0.1**
	0.4nm,0.7s,mb3.3,baz=256,slow=5.3,SNR=4.2						
ASAR	**Alice Springs**	**147.80**	**237**	PKPbc	PKPbc	07 46 40.8	+0.2
	0.4nm,0.6s,baz=126,slow=3.6,SNR=5.0						
WRA	**Warramunga Arr**	**148.78**	**244**	PKPbc	PKPbc	07 46 44.2	+1.0
	0.6nm,0.8s,baz=107,slow=3.0,SNR=8.8						

*IDC **21** 08:01:21.9±10.0, 1742S×17864W, h509km±121km, mb3.3/7, mb1 3.5/7, mb1mx3.3/16, mbtmp3.3/7, Error ellipse: s-maj=100.6km s-min=34.9km az=162.0*
*NEIC **21** 08:01:27.7±6.0, 1755S×17877W, h584km±73km, mb4.0/3, Error ellipse: s-maj=81.7km s-min=26.9km az=157.0*
*ISCJB **21** 08:01:28.1±1.3, 174S±07×1789W±04, h600km, mb3.7/9, Error ellipse: s-maj=101.2km s-min=14.5km az=155.0*

ISC 21 08:01:29.3±1.3, 174S±07×1789W±04, h600km, n13, σ0§45/12, mb3.7/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.10**	**260**	P	**P**	**08 07 17.6**	**+0.2**
	1.7nm,0.4s,mb4.0,baz=82,slow=11,SNR=5.9						
CTAO	**Charters Tower**	**33.10**	**260**	*e*P	**P**	**08 07 17.8**	**+0.4**
	7.4nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**38.48**	**241**	P	**P**	**08 08 01.6**	**0.0**
	1.0nm,0.4s,mb3.7,baz=97,slow=10,SNR=5.9						
WB2	**Warramunga Arr**	**44.28**	**259**	*e*P	**P**	**08 08 47.3**	**-0.1**
WRAB	**Tennant Creek**	**44.28**	**259**	*e*P	**P**	**08 08 46.9**	**-0.5**
	3.1nm,0.6s,mb4.0						
WRA	**Warramunga Arr**	**44.29**	**259**	P	**P**	**08 08 47.6**	**+0.2**
	2.0nm,0.4s,mb4.0,baz=94,slow=7.1,SNR=111						
ASAR	**Alice Springs**	**44.50**	**254**	P	**P**	**08 08 49.2**	**+0.2**
	13nm,0.5s,mb4.7,baz=87,slow=8.6,SNR=222						
FITZ	**Fitzroy Crossi**	**52.68**	**260**	*e*P	**P**	**08 09 50.1**	**+0.6**
MBWA	**Marble Bar**	**57.77**	**256**	P	**P**	**08 10 23.8**	**-0.9**
	2.4nm,0.6s,mb3.5						
NVAR	**Mina Array Bea**	**79.39**	**44**	P	**P**	**08 12 34.4**	**+0.2**
	0.3nm,0.6s,mb2.8,baz=229,slow=11,SNR=4.0						
TXAR	**Lajitas Array**	**86.11**	**58**	P	**P**	**08 13 08.5**	**+0.4**
	0.4nm,0.7s,mb3.2,baz=216,slow=5.5,SNR=6.7						
PDAR	**Pinedale Array**	**87.31**	**44**	P	**P**	**08 13 12.8**	**-0.6**
	0.5nm,0.8s,mb3.3,baz=199,slow=4.1,SNR=3.6						
GERES	**GERESS Array B**	**147.05**	**345**	PKPbc	PKPbc	08 20 07.0	+1.4
	0.3nm,0.3s,baz=7.1,slow=3.1,SNR=4.9						

*NNC **21** 08:02:52.2±3.1, 3782N×7118E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=26.3km s-min=24.4km az=62.0*
*ISCJB **21** 08:03:04.9±1.1, 3835N±007×726E±02, h10km, Error ellipse: s-maj=18.5km s-min=7.4km az=22.5*
*NEIC **21** 08:03:06.9±1.5, 3849N×7246E, h10km, Error ellipse: s-maj=87.9km s-min=10.0km az=118.0*

ISC 21 08:03:06.7±1.1, 3835N±007×727E±02, h10km, n13, σ0§39/18, 2C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.85**	**11**	P	**Pn**	**08 04 05.8**	**-0.2**
	SNR=9.6						
AML	**Almayashu**	**3.85**	**11**	*e*Pn	**Pn**	**08 04 05.0**	**-1.0**
AML				*e*Sn	**Sb**	**08 05 01.1**	**-0.3**
UCH	**Uchtor**	**4.11**	**19**	P	**Pn**	**08 04 09.9**	**+0.4**
	SNR=14						
UCH	**Uchtor**	**4.11**	**19**	*e*Pn	**Pn**	**08 04 09.7**	**+0.1**
UCH				*e*Sn	**Sb**	**08 05 09.5**	**+0.7**
EKS2	**Erkin-Say**	**4.38**	**10**	P	**Pn**	**08 04 12.9**	**-0.4**
	SNR=29						
EKS2	**Erkin-Say**	**4.38**	**10**	*e*Pn	**Pn**	**08 04 12.4**	**-0.8**
EKS2				*e*Sn	**Sn**	**08 05 04.2**	**-0.2**
AAK	**Ala-Archa**	**4.49**	**17**	P	**Pn**	**08 04 15.1**	**+0.4**
	SNR=7.3						
KBL	**Kabul**	**4.82**	**219**	*e*Pn	**Pn**	**08 04 19.5**	**+0.2**
KK31	**Karatay Array**	**5.04**	**341**	⇓Pn	**Pn**	**08 04 15.8**	**-6.5**
	3.4nm,0.3s,baz=176,slow=12,SNR=119						
KK31				Sn	**Sn**	**08 05 20.8**	**+0.2**
	12nm,0.6s,baz=180,slow=21,SNR=17						
TKM2	**Tokmak 2**	**5.07**	**25**	⇑Pn	**Pn**	**08 04 22.6**	**0.0**
	3.7nm,0.6s						
TKM2				⇑Sn	**Sb**	**08 05 36.3**	**0.0**
	3.0nm,0.8s						
TKM2	**Tokmak 2**	**5.07**	**25**	P	**Pn**	**08 04 22.7**	**+0.1**
	SNR=5.3						
TKM2	**Tokmak 2**	**5.07**	**25**	*e*Pn	**Pn**	**08 04 22.4**	**-0.2**
	4.2nm,0.5s						
USP	**Ospenovka**	**5.10**	**15**	P	**Pn**	**08 04 23.1**	**0.0**
	SNR=8.4						

*SKO **21** 08:08:43.7, 4203N×2152E, h24km, M1.6, ML2.2*
*ISCJB **21** 08:08:44.1±0.6, 4203N±002×2151E±005, h9km±6km, Error ellipse: s-maj=6.5km s-min=3.7km az=22.0*
*CSEM **21** 08:08:44.5±0.1, 4205N×2150E, h15km, ML2.2, Error ellipse: s-maj=4.0km s-min=2.2km az=115.0*
*BEO **21** 08:08:45.4±1.2, 4205N×2149E, ML1.8/2*
*THE **21** 08:08:47.1, 4191N×2151E, h3km, ML3.1*

ISC 21 08:08:44.9±0.6, 4203N±003×2150E±005, h12km±5km, n22, σ0§73/41, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKO	**Skopje**	**0.07**	**218**	*e*Pg	**Pg**	**08 08 48.1**	**+0.8**
SKO				*e*Sg	**Sg**	**08 08 50.2**	**+1.1**
SKO	**Skopje**	**0.07**	**218**	⇑*i*Pg	**Pg**	**08 08 48.3**	**+0.9**
SKO				*i* Sg	**Sg**	**08 08 50.2**	**+1.1**
SKO				*e*Lg		08 08 50.5	
	comp=E,1μm,0.3s						
SKO				*e*Lg		08 08 51.3	
	comp=N,1μm,0.3s						
SKO	**Skopje**	**0.07**	**218**	*e*Pg	**Pg**	**08 08 48.1**	**+0.7**
SKO				*i* Sg	**Sg**	**08 08 50.2**	**+1.0**
STIP	**Stip**	**0.61**	**123**	*e*Pg	**Pg**	**08 08 57.6**	**+0.8**
STIP				*e*Sg	**Sg**	**08 09 05.8**	**+1.0**
STIP	**Stip**	**0.61**	**123**	*i* Pg	**Pg**	**08 08 55.5**	**-1.3**
STIP	**Stip**	**0.61**	**123**	*i* Pg	**Pg**	**08 08 55.5**	**-1.3**
STIP				*e*Sg	**Sg**	**08 09 05.8**	**+0.9**
KRUS	**Krusevo**	**0.69**	**196**	*i* Pg	**Pg**	**08 08 58.5**	**+0.3**
KRUS				*i* Sg	**Sg**	**08 09 07.6**	**+0.4**
KRUS				*e*Lg		08 08 08.2	
	comp=E,46nm,0.4s						
KRUS				*e*Lg		08 08 09.3	
	comp=N,38nm,0.3s						
KRUS	**Krusevo**	**0.69**	**196**	*i* Pg	**Pg**	**08 08 58.5**	**+0.3**
KRUS				*i* Sg	**Sg**	**08 09 07.5**	**+0.3**
BARS	**Barje**	**0.82**	**16**	*e*Pg	**Pg**	**08 09 00.0**	**-0.7**
BARS				*e*Sg	**Sg**	**08 09 11.2**	**-0.3**
BIA	**Bitola**	**1.02**	**187**	⇑*i*Pg	**Pg**	**08 09 03.6**	**-0.8**
BIA				*i* Sg	**Sg**	**08 09 17.2**	**-0.5**
BIA				*e*Lg		08 09 19.0	
	comp=E,51nm,0.4s						
BIA				*e*Lg		08 09 19.3	
	comp=N,40nm,0.3s						
BIA	**Bitola**	**1.02**	**187**	*e*Pg	**Pg**	**08 09 03.7**	**-0.8**
BIA				*e*Sg	**Sg**	**08 09 17.4**	**-0.3**
OHR	**Ohrid**	**1.06**	**210**	*e*Pg	**Pg**	**08 09 04.4**	**-0.8**
OHR				*e*Sg	**Sg**	**08 09 19.1**	**+0.1**
OHR	**Ohrid**	**1.06**	**210**	*i* Pg	**Pg**	**08 09 04.3**	**-0.9**
OHR				*i* Sg	**Sg**	**08 09 19.0**	**0.0**
VAY	**Valandovo**	**1.07**	**131**	*e*Pg	**Pg**	**08 09 05.2**	**-0.3**
VAY				*e*Sg	**Sg**	**08 09 19.7**	**+0.3**
VAY	**Valandovo**	**1.07**	**131**	*i* Pg	**Pg**	**08 09 05.2**	**-0.3**
VAY				*i* Sg	**Sg**	**08 09 18.8**	**-0.6**
VAY				*e*Lg		08 09 19.6	
	comp=E,43nm,0.5s						
VAY				*e*Lg		08 09 19.9	
	comp=N,41nm,0.5s						
VAY	**Valandovo**	**1.07**	**131**	*i* Pg	**Pg**	**08 09 05.2**	**-0.3**
VAY				*e*Sg	**Sg**	**08 09 19.7**	**+0.3**
FNA	**Florina**	**1.25**	**184**	*e*Pg	**Pg**	**08 09 08.2**	**-0.6**
FNA				*e*Sg	**Sg**	**08 09 24.9**	**-0.1**
GRG	**Griva**	**1.27**	**147**	*e*Pg	**Pg**	**08 09 08.7**	**-0.5**
KNT	**Kendrikon**	**1.36**	**129**	*e*Pg	**Pg**	**08 09 11.0**	**0.0**
VTS	**Vitosha**	**1.39**	**66**	*e*Pn	**Pn**	**08 09 11.3**	**+1.3**
VTS				*e*Sg	**Sg**	**08 09 29.6**	**+0.1**
ZAPS	**Zavoj**	**1.50**	**34**	*e*Pn	**Pn**	**08 09 13.3**	**+1.7**
ZAPS				*e*Sg	**Sg**	**08 09 32.1**	**-1.0**
SOH	**Sokhos**	**1.84**	**130**	*e*Pb	**Pb**	**08 09 18.5**	**0.0**
SOH				*e*Sb	**Sb**	**08 09 41.3**	**-0.2**

*KRSC **21** 08:31:20.5±0.8, 5122N×15829E, h38km±37km, ML4.7*
*ISCJB **21** 08:31:21.9±0.8, 5125N±006×158.1E±0.1, h58km±8km, mb3.8/10, Error ellipse: s-maj=13.7km s-min=4.8km az=42.8*
*MOS **21** 08:31:22.0±1.9, 5144N×15790E, h41km, mb4.1/7, Error ellipse: s-maj=25.5km s-min=9.8km az=66.4*
*NEIC **21** 08:31:24.0±1.5, 5146N×15787E, h60km±14km, mb4.1/2, Error ellipse: s-maj=19.4km s-min=10.8km az=130.0*
*IDC **21** 08:31:26.3±5.7, 5139N×15788E, h81km±51km, mb3.4/10, mb1 3.8/11, mb1mx3.6/23, mbtmp3.5/11, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/38, Error ellipse: s-maj=28.0km s-min=19.5km az=132.0*

ISC 21 08:31:23.2±0.8, 5127N±006×15811E±010, h53km±8km, n44, σ1§34/53, mb3.8/10, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**1.20**	**12**	*e*P	**Pn**	**08 31 41.4**	**-2.2**
RUS				*i* S	**Sn**	**08 31 56.6**	**-2.2**
GRL	**Gorelyy**	**1.29**	**359**	*e*P	**Pn**	**08 31 44.2**	**-0.7**
GRL				*i* S	**Sn**	**08 32 01.1**	**+0.1**
MIPR	**Malaya Ipel'ka**	**1.31**	**321**	*e*P	**Pn**	**08 31 45.5**	**+0.3**
MIPR				*i* S	**Sn**	**08 32 03.4**	**+1.7**
SKR	**Severo-Kuril's**	**1.39**	**246**	*e*PN	**Pn**	**08 31 44.5**	**-1.7**
SKR				*e*S	**Sn**	**08 32 02.0**	**-1.4**
SKR				pmax	pmax		
	comp=Z,130nm,0.4s						
SKR				smax			
	comp=E,730nm,0.6s						
SKR				smax			
	comp=N,2μm,0.4s						
ALID	**Alaid**	**1.66**	**257**	*e*P	**Pn**	**08 31 49.6**	**-0.4**
ALID				*i* S	**Sn**	**08 32 10.6**	**+0.5**
PET	**Petropavlovsk**	**1.79**	**11**	⇑*i*PN	**Pn**	**08 31 50.5**	**-1.2**
PET				*e*S	**Sn**	**08 32 12.0**	**-1.3**
PET				pmax	pmax		
	comp=Z,123nm,0.4s						
PET				smax			
	comp=E,1μm,0.6s						
PET				smax			
	comp=N,1μm,0.5s						
PET	**Petropavlovsk**	**1.79**	**11**	*e*P	**Pn**	**08 31 50.4**	**-1.3**
PET				*i* S	**Sn**	**08 32 12.2**	**-1.1**
PET	**Petropavlovsk**	**1.79**	**11**	*e*Pn	**Pn**	**08 31 50.3**	**-1.4**
PET				*e*Sn	**Sn**	**08 32 11.6**	**-1.6**
AVH	**Avacha**	**2.04**	**11**	*e*P	**Pn**	**08 31 54.9**	**-0.2**
SPN	**Mys Shipunski**	**2.18**	**32**	*e*P	**Pn**	**08 31 55.5**	**-1.5**
SPN				*i* S	**Sn**	**08 32 21.4**	**-1.4**
GNL	**Ganaly**	**2.44**	**358**	*e*P	**Pn**	**08 32 00.7**	**+0.2**
GNL				*i* S	**Sn**	**08 32 29.9**	**+0.9**
KMNR	**Kamenistaya**	**4.67**	**15**	P	**Pn**	**08 32 34.0**	**+2.9**
KPT	**Kopyto**	**4.87**	**14**	P	**Pn**	**08 32 35.4**	**+1.5**
BZMR	**Bezymyannaya**	**4.89**	**16**	P	**Pn**	**08 32 36.5**	**+2.4**
BZWR	**Bezymyannyi-We**	**4.92**	**16**	P	**Pn**	**08 32 36.4**	**+1.9**
SRDR	**Sredinnyy**	**5.15**	**10**	P	**Pn**	**08 32 40.3**	**+2.6**
KRSR	**Krestovskiy**	**5.17**	**15**	P	**Pn**	**08 32 40.0**	**+2.1**
KBTR	**Krutoberegovo**	**5.68**	**28**	P	**Pn**	**08 32 45.2**	**+0.2**
ASAJ	**Asahikawa**	**12.65**	**242**	P	**Pn**	**08 34 21.9**	**+1.7**
	comp=N,0.3nm,0.3s,baz=96,slow=16,SNR=2.9	

PRNI	**Paran**	**1.24**	**294**	Pg	**Pg**	**09**	**02**	**51.2 -0.7**
PRNI				Sg	**Sg**	**09**	**03**	**09.4 +1.5**
JLOS		**1.33**	**213**	P	**Pg**	**09**	**02**	**53.7 +0.2**
KRMI	**Paran Flat**	**1.40**	**281**	Pn	**Pn**	**09**	**02**	**54.0 -0.9**
TBKS	**Tabuk**	**1.64**	**173**	P	**Pn**	**09**	**02**	**59.3 +1.1**
BDAS	**Al Bad'**	**1.77**	**217**	P	**Pn**	**09**	**02**	**60.0 -0.1**
DSI	**Dead Sea**	**1.89**	**335**	Pn	**Pn**	**09**	**03**	**02.5 +0.8**

*DDA **21** 09:39:16.2, 3984N×30.12E, h7km±6km, Md2.9*
*CSEM **21** 09:39:16.0±0.1, 3987N×3013E, h1km±1km, MD2.9, Error ellipse: s-maj=1.8km s-min=1.4km az=99.0*
*ISCJB **21** 09:39:17.1±0.4, 3988N±003×30.17E±003, h10km, Error ellipse: s-maj=3.9km s-min=3.7km az=37.4*
*ISK **21** 09:39:17.0, 3988N×3014E, h9km, MD2.9*
ISC 21 09:39:17.1±0.5,**3985N**±003×**3014E**±003,**h3**km±6km,**n25,**
σ0§**77**/33,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.25**	**84**	*i* P	**Pg**	**09 39 21.4**	**-0.5**
BORA				*i* S	**Sg**	**09 39 24.1**	**-0.9**
GPA	**Golpazari**	**0.45**	**17**	*e*PG	**Pg**	**09 39 25.8**	**0.0**
GPA				*e*SG	**Sg**	**09 39 33.3**	**+1.6**
ESKT	**Eskisehir**	**0.64**	**121**	*i* P	**Pg**	**09 39 28.9**	**-0.5**
ESKT				*i* S	**Sg**	**09 39 38.4**	**+0.6**
SEYT	**Eskypehyr**	**0.64**	**121**	*i* P	**Pg**	**09 39 28.9**	**-0.6**
GULT	**Gulveren**	**0.65**	**27**	*e*PG	**Pg**	**09 39 29.2**	**-0.3**
GULT				*e*SG	**Sg**	**09 39 38.1**	**+0.2**
ADVT	**Abdulvahap**	**0.65**	**332**	*e*PG	**Pg**	**09 39 29.5**	**-0.1**
ALT	**Altintas**	**0.80**	**181**	*e*PG	**Pg**	**09 39 33.3**	**+0.9**
ULDT	**Uludag**	**0.82**	**291**	*i* P	**Pg**	**09 39 32.4**	**-0.5**
ULDT				*i* S	**Sg**	**09 39 39.9**	**-3.6**
GDZ	**Gediz**	**0.92**	**214**	*i* P	**Pg**	**09 39 32.5**	**-2.1**
GDZ				*i* S	**Sg**	**09 39 51.6**	**+5.0**
YLV	**Yalova**	**0.92**	**321**	*e*PG	**Pg**	**09 39 34.5**	**-0.3**
GEMT	**Gemlik**	**0.93**	**309**	*e*PG	**Pg**	**09 39 34.7**	**-0.3**
MDU	**Mudurnu**	**1.03**	**53**	*e*PG	**Pg**	**09 39 37.1**	**+0.3**
HRT	**Hereke**	**1.03**	**340**	*e*PG	**Pg**	**09 39 37.2**	**+0.4**
HENT	**Hendek**	**1.13**	**31**	*i* P	**Pg**	**09 39 39.0**	**+0.2**
HENT				*i* S	**Sg**	**09 39 57.4**	**+4.0**
DST	**Dursunbey**	**1.19**	**258**	*e*PN	**Pn**	**09 39 40.5**	**-0.1**
SHUT	**Suhut-Afyon**	**1.34**	**166**	*e*PN	**Pn**	**09 39 42.9**	**+0.2**
DEMI	**Demirci**	**1.37**	**234**	*i* P	**Pn**	**09 39 42.8**	**-0.3**
DEMI				*i* S	**Sg**	**09 40 02.8**	**+1.9**
KCT	**Karacabey**	**1.43**	**287**	*e*PN	**Pn**	**09 39 44.0**	**0.0**
ISK	**Istanbul-Kandi**	**1.46**	**326**	*e*PN	**Pn**	**09 39 44.0**	**-0.5**
KHL	**Karahalli**	**1.60**	**198**	*e*PN	**Pn**	**09 39 46.4**	**0.0**
SGKT	**Sivrigoynuk**	**1.64**	**63**	*i* P	**Pn**	**09 39 46.4**	**-0.4**
SGKT				*i* S	Px	09 39 52.2	
KIZT	**Kizilcal**	**1.67**	**125**	*e*PN	**Pn**	**09 39 46.7**	**-0.5**
BALB	**Balikesir**	**1.75**	**264**	*e*PN	**Pn**	**09 39 48.8**	**+0.4**
KULA	**Kula-Manisa**	**1.76**	**221**	*e*PN	**Pn**	**09 39 48.4**	**-0.1**
KONT	**Konya--Tatoy**	**2.58**	**137**	*e*PN	**Pn**	**09 40 00.8**	**+1.0**

*ISCJB **21** 09:42:38.3±0.8, 3341N±003×3531E±007, h0km, Error ellipse: s-maj=9.4km s-min=4.0km az=19.4*
*GII **21** 09:42:38.1±0.8, 3339N×3537E, h0km, ML2.1/4, EXPLOSION*
*GRAL **21** 09:42:38.5±0.5, 3338N×3532E, h14km±3km, MD3.0, Fault plane solution: NP1:φ±270.00000°, δ60.00000°, λ0.00000°.*
*CSEM **21** 09:42:38.5, 3338N×3532E, h13km, ML3.0, After GRAL*
ISC 21 09:42:38.9±0.8,**3341N**±003×**3532E**±007,**h0**km,**n18,**
σ0§**71**/21,**1C-3D,Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matirih**	**0.08**	**6**	‖*e*P	**Pg**	**09 42 41.5**	**+1.1**
KSDI	**Kefar Szold**	**0.36**	**128**	Pg	**Pg**	**09 42 45.0**	**-0.7**
MMB4	**Mount Meron ar**	**0.40**	**170**	Pg	**Pg**	**09 42 47.0**	**+0.6**
MMA0B	**Mount Meron ar**	**0.40**	**170**	Pg	**Pg**	**09 42 46.3**	**-0.2**
MMA0B				Sg	**Sg**	**09 42 53.0**	**+1.3**
MMA0	**Mount Meron ar**	**0.40**	**170**	Pg	**Pg**	**09 42 46.2**	**-0.3**
MMB1	**Mount Meron ar**	**0.40**	**169**	Pg	**Pg**	**09 42 46.4**	**-0.2**
MMC6	**Mount Meron ar**	**0.40**	**171**	Pg	**Pg**	**09 42 46.2**	**-0.4**
MMA2	**Mount Meron ar**	**0.41**	**170**	Pg	**Pg**	**09 42 46.0**	**-0.6**
MMC5	**Mount Meron ar**	**0.41**	**169**	Pg	**Pg**	**09 42 46.2**	**-0.5**
MMC4	**Mount Meron ar**	**0.41**	**168**	Pg	**Pg**	**09 42 46.0**	**-0.7**
RCY	**Rachaya**	**0.42**	**80**	‖*e*P	**Pg**	**09 42 46.6**	**-0.4**
RCY				*e*S	**Sg**	**09 42 53.1**	**+0.7**
BHL	**Bhannes**	**0.56**	**29**	‖*e*P	**Pg**	**09 42 49.3**	**-0.4**
OFRI	**'Ofer**	**0.84**	**200**	Pg	**Pg**	**09 42 54.7**	**-0.2**
MMLI	**Mount Malkishu**	**0.97**	**175**	Pg	**Pg**	**09 42 56.7**	**-0.8**
HWQ	**Hawqa**	**1.01**	**31**	‖*e*P	**Pg**	**09 42 58.7**	**+0.5**
HMDT	**Nahal Hemdat**	**1.17**	**171**	Pg	**Pg**	**09 43 00.4**	**-0.8**
HMDT				Sg	**Sg**	**09 43 17.6**	**+1.2**
SLTI	**Sal'it**	**1.19**	**191**	Sg	**Sg**	**09 43 18.4**	**+1.3**
DSI	**Dead Sea**	**1.84**	**178**	Pn	**Pn**	**09 43 11.4**	**-0.2**

*ISCJB **21** 09:47:34.9±1.3, 1914N±008×6467W±003, h12km±9km, Error ellipse: s-maj=13.8km s-min=4.8km az=4.2*
*TRN **21** 09:47:34.9, 1901N×6469W, h15km, MD4.0, MD3.8(RSPR)*
*RSPR **21** 09:47:36.7, 1912N×6450W, h40km±8km, MD3.8/14, MD3.8/14*
*NEIC **21** 09:47:36.7, 1912N×6450W, h40km, MD3.8(RSPR), After RSPR.*
ISC 21 09:47:35.7±1.2,**1908N**±007×**6468W**±003,**h10**km±7km,**n26,**
σ0§**63**/45,**14C-8D,Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.48**	**137**	‖*e*P	**Pg**	**09 47 45.9**	**+0.9**
ABV	**Anegada**	**0.48**	**137**	‖*e*P	**Pg**	**09 47 45.9**	**+0.9**
TBVI	**Tortola**	**0.66**	**175**	‖*i*P	**Pg**	**09 47 49.0**	**+0.4**
MTP	**Monte Pirata**	**1.28**	**220**	‖*e*P	**Pn**	**09 47 59.1**	**-0.6**
MTP				*e*S	**Sb**	**09 48 16.5**	**0.0**
CBYP	**Canovanas**	**1.38**	**234**	‖*e*P	**Pn**	**09 48 00.5**	**-0.5**
CBYP				*e*S	**Sb**	**09 48 18.8**	**-0.4**
HUMP	**Col San Antoni**	**1.45**	**230**	‖*e*P	**Pn**	**09 48 01.4**	**-0.7**
HUMP				*e*S	**Sn**	**09 48 20.3**	**-0.8**
CPD	**Cerro la Pandu**	**1.57**	**229**	‖*e*P	**Pn**	**09 48 03.3**	**-0.4**
CPD				‖*e*S	**Sn**	**09 48 24.3**	**+0.3**
SJG	**San Juan**	**1.70**	**236**	‖*e*P	**Pn**	**09 48 05.0**	**-0.4**
SJG	**San Juan**	**1.70**	**236**	‖*e*P	**Pn**	**09 48 05.0**	**-0.4**
SJG				*e*S	**Sn**	**09 48 27.1**	**-0.2**
SJG	**San Juan**	**1.70**	**236**	‖*e*P	**Pn**	**09 48 05.0**	**-0.4**
SJG				*e*S	**Sn**	**09 48 26.6**	**-0.6**
SJG				*e*S	**Sn**	**09 48 27.6**	**+0.4**
SJG	**San Juan**	**1.70**	**236**	‖*e*P	**Pn**	**09 48 05.0**	**-0.4**
SJG				*e*S	**Sn**	**09 48 26.6**	**-0.6**
STMA	**St. Maarten, A**	**1.81**	**124**	*e*P	**Pn**	**09 48 06.5**	**-0.5**
STMA				*e*S	**Sn**	**09 48 30.2**	**+0.2**
CELP	**Cerrillos**	**2.06**	**241**	‖*e*P	**Pn**	**09 48 10.3**	**-0.1**
AOPR	**Arecibo Observ**	**2.10**	**250**	‖*e*P	**Pn**	**09 48 10.3**	**-0.6**
AOPR				*e*S	**Sn**	**09 48 37.1**	**0.0**
OBIP	**Obispado Ponce**	**2.10**	**241**	‖*e*P	**Pn**	**09 48 11.0**	**0.0**
OBIP				*e*S	**Sn**	**09 48 37.6**	**+0.4**
ICM	**Isla Caja Muer**	**2.11**	**236**	‖*e*P	**Pn**	**09 48 11.5**	**+0.4**
ICM				*e*S	**Sn**	**09 48 38.0**	**+0.5**
GBPR	**Guanica, Bosqu**	**2.36**	**243**	‖*e*P	**Pn**	**09 48 15.4**	**+0.8**
GBPR				*e*S	**Sn**	**09 48 44.6**	**+1.0**
AGPR	**Aguadilla, PR**	**2.38**	**256**	‖*e*P	**Pn**	**09 48 14.3**	**-0.6**
AGPR				*e*S	**Sn**	**09 48 44.7**	**+0.5**
LSP	**Las Mesas**	**2.45**	**249**	‖*e*P	**Pn**	**09 48 15.3**	**-0.6**
LSP				*e*S	**Sn**	**09 48 46.7**	**+0.8**
LSP	**Las Mesas**	**2.45**	**249**	‖*e*P	**Pn**	**09 48 15.3**	**-0.6**
LSP				*e*S	**Sn**	**09 48 46.7**	**+0.8**
LSP	**Las Mesas**	**2.45**	**249**	‖*e*P	**Pn**	**09 48 15.3**	**-0.6**
LSP				*e*S	**Sn**	**09 48 46.7**	**+0.8**
CRPR	**Cabo Rojo, PR**	**2.54**	**246**	‖*e*P	**Pn**	**09 48 17.3**	**+0.2**
CRPR				*e*S	**Sn**	**09 48 48.9**	**+0.8**
IMO	**Isla Mona**	**3.21**	**253**	‖*e*P	**Pn**	**09 48 27.1**	**+0.8**
BPA	**Boggy Peak**	**3.36**	**127**	*e*S	**Sn**	**09 49 08.4**	**+0.1**
LZG	**Guadaloupe-1**	**4.03**	**136**	*i* P	**Pn**	**09 48 38.2**	**+0.7**
SDV	**Santo Domingo** 8.2nm,0.7s	**11.66**	**210**	*e*Pn	**Pn**	**09 50 20.4**	**-2.0**
SDV				*e*Sn	**Sn**	**09 52 32.3**	**-0.4**

*TEH **21** 09:48:44.3, 3751N×4479E, h7km, ML4.4*
*IDC **21** 09:49:22.3±0.9, 37.18N×4430E, h0km, mb4.0/10, mb1 4.2/13, mb1mx4.0/26, mbtmp4.0/13, ML4.1/2, MS3.4/12, Ms1 3.4/12, ms1mx3.2/35, Error ellipse: s-maj=18.1km s-min=13.5km az=140.0*

*THR **21** 09:49:23.7±0.8, 3747N×4436E, h14km±7km, ML4.1*
*CSEM **21** 09:49:23.0±0.1, 3744N×4445E, h2km, mb4.2/10, Error ellipse: s-maj=2.0km s-min=1.2km az=39.0*
*ISCJB **21** 09:49:23.1±0.2, 3729N±002×4442E±002, h10km, mb4.1/20, MS3.4/8, Error ellipse: s-maj=3.0km s-min=2.2km az=141.0*
*MOS **21** 09:49:25.9±1.8, 3734N×4428E, h27km, mb4.4/13, Error ellipse: s-maj=10.3km s-min=6.5km az=107.0*
*ISK **21** 09:49:26.1, 3756N×4416E, h5km, MD4.0, ML4.2*
*DDA **21** 09:49:26.5, 3732N×4413E, h7km±9km, Md4.2*
*NEIC **21** 09:49:28.2±0.5, 3751N×4458E, h35km, mb4.3/10, Error ellipse: s-maj=9.1km s-min=5.4km az=223.0*
ISC 21 09:49:25.0±0.2,**3732N**±002×**4439E**±002,**h10**km,**n169,**
σ1§**51**/199,**mb4.1**/20,**MS3.4**/8,**1C-5D,Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.58**	**296**	PG	**Pg**	**09 49 33.3**	**-2.8**
HAKT	**HAKKARI**	**0.59**	**294**	*i* P	**Pg**	**09 49 34.4**	**-2.1**
HAKT				*i* S	**Sg**	**09 49 43.0**	**-1.3**
IAZR	**Azarshahr**	**1.31**	**74**	Pg	**Pg**	**09 49 45.5**	**-4.7**
IAZR				Sg	**Sg**	**09 49 57.3**	**-10**
IAZR	**Azarshahr**	**1.31**	**74**	*e*Pg	**Pg**	**09 49 45.6**	**-4.6**
IAZR				*e*Sg	**Sg**	**09 49 57.3**	**-10**
IAZR				*e*		09 50 08.7	
ISHB	**Shabestar**	**1.36**	**45**	*e*Pg	**Pg**	**09 49 45.0**	**-6.2**
ISHB				*e*Sg	**Sg**	**09 49 58.7**	**-10**
ISHB				*e*		09 50 15.3	
ISHB	**Shabestar**	**1.36**	**45**	Pg	**Pg**	**09 49 44.9**	**-6.3**
ISHB				Sg	**Sg**	**09 49 58.7**	**-10**
VANT	**Van**	**1.37**	**325**	*e*PN	**Pn**	**09 49 48.5**	**-1.6**
TVAN	**Van**	**1.43**	**327**	*i* P	**Pn**	**09 49 49.0**	**-2.0**
MSL	**Mosul**	**1.47**	**226**	*i* x	x	09 49 50.0	
MSL				*i* x	x	09 50 12.0	
SIRT	**Sirnak**	**1.56**	**277**	*e*PN	**Pn**	**09 49 52.9**	**+0.1**
SIRT				*e*SN	**Sn**	**09 50 13.4**	**+0.3**
ITBZ	**Tabriz**	**1.66**	**56**	*e*Pg	**Pg**	**09 49 50.4**	**-6.5**
ITBZ				*e*Sg	**Sg**	**09 50 07.4**	**-11**
ITBZ				*e*		09 50 16.9	
ITBZ	**Tabriz**	**1.66**	**56**	Pg	**Pg**	**09 49 50.4**	**-6.5**
ITBZ				Sg	**Sg**	**09 50 07.4**	**-11**
IMRD	**Marand**	**1.73**	**36**	Pn	**Pn**	**09 49 51.7**	**-3.4**
IMRD	**Marand**	**1.73**	**36**	*e*Pn	**Pn**	**09 49 51.8**	**-3.3**
IMRD				*e*		09 50 31.0	
CLDR	**Caldiran**	**1.85**	**349**	*e*PN	**Pn**	**09 49 55.3**	**-1.5**
IBST	**Bostanabad**	**2.02**	**79**	*e*Pn	**Pn**	**09 49 57.8**	**-1.3**
IBST				*e*Sn	**Sn**	**09 50 18.5**	**-6.0**
IBST				*e*		09 50 31.5	
IBST	**Bostanabad**	**2.02**	**79**	Pn	**Pn**	**09 49 57.8**	**-1.3**
IBST				Sn	**Sn**	**09 50 18.4**	**-6.1**
MAKU	**Maku**	**2.04**	**6**	*e*Pg	**Pg**	**09 49 58.4**	**-5.7**
MAKU				*e*Sg	**Sg**	**09 50 24.0**	**-6.6**
DYDN	**Diyadin**	**2.28**	**346**	*i* P	**Pn**	**09 50 03.7**	**+1.0**
IHRS	**Heris**	**2.32**	**64**	*e*Pn	**Pn**	**09 50 02.3**	**-0.9**
IHRS				*e*Sn	**Sn**	**09 50 26.5**	**-5.3**
IHRS				*e*		09 50 39.9	
IHRS	**Heris**	**2.32**	**64**	Pn	**Pn**	**09 50 02.3**	**-0.9**
IHRS				Sn	**Sn**	**09 50 26.5**	**-5.3**
AGRB	**Hanur-Agry**	**2.50**	**334**	*e*PN	**Pn**	**09 50 05.5**	**-0.2**
ISRB	**Sarab**	**2.65**	**78**	*e*Pn	**Pn**	**09 50 07.7**	**0.0**
ISRB				*e*Sn	**Sn**	**09 50 34.0**	**-5.9**
ISRB				*e*		09 50 52.5	
ISRB	**Sarab**	**2.65**	**78**	Pn	**Pn**	**09 50 07.7**	**0.0**
ISRB				Sn	**Sn**	**09 50 34.0**	**-5.9**
GNI	**Garni**	**2.84**	**5**	Pn	**Pn**	**09 50 12.6**	**+2.3**
GNI	12nm,0.3s,baz=206,slow=2.7,SNR=55			Lg		09 50 56.6	
GNI	18nm,0.3s,baz=219,slow=22,SNR=6.3			LR	LR	09 51 26.2	
	comp=Z,565nm,18.8s,baz=165,slow=42						
GNI	**Garni**	**2.84**	**5**	*e*P	**Pn**	**09 50 08.9**	**-1.4**
GNI	**Garni**	**2.84**	**5**	*e*Pn	**Pn**	**09 50 11.6**	**+1.3**
GNI	**Garni**	**2.84**	**5**	*e*Pn	**Pn**	**09 50 08.9**	**-1.4**
MARD	**Mardin**	**2.88**	**271**	*i* P	**Pn**	**09 50 09.6**	**-1.3**
MARD				*i* S	**Sg**	**09 50 54.0**	**-3.4**
BNGL	**BINGOL**	**3.03**	**303**	*i* P	**Pn**	**09 50 14.0**	**+1.1**
IDHR	**Dehrash**	**3.08**	**148**	*e*Pn	**Pn**	**09 50 15.9**	**+2.3**
IDHR				*e*		09 51 10.4	
ILIN	**Lien**	**3.18**	**138**	*e*Pn	**Pn**	**09 50 16.6**	**+1.6**
ILIN				*e*Sn	**Sn**	**09 50 53.3**	**+0.4**
ILIN	**Lien**	**3.18**	**138**	*e*Pn	**Pn**	**09 50 16.6**	**+1.6**
ILIN				*e*Sn	**Sn**	**09 50 53.3**	**+0.4**
ILIN				*e*		09 51 26.4	
SNGE	**Sanandaj**	**3.27**	**132**	*e*Pn	**Pn**	**09 50 18.1**	**+1.9**
SNGE				*e*Sg	**Sg**	**09 51 09.0**	**-0.9**
SNGE				AML	AML	09 51 20.1	
	comp=E,832nm,0.7s						
SNGE				AML	AML	09 51 21.7	
	comp=N,657nm,0.7s						
SNGE	**Sanandaj** SNR=52	**3.27**	**132**	*e*Pn	**Pn**	**09 50 18.1**	**+1.9**
SNGE				*e*Sg	**Sg**	**09 51 09.0**	**-0.9**
	comp=N,657nm,0.7s,SNR=90						
IVIS	**Veis**	**3.43**	**144**	*e*Pn	**Pn**	**09 50 20.3**	**+1.8**
IVIS				*e*		09 51 25.5	
IVIS	**Veis**	**3.43**	**144**	Pn	**Pn**	**09 50 20.2**	**+1.7**
KARS	**Kars**	**3.44**	**343**	*e*PN	**Pn**	**09 50 19.2**	**+0.6**
DIYA	**Diyarbakir**	**3.44**	**281**	*i* P	**Pn**	**09 50 16.9**	**-1.7**
DIYA				*i* S	**Sb**	**09 51 08.6**	**+0.7**
IGHG	**Ghaleghazi**	**3.47**	**149**	*e*Pn	**Pn**	**09 50 19.7**	**+2.1**
IGHG				*e*		09 51 29.7	
ZNJK	**Zanjan**	**3.50**	**99**	*e*Pn	**Pn**	**09 50 20.7**	**+1.2**
ZNJK				*e*Sg	**Sg**	**09 51 14.3**	**-3.1**
ERZM	**Erzurum**	**3.50**	**318**	*i* P	**Pn**	**09 50 21.1**	**+1.6**
ERZM	**Erzurum**	**3.50**	**318**	*i* P	**Pn**	**09 50 21.0**	**+1.6**
EZM	**Erzurum**	**3.50**	**318**	*e*PN	**Pn**	**09 50 19.7**	**+0.3**
GANJ	**Ganja** SNR=48	**3.64**	**24**	P	**Pn**	**09 50 22.9**	**+1.5**
IKOM	**Komasi**	**4.04**	**140**	Pn	**Pn**	**09 50 29.4**	**+2.6**
IKOM				*e*Sn	**Sn**	**09 51 14.1**	**-0.1**
IKOM	**Komasi**	**4.04**	**140**	*e*Pn	**Pn**	**09 50 29.5**	**+2.7**
IKOM				*e*Sn	**Sn**	**09 51 14.1**	**-0.1**
IKOM				*e*		09 51 50.5	
BHD	**Baghdad**	**4.04**	**180**	*ex*	x	09 50 24.0	
BHD				*ex*	x	09 50 40.0	
BHD				*e*	x	09 51 15.0	
SVRC	**Sivrice-ELAZID**	**4.16**	**286**	*e*PN	**Pn**	**09 50 30.0**	**+1.5**
DGRG	**David-gareji**	**4.19**	**10**	P	**Pb**	**09 50 39.4**	**+0.6**
DGRG				S	**Sg**	**09 51 41.9**	**+2.3**
PTK	**Pertek**	**4.24**	**293**	*e*PN	**Pn**	**09 50 31.1**	**+1.5**
EZC	**Erzincan**	**4.33**	**305**	*e*PN	**Pn**	**09 50 36.5**	**+5.8**
MTA	**Mtatsminda**	**4.38**	**4**	P	**Pb**	**09 50 41.4**	**-0.5**
MTA				S	**Sg**	**09 51 49.2**	**+3.7**
TBLG	**Delisi**	**4.41**	**3**	*e*P	**Pb**	**09 50 42.4**	**-0.1**
TBLG	**Delisi**	**4.41**	**3**	P	**Pb**	**09 50 42.4**	**-0.1**
TBLG				S	**Sg**	**09 51 50.2**	**+3.7**
URFA	**Urfa**	**4.44**	**273**	*e*PN	**Pn**	**09 50 34.1**	**+1.9**
BCA	**Borcka**	**4.64**	**333**	*e*PN	**Pn**	**09 50 35.9**	**+0.8**
GOR	**Gori**	**4.66**	**357**	P	**Pb**	**09 50 46.3**	**-0.4**
GOR				S	**Sg**	**09 51 59.0**	**+4.4**
MYA	**Malataya**	**4.83**	**284**	*e*PN	**Pn**	**09 50 40.1**	**+2.5**
IRAZ	**Razeghan**	**4.86**	**112**	*e*Pn	**Pn**	**09 50 39.9**	**+1.7**
IRAZ				*e*		09 52 21.0	
IRAZ	**Razeghan**	**4.86**	**112**	Pn	**Pn**	**09 50 39.8**	**+1.6**
GUMT	**Gumushane**	**4.95**	**311**	*e*PN	**Pn**	**09 50 40.2**	**+0.9**
ONI	**Oni**	**5.30**	**352**	P	**Pn**	**09 50 41.7**	**-2.5**
ONI				S	**Sg**	**09 52 21.6**	**+6.5**
ASAO	**Ashtian**	**5.34**	**120**	*e*Pn	**Pn**	**09 50 47.5**	**+2.7**
ASAO				*e*Sg	**Sg**	**09 52 11.8**	**-4.8**
ASAO				AML	AML	09 52 30.9	
	comp=N,41nm,0.7s						
THKV	**Tehran--Karaj**	**5.41**	**103**	*e*Pn	**Pn**	**09 50 46.7**	**+1.1**
THKV				AML	AML	09 52 27.4	
	comp=E,58nm,0.6s						
THKV				AML	AML	09 52 34.7	
	comp=N,63nm,0.9s						
DARE	**Darende-Malaty**	**5.44**	**289**	*e*PN	**Pn**	**09 50 50.9**	**+4.8**
GAZ	**Gaziantep**	**5.73**	**271**	*e*PN	**Pn**	**09 50 53.3**	**+3.2**
KMRS	**Kahramanmaras**	**5.96**	**274**	*e*PN	**Pn**	**09 50 56.8**	**+3.6**
DAMV	**Damavand**	**6.34**	**103**	*e*Pn	**Pn**	**09 50 59.6**	**+1.2**
SVSK	**Karacayir**	**6.34**	**296**	*e*PN	**Pn**	**09 51 00.4**	**+2.0**
IVRN	**Varamin**	**6.37**	**109**	*e*Pn	**Pn**	**09 50 58.0**	**-0.9**
IVRN				*e*		09 53 46.1	
IDMV	**Damavand**	**6.40**	**104**	*e*Pn	**Pn**	**09 50 58.0**	**-1.3**
IDMV				*e*		09 53 07.7	
IPRN	**Peran**	**6.47**	**97**	*e*Pn	**Pn**	**09 51 05.2**	**+5.0**
IPRN				*e*		09 51 37.8	
KIV	**Kislovodsk**	**6.75**	**349**	‖*e*P	**Pn**	**09 51 06.9**	**+2.9**
KIV				S	**Sn**	**09 52 20.0**	**-0.9**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,200nm,17.0s						
KIV	**Kislovodsk** comp=Z,24nm,0.8s	**6.75**	**349**	*e*Pn	**Pn**	**09 51 03.7**	**-0.3**
KIV				S	**Sn**	**09 52 20.0**	**-0.9**
	comp=Z,200nm,17.0s						
KIV	**Kislovodsk** comp=Z,24nm,0.8s	**6.75**	**349**	*e*Pn	**Pn**	**09 51 03.7**	**-0.3**
KOZT	**Kozan**	**6.82**	**274**	*e*PN	**Pn**	**09 51 08.2**	**+3.2**
IPIR	**Pirpir**	**7.06**	**129**	*e*Pn	**Pn**	**09 51 09.6**	**+1.2**
IPIR				*e*		09 52 42.4	
IPIR	**Pirpir**	**7.06**	**129**	Pn	**Pn**	**09 51 09.5**	**+1.1**
IKLH	**Kolahrood**	**7.10**	**122**	*e*Pn	**Pn**	**09 51 14.0**	**+5.0**
IKLH				*e*		09 53 47.3	
IKLH	**Kolahrood**	**7.10**	**122**	Pn	**Pn**	**09 51 13.9**	**+5.0**
SOC	**Sochi**	**7.20**	**332**	*e*P	**Pn**	**09 51 10.9**	**+0.7**
SOC				*e*		09 52 34.2	
SOC				pmax	pmax		
	comp=Z,23nm,0.6s						
SOC				MLR	MLR		
	comp=Z,33nm,6.0s						
SOC	**Sochi** comp=Z,23nm,0.6s	**7.20**	**332**	*e*P	**Pn**	**09 51 10.9**	**+0.7**
SOC				*e*S	**Sn**	**09 52 34.2**	**+2.3**
	comp=Z,33nm,6.0s						
ISHM	**Shahmirzad**	**7.32**	**99**	*e*Pn	**Pn**	**09 51 19.2**	**+7.3**
ISHM				*e*		09 51 49.7	
IGLO	**Ghaloghah**	**7.61**	**93**	*e*Pn	**Pn**	**09 51 20.3**	**+4.5**
IGLO				*e*		09 51 38.3	
ASF	**Jabal al Asfar** comp=Z,0.7nm,0.3s,baz=272,slow=9.4,SNR=10	**8.02**	**232**	Pn	**Pn**	**09 51 21.5**	**0.0**
ASF				Lg		09 53 31.7	
	comp=Z,0.7nm,0.3s,baz=118,slow=23,SNR=3.6						
ASF				LR	LR	09 54 38.3	
	comp=Z,74nm,18.4s,baz=191,slow=40						
ASF	**Jabal al Asfar**	**8.02**	**232**	Pn	**Pn**	**09 51 21.5**	**0.0**
ASF				Lg		09 53 31.7	
ASF				LR	LR	09 54 38.3	
RST	**Umm Al-Ruwaisa**	**8.10**	**164**	*e*P	**Pn**	**09 51 22.0**	**-0.6**
UMR	**Umm Al-Rimmam** baz=160	**8.23**	**159**	*e*P	**Pn**	**09 51 23.2**	**-1.2**
UMR				AML	AML	09 52 57.6	
	comp=Z,34nm,0.7s,baz=160						
NAY	**Al-Naaiem** baz=163	**8.40**	**163**	*e*P	**Pn**	**09 51 26.4**	**-0.3**
NAY				AML	AML	09 52 59.0	
	comp=Z,12nm,0.6s,baz=163						
MMAI	**Mount Meron Ar** comp=Z,2.5nm,0.3s,baz=70,slow=13,SNR=9.2	**8.52**	**242**	Pn	**Pn**	**09 51 28.7**	**+0.4**
MMAI				Lg		09 53 48.2	
	comp=Z,3.9nm,0.3s,baz=80,slow=29,SNR=3.9						
MMAI				LR	LR	09 55 29.1	
	comp=Z,168nm,20.6s,baz=55,slow=44						
KBD	**Kabd** baz=161	**8.58**	**160**	*e*P	**Pn**	**09 51 29.0**	**-0.2**
KBD				AML	AML	09 53 05.2	
	comp=Z,19nm,0.6s,baz=161						
RDF	**Al-Radifah**	**8.78**	**162**	*e*P	**Pn**	**09 51 31.6**	**-0.4**
ANN	**Anapa**	**9.13**	**327**	*e*P	**Pn**	**09 51 32.7**	**-4.0**
ANN				pmax	pmax		
	comp=Z,41nm,1.1s						
ANN				MLR	MLR		
	comp=Z,239nm,14.0s						
IPAR	**Pars**	**10.38**	**133**	*e*Pn	**Pn**	**09 51 54.0**	**+0.1**
IPAR				*e*		09 54 00.2	
IPAR	**Pars**	**10.38**	**133**	Pn	**Pn**	**09 51 53.9**	**0.0**
IMOK	**Mouk**	**10.80**	**137**	*e*Pn	**Pn**	**09 52 00.1**	**+0.5**
IMOK				*e*		09 54 05

TKM2	**Tokmak 2**	**24.43**	**67**	*e*P		**P**	**09 54 42.6**	**-1.0**	
	comp=Z,14nm,1.3s,mb4.2								
TKM2	**Tokmak 2**	**24.43**	**67**	*e*P		**P**	**09 54 42.6**	**-1.0**	
	comp=Z,14nm,1.3s,mb4.2								
PRU	**Pruhonice**	**24.85**	**310**	*e*P		**P**	**09 54 47.1**	**-0.3**	
GERES	**GERESS Array B**	**25.03**	**307**	P		**P**	**09 54 48.2**	**-0.7**	
	comp=Z,2.1nm,0.7s,mb3.8,baz=109,slow=7.2,SNR=11								
GERES				LR		LR	10 06 08.3		
	comp=Z,88nm,18.8s,MS3.3,baz=101,slow=40								
GERES	**GERESS Array B**	**25.03**	**307**	P		**P**	**09 54 48.2**	**-0.8**	
GERES				pmax	pmax				
	comp=Z,2.0nm,0.7s								
GERES				MLR	MLR				
	comp=Z,88nm,18.8s								
KHC	**Kasperske Hory**	**25.18**	**308**⇑	*e*P		**P**	**09 54 49.5**	**-0.9**	
KHC	**Kasperske Hory**	**25.18**	**308**	*e*P		**P**	**09 54 49.3**	**-1.1**	
KHC				*ex*		x	09 54 53.6		
GRA1	**Grafenberg Arr**	**26.82**	**308**	*e*P		**P**	**09 55 07.1**	**+1.9**	
	comp=Z,10.0nm,1.3s,mb4.2								
GRF	**Grafenberg Arr**	**26.82**	**308**	*e*P		**P**	**09 55 07.1**	**+1.9**	
GRF				pmax	pmax				
	comp=Z,10.0nm,1.3s,mb4.2								
GRF	**Grafenberg Arr**	**26.82**	**308**	*e*P		**P**	**09 55 07.1**	**+1.9**	
GRF				pmax	pmax				
	comp=Z,10.0nm,1.3s,mb4.2								
GRF	**Grafenberg Arr**	**26.82**	**308**	*e*P		**P**	**09 55 07.1**	**+1.9**	
	comp=Z,10.0nm,1.3s,mb4.2								
DAVOX	**Davos/Dischmat**	**27.12**	**301**	LR		LR	10 07 44.3		
	comp=Z,98nm,18.4s,MS3.4,baz=70,slow=41								
KURK	**Kurchatov**	**27.74**	**50**	P		**P**	**09 55 13.8**	**+0.3**	
	comp=Z,1.1nm,0.6s,mb3.7,baz=262,slow=8.9,SNR=6.4								
KURK				LR		LR	10 07 56.8		
	comp=Z,55nm,20.8s,MS3.1,baz=160,slow=40								
KURK	**Kurchatov**	**27.74**	**50**	P		**P**	**09 55 13.8**	**+0.3**	
KURK				pmax	pmax				
	comp=Z,1.0nm,0.6s,mb3.6								
KURK				MLR	MLR				
	comp=Z,55nm,20.8s,MS3.1								
KEST	**Kesra**	**28.11**	**277**	P		**P**	**09 55 16.9**	**0.0**	
	comp=Z,1.0nm,0.6s,mb3.6,baz=291,slow=3.2,SNR=3.9								
MKAR	**Makanchi Array**	**29.44**	**59**	P		**P**	**09 55 29.8**	**+1.1**	
	comp=Z,1.3nm,0.8s,mb3.7,baz=267,slow=6.1,SNR=6.9								
MKAR	**Makanchi Array**	**29.44**	**59**	P		**P**	**09 55 29.8**	**+1.1**	
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.8s								
NOA	**NORSAR Array B**	**31.55**	**329**	P		**P**	**09 55 45.7**	**-1.4**	
	comp=Z,1.5nm,0.8s,mb3.9,baz=126,slow=8.7,SNR=3.4								
NOA				LR		LR	10 09 21.7		
	comp=Z,56nm,19.6s,MS3.2,baz=145,slow=38								
NOA	**NORSAR Array B**	**31.55**	**329**	P		**P**	**09 55 45.7**	**-1.4**	
NOA				pmax	pmax				
	comp=Z,2.0nm,0.8s								
NOA				MLR	MLR				
	comp=Z,56nm,19.6s								
ARCES	**ARCESS Array B**	**33.86**	**348**	LR		LR	10 11 18.2		
	comp=Z,90nm,18.3s,MS3.5,baz=251,slow=39								
TORD	**Torodi Ar. Bea**	**44.99**	**249**	P		**P**	**09 57 38.4**	**-2.3**	
	comp=Z,0.8nm,0.6s,mb3.7,baz=66,slow=8.1,SNR=6.8								
SONM	**Songino Array**	**45.71**	**56**	LR		LR	10 19 27.9		
	comp=Z,75nm,20.4s,MS3.6,baz=359,slow=39								
ULN	**Ulaanbaatar**	**46.14**	**56**⇓	*e*P		**P**	**09 57 52.2**	**+2.8**	
CMAR	**Chiang Mai Arr**	**51.04**	**96**	P		**P**	**09 58 25.7**	**-1.8**	
	comp=Z,1.5nm,0.6s,mb4.1,baz=297,slow=8.1,SNR=6.6								
CMAR				LR		LR	10 25 26.6		
	comp=Z,58nm,19.4s,MS3.6,baz=205,slow=42								
CMAR	**Chiang Mai Arr**	**51.04**	**96**	*i* P		**P**	**09 58 29.6**	**+2.2**	
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.6s								
SUMG	**Summit**	**52.73**	**338**	*e*P		**P**	**09 58 37.9**	**-1.4**	
	comp=Z,1.9nm,0.9s,mb4.0								
DBIC	**Dimbokro**	**54.08**	**248**	P		**P**	**09 58 47.4**	**-2.7**	
	comp=Z,4.3nm,0.9s,mb4.4,baz=28,slow=8.2,SNR=5.2								
DBIC	**Dimbokro**	**54.08**	**248**	P		**P**	**09 58 47.4**	**-2.7**	
DBIC				pmax	pmax				
	comp=Z,4.0nm,0.9s								
KIC	**Kosan Boka**	**54.20**	**248**	*e*P		**P**	**09 58 49.2**	**-1.7**	
	comp=Z,19nm,0.7s,mb5.2								
TIC	**Toumodi**	**54.22**	**248**	*e*P		**P**	**09 58 45.9**	**-5.2**	
	comp=Z,211nm,1.9s								
LIC	**Lamto**	**54.51**	**248**	*e*P		**P**	**09 58 51.3**	**-1.8**	
	comp=Z,25nm,0.9s,mb5.2								

CSEM ***21*** *10:21:16.5±0.1,3724N×4436E,h10km,mb4.5/23,Error ellipse: s-maj=2.5km s-min=1.4km az=48.0*
IDC ***21*** *10:21:16.3±0.8,3722N×4426E,h0km,mb4.1/10, mb1 4.2/15,mb1mx4.0/28,mbtmp4.1/15,ML3.8/4,MS3.7/26, Ms1 3.7/26,ms1mx3.6/36,Error ellipse: s-maj=16.7km s-min=12.5km az=140.0*
ISCJB ***21*** *10:21:17.5±0.8,3720N±002×4431E±003,h14km±5km, mb4.5/28,MS3.7/19,Error ellipse: s-maj=4.1km s-min=3.0km az=42.4*
THR ***21*** *10:21:18.7±0.8,3745N×4448E,h14km±7km,ML4.3*
ISK ***21*** *10:21:18.6,3738N×4423E,h6km,ML4.5*
MOS ***21*** *10:21:19.5±1.6,3733N×4418E,h23km,mb4.4/17,Error ellipse: s-maj=8.8km s-min=5.5km az=115.4*
DDA ***21*** *10:21:20.7,3740N×4415E,h2km,Md4.3,Ml4.6*
NEIC ***21*** *10:21:21.9±0.6,3734N×4427E,h35km,mb4.5/16,Error ellipse: s-maj=10.5km s-min=7.2km az=165.0*

ISC 21 10:21:19.1±0.6,3726N±002×4432E±003,h12km±4km, n187,σ1s26/193,mb4.5/28,MS3.7/19,7C-8D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HKR	**Hakkari**	**0.56**	**304**	PG		**Pg**	**10 21 27.6**	**-2.4**
HAKT	**HAKKARI**	**0.57**	**301**	*i* P		**Pg**	**10 21 27.9**	**-2.3**
HAKT				*i* S		**Sg**	**10 21 37.9**	**+0.1**
MSL	**Mosul**	**1.39**	**226**	*i* x		x	10 21 41.0	
MSL				*i* x		x	10 21 45.0	
MSL				*i* x		x	10 21 58.0	
MSL				*i* x		x	10 22 02.0	
VANT	**Van**	**1.39**	**328**	PN		**Pn**	**10 21 43.3**	**-1.0**
VANT				*e*SN		**Sn**	**10 22 01.7**	**-0.9**
TVAN	**Van**	**1.46**	**330**	*i* P		**Pn**	**10 21 42.7**	**-2.5**
SIRT	**Sirnak**	**1.52**	**280**	*e*PN		**Pn**	**10 21 46.5**	**+0.4**
CLDR	**Caldiran**	**1.90**	**350**	*e*PN		**Pn**	**10 21 50.1**	**-1.3**
CLDR				*e*SN		**Sn**	**10 22 14.5**	**-0.8**
MAKU	**Maku**	**2.11**	**8**	*e*Pg		**Pn**	**10 21 52.9**	**-1.3**
MAKU				*e*Sg		**Sn**	**10 22 19.4**	**-0.8**
DYDN	**Diyadin**	**2.33**	**348**	*i* P		**Pn**	**10 21 57.9**	**+0.7**
BEST	**Besiri**	**2.50**	**285**	*i* P		**Pn**	**10 22 00.1**	**+0.5**
AGRB	**Hanur-Agry**	**2.53**	**336**	*e*PN		**Pn**	**10 21 59.6**	**-0.4**
MARD	**Mardin**	**2.83**	**272**	*i* P		**Pn**	**10 22 04.5**	**+0.4**
GNI	**Garni**	**2.90**	**6**	*e*PN		**Pn**	**10 22 05.4**	**+0.3**
GNI	**Garni**	**2.90**	**6**	⇑P		**Pn**	**10 22 07.2**	**+2.2**
	SNR=159							
GNI	**Garni**	**2.90**	**6**	Pn		**Pn**	**10 22 06.8**	**+1.8**
	22nm,0.3s,baz=188,slow=3.3,SNR=66							
GNI				Lg			10 22 52.1	
	20nm,0.3s,baz=351,slow=22,SNR=4.3							
GNI				LR		LR	10 23 20.7	
	comp=Z,1μm,18.5s,baz=182,slow=42							
GNI	**Garni**	**2.90**	**6**	*i* P		**Pn**	**10 22 04.2**	**-0.9**
GNI	**Garni**	**2.90**	**6**	*e*Pn		**Pn**	**10 22 04.6**	**-0.5**
GNI				*e*Sn		**Sn**	**10 22 33.9**	**-6.0**
GNI	**Garni**	**2.90**	**6**	*e*Pn		**Pn**	**10 22 04.6**	**-0.5**
GNI				*e*Sn		**Sn**	**10 22 33.9**	**-6.0**
BNGL	**BINGOL**	**3.02**	**305**	*i* P		**Pn**	**10 22 08.0**	**+1.3**
DIGO	**Kars**	**3.23**	**347**	*i* P		**Pn**	**10 22 10.7**	**+1.0**
SNGE	**Sanandaj**	**3.27**	**131**	*e*Pn		**Pn**	**10 22 12.4**	**+2.3**
SNGE				*e*Sg		**Sg**	**10 23 01.8**	**-2.4**
SNGE				AML		AML	10 23 15.3	
	comp=E,1μm,0.7s							
SNGE				AML		AML	10 23 20.2	
	comp=N,610nm,0.6s							
SNGE	**Sanandaj**	**3.27**	**131**	*e*Pn		**Pn**	**10 22 12.4**	**+2.2**
	SNR=52							
SNGE				*e*Sg		**Sg**	**10 23 01.8**	**-2.3**
	SNR=90							
DIYA	**Diyarbakir**	**3.40**	**282**	*i* P		**Pn**	**10 22 15.4**	**+3.4**
DIYA				*i* S		**Sg**	**10 23 09.5**	**+1.2**
KARS	**Kars**	**3.48**	**344**	*e*PN		**Pn**	**10 22 12.9**	**-0.1**
ERZM	**Erzurum**	**3.51**	**320**	*i* P		**Pn**	**10 22 15.3**	**+1.9**
EZM	**Erzurum**	**3.51**	**320**	*e*PN		**Pn**	**10 22 13.5**	**0.0**
ZNJK	**Zanjan**	**3.54**	**98**	*e*Pn		**Pn**	**10 22 14.1**	**+0.2**
ZNJK				*e*Sg		**Sg**	**10 23 06.1**	**-6.9**
BRDA	**Brd**	**3.74**	**36**	P		**Pn**	**10 22 18.6**	**+2.0**
	SNR=58							
GLBA	**Clilabad**	**3.77**	**57**	P		**Pn**	**10 22 16.5**	**-0.5**
	SNR=5.4							
BHD	**Baghdad**	**3.98**	**179**	*ex*		x	10 22 21.0	
BHD				*ex*		x	10 22 32.0	
BHD				*ex*		x	10 22 38.0	
BHD				*ex*		x	10 23 13.0	
BHD				*ex*		x	10 23 36.0	
SVRC	**Sivrice-ELAZID**	**4.12**	**287**	*e*PN		**Pn**	**10 22 22.7**	**+0.8**
PTK	**Pertek**	**4.21**	**294**	*e*PN		**Pn**	**10 22 24.0**	**+0.8**
DGRG	**David-gareji**	**4.26**	**11**	P		**Pn**	**10 22 25.7**	**+1.9**
DGRG				S		**Sg**	**10 23 51.2**	**+15**
EZC	**Erzincan**	**4.32**	**306**	*e*PN		**Pn**	**10 22 29.4**	**+4.8**
URFA	**Urfa**	**4.39**	**274**	*e*PN		**Pn**	**10 22 26.1**	**+0.5**
MTA	**Mtatsminda**	**4.44**	**5**	P		**Pb**	**10 22 37.8**	**+0.8**
MTA				S		**Sg**	**10 23 50.2**	**+8.5**
TBLG	**Delisi**	**4.47**	**4**	*e*P		**Pb**	**10 22 36.8**	**-0.8**
TBLG	**Delisi**	**4.47**	**4**	P		**Pb**	**10 22 36.8**	**-0.7**
TBLG				S		**Sg**	**10 23 43.2**	**+0.5**
ALIB	**Ii-Bayraml**	**4.55**	**52**	P		**Pn**	**10 22 30.2**	**+2.4**
	SNR=18							
BCA	**Borcka**	**4.67**	**334**	*e*PN		**Pn**	**10 22 30.2**	**+0.8**
GOR	**Gori**	**4.72**	**358**	P		**Pn**	**10 22 36.6**	**+6.6**
GOR				S		**Sg**	**10 23 44.4**	**-6.2**
MALT	**Malatya**	**4.79**	**284**	*e*Pn		**Pn**	**10 22 28.0**	**-3.0**
MALT	**Malatya**	**4.79**	**284**	*e*Pn		**Pn**	**10 22 28.0**	**-3.0**
MYA	**Malataya**	**4.79**	**285**	*e*PN		**Pn**	**10 22 31.7**	**+0.7**
PQL	**Pirkuli**	**4.84**	**42**	P		**Pn**	**10 22 33.9**	**+2.1**
	SNR=3.9							
GUMT	**Gumushane**	**4.95**	**312**	*e*PN		**Pn**	**10 22 34.5**	**+1.3**
ONI	**Oni**	**5.35**	**353**	P		**Pn**	**10 22 40.8**	**+2.0**
ONI				S		**Sg**	**10 24 11.2**	**+0.3**
ASAO	**Ashtian**	**5.36**	**119**	*e*Pn		**Pn**	**10 22 40.5**	**+1.5**
ASAO				*e*Sg		**Sg**	**10 24 04.1**	**-7.3**
DARE	**Darende-Malaty**	**5.41**	**290**	*e*PN		**Pn**	**10 22 43.9**	**+4.4**
THKV	**Tehran--Karaj**	**5.45**	**102**	*e*Pn		**Pn**	**10 22 40.6**	**+0.6**
THKV				AML		AML	10 24 23.9	
	comp=E,96nm,0.8s							
CHTH	**Charan**	**5.64**	**102**	*e*Pn		**Pn**	**10 22 43.3**	**+0.5**
GAZ	**Gaziantep**	**5.67**	**271**	*e*PN		**Pn**	**10 22 45.7**	**+2.5**
DAMV	**Damavand**	**6.38**	**103**	*e*Pn		**Pn**	**10 22 53.6**	**+0.8**
KIV	**Kislovodsk**	**6.80**	**350**	P		**Pn**	**10 23 01.9**	**+3.3**
	SNR=7.4							
KIV	**Kislovodsk**	**6.80**	**350**	*e*P		**Pn**	**10 23 01.7**	**+3.1**
KIV				S		**Sn**	**10 24 08.0**	**-7.9**
KIV				pmax	pmax			
	comp=Z,36nm,1.2s							
KIV				MLR	MLR			
	comp=Z,500nm,17.0s							
KIV	**Kislovodsk**	**6.80**	**350**	*e*P		**Pn**	**10 23 01.7**	**+3.1**
	comp=Z,36nm,1.2s							
KIV	**Kislovodsk**	**6.80**	**350**	*e*Pn		**Pn**	**10 23 00.2**	**+1.5**
SOC	**Sochi**	**7.22**	**332**	*e*P		**Pn**	**10 23 03.8**	**-0.6**
SOC				*e*			10 24 21.4	
SOC				pmax	pmax			
	comp=Z,31nm,0.8s							
SOC				MLR	MLR			
	comp=Z,139nm,11.0s							
SOC	**Sochi**	**7.22**	**332**	*e*P		**Pn**	**10 23 03.8**	**-0.6**
	comp=Z,31nm,0.8s							
HWQ	**Hawqa**	**7.43**	**249**	*e*Pn		**Pn**	**10 23 08.6**	**+1.3**
BHL	**Bhannes**	**7.82**	**247**	*e*Pn		**Pn**	**10 23 13.9**	**+1.2**
MIB	**Mutribah**	**7.86**	**160**	*e*P		**Pn**	**10 23 13.7**	**+0.5**
	baz=161							
MIB				AML		AML	10 24 41.5	
	comp=Z,41nm,0.7s,baz=161							
ASF	**Jabal al Asfar**	**7.95**	**232**	Pn		**Pn**	**10 23 16.8**	**+2.4**
	comp=Z,1.5nm,0.3s,baz=158,slow=6.5,SNR=13							
ASF				LR		LR	10 26 32.9	
	comp=Z,194nm,18.5s,baz=183,slow=40							
ASF	**Jabal al Asfar**	**7.95**	**232**	P		**Pn**	**10 23 16.8**	**+2.4**
ASF				pmax	pmax			
	comp=Z,2.0nm,0.3s							
ASF				MLR	MLR			
	comp=Z,194nm,18.5s							
RST	**Umm Al-Ruwaisa**	**8.06**	**163**	*e*P		**Pn**	**10 23 16.7**	**+0.7**
	baz=163							
RST				AML		AML	10 24 48.6	
	comp=Z,39nm,0.7s,baz=163							
UMR	**Umm Al-Rimmam**	**8.20**	**159**	*e*P		**Pn**	**10 23 18.7**	**+0.8**
	baz=159							
UMR				AML		AML	10 24 52.1	
	comp=Z,39nm,0.4s,baz=159							
NAY	**Al-Naaiem**	**8.36**	**162**	*e*P		**Pn**	**10 23 20.6**	**+0.5**
	baz=162							
NAY				AML		AML	10 24 51.6	
	comp=Z,8.0nm,0.6s,baz=162							
MMAI	**Mount Meron Ar**	**8.44**	**243**	Pn		**Pn**	**10 23 24.2**	**+2.9**
	comp=Z,2.9nm,0.3s,baz=68,slow=14,SNR=11							
MMAI				Lg			10 25 50.5	
	comp=Z,1.9nm,0.3s,baz=70,slow=28,SNR=3.5							
MMAI				LR		LR	10 27 23.8	
	comp=Z,359nm,20.1s,baz=55,slow=44							
RDF	**Al-Radifah**	**8.74**	**161**	*e*P		**Pn**	**10 23 25.9**	**+0.5**
	baz=161							
RDF				AML		AML	10 25 01.4	
	comp=Z,33nm,0.6s,baz=161							
ANN	**Anapa**	**9.15**	**328**	*e*P		**Pn**	**10 23 25.8**	**-5.1**
ANN				pmax	pmax			
	comp=Z,36nm,1.2s							
ANN				MLR	MLR			
	comp=E,453nm,14.0s							
ANN				MLR	MLR			
	comp=Z,553nm,14.0s							
SIM	**Simferopol'**	**10.87**	**318**	P		**Pn**	**10 23 52.0**	**-2.4**
SIM				*e*S		**Sn**	**10 25 48.0**	**-7.8**
SIM				MLR	MLR			
	comp=Z,400nm,17.0s							
EIL	**Elat**	**10.88**	**229**	Pn		**Pn**	**10 23 54.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=42,slow=15,SNR=2.0							
EIL				Lg			10 27 12.2	
	comp=Z,0.7nm,0.3s,baz=320,slow=19,SNR=7.0							
EIL				LR		LR	10 28 26.3	
	comp=Z,208nm,18.6s,baz=268,slow=40							
ISP	**Isparta**	**10.98**	**277**	*i* P		**Pn**	**10 24 01.6**	**+5.6**
NAZ	**Nazwa, Dubai**	**15.60**	**138**	P		**Pn**	**10 24 57.2**	**-1.7**
	SNR=12							
FAQ	**Al Faqa, Dubai**	**15.77**	**139**	P		**Pn**	**10 24 59.6**	**-1.4**
	SNR=6.8							
IDI	**Anoyia**	**15.80**	**269**	LR		LR	10 32 08.3	
	comp=Z,134nm,21.4s,baz=277,slow=41							
HATD	**Hatta, Dubai**	**15.99**	**138**	⇑P		**Pn**	**10 25 02.2**	**-1.6**
	SNR=13							
MLR	**Muntele Rosu**	**16.03**	**307**	Pn		**Pn**	**10 25 03.0**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=112,slow=16,SNR=2.6							
MLR				LR		LR	10 32 32.1	
	comp=Z,264nm,19.1s,baz=118,slow=42							
ASHO	**Ashiyiah**	**16.06**	**138**	⇑P		**Pn**	**10 25 03.4**	**-1.4**
	SNR=13							
AKTK	**Aktyubinsk**	**16.42**	**32**	P		**Pn**	**10 25 09.1**	**-0.2**
AKTK	**Aktyubinsk**	**16.42**	**32**	Pn		**Pn**	**10 25 09.1**	**-0.1**
AKTK				LR		LR	10 32 41.5	
AKTO	**Aktyubinsk**	**16.42**	**32**	Pn		**Pn**	**10 25 09.1**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=234,slow=14,SNR=6.6							
AKTO				LR		LR	10 32 41.5	
	comp=Z,51nm,18.1s,baz=38,slow=42							
AKASG	**Malin Array Be**	**17.23**	**326**	P		**Pn**	**10 25 17.8**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=136,slow=12,SNR=17							
AKASG	**Malin Array Be**	**17.23**	**326**	P		**Pn**	**10 25 17.8**	**-1.6**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AKBB	**Malin Array Si**	**17.23**	**326**	*e*P		**Pn**	**10 25 17.0**	**-2.4**
KIEV	**Kiev**	**17.23**	**326**	*e*P		**Pn**	**10 25 17.1**	**-2.4**
KIEV				pmax	pmax			
	comp=Z,56nm,1.6s							
KIEV	**Kiev**	**17.23**	**326**	*e*Pn		**Pn**	**10 25 17.1**	**-2.3**
	comp=Z,56nm,1.6s							
BUR08	**Bucovina Ar. S**	**17.47**	**312**	*e*P		**Pn**	**10 25 21.8**	**-0.6**
BUR08	**Bucovina Ar. S**	**17.47**	**312**	*e*P		**Pn**	**10 25 21.8**	**-0.6**
SMDO	**Samad**	**18.44**	**136**	⇓P		**Pn**	**10 25 33.7**	**-0.9**
	SNR=8.1							
OBN	**Obninsk**	**18.62**	**346**⇑	*e*P		**Pn**	**10 25 33.5**	**-3.0**
OBN				S		**Sn**	**10 29 05.4**	**+0.9**
OBN				pmax	pmax			
	comp=Z,13nm,0.9s							
OBN				MLR	MLR			
	comp=Z,400nm,15.0s							
JMDO	**Jabal Madar**	**19.03**	**137**	⇑P		**Pn**	**10 25 40.4**	**-1.3**
	SNR=5.6							
MOS	**Moscow**	**19.03**	**348**	*e*P		**Pn**	**10 25 35.2**	**-6.3**
UZH	**Uzhgorod**	**19.65**	**312**	*e*P		**Pn**	**10 25 47.3**	**-1.7**
UZH				*e*S		**Sn**	**10 29 21.0**	**-8.4**
UZH				MLR	MLR			
	comp=N,300nm,12.0s							
UZH				MLR	MLR			
	comp=E,500nm,12.0s							
UZH				MLR	MLR			
	comp=Z,200nm,12.0s							
UZH	**Uzhgorod**	**19.65**	**312**	*e*P		**Pn**	**10 25 47.3**	**-1.7**
UZH				*e*S		**Sn**	**10 29 21.0**	**-8.4**
KWP	**Kalwaria**	**19.89**	**315**	*e*P		**Pn**	**10 25 46.6**	**-5.3**
KWP				pmax	pmax			
	comp=Z,129nm,1.4s							
KWP	**Kalwaria**	**19.89**	**315**	*e*P		**Pn**	**10 25 46.6**	**-5.3**
	comp=Z,129nm,1.4s							
CRVS	**Cervenica-Dubn**	**20.26**	**312**	*e*P		**P**	**10 25 56.6**	**+2.3**
STHS	**Stebnicka Huta**	**20.62**	**313**	*e*P		**P**	**10 26 00.6**	**+2.4**
STHS				pmax	pmax			
	comp=Z,9.0nm,1.3s							
STHS	**Stebnicka Huta**	**20.62**	**313**	*e*P		**P**	**10 26 00.6**	**+2.4**
	comp=Z,8.6nm,1.3s							
PSZ	**Piszkesteto**	**20.81**	**308**	*e*P		**P**	**10 26 00.2**	**0.0**
PSZ				pmax	pmax			
	comp=Z,7.0nm,0.8s							
PSZ	**Piszkesteto**	**20.81**	**308**	*e*P		**P**	**10 26 00.2**	**0.0**
	comp=Z,7.0nm,0.8s							
PSZ	**Piszkesteto**	**20.81**	**308**	*e*P		**P**	**10 26 00.2**	**0.0**
	comp=Z,7.0nm,0.8s							
WHFO	**Wadi Hawf**	**20.99**	**154**	⇓P		**P**	**10 26 02.1**	**-0.3**
	SNR=9.7							
ABTO	**Aybut**	**21.35**	**156**	⇑P		**P**	**10 26 05.7**	**-0.6**
	SNR=6.3							
ARU	**Arti**	**21.42**	**22**	*d* iP		**P**	**10 26 06.2**	**-0.5**
ARU				*e*S		**S**	**10 30 03.6**	**-0.4**
ARU				pmax	pmax			
	comp=Z,34nm,1.2s,mb4.5							
ARU	**Arti**	**21.42**	**22**	*i* P		**P**	**10 26 06.2**	**-0.5**
	comp=Z,34nm,1.2s,mb4.5							
ARU	**Arti**	**21.42**	**22**	*e*P		**P**	**10 26 04.7**	**-2.1**
	comp=Z,36nm,1.1s,mb4.6							
RBK	**Rabkut**	**21.52**	**153**	⇓P		**P**	**10 26 07.1**	**-1.0**
	SNR=20							
VYHS	**Vyhne**	**21.68**	**309**	*e*P		**P**	**10 26 10.1**	**+0.5**
VYHS				pmax	pmax			
	comp=Z,19nm,1.9s,mb4.2							
VYHS	**Vyhne**	**21.68**	**309**	*e*P		**P**	**10 26 10.1**	**+0.5**
	comp=Z,19nm,1.9s,mb4.2							
TIP	**Timpagrande**	**21.71**	**284**	*e*P		**P**	**10 26 08.0**	**-2.0**
	comp=Z,49nm,1.1s,mb4.8							
TIP	**Timpagrande**	**21.71**	**284**	*e*P		**P**	**10 26 08.0**	**-2.0**
	comp=Z,49nm,1.1s,mb4.8							
SUW	**Suwalki**	**22.20**	**326**	*e*P		**P**	**10 26 13.0**	**-2.1**
SUW				pmax	pmax			
	comp=Z,19nm,0.4s,mb4.9							
SUW	**Suwalki**	**22.20**	**326**	*e*P		**P**	**10 26 13.0**	**-2.1**
	comp=Z,19nm,0.4s,mb4.9							
SUW	**Suwalki**	**22.20**	**326**	*e*P		**P**	**10 26 12.9**	**-2.1**
	comp=Z,19nm,0.4s,mb4.9							
CUC	**Castrocucco**	**22.40**	**286**	*e*P		**P**	**10 26 17.6**	**+0.3**
	comp=Z,55nm,1.4s,mb4.8							
CUC	**Castrocucco**	**22.40**	**286**	*e*P		**P**	**10 26 17.6**	**+0.3**
	comp=Z,55nm,1.4s,mb4.8							
MODS	**Modra-Piesok**	**22.61**	**308**	*e*P		**P**	**10 26 18.8**	**-0.7**
EKS2	**Erkin-Say**	**23.15**	**67**	*e*P		**P**	**10 26 25.1**	**-0.1**
	comp=Z,20nm,1.2s,mb4.4							
EKS2	**Erkin-Say**	**23.15**	**67**	*e*P		**P**	**10 26 25.1**	**-0.1**
	comp=Z,20nm,1.2s,mb4.4							
VRAC	**Vranov**	**23.36**	**310**	LR		LR	10 36 49.5	
	comp=Z,177nm,19.1s,MS3.5,baz=106,slow=40							
UCH	**Uchtor**	**23.67**	**68**	*e*P		**P**	**10 26 29.8**	**-0.7**
	comp=Z,19nm,1.6s,mb4.3							
UCH	**Uchtor**	**23.67**	**68**	*e*P		**P**	**10 26 29.8**	**-0.7**
	comp=Z,19nm,1.6s,mb4.3							
FRU	**Bishkek**	**23.77**	**67**⇓	*i* P		**P**	**10 26 34.0**	**+2.5**
FRU				pmax	pmax			
	comp=Z,108nm,2.2s,mb4.9							
DPC	**Dobruska-Polom**	**23.90**	**312**	*e*P		**P**	**10 26 32.7**	**+0.1**
	comp=Z,300nm,13.5s							
DPC	**Dobruska-Polom**	**23.90**	**312**	*e*P		**P**	**10 26 32.7**	**+0.1**
DPC				AMS		AMS	10 39 10.0	
	comp=Z,300nm,13.5s							
BRVK	**Borovoye**	**23.99**	**41**	*e*P		**P**	**10 26 34.1**	**+0.8**
BRVK				pmax	pmax			
	comp=Z,15nm,0.9s,mb4.4							
BRVK	**Borovoye**	**23.99**	**41**	*e*P		**P**	**10 26 34.1**	**+0.8**
	comp=Z,15nm,0.9s,mb4.4							
BRVK	**Borovoye**	**23.99**	**41**	*e*P		**P**	**10 26 34.1**	**+0.8**
	comp=Z,15nm,0.9s,mb4.4							
BVAR	**Borovoye Array**	**24.02**	**41**	P		**P**	**10 26 33.4**	**-0.2**
	comp=Z,2.8nm,0.8s,mb

TAM	**Tamanrasset**	**36.29**	**258**	*e*P	**P**	**10 28 23.8**	**+1.3**
KMBO	**Kilima Mbogo**	**38.76**	**191**	*i* P	**P**	**10 28 50.2**	**+6.8**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TORD	**Torodi Ar. Bea**	**44.92**	**249**	P	**P**	**10 29 33.4**	**-0.5**
	comp=Z,1.9nm,0.8s,mb4.0,baz=52,slow=5.4,SNR=13						
SONM	**Songino Array**	**45.79**	**56**	LR	LR	10 51 30.6	
	comp=Z,114nm,18.5s,MS3.9,baz=83,slow=40						
ULN	**Ulaanbaatar**	**46.22**	**56**	*i* P	**P**	**10 29 45.2**	**+1.3**
BORG	**Borgarnes**	**46.71**	**328**	LR	LR	10 51 19.0	
	comp=Z,105nm,20.3s,MS3.8,baz=114,slow=39						
CMAR	**Chiang Mai Arr**	**51.09**	**96**	P	**P**	**10 30 20.9**	**-0.8**
	comp=Z,3.6nm,0.7s,mb4.4,baz=296,slow=8.5,SNR=14						
CMAR				LR	LR	10 55 07.4	
	comp=Z,56nm,21.5s,MS3.5,baz=33,slow=40						
CMAR	**Chiang Mai Arr**	**51.09**	**96**	P	**P**	**10 30 20.9**	**-0.8**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR				MLR	MLR		
	comp=Z,56nm,21.5s						
BDT	**Bhumibol Dam**	**51.80**	**97**	P	**P**	**10 30 27.0**	**0.0**
NANT	**Nan**	**52.30**	**94**	P	**P**	**10 30 31.2**	**+0.5**
	comp=Z,65nm,1.0s,mb5.5						
DBIC	**Dimbokro**	**54.01**	**248**	P	**P**	**10 30 41.2**	**-2.1**
	comp=Z,3.9nm,0.8s,mb4.4,baz=30,slow=9.6,SNR=4.6						
DBIC				LR	LR	10 54 27.6	
	comp=Z,72nm,19.3s,MS3.8,baz=142,slow=37						
DBIC	**Dimbokro**	**54.01**	**248**	P	**P**	**10 30 41.3**	**-2.1**
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,72nm,19.3s						
KIC	**Kosan Boka**	**54.13**	**248**	*e*P	**P**	**10 30 43.9**	**-0.4**
	comp=Z,46nm,0.8s,mb5.5						
TIC	**Toumodi**	**54.15**	**248**	*e*P	**P**	**10 30 42.7**	**-1.7**
	comp=Z,6.3nm,0.3s,mb5.1						
LIC	**Lamto**	**54.43**	**248**	*e*P	**P**	**10 30 46.0**	**-0.5**
	comp=Z,33nm,0.9s,mb5.3						
KSRS	**Korea Array**	**64.16**	**61**	P	**P**	**10 31 53.9**	**+0.4**
	comp=Z,6.9nm,1.2s,mb4.5,baz=302,slow=5.7,SNR=6.0						
KSRS	**Korea Array**	**64.16**	**61**	P	**P**	**10 31 53.9**	**+0.4**
KSRS				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
BOSA	**Boshof**	**67.93**	**198**	LR	LR	11 02 30.4	
	comp=Z,83nm,18.3s,MS4.0,baz=165,slow=36						
SCHQ	**Schefferville**	**71.03**	**325**	LR	LR	11 05 58.1	
	comp=Z,72nm,18.2s,MS4.0,baz=51,slow=38						
PETK	**Petropavlovsk-**	**73.13**	**35**	LR	LR	11 12 02.7	
	comp=Z,39nm,19.1s,MS3.7,baz=106,slow=42						
YKA	**Yellowknife Ar**	**79.15**	**350**	LR	LR	11 07 48.7	
	comp=Z,39nm,19.1s,MS3.8,baz=190,slow=35						
ULM	**Lac du Bonnet**	**86.06**	**336**	LR	LR	11 12 44.4	
	comp=Z,69nm,20.6s,MS4.0,baz=9.4,slow=36						
PDAR	**Pinedale Array**	**96.87**	**341**	LR	LR	11 19 42.1	
	comp=Z,57nm,19.8s,MS4.1,baz=274,slow=36						

*CSEM **21** 10:29:46.7±0.2, 4041N×2607E, h8km, MD2.9, Error ellipse: s-maj=4.5km s-min=3.5km az=97.0*
*ISCJB **21** 10:29:46.5±1.0, 4042N±004×2589E±006, h11km±8km, Error ellipse: s-maj=8.3km s-min=6.6km az=151.5*
*ISK **21** 10:29:47.7, 4040N×2617E, h14km, MD2.9*
*NEIC **21** 10:29:47.0, 4041N×2597E, h20km, MD3.1(ATH), After ATH.*
*ATH **21** 10:29:47.0, 4041N×2597E, h20km±2km, MD3.1/4*
*DDA **21** 10:29:47.4, 4038N×2598E, h6km±1km, Md2.9*

ISC 21 10:29:46.6±1.0, 4041N±004×2593E±006, h10km±8km, n15, σ1°14/21, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENEZ	**Enez**	**0.36**	**27**	*e*PG	**Pg**	**10 29 54.6**	**+0.8**
ENEZ				*e*SG	**Sg**	**10 30 00.5**	**+1.9**
EZN	**Ezine**	**0.66**	**153**	*e*PG	**Pg**	**10 29 59.7**	**+0.3**
LIA	**Limnos Island**	**0.77**	**228**	*e*PN	**Pn**	**10 30 02.7**	**-0.8**
LIA				*e*SN		10 30 13.3	
RDO	**Rodhopi**	**0.79**	**338**	*e*PN	**Pn**	**10 30 02.4**	**-1.4**
RKY	**Sarkoy-Tekirda**	**0.99**	**73**	*e*PG	**Pg**	**10 30 04.1**	**-1.5**
RKY				*e*SG	**Sg**	**10 30 15.6**	**-2.8**
PRK	**Paraskevi**	**1.20**	**167**	*e*PN	**Pn**	**10 30 09.7**	**+0.4**
PRK				*e*SN	**Sn**	**10 30 25.7**	**+0.1**
AYVA	**Ayvalik**	**1.25**	**152**	*i* P	**Pn**	**10 30 10.3**	**+0.2**
AYVA				*i* S	**Sb**	**10 30 27.2**	**+0.9**
AYVA	**Ayvalik**	**1.25**	**152**	*i* P	**Pn**	**10 30 12.1**	**+2.0**
AYVA	**Ayvalik**	**1.25**	**152**	*i* P	**Pn**	**10 30 10.3**	**+0.2**
AYVA				*i* S	**Sb**	**10 30 27.2**	**+0.9**
TKR	**Tekirdag**	**1.35**	**64**	*e*PN	**Pn**	**10 30 10.6**	**-0.9**
BALY	**Balya**	**1.46**	**117**	*i* P	**Pn**	**10 30 14.0**	**+1.0**
BALY				*i* S	**Sn**	**10 30 33.2**	**+1.1**
BALY	**Balya**	**1.46**	**117**	*i* P	**Pn**	**10 30 14.0**	**+1.0**
EDRB	**Edirne**	**1.56**	**23**	*e*PN	**Pn**	**10 30 14.6**	**+0.2**
BALB	**Balikesir**	**1.68**	**117**	*e*PN	**Pn**	**10 30 15.2**	**-0.9**
NVR	**Nevrokopi**	**1.83**	**301**	*e*PN	**Pn**	**10 30 19.8**	**+1.7**

IDC 21 10:45:24.5±3.2, 312S×10092E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/20, mbtmp3.5/5, Error ellipse: s-maj=140.9km s-min=20.6km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.64**	**120**	P	P	10 52 32.2	-0.8
	0.2nm,0.4s,baz=307,slow=9.2,SNR=9.1						
ASAR	**Alice Springs**	**37.86**	**126**	P	P	10 52 43.8	+0.5
	0.3nm,0.3s,baz=300,slow=7.8,SNR=12						
SONM	**Songino Array**	**50.96**	**5**	P	P	10 54 29.3	+1.5
	0.7nm,0.7s,baz=189,slow=8.6,SNR=3.1						
MKAR	**Makanchi Array**	**52.34**	**344**	P	P	10 54 37.7	-0.4
	0.6nm,0.8s,baz=148,slow=8.5,SNR=6.9						
KURK	**Kurchatov**	**56.93**	**343**	P	P	10 55 10.1	-1.2
	0.3nm,0.7s,baz=167,slow=7.4,SNR=3.4						
TXAR	**Lajitas Array**	**145.00**	**39**	PKPbc	PKPbc	11 05 03.3	-0.4
	0.5nm,0.5s,baz=267,slow=0.7,SNR=9.2						

*ISCJB **21** 11:28:12.7±0.3, 2483N±002×12209E±002, h10km, Error ellipse: s-maj=2.9km s-min=2.4km az=2.6*
*TAP **21** 11:28:12.6, 2481N×12203E, h10km, ML2.9,C*
*JMA **21** 11:28:13.1±0.4, 2428N×12195E, h38km, M2.2*

ISC 21 11:28:12.5±0.5, 2479N±002×12211E±002, h2km±3km, n39, σ0°81/69, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.17**	**287**	*i*P	**Pg**	**11 28 15.8**	**0.0**
	baz=290						
EGS				S	**Sg**	**11 28 17.4**	**-0.6**
	baz=290						
TWB1	**Santiao Chiao**	**0.24**	**333**	*i*P	**Pg**	**11 28 17.2**	**+0.1**
	baz=348						
TWB1				*i* S	**Sg**	**11 28 20.5**	**+0.2**
	baz=348						
TWC	**Suao**	**0.30**	**232**	*i* P	**Pg**	**11 28 18.4**	**+0.1**
	baz=220						
TWC				*i* S	**Sg**	**11 28 21.7**	**-0.4**
	baz=220						
NWF	**Wu-fen Shan**	**0.41**	**313**	*i* P	**Pg**	**11 28 20.5**	**+0.2**
	baz=310						
NWF				*i* S	**Sg**	**11 28 25.9**	**+0.3**
	baz=310						
TWE	**Neicheng**	**0.41**	**260**	*i* P	**Pg**	**11 28 20.0**	**-0.3**
	baz=255						
TWE				S	**Sg**	**11 28 24.8**	**-0.8**
	baz=255						
ENA	**Nanau**	**0.50**	**223**	*e*P	**Pg**	**11 28 22.1**	**+0.1**
	baz=222						
ENA				*e*S	**Sg**	**11 28 28.2**	**-0.2**
	baz=222						
TWA	**Mucha**	**0.51**	**291**	*e*P	**Pg**	**11 28 22.6**	**+0.3**
	baz=280						
TWA				*e*S	**Sg**	**11 28 28.6**	**-0.4**
	baz=280						
ENTT	**Nioudou**	**0.52**	**253**	P	**Pg**	**11 28 22.2**	**-0.2**
	baz=248						
ENTT				*e*S	**Sg**	**11 28 28.9**	**-0.3**
	baz=248						
TAP1	**Taipei**	**0.59**	**295**	*e*P	**Pg**	**11 28 23.2**	**-0.5**
	baz=285						
TAP1				*e*S	**Sg**	**11 28 31.8**	**+0.4**
	baz=285						
TWY	**Chenhua**	**0.67**	**316**	*e*P	**Pg**	**11 28 25.7**	**+0.4**
	baz=318						
NSK	**Sanguang**	**0.69**	**260**	P	**Pg**	**11 28 25.1**	**-0.7**
	baz=258						
NSK				*e*S	**Sg**	**11 28 33.2**	**-1.6**
	baz=258						
TWS1	**Kuangyinshan**	**0.70**	**296**	*e*P	**Pg**	**11 28 26.3**	**+0.4**
	baz=296						
NNS	**Nan Shan**	**0.76**	**242**	*e*P	**Pg**	**11 28 26.7**	**-0.4**
	baz=239						
PCYT	**Pengchaiyu**	**0.83**	**358**	*e*P	**Pg**	**11 28 29.9**	**+1.5**
	baz=356						
TWD	**Chiawan**	**0.85**	**214**	P	**Pg**	**11 28 28.9**	**+0.1**
	baz=202						
TWD				S	**Sg**	**11 28 39.9**	**0.0**
	baz=202						
YOJ	**Yonaguni jima**	**0.88**	**112**	P	**Pg**	**11 28 30.8**	**+1.4**
YOJ				*e*S	**Sg**	**11 28 43.2**	**+2.3**
WHF	**Hehuan Shan**	**1.01**	**230**	*e*P	**Pg**	**11 28 31.7**	**-0.1**
	baz=228						
WHF				*e*S	**Sg**	**11 28 44.2**	**-0.7**
	baz=228						
TWT	**Tachien**	**1.01**	**238**	*e*P	**Pg**	**11 28 32.5**	**+0.6**
	baz=230						
TWT				*e*S	**Sg**	**11 28 45.8**	**+1.0**
	baz=230						
NSTT	**Nanjuang**	**1.02**	**261**	*e*P	**Pg**	**11 28 31.5**	**-0.6**
	baz=259						
NSTT				*e*S	**Sg**	**11 28 44.6**	**-0.7**
	baz=259						
ESL	**Shilin**	**1.16**	**212**	P	**Pg**	**11 28 34.6**	**-0.1**
	baz=210						
ESL				S	**Sg**	**11 28 50.5**	**+0.9**
	baz=210						
TWQ1	**Liyutan**	**1.30**	**250**	*e*P	**Pg**	**11 28 36.8**	**-0.5**
	baz=249						
TWQ1				*e*S	**Sg**	**11 28 54.7**	**+0.5**
	baz=249						
SMLT	**Sun Moon Lake**	**1.43**	**231**	*e*P	**Pn**	**11 28 40.0**	**+0.5**
	baz=229						
SMLT				*e*S	**Sg**	**11 28 59.3**	**+0.9**
	baz=229						
TYC	**Yuchr**	**1.45**	**232**	*e*P	**Pn**	**11 28 38.8**	**-1.0**
	baz=231						
TYC				*e*S	**Sg**	**11 28 57.2**	**-1.8**
	baz=231						
EHY	**Hungye**	**1.47**	**209**	*e*P	**Pn**	**11 28 39.7**	**-0.3**
	baz=218						
EHY				*e*S	**Sb**	**11 28 59.0**	**-0.8**
	baz=218						
IRIF	**Iriomote-Funau**	**1.54**	**107**	P	**Pn**	**11 28 39.7**	**-1.4**
IRIF				*e*S	**Sn**	**11 29 00.6**	**-1.1**
TWF1	**Yuli**	**1.62**	**208**	*e*P	**Pn**	**11 28 42.3**	**+0.3**
	baz=217						
TWF1				*e*S	**Sn**	**11 29 02.6**	**-0.9**
	baz=217						
YUS	**Yu-Shan**	**1.68**	**219**	*e*P	**Pn**	**11 28 42.1**	**-0.8**
	baz=229						
HATJ	**Hateruma jima**	**1.71**	**115**	*e*S	**Sn**	**11 29 02.2**	**-3.6**
ALS	**Alishan**	**1.75**	**223**	*e*P	**Pn**	**11 28 44.8**	**+1.0**
	baz=223						
ALS				*e*S	**Sn**	**11 29 07.4**	**+0.7**
	baz=223						
CHN5	**Tsauling**	**1.77**	**228**	*e*P	**Pn**	**11 28 45.9**	**+1.8**
	baz=228						
CHN5				*e*S	**Sn**	**11 29 08.8**	**+1.5**
	baz=228						
JKRS	**Kuro-shima**	**1.82**	**107**	P	**Pn**	**11 28 44.1**	**-0.7**
JKRS				*e*S	**Sn**	**11 29 06.8**	**-1.6**
CHKT	**Chengkung**	**1.82**	**202**	*e*P	**Pn**	**11 28 45.0**	**+0.1**
	baz=183						
ELDTW	**Lidau**	**1.89**	**212**	*e*P	**Pn**	**11 28 45.5**	**-0.2**
	baz=213						
ELDTW				*e*S	**Sn**	**11 29 10.3**	**+0.1**
	baz=213						
JIJ	**Ishigaki jima**	**1.90**	**103**	P	**Pn**	**11 28 45.4**	**-0.6**
JIJ				*e*S	**Sn**	**11 29 09.9**	**-0.6**
CHN4	**Tsaushan**	**2.00**	**224**	*e*P	**Pn**	**11 28 47.4**	**+0.1**
	baz=226						
STYT	**Tauyuan**	**2.04**	**218**	*e*P	**Pn**	**11 28 47.8**	**-0.1**
	baz=208						
STYT				*e*S	**Sn**	**11 29 14.2**	**+0.2**
	baz=208						
WTP	**Ta-pu**	**2.06**	**222**	*e*P	**Pn**	**11 28 49.3**	**+1.1**
	baz=210						
WTP				*e*S	**Sn**	**11 29 15.5**	**+1.0**
	baz=210						
TWK	**Hsinying**	**2.12**	**225**	*e*P	**Pn**	**11 28 49.3**	**+0.2**
	baz=227						
CHN1	**Nanshi**	**2.16**	**222**	*e*P	**Pn**	**11 28 50.1**	**+0.5**
	baz=225						
CHN1				*e*S	**Sn**	**11 29 18.2**	**+1.3**
	baz=225						

IDC 21 11:28:20.1±3.1, 417S×10074E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.6/6, Error ellipse: s-maj=126.7km s-min=20.7km az=57.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.55**	**356**	P	P	11 33 23.8	+1.9
	1.0nm,0.6s,baz=193,slow=9.0,SNR=4.8						
WRA	**Warramunga Arr**	**36.29**	**118**	P	P	11 35 25.6	0.0
	0.2nm,0.4s,baz=302,slow=9.5,SNR=5.9						
ASAR	**Alice Springs**	**37.41**	**124**	P	P	11 35 35.5	+0.4
	0.3nm,0.5s,baz=299,slow=7.5,SNR=7.7						
SONM	**Songino Array**	**52.02**	**5**	P	P	11 37 30.1	-1.1
	1.2nm,0.8s,baz=187,slow=7.1,SNR=6.8						
MKAR	**Makanchi Array**	**53.30**	**344**	P	P	11 37 42.1	+1.3
	0.6nm,0.5s,baz=157,slow=8.4,SNR=4.9						
ZALV	**Zalesovo Beam**	**59.42**	**349**	P	P	11 38 23.1	-1.2
	0.5nm,0.4s,baz=183,slow=2.8,SNR=4.6						
TXAR	**Lajitas Array**	**145.92**	**40**	PKP	PKPdf	11 48 00.9	-0.8
	0.6nm,0.9s,baz=318,slow=1.7,SNR=5.9						

*GII **21** 11:30:24.1±0.0, 2968N×3641E, h0km, ML1.8/3, EXPLOSION*
*ISCJB **21** 11:30:26.2±0.9, 2983N±005×3629E±006, h0km, Error ellipse: s-maj=7.8km s-min=7.4km az=44.1*
*CSEM **21** 11:30:26.8, 3021N×3624E, h25km, ML2.7, After SNSN SGS **21** 11:30:26.8, 3021N×3624E, h25km*

ISC 21 11:30:26.1±1.0, 2983N±005×3633E±006, h0km, n16, σ1°07/20, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.12**	**265**	Pg	**Pg**	**11 30 47.0**	**-0.6**
HRFI	**Mount Harif**	**1.14**	**281**	Pg	**Pg**	**11 30 47.4**	**-0.7**
EIL	**Elat**	**1.21**	**263**	Pg	**Pg**	**11 30 48.9**	**-0.5**
EIL				Sg	**Sg**	**11 31 06.7**	**+1.6**
HQLS		**1.23**	**245**	S	**Sg**	**11 31 05.0**	**-0.5**
HQLS		**1.23**	**245**	P	**Pg**	**11 30 48.6**	**-1.0**
HQLS		**1.23**	**245**	P	**Pg**	**11 30 48.6**	**-1.0**
HQLS				S	**Sg**	**11 31 05.0**	**-0.5**
MBRI	**Mt Berech**	**1.23**	**269**	Pg	**Pg**	**11 30 48.9**	**-0.9**
MBRI				Sg	**Sg**	**11 31 06.7**	**+0.9**
ZFRI	**Zfri**	**1.23**	**306**	Pn	**Pn**	**11 30 49.0**	**-1.6**
PRNI	**Paran**	**1.26**	**295**	Pn	**Pn**	**11 30 49.4**	**-1.7**
PRNI				Sn	**Sn**	**11 31 10.4**	**+1.7**
JLOS		**1.31**	**214**	P	**Pg**	**11 30 51.9**	**+0.6**
KRMI	**Paran Flat**	**1.42**	**282**	Pn	**Pn**	**11 30 52.2**	**-1.1**
TBKS	**Tabuk**	**1.61**	**173**	P	**Pn**	**11 30 57.4**	**+1.5**
MZDA	**Masada**	**1.70**	**331**	Pn	**Pn**	**11 30 57.7**	**+0.7**
BDAS	**Al Bad'**	**1.76**	**218**	P	**Pn**	**11 30 57.9**	**0.0**
DSI	**Dead Sea**	**1.92**	**335**	Pn	**Pn**	**11 31 01.4**	**+1.3**
KZIT	**Kziot**	**1.99**	**303**	Pn	**Pn**	**11 31 01.4**	**+0.4**

*ISCJB **21** 11:38:02.4±0.3, 4656N±002×12218E±002, h11km±5km, Error ellipse: s-maj=3.8km s-min=2.4km az=177.5*
*ROM **21** 11:38:02.3±0.3, 4655N×1222E, h6km±5km, Md2.3/6, Ml2.1/6, Error ellipse: s-maj=4.7km s-min=2.3km az=23.0*
*VIE **21** 11:38:02.6±0.2, 4655N×1219E, h10km±1km, mb1.4/8, ML2.3/9, Error ellipse: s-maj=1.8km s-min=0.8km az=178.0 4 km ENE of Cortina d'Ampezzo*
*CSEM **21** 11:38:02.2±0.1, 4654N×1219E, h20km, ML2.7/8, Error ellipse: s-maj=3.0km s-min=1.8km az=174.0*

ISC 21 11:38:03.3±0.3, 4656N±002×1218E±002, h8km±6km, n26, σ0°63/50, 11C-10D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFL	**Alpe Faloria**	**0.03**	**177**	⇑*i*Pg	**Pg**	**11 38 04.4**	**-0.3**
SEST	**Monte Rota**	**0.19**	**8**	Pg	**Pg**	**11 38 07.3**	**+0.1**
SEST				Sg	**Sg**	**11 38 10.4**	**+0.5**
	709nm,0.2s						
ABTA	**Abfaltersbach**	**0.30**	**50**	⇑*i*Pg	**Pg**	**11 38 08.9**	**-0.3**
ABTA				⇓*i*Sg	**Sg**	**11 38 12.9**	**-0.2**
	97nm,0.2s						
CSO	**Casso**	**0.30**	**160**	⇓*i*Pg	**Pg**	**11 38 08.7**	**-0.5**
CSO				*i* Sg	**Sg**	**11 38 13.2**	**-0.1**
CSO	**Casso**	**0.30**	**160**	*i* Pg	**Pg**	**11 38 08.7**	**-0.5**
CSO				*i* Sg	**Sg**	**11 38 13.1**	**-0.1**
CSMI	**Casera Mimoias**	**0.33**	**98**	⇑*i*Pg	**Pg**	**11 38 09.2**	**-0.5**
CSMI				*i* Sg	**Sg**	**11 38 14.1**	**-0.1**
FAU	**Forcella Aurin**	**0.35**	**203**	⇑*i*Pg	**Pg**	**11 38 10.0**	**-0.2**
FVI	**Forni Avoltri**	**0.42**	**84**	Pg	**Pg**	**11 38 10.8**	**-0.6**
FVI				Sg	**Sg**	**11 38 16.7**	**-0.2**
	115nm,0.4s						
ZOU	**Zoufplan**	**0.55**	**90**	⇑*i*Pg	**Pg**	**11 38 13.1**	**-0.7**
ZOU				*i* Sg	**Sg**	**11 38 21.0**	**-0.1**
CTI	**Castel Tesino**	**0.63**	**216**	Pg	**Pg**	**11 38 15.1**	**-0.3**
CTI				Sg	**Sg**	**11 38 24.7**	**+1.2**
	44nm,0.2s						
APPI	**Appiano**	**0.66**	**263**	Pg	**Pg**	**11 38 16.1**	**+0.1**
APPI				Sg	**Sg**	**11 38 25.3**	**+0.7**
PLRO	**Paularo**	**0.67**	**90**	⇓*i*Pg	**Pg**	**11 38 15.4**	**-0.8**
PLRO				*i* Sg	**Sg**	**11 38 24.7**	**-0.1**
WTTA	**Wattenberg**	**0.80**	**332**	⇓*i*Pg	**Pg**	**11 38 19.0**	**+0.3**
WTTA				⇑*i*Sg	**Sg**	**11 38 29.8**	**+0.8**
	7.3nm,0.1s						
PTCC	**Patocco-Chiusa**	**0.83**	**100**	Pg	**Pg**	**11 38 18.7**	**-0.4**
PTCC				Sg	**Sg**	**11 38 30.0**	**+0.1**
	7.0nm,0.3s						
KBA	**Koelnbreinsper**	**0.96**	**57**	⇑*i*Pg	**Pg**	**11 38 20.8**	**-0.9**
KBA				⇑*i*Sg	**Sg**	**11 38 34.3**	**+0.2**
	4.6nm,0.1s						
FETA	**Feichten**	**1.10**	**295**	⇓*i*Pg	**Pg**	**11 38 24.1**	**-0.2**
FETA				⇓*i*Sg	**Sg**	**11 38 38.9**	**+0.3**
	7.2nm,0.2s						
FETA	**Feichten**	**1.10**	**295**	Pg	**Pg**	**11 38 24.1**	**-0.2**
FETA				Sg	**Sg**	**11 38 38.9**	**+0.3**
	7.2nm,0.2s						
BRMO	**Bormio**	**1.25**	**267**	Pg	**Pg**	**11 38 26.9**	**-0.3**
BRMO				Sg	**Sg**	**11 38 43.3**	**-0.1**
	14nm,0.2s						
MABI	**Malga Bissina**	**1.26**	**247**	Pg	**Pg**	**11 38 26.9**	**-0.5**
MABI				Sg	**Sg**	**11 38 43.6**	**-0.1**
	13nm,0.3s						
VOY	**Vojsko**	**1.30**	**113**	*e*Pg	**Pg**	**11 38 30.2**	**+2.0**
VOY				*e*Sg	**Sg**	**11 38 47.0**	**+1.9**
MAGA	**Magasa**	**1.33**	**235**	Pg	**Pg**	**11 38 28.8**	**0.0**
	60nm,0.4s						
JAVS	**Javornik**	**1.47**	**116**	*i* Pg	**Pg**	**11 38 31.0**	**-0.4**
JAVS				*i* Sg	**Sg**	**11 38 51.0**	**+0.6**
OBKA	**Obir**	**1.64**	**91**	⇑*i*Pg	**Pg**	**11 38 33.9**	**-0.7**
OBKA				⇑*i*Sg	**Sg**	**11 38 56.6**	**+0.7**
	12nm,0.3s						
OBKA	**Obir**	**1.64**	**91**	Pg	**Pg**	**11 38 33.9**	**-0.8**
OBKA				Sg	**Sg**	**11 38 56.6**	**+0.7**
	12nm,0.3s						
DAVA	**Damuels**	**1.74**	**296**	⇓*i*Pn	**Pn**	**11 38 33.1**	**-0.5**
DAVA				⇑*i*Pg	**Pg**	**11 38 36.1**	**-0.5**
DAVA				⇓*i*Sn	**Sn**	**11 38 56.2**	**+0.2**
MOA	**Molln**	**1.92**	**47**	⇓*i*Pg	**Pg**	**11 38 39.5**	**-0.6**
MOA				⇓*i*Sg	**Sg**	**11 39 06.2**	**+1.1**
	4.2nm,0.2s						

*BJI **21** 11:52:19.8, 746S×12678E, h387km, mB4.4, mb4.3*
*MOS **21** 11:52:34.6±0.8, 671S×12627E, h489km, mb4.5/9, Error ellipse: s-maj=24.8km s-min=10.1km az=104.4*
*IDC **21** 11:52:35.4±0.9, 678S×12628E, h482km±11km, mb3.8/11, mb1 3.9/16, mb1mx3.8/20, mbtmp3.8/16, Error ellipse: s-maj=18.0km s-min=7.6km az=73.0*
*ISCJB **21** 11:52:35.1±0.5, 675S±004×12630E±006, h497km±6km, mb4.5/35, Error ellipse: s-maj=10.4km s-min=5.0km az=160.9*
*NEIC **21** 11:52:35.6±0.7, 674S×12638E, h488km±8km, mb4.5/7, Error ellipse: s-maj=10.8km s-min=5.5km az=64.0*
*DJA **21** 11:52:36, 682S×12649E, h471km, mb4.8/5*

ISC 21 11:52:36.0±0.4, 680S±004×12642E±006, h495km±6km, n75, σ0°93/77, mb4.5/35, 6C-3D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.56**	**30**	P	**P**	**11 53 50.4**	**-0.3**
	0.0nm,0.0s						
BBSI	**Bau Bau**	**4.04**	**289**	P	**P**	**11 53 56.6**	**+2.1**
	0.0nm,0.0s						
BATI	**Baumata**	**4.34**	**219**	P	**P**	**11 53 57.1**	**+0.2**
	0.0nm,0.0s						
BATI	**Baumata**	**4.34**	**219**	P	**P**	**11 53 57.0**	**0.0**
	118nm,0.3s,baz=49,slow=1.2,SNR=58						
BATI				S	**S**	**11 54 56.9**	**-6.0**
	86nm,0.3s,baz=102,slow=11,SNR=5.0						
LBMI	**Labuha**	**6.22**	**10**	P	**P**	**11 54 14.3**	**0.0**
	326nm,0.8s						
KAPI	**Kappang**	**6.86**	**285**	P	**P**	**11 54 19.6**	**-1.1**
	0.5nm,0.3s,baz=216,slow=3.4,SNR=2.7						
SWI	**Sorong**	**7.62**	**40**	P	**P**	**11 54 28.9**	**+0.4**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**11.26**	**184**	⇑*i*P	**P**	**11 55 07.2**	**+0.5**
FITZ				*e*S	**S**	**11 57 08.3**	**-2.5**
FITZ	**Fitzroy Crossi**	**11.26**	**184**	P	**P**	**11 55 07.2**	**+0.5**
	4.2nm,0.3s,baz=17,slow=9.8,SNR=171						
FITZ				S	**S**	**11 57 07.6**	**-3.2**
	0.4nm,0.3s,baz=190,slow=19,SNR=11						
WRAB	**Tennant Creek**	**15.16**	**150**	*e*P	**P**	**11 55 48.0**	**+0.1**
WRAB				*e*S	**S**	**11 58 24.5**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,18nm,0.9s						
WRAB	**Tennant Creek**	**15.16**	**150**	*e*P	**P**	**11 55 48.0**	**+0.1**
	comp=Z,18nm,0.9s						
WRAB				*e*S	**S**	**11 58 24.5**	**-1.8**
WRA	**Warramunga Arr**	**15.16**	**150**	P	**P**	**11 55 48.1**	**+0.1**
	comp=Z,2.5nm,0.3s,baz=335,slow=9.8,S

LZH				AMB	AMB			
	comp=Z,28nm,1.0s,mb4.5							
LZH				AMB	AMB			
	comp=Z,130nm,7.0s							
ODAN	**Odare**	**50.48**	**313**	*eP*	**P**	**12 00 48.1**	**+0.2**	
	comp=Z,33nm,0.5s,mb4.9							
TAPN	**Taplejung**	**50.54**	**314**	*eP*	**P**	**12 00 48.3**	**0.0**	
	comp=Z,27nm,0.4s,mb5.0							
RAMN	**Ramite**	**51.11**	**313**	*eP*	**P**	**12 00 52.7**	**+0.2**	
	comp=Z,72nm,0.6s,mb5.2							
JIRN	**Jiri**	**51.82**	**313**	*eP*	**P**	**12 00 57.0**	**-0.6**	
	comp=Z,11nm,0.4s,mb4.5							
GTA	**Gaotai**	**52.16**	**334**	*eP*	**P**	**12 01 00.0**	**+0.2**	
GTA				AMB	AMB			
	comp=Z,16nm,0.7s,mb4.5							
GUN	**Gumba**	**52.19**	**313**	*eP*	**P**	**12 00 59.9**	**-0.4**	
	comp=Z,34nm,0.5s,mb5.0							
PKIN	**Phulchoki**	**52.35**	**313**	*eP*	**P**	**12 01 00.9**	**-0.5**	
	comp=Z,14nm,0.4s,mb4.6							
KKN	**Kakani**	**52.55**	**313**	*eP*	**P**	**12 01 02.6**	**-0.3**	
	comp=Z,17nm,0.5s,mb4.7							
DMN	**Daman**	**52.58**	**312**	*eP*	**P**	**12 01 03.1**	**0.0**	
	comp=Z,38nm,0.9s,mb4.7							
GKN	**Gorkha**	**53.14**	**313**	*eP*	**P**	**12 01 06.8**	**-0.3**	
	comp=Z,36nm,0.4s,mb5.1							
RPZ	**Rata Peaks**	**53.60**	**141**	P	**P**	**12 01 11.6**	**+1.5**	
	comp=Z,3.5nm,0.7s,mb3.8,baz=301,slow=5.9,SNR=4.0							
KOLN	**Koldanda**	**53.77**	**312**	*eP*	**P**	**12 01 11.6**	**-0.1**	
	comp=Z,44nm,0.7s,mb4.9							
DANN	**Dangsing**	**53.98**	**312**	*eP*	**P**	**12 01 12.9**	**-0.2**	
	comp=Z,19nm,0.5s,mb4.6							
ULN	**Ulaanbaatar**	**57.05**	**345**	*d iP*	**P**	**12 01 34.8**	**+0.7**	
SONM	**Songino Array**	**57.20**	**344**	P	**P**	**12 01 35.7**	**+0.5**	
	comp=Z,4.6nm,0.5s,mb4.1,baz=166,slow=6.9,SNR=30							
SONM				PcP	PcP	12 02 23.3	+0.5	
	comp=Z,1.1nm,0.6s,baz=156,slow=5.3,SNR=3.9							
BOD	**Bodaibo**	**65.19**	**353**	*eP*	**P**	**12 02 27.1**	**-0.3**	
BOD				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.3							
PETK	**Petropavlovsk-**	**65.30**	**20**	P	**P**	**12 02 29.6**	**+1.3**	
	comp=Z,9.2nm,0.7s,mb4.5,baz=179,slow=4.4,SNR=8.2							
PETK				PcP	PcP	12 02 56.2	+0.4	
	comp=Z,2.1nm,0.5s,baz=222,slow=3.3,SNR=1.9							
PETK	**Petropavlovsk-**	**65.30**	**20**	P	**P**	**12 02 29.6**	**+1.3**	
PETK				PcP	PcP	12 02 56.2	+0.4	
MK31	**Makanchi Array**	**66.15**	**328**	*eP*	**P**	**12 02 33.8**	**0.0**	
MKAR	**Makanchi Array**	**66.15**	**328**	P	**P**	**12 02 33.9**	**+0.1**	
	comp=Z,2.9nm,0.4s,mb4.2,baz=126,slow=7.6,SNR=27							
MKAR				PcP	PcP	12 02 59.6	+0.1	
	comp=Z,1.2nm,0.6s,baz=132,slow=6.1,SNR=4.4							
YAK	**Yakutsk**	**68.67**	**2**	*eP*	**P**	**12 02 46.3**	**-2.6**	
YAK				pmax	pmax			
	comp=Z,17nm,0.9s,mb4.6							
YAK				pmax	pmax			
	comp=N,4.0nm,0.9s							
ZALV	**Zalesovo Beam**	**69.87**	**335**	P	**P**	**12 02 55.7**	**-0.6**	
	comp=N,16nm,0.4s,mb4.9,baz=134,slow=5.3,SNR=67							
KURK	**Kurchatov**	**70.53**	**330**	⇓*iP*	**P**	**12 03 00.2**	**-0.1**	
KURK				pmax	pmax			
	comp=Z,17nm,0.9s,mb4.6							
KURK	**Kurchatov**	**70.53**	**330**	*eP*	**P**	**12 02 59.7**	**-0.6**	
	comp=Z,16nm,0.9s,mb4.5							
NVS	**Novosibirsk**	**71.16**	**335**	*eP*	**P**	**12 03 02.2**	**-1.7**	
NVS				pmax	pmax			
	comp=Z,15nm,0.8s,mb4.6							
NVS				pmax	pmax			
	comp=N,12nm,1.0s							
NVS				pmax	pmax			
	comp=E,9.0nm,0.9s							
SEY	**Seymchan**	**72.31**	**12**	⇓*iP*	**P**	**12 03 11.4**	**+0.9**	
MAW	**Mawson**	**73.85**	**201**	P	**P**	**12 03 20.0**	**+0.7**	
	comp=E,0.5nm,0.5s,mb3.4,baz=4.2,slow=3.6,SNR=4.0							
BRVK	**Borovoye**	**76.10**	**329**	*eP*	**P**	**12 03 31.8**	**-0.3**	
BRVK				pmax	pmax			
	comp=Z,24nm,1.3s,mb4.6							
BRVK	**Borovoye**	**76.10**	**329**	*eP*	**P**	**12 03 31.8**	**-0.3**	
	comp=Z,24nm,1.3s,mb4.6							
BILL	**Bilibino**	**79.76**	**14**	⇑*eP*	**P**	**12 03 57.8**	**+6.2**	
BILL				*e**PP	pP	12 05 40.4	+1.3	
BILL				*SP	sP	12 06 31.0	+0.8	
BILL						12 07 03.0		
BILL				pmax	pmax			
	comp=Z,17nm,2.0s,mb4.2							
ARU	**Arti**	**83.68**	**329**	*c iP*	**P**	**12 04 11.8**	**-0.1**	
ARU				*PP	pP	12 06 00.8	+0.1	
ARU				*e*		12 07 33.8		
ARU				*e*S	S	12 13 45.6	-7.2	
ARU				*e*SS	SS	12 19 33.4	-0.5	
ARU				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.2							
COLD	**Coldfoot**	**66.66**	**23**	*eP*	**P**	**12 04 58.6**	**0.0**	
	comp=Z,1.6nm,0.5s,mb4.3							
ARCES	**ARCESS Array B**	**100.15**	**339**	P	Pdif	12 05 26.0	-2.1	
	comp=Z,3.7nm,1.0s,baz=61,slow=9.4,SNR=3.3							
PDAR	**Pinedale Array**	**119.26**	**44**	PKP	PKPdf	12 10 29.6	+0.9	
	comp=Z,0.3nm,0.5s,baz=82,slow=2.2,SNR=6.2							
ULM	**Lac du Bonnet**	**124.18**	**31**	PKP	PKPdf	12 10 36.8	-1.1	
	comp=Z,1.4nm,0.6s,baz=246,slow=18,SNR=3.2							
TORD	**Torodi Ar. Bea**	**125.28**	**281**	PKP	PKPdf	12 10 41.2	+0.2	
	comp=Z,0.8nm,0.6s,baz=65,slow=2.0,SNR=7.1							
TORD	**Torodi Ar. Bea**	**125.28**	**281**	PKP	PKPdf	12 10 41.2	+0.2	
TXAR	**Lajitas Array**	**127.86**	**58**	PKP	PKPdf	12 10 46.1	+0.4	
	comp=Z,0.3nm,0.6s,baz=220,slow=2.9,SNR=6.5							
TXAR	**Lajitas Array**	**127.86**	**58**	PKP	PKPdf	12 10 46.1	+0.4	

*ISCJB **21** 12:01:36.6±0.3,3721N×001×542W±001,h3km±2km, Error ellipse: s-maj=2.1km s-min=1.8km az=24.3*
*MDD **21** 12:01:38.9±0.2,3708N×540W,h7km±2km, mbLg3.2/31, Error ellipse: s-maj=2.2km s-min=1.8km az=171.0, PRIMO*
MDD EMS: III INTENSIDAD MIMA.
*LDG **21** 12:01:38.8±0.1, 3707N×542W,h2km, Ml3.5/4, Error ellipse: s-maj=2.5km s-min=1.7km az=178.0*
*SFS **21** 12:01:38.0,3705N×542W,h0km, ML3.2*
*NEIC **21** 12:01:39.2,3708N×541W,h10km, MN3.0(MDD), After MDD.*
NEIC Felt at Coripe.
*IGIL **21** 12:01:39.5,3708N×541W,h11km, ML3.2*
*INMG **21** 12:01:39.7±2.4, 3705N×539W,h24km±5km, MD3.3, ML3.3, Error ellipse: s-maj=3.9km s-min=3.0km az=47.0*
*CSEM **21** 12:01:39.4±0.0, 3701N×537W,h13km, ML3.9/27, Error ellipse: s-maj=1.1km s-min=0.8km az=2.0*
*CNRM **21** 12:01:44.7, 3703N×538W,h30km, MD3.5*

ISC 21 12:01:38.1±0.2,3715N±001×540W±001,h11km±1km,n185,
σ1§19/359,16C-5D,Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIJA	**Lijar**	**0.24**	**180**	⇓*P*	**Pg**	**12 01 41.5**	**-1.6**
LIJA	**Lijar**	**0.24**	**180**	*i* P	**Pg**	**12 01 41.5**	**-1.6**
ESPR	**Espera**	**0.46**	**233**	⇑Pg	**Pg**	**12 01 47.1**	**-0.1**
	82nm,0.5s,SNR=18						
ESPR				Lg		12 01 52.6	
	849nm,0.3s,SNR=5.0						
ESPR	**Espera**	**0.46**	**233**	⇑Pg	**Pg**	**12 01 47.0**	**-0.1**
ESPR	**Espera**	**0.46**	**233**	⇑Pg	**Pg**	**12 01 47.0**	**-0.1**
ESPR				Lg		12 01 54.2	
GIBL	**Gibalbin**	**0.55**	**235**	⇑P	**Pg**	**12 01 49.7**	**+0.8**
GIBL				S	**Sg**	**12 01 58.4**	**+2.2**
GIBL	**Gibalbin**	**0.55**	**235**	*i* P	**Pg**	**12 01 49.7**	**+0.8**
REAL	**Reales**	**0.68**	**167**	⇓P	**Pg**	**12 01 50.1**	**-1.2**
REAL				S	**Sg**	**12 01 59.8**	**-0.5**
REAL	**Reales**	**0.68**	**167**	*i* P	**Pg**	**12 01 50.1**	**-1.2**
REAL				*e*S	**Sg**	**12 01 59.8**	**-0.4**
EJIF	**Jimena Fronter**	**0.70**	**184**	⇑Pg	**Pg**	**12 01 49.5**	**-2.1**
	64nm,0.4s,SNR=18						
EJIF				Lg		12 02 00.2	
	144nm,0.2s,SNR=7.9						
EJIF	**Jimena Fronter**	**0.70**	**184**	⇑Pg	**Pg**	**12 01 49.8**	**-1.8**
EJIF	**Jimena Fronter**	**0.70**	**184**	⇑Pg	**Pg**	**12 01 49.8**	**-1.9**
EJIF				Lg		12 02 02.0	
EMIJ	**Mijas**	**0.77**	**139**	⇑Pg	**Pg**	**12 01 51.0**	**-2.0**
	130nm,0.3s,SNR=18						
EMIJ				Lg		12 02 01.9	
	427nm,0.2s,SNR=5.0						
EMIJ	**Mijas**	**0.77**	**139**	⇑Pg	**Pg**	**12 01 51.2**	**-1.8**
EMIJ	**Mijas**	**0.77**	**139**	⇑Pg	**Pg**	**12 01 51.2**	**-1.8**
EMIJ				Lg		12 02 03.5	
SCRT	**Cerro San Cris**	**0.80**	**231**	⇑P	**Pg**	**12 01 55.1**	**+1.4**
SCRT				S	**Sg**	**12 02 04.8**	**+0.7**
SCRT	**Cerro San Cris**	**0.80**	**231**	*i* P	**Pg**	**12 01 55.1**	**+1.4**
SCRT				*e*S	**Sg**	**12 02 04.8**	**+0.7**
MOMI	**Momias**	**0.86**	**197**	⇑P	**Pg**	**12 01 55.5**	**+0.9**
MOMI				S	**Sg**	**12 02 09.0**	**+3.2**
MOMI	**Momias**	**0.86**	**197**	*i* P	**Pg**	**12 01 55.5**	**+0.9**
MOMI				*e*S	**Sg**	**12 02 09.0**	**+3.2**
EMAL	**Malaga-Limoner**	**0.87**	**116**	Pg	**Pg**	**12 01 58.3**	**+3.4**
	12nm,0.1s,SNR=7.9						
EMAL				Lg		12 02 10.4	
	31nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**0.93**	**359**	⇑Pg	**Pg**	**12 01 57.8**	**+1.8**
	29nm,0.2s,SNR=18						
ECAB				Lg		12 02 11.7	
	434nm,0.1s,SNR=17						
ECAB	**El Cabril**	**0.93**	**359**	Pg	**Pg**	**12 01 57.7**	**+1.7**
	162nm,0.3s,SNR=18						
ECAB	**El Cabril**	**0.93**	**359**	⇑Pg	**Pg**	**12 01 57.7**	**+1.7**
ECAB				Lg		12 02 11.7	
CNIL	**Conil**	**0.94**	**214**	P	**Pg**	**12 01 57.1**	**+1.0**
CNIL				S	**Sg**	**12 02 08.2**	**-0.2**
CNIL	**Conil**	**0.94**	**214**	*eP*	**Pg**	**12 01 57.1**	**+0.9**
CNIL				*e*S	**Sg**	**12 02 08.2**	**-0.2**
SFS	**San Fernando**	**0.94**	**224**	P	**Pg**	**12 01 57.8**	**+1.6**
SFS				S	**Sg**	**12 02 11.0**	**+2.6**
SFS	**San Fernando**	**0.94**	**224**	*eP*	**Pg**	**12 01 57.8**	**+1.6**
SFS				*e*S	**Sg**	**12 02 11.0**	**+2.6**
ELOJ	**Sierra Loja**	**1.00**	**90**	Pg	**Pg**	**12 01 57.6**	**+0.3**
	20nm,0.2s,SNR=26						
ELOJ				Lg		12 02 12.2	
	82nm,0.2s,SNR=14						
ELOJ	**Sierra Loja**	**1.00**	**90**	Pg	**Pg**	**12 01 58.0**	**+0.6**
	28nm,0.2s,SNR=26						
ELOJ	**Sierra Loja**	**1.00**	**90**	Pg	**Pg**	**12 01 58.0**	**+0.6**
ELOJ				Lg		12 02 12.2	
EMIN	**Mina Concepcio**	**1.19**	**302**	⇓Pn	**Pn**	**12 02 00.8**	**+0.1**
	33nm,0.2s,SNR=18						
EMIN				Pg	**Pg**	**12 02 01.6**	**+0.7**
	117nm,0.2s,SNR=7.9						
EMIN				Lg		12 02 16.5	
	292nm,0.2s,SNR=5.0						
EMIN	**Mina Concepcio**	**1.19**	**302**	Pn	**Pn**	**12 02 00.8**	**+0.1**
	33nm,0.2s,SNR=18						
EMIN	**Mina Concepcio**	**1.19**	**302**	Pg	**Pg**	**12 02 01.7**	**+0.8**
	117nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.19**	**302**	⇓Pg	**Pg**	**12 02 00.8**	**-0.1**
EMIN				Lg		12 02 16.7	
EADA	**Adamuz**	**1.21**	**33**	⇑Pn	**Pn**	**12 02 01.8**	**+0.8**
	1.4nm,0.1s,SNR=18						
EADA				Pg	**Pg**	**12 02 03.2**	**+1.8**
	24nm,0.1s,SNR=7.9						
EADA				Lg		12 02 18.7	
	162nm,0.2s,SNR=5.0						
EADA	**Adamuz**	**1.21**	**33**	Pn	**Pn**	**12 02 01.8**	**+0.8**
	26nm,0.3s,SNR=18						
EADA	**Adamuz**	**1.21**	**33**	Pg	**Pg**	**12 02 03.2**	**+1.8**
	24nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**1.25**	**179**	Pg	**Pg**	**12 02 00.4**	**-1.7**
	16nm,0.1s,SNR=32						
ECEU				Lg		12 02 15.3	
	23nm,0.2s,SNR=9.3						
ECEU	**Ceuta**	**1.25**	**179**	Pg	**Pg**	**12 02 00.4**	**-1.7**
	30nm,0.3s,SNR=32						
ERON	**Agron**	**1.28**	**95**	Pg	**Pg**	**12 02 03.0**	**+0.2**
	5.3nm,0.2s,SNR=7.9						
ERON				Lg		12 02 21.3	
	67nm,0.3s,SNR=7.9						
ERON	**Agron**	**1.28**	**95**	Pg	**Pg**	**12 02 03.0**	**+0.2**
ERON				Lg		12 02 20.7	
ECOG	**Cogollos-Vega**	**1.47**	**84**	Pg	**Pg**	**12 02 05.7**	**-0.7**
	19nm,0.2s,SNR=22						
ECOG				Lg		12 02 27.3	
	50nm,0.2s,SNR=10						
ECOG	**Cogollos-Vega**	**1.47**	**84**	Pg	**Pg**	**12 02 05.7**	**-0.7**
ECOG				Lg		12 02 27.1	
EGUA	**Guajares**	**1.50**	**102**	Pg	**Pg**	**12 02 06.0**	**-1.0**
	7.0nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**1.57**	**87**	Pg	**Pg**	**12 02 07.0**	**-1.3**
	2.3nm,0.1s,SNR=33						
EQUE				Lg		12 02 29.9	
	110nm,0.3s,SNR=9.2						
EBAN	**Banos Encina**	**1.64**	**51**	Pn	**Pn**	**12 02 07.4**	**+0.6**
	0.9nm,0.1s,SNR=7.9						
EBAN				Pg	**Pg**	**12 02 09.8**	**+0.2**
	9.3nm,0.1s,SNR=18						
EBAN				Sn	**Sn**	**12 02 28.3**	**+0.4**
	20nm,0.1s,SNR=11						
EBAN				Lg		12 02 31.6	
	162nm,0.4s,SNR=5.0						
EBAN	**Banos Encina**	**1.64**	**51**	Pn	**Pn**	**12 02 07.8**	**+0.9**
	0.9nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**1.64**	**51**	Pg	**Pg**	**12 02 09.8**	**+0.3**
	16nm,0.4s,SNR=18						
EBAN				Sn	**Sn**	**12 02 28.6**	**+0.7**
	116nm,0.3s,SNR=11						
EBAN	**Banos Encina**	**1.64**	**51**	Pn	**Pn**	**12 02 07.8**	**+0.9**
EBAN				Pg	**Pg**	**12 02 09.8**	**+0.2**
EBAN				Sn	**Sn**	**12 02 28.6**	**+0.7**
EBAN				Lg		12 02 31.6	
PBAR	**Barrancos**	**1.66**	**309**	*e*Pn	**Pn**	**12 02 07.3**	**+0.2**
PBAR	**Barrancos**	**1.66**	**309**	*e*Pg	**Pg**	**12 02 10.2**	**+0.3**
PBAR				*e*Sn	**Sn**	**12 02 28.9**	**+0.5**
PBAR				A		12 02 33.1	
	159nm,0.4s						
PBAR				*e*Sg	**Sg**	**12 02 33.5**	**+2.1**
PBAR	**Barrancos**	**1.66**	**309**	Pn	**Pn**	**12 02 07.3**	**+0.2**
PBAR				Pg	**Pg**	**12 02 10.2**	**+0.3**
PBAR				Sn	**Sn**	**12 02 28.9**	**+0.5**
	79nm,0.4s						
PBAR				Lg		12 02 33.5	
PBAR	**Barrancos**	**1.66**	**309**	*e*Pg	**Pg**	**12 02 10.2**	**+0.3**
PBAR				*e*Sn	**Sn**	**12 02 28.9**	**+0.5**
	159nm,0.4s						
PBAR				*e*Sg	**Sg**	**12 02 33.5**	**+2.1**
DKH	**Dar Kharkhour**	**1.66**	**179**	*i* P	**Pn**	**12 02 08.5**	**+1.3**
DKH				*i* S	**Sn**	**12 02 28.0**	**-0.4**
EGRO	**El Granado**	**1.70**	**284**	Pn	**Pn**	**12 02 07.5**	**-0.3**
	3.0nm,0.1s,SNR=62						
EGRO				Pg	**Pg**	**12 02 09.8**	**-1.0**
	9.1nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**12 02 28.5**	**-1.1**
	24nm,0.1s,SNR=7.9						
EGRO				Lg		12 02 31.9	
	326nm,0.2s,SNR=5.0						
EGRO	**El Granado**	**1.70**	**284**	Pn	**Pn**	**12 02 07.6**	**-0.2**
	1.3nm,0.2s,SNR=62						
EGRO	**El Granado**	**1.70**	**284**	Pg	**Pg**	**12 02 10.0**	**-0.8**
	9.1nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.70**	**284**	Pn	**Pn**	**12 02 07.6**	**-0.2**
EGRO				Pg	**Pg**	**12 02 10.0**	**-0.8**
EGRO				Lg		12 02 31.6	
PVAQ	**Vaqueiros**	**1.86**	**279**	*e*Pn	**Pn**	**12 02 09.6**	**-0.4**
PVAQ	**Vaqueiros**	**1.86**	**279**	*e*Pg	**Pg**	**12 02 13.1**	**-0.8**
PVAQ				*e*Sn	**Sn**	**12 02 31.9**	**-1.6**
PVAQ				*e*Sg	**Sg**	**12 02 37.5**	**-0.6**
PVAQ				A		12 02 40.6	
	248nm,0.4s						
PVAQ	**Vaqueiros**	**1.86**	**279**	Pn	**Pn**	**12 02 09.6**	**-0.4**
PVAQ				Pg	**Pg**	**12 02 13.1**	**-0.8**
PVAQ				Sn	**Sn**	**12 02 31.9**	**-1.6**
PVAQ				Lg		12 02 37.5	
	124nm,0.4s						
PVAQ	**Vaqueiros**	**1.86**	**279**	*e*Pg	**Pg**	**12 02 13.1**	**-0.8**
PVAQ				*e*Sn	**Sn**	**12 02 31.9**	**-1.6**
PVAQ				*e*Sg	**Sg**	**12 02 37.5**	**-0.6**
	248nm,0.4s						
EQES	**Quesada**	**1.97**	**70**	Pn	**Pn**	**12 02 11.9**	**+0.5**
	0.9nm,0.1s,SNR=20						
EQES				Pg	**Pg**	**12 02 16.1**	**+0.3**
	6.8nm,0.1s,SNR=13						
EQES				Sn	**Sn**	**12 02 37.1**	**+1.0**
	24nm,0.2s,SNR=8.4						
EQES				Lg		12 02 42.5	
	66nm,0.2s,SNR=5.0						
EQES	**Quesada**	**1.97**	**70**	Pn	**Pn**	**12 02 11.9**	**+0.5**
	8.2nm,0.6s,SNR=20						
EQES	**Quesada**	**1.97**	**70**	Pg	**Pg**	**12 02 16.2**	**+0.4**
	18nm,0.3s,SNR=13						
EQES				Sn	**Sn**	**12 02 37.1**	**+1.1**
	29nm,0.3s,SNR=8.4						
EQES	**Quesada**	**1.97**	**70**	Pn	**Pn**	**12 02 11.9**	**+0.5**
EQES				Pg	**Pg**	**12 02 16.2**	**+0.4**
EQES				Sn	**Sn**	**12 02 37.1**	**+1.0**
EQES				Lg		12 02 43.1	
PBDV	**Barranco-do-Ve**	**2.02**	**273**	*e*Pn	**Pn**	**12 02 12.0**	**-0.2**
PBDV	**Barranco-do-Ve**	**2.02**	**273**	*e*Pg	**Pg**	**12 02 16.7**	**-0.2**
PBDV				*e*Sn	**Sn**	**12 02 35.8**	**-1.6**
PBDV				*e*Sg	**Sg**	**12 02 43.1**	**0.0**
PBDV				A		12 02 45.8	
	184nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.02**	**273**	Pn	**Pn**	**12 02 12.0**	**-0.2**
PBDV				Pg	**Pg**	**12 02 16.7**	**-0.2**
PBDV				Sn	**Sn**	**12 02 35.8**	**-1.6**
PBDV				Lg		12 02 43.1	
	92nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.02**	**273**	*e*Pg	**Pg**	**12 02 16.7**	**-0.2**
PBDV				*e*Sn	**Sn**	**12 02 35.8**	**-1.6**
PBDV				*e*Sg	**Sg**	**12 02 43.1**	**0.0**
	184nm,0.3s						
EBER	**Berja**	**2.03**	**96**	Pn	**Pn**	**12 02 12.5**	**+0.3**
	3.3nm,0.3s,SNR=18						
EBER				Pg	**Pg**	**12 02 15.6**	**-1.3**
	13nm,0.2s,SNR=18						
EBER				Lg		12 02 45.1	
	83nm,0.4s,SNR=5.8						
EBER	**Berja**	**2.03**	**96**	Pn	**Pn**	**12 02 12.4**	**+0.2**
	33nm,0.3s,SNR=18						
EBER	**Berja**	**2.03**	**96**	Pg	**Pg**	**12 02 16.2**	**-0.8**
	50nm,0.4s,SNR=18						
EBER	**Berja**	**2.03**	**96**	Pn	**Pn**	**12 02 12.4**	**+0.1**
EBER				Pg	**Pg**	**12 02 16.2**	**-0.8**
EBER				Lg		12 02 48.0	
EBAD	**Badajoz**	**2.05**	**322**	⇓Pn	**Pn**	**12 02 13.1**	**+0.6**
	3.3nm,0.1s,SNR=18						
EBAD				Pg	**Pg**	**12 02 17.2**	**-0.2**
	12nm,0.1s,SNR=5.9						
EBAD				Sn	**Sn**	**12 02 39.7**	**+1.7**
	49nm,0.1s,SNR=5.3						
EBAD				Lg		12 02 45.5	
	164nm,0.2s,SNR=5.0						
EBAD	**Badajoz**	**2.05**	**322**	Pn	**Pn**	**12 02 13.1**	**+0.6**
	11nm,0.3s,SNR=18						
EBAD	**Badajoz**	**2.05**	**322**	Pg	**Pg**	**12 02 17.1**	**-0.3**
	12nm,0.3s,SNR=5.9						
EBAD				Sn	**Sn**	**12 02 39.7**	**+1.6**
	26nm,0.3s,SNR=5.3						
EBAD	**Badajoz**	**2.05**	**322**	Pn	**Pn**	**12 02 13.2**	**+0.6**
EBAD				Pg	**Pg**	**12 02 16.1**	**-1.3**
EBAD				Sn	**Sn**	**12 02 39.8**	**+1.7**
EBAD				Lg		12 02 45.7	
RSA	**Sarsar**	**2.29**	**189**	*eP*	**Pn**	**12 02 19.0**	**+3.1**
RSA				*e*S	**Sn**	**12 02 43.0**	**-1.1**
EHUE	**Huescar**	**2.33**	**73**	⇑Pn	**Pn**	**12 02 16.9**	**+0.4**
	3.4nm,0.1s,SNR=18						
EHUE				Sn	**Sn**	**12 02 46.8**	**+1.8**
	7.8nm,0.2s,SNR=7.9						
EHUE				Lg		12 02 54.2	
	26nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**2.33**	**73**	Pn	**Pn**	**12 02 16.6**	**+0.2**
	3.4nm,0.1s,SNR=7.9						
EHUE				Sn	**Sn**	**12 02 46.8**	**+1.7**
	7.8nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**2.33**	**73**	Pn	**Pn**	**12 02 16.6**	**+0.2**
EHUE				Lg		12 02 53.6	
PESTR	**Estremoz**	**2.44**	**315**	*e*Pn	**Pn**	**12 02 18.6**	**+0.7**
PESTR	**Estremoz**	**2.44**	**315**	*e*Pg	**Pg**	**12 02 25.2**	**+0.4**
PESTR				*e*Sn	**Sn**	**12 02 48.4**	**+0.8**
PESTR				*e*Sg	**Sg**	**12 02 57.8**	**+1.4**
PESTR				A		12 03 03.0	
	158nm,0.8s						
PESTR	**Estremoz**	**2.44**	**315**	Pn	**Pn**	**12 02 18.6**	**+0.7**
PESTR				Pg	**Pg**	**12 02 25.2**	**+0.4**
PESTR				Sn	**Sn**	**12 02 48.4**	**+0.8**
PESTR				Lg		12 02 57.8	
	79nm,0.8s						
PESTR	**Estremoz**	**2.44**	**315**	*e*Pg	**Pg**	**12 02 25.2**	**+0.4**
PESTR				*e*Sn	**Sn**	**12 02 48.4**	**+0.8**
PESTR				*e*Sg	**Sg**	**12 02 57.8**	**+1.4**
	158nm,0.8s						
EVO	**Evora**	**2.49**	**305**	*e*Pn	**Pn**	**12 02 19.9**	**+1.4**
EVO	**Evora**	**2.49**	**305**	*e*Pg	**Pg**	**12 02 27.3**	**+1.5**
EVO				*e*Sg	**Sg**	**12 02 59.7**	**+1.7**
	350nm,0.6s						
EVO	**Evora**	**2.49**	**305**	*e*Pn	**Pn**	**12 02 19.1**	**+0.6**
EVO	**Evora**	**2.49**	**305**	*e*Pg	**Pg**	**12 02 25.4**	**-0.4**
EVO				*e*Sn	**Sn**	**12 02 48.3**	**-0.6**
EVO				A		12 03 02.3	
	134nm,0.2s						
EVO	**Evora**	**2.49**	**305**	Pn	**Pn**	**12 02 19.1**	**+0.6**
EVO				Pg	**Pg**	**12 02 25.4**	**-0.4**
EVO				Sn	**Sn**	**12 02 48.3**	**-0.6**
	67nm,0.2s						
EVO	**Evora**	**2.49**	**305**	*e*Pg	**Pg**	**12 02 25.4**	**-0.4**
EVO				*e*Sn	**Sn**	**12 02 48.3**	**-0.6**
	134nm,0.2s						
EVOP	**Sao Brissos**	**2.56**	**303**	*e*Pn	**Pn**	**12 02

3.6nm,0.3s,baz=202,slow=12,SNR=7.3
ESDC Sn **Sn** **12 02 57.3 +1.5**
3.7nm,0.3s,baz=205,slow=23,SNR=7.6
ESDC Lg 12 03 07.4
baz=210,slow=28,SNR=7.9
ESDC Sonseca Array 2.76 24 Pn **Pn** **12 02 24.1 +1.7**
1.3nm,0.4s,SNR=6.6
ESDC Sonseca Array 2.76 24 Pg **Pg** **12 02 30.6 -0.5**
3.6nm,0.3s,SNR=7.3
ESDC Sn **Sn** **12 02 57.3 +1.6**
3.7nm,0.3s,SNR=7.6
PCBR Castelo Branco 3.14 329 *e*Pn **Pn** **12 02 28.6 +1.0**
PCBR Castelo Branco 3.14 329 *e*Pg **Pg** **12 02 36.8 -1.5**
PCBR *e*Sn **Sn** **12 03 05.1 0.0**
PCBR *e*Sg **Sg** **12 03 19.8 +0.7**
PCBR A 12 03 23.4
51nm,0.4s
PCBR Castelo Branco 3.14 329 Pn **Pn** **12 02 28.6 +1.0**
PCBR Pg **Pg** **12 02 36.8 -1.5**
PCBR Sn **Sn** **12 03 05.1 0.0**
PCBR Lg 12 03 19.8
26nm,0.4s
PCBR Castelo Branco 3.14 329 *e*Pg **Pg** **12 02 36.8 -1.5**
PCBR *e*Sn **Sn** **12 03 05.1 0.0**
PCBR *e*Sg **Sg** **12 03 19.8 +0.7**
51nm,0.4s
ALMR Almeirim 3.21 310 *e*P **Pn** **12 02 28.7 +0.2**
ALMR *e*S **Sn** **12 03 04.4 -2.2**
ALMR *e*S **Sn** **12 03 04.5 -2.1**
ALMR AML AML 12 03 05.2
comp=N,46nm,0.5s
ALMR Almeirim 3.21 310 *e*P **Pn** **12 02 28.7 +0.3**
ALMR *e*S **Sn** **12 03 04.4 -2.2**
ALMR Almeirim 3.21 310 P **Pn** **12 02 28.7 +0.2**
ALMR S **Sn** **12 03 04.4 -2.2**
TZK Tazeka 3.21 162 *i*P **Pn** **12 02 31.0 +2.5**
TZK *i*S **Sn** **12 03 04.0 -2.7**
EMUR La Murta 3.38 77 Pg **Pg** **12 02 39.8 -3.2**
comp=N,5.7nm,0.3s,SNR=4.0
EMUR Lg 12 03 27.1
comp=N,21nm,0.4s,SNR=7.9
EMUR La Murta 3.38 77 Pn **Pn** **12 02 29.4 -1.5**
EMUR La Murta 3.38 77 Pg **Pg** **12 02 39.0 -3.9**
comp=N,2.8nm,0.3s,SNR=7.9
EMUR Sn **Sn** **12 03 10.7 -0.3**
EMUR La Murta 3.38 77 Pn **Pn** **12 02 29.4 -1.5**
EMUR Sn **Sn** **12 03 10.7 -0.3**
EMUR Lg 12 03 27.0
ETOB Tobarra 3.40 63 Pn **Pn** **12 02 31.4 +0.3**
comp=N,1.9nm,0.1s,SNR=15
ETOB Pg **Pg** **12 02 39.9 -3.3**
comp=N,2.3nm,0.1s,SNR=6.4
ETOB Sn **Sn** **12 03 10.4 -0.9**
comp=N,7.6nm,0.2s,SNR=4.6
ETOB Lg 12 03 28.1
comp=N,26nm,0.4s,SNR=5.0
ETOB Tobarra 3.40 63 Pn **Pn** **12 02 31.4 +0.4**
comp=N,1.9nm,0.1s,SNR=15
ETOB Tobarra 3.40 63 Pg **Pg** **12 02 39.9 -3.3**
comp=N,2.3nm,0.1s,SNR=6.4
ETOB Sn **Sn** **12 03 10.4 -0.9**
comp=N,7.4nm,0.3s,SNR=4.6
ETOB Tobarra 3.40 63 Pn **Pn** **12 02 31.4 +0.3**
ETOB Pg **Pg** **12 02 41.4 -1.8**
ETOB Sn **Sn** **12 03 10.4 -0.9**
ETOB Lg 12 03 27.9
PTOM Tomar 3.42 317 *e*Pn **Pn** **12 02 32.0 +0.7**
PTOM *e*Sn **Sn** **12 03 12.3 +0.5**
PTOM *e*Sg **Sg** **12 03 27.6 -0.2**
PTOM A 12 03 38.5
comp=N,93nm,0.3s
PTOM Tomar 3.42 317 *e*Pn **Pn** **12 02 32.0 +0.7**
PTOM *e*Sn **Sn** **12 03 12.3 +0.5**
PTOM *e*Sg **Sg** **12 03 27.6 -0.2**
comp=N,93nm,0.3s
GUD Guadarrama 3.62 15 Pn **Pn** **12 02 36.4 +2.2**
comp=N,0.8nm,0.2s,SNR=5.6
GUD Sn **Sn** **12 03 15.6 -1.3**
comp=N,7.0nm,0.3s,SNR=4.0
GUD Lg 12 03 35.0
comp=N,30nm,0.3s,SNR=10.0
GUD Guadarrama 3.62 15 Pg **Pg** **12 02 47.0 -0.5**
GUD Sn **Sn** **12 03 16.0 -0.9**
comp=N,7.0nm,0.3s,SNR=4.0
GUD Guadarrama 3.62 15 Pn **Pn** **12 02 35.8 +1.6**
GUD Pg **Pg** **12 02 47.0 -0.5**
GUD Sn **Sn** **12 03 16.0 -0.9**
GUD Lg 12 03 34.6
MTE Manteigas 3.65 333 *e*Pn **Pn** **12 02 36.0 +1.4**
MTE *e*Sn **Sn** **12 03 18.3 +0.7**
MTE *e*Sg **Sg** **12 03 35.0 -0.4**
MTE A 12 03 43.4
comp=N,105nm,0.5s
MTE Manteigas 3.65 333 *e*Pn **Pn** **12 02 36.0 +1.4**
MTE *e*Sn **Sn** **12 03 18.3 +0.7**
MTE *e*Sg **Sg** **12 03 35.0 -0.4**
comp=N,105nm,0.5s
PVIS Viseu 4.06 332 *e*Pn **Pn** **12 02 41.5 +1.4**
PVIS *e*Sn **Sn** **12 03 27.5 -0.1**
PVIS *e*Sg **Sg** **12 03 48.0 -0.4**
PVIS A 12 03 53.2
comp=N,43nm,0.5s
PVIS Viseu 4.06 332 *e*Pn **Pn** **12 02 41.5 +1.4**
PVIS *e*Sn **Sn** **12 03 27.5 -0.1**
PVIS *e*Sg **Sg** **12 03 48.0 -0.4**
comp=N,43nm,0.5s
CZD Col de Zad 4.12 176 *i*P **Pn** **12 02 43.5 +2.5**
CZD *i*S **Sn** **12 03 27.5 -1.6**
MVO Moncorvo 4.21 343 *e*Pn **Pn** **12 02 43.3 +1.1**
MVO Moncorvo 4.21 343 *e*Pg **Pg** **12 02 58.7 0.0**
MVO *e*Sn **Sn** **12 03 30.9 -0.4**
MVO *e*Sg **Sg** **12 03 53.6 +0.5**
MVO A 12 04 02.3
comp=N,48nm,0.4s
MVO Moncorvo 4.21 343 *e*Pg **Pg** **12 02 58.7 0.0**
MVO *e*Sn **Sn** **12 03 30.9 -0.4**
MVO *e*Sg **Sg** **12 03 53.6 +0.5**
comp=N,48nm,0.4s
ECHE Chera 4.25 54 Pn **Pn** **12 02 42.6 -0.2**
comp=N,0.5nm,0.1s,SNR=7.9
ECHE Lg 12 03 57.3
comp=N,3.6nm,0.2s,SNR=4.8
ECHE Chera 4.25 54 Pn **Pn** **12 02 42.6 -0.2**
ECHE Lg 12 03 55.4
EBEN Beniarda 4.38 68 Pn **Pn** **12 02 44.2 -0.4**
comp=N,0.3nm,0.1s,SNR=7.9
EBEN Sn **Sn** **12 03 34.4 -1.1**
comp=N,0.9nm,0.2s,SNR=7.9
EBEN Lg 12 03 59.7
comp=N,11nm,0.5s,SNR=7.9
EBEN Beniarda 4.38 68 Pn **Pn** **12 02 44.7 +0.1**
comp=N,0.2nm,0.1s,SNR=7.9
EBEN Sn **Sn** **12 03 34.9 -0.6**
comp=N,0.9nm,0.2s,SNR=7.9
EBEN Beniarda 4.38 68 Pn **Pn** **12 02 44.7 +0.1**
EBEN Sn **Sn** **12 03 34.9 -0.7**
PVRL Vila Real 4.50 337 *e*Pn **Pn** **12 02 47.5 +1.3**
PVRL *e*Sn **Sn** **12 03 37.9 -0.5**
PVRL *e*Sg **Sg** **12 04 03.6 +1.1**
ETOR Torete 4.50 34 Pn **Pn** **12 02 47.4 +1.2**
comp=N,8.8nm,0.3s,SNR=11
ETOR Sn **Sn** **12 03 37.1 -1.4**
comp=N,14nm,0.2s,SNR=5.4
ETOR Lg 12 04 03.3
comp=N,45nm,0.2s,SNR=5.0
ETOR Torete 4.50 34 Pn **Pn** **12 02 47.4 +1.2**
comp=N,7.9nm,0.3s,SNR=11
ETOR Sn **Sn** **12 03 37.1 -1.4**
comp=N,30nm,0.6s,SNR=5.4
ETOR Torete 4.50 34 Pn **Pn** **12 02 47.4 +1.2**
ETOR Sn **Sn** **12 03 37.1 -1.4**
ETOR Lg 12 04 03.4
KIB El Ksiba 4.59 187 *e*P **Pn** **12 02 49.0 +1.5**
KIB *i*S **Sn** **12 03 36.0 -4.8**
PTO Porto 4.70 329 *e*Sn **Sn** **12 03 42.6 -0.8**
PTO *e*Sg **Sg** **12 04 06.3 -2.6**
PBRG Braganca 4.76 348 *e*Pn **Pn** **12 02 51.6 +1.7**
PBRG *e*Sn **Sn** **12 03 44.5 -0.6**
PBRG *e*Sg **Sg** **12 04 10.2 -0.9**
PBRG A 12 04 21.2
comp=N,26nm,0.6s
PBRG Braganca 4.76 348 *e*Pn **Pn** **12 02 51.6 +1.7**
PBRG *e*Sn **Sn** **12 03 44.5 -0.6**
PBRG *e*Sg **Sg** **12 04 10.2 -0.9**
comp=N,26nm,0.6s
ECAL Calabor 4.90 348 Pn **Pn** **12 02 53.5 +1.9**
comp=N,3.8nm,0.3s,SNR=5.9
ECAL Sn **Sn** **12 03 47.9 -0.4**
comp=N,10.0nm,0.4s,SNR=11
ECAL Lg 12 04 16.0
comp=N,110nm,0.7s,SNR=8.0
ECAL Calabor 4.90 348 Pn **Pn** **12 02 54.1 +2.4**
ECAL Sn **Sn** **12 03 47.9 -0.4**
comp=N,30nm,0.4s,SNR=11
ECAL Calabor 4.90 348 Pn **Pn** **12 02 54.1 +2.4**
ECAL Sn **Sn** **12 03 47.9 -0.4**
ECAL Lg 12 04 15.9
PCAB Cabril 4.99 337 *e*Pn **Pn** **12 02 53.9 +1.0**
PCAB *e*Sn **Sn** **12 03 49.7 -0.9**
PCAB A 12 04 26.6
comp=N,31nm,0.5s
PCAB Cabril 4.99 337 *e*Pn **Pn** **12 02 53.9 +1.0**
PCAB *e*Sn **Sn** **12 03 49.7 -0.9**
comp=N,31nm,0.5s
EMOS Mosqueruela 5.01 49 Pn **Pn** **12 02 55.2 +1.9**
comp=N,0.9nm,0.3s,SNR=7.9
EMOS Sn **Sn** **12 03 50.3 -0.9**
comp=N,6.1nm,0.4s,SNR=7.9
EMOS Lg 12 04 20.0
comp=N,12nm,0.5s,SNR=7.9
EMOS Mosqueruela 5.01 49 Pn **Pn** **12 02 54.5 +1.2**
comp=N,0.4nm,0.5s,SNR=7.9
EMOS Sn **Sn** **12 03 49.8 -1.4**
comp=N,1.4nm,0.9s,SNR=7.9
EMOS Mosqueruela 5.01 49 Pn **Pn** **12 02 54.5 +1.2**
EMOS Sn **Sn** **12 03 49.8 -1.4**
ELOB Lobios 5.14 337 Pn **Pn** **12 02 56.0 +1.0**
comp=N,1.3nm,0.2s,SNR=6.6
ELOB Sn **Sn** **12 03 53.0 -1.4**
comp=N,7.5nm,0.3s,SNR=5.3
ELOB Lg 12 04 24.5
comp=N,51nm,0.6s,SNR=7.3
ELOB Lobios 5.14 337 Pn **Pn** **12 02 56.0 +1.0**
comp=N,2.6nm,0.5s,SNR=6.6
ZFT Errachidia 5.17 170 *e*P **Pn** **12 02 57.0 +1.5**
ZFT *e*S **Sn** **12 03 51.5 -3.7**
ESAC San Caprasio 5.95 38 Pn **Pn** **12 03 09.7 +3.6**
comp=N,6.4nm,0.3s,SNR=7.9
ESAC Sn **Sn** **12 04 12.0 -2.3**
comp=N,4.4nm,0.4s,SNR=4.0
ESAC Lg 12 04 50.9
comp=N,23nm,0.3s,SNR=7.9
ESAC San Caprasio 5.95 38 Pn **Pn** **12 03 09.7 +3.5**
comp=N,6.3nm,0.8s,SNR=7.9
ESAC Sn **Sn** **12 04 12.1 -2.2**
ESAC San Caprasio 5.95 38 Pn **Pn** **12 03 09.7 +3.6**
ESAC Sn **Sn** **12 04 12.1 -2.2**
ESAC Lg 12 04 48.9
EARI Arriondas 6.15 1 Pn **Pn** **12 03 11.5 +2.6**
comp=N,0.4nm,0.1s,SNR=7.9
EARI Sn **Sn** **12 04 16.5 -2.6**
comp=N,0.3nm,0.1s,SNR=7.9
EARI Lg 12 04 56.2
comp=N,22nm,0.7s,SNR=7.9
EARI Arriondas 6.15 1 Pn **Pn** **12 03 10.7 +1.9**
EARI Arriondas 6.15 1 Pn **Pn** **12 03 10.7 +1.8**
EARI Sn **Sn** **12 04 16.9 -2.2**
EARI Lg 12 04 56.2
EMAZ Mazaricos 6.41 336 Pn **Pn** **12 03 13.0 +0.5**
comp=N,4.0nm,0.4s,SNR=7.9
EMAZ Mazaricos 6.41 336 Pn **Pn** **12 03 13.0 +0.6**
comp=N,4.0nm,0.4s,SNR=7.9
SJPF Ste Jean 6.76 27 *e*Pn **Pn** **12 03 17.5 +0.2**
SJPF *e*Sn **Sn** **12 04 31.7 -2.6**
SJPF *e*Sg **Sg** **12 05 13.6 -1.5**
comp=N,7.8nm,0.7s
ETSF Etsaut 6.84 31 *e*Pn **Pn** **12 03 19.7 +1.4**
ETSF *e*Sn **Sn** **12 04 33.3 -2.9**
ETSF *e*Sg **Sg** **12 05 14.9 -2.7**
comp=N,8.0nm,0.8s
ETSF Etsaut 6.84 31 *e*Pn **Pn** **12 03 19.7 +1.4**
ETSF *e*Sg **Sg** **12 05 14.9 -2.7**
comp=N,4.0nm,0.8s
EPF Esparros 7.34 35 *e*Pn **Pn** **12 03 26.2 +1.0**
EPF *e*Sn **Sn** **12 04 44.9 -3.6**
EPF *e*Sg **Sg** **12 05 30.0 -3.6**
comp=N,6.8nm,0.5s
EPF Esparros 7.34 35 *e*Pn **Pn** **12 03 26.2 +1.0**
EPF *e*Sg **Sg** **12 05 30.0 -3.6**
comp=N,3.4nm,0.5s
QUIF Quistinic 10.89 8 *e*Pn **Pn** **12 04 14.0 +0.2**
ROSF Rostrenen 11.29 7 *e*Pn **Pn** **12 04 19.1 -0.2**

*IDC **21** 12:04:43.1±6.4, 263S×139.15E, h20km±36km, mb3.7/8, mb1 3.9/9, mb1mx3.8/16, mbtmp3.8/9, ML4.2/1, MS3.5/6, Ms1 3.5/6, ms1mx3.2/23, Error ellipse: s-maj=76.0km s-min=14.7km az=92.0*
*NEIC **21** 12:04:45.0±0.6, 265S×139.19E, h35km, mb4.4/2, Error ellipse: s-maj=24.1km s-min=7.7km az=95.0*
*ISCJB **21** 12:04:49.9±3.1, 284S±007×139.0E±02, h96km±31km, mb3.9/8, Error ellipse: s-maj=34.5km s-min=10.8km az=9.8*
ISC 21 12:04:48.8±4.4, 28S±01×139.1E±02, h70km±45km, n22, σ0s57/23, mb3.9/8, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**17.00**	**244**	Pn	**Pn**	**12 08 47.7**	**+5.5**
	6.8nm,0.3s,baz=150,slow=1.1,SNR=13						
GUMO	**Guam**	**17.23**	**19**	LR	LR	12 13 43.6	
	comp=Z,90nm,20.7s,baz=88,slow=32						
WRAB	**Tennant Creek**	**17.68**	**195**	*e*Pn	**Pn**	**12 08 50.3**	**-0.1**
	7.3nm,0.6s						
WRAB				*e*Sn	**Sn**	**12 11 59.8**	**-7.3**
WB2	**Warramunga Arr**	**17.69**	**195**	*e*P	**Pn**	**12 08 50.0**	**-0.6**
WB2				*e*S	**S**	**12 11 59.8**	**-11**
WRA	**Warramunga Arr**	**17.69**	**195**	P	**Pn**	**12 08 50.4**	**-0.2**
	0.8nm,0.3s,baz=18,slow=12,SNR=27						
WRA				S	**S**	**12 12 00.6**	**-10**
	0.2nm,0.3s,baz=20,slow=21,SNR=4.8						
WRA				LR	LR	12 15 48.3	
	comp=Z,79nm,19.9s,baz=295,slow=37						
CTA	**Charters Tower**	**18.59**	**158**	LR	LR	12 15 49.4	
	comp=Z,130nm,19.9s,baz=5.4,slow=36						
FITZ	**Fitzroy Crossi**	**20.15**	**220**	P	**P**	**12 09 17.8**	**+0.2**
	1.7nm,0.9s,baz=42,slow=15,SNR=4.8						
FITZ				S	**S**	**12 12 52.2**	**-7.9**
	2.2nm,0.9s,baz=109,slow=7.3,SNR=3.7						
FITZ				LR	LR	12 18 01.8	
	comp=Z,158nm,20.6s,baz=50,slow=39						
FITZ	**Fitzroy Crossi**	**20.15**	**220**	*e*P	**P**	**12 09 18.7**	**+1.2**
FITZ				*e*P		12 09 21.3	
FITZ				*e*S	**S**	**12 12 59.4**	**-0.8**
ASAR	**Alice Springs**	**21.38**	**193**	P	**P**	**12 09 31.4**	**+0.7**
	1.0nm,0.4s,mb3.5,baz=14,slow=11,SNR=35						
ASAR				S	**S**	**12 13 30.2**	**+6.1**
	0.6nm,0.6s,baz=4.6,slow=29,SNR=3.2						
STKA	**Stephens Creek**	**29.06**	**176**	LR	LR	12 23 40.4	
	comp=Z,194nm,18.7s,baz=23,slow=39						
CMAR	**Chiang Mai Arr**	**44.79**	**300**	P	**P**	**12 12 55.6**	**-0.4**
	0.8nm,0.6s,mb3.6,baz=122,slow=5.7,SNR=4.5						
SONM	**Songino Array**	**57.92**	**335**	P	**P**	**12 14 34.4**	**+0.6**
	0.5nm,0.5s,mb3.8,baz=158,slow=6.4,SNR=5.2						
SONM				LR	LR	12 37 49.4	
	comp=Z,52nm,20.0s,baz=257,slow=34						
MK31	**Makanchi Array**	**70.06**	**322**	*e*P	**P**	**12 15 52.8**	**-0.5**
MKAR	**Makanchi Array**	**70.06**	**322**	P	**P**	**12 15 54.0**	**+0.6**
	1.4nm,0.6s,mb4.0,baz=120,slow=7.8,SNR=11						
MKAR	**Makanchi Array**	**70.06**	**322**	P	**P**	**12 15 54.0**	**+0.6**
ZALV	**Zalesovo Beam**	**72.17**	**330**	P	**P**	**12 16 05.0**	**-1.0**
	0.9nm,0.5s,mb3.8,baz=99,slow=5.4,SNR=4.0						
KURK	**Kurchatov**	**73.97**	**325**	P	**P**	**12 16 17.0**	**+0.3**
	0.8nm,0.8s,mb3.5,baz=114,slow=3.6,SNR=4.1						
BVAR	**Borovoye Array**	**79.57**	**325**	P	**P**	**12 16 48.4**	**+0.2**
	1.6nm,0.7s,mb4.0,baz=110,slow=8.0,SNR=7.7						
CHUM	**Lake Minchumin**	**83.20**	**25**	*e*P	**P**	**12 17 06.5**	**-0.7**
	9.6nm,0.9s,mb4.6						
DAWY	**Dawson**	**88.75**	**26**	*e*P	**P**	**12 17 35.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**136.63**	**286**	PKP	PKPdf	12 24 05.2	+1.1
	0.5nm,0.8s,baz=57,slow=1.9,SNR=3.1						
DBIC	**Dimbokro**	**143.86**	**277**	PKP	PKPdf	12 24 15.8	-1.4
	3.4nm,0.7s,baz=100,slow=7.2,SNR=5.8						

IDC 21 12:29:06.4±4.8, 204S×10001E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/19, mbtmp3.4/3, Error ellipse: s-maj=181.0km s-min=30.6km az=61.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.96**	**120**	P	P	12 36 26.3	+0.1
	0.4nm,0.7s,baz=301,slow=9.8,SNR=3.6						
ASAR	**Alice Springs**	**39.22**	**126**	P	P	12 36 36.6	-0.1
	0.1nm,0.5s,baz=299,slow=7.3,SNR=6.5						
SONM	**Songino Array**	**49.98**	**6**	P	P	12 38 02.7	+0.5
	0.7nm,0.7s,baz=190,slow=7.6,SNR=5.6						
TXAR	**Lajitas Array**	**144.73**	**37**	PKP	PKPdf	12 48 44.5	-1.4
	0.4nm,0.6s,baz=254,slow=2.3,SNR=6.3						

*ISCJB **21** 12:32:10.0±2.0, 200S±01×1757W±0.1, h176km±23km, mb4.2/6, Error ellipse: s-maj=23.3km s-min=19.6km az=37.7*
*IDC **21** 12:32:10.6±2.7, 1993S×17575W, h164km±28km, mb4.0/6, mb1 4.1/8, mb1mx3.7/20, mbtmp4.0/8, Error ellipse: s-maj=30.9km s-min=17.0km az=116.0*
*NEIC **21** 12:32:11.7±1.8, 1997S×17553W, h185km±23km, mb4.8/1, Error ellipse: s-maj=28.4km s-min=15.8km az=120.0*
ISC 21 12:32:11.7±1.8, 199S±01×1756W±01, h182km±20km, n18, σ0s99/19, mb4.2/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.02**	**32**	P	**Pn**	**12 33 51.8**	**-0.4**
	6.1nm,0.3s,baz=187,slow=1.5,SNR=16						
AFI				S	**Sn**	**12 35 04.9**	**-6.6**
	3.6nm,0.3s,baz=15,slow=20,SNR=4.1						
AFI	**Afiamalu**	**7.02**	**32**	*e*Pn	**Pn**	**12 33 51.7**	**-0.5**
	29nm,0.5s						
AFI				*e*Sn	**Sn**	**12 35 06.5**	**-5.0**
DZM	**Mont Dzumac**	**16.90**	**260**	*e*P	**Pn**	**12 35 59.9**	**+2.2**
URZ	**Urewera**	**19.33**	**198**	P	**P**	**12 36 22.6**	**-0.5**
	6.6nm,0.3s,baz=12,slow=4.0,SNR=34						
RPZ	**Rata Peaks**	**26.21**	**202**	P	**P**	**12 37 30.1**	**+0.5**
	6.4nm,0.5s,mb4.5,baz=357,slow=1.7,SNR=15						
CTA	**Charters Tower**	**35.79**	**263**	*e*P	**P**	**12 38 54.1**	**+0.4**
CTA	**Charters Tower**	**35.79**	**263**	P	**P**	**12 38 54.0**	**+0.3**
	7.0nm,0.6s,mb4.5,baz=90,slow=10,SNR=12						
STKA	**Stephens Creek**	**40.06**	**244**	P	**P**	**12 39 28.7**	**-0.6**
	1.0nm,0.3s,mb3.9,baz=92,slow=9.1,SNR=2.8						
ASAR	**Alice Springs**	**46.84**	**256**	P	**P**	**12 40 23.1**	**-0.5**
	4.5nm,0.7s,mb4.2,baz=90,slow=8.6,SNR=87						
ASAR				PcP	PcP	12 41 53.7	0.0
	2.0nm,0.7s,baz=103,slow=3.9,SNR=14						
WB2	**Warramunga Arr**	**46.90**	**261**	*e*P	**P**	**12 40 22.6**	**-1.5**
WB2	**Warramunga Arr**	**46.90**	**261**	*e*P	**P**	**12 40 23.2**	**-0.9**
WRA	**Warramunga Arr**	**46.91**	**261**	P	**P**	**12 40 23.4**	**-0.8**
	1.5nm,0.3s,mb4.1,baz=96,slow=7.6,SNR=150						
WRA				PcP	PcP	12 41 54.3	+0.3
	1.4nm,0.8s,baz=95,slow=3.5,SNR=7.8						
FITZ	**Fitzroy Crossi**	**55.34**	**261**	*e*P	**P**	**12 41 26.4**	**-0.6**
PETK	**Petropavlovsk-**	**76.33**	**344**	P	**P**	**12 43 41.5**	**+1.3**
	1.7nm,0.7s,mb3.8,baz=111,slow=8.7,SNR=5.3						
VNA3	**Neumayer Olymp**	**88.54**	**175**	*e*	**P**	**12 44 42.7**	**-0.6**
VNA2	**Neumayer--Watz**	**89.01**	**176**	*e*	**P**	**12 44 45.2**	**-0.3**
	baz=193,slow=4.3						
VNA1	**Neumayer--Stat**	**89.22**	**176**	*e*	**P**	**12 44 48.5**	**+2.0**
GERES	**GERESS Array B**	**150.20**	**348**	PKPbc	PKPbc	12 51 41.8	+0.8
	0.4nm,0.5s,baz=29,slow=3.0,SNR=5.6						

IDC 21 12:37:50.8±3.2, 2200S×17832W, h642km±40km, mb3.1/3, mb1 3.2/3, mb1mx2.8/16, mbtmp3.1/3, Error ellipse: s-maj=39.2km s-min=20.7km az=168.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**23.38**	**200**	P	P	12 42 12.1	-0.4
	4.0nm,0.3s,baz=36,slow=4.1,SNR=12						
ASAR	**Alice Springs**	**43.90**	**258**	P	P	12 45 04.3	+1.0
	1.4nm,0.8s,baz=95,slow=7.6,SNR=21						
ASAR				PcP	PcP	12 46 35.8	+1.2
	0.3nm,0.6s,baz=101,slow=4.8,SNR=6.5						
ASAR				S	S	12 50 51.5	+1.2
	0.5nm,0.7s,baz=90,slow=16,SNR=4.7						
WB2	**Warramunga Arr**	**44.10**	**264**	*e*P	P	12 45 04.0	-0.9
WRA	**Warramunga Arr**	**44.12**	**264**	P	P	12 45 04.7	-0.2
	0.8nm,0.3s,baz=96,slow=7.4,SNR=33						
WRA				S	S	12 50 53.0	-0.4
	0.4nm,0.8s,baz=100,slow=12,SNR=3.2						
ARCES	**ARCESS Array B**	**130.34**	**349**	PKP	PKPdf	12 55 49.3	+0.2
	1.0nm,0.6s,baz=350,slow=2.7,SNR=3.0						
AKASG	**Malin Array Be**	**144.17**	**330**	PKP	PKPdf	12 56 13.1	-1.8
	2.7nm,0.5s,baz=40,slow=3.9,SNR=7.6						
GERES	**GERESS Array B**	**151.55**	**343**	PKPbc	PKPbc	12 56 33.8	-0.1
	0.3nm,0.3s,baz=352,slow=4.0,SNR=3.4						

*IDC **21** 12:55:10.6±2.3, 084N×9781E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/20, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=77.1km s-min=20.2km az=61.0*
*ISCJB **21** 12:55:14.0±2.0, 10N±02×979E±04, h33km, mb3.8/6, Error ellipse: s-maj=62.8km s-min=16.7km az=154.3*
*NEIC **21** 12:55:17.2±1.8, 109N×9822E, h35km, Error ellipse: s-maj=65.8km s-min=13.3km az=64.0*
ISC 21 12:55:16.5±2.0, 10N±02×980E±04, h35km, n8, σ0s68/8, mb3.8/6, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.05**	**27**	*e*P	**Pn**	**12 55 57.4**	**+9.0**
CMAR	**Chiang Mai Arr**	**17.40**	**3**	P	**Pn**	**12 59 15.4**	**-1.2**
	0.1nm,0.3s,baz=198,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**41.25**	**122**	P	**P**	**13 02 57.9**	**-0.6**
	0.6nm,0.6s,mb3.4,baz=303,slow=9.0,SNR=8.8						
ASAR	**Alice Springs**	**42.63**	**127**	P	**P**	**13 03 09.8**	**0.0**
	0.3nm,0.4s,mb3.4,baz=296,slow=8.0,SNR=17						
KSRS	**Korea Array**	**45.60**	**34**	P	**P**	**13 03 34.4**	**+1.1**
	2.6nm,0.7s,mb4.2,baz=222,slow=8.8,SNR=9.4						
SONM	**Songino Array**	**47.24**	**8**	P	**P**	**13 03 46.5**	**+0.5**
	0.3nm,0.4s,mb3.6,baz=190,slow=7.2,SNR=3.3						
MKAR	**Makanchi Array**	**47.65**	**345**	P	**P**	**13 03 49.4**	**+0.1**
	1.2nm,0.7s,mb4.0,baz=161,slow=7.7,SNR=7.3						
ZALV	**Zalesovo Beam**	**53.91**	**350**	P	**P**	**13 04 36.4**	**+0.1**
	1.3nm,0.4s,mb4.2,baz=164,slow=7.1,SNR=7.3						

IGQ 21 13:03:04.1, 116S×7830W, h12km±1km, Mb4.0, Ms3.8, 8C-2D, Error ellipse: s-maj=1.9km s-min=0.6km az=8.4, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PISA	**Pisayambo**	**0.13**	**319**	⇓P	Pg	13 03 07.3	-0.1
RUN5	**Runtun**	**0.28**	**206**	P	Pg	13 03 10.2	+0.3
ULBA	**Ulba**	**0.31**	**201**	⇑P	Pg	13 03 10.7	+0.4
JUI6	**Juive**	**0.31**	**213**	P	Pg	13 03 10.4	-0.1
BIL2	**Estacion Bilba**	**0.36**	**215**	P	Pg	13 03 11.3	+0.1
BIL2	**Estacion Bilba**	**0.36**	**215**	S	Sg	13 03 16.9	+0.8
PATA	**Patacocha**	**0.37**	**202**	⇑P	Pg	13 03 12.1	+0.7
ARRY	**Arrayan**	**0.38**	**204**	⇑P	Pg	13 03 11.8	+0.1
TAMB	**Tambo**	**0.47**	**352**	⇑P	Pg	13 03 14.0	+0.6
IGUA	**Igualata**	**0.47**	**226**	P	Pg	13 03 13.9	+0.5
CAMI	**Rancho Maria**	**0.52**	**337**	P	Pg	13 03 14.8	+0.4
VC1	**Cotopaxi 1**	**0.53**	**349**	P	Pg	13 03 15.1	+0.7
QIL2	**Quilotoa**	**0.68**	**295**	P	Pg	13 03 18.1	+0.7
ANTI	**Antisana**	**0.72**	**11**	⇓P	Pg	13 03 18.2	+0.1
JUA2	**San Juan 2**	**0.99**	**342**	P	Pb	13 03 23.3	+0.2
JUA2	**San Juan 2**	**0.99**	**342**	S	Sg	13 03 36.5	+0.4
GGP	**Refugio Guagua**	**1.02**	**343**	P	Pb	13 03 24.1	+0.3
TERV	**Terraza Guagua**	**1.03**	**343**	P	Pb	13 03 24.8	+0.9
PINO	**Pino**	**1.04**	**343**	P	Pb	13 03 25.2	+1.1
YANA	**Yana**	**1.07**	**345**	P	Pb	13 03 25.8	+1.2
YANA	**Yana**	**1.07**	**345**	S	Sb	13 03 38.0	-0.5
LAV3	**Lava3-Reventad**	**1.25**	**32**	⇑P	Pn	13 03 29.2	+1.8
LAV3	**Lava3-Reventad**	**1.25**	**32**	⇑S

ISC 21 13:08:45.6±1.6, 365N±01×4176E±007, h10km, n9, σ1§16/11, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSL	**Mosul**	**1.10**	**102**	*ex*	x	13 09 03.0	
MSL				*i* x	x	13 09 19.0	
MARD	**Mardin**	**1.11**	**315**	*i* P	**Pb**	**13 09 04.9**	**-2.0**
MARD				*i* S	**Sg**	**13 09 21.0**	**-0.4**
BEST	**Besiri**	**1.42**	**344**	*i* P	**Pn**	**13 09 10.7**	**-0.7**
BEST				*i* S	**Sn**	**13 09 30.1**	**0.0**
HAKT	**HAKKARI**	**1.87**	**56**	*i* P	**Pn**	**13 09 17.1**	**-0.6**
HAKT				*i* S	**Sn**	**13 09 41.9**	**+0.5**
DIYA	**Diyarbakir**	**1.91**	**317**	*i* P	**Pn**	**13 09 17.9**	**-0.3**
DIYA				*i* S	**Sn**	**13 09 44.0**	**+1.8**
URFA	**Urfa**	**2.52**	**292**	*e*PN	**Pn**	**13 09 27.6**	**+1.0**
SVRC	**Sivrice-ELAZID**	**2.69**	**314**	*e*PN	**Pb**	**13 09 32.6**	**-1.1**
PTK	**Pertek**	**3.01**	**322**	*e*PN	**Pn**	**13 09 36.0**	**+2.6**
BHD	**Baghdad**	**3.90**	**146**	*ex*	x	13 09 43.0	
BHD				*ex*	x	13 10 30.0	

BJI ***21*** *13:33:07.3, 257S×9954E, h43km, mB5.1, mb4.9, Ms4.9, Ms2.4*

ISCJB ***21*** *13:33:09.0±0.7, 222S±004×9942E±005, h35km±5km, mb4.9/62, MS4.6/33, Error ellipse: s-maj=8.5km s-min=5.3km az=147.8*

NEIC ***21*** *13:33:09.6±0.3, 2.18S×9953E, mb5.1/11, Error ellipse: s-maj=9.4km s-min=5.6km az=51.0*

NEIC Felt [IV] in the Kepulauan Mentawai. Felt [II] at Padang, Sumatra.

IDC ***21*** *13:33:09.8±0.7, 2.17S×9965E, h23km±4km, mb4.5/21, mb1 4.5/21, mb1mx4.4/26, mbtmp4.5/21, MS4.4/13, Ms1 4.4/13, ms1mx4.1/36, Error ellipse: s-maj=18.6km s-min=9.6km az=54.0*

MOS ***21*** *13:33:09.1±1.2, 2.11S×9960E, h33km, mb5.2/18, MS4.7/5, Error ellipse: s-maj=16.0km s-min=7.9km az=105.1*

DJA ***21*** *13:33:11, 220S×9933E, h35km, Mw5.4/13*

ISC 21 13:33:11.5±0.7, 223S±004×9945E±005, h40km±5km, h31km±2.6km:pP-P, n149, σ1§11/142, mb4.9/62, MS4.6/33, 23C-9D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**2.00**	**28**	P	**Pn**	**13 33 41.5**	**-1.3**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.44**	**57**	P	**Pn**	**13 34 03.2**	**+0.6**
	0.0nm,0.0s						
KSI	**Kapahiang**	**3.45**	**114**	P	**Pn**	**13 34 03.7**	**+1.0**
	0.0nm,0.0s						
JMBI	**JAMBI**	**4.24**	**82**	P	**Pn**	**13 34 14.8**	**+1.3**
	0.0nm,0.0s						
TRSI	**Tarutung**	**4.25**	**353**	P	**Pn**	**13 34 21.8**	**+8.0**
	0.0nm,0.0s						
PSI	**Prapat**	**5.02**	**354**	⇑*e*P	**Pn**	**13 34 21.0**	**-3.3**
DSRI	**Dabo**	**5.42**	**71**	P	**Pn**	**13 34 29.4**	**-0.4**
	251nm,1.2s						
KGM	**Kluang**	**5.72**	**43**	⇑P	**Pn**	**13 34 34.5**	**+0.5**
FRIM	**Kepong**	**5.85**	**22**	⇓P	**Pn**	**13 34 35.1**	**-0.6**
MYKOM	**Kota Tinggi**	**5.94**	**48**	⇑P	**Pn**	**13 34 37.8**	**+0.8**
PPBI	**Pangkal Pinang**	**6.69**	**90**	P		13 35 01.0	
	48nm,1.4s						
IPM	**Ipoh**	**6.84**	**13**	⇑P	**Pn**	**13 34 50.0**	**+0.6**
SBJI	**Serang**	**7.71**	**120**	P	**Pn**	**13 35 09.0**	**+7.7**
	279nm,1.1s						
TPI	**Tanjungpandan**	**8.22**	**94**	⇓*e*P	**Pn**	**13 35 09.0**	**+0.7**
TPI				*e*S	**Sn**	**13 36 52.0**	**+12**
KTGM	**Kuala Trenggan**	**8.36**	**26**	⇑P	**Pn**	**13 35 10.6**	**+0.4**
DBJI	**Dramaga**	**8.46**	**121**	P	**Pn**	**13 35 12.1**	**+0.6**
	227nm,1.2s						
CBJI	**Citeko**	**8.48**	**120**	P	**Pn**	**13 35 15.8**	**+4.0**
	1μm,0.9s						
LEM	**Lembang**	**9.34**	**120**	P	**Pn**	**13 35 24.7**	**+1.0**
	295nm,1.2s						
SNG	**Songkhla**	**9.41**	**7**	P	**Pn**	**13 35 23.0**	**-1.6**
KSM	**Kuching**	**11.46**	**71**	⇓P	**Pn**	**13 35 53.7**	**+0.9**
KSM	**Kuching**	**11.46**	**71**	*e*Pn	**Pn**	**13 35 51.7**	**-1.1**
STKI	**Sintang**	**12.24**	**79**	P		13 36 16.3	
	53nm,0.8s						
SJI	**Sawahan**	**13.44**	**114**	P	**Pn**	**13 36 17.7**	**-2.0**
	83nm,1.1s						
SBUM	**Sibu**	**13.59**	**70**	⇓P	**Pn**	**13 36 23.4**	**+1.5**
BTM	**Bintulu**	**14.66**	**68**	⇑P	**Pn**	**13 36 42.0**	**+5.6**
BBKI	**Banjar Baru**	**15.43**	**95**	P	**Pn**	**13 36 50.7**	**+4.3**
	130nm,0.9s						
KKM	**Kota Kinabalu**	**18.65**	**64**	⇑P	**Pn**	**13 37 26.9**	**+0.2**
KKM	**Kota Kinabalu**	**18.65**	**64**	⇑*e*P	**Pn**	**13 37 25.7**	**-1.0**
BDT	**Bhumibol Dam**	**19.35**	**359**	P	**Pn**	**13 37 34.0**	**-1.1**
SDKM	**Sandakan**	**19.37**	**66**	⇑P	**Pn**	**13 37 34.8**	**-0.6**
TSM	**Tawau**	**19.52**	**71**	⇑P	**Pn**	**13 37 36.3**	**-0.9**
KDM	**Kudat**	**19.59**	**62**	⇑P	**Pn**	**13 37 37.4**	**-0.6**
MYLDM	**Lahad Datu**	**20.41**	**69**	⇓P	**P**	**13 37 45.8**	**+0.5**
PCI	**Palu**	**20.43**	**87**	P	**P**	**13 37 47.7**	**+2.2**
	218nm,1.6s						
KAPI	**Kappang**	**20.45**	**98**	P	**P**	**13 37 44.1**	**-1.7**
	599nm,1.2s,SNR=9.0						
KAPI	**Kappang**	**20.45**	**98**	P	**P**	**13 37 43.3**	**-2.5**
	161nm,1.2s,baz=268,slow=6.5,SNR=6.1						
KAPI	**Kappang**	**20.45**	**98**	*e*P	**P**	**13 37 44.0**	**-1.8**
CMAR	**Chiang Mai Arr**	**20.56**	**359**	⇑*e*P	**P**	**13 37 45.4**	**-1.5**
	8.4nm,0.8s,baz=186,slow=10,SNR=30						
CMAR				LR	LR	13 46 36.4	
	comp=Z,2μm,18.6s,MS4.4,baz=185,slow=39						
CMAR	**Chiang Mai Arr**	**20.56**	**359**	⇑*e*P	**P**	**13 37 46.2**	**-0.7**
CHTO	**Chiang Mai**	**20.91**	**359**	*e*P	**P**	**13 37 52.4**	**+1.7**
NANT	**Nan**	**20.93**	**3**	⇓P	**P**	**13 37 50.7**	**-0.2**
	125nm,1.0s						
CHRT	**Chiangrai**	**21.96**	**1**	⇑P	**P**	**13 38 02.0**	**+0.1**
	197nm,0.9s,mb5.5						
KDI	**Kedari**	**23.20**	**95**	P	**P**	**13 38 15.8**	**+0.6**
	60nm,1.3s,mb4.9						
QIZ	**Qiongzhong**	**23.47**	**25**	P	**P**	**13 38 16.6**	**-1.1**
QIZ				S	**S**	**13 42 22.9**	**-5.5**
QIZ				AMB	AMB		
	comp=Z,36nm,1.1s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,208nm,7.2s						
QIZ				LR	LR		
	comp=E,2μm,14.3s						
QIZ				LR	LR		
	comp=Z,2μm,15.5s,MS4.6						
QIZ	**Qiongzhong**	**23.47**	**25**	*e*P	**P**	**13 38 16.9**	**-0.8**
BATI	**Baumata**	**25.33**	**109**	P	**P**	**13 38 32.4**	**-2.5**
	comp=Z,9.3nm,0.4s,mb4.7,baz=270,slow=1.0,SNR=2.3						
MNI	**Manado**	**25.65**	**82**	P	**P**	**13 38 40.7**	**+2.9**
	comp=Z,235nm,1.0s,mb5.7						
KMI	**Kunming**	**27.37**	**7**	P	**P**	**13 38 53.3**	**+0.2**
KMI				AP	pP	13 39 05.3	+1.2
KMI				XP	sP	13 39 09.3	+0.4
KMI				PP		13 39 45.0	
KMI				PPP		13 39 57.6	
KMI				S	**S**	**13 43 35.3**	**+4.8**
KMI				XS	sS	13 43 50.9	+2.0
KMI				SS		13 44 52.4	
KMI				SSS		13 45 12.3	
KMI				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.1						
KMI				AMB	AMB		
	comp=Z,103nm,4.6s						
KMI				LR	LR		
	comp=N,927nm,18.8s,MS4.6						
KMI				LR	LR		
	comp=E,1μm,14.4s,MS4.6						
KMI				LR	LR		
	comp=Z,1μm,13.8s,MS4.6						
LBMI	**Labuha**	**28.09**	**87**	P	**P**	**13 39 02.3**	**+2.6**
	comp=Z,108nm,1.2s,mb5.3						
GYA	**Guiyang**	**29.36**	**13**	⇑*i*P	**P**	**13 39 09.8**	**-1.0**
GYA				PP	PP	13 40 09.3	-8.3
GYA				PCP	PcP	13 42 18.6	+2.0
GYA				S	**S**	**13 44 03.0**	**+1.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,110nm,4.5s						
GYA				LR	LR		
	comp=N,2μm,14.9s,MS4.9						
GYA				LR	LR		
	comp=E,920nm,14.3s,MS4.9						
GYA				LR	LR		
	comp=Z,2μm,13.7s,MS4.8						
FITZ	**Fitzroy Crossi**	**30.15**	**123**	*e*P	**P**	**13 39 16.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**30.15**	**123**	P	**P**	**13 39 17.4**	**-0.5**
	comp=Z,12nm,1.1s,mb4.5,baz=298,slow=6.7,SNR=16						
FITZ				LR	LR	13 53 25.8	
	comp=Z,419nm,18.7s,MS4.1,baz=300,slow=40						
SWI	**Sorong**	**31.83**	**88**	P	**P**	**13 39 31.7**	**-1.2**
	comp=Z,63nm,1.1s,mb5.4						
LSA	**Lhasa**	**32.72**	**347**	P	**P**	**13 39 41.8**	**+1.4**
LSA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
LSA				AMB	AMB		
	comp=Z,120nm,7.0s						
LSA				LR	LR		
	comp=N,220nm,21.0s						
LSA				LR	LR		
	comp=E,540nm,30.0s						
LSA				LR	LR		
	comp=Z,500nm,23.0s,MS4.2						
LSA	**Lhasa**	**32.72**	**347**	*e*P	**P**	**13 39 42.0**	**+1.6**
LSA				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.0						
LSA	**Lhasa**	**32.72**	**347**	*e*P	**P**	**13 39 42.0**	**+1.6**
	comp=Z,31nm,1.4s,mb5.0						
CD2	**Chengdu**	**33.21**	**7**	P	**P**	**13 39 45.6**	**+1.0**
CD2				AP	pP	13 39 55.5	-0.2
CD2				XP	sP	13 40 00.1	-0.4
CD2				PP	PP	13 40 57.8	-2.5
CD2				PCP	PcP	13 42 26.8	0.0
CD2				S	**S**	**13 45 03.8**	**+2.0**
CD2				PCS	PcS	13 46 11.3	-1.1
CD2				SS	SS	13 47 07.5	-19
CD2				SCS	ScS	13 50 06.9	-1.8
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,60nm,5.8s						
CD2				LR	LR		
	comp=N,1μm,14.4s,MS4.9						
CD2				LR	LR		
	comp=E,1μm,14.4s,MS4.9						
CD2				LR	LR		
	comp=Z,2μm,14.4s,MS4.9						
NWAO	**Narrogin (SRO)**	**34.81**	**153**	P	**P**	**13 39 59.3**	**+0.8**
	comp=Z,6.1nm,0.7s,mb4.6,baz=328,slow=14,SNR=5.1						
NWAO				LR	LR	13 52 45.2	
	comp=Z,1μm,21.4s,MS4.6,baz=319,slow=34						
XAN	**Xi'an**	**37.16**	**13**	P	**P**	**13 40 16.8**	**-1.8**
XAN				AP	pP	13 40 27.9	-1.9
XAN				PP	PP	13 41 44.9	+1.0
XAN				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.6						
XAN				AMB	AMB		
	comp=Z,63nm,5.5s						
XAN				LR	LR		
	comp=N,865nm,14.4s,MS4.8						
XAN				LR	LR		
	comp=E,583nm,14.3s,MS4.8						
XAN				LR	LR		
	comp=Z,2μm,16.1s,MS4.9						
LZH	**Lanzhou**	**38.33**	**6**	⇑P	**P**	**13 40 29.1**	**+0.6**
LZH				AP	pP	13 40 41.0	+1.3
LZH				XP	sP	13 40 45.0	+0.5
LZH				PP	PP	13 42 01.3	+4.5
LZH				*e*S	**S**	**13 46 24.0**	**+3.7**
LZH				SS	SS	13 49 03.5	-6.7
LZH				AMB	AMB		
	comp=Z,53nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,195nm,4.0s						
LZH				LR	LR		
	comp=N,980nm,14.0s						
LZH				LR	LR		
	comp=Z,1μm,16.3s,MS4.8						
WRA	**Warramunga Arr**	**38.36**	**120**	P	**P**	**13 40 27.9**	**-1.1**
	comp=Z,16nm,0.8s,mb4.8,baz=304,slow=9.0,SNR=153						
WRA				S	**S**	**13 46 20.4**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=292,slow=15,SNR=5.2						
WRAB	**Tennant Creek**	**38.37**	**120**	P	**P**	**13 40 28.7**	**-0.4**
	comp=Z,185nm,0.9s,mb5.8,SNR=10.0						
WRAB	**Tennant Creek**	**38.37**	**120**	*e*P	**P**	**13 40 28.1**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,84nm,1.5s,mb5.2						
WRAB	**Tennant Creek**	**38.37**	**120**	*e*P	**P**	**13 40 28.1**	**-1.0**
	comp=Z,84nm,1.5s,mb5.2						
WB2	**Warramunga Arr**	**38.37**	**120**	⇑*i*P	**P**	**13 40 27.9**	**-1.2**
NJ2	**Nanjing**	**38.74**	**27**	*e*P	**P**	**13 40 32.9**	**+0.9**
NJ2				AP	pP	13 40 42.1	-1.2
NJ2				PP	PP	13 42 07.3	+5.9
NJ2				S	**S**	**13 46 27.0**	**+0.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,60nm,4.2s						
NJ2				LR	LR		
	comp=N,170nm,14.0s,MS4.5						
NJ2				LR	LR		
	comp=E,480nm,13.2s,MS4.5						
SSE	**Sheshan**	**39.07**	**30**	P	**P**	**13 40 35.1**	**+0.3**
SSE				AP	pP	13 40 46.1	+0.1
SSE				XP	sP	13 40 51.8	+1.1
SSE				S	**S**	**13 46 31.9**	**+0.4**
SSE				SCS	ScS	13 50 39.8	-1.3
SSE				AMB	AMB		
	comp=Z,28nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,207nm,3.5s						
SSE				LR	LR		
	comp=N,930nm,18.8s,MS4.7						
SSE				LR	LR		
	comp=E,402nm,18.9s,MS4.7						
SSE				LR	LR		
	comp=Z,1μm,15.0s,MS4.9						
ASAR	**Alice Springs**	**39.57**	**125**	P	**P**	**13 40 38.9**	**-0.2**
	comp=Z,9.4nm,0.8s,mb4.6,baz=300,slow=7.3,SNR=206						
ASAR				S	**S**	**13 46 38.7**	**-0.6**
	comp=Z,5.6nm,1.1s,baz=296,slow=17,SNR=15						
JOW	**Kunigami**	**40.10**	**42**	P	**P**	**13 40 44.1**	**+0.7**
	comp=Z,11nm,0.5s,mb4.8,baz=276,slow=10,SNR=6.8						
GTA	**Gaotai**	**41.43**	**0**	⇑P	**P**	**13 40 54.5**	**+0.3**
GTA				PCP	PcP	13 42 51.5	-0.1
GTA				S	**S**	**13 47 09.0**	**+2.4**
GTA				SS	SS	13 50 09.6	-2.5
GTA				AMB	AMB		
	comp=Z,28nm,1.5s,mb4.7						
GTA				AMB	AMB		
	comp=Z,158nm,4.5s						
GTA				LR	LR		
	comp=N,699nm,18.6s,MS4.7						
GTA				LR	LR		
	comp=E,745nm,18.0s,MS4.7						
GTA				LR	LR		
	comp=Z,1μm,17.4s,MS4.8						
HHC	**Hu-ho-hao-te**	**44.27**	**13**	*e*P	**P**	**13 41 17.6**	**+0.4**
HHC				AP	pP	13 41 28.0	-0.6
HHC				PCP	PcP	13 43 00.5	-0.6
HHC				PP	PP	13 43 02.8	+1.8
HHC				SCP	ScP	13 46 48.8	-1.4
HHC				PCS	PcS	13 46 53.0	-1.3
HHC				S	**S**	**13 47 49.8**	**+1.5**
HHC				SS	SS	13 51 02.0	-5.8
HHC				SCS	ScS	13 51 10.6	-1.8
HHC				AMB	AMB		
	comp=Z,22nm,0.6s,mb5.1						
HHC				AMB	AMB		
	comp=Z,154nm,6.4s						
HHC				LR	LR		
	comp=N,2μm,14.1s,MS5.2						
HHC				LR	LR		
	comp=E,682nm,14.3s,MS5.2						
HHC				LR	LR		
	comp=Z,2μm,14.6s,MS5.1						
BJI	**Beijing**	**44.77**	**18**	P	**P**	**13 41 20.9**	**-0.3**
BJI				PP	PP	13 43 08.1	+1.8
BJI				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.8						
BJI				AMB	AMB		
	comp=Z,220nm,3.6s						
BJI				LR	LR		
	comp=N,297nm,16.6s,MS4.5						
BJI				LR	LR		
	comp=E,423nm,19.5s,MS4.5						
BJI				LR	LR		
	comp=Z,387nm,21.2s,MS4.3						
WMQ	**Urumqi**	**47.04**	**348**	⇑*i*P	**P**	**13 41 40.3**	**+1.3**
WMQ				AP	pP	13 41 48.6	-1.8
WMQ				PCP	PcP	13 43 10.0	-0.7
WMQ				PP	PP	13 43 31.0	+0.9
WMQ				S	**S**	**13 48 29.5**	**+1.5**
WMQ				SCS	ScS	13 51 29.0	-1.1
WMQ				AMB	AMB		
	comp=Z,43nm,1.1s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,137nm,5.4s						
WMQ				LR	LR		
	comp=N,752nm,17.5s,MS4.8						
WMQ				LR	LR		
	comp=E,473nm,13.4s,MS4.8						
WMQ				LR	LR		
	comp=Z,633nm,20.7s						
KSRS	**Korea Array**	**47.49**	**31**	P	**P**	**13 41 42.1**	**-0.5**
	comp=Z,12nm,0.9s,mb4.8,baz=223,slow=8.6,SNR=32						
KSRS				LR	LR	14 03 23.0	
	comp=Z,261nm,18.4s,MS4.2,baz=205,slow=38						
CTA	**Charters Tower**	**49.01**	**115**	*e*P	**P**	**13 41 54.0**	**-0.7**
CTAO	**Charters Tower**	**49.01**	**115**	*e*P	**P**	**13 41 54.2**	**-0.5**
STKA	**Stephens Creek**	**49.42**	**131**	*e*P	**P**	**13 41 57.4**	**-0.2**
STKA	**Stephens Creek**	**49.42**	**131**	P	**P**	**13 41 58.3**	**+0.7**
	comp=Z,8.6nm,0.8s,mb4.8,baz=308,slow=8.7,SNR=17						
STKA				LR	LR	14 06 06.6	
	comp=Z,363nm,18.4s,MS4.4,baz=259,slow=40						
UCH	**Uchtor**	**49.67**	**336**	*e*P	**P**	**13 41 58.4**	**-0.9**
	comp=Z,7.5nm,0.8s,mb4.8						
TKM2	**Tokmak 2**	**49.82**	**337**	*e*P	**P**	**13 41 59.9**	**-0.6**
TKM2				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.3						
TKM2	**Tokmak 2**	**49.82**	**337**	*e*P	**P**	**13 41 59.9**	**-0.5**
	comp=Z,39nm,1.3s,mb5.3						
FRU	**Bishkek**	**50.13**	**336**	⇓*i*P	**P**	**13 42 03.0**	**+0.2**
FRU				pmax	pmax		
	comp=Z,220nm,3.0s						
SONM	**Songino Array**	**50.22**	**6**	P	**P**	**13 42 04.2**	**+0.8**
	comp=Z,21nm,0.6s,mb5.3,baz=188,slow=9.2,SNR=146						
SONM				PcP	PcP	13 43 22.6	+0.5
	comp=Z,2.0nm,0.5s,baz=188,slow=3.8,SNR=5.2						
ULN	**Ulaanbaatar**	**50.33**	**7**	*c i*P	**P**	**13 42 04.9**	**+0.7**
ULN	**Ulaanbaatar**	**50.33**	**7**	*e*P	**P**	**13 42 04.1**	**-0.1**
	comp=Z,20nm,0.7s,mb5.2						
EKS2	**Erkin-Say**	**50.33**	**335**	*e*P	**P**	**13 42 05.0**	**+0.7**
	comp=Z,18nm,0.9s,mb5.1						
MK31	**Makanchi Array**	**51.10**	**345**	*e*P	**P**	**13 42 10.4**	**+0.4**
MKAR	**Makanchi Array**	**51.10**	**345**	P	**P**	**13 42 10.4**	**+0.3**
	comp=Z,14nm,0.6s,mb5.1,baz=149,slow=8.1,SNR=171						
CN2	**Changchun**	**51.41**	**24**	*e*P	**P**	**13 42 11.8**	**-0.7**
CN2				*e*S	**S**	**13 49 27.6**	**-1.8**
CN2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
CN2				AMB	AMB		
	comp=Z,500nm,7.0s						
CN2				LR	LR		
	comp=N,700nm,17.0s,MS4.8						
CN2				LR	LR		
	comp=E,530nm,17.0s,MS4.8						
ZAK	**Zakamensk**	**52.51**	**3**	*e*P	**P**	**13 42 28.6**	**+8.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
VLA	**Vladivostok**	**53.76**	**29**	*e*P	**P**	**13 42 28.6**	**-1.2**
VLA				pmax	pmax		
	comp=Z,52nm,1.6s,mb5.2						
VLA				MLR	MLR		
	comp=Z,500nm,14.0s,MS4.7						
MDJ	**Mudanjiang**	**53.83**	**26**	P	**P**	**13 42 31.6**	**+1.2**
MDJ				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,70nm,5.4s						
MDJ				LR	LR		
	comp=N,726nm,13.2s,MS5.0						
MDJ				LR	LR		
	comp=E,557nm,12.6s,MS5.0						
MDJ				LR	LR		
	comp=Z,1μm,13.8s,MS5.1						
HIA	**Hailar**	**54.21**	**16**	*i* P	**P**	**13 42 32.1**	**-0.9**
KURK	**Kurchatov**	**55.67**	**344**	P	**P**	**13 42 43.0**	**-0.5**
	comp=Z,3.3nm,0.6s,mb4.6,baz=164,slow=7.2,SNR=10						
KURK	**Kurchatov**	**55.67**	**344**	*e*P	**P**	**13 42 43.1**	**-0.4**
KURK				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
KURK	**Kurchatov**	**55.67**	**344**	*e*P	**P**	**13 42 43.1**	**-0.4**
	comp=Z,21nm,0.9s,mb5.2						
ZALV	**Zalesovo Beam**	**57.29**	**350**	P	**P**	**13 42 55.1**	**+0.1**
	comp=Z,19nm,0.6s,mb5.3,baz=180,slow=5.6,SNR=106						
ZALV				pP	pP	13 43 02.1	-4.6
	comp=Z,16nm,0.7s,baz=147,slow=8.1,SNR=12						
KLR	**Kul'dur**	**58.36**	**24**	*e*P	**P**	**13 42 58.8**	**-3.8**
NVS	**Novosibirsk**	**58.43**	**349**	⇑*i*P	**P**	**13 43 01.7**	**-1.3**
NVS				*e*S	**S**	**13 51 01.5**	**-1.6**
NVS				pmax	pmax		
	comp=Z,24nm,1.5s,mb5.0						
NVS				pmax	pmax		
	comp=N,34nm,1.6s						
NVS				pmax	pmax		
	comp=E,15nm,1.3s						
NVS				smax			
	comp=E,58nm,2.9s						
BVAR	**Borovoye Array**	**60.20**	**340**	P	**P**	**13 43 14.7**	**-0.5**
	comp=E,4.3nm,0.7s,mb4.6,baz=144,slow=8.7,SNR=22						
BVAR				pP	pP	13 43 22.0	-5.0
	comp=E,5.4nm,0.7s,baz=134,slow=8.5,SNR=11						
BRVK	**Borovoye**	**60.27**	**340**	*e*P	**P**	**13 43 15.0**	**-0.7**
BRVK				*e**PP	pP	13 43 22.2	-5.3
BOD	**Bodaibo**	**60.99**	**9**	*e*P	**P**	**13 43 20.0**	**-0.5**
BOD				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.9						
YSS	**Yuzh-Sakhalins**	**61.97**	**32**	*e*	**P**	**13 43 32.0**	**+4.6**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.4						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.7						
KMBO	**Kilima Mbogo**	**62.17**	**270**	LR	LR	14 07 46.8	
	comp=Z,223nm,19.3s,MS4.3,baz=103,slow=33						
AKTO	**Aktyubinsk**	**63.29**	**332**	LR	LR	14 14 14.8	
	comp=Z,170nm,19.9s,MS4.2,baz=141,slow=39						
ARU	**Arti**	**67.19**	**337**	*d i*P	**P**	**13 44 09.4**	**+8.1**
ARU				*e*		13 46 36.4	
ARU				*e*SS	SS	13 57 15.9	+3.0
ARU				pmax	pmax		
	comp=Z,23nm,1.7s,mb4.9						
ARU	**Arti**	**67.19**	**337**	*e*P	**P**	**13 44 00.1**	**-1.2**
	comp=Z,16nm,1.2s,mb4.9						
YAK	**Yakutsk**	**68.10**	**15**	*e*P	**P**	**13 44 05.3**	**-1.6**
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
YAK				MLR	MLR		
	comp=Z,695nm,17.0s,MS5.0						
YAK				MLR	MLR		
	comp=N,455nm,17.0s,MS4.8						
YAK				MLR	MLR		
	comp=E,210nm,16.0s,MS4.8						
YAK	**Yakutsk**	**68.10**	**15**	*e*P	**P**	**13 44 05.7**	**-1.2**
ASF	**Jabal al Asfar**	**68.27**	**306**	LR	LR	14 14 48.5	
	comp=E,287nm,19.5s,MS4.5,baz=118,slow=36						
KIV	**Kislovodsk**	**68.35**	**319**	P	pP	13 44 24.0	+3.2
KIV				*e*S	S	13 53 11.2	+3.9
KIV				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
MALT	**Malatya**	**69.08**	**313**	*e*P	**P**	**13 44 16.0**	**+

	comp=Z,2.8nm,0.9s,mb4.2,baz=120,slow=8.8,SNR=4.7								
BOSA	**Boshof**	**75.06**	**241**		P		**P**	**13 44 50.4**	**+0.8**
SEY	**Seymchan**	**76.04**	**22**⇑	*eP*			**P**	**13 44 55.1**	**+0.7**
TIXI	**Tiksi**	**76.17**	**9**	*eP*			**P**	**13 44 51.8**	**-3.2**
TIXI					pmax	pmax			
	comp=Z,22nm,1.3s,mb4.9								
TIXI					MLR	MLR			
	comp=Z,506nm,14.0s,MS5.0								
MOS	**Moscow**	**76.40**	**329**	*eP*			**P**	**13 45 02.8**	**+6.2**
OBN	**Obninsk**	**76.69**	**328**⇑	*eP*			**P**	**13 45 07.7**	**+9.4**
OBN				*e*				13 45 15.2	
OBN					S	S		13 54 46.0	+3.9
OBN					pmax	pmax			
	comp=Z,40nm,1.6s,mb5.1								
SYO	**Syowa Base**	**77.48**	**199**⇓	*es*	P		sP	13 45 16.8	-2.3
KLMR	**Klimovskoe**	**77.79**	**334**		P		**P**	**13 45 02.3**	**-2.0**
KLMR					pmax	pmax			
	comp=Z,33nm,1.6s,mb5.0								
BUR08	**Bucovina Ar. S**	**81.08**	**319**	*eP*			**P**	**13 45 23.5**	**+0.9**
ARCES	**ARCESS Array B**	**86.50**	**340**		P		**P**	**13 45 50.6**	**+0.9**
	comp=Z,3.2nm,0.7s,mb4.7,baz=98,slow=7.5,SNR=8.1								
ARCES					pP		pP	13 45 59.4	-2.6
	comp=Z,5.8nm,0.9s,baz=103,slow=4.5,SNR=4.5								
ARCES					LR		LR	14 29 17.5	
	comp=Z,266nm,18.2s,MS4.7,baz=94,slow=39								
ARCES	**ARCESS Array B**	**86.50**	**340**		P		**P**	**13 45 50.6**	**+0.9**
ARCES					*PP		pP	13 45 59.4	-2.6
GERES	**GERESS Array B**	**88.85**	**319**		P		**P**	**13 46 02.4**	**+1.0**
	comp=Z,0.3nm,0.3s,mb4.1,baz=97,slow=5.0,SNR=3.8								
GERES					pP		pP	13 46 11.2	-2.6
	comp=Z,0.8nm,0.7s,baz=87,slow=2.8,SNR=2.9								
BRG	**Berggiesshubel**	**88.86**	**321**	*eP*			pP	13 46 11.4	-2.4
BRG					pmax	pmax			
	comp=Z,8.0nm,1.4s,mb4.9								
BRG	**Berggiesshubel**	**88.86**	**321**	*eP*			pP	13 46 11.4	-2.4
	comp=Z,13nm,1.4s								
CLL	**Collm**	**89.49**	**321**	*eP*			**P**	**13 46 04.0**	**-0.4**
CLL					pmax	pmax			
	comp=Z,5.0nm,0.6s,mb5.0								
CLL	**Collm**	**89.49**	**321**	*eP*			**P**	**13 46 04.0**	**-0.4**
	comp=Z,5.0nm,0.6s,mb5.0								
CLL				*eS*			S	13 56 57.0	+4.9
MOX	**Moxa**	**90.32**	**320**	*eP*			pP	13 46 18.3	-2.3
	comp=Z,20nm,1.8s								
MOX	**Moxa**	**90.32**	**320**	*eP*			pP	13 46 18.3	-2.3
MOX					pmax	pmax			
	comp=Z,20nm,1.8s,mb5.2								
KEST	**Kesra**	**91.37**	**306**		P		**P**	**13 46 16.0**	**+2.5**
	comp=Z,0.8nm,0.7s,mb4.2,baz=85,slow=17,SNR=2.5								
KEST					pP		pP	13 46 22.9	-2.9
	comp=Z,1.6nm,0.7s,baz=306,slow=3.0,SNR=4.6								
SNAA	**Sanae**	**91.76**	**198**⇑	*eP*			pP	13 46 24.8	-2.1
MEM	**Membach**	**93.89**	**320**		P		**P**	**13 46 24.1**	**-0.7**
DOU	**Dourbes**	**94.81**	**320**		P		**P**	**13 46 28.5**	**-0.6**
	comp=Z,15nm,2.6s,mb5.0								
CPUP	**Villa Florida**	**143.81**	**217**		PKP		PKPdf	13 52 47.2	+4.0
	comp=Z,0.5nm,0.4s,baz=115,slow=3.3,SNR=3.3								
CPUP	**Villa Florida**	**143.81**	**217**		PKP		PKPdf	13 52 47.2	+4.0
TXAR	**Lajitas Array**	**145.22**	**37**		PKPbc		PKPbc	13 52 46.2	+1.0
	comp=Z,11nm,0.6s,baz=264,slow=0.9,SNR=160								
WVT	**Waverly**	**145.60**	**10**	*eP*	KIKP		PKPdf	13 52 46.1	+0.1
TZTN	**Tazewell**	**145.74**	**4**	*eP*	KPab		PKPab	13 52 46.4	-0.5
JCT	**Junction City**	**146.50**	**31**	*eP*	KP2		PKPab	13 52 49.4	-0.7
CPCT	**Cooper Cave**	**146.74**	**6**	*eP*	KPab		PKPab	13 52 49.9	-0.9

NIED ***21*** *13:40:00,3520N×14120E,h8km,Mw4.7 Best double couple: Mo1.43000×10¹⁶ NP1:φ≈62.00000°,δ88.00000°, λ84.00000°. NP2:φ≈317.00000°,δ7.00000°,λ164.00000°.*

IDC ***21*** *13:40:29.4±0.7,3514N×141.17E,h0km,mb4.1/12, mb1 4.3/16,mb1mx4.2/27,mbtmp4.2/16,ML4.0/4,MS3.9/5, Ms1 3.9/5,ms1mx3.5/28, Error ellipse: s-maj=21.8km s-min=13.6km az=81.0*

ISCJB ***21*** *13:40:31.0±0.8,3516N±003×14127E±006,h27km±5km, mb4.2/18,MS4.1/2, Error ellipse: s-maj=8.4km s-min=5.8km az=0.3*

JMA ***21*** *13:40:31.7±0.1,3523N×14121E,h36km±3km,M4.6*

MOS ***21*** *13:40:32.2±1.0,3521N×14139E,h42km,mb4.4/11, Error ellipse: s-maj=16.8km s-min=8.6km az=123.5*

NEIC ***21*** *13:40:32.4±4.3,3507N×141.13E,h19km±26km,mb4.6/3, MW4.7(NIED), Error ellipse: s-maj=12.8km s-min=9.2km az=80.0*

BJI ***21*** *13:40:36.6,3561N×140.32E,h19km,mB5.0,mb4.2,Ms4.7*

ISC 21 13:40:32.1±0.8,**3515N**±003×**14118E**±005,**h17**km±4km, **n65,σ1§01**/61,**mb4.2**/18,**MS4.1**/2,**1C-3D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BSO1	**Boso 1**	**0.52**	**199**	⇓P		**Pg**	**13 40 43.6**	**+1.1**
CHOJ	**Chosi**	**0.61**	**334**	⇓P		**Pg**	**13 40 43.1**	**-1.0**
CHOJ				*e*S		**Sg**	**13 40 50.9**	**-1.4**
BSO3	**Boso 3**	**0.65**	**238**	⇓P		**Pg**	**13 40 45.4**	**+0.5**
BSO4	**Boso 4**	**0.71**	**257**	P		**Pg**	**13 40 46.4**	**+0.4**
KTR	**Katsuura**	**0.71**	**270**	P		**Pg**	**13 40 46.0**	**0.0**
KTR				*e*S		**Sg**	**13 40 55.7**	**+0.3**
JCN	**Nagara**	**0.84**	**289**	P		**Pb**	**13 40 48.2**	**-0.1**
JIM2	**Oshima 3**	**1.50**	**254**	P		**Pn**	**13 40 56.4**	**-1.8**
JIM2				*e*S		**Sn**	**13 41 16.5**	**-0.9**
JHJ	**Hachijo jima 2**	**2.34**	**210**	Pn		**Pn**	**13 41 10.0**	**+0.3**
	103nm,0.3s,baz=43,slow=11,SNR=32							
JHJ				Sn		**Sn**	**13 41 38.3**	**+0.3**
	82nm,0.3s,baz=260,slow=23,SNR=7.2							
JHJ				LR		LR	13 41 49.9	
	comp=Z,532nm,18.3s,baz=51,slow=35							
MJAR	**Matsushiro Arr**	**2.79**	**301**	Pn		**Pn**	**13 41 16.2**	**+0.4**
	6.3nm,0.3s,baz=97,slow=11,SNR=50							
MJAR	**Matsushiro Arr**	**2.79**	**301**	P		**Pn**	**13 41 16.2**	**+0.4**
MJAR					pmax	pmax		
	comp=Z,6.0nm,0.3s							
MAJO	**Matsushiro**	**2.79**	**301**	*eP*		**Pn**	**13 41 16.5**	**+0.6**
MAT	**Matsushiro**	**2.79**	**301**	P		**Pn**	**13 41 17.8**	**+1.9**
MAT				S		**Sn**	**13 41 49.5**	**+0.4**
CBIJ	**Chichi jima**	**8.08**	**174**	Pn		**Pn**	**13 42 27.4**	**-1.1**
	comp=Z,9.1nm,0.3s,baz=288,slow=20,SNR=3.7							
ASAJ	**Asahikawa**	**9.02**	**7**	Pn		**Pn**	**13 42 39.5**	**-1.9**
	comp=Z,2.2nm,0.3s,baz=213,slow=21,SNR=18							
ASAJ	**Asahikawa**	**9.02**	**7**	P		**Pn**	**13 42 39.5**	**-1.9**
ASAJ					pmax	pmax		
	comp=Z,2.0nm,0.3s							
VLA	**Vladivostok**	**10.73**	**321**	P		**Pn**	**13 43 06.0**	**+1.1**
VLA					MLR	MLR		
	comp=Z,600nm,13.5s							
KSRS	**Korea Array**	**10.94**	**286**	Pn		**Pn**	**13 43 11.8**	**+4.0**
	comp=Z,0.2nm,0.3s,baz=98,slow=14,SNR=6.6							
KSRS					LR	LR	13 47 32.2	
	comp=Z,2μm,18.7s,baz=87,slow=38							
YSS	**Yuzh-Sakhalins**	**11.85**	**5**⇑	*eP*		**Pn**	**13 43 21.0**	**+0.8**
YSS					pmax	pmax		
	comp=Z,30nm,0.9s							
YSS	**Yuzh-Sakhalins**	**11.85**	**5**	*e*Pn		**Pn**	**13 43 21.2**	**+1.1**
	comp=Z,15nm,0.8s							
JOW	**Kunigami**	**13.82**	**237**	LR		LR	13 49 00.5	
	comp=Z,242nm,19.6s,baz=330,slow=37							
BJI	**Beijing**	**20.38**	**291**	P		**P**	**13 45 05.1**	**-2.8**
BJI					AMB	AMB		
	comp=Z,16nm,1.7s							
PETK	**Petropavlovsk-**	**21.42**	**28**	LR		LR	13 53 05.2	
	comp=Z,182nm,19.7s,MS3.5,baz=91,slow=35							
SONM	**Songino Array**	**28.72**	**307**	P		**P**	**13 46 29.7**	**+1.4**
	comp=Z,1.2nm,0.7s,mb3.7,baz=107,slow=8.3,SNR=5.2							
SONM	**Songino Array**	**28.72**	**307**	P		**P**	**13 46 29.7**	**+1.4**
SONM					pmax	pmax		
	comp=Z,1.0nm,0.7s							
BOD	**Bodaibo**	**29.04**	**330**	*eP*		**P**	**13 46 32.3**	**+1.3**
BOD					pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.2							
CMAR	**Chiang Mai Arr**	**40.87**	**257**	P		**P**	**13 48 13.4**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.4,baz=47,slow=6.6,SNR=3.1							
CMAR	**Chiang Mai Arr**	**40.87**	**257**	P		**P**	**13 48 13.4**	**+0.2**
CMAR					pmax	pmax		
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**43.06**	**314**	P		**P**	**13 48 30.2**	**-0.6**
	comp=Z,3.1nm,0.6s,mb4.2,baz=91,slow=7.0,SNR=10.0							
ZALV	**Zalesovo Beam**	**43.06**	**314**	P		**P**	**13 48 30.2**	**-0.5**
ZALV					pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2							
ZALV	**Zalesovo Beam**	**43.06**	**314**	P		**P**	**13 48 30.2**	**-0.6**
NVS	**Novosibirsk**	**44.02**	**315**	*eP*		**P**	**13 48 38.2**	**-0.2**
NVS					pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4							
NVS					pmax	pmax		
	comp=N,13nm,1.9s							
MK31	**Makanchi Array**	**44.98**	**304**	*eP*		**P**	**13 48 45.6**	**-0.6**
MKAR	**Makanchi Array**	**44.98**	**304**	P		**P**	**13 48 45.6**	**-0.7**
	comp=N,0.5nm,0.3s,mb3.9,baz=97,slow=6.2,SNR=7.5							
MKAR	**Makanchi Array**	**44.98**	**304**	P		**P**	**13 48 45.6**	**-0.6**
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.3s							
KURK	**Kurchatov**	**46.96**	**309**	P		**P**	**13 49 01.3**	**-0.5**
	comp=Z,4.7nm,0.7s,mb4.5,baz=85,slow=7.8,SNR=20							
KURK	**Kurchatov**	**46.96**	**309**	P		**P**	**13 49 01.3**	**-0.5**
KURK					pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5							
TKM2	**Tokmak 2**	**50.38**	**300**	*eP*		**P**	**13 49 29.1**	**+0.9**
TKM2					pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7							
TKM2	**Tokmak 2**	**50.38**	**300**	*eP*		**P**	**13 49 29.1**	**+0.9**
	comp=Z,4.9nm,0.7s,mb4.7							
UCH	**Uchtor**	**51.33**	**299**	*eP*		**P**	**13 49 35.7**	**+0.3**
	comp=Z,3.6nm,0.9s,mb4.3							
BVAR	**Borovoye Array**	**51.71**	**313**	P		**P**	**13 49 38.3**	**+0.3**
	comp=Z,0.7nm,0.5s,mb3.9,baz=97,slow=12,SNR=4.3							
BVAR	**Borovoye Array**	**51.71**	**313**	P		**P**	**13 49 38.3**	**+0.2**
BVAR					pmax	pmax		
	comp=Z,1.0nm,0.5s							
FITZ	**Fitzroy Crossi**	**54.98**	**198**	P		**P**	**13 50 02.2**	**-0.2**
	comp=Z,2.3nm,0.6s,mb4.4,baz=15,slow=11,SNR=8.7							
WRAB	**Tennant Creek**	**55.16**	**188**	*eP*		**P**	**13 50 02.9**	**-0.8**
WRAB					pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0							
WRAB	**Tennant Creek**	**55.16**	**188**	*eP*		**P**	**13 50 02.9**	**-0.8**
	comp=Z,16nm,0.9s,mb5.0							
WB2	**Warramunga Arr**	**55.17**	**188**	*eP*		**P**	**13 50 01.6**	**-2.1**
WRA	**Warramunga Arr**	**55.17**	**188**	P		**P**	**13 50 03.1**	**-0.7**
	comp=Z,10.0nm,0.8s,mb4.9,baz=3.3,slow=7.2,SNR=96							
WRA	**Warramunga Arr**	**55.17**	**188**	P		**P**	**13 50 03.1**	**-0.6**
WRA					pmax	pmax		
	comp=Z,10.0nm,0.8s							
ARU	**Arti**	**57.65**	**319**	P		**P**	**13 50 20.3**	**-0.8**
ASAR	**Alice Springs**	**58.90**	**188**	P		**P**	**13 50 29.9**	**-0.2**
	comp=Z,1.8nm,0.7s,mb4.2,baz=1.6,slow=6.1,SNR=19							
ASAR	**Alice Springs**	**58.90**	**188**	P		**P**	**13 50 29.9**	**-0.2**
ASAR					pmax	pmax		
	comp=Z,2.0nm,0.7s							
AKASG	**Malin Array Be**	**75.67**	**323**	P		**P**	**13 52 15.7**	**-0.5**
	comp=Z,0.6nm,0.4s,mb3.9,baz=44,slow=5.2,SNR=4.5							
AKASG					LR	LR	14 28 29.2	
	comp=Z,362nm,19.0s,MS4.7,baz=10.0,slow=38							
AKASG	**Malin Array Be**	**75.67**	**323**	P		**P**	**13 52 15.7**	**-0.5**
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.4s							
AKASG					MLR	MLR		
	comp=Z,362nm,19.0s							
NB2	**NORSAR Subarra**	**75.85**	**337**	P		**P**	**13 52 21.3**	**+4.3**
	comp=Z,5.0nm,1.0s,mb4.4,baz=41,slow=5.9							
NOA	**NORSAR Array B**	**75.85**	**337**	P		**P**	**13 52 17.8**	**+0.8**
	comp=Z,1.1nm,0.8s,mb3.8,baz=37,slow=6.0,SNR=3.0							
NOA	**NORSAR Array B**	**75.85**	**337**	P		**P**	**13 52 17.8**	**+0.8**
NOA					pmax	pmax		
	comp=Z,1.0nm,0.8s							
NVAR	**Mina Array Bea**	**76.27**	**53**	P		**P**	**13 52 19.9**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=286,slow=5.3,SNR=4.9							
PDAR	**Pinedale Array**	**79.12**	**45**	P		**P**	**13 52 37.8**	**+2.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=328,slow=3.3,SNR=3.4							
MSU	**Marysvale**	**80.14**	**50**	*eP*		**P**	**13 52 42.8**	**+1.6**
PPT	**Papeete**	**83.97**	**116**	*e*LR		LR	14 19 36.7	
	comp=Z,256nm,24.5s,baz=303							
TBI	**Tubuai**	**87.73**	**121**	*e*LR		LR	14 21 16.7	
	comp=Z,174nm,21.5s,baz=311							
RKT	**Rikitea**	**98.22**	**112**	*e*LR		LR	14 26 01.0	
	comp=Z,124nm,23.5s							
TORD	**Torodi Ar. Bea**	**118.51**	**314**	PKP		PKPdf	13 59 21.0	+1.6
	comp=Z,0.4nm,0.7s,baz=26,slow=0.9,SNR=2.5							
QSPA	**South Pole Qui**	**124.90**	**180**	PKP		PKPdf	13 59 30.7	+0.9
	comp=Z,1.0nm,0.8s,baz=242,slow=0.9,SNR=8.5							
LPAZ	**La Paz**	**147.78**	**62**	PKPbc		PKPbc	14 00 16.5	+0.1
	comp=Z,0.6nm,0.6s,baz=247,slow=3.7,SNR=3.8							
LPAZ	**La Paz**	**147.78**	**62**	PKP2		PKPbc	14 00 16.5	+0.1
LPAZ					pmax	pmax		
	comp=Z,1.0nm,0.6s							

ISCJB ***21*** *13:42:31.8±1.3,3524N±005×1412E±0.1,h43km±9km, mb3.9/5, Error ellipse: s-maj=16.6km s-min=7.9km az=5.7*

JMA ***21*** *13:42:31.2±0.2,3524N×14120E,h41km±3km,M3.4*

NEIC ***21*** *13:42:31.3,3524N×14120E,h41km,MG3.4(JMA), After JMA.*

IDC ***21*** *13:42:41.7±7.3,3475N×13995E,h77km±23km,mb3.5/5, mb1 3.6/6,mb1mx3.4/23,mbtmp3.5/6, Error ellipse: s-maj=213.9km s-min=16.9km az=68.0*

ISC 21 13:42:32.9±1.1,**3526N**±005×**14109E**±009,**h35**km±5km, **n14,σ1§96**/18,**mb3.9**/5,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHOJ	**Chosi**	**0.48**	**337**	P		**Pb**	**13 42 42.4**	**-1.0**
CHOJ				*e*S		**Sb**	**13 42 50.8**	**+0.2**
BSO2	**Boso 2**	**0.57**	**209**	*e*S		**Sb**	**13 42 53.8**	**+0.9**
KTR	**Katsuura**	**0.64**	**260**	P		**Pn**	**13 42 45.1**	**-0.5**
KTR				*e*S		**Sb**	**13 42 55.2**	**+0.5**
BSO3	**Boso 3**	**0.66**	**227**	P		**Pn**	**13 42 44.7**	**-1.1**
BSO3				*e*S		**Sn**	**13 42 56.2**	**+1.3**
JYT	**Yasato**	**1.21**	**323**	P		**Pn**	**13 42 53.4**	**0.0**
JIM2	**Oshima 3**	**1.47**	**249**	P		**Pn**	**13 42 55.6**	**-1.3**
JOD2	**Odawara 2**	**1.64**	**271**	P		**Pn**	**13 42 58.8**	**-0.4**
JOD2				*e*S		**Sn**	**13 43 18.2**	**-0.9**
JHJ	**Hachijo jima 2**	**2.39**	**207**	P		**Pn**	**13 43 08.2**	**-1.4**
	baz=72,slow=20,SNR=1.4							
MJAR	**Matsushiro Arr**	**2.67**	**300**	P		**Pn**	**13 43 17.1**	**+3.7**
	4.5nm,0.3s,baz=166,slow=21,SNR=5.6							
SONM	**Songino Array**	**28.60**	**307**	P		**P**	**13 48 27.3**	**+1.6**
	0.4nm,0.6s,mb3.4,baz=98,slow=7.5,SNR=2.9							
MKAR	**Makanchi Array**	**44.86**	**304**	P		**P**	**13 50 44.0**	**+0.3**
	0.4nm,0.3s,mb3.8,baz=99,slow=8.9,SNR=2.3							
KURK	**Kurchatov**	**46.84**	**309**	P		**P**	**13 51 00.5**	**+1.3**
	2.1nm,0.6s,mb4.2,baz=84,slow=7.6,SNR=4.0							
WRA	**Warramunga Arr**	**55.27**	**188**	P		**P**	**13 52 02.2**	**-0.6**
	1.0nm,0.4s,mb4.2,baz=3.6,slow=7.4,SNR=5.8							
ASAR	**Alice Springs**	**58.99**	**188**	P		**P**	**13 52 29.5**	**+0.5**
	0.6nm,0.7s,mb3.8,baz=21,slow=11,SNR=3.6							

IDC ***21*** *13:57:01.3±6.0,3638N×7100E,h210km±55km,mb3.2/7, mb1 3.4/11,mb1mx3.2/26,mbtmp3.3/11, Error ellipse: s-maj=31.3km s-min=19.1km az=20.0*

ISCJB ***21*** *13:57:04.6±0.4,3666N±003×7104E±006,h245km±6km, mb3.4/6, Error ellipse: s-maj=8.1km s-min=4.6km az=160.7*

NEIC ***21*** *13:57:04.9±0.9,3658N×7118E,h242km±9km,mb4.6/3, Error ellipse: s-maj=19.2km s-min=11.5km az=118.0*

MOS ***21*** *13:57:04.3±1.6,3666N×7109E,h246km,mb4.5/2, Error ellipse: s-maj=28.8km s-min=11.9km az=81.2*

NNC ***21*** *13:57:09.6±5.5,3707N×7078E,h216km±45km,mb2.9, mpv4.0, Error ellipse: s-maj=47.7km s-min=30.7km az=16.0*

ISC 21 13:57:05.6±0.4,**3668N**±003×**7103E**±006,**h237**km±6km, **n53,σ1§20/64,mb3.4/6,7C-2D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBL	**Kabul**	**2.67**	**218**	*e*PN		**Pn**	**13 57 54.4**	**+0.7**
KBL				*e*S		**S**	**13 58 31.3**	**-0.2**
THN	**Thein Dam**	**5.73**	**136**	*e*P		**Pn**	**13 58 29.3**	**-0.8**
THN				*e*x		x	13 59 35.6	
DLH	**Dalhousie**	**5.79**	**134**	*e*P		**Pn**	**13 58 31.0**	**+0.1**
DLH				*e*x		x	13 59 39.0	
AML	**Almayashu**	**5.83**	**20**	P		**Pn**	**13 58 31.9**	**+0.8**
	SNR=28							
AML	**Almayashu**	**5.83**	**20**	*e*Pn		**Pn**	**13 58 31.2**	**+0.1**
	68nm,0.4s							
AML				*e*S		**S**	**13 59 32.7**	**-6.7**
UCH	**Uchtor**	**6.17**	**25**	P		**Pn**	**13 58 36.3**	**+0.9**
	SNR=67							
UCH	**Uchtor**	**6.17**	**25**	*e*Pn		**Pn**	**13 58 36.1**	**+0.8**
	47nm,0.4s							
UCH				*e*S		**S**	**13 59 45.1**	**-2.0**
EKS2	**Erkin-Say**	**6.34**	**19**	P		**Pn**	**13 58 38.9**	**+1.3**
	SNR=13							
EKS2	**Erkin-Say**	**6.34**	**19**	*e*P		**Pn**	**13 58 38.0**	**+0.4**
EKS2				*e*S		**S**	**13 59 43.0**	**-8.2**
KK31	**Karatay Array**	**6.43**	**357**	⇑P		**Pn**	**13 58 38.5**	**-0.2**
	11nm,0.5s,baz=185,slow=12,SNR=96							
KK31				⇓S		**S**	**13 59 48.2**	**-5.0**
	10nm,0.5s,baz=180,slow=24,SNR=15							
AAK	**Ala-Archa**	**6.52**	**23**	P		**Pn**	**13 58 41.1**	**+1.2**
	SNR=15							
KBK	**Karagaybulak**	**6.69**	**26**	P		**Pn**	**13 58 43.7**	**+1.6**
	SNR=10							
TKM2	**Tokmak 2**	**7.16**	**28**	⇑P		**Pn**	**13 58 48.5**	**+0.5**
TKM2	6.1nm,0.8s							
TKM2				⇑S		**S**	**14 00 07.2**	**-2.9**
	30nm,0.8s							
TKM2	**Tokmak 2**	**7.16**	**28**	*e*PN		**Pn**	**13 58 46.0**	**-2.0**
TKM2					pmax	pmax		
	comp=Z,6.0nm,0.6s							
TKM2	**Tokmak 2**	**7.16**	**28**	P		**Pn**	**13 58 49.1**	**+1.2**
	SNR=8.3							
TKM2	**Tokmak 2**	**7.16**	**28**	*e*Pn		**Pn**	**13 58 46.0**	**-1.9**
	comp=Z,5.6nm,0.6s							
SMLA	**Simla**	**7.53**	**136**	*i* P		**Pn**	**13 58 52.5**	**-0.3**
SMLA				*i* S		**S**	**14 00 13.9**	**-4.9**
SMLA				*i* S		**S**	**14 00 14.3**	**-4.4**
SMLA				*ex*		x	14 00 17.5	
	comp=N,277nm,0.4s							
SMLA				*ex*		x	14 00 17.6	
	comp=E,267nm,0.4s							
JOSI	**Joshimath**	**9.37**	**128**	*e*P		**Pn**	**13 59 16.6**	**+0.3**
JOSI				*e*S		**S**	**14 00 53.1**	**-8.8**
NDI	**New Delhi**	**9.52**	**145**	*e*P		**Pn**	**13 59 18.0**	**-0.2**
SONA	**Sohna**	**9.83**	**147**	*e*P		**Pn**	**13 59 20.5**	**-1.7**
SONA				*ex*		x	14 00 44.8	
MKAR	**Makanchi Array**	**13.14**	**36**	P		**Pn**	**14 00 03.7**	**+0.3**
	comp=E,0.1nm,0.3s,baz=219,slow=16,SNR=2.8							
DANN	**Dangsing**	**13.57**	**124**	*e*P		**Pn**	**14 00 08.8**	**-0.1**
	comp=E,13nm,0.4s							
KOLN	**Koldanda**	**13.85**	**126**	*e*P		**Pn**	**14 00 12.0**	**-0.3**
	comp=E,7.9nm,0.3s							
GKN	**Gorkha**	**14.38**	**123**	*e*P		**Pn**	**14 00 18.2**	**-0.6**
	comp=E,25nm,0.5s							
AB31	**Akbulak array**	**14.94**	**331**	⇑P		**Pn**	**14 00 24.4**	**-1.0**
	comp=E,0.7nm,0.3s							
AB31				⇑S		**S**	**14 03 09.1**	**-1.2**
	comp=E,0.5nm,0.5s							
DMN	**Daman**	**14.95**	**123**	*e*P		**Pn**	**14 00 25.3**	**-0.4**
	comp=E,12nm,0.4s							
KKN	**Kakani**	**14.95**	**122**	*e*P		**Pn**	**14 00 24.8**	**-0.9**
	comp=E,29nm,0.5s							
KURK	**Kurchatov**	**15.06**	**19**	P		**Pn**	**14 00 24.0**	**-2.7**
	comp=E,0.1nm,0.3s,baz=207,slow=10.0,SNR=2.9							
PKIN	**Phulchoki**	**15.17**	**123**	*e*P		**Pn**	**14 00 29.3**	**+1.0**
	comp=E,22nm,0.4s							
GUN	**Gumba**	**15.29**	**121**	*e*P		**Pn**	**14 00 29.2**	**-0.5**
	comp=E,12nm,0.3s							
JIRN	**Jiri**	**15.66**	**121**	*e*P		**Pn**	**14 00 34.9**	**+0.7**
	comp=E,28nm,0.3s							
VOSK	**Vostochnaya**	**16.05**	**360**	⇑P		**P**	**14 00 38.3**	**+0.9**
	comp=E,2.8nm,0.6s							
BVA0	**Borovoye Array**	**16.36**	**359**	P		**P**	**14 00 42.8**	**+2.0**
	comp=E,0.5nm,0.4s,baz=168,slow=12,SNR=18							
BVAR	**Borovoye Array**	**16.36**	**359**	P		**P**	**14 00 42.9**	**+2.1**
	comp=E,2.4nm,0.3s,baz=163,slow=10,SNR=19							
BVAR	**Borovoye Array**	**16.36**	**359**	P		**P**	**14 00 42.9**	**+2.1**
BVAR					pmax	pmax		
	comp=Z,2.0nm,0.3s							
RAMN	**Ramite**	**16.39**	**122**	*e*P		**P**	**14 00 42.8**	**+1.4**
	comp=Z,17nm,0.4s							
AKTK	**Aktyubinsk**	**16.64**	**330**	P		**P**	**14 00 44.9**	**+1.0**
AKTO	**Aktyubinsk**	**16.64**	**330**	⇑P		**P**	**14 00 44.0**	**+0.1**
	comp=Z,2.2nm,0.7s							
AKTO				⇓S		**S**	**14 03 42.3**	**-3.1**
	comp=Z,2.1nm,2.6s							
AKTO	**Aktyubinsk**	**16.64**	**330**	P		**P**	**14 00 44.9**	**+1.0**
	com

ellipse: s-maj=11.4km s-min=1.9km az=93.0
*ISCJB **21** 14:17:06.3±0.6, 3992N±003×3955E±007, h10km, Error ellipse: s-maj=7.2km s-min=4.8km az=179.6*
*ISK **21** 14:17:06.0, 3993N×3944E, h5km, MD2.8*
ISC 21 14:17:06.1±0.9, 3990N±003×3952E±007, h3km±9km, n12, σ1§04/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZC	**Erzincan**	**0.28**	**124**	**Pg**	**Pg**	**14 17 10.5**	**-0.9**
EZC				*e*SG	**Sg**	**14 17 13.1**	**-2.0**
GUMT	**Gumushane**	**0.56**	**357**	PG	**Pg**	**14 17 17.1**	**+0.3**
GUMT				*e*SG	**Sg**	**14 17 24.4**	**+0.4**
PTK	**Pertek**	**1.01**	**186**	*e*PG	**Pg**	**14 17 26.5**	**+0.9**
KTUT	**Trabzon**	**1.10**	**10**	*e*PN	**Pn**	**14 17 27.0**	**-1.4**
ESPY	**Espiye-Giresun**	**1.18**	**329**	*e*PN	**Pn**	**14 17 28.0**	**-1.5**
EZM	**Erzurum**	**1.42**	**89**	*e*PN	**Pn**	**14 17 34.1**	**+1.3**
ERZM	**Erzurum**	**1.42**	**89**	*i* P	**Pg**	**14 17 35.1**	**+1.7**
ELZG	**Elazig**	**1.46**	**197**	*i* P	**Pn**	**14 17 33.1**	**-0.3**
ELZG	**Elazig**	**1.46**	**197**	*i* P	**Pn**	**14 17 33.1**	**-0.3**
ELZG				*i* S	**Sb**	**14 17 53.7**	**+0.7**
SVSK	**Karacayir**	**1.94**	**271**	*e*PN	**Pn**	**14 17 39.9**	**-0.1**
AKCD	**Akcadag**	**2.03**	**218**	*i* P	**Pb**	**14 17 43.5**	**-0.2**
BCA	**Borcka**	**2.22**	**45**	*e*PN	**Pn**	**14 17 44.5**	**+0.7**

*ISCJB **21** 14:24:48.5±0.5, 4735S±007×135W±0.1, h10km, mb4.2/13, MS4.1/13, Error ellipse: s-maj=13.5km s-min=9.6km az=171.3*
*IDC **21** 14:24:48.8±0.7, 4738S×1350W, h0km, mb4.1/11, mb1 4.2/11, mb1mx4.1/18, mbtmp4.1/11, MS4.1/13, Ms1 4.1/13, ms1mx3.9/24, Error ellipse: s-maj=19.9km s-min=18.5km az=132.0*
*NEIC **21** 14:24:50.0±0.3, 4740S×1347W, h10km, mb4.8/3, Error ellipse: s-maj=10.5km s-min=9.3km az=117.0*
ISC 21 14:24:50.3±0.5, 4742S±007×135W±01, h10km, n43, σ0§62/22, mb4.2/13, MS4.1/13, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**23.44**	**176**	*e*	**P**	**14 29 59.7**	**+0.3**
VNA2	**Neumayer--Watz**	**23.76**	**175**	*e*	**P**	**14 30 02.3**	**-0.1**
VNA2				*e*		14 30 05.0	
VNA2				*e*		14 30 08.4	
VNA3	**Neumayer Olymp**	**23.97**	**177**	*e*	**P**	**14 30 04.0**	**-0.4**
VNA3				*e*		14 30 06.4	
VNA3				*e*		14 30 09.9	
SNAA	**Sanae**	**24.84**	**172**	*e*	**P**	**14 30 11.6**	**-0.7**
SNAA				*e*		14 30 14.7	
SNAA				*e*		14 30 18.8	
SNAA	**Sanae**	**24.84**	**172**	*e*P	**P**	**14 30 11.4**	**-0.9**
	16nm,1.1s,mb4.5						
MAIT	**Maitri**	**26.35**	**161**	*e*P	**P**	**14 30 25.6**	**-0.3**
SUR	**Sutherland**	**30.00**	**72**	LR	LR	14 39 54.4	
	comp=Z,389nm,21.6s,MS4.0,baz=220,slow=30						
PMSA	**Palmer Station**	**32.01**	**219**	LR	LR	14 41 58.6	
	comp=Z,240nm,18.9s,MS3.9,baz=284,slow=32						
USHA	**Ushuaia**	**34.49**	**237**	P	**P**	**14 31 38.9**	**+0.9**
	4.7nm,1.0s,mb4.4,baz=82,slow=14,SNR=1.9						
USHA				LR	LR	14 42 38.5	
	comp=Z,518nm,21.6s,MS4.2,baz=97,slow=31						
BOSA	**Boshof**	**35.35**	**72**	LR	LR	14 43 25.6	
	comp=Z,388nm,18.1s,MS4.2,baz=153,slow=32						
TRQA	**Tornquist**	**36.32**	**267**	*e*P	**P**	**14 31 54.2**	**+0.2**
	26nm,1.4s,mb5.0						
TSUM	**Tsumeb**	**37.83**	**53**	P	**P**	**14 32 07.8**	**+0.9**
	4.1nm,0.8s,mb4.2,baz=211,slow=5.9,SNR=8.7						
CPUP	**Villa Florida**	**40.25**	**286**	P	**P**	**14 32 27.1**	**-0.1**
	1.2nm,0.5s,mb3.9,baz=109,slow=4.5,SNR=7.0						
CPUP				LR	LR	14 45 21.1	
	comp=Z,212nm,19.5s,MS4.0,baz=134,slow=31						
CPUP	**Villa Florida**	**40.25**	**286**	*e*P	**P**	**14 32 27.2**	**0.0**
	22nm,1.1s,mb4.8						
PLCA	**Paso Flores**	**40.75**	**258**	LR	LR	14 48 33.1	
	comp=Z,261nm,18.0s,MS4.1,baz=168,slow=35						
MAW	**Mawson**	**42.31**	**146**	P	**P**	**14 32 43.4**	**-0.2**
	0.6nm,0.3s,mb3.7,baz=239,slow=11,SNR=3.6						
BDFB	**Brasilia**	**42.65**	**306**	P	**P**	**14 32 46.1**	**-0.8**
	6.3nm,0.9s,mb4.3,baz=97,slow=8.9,SNR=5.1						
BDFB				LR	LR	14 47 22.9	
	comp=Z,223nm,21.5s,MS4.0,baz=188,slow=32						
QSPA	**South Pole Qui**	**42.84**	**180**	P	**P**	**14 32 48.6**	**+0.8**
	5.8nm,0.9s,mb4.3,baz=218,slow=5.0,SNR=25						
QSPA	**South Pole Qui**	**42.84**	**180**	P	**P**	**14 32 48.6**	**+0.8**
CFAA	**Coronel Fontan**	**44.19**	**271**	P	**P**	**14 32 59.2**	**-0.1**
	0.2nm,0.3s,mb3.3,baz=116,slow=6.5,SNR=3.9						
CFAA				LR	LR	14 48 47.0	
	comp=Z,14nm,18.2s,baz=151,slow=33						
SIV	**San Ignacio**	**50.11**	**292**	LR	LR	14 53 51.7	
	comp=Z,224nm,20.4s,MS4.2,baz=356,slow=35						
LVC	**Limon Verde**	**50.47**	**279**	LR	LR	14 52 52.3	
	comp=Z,187nm,18.0s,MS4.1,baz=165,slow=33						
DBIC	**Dimbokro**	**54.39**	**11**	P	**P**	**14 34 17.3**	**+0.1**
	6.1nm,1.1s,mb4.5,baz=165,slow=8.2,SNR=4.2						
LPAZ	**La Paz**	**54.42**	**286**	P	**P**	**14 34 17.6**	**0.0**
	1.4nm,0.9s,mb3.9,baz=118,slow=7.4,SNR=4.5						
LPAZ				LR	LR	14 55 30.3	
	comp=Z,170nm,19.2s,MS4.1,baz=76,slow=34						
TOA0	**Torodi Ar. Sit**	**61.79**	**17**	*e*P	**P**	**14 35 07.9**	**-1.2**
TORD	**Torodi Ar. Bea**	**61.79**	**17**	P	**P**	**14 35 08.4**	**-0.7**
	2.8nm,1.1s,mb4.3,baz=196,slow=6.2,SNR=11						
TORD				LR	LR	14 55 07.3	
	comp=Z,162nm,20.7s,MS4.2,baz=100,slow=29						
NNA	**Nana**	**63.31**	**282**	LR	LR	15 01 56.5	
	comp=Z,93nm,20.7s,MS3.9,baz=136,slow=35						
ATAH	**Atahualpa**	**68.01**	**284**	LR	LR	15 04 54.9	
	comp=Z,200nm,18.5s,MS4.4,baz=172,slow=35						
TAM	**Tamanrasset**	**71.94**	**12**	*e*P	**P**	**14 36 14.1**	**+0.5**
ESDC	**Sonseca Array**	**87.12**	**7**	P	**P**	**14 37 36.9**	**+1.2**
	0.2nm,0.3s,mb3.9,baz=179,slow=4.5,SNR=6.0						
PDAR	**Pinedale Array**	**123.35**	**299**	PKP	PKPdf	14 43 46.3	-0.5
	0.9nm,0.8s,baz=113,slow=3.9,SNR=6.0						
NVAR	**Mina Array Bea**	**126.23**	**290**	PKP	PKPdf	14 43 53.2	+0.7
	0.9nm,0.7s,baz=197,slow=1.6,SNR=5.0						
YKA	**Yellowknife Ar**	**135.32**	**320**	PKP	PKPdf	14 44 09.0	+0.2
	1.0nm,0.7s,baz=92,slow=1.2,SNR=3.9						
SONM	**Songino Array**	**140.37**	**66**	PKP	PKPdf	14 44 18.6	-0.1
	0.8nm,1.0s,baz=336,slow=3.3,SNR=3.8						
DAWY	**Dawson**	**146.56**	**320**	*e*PKPbc	PKPbc	14 44 30.0	-0.5
COLA	**College**	**150.06**	**322**	*e*PKPbc	PKPbc	14 44 38.1	-1.6
COLA				*e*PKPab	PKPab	14 44 45.6	-0.1
KSRS	**Korea Array**	**150.09**	**95**	PKPbc	PKPbc	14 44 40.0	-0.6
	1.3nm,0.9s,baz=204,slow=5.4,SNR=3.6						
COLD	**Coldfoot**	**150.30**	**327**	*e*PKPbc	PKPbc	14 44 40.3	+0.1
BPAW	**Bear Paw Mtn.**	**151.57**	**321**	*e*PKPbc	PKPbc	14 44 42.6	-0.7
KTH	**Kantishna Hill**	**151.69**	**320**	*e*PKPbc	PKPbc	14 44 43.0	-0.5
IMA2	**Indian Mountai**	**152.02**	**326**	*e*PKPbc	PKPbc	14 44 43.3	-0.9
CHUM	**Lake Minchumin**	**152.20**	**321**	*e*PKPbc	PKPbc	14 44 45.0	+0.2
PPLA	**Purkeypile**	**152.41**	**319**	*e*PKPbc	PKPbc	14 44 44.4	-0.9

*ISCJB **21** 14:39:42.0±0.6, 2513S±003×6802W±008, h101km±10km, mb4.1/5, Error ellipse: s-maj=11.5km s-min=5.6km az=4.8*
*NEIC **21** 14:39:43.3±0.5, 2508S×6798W, h102km±7km, mb4.4/5, Error ellipse: s-maj=10.5km s-min=6.9km az=101.0*
*IDC **21** 14:39:43.7±1.4, 2504S×6799W, h104km±14km, mb4.1/5, mb1 4.0/11, mb1mx3.8/22, mbtmp3.9/11, Error ellipse: s-maj=20.1km s-min=13.8km az=82.0*
*GUC **21** 14:39:45.5±0.7, 2514S×6852W, h140km, ML4.2*
ISC 21 14:39:43.2±0.5, 2511S±003×6803W±006, h95km±9km, n32, σ1§01/39, mb4.1/5, 2C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPN1	**Cerro Paranal**	**2.21**	**282**	⇑*i*P	**Pn**	**14 40 19.2**	**+0.9**
CPN1				*i* S	**Sn**	**14 40 44.5**	**-0.7**
CPN1				AML	AML	14 40 50.5	
	comp=N,1μm,0.3s						
ANCH	**Antofagasta**	**2.60**	**303**	⇓*i*P	**Pn**	**14 40 24.1**	**+0.7**
ANCH				*i* S	**Sn**	**14 40 53.0**	**-1.3**
ANCH				AML	AML	14 40 57.4	
	comp=N,2μm,0.4s						
ANCH	**Antofagasta**	**2.60**	**303**	⇓*i*P	**Pn**	**14 40 24.1**	**+0.7**
ANCH				*i* S	**Sn**	**14 40 53.0**	**-1.3**
LVC	**Limon Verde**	**2.62**	**342**	P	**Pn**	**14 40 25.9**	**+2.3**
	comp=N,183nm,0.3s,baz=166,slow=9.3,SNR=1495						
LVC				S	**Sn**	**14 40 55.4**	**+0.6**
	comp=N,40nm,0.3s,baz=9.7,slow=23,SNR=11						
LVC	**Limon Verde**	**2.62**	**342**	*e*Pn	**Pn**	**14 40 25.8**	**+2.2**
LVC				*e*Sn	**Sn**	**14 40 57.1**	**+2.3**
CEN1	**Los Morros**	**2.62**	**310**	⇓*i*P	**Pn**	**14 40 24.3**	**+0.6**
CEN1				*i* S	**Sn**	**14 40 53.5**	**-1.4**
CEN1				AML	AML	14 40 57.8	
	comp=E,1μm,0.6s						
CPCH	**Copiapo**	**3.06**	**223**	⇑*i*P	**Pn**	**14 40 30.3**	**+0.7**
CPCH				*i* S	**Sn**	**14 41 05.2**	**-0.1**
VACH	**Vallenar**	**4.23**	**215**	*i* S	**Sn**	**14 41 33.0**	**-0.5**
LCO	**Las Campanas**	**4.56**	**211**	*e*Pn	**Pn**	**14 40 49.8**	**0.0**
LCO				*e*Sn	**Sn**	**14 41 33.6**	**-8.0**
CFAA	**Coronel Fontan**	**6.47**	**182**	P	**Pn**	**14 41 17.5**	**+1.7**
	comp=E,2.4nm,0.3s,baz=354,slow=14,SNR=185						
CFAA				S	**Sn**	**14 42 26.8**	**-1.3**
	comp=E,0.7nm,0.3s,baz=253,slow=19,SNR=3.6						
CFAA	**Coronel Fontan**	**6.47**	**182**	P	**Pn**	**14 41 17.5**	**+1.7**
CFAA				S	**Sn**	**14 42 26.8**	**-1.3**
LPAZ	**La Paz**	**8.78**	**359**	P	**Pn**	**14 41 47.4**	**+0.1**
	comp=E,1.4nm,0.3s,baz=168,slow=5.0,SNR=27						
LPAZ	**La Paz**	**8.78**	**359**	*e*Pn	**Pn**	**14 41 46.8**	**-0.5**
	comp=E,5.3nm,0.4s						
CPUP	**Villa Florida**	**9.72**	**99**	P	**Pn**	**14 42 00.1**	**0.0**
	comp=E,0.7nm,0.3s,baz=263,slow=10,SNR=5.6						
CPUP	**Villa Florida**	**9.72**	**99**	*e*Pn	**Pn**	**14 42 00.0**	**-0.1**
	comp=E,8.0nm,0.6s						
SIV	**San Ignacio**	**11.17**	**37**	P	**Pn**	**14 42 18.4**	**-1.4**
	comp=E,2.7nm,0.3s,baz=249,slow=9.9,SNR=28						
SIV				S	**Sn**	**14 44 16.2**	**-6.5**
	comp=E,0.2nm,0.3s,baz=143,slow=20,SNR=2.3						
TRQA	**Tornquist**	**13.89**	**160**	*e*P	**Pn**	**14 42 55.6**	**-0.2**
	comp=E,11nm,0.9s						
PLCA	**Paso Flores**	**15.72**	**187**	P	**Pn**	**14 43 19.0**	**-0.1**
	comp=E,0.1nm,0.3s,baz=356,slow=15,SNR=3.7						
BDFB	**Brasilia**	**20.97**	**67**	P	**P**	**14 44 17.1**	**-1.7**
	comp=E,8.9nm,0.6s,baz=226,slow=11,SNR=11						
BDFB	**Brasilia**	**20.97**	**67**	*e*P	**P**	**14 44 16.7**	**-2.1**
	comp=E,12nm,0.6s						
VNA3	**Neumayer Olymp**	**56.41**	**161**	*e*	**P**	**14 49 15.1**	**+0.7**
VNA3				*e*		14 49 19.7	
VNA3				*e*		14 49 24.6	
VNA2	**Neumayer--Watz**	**56.99**	**160**	*e*	**P**	**14 49 18.9**	**+0.4**
	baz=290,slow=7.2						
VNA2				*e*		14 49 22.9	
VNA2				*e*		14 49 28.9	
QSPA	**South Pole Qui**	**65.10**	**180**	P	**P**	**14 50 13.3**	**+0.2**
	comp=E,1.0nm,0.5s,mb3.9,baz=191,slow=2.0,SNR=23						
DBIC	**Dimbokro**	**69.04**	**72**	P	**P**	**14 50 38.2**	**-0.9**
	comp=E,8.4nm,0.9s,mb4.6,baz=225,slow=8.8,SNR=8.7						
TORD	**Torodi Ar. Bea**	**77.84**	**69**	P	**P**	**14 51 29.8**	**-1.0**
	comp=E,2.5nm,0.4s,mb4.2,baz=258,slow=5.5,SNR=47						
TSUM	**Tsumeb**	**78.26**	**106**	*e*P	**P**	**14 51 33.5**	**+0.4**
	comp=E,3.3nm,1.0s,mb4.0						
BOSA	**Boshof**	**81.06**	**117**	P	**P**	**14 51 49.5**	**+1.4**
	comp=E,0.9nm,0.5s,mb3.9,baz=258,slow=5.7,SNR=4.3						
BOSA	**Boshof**	**81.06**	**117**	P	**P**	**14 51 49.5**	**+1.4**
ASAR	**Alice Springs**	**127.06**	**205**	PKP	PKPdf	14 58 35.2	-1.7
	comp=E,0.1nm,0.5s,baz=126,slow=1.7,SNR=3.7						
WRA	**Warramunga Arr**	**130.21**	**208**	PKP	PKPdf	14 58 41.6	-1.3
	comp=E,0.1nm,0.3s,baz=160,slow=1.6,SNR=4.0						
ZALV	**Zalesovo Beam**	**144.81**	**28**	PKP	PKPdf	14 59 07.2	-1.3
	comp=E,1.7nm,0.5s,baz=306,slow=5.0,SNR=10						
MKAR	**Makanchi Array**	**147.97**	**40**	PKPbc	PKPbc	14 59 16.6	-0.8
	comp=E,1.4nm,0.6s,baz=308,slow=3.2,SNR=9.4						

*NIED **21** 14:47:00, 3520N×14130E, h17km, Mw3.8 Best double couple: M0 5.76000×10^14 NP1:φs229.00000°, δ89.00000°, λ-64.00000°. NP2:φs321.00000°, δ26.00000°, λ-177.00000°.*
*IDC **21** 14:47:03.5±1.0, 3521N×14121E, h0km, mb3.7/6, mb1 3.8/9, mb1mx3.7/24, mbtmp3.7/9, ML3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.6/32, Error ellipse: s-maj=28.7km s-min=18.1km az=79.0*
*ISCJB **21** 14:47:05.6±1.0, 3519N±004×14126E±007, h31km±5km, mb3.8/7, Error ellipse: s-maj=9.9km s-min=5.9km az=2.9*
*JMA **21** 14:47:05.6±0.1, 3524N×14125E, h41km±2km, M3.5*
*NEIC **21** 14:47:05.6, 3524N×14125E, h41km, mb4.4/1, After JMA.*
ISC 21 14:47:05.5±1.6, 3520N±003×14125E±006, h18km±10km, n23, σ1§14/29, mb3.8/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.59**	**327**	P	**Pb**	**14 47 17.1**	**-0.2**
CHOJ				S	**Sb**	**14 47 25.6**	**+0.2**
BSO1	**Boso 1**	**0.59**	**202**	P	**Pb**	**14 47 18.0**	**+0.7**
BSO3	**Boso 3**	**0.73**	**237**	P	**Pb**	**14 47 19.9**	**+0.3**
BSO3				S	**Sb**	**14 47 30.3**	**+1.0**
KTR	**Katsuura**	**0.77**	**266**	P	**Pb**	**14 47 20.1**	**-0.2**
BSO4	**Boso 4**	**0.78**	**254**	P	**Pb**	**14 47 20.9**	**+0.4**
BSO4				S	**Sb**	**14 47 30.9**	**+0.2**
JCN	**Nagara**	**0.88**	**284**	P	**Pb**	**14 47 22.3**	**0.0**
JYT	**Yasato**	**1.33**	**320**	P	**Pb**	**14 47 28.0**	**-1.3**
JYT				S	**Sn**	**14 47 46.3**	**-0.3**
JHO	**Hitachi**	**1.51**	**339**	P	**Pn**	**14 47 30.2**	**-1.5**
JIM2	**Oshima 3**	**1.57**	**253**	P	**Pn**	**14 47 30.6**	**-1.9**
JIM2				S	**Sn**	**14 47 50.3**	**-2.1**
JHJ	**Hachijo jima 2**	**2.41**	**211**	Pn	**Pn**	**14 47 42.5**	**-1.5**
	16nm,0.3s,baz=47,slow=19,SNR=8.4						
JHJ				Sn	**Sn**	**14 48 12.1**	**-0.9**
	52nm,0.3s,baz=89,slow=21,SNR=6.9						
MJAR	**Matsushiro Arr**	**2.81**	**299**	Pn	**Pn**	**14 47 50.3**	**+0.8**
	5.5nm,0.3s,baz=96,slow=12,SNR=40						
MAJO	**Matsushiro**	**2.81**	**299**	*e*Pn	**Pn**	**14 47 50.6**	**+1.1**
MAT	**Matsushiro**	**2.81**	**299**	P	**Pn**	**14 47 52.1**	**+2.6**
MAT				S	**Sn**	**14 48 24.1**	**+1.2**
ASAJ	**Asahikawa**	**8.96**	**6**	Pn	**Pn**	**14 49 12.1**	**-1.9**
	0.9nm,0.3s,baz=141,slow=29,SNR=9.3						
KSRS	**Korea Array**	**10.98**	**286**	LR	LR	14 53 56.2	
	comp=Z,81nm,19.9s,baz=90,slow=38						
SONM	**Songino Array**	**28.73**	**307**	P	**P**	**14 53 03.2**	**+1.5**
	0.4nm,0.5s,mb3.4,baz=96,slow=10,SNR=2.7						
ZALV	**Zalesovo Beam**	**43.07**	**314**	P	**P**	**14 55 04.0**	**-0.1**
	1.1nm,0.4s,mb3.9,baz=102,slow=7.1,SNR=5.6						
ZALV	**Zalesovo Beam**	**43.07**	**314**	P	**P**	**14 55 04.0**	**-0.1**
MKAR	**Makanchi Array**	**45.00**	**304**	P	**P**	**14 55 19.6**	**-0.1**
	0.3nm,0.3s,mb3.7,baz=95,slow=9.9,SNR=6.3						
KURK	**Kurchatov**	**46.97**	**309**	*e*Pn	**P**	**14 55 34.1**	**-1.1**
	3.9nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**55.23**	**188**	P	**P**	**14 56 37.7**	**+0.3**
	0.5nm,0.4s,mb3.9,baz=21,slow=7.3,SNR=19						
ASAR	**Alice Springs**	**58.96**	**188**	P	**P**	**14 57 05.5**	**+1.7**
	0.3nm,0.6s,mb3.5,baz=18,slow=12,SNR=9.7						
PDAR	**Pinedale Array**	**79.05**	**45**	P	**P**	**14 59 10.4**	**+1.9**
	0.3nm,0.5s,mb3.5,baz=325,slow=4.4,SNR=2.5						

*NIED **21** 14:57:00, 3500N×13540E, h8km, Mw3.3 Best double couple: M0 1.11000×10^14 NP1:φs29.00000°, δ83.00000°, λ149.00000°. NP2:φs124.00000°, δ59.00000°, λ9.00000°.*
JMA 21 14:57:52.3, 3497N×13545E, h10km±1km, M3.5, 2C-1D Broadband fault plane solution: P waves. NP1: φs125.00000°, δ71.00000°, λ1.00000°. **NP2:**φs34.00000°, δ89.00000°, λ161.00000°. **Principal axes:** T Plg14.0000°, Azm348.0000°; N Plg71.0000°, Azm210.0000°; P Plg12.0000°, Azm81.0000°; **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWT	**Wachi**	**0.31**	**353**	⇑P	Pg	14 57 58.9	+0.3
JWT				S	Sg	14 58 03.1	+0.3
JHE	**Heguri**	**0.37**	**148**	⇑P	Pg	14 57 59.6	0.0
JHE				S	Sg	14 58 04.7	+0.2
JKS	**Kasai**	**0.50**	**272**	⇓P	Pg	14 58 01.9	-0.1
JKS				S	Sg	14 58 08.4	-0.2
MAT	**Matsushiro**	**2.74**	**54**	P	Pn	14 58 38.7	+2.4
MAT				S	Sn	14 59 11.9	+2.5

IDC 21 15:09:51.1±3.5, 1572S×17501W, h0km, mb3.4/4, mb1 3.8/5, mb1mx3.6/17, mbtmp3.5/5, ML1.5/1, MS3.6/7, Ms1 3.6/7, ms1mx3.4/17 Error ellipse: s-maj=361.6km s-min=24.4km az=155.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.61**	**60**	Pn	Pn	15 10 46.8	-1.5
	2.4nm,0.3s,baz=52,slow=15,SNR=13						
AFI				LR	LR	15 12 03.1	
	comp=Z,375nm,21.1s,baz=246,slow=37						
RAO	**Raoul Island**	**13.73**	**191**	LR	LR	15 17 27.5	
	comp=Z,258nm,21.8s,baz=345,slow=33						
PPT	**Papeete**	**24.43**	**98**	*e*LR	LR	15 21 11.5	
	259nm,25.8s						
PPT	**Papeete**	**24.43**	**98**	LR	LR	15 22 15.4	
	comp=Z,138nm,19.5s,baz=172,slow=30						
HNR	**Honiara**	**25.21**	**281**	LR	LR	15 23 21.6	
	comp=Z,356nm,20.2s,baz=159,slow=32						
TBI	**Tubuai**	**25.22**	**112**	*e*LQ		15 20 32.5	
	342nm,25.2s						
TBI				*e*LR	LR	15 21 38.6	
	265nm,26.8s						
CTA	**Charters Tower**	**37.05**	**257**	LR	LR	15 29 47.3	
	comp=Z,102nm,20.6s,baz=53,slow=32						
WRA	**Warramunga Arr**	**48.26**	**257**	P	P	15 18 33.6	-0.6
	0.5nm,0.8s,baz=89,slow=6.8,SNR=4.7						
ASAR	**Alice Springs**	**48.53**	**252**	P	P	15 18 36.4	+0.1
	0.4nm,0.8s,baz=82,slow=8.5,SNR=4.1						
GUMO	**Guam**	**49.21**	**304**	LR	LR	15 38 34.1	
	comp=Z,32nm,18.8s,baz=271,slow=35						
FITZ	**Fitzroy Crossi**	**56.62**	**258**	LR	LR	15 41 35.0	
	comp=Z,115nm,20.7s,baz=280,slow=34						
TXAR	**Lajitas Array**	**82.08**	**57**	P	P	15 22 14.3	+0.6
	0.1nm,0.7s,baz=273,slow=8.0,SNR=2.7						
PDAR	**Pinedale Array**	**83.55**	**42**	P	P	15 22 22.3	+1.2
	0.3nm,0.7s,baz=213,slow=7.6,SNR=2.5						

*ISK **21** 15:11:27.8, 3648N×2878E, h10km, MD3.1*
*ATH **21** 15:11:28.9, 3654N×2882E, h30km, MD3.1/4*
*DDA **21** 15:11:28.9, 3656N×2875E, h7km±6km, Md2.9*
*NEIC **21** 15:11:28.9, 3654N×2882E, h30km, MD3.1(ATH), After ATH.*
*CSEM **21** 15:11:29.6±0.1, 3657N×2885E, h20km, MD2.9, Error ellipse: s-maj=2.1km s-min=1.5km az=2.0*
*ISCJB **21** 15:11:29.8±0.6, 3646N±004×2882E±004, h26km±6km, Error ellipse: s-maj=5.9km s-min=5.1km az=14.6*
ISC 21 15:11:29.4±0.7, 3649N±003×2884E±003, h19km±4km, n16, σ1§04/29, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURN	**Turunc**	**0.43**	**334**	*i* P	**Pg**	**15 11 39.7**	**+1.4**
TURN				*i* S	**Sg**	**15 11 47.5**	**+3.2**
ARG	**Arkhangelos**	**0.64**	**245**	*e*PN	**Pn**	**15 11 41.9**	**-1.5**
ARG				*e*SN	**Sn**	**15 11 51.9**	**+1.4**
AKAS	**Kas**	**0.67**	**112**	*i* P	**Pb**	**15 11 42.8**	**+0.3**
AKAS				*i* S	**Sb**	**15 11 55.3**	**+3.9**
KSL	**Kastellorizon**	**0.69**	**119**	*e*PN	**Pn**	**15 11 43.5**	**-0.6**
YER	**Yerkesik**	**0.79**	**326**	*e*PG	**Pg**	**15 11 43.6**	**-1.3**
YER				*e*SG	**Sg**	**15 11 53.7**	**-1.6**
ELL	**Elmali**	**0.90**	**73**	*e*PG	**Pg**	**15 11 46.5**	**-0.4**
ELL				*e*SG	**Sg**	**15 11 60.0**	**+1.1**
GOLH	**Golhisar**	**0.95**	**38**	*i* P	**Pb**	**15 11 46.8**	**-0.4**
GOLH				*i* S	**Sb**	**15 12 02.7**	**+3.3**
MLSB	**Milas**	**1.17**	**314**	*e*PN	**Pn**	**15 11 50.4**	**-0.4**
MLSB				*e*SN	**Sn**	**15 12 06.2**	**0.0**
DNZL	**Cakiroluk**	**1.21**	**8**	*i* P	**Pn**	**15 11 50.6**	**-0.7**
DNZL				*i* S	**Sb**	**15 12 06.5**	**-0.5**
BDRM	**Kayabasi**	**1.26**	**298**	*i* P	**Pn**	**15 11 51.8**	**-0.2**
BDRM				*i* S	**Sb**	**15 12 09.7**	**+1.4**
BODT	**Bodrum**	**1.35**	**296**	*e*PN	**Pn**	**15 11 51.9**	**-1.4**
BODT				*e*SN	**Sn**	**15 12 11.6**	**+0.9**
AYDN	**Tasoluk**	**1.40**	**327**	*i* P	**Pn**	**15 11 54.0**	**+0.1**
AYDN				*i* S	**Sn**	**15 12 12.7**	**+0.8**
KARP	**Karpathos**	**1.65**	**236**	*e*PB	**Pb**	**15 11 57.8**	**-1.4**
KARP				*e*SN	**Sn**	**15 12 19.3**	**+1.2**
BCK	**Bucak**	**1.71**	**55**	*e*PN	**Pn**	**15 11 58.5**	**+0.4**
GCAM	**G?zelcaml?**	**1.77**	**314**	*e*P	**Pn**	**15 11 58.5**	**-0.4**
GCAM				*i* S	**Sn**	**15 12 21.1**	**+0.2**
SMG	**Samos**	**2.01**	**308**	*e*PN	**Pn**	**15 12 02.3**	**0.0**

*ISCJB **21** 15:11:50.6±0.6, 4744S±008×136W±02, h10km, mb4.3/15, Error ellipse: s-maj=16.3km s-min=11.4km az=179.0*
*IDC **21** 15:11:50.9±0.8, 4754S×1364W, h0km, mb4.2/10, mb1 4.2/10, mb1mx4.1/17, mbtmp4.2/10, MS4.0/1, Ms1 4.0/1, ms1mx3.7/6, Error ellipse: s-maj=21.8km s-min=19.5km az=163.0*
*N

mb1 4.3/6,mb1mx4.0/17,mbtmp4.1/6,ML2.4/1,Error ellipse: s-maj=195.9km s-min=27.5km az=139.0

ISC 21 15:30:55.1±0.8,**241S**×01×**1764W**±02,**h35**km,**n12**, σ1$**09**/13,**mb4.1**/5,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**11.02**	**24**	Pn	**Pn**	**15 33 29.6**	**-0.7**
	1.8nm,0.3s,baz=230,slow=20,SNR=7.5						
AFI				Sn	**Sn**	**15 35 23.3**	**-9.1**
	1.4nm,0.3s,baz=352,slow=14,SNR=3.2						
AFI	**Afiamalu**	**11.02**	**24**	*e*Pn	**Pn**	**15 33 29.8**	**-0.5**
	9.2nm,0.3s						
AFI				*e*Sn	**Sn**	**15 35 25.1**	**-7.3**
ASAR	**Alice Springs**	**45.24**	**260**	P	**P**	**15 39 09.5**	**+0.2**
	2.5nm,0.9s,mb4.0,baz=93,slow=6.8,SNR=28						
WB2	**Warramunga Ar**	**45.66**	**265**	*e*P	**P**	**15 39 12.0**	**-0.7**
WRA	**Warramunga Arr**	**45.67**	**265**	P	**P**	**15 39 12.3**	**-0.4**
	0.8nm,0.6s,mb3.9,baz=98,slow=8.4,SNR=22						
FITZ	**Fitzroy Crossi**	**54.09**	**265**	P	**P**	**15 40 16.7**	**0.0**
	0.7nm,0.4s,mb3.9,baz=124,slow=8.9,SNR=5.2						
PETK	**Petropavlovsk-**	**80.09**	**344**	P	**P**	**15 43 03.8**	**+2.8**
	3.4nm,0.8s,mb4.3,baz=123,slow=11,SNR=5.6						
VNA3	**Neumayer Olymp**	**84.49**	**176**	*e*	**P**	**15 43 24.6**	**+0.7**
VNA3				*e*		15 43 27.0	
VNA2	**Neumayer--Watz**	**84.95**	**176**	*e*	**P**	**15 43 26.8**	**+0.6**
VNA2				*e*		15 43 29.2	
VNA1	**Neumayer--Stat**	**85.17**	**176**	*e*	**P**	**15 43 25.9**	**-1.4**
VNA1				*e*		15 43 28.7	
CMAR	**Chiang Mai Arr**	**92.68**	**289**	P	**P**	**15 44 07.3**	**+3.4**
	1.0nm,0.8s,mb4.3,baz=123,slow=3.8,SNR=6.6						
AKASG	**Malin Array Be**	**146.84**	**330**	PKPbc	PKPbc	15 50 34.5	+1.1
	0.9nm,0.3s,baz=38,slow=3.1,SNR=8.1						

*MOS **21** 15:47:59.1±1.0,41**45N**×4370E,h15**km**,mb3.8/1,Error ellipse: s-maj=57.6km s-min=16.7km az=76.6*

ISC 21 15:47:56.5±1.7,**4137N**±007×**4438E**±008,**h5**km±14km,**n11**, σ0$**85**/20,**Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTA	**Mtatsminda**	**0.45**	**43**	P	**Pg**	**15 48 04.5**	**-0.7**
MTA				S	**Sg**	**15 48 10.7**	**-0.3**
TBLG	**Delisi**	**0.45**	**36**	*e*PG	**Pg**	**15 48 04.4**	**-0.8**
TBLG	**Delisi**	**0.45**	**36**	P	**Pg**	**15 48 04.4**	**-0.8**
TBLG				S	**Sg**	**15 48 11.2**	**+0.1**
GOR	**Gori**	**0.65**	**342**	P	**Pg**	**15 48 09.6**	**+0.5**
GOR				S	**Sg**	**15 48 17.7**	**+0.1**
DGRG	**David-gareji**	**0.75**	**83**	P	**Pg**	**15 48 10.4**	**-0.6**
DGRG				S	**Sg**	**15 48 22.0**	**+1.4**
ONI	**Oni**	**1.40**	**330**	P	**Pn**	**15 48 22.7**	**0.0**
ONI				S	**Sb**	**15 48 41.3**	**0.0**
ZEI	**Tsey**	**1.45**	**346**	*e*PG	**Pg**	**15 48 24.9**	**+0.6**
ZEI				*e*S	**Sg**	**15 48 43.5**	**+0.4**
LACR	**Lac**	**1.46**	**357**	*e*PG	**Pg**	**15 48 26.1**	**+1.6**
LACR				*e*S	**Sg**	**15 48 46.2**	**+2.7**
KORR	**Kora**	**1.73**	**352**	*e*PN	**Pg**	**15 48 29.2**	**-0.6**
KORR				*e*S	**Sg**	**15 48 51.4**	**-0.9**
ARNR	**Ardon**	**1.82**	**358**	*e*PN	**Pg**	**15 48 30.8**	**-0.7**
ARNR				*e*S	**Sg**	**15 48 54.4**	**-0.7**
BTKR	**Batakoyurt**	**2.01**	**3**	*e*Pn	**Pg**	**15 48 34.3**	**-0.7**

*ISCJB **21** 15:53:53.3±0.3,49**36N**×002×**678E**±003,h0**km**,Error ellipse: s-maj=2.6km s-min=2.4km az=19.8*
*CSEM **21** 15:53:54.7±0.1,49**38N**×680E,h0**km**,ML2.6/9,Error ellipse: s-maj=1.2km s-min=0.9km az=45.0*
*LDG **21** 15:53:55.1±0.1,49**39N**×680E,h1**km**,Md2.6/1,Ml2.6/9,Error ellipse: s-maj=1.3km s-min=1.2km az=126.0, Suspected Mining induced.*
*NEIC **21** 15:53:55.1,49**39N**×680E,h1**km**,ML2.3(STR), ML2.6(LDG),After LDG.*
*BGR **21** 15:53:55.0±0.5,49**35N**×683E,h1**km**,ML1.9/3,Error ellipse: s-maj=7.8km s-min=4.4km az=35.0*

ISC 21 15:53:54.3±0.3,**4937N**±002×**678E**±003,**h0**km,**n36**, σ0$**83**/70,**Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUP	**Ruppelstein**	**0.38**	**28**	Pg	**Pg**	**15 54 02.4**	**+0.8**
RUP				Sg	**Sg**	**15 54 06.9**	**+0.4**
WLF	**Walferdange**	**0.51**	**306**	*e*Pg	**Pg**	**15 54 06.0**	**+2.0**
	SNR=2.1						
WLF				*e*Sg	**Sg**	**15 54 11.7**	**+1.1**
	SNR=3.9						
ABH	**Alteburg**	**0.71**	**44**	Pg	**Pg**	**15 54 08.2**	**+0.2**
ABH				Sg	**Sg**	**15 54 17.2**	**-0.1**
LANF	**Langenberg**	**0.78**	**120**	Pg	**Pg**	**15 54 09.2**	**0.0**
LANF				Sg	**Sg**	**15 54 19.2**	**0.0**
CDF	**Champ du Feu**	**1.01**	**161**	*e*Pn	**Pn**	**15 54 14.9**	**-0.8**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**15 54 27.5**	**+0.7**
	17nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**1.01**	**161**	*e*Pn	**Pn**	**15 54 14.9**	**-0.8**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**15 54 27.5**	**+0.7**
	8.6nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**1.01**	**161**	*e*Pg	**Pg**	**15 54 14.2**	**+0.5**
CDF				*e*Pn	**Pn**	**15 54 14.9**	**-0.8**
CDF				*e*Sg	**Sg**	**15 54 27.5**	**+0.7**
RFYF	**Reffroy**	**1.14**	**230**	*e*Pn	**Pn**	**15 54 17.7**	**+0.3**
	baz=49						
RFYF				*e*Sn	**Sn**	**15 54 32.4**	**-1.3**
	40nm,0.3s						
RFYF	**Reffroy**	**1.14**	**230**	*e*Pn	**Pn**	**15 54 17.7**	**+0.3**
RFYF				*e*Sn	**Sn**	**15 54 32.4**	**-1.3**
	20nm,0.3s						
ECH	**Echery**	**1.18**	**168**	Pg	**Pg**	**15 54 17.7**	**+0.8**
ECH				Sg	**Sg**	**15 54 33.9**	**+1.7**
THEF	**They Montfort**	**1.26**	**205**	Pg	**Pg**	**15 54 18.5**	**+0.1**
THEF				Sg	**Sg**	**15 54 36.3**	**+1.6**
TOD	**Tromm**	**1.34**	**79**	Pg	**Pg**	**15 54 19.1**	**-0.9**
TOD				Sg	**Sg**	**15 54 37.0**	**-0.3**
TNS	**Taunus Mts**	**1.38**	**51**	*e*Pg	**Pg**	**15 54 20.4**	**-0.3**
	SNR=4.7						
TNS				*e*Sg	**Sg**	**15 54 38.6**	**+0.1**
	SNR=3.2						
HAU	**Haudompre**	**1.39**	**192**	*e*Pg	**Pg**	**15 54 21.4**	**+0.4**
HAU				*e*Sg	**Sg**	**15 54 40.0**	**+0.9**
	9.6nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**1.39**	**192**	*e*Pg	**Pg**	**15 54 21.4**	**+0.4**
HAU				*e*Sg	**Sg**	**15 54 40.0**	**+0.9**
	4.8nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**1.39**	**192**	*e*Pn	**Pn**	**15 54 20.3**	**-0.7**
HAU				*e*Pg	**Pg**	**15 54 21.4**	**+0.4**
HAU				*e*Sg	**Sg**	**15 54 40.0**	**+0.9**
MEZF	**Maizieres J'vi**	**1.43**	**233**	*e*Pg	**Pg**	**15 54 22.1**	**+0.4**
	baz=54						
MEZF				*e*Sg	**Sg**	**15 54 41.2**	**+0.9**
	9.6nm,0.3s,baz=55,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.43**	**233**	*e*Pg	**Pg**	**15 54 22.1**	**+0.4**
MEZF				*e*Sg	**Sg**	**15 54 41.2**	**+0.9**
	4.8nm,0.3s,SNR=1.0						
BFO	**Black Forest**	**1.46**	**135**	*e*Pg	**Pg**	**15 54 22.3**	**+0.1**
	SNR=2.2						
BFO				*e*Sg	**Sg**	**15 54 39.6**	**-1.5**
	SNR=5.1						
BFO	**Black Forest**	**1.46**	**135**	Pg	**Pg**	**15 54 22.3**	**+0.1**
	SNR=2.2						
BFO				Sg	**Sg**	**15 54 39.6**	**-1.5**
	SNR=5.1						
GIVF	**Givet**	**1.47**	**301**	*e*Pg	**Pg**	**15 54 22.4**	**0.0**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**15 54 41.7**	**+0.3**
	10nm,0.2s,SNR=1.0						
GIVF	**Givet**	**1.47**	**301**	*e*Pg	**Pg**	**15 54 22.4**	**0.0**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**15 54 41.7**	**+0.3**
	5.2nm,0.2s,SNR=1.0						
MOF	**Molkenrain**	**1.54**	**171**	Pg	**Pg**	**15 54 24.0**	**+0.3**
MOF				Sg	**Sg**	**15 54 44.2**	**+0.6**
HINF	**Hinteralfeld**	**1.55**	**178**	*e*Pg	**Pg**	**15 54 24.2**	**+0.1**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**15 54 44.3**	**+0.1**
	12nm,0.2s,SNR=1.0						
HINF	**Hinteralfeld**	**1.55**	**178**	*e*Pg	**Pg**	**15 54 24.2**	**+0.1**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**15 54 44.3**	**+0.1**
	6.0nm,0.2s,SNR=1.0						
SFTF	**Sexfontaines**	**1.64**	**225**	*e*Pn	**Pn**	**15 54 23.6**	**-0.7**
FELD	**Feldberg im Sc**	**1.70**	**151**	Pg	**Pg**	**15 54 26.9**	**0.0**
FELD				Sg	**Sg**	**15 54 49.1**	**+0.2**
BAIF	**Baives**	**1.81**	**293**	*e*Pg	**Pg**	**15 54 28.4**	**-0.5**
	SNR=1.0						
BAIF				*e*Sg	**Sg**	**15 54 52.1**	**-0.2**
	6.5nm,0.4s,SNR=1.0						
BAIF	**Baives**	**1.81**	**293**	*e*Pg	**Pg**	**15 54 28.4**	**-0.5**
	SNR=1.0						
BAIF				*e*Sg	**Sg**	**15 54 52.1**	**-0.2**
	3.2nm,0.4s,SNR=1.0						
CABF	**La Chapelle**	**2.80**	**190**	*e*Pn	**Pn**	**15 54 39.2**	**-1.1**
	SNR=1.0						
LOR	**Lormes**	**2.87**	**224**	*e*Pn	**Pn**	**15 54 40.2**	**-1.0**
	baz=56,SNR=1.0						
LOR				*e*Sn	**Sn**	**15 55 14.1**	**-2.3**
	baz=45						
LOR				*e*Sg	**Sg**	**15 55 26.1**	**-0.3**
	3.7nm,0.3s						
LOR	**Lormes**	**2.87**	**224**	*e*Pn	**Pn**	**15 54 40.2**	**-1.0**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**15 55 14.1**	**-2.3**
LOR				*e*Sg	**Sg**	**15 55 26.1**	**-0.3**
	1.9nm,0.3s						
SSF	**Saint Saulge**	**3.18**	**225**	*e*Pn	**Pn**	**15 54 44.2**	**-1.3**
	SNR=1.0						
SMF	**Signal de Mont**	**3.37**	**217**	*e*Pn	**Pn**	**15 54 47.1**	**-1.0**
AVF	**Avril sur Loir**	**3.46**	**223**	*e*Sg	**Sg**	**15 55 44.3**	**-0.9**
	2.4nm,0.4s,SNR=1.0						
AVF	**Avril sur Loir**	**3.46**	**223**	*e*Sg	**Sg**	**15 55 44.3**	**-0.9**
	1.2nm,0.4s,SNR=1.0						

*DJA **21** 16:52:59.091N×9652E,h45**km**,MLv4.8/4*
*IDC **21** 16:53:03.5±2.8,161N×9709E,h0**km**,mb4.4/7,mb1 4.4/8, mb1mx4.1/20,mbtmp4.3/8,ML4.3/1,MS3.4/1,Ms1 3.4/1, ms1mx2.5/34,Error ellipse: s-maj=64.4km s-min=40.7km az=171.0*
*BJI **21** 16:53:09.4,2.11N×9728E,h26**km**,mB4.8,mb4.8*
*NEIC **21** 16:53:10.1±1.7,185N×97.13E,h35**km**,mb4.4/2,Error ellipse: s-maj=33.2km s-min=25.7km az=152.0*

ISC 21 16:53:10.4±2.1,**19N**±03×**971E**±02,**h35**km,**n15**, σ0$**59**/15, **mb4.4**/12,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.59**	**6**	Pn	**Pn**	**16 56 59.6**	**-0.8**
	0.4nm,0.3s,baz=198,slow=11,SNR=11						
XAN	**Xi'an**	**33.86**	**18**	P	**P**	**16 59 49.1**	**-0.6**
XAN				AP	pP	16 59 58.3	-1.5
XAN				XP	sP	17 00 03.3	-0.7
XAN				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.8						
XAN				AMB	AMB		
	comp=Z,23nm,3.6s						
GTA	**Gaotai**	**37.45**	**3**	*e*P	**P**	**17 00 20.5**	**+0.1**
GTA				AP	pP	17 00 24.3	-6.3
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.3						
BJI	**Beijing**	**41.76**	**22**	P	**P**	**17 00 57.3**	**+1.0**
BJI				AMB	AMB		
	comp=Z,18nm,0.8s,mb4.8						
BJI				AMB	AMB		
	comp=Z,124nm,3.8s						
UCH	**Uchtor**	**45.02**	**336**	*e*P	**P**	**17 01 23.5**	**+0.9**
TKM2	**Tokmak 2**	**45.18**	**338**	*e*P	**P**	**17 01 22.9**	**-0.9**
	comp=Z,1.8nm,0.5s,mb4.2						
KSRS	**Korea Array**	**45.35**	**35**	P	**P**		
	comp=Z,1.7nm,0.6s,mb4.0,baz=233,slow=7.7,SNR=11					**17 01 25.2**	**-0.1**
SONM	**Songino Array**	**46.49**	**9**	P	**P**	**17 01 34.8**	**+0.7**
	comp=Z,3.2nm,0.5s,mb4.5,baz=190,slow=9.8,SNR=44						
SONM				PcP	PcP	17 03 08.2	0.0
	comp=Z,0.7nm,0.5s,baz=170,slow=4.9,SNR=4.7						
MK31	**Makanchi Array**	**46.58**	**346**	*e*P	**P**	**17 01 35.2**	**+0.4**
MKAR	**Makanchi Array**	**46.58**	**346**	P	**P**	**17 01 35.3**	**+0.5**
	comp=Z,8.3nm,0.7s,mb4.8,baz=159,slow=7.7,SNR=52						
MKAR				LR	LR	17 25 00.2	
	comp=Z,38nm,19.8s,baz=263,slow=41						
KURK	**Kurchatov**	**51.13**	**345**	*e*P	**P**	**17 02 09.7**	**0.0**
	comp=Z,5.3nm,1.0s,mb4.4						
MJAR	**Matsushiro Arr**	**51.26**	**43**	P	**P**	**17 02 10.5**	**-0.4**
	comp=Z,1.7nm,0.7s,mb4.1,baz=211,slow=6.3,SNR=5.5						
ZALV	**Zalesovo Beam**	**52.89**	**351**	P	**P**	**17 02 22.9**	**+0.1**
	comp=Z,1.1nm,0.5s,mb5.0,baz=175,slow=7.1,SNR=62						
ARCES	**ARCESS Array B**	**81.89**	**340**	P	**P**	**17 05 25.6**	**-0.3**
	comp=Z,1.6nm,0.5s,mb4.2,baz=96,slow=4.7,SNR=26						
GERES	**GERESS Array B**	**84.27**	**319**	P	**P**	**17 05 37.9**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.9,baz=88,slow=3.2,SNR=4.1						

*NEIC **21** 16:55:52.9±3.0,7.44S×12874E,h121**km**±32**km**,mb4.2/3, Error ellipse: s-maj=28.5km s-min=13.2km az=222.0*
*ISCJB **21** 16:55:53.8±0.8,754S±005×12873E±007,h150**km**±10**km**, mb3.8/6,Error ellipse: s-maj=11.3km s-min=7.4km az=170.4*
*IDC **21** 16:55:54.4±3.0,750S×12868E,h136**km**±26**km**,mb3.5/4, mb1 3.9/8,mb1mx3.8/15,mbtmp3.8/8,MS3.5/2,Ms1 3.5/2, ms1mx2.7/27,Error ellipse: s-maj=30.0km s-min=20.3km az=67.0*
*DJA **21** 16:55:55,754S×12882E,h205**km**,mb4.6/4*

ISC 21 16:55:54.6±0.7,**756S**±004×**12875E**±007,**h142**km±10**km**, **n25**,σ0$**98**/28,**mb3.8**/6,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**3.89**	**352**	P	**Pn**	**16 56 52.8**	**-0.4**
	0.0nm,0.0s						
AAI	**Ambon**	**3.89**	**352**	P	**Pn**	**16 56 52.8**	**-0.4**
	0.0nm,0.0s						
BATI	**Baumata**	**5.67**	**242**	P	**Pn**	**16 57 18.1**	**+1.2**
	273nm,0.9s						
BATI	**Baumata**	**5.67**	**242**	P	**Pn**	**16 57 17.7**	**+0.8**
	77nm,0.3s,baz=119,slow=2.1,SNR=84						
BATI				S	**Sn**	**16 58 20.1**	**-0.9**
	94nm,0.3s,baz=75,slow=20,SNR=15						
LBMI	**Labuha**	**6.99**	**350**	P	**Pn**	**16 57 35.2**	**+0.6**
	57nm,0.7s						
SWI	**Sorong**	**7.11**	**21**	P	**Pn**	**16 57 35.3**	**-0.9**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**10.91**	**196**	*e*P	**Pn**	**16 58 26.1**	**-0.7**
FITZ				*e*S	**Sn**	**17 00 19.4**	**-7.9**
FITZ	**Fitzroy Crossi**	**10.91**	**196**	P	**Pn**	**16 58 26.2**	**-0.6**
	4.0nm,0.3s,baz=28,slow=11,SNR=54						
FITZ				S	**Sn**	**17 00 19.7**	**-7.6**
	1.1nm,0.3s,baz=331,slow=19,SNR=2.8						
WRAB	**Tennant Creek**	**13.45**	**157**	*e*Pn	**Pn**	**16 59 00.3**	**+0.4**
	15nm,0.7s						
WRA	**Warramunga Arr**	**13.45**	**157**	P	**Pn**	**16 59 00.1**	**+0.2**
	2.4nm,0.3s,baz=332,slow=14,SNR=52						
WRA				S	**Sn**	**17 01 22.7**	**-6.1**
	2.9nm,0.3s,baz=337,slow=22,SNR=11						
WB2	**Warramunga Ar**	**13.46**	**157**	*e*P	**Pn**	**16 59 00.2**	**+0.2**
WB2				*e*S	**Sn**	**17 01 23.9**	**-4.9**
MBWA	**Marble Bar**	**16.08**	**212**	*e*P	**Pn**	**16 59 33.2**	**+0.3**
	12nm,0.8s						
ASAR	**Alice Springs**	**16.76**	**163**	P	**Pn**	**16 59 43.2**	**+2.1**
	0.9nm,0.3s,baz=331,slow=9.5,SNR=56						
ASAR				S	**S**	**17 02 45.9**	**-1.9**
	1.0nm,0.3s,baz=332,slow=23,SNR=6.7						
ASAR				ScP	ScP	17 07 43.7	+0.9
	0.0nm,0.3s,baz=336,slow=2.1,SNR=4.5						
KSM	**Kuching**	**20.46**	**295**	*e*P	**P**	**17 00 22.5**	**+1.2**
STKA	**Stephens Creek**	**27.00**	**155**	*e*P	**P**	**17 01 26.1**	**+2.8**
STKA	**Stephens Creek**	**27.00**	**155**	P	**P**	**17 01 27.0**	**+3.7**
	5.2nm,0.9s,mb4.2,baz=331,slow=9.5,SNR=5.9						
CMAR	**Chiang Mai Arr**	**39.15**	**312**	P	**P**	**17 03 08.0**	**-0.7**
	0.8nm,0.7s,mb3.5,baz=140,slow=7.1,SNR=4.4						
KSRS	**Korea Array**	**44.78**	**359**	LR	LR	17 21 59.5	
	comp=Z,25nm,20.7s,baz=209,slow=35						
URZ	**Urewera**	**53.19**	**133**	LR	LR	17 25 50.5	
	comp=Z,123nm,19.5s,baz=238,slow=34						
SONM	**Songino Array**	**58.59**	**343**	P	**P**	**17 05 36.4**	**0.0**
	1.4nm,1.0s,mb3.8,baz=168,slow=7.4,SNR=7.0						
MKAR	**Makanchi Array**	**68.02**	**328**	P	**P**	**17 06 39.0**	**+0.5**
	1.0nm,0.4s,mb3.9,baz=116,slow=7.7,SNR=11						
ZALV	**Zalesovo Beam**	**71.54**	**334**	P	**P**	**17 06 59.4**	**-0.5**
	1.2nm,0.6s,mb3.8,baz=117,slow=4.8,SNR=5.9						
ZALV	**Zalesovo Beam**	**71.54**	**334**	P	**P**	**17 06 59.4**	**-0.5**
KURK	**Kurchatov**	**72.35**	**329**	*e*P	**P**	**17 07 03.7**	**-1.1**
	1.8nm,0.6s,mb4.0						
TORD	**Torodi Ar. Bea**	**127.69**	**281**	PKP	PKPdf	17 14 44.4	+0.2
	0.8nm,0.7s,baz=38,slow=1.6,SNR=4.6						

IDC 21 17:05:14.9±2.5,**1901S**×**17716W**,**h0**km,**mb3.5**/3, **mb1 3.9**/3,**mb1mx3.6**/16,**mbtmp3.5**/3,**Error ellipse: s-maj=264.7km s-min=31.0km az=160.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.61**	**260**	P	P	17 13 37.2	-0.1
	0.1nm,0.3s,baz=97,slow=7.5,SNR=14						
ASAR	**Alice Springs**	**45.65**	**255**	P	P	17 13 37.5	0.0
	0.3nm,0.4s,baz=89,slow=7.6,SNR=17						
TXAR	**Lajitas Array**	**85.59**	**57**	P	P	17 17 55.6	+0.2
	0.4nm,0.6s,baz=223,slow=6.7,SNR=7.5						

IDC 21 17:14:23.2±5.2,**2116S**×**7080W**,**h204**km±41**km**,**mb1 2.8**/2, **mb1mx2.7**/17,**mbtmp2.7**/2,**Error ellipse: s-maj=109.6km s-min=26.3km az=83.0,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.27**	**130**	P	Pn	17 15 05.9	+1.0
	4.3nm,0.3s,baz=128,slow=5.3,SNR=36						
LVC				S	Sn	17 15 38.3	+0.8
	8.6nm,0.3s,baz=258,slow=20,SNR=31						
LPAZ	**La Paz**	**5.46**	**28**	P	Pn	17 15 43.9	+0.3
	0.2nm,0.3s,baz=213,slow=5.5,SNR=6.9						
ASAR	**Alice Springs**	**129.37**	**210**	PKP	PKPdf	17 33 06.7	-1.3
	0.2nm,0.5s,baz=126,slow=1.5,SNR=5.4						
WRA	**Warramunga Arr**	**132.32**	**213**	PKP	PKPdf	17 33 13.3	-0.4
	0.5nm,1.0s,baz=154,slow=2.0,SNR=8.0						
MKAR	**Makanchi Array**	**146.36**	**34**	PKPbc	PKPbc	17 33 39.4	-0.4
	0.3nm,0.2s,baz=323,slow=1.8,SNR=4.0						

*ISK **21** 17:20:33.7,39.13N×2795E,h5**km**,MD3.2*
*CSEM **21** 17:20:33.8±0.1,39.13N×2795E,h2**km**,MD3.2,Error ellipse: s-maj=1.5km s-min=1.1km az=106.0*
*DDA **21** 17:20:34.2,39.13N×2799E,h8**km**±5**km**,Md3.0*
*ISCJB **21** 17:20:35.1±0.3,39.13N±002×2799E±003,h10**km**,Error ellipse: s-maj=3.3km s-min=2.8km az=23.2*

ISC 21 17:20:35.1±0.4,**3914N**±002×**2800E**±003,**h2**km±4km,**n32**, σ0$**65**/43,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.29**	**209**	*i* P	**Pg**	**17 20 40.5**	**-0.1**
AKHS				*i* S	**Sg**	**17 20 45.8**	**+1.4**
AKHS	**Akhisar**	**0.29**	**209**	*i* P	**Pg**	**17 20 40.5**	**-0.2**
AKS	**Akhisar**	**0.29**	**209**	PG	**Pg**	**17 20 40.5**	**-0.1**
BALB	**Balikesir**	**0.51**	**350**	*e*PG	**Pg**	**17 20 45.0**	**+0.1**
BALB				*e*SG	**Sg**	**17 20 52.8**	**+1.2**
DEMI	**Demirci**	**0.57**	**99**	*i* P	**Pg**	**17 20 45.9**	**-0.1**
DEMI				*i* S	**Sg**	**17 20 53.6**	**+0.3**
DURS	**Dursunbey**	**0.59**	**38**	*i* P	**Pg**	**17 20 45.9**	**-0.6**
BALY	**Balya**	**0.67**	**334**	*i* P	**Pg**	**17 20 47.5**	**-0.5**
BALY				*i* S	**Sg**	**17 20 56.4**	**-0.2**
DST	**Dursunbey**	**0.68**	**46**	*e*PG	**Pg**	**17 20 47.9**	**-0.2**
MANT	**Manisa**	**0.78**	**146**	*e*P	**Pg**	**17 20 49.5**	**-0.5**
MANT				*i* S	**Sg**	**17 21 00.2**	**+0.2**
KULA	**Kula-Manisa**	**0.81**	**140**	*e*PG	**Pg**	**17 20 50.8**	**+0.3**
IZM	**Izmir**	**0.93**	**218**	*e*PG	**Pg**	**17 20 52.0**	**-1.0**
IZM				*e*SG	**Sg**	**17 21 05.6**	**+0.5**
AYVA	**Ayvalik**	**1.03**	**280**	*i* P	**Pg**	**17 20 54.3**	**-0.5**
AYVA				*i* S	**Sg**	**17 21 08.8**	**+0.6**
BLCB	**Balcova**	**1.06**	**225**	*e*PG	**Pg**	**17 20 54.4**	**-0.9**
BLCB				*e*SG	**Sg**	**17 21 09.6**	**+0.6**
GDZ	**Gediz**	**1.16**	**92**	*e*P	**Pg**	**17 20 56.9**	**-0.3**
GDZ				*i* S	**Sg**	**17 21 12.2**	**0.0**
GDZ	**Gediz**	**1.16**	**92**	*e*P	**Pg**	**17 20 56.9**	**-0.3**
GDZ				*i* S	**Sg**	**17 21 12.1**	**-0.1**
EDC	**Edincik**	**1.22**	**355**	*e*PN	**Pn**	**17 20 57.3**	**-1.8**
KHL	**Karahalli**	**1.44**	**124**	*e*PN	**Pn**	**17 21 02.3**	**+0.1**
EZN	**Ezine**	**1.47**	**299**	*e*PN	**Pn**	**17 21 01.5**	**-1.0**
MRMT	**Marmara Adasi**	**1.50**	**348**	*e*PN	**Pn**	**17 21 03.1**	**+0.2**
GCAM	**G?zelcaml?**	**1.55**	**203**	*i* P	**Pn**	**17 21 04.0**	**+0.3**
GCAM				*i* S	**Sn**	**17 21 24.4**	**+0.1**
GEMT	**Gemlik**	**1.59**	**35**	*e*PN	**Pn**	**17 21 04.2**	**+0.1**
ALT	**Altintas**	**1.65**	**92**	*e*PN	**Pn**	**17 21 05.2**	**+0.2**
DNZL	**Cakiroluk**	**1.66**	**150**	*i* P	**Pn**	**17 21 03.6**	**-1.5**
MFT	**Murefte**	**1.74**	**342**	*e*PN	**Pn**	**17 21 06.2**	**0.0**
YLV	**Yalova**	**1.78**	**36**	*e*PN	**Pn**	**17 21 07.5**	**+0.7**
MLSB	**Milas**	**1.84**	**185**	*e*PN	**Pn**	**17 21 07.6**	**-0.1**
ADVT	**Abdulvahap**	**1.87**	**45**	*e*PN	**Pn**	**17 21 08.3**	**+0.4**
YER	**Yerkesik**	**2.01**	**173**	*e*PN	**Pn**	**17 21 09.9**	**0.0**
HRT	**Hereke**	**2.12**	**37**	*e*PN	**Pn**	**17 21 12.7**	**+1.3**
BODT	**B

MAJO	**Matsushiro**	**2.88**	**297**	*e*P		**Pn**	**17 38 19.0**	**+0.8**
MAT	**Matsushiro**	**2.88**	**297**	P		**Pn**	**17 38 19.5**	**+1.3**
MAT				S		**Sn**	**17 38 54.6**	**+1.7**
CBIJ	**Chichi jima**	**8.16**	**175**	Pn		**Pn**	**17 39 31.1**	**+0.5**
	7.1nm,0.3s,baz=287,slow=20,SNR=3.7							
ASAJ	**Asahikawa**	**8.90**	**6**	Pn		**Pn**	**17 39 41.1**	**+0.3**
	0.9nm,0.3s,baz=228,slow=6.9,SNR=7.2							
ASAJ				LR		LR	17 43 46.4	
	comp=Z,85nm,20.5s,baz=159,slow=42							
ASAJ	**Asahikawa**	**8.90**	**6**	P		**Pn**	**17 39 41.1**	**+0.3**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ASAJ				MLR	MLR			
	comp=Z,85nm,20.5s							
KSRS	**Korea Array**	**11.08**	**285**	LR		LR	17 44 24.6	
	comp=Z,194nm,18.3s,baz=150,slow=37							
JOW	**Kunigami**	**14.02**	**237**	LR		LR	17 46 04.1	
	comp=Z,71nm,20.1s,baz=56,slow=37							
PETK	**Petropavlovsk-**	**21.25**	**28**	LR		LR	17 50 51.8	
	comp=Z,33nm,18.7s,MS2.8,baz=36,slow=38							
SONM	**Songino Array**	**28.79**	**307**	P		**P**	**17 43 29.5**	**-0.7**
	comp=Z,0.4nm,0.6s,mb3.4,baz=110,slow=7.8,SNR=3.9							
SONM				LR		LR	17 55 02.2	
	comp=Z,85nm,18.8s,MS3.4,baz=78,slow=37							
ZALV	**Zalesovo Beam**	**43.11**	**314**	P		**P**	**17 45 31.9**	**-0.5**
	comp=Z,0.9nm,0.5s,mb3.7,baz=104,slow=7.0,SNR=5.4							
ZALV	**Zalesovo Beam**	**43.11**	**314**	P		**P**	**17 45 31.9**	**-0.5**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.8							
ZALV	**Zalesovo Beam**	**43.11**	**314**	P		**P**	**17 45 31.9**	**-0.5**
MKAR	**Makanchi Array**	**45.06**	**304**	P		**P**	**17 45 47.6**	**-0.5**
	comp=Z,0.5nm,0.4s,mb3.7,baz=98,slow=8.7,SNR=5.6							
KURK	**Kurchatov**	**47.03**	**309**	*e*P		**P**	**17 46 02.4**	**-1.2**
KURK				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3							
KURK	**Kurchatov**	**47.03**	**309**	*e*P		**P**	**17 46 02.4**	**-1.1**
	comp=Z,3.4nm,0.8s,mb4.3							
UCH	**Uchtor**	**51.43**	**299**	P		**P**	**17 46 37.7**	**+0.3**
	comp=Z,2.8nm,0.9s,mb4.2							
FITZ	**Fitzroy Crossi**	**55.12**	**198**	P		**P**	**17 47 04.2**	**-0.5**
	comp=Z,1.0nm,0.8s,mb3.9,baz=6.2,slow=9.5,SNR=5.4							
WRAB	**Tennant Creek**	**55.28**	**188**	*e*P		**P**	**17 47 05.4**	**-0.4**
WRAB				pmax	pmax			
	comp=Z,12nm,1.2s,mb4.8							
WRAB	**Tennant Creek**	**55.28**	**188**	*e*P		**P**	**17 47 05.4**	**-0.4**
	comp=Z,12nm,1.2s,mb4.8							
WB2	**Warramunga Arr**	**55.30**	**188**	*e*P		**P**	**17 47 05.9**	**0.0**
WB2	**Warramunga Arr**	**55.30**	**188**	*e*P		**P**	**17 47 05.8**	**-0.1**
WRA	**Warramunga Arr**	**55.30**	**188**	P		**P**	**17 47 05.9**	**0.0**
	comp=Z,3.8nm,0.6s,mb4.6,baz=3.1,slow=7.4,SNR=33							
ARU	**Arti**	**57.68**	**319**	P		**P**	**17 47 21.4**	**-1.2**
ARU				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.6							
ARU	**Arti**	**57.68**	**319**	P		**P**	**17 47 21.4**	**-1.2**
	comp=Z,5.8nm,1.0s,mb4.6							
ASAR	**Alice Springs**	**59.02**	**188**	P		**P**	**17 47 32.6**	**+0.4**
	comp=Z,0.9nm,0.7s,mb3.9,baz=19,slow=12,SNR=17							
NOA	**NORSAR Array B**	**75.82**	**337**	LR		LR	18 25 36.9	
	comp=Z,81nm,18.8s,MS4.0,baz=90,slow=38							

*DJA **21** 18:10:52,789S×124.30E,h236km,mb4.8/3*
*IDC **21** 18:10:53.6±0.7,792S×12298E,h0km,mb4.3/10, mb1 4.4/14,mb1mx4.3/21,mbtmp4.3/14,ML4.2/4,MS3.8/18, Ms1 3.8/18,ms1mx3.7/28,Error ellipse: s-maj=30.4km s-min=13.1km az=62.0*
*ISCJB **21** 18:10:55.0±1.7,805S±004×12298E±005,h26km±12km, mb4.7/38,MS3.8/14,Error ellipse: s-maj=9.5km s-min=5.1km az=148.8*
*BJI **21** 18:10:54.5,800S×12290E,h10km,mB5.0,mb4.4*
*NEIC **21** 18:10:54.6±0.3,804S×12294E,h10km,mb4.7/22,Error ellipse: s-maj=12.7km s-min=5.5km az=62.0*
*MOS **21** 18:10:55.8±0.8,797S×12306E,h33km,mb4.8/13,Error ellipse: s-maj=21.2km s-min=8.4km az=116.2*

ISC 21 18:10:57.8±1.9,805S±004×12308E±005,h32km±14km, n90,σ1°13/95,mb4.7/38,MS3.8/14,4C-3D,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.22**	**165**	P	**Pn**	**18 11 36.5**	**+4.1**
	0.0nm,0.0s						
BATI	**Baumata**	**2.22**	**165**	Pn	**Pn**	**18 11 37.7**	**+5.3**
	113nm,0.3s,baz=17,slow=2.7,SNR=94						
BATI				Sn	**Sn**	**18 12 11.7**	**+13**
	77nm,0.3s,baz=52,slow=21,SNR=16						
BATI				LR	LR	18 12 45.9	
	comp=Z,5μm,18.3s,baz=238,slow=47						
WSI	**Waingapu**	**3.18**	**239**	*e*P	**Pn**	**18 11 44.0**	**-1.6**
WSI				*e*S	**Sn**	**18 12 24.5**	**+2.1**
KDI	**Kendari**	**4.09**	**354**	P	**Pn**	**18 11 57.6**	**-0.6**
	0.0nm,0.0s						
KAPI	**Kappang**	**4.47**	**312**	Pn	**Pn**	**18 12 01.0**	**-2.4**
	14nm,0.3s,baz=157,slow=6.5,SNR=34						
KAPI				Sn	**Sn**	**18 12 51.4**	**-3.0**
	3.8nm,0.3s,baz=284,slow=19,SNR=8.3						
KAPI				LR	LR	18 13 30.5	
	comp=Z,698nm,18.7s,baz=0.3,slow=36						
PCI	**Palu**	**7.80**	**335**	P	**Pn**	**18 12 50.3**	**+1.2**
	177nm,1.1s						
LBMI	**Labuha**	**8.59**	**31**	P	**Pn**	**18 12 59.5**	**-0.4**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**10.30**	**166**	*e*P	**Pn**	**18 13 23.5**	**+0.1**
FITZ				*e*S	**Sn**	**18 15 14.7**	**-3.0**
FITZ	**Fitzroy Crossi**	**10.30**	**166**	Pn	**Pn**	**18 13 23.8**	**+0.4**
	1.2nm,0.3s,baz=359,slow=11,SNR=40						
FITZ				Sn	**Sn**	**18 15 16.4**	**-1.3**
	1.5nm,0.3s,baz=84,slow=19,SNR=11						
FITZ				LR	LR	18 18 10.8	
	comp=Z,205nm,19.4s,baz=336,slow=42						
SWI	**Sorong**	**10.84**	**49**	P	**Pn**	**18 13 34.6**	**+3.8**
	0.0nm,0.0s						
MBWA	**Marble Bar**	**13.42**	**194**	*e*Pn	**Pn**	**18 14 04.7**	**-1.5**
	16nm,0.8s						
MBWA				*e*Sn	**Sn**	**18 16 20.8**	**-13**
KSM	**Kuching**	**15.86**	**306**	*e*Pn	**Pn**	**18 14 41.9**	**+3.0**
WRA	**Warramunga Arr**	**16.09**	**138**	Pn	**Pn**	**18 14 41.5**	**-0.2**
	0.9nm,0.3s,baz=317,slow=12,SNR=54						
WRA				Sn	**Sn**	**18 17 32.0**	**-7.2**
	0.9nm,0.3s,baz=305,slow=24,SNR=13						
WRA				LR	LR	18 22 04.1	
	comp=Z,280nm,18.6s,baz=325,slow=41						
WRA	**Warramunga Arr**	**16.09**	**138**	P	**Pn**	**18 14 41.5**	**-0.2**
WRA						18 17 32.0	
WRAB	**Tennant Creek**	**16.09**	**138**	*e*P	**Pn**	**18 14 42.3**	**+0.6**
WRAB	**Tennant Creek**	**16.09**	**138**	*e*Pn	**Pn**	**18 14 40.4**	**-1.3**
	24nm,0.9s						
WRAB				*e*Sn	**Sn**	**18 17 32.6**	**-6.5**
WB2	**Warramunga Arr**	**16.09**	**138**	*e*P	**Pn**	**18 14 41.2**	**-0.6**
WB2				*e*S	Sn	18 17 31.0	-8.4
WB2	**Warramunga Arr**	**16.09**	**138**	*e*Pn	**Pn**	**18 14 40.5**	**-1.2**
WB2				*e*Sn	**Sn**	**18 17 27.2**	**-12**
ASAR	**Alice Springs**	**18.68**	**147**	P	**Pn**	**18 15 14.8**	**+1.0**
	0.7nm,0.3s,baz=320,slow=12,SNR=106						
ASAR				S	**Sn**	**18 18 37.0**	**-4.9**
	0.3nm,0.3s,baz=320,slow=22,SNR=7.6						
COEN	**Coen**	**20.58**	**108**	↑*i*P	**P**	**18 15 37.2**	**+3.0**
	18nm,1.0s						
COEN				*e*S	**S**	**18 19 22.1**	**-0.7**
FORT	**Forrest**	**23.09**	**169**	*e*P	**P**	**18 16 01.9**	**+1.0**
FORT	**Forrest**	**23.09**	**169**	*e*P	**P**	**18 16 01.5**	**+0.6**
	5.8nm,0.8s,mb4.1						
MUN	**Mundaring**	**24.65**	**194**	*e*P	**P**	**18 16 16.7**	**+1.1**
NWAO	**Narrogin (SRO)**	**25.34**	**192**	P	**P**	**18 16 23.0**	**+1.2**
	18nm,1.0s,mb4.6,baz=2.7,slow=13,SNR=4.3						
NWAO				LR	LR	18 28 16.6	
	comp=Z,235nm,18.9s,MS3.7,baz=355,slow=41						
NWAO	**Narrogin (SRO)**	**25.34**	**192**	*e*P	**P**	**18 16 20.9**	**-1.0**
NWAO				LR	LR	18 28 16.6	
CTA	**Charters Tower**	**25.43**	**120**	P	**P**	**18 16 26.2**	**+3.5**
	2.3nm,0.5s,mb4.0,baz=294,slow=12,SNR=3.7						
CTA				LR	LR	18 27 57.1	
	comp=Z,230nm,19.0s,MS3.7,baz=280,slow=40						
CTA	**Charters Tower**	**25.43**	**120**	P	**P**	**18 16 26.2**	**+3.5**
CTA				LR	LR	18 27 57.1	
CTAO	**Charters Tower**	**25.43**	**120**	*e*P	**P**	**18 16 22.7**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
CTAO	**Charters Tower**	**25.43**	**120**	*e*P	**P**	**18 16 22.7**	**-0.1**
	comp=Z,11nm,1.0s,mb4.4						
STKA	**Stephens Creek**	**29.31**	**146**	*e*P	**P**	**18 17 00.0**	**+2.5**
STKA	**Stephens Creek**	**29.31**	**146**	P	**P**	**18 17 00.1**	**+2.6**
	comp=Z,3.9nm,0.8s,mb4.2,baz=319,slow=12,SNR=11						
STKA				LR	LR	18 30 00.9	
	comp=Z,344nm,20.0s,MS4.0,baz=212,slow=39						
STKA	**Stephens Creek**	**29.31**	**146**	*e*P	**P**	**18 16 59.5**	**+2.0**
	comp=Z,8.3nm,1.0s,mb4.4						
STKA				LR	LR	18 30 00.9	
NANT	**Nan**	**34.62**	**321**	⇑P	**P**	**18 17 45.0**	**+0.7**
	comp=Z,79nm,1.0s,mb5.6						
CMAR	**Chiang Mai Arr**	**35.51**	**318**	P	**P**	**18 17 52.1**	**+0.3**
	comp=Z,6.3nm,0.8s,mb4.6,baz=143,slow=6.9,SNR=41						
CMAR				LR	LR	18 32 56.2	
	comp=Z,134nm,21.9s,MS3.7,baz=159,slow=37						
CHTO	**Chiang Mai**	**35.76**	**319**	*e*P	**P**	**18 17 53.6**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
CHTO	**Chiang Mai**	**35.76**	**319**	*e*P	**P**	**18 17 53.6**	**-0.5**
	comp=Z,9.3nm,1.1s,mb4.6						
CHRT	**Chiangrai**	**36.00**	**321**	⇑P	**P**	**18 17 57.0**	**+0.9**
	comp=Z,160nm,1.0s,mb5.9						
HNR	**Honiara**	**36.46**	**95**	LR	LR	18 33 52.0	
	comp=Z,135nm,20.1s,MS3.7,baz=20,slow=38						
KMI	**Kunming**	**38.47**	**330**	P	**P**	**18 18 18.9**	**+2.0**
KMI				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.2						
WHN	**Wuhan**	**39.28**	**348**	⇓P	**P**	**18 18 25.3**	**+1.6**
XAN	**Xi'an**	**43.96**	**343**	P	**P**	**18 19 02.3**	**+0.3**
XAN				AP	pP	18 19 10.3	-1.2
XAN				XP	sP	18 19 14.1	-1.3
XAN				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
XAN				AMB	AMB		
	comp=Z,29nm,4.6s						
KSRS	**Korea Array**	**45.49**	**5**	LR	LR	18 38 24.5	
	comp=Z,62nm,18.3s,MS3.6,baz=187,slow=36						
MJAR	**Matsushiro Arr**	**46.58**	**17**	P	**P**	**18 19 22.3**	**-0.4**
	comp=Z,1.3nm,0.9s,mb3.8,baz=193,slow=8.5,SNR=5.2						
BJT	**Baijiatuao**	**48.25**	**353**	*e*P	**P**	**18 19 35.6**	**-0.1**
BJT				pmax	pmax		
	comp=Z,11nm,1.0s						
BJT	**Baijiatuao**	**48.25**	**353**	*e*P	**P**	**18 19 35.6**	**0.0**
	comp=Z,11nm,1.0s,mb4.8						
LSA	**Lhasa**	**48.49**	**322**	*e*P	**P**	**18 19 38.5**	**+0.8**
LSA				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
LSA	**Lhasa**	**48.49**	**322**	*e*P	**P**	**18 19 38.5**	**+0.7**
	comp=Z,9.5nm,1.0s,mb4.8						
RAMN	**Ramite**	**49.60**	**316**	*e*P	**P**	**18 19 46.1**	**-0.2**
	comp=Z,53nm,1.1s,mb5.5						
GUN	**Gumba**	**50.70**	**316**	*e*P	**P**	**18 19 54.7**	**+0.1**
	comp=Z,25nm,0.8s,mb5.2						
KKN	**Kakani**	**51.04**	**316**	*e*P	**P**	**18 19 56.7**	**-0.5**
DMN	**Daman**	**51.05**	**315**	*e*P	**P**	**18 19 57.0**	**-0.2**
	comp=Z,52nm,1.1s,mb5.4						
GKN	**Gorkha**	**51.62**	**315**	*e*P	**P**	**18 20 01.1**	**-0.4**
	comp=Z,44nm,1.1s,mb5.3						
GTA	**Gaotai**	**51.91**	**337**	*e*P	**P**	**18 20 04.4**	**+0.9**
GTA				AP	pP	18 20 11.3	-1.9
GTA				XP	sP	18 20 15.4	-1.6
GTA				AMB	AMB		
	comp=Z,3.0nm,1.3s,mb4.1						
KOLN	**Koldanda**	**52.20**	**315**	*e*P	**P**	**18 20 05.5**	**-0.4**
	comp=Z,29nm,0.9s,mb5.2						
DANN	**Dangsing**	**52.44**	**315**	*e*P	**P**	**18 20 07.3**	**-0.3**
	comp=Z,7.5nm,1.0s,mb5.6						
MDJ	**Mudanjiang**	**52.75**	**6**	P	**P**	**18 20 10.2**	**+0.6**
	comp=Z,9.2nm,0.9s,mb4.7						
ULN	**Ulaanbaatar**	**57.45**	**347**	*c i*P	**P**	**18 20 43.7**	**+0.3**
ULN	**Ulaanbaatar**	**57.45**	**347**	*e*P	**P**	**18 20 44.0**	**+0.5**
	comp=Z,3.3nm,1.1s,mb4.3						
SONM	**Songino Array**	**57.57**	**347**	P	**P**	**18 20 45.0**	**+0.7**
	comp=Z,2.8nm,0.9s,mb4.3,baz=166,slow=8.9,SNR=14						
SONM				LR	LR	18 48 21.5	
	comp=Z,77nm,19.3s,MS3.8,baz=61,slow=39						
ZAK	**Zakamensk**	**60.68**	**346**	*e*P	**P**	**18 20 59.7**	**-6.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.1						
MK31	**Makanchi Array**	**65.54**	**330**	*e*P	**P**	**18 21 37.2**	**-0.9**
MKAR	**Makanchi Array**	**65.54**	**330**	P	**P**	**18 21 38.4**	**+0.3**
	comp=Z,3.6nm,0.7s,mb4.5,baz=128,slow=7.9,SNR=19						
MKAR				LR	LR	18 50 45.7	
	comp=Z,51nm,20.4s,MS3.7,baz=282,slow=37						
KBL	**Kabul**	**66.32**	**313**	*e*P	**P**	**18 21 42.3**	**-1.1**
KBL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
KBL	**Kabul**	**66.32**	**313**	*e*P	**P**	**18 21 42.3**	**-1.1**
	comp=Z,7.0nm,1.0s,mb4.7						
TKM2	**Tokmak 2**	**66.59**	**324**	*e*P	**P**	**18 21 45.4**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
TKM2	**Tokmak 2**	**66.59**	**324**	*e*P	**P**	**18 21 45.4**	**+0.4**
	comp=Z,6.1nm,1.0s,mb4.6						
UCH	**Uchtor**	**66.82**	**323**	*e*P	**P**	**18 21 46.8**	**+0.3**
	comp=Z,15nm,1.3s,mb4.9						
AML	**Almayashu**	**67.26**	**322**	*e*P	**P**	**18 21 49.4**	**+0.1**
	comp=Z,16nm,1.2s,mb4.9						
EKS2	**Erkin-Say**	**67.52**	**323**	*e*P	**P**	**18 21 51.4**	**+0.6**
	comp=Z,12nm,1.1s,mb4.8						
PETK	**Petropavlovsk-**	**67.65**	**22**	P	**P**	**18 21 51.1**	**-0.4**
	comp=Z,1.5nm,0.7s,mb4.1,baz=256,slow=5.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**69.67**	**337**	P	**P**	**18 22 02.5**	**-1.6**
	comp=Z,3.5nm,0.8s,mb4.3,baz=128,slow=4.4,SNR=15						
ZALV				LR	LR	18 51 40.1	
	comp=Z,27nm,20.0s,MS3.5,baz=70,slow=35						
KURK	**Kurchatov**	**70.00**	**332**	P	**P**	**18 22 05.6**	**-0.6**
	comp=Z,1.0nm,0.7s,mb3.9,baz=143,slow=5.2,SNR=7.3						
KURK				LR	LR	18 57 13.5	
	comp=Z,49nm,19.5s,MS3.8,baz=130,slow=40						
KURK	**Kurchatov**	**70.00**	**332**	*e*P	**P**	**18 22 04.8**	**-1.4**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
KURK	**Kurchatov**	**70.00**	**332**	*e*P	**P**	**18 22 04.8**	**-1.4**
	comp=Z,10.0nm,1.2s,mb4.6						
KURK				LR	LR	18 57 13.5	
YAK	**Yakutsk**	**70.06**	**3**	*e*P	**P**	**18 22 06.5**	**+0.2**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
YAK	**Yakutsk**	**70.06**	**3**	*e*P	**P**	**18 22 06.8**	**+0.5**
	comp=Z,9.1nm,0.7s,mb4.8						
NVS	**Novosibirsk**	**70.95**	**337**	*e*P	**P**	**18 22 10.1**	**-1.8**
SBA	**Scott Base**	**73.28**	**171**	*e*P	**P**	**18 22 29.5**	**+4.0**
SBA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
SBA	**Scott Base**	**73.28**	**171**	*e*P	**P**	**18 22 29.5**	**+3.9**
	comp=Z,4.6nm,1.1s,mb4.3						
BRVK	**Borovoye**	**75.49**	**330**	P	**P**	**18 22 37.4**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
BRVK	**Borovoye**	**75.49**	**330**	P	**P**	**18 22 37.4**	**-1.3**
	comp=Z,8.7nm,1.1s,mb4.6						
AKTO	**Aktyubinsk**	**80.79**	**324**	LR	LR	19 02 29.3	
	comp=Z,54nm,18.7s,MS3.9,baz=18,slow=38						
ARU	**Arti**	**83.05**	**330**	P	**P**	**18 23 17.6**	**-2.3**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ARU	**Arti**	**83.05**	**330**	P	**P**	**18 23 17.6**	**-2.3**
	comp=Z,2.4nm,0.8s,mb4.3						
PPT	**Papeete**	**85.10**	**107**	LR	LR	18 58 22.1	
	comp=Z,66nm,19.1s,MS4.0,baz=266,slow=33						
ANN	**Anapa**	**92.53**	**315**	*e*P	**P**	**18 24 01.0**	**-5.0**
ANN				pmax	pmax		
	comp=Z,48nm,1.3s						
LSZ	**Lusaka**	**92.58**	**254**	LR	LR	18 59 15.2	
	comp=Z,56nm,21.9s,MS4.0,baz=42,slow=31						
SNAA	**Sanae**	**92.97**	**195**	*e*P	**P**	**18 24 07.4**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SNAA	**Sanae**	**92.97**	**195**	*e*P	**P**	**18 24 07.4**	**-0.1**
	comp=Z,2.8nm,1.1s,mb4.6						
BOSA	**Boshof**	**92.99**	**241**	LR	LR	18 59 08.6	
	comp=Z,78nm,18.6s,MS4.2,baz=164,slow=31						

*ISCJB **21** 18:20:09.9±0.4,4621N±002×333E±004,h10km,Error ellipse: s-maj=4.0km s-min=2.8km az=14.1*
*LDG **21** 18:20:11.6±0.1,4625N×333E,h18km,Md1.4/2,Ml1.3/4, Error ellipse: s-maj=1.1km s-min=0.7km az=116.0*
*STR **21** 18:20:12.7±0.9,4622N×287E,h5km,Ml2.6,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 21 18:20:11.4±0.4,4624N±002×332E±004,h10km,n13, σ0°88/26,France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGO	**Saint Agoulin**	**0.23**	**216**	Pg	**Pg**	**18 20 17.5**	**+1.4**
AGO				Sg	**Sg**	**18 20 21.3**	**+2.1**
PLDF	**La Plantade**	**0.34**	**142**	Pg	**Sg**	**18 20 24.2**	**+1.5**
BGF	**Bois d'Agland**	**0.46**	**314**	*e*Pg	**Pg**	**18 20 21.0**	**+0.6**
BGF				*e*Sg	**Sg**	**18 20 27.0**	**+0.6**
	6.4nm,0.2s						
SMF	**Signal de Mont**	**0.54**	**41**	*e*Pg	**Pg**	**18 20 22.2**	**+0.2**
SMF				*e*Sg	**Sg**	**18 20 29.3**	**+0.2**
	2.8nm,0.2s						
AVF	**Avril sur Loir**	**0.55**	**2**	*e*Pg	**Pg**	**18 20 22.3**	**+0.1**
AVF				*e*Sg	**Sg**	**18 20 29.7**	**+0.3**
	1.9nm,0.2s						
AVF				*e*Sn	**Sg**	**18 20 30.7**	**+1.3**
TCF	**Toulx Ste Croi**	**0.77**	**274**	*e*Pg	**Pg**	**18 20 26.5**	**+0.2**
TCF				*e*Sg	**Sg**	**18 20 36.6**	**+0.2**
	1.3nm,0.2s						
SSF	**Saint Saulge**	**0.83**	**9**	*e*Pg	**Pg**	**18 20 27.3**	**-0.2**
SSF				*e*Sg	**Sg**	**18 20 38.1**	**-0.2**
	0.7nm,0.2s						
LOR	**Lormes**	**1.09**	**20**	*e*Pg	**Pg**	**18 20 31.8**	**-0.7**
LOR	**Lormes**	**1.09**	**20**	*e*P	**Pb**	**18 20 32.1**	**-0.3**
LOR				*e*Sg	**Sg**	**18 20 45.9**	**-0.8**
	1.0nm,0.2s						
HYF	**Humbligny**	**1.13**	**336**	*e*Sg	**Sg**	**18 20 47.6**	**-0.3**
RJF	**Les Rejaudoux**	**1.57**	**234**	*e*Pg	**Pg**	**18 20 41.2**	**-0.3**
RJF				*e*Sg	**Sg**	**18 21 00.9**	**-1.0**
	0.3nm,0.2s						
CAF	**Calviac**	**1.58**	**214**	*e*Pg	**Pg**	**18 20 41.4**	**-0.3**
CAF				*e*Sn	**Sn**	**18 20 56.5**	**-3.5**
CAF				*e*Sg	**Sg**	**18 21 01.0**	**-1.2**
	0.4nm,0.2s						
VIVF	**Saint-Julien-l**	**1.68**	**145**	*e*Pg	**Pg**	**18 20 43.2**	**-0.4**
VIVF				*e*Sn	**Sn**	**18 20 58.8**	**-3.5**
VIVF				*e*Sg	**Sg**	**18 21 05.2**	**-0.1**
	0.6nm,0.2s						

*IDC **21** 18:34:39.2±1.4,459S×9978E,h0km,mb4.0/10, mb1 4.1/10,mb1mx3.9/21,mbtmp4.0/10,Error ellipse: s-maj=59.2km s-min=15.5km az=59.0*
*MOS **21** 18:34:40.8±0.9,476S×9963E,h33km,mb4.7/6,Error ellipse: s-maj=27.1km s-min=12.3km az=106.1*
*ISCJB **21** 18:34:41.7±0.8,465S±01×998E±02,h33km,mb4.2/17, Error ellipse: s-maj=26.7km s-min=11.7km az=143.0*
*NEIC **21** 18:34:43.4±0.6,472S×9964E,h35km,mb4.5/9,Error ellipse: s-maj=24.1km s-min=11.3km az=58.0*

ISC 21 18:34:43.6±0.7,47S±01×997E±01,h35km,n30,σ1°06/28, mb4.2/17,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**22.37**	**302**	P	**P**	**18 39 38.5**	**-0.4**
PALK				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.5						
PALK	**Pallekele**	**22.37**	**302**	P	**P**	**18 39 38.5**	**-0.4**
	comp=Z,23nm,1.1s,mb4.5						
CMAR	**Chiang Mai Arr**	**23.00**	**358**	P	**P**	**18 39 44.4**	**-1.1**
	comp=Z,2.2nm,0.8s,mb3.6,baz=188,slow=9.8,SNR=14						
CHTO	**Chiang Mai**	**23.35**	**358**	P	**P**	**18 39 47.2**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.8						
CHTO	**Chiang Mai**	**23.35**	**358**	P	**P**	**18 39 47.2**	**-2.0**
	comp=Z,3.6nm,1.1s,mb3.7						
WRA	**Warramunga Arr**	**36.97**	**117**	P	**P**	**18 41 49.4**	**-0.5**
	comp=Z,0.4nm,0.7s,mb3.3,baz=300,slow=10.0,SNR=4.6						
WRA				PcP	PcP	18 44 11.2	+0.4
	comp=Z,0.2nm,0.6s,baz=310,slow=1.9,SNR=3.7						
ASAR	**Alice Springs**	**37.99**	**123**	P	**P**	**18 41 59.0**	**+0.6**
	comp=Z,0.8nm,0.6s,mb3.6,baz=298,slow=7.9,SNR=19						
ASAR				PcP	PcP	18 44 14.4	+0.7
	comp=Z,0.4nm,0.7s,baz=298,slow=2.6,SNR=4.2						
STKA	**Stephens Creek**	**47.64**	**130**	P	**P**	**18 43 17.8**	**+1.1**
	comp=Z,2.0nm,0.6s,mb4.3,baz=321,slow=8.9,SNR=8.7						
STKA	**Stephens Creek**	**47.64**	**130**	*e*P	**P**	**18 43 17.2**	**+0.6**
	comp=Z,9.7nm,1.1s,mb4.8						
KSRS	**Korea Array**	**49.46**	**30**	P	**P**	**18 43 29.7**	**-0.8**
	comp=Z,2.8nm,0.8s,mb4.3,baz=221,slow=8.1,SNR=9.0						
TKM2	**Tokmak 2**	**52.16**	**338**	*e*P	**P**	**18 43 52.1**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**52.16**	**338**	*e*P	**P**	**18 43 52.1**	**+1.3**
	comp=Z,2.5nm,0.8s,mb4.2						
SONM	**

Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLIG	**Platanillo**	**0.71**	**47**	*i* P	Pn	19 35 04.5	-0.8
PLIG				*i* S	Sn	19 35 14.2	-1.8
CAIG	**El Cayaco**	**0.88**	**194**	*e*P	Pn	19 35 05.3	-2.0
CAIG				*i* S	Sn	19 35 18.1	-1.5
ACX	**Acapulco**	**1.04**	**173**	*i* P	Pn	19 35 07.8	-1.6
ACX				*i* S	Sn	19 35 21.8	-1.5
YAIG	**Yautepec**	**1.33**	**44**	*i* P	Pn	19 35 12.1	-1.0
YAIG				*i* S	Sn	19 35 28.0	-2.1
ZIIG	**Zihuatanejo**	**1.39**	**258**	*e*P	Pn	19 35 14.1	+0.2
ZIIG				*i* S	Sn	19 35 29.4	-1.9

*ISCJB **21** 20:08:25.2±1.0, 1070S±009×1244E±0.1, h48km±12km, mb3.8/5, Error ellipse: s-maj=24.2km s-min=6.7km az=146.3*
*NEIC **21** 20:08:26.3±3.3, 1046S×12447E, h31km±26km, mb4.9/2, Error ellipse: s-maj=21.2km s-min=9.5km az=51.0*
*IDC **21** 20:08:27.1±4.9, 1043S×12440E, h33km±42km, mb3.7/4, mb1 4.0/8, mb1mx3.7/16, mbtmp3.8/8, ML4.0/4, MS2.8/1, Ms1 2.8/1, ms1mx2.3/27, Error ellipse: s-maj=48.0km s-min=14.5km az=44.0*

ISC 21 20:08:27.0±0.8, 1073S±009×1242E±01, h41km±11km, h30km±5.5km: pP-P, n19, σ1§04/27, mb3.8/5, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.76**	**313**	Pn	**Sn**	**20 08 41.3**	**0.0**
	2µm,0.3s,baz=127,slow=2.5,SNR=4974						
BATI				Sn	**Sn**	**20 08 51.6**	**0.0**
	2µm,0.3s,baz=41,slow=20,SNR=21						
BATI				LR	LR	20 08 52.7	
	comp=Z,3µm,19.1s,baz=0.0,slow=34						
KAPI	**Kappang**	**7.21**	**322**	Pn	**Pn**	**20 10 09.2**	**-0.6**
	0.6nm,0.3s,baz=115,slow=17,SNR=3.5						
KAPI				LR	LR	20 13 18.1	
	comp=Z,79nm,19.6s,baz=9.2,slow=41						
FITZ	**Fitzroy Crossi**	**7.46**	**170**	*e*P	**Pn**	**20 10 16.6**	**+3.4**
FITZ				*e*S	**Sn**	**20 11 34.4**	**-2.1**
FITZ	**Fitzroy Crossi**	**7.46**	**170**	Pn	**Pn**	**20 10 17.1**	**+3.8**
	1.8nm,0.3s,baz=12,slow=12,SNR=105						
FITZ				Sn	**Sn**	**20 11 36.6**	**+0.1**
	9.0nm,0.3s,baz=82,slow=23,SNR=20						
MBWA	**Marble Bar**	**11.23**	**202**	*e*Pn	**Pn**	**20 11 08.4**	**+3.4**
MBWA				*e*Sn	**Sn**	**20 13 06.1**	**-3.2**
WRA	**Warramunga Arr**	**13.37**	**134**	Pn	**Pn**	**20 11 34.2**	**-0.1**
	1.4nm,0.3s,baz=301,slow=14,SNR=69						
WRA				Sn	**Sn**	**20 13 55.9**	**-5.7**
	6.5nm,0.3s,baz=312,slow=24,SNR=20						
WRAB	**Tennant Creek**	**13.37**	**134**	*e*Pn	**Pn**	**20 11 34.3**	**0.0**
	5.1nm,0.5s						
WRAB				*e*Sn	**Sn**	**20 13 55.0**	**-6.6**
WB2	**Warramunga Arr**	**13.38**	**134**	*e*P	**Pn**	**20 11 34.4**	**+0.1**
WB2				*e*S	**Sn**	**20 13 53.4**	**-8.4**
WB2	**Warramunga Arr**	**13.38**	**134**	*e*Pn	**Pn**	**20 11 33.7**	**-0.6**
WB2				*e*		20 11 43.1	
WB2				*e*Sn	**Sn**	**20 13 54.9**	**-6.8**
ASAR	**Alice Springs**	**15.83**	**146**	Pn	**Pn**	**20 12 08.3**	**+1.4**
	1.1nm,0.3s,baz=320,slow=12,SNR=106						
ASAR				Sn	**Sn**	**20 14 57.3**	**-4.1**
	1.5nm,0.3s,baz=316,slow=25,SNR=33						
STKA	**Stephens Creek**	**26.47**	**145**	P	**P**	**20 14 03.9**	**+3.6**
	1.2nm,0.9s,mb3.4,baz=337,slow=13,SNR=1.7						
STKA	**Stephens Creek**	**26.47**	**145**	P	**P**	**20 14 03.9**	**+3.6**
STKA				Pn	pP	20 14 09.4	-2.0
HNR	**Honiara**	**35.18**	**91**	P	**P**	**20 15 11.8**	**-5.5**
	107nm,1.2s						
SONM	**Songino Array**	**60.42**	**346**	P	**P**	**20 18 32.0**	**-0.1**
	0.6nm,0.5s,mb3.9,baz=158,slow=7.6,SNR=5.4						
MK31	**Makanchi Array**	**68.42**	**330**	*e*P	**P**	**20 19 24.8**	**+0.4**
MKAR	**Makanchi Array**	**68.42**	**330**	P	**P**	**20 19 24.8**	**+0.4**
	0.6nm,0.5s,mb3.9,baz=131,slow=6.7,SNR=8.4						
MKAR				pP	pP	20 19 35.1	-1.6
	1.3nm,0.7s,baz=135,slow=8.0,SNR=8.8						
ZALV	**Zalesovo Beam**	**72.56**	**337**	P	**P**	**20 19 48.9**	**-0.7**
	0.7nm,0.4s,mb3.9,baz=128,slow=4.1,SNR=4.7						
ZALV				pP	pP	20 19 59.3	-2.6
	0.4nm,0.3s,baz=100,slow=4.5,SNR=4.5						
KURK	**Kurchatov**	**72.89**	**332**	*e*P	**P**	**20 19 51.3**	**-0.3**
	1.4nm,0.7s,mb4.0						
TXAR	**Lajitas Array**	**131.72**	**60**	PKP	PKPdf	20 27 34.7	-1.4
	0.3nm,0.8s,baz=220,slow=4.9,SNR=3.9						

IDC 21 20:32:39.6±5.4, 1927S×17715W, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.6/16, mbtmp3.7/2, Error ellipse: s-maj=290.3km s-min=50.3km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.58**	**261**	P	P	20 41 01.8	+0.1
	0.3nm,0.3s,baz=96,slow=7.4,SNR=15						
ASAR	**Alice Springs**	**45.59**	**255**	P	P	20 41 01.6	-0.2
	0.7nm,0.5s,baz=94,slow=7.9,SNR=23						
AKASG	**Malin Array Be**	**142.32**	**332**	PKP	PKPdf	20 52 12.4	-1.6
	1.5nm,0.3s,baz=43,slow=3.9,SNR=6.7						
GERES	**GERESS Array B**	**149.22**	**346**	PKPbc	PKPbc	20 52 29.9	-0.1
	0.4nm,0.7s,baz=20,slow=4.3,SNR=3.7						

*NNC **21** 20:46:10.5±11.0, 37.12N×70.85E, h233km±138km, mb2.4, mpv3.6, Error ellipse: s-maj=105.1km s-min=58.8km az=14.0*
*ISCJB **21** 20:46:32.0±1.3, 3909N±007×712E±0.1, h10km, Error ellipse: s-maj=17.1km s-min=8.1km az=153.1*

ISC 21 20:46:35.5±1.1, 3920N±007×7138E±010, h10km, n9, σ0§63/12, 3C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.42**	**30**	P	**Pn**	**20 47 29.6**	**+0.8**
	SNR=70						
EKS2	**Erkin-Say**	**3.91**	**27**	P	**Pn**	**20 47 36.6**	**+1.0**
	SNR=14						
KK31	**Karatay Array**	**3.96**	**351**	⇓P	**Pn**	**20 47 36.6**	**+0.4**
	2.1nm,0.3s,baz=169,slow=11						
KK31				⇑S	**Sg**	**20 48 47.1**	**+4.6**
	0.9nm,0.2s,baz=174,slow=30						
AAK	**Ala-Archa**	**4.17**	**34**	P	**Pn**	**20 47 38.8**	**-0.3**
	SNR=5.9						
CHMS	**Chumysh**	**4.57**	**33**	P	**Pn**	**20 47 45.0**	**+0.4**
	SNR=6.1						
USP	**Ospenovka**	**4.70**	**29**	P	**Pn**	**20 47 46.6**	**+0.3**
	SNR=11						
TKM2	**Tokmak 2**	**4.90**	**39**	⇑P	**Pn**	**20 47 48.4**	**-0.8**
	4.4nm,0.8s						
TKM2				S	**Sg**	**20 49 12.1**	**-0.6**
DLH	**Dalhousie**	**7.61**	**149**	*e*P	**Pn**	**20 48 26.0**	**-0.5**
AB31	**Akbulak array**	**12.96**	**325**	⇓P	**Pn**	**20 49 27.9**	**-12**
	0.2nm,0.3s,baz=157,slow=11,SNR=11						
AB31				⇑S	**Sn**	**20 52 03.0**	**-0.7**
	1.2nm,0.8s,baz=151,slow=23,SNR=5.3						

*ISCJB **21** 20:52:00.1±1.7, 34S±03×1011E±04, h46km, mb4.0/8, Error ellipse: s-maj=73.9km s-min=11.6km az=142.1*
*DJA **21** 20:52:00, 385S×10084E, h33km, MLv4.1/3*
*NEIC **21** 20:52:01.1±1.0, 340S×101.19E, h35km, mb4.6/2, Error ellipse: s-maj=44.7km s-min=7.0km az=52.0*
*IDC **21** 20:52:02.3±2.5, 338S×10121E, h43km±6km, mb3.7/7, mb1 3.8/7, mb1mx3.6/18, mbtmp3.7/7, Error ellipse: s-maj=103.8km s-min=14.0km az=56.0*

ISC 21 20:52:02.7±1.6, 34S±03×1013E±04, h48km, h48km±.9km: pP-P, n19, σ0§37/16, mb4.0/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.79**	**354**	P	**P**	**20 56 50.7**	**-0.1**
	0.4nm,0.4s,mb3.2,baz=185,slow=8.6,SNR=4.6						
WRA	**Warramunga Arr**	**36.24**	**120**	P	**P**	**20 59 01.0**	**-0.5**
	0.5nm,0.3s,mb3.9,baz=300,slow=11,SNR=21						
WRAB	**Tennant Creek**	**36.24**	**120**	*e*P	**P**	**20 59 01.6**	**0.0**
ASAR	**Alice Springs**	**37.45**	**126**	P	**P**	**20 59 12.1**	**+0.3**
	0.7nm,0.6s,mb3.6,baz=299,slow=7.5,SNR=13						
ASAR				pP	pP	20 59 24.5	0.0
	0.6nm,0.4s,baz=302,slow=7.8,SNR=6.0						
CTA	**Charters Tower**	**46.90**	**114**	P	**P**	**21 00 29.3**	**+0.5**
	2.5nm,0.7s,mb4.2,baz=269,slow=11,SNR=3.0						
CTA	**Charters Tower**	**46.90**	**114**	P	**P**	**21 00 29.3**	**+0.5**
CTAO	**Charters Tower**	**46.90**	**114**	P	**P**	**21 00 28.7**	**-0.1**
	19nm,1.5s,mb4.8						
STKA	**Stephens Creek**	**47.32**	**131**	pP	pP	21 00 43.8	-1.2
	1.0nm,0.4s,baz=310,slow=9.1,SNR=2.1						
SONM	**Songino Array**	**51.17**	**4**	P	**P**	**21 01 01.4**	**+0.4**
	1.7nm,0.8s,mb4.0,baz=187,slow=7.6,SNR=10						
SONM				pP	pP	21 01 14.4	+0.2
	1.0nm,0.6s,baz=185,slow=8.6,SNR=8.0						
TKM2	**Tokmak 2**	**51.56**	**336**	*e*P	**P**	**21 01 04.2**	**+0.1**
EKS2	**Erkin-Say**	**52.11**	**334**	*e*P	**P**	**21 01 08.4**	**+0.3**
MK31	**Makanchi Array**	**52.66**	**344**	*e*P	**P**	**21 01 11.8**	**-0.4**
MKAR	**Makanchi Array**	**52.66**	**344**	P	**P**	**21 01 12.7**	**+0.5**
	1.5nm,0.6s,mb4.1,baz=148,slow=7.8,SNR=15						
MKAR				pP	pP	21 01 24.9	-0.4
	0.8nm,0.6s,baz=145,slow=7.6,SNR=4.0						
MKAR	**Makanchi Array**	**52.66**	**344**	P	**P**	**21 01 12.7**	**+0.6**
MKAR				pP	pP	21 01 24.9	-0.4
KURK	**Kurchatov**	**57.25**	**343**	*e*P	**P**	**21 01 44.7**	**-0.5**
	2.7nm,0.8s,mb4.3						
ZALV	**Zalesovo Beam**	**58.73**	**349**	P	**P**	**21 01 55.1**	**-0.4**
	1.2nm,0.4s,mb4.3,baz=179,slow=5.2,SNR=11						
ZALV				pP	pP	21 02 08.0	-0.8
	1.3nm,0.4s,baz=160,slow=5.3,SNR=7.3						
ZALV	**Zalesovo Beam**	**58.73**	**349**	P	**P**	**21 01 55.1**	**-0.4**
ZALV				pP	pP	21 02 08.0	-0.8
TXAR	**Lajitas Array**	**144.97**	**40**	PKPbc	PKPdf	21 11 35.0	-0.5
	0.2nm,0.5s,baz=140,slow=0.7,SNR=5.1						
TXAR				pPKPbc		21 11 46.5	
	0.3nm,0.6s,baz=10,slow=1.4,SNR=3.5						
TXAR	**Lajitas Array**	**144.97**	**40**	PKPbc	PKPdf	21 11 35.0	-0.5
TXAR				pPKPbc		21 11 46.5	

*IDC **21** 20:56:31.1±0.9, 344S×12832E, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.8/18, mbtmp3.8/9, ML3.1/2, MS2.9/2, Ms1 2.9/2, ms1mx2.7/26, Error ellipse: s-maj=43.4km s-min=17.5km az=67.0*
*NEIC **21** 20:56:32.1±0.4, 350S×12841E, h10km, mb4.2/8, Error ellipse: s-maj=16.9km s-min=6.7km az=71.0*
NEIC Felt [III] on Ambon.
*ISCJB **21** 20:56:33.9±0.7, 360S±005×12836E±008, h37km±8km, mb3.9/11, Error ellipse: s-maj=13.1km s-min=8.2km az=169.0*
*DJA **21** 20:56:34, 352S×12841E, h10km, MLv4.6/6*

ISC 21 20:56:34.4±0.9, 359S±005×12839E±007, h24km±7km, n30, σ1§05/28, mb3.9/11, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.22**	**242**	P	**Pb**	**20 56 39.6**	**-0.5**
	0.0nm,0.0s						
AAI	**Ambon**	**0.22**	**242**	P	**Pb**	**20 56 39.6**	**-0.5**
	0.0nm,0.0s						
MSAI	**Masohi**	**0.59**	**66**	P	**Pb**	**20 56 45.8**	**-0.3**
	0.0nm,0.0s						
LBMI	**Labuha**	**3.06**	**343**	P	**Pn**	**20 57 22.5**	**+1.2**
	0.0nm,0.0s						
SWI	**Sorong**	**3.94**	**47**	P	**Pn**	**20 57 34.9**	**+1.5**
	0.0nm,0.0s						
MNI	**Manado**	**6.13**	**325**	P	**Pn**	**20 58 04.4**	**+1.0**
	0.0nm,0.0s						
KAPI	**Kappang**	**8.73**	**260**	LR	LR	21 02 43.5	
	comp=Z,78nm,18.4s,baz=274,slow=43						
FITZ	**Fitzroy Crossi**	**14.68**	**190**	Pn	**Pn**	**21 00 00.1**	**-0.5**
	0.1nm,0.3s,baz=21,slow=13,SNR=3.4						
WRAB	**Tennant Creek**	**17.26**	**161**	*e*P	**Pn**	**21 00 33.0**	**-0.9**
	18nm,1.3s						
WRA	**Warramunga Arr**	**17.26**	**161**	P	**Pn**	**21 00 33.9**	**-0.1**
	0.1nm,0.3s,baz=339,slow=12,SNR=9.5						
WB2	**Warramunga Arr**	**17.27**	**161**	*e*P	**Pn**	**21 00 33.6**	**-0.4**
MBWA	**Marble Bar**	**19.39**	**205**	P	**Pn**	**21 00 60.0**	**0.0**
	11nm,1.1s						
ASAR	**Alice Springs**	**20.66**	**166**	P	**P**	**21 01 14.9**	**+2.4**
	6.5nm,0.7s,baz=347,slow=9.9,SNR=55						
TNG	**Tangerang**	**21.81**	**262**	P	**P**	**21 01 28.1**	**+3.0**
	979nm,0.5s						
GUMO	**Guam**	**23.64**	**43**	LR	LR	21 09 03.8	
	comp=Z,32nm,19.7s,baz=248,slow=32						
CTA	**Charters Tower**	**23.93**	**135**	P	**P**	**21 01 49.2**	**+2.4**
	2.6nm,0.7s,mb3.8,baz=309,slow=6.5,SNR=4.2						
CTA	**Charters Tower**	**23.93**	**135**	P	**P**	**21 01 49.2**	**+2.4**
CTAO	**Charters Tower**	**23.93**	**135**	P	**P**	**21 01 46.8**	**+0.1**
	5.6nm,0.9s,mb4.0						
CMAR	**Chiang Mai Arr**	**36.35**	**308**	P	**P**	**21 03 36.6**	**-0.1**
	0.5nm,0.8s,mb3.5,baz=130,slow=7.1,SNR=3.4						
CHTO	**Chiang Mai**	**36.55**	**309**	*e*P	**P**	**21 03 38.5**	**0.0**
	1.5nm,0.8s,mb3.9						
MAJO	**Matsushiro**	**40.96**	**12**	P	**P**	**21 04 13.5**	**-1.7**
	2.9nm,0.6s,mb4.1						
MJAR	**Matsushiro Arr**	**40.96**	**12**	P	**P**	**21 04 14.5**	**-0.7**
	0.7nm,0.6s,mb3.5,baz=195,slow=10,SNR=3.4						
LSA	**Lhasa**	**48.64**	**315**	*e*P	**P**	**21 05 17.9**	**+1.3**
	2.3nm,0.6s,mb4.4						
SONM	**Songino Array**	**54.72**	**342**	P	**P**	**21 06 00.5**	**-1.2**
	0.6nm,1.1s,mb3.5,baz=141,slow=5.5,SNR=2.3						
MK31	**Makanchi Array**	**64.51**	**327**	P	**P**	**21 07 08.4**	**-0.8**
MKAR	**Makanchi Array**	**64.51**	**327**	P	**P**	**21 07 09.2**	**0.0**
	0.9nm,0.6s,mb4.0,baz=121,slow=8.2,SNR=9.4						
TKM2	**Tokmak 2**	**66.34**	**320**	P	**P**	**21 07 20.8**	**-0.4**
	1.8nm,0.7s,mb4.2						
ZALV	**Zalesovo Beam**	**67.83**	**334**	P	**P**	**21 07 29.4**	**-0.9**
	0.2nm,0.3s,mb3.7,baz=108,slow=4.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**67.83**	**334**	P	**P**	**21 07 29.4**	**-0.9**
KURK	**Kurchatov**	**68.78**	**329**	*e*P	**P**	**21 07 35.6**	**-0.8**
	3.0nm,0.8s,mb4.3						

IDC 21 21:01:26.5±18.0, 2122S×17550W, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.9/19, mbtmp4.1/5, Error ellipse: s-maj=334.2km s-min=145.0km az=82.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**35.75**	**265**	P	P	21 08 29.0	+1.6
	3.8nm,0.4s,baz=93,slow=11,SNR=6.9						
STKA	**Stephens Creek**	**39.60**	**245**	P	P	21 08 58.3	-1.5
	1.1nm,0.5s,baz=82,slow=13,SNR=4.6						
ASAR	**Alice Springs**	**46.63**	**257**	P	P	21 09 56.1	-0.8
	1.9nm,0.7s,baz=97,slow=7.7,SNR=26						
WB2	**Warramunga Arr**	**46.81**	**262**	*e*P	P	21 09 58.1	-0.2
WRA	**Warramunga Arr**	**46.82**	**262**	P	P	21 09 58.1	-0.3
	1.1nm,0.4s,baz=92,slow=8.4,SNR=48						
FITZ	**Fitzroy Crossi**	**55.25**	**262**	*e*P	P	21 11 03.0	+1.1
FITZ	**Fitzroy Crossi**	**55.25**	**262**	P	P	21 11 02.6	+0.7
	0.5nm,0.4s,baz=95,slow=11,SNR=4.8						

IDC 21 21:12:57.9±5.6, 691S×15452E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/15, mbtmp3.4/3, Error ellipse: s-maj=169.6km s-min=38.5km az=113.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.48**	**235**	P	P	21 18 09.0	-0.6
	0.8nm,0.8s,baz=57,slow=9.3,SNR=6.5						
ASAR	**Alice Springs**	**25.88**	**228**	P	P	21 18 31.6	0.0
	0.2nm,0.8s,baz=67,slow=8.3,SNR=5.6						
MKAR	**Makanchi Array**	**83.03**	**319**	P	P	21 25 25.7	+0.5
	0.4nm,0.7s,baz=116,slow=4.4,SNR=3.0						

*NEIC **21** 21:41:16.6±0.6, 337N×12741E, h10km, mb3.8/2, Error ellipse: s-maj=11.4km s-min=9.2km az=181.0*
*ISCJB **21** 21:41:17.1±1.0, 35N±0.1×12729E±0.10, h33km, mb3.5/6, Error ellipse: s-maj=17.1km s-min=14.1km az=3.8*
*IDC **21** 21:41:19.3±7.3, 291N×12743E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/19, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=112.9km s-min=55.0km az=172.0*

ISC 21 21:41:19.7±1.0, 34N±01×12737E±010, h35km, n10, σ0§27/10, mb3.5/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**11.29**	**222**	Pn	**Pn**	**21 43 58.6**	**-0.1**
	0.5nm,0.3s,baz=176,slow=18,SNR=4.8						
KKM	**Kota Kinabalu**	**11.42**	**284**	*e*P	**Pn**	**21 44 00.5**	**+0.1**
GUMO	**Guam**	**20.04**	**59**	*e*P	**P**	**21 45 49.8**	**-0.1**
	29nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.42**	**184**	P	**P**	**21 46 04.3**	**-0.5**
	0.4nm,0.3s,mb3.2,baz=10.0,slow=14,SNR=3.8						
PMG	**Port Moresby**	**23.47**	**123**	*e*P	**P**	**21 46 26.3**	**-0.2**
	5.7nm,1.0s,mb4.0						
WRAB	**Tennant Creek**	**24.17**	**164**	*e*P	**P**	**21 46 33.1**	**+0.2**
	1.1nm,0.7s,mb3.4						
WRA	**Warramunga Arr**	**24.18**	**164**	P	**P**	**21 46 33.5**	**+0.6**
	2.1nm,0.8s,mb3.6,baz=340,slow=10,SNR=14						
WB2	**Warramunga Arr**	**24.18**	**164**	*e*P	**P**	**21 46 32.9**	**0.0**
ASAR	**Alice Springs**	**27.64**	**167**	P	**P**	**21 47 04.2**	**0.0**
	0.4nm,0.5s,mb3.3,baz=344,slow=7.2,SNR=11						
STKA	**Stephens Creek**	**37.59**	**160**	P	**P**	**21 48 31.0**	**0.0**
	0.6nm,0.3s,mb3.8,baz=328,slow=5.8,SNR=3.8						

*ISCJB **21** 21:43:24.8±0.9, 3695N±009×343E±008, h18km±20km, Error ellipse: s-maj=16.1km s-min=9.1km az=155.3*
*CSEM **21** 21:43:24.5±0.1, 3680N×353E, h5km, mb3.4/6, Error ellipse: s-maj=3.4km s-min=2.3km az=76.0*
*CRAAG **21** 21:43:24.7, 3681N×349E, Ml2.6*
*MDD **21** 21:43:25.2±0.6, 3686N×349E, h0km, mb3.9/2, Error ellipse: s-maj=7.2km s-min=4.9km az=65.0, PRIMO*
*NEIC **21** 21:43:27.6, 3705N×348E, h4km, MG3.3(MDD), After MDD.*

ISC 21 21:43:24.5±0.8, 3693N±006×346E±007, h7km±10km, n26, σ1§21/38, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABMS	**Boumerdes**	**0.18**	**175**	P	**Pg**	**21 43 26.5**	**-1.7**
ABA	**Alger-Bouzarea**	**0.37**	**249**	P	**Pg**	**21 43 32.3**	**+0.7**
ADJB	**Djebel Djouab**	**0.77**	**181**	P	**Pg**	**21 43 38.0**	**-1.4**
EMHD	**Djebel Mahouad**	**0.84**	**209**	P	**Pg**	**21 43 40.9**	**+0.3**
AKF	**Akfadou**	**0.94**	**108**	P	**Pg**	**21 43 42.6**	**+0.1**
EIBI	**Ibiza**	**2.68**	**322**	Pn	**Pn**	**21 44 09.2**	**+1.2**
	2.9nm,0.2s,SNR=7.9						
EIBI				Pg	**Pg**	**21 44 15.2**	**-0.7**
	0.8nm,0.1s,SNR=7.9						
EIBI				Sn	**Sn**	**21 44 40.1**	**-0.6**
	8.8nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**2.68**	**322**	Pn	**Pn**	**21 44 09.2**	**+1.2**
	0.9nm,0.1s,SNR=7.9						
EIBI				Sn	**Sn**	**21 44 40.1**	**-0.6**
	SNR=7.9						
ETOS	**Mallorca**	**2.88**	**350**	Pn	**Pn**	**21 44 11.6**	**+0.8**
	0.6nm,0.1s,SNR=6.6						
ETOS				Sn	**Sn**	**21 44 43.1**	**-2.4**
	0.5nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**2.88**	**350**	Pn	**Pn**	**21 44 11.6**	**+0.9**
	0.6nm,0.1s,SNR=6.6						
ETOS	**Mallorca**	**2.88**	**350**	Pn	**Pn**	**21 44 11.6**	**+0.8**
ETOS				Sn	**Sn**	**21 44 43.1**	**-2.4**
EBEN	**Beniarda**	**3.41**	**302**	Pn	**Pn**	**21 44 18.9**	**+0.8**
	0.1nm,0.1s,SNR=4.0						
EBEN	**Beniarda**	**3.41**	**302**	Pn	**Pn**	**21 44 18.9**	**+0.8**
	0.3nm,0.1s,SNR=4.0						
EBEN	**Beniarda**	**3.41**	**302**	Pn	**Pn**	**21 44 19.1**	**+1.0**
ETOB	**Tobarra**	**4.32**	**295**	Pn	**Pn**	**21 44 31.9**	**+1.3**
	0.1nm,0.1s,SNR=7.9						
ETOB				Sn	**Sn**	**21 45 20.8**	**-0.3**
	0.8nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.32**	**295**	Pn	**Pn**	**21 44 31.9**	**+1.3**
	0.6nm,0.2s,SNR=7.9						
ETOB				Sn	**Sn**	**21 45 20.4**	**-0.8**
	SNR=7.9						
ETOB	**Tobarra**	**4.32**	**295**	Pn	**Pn**	**21 44 31.9**	**+1.3**
ETOB				Sn	**Sn**	**21 45 20.4**	**-0.8**
EMOS	**Mosqueruela**	**4.61**	**319**	Sn	**Sn**	**21 45 27.3**	**-0.9**
	0.2nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**4.61**	**319**	Pn	**Pn**	**21 44 35.8**	**+1.3**
EMOS				Sn	**Sn**	**21 45 27.0**	**-1.2**
	SNR=7.9						
EMOS	**Mosqueruela**	**4.61**	**319**	Pn	**Pn**	**21 44 35.8**	**+1.3**
EMOS				Sn	**Sn**	**21 45 27.0**	**-1.2**
EMIR	**Miracle**	**5.20**	**344**	Pn	**Pn**	**21 44 44.1**	**+1.5**
	2.1nm,0.2s,SNR=7.9						
EMIR				Sn	**Sn**	**21 45 40.6**	**-2.1**
	SNR=4.0						
EMIR	**Miracle**	**5.20**	**344**	Pn	**Pn**	**21 44 44.1**	**+1.5**
	2.1nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.28**	**281**	Sn	**Sn**	**21 45 44.7**	**-0.1**
	2.4nm,0.4s,SNR=7.9						
EQES	**Quesada**	**5.28**	**281**	Sn	**Sn**	**21 45 44.7**	**-0.1**
	SNR=7.9						
EJON	**La Jonquera**	**5.53**	**356**	Pn	**Pn**	**21 44 49.1**	**+1.9**
	0.3nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**5.53**	**356**	Pn	**Pn**	**21 44 48.8**	**+1.7**
	0.4nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**5.53**	**356**	Pn	**Pn**	**21 44 48.8**	**+1.6**
EJON				Sn	**Sn**	**21 45 45.5**	**-5.4**

*ISK **21** 21:51:58.8, 3837N×3915E, h5km, MD3.0*
*CSEM **21** 21:51:58.7±0.2, 3836N×3919E, h2km, MD3.0, Error ellipse: s-maj=5.5km s-min=4.0km az=149.0*
*ISCJB **21** 21:51:59.9±0.6, 3834N±004×3922E±005, h7km±7km, Error ellipse: s-maj=6.4km s-min=5.9km az=160.2*
*DDA **21** 21:52:00.0, 3840N×3922E, h16km, Md3.2*

ISC 21 21:52:00.3±0.6, 3835N±004×3922E±004, h6km±8km, n11, σ1§00/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.08**	**65**	PG	**Pg**

UPC	**Upice**	**1.60**	**287**	*e*PG	**Pg**	**22 02 02.9**	**-0.7**
UPC				*e*SG	**Sg**	**22 02 24.3**	**0.0**
VYHS	**Vyhne**	**1.61**	**170**	*e*PN	**Pn**	**22 02 02.2**	**-0.5**
VYHS				*e*SN	**Sn**	**22 02 23.8**	**-0.3**
VYHS	**Vyhne**	**1.61**	**170**	*e*Pn	**Pn**	**22 02 02.2**	**-0.5**
VYHS				*e*Sn	**Sn**	**22 02 23.8**	**-0.3**
KRUC	**Moravsky**	**1.66**	**233**	*e*Pn	**Pn**	**22 02 03.2**	**-0.2**
KRUC				*e*Sg	**Sg**	**22 02 25.0**	**-1.3**
	comp=Z,26nm,0.3s						
MODS	**Modra-Piesok**	**1.86**	**204**	*e*PN	**Pn**	**22 02 06.1**	**0.0**
MODS				*e*SN	**Sn**	**22 02 29.4**	**-0.9**
MODS	**Modra-Piesok**	**1.86**	**204**	*e*Pn	**Pn**	**22 02 06.1**	**0.0**
MODS				*e*Sn	**Sn**	**22 02 29.4**	**-0.9**
STHS	**Stebnicka Huta**	**1.95**	**109**	*e*PN	**Pn**	**22 02 10.6**	**+3.2**
STHS				*e*SN	**Sn**	**22 02 37.7**	**+5.1**
STHS	**Stebnicka Huta**	**1.95**	**109**	*e*Pn	**Pn**	**22 02 10.6**	**+3.2**
STHS				*e*Sn	**Sn**	**22 02 37.7**	**+5.1**
ZST	**Bratislava**	**2.07**	**205**	*e*SN	**Sn**	**22 02 35.6**	**+0.1**
ZST	**Bratislava**	**2.07**	**205**	*e*Sn	**Sn**	**22 02 35.6**	**+0.1**
CRVS	**Cervenica-Dubn**	**2.31**	**119**	*e*PN	**Pg**	**22 02 15.2**	**-2.1**
CRVS				*e*SN	**Sn**	**22 02 47.0**	**+5.6**
CRVS	**Cervenica-Dubn**	**2.31**	**119**	*e*Pg	**Pg**	**22 02 15.2**	**-2.1**
PRU	**Pruhonice**	**2.50**	**269**	*e*SG	**Sg**	**22 02 50.5**	**-2.7**
	comp=Z,10nm,0.4s						
PVCC	**Panska Ves**	**2.50**	**282**	*e*SG	**Sg**	**22 02 52.6**	**-0.9**
	comp=Z,43nm,0.6s						
KOLS	**Kolonicke sedl**	**2.77**	**113**	*e*PG	**Pg**	**22 02 24.3**	**-1.7**
KOLS				*e*SG	**Sg**	**22 03 03.2**	**+1.4**
KOLS	**Kolonicke sedl**	**2.77**	**113**	*e*Pg	**Pg**	**22 02 24.3**	**-1.7**
KOLS				*e*Sg	**Sg**	**22 03 03.2**	**+1.4**
KHC	**Kasperske Hory**	**3.28**	**255**	*e*PG	**Pg**	**22 02 34.5**	**-1.4**
KHC				*e*SG	**Sg**	**22 03 18.5**	**0.0**
	comp=Z,11nm,0.3s						
CLL	**Collm**	**3.65**	**292**	*e*(Pg)	**Pg**	**22 02 44.0**	**+1.0**
CLL				*e*Sg	**Sg**	**22 03 30.0**	**-0.3**
MOX	**Moxa**	**4.39**	**280**	*e*SG	**Sg**	**22 03 53.7**	**-0.2**

IDC ***21*** *22:07:19.4±2.2, 340S×10087E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.7/21, mbtmp3.9/7, ML4.1/1, Error ellipse: s-maj=87.2km s-min=18.3km az=50.0*

ISCJB ***21*** *22:07:22.6±1.7, 33S±03×1010E±03, h33km, mb4.0/7, Error ellipse: s-maj=56.0km s-min=14.7km az=44.7*

NEIC ***21*** *22:07:24.7±1.2, 338S×10093E, h35km, mb4.3/1, Error ellipse: s-maj=45.2km s-min=11.1km az=46.0*

ISC 21 22:07:25.0±1.6, 33S±03×1010E±03, h35km, n10, σ0§47/9, mb4.0/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**18.77**	**96**	P		**Pn**	**22 11 42.0**	**0.0**
	0.6nm,0.3s,baz=157,slow=15,SNR=4.4							
KAPI	**Kappang**	**18.77**	**96**	P		**Pn**	**22 11 42.0**	**0.0**
WRA	**Warramunga Arr**	**36.46**	**120**	P		**P**	**22 14 26.5**	**-0.4**
	1.1nm,0.4s,mb4.1,baz=303,slow=8.9,SNR=28							
ASAR	**Alice Springs**	**37.66**	**125**	P		**P**	**22 14 37.6**	**+0.5**
	0.7nm,0.5s,mb3.6,baz=301,slow=8.6,SNR=12							
SONM	**Songino Array**	**51.17**	**5**	P		**P**	**22 16 24.8**	**+0.2**
	0.4nm,0.4s,mb3.7,baz=187,slow=9.7,SNR=8.3							
MKAR	**Makanchi Array**	**52.58**	**344**	P		**P**	**22 16 35.8**	**+0.7**
	1.0nm,0.4s,mb4.1,baz=140,slow=9.2,SNR=2.0							
KURK	**Kurchatov**	**57.16**	**343**	*e*P		**P**	**22 17 08.5**	**+0.3**
	1.8nm,0.6s,mb4.3							
ZALV	**Zalesovo Beam**	**58.66**	**349**	P		**P**	**22 17 18.1**	**-0.6**
	1.1nm,0.3s,mb4.3,baz=176,slow=5.9,SNR=9.2							
BVAR	**Borovoye Array**	**61.77**	**340**	P		**P**	**22 17 39.4**	**-0.6**
	0.4nm,0.6s,mb3.8,baz=137,slow=10,SNR=2.6							
TXAR	**Lajitas Array**	**145.11**	**40**	PKPbc		PKPbc	22 26 59.2	+0.2
	0.4nm,0.6s,baz=297,slow=1.3,SNR=7.8							

NNC 21 22:12:48.2±3.1, 4264N×8159E, h0km, mb3.7, mpv3.3, 4C-4D, Error ellipse: s-maj=29.7km s-min=12.2km az=142.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.18**	**7**	⇑Pn		Pn	22 13 56.3	+3.2
	3.1nm,0.6s,baz=188,slow=12,SNR=28							
MK31				⇓Pg		Pg	22 14 07.6	-0.6
	0.9nm,0.3s,baz=186,slow=17,SNR=4.5							
MK31				⇑Sn		Sn	22 14 48.6	+5.9
	6.0nm,0.6s,baz=191,slow=21							
MK31				⇓Lg			22 14 60.0	
	31nm,0.8s,baz=185,slow=28,SNR=4.2							
TKM2	**Tokmak 2**	**4.42**	**276**	⇑Pn		Pn	22 13 55.3	-1.2
	5.0nm,0.7s							
TKM2				⇓Sn		Sn	22 14 50.7	+2.1
	19nm,0.7s							
KURK	**Kurchatov**	**8.33**	**347**	⇓Pn		Pn	22 14 50.0	-0.1
	7.9nm,2.4s							
KURK				⇑Lg			22 17 15.5	
	6.1nm,0.7s							

CSEM ***21*** *22:35:19.0±1.8, 1451N×4181E, h30km, ML3.4, Error ellipse: s-maj=58.4km s-min=18.1km az=55.0*

SGS ***21*** *22:35:23.5, 1459N×4191E, h28km*

DHMR ***21*** *22:35:25.5±1.1, 1398N×4231E, h4km±14km, ML3.4*

ISC 21 22:35:21.6±2.3, 1462N±009×420E±01, h24km±18km, n11, σ0§90/16, 1D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
UDYN	**Al 'Udayn**	**2.04**	**108**	*i* P		**Pn**	**22 35 54.9**	**+0.4**
UDYN				*i* S		**Sn**	**22 36 18.9**	**-0.4**
UDYN					AML	AML	22 36 28.0	
	comp=N,442nm,0.4s							
FRSS	**Farasan al Kab**	**2.11**	**4**	S		**Sn**	**22 36 20.5**	**-0.5**
FRSS	**Farasan al Kab**	**2.11**	**4**	P		**Pn**	**22 35 55.7**	**+0.2**
DHBB	**Dhamar BB**	**2.34**	**91**	⇓*i* P		**Pb**	**22 36 02.9**	**-0.2**
DHBB				*i* S		**Sn**	**22 36 32.3**	**+5.6**
TRBA	**At Turbah**	**2.50**	**123**	*i* P		**Pn**	**22 35 59.7**	**-1.2**
TRBA				*i* S		**Sn**	**22 36 26.7**	**-3.9**
TRBA					AML	AML	22 36 40.7	
	comp=N,259nm,0.8s							
JAZS	**Jizan**	**2.60**	**20**	P		**Pn**	**22 36 01.1**	**-1.0**
DJNS	**Zahran al Janu**	**3.42**	**26**	S		**Sn**	**22 36 52.6**	**-0.6**
DJNS	**Zahran al Janu**	**3.42**	**26**	P		**Pn**	**22 36 14.1**	**+0.7**
BDHA	**Al Bayda'**	**3.55**	**100**	*i* P		**Pn**	**22 36 19.6**	**+4.4**
BDHA				*i* S		**Sn**	**22 37 00.3**	**+3.9**
BDHA					AML	AML	22 37 10.7	
	comp=N,404nm,0.7s							
BDHA	**Al Bayda'**	**3.55**	**100**	*i* P		**Pn**	**22 36 19.6**	**+4.4**
BDHA				*i* S		**Sn**	**22 37 00.3**	**+3.9**
	comp=N,202nm,0.7s							
WBHS	**Wadi 'Ibn Hash**	**4.03**	**10**	P		**Pn**	**22 36 23.4**	**+1.5**

NEIC ***21*** *22:38:59.8±0.5, 1488S×7725W, h10km, mb4.9/22, ML4.7(LIM), Error ellipse: s-maj=17.7km s-min=7.4km az=51.0*

NEIC Felt [II] at Chincha Alta and Pisco.

BJI ***21*** *22:38:59.8, 1490S×7720W, h10km, mB5.0, Ms5.0, Msz4.8*

ISCJB ***21*** *22:39:01.2±0.3, 1456S±006×7680W±009, h24km, mb4.7/33, MS4.2/17, Error ellipse: s-maj=14.2km s-min=5.7km az=148.5*

IDC ***21*** *22:39:01.0±0.6, 1401S×7662W, h23km±3km, mb4.2/11, mb1 4.3/16, mb1mx4.2/23, mbtmp4.1/16, ML3.6/4, MS4.1/20, Ms1 4.1/20, ms1mx4.0/25, Error ellipse: s-maj=22.4km s-min=10.4km az=64.0*

MOS ***21*** *22:39:02.4±1.1, 1468S×7700W, h33km, mb5.0/7, Error ellipse: s-maj=18.5km s-min=10.1km az=125.2*

ISC 21 22:39:03.5±0.3, 1464S±006×7694W±010, h25km, h25km±6km: pP-P, n126, σ1§34/99, mb4.7/33, MS4.2/17, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.63**	**2**	Pn		**Pn**	**22 39 33.2**	**-11**
	61nm,0.3s,baz=188,slow=13,SNR=22							
NNA				Pg		**Pn**	**22 39 37.2**	**-7.2**
	66nm,0.3s,baz=182,slow=15,SNR=74							
NNA				Lg			22 40 05.1	
	176nm,0.3s,baz=189,slow=9.1,SNR=8.7							
NNA				LR		LR	22 40 42.5	
	comp=Z,1μm,20.1s,baz=359,slow=50							
ARE	**Arequipa**	**5.55**	**110**	*e*P		**Pn**	**22 40 28.0**	**+3.4**
ARE				*e*S		**Sn**	**22 41 45.0**	**+17**
ATAH	**Atahualpa**	**7.72**	**349**	Pn		**Pn**	**22 40 44.8**	**-10**
	4.0nm,0.3s,baz=196,slow=16,SNR=13							
ATAH				Lg			22 42 36.9	
	4.2nm,0.3s,baz=342,slow=15,SNR=4.6							
ATAH					LR	LR	22 43 12.3	
	comp=Z,1μm,19.4s,baz=23,slow=36							
LPAZ	**La Paz**	**8.65**	**102**	Pn		**Pn**	**22 41 07.1**	**0.0**
	0.3nm,0.3s,baz=290,slow=11,SNR=26							
LPAZ					LR	LR	22 44 58.4	
	comp=Z,2μm,21.0s,baz=289,slow=42							
LPAZ	**La Paz**	**8.65**	**102**	*e*P		**Pn**	**22 41 07.1**	**0.0**
LPAZ					pmax	pmax		
	comp=Z,63nm,0.9s							
LPAZ	**La Paz**	**8.65**	**102**	*e*Pn		**Pn**	**22 41 07.1**	**-0.1**
	comp=Z,63nm,0.9s							
LVC	**Limon Verde**	**10.99**	**137**	Pn		**Pn**	**22 41 40.3**	**+1.1**
	comp=Z,1.9nm,0.3s,baz=308,slow=9.9,SNR=7.0							
LVC					Lg		22 44 49.7	
	comp=Z,1.1nm,0.3s,baz=106,slow=22,SNR=7.8							
LVC					LR	LR	22 45 27.7	
	comp=Z,816nm,19.0s,baz=323,slow=34							
LVC	**Limon Verde**	**10.99**	**137**	*e*Pn		**Pn**	**22 41 39.8**	**+0.6**
OTAV	**Otavalo**	**14.85**	**354**	*e*Pn		**Pn**	**22 42 33.2**	**+1.2**
SIV	**San Ignacio**	**15.37**	**97**	Pn		**Pn**	**22 42 31.7**	**-7.1**
	comp=Z,0.1nm,0.3s,baz=279,slow=15,SNR=8.3							
CFAA	**Coronel Fontan**	**18.67**	**156**	P		**Pn**	**22 43 22.4**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=337,slow=11,SNR=11							
ROSC	**El Rosal**	**19.54**	**8**	P		**Pn**	**22 43 25.9**	**-4.9**
	comp=Z,1.6nm,0.3s,baz=266,slow=24,SNR=5.7							
ROSC					LR		22 51 33.4	
	comp=Z,989nm,18.9s,baz=198,slow=40							
CPUP	**Villa Florida**	**21.71**	**125**	P		**P**	**22 43 50.9**	**-2.0**
	comp=Z,8.1nm,0.9s,mb4.1,baz=282,slow=10,SNR=10.0							
CPUP					LR	LR	22 53 55.7	
	comp=Z,260nm,19.1s,MS3.6,baz=133,slow=41							
CPUP	**Villa Florida**	**21.71**	**125**	*e*P		**P**	**22 43 51.0**	**-1.8**
CPUP					pmax	pmax		
	comp=Z,52nm,1.0s							
CPUP	**Villa Florida**	**21.71**	**125**	*e*P		**P**	**22 43 51.0**	**-1.8**
	comp=Z,52nm,1.0s,mb4.9							
SDV	**Santo Domingo**	**24.19**	**15**	P		**P**	**22 44 10.1**	**-8.1**
	comp=Z,4.1nm,0.4s,mb4.3,baz=9.7,slow=23,SNR=4.5							
SDV					LR	LR	22 54 38.1	
	comp=Z,919nm,18.8s,MS4.3,baz=230,slow=40							
SDV	**Santo Domingo**	**24.19**	**15**	*e*P		**P**	**22 44 18.2**	**+0.1**
	comp=Z,33nm,1.2s,mb4.6							
SDV					LR	LR	22 54 38.0	
JTS	**JuntasAbangare**	**26.01**	**342**	LR		LR	22 54 39.6	
	comp=Z,322nm,18.8s,MS3.9,baz=312,slow=37							
PLCA	**Paso Flores**	**26.59**	**169**	P		**P**	**22 44 41.8**	**+2.1**
	comp=Z,4.7nm,1.0s,mb4.0,baz=351,slow=8.9,SNR=4.1							
TRQA	**Tornquist**	**26.83**	**153**	*e*P		**P**	**22 44 41.8**	**-0.1**
PCRV	**Puerto La Cruz**	**27.50**	**27**	LR		LR	22 55 19.4	
	comp=Z,558nm,18.0s,MS4.2,baz=203,slow=36							
BDFB	**Brasilia**	**27.93**	**96**	P		**P**	**22 44 48.2**	**-3.8**
	comp=Z,3.0nm,0.9s,mb3.9,baz=245,slow=15,SNR=3.7							
BDFB					LR	LR	22 57 16.4	
	comp=Z,1μm,18.9s,MS4.5,baz=22,slow=40							
SPB	**Sao Paulo**	**29.22**	**112**	*e*P		**P**	**22 45 03.1**	**-0.3**
LRAL	**Lakeview Retre**	**48.37**	**349**	*e*P		**P**	**22 47 44.1**	**+0.9**
SWET	**Sewanee**	**50.31**	**350**	P		**P**	**22 47 58.3**	**+0.2**
TKL	**Tuckaleechee C**	**50.44**	**353**	pP		pP	22 47 59.0	-7.8
	comp=Z,13nm,1.2s,baz=140,slow=8.4,SNR=5.3							
TXAR	**Lajitas Array**	**50.76**	**330**	P		**P**	**22 47 56.6**	**-5.0**
	comp=Z,0.8nm,0.8s,mb3.7,baz=150,slow=10,SNR=8.0							
TXAR					pP	pP	22 48 03.9	-5.6
	comp=Z,1.8nm,0.8s,baz=151,slow=8.9,SNR=9.9							
TXAR					LR	LR	23 09 20.9	
	comp=Z,115nm,19.3s,MS3.9,baz=20,slow=36							
TXAR	**Lajitas Array**	**50.76**	**330**	P		**P**	**22 47 56.7**	**-4.9**
TXAR					*PP	pP	22 48 03.9	-5.6
UALR	**University of**	**51.27**	**344**	*e*P		**P**	**22 48 06.7**	**+1.4**
MIAR	**Mount Ida**	**51.40**	**342**	*e*P		**P**	**22 48 08.1**	**+1.8**
WVT	**Waverly**	**51.53**	**349**	*e*P		**P**	**22 48 07.2**	**0.0**
ELN	**Prospectdale**	**51.71**	**356**	*e*P		**P**	**22 48 08.7**	**+0.2**
WCI	**Wyandotte Cave**	**53.31**	**351**	*e*P		**P**	**22 48 20.9**	**+0.5**
SIUC	**Southern Illin**	**53.34**	**348**	*e*P		**P**	**22 48 21.7**	**+1.1**
FVM	**French Village**	**53.85**	**347**	*e*P		**P**	**22 48 26.1**	**+1.7**
FVM					pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7							
FVM	**French Village**	**53.85**	**347**	*e*P		**P**	**22 48 26.1**	**+1.7**
	comp=Z,11nm,1.1s,mb4.7							
CCM	**Cathedral Cave**	**54.10**	**346**	*e*P		**P**	**22 48 27.4**	**+1.1**
CCM					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7							
CCM	**Cathedral Cave**	**54.10**	**346**	*e*P		**P**	**22 48 27.4**	**+1.1**
	comp=Z,9.3nm,0.9s,mb4.7							
OLIL	**Olney**	**54.11**	**349**	*e*P		**P**	**22 48 26.9**	**+0.7**
	comp=Z,15nm,0.6s,mb5.1							
RKT	**Rikitea**	**55.26**	**252**	*e*S		**S**	**22 56 07.9**	**-10**
	comp=Z,122nm,30.8s							
RKT					*eLR	LR	23 04 26.6	
	comp=Z,263nm,28.2s							
BRYW	**Bryant College**	**56.49**	**5**	*e*P		**P**	**22 48 45.4**	**+2.0**
BINY	**Binghamton**	**56.56**	**1**	*e*P		**P**	**22 48 45.5**	**+1.7**
	comp=Z,14nm,1.0s,mb5.0							
LAZ	**Ladron**	**56.60**	**330**	P		**P**	**22 48 43.3**	**-1.0**
ANMO	**Albuquerque**	**56.72**	**331**	*e*P		**P**	**22 48 41.3**	**-3.9**
ANMO					pmax	pmax		
	comp=Z,6.0nm,0.9s							
ANMO	**Albuquerque**	**56.72**	**331**	*e*P		**P**	**22 48 41.3**	**-3.8**
	comp=Z,6.4nm,0.9s,mb4.7							
HRV	**Adam Dziewonsk**	**57.07**	**5**	*e*P		**P**	**22 48 49.2**	**+1.7**
HRV					pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8							
HRV	**Adam Dziewonsk**	**57.07**	**5**	*e*P		**P**	**22 48 49.2**	**+1.7**
	comp=Z,8.8nm,0.8s,mb4.8							
ACCN	**Adirondack Com**	**57.81**	**3**	*e*P		**P**	**22 48 54.8**	**+2.2**
	comp=Z,16nm,1.0s,mb5.0							
HNH	**Hanover**	**58.21**	**4**	*e*P		**P**	**22 48 57.9**	**+2.4**
MDV	**Middlebury**	**58.45**	**3**	*e*P		**P**	**22 48 58.6**	**+1.4**
SDCO	**Great Sand Dun**	**58.61**	**334**	*e*P		**P**	**22 48 54.3**	**-4.1**
LBNH	**Lisbon**	**58.77**	**4**	*e*P		**P**	**22 49 00.7**	**+1.4**
LONY	**Lake Ozonia**	**59.01**	**2**	*e*P		**P**	**22 49 00.0**	**-1.0**
	comp=Z,3.7nm,0.6s,mb4.6							
FRNY	**Flat Rock**	**59.26**	**3**	*e*P		**P**	**22 49 02.7**	**-0.1**
PKME	**Peaks-Kenny Pk**	**60.02**	**6**	*e*P		**P**	**22 49 08.3**	**+0.3**
	comp=Z,8.9nm,0.9s,mb4.8							
ECSD	**EROS,Sioux Fal**	**60.81**	**344**	*e*P		**P**	**22 49 10.1**	**-3.3**
MSU	**Marysvale**	**62.32**	**329**	*e*P		**P**	**22 49 22.9**	**-0.8**
ARUT	**Antelope Range**	**62.40**	**328**	*e*P		**P**	**22 49 21.6**	**-2.7**
DAU	**Daniels Canyon**	**63.37**	**331**	*e*P		**P**	**22 49 30.5**	**-0.2**
RSSD	**Black Hills**	**63.48**	**338**	*e*P		**P**	**22 49 30.8**	**-0.6**
RSSD					pmax	pmax		
	comp=Z,11nm,1.5s,mb4.8							
RSSD	**Black Hills**	**63.48**	**338**	*e*P		**P**	**22 49 30.8**	**-0.6**
	comp=Z,11nm,1.5s,mb4.8							
DUG	**Dugway**	**63.94**	**330**	*e*P		**P**	**22 49 31.4**	**-3.0**
DUG					pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8							
DUG	**Dugway**	**63.94**	**330**	*e*P		**P**	**22 49 31.4**	**-3.1**
	comp=Z,11nm,1.0s,mb4.8							
HWUT	**Hardware Ranch**	**64.45**	**332**	P		**P**	**22 49 37.7**	**-0.1**
	comp=Z,8.2nm,0.9s,mb4.8							
PDAR	**Pinedale Array**	**64.50**	**334**	P		**P**	**22 49 33.3**	**-4.8**
	comp=Z,0.5nm,0.7s,mb3.7,baz=133,slow=10.0,SNR=3.2							
PDAR					pP	pP	22 49 40.8	-5.3
	comp=Z,2.1nm,0.9s,baz=151,slow=6.6,SNR=5.8							
HVU	**Hansel Valley**	**65.15**	**331**	*e*P		**P**	**22 49 42.2**	**-0.1**
ELK	**Elko**	**65.55**	**329**	*e*P		**P**	**22 49 44.2**	**-0.7**
RRI2	**Red Ridge**	**65.73**	**333**	*e*P		**P**	**22 49 42.8**	**-3.3**
	comp=Z,8.2nm,0.8s,mb4.8							
MOOW	**Moose Ponds**	**65.80**	**334**	*e*P		**P**	**22 49 45.3**	**-1.2**
	comp=Z,10nm,1.4s,mb4.7							
IMW	**Indian Meadow**	**66.01**	**334**	*e*P		**P**	**22 49 47.7**	**-0.1**
	comp=Z,6.1nm,0.9s,mb4.6							
RLMT	**Red Lodge**	**66.31**	**336**	*e*P		**P**	**22 49 50.0**	**+0.2**
ULM	**Lac du Bonnet**	**66.72**	**347**	P		**P**	**22 49 46.6**	**-5.6**
	comp=Z,2.2nm,0.5s,mb4.4,baz=180,slow=1.5,SNR=3.8							
ULM					pP	pP	22 49 53.5	-6.7
	comp=Z,10.0nm,0.7s,baz=165,slow=4.6,SNR=6.9							
ULM					LR	LR	23 22 14.6	
	comp=Z,91nm,18.8s,MS4.0,baz=200,slow=39							
PAHR	**Pah Rah Range**	**66.97**	**326**	*e*P		**P**	**22 49 51.9**	**-2.2**
	comp=Z,8.0nm,1.0s,mb4.7							
GCMT	**Greycliff**	**67.02**	**336**	*e*P		**P**	**22 49 53.9**	**-0.4**
HLID	**Hailey**	**67.29**	**331**	*e*P		**P**	**22 49 54.8**	**-1.2**
	comp=Z,22nm,2.1s,mb4.8							
DGMT	**Dagmar**	**67.34**	**341**	*e*P		**P**	**22 49 54.8**	**-1.4**
MCMT	**McKenzie Canyo**	**67.58**	**333**	*e*P		**P**	**22 49 57.3**	**-0.5**
BOZ	**Bozeman (W)**	**67.71**	**334**	*e*P		**P**	**22 49 59.0**	**+0.4**
VNA3	**Neumayer Olymp**	**68.99**	**161**	*e*P		**P**	**22 50 06.6**	**+0.3**
VNA3					*e*		22 50 08.0	
VNA3					*e*	pP	22 50 15.1	+0.7
VNA3					*e*		22 50 21.5	
MOD	**Modoc**	**69.01**	**327**	*e*P		**P**	**22 50 10.8**	**+4.0**
VNA1	**Neumayer--Stat**	**69.26**	**161**	*e*P		**P**	**22 50 10.0**	**+1.9**
VNA1					*e*	pP	22 50 17.0	+0.9
VNA1					*e*		22 50 23.3	
PPT	**Papeete**	**69.46**	**256**	LR		LR	23 11 46.7	
	comp=Z,44nm,20.1s,MS3.7,baz=57,slow=28							
VNA2	**Neumayer--Watz**	**69.61**	**161**	*e*P		**P**	**22 50 10.6**	**+0.4**
	baz=285,slow=7.0							
VNA2					*e*		22 50 11.7	
VNA2					*e*	pP	22 50 18.8	+0.5
VNA2					*e*		22 50 24.2	
MSO	**Missoula**	**69.62**	**334**	*e*P		**P**	**22 50 13.3**	**+2.8**
	comp=Z,11nm,1.4s,mb4.6							
SCHQ	**Schefferville**	**69.72**	**6**	LR		LR	23 18 19.9	
	comp=Z,143nm,18.1s,MS4.3,baz=52,slow=34							
SNAA	**Sanae**	**71.21**	**161**	*e*P		**P**	**22 50 19.9**	**-0.1**
SNAA					*e*		22 50 21.1	
SNAA					*e*	pP	22 50 27.4	-0.7
SNAA					*e*		22 50 33.1	
SNAA	**Sanae**	**71.21**	**161**	*e*P		**P**	**22 50 20.1**	**+0.1**
NEW	**Newport**	**72.10**	**333**	*e*P		**P**	**22 50 25.5**	**-0.1**
LIC	**Lamto**	**74.23**	**79**	*e*PKP1		**P**	**22 50 35.7**	**-3.3**
	comp=Z,36nm,1.2s,mb5.2							
TIC	**Toumodi**	**74.36**	**79**	*e*PKP1		**P**	**22 50 35.7**	**-4.0**
	comp=Z,90nm,1.3s,mb5.5							
EDM	**Edmonton**	**74.47**	**338**	*e*P		**P**	**22 50 37.9**	**-1.5**
DBIC	**Dimbokro**	**74.52**	**79**	P		**P**	**22 50 35.7**	**-5.0**
	comp=Z,8.7nm,1.0s,mb4.7,baz=206,slow=2.9,SNR=6.5							
DBIC					pP	pP	22 50 43.4	-5.4
	comp=Z,4.2nm,0.6s,baz=239,slow=6.6,SNR=3.4							
DBIC					LR	LR	23 22 55.7	
	comp=Z,276nm,18.5s,MS4.6,baz=227,slow=36							
KIC	**Kosan Boka**	**74.54**	**79**	*e*PKP1		**P**	**22 50 36.6**	**-4.2**
	comp=Z,69nm,1.0s,mb5.5							
YKA	**Yellowknife Ar**	**82.33**	**343**	P		**P**	**22 51 17.5**	**-5.1**
	comp=Z,1.3nm,0.6s,mb4.1,baz=144,slow=6.1,SNR=9.6							
YKA					pP	pP	22 51 25.1	-5.7
	comp=Z,3.5nm,0.8s,baz=148,slow=5.7,SNR=10.0							
TOA0	**Torodi Ar. Sit**	**82.58**	**74**	*e*P		**P**	**22 51 21.8**	**-3.2**
TOA0				*e*PcP		PcP	22 51 28.2	-1.8
TORD	**Torodi Ar. Bea**	**82.58**	**74**	P		**P**	**22 51 21.1**	**-4.0**
	comp=Z,15nm,1.1s,mb4.9,baz=258,slow=4.5,SNR=45							
TORD					pP	pP	22 51 28.0	-5.2
	comp=Z,19nm,1.0s,baz=257,slow=4.7,SNR=23							
TORD					LR	LR	23 26 44.3	
	comp=Z,143nm,19.3s,MS4.3,baz=235,slow=35							
TORD	**Torodi Ar. Bea**	**82.58**	**74**	P		**P**	**22 51 21.1**	**-4.0**
TORD					pP	pP	22 51 28.0	-5.2
TORD					LR	LR	23 26 44.3	
ESDC	**Sonseca Array**	**86.61**	**48**	LR		LR	23 25 59.6	
	comp=Z,132nm,20.3s,MS4.3,baz=245,slow=33							
TAM	**Tamanrasset**	**88.83**	**66**	*e*P		**P**	**22 51 54.2**	**-1.7**
TSUM	**Tsumeb**	**89.43**	**110**	P		**P**	**22 51 56.9**	**-1.9**
	comp=Z,2.8nm,0.8s,mb4.6,baz=183,slow=1.1,SNR=5.0							
TSUM	**Tsumeb**	**89.43**	**110**	*e*P		**P**	**22 51 57.5**	**-1.4**
	comp=Z,7.2nm,1.2s,mb4.9							
SUMG	**Summit**	**90.64**	**11**	*e*P		**P**	**22 52 04.1**	**+0.9**
	comp=Z,6.9nm,1.3s,mb4.8							
DAWY	**Dawson**	**91.64**	**337**	*e*P		**P**	**22 52 07.6**	**-0.4**
MAW	**Mawson**	**92.95**	**166**	LR		LR	23 31 26.9	
	comp=Z,106nm,18.4s,MS4.3,baz=66,slow=34							
**BO

ISC 21 22:43:16.7±0.3, 5546N±002×11052E±003, h10km, n65, σ1^{s}30/108, mb3.9/8, 8C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	Kumora	0.57	42	ePG	Pg	22 43 27.0	-0.8
KMO				e		22 43 33.7	
KMO				pmax	pmax		
	comp=Z,738nm,0.3s						
KMO				smax			
	comp=N,5µm,0.9s						
KMO	Kumora	0.57	42⇑	iPg	Pg	22 43 27.0	-0.8
KMO				Pmax		22 43 29.3	
	comp=N,976nm,0.3s						
KMO				i Sg	Sg	22 43 35.0	-0.3
KMO				Smax		22 43 36.0	
	comp=N,5µm,0.9s						
NIZ	Nizh Angarsk	0.64	300	ePG	Pg	22 43 27.6	-1.4
NIZ				e		22 43 36.1	
NIZ				pmax	pmax		
	comp=Z,787nm,0.2s						
NIZ				smax			
	comp=N,2µm,0.2s						
NIZ	Nizh Angarsk	0.64	300⇑	iPg	Pg	22 43 27.6	-1.4
NIZ				Pmax		22 43 28.9	
	comp=N,292nm,0.4s						
NIZ				e		22 43 35.0	
NIZ				i Sg	Sg	22 43 36.2	-1.1
NIZ				eSb	Sb	22 43 43.3	+4.5
NIZ				max		22 43 44.7	
	comp=N,2µm,0.5s						
YLYR	Ulyunkhan	0.69	148⇑	iPG	Pg	22 43 29.6	-0.5
YLYR				e		22 43 39.0	
YLYR				pmax	pmax		
	comp=Z,750nm,0.1s						
YLYR				smax			
	comp=N,1µm,0.2s						
YLYR	Ulyunkhan	0.69	148⇑	iPg	Pg	22 43 29.5	-0.6
YLYR				Pmax		22 43 31.7	
	comp=N,587nm,0.6s						
YLYR				i Sg	Sg	22 43 39.3	+0.1
YLYR				Smax		22 43 39.9	
	comp=N,1µm,0.5s						
YOA	Uoyan	0.95	45⇑	iPG	Pg	22 43 34.4	-0.6
YOA				i		22 43 48.2	
YOA				pmax	pmax		
	comp=Z,945nm,0.3s						
YOA				smax			
	comp=N,4µm,0.4s						
YOA	Uoyan	0.95	45	ePg	Pg	22 43 34.3	-0.7
YOA				Pmax		22 43 36.7	
	comp=N,868nm,0.4s						
YOA				i Sg	Sg	22 43 48.2	+0.7
YOA				Smax		22 43 57.4	
	comp=N,4µm,0.9s						
UKT	Uakit	1.77	88	ePN	Pn	22 43 48.6	+1.3
UKT				e		22 44 12.0	
UKT				pmax	pmax		
	comp=Z,410nm,0.4s						
UKT				smax			
	comp=N,4µm,0.3s						
UKT	Uakit	1.77	88⇑	iPn	Pn	22 43 48.6	+1.3
UKT				⇑iPg	Pg	22 43 49.3	-1.3
UKT				Pmax		22 43 49.8	
	comp=N,416nm,0.7s						
UKT				eSg	Sg	22 44 13.1	-0.4
UKT				Smax		22 44 15.7	
	comp=N,4µm,0.7s						
SYVR	Suvo	1.84	190	ePn	Pn	22 43 49.5	+1.3
SYVR				ePg	Pg	22 43 50.5	-1.3
SYVR				Pmax		22 43 53.0	
	comp=N,308nm,0.6s						
SYVR				eSg	Sg	22 44 15.2	-0.4
SYVR				Smax		22 44 20.7	
	comp=N,2µm,0.9s						
SVKR	Severomuysk	1.84	68	ePN	Pg	22 43 50.2	-1.7
SVKR				e		22 44 15.2	
SVKR				pmax	pmax		
	comp=Z,646nm,0.5s						
SVKR				smax			
	comp=N,809nm,1.5s						
SVKR	Severomuysk	1.84	68⇑	iPg	Pg	22 43 50.2	-1.7
SVKR				Pmax		22 43 51.1	
	comp=N,577nm,0.4s						
SVKR				i Sg	Sg	22 44 16.1	+0.4
SVKR				Smax		22 44 19.4	
	comp=N,4µm,0.3s						
MXMB	Maximikha	2.44	206	ePg	Pg	22 43 59.1	-4.3
MXMB				Pmax		22 44 03.0	
	comp=N,223nm,1.0s						
MXMB				eSg	Sg	22 44 32.1	-2.8
MXMB				Smax		22 44 37.5	
	comp=N,2µm,0.7s						
OGRR	Ongureny	2.50	224	ePN	Pg	22 44 01.8	-2.7
OGRR				e		22 44 33.4	
OGRR				pmax	pmax		
	comp=Z,124nm,0.7s						
OGRR				smax			
	comp=N,891nm,1.1s						
OGRR	Ongureny	2.50	224	ePn	Pn	22 43 58.7	+1.4
OGRR				ePg	Pg	22 44 00.8	-3.7
OGRR				Pmax		22 44 05.0	
	comp=N,127nm,0.6s						
OGRR				eSn	Sn	22 44 27.3	-0.4
OGRR				eSg	Sg	22 44 33.4	-3.4
OGRR				Smax		22 44 37.2	
	comp=N,892nm,1.0s						
BOD	Bodaibo	3.04	38	ePn	Pn	22 44 05.8	+1.0
BOD				ePg	Pg	22 44 11.2	-3.8
BOD				Pmax		22 44 13.9	
	comp=N,59nm,0.3s						
BOD				eSn	Sn	22 44 42.6	+1.3
BOD				eSg	Sg	22 44 50.4	-4.0
BOD				Smax		22 44 51.6	
	comp=N,440nm,1.4s						
NLYR	Nelyaty	3.09	68	ePN	Pb	22 44 11.4	-0.2
NLYR				e		22 44 52.4	
NLYR				pmax	pmax		
	comp=Z,209nm,0.6s						
NLYR				smax			
	comp=E,608nm,1.5s						
NLYR	Nelyaty	3.09	68	ePn	Pn	22 44 07.2	+1.8
NLYR				ePg	Pg	22 44 12.6	-3.2
NLYR				Pmax		22 44 18.2	
	comp=E,210nm,0.6s						
NLYR				eSg	Sg	22 44 52.9	-2.9
NLYR				Smax		22 45 04.0	
	comp=E,609nm,1.8s						
TRG	Tyrgan	3.66	224	ePN	Pb	22 44 22.7	+1.4
TRG				e		22 45 08.4	
TRG				pmax	pmax		
	comp=Z,34nm,0.4s						
TRG				smax			
	comp=E,354nm,0.4s						
TRG	Tyrgan	3.66	224	ePn	Pn	22 44 14.1	+0.9
TRG				Pg	Pg	22 44 20.1	-6.6
TRG				Pmax		22 44 24.3	
	comp=E,33nm,0.5s						
TRG				eSn	Sn	22 44 57.8	+1.5
TRG				eSg	Sg	22 45 08.4	-5.6
TRG				Smax		22 45 16.8	
	comp=E,415nm,0.9s						
CIT	Chita	3.89	151	i Sg	Sg	22 45 16.5	-5.0
CIT				Smax		22 45 22.1	
	comp=E,556nm,1.0s						
UUDB	Ulan-Yde	3.98	206	ePg	Pg	22 44 27.8	-5.1
UUDB				Pmax		22 44 31.7	
	comp=E,84nm,0.7s						
UUDB				eSg	Sg	22 45 21.9	-2.6
UUDB				Smax		22 45 31.5	
	comp=E,250nm,1.4s						
KAB	Kabansk	4.12	215	eSg	Sg	22 45 23.2	-5.6
KAB				Smax		22 45 47.4	
	comp=E,1µm,1.4s						
HRMR	Khuramsha	4.39	210	ePn	Pn	22 44 24.8	+1.5
HRMR				ePg	Pg	22 44 35.2	-5.5
HRMR				Pmax		22 44 37.2	
	comp=E,117nm,0.5s						
HRMR				eSg	Sg	22 45 31.8	-5.8
HRMR				Smax		22 45 41.8	
	comp=E,818nm,0.7s						
CRS	Chara	4.56	68	ePN	Pn	22 44 27.6	+1.9
CRS				e		22 44 39.2	
CRS				e		22 45 38.1	
CRS				pmax	pmax		
	comp=Z,149nm,1.0s						
CRS				smax			
	comp=E,396nm,1.2s						
CRS	Chara	4.56	68	ePg	Pg	22 44 39.3	-4.7
CRS				Pmax		22 44 44.7	
	comp=E,149nm,0.9s						
CRS				eSg	Sg	22 45 38.5	-4.5
CRS				Smax		22 45 43.5	
	comp=E,397nm,1.2s						
IRK	Irkutsk	4.91	231	ePN	Pb	22 44 43.8	+1.2
IRK				e		22 45 46.4	
IRK				pmax	pmax		
	comp=Z,77nm,0.2s						
IRK				smax			
	comp=N,929nm,1.1s						
IRK	Irkutsk	4.91	231	e	Sn	22 45 28.6	+1.4
IRK				i Sg	Sg	22 45 46.8	-7.3
IRK				Smax		22 45 51.9	
	comp=N,798nm,0.5s						
LSTR	Listvyanka	4.94	226	ePn	Pn	22 44 31.6	+0.7
LSTR				ePg	Pg	22 44 44.8	-6.4
LSTR				Pmax		22 44 45.5	
	comp=N,18nm,0.5s						
LSTR				eSn	Sn	22 45 28.5	+0.5
LSTR				eSg	Sg	22 45 47.8	-7.4
LSTR				Smax		22 45 53.2	
	comp=N,221nm,1.8s						
TLY	Talaya	5.58	230	ePN	Pn	22 44 39.9	+0.3
TLY				e		22 44 56.1	
TLY				eS	Sn	22 45 42.0	-1.7
TLY				e		22 46 06.9	
TLY				pmax	pmax		
	comp=Z,35nm,0.5s						
TLY				smax			
	comp=N,224nm,1.1s						
TLY	Talaya	5.58	230	ePg	Pg	22 44 56.0	-7.5
TLY				Pmax		22 44 58.6	
	comp=N,34nm,0.7s						
TLY				eSn	Sn	22 45 44.9	+1.2
TLY				eSg	Sg	22 46 07.2	-8.5
TLY				Smax		22 46 12.0	
	comp=N,220nm,1.0s						
KPC	Khapcheranga	5.88	168	ePN	Pg	22 45 04.5	-4.7
KPC				e		22 46 19.7	
KPC				pmax	pmax		
	comp=Z,222nm,0.3s						
KPC				smax			
	comp=E,123nm,1.0s						
KPC	Khapcheranga	5.88	168	ePn	Pn	22 44 44.0	+0.2
KPC				e		22 44 53.7	
KPC				e		22 45 04.2	
KPC				eSn	Sn	22 45 52.3	+1.2
KPC				eSg	Sg	22 46 19.6	-5.7
KPC				Smax		22 46 28.4	
	comp=E,122nm,1.1s						
ARS	Arshan	5.98	237	ePN	Pn	22 44 45.8	+0.7
ARS				eS	Sg	22 46 19.5	-8.9
ARS				smax			
	comp=E,556nm,0.8s						
ARS	Arshan	5.98	237	ePn	Pn	22 44 45.4	+0.3
ARS				e		22 45 05.4	
ARS				eSn	Sn	22 45 53.2	-0.3
ARS				eSg	Sg	22 46 19.5	-8.9
ARS				Smax		22 46 27.1	
	comp=E,555nm,0.8s						
ZAK	Zakamensk	6.71	224	ePN	Pn	22 44 56.9	+1.7
ZAK				e		22 45 16.1	
ZAK				e		22 46 41.3	
ZAK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZAK				smax			
	comp=E,1µm,1.0s						
ZAK	Zakamensk	6.71	224	ePn	Pn	22 44 57.1	+1.9
ZAK				ePg	Pg	22 45 16.3	-8.8
ZAK				Pmax		22 45 34.0	
	comp=E,9.0nm,0.6s						
ZAK				eSn	Sn	22 46 21.0	+9.4
ZAK				eSg	Sg	22 46 43.7	-8.2
ZAK				Smax		22 46 49.2	
	comp=E,111nm,1.4s						
MOY	Mondy	6.83	240	ePN	Pn	22 44 58.5	+1.7
MOY				eS	Sg	22 46 44.1	-12
MOY				smax			
	comp=N,236nm,1.5s						
MOY	Mondy	6.83	240	ePn	Pn	22 44 58.9	+2.1
MOY				max		22 45 04.0	
	comp=N,40nm,1.1s						
MOY				e		22 45 15.7	
MOY				eSg	Sg	22 46 48.3	-7.4
MOY				Smax		22 47 01.2	
	comp=N,236nm,2.0s						
ORL	Orlik	6.96	250⇓	iPn	Pn	22 45 00.3	+1.7
ORL				max		22 45 01.1	
	comp=N,30nm,1.1s						
ORL				e		22 45 09.1	
ORL				eSn	Sn	22 46 16.1	-1.6
ORL				e		22 46 33.3	
ORL				eSg	Sg	22 46 50.3	-10
ORL				Smax		22 46 59.3	
	comp=N,275nm,2.2s						
ULN	Ulaanbaatar	7.91	197	eSg	Sx	22 47 21.6	
SONM	Songino Array	8.06	200	Pn	Pn	22 45 15.5	+1.9
	comp=N,0.9nm,0.3s,baz=12,slow=14,SNR=19						
SONM				Lg		22 47 31.4	
	comp=N,2.3nm,0.3s,baz=12,slow=28,SNR=20						
HIA	Hailar	8.38	134	eSg	Sx	22 47 36.9	
TDJR	Todzha	9.04	256	e	Pn	22 45 33.1	+6.0
TDJR				e		22 47 16.1	
TDJR				eSg	Sn	22 47 54.8	+46
ZALV	Zalesovo Beam	14.91	275	Pn	Pn	22 46 47.8	+0.6
	comp=N,0.2nm,0.3s,baz=76,slow=9.8,SNR=14						
ZALV				LR	LR	22 52 40.9	
	comp=N,31nm,20.0s,baz=73,slow=38						
MK31	Makanchi Array	19.61	256	eP	Pn	22 47 47.8	+1.6
MKAR	Makanchi Array	19.61	256	P	Pn	22 47 45.2	-1.0
	comp=N,0.2nm,0.3s,baz=62,slow=13,SNR=3.7						
MKAR				LR	LR	22 55 24.8	
	comp=N,46nm,20.7s,baz=186,slow=37						
MKAR	Makanchi Array	19.61	256	P	Pn	22 47 45.2	-1.0
MKAR				LR	LR	22 55 24.8	
KURK	Kurchatov	19.63	269	P	Pn	22 47 45.9	-0.6
	comp=N,0.1nm,0.3s,baz=67,slow=12,SNR=14						
BVAR	Borovoye Array	23.35	281	P	P	22 48 24.8	-0.2
	comp=N,0.4nm,0.3s,mb3.3,baz=61,slow=10,SNR=4.9						
ARCES	ARCESS Array B	38.10	325	P	P	22 50 33.6	-1.5
	comp=N,3.5nm,1.1s,mb4.0,baz=58,slow=9.2,SNR=4.0						
ARCES	ARCESS Array B	38.10	325	P	P	22 50 33.6	-1.5
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV	Kislovodsk	43.64	284	eP	P	22 51 19.7	-1.3
KIV				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
KIV	Kislovodsk	43.64	284	eP	P	22 51 19.7	-1.2
	comp=Z,4.7nm,1.4s,mb4.0						
HFS	Hagfors	47.33	317	P	P	22 51 49.4	-0.6
	comp=Z,1.5nm,0.7s,mb4.0,baz=73,slow=8.3,SNR=8.2						
HFS	Hagfors	47.33	317	P	P	22 51 49.4	-0.6
HFS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	47.68	319	P	P	22 51 52.3	-0.4
	comp=Z,0.9nm,0.6s,mb4.0,baz=52,slow=7.8,SNR=3.3						
NOA	NORSAR Array B	47.68	319	P	P	22 51 52.3	-0.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	47.68	319	P	P	22 51 52.3	-0.4
MMAI	Mount Meron Ar	55.34	279	P	P	22 52 51.8	+1.4
	comp=Z,1.2nm,0.8s,mb4.0,baz=38,slow=7.3,SNR=3.1						
YKA	Yellowknife Ar	57.22	23	P	P	22 53 04.6	+1.2
	comp=Z,0.5nm,0.8s,mb3.6,baz=314,slow=6.6,SNR=2.8						
YKA	Yellowknife Ar	57.22	23	P	P	22 53 04.6	+1.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	57.22	23	P	P	22 53 04.6	+1.2
BMO	Blue Mountains	72.19	34	eP	P	22 54 39.4	-1.9
	comp=Z,1.8nm,1.1s,mb3.9						

*ATH **21** 22:44:56.8, 39.16N×26.97E, h4km, MD2.9/3*
*ISK **21** 22:44:57.6, 39.07N×26.81E, h12km, MD2.9*
*DDA **21** 22:44:57.6, 39.06N×26.81E, h7km±6km, Md2.8*
*CSEM **21** 22:44:57.8±0.1, 39.07N×26.83E, h12km, MD2.9, Error ellipse: s-maj=1.6km s-min=1.0km az=72.0*
*ISCJB **21** 22:44:58.2±0.6, 39.06N±0.03×26.80E±0.05, h8km±7km, Error ellipse: s-maj=6.7km s-min=3.9km az=156.7*

ISC 21 22:44:58.7±0.5, 3906N±003×2680E±004, h13km±5km, n18, σ0^{s}83/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	0.45	294	ePG	Pg	22 45 07.8	+0.3
PRK				eSG	Sg	22 45 14.9	+1.4
BLCB	Balcova	0.70	164	ePG	Pg	22 45 11.7	-0.6
BLCB				eSG	Sg	22 45 21.9	+0.4
IZM	Izmir	0.76	151	ePG	Pg	22 45 12.9	-0.5
IZM				eSG	Sg	22 45 24.4	+1.1
EZN	Ezine	0.84	335	ePG	Pg	22 45 14.7	-0.3
EZN				eSG	Sg	22 45 26.1	0.0
BALY	Balya	0.93	43	i P	Pg	22 45 15.9	-0.7
BALY				i S	Sg	22 45 29.1	+0.3
BALB	Balikesir	1.02	55	ePG	Pg	22 45 17.3	-1.0
SMG	Samos	1.35	179	ePB	Pb	22 45 24.1	+0.3
GCAM	G?zelcaml?	1.40	166	i P	Pn	22 45 22.0	-1.9
GCAM				i S	Sn	22 45 42.3	0.0
DURS	Dursunbey	1.41	67	i P	Pn	22 45 18.3	-5.7
DURS				i S	Sn	22 45 43.6	+1.1
DEMI	Demirci	1.50	90	i P	Pn	22 45 24.7	-0.5
DEMI				i S	Sn	22 45 46.0	+1.4
LIA	Limnos Island	1.50	304	ePB	Pb	22 45 26.1	-0.3
DST	Dursunbey	1.52	69	ePN	Pn	22 45 25.1	-0.4
EDC	Edincik	1.52	32	ePN	Pn	22 45 25.2	-0.4
KULA	Kula-Manisa	1.56	110	ePN	Pn	22 45 25.6	-0.5
MRMT	Marmara Adasi	1.66	22	ePN	Pn	22 45 27.1	-0.3
KCT	Karacabey	1.70	45	ePN	Pn	22 45 27.9	-0.1
ENEZ	Enez	1.74	344	ePN	Pn	22 45 28.5	-0.1
ULDT	Uludag	2.10	58	i P	Pn	22 45 36.7	+3.1
ULDT				i S	Sn	22 46 04.6	+4.9

SKHL 21 22:54:59.9±0.2, 5332N×13197E, h10km±1km, mb3.8/3, 1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKMR	Ekimchan	0.64	113⇓	iPg	Pg	22 55 11.4	-0.9
EKMR				AMB	AMB	22 55 12.0	
	28nm,0.1s						
EKMR				AMB	AMB	22 55 12.0	
	31nm,0.1s						
EKMR				AMB	AMB	22 55 12.0	
	62nm,0.1s						
EKMR				pPg		22 55 14.5	
EKMR				eSg	Sg	22 55 19.9	-0.7
EKMR				A		22 55 21.0	
	420nm,0.3s						
EKMR				A		22 55 21.0	
	450nm,0.3s						
EKMR				A		22 55 21.0	
	370nm,0.3s						
BMKR	Bomnak	2.31	308	ePn	Pn	22 55 37.9	-0.1
BMKR				ePg	Pg	22 55 40.5	-3.7
BMKR				AMB	AMB	22 55 42.6	
	16nm,0.4s						
BMKR				pPg		22 55 44.4	
BMKR				eSn	Sn	22 56 07.4	+1.0
BMKR				eSg	Sg	22 56 11.0	-3.1
BMKR				A		22 56 11.9	
	74nm,0.5s						
BMKR				A		22 56 11.9	
	54nm,0.5s						
ZEA	Zeya	2.85	280	eSg	Sg	22 56 28.8	-2.5
KROS	Kirovskiy	3.16	293	ePn	Pn	22 55 49.5	-0.2
KROS				ePg	Pg	22 55 56.0	-4.4
KROS				AMB	AMB	22 55 59.4	
	7.0nm,0.5s						
KROS				eSg	Sg	22 56 37.6	-3.8
KROS				A		22 56 44.9	
	23nm,0.5s						
KROS				A		22 56 44.9	
	60nm,0.5s						
KROS				A		22 56 44.9	
	13nm,0.5s						
GRNR	Gornyy	3.75	131	eSg	Sg	22 56 56.5	-3.8
GRNR				A		22 56 59.3	
	31nm,0.5s						
KLR	Kul'dur	4.10	182	ePn	Pn	22 56 04.0	+1.5
KLR				eSg	Sg	22 57 08.0	-3.4
NKL	Nikolayevsk	5.24	88	eSg	Sg	22 57 42.9	-4.9

KRSC 21 23:40:08.1±2.2, 4922N×15678E, h35km±35km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	1.83	335	P	Pn	23 40 37.5	+0.5
MIPR	Malaya Ipel'ka	3.06	360	P	Pn	23 40 56.4	+2.5
RUS	Russkaya	3.40	18	eP	Pn	23 41 01.6	+3.0
RUS				S	Sn	23 41 40.6	+3.0
AVH	Avacha	4.23	16	P	Pn	23 41 14.7	+4.7
AVH				S	Sn	23 42 03.1	+5.0
SPN	Mys Shipunski	4.39	26	P	Pn	23 41 15.8	+3.7
SPN				S	Sn	23 42 05.2	+3.3
GNL	Ganaly	4.54	9	P	Pn	23 41 18.8	+4.6

IDC 21 23:59:43.9±1.8, 187N×12770E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/15, mbtmp3.5/4, Error ellipse: s-maj=140.9km s-min=23.5km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.64	164	P	P	00 04 47.2	+0.5
	1.3nm,0.8s,baz=343,slow=11,SNR=7.4						
ASAR	Alice Springs	26.09	167	P	P	00 05 19.2	-0.2
	0.5nm,0.8s,baz=354,slow=7.8,SNR=5.2						
STKA	Stephens Creek	36.06	160	P	P	00 06 47.0	-0.3
	2.0nm,0.6s,baz=341,slow=12,SNR=6.2						
MKAR	Makanchi Array	59.62	325	P	P	00 09 49.9	+0.2
	0.2nm,0.5s,baz=123,slow=7.1,SNR=2.5						

*IDC **22** 00:07:47.3±2.3, 7.17N×92.02E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/22, mbtmp3.7/7, ML4.5/1, Error ellipse: s-maj=81.8km s-min=18.9km az=65.0*
*ISCJB **22** 00:07:50.9±1.5, 7.2N±0.1×92.1E±0.3, h33km, mb3.7/7, Error ellipse: s-maj=42.2km s-min=15.7km az=161.0*
*NEIC **22** 00:07:52.5±1.0, 7.17N×92.03E, h35km, mb4.2/1, Error ellipse: s-maj=30.4km s-min=11.9km az=72.0*

ISC 22 00:07:52.6±1.4, 72N±01×920E±03, h35km, n9, σ0^{s}38/9, mb3.7/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.08	30	Pn	Pn	00 10 56.2	+0.3
	0.8nm,0.3s,baz=230,slow=14,SNR=5.3						
MKAR	Makanchi Array	40.35	350	P	P	00 15 27.1	+0.2
	0.6nm,0.4s,mb3.6,baz=165,slow=9.0,SNR=8.1						
FITZ	Fitzroy Crossi	41.61	128	P	P	00 15 37.4	-0.2
	1.0nm,0.8s,mb3.5,baz=325,slow=12,SNR=3.6						
SONM	Songino Array	42.33	14	P	P	00 15 42.1	-0.9
	0.3nm,0.5s,mb3.2,baz=204,slow=9.3,SNR=3.2						
ZALV	Zalesovo Beam	47.00	354	P	P	00 16 20.3	0.0
	0.4nm,0.4s,mb3.7,baz=151,slow=8.6,SNR=2.9						
ZALV	Zalesovo Beam	47.00	354	P	P	00 16 20.3	0.0
WRA	Warramunga Arr	49.59	124	P	P	00 16 40.5	-0.1
	1.5nm,0.8s,mb4.1,baz=303,slow=8.8,SNR=9.6						
ASAR	Alice Springs	51.10	128	P	P	00 16 52.4	+0.3
	0.7nm,0.7s,mb3.7,baz=304,slow=7.7,SNR=9.5						
CHUM	Lake Minchumin	94.53	24	eP	P	00 21 09.6	+0.4
	0.5nm,0.5s,mb4.2						

*ATH **22** 00:17:02.2, 35.61N×25.31E, h76km±2km*
*ISCJB **22** 00:17:03.8±0.4, 35.79N±0.03×25.27E±0.05, h29km±6km, Error ellipse: s-maj=6.8km s-min=4.4km az=3.3*
*THE **22** 00:17:03.4, 35.77N×25.26E, h1km, ML2.5*
*CSEM **22** 00:17:03.7±0.1, 35.76N×25.37E, h31km, ML2.5, Error ellipse: s-maj=3.6km s-min=2.3km az=113.0*

ISC 22 00:17:03.9±0.4, 3579N±003×2527E±005, h26km±8km, n19, σ0^{s}77/30, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR6	Thira Island,	0.57	10	ePg	Pb	00 17 15.0	-0.3
SANT	Santorini	0.60	15	ePg	Pb	00 17 15.0	-0.7
SANT				eSg	Sb	00 17 24.3	+0.5
THR1	Thera Island	0.60	15	ePg	Pb	00 17 15.3	-0.4

NPS	**Neapolis**	**0.60**	**152**	*e*P	**Pb**	**00 17 15.1**	**-0.6**
NPS				*e*S	**Sb**	**00 17 24.7**	**+0.9**
THR3	**Thira Island,**	**0.62**	**10**	*e*Pg	**Pb**	**00 17 15.8**	**-0.3**
THR5	**Thira Island,**	**0.63**	**6**	*e*Pg	**Pb**	**00 17 16.3**	**+0.1**
LAST	**Lasithi**	**0.65**	**165**	*e*Pg	**Pb**	**00 17 16.2**	**-0.4**
LAST				*e*Sg	**Sb**	**00 17 25.7**	**+0.4**
LAST	**Lasithi**	**0.65**	**165**	*e*Pg	**Pb**	**00 17 16.2**	**-0.5**
LAST				*e*Sg	**Sb**	**00 17 25.7**	**+0.3**
THR4	**Thira Island,**	**0.67**	**9**	*e*Pg	**Pb**	**00 17 17.1**	**+0.1**
SIVA	**Sivas**	**0.86**	**206**	*e*Pg	**Pb**	**00 17 19.4**	**-0.8**
SIVA				*e*Sg	**Sb**	**00 17 31.6**	**+0.3**
VAM	**Vamos**	**0.95**	**246**	*e*P	**Pn**	**00 17 21.0**	**-0.5**
VAM				*e*S	**Sb**	**00 17 34.3**	**+0.4**
VAM	**Vamos**	**0.95**	**246**	*e*P	**Pn**	**00 17 22.0**	**+0.5**
VAM				*e*S	**Sb**	**00 17 34.3**	**+0.4**
ZKR	**Zakros**	**1.03**	**131**	*e*Pg	**Pn**	**00 17 22.9**	**+0.3**
ZKR				*e*Sg	**Sb**	**00 17 36.8**	**+0.7**
APE	**Apeiranthos**	**1.29**	**9**	*e*Pg	**Pn**	**00 17 27.1**	**+0.9**
APE				*e*Sg	**Sn**	**00 17 46.6**	**+4.0**
APE	**Apeiranthos**	**1.29**	**9**	*e*P	**Pn**	**00 17 28.0**	**+1.8**
APE				*e*S	**Sn**	**00 17 47.3**	**+4.7**
APE	**Apeiranthos**	**1.29**	**9**	*e*Pg	**Pn**	**00 17 27.0**	**+0.8**
APE				*e*Sg	**Sn**	**00 17 46.7**	**+4.1**
GVD	**Gavdhos**	**1.36**	**226**	*e*P	**Pn**	**00 17 25.5**	**-1.6**
KARP	**Karpathos**	**1.56**	**99**	*e*P	**Pn**	**00 17 28.5**	**-1.4**
VLI	**Velíai**	**2.10**	**297**	*e*P	**Pn**	**00 17 38.7**	**+1.4**

IDC 22 00:44:43.9±2.5, 213N×12556E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=284.0km s-min=25.1km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.57**	**159**	P	P	00 49 57.0	+0.5
	2.1nm,0.5s,baz=337,slow=10.0,SNR=16						
ASAR	**Alice Springs**	**26.90**	**163**	P	P	00 50 25.7	-1.1
	0.2nm,0.4s,baz=340,slow=6.8,SNR=6.4						
MKAR	**Makanchi Array**	**58.21**	**326**	P	P	00 54 40.5	+0.5
	0.3nm,0.3s,baz=125,slow=8.4,SNR=5.7						

NEIC 22 01:10:00.8, 4456S×16687E, h12km, ML4.2(WEL), After WEL., Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.76**	**99**	P	Pg	01 10 15.0	-0.6
DCZ	**Deep Cove**	**0.94**	**168**	P	Pg	01 10 17.6	-1.3
DCZ				S	Sg	01 10 29.7	-1.5
MLZ	**Mavora Lakes**	**1.22**	**131**	P	Pn	01 10 22.8	-0.8
MLZ				S	Sb	01 10 39.9	+0.6
WHZ	**Wether Hill Ro**	**1.54**	**151**	P	Pn	01 10 27.4	-0.6

*ISCJB **22** 02:02:00.1±0.3, 4688N±001×677E±002, h3km±3km, Error ellipse: s-maj=2.8km s-min=2.3km az=177.7*
*ZUR **22** 02:02:01.4, 4689N×693E, h-0km±3km, ML1.8/6*
*VIE **22** 02:02:01.8±0.7, 4682N×699E, h8km, ML2.1/1, Error ellipse: s-maj=5.9km s-min=1.4km az=136.0 14 km W of Fribourg*
*LDG **22** 02:02:02.4±0.0, 4689N×686E, h3km, Md2.6/1, Ml2.4/19, Error ellipse: s-maj=0.9km s-min=0.6km az=117.0*
*STR **22** 02:02:03.2±0.7, 4695N×691E, h10km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 22 02:02:01.4±0.3, 4689N±001×684E±002, h10km±3km, n42, σ0§66/70, 3C-4D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORNY	**Torny/Romont**	**0.14**	**145**	⇓*i* Pg	**Pg**	**02 02 03.7**	**-0.8**
	1µm,0.2s						
TORNY				*e*Sg	**Sg**	**02 02 06.3**	**-0.3**
	1µm,0.2s						
BRANT	**Les Verrieres**	**0.26**	**282**	⇑*i* Pg	**Pg**	**02 02 08.0**	**+1.4**
	275nm,0.4s						
BRANT				*i* Sg	**Sg**	**02 02 13.2**	**+3.1**
	275nm,0.4s						
AIGLE	**Aigle**	**0.55**	**172**	⇑*i* Pg	**Pg**	**02 02 12.1**	**+0.1**
	45nm,1.5s						
BOURR	**Bourrignon**	**0.57**	**27**	⇓*i* Pg	**Pg**	**02 02 12.7**	**+0.2**
	67nm,1.2s						
WIMIS	**Wimmis**	**0.58**	**112**	*e*Pg	**Pg**	**02 02 11.9**	**-0.7**
	80nm,0.8s						
WIMIS				*i* Sg	**Sg**	**02 02 20.0**	**-0.2**
	80nm,0.8s						
CABF	**La Chapelle**	**0.59**	**242**	*e*Pg	**Pg**	**02 02 14.0**	**+1.3**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**02 02 21.9**	**+1.4**
	13nm,0.4s,SNR=1.0						
GRYON	**Gryon**	**0.66**	**164**	*e*Pg	**Pg**	**02 02 13.8**	**-0.3**
	8.9nm,0.2s						
BALST	**Balsthal**	**0.73**	**52**	⇓*i* P	**Pg**	**02 02 15.5**	**0.0**
	165nm,0.4s						
HINF	**Hinteralfeld**	**0.93**	**0**	*e*Pg	**Pg**	**02 02 19.4**	**+0.1**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**02 02 31.8**	**+0.4**
HINF				*e*Sn	**Sn**	**02 02 33.7**	**-0.2**
	30nm,0.3s,SNR=1.0						
MOF	**Molkenrain**	**0.99**	**11**	Pg	**Pg**	**02 02 20.5**	**+0.2**
HAU	**Haudompre**	**1.17**	**343**	*e*Pg	**Pg**	**02 02 24.2**	**+0.4**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**02 02 39.4**	**+0.4**
	SNR=1.0						
ECH	**Echery**	**1.35**	**9**	Pg	**Pg**	**02 02 27.3**	**+0.1**
ECH				Sg	**Sg**	**02 02 45.4**	**+0.7**
LPL	**La Plagne**	**1.37**	**183**	*e*Pn	**Pn**	**02 02 27.1**	**+0.6**
	SNR=1.0						
LPL	**La Plagne**	**1.37**	**183**	*e*Pg	**Pg**	**02 02 28.1**	**+0.4**
LPL				*e*Sg	**Sg**	**02 02 46.4**	**+0.9**
	3.0nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**1.39**	**183**	*e*Pg	**Pg**	**02 02 28.5**	**+0.5**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**02 02 46.9**	**+0.9**
	7.7nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	**1.56**	**11**	*e*Pn	**Pn**	**02 02 29.2**	**+0.1**
	SNR=1.0						
CDF	**Champ du Feu**	**1.56**	**11**	*e*Pg	**Pg**	**02 02 31.1**	**-0.1**
CDF				*e*Sn	**Sn**	**02 02 48.5**	**-0.8**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**02 02 51.2**	**-0.1**
	4.3nm,0.2s,SNR=1.0						
SFTF	**Sexfontaines**	**1.80**	**318**	*e*Pn	**Pn**	**02 02 32.8**	**+0.4**
	baz=134						
SFTF	**Sexfontaines**	**1.80**	**318**	*e*Pg	**Pg**	**02 02 35.8**	**-0.1**
	baz=136						
SFTF				*e*Sn	**Sn**	**02 02 54.7**	**-0.6**
SFTF				*e*Sg	**Sg**	**02 02 59.1**	**-0.1**
	5.2nm,0.2s,baz=137						
RFYF	**Reffroy**	**1.97**	**333**	*e*Pg	**Pg**	**02 02 38.8**	**-0.4**
RFYF				*e*Sg	**Sg**	**02 03 04.4**	**-0.4**
	3.6nm,0.2s						
MEZF	**Maizieres J'vi**	**2.02**	**324**	*e*Pn	**Pn**	**02 02 35.7**	**+0.2**
MEZF	**Maizieres J'vi**	**2.02**	**324**	*e*Pg	**Pg**	**02 02 40.1**	**0.0**
	baz=140						
MEZF				*e*Sg	**Sg**	**02 03 06.6**	**+0.4**
	7.2nm,0.4s,SNR=1.0						
LOR	**Lormes**	**2.08**	**282**	*e*Pn	**Pn**	**02 02 36.8**	**+0.6**
LOR	**Lormes**	**2.08**	**282**	*e*Pg	**Pg**	**02 02 41.2**	**+0.1**
	baz=104						
LOR				*e*Sg	**Sg**	**02 03 07.0**	**-1.0**
	4.8nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**2.08**	**264**	*e*Pn	**Pn**	**02 02 36.6**	**+0.4**
SMF	**Signal de Mont**	**2.08**	**264**	*e*Pg	**Pg**	**02 02 41.1**	**-0.1**
SMF				*e*Sg	**Sg**	**02 03 07.0**	**-1.1**
	3.9nm,0.3s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**2.08**	**199**	*e*Pg	**Pg**	**02 02 41.0**	**-0.2**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**02 03 07.5**	**-0.7**
	2.6nm,0.2s,SNR=1.0						
DAVA	**Damuels**	**2.11**	**78**	⇓*i* Pg	**Pg**	**02 02 40.2**	**-1.6**
DAVA				⇑*i* Sg	**Sg**	**02 03 09.1**	**-0.1**
	2.8nm,0.2s						
MBDF	**Montbardon**	**2.16**	**181**	*e*Pg	**Pg**	**02 02 42.7**	**0.0**
MBDF				*e*Sg	**Sg**	**02 03 10.9**	**+0.2**
	2.7nm,0.4s						
SSF	**Saint Saulge**	**2.29**	**276**	*e*Pn	**Pn**	**02 02 39.9**	**+0.7**
SSF	**Saint Saulge**	**2.29**	**276**	*e*Pg	**Pg**	**02 02 45.3**	**0.0**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**02 03 15.0**	**0.0**
	3.3nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**2.40**	**269**	*e*Pn	**Pn**	**02 02 41.3**	**+0.6**
	SNR=1.0						
AVF	**Avril sur Loir**	**2.40**	**269**	*e*Pg	**Pg**	**02 02 47.6**	**+0.3**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**02 03 17.6**	**-0.8**
	1.1nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**2.53**	**218**	*e*Pg	**Pg**	**02 02 49.6**	**-0.3**
VIVF				*e*Sg	**Sg**	**02 03 22.6**	**-0.1**
	6.7nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**2.77**	**265**	*e*Pn	**Pn**	**02 02 46.2**	**+0.4**
BGF	**Bois d'Agland**	**2.77**	**265**	*e*Pg	**Pg**	**02 02 53.7**	**-0.7**
BGF				*e*Sg	**Sg**	**02 03 29.2**	**-1.1**
	4.0nm,0.3s						
HYF	**Humbligny**	**2.90**	**279**	*e*Pg	**Pg**	**02 02 55.9**	**-1.0**
HYF				*e*Sg	**Sg**	**02 03 33.8**	**-0.6**
TCF	**Toulx Ste Croi**	**3.25**	**261**	*e*Pn	**Pn**	**02 02 51.9**	**-0.5**
	SNR=1.0						
TCF				*e*Sn	**Sn**	**02 03 30.1**	**-1.0**
	1.5nm,0.4s,SNR=1.0						
LASF	**Ste Croix**	**3.51**	**218**	*e*Pn	**Pn**	**02 02 56.1**	**+0.2**
LASF				*e*Sg	**Sg**	**02 03 52.7**	**-1.3**
	1.4nm,0.3s						
BAIF	**Baives**	**3.63**	**332**	*e*Pn	**Pn**	**02 02 57.5**	**0.0**
MFF	**Saint Martin d**	**4.81**	**269**	*e*Pn	**Pn**	**02 03 14.8**	**+1.0**
GRR	**Gorron**	**5.42**	**289**	*e*Pn	**Pn**	**02 03 22.7**	**+0.6**
	SNR=1.0						

*IDC **22** 02:05:56.7±0.8, 1365N×9086W, h0km, mb4.0/9, mb1 4.3/11, mb1mx4.0/24, mbtmp4.0/11, ML4.0/2, MS3.3/3, Ms1 3.3/3, ms1mx2.8/31, Error ellipse: s-maj=36.9km s-min=15.6km az=58.0*
*CASC **22** 02:05:59.7±2.1, 1342N×9135W, h32km±15km, MD4.3, mb4.0(NEIC)*
*ISCJB **22** 02:06:00.5±0.6, 1344N±005×9126W±004, h42km±6km, mb4.0/25, MS3.4/2, Error ellipse: s-maj=9.9km s-min=3.9km az=34.9*
*NEIC **22** 02:06:02.7±0.9, 1348N×9118W, h45km±8km, mb4.0/21, MD4.8(MEX), Error ellipse: s-maj=13.2km s-min=7.4km az=216.0*
*MEX **22** 02:06:03.1±1.0, 1328N×9149W, h40km, MD4.6*

ISC 22 02:06:02.6±0.6, 1348N±005×9122W±004, h39km±5km, n82, σ1§20/80, mb4.0/25, MS3.4/2, 5C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**1.03**	**21**	⇓*i* P	**Pn**	**02 06 20.0**	**-0.5**
PCG	**Pacaya**	**1.08**	**33**	⇑*e*P	**Pn**	**02 06 20.8**	**-0.6**
FG6		**1.12**	**17**	⇓*e*P	**Pn**	**02 06 21.2**	**-0.6**
NBG	**Las Nubes**	**1.39**	**38**	⇓*e*P	**Pn**	**02 06 25.9**	**+0.4**
RTR	**El Retiro**	**1.59**	**75**	*e*P	x	02 06 27.0	
SBLS	**San Blas**	**1.59**	**77**	⇓*e*P	x	02 06 26.6	
SBLS				*e*P	x	02 06 26.7	
SNJE	**San Jose**	**1.62**	**76**	*e*P	x	02 06 27.2	
RBDL	**Robledal**	**1.62**	**67**	*e*P	x	02 06 27.8	
THIG		**1.74**	**325**	*e*P	**Pn**	**02 06 29.2**	**-1.1**
THIG				*i* S	**Sn**	**02 06 50.4**	**-0.9**
BOQS	**Boqueron**	**1.91**	**82**	⇑*e*P	x	02 06 31.4	
BOQS				*e*P	x	02 06 31.6	
BOQS				*e*S	x	02 06 55.3	
BOQS				*e*S	x	02 06 58.3	
LFRS	**El Faro**	**2.11**	**86**	*e*P	x	02 06 34.7	
LBRS	**Las Brisas**	**2.13**	**83**	*e*P	x	02 06 35.3	
SNVI	**San Vicente**	**2.32**	**87**	⇑*e*P	x	02 06 37.8	
SNVI				*e*P	x	02 06 38.1	
SNVI				*e*S	x	02 07 07.8	
VSM	**San Miguel**	**2.87**	**91**	⇑*e*P	x	02 06 45.9	
VSM				*e*S	x	02 07 22.8	
CCIG	**Comitan**	**2.92**	**342**	*e*P	**Pn**	**02 06 48.0**	**+1.4**
CCIG				*i* S	**Sn**	**02 07 23.5**	**+3.1**
CCIG	**Comitan**	**2.92**	**342**	*e*P	**Pn**	**02 06 48.0**	**+1.4**
CCIG				*i* S	**Sn**	**02 07 25.1**	**+4.7**
CAHU	**Cacacuatique**	**2.94**	**84**	*e*P	x	02 06 46.4	
CNCH	**Conchagua**	**3.31**	**93**	⇓*e*P	x	02 06 51.1	
CNCH				*e*P	x	02 06 51.3	
CNCH				*e*S	x	02 07 34.7	
SCX	**San Cristobal**	**3.51**	**337**	*i* P	**Pn**	**02 06 55.3**	**+0.7**
TGIG		**3.75**	**331**	*e*P	**Pn**	**02 06 59.9**	**+1.8**
TGIG				*i* S	**Sn**	**02 07 42.7**	**+1.7**
TGUH	**Tegucigalpa,Un**	**3.88**	**81**	*e*P	**Pn**	**02 06 59.3**	**-0.4**
TGUH	**Tegucigalpa,Un**	**3.88**	**81**	*e*Pn	**Pn**	**02 06 59.1**	**-0.6**
TEL3	**Telica 3**	**4.36**	**101**	⇑*e*P	**Pn**	**02 07 06.2**	**-0.2**
TELN	**Telica**	**4.37**	**101**	*e*P	**Pn**	**02 07 05.7**	**-0.8**
MIRN	**Miramar**	**4.52**	**103**	*e*P	**Pn**	**02 07 07.5**	**-1.1**
MOMN	**Momotombo**	**4.69**	**103**	*e*P	**Pn**	**02 07 11.4**	**+0.6**
CSAN		**4.86**	**105**	*e*P	**Pn**	**02 07 13.3**	**+0.2**
APYN	**Apoyeque**	**4.91**	**104**	*e*P	**Pn**	**02 07 14.5**	**+0.6**
CMIG	**Matias Romero**	**5.04**	**316**	Pn	**Pn**	**02 07 14.6**	**-1.1**
	2.0nm,0.3s,baz=119,slow=11,SNR=21						
CMIG				Sn	**Sn**	**02 08 11.4**	**-1.1**
	2.2nm,0.3s,baz=103,slow=22,SNR=5.7						
CMIG	**Matias Romero**	**5.04**	**316**	*e*P	**Pn**	**02 07 14.7**	**-1.0**
CMIG				*i* S	**Sn**	**02 08 12.4**	**-0.1**
HUIG	**Huatulco**	**5.25**	**296**	*i* S	**Sn**	**02 08 14.5**	**-3.3**
VHO	**Vista Hermosa**	**6.40**	**305**	*i* P	**Pn**	**02 07 33.7**	**-0.7**
VHO				*i* S	**Sn**	**02 08 45.2**	**-1.1**
JTS	**JuntasAbangare**	**6.91**	**117**	Pn	**Pn**	**02 07 40.7**	**-0.6**
	1.6nm,0.3s,baz=325,slow=21,SNR=6.0						
JTS				Sn	**Sn**	**02 09 00.1**	**+1.4**
	0.5nm,0.3s,baz=249,slow=21,SNR=1.7						
PNIG	**Pinotepa**	**7.27**	**294**	*i* P	**Pn**	**02 07 46.4**	**+0.1**
PNIG				*i* S	**Sn**	**02 09 01.9**	**-5.8**
PNIG	**Pinotepa**	**7.27**	**294**	*i* P	**Pn**	**02 07 46.4**	**+0.1**
PNIG				*i* S	**Sn**	**02 09 04.2**	**-3.6**
TEIG	**Tepich**	**7.28**	**22**	Pn	**Pn**	**02 07 46.2**	**-0.1**
	33nm,0.3s,baz=201,slow=2.8,SNR=289						
TEIG				Sn	**Sn**	**02 09 08.5**	**+0.8**
	baz=40,slow=23,SNR=2.8						
TEIG				LR	LR	02 10 20.5	
	comp=Z,80nm,20.5s,baz=209,slow=38						
TEIG	**Tepich**	**7.28**	**22**	Pn	**Pn**	**02 07 46.2**	**-0.1**
TEIG				Sn	**Sn**	**02 09 08.5**	**+0.8**
TEIG				LR	LR	02 10 20.5	
TPIG	**Tehuac#an**	**7.68**	**311**	*i* S	**Sn**	**02 09 17.2**	**-0.4**
PPM	**Popocatepetl**	**9.02**	**309**	*i* P	**Pn**	**02 08 09.9**	**-0.4**
PPM				*i* S	**Sn**	**02 09 52.7**	**+2.1**
BCIP	**Isla Barro Col**	**11.96**	**110**	*e*Pn	**Pn**	**02 08 52.8**	**+2.2**
HKT	**Hockley**	**16.93**	**346**	*e*P	**Pn**	**02 09 58.1**	**+1.5**
	1.5nm,0.8s						
JCT	**Junction City**	**18.68**	**336**	*e*P	**Pn**	**02 10 18.1**	**0.0**
	3.0nm,0.6s						
CHI2		**19.36**	**115**	*e*P	Px	02 07 02.6	
TXAR	**Lajitas Array**	**19.54**	**326**	P	**Pn**	**02 10 28.5**	**0.0**
	0.2nm,0.3s,baz=154,slow=13,SNR=7.2						
LRAL	**Lakeview Retre**	**19.84**	**11**	*e*P	**Pn**	**02 10 30.7**	**-1.3**
	13nm,1.0s						
GOGA	**Godfrey**	**21.06**	**18**	*e*P	**P**	**02 10 43.5**	**+0.2**
	7.5nm,0.8s,mb4.1						
MIAR	**Mount Ida**	**21.08**	**355**	*e*P	**P**	**02 10 43.5**	**0.0**
	4.7nm,0.9s,mb3.8						
SWET	**Sewanee**	**22.16**	**12**	*e*P	**P**	**02 10 53.3**	**-1.8**
WMOK	**Wichita Mounta**	**22.24**	**343**	*e*P	**P**	**02 10 54.7**	**-1.2**
	1.4nm,0.8s,mb3.4						
WVT	**Waverly**	**22.76**	**7**	*e*P	**P**	**02 11 00.3**	**-1.1**
	4.9nm,0.7s,mb4.0						
TKL	**Tuckaleechee C**	**23.08**	**16**	P	**P**	**02 11 02.6**	**-2.2**
	1.7nm,0.4s,mb3.8,baz=190,slow=9.4,SNR=5.6						
TKL				LR	LR	02 20 39.6	
	comp=Z,88nm,19.4s,MS3.2,baz=68,slow=39						
TKL	**Tuckaleechee C**	**23.08**	**16**	*e*P	**P**	**02 11 03.5**	**-1.4**
TKL				LR	LR	02 20 39.6	
AMTX	**Amarillo**	**23.31**	**338**	*e*P	**P**	**02 11 02.5**	**-4.8**
	3.8nm,0.4s,mb4.2						
CCM	**Cathedral Cave**	**24.47**	**360**	*e*P	**P**	**02 11 16.5**	**-1.4**
	6.5nm,0.7s,mb4.2						
BNM	**Barren Site**	**24.88**	**328**	*e*P	**P**	**02 11 23.2**	**+1.6**
ANMO	**Albuquerque**	**25.43**	**330**	P	**P**	**02 11 27.2**	**+0.6**
	1.0nm,0.6s,mb3.6,baz=128,slow=12,SNR=6.6						
ANMO	**Albuquerque**	**25.43**	**330**	*e*P	**P**	**02 11 24.7**	**-1.9**
	1.8nm,0.7s,mb3.7						
TUC	**Tucson**	**25.91**	**320**	*e*P	**P**	**02 11 33.0**	**+1.9**
	1.5nm,0.8s,mb3.6						
SDCO	**Great Sand Dun**	**27.31**	**335**	*e*P	**P**	**02 11 44.4**	**+0.8**
WUAZ	**Wupatki**	**28.48**	**324**	*e*P	**P**	**02 11 56.4**	**+2.4**
	3.6nm,0.8s,mb4.0						
HWUT	**Hardware Ranch**	**33.15**	**332**	*e*P	**P**	**02 12 36.6**	**+1.4**
	1.0nm,0.4s,mb4.1						
PDAR	**Pinedale Array**	**33.20**	**335**	P	**P**	**02 12 35.9**	**+0.2**
	0.4nm,0.7s,mb3.5,baz=124,slow=7.9,SNR=3.9						
PDAR				PcP	PcP	02 15 17.5	-0.2
	0.4nm,0.7s,baz=139,slow=4.7,SNR=3.5						
SNOW	**Snow King Moun**	**34.27**	**334**	*e*P	**P**	**02 12 45.8**	**+0.9**
	2.6nm,0.5s,mb4.4						
LOHW	**Long Hollow**	**34.33**	**335**	*e*P	**P**	**02 12 45.9**	**+0.5**
	1.5nm,0.8s,mb4.0						
TPAW	**Teton Pass**	**34.38**	**334**	*e*P	**P**	**02 12 46.7**	**+0.8**
	9.1nm,1.5s,mb4.5						
MOOW	**Moose Ponds**	**34.50**	**335**	*e*P	**P**	**02 12 46.7**	**-0.3**
	1.2nm,0.8s,mb3.9						
NVAR	**Mina Array Bea**	**34.55**	**321**	P	**P**	**02 12 49.4**	**+2.0**
	3.4nm,0.7s,mb4.4,baz=132,slow=8.8,SNR=6.9						
NVAR				PcP	PcP	02 15 22.1	+0.4
	1.6nm,0.8s,baz=116,slow=4.2,SNR=4.0						
HLID	**Hailey**	**35.99**	**331**	*e*P	**P**	**02 13 00.8**	**+1.1**
	1.4nm,0.8s,mb3.9						
MCMT	**McKenzie Canyo**	**36.27**	**334**	*e*P	**P**	**02 13 03.3**	**+1.2**
ULM	**Lac du Bonnet**	**36.86**	**355**	P	**P**	**02 13 05.5**	**-1.6**
	2.2nm,0.7s,mb4.1,baz=173,slow=8.1,SNR=2.7						
WVOR	**Wild Horse Val**	**37.34**	**326**	*e*P	**P**	**02 13 12.4**	**+1.1**
	3.0nm,0.9s,mb4.1						
LPAZ	**La Paz**	**37.36**	**142**	P	**P**	**02 13 12.0**	**+0.3**
	0.6nm,0.7s,mb3.6,baz=330,slow=8.1,SNR=3.6						
LPAZ	**La Paz**	**37.36**	**142**	*e*P	**P**	**02 13 11.5**	**-0.2**
	0.9nm,0.7s,mb3.7						
SIV	**San Ignacio**	**41.79**	**134**	P	**P**	**02 13 47.3**	**-1.3**
	3.1nm,0.7s,mb4.0,baz=305,slow=9.4,SNR=21						
SCHQ	**Schefferville**	**45.45**	**20**	P	**P**	**02 14 14.3**	**-3.2**
	6.8nm,0.7s,mb4.6,baz=228,slow=5.7,SNR=9.6						
SCHQ				LR	LR	02 33 27.9	
	comp=Z,72nm,19.5s,MS3.6,baz=168,slow=37						
SCHQ	**Schefferville**	**45.45**	**20**	P	**P**	**02 14 14.3**	**-3.2**
SCHQ				LR	LR	02 33 27.9	
YKA	**Yellowknife Ar**	**51.70**	**346**	P	**P**	**02 15 03.3**	**-2.1**
	1.3nm,0.7s,mb4.0,baz=149,slow=7.5,SNR=5.4						
RC01	**Rabbit Creek A**	**63.30**	**332**	*e*P	**P**	**02 16 24.2**	**-3.0**
	5.9nm,0.7s,mb4.8						
SVW2	**Sparrevohn**	**65.98**	**331**	*e*P	**P**	**02 16 43.1**	**-1.6**
WRA	**Warramunga Arr**	**136.00**	**255**	PKP	PKPdf	02 25 19.3	-1.0
	0.5nm,0.8s,baz=88,slow=2.2,SNR=6.4						
ASAR	**Alice Springs**	**136.20**	**250**	PKP	PKPdf	02 25 20.1	-0.4
	0.5nm,0.9s,baz=114,slow=3.7,SNR=4.1						
CMAR	**Chiang Mai Arr**	**146.72**	**342**	PKPbc	PKPbc	02 25 40.3	-0.8
	4.5nm,0.6s,baz=343,slow=3.7,SNR=17						

*CSEM **22** 02:16:33.8±0.1, 3855N×2754E, h14km±1km, MD2.7, Error ellipse: s-maj=6.1km s-min=2.9km az=147.0*
*ISCJB **22** 02:16:34.7±0.5, 3857N±005×2752E±006, h12km±6km, Error ellipse: s-maj=10.8km s-min=4.7km az=136.9*
*ISK **22** 02:16:34.0, 3854N×2754E, h17km, MD2.9*
*DDA **22** 02:16:34.7, 3857N×2752E, h7km±2km, Md2.7*

ISC 22 02:16:34.8±0.6, 3857N±005×2753E±006, h16km±5km, n12, σ0§33/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAG	**Bornova**	**0.26**	**231**	*i* P	**Pg**	**02 16 40.3**	**-0.2**
KDAG				*i* S	**Sg**	**02 16 44.5**	**+0.1**
AKHS	**Akhisar**	**0.39**	**36**	*i* P	**Pg**	**02 16 42.5**	**-0.2**
AKHS				*i* S	**Sg**	**02 16 48.5**	**+0.4**
AKS	**Akhisar**	**0.39**	**36**	*e*PG	**Pg**	**02 16 42.2**	**-0.5**
AKS				*e*SG	**Sg**	**02 16 47.8**	**-0.2**
AKS	**Akhisar**	**0.39**	**36**	*i* Pg	**Pg**	**02 16 42.6**	**-0.1**
AKS				*e*Sg	**Sg**	**02 16 48.6**	**+0.6**
BLCB	**Balcova**	**0.42**	**245**	*e*PG	**Pg**	**02 16 43.1**	**-0.2**
BLCB				*e*SG	**Sg**	**02 16 49.5**	**+0.4**
MANT	**Manisa**	**0.81**	**95**	*i* P	**Pb**	**02 16 51.1**	**+0.6**
MANT				*i* S	**Sb**	**02 17 01.4**	**+0.2**
KULA	**Kula-Manisa**	**0.89**	**93**	*e*PG	**Pg**	**02 16 51.4**	**-0.7**
DEMI	**Demirci**	**1.05**	**62**	*i* P	**Pb**	**02 16 54.5**	**+0.1**
DEMI				*i* S	**Sb**	**02 17 08.0**	**+0.1**
DEMI	**Demirci**	**1.05**	**62**	*i* P	**Pb**	**02 16 54.5**	**0.0**
DEMI				*i* S	**Sb**	**02 17 08.0**	**+0.1**
BALB	**Balikesir**	**1.11**	**14**	*e*PN	**Pn**	**02 16 55.6**	**0.0**
DURS	**Dursunbey**	**1.27**	**35**	*i* P	**Pn**	**02 16 57.6**	**-0.2**
DURS				*i* S	**Sb**	**02 17 14.4**	**0.0**

19nm,0.4s,mb5.3
KKN Kakani 34.05 334 *e*P **P 03 28 04.7 +0.4**
8.7nm,0.4s,mb4.9
GKN Gorkha 34.52 333 *e*P **P 03 28 08.4 0.0**
13nm,0.5s,mb5.1
KOLN Koldanda 34.81 331 *e*P **P 03 28 11.0 +0.1**
4.0nm,0.3s,mb4.7
DANN Dangsing 35.22 332 *e*P **P 03 28 14.5 +0.1**
24nm,0.4s,mb5.4
WRA Warramunga Arr 36.34 121 P **P 03 28 24.4 +0.3**
1.6nm,0.4s,mb4.3,baz=303,slow=9.0,SNR=19
WRAB Tennant Creek 36.34 121 *e*P **P 03 28 24.1 0.0**
2.2nm,0.4s,mb4.4
WB2 Warramunga Arr 36.35 121 *e*P **P 03 28 23.9 -0.3**
ASAR Alice Springs 37.63 127 P **P 03 28 35.0 -0.1**
0.5nm,0.4s,mb3.7,baz=297,slow=7.6,SNR=10
ASAR S **S 03 34 27.3 +9.0**
0.2nm,0.4s,baz=278,slow=17,SNR=5.3
STKA Stephens Creek 47.58 132 P **P 03 29 55.7 +0.2**
0.5nm,0.3s,mb3.8,baz=324,slow=20,SNR=2.9
STKA Stephens Creek 47.58 132 P **P 03 29 55.7 +0.2**
SONM Songino Array 50.42 4 P **P 03 30 17.9 +1.1**
5.9nm,1.0s,mb4.5,baz=184,slow=9.5,SNR=20
ULN Ulaanbaatar 50.50 5 *e*P **P 03 30 17.8 +0.4**
1.9nm,0.7s,mb4.2
TKM2 Tokmak 2 51.02 336 *e*P **P 03 30 21.7 +0.2**
3.4nm,0.3s,mb4.8
EKS2 Erkin-Say 51.59 334 *e*P **P 03 30 25.5 -0.2**
6.0nm,0.8s,mb4.7
MJAR Matsushiro Arr 51.79 38 P **P 03 30 28.2 +0.9**
0.2nm,0.3s,mb3.6,baz=202,slow=6.3,SNR=4.1
MK31 Makanchi Array 52.05 343 *e*P **P 03 30 28.9 -0.2**
MKAR Makanchi Array 52.05 343 P **P 03 30 28.9 -0.1**
2.9nm,0.5s,mb4.5,baz=141,slow=7.8,SNR=27
TLY Talaya 54.12 2 *e*P **P 03 30 43.5 -0.6**
4.5nm,0.8s,mb4.5
KURK Kurchatov 56.64 343 LR LR 03 56 44.3
comp=Z,44nm,19.4s,baz=325,slow=38
KURK Kurchatov 56.64 343 *e*P **P 03 31 01.4 -0.8**
1.3nm,0.6s,mb4.1
ZAA0 Zalesovo Array 58.07 348 *e*P **P 03 31 11.7 -0.5**
ZALV Zalesovo Beam 58.07 348 P **P 03 31 12.2 0.0**
4.7nm,0.4s,mb4.9,baz=161,slow=5.2,SNR=27
BRVK Borovoye 61.37 339 *e*P **P 03 31 33.4 -1.5**
3.6nm,0.6s,mb4.6
ARCES ARCESS Array B 87.58 340 P **P 03 34 05.6 -0.7**
2.2nm,0.8s,mb4.2,baz=39,slow=7.8,SNR=3.5
ARCES ARCESS Array B 87.58 340 P **P 03 34 05.6 -0.7**
TXAR Lajitas Array 144.21 40 PKP PKPdf 03 40 54.1 -0.6
1.0nm,0.5s,baz=256,slow=0.8,SNR=28

*IDC **22** 03:31:06.1±1.0,51.17N×179.63W,h0km,mb3.8/8, mb1 4.0/8,mb1mx3.8/25,mbtmp3.8/8,Error ellipse: s-maj=31.0km s-min=27.9km az=166.0*
*ISCJB **22** 03:31:12.0±1.2,512N±02×179.77W±008,h51km±9km, mb3.9/8,Error ellipse: s-maj=26.2km s-min=7.4km az=172.0*
*NEIC **22** 03:31:12.9,51.10N×179.72W,h17km,mb3.8/1, ML3.6(AEIC),After AEIC.*
ISC 22 03:31:13.0±1.2,511N±02×17978W±008,h44km±10km,n16, σ0§96/18,mb3.9/8,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
AMKA	**Amchitka**	**0.63**	**292**	P		**Pn**	**03 31 24.3**	**-1.3**
AMKA				S		**Sn**	**03 31 33.3**	**-1.2**
ADK	**Adak**	**2.07**	**68**	P		**Pn**	**03 31 44.9**	**-0.3**
ADK				S		**Sn**	**03 32 10.2**	**+0.5**
SMY	**Shemya**	**4.11**	**295**	P		**Pn**	**03 32 15.0**	**+1.8**
FX1	**Attu Island--F**	**4.70**	**295**	P		**Pn**	**03 32 22.9**	**+1.6**
SPIA	**Saint Paul Isl**	**8.23**	**39**	P		**Pn**	**03 33 10.7**	**+1.0**
UNV	**Unalaska Valle**	**8.54**	**66**	P		**Pn**	**03 33 14.1**	**+0.2**
KTH	**Kantishna Hill**	**19.70**	**40**	*e*P		**Pn**	**03 35 38.8**	**-1.2**
3.9nm,0.8s								
SONM	**Songino Array**	**46.20**	**296**	P		**P**	**03 39 32.3**	**-0.9**
0.7nm,0.4s,mb3.9,baz=60,slow=8.9,SNR=5.2								
PDAR	**Pinedale Array**	**46.97**	**71**	P		**P**	**03 39 37.7**	**-1.5**
1.1nm,0.8s,mb3.9,baz=306,slow=3.6,SNR=9.0								
KURK	**Kurchatov**	**58.74**	**313**	P		**P**	**03 41 06.7**	**+0.7**
0.9nm,0.4s,mb4.2,baz=43,slow=6.4,SNR=2.3								
MKAR	**Makanchi Array**	**59.70**	**308**	P		**P**	**03 41 12.3**	**-0.3**
0.9nm,0.3s,mb4.2,baz=47,slow=6.4,SNR=7.1								
MKAR	**Makanchi Array**	**59.70**	**308**	P		**P**	**03 41 12.3**	**-0.3**
GERES	**GERESS Array B**	**79.73**	**351**	P		**P**	**03 43 16.0**	**+0.2**
0.3nm,0.5s,mb3.5,baz=37,slow=7.3,SNR=3.7								
WRA	**Warramunga Arr**	**81.42**	**223**	P		**P**	**03 43 24.8**	**-0.3**
0.4nm,0.7s,mb3.4,baz=29,slow=5.6,SNR=2.6								
FITZ	**Fitzroy Crossi**	**83.84**	**231**	P		**P**	**03 43 38.3**	**+0.6**
1.0nm,0.6s,mb4.1,baz=5.7,slow=5.0,SNR=5.8								
ASAR	**Alice Springs**	**84.90**	**222**	P		**P**	**03 43 43.5**	**+0.5**
0.5nm,0.9s,mb3.6,baz=27,slow=6.3,SNR=4.3								

*BJI **22** 03:59:31.9, 12.52N×124.75E,h47km,mB5.1,mb4.8,Ms4.5, Msz4.3*
*MOS **22** 03:59:35.5±1.1,1304N×12446E,h47km,mb5.1/39,Error ellipse: s-maj=12.6km s-min=6.2km az=113.0*
*ISCJB **22** 03:59:36.6±0.2,1323N±002×12465E±002,h47km, mb4.8/93,MS4.2/28,Error ellipse: s-maj=3.3km s-min=2.5km az=177.3*
*MAN **22** 03:59:36, 1327N×12467E,h40km,mb5.6,ML4.7,MS5.1*
MAN INTENSITY IV - VIRAC, CATANDUANES; INTENSITY III - SORSOGON CITY, LIGNON HILL, LEGASPI CITY.
*NEIC **22** 03:59:37.6±0.2,1303N×12452E,mb5.1/34,Error ellipse: s-maj=7.2km s-min=4.6km az=82.0*
NEIC Felt [IV PIVS] at Virac. Felt [III PIVS] at Sorsogon, Luzon.
*GCMT **22** 03:59:37.6±0.3,1308N×12.472E,h65km±2km, MW5.2/87, Moment Tensor Solution. s38,c48; s87,c120; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr1.73±.23; Mθθ4.42±.18; Mϕϕ-6.15±.20; Mrθ-2.37±.11; Mrϕ0.60±.18; Mθϕ2.58±.16; Best double couple: Mo6.45900×10^16^ NP1:ϕs220.00000°,δ54.00000°,λ169.00000°. NP2: ϕs317.00000°,δ81.00000°,λ37.00000°. Principal axes: T 5.8560, Plg32.0000°, Azm185.0000°; N 1.2060, Plg52.0000°, Azm329.0000°; P -7.0620, Plg18.0000°, Azm83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **22** 03:59:39.8±2.2,1298N×124.41E,h72km±20km,mb4.3/20, mb1 4.4/23,mb1mx4.3/27,mbtmp4.3/23,MS4.2/22, Ms1 4.2/22,ms1mx4.0/27 Error ellipse: s-maj=19.2km s-min=8.3km az=72.0*
*DJA **22** 03:59:46, 1324N×12458E,h141km,Mw5.3/8*
ISC 22 03:59:38.4±0.2,1321N±002×12461E±002,h49km, h49km±1.2km:pP-P,n251,σ1§26/247,mb4.8/93,MS4.2/28, 23C-15D,Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
PVCP	**Virac**	**0.59**	**311**	*e*P		**Pn**	**03 59 50.4**	**-0.3**
PVCP				*e*S		**Sn**	**03 59 59.3**	**-0.2**
CNP	**Catarman**	**0.69**	**176**	*e*P		**Pn**	**03 59 52.3**	**+0.3**
CNP				*e*S		**Sn**	**04 00 03.5**	**+1.6**
MMPH	**Masbate**	**1.28**	**229**	↑*i*P		**Pn**	**03 59 59.6**	**-0.3**
MMPH				*i* S		**Sn**	**04 00 16.2**	**+0.2**
BESP	**Borongan**	**1.79**	**153**	*e*P		**Pn**	**04 00 06.8**	**0.0**
AUQP	**San Andres**	**1.89**	**274**	*e*P		**Pn**	**04 00 09.8**	**+1.6**
AUQP				*e*S		**Sn**	**04 00 49.3**	**+18**
PLP	**Palo**	**2.06**	**170**	↓*i*P		**Pn**	**04 00 11.1**	**+0.5**
PLP				*e*S		**Sn**	**04 00 34.5**	**-0.5**
OCLP	**Ormoc**	**2.14**	**180**	*e*P		**Pn**	**04 00 12.7**	**+1.0**
OCLP				*e*S		Sn	04 00 59.5	+22
GQP	**Guinayangan**	**2.22**	**288**	↑*i*P		**Pn**	**04 00 12.5**	**-0.2**
GQP				*i* S		**Sn**	**04 00 40.7**	**+1.7**
RCP	**Roxas**	**2.45**	**228**	↑*e*P		**Pn**	**04 00 15.9**	**0.0**
RCP				*e*S		**Sn**	**04 00 44.6**	**-0.1**
OTRP	**Odiongan**	**2.67**	**252**	*e*P		**Pn**	**04 00 18.8**	**-0.1**
OTRP				*e*S		**Sn**	**04 00 52.4**	**+2.5**
KALP	**Kalibo**	**2.69**	**236**	↓*e*P		**Pn**	**04 00 20.2**	**+1.0**
LLP	**Lapu-Lapu**	**2.94**	**193**	↑*e*P		**Pn**	**04 00 22.2**	**-0.4**
LLP				*e*S		**Sn**	**04 00 57.2**	**+0.4**
POLP	**Polilio Island**	**3.00**	**301**	*e*P		**Pn**	**04 00 24.7**	**+1.2**
POLP				*e*S		**Sn**	**04 01 05.9**	**+7.7**
MSLP	**Maasin**	**3.06**	**175**	*e*P		**Pn**	**04 00 25.7**	**+1.4**
MSLP				*e*S		Sn	04 01 20.4	+21
GUIM	**Jordan**	**3.24**	**218**	*e*P		**Pn**	**04 00 26.7**	**-0.1**
SJMP	**San Jose**	**3.49**	**258**	*e*P		**Pn**	**04 00 31.2**	**+1.0**
SCPH	**Surigao**	**3.51**	**166**	*e*P		**Pn**	**04 00 31.1**	**+0.7**
SCPH				*e*S		**Sn**	**04 01 05.2**	**-5.5**
TBP	**Tagbilaran**	**3.57**	**192**	*e*P		**Pn**	**04 00 31.1**	**-0.2**
TBP				*e*S		**Sn**	**04 01 06.2**	**-6.0**
BALP	**Baler**	**3.87**	**311**	*e*P		**Pn**	**04 00 33.3**	**-2.1**
BALP				*e*S		Sn	04 01 44.9	+25
PCPH	**Palayan**	**4.13**	**305**	↓*e*P		**Pn**	**04 00 38.9**	**-0.1**
PCPH				*e*S		**Sn**	**04 01 23.2**	**-2.9**
CUYO	**Cuyo Island**	**4.23**	**237**	*e*P		**Pn**	**04 00 40.3**	**0.0**
LUBP	**Lubang**	**4.28**	**278**	*e*P		**Pn**	**04 00 41.2**	**+0.2**
BUTP	**Butuan**	**4.33**	**167**	*e*P		**Pn**	**04 00 44.7**	**+3.0**
NBP	**Mount Natib**	**4.35**	**291**	↑*e*P		**Pn**	**04 00 42.6**	**+0.7**
PALP	**Palanan**	**4.38**	**331**	↓*i*P		**Pn**	**04 00 50.5**	**+8.2**
PALP				*i* S		**Sn**	**04 01 27.0**	**-5.1**
BUSP	**Coron**	**4.47**	**255**	*e*P		**Pn**	**04 00 44.0**	**+0.4**
CAUP	**Cauayan**	**4.59**	**324**	*e*P		**Pn**	**04 00 44.4**	**-0.8**
BCPH	**Baguio City Da**	**5.02**	**309**	↑*e*P		**Pn**	**04 00 52.8**	**+1.6**
BCPH				*e*S		**Sn**	**04 01 44.8**	**-3.1**
CVP	**Callao Caves**	**5.22**	**329**	↓*e*P		**Pn**	**04 00 55.5**	**+1.6**
SCZP	**Santa Cruz**	**5.22**	**300**	*e*P		**Pn**	**04 00 57.0**	**+3.1**
BIPH	**Bislig**	**5.28**	**161**	↓*i*P		**Pn**	**04 00 56.4**	**+1.7**
BIPH				*i* S		**Sn**	**04 02 12.0**	**+18**
BUKP	**Musuan**	**5.31**	**175**	*e*P		**Pn**	**04 00 57.1**	**+1.9**
ENPP	**El Nido**	**5.45**	**249**	*e*P		**Pn**	**04 00 57.3**	**+0.2**
PAGZ	**Pagadian**	**5.46**	**193**	*e*P		**Pn**	**04 00 58.0**	**+0.7**
BOLP	**Bolinao**	**5.53**	**305**	*e*P		**Pn**	**04 01 00.1**	**+1.9**
APYP	**Conner**	**5.65**	**325**	*e*P		**Pn**	**04 00 59.8**	**-0.1**
APYP				*e*S		**Sn**	**04 02 04.1**	**+0.6**
SIPP	**Brgy, Tapao**	**6.17**	**320**	*e*S		**Sn**	**04 02 19.9**	**+3.8**
DAV	**Davao City (W)**	**6.17**	**171**	P		**Pn**	**04 01 05.2**	**-1.8**
75nm,0.3s,baz=63,slow=23,SNR=2.3								
DAV				LR		LR	04 03 59.4	
comp=Z,6μm,21.3s,baz=353,slow=43								
BATP	**Bataraza**	**8.00**	**237**	*e*P		**Pn**	**04 01 34.7**	**+2.7**
KDM	**Kudat**	**9.89**	**232**	↑P		**Pn**	**04 02 04.4**	**+6.5**
MYLDM	**Lahad Datu**	**10.00**	**218**	↓P		**Pn**	**04 02 04.2**	**+4.7**
SDKM	**Sandakan**	**10.49**	**225**	↑P		**Pn**	**04 02 08.8**	**+2.6**
KKM	**Kota Kinabalu**	**10.92**	**230**	↓P		**Pn**	**04 02 17.8**	**+5.7**
KKM	**Kota Kinabalu**	**10.92**	**230**	*e*Pn		**Pn**	**04 02 11.3**	**-0.7**
TSM	**Tawau**	**11.08**	**218**	↑P		**Pn**	**04 02 17.2**	**+3.0**
YHNB	**Yeheng**	**11.80**	**345**	*e*Pn		**Pn**	**04 02 30.8**	**+6.7**
JOW	**Kunigami**	**13.98**	**14**	P		**Pn**	**04 02 54.5**	**+0.7**
3.4nm,0.3s,baz=166,slow=18,SNR=12								
JOW				LR		LR	04 07 34.7	
comp=Z,1μm,20.5s,baz=324,slow=33								
BTM	**Bintulu**	**15.12**	**230**	↑P		**Pn**	**04 03 12.8**	**+3.8**
QIZ	**Qiongzhong**	**15.32**	**294**	P		**Pn**	**04 03 10.4**	**-1.1**
QIZ				S		**S**	**04 05 59.5**	**-15**
QIZ				LR		LR		
comp=N,743nm,16.0s								
QIZ				LR		LR		
comp=Z,943nm,18.2s								
SBUM	**Sibu**	**16.27**	**230**	↑P		**Pn**	**04 03 25.5**	**+1.9**
SSE	**Sheshan**	**18.08**	**350**	P		**Pn**	**04 03 49.4**	**+3.4**
SSE				XP		sP	04 04 07.5	+4.1
SSE				S		**S**	**04 07 09.8**	**-0.8**
SSE				XS		sS	04 07 32.9	+4.2
SSE				AMB		AMB		
comp=Z,47nm,0.8s								
SSE				AMB		AMB		
comp=Z,198nm,5.5s								
SSE				LR		LR		
comp=N,488nm,17.2s								
SSE				LR		LR		
comp=E,204nm,17.3s								
SSE				LR		LR		
comp=Z,700nm,16.1s								
KSM	**Kuching**	**18.34**	**232**	↓P		**Pn**	**04 03 50.0**	**+0.7**
KSM	**Kuching**	**18.34**	**232**	*e*P		**Pn**	**04 03 48.7**	**-0.6**
KAPI	**Kappang**	**18.73**	**195**	P		**Pn**	**04 03 45.8**	**-8.3**
comp=Z,347nm,1.1s,SNR=6.6								
KAPI	**Kappang**	**18.73**	**195**	P		**Pn**	**04 03 50.7**	**-3.4**
comp=Z,1.5nm,0.3s,baz=16,slow=6.8,SNR=13								
KAPI				LR		LR	04 11 26.5	
comp=Z,942nm,20.4s,baz=22,slow=38								
KAPI	**Kappang**	**18.73**	**195**	*e*P		**Pn**	**04 03 51.7**	**-2.4**
NJ2	**Nanjing**	**19.49**	**345**	*e*P		**Pn**	**04 04 05.4**	**+2.5**
NJ2				AP		pP	04 04 15.8	+3.2
NJ2				XP		sP	04 04 21.6	+2.8
NJ2				PP			04 04 24.5	
NJ2				S		**S**	**04 07 37.0**	**-1.9**
NJ2				AMB		AMB		
comp=Z,10.0nm,0.6s								
NJ2				AMB		AMB		
comp=Z,170nm,4.2s								
NJ2				LR		LR		
comp=N,270nm,26.7s								
NJ2				LR		LR		
comp=E,370nm,19.8s								
NJ2				LR		LR		
comp=Z,370nm,19.8s								
WHN	**Wuhan**	**19.68**	**333**	P		**Pn**	**04 04 05.3**	**0.0**
WHN				S		**S**	**04 07 43.8**	**+0.9**
WHN				LR		LR		
comp=N,2μm,36.7s								
WHN				LR		LR		
comp=E,1μm,24.3s								
WHN				LR		LR		
comp=Z,2μm,21.0s								
GUMO	**Guam**	**19.71**	**87**	P		**Pn**	**04 04 05.6**	**-0.1**
comp=Z,5.3nm,0.3s,baz=24,slow=20,SNR=4.5								
GUMO				LR		LR	04 10 14.7	
comp=Z,519nm,19.0s,baz=264,slow=32								
GYA	**Guiyang**	**21.38**	**311**	P		**P**	**04 04 20.8**	**-1.1**
GYA				AP			04 04 32.5	
GYA				XP		sP	04 04 38.3	-1.3
GYA				PP			04 04 48.0	
GYA				PPP			04 04 58.3	
GYA				S		**S**	**04 08 15.4**	**-1.3**
GYA				XS		sS	04 08 34.3	-0.9
GYA				SS			04 08 56.5	
GYA				AMB		AMB		
comp=Z,10.0nm,0.8s,mb4.2								
GYA				AMB		AMB		
comp=Z,200nm,4.5s								
GYA				LR		LR		
comp=N,930nm,11.1s,MS4.6								
GYA				LR		LR		
comp=E,1μm,13.2s,MS4.6								
GYA				LR		LR		
comp=Z,1μm,12.5s,MS4.6								
CBIJ	**Chichi jima**	**21.48**	**47**	LR		LR	04 10 54.4	
comp=Z,892nm,20.3s,MS4.2,baz=279,slow=31								
KTGM	**Kuala Trenggan**	**22.58**	**252**	↓P		**P**	**04 04 34.7**	**-0.1**
BATI	**Baumata**	**23.28**	**182**	P		**P**	**04 04 39.9**	**-2.2**
comp=Z,34nm,0.6s,mb5.0,baz=107,slow=3.4,SNR=4.2								
BATI				LR		LR	04 14 43.2	
comp=Z,612nm,19.3s,MS4.1,baz=91,slow=39								
MYKOM	**Kota Tinggi**	**23.47**	**243**	↑P		**P**	**04 04 44.9**	**+1.0**
KMI	**Kunming**	**23.78**	**303**	P		**P**	**04 04 47.8**	**+1.2**
KMI				AP			04 05 00.3	
KMI				XP		sP	04 05 06.1	+1.1
KMI				PP			04 05 21.5	
KMI				PPP			04 05 32.9	
KMI				S		**S**	**04 08 57.8**	**-1.0**
KMI				XS		sS	04 09 18.8	-1.1
KMI				SS			04 09 49.9	
KMI				SSS			04 10 06.6	
KMI				AMB		AMB		
comp=Z,197nm,3.8s								
KMI				LR		LR		
comp=N,664nm,13.3s,MS4.4								
KMI				LR		LR		
comp=E,594nm,16.4s,MS4.4								
KMI				LR		LR		
comp=Z,688nm,20.7s,MS4.1								
KGM	**Kluang**	**23.83**	**244**	↓P		**P**	**04 04 46.4**	**-0.7**
TIA	**Tai'an**	**23.88**	**345**	*e*P		**P**	**04 04 47.3**	**-0.1**
JHJ	**Hachijo jima 2**	**24.18**	**32**	LR		LR	04 12 14.1	
comp=Z,706nm,21.5s,MS4.1,baz=240,slow=31								
KSRS	**Korea Array**	**24.33**	**6**	P		**P**	**04 04 51.9**	**+0.4**
comp=Z,5.3nm,0.7s,mb4.1,baz=183,slow=9.8,SNR=15								
KSRS				LR		LR	04 13 42.5	
comp=Z,672nm,21.3s,MS4.1,baz=187,slow=34								
XAN	**Xi'an**	**25.17**	**328**	P		**P**	**04 04 58.6**	**-0.6**
XAN				S		**S**	**04 09 21.3**	**+0.4**
XAN				AMB		AMB		
comp=Z,9.0nm,0.9s,mb4.3								
XAN				AMB		AMB		
comp=Z,55nm,5.6s								
CMAR	**Chiang Mai Arr**	**25.23**	**285**	P		**P**	**04 04 57.7**	**-2.2**
comp=Z,1.8nm,0.3s,mb4.0,baz=101,slow=7.9,SNR=13								
CMAR				LR		LR	04 15 03.3	
comp=Z,276nm,19.4s,MS3.8,baz=100,slow=37								
CMAR	**Chiang Mai Arr**	**25.23**	**285**	↑*e*P		**P**	**04 04 58.9**	**-1.0**
MAJO	**Matsushiro**	**26.25**	**25**	*e*P		**P**	**04 05 09.2**	**+0.3**
MAJO				pmax		pmax		
comp=Z,30nm,1.4s,mb4.6								
MAJO	**Matsushiro**	**26.25**	**25**	*e*P		**P**	**04 05 09.2**	**+0.3**
comp=Z,30nm,1.4s,mb4.6								
MAT	**Matsushiro**	**26.25**	**25**	P		**P**	**04 05 08.4**	**-0.5**
MAT				S		**S**	**04 09 44.0**	**+6.1**
MJAR	**Matsushiro Arr**	**26.25**	**25**	P		**P**	**04 05 07.6**	**-1.3**
comp=Z,2.4nm,0.8s,mb3.8,baz=203,slow=8.8,SNR=7.6								
MJAR				PcP		PcP	04 08 34.5	-0.1
comp=Z,3.7nm,0.8s,baz=183,slow=2.2,SNR=7.8								
MJAR				LR		LR	04 13 44.7	
comp=Z,764nm,21.8s,MS4.2,baz=205,slow=32								
MJAR	**Matsushiro Arr**	**26.25**	**25**	P		**P**	**04 05 07.6**	**-1.3**
MJAR							04 08 34.5	
PSI	**Prapat**	**27.43**	**250**	↑*e*P		pP	04 05 32.1	-0.3
BJT	**Baijiatuau**	**27.72**	**346**	*e*P		**P**	**04 05 22.9**	**+0.8**
BJT				pmax		pmax		
comp=Z,35nm,0.9s								
BJT	**Baijiatuau**	**27.72**	**346**	*e*P		**P**	**04 05 22.9**	**+0.7**
comp=Z,35nm,0.9s,mb5.0								
BJI	**Beijing**	**27.74**	**346**	P		**P**	**04 05 23.0**	**+0.7**
BJI				S		**S**	**04 10 13.3**	**+12**
BJI				AMB		AMB		
comp=Z,11nm,1.1s,mb4.4								
BJI				AMB		AMB		
comp=Z,179nm,4.3s								
BJI				LR		LR		
comp=N,302nm,16.7s,MS4.1								
BJI				LR		LR		
comp=E,268nm,13.8s,MS4.1								
LZH	**Lanzhou**	**29.46**	**324**	↑P		**P**	**04 05 43.0**	**+5.4**
LZH				AP		pP	04 05 52.6	+2.3
LZH				XP		sP	04 05 56.5	+0.3
LZH				PP		PP	04 06 40.1	-4.7
LZH				*e*S		**S**	**04 10 35.4**	**+6.9**
LZH				XS		sS	04 10 51.5	+1.5
LZH				SS		SS	04 12 11.3	-24
LZH				AMB		AMB		
comp=Z,18nm,1.0s,mb4.8								
LZH				AMB		AMB		
comp=Z,78nm,4.2s								
LZH				LR		LR		
comp=N,591nm,12.0s								
LZH				LR		LR		
comp=Z,978nm,13.8s,MS4.6								
HHC	**Hu-ho-hao-te**	**29.82**	**340**	*e*P		**P**	**04 05 42.6**	**+1.9**
HHC				AP		pP	04 05 55.6	+2.2
HHC				XP		sP	04 06 01.0	+1.7
HHC				PP		PP	04 06 42.0	-6.7
HHC				PCP		PcP	04 08 43.3	+0.1
HHC				S		**S**	**04 10 36.6**	**+2.6**
HHC				XS		sS	04 10 58.1	+2.6
HHC				SCP		ScP	04 12 21.4	0.0
HHC				PCS		PcS	04 12 26.3	-0.1
HHC				SCS		ScS	04 16 14.9	-1.5
HHC				AMB		AMB		
comp=Z,21nm,0.6s,mb5.0								
HHC				AMB		AMB		
comp=Z,115nm,5.2s								
HHC				LR		LR		
comp=N,363nm,11.7s,MS4.4								
HHC				LR		LR		
comp=E,478nm,12.6s,MS4.4								
HHC				LR		LR		
comp=Z,431nm,12.7s,MS4.3								
BTO	**Baotou**	**30.14**	**338**	*e*P		**P**	**04 05 47.8**	**+4.2**
VLA	**Vladivostok**	**30.46**	**11**	*e*P		pP	04 05 57.0	-2.1
VLA				pmax		pmax		
comp=Z,73nm,1.4s,mb5.2								
CN2	**Changchun**	**30.50**	**1**	*e*P		**P**	**04 05 51.6**	**+4.9**
CN2				*e*XP		sP	04 06 08.9	+3.6
CN2				*e*S		**S**	**04 10 50.6**	**+6.0**
CN2				AMB		AMB		
comp=Z,10.0nm,1.1s,mb4.5								
CN2				AMB		AMB		
comp=Z,200nm,4.0s								
CN2				LR		LR		
comp=N,300nm,17.0s,MS4.2								
CN2				LR		LR		
comp=E,300nm,17.0s,MS4.2								
CN2				LR		LR		
comp=Z,420nm,17.0s,MS4.2								
FITZ	**Fitzroy Crossi**	**31.13**	**178**	↑*i*P		**P**	**04 05 48.6**	**-3.9**
FITZ	**Fitzroy Crossi**	**31.13**	**178**	P		**P**	**04 05 48.5**	**-3.9**
comp=Z,4.1nm,0.8s,mb4.3,baz=360,slow=12,SNR=9.4								
MDJ	**Mudanjiang**	**31.59**	**7**	P		**P**	**04 05 57.0**	**+0.7**
MDJ				AP		pP	04 06 07.8	-1.3
MDJ				XP		sP	04 06 12.9	-2.0
MDJ				PP		PP	04 07 05.9	-2.5
MDJ				S		**S**	**04 11 08.5**	**+6.8**
MDJ				AMB		AMB		
comp=Z,11nm,1.1s,mb4.6								
MDJ				AMB		AMB		
comp=Z,77nm,5.4s								
MDJ				LR		LR		
comp=N,509nm,22.0s								
MDJ				LR		LR		
comp=E,163nm,15.8s								
MDJ				LR		LR		
comp=Z,679nm,22.9s,MS4.3								
MDJ	**Mudanjiang**	**31.59**	**7**	*e*P		**P**	**04 05 57.3**	**+0.9**
comp=Z,41nm,1.1s,mb5.2								
COEN	**Coen**	**32.66**	**145**	*e*P		**P**	**04 06 03.3**	**-2.7**
comp=Z,4.0nm,0.8s,mb4.4								
GTA	**Gaotai**	**34.06**	**325**	*e*P		**P**	**04 06 18.6**	**+0.6**
GTA				AP		pP	04 06 31.3	+0.5
GTA				XP		sP	04 06 37.3	+0.7
GTA				PP		PP	04 07 35.5	-0.3
GTA				S		**S**	**04 11 38.9**	**-1.3**
GTA				AMB		AMB		
comp=Z,6.0nm,1.1s,mb4.4								
GTA				AMB		AMB		
comp=Z,122nm,3.9s								
GTA				LR		LR		
comp=N,252nm,22.5s,MS4.1								
GTA				LR		LR		
comp=E,277nm,18.0s,MS4.1								
GTA				LR		LR		
comp=Z,255nm,17.7s,MS4.0								
WRAB	**Tennant Creek**	**34.30**	**164**	*e*P		**P**	**04 06 17.2**	**-3.

SONM LR LR 04 24 48.8
comp=Z,252nm,18.3s,MS4.1,baz=153,slow=40
SONM Songino Array 37.72 340 P **P 04 06 49.7 +0.5**
SONM 04 09 04.7
ASAR Alice Springs 37.76 166 P **P 04 06 47.6 -2.1**
comp=Z,9.4nm,0.5s,mb4.7,baz=354,slow=8.2,SNR=194
ASAR S **S 04 12 31.2 -5.8**
comp=Z,1.1nm,0.8s,baz=352,slow=16,SNR=5.9
JIRN Jiri 38.59 298 eP **P 04 06 55.9 -1.0**
comp=Z,7.4nm,0.3s,mb5.0
GUN Gumba 38.92 298 eP **P 04 06 58.4 -1.2**
comp=Z,112nm,1.0s,mb5.6
PKIN Phulchoki 39.26 298 eP **P 04 07 00.7 -1.7**
comp=Z,10.0nm,0.7s,mb4.7
CTA Charters Tower 39.34 147 eP **P 04 07 01.9 -1.2**
CTA Charters Tower 39.34 147 P **P 04 07 01.7 -1.5**
comp=Z,2.8nm,0.7s,mb4.1,baz=348,slow=10,SNR=3.5
CTA PcP PcP 04 09 11.3 +0.3
comp=Z,4.5nm,0.9s,baz=326,slow=8.2,SNR=3.6
CTAO Charters Tower 39.34 147 eP **P 04 07 01.8 -1.3**
CTAO pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
CTAO Charters Tower 39.34 147 eP **P 04 07 01.8 -1.4**
comp=Z,8.7nm,1.0s,mb4.4
KKN Kakani 39.41 298 eP **P 04 07 02.2 -1.5**
DMN Daman 39.52 297 eP **P 04 07 02.9 -1.7**
comp=Z,38nm,0.8s,mb5.2
CIT Chita 39.73 349 eP pP 04 07 16.4 -2.5
GKN Gorkha 40.01 298 eP **P 04 07 06.9 -1.8**
comp=Z,30nm,1.0s,mb5.0
DANN Dangsing 40.84 298 eP **P 04 07 14.1 -1.5**
comp=Z,28nm,0.9s,mb4.9
KOLN Koldanda 40.85 297 eP **P 04 07 14.1 -1.6**
comp=Z,15nm,0.8s,mb4.7
ZAK Zakamensk 40.96 339 eP pP 04 07 25.2 -4.0
ZAK e 04 09 13.9
ZAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
HNR Honiara 41.67 121 LR LR 04 22 02.0
comp=Z,345nm,21.2s,MS4.2,baz=114,slow=32
TLY Talaya 41.94 341 eP pP 04 07 33.5 -3.8
TLY e 04 09 16.7
TLY eSS SS 04 17 16.4 +29
TLY pmax pmax
comp=Z,20nm,1.0s,mb4.7
TLY Talaya 41.94 341 eP **P 04 07 25.2 +1.1**
comp=Z,19nm,0.9s,mb4.7
TLY epP pP 04 07 37.0 -0.3
TLY esP sP 04 07 42.8 -0.2
MOY Mondy 42.83 338 eP **P 04 07 32.8 +1.4**
MDRS Chennai 43.16 275 ex x 04 07 54.0
MDRS ex x 04 13 28.0
MDRS ex x 04 19 35.0
MDRS ex x 04 22 40.0
MDRS ex x 04 29 37.0
MDRS ex x 04 33 52.0
CLNS Chul'man 43.54 0 eP **P 04 07 31.7 -5.4**
CLNS e 04 07 49.6
CLNS pmax pmax
comp=Z,2.0nm,0.2s,mb4.5
CLNS pmax pmax
comp=E,4.0nm,0.4s
CLNS pmax pmax
comp=N,3.0nm,0.4s
FORT Forrest 43.86 176 eP **P 04 07 36.8 -3.1**
WMQ Urumqi 43.93 321 eP **P 04 07 41.4 +1.0**
WMQ AP pP 04 07 53.0 -0.6
WMQ XP sP 04 08 00.0 +0.7
WMQ S **S 04 14 10.0 +1.5**
WMQ XS sS 04 14 31.0 +0.4
WMQ SCS ScS 04 17 34.0 -1.1
WMQ AMB AMB
comp=Z,12nm,1.0s,mb4.6
WMQ AMB AMB
comp=Z,168nm,4.9s
WMQ LR LR
comp=N,634nm,11.4s,MS4.8
WMQ LR LR
comp=E,415nm,13.8s,MS4.8
WMQ LR LR
comp=Z,451nm,19.7s
KLBR Kellerberrin 45.02 188 eP **P 04 07 45.7 -3.5**
BOD Bodaibo 45.25 352 eP **P 04 07 52.0 +1.3**
BOD pmax pmax
comp=Z,13nm,1.0s,mb4.7
EIDS Eidsvold 46.21 146 eP **P 04 08 02.8 +4.1**
comp=Z,72nm,0.8s,mb5.7
STKA Stephens Creek 47.69 160⇑iP **P 04 08 08.5 -1.7**
STKA Stephens Creek 47.69 160 P **P 04 08 08.7 -1.5**
comp=Z,9.2nm,0.6s,mb5.0,baz=328,slow=7.3,SNR=28
PEA0B Petropavlovsk- 47.70 26 eP **P 04 08 11.0 +1.1**
PEA0B esP sP 04 08 29.6 +0.7
PETK Petropavlovsk- 47.70 26 P **P 04 08 11.2 +1.3**
comp=Z,9.7nm,0.8s,mb4.9,baz=205,slow=3.8,SNR=12
PETK LR LR 04 27 43.1
comp=Z,177nm,20.1s,MS4.0,baz=218,slow=35
PET Petropavlovsk 48.06 27 eP **P 04 08 13.8 +1.1**
PET e*PP pP 04 08 26.2 +0.1
PET eS **S 04 15 08.1 +0.6**
PET pmax pmax
comp=Z,26nm,1.4s,mb5.1
PET MLR MLR
comp=Z,200nm,22.0s,MS4.0
PET Petropavlovsk 48.06 27 eP **P 04 08 15.3 +2.5**
comp=Z,46nm,1.1s,mb5.4
PET epP pP 04 08 23.8 -2.2
MK31 Makanchi Array 48.72 322 iP **P 04 08 18.2 +0.2**
MK31 pmax pmax
comp=Z,22nm,0.9s,mb5.2
MKAR Makanchi Array 48.72 322 P **P 04 08 18.4 +0.3**
comp=Z,11nm,0.9s,mb4.9,baz=116,slow=8.5,SNR=41
YAK Yakutsk 48.89 3⇓eP **P 04 08 20.1 +1.1**
YAK pmax pmax
comp=Z,36nm,1.0s,mb5.4
ZAA0 Zalesovo Array 51.29 331 eP **P 04 08 36.6 -0.7**
ZALV Zalesovo Beam 51.29 331 P **P 04 08 37.4 0.0**
comp=Z,16nm,0.9s,mb5.0,baz=111,slow=6.5,SNR=51
ZALV LR LR 04 31 50.3
comp=Z,155nm,18.1s,MS4.1,baz=328,slow=38
TKM2 Tokmak 2 51.45 315 eP **P 04 08 39.0 +0.3**
TKM2 pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
TKM2 Tokmak 2 51.45 315 eP **P 04 08 39.0 +0.2**
comp=Z,8.9nm,0.8s,mb4.8
UCH Uchtor 51.98 314 eP **P 04 08 43.6 +0.9**
comp=Z,32nm,0.9s,mb5.3
UCH epP pP 04 08 56.3 +0.2
AML Almayashu 52.52 313 eP **P 04 08 48.0 +1.2**
comp=Z,12nm,1.0s,mb4.8
AML epP pP 04 09 01.2 +1.0
NVS Novosibirsk 52.56 331⇑iP **P 04 08 45.6 -1.2**
NVS e pP 04 08 57.7 -2.5
NVS eS **S 04 16 04.6 -5.5**
NVS pmax pmax
comp=N,15nm,1.1s
NVS pmax pmax
comp=E,19nm,1.1s
NVS pmax pmax
comp=Z,26nm,1.1s,mb5.1
NVS smax
comp=N,46nm,3.0s
EKS2 Erkin-Say 52.63 314 eP **P 04 08 47.9 +0.3**
comp=N,16nm,0.9s,mb5.0
EKS2 epP pP 04 09 00.6 -0.3
KURK Kurchatov 52.74 325 P **P 04 08 47.9 -0.3**
comp=N,8.4nm,0.8s,mb4.7,baz=122,slow=7.8,SNR=49
KURK Kurchatov 52.74 325⇑eP **P 04 08 48.5 +0.3**
KURK pmax pmax
comp=Z,39nm,1.3s,mb5.2
KURK Kurchatov 52.74 325 eP **P 04 08 48.4 +0.2**
comp=Z,83nm,0.9s,mb5.7
KURK epP pP 04 09 01.4 -0.3
SEY Seymchan 53.41 15⇑eP **P 04 08 53.5 +0.6**
CNB Canberra Magne 53.65 155 eP **P 04 08 54.4 -0.7**
TOO Toolangi 54.18 160 eP **P 04 08 57.8 -1.1**
KBL Kabul 54.36 303 eP **P 04 09 00.3 -0.1**
KBL pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KBL Kabul 54.36 303 eP **P 04 09 00.2 -0.1**
comp=Z,4.1nm,0.5s,mb4.6
KK31 Karatay Array 55.05 314 P **P 04 09 03.8 -1.4**
KK31 pmax pmax
comp=Z,19nm,1.0s,mb5.1
VOSK Vostochnaya 57.90 325 P **P 04 09 24.3 -1.0**
VOSK pmax pmax
comp=Z,12nm,0.8s,mb5.0
BVA0 Borovoye Array 58.34 325 iP **P 04 09 28.0 -0.4**
BVA0 pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BVAR Borovoye Array 58.34 325 P **P 04 09 27.7 -0.6**
comp=Z,6.9nm,0.8s,mb4.7,baz=116,slow=10,SNR=27
BRVK Borovoye 58.41 325 P **P 04 09 29.7 +0.8**
comp=Z,281nm,0.8s,SNR=7.2
BRVK Borovoye 58.41 325 P **P 04 09 28.9 0.0**
BRVK pmax pmax
comp=Z,56nm,0.9s,mb5.6
BRVK Borovoye 58.41 325 eP **P 04 09 28.9 +0.1**
comp=Z,59nm,0.9s,mb5.6
BRVK epP pP 04 09 41.9 -0.6
BILL Bilibino 61.05 17 eP **P 04 09 47.7 +1.0**
BILL pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
AB31 Akbulak array 63.61 319 iP **P 04 10 02.9 -1.3**
AB31 pmax pmax
comp=Z,15nm,1.0s,mb5.0
SVE Sverdlovsk 64.88 327 eP **P 04 10 12.4 0.0**
SVE pmax pmax
comp=Z,21nm,0.9s,mb5.2
AKTO Aktyubinsk 65.05 320 P **P 04 10 11.8 -1.8**
AKTO pmax pmax
comp=Z,3.0nm,1.5s,mb4.1
ARU Arti 65.90 326 P **P 04 10 18.0 -0.9**
comp=Z,203nm,0.6s,SNR=5.1
ARU Arti 65.90 326c iP **P 04 10 18.0 -0.9**
ARU e*PP pP 04 10 38.5 +5.7
ARU e 04 10 44.1
ARU e 04 12 42.0
ARU ePPP 04 14 19.5
ARU eS S 04 19 02.7 +0.3
ARU eSS SS 04 23 24.9 +7.1
ARU pmax pmax
comp=Z,13nm,0.7s,mb5.1
ARU Arti 65.90 326 eP **P 04 10 17.8 -1.1**
comp=Z,25nm,0.7s,mb5.3
ARU epP pP 04 10 33.1 +0.3
UNV Unalaska Valle 67.00 37 eP **P 04 10 26.8 +0.7**
comp=Z,27nm,1.0s,mb5.2
UNV epP pP 04 10 40.7 +0.8
RPZ Rata Peaks 70.71 146 P **P 04 10 48.2 -1.0**
comp=Z,6.1nm,0.5s,mb4.8,baz=359,slow=3.1,SNR=5.1
SVW2 Sparrevohn 73.61 30 eP **P 04 11 07.9 +1.6**
SVW2 epP pP 04 11 22.0 +1.6
GNI Garni 73.92 308⇓iP pP 04 11 20.1 -2.5
GNI pmax pmax
comp=Z,20nm,1.4s
IMA2 Indian Mountai 74.66 25 eP **P 04 11 13.7 +1.4**
KDAK Kodiak Island 75.11 33 eP **P 04 11 15.9 +0.8**
comp=Z,223nm,2.0s,mb5.8
KIV Kislovodsk 75.18 312 eP **P 04 11 15.0 -0.8**
KIV pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KTH Kantishna Hill 75.81 27 eP **P 04 11 20.3 +1.2**
comp=Z,12nm,0.9s,mb4.8
COLD Coldfoot 76.06 24 eP **P 04 11 21.9 +1.6**
comp=Z,13nm,0.9s,mb4.8
COLD epP pP 04 11 36.6 +2.1
TRF Thorofare Moun 76.10 27 eP **P 04 11 21.3 +0.7**
comp=Z,4μm,1.1s
TRF epP pP 04 11 35.9 +1.1
KLMR Klimovskoe 76.19 330 P **P 04 11 18.5 -2.7**
KLMR pmax pmax
comp=Z,48nm,1.5s,mb5.2
MCK McKinley 76.70 27 eP **P 04 11 24.6 +0.6**
MCK e*PP pP 04 11 38.8 +0.7
MCK pmax pmax
comp=Z,80nm,1.1s,mb5.6
MCK McKinley 76.70 27 eP **P 04 11 24.6 +0.6**
comp=Z,80nm,1.1s,mb5.6
MCK epP pP 04 11 38.8 +0.7
PMR Palmer 76.72 29 eP **P 04 11 23.8 -0.4**
PMR e*PP pP 04 11 38.7 +0.4
PMR pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
PMR Palmer 76.72 29 eP **P 04 11 23.8 -0.3**
comp=Z,7.2nm,0.9s,mb4.6
PMR epP pP 04 11 38.7 +0.4
VSR Storozhevoye 76.99 320 eP **P 04 11 24.6 -1.3**
VSR pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
VSR pmax pmax
comp=N,3.0nm,0.8s
VSR pmax pmax
comp=E,2.0nm,0.5s
COLA College 77.11 26 eP **P 04 11 26.7 +0.4**
COLA e*PP pP 04 11 40.9 +0.5
COLA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
COLA College 77.11 26 eP **P 04 11 26.7 +0.4**
comp=Z,10nm,1.0s,mb4.7
COLA epP pP 04 11 40.9 +0.5
OBN Obninsk 78.18 324 eP **P 04 11 31.0 -1.5**
OBN pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
APA Apatity 78.36 337⇓iP pP 04 11 44.6 -2.8
APA pmax pmax
comp=Z,29nm,1.2s,mb5.1
DIV Divide 78.37 30 eP **P 04 11 35.3 +2.0**
comp=Z,45nm,1.2s,mb5.3
JOF Joensuu 79.85 332 ep **P 04 11 39.5 -2.0**
comp=Z,7.8nm,1.0s,mb4.6
JOF Joensuu 79.85 332 ep pP 04 11 53.6 -2.1
comp=Z,9.7nm,0.8s
JOF Joensuu 79.85 332 eP **P 04 11 39.5 -2.0**
JOF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
JOF Joensuu 79.85 332 eP **P 04 11 39.5 -2.0**
JOF eP pP 04 11 53.6 -2.1
KEV Kevo 80.33 340 ep pP 04 11 56.6 -1.6
comp=Z,4.7nm,0.8s
KEV Kevo 80.33 340 eP pP 04 11 56.6 -1.6
KEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
DAWY Dawson 80.84 26 eP **P 04 11 48.3 +1.5**
DAWY epP pP 04 12 02.6 +1.7
ARCES ARCESS Array B 80.89 339 P **P 04 11 46.6 -0.4**
comp=Z,7.1nm,1.0s,mb4.6,baz=68,slow=6.7,SNR=7.3
ARCES LR LR 04 53 57.1
comp=Z,163nm,18.9s,MS4.4,baz=282,slow=40
KAF Kangasniemi 82.29 332 ep pP 04 12 04.9 -3.8
comp=Z,9.3nm,0.9s
KAF Kangasniemi 82.29 332 eP **P 04 11 53.7 -0.8**
KAF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KAF Kangasniemi 82.29 332 eP **P 04 11 53.7 -0.8**
comp=Z,7.4nm,0.9s,mb4.6
KAF eP pP 04 12 04.9 -3.8
HYT Haines Junctio 82.39 29 eP **P 04 11 57.0 +2.0**
HYT epP pP 04 12 11.4 +2.1
AKASG Malin Array Be 83.28 320 P **P 04 11 58.6 -1.3**
comp=Z,1.9nm,0.8s,mb4.2,baz=65,slow=4.7,SNR=3.6
AKASG LR LR 04 53 33.5
comp=Z,70nm,20.7s,MS4.0,baz=90,slow=39
CSS Prodhromos 83.59 304 eP **P 04 11 58.6 -3.2**
comp=Z,5.7nm,0.6s,mb4.9
SKAG Skagway 83.78 30 eP **P 04 12 02.5 +0.3**
comp=Z,43nm,1.3s,mb5.4
KWP Kalwaria 87.60 320 eP **P 04 12 20.4 -1.0**
KWP pmax pmax
comp=Z,13nm,1.1s,mb5.1
KWP Kalwaria 87.60 320 eP **P 04 12 20.4 -1.0**
comp=Z,13nm,1.1s,mb5.1
KMBO Kilima Mbogo 87.69 268 LR LR 04 50 44.2
comp=Z,145nm,21.1s,MS4.4,baz=222,slow=35
UZH Uzhgorod 88.17 320c iP **P 04 12 24.0 -0.1**
UZH e pP 04 12 40.0 +1.5
UZH i 04 12 47.5
NB2 NORSAR Subarra 89.42 333 P **P 04 12 28.4 -1.3**
comp=Z,3.0nm,0.9s,mb4.6,baz=65,slow=4.8
NOA NORSAR Array B 89.42 333 P **P 04 12 27.8 -1.9**
comp=Z,2.1nm,0.8s,mb4.5,baz=67,slow=4.8,SNR=5.2
NOA LR LR 04 55 29.4
comp=Z,199nm,21.2s,MS4.5,baz=55,slow=37
PSZ Piszkesteto 89.91 319 eP **P 04 12 31.3 -1.0**
PSZ pmax pmax
comp=Z,3.0nm,1.1s,mb4.5
PSZ Piszkesteto 89.91 319 eP **P 04 12 31.3 -1.0**
comp=Z,3.2nm,1.1s,mb4.6
PPT Papeete 90.01 108 eLR LR 04 41 18.5
comp=Z,437nm,28.0s
PPT Papeete 90.01 108 LR LR 04 50 19.1
comp=Z,24nm,19.0s,MS3.6,baz=313,slow=34
TBI Tubuai 91.48 114 eLR LR 04 42 00.7
comp=Z,302nm,31.0s
YKA Yellowknife Ar 91.74 24 LR LR 04 54 59.4
comp=Z,78nm,19.4s,MS4.2,baz=220,slow=36
CLL Collm 92.78 324 iP **P 04 12 46.2 +0.7**
comp=Z,21nm,1.9s,mb5.2
CLL L 04 58 00.0
comp=Z,100nm,22.0s
GERES GERESS Array B 93.39 322 P **P 04 12 45.7 -2.7**
comp=Z,0.4nm,0.8s,mb3.9,baz=45,slow=2.5,SNR=3.5
GERES LR LR 04 58 29.1
comp=Z,106nm,19.1s,MS4.3,baz=273,slow=38
JCW Jim Creek 95.20 38 eP **P 04 12 57.6 +0.9**
MEM Membach 97.02 326 P **P 04 13 02.9 -2.0**
TAOE Nuku Hiva Isla 97.04 97 eLR LR 04 44 37.4
comp=Z,682nm,26.6s
BEBN Eben Emael 97.10 326 P **P 04 13 05.0 -0.3**
EDM Edmonton 97.43 31 eP **P 04 13 07.3 +0.6**
EDM e*PP pP 04 13 21.8 +0.6
BCLA Clavier 97.50 326 P **P 04 13 05.2 -2.0**
comp=Z,10nm,2.6s,mb4.8
DOU Dourbes 98.06 326 P **P 04 13 08.3 -1.3**
comp=Z,11nm,4.1s
LSZ Lusaka 99.47 256 LR LR 04 54 41.4
comp=Z,159nm,18.3s,MS4.6,baz=183,slow=33
TXAR Lajitas Array 117.08 47 PKP PKPdf 04 18 18.0 -0.6
comp=Z,0.5nm,0.7s,baz=147,slow=2.5,SNR=5.7
TXAR PKKP PKKPbc 04 29 07.8 +24
comp=Z,0.5nm,0.9s,baz=112,slow=3.4,SNR=4.1
TXAR Lajitas Array 117.08 47 PKP PKPdf 04 18 18.0 -0.6
TXAR PKKP PKKPbc 04 29 07.8 +24
TORD Torodi Ar. Bea 117.66 293 PKP PKPdf 04 18 18.4 -1.7
comp=Z,0.7nm,0.8s,baz=63,slow=1.3,SNR=4.4
TORD PKKPbc PKKPbc 04 28 41.8 +0.3
comp=Z,1.4nm,1.1s,baz=235,slow=5.1,SNR=2.6
JCT Junction City 119.08 44 ePKIKP PKPdf 04 18 21.0 -1.4
JCT e 04 18 38.3
ACSO Alum Creek Sta 120.98 24 ePKPdf PKPdf 04 18 24.7 -1.1
ACSO epPKPdf pPKPdf 04 18 41.1 +0.4
WCI Wyandotte Cave 121.21 28 ePKIKP PKPdf 04 18 26.3 0.0
HKT Hockley 122.04 42 ePKIKP PKPdf 04 18 27.8 -0.3
HKT e 04 18 42.7
WVT Waverly 122.15 31 ePKIKP PKPdf 04 18 27.6 -0.6
WVT e 04 18 43.5
TKL Tuckaleechee C 124.47 28 PKP PKPdf 04 18 31.9 -0.8
comp=Z,3.2nm,0.7s,baz=76,slow=4.2,SNR=7.2
JTS JuntasAbangare 142.50 53 ePKIKP PKPdf 04 19 06.6 -0.3
BCIP Isla Barro Col 147.08 49 ePKPbc PKPbc 04 19 16.8 -0.1
BCIP epPKPdf pPKPdf 04 19 32.2 +2.5
HUMP Col San Antoni 147.19 19 ePKPbc PKPbc 04 19 17.3 +0.2
HUMP epPKPdf pPKPdf 04 19 32.7 +2.9
CPD Cerro la Pandu 147.26 19 ePKPbc PKPbc 04 19 17.3 0.0
CPD epPKPdf pPKPdf 04 19 31.4 +1.5
MTP Monte Pirata 147.32 18 ePKPbc PKPbc 04 19 17.4 0.0
MTP epPKPdf pPKPdf 04 19 31.2 +1.2
PLCA Paso Flores 149.53 157 PKPbc PKPbc 04 19 21.5 -1.1
comp=Z,11nm,0.9s,baz=213,slow=4.9,SNR=16
PLCA Paso Flores 149.53 157 ePKPbc PKPbc 04 19 21.5 -1.1
FDF Fort de France 151.66 12 ePKIKP PKPbc 04 19 28.1 -0.2
OTAV Otavalo 153.52 61 ePKPdf PKPdf 04 19 25.5 +0.6
OTAV ePKPbc PKPbc 04 19 33.1 +0.5
OTAV ePKPab PKPab 04 19 43.2 -1.9
TRQA Tornquist 154.56 168 ePKPbc PKPbc 04 19 32.1 -2.0

CSEM ***22*** *04:16:13.2±1.1, 39.03N×29.17W, h5km, ML2.9, Error ellipse: s-maj=7.0km s-min=4.4km az=95.0, After PDA*
PDA 22 04:16:13.2±1.1**, 39.03N×29.17W, h5km, MD3.5, ML2.9, Error ellipse: s-maj=7.0km s-min=4.4km az=95.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.54**	**137**	eP	Pg	04 16 22.2	-1.4
PCED				eS	Sg	04 16 29.6	-1.0
PCED				A		04 16 30.4	
	342nm,0.1s						
PCED	**Cedros**	**0.54**	**137**	eP	Pg	04 16 22.2	-1.4
PCED				eS	Sg	04 16 29.6	-1.0
CALA	**Caldeira**	**0.58**	**140**	eP	Pg	04 16 23.0	-1.3
CALA				eS	Sg	04 16 30.3	-1.4
HOR	**Horta**	**0.65**	**139**	iP	Pg	04 16 23.9	-1.8
HOR				eS	Sg	04 16 32.4	-1.8
HOR	**Horta**	**0.65**	**139**	eS	Sg	04 16 32.4	-1.8
PICO	**Pico**	**0.78**	**132**	iP	Pg	04 16 26.3	-1.9
PICO				eS	Sg	04 16 35.6	-2.8
PICO	**Pico**	**0.78**	**132**	eS	Sg	04 16 35.6	-2.8
ROSA	**Rosais**	**0.79**	**112**	eP	Pg	04 16 25.8	-2.5
ROSA				eS	Sg	04 16 35.5	-3.1
SRBC	**Serra Branca**	**0.88**	**89**	eP	Pg	04 16 26.9	-3.2
SRBC				eS	Sg	04 16 37.6	-4.0
PGRA	**Graciosa**	**0.93**	**89**	eP	Pg	04 16 27.9	-3.1
PGRA				eS	Sg	04 16 39.1	-3.9
PGRA				A		04 16 40.0	
	157nm,0.2s						
PGRA	**Graciosa**	**0.93**	**89**	eP	Pg	04 16 27.9	-3.1
PGRA				eS	Sg	04 16 39.1	-3.9
PMAN	**Manadas**	**0.93**	**114**	eP	Pg	04 16 27.8	-3.3
PMAN				eS	Sg	04 16 39.3	-3.9
PMAN				A		04 16 40.5	
	136nm,0.3s						
PMAN	**Manadas**	**0.93**	**114**	eP	Pg	04 16 27.8	-3.3
PMAN				eS	Sg	04 16 39.3	-3.9
PSBA	**Serra de Santa**	**1.47**	**100**	eP	Pn	04 16 35.5	-4.8
PSBA				eS	Sn	04 16 52.3	-7.5
PSBA				A		04 16 55.0	
	40nm,0.3s						
PSBA	**Serra de Santa**	**1.47**	**100**	eP	Pn	04 16 35.5	-4.8
PSBA				eS	Sn	04 16 52.3	-7.5
PSET	**Sete Cidades**	**2.96**	**113**	eP	Pn	04 16 57.1	-3.8
PSET				eS	Sn	04 17 28.9	-7.9
PSET				A		04 17 32.4	
	5.4nm,0.2s						
PSET	**Sete Cidades**	**2.96**	**113**	eP	Pn	04 16 57.1	-3.8
PSET				eS	Sn	04 17 28.9	-7.9
PDA	**Ponta Delgada**	**3.04**	**114**	eP	Pn	04 16 58.8	-3.1
CMLA	**Cha da Macela**	**3.13**	**113**	eP	Pn	04 16 59.4	-3.8
PSMN	**Pico do Norte,**	**3.82**	**121**	eP	Pn	04 17 08.3	-4.3

BJI ***22*** *04:35:07.6, 3.91S×101.87E, h22km, mB5.3, mb5.0, Ms4.4, Msz4.0*
MOS ***22*** *04:35:12.5±0.9, 3.46S×101.63E, h33km, mb4.8/14, Error ellipse: s-maj=15.9km s-min=8.8km az=109.5*
ISCJB ***22*** *04:35:12.5±0.3, 3.65S±0.04×101.44E±0.04, h36km, mb4.6/50, MS3.9/5, Error ellipse: s-maj=7.2km s-min=4.7km az=136.7*
NEIC ***22*** *04:35:14.2±0.2, 3.57S×101.54E, mb4.6/16, Error ellipse: s-maj=8.1km s-min=5.4km az=59.0*
IDC ***22*** *04:35:14.9±0.5, 3.47S×101.59E, h38km±4km, mb4.2/21, mb1 4.3/22, mb1mx4.3/25, mbtmp4.2/22, ML4.7/1, MS3.8/4, Ms1 3.8/4, ms1mx3.3/28, Error ellipse: s-maj=16.0km s-min=10.8km az=55.0*
DJA ***22*** *04:35:23, 3.21S×102.03E, h10km, Mw5.3/4*
ISC 22 04:35:14.8±0.3**, 3.64S**±0.04×**101.47E**±0.04**, h38km, h38km**±2.1km**:pP-P, n118, σ1.12**/105**, mb4.6**/50**, MS3.9**/5**, 5C-5D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.12**	**91**	P	**Pn**	**04 35 34.3**	**+0.3**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.38**	**15**	P	**Pn**	**04 36 08.6**	**+3.5**
	0.0nm,0.0s						
BLSI	**Bandar Lampung**	**4.14**	**115**	P	**Pn**	**04 36 21.6**	**+6.1**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**4.89**	**73**	P	**Pn**	**04 36 27.4**	**+1.6**
	0.0nm,0.0s						
SBJI	**Serang**	**5.26**	**118**	P	**Pn**	**04 36 37.9**	**+7.0**
	0.0nm,0.0s						
MYKOM	**Kota Tinggi**	**5.90**	**24**	⇓P	**Pn**	**04 36 41.7**	**+2.0**
KGM	**Kluang**	**5.92**	**18**	⇓P	**Pn**	**04 36 41.7**	**+1.7**
DBJI	**Dramaga**	**6.00**	**119**	P	**Pn**	**04 36 45.1**	**+3.9**
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**6.24**	**82**	P	**Pn**	**04 36 45.3**	**+0.9**
	0.0nm,0.0s						
GSI	**Gunungsitoli**	**6.27**	**322**	⇑eP	**Pn**	**04 36 43.0**	**-1.8**
PSI	**Prapat**	**6.89**	**338**	⇓eP	**Pn**	**04 36 54.8**	**+1.5**
XMIS	**Christmas Isla**	**7.96**	**149**	ePn	**Pn**	**04 37 06.7**	**-1.4**
XMIS				eSn	**Sn**	**04 38 30.9**	**-6.0**
IPM	**Ipoh**	**8.08**	**357**	⇑P	**Pn**	**04 37 16.8**	**+7.1**

KTGM Kuala Trenggan 9.06 11 ⇑P Pn 04 37 27.6 +4.4
COCO West Island 9.65 208 eP Pn 04 37 29.9 -1.3
COCO pmax pmax
comp=Z,64nm,0.6s
COCO West Island 9.65 208 ePn Pn 04 37 29.9 -1.3
comp=Z,64nm,0.6s
COCO eSn Sn 04 39 01.9 -17
KSM Kuching 10.19 60 ⇓P Pn 04 37 38.1 -0.6
KSM Kuching 10.19 60 ePn Pn 04 37 37.2 -1.5
SJI Sawahan 11.03 112 P Pn 04 37 52.6 +2.5
comp=Z,0.0nm,0.0s
KAPI Kappang 18.28 95 P Pn 04 39 25.6 -0.1
comp=Z,2.3nm,0.3s,baz=275,slow=9.1,SNR=11
KAPI LR LR 04 47 01.4
comp=Z,232nm,20.7s,baz=166,slow=39
KAPI Kappang 18.28 95 eP Pn 04 39 25.3 -0.4
comp=Z,25nm,0.8s
KDM Kudat 18.58 56 ⇓P Pn 04 39 25.2 -4.1
MYLDM Lahad Datu 19.14 63 ⇑P Pn 04 39 31.7 -4.4
KDI Kendari 21.11 92 P P 04 39 57.9 +1.5
comp=Z,0.0nm,0.0s
CMAR Chiang Mai Arr 22.10 354 P P 04 40 06.2 -0.8
comp=Z,3.4nm,0.6s,mb4.0,baz=182,slow=9.3,SNR=15
CMAR LR LR 04 49 37.7
comp=Z,197nm,19.1s,MS3.5,baz=331,slow=39
BATI Baumata 22.97 108 P P 04 40 15.4 -0.8
comp=Z,28nm,0.4s,mb5.0,baz=282,slow=14,SNR=2.6
MBWA Marble Bar 24.87 136 eP P 04 40 34.6 +0.5
comp=Z,5.8nm,0.7s,mb4.2
FITZ Fitzroy Crossi 27.69 123 eP P 04 40 59.3 -0.3
FITZ Fitzroy Crossi 27.69 123 P P 04 40 59.3 -0.3
comp=Z,1.2nm,0.4s,mb3.9,baz=317,slow=10.0,SNR=11
NWAO Narrogin (SRO) 32.66 155 LR LR 04 54 02.3
comp=Z,275nm,20.4s,MS3.9,baz=321,slow=34
ODAN Odare 33.23 337 eP P 04 41 49.0 +0.6
comp=Z,19nm,0.5s,mb5.2
TAPN Taplejung 33.55 337 eP P 04 41 51.5 +0.3
comp=Z,56nm,0.9s,mb5.5
LSA Lhasa 34.59 344 eP P 04 42 00.8 +0.6
GUN Gumba 34.78 335 eP P 04 42 02.7 +0.9
comp=Z,41nm,0.5s,mb5.6
KKN Kakani 34.93 334 eP P 04 42 04.1 +1.0
comp=Z,23nm,0.7s,mb5.2
GKN Gorkha 35.39 334 eP P 04 42 07.6 +0.5
comp=Z,19nm,0.5s,mb5.3
KOLN Koldanda 35.66 332 eP P 04 42 10.3 +0.8
comp=Z,26nm,0.7s,mb5.3
WRA Warramunga Arr 35.91 119 P P 04 42 11.2 -0.5
comp=Z,4.2nm,0.4s,mb4.7,baz=302,slow=9.0,SNR=99
WRA S S 04 47 42.3 -5.3
comp=Z,3.7nm,1.1s,baz=292,slow=17,SNR=5.3
WRAB Tennant Creek 35.91 119 eP P 04 42 11.0 -0.8
WRAB pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
WRAB Tennant Creek 35.91 119 eP P 04 42 11.0 -0.8
comp=Z,6.2nm,0.5s,mb4.8
WB2 Warramunga Arr 35.92 119 eP P 04 42 10.9 -0.9
DANN Dangsing 36.08 333 eP P 04 42 13.7 +0.6
comp=Z,51nm,0.5s
FORT Forrest 36.85 140 eP P 04 42 19.8 +0.2
comp=Z,1.8nm,0.6s,mb4.1
ASAR Alice Springs 37.11 125 P P 04 42 21.8 -0.1
comp=Z,5.1nm,0.5s,mb4.6,baz=300,slow=7.9,SNR=67
ASAR S S 04 48 02.3 -3.5
comp=Z,2.4nm,0.9s,baz=296,slow=17,SNR=12
JOW Kunigami 39.86 39 P P 04 42 47.0 +2.1
comp=Z,12nm,0.6s,mb4.8,baz=170,slow=19,SNR=2.8
GTA Gaotai 42.87 358 eP P 04 43 09.3 -0.1
GTA AP pP 04 43 14.3 -6.0
GTA XP sP 04 43 18.0 -6.8
GTA AMB AMB
comp=Z,6.0nm,1.0s,mb4.3
GTA LR LR
comp=N,170nm,18.7s,MS4.1
GTA LR LR
comp=E,134nm,18.1s,MS4.1
GTA LR LR
comp=Z,217nm,21.7s,MS4.0
BJT Baijiatuau 45.50 16 eP P 04 43 29.2 -1.3
BJT pmax pmax
comp=Z,8.0nm,0.5s
BJT Baijiatuau 45.50 16 eP P 04 43 29.2 -1.3
comp=Z,7.8nm,0.5s,mb4.8
BJI Beijing 45.52 16 P P 04 43 28.9 -1.8
BJI AMB AMB
comp=Z,12nm,0.6s,mb5.0
BJI LR LR
comp=N,282nm,16.5s,MS4.3
BJI LR LR
comp=E,148nm,16.8s,MS4.3
BJI LR LR
comp=Z,164nm,19.3s,MS4.0
CTAO Charters Tower 46.58 114 eP P 04 43 38.6 -0.8
CTAO pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CTAO Charters Tower 46.58 114 eP P 04 43 38.6 -0.8
comp=Z,5.7nm,0.8s,mb4.5
STKA Stephens Creek 46.97 131 eP P 04 43 42.4 +0.1
STKA Stephens Creek 46.97 131 P P 04 43 42.6 +0.4
comp=Z,4.2nm,0.6s,mb4.6,baz=310,slow=6.5,SNR=14
KSRS Korea Array 47.71 29 P P 04 43 47.5 -0.3
comp=Z,2.7nm,0.9s,mb4.3,baz=205,slow=8.6,SNR=5.0
WMQ Urumqi 48.85 347 ⇑iP P 04 43 56.5 0.0
WMQ AMB AMB
comp=Z,55nm,0.8s,mb5.6
WMQ AMB AMB
comp=Z,128nm,5.1s
KSH Kashi 48.94 334 eP P 04 43 59.1 +1.8
SONM Songino Array 51.44 4 P P 04 44 16.1 0.0
comp=Z,8.0nm,0.7s,mb4.8,baz=187,slow=9.7,SNR=34
ULN Ulaanbaatar 51.52 5 eP P 04 44 16.1 -0.6
ULN pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ULN Ulaanbaatar 51.52 5 eP P 04 44 16.1 -0.6
comp=Z,4.6nm,0.6s,mb4.6
UCH Uchtor 51.79 335 eP P 04 44 19.0 +0.1
comp=Z,2.5nm,0.6s,mb4.3
TKM2 Tokmak 2 51.91 336 eP P 04 44 20.0 +0.3
TKM2 pmax pmax
comp=Z,18nm,0.5s,mb5.3
TKM2 Tokmak 2 51.91 336 eP P 04 44 20.0 +0.3
comp=Z,18nm,0.5s,mb5.2
CN2 Changchun 51.92 22 eP P 04 44 17.9 -1.9
EKS2 Erkin-Say 52.46 334 eP P 04 44 24.4 +0.6
comp=Z,14nm,0.8s,mb4.9
MJAR Matsushiro Arr 52.65 37 P P 04 44 22.8 -2.5
comp=Z,2.3nm,0.6s,mb4.3,baz=211,slow=7.9,SNR=7.3
MK31 Makanchi Array 53.00 344 eP P 04 44 26.6 -1.1
MKAR Makanchi Array 53.00 344 P P 04 44 27.2 -0.5
comp=Z,9.1nm,0.6s,mb4.9,baz=146,slow=7.9,SNR=53
MKAR pP pP 04 44 37.1 -1.7
comp=Z,9.4nm,0.6s,baz=148,slow=7.9,SNR=13
MKAR Makanchi Array 53.00 344 P P 04 44 27.2 -0.5
MKAR pP pP 04 44 37.1 -1.7
ZAK Zakamensk 53.83 1 eP P 04 44 29.4 -4.3
ZAK pmax pmax
comp=Z,4.0nm,1.5s,mb4.1
OPO Ambohidratompo 55.06 250 P P 04 44 45.2 +1.8
comp=Z,2.4nm,0.7s,mb4.3,baz=47,slow=8.5,SNR=3.7
KURK Kurchatov 57.59 343 P P 04 44 59.5 -1.2
comp=Z,5.9nm,0.8s,mb4.6,baz=160,slow=6.5,SNR=24
KURK pP pP 04 45 10.1 -1.8
comp=Z,6.0nm,0.7s,baz=165,slow=6.8,SNR=12
KURK Kurchatov 57.59 343 eP P 04 44 59.7 -1.0
KURK *PP pP 04 45 10.1 -1.8
KURK pmax pmax
comp=Z,12nm,0.7s,mb5.0
KURK Kurchatov 57.59 343 eP P 04 44 59.7 -1.0
comp=Z,12nm,0.7s,mb5.0
KURK pP pP 04 45 10.1 -1.9
KLR Kul'dur 58.85 23 eP P 04 45 04.8 -4.7
ZAA0 Zalesovo Array 59.05 349 eP P 04 45 09.3 -1.5
ZAA0 e pP 04 45 19.9 -2.2
ZALV Zalesovo Beam 59.05 349 P P 04 45 09.7 -1.1
comp=Z,6.0nm,0.5s,mb4.9,baz=179,slow=5.3,SNR=26
ZALV pP pP 04 45 19.9 -2.2
comp=Z,22nm,0.8s,baz=163,slow=5.2,SNR=12
ZALV LR LR 05 14 01.4
comp=Z,58nm,20.4s,MS3.7,baz=244,slow=40
ZALV Zalesovo Beam 59.05 349 P P 04 45 09.7 -1.1
ZALV *PP pP 04 45 19.9 -2.2
ZALV Zalesovo Beam 59.05 349 P P 04 45 09.7 -1.1
ZALV pP pP 04 45 19.9 -2.2
ZALV LR LR 05 14 01.4
NVS Novosibirsk 60.21 348 eP P 04 45 27.3 +8.5
NVS e 04 53 24.0

BOD Bodaibo 62.09 8 eP P 04 45 30.3 -1.2
BOD pmax pmax
comp=Z,4.0nm,1.7s,mb4.3
BVAR Borovoye Array 62.22 339 P P 04 45 31.2 -1.3
comp=Z,3.0nm,0.5s,mb4.7,baz=146,slow=8.5,SNR=15
BRVK Borovoye 62.29 339 eP P 04 45 31.9 -1.0
BRVK e pP 04 45 43.2 -1.0
BRVK pmax pmax
comp=Z,15nm,0.8s,mb5.2
BRVK Borovoye 62.29 339 eP P 04 45 31.9 -1.0
comp=Z,15nm,0.8s,mb5.2
BRVK e pP 04 45 43.2 -1.0
KMBO Kilima Mbogo 64.20 271 eP P 04 45 47.1 +0.7
AKTK Aktyubinsk 65.49 331 P P 04 45 53.0 -1.1
AKTO Aktyubinsk 65.49 331 P P 04 45 53.0 -1.1
comp=Z,0.8nm,0.4s,mb4.1,baz=104,slow=8.3,SNR=2.9
MAW Mawson 69.07 195 P P 04 46 18.2 +1.8
comp=Z,2.5nm,0.8s,mb4.2,baz=48,slow=8.6,SNR=7.1
ARU Arti 69.29 336 eP P 04 46 16.9 -1.1
ARU pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
ARU Arti 69.29 336 eP P 04 46 16.9 -1.0
comp=Z,3.5nm,0.5s,mb4.5
LSZ Lusaka 72.92 255 P P 04 46 42.0 +1.2
comp=Z,0.8nm,0.3s,mb4.1,baz=67,slow=7.7,SNR=3.7
PETK Petropavlovsk- 73.50 32 pP pP 04 46 54.1 -0.8
comp=Z,3.2nm,0.8s,baz=197,slow=3.9,SNR=2.9
VSR Storozhevoye 75.95 325 eP pP 04 47 09.6 +0.3
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.6s
VSR pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BOSA Boshof 76.16 242 P P 04 47 00.5 +1.1
comp=Z,4.4nm,0.7s,mb4.5,baz=143,slow=5.2,SNR=9.3
OBN Obninsk 78.95 328 eP P 04 47 14.9 +0.5
OBN pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SBA Scott Base 81.37 169 eP P 04 47 28.5 +1.4
SBA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SBA Scott Base 81.37 169 eP P 04 47 28.5 +1.4
comp=Z,4.3nm,0.8s,mb4.4
AKASG Malin Array Be 81.67 322 P P 04 47 29.0 -0.1
comp=Z,0.3nm,0.3s,mb3.7,baz=80,slow=6.5,SNR=5.2
AKASG pP pP 04 47 41.0 +0.3
comp=Z,2.6nm,0.6s,baz=89,slow=5.0,SNR=5.9
KIEV Kiev 81.68 322 eP P 04 47 28.2 -1.0
KIEV pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KIEV Kiev 81.68 322 eP P 04 47 28.1 -1.0
comp=Z,3.1nm,0.7s,mb4.3
BILL Bilibino 84.18 20 eP P 04 47 41.1 -0.7
BILL pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ARCES ARCESS Array B 88.50 340 P P 04 48 02.9 -0.1
comp=Z,3.6nm,0.8s,mb4.7,baz=80,slow=3.0,SNR=6.4
MORC Moravsky Berou 88.83 320 eP P 04 48 05.7 +0.8
MORC pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
MORC Moravsky Berou 88.83 320 eP P 04 48 05.7 +0.8
comp=Z,2.1nm,0.7s,mb4.6
GERES GERESS Array B 91.24 319 P P 04 48 17.3 +1.1
comp=Z,0.2nm,0.5s,mb3.7,baz=115,slow=8.8,SNR=2.4
GERES pP pP 04 48 29.7 +1.7
comp=Z,1.1nm,0.8s,baz=0.0,slow=1.3,SNR=4.1
NVAR Mina Array Bea 129.91 41 pPKP pPKPdf 04 54 34.9 +2.0
comp=Z,0.8nm,0.5s,baz=349,slow=3.8,SNR=2.6
PDAR Pinedale Array 132.26 31 PKP PKPdf 04 54 25.8 +0.7
comp=Z,0.2nm,0.5s,baz=33,slow=2.2,SNR=2.8
PDAR pPKP pPKPdf 04 54 38.2 +1.0
comp=Z,0.4nm,0.6s,baz=288,slow=0.5,SNR=3.5
WMOK Wichita Mounta 143.80 29 ePKIKP PKPdf 04 54 43.5 -3.0
CPUP Villa Florida 143.82 213 PKP PKPdf 04 54 44.9 -2.0
comp=Z,2.7nm,0.7s,baz=141,slow=2.5,SNR=9.3
CPUP pPKP pPKPdf 04 54 59.1 +0.2
comp=Z,3.1nm,0.8s,baz=141,slow=3.8,SNR=5.6
BDFB Brasilia 144.23 237 PKP PKPdf 04 54 46.7 -1.0
comp=Z,1.9nm,0.4s,baz=138,slow=4.3,SNR=5.5
BDFB pPKP pPKPdf 04 55 00.9 +1.0
comp=Z,4.4nm,0.7s,baz=152,slow=4.9,SNR=5.1
WCI Wyandotte Cave 144.85 11 ePKIKP PKPdf 04 54 46.0 -2.2
TXAR Lajitas Array 145.05 40 PKP PKPdf 04 54 48.0 -0.9
comp=Z,4.3nm,0.5s,baz=241,slow=1.0,SNR=103
TXAR pPKP pPKPdf 04 55 01.5 +0.5
comp=Z,6.9nm,0.5s,baz=242,slow=1.7,SNR=23
MIAR Mount Ida 146.22 23 ePKP2 PKPab 04 54 50.7 -1.7
WVT Waverly 146.55 14 ePKP2 PKPab 04 54 51.0 -2.6
JCT Junction City 146.59 35 ePKP2 PKPab 04 54 52.4 -1.6
TZTN Tazewell 146.93 7 ePKPbc PKPbc 04 54 52.9 -0.8
OXF Oxford 147.66 17 ePKP2 PKPab 04 54 55.2 -2.8
SWET Sewanee 147.84 11 ePKPbc PKPbc 04 54 54.3 -2.0
CPCT Cooper Cave 147.87 9 ePKPbc PKPbc 04 54 55.1 -1.3

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*IDC **22** 04:36:35.5±0.8, 275S×10082E, h0km, mb4.6/19, mb1 4.7/20, mb1mx4.6/25, mbtmp4.6/20, ML4.8/1, MS3.7/2, Ms1 3.7/2, ms1mx3.0/28, Error ellipse: s-maj=34.1km s-min=12.1km az=50.0*
*BJI **22** 04:36:36.5, 358S×10107E, h62km, mB5.2, mb5.2*
*ISCJB **22** 04:36:38.4±0.4, 277S±007×10085E±008, h33km, mb4.8/47, MS3.7/3, Error ellipse: s-maj=13.1km s-min=6.6km az=142.3*
*MOS **22** 04:36:38.5±1.1, 275S×10078E, h33km, mb5.1/20, Error ellipse: s-maj=15.2km s-min=7.4km az=107.4*
*NEIC **22** 04:36:39.7±2.6, 278S×10081E, h31km±18km, mb4.8/23, Error ellipse: s-maj=11.1km s-min=5.4km az=57.0*
NEIC Felt [IV] at Mukomuko, [III] at Bengkulu and [II] at Kapahiang, Sumatra.
ISC 22 04:36:36.9±5.4**, 276S**±007×**10084E**±008**, h9**km±34km**, n96, σ0.90**/84**, mb4.8**/47**, MS3.7**/3**, 1C, Southern Sumatera**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
COCO West Island 10.17 203 eP Pn 04 39 03.0 -0.2
KAPI Kappang 19.00 97 P Pn 04 41 00.4 +0.6
2.9nm,0.3s,baz=268,slow=13,SNR=5.6
KAPI Kappang 19.00 97 eP Pn 04 41 00.7 +0.9
35nm,1.0s
CMAR Chiang Mai Arr 21.17 355 P P 04 41 20.8 -1.8
6.4nm,0.8s,mb4.0,baz=184,slow=9.7,SNR=6.9
CHTO Chiang Mai 21.52 355 eP P 04 41 25.4 -1.0
CHTO pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
CHTO Chiang Mai 21.52 355 eP P 04 41 25.4 -1.0
comp=Z,7.3nm,0.8s,mb4.2
FITZ Fitzroy Crossi 28.69 124 P P 04 42 34.3 -0.2
comp=Z,2.3nm,0.7s,mb4.0,baz=304,slow=7.3,SNR=2.0
FITZ LR LR 04 54 31.8
comp=Z,75nm,20.4s,MS3.3,baz=145,slow=38
FITZ Fitzroy Crossi 28.69 124 eP P 04 42 34.9 +0.4
comp=Z,7.8nm,0.7s,mb4.5
FITZ LR LR 04 54 31.8
LSA Lhasa 33.59 345 eP P 04 43 18.6 +1.1
LSA pmax pmax
comp=Z,11nm,0.5s,mb5.0
LSA Lhasa 33.59 345 eP P 04 43 18.6 +1.1
comp=Z,11nm,0.5s,mb5.1
WRA Warramunga Arr 36.89 120 P P 04 43 45.7 -0.5
comp=Z,7.8nm,0.4s,mb4.9,baz=301,slow=8.6,SNR=15
WRA PcP PcP 04 46 08.0 +0.1
comp=Z,1.3nm,0.7s,baz=300,slow=2.8,SNR=4.9
WRA S S 04 49 21.8 -9.4
comp=Z,0.4nm,0.5s,baz=288,slow=18,SNR=3.3
WRAB Tennant Creek 36.89 120 eP P 04 43 45.9 -0.3
WRAB pmax pmax
comp=Z,12nm,0.7s,mb4.8
WRAB Tennant Creek 36.89 120 eP P 04 43 45.9 -0.3
comp=Z,12nm,0.7s,mb4.8
WB2 Warramunga Arr 36.90 120 eP P 04 43 45.6 -0.6
XAN Xi'an 37.39 11 P P 04 43 49.1 -1.1
XAN AMB AMB
comp=Z,20nm,0.6s,mb5.1
XAN AMB AMB
comp=Z,58nm,4.6s
FORT Forrest 37.92 140 eP P 04 43 54.9 +0.2
comp=Z,2.1nm,0.9s,mb3.9
ASAR Alice Springs 38.13 126 P P 04 43 56.9 +0.3
comp=Z,7.1nm,0.7s,mb4.5,baz=305,slow=8.3,SNR=8.3
ASAR PcP PcP 04 46 11.6 -0.1
comp=Z,1.5nm,0.7s,baz=305,slow=3.5,SNR=4.4
ASAR S S 04 49 43.5 -6.5
comp=Z,1.6nm,0.8s,baz=298,slow=16,SNR=8.3

SDNR Sundarnagar 40.94 328 eP P 04 44 21.0 +1.0
KSRS Korea Array 47.26 30 P P 04 45 10.8 +0.3
comp=Z,3.3nm,0.7s,mb4.4,baz=223,slow=8.0,SNR=7.5
CTA Charters Tower 47.52 115 P P 04 45 13.0 +0.2
comp=Z,12nm,0.7s,mb5.0,baz=286,slow=10.0,SNR=10
CTA Charters Tower 47.52 115 P P 04 45 13.0 +0.2
CTAO Charters Tower 47.52 115 eP P 04 45 12.6 -0.3
CTAO pmax pmax
comp=Z,15nm,0.8s,mb5.1
CTAO Charters Tower 47.52 115 eP P 04 45 12.6 -0.3
comp=Z,15nm,0.8s,mb5.1
WMQ Urumqi 47.85 347 ⇑iP P 04 45 16.4 +1.4
WMQ AMB AMB
comp=Z,70nm,0.8s,mb5.7
WMQ AMB AMB
comp=Z,153nm,4.3s
STKA Stephens Creek 48.02 132 eP P 04 45 17.2 +0.6
STKA Stephens Creek 48.02 132 P P 04 45 17.3 +0.7
comp=Z,8.0nm,0.8s,mb4.8,baz=294,slow=8.0,SNR=4.8
STKA LR LR 05 05 20.1
comp=Z,154nm,19.8s,MS4.0,baz=22,slow=36
SONM Songino Array 50.62 5 P P 04 45 37.2 +1.0
comp=Z,15nm,0.6s,mb5.1,baz=186,slow=9.7,SNR=19
SONM PcP PcP 04 46 53.5 -0.2
comp=Z,2.9nm,0.7s,baz=182,slow=5.3,SNR=2.9
ULN Ulaanbaatar 50.71 5 eP P 04 45 37.8 +1.0
ULN pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ULN Ulaanbaatar 50.71 5 eP P 04 45 37.8 +1.0
comp=Z,9.8nm,0.8s,mb4.8
UCH Uchtor 50.74 335 eP P 04 45 37.4 +0.3
comp=Z,9.3nm,0.8s,mb4.8
TKM2 Tokmak 2 50.86 336 eP P 04 45 39.2 +1.1
TKM2 pmax pmax
comp=Z,22nm,0.5s,mb5.3
TKM2 Tokmak 2 50.86 336 eP P 04 45 39.2 +1.1
comp=Z,22nm,0.5s,mb5.3
AML Almayashu 51.01 334 eP P 04 45 40.9 +1.7
comp=Z,25nm,0.8s,mb5.2
CN2 Changchun 51.35 23 eP P 04 45 41.0 -0.7
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
EKS2 Erkin-Say 51.41 335 eP P 04 45 43.6 +1.4
comp=Z,34nm,0.7s,mb5.4
MK31 Makanchi Array 51.99 344 eP P 04 45 46.7 +0.3
MKAR Makanchi Array 51.99 344 P P 04 45 46.9 +0.4
comp=Z,12nm,0.6s,mb5.0,baz=147,slow=9.2,SNR=14
KK31 Karatay Array 53.21 332 iP P 04 45 55.8 +0.2
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
TLY Talaya 54.29 2 eP P 04 46 04.5 +1.2
TLY pmax pmax
comp=Z,14nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,80nm,15.0s,MS3.9
TLY Talaya 54.29 2 eP P 04 46 04.0 +0.7
comp=Z,7.5nm,0.8s,mb4.7
KURK Kurchatov 56.57 343 P P 04 46 19.4 -0.3
comp=Z,11nm,0.7s,mb5.0,baz=162,slow=7.0,SNR=14
KURK Kurchatov 56.57 343 P P 04 46 19.5 -0.3
KURK pmax pmax
comp=Z,18nm,0.8s,mb5.2
KURK Kurchatov 56.57 343 P P 04 46 19.4 -0.3
ZAA0 Zalesovo Array 58.07 349 eP P 04 46 29.6 -0.6
ZALV Zalesovo Beam 58.07 349 P P 04 46 30.2 -0.1
comp=Z,11nm,0.4s,mb5.2,baz=164,slow=5.8,SNR=15
VOSK Vostochnaya 60.73 340 P P 04 46 47.7 -1.0
VOSK pmax pmax
comp=Z,7.0nm,0.4s,mb5.1
BVAR Borovoye Array 61.19 340 P P 04 46 51.2 -0.6
comp=Z,7.9nm,0.5s,mb5.1,baz=127,slow=7.2,SNR=12
BRVK Borovoye 61.25 340 eP P 04 46 51.4 -0.8
BRVK pmax pmax
comp=Z,11nm,0.5s,mb5.2
BRVK Borovoye 61.25 340 eP P 04 46 51.4 -0.9
comp=Z,11nm,0.5s,mb5.2
BOD Bodaibo 61.31 8 eP P 04 46 52.8 +0.3
BOD pmax pmax
comp=Z,11nm,0.7s,mb5.1
YSS Yuzh-Sakhalins 61.69 31 eP P 04 46 55.5 +0.2
YSS pmax pmax
comp=Z,20nm,0.7s,mb5.4
YSS Yuzh-Sakhalins 61.69 31 eP P 04 46 55.5 +0.2
comp=Z,20nm,0.7s,mb5.3
AB31 Akbulak array 62.71 331 iP P 04 47 01.4 -0.7
AB31 pmax pmax
comp=Z,30nm,0.9s,mb5.4
AKTK Aktyubinsk 64.42 331 P P 04 47 13.3 -0.1
AKTO Aktyubinsk 64.42 331 P P 04 47 13.3 -0.1
comp=Z,3.8nm,0.6s,mb4.6,baz=122,slow=7.8,SNR=6.9
ARU Arti 68.24 336 eP P 04 47 37.3 -0.5
ARU pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ARU Arti 68.24 336 eP P 04 47 37.2 -0.5
comp=Z,5.8nm,0.7s,mb4.7
MALT Malatya 70.47 312 eP P 04 47 49.9 -2.1
MALT pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
MALT Malatya 70.47 312 eP P 04 47 49.9 -2.1
comp=Z,4.1nm,1.0s,mb4.3
PETK Petropavlovsk- 73.08 32 P P 04 48 06.5 -0.8
comp=Z,3.5nm,0.7s,mb4.4,baz=244,slow=2.7,SNR=4.6
PET Petropavlovsk 73.55 32 eP P 04 48 09.5 -0.6
PET pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
PET Petropavlovsk 73.55 32 eP P 04 48 09.5 -0.7
comp=Z,9.4nm,0.6s,mb4.9
AKASG Malin Array Be 80.60 322 P P 04 48 49.2 -0.6
comp=Z,1.9nm,0.7s,mb4.1,baz=89,slow=4.6,SNR=3.0
KIEV Kiev 80.60 322 eP P 04 48 48.7 -1.2
KIEV pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KIEV Kiev 80.60 322 eP P 04 48 48.7 -1.2
comp=Z,3.6nm,0.9s,mb4.3
JOF Joensuu 83.26 334 ep P 04 49 03.0 -0.6
comp=Z,4.5nm,0.7s,mb4.6
LVV L'vov 83.62 321 eP P 04 49 08.8 +3.1
SUW Suwalki 84.99 325 eP P 04 49 12.1 -0.5
SUW pmax pmax
comp=Z,31nm,0.9s,mb5.4
SUW Suwalki 84.99 325 eP P 04 49 12.1 -0.4
comp=Z,31nm,0.9s,mb5.4
KAF Kangasniemi 85.24 333 ep P 04 49 11.9 -1.8
comp=Z,5.4nm,0.7s,mb4.8
KAF Kangasniemi 85.24 333 eP P 04 49 11.9 -1.8
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
PSZ Piszkesteto 85.97 318 eP P 04 49 17.2 -0.4
PSZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
PSZ Piszkesteto 85.97 318 eP P 04 49 17.2 -0.4
comp=Z,3.8nm,0.9s,mb4.6
KEV Kevo 87.02 340 ep P 04 49 25.1 +2.8
ARCES ARCESS Array B 87.47 340 P P 04 49 24.9 +0.3
comp=Z,2.7nm,0.5s,mb4.8,baz=104,slow=6.4,SNR=14
MORC Moravsky Berou 87.76 320 eP P 04 49 26.2 -0.1
MORC pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
MORC Moravsky Berou 87.76 320 eP P 04 49 26.2 -0.1
comp=Z,2.1nm,0.8s,mb4.4
GERES GERESS Array B 90.17 319 P P 04 49 38.1 +0.4
comp=Z,1.4nm,0.7s,mb4.4,baz=86,slow=4.1,SNR=9.4
NB2 NORSAR Subarra 92.22 331 P P 04 49 46.4 -0.5
comp=Z,3.6nm,0.9s,mb4.7,baz=93,slow=4.6
NOA NORSAR Array B 92.22 331 P P 04 49 47.2 +0.3
comp=Z,2.5nm,0.8s,mb4.6,baz=94,slow=4.7,SNR=4.8
NOA NORSAR Array B 92.22 331 P P 04 49 47.2 +0.3
KEST Kesra 92.81 305 P P 04 49 51.4 +1.1
comp=Z,1.5nm,0.9s,mb4.4,baz=198,slow=3.2,SNR=4.3
LOHW Long Hollow 130.68 30 ePKPdf PKPdf 04 55 48.3 -0.4
PDAR Pinedale Array 131.82 30 PKP PKPdf 04 55 51.1 +0.2
comp=Z,0.3nm,0.6s,baz=106,slow=2.0,SNR=2.8
PDAR SKPbc SKPbc 04 59 12.2 -4.8
comp=Z,0.9nm,1.0s,baz=284,slow=0.6,SNR=4.1
RSSD Black Hills 133.31 25 ePKIKP PKPdf 04 55 52.7 -0.9
TMUT Trail Mountain 133.41 35 ePKPdf PKPdf 04 55 54.7 +0.7
SDCO Great Sand Dun 137.63 31 ePKPdf PKPdf 04 56 02.7 +0.8
WCI Wyandotte Cave 144.10 10 ePKIKP PKPdf 04 56 10.7 -2.9
CPUP Villa Florida 144.19 215 ePKIKP PKPdf 04 56 13.6 -0.5
TXAR Lajitas Array 144.78 39 PKP PKPdf 04 56 14.2 -0.8
comp=Z,5.4nm,0.4s,baz=308,slow=0.5,SNR=45
MIAR Mount Ida 145.65 21 ePKP2 PKPab 04 56 16.1 -0.7
ELN Prospectdale 145.67 2 ePKPbc PKPbc 04 56 15.1 -1.4
WVT Waverly 145.84 13 ePKP2 PKPab 04 56 15.9 -1.6
TZTN Tazewell 146.14 6 ePKPbc PKPbc 04 56 16.6 -1.4
JCT Junction City 146.21 33 ePKP2 PKPab 04 56 17.6 -1.5

OXF Oxford 147.00 16 *e*PKP2 PKPab 04 56 19.4 -2.6

*DJA **22** 04:57:20, 12.21N×12591E, h10km, mb4.8/8*
*BJI **22** 04:57:22.6, 12.12N×12567E, h54km, mB5.0, mb4.7, Ms4.3, Msz4.1*
*MAN **22** 04:57:22, 12.39N×12566E, h21km, mb5.1, ML4.1, MS4.2*
MAN INTENSITY II - BORONGAN, EASTERN SAMAR.
*MOS **22** 04:57:22.2±1.0, 12.20N×12542E, h33km, mb5.0/20, Error ellipse: s-maj=20.0km s-min=7.6km az=123.3*
*ISCJB **22** 04:57:23.0±0.7, 12.33N±003×12569E±005, h44km±5km, mb4.8/63, MS3.9/13, Error ellipse: s-maj=8.1km s-min=4.2km az=161.3*
*IDC **22** 04:57:24.8±2.3, 12.18N×12542E, h37km±18km, mb4.4/15, mb1 4.4/16, mb1mx4.3/23, mbtmp4.4/16, ML3.9/1, MS3.8/12, Ms1 3.9/12, ms1mx3.7/30, Error ellipse: s-maj=32.9km s-min=9.9km az=74.0*
*NEIC **22** 04:57:24.9±1.6, 12.22N×12552E, h44km±14km, mb4.7/23, Error ellipse: s-maj=10.8km s-min=5.1km az=68.0*
NEIC Felt [II PIVS] at Borongan.
ISC 22 04:57:25.1±0.6, 12.29N±003×12564E±005, h46km±5km, n150, σ1§04/149, mb4.8/63, MS3.9/13, 16C-4D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CNP	**Catarman**	**0.98**	**283**	*e*P		**Pn**	**04 57 39.1**	**-3.3**
CNP				*e*S		**Sn**	**04 58 04.1**	**+8.8**
PLP	**Palo**	**1.29**	**210**	⇓*i*P		**Pn**	**04 57 45.3**	**-1.4**
PLP				*i* S		**Sn**	**04 58 01.6**	**-1.2**
OCLP	**Ormoc**	**1.59**	**220**	*e*P		**Pn**	**04 57 50.5**	**-0.3**
PVCP	**Virac**	**1.95**	**312**	*e*P		**Pn**	**04 57 53.1**	**-2.6**
PVCP				*e*S		**Sn**	**04 58 23.2**	**+4.2**
MMPH	**Masbate**	**1.98**	**272**	⇑*i*P		**Pn**	**04 57 55.0**	**-1.1**
MMPH				*i* S		**Sn**	**04 58 19.8**	**+0.2**
MSLP	**Maasin**	**2.27**	**200**	*e*P		**Pn**	**04 58 01.6**	**+1.4**
SCPH	**Surigao**	**2.49**	**183**	*e*P		**Pn**	**04 58 02.4**	**-0.8**
SCPH				*e*S		**Sn**	**04 58 30.2**	**-2.2**
LLP	**Lapu-Lapu**	**2.56**	**220**	⇑*e*P		**Pn**	**04 58 03.7**	**-0.3**
LLP				*e*S		**Sn**	**04 58 36.1**	**+2.2**
RCP	**Roxas**	**2.93**	**256**	⇑*e*P		**Pn**	**04 58 08.7**	**-0.4**
RCP				*e*S		**Sn**	**04 58 45.1**	**+2.0**
AUQP	**San Andres**	**3.07**	**290**	*e*P		**Pn**	**04 58 11.9**	**+0.8**
AUQP				*e*S		**Sn**	**04 58 53.5**	**+6.8**
TBP	**Tagbilaran**	**3.12**	**214**	*e*P		**Pn**	**04 58 12.1**	**+0.3**
TBP				*e*S		**Sn**	**04 58 44.8**	**-2.9**
KALP	**Kalibo**	**3.29**	**260**	⇑*e*P		**Pn**	**04 58 17.8**	**+3.6**
GUIM	**Jordan**	**3.42**	**241**	*e*P		**Pn**	**04 58 15.8**	**-0.1**
GQP	**Guinayangan**	**3.51**	**298**	⇓*i*P		**Pn**	**04 58 12.6**	**-4.5**
GQP				*i* S		**Sn**	**04 59 01.5**	**+4.2**
OTRP	**Odiongan**	**3.54**	**272**	*e*P		**Pn**	**04 58 16.7**	**-0.9**
BIPH	**Bislig**	**4.14**	**170**	⇑*i*P		**Pn**	**04 58 26.1**	**+0.3**
BIPH				*i* S		**Sn**	**04 59 32.5**	**+20**
POLP	**Polilio Island**	**4.34**	**304**	*e*P		**Pn**	**04 58 30.6**	**+2.0**
BUKP	**Musuan**	**4.42**	**187**	*e*P		**Pn**	**04 58 31.4**	**+1.8**
SJMP	**San Jose**	**4.42**	**273**	*e*P		**Pn**	**04 58 30.2**	**+0.5**
LBPH	**Los Banos**	**4.73**	**294**	⇑*e*P		**Pn**	**04 58 30.5**	**-3.3**
PAGZ	**Pagadian**	**4.94**	**207**	*e*P		**Pn**	**04 58 38.1**	**+1.3**
DAV	**Davao City (W)**	**5.18**	**181**	LR		LR	05 00 57.8	
	comp=Z,2μm,19.9s,baz=267,slow=42							
BALP	**Baler**	**5.23**	**312**	*e*P		**Pn**	**04 58 40.0**	**-0.8**
BUSP	**Coron**	**5.33**	**268**	*e*P		**Pn**	**04 58 42.1**	**-0.1**
LUBP	**Lubang**	**5.45**	**286**	*e*P		**Pn**	**04 58 46.7**	**+2.8**
NBP	**Mount Natib**	**5.64**	**296**	⇑*e*P		**Pn**	**04 58 47.4**	**+1.0**
PALP	**Palanan**	**5.68**	**327**	*e*P		**Pn**	**04 58 43.9**	**-3.0**
CAUP	**Cauayan**	**5.93**	**322**	*e*P		**Pn**	**04 58 49.2**	**-1.1**
APYP	**Conner**	**6.99**	**323**	*e*P		**Pn**	**04 59 04.4**	**-0.5**
SDKM	**Sandakan**	**10.64**	**232**	⇑P		**Pn**	**05 00 01.0**	**+6.0**
KKM	**Kota Kinabalu**	**11.18**	**237**	⇓P		**Pn**	**05 00 07.0**	**+4.6**
JOW	**Kunigami**	**14.68**	**9**	Pn		**Pn**	**05 00 50.9**	**+0.9**
	1.1nm,0.3s,baz=270,slow=20,SNR=2.8							
SBUM	**Sibu**	**16.50**	**235**	⇑P		**Pn**	**05 01 18.0**	**+4.5**
KAPI	**Kappang**	**18.16**	**199**	P		**Pn**	**05 01 36.3**	**+2.4**
	0.3nm,0.3s,baz=77,slow=18,SNR=3.9							
KSM	**Kuching**	**18.61**	**236**	⇑P		**Pn**	**05 01 41.0**	**+1.4**
GUMO	**Guam**	**18.78**	**84**	LR		LR	05 07 32.8	
	comp=Z,220nm,19.2s,baz=79,slow=32							
NJ2	**Nanjing**	**20.64**	**343**	*e*P		**P**	**05 02 00.3**	**-0.5**
NJ2				AMB		AMB		
	comp=Z,10.0nm,1.0s							
WHN	**Wuhan**	**20.96**	**332**	P		**P**	**05 02 05.0**	**+0.7**
WHN				S		**S**	**05 05 56.0**	**+0.6**
WHN				LR		LR		
	comp=N,943nm,19.6s,MS4.2							
WHN				LR		LR		
	comp=E,765nm,23.6s,MS4.2							
WHN				LR		LR		
	comp=Z,805nm,13.1s							
BATI	**Baumata**	**22.43**	**185**	P		**P**	**05 02 20.4**	**+0.3**
	comp=Z,32nm,0.4s,mb5.1,baz=77,slow=4.0,SNR=5.1							
KKTK	**Khon Kaen**	**22.47**	**283**	P		**P**	**05 02 19.0**	**-1.6**
	comp=Z,679nm,0.6s							
GYA	**Guiyang**	**22.74**	**311**	P		**P**	**05 02 22.3**	**-1.1**
GYA				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.2							
GYA				AMB		AMB		
	comp=Z,410nm,5.7s							
KGM	**Kluang**	**24.36**	**247**	⇑P		**P**	**05 02 40.1**	**+1.1**
JHJ	**Hachijo jima 2**	**24.45**	**30**	LR		LR	05 10 28.5	
	comp=Z,186nm,19.3s,MS3.6,baz=326,slow=32							
NANT	**Nan**	**24.87**	**288**	⇑P		**P**	**05 02 39.5**	**-4.2**
	comp=Z,215nm,0.9s,mb5.7							
KMI	**Kunming**	**25.12**	**304**	P		**P**	**05 02 45.8**	**-0.1**
KMI				AMB		AMB		
	comp=Z,19nm,0.9s,mb4.6							
KMI				AMB		AMB		
	comp=Z,136nm,3.2s							
KMI				LR		LR		
	comp=N,327nm,15.0s,MS4.2							
KMI				LR		LR		
	comp=E,475nm,16.3s,MS4.2							
KMI				LR		LR		
	comp=Z,570nm,16.2s,MS4.2							
KSRS	**Korea Array**	**25.15**	**4**	P		**P**	**05 02 47.7**	**+1.8**
	comp=Z,4.1nm,0.9s,mb4.0,baz=179,slow=11,SNR=10							
KSRS				LR		LR	05 11 46.1	
	comp=Z,95nm,18.2s,MS3.3,baz=185,slow=34							
CM31	**Chiang Mai Arr**	**26.45**	**287**	*e*P		**P**	**05 02 56.8**	**-1.2**
	comp=Z,7.9nm,0.5s,mb4.5							
CMAR	**Chiang Mai Arr**	**26.45**	**287**	P		**P**	**05 02 57.0**	**-0.9**
	comp=Z,18nm,0.8s,mb4.7,baz=98,slow=7.6,SNR=7.4							
CMAR				PcP		PcP	05 06 23.2	+0.7
	comp=Z,1.2nm,0.3s,baz=48,slow=1.3,SNR=5.9							
CMAR				LR		LR	05 14 27.8	
	comp=Z,308nm,18.0s,MS3.9,baz=130,slow=39							
CMAR	**Chiang Mai Arr**	**26.45**	**287**	P		**P**	**05 02 57.1**	**-0.8**
CMAR							05 06 23.2	
CHTO	**Chiang Mai**	**26.51**	**288**	*e*P		**P**	**05 02 56.4**	**-2.1**
CHTO				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.3							
CHTO	**Chiang Mai**	**26.51**	**288**	*e*P		**P**	**05 02 56.4**	**-2.1**
	comp=Z,7.7nm,0.8s,mb4.3							
MJAR	**Matsushiro Arr**	**26.67**	**23**	LR		LR	05 12 12.6	
	comp=Z,170nm,20.0s,MS3.6,baz=210,slow=33							
CD2	**Chengdu**	**27.43**	**316**	P		**P**	**05 03 06.4**	**-0.2**
CD2				AMB		AMB		
	comp=Z,40nm,0.9s,mb5.0							
FITZ	**Fitzroy Crossi**	**30.19**	**180**	*e*P		**P**	**05 03 30.7**	**-0.6**
FITZ	**Fitzroy Crossi**	**30.19**	**180**	P		**P**	**05 03 30.9**	**-0.4**
	comp=Z,4.7nm,0.6s,mb4.4,baz=7.1,slow=11,SNR=24							
LZH	**Lanzhou**	**30.79**	**324**	⇑P		**P**	**05 03 37.0**	**+0.6**
LZH				AMB		AMB		
	comp=Z,17nm,1.3s,mb4.7							
LZH				AMB		AMB		
	comp=Z,53nm,4.5s							
COEN	**Coen**	**31.33**	**146**	*e*P		**P**	**05 03 41.9**	**+0.5**
	comp=Z,1.8nm,0.7s,mb4.0							
WRAB	**Tennant Creek**	**33.14**	**165**	*e*P		**P**	**05 03 57.2**	**0.0**
WRAB				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.2							
WRAB	**Tennant Creek**	**33.14**	**165**	*e*P		**P**	**05 03 57.2**	**0.0**
	comp=Z,2.0nm,0.6s,mb4.2							
WRA	**Warramunga Arr**	**33.15**	**165**	P		**P**	**05 03 56.4**	**-0.8**
	comp=Z,0.7nm,0.4s,mb3.9,baz=343,slow=9.2,SNR=11							
WRA				PcP		PcP	05 06 40.4	+0.8
	comp=Z,1.3nm,0.8s,baz=347,slow=3.3,SNR=9.0							
WRA				ScP		ScP	05 10 21.5	+1.1
	comp=Z,1.8nm,1.0s,baz=344,slow=3.7,SNR=8.2							
WRA	**Warramunga Arr**	**33.15**	**165**	P		**P**	**05 03 56.4**	**-0.8**
WRA							05 06 40.4	
WB2	**Warramunga Arr**	**33.15**	**165**	*e*P		**P**	**05 03 56.1**	**-1.2**
MBWA	**Marble Bar**	**33.74**	**190**	*e*P		**P**	**05 04 01.4**	**-0.9**
	comp=Z,19nm,1.3s,mb4.9							
GTA	**Gaotai**	**35.39**	**324**	*e*P		**P**	**05 04 16.9**	**+0.4**
GTA				S		**S**	**05 09 38.6**	**-9.4**
GTA				AMB		AMB		
	comp=Z,11nm,1.2s,mb4.7							
GTA				AMB		AMB		
	comp=Z,105nm,3.9s							
GTA				LR		LR		
	comp=N,246nm,14.1s,MS4.1							
GTA				LR		LR		
	comp=E,173nm,18.0s,MS4.1							
GTA				LR		LR		
	comp=Z,287nm,15.3s,MS4.1							
LSA	**Lhasa**	**36.38**	**304**	*e*P		**P**	**05 04 26.2**	**+1.1**
LSA				pmax		pmax		
	comp=Z,21nm,1.0s,mb5.0							
LSA	**Lhasa**	**36.38**	**304**	*e*P		**P**	**05 04 26.2**	**+1.1**
	comp=Z,21nm,1.0s,mb5.0							
ASAR	**Alice Springs**	**36.63**	**167**	P		**P**	**05 04 27.2**	**0.0**
	comp=Z,1.2nm,0.3s,mb4.2,baz=350,slow=6.7,SNR=42							
ASAR				PcP		PcP	05 06 49.6	0.0
	comp=Z,1.6nm,0.8s,baz=339,slow=3.9,SNR=4.2							
ASAR				S		**S**	**05 10 07.7**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=0.4,slow=20,SNR=4.7							
ASAR				ScP		ScP	05 10 34.3	+1.5
	comp=Z,1.8nm,1.0s,baz=2.8,slow=3.4,SNR=9.0							
ASAR	**Alice Springs**	**36.63**	**167**	P		**P**	**05 04 27.3**	**+0.1**
ASAR							05 06 49.7	
ASAR				S		**S**	**05 10 07.7**	**+0.5**
CTAO	**Charters Tower**	**38.03**	**148**	*e*P		**P**	**05 04 40.3**	**+1.1**
CTAO				pmax		pmax		
	comp=Z,14nm,1.4s,mb4.5							
CTAO	**Charters Tower**	**38.03**	**148**	*e*P		**P**	**05 04 40.2**	**+1.1**
	comp=Z,14nm,1.4s,mb4.5							
TAPN	**Taplejung**	**38.53**	**299**	*e*P		**P**	**05 04 43.2**	**-0.2**
	comp=Z,36nm,0.9s,mb5.1							
ODAN	**Odare**	**38.68**	**298**	*e*P		**P**	**05 04 44.5**	**-0.1**
	comp=Z,99nm,0.9s,mb5.5							
ULN	**Ulaanbaatar**	**38.73**	**340**	⇑*i*P		**P**	**05 04 45.5**	**+0.8**
ULN	**Ulaanbaatar**	**38.73**	**340**	*e*P		**P**	**05 04 45.0**	**+0.3**
	comp=Z,8.3nm,0.9s,mb4.5							
SONM	**Songino Array**	**38.93**	**339**	P		**P**	**05 04 47.0**	**+0.6**
	comp=Z,8.9nm,1.0s,mb4.4,baz=157,slow=9.0,SNR=25							
SONM				LR		LR	05 21 51.5	
	comp=Z,157nm,18.2s,MS3.9,baz=63,slow=38							
RAMN	**Ramite**	**39.38**	**298**	*e*P		**P**	**05 04 50.7**	**+0.2**
	comp=Z,87nm,0.8s,mb5.5							
JIRN	**Jiri**	**39.91**	**299**	*e*P		**P**	**05 04 55.1**	**+0.2**
	comp=Z,20nm,0.3s,mb5.4							
GUN	**Gumba**	**40.24**	**299**	*e*P		**P**	**05 04 57.6**	**0.0**
	comp=Z,113nm,0.8s,mb5.6							
PKIN	**Phulchoki**	**40.57**	**298**	*e*P		**P**	**05 04 59.7**	**-0.7**
	comp=Z,41nm,0.9s,mb5.1							
KKN	**Kakani**	**40.73**	**298**	*e*P		**P**	**05 05 00.9**	**-0.7**
	comp=Z,80nm,1.0s,mb5.3							
DMN	**Daman**	**40.83**	**298**	*e*P		**P**	**05 05 01.9**	**-0.6**
	comp=Z,73nm,1.0s,mb5.3							
GKN	**Gorkha**	**41.33**	**299**	*e*P		**P**	**05 05 05.9**	**-0.7**
	comp=Z,79nm,1.0s,mb5.3							
DANN	**Dangsing**	**42.16**	**299**	*e*P		**P**	**05 05 13.2**	**-0.2**
	comp=Z,108nm,0.8s,mb5.5							
KOLN	**Koldanda**	**42.17**	**298**	*e*P		**P**	**05 05 13.1**	**-0.4**
	comp=Z,84nm,0.8s,mb5.4							
FORT	**Forrest**	**42.88**	**177**	*e*P		**P**	**05 05 19.4**	**+0.3**
NWAO	**Narrogin (SRO)**	**45.67**	**190**	P		**P**	**05 05 40.1**	**-1.2**
	comp=Z,4.7nm,0.5s,mb4.7,baz=42,slow=14,SNR=4.6							
STKA	**Stephens Creek**	**46.49**	**161**	*e*P		**P**	**05 05 51.5**	**+3.6**
STKA	**Stephens Creek**	**46.49**	**161**	P		**P**	**05 05 48.5**	**+0.6**
	comp=Z,4.1nm,0.7s,mb4.4,baz=330,slow=14,SNR=10							
STKA	**Stephens Creek**	**46.49**	**161**	*e*P		**P**	**05 05 47.9**	**0.0**
	comp=Z,7.9nm,0.9s,mb4.6							
DDI	**Dehra Dun**	**47.45**	**300**	*ex*		x	05 05 55.0	
PETK	**Petropavlovsk-**	**48.08**	**25**	LR		LR	05 23 19.8	
	comp=Z,91nm,20.6s,MS3.7,baz=230,slow=32							
MK31	**Makanchi Array**	**50.06**	**322**	*i* P		**P**	**05 06 15.9**	**+0.6**
MK31				pmax		pmax		
	comp=Z,16nm,0.8s,mb5.1							
MKAR	**Makanchi Array**	**50.06**	**322**	P		**P**	**05 06 16.1**	**+0.8**
	comp=Z,16nm,0.8s,mb5.1,baz=116,slow=8.5,SNR=76							
MKAR				PcP		PcP	05 07 35.4	+0.9
	comp=Z,2.1nm,0.7s,baz=109,slow=5.8,SNR=2.6							
MKAR				LR		LR	05 27 26.6	
	comp=Z,102nm,18.6s,MS3.9,baz=148,slow=36							
MKAR	**Makanchi Array**	**50.06**	**322**	P		**P**	**05 06 16.1**	**+0.8**
MKAR							05 07 35.4	
ZALV	**Zalesovo Beam**	**52.58**	**331**	P		**P**	**05 06 33.6**	**-0.4**
	comp=Z,3.2nm,0.8s,mb4.3,baz=110,slow=6.5,SNR=17							
ZALV				LR		LR	05 29 42.4	
	comp=Z,66nm,20.2s,MS3.7,baz=115,slow=37							
TKM2	**Tokmak 2**	**52.81**	**315**	*e*P		**P**	**05 06 36.7**	**+0.8**
TKM2				pmax		pmax		
	comp=Z,6.0nm,0.7s,mb4.6							
TKM2	**Tokmak 2**	**52.81**	**315**	*e*P		**P**	**05 06 36.7**	**+0.9**
	comp=Z,6.3nm,0.7s,mb4.7							
UCH	**Uchtor**	**53.34**	**314**	*e*P		**P**	**05 06 41.2**	**+1.4**
	comp=Z,16nm,0.9s,mb5.0							
NVS	**Novosibirsk**	**53.85**	**331**	*e*P		**P**	**05 06 42.3**	**-1.0**
NVS				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
NVS				pmax		pmax		
	comp=N,14nm,1.6s							
NVS				pmax		pmax		
	comp=E,9.0nm,1.2s							
EKS2	**Erkin-Say**	**53.99**	**314**	*e*P		**P**	**05 06 45.4**	**+0.8**
	comp=E,4.5nm,0.8s,mb4.5							
KURK	**Kurchatov**	**54.07**	**325**	*i* P		**P**	**05 06 45.6**	**+0.6**
	comp=E,23nm,0.7s,mb5.2,baz=121,slow=8.0,SNR=90							
KURK	**Kurchatov**	**54.07**	**325**	*c i* P		**P**	**05 06 45.7**	**+0.7**
KURK				pmax		pmax		
	comp=Z,41nm,0.9s,mb5.4							
KURK	**Kurchatov**	**54.07**	**325**	*e*P		**P**	**05 06 45.2**	**+0.2**
	comp=Z,31nm,0.8s,mb5.3							
KBL	**Kabul**	**55.70**	**303**	*e*P		**P**	**05 06 57.1**	**0.0**
KBL				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.9							
KBL	**Kabul**	**55.70**	**303**	*e*P		**P**	**05 06 57.1**	**0.0**
	comp=Z,9.7nm,0.8s,mb4.9							
VOSK	**Vostochnaya**	**59.23**	**325**	P		**P**	**05 07 21.0**	**-0.6**
VOSK				pmax		pmax		
	comp=Z,10.0nm,0.7s,mb5.0							
BVA0	**Borovoye Array**	**59.67**	**325**	*i* P		**P**	**05 07 24.7**	**+0.1**
BVA0				pmax		pmax		
	comp=Z,5.0nm,1.1s,mb4.5							
BRVK	**Borovoye**	**59.74**	**325**	*e*P		**P**	**05 07 25.5**	**+0.4**
BRVK				pmax		pmax		
	comp=Z,44nm,0.9s,mb5.5							
BRVK	**Borovoye**	**59.74**	**325**	*e*P		**P**	**05 07 25.5**	**+0.4**
	comp=Z,44nm,0.9s,mb5.5							
AB31	**Akbulak array**	**64.96**	**319**	*i* P		**P**	**05 07 59.6**	**-0.5**
AB31				pmax		pmax		
	comp=Z,21nm,1.3s,mb5.0							
SVE	**Sverdlovsk**	**66.19**	**327**	⇓*e*P		**P**	**05 08 08.1**	**+0.2**
SVE				pmax		pmax		
	comp=Z,16nm,0.9s,mb5.0							
ARU	**Arti**	**67.22**	**326**	*c i* P		**P**	**05 08 14.2**	**-0.2**
ARU				*e*			05 10 40.8	
ARU				*e*S		S	05 17 08.6	+2.9
ARU				*e*SS		SS	05 21 25.0	-0.6
ARU				pmax		pmax		
	comp=Z,25nm,1.7s,mb5.0							
ARU	**Arti**	**67.22**	**326**	*e*P		**P**	**05 08 13.8**	**-0.6**
	comp=Z,5.6nm,0.5s,mb4.8							
IMA2	**Indian Mountai**	**75.07**	**25**	*e*P		**P**	**05 09 00.7**	**-1.0**
GNI	**Garni**	**75.27**	**309**	*e*P		**P**	**05 09 05.0**	**+1.5**
GNI				pmax		pmax		
	comp=Z,12nm,0.9s							
GNI	**Garni**	**75.27**	**309**	*e*P		**P**	**05 09 05.0**	**+1.5**
	comp=Z,12nm,0.9s,mb4.8							
KIV	**Kislovodsk**	**76.54**	**313**	*e*P		**P**	**05 09 12.1**	**+1.5**
KIV				pmax		pmax		
	comp=Z,8.0nm,1.0s,mb4.6							
MCK	**McKinley**	**77.05**	**27**	*e*P		**P**	**05 09 13.9**	**+0.8**
MCK				pmax		pmax		
	comp=Z,10.0nm,1.2s,mb4.6							
MCK	**McKinley**	**77.05**	**27**	*e*P		**P**	**05 09 13.9**	**+0.8**
	comp=Z,10nm,1.2s,mb4.6							
KLMR	**Klimovskoe**	**77.48**	**330**	*e*P		**P**	**05 09 15.8**	**+0.2**
KLMR				pmax		pmax		
	comp=Z,17nm,1.6s,mb4.7							
COLA	**College**	**77.49**	**26**	*e*P		**P**	**05 09 16.9**	**+1.4**
OBN	**Obninsk**	**79.51**	**324**	*e*P		**P**	**05 09 26.7**	**-0.1**
OBN				*e*			05 09 32.8	
OBN				pmax		pmax		
	comp=Z,16nm,1.0s,mb4.9							
MALT	**Malatya**	**80.34**	**307**	*e*P		**P**	**05 09 29.4**	**-2.3**
MALT				pmax		pmax		
	comp=Z,7.0nm,0.9s,mb4.6							
MALT	**Malatya**	**80.34**	**307**	*e*P		**P**	**05 09 29.4**	**-2.4**
	comp=Z,6.7nm,0.9s,mb4.6							
JOF	**Joensuu**	**81.13**	**332**	*e*p		**P**	**05 09 34.9**	**-0.5**
	comp=Z,2.9nm,0.6s,mb4.4							
ARCES	**ARCESS Array B**	**82.10**	**340**	P		**P**	**05 09 41.3**	**+0.8**
	comp=Z,8.9nm,0.9s,mb4.7,baz=74,slow=10,SNR=12							
KAF	**Kangasniemi**	**83.57**	**332**	*e*p		**P**	**05 09 47.1**	**-1.1**
	comp=Z,3.4nm,0.9s,mb4.5							
KAF	**Kangasniemi**	**83.57**	**332**	*e*P		**P**	**05 09 47.1**	**-1.1**
KAF				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.4							
FINES	**FINESS Array B**	**83.84**	**332**	*e*P		**P**	**05 09 49.0**	**-0.6**
AKASG	**Malin Array Be**	**84.62**	**321**	P		**P**	**05 09 53.2**	**-0.6**
	comp=Z,5.9nm,0.8s,mb4.8,baz=66,slow=4.5,SNR=20							
AKASG	**Malin Array Be**	**84.62**	**321**	P		**P**	**05 09 53.2**	**-0.6**
AKBB	**Malin Array Si**	**84.62**	**321**	*e*P		**P**	**05 09 53.1**	**-0.7**
KIEV	**Kiev**	**84.64**	**321**	*e*P		**P**	**05 09 53.5**	**-0.3**
KIEV				pmax		pmax		
	comp=Z,9.0nm,1.1s,mb4.8							
KIEV	**Kiev**	**84.64**	**321**	*e*P		**P**	**05 09 53.5**	**-0.4**
	comp=Z,9.3nm,1.1s,mb4.8							
CSS	**Prodhromos**	**84.94**	**305**	*e*P		**P**	**05 09 55.7**	**0.0**
	comp=Z,30nm,0.9s,mb5.4							
KMBO	**Kilima Mbogo**	**88.66**	**269**	*e*P		**P**	**05 10 14.7**	**+0.4**
KMBO				pmax		pmax		
	comp=Z,7.0nm,1.2s							
KMBO	**Kilima Mbogo**	**88.66**	**269**	*e*P		**P**	**05 10 14.7**	**+0.4**
	comp=Z,7.3nm,1.2s,mb4.9							
PPT	**Papeete**	**88.77**	**108**	LR		LR	05 43 50.1	
	comp=Z,107nm,19.4s,MS4.3,baz=48,slow=31							
NB2	**NORSAR Subarra**	**90.69**	**334**	P		**P**	**05 10 21.9**	**-0.8**
	comp=Z,4.7nm,0.9s,mb4.8,baz=64,slow=4.8							
NOA	**NORSAR Array B**	**90.69**	**334**	P		**P**	**05 10 22.2**	**-0.6**
	comp=Z,3.4nm,0.8s,mb4.7,baz=64,slow=4.6,SNR=7.3							
NOA				LR		LR	05 53 06.2	
	comp=Z,92nm,18.6s,MS4.2,baz=15,slow=37							
NOA	**NORSAR Array B**	**90.69**	**334**	P		**P**	**05 10 22.2**	**-0.6**
NOA				LR		LR	05 53 06.2	
TXAR	**Lajitas Array**	**116.96**	**48**	PKP		PKPdf	05 16 06.7	+1.2
	comp=Z,0.2nm,0.7s,baz=20,slow=2.9,SNR=3.4							
TXAR	**Lajitas Array**	**116.96**	**48**	PKP		PKPdf	05 16 06.7	+1.2
TOA0	**Torodi Ar. Sit**	**118.94**	**293**	*e*PKPdf		PKPdf	05 16 09.0	-0.6
TORD	**Torodi Ar. Bea**	**118.94**	**293**	PKP		PKPdf	05 16 09.2	-0.4
	comp=Z,0.5nm,0.5s,baz=44,slow=2.2,SNR=7.9							
JCT	**Junction City**	**119.03**	**45**	*e*PKIKP		PKPdf	05 16 10.4	+0.9
WVT	**Waverly**	**122.41**	**32**	*e*PKIKP		PKPdf	05 16 15.6	-0.2
PLCA	**Paso Flores**	**148.29**	**156**	PKPbc		PKPbc	05 17 08.4	+1.9
	comp=Z,3.9nm,0.8s,baz=191,slow=8.6,SNR=10.0							
PLCA	**Paso Flores**	**148.29**	**156**	*e*PKPbc		PKPbc	05 17 07.9	+1.4
TRQA	**Tornquist**	**153.45**	**166**	*e*PKPdf		PKPdf	05 17 12.4	+1.2
TRQA				*e*PKPbc		PKPbc	05 17 18.9	+0.1

*IDC **22** 05:07:20.0±2.1, 1790S×16782E, h0km, mb4.1/7, mb1 4.2/7, mb1mx4.0/15, mbtmp4.1/7, MS3.9/7, Ms1 3.9/7, ms1mx3.6/18, Error ellipse: s-maj=61.3km s-min=27.7km az=130.0*
*LDG **22** 05:07:23.0±0.1, 1750S×16752E, h10km, Mb4.7/2, Error ellipse: s-maj=16.5km s-min=3.5km az=97.0*
*ISCJB **22** 05:07:24.5±3.6, 178S±0.1×1677E±0.1, h34km±27km, mb4.0/8, MS3.9/6, Error ellipse: s-maj=27.6km s-min=13.5km az=141.8*
*NEIC **22** 05:07:30.1±4.5, 1824S×16783E, h78km±49km, mb4.4/1, Error ellipse: s-maj=60.4km s-min=33.5km az=151.0*
**ISC 22 05:07:25.3±5.8, 1782S±008×1678E±02, h30km±36km, h30km±.4km:pP-P, n61, σ1§10/18, mb4.0/8, MS3.9/

SMRF	**Simiane la Rot** 44nm,1.4s	**149.92**	**334**	*e*PKP1	PKPbc	05 27 12.5	-0.2
LMR	**La Mourre** 16nm,1.1s	**150.03**	**332**	*e*PKP1	PKPbc	05 27 12.1	-0.9
RJF	**Les Rejaudoux** 26nm,1.1s	**150.29**	**340**	*e*PKP1	PKPbc	05 27 13.0	-0.6
CAF	**Calviac**	**150.45**	**339**	*e*PKP1	PKPbc	05 27 13.7	-0.3
LASF	**Ste Croix** 27nm,1.2s	**150.53**	**336**	*e*PKP1	PKPbc	05 27 13.7	-0.5
LFF	**La Frestale**	**150.87**	**341**	*e*PKP1	PKPbc	05 27 14.2	-0.8
MTLF	**Montolieu** 23nm,1.3s	**151.77**	**337**	*e*PKP1	PKPbc	05 27 16.4	-0.7
ETSF	**Etsaut**	**153.11**	**341**	*e*PKP1	PKPbc	05 27 20.0	-0.1
TORD	**Torodi Ar. Bea** 1.0nm,0.9s,baz=135,slow=1.2,SNR=3.4	**165.81**	**253**	PKP	PKPdf	05 27 27.1	-1.0

CASC 22 06:15:17.4±2.1, 1210N×8190W, h36km±999km, MD4.2, 2C, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIO	**Limon**	**2.36**	**208**	*e*P	Pn	06 15 55.5	+1.8
BUS	**Buena Vista**	**3.12**	**216**⇓	*e*P	Pn	06 16 05.2	+1.0
BUS				*e*S	Sn	06 16 41.8	+1.6
LCR2	**La Lucha 2**	**3.13**	**222**⇑	*e*P	Pn	06 16 04.5	+0.3
LCR2				*e*S	Sn	06 16 41.1	+0.8
BAR1		**3.16**	**206**	*e*P	Pn	06 16 06.0	+1.3
BAR1				*e*S	Sn	06 16 43.2	+1.9
PRS1	**Puriscal**	**3.17**	**229**	*e*P	Pn	06 16 06.3	+1.5
PINA	**Piqa, Costa Ab**	**3.35**	**147**	*e*P	Pn	06 16 06.3	-1.0
TBS2		**3.37**	**193**	*e*P	Pn	06 16 10.9	+3.3
ACLA	**Agua Clara, Si**	**3.47**	**141**	*e*P	Pn	06 16 09.3	+0.4

ISCJB ***22*** *06:23:43.7±0.4, 3914N×002×2800E±004, h6km±6km, Error ellipse: s-maj=5.6km s-min=3.6km az=19.5*
ISK ***22*** *06:23:43.3, 3913N×2804E, h8km, MD2.7*
DDA ***22*** *06:23:43.3, 3912N×2802E, h9km±4km, Md2.7*
CSEM ***22*** *06:23:43.0±0.1, 3913N×2804E, h5km, MD2.7, Error ellipse: s-maj=3.1km s-min=1.9km az=124.0*

ISC 22 06:23:44.1±0.4, 3914N±002×2800E±004, h11km±5km, n15, σ0§66/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.29**	**210**	*i* P	**Pg**	**06 23 49.6**	**-0.4**
AKHS				*i* S	**Sg**	**06 23 55.0**	**+1.0**
AKS	**Akhisar**	**0.29**	**210**	*e*PG	**Pg**	**06 23 49.7**	**-0.3**
AKS				*e*SG	**Sg**	**06 23 54.4**	**+0.4**
BALB	**Balikesir**	**0.51**	**349**	*e*PG	**Pg**	**06 23 54.0**	**-0.1**
BALB				*e*SG	**Sg**	**06 24 02.0**	**+1.1**
DEMI	**Demirci**	**0.56**	**99**	*i* P	**Pg**	**06 23 55.0**	**0.0**
DEMI				*i* S	**Sg**	**06 24 03.0**	**+0.6**
DURS	**Dursunbey**	**0.59**	**38**	*i* P	**Pg**	**06 23 55.1**	**-0.5**
DURS				*i* S	**Sg**	**06 24 03.1**	**-0.3**
BALY	**Balya**	**0.67**	**334**	*i* P	**Pg**	**06 23 56.9**	**-0.2**
BALY				*i* S	**Sg**	**06 24 05.8**	**-0.1**
DST	**Dursunbey**	**0.68**	**46**	*e*PG	**Pg**	**06 23 56.0**	**-1.1**
KULA	**Kula-Manisa**	**0.81**	**140**	*e*PG	**Pg**	**06 23 59.2**	**-0.4**
IZM	**Izmir**	**0.94**	**218**	*e*PG	**Pg**	**06 24 02.0**	**-0.1**
BLCB	**Balcova**	**1.06**	**225**	*e*PG	**Pg**	**06 24 04.2**	**-0.2**
GDZ	**Gediz**	**1.15**	**92**	*i* P	**Pb**	**06 24 05.1**	**-0.9**
GDZ				*i* S	**Sb**	**06 24 21.4**	**+0.5**
KCT	**Karacabey**	**1.16**	**13**	*e*PN	**Pn**	**06 24 05.3**	**-1.0**
ULDT	**Uludag**	**1.33**	**41**	*i* P	**Pn**	**06 24 08.7**	**+0.1**
ULDT				*i* S	**Sb**	**06 24 28.1**	**+1.9**
AYDN	**Tasoluk**	**1.48**	**184**	*i* P	**Pn**	**06 24 11.1**	**+0.5**
AYDN				*i* S	**Sn**	**06 24 29.5**	**-0.3**
YLV	**Yalova**	**1.78**	**36**	*e*PN	**Pn**	**06 24 14.7**	**0.0**

IDC 22 06:26:17.8±8.1, 363S×10296E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=291.5km s-min=29.0km az=61.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.4nm,0.4s,baz=301,slow=8.8,SNR=9.0	**34.63**	**120**	P	P	06 33 09.9	+0.8
ASAR	**Alice Springs** 0.5nm,0.5s,baz=295,slow=7.9,SNR=13	**35.92**	**127**	P	P	06 33 19.4	-0.8
SONM	**Songino Array** 0.6nm,0.6s,baz=183,slow=8.7,SNR=3.0	**51.33**	**3**	P	P	06 35 24.1	+0.2

NIED ***22*** *06:27:00, 2460N×12190E, h23km, Mw4.3 Best double couple: M0 3.01000×10^15 NP1:φ=268.00000°, δ87.00000°, λ14.00000°. NP2:φ=178.00000°, δ76.00000°, λ177.00000°.*
NEIC ***22*** *06:27:03.8±1.3, 2439N×12196E, h11km±8km, mb4.2/2, Error ellipse: s-maj=12.6km s-min=9.2km az=79.0*
NEIC Recorded [6 TAP] in I-lan; [4 TAP] in Hua-lien; [2 TAP] in Nan-t'ou, T'ai-pei and T'ao-yuan; [1 TAP] in Hsin-chu Counties.
ISCJB ***22*** *06:27:04.0±0.3, 2448N±001×12197E±001, h11km±2km, mb4.0/14, MS3.3/3, Error ellipse: s-maj=2.4km s-min=1.9km az=35.0*
TAP ***22*** *06:27:04.5, 2446N×12187E, h22km, ML4.8, B*
JMA ***22*** *06:27:05.1±0.3, 2461N×12189E, h49km, M4.5*
IDC ***22*** *06:27:08.5±3.9, 2438N×12206E, h52km±39km, mb3.8/11, mb1 4.0/12, mb1mx3.8/23, mbtmp3.9/12, ML4.1/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/36, Error ellipse: s-maj=28.7km s-min=14.0km az=61.0*
BJI ***22*** *06:27:08.8, 2488N×12157E, h15km, mB4.5, mb4.4, ML4.3, Ms4.1, Msz4.0*

ISC 22 06:27:04.2±0.3, 2445N±001×12197E±002, h7km±2km, n108, σ1§15/163, mb4.0/14, MS3.3/3, 25C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao** baz=353	**0.19**	**326**⇓	*i* P	**Pg**	**06 27 09.6**	**+1.5**
ENA	**Nanau** baz=254	**0.20**	**263**⇑	*i* P	**Pg**	**06 27 09.3**	**+0.9**
ENA				*i* S	**Sg**	**06 27 12.2**	**+1.0**
EHP	**Heping Village** baz=219	**0.25**	**235**	*i* P	**Pg**	**06 27 09.9**	**+0.8**
EHP				*i* S	**Sg**	**06 27 13.6**	**+1.1**
ILA	**Ilan** baz=332	**0.37**	**328**⇓	*i* P	**Pg**	**06 27 12.4**	**+0.9**
ILA				*e*S	**Sg**	**06 27 17.4**	**+1.1**
TWE	**Neicheng** baz=324	**0.38**	**315**⇓	*i* P	**Pg**	**06 27 12.0**	**+0.4**
EGS	baz=8.0	**0.39**	**356**⇑	*i* P	**Pg**	**06 27 13.3**	**+1.5**
EGS				*i* S	**Sg**	**06 27 18.7**	**+1.7**
ENTT	**Nioudou** baz=303	**0.41**	**297**⇓	*i* P	**Pg**	**06 27 12.2**	**+0.1**
NACB	**Ninganchiao**	**0.44**	**231**	*e*Pg	**Pg**	**06 27 12.4**	**-0.3**
NACB				*e*Sg	**Sg**	**06 27 18.1**	**-0.3**
TWD	**Chiawan** baz=218	**0.50**	**222**⇑	*i* P	**Pg**	**06 27 13.8**	**-0.1**
TWD				*e*S	**Sg**	**06 27 21.0**	**+0.5**
NNS	**Nan Shan** baz=269	**0.54**	**269**⇑	*i* P	**Pg**	**06 27 14.2**	**-0.4**
NNS				*i* S	**Sg**	**06 27 20.6**	**-1.1**
TWB1	**Santiao Chiao** baz=5.0	**0.55**	**2**⇑	*i* P	**Pg**	**06 27 16.0**	**+1.1**
TWB1				*i* S	**Sg**	**06 27 22.9**	**+0.7**
HWA	**Hwalien** baz=215	**0.58**	**215**	P	**Pg**	**06 27 15.9**	**+0.6**
HWA				*e*S	**Sg**	**06 27 25.9**	**+3.0**
YHNB	**Yeheng**	**0.58**	**292**	*e*Pg	**Pg**	**06 27 14.9**	**-0.5**
YHNB				*e*Sg	**Sg**	**06 27 21.1**	**-1.8**
NSK	**Sanguang** baz=296	**0.59**	**292**⇓	*i* P	**Pg**	**06 27 15.3**	**-0.4**
NSK				*e*S	**Sg**	**06 27 21.0**	**-2.4**
TWA	**Mucha** baz=328	**0.63**	**327**⇓	*i* P	**Pg**	**06 27 16.6**	**+0.2**
TWA				*e*S	**Sg**	**06 27 23.5**	**-1.1**
NWF	**Wu-fen Shan** baz=347	**0.64**	**345**⇓	*i* P	**Pg**	**06 27 17.4**	**+0.8**
NWF				S	**Sg**	**06 27 24.5**	**-0.3**
TATO	**Taipei** baz=347	**0.68**	**320**	*e*Pg	**Pg**	**06 27 16.9**	**-0.3**
WHF	**Hehuan Shan** baz=245	**0.71**	**245**⇑	*i*P	**Pg**	**06 27 17.3**	**-0.5**
TAP1	**Taipei** baz=331	**0.71**	**326**	*i* P	**Pg**	**06 27 18.2**	**+0.4**
TAP1				*e*S	**Sg**	**06 27 26.4**	**-0.7**
ESF	**Shoufeng Towns** baz=225	**0.71**	**216**	*e*P	**Pg**	**06 27 17.8**	**-0.2**
TWT	**Tachien** baz=256	**0.75**	**255**	P	**Pg**	**06 27 18.3**	**-0.3**
TWT				*e*S	**Sg**	**06 27 27.9**	**-0.3**
ESL	**Shilin** baz=219	**0.80**	**217**⇑	*i*P	**Pg**	**06 27 19.2**	**-0.4**
ESL				*e*S	**Sg**	**06 27 31.3**	**+1.3**
TWS1	**Kuangyinshan** baz=327	**0.81**	**323**⇑	P	**Pg**	**06 27 20.1**	**+0.2**
TWS1				*e*S	**Sg**	**06 27 30.7**	**+0.2**
TEGC	**Jichi Village** baz=193	**0.84**	**208**	*e*P	**Pg**	**06 27 20.4**	**+0.1**
NCU	**National Centr** baz=310	**0.88**	**306**	*i* P	**Pg**	**06 27 21.2**	**+0.2**
NCU				S	**Sg**	**06 27 32.4**	**0.0**
TWY	**Chenhua** baz=343	**0.88**	**338**⇓	*i*P	**Pg**	**06 27 21.6**	**+0.4**
TWY				S	**Sg**	**06 27 32.8**	**+0.1**
NSTT	**Nanjuang** baz=278	**0.90**	**282**	*e*P	**Pg**	**06 27 20.5**	**-1.0**
NSTT				*e*S	**Sg**	**06 27 30.6**	**-2.5**
YOJ	**Yonaguni jima** baz=87	**0.95**	**89**	P	**Pg**	**06 27 23.5**	**+1.0**
YOJ				*e*S	**Sg**	**06 27 37.0**	**+2.1**
YOJ	**Yonaguni jima** baz=87	**0.95**	**89**	⇑P	**Pg**	**06 27 23.3**	**+0.8**
YOJ				*e*S	**Sg**	**06 27 37.6**	**+2.7**
HSN	**Hsinchu** baz=307	**0.97**	**291**	P	**Pg**	**06 27 22.4**	**-0.5**
HSN				S	**Sg**	**06 27 34.9**	**-0.6**
TWQ1	**Liyutan** baz=266	**1.09**	**265**	⇑P	**Pg**	**06 27 24.6**	**-0.6**
TWQ1				*e*S	**Sg**	**06 27 39.7**	**+0.4**
NSY	**Sanyi** baz=269	**1.10**	**268**	P	**Pg**	**06 27 25.4**	**+0.1**
NSY				*e*S	**Sg**	**06 27 38.8**	**-0.8**
EHY	**Hungye** baz=223	**1.11**	**212**	*e*P	**Pg**	**06 27 23.4**	**-2.1**
EHY				*e*S	**Sg**	**06 27 40.1**	**+0.1**
SMLT	**Sun Moon Lake** baz=245	**1.13**	**240**	⇑P	**Pg**	**06 27 24.6**	**-1.2**
SMLT				*e*S	**Sg**	**06 27 39.1**	**-1.3**
TYC	**Yuchr** baz=244	**1.15**	**242**⇓	*i*P	**Pg**	**06 27 25.2**	**-1.1**
PCYT	**Pengchaiyu** baz=7.0	**1.18**	**5**⇑	*i*P	**Pb**	**06 27 25.4**	**-1.4**
TCU	**Taichung** baz=271	**1.21**	**256**⇑	*i*P	**Pb**	**06 27 27.5**	**0.0**
TCU				*e*S	**Sb**	**06 27 43.2**	**-0.2**
TWF1	**Yuli** baz=219	**1.25**	**209**⇑	*i*P	**Pn**	**06 27 25.4**	**-2.7**
WNT	**Mingjian** baz=258	**1.30**	**244**	⇑P	**Pn**	**06 27 29.1**	**+0.3**
WNT				*e*S	**Sb**	**06 27 47.1**	**+1.1**
YUS	**Yu-Shan** baz=211	**1.33**	**224**⇑	*i*P	**Pn**	**06 27 28.5**	**-0.7**
ALS	**Alishan** baz=217	**1.42**	**229**⇑	*i*P	**Pn**	**06 27 30.1**	**-0.2**
ALS				*e*S	**Sn**	**06 27 49.7**	**+0.4**
CHN5	**Tsauling** baz=235	**1.45**	**234**	⇑P	**Pn**	**06 27 30.9**	**+0.1**
CHN5				*e*S	**Sn**	**06 27 51.4**	**+1.2**
CHKT	**Chengkung** baz=186	**1.46**	**202**	*e*P	**Pn**	**06 27 29.4**	**-1.5**
CHKT				*e*S	**Sn**	**06 27 49.2**	**-1.0**
WGK	**Gukeng** baz=241	**1.49**	**240**	⇑P	**Pn**	**06 27 32.0**	**+0.5**
WGK				*e*S	**Sn**	**06 27 53.4**	**+2.2**
ELDTW	**Lidau** baz=203	**1.53**	**215**	*e*P	**Pn**	**06 27 30.0**	**-1.9**
IRIF	**Iriomote-Funau**	**1.61**	**94**	P	**Pn**	**06 27 32.7**	**-0.4**
IRIF				*e*S	**Sn**	**06 27 53.2**	**-1.0**
CHN2	**Minshiung** baz=237	**1.64**	**236**	*e*P	**Pn**	**06 27 34.1**	**+0.6**
CHN2				*e*S	**Sn**	**06 27 56.7**	**+1.8**
WTCT	**Ta-ch'eng** baz=260	**1.65**	**249**	*e*P	**Pn**	**06 27 33.5**	**-0.1**
WTCT				*e*S	**Sn**	**06 27 54.3**	**-0.6**
CHN4	**Tsaushan** baz=230	**1.67**	**229**⇑	*i*P	**Pn**	**06 27 34.3**	**+0.4**
CHN4				S	**Sn**	**06 27 57.0**	**+1.6**
STYT	**Tauyuan** baz=222	**1.69**	**221**⇑	*i*P	**Pn**	**06 27 33.9**	**-0.3**
STYT				*e*S	**Sn**	**06 27 56.5**	**+0.3**
WTP	**Ta-pu** baz=215	**1.72**	**226**	⇑P	**Pn**	**06 27 34.9**	**+0.3**
WTP				*e*S	**Sn**	**06 27 58.2**	**+1.4**
HATJ	**Hateruma jima**	**1.73**	**103**	P	**Pn**	**06 27 35.3**	**+0.7**
HATJ				*e*S	**Sn**	**06 27 57.1**	**+0.2**
WSF	**Szhu** baz=245	**1.79**	**243**	*e*P	**Pn**	**06 27 34.9**	**-0.6**
WSF				*e*S	**Sn**	**06 27 58.8**	**+0.3**
TWK	**Hsinying** baz=230	**1.79**	**229**	⇑P	**Pn**	**06 27 36.1**	**+0.5**
TWK				*e*S	**Sn**	**06 27 59.8**	**+1.2**
TWG	**Pinlang** baz=194	**1.82**	**207**	*e*P	**Pn**	**06 27 33.1**	**-2.8**
CHN1	**Nanshi** baz=228	**1.82**	**226**	⇑P	**Pn**	**06 27 36.4**	**+0.4**
CHN1				*e*S	**Sn**	**06 28 00.7**	**+1.4**
TTN	**Taitung** baz=204	**1.85**	**204**	*e*P	**Pn**	**06 27 33.9**	**-2.5**
SGST	**Jiashian** baz=225	**1.86**	**223**⇑	*i*P	**Pn**	**06 27 37.2**	**+0.7**
SGST				*e*S	**Sn**	**06 28 01.8**	**+1.5**
JKRS	**Kuro-shima**	**1.88**	**96**	P	**Pn**	**06 27 36.8**	**+0.1**
JKRS				*e*S	**Sn**	**06 28 00.1**	**-0.6**
CHN8	**Yiju** baz=224	**1.95**	**236**	P	**Pn**	**06 27 38.1**	**+0.4**
CHN8				*e*S	**Sn**	**06 28 03.7**	**+1.3**
JIJ	**Ishigaki jima**	**1.99**	**92**	P	**Pn**	**06 27 37.7**	**-0.6**
JIJ				*e*S	**Sn**	**06 28 02.0**	**-1.4**
SCLT	**Jiali** baz=218	**2.06**	**232**	*e*P	**Pn**	**06 27 39.8**	**+0.5**
SCLT				*e*S	**Sn**	**06 28 06.5**	**+1.3**
ECL	**Taimali** baz=196	**2.07**	**207**	*e*P	**Pn**	**06 27 37.0**	**-2.4**
SSD	**Sandimen** baz=207	**2.09**	**216**	*e*P	**Pn**	**06 27 39.2**	**-0.5**
SSD				*e*S	**Sn**	**06 28 07.2**	**+1.2**
TAI1	**Yung-k'ang** baz=229	**2.12**	**229**	*e*P	**Pn**	**06 27 40.2**	**+0.1**
TWM1	**Shoushan** baz=221	**2.15**	**221**	*e*P	**Pn**	**06 27 42.1**	**+1.6**
EAST	**Anshuo** baz=196	**2.30**	**207**	*e*P	**Pn**	**06 27 40.5**	**-2.0**
TAW	**Tawu** baz=196	**2.31**	**205**	*e*P	**Pn**	**06 27 41.8**	**-0.8**
PNG	**Penghu** baz=251	**2.37**	**249**	*e*P	**Pn**	**06 27 40.6**	**-2.9**
SCZT	**Fangliau** baz=199	**2.41**	**211**	*e*P	**Pn**	**06 27 44.7**	**+0.6**
LAY	**Lan-yu** baz=179	**2.43**	**189**	*e*P	**Pn**	**06 27 42.6**	**-1.8**
JTJ	**Tarama**	**2.50**	**85**	P	**Pn**	**06 27 45.9**	**+0.6**
JTJ				*e*S	**Sn**	**06 28 15.9**	**-0.1**
TWP	**Hsiaoliuchiu** baz=216	**2.56**	**215**	*e*P	**Pn**	**06 27 47.9**	**+1.7**
HEN	**Hengchun** baz=198	**2.68**	**205**	*e*P	**Pn**	**06 27 48.8**	**+0.9**
TWK1	**Hengchun** baz=205	**2.72**	**203**	*e*P	**Pn**	**06 27 46.2**	**-2.1**
TWK1				*e*S	**Sn**	**06 28 23.2**	**+1.9**
TSEB	**Hengchuen, Pin** baz=193	**2.72**	**201**	*e*P	**Pn**	**06 27 48.7**	**+0.4**
QZH	**Quanzhou**	**3.11**	**280**	P	**Pn**	**06 27 51.6**	**-2.0**
QZH				S	**Sn**	**06 28 26.5**	**-4.5**
QZH	comp=N,2μm,0.5s			Smax			
QZH	comp=E,840nm,0.7s			Smax			
JOGS	**Gusukube**	**3.15**	**84**	P	**Pn**	**06 27 55.5**	**+1.3**
JOGS				*e*S	**Sn**	**06 28 32.1**	**+0.1**
KNM	**Kinmen** baz=272	**3.22**	**270**	*e*P	**Pn**	**06 27 54.1**	**-1.1**
JKE	**Kume jima 2**	**4.74**	**66**	P	**Pn**	**06 28 18.3**	**+2.2**
JOW	**Kunigami** comp=E,11nm,0.3s,baz=201,slow=9.8,SNR=26	**6.17**	**66**	*e*P	**Pn**	**06 28 36.8**	**+1.0**
JOW	**Kunigami** baz=67	**6.17**	**66**	*e*P	**Pn**	**06 28 36.7**	**+1.0**
NJ2	**Nanjing**	**8.05**	**341**	*e*P	**Pn**	**06 29 02.8**	**+1.2**
NJ2				S	**Sn**	**06 30 36.3**	**+3.4**
NJ2	comp=Z,20nm,0.7s			AMB	AMB		
WHN	**Wuhan**	**9.08**	**314**	*e*P	**Pn**	**06 29 16.0**	**+0.3**
WHN				S	**Sn**	**06 31 00.0**	**+1.8**
WHN	comp=N,843nm,14.3s			LR	LR		
WHN	comp=E,1μm,10.2s			LR	LR		
WHN	comp=Z,1μm,11.4s			LR	LR		
KSRS	**Korea Array** comp=Z,1.0nm,0.3s,baz=199,slow=12,SNR=36	**13.93**	**20**	P	**Pn**	**06 30 30.7**	**+8.7**
XAN	**Xi'an**	**14.85**	**313**	P	**Pn**	**06 30 36.3**	**+1.7**
XAN				LG2		06 33 55.4	
XAN	comp=Z,2.0nm,0.9s			AMB	AMB		
XAN	comp=N,168nm,15.7s			LR	LR		
XAN	comp=E,208nm,13.3s			LR	LR		
XAN	comp=Z,207nm,12.6s			LR	LR		
CD2	**Chengdu**	**17.35**	**296**	P	**Pn**	**06 31 05.1**	**-1.8**
CD2				AP	pP	06 31 08.6	-1.7
CD2				XP	sP	06 31 12.3	+1.1
CD2				PP		06 31 19.8	
CD2				S	**Sn**	**06 34 16.1**	**-4.2**
CD2				XS	sS	06 34 22.1	-10
CD2	comp=Z,40nm,1.0s			AMB	AMB		
CD2	comp=Z,190nm,6.0s			AMB	AMB		
CD2	comp=N,300nm,10.8s			LR	LR		
CD2	comp=E,370nm,13.2s			LR	LR		
CD2	comp=Z,370nm,13.2s			LR	LR		
JHJ	**Hachijo jima 2** comp=Z,31nm,20.7s,baz=218,slow=32	**17.83**	**57**	LR	LR	06 36 33.8	
MJAR	**Matsushiro Arr** comp=Z,54nm,19.3s,baz=220,slow=39	**18.44**	**45**	LR	LR	06 39 08.0	
HHC	**Hu-ho-hao-te**	**18.52**	**334**	*e*P	**Pn**	**06 31 15.5**	**-5.8**
HHC				PP		06 31 31.3	
HHC				S	**Sn**	**06 34 38.9**	**-10**
HHC				XS	sS	06 34 45.0	-11
HHC				SS		06 35 02.8	
HHC	comp=Z,21nm,0.6s			AMB	AMB		
HHC	comp=Z,125nm,5.1s			AMB	AMB		
LZH	**Lanzhou**	**19.44**	**311**	*e*P	**Pn**	**06 31 32.5**	**+0.1**
LZH				AP	pP	06 31 36.3	+3.0
LZH				XP	sP	06 31 39.6	+5.4
LZH				PP		06 31 50.5	
LZH				*e*S	**Sn**	**06 35 05.4**	**-5.4**
LZH				XS	sS	06 35 11.3	-3.2
LZH	comp=Z,18nm,1.0s			AMB	AMB		
LZH	comp=Z,83nm,4.1s			AMB	AMB		
LZH	comp=E,439nm,11.3s			LR	LR		
LZH	comp=Z,623nm,14.1s			LR	LR		
CMAR	**Chiang Mai Arr** comp=Z,1.3nm,0.4s,mb3.7,baz=61,slow=8.8,SNR=4.1	**22.23**	**259**	P	**P**	**06 32 02.2**	**+0.7**
CMAR	comp=Z,103nm,19.4s,MS3.3,baz=80,slow=39			LR	LR	06 41 29.4	
GTA	**Gaotai**	**23.91**	**314**	*e*P	**P**	**06 32 20.9**	**+2.2**
GTA				AP		06 32 26.4	
GTA				XP	sP	06 32 30.4	+8.7
GTA	comp=Z,7.0nm,0.9s,mb4.1			AMB	AMB		
GTA	comp=N,120nm,9.9s			LR	LR		
GTA	comp=E,227nm,13.8s			LR	LR		
ASAJ	**Asahikawa** comp=E,91nm,18.4s,MS3.3,baz=96,slow=38	**25.86**	**36**	LR	LR	06 43 18.2	
ULN	**Ulaanbaatar** comp=E,4.7nm,0.7s,mb4.1	**26.19**	**337**	*e*P	**P**	**06 32 39.2**	**-0.2**
SONM	**Songino Array** comp=E,5.4nm,1.0s,mb4.0,baz=152,slow=10.0,SNR=20	**26.41**	**336**	P	**P**	**06 32 41.3**	**0.0**
SONM	comp=E,92nm,19.1s,MS3.3,baz=28,slow=38			LR	LR	06 44 05.9	
MKAR	**Makanchi Array** comp=E,1.3nm,0.5s,mb3.9,baz=101,slow=11,SNR=15	**38.64**	**315**	P	**P**	**06 34 27.5**	**-0.7**
ZALV	**Zalesovo Beam** comp=E,2.4nm,0.7s,mb4.0,baz=111,slow=8.4,SNR=9.4	**40.41**	**327**	P	**P**	**06 34 41.9**	**-0.9**
ZALV	**Zalesovo Beam**	**40.41**	**327**	P	**P**	**06 34 41.9**	**-0.9**
KURK	**Kurchatov** comp=E,0.7nm,0.2s,mb3.9,baz=106,slow=30,SNR=7.1	**42.35**	**320**	P	**P**	**06 34 57.8**	**-1.0**
UCH	**Uchtor** comp=E,3.6nm,0.9s,mb4.1	**42.83**	**306**	*e*P	**P**	**06 35 05.6**	**+2.7**
WRA	**Warramunga Arr** comp=E,1.7nm,0.6s,mb4.2,baz=346,slow=8.8,SNR=16	**45.74**	**164**	P	**P**	**06 35 23.8**	**-2.5**
WB2	**Warramunga Arr**	**45.74**	**164**	*e*P	**P**	**06 35 23.4**	**-3.0**
BVAR	**Borovoye Array** comp=E,1.0nm,0.5s,mb4.1,baz=95,slow=8.0,SNR=5.7	**47.92**	**320**	P	**P**	**06 35 42.0**	**-1.0**
ASAR	**Alice Springs** comp=E,0.7nm,0.6s,mb3.9,baz=336,slow=7.0,SNR=11	**49.21**	**165**	P	**P**	**06 35 51.4**	**-1.9**
STKA	**Stephens Creek** comp=E,2.2nm,0.7s,mb4.3,baz=0.0,slow=6.1,SNR=4.5	**59.07**	**161**	P	**P**	**06 37 02.4**	**-2.7**
NOA	**NORSAR Array B** comp=E,1.3nm,0.9s,mb3.9,baz=55,slow=5.3,SNR=2.9	**78.32**	**332**	P	**P**	**06 39 04.8**	**-0.1**
NVAR	**Mina Array Bea** comp=E,0.5nm,0.8s,mb4.0,baz=222,slow=2.0,SNR=3.7	**95.75**	**43**	P	**P**	**06 40 28.9**	**-2.4**

IDC ***22*** *06:35:24.9±0.4, 4284N×3191W, h0km, mb4.8/29, mb1 4.9/29, mb1mx4.9/31, mbtmp4.8/29, MS4.5/26, Ms1 4.5/26, ms1mx4.4/30, Error ellipse: s-maj=11.4km s-min=10.3km az=162.0*
ISCJB ***22*** *06:35:25.3±0.1, 4284N±002×3189W±002, h10km, mb5.1/225, MS4.6/61, Error ellipse: s-maj=3.5km s-min=1.8km az=0.6*
GCMT ***22*** *06:35:27.2±0.2, 4293N×3194W, h28km, MW5.2/94, Moment Tensor Solution. s76,c116; s94,c170; Duration: 1§0 Moment tensor: Scale 10^17 Nm; Mrr-0.78±.02; Mθθ0.75±.01; Mφφ0.02±.01; Mrθ-0.17±.02; Mθφ-0.20±.01; Mφr-0.21±.02; Best double couple: M0 0.83400×10^17 NP1:φ=300.00000°, δ43.00000°, λ-66.00000°. NP2:φ=89.00000°, δ51.00000°, λ-111.00000°. Principal axes: T 0.8100, Plg4.0000°, Azm194.0000°; N 0.0470, Plg16.0000°, Azm102.0000°; P -0.8570, Plg73.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves,*

cutoff=50s.

NEIC ***22*** *06:35:27.2₀0.1,4288N×3187W,h10km,mb5.3/132, MW5.2 Error ellipse: s-maj=4.6km s-min=1.6km az=176.0, Moment Tensor Solution. s46 Moment tensor: Scale 10¹⁶Nm; Mrr=8.36; Mθθ=7.49; Mφφ=0.88; Mrθ=-1.07; Mrφ=-1.13; Mθφ=0.68; Best double couple: M₀8.10000×10¹⁶ NP1: φs=94.00000°, δ49.00000°, λ=-97.00000°. NP2:φs285.00000°, δ42.00000°, λ=-82.00000°. Principal axes: T 7.7300, Plg3.0000°, Azm189.0000°; N 0.7700, Plg5.0000°, Azm98.0000°; P -8.4900, Plg83.0000°, Azm311.0000°;*

BJI ***22*** *06:35:27.2, 4372N×3240W, h8km, mB5.4, mb5.2, Ms5.2, Msz4.8*

CSEM ***22*** *06:35:28.9₀0.0, 4303N×3187W, h33km, mb5.3/99, Ms4.3, Mw5.2, Error ellipse: s-maj=2.7km s-min=0.8km az=178.0*

MOS ***22*** *06:35:28.8₀0.8, 4291N×3189W, h33km, mb5.2/75, MS4.5/25, Error ellipse: s-maj=6.1km s-min=3.7km az=148.3*

IGIL ***22*** *06:35:30.3, 4290N×3180W, h10km, MS4.4*

SZGRF ***22*** *06:35:44.7, 4307N×2958W, h33km, mb4.8, MS4.4, Northern Mid-Atlantic Ridge*

BGS ***22*** *06:35:44.6₀3.3, 4346N×2983W, h10km, mb5.0*

PDA ***22*** *06:36:25.7₀0.7, 3949N×2877W, h10km, MD3.4, ML2.3, Error ellipse: s-maj=6.4km s-min=4.0km az=151.0*

ISC 22 06:35:27.2₀0.1,4281N₄003×3187W₄002,h10km, (h17km±1.7km:pP-P),n827,ₙ0ᵍ91/821,mb5.1/225, MS4.6/61,20C-34D,Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SRBC	**Serra Branca**	**4.76**	**141**	*eP*		**Pn**	**06 36 36.9**	**-2.0**
PGRA	**Graciosa**	**4.79**	**141**	*eP*		**Pn**	**06 36 37.8**	**-1.5**
PGRA				*eS*		**Pb**	**06 36 47.0**	**-4.1**
PGRA				A			06 36 51.3	
	22nm,0.3s							
PGRA	**Graciosa**	**4.79**	**141**	*eP*		**Pn**	**06 36 37.8**	**-1.5**
PGRA				*eS*		**Pb**	**06 36 47.0**	**-4.1**
PCED	**Cedros**	**4.82**	**149**	*eP*		**Pn**	**06 36 39.2**	**-0.6**
PCED				*eS*		**Pb**	**06 36 49.2**	**-2.5**
PCED				A			06 36 50.5	
	34nm,0.4s							
PCED	**Cedros**	**4.82**	**149**	*eP*		**Pn**	**06 36 39.2**	**-0.6**
PCED				*eS*		**Pb**	**06 36 49.2**	**-2.5**
CALA	**Caldeira**	**4.86**	**149**	*eP*		**Pn**	**06 36 39.8**	**-0.5**
ROSA	**Rosais**	**4.93**	**145**	*eP*		**Pn**	**06 36 39.3**	**-1.9**
HOR	**Horta**	**4.94**	**149**	*eP*		**Pn**	**06 36 40.4**	**-1.0**
PICO	**Pico**	**5.04**	**148**	*eP*		**Pn**	**06 36 41.9**	**-0.8**
PMAN	**Manadas**	**5.07**	**144**	*eP*		**Pn**	**06 36 41.3**	**-1.8**
PSBA	**Serra de Santa**	**5.31**	**138**	*eP*		**Pn**	**06 36 45.9**	**-0.6**
PSBA				*eS*		**Pb**	**06 37 00.8**	**+0.8**
PSBA				A			06 37 03.3	
	68nm,0.3s							
PSBA	**Serra de Santa**	**5.31**	**138**	*eP*		**Pn**	**06 36 45.9**	**-0.6**
PSBA				*eS*		**Pb**	**06 37 00.8**	**+0.8**
PDA	**Ponta Delgada**	**6.93**	**135**	*eP*		**Sn**	**06 38 32.0**	**+4.3**
CMLA	**Cha da Macela**	**6.99**	**134**	*eP*		**Sn**	**06 38 48.3**	**+19**
LIS	**Lisbon**	**17.68**	**96**	*eP*		**Pn**	**06 39 34.5**	**+1.1**
LIS				*eS*		**Sn**	**06 42 56.8**	**+6.6**
LIS				*eS*		**Sn**	**06 42 56.8**	**+6.6**
LIS				AMS		AMS	06 45 02.6	
	comp=Z,2μm,18.2s							
MTE	**Manteigas**	**18.33**	**89**	*e*Pn		**Pn**	**06 39 42.7**	**+1.3**
MTE	**Manteigas**	**18.33**	**89**	*e*Pn		**Pn**	**06 39 42.7**	**+1.3**
EVOP	**Sao Brissos**	**18.49**	**95**	*eP*		**Pn**	**06 39 44.2**	**+0.8**
	comp=Z,43nm,1.2s							
EVO	**Evora**	**18.57**	**95**	*eP*		**Pn**	**06 39 44.2**	**-0.2**
	comp=Z,86nm,1.2s							
EVO				*e*MLR		MLR		
	comp=Z,2μm,19.5s							
DCN	**Croghan**	**19.42**	**49**	*eP*		**Pn**	**06 39 52.0**	**-2.4**
ROSF	**Rostrenen**	**20.70**	**65**	*eP*		**P**	**06 40 07.1**	**-0.1**
	comp=Z,206nm,1.2s							
ROSF	**Rostrenen**	**20.70**	**65**	*eP*		**P**	**06 40 07.1**	**-0.1**
ROSF				pmax		pmax		
	comp=Z,103nm,1.2s							
ROSF	**Rostrenen**	**20.70**	**65**	*eP*		**P**	**06 40 07.1**	**-0.1**
	comp=Z,103nm,1.2s							
QUIF	**Quistinic**	**20.74**	**66**	*eP*		**P**	**06 40 07.8**	**+0.1**
	comp=Z,90nm,1.4s							
QUIF	**Quistinic**	**20.74**	**66**	*eP*		**P**	**06 40 07.8**	**+0.1**
QUIF				pmax		pmax		
	comp=Z,45nm,1.4s							
QUIF	**Quistinic**	**20.74**	**66**	*eP*		**P**	**06 40 07.8**	**+0.1**
	comp=Z,45nm,1.4s							
PAB	**San Pablo**	**20.93**	**90**	*eP*		**P**	**06 40 10.5**	**+0.6**
PAB				pmax		pmax		
	comp=Z,96nm,1.2s							
PAB	**San Pablo**	**20.93**	**90**	*eP*		**P**	**06 40 10.5**	**+0.6**
	comp=Z,96nm,1.2s							
PAB	**San Pablo**	**20.93**	**90**	*eP*		**P**	**06 40 10.5**	**+0.7**
	comp=Z,96nm,1.2s							
WLF1	**Llynfaes**	**21.01**	**51**	*eP*		**P**	**06 40 11.1**	**+0.4**
WLF1				AMb		AMB	06 40 17.6	
	comp=Z,151nm,1.6s,mb5.1							
WME	**Myndd Eilian**	**21.10**	**50**	*eP*		**P**	**06 40 11.9**	**+0.4**
WME	**Myndd Eilian**	**21.10**	**50**	*eP*		**P**	**06 40 11.9**	**+0.3**
WIM	**Isle of Man**	**21.15**	**48**	*eP*		**P**	**06 40 14.8**	**+2.7**
SGMF	**Saint Gilles**	**21.17**	**65**	*eP*		**P**	**06 40 12.5**	**+0.2**
	comp=Z,225nm,1.3s,mb5.0							
SGMF	**Saint Gilles**	**21.17**	**65**	*eP*		**P**	**06 40 12.5**	**+0.2**
SGMF				pmax		pmax		
	comp=Z,112nm,1.3s,mb5.0							
SGMF	**Saint Gilles**	**21.17**	**65**	*eP*		**P**	**06 40 12.5**	**+0.2**
	comp=Z,112nm,1.3s,mb5.0							
ESDC	**Sonseca Array**	**21.18**	**89**	P		**P**	**06 40 12.8**	**+0.3**
	comp=Z,12nm,1.0s,mb4.2,baz=295,slow=9.4,SNR=18							
ESDC				LR		LR	06 46 33.5	
	comp=Z,519nm,21.0s,MS3.9,baz=275,slow=32							
HTR	**Trewern Hill**	**21.32**	**54**	*eP*		**P**	**06 40 13.1**	**-0.9**
HTR	**Trewern Hill**	**21.32**	**54**	*eP*		**P**	**06 40 13.1**	**-0.9**
	comp=Z,131nm,1.4s,mb5.1							
GAL1	**Galloway**	**21.41**	**46**	*eP*		**P**	**06 40 16.2**	**+1.4**
RTC	**Rabat Centre**	**21.43**	**106**	*eP*		**P**	**06 40 17.0**	**+1.7**
	comp=Z,76nm,0.4s,mb5.4							
MCH1	**Michaelchurch**	**21.47**	**55**	*eP*		**P**	**06 40 14.5**	**-1.0**
MCH1				AMb		AMB	06 40 24.6	
	comp=Z,171nm,1.7s,mb5.1							
HGH	**Gray Hill**	**21.50**	**56**	*eP*		**P**	**06 40 15.2**	**-0.7**
JSA	**Saint Aubin**	**21.50**	**62**	*eP*		**P**	**06 40 15.3**	**-0.6**
JSA				AMb		AMB	06 40 15.5	
	comp=Z,131nm,1.4s,mb5.2							
JRS	**Jersey**	**21.55**	**62**	*eP*		**P**	**06 40 17.8**	**+1.3**
JQE	**Queens East**	**21.59**	**62**	*eP*		**P**	**06 40 16.7**	**-0.1**
HLM1	**Long Mynd**	**21.67**	**53**	*eP*		**P**	**06 40 16.1**	**-1.5**
RSA	**Sarsar**	**21.71**	**103**	*i* P		**P**	**06 40 20.0**	**+1.7**
DKH	**Dar Kharkhour**	**21.76**	**101**	*i* P		**P**	**06 40 21.0**	**+2.2**
GCD	**Castle Douglas**	**21.82**	**47**	*eP*		**P**	**06 40 21.6**	**+2.3**
KSB	**Sheil Bridge**	**22.08**	**40**	*eP*		**P**	**06 40 23.6**	**+1.5**
EAB	**Aberfoyle**	**22.14**	**43**	*eP*		**P**	**06 40 24.1**	**+1.4**
EAB	**Aberfoyle**	**22.14**	**43**	*eP*		**P**	**06 40 24.1**	**+1.4**
	comp=Z,177nm,1.6s,mb5.2							
GRR	**Gorron**	**22.31**	**65**	*eP*		**P**	**06 40 24.6**	**+0.1**
	comp=Z,83nm,1.4s,mb4.7							
GRR	**Gorron**	**22.31**	**65**	*eP*		**P**	**06 40 24.6**	**+0.1**
GRR				pmax		pmax		
	comp=Z,42nm,1.4s,mb4.7							
GRR	**Gorron**	**22.31**	**65**	*eP*		**P**	**06 40 24.6**	**+0.1**
	comp=Z,42nm,1.4s,mb4.7							
SJPF	**Ste Jean**	**22.37**	**79**	*eP*		**P**	**06 40 25.4**	**+0.1**
	comp=Z,181nm,1.6s,mb5.0							
SJPF	**Ste Jean**	**22.37**	**79**	*eP*		**P**	**06 40 25.4**	**+0.1**
SJPF				pmax		pmax		
	comp=Z,91nm,1.6s,mb5.0							
SJPF	**Ste Jean**	**22.37**	**79**	*eP*		**P**	**06 40 25.4**	**+0.1**
	comp=Z,91nm,1.6s,mb5.0							
ESK	**Eskdalemuir**	**22.38**	**46**	*eP*		**P**	**06 40 26.3**	**+1.1**
ESK				AMb		AMB	06 40 27.4	
	comp=Z,172nm,1.6s,mb5.2							
ESK	**Eskdalemuir**	**22.38**	**46**	*eP*		**P**	**06 40 27.3**	**+2.0**
EKA	**Eskdalemuir Ar**	**22.41**	**46**	P		**P**	**06 40 24.9**	**-0.6**
	comp=Z,7.3nm,0.9s,mb4.1,baz=246,slow=8.1,SNR=13							
FLN	**La Foliniere**	**22.58**	**64**	*eP*		**P**	**06 40 27.6**	**+0.2**
	comp=Z,66nm,1.2s,mb4.6							
FLN				*e*MLR		MLR		
	comp=Z,1μm,17.2s,MS4.1							
FLN	**La Foliniere**	**22.58**	**64**	*eP*		**P**	**06 40 27.6**	**+0.2**
FLN				pmax		pmax		
	comp=Z,33nm,1.2s,mb4.6							
FLN				MLR		MLR		
	comp=Z,1μm,17.3s,MS4.4							
FLN	**La Foliniere**	**22.58**	**64**	*eP*		**P**	**06 40 27.6**	**+0.2**
	comp=Z,33nm,1.2s,mb4.6							
FLN				LR		LR		
	comp=Z,1μm,17.3s,MS4.4							
CWF	**Charnwood Fore**	**22.65**	**53**	*eP*		**P**	**06 40 30.1**	**+1.9**
CWF				AMb		AMB	06 40 30.9	
	comp=Z,177nm,1.6s,mb5.2							
KBI1	**Birley Grange**	**22.65**	**52**	*eP*		**P**	**06 40 31.4**	**+3.2**
TGT	**Taghat**	**22.67**	**104**	*i* P		**P**	**06 40 30.0**	**+1.5**
TZC	**Tazercounte**	**22.70**	**110**	*i* P		**P**	**06 40 29.5**	**+0.7**
XAL	**Allendale**	**22.75**	**48**	*eP*		**P**	**06 40 29.8**	**+0.7**
KIB	**El Ksiba**	**22.77**	**108**	*i* P		**P**	**06 40 30.0**	**+0.4**
MFF	**Saint Martin d**	**22.78**	**69**	*eP*		**P**	**06 40 29.3**	**-0.2**
	comp=Z,108nm,1.4s,mb4.8							
MFF	**Saint Martin d**	**22.78**	**69**	*eP*		**P**	**06 40 29.3**	**-0.2**
MFF				pmax		pmax		
	comp=Z,54nm,1.4s,mb4.8							
MFF	**Saint Martin d**	**22.78**	**69**	*eP*		**P**	**06 40 29.3**	**-0.2**
	comp=Z,54nm,1.4s,mb4.8							
BORG	**Borgarnes**	**22.78**	**12**	LR		LR	06 46 37.1	
	comp=Z,1μm,19.8s,MS4.4,baz=31,slow=30							
LDF	**La Druitiere**	**22.80**	**64**	*eP*		**P**	**06 40 29.7**	**-0.1**
	comp=Z,80nm,1.3s,mb4.7							
LDF	**La Druitiere**	**22.80**	**64**	*eP*		**P**	**06 40 29.7**	**-0.1**
LDF				pmax		pmax		
	comp=Z,40nm,1.3s,mb4.7							
LDF	**La Druitiere**	**22.80**	**64**	*eP*		**P**	**06 40 29.7**	**-0.1**
	comp=Z,40nm,1.3s,mb4.7							
ETSF	**Etsaut**	**22.89**	**79**	*eP*		**P**	**06 40 31.9**	**+1.1**
	comp=Z,60nm,1.1s,mb4.7							
ETSF	**Etsaut**	**22.89**	**79**	*eP*		**P**	**06 40 31.9**	**+1.1**
ETSF				pmax		pmax		
	comp=Z,30nm,1.1s,mb4.6							
ETSF	**Etsaut**	**22.89**	**79**	*eP*		**P**	**06 40 31.9**	**+1.1**
	comp=Z,30nm,1.1s,mb4.7							
REYF	**Montagne du Re**	**22.98**	**79**	*eP*		**P**	**06 40 29.6**	**-2.1**
CZD	**Col de Zad**	**23.22**	**106**	*i* P		**P**	**06 40 37.0**	**+2.7**
TZK	**Tazeka**	**23.28**	**103**	*i* P		**P**	**06 40 35.0**	**0.0**
MCD	**Coleburn Disti**	**23.30**	**41**	*eP*		**P**	**06 40 36.2**	**+1.2**
VIEF	**Viey**	**23.31**	**79**	*eP*		**P**	**06 40 34.6**	**-0.6**
LABF	**Labassere**	**23.32**	**78**	*eP*		**P**	**06 40 35.3**	**0.0**
EPF	**Esparros**	**23.51**	**78**	*eP*		**P**	**06 40 37.6**	**+0.2**
	comp=Z,130nm,1.4s,mb4.9							
EPF	**Esparros**	**23.51**	**78**	*eP*		**P**	**06 40 37.6**	**+0.2**
EPF				pmax		pmax		
	comp=Z,65nm,1.4s,mb4.9							
EPF	**Esparros**	**23.51**	**78**	*eP*		**P**	**06 40 37.6**	**+0.2**
	comp=Z,65nm,1.4s,mb4.9							
LFF	**La Frestale**	**23.52**	**74**	*eP*		**P**	**06 40 37.5**	**+0.1**
	comp=Z,188nm,1.5s,mb5.0							
LFF	**La Frestale**	**23.52**	**74**	*eP*		**P**	**06 40 37.5**	**+0.1**
LFF				pmax		pmax		
	comp=Z,94nm,1.5s,mb5.0							
LFF	**La Frestale**	**23.52**	**74**	*eP*		**P**	**06 40 37.5**	**+0.1**
	comp=Z,94nm,1.5s,mb5.0							
MDT	**Midelt**	**23.64**	**106**	P		**P**	**06 40 39.4**	**+0.8**
	comp=Z,17nm,1.1s,mb4.4,baz=300,slow=9.9,SNR=13							
MDT				LR		LR	06 48 07.6	
	comp=Z,638nm,18.9s,MS4.1,baz=268,slow=32							
RJF	**Les Rejaudoux**	**24.02**	**73**	*eP*		**P**	**06 40 41.8**	**-0.2**
	comp=Z,148nm,1.7s,mb4.8							
RJF				*e*MLR		MLR		
	comp=Z,1μm,20.0s,MS4.1							
RJF	**Les Rejaudoux**	**24.02**	**73**	*eP*		**P**	**06 40 41.8**	**-0.2**
RJF				pmax		pmax		
	comp=Z,74nm,1.7s,mb4.8							
RJF				MLR		MLR		
	comp=Z,1μm,20.0s,MS4.4							
RJF	**Les Rejaudoux**	**24.02**	**73**	*eP*		**P**	**06 40 41.8**	**-0.2**
	comp=Z,74nm,1.7s,mb4.8							
RJF				LR		LR		
	comp=Z,1μm,20.0s,MS4.4							
MLS	**Moulis**	**24.07**	**78**	*eP*		**P**	**06 40 38.1**	**-4.4**
CAF	**Calviac**	**24.45**	**73**	*eP*		**P**	**06 40 45.8**	**-0.2**
	comp=Z,104nm,1.5s,mb4.8							
CAF	**Calviac**	**24.45**	**73**	*eP*		**P**	**06 40 45.8**	**-0.2**
CAF				pmax		pmax		
	comp=Z,52nm,1.5s,mb4.7							
CAF	**Calviac**	**24.45**	**73**	*eP*		**P**	**06 40 45.8**	**-0.2**
	comp=Z,52nm,1.5s,mb4.8							
MTLF	**Montolieu**	**24.81**	**77**	*eP*		**P**	**06 40 48.8**	**-0.4**
	comp=Z,114nm,1.1s,mb5.0							
MTLF	**Montolieu**	**24.81**	**77**	*eP*		**P**	**06 40 48.8**	**-0.4**
MTLF				pmax		pmax		
	comp=Z,57nm,1.1s,mb5.0							
MTLF	**Montolieu**	**24.81**	**77**	*eP*		**P**	**06 40 48.8**	**-0.4**
	comp=Z,57nm,1.1s,mb5.0							
BGF	**Bois d'Agland**	**24.84**	**69**	*eP*		**P**	**06 40 49.4**	**-0.1**
	comp=Z,156nm,1.3s,mb5.1							
BGF	**Bois d'Agland**	**24.84**	**69**	*eP*		**P**	**06 40 49.4**	**-0.1**
BGF				pmax		pmax		
	comp=Z,78nm,1.3s,mb5.1							
BGF	**Bois d'Agland**	**24.84**	**69**	*eP*		**P**	**06 40 49.4**	**-0.1**
	comp=Z,78nm,1.3s,mb5.1							
PYM	**Petit Puy Mans**	**25.02**	**71**	*eP*		**P**	**06 40 50.6**	**-0.5**
AGO	**Saint Aoulin**	**25.08**	**70**	*eP*		**P**	**06 40 50.8**	**-0.8**
AVF	**Avril sur Loir**	**25.17**	**69**	*eP*		**P**	**06 40 52.3**	**-0.2**
	comp=Z,34nm,1.0s,mb4.5							
AVF	**Avril sur Loir**	**25.17**	**69**	*eP*		**P**	**06 40 52.3**	**-0.2**
AVF				pmax		pmax		
	comp=Z,17nm,1.0s,mb4.5							
AVF	**Avril sur Loir**	**25.17**	**69**	*eP*		**P**	**06 40 52.3**	**-0.2**
	comp=Z,17nm,1.0s,mb4.5							
LBL	**Lubilhac**	**25.25**	**72**	*eP*		**P**	**06 40 53.4**	**+0.2**
SSF	**Saint Saulge**	**25.26**	**68**	*eP*		**P**	**06 40 53.2**	**-0.1**
	comp=Z,72nm,1.2s,mb4.8							
SSF	**Saint Saulge**	**25.26**	**68**	*eP*		**P**	**06 40 53.2**	**-0.1**
SSF				pmax		pmax		
	comp=Z,36nm,1.2s,mb4.8							
SSF	**Saint Saulge**	**25.26**	**68**	*eP*		**P**	**06 40 53.2**	**-0.1**
	comp=Z,36nm,1.2s,mb4.8							
PLDF	**La Plantade**	**25.43**	**71**	*eP*		**P**	**06 40 56.0**	**+1.2**
LOR	**Lormes**	**25.49**	**68**	*eP*		**P**	**06 40 55.3**	**0.0**
	comp=Z,118nm,1.3s,mb5.0							
LOR				*e*MLR		MLR		
	comp=Z,2μm,17.8s,MS4.3							
LOR	**Lormes**	**25.49**	**68**	*eP*		**P**	**06 40 55.3**	**0.0**
LOR				pmax		pmax		
	comp=Z,59nm,1.3s,mb5.0							
LOR				MLR		MLR		
	comp=Z,2μm,17.8s,MS4.6							
LOR	**Lormes**	**25.49**	**68**	*eP*		**P**	**06 40 55.3**	**0.0**
	comp=Z,59nm,1.3s,mb5.0							
LOR				LR		LR		
	comp=Z,2μm,17.8s,MS4.6							
SMF	**Signal de Mont**	**25.52**	**69**	*eP*		**P**	**06 40 55.6**	**0.0**
	comp=Z,92nm,1.4s,mb4.8							
SMF	**Signal de Mont**	**25.52**	**69**	*eP*		**P**	**06 40 55.6**	**0.0**
SMF				pmax		pmax		
	comp=Z,46nm,1.4s,mb4.8							
SMF	**Signal de Mont**	**25.52**	**69**	*eP*		**P**	**06 40 55.6**	**0.0**
	comp=Z,46nm,1.4s,mb4.8							
COLF	**Collangettes**	**25.52**	**72**	*eP*		**P**	**06 40 55.6**	**-0.1**
EMMW	**East Machias**	**25.65**	**287**	*eP*		**P**	**06 40 56.3**	**-0.6**
EMMW	**East Machias**	**25.65**	**287**	*eP*		**P**	**06 40 56.3**	**-0.6**
SCHQ	**Schefferville**	**25.69**	**310**	P		**P**	**06 40 56.4**	**-0.7**
	comp=Z,112nm,1.0s,mb5.3,baz=103,slow=8.7,SNR=42							
SCHQ				LR		LR	06 49 45.4	
	comp=Z,1μm,19.3s,MS4.5,baz=100,slow=34							
BAIF	**Baives**	**25.70**	**61**	*eP*		**P**	**06 40 56.5**	**-0.7**
	comp=Z,99nm,1.3s,mb4.9							
BAIF	**Baives**	**25.70**	**61**	*eP*		**P**	**06 40 56.5**	**-0.7**
BAIF				pmax		pmax		
	comp=Z,49nm,1.3s,mb4.9							
BAIF	**Baives**	**25.70**	**61**	*eP*		**P**	**06 40 56.5**	**-0.7**
	comp=Z,50nm,1.3s,mb4.9							
SNF	**Seneffe**	**25.77**	**60**	P		**P**	**06 40 57.5**	**-0.4**
	comp=Z,23nm,1.6s,mb4.5							
UCC	**Uccle**	**25.84**	**59**	P		**P**	**06 40 58.3**	**-0.2**
	comp=Z,67nm,2.1s,mb4.8							
LASF	**Ste Croix**	**25.85**	**75**	*eP*		**P**	**06 40 59.1**	**+0.5**
	comp=Z,125nm,1.2s,mb5.0							
LASF	**Ste Croix**	**25.85**	**75**	*eP*		**P**	**06 40 59.1**	**+0.5**
	comp=Z,62nm,1.2s,mb5.0							
DOU	**Dourbes**	**25.95**	**61**	P		**P**	**06 40 59.4**	**-0.1**
	comp=Z,20nm,1.4s,mb4.5							
GIVF	**Givet**	**26.10**	**61**	*eP*		**P**	**06 41 00.9**	**0.0**
	comp=Z,202nm,1.5s,mb5.1							
GIVF	**Givet**	**26.10**	**61**	*eP*		**P**	**06 41 00.9**	**0.0**
GIVF				pmax		pmax		
	comp=Z,101nm,1.5s,mb5.1							
GIVF	**Givet**	**26.10**	**61**	*eP*		**P**	**06 41 00.9**	**0.0**
	comp=Z,101nm,1.5s,mb5.1							
SSB	**Saint Sauveur**	**26.15**	**72**	*eP*		**P**	**06 41 02.0**	**+0.7**
SSB	**Saint Sauveur**	**26.15**	**72**	*eP*		**P**	**06 41 01.2**	**-0.1**
SSB	**Saint Sauveur**	**26.15**	**72**	*eP*		**P**	**06 41 01.2**	**-0.2**
MEZF	**Maizieres J'vi**	**26.24**	**65**	*eP*		**P**	**06 41 01.4**	**-0.8**
	comp=Z,128nm,1.2s,mb5.0							
MEZF	**Maizieres J'vi**	**26.24**	**65**	*eP*		**P**	**06 41 01.4**	**-0.8**
	comp=Z,64nm,1.2s,mb5.0							
EANR	**'Ain N'Sour**	**26.27**	**94**	P		**P**	**06 41 03.0**	**+0.5**
SFJD	**Kangerlussuaq**	**26.30**	**343**	P		**P**	**06 41 02.0**	**-0.5**
	comp=Z,35nm,1.1s,mb4.8,baz=135,slow=9.8,SNR=8.7							
SFJD				LR		LR	06 49 14.5	
	comp=Z,2μm,18.3s,MS4.6,baz=128,slow=32							
SFJD	**Kangerlussuaq**	**26.30**	**343**	↓*i* P		**P**	**06 41 01.4**	**-1.1**
SFJD				*i* S		**S**	**06 45 37.2**	**+2.4**
SFJD				pmax		pmax		
	comp=Z,88nm,1.4s,mb5.1							
SFJD				MLR		MLR		
	comp=Z,1μm,18.0s,MS4.6							
SFJD	**Kangerlussuaq**	**26.30**	**343**	↓*i* P		**P**	**06 41 01.4**	**-1.1**
	comp=Z,88nm,1.4s,mb5.1							
SFJD				*i* S		**S**	**06 45 37.2**	**+2.4**
SFJD								
	comp=Z,1μm,18.0s							
VIVF	**Saint-Julien-l**	**26.30**	**73**	*eP*		**P**	**06 41 03.6**	**+0.9**
	comp=Z,124nm,1.5s,mb4.9							
VIVF	**Saint-Julien-l**	**26.30**	**73**	*eP*		**P**	**06 41 03.6**	**+0.9**
VIVF				pmax		pmax		
	comp=Z,62nm,1.5s,mb4.9							
VIVF	**Saint-Julien-l**	**26.30**	**73**	*eP*		**P**	**06 41 03.6**	**+0.9**
	comp=Z,62nm,1.5s,mb4.9							
BCLA	**Clavier**	**26.42**	**60**	P		**P**	**06 41 03.1**	**-0.6**
	comp=Z,47nm,1.9s,mb4.7							
ETRT	**Tiaret**	**26.66**	**95**	P		**P**	**06 41 07.0**	**+0.9**
OCF	**Saint Nazaire**	**26.79**	**73**	*eP*		**P**	**06 41 03.7**	**-3.4**
OG26	**St.-Nazaire-De**	**26.79**	**73**	*eP*		**P**	**06 41 03.7**	**-3.4**
PRAF	**Pradon**	**26.83**	**75**	*eP*		**P**	**06 41 07.6**	**+0.1**
HGN	**Heimansgroeve**	**26.83**	**60**	*eP*		**P**	**06 41 12.3**	**+4.8**
	comp=Z,33nm,2.6s,mb4.4							
HGN	**Heimansgroeve**	**26.83**	**60**	*ex*		x	06 41 19.2	
	comp=Z,36nm,1.3s							
HGN	**Heimansgroeve**	**26.83**	**60**	*eS*		**S**	**06 45 46.5**	**+2.9**
PKME	**Peaks-Kenny Pk**	**26.86**	**288**	*eP*		**P**	**06 41 07.3**	**-0.5**
PKME	**Peaks-Kenny Pk**	**26.86**	**288**	*eP*		**P**	**06 41 07.3**	**-0.5**
THEF	**They Montfort**	**26.87**	**65**	*eP*		**P**	**06 41 09.6**	**+1.7**
MEM	**Membach**	**26.88**	**60**	P		**P**	**06 41 07.3**	**-0.5**
	comp=Z,15nm,1.5s,mb4.3							
TREF	**Trevaresse**	**27.02**	**75**	*eP*		**P**	**06 41 06.9**	**-2.3**
CABF	**La Chapelle**	**27.06**	**69**	*eP*		**P**	**06 41 10.2**	**+0.6**
	comp=Z,145nm,1.7s,mb4.9							
CABF	**La Chapelle**	**27.06**	**69**	*eP*		**P**	**06 41 10.2**	**+0.6**
CABF				pmax		pmax		
	comp=Z,72nm,1.7s,mb4.9							
CABF	**La Chapelle**	**27.06**	**69**	*eP*		**P**	**06 41 10.2**	**+0.6**
	comp=Z,72nm,1.7s,mb4.9							
SMRF	**Simiane la Rot**	**27.08**	**75**	*eP*		**P**	**06 41 10.8**	**+1.0**
	comp=Z,126nm,1.3s,mb5.0							
SMRF	**Simiane la Rot**	**27.08**	**75**	*eP*		**P**	**06 41 10.8**	**+1.0**
	comp=Z,63nm,1.3s,mb5.0							
GELF	**Grande-Etoile**	**27.09**	**76**	*eP*		**P**	**06 41 07.4**	**-2.5**
HAU	**Haudompre**	**27.13**	**66**	*eP*		**P**	**06 41 10.2**	**+0.1**
	comp=Z,66nm,1.3s,mb4.7							
HAU				*e*MLR		MLR		
	comp=Z,1μm,17.8s,MS4.2							
HAU	**Haudompre**	**27.13**	**66**	*eP*		**P**	**06 41 10.2**	**+0.1**
HAU				pmax		pmax		
	comp=Z,33nm,1.3s,mb4.7							
HAU				MLR		MLR		
	comp=Z,1μm,17.8s,MS4.5							
HAU	**Haudompre**	**27.13**	**66**	*eP*		**P**	**06 41 10.

HRV Adam Dziewonsk 29.01 283 *e*P P **06 41 27.1 +0.1**
HRV pmax pmax
comp=Z,160nm,1.7s,mb5.5
HRV Adam Dziewonsk 29.01 283 *e*P P **06 41 27.1 +0.1**
comp=Z,160nm,1.7s,mb5.5
HRV Adam Dziewonsk 29.01 283 *e*P P **06 41 27.1 +0.1**
comp=Z,160nm,1.7s,mb5.5
BRYW Bryant College 29.14 282 *e*P P **06 41 28.5 +0.3**
BRYW Bryant College 29.14 282 *e*P P **06 41 28.5 +0.3**
HNH Hanover 29.25 286 *e*P P **06 41 29.6 +0.5**
HNH Hanover 29.25 286 *e*P P **06 41 29.6 +0.5**
UBBA Unterbreizbach 29.42 60 *e*P P **06 41 30.2 -0.3**
comp=Z,18nm,1.9s,mb4.5
NRDL Niedersach Rie 29.50 56 *e*P P **06 41 31.1 -0.2**
comp=Z,26nm,1.6s,mb4.7
DAVOS Davos 29.57 68 P P **06 41 33.2 +1.3**
DAVOX Davos/Dischmat 29.63 68 P P **06 41 33.2 +0.7**
comp=Z,1.3nm,0.4s,mb4.0,baz=300,slow=20,SNR=3.5
DAVOX LR LR 06 52 04.5
comp=Z,770nm,18.6s,MS4.4,baz=277,slow=34
QUA2 Belchertown 29.64 283 *e*P P **06 41 32.5 -0.1**
comp=Z,225nm,1.6s,mb5.7
QUA2 Belchertown 29.64 283 *e*P P **06 41 32.5 -0.1**
comp=Z,225nm,1.6s,mb5.7
BSEG Bad Segeberg 29.72 53 *e*P P **06 41 32.8 -0.3**
comp=Z,22nm,1.1s,mb4.8
MDV Middlebury 29.82 287 *e*P P **06 41 34.8 +0.6**
MDV Middlebury 29.82 287 *e*P P **06 41 34.8 +0.6**
FRNY Flat Rock 29.94 288 *e*P P **06 41 35.3 +0.1**
FRNY Flat Rock 29.94 288 *e*P P **06 41 35.3 +0.1**
SUMG Summit 30.01 356 *e*P P **06 41 35.3 -0.3**
SUMG Summit 30.01 356 *e*P P **06 41 35.3 -0.3**
CASM Ain Smara 30.10 90 P P **06 41 36.5 -0.3**
CKFL Kef-Lekhel 30.21 89 P P **06 41 38.0 +0.2**
GRA1 Grafenberg Arr 30.24 62 *e*P P **06 41 37.7 -0.1**
comp=Z,31nm,1.5s,mb4.8
GRA1 LR LR
comp=Z,900nm,19.2s,MS4.4
GRF Grafenberg Arr 30.24 62 *e*P P **06 41 37.7 -0.1**
GRF pmax pmax
comp=Z,31nm,1.5s,mb4.8
GRF MLR MLR
comp=Z,900nm,19.2s,MS4.4
GRF Grafenberg Arr 30.24 62 *e*P P **06 41 37.7 -0.1**
GRF pmax pmax
comp=Z,31nm,1.5s,mb4.8
GRF MLR MLR
comp=Z,900nm,19.2s,MS4.4
GRF Grafenberg Arr 30.24 62 *e*P P **06 41 37.7 -0.1**
comp=Z,31nm,1.5s,mb4.8
GRF *e*L 06 52 39.6
comp=Z,886nm,19.2s
ACCN Adirondack Com 30.30 286 *e*P P **06 41 39.1 +0.7**
ACCN Adirondack Com 30.30 286 *e*P P **06 41 39.1 +0.7**
FUR Furstenfeldbru 30.41 65 *e*P P **06 41 39.4 +0.1**
FUR pmax pmax
comp=Z,19nm,1.0s,mb4.8
FUR Furstenfeldbru 30.41 65 *e*P P **06 41 39.3 0.0**
comp=Z,19nm,1.0s,mb4.8
FUR Furstenfeldbru 30.41 65 *e*P P **06 41 39.4 +0.1**
comp=Z,19nm,1.0s,mb4.8
MOX Moxa 30.45 60 *e*P P **06 41 40.1 +0.5**
comp=Z,23nm,1.7s,mb4.6
MOX
comp=Z,1μm,17.0s
MOX Moxa 30.45 60 *e*P P **06 41 40.1 +0.5**
MOX pmax pmax
comp=Z,23nm,1.7s,mb4.6
MOX MLR MLR
comp=Z,1μm,17.0s,MS4.6
MOX Moxa 30.45 60 *e*P P **06 41 39.5 -0.1**
JMIC Jan Mayen 30.55 15 LR LR 06 50 51.9
comp=Z,951nm,18.1s,MS4.5,baz=35,slow=30
NCB Newcomb 30.56 287 *e*P P **06 41 41.7 +1.0**
NCB Newcomb 30.56 287 *e*P P **06 41 41.7 +1.0**
CMAH Djebel Manchou 30.64 88 P P **06 41 40.0 -1.5**
LONY Lake Ozonia 30.67 288 *e*P P **06 41 42.0 +0.3**
LONY Lake Ozonia 30.67 288 *e*P P **06 41 42.0 +0.3**
MANZ Manzenberg 30.80 61 *e*P P **06 41 42.8 +0.1**
comp=Z,30nm,1.3s,mb5.0
ABSA Djebel Ababsia 30.82 89 P P **06 41 43.0 -0.1**
GUNZ Gunzen 30.92 60 *e*P P **06 41 43.5 -0.3**
comp=Z,12nm,1.1s,mb4.6
WERN Wernitzgruen 30.95 60 *e*P P **06 41 44.0 -0.1**
comp=Z,16nm,1.6s,mb4.6
NKC Novy Kostel 31.00 61 *e*P P **06 41 44.7 +0.2**
NKC *e*S S **06 46 48.5 -0.5**
NKC AMS AMS 06 56 10.0
comp=Z,1μm,14.4s
NKC Novy Kostel 31.00 61 *e*P P **06 41 44.7 +0.2**
NKC *e*S S **06 46 48.5 -0.5**
PAL Palisades 31.11 281 *e*P P **06 41 45.4 -0.2**
PAL Palisades 31.11 281 *e*P P **06 41 45.4 -0.2**
CPNY Central Park 31.21 281 *e*P P **06 41 46.4 -0.1**
comp=Z,116nm,1.0s,mb5.7
CPNY Central Park 31.21 281 *e*P P **06 41 46.4 -0.1**
comp=Z,116nm,1.0s,mb5.7
CLL Collm 31.30 58⇓*i*P P **06 41 47.1 0.0**
CLL *e*S S **06 46 55.0 +1.3**
CLL pmax pmax
comp=Z,26nm,1.3s,mb4.9
CLL MLR MLR
comp=Z,800nm,18.8s,MS4.4
CLL Collm 31.30 58 *e*P P **06 41 46.8 -0.3**
comp=Z,9.0nm,1.0s,mb4.5
CLL Collm 31.30 58⇓*i*P P **06 41 47.1 0.0**
comp=Z,26nm,1.3s,mb4.9
CLL *e*S S **06 46 55.0 +1.3**
CLL LmV 06 53 00.0
comp=Z,800nm,18.8s
WET Wettzell 31.36 63 *e*P P **06 41 47.3 -0.4**
WET pmax pmax
comp=Z,21nm,1.4s,mb4.8
WET Wettzell 31.36 63 *e*P P **06 41 47.3 -0.4**
comp=Z,21nm,1.4s,mb4.8
NOA NORSAR Array B 31.45 40 P P **06 41 48.9 +0.5**
comp=Z,9.1nm,1.1s,mb4.5,baz=256,slow=9.4,SNR=3.7
NOA LR LR 06 52 37.3
comp=Z,349nm,18.4s,MS4.1,baz=270,slow=33
FBE Freiberg 31.54 59 *e*P P **06 41 49.0 -0.2**
comp=Z,25nm,1.5s,mb4.8
BRNJ Basking Ridge 31.68 281 *e*P P **06 41 51.4 +0.7**
comp=Z,276nm,1.5s,mb5.9
BRNJ Basking Ridge 31.68 281 *e*P P **06 41 51.4 +0.7**
comp=Z,276nm,1.5s,mb5.9
RUE Ruedersdorf 31.75 56 *e*P P **06 41 50.6 -0.5**
comp=Z,30nm,1.2s,mb5.0
KHC Kasperske Hory 31.82 63 *e*P P **06 41 51.7 -0.1**
KHC *ep*P pP 06 41 56.1 +1.3
KHC *e*S S **06 47 02.4 +0.5**
KHC AMS AMS 06 53 30.0
comp=Z,900nm,16.0s
BRG Berggiesshubel 31.91 59 *e*P P **06 41 52.9 +0.4**
BRG *i* 06 42 02.5
BRG S S **06 47 04.0 +0.7**
BRG pmax pmax
comp=Z,26nm,1.8s,mb4.8
BRG MLR MLR
comp=Z,770nm,13.9s,MS4.5
BRG Berggiesshubel 31.91 59 *e*P P **06 41 52.3 -0.2**
comp=Z,43nm,1.8s,mb5.0
BRG Berggiesshubel 31.91 59 *e*P P **06 41 52.9 +0.3**
comp=Z,43nm,1.8s,mb5.0
BRG *i* 06 42 02.5
comp=Z,43nm,1.6s
BRG S S **06 47 04.0 +0.7**
BRG SCP ScP 06 48 20.9 -5.2
comp=Z,2.3nm,0.6s
BRG
comp=N,613nm,10.7s
BRG
comp=E,1μm,15.1s
BRG
comp=Z,1μm,13.9s
BRG Berggiesshubel 31.91 59 *e*P P **06 41 52.9 +0.3**
comp=Z,26nm,1.8s,mb4.8
BRG *i* 06 42 02.5
BRG S S **06 47 04.0 +0.7**
BRG ScP ScP 06 48 20.9 -5.2
BRG LR LR
comp=Z,770nm,13.9s,MS4.5
GEC2 GERESS Array S 31.93 63 *e*P P **06 41 52.5 -0.3**
GEC2 pmax pmax
comp=Z,17nm,1.3s,mb4.7
GEC2 GERESS Array S 31.93 63 *e*P P **06 41 52.5 -0.3**
comp=Z,17nm,1.3s,mb4.7
GERES GERESS Array B 31.93 63 P P **06 41 53.1 +0.3**
comp=Z,6.3nm,1.1s,mb4.3,baz=273,slow=7.5,SNR=23
GERES LR LR 06 53 54.8
comp=Z,699nm,18.1s,MS4.4,baz=272,slow=35
KBA Koelnbreinsper 31.94 66⇓*i*P P **06 41 53.3 +0.4**
comp=Z,31nm,1.3s,mb5.0,SNR=9.5
BINY Binghamton 32.26 284 *e*P P **06 41 55.9 +0.2**
BINY Binghamton 32.26 284 *e*P P **06 41 55.9 +0.3**
PVCC Panska Ves 32.33 60 *e*P P **06 42 04.9 +8.7**
PVCC AMS AMS 06 55 00.0
comp=Z,1μm,15.1s
PRU Pruhonice 32.36 61 *e*P P **06 41 56.3 -0.2**
comp=Z,1μm,15.5s
PRU Pruhonice 32.36 61 *e*P P **06 41 56.3 -0.2**
PRU *e*S S **06 47 13.8 +3.5**
PRU AMS AMS 06 54 10.0
comp=Z,1μm,15.5s
KEST Kesra 32.43 89 P P **06 41 56.8 -0.4**
comp=Z,7.9nm,0.9s,mb4.6,baz=193,slow=0.8,SNR=20
KEST LR LR 06 54 18.5
comp=Z,196nm,18.7s,MS3.8,baz=270,slow=35
SOKA Soboth 33.15 67⇑⇓*i*P P **06 42 02.4 -1.0**
comp=Z,10nm,1.4s,mb4.6
UPC Upice 33.25 60 *e*P P **06 42 04.4 +0.1**
UPC *ep*P pP 06 42 08.7 +1.3
KSP Ksiaz 33.40 59 *e*P P **06 42 05.6 0.0**
KSP *e*S S **06 47 31.0 +4.6**
KSP MLR MLR
comp=Z,2μm,15.4s,MS4.9
DPC Dobruska-Polom 33.47 60 *e*P P **06 42 05.7 -0.4**
DPC *e*S S **06 47 29.2 +1.7**
DPC AMS AMS 06 55 00.0
comp=Z,1μm,15.0s
CSNA Conrad Observa 33.48 64⇓*i*P P **06 42 04.9 -1.4**
comp=Z,15nm,1.4s,mb4.7
CONA Conrad Observa 33.49 64⇓*i*P P **06 42 05.1 -1.3**
comp=Z,18nm,1.5s,mb4.8,SNR=5.7
SDMD Soldier's Deli 33.75 280 *e*P P **06 42 08.8 0.0**
comp=Z,58nm,1.0s,mb5.5
SDMD Soldier's Deli 33.75 280 *e*P P **06 42 08.8 0.0**
comp=Z,58nm,1.0s,mb5.5
VRAC Vranov 33.76 62⇓*i*P P **06 42 09.9 +1.1**
VRAC Vranov 33.76 62⇓P P **06 42 09.9 +1.1**
SOP Sopron 33.99 65 *e*P P **06 42 10.8 0.0**
SSPA Standing Stone 34.09 282 *e*P P **06 42 12.4 +0.7**
comp=Z,128nm,1.1s,mb5.8
SSPA Standing Stone 34.09 282 *e*P P **06 42 12.4 +0.7**
comp=Z,128nm,1.1s,mb5.8
ZST Bratislava 34.26 64 *e*P P **06 42 13.3 +0.2**
ZST pmax pmax
comp=Z,19nm,1.5s,mb4.8
ZST MLR MLR
comp=Z,500nm,16.2s,MS4.3
ZST Bratislava 34.26 64 *e*P P **06 42 13.3 +0.2**
ZST Bratislava 34.26 64 *e*P P **06 42 13.3 +0.2**
comp=Z,19nm,1.5s,mb4.8
ZST Bratislava 34.26 64 *e*P P **06 42 13.3 +0.2**
comp=Z,19nm,1.5s,mb4.8
ZST LR LR
comp=Z,500nm,16.2s,MS4.3
MORC Moravsky Berou 34.31 61⇓*i*P P **06 42 14.5 +1.0**
MORC Moravsky Berou 34.31 61 *e*P P **06 42 14.2 +0.7**
MORC Moravsky Berou 34.31 61 *e*P P **06 42 14.2 +0.7**
MODS Modra-Piesok 34.35 63 *e*P P **06 42 13.6 -0.3**
DAG Danmarks Havn 34.52 5⇓*i*P P **06 42 15.4 +0.4**
DAG pmax pmax
comp=Z,11nm,0.8s,mb4.8
DAG Danmarks Havn 34.52 5⇓*i*P P **06 42 15.4 +0.4**
comp=Z,11nm,0.8s,mb4.8
CBN Corbin 34.58 278 *e*P P **06 42 16.5 +0.5**
CBN Corbin 34.58 278 *e*P P **06 42 16.5 +0.5**
OKC Ostrava-Krasne 34.69 61 *e*P P **06 42 17.0 +0.2**
OKC *e*S S **06 47 54.1 +7.6**
OKC AMS AMS 06 55 40.0
comp=Z,1μm,15.8s
OKC Ostrava-Krasne 34.69 61 *e*P P **06 42 17.0 +0.2**
OKC *e*S S **06 47 54.1 +7.6**
URVA University of 34.94 277 *e*P P **06 42 19.6 +0.5**
URVA University of 34.94 277 *e*PcP PcP 06 44 50.3 -1.2
URVA University of 34.94 277 *e*P P **06 42 19.6 +0.5**
URVA *e*PcP PcP 06 44 50.3 -1.1
ERPA Erie 35.12 286 *e*P P **06 42 21.2 +0.6**
ERPA Erie 35.12 286 *e*P P **06 42 21.2 +0.6**
VYHS Vyhne 35.35 63 *e*P P **06 42 22.3 -0.2**
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
VYHS Vyhne 35.35 63 *e*P P **06 42 22.3 -0.2**
comp=Z,3.5nm,1.2s,mb4.2
ALLY Allegheny Colle 35.38 285 *e*P P **06 42 23.8 +1.0**
comp=Z,120nm,1.1s,mb5.7
ALLY Allegheny Colle 35.38 285 *e*P P **06 42 23.8 +0.9**
comp=Z,120nm,1.1s,mb5.7
BUD Budapest 35.67 65⇑*e*P P **06 42 25.6 +0.4**
PKSM Moragy 35.69 67⇓*i*P P **06 42 24.5 -0.9**
PKSM Moragy 35.69 67 ⇓P P **06 42 24.5 -0.9**
OJC Ojcow 35.69 60 *e*P P **06 42 25.8 +0.4**
MCWV Mont Chateau 35.84 282 *e*P P **06 42 27.5 +0.7**
MCWV Mont Chateau 35.84 282 *e*P P **06 42 27.5 +0.7**
NIE Niedzica 36.15 61 *e*P P **06 42 30.7 +1.4**
PSZ Piszkesteto 36.16 64 *e*P P **06 42 29.6 +0.2**
PSZ pmax pmax
comp=Z,147nm,2.4s,mb5.5
PSZ Piszkesteto 36.16 64⇓*e*P P **06 42 29.7 +0.3**
PSZ Piszkesteto 36.16 64 *e*P P **06 42 29.6 +0.2**
comp=Z,147nm,2.4s,mb5.5
PSZ Piszkesteto 36.16 64 *e*P P **06 42 29.6 +0.2**
comp=Z,147nm,2.4s,mb5.5
CNNC Cliffs of the 36.18 274 *e*P P **06 42 30.5 +0.8**
comp=Z,56nm,0.9s,mb5.5
CNNC Cliffs of the 36.18 274 *e*P P **06 42 30.5 +0.7**
comp=Z,56nm,0.9s,mb5.5
STHS Stebnicka Huta 36.75 61 *e*P P **06 42 35.9 +1.4**
STHS pmax pmax
comp=Z,15nm,1.2s,mb4.7
STHS Stebnicka Huta 36.75 61 *e*P P **06 42 35.9 +1.4**
comp=Z,15nm,1.2s,mb4.7
STHS *e* pP 06 42 40.3 +2.8
CRVS Cervenica-Dubn 36.98 62 *e*P P **06 42 37.4 +0.9**
BLA Blacksburg 37.19 278 *e*P P **06 42 39.5 +1.1**
BLA pmax pmax
comp=Z,119nm,1.1s,mb5.6
BLA Blacksburg 37.19 278 *e*P P **06 42 39.5 +1.1**
comp=Z,119nm,1.1s,mb5.6
BLA Blacksburg 37.19 278 *e*P P **06 42 39.5 +1.1**
comp=Z,119nm,1.1s,mb5.6
ELN Prospectdale 37.43 278 P P **06 42 34.9 -5.4**
KOLS Kolonicke sedl 37.50 61 *e*P P **06 42 41.9 +1.0**
UZH Uzhgorod 37.58 62*e i*P P **06 42 41.3 -0.2**
UZH *i* 06 42 58.0
UZH *i* S S **06 48 30.0 -0.6**
UZH MLR MLR
comp=N,300nm,14.0s,MS4.5
UZH MLR MLR
comp=Z,300nm,14.0s,MS4.2
UZH MLR MLR
comp=E,500nm,13.0s,MS4.5
AAM Ann Arbor 37.65 287 *e*P P **06 42 42.8 +0.6**
AAM pmax pmax
comp=Z,140nm,1.4s,mb5.5
AAM Ann Arbor 37.65 287 *e*P P **06 42 42.8 +0.6**
comp=Z,140nm,1.4s,mb5.5
AAM Ann Arbor 37.65 287 *e*P P **06 42 42.8 +0.6**
comp=Z,140nm,1.4s,mb5.5
MTP Monte Pirata 37.68 240 *e*P P **06 42 43.1 +0.5**
MTP Monte Pirata 37.68 240 *e*PcP PcP 06 44 59.7 -0.2
MTP Monte Pirata 37.68 240 *e*P P **06 42 43.1 +0.5**
MTP *e*PcP PcP 06 44 59.7 -0.2
CBYP Canovanas 37.74 240 *e*P P **06 42 44.0 +0.8**
CBYP Canovanas 37.74 240 *e*P P **06 42 44.0 +0.8**
HUMP Col San Antoni 37.84 240 *e*P P **06 42 46.2 +2.2**
HUMP Col San Antoni 37.84 240 *e*P P **06 42 46.2 +2.2**
BZS Buzias 37.85 67⇑⇓*i*P P **06 42 45.4 +1.6**
BZS Buzias 37.85 67⇑⇑P P **06 42 45.4 +1.6**
TRPA Tarpa 37.85 63⇑⇓*i*P P **06 42 44.5 +0.7**
ACSO Alum Creek Sta 37.88 284 *e*P P **06 42 45.0 +0.8**
ACSO Alum Creek Sta 37.88 284 *e*P P **06 42 45.0 +0.8**
CPD Cerro la Pandu 37.95 240 *e*P P **06 42 46.0 +1.0**
CPD Cerro la Pandu 37.95 240 *e*P P **06 42 46.0 +1.0**
SJG San Juan 38.05 240 *e*P P **06 42 46.0 +0.2**
SJG San Juan 38.05 240 *e*P P **06 42 46.0 +0.2**
AOPR Arecibo Observ 38.27 241 *e*P P **06 42 47.3 -0.3**
comp=Z,14nm,0.8s,mb4.8
AOPR Arecibo Observ 38.27 241 *e*P P **06 42 47.3 -0.3**
comp=Z,14nm,0.8s,mb4.8
DRGR 38.28 65⇓*i*P P **06 42 48.0 +0.6**
DRGR 38.28 65 ⇓P P **06 42 48.0 +0.6**
LVV L'vov 38.45 60 *e*P P **06 42 48.8 -0.1**
MPR Mayaguez 38.61 242 *e*P P **06 42 51.6 +1.1**
MPR Mayaguez 38.61 242 *e*P P **06 42 51.6 +1.1**
GZR Gura Zlata 38.69 67⇑*i*P P **06 42 52.2 +1.3**
GZR Gura Zlata 38.69 67⇑P P **06 42 52.1 +1.2**
KAF Kangasniemi 38.73 40 *e*p P **06 42 50.1 -1.0**
comp=Z,13nm,0.8s,mb4.7
KAF Kangasniemi 38.73 40 *e*P P **06 42 50.1 -1.0**
KAF pmax pmax
comp=Z,13nm,0.8s,mb4.7
NHSC New Hope 38.84 272 *e*P P **06 42 53.1 +0.8**
NHSC New Hope 38.84 272 *e*P P **06 42 53.1 +0.7**
JSC Jenkinsville 39.08 274 *e*P P **06 42 55.0 +0.6**
JSC *e* 06 45 03.4
JSC Jenkinsville 39.08 274 *e*PcP PcP 06 45 03.4 -0.7
ARCES ARCESS Array B 39.34 28 P P **06 42 55.0 -1.1**
comp=Z,23nm,1.1s,mb4.8,baz=254,slow=8.2,SNR=20
BURAR Bucovina Array 39.72 63⇓*i*P P **06 43 00.2 +0.7**
BURAR Bucovina Array 39.72 63 ⇓P P **06 43 00.2 +0.7**
TZTN Tazewell 39.75 279 *e*P P **06 43 00.3 +0.4**
comp=Z,73nm,1.3s,mb5.2
TZTN Tazewell 39.75 279 *e*P P **06 43 00.3 +0.4**
comp=Z,73nm,1.3s,mb5.2
KEV Kevo 39.90 28 *e*p P **06 42 58.7 -2.0**
comp=Z,9.5nm,0.9s,mb4.5
KEV Kevo 39.90 28 *e*P P **06 42 58.7 -2.0**
KEV pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
VOIR 40.21 66⇓*i*P P **06 43 04.1 +0.5**
VOIR 40.21 66 ⇓P P **06 43 04.1 +0.5**
COWI Conover 40.26 295 *e*P P **06 43 04.2 +0.2**
comp=Z,56nm,1.0s,mb5.2
COWI Conover 40.26 295 *e*P P **06 43 04.2 +0.2**
comp=Z,56nm,1.0s,mb5.2
TKL Tuckaleechee C 40.30 278 *e*P P **06 43 04.6 +0.1**
TKL Tuckaleechee C 40.30 278 *e*P P **06 43 04.6 +0.2**
MLR Muntele Rosu 40.80 66⇓*i*P P **06 43 09.3 +0.9**
MLR Muntele Rosu 40.80 66 ⇓P P **06 43 09.3 +0.8**
BLO Bloomington 40.81 284 *e*P P **06 43 09.1 +0.5**
BLO Bloomington 40.81 284 *e*P P **06 43 09.1 +0.4**
FCC Fort Churchill 40.83 315 *e*P P **06 43 09.0 +0.5**
FCC pmax pmax
comp=Z,107nm,1.0s,mb5.4
FCC Fort Churchill 40.83 315 *e*P P **06 43 08.9 +0.4**
comp=Z,108nm,1.0s,mb5.4
FCC Fort Churchill 40.83 315 *e*P P **06 43 08.9 +0.4**
comp=Z,108nm,1.0s,mb5.4
CPCT Cooper Cave 40.94 278 *e*P P **06 43 10.6 +0.9**
CPCT Cooper Cave 40.94 278 *e*P P **06 43 10.6 +0.8**
WCI Wyandotte Cave 41.03 283 *e*P P **06 43 10.2 -0.2**
WCI pmax pmax
comp=Z,128nm,1.0s,mb5.5
WCI Wyandotte Cave 41.03 283 *e*P P **06 43 10.2 -0.2**
comp=Z,128nm,1.0s,mb5.5
WCI Wyandotte Cave 41.03 283 *e*P P **06 43 10.2 -0.2**
comp=Z,128nm,1.0s,mb5.5
JOF Joensuu 41.06 38 *e*p P **06 43 07.9 -2.5**
comp=Z,15nm,0.8s,mb4.7
GOGA Godfrey 41.11 274 *e*P P **06 43 11.9 +0.7**
GOGA pmax pmax
comp=Z,101nm,1.4s,mb5.3
GOGA Godfrey 41.11 274 *e*P P **06 43 11.9 +0.7**
comp=Z,101nm,1.4s,mb5.3
GOGA Godfrey 41.11 274 *e*P P **06 43 11.9 +0.7**
comp=Z,101nm,1.4s,mb5.3
VRI Vrincioaia 41.21 65⇓*i*P P **06 43 12.6 +0.8**
VRI Vrincioaia 41.21 65 ⇓P P **06 43 12.6 +0.8**
EYMN Ely 41.29 298 *e*P P **06 43 12.4 -0.1**
comp=Z,130nm,1.0s,mb5.5
EYMN Ely 41.29 298 *e*P P **06 43 12.4 -0.1**
comp=Z,130nm,1.0s,mb5.5
TORD Torodi Ar. Bea 41.38 125 P P **06 43 13.1 -0.5**
comp=Z,19nm,1.0s,mb4.7,baz=320,slow=6.4,SNR=60
TORD PcP PcP 06 45 10.7 -1.0
comp=Z,5.3nm,0.9s,baz=322,slow=5.2,SNR=3.3
TORD LR LR 06 59 11.4
comp=Z,524nm,18.5s,MS4.4,baz=320,slow=34
KIEV Kiev 41.51 57 *e*P P **06 43 13.1 -1.1**
KIEV pmax pmax
comp=Z,13nm,1.0s,mb4.5
KIEV Kiev 41.51 57 *e*P P **06 43 13.1 -1.1**
comp=Z,13nm,1.0s,mb4.5
KIEV Kiev 41.51 57 *e*P P **06 43 13.1 -1.1**
comp=Z,13nm,1.0s,mb4.5
AKASG Malin Array Be 41.51 57 P P **06 43 13.2 -1.0**
comp=Z,4.9nm,0.8s,mb4.2,baz=278,slow=8.3,SNR=18
AKASG LR LR 07 00 24.2
comp=Z,696nm,18.2s,MS4.6,baz=275,slow=36
AKASG Malin Array Be 41.51 57 P P **06 43 13.2 -1.1**
APA Apatity 41.98 31⇓*i*P P **06 43 17.6 -0.2**
APA *i* 06 43 23.2
APA pmax pmax
comp=Z,30nm,1.1s,mb4.8
APA MLR MLR
comp=Z,800nm,11.0s,MS4.9
JFWS Jewell Farm 42.03 291 *e*P P **06 43 19.0 +0.4**
JFWS Jewell Farm 42.03 291 *e*P P **06 43 19.0 +0.4**
SWET Sewanee 42.07 278 *e*P P **06 43 19.3 +0.3**
SWET Sewanee 42.07 278 *e*P P **06 43 19.3 +0.3**
OLIL Olney 42.11 284 *e*P P **06 43 19.4 +0.1**
comp=Z,306nm,1.0s,mb5.9
OLIL Olney 42.11 284 *e*PcP PcP 06 45 11.9 -1.9
OLIL Olney 42.11 284 *e*P P **06 43 19.4 +0.1**
comp=Z,306nm,1.0s,mb5.9
OLIL *e*PcP PcP 06 45 11.9 -1.9
USIN University of 42.12 283 *e*P P **06 43 19.5 +0.1**
comp=Z,124nm,1.0s,mb5.5
USIN University of 42.12 283 *e*P P **06 43 19.5 +0.1**
comp=Z,124nm,1.0s,mb5.5
HDIL Hopedale 42.23 287 *e*P P **06 43 20.8 +0.5**
HDIL Hopedale 42.23 287 *e*P P **06 43 20.8 +0.4**
KIS Kishinev 42.25 63 *e*P P **06 43 18.0 -2.3**
KIS *e* 06 43 29.0
KIS MLR MLR
comp=N,500nm,14.0s,MS4.7
KIS MLR MLR
comp=E,400nm,14.0s,MS4.7
KIS MLR MLR
comp=Z,700nm,14.0s,MS4.7
KIS MLR MLR
comp=Z,700nm,14.0s
KIS Kishinev 42.25 63 *e*P P **06 43 18.0 -2.3**
KIS *e*L 06 59 42.0
KIS LRM 07 05 42.0
comp=Z,700nm,14.0s
TIRR Tirgusor 42.79 66 *e*P P **06 43 23.3 -1.4**
TIRR pmax pmax
comp=Z,14nm,1.0s,mb4.7
TIRR Tirgusor 42.79 66⇓*i*P P **06 43 23.5 -1.2**
TIRR Tirgusor 42.79 66 *e*P P **06 43 23.3 -1.4**
comp=Z,14nm,1.0s,mb4.6
TIRR Tirgusor 42.79 66 *e*P P **06 43 23.3 -1.5**
comp=Z,14nm,1.0s,mb4.6
WVT Waverly 43.03 281 *e*P P **06 43 27.0 +0.1**
WVT pmax pmax
comp=Z,110nm,1.3s,mb5.4
WVT Waverly 43.03 281 *e*P P **06 43 27.0 +0.1**
comp=Z,110nm,1.3s,mb5.4
TIC Toumodi 43.11 139 *e*P P **06 43 27.8 +0.2**
comp=Z,240nm,1.2s,mb5.8
DBIC Dimbokro 43.17 139 P P **06 43 28.7 +0.6**
comp=Z,12nm,0.9s,mb4.7,baz=320,slow=9.2,SNR=15
DBIC LR LR 06 58 47.1
comp=Z,483nm,21.9s,MS4.4,baz=308,slow=32
DBIC Dimbokro 43.17 139 P P **06 43 28.7 +0.6**
DBIC LR LR 06 58 47.1
SIUC Southern Illin 43.34 283 *e*P P **06 43 29.9 +0.6**
SIUC Southern Illin 43.34 283 *e*P P **06 43 29.9 +0.5**
ULM Lac du Bonnet 43.43 303 P P **06 43 28.9 -1.0**
comp=Z,20nm,0.9s,mb4.8,baz=68,slow=9.3,SNR=11
ULM PP PP 06 45 06.6 -4.0
comp=Z,17nm,1.1s,baz=95,slow=13,SNR=4.7
ULM LR LR 07 00 29.3
comp=Z,1μm,19.8s,MS4.7,baz=63,slow=35
ULM Lac du Bonnet 43.43 303 PP PP 06 45 06.6 -4.0
ULM Lac du Bonnet 43.43 303 P P **06 43 28.9 -1.0**
ULM PP PP 06 45 06.6 -4.0
ULM LR LR 07 00 29.3
LIC Lamto 43.47 139 *e*P P **06 43 30.3 -0.3**
comp=Z,87nm,1.1s,mb5.1
LIC *e*MLR MLR
comp=Z,774nm,20.8s,MS4.3
LIC Lamto 43.47 139 *e*P P **06 43 30.3 -0.3**

comp=Z,44nm,1.1s,mb5.1
LIC LR LR
comp=Z,390nm,20.8s,MS4.3
KIC Kosan Boka 43.49 139 *e*P **P 06 43 30.5 -0.2**
comp=Z,228nm,1.1s,mb5.8
SLM Saint Louis 43.67 285 *e*P **P 06 43 32.4 +0.4**
SLM Saint Louis 43.67 285 *e*P **P 06 43 32.4 +0.4**
UTMT University of 43.69 281 *e*P **P 06 43 32.8 +0.7**
UTMT University of 43.69 281 *e*P **P 06 43 32.8 +0.7**
LRAL Lakeview Retre 43.88 276 *e*P **P 06 43 34.0 +0.3**
LRAL Lakeview Retre 43.88 276 *e*P **P 06 43 34.0 +0.3**
AGMN Agassiz Refuge 43.99 300 *e*P **P 06 43 34.5 +0.1**
comp=Z,108nm,1.0s,mb5.5
AGMN Agassiz Refuge 43.99 300 *e*P **P 06 43 34.5 +0.1**
comp=Z,108nm,1.0s,mb5.5
GLAT Glass 44.03 282 *e*P **P 06 43 35.4 +0.6**
GLAT Glass 44.03 282 *e*P **P 06 43 35.4 +0.5**
FVM French Village 44.09 284 *e*P **P 06 43 34.4 -0.9**
FVM pmax pmax
comp=Z,101nm,1.0s,mb5.5
FVM French Village 44.09 284 *e*P **P 06 43 34.4 -0.9**
comp=Z,101nm,1.0s,mb5.5
FVM French Village 44.09 284 *e*P **P 06 43 34.4 -0.9**
comp=Z,101nm,1.0s,mb5.5
PARMO Parma 44.18 282 *e*P **P 06 43 35.9 -0.2**
PARMO Parma 44.18 282 *e*P **P 06 43 35.9 -0.2**
PARMO *e* 06 45 18.6
HALT Halls 44.23 281 *e*P **P 06 43 36.4 -0.1**
HALT Halls 44.23 281 *e*P **P 06 43 36.4 -0.1**
PVMO Portageville 44.26 282 *e*P **P 06 43 36.9 +0.2**
comp=Z,837nm,1.3s,mb6.3
PVMO Portageville 44.26 282 *e*P **P 06 43 36.9 +0.2**
comp=Z,837nm,1.3s,mb6.3
SCIA State Center 44.44 291 *e*P **P 06 43 38.5 +0.4**
SCIA State Center 44.44 291 *e*P **P 06 43 38.5 +0.4**
CCM Cathedral Cave 44.64 285 *e*P **P 06 43 39.5 -0.2**
CCM pmax pmax
comp=Z,130nm,1.0s,mb5.7
CCM Cathedral Cave 44.64 285 *e*P **P 06 43 39.5 -0.2**
comp=Z,130nm,1.0s,mb5.7
CCM Cathedral Cave 44.64 285 *e*P **P 06 43 39.5 -0.3**
comp=Z,130nm,1.0s,mb5.7
GNAR Gosnell 44.69 282 *e*P **P 06 43 39.9 -0.3**
GNAR Gosnell 44.69 282 *e*P **P 06 43 39.9 -0.2**
OBN Obninsk 44.80 49*d i*P **P 06 43 40.4 -0.3**
OBN *e**PP pP 06 43 49.9 +6.0
OBN *e* 06 45 20.6
OBN pmax pmax
comp=Z,54nm,1.3s,mb5.2
OBN MLR MLR
comp=Z,1μm,21.0s,MS4.7
OBN Obninsk 44.80 49 *i* P **P 06 43 40.4 -0.3**
comp=Z,54nm,1.3s,mb5.2
OXF Oxford 44.93 279 *e*P **P 06 43 41.4 -0.7**
OXF *e* 06 45 31.7
OXF pmax pmax
comp=Z,317nm,1.1s,mb6.1
OXF Oxford 44.93 279 *e*P **P 06 43 41.4 -0.7**
comp=Z,317nm,1.1s,mb6.1
OXF Oxford 44.93 279 *e*P **P 06 43 41.4 -0.7**
comp=Z,317nm,1.1s,mb6.1
OXF *e* 06 45 31.7
HBAR Harrisburg 45.34 281 *e*P **P 06 43 44.9 -0.5**
HBAR Harrisburg 45.34 281 *e*P **P 06 43 44.9 -0.4**
HBAR *e* 06 45 25.0
FFC Flin Flon 45.83 310 P **P 06 43 49.1 +0.1**
comp=Z,450nm,0.9s,mb6.4,SNR=12
FFC Flin Flon 45.83 310 *e*P **P 06 43 49.5 +0.5**
FFC pmax pmax
comp=Z,61nm,0.8s,mb5.6
FFC Flin Flon 45.83 310 *e*P **P 06 43 49.5 +0.5**
comp=Z,61nm,0.8s,mb5.6
FFC Flin Flon 45.83 310 *e*P **P 06 43 49.5 +0.5**
comp=Z,61nm,0.8s,mb5.6
ECSD EROS,Sioux Fal 46.05 294 *e*P **P 06 43 50.8 -0.1**
comp=Z,163nm,0.9s,mb6.0
ECSD EROS,Sioux Fal 46.05 294 *e*P **P 06 43 50.8 -0.1**
comp=Z,163nm,0.9s,mb6.0
ECSD LR LR
comp=Z,833nm,21.0s,MS4.7
SIM Simferopol' 46.41 64 P **P 06 43 55.0 +1.3**
SIM S **S 06 50 43.9 +2.7**
SIM pmax pmax
comp=Z,19nm,1.1s,mb4.9
SIM MLR MLR
comp=Z,380nm,14.0s,MS4.5
ISP Isparta 46.86 74⇑*e*P **P 06 43 57.4 +0.1**
VBMS Vicksburg 46.86 277 *e*P **P 06 43 57.6 +0.2**
UALR University of 46.92 281 *e*P **P 06 43 56.5 -1.3**
UALR University of 46.92 281 *e*P **P 06 43 56.5 -1.3**
VOR Voronezh 47.26 53 P **P 06 44 01.0 +0.8**
VOR pmax pmax
comp=Z,140nm,1.6s,mb5.6
VSR Storozhevoye 47.40 54 *e*P **P 06 43 59.3 -2.0**
VSR pmax pmax
comp=E,20nm,1.1s
VSR pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
VSR pmax pmax
comp=N,9.0nm,1.0s
KSU1 Kansas State U 47.96 289 *e*P **P 06 44 05.5 -0.3**
KSU1 Kansas State U 47.96 289 *e*P **P 06 44 05.5 -0.4**
ANN Anapa 48.65 63 *e*P **P 06 44 20.2 +9.1**
ANN *i **PP pP 06 44 25.6 +11
ANN *e* 06 45 39.8
ANN pmax pmax
comp=Z,81nm,1.7s,mb5.5
ANN MLR MLR
comp=N,207nm,16.0s,MS4.5
ANN MLR MLR
comp=E,327nm,16.0s,MS4.5
ANN MLR MLR
comp=Z,443nm,16.0s,MS4.5
DGMT Dagmar 49.15 303 *e*P **P 06 44 15.1 +0.2**
DGMT Dagmar 49.15 303 *e*P **P 06 44 15.1 +0.2**
YKA Yellowknife Ar 49.99 323 P **P 06 44 20.3 -0.8**
comp=Z,11nm,0.8s,mb4.9,baz=64,slow=7.4,SNR=20
YKA PcP PcP 06 45 39.4 -1.5
comp=Z,8.4nm,0.9s,baz=77,slow=4.1,SNR=11
YKA LR LR 07 03 24.1
comp=Z,363nm,18.1s,MS4.4,baz=155,slow=34
YKA Yellowknife Ar 49.99 323 P **P 06 44 20.3 -0.8**
YKA *e* 06 45 39.4
YKA Yellowknife Ar 49.99 323 PcP PcP 06 45 39.4 -1.5
NATX Nacogdoches 50.12 279 *e*P **P 06 44 22.3 -0.2**
CBKS Cedar Bluff 50.27 290 *e*P **P 06 44 22.8 -0.7**
CBKS pmax pmax
comp=Z,68nm,1.3s,mb5.5
CBKS Cedar Bluff 50.27 290 *e*P **P 06 44 22.8 -0.7**
comp=Z,68nm,1.3s,mb5.5
CBKS Cedar Bluff 50.27 290 *e*P **P 06 44 22.8 -0.7**
comp=Z,68nm,1.3s,mb5.5
SOC Sochi 50.65 63 *e*P **P 06 44 30.4 +4.1**
SOC *e* 06 45 40.3
SOC *e* 06 46 19.4
SOC *e*PPP 06 47 20.8
SOC *e*S **S 06 51 43.9 +2.9**
SOC *e*SS SS 06 55 13.1 -1.7
SOC pmax pmax
comp=Z,14nm,0.9s,mb4.9
SOC Sochi 50.65 63 *e*PcP PcP 06 45 40.3 -3.4
RSSD Black Hills 50.80 298 *e*P **P 06 44 27.0 -0.5**
RSSD Black Hills 50.80 298 *e*P **P 06 44 27.0 -0.4**
OGNE Ogallala 50.86 293 *e*P **P 06 44 27.4 -0.6**
comp=Z,184nm,1.3s,mb5.8
OGNE Ogallala 50.86 293 *e*P **P 06 44 27.4 -0.6**
comp=Z,184nm,1.3s,mb5.8
LAO LASA Array 51.12 302 *e*P **P 06 44 30.5 +0.7**
LAO LASA Array 51.12 302 *e*P **P 06 44 30.5 +0.7**
WMOK Wichita Mounta 51.56 285 *e*P **P 06 44 32.3 -1.0**
WMOK Wichita Mounta 51.56 285 *e*P **P 06 44 32.3 -1.0**
HKT Hockley 51.93 278 *e*P **P 06 44 35.7 -0.4**
HKT *e* 06 45 48.5
HKT pmax pmax
comp=Z,77nm,1.6s,mb5.4
HKT Hockley 51.93 278 *e*P **P 06 44 35.7 -0.4**
comp=Z,77nm,1.6s,mb5.4
HKT *e*PcP PcP 06 45 48.5 -0.2
TEIG Tepich 52.05 263 *e*P **P 06 44 37.7 +0.6**
comp=Z,58nm,1.0s,mb5.5
TEIG Tepich 52.05 263 *e*P **P 06 44 37.7 +0.6**
comp=Z,58nm,1.0s,mb5.5
MALT Malatya 52.17 70⇓*i*P **P 06 44 35.2 -2.6**
MALT Malatya 52.17 70 *e*P **P 06 44 35.0 -2.9**
comp=Z,44nm,1.1s,mb5.3

KIV Kislovodsk 52.42 61⇑*e*P **P 06 44 40.6 +1.0**
EDM Edmonton 52.66 312 *e*P **P 06 44 41.2 0.0**
EDM Edmonton 52.66 312 *e*P **P 06 44 41.2 +0.1**
EGMT Eagleton 52.73 304 *e*P **P 06 44 41.9 +0.1**
EGMT Eagleton 52.73 304 *e*P **P 06 44 41.9 +0.1**
PHWY Pilot Hill 53.00 295 *e*P **P 06 44 43.9 0.0**
ROSC El Rosal 53.28 237 P **P 06 44 47.2 +1.0**
comp=Z,17nm,0.8s,mb5.0,baz=107,slow=4.9,SNR=12
ROSC PcP PcP 06 45 54.3 +0.4
comp=Z,20nm,0.9s,baz=163,slow=2.7,SNR=6.8
ROSC El Rosal 53.28 237 PcP PcP 06 45 54.3 +0.4
ONI Oni 53.54 63 P **P 06 44 47.6 -0.2**
AMTX Amarillo 53.54 286 *e*P **P 06 44 48.0 0.0**
comp=Z,98nm,1.1s,mb5.7
AMTX Amarillo 53.54 286 *e*P **P 06 44 48.0 0.0**
comp=Z,98nm,1.1s,mb5.7
GCMT Greycliff 53.66 302 *e*P **P 06 44 49.0 +0.3**
GCMT Greycliff 53.66 302 *e*P **P 06 44 49.0 +0.3**
RLMT Red Lodge 53.71 301 *e*P **P 06 44 49.5 +0.4**
comp=Z,103nm,1.4s,mb5.6
RLMT Red Lodge 53.71 301 *e*P **P 06 44 49.5 +0.5**
comp=Z,103nm,1.4s,mb5.6
ISCO Idaho Springs 53.82 294 *e*P **P 06 44 50.3 +0.4**
ISCO pmax pmax
comp=Z,60nm,1.4s,mb5.3
ISCO Idaho Springs 53.82 294 *e*P **P 06 44 50.3 +0.4**
comp=Z,60nm,1.4s,mb5.3
ISCO Idaho Springs 53.82 294 *e*P **P 06 44 50.3 +0.3**
comp=Z,60nm,1.4s,mb5.3
RWWY Rawlins 53.98 296 *e*P **P 06 44 51.5 +0.4**
comp=Z,101nm,1.5s,mb5.5
RWWY Rawlins 53.98 296 *e*P **P 06 44 51.5 +0.4**
comp=Z,101nm,1.5s,mb5.5
JCT Junction City 54.52 281 *e*P **P 06 44 54.1 -1.1**
JCT Junction City 54.52 281 *e*P **P 06 44 54.1 -1.1**
LKWY Lake 54.68 301 *e*P **P 06 44 57.9 +1.7**
LKWY pmax pmax
comp=Z,217nm,2.3s,mb5.8
LKWY Lake 54.68 301 *e*P **P 06 44 57.9 +1.7**
comp=Z,216nm,2.3s,mb5.8
LKWY Lake 54.68 301 *e*P **P 06 44 57.9 +1.8**
comp=Z,216nm,2.3s,mb5.8
SDCO Great Sand Dun 54.75 291 *e*P **P 06 44 57.0 +0.2**
WALA Waterton Lakes 54.76 307 *e*P **P 06 44 56.6 -0.1**
WALA Waterton Lakes 54.76 307 *e*P **P 06 44 56.6 0.0**
TBLG Delisi 54.79 63 *e*P **P 06 44 56.8 -0.2**
TBLG Delisi 54.79 63 P **P 06 44 56.9 -0.1**
YNR Norris Junctio 54.79 301 *e*P **P 06 44 58.9 +2.0**
YNR Norris Junctio 54.79 301 *e*P **P 06 44 58.9 +1.9**
MTA Mtatsminda 54.84 63 P **P 06 44 57.5 +0.1**
BOZ Bozeman (W) 54.95 303 *e*P **P 06 44 58.2 +0.1**
BOZ pmax pmax
comp=Z,62nm,1.4s,mb5.5
BOZ Bozeman (W) 54.95 303 *e*P **P 06 44 58.2 +0.1**
comp=Z,62nm,1.4s,mb5.5
BOZ Bozeman (W) 54.95 303 *e*P **P 06 44 58.2 +0.1**
comp=Z,62nm,1.4s,mb5.5
YMR Madison River 54.99 301 *e*P **P 06 44 59.0 +0.6**
comp=Z,115nm,1.5s,mb5.7
YMR Madison River 54.99 301 *e*P **P 06 44 59.0 +0.6**
comp=Z,115nm,1.5s,mb5.7
YMR *e*PcP PcP 06 46 00.9 +0.9
BW06 Boulder Array 55.00 299 *e*P **P 06 44 57.5 -1.0**
comp=Z,57nm,1.2s,mb5.5
BW06 Boulder Array 55.00 299 *e*P **P 06 44 57.5 -1.0**
comp=Z,57nm,1.2s,mb5.5
PDAR Pinedale Array 55.00 299 P **P 06 44 57.5 -0.9**
comp=Z,22nm,1.0s,mb5.1,baz=64,slow=6.8,SNR=105
PDAR PP PP 06 47 00.5 -0.7
comp=Z,2.2nm,0.9s,baz=62,slow=12,SNR=2.5
PDAR LR LR 07 07 54.2
comp=Z,533nm,19.3s,MS4.6,baz=68,slow=36
PDAR Pinedale Array 55.00 299 P **P 06 44 57.5 -1.0**
PDAR Pinedale Array 55.00 299 PP PP 06 47 00.5 -0.8
QLMT Earthquake Lak 55.21 302 *e*P **P 06 45 00.7 +0.7**
QLMT Earthquake Lak 55.21 302 *e*P **P 06 45 00.7 +0.7**
LOHW Long Hollow 55.26 300 *e*P **P 06 45 00.3 -0.1**
comp=Z,55nm,1.4s,mb5.4
LOHW Long Hollow 55.26 300 *e*P **P 06 45 00.3 -0.1**
comp=Z,55nm,1.4s,mb5.4
MOOW Moose Ponds 55.29 300 *e*P **P 06 45 00.5 -0.1**
comp=Z,59nm,1.4s,mb5.4
MOOW Moose Ponds 55.29 300 *e*P **P 06 45 00.5 -0.1**
comp=Z,59nm,1.4s,mb5.4
TGUH Tegucigalpa,Un 55.33 256 *e*P **P 06 45 02.7 +1.5**
comp=Z,39nm,0.9s,mb5.4
TGUH Tegucigalpa,Un 55.33 256 *e*P **P 06 45 02.7 +1.5**
comp=Z,39nm,0.9s,mb5.4
DGRG David-gareji 55.34 63 P **P 06 45 02.0 +1.0**
IMW Indian Meadow 55.34 300 *e*P **P 06 45 01.3 +0.4**
comp=Z,89nm,1.4s,mb5.6
IMW Indian Meadow 55.34 300 *e*P **P 06 45 01.3 +0.3**
comp=Z,89nm,1.4s,mb5.6
CHMT Chamberlain Mo 55.35 305 *e*P **P 06 45 01.3 +0.3**
CHMT Chamberlain Mo 55.35 305 *e*P **P 06 45 01.3 +0.3**
LRM Limekiln Ridge 55.38 303 *e*P **P 06 45 01.2 +0.1**
LRM Limekiln Ridge 55.38 303 *e*P **P 06 45 01.2 +0.1**
SNOW Snow King Moun 55.43 300 *e*P **P 06 45 01.8 +0.2**
comp=Z,90nm,1.3s,mb5.6
SNOW Snow King Moun 55.43 300 *e*P **P 06 45 01.8 +0.2**
comp=Z,90nm,1.3s,mb5.6
REDW Red Top Meadow 55.54 300 *e*P **P 06 45 02.4 0.0**
REDW Red Top Meadow 55.54 300 *e*P **P 06 45 02.4 0.0**
TPAW Teton Pass 55.54 300 *e*P **P 06 45 02.3 -0.1**
comp=Z,57nm,1.3s,mb5.4
TPAW Teton Pass 55.54 300 *e*P **P 06 45 02.3 -0.1**
comp=Z,57nm,1.3s,mb5.4
GNI Garni 55.56 65 P **P 06 45 02.9 +0.3**
comp=Z,4.8nm,0.2s,mb5.2,baz=357,slow=19,SNR=9.1
DCID1 Drake Creek 55.64 300 *e*P **P 06 45 03.8 +0.7**
DLMT Dillon 55.68 303 *e*P **P 06 45 03.5 +0.1**
comp=Z,98nm,1.4s,mb5.6
MSO Missoula 55.81 305 *e*P **P 06 45 04.1 -0.2**
MSO Missoula 55.81 305 *e*P **P 06 45 04.1 -0.1**
RRI2 Red Ridge 55.85 300 *e*P **P 06 45 04.6 0.0**
comp=Z,80nm,1.4s,mb5.6
RRI2 Red Ridge 55.85 300 *e*P **P 06 45 04.5 0.0**
comp=Z,80nm,1.4s,mb5.6
ARU Arti 55.95 42 P **P 06 45 05.8 +0.7**
comp=Z,305nm,0.9s,mb6.3,SNR=8.0
ARU Arti 55.95 42*d i*P **P 06 45 04.5 -0.6**
ARU *e* 06 45 58.4
ARU *e* 06 47 07.6
ARU *e*S **S 06 52 53.6 +0.9**
ARU *e*SS SS 06 56 40.5 +2.6
ARU pmax pmax
comp=Z,106nm,1.7s,mb5.6
ARU MLR MLR
comp=Z,474nm,17.0s,MS4.7
ARU Arti 55.95 42 *e*P **P 06 45 04.6 -0.5**
comp=Z,49nm,0.9s,mb5.5
ARU Arti 55.95 42 *e*P **P 06 45 04.6 -0.5**
comp=Z,49nm,0.9s,mb5.5
JTS JuntasAbangare 56.28 251 *e*P **P 06 45 07.0 -1.0**
SVE Sverdlovsk 56.77 41⇑*e*P **P 06 45 10.5 -0.5**
SVE *e* 06 47 22.5
SVE *e*S **S 06 53 19.5 +16**
SVE *e* 06 54 52.3
SVE *e*SS SS 06 56 54.7 +3.9
SVE pmax pmax
comp=Z,62nm,1.3s,mb5.5
SVE MLR MLR
comp=Z,389nm,14.0s,MS4.7
ANMO Albuquerque 56.86 289*d i*P **P 06 45 12.6 +0.7**
NEW Newport 57.01 307 *e*P **P 06 45 12.3 -0.5**
NEW pmax pmax
comp=Z,77nm,1.1s
DAU Daniels Canyon 57.27 297 *e*P **P 06 45 15.1 +0.4**
BNM Barren Site 57.40 288 *e*P **P 06 45 16.5 +0.7**
BNM Barren Site 57.40 288 *e*PcP PcP 06 46 09.9 +0.3
BNM Barren Site 57.40 288 *e*P **P 06 45 16.4 +0.7**
BNM *e*PcP PcP 06 46 09.9 +0.3
SRU San Rafael 57.45 295 *e*P **P 06 45 16.1 0.0**
HVU Hansel Valley 57.56 299 *e*P **P 06 45 16.8 0.0**
LAZ Ladron 57.62 289 *e*P **P 06 45 18.2 +0.9**
LAZ Ladron 57.62 289 *e*P **P 06 45 18.2 +0.8**
LAZ *e*PcP PcP 06 46 11.1 +0.6
LAZ *e*PP PP 06 47 24.8 -0.1
TXAR Lajitas Array 57.95 282 P **P 06 45 19.2 -0.5**
comp=Z,20nm,0.8s,mb5.2,baz=74,slow=6.9,SNR=216
TXAR PP PP 06 47 24.4 -3.5
comp=Z,2.7nm,0.9s,baz=55,slow=10,SNR=3.1
TXAR LR LR 07 12 47.0
comp=Z,289nm,18.6s,MS4.4,baz=0.0,slow=39
TXAR Lajitas Array 57.95 282 P **P 06 45 19.2 -0.5**

TXAR 06 47 24.4
TXAR Lajitas Array 57.95 282 PP PP 06 47 24.4 -3.5
TXAR Lajitas Array 57.95 282 P **P 06 45 19.2 -0.5**
TXAR PP PP 06 47 24.4 -3.5
TXAR LR LR 07 12 47.0
BGU Big Grassy Mou 58.16 298 *e*P **P 06 45 20.5 -0.5**
BGU Big Grassy Mou 58.16 298 *e*P **P 06 45 20.5 -0.5**
OD2 Odessa Site #2 58.38 307 *e*P **P 06 45 20.6 -1.8**
OD2 Odessa Site #2 58.38 307 *e*P **P 06 45 20.6 -1.8**
DUG Dugway 58.40 297 *e*P **P 06 45 22.8 +0.1**
BMO Blue Mountains 58.83 304 *e*P **P 06 45 24.5 -1.1**
MSU Marysvale 58.87 295 *e*P **P 06 45 26.5 +0.5**
LNOR Lincton Mounta 58.90 305 P **P 06 45 25.7 -0.4**
LNOR Lincton Mounta 58.90 305 P **P 06 45 25.7 -0.4**
WTV Waterville 58.95 308 P **P 06 45 25.2 -1.2**
WTV Waterville 58.95 308 P **P 06 45 25.2 -1.1**
ETW Entiat 59.21 308 P **P 06 45 27.2 -1.0**
ETW Entiat 59.21 308 P **P 06 45 27.2 -1.0**
RSW Rattlesnake Hi 59.41 307 *e*P **P 06 45 28.6 -1.0**
RSW Rattlesnake Hi 59.41 307 *e*P **P 06 45 28.6 -0.9**
ELK Elko 59.68 299 *e*P **P 06 45 31.8 +0.2**
ELK pmax pmax
comp=Z,12nm,0.5s
ELK Elko 59.68 299 *e*P **P 06 45 31.8 +0.2**
comp=Z,12nm,0.5s,mb5.2
ELK Elko 59.68 299 *e*P **P 06 45 31.8 +0.2**
comp=Z,12nm,0.5s,mb5.2
EBG Ellensburg 59.71 307 P **P 06 45 31.2 -0.5**
EBG Ellensburg 59.71 307 P **P 06 45 31.2 -0.4**
JCW Jim Creek 59.82 309 *e*P **P 06 45 29.8 -2.6**
JCW *e*PcP PcP 06 46 17.4 -1.5
BDFB Brasilia 60.03 198 P **P 06 45 33.8 -0.3**
comp=Z,14nm,1.0s,mb5.0,baz=348,slow=7.2,SNR=17
BDFB LR LR 07 07 44.3
comp=Z,708nm,18.8s,MS4.8,baz=349,slow=32
ARUT Antelope Range 60.09 295 *e*P **P 06 45 34.6 +0.1**
ARUT Antelope Range 60.09 295 *e*P **P 06 45 34.6 +0.2**
CCUT Cedar City 60.17 295 *e*P **P 06 45 35.4 +0.4**
CCUT Cedar City 60.17 295 *e*P **P 06 45 35.4 +0.4**
AB31 Akbulak array 60.24 49 P **P 06 45 34.7 -0.6**
AB31 pmax pmax
comp=Z,26nm,1.0s,mb5.2
AB31 Akbulak array 60.24 49 *i* P **P 06 45 34.8 -0.5**
HYT Haines Junctio 60.46 327 *e*P **P 06 45 36.4 -0.2**
HYT Haines Junctio 60.46 327 *e*P **P 06 45 36.4 -0.1**
COLD Coldfoot 60.81 337 *e*P **P 06 45 38.8 -0.1**
comp=Z,58nm,1.1s,mb5.6
COLD *e*PcP PcP 06 46 16.0 -6.5
WVOR Wild Horse Val 60.93 302 *e*P **P 06 45 40.8 +0.7**
WVOR pmax pmax
comp=Z,128nm,1.7s,mb5.8
WVOR Wild Horse Val 60.93 302 *e*P **P 06 45 40.8 +0.7**
comp=Z,128nm,1.7s,mb5.8
WVOR Wild Horse Val 60.93 302 *e*P **P 06 45 40.8 +0.7**
comp=Z,128nm,1.7s,mb5.8
VIPM Ingram Point 61.02 305 P **P 06 45 41.1 +0.4**
OSD Olympics--Snow 61.03 310 P **P 06 45 41.4 +0.7**
OSD Olympics--Snow 61.03 310 P **P 06 45 41.4 +0.7**
BMN Battle Mountai 61.12 300 *e*P **P 06 45 41.5 +0.1**
BMN *e* 06 46 23.8
BMN *e* 06 47 54.2
BMN pmax pmax
comp=Z,22nm,1.1s,mb5.2
BMN Battle Mountai 61.12 300 *e*P **P 06 45 41.5 +0.1**
comp=Z,22nm,1.1s,mb5.2
BMN Battle Mountai 61.12 300 *e*PcP PcP 06 46 23.8 -0.5
BMN Battle Mountai 61.12 300 *e*P **P 06 45 41.5 0.0**
comp=Z,22nm,1.1s,mb5.2
BMN *e*PcP PcP 06 46 23.8 -0.5
BMN *e*PP PP 06 47 54.2 -1.5
TUC Tucson 61.32 289 *e*P **P 06 45 43.5 +0.6**
COLA College 61.66 334*c i*P **P 06 45 43.7 -1.0**
COLA College 61.66 334 *e*P **P 06 45 43.8 -0.9**
comp=Z,13nm,1.1s,mb5.0
COLA *e*PcP PcP 06 46 23.0 -3.0
COLA LR LR
comp=Z,437nm,19.0s,MS4.6
MOD Modoc 62.26 303 *e*P **P 06 45 49.2 +0.1**
comp=Z,23nm,0.9s,mb5.3
MOD Modoc 62.26 303 *e*P **P 06 45 49.2 +0.2**
comp=Z,23nm,0.9s,mb5.3
TPNV Topopah Spring 62.42 296 *e*P **P 06 45 50.2 0.0**
TPNV pmax pmax
comp=Z,100nm,2.2s,mb5.6
TPNV Topopah Spring 62.42 296 *e*P **P 06 45 50.2 0.0**
comp=Z,100nm,2.2s,mb5.6
HEBO Mount Hebo 62.49 307 *e*P **P 06 45 50.0 -0.6**
comp=Z,89nm,1.1s,mb5.8
HEBO Mount Hebo 62.49 307 *e*P **P 06 45 50.0 -0.6**
comp=Z,89nm,1.1s,mb5.8
MCK McKinley 62.78 334 *e*P **P 06 45 51.8 -0.4**
MCK pmax pmax
comp=Z,44nm,1.1s,mb5.5
MCK McKinley 62.78 334 *e*P **P 06 45 51.8 -0.4**
comp=Z,44nm,1.1s,mb5.5
MCK McKinley 62.78 334 *e*P **P 06 45 51.8 -0.4**
comp=Z,44nm,1.1s,mb5.5
NVAR Mina Array Bea 62.93 298 P **P 06 45 53.0 -0.6**
comp=Z,3.9nm,0.8s,mb4.6,baz=66,slow=4.7,SNR=27
NVAR PKP2bc 07 14 58.9
comp=Z,0.8nm,0.8s,baz=186,slow=4.5,SNR=5.2
NVAR Mina Array Bea 62.93 298 P **P 06 45 53.0 -0.6**
NVAR ⇑*e* 07 14 58.9
BMRM Bremner River 63.10 330 *e*P **P 06 45 54.1 -0.3**
BMRM Bremner River 63.10 330 *e*P **P 06 45 54.1 -0.3**
LASM Arnica Sink 63.22 303 P **P 06 45 55.9 +0.4**
LASM Arnica Sink 63.22 303 P **P 06 45 55.9 +0.5**
TRF Thorofare Moun 63.41 334 *e*P **P 06 45 55.7 -0.7**
comp=Z,131nm,1.6s,mb5.8
TRF Thorofare Moun 63.41 334 *e*P **P 06 45 55.7 -0.7**
comp=Z,131nm,1.6s,mb5.8
DIV Divide 63.43 330 *e*P **P 06 45 56.3 -0.2**
comp=Z,37nm,0.9s,mb5.5
DIV Divide 63.43 330 *e*P **P 06 45 56.3 -0.2**
comp=Z,37nm,0.9s,mb5.5
BRVK Borovoye 63.49 41 P **P 06 45 57.2 +0.1**
comp=Z,457nm,1.0s,mb6.6,SNR=18
BRVK Borovoye 63.49 41 P **P 06 45 57.4 +0.3**
SNR=22
BRVK Borovoye 63.49 41 P **P 06 45 56.5 -0.6**
BRVK pmax pmax
comp=Z,90nm,1.0s,mb5.8
BRVK Borovoye 63.49 41 *e*P **P 06 45 57.1 0.0**
comp=Z,90nm,1.0s,mb5.8
BRVK Borovoye 63.49 41 *e*P **P 06 45 57.1 0.0**
comp=Z,90nm,1.0s,mb5.8
BRVK LR LR
comp=Z,847nm,22.0s,MS4.9
LBCM Butte Creek Ri 63.51 302 P **P 06 45 57.7 +0.3**
KTH Kantishna Hill 63.55 334 *e*P **P 06 45 56.6 -0.7**
comp=Z,70nm,1.1s,mb5.6
KTH Kantishna Hill 63.55 334 *e*P **P 06 45 56.6 -0.7**
comp=Z,70nm,1.1s,mb5.6
BVA0 Borovoye Array 63.56 41 P **P 06 45 57.2 -0.3**
BVA0 pmax pmax
comp=Z,17nm,1.2s,mb5.0
BVA0 Borovoye Array 63.56 41 P **P 06 45 57.2 -0.3**
comp=Z,17nm,1.2s,mb5.0
GLA Glamis 63.69 292 *e*P **P 06 45 59.7 +1.0**
GLA pmax pmax
comp=Z,180nm,1.9s,mb5.8
GLA Glamis 63.69 292 *e*P **P 06 45 59.7 +1.0**
comp=Z,180nm,1.9s,mb5.8
GSC Goldstone 63.73 295 *e*P **P 06 45 59.4 +0.5**
CHUM Lake Minchumin 63.76 335 *e*P **P 06 45 58.2 -0.5**
comp=Z,62nm,1.2s,mb5.5
CHUM Lake Minchumin 63.76 335 *e*P **P 06 45 58.2 -0.4**
comp=Z,62nm,1.2s,mb5.5
VOSK Vostochnaya 64.03 41 P **P 06 45 58.5 -2.1**
VOSK pmax pmax
comp=Z,57nm,1.3s,mb5.4
VOSK Vostochnaya 64.03 41 P **P 06 45 58.5 -2.1**
comp=Z,57nm,1.3s,mb5.4
PMR Palmer 64.31 332 *e*P **P 06 46 01.5 -0.8**
PMR pmax pmax
comp=Z,69nm,1.0s,mb5.6
PMR Palmer 64.31 332 *e*P **P 06 46 01.5 -0.8**
comp=Z,69nm,1.0s,mb5.6
PPLA Purkeypile 64.42 334 *e*P **P 06 46 00.5 -2.5**
comp=Z,22nm,1.1s,mb5.1
PPLA Purkeypile 64.42 334 *e*PcP PcP 06 46 36.1 -1.2
PPLA Purkeypile 64.42 334 *e*P **P 06 46 00.5 -2.5**
comp=Z,22nm,1.1s,mb5.1
PPLA *e*PcP PcP 06 46 36.1 -1.2
PFO Pinyon Flat Ob 64.47 293 P **P 06 46 04.5 +0.6**

comp=Z,135nm,1.0s,mb5.9,SNR=7.7
PFO Pinyon Flat Ob 64.47 293 eP P 06 46 04.4 +0.5
CMB Columbia Colle 64.50 299 eP P 06 46 04.3 +0.3
ISA Isabella 64.63 296 eP P 06 46 05.1 +0.2
ISA pmax pmax
comp=Z,220nm,2.4s,mb5.8
ISA Isabella 64.63 296 eP P 06 46 05.1 +0.2
comp=Z,220nm,2.4s,mb5.8
RC01 Rabbit Creek A 64.87 332 eP P 06 46 05.7 -0.3
comp=Z,90nm,1.4s,mb5.6
RC01 Rabbit Creek A 64.87 332 eP P 06 46 05.7 -0.3
comp=Z,90nm,1.4s,mb5.6
TIXI Tiksi 65.03 7 eP P 06 46 06.7 -0.1
TIXI pmax pmax
comp=Z,36nm,1.2s,mb5.3
TIXI Tiksi 65.03 7 eP P 06 46 06.7 -0.1
comp=Z,36nm,1.2s,mb5.3
TIXI Tiksi 65.03 7 *i* P P 06 46 07.1 +0.3
OSI Osito Adit 65.41 295 eP P 06 46 09.2 -0.7
comp=Z,16nm,0.9s,mb5.1
OSI Osito Adit 65.41 295 eP P 06 46 09.2 -0.7
comp=Z,16nm,0.9s,mb5.1
SLKM Skilak Lake 65.45 331 eP P 06 46 08.6 -1.2
SLKM Skilak Lake 65.45 331 eP P 06 46 08.6 -1.2
SEW Seward 65.46 331 eP P 06 46 09.6 -0.2
SEW Seward 65.46 331 eP P 06 46 09.6 -0.2
TTA Tatalina 65.60 335 eP P 06 46 09.7 -1.0
TTA Tatalina 65.60 335 eP P 06 46 07.5 -3.1
comp=Z,15nm,1.2s,mb4.9
HOPS Hopland 65.65 301 eP P 06 46 08.2 -3.2
PTRM Twissleman Ran 65.78 297 eP P 06 46 11.7 -0.6
PTRM Twissleman Ran 65.78 297 eP P 06 46 11.7 -0.6
SAO San Andreas Ge 65.93 298 eP P 06 46 14.0 +0.7
LPAZ La Paz 67.60 218 P P 06 46 24.8 +0.8
comp=Z,20nm,1.0s,mb5.1,baz=18,slow=7.3,SNR=52
LPAZ LR LR 07 12 56.4
comp=Z,113nm,18.7s,MS4.1,baz=226,slow=33
NVS Novosibirsk 68.17 34 ⇓*i* P P 06 46 26.1 -1.1
NVS pmax pmax
comp=N,18nm,1.4s
NVS pmax pmax
comp=Z,70nm,1.4s,mb5.5
BILL Bilibino 68.63 353⇓ eP P 06 46 29.1 -0.8
KURK Kurchatov 68.96 40 P P 06 46 31.0 -1.2
comp=Z,183nm,1.0s,mb6.0,SNR=15
KURK Kurchatov 68.96 40 P P 06 46 31.9 -0.4
SNR=15
KURK Kurchatov 68.96 40 P P 06 46 30.3 -1.9
KURK pmax pmax
comp=Z,43nm,1.0s,mb5.3
KURK Kurchatov 68.96 40 eP P 06 46 31.2 -1.0
comp=Z,44nm,1.0s,mb5.3
KURK Kurchatov 68.96 40 eP P 06 46 31.2 -1.0
comp=Z,44nm,1.0s,mb5.3
ZALV Zalesovo Beam 69.46 34 P P 06 46 34.0 -1.2
comp=Z,10nm,1.0s,mb4.7,baz=296,slow=8.1,SNR=28
ZALV LR LR 07 17 53.9
comp=Z,195nm,18.6s,MS4.4,baz=224,slow=37
KRAR Krasnoyarsk 71.05 29⇑ eP P 06 46 45.2 +0.3
KRAR pmax pmax
comp=Z,87nm,1.0s,mb5.6
KRAR Krasnoyarsk 71.05 29 eP P 06 46 45.2 +0.3
comp=Z,87nm,1.0s,mb5.6
EKS2 Erkin-Say 71.89 48 eP P 06 46 50.8 +0.5
comp=Z,55nm,1.3s,mb5.3
EKS2 Erkin-Say 71.89 48 eP P 06 46 50.9 +0.6
comp=Z,55nm,1.3s,mb5.3
HATD Hatta, Dubai 72.18 73 P P 06 46 51.5 -0.8
SNR=5.9
AML Almayashu 72.20 49 eP P 06 46 53.2 +1.1
comp=Z,60nm,1.3s,mb5.4
AML Almayashu 72.20 49 eP P 06 46 53.2 +1.1
comp=Z,60nm,1.3s,mb5.4
CPUP Villa Florida 72.69 204 P P 06 46 53.8 -1.3
comp=Z,8.9nm,0.9s,mb4.7,baz=358,slow=6.3,SNR=19
CPUP LR LR 07 16 36.7
comp=Z,133nm,18.4s,MS4.2,baz=186,slow=34
TKM2 Tokmak 2 72.71 47 eP P 06 46 55.5 +0.4
TKM2 pmax pmax
comp=Z,25nm,1.2s,mb5.0
TKM2 Tokmak 2 72.71 47 eP P 06 46 55.5 +0.4
comp=Z,25nm,1.2s,mb5.0
TKM2 Tokmak 2 72.71 47 eP P 06 46 55.5 +0.3
comp=Z,25nm,1.2s,mb5.0
MK31 Makanchi Array 73.44 41 *i* P P 06 46 58.1 -1.3
MK31 pmax pmax
comp=Z,29nm,1.0s,mb5.2
MK31 Makanchi Array 73.44 41 *i* P P 06 46 58.1 -1.3
comp=Z,29nm,1.0s,mb5.2
MKAR Makanchi Array 73.44 41 P P 06 46 58.6 -0.7
comp=Z,15nm,0.9s,mb4.9,baz=320,slow=5.4,SNR=78
MKAR LR LR 07 21 17.6
comp=Z,251nm,18.7s,MS4.5,baz=70,slow=38
LVC Limon Verde 73.51 215 eP P 06 46 59.6 -0.4
comp=Z,51nm,1.5s,mb5.2
LVC Limon Verde 73.51 215 eP P 06 46 59.6 -0.3
comp=Z,51nm,1.5s,mb5.2
YAK Yakutsk 74.45 9 eP P 06 47 01.8 -3.2
YAK pmax pmax
comp=Z,67nm,1.0s,mb5.5
YAK pmax pmax
comp=N,26nm,1.1s
YAK Yakutsk 74.45 9⇑ eP P 06 47 04.4 -0.6
SEY Seymchan 74.55 358⇑ eP P 06 47 06.0 +0.4
HVS Khovu-Aksy 75.16 32 *c* iP P 06 47 08.7 -0.6
HVS pmax pmax
comp=Z,210nm,1.8s,mb5.8
KMBO Kilima Mbogo 75.58 105 LR LR 07 20 32.9
comp=Z,346nm,18.8s,MS4.7,baz=281,slow=36
KMBO Kilima Mbogo 75.58 105 P P 06 47 07.0 -5.3
KMBO pmax pmax
comp=Z,21nm,1.1s
BOD Bodaibo 75.76 18 eP P 06 47 10.7 -1.9
BOD pmax pmax
comp=Z,36nm,1.1s,mb5.2
BOD Bodaibo 75.76 18 eP P 06 47 10.7 -1.9
comp=Z,36nm,1.1s,mb5.2
TSUM Tsumeb 76.66 132 eP P 06 47 17.7 -0.5
comp=Z,12nm,1.1s,mb4.7
TSUM Tsumeb 76.66 132 eP P 06 47 17.7 -0.5
comp=Z,12nm,1.1s,mb4.7
MOY Mondy 77.41 28 eP P 06 47 22.4 +0.3
MOY pmax pmax
comp=Z,70nm,2.0s,mb5.2
MOY Mondy 77.41 28 eP P 06 47 22.4 +0.3
comp=Z,70nm,2.0s,mb5.2
WMQ Urumqi 78.20 40 P P 06 47 27.3 +0.6
WMQ AP pP 06 47 31.5 +1.5
WMQ XP sP 06 47 34.0 +2.8
WMQ PCP PcP 06 47 38.0 +1.8
WMQ PP PP 06 50 25.0 +2.3
WMQ PPP 06 52 15.0
WMQ S S 06 57 20.0 -1.2
WMQ AMB AMB
comp=Z,20nm,1.4s,mb4.8
WMQ AMB AMB
comp=Z,149nm,3.6s
WMQ LR LR
comp=N,974nm,13.2s,MS5.4
WMQ LR LR
comp=E,861nm,15.0s,MS5.4
WMQ LR LR
comp=Z,1µm,17.8s,MS5.2
TLY Talaya 78.29 26 P P 06 47 26.7 -0.2
SNR=5.7
TLY Talaya 78.29 26 eP P 06 47 26.1 -0.9
TLY ePPP 06 52 20.6
TLY eS S 06 57 16.5 -5.3
TLY ePS 06 58 15.9
TLY pmax pmax
comp=Z,38nm,2.2s,mb4.9
TLY MLR MLR
comp=Z,268nm,19.0s,MS4.6
TLY Talaya 78.29 26 eP P 06 47 26.1 -0.9
comp=Z,38nm,2.2s,mb4.9
TLY Talaya 78.29 26 eP P 06 47 25.8 -1.2
comp=Z,26nm,1.4s,mb5.0
CLNS Chul'man 78.81 13 eP P 06 47 29.6 -0.2
CLNS pmax pmax
comp=N,10.0nm,0.9s
CLNS pmax pmax
comp=Z,21nm,1.2s,mb4.9
CLNS pmax pmax
comp=E,5.0nm,1.0s
CLNS Chul'man 78.81 13 eP P 06 47 29.6 -0.2
comp=E,21nm,1.2s,mb4.9

ZAK Zakamensk 79.27 27 eP P 06 47 30.9 -1.5
ZAK pmax pmax
comp=Z,11nm,1.3s,mb4.6
ZAK Zakamensk 79.27 27 eP P 06 47 30.9 -1.5
comp=Z,11nm,1.3s,mb4.6
LSZ Lusaka 79.79 122 ⇑P P 06 47 36.1 +0.5
SNR=7.5
LSZ Lusaka 79.79 122 eP P 06 47 35.5 -0.1
LSZ pmax pmax
comp=Z,36nm,1.1s,mb5.2
LSZ Lusaka 79.79 122 eP P 06 47 35.5 -0.1
comp=Z,36nm,1.1s,mb5.2
LSZ Lusaka 79.79 122 eP P 06 47 35.5 -0.1
comp=Z,36nm,1.1s,mb5.2
LCO Las Campanas 79.90 214 eP P 06 47 36.7 +0.8
comp=Z,92nm,1.4s,mb5.5
LCO Las Campanas 79.90 214 eP P 06 47 36.7 +0.7
comp=Z,92nm,1.4s,mb5.5
LCO ePcP PcP 06 47 45.4 +1.9
CIT Chita 80.91 21 eP P 06 47 39.8 -1.4
SONM Songino Array 82.51 27 P P 06 47 49.5 -0.3
comp=Z,15nm,0.9s,mb5.0,baz=327,slow=5.6,SNR=59
ULN Ulaanbaatar 82.70 26 P P 06 47 50.2 -0.6
SNR=14
ULN Ulaanbaatar 82.70 26 *d* iP P 06 47 50.6 -0.1
ULN Ulaanbaatar 82.70 26 *i* P P 06 47 50.6 -0.1
ULN Ulaanbaatar 82.70 26 eP P 06 47 50.8 0.0
comp=Z,107nm,1.8s,mb5.6
ULN LR LR
comp=Z,285nm,21.0s,MS4.6
PETK Petropavlovsk- 84.10 354 P P 06 47 57.3 -0.6
comp=Z,8.8nm,0.9s,mb4.9,baz=72,slow=9.8,SNR=7.5
PETK LR LR 07 26 31.2
comp=Z,313nm,18.1s,MS4.7,baz=204,slow=36
PET Petropavlovsk 84.11 354 ⇓*i* P P 06 47 57.3 -0.6
PET *e*S S 06 58 23.1 +0.8
PET *e*PS 06 59 19.4
PET pmax pmax
comp=Z,60nm,1.2s,mb5.6
PET pmax pmax
comp=Z,200nm,9.5s
PET MLR MLR
comp=Z,300nm,20.0s,MS4.7
PET Petropavlovsk 84.11 354 *i* P P 06 47 57.3 -0.6
comp=Z,200nm,9.5s
PET Petropavlovsk 84.11 354 *i* P P 06 47 56.9 -1.0
TRQA Tornquist 85.02 203 eP P 06 48 00.5 -1.9
comp=Z,24nm,1.2s,mb5.2
GTA Gaotai 87.19 35 P P 06 48 12.8 -0.7
GTA AP pP 06 48 16.9 +0.1
GTA XP sP 06 48 19.4 +1.4
GTA PP PP 06 51 35.6 -0.8
GTA SKS 06 58 36.0
GTA S S 06 58 47.3 -5.8
GTA XS sS 06 58 56.3 -2.3
GTA AMB AMB
comp=Z,16nm,1.3s,mb5.1
GTA AMB AMB
comp=Z,148nm,5.7s
GTA LR LR
comp=N,187nm,18.7s,MS4.8
GTA LR LR
comp=E,274nm,16.1s,MS4.8
GTA LR LR
comp=Z,292nm,17.2s,MS4.8
BOSA Boshof 88.36 132 LR LR 07 25 34.1
comp=Z,555nm,18.8s,MS5.0,baz=314,slow=34
PLCA Paso Flores 90.21 208 P P 06 48 26.1 -1.3
comp=Z,7.1nm,1.1s,mb4.9,baz=0.8,slow=4.9,SNR=5.4
PLCA LR LR 07 28 11.6
comp=Z,371nm,20.3s,MS4.8,baz=267,slow=35
HHC Hu-ho-hao-te 90.41 27 eP P 06 48 25.6 -3.1
HHC PP PP 06 52 01.3 -0.7
HHC SKS 06 58 54.0
HHC S S 06 59 15.6 -7.8
HHC AMB AMB
comp=Z,8.0nm,0.6s,mb5.2
HHC AMB AMB
comp=Z,101nm,7.5s
HHC LR LR
comp=N,311nm,17.7s,MS5.0
HHC LR LR
comp=E,382nm,17.2s,MS5.0
HHC LR LR
comp=Z,282nm,16.2s,MS4.8
MDJ Mudanjiang 91.39 13 P P 06 48 31.0 -2.2
MDJ AP pP 06 48 34.1 -2.4
MDJ PP PP 06 52 05.9 -3.7
MDJ S S 06 59 16.8 -15
MDJ AMB AMB
comp=Z,8.0nm,1.2s,mb4.9
MDJ AMB AMB
comp=Z,93nm,4.8s
MDJ LR LR
comp=N,107nm,26.6s
MDJ LR LR
comp=E,34nm,34.2s
MDJ LR LR
comp=Z,129nm,25.7s,MS4.3
CN2 Changchun 91.41 16 eP P 06 48 31.9 -1.4
CN2 *e*XP sP 06 48 38.9 +1.1
CN2 *e*S S 06 59 26.4 -6.0
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb5.3
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,280nm,20.0s,MS4.8
CN2 LR LR
comp=E,170nm,20.0s,MS4.8
CN2 LR LR
comp=Z,250nm,19.0s,MS4.7
LZH Lanzhou 91.70 34 ⇑P P 06 48 34.5 -0.2
LZH AP pP 06 48 39.3 +1.2
LZH XP sP 06 48 41.6 +2.3
LZH PP PP 06 52 14.8 +2.4
LZH SKS 06 59 04.3
LZH *e*S S 06 59 30.4 -4.9
LZH XS sS 06 59 38.0 -2.8
LZH AMB AMB
comp=Z,31nm,1.4s,mb5.5
LZH AMB AMB
comp=Z,189nm,8.8s
LZH LR LR
comp=N,796nm,17.8s
LZH LR LR
comp=Z,998nm,19.7s,MS5.3
BJI Beijing 92.60 24 P P 06 48 35.1 -3.8
BJI PP PP 06 52 17.8 -1.5
BJI S S 06 59 34.3 -9.0
BJI AMB AMB
comp=Z,2.0nm,0.7s,mb4.7
BJI AMB AMB
comp=Z,154nm,4.1s
BJI LR LR
comp=N,346nm,14.9s,MS5.0
BJI LR LR
comp=E,186nm,12.8s,MS5.0
BJI LR LR
comp=Z,191nm,22.1s
XAN Xi'an 95.52 32 P P 06 48 50.4 -2.0
XAN AP pP 06 48 58.3 +2.6
XAN XP sP 06 49 02.0 +5.1
XAN AMB AMB
comp=Z,5.0nm,1.6s,mb4.7
XAN AMB AMB
comp=Z,60nm,5.4s
CD2 Chengdu 96.08 37 eP P 06 48 54.3 -0.7
CD2 AP pP 06 48 59.0 +0.7
CD2 XP sP 06 49 02.1 +2.6
CD2 PP PP 06 52 49.1 +2.3
CD2 SKS 06 59 28.8
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.6
CD2 AMB AMB
comp=Z,60nm,6.2s
CD2 LR LR
comp=N,270nm,16.8s,MS5.0
CD2 LR LR
comp=E,290nm,14.4s,MS5.0
CD2 LR LR
comp=Z,260nm,15.6s,MS4.8
KSRS Korea Array 98.02 16 P P 06 49 01.7 -1.9
comp=Z,3.6nm,1.0s,mb4.9,baz=349,slow=5.1,SNR=6.7
KMI Kunming 100.52 41 P Pdif 06 49 14.3 -0.5
KMI AP pP 06 49 17.5
KMI PP PP 06 53 23.8 +2.9
KMI AMB AMB
comp=Z,7.0nm,0.8s
KMI LR LR
comp=N,240nm,7.5s
KMI LR LR
comp=E,187nm,12.5s
KMI LR LR
comp=Z,202nm,21.1s
GYA Guiyang 101.20 37 P Pdif 06 49 18.0 +0.1
GYA PP PP 06 53 27.6 +1.6
GYA PPP 06 55 27.3
GYA LR LR
comp=N,940nm,22.2s,MS5.4
GYA LR LR
comp=E,800nm,23.3s,MS5.4
GYA LR LR
comp=Z,700nm,22.8s,MS5.1
MAW Mawson 130.45 150 PKP PKPdf 06 54 36.2 -0.5
comp=Z,9.8nm,1.0s,baz=293,slow=3.6,SNR=19
MAW Mawson 130.45 150 ePKIKP PKPdf 06 54 35.8 -0.8
SBA Scott Base 144.04 187 ePKIKP PKPdf 06 55 00.4 -1.1
SBA Scott Base 144.04 187 ePKPdf PKPdf 06 55 00.4 -1.0
PMG Port Moresby 146.71 2 ePKPbc PKPdf 06 55 07.6 -0.3
PMG Port Moresby 146.71 2 ePKPbc PKPdf 06 55 07.6 -0.3
FITZ Fitzroy Crossi 148.84 45 ePKP PKPbc 06 55 13.6 -1.6
FITZ Fitzroy Crossi 148.84 45 PKPbc PKPbc 06 55 13.2 -2.0
comp=Z,11nm,1.1s,baz=340,slow=6.8,SNR=10.0
MUN Mundaring 152.58 77 ePKP PKPbc 06 55 21.9 -1.8
WRA Warramunga Arr 154.41 31 PKP PKPdf 06 55 17.4 -2.3
comp=Z,1.6nm,1.1s,baz=342,slow=1.8,SNR=5.2
WRA PKPbc PKPbc 06 55 26.3 -1.7
comp=Z,1.4nm,0.9s,baz=341,slow=2.2,SNR=6.2
WRA PKPab PKPab 06 55 40.9 -1.2
comp=Z,8.2nm,1.1s,baz=343,slow=3.5,SNR=17
WB2 Warramunga Arr 154.41 31 ePKP PKPab 06 55 40.6 -1.5
ASAR Alice Springs 157.56 36 PKP PKPdf 06 55 23.6 -0.2
comp=Z,1.4nm,1.0s,baz=5.1,slow=0.7,SNR=7.0
ASAR PKPab PKPab 06 55 54.2 -1.4
comp=Z,4.7nm,1.0s,baz=338,slow=4.1,SNR=15
ASAR Alice Springs 157.56 36 PKIKP PKPdf 06 55 23.5 -0.2

BJI ***22*** *06:52:43.9, 166N×12673E, h34km, mB5.1, mb5.0, Ms4.6, Msz4.6*
ISCJB ***22*** *06:52:48.3± 0.2, 223N± 003× 12668E± 004, h33km, mb5.1/86, MS4.2/14, Error ellipse: s-maj=6.0km s-min=3.9km az=163.7*
MOS ***22*** *06:52:48.3± 1.0, 229N× 12670E, h33km, mb5.3/31, Error ellipse: s-maj=14.0km s-min=6.3km az=112.8*
NEIC ***22*** *06:52:50.3± 0.2, 226N× 12677E, mb5.0/28, Error ellipse: s-maj=7.3km s-min=4.4km az=71.0*
IDC ***22*** *06:52:51.2± 1.7, 222N× 12668E, h42km± 14km, mb4.5/16, mb1 4.6/18, mb1mx4.6/20, mbtmp4.5/18, ML4.6/2, MS3.9/4, Ms1 4.0/4, ms1mx3.4/25, Error ellipse: s-maj=20.9km s-min=8.5km az=79.0*
DJA ***22*** *06:52:54, 243N× 12690E, h52km, Mw5.2/5*
ISC 22 06:52:50.2± 0.2, 224N± 003× 12672E± 004, h35km, h35km± 1.1km; pP-P, n176, σ1 06/179, mb5.1/86, MS4.2/14, 6C-9D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**2.04**	**247**	P	**Pn**	**06 53 26.1**	**+4.0**
	0.0nm,0.0s						
LBMI	**Labuha**	**2.97**	**165**	P	**Pn**	**06 53 38.4**	**+3.5**
	0.0nm,0.0s						
DAV	**Davao City (W)**	**4.93**	**347**	P	**Pn**	**06 54 03.9**	**+2.1**
	70nm,0.3s,baz=39,slow=14,SNR=2.5						
DAV	**Davao City (W)**	**4.93**	**347**	P	**Pn**	**06 54 03.9**	**+2.1**
SWI	**Sorong**	**5.49**	**124**	P	**Pn**	**06 54 12.5**	**+3.0**
	0.0nm,0.0s						
AAI	**Ambon**	**6.07**	**166**	P	**Pn**	**06 54 24.1**	**+6.5**
	0.0nm,0.0s						
PCI	**Palu**	**7.56**	**246**	P	**Pn**	**06 54 45.7**	**+7.7**
	0.0nm,0.0s						
MYLDM	**Lahad Datu**	**8.71**	**290**	⇓P	**Pn**	**06 55 02.4**	**+8.6**
TSM	**Tawau**	**9.07**	**283**	⇑P	**Pn**	**06 55 03.7**	**+5.0**
KAPI	**Kappang**	**10.02**	**224**	P	**Pn**	**06 55 12.6**	**+0.8**
	1.4nm,0.3s,baz=194,slow=17,SNR=2.7						
KAPI				S	**Sn**	**06 57 03.5**	**+0.3**
	0.6nm,0.3s,baz=158,slow=16,SNR=2.2						
KAPI	**Kappang**	**10.02**	**224**	*e*Pn	**Pn**	**06 55 13.7**	**+1.9**
KAPI				*e*Sn	**Sn**	**06 57 03.8**	**+0.7**
SDKM	**Sandakan**	**10.09**	**290**	⇓P	**Pn**	**06 55 17.4**	**+4.7**
KKM	**Kota Kinabalu**	**11.14**	**290**	⇓P	**Pn**	**06 55 33.1**	**+6.0**
KKM	**Kota Kinabalu**	**11.14**	**290**	*e*Pn	**Pn**	**06 55 28.0**	**+0.9**
SBUM	**Sibu**	**14.49**	**271**	⇓P	**Pn**	**06 56 20.6**	**+7.7**
STKI	**Sintang**	**15.39**	**262**	P	**Pn**	**06 56 29.2**	**+4.2**
	0.0nm,0.0s						
KSM	**Kuching**	**16.42**	**268**	*e*Pn	**Pn**	**06 56 39.3**	**+1.1**
SJI	**Sawahan**	**17.91**	**236**	P	**Pn**	**06 57 01.4**	**+4.6**
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**19.70**	**255**	P	**Pn**	**06 57 18.7**	**+0.3**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**20.25**	**183**	*e*P	**P**	**06 57 23.4**	**+0.8**
FITZ				*e*S	**S**	**07 01 01.5**	**-6.5**
FITZ	**Fitzroy Crossi**	**20.25**	**183**	P	**P**	**06 57 23.5**	**+0.9**
	6.4nm,0.5s,baz=13,slow=13,SNR=43						
GUMO	**Guam**	**21.19**	**57**	P	**P**	**06 57 25.6**	**-7.3**
YHNB	**Yeheng**	**22.89**	**347**	*e*P	**P**	**06 57 49.4**	**-1.5**
	286nm,1.8s,mb5.4						
COEN	**Coen**	**22.92**	**135**	*e*P	**P**	**06 57 51.0**	**-0.3**
	6.4nm,0.7s,mb4.2						
WRAB	**Tennant Creek**	**23.28**	**162**	P	**P**	**06 57 55.3**	**+0.3**
	306nm,0.7s,mb5.8,SNR=19						
WRAB	**Tennant Creek**	**23.28**	**162**	⇑*e*P	**P**	**06 57 53.9**	**-1.1**
WRAB	**Tennant Creek**	**23.28**	**162**	*e*P	**P**	**06 57 54.2**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,44nm,1.0s,mb4.8						
WRAB	**Tennant Creek**	**23.28**	**162**	*e*P	**P**	**06 57 54.1**	**-0.9**
	comp=Z,44nm,1.0s,mb4.8						
WRA	**Warramunga Arr**	**23.28**	**162**	P	**P**	**06 57 53.9**	**-1.2**
	comp=Z,16nm,0.4s,mb4.8,baz=334,slow=11,SNR=169						
WRA				S	**S**	**07 02 03.7**	**-1.3**
	comp=Z,3.8nm,0.8s,baz=330,slow=21,SNR=5.8						
WB2	**Warramunga Arr**	**23.29**	**162**	*e*P	**P**	**06 57 53.9**	**-1.2**
WB2				*e*S	**S**	**07 02 00.8**	**-4.2**
PMG	**Port Moresby**	**23.42**	**120**	*e*P	**P**	**06 57 56.8**	**+0.2**
PMG				pmax	pmax		
	comp=Z,21nm,1.1s						
PMG	**Port Moresby**	**23.42**	**120**	*e*P	**P**	**06 57 56.8**	**+0.1**
	comp=Z,21nm,1.1s,mb4.5						
QIZ	**Qiongzhong**	**23.48**	**316**	P	**P**	**06 57 56.4**	**-0.7**
QIZ				XP	sP	06 58 09.3	-1.7
QIZ				S	**S**	**07 02 06.4**	**-1.9**
QIZ				XS	sS	07 02 21.1	-3.6
QIZ				AMB	AMB		
	comp=Z,29nm,1.4s,mb4.5						
MBWA	**Marble Bar**	**24.24**	**196**	*e*P	**P**	**06 58 04.2**	**+0.2**
	comp=Z,11nm,0.6s,mb4.5						
JOW	**Kunigami**	**24.49**	**3**	P	**P**	**06 58 08.2**	**+2.0**
	comp=Z,39nm,0.7s,mb4.9,baz=226,slow=12,SNR=8.4						
ASAR	**Alice Springs**	**26.68**	**165**	P	**P**	**06 58 25.4**	**-0.8**
	comp=Z,6.3nm,0.5s,mb4.4,baz=345,slow=7.2,SNR=65						
ASAR				PcP	PcP	07 01 49.5	+0.1
	comp=Z,3.1nm,0.5s,baz=342,slow=1.9,SNR=9.5						
ASAR				S	**S**	**07 03 01.8**	**+2.5**
	comp=Z,0.8nm,0.8s,baz=344,slow=20,SNR=3.8						
SSE	**Sheshan**	**29.17**	**350**	P	**P**	**06 58 50.8**	**+2.5**
SSE				AMB	AMB		
	comp=Z,29nm,0.9s,mb5.0						
SSE				AMB	AMB		
	comp=Z,127nm,3.9s						
CTA	**Charters Tower**	**29.32**	**140**	*e*P	**P**	**06 58 50.5**	**+0.7**
CTA	**Charters Tower**	**29.32**	**140**	P	**P**	**06 58 50.6**	**+0.8**
	comp=Z,3.6nm,0.6s,mb4.3,baz=323,slow=11,SNR=4.8						
CTA				PcP	PcP	07 01 56.9	+0.9
	comp=Z,3.8nm,0.8s,baz=300,slow=3.1,SNR=3.5						
CTAO	**Charters Tower**	**29.32**	**140**	*e*P	**P**	**06 58 49.4**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
CTAO	**Charters Tower**	**29.32**	**140**	*e*P	**P**	**06 58 49.4**	**-0.4**
	comp=Z,10.0nm,0.8s,mb4.6						
NANT	**Nan**	**30.34**	**305**	⇑P	**P**	**06 58 57.0**	**-1.8**
	comp=Z,406nm,0.7s,mb6.3						
WHN	**Wuhan**	**30.49**	**339**	P	**P**	**06 59 01.0**	**+1.0**
WHN				LR	LR		
	comp=Z,1µm,34.3s,MS4.2						
NJ2	**Nanjing**	**30.56**	**347**	*e*P	**P**	**06 59 03.1**	**+2.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GYA	**Guiyang**	**30.83**	**323**	P	**P**	**06 59 03.8**	**+0.7**
GYA				AP	pP	06 59 12.8	-0.4

GYA XP sP 06 59 17.3 -0.1
GYA PP PP 07 00 05.4 -7.7
GYA PCP PcP 07 02 00.3 +0.5
GYA S **S** **07 03 59.5 -5.1**
GYA XS sS 07 04 20.8 -0.4
GYA SCP ScP 07 05 38.9 -1.2
GYA SS SS 07 05 50.4 -27
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
GYA AMB AMB
comp=Z,120nm,4.5s
GYA LR LR
comp=N,820nm,13.1s,MS4.7
GYA LR LR
comp=E,690nm,13.3s,MS4.7
GYA LR LR
comp=Z,840nm,13.6s,MS4.6
CMAR Chiang Mai Arr 31.64 302 P **P** **06 59 10.5 +0.2**
comp=Z,10.0nm,0.9s,mb4.7,baz=117,slow=7.1,SNR=41
CMAR LR LR 07 12 13.1
comp=Z,98nm,21.4s,MS3.5,baz=317,slow=37
CMAR Chiang Mai Arr 31.64 302 *i* P **P** **06 59 11.1 +0.8**
CMAR pmax pmax
comp=Z,10.0nm,0.9s
CHG Chiang Mai 31.80 303 PG **P** **06 59 11.9 +0.2**
CHTO Chiang Mai 31.80 303 *eP* **P** **06 59 11.8 +0.1**
CHTO pmax pmax
comp=Z,23nm,0.6s,mb5.2
CHTO Chiang Mai 31.80 303 *eP* **P** **06 59 11.8 +0.1**
comp=Z,23nm,0.6s,mb5.2
KMI Kunming 32.43 317 P **P** **06 59 18.6 +1.4**
KMI AP pP 06 59 31.4 +4.1
KMI XP sP 06 59 34.1 +2.6
KMI PP PP 07 00 29.1 -1.8
KMI PPP 07 00 45.5
KMI PCP PcP 07 02 05.3 +1.2
KMI S **S** **07 04 32.0 +2.4**
KMI XS sS 07 04 49.1 +2.8
KMI SCP ScP 07 05 46.1 +0.6
KMI PCS PcS 07 05 50.1 +0.8
KMI SS SS 07 06 29.5 -20
KMI SSS 07 06 53.8
KMI SCS ScS 07 09 44.0 -0.9
KMI AMB AMB
comp=Z,23nm,1.1s,mb4.9
KMI AMB AMB
comp=Z,162nm,5.9s
KMI LR LR
comp=N,214nm,9.5s
KMI LR LR
comp=E,195nm,8.3s
FORT Forrest 32.86 178 *eP* **P** **06 59 21.4 +0.5**
KLBR Kellerberrin 34.71 194 *eP* **P** **06 59 38.0 +1.1**
KSRS Korea Array 35.06 2 P **P** **06 59 41.1 +1.3**
comp=E,9.2nm,0.4s,mb5.0,baz=177,slow=10.0,SNR=44
HNR Honiara 35.07 110 *eP* **P** **06 59 40.1 -0.2**
HNR pmax pmax
comp=Z,313nm,1.0s,mb6.2
HNR Honiara 35.07 110 *eP* **P** **06 59 40.1 -0.3**
comp=Z,313nm,1.0s,mb6.2
MUN Mundaring 35.47 196 *eP* **P** **06 59 45.4 +2.0**
XAN Xi'an 35.74 334 P **P** **06 59 44.8 -1.0**
XAN AP pP 06 59 53.3 -2.6
XAN XP sP 06 59 57.4 -2.7
XAN AMB AMB
comp=Z,11nm,0.7s,mb4.9
XAN AMB AMB
comp=Z,22nm,4.5s
XAN LR LR
comp=N,149nm,19.9s,MS3.9
XAN LR LR
comp=E,157nm,17.5s,MS3.9
MAJO Matsushiro 35.74 16 *eP* **P** **06 59 45.3 -0.5**
MAJO pmax pmax
comp=Z,16nm,0.8s,mb5.0
MAJO Matsushiro 35.74 16 *eP* **P** **06 59 45.3 -0.4**
comp=Z,16nm,0.8s,mb5.0
MAT Matsushiro 35.74 16 P **P** **06 59 45.8 0.0**
MJAR Matsushiro Arr 35.74 16 P **P** **06 59 45.2 -0.5**
comp=Z,12nm,1.1s,mb4.8,baz=195,slow=9.7,SNR=15
MJAR Matsushiro Arr 35.74 16 P **P** **06 59 45.2 -0.5**
CD2 Chengdu 35.84 325 P **P** **06 59 46.3 -0.4**
CD2 AP pP 06 59 55.9 -0.9
CD2 XP sP 06 59 59.8 -1.3
CD2 PP PP 07 01 08.4 -0.2
CD2 S **S** **07 05 22.0 -0.2**
CD2 XS sS 07 05 38.0 -0.9
CD2 SS SS 07 07 54.4 -4.9
CD2 AMB AMB
comp=Z,30nm,1.1s,mb5.1
CD2 AMB AMB
comp=Z,80nm,5.8s
CD2 LR LR
comp=N,290nm,14.4s
CD2 LR LR
comp=Z,240nm,16.8s,MS4.0
STKA Stephens Creek 36.75 159 *eP* **P** **06 59 54.2 -0.3**
STKA Stephens Creek 36.75 159 P **P** **06 59 54.2 -0.3**
comp=Z,23nm,0.5s,mb5.2,baz=336,slow=8.2,SNR=34
BJT Baijiatuau 38.80 347 *eP* **P** **07 00 11.8 +0.1**
BJT pmax pmax
comp=Z,30nm,0.8s
BJT Baijiatuau 38.80 347 *eP* **P** **07 00 11.8 +0.1**
comp=Z,30nm,0.8s,mb5.1
BJI Beijing 38.82 347 P **P** **07 00 11.9 +0.1**
BJI S **S** **07 06 08.8 +1.6**
BJI AMB AMB
comp=Z,41nm,1.1s,mb5.1
BJI LR LR
comp=N,185nm,12.4s
BJI LR LR
comp=E,129nm,20.3s
LZH Lanzhou 39.78 331 ⇑P **P** **07 00 19.8 -0.1**
LZH AP pP 07 00 29.8 -0.3
LZH XP sP 07 00 33.8 -0.5
LZH *eS* **S** **07 06 25.6 +3.9**
LZH XS sS 07 06 38.5 -0.1
LZH *e*SS SS 07 09 13.6 -5.0
LZH AMB AMB
comp=Z,37nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,109nm,4.2s
LZH LR LR
comp=N,524nm,14.0s
LZH LR LR
comp=Z,812nm,16.5s,MS4.7
ARMA Armidale 40.24 146 *eP* **P** **07 00 24.4 +0.6**
HHC Hu-ho-hao-te 40.80 342 *eP* **P** **07 00 28.1 -0.2**
HHC AP pP 07 00 38.4 -0.1
HHC XP sP 07 00 42.8 +0.1
HHC PP PP 07 02 06.4 +3.6
HHC PCP PcP 07 02 29.4 +0.5
HHC SCP ScP 07 06 15.0 -1.1
HHC PCS PcS 07 06 18.1 -1.6
HHC S **S** **07 06 37.8 +0.9**
HHC XS sS 07 06 54.3 +0.5
HHC SCS ScS 07 10 28.3 -2.5
HHC AMB AMB
comp=Z,15nm,0.6s,mb4.8
HHC AMB AMB
comp=Z,145nm,6.2s
HHC LR LR
comp=N,193nm,12.4s,MS4.4
HHC LR LR
comp=E,303nm,13.4s,MS4.4
HHC LR LR
comp=Z,251nm,13.0s,MS4.3
VLA Vladivostok 40.96 6 *eP* **P** **07 00 29.3 -0.2**
VLA pmax pmax
comp=Z,71nm,1.1s,mb5.2
CN2 Changchun 41.40 359 *eP* **P** **07 00 36.4 +3.3**
CN2 *e*XP sP 07 00 50.3 +2.7
CN2 *eS* **S** **07 06 50.3 +4.7**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,280nm,20.0s,MS4.2
CN2 LR LR
comp=E,170nm,20.0s,MS4.2
CN2 LR LR
comp=Z,250nm,19.0s,MS4.1
MDJ Mudanjiang 42.27 3 P **P** **07 00 39.7 -0.6**
comp=Z,32nm,1.0s,mb4.9

CAN Canberra 42.80 153 *eP* **P** **07 00 45.0 +0.3**
CNB Canberra Magne 42.96 152 *eP* **P** **07 00 51.1 +5.1**
TOO Toolangi 43.27 158 *eP* **P** **07 00 45.7 -2.8**
LSA Lhasa 43.42 313 *eP* **P** **07 00 50.9 +1.1**
LSA pmax pmax
comp=Z,13nm,0.6s,mb4.8
LSA Lhasa 43.42 313 *eP* **P** **07 00 50.9 +1.1**
comp=Z,12nm,0.6s,mb4.8
GTA Gaotai 44.37 330 *eP* **P** **07 00 57.5 +0.2**
GTA AP pP 07 01 07.4 -0.2
GTA XP sP 07 01 10.4 -1.4
GTA PCP PcP 07 02 42.8 +1.9
GTA SCP ScP 07 06 30.3 -0.2
GTA S **S** **07 07 28.1 -1.3**
GTA AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
GTA AMB AMB
comp=Z,91nm,5.1s
GTA LR LR
comp=N,166nm,17.7s,MS4.2
GTA LR LR
comp=E,179nm,15.9s,MS4.2
GTA LR LR
comp=Z,307nm,30.9s
TAPN Taplejung 44.90 308 *eP* **P** **07 01 01.3 -0.4**
ODAN Odare 44.93 307 *eP* **P** **07 01 02.1 +0.1**
RAMN Ramite 45.61 306 *eP* **P** **07 01 06.2 -1.2**
comp=Z,79nm,0.8s,mb5.7
JIRN Jiri 46.24 307 *eP* **P** **07 01 12.4 0.0**
comp=Z,15nm,0.3s,mb5.5
GUN Gumba 46.60 307 *eP* **P** **07 01 14.8 -0.4**
comp=Z,94nm,0.6s,mb5.9
PKIN Phulchoki 46.84 307 *eP* **P** **07 01 15.9 -1.2**
comp=Z,8.9nm,0.3s,mb5.1
KLR Kul'dur 47.01 5 *eP* **P** **07 01 15.0 -3.0**
KLR pmax pmax
comp=Z,57nm,1.4s,mb5.3
KKN Kakani 47.03 307 *eP* **P** **07 01 17.9 -0.6**
comp=Z,29nm,0.6s,mb5.4
DMN Daman 47.09 306 *eP* **P** **07 01 18.5 -0.5**
comp=Z,51nm,0.9s,mb5.5
HIA Hailar 47.23 354 *eP* **P** **07 01 20.8 +1.1**
HIA pmax pmax
comp=Z,6.0nm,0.3s
HIA Hailar 47.23 354 *eP* **P** **07 01 20.8 +1.1**
comp=Z,6.4nm,0.3s,mb5.0
GKN Gorkha 47.63 307 *eP* **P** **07 01 22.3 -0.9**
comp=Z,19nm,0.4s,mb5.5
KOLN Koldanda 48.37 306 *eP* **P** **07 01 28.5 -0.4**
comp=Z,61nm,0.5s,mb5.9
DANN Dangsing 48.48 307 *eP* **P** **07 01 29.2 -0.6**
comp=Z,81nm,0.6s,mb5.9
ULN Ulaanbaatar 48.52 342 *eP* **P** **07 01 30.0 +0.3**
ULN *e**PP pP 07 01 39.8 -0.4
ULN pmax pmax
comp=Z,21nm,1.2s,mb5.0
ULN Ulaanbaatar 48.52 342 *eP* **P** **07 01 30.0 +0.3**
comp=Z,21nm,1.2s,mb5.0
ULN *e*pP pP 07 01 39.8 -0.4
SONM Songino Array 48.70 342 P **P** **07 01 31.4 +0.3**
comp=Z,5.7nm,0.6s,mb4.8,baz=159,slow=8.3,SNR=31
SONM PcP PcP 07 02 55.7 -0.2
comp=Z,1.7nm,0.6s,baz=190,slow=3.5,SNR=3.1
SONM ScP ScP 07 06 47.6 -0.7
comp=Z,1.1nm,0.8s,baz=168,slow=2.7,SNR=4.1
SONM Songino Array 48.70 342 P **P** **07 01 31.4 +0.3**
SONM 07 02 55.7
HYB Hyderabad 49.62 291 *i* P **P** **07 01 40.0 +1.3**
HYB Hyderabad 49.62 291 *eP* **P** **07 01 39.0 +0.3**
ZAK Zakamensk 51.92 341 *eP* **P** **07 01 53.4 -2.0**
ZAK pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
TLY Talaya 52.93 342 P **P** **07 02 04.3 +1.4**
comp=Z,108nm,0.9s,mb5.8,SNR=6.2
TLY Talaya 52.93 342 *eP* **P** **07 02 03.6 +0.7**
TLY pmax pmax
comp=Z,19nm,0.9s,mb5.0
TLY Talaya 52.93 342 *eP* **P** **07 02 04.0 +1.1**
comp=Z,17nm,0.9s,mb5.0
WMQ Urumqi 53.93 326 P **P** **07 02 11.3 +0.9**
WMQ AP pP 07 02 21.0 0.0
WMQ XP sP 07 02 25.5 +0.4
WMQ PCP PcP 07 03 16.0 +0.5
WMQ PP PP 07 04 14.0 +2.0
WMQ S **S** **07 09 43.0 -0.6**
WMQ XS sS 07 10 00.0 -1.0
WMQ SCS ScS 07 11 54.0 -3.2
WMQ AMB AMB
comp=Z,12nm,0.9s,mb4.8
WMQ AMB AMB
comp=Z,175nm,5.1s
WMQ LR LR
comp=N,682nm,17.5s,MS4.9
WMQ LR LR
comp=E,598nm,16.4s,MS4.9
WMQ LR LR
comp=Z,375nm,16.6s,MS4.5
CLNS Chul'man 54.45 359 *eP* **P** **07 02 15.2 +1.3**
CLNS pmax pmax
comp=Z,20nm,0.9s,mb5.0
CLNS pmax pmax
comp=E,5.0nm,0.8s
CLNS pmax pmax
comp=N,6.0nm,0.7s
HVS Khovu-Aksy 56.08 336⇓ *eP* **P** **07 02 26.3 +0.5**
HVS pmax pmax
comp=Z,79nm,1.3s,mb5.6
BOD Bodaibo 56.32 352 *eP* **P** **07 02 28.1 +0.7**
BOD pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
PETK Petropavlovsk- 56.80 22 P **P** **07 02 31.6 +0.7**
comp=Z,4.1nm,0.7s,mb4.6,baz=197,slow=4.6,SNR=5.0
MKAR Makanchi Array 58.77 326 P **P** **07 02 44.5 -0.3**
comp=Z,5.7nm,0.6s,mb4.8,baz=123,slow=8.5,SNR=43
MKAR ScP ScP 07 07 31.2 -1.2
comp=Z,1.9nm,0.9s,baz=132,slow=5.4,SNR=5.9
MKAR Makanchi Array 58.77 326 P **P** **07 02 44.5 -0.3**
MKAR ScP ScP 07 07 31.2 -1.2
YAK Yakutsk 59.68 2 *eP* **P** **07 02 50.3 -0.6**
YAK pmax pmax
comp=Z,65nm,0.9s,mb5.7
YAK pmax pmax
comp=N,20nm,1.1s
SNZO South Karori 61.43 140 *eP* **P** **07 03 01.8 -1.4**
comp=N,13nm,0.9s,mb5.0
RAO Raoul Island 61.48 125 LR LR 07 25 36.4
comp=N,168nm,19.6s,MS4.2,baz=333,slow=32
ZALV Zalesovo Beam 61.90 333 P **P** **07 03 05.2 -0.9**
comp=N,3.0nm,0.4s,mb4.8,baz=130,slow=6.3,SNR=17
EKS2 Erkin-Say 61.94 318 *eP* **P** **07 03 07.0 +0.4**
comp=N,12nm,1.0s,mb5.0
KBL Kabul 62.42 308 *eP* **P** **07 03 09.7 -0.3**
KBL pmax pmax
comp=Z,12nm,0.5s,mb5.3
KBL Kabul 62.42 308 *eP* **P** **07 03 09.7 -0.3**
comp=Z,12nm,0.5s,mb5.3
KURK Kurchatov 62.98 328 P **P** **07 03 13.3 -0.1**
comp=Z,281nm,0.6s,SNR=27
KURK Kurchatov 62.98 328 *d* iP **P** **07 03 12.9 -0.5**
KURK pmax pmax
comp=Z,23nm,0.7s,mb5.4
KURK Kurchatov 62.98 328 *eP* **P** **07 03 12.8 -0.6**
comp=Z,24nm,0.5s,mb5.6
NVS Novosibirsk 63.19 334 *eP* **P** **07 03 13.0 -1.7**
NVS pmax pmax
comp=Z,18nm,1.1s,mb5.1
NVS pmax pmax
comp=N,12nm,1.4s
SEY Seymchan 63.47 13⇓ *eP* **P** **07 03 18.1 +1.7**
BRVK Borovoye 68.63 327 P **P** **07 03 49.4 -0.3**
comp=N,178nm,0.8s,mb6.0,SNR=9.8
BRVK Borovoye 68.63 327 *eP* **P** **07 03 49.8 +0.1**
BRVK pmax pmax
comp=Z,13nm,0.6s,mb5.0
BRVK Borovoye 68.63 327 *eP* **P** **07 03 49.8 +0.1**
comp=Z,13nm,0.6s,mb5.0
TIXI Tiksi 69.32 1 *i* P **P** **07 03 53.5 -0.2**
TIXI pmax pmax
comp=Z,20nm,1.3s,mb4.9
AKTO Aktyubinsk 74.81 322 LR LR 07 40 23.4
comp=Z,85nm,19.1s,MS4.1,baz=308,slow=38
SVE Sverdlovsk 75.22 329⇓ *eP* **P** **07 04 29.5 +0.3**
SVE pmax pmax
comp=Z,81nm,1.1s,mb5.6
ARU Arti 76.18 328 P **P** **07 04 34.4 -0.3**
comp=Z,250nm,0.6s,mb6.3,SNR=9.7

ARU Arti 76.18 328 *c iP* **P** **07 04 34.5 -0.2**
ARU *e* pP 07 04 45.8 +0.2
ARU *e* 07 07 22.1
ARU *e*S S 07 14 16.6 +0.4
ARU *e*SS SS 07 19 04.8 -5.4
ARU pmax pmax
comp=Z,48nm,1.2s,mb5.3
ARU Arti 76.18 328 *eP* **P** **07 04 34.4 -0.4**
comp=Z,61nm,1.2s,mb5.4
RDF Al-Radifah 79.44 299 *eP* **P** **07 04 52.5 -1.0**
baz=299
RDF AMb AMB 07 05 09.1
comp=Z,54nm,1.7s,mb5.2,baz=299
MIB Mutribah 79.67 300 *eP* **P** **07 04 53.2 -1.5**
baz=300
MIB AMb AMB 07 04 57.0
comp=Z,36nm,0.5s,mb5.6,baz=300
NAY Al-Naaiem 79.73 299 *eP* **P** **07 04 53.9 -1.1**
baz=299
NAY AMb AMB 07 05 01.9
comp=Z,17nm,1.3s,mb4.8,baz=299
RST Umm Al-Ruwaisa 79.95 299 *eP* **P** **07 04 55.1 -1.1**
baz=299
RST AMb AMB 07 04 58.2
comp=Z,53nm,0.6s,mb5.7,baz=299
TTA Tatalina 82.22 27 *eP* **P** **07 05 08.5 +0.9**
TTA pmax pmax
comp=Z,17nm,1.0s,mb4.9
TTA Tatalina 82.22 27 *eP* **P** **07 05 08.5 +0.9**
comp=Z,17nm,1.0s,mb4.9
MAW Mawson 82.37 200 *eP* **P** **07 05 09.0 +0.8**
MAW Mawson 82.37 200 P **P** **07 05 09.2 +1.0**
comp=Z,6.1nm,0.6s,mb4.7,baz=69,slow=5.6,SNR=47
GNI Garni 82.42 310 *i* P **P** **07 05 11.7 +2.6**
GNI pmax pmax
comp=Z,33nm,1.9s
IMA2 Indian Mountai 83.73 24 *eP* **P** **07 05 16.4 +1.1**
PPLA Purkeypile 83.95 27 *eP* **P** **07 05 16.3 -0.2**
comp=Z,3.9nm,0.6s,mb4.7
KIV Kislovodsk 84.15 314⇑ *eP* **P** **07 05 18.9 +0.9**
KIV *e* pP 07 05 29.0 0.0
KIV *e* 07 08 32.2
KIV pmax pmax
comp=Z,24nm,1.5s,mb5.1
BPAW Bear Paw Mtn. 84.62 26 *eP* **P** **07 05 20.9 +1.0**
comp=Z,4.7nm,1.0s,mb4.6
SLKM Skilak Lake 84.63 30 *eP* **P** **07 05 19.8 -0.2**
PPT Papeete 84.67 108 *e*LR LR 07 31 58.2
comp=Z,238nm,24.8s
RC01 Rabbit Creek A 84.92 29 *eP* **P** **07 05 21.0 -0.4**
comp=Z,14nm,0.6s,mb5.3
TBI Tubuai 85.20 114 *e*LR LR 07 32 07.0
comp=Z,140nm,36.0s
PMR Palmer 85.25 29 *eP* **P** **07 05 22.7 -0.4**
PMR pmax pmax
comp=Z,19nm,1.0s,mb5.2
PMR Palmer 85.25 29 *eP* **P** **07 05 22.7 -0.4**
comp=Z,19nm,1.0s,mb5.2
COLD Coldfoot 85.26 23 *eP* **P** **07 05 24.2 +1.2**
comp=Z,9.4nm,0.9s,mb4.9
SOC Sochi 86.29 313 *eP* **P** **07 05 27.7 -1.0**
SOC pmax pmax
comp=Z,18nm,0.8s,mb5.3
VSR Storozhevoye 86.73 321 *eP* **P** **07 05 30.3 -0.3**
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
VSR pmax pmax
comp=N,3.0nm,0.6s
MALT Malatya 87.28 308 *eP* **P** **07 05 32.2 -1.4**
MALT *e**PP pP 07 05 43.6 -1.1
MALT pmax pmax
comp=Z,20nm,1.3s,mb5.2
MALT Malatya 87.28 308 *eP* **P** **07 05 32.2 -1.5**
comp=Z,20nm,1.3s,mb5.2
MALT *e*pP pP 07 05 43.6 -1.1
MOS Moscow 87.65 326 *eP* **P** **07 05 34.9 -0.1**
ANN Anapa 87.93 315 *eP* **P** **07 05 35.1 -1.5**
ANN *e**PP pP 07 05 44.2 -3.5
ANN *e*S S 07 15 59.7 -18
ANN *e*SS SS 07 22 01.7 -3.6
ANN pmax pmax
comp=Z,53nm,1.1s,mb5.7
OBN Obninsk 88.26 325⇓ *eP* **P** **07 05 37.7 -0.2**
OBN *e*PS 07 17 26.8
OBN pmax pmax
comp=Z,12nm,0.7s,mb5.2
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.3
DAWY Dawson 89.71 26 *eP* **P** **07 05 44.1 -0.4**
JOF Joensuu 90.49 333 *ep* **P** **07 05 46.5 -1.7**
comp=Z,4.1nm,0.5s,mb5.0
ARCES ARCESS Array B 91.83 340 P **P** **07 05 53.4 -0.9**
comp=Z,5.0nm,0.8s,mb4.9,baz=72,slow=7.8,SNR=12
ARCES LR LR 07 48 42.3
comp=Z,64nm,18.8s,MS4.1,baz=206,slow=36
ARCES ARCESS Array B 91.83 340 P **P** **07 05 53.4 -0.9**
ARCES LR LR 07 48 42.3
KAF Kangasniemi 92.90 332 *ep* **P** **07 05 57.5 -1.9**
comp=Z,3.6nm,0.6s,mb5.0
KAF Kangasniemi 92.90 332 *eP* **P** **07 05 57.5 -1.9**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb5.0
AKASG Malin Array Be 93.03 321 P **P** **07 05 59.5 -0.8**
comp=Z,1.5nm,0.5s,mb4.7,baz=71,slow=3.6,SNR=7.0
SCHQ Schefferville 122.03 9 PKP PKPdf 07 11 41.4 +0.4
comp=Z,2.6nm,0.4s,baz=98,slow=1.7,SNR=9.8
TXAR Lajitas Array 122.50 53 PKP PKPdf 07 11 43.3 +0.6
comp=Z,0.5nm,0.7s,baz=149,slow=0.5,SNR=7.2
TORD Torodi Ar. Bea 123.36 287 PKP PKPdf 07 11 44.3 -0.4
comp=Z,1.0nm,0.5s,baz=61,slow=1.7,SNR=14
TORD PKKPbc PKKPbc 07 21 33.4 -0.6
comp=Z,0.5nm,0.8s,baz=276,slow=3.5,SNR=5.5
DBIC Dimbokro 130.86 281 PKP PKPdf 07 11 59.5 +0.4
comp=Z,1.3nm,0.5s,baz=89,slow=21,SNR=5.2
PLCA Paso Flores 138.62 160 PKhKP 07 12 05.3
comp=Z,2.3nm,1.2s,baz=288,slow=3.2,SNR=2.5
PLCA PKP PKPdf 07 12 14.7 +1.9
comp=Z,1.7nm,0.7s,baz=217,slow=2.4,SNR=4.3
PLCA Paso Flores 138.62 160 PKP PKPdf 07 12 14.7 +1.9
CPUP Villa Florida 155.74 171 PKP PKPdf 07 12 43.4 +2.0
comp=Z,0.3nm,0.4s,baz=112,slow=5.4,SNR=2.9
CPUP Villa Florida 155.74 171 ePKPdf PKPdf 07 12 43.7 +2.4
LPAZ La Paz 159.79 135 PKP PKPdf 07 12 47.5 +0.9
comp=Z,1.0nm,0.8s,baz=65,slow=6.4,SNR=5.0

IDC 22 07:35:01.1±1.6, 245N×12830E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/16, mbtmp4.0/4, Error ellipse: s-maj=123.8km s-min=22.8km az=67.0, Halmahera

Code	Station Name	Phase	Δ°	AZ°	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.03 165**			P	P	07 40 08.7	+0.7
	4.1nm,0.4s,baz=344,slow=10,SNR=104							
WB2	**Warramunga Arr**	**23.04 165**			*eP*	P	07 40 08.8	+0.7
ASAR	**Alice Springs**	**26.53 168**			P	P	07 40 40.9	+0.2
	0.9nm,0.5s,baz=355,slow=8.4,SNR=31							
ASAR					PcP	PcP	07 44 03.8	-1.9
	0.4nm,0.3s,baz=359,slow=2.3,SNR=8.6							
STKA	**Stephens Creek**	**36.40 161**			*eP*	P	07 42 07.1	-0.3
STKA	**Stephens Creek**	**36.40 161**			P	P	07 42 07.2	-0.2
	1.5nm,0.4s,baz=338,slow=9.4,SNR=7.8							
MKAR	**Makanchi Array**	**59.49 325**			P	P	07 45 07.0	+0.9
	0.4nm,0.5s,baz=127,slow=9.2,SNR=3.9							

NIED ***22*** *08:00:00.2480N×125.40E, h41km, Mw5.0 Best double couple: M0 3.31000×10^16 NP1:φ=43.00000°, δ=65.00000°, λ=83.00000°. NP2:φ=239.00000°, δ=26.00000°, λ=104.00000°.*
IDC ***22*** *08:00:11.0±0.4, 2491N×12536E, h0km, mb4.9/28, mb1 5.0/28, mb1mx5.0/30, mbtmp4.9/28, MS4.2/12, Ms1 4.2/12, ms1mx4.0/36, Error ellipse: s-maj=15.2km s-min=11.1km az=71.0*
SZGRF ***22*** *08:00:14.0, 2408N×124.75E, h33km, mb5.7, MS5.0, Southwestern Ryukyu Islands, Japan*
BJI ***22*** *08:00:14.0, 2466N×125.70E, h50km, mB4.9, mb4.9, Ms4.5, Msz4.4*
MOS ***22*** *08:00:14.8±1.0, 2494N×125.41E, h33km, mb5.6/83, MS4.8/7, Error ellipse: s-maj=9.6km s-min=4.5km az=118.2*
JMA ***22*** *08:00:17.3±0.1, 2484N×125.40E, h48km±1km, M5.1*

JMA Felt III J1.

ISCJB ***22*** *08:00:17.2◦0.3,2486N◦002×12533E◦002,h51km±2km, mb5.3/219,MS4.5/22, Error ellipse: s-maj=4.3km s-min=2.7km az=157.6*

GCMT ***22*** *08:00:18.9◦0.4,2466N◦×125 48E,h47km±1km,MW5.1/52, Moment Tensor Solution. s38,c47; s52,c72; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.42±.27; Mθθ-2.74±.19; Mϕϕ-1.67±.21; Mrθ1.07±.12; Mrϕ-2.39±.10; Mθϕ1.07±.12; Best double couple: Mo4.78300×10^16 NP1:ϕs234.00000°,δ36.00000°,λ.94.00000°. NP2: ϕs49.00000°,δ54.00000°,λ87.00000°. Principal axes: T 4.6690, Plg81.0000°, Azm308.0000°; N 0.2380, Plg2.0000°, Azm51.0000°; P -4.8970, Plg9.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***22*** *08:00:18.9◦0.3,2486N◦12527E,h54km±2km,mb5.3/119, MW4.9(NIED) Error ellipse: s-maj=3.9km s-min=3.3km az=171.0*

NEIC Felt at Hirara. Also felt at Taipei, Taiwan. Recorded [3 JMA] on Miyako-jima, [2 JMA] on Tarama-shima and [1 JMA] on Ishigaki-jima.

ORF ***22*** *08:00:38.2,2857N◦12327E,h30km,mb5.5*

ISC 22 08:00:18.4±0.3,2488N±003×12533E±002,h48km±2km, h50km±1.1km;pP-P,n667,σθ96/670,mb5.3/219,MS4.5/21, 57C-25D,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMJ	**Miyako jima 2**	**0.07**	**210**	P	**Pn**	**08 00 24.8**	**-1.1**
JMJ				S	**Sn**	**08 00 30.0**	**-1.2**
JOGS	**Gusukube**	**0.13**	**149**	P	**Pn**	**08 00 24.7**	**-1.5**
JOGS				S	**Sn**	**08 00 30.3**	**-1.3**
JTJ	**Tarama**	**0.62**	**248**	P	**Pn**	**08 00 30.6**	**-0.4**
JTJ				S	**Sn**	**08 00 40.5**	**+0.4**
JIJ	**Ishigaki jima**	**1.20**	**245**	P	**Pn**	**08 00 38.2**	**-0.5**
JIJ				S	**Sn**	**08 00 54.3**	**+0.5**
JKRS	**Kuro-shima**	**1.36**	**242**	P	**Pn**	**08 00 41.3**	**+0.3**
JKRS				*e*S	**Sn**	**08 00 58.9**	**+1.0**
IRIF	**Iriomote-Funau**	**1.55**	**250**	P	**Pn**	**08 00 43.0**	**-0.6**
HATJ	**Hateruma jima**	**1.61**	**240**	P	**Pn**	**08 00 44.2**	**-0.2**
JKE	**Kume jima 2**	**1.95**	**42**	P	**Pn**	**08 00 48.4**	**-0.7**
YOJ	**Yonaguni jima**	**2.15**	**259**	P	**Pn**	**08 00 51.4**	**-0.4**
YOJ				*e*S	**Sn**	**08 01 16.9**	**-0.4**
JAGN	**Aguni-jima**	**2.42**	**45**	P	**Pn**	**08 00 55.3**	**-0.3**
JAGN				*e*S	**Sn**	**08 01 24.1**	**+0.1**
NAH1	**Naha**	**2.51**	**58**	*e*S	**Sn**	**08 01 26.1**	**+0.1**
JJT2	**Tamagusuku 2**	**2.52**	**60**	P	**Pn**	**08 00 57.5**	**+0.6**
JIH	**Iheya**	**3.20**	**47**	P	**Pn**	**08 01 05.6**	**-0.6**
JOW	**Kunigami**	**3.29**	**53**	Pn	**Pn**	**08 01 06.5**	**-1.0**
	44nm,0.3s,baz=238,slow=9.5,SNR=105						
JOW				Sn	**Sn**	**08 01 48.8**	**+3.4**
	162nm,0.3s,baz=166,slow=18,SNR=6.6						
JOW				LR	LR	08 02 36.9	
	comp=Z,2μm,21.9s,baz=289,slow=45						
JOW	**Kunigami**	**3.29**	**53**	P	**Pn**	**08 01 06.7**	**-0.7**
NACB	**Ninganchiao**	**3.48**	**259**	*e*Pn	**Pn**	**08 01 09.5**	**-0.5**
NACB				*e*Sn	**Sn**	**08 01 56.4**	**+6.5**
TATO	**Taipei**	**3.49**	**272**	P	**Pn**	**08 01 13.0**	**+2.8**
	SNR=14						
TATO	**Taipei**	**3.49**	**272**	*e*Pn	**Pn**	**08 01 11.8**	**+1.6**
TATO				*e*Sn	**Sn**	**08 01 55.7**	**+5.5**
YHNB	**Yeheng**	**3.60**	**268**	*e*Pn	**Pn**	**08 01 13.6**	**+1.9**
YHNB				*e*Sn	**Sn**	**08 01 57.6**	**+4.6**
JTK	**Tokunoshima**	**4.35**	**47**	P	**Pn**	**08 01 20.2**	**-1.8**
JAM	**Amami Oshima**	**5.20**	**46**	*e*S	**Sn**	**08 02 27.8**	**-4.5**
JMZ	**Minamidaito 2**	**5.41**	**79**	P	**Pn**	**08 01 32.0**	**-4.5**
JMZ				*e*S	**Sn**	**08 02 28.4**	**-9.1**
QZH	**Quanzhou**	**6.12**	**272**	P	**Pn**	**08 01 47.0**	**+0.7**
JNN	**Nakanoshima**	**6.39**	**38**	P	**Pn**	**08 01 49.7**	**-0.2**
SSE	**Sheshan**	**7.20**	**330**	P	**Pn**	**08 02 02.3**	**+1.3**
SSE				XP		08 02 19.8	
SSE				S	**Sn**	**08 03 23.8**	**+2.3**
SSE				AMB	AMB		
	comp=Z,56nm,0.5s						
SSE				AMB	AMB		
	comp=Z,178nm,4.8s						
SSE				LR	LR		
	comp=Z,2μm,12.5s						
NJ2	**Nanjing**	**9.14**	**323**	*e*P	**Pn**	**08 02 29.8**	**+2.1**
NJ2				XP		08 02 47.6	
NJ2				S	**Sn**	**08 04 15.1**	**+5.9**
NJ2				AMB	AMB		
	comp=Z,50nm,0.8s						
NJ2				LR	LR		
	comp=N,640nm,18.5s						
NJ2				LR	LR		
	comp=E,1μm,15.2s						
NJ2				LR	LR		
	comp=Z,1μm,15.2s						
WHN	**Wuhan**	**11.25**	**303**	P	**Pn**	**08 02 57.8**	**+1.3**
WHN				S	**Sn**	**08 05 08.3**	**+7.5**
WHN				LR	LR		
	comp=N,2μm,15.7s						
WHN				LR	LR		
	comp=E,2μm,14.9s						
WHN				LR	LR		
	comp=Z,4μm,15.9s						
KSRS	**Korea Array**	**12.73**	**9**	Pn	**Pn**	**08 03 18.4**	**+1.7**
	comp=Z,1.1nm,0.3s,baz=190,slow=13,SNR=47						
KSRS				LR	LR	08 08 41.5	
	comp=E,816nm,18.4s,baz=186,slow=40						
JAO	**Obara**	**14.61**	**42**	P	**Pn**	**08 03 48.1**	**+5.9**
JGF	**Kuroka**	**14.89**	**41**	P	**Pn**	**08 03 51.1**	**+5.2**
JHJ	**Hachijo jima 2**	**15.07**	**54**	LR	LR	08 09 15.1	
	comp=Z,252nm,20.3s,baz=257,slow=36						
CBIJ	**Chichi jima**	**15.32**	**78**	Pn	**Pn**	**08 03 55.0**	**+3.5**
	comp=Z,4.6nm,0.3s,baz=289,slow=15,SNR=2.1						
CBIJ				LR	LR	08 08 57.6	
	comp=Z,479nm,21.4s,baz=290,slow=34						
QIZ	**Qiongzhong**	**15.50**	**251**	P	**Pn**	**08 03 58.8**	**+5.0**
QIZ				S	**S**	**08 06 42.0**	**-16**
QIZ				AMB	AMB		
	comp=Z,31nm,1.0s						
QIZ				AMB	AMB		
	comp=Z,285nm,9.5s						
QIZ				LR	LR		
	comp=E,835nm,20.5s						
QIZ				LR	LR		
	comp=Z,1μm,21.4s						
JNG	**Nsakai**	**15.88**	**41**	P	**Pn**	**08 04 02.2**	**+3.5**
MAJO	**Matsushiro**	**16.04**	**41**	*e*P	**Pn**	**08 04 03.6**	**+3.0**
MAJO				pmax	pmax		
	comp=Z,37nm,0.8s						
MAJO	**Matsushiro**	**16.04**	**41**	*e*P	**Pn**	**08 04 03.6**	**+2.9**
	comp=Z,37nm,0.8s						
MAT	**Matsushiro**	**16.04**	**41**	P	**Pn**	**08 04 03.9**	**+3.3**
MAT				S	**S**	**08 07 04.0**	**-5.1**
MJAR	**Matsushiro Arr**	**16.04**	**41**	Pn	**Pn**	**08 04 03.4**	**+2.7**
	comp=Z,3.7nm,0.3s,baz=231,slow=11,SNR=53						
JRY	**Ryogami san**	**16.11**	**43**	P	**Pn**	**08 04 06.5**	**+4.9**
JAG	**Ashikaga**	**16.72**	**43**	P	**Pn**	**08 04 10.6**	**+1.4**
JKT	**Katashina**	**16.81**	**42**	P	**Pn**	**08 04 12.1**	**+1.7**
GYA	**Guiyang**	**16.91**	**279**	P	**Pn**	**08 04 12.4**	**+0.8**
GYA				AP	pP	08 04 22.4	-1.7
GYA				PP		08 04 28.3	
GYA				PPP		08 04 35.8	
GYA				S	**S**	**08 07 23.1**	**-3.8**
GYA				SS		08 07 39.3	
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
GYA				AMB	AMB		
	comp=Z,250nm,5.4s						
GYA				LR	LR		
	comp=N,1μm,10.1s						
GYA				LR	LR		
	comp=E,1μm,12.3s						
GYA				LR	LR		
	comp=Z,1μm,13.4s						
XAN	**Xi'an**	**16.94**	**306**	P	**Pn**	**08 04 14.5**	**+2.5**
XAN				PP		08 04 25.6	
XAN				SS		08 07 41.9	
XAN				AMB	AMB		
	comp=Z,29nm,0.8s						
XAN				AMB	AMB		
	comp=Z,222nm,7.2s						
XAN				LR	LR		
	comp=N,398nm,12.6s						
XAN				LR	LR		
	comp=E,894nm,15.2s						
XAN				LR	LR		
	comp=Z,1μm,15.7s						
BJT	**Baijiatuau**	**16.95**	**335**	*e*P	**Pn**	**08 04 14.6**	**+2.6**
BJT				pmax	pmax		
	comp=Z,83nm,1.1s						
BJT	**Baijiatuau**	**16.95**	**335**	*e*P	**Pn**	**08 04 14.6**	**+2.6**
	comp=Z,83nm,1.1s						
BJI	**Beijing**	**16.96**	**335**	P	**Pn**	**08 04 13.9**	**+1.7**
BJI				S	**S**	**08 07 24.6**	**-3.3**
BJI				AMB	AMB		
	comp=Z,34nm,1.5s						
BJI				LR	LR		
	comp=N,1μm,16.9s						
BJI				LR	LR		
	comp=E,554nm,14.7s						
BJI				LR	LR		
	comp=Z,1μm,24.9s						
SNY	**Shenyang**	**16.97**	**356**	⇑P	**Pn**	**08 04 14.8**	**+2.5**
SNY				S	**S**	**08 07 23.5**	**-4.5**
SNY				AMB	AMB		
	comp=Z,148nm,0.7s						
SNY				LR	LR		
	comp=N,873nm,22.7s						
SNY				LR	LR		
	comp=E,698nm,16.8s						
SNY				LR	LR		
	comp=Z,1μm,19.4s						
JHO	**Hitachi**	**17.53**	**45**	P	**Pn**	**08 04 17.6**	**-1.7**
CN2	**Changchun**	**18.88**	**0**	*e*P	**Pn**	**08 04 35.0**	**-0.6**
CN2				*e*AP	pP	08 04 46.8	+1.0
CN2				*e*XP	sP	08 04 55.1	+3.2
CN2				*e*S	**S**	**08 08 01.1**	**-5.6**
CN2				AMB	AMB		
	comp=Z,50nm,1.0s						
CN2				AMB	AMB		
	comp=Z,400nm,7.0s						
CN2				LR	LR		
	comp=N,360nm,18.0s						
CN2				LR	LR		
	comp=E,310nm,18.0s						
HHC	**Hu-ho-hao-te**	**19.64**	**328**	⇑*i*P	**Pn**	**08 04 44.5**	**-0.3**
HHC				AP	pP	08 04 55.9	+1.7
HHC				PP		08 05 04.3	
HHC				S	**S**	**08 08 18.8**	**-3.2**
HHC				SS		08 08 47.6	
HHC				PCP	PcP	08 09 01.3	+0.4
HHC				AMB	AMB		
	comp=Z,113nm,1.0s						
HHC				AMB	AMB		
	comp=Z,328nm,4.0s						
HHC				LR	LR		
	comp=N,884nm,12.0s						
HHC				LR	LR		
	comp=E,1μm,12.4s						
HHC				LR	LR		
	comp=Z,1μm,12.2s						
CD2	**Chengdu**	**19.98**	**292**	P	**Pn**	**08 04 47.4**	**-1.4**
CD2				AP	pP	08 04 59.0	+1.0
CD2				PP		08 05 05.9	
CD2				S	**S**	**08 08 25.4**	**-3.5**
CD2				XS	sS	08 08 47.4	+0.4
CD2				SS		08 08 56.3	
CD2				AMB	AMB		
	comp=Z,140nm,0.9s						
CD2				AMB	AMB		
	comp=Z,300nm,5.7s						
CD2				LR	LR		
	comp=N,700nm,14.4s						
CD2				LR	LR		
	comp=E,1μm,16.8s						
CD2				LR	LR		
	comp=Z,1μm,14.7s						
MDJ	**Mudanjiang**	**20.00**	**9**	P	**Pn**	**08 04 48.1**	**-0.8**
MDJ				AP	pP	08 04 59.8	+1.7
MDJ				S	**S**	**08 08 26.3**	**-2.7**
MDJ				XS	sS	08 08 46.8	-0.3
MDJ				AMB	AMB		
	comp=Z,12nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,84nm,5.2s						
MDJ				LR	LR		
	comp=N,377nm,22.8s						
MDJ				LR	LR		
	comp=E,256nm,17.4s						
MDJ				LR	LR		
	comp=Z,596nm,21.2s						
BTO	**Baotou**	**20.25**	**324**	*e*P	**P**	**08 04 49.3**	**-0.3**
KMI	**Kunming**	**20.48**	**275**	P	**P**	**08 04 53.8**	**+1.6**
KMI				AP		08 05 06.3	
KMI				XP	sP	08 05 13.3	+3.7
KMI				PP		08 05 16.0	
KMI				S	**S**	**08 08 34.8**	**-4.1**
KMI				SS		08 09 06.3	
KMI				AMB	AMB		
	comp=Z,20nm,0.8s						
KMI				AMB	AMB		
	comp=Z,106nm,3.1s						
KMI				LR	LR		
	comp=N,486nm,12.3s,MS4.2						
KMI				LR	LR		
	comp=E,639nm,15.4s,MS4.2						
KMI				LR	LR		
	comp=Z,790nm,14.9s,MS4.2						
GUMO	**Guam**	**21.56**	**118**	P	**P**	**08 05 01.5**	**-2.4**
	comp=Z,25nm,0.6s,mb4.8,baz=237,slow=10.0,SNR=1.9						
GUMO				LR	LR	08 11 48.8	
	comp=Z,414nm,20.2s,MS3.8,baz=270,slow=32						
GUMO	**Guam**	**21.56**	**118**	P	**P**	**08 05 01.5**	**-2.5**
GUMO				*e*PP		08 05 16.8	
GUMO	**Guam**	**21.56**	**118**	P	**P**	**08 05 01.5**	**-2.5**
GUMO				*e*pP		08 05 16.8	
GUMO				LR	LR	08 11 48.8	
LZH	**Lanzhou**	**21.58**	**306**	*e*P	**P**	**08 05 03.9**	**-0.1**
LZH				PP		08 05 28.8	
LZH				*e*S	**S**	**08 08 56.3**	**-4.1**
LZH				AMB	AMB		
	comp=Z,122nm,1.2s,mb5.2						
LZH				AMB	AMB		
	comp=Z,398nm,4.3s						
LZH				LR	LR		
	comp=E,2μm,11.5s						
LZH				LR	LR		
	comp=Z,2μm,13.0s,MS4.7						
ERM	**Erimo**	**22.58**	**36**	P	**P**	**08 05 12.8**	**-1.8**
	comp=Z,409nm,0.7s,mb6.0,SNR=7.3						
ERM	**Erimo**	**22.58**	**36**	⇓*i*P	**P**	**08 05 11.9**	**-2.7**
ERM	**Erimo**	**22.58**	**36**	⇓*i*P	**P**	**08 05 11.0**	**-3.6**
KKTK	**Khon Kaen**	**22.69**	**252**	P	**P**	**08 05 17.0**	**+1.0**
	comp=Z,494nm,0.5s,mb6.2						
ASAJ	**Asahikawa**	**23.80**	**32**	P	**P**	**08 05 25.1**	**-1.6**
	comp=Z,70nm,0.8s,mb5.2,baz=237,slow=12,SNR=18						
HIA	**Hailar**	**24.74**	**351**	*e*P	**P**	**08 05 34.0**	**-1.1**
HIA				*e*		08 09 11.3	
HIA				pmax	pmax		
	comp=Z,102nm,1.0s						
HIA	**Hailar**	**24.74**	**351**	*e*P	**P**	**08 05 34.0**	**-1.2**
	comp=Z,102nm,1.0s,mb5.3						
HIA				*e*PcP	PcP	08 09 11.3	+0.3
KLR	**Kul'dur**	**24.82**	**10**	*e*P	**P**	**08 05 30.0**	**-5.9**
KLR				pmax	pmax		
	comp=Z,78nm,1.8s,mb4.9						
CHG	**Chiang Mai**	**25.20**	**261**	⇑P	**P**	**08 05 39.8**	**+0.1**
	comp=Z,40nm,1.2s,mb4.8						
CHTO	**Chiang Mai**	**25.20**	**261**	⇓P	**P**	**08 05 41.7**	**+2.1**
	SNR=9.4						
CHTO	**Chiang Mai**	**25.20**	**261**	*e*P	**P**	**08 05 39.8**	**+0.1**
CHTO				*e*PP	pP	08 05 56.6	+4.5
CHTO				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.7						
CHTO	**Chiang Mai**	**25.20**	**261**	*e*P	**P**	**08 05 39.8**	**+0.1**
	comp=Z,26nm,1.0s,mb4.7						
CHTO				*e*pP	pP	08 05 56.6	+4.5
NST	**Nakhon Sawan**	**25.31**	**254**	P	**P**	**08 05 41.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**25.32**	**261**	P	**P**	**08 05 40.9**	**+0.2**
	comp=Z,16nm,0.9s,mb4.5,baz=60,slow=8.1,SNR=39						
SBUM	**Sibu**	**25.63**	**212**	⇓P	**P**	**08 05 44.3**	**+0.7**
GTA	**Gaotai**	**25.90**	**310**	P	**P**	**08 05 45.3**	**-0.6**
GTA				AP	pP	08 05 57.8	-0.5
GTA				PP		08 06 25.9	
GTA				PCP	PcP	08 09 15.0	+1.2
GTA				S	**S**	**08 10 09.6**	**-3.0**
GTA				AMB	AMB		
	comp=Z,81nm,1.0s,mb5.2						
GTA				AMB	AMB		
	comp=Z,135nm,4.2s						
GTA				LR	LR		
	comp=N,350nm,18.3s,MS4.4						
GTA				LR	LR		
	comp=E,868nm,14.7s,MS4.4						
GTA				LR	LR		
	comp=Z,1μm,15.9s,MS4.5						
YSS	**Yuzh-Sakhalins**	**26.05**	**28**	*e*P	**P**	**08 05 45.0**	**-2.1**
YSS				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.3						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.2						
YSS	**Yuzh-Sakhalins**	**26.05**	**28**	*e*P	**P**	**08 05 46.0**	**-1.1**
	comp=Z,93nm,1.2s,mb5.2						
ULN	**Ulaanbaatar**	**27.12**	**332**	P	**P**	**08 05 56.7**	**0.0**
	SNR=20						
ULN	**Ulaanbaatar**	**27.12**	**332**	*e*P	**P**	**08 05 55.9**	**-0.9**
ULN				pmax	pmax		
	comp=Z,32nm,0.8s,mb4.9						
ULN	**Ulaanbaatar**	**27.12**	**332**	*e*P	**P**	**08 05 55.9**	**-0.9**
	comp=Z,32nm,0.8s,mb4.9						
SONM	**Songino Array**	**27.38**	**332**	P	**P**	**08 05 57.8**	**-1.2**
	comp=Z,9.4nm,0.5s,mb4.6,baz=149,slow=9.7,SNR=52						
SONM				PcP	PcP	08 09 17.6	+0.5
	comp=Z,3.5nm,0.6s,baz=160,slow=4.3,SNR=4.8						
SONM				LR	LR	08 18 24.6	
	comp=Z,1μm,19.6s,MS4.5,baz=233,slow=40						
SONM	**Songino Array**	**27.38**	**332**	P	**P**	**08 05 57.8**	**-1.3**
SONM						08 09 17.6	
KSM	**Kuching**	**27.42**	**214**	⇓P	**P**	**08 06 00.1**	**+0.4**
KSM	**Kuching**	**27.42**	**214**	*e*P	**P**	**08 05 59.7**	**0.0**
CIT	**Chita**	**28.56**	**345**	*e*	**P**	**08 06 08.8**	**-0.7**
ZAK	**Zakamensk**	**30.65**	**332**	⇑*i*P	**P**	**08 06 26.4**	**-1.6**
ZAK				*e*		08 07 25.3	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.4						
LSA	**Lhasa**	**30.69**	**287**	P	**P**	**08 06 30.0**	**+1.4**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
LSA	**Lhasa**	**30.69**	**287**	*e*P	**P**	**08 06 30.2**	**+1.6**
LSA				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.2						
LSA	**Lhasa**	**30.69**	**287**	*e*P	**P**	**08 06 30.2**	**+1.5**
	comp=Z,26nm,0.7s,mb5.2						
TLY	**Talaya**	**31.48**	**334**	*e*P	**P**	**08 06 34.3**	**-1.0**
TLY				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.1						
TLY				MLR	MLR		
	comp=Z,789nm,16.9s,MS4.5						
TLY	**Talaya**	**31.48**	**334**	*e*P	**P**	**08 06 34.6**	**-0.7**
	comp=Z,20nm,0.7s,mb5.1						
MOY	**Mondy**	**32.57**	**332**	*e*P	**P**	**08 06 44.4**	**-0.5**
MOY				pmax	pmax		
	comp=Z,86nm,1.5s,mb5.5						
TAPN	**Taplejung**	**33.79**	**282**	*e*P	**P**	**08 06 57.5**	**+1.6**
	comp=Z,86nm,0.8s,mb5.8						
BOD	**Bodaibo**	**33.90**	**349**	*e*P	**P**	**08 06 54.6**	**-1.8**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
ODAN	**Odare**	**34.12**	**282**	*e*P	**P**	**08 06 59.6**	**+0.9**
	comp=Z,148nm,0.9s,mb5.9						
RAMN	**Ramite**	**34.81**	**282**	*e*P	**P**	**08 07 06.0**	**+1.3**
	comp=Z,14nm,0.3s,mb5.4						
BATI	**Baunata**	**34.91**	**183**	LR	LR	08 23 30.2	
	comp=Z,1μm,20.7s,MS4.6,baz=307,slow=40						
JIRN	**Jiri**	**35.11**	**283**	*e*P	**P**	**08 07 08.7**	**+1.4**
	comp=Z,8.2nm,0.3s,mb5.2						
GUN	**Gumba**	**35.37**	**284**	*e*P	**P**	**08 07 10.5**	**+1.0**
	comp=Z,42nm,0.5s,mb5.7						
HVS	**Khovu-Aksy**	**35.70**	**326**	*d i*P	**P**	**08 07 11.1**	**-0.9**
HVS				pmax	pmax		
	comp=Z,112nm,1.0s,mb5.8						
PKIN	**Phulchoki**	**35.82**	**283**	*e*P	**P**	**08 07 13.6**	**+0.2**
	comp=Z,38nm,0.7s,mb5.4						
KKN	**Kakani**	**35.91**	**284**	*e*P	**P**	**08 07 14.7**	**+0.6**
	comp=Z,87nm,0.8s,mb5.8						
WMQ	**Urumqi**	**35.98**	**311**	P	**P**	**08 07 14.6**	**+0.1**
WMQ				AP	pP	08 07 28.0	+0.8
WMQ				PP	PP	08 08 37.0	+0.1
WMQ				PCP	PcP	08 09 41.0	+0.7
WMQ				AMB	AMB		
	comp=Z,53nm,0.8s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,178nm,4.0s						
WMQ				LR	LR		
	comp=N,966nm,14.6s,MS4.8						
WMQ				LR	LR		
	comp=E,1μm,17.2s,MS4.8						
WMQ				LR	LR		
	comp=Z,912nm,18.5s,MS4.6						
DMN	**Daman**	**36.08**	**283**	*e*P	**P**	**08 07 16.1**	**+0.5**
	comp=Z,112nm,1.1s,mb5.7						
GKN	**Gorkha**	**36.46**	**284**	*e*P	**P**	**08 07 19.0**	**+0.2**
	comp=Z,65nm,0.8s,mb5.6						
DANN	**Dangsing**	**37.20**	**285**	*e*P	**P**	**08 07 26.2**	**+1.1**
	comp=Z,116nm,0.8s,mb5.8						
PEA0B	**Petropavlovsk-**	**37.23**	**32**	*e*P	**P**	**08 07 24.7**	**-0.3**
PETK	**Petropavlovsk-**	**37.23**	**32**	P	**P**	**08 07 24.2**	**-0.8**
	comp=Z,15nm,0.6s,mb5.0,baz=224,slow=4.3,SNR=41						
PETK				LR	LR	08 23 10.3	
	comp=Z,154nm,20.9s,MS3.8,baz=233,slow=37						
YAK	**Yakutsk**	**37.26**	**3**	*e*P	**P**	**08 07 21.3**	**-3.9**
YAK				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,13nm,1.1s						
YAK	**Yakutsk**	**37.26**	**3**	*i* P	**P**	**08 07 23.2**	**-2.0**
KOLN	**Koldanda**	**37.39**	**284**	*e*P	**P**	**08 07 27.1**	**+0.3**
	comp=N,65nm,0.9s,mb5.5						
PET	**Petropavlovsk**	**37.64**	**33**	*e*P	**P**	**08 07 26.8**	**-1.7**
PET				*e*PP	pP	08 07 40.2	-1.1
PET				*e*S	**S**	**08 13 21.7**	**+6.9**
PET				pmax	pmax		
	comp=Z,700nm,3.5s						
PET				pmax	pmax		
	comp=Z,224nm,1.3s,mb5.7						
PET				MLR	MLR		
	comp=Z,200nm,20.0s,MS3.9						
PET	**Petropavlovsk**	**37.64**	**33**	*e*P	**P**	**08 07 27.8**	**-0.7**
	comp=Z,158nm,0.9s,mb5.7						
PET				*e*pP	pP	08 07 41.6	+0.3
KRAR	**Krasnoyarsk**	**39.06**	**331**	⇓*e*P	**P**	**08 07 39.5**	**-0.9**
KRAR				pmax	pmax		
	comp=Z,37nm,0.6s,mb5.3						
PTH	**Pithoragarh**	**40.20**	**287**	*e*P	**P**	**08 07 50.9**	**+0.6**
MK31	**Makanchi Array**	**40.53**	**314**	*i* P	**P**	**08 07 51.9**	**-0.9**
MK31				pmax	pmax		
	comp=Z,25nm,0.5s,mb5.1						
MK31	**Makanchi Array**	**40.53**	**314**	*i* P	**P**	**08 07 51.0**	**-1.8**
MKAR	**Makanchi Array**	**40.53**	**314**	P	**P**	**08 07 52.3**	**-0.5**
	comp=Z,34nm,0.6s,mb5.2,baz=96,slow=11,SNR=228						
MKAR				LR	LR	08 26 07.1	
	comp=Z,491nm,19.0s,MS4.4,baz=145,slow=38						
ZALV	**Zalesovo Beam**	**41.79**	**325**	P	**P**	**08 08 01.4**	**-1.6**
	comp=Z,26nm,0.5s,mb5.2,baz=111,slow=8.4,SNR=143						
ZALV				PcP	PcP	08 09 56.6	-1.8
	comp=Z,3.0nm,0.6s,baz=121,slow=4.7,SNR=4.3						
ZALV				LR	LR	08 26 54.3	
	comp=Z,311nm,18.4s,MS4.2,baz=312,slow=38						
ZALV	**Zalesovo Beam**	**41.79**	**325**	P	**P**	**08 08 01.4**	**-1.6**
ZALV						08 09 56.6	
DDI	**Dehra Dun**	**42.01**	**288**	*e*P	**P**	**08 08 05.4**	**+0.2**
SEY	**Seymchan**	**42.09**	**18**	⇓*e*P	**P**	**08 08 05.0**	**-0.3**
COEN	**Coen**	**42.34**	**154**	*e*P	**P**	**08 08 07.5**	**-0.4**
	comp=Z,33nm,1.0s,mb4.9						
COEN				*e*pP	pP	08 08 20.5	-0.3
FITZ	**Fitzroy Crossi**	**42.72**	**180**	*e*P	**P**	**08 08 09.4**	**-1.5**
FITZ				*e*pP	pP	08 08 22.2	-1.6
FITZ	**Fitzroy Crossi**	**42.72**	**180**	P	**P**	**08 08 09.4**	**-

KSH eSS SS 08 17 55.1 -7.3
KSH AMB AMB
comp=Z,278nm,1.5s,mb5.8
KSH LR LR
comp=N,707nm,4.2s
KSH LR LR
comp=E,821nm,7.6s
KSH LR LR
comp=Z,816nm,6.2s
THN Thein Dam 43.87 292 eP **P 08 08 18.1 -2.1**
KURK Kurchatov 44.04 318 P **P 08 08 20.3 -1.0**
comp=Z,200nm,0.9s,mb5.8,SNR=29
KURK Kurchatov 44.04 318 P **P 08 08 20.9 -0.4**
SNR=18
KURK Kurchatov 44.04 318 P **P 08 08 20.4 -0.9**
comp=Z,14nm,0.7s,mb4.8,baz=109,slow=7.8,SNR=78
KURK PcP PcP 08 10 03.5 -2.5
comp=Z,7.9nm,0.9s,baz=109,slow=3.7,SNR=6.3
KURK Kurchatov 44.04 318 eP **P 08 08 20.2 -1.1**
KURK pmax pmax
comp=Z,14nm,0.6s,mb4.9
KURK Kurchatov 44.04 318 eP **P 08 08 20.2 -1.1**
comp=Z,14nm,0.6s,mb4.9
TKM2 Tokmak 2 44.35 307 eP **P 08 08 24.5 +0.6**
TKM2 pmax pmax
comp=Z,70nm,0.9s,mb5.4
TKM2 Tokmak 2 44.35 307 P **P 08 08 24.7 +0.8**
SNR=23
TKM2 Tokmak 2 44.35 307 eP **P 08 08 24.5 +0.6**
comp=Z,70nm,0.9s,mb5.4
KBK Karagaybulak 44.79 306 P **P 08 08 28.3 +0.9**
SNR=18
CHMS Chumysh 44.98 307 P **P 08 08 29.4 +0.6**
SNR=15
UCH Uchtor 45.06 306 P **P 08 08 31.1 +1.5**
SNR=60
AAK Ala-Archa 45.12 306 P **P 08 08 30.8 +0.8**
SNR=7.5
USP Ospenovka 45.19 307 P **P 08 08 30.7 +0.1**
SNR=13
WRAB Tennant Creek 45.39 168 P pP 08 08 44.0 -1.4
comp=Z,684nm,1.0s,SNR=12
WRAB Tennant Creek 45.39 168 eP **P 08 08 31.2 -1.1**
WRAB e*PP pP 08 08 44.3 -1.1
WRAB pmax pmax
comp=Z,121nm,1.0s,mb5.7
WRAB Tennant Creek 45.39 168 eP **P 08 08 31.2 -1.1**
comp=Z,121nm,1.0s,mb5.7
WRAB epP pP 08 08 44.3 -1.0
WRA Warramunga Arr 45.40 168 P **P 08 08 31.7 -0.7**
comp=Z,5.2nm,0.6s,mb4.5,baz=350,slow=8.6,SNR=54
WB2 Warramunga Arr 45.40 168 eP **P 08 08 31.6 -0.8**
WB2 epP pP 08 08 43.9 -1.5
WB2 eS **S 08 15 05.4 -4.9**
EKS2 Erkin-Say 45.65 306 P **P 08 08 34.4 +0.2**
SNR=15
EKS2 Erkin-Say 45.65 306 eP **P 08 08 34.4 +0.2**
comp=Z,15nm,0.8s,mb5.0
MBWA Marble Bar 46.08 187 eP **P 08 08 36.4 -1.3**
TIXI Tiksi 46.85 2 *i* P **P 08 08 44.0 +0.8**
TIXI pmax pmax
comp=Z,25nm,1.4s,mb5.0
TIXI Tiksi 46.85 2 *i* P **P 08 08 44.1 +0.9**
HNR Honiara 47.98 131 LR LR 08 25 44.0
comp=Z,232nm,21.0s,MS4.1,baz=252,slow=32
AMKA Amchitka 48.64 42 eP **P 08 08 58.0 +0.7**
ASAR Alice Springs 48.96 170 P **P 08 08 60.0 -0.1**
comp=Z,1.8nm,0.5s,mb4.3,baz=358,slow=7.5,SNR=64
CTA Charters Tower 49.11 154 eP **P 08 09 01.6 +0.4**
CTA epP pP 08 09 13.9 -0.5
CTAO Charters Tower 49.11 154 eP **P 08 09 01.4 +0.2**
CTAO e*PP pP 08 09 15.2 +0.8
CTAO pmax pmax
comp=Z,31nm,1.5s,mb5.1
CTAO Charters Tower 49.11 154 eP **P 08 09 01.4 +0.2**
comp=Z,31nm,1.5s,mb5.1
CTAO epP pP 08 09 15.2 +0.8
VOSK Vostochnaya 49.16 319 P **P 08 08 59.6 -1.7**
VOSK pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KBL Kabul 49.29 295 eP **P 08 09 03.3 +0.7**
KBL pmax pmax
comp=Z,143nm,1.3s,mb5.8
KBL Kabul 49.29 295 eP **P 08 09 03.2 +0.7**
comp=Z,143nm,1.3s,mb5.8
BVA0 Borovoye Array 49.57 319 *i* P **P 08 09 02.8 -1.6**
BVAR Borovoye Array 49.57 319 P **P 08 09 03.3 -1.1**
comp=Z,7.3nm,0.5s,mb5.0,baz=109,slow=9.1,SNR=21
BVAR PcP PcP 08 10 25.2 -0.3
comp=Z,3.0nm,0.6s,baz=106,slow=3.8,SNR=5.6
BRVK Borovoye 49.64 320 P **P 08 09 04.7 -0.3**
comp=Z,220nm,0.5s,mb6.4,SNR=7.0
BRVK Borovoye 49.64 320 P **P 08 09 04.9 -0.1**
SNR=7.6
BRVK Borovoye 49.64 320 eP **P 08 09 04.8 -0.2**
BRVK pmax pmax
comp=Z,17nm,0.5s,mb5.3
BRVK Borovoye 49.64 320 eP **P 08 09 04.8 -0.2**
comp=Z,17nm,0.5s,mb5.3
BILL Bilibino 49.78 19⇑ eP **P 08 09 05.6 -0.2**
ADK Adak 51.19 42 eP **P 08 09 15.1 -1.6**
ADK pmax pmax
comp=Z,105nm,1.8s,mb5.5
ADK Adak 51.19 42 eP **P 08 09 15.1 -1.6**
comp=Z,105nm,1.8s,mb5.5
FORT Forrest 55.40 177 eP **P 08 09 47.7 0.0**
FORT epP pP 08 10 01.4 +0.3
FORT epP pP 08 10 01.6 +0.5
SVE Sverdlovsk 55.75 323⇓ eP **P 08 09 49.5 -0.5**
SVE pmax pmax
comp=Z,65nm,0.9s,mb5.7
EIDS Eidsvold 55.81 152 epP pP 08 10 03.7 -0.5
KLBR Kellerberrin 56.61 188 eP **P 08 09 55.9 -0.5**
ARU Arti 56.85 322 P **P 08 09 57.3 -0.6**
comp=Z,400nm,0.5s,mb6.7,SNR=12
ARU Arti 56.85 322 *c* iP **P 08 09 56.9 -1.0**
ARU e 08 10 50.2
ARU e 08 12 01.8
ARU eS **S 08 17 49.7 +2.0**
ARU eSS SS 08 21 39.3 +3.3
ARU pmax pmax
comp=Z,72nm,1.2s,mb5.6
ARU MLR MLR
comp=Z,657nm,22.0s,MS4.7
ARU Arti 56.85 322 eP **P 08 09 57.4 -0.4**
comp=Z,43nm,0.6s,mb5.7
AKTK Aktyubinsk 56.93 315 P **P 08 09 58.1 -0.4**
AKTO Aktyubinsk 56.93 315 P **P 08 09 58.1 -0.4**
comp=Z,13nm,1.0s,mb4.9,baz=77,slow=6.6,SNR=14
ABKT Ailbek 57.71 300 P **P 08 10 05.4 +1.1**
comp=Z,596nm,0.7s,mb6.7,SNR=25
NWAO Narrogin (SRO) 57.99 188 P **P 08 10 05.6 -0.5**
comp=Z,33nm,1.0s,mb5.3,baz=5.7,slow=8.4,SNR=7.6
STKA Stephens Creek 58.53 164 eP **P 08 10 09.5 -0.4**
STKA epP pP 08 10 22.4 -1.0
STKA Stephens Creek 58.53 164 P **P 08 10 09.8 -0.1**
comp=Z,5.0nm,0.8s,mb4.6,baz=342,slow=6.9,SNR=9.2
WBK Wadi Bani Khal 60.24 283 P **P 08 10 23.2 +1.2**
SNR=6.9
BIDO Bidbid 60.72 284 P **P 08 10 26.5 +1.1**
SNR=9.4
SMDO Samad 60.92 284 P **P 08 10 27.2 +0.5**
SNR=6.9
JMDO Jabal Madar 61.07 283 P **P 08 10 28.3 +0.5**
SNR=5.4
HOQ Hoqain 61.43 284 P **P 08 10 30.8 +0.7**
SNR=13
BANOM Banah 61.67 287 P **P 08 10 33.5 +1.8**
SNR=5.2
BSY Bisya 61.76 283 P **P 08 10 33.1 +0.7**
SNR=9.0
HATD Hatta, Dubai 62.11 286 P **P 08 10 35.9 +1.2**
SNR=5.5
CHGN Chignik 62.12 38 eP **P 08 10 35.6 +1.4**
ASHO Ashiyiah 62.22 286 P **P 08 10 36.2 +0.8**
SNR=9.9
TTA Tatalina 63.02 30 eP **P 08 10 40.5 +0.4**
SVW2 Sparrevohn 63.31 32 eP **P 08 10 41.7 -0.3**
IMA2 Indian Mountai 63.90 27 eP **P 08 10 46.5 +0.7**
IMA2 epP pP 08 10 59.8 +0.3
CHUM Lake Minchumin 64.62 29 eP **P 08 10 51.5 +0.9**
comp=Z,35nm,0.7s,mb5.5
PPLA Purkeypile 64.77 30 eP **P 08 10 52.3 +0.7**
comp=Z,38nm,0.8s,mb5.5
PPLA epP pP 08 11 08.1 +2.8
OHAK Old Harbor 64.85 36 eP **P 08 10 51.2 -1.0**
comp=Z,14nm,0.8s,mb5.0
TOO Toolangi 64.94 162 eP **P 08 10 53.9 +1.0**
TOO epP pP 08 11 06.4 -0.2
KDAK Kodiak Island 65.15 36 P **P 08 10 54.0 -0.2**
comp=Z,319nm,1.7s,mb6.1,SNR=8.0
KDAK Kodiak Island 65.15 36 P **P 08 10 53.8 -0.4**
comp=Z,34nm,0.8s,mb5.4,baz=256,slow=2.2,SNR=13
COLD Coldfoot 65.20 25 eP **P 08 10 54.8 +0.5**
comp=Z,42nm,1.1s,mb5.4
KTH Kantishna Hill 65.27 29 eP **P 08 10 55.0 +0.2**
comp=Z,18nm,0.7s,mb5.2
TRF Thorofare Moun 65.56 29 eP **P 08 10 56.8 0.0**
comp=Z,18nm,0.9s,mb5.1
MCK McKinley 66.13 29 eP **P 08 11 00.3 -0.1**
MCK e*PP pP 08 11 16.3 +2.3
MCK pmax pmax
comp=Z,27nm,0.7s,mb5.4
MCK McKinley 66.13 29 eP **P 08 11 00.3 -0.1**
comp=Z,27nm,0.7s,mb5.4
MCK epP pP 08 11 16.3 +2.3
RC01 Rabbit Creek A 66.13 32 eP **P 08 10 59.9 -0.5**
comp=Z,9.8nm,0.6s,mb5.0
RC01 epP pP 08 11 14.7 +0.6
PMR Palmer 66.35 31 eP **P 08 11 01.0 -0.8**
PMR pmax pmax
comp=Z,21nm,0.6s,mb5.3
PMR Palmer 66.35 31 eP **P 08 11 01.0 -0.8**
comp=Z,21nm,0.6s,mb5.3
SEW Seward 66.42 33 eP **P 08 11 00.5 -1.8**
COLA College 66.44 28 *i* P **P 08 11 02.9 +0.6**
COLA College 66.44 28 *i* P **P 08 11 02.9 +0.6**
KLMR Klimovskoe 66.60 328 eP **P 08 11 03.0 -0.4**
KLMR pmax pmax
comp=Z,59nm,1.2s,mb5.5
GNI Garni 67.51 305 eP **P 08 11 10.4 +0.8**
GNI Garni 67.51 305 P **P 08 11 11.3 +1.7**
SNR=12
GNI Garni 67.51 305 eP **P 08 11 10.9 +1.3**
GNI pmax pmax
comp=Z,69nm,1.2s
GNI Garni 67.51 305 eP **P 08 11 10.9 +1.3**
comp=Z,69nm,1.2s,mb5.6
UMR Umm Al-Rimmam 67.98 293 eP **P 08 11 12.2 -0.5**
baz=293
UMR AMb AMB 08 11 14.9
comp=Z,85nm,0.8s,mb5.8,baz=293
APA Apatity 68.00 336⇑ *i* P **P 08 11 12.0 -0.2**
APA *i* 08 11 38.6
APA pmax pmax
comp=Z,52nm,1.0s,mb5.5
APA MLR MLR
comp=Z,900nm,24.0s,MS4.9
DIV Divide 68.02 32 eP **P 08 11 12.5 +0.1**
comp=Z,29nm,0.7s,mb5.4
KIV Kislovodsk 68.08 309 P **P 08 11 13.5 +0.4**
comp=Z,1μm,0.7s,SNR=15
KIV Kislovodsk 68.08 309 P **P 08 11 14.1 +1.0**
SNR=24
KIV Kislovodsk 68.08 309 eP **P 08 11 13.9 +0.8**
KIV pmax pmax
comp=Z,112nm,0.6s,mb6.1
KIV Kislovodsk 68.08 309⇑ *i* P **P 08 11 13.9 +0.8**
KIV Kislovodsk 68.08 309 eP **P 08 11 13.9 +0.8**
comp=Z,112nm,0.6s,mb6.1
MIB Mutribah 68.22 294 eP **P 08 11 13.6 -0.7**
baz=294
MIB AMb AMB 08 11 15.2
comp=Z,59nm,0.5s,mb5.9,baz=294
RDF Al-Radifah 68.30 293 eP **P 08 11 14.2 -0.5**
baz=293
RDF AMb AMB 08 11 17.6
comp=Z,77nm,0.7s,mb5.8,baz=293
NAY Al-Naaiem 68.46 293 eP **P 08 11 14.9 -0.9**
baz=293
NAY AMb AMB 08 11 17.1
comp=Z,37nm,0.7s,mb5.5,baz=293
MOS Moscow 68.56 323 eP **P 08 11 13.8 -2.1**
MOS e 08 11 37.6
MOS e 08 13 46.4
MOS pmax pmax
comp=Z,106nm,1.0s,mb5.7
MOS Moscow 68.56 323 eP **P 08 11 13.7 -2.2**
RST Umm Al-Ruwaisa 68.59 294 eP **P 08 11 15.4 -1.1**
baz=293
RST AMb AMB 08 11 18.6
comp=Z,60nm,0.8s,mb5.6,baz=293
BMRM Bremner River 68.61 32 eP **P 08 11 16.1 -0.1**
VSR Storozhevoye 68.69 318 eP **P 08 11 15.9 -0.9**
VSR pmax pmax
comp=Z,30nm,1.0s,mb5.2
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,40nm,1.0s
HKR Hakkari 68.93 303 eP **P 08 11 19.7 +1.2**
OBN Obninsk 69.29 322 *c* iP **P 08 11 19.5 -0.9**
OBN e 08 11 43.4
OBN pmax pmax
comp=Z,64nm,0.7s,mb5.7
OBN Obninsk 69.29 322 eP **P 08 11 20.0 -0.4**
comp=Z,52nm,0.5s,mb5.7
BCA Borcka 69.47 307 eP **P 08 11 22.2 +0.4**
KEV Kevo 69.73 338 ep **P 08 11 19.5 -3.4**
comp=Z,12nm,0.7s,mb4.9
KEV Kevo 69.73 338 eP **P 08 11 19.5 -3.4**
KEV pmax pmax
comp=Z,12nm,0.7s,mb4.9
JOF Joensuu 69.95 331 ep **P 08 11 23.0 -1.4**
comp=Z,16nm,0.5s,mb5.2
KBS Kingsbay 70.08 349⇓ eP **P 08 11 24.2 -0.7**
EZM Erzurum 70.08 306 eP **P 08 11 27.5 +1.9**
DAWY Dawson 70.19 28 eP **P 08 11 26.2 +0.4**
SOC Sochi 70.25 310 *c* iP **P 08 11 26.3 -0.3**
SOC e 08 14 06.4
SOC eS S 08 20 33.3 -1.6
SOC pmax pmax
comp=Z,83nm,0.8s,mb5.7
SOC Sochi 70.25 310 *i* P **P 08 11 26.6 0.0**
ARCES ARCESS Array B 70.30 338 P **P 08 11 25.3 -1.1**
comp=Z,2.5nm,0.4s,mb4.5,baz=70,slow=7.3,SNR=34
ARCES PcP PcP 08 11 47.8 0.0
comp=Z,14nm,0.7s,baz=86,slow=4.6,SNR=13
EZC Erzincan 71.27 306 eP **P 08 11 35.9 +3.0**
GUMT Gumushane 71.31 307 eP **P 08 11 33.9 +0.9**
PNL Peninsula 71.45 32 eP **P 08 11 33.8 +0.3**
comp=Z,29nm,0.9s,mb5.2
ANN Anapa 71.49 311 *c* iP **P 08 11 32.8 -1.3**
ANN e*PP pP 08 11 43.1 -4.8
ANN e 08 11 52.1
ANN e 08 14 11.3
ANN eS S 08 20 50.5 +1.3
ANN eSS SS 08 25 28.0 +3.7
ANN pmax pmax
comp=Z,203nm,1.2s,mb5.9
ANN Anapa 71.49 311 eP **P 08 11 33.1 -1.0**
PTK Pertek 71.83 305 eP **P 08 11 37.5 +1.3**
HYT Haines Junctio 71.99 31 eP **P 08 11 37.7 +0.9**
KAF Kangasniemi 72.41 331 ep **P 08 11 36.3 -2.9**
comp=Z,12nm,0.8s,mb4.9,baz=69,slow=5.7
KAF Kangasniemi 72.41 331 eP **P 08 11 36.3 -2.9**
KAF pmax pmax
comp=Z,13nm,0.8s,mb4.9
MYA Malataya 72.73 305 eP **P 08 11 43.2 +1.6**
MALT Malatya 72.73 305 eP **P 08 11 39.9 -1.8**
MALT Malatya 72.73 305 eP **P 08 11 39.7 -1.9**
MALT pmax pmax
comp=Z,84nm,0.7s,mb5.8
MALT Malatya 72.73 305 eP **P 08 11 39.7 -2.0**
comp=Z,84nm,0.7s,mb5.8
ALE Alert 72.75 1 P **P 08 11 40.6 -0.4**
comp=Z,174nm,1.2s,mb5.9,SNR=6.8
DARE Darende-Malaty 72.99 305 eP **P 08 11 45.3 +2.2**
SVSK Karacayir 73.28 307 eP **P 08 11 45.4 +0.5**
SKAG Skagway 73.48 32 eP **P 08 11 45.5 -0.1**
comp=Z,48nm,1.9s,mb5.1
SKAG LR LR
comp=Z,300nm,18.0s,MS4.6
TOKT Tokat 73.48 307 eP **P 08 11 46.3 +0.3**
KVT Kavak 73.60 308 eP **P 08 11 47.3 +0.6**
SIM Simferopol' 73.69 312 *c*eP **P 08 11 47.3 +0.2**
SIM pmax pmax
comp=Z,76nm,0.6s,mb5.8
GAZ Gaziantep 74.01 304 eP **P 08 11 47.4 -1.8**
KMRS Kahramanmaras 74.14 304 eP **P 08 11 48.1 -1.8**
MNK Minsk 74.30 323 eP **P 08 11 45.0 -5.5**
MNK pmax pmax
comp=Z,220nm,1.0s,mb6.0
BNN Bunyan 74.47 306 eP **P 08 11 50.1 -1.7**
AKASG Malin Array Be 74.85 319 P **P 08 11 52.9 -0.9**
comp=Z,13nm,0.4s,mb5.2,baz=52,slow=5.7,SNR=72
KIEV Kiev 74.86 319 eP **P 08 11 52.9 -0.9**
KIEV pmax pmax
comp=Z,35nm,0.5s,mb5.5
KIEV Kiev 74.86 319 eP **P 08 11 52.9 -0.9**
comp=Z,35nm,0.5s,mb5.5
CORM Corum 74.91 307 eP **P 08 11 52.7 -1.7**
KOZT Kozan 74.95 305 eP **P 08 11 55.2 +0.6**
TOS Tosya 75.06 308 eP **P 08 11 54.2 -1.0**
KARA Karaisali 75.60 305 eP **P 08 11 56.3 -2.1**
NIG Nigde 75.64 305 eP **P 08 11 59.5 +1.0**
KAMT Kaman 75.86 307 eP **P 08 11 59.9 +0.1**
ASF Jabal al Asfar 75.95 299 P **P 08 12 00.9 +0.5**
comp=Z,15nm,0.8s,mb5.0,baz=299,slow=3.6,SNR=28
MERS Mersin 76.14 304 eP **P 08 12 01.4 0.0**
DAG Danmarks Havn 76.24 352⇓ eP **P 08 12 00.0 -1.3**
DAG pmax pmax
comp=Z,13nm,0.9s,mb4.9
DAG Danmarks Havn 76.24 352⇓ *i* P **P 08 12 00.0 -1.3**
comp=Z,13nm,0.9s,mb4.9
DAG Danmarks Havn 76.24 352⇓ eP **P 08 12 00.0 -1.3**
comp=Z,13nm,0.9s,mb4.9
DLBC Dease Lake 76.41 32 eP **P 08 12 03.9 +1.3**
KIS Kishinev 76.44 316 eP **P 08 12 00.0 -3.0**
KIS Kishinev 76.44 316 eUNK **P 08 12 00.0 -3.0**
IKL Isikli 76.99 304 eP **P 08 12 05.6 -0.7**
SUW Suwalki 77.01 324 eP **P 08 12 06.2 +0.2**
SUW Suwalki 77.01 324 eP **P 08 12 05.8 -0.1**
comp=Z,92nm,0.4s,mb6.1
LFK Lefkose 77.46 303 eP **P 08 12 08.0 -0.9**
TIRR Tirgusor 77.67 313⇑ iP **P 08 12 09.7 -0.2**
TIRR Tirgusor 77.67 313⇑ P **P 08 12 09.7 -0.2**
CSS Prodhromos 77.73 303 eP **P 08 12 10.1 -0.3**
comp=Z,42nm,0.8s,mb5.4
HARR Harsova 77.89 314⇓ iP **P 08 12 11.6 +0.5**
HARR Harsova 77.89 314 P **P 08 12 11.6 +0.4**
PSN Preselentsi 78.12 313 *i* P **P 08 12 12.8 +0.4**
VRI Vrincioaia 78.21 315⇑ iP **P 08 12 14.3 +1.4**
VRI Vrincioaia 78.21 315 P **P 08 12 13.4 +0.5**
LVV L'vov 78.26 320 eP **P 08 12 12.8 -0.3**
PLOR Plostina 78.27 315⇑ iP **P 08 12 14.1 +0.9**
BUR08 Bucovina Ar. S 78.46 317 eP **P 08 12 14.2 0.0**
BURAR Bucovina Array 78.46 317⇑ iP **P 08 12 14.3 +0.1**
BURAR Bucovina Array 78.46 317⇑ P **P 08 12 14.3 +0.1**
ISP Isparta 78.75 306 P **P 08 12 16.1 +0.1**
ISP Isparta 78.75 306⇓ iP **P 08 12 15.5 -0.5**
ISP Isparta 78.75 306 eP **P 08 12 15.4 -0.6**
comp=Z,172nm,1.2s,mb5.9
PRD Provadia 78.83 312 *i* P **P 08 12 16.0 -0.4**
MLR Muntele Rosu 78.87 315⇓ iP **P 08 12 16.8 +0.3**
MLR Muntele Rosu 78.87 315 P **P 08 12 17.0 +0.5**
KWP Kalwaria 79.12 320 eP **P 08 12 17.9 +0.1**
KWP Kalwaria 79.12 320 eP **P 08 12 17.9 +0.1**
NB2 NORSAR Subarra 79.35 333 P **P 08 12 18.2 -0.6**
comp=Z,122nm,1.4s,mb5.6,baz=56,slow=5.6
NOA NORSAR Array B 79.35 333 P **P 08 12 18.1 -0.7**
comp=Z,17nm,0.7s,mb5.1,baz=55,slow=5.2,SNR=38
VOIR 79.46 315⇑ iP **P 08 12 20.0 +0.2**
VOIR 79.46 315⇑ P **P 08 12 20.0 +0.3**
NAO01 NORSAR Array S 79.59 333 eP **P 08 12 19.1 -1.0**
comp=Z,15nm,0.8s,mb5.0
JMB Yambol 79.68 312 *i* P **P 08 12 21.0 0.0**
KOLS Kolonicke sedl 79.68 319 eP **P 08 12 20.9 0.0**
UZH Uzhgorod 79.80 319 *d* iP **P 08 12 21.5 0.0**
UZH *e* 08 12 28.0
TRPA Tarpa 79.87 318⇑ iP **P 08 12 22.2 +0.3**
ZIMR 80.00 313⇓ iP **P 08 12 23.3 +0.6**
ZIMR 80.00 313 P **P 08 12 23.3 +0.6**
STHS Stebnicka Huta 80.07 320 eP **P 08 12 23.6 +0.6**
STHS pmax pmax
comp=Z,12nm,1.0s,mb4.8
STHS Stebnicka Huta 80.07 320 eP **P 08 12 23.5 +0.5**
STHS Stebnicka Huta 80.07 320 eP **P 08 12 23.6 +0.6**
comp=Z,12nm,1.0s,mb4.8
CRVS Cervenica-Dubn 80.18 319 eP **P 08 12 23.9 +0.4**
DRGR 80.35 317⇓ iP **P 08 12 25.1 +0.6**
DRGR 80.35 317 P **P 08 12 24.9 +0.4**
GKP Gorka Klasztor 80.50 325 eP **P 08 12 25.8 +0.6**
GKP Gorka Klasztor 80.50 325 eP **P 08 12 25.8 +0.6**
OJC Ojcow 80.54 321⇑ iP **P 08 12 25.6 +0.1**
NIE Niedzica 80.61 320 eP **P 08 12 27.0 +1.1**
KONO Kongsberg 80.79 332⇑ eP **P 08 12 26.9 +0.3**
KONO Kongsberg 80.79 332⇑ eP **P 08 12 26.0 -0.6**
YKW3 Yellowknife Ar 80.79 24 eP **P 08 12 26.9 +0.3**
KDZ Kurdzhali 80.81 312 *i* P **P 08 12 26.4 -0.7**
YKA Yellowknife Ar 80.84 24 P **P 08 12 26.5 -0.3**
comp=Z,12nm,0.6s,mb5.0,baz=302,slow=5.5,SNR=32
YKA PKKPbc PKKPbc 08 31 02.7 -3.4
comp=Z,1.0nm,0.6s,baz=132,slow=2.2,SNR=6.6
YKA Yellowknife Ar 80.84 24 P **P 08 12 26.6 -0.3**
YKA PKKPbc PKKPbc 08 31 02.7 -3.4
GZR Gura Zlata 80.93 316⇑ iP **P 08 12 28.5 +0.9**
GZR Gura Zlata 80.93 316 P **P 08 12 28.4 +0.7**
RZN Rozhen 81.27 312 *i* P **P 08 12 29.2 -0.3**
PSZ Piszkesteto 81.55 319⇑ eP **P 08 12 31.1 +0.2**
PSZ Piszkesteto 81.55 319⇓ iP **P 08 12 31.6 +0.7**
PSZ Piszkesteto 81.55 319 P **P 08 12 31.6 +0.7**
BZS Buzias 81.56 316⇑ iP **P 08 12 30.6 -0.4**
BZS Buzias 81.56 316⇑ iP **P 08 12 30.5 -0.5**
BZS Buzias 81.56 316 P **P 08 12 30.5 -0.5**
OKC Ostrava-Krasne 81.66 321⇑ eP **P 08 12 31.5 +0.1**
COP Copenhagen 81.69 328 eP **P 08 12 32.3 +0.9**
COP pmax pmax
comp=Z,61nm,1.1s,mb5.4
COP Copenhagen 81.69 328 *i* P **P 08 12 32.3 +0.9**
comp=Z,61nm,1.1s,mb5.4
COP Copenhagen 81.69 328 eP **P 08 12 32.3 +0.9**
comp=Z,61nm,1.1s,mb5.4
VTS Vitosha 81.88 313 *i* P **P 08 12 33.0 +0.2**
VYHS Vyhne 81.91 320 eP **P 08 12 33.2 +0.4**
VYHS pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
VYHS Vyhne 81.91 320 eP **P 08 12 33.2 +0.4**
comp=Z,7.3nm,0.8s,mb4.7
MMB Musomiste 81.98 312 *i* P **P 08 12 32.2 -1.1**
MORC Moravsky Berou 82.03 321⇑ iP **P 08 12 33.8 +0.4**
MORC Moravsky Berou 82.03 321⇑ P **P 08 12 33.8 +0.4**
KOLL Kolacno 82.12 320 eP **P 08 12 35.0 +1.1**
KOLL Kolacno 82.12 320 eP **P 08 12 35.1 +1.2**
SUMG Summit 82.18 355 eP **P 08 12 34.2 +0.5**
comp=Z,36nm,0.8s,mb5.4
KSP Ksiaz 82.20 323 eP **P 08 12 35.2 +1.0**
KSP Ksiaz 82.20 323 eP **P 08 12 34.3 0.0**
KKB Krupnik 82.29 313 *i* P **P 08 12 34.6 -0.3**
DPC Dobruska-Polom 82.44 322⇑ iP **P 08 12 36.1 +0.6**
UPC Upice 82.53 323⇑ eP **P 08 12 36.0 0.0**
RUE Ruedersdorf 82.71 325 eP **P 08 12 37.4 +0.5**
comp=Z,170nm,1.2s,mb6.0
RUE Ruedersdorf 82.71 325 eP **P 08 12 37.5 +0.6**
comp=Z,104nm,0.9s,mb5.9
MUD Monsted U'grnd 82.78 330⇑ iP **P 08 12 37.6 +0.4**
MUD pmax pmax
comp=Z,82nm,0.8s,mb5.8
MUD Monsted U'grnd 82.78 330 *i* iP **P 08 12 37.6 +0.4**
comp=Z,82nm,0.8s,mb5.8
VRAC Vranov 82.80 321⇑ iP **P 08 12 38.1 +0.7**
VRAC Vranov 82.80 321 P **P 08 12 38.2 +0.8**
MODS Modra-Piesok 82.87 320 eP **P 08 12 39.2 +1.4**
VAY Valandovo 82.88 312 eP **P 08 12 36.9 -1.0**
ZST Bratislava 83.06 320 eP **P 08 12 39.8 +1.0**
ZST pmax pmax
comp=Z,13nm,1.1s,mb4.9
ZST Bratislava 83.06 320 eP **P 08 12 39.8 +1.0**
comp=Z,13nm,1.1s,mb4.9
PKSM Moragy 83.12 318⇓ iP **P 08 12 39.0 -0.1**
PKSM Moragy 83.12 318⇓ iP **P 08 12 39.0 -0.1**
PVCC Panska Ves 83.31 323⇑ eP **P 08 12 40.6 +0.6**
SKO Skopje 83.33 313 eP **P 08 12 40.9 +0.6**
BRG Berggiesshubel 83.47 324 eP **P 08 12 40.9 +0.1**
comp=Z,23nm,0.8s,mb5.3
BRG Berggiesshubel 83.47 324 *i* P **P 08 12 41.0 +0.1**
comp=Z,25nm,1.0s,mb5.2
BRG *e* 08 16 44.0
comp=Z,2.7nm,0.7s
PRU Pruhonice 83.61 323⇑ iP **P 08 12 41.8 +0.3**
SOP Sopron 83.64 320⇑ eP **P 08 12 41.3 -0.5**
BSEG Bad Segeberg 83.67 327 eP **P 08 12 41.5 -0.3**
comp=Z,128nm,1.4s,mb5.9
KRUS Krusevo 83.74 313 eP **P 08 12 42.2 -0.2**

CLL Collm 83.74 324⇑ *i*P P 08 12 42.2 0.0
CLL pmax pmax
comp=Z,37nm,0.7s,mb5.6
CLL MLR MLR
comp=Z,600nm,18.6s,MS5.0
CLL Collm 83.74 324 *e*P P 08 12 41.2 -1.0
comp=Z,37nm,0.7s,mb5.6
CLL Collm 83.74 324⇑ *i*P P 08 12 42.2 0.0
comp=Z,37nm,0.7s,mb5.6
CLL LR LR
comp=Z,600nm,18.6s,MS5.0
FBE Freiberg 83.76 324 *e*P P 08 12 41.7 -0.6
comp=Z,40nm,1.1s,mb5.5
CONA Conrad Observa 83.92 320 *i* P P 08 12 43.9 +0.7
comp=Z,60nm,1.1s,mb5.6,SNR=29
CONA Conrad Observa 83.92 320 *i* PcP P 08 12 43.9 +0.7
comp=Z,60nm,1.1s,mb5.6,SNR=29
CSNA Conrad Observa 83.92 320⇑ *i*P P 08 12 44.0 +0.8
comp=Z,55nm,1.1s,mb5.6
CSNA Conrad Observa 83.92 320⇑ *i*PcP P 08 12 44.0 +0.8
comp=Z,55nm,1.1s,mb5.6
OHR Ohrid 84.16 313 *e*P P 08 12 41.7 -2.8
TANN Tannenbergstha 84.51 324 *e*P P 08 12 45.6 -0.6
comp=Z,34nm,1.2s,mb5.3
WERD Werda 84.58 324 *e*P P 08 12 45.9 -0.6
comp=Z,33nm,0.9s,mb5.5
NRDL Niedersach Rie 84.59 326 *e*P P 08 12 46.3 -0.2
comp=Z,112nm,1.4s,mb5.8
KHC Kasperske Hory 84.59 322 *c i*P P 08 12 46.9 +0.3
KHC Kasperske Hory 84.59 322⇑ *i*P P 08 12 46.6 0.0
GUNZ Gunzen 84.61 324 *e*P P 08 12 46.2 -0.4
comp=Z,61nm,0.9s,mb5.7
NKC Novy Kostel 84.62 324⇑ *e*P P 08 12 46.8 +0.1
WERN Wernitzgruen 84.63 324 *e*P P 08 12 46.3 -0.4
comp=Z,51nm,0.9s,mb5.7
GEC2 GERESS Array S 84.67 322 *e*P P 08 12 46.2 -0.8
GEC2 pmax pmax
comp=Z,44nm,1.2s,mb5.5
GEC2 GERESS Array S 84.67 322 *e*P P 08 12 46.2 -0.8
comp=Z,44nm,1.2s,mb5.5
GERES GERESS Array B 84.67 322 P P 08 12 47.3 +0.3
comp=Z,14nm,0.8s,mb5.2,baz=57,slow=4.9,SNR=68
MOX Moxa 84.84 324 *e*P P 08 12 48.0 +0.2
comp=Z,83nm,1.6s,mb5.6
MOX
comp=Z,1μm,23.0s
MOX Moxa 84.84 324 *e*P P 08 12 48.0 +0.2
MOX pmax pmax
comp=Z,83nm,1.6s,mb5.6
MOX MLR MLR
comp=Z,1μm,23.0s,MS5.1
MOX Moxa 84.84 324 *e*P P 08 12 47.2 -0.6
comp=Z,39nm,1.1s,mb5.5
MOA Molln 84.88 321⇑ *i*P P 08 12 48.2 +0.1
comp=Z,23nm,0.9s,mb5.3,SNR=12
MANZ Manzenberg 84.94 323 *e*P P 08 12 47.9 -0.4
comp=Z,42nm,1.0s,mb5.5
NLWA Neilton Lookou 84.96 40 *e*P P 08 12 49.4 +0.9
comp=Z,25nm,1.3s,mb5.2
NLWA *e*pP pP 08 13 03.6 +1.0
WET Wettzell 84.97 322 *e*P P 08 12 48.1 -0.4
WET pmax pmax
comp=Z,46nm,1.6s,mb5.4
WET Wettzell 84.97 322 *e*P P 08 12 48.1 -0.4
comp=Z,46nm,1.6s,mb5.4
PERS Pernice 85.02 320 *i* P P 08 12 48.7 0.0
SOKA Soboth 85.04 320⇑ *i*P P 08 12 48.7 -0.2
comp=Z,17nm,0.7s,mb5.3
MBW Mount Baker 85.34 38 P P 08 12 51.2 +0.9
GNW Green Mountain 85.47 39 *e*P P 08 12 52.3 +1.2
BOJS Bojanci 85.52 319 *i* P P 08 12 51.3 0.0
GRA1 Grafenberg Arr 85.58 324 *e*P P 08 12 51.2 -0.3
comp=Z,118nm,1.2s,mb6.0
GRA1 LR LR
comp=Z,700nm,21.9s,MS5.0
GRF Grafenberg Arr 85.58 324 *e*P P 08 12 51.2 -0.3
GRF pmax pmax
comp=Z,118nm,1.2s,mb6.0
GRF MLR MLR
comp=Z,700nm,21.9s,MS5.0
GRF Grafenberg Arr 85.58 324 *e*P P 08 12 51.2 -0.3
GRF pmax pmax
comp=Z,118nm,1.2s,mb6.0
GRF MLR MLR
comp=Z,700nm,21.9s,MS5.0
GRF Grafenberg Arr 85.58 324 *e*P P 08 12 51.2 -0.3
comp=Z,118nm,1.2s,mb6.0
GRF *e*L 09 08 26.5
comp=Z,670nm,21.9s
GRFO Grafenberg 85.58 324 *e*P P 08 12 51.3 -0.2
comp=Z,108nm,1.2s,mb6.0
UBBA Unterbreizbach 85.59 325 *e*P P 08 12 50.9 -0.7
comp=Z,62nm,1.3s,mb5.7
VISS Visnje 85.61 319 *i* P P 08 12 51.4 -0.4
JCW Jim Creek 85.64 38 *e*P P 08 12 52.4 +0.6
RPW Rockport 85.74 38 *e*P P 08 12 52.8 +0.5
RJOB Jochberg 85.78 321 *e*P P 08 12 51.9 -0.6
comp=Z,35nm,0.9s,mb5.6
KBA Koelnbreinsper 85.82 321⇓ *i*P P 08 12 52.6 -0.2
comp=Z,17nm,1.1s,mb5.6,SNR=7.3
IBBN Ibbenburen 85.87 327 *e*P P 08 12 52.4 -0.5
comp=Z,172nm,1.0s,mb6.2
JAVS Javornik 86.03 319 *i* P P 08 12 53.0 -0.8
FUR Furstenfeldbru 86.40 322 *e*P P 08 12 55.3 -0.3
FUR pmax pmax
comp=Z,125nm,1.0s,mb6.1
FUR Furstenfeldbru 86.40 322 *e*P P 08 12 55.3 -0.3
comp=Z,125nm,1.0s,mb6.1
ABTA Abfaltersbach 86.48 321⇑ *i*P P 08 12 54.8 -1.2
comp=Z,21nm,0.7s,mb5.4,SNR=15
LON Longmire 86.50 39 *e*P P 08 12 56.5 +0.4
LON pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
LON Longmire 86.50 39 *e*P P 08 12 56.5 +0.4
comp=Z,8.8nm,1.1s,mb4.9
WTSB Winterswijk 86.55 327 *e*P P 08 12 56.5 +0.3
comp=Z,51nm,1.1s,mb5.7
BUG Bochum--Univer 86.63 326 *e*P P 08 12 57.2 +0.5
comp=Z,114nm,1.2s,mb5.7
WTTA Wattenberg 86.69 321⇑ *i*P P 08 12 56.9 -0.2
comp=Z,31nm,0.9s,mb5.5,SNR=11
WTTA Wattenberg 86.69 321⇓ *i*PcP P 08 12 56.9 -0.2
comp=Z,31nm,0.9s,mb5.5,SNR=11
TNS Taunus Mts 86.75 325 *e*P P 08 12 56.7 -0.6
TNS pmax pmax
comp=Z,38nm,1.0s,mb5.6
TNS Taunus Mts 86.75 325 *e*P P 08 12 56.7 -0.6
comp=Z,38nm,1.0s,mb5.6
ETW Entiat 86.87 38 *e*P P 08 12 58.3 +0.4
RNO Roman Nose 86.87 43 P P 08 12 59.8 +1.8
TOD Tromm 86.92 324 *e*P P 08 12 57.7 -0.4
MOTA Moosalm 86.95 322⇑ *i*P P 08 12 58.1 -0.2
comp=Z,20nm,1.0s,mb5.3
MOTA Moosalm 86.95 322⇑ *i*PcP P 08 12 58.1 -0.2
comp=Z,20nm,1.0s,mb5.3
EDM Edmonton 87.11 31 *e*P P 08 12 59.6 +0.6
STU Stuttgart 87.19 324 *e*P P 08 12 59.9 +0.4
STU pmax pmax
comp=Z,36nm,0.7s,mb5.7
STU Stuttgart 87.19 324 *e*P P 08 12 58.5 -1.0
comp=Z,40nm,0.8s,mb5.7
STU Stuttgart 87.19 324 *e*P P 08 12 59.9 +0.4
comp=Z,36nm,0.7s,mb5.7
FETA Feichten 87.34 321⇑ *i*P P 08 12 59.9 -0.3
comp=Z,29nm,1.5s,mb5.3,SNR=9.6
FETA Feichten 87.34 321⇑ *i*PcP P 08 12 59.9 -0.3
comp=Z,29nm,1.5s,mb5.3,SNR=9.6
ABH Alteburg 87.42 325 *e*P P 08 13 01.0 +0.5
OPO Ambohidratompo 87.44 248 P P 08 13 01.1 -0.1
comp=Z,4.4nm,0.7s,mb4.8,baz=52,slow=4.3,SNR=8.4
KTD Kalmit 87.47 324 *e*P P 08 13 01.0 +0.2
DAVA Damuels 87.67 322⇓ *i*P P 08 13 01.9 +0.1
comp=Z,22nm,0.8s,mb5.5,SNR=7.0
DAVA Damuels 87.67 322⇓ *i*PcP P 08 13 01.9 +0.1
comp=Z,22nm,0.8s,mb5.5,SNR=7.0
HGN Heimansgroeve 87.71 326 *e*P P 08 13 02.2 +0.3
comp=Z,37nm,0.9s,mb5.6
MEM Membach 87.77 326 P P 08 13 02.6 +0.4
comp=Z,17nm,1.1s,mb5.2
RUP Ruppelstein 87.78 325 *e*P P 08 13 01.9 -0.3
SPAK Spaichingen-Ko 87.80 323 *e*P P 08 13 01.9 -0.5
LANF Langenberg 87.81 324 *e*P P 08 13 02.6 +0.2
BEBN Eben Emael 87.82 327 P P 08 13 03.8 +1.4
comp=Z,12nm,1.5s,mb4.9
OD2 Odessa Site #2 87.89 38 *e*P P 08 13 03.4 +0.5
OD2 *e*pP pP 08 13 17.5 +0.4

BFO Black Forest 87.92 323 P P 08 13 02.8 -0.1
comp=Z,77nm,1.4s,mb5.7,SNR=5.6
BFO Black Forest 87.92 323 *e*P P 08 13 01.9 -1.0
BFO pmax pmax
comp=Z,42nm,1.6s,mb5.4
BFO Black Forest 87.92 323 *e*P P 08 13 01.9 -1.0
comp=Z,42nm,1.6s,mb5.4
GBL Gable Mountain 87.93 39 P P 08 13 04.0 +1.0
RSW Rattlesnake Hi 87.97 39 *e*P P 08 13 04.1 +0.8
RSW *e*pP pP 08 13 18.4 +0.9
HAWA Hanford 88.00 39 *e*P P 08 13 04.1 +0.7
comp=Z,22nm,1.4s,mb5.2
HUMO Hull Mountain 88.05 43 *e*P P 08 13 05.0 +1.4
comp=Z,41nm,1.5s,mb5.4
BCLA Clavier 88.24 326 P P 08 13 04.7 +0.3
comp=Z,15nm,1.6s,mb5.0
NEW Newport 88.25 36 *e*P P
NEW pmax pmax
comp=Z,12nm,0.8s
NEW Newport 88.25 36 *e*P P 08 13 05.3 +0.8
comp=Z,12nm,0.8s,mb5.2
WLF Walferdange 88.27 325 P P 08 13 04.6 0.0
comp=Z,28nm,1.3s,mb5.3
WLF Walferdange 88.27 325 *e*P P 08 13 04.6 0.0
WLF pmax pmax
comp=Z,11nm,0.6s,mb5.3
WLF Walferdange 88.27 325 *e*P P 08 13 04.4 -0.2
comp=Z,54nm,1.2s,mb5.7
WLF Walferdange 88.27 325 *e*P P 08 13 04.6 0.0
comp=Z,11nm,0.6s,mb5.3
FELD Feldberg im Sc 88.36 323 *e*P P 08 13 04.0 -1.1
SFJD Kangerlussuaq 88.36 358 *i* P P 08 13 03.9 -0.8
SFJD pmax pmax
comp=Z,19nm,1.0s,mb5.3
SFJD Kangerlussuaq 88.36 358 *i* P P 08 13 03.9 -0.8
comp=Z,19nm,1.0s,mb5.3
CDF Champ du Feu 88.44 324 *e*P P 08 13 05.8 +0.4
comp=Z,25nm,0.8s,mb5.2
CDF Champ du Feu 88.44 324 *e*P P 08 13 05.8 +0.4
CDF pmax pmax
comp=Z,13nm,0.8s,mb5.2
CDF Champ du Feu 88.44 324 *e*P P 08 13 05.8 +0.4
comp=Z,12nm,0.8s,mb5.2
TUE Stuetta 88.44 322 *e*P P 08 13 05.4 0.0
comp=Z,47nm,1.2s,mb5.6
UCC Uccle 88.47 327 P P 08 13 04.1 -1.4
ECH Echery 88.62 324 *e*P P 08 13 05.9 -0.3
YBH Yreka Blue Hor 88.67 44 *e*P P 08 13 08.0 +1.3
GIVF Givet 88.68 326 *e*P P 08 13 05.9 -0.6
comp=Z,32nm,0.9s,mb5.3
GIVF Givet 88.68 326 *e*P P 08 13 05.9 -0.6
GIVF pmax pmax
comp=Z,16nm,0.9s,mb5.3
GIVF Givet 88.68 326 *e*P P 08 13 05.9 -0.6
comp=Z,16nm,0.9s,mb5.3
SNF Seneffe 88.69 327 P P 08 13 06.5 0.0
comp=Z,12nm,1.0s,mb5.2
KMBO Kilima Mbogo 88.72 268 P P 08 13 07.8 +0.4
comp=Z,8.4nm,0.9s,mb5.1,baz=44,slow=9.1,SNR=15
DOU Dourbes 88.80 326 P P 08 13 07.0 0.0
comp=Z,11nm,1.1s,mb5.1
MOF Molkenrain 88.85 324 *e*P P 08 13 05.9 -1.4
BBS Basel-Blauen 88.88 323 *e*P P 08 13 05.7 -1.8
LNOR Lincton Mounta 89.01 39 *e*P P 08 13 09.2 +1.0
BAIF Baives 89.01 327 *e*P P 08 13 07.4 -0.7
comp=Z,21nm,0.9s,mb5.2
BAIF Baives 89.01 327 *e*P P 08 13 07.4 -0.7
BAIF pmax pmax
comp=Z,11nm,0.9s,mb5.2
BAIF Baives 89.01 327 *e*P P 08 13 07.4 -0.7
comp=Z,10nm,0.9s,mb5.2
HINF Hiseralfeld 89.02 324 *e*P P 08 13 07.1 -1.1
HAU Haudompre 89.18 324 *e*P P 08 13 08.6 -0.3
THEF They Montfort 89.23 324 *e*P P 08 13 08.0 -1.2
WALA Waterton Lakes 89.45 34 *e*P P 08 13 11.5 +1.3
comp=Z,54nm,1.6s,mb5.6
MEZF Maizieres J'vi 89.56 325 *e*P P 08 13 10.9 +0.2
comp=Z,16nm,0.8s,mb5.1
MEZF Maizieres J'vi 89.56 325 *e*P P 08 13 10.9 +0.2
comp=Z,16nm,0.8s,mb5.4
MENF Mencas 89.71 328 *e*P P 08 13 10.6 -0.7
MOD Modoc 90.08 43 *e*P P 08 13 14.0 +0.8
comp=Z,4.3nm,0.8s,mb4.8
CABF La Chapelle 90.17 323 *e*P P 08 13 12.9 -0.6
BMO Blue Mountains 90.17 39 *e*P P 08 13 14.6 +1.0
comp=Z,14nm,1.0s,mb5.2
BMO *e*pP pP 08 13 28.6 +0.8
LPG La Plagne 90.47 322 *e*P P 08 13 15.6 +0.6
comp=Z,75nm,0.9s,mb5.7
LPG La Plagne 90.47 322 *e*P P 08 13 15.6 +0.6
LPG pmax pmax
comp=Z,38nm,0.9s,mb5.7
LPG La Plagne 90.47 322 *e*P P 08 13 15.6 +0.6
comp=Z,38nm,0.9s,mb5.7
LPL La Plagne 90.47 322 *e*P P 08 13 15.5 +0.5
comp=Z,50nm,0.8s,mb5.6
LPL La Plagne 90.47 322 *e*P P 08 13 15.5 +0.5
LPL pmax pmax
comp=Z,25nm,0.8s,mb5.6
LPL La Plagne 90.47 322 *e*P P 08 13 15.5 +0.5
comp=Z,25nm,0.8s,mb5.6
BNI Bardonecchia 90.78 322 *e*P P 08 13 16.8 +0.3
WVOR Wild Horse Val 90.80 42 *e*P P 08 13 17.1 +0.5
WVOR pmax pmax
comp=Z,5.0nm,1.1s,mb4.8
WVOR Wild Horse Val 90.80 42 *e*P P 08 13 17.1 +0.5
comp=Z,5.2nm,1.1s,mb4.8
MSO Missoula 90.83 36 *e*P P 08 13 16.7 0.0
comp=Z,16nm,1.3s,mb5.2
MSO *e*pP pP 08 13 31.9 +1.0
PGF Pioggiola 90.91 319 *e*P P 08 13 17.0 -0.1
comp=Z,20nm,0.8s,mb5.2
PGF Pioggiola 90.91 319 *e*P P 08 13 17.0 -0.1
PGF pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
PGF Pioggiola 90.91 319 *e*P P 08 13 17.0 -0.1
comp=Z,10.0nm,0.8s,mb5.2
SAOF Saorge 90.92 320 *e*P P 08 13 16.5 -0.6
MBDF Montbardon 90.93 321 *e*P P 08 13 16.6 -0.5
comp=Z,27nm,0.8s,mb5.3
MBDF Montbardon 90.93 321 *e*P P 08 13 16.6 -0.5
MBDF pmax pmax
comp=Z,14nm,0.8s,mb5.3
MBDF Montbardon 90.93 321 *e*P P 08 13 16.6 -0.5
comp=Z,14nm,0.8s,mb5.3
FFC Flin Flon 90.95 25 P P 08 13 17.2 +0.2
comp=Z,143nm,0.8s,mb6.3,SNR=7.1
FFC Flin Flon 90.95 25 *e*P P 08 13 17.1 +0.1
FFC pmax pmax
comp=Z,20nm,0.8s,mb5.5
FFC Flin Flon 90.95 25 *e*P P 08 13 17.1 +0.1
comp=Z,20nm,0.8s,mb5.5
LOR Lormes 90.95 324 *e*P P 08 13 16.8 -0.4
AUTN L'Aution 90.99 320 *e*P P 08 13 16.7 -0.7
SBF Sospel 91.06 320 *e*P P 08 13 17.4 -0.4
comp=Z,73nm,0.8s,mb5.8
SBF Sospel 91.06 320 *e*P P 08 13 17.4 -0.4
SBF pmax pmax
comp=Z,36nm,0.8s,mb5.8
SBF Sospel 91.06 320 *e*P P 08 13 17.4 -0.4
comp=Z,36nm,0.8s,mb5.8
TOUF Mont Tournerai 91.08 320 *e*P P 08 13 17.4 -0.5
LUCF Luceram 91.10 320 *e*P P 08 13 17.2 -0.7
CHMT Chamberlain Mo 91.15 36 *e*P P 08 13 18.6 +0.5
REVF Revere 91.18 320 *e*P P 08 13 17.2 -1.1
MVIF Mont Vial 91.21 320 *e*P P 08 13 17.5 -0.9
SSF Saint Saulge 91.27 324 *e*P P 08 13 17.7 -1.0
ORIF Oris-en-Rattie 91.31 322 *e*P P 08 13 19.1 +0.2
comp=Z,45nm,1.0s,mb5.4
ORIF Oris-en-Rattie 91.31 322 *e*P P 08 13 19.1 +0.2
ORIF pmax pmax
comp=Z,22nm,1.0s,mb5.4
ORIF Oris-en-Rattie 91.31 322 *e*P P 08 13 19.1 +0.2
comp=Z,22nm,1.0s,mb5.5
SMF Signal de Mont 91.36 324 *e*P P 08 13 18.2 -0.9
comp=Z,19nm,0.8s,mb5.2
SMF Signal de Mont 91.36 324 *e*P P 08 13 18.2 -0.9
SMF pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
SMF Signal de Mont 91.36 324 *e*P P 08 13 18.2 -0.9
comp=Z,9.6nm,0.8s,mb5.2
CALN Calern 91.45 320 *e*P P 08 13 18.9 -0.7
AVF Avril sur Loir 91.53 324 *e*P P 08 13 18.8 -1.1
comp=Z,10.0nm,0.8s,mb4.9
AVF Avril sur Loir 91.53 324 *e*P P 08 13 18.8 -1.1
AVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
AVF Avril sur Loir 91.53 324 *e*P P 08 13 18.8 -1.1
comp=Z,5.0nm,0.8s,mb4.9
OG25 Le Caire 91.54 321 *e*P P 08 13 19.7 -0.3
FRF La Foret Royal 91.70 320 *e*P P 08 13 20.3 -0.4
comp=Z,49nm,1.0s,mb5.5
FRF La Foret Royal 91.70 320 *e*P P 08 13 20.3 -0.4
FRF pmax pmax
comp=Z,25nm,1.0s,mb5.5
FRF La Foret Royal 91.70 320 *e*P P 08 13 20.3 -0.4
comp=Z,24nm,1.0s,mb5.5
STOF St-Etienne Org 91.86 321 *e*P P 08 13 21.5 0.0
PAHR Pah Rah Range 91.90 44 *e*P P 08 13 23.3 +1.5
comp=Z,24nm,1.8s,mb5.2
PLDF La Plantade 91.90 324 *e*P P 08 13 21.4 -0.2
LMR La Mourre 91.92 320 *e*P P 08 13 21.5 -0.3
comp=Z,62nm,1.2s,mb5.5
LMR La Mourre 91.92 320 *e*P P 08 13 21.5 -0.3
LMR pmax pmax
comp=Z,31nm,1.2s,mb5.5
LMR La Mourre 91.92 320 *e*P P 08 13 21.5 -0.3
comp=Z,31nm,1.2s,mb5.5
BGF Bois d'Agland 91.94 324 *e*P P 08 13 20.9 -0.9
TAVF Tavernes 92.01 321 *e*P P 08 13 21.5 -0.7
VIVF Saint-Julien-l 92.03 322 *e*P P 08 13 21.7 -0.5
comp=Z,44nm,1.2s,mb5.4
VIVF Saint-Julien-l 92.03 322 *e*P P 08 13 21.7 -0.5
VIVF pmax pmax
comp=Z,22nm,1.2s,mb5.4
VIVF Saint-Julien-l 92.03 322 *e*P P 08 13 21.7 -0.5
comp=Z,22nm,1.2s,mb5.4
VILF Villemus 92.06 321 *e*P P 08 13 21.7 -0.7
SMRF Simiane la Rot 92.06 321 *e*P P 08 13 22.6 +0.2
comp=Z,45nm,1.1s,mb5.4
SMRF Simiane la Rot 92.06 321 *e*P P 08 13 22.6 +0.2
comp=Z,45nm,1.1s,mb5.7
LDF La Druitiere 92.12 327 *e*P P 08 13 21.4 -1.2
comp=Z,11nm,0.7s,mb5.0
LDF La Druitiere 92.12 327 *e*P P 08 13 21.4 -1.2
LDF pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
LDF La Druitiere 92.12 327 *e*P P 08 13 21.4 -1.2
comp=Z,5.7nm,0.7s,mb5.0
FLN La Foliniere 92.18 328 *e*P P 08 13 21.7 -1.1
CMB Columbia Colle 92.19 46 *e*P P 08 13 23.3 +0.2
CMB *e*PP pP 08 13 37.7 +0.3
CMB pmax pmax
comp=Z,12nm,1.1s,mb5.1
CMB Columbia Colle 92.19 46 *e*P P 08 13 23.3 +0.2
comp=Z,12nm,1.1s,mb5.1
CMB *e*pP pP 08 13 37.7 +0.4
EGMT Eagleton 92.23 33 *e*P P 08 13 23.4 +0.3
comp=Z,19nm,1.2s,mb5.3
PUYF Puyloubier 92.27 321 *e*P P 08 13 22.4 -1.0
LRM Limekiln Ridge 92.27 36 *e*P P 08 13 24.7 +1.4
TREF Trevaresse 92.39 321 *e*P P 08 13 22.7 -1.2
PRAF Pradon 92.40 321 *e*P P 08 13 21.7 -2.3
BERF Bertagne 92.41 321 *e*P P 08 13 23.4 -0.6
DLMT Dillon 92.48 37 *e*pP pP 08 13 39.6 +1.0
HLID Hailey 92.60 39 *e*P P 08 13 26.5 +1.6
comp=Z,18nm,0.8s,mb5.5
HLID *e*pP pP 08 13 40.7 +1.5
GRR Gorron 92.62 327 *e*P P 08 13 24.5 -0.4
comp=Z,14nm,0.8s,mb5.2
GRR Gorron 92.62 327 *e*P P 08 13 24.5 -0.4
GRR pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
GRR Gorron 92.62 327 *e*P P 08 13 24.5 -0.4
comp=Z,7.3nm,0.8s,mb5.2
MCMT McKenzie Canyo 92.69 37 *e*P P 08 13 26.1 +0.8
BOZ Bozeman (W) 92.82 36 *e*P P 08 13 26.7 +0.8
BOZ *e*PP pP 08 13 41.0 +0.9
BOZ pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
BOZ Bozeman (W) 92.82 36 *e*P P 08 13 26.7 +0.8
comp=Z,4.7nm,0.7s,mb5.0
BOZ *e*pP pP 08 13 41.0 +0.9
LASF Ste Croix 92.97 322 *e*P P 08 13 26.4 -0.2
comp=Z,44nm,1.2s,mb5.5
NVAR Mina Array Bea 93.32 45 P P 08 13 29.3 +1.0
comp=Z,2.4nm,0.6s,mb4.8,baz=289,slow=4.8,SNR=20
NVAR Mina Array Bea 93.32 45 P P 08 13 29.3 +0.9
CAF Calviac 93.41 323 *e*P P 08 13 28.6 0.0
comp=Z,28nm,1.2s,mb5.3
CAF Calviac 93.41 323 *e*P P 08 13 28.6 0.0
CAF pmax pmax
comp=Z,14nm,1.2s,mb5.3
CAF Calviac 93.41 323 *e*P P 08 13 28.6 0.0
comp=Z,14nm,1.2s,mb5.3
QLMT Earthquake Lak 93.46 37 *e*P P 08 13 30.6 +1.8
QLMT *e*pP pP 08 13 44.5 +1.4
RJF Les Rejaudoux 93.46 324 *e*P P 08 13 28.4 -0.4
comp=Z,31nm,1.2s,mb5.3
RJF Les Rejaudoux 93.46 324 *e*P P 08 13 28.4 -0.4
RJF pmax pmax
comp=Z,16nm,1.2s,mb5.3
RJF Les Rejaudoux 93.46 324 *e*P P 08 13 28.4 -0.4
comp=Z,16nm,1.2s,mb5.3
MFF Saint Martin d 93.47 326 *e*P P 08 13 28.0 -0.8
SGMF Saint Gilles 93.53 328 *e*P P 08 13 28.3 -0.8
comp=Z,20nm,0.9s,mb5.3
SGMF Saint Gilles 93.53 328 *e*P P 08 13 28.3 -0.8
SGMF pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
SGMF Saint Gilles 93.53 328 *e*P P 08 13 28.3 -0.8
comp=Z,10nm,0.9s,mb5.2
PTRM Twisteman Ran 93.64 48 *e*P P 08 13 30.9 +1.0
PTRM *e*pP pP 08 13 45.0 +0.9
YMR Madison River 93.82 37 *e*P P 08 13 31.9 +1.4
comp=Z,11nm,0.8s,mb5.3
ROSF Rostrenen 93.82 328 *e*P P 08 13 29.7 -0.7
comp=Z,14nm,0.8s,mb5.2
ROSF Rostrenen 93.82 328 *e*P P 08 13 29.7 -0.7
ROSF pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
ROSF Rostrenen 93.82 328 *e*P P 08 13 29.7 -0.7
comp=Z,7.3nm,0.8s,mb5.2
QUIF Quistinic 94.06 328 *e*P P 08 13 30.3 -1.2
comp=Z,17nm,0.9s,mb5.2
QUIF Quistinic 94.06 328 *e*P P 08 13 30.3 -1.2
QUIF pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
QUIF Quistinic 94.06 328 *e*P P 08 13 30.3 -1.2
comp=Z,8.4nm,0.9s,mb5.2
LFF La Frestale 94.12 324 *e*P P 08 13 31.5 -0.3
IMW Indian Meadow 94.33 37 *e*P P 08 13 34.2 +1.4
comp=Z,5.0nm,0.9s,mb4.9
IMW *e*pP pP 08 13 48.8 +1.6
MTLF Montolieu 94.36 322 *e*P P 08 13 32.7 -0.3
comp=Z,26nm,1.2s,mb5.2
MTLF Montolieu 94.36 322 *e*P P 08 13 32.7 -0.3
MTLF pmax pmax
comp=Z,13nm,1.2s,mb5.2
MTLF Montolieu 94.36 322 *e*P P 08 13 32.7 -0.3
comp=Z,13nm,1.2s,mb5.2
RLMT Red Lodge 94.42 35 *e*P P 08 13 34.2 +1.0
comp=Z,14nm,1.4s,mb5.2
RRI2 Red Ridge 94.48 38 *e*P P 08 13 35.3 +1.7
comp=Z,35nm,1.8s,mb5.5
RRI2 *e*pP pP 08 13 44.8 -3.0
MOOW Moose Ponds 94.54 37 *e*P P 08 13 35.4 +1.6
comp=Z,38nm,2.5s,mb5.4
TPAW Teton Pass 94.59 37 *e*P P 08 13 35.3 +1.2
comp=Z,24nm,1.8s,mb5.3
DGMT Dagmar 94.60 31 *e*P P 08 13 34.2 +0.2
comp=Z,9.6nm,0.9s,mb5.2
KEST Kesra 94.62 313 P P 08 13 34.3 -0.1
comp=Z,0.9nm,0.8s,mb4.3,baz=8.2,slow=3.9,SNR=3.9
REDW Red Top Meadow 94.73 37 *e*P P 08 13 36.0 +1.3
ISA Isabella 94.80 47 *e*P P 08 13 34.0 -1.2
ISA *e*PP pP 08 13 48.9 -0.5
ISA pmax pmax
comp=Z,20nm,1.3s,mb5.4
ISA Isabella 94.80 47 *e*P P 08 13 34.0 -1.2
comp=Z,20nm,1.3s,mb5.4
ISA *e*pP pP 08 13 48.9 -0.5
LAO LASA Array 94.90 33 *e*P P 08 13 34.2 -1.2
comp=Z,6.2nm,1.0s,mb5.0
HWUT Hardware Ranch 95.47 39 *e*P P 08 13 39.1 +1.0
comp=Z,12nm,1.0s,mb5.3
TPNV Topopah Spring 95.51 45 *e*P P 08 13 39.4 +1.0
TPNV *e*PP pP 08 13 53.3 +0.7
DUG Dugway 95.64 41 *e*P P 08 13 39.7 +0.8
BW06 Boulder Array 95.84 37 *e*P P 08 13 40.2 +0.4
PDAR Pinedale Array 95.84 37 P P 08 13 39.7 -0.1
comp=Z,1.8nm,0.9s,mb4.5,baz=318,slow=2.0,SNR=9.1

PDAR PKKP PKKPbc 08 30 26.9 -2.2
comp=Z,0.3nm,0.7s,baz=126,slow=2.6,SNR=3.5
GSC Goldstone 96.12 47 *e*P **P 08 13 42.0 +0.8**
comp=Z,7.5nm,0.8s,mb5.2
GSC *ep*P pP 08 13 55.7 +0.2
GSC *es*P sP 08 14 03.7 +2.9
ETSF Etsaut 96.18 323 *e*P **P 08 13 40.7 -0.6**
comp=Z,15nm,1.0s,mb5.1
ETSF Etsaut 96.18 323 *e*P **P 08 13 40.7 -0.6**
ETSF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
ETSF Etsaut 96.18 323 *e*P **P 08 13 40.7 -0.6**
comp=Z,7.4nm,1.0s,mb5.1
SJPF Ste Jean 96.39 324 *e*P **P 08 13 41.7 -0.6**
SHPR Sheep Range 96.47 45 *ep*P pP 08 14 00.1 +3.0
ULM Lac du Bonnet 96.78 25 P **P 08 13 43.0 -0.8**
comp=Z,3.1nm,0.7s,mb4.9,baz=222,slow=5.2,SNR=3.1
MSU Marysvale 97.09 42 *e*P **P 08 13 46.8 +1.2**
MSU *ep*P pP 08 14 01.0 +1.2
PFO Pinyon Flat Ob 97.35 48 *e*P **P 08 13 47.5 +0.7**
comp=Z,8.7nm,1.3s,mb5.0
LDFC Landfair 97.36 46 *e*P **P 08 13 47.7 +0.8**
comp=Z,51nm,1.1s,mb5.9
BAR Barrett 97.75 49 *e*P **P 08 13 49.6 +1.0**
comp=Z,18nm,1.0s,mb5.6
SCHQ Schefferville 99.94 7 LR LR 09 02 01.7
comp=Z,685nm,21.2s,MS5.1,baz=203,slow=37
EVO Evora 103.27 324⇑ *i*P Pdif 08 14 13.6 +0.8
comp=Z,34nm,1.3s
TXAR Lajitas Array 108.45 44 PKiKP PKiKP 08 18 41.2 -0.8
comp=Z,0.3nm,0.8s,baz=350,slow=2.7,SNR=3.4
TORD Torodi Ar. Bea 113.30 298 PKiKP PKiKP 08 18 50.1 -1.5
comp=Z,2.5nm,0.6s,baz=44,slow=2.0,SNR=32
TORD PP PP 08 19 32.5 -10
comp=Z,2.9nm,0.9s,baz=48,slow=6.4,SNR=4.0
QSPA South Pole Qui 114.66 180 PKP PKiKP 08 18 52.2 -0.1
comp=Z,0.7nm,0.2s,baz=117,slow=2.5,SNR=3.6
DBIC Dimbokro 122.27 296 PKP PKPdf 08 19 07.9 -1.0
comp=Z,7.6nm,0.7s,baz=39,slow=2.4,SNR=14
KIC Kosan Boka 122.35 296 *e*PKP1 PKPdf 08 19 07.7 -1.4
comp=Z,35nm,0.6s
TIC Toumodi 122.42 296 *e*PKP1 PKPdf 08 19 08.0 -1.2
comp=Z,22nm,0.6s
LIC Lamto 122.67 296 *e*PKIKP PKPdf 08 19 08.8 -0.9
comp=Z,18nm,0.7s
LIC Lamto 122.67 296 *e*PKP1 PKPdf 08 19 08.8 -0.9
comp=Z,49nm,1.1s
SNAA Sanae 125.06 198 *e*PKPdf PKPdf 08 19 11.4 -1.1
SNAA *e* 08 19 26.2
SNAA *e* 08 19 35.5
VNA2 Neumayer--Watz 126.70 198 *e*PKPdf PKPdf 08 19 15.9 +0.3
baz=57,slow=0.9
VNA2 *e* 08 19 30.4
VNA2 *e* 08 19 39.6
VNA1 Neumayer--Stat 127.10 198 *e*PKPdf PKPdf 08 19 16.7 +0.3
VNA1 *e* 08 19 31.1
VNA1 *e* 08 19 40.1
VNA3 Neumayer Olymp 127.13 197 *e*PKPdf PKPdf 08 19 16.3 -0.1
VNA3 *e* 08 19 29.7
VNA3 *e* 08 19 40.7
PMSA Palmer Station 139.64 174 *e*PKPdf PKPdf 08 19 29.8 -10
ROSC El Rosal 144.80 36 PKP PKPdf 08 19 50.8 -0.1
comp=Z,6.4nm,0.6s,baz=288,slow=19,SNR=5.5
OTAV Otavalo 146.04 46 *e*PKPbc PKPbc 08 19 54.3 +0.5
LPAZ La Paz 164.78 58 PKP PKPdf 08 20 18.8 +1.1
comp=Z,2.9nm,1.1s,baz=17,slow=4.7,SNR=6.3
LPAZ PKPab PKPab 08 21 12.7 -0.9
comp=Z,1.3nm,0.8s,baz=293,slow=3.9,SNR=4.3
BDFB Brasilia 168.90 325 PKPab PKPab 08 21 31.2 -0.4
comp=Z,14nm,0.9s,baz=49,slow=3.2,SNR=18
SIV San Ignacio 169.32 35 PP PP 08 25 21.4 -0.9
comp=Z,4.1nm,1.0s,baz=337,slow=5.5,SNR=6.2
CPUP Villa Florida 177.18 122 PKP PKPdf 08 20 23.7 -0.2
comp=Z,0.8nm,0.7s,baz=196,slow=7.4,SNR=3.6

IDC ***22*** *08:01:02.1±0.5, 4609S×7625W, h0km, mb4.7/14, mb1 4.8/17, mb1mx4.7/19, mbtmp4.6/17, ML4.7/3, MS5.2/14, Ms1 5.2/14, ms1mx4.9/30, Error ellipse: s-maj=23.4km s-min=13.4km az=91.0*

NEIC ***22*** *08:01:03.5±0.2, 4591S×7628W, h10km, mb5.4/69, Error ellipse: s-maj=6.8km s-min=4.9km az=94.0*

BJI ***22*** *08:01:03.4, 4590S×7630W, h10km, mB5.3, Ms5.5, Msz5.4*

GCMT ***22*** *08:01:03.5±0.1, 4601S×7680W, h12km, MW5.5/103, Moment Tensor Solution. s86,c151; s103,c260; Duration: 1ꜛ4 Moment tensor: Scale 10^17 Nm; Mrr-0.59±.03; Mθθ 1.57±.03; Mϕϕ -0.97±.03; Mrθ 0.36±.08; Mθϕ-2.25±.03; Mϕr-0.41±.08; Best double couple: M◎2.63100×10^17 NP1:ϕs75.00000°, δ80.00000°, λ178.00000°. NP2:ϕs165.00000°, δ88.00000°, λ10.00000°. Principal axes: T 2.9580, Plg8.0000°, Azm31.0000°; N -0.6530, Plg80.0000°, Azm175.0000°; P -2.3030, Plg6.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISCJB ***22*** *08:01:03.0±0.2, 4592S±004×7624W±007, h17km, mb5.2/87, MS5.2/12 Error ellipse: s-maj=6.9km s-min=5.2km az=176.1*

MOS ***22*** *08:01:04.7±1.1, 4595S×7629W, h33km, mb5.4/27, Error ellipse: s-maj=26.0km s-min=12.2km az=83.9*

ISC 22 08:01:05.0±0.2, 4591S±003×7629W±006, h18km, h18km±2.6km:pP-P,n235,σ1ꜛ02/179, mb5.2/87, MS5.2/12, 8C-2D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**6.65**	**41**	Pn	**Pn**	**08 02 42.7**	**+1.0**
	5.5nm,0.3s,baz=215,slow=12,SNR=128						
PLCA				LR	LR	08 05 18.8	
	comp=Z,43μm,20.3s,baz=212,slow=38						
CCHI	**Chillan**	**9.82**	**20**	*i* P	**Pn**	**08 03 24.9**	**-0.2**
USHA	**Ushuaia**	**10.24**	**154**	Pn	**Pn**	**08 03 29.1**	**-1.6**
	1.5nm,0.3s,baz=312,slow=9.9,SNR=13						
USHA				LR	LR	08 07 48.4	
	comp=Z,12μm,18.5s,baz=306,slow=40						
CICH	**Cipreses**	**12.41**	**23**⇓	*i*P	**Pn**	**08 04 00.3**	**-0.3**
LNV	**Longovilo**	**12.51**	**19**	*e*P	**Pn**	**08 03 59.4**	**-2.5**
CACH	**El Canelo**	**12.55**	**22**	*i* P	**Pn**	**08 04 00.7**	**-1.8**
TACH	**Talagante**	**12.91**	**20**⇑	*i*P	**Pn**	**08 04 04.6**	**-2.9**
LMEL	**Las Melosas**	**12.92**	**23**	*e*P	**Pn**	**08 04 05.7**	**-1.8**
PCH	**Pirque**	**13.05**	**22**⇑	*i*P	**Pn**	**08 04 06.9**	**-2.4**
TRQA	**Tornquist**	**13.21**	**59**	*e*Pn	**Pn**	**08 04 12.3**	**+0.8**
CLCH	**Cerro Calan**	**13.25**	**21**⇑	*i*P	**Pn**	**08 04 09.8**	**-2.3**
EFI	**East Falkland**	**13.31**	**122**	*e*P	**Pn**	**08 04 12.3**	**-0.5**
EFI				pmax	pmax		
	comp=Z,168nm,1.1s						
EFI	**East Falkland**	**13.31**	**122**	*e*Pn	**Pn**	**08 04 12.3**	**-0.5**
	comp=Z,168nm,1.1s						
FCH	**Farellones**	**13.38**	**22**⇑	*i*P	**Pn**	**08 04 11.1**	**-2.8**
CFAA	**Coronel Fontan**	**15.59**	**26**	Pn	**Pn**	**08 04 39.0**	**-4.7**
	comp=Z,0.7nm,0.3s,baz=194,slow=1.1,SNR=40						
CFAA				Sn	**Sn**	**08 07 31.4**	**-4.5**
	comp=Z,0.1nm,0.3s,baz=269,slow=16,SNR=2.9						
CFAA				LR	LR	08 10 56.7	
	comp=Z,2μm,19.5s,baz=198,slow=38						
TLL	**Tololo Astrono**	**16.29**	**17**	*e*P	**Pn**	**08 04 51.1**	**-1.6**
LCO	**Las Campanas**	**17.43**	**17**	*e*Pn	**Pn**	**08 05 06.7**	**-0.4**
	comp=Z,140nm,1.3s						
LPA	**La Plata**	**17.74**	**58**	*ce*P	**Pn**	**08 05 10.0**	**-0.8**
LPA	**La Plata**	**17.74**	**58**	*e*P	**Pn**	**08 05 13.0**	**+2.2**
LPA				*e*PP		08 05 22.0	
LPA				*e*S	**Sn**	**08 08 30.0**	**+2.1**
LPA				*e*SS		08 08 49.0	
LPA				*e*S	sS	08 08 55.0	+12
PMSA	**Palmer Station**	**20.07**	**165**	P	**P**	**08 05 36.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=344,slow=11,SNR=2.9						
PMSA				LR	LR	08 11 39.6	
	comp=Z,6μm,19.0s,MS4.9,baz=329,slow=32						
PMSA	**Palmer Station**	**20.07**	**165**	*e*P	**P**	**08 05 36.9**	**-0.1**
	comp=Z,71nm,1.3s						
LVC	**Limon Verde**	**24.00**	**17**	P	**P**	**08 06 19.2**	**+0.6**
	comp=Z,15nm,0.8s,mb4.5,baz=223,slow=7.4,SNR=10						
LVC				LR	LR	08 16 28.9	
	comp=Z,5μm,20.0s,MS4.9,baz=192,slow=38						
LVC	**Limon Verde**	**24.00**	**17**	*e*P	**P**	**08 06 19.0**	**+0.4**
	comp=Z,217nm,1.4s,mb5.4						
CPUP	**Villa Florida**	**24.71**	**44**	P	**P**	**08 06 25.8**	**+0.8**
	comp=Z,23nm,0.6s,mb4.9,baz=204,slow=8.7,SNR=37						
CPUP				LR	LR	08 16 49.2	
	comp=Z,13μm,19.1s,MS5.4,baz=201,slow=38						
CPUP	**Villa Florida**	**24.71**	**44**	P	**P**	**08 06 25.8**	**+0.8**
CPUP				LR	LR	08 16 49.2	
LPAZ	**La Paz**	**30.31**	**16**	P	**P**	**08 07 16.5**	**+1.3**
	comp=Z,4.8nm,0.8s,mb4.3,baz=182,slow=8.2,SNR=16						
LPAZ				PcP	PcP	08 10 17.6	+2.4
	comp=Z,2.6nm,0.9s,baz=207,slow=2.3,SNR=4.0						
LPAZ	**La Paz**	**30.31**	**16**	P	**P**	**08 07 16.5**	**+1.3**
LPAZ				PcP	PcP	08 10 17.6	+2.4
BDFB	**Brasilia**	**38.35**	**47**	P	**P**	**08 08 26.5**	**+1.7**
	comp=Z,9.1nm,0.6s,mb4.7,baz=213,slow=6.7,SNR=16						
BDFB				LR	LR	08 25 40.2	
	comp=Z,10μm,18.8s,MS5.6,baz=26,slow=38						
ATAH	**Atahualpa**	**38.81**	**357**	P	**P**	**08 08 30.4**	**+1.8**
	comp=Z,23nm,1.1s,mb4.8,baz=172,slow=6.5,SNR=5.5						
VNA3	**Neumayer Olymp**	**39.91**	**152**	*e*P	**P**	**08 08 36.2**	**-1.1**
VNA3				*e*	pP	08 08 40.4	-2.6
VNA3				*e*		08 08 43.5	
VNA3				*e*		08 08 49.7	
VNA3				*e*		08 08 58.6	
VNA1	**Neumayer--Stat**	**40.35**	**151**	*e*P	**P**	**08 08 41.2**	**+0.2**
VNA1				*e*	pP	08 08 44.8	-1.9
VNA1				*e*	pP	08 08 47.6	+0.9
VNA1				*e*		08 08 52.9	
VNA1				*e*		08 08 58.6	
VNA2	**Neumayer--Watz**	**40.65**	**152**	*e*P	**P**	**08 08 42.3**	**-1.1**
	baz=277,slow=9.1						
VNA2				*e*	pP	08 08 46.7	-2.4
VNA2				*e*	pP	08 08 48.7	-0.4
VNA2				*e*		08 08 56.0	
VNA2				*e*		08 09 05.0	
SNAA	**Sanae**	**42.09**	**153**	*e*P	**P**	**08 08 55.0**	**-0.2**
SNAA				*e*	pP	08 08 58.5	-2.5
SNAA				*e*	pP	08 09 00.8	-0.2
SNAA				*e*		08 09 06.9	
SNAA				*e*		08 09 13.2	
SNAA	**Sanae**	**42.09**	**153**⇑	*e*P	**P**	**08 08 54.6**	**-0.6**
SNAA	**Sanae**	**42.09**	**153**	*e*P	**P**	**08 08 54.7**	**-0.6**
QSPA	**South Pole Qui**	**44.34**	**180**	P	**P**	**08 09 12.8**	**-0.5**
	comp=Z,17nm,1.0s,mb4.7,baz=144,slow=5.4,SNR=24						
QSPA	**South Pole Qui**	**44.34**	**180**	P	**P**	**08 09 12.8**	**-0.5**
OTAV	**Otavalo**	**45.99**	**357**	*e*P	**P**	**08 09 27.9**	**+0.8**
	comp=Z,33nm,1.2s,mb5.1						
MAIT	**Maitri**	**46.88**	**153**	*e*P	**P**	**08 09 33.5**	**0.0**
NVL	**N'lazarevskaya**	**46.92**	**153**	*e*P	**P**	**08 09 33.7**	**-0.1**
NVL				*e**PP	pP	08 09 40.4	+0.9
NVL				*e*S	**S**	**08 16 26.2**	**+2.8**
NVL				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.4						
ROSC	**El Rosal**	**50.57**	**3**	P	**P**	**08 10 05.4**	**+3.0**
	comp=Z,15nm,0.8s,mb5.0,baz=256,slow=22,SNR=5.5						
ROSC				LR	LR	08 29 28.3	
	comp=Z,3μm,18.9s,MS5.4,baz=187,slow=34						
ROSC	**El Rosal**	**50.57**	**3**	*e*P	**P**	**08 10 03.1**	**+0.7**
SBA	**Scott Base**	**50.76**	**194**	*e*P	**P**	**08 10 02.7**	**-0.5**
SBA				*e*		08 11 21.1	
SBA				pmax	pmax		
	comp=Z,253nm,2.8s,mb5.7						
SBA	**Scott Base**	**50.76**	**194**	*e*P	**P**	**08 10 02.6**	**-0.5**
	comp=Z,253nm,2.8s,mb5.7						
SBA				*e*PcP	PcP	08 11 21.1	+1.2
RKT	**Rikitea**	**52.15**	**275**	*e*S	**S**	**08 17 34.3**	**-3.5**
	comp=Z,639nm,28.0s						
RKT				*e*LQ		08 22 58.8	
	comp=Z,2μm,33.2s						
RKT				*e*LR	LR	08 25 16.8	
	comp=Z,2μm,28.5s						
BCIP	**Isla Barro Col**	**54.92**	**356**	*e*P	**P**	**08 10 34.4**	**-0.1**
	comp=Z,44nm,0.9s,mb5.5						
JTS	**JuntasAbangare**	**56.48**	**350**	*e*P	**P**	**08 10 46.3**	**+0.6**
JTS				pmax	pmax		
	comp=Z,13nm,1.0s						
JTS	**JuntasAbangare**	**56.48**	**350**	*e*P	**P**	**08 10 46.3**	**+0.6**
	comp=Z,13nm,1.0s,mb4.9						
TGUH	**Tegucigalpa,Un**	**60.50**	**348**	*e*P	**P**	**08 11 13.8**	**0.0**
	comp=Z,45nm,1.0s,mb5.6						
TBI	**Tubuai**	**62.10**	**265**	*e*S	**S**	**08 19 48.6**	**-0.3**
	comp=Z,564nm,31.0s						
TBI				*e*LQ		08 27 15.4	
	comp=Z,3μm,33.5s						
TBI				*e*LR	LR	08 29 39.3	
	comp=Z,948nm,29.0s						
MAW	**Mawson**	**62.69**	**164**	*e*P	**P**	**08 11 27.0**	**-0.9**
MAW	**Mawson**	**62.69**	**164**	P	**P**	**08 11 26.9**	**-1.0**
	comp=Z,7.3nm,1.0s,mb4.8,baz=194,slow=8.7,SNR=13						
DRV	**Dumont d'Urvil**	**64.38**	**195**	P	**P**	**08 11 43.0**	**+3.9**
DRV				S	**S**	**08 20 31.0**	**+15**
DRV				SS	SS	08 24 54.0	+29
DRV				L		08 28 00.0	
DRV				R		08 31 00.0	
SJG	**San Juan**	**64.38**	**11**	*e*P	**P**	**08 11 38.4**	**-1.2**
SJG				pmax	pmax		
	comp=Z,11nm,0.7s						
SJG	**San Juan**	**64.38**	**11**	*e*P	**P**	**08 11 38.4**	**-1.2**
	comp=Z,11nm,0.7s,mb5.0						
AOPR	**Arecibo Observ**	**64.53**	**10**	*e*P	**P**	**08 11 40.9**	**+0.2**
	comp=Z,9.3nm,0.8s,mb4.9						
CBYP	**Canovanas**	**64.57**	**11**	*e*P	**P**	**08 11 40.3**	**-0.6**
	comp=Z,26nm,1.1s,mb5.2						
MEH	**Mehetia**	**64.77**	**270**	*e*P	**P**	**08 11 42.0**	**-0.4**
	comp=Z,2μm,1.5s						
TAOE	**Nuku Hiva Isla**	**65.58**	**283**	*e*S	S	08 20 32.2	-0.1
	comp=Z,8μm,29.2s						
TAOE	**Nuku Hiva Isla**	**65.58**	**283**	*e*LR	LR	08 31 40.1	
	comp=Z,4μm,29.7s						
TIAR	**Tiarei**	**65.88**	**269**	*e*P	**P**	**08 11 49.3**	**-0.3**
	comp=Z,507nm,1.2s,mb6.4						
PAE	**Paea**	**65.97**	**269**	*e*P	**P**	**08 11 49.6**	**-0.6**
	comp=Z,167nm,1.2s,mb6.0						
PAE	**Paea**	**65.97**	**269**	*e*P	**P**	**08 11 49.6**	**-0.6**
PAE				pmax	pmax		
	comp=Z,167nm,1.2s,mb5.9						
PPT	**Papeete**	**66.03**	**269**	*e*P	**P**	**08 11 50.6**	**0.0**
	comp=Z,36nm,1.3s,mb5.2						
PPT				*e*S	S	08 20 34.3	-3.4
	comp=Z,1μm,28.5s						
PPT				*e*LQ		08 28 15.7	
	comp=Z,1μm,25.8s						
PPT				*e*LR	LR	08 31 51.1	
	comp=Z,508nm,29.0s						
PPT	**Papeete**	**66.03**	**269**	*e*P	**P**	**08 11 50.6**	**0.0**
PPT				*e*S	S	08 20 34.3	-3.4
PPT				pmax	pmax		
	comp=Z,36nm,1.3s						
PPT	**Papeete**	**66.03**	**269**	*e*P	**P**	**08 11 50.6**	**0.0**
	comp=Z,36nm,1.3s,mb5.2						
PPT				*e*S	S	08 20 34.3	-3.4
PPT				*e*LQ		08 28 15.7	
VAH	**Vaihoa**	**66.26**	**272**	*e*P	**P**	**08 11 51.5**	**-0.6**
	comp=Z,65nm,1.2s,mb5.5						
PMOR	**Pomariorio Ree**	**66.61**	**272**	*e*P	**P**	**08 11 53.8**	**-0.5**
	comp=Z,44nm,1.1s,mb5.4						
TEIG	**Tepich**	**66.71**	**348**	*e*P	**P**	**08 11 53.9**	**-0.8**
	comp=Z,20nm,0.8s,mb5.2						
RAR	**Rarotonga**	**70.64**	**259**	LR	LR	08 34 29.3	
	comp=Z,847nm,21.0s,MS5.0,baz=287,slow=28						
SUR	**Sutherland**	**72.03**	**118**	*e*P	**P**	**08 12 29.0**	**+1.3**
	comp=Z,71nm,1.3s,mb5.4						
RPZ	**Rata Peaks**	**72.67**	**225**	LR	LR	08 36 23.1	
	comp=Z,3μm,20.7s,MS5.5,baz=117,slow=29						
URZ	**Urewera**	**73.48**	**232**	LR	LR	08 37 19.5	
	comp=Z,1μm,21.0s,MS5.1,baz=151,slow=30						
DWPF	**Disney**	**73.81**	**355**	P	**P**	**08 12 37.1**	**-0.9**
	comp=Z,61nm,1.0s,mb5.5						
BOSA	**Boshof**	**77.39**	**118**	P	**P**	**08 12 57.9**	**-0.9**
	comp=Z,7.7nm,0.9s,mb4.6,baz=237,slow=7.8,SNR=7.5						
HKT	**Hockley**	**77.56**	**343**	*e*P	**P**	**08 12 59.3**	**-0.1**
HKT				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
HKT	**Hockley**	**77.56**	**343**	*e*P	**P**	**08 12 59.3**	**-0.1**
	comp=Z,20nm,1.4s,mb4.8						
BBSR	**BB Station**	**78.62**	**10**	*e*P	**P**	**08 13 04.5**	**-0.7**
	comp=Z,11nm,1.1s,mb4.7						
NHSC	**New Hope**	**78.73**	**357**	*e*P	**P**	**08 13 06.9**	**+1.1**
	comp=Z,83nm,1.1s,mb5.6						
VBMS	**Vicksburg**	**78.82**	**348**	*e*P	**P**	**08 13 06.5**	**+0.2**
	comp=Z,7.6nm,0.4s,mb5.0						
TXAR	**Lajitas Array**	**78.91**	**336**	P	**P**	**08 13 07.1**	**+0.3**
	comp=Z,11nm,1.2s,mb4.6,baz=152,slow=5.7,SNR=25						
TXAR				PP	PP	08 16 17.4	+11
	comp=Z,1.7nm,1.1s,baz=165,slow=7.5,SNR=4.0						
JCT	**Junction City**	**78.97**	**339**	*e*P	**P**	**08 13 06.9**	**-0.3**
JCT				pmax	pmax		
	comp=Z,117nm,1.3s,mb5.7						
JCT	**Junction City**	**78.97**	**339**	*e*P	**P**	**08 13 06.9**	**-0.2**
	comp=Z,117nm,1.3s,mb5.7						
TSUM	**Tsumeb**	**79.08**	**106**	*e*P	**P**	**08 13 07.9**	**-0.3**
	comp=Z,12nm,1.2s,mb4.7						
NATX	**Nacogdoches**	**79.08**	**344**	*e*P	**P**	**08 13 07.4**	**-0.4**
	comp=Z,29nm,0.9s,mb5.2						
LRAL	**Lakeview Retre**	**79.17**	**351**	*e*P	**P**	**08 13 08.2**	**-0.1**
	comp=Z,17nm,0.9s,mb5.0						
GOGA	**Godfrey**	**79.22**	**354**	*e*P	**P**	**08 13 07.5**	**-1.0**
GOGA				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
GOGA	**Godfrey**	**79.22**	**354**	*e*P	**P**	**08 13 07.5**	**-1.0**
	comp=Z,38nm,1.1s,mb5.2						
JSC	**Jenkinsville**	**79.95**	**356**	*e*P	**P**	**08 13 12.9**	**+0.5**
CNNC	**Cliffs of the**	**80.79**	**359**	P	**P**	**08 13 11.7**	**-5.2**
	comp=Z,36nm,1.2s,mb5.2						
OXF	**Oxford**	**80.92**	**349**	*e*P	**P**	**08 13 18.1**	**+0.4**
OXF				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.3						
OXF	**Oxford**	**80.92**	**349**	*e*P	**P**	**08 13 18.1**	**+0.5**
	comp=Z,42nm,1.1s,mb5.3						
SWET	**Sewanee**	**81.22**	**352**	*e*P	**P**	**08 13 18.2**	**-1.0**
SWET				*e*PP	PP	08 16 20.0	-5.3
CPCT	**Cooper Cave**	**81.33**	**353**	*e*P	**P**	**08 13 18.6**	**-1.2**
MIAR	**Mount Ida**	**81.59**	**346**	*e*P	**P**	**08 13 21.4**	**+0.2**
MIAR				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
MIAR	**Mount Ida**	**81.59**	**346**	*e*P	**P**	**08 13 21.4**	**+0.2**
	comp=Z,13nm,1.1s,mb4.8						
LIC	**Lamto**	**81.61**	**72**	*e*P	**P**	**08 13 21.0**	**-0.9**
	comp=Z,77nm,1.3s,mb5.5						
GDL2	**Guadalupe Moun**	**81.80**	**336**	*e*P	**P**	**08 13 22.7**	**+0.4**
KIC	**Kosan Boka**	**81.90**	**72**	*e*P	**P**	**08 13 23.5**	**+0.1**
	comp=Z,120nm,1.3s,mb5.7						
TIC	**Tononou**	**81.92**	**72**	*e*P	**P**	**08 13 23.7**	**+0.2**
	comp=Z,114nm,1.2s,mb5.7						
DBIC	**Dimbokro**	**82.05**	**72**	P	**P**	**08 13 24.3**	**+0.1**
	comp=Z,7.1nm,0.8s,mb4.6,baz=197,slow=6.2,SNR=8.6						
WVT	**Waverly**	**82.33**	**351**	*e*P	**P**	**08 13 23.7**	**-1.3**
WVT				pmax	pmax		
	comp=Z,49nm,1.3s,mb5.3						
WVT	**Waverly**	**82.33**	**351**	*e*P	**P**	**08 13 23.7**	**-1.3**
	comp=Z,49nm,1.3s,mb5.3						
TZTN	**Tazewell**	**82.34**	**354**	*e*P	**P**	**08 13 25.2**	**+0.1**
	comp=Z,42nm,1.3s,mb5.2						
GNAR	**Gosnell**	**82.44**	**349**	*e*P	**P**	**08 13 25.2**	**-0.4**
	comp=Z,2μm,1.3s						
GLAT	**Glass**	**82.64**	**349**	*e*P	**P**	**08 13 26.7**	**+0.1**
UTMT	**University of**	**82.66**	**350**	*e*P	**P**	**08 13 26.3**	**-0.5**
	comp=Z,157nm,1.2s,mb5.9						
WMOK	**Wichita Mounta**	**82.81**	**341**	*e*P	**P**	**08 13 26.5**	**-1.1**
WMOK				pmax	pmax		
	comp=Z,64nm,1.4s,mb5.5						
WMOK	**Wichita Mounta**	**82.81**	**341**	*e*P	**P**	**08 13 26.5**	**-1.1**
	comp=Z,64nm,1.4s,mb5.5						
PVMO	**Portageville**	**82.83**	**349**	*e*P	**P**	**08 13 27.5**	**-0.1**
	comp=Z,96nm,0.3s,mb6.3						
ELN	**Prospectdale**	**82.86**	**356**	*e*P	**P**	**08 13 27.6**	**-0.1**
PARMO	**Parma**	**83.09**	**349**	*e*P	**P**	**08 13 29.9**	**+0.9**
URVA	**University of**	**83.11**	**359**	*e*P	**P**	**08 13 29.3**	**+0.2**
AMTX	**Amarillo**	**83.63**	**339**	*e*P	**P**	**08 13 31.9**	**0.0**
	comp=Z,56nm,1.3s,mb5.5						
TUC	**Tucson**	**83.89**	**331**	*e*P	**P**	**08 13 33.5**	**+0.3**
TUC				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
TUC	**Tucson**	**83.89**	**331**	*e*P	**P**	**08 13 33.5**	**+0.3**
	comp=Z,8.0nm,0.9s,mb4.8						
SIUC	**Southern Illin**	**84.06**	**350**	*e*P	**P**	**08 13 32.5**	**-1.4**
	comp=Z,33nm,0.9s,mb5.5						
USIN	**University of**	**84.12**	**351**	*e*P	**P**	**08 13 33.3**	**-0.9**
	comp=Z,26nm,0.7s,mb5.5						
WCI	**Wyandotte Cave**	**84.24**	**352**	*e*P	**P**	**08 13 34.2**	**-0.6**
WCI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
WCI	**Wyandotte Cave**	**84.24**	**352**	*e*P	**P**	**08 13 34.2**	**-0.7**
	comp=Z,6.7nm,0.8s,mb4.8						
BNM	**Barren Site**	**84.28**	**335**	*e*P	**P**	**08 13 35.4**	**+0.2**
LENM	**Lemitar**	**84.39**	**335**	*e*P	**P**	**08 13 35.8**	**0.0**
LPM	**Los Pinos Moun**	**84.43**	**335**	*e*P	**P**	**08 13 36.3**	**+0.4**
FVM	**French Village**	**84.48**	**349**	*e*P	**P**	**08 13 35.6**	**-0.5**
FVM				pmax	pmax		
	comp=Z,55nm,1.4s,mb5.5						
FVM	**French Village**	**84.48**	**349**	*e*P	**P**	**08 13 35.6**	**-0.5**
	comp=Z,55nm,1.4s,mb5.5						
CCM	**Cathedral Cave**	**84.66**	**348**	*e*P	**P**	**08 13 36.6**	**-0.4**
CCM				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.7						
CCM	**Cathedral Cave**	**84.66**	**348**	*e*P	**P**	**08 13 36.5**	**-0.4**
	comp=Z,52nm,0.8s,mb5.7						
LAZ	**Ladron**	**84.66**	**335**	*e*P	**P**	**08 13 37.7**	**+0.6**
SDMD	**Soldier's Deli**	**84.94**	**360**	*e*P	**P**	**08 13 38.4**	**0.0**
	comp=Z,28nm,1.1s,mb5.3						
ANMO	**Albuquerque**	**84.98**	**336**	LR	LR	08 45 38.5	
	comp=Z,559nm,18.3s,MS5.0,baz=343,slow=31						
ANMO	**Albuquerque**	**84.98**	**336**	*e*P	**P**	**08 13 39.0**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,17nm,1.0s						
ANMO	**Albuquerque**	**84.98**	**336**	*e*P	**P**	**08 13 39.0**	**+0.3**

DUG pmax pmax
comp=Z,15nm,1.4s,mb5.1
DUG Dugway 91.75 333 *e*P **P** **08 14 11.2 +0.3**
comp=Z,15nm,1.4s,mb5.1
NVAR Mina Array Bea 92.05 328 P **P** **08 14 14.8 +2.4**
comp=Z,1.8nm,0.7s,mb4.5,baz=149,slow=2.1,SNR=5.2
CMB Columbia Colle 92.48 327 *e*P **P** **08 14 10.1 -4.2**
CMB pmax pmax
comp=Z,14nm,1.3s,mb5.1
CMB Columbia Colle 92.48 327 *e*P **P** **08 14 10.1 -4.3**
comp=Z,14nm,1.3s,mb5.1
WAKR Walker 92.53 328 *e*P **P** **08 14 15.8 +1.2**
HWUT Hardware Ranch 92.64 334 *e*P **P** **08 14 13.6 -1.4**
comp=Z,14nm,1.0s,mb5.3
RSSD Black Hills 92.96 340 *e*P **P** **08 14 15.6 -0.8**
RSSD pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
RSSD Black Hills 92.96 340 *e*P **P** **08 14 15.6 -0.8**
comp=Z,4.9nm,0.8s,mb5.0
BW06 Boulder Array 93.12 336 *e*P **P** **08 14 21.9 +4.7**
PDAR Pinedale Array 93.12 336 P **P** **08 14 20.1 +2.9**
comp=Z,2.2nm,0.8s,mb4.6,baz=159,slow=5.4,SNR=7.8
REDW Red Top Meadow 94.04 335 *e*P **P** **08 14 22.8 +1.4**
TPAW Teton Pass 94.19 335 *e*P **P** **08 14 21.8 -0.2**
comp=Z,6.2nm,1.1s,mb5.0
STKA Stephens Creek 95.31 212 LR LR 08 49 35.8
comp=Z,1μm,18.8s,MS5.3,baz=84,slow=31
ULM Lac du Bonnet 97.27 347 P **P** **08 14 39.1 +3.1**
comp=Z,3.5nm,0.7s,mb4.9,baz=191,slow=11,SNR=2.9
ASAR Alice Springs 105.52 209 PKKP PKKPbc 08 30 57.1 +7.3
comp=Z,0.6nm,0.9s,baz=344,slow=2.5,SNR=5.4
ASAR PKKPab PKKPab 08 31 14.5 +3.1
comp=Z,0.9nm,1.1s,baz=337,slow=2.1,SNR=4.2
DLBC Dease Lake 113.06 333 *e*PKPdf PKiKP 08 19 39.7 -0.1
SUMG Summit 121.10 12 *e*PKPdf PKPdf 08 19 55.8 +0.9
GERES GERESS Array B 122.50 52 PKP PKPdf 08 19 58.5 +0.2
comp=Z,1.2nm,0.8s,baz=257,slow=1.7,SNR=3.8
KHC Kasperske Hory 122.60 51 *i* PKIKP PKPdf 08 20 02.9 +4.4
CLL Collm 123.50 49 *e*SS SS 08 38 54.0 +25
CLL *e*SSS 08 43 06.0
CLL Lm 09 09 00.0
comp=N,600nm,21.7s
CLL Lm 09 09 00.0
comp=E,900nm,22.0s
CLL Lm 09 09 00.0
comp=Z,1μm,21.5s
CLL Collm 123.50 49 PP PP 08 21 47.0 +4.4
COLA College 123.58 331 *i* PKIKP PKPdf 08 20 05.3 +5.4
IMA2 Indian Mountai 126.26 330 *e*PKPdf PKPdf 08 20 05.4 +0.4
NOA NORSAR Array B 127.63 38 PKP PKPdf 08 20 09.9 +2.2
comp=Z,1.5nm,0.9s,baz=236,slow=1.7,SNR=2.7
KIS Kishinev 130.27 60 *e*PKIKP PKPdf 08 20 19.0 +5.8
KIS MLR MLR
comp=E,900nm,20.0s
KIS MLR MLR
comp=Z,900nm,20.0s,MS5.5
KIS MLR MLR
comp=Z,800nm,20.0s
KIS Kishinev 130.27 60 *e*PKP PKPdf 08 20 19.0 +5.8
KIS *e*L 09 07 50.0
KIS LRM 09 19 46.0
comp=Z,800nm,20.0s
AKASG Malin Array Be 132.16 56 PKP PKPdf 08 20 16.7 +0.1
comp=Z,0.7nm,0.3s,baz=253,slow=3.6,SNR=4.0
GNI Garni 137.36 76 *i* PKIKP PKPdf 08 20 30.1 +3.3
KIV Kislovodsk 137.68 70 *e*PKIKP PKPdf 08 20 26.3 -0.9
KIV pmax pmax
comp=Z,4.0nm,0.8s
OBN Obninsk 137.88 52 *e*PKIKP PKPdf 08 20 26.4 -0.8
OBN *i* 08 20 31.6
OBN pmax pmax
comp=Z,7.0nm,1.2s
KLMR Klimovskoe 140.63 44 PKHKP 08 20 23.9
HYB Hyderabad 144.72 135 *i* PKP PKPdf 08 20 40.5 -0.2
HYB Hyderabad 144.72 135 *e*P PKPdf 08 20 38.5 -2.2
PETK Petropavlovsk- 144.95 302 PKPbc PKPdf 08 20 38.1 -1.8
comp=Z,5.4nm,0.7s,baz=98,slow=6.1,SNR=8.4
PETK PKKP 08 29 46.6
comp=Z,5.3nm,1.0s,baz=280,slow=8.4,SNR=3.5
AKTO Aktyubinsk 149.57 65 PKPbc PKPbc 08 20 51.9 -0.4
comp=Z,32nm,1.3s,baz=250,slow=3.1,SNR=18
AKTO PKPab PKPab 08 20 57.9 +0.4
comp=Z,38nm,1.1s,baz=283,slow=4.5,SNR=21
ARU Arti 150.32 53 *i* PKIKP PKPbc 08 20 53.5 -0.4
ARU Arti 150.32 53 *e*PKPbc PKPbc 08 20 53.9 0.0
BDT Bhumibol Dam 151.15 171 ⇑P PKPab 08 21 03.0 -1.8
KBL Kabul 151.41 101 *e*PKIKP PKPdf 08 20 50.1 -1.0
SVE Sverdlovsk 151.45 52 ⇓*i*PKIKP PKPbc 08 20 56.6 0.0
SVE pmax pmax
comp=Z,33nm,1.4s
ERM Erimo 151.54 276 ⇑*i*PKIKP PKPbc 08 20 59.4 +2.1
TIXI Tiksi 151.55 344 *e*PKIKP PKPbc 08 21 00.1 +3.7
TIXI pmax pmax
comp=Z,52nm,1.3s
CMAR Chiang Mai Arr 152.34 170 PKPbc PKPbc 08 20 58.4 -1.4
comp=Z,4.7nm,0.8s,baz=216,slow=3.3,SNR=7.4
CMAR Chiang Mai Arr 152.34 170 *i* PKIKP PKPbc 08 20 59.4 -0.4
CMAR pmax pmax
comp=Z,5.0nm,0.8s
MJAR Matsushiro Arr 152.60 262 PKPbc PKPbc 08 20 59.5 -0.4
comp=Z,2.5nm,0.9s,baz=193,slow=3.4,SNR=4.9
MAT Matsushiro 152.60 262 *e*PKP PKPdf 08 20 56.7 +3.8
CHTO Chiang Mai 152.69 170 *e*PKIKP pPKPbc 08 21 05.1 -1.7
CHTO *e* 08 21 16.5
YSS Yuzh-Sakhalins 153.26 286 *e*PKP2 PKPab 08 21 16.3 +3.3
DDI Dehra Dun 154.66 119 *ex* PKPab 08 21 23.3 +3.9
BVAR Borovoye Array 157.36 60 PKP PKPdf 08 20 59.0 +0.2
comp=Z,0.4nm,0.4s,baz=249,slow=1.2,SNR=3.6
UCH Uchtor 158.75 89 *e*PKPdf PKPdf 08 21 01.0 +0.1
KMI Kunming 159.24 178 PKP PKPdf 08 21 02.3 +0.3
GYA Guiyang 160.44 188 *e*PKP PKPdf 08 21 02.4 -0.9
GYA PKP2 PKPab 08 21 46.3 +2.0
GYA PKS 08 24 35.8
GYA PP PP 08 25 30.0 +4.1
GYA SKS SKSdf 08 28 06.4 -1.2
GYA SKKS SKKSac 08 32 15.9 +1.7
GYA SS SS 08 45 38.0 +2.3
GYA PP PP
comp=Z,140nm,8.9s
GYA LR LR
comp=N,340nm,24.2s
GYA LR LR
comp=E,260nm,25.3s
GYA LR LR
comp=Z,330nm,24.8s
KURK Kurchatov 162.67 65 *e*PKIKP PKPdf 08 21 03.2 -1.6
NVS Novosibirsk 164.22 48 *e*PKIKP PKPdf 08 21 04.5 -1.7
NVS *e* 08 21 58.2
NVS pmax pmax
comp=Z,24nm,1.5s
NVS pmax pmax
comp=E,9.0nm,1.4s
CN2 Changchun 164.45 270 *e*PKP PKPdf 08 21 09.3 +2.6
CD2 Chengdu 165.02 180 *e*PKP PKPdf 08 21 05.0 -2.7
CD2 APKP 08 21 12.8
CD2 PKP2 PKPab 08 22 03.8 -0.4
CD2 PP PP 08 25 51.6 +1.5
CD2 SKKS SKKSac 08 32 33.5 -3.9
CD2 SS SS 08 46 20.6 -2.5
CD2 PP PP
comp=Z,250nm,10.8s
CD2 LR LR
comp=N,510nm,20.6s
CD2 LR LR
comp=E,400nm,24.0s
CD2 LR LR
comp=Z,550nm,19.6s
MKAR Makanchi Array 165.18 79 PKP PKPdf 08 21 06.4 -0.9
comp=Z,0.7nm,0.8s,baz=316,slow=3.3,SNR=4.7
MKAR PKPab PKPab 08 22 04.4 -0.4
comp=Z,0.9nm,0.7s,baz=286,slow=4.2,SNR=3.6
MKAR PP PP 08 25 54.5 +2.3
comp=Z,1.2nm,0.9s,baz=258,slow=7.2,SNR=5.2
MKAR Makanchi Array 165.18 79 PKP PKPdf 08 21 06.4 -0.9
MKAR PKPab PKPab 08 22 04.4 -0.4
MKAR PP PP 08 25 54.5 +2.3
ZALV Zalesovo Beam 165.45 50 PKP PKPdf 08 21 05.4 -1.8
comp=Z,3.9nm,1.0s,baz=228,slow=1.8,SNR=10
ZALV PKPab PKPab 08 22 07.5 +1.8
comp=Z,1.1nm,0.7s,baz=286,slow=5.2,SNR=2.8
WMQ Urumqi 168.44 95 *e*PKP PKPdf 08 21 11.0 +1.2
WMQ PKS 08 24 43.0
WMQ *e*PP PP 08 26 11.0 +2.0
WMQ SKS SKSdf 08 28 13.0 +0.7
WMQ SKKS SKKSac 08 32 57.0 +2.6
WMQ SS SS 08 47 05.0 +5.0
WMQ PP PP
comp=Z,340nm,4.6s
WMQ LR LR
comp=N,825nm,20.6s
WMQ LR LR
comp=E,801nm,19.4s
WMQ LR LR
comp=Z,665nm,22.0s
LZH Lanzhou 170.19 181 *e*PKP PKPdf 08 21 12.3 +1.1
LZH APKP 08 21 15.6
LZH PP PP 08 26 20.1 +3.6
LZH SKS SKSdf 08 28 13.5 -0.1
LZH SKKS SKKSac 08 33 06.3 +3.5
LZH *e*SS SS 08 47 19.8 +4.8
LZH PP PP
comp=Z,237nm,8.3s
LZH LR LR
comp=E,437nm,18.7s
LZH LR LR
comp=Z,615nm,20.3s
HVS Khovu-Aksy 171.55 48 *i* PKIKP PKPdf 08 21 11.6 +0.2
HHC Hu-ho-hao-te 172.37 231 *e*PKP PKPdf 08 21 08.1 -4.0
HHC PKS 08 24 38.9
HHC PP PP 08 26 25.9 -2.3
HHC SKS SKSdf 08 28 09.5 -4.7
HHC SKKS SKKSac 08 33 11.9 -1.6
HHC SS SS 08 47 34.8 -3.2
HHC PP PP
comp=Z,166nm,9.4s
HHC LR LR
comp=N,327nm,22.1s
HHC LR LR
comp=E,360nm,22.9s
HHC LR LR
comp=Z,275nm,22.5s
GTA Gaotai 172.90 155 PKP PKPdf 08 21 12.0 -0.4
GTA XPKP 08 21 17.8
GTA PP PP
comp=Z,152nm,5.1s
GTA LR LR
comp=N,402nm,21.7s
GTA LR LR
comp=E,439nm,20.2s
GTA LR LR
comp=Z,698nm,20.5s
SONM Songino Array 177.34 317 PKP PKPdf 08 21 11.6 -1.7
comp=Z,1.4nm,1.1s,baz=46,slow=4.3,SNR=8.5
SONM PKPab PKPab 08 23 00.7 +2.2
comp=Z,0.5nm,0.8s,baz=31,slow=3.4,SNR=3.4
SONM PP PP 08 26 55.0 +3.1
comp=Z,3.6nm,1.2s,baz=64,slow=3.4,SNR=8.1

MAN 22 08:01:36,1935N×12258E,h19km,mb3.7,ML2.4,MS2.0,
1C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CVP	**Callao Caves**	**1.79**	**204**	⇑*e*P		Pn	08 02 07.3	+1.4
CVP				*e*S		Sn	08 02 31.3	+3.2
APYP	**Conner**	**1.95**	**221**	*e*P		Pn	08 02 09.1	+1.0
BALP	**Baler**	**3.71**	**195**	*e*P		Pn	08 02 34.3	+1.9

BJI **22** *08:03:36.3,472S×101.17E,h39km,mB5.2,mb4.9,Ms4.7,*
Msz4.5
ISCJB **22** *08:03:37.9±0.3,431S±004×10104E±004,h28km,*
mb4.9/61,MS4.5/12,Error ellipse: s-maj=7.1km
s-min=4.0km az=39.6
IDC **22** *08:03:38.2±3.2,420S×10120E,h15km±18km,mb4.7/20,*
mb1 4.8/21,mb1mx4.7/24,mbtmp4.7/21,ML4.4/1,Error
ellipse: s-maj=21.1km s-min=10.9km az=51.0
MOS **22** *08:03:38.7±0.8,426S×101.17E,h33km,mb5.3/23,Error*
ellipse: s-maj=17.2km s-min=10.7km az=118.0
NEIC **22** *08:03:39.6±0.2,434S×10106E,mb5.0/18,Error ellipse:*
s-maj=8.4km s-min=5.3km az=61.0
NEIC Felt [II] at Bengkulu.
DJA **22** *08:03:39,435S×10094E,h20km,Mw5.4/9*
ISC 22 08:03:40.3±0.3,430S±004×10106E±004,h30km,
h30km±.8km:pP-P,n182,σ1°07/149,mb4.9/61,MS4.5/12,
13C-11D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.66**	**67**	P		**Pn**	**08 04 07.3**	**-0.1**
	0.0nm,0.0s							
BLSI	**Bandar Lampung**	**4.31**	**104**	P		**Pn**	**08 04 44.4**	**+0.6**
	0.0nm,0.0s							
DSRI	**Dabo**	**5.17**	**43**	P		**Pn**	**08 04 56.6**	**+0.9**
	0.0nm,0.0s							
SBJI	**Serang**	**5.37**	**110**	P		**Pn**	**08 04 58.5**	**+0.1**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.50**	**67**	P		**Pn**	**08 05 00.5**	**+0.4**
	0.0nm,0.0s							
TNG	**Tangerang**	**5.87**	**109**	P		**Pn**	**08 05 06.0**	**+0.7**
	0.0nm,0.0s							
DBJI	**Dramaga**	**6.09**	**112**	P		**Pn**	**08 05 08.3**	**-0.1**
	0.0nm,0.0s							
CBJI	**Citeko**	**6.14**	**110**	P		**Pn**	**08 05 11.5**	**+2.5**
	0.0nm,0.0s							
GSI	**Gunungsitoli**	**6.56**	**328**	⇑*e*P		**Pn**	**08 05 13.0**	**-1.8**
TPI	**Tanjungpandan**	**6.76**	**77**	⇓*e*P		**Pn**	**08 05 19.0**	**+1.5**
TPI				*e*S		**Sn**	**08 06 39.0**	**+5.5**
LEM	**Lembang**	**7.00**	**111**	P		**Pn**	**08 05 21.5**	**+0.7**
	0.0nm,0.0s							
LEM	**Lembang**	**7.00**	**111**	⇓*e*P		**Pn**	**08 05 22.4**	**+1.6**
COCO	**West Island**	**8.89**	**208**	*e*Pn		**Pn**	**08 05 42.6**	**-4.1**
COCO				*e*Sn		**Sn**	**08 07 11.9**	**-14**
SJI	**Sawahan**	**11.18**	**108**	P		**Pn**	**08 06 17.4**	**-0.8**
	0.0nm,0.0s							
BSI	**Banda Aceh**	**11.30**	**329**	P		**Pn**	**08 06 18.1**	**-1.7**
	0.0nm,0.0s							
KKM	**Kota Kinabalu**	**18.29**	**56**	⇓P		**Pn**	**08 07 52.9**	**+0.9**
KKM	**Kota Kinabalu**	**18.29**	**56**	*e*Pn		**Pn**	**08 07 52.5**	**+0.5**
KAPI	**Kappang**	**18.65**	**93**	Pn		**Pn**	**08 07 56.7**	**+0.4**
	366nm,0.9s,SNR=5.5							
KAPI	**Kappang**	**18.65**	**93**	P		**Pn**	**08 07 54.1**	**-2.3**
	1.3nm,0.3s,baz=269,slow=7.7,SNR=14							
KAPI	**Kappang**	**18.65**	**93**	*e*P		**Pn**	**08 07 55.3**	**-1.0**
	54nm,1.0s							
TSM	**Tawau**	**18.84**	**63**	⇑P		**Pn**	**08 07 59.7**	**+1.0**
SDKM	**Sandakan**	**18.90**	**59**	⇓P		**Pn**	**08 07 59.2**	**-0.1**
PCI	**Palu**	**19.06**	**80**	P		**Pn**	**08 08 01.1**	**-0.2**
	0.0nm,0.0s							
KDM	**Kudat**	**19.29**	**55**	⇑P		**Pn**	**08 08 04.3**	**+0.3**
MYLDM	**Lahad Datu**	**19.80**	**62**	⇓P		**Pn**	**08 08 08.6**	**-1.6**
KDI	**Kendari**	**21.51**	**90**	P		**P**	**08 08 26.5**	**-0.5**
	0.0nm,0.0s							
CMAR	**Chiang Mai Arr**	**22.70**	**355**	P		**P**	**08 08 37.4**	**-2.3**
	24nm,0.9s,mb4.6,baz=184,slow=8.6,SNR=44							
CHTO	**Chiang Mai**	**23.06**	**355**	*e*P		**P**	**08 08 43.4**	**0.0**
CHTO				pmax		pmax		
	comp=Z,33nm,1.1s,mb4.7							
CHTO	**Chiang Mai**	**23.06**	**355**	*e*P		**P**	**08 08 43.4**	**+0.1**
	comp=Z,33nm,1.1s,mb4.7							
BATI	**Baumata**	**23.17**	**106**	P		**P**	**08 08 41.9**	**-2.8**
	comp=Z,27nm,0.5s,mb4.9,baz=321,slow=6.5,SNR=2.4							
BATI				S		**S**	**08 12 48.1**	**-6.3**
	comp=Z,22nm,0.5s,baz=329,slow=19,SNR=3.3							
MBWA	**Marble Bar**	**24.70**	**134**	P		**P**	**08 08 57.8**	**-1.1**
	comp=Z,10nm,0.9s,mb4.3							
QIZ	**Qiongzhong**	**24.74**	**20**	*e*P		**P**	**08 08 59.2**	**0.0**
	comp=Z,31nm,1.2s,mb4.7							
LBMI	**Labuha**	**26.66**	**83**	P		**P**	**08 09 16.2**	**-0.6**
	comp=Z,0.0nm,0.0s							
FITZ	**Fitzroy Crossi**	**27.69**	**122**	*e*P		**P**	**08 09 25.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**27.69**	**122**	P		**P**	**08 09 25.1**	**-0.8**
	comp=Z,22nm,0.9s,mb4.8,baz=289,slow=6.4,SNR=12							
KMI	**Kunming**	**29.29**	**3**	P		**P**	**08 09 41.6**	**+1.5**
KMI				AP		pP	08 09 49.3	+0.5
KMI				PP		PP	08 10 40.5	-6.1
KMI				PPP			08 10 54.3	
KMI				PCP		PcP	08 12 48.3	+1.7
KMI				S		**S**	**08 14 36.0**	**+4.6**
KMI				XS		sS	08 14 49.9	+4.0
KMI				SS		SS	08 16 08.4	-28
KMI				SSS			08 16 30.6	
KMI				AMB		AMB		
	comp=Z,24nm,1.0s,mb4.9							
KMI				AMB		AMB		
	comp=Z,191nm,4.4s							
KMI				LR		LR		
	comp=N,559nm,12.3s,MS4.5							
KMI				LR		LR		
	comp=E,777nm,16.8s,MS4.5							
KMI				LR		LR		
	comp=Z,539nm,12.5s,MS4.4							
GYA	**Guiyang**	**31.05**	**10**	P		**P**	**08 09 57.3**	**+1.6**
GYA				AP		pP	08 10 06.8	+2.4
GYA				XP		sP	08 10 11.9	+3.8
GYA				PP		PP	08 11 03.3	-2.9
GYA				PCP		PcP	08 12 52.8	+1.7
GYA				S		**S**	**08 15 03.0**	**+3.9**
GYA				SS		SS	08 16 51.5	-21
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.7							
GYA				AMB		AMB		
	comp=Z,120nm,4.6s							
GYA				LR		LR		
	comp=N,860nm,13.9s,MS4.7							
GYA				LR		LR		
	comp=E,650nm,13.8s,MS4.7							
GYA				LR		LR		
	comp=Z,880nm,13.7s,MS4.6							
NWAO	**Narrogin (SRO)**	**32.25**	**154**	P		**P**	**08 10 05.4**	**-0.8**
	comp=Z,37nm,1.1s,mb5.1							
NWAO				*e*pP		pP	08 10 14.7	-0.2
CD2	**Chengdu**	**35.10**	**4**	⇓*i*P		**P**	**08 10 30.8**	**-0.2**
CD2				AP		pP	08 10 40.3	+0.5
CD2				PP		PP	08 11 50.8	-0.2
CD2				PCP		PcP	08 13 00.8	-1.5
CD2				S		**S**	**08 16 03.3**	**+1.4**
CD2				XS		sS	08 16 22.3	+5.9
CD2				SCS		ScS	08 20 43.6	-6.3
CD2				AMB		AMB		
	comp=Z,70nm,0.9s,mb5.6							
CD2				AMB		AMB		
	comp=Z,180nm,4.8s							
CD2				LR		LR		
	comp=N,770nm,14.4s,MS4.7							
CD2				LR		LR		
	comp=E,860nm,16.8s,MS4.7							
CD2				LR		LR		
	comp=Z,840nm,13.2s,MS4.7							
LSA	**Lhasa**	**35.11**	**345**	*e*P		**P**	**08 10 31.8**	**+0.7**
LSA				*e**PP		pP	08 10 41.2	+1.3
LSA				pmax		pmax		
	comp=Z,15nm,1.1s,mb4.8							
LSA	**Lhasa**	**35.11**	**345**	*e*P		**P**	**08 10 31.8**	**+0.7**
	comp=Z,15nm,1.1s,mb4.8							
LSA				*e*pP		pP	08 10 41.2	+1.3
ENH	**Enshi**	**35.30**	**13**	*e*P		**P**	**08 10 32.5**	**-0.3**
	comp=Z,0.8nm,0.6s							
WRA	**Warramunga Arr**	**35.95**	**118**	P		**P**	**08 10 37.9**	**-0.6**
	comp=Z,13nm,1.0s,mb4.8,baz=302,slow=9.0,SNR=12							
WRA				S		**S**	**08 16 16.3**	**+1.0**
	comp=Z,1.1nm,1.0s,baz=288,slow=4.1,SNR=4.1							
WRAB	**Tennant Creek**	**35.96**	**118**	*e*P		**P**	**08 10 37.3**	**-1.3**
WRAB				pmax		pmax		
	comp=Z,20nm,0.8s,mb5.1							
WRAB	**Tennant Creek**	**35.96**	**118**	*e*P		**P**	**08 10 37.3**	**-1.3**
	comp=Z,20nm,0.8s,mb5.1							
WB2	**Warramunga Arr**	**35.96**	**118**	*e*P		**P**	**08 10 37.9**	**-0.7**
WHN	**Wuhan**	**36.90**	**19**	P		**P**	**08 10 47.0**	**+0.6**
WHN				S		**S**	**08 16 37.1**	**+7.6**
WHN				LR		LR		
	comp=N,780nm,19.5s,MS4.8							
WHN				LR		LR		
	comp=E,1μm,18.4s,MS4.8							
WHN				LR		LR		
	comp=Z,1μm,17.0s,MS4.7							
ASAR	**Alice Springs**	**37.07**	**124**	P		**P**	**08 10 47.8**	**-0.2**
	comp=Z,12nm,0.7s,mb4.8,baz=292,slow=8.1,SNR=22							
ASAR				PcP		PcP	08 13 08.2	-0.2
	comp=Z,2.5nm,0.8s,baz=282,slow=2.9,SNR=4.5							
ASAR				S		**S**	**08 16 33.2**	**+0.9**
	comp=Z,0.9nm,1.0s,baz=306,slow=3.2,SNR=3.2							
XAN	**Xi'an**	**38.84**	**10**	P		**P**	**08 11 01.8**	**-1.0**
XAN				AMB		AMB		
	comp=Z,19nm,1.3s,mb4.7							
XAN				LR		LR		
	comp=N,551nm,15.1s,MS4.5							
XAN				LR		LR		
	comp=E,296nm,15.2s,MS4.5							
XAN				LR		LR		
	comp=Z,624nm,15.3s,MS4.5							
NJ2	**Nanjing**	**39.91**	**24**	*e*P		**P**	**08 11 14.6**	**+2.9**
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.7							
LZH	**Lanzhou**	**40.25**	**3**	⇑P		**P**	**08 11 15.1**	**+0.6**
LZH				PP		PP	08 12 52.5	+4.9
LZH				*e*S		**S**	**08 17 23.6**	**+3.7**
LZH				SS		SS	08 20 18.3	-0.8
LZH				AMB		AMB		
	comp=Z,86nm,1.4s,mb5.3							
LZH				AMB		AMB		
	comp=Z,263nm,4.7s							
LZH				LR		LR		
	comp=E,709nm,13.6s							
LZH				LR		LR		
	comp=Z,993nm,15.7s,MS4.8							
GTA	**Gaotai**	**43.50**	**359**	*e*P		**P**	**08 11 41.8**	**+0.8**
GTA				PP		PP	08 13 26.5	+3.9
GTA				PCP		PcP	08 13 29.8	+1.1
GTA				S		**S**	**08 18 09.3**	**+1.4**
GTA				AMB		AMB		
	comp=Z,14nm,1.3s,mb4.5							
GTA				AMB		AMB		
	comp=Z,141nm,4.2s							
GTA				LR		LR		
	comp=N,278nm,15.2s,MS4.4							
GTA				LR		LR		
	comp=E,249nm,13.1s,MS4.4							
GTA				LR		LR		
	comp=Z,423nm,15.8s,MS4.5							
HHC	**Hu-ho-hao-te**	**45.95**	**11**	⇓P		**P**	**08 12 01.3**	**+0.8**
HHC				AP		pP	08 12 11.8	+2.3
HHC				XP		sP	08 12 15.8	+2.7
HHC				PCP		PcP	08 13 36.6	-0.4
HHC				PP		PP	08 13 50.0	+1.4
HHC				SCP		ScP	08 17 25.6	-2.6
HHC				PCS		PcS	08 17 29.8	-1.5
HHC				S		**S**	**08 18 45.3**	**+2.0**
HHC				XS		sS	08 19 02.4	+4.3
HHC				AMB		AMB		
	comp=Z,19nm,0.6s,mb5.2							
HHC				AMB		AMB		
	comp=Z,544nm,6.9s							
HHC				LR		LR		
	comp=N,692nm,14.2s,MS4.8							
HHC				LR		LR		
	comp=E,345nm,14.5s,MS4.8							
HHC				LR		LR		
	comp=Z,682nm,13.5s,MS4.8							
PMG	**Port Moresby**	**46.02**	**99**	*e*P		**P**	**08 12 00.6**	**-1.0**
PMG				*e**PP		pP	08 12 09.0	-1.6
BJT	**Baijiatuau**	**46.23**	**16**	*e*P		**P**	**08 12 03.0**	**+0.3**
	comp=Z,875nm,1.4s							
BJI	**Beijing**	**46.26**	**16**	P		**P**	**08 12 01.5**	**-1.4**
BJI				S		**S**	**08 18 50.1**	**+2.3**
BJI				AMB		AMB		
	comp=Z,18nm,1.2s,mb4.9							
BJI				LR		LR		
	comp=N,247nm,20.7s,MS4.5							
BJI				LR		LR		
	comp=E,413nm,19.1s,MS4.5							
BJI				LR		LR		
	comp=Z,227nm,23.9s,MS4.0							
CTA	**Charters Tower**	**46.69**	**114**	*e*P		**P**	**08 12 06.7**	**0.0**
CTAO	**Charters Tower**	**46.69**	**114**	*e*P		**P**	**08 12 06.4**	**-0.3**
CTAO				pmax		pmax		
	comp=Z,36nm,1.2s,mb5.2							
CTAO	**Charters Tower**	**46.69**	**114**	*e*P		**P**	**08 12 06.3**	**-0.4**
	comp=Z,36nm,1.2s,mb5.2							
STKA	**Stephens Creek**	**46.85**	**131**	*e*P		**P**	**08 12 08.4**	**+0.6**
STKA	**Stephens Creek**	**46.85**	**131**	P		**P**	**08 12 08.1**	**+0.2**
	comp=Z,25nm,0.9s,mb5.2,baz=303,slow=7.8,SNR=15							
KSRS	**Korea Array**	**48.48**	**29**	P		**P**	**08 12 19.4**	**-0.9**
	comp=Z,19nm,0.9s,mb5.1,baz=215,slow=8.2,SNR=32							
KBL	**Kabul**	**49.00**	**325**	*e*P		**P**	**08 12 24.5**	**+0.1**
KBL				*e**PP		pP	08 12 33.7	+0.3
WMQ	**Urumqi**	**49.39**	**347**	⇑*i*P		**P**	**08 12 28.4**	**+1.3**
WMQ				AP		pP	08 12 36.0	-0.2
WMQ				PCP		PcP	08 13 52.0	+2.7
WMQ				PP		PP	08 14 22.0	+0.5
WMQ				*e*S		**S**	**08 19 30.0**	**-2.1**
WMQ				AMB		AMB		
	comp=Z,46nm,1.1s,mb5.4							

WMQ					AMB	AMB			
	comp=Z,167nm,4.6s								
WMQ					LR	LR			
	comp=N,379nm,21.3s,MS4.5								
WMQ					LR	LR			
	comp=E,341nm,20.4s,MS4.5								
WMQ					LR	LR			
	comp=Z,342nm,21.3s,MS4.3								
SONM	**Songino Array**	**52.12**	**5**	P	**P**		**08 12 48.4**	**+0.8**	
	comp=Z,26nm,0.9s,mb5.2,baz=186,slow=8.5,SNR=75								
ULN	**Ulaanbaatar**	**52.21**	**5**	*e*P	**P**		**08 12 49.1**	**+0.8**	
ULN				*e**PP	pP		08 12 57.3	-0.1	
ULN				pmax	pmax				
	comp=Z,27nm,1.1s,mb5.1								
ULN	**Ulaanbaatar**	**52.21**	**5**	*e*P	**P**		**08 12 49.1**	**+0.8**	
	comp=Z,27nm,1.1s,mb5.1								
ULN				*e*pP	pP		08 12 57.3	-0.1	
EIDS	**Eidsvold**	**52.31**	**119**	*e*P	**P**		**08 12 52.9**	**+3.4**	
TKM2	**Tokmak 2**	**52.34**	**336**	*e*P	**P**		**08 12 50.3**	**+0.9**	
TKM2				pmax	pmax				
	comp=Z,21nm,0.6s,mb5.2								
TKM2	**Tokmak 2**	**52.34**	**336**	*e*P	**P**		**08 12 50.3**	**+0.8**	
	comp=Z,21nm,0.6s,mb5.2								
CN2	**Changchun**	**52.68**	**22**	*e*P	**P**		**08 12 55.8**	**+3.9**	
CN2				*e*XP	sP		08 13 09.6	+5.0	
CN2				*e*S	**S**		**08 20 21.5**	**+3.9**	
CN2				AMB	AMB				
	comp=Z,10.0nm,0.6s,mb4.9								
CN2				AMB	AMB				
	comp=Z,200nm,4.0s								
CN2				LR	LR				
	comp=N,340nm,17.0s,MS4.5								
CN2				LR	LR				
	comp=E,230nm,17.0s,MS4.5								
CN2				LR	LR				
	comp=Z,310nm,20.0s,MS4.3								
EKS2	**Erkin-Say**	**52.88**	**335**	*e*P	**P**		**08 12 54.5**	**+1.2**	
	comp=Z,15nm,0.8s,mb5.0								
EKS2				*e*pP	pP		08 13 02.9	+0.4	
MAJO	**Matsushiro**	**53.41**	**37**	*e*P	**P**		**08 12 55.8**	**-1.7**	
MAJO				pmax	pmax				
	comp=Z,24nm,1.2s,mb5.0								
MAJO	**Matsushiro**	**53.41**	**37**	*e*P	**P**		**08 12 55.8**	**-1.7**	
	comp=Z,24nm,1.2s,mb5.0								
MAT	**Matsushiro**	**53.41**	**37**	P	**P**		**08 12 56.6**	**-0.9**	
MJAR	**Matsushiro Arr**	**53.41**	**37**	P	**P**		**08 12 55.6**	**-1.8**	
	comp=Z,12nm,1.0s,mb4.8,baz=217,slow=7.9,SNR=24								
MKAR	**Makanchi Array**	**53.51**	**344**	P	**P**		**08 12 58.2**	**+0.3**	
	comp=Z,19nm,0.8s,mb5.1,baz=141,slow=7.8,SNR=50								
ZAK	**Zakamensk**	**54.49**	**2**	*e*P	**P**		**08 13 04.3**	**-0.7**	
ZAK				*e*			08 16 20.0		
ZAK				pmax	pmax				
	comp=E,6.0nm,0.9s,mb4.5								
MDJ	**Mudanjiang**	**55.00**	**25**	P	**P**		**08 13 08.8**	**0.0**	
MDJ				PCP	PcP		08 14 10.1	-0.2	
MDJ				S	**S**		**08 20 42.3**	**-6.7**	
MDJ				SCS	ScS		08 22 48.1	-7.8	
MDJ				SS	SS		08 24 28.3	-4.9	
MDJ				AMB	AMB				
	comp=Z,11nm,1.0s,mb4.8								
MDJ				LR	LR				
	comp=N,208nm,19.0s,MS4.4								
MDJ				LR	LR				
	comp=E,204nm,18.1s,MS4.4								
MDJ				LR	LR				
	comp=Z,190nm,20.0s,MS4.2								
HVS	**Khovu-Aksy**	**55.57**	**354**	*i* P	**P**		**08 13 12.8**	**0.0**	
HVS				pmax	pmax				
	comp=Z,17nm,1.2s,mb5.0								
HIA	**Hailar**	**55.76**	**15**	*e*P	**P**		**08 13 14.1**	**-0.1**	
TLY	**Talaya**	**55.80**	**2**	*i* P	**P**		**08 13 15.5**	**+1.0**	
KURK	**Kurchatov**	**58.09**	**343**	P	**P**		**08 13 31.3**	**+0.6**	
	comp=Z,166nm,0.9s,SNR=9.9								
KURK	**Kurchatov**	**58.09**	**343**	P	**P**		**08 13 30.2**	**-0.6**	
	comp=Z,4.0nm,1.0s,mb4.4,baz=160,slow=6.4,SNR=6.5								
KURK	**Kurchatov**	**58.09**	**343**	*e*P	**P**		**08 13 30.9**	**+0.2**	
KURK				*e**PP	pP		08 13 38.5	-1.4	
KURK				pmax	pmax				
	comp=Z,32nm,1.0s,mb5.3								
KURK	**Kurchatov**	**58.09**	**343**	*e*P	**P**		**08 13 30.9**	**+0.2**	
	comp=Z,32nm,1.0s,mb5.3								
KURK				*e*pP	pP		08 13 38.5	-1.4	
KLR	**Kul'dur**	**59.60**	**23**	*e*P	**P**		**08 13 37.1**	**-4.2**	
KLR				pmax	pmax				
	comp=E,32nm,1.2s								
KLR				pmax	pmax				
	comp=Z,47nm,1.2s,mb5.4								
ZALV	**Zalesovo Beam**	**59.61**	**349**	P	**P**		**08 13 41.1**	**-0.1**	
	comp=Z,17nm,0.7s,mb5.2,baz=174,slow=5.2,SNR=44								
KRAR	**Krasnoyarsk**	**60.48**	**355**	*i* P	**P**		**08 13 47.5**	**+0.4**	
KRAR				pmax	pmax				
	comp=Z,22nm,0.5s,mb5.4								
NVS	**Novosibirsk**	**60.76**	**348**	*e*P	**P**		**08 13 47.1**	**-2.0**	
NVS				pmax	pmax				
	comp=Z,18nm,1.3s,mb5.0								
NVS				pmax	pmax				
	comp=N,22nm,1.6s								
ASAJ	**Asahikawa**	**60.92**	**33**	P	**P**		**08 13 48.6**	**-1.8**	
	comp=N,13nm,0.8s,mb5.1,baz=225,slow=19,SNR=5.1								
BVAR	**Borovoye Array**	**62.69**	**340**	P	**P**		**08 14 01.6**	**-0.5**	
	comp=N,6.9nm,0.7s,mb4.9,baz=147,slow=8.3,SNR=17								
BRVK	**Borovoye**	**62.75**	**340**	*e*P	**P**		**08 14 01.8**	**-0.7**	
BRVK				*e**PP	pP		08 14 10.2	-1.6	
BRVK				pmax	pmax				
	comp=Z,32nm,1.4s,mb5.3								
BRVK	**Borovoye**	**62.75**	**340**	*e*P	**P**		**08 14 01.8**	**-0.7**	
	comp=Z,32nm,1.4s,mb5.3								
BRVK				*e*pP	pP		08 14 10.2	-1.6	
BOD	**Bodaibo**	**62.79**	**8**	*e*P	**P**		**08 14 01.9**	**-0.8**	
BOD				pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.7								
YSS	**Yuzh-Sakhalins**	**62.88**	**31**	*e*P	**P**		**08 14 02.3**	**-1.2**	
YSS				pmax	pmax				
	comp=Z,120nm,1.2s,mb5.9								
YSS	**Yuzh-Sakhalins**	**62.88**	**31**	*i* P	**P**		**08 14 02.8**	**-0.7**	
AKTK	**Aktyubinsk**	**65.86**	**331**	P	**P**		**08 14 21.8**	**-1.1**	
AKTO	**Aktyubinsk**	**65.86**	**331**	P	**P**		**08 14 21.8**	**-1.1**	
	comp=Z,3.0nm,0.8s,mb4.4,baz=109,slow=14,SNR=5.7								
MAW	**Mawson**	**68.34**	**195**	*e*P	pP		08 14 47.4	-0.4	
MAW	**Mawson**	**68.34**	**195**	P	**P**		**08 14 39.4**	**+1.0**	
	comp=Z,2.3nm,1.0s,mb4.2,baz=49,slow=9.3,SNR=3.9								
SVE	**Sverdlovsk**	**69.19**	**338**	*e*P	**P**		**08 14 44.6**	**+0.7**	
SVE				*e*S	S		08 24 03.5	+16	
SVE				*e*			08 24 34.1		
SVE				pmax	pmax				
	comp=Z,32nm,1.1s,mb5.2								
YAK	**Yakutsk**	**69.69**	**14**	*e*P	**P**		**08 14 45.0**	**-1.8**	
ARU	**Arti**	**69.72**	**336**	*c* P	**P**		**08 14 46.8**	**-0.3**	
ARU				*e*			08 15 06.9		
ARU				*e*			08 17 15.2		
ARU				*e*S	S		08 23 55.2	+1.3	
ARU				*e*SS	SS		08 28 23.7	+0.9	
ARU				pmax	pmax				
	comp=Z,24nm,1.2s,mb5.0								
ARU	**Arti**	**69.72**	**336**	*e*P	**P**		**08 14 47.0**	**-0.1**	
	comp=Z,25nm,1.2s,mb5.0								
ARU				*e*pP	pP		08 14 55.1	-1.4	
KIV	**Kislovodsk**	**70.96**	**319**	*e*P	**P**		**08 14 55.8**	**+0.8**	
KIV				pmax	pmax				
	comp=Z,12nm,1.3s,mb4.7								
SOC	**Sochi**	**72.76**	**318**	*i* P	**P**		**08 15 06.5**	**+0.7**	
PETK	**Petropavlovsk-**	**74.26**	**32**	P	**P**		**08 15 13.2**	**-1.2**	
	comp=Z,6.2nm,0.9s,mb4.5,baz=174,slow=1.2,SNR=4.6								
PET	**Petropavlovsk**	**74.72**	**32**	*e*P	**P**		**08 15 15.9**	**-1.2**	
ANN	**Anapa**	**74.74**	**319**	*e*P	**P**		**08 15 09.2**	**-8.2**	
ANN				*e**PP	pP		08 15 19.4	-7.5	
ANN				*e*			08 15 23.1		
ANN				pmax	pmax				
	comp=Z,36nm,1.1s,mb5.2								
BOSA	**Boshof**	**75.49**	**242**	P	**P**		**08 15 28.3**	**+6.2**	
	comp=Z,2.3nm,0.7s,mb4.2,baz=86,slow=5.2,SNR=3.6								
SEY	**Seymchan**	**77.35**	**21**	*e*P	**P**		**08 15 32.3**	**+0.4**	
TIXI	**Tiksi**	**77.95**	**9**	*e*P	**P**		**08 15 34.5**	**-0.6**	
TIXI				pmax	pmax				
	comp=Z,22nm,1.1s,mb5.0								
TIXI	**Tiksi**	**77.95**	**9**	*e*P	**P**		**08 15 34.6**	**-0.5**	
OBN	**Obninsk**	**79.29**	**328**	*e*P	**P**		**08 15 43.2**	**+0.4**	
OBN				pmax	pmax				
	comp=Z,13nm,0.9s,mb4.9								
OBN	**Obninsk**	**79.29**	**328**	*e*P	**P**		**08 15 43.3**	**+0.5**	
KLMR	**Klimovskoe**	**80.34**	**334**	*e*P	**P**		**08 15 48.7**	**+0.4**	
KLMR				pmax	pmax				
	comp=Z,38nm,1.5s,mb5.1								
AKASG	**Malin Array Be**	**81.94**	**322**	P	**P**		**08 15 56.6**	**-0.5**	
	comp=Z,0.5nm,0.4s,baz=87,slow=5.3,SNR=4.5								

BUR08	**Bucovina Ar. S**	**83.69**	**319**	*e*P	**P**		**08 16 05.8**	**-0.4**	
BUR08				*e*pP	pP		08 16 16.2	+0.4	
BILL	**Bilibino**	**84.93**	**20**	*e*P	**P**		**08 16 12.3**	**+0.2**	
BILL				pmax	pmax				
	comp=Z,7.0nm,0.9s,mb4.8								
BILL	**Bilibino**	**84.93**	**20**	*i* P	**P**		**08 16 12.4**	**+0.3**	
KOLS	**Kolonicke sedl**	**85.87**	**320**	*e*P	**P**		**08 16 18.4**	**+1.2**	
KOLS				*e*pP	pP		08 16 27.1	+0.3	
KOLS				*e*	pP		08 16 27.1	+0.3	
KOLS	**Kolonicke sedl**	**85.87**	**320**	*e*	**P**		**08 16 18.4**	**+1.2**	
KAF	**Kangasniemi**	**86.69**	**333**	*e*p	**P**		**08 16 20.8**	**-0.2**	
	comp=Z,2.7nm,0.5s,mb4.7								
KAF	**Kangasniemi**	**86.69**	**333**	*e*P	**P**		**08 16 20.8**	**-0.2**	
KAF				pmax	pmax				
	comp=Z,3.0nm,0.5s,mb4.8								
ARCES	**ARCESS Array B**	**88.98**	**340**	P	**P**		**08 16 31.9**	**+0.2**	
	comp=Z,4.8nm,0.8s,mb4.8,baz=115,slow=4.3,SNR=7.2								
ARCES	**ARCESS Array B**	**88.98**	**340**	P	**P**		**08 16 31.9**	**+0.2**	
SNAA	**Sanae**	**90.30**	**198**	*e*Pdiff	**P**		**08 16 40.0**	**+2.1**	
SNAA				*e*	pP		08 16 48.0	+0.4	
SNAA	**Sanae**	**90.30**	**198**	*e*P	**P**		**08 16 38.8**	**+0.9**	
SNAA				pmax	pmax				
	comp=Z,9.0nm,1.1s								
SNAA	**Sanae**	**90.30**	**198**	*e*P	**P**		**08 16 38.8**	**+0.9**	
	comp=Z,9.1nm,1.1s,mb5.0								
GERES	**GERESS Array B**	**91.46**	**319**	P	**P**		**08 16 44.3**	**+0.6**	
	comp=Z,1.6nm,0.8s,mb4.4,baz=73,slow=4.6,SNR=6.0								
VNA2	**Neumayer--Watz**	**91.92**	**198**	*e*Pdiff	**P**		**08 16 47.2**	**+1.7**	
	baz=82,slow=3.1								
VNA2				*e*	pP		08 16 55.2	+0.1	
VNA1	**Neumayer--Stat**	**92.28**	**198**	*e*Pdiff	**P**		**08 16 49.5**	**+2.3**	
VNA1				*e*	pP		08 16 57.5	+0.7	
VNA3	**Neumayer Olymp**	**92.51**	**198**	*e*Pdiff	**P**		**08 16 49.7**	**+1.5**	
VNA3				*e*	pP		08 16 57.9	+0.1	
HAWA	**Hanford**	**125.30**	**33**	*e*PKPdf	PKPdf		08 22 37.3	-1.0	
MOD	**Modoc**	**127.46**	**38**	*e*PKPdf	PKPdf		08 22 44.6	+2.0	
MSO	**Missoula**	**127.95**	**30**	*e*PKPdf	PKPdf		08 22 43.8	+0.4	
CHMT	**Chamberlain Mo**	**128.23**	**29**	*e*PKPdf	PKPdf		08 22 45.0	+1.1	
DLMT	**Dillon**	**129.64**	**30**	*e*PKPdf	PKPdf		08 22 46.7	0.0	
BOZ	**Bozeman (W)**	**129.92**	**30**	*e*PKIKP	PKPdf		08 22 49.1	+1.9	
NVAR	**Mina Array Bea**	**130.66**	**41**	PKP	PKPdf		08 22 50.8	+2.0	
	comp=Z,1.4nm,0.8s,baz=260,slow=1.5,SNR=7.3								
ULM	**Lac du Bonnet**	**132.03**	**15**	PKP	PKPdf		08 22 49.7	-1.3	
	comp=Z,2.3nm,0.8s,baz=288,slow=3.2,SNR=3.2								
ULM	**Lac du Bonnet**	**132.03**	**15**	PKP	PKPdf		08 22 49.7	-1.3	
HWUT	**Hardware Ranch**	**132.77**	**33**	*e*PKPdf	PKPdf		08 22 52.5	-0.2	
DUG	**Dugway**	**133.00**	**36**	*e*PKIKP	PKPdf		08 22 54.8	+1.6	
PDAR	**Pinedale Array**	**133.03**	**31**	PKP	PKPdf		08 22 54.2	+1.1	
	comp=Z,1.1nm,1.0s,baz=318,slow=2.0,SNR=5.7								
MSU	**Marysvale**	**134.47**	**37**	*e*PKIKP	PKPdf		08 22 59.3	+3.3	
RSSD	**Black Hills**	**134.59**	**25**	*e*PKIKP	PKPdf		08 22 54.9	-1.1	
ANMO	**Albuquerque**	**140.26**	**36**	*i*PKIKP	PKPdf		08 23 09.7	+2.9	
ANMO	**Albuquerque**	**140.26**	**36**	*e*PKIKP	PKPdf		08 23 03.6	-3.2	
WMOK	**Wichita Mounta**	**144.56**	**29**	*e*PKIKP	PKPdf		08 23 12.7	-1.7	
CCM	**Cathedral Cave**	**144.57**	**17**	*e*PKIKP	PKPdf		08 23 12.7	-1.7	
BLO	**Bloomington**	**144.61**	**10**	*e*PKIKP	PKPdf		08 23 12.9	-1.5	
OLIL	**Olney**	**144.72**	**12**	*e*PKPdf	PKPdf		08 23 13.5	-1.1	
MCWV	**Mont Chateau**	**144.79**	**1**	*e*PKPdf	PKPdf		08 23 13.9	-0.8	
FVM	**French Village**	**144.87**	**16**	*e*PKIKP	PKPdf		08 23 13.4	-1.5	
SDMD	**Soldier's Deli**	**144.99**	**357**	*e*PKPdf	PKPdf		08 23 14.2	-0.9	
SIUC	**Southern Illin**	**145.44**	**14**	*e*PKPbc	PKPbc		08 23 15.5	-0.3	
USIN	**University of**	**145.55**	**12**	*e*PKKPbc			08 23 14.8		
WCI	**Wyandotte Cave**	**145.56**	**10**	*e*PKIKP	PKPdf		08 23 15.8	-0.3	
TXAR	**Lajitas Array**	**145.81**	**41**	PKPbc	PKPbc		08 23 18.2	+0.9	
	comp=Z,30nm,1.0s,baz=276,slow=1.9,SNR=129								
UTMT	**University of**	**146.82**	**15**	*e*PKPab	PKPbc		08 23 20.4	+0.4	
URVA	**University of**	**146.86**	**358**	*e*PKPbc	PKPbc		08 23 20.3	+0.2	
GNAR	**Gosnell**	**146.87**	**17**	*e*PKPbc	PKPbc		08 23 20.1	0.0	
HBAR	**Harrisburg**	**147.06**	**18**	*e*PKPbc	PKPbc		08 23 20.0	-0.7	
HALT	**Halls**	**147.11**	**16**	*e*PKPbc	PKPbc		08 23 20.1	-0.8	
ELN	**Prospectdale**	**147.18**	**3**	*e*PKPbc	PKPbc		08 23 20.3	-0.8	
UALR	**University of**	**147.22**	**21**	*e*PKPab	PKPbc		08 23 20.5	-0.7	
WVT	**Waverly**	**147.28**	**13**	*e*PKP2	PKPbc		08 23 21.1	-0.2	
JCT	**Junction City**	**147.35**	**35**	*e*PKIKP	PKPdf		08 23 20.3	+1.0	
TZTN	**Tazewell**	**147.63**	**7**	*e*PKPbc	PKPbc		08 23 22.0	-0.3	
TKL	**Tuckaleechee C**	**148.47**	**8**	*e*PKP2	PKPbc		08 23 24.2	-0.4	
SWET	**Sewanee**	**148.56**	**11**	*e*PKPbc	PKPbc		08 23 24.0	-0.8	
CPCT	**Cooper Cave**	**148.57**	**9**	*e*PKPdf	PKPdf		08 23 21.1	-0.1	
CPCT				*e*PKPbc	PKPbc		08 23 24.9	+0.1	
CPCT				*e*PKPab	PKPab		08 23 27.8	-0.4	
NAIX	**Nacogdoches**	**148.95**	**27**	*e*PKPbc	PKPbc		08 23 26.4	+0.5	
HKT	**Hockley**	**149.90**	**30**	*e*PKP2	PKPbc		08 23 28.9	+0.6	
JSC	**Jenkinsville**	**150.09**	**4**	*e*PKP2	PKPbc		08 23 28.6	0.0	
VBMS	**Vicksburg**	**150.18**	**20**	*e*PKPbc	PKPbc		08 23 29.4	+0.5	
LRAL	**Lakeview Retre**	**150.43**	**14**	*e*PKPbc	PKPbc		08 23 29.0	-0.5	
GOGA	**Godfrey**	**150.73**	**8**	*e*PKIKP	PKPbc		08 23 30.1	-0.1	
SIV	**San Ignacio**	**153.19**	**221**	PKPbc	PKPbc		08 23 35.5	-0.8	
	baz=115,slow=6.7								
SJG	**San Juan**	**161.42**	**319**	*e*PKP2	PKPab		08 24 14.7	-8.5	

*THR **22** 08:12:33.9±0.8, 37.15N×4261E, h14km±10km, ML3.9*
*ISK **22** 08:12:34.6, 37.16N×4296E, h5km, ML4.0*
*DDA **22** 08:12:34.3, 37.11N×4298E, h10km±3km, Md4.1*
*CSEM **22** 08:12:34.6±0.1, 3720N×4290E, h2km, ML3.9, Error ellipse: s-maj=3.1km s-min=2.0km az=157.0*
*ISCJB **22** 08:12:35.1±0.3, 37.12N±003×4298E±002, h10km, Error ellipse: s-maj=3.9km s-min=2.8km az=178.4*
ISC 22 08:12:37.1±0.3,**3720N**±003×**4298E**±002,**h10**km,**n48,**
σ1§**19**/63,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.52**	**305**	*e*PG		**Pg**		**08 12 45.9**	**-1.4**
SIRT				*e*SG		**Sg**		**08 12 53.0**	**-1.2**
SIRT	**Sirnak**	**0.52**	**305**	*e*Pg		**Pg**		**08 12 45.4**	**-1.9**
SIRT				*e*Sg		**Sg**		**08 12 53.2**	**-1.0**
HAKT	**HAKKARI**	**0.68**	**58**	*i* P		**Pg**		**08 12 48.7**	**-1.6**
HAKT				*i* S		**Sg**		**08 12 58.7**	**-0.5**
HKR	**Hakkari**	**0.71**	**58**	*e*PG		**Pg**		**08 12 49.4**	**-1.5**
HKR				*e*SG		**Sg**		**08 12 59.7**	**-0.6**
MSL	**Mosul**	**0.81**	**172**	*i* x		x		08 12 50.0	
MSL				*i* x		x		08 13 01.0	
VANT	**Van**	**1.28**	**15**	*e*PN		**Pn**		**08 12 59.9**	**-1.2**
VANT				*e*SN		**Sn**		**08 13 17.7**	**-0.7**
TVAN	**Van**	**1.36**	**14**	*i* P		**Pn**		**08 13 02.4**	**+0.1**
TVAN				*i* S		**Sn**		**08 13 10.9**	**-1.3**
VANB	**Van**	**1.43**	**13**	*e*PN		**Pn**		**08 13 02.0**	**-1.1**
MARD	**Mardin**	**1.76**	**274**	*i* P		**Pg**		**08 13 07.3**	**-3.6**
MARD				*i* S		**Sg**		**08 13 31.8**	**-1.9**
CLDR	**Caldiran**	**2.07**	**21**	*e*PN		**Pn**		**08 13 12.4**	**+0.4**
BNGL	**BINGOL**	**2.26**	**321**	*i* P		**Pn**		**08 13 15.1**	**+0.5**
BNGL				*i* S		**Sn**		**08 13 43.8**	**+1.2**
AGRB	**Hanur-Agry**	**2.37**	**0**	*e*PN		**Pn**		**08 13 16.3**	**+0.3**
DIYA	**Diyarbakir**	**2.38**	**288**	*i* P		**Pn**		**08 13 15.4**	**-0.8**
DIYA				*i* S		**Sn**		**08 13 47.2**	**+1.8**
MAKU	**Maku**	**2.53**	**31**	*e*Pn		**Pn**		**08 13 20.0**	**+1.7**
MAKU				*e*Sg		**Sg**		**08 13 59.7**	**+1.2**
SVRC	**Sivrice-ELAZID**	**3.13**	**293**	*e*PN		**Pn**		**08 13 25.8**	**-0.8**
GNI	**Garni**	**3.25**	**25**	*e*PN		**Pn**		**08 13 29.1**	**+1.0**
PTK	**Pertek**	**3.29**	**302**	*e*PN		**Pn**		**08 13 28.0**	**-0.7**
URFA	**Urfa**	**3.32**	**275**	*e*PN		**Pn**		**08 13 29.1**	**0.0**
ELZG	**Elazig**	**3.41**	**293**	*i* P		**Pn**		**08 13 29.5**	**-0.9**
ELZG				*i* S		**Sg**		**08 14 23.6**	**-3.2**
ELZG	**Elazig**	**3.41**	**293**	*i* P		**Pn**		**08 13 29.5**	**-0.9**
ELZG				*i* S		**Sg**		**08 13 23.5**	**-3.3**
EZC	**Erzincan**	**3.55**	**317**	*e*PN		**Pn**		**08 13 36.1**	**+3.8**
MALT	**Malatya**	**3.77**	**288**	*e*PN		**Pn**		**08 13 35.4**	**+0.1**
MYA	**Malatya**	**3.78**	**289**	*e*PN		**Pn**		**08 13 35.1**	**-0.3**
BHD	**Baghdad**	**4.09**	**163**	*e*x		x		08 13 36.0	
BHD				*e*x		x		08 13 49.0	
BHD				*e*x		x		08 14 24.0	
SNGE	**Sanandaj**	**4.12**	**119**	*e*Pn		**Pn**		**08 13 41.5**	**+1.4**
SNGE				*e*Sg		**Sg**		**08 14 48.9**	**-0.4**
SNGE				AML	AML			08 15 05.1	
	comp=E,264nm,0.7s								
SNGE				AML	AML			08 15 08.9	
	comp=N,248nm,0.6s								
SNGE	**Sanandaj**	**4.12**	**119**	*e*Pn		**Pn**		**08 13 41.5**	**+1.4**
	SNR=52								
SNGE				*e*Sg		**Sg**		**08 14 48.9**	**-0.4**
	SNR=90								
GUMT	**Gumushane**	**4.25**	**321**	*e*PN		**Pn**		**08 13 42.7**	**+0.9**
DARE	**Darende-Malaty**	**4.44**	**295**	*e*PN		**Pn**		**08 13 46.3**	**+1.8**
GAZ	**Gaziantep**	**4.60**	**271**	*e*PN		**Pn**		**08 13 46.9**	**+0.1**
ZNJK	**Zanjan**	**4.60**	**95**	*e*Pn		**Pn**		**08 13 48.9**	**+2.1**
ZNJK				AML	AML			08 15 14.9	
	comp=E,23nm,0.7s								
KMRS	**Kahramanmaras**	**4.85**	**275**	*e*PN		**Pn**		**08 13 50.3**	**+0.1**
SVSK	**Karacayir**	**5.41**	**302**	*e*PN		**Pn**		**08 13 58.2**	**+0.3**
HTY	**Hatay**	**5.60**	**261**	*e*PN		**Pn**		**08 14 00.5**	**0.0**

KOZT	**Kozan**	**5.70**	**275**	*e*PN		**Pn**		**08 14 02.5**	**+0.6**
BNN	**Bunyan**	**5.87**	**288**	*e*PN		**Pn**		**08 14 04.7**	**+0.6**
YURE	**YUREGIR**	**5.89**	**269**	*i* P		**Pg**		**08 14 30.3**	**+0.3**
YURE				*i* S		**Sg**		**08 15 41.9**	**-4.3**
ASAO	**Ashtian**	**6.31**	**113**	*e*Pn		**Pn**		**08 14 12.6**	**+2.5**
ASAO				Sn		**Sn**		**08 15 24.6**	**+2.4**
ASAO	**Ashtian**	**6.31**	**113**	*e*Pn		**Pn**		**08 14 12.6**	**+2.4**
	SNR=52								
ASAO				Sn		**Sn**		**08 15 24.6**	**+2.4**
	SNR=52								
KARA	**Karaisali**	**6.32**	**273**	*e*PN		**Pn**		**08 14 11.2**	**+0.9**
YOZ	**Yozgat**	**6.49**	**294**	*e*PN		**Pn**		**08 14 13.6**	**+1.0**
NIG	**Nigde**	**6.70**	**280**	*e*PN		**Pn**		**08 14 17.1**	**+1.5**
MERS	**Mersin**	**6.77**	**270**	*e*PN		**Pn**		**08 14 17.6**	**+1.0**
IKL	**Isikli**	**7.52**	**265**	*e*PN		**Pn**		**08 14 26.8**	**-0.1**
KAMT	**Kaman**	**7.60**	**289**	*e*PN		**Pn**		**08 14 28.4**	**+0.4**
MIB	**Mutribah**	**8.23**	**152**	*e*P		**Pn**		**08 14 35.2**	**-1.3**
	baz=152								
MIB				AML	AML			08 16 06.6	
	comp=Z,22nm,0.6s,baz=152								
RST	**Umm Al-Ruwaisa**	**8.38**	**155**	*e*P		**Pn**		**08 14 36.9**	**-1.8**
	baz=155								
RST				AML	AML			08 16 06.2	
	comp=Z,13nm,0.4s,baz=155								
NAY	**Al-Naaiem**	**8.70**	**155**	*e*P		**Pn**		**08 14 41.0**	**-2.1**
	baz=154								
NAY				AML	AML			08 16 13.9	
	comp=Z,6.0nm,0.6s,baz=154								
RDF	**Al-Radifah**	**9.10**	**154**	*e*P		**Pn**		**08 14 46.8**	**-1.7**
	baz=154								
RDF				AML	AML			08 16 25.9	
	comp=Z,9.0nm,0.4s,baz=154								

*ISCJB **22** 08:29:55.0±0.4, 379S±005×10373W±006, h10km, mb4.6/73, MS4.8/33, Error ellipse: s-maj=9.5km s-min=6.4km az=151.2*
*IDC **22** 08:29:54.9±0.7, 382S×10365W, h0km, mb4.2/16, mb1 4.4/16, mb1mx4.3/21, mbtmp4.2/16, MS4.7/26, Ms1 4.7/26, ms1mx4.6/32, Error ellipse: s-maj=27.3km s-min=13.1km az=59.0*
*BJI **22** 08:29:56.3, 380S×10380W, h10km, mB5.5, Ms5.5, Msz5.

MVCO	**Mesa Verde**	**41.07**	**354**	*e*P		**P**	**08 37 40.3**	**-0.1**
	comp=Z,20nm,0.9s,mb4.7								
SDCO	**Great Sand Dun**	**41.40**	**358**	*e*P		**P**	**08 37 43.3**	**+0.1**
	comp=Z,7.0nm,1.0s,mb4.2								
SHPR	**Sheep Range**	**41.52**	**346**	*e*P		**P**	**08 37 45.3**	**+1.1**
GNAR	**Gosnell**	**41.62**	**17**	*e*P		**P**	**08 37 43.0**	**-2.0**
	comp=Z,300nm,0.8s								
ISA	**Isabella**	**41.65**	**342**	*e*P		**P**	**08 37 44.6**	**-0.6**
ISA				pmax	pmax				
	comp=Z,5.0nm,1.0s,mb4.1								
ISA	**Isabella**	**41.65**	**342**	*e*P		**P**	**08 37 44.5**	**-0.7**
	comp=Z,5.3nm,1.0s,mb4.1								
GOGA	**Godfrey**	**41.70**	**26**	*e*P		**P**	**08 37 45.4**	**-0.4**
GOGA				pmax	pmax				
	comp=Z,17nm,1.1s,mb4.6								
GOGA	**Godfrey**	**41.70**	**26**	*e*P		**P**	**08 37 45.4**	**-0.3**
	comp=Z,17nm,1.1s,mb4.6								
GLAT	**Glass**	**42.11**	**17**	*e*P		**P**	**08 37 49.5**	**+0.5**
SWET	**Sewanee**	**42.28**	**22**	*e*P		**P**	**08 37 49.6**	**-0.8**
UTMT	**University of**	**42.31**	**18**	*e*P		**P**	**08 37 51.1**	**+0.5**
	comp=Z,86nm,1.2s,mb5.2								
ARUT	**Antelope Range**	**42.38**	**349**	*e*P		**P**	**08 37 50.8**	**-0.4**
WVT	**Waverly**	**42.44**	**19**	*e*P		**P**	**08 37 50.7**	**-1.0**
WVT				pmax	pmax				
	comp=Z,19nm,0.8s,mb4.8								
WVT	**Waverly**	**42.44**	**19**	*e*P		**P**	**08 37 50.7**	**-1.1**
	comp=Z,19nm,0.8s,mb4.8								
CBKS	**Cedar Bluff**	**42.59**	**5**	*e*P		**P**	**08 37 52.6**	**-0.3**
CBKS				pmax	pmax				
	comp=Z,22nm,1.0s,mb4.8								
CBKS	**Cedar Bluff**	**42.59**	**5**	*e*P		**P**	**08 37 52.6**	**-0.2**
	comp=Z,22nm,1.0s,mb4.8								
MSU	**Marysvale**	**42.85**	**350**	*e*P		**P**	**08 37 55.3**	**+0.3**
CPCT	**Cooper Cave**	**43.03**	**23**	*e*P		**P**	**08 37 56.2**	**-0.3**
SRU	**San Rafael**	**43.18**	**352**	*e*P		**P**	**08 37 57.9**	**+0.2**
KSU1	**Kansas State U**	**43.22**	**8**	*e*P		**P**	**08 37 57.0**	**-1.0**
	comp=Z,20nm,1.2s,mb4.7								
CCM	**Cathedral Cave**	**43.25**	**14**	*e*P		**P**	**08 37 57.2**	**-1.1**
CCM				pmax	pmax				
	comp=Z,22nm,1.0s,mb4.8								
CCM	**Cathedral Cave**	**43.25**	**14**	*e*P		**P**	**08 37 57.2**	**-1.1**
	comp=Z,22nm,1.0s,mb4.8								
CFAA	**Coronel Fontan**	**43.30**	**134**	P		**P**	**08 37 58.5**	**-0.4**
	comp=Z,1.3nm,0.9s,mb3.6,baz=292,slow=8.1,SNR=8.4								
CFAA	**Coronel Fontan**	**43.30**	**134**	P		**P**	**08 37 58.5**	**-0.4**
FVM	**French Village**	**43.40**	**15**	*e*P		**P**	**08 37 59.6**	**+0.2**
FVM				pmax	pmax				
	comp=Z,25nm,1.2s,mb4.8								
FVM	**French Village**	**43.40**	**15**	*e*P		**P**	**08 37 59.6**	**+0.2**
	comp=Z,25nm,1.2s,mb4.8								
JSC	**Jenkinsville**	**43.42**	**27**	*e*P		**P**	**08 37 59.3**	**-0.4**
ISCO	**Idaho Springs**	**43.45**	**358**	*e*P		**P**	**08 38 00.8**	**+1.0**
ISCO				pmax	pmax				
	comp=Z,11nm,1.0s,mb4.5								
ISCO	**Idaho Springs**	**43.45**	**358**	*e*P		**P**	**08 38 00.8**	**+0.9**
	comp=Z,11nm,1.0s,mb4.5								
TMUT	**Trail Mountain**	**43.46**	**352**	*e*P		**P**	**08 38 01.0**	**+1.1**
SIUC	**Southern Illin**	**43.48**	**17**	*e*P		**P**	**08 37 59.7**	**-0.4**
TKL	**Tuckaleechee C**	**43.51**	**24**	*e*P		**P**	**08 38 00.4**	**0.0**
SIV	**San Ignacio**	**43.62**	**109**	P		**P**	**08 37 59.6**	**-2.0**
	comp=Z,2.3nm,1.0s,mb3.9,baz=308,slow=9.2,SNR=8.6								
NVAR	**Mina Array Bea**	**44.16**	**344**	P		**P**	**08 38 06.6**	**+1.1**
	comp=Z,2.1nm,0.9s,mb3.8,baz=169,slow=8.4,SNR=5.1								
NVAR				PcP	PcP		08 39 51.7	+1.2	
	comp=Z,0.4nm,0.3s,baz=188,slow=5.5,SNR=3.9								
NVAR	**Mina Array Bea**	**44.16**	**344**	P		**P**	**08 38 06.6**	**+1.1**
NVAR				PcP	PcP		08 39 51.7	+1.2	
USIN	**University of**	**44.17**	**18**	*e*P		**P**	**08 38 05.8**	**0.0**
	comp=Z,60nm,1.1s,mb5.2								
MPU	**Maple Canyon**	**44.23**	**351**	*e*P		**P**	**08 38 07.5**	**+1.4**
	comp=Z,19nm,1.0s,mb4.8								
TZTN	**Tazewell**	**44.37**	**23**	*e*P		**P**	**08 38 06.6**	**-0.6**
	comp=Z,50nm,1.3s,mb5.1								
CMB	**Columbia Colle**	**44.42**	**341**	*e*P		**P**	**08 38 08.6**	**+0.9**
CMB				pmax	pmax				
	comp=Z,5.0nm,1.0s,mb4.2								
CMB	**Columbia Colle**	**44.42**	**341**	*e*P		**P**	**08 38 08.6**	**+0.9**
	comp=Z,4.6nm,1.0s,mb4.2								
WAKR	**Walker**	**44.56**	**342**	*e*P		**P**	**08 38 10.6**	**+1.8**
DAU	**Daniels Canyon**	**44.56**	**352**	*e*P		**P**	**08 38 10.0**	**+1.2**
DUG	**Dugway**	**44.59**	**350**	*e*P		**P**	**08 38 09.3**	**+0.3**
DUG				pmax	pmax				
	comp=Z,13nm,1.2s,mb4.6								
DUG	**Dugway**	**44.59**	**350**	*e*P		**P**	**08 38 09.3**	**+0.2**
	comp=Z,13nm,1.2s,mb4.7								
OLIL	**Olney**	**44.75**	**17**	*e*P		**P**	**08 38 10.3**	**+0.1**
	comp=Z,27nm,0.8s,mb5.1								
JLU	**Jordanelle**	**44.78**	**352**	*e*P		**P**	**08 38 11.9**	**+1.5**
WCI	**Wyandotte Cave**	**44.86**	**20**	*e*P		**P**	**08 38 10.8**	**-0.4**
WCI				pmax	pmax				
	comp=Z,17nm,1.0s,mb4.8								
WCI	**Wyandotte Cave**	**44.86**	**20**	*e*P		**P**	**08 38 10.8**	**-0.3**
	comp=Z,17nm,1.0s,mb4.8								
CTU	**Camp Tracy**	**44.91**	**351**	*e*P		**P**	**08 38 12.5**	**+1.0**
PHWY	**Pilot Hill**	**44.94**	**358**	*e*P		**P**	**08 38 12.2**	**+0.5**
BGU	**Big Grassy Mou**	**45.34**	**350**	*e*P		**P**	**08 38 15.2**	**+0.3**
SPUT	**South Promonto**	**45.62**	**351**	*e*P		**P**	**08 38 17.8**	**+0.6**
BLO	**Bloomington**	**45.64**	**19**	*e*P		**P**	**08 38 17.1**	**-0.3**
BLO				pmax	pmax				
	comp=Z,22nm,1.0s,mb5.0								
BLO	**Bloomington**	**45.64**	**19**	*e*P		**P**	**08 38 17.1**	**-0.3**
	comp=Z,22nm,1.0s,mb5.0								
HWUT	**Hardware Ranch**	**45.78**	**352**	*e*P		**P**	**08 38 18.2**	**-0.2**
	comp=Z,16nm,1.2s,mb4.8								
ELN	**Prospectdale**	**46.11**	**26**	*e*P		**P**	**08 38 20.3**	**-0.8**
HVU	**Hansel Valley**	**46.13**	**351**	*e*P		**P**	**08 38 22.0**	**+0.8**
BW06	**Boulder Array**	**46.68**	**354**	*e*P		**P**	**08 38 24.7**	**-0.8**
	comp=Z,11nm,1.0s,mb4.8								
PDAR	**Pinedale Array**	**46.68**	**354**	P		**P**	**08 38 24.6**	**-0.8**
	comp=Z,4.8nm,0.9s,mb4.4,baz=164,slow=4.9,SNR=33								
PDAR				LR	LR		08 55 42.2		
	comp=Z,590nm,19.2s,MS4.6,baz=153,slow=33								
AHID	**Auburn Hatcher**	**46.85**	**353**	*e*P		**P**	**08 38 27.6**	**+0.8**
PPT	**Papeete**	**46.92**	**250**	*e*S		**S**	**08 45 19.2**	**-0.1**
	comp=Z,361nm,24.2s								
PPT				*e*LQ			08 49 48.1		
	comp=Z,2μm,29.0s								
PPT				*e*LR	LR		08 51 42.9		
	comp=Z,2μm,26.0s,baz=74								
PPT	**Papeete**	**46.92**	**250**	LR	LR		08 52 54.4		
	comp=Z,434nm,18.5s,MS4.4,baz=255,slow=29								
PLCA	**Paso Flores**	**47.33**	**146**	P		**P**	**08 38 35.0**	**+4.3**
	comp=Z,3.7nm,1.1s,mb4.2,baz=315,slow=8.6,SNR=2.8								
PLCA				LR	LR		08 53 53.9		
	comp=Z,1μm,18.5s,MS5.0,baz=7.1,slow=30								
PLCA	**Paso Flores**	**47.33**	**146**	P		**P**	**08 38 35.0**	**+4.3**
PLCA				LR	LR		08 53 53.9		
REDW	**Red Top Meadow**	**47.41**	**353**	*e*P		**P**	**08 38 31.2**	**0.0**
	comp=Z,11nm,1.1s,mb4.7								
RRI2	**Red Ridge**	**47.45**	**352**	*e*P		**P**	**08 38 30.5**	**-1.0**
	comp=Z,10nm,0.9s,mb4.8								
SNOW	**Snow King Moun**	**47.50**	**353**	*e*P		**P**	**08 38 31.9**	**0.0**
	comp=Z,32nm,1.7s,mb5.0								
TPAW	**Teton Pass**	**47.55**	**353**	*e*P		**P**	**08 38 31.5**	**-0.7**
	comp=Z,6.1nm,0.9s,mb4.6								
TPAW				*e*PcP	PcP		08 40 01.6	-0.5	
LOHW	**Long Hollow**	**47.63**	**353**	*e*P		**P**	**08 38 32.4**	**-0.5**
	comp=Z,11nm,1.2s,mb4.8								
DCID1	**Drake Creek**	**47.68**	**353**	*e*P		**P**	**08 38 33.3**	**0.0**
RSSD	**Black Hills**	**47.73**	**360**	*e*P		**P**	**08 38 33.8**	**+0.1**
RSSD				*e*			08 40 03.3		
RSSD				pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.6								
RSSD	**Black Hills**	**47.73**	**360**	*e*P		**P**	**08 38 33.8**	**+0.2**
	comp=Z,5.7nm,0.9s,mb4.6								
RSSD				*e*PcP	PcP		08 40 03.3	+0.4	
ECSD	**EROS,Sioux Fal**	**47.78**	**7**	*e*P		**P**	**08 38 33.0**	**-1.0**
	comp=Z,18nm,1.4s,mb4.9								
MOOW	**Moose Ponds**	**47.78**	**353**	*e*P		**P**	**08 38 34.2**	**+0.1**
	comp=Z,7.2nm,1.1s,mb4.6								
IMW	**Indian Meadow**	**47.95**	**353**	*e*P		**P**	**08 38 34.9**	**-0.4**
	comp=Z,18nm,1.2s,mb5.0								
MOD	**Modoc**	**47.95**	**343**	*e*P		**P**	**08 38 35.6**	**+0.2**
	comp=Z,7.5nm,1.0s,mb4.7								
WVOR	**Wild Horse Val**	**47.99**	**345**	*e*P		**P**	**08 38 36.4**	**+0.7**
WVOR				pmax	pmax				
	comp=Z,7.0nm,1.1s,mb4.6								
WVOR	**Wild Horse Val**	**47.99**	**345**	*e*P		**P**	**08 38 36.4**	**+0.6**
	comp=Z,7.3nm,1.1s,mb4.6								
HLID	**Hailey**	**48.15**	**350**	*e*P		**P**	**08 38 36.3**	**-0.6**
	comp=Z,6.6nm,0.9s,mb4.7								
TBI	**Tubuai**	**48.22**	**242**	*e*S		**S**	**08 45 35.6**	**-2.0**
	comp=Z,259nm,28.5s								
TBI				*e*LR	LR		08 52 17.7		
	comp=Z,1μm,29.0s,baz=72								
MCWV	**Mont Chateau**	**48.54**	**25**	*e*P		**P**	**08 38 39.0**	**-0.9**
	comp=Z,53nm,1.4s,mb5.4								
YMR	**Madison River**	**48.71**	**353**	*e*P		**P**	**08 38 41.3**	**+0.1**
	comp=Z,25nm,1.3s,mb5.1								
QLMT	**Earthquake Lak**	**48.93**	**353**	*e*P		**P**	**08 38 43.6**	**+0.8**
RLMT	**Red Lodge**	**48.98**	**355**	*e*P		**P**	**08 38 42.4**	**-0.9**
	comp=Z,10nm,0.8s,mb4.9								
MCMT	**McKenzie Canyo**	**49.12**	**351**	*e*P		**P**	**08 38 44.4**	**0.0**
DLMT	**Dillon**	**49.61**	**352**	*e*P		**P**	**08 38 49.0**	**+0.9**
SDMD	**Soldier's Deli**	**49.65**	**27**	*e*P		**P**	**08 38 48.2**	**-0.3**
	comp=Z,8.7nm,0.9s,mb4.8								
GCMT	**Greycliff**	**49.68**	**355**	*e*P		**P**	**08 38 48.4**	**-0.2**
CPUP	**Villa Florida**	**49.70**	**122**	P		**P**	**08 38 49.0**	**-0.2**
	comp=Z,3.2nm,0.8s,mb4.4,baz=282,slow=6.6,SNR=6.4								
CPUP				LR	LR		08 56 43.6		
	comp=Z,781nm,18.6s,MS4.7,baz=276,slow=32								
LRM	**Limekiln Ridge**	**50.04**	**352**	*e*P		**P**	**08 38 51.7**	**+0.4**
CHMT	**Chamberlain Mo**	**51.22**	**352**	*e*P		**P**	**08 38 60.0**	**-0.3**
EGMT	**Eagleton**	**51.91**	**355**	*e*P		**P**	**08 39 05.1**	**-0.2**
	comp=Z,12nm,1.1s,mb4.7								
HAWA	**Hanford**	**51.93**	**346**	*e*P		**P**	**08 39 04.6**	**-1.0**
	comp=Z,9.6nm,1.1s,mb4.6								
RSW	**Rattlesnake Hi**	**51.94**	**346**	*e*P		**P**	**08 39 05.5**	**-0.1**
DGMT	**Dagmar**	**52.08**	**360**	*e*P		**P**	**08 39 06.6**	**-0.1**
	comp=Z,17nm,0.9s,mb5.0								
AGMN	**Agassiz Refuge**	**52.36**	**7**	*e*P		**P**	**08 39 08.4**	**-0.3**
	comp=Z,9.4nm,0.8s,mb4.8								
OD2	**Odessa Site #2**	**52.68**	**347**	*e*P		**P**	**08 39 09.9**	**-1.2**
NEW	**Newport**	**53.18**	**349**	*e*P		**P**	**08 39 14.5**	**-0.3**
NEW				pmax	pmax				
	comp=Z,9.0nm,1.1s								
NEW	**Newport**	**53.18**	**349**	*e*P		**P**	**08 39 14.5**	**-0.3**
	comp=Z,8.9nm,1.1s,mb4.6								
WALA	**Waterton Lakes**	**53.41**	**352**	*e*P		**P**	**08 39 17.6**	**+1.1**
JCW	**Jim Creek**	**54.20**	**345**	*e*P		**P**	**08 39 21.6**	**-0.7**
ULM	**Lac du Bonnet**	**54.29**	**6**	P		**P**	**08 39 22.4**	**-0.5**
	comp=Z,8.7nm,0.9s,mb4.7,baz=181,slow=9.3,SNR=3.5								
ULM				LR	LR		09 01 17.0		
	comp=Z,1μm,20.6s,MS4.9,baz=306,slow=35								
FRNY	**Flat Rock**	**55.44**	**26**	*e*P		**P**	**08 39 31.4**	**+0.1**
BDFB	**Brasilia**	**56.00**	**106**	P		**P**	**08 39 35.4**	**-0.5**
	comp=Z,5.4nm,0.9s,mb4.6,baz=249,slow=8.9,SNR=5.6								
BDFB				LR	LR		09 00 20.0		
	comp=Z,776nm,19.1s,MS4.8,baz=282,slow=33								
RAR	**Rarotonga**	**57.05**	**247**	LR	LR		08 56 49.5		
	comp=Z,566nm,18.5s,MS4.7,baz=259,slow=28								
EDM	**Edmonton**	**57.41**	**353**	*e*P		**P**	**08 39 45.0**	**-0.3**
YKA	**Yellowknife Ar**	**66.66**	**355**	P		**P**	**08 40 46.1**	**-1.1**
	comp=Z,2.1nm,0.8s,mb4.2,baz=164,slow=6.5,SNR=5.2								
BMRM	**Bremner River**	**71.93**	**340**	P		**P**	**08 41 19.9**	**0.0**
RAO	**Raoul Island**	**74.34**	**241**	LR	LR		09 05 49.1		
	comp=Z,209nm,21.2s,MS4.4,baz=96,slow=29								
COLA	**College**	**75.77**	**342**	*e*P		**P**	**08 41 43.0**	**+0.7**
KTH	**Kantishna Hill**	**75.86**	**340**	*e*P		**P**	**08 41 41.7**	**-1.2**
	comp=Z,17nm,1.0s,mb4.9								
COLD	**Coldfoot**	**78.09**	**343**	*e*P		**P**	**08 41 55.6**	**+0.2**
	comp=Z,13nm,1.2s,mb4.7								
RPZ	**Rata Peaks**	**83.91**	**227**	LR	LR		09 13 00.5		
	comp=Z,868nm,19.1s,MS5.2,baz=40,slow=31								
QSPA	**South Pole Qui**	**86.22**	**180**	P		**P**	**08 42 38.1**	**+0.2**
	comp=Z,4.3nm,1.0s,mb4.6,baz=115,slow=1.5,SNR=4.2								
QSPA				LR	LR		09 14 36.8		
	comp=Z,435nm,18.8s,MS4.9,baz=310,slow=31								
QSPA	**South Pole Qui**	**86.22**	**180**	P		**P**	**08 42 38.1**	**+0.2**
QSPA				LR	LR		09 14 36.8		
VNA3	**Neumayer Olymp**	**87.71**	**161**	*e*P		**P**	**08 42 45.6**	**+0.3**
VNA3				*e*			08 42 50.8		
VNA3				*e*			08 42 57.2		
BBTS	**Babate**	**88.25**	**75**	LR	LR		09 14 41.8		
	comp=Z,400nm,20.7s,MS4.8,baz=4.2,slow=30								
VNA2	**Neumayer--Watz**	**88.49**	**161**	*e*P		**P**	**08 42 49.5**	**+0.6**
VNA2				*e*	pP		08 42 54.4	+2.1	
VNA2				*e*			08 43 01.1		
SNAA	**Sanae**	**89.81**	**162**	*e*P		**P**	**08 42 54.8**	**-0.4**
SNAA				*e*	pP		08 42 58.7	+0.2	
HNR	**Honiara**	**95.60**	**260**	LR	LR		09 15 51.8		
	comp=Z,140nm,21.2s,MS4.4,baz=273,slow=29								
PET	**Petropavlovsk**	**97.63**	**323**	*e*P		**P**	**08 43 41.2**	**+10**
PETK	**Petropavlovsk-**	**98.20**	**323**	LR	LR		09 19 06.4		
	comp=Z,361nm,20.5s,MS4.8,baz=45,slow=30								
DBIC	**Dimbokro**	**99.24**	**84**	LR	LR		09 24 23.2		
	comp=Z,280nm,18.2s,MS4.8,baz=229,slow=33								
MDT	**Midelt**	**99.72**	**58**	LR	LR		09 19 09.9		
	comp=Z,389nm,20.1s,MS4.9,baz=299,slow=30								
ESDC	**Sonseca Array**	**99.95**	**51**	LR	LR		09 20 27.0		
	comp=Z,288nm,20.6s,MS4.8,baz=265,slow=30								
WRA	**Warramunga Arr**	**118.29**	**245**	PKP	PKPdf		08 48 44.2	-1.0	
	comp=Z,0.4nm,0.8s,baz=100,slow=2.6,SNR=6.7								
CN2	**Changchun**	**121.20**	**320**	*e*PKP	PKPdf		08 48 52.8	+2.7	
CN2				PP	PP		08 50 26.0	+6.0	
CN2				PP	PP				
	comp=Z,200nm,5.0s								
CN2				LR	LR				
	comp=N,320nm,20.0s,MS5.2								
CN2				LR	LR				
	comp=E,430nm,20.0s,MS5.2								
CN2				LR	LR				
	comp=Z,440nm,22.0s,MS5.1								
BJI	**Beijing**	**129.06**	**321**	PKP	PKPdf		08 48 59.3	-6.0	
SONM	**Songino Array**	**129.09**	**334**	PKP	PKPdf		08 49 05.8	+0.7	
	comp=Z,0.3nm,0.4s,baz=28,slow=3.4,SNR=3.0								
ZALV	**Zalesovo Beam**	**129.55**	**353**	PKP	PKPdf		08 49 05.7	-0.1	
	comp=Z,0.6nm,0.3s,baz=10,slow=1.7,SNR=4.3								
SSE	**Sheshan**	**129.81**	**308**	PKP	PKPdf		08 49 03.0	-4.0	
SSE				PP	PP		08 51 18.4	+0.5	
SSE				SS	SS		09 08 36.8	-5.5	
SSE				PP	PP				
	comp=Z,85nm,4.3s								
SSE				LR	LR				
	comp=N,125nm,19.5s,MS5.0								
SSE				LR	LR				
	comp=E,318nm,19.4s,MS5.0								
SSE				LR	LR				
	comp=Z,423nm,16.8s,MS5.2								
NJ2	**Nanjing**	**131.21**	**310**	*e*PKP	PKPdf		08 49 06.8	-2.8	
HHC	**Hu-ho-hao-te**	**131.38**	**324**	*e*PKP	PKPdf		08 49 03.9	-5.8	
HHC				PP	PP		08 51 26.3	-1.1	
HHC				PKS			08 52 38.6		
HHC				SKS	SKSdf		08 56 13.8	-7.6	
HHC				SKKS	SKKSac		08 58 17.3	-7.5	
HHC				SS	SS		09 08 56.6	-3.7	
HHC				PP	PP				
	comp=Z,111nm,6.9s								
HHC				LR	LR				
	comp=N,572nm,19.8s,MS5.5								
HHC				LR	LR				
	comp=E,616nm,19.4s,MS5.5								
HHC				LR	LR				
	comp=Z,814nm,19.2s,MS5.4								
KURK	**Kurchatov**	**133.24**	**358**	PKP	PKPdf		08 49 13.7	+0.8	
	comp=Z,0.4nm,0.3s,baz=341,slow=1.2,SNR=3.8								
MKAR	**Makanchi Array**	**136.88**	**354**	PKP	PKPdf		08 49 19.0	-0.8	
	comp=Z,0.2nm,0.4s,baz=9.1,slow=3.6,SNR=2.8								
MKAR	**Makanchi Array**	**136.88**	**354**	PKP	PKPdf		08 49 19.0	-0.8	
WMQ	**Urumqi**	**138.91**	**347**	*e*PKP	PKPdf		08 49 25.0	+1.4	
WMQ				*e*PP	PP		08 52 21.0	+6.7	
WMQ				PKS			08 53 00.0		
WMQ				SKS	SKSdf		08 56 33.0	-1.4	
WMQ				PP	PP				
	comp=Z,258nm,6.4s								
WMQ				LR	LR				
	comp=N,335nm,20.4s,MS5.2								
WMQ				LR	LR				
	comp=E,364nm,19.8s,MS5.2								
WMQ				LR	LR				
	comp=Z,320nm,19.9s,MS5.1								
LZH	**Lanzhou**	**139.05**	**325**	*e*PKP	PKPdf		08 49 26.5	+2.4	
LZH				XPKP			08 49 31.0		
LZH				PP	PP		08 52 23.0	+7.1	
LZH				SKKS	SKKSac		08 59 11.8	+0.7	
LZH				*e*SS	SS		09 10 35.0	+2.6	
LZH				PP	PP				
	comp=Z,89nm,7.7s								
LZH				LR	LR				
	comp=E,147nm,18.5s								
LZH				LR	LR				
	comp=Z,176nm,20.2s,MS4.8								
CD2	**Chengdu**	**142.62**	**319**	*e*PKP	PKPdf		08 49 29.8	-0.9	
CD2				PP	PP		08 52 41.5	+3.5	
CD2				PKS			08 53 04.3		
CD2				SKS	SKSdf		08 56 34.3	-6.7	
CD2				SKKS	SKKSac		08 59 27.6	-4.6	
CD2				SS	SS		09 11 11.8	-2.8	
CD2				PP	PP				
	comp=Z,100nm,8.4s								
CD2				LR	LR				
	comp=N,150nm,16.2s								
CD2				LR	LR				
	comp=Z,160nm,18.4s,MS4.8								
GYA	**Guiyang**	**143.22**	**311**	*e*PKP	PKPdf		08 49 32.0	+0.1	
GYA				PP	PP		08 52 45.8	+3.9	
GYA				PKS			08 53 06.3		
GYA				SKS	SKSdf		08 56 39.8	-2.3	
GYA				SKKS	SKKSac		08 59 34.6	-1.3	
GYA				SS	SS		09 11 22.4	+0.3	
GYA				PP	PP				
	comp=Z,120nm,8.9s								
GYA				LR	LR				
	comp=N,140nm,24.8s,MS4.8								
GYA				LR	LR				
	comp=E,160nm,25.9s,MS4.8								
GYA				LR	LR				
	comp=Z,130nm,24.4s,MS4.6								
KMI	**Kunming**	**146.90**	**312**	PKP	PKPdf		08 49 38.5	+0.2	
CMAR	**Chiang Mai Arr**	**153.48**	**305**	PKPbc	PKPbc		08 49 56.6	+0.3	
	comp=Z,1.0nm,0.5s,baz=44,slow=2.7,SNR=4.9								

IDC 22 08:30:03.9±3.0, 386S×10177E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/19, mbtmp3.9/7, Error ellipse: s-maj=142.2km s-min=17.6km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**35.54**	**119**	P	P	08 37 02.5	-0.6
	0.6nm,0.4s,baz=301,slow=8.9,SNR=24						
ASAR	**Alice Springs**	**36.74**	**125**	P	P	08 37 13.1	-0.2
	0.7nm,0.5s,baz=300,slow=8.1,SNR=16						
STKA	**Stephens Creek**	**46.60**	**131**	P	P	08 38 34.6	+0.5
	1.5nm,0.5s,baz=6.2,slow=4.4,SNR=7.6						
SONM	**Songino Array**	**51.63**	**4**	P	P	08 39 12.8	+0.6
	0.9nm,0.8s,baz=183,slow=9.6,SNR=4.9						
MKAR	**Makanchi Array**	**53.29**	**343**	P	P	08 39 23.8	-0.7
	0.7nm,0.5s,baz=142,slow=8.9,SNR=6.1						
KURK	**Kurchatov**	**57.88**	**343**	P	P	08 39 57.4	-0.1
	1.0nm,0.3s,baz=161,slow=7.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**59.32**	**348**	P	P	08 40 07.2	-0.3
	1.9nm,0.4s,baz=172,slow=5.7,SNR=8.6						
TXAR	**Lajitas Array**	**145.02**	**41**	PKPbc	PKPbc	08 49 43.1	-0.1
	0.5nm,0.5s,baz=329,slow=1.1,SNR=15						

IDC 22 08:52:28.8±3.5, 929S×10831E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.6/17, mbtmp3.6/4, 1D, Error ellipse: s-maj=153.2km s-min=24.7km az=51.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**2.54**	**344**	*i*P	Pn	08 53 16.5	+5.2
WRA	**Warramunga Arr**	**27.28**	**116**	P	P	08 58 13.4	-1.8
	0.6nm,0.9s,baz=287,slow=11,SNR=4.1						
ASAR	**Alice Springs**	**28.33**	**123**	P	P	08 58 26.6	+2.1
	0.3nm,0.6s,baz=294,slow=9.0,SNR=5.8						
SONM	**Songino Array**	**56.90**	**358**	P		09 02 16.8	+1.4
	0.5nm,0.6s,baz=174,slow=7.9,SNR=4.4						
MKAR	**Makanchi Array**	**60.47**	**340**	P	P	09 02 39.5	-

ATAH LR LR 09 33 17.1
comp=Z,614nm,18.5s,MS4.2,baz=103,slow=32
OTAV Otavalo 25.58 81 *eP* **P 09 25 21.3 +1.3**
NNA Nana 27.81 108 LR LR 09 33 42.2
comp=Z,828nm,21.2s,MS4.3,baz=292,slow=30
TEIG Tepich 28.33 32 LR LR 09 35 29.2
comp=Z,1μm,18.1s,MS4.6,baz=82,slow=33
LPIG La Paz 28.51 347 LR LR 09 34 10.0
comp=Z,1μm,20.3s,MS4.5,baz=161,slow=30
ROSC El Rosal 30.61 74 LR LR 09 35 05.3
comp=Z,348nm,19.1s,MS4.0,baz=203,slow=30
TXAR Lajitas Array 32.99 0 P **P 09 26 25.7 0.0**
comp=Z,1.3nm,1.0s,mb3.8,baz=178,slow=11,SNR=10
TXAR PcP PcP 09 29 07.5 -2.3
comp=Z,0.5nm,1.0s,baz=172,slow=1.4,SNR=3.1
TXAR LR LR 09 37 49.4
comp=Z,801nm,21.9s,MS4.4,baz=185,slow=33
TXAR Lajitas Array 32.99 0 P **P 09 26 25.7 0.0**
TXAR 09 29 07.5
JCT Junction City 34.34 6 *eP* **P 09 26 37.4 0.0**
JCT pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
JCT Junction City 34.34 6 *eP* **P 09 26 37.4 -0.1**
comp=Z,6.6nm,0.8s,mb4.6
RKT Rikitea 35.77 235 *e*LQ 09 34 59.1
comp=Z,317nm,28.5s
RKT *e*LR LR 09 36 22.6
comp=Z,2μm,26.8s,baz=57
TAOE Nuku Hiva Isla 36.52 260 *e*LR LR 09 36 37.6
comp=Z,3μm,26.0s
LPAZ La Paz 37.08 112 P **P 09 27 01.2 0.0**
comp=Z,0.9nm,0.8s,mb3.7,baz=277,slow=8.1,SNR=3.9
LPAZ LR LR 09 40 17.7
comp=Z,325nm,19.5s,MS4.1,baz=78,slow=33
BNM Barren Site 37.89 356 *eP* **P 09 27 08.3 +0.5**
LAZ Ladron 38.18 355 *eP* **P 09 27 11.0 +0.8**
LVC Limon Verde 38.52 122 P **P 09 27 13.9 +0.6**
comp=Z,4.3nm,0.9s,mb4.2,baz=283,slow=7.8,SNR=3.9
AMTX Amarillo 38.57 3 *eP* **P 09 27 13.4 -0.2**
comp=Z,16nm,1.4s,mb4.5
WMOK Wichita Mounta 38.66 7 *eP* **P 09 27 13.6 -0.7**
ANMO Albuquerque 38.68 356 *eP* **P 09 27 14.9 +0.5**
MIAR Mount Ida 39.37 13 *eP* **P 09 27 20.1 -0.1**
MIAR pmax pmax
comp=Z,24nm,1.0s,mb4.9
MIAR Mount Ida 39.37 13 *eP* **P 09 27 20.1 -0.1**
comp=Z,24nm,1.0s,mb4.9
WUAZ Wupatki 39.81 350 *eP* **P 09 27 24.5 +0.7**
comp=Z,8.3nm,1.0s,mb4.4
LRAL Lakeview Retre 39.96 22 *eP* **P 09 27 25.6 +0.4**
MVCO Mesa Verde 41.09 354 *eP* **P 09 27 34.7 +0.3**
comp=Z,16nm,1.0s,mb4.6
SDCO Great Sand Dun 41.41 358 *eP* **P 09 27 37.6 +0.5**
GOGA Godfrey 41.72 26 *eP* **P 09 27 39.3 -0.4**
SWET Sewanee 42.30 22 *eP* **P 09 27 43.8 -0.6**
UTMT University of 42.33 18 *eP* **P 09 27 44.1 -0.5**
ARUT Antelope Range 42.39 349 *eP* **P 09 27 46.5 +1.4**
WVT Waverly 42.46 19 *eP* **P 09 27 45.1 -0.6**
MSU Marysvale 42.87 350 *eP* **P 09 27 50.1 +1.1**
CPCT Cooper Cave 43.04 23 *eP* **P 09 27 49.9 -0.6**
SRU San Rafael 43.20 352 *eP* **P 09 27 52.0 +0.3**
CCM Cathedral Cave 43.27 14 *eP* **P 09 27 51.4 -0.8**
CCM pmax pmax
comp=Z,15nm,1.0s,mb4.7
CCM Cathedral Cave 43.27 14 *eP* **P 09 27 51.4 -0.9**
comp=Z,15nm,1.0s,mb4.7
CFAA Coronel Fontan 43.29 134 P **P 09 27 52.7 +0.1**
comp=Z,1.1nm,1.0s,mb3.5,baz=295,slow=7.3,SNR=5.8
CFAA Coronel Fontan 43.29 134 P **P 09 27 52.7 +0.1**
FVM French Village 43.41 15 *eP* **P 09 27 52.2 -1.2**
FVM pmax pmax
comp=Z,13nm,1.0s,mb4.6
FVM French Village 43.41 15 *eP* **P 09 27 52.2 -1.2**
comp=Z,13nm,1.0s,mb4.6
ISCO Idaho Springs 43.47 358 *eP* **P 09 27 53.8 0.0**
TMUT Trail Mountain 43.48 352 *eP* **P 09 27 54.5 +0.6**
TKL Tuckaleechee C 43.52 24 *eP* **P 09 27 53.4 -0.9**
SIV San Ignacio 43.61 109 P **P 09 27 54.8 -0.6**
comp=Z,1.5nm,0.8s,mb3.8,baz=294,slow=12,SNR=7.5
SIV ScP ScP 09 33 32.3 -2.6
comp=Z,2.1nm,0.9s,baz=272,slow=3.2,SNR=6.7
NVAR Mina Array Bea 44.18 344 P **P 09 28 00.3 +0.7**
comp=Z,1.1nm,0.8s,mb3.6,baz=168,slow=8.7,SNR=7.5
NVAR PcP PcP 09 29 46.7 +2.3
comp=Z,0.5nm,0.7s,baz=156,slow=4.2,SNR=3.1
MPU Maple Canyon 44.25 351 *eP* **P 09 28 01.5 +1.4**
TZTN Tazewell 44.38 23 *eP* **P 09 28 00.5 -0.8**
CMB Columbia Colle 44.44 341 *eP* **P 09 28 02.4 +0.7**
WAKR Walker 44.58 342 *eP* **P 09 28 01.6 -1.1**
DUG Dugway 44.61 350 *eP* **P 09 28 03.8 +0.8**
DUG pmax pmax
comp=Z,11nm,1.1s,mb4.6
DUG Dugway 44.61 350 *eP* **P 09 28 03.8 +0.8**
comp=Z,11nm,1.1s,mb4.6
OLIL Olney 44.77 17 *eP* **P 09 28 03.0 -1.3**
comp=Z,29nm,1.0s,mb5.1
JLU Jordanelle 44.80 352 *eP* **P 09 28 05.8 +1.4**
WCI Wyandotte Cave 44.88 20 *eP* **P 09 28 03.7 -1.4**
WCI pmax pmax
comp=Z,21nm,1.2s,mb4.8
WCI Wyandotte Cave 44.88 20 *eP* **P 09 28 03.7 -1.4**
comp=Z,21nm,1.2s,mb4.8
CTU Camp Tracy 44.93 351 *eP* **P 09 28 06.6 +1.1**
PHWY Pilot Hill 44.96 358 *eP* **P 09 28 06.5 +0.8**
SPUT South Promonto 45.64 351 *eP* **P 09 28 11.4 +0.3**
HWUT Hardware Ranch 45.80 352 *eP* **P 09 28 12.4 0.0**
comp=Z,12nm,1.1s,mb4.7
ELN Prospectdale 46.12 26 *eP* **P 09 28 14.5 -0.6**
HVU Hansel Valley 46.15 351 *eP* **P 09 28 15.6 +0.4**
BW06 Boulder Array 46.70 354 *eP* **P 09 28 19.2 -0.3**
PDAR Pinedale Array 46.70 354 *eP* **P 09 28 18.8 -0.6**
comp=Z,4.5nm,0.9s,mb4.4,baz=166,slow=6.9,SNR=31
PDAR LR LR 09 45 25.7
comp=Z,294nm,18.1s,MS4.3,baz=177,slow=33
PPT Papeete 46.92 250 *eS* **S 09 35 11.4 -1.7**
comp=Z,172nm,24.5s
PPT *e*LQ 09 39 29.8
comp=Z,931nm,27.8s
PPT *e*LR LR 09 41 35.7
comp=Z,1μm,26.5s,baz=68
PPT Papeete 46.92 250 LR LR 09 42 28.7
comp=Z,528nm,20.8s,MS4.5,baz=92,slow=29
PLCA Paso Flores 47.32 146 P **P 09 28 25.2 +0.8**
comp=Z,3.6nm,1.1s,mb4.2,baz=297,slow=6.4,SNR=3.2
PLCA LR LR 09 43 28.8
comp=Z,913nm,18.9s,MS4.8,baz=328,slow=30
REDW Red Top Meadow 47.43 353 *eP* **P 09 28 24.6 -0.6**
comp=Z,9.9nm,1.2s,mb4.6
RRI2 Red Ridge 47.47 352 *eP* **P 09 28 25.3 -0.2**
comp=Z,11nm,1.0s,mb4.7
SNOW Snow King Moun 47.52 353 *eP* **P 09 28 26.9 +1.0**
comp=Z,11nm,1.2s,mb4.8
TPAW Teton Pass 47.57 353 *eP* **P 09 28 26.5 +0.3**
comp=Z,28nm,1.7s,mb5.0
RSSD Black Hills 47.75 360 *eP* **P 09 28 27.7 +0.1**
ECSD EROS,Sioux Fal 47.79 7 *eP* **P 09 28 28.7 +0.7**
MOOW Moose Ponds 47.80 353 *eP* **P 09 28 27.3 -0.7**
IMW Indian Meadow 47.97 353 *eP* **P 09 28 29.2 -0.1**
comp=Z,19nm,1.1s,mb5.0
MOD Modoc 47.97 343 *eP* **P 09 28 30.5 +1.1**
WVOR Wild Horse Val 48.01 345 *eP* **P 09 28 30.4 +0.7**
WVOR pmax pmax
comp=Z,10.0nm,1.5s,mb4.6
WVOR Wild Horse Val 48.01 345 *eP* **P 09 28 30.4 +0.7**
comp=Z,9.8nm,1.5s,mb4.6
HLID Hailey 48.17 350 *eP* **P 09 28 31.2 +0.4**
TBI Tubuai 48.21 242 *eS* **S 09 35 30.4 -0.9**
comp=Z,190nm,28.0s
TBI *e*LR LR 09 42 08.7
comp=Z,870nm,28.5s,baz=68
YBH Yreka Blue Hor 48.55 341 P **P 09 28 33.2 -0.7**
comp=Z,4.2nm,0.9s,mb4.5,baz=50,slow=3.6,SNR=5.6
YMR Madison River 48.73 353 *eP* **P 09 28 36.8 +1.5**
comp=Z,19nm,1.3s,mb5.0
QLMT Earthquake Lak 48.95 353 *eP* **P 09 28 37.7 +0.9**
RLMT Red Lodge 49.00 355 *eP* **P 09 28 37.3 0.0**
comp=Z,8.9nm,0.9s,mb4.8
MCMT McKenzie Canyo 49.14 351 *eP* **P 09 28 39.1 +0.8**
CPUP Villa Florida 49.69 122 P **P 09 28 42.9 0.0**
comp=Z,0.5nm,0.4s,mb3.9,baz=249,slow=7.3,SNR=4.0
CPUP LR LR 09 46 04.5
comp=Z,289nm,20.1s,MS4.3,baz=18,slow=32
CPUP Villa Florida 49.69 122 P **P 09 28 42.9 0.0**
CPUP LR LR 09 46 04.5
GCMT Greycliff 49.70 355 *eP* **P 09 28 41.8 -0.8**
EGMT Eagleton 51.92 355 *eP* **P 09 28 57.8 -1.5**
comp=Z,9.7nm,1.1s,mb4.7
HAWA Hanford 51.95 346 *eP* **P 09 28 59.2 -0.3**
RSW Rattlesnake Hi 51.96 346 *eP* **P 09 29 00.0 +0.4**
DGMT Dagmar 52.10 360 *eP* **P 09 29 00.7 0.0**
comp=Z,17nm,1.1s,mb4.9
AGMN Agassiz Refuge 52.38 7 *eP* **P 09 29 01.6 -1.1**
comp=Z,13nm,1.1s,mb4.8
OD2 Odessa Site #2 52.70 347 *eP* **P 09 29 04.9 -0.2**
NEW Newport 53.20 349 *eP* **P 09 29 08.0 -0.8**
WALA Waterton Lakes 53.43 352 *eP* **P 09 29 10.3 -0.2**
comp=Z,10nm,1.3s,mb4.6
JCW Jim Creek 54.22 345 *eP* **P 09 29 15.5 -0.7**
ULM Lac du Bonnet 54.31 6 P **P 09 29 15.2 -1.7**
comp=Z,7.7nm,1.0s,mb4.6,baz=171,slow=10,SNR=3.8
ULM LR LR 09 51 18.2
comp=Z,628nm,18.9s,MS4.7,baz=217,slow=35
BDFB Brasilia 55.99 106 P **P 09 29 28.7 -1.0**
comp=Z,3.4nm,0.8s,mb4.4,baz=275,slow=7.1,SNR=4.4
BDFB LR LR 09 51 08.8
comp=Z,189nm,20.6s,MS4.2,baz=92,slow=34
SCHQ Schefferville 65.96 22 LR LR 09 58 42.2
comp=Z,426nm,18.6s,MS4.7,baz=209,slow=35
YKA Yellowknife Ar 66.68 355 P **P 09 30 39.4 -1.8**
comp=Z,2.4nm,1.0s,mb4.2,baz=162,slow=5.4,SNR=5.8
YKA LR LR 09 57 10.6
comp=Z,227nm,21.6s,MS4.3,baz=20,slow=34
DAWY Dawson 72.75 344 *eP* **P 09 31 18.3 -0.2**
DAWY *eP* 09 31 18.6
KTH Kantishna Hill 75.88 340 *eP* **P 09 31 36.4 -0.5**
comp=Z,2μm,0.6s
COLD Coldfoot 78.11 343 *eP* **P 09 31 49.3 +0.1**
comp=Z,7.0nm,1.2s,mb4.5
PETK Petropavlovsk- 98.21 323 LR LR 10 10 11.3
comp=Z,205nm,18.7s,MS4.7,baz=119,slow=31
DBIC Dimbokro 99.24 84 LR LR 10 17 42.5
comp=Z,134nm,18.5s,MS4.5,baz=273,slow=35
WRA Warramunga Arr 118.29 245 PKP PKPdf 09 38 40.8 +1.8
comp=Z,0.3nm,0.8s,baz=99,slow=2.4,SNR=6.7
CN2 Changchun 121.22 320 *e*PKP PKPdf 09 38 46.1 +2.1
SONM Songino Array 129.10 334 PKP PKPdf 09 38 58.5 -0.5
comp=Z,0.5nm,0.8s,baz=0.0,slow=0.4,SNR=3.2
NJ2 Nanjing 131.23 310 *e*PKP PKPdf 09 39 00.1 -3.4
HHC Hu-ho-hao-te 131.40 324 *e*PKP PKPdf 09 38 57.3 -6.2
HHC SKS SKSdf 09 46 07.5 -7.8
HHC SKKS SKKSac 09 48 10.3 -8.4
HHC PP PP
comp=Z,199nm,7.8s
HHC LR LR
comp=N,211nm,21.1s,MS4.9
HHC LR LR
comp=E,191nm,21.4s,MS4.9
HHC LR LR
comp=Z,171nm,20.5s,MS4.7
MKAR Makanchi Array 136.90 354 PKP PKPdf 09 39 12.1 -1.6
comp=Z,0.5nm,0.7s,baz=22,slow=1.3,SNR=4.0
WMQ Urumqi 138.93 347 *e*PKP PKPdf 09 39 19.0 +1.5
WMQ LR LR
comp=Z,186nm,20.2s,MS4.8
LZH Lanzhou 139.07 325 *e*PKP PKPdf 09 39 20.0 +2.0
LZH XPKP 09 39 24.5
LZH PP PP 09 42 16.8 +7.0
LZH SKKS SKKSac 09 49 05.3 +0.2
LZH *e*SS SS 10 00 28.8 +2.4
LZH PP PP
comp=Z,83nm,7.9s
LZH LR LR
comp=N,127nm,18.7s
LZH LR LR
comp=Z,163nm,20.3s,MS4.8
GYA Guiyang 143.23 311 *e*PKP PKPdf 09 39 25.4 -0.4
GYA PP PP 09 42 39.4 +3.5
GYA PKS 09 42 59.8
GYA SKS SKSdf 09 46 36.8 +0.8
GYA SKKS SKKSac 09 49 27.3 -2.5
GYA SS SS 10 01 16.4 +0.3
GYA PP PP
comp=Z,120nm,8.9s
GYA LR LR
comp=N,160nm,24.6s,MS4.8
GYA LR LR
comp=E,130nm,25.4s,MS4.8
GYA LR LR
comp=Z,120nm,24.8s,MS4.6
KMI Kunming 146.91 312 PKP PKPdf 09 39 33.4 +1.3
CMAR Chiang Mai Arr 153.49 305 PKPbc PKPbc 09 39 51.2 +0.9
comp=Z,1.0nm,0.3s,baz=27,slow=4.2,SNR=3.7
CMAR PKPab PKPab 09 40 03.6 +1.2
comp=Z,1.0nm,0.3s,baz=31,slow=2.1,SNR=5.4

*IDC **22** 09:30:55.5±2.5, 388S×10390W, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.9/18, mbtmp3.8/8, MS4.0/5, Ms1 4.0/5, ms1mx3.6/23, Error ellipse: s-maj=72.6km s-min=19.6km az=62.0*
*ISCJB **22** 09:30:56.9±1.0, 37S±0.1×1037W±0.2, h10km, mb4.3/27, MS3.9/5, Error ellipse: s-maj=28.0km s-min=9.1km az=142.4*
*NEIC **22** 09:30:58.5±0.8, 375S×10363W, h10km, mb4.6/20, Error ellipse: s-maj=21.9km s-min=7.8km az=54.0*
*MOS **22** 09:31:00.7±0.8, 365S×10352W, h10km, mb4.8/8, Error ellipse: s-maj=28.5km s-min=11.7km az=89.8*
ISC 22 09:30:58.9±1.0, 37S±01×1036W±02, h10km, n55, σ0²89/51, mb4.3/27, MS3.9/5, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**22.41**	**22**	P		**P**		**09 35 59.5**	**+1.8**
	4.9nm,1.1s,mb3.9,baz=216,slow=8.5,SNR=4.0								
CMIG				LR		LR		09 42 44.2	
	comp=Z,305nm,20.8s,MS3.7,baz=220,slow=31								
JTS	**JuntasAbangare**	**23.22**	**53**	LR		LR		09 42 44.3	
	comp=Z,411nm,20.8s,MS3.9,baz=342,slow=30								
ATAH	**Atahualpa**	**25.32**	**98**	P		**P**		**09 36 27.0**	**+0.9**
	4.1nm,0.6s,mb4.1,baz=284,slow=17,SNR=3.9								
OTAV	**Otavalo**	**25.45**	**82**	*e*P		**P**		**09 36 29.2**	**+1.9**
	59nm,1.5s,mb4.9								
TEIG	**Tepich**	**28.17**	**32**	LR		LR		09 46 35.7	
	comp=Z,348nm,18.4s,MS4.0,baz=208,slow=33								
TXAR	**Lajitas Array**	**32.87**	**360**	P		**P**		**09 37 32.5**	**-0.5**
	0.7nm,1.1s,mb3.5,baz=165,slow=7.1,SNR=5.0								
JCT	**Junction City**	**34.20**	**6**	*e*P		**P**		**09 37 44.1**	**-0.6**
JCT				pmax		pmax			
	comp=Z,6.0nm,0.9s,mb4.5								
JCT	**Junction City**	**34.20**	**6**	*e*P		**P**		**09 37 44.1**	**-0.6**
	comp=Z,5.9nm,0.9s,mb4.5								
LPAZ	**La Paz**	**37.03**	**112**	P		**P**		**09 38 09.9**	**+0.7**
	comp=Z,0.4nm,0.4s,mb3.6,baz=314,slow=6.0,SNR=4.7								
BNM	**Barren Site**	**37.78**	**356**	*e*P		**P**		**09 38 15.6**	**+0.3**
LAZ	**Ladron**	**38.07**	**355**	*e*P		**P**		**09 38 18.3**	**+0.6**
AMTX	**Amarillo**	**38.44**	**3**	*e*P		**P**		**09 38 20.5**	**-0.4**
	comp=Z,9.4nm,1.0s,mb4.5								
ANMO	**Albuquerque**	**38.56**	**356**	*e*P		**P**		**09 38 21.8**	**-0.1**
MIAR	**Mount Ida**	**39.22**	**13**	*e*P		**P**		**09 38 27.2**	**-0.2**
MIAR				pmax		pmax			
	comp=Z,12nm,0.9s,mb4.6								
MIAR	**Mount Ida**	**39.22**	**13**	*e*P		**P**		**09 38 27.2**	**-0.2**
	comp=Z,12nm,0.9s,mb4.6								
MVCO	**Mesa Verde**	**40.98**	**354**	*e*P		**P**		**09 38 42.1**	**+0.1**
	comp=Z,11nm,1.0s,mb4.4								
ARUT	**Antelope Range**	**42.30**	**348**	*e*P		**P**		**09 38 54.0**	**+1.2**
WVT	**Waverly**	**42.31**	**19**	*e*P		**P**		**09 38 52.1**	**-0.8**
WVT				pmax		pmax			
	comp=Z,12nm,0.9s,mb4.5								
WVT	**Waverly**	**42.31**	**19**	*e*P		**P**		**09 38 52.1**	**-0.8**
	comp=Z,12nm,0.9s,mb4.5								
CPCT	**Cooper Cave**	**42.89**	**23**	*e*P		**P**		**09 38 57.2**	**-0.4**
SRU	**San Rafael**	**43.09**	**352**	*e*P		**P**		**09 38 59.6**	**+0.4**
SRU				pmax		pmax			
	comp=Z,6.0nm,1.1s,mb4.2								
SRU	**San Rafael**	**43.09**	**352**	*e*P		**P**		**09 38 59.6**	**+0.4**
	comp=Z,6.0nm,1.1s,mb4.2								
CCM	**Cathedral Cave**	**43.12**	**14**	*e*P		**P**		**09 38 58.3**	**-1.2**
CCM				pmax		pmax			
	comp=Z,12nm,0.9s,mb4.6								
CCM	**Cathedral Cave**	**43.12**	**14**	*e*P		**P**		**09 38 58.3**	**-1.2**
	comp=Z,12nm,0.9s,mb4.6								
FVM	**French Village**	**43.26**	**15**	*e*P		**P**		**09 39 00.0**	**-0.6**
FVM				pmax		pmax			
	comp=Z,13nm,1.1s,mb4.6								
FVM	**French Village**	**43.26**	**15**	*e*P		**P**		**09 39 00.0**	**-0.6**
	comp=Z,13nm,1.1s,mb4.6								
JSC	**Jenkinsville**	**43.28**	**27**	*e*P		**P**		**09 39 01.1**	**+0.3**
CFAA	**Coronel Fontan**	**43.29**	**134**	P		**P**		**09 39 00.6**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=330,slow=8.4,SNR=3.3								
CFAA	**Coronel Fontan**	**43.29**	**134**	P		**P**		**09 39 00.6**	**-0.4**
ISCO	**Idaho Springs**	**43.35**	**358**	*e*P		**P**		**09 39 01.5**	**+0.2**
ISCO				pmax		pmax			
	comp=Z,8.0nm,1.6s,mb4.2								
ISCO	**Idaho Springs**	**43.35**	**358**	*e*P		**P**		**09 39 01.5**	**+0.2**
	comp=Z,7.9nm,1.6s,mb4.2								
SIV	**San Ignacio**	**43.55**	**109**	P		**P**		**09 39 02.4**	**-0.9**
	comp=Z,1.1nm,0.8s,mb3.6,baz=280,slow=10,SNR=6.4								
TZTN	**Tazewell**	**44.23**	**23**	*e*P		**P**		**09 39 07.6**	**-0.8**
	comp=Z,1.7nm,0.6s,mb4.0								
DUG	**Dugway**	**44.51**	**350**	*e*P		**P**		**09 39 11.3**	**+0.7**
DUG				pmax		pmax			
	comp=Z,5.0nm,1.2s,mb4.2								
DUG	**Dugway**	**44.51**	**350**	*e*P		**P**		**09 39 11.3**	**+0.6**
	comp=Z,5.3nm,1.2s,mb4.2								
OLIL	**Olney**	**44.62**	**17**	P		**P**		**09 39 09.1**	**-2.4**
	comp=Z,20nm,0.9s,mb4.9								
JLU	**Jordanelle**	**44.69**	**352**	*e*P		**P**		**09 39 15.6**	**+3.6**
HWUT	**Hardware Ranch**	**45.69**	**352**	*e*P		**P**		**09 39 20.1**	**+0.1**
	comp=Z,10nm,1.1s,mb4.7								
BW06	**Boulder Array**	**46.59**	**354**	*e*P		**P**		**09 39 26.4**	**-0.6**
PDAR	**Pinedale Array**	**46.59**	**354**	P		**P**		**09 39 26.3**	**-0.7**
	comp=Z,1.4nm,0.8s,mb3.9,baz=163,slow=6.6,SNR=10								
PPT	**Papeete**	**47.07**	**249**	LR		LR		09 53 22.2	
	comp=Z,167nm,19.9s,MS4.0,baz=63,slow=29								
PLCA	**Paso Flores**	**47.35**	**146**	LR		LR		09 55 44.9	
	comp=Z,192nm,21.2s,MS4.0,baz=219,slow=31								
RRI2	**Red Ridge**	**47.37**	**352**	*e*P		**P**		**09 39 32.8**	**-0.3**
	comp=Z,5.6nm,1.0s,mb4.5								
SNOW	**Snow King Moun**	**47.41**	**353**	*e*P		**P**		**09 39 35.6**	**+2.2**
LOHW	**Long Hollow**	**47.54**	**353**	*e*P		**P**		**09 39 33.8**	**-0.6**
	comp=Z,7.3nm,1.4s,mb4.5								
MOOW	**Moose Ponds**	**47.69**	**353**	*e*P		**P**		**09 39 35.4**	**-0.2**
IMW	**Indian Meadow**	**47.86**	**353**	*e*P		**P**		**09 39 36.6**	**-0.3**
	comp=Z,10nm,1.2s,mb4.7								
HLID	**Hailey**	**48.06**	**349**	*e*P		**P**		**09 39 39.0**	**+0.5**
	comp=Z,4.5nm,1.1s,mb4.4								
YMR	**Madison River**	**48.62**	**353**	P		**P**		**09 39 44.7**	**+1.9**
	comp=Z,17nm,1.2s,mb4.9								
QLMT	**Earthquake Lak**	**48.84**	**353**	*e*P		**P**		**09 39 44.8**	**+0.3**
RLMT	**Red Lodge**	**48.89**	**355**	*e*P		**P**		**09 39 44.6**	**-0.3**
	comp=Z,9.3nm,1.3s,mb4.7								
MCMT	**McKenzie Canyo**	**49.03**	**351**	*e*P		**P**		**09 39 46.4**	**+0.5**
CPUP	**Villa Florida**	**49.66**	**122**	P		**P**		**09 39 50.5**	**-0.6**
	comp=Z,1.7nm,0.8s,mb4.1,baz=284,slow=9.5,SNR=3.8								
SSPA	**Standing Stone**	**50.04**	**26**	*e*P		**P**		**09 39 53.1**	**-0.6**
EDM	**Edmonton**	**57.33**	**353**	*e*P		**P**		**09 40 45.9**	**-1.0**

*GII **22** 09:35:36.1±0.6, 3350N×3542E, h0km, ML1.7/2, EXPLOSION*
*ISCJB **22** 09:35:38.4±0.6, 3344N±003×3540E±005, h0km, Error ellipse: s-maj=6.6km s-min=3.7km az=19.1*
*GRAL **22** 09:35:38.1±0.3, 3342N×3542E, h21km±4km, MD2.9, Fault plane solution: NP1:θs38.33000°, δ60.00000°, λ0.00000°.*
*CSEM **22** 09:35:38.1, 3342N×3542E, h21km, ML2.9, After GRAL*
ISC 22 09:35:38.9±0.6, 3344N±003×3541E±005, h0km, n16, σ0²80/20, 3C-1D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATL	**Matirih**	**0.08**	**305**	⇑*e*P		**Pg**		**09 35 41.8**	**+1.3**
KSDI	**Kefar Szold**	**0.33**	**140**	Pg		**Pg**		**09 35 44.5**	**-0.6**
KSDI				Sg		**Sg**		**09 35 50.4**	**+1.2**
RCY	**Rachaya**	**0.34**	**83**	⇑*e*P		**Pg**		**09 35 45.2**	**-0.3**
RCY				*e*S		**Sg**		**09 35 50.6**	**+0.6**
MMC7	**Mount Meron ar**	**0.42**	**182**	Pg		**Pg**		**09 35 46.6**	**-0.3**
MMC3	**Mount Meron ar**	**0.42**	**180**	Pg		**Pg**		**09 35 46.6**	**-0.4**
MMA0	**Mount Meron ar**	**0.43**	**181**	Pg		**Pg**		**09 35 46.6**	**-0.4**
MMA0B	**Mount Meron ar**	**0.43**	**181**	Pg		**Pg**		**09 35 46.7**	**-0.3**
MMA4	**Mount Meron ar**	**0.43**	**181**	Pg		**Pg**		**09 35 46.7**	**-0.3**
MMA3	**Mount Meron ar**	**0.43**	**181**	Pg		**Pg**		**09 35 46.8**	**-0.3**
MMC6	**Mount Meron ar**	**0.43**	**182**	Pg		**Pg**		**09 35 46.7**	**-0.4**
MMC5	**Mount Meron ar**	**0.43**	**180**	Pg		**Pg**		**09 35 46.8**	**-0.4**
MMC5				Sg		**Sg**		**09 35 55.8**	**+3.1**
BHL	**Bhannes**	**0.50**	**24**	⇓*e*P		**Pg**		**09 35 47.7**	**-0.8**
BHL				*e*S		**Sg**		**09 35 54.9**	**-0.2**
OFRI	**'Ofer**	**0.89**	**204**	Pg		**Pg**		**09 35 56.0**	**0.0**
HWQ	**Hawqa**	**0.95**	**28**	⇑*e*P		**Pg**		**09 35 57.8**	**+0.8**
HMDT	**Nahal Hemdat**	**1.19**	**175**	Pg		**Pg**		**09 36 00.4**	**-1.3**
SLTI	**Sal'it**	**1.24**	**195**	Sg		**Sg**		**09 36 19.7**	**+1.0**

*ISCJB **22** 09:54:11.9±0.5, 4556N±003×2639E±003, h127km±4km, Error ellipse: s-maj=4.4km s-min=3.9km az=25.2*
*BUC **22** 09:54:11.7±0.5, 4558N×2635E, h132km±6km, MD4.3/2, Error ellipse: s-maj=4.3km s-min=3.6km az=349.0*
*NEIC **22** 09:54:11.8±1.4, 4551N×2635E, h139km±17km, MG3.8(BUC), Error ellipse: s-maj=15.1km s-min=11.1km az=46.0*
*CSEM **22** 09:54:12.5±0.1, 4556N×2636E, h115km±1km, MD4.4/2, Error ellipse: s-maj=2.0km s-min=1.5km az=20.0*
*SOF **22** 09:54:14.9, 45.12N×2624E, h10km, MD2.9*
ISC 22 09:54:12.7±0.5, 4556N±003×2640E±003, h125km±5km, n55, σ0²71/85, 18C-16D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.33**	**258**	⇑*i*P		**Pn**		**09 54 30.5**	**+0.3**
MLR				*i* S		**Sn**		**09 54 43.8**	**+0.3**
MLR	**Muntele Rosu**	**0.33**	**258**	P		**Pn**		**09 54 30.7**	**+0.5**
PLOR	**Plostina**	**0.34**	**31**	⇑*i*P		**Pn**		**09 54 30.3**	**0.0**
PLOR				*i* S		**Sn**		**09 54 43.4**	**+0.1**
VRI	**Vrincioaia**	**0.39**	**36**	⇑*i*P		**Pn**		**09 54 30.7**	**+0.2**
VRI				*i* S		**Sn**		**09 54 44.1**	**+0.1**
VRI	**Vrincioaia**	**0.39**	**36**	⇑*i*P		**Pn**		**09 54 30.7**	**+0.2**
VRI				*i* S		**Sn**		**09 54 44.0**	**0.0**
ISR	**Istrita**	**0.45**	**167**	⇓*i*P		**Pn**		**09 54 31.4**	**+0.5**
ODB	**Odobesti**	**0.51**	**64**	⇓*i*P		**Pn**		**09 54 32.0**	**+0.8**
ODB				*i* S		**Sn**		**09 54 45.7**	**+0.5**
ODB	**Odobesti**	**0.51**	**64**	⇓P		**Pn**		**09 54 32.3**	**+1.1**
ODB				S		**Sn**		**09 54 47.0**	**+1.8**
PETR		**0.61**	**74**	⇑*i*P		**Pn**		**09 54 32.6**	**+0.8**
PETR				*i* S		**Sn**		**09 54 46.9**	**+0.6**
TUDR		**0.89**	**87**	⇑*i*P		**Pn**		**09 54 33.7**	**-0.4**
TUDR				*i* S		**Sn**		**09 54 49.9**	**-0.4**
VOIR		**0.96**	**263**	⇑*i*P		**Pn**		**09 54 34.5**	**-0.2**
VOIR				*i* S		**Sn**		**09 54 50.5**	**-0.8**
VOIR		**0.96**	**263**	P		**Pn**		**09 54 34.5**	**-0.2**
TESR		**0.97**	**10**	⇑*i*P		**Pn**		**09 54 34.6**	**-0.2**
TESR				*i* S		**Sn**		**09 54 50.3**	**-1.3**
VARR		**1.07**	**72**	⇓*i*P		**Pn**		**09 54 36.2**	**+0.4**
VARR				*i* S		**Sn**		**09 54 53.1**	**-0.2**
**ONC

PRD	**Provadia**	**2.46 163**	*i* P	**Pn**	**09 54 52.1**	**-0.1**
GZR	**Gura Zlata**	**2.55 268**	⇑*i*P	**Pn**	**09 54 53.2**	**-0.1**
GZR			*i* S	**Sn**	**09 55 23.9**	**-0.6**
GZR	**Gura Zlata**	**2.55 268**	⇓P	**Pn**	**09 54 54.1**	**+0.8**
GZR			S	**Sn**	**09 55 26.0**	**+1.5**
DRGR		**2.84 297**	⇑*i*P	**Pn**	**09 54 56.1**	**-0.9**
DRGR			*i* S	**Sn**	**09 55 31.0**	**-0.2**
DRGR		**2.84 297**	⇑P	**Pn**	**09 54 57.5**	**+0.5**
DRGR		**2.84 297**	⇑P	**Pn**	**09 54 57.5**	**+0.5**
JMB	**Yambol**	**3.09 177**	*i* P	**Pn**	**09 54 59.8**	**-0.5**
BZS	**Buzias**	**3.36 273**	⇓*i*P	**Pn**	**09 55 02.7**	**-1.0**
BZS			*i* S	**Sn**	**09 55 42.2**	**-1.0**
VTS	**Vitosha**	**3.75 219**	*e*P	**Pn**	**09 55 09.5**	**+0.5**
KDZ	**Kurdzhali**	**3.97 191**	*e*P	**Pn**	**09 55 11.0**	**-0.9**
KOLS	**Kolonicke sedl**	**4.39 322**	*e*PN	**Pn**	**09 55 17.6**	**+0.2**
KOLS	**Kolonicke sedl**	**4.39 322**	*e*Pn	**Pn**	**09 55 17.6**	**+0.2**
KOLS	**Kolonicke sedl**	**4.39 322**	*e*Pn	**Pn**	**09 55 17.6**	**+0.2**
CRVS	**Cervenica-Dubn**	**4.74 317**	*e*Pn	**Pn**	**09 55 21.7**	**-0.4**
STHS	**Stebnicka Huta**	**5.21 320**	*e*PN	**Pn**	**09 55 28.2**	**-0.1**
STHS	**Stebnicka Huta**	**5.21 320**	*e*Pn	**Pn**	**09 55 28.2**	**-0.1**
STHS	**Stebnicka Huta**	**5.21 320**	*e*Pn	**Pn**	**09 55 28.2**	**-0.1**
MODS	**Modra-Piesok**	**6.85 298**	*e*PN	**Pn**	**09 55 46.6**	**-3.8**
MODS	**Modra-Piesok**	**6.85 298**	*e*Pn	**Pn**	**09 55 46.6**	**-3.8**

IDC ***22*** *10:28:43.2±2.1, 9 03S×123 65E, h0km, mb3.8/1, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=277.5km s-min=31.7km az=56.0*

NEIC 22 10:28:44.7±1.1, 901S×12372E, h10km, Error ellipse: s-maj=41.3km s-min=14.0km az=58.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.23**	**169**	Sn	Sn	10 32 30.4	-11
FITZ	**Fitzroy Crossi**	**9.23**	**169**	*e*Pn	Pn	10 30 57.8	-0.1
FITZ				*e*Sn	Sn	10 32 28.9	-13
WRA	**Warramunga Arr**	**14.95**	**138**	Pn	Pn	10 32 16.1	-0.2
	0.4nm,0.3s,baz=318,slow=13,SNR=23						
WRA				Sn	Sn	10 34 47.7	-14
	0.8nm,0.3s,baz=301,slow=23,SNR=9.3						
WB2	**Warramunga Arr**	**14.96**	**138**	*e*Pn	Pn	10 32 16.4	0.0
WB2				*e*Sn	Sn	10 34 48.7	-14
ASAR	**Alice Springs**	**17.53**	**147**	P	P	10 32 49.9	+0.5
	0.1nm,0.3s,baz=320,slow=12,SNR=14						
MKAR	**Makanchi Array**	**66.68**	**330**	P	P	10 39 35.8	+0.1
	0.6nm,0.5s,baz=133,slow=7.3,SNR=5.4						

IDC 22 10:48:56.3±4.3, 262S×10030E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/19, mbtmp3.5/4, Error ellipse: s-maj=178.5km s-min=25.0km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.42**	**120**	P	P	10 56 11.5	0.0
	0.2nm,0.6s,baz=303,slow=8.8,SNR=7.4						
ASAR	**Alice Springs**	**38.65**	**126**	P	P	10 56 21.4	-0.3
	0.3nm,0.8s,baz=294,slow=6.8,SNR=3.4						
SONM	**Songino Array**	**50.52**	**5**	P	P	10 57 56.5	+0.3
	0.8nm,0.8s,baz=198,slow=7.6,SNR=3.5						
MKAR	**Makanchi Array**	**51.70**	**344**	P	P	10 58 04.8	-0.3
	0.6nm,0.7s,baz=145,slow=8.7,SNR=3.6						
TXAR	**Lajitas Array**	**145.00**	**38**	PKPbc	PKPbc	11 08 35.4	-0.1
	0.4nm,0.7s,baz=288,slow=1.4,SNR=6.1						

ISCJB ***22*** *11:01:30.4±0.7, 553S±01×294W±03, h10km, mb3.8/8, MS3.6/2, Error ellipse: s-maj=24.9km s-min=10.2km az=145.1*

IDC ***22*** *11:01:30.7±0.9, 5529S×2942W, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.8/18, mbtmp3.8/8, MS3.7/2, Ms1 3.7/2, ms1mx3.4/22, Error ellipse: s-maj=29.6km s-min=18.5km az=50.0*

NEIC ***22*** *11:01:32.1±0.6, 5529S×2943W, h10km, mb3.9/1, Error ellipse: s-maj=20.2km s-min=10.8km az=52.0*

ISC 22 11:01:32.2±0.7, 553S±01×294W±02, h10km, n16, σ0.9 93/14, mb3.8/8, MS3.6/2, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**17.97**	**157**	*e*P	**Pn**	**11 05 49.8**	**+8.0**
VNA3	**Neumayer Olymp**	**18.13**	**159**	*e*P	**Pn**	**11 05 44.4**	**+0.7**
VNA3				*e*		11 05 53.7	
VNA2	**Neumayer--Watz**	**18.37**	**157**	*e*P	**Pn**	**11 05 47.0**	**+0.4**
	baz=318,slow=13						
VNA2				*e*		11 05 56.6	
SNAA	**Sanae**	**19.95**	**155**	*e*P	**Pn**	**11 06 03.9**	**-1.7**
SNAA				*e*		11 06 11.6	
SNAA	**Sanae**	**19.95**	**155**	*e*P	**Pn**	**11 06 03.9**	**-1.7**
	3.8nm,0.6s						
USHA	**Ushuaia**	**22.15**	**255**	P	**P**	**11 06 27.7**	**-0.1**
	8.0nm,0.9s,mb4.1,baz=311,slow=10,SNR=3.2						
PLCA	**Paso Flores**	**30.62**	**281**	LR	LR	11 17 25.3	
	comp=Z,220nm,21.3s,MS3.8,baz=288,slow=31						
QSPA	**South Pole Qui**	**34.95**	**180**	P	**P**	**11 08 24.9**	**+1.2**
	1.7nm,0.7s,mb4.1,baz=189,slow=3.1,SNR=11						
QSPA				LR	LR	11 21 45.6	
	comp=Z,76nm,18.9s,MS3.5,baz=51,slow=35						
CPUP	**Villa Florida**	**35.37**	**313**	P	**P**	**11 08 27.3**	**-0.5**
	0.3nm,0.4s,mb3.6,baz=184,slow=11,SNR=2.7						
CFAA	**Coronel Fontan**	**36.10**	**295**	P	**P**	**11 08 32.8**	**-1.2**
	0.4nm,0.6s,mb3.5,baz=156,slow=8.9,SNR=5.4						
MAW	**Mawson**	**41.50**	**145**	P	**P**	**11 09 18.2**	**-0.7**
	0.4nm,0.5s,mb3.3,baz=48,slow=3.7,SNR=4.6						
SIV	**San Ignacio**	**46.15**	**316**	P	**P**	**11 09 56.6**	**-0.1**
	1.1nm,0.6s,mb4.0,baz=151,slow=8.9,SNR=8.2						
LPAZ	**La Paz**	**48.91**	**307**	P	**P**	**11 10 19.9**	**+1.7**
	2.3nm,0.5s,mb4.5,baz=141,slow=6.2,SNR=14						
LPAZ	**La Paz**	**48.91**	**307**	P	**P**	**11 10 19.9**	**+1.6**
TORD	**Torodi Ar. Bea**	**73.05**	**32**	P	**P**	**11 13 02.6**	**+0.4**
	0.4nm,0.5s,mb3.6,baz=198,slow=7.7,SNR=5.0						
SONM	**Songino Array**	**151.95**	**87**	PKPbc	PKPbc	11 21 26.2	-0.2
	0.7nm,0.6s,baz=225,slow=3.1,SNR=5.0						

SZGRF ***22*** *11:02:28.9, 5.43S×101.11E, h33km, mb5.4, Southwest of Sumatera, Indonesia*

BJI ***22*** *11:02:41.9, 2.03S×99.98E, h36km, mB5.2, mb5.3, Ms5.2, Msz5.0*

IDC ***22*** *11:02:41.4±2.4, 1.99S×100.01E, h16km±14km, mb4.8/23, mb1 4.9/24, mb1mx4.9/24, mbtmp4.8/24, ML4.9/1, MS4.6/26, Ms1 4.7/26, ms1mx4.5/30, Error ellipse: s-maj=15.0km s-min=11.3km az=57.0*

ISCJB ***22*** *11:02:42.6±0.2, 2.00S±0.03×99.87E±0.03, h34km, mb5.3/127, MS4.8/63, Error ellipse: s-maj=4.5km s-min=3.4km az=34.1*

MOS ***22*** *11:02:42.7±1.0, 1.90S×100.06E, h33km, mb5.6/54, MS4.7/14, Error ellipse: s-maj=9.4km s-min=4.8km az=113.5*

GCMT ***22*** *11:02:44.2±0.2, 2.26S×99.63E, h38km, MW5.3/75, Moment Tensor Solution. s73,c115; s75,c120; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr 0.65±.02; Mθθ -0.43±.02; Mφφ -0.21±.02; Mrθ 0.52±.02; Mθφ 0.50±.01; Mφr -0.27±.03; Best double couple: M=0.94900×10^17 NP1:φ=321.00000°, δ27.00000°, λ108.00000°. NP2:φ=120.00000°, δ64.00000°, λ81.00000°. Principal axes: T 0.8620, Plg69.0000°, Azm122.0000°; N 0.1740, Plg8.0000°, Azm124.0000°; P -1.0370, Plg19.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***22*** *11:02:44.2±0.1, 2.00S×99.94E, h35km, mb5.3/46 Error ellipse: s-maj=5.8km s-min=4.0km az=44.0*

NEIC Felt [III] at Padang, Padangpanjang and Painan, Sumatra.

DJA ***22*** *11:02:46, 2.10S×99.70E, h60km, Mw5.4/22*

ISC 22 11:02:44.5±0.2, 204S±003×9986E±003, h36km, h36km±.9km: pP-P, n459, σ1.9 06/407, mb5.3/127, MS4.8/63, 64C-23D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**3.17**	**120**	P	**Pn**	**11 03 33.8**	**+1.9**
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.80**	**84**	P	**Pn**	**11 03 44.2**	**+3.6**
	0.0nm,0.0s						
GSI	**Gunungsitoli**	**4.03**	**325**	⇑*e*P	**Pn**	**11 03 42.0**	**-1.6**
GSI				*e*S	Sn	11 04 08.0	-22
TRSI	**Tarutung**	**4.13**	**347**	P	**Pn**	**11 03 50.1**	**+5.0**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.97**	**72**	P	**Pn**	**11 03 57.7**	**+1.1**
	0.0nm,0.0s						
KGM	**Kluang**	**5.31**	**41**	⇑P	**Pn**	**11 04 03.3**	**+2.1**
MYKOM	**Kota Tinggi**	**5.51**	**46**	⇑P	**Pn**	**11 04 07.1**	**+3.0**
FRIM	**Kepong**	**5.53**	**19**	⇑P	**Pn**	**11 04 06.7**	**+2.4**
TSI	**Tuntungan**	**5.65**	**347**	P	**Pn**	**11 04 06.9**	**+0.9**
	2μm,1.1s						
PPBI	**Pangkal Pinang**	**6.28**	**91**	P	**Pn**	**11 04 18.1**	**+3.5**
	54nm,0.9s						
BLSI	**Bandar Lampung**	**6.31**	**122**	P	**Pn**	**11 04 21.0**	**+5.9**
	304nm,0.8s						
IPM	**Ipoh**	**6.58**	**10**	⇑P	**Pn**	**11 04 22.2**	**+3.5**
SBJI	**Serang**	**7.46**	**123**	P	**Pn**	**11 04 41.9**	**+11**
	347nm,0.9s						
TPI	**Tanjungpandan**	**7.82**	**95**	P	**Pn**	**11 04 40.0**	**+4.2**
	78nm,1.1s						
TPI	**Tanjungpandan**	**7.82**	**95**	⇓*e*P	**Pn**	**11 04 38.0**	**+2.2**
TPI				*e*S	**Sn**	**11 05 58.0**	**-5.2**
KTGM	**Kuala Trenggan**	**8.01**	**24**	⇓P	**Pn**	**11 04 40.9**	**+2.4**
DBJI	**Dramaga**	**8.21**	**123**	P	**Pn**	**11 04 43.1**	**+2.0**
	270nm,1.1s						
CBJI	**Citeko**	**8.22**	**122**	P	**Pn**	**11 04 45.6**	**+4.3**
	953nm,1.0s						
BSI	**Banda Aceh**	**8.76**	**329**	P	**Pn**	**11 04 50.0**	**+1.3**
	265nm,1.0s						
LEM	**Lembang**	**9.08**	**122**	P	**Pn**	**11 04 56.5**	**+3.4**
	172nm,1.1s						
LEM	**Lembang**	**9.08**	**122**	⇑*e*P	**Pn**	**11 04 56.9**	**+3.8**
SNG	**Songkhla**	**9.18**	**5**	P	**Pn**	**11 04 56.0**	**+1.5**
	480nm,1.0s						
KSM	**Kuching**	**11.02**	**72**	⇓P	**Pn**	**11 05 23.5**	**+3.8**
KSM	**Kuching**	**11.02**	**72**	*e*Pn	**Pn**	**11 05 21.2**	**+1.6**
SBUM	**Sibu**	**13.14**	**70**	⇑P	**Pn**	**11 05 53.8**	**+5.2**
SJI	**Sawahan**	**13.14**	**116**	P	**Pn**	**11 05 47.7**	**-1.1**
	116nm,0.7s						
BTM	**Bintulu**	**14.21**	**69**	⇑P	**Pn**	**11 06 09.5**	**+6.2**
BBKI	**Banjar Baru**	**15.03**	**96**	P	**Pn**	**11 06 17.7**	**+3.3**
	168nm,0.7s						
KHKI	**Kahang-Kahang**	**16.89**	**112**	P	**Pn**	**11 06 42.1**	**+3.8**
	82nm,0.8s						
SMKI	**Samarinda**	**17.42**	**85**	P	**Pn**	**11 06 47.7**	**+2.8**
	145nm,1.3s						
NST	**Nakhon Sawan**	**17.60**	**1**	P	**Pn**	**11 06 46.0**	**-1.0**
	42nm,1.0s						
KKM	**Kota Kinabalu**	**18.20**	**64**	⇓P	**Pn**	**11 06 56.5**	**+2.0**
KKM	**Kota Kinabalu**	**18.20**	**64**	*e*Pn	**Pn**	**11 06 54.9**	**+0.4**
SDKM	**Sandakan**	**18.92**	**66**	⇓P	**Pn**	**11 07 03.1**	**-0.2**
TSM	**Tawau**	**19.07**	**71**	⇑P	**Pn**	**11 07 05.0**	**0.0**
KDM	**Kudat**	**19.14**	**62**	⇓P	**Pn**	**11 07 06.1**	**+0.3**
BDT	**Bhumibol Dam**	**19.18**	**358**	⇑P	**Pn**	**11 07 04.0**	**-2.2**
	22nm,1.0s						
MYLDM	**Lahad Datu**	**19.96**	**69**	⇑P	**Pn**	**11 07 15.9**	**+0.3**
PCI	**Palu**	**20.00**	**87**	P	**P**	**11 07 16.8**	**+2.5**
	263nm,1.6s						
KAPI	**Kappang**	**20.07**	**99**	P	**P**	**11 07 12.2**	**-2.8**
	1μm,0.8s,SNR=11						
KAPI	**Kappang**	**20.07**	**99**	P	**P**	**11 07 14.9**	**-0.1**
	SNR=13						
KAPI	**Kappang**	**20.07**	**99**	P	**P**	**11 07 13.0**	**-2.0**
	3.9nm,0.3s,baz=285,slow=8.5,SNR=20						
KAPI				S	**S**	**11 10 54.8**	**-4.1**
	0.4nm,0.3s,baz=75,slow=22,SNR=2.2						
KAPI				LR	LR	11 15 52.5	
	comp=Z,2μm,18.4s,MS4.6,baz=65,slow=40						
KAPI	**Kappang**	**20.07**	**99**	*e*P	**P**	**11 07 12.8**	**-2.2**
CMAR	**Chiang Mai Arr**	**20.38**	**358**	P	**P**	**11 07 17.1**	**-1.2**
	64nm,0.8s,baz=186,slow=9.7,SNR=134						
CMAR				S	**S**	**11 11 08.8**	**+3.9**
	1.7nm,0.9s,baz=197,slow=6.1,SNR=2.3						
CMAR				PcP	PcP	11 11 31.7	+1.4
	3.7nm,0.8s,baz=216,slow=3.6,SNR=6.2						
CMAR				LR	LR	11 15 24.3	
	comp=Z,3μm,20.2s,MS4.7,baz=188,slow=38						
CMAR	**Chiang Mai Arr**	**20.38**	**358**	P	**P**	**11 07 17.1**	**-1.2**
CMAR						11 11 31.7	
NANT	**Nan**	**20.72**	**2**	⇑P	**P**	**11 07 19.0**	**-2.9**
	575nm,1.0s						
CHG	**Chiang Mai**	**20.74**	**358**	⇓P	**P**	**11 07 20.9**	**-1.2**
	40nm,0.9s						
CHTO	**Chiang Mai**	**20.74**	**358**	⇓P	**P**	**11 07 22.3**	**+0.2**
	SNR=7.8						
CHTO	**Chiang Mai**	**20.74**	**358**	*e*P	**P**	**11 07 21.2**	**-0.9**
KDI	**Kendari**	**22.81**	**95**	P	**P**	**11 07 44.7**	**+0.3**
	123nm,1.3s,mb5.2						
QIZ	**Qiongzhong**	**23.12**	**25**	P	**P**	**11 07 46.3**	**-1.3**
QIZ				XP	sP	11 08 00.8	-0.8
QIZ				S	**S**	**11 11 55.8**	**-0.6**
QIZ				AMB	AMB		
	comp=Z,107nm,0.8s,mb5.3						
QIZ				AMB	AMB		
	comp=Z,373nm,5.6s						
QIZ				LR	LR		
	comp=N,3μm,16.6s						
QIZ				LR	LR		
	comp=Z,4μm,17.2s,MS4.9						
QIZ	**Qiongzhong**	**23.12**	**25**	*e*P	**P**	**11 07 46.8**	**-0.7**
	comp=Z,74nm,0.8s,mb5.2						
BATI	**Baumata**	**25.00**	**110**	P	**P**	**11 08 02.9**	**-2.3**
	comp=Z,43nm,1.0s,mb4.9						
BATI	**Baumata**	**25.00**	**110**	P	**P**	**11 08 02.4**	**-2.8**
	comp=Z,33nm,0.6s,mb5.0,baz=339,slow=2.8,SNR=4.8						
BATI				S	**S**	**11 12 20.4**	**-6.6**
	comp=Z,13nm,0.4s,baz=333,slow=23,SNR=3.0						
MNI	**Manado**	**25.22**	**82**	P	**P**	**11 08 10.6**	**+3.4**
	comp=Z,588nm,1.0s,mb6.1						
BWNR	**Bhubaneshwar**	**26.12**	**329**	*e*P	**P**	**11 08 15.0**	**-0.3**
OTRP	**Odiongan**	**26.25**	**56**	*e*P	**P**	**11 08 16.0**	**-0.5**
KMI	**Kunming**	**27.14**	**6**	⇑P	**P**	**11 08 25.0**	**+0.6**
KMI				AP	pP	11 08 36.3	+1.7
KMI				XP	sP	11 08 40.3	+1.4
KMI				PP		11 09 14.0	
KMI				PPP		11 09 25.4	
KMI				PCP	PcP	11 11 46.9	+2.3
KMI				S	**S**	**11 13 03.3**	**+2.7**
KMI				XS	sS	11 13 20.3	+2.8
KMI				SSS		11 14 39.3	
KMI				SCS	ScS	11 19 13.3	-0.4
KMI				AMB	AMB		
	comp=Z,22nm,0.8s,mb4.7						
KMI				AMB	AMB		
	comp=Z,221nm,6.3s						
KMI				LR	LR		
	comp=N,2μm,14.3s,MS5.0						
KMI				LR	LR		
	comp=E,2μm,11.7s,MS5.0						
KMI				LR	LR		
	comp=Z,3μm,15.4s,MS4.9						
DAV	**Davao City (W)**	**27.22**	**70**	P	**P**	**11 08 27.5**	**+2.2**
	comp=Z,236nm,0.4s,mb6.0,baz=302,slow=1.7,SNR=3.9						
DAV				LR	LR	11 20 30.5	
	comp=Z,1μm,20.0s,MS4.5,baz=8.8,slow=40						
DAV	**Davao City (W)**	**27.22**	**70**	⇑*e*P	**P**	**11 08 22.6**	**-2.6**
IMP	**Imphal**	**27.27**	**348**	*e*P	**P**	**11 08 25.0**	**-0.6**
IMP				*ex*	x	11 09 08.0	
LBMI	**Labuha**	**27.67**	**88**	P	**P**	**11 08 28.6**	**-0.8**
	comp=Z,184nm,0.9s,mb5.7						
BOK	**Bokaro**	**29.05**	**333**	*i* P	**P**	**11 08 42.4**	**+0.9**
BOK				*i* x	x	11 08 47.4	
GYA	**Guiyang**	**29.08**	**13**	P	**P**	**11 08 40.6**	**-1.1**
GYA				AP	pP	11 08 51.3	-0.6
GYA				XP	sP	11 08 55.8	-0.4
GYA				PP	PP	11 09 38.4	-9.4
GYA				PCP	PcP	11 11 50.3	+1.0
GYA				S	**S**	**11 13 28.3**	**-2.8**
GYA				XS	sS	11 13 49.6	+1.6
GYA				SS	SS	11 15 02.4	-33
GYA				SCP	ScP	11 15 26.8	-1.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
GYA				AMB	AMB		
	comp=Z,120nm,3.9s						
GYA				LR	LR		
	comp=N,510nm,15.6s,MS4.5						
GYA				LR	LR		
	comp=E,780nm,16.2s,MS4.5						
GYA				LR	LR		
	comp=Z,620nm,15.3s,MS4.3						
FITZ	**Fitzroy Crossi**	**29.91**	**124**	⇑*i*P	**P**	**11 08 47.3**	**-1.9**
FITZ	**Fitzroy Crossi**	**29.91**	**124**	P	**P**	**11 08 47.9**	**-1.3**
	comp=Z,22nm,0.8s,mb4.9,baz=298,slow=6.8,SNR=65						
FITZ				S	**S**	**11 13 38.8**	**-5.6**
	comp=Z,2.3nm,1.0s,baz=204,slow=13,SNR=2.4						
FITZ				LR	LR	11 19 41.2	
	comp=Z,366nm,20.4s,MS4.0,baz=304,slow=34						
ODAN	**Odare**	**31.14**	**338**	*e*P	**P**	**11 09 00.8**	**+0.8**
	comp=Z,205nm,0.9s,mb5.9						
SWI	**Sorong**	**31.41**	**88**	P	**P**	**11 09 00.7**	**-1.9**
	comp=Z,216nm,1.0s,mb5.9						
TAPN	**Taplejung**	**31.47**	**339**	*e*P	**P**	**11 09 03.9**	**+1.1**
	comp=Z,307nm,0.9s,mb6.1						
RAMN	**Ramite**	**31.53**	**337**	*e*P	**P**	**11 09 04.1**	**+0.8**
	comp=Z,142nm,0.8s,mb5.8						
JIRN	**Jiri**	**32.32**	**337**	*e*P	**P**	**11 09 11.7**	**+1.4**
	comp=Z,14nm,0.3s,mb5.3						
LSA	**Lhasa**	**32.64**	**346**	P	**P**	**11 09 14.3**	**+1.3**
LSA				S	**S**	**11 14 23.0**	**-3.7**
LSA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LSA				AMB	AMB		
	comp=Z,160nm,5.0s						
LSA				LR	LR		
	comp=N,620nm,26.0s,MS4.4						
LSA				LR	LR		
	comp=E,830nm,26.0s,MS4.4						
LSA				LR	LR		
	comp=Z,1μm,28.0s,MS4.4						
LSA	**Lhasa**	**32.64**	**346**	*e*P	**P**	**11 09 14.1**	**+1.1**
LSA				*e*		11 12 00.2	
LSA				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.7						
LSA	**Lhasa**	**32.64**	**346**	*e*P	**P**	**11 09 14.1**	**+1.1**
	comp=Z,99nm,1.0s,mb5.7						
LSA				*e*PcP	PcP	11 12 00.2	+1.5
GUN	**Gumba**	**32.67**	**337**	*e*P	**P**	**11 09 14.1**	**+0.8**
	comp=Z,201nm,0.8s,mb6.1						
DMN	**Daman**	**32.72**	**335**	*e*P	**P**	**11 09 14.5**	**+0.7**
	comp=Z,60nm,0.9s,mb5.5						
KKN	**Kakani**	**32.80**	**336**	*e*P	**P**	**11 09 15.3**	**+0.8**
	comp=Z,133nm,0.9s,mb5.9						
CD2	**Chengdu**	**32.97**	**6**	*e*P	**P**	**11 09 15.5**	**-0.5**
CD2				AP	pP	11 09 25.1	-1.1
CD2				XP	sP	11 09 28.9	-1.6
CD2				PP	PP	11 10 27.1	-3.9
CD2				PCP	PcP	11 11 57.8	-1.8
CD2				S	**S**	**11 14 32.8**	**+0.9**
CD2				XS	sS	11 14 48.5	-0.4
CD2				PCS	PcS	11 15 42.3	-2.7
CD2				SS	SS	11 16 34.3	-21
CD2				SCS	ScS	11 19 37.5	-3.9
CD2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3						
CD2				AMB	AMB		
	comp=Z,180nm,5.8s						
CD2				LR	LR		
	comp=N,3μm,20.4s,MS5.2						
CD2				LR	LR		
	comp=E,3μm,18.0s,MS5.2						
CD2				LR	LR		
	comp=Z,3μm,20.4s,MS5.0						
GKN	**Gorkha**	**33.26**	**335**	*e*P	**P**	**11 09 18.9**	**+0.4**
KOLN	**Koldanda**	**33.51**	**333**	*e*P	**P**	**11 09 21.4**	**+0.7**
	comp=Z,82nm,0.8s,mb5.7						
MUN	**Mundaring**	**33.53**	**154**	*e*P	**P**	**11 09 21.9**	**+1.0**
NACB	**Ninganchiao**	**33.54**	**38**	*e*P	**P**	**11 09 21.8**	**+0.8**
	comp=Z,209nm,0.9s,mb6.1						
DANN	**Dangsing**	**33.94**	**334**	*e*P	**P**	**11 09 25.0**	**+0.6**
	comp=Z,62nm,0.7s,mb5.7						
NWAO	**Narrogin (SRO)**	**34.79**	**154**	P	**P**	**11 09 31.8**	**0.0**
	comp=Z,8.9nm,0.7s,mb4.8,baz=351,slow=8.3,SNR=6.6						
NWAO				LR	LR	11 21 44.5	
	comp=Z,2μm,21.7s,MS4.9,baz=325,slow=33						
NWAO	**Narrogin (SRO)**	**34.79**	**154**	P	**P**	**11 09 31.8**	**0.0**
NWAO				LR	LR	11 21 44.5	
WHN	**Wuhan**	**35.22**	**22**	P	**P**	**11 09 35.0**	**-0.5**
WHN				LR	LR		
	comp=N,8μm,16.8s,MS5.6						
WHN				LR	LR		
	comp=E,4μm,16.1s,MS5.6						
WHN				LR	LR		
	comp=Z,10μm,17.3s,MS5.6						
PTH	**Pithoragarh**	**36.60**	**331**	*e*P	**P**	**11 09 48.5**	**+1.2**
XAN	**Xi'an**	**36.88**	**13**	P	**P**	**11 09 47.6**	**-2.1**
XAN				AP	pP	11 09 54.8	-5.2
XAN				XP	sP	11 09 58.4	-5.9
XAN				PP	PP	11 11 15.0	+0.8
XAN				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.3						
XAN				AMB	AMB		
	comp=Z,69nm,4.8s						
XAN				LR	LR		
	comp=N,1μm,19.1s,MS5.0						
XAN				LR	LR		
	comp=E,2μm,18.3s,MS5.0						
XAN				LR	LR		
	comp=Z,2μm,15.1s,MS5.1						
NDI	**New Delhi**	**37.48**	**326**	*e*P	**P**	**11 09 53.0**	**-1.8**
NDI				*ex*	x	11 16 07.0	
WRA	**Warramunga Arr**	**38.10**	**120**	P	**P**	**11 09 58.0**	**-2.2**
	comp=Z,48nm,0.9s,mb5.2,baz=296,slow=9.6,SNR=175						
WRA				PcP	PcP	11 12 15.2	+0.2
	comp=Z,5.7nm,0.9s,baz=317,slow=2.4,SNR=4.9						
WRA				S	**S**	**11 15 44.2**	**-6.8**
	comp=Z,7.1nm,0.9s,baz=294,slow=16,SNR=16						
WRA				LR	LR	11 27 58.0	
	comp=Z,700nm,21.4s,MS4.4,baz=320,slow=40						
WRA	**Warramunga Arr**	**38.10**	**120**	P	**P**	**11 09 58.0**	**-2.2**
WRA						11 12 15.2	
WRA				S	**S**	**11 15 44.2**	**-6.7**
WRAB	**Tennant Creek**	**38.10**	**120**	P	**P**	**11 09 58.0**	**-2.2**
	comp=Z,418nm,0.9s,mb6.2,SNR=36						
WRAB	**Tennant Creek**	**38.10**	**120**	*c*P	**P**	**11 09 58.1**	**-2.1**
WRAB	**Tennant Creek**	**38.10**	**120**	*e*

SMLA	**Simla**	**39.42**	**329**	*i* P		**P**		**11 10 11.4**	**+0.3**
SMLA				*ex*		x		11 10 12.0	
	comp=Z,128nm,1.0s								
SMLA				*i* x		x		11 12 39.6	
SDNR	**Sundarnagar**	**39.81**	**329**	*e*P		**P**		**11 10 15.0**	**+0.6**
DLH	**Dalhousie**	**41.16**	**329**	*ex*		x		11 10 04.0	
DLH				*ex*		x		11 11 02.0	
THN	**Thein Dam**	**41.20**	**328**	*e*P		**P**		**11 10 24.2**	**-1.6**
THN				*ex*		x		11 12 00.6	
GTA	**Gaotai**	**41.24**	**360**	*e*P		**P**		**11 10 25.4**	**-0.6**
GTA					AP	pP		11 10 35.4	-1.1
GTA					XP	sP		11 10 39.8	-1.0
GTA					PP	PP		11 12 04.5	+2.7
GTA					PCP	PcP		11 12 25.6	+1.1
GTA					SCP	ScP		11 16 12.5	+0.6
GTA					S	**S**		**11 16 36.3**	**-1.2**
GTA					XS	sS		11 16 52.8	-1.9
GTA					SS	SS		11 19 35.3	-6.5
GTA					AMB	AMB			
	comp=Z,28nm,1.4s,mb4.7								
GTA					AMB	AMB			
	comp=Z,193nm,3.8s								
GTA					LR	LR			
	comp=N,1μm,14.4s,MS5.1								
GTA					LR	LR			
	comp=E,2μm,16.5s,MS5.1								
GTA					LR	LR			
	comp=Z,2μm,15.9s,MS5.0								
TIA	**Tai'an**	**41.32**	**21**	*e*P		**P**		**11 10 25.3**	**-1.4**
CHCP	**Chirah Chowk**	**43.45**	**327**	P		**P**		**11 10 35.0**	**-9.2**
THW	**Thamme Wali**	**43.66**	**325**	⇑P		**P**		**11 10 39.9**	**-5.9**
HHC	**Hu-ho-hao-te**	**44.00**	**13**	*e*P		**P**		**11 10 48.3**	**-0.1**
HHC					AP	pP		11 10 58.8	-0.1
HHC					XP	sP		11 11 02.6	-0.6
HHC					PP	PP		11 12 32.5	+1.1
HHC					SCP	ScP		11 16 21.0	-1.9
HHC					PCS	PcS		11 16 24.4	-2.2
HHC					S	**S**		**11 17 19.0**	**+1.0**
HHC					XS	sS		11 17 35.8	+0.5
HHC					SS	SS		11 20 28.8	-7.1
HHC					SCS	ScS		11 20 42.0	-2.5
HHC					AMB	AMB			
	comp=Z,24nm,0.7s,mb5.0								
HHC					AMB	AMB			
	comp=Z,187nm,6.3s								
HHC					LR	LR			
	comp=N,2μm,14.7s,MS5.2								
HHC					LR	LR			
	comp=E,1μm,14.1s,MS5.2								
HHC					LR	LR			
	comp=Z,2μm,14.9s,MS5.1								
BJT	**Baijiatuau**	**44.44**	**18**	*e*P		**P**		**11 10 52.2**	**+0.3**
BJT					pmax	pmax			
	comp=Z,99nm,1.3s								
BJT	**Baijiatuau**	**44.44**	**18**	*e*P		**P**		**11 10 52.2**	**+0.3**
	comp=Z,99nm,1.3s,mb5.4								
BJI	**Beijing**	**44.46**	**18**	P		**P**		**11 10 52.6**	**+0.5**
BJI					PP	PP		11 12 38.3	+1.9
BJI					AMB	AMB			
	comp=Z,51nm,1.1s,mb5.2								
BJI					AMB	AMB			
	comp=Z,449nm,4.1s								
BJI					LR	LR			
	comp=N,3μm,16.4s,MS5.2								
BJI					LR	LR			
	comp=E,724nm,17.7s,MS5.2								
BJI					LR	LR			
	comp=E,1μm,16.4s,MS5.0								
DL2	**Dalian**	**45.41**	**24**	⇑P		**P**		**11 10 58.6**	**-1.1**
DL2					S	**S**		**11 17 37.3**	**-1.2**
DL2					AMB	AMB			
	comp=Z,40nm,1.1s,mb5.2								
DL2					AMB	AMB			
	comp=Z,130nm,3.7s								
DL2					LR	LR			
	comp=N,500nm,16.6s,MS4.7								
DL2					LR	LR			
	comp=E,510nm,15.8s,MS4.7								
DL2					LR	LR			
	comp=Z,790nm,19.8s,MS4.7								
KSH	**Kashi**	**46.80**	**335**	*e*P		**P**		**11 11 12.0**	**+1.3**
WMQ	**Urumqi**	**46.94**	**348**	⇑*i*P		**P**		**11 11 12.3**	**+0.7**
WMQ					AP	pP		11 11 21.6	-0.6
WMQ					XP	sP		11 11 27.0	+0.6
WMQ					PCP	PcP		11 12 45.0	+1.2
WMQ					PP	PP		11 13 03.0	+0.5
WMQ					S	**S**		**11 18 01.0**	**+0.7**
WMQ					XS	sS		11 18 21.0	+3.2
WMQ					SCS	ScS		11 21 02.0	-1.3
WMQ					AMB	AMB			
	comp=Z,41nm,1.0s,mb5.3								
WMQ					AMB	AMB			
	comp=Z,273nm,3.7s								
WMQ					LR	LR			
	comp=N,892nm,15.7s,MS5.0								
WMQ					LR	LR			
	comp=E,1μm,14.4s,MS5.0								
WMQ					LR	LR			
	comp=Z,952nm,23.7s								
KSRS	**Korea Array**	**47.12**	**31**	P		**P**		**11 11 12.6**	**-0.6**
	comp=Z,32nm,0.8s,mb5.3,baz=224,slow=8.4,SNR=80								
KSRS					PcP	PcP		11 12 45.0	+0.4
	comp=Z,5.8nm,0.8s,baz=224,slow=4.5,SNR=5.2								
KSRS					LR	LR		11 30 51.5	
	comp=Z,777nm,20.5s,MS4.7,baz=226,slow=36								
BIDO	**Bidbid**	**47.89**	**305**	⇓P		pP		11 11 30.2	+0.2
	SNR=5.4								
SNY	**Shenyang**	**48.67**	**24**	⇓P		**P**		**11 11 24.8**	**-0.3**
SNY					AMB	AMB			
	comp=Z,27nm,1.5s,mb5.1								
SNY					LR	LR			
	comp=N,1μm,15.3s,MS5.2								
SNY					LR	LR			
	comp=E,2μm,14.4s,MS5.2								
SNY					LR	LR			
	comp=Z,2μm,14.4s,MS5.2								
CTA	**Charters Tower**	**48.71**	**115**	*e*P		**P**		**11 11 24.4**	**-1.4**
CTA				*e*	pP	pP		11 11 36.6	+0.2
CTA	**Charters Tower**	**48.71**	**115**	LR		LR		11 34 27.2	
	comp=Z,1μm,20.7s,MS4.8,baz=289,slow=39								
CTAO	**Charters Tower**	**48.71**	**115**	*e*P		**P**		**11 11 24.4**	**-1.4**
CTAO					pmax	pmax			
	comp=Z,66nm,1.4s,mb5.5								
CTAO	**Charters Tower**	**48.71**	**115**	*e*P		**P**		**11 11 24.4**	**-1.4**
	comp=Z,66nm,1.4s,mb5.5								
STKA	**Stephens Creek**	**49.23**	**132**	*e*P		**P**		**11 11 29.0**	**-0.6**
STKA	**Stephens Creek**	**49.23**	**132**	P		**P**		**11 11 28.9**	**-0.7**
	comp=Z,25nm,0.7s,mb5.3,baz=306,slow=8.1,SNR=28								
STKA					S	**S**		**11 18 33.6**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=136,slow=20,SNR=2.8								
STKA					LR	LR		11 34 10.0	
	comp=Z,1μm,19.6s,MS4.9,baz=293,slow=38								
TKM2	**Tokmak 2**	**49.81**	**337**	*e*P		**P**		**11 11 30.0**	**-3.8**
TKM2					pmax	pmax			
	comp=Z,29nm,0.5s,mb5.6								
TKM2	**Tokmak 2**	**49.81**	**337**	P		**P**		**11 11 28.7**	**-5.1**
	SNR=17								
TKM2	**Tokmak 2**	**49.81**	**337**	*e*P		**P**		**11 11 30.0**	**-3.8**
	comp=Z,29nm,0.5s,mb5.6								
KBK	**Karagaybulak**	**49.85**	**336**	P		**P**		**11 11 35.8**	**+1.7**
	SNR=10								
SONM	**Songino Array**	**49.99**	**6**	P		**P**		**11 11 35.2**	**+0.1**
	comp=Z,29nm,0.6s,mb5.5,baz=189,slow=8.7,SNR=121								
SONM					PcP	PcP		11 12 54.7	0.0
	comp=Z,16nm,0.8s,baz=185,slow=3.8,SNR=6.0								
SONM					ScP	ScP		11 16 47.7	-0.2
	comp=Z,1.6nm,0.9s,baz=197,slow=1.5,SNR=4.8								
SONM					LR	LR		11 35 08.0	
	comp=Z,921nm,18.3s,MS4.8,baz=192,slow=39								
SONM	**Songino Array**	**49.99**	**6**	P		**P**		**11 11 35.2**	**+0.1**
SONM								11 12 54.7	
ULN	**Ulaanbaatar**	**50.09**	**6**	⇑P		**P**		**11 11 34.7**	**-1.2**
	SNR=18								
ULN	**Ulaanbaatar**	**50.09**	**6**	⇑*e*P		**P**		**11 11 36.1**	**+0.3**
ULN	**Ulaanbaatar**	**50.09**	**6**	*e*P		**P**		**11 11 35.7**	**-0.1**
	comp=Z,25nm,0.8s,mb5.3								
FRU	**Bishkek**	**50.13**	**336**	*e*P		**P**		**11 11 38.0**	**+1.8**
FRU				*e*				11 18 47.0	
FRU					MLR	MLR			
	comp=Z,600nm,20.0s,MS4.6								
MK31	**Makanchi Array**	**51.02**	**345**	*e*P		**P**		**11 11 42.7**	**-0.2**
MKAR	**Makanchi Array**	**51.02**	**345**	P		**P**		**11 11 43.0**	**+0.2**
	comp=Z,156nm,0.7s,mb6.0,baz=149,slow=7.9,SNR=573								
MKAR					S	**S**		**11 18 59.4**	**+1.7**
	comp=Z,1.0nm,0.9s,baz=165,slow=15,SNR=3.8								
MKAR					LR	LR		11 35 50.6	
	comp=Z,357nm,21.7s,MS4.3,baz=285,slow=39								
MKAR	**Makanchi Array**	**51.02**	**345**	P		**P**		**11 11 43.1**	**+0.2**
MKAR					S	**S**		**11 18 59.4**	**+1.7**
CN2	**Changchun**	**51.08**	**24**	⇑P		**P**		**11 11 41.8**	**-1.5**
CN2				*e*	AP	pP		11 11 51.6	-2.4
CN2				*e*	XP	sP		11 11 55.5	-2.7
CN2					PCP	PcP		11 12 56.9	-1.9
CN2				*e*	S	**S**		**11 18 56.4**	**-2.1**
CN2					AMB	AMB			
	comp=Z,20nm,0.9s,mb5.0								
CN2					AMB	AMB			
	comp=Z,200nm,5.0s								
CN2					LR	LR			
	comp=N,1μm,16.0s,MS5.2								
CN2					LR	LR			
	comp=E,1μm,16.0s,MS5.2								
CN2					LR	LR			
	comp=Z,2μm,17.0s,MS5.2								
ZAK	**Zakamensk**	**52.30**	**3**	⇑*i*P		**P**		**11 11 52.0**	**-0.3**
ZAK				*e*				11 12 58.4	
ZAK				*e*				11 14 49.6	
ZAK					pmax	pmax			
	comp=Z,31nm,1.0s,mb5.2								
MAJO	**Matsushiro**	**52.39**	**39**	*e*P		**P**		**11 11 51.9**	**-1.4**
MAJO					pmax	pmax			
	comp=Z,51nm,1.2s,mb5.3								
MAJO	**Matsushiro**	**52.39**	**39**	*e*P		**P**		**11 11 51.9**	**-1.4**
	comp=Z,51nm,1.2s,mb5.3								
MAT	**Matsushiro**	**52.39**	**39**	P		**P**		**11 11 51.8**	**-1.5**
MAT					S	**S**		**11 19 27.0**	**+10**
MJAR	**Matsushiro Arr**	**52.39**	**39**	P		**P**		**11 11 52.0**	**-1.3**
	comp=Z,23nm,0.9s,mb5.1,baz=222,slow=7.2,SNR=54								
MJAR					LR	LR		11 35 49.3	
	comp=Z,619nm,18.3s,MS4.7,baz=220,slow=38								
MJAR	**Matsushiro Arr**	**52.39**	**39**	P		**P**		**11 11 52.0**	**-1.3**
MJAR					LR	LR		11 35 49.3	
HVS	**Khovu-Aksy**	**53.23**	**355**	⇑*e*P		**P**		**11 11 58.8**	**-0.4**
HVS					pmax	pmax			
	comp=Z,84nm,0.8s,mb5.7								
VLA	**Vladivostok**	**53.40**	**29**	*e*P		**P**		**11 11 59.5**	**-1.1**
VLA					pmax	pmax			
	comp=Z,95nm,1.9s,mb5.4								
VLA					MLR	MLR			
	comp=Z,600nm,18.0s,MS4.7								
VLA	**Vladivostok**	**53.40**	**29**	*i* P		**P**		**11 12 00.4**	**-0.2**
MDJ	**Mudanjiang**	**53.48**	**26**	P		**P**		**11 12 00.6**	**-0.6**
MDJ					AP	pP		11 12 09.5	-2.4
MDJ					XP	sP		11 12 13.3	-2.8
MDJ					PCP	PcP		11 13 07.3	-0.6
MDJ					PP	PP		11 13 58.8	-3.3
MDJ					S	**S**		**11 19 26.5**	**-5.0**
MDJ					SS	SS		11 23 05.8	-6.4
MDJ					AMB	AMB			
	comp=Z,38nm,1.0s,mb5.3								
MDJ					AMB	AMB			
	comp=Z,186nm,6.3s								
MDJ					LR	LR			
	comp=N,1μm,15.9s,MS5.2								
MDJ					LR	LR			
	comp=E,950nm,15.9s,MS5.2								
MDJ					LR	LR			
	comp=Z,2μm,17.2s,MS5.3								
MDJ	**Mudanjiang**	**53.48**	**26**	*e*P		**P**		**11 12 01.0**	**-0.2**
	comp=Z,32nm,0.9s,mb5.2								
MDJ				*e*	pP	pP		11 12 10.4	-1.5
TLY	**Talaya**	**53.61**	**3**	P		**P**		**11 12 02.5**	**+0.5**
	comp=Z,475nm,0.9s,mb6.4,SNR=35								
TLY	**Talaya**	**53.61**	**3**	⇑P		**P**		**11 12 01.1**	**-0.8**
	SNR=15								
TLY	**Talaya**	**53.61**	**3**	*e*P		**P**		**11 12 02.0**	**0.0**
TLY					pmax	pmax			
	comp=Z,85nm,1.0s,mb5.6								
TLY					MLR	MLR			
	comp=Z,2μm,16.0s,MS5.2								
TLY	**Talaya**	**53.61**	**3**	*e*P		**P**		**11 12 02.2**	**+0.2**
	comp=Z,73nm,0.9s,mb5.6								
HIA	**Hailar**	**53.92**	**16**	*e*P		**P**		**11 12 03.6**	**-0.7**
HIA				*e*	PP	pP		11 12 13.8	-1.2
HIA					pmax	pmax			
	comp=Z,5.0nm,0.5s								
HIA	**Hailar**	**53.92**	**16**	*e*P		**P**		**11 12 03.5**	**-0.7**
	comp=Z,5.1nm,0.5s,mb4.7								
HIA				*e*	pP	pP		11 12 13.8	-1.2
OPO	**Ambohidratompo**	**54.12**	**249**	P		**P**		**11 12 08.0**	**+1.7**
	comp=Z,2.5nm,0.9s,mb4.2,baz=136,slow=23,SNR=3.1								
IRK	**Irkutsk**	**54.21**	**3**	*e*P		**P**		**11 12 06.6**	**+0.3**
IRK					pmax	pmax			
	comp=Z,119nm,2.4s,mb5.4								
CIT	**Chita**	**55.09**	**10**	*e*P		**P**		**11 12 14.4**	**+1.6**
CIT				*e*				11 13 13.6	
CIT					pmax	pmax			
	comp=Z,153nm,1.8s,mb5.7								
KURK	**Kurchatov**	**55.60**	**344**	P		**P**		**11 12 16.1**	**-0.4**
	comp=Z,1μm,0.9s,SNR=67								
KURK	**Kurchatov**	**55.60**	**344**	⇓P		**P**		**11 12 17.4**	**+1.0**
	SNR=58								
KURK	**Kurchatov**	**55.60**	**344**	S		**S**		**11 19 58.8**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=274,slow=40,SNR=3.9								
KURK	**Kurchatov**	**55.60**	**344**	*e*P		**P**		**11 12 16.3**	**-0.1**
CAN	**Canberra**	**56.29**	**132**	*e*P		**P**		**11 12 21.3**	**-0.5**
ARMA	**Armidale**	**56.50**	**126**	*e*P		**P**		**11 12 24.1**	**+0.8**
CNB	**Canberra Magne**	**56.56**	**132**	*e*P		pP		11 12 38.5	+4.0
ZAA0	**Zalesovo Array**	**57.18**	**349**	*e*P		**P**		**11 12 27.1**	**-0.5**
ZALV	**Zalesovo Beam**	**57.18**	**349**	P		**P**		**11 12 27.2**	**-0.4**
	comp=Z,98nm,0.8s,mb5.9,baz=175,slow=5.4,SNR=260								
ZALV					S	**S**		**11 20 20.3**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=156,slow=15,SNR=7.0								
ZALV					LR	LR		11 39 33.0	
	comp=Z,417nm,20.1s,MS4.5,baz=44,slow=39								
ZALV	**Zalesovo Beam**	**57.18**	**349**	P		**P**		**11 12 27.2**	**-0.4**
ZALV					S	**S**		**11 20 20.3**	**-0.2**
ZALV	**Zalesovo Beam**	**57.18**	**349**	P		**P**		**11 12 27.2**	**-0.4**
ZALV					S	**S**		**11 20 20.3**	**-0.2**
ZALV					LR	LR		11 39 33.0	
KLR	**Kul'dur**	**58.02**	**24**	*e*P		**P**		**11 12 29.6**	**-4.1**
KLR				*e*	S	**S**		**11 20 30.5**	**-1.3**
KLR				*e*	SSS			11 26 38.0	
KLR					pmax	pmax			
	comp=E,140nm,2.2s								
KLR					pmax	pmax			
	comp=Z,340nm,2.2s,mb6.0								
KLR					MLR	MLR			
	comp=E,1μm,14.0s								
KLR					MLR	MLR			
	comp=Z,2μm,14.0s,MS5.5								
KRAR	**Krasnoyarsk**	**58.14**	**355**	⇓*e*P		**P**		**11 12 35.0**	**+0.7**
KRAR					pmax	pmax			
	comp=Z,191nm,1.8s,mb5.8								
KRAR					MLR	MLR			
	comp=Z,700nm,18.0s,MS4.8								
NVS	**Novosibirsk**	**58.32**	**349**	*i* P		**P**		**11 12 33.7**	**-1.9**
NVS				*e*	S	**S**		**11 20 28.0**	**-7.5**
NVS					pmax	pmax			
	comp=Z,32nm,0.6s,mb5.5								
NVS					pmax	pmax			
	comp=N,51nm,1.2s								
NVS					pmax	pmax			
	comp=E,24nm,0.8s								
NVS					smax				
	comp=N,26nm,2.0s								
NVS					smax				
	comp=E,6.0nm,1.1s								
RDF	**Al-Radifah**	**58.76**	**306**	*e*P		**P**		**11 12 38.1**	**-1.1**
	baz=306								
RDF					AMb	AMB		11 12 56.9	
	comp=Z,80nm,1.0s,mb5.7,baz=306								
ERM	**Erimo**	**58.77**	**37**	⇑*e*P		**P**		**11 12 38.7**	**-0.3**
UMR	**Umm Al-Rimmam**	**58.86**	**307**	*e*P		**P**		**11 12 39.3**	**-0.6**
	baz=306								
UMR					AMb	AMB		11 12 56.9	
	comp=Z,109nm,0.9s,mb5.9,baz=306								
NAY	**Al-Naaiem**	**59.13**	**306**	*e*P		**P**		**11 12 40.3**	**-1.5**
	baz=306								
NAY					AMb	AMB		11 12 58.6	
	comp=Z,41nm,1.2s,mb5.3,baz=306								
MIB	**Mutribah**	**59.26**	**307**	*e*P		**P**		**11 12 41.9**	**-0.8**
	baz=307								
MIB					AMb	AMB		11 12 59.7	
	comp=Z,178nm,0.9s,mb6.1,baz=307								
ASAJ	**Asahikawa**	**59.72**	**34**	LR		LR		11 39 26.2	
	comp=Z,332nm,19.0s,MS4.5,baz=327,slow=37								
BVAR	**Borovoye Array**	**60.17**	**340**	S		**S**		**11 20 58.4**	**-1.1**
	comp=Z,1.8nm,0.7s,baz=239,slow=38,SNR=2.4								
HNR	**Honiara**	**60.17**	**100**	LR		LR		11 41 02.9	
	comp=Z,200nm,20.5s,MS4.2,baz=282,slow=38								
HNR	**Honiara**	**60.17**	**100**	*e*P		**P**		**11 12 45.2**	**-4.0**
HNR					pmax	pmax			
	comp=Z,175nm,1.8s,mb5.8								
HNR	**Honiara**	**60.17**	**100**	*e*P		**P**		**11 12 45.2**	**-4.1**
	comp=Z,175nm,1.8s,mb5.8								
BRVK	**Borovoye**	**60.23**	**340**	P		**P**		**11 12 48.1**	**-0.8**
	comp=Z,350nm,1.7s,mb6.1,SNR=6.0								
BRVK	**Borovoye**	**60.23**	**340**	⇑P		**P**		**11 12 50.4**	**+1.5**
	SNR=14								
BRVK	**Borovoye**	**60.23**	**340**	*e*P		**P**		**11 12 47.9**	**-0.9**
BOD	**Bodaibo**	**60.74**	**9**	*e*P		**P**		**11 12 51.8**	**-0.4**
BOD					pmax	pmax			
	comp=Z,109nm,0.8s,mb6.0								
YSS	**Yuzh-Sakhalins**	**61.59**	**32**	*e*P		**P**		**11 12 57.2**	**-1.0**
YSS					pmax	pmax			
	comp=Z,190nm,1.0s,mb6.2								
YSS					MLR	MLR			
	comp=N,500nm,16.0s,MS4.9								
YSS					MLR	MLR			
	comp=E,400nm,16.0s,MS4.9								
YSS					MLR	MLR			
	comp=Z,600nm,16.0s,MS4.8								
YSS	**Yuzh-Sakhalins**	**61.59**	**32**	*i* P		**P**		**11 12 58.1**	**-0.1**
CLNS	**Chul'man**	**62.08**	**15**	*e*P		**P**		**11 13 00.8**	**-0.6**
CLNS				*e*	*PP	pP		11 13 08.9	-3.4
CLNS				*e*				11 13 41.2	
CLNS				*e*				11 15 16.4	
CLNS				*e*	S	**S**		**11 21 22.0**	**-1.7**
CLNS					pmax	pmax			
	comp=Z,75nm,0.7s,mb5.9								
CLNS					pmax	pmax			
	comp=E,36nm,0.8s								
CLNS					pmax	pmax			
	comp=N,40nm,0.7s								
CLNS					smax				
	comp=N,65μm,12.3s								
CLNS					smax				
	comp=E,154μm,12.3s								
CLNS					MLR	MLR			
	comp=N,776nm,15.0s,MS5.0								
CLNS					MLR	MLR			
	comp=E,456nm,15.0s,MS5.0								
CLNS					MLR	MLR			
	comp=Z,1μm,16.0s,MS5.2								
KMBO	**Kilima Mbogo**	**62.58**	**270**	P		**P**		**11 13 06.8**	**+1.2**
	comp=Z,1.1nm,0.2s,mb4.6,baz=49,slow=23,SNR=3.8								
KMBO					LR	LR		11 36 10.6	
	comp=Z,787nm,19.9s,MS4.9,baz=95,slow=32								
KMBO	**Kilima Mbogo**	**62.58**	**270**	⇑*e*P		**P**		**11 13 09.3**	**+3.7**
KMBO	**Kilima Mbogo**	**62.58**	**270**	P		**P**		**11 13 06.8**	**+1.2**
KMBO					LR	LR		11 36 10.6	
GNI	**Garni**	**65.45**	**316**	⇑*i*P		**P**		**11 13 24.1**	**+0.2**
SVE	**Sverdlovsk**	**66.66**	**338**	⇓*e*P		**P**		**11 13 30.7**	**-0.6**
SVE				*e*				11 13 46.7	
SVE				*e*	S	S		11 22 24.6	+4.3
SVE					pmax	pmax			
	comp=Z,65nm,1.0s,mb5.6								
SVE					MLR	MLR			
	comp=Z,688nm,20.0s,MS4.9								
ARU	**Arti**	**67.18**	**337**	*c i*P		**P**		**11 13 34.3**	**-0.4**
ARU				*e*				11 14 00.5	
ARU				*e*				11 16 03.2	
ARU				*e*	PPP			11 17 40.6	
ARU				*e*	S	S		11 22 28.3	+1.7
ARU				*e*	SS	SS		11 26 49.1	+2.6
ARU					pmax	pmax			
	comp=Z,59nm,1.7s,mb5.3								
ARU					MLR	MLR			
	comp=Z,760nm,19.0s,MS4.9								
ARU	**Arti**	**67.18**	**337**	*e*P		**P**		**11 13 33.9**	**-0.8**
YAK	**Yakutsk**	**67.81**	**15**	⇑*i*P		**P**		**11 13 37.1**	**-1.4**
KIV	**Kislovodsk**	**68.48**	**319**	*c i*P		**P**		**11 13 43.6**	**+0.5**
KIV				*e*				11 13 59.4	
KIV				*e*				11 14 08.0	
KIV				*e*				11 16 17.1	
KIV					pmax	pmax			
	comp=Z,46nm,1.0s,mb5.5								
KIV					MLR	MLR			
	comp=Z,200nm,17.0s,MS4.4								
KIV	**Kislovodsk**	**68.48**	**319**	*e*P		**P**		**11 13 43.8**	**+0.7**
	comp=Z,46nm,0.9s,mb5.5								
MALT	**Malatya**	**69.26**	**312**	⇑*i*P		**P**		**11 13 46.5**	**-1.6**
MALT	**Malatya**	**69.26**	**312**	*e*P		**P**		**11 13 45.9**	**-2.2**
MAW	**Mawson**	**70.22**	**194**	*e*P		**P**		**11 13 54.0**	**+0.6**
MAW	**Mawson**	**70.22**	**194**	P		**P**		**11 13 54.0**	**+0.7**
	comp=Z,2.1nm,0.8s,mb4.1,baz=46,slow=6.0,SNR=6.4								
MAW					LR	LR		11 38 16.3	
	comp=Z,989nm,20.8s,MS5.0,baz=48,slow=30								
SOC	**Sochi**	**70.28**	**318**	*c i*P		**P**		**11 13 53.6**	**-0.7**
SOC				*e*	*PP	pP		11 14 03.8	-1.5
SOC				*e*				11 14 13.0	
SOC				*e*				11 16 35.8	
SOC				*e*	S	S		11 23 03.9	0.0
SOC				*e*				11 23 49.6	
SOC				*e*	SS	SS		11 27 34.6	-0.3
SOC					pmax	pmax			
	comp=Z,33nm,0.8s,mb5.3								
DRV	**Dumont d'Urvil**	**70.33**	**164**	S		S		11 23 20.0	+16
DRV				R				11 35 00.0	
PETK	**Petropavlovsk-**	**72.99**	**32**	P		**P**		**11 14 09.4**	**-1.0**
	comp=Z,11nm,0.6s,mb5.0,baz=243,slow=1.4,SNR=38								
PETK					LR	LR		11 50 54.3	
	comp=Z,190nm,20.3s,MS4.4,baz=257,slow=40								
PET	**Petropavlovsk**	**73.46**	**33**	*e*P		**P**		**11 14 12.0**	**-1.1**
PET				*e*	S	S		11 23 38.0	-2.1
PET					pmax	pmax			
	comp=Z,51nm,0.7s,mb5.6								
PET					pmax	pmax			
	comp=Z,100nm,11.9s								
PET					MLR	MLR			
	comp=Z,600nm,21.0s,MS4.8								
PET	**Petropavlovsk**	**73.46**	**33**	⇑*e*P	

TIRR Tirgusor 78.28 316⇑ iP P 11 14 41.0 +0.2
TIRR Tirgusor 78.28 316 eP P 11 14 40.4 -0.5
comp=Z,29nm,0.9s,mb5.2
KIS Kishinev 78.67 319 eP P 11 14 43.0 +0.1
KIS e 11 14 50.0
KIS e 11 14 58.0
KIS Kishinev 78.67 319 eUNK P 11 14 43.0 +0.1
HARR Harsova 78.67 316⇑ iP P 11 14 43.7 +0.7
HARR Harsova 78.67 316⇑ P P 11 14 43.7 +0.7
URZ Urewera 78.73 128 LR LR 11 51 00.3
comp=Z,627nm,18.5s,MS5.0,baz=248,slow=37
AKASG Malin Array Be 79.42 322 P P 11 14 46.0 -1.0
comp=Z,5.8nm,0.7s,mb4.6,baz=86,slow=3.7,SNR=19
AKASG LR LR 11 54 17.3
comp=Z,289nm,21.6s,MS4.6,baz=65,slow=39
AKASG Malin Array Be 79.42 322 P P 11 14 46.0 -1.0
AKASG LR LR 11 54 17.3
KIEV Kiev 79.43 322 eP P 11 14 46.2 -0.8
KIEV pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
KIEV Kiev 79.43 322 eP P 11 14 46.2 -0.9
comp=Z,9.4nm,0.6s,mb4.9
VRI Vrincioaia 79.78 317⇑ iP P 11 14 49.5 +0.5
VRI Vrincioaia 79.78 317 ⇑P P 11 14 49.5 +0.5
PLOR Plostina 79.83 317⇑ iP P 11 14 51.0 +1.7
MLR Muntele Rosu 80.23 317⇑ iP P 11 14 52.2 +0.7
MLR Muntele Rosu 80.23 317 ⇑P P 11 14 52.2 +0.8
BURAR Bucovina Array 81.19 319⇑ iP P 11 14 57.3 +0.7
BURAR Bucovina Array 81.19 319 ⇑P P 11 14 57.3 +0.7
BUR08 Bucovina Ar. S 81.21 319 eP P 11 14 57.5 +0.8
JOF Joensuu 82.19 335 ep P 11 14 59.6 -1.9
comp=Z,18nm,0.9s,mb5.0
GZR Gura Zlata 82.39 316⇓ iP P 11 15 03.7 +0.8
GZR Gura Zlata 82.39 316 ⇓P P 11 15 03.7 +0.7
LVV L'vov 82.44 321 eP pP 11 15 13.8 -0.5
DRGR 82.70 318⇑ iP P 11 15 05.4 +0.9
DRGR 82.70 318 ⇑P P 11 15 05.4 +0.9
KRUS Krusevo 82.80 312 eP P 11 15 04.3 -0.9
VSU Vasula 82.96 330⇑ iP P 11 15 06.1 +0.5
APA Apatity 83.07 339⇓ iP P 11 15 05.3 -0.7
APA i pP 11 15 15.4 -1.8
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
APA MLR MLR
comp=Z,1μm,22.0s,MS5.3
BZS Buzias 83.23 316⇑ iP P 11 15 07.1 -0.2
BZS Buzias 83.23 316 ⇑P P 11 15 07.1 -0.2
BILL Bilibino 83.24 20 i P P 11 15 07.4 +0.6
BILL e 11 18 17.7
BILL pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
BILL MLR MLR
comp=Z,900nm,15.0s,MS5.3
BILL Bilibino 83.24 20 i P P 11 15 07.5 +0.7
KWP Kalwaria 83.24 320 eP P 11 15 07.5 +0.3
KWP Kalwaria 83.24 320 eP P 11 15 07.5 +0.3
SBA Scott Base 83.25 169 eP P 11 15 08.3 +1.5
SBA pmax pmax
comp=Z,166nm,2.8s,mb5.6
SBA Scott Base 83.25 169 eP P 11 15 08.3 +1.5
comp=Z,166nm,2.8s,mb5.6
UZH Uzhgorod 83.32 319 e P 11 15 08.0 +0.3
UZH i 11 15 15.5
KOLS Kolonicke sedl 83.39 320 eP P 11 15 08.4 +0.4
SUW Suwalki 83.83 325 eP P 11 15 10.3 +0.1
SUW Suwalki 83.83 325 eP P 11 15 10.3 +0.1
STHS Stebnicka Huta 84.14 320 eP P 11 15 12.4 +0.6
STHS e pP 11 15 24.2 +1.1
STHS pmax pmax
comp=Z,14nm,0.8s,mb5.1
STHS Stebnicka Huta 84.14 320 eP P 11 15 12.4 +0.6
comp=Z,14nm,0.8s,mb5.1
STHS e pP 11 15 24.2 +1.1
KAF Kangasniemi 84.15 333 ep P 11 15 11.4 -0.2
comp=Z,41nm,0.8s,mb5.6,baz=101,slow=4.7
KAF Kangasniemi 84.15 333 eP P 11 15 11.4 -0.2
KAF pmax pmax
comp=Z,41nm,0.8s,mb5.6
NIE Niedzica 84.74 320 eP P 11 15 16.3 +1.4
PSZ Piszkesteto 84.78 318⇓ eP P 11 15 15.4 +0.3
PSZ Piszkesteto 84.78 318⇑ iP P 11 15 15.8 +0.7
PSZ Piszkesteto 84.78 318 eP P 11 15 15.4 +0.3
OJC Ojcow 85.19 321 eP P 11 15 17.6 +0.4
PKSM Moragy 85.38 316⇑ iP P 11 15 18.6 +0.4
PKSM Moragy 85.38 316 ⇑P P 11 15 18.6 +0.4
VYHS Vyhne 85.56 319 eP P 11 15 18.9 -0.1
KEV Kevo 86.02 341 ep P 11 15 19.4 -1.4
comp=Z,19nm,0.9s,mb5.3
KEV Kevo 86.02 341 eP P 11 15 19.4 -1.4
KEV pmax pmax
comp=Z,19nm,0.9s,mb5.3
OKC Ostrava-Krasne 86.19 320 eP P 11 15 23.0 +0.9
OKC epP pP 11 15 33.6 +0.2
ARCES ARCESS Array B 86.46 340 P P 11 15 23.1 +0.1
comp=Z,22nm,0.8s,mb5.4,baz=104,slow=5.1,SNR=42
ARCES LR LR 11 58 07.1
comp=Z,500nm,20.8s,MS4.9,baz=109,slow=38
ARCES ARCESS Array B 86.46 340 P P 11 15 23.1 +0.1
ARCES LR LR 11 58 07.1
MORC Moravsky Berou 86.57 320 P P 11 15 24.6 +0.6
MORC pmax pmax
comp=Z,15nm,1.0s,mb5.2
MORC Moravsky Berou 86.57 320 ⇑P P 11 15 24.8 +0.8
MORC Moravsky Berou 86.57 320⇑ iP P 11 15 24.8 +0.8
MORC Moravsky Berou 86.57 320 eP P 11 15 24.5 +0.5
comp=Z,15nm,0.9s,mb5.2
MORC epP pP 11 15 35.8 +0.5
MORC esP sP 11 15 40.2 +0.8
MODS Modra-Piesok 86.57 319 eP P 11 15 24.3 +0.3
ZST Bratislava 86.67 318 eP P 11 15 24.8 +0.3
ZST e pP 11 15 36.3 +0.5
ZST pmax pmax
comp=Z,14nm,0.8s,mb5.2
ZST MLR MLR
comp=Z,100nm,18.6s,MS4.2
ZST Bratislava 86.67 318 eP P 11 15 24.8 +0.3
ZST epP pP 11 15 36.3 +0.5
ZST Bratislava 86.67 318 eP P 11 15 24.8 +0.3
comp=Z,14nm,0.8s,mb5.2
ZST e pP 11 15 36.3 +0.5
ZST LR LR
comp=Z,100nm,18.6s,MS4.2
SOP Sopron 86.97 318⇓ eP P 11 15 26.5 +0.5
DPC Dobruska-Polom 87.42 320 eP P 11 15 28.6 +0.5
DPC esP sP 11 15 44.1 +0.6
DPC AMS AMS 12 03 00.0
comp=Z,200nm,14.2s
MAIT Maitri 87.47 199 eP pP 11 15 38.1 -1.2
KSP Ksiaz 87.49 321 eP P 11 15 30.1 +1.7
KSP e pP 11 15 40.5 +0.7
KSP Ksiaz 87.49 321 eP P 11 15 29.6 +1.2
KSP epP pP 11 15 39.6 -0.1
ADK Adak 87.54 38 eP P 11 15 27.9 -0.8
UPC Upice 87.64 321 eP P 11 15 29.7 +0.6
UPC epP pP 11 15 40.9 +0.5
BOJS Bojanci 87.65 316 i P P 11 15 29.9 +0.5
PERS Pernice 87.85 317 i P P 11 15 31.0 +0.8
SOKA Soboth 87.91 317⇑ iP P 11 15 30.8 +0.2
comp=Z,14nm,1.0s,mb5.2
QSPA South Pole Qui 87.93 180 P P 11 15 30.6 +0.6
comp=Z,2.7nm,1.0s,mb4.4,baz=296,slow=1.9,SNR=7.3
LJU Ljubljana 88.20 316 i P P 11 15 33.0 +1.0
JAVS Javornik 88.51 316 i P P 11 15 33.2 -0.2
PRU Pruhonice 88.53 320 eP P 11 15 33.5 +0.1
PVCC Panska Ves 88.55 320 eP P 11 15 34.1 +0.6
BRG Berggiesshubel 88.98 321 i P P 11 15 35.9 +0.4
BRG i pP 11 15 47.1 +0.3
BRG S S 11 26 24.0 +2.9
comp=Z,10.0nm,1.0s,mb5.1
BRG MLR MLR
comp=Z,170nm,19.9s,MS4.5
BRG Berggiesshubel 88.98 321 i P P 11 15 35.9 +0.4
comp=Z,17nm,1.0s,mb5.3
BRG i pP 11 15 47.1 +0.3
comp=Z,37nm,1.5s
BRG S S 11 26 24.0 +2.9
BRG
comp=N,132nm,18.5s
BRG
comp=E,220nm,19.3s
BRG
comp=Z,282nm,19.9s

BRG Berggiesshubel 88.98 321 i P P 11 15 35.9 +0.4
comp=Z,10nm,1.0s,mb5.1
BRG i pP 11 15 47.1 +0.3
BRG S S 11 26 24.0 +2.9
BRG LR LR
comp=Z,170nm,19.9s,MS4.5
GEC2 GERESS Array S 88.98 319 P P 11 15 36.0 +0.5
GEC2 GERESS Array S 88.98 319 eP P 11 15 35.0 -0.5
GERES GERESS Array B 88.98 319 P P 11 15 35.6 0.0
comp=Z,5.8nm,0.8s,mb5.0,baz=86,slow=4.1,SNR=33
KHC Kasperske Hory 89.08 319⇓ eP P 11 15 36.4 +0.4
KHC Kasperske Hory 89.08 319 eP P 11 15 36.0 0.0
KHC epP pP 11 15 47.4 +0.1
KHC AMS AMS 12 05 30.0
comp=Z,200nm,22.8s
RUE Ruedersdorf 89.20 322 eP P 11 15 36.9 +0.4
comp=Z,64nm,1.0s,mb5.9
RUE epP pP 11 15 47.2 -0.6
CLL Collm 89.60 321 i P P 11 15 39.0 +0.6
CLL e pP 11 15 49.0 -0.7
CLL pmax pmax
comp=Z,18nm,1.1s,mb5.3
CLL Collm 89.60 321 i P P 11 15 39.0 +0.6
comp=Z,18nm,1.1s,mb5.3
CLL epP pP 11 15 49.0 -0.7
CLL eS S 11 26 26.0 -0.9
CLL LmV 12 05 00.0
comp=Z,200nm,20.0s
CLL Collm 89.60 321 i P P 11 15 39.0 +0.6
comp=Z,18nm,1.1s,mb5.3
CLL e pP 11 15 49.0 -0.7
NKC Novy Kostel 89.89 320 eP P 11 15 40.6 +0.8
WTTA Wattenberg 90.27 317⇑ iP P 11 15 41.2 -0.4
comp=Z,24nm,1.0s,mb5.5
MOX Moxa 90.44 320 eP P 11 15 42.4 +0.1
comp=Z,25nm,1.6s,mb5.3
MOX Moxa 90.44 320 eP P 11 15 42.4 +0.1
MOX pmax pmax
comp=Z,25nm,1.6s,mb5.3
MOTA Moosalm 90.64 317⇓ iP P 11 15 43.3 0.0
comp=Z,21nm,0.9s,mb5.5,SNR=9.9
GRA1 Grafenberg Arr 90.65 320 eP P 11 15 44.1 +0.8
comp=Z,21nm,1.1s,mb5.4
GRF Grafenberg Arr 90.65 320 eP P 11 15 44.1 +0.8
GRF pmax pmax
comp=Z,21nm,1.1s,mb5.4
GRF Grafenberg Arr 90.65 320 eP P 11 15 44.1 +0.8
GRF pmax pmax
comp=Z,21nm,1.1s,mb5.4
GRF Grafenberg Arr 90.65 320 eP P 11 15 44.1 +0.8
comp=Z,21nm,1.1s,mb5.4
FETA Feichten 90.88 317⇑ iP P 11 15 44.5 +0.1
comp=Z,14nm,1.0s,mb5.2,SNR=10
NB2 NORSAR Subarra 91.11 331 P P 11 15 44.8 -0.4
comp=Z,4.6nm,0.8s,mb4.9,baz=93,slow=4.8
NOA NORSAR Array B 91.11 331 P P 11 15 44.9 -0.3
comp=Z,3.1nm,0.8s,mb4.7,baz=93,slow=4.7,SNR=8.0
NOA LR LR 12 01 35.2
comp=Z,251nm,18.8s,MS4.7,baz=50,slow=39
NOA NORSAR Array B 91.11 331 P P 11 15 44.9 -0.3
NOA LR LR 12 01 35.2
DAVA Damuels 91.47 317⇑ iP P 11 15 47.3 +0.2
comp=Z,36nm,0.9s,mb5.7
KEST Kesra 91.59 306 P P 11 15 49.4 +1.4
comp=Z,8.2nm,0.9s,mb5.1,baz=304,slow=2.1,SNR=21
KEST LR LR 11 58 25.0
comp=Z,132nm,18.6s,MS4.4,baz=323,slow=36
TUE Stuetta 91.81 316 eP P 11 15 48.4 -0.4
comp=Z,6.2nm,0.9s,mb4.9
KONO Kongsberg 91.87 329⇓ eP P 11 15 49.9 +1.1
KONO Kongsberg 91.87 329⇓ eP P 11 15 49.0 +0.2
PGF Pioggiola 92.00 312 eP P 11 15 49.6 -0.1
comp=Z,30nm,1.2s,mb5.2
PGF Pioggiola 92.00 312 eP P 11 15 49.6 -0.1
PGF pmax pmax
comp=Z,15nm,1.2s,mb5.2
PGF Pioggiola 92.00 312 eP P 11 15 49.6 -0.1
comp=Z,15nm,1.2s,mb5.2
SBF Sospel 93.15 314 eP P 11 15 54.0 -1.0
comp=Z,18nm,0.9s,mb5.2
SBF Sospel 93.15 314 eP P 11 15 54.0 -1.0
SBF pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
SBF Sospel 93.15 314 eP P 11 15 54.0 -1.0
comp=Z,8.9nm,0.9s,mb5.2
CDF Champ du Feu 93.23 318 eP P 11 15 54.8 -0.5
comp=Z,18nm,1.3s,mb5.1
CDF Champ du Feu 93.23 318 eP P 11 15 54.8 -0.5
CDF pmax pmax
comp=Z,9.0nm,1.3s,mb5.0
CDF Champ du Feu 93.23 318 eP P 11 15 54.8 -0.5
comp=Z,9.2nm,1.3s,mb5.0
ECH Echery 93.31 318 eP P 11 15 55.5 -0.2
HINF Hinhalfeld 93.52 318 eP P 11 15 55.6 -1.0
MBDF Montbardon 93.62 315 eP P 11 15 56.3 -0.9
comp=Z,3.9nm,0.8s,mb4.6
MBDF Montbardon 93.62 315 eP P 11 15 56.3 -0.9
MBDF pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
MBDF Montbardon 93.62 315 eP P 11 15 56.3 -0.9
comp=Z,2.0nm,0.8s,mb4.6
LPG La Plagne 93.62 315 eP P 11 15 57.2 0.0
comp=Z,12nm,0.9s,mb5.0
LPG La Plagne 93.62 315 eP P 11 15 57.2 0.0
LPG pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
LPG La Plagne 93.62 315 eP P 11 15 57.2 0.0
comp=Z,6.2nm,0.9s,mb5.0
LPL La Plagne 93.63 315 eP P 11 15 57.2 0.0
comp=Z,12nm,0.8s,mb5.1
LPL La Plagne 93.63 315 eP P 11 15 57.2 0.0
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
LPL La Plagne 93.63 315 eP P 11 15 57.2 0.0
comp=Z,6.1nm,0.8s,mb5.1
FRF La Foret Royal 93.72 313 eP P 11 15 57.4 -0.3
comp=Z,13nm,0.9s,mb5.1
FRF La Foret Royal 93.72 313 eP P 11 15 57.4 -0.3
FRF pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
FRF La Foret Royal 93.72 313 eP P 11 15 57.4 -0.3
comp=Z,6.4nm,0.9s,mb5.0
LMR La Mourre 93.83 313 eP P 11 15 56.7 -1.5
HAU Haudompre 93.85 318 eP P 11 15 57.6 -0.6
comp=Z,22nm,1.1s,mb5.2
HAU eMLR MLR
comp=Z,187nm,22.2s,MS4.2
HAU Haudompre 93.85 318 eP P 11 15 57.6 -0.6
HAU pmax pmax
comp=Z,11nm,1.1s,mb5.2
HAU MLR MLR
comp=Z,190nm,22.3s,MS4.5
HAU Haudompre 93.85 318 eP P 11 15 57.6 -0.6
comp=Z,11nm,1.1s,mb5.2
HAU LR LR
comp=Z,190nm,22.3s,MS4.5
CABF La Chapelle 94.06 316 eP P 11 15 59.1 -0.1
comp=Z,11nm,1.0s,mb5.0
CABF La Chapelle 94.06 316 eP P 11 15 59.1 -0.1
CABF pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
CABF La Chapelle 94.06 316 eP P 11 15 59.1 -0.1
comp=Z,5.5nm,1.0s,mb4.9
ORIF Oris-en-Rattie 94.25 315 eP P 11 15 59.5 -0.6
comp=Z,13nm,0.9s,mb5.1
ORIF eMLR MLR
comp=Z,302nm,21.5s,MS4.4
ORIF Oris-en-Rattie 94.25 315 eP P 11 15 59.5 -0.6
ORIF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
ORIF Oris-en-Rattie 94.25 315 eP P 11 15 59.5 -0.6
comp=Z,6.6nm,0.9s,mb5.1
MEZF Maizieres J'vi 94.70 318 eP P 11 16 01.8 -0.3
VIVF Saint-Julien-l 95.11 315 eP P 11 16 02.9 -1.1
comp=Z,5.9nm,0.8s,mb4.8
VIVF Saint-Julien-l 95.11 315 eP P 11 16 02.9 -1.1
VIVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
VIVF Saint-Julien-l 95.11 315 eP P 11 16 02.9 -1.1
comp=Z,3.0nm,0.8s,mb4.8
BAIF Baives 95.19 320 eP P 11 16 04.1 -0.1
comp=Z,17nm,1.0s,mb5.1
BAIF Baives 95.19 320 eP P 11 16 04.1 -0.1
BAIF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
BAIF Baives 95.19 320 eP P 11 16 04.1 -0.1

comp=Z,8.6nm,1.0s,mb5.1
LOR Lormes 95.56 317 eP P 11 16 05.5 -0.5
comp=Z,17nm,1.1s,mb5.1
LOR eMLR MLR
comp=Z,144nm,21.2s,MS4.1
LOR Lormes 95.56 317 eP P 11 16 05.5 -0.5
LOR pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
LOR Lormes 95.56 317 eP P 11 16 05.5 -0.5
comp=Z,8.4nm,1.1s,mb5.1
SMF Signal de Mont 95.61 316 eP P 11 16 05.7 -0.6
comp=Z,14nm,0.9s,mb5.1
SMF Signal de Mont 95.61 316 eP P 11 16 05.7 -0.6
SMF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
SMF Signal de Mont 95.61 316 eP P 11 16 05.7 -0.6
comp=Z,7.1nm,0.9s,mb5.1
AVF Avril sur Loir 95.94 317 eP P 11 16 07.2 -0.5
BGF Bois d'Agland 96.30 316 eP P 11 16 09.1 -0.3
TTA Tatalina 98.22 27 eP P 11 16 18.0 +0.3
TTA e*PP pP 11 16 28.5 -0.6
TTA e*SP sP 11 16 32.8 -0.3
TORD Torodi Ar. Bea 98.41 283 P P 11 16 19.6 0.0
comp=Z,0.9nm,0.9s,mb4.3,baz=74,slow=5.3,SNR=5.2
TORD LR LR 11 59 00.1
comp=Z,254nm,19.5s,MS4.7,baz=100,slow=34
MCK McKinley 101.10 25 eP Pdif 11 16 30.5 -0.2
MCK pmax pmax
comp=Z,10.0nm,1.1s
MCK McKinley 101.10 25 ePdif Pdif 11 16 30.5 -0.2
comp=Z,9.5nm,1.1s
TBI Tubuai 108.09 115 eLR LR 11 52 56.0
comp=Z,344nm,22.2s
PPT Papeete 108.92 109 eLR LR 11 53 14.7
comp=Z,269nm,21.8s
RKT Rikitea 121.08 119 eLR LR 11 58 50.8
comp=Z,291nm,29.0s
EDM Edmonton 122.07 23 ePKIKP PKPdf 11 21 34.5 -0.7
RSW Rattlesnake Hi 124.03 32 ePKPdf PKPdf 11 21 39.2 0.0
HAWA Hanford 124.06 32 ePKPdf PKPdf 11 21 39.4 +0.1
HAWA epPKPdf pPKPdf 11 21 49.3 -1.6
HAWA esPKPdf 11 21 54.1
SCHQ Schefferville 126.26 350 PKP PKPdf 11 21 43.1 -0.1
comp=Z,6.2nm,0.8s,baz=64,slow=3.9,SNR=5.3
MOD Modoc 126.42 37 ePKPdf PKPdf 11 21 44.1 +0.2
MOD epPKPdf pPKPdf 11 21 54.5 -1.1
MOD esPKPdf 11 21 59.2
MSO Missoula 126.58 28 ePKPdf PKPdf 11 21 43.9 -0.1
MSO esPKPdf 11 21 58.8
CHMT Chamberlain Mo 126.84 28 ePKPdf PKPdf 11 21 44.0 -0.6
CHMT epPKPdf pPKPdf 11 21 54.6 -1.7
CHMT esPKPdf 11 21 59.7
CHMT ePP PP 11 23 43.0 +1.6
WVOR Wild Horse Val 127.07 35 ePKIKP PKPdf 11 21 46.0 +0.8
WVOR e 11 23 48.2
DLMT Dillon 128.28 29 ePKPdf PKPdf 11 21 47.9 +0.5
DLMT esPKPdf 11 22 03.2
DLMT ePP PP 11 23 50.2 -0.8
BOZ Bozeman (W) 128.53 28 ePKIKP PKPdf 11 21 48.4 +0.5
BOZ e 11 23 49.7
MCMT McKenzie Canyo 128.55 29 ePKPdf PKPdf 11 21 48.6 +0.7
MCMT epPKPdf pPKPdf 11 21 58.6 -1.0
MCMT esPKPdf 11 22 03.9
MCMT ePP PP 11 23 58.4 +5.6
HLID Hailey 128.65 32 ePKPdf PKPdf 11 21 49.1 +1.0
HLID esPKPdf 11 22 04.2
QLMT Earthquake Lak 129.24 28 ePKPdf PKPdf 11 21 51.0 +1.8
QLMT epPKPdf pPKPdf 11 22 00.7 -0.1
QLMT esPKPdf 11 22 05.5
GCMT Greycliff 129.32 26 ePKPdf PKPdf 11 21 50.4 +1.1
GCMT esPKPdf 11 22 05.0
NVAR Mina Array Bea 129.72 39 PKP PKPdf 11 21 51.1 +0.8
comp=Z,3.3nm,0.9s,baz=270,slow=2.1,SNR=13
NVAR PP PP 11 24 02.2 +1.4
comp=Z,1.1nm,1.0s,baz=276,slow=8.1,SNR=4.1
NVAR Mina Array Bea 129.72 39 PKP PKPdf 11 21 51.1 +0.8
NVAR PP PP 11 24 02.2 +1.4
LAO LASA Array 130.06 23 ePKPdf PKPdf 11 21 52.6 +1.9
LAO epPKPdf pPKPdf 11 22 02.1 -0.2
LAO esPKPdf 11 22 07.2
ULM Lac du Bonnet 130.14 13 PKP PKPdf 11 21 50.9 +0.1
comp=Z,7.4nm,0.9s,baz=342,slow=3.4,SNR=5.6
SNOW Snow King Moun 130.58 29 ePKPdf PKPdf 11 21 52.6 +0.8
SNOW esPKPdf 11 22 07.3
SNOW ePP PP 11 24 08.9 +3.0
REDW Red Top Meadow 130.60 29 ePKPdf PKPdf 11 21 52.4 +0.5
REDW esPKPdf 11 22 08.3
REDW ePP PP 11 24 05.1 -1.1
HWUT Hardware Ranch 131.52 31 ePKPdf PKPdf 11 21 53.6 -0.1
HWUT epPKPdf pPKPdf 11 22 04.4 -0.9
HWUT esPKPdf 11 22 09.9
HWUT ePP PP 11 24 09.8 -2.4
HWUT eSKPbc SKPbc 11 25 17.3 +0.9
PDAR Pinedale Array 131.68 29 PKP PKPdf 11 21 53.5 -0.4
comp=Z,1.5nm,0.8s,baz=121,slow=1.1,SNR=11
PDAR PP PP 11 24 11.4 -1.7
comp=Z,1.0nm,0.9s,baz=336,slow=3.3,SNR=3.6
PDAR SKP 11 25 29.1
comp=Z,1.0nm,0.7s,baz=338,slow=1.0,SNR=3.0
DUG Dugway 131.84 34 ePKIKP PKPdf 11 21 55.7 +1.4
DUG e 11 22 11.0
DUG Dugway 131.84 34 ePKPdf PKPdf 11 21 55.7 +1.4
DUG eSKPdf 11 22 11.0
DUG eSKPbc SKPbc 11 25 18.5 +0.9
NLU North Lily Min 132.42 33 ePKPdf PKPdf 11 21 56.0 +0.6
GSC Goldstone 132.53 42⇑ ePKIKP PKPdf 11 21 56.8 +1.0
GSC e 11 22 10.7
GSC Goldstone 132.53 42 ePKPcr PKPdf 11 21 56.8 +1.0
GSC esPKPdf 11 22 10.7
RSSD Black Hills 133.04 24 ePKIKP PKPdf 11 21 56.3 -0.2
RSSD e 11 24 22.0
RSSD Black Hills 133.04 24 ePKPdf PKPdf 11 21 56.2 -0.2
RSSD ePP PP 11 24 22.0 +0.3
RSSD eSKPbc SKPbc 11 25 21.5 -0.2
TMUT Trail Mountain 133.35 33 ePKPdf PKPdf 11 21 59.2 +2.1
MSU Marysvale 133.36 35 ePKIKP PKPdf 11 21 59.0 +1.8
RWWY Rawlins 133.62 28 ePKPdf PKPdf 11 21 57.9 +0.3
RWWY esPKPdf 11 22 13.8
RWWY ePP PP 11 24 26.7 +1.2
SRU San Rafael 133.86 33 ePKIKP PKPdf 11 21 58.5 +0.3
ECSD EROS,Sioux Fal 135.97 17 ePKPdf PKPdf 11 21 58.7 -3.3
ECSD ePP PP 11 24 39.3 -0.8
ANMO Albuquerque 139.11 34 ePKHKP 11 22 01.2
LAZ Ladron 139.13 35 ePKPdf PKPdf 11 22 09.3 +1.3
BNM Barren Site 139.60 35 ePKPdf PKPdf 11 22 03.4 -5.5
AAM Ann Arbor 139.79 4 PKIKP PKPdf 11 22 10.9 +1.9
WMOK Wichita Mounta 143.12 26 ePKIKP PKPdf 11 22 11.0 -4.2
WCI Wyandotte Cave 143.54 8 ePKIKP PKPdf 11 22 11.6 -4.3
BDFB Brasilia 143.70 240 PKP PKPdf 11 22 16.2 -0.5
comp=Z,3.4nm,0.8s,baz=99,slow=5.5,SNR=3.7
CPUP Villa Florida 144.21 217 PKP PKPdf 11 22 16.1 -1.2
comp=Z,10nm,0.9s,baz=112,slow=2.5,SNR=19
CPUP Villa Florida 144.21 217 ePKPdf PKPdf 11 22 15.9 -1.5
URVA University of 144.56 356 ePKPdf PKPdf 11 22 15.8 -1.9
TXAR Lajitas Array 144.82 37 PKP PKPdf 11 22 17.5 -0.9
comp=Z,60nm,0.8s,baz=276,slow=1.2,SNR=455
GLAT Glass 144.90 13 ePKPdf PKPdf 11 22 17.1 -1.2
GLAT esPKPdf 11 22 32.6
UTMT University of 144.92 12 ePKPdf PKPdf 11 22 16.9 -1.4
BLA Blacksburg 145.00 0 ePKIKP PKPdf 11 22 16.7 -1.7
BLA e 11 22 31.4
GNAR Gosnell 145.02 14 ePKPbc PKPbc 11 22 17.6 -0.2
GNAR esPKPdf 11 22 32.5
HALT Halls 145.23 13 ePKPbc PKPbc 11 22 17.9 -0.7
WVT Waverly 145.34 11 ePKIKP PKPdf 11 22 18.0 -1.1
WVT e 11 22 28.0
WVT e 11 22 32.9
UALR University of 145.50 18 ePKPbc PKPbc 11 22 18.4 -1.0
UALR esPKPdf 11 22 33.4
TZTN Tazewell 145.52 5 ePKPbc PKPbc 11 22 18.5 -0.9
TZTN esPKPdf 11 22 33.1
JCT Junction City 146.13 31 ePKPbc PKPbc 11 22 20.9 -0.6
JCT esPKPdf 11 22 36.1
TKL Tuckaleechee C 146.38 5 ePKPbc PKPbc 11 22 21.1 -0.9
TKL epPKPdf pPKPdf 11 22 31.5 -1.1
TKL esPKPdf 11 22 36.4
BBSR BB Station 146.51 336 ePKPdf PKPdf 11 22 20.1 -1.1
SWET Sewanee 146.55 9 ePKPbc PKPbc 11 22 21.2 -1.4
OXF Oxford 146.55 14 ePKP2 PKPab 11 22 21.6 -2.0
CNNC Cliffs of the 146.90 357 ePKPbc PKPbc 11 22 23.4 -0.2
NATX Nacogdoches 147.42 23 ePKPbc PKPbc 11 22 25.0 -0.2
JSC Jenkinsville 147.90 2 ePKP2 PKPbc 11 22 25.8 -0.6

VBMS	**Vicksburg**	**148.43**	**17**	*e*PKPbc	PKPbc	11 22 27.9	0.0
HKT	**Hockley**	**148.49**	**27**	*e*PKIKP	PKPdf	11 22 24.9	+0.4
LRAL	**Lakeview Retre**	**148.50**	**11**	*e*PKPbc	PKPbc	11 22 26.6	-1.4
GOGA	**Godfrey**	**148.63**	**5**	*e*PKP2	PKPbc	11 22 27.6	-0.8
KVTX	**Kingsville**	**149.47**	**32**	*e*PKPbc	PKPbc	11 22 31.9	+1.3
BRAL	**Brewton**	**150.45**	**12**	*e*PKPbc	PKPbc	11 22 33.0	+0.1
SIV	**San Ignacio**	**154.00**	**226**	PKP	PKPdf	11 22 33.7	+0.4
	comp=Z,0.5nm,0.7s,baz=166,slow=12,SNR=4.6						
LPAZ	**La Paz**	**158.27**	**213**	PKP	PKPdf	11 22 40.1	+1.2
	comp=Z,0.7nm,0.8s,baz=46,slow=10,SNR=4.3						

MAN 22 11:06:40,1924N×12105E,h15km,mb4.1,ML2.9,MS2.6, 3D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**1.00**	**204**	⇓*e*P	Pb	11 06 58.8	-0.2
PIP				*e*S	Sb	11 07 11.4	-0.6
SGCP	**Mt. Cagua**	**1.38**	**136**	*e*P	Pn	11 07 04.0	-0.6
APYP	**Conner**	**1.39**	**172**	*e*P	Pn	11 07 04.5	-0.4
APYP				*e*S	Sn	11 07 21.8	-1.1
SIPP	**Brgy, Tapao**	**1.43**	**203**	⇓*e*P	Pn	11 07 06.1	+0.7
SIPP				*e*S	Sn	11 07 25.6	+1.7
ABRA	**Dolores**	**1.62**	**191**	*e*P	Pn	11 07 07.2	-0.8
ABRA				*e*S	Sn	11 07 32.7	+4.1
CVP	**Callao Caves**	**1.70**	**154**	⇓*e*P	Pn	11 07 08.3	-0.8
CVP				*e*S	Sn	11 07 28.0	-2.6
CAUP	**Cauayan**	**2.40**	**162**	*e*P	Pn	11 07 21.4	+2.6
CAUP				*e*S	Sn	11 07 50.6	+2.6
PALP	**Palanan**	**2.53**	**149**	*e*P	Pn	11 07 21.5	+0.9
PALP				*e*S	Sn	11 07 54.0	+2.8
BALP	**Baler**	**3.52**	**172**	*e*P	Pn	11 07 35.5	+1.3

ISC 22 11:09:44.7±1.9,3633N±007×713E±04,h160km±26km,n18, σ0°60/21,2C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.55**	**168**	⇓P	**Pn**	**11 10 27.2**	**+0.3**
CEP				S	**Sn**	**11 10 59.0**	**-0.5**
SARP	**Sargodha**	**4.54**	**165**	P	**Pn**	**11 10 53.4**	**+1.1**
SARP				S	**Sn**	**11 11 27.0**	**-18**
AML	**Almayashu** SNR=10	**6.09**	**17**	P	**Pn**	**11 11 12.3**	**-0.2**
UCH	**Uchtor** SNR=10	**6.40**	**22**	P	**Pn**	**11 11 17.0**	**+0.3**
EKS2	**Erkin-Say** SNR=23	**6.61**	**16**	P	**Pn**	**11 11 20.1**	**+0.7**
AAK	**Ala-Archa** SNR=12	**6.77**	**20**	P	**Pn**	**11 11 21.9**	**+0.4**
KK31	**Karatay Array** 6.6nm,0.2s,baz=178,slow=13,SNR=288	**6.79**	**355**	⇑P	**Pn**	**11 11 20.7**	**-1.3**
KK31	7.1nm,0.4s,baz=186,slow=25,SNR=8.7			⇑S	**Sn**	**11 12 31.8**	**-6.5**
CHMS	**Chumysh** SNR=7.2	**7.18**	**21**	P	**Pn**	**11 11 27.0**	**0.0**
USP	**Ospenovka** SNR=9.1	**7.36**	**19**	P	**Pn**	**11 11 29.4**	**+0.1**
DANN	**Dangsing** 16nm,0.3s	**13.20**	**124**	*e*P	**Pn**	**11 12 45.3**	**-0.8**
KOLN	**Koldanda** 8.1nm,0.3s	**13.47**	**126**	*e*P	**Pn**	**11 12 49.2**	**-0.4**
GKN	**Gorkha** 33nm,0.4s	**14.01**	**123**	*e*P	**Pn**	**11 12 55.9**	**-0.5**
DMN	**Daman** 9.6nm,0.3s	**14.58**	**123**	*e*P	**Pn**	**11 13 03.6**	**+0.1**
KKN	**Kakani**	**14.59**	**122**	*e*P	**Pn**	**11 13 02.9**	**-0.7**
GUN	**Gumba** 7.4nm,0.3s	**14.93**	**120**	*e*P	**Pn**	**11 13 07.4**	**-0.4**
JIRN	**Jiri** 17nm,0.2s	**15.30**	**120**	*e*P	**Pn**	**11 13 12.8**	**+0.4**
TAPN	**Taplejung** 29nm,0.6s	**16.56**	**118**	*e*P	**Pn**	**11 13 28.0**	**+0.3**
ODAN	**Odare** 23nm,0.7s	**16.63**	**120**	*e*P	**Pn**	**11 13 29.7**	**+1.1**

CSEM ***22*** *11:20:26.9, 30.11N×36.18E, h6km, ML2.7, After SNSN*
SGS ***22*** *11:20:26.9, 30.11N×36.18E, h7km*
ISCJB ***22*** *11:20:27.2±1.0, 2983N±004×3621E±007, h0km, Error ellipse: s-maj=9.1km s-min=5.7km az=164.2*
GII ***22*** *11:20:27.5±0.0, 2982N×3622E, h0km, ML1.8/4, EXPLOSION*

ISC 22 11:20:27.4±1.0,2983N±004×3624E±007,h0km,n15, σ0°68/17,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HRFI	**Mount Harif**	**1.06**	**281**	Pg	**Pg**	**11 20 47.5**	**-0.4**
EIL	**Elat**	**1.13**	**262**	Pg	**Pg**	**11 20 49.0**	**-0.1**
MBRI	**Mt Berech**	**1.15**	**269**	Pg	**Pg**	**11 20 49.3**	**-0.3**
MBRI				Sg	**Sg**	**11 21 05.4**	**+0.9**
HQLS		**1.15**	**243**	P	**Pg**	**11 20 49.1**	**-0.4**
ZFRI	**Zfri**	**1.17**	**308**	Pg	**Pg**	**11 20 49.0**	**-0.8**
ZFRI				Sg	**Sg**	**11 21 06.2**	**+1.2**
PRNI	**Paran**	**1.19**	**296**	Pg	**Pg**	**11 20 49.6**	**-0.7**
JLOS		**1.27**	**211**	P	**Pg**	**11 20 52.3**	**+0.5**
KRMI	**Paran Flat**	**1.35**	**283**	Pn	**Pn**	**11 20 52.5**	**-1.0**
MZDA	**Masada**	**1.66**	**333**	Pn	**Pn**	**11 20 58.0**	**+0.3**
BDAS	**Al Bad'**	**1.71**	**216**	S	**Sn**	**11 21 21.6**	**+0.5**
BDAS	**Al Bad'**	**1.71**	**216**	P	**Pn**	**11 20 58.3**	**-0.3**
DSI	**Dead Sea**	**1.89**	**337**	Pn	**Pn**	**11 21 02.0**	**+1.1**
KZIT	**Kziot**	**1.92**	**304**	Pn	**Pn**	**11 21 00.9**	**-0.5**
RSHS		**1.98**	**220**	P	**Pn**	**11 21 01.5**	**-0.7**
BIDS	**Bi'r al Bayda'**	**3.02**	**168**	P	**Pn**	**11 21 17.3**	**+0.8**

IDC ***22*** *11:44:35.0±0.4, 570N×7749W, h0km, mb4.8/20, mb1 5.0/25, mb1mx4.9/27, mbtmp4.8/25, ML4.4/5, MS4.3/12, Ms1 4.3/12, ms1mx4.0/27, Error ellipse: s-maj=17.1km s-min=10.1km az=60.0*
ISCJB ***22*** *11:44:37.5±0.2, 580N±003×7746W±002, h22km, mb5.0/178, MS4.4/14, Error ellipse: s-maj=4.3km s-min=3.1km az=22.6*
GCMT ***22*** *11:44:39.3±0.4, 606N×7753W, h20km±1km, MW5.0/54, Moment Tensor Solution. s25,c32; s54,c74; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.55±.22; Mθθ-0.01±.12; Mφφ-2.54±.16; Mrθ-0.44±.24; Mrφ-0.36±.08; Mθφ-3.00±.36; Best double couple: M₀3.97500×10¹⁶ NP1:ϕs8.00000°, δ20.00000°, λ90.00000°. NP2: ϕs188.00000°, δ70.00000°, λ90.00000°. Principal axes: T 3.9540, Plg65.0000°, Azm99.0000°; N 0.0450, Plg0.0000°, Azm8.0000°; P -3.9950, Plg25.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***22*** *11:44:39.3±0.2, 576N×7744W, mb5.0/125, MS4.3/1 Error ellipse: s-maj=4.1km s-min=2.7km az=23.0*
BJI ***22*** *11:44:39.3, 580N×7740W, h24km, mB5.4, Ms5.1, Msz4.8*
MOS ***22*** *11:44:40.3±0.8, 601N×7741W, h33km, mb5.3/69, Error ellipse: s-maj=6.2km s-min=4.6km az=63.4*
SZGRF ***22*** *11:44:48.5, 661N×7602W, h33km, mb5.2, Northern Colombia*

ISC 22 11:44:39.4±0.2,579N±003×7745W±002,h23km, h23km±.8km:pP-P,n503,σ0°85/479,mb5.0/178,MS4.4/14, 125C-9D,Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal** 86nm,0.3s,baz=84,slow=5.3,SNR=88	**3.24**	**106**	Pn	**Pn**	**11 45 32.2**	**+3.4**
ROSC	**El Rosal**	**3.24**	**106**	*e*Pn	**Pn**	**11 45 32.3**	**+3.5**
BCIP	**Isla Barro Col**	**4.11**	**325**	*e*Pn	**Pn**	**11 45 35.5**	**-5.3**
ACLA	**Agua Clara, Si**	**4.20**	**328**	*e*P	**Pn**	**11 45 37.2**	**-4.9**
PINA	**Piqa, Costa Ab**	**4.31**	**323**	*e*P	**Pn**	**11 45 38.8**	**-4.8**
OTAV	**Otavalo**	**5.60**	**190**	*e*Pn	**Pn**	**11 46 00.5**	**-0.8**
OTAV				*e*Sn	**Sn**	**11 47 06.1**	**+1.0**
TBS2		**5.97**	**300**	*e*P	**Pn**	**11 46 03.7**	**-2.7**
BRU2	**Volcan**	**6.00**	**300**	*e*P	**Pn**	**11 46 03.2**	**-3.6**
CTCR	**Cotoan**	**6.11**	**301**	*e*P	**Pn**	**11 46 05.3**	**-3.0**
CNI	**Changuinola**	**6.19**	**306**	*e*P	**Pn**	**11 46 04.7**	**-4.7**
ACR	**Cerro Adams**	**6.35**	**297**	*e*P	**Pn**	**11 46 08.2**	**-3.4**
ACR				*e*S	**Sn**	**11 47 19.9**	**-3.6**
BUS	**Buena Vista**	**7.29**	**301**	*e*P	**Pn**	**11 46 22.6**	**-1.9**
SDV	**Santo Domingo** 65nm,0.3s,baz=244,slow=6.8,SNR=312	**7.43**	**65**	Pn	**Pn**	**11 46 27.5**	**+1.1**
SDV	2.2nm,0.3s,baz=350,slow=17,SNR=1.3			Sn	**Sn**	**11 47 49.5**	**-0.5**
SDV	comp=Z,7μm,19.0s,baz=253,slow=40			LR	LR	11 49 32.6	
SDV	**Santo Domingo**	**7.43**	**65**	*e*Pn	**Pn**	**11 46 27.5**	**+1.1**
SDV				*e*Sn	**Sn**	**11 47 46.6**	**-3.5**
LCR2	**La Lucha 2**	**7.59**	**302**	⇑*e*P	**Pn**	**11 46 27.1**	**-1.6**
PRS1	**Puriscal**	**7.98**	**302**	⇓*e*P	**Pn**	**11 46 32.0**	**-1.9**
JCR	**Jicaral**	**8.60**	**298**	*e*P	**Pn**	**11 46 40.0**	**-2.5**
JTS	**JuntasAbangare** 2.3nm,0.3s,baz=108,slow=23,SNR=7.5	**8.68**	**302**	Pn	**Pn**	**11 46 42.0**	**-1.6**
JTS				LR	LR	11 50 01.2	
JTS	comp=Z,3μm,21.0s,baz=108,slow=38 **JuntasAbangare**	**8.68**	**302**	*e*Pn	**Pn**	**11 46 41.9**	**-1.7**
TGUH	**Tegucigalpa,Un** 44nm,1.1s	**12.69**	**311**	*e*Pn	**Pn**	**11 47 36.8**	**-1.8**
ATAH	**Atahualpa** 1.8nm,0.3s,baz=22,slow=7.1,SNR=16	**12.74**	**184**	Pn	**Pn**	**11 47 44.2**	**+5.0**
PCRV	**Puerto La Cruz** 4.6nm,0.3s,baz=202,slow=3.3,SNR=12	**13.41**	**70**	Pn	**Pn**	**11 47 49.4**	**+0.9**
PCRV				Sn	**Sn**	**11 50 17.9**	**+1.0**
MPR	1.0nm,0.3s,baz=98,slow=21,SNR=2.9 **Mayaguez**	**15.93**	**38**	*e*Pn	**Pn**	**11 48 20.9**	**-1.3**
AGPR	**Aguadilla, PR**	**16.14**	**38**	*e*Pn	**Pn**	**11 48 26.1**	**+1.2**
AOPR	**Arecibo Observ** 105nm,0.7s	**16.27**	**39**	*e*Pn	**Pn**	**11 48 25.7**	**-0.8**
TCE	**Chacachacare**	**16.28**	**72**	*e*	**Pn**	**11 48 27.8**	**+1.1**
TPP	**Pointe-a-Pierr**	**16.46**	**73**	*e*	**Pn**	**11 48 28.1**	**-1.0**
SJG	**San Juan**	**16.48**	**41**	*e*P	**Pn**	**11 48 26.4**	**-2.9**
CPD	**Cerro la Pandu**	**16.59**	**42**	*e*P	**Pn**	**11 48 29.3**	**-1.3**
CPD	comp=Z,88nm,0.8s			pmax	pmax		
CPD	**Cerro la Pandu** comp=Z,88nm,0.8s	**16.59**	**42**	*e*Pn	**Pn**	**11 48 29.3**	**-1.3**
TRN	**Trinidad (W)**	**16.59**	**72**	*e*	**Pn**	**11 48 29.7**	**-1.0**
HUMP	**Col San Antoni** comp=Z,86nm,0.8s	**16.70**	**42**	*e*Pn	**Pn**	**11 48 28.7**	**-3.3**
CBYP	**Canovanas** comp=Z,99nm,0.7s	**16.79**	**41**	*e*Pn	**Pn**	**11 48 32.4**	**-0.8**
GRGR	**Grenville** comp=Z,186nm,0.9s	**16.82**	**67**	*e*Pn	**Pn**	**11 48 32.1**	**-1.5**
MTP	**Monte Pirata**	**16.87**	**42**	*e*Pn	**Pn**	**11 48 29.5**	**-4.7**
TBH	**Brigand Hill**	**16.87**	**73**	*e*	**Pn**	**11 48 33.4**	**-0.8**
PTP	**Ponta Puerca**	**16.93**	**42**	*e*P	Px	11 46 02.5	
TPR	**Prospect**	**17.33**	**71**	*e*	**Pn**	**11 48 40.1**	**+0.1**
NNA	**Nana** comp=Z,0.3nm,0.3s,baz=12,slow=16,SNR=2.7	**17.67**	**178**	P	**Pn**	**11 48 43.2**	**-0.9**
TEIG	**Tepich** comp=Z,0.6nm,0.3s,baz=136,slow=11,SNR=4.9	**17.80**	**325**	P	**Pn**	**11 48 46.6**	**+0.9**
TEIG				LR	LR	11 55 51.5	
TEIG	comp=Z,833nm,18.6s,baz=159,slow=38 **Tepich**	**17.80**	**325**	*e*P	**Pn**	**11 48 47.1**	**+1.4**
FDF	**Fort de France**	**18.32**	**60**	*e*P	**Pn**	**11 48 51.1**	**-1.1**
ANWB	**Willy Bob**	**19.33**	**51**	*e*P	**Pn**	**11 49 01.9**	**-2.5**
CMIG	**Matias Romero** comp=Z,6.3nm,0.8s,baz=84,slow=6.6,SNR=7.9	**20.43**	**305**	P	**P**	**11 49 13.0**	**-2.2**
CMIG				LR	LR	11 57 19.7	
CMIG	comp=Z,365nm,21.9s,MS3.7,baz=109,slow=37 **Matias Romero**	**20.43**	**305**	P	**P**	**11 49 13.0**	**-2.2**
CMIG				LR	LR	11 57 19.7	
ARE	**Arequipa**	**22.88**	**165**	*e*P	**P**	**11 49 45.0**	**+3.6**
LPAZ	**La Paz** comp=Z,20nm,0.6s,mb4.7,baz=327,slow=12,SNR=79	**23.79**	**157**	P	**P**	**11 49 49.0**	**-1.6**
LPAZ				S	**S**	**11 54 04.7**	**-0.3**
LPAZ	comp=Z,1.9nm,0.8s,baz=108,slow=24,SNR=1.3 **La Paz**	**23.79**	**157**	*e*P	**P**	**11 49 49.3**	**-1.3**
LPAZ	comp=Z,20nm,0.6s			pmax	pmax		
LPAZ	**La Paz** comp=Z,20nm,0.6s,mb4.7	**23.79**	**157**	*e*P	**P**	**11 49 49.3**	**-1.3**
SIV	**San Ignacio** comp=Z,46nm,0.7s,mb5.1,baz=326,slow=10,SNR=284	**27.04**	**143**	P	**P**	**11 50 18.8**	**-1.3**
GOGA	**Godfrey**	**28.05**	**349**	*e*P	**P**	**11 50 31.4**	**+2.4**
LRAL	**Lakeview Retre**	**28.53**	**343**	*e*P	**P**	**11 50 33.4**	**0.0**
LVC	**Limon Verde** comp=Z,4.5nm,0.6s,mb4.4,baz=331,slow=13,SNR=2.5	**29.43**	**164**	P	**P**	**11 50 41.0**	**-0.4**
LVC				LR	LR	12 03 46.4	
LVC	comp=Z,499nm,21.8s,MS4.1,baz=310,slow=39 **Limon Verde**	**29.43**	**164**	*e*P	**P**	**11 50 42.3**	**+0.9**
HKT	comp=Z,30nm,1.1s,mb4.9 **Hockley**	**29.63**	**326**	*e*P	**P**	**11 50 42.3**	**-0.9**
HKT	comp=Z,11nm,1.0s,mb4.5			pmax	pmax		
HKT	**Hockley** comp=Z,11nm,1.0s,mb4.5	**29.63**	**326**	*e*P	**P**	**11 50 42.3**	**-0.9**
CPCT	**Cooper Cave**	**30.23**	**348**	*e*P	**P**	**11 50 48.5**	**+0.1**
SWET	**Sewanee**	**30.32**	**346**	*e*P	**P**	**11 50 49.8**	**+0.6**
NATX	**Nacogdoches** comp=Z,22nm,0.8s,mb4.9	**30.45**	**330**	*e*P	**P**	**11 50 50.3**	**-0.1**
BLA	**Blacksburg**	**31.40**	**355**	*e*P	**P**	**11 50 57.2**	**-1.4**
BLA	comp=Z,20nm,0.9s,mb5.0			pmax	pmax		
BLA	**Blacksburg** comp=Z,20nm,0.9s,mb5.0	**31.40**	**355**	*e*P	**P**	**11 50 57.1**	**-1.5**
ELN	**Prospectdale**	**31.44**	**355**	*e*P	**P**	**11 50 59.9**	**+0.9**
ELN				*e*pP	pP	11 51 07.1	+1.1
WVT	**Waverly**	**31.67**	**344**	*e*P	**P**	**11 50 59.7**	**-1.4**
WVT	comp=Z,17nm,0.8s,mb4.9			pmax	pmax		
WVT	**Waverly** comp=Z,17nm,0.8s,mb4.9	**31.67**	**344**	*e*P	**P**	**11 50 59.7**	**-1.4**
UALR	**University of** comp=Z,19nm,0.8s,mb5.0	**31.96**	**336**	*e*P	**P**	**11 51 03.3**	**-0.3**
JCT	**Junction City**	**32.34**	**322**	*e*P	**P**	**11 51 07.7**	**+0.7**
PARMO	**Parma**	**32.73**	**342**	*e*P	**P**	**11 51 09.8**	**-0.6**
WCI	**Wyandotte Cave**	**33.28**	**347**	*e*P	**P**	**11 51 14.9**	**-0.3**
WCI	comp=Z,22nm,0.9s,mb5.1			pmax	pmax		
WCI	**Wyandotte Cave** comp=Z,22nm,0.9s,mb5.1	**33.28**	**347**	*e*P	**P**	**11 51 14.9**	**-0.2**
USIN	**University of**	**33.35**	**345**	*e*P	**P**	**11 51 15.0**	**-0.8**
SIUC	**Southern Illin**	**33.54**	**343**	*e*P	**P**	**11 51 16.7**	**-0.7**
TXAR	**Lajitas Array** comp=Z,2.2nm,0.8s,mb4.1,baz=140,slow=9.9,SNR=28	**34.09**	**316**	P	**P**	**11 51 22.1**	**-0.2**
TXAR	comp=Z,1.8nm,0.7s,baz=139,slow=6.1,SNR=7.2			PcP	PcP	11 54 00.3	+0.6
TXAR	comp=Z,117nm,19.2s,MS3.6,baz=85,slow=40			LR	LR	12 07 09.1	
TXAR	**Lajitas Array**	**34.09**	**316**	P	**P**	**11 51 22.1**	**-0.2**
TXAR						11 54 00.3	
FVM	**French Village**	**34.16**	**342**	*e*P	**P**	**11 51 21.8**	**-1.0**
OLIL	**Olney** comp=Z,66nm,1.0s,mb5.5	**34.19**	**345**	*e*P	**P**	**11 51 22.2**	**-0.8**
BLO	**Bloomington**	**34.23**	**347**	*e*P	**P**	**11 51 23.3**	**-0.1**
CCM	**Cathedral Cave**	**34.49**	**341**	*e*P	**P**	**11 51 24.3**	**-1.4**
SSPA	**Standing Stone** comp=Z,16nm,1.2s,mb4.8	**34.70**	**359**	*e*P	**P**	**11 51 28.1**	**+0.7**
WMOK	**Wichita Mounta**	**34.91**	**328**	*e*P	**P**	**11 51 28.0**	**-1.4**
PAL	**Palisades**	**35.21**	**5**	*e*P	**P**	**11 51 31.8**	**-0.1**
PAL	comp=Z,16nm,1.0s,mb4.9			pmax	pmax		
PAL	**Palisades** comp=Z,16nm,1.0s,mb4.9	**35.21**	**5**	*e*P	**P**	**11 51 31.8**	**-0.1**
BDFB	**Brasilia** comp=Z,15nm,0.7s,mb5.0,baz=288,slow=11,SNR=21	**36.09**	**127**	P	**P**	**11 51 38.6**	**-1.1**
BDFB				PcP	PcP	11 54 06.0	+0.3
HDIL	comp=Z,7.7nm,0.9s,baz=195,slow=2.6,SNR=3.4 **Hopedale**	**36.22**	**345**	*e*P	**P**	**11 51 42.8**	**+2.3**
BINY	comp=Z,59nm,1.2s,mb5.4 **Binghamton**	**36.28**	**2**	*e*P	**P**	**11 51 42.0**	**+1.0**
AMTX	comp=Z,27nm,1.0s,mb5.1 **Amarillo** comp=Z,16nm,1.1s,mb4.8	**36.59**	**326**	*e*P	**P**	**11 51 43.0**	**-0.8**
WES	**Weston**	**36.85**	**8**	*e*P	**P**	**11 51 46.7**	**+0.8**
CPUP	**Villa Florida** comp=Z,6.6nm,0.6s,mb4.7,baz=317,slow=8.3,SNR=22	**37.41**	**149**	P	**P**	**11 51 47.6**	**-3.3**
CPUP				PcP	PcP	11 54 09.5	0.0
CPUP	comp=Z,1.4nm,0.5s,baz=340,slow=6.4,SNR=2.4			LR	LR	12 08 32.0	
CPUP	comp=Z,556nm,18.5s,MS4.4,baz=307,slow=38 **Villa Florida**	**37.41**	**149**	*e*P	**P**	**11 51 47.4**	**-3.5**
CPUP	comp=Z,32nm,0.6s			pmax	pmax		
CPUP	**Villa Florida** comp=Z,32nm,0.6s,mb5.3	**37.41**	**149**	*e*P	**P**	**11 51 47.4**	**-3.5**
KSU1	**Kansas State U**	**37.42**	**335**	*e*P	**P**	**11 51 50.7**	**-0.1**
NCB	**Newcomb** comp=Z,19nm,0.8s,mb4.9	**38.14**	**4**	*e*P	**P**	**11 51 57.1**	**+0.4**
CFAA	**Coronel Fontan** comp=Z,0.6nm,0.6s,baz=311,slow=6.1,SNR=8.8	**38.20**	**167**	P	**P**	**11 51 57.0**	**-0.4**
CBKS	**Cedar Bluff**	**38.58**	**332**	*e*P	**P**	**11 51 59.9**	**-0.7**
CBKS	comp=Z,18nm,0.8s,mb4.8			pmax	pmax		
CBKS	**Cedar Bluff** comp=Z,18nm,0.8s,mb4.8	**38.58**	**332**	*e*P	**P**	**11 51 59.9**	**-0.7**
LBNH	**Lisbon**	**38.61**	**6**	*e*P	**P**	**11 52 01.7**	**+1.0**
SCIA	**State Center**	**38.61**	**341**	*e*P	**P**	**11 52 00.5**	**-0.3**
JFWS	**Jewell Farm**	**38.67**	**345**	*e*P	**P**	**11 52 01.0**	**-0.3**
JFWS	comp=Z,18nm,0.7s,mb4.9			pmax	pmax		
JFWS	**Jewell Farm** comp=Z,18nm,0.7s,mb4.9	**38.67**	**345**	*e*P	**P**	**11 52 00.9**	**-0.3**
LONY	**Lake Ozonia** comp=Z,20nm,1.0s,mb4.8	**38.76**	**3**	*e*P	**P**	**11 52 02.2**	**+0.2**
FRNY	**Flat Rock**	**39.04**	**4**	*e*P	**P**	**11 52 05.0**	**+0.7**
BNM	**Barren Site**	**39.07**	**320**	*e*P	**P**	**11 52 05.5**	**+0.7**
ANMO	**Albuquerque**	**39.48**	**321**	*e*P	**P**	**11 52 08.6**	**+0.4**
LAZ	**Ladron**	**39.56**	**320**	*e*P	**P**	**11 52 09.4**	**+0.6**
EMMW	**East Machias**	**39.74**	**11**	*e*P	**P**	**11 52 10.9**	**+0.7**
PKME	**Peaks-Kenny Pk**	**39.96**	**9**	*e*P	**P**	**11 52 12.8**	**+0.8**
TUC	**Tucson**	**40.79**	**315**	*e*P	**P**	**11 52 19.4**	**+0.3**
TUC	comp=Z,7.0nm,0.8s,mb4.3			pmax	pmax		
TUC	**Tucson** comp=Z,6.8nm,0.8s,mb4.3	**40.79**	**315**	*e*P	**P**	**11 52 19.4**	**+0.3**
SDCO	**Great Sand Dun**	**40.79**	**325**	*e*P	**P**	**11 52 19.7**	**+0.7**
OGNE	**Ogallala** comp=Z,12nm,0.8s,mb4.6	**41.34**	**332**	*e*P	**P**	**11 52 24.1**	**+0.6**
ECSD	**EROS,Sioux Fal**	**41.39**	**339**	*e*P	**P**	**11 52 22.4**	**-1.4**
MVCO	**Mesa Verde** comp=Z,65nm,2.1s,mb4.9	**42.20**	**322**	*e*P	**P**	**11 52 32.9**	**+2.3**
ISCO	**Idaho Springs**	**42.30**	**327**	*e*P	**P**	**11 52 32.1**	**+0.7**
WUAZ	**Wupatki** comp=Z,16nm,0.8s,mb4.8	**42.99**	**318**	*e*P	**P**	**11 52 38.1**	**+1.1**
PHWY	**Pilot Hill**	**43.31**	**329**	*e*P	**P**	**11 52 43.2**	**+3.8**
EYMN	**Ely** comp=Z,33nm,1.0s,mb5.0	**43.69**	**346**	*e*P	**P**	**11 52 40.9**	**-1.6**
RWWY	**Rawlins**	**44.50**	**328**	*e*P	**P**	**11 52 50.6**	**+1.6**
SRU	**San Rafael**	**44.64**	**323**	*e*P	**P**	**11 52 50.7**	**+0.5**
RSSD	**Black Hills**	**44.74**	**333**	*e*P	**P**	**11 52 51.7**	**+0.7**
TMUT	**Trail Mountain**	**45.17**	**323**	*e*P	**P**	**11 52 55.9**	**+1.4**
AGMN	**Agassiz Refuge** comp=Z,15nm,0.9s,mb4.8	**45.18**	**343**	*e*P	**P**	**11 52 53.3**	**-1.0**
MSU	**Marysvale**	**45.28**	**321**	*e*P	**P**	**11 52 56.3**	**+0.9**
ARUT	**Antelope Range**	**45.66**	**319**	*e*P	**P**	**11 52 59.3**	**+0.9**
MPU	**Maple Canyon** comp=Z,18nm,1.2s,mb4.9	**45.87**	**323**	*e*P	**P**	**11 53 00.8**	**+0.8**
DAU	**Daniels Canyon**	**45.90**	**324**	*e*P	**P**	**11 53 01.1**	**+0.9**
TRQA	**Tornquist** comp=Z,15nm,0.9s,mb4.9	**45.93**	**163**	*e*P	**P**	**11 53 00.6**	**+0.2**
TRQA				*e*pP	pP	11 53 07.8	+0.3
SHPR	**Sheep Range**	**46.09**	**317**	*e*P	**P**	**11 53 02.9**	**+1.1**
NLU	**North Lily Min**	**46.10**	**323**	*e*P	**P**	**11 53 05.7**	**+3.8**
JLU	**Jordanelle**	**46.13**	**324**	*e*P	**P**	**11 53 03.0**	**+0.9**
CTU	**Camp Tracy**	**46.37**	**324**	*e*P	**P**	**11 53 05.2**	**+1.3**
BW06	**Boulder Array**	**46.50**	**327**	*e*P	**P**	**11 53 05.6**	**+0.7**
PDAR	**Pinedale Array** comp=Z,2.1nm,0.9s,mb4.1,baz=123,slow=11,SNR=16	**46.50**	**327**	P	**P**	**11 53 05.2**	**+0.3**
PDAR				PcP	PcP	11 54 39.5	+0.3
PDAR	comp=Z,1.0nm,0.7s,baz=140,slow=4.7,SNR=2.4			ScP	ScP	11 58 33.6	+2.1
PDAR	comp=Z,0.4nm,0.6s,baz=128,slow=7.0,SNR=4.1			LR	LR	12 18 35.8	
GSC	comp=Z,128nm,18.2s,MS3.9,baz=323,slow=44 **Goldstone**	**46.62**	**314**	*e*P	**P**	**11 53 07.4**	**+1.4**
DUG	**Dugway**	**46.70**	**322**	*e*P	**P**	**11 53 07.1**	**+0.6**
DUG				*e*PP	pP	11 53 14.1	+0.5
DUG	comp=Z,16nm,1.0s,mb4.9			pmax	pmax		
DUG	**Dugway** comp=Z,16nm,1.0s,mb4.9	**46.70**	**322**	*e*P	**P**	**11 53 07.1**	**+0.6**
DUG				*e*pP	pP	11 53 14.1	+0.5
PLCA	**Paso Flores** comp=Z,19nm,0.8s,mb5.0,baz=351,slow=9.2,SNR=37	**46.72**	**173**	P	**P**	**11 53 08.0**	**+1.4**
PLCA	**Paso Flores**	**46.72**	**173**	*e*P	**P**	**11 53 07.7**	**+1.1**
PLCA	comp=Z,20nm,0.9s			pmax	pmax		
PLCA	**Paso Flores** comp=Z,20nm,0.9s,mb5.0	**46.72**	**173**	*e*P	**P**	**11 53 07.7**	**+1.1**
HWUT	**Hardware Ranch** comp=Z,10nm,0.8s,mb4.8	**46.84**	**325**	*e*P	**P**	**11 53 07.5**	**-0.1**
ULM	**Lac du Bonnet** comp=Z,5.9nm,0.9s,mb4.5,baz=171,slow=10,SNR=5.5	**46.94**	**344**	P	**P**	**11 53 06.1**	**-2.1**
ULM	**Lac du Bonnet** comp=Z,3.3nm,1.1s,mb5.2	**46.94**	**344**	*e*P	**P**	**11 53 07.5**	**-0.7**
TPNV	**Topopah Spring**	**47.07**	**317**	*e*P	**P**	**11 53 10.7**	**+1.2**
SPUT	**South Promonto**	**47.17**	**324**	*e*P	**P**	**11 53 11.0**	**+0.8**
BGU	**Big Grassy Mou**	**47.27**	**323**	*e*P	**P**	**11 53 11.2**	**+0.2**
AHID	**Auburn Hatcher** comp=Z,10nm,0.8s,

comp=Z,34nm,1.2s,mb5.2
PBAR Barrancos 71.06 52 *e*P P **11 55 56.0 +0.1**
comp=Z,24nm,1.4s,mb4.9
EBAD Badajoz 71.16 51 P P **11 55 56.0 -0.4**
comp=Z,7.5nm,0.8s,mb4.7
EMIN Mina Concepcio 71.29 52 P P **11 55 57.6 +0.3**
comp=Z,9.6nm,0.8s,mb4.8
MVO Moncorvo 71.49 49 *e*P P **11 55 58.3 -0.1**
comp=Z,39nm,1.4s,mb5.1
ERUA La Rua 71.60 47 P P **11 55 58.2 -0.8**
ERUA pmax pmax
comp=Z,11nm,0.8s,mb4.8
ERUA La Rua 71.60 47 P P **11 55 58.2 -0.9**
comp=Z,11nm,0.8s,mb4.8
EPON Pontenova 71.74 46 P P **11 55 58.9 -1.0**
comp=Z,17nm,1.3s,mb4.8
PBRG Braganca 71.80 48 *e*P P **11 56 00.5 +0.2**
comp=Z,22nm,1.3s,mb4.9
ECAL Calabor 71.83 48 P P **11 55 59.9 -0.6**
comp=Z,15nm,0.8s,mb5.0
ESPR Espera 71.83 53 P P **11 56 00.7 +0.1**
comp=Z,16nm,0.9s,mb5.0
TIC Toumodi 71.94 85⇑*iP* P **11 56 01.2 -0.5**
comp=Z,107nm,0.7s,mb5.9
LIC Lamto 71.97 85⇑*iP* P **11 56 01.5 -0.3**
LIC comp=Z,98nm,0.7s,mb5.5 *e*MLR MLR
comp=Z,322nm,21.0s,MS4.3
LIC Lamto 71.97 85⇑*iP* P **11 56 01.3 -0.5**
comp=Z,158nm,0.7s,mb6.0
LIC Lamto 71.97 85⇑*iP* P **11 56 01.5 -0.3**
LIC comp=Z,49nm,0.7s,mb5.5 LR LR
comp=Z,160nm,21.0s,MS4.3
EJIF Jimena Fronter 72.09 54 P P **11 56 03.1 +0.9**
EJIF pmax pmax
comp=Z,19nm,0.8s,mb5.1
EJIF Jimena Fronter 72.09 54 P P **11 56 03.1 +1.0**
comp=Z,19nm,0.8s,mb5.1
DBIC Dimbokro 72.11 85 P P **11 56 02.2 -0.4**
DBIC comp=Z,44nm,0.7s,mb5.5,baz=257,slow=6.6,SNR=64 LR LR 12 25 29.5
comp=Z,245nm,18.6s,MS4.5,baz=177,slow=34
DBIC Dimbokro 72.11 85 P P **11 56 02.2 -0.4**
DBIC LR LR 12 25 29.5
KIC Kosan Boka 72.24 85⇑*iP* P **11 56 03.2 -0.3**
comp=Z,240nm,0.8s,mb6.2
EADA Adamuz 72.98 52 P P **11 56 06.5 -0.9**
comp=Z,8.6nm,0.8s,mb4.7
EARI Arriondas 73.14 47 P P **11 56 07.8 -0.4**
comp=Z,6.1nm,0.9s,mb4.5
ELOJ Sierra Loja 73.22 53 P P **11 56 09.9 +1.1**
ELOJ pmax pmax
comp=Z,19nm,0.8s,mb5.1
ELOJ Sierra Loja 73.22 53 P P **11 56 09.9 +1.1**
comp=Z,19nm,0.8s,mb5.1
GUD Guadarrama 73.58 49 P P **11 56 11.7 +0.8**
GUD pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
GUD Guadarrama 73.58 49 P P **11 56 11.7 +0.8**
comp=Z,9.4nm,0.6s,mb4.9
DCN Croghan 73.59 36⇑*iP* P **11 56 09.7 -1.0**
EBAN Banos Encina 73.61 52 P P **11 56 11.0 -0.1**
EBAN pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
EBAN Banos Encina 73.61 52 P P **11 56 11.0 -0.1**
comp=Z,7.2nm,0.8s,mb4.7
ESDC Sonseca Array 73.62 50 P P **11 56 11.5 +0.3**
comp=Z,10nm,0.8s,mb4.8,baz=271,slow=5.4,SNR=38
ECOG Cogollos-Vega 73.69 53 P P **11 56 12.5 +0.9**
ECOG pmax pmax
comp=Z,15nm,0.6s,mb5.1
ECOG Cogollos-Vega 73.69 53 P P **11 56 12.5 +0.9**
comp=Z,15nm,0.6s,mb5.1
DMUB Kingscourt 73.92 35⇑*iP* P **11 56 11.1 -1.5**
DLF Lyons Farm 74.02 36 *e*P P **11 56 11.9 -1.3**
EQES Quesada 74.13 52 P P **11 56 13.9 -0.3**
comp=Z,25nm,0.7s,mb5.2
EBER Berja 74.20 53 P P **11 56 14.4 -0.2**
comp=Z,23nm,0.6s,mb5.3
ELAN Lanestosa 74.42 47 P P **11 56 15.2 -0.6**
comp=Z,16nm,0.8s,mb5.0
EHUE Huescar 74.51 52 P P **11 56 16.8 +0.4**
EHUE pmax pmax
comp=Z,35nm,1.5s,mb5.1
EHUE Huescar 74.51 52 P P **11 56 16.8 +0.4**
comp=Z,35nm,1.5s,mb5.1
EVIA Vianos 74.65 52 P P **11 56 17.6 +0.4**
EVIA pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
EVIA Vianos 74.65 52 P P **11 56 17.6 +0.4**
comp=Z,9.5nm,0.7s,mb4.8
ENIJ Nijar 74.75 53 P P **11 56 17.7 -0.1**
ENIJ pmax pmax
comp=Z,18nm,0.7s,mb5.1
ENIJ Nijar 74.75 53 P P **11 56 17.7 -0.1**
comp=Z,18nm,0.7s,mb5.1
PPT Papeete 74.86 250 LR LR 12 21 07.3
comp=Z,253nm,18.4s,MS4.5,baz=327,slow=29
ETOR Torete 75.19 49 P P **11 56 21.0 +0.8**
ETOR pmax pmax
comp=Z,2.0nm,2.2s,mb3.7
ETOR Torete 75.19 49 P P **11 56 21.0 +0.8**
comp=Z,1.6nm,2.2s,mb3.6
ROSF Rostrenen 75.19 42⇑*iP* P **11 56 20.1 0.0**
comp=Z,41nm,0.8s,mb5.1
ROSF Rostrenen 75.19 42⇑*iP* P **11 56 20.1 0.0**
ROSF pmax pmax
comp=Z,21nm,0.8s,mb5.1
ROSF Rostrenen 75.19 42⇑*iP* P **11 56 20.1 0.0**
comp=Z,21nm,0.8s,mb5.1
QUIF Quistinic 75.20 42⇑*iP* P **11 56 20.2 0.0**
comp=Z,28nm,0.9s,mb4.9
QUIF Quistinic 75.20 42⇑*iP* P **11 56 20.2 0.0**
QUIF pmax pmax
comp=Z,14nm,0.9s,mb4.9
QUIF Quistinic 75.20 42⇑*iP* P **11 56 20.2 0.0**
comp=Z,14nm,0.9s,mb4.9
ETOB Tobarra 75.40 52 P P **11 56 21.8 +0.2**
comp=Z,30nm,0.7s,mb5.3
EMUR La Murta 75.58 53 P P **11 56 22.0 -0.6**
comp=Z,10nm,0.6s,mb4.9
SGMF Saint Gilles 75.65 42⇑*iP* P **11 56 22.7 0.0**
comp=Z,59nm,0.9s,mb5.2
SGMF Saint Gilles 75.65 42⇑*iP* P **11 56 22.7 0.0**
SGMF pmax pmax
comp=Z,29nm,0.9s,mb5.2
SGMF Saint Gilles 75.65 42⇑*iP* P **11 56 22.7 0.0**
comp=Z,29nm,0.9s,mb5.2
EALK Alkurruntz 75.82 47 P P **11 56 25.1 +1.3**
comp=Z,20nm,1.3s,mb4.9
SJPF Ste Jean 76.01 47⇑*iP* P **11 56 25.5 +0.6**
comp=Z,94nm,0.8s,mb5.5
SJPF Ste Jean 76.01 47⇑*iP* P **11 56 25.5 +0.6**
SJPF pmax pmax
comp=Z,47nm,0.8s,mb5.5
SJPF Ste Jean 76.01 47⇑*iP* P **11 56 25.5 +0.6**
comp=Z,47nm,0.8s,mb5.5
LARF Larrau 76.18 47 *e*P P **11 56 26.8 +0.9**
ESAC San Caprasio 76.45 49 P P **11 56 27.7 +0.2**
comp=Z,32nm,0.7s,mb5.4
ETSF Etsaut 76.48 47⇑*iP* P **11 56 28.2 +0.6**
comp=Z,23nm,0.9s,mb4.8
ETSF Etsaut 76.48 47⇑*iP* P **11 56 28.2 +0.6**
ETSF pmax pmax
comp=Z,12nm,0.9s,mb4.8
ETSF Etsaut 76.48 47⇑*iP* P **11 56 28.2 +0.6**
comp=Z,12nm,0.9s,mb4.8
COLA College 76.53 336 *e*P P **11 56 26.7 -0.7**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
COLA College 76.53 336 *e*P P **11 56 26.7 -0.7**
comp=Z,4.4nm,0.8s,mb4.4
SLKM Skilak Lake 76.54 331 *e*P P **11 56 26.9 -0.6**
SLKM *e**PP pP 11 56 33.8 -1.2
REYF Montagne du Re 76.62 47 *e*P P **11 56 28.9 +0.6**
GRR Gorron 76.79 42⇑*iP* P **11 56 29.2 0.0**
comp=Z,67nm,0.8s,mb5.3
GRR Gorron 76.79 42⇑*iP* P **11 56 29.2 0.0**
GRR pmax pmax
comp=Z,34nm,0.8s,mb5.3
GRR Gorron 76.79 42⇑*iP* P **11 56 29.2 0.0**
comp=Z,34nm,0.8s,mb5.3
VIEF Viey 76.91 47 *e*P P **11 56 30.7 +0.7**
EBIE Bielsa 76.98 48 P P **11 56 30.9 +0.5**
comp=Z,5.3nm,1.0s,mb4.4
FLN La Foliniere 77.08 41⇑*iP* P **11 56 31.0 +0.2**
comp=Z,53nm,0.8s,mb5.2
FLN La Foliniere 77.08 41⇑*iP* P **11 56 31.0 +0.2**
FLN pmax pmax
comp=Z,26nm,0.8s,mb5.2
FLN La Foliniere 77.08 41⇑*iP* P **11 56 31.0 +0.2**
comp=Z,26nm,0.8s,mb5.2
MFF Saint Martin d 77.09 44⇑*iP* P **11 56 31.1 +0.1**
comp=Z,64nm,0.8s,mb5.3
MFF Saint Martin d 77.09 44⇑*iP* P **11 56 31.1 +0.1**
MFF pmax pmax
comp=Z,32nm,0.8s,mb5.3
MFF Saint Martin d 77.09 44⇑*iP* P **11 56 31.1 +0.1**
comp=Z,32nm,0.8s,mb5.3
EPF Esparros 77.15 47⇑*iP* P **11 56 31.9 +0.5**
comp=Z,51nm,0.9s,mb5.1
EPF Esparros 77.15 47⇑*iP* P **11 56 31.9 +0.5**
EPF pmax pmax
comp=Z,25nm,0.9s,mb5.1
EPF Esparros 77.15 47⇑*iP* P **11 56 31.9 +0.5**
comp=Z,25nm,0.9s,mb5.2
LDF La Druitiere 77.30 42⇑*iP* P **11 56 32.1 0.0**
comp=Z,65nm,0.9s,mb5.3
LDF La Druitiere 77.30 42⇑*iP* P **11 56 32.1 0.0**
LDF pmax pmax
comp=Z,33nm,0.9s,mb5.3
LDF La Druitiere 77.30 42⇑*iP* P **11 56 32.1 0.0**
comp=Z,33nm,0.9s,mb5.3
DAG Danmarks Havn 77.52 12⇓*eP* P **11 56 31.3 -1.5**
DAG pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
DAG Danmarks Havn 77.52 12⇓*iP* P **11 56 31.3 -1.5**
comp=Z,2.0nm,0.6s,mb4.2
DAG Danmarks Havn 77.52 12⇓*eP* P **11 56 31.3 -1.5**
comp=Z,2.0nm,0.6s,mb4.2
LFF La Frestale 77.58 45⇑*iP* P **11 56 33.7 0.0**
comp=Z,40nm,0.8s,mb5.1
LFF La Frestale 77.58 45⇑*iP* P **11 56 33.7 0.0**
LFF pmax pmax
comp=Z,20nm,0.8s,mb5.1
LFF La Frestale 77.58 45⇑*iP* P **11 56 33.7 0.0**
comp=Z,20nm,0.8s,mb5.1
EPOB Poblet 77.59 49 P P **11 56 33.4 -0.5**
comp=Z,4.0nm,1.5s,mb4.1
SALF Salau 77.75 48 *e*P P **11 56 35.5 +0.8**
RJF Les Rejaudoux 78.15 45⇑*iP* P **11 56 36.8 -0.1**
comp=Z,56nm,1.0s,mb5.2
RJF Les Rejaudoux 78.15 45⇑*iP* P **11 56 36.8 -0.1**
RJF pmax pmax
comp=Z,28nm,1.0s,mb5.2
RJF Les Rejaudoux 78.15 45⇑*iP* P **11 56 36.8 -0.1**
comp=Z,28nm,1.0s,mb5.1
TORD Torodi Ar. Bea 78.16 78 P P **11 56 37.1 -0.4**
comp=Z,19nm,0.6s,mb5.2,baz=280,slow=6.4,SNR=159
TORD LR LR 12 31 00.0
comp=Z,171nm,19.4s,MS4.4,baz=260,slow=36
CAF Calviac 78.51 45⇑*iP* P **11 56 38.9 0.0**
comp=Z,77nm,1.2s,mb5.2
CAF Calviac 78.51 45⇑*iP* P **11 56 38.9 0.0**
CAF pmax pmax
comp=Z,39nm,1.2s,mb5.2
CAF Calviac 78.51 45⇑*iP* P **11 56 38.9 0.0**
comp=Z,38nm,1.2s,mb5.2
MTLF Montolieu 78.54 47⇑*iP* P **11 56 39.0 -0.1**
comp=Z,53nm,1.2s,mb5.0
MTLF Montolieu 78.54 47⇑*iP* P **11 56 39.0 -0.1**
MTLF pmax pmax
comp=Z,26nm,1.2s,mb5.0
MTLF Montolieu 78.54 47⇑*iP* P **11 56 39.0 -0.1**
comp=Z,26nm,1.2s,mb5.0
MENF Mencas 78.95 40 *e*P P **11 56 40.9 -0.3**
HYF Humbligny 79.05 43 *e*P P **11 56 41.9 +0.1**
BGF Bois d'Agland 79.15 44⇑*iP* P **11 56 42.2 -0.2**
comp=Z,42nm,0.9s,mb5.0
BGF Bois d'Agland 79.15 44⇑*iP* P **11 56 42.2 -0.2**
BGF pmax pmax
comp=Z,21nm,0.9s,mb5.1
BGF Bois d'Agland 79.15 44⇑*iP* P **11 56 42.2 -0.2**
comp=Z,21nm,0.9s,mb5.1
PYM Petit Puy Mans 79.22 45 *e*P P **11 56 42.7 -0.1**
AGO Saint Agoulin 79.32 44 *e*P P **11 56 43.1 -0.2**
LBL Lubilhac 79.36 45 *e*P P **11 56 43.7 +0.1**
AVF Avril sur Loir 79.51 44⇑*iP* P **11 56 43.8 -0.5**
comp=Z,42nm,1.0s,mb5.0
AVF Avril sur Loir 79.51 44⇑*iP* P **11 56 43.8 -0.5**
AVF pmax pmax
comp=Z,21nm,1.0s,mb5.0
AVF Avril sur Loir 79.51 44⇑*iP* P **11 56 43.8 -0.5**
comp=Z,21nm,1.0s,mb5.0
SSF Saint Saulge 79.63 43⇑*iP* P **11 56 44.4 -0.6**
comp=Z,46nm,1.2s,mb5.0
SSF Saint Saulge 79.63 43⇑*iP* P **11 56 44.4 -0.6**
SSF pmax pmax
comp=Z,23nm,1.2s,mb5.0
SSF Saint Saulge 79.63 43⇑*iP* P **11 56 44.4 -0.6**
comp=Z,23nm,1.2s,mb5.0
PLDF La Plantade 79.66 44 *e*P P **11 56 44.7 -0.5**
LASF Ste Croix 79.76 46⇑*iP* P **11 56 46.2 +0.5**
comp=Z,44nm,1.0s,mb5.0
SMF Signal de Mont 79.84 44⇑*iP* P **11 56 45.7 -0.4**
comp=Z,77nm,1.1s,mb5.2
SMF Signal de Mont 79.84 44⇑*iP* P **11 56 45.7 -0.4**
SMF pmax pmax
comp=Z,38nm,1.1s,mb5.2
SMF Signal de Mont 79.84 44⇑*iP* P **11 56 45.7 -0.4**
comp=Z,38nm,1.1s,mb5.2
LOR Lormes 79.88 43⇑*iP* P **11 56 45.8 -0.5**
comp=Z,31nm,1.0s,mb4.9
LOR Lormes 79.88 43⇑*iP* P **11 56 45.8 -0.5**
LOR pmax pmax
comp=Z,15nm,1.0s,mb4.9
LOR Lormes 79.88 43⇑*iP* P **11 56 45.8 -0.5**
comp=Z,15nm,1.0s,mb4.9
BAIF Baives 80.23 40⇑*iP* P **11 56 47.8 -0.4**
comp=Z,16nm,0.8s,mb4.7
BAIF Baives 80.23 40⇑*iP* P **11 56 47.8 -0.4**
BAIF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
BAIF Baives 80.23 40⇑*iP* P **11 56 47.8 -0.4**
comp=Z,7.8nm,0.8s,mb4.7
SSB Saint Sauveur 80.28 45 *e*P P **11 56 48.6 +0.1**
SNF Seneffe 80.30 40 P P **11 56 48.5 -0.1**
VIVF Saint-Julien-l 80.36 46⇑*iP* P **11 56 49.6 +0.6**
comp=Z,72nm,1.2s,mb5.2
VIVF Saint-Julien-l 80.36 46⇑*iP* P **11 56 49.6 +0.6**
VIVF pmax pmax
comp=Z,36nm,1.2s,mb5.2
VIVF Saint-Julien-l 80.36 46⇑*iP* P **11 56 49.6 +0.6**
comp=Z,36nm,1.2s,mb5.2
UCC Uccle 80.36 40 P P **11 56 48.6 -0.3**
DOU Dourbes 80.48 40 P P **11 56 49.5 0.0**
GIVF Givet 80.63 40⇑*iP* P **11 56 50.2 -0.1**
comp=Z,40nm,0.9s,mb5.1
GIVF Givet 80.63 40⇑*iP* P **11 56 50.2 -0.1**
GIVF pmax pmax
comp=Z,20nm,0.9s,mb5.0
GIVF Givet 80.63 40⇑*iP* P **11 56 50.2 -0.1**
comp=Z,20nm,0.9s,mb5.0
PRAF Pradon 80.70 47 *e*P P **11 56 51.1 +0.3**
MEZF Maizieres J'vi 80.72 42⇑*iP* P **11 56 50.7 -0.2**
comp=Z,48nm,0.8s,mb5.2
MEZF Maizieres J'vi 80.72 42⇑*iP* P **11 56 50.7 -0.2**
comp=Z,48nm,0.8s,mb5.5
TREF Trevaresse 80.85 47 *e*P P **11 56 51.3 -0.3**
GELF Grande-Etoile 80.88 47 *e*P P **11 56 50.4 -1.4**
BCLA Clavier 80.95 40 P P **11 56 52.2 +0.1**
comp=Z,13nm,1.9s,mb4.5
SMRF Simiane la Rot 80.99 47 *e*P P **11 56 53.1 +0.7**
comp=Z,36nm,1.1s,mb4.9
SMRF Simiane la Rot 80.99 47 *e*P P **11 56 53.1 +0.7**
comp=Z,36nm,1.1s,mb5.2
PUYF Puyloubier 81.08 47 *e*P P **11 56 50.9 -2.0**
VILF Villemus 81.09 47 *e*P P **11 56 51.3 -1.6**
BEBN Eben Emael 81.20 40 P P **11 56 53.7 +0.4**
ORIF Oris-en-Rattie 81.22 46⇑*iP* P **11 56 54.4 +0.8**
comp=Z,68nm,0.9s,mb5.3
ORIF Oris-en-Rattie 81.22 46⇑*iP* P **11 56 54.4 +0.8**
ORIF pmax pmax
comp=Z,34nm,0.9s,mb5.3
ORIF Oris-en-Rattie 81.22 46⇑*iP* P **11 56 54.4 +0.8**
comp=Z,34nm,0.9s,mb5.3
STOF St-Etienne Org 81.23 46 *e*P P **11 56 51.8 -1.9**
TAVF Tavernes 81.34 47 *e*P P **11 56 52.3 -1.9**
THEF They Montfort 81.34 42 *e*P P **11 56 53.8 -0.3**
HGN Heimansgroeve 81.36 40 *e*P P **11 56 53.7 -0.5**
comp=Z,17nm,0.8s,mb5.0
CABF La Chapelle 81.39 44⇑*iP* P **11 56 54.4 0.0**
comp=Z,27nm,0.9s,mb4.8
CABF La Chapelle 81.39 44⇑*iP* P **11 56 54.4 0.0**
CABF pmax pmax
comp=Z,14nm,0.9s,mb4.9
CABF La Chapelle 81.39 44⇑*iP* P **11 56 54.4 0.0**
comp=Z,14nm,0.9s,mb4.9
MEM Membach 81.40 40 P P **11 56 54.2 -0.2**
comp=Z,9.8nm,1.3s,mb4.6
WLF Walferdange 81.48 41 *e*P P **11 56 55.0 +0.2**
comp=Z,47nm,1.1s,mb5.3
HAU Haudompre 81.58 42⇑*iP* P **11 56 55.0 -0.4**
comp=Z,17nm,0.8s,mb4.7
HAU Haudompre 81.58 42⇑*iP* P **11 56 55.0 -0.4**
HAU pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
HAU Haudompre 81.58 42⇑*iP* P **11 56 55.0 -0.4**
comp=Z,8.4nm,0.8s,mb4.7
LMR La Mourre 81.67 47⇑*iP* P **11 56 55.8 -0.2**
comp=Z,31nm,0.9s,mb5.0
LMR La Mourre 81.67 47⇑*iP* P **11 56 55.8 -0.2**
LMR pmax pmax
comp=Z,16nm,0.9s,mb5.0
LMR La Mourre 81.67 47⇑*iP* P **11 56 55.8 -0.2**
comp=Z,16nm,0.9s,mb4.9
FRF La Foret Royal 81.77 47⇑*iP* P **11 56 56.4 -0.1**
comp=Z,43nm,0.9s,mb5.1
FRF La Foret Royal 81.77 47⇑*iP* P **11 56 56.4 -0.1**
FRF pmax pmax
comp=Z,22nm,0.9s,mb5.1
FRF La Foret Royal 81.77 47⇑*iP* P **11 56 56.4 -0.1**
comp=Z,22nm,0.9s,mb5.1
LPL La Plagne 81.83 45⇑*iP* P **11 56 57.6 +0.8**
comp=Z,30nm,0.9s,mb4.9
LPL La Plagne 81.83 45⇑*iP* P **11 56 57.6 +0.8**
LPL pmax pmax
comp=Z,15nm,0.9s,mb4.9
LPL La Plagne 81.83 45⇑*iP* P **11 56 57.6 +0.8**
comp=Z,15nm,0.9s,mb4.9
LPG La Plagne 81.84 45⇑*iP* P **11 56 57.8 +0.9**
comp=Z,46nm,1.1s,mb5.0
LPG La Plagne 81.84 45⇑*iP* P **11 56 57.8 +0.9**
LPG pmax pmax
comp=Z,23nm,1.1s,mb5.0
LPG La Plagne 81.84 45⇑*iP* P **11 56 57.8 +0.9**
comp=Z,23nm,1.1s,mb5.0
MBDF Montbardon 81.86 46⇑*iP* P **11 56 57.5 +0.6**
comp=Z,22nm,1.0s,mb4.8
MBDF Montbardon 81.86 46⇑*iP* P **11 56 57.5 +0.6**
MBDF pmax pmax
comp=Z,11nm,1.0s,mb4.7
MBDF Montbardon 81.86 46⇑*iP* P **11 56 57.5 +0.6**
comp=Z,11nm,1.0s,mb4.8
HINF Hinteralfeld 81.92 43⇑*iP* P **11 56 56.6 -0.6**
comp=Z,28nm,0.9s,mb4.9
HINF Hinteralfeld 81.92 43⇑*iP* P **11 56 56.6 -0.6**
HINF pmax pmax
comp=Z,14nm,0.9s,mb4.9
HINF Hinteralfeld 81.92 43⇑*iP* P **11 56 56.6 -0.6**
comp=Z,14nm,0.9s,mb4.9
WTSB Winterswijk 81.93 38 *e*P P **11 56 57.2 0.0**
comp=Z,42nm,0.4s,mb5.7
CALN Calern 81.94 47 *e*P P **11 56 57.5 +0.1**
RUP Ruppelstein 82.07 41 *e*P P **11 56 58.2 +0.3**
MOF Molkenrain 82.11 43 *e*P P **11 56 57.7 -0.5**
ECH Echery 82.12 42 *e*P P **11 56 57.8 -0.5**
MVIF Mont Vial 82.13 47 *e*P P **11 56 58.5 +0.1**
TOUF Mont Tournerai 82.20 46 *e*P P **11 56 58.8 0.0**
CDF Champ du Feu 82.20 42⇑*iP* P **11 56 58.3 -0.4**
comp=Z,42nm,1.2s,mb5.0
CDF Champ du Feu 82.20 42⇑*iP* P **11 56 58.3 -0.4**
CDF pmax pmax
comp=Z,21nm,1.2s,mb4.9
CDF Champ du Feu 82.20 42⇑*iP* P **11 56 58.3 -0.4**
comp=Z,21nm,1.2s,mb5.0
BUG Bochum--Univer 82.22 39 *e*P P **11 56 58.6 -0.1**
comp=Z,20nm,1.0s,mb5.0
LUCF Luceram 82.27 47 *e*P P **11 56 58.5 -0.7**
REVF Revere 82.29 47 *e*P P **11 56 59.2 0.0**
AUTN L'Aution 82.33 46 *e*P P **11 56 59.6 +0.1**
SBF Sospel 82.34 47⇑*iP* P **11 56 59.4 -0.1**
comp=Z,64nm,1.0s,mb5.2
SBF Sospel 82.34 47⇑*iP* P **11 56 59.4 -0.1**
SBF pmax pmax
comp=Z,32nm,1.0s,mb5.2
SBF Sospel 82.34 47⇑*iP* P **11 56 59.4 -0.1**
comp=Z,32nm,1.0s,mb5.2
ABH Alteburg 82.38 41 *e*P P **11 56 59.6 0.0**
SAOF Saorge 82.42 47 *e*P P **11 56 59.8 -0.1**
LIBD Limburg 82.42 42 *e*P P **11 56 59.8 0.0**
IBBN Ibbenburen 82.52 38 *e*P P **11 57 00.3 0.0**
comp=Z,18nm,0.8s,mb5.2
STR Strasburg 82.53 42 *e*P P **11 57 01.8 +1.4**
LANF Langenberg 82.55 41 *e*P P **11 57 00.4 -0.1**
FELD Feldberg im Sc 82.69 43 *e*P P **11 57 00.9 -0.4**
KTD Kalmit 82.73 41 *e*P P **11 57 01.3 -0.1**
BFO Black Forest 82.91 42 *e*P P **11 57 01.6 -0.8**
BFO pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BFO Black Forest 82.91 42 *e*P P **11 57 01.6 -0.8**
comp=Z,9.0nm,1.0s,mb4.8
TNS Taunus Mts 82.96 40 *e*P P **11 57 02.7 +0.1**
TNS pmax pmax
comp=Z,24nm,1.4s,mb5.0
TNS Taunus Mts 82.96 40 *e*P P **11 57 02.7 +0.1**
comp=Z,24nm,1.4s,mb5.0
TOD Tromm 83.20 41 *e*P P **11 57 03.3 -0.6**
SPAK Spaichingen-Ko 83.22 42 *e*P P **11 57 02.9 -1.1**
STU Stuttgart 83.47 42 *e*P P **11 57 04.9 -0.4**
comp=Z,25nm,0.8s,mb5.3
PGF Pioggiola 83.51 48⇑*iP* P **11 57 05.5 -0.1**
comp=Z,55nm,1.0s,mb5.3
PGF Pioggiola 83.51 48⇑*iP* P **11 57 05.5 -0.1**
PGF pmax pmax
comp=Z,27nm,1.0s,mb5.3
PGF Pioggiola 83.51 48⇑*iP* P **11 57 05.5 -0.1**
comp=Z,27nm,1.0s,mb5.3
CORF Corte 83.63 48 *e*P P **11 57 06.0 -0.2**
NRDL Niedersach Rie 83.96 38 *e*P P **11 57 08.0 +0.3**
comp=Z,16nm,1.0s,mb5.1
DAVA Damuels 83.98 43⇑*iP* P **11 57 08.5 +0.6**
comp=Z,36nm,0.8s,mb5.5,SNR=12
BSEG Bad Segeberg 84.05 36 *e*P P **11 57 08.3 +0.2**
comp=Z,20nm,0.8s,mb5.3
KEST Kesra 84.06 55 P P **11 57 09.0 +0.4**
comp=Z,5.6nm,0.7s,mb4.8,baz=51,slow=0.7,SNR=17
NB2 NORSAR Subarra 84.33 29 P P **11 57 09.6 +0.2**
comp=Z,11nm,0.8s,mb5.0,baz=271,slow=5.1
NOA NORSAR Array B 84.33 29 P P **11 57 09.8 +0.4**
comp=Z,6.2nm,0.8s,mb4.8,baz=273,slow=5.2,SNR=13
NOA NORSAR Array B 84.33 29 P P **11 57 09.8 +0.4**
FETA Feichten 84.57 43⇓*iP* P **11 57 11.1 +0.3**
comp=Z,25nm,1.0s,mb5.3,SNR=16
RETA Reutte 84.57 43⇓*iP* P **11 57 11.1 +0.2**
comp=Z,14nm,1.1s,mb5.0,SNR=5.2
GRA1 Grafenberg Arr 84.77 41 *e*P P **11 57 12.0 +0.1**
comp=Z,17nm,1.0s,mb5.1
GRF Grafenberg Arr 84.77 41 *e*P P **11 57 12.0 +0.1**
GRF pmax pmax
comp=Z,17nm,1.0s,mb5.1
GRF Grafenberg Arr 84.77 41 *e*P P **11 57 12.0 +0.1**
GRF pmax pmax
comp=Z,17nm,1.0s,mb5.1
GRF Grafenberg Arr 84.77 41 *e*P P **11 57 12.0 +0.1**
comp=Z,17nm,1.0s,mb5.1
MOX Moxa 84.97 40 *e*P P **11 57 13.0 +0.1**
comp=Z,15nm,1.4s,mb4.9
MOX Moxa 84.97 40 *e*P P **11 57 13.0 +0.1**
MOX pmax pmax
comp=Z,15nm,1.4s,mb4.9
WERD Werda 85.43 40 *e*P P **11 57 15.3 +0.2**
comp=Z,23nm,1.4s,mb5.1
GUNZ Gunzen 85.45 40 *e*P P **11 57 15.6 +0.4**
comp=Z,5nm,1.5s,mb5.1
WERN Wernitzgruen 85.48 40 *e*P P **11 57 15.9 +0.5**
comp=Z,23nm,1.3s,mb5.2
TANN Tannenbergstha 85.53 40 *e*P P **11 57 16.0 +0.4**
comp=Z,30nm,1.3s,mb5.4
NKC Novy Kostel 85.53 40 *e*P P **11 57 16.5 +0.9**
NKC *e*pP pP 11 57 22.6 -0.6
ABTA Abfaltersbach 85.80 44⇑*iP* P **11 57 17.1 0.0**
comp=Z,23nm,0.9s,mb5.4,SNR=8.5
CLL Collm 85.81 39⇑*iP* P **11 57 17.4 +0.4**
CLL pmax pmax
comp=Z,23nm,1.2s,mb5.3
CLL Collm 85.81 39 *e*P P **11 57 17.2 +0.2**
comp=Z,23nm,1.2s,mb5.3

CLL	**Collm**	**85.81**	**39**	⇑	*i*	P	**P**	**11 57 17.4**	**+0.4**	
	comp=Z,23nm,1.2s,mb5.3									
CLL					*e*	pP	pP	11 57 23.0	-1.6	
WET	**Wettzell**	**85.88**	**41**		*e*	P	**P**	**11 57 17.8**	**+0.4**	
WET						pmax	pmax			
	comp=Z,39nm,1.2s,mb5.5									
WET	**Wettzell**	**85.88**	**41**		*e*	P	**P**	**11 57 17.8**	**+0.4**	
	comp=Z,39nm,1.2s,mb5.5									
RJOB	**Jochberg**	**85.93**	**43**		*e*	P	**P**	**11 57 17.7**	**0.0**	
	comp=Z,16nm,1.0s,mb5.2									
FBE	**Freiberg**	**86.06**	**39**		*e*	P	**P**	**11 57 18.6**	**+0.3**	
	comp=Z,19nm,0.9s,mb5.3									
RUE	**Ruedersdorf**	**86.20**	**38**		*e*	P	**P**	**11 57 19.1**	**+0.2**	
	comp=Z,26nm,0.6s,mb5.6									
KHC	**Kasperske Hory**	**86.34**	**41**		*c i*	P	**P**	**11 57 19.9**	**+0.2**	
KHC	**Kasperske Hory**	**86.34**	**41**		*e*	P	**P**	**11 57 20.1**	**+0.4**	
KBA	**Koelnbreinsper**	**86.35**	**43**	⇑	*i*	P	**P**	**11 57 19.9**	**+0.1**	
	comp=Z,28nm,1.2s,mb5.4,SNR=9.7									
BRG	**Berggiesshubel**	**86.44**	**39**		*e*	P	**P**	**11 57 20.4**	**+0.3**	
	comp=Z,19nm,1.0s,mb5.3									
GEC2	**GERESS Array S**	**86.44**	**41**		*e*	P	**P**	**11 57 20.3**	**+0.1**	
GEC2						pmax	pmax			
	comp=Z,27nm,1.1s,mb5.4									
GEC2	**GERESS Array S**	**86.44**	**41**		*e*	P	**P**	**11 57 20.3**	**+0.1**	
	comp=Z,27nm,1.1s,mb5.4									
GERES	**GERESS Array B**	**86.44**	**41**			P	**P**	**11 57 20.3**	**+0.1**	
	comp=Z,12nm,0.9s,mb5.1,baz=264,slow=3.6,SNR=59									
MYKA	**Terra Mystica**	**86.59**	**44**	⇑	*i*	P	**P**	**11 57 20.9**	**-0.1**	
	comp=Z,23nm,0.8s,mb5.5									
PVCC	**Panska Ves**	**86.86**	**40**		*e*	P	**P**	**11 57 22.7**	**+0.5**	
PRU	**Pruhonice**	**86.89**	**40**		*e*	P	**P**	**11 57 22.8**	**+0.4**	
PRU					*e*	pP	pP	11 57 29.1	-0.8	
MOA	**Molln**	**86.91**	**42**	⇑	*i*	P	**P**	**11 57 22.5**	**0.0**	
	comp=Z,15nm,0.9s,mb5.2,SNR=8.8									
SOKA	**Soboth**	**87.54**	**44**	⇑	*i*	P	**P**	**11 57 25.2**	**-0.3**	
	comp=Z,8.8nm,0.9s,mb5.0									
UPC	**Upice**	**87.78**	**40**		*e*	P	**P**	**11 57 27.5**	**+0.8**	
UPC					*e*	pP	pP	11 57 33.6	-0.6	
ARSA	**Arzberg**	**87.81**	**43**	⇓	*i*	P	**P**	**11 57 26.7**	**-0.2**	
	comp=Z,17nm,1.2s,mb5.1									
KSP	**Ksiaz**	**87.92**	**39**		*e*	P	**P**	**11 57 27.8**	**+0.5**	
CSNA	**Conrad Observa**	**87.96**	**42**	⇑	*i*	P	**P**	**11 57 28.0**	**+0.4**	
	comp=Z,11nm,0.8s,mb5.2									
CSNA	**Conrad Observa**	**87.96**	**42**	⇑	*i*	PcP	PcP	11 57 28.0	-1.4	
	comp=Z,11nm,0.8s									
CONA	**Conrad Observa**	**87.97**	**42**	⇓	*i*	P	**P**	**11 57 27.9**	**+0.3**	
	comp=Z,13nm,0.8s,mb5.2									
CONA	**Conrad Observa**	**87.97**	**42**	⇓	*i*	PcP	PcP	11 57 27.9	-1.5	
	comp=Z,13nm,0.8s									
DPC	**Dobruska-Polom**	**88.00**	**40**		*e*	P	**P**	**11 57 28.4**	**+0.7**	
DPC					*e*	pP	pP	11 57 35.0	-0.3	
VNA3	**Neumayer Olymp**	**88.45**	**163**		*e*	P	**P**	**11 57 29.2**	**-0.1**	
VNA3					*e*			11 57 41.2		
VNA3					*e*			11 57 44.2		
VNA1	**Neumayer--Stat**	**88.66**	**162**		*e*	P	**P**	**11 57 30.4**	**+0.1**	
VNA1					*e*			11 57 41.4		
VNA1					*e*			11 57 44.8		
ZST	**Bratislava**	**88.76**	**42**		*e*	P	**P**	**11 57 31.7**	**+0.3**	
ZST						pmax	pmax			
	comp=Z,7.0nm,0.7s,mb5.1									
ZST	**Bratislava**	**88.76**	**42**		*e*	P	**P**	**11 57 31.6**	**+0.2**	
ZST	**Bratislava**	**88.76**	**42**		*e*	P	**P**	**11 57 31.7**	**+0.3**	
	comp=Z,6.5nm,0.7s,mb5.1									
MODS	**Modra-Piesok**	**88.85**	**42**		*e*	P	**P**	**11 57 32.5**	**+0.7**	
MODS					*e*	pP	pP	11 57 38.9	-0.5	
VNA2	**Neumayer--Watz**	**89.02**	**162**		*e*	P	**P**	**11 57 32.2**	**+0.2**	
	baz=311,slow=5.4									
VNA2					*e*			11 57 43.6		
VNA2					*e*			11 57 47.0		
ARCES	**ARCESS Array B**	**89.12**	**20**			P	**P**	**11 57 31.9**	**-0.7**	
	comp=Z,8.9nm,0.7s,mb5.2,baz=289,slow=3.7,SNR=31									
ARCES	**ARCESS Array B**	**89.12**	**20**			P	**P**	**11 57 31.9**	**-0.7**	
OKC	**Ostrava-Krasne**	**89.23**	**40**		*e*	P	**P**	**11 57 33.6**	**+0.1**	
VYHS	**Vyhne**	**89.87**	**41**		*e*	P	**P**	**11 57 36.9**	**+0.4**	
OJC	**Ojcow**	**90.22**	**40**		*e*	P	**P**	**11 57 38.7**	**+0.6**	
SNAA	**Sanae**	**90.66**	**162**		*e*	P	**P**	**11 57 39.3**	**-0.3**	
SNAA					*e*			11 57 49.4		
SNAA					*e*			11 57 52.5		
SNAA	**Sanae**	**90.66**	**162**		*i*	P	**P**	**11 57 39.9**	**+0.3**	
STHS	**Stebnicka Huta**	**91.28**	**40**		*e*	P	**P**	**11 57 44.9**	**+1.8**	
STHS					*e*	pP	pP	11 57 51.4	+0.7	
STHS						pmax	pmax			
	comp=Z,10.0nm,1.8s,mb4.8									
STHS	**Stebnicka Huta**	**91.28**	**40**		*e*	P	**P**	**11 57 44.9**	**+1.8**	
	comp=Z,10nm,1.8s,mb4.9									
STHS					*e*		pP	11 57 51.4	+0.7	
CRVS	**Cervenica-Dubn**	**91.51**	**41**		*e*	P	**P**	**11 57 46.1**	**+1.9**	
BILL	**Bilibino**	**94.18**	**340**		*e*	P	**P**	**11 57 58.0**	**+1.9**	
BILL						pmax	pmax			
	comp=Z,9.0nm,1.2s,mb5.1									
TSUM	**Tsumeb**	**96.61**	**109**			LR	LR	12 37 50.1		
	comp=Z,220nm,20.5s,MS4.6,baz=324,slow=33									
OBN	**Obninsk**	**98.67**	**32**		*e*	P	**P**	**11 58 17.3**	**+0.6**	
OBN						pmax	pmax			
	comp=Z,5.0nm,0.9s,mb5.0									
ZALV	**Zalesovo Beam**	**118.65**	**12**			PKP	PKPdf	12 03 24.9	-0.6	
	comp=Z,0.5nm,0.3s,baz=272,slow=3.9,SNR=4.8									
ZALV	**Zalesovo Beam**	**118.65**	**12**			PKP	PKPdf	12 03 24.9	-0.6	
MDJ	**Mudanjiang**	**124.25**	**337**			PKP	PKPdf	12 03 36.6	0.0	
MDJ						PP	PP	12 05 20.8	+0.1	
MDJ						PS	PS	12 15 19.0	-1.0	
MDJ						SS	SS	12 22 11.3	+1.1	
MDJ						PP	PP			
	comp=Z,59nm,4.2s									
MDJ						LR	LR			
	comp=N,164nm,17.2s,MS4.9									
MDJ						LR	LR			
	comp=E,115nm,14.6s,MS4.9									
MDJ						LR	LR			
	comp=Z,228nm,19.8s									
MKAR	**Makanchi Array**	**124.65**	**17**			PKP	PKPdf	12 03 36.0	-1.3	
	comp=Z,1.0nm,0.8s,baz=0.0,slow=2.4,SNR=6.7									
MJAR	**Matsushiro Arr**	**126.28**	**324**			PKP	PKPdf	12 03 38.9	-1.8	
	comp=Z,0.4nm,0.4s,baz=209,slow=41,SNR=2.9									
CN2	**Changchun**	**126.48**	**339**		*e*	PKP	PKPdf	12 03 39.3	-1.6	
SONM	**Songino Array**	**126.50**	**357**			PKP	PKPdf	12 03 40.3	-0.5	
	comp=Z,1.8nm,0.8s,baz=342,slow=1.2,SNR=7.9									
WMQ	**Urumqi**	**128.83**	**14**		*e*	PKP	PKPdf	12 03 44.0	-1.4	
WMQ						PP	PP			
	comp=Z,107nm,6.4s									
WMQ						LR	LR			
	comp=Z,129nm,22.8s,MS4.6									
KSRS	**Korea Array**	**130.91**	**333**			PKP	PKPdf	12 03 48.9	-0.6	
	comp=Z,0.6nm,0.6s,baz=61,slow=26,SNR=6.4									
STKA	**Stephens Creek**	**135.24**	**230**		*e*	PKP	PKPdf	12 03 59.6	+1.8	
STKA	**Stephens Creek**	**135.24**	**230**			PKP	PKPdf	12 03 57.5	-0.2	
	comp=Z,2.9nm,0.5s,baz=269,slow=6.8,SNR=3.5									
NJ2	**Nanjing**	**139.29**	**339**		*e*	PKP	PKPdf	12 04 03.8	-1.5	
CD2	**Chengdu**	**143.50**	**358**		*e*	PKP	PKPdf	12 04 09.8	-3.1	
CD2						APKP		12 04 18.3		
CD2						XPKP		12 04 23.8		
CD2						PP	PP	12 07 24.4	+1.6	
CD2						PKS		12 07 44.3		
CD2						SKS	SKSdf	12 11 14.3	-7.2	
CD2						SKKS	SKKSac	12 14 09.3	-6.8	
CD2						PP	PP			
	comp=Z,120nm,10.2s									
CD2						LR	LR			
	comp=N,180nm,18.2s									
CD2						LR	LR			
	comp=Z,150nm,16.4s,MS4.8									
ASAR	**Alice Springs**	**144.99**	**236**			PKP	PKPdf	12 04 13.6	-2.0	
	comp=Z,5.3nm,0.8s,baz=118,slow=3.7,SNR=92									
FORT	**Forrest**	**145.47**	**221**		*e*	PKP	PKPdf	12 04 15.1	-1.2	
WB2	**Warramunga Arr**	**146.05**	**243**		*e*	PKP	PKPdf	12 04 16.8	-0.7	
WRAB	**Tennant Creek**	**146.05**	**243**		*i*	PKIKP	PKPdf	12 04 17.5	0.0	
WRA	**Warramunga Arr**	**146.06**	**243**			PKPbc	PKPbc	12 04 16.6	-1.8	
	comp=Z,4.0nm,0.6s,baz=104,slow=3.3,SNR=41									
HYB	**Hyderabad**	**146.93**	**45**		*i*	PKP	PKPab	12 04 22.0	-0.4	
HYB	**Hyderabad**	**146.93**	**45**		*e*	PKP	PKPdf	12 04 20.0	+0.9	
GYA	**Guiyang**	**147.70**	**353**		*e*	PKP	PKPdf	12 04 19.3	-0.9	
GYA						PKP2	PKPab	12 04 26.5	+1.4	
GYA						XPKP		12 04 30.8		
GYA						PP	PP	12 07 51.9	+4.1	
GYA						PKS		12 07 53.4		
GYA						SKS	SKSdf	12 11 23.8	-4.0	
GYA						SKKS	SKKSac	12 14 37.5	-2.5	
GYA						SS	SS	12 26 50.3	+0.3	
GYA						PP	PP			
	comp=Z,120nm,8.6s									
GYA						LR	LR			
	comp=N,180nm,24.8s,MS4.9									
GYA						LR	LR			
	comp=E,160nm,25.6s,MS4.9									
GYA						LR	LR			
	comp=Z,130nm,24.7s,MS4.6									
KMI	**Kunming**	**149.28**	**360**			PKP	PKPdf	12 04 24.6	+1.8	
MUN	**Mundaring**	**150.98**	**204**		*e*	PKP	PKPbc	12 04 30.4	-0.6	
FITZ	**Fitzroy Crossi**	**154.35**	**240**		*e*	PKP	PKPbc	12 04 36.6	-2.3	
CMAR	**Chiang Mai Arr**	**155.65**	**8**			PKP	PKPdf	12 04 31.2	-1.1	
	comp=Z,1.2nm,0.7s,baz=304,slow=2.5,SNR=8.3									
CMAR						PKPab	PKPab	12 04 57.3	-0.9	
	comp=Z,2.2nm,0.7s,baz=329,slow=5.5,SNR=8.2									

IDC ***22*** *12:20:10.1±0.9, 2.71N×9587E, h0km, mb4.2/11, mb1 4.3/12, mb1mx4.1/21, mbtmp4.2/12, ML4.5/1, MS3.9/5, Ms1 3.9/5, ms1mx3.6/21, Error ellipse: s-maj=34.6km s-min=15.5km az=55.0*

MOS ***22*** *12:20:12.6±1.2, 2.59N×9578E, h33km, mb5.0/12, Error ellipse: s-maj=22.6km s-min=8.9km az=99.3*

BJI ***22*** *12:20:13.1, 2.45N×9581E, h55km, mB5.0, mb4.8, Ms4.3, Msz4.0*

ISCJB ***22*** *12:20:14.4±1.4, 2.64N±008×9583E±008, h46km±11km, mb4.7/42, MS4.1/14, Error ellipse: s-maj=16.7km s-min=7.5km az=136.8*

NEIC ***22*** *12:20:15.6±0.5, 2.71N×9591E, h35km, mb4.5/7, Error ellipse: s-maj=14.5km s-min=6.5km az=55.0*

DJA ***22*** *12:20:23, 350N×9606E, h56km, MLv4.5/5*

ISC 22 12:20:17.8±1.5, 270N±008×9592E±009, h56km±12km, n78, σ0°96/78, mb4.7/42, MS4.1/14, 10C-4D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**2.16**	**130**	⇑	*e*	P	**Pn**	**12 20 47.0**	**-4.4**
TSI	**Tuntungan**	**2.76**	**73**			P	**Pn**	**12 20 59.9**	**+0.3**
	0.0nm,0.0s								
BSI	**Banda Aceh**	**2.85**	**348**			P	**Pn**	**12 20 56.1**	**-4.7**
	0.0nm,0.0s								
TRSI	**Tarutung**	**3.11**	**102**			P	**Pn**	**12 21 05.1**	**+0.7**
	0.0nm,0.0s								
IPM	**Ipoh**	**5.40**	**71**	⇓		P	**Pn**	**12 21 35.5**	**-0.2**
FRIM	**Kepong**	**5.73**	**84**	⇑		P	**Pn**	**12 21 40.2**	**0.0**
KGM	**Kluang**	**7.43**	**95**	⇑		P	**Pn**	**12 22 04.7**	**+1.0**
KTGM	**Kuala Trenggan**	**7.66**	**70**	⇑		P	**Pn**	**12 22 10.7**	**+3.9**
MYKOM	**Kota Tinggi**	**7.98**	**96**	⇑		P	**Pn**	**12 22 10.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**15.94**	**11**			Pn	**Pn**	**12 23 57.0**	**-1.5**
	0.7nm,0.3s,baz=201,slow=11,SNR=18								
CMAR						LR	LR	12 29 56.2	
	comp=Z,411nm,20.0s,baz=196,slow=37								
CMAR	**Chiang Mai Arr**	**15.94**	**11**		*i*	P	**Pn**	**12 23 59.5**	**+0.9**
CMAR						pmax	pmax		
	comp=Z,6.0nm,0.9s								
CHTO	**Chiang Mai**	**16.29**	**10**		*e*	P	**Pn**	**12 24 00.8**	**-2.2**
CHTO						pmax	pmax		
	comp=Z,8.0nm,0.8s								
CHTO	**Chiang Mai**	**16.29**	**10**		*e*	Pn	**Pn**	**12 24 00.8**	**-2.2**
	comp=Z,7.6nm,0.8s								
SBUM	**Sibu**	**16.29**	**90**	⇓		P	**Pn**	**12 24 01.6**	**-1.4**
KKM	**Kota Kinabalu**	**20.51**	**80**		*e*	P	**P**	**12 24 50.8**	**-0.7**
QIZ	**Qiongzhong**	**21.20**	**39**			P	**P**	**12 24 58.5**	**-0.3**
QIZ						LR	LR		
	comp=E,809nm,16.2s								
QIZ						LR	LR		
	comp=Z,469nm,18.7s,MS3.9								
SDKM	**Sandakan**	**21.42**	**81**	⇓		P	**P**	**12 25 02.4**	**+1.0**
MYLDM	**Lahad Datu**	**22.66**	**83**	⇑		P	**P**	**12 25 15.9**	**+1.3**
KMI	**Kunming**	**23.25**	**16**			P	**P**	**12 25 22.0**	**+1.5**
KMI						AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.1								
KMI						LR	LR		
	comp=N,769nm,11.3s								
KMI						LR	LR		
	comp=E,500nm,17.3s								
KMI						LR	LR		
	comp=Z,791nm,12.5s,MS4.4								
PCI	**Palu**	**24.18**	**98**			P	**P**	**12 25 29.8**	**+0.6**
	comp=Z,0.0nm,0.0s								
KAPI	**Kappang**	**25.02**	**108**			P	**P**	**12 25 37.2**	**+0.4**
	comp=Z,12nm,0.9s,mb4.4,baz=344,slow=6.7,SNR=4.3								
KAPI	**Kappang**	**25.02**	**108**			P	**P**	**12 25 37.2**	**+0.4**
ODAN	**Odare**	**25.38**	**342**		*e*	P	**P**	**12 25 41.1**	**+1.2**
RAMN	**Ramite**	**25.71**	**341**		*e*	P	**P**	**12 25 43.7**	**+0.7**
	comp=Z,46nm,0.5s,mb5.2								
TAPN	**Taplejung**	**25.74**	**343**		*e*	P	**P**	**12 25 44.1**	**+0.9**
	comp=Z,30nm,0.8s,mb4.9								
JIRN	**Jiri**	**26.51**	**340**		*e*	P	**P**	**12 25 50.6**	**+0.5**
	comp=Z,12nm,0.5s,mb4.7								
DMN	**Daman**	**26.84**	**338**		*e*	P	**P**	**12 25 53.2**	**+0.1**
	comp=Z,22nm,0.7s,mb4.8								
GUN	**Gumba**	**26.84**	**340**		*e*	P	**P**	**12 25 53.4**	**+0.3**
	comp=Z,85nm,0.7s,mb5.4								
KKN	**Kakani**	**26.94**	**339**		*e*	P	**P**	**12 25 54.0**	**0.0**
	comp=Z,56nm,0.8s,mb5.1								
LSA	**Lhasa**	**27.23**	**351**		*e*	P	**P**	**12 25 57.4**	**+0.8**
LSA						pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.4								
LSA	**Lhasa**	**27.23**	**351**		*e*	P	**P**	**12 25 57.4**	**+0.8**
	comp=Z,6.4nm,0.5s,mb4.4								
GKN	**Gorkha**	**27.37**	**338**		*e*	P	**P**	**12 25 57.9**	**0.0**
	comp=Z,36nm,0.7s,mb5.0								
KOLN	**Koldanda**	**27.57**	**336**		*e*	P	**P**	**12 25 59.8**	**+0.1**
	comp=Z,26nm,0.7s,mb5.0								
DANN	**Dangsing**	**28.02**	**337**		*e*	P	**P**	**12 26 04.1**	**+0.4**
	comp=Z,47nm,0.7s,mb5.2								
WHN	**Wuhan**	**32.73**	**30**			P	**P**	**12 26 47.0**	**+1.7**
WHN						LR	LR		
	comp=N,623nm,11.3s								
WHN						LR	LR		
	comp=E,840nm,19.4s								
WHN						LR	LR		
	comp=Z,820nm,13.1s,MS4.6								
XAN	**Xi'an**	**33.46**	**20**			P	**P**	**12 26 50.0**	**-1.6**
XAN						AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.5								
XAN						AMB	AMB		
	comp=Z,53nm,5.4s								
XAN						LR	LR		
	comp=N,188nm,15.7s,MS4.2								
XAN						LR	LR		
	comp=E,261nm,14.7s,MS4.2								
XAN						LR	LR		
	comp=Z,114nm,12.8s,MS3.8								
LZH	**Lanzhou**	**34.02**	**12**	⇑		P	**P**	**12 26 55.0**	**-1.5**
LZH						AMB	AMB		
	comp=Z,26nm,1.3s,mb5.0								
LZH						AMB	AMB		
	comp=Z,137nm,5.1s								
NJ2	**Nanjing**	**36.31**	**34**		*e*	P	**P**	**12 27 16.4**	**+0.2**
NJ2						AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9								
GTA	**Gaotai**	**36.72**	**5**		*e*	P	**P**	**12 27 18.5**	**-1.0**
GTA						XS	sS	12 33 27.3	+4.0
GTA						AMB	AMB		
	comp=Z,15nm,1.0s,mb4.8								
GTA						AMB	AMB		
	comp=Z,152nm,5.4s								
GTA						LR	LR		
	comp=N,189nm,15.0s,MS4.1								
GTA						LR	LR		
	comp=E,193nm,17.1s,MS4.1								
GTA						LR	LR		
	comp=Z,210nm,16.1s,MS4.0								
HHC	**Hu-ho-hao-te**	**40.52**	**18**		*e*	P	**P**	**12 27 52.6**	**+1.2**
HHC						S	**S**	**12 33 50.0**	**-6.6**
HHC						AMB	AMB		
	comp=Z,21nm,0.6s,mb4.9								
HHC						AMB	AMB		
	comp=Z,140nm,5.6s								
HHC						LR	LR		
	comp=N,458nm,14.4s,MS4.6								
HHC						LR	LR		
	comp=E,346nm,13.9s,MS4.6								
HHC						LR	LR		
	comp=Z,405nm,13.8s,MS4.4								
BJT	**Baijiatuau**	**41.44**	**24**		*e*	P	**P**	**12 27 59.9**	**+0.9**
BJT						pmax	pmax		
	comp=Z,32nm,0.8s								
BJT	**Baijiatuau**	**41.44**	**24**		*e*	P	**P**	**12 27 59.9**	**+0.9**
	comp=Z,32nm,0.8s,mb5.0								
BJI	**Beijing**	**41.46**	**24**			P	**P**	**12 27 59.6**	**+0.4**
BJI						AMB	AMB		
	comp=Z,33nm,0.9s,mb5.0								
BJI						LR	LR		
	comp=N,143nm,15.7s,MS4.2								
BJI						LR	LR		
	comp=E,230nm,18.8s,MS4.2								
BJI						LR	LR		
	comp=Z,67nm,28.5s								
WMQ	**Urumqi**	**41.59**	**351**		*e*	P	**P**	**12 28 00.9**	**+0.7**
WMQ						AMB	AMB		
	comp=Z,14nm,1.1s,mb4.5								
WMQ						AMB	AMB		
	comp=Z,123nm,5.8s								
WMQ						LR	LR		
	comp=N,215nm,21.6s,MS4.2								
WMQ						LR	LR		
	comp=E,326nm,21.3s,MS4.2								
WMQ						LR	LR		
	comp=Z,234nm,23.3s,MS4.0								
WRA	**Warramunga Arr**	**43.91**	**123**			P	**P**	**12 28 18.9**	**-0.4**
	comp=Z,1.1nm,0.4s,mb3.9,baz=301,slow=9.3,SNR=24								
WRA	**Warramunga Arr**	**43.91**	**123**		*i*	P	**P**	**12 28 18.8**	**-0.6**
WRA						pmax	pmax		
	comp=Z,1.0nm,0.4s								
WB2	**Warramunga Arr**	**43.92**	**123**		*e*	P	**P**	**12 28 19.3**	**-0.1**
TKM2	**Tokmak 2**	**43.96**	**338**		*e*	P	**P**	**12 28 20.7**	**+1.3**
TKM2						pmax	pmax		
	comp=Z,19nm,1.5s,mb4.6								
TKM2	**Tokmak 2**	**43.96**	**338**		*e*	P	**P**	**12 28 20.7**	**+1.4**
	comp=Z,19nm,1.5s,mb4.6								
EKS2	**Erkin-Say**	**44.43**	**337**		*e*	P	**P**	**12 28 23.9**	**+0.7**
	comp=Z,3.7nm,0.7s,mb4.2								
ASAR	**Alice Springs**	**45.32**	**127**			P	**P**	**12 28 30.3**	**-0.2**
	comp=Z,0.5nm,0.4s,mb3.7,baz=300,slow=7.7,SNR=24								
KSRS	**Korea Array**	**45.38**	**36**			P	**P**	**12 28 30.1**	**-0.7**
	comp=Z,1.7nm,0.7s,mb4.0,baz=218,slow=8.3,SNR=11								
KSRS						LR	LR	12 50 08.6	
	comp=Z,241nm,18.6s,MS4.2,baz=55,slow=40								
MK31	**Makanchi Array**	**45.49**	**347**		*e*	P	**P**	**12 28 31.2**	**-0.3**
MKAR	**Makanchi Array**	**45.49**	**347**			P	**P**	**12 28 31.1**	**-0.4**
	comp=Z,3.6nm,0.4s,mb4.5,baz=159,slow=8.4,SNR=32								
SONM	**Songino Array**	**45.87**	**10**			P	**P**	**12 28 34.2**	**-0.2**
	comp=Z,6.7nm,0.8s,mb4.6,baz=190,slow=8.9,SNR=29								
SONM						PcP	PcP	12 30 11.3	+0.5
	comp=Z,0.7nm,0.5s,baz=178,slow=5.0,SNR=3.4								
ULN	**Ulaanbaatar**	**46.01**	**10**		*e*	P	**P**	**12 28 35.5**	**-0.1**
ULN						pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5								
ULN	**Ulaanbaatar**	**46.01**	**10**		*e*	P	**P**	**12 28 35.5**	**0.0**
	comp=Z,4.6nm,0.8s,mb4.5								
HVS	**Khovu-Aksy**	**48.30**	**358**	⇓	*e*	P	**P**	**12 28 53.6**	**+0.2**
HVS						pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2								
KURK	**Kurchatov**	**50.03**	**346**	⇑	*e*	P	**P**	**12 29 07.7**	**+1.1**
KURK						MLR	MLR		
	comp=Z,100nm,15.0s,MS3.9								
KURK	**Kurchatov**	**50.03**	**346**		*e*	P	**P**	**12 29 06.3**	**-0.3**
	comp=Z,20nm,1.4s,mb5.0								
VLA	**Vladivostok**	**51.41**	**33**		*e*	P	**P**	**12 29 11.3**	**-5.8**
VLA						pmax	pmax		
	comp=Z,36nm,1.5s,mb5.1								
VLA						MLR	MLR		
	comp=Z,200nm,15.0s,MS4.3								
ZAA0	**Zalesovo Array**	**51.89**	**352**		*e*	P	**P**	**12 29 20.0**	**-0.5**
ZALV	**Zalesovo Beam**	**51.89**	**352**			P	**P**	**12 29 20.2**	**-0.3**
	comp=Z,8.1nm,0.6s,mb4.8,baz=180,slow=7.6,SNR=47								
ZALV						LR	LR	12 56 23.3	
	comp=Z,56nm,18.7s,MS3.6,baz=43,slow=42								
NVS	**Novosibirsk**	**53.00**	**351**		*e*	P	**P**	**12 29 27.2**	**-1.5**
STKA	**Stephens Creek**	**55.31**	**132**		*e*	P	**P**	**12 29 46.3**	**+0.4**
STKA	**Stephens Creek**	**55.31**	**132**			P	**P**	**12 29 45.8**	**-0.1**
	comp=Z,1.9nm,0.7s,mb4.2,baz=307,slow=10,SNR=4.3								
STKA						LR	LR	12 55 45.5	
	comp=Z,93nm,18.0s,MS3.9,baz=23,slow=39								
MAK	**Makhachkala**	**58.77**	**320**		*e*	P	**P**	**12 30 07.5**	**-2.7**
MAK					*e*			12 32 19.7	
MAK						pmax	pmax		
	comp=Z,515nm,2.0s								
MAK						MLR	MLR		
	comp=Z,199nm,9.0s					

PFB	Port Renfrew	0.96	301	⇓	P	Pn	13 03 34.7	-0.4	
PFB				⇑	S	Sn	13 03 47.0	-0.5	
HTW	Haystack Looko	1.01	105	⇓	P	Pn	13 03 35.1	-0.6	
MBW	Mount Baker	1.12	51	⇑	P	Pn	13 03 37.5	+0.2	
RMW	Rattlesnake Mo	1.13	123	⇑	P	Pn	13 03 37.0	-0.5	
RPW	Rockport	1.19	71	⇑	P	Pn	13 03 38.0	-0.3	
VDB	Vedder Mountai	1.20	37	⇓	P	Pn	13 03 38.4	0.0	
VDB				⇓	S	Sn	13 03 53.8	+0.4	
VDB	Vedder Mountai	1.20	37	⇑	P	Pn	13 03 38.2	-0.2	
GHW	Garrison Hill	1.22	148		P	Pn	13 03 38.0	-0.6	
NLLB	Nanaimo Lost L	1.26	336	⇓	P	Pn	13 03 38.9	-0.3	
NLLB				⇑	S	Sn	13 03 54.9	0.0	
HNB	Haney	1.27	19	⇓	P	Pn	13 03 39.3	0.0	
HNB				⇓	S	Sn	13 03 55.2	+0.2	
BIB	Bowen Island	1.33	357	⇓	P	Pn	13 03 40.3	+0.2	
BIB				⇓	S	Sn	13 03 56.5	-0.2	
MGB	Mount Grey	1.35	314	⇓	P	Pn	13 03 40.4	0.0	
MGB				⇑	S	Sn	13 03 57.3	+0.2	
BMSB	Bamfield Mari	1.49	301	⇑	P	Pn	13 03 43.0	+0.6	
BMSB				⇑	S	Sn	13 04 01.0	+0.4	
LMW	Ladd Mountain	1.54	156		P	Pn	13 03 42.8	-0.3	
FMW	Mount Fremont	1.55	137	⇑	P	Pn	13 03 42.9	-0.4	
WPB	Watts Point	1.58	360	⇑	P	Pn	13 03 43.5	-0.1	
WPB				⇑	S	Sn	13 04 02.8	0.0	
SHB	Sechelt	1.58	344	⇓	P	Pn	13 03 43.6	0.0	
SHB				⇓	S	Sn	13 04 03.1	+0.3	
ALB	Alberni	1.60	319	⇓	P	Pn	13 03 43.9	-0.1	
ALB				⇓	S	Sn	13 04 03.5	+0.1	
BMW	Boistfort Moun	1.61	180	⇑	P	Pn	13 03 43.7	-0.3	
LON	Longmire	1.64	144		P	Pn	13 03 43.9	-0.5	
OZB	Mount Ozzard	1.75	301	⇓	P	Pn	13 03 45.2	-0.9	
OZB				⇓	S	Sn	13 04 06.0	-1.2	
HOPB	Hope	1.77	41	⇓	P	Pn	13 03 46.2	0.0	
WPW	White Pass	1.79	140	⇑	P	Pn	13 03 46.7	+0.3	
TXB	Texada	1.81	334	⇑	P	Pn	13 03 47.0	+0.2	
TXB				⇓	S	Sn	13 04 07.0	-1.5	
TWW	Teanaway	1.84	120		P	Pn	13 03 48.0	+0.7	
TDL	Tradedollar La	1.86	158	⇑	P	Pn	13 03 47.4	0.0	
GLK	Glacier Lake	1.87	144		P	Pn	13 03 47.8	+0.2	
LTY	Liberty	1.90	115		P	Pn	13 03 48.1	0.0	
TBM	Table Mountain	1.99	116		P	Pn	13 03 49.8	+0.5	
ETW	Entiat	2.00	103	*e*	Pn	Pn	13 03 48.8	-0.5	
ETW				*e*	Sn	Sn	13 04 15.4	+2.3	
WSLR	Whistler	2.06	5	⇓	P	Pn	13 03 50.6	+0.5	
WSLR				⇑	S	Sn	13 04 15.6	+1.0	
BTB	Buttle Lake	2.07	313	⇓	P	Pn	13 03 50.5	+0.2	
BTB				⇑	S	Sn	13 04 16.5	+1.7	
CBB	Campbell River	2.41	325	⇓	P	Pn	13 03 55.1	0.0	
RSW	Rattlesnake Hi	2.99	123	*e*	Pn	Pn	13 04 05.6	+2.6	
RSW				*e*	Sn	Sn	13 04 44.9	+7.4	
HAWA	Hanford	3.02	123	*e*	Pn	Pn	13 04 03.8	+0.4	
OD2	Odessa Site #2	3.11	101	*e*	Pn	Pn	13 04 04.0	-0.7	
LNOR	Lincton Mounta	4.03	121	*e*	Pn	Pn	13 04 15.0	-2.3	

MAN 22 13:15:53, 1706N×12246E, h24km, mb3.7, ML2.4, MS1.9, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.04	279 ⇓	*e*P	Pb	13 15 57.9	+0.7
PALP				*e*S	Sb	13 16 03.3	+3.4
CAUP	Cauayan	0.62	260	*e*P	Pb	13 16 07.2	+1.9
APYP	Conner	1.41	305	*e*P	Pn	13 16 17.8	+0.6
APYP				*e*S	Sn	13 16 36.6	+1.5

*NEIC **22** 13:35:59.4±1.7, 1806S×178.13W, h540km±21km, mb4.9/9, Error ellipse: s-maj=20.8km s-min=8.5km az=169.0*
*ISCJB **22** 13:36:00.8±1.7, 182S±0.1×178.10W±006, h579km±24km, mb4.3/17, Error ellipse: s-maj=19.7km s-min=8.6km az=167.4*
*IDC **22** 13:36:05.0±2.0, 1838S×178.16W, h618km±27km, mb3.4/13, mb1 3.6/13, mb1mx3.5/19, mbtmp3.4/13, Error ellipse: s-maj=21.2km s-min=11.4km az=153.0*

ISC 22 13:36:01.8±1.5, 182S±01×17812W±006, h576km±21km, n63, σ0°88/35, mb4.3/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.01	252	*e*P	P	13 39 10.9	-0.2
URZ	Urewera	20.45	191	P	P	13 39 59.0	-1.5
	6.2nm,0.4s,baz=268,slow=3.1,SNR=14						
RPZ	Rata Peaks	27.06	197	P	P	13 40 57.0	-2.1
	10nm,0.9s,mb4.4,baz=17,slow=20,SNR=3.8						
PAE	Paea	27.15	93	*e*P	P	13 40 59.9	-0.4
	129nm,1.2s,mb5.4						
PPT	Papeete	27.16	93	*e*P	P	13 41 00.2	-0.2
	15nm,1.2s,mb4.5						
TIAR	Tiarei	27.39	93	*e*P	P	13 41 02.9	+0.6
	84nm,0.7s						
TVO	Taravao	27.45	94	*e*P	P	13 41 03.4	+0.5
	292nm,1.3s						
PMOR	Pomariorio Ree	29.12	88	*e*P	P	13 41 17.3	-0.2
	62nm,1.2s,mb5.1						
VAH	Vaihoa	29.34	89	*e*P	P	13 41 18.7	-0.6
	15nm,0.8s,mb4.7						
CNB	Canberra Magne	33.49	233	*e*P	P	13 41 55.8	+1.4
CTA	Charters Tower	33.67	261	*e*P	P	13 41 56.5	+0.3
CTA	Charters Tower	33.67	261	P	P	13 41 56.6	+0.5
	2.1nm,0.4s,mb4.2,baz=89,slow=10,SNR=4.9						
TOO	Toolangi	37.22	231	*e*P	P	13 42 26.8	+1.5
STKA	Stephens Creek	38.75	242	*e*P	P	13 42 38.9	+1.2
STKA	Stephens Creek	38.75	242	P	P	13 42 39.0	+1.2
	3.8nm,0.3s,mb4.4,baz=78,slow=9.7,SNR=37						
STKA	Stephens Creek	38.75	242	*e*P	P	13 42 38.5	+0.7
	5.4nm,0.5s,mb4.3						
RKT	Rikitea	40.57	105	*e*P	P	13 42 53.1	+0.6
	34nm,1.2s,mb4.7						
WB2	Warramunga Arr	44.84	260	*e*P	P	13 43 25.4	-0.4
WB2	Warramunga Arr	44.84	260	*e*P	P	13 43 25.2	-0.6
WRA	Warramunga Arr	44.85	260	P	P	13 43 25.8	-0.2
	3.4nm,0.4s,mb4.3,baz=95,slow=7.2,SNR=263						
WRA				PcP	PcP	13 44 54.8	-0.3
	0.4nm,0.3s,baz=94,slow=3.6,SNR=5.8						
WRA				S	S	13 49 17.1	-5.3
	1.3nm,0.9s,baz=98,slow=13,SNR=5.9						
ASAR	Alice Springs	44.99	254	P	P	13 43 27.1	+0.3
	6.3nm,0.3s,mb4.6,baz=90,slow=8.3,SNR=180						
ASAR				PcP	PcP	13 44 55.1	-0.4
	1.1nm,0.7s,baz=100,slow=4.0,SNR=6.8						
ASAR				S	S	13 49 22.2	-2.0
	4.8nm,0.9s,baz=88,slow=15,SNR=29						
FITZ	Fitzroy Crossi	53.26	261	*e*P	P	13 44 27.7	-0.1
MJAR	Matsushiro Arr	68.27	323	P	P	13 46 05.5	-0.5
	3.1nm,0.7s,mb3.8,baz=163,slow=5.8,SNR=6.7						
PETK	Petropavlovsk-	73.99	345	P	P	13 46 38.5	-0.5
	6.7nm,0.9s,mb4.2,baz=210,slow=4.8,SNR=5.3						
NVAR	Mina Array Bea	79.42	44	P	P	13 47 09.4	+0.5
	0.8nm,0.7s,baz=224,slow=8.8,SNR=4.2						
TRF	Thorofare Moun	84.20	12	*e*P	P	13 47 30.9	-1.8
	9.0nm,0.8s,mb4.3						
TXAR	Lajitas Array	85.90	58	P	P	13 47 43.2	+1.5
	1.0nm,0.7s,mb3.6,baz=215,slow=6.0,SNR=16						
DAWY	Dawson	87.26	16	*e*P	P	13 47 46.8	-0.5
PDAR	Pinedale Array	87.35	43	P	P	13 47 47.7	-0.5
	0.4nm,0.3s,mb3.6,baz=315,slow=0.2,SNR=4.5						
CMAR	Chiang Mai Arr	89.23	290	P	P	13 47 58.2	+0.7
	2.0nm,0.9s,mb4.0,baz=102,slow=2.7,SNR=9.7						
VNA3	Neumayer Olymp	90.47	176	*e*	P	13 48 02.3	0.0
VNA2	Neumayer--Watz	90.91	177	*e*	P	13 48 04.9	+0.6
	baz=199,slow=3.8						
SONM	Songino Array	93.92	319	P	P	13 48 19.1	+0.6
	0.2nm,0.4s,mb3.6,baz=103,slow=6.4,SNR=3.0						
ARCES	ARCESS Array B	126.61	350	PKP	PKPdf	13 53 58.8	-0.7
	4.5nm,1.1s,baz=62,slow=1.1,SNR=8.3						
STHS	Stebnicka Huta	145.13	338	*e*PKP	PKPdf	13 54 35.0	+0.8
STHS	Stebnicka Huta	145.13	338	*e*P	PKPdf	13 54 35.0	+0.8
KOLS	Kolonicke sedl	145.15	336	*e*PKP	PKPdf	13 54 34.9	+0.7
KOLS	Kolonicke sedl	145.15	336	*e*P	PKPdf	13 54 34.9	+0.7
CLL	Collm	145.77	348	*e*PKPbc	PKPbc	13 54 36.0	-0.9
	comp=Z,13nm,1.0s						
UPC	Upice	145.81	344	*e*PKP	PKPdf	13 54 36.8	+1.5
DPC	Dobruska-Polom	145.87	343	*e*PKP	PKPdf	13 54 37.1	+1.7
BRG	Berggiesshubel	145.98	346	*e*P	PKPdf	13 54 37.0	+1.4
	comp=Z,6.7nm,0.9s						
PRU	Pruhonice	146.66	345	*e*PKP	PKPbc	13 54 38.8	-0.6
VYHS	Vyhne	146.75	339	*e*PKP	PKPbc	13 54 39.3	-0.4
VYHS	Vyhne	146.75	339	*e*P	PKPbc	13 54 39.4	-0.3
NKC	Novy Kostel	146.90	348	*e*PKP	PKPbc	13 54 39.9	-0.2
MODS	Modra-Piesok	147.36	341	*e*PKP	PKPbc	13 54 41.0	-0.3
MODS	Modra-Piesok	147.36	341	*e*P	PKPbc	13 54 41.0	-0.3
GRA1	Grafenberg Arr	147.66	349	*e*PKP	PKPbc	13 54 40.8	-1.2
GRF	Grafenberg Arr	147.66	349	*e*PKP	PKPbc	13 54 40.8	-1.2
KHC	Kasperske Hory	147.69	346	*e*PKP	PKPbc	13 54 41.8	-0.3
GERES	GERESS Array B	147.93	345	PKPbc	PKPbc	13 54 42.3	-0.4
	comp=Z,2.1nm,0.7s,baz=29,slow=3.0,SNR=20						
BAIF	Baives	148.13	357	*e*PKP1	PKPbc	13 54 42.9	-0.3
FLN	La Foliniere	149.42	3	*e*PKP1	PKPbc	13 54 45.6	-0.8
	comp=Z,8.2nm,0.7s						
CDF	Champ du Feu	149.51	353	*e*PKP1	PKPbc	13 54 46.1	-0.5
	comp=Z,12nm,0.9s						
SGMF	Saint Gilles	149.77	6	*e*PKP1	PKPbc	13 54 46.3	-0.9
	comp=Z,9.9nm,0.9s						
HAU	Haudompre	150.01	354	*e*PKP1	PKPbc	13 54 47.2	-0.6
QUIF	Quistinic	150.04	7	*e*PKP1	PKPbc	13 54 46.8	-1.1
HINF	Hinteralfeld	150.15	353	*e*PKP1	PKPbc	13 54 47.4	-0.7
LOR	Lormes	150.93	357	*e*PKP1	PKPbc	13 54 49.3	-0.7
SSF	Saint Saulge	151.15	358	*e*PKP1	PKPbc	13 54 50.0	-0.5
	comp=Z,10nm,1.0s						
CABF	La Chapelle	151.42	354	*e*PKP1	PKPbc	13 54 51.1	0.0
	comp=Z,18nm,1.2s						
SMF	Signal de Mont	151.55	357	*e*PKP1	PKPbc	13 54 50.6	-0.8

*MOS **22** 14:02:28.2±0.9, 186N×12274E, h421km, mb4.4/11, Error ellipse: s-maj=23.4km s-min=8.2km az=110.1*
*BJI **22** 14:02:28.0, 180N×12270E, h430km, mB4.5, mb4.4*
*ISCJB **22** 14:02:30.0±0.5, 184N±003×12277E±005, h440km±5km, mb4.2/34, Error ellipse: s-maj=8.7km s-min=5.1km az=165.0*
*NEIC **22** 14:02:30.3±0.9, 183N×12271E, h430km±11km, mb4.3/11, Error ellipse: s-maj=14.4km s-min=5.3km az=72.0*
*IDC **22** 14:02:30.8±0.6, 180N×12269E, h434km±7km, mb3.5/13, mb1 3.6/16, mb1mx3.6/21, mbtmp3.6/16, Error ellipse: s-maj=17.0km s-min=6.6km az=76.0*
*DJA **22** 14:02:44, 078N×12161E, h396km, MLv4.2/4*

ISC 22 14:02:31.4±0.5, 183N±003×12275E±005, h440km±6km, n90, σ0°95/93, mb4.2/34, 6C-11D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	Manado	2.12	100	P	P	14 03 33.5	+1.8
	0.0nm,0.0s						
PCI	Palu	3.98	227	P	P	14 03 42.9	-2.9
	0.0nm,0.0s						
LBMI	Labuha	5.34	117	P	P	14 03 58.8	+0.1
	107nm,0.5s						
MYLDM	Lahad Datu	5.40	308	⇓P	P	14 04 00.3	+1.1
TSM	Tawau	5.46	297	⇑P	P	14 03 58.0	-1.8
KDI	Kendari	5.75	181	P	P	14 04 02.0	-0.8
	341nm,1.0s						
SDKM	Sandakan	6.72	304	⇓P	P	14 04 12.1	-0.8
KAPI	Kappang	7.43	204	P	P	14 04 18.9	-1.7
	3.9nm,0.3s,baz=43,slow=4.5,SNR=18						
KAPI				S	S	14 05 46.5	-3.4
	0.4nm,0.3s,baz=26,slow=21,SNR=7.0						
KKM	Kota Kinabalu	7.75	303	⇓P	P	14 04 23.3	-0.7
KKM	Kota Kinabalu	7.75	303	*e*P	P	14 04 22.0	-2.0
BBKI	Banjar Baru	9.50	236	P	P	14 04 44.1	+1.0
	89nm,0.9s						
BTM	Bintulu	9.76	278	⇓P	P	14 04 46.7	+0.8
SBUM	Sibu	10.54	274	⇓P	P	14 04 54.9	+0.3
STKI	Sintang	11.41	261	P	P	14 05 03.9	-0.2
	60nm,0.2s						
BATI	Baumata	11.99	176	P	P	14 05 13.1	+2.8
	32nm,0.7s						
BATI	Baumata	11.99	176	P	P	14 05 10.9	+0.5
	6.6nm,0.3s,baz=242,slow=0.9,SNR=14						
BATI				S	S	14 07 23.1	+1.6
	10.0nm,0.3s,baz=132,slow=21,SNR=12						
MTNI	Mataram	12.29	212	P	P	14 05 14.2	+0.5
	107nm,0.9s						
KHKI	Kahang-Kahang	12.38	215	P	P	14 05 14.6	0.0
	116nm,1.0s						
KSM	Kuching	12.45	269	⇓P	P	14 05 15.4	+0.1
IGBI	Denpasar	13.01	216	P	P	14 05 22.3	+0.8
	422nm,0.8s						
SJI	Sawahan	14.50	229	P	P	14 05 37.6	0.0
	55nm,0.8s						
LEM	Lembang	17.38	240	P	P	14 06 09.3	+1.1
	109nm,0.8s						
CBJI	Citeko	17.87	243	P	P	14 06 14.2	+0.9
	298nm,1.0s						
DBJI	Dramaga	18.02	242	P	P	14 06 15.8	+1.0
	93nm,0.9s						
MYKOM	Kota Tinggi	18.89	270	⇑P	P	14 06 22.6	-0.9
KGM	Kluang	19.43	271	⇑P	P	14 06 28.3	-0.1
KTGM	Kuala Trenggan	19.89	281	⇓P	P	14 06 33.4	+0.9
FITZ	Fitzroy Crossi	20.01	172	*e*P	P	14 06 33.0	-0.5
FITZ	Fitzroy Crossi	20.01	172	P	P	14 06 33.0	-0.6
	0.9nm,0.3s,baz=10,slow=9.5,SNR=35						
QIZ	Qiongzhong	21.27	324	*e*P	P	14 06 45.4	+0.3
	12nm,0.7s,mb4.5						
MBWA	Marble Bar	23.04	187	*e*P	P	14 06 59.6	-1.4
	3.1nm,0.5s,mb4.0						
WRAB	Tennant Creek	24.44	153	⇑*e*P	P	14 07 13.1	-0.5
WRA	Warramunga Arr	24.44	153	P	P	14 07 12.9	-0.7
	2.1nm,0.5s,mb3.9,baz=335,slow=9.6,SNR=55						
WRA				pP		14 08 22.7	
	3.0nm,0.8s,baz=336,slow=12,SNR=6.8						
WRA				sP	sP	14 09 19.7	-0.3
	1.4nm,0.5s,baz=338,slow=10,SNR=3.5						
WRA				S	S	14 11 01.4	0.0
	0.9nm,0.7s,baz=334,slow=17,SNR=4.0						
WRA				ScP	ScP	14 13 35.7	+0.6
	2.9nm,0.8s,baz=342,slow=3.1,SNR=17						
WRA	Warramunga Arr	24.44	153	P	P	14 07 12.9	-0.7
WRA				S	S	14 11 01.4	0.0
WB2	Warramunga Arr	24.45	153	*e*P	P	14 07 13.1	-0.5
WB2	Warramunga Arr	24.45	153	*e*P	P	14 07 13.0	-0.7
ASAR	Alice Springs	27.57	157	P	P	14 07 41.3	+0.1
	0.5nm,0.3s,mb3.3,baz=334,slow=8.8,SNR=28						
ASAR				pP		14 08 56.5	
	3.1nm,0.9s,baz=344,slow=9.7,SNR=11						
ASAR				sP	sP	14 09 49.1	-0.9
	1.4nm,0.8s,baz=348,slow=14,SNR=3.7						
ASAR				PcP	PcP	14 10 44.3	-1.4
	0.3nm,0.3s,baz=339,slow=2.1,SNR=4.2						
ASAR				S	S	14 11 50.9	+0.4
	2.0nm,1.1s,baz=344,slow=23,SNR=6.8						
ASAR				ScP	ScP	14 13 45.5	+1.3
	2.4nm,0.7s,baz=340,slow=2.9,SNR=21						
ASAR	Alice Springs	27.57	157	P	P	14 07 41.3	+0.1
ASAR				*SP	sP	14 09 49.2	-0.8
ASAR						14 10 44.3	
ASAR				S	S	14 11 50.9	+0.4
CMAR	Chiang Mai Arr	28.61	307	P	P	14 07 49.9	-0.6
	1.1nm,0.6s,mb3.4,baz=131,slow=8.0,SNR=9.5						
CMAR				PcP	PcP	14 10 47.2	-1.2
	0.6nm,0.5s,baz=182,slow=2.3,SNR=6.1						
CMAR				ScP	ScP	14 13 47.7	+0.1
	0.7nm,0.7s,baz=184,slow=1.9,SNR=5.6						
CMAR	Chiang Mai Arr	28.61	307	P	P	14 07 49.9	-0.6
CMAR						14 10 47.3	
CHTO	Chiang Mai	28.80	307	*e*P	P	14 07 51.7	-0.5
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.8						
CHTO	Chiang Mai	28.80	307	*e*P	P	14 07 51.6	-0.5
	comp=Z,5.4nm,0.9s,mb3.9						
FORT	Forrest	32.82	172	*e*P	P	14 08 26.7	-0.1
KLBR	Kellerberrin	33.57	188	*e*P	P	14 08 32.5	-0.7
MUN	Mundaring	34.19	190	*e*P	P	14 08 38.1	-0.3
XAN	Xi'an	34.56	340	P	P	14 08 41.8	+0.3
XAN				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.0						
XAN				AMB	AMB		
	comp=Z,43nm,4.7s						
NWAO	Narrogin (SRO)	34.96	188	P	P	14 08 44.9	0.0
	comp=Z,6.4nm,0.6s,mb4.1,baz=21,slow=6.8,SNR=9.0						
KSRS	Korea Array	35.77	7	P	P	14 08 52.0	+0.4
	comp=Z,2.5nm,0.6s,mb3.7,baz=188,slow=9.1,SNR=14						
MJAR	Matsushiro Arr	37.38	21	P	P	14 09 03.9	-1.1
	comp=Z,2.2nm,0.5s,mb3.7,baz=194,slow=9.1,SNR=9.9						
MJAR	Matsushiro Arr	37.38	21	P	P	14 09 03.9	-1.1
STKA	Stephens Creek	37.99	153	*e*P	P	14 09 11.1	+1.0
STKA	Stephens Creek	37.99	153	P	P	14 09 11.1	+1.0
	comp=Z,4.9nm,0.6s,mb4.0,baz=321,slow=8.2,SNR=12						
LZH	Lanzhou	38.33	335	*e*P	P	14 09 14.5	+1.7
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.2						
LZH				AMB	AMB		
	comp=Z,85nm,4.3s						
BJI	Beijing	38.50	352	P	P	14 09 14.4	+0.2
BJI				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.6						
LSA	Lhasa	40.86	316	*e*P	P	14 09 34.4	+0.9
LSA				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.4						
LSA	Lhasa	40.86	316	*e*P	P	14 09 34.4	+0.8
	comp=Z,10nm,0.6s,mb4.3						
GTA	Gaotai	42.85	334	*e*P	P	14 09 50.1	+0.9
GTA				AMB	AMB		
	comp=Z,17nm,0.7s,mb4.5						
MDJ	Mudanjiang	43.03	7	*e*P	P	14 09 50.5	0.0
	comp=Z,17nm,0.8s,mb4.4						
HIA	Hailar	47.33	357	*e*P	P	14 10 23.4	-0.2
HIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HIA	Hailar	47.33	357	*e*P	P	14 10 23.4	-0.2
	comp=Z,7.8nm,0.9s,mb4.0						
ULN	Ulaanbaatar	47.83	346	*c* *i*P	P	14 10 27.9	+0.5
ULN	Ulaanbaatar	47.83	346	*e*P	P	14 10 27.5	+0.1
	comp=Z,12nm,0.8s,mb4.3						
SONM	Songino Array	47.97	345	P	P	14 10 29.1	+0.6
	comp=Z,9.1nm,0.7s,mb4.2,baz=163,slow=8.5,SNR=58						
ZAK	Zakamensk	51.12	344	*e*P	P	14 10 51.3	-0.6
TLY	Talaya	52.21	345	⇓*e*P	P	14 11 00.4	+0.7
TLY				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb3.9						
MOY	Mondy	52.92	343	*e*P	P	14 11 06.0	+1.1
HVS	Khovu-Aksy	54.89	338	⇓*e*P	P	14 11 19.6	+0.7
HVS				pmax	pmax		
	comp=Z,123nm,1.6s,mb4.9						
BOD	Bodaibo	56.26	354	*e*P	P	14 11 28.2	-0.1
BOD				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
MK31	Makanchi Array	56.94	328	*e*P	P	14 11 33.3	0.0
MKAR	Makanchi Array	56.94	328	P	P	14 11 33.7	+0.4
	comp=Z,14nm,0.5s,mb4.6,baz=121,slow=8.8,SNR=172						
TKM2	Tokmak 2	58.62	321	*e*P	P	14 11 45.1	+0.2
TKM2				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.4						
TKM2	Tokmak 2	58.62	321	*e*P	P	14 11 45.1	+0.2
	comp=Z,11nm,0.6s,mb4.4						
PETK	Petropavlovsk-	58.72	24	P	P	14 11 46.1	+0.7
	comp=Z,1.8nm,0.6s,mb3.6,baz=138,slow=0.9,SNR=10						
UCH	Uchtor	58.96	320	*e*P	P	14 11 48.5	+1.4
	comp=Z,3.8nm,0.6s,mb3.9						
KRAR	Krasnoyarsk	59.14	341	*i*P	P	14 11 49.7	+1.6
YAK	Yakutsk	60.28	4	*e*P	P	14 11 55.0	-0.7
YAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
ZAA0	Zalesovo Array	60.56	335	*e*P	P	14 11 55.8	-1.9
ZALV	Zalesovo Beam	60.56	335	P	P	14 11 56.6	-1.0
	comp=Z,3.7nm,0.5s,mb4.0,baz=117,slow=5.3,SNR=23						
KURK	Kurchatov	61.28	330	*d*P	P	14 12 02.4	-0.1
KURK				pmax	pmax		
	comp=Z,47nm,1.0s,mb4.9						
KURK	Kurchatov	61.28	330	*e*P	P	14 12 02.0	-0.6
	comp=Z,36nm,0.7s,mb4.9						
NVS	Novosibirsk	61.85	335	*i*P	P	14 12 03.8	-2.3
SVE	Sverdlovsk	73.53	330	*e*P	P	14 13 17.6	-0.4
SVE				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.7						
ARU	Arti	74.45	329	*d* *i*P	P	14 13 22.2	-1.0
ARU				*e*		14 16 16.3	
ARU				*e*S	S	14 22 21.2	-0.3
ARU				*e*SS	SS	14 27 22.6	+3.4
ARU				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.4						
ARU	Arti	74.45	329	*e*P	P	14 13 21.2	-2.1
	comp=Z,14nm,1.2s,mb4.5						
MAW	Mawson	80.62	200	P	P	14 13 57.0	+0.3
	comp=Z,0.9nm,0.4s,mb3.9,baz=85,slow=8.3,SNR=10						
OBN	Obninsk	86.32	325	⇑*e*P	P	14 14 25.3	-0.2
OBN				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.6						
ARCES	ARCESS Array B	90.84	340	P	P	14 14 44.8	-1.5
	comp=Z,1.6nm,0.7s,mb4.0,baz=78,slow=7.9,SNR=7.2						
TORD	Torodi Ar. Bea	119.68	286	PKP	PKPdf	14 20 30.6	-0.9
	comp=Z,0.5nm,0.5s,baz=81,slow=1.5,SNR=6.0						
TXAR	Lajitas Array	125.89	51	PKP	PKPdf	14 20 43.5	+0.5
	comp=Z,0.5nm,1.0s,baz=355,slow=1.4,SN

	comp=N,74nm,19.1s,baz=335,slow=40							
PETK	**Petropavlovsk-**	**11.97**	**31**	P		**Pn**	**14 40 39.3**	**-2.5**
	comp=N,0.2nm,0.3s,baz=198,slow=9.9,SNR=8.1							
KSRS	**Korea Array**	**15.99**	**255**	LR		LR	14 47 18.1	
	comp=N,37nm,20.7s,baz=55,slow=35							
YAK	**Yakutsk**	**21.55**	**337**	*i* P		**P**	**14 42 41.6**	**+3.0**
YAK				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.2							
ULN	**Ulaanbaatar**	**28.45**	**294**	*c i* P		**P**	**14 43 44.5**	**+0.9**
ULN	**Ulaanbaatar**	**28.45**	**294**	*e* Pn		**P**	**14 43 44.3**	**+0.7**
	comp=Z,3.4nm,0.8s,mb4.0							
SONM	**Songino Array**	**28.89**	**294**	P		**P**	**14 43 48.7**	**+1.1**
	comp=Z,2.7nm,0.5s,mb4.2,baz=86,slow=8.4,SNR=26							
SONM				LR		LR	14 56 35.3	
	comp=Z,54nm,19.7s,MS3.2,baz=253,slow=39							
SONM	**Songino Array**	**28.89**	**294**	P		**P**	**14 43 48.7**	**+1.1**
SONM				pmax	pmax			
	comp=Z,3.0nm,0.5s							
SONM				MLR		MLR		
	comp=Z,54nm,19.7s							
ZALV	**Zalesovo Beam**	**41.49**	**308**	P		**P**	**14 45 36.0**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.5,baz=60,slow=8.8,SNR=4.2							
ZALV	**Zalesovo Beam**	**41.49**	**308**	P		**P**	**14 45 36.0**	**+0.4**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.6							
MK31	**Makanchi Array**	**45.03**	**298**	*e* P		**P**	**14 46 04.8**	**+0.6**
MKAR	**Makanchi Array**	**45.03**	**298**	P		**P**	**14 46 04.8**	**+0.5**
	comp=Z,2.4nm,0.5s,mb4.3,baz=81,slow=8.8,SNR=21							
MKAR				LR		LR	15 05 29.9	
	comp=Z,30nm,18.5s,MS3.3,baz=358,slow=37							
MKAR	**Makanchi Array**	**45.03**	**298**	*i* P		**P**	**14 46 04.8**	**+0.6**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.5s							
MKAR	**Makanchi Array**	**45.03**	**298**	P		**P**	**14 46 04.8**	**+0.5**
MKAR				LR		LR	15 05 29.9	
KURK	**Kurchatov**	**46.01**	**304**	⇓ *e* P		**P**	**14 46 12.2**	**+0.3**
KURK				pmax	pmax			
	comp=Z,8.0nm,1.6s,mb4.4							
HYT	**Haines Junctio**	**46.54**	**41**	*e* P		**P**	**14 46 17.0**	**+1.1**
BRVK	**Borovoye**	**50.06**	**310**	*e* P		**P**	**14 46 43.2**	**+0.1**
KEV	**Kevo**	**59.27**	**340**	*e* p		**P**	**14 47 48.4**	**-1.1**
	comp=Z,2.1nm,0.5s,mb4.4							
KEV	**Kevo**	**59.27**	**340**	*e* P		**P**	**14 47 48.4**	**-1.1**
KEV				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4							
ARCES	**ARCESS Array B**	**59.80**	**340**	P		**P**	**14 47 53.0**	**-0.1**
	comp=Z,1.2nm,0.4s,mb4.3,baz=49,slow=8.0,SNR=16							
ARCES	**ARCESS Array B**	**59.80**	**340**	P		**P**	**14 47 53.0**	**-0.1**
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.4s							
JOF	**Joensuu**	**62.64**	**332**	*e* p		**P**	**14 48 11.4**	**-1.1**
	comp=Z,3.6nm,0.5s,mb4.8							
JOF	**Joensuu**	**62.64**	**332**	*e* P		**P**	**14 48 11.4**	**-1.1**
JOF				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.8							
WRA	**Warramunga Array**	**64.03**	**194**	P		**P**	**14 48 21.1**	**-1.0**
	comp=Z,1.0nm,0.9s,mb3.9,baz=9.7,slow=6.6,SNR=7.6							
WRA	**Warramunga Array**	**64.03**	**194**	*i* P		**P**	**14 48 21.1**	**-1.0**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.9s							
FINES	**FINESS Array B**	**65.43**	**333**	*e* P		**P**	**14 48 29.1**	**-1.7**
OBN	**Obninsk**	**65.86**	**324**	*e* P		**P**	**14 48 31.0**	**-2.6**
OBN				pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.5							
NVAR	**Mina Array Bea**	**67.64**	**58**	P		**P**	**14 48 46.0**	**+0.8**
	comp=Z,1.4nm,0.7s,mb4.1,baz=290,slow=8.4,SNR=8.1							
ASAR	**Alice Springs**	**67.75**	**193**	P		**P**	**14 48 46.8**	**+0.9**
	comp=Z,0.2nm,0.5s,mb3.4,baz=6.5,slow=5.9,SNR=5.5							
PDAR	**Pinedale Array**	**70.04**	**50**	P		**P**	**14 48 59.8**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=290,slow=1.7,SNR=4.5							
NB2	**NORSAR Subarra**	**70.16**	**339**	P		**P**	**14 49 00.0**	**-0.5**
	comp=Z,1.8nm,0.6s,mb4.2,baz=31,slow=6.2							
NOA	**NORSAR Array B**	**70.16**	**339**	P		**P**	**14 49 00.4**	**-0.1**
	comp=Z,3.0nm,0.8s,mb4.3,baz=32,slow=6.2,SNR=7.6							
NOA	**NORSAR Array B**	**70.16**	**339**	P		**P**	**14 49 00.4**	**-0.1**
NOA				pmax	pmax			
	comp=Z,3.0nm,0.8s							
MSU	**Marysvale**	**71.30**	**55**	*e* P		**P**	**14 49 11.0**	**+3.1**
AKASG	**Malin Array Be**	**72.13**	**324**	P		**P**	**14 49 11.6**	**-1.0**
	comp=Z,1.9nm,0.6s,mb4.2,baz=39,slow=5.7,SNR=5.3							
AKASG	**Malin Array Be**	**72.13**	**324**	*i* P		**P**	**14 49 11.6**	**-1.0**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.6s							
GERES	**GERESS Array B**	**79.71**	**331**	P		**P**	**14 49 54.9**	**-1.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=26,slow=6.9,SNR=3.4							
TXAR	**Lajitas Array**	**82.72**	**56**	P		**P**	**14 50 12.2**	**0.0**
	comp=Z,1.2nm,0.6s,mb4.1,baz=299,slow=4.0,SNR=18							
TXAR	**Lajitas Array**	**82.72**	**56**	P		**P**	**14 50 12.2**	**0.0**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							

*NEIC **22** 14:39:53.8, 1705N×9448W, h137km, MD3.9(MEX), After MEX.*

MEX 22 14:39:53.8±0.6, 1705N×9448W, h137km±11km, MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TGIG		**1.32**	**102**	*i* P		Pn	14 40 19.1	-1.4
TGIG				*i* S		Sn	14 40 39.0	-1.9
SCX	**San Cristobal**	**1.79**	**100**	*i* P		Pn	14 40 33.0	+7.3
SCX				*i* S		Sn	14 40 48.2	-1.9
HUIG	**Huatulco**	**2.02**	**231**	*i* P		Pn	14 40 25.1	-3.3
HUIG				*i* S		Sn	14 40 53.1	-1.9
VHO	**Vista Hermosa**	**2.16**	**271**	*i* P		Pn	14 40 28.9	-1.1
VHO				*i* S		Sn	14 40 56.7	-1.2
CCIG	**Comitan**	**2.37**	**109**	*e* P		Pn	14 40 31.8	-0.9
CCIG				*i* S		Sn	14 41 01.5	-1.1

KRSC 22 14:41:32.4±1.7, 5476N×15856E, h336km±65km, ML3.9, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GNL	**Ganaly**	**1.13**	**199**	P		Pn	14 42 18.0	+0.8
KMNR	**Kamenistaya**	**1.39**	**43**	P		Pn	14 42 19.3	+1.0
AVH	**Avacha**	**1.50**	**176**	P		Pn	14 42 21.3	+2.1
NLC	**Nalytchevo**	**1.66**	**163**	P		Pn	14 42 21.4	+1.3
NLC				*i* S		S	14 42 57.2	-1.1
SPN	**Mys Shipunski**	**1.88**	**152**	P		Pn	14 42 22.7	+1.2
SPN				*i* S		S	14 42 59.2	-1.7
RUS	**Russkaya**	**2.33**	**181**	P		Pn	14 42 26.0	+1.1
RUS				*i* S		S	14 43 05.4	-1.7
MIPR	**Malaya Ipel'ka**	**2.71**	**204**	P		Pn	14 42 27.6	-0.5
KBTR	**Krutoberegovo**	**2.83**	**57**	P		Pn	14 42 29.2	+0.3

IDC 22 15:01:09.1±2.3, 085N×12607E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/16, mbtmp3.1/3, MS3.6/1, Ms1 3.6/1, ms1mx2.7/12, Error ellipse: s-maj=231.6km s-min=26.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.20**	**159**	P		P	15 06 06.1	-1.0
	0.1nm,0.5s,baz=337,slow=11,SNR=4.4							
ASAR	**Alice Springs**	**25.53**	**163**	P		P	15 06 40.6	+1.0
	0.2nm,0.4s,baz=345,slow=12,SNR=4.9							
JHJ	**Hachijo jima 2**	**34.59**	**21**	LR		LR	15 20 21.5	
	comp=Z,94nm,18.5s,baz=278,slow=33							
MKAR	**Makanchi Array**	**59.55**	**327**	P		P	15 11 14.4	0.0
	0.4nm,0.5s,baz=121,slow=7.4,SNR=6.1							

*ISCJB **22** 15:04:19.1±0.6, 4133N×14037E, h152km±4km, mb3.5/3, Error ellipse: s-maj=9.9km s-min=6.2km az=9.8*
*MOS **22** 15:04:19.4±0.1, 4138N×14045E, h174km, mb4.0/1, Error ellipse: s-maj=86.6km s-min=29.0km az=76.2*
*IDC **22** 15:04:20.3±1.5, 4136N×14062E, h160km±21km, mb3.2/3, mb1 3.3/5, mb1mx3.1/22, mbtmp3.1/5, Error ellipse: s-maj=35.0km s-min=18.4km az=101.0*
*JMA **22** 15:04:20.4±0.1, 4134N×14037E, h146km±1km, M3.2*

ISC 22 15:04:20.1±0.6, 4133N×14037E, h149km±4km, n24, σ0§53/34, mb3.5/3, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JSR	**Shiriuchi**	**0.20**	**9**	P		**Pn**	**15 04 40.1**	**-0.1**
JSR				*e* S		**Sn**	**15 04 55.0**	**-0.6**
JSI2	**Shiura 2**	**0.28**	**174**	P		**Pn**	**15 04 40.5**	**+0.1**
JSI2				*e* S		**Sn**	**15 04 55.6**	**-0.2**
JOT	**Ohata**	**0.51**	**84**	P		**Pn**	**15 04 41.4**	**+0.1**
JOT				*e* S		**Sn**	**15 04 57.8**	**+0.4**
JKB	**Kayabe**	**0.74**	**41**	P		**Pn**	**15 04 43.0**	**+0.3**
JKB				*e* S		**Sn**	**15 04 59.9**	**-0.1**
JTM	**Tenmabayashi**	**0.76**	**136**	P		**Pn**	**15 04 43.0**	**+0.2**
JTM				*e* S		**Sn**	**15 04 59.8**	**-0.3**
JYM2	**Yakumo 2**	**0.79**	**360**	P		**Pn**	**15 04 43.2**	**+0.2**
JYM2				*e* S		**Sn**	**15 05 00.8**	**+0.2**
JIW	**Iwasaki**	**0.79**	**201**	P		**Pn**	**15 04 43.3**	**+0.2**
JIW				*e* S		**Sn**	**15 05 00.5**	**0.0**
JOSM	**Okushiri--Mats**	**1.01**	**318**	P		**Pn**	**15 04 44.6**	**-0.2**
JOSM				*e* S		**Sn**	**15 05 02.7**	**-0.9**
JANG	**Nango**	**1.29**	**137**	P		**Pn**	**15 04 47.0**	**-0.4**
JEW	**Eniwo**	**1.71**	**28**	P		**Pn**	**15 04 52.3**	**+0.6**
JEW				*e* S		**Sn**	**15 05 16.7**	**+0.6**
JOM	**Ohasama**	**1.98**	**159**	P		**Pn**	**15 04 55.0**	**0.0**
JOM				*e* S		**Sn**	**15 05 21.2**	**-0.5**
JNBK	**Urakawa-nobuka**	**2.02**	**61**	P		**Pn**	**15 04 55.3**	**0.0**
JNBK				*e* S		**Sn**	**15 05 22.6**	**+0.3**
JSK	**Shakotan**	**2.02**	**2**	P		**Pn**	**15 04 56.0**	**+0.7**
ASAJ	**Asahikawa**	**3.23**	**30**	P		**Pn**	**15 05 10.5**	**+0.2**
	13nm,0.3s,baz=223,slow=12,SNR=223							
ASAJ				S		**Sn**	**15 05 47.7**	**-1.4**
	4.4nm,0.3s,baz=89,slow=33,SNR=7.6							
ASAJ	**Asahikawa**	**3.23**	**30**	P		**Pn**	**15 05 10.5**	**+0.2**
ASAJ				S		**Sn**	**15 05 47.7**	**-1.4**
ASAJ				pmax	pmax			
	comp=Z,13nm,0.3s							
ASAJ				smax				
	comp=N,4.0nm,0.3s							
MJAR	**Matsushiro Arr**	**5.07**	**200**	P		**Pn**	**15 05 35.9**	**+1.5**
	comp=N,0.6nm,0.3s,baz=14,slow=14,SNR=7.2							
MJAR	**Matsushiro Arr**	**5.07**	**200**	P		**Pn**	**15 05 35.9**	**+1.5**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
MKAR	**Makanchi Array**	**41.27**	**298**	P		**P**	**15 11 50.7**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.2,baz=90,slow=9.9,SNR=4.5							
WRA	**Warramunga Arr**	**61.22**	**186**	P		**P**	**15 14 18.5**	**-0.7**
	comp=Z,0.9nm,0.5s,mb3.9,baz=4.7,slow=7.2,SNR=28							
WRA	**Warramunga Arr**	**61.22**	**186**	P		**P**	**15 14 18.5**	**-0.6**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ASAR	**Alice Springs**	**64.94**	**187**	P		**P**	**15 14 43.0**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.3,baz=6.8,slow=6.3,SNR=7.3							
SNAA	**Sanae**	**144.58**	**199**	*e*		PKPdf	15 23 36.6	-0.9
VNA2	**Neumayer--Watz**	**146.18**	**198**	*e*		PKPdf	15 23 41.6	+1.3
	baz=116,slow=3.1							
VNA3	**Neumayer Olymp**	**146.47**	**197**	*e*		PKPdf	15 23 42.7	+1.9

*ISK **22** 15:35:25.4, 3958N×3979E, h5km, MD3.0*
*CSEM **22** 15:35:25.6±0.1, 3956N×3977E, h2km, MD3.0, Error ellipse: s-maj=2.5km s-min=2.0km az=140.0*
*ISCJB **22** 15:35:27.6±0.4, 3960N±003×3977E±004, h10km, Error ellipse: s-maj=5.4km s-min=3.7km az=32.6*
*DDA **22** 15:35:27.6, 3965N×3973E, h10km±1km, Md3.0*

ISC 22 15:35:26.8±0.6, 3961N±003×3975E±004, h1km±6km, n19, σ0§94/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EZC	**Erzincan**	**0.15**	**20**	*e* PG		**Pg**	**15 35 34.0**	**+4.3**
EZC				*e* SG		**Sg**	**15 35 40.7**	**+9.0**
KOPT	**Kop Dagi**	**0.71**	**54**	*i* P		**Pg**	**15 35 40.2**	**-0.2**
PTK	**Pertek**	**0.77**	**201**	*e* PG		**Pg**	**15 35 41.2**	**-0.3**
PTK				*e* SG		**Sg**	**15 35 52.1**	**+0.7**
GUMT	**Gumushane**	**0.88**	**346**	*e* PG		**Pg**	**15 35 43.9**	**+0.3**
ELZG	**Elazig**	**1.26**	**209**	*i* P		**Pg**	**15 35 49.7**	**-1.2**
ELZG				*i* S		**Sg**	**15 36 07.5**	**+0.3**
ELZG	**Elazig**	**1.26**	**209**	*i* P		**Pg**	**15 35 49.7**	**-1.2**
ELZG				*i* S		**Sg**	**15 36 07.4**	**+0.2**
BNGL	**BINGOL**	**1.27**	**121**	*i* P		**Pg**	**15 35 50.8**	**-0.4**
BNGL				*i* S		**Sg**	**15 36 10.5**	**+2.9**
SVRC	**Sivrice-ELAZID**	**1.27**	**196**	*e* PN		**Pn**	**15 35 50.6**	**-1.2**
EZM	**Erzurum**	**1.28**	**76**	*e* PN		**Pn**	**15 35 50.4**	**-1.4**
ERZM	**Erzurum**	**1.28**	**76**	*i* P		**Pg**	**15 35 50.5**	**-0.9**
ERZM				*i* S		**Sg**	**15 36 09.5**	**+1.5**
MACK	**Trabzon**	**1.34**	**1**	*i* P		**Pg**	**15 35 51.9**	**-0.5**
ESPY	**Espiye-Giresun**	**1.52**	**329**	*e* PN		**Pn**	**15 35 56.0**	**+0.7**
DARE	**Darende-Malaty**	**1.64**	**247**	*e* PN		**Pg**	**15 36 02.9**	**+4.6**
DIYA	**Diyarbakir**	**1.71**	**170**	*i* P		**Pn**	**15 35 57.1**	**-0.7**
DIYA				*i* S		**Sn**	**15 36 21.6**	**+1.5**
AKCD	**Akcadag**	**1.94**	**228**	*i* P		**Pn**	**15 36 01.5**	**+0.6**
AKCD				*i* S		**Sb**	**15 36 28.3**	**+0.7**
SVSK	**Karacayir**	**2.14**	**279**	*e* PN		**Pn**	**15 36 04.4**	**+0.3**
BCA	**Borcka**	**2.33**	**37**	*e* PN		**Pn**	**15 36 06.5**	**+0.3**
MARD	**Mardin**	**2.43**	**160**	*i* P		**Pn**	**15 36 06.4**	**-1.2**
MARD				*i* S		**Sb**	**15 36 40.9**	**-0.8**
AGRB	**Hanur-Agry**	**2.50**	**90**	*e* PN		**Pn**	**15 36 08.9**	**+0.2**

*ISCJB **22** 15:35:34.9±0.5, 5142N±003×1609E±003, h0km, Error ellipse: s-maj=3.9km s-min=2.3km az=10.7*
*NEIC **22** 15:35:35.5±0.7, 5156N×1616E, h5km, ML3.1(SZGRF), Error ellipse: s-maj=8.6km s-min=5.2km az=189.0*
*CSEM **22** 15:35:35.5±0.4, 5149N×1617E, h2km, ML3.4/5, Error ellipse: s-maj=6.8km s-min=4.6km az=39.0*
*BGR **22** 15:35:36.1±0.8, 5147N×1613E, h1km, ML3.1/6, Error ellipse: s-maj=17.8km s-min=7.8km az=165.0*
*WAR **22** 15:35:37.3, 5150N×1609E, ML2.7, Mining Induced*
*IDC **22** 15:35:37.5±1.3, 5148N×1595E, h0km, mb1 3.2/4, mb1mx3.1/24, mbtmp3.1/4, ML2.9/4, Error ellipse: s-maj=14.9km s-min=11.5km az=128.0*
*PRU **22** 15:35:37.1, 5149N×1606E, h0km*
*VIE **22** 15:35:39.3±0.5, 5128N×1609E, h0km, mb2.5/6, ML2.9/6, Error ellipse: s-maj=3.4km s-min=2.9km az=110.0 67 km WNW of Breslau Suspected Mining induced.*

ISC 22 15:35:35.6±0.5, 5151N±003×1611E±003, h0km, n42, σ0§92/78, 5C-5D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSP	**Ksiaz**	**0.68**	**170**	*e* Pg		**Pg**	**15 35 49.6**	**+1.0**
KSP				*e* Sg		**Sg**	**15 35 58.7**	**+1.3**
UPC	**Upice**	**1.01**	**183**	*e* PG		**Pg**	**15 35 55.6**	**+0.7**
DPC	**Dobruska-Polom**	**1.17**	**173**	*e* PG		**Pg**	**15 35 58.4**	**+0.4**
DPC				*e* SG		**Sg**	**15 36 13.4**	**+0.2**
	comp=Z,66nm,0.6s							
PVCC	**Panska Ves**	**1.38**	**225**	*e* PG		**Pg**	**15 36 02.3**	**+0.2**
PVCC				*e* SG		**Sg**	**15 36 20.8**	**+0.8**
	comp=Z,174nm,0.2s							
BRG	**Berggiesshubel**	**1.50**	**246**	*e* Pn		**Pn**	**15 36 04.5**	**+0.8**
BRG				*e* Sg		**Sg**	**15 36 24.4**	**+0.6**
BRG	**Berggiesshubel**	**1.50**	**246**	PN		**Pn**	**15 36 03.2**	**-0.5**
BRG				PG		**Pg**	**15 36 04.6**	**+0.2**
BRG				SG		**Sg**	**15 36 24.9**	**+1.1**
	comp=Z,112nm,0.4s							
RUE	**Ruedersdorf**	**1.73**	**305**	*e* Pn		**Pn**	**15 36 05.8**	**-1.2**
PRU	**Pruhonice**	**1.82**	**214**	*e* PN		**Pn**	**15 36 08.1**	**0.0**
PRU				*e* PG		**Pg**	**15 36 09.6**	**-0.8**
PRU				*e* SG		**Sg**	**15 36 33.7**	**-0.3**
	comp=Z,45nm,0.4s							
CLL	**Collm**	**1.95**	**265**	*e* Pn		**Pn**	**15 36 09.4**	**-0.5**
CLL				*e* Sg		**Sg**	**15 36 39.4**	**+1.1**
CLL	**Collm**	**1.95**	**265**	*i* Pn		**Pn**	**15 36 09.6**	**-0.3**
	comp=Z,7.0nm,0.4s							
CLL				*e* Pg		**Pg**	**15 36 13.0**	**0.0**
CLL				*e* Sg		**Sg**	**15 36 39.0**	**+0.7**
	comp=Z,40nm,0.8s							
MORC	**Moravsky Berou**	**1.96**	**152**	*e* Pn		**Pn**	**15 36 09.7**	**-0.4**
OKC	**Ostrava-Krasne**	**2.12**	**141**	*e* PN		**Pn**	**15 36 11.8**	**-0.4**
OKC				*e* PG		**Pg**	**15 36 16.1**	**-0.1**
VRAC	**Vranov**	**2.23**	**172**	Pn		**Pn**	**15 36 14.4**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=348,slow=17,SNR=9.7							
VRAC				Pg		**Pg**	**15 36 18.8**	**+0.5**
	comp=Z,4.2nm,0.3s,baz=349,slow=16,SNR=16							
VRAC				Lg			15 36 46.7	
	comp=Z,2.9nm,0.3s,baz=62,slow=21,SNR=4.8							
TANN	**Tannenbergstha**	**2.55**	**246**	*e* Pn		**Pn**	**15 36 18.3**	**+0.1**
TANN				*e* Sg		**Sg**	**15 36 56.0**	**-1.5**
WERD	**Werda**	**2.63**	**248**	*e* Sg		**Sg**	**15 36 58.4**	**-1.5**
NKC	**Novy Kostel**	**2.65**	**242**	*e* PN		**Pn**	**15 36 20.0**	**+0.5**
NKC				*e* PG		**Pg**	**15 36 25.1**	**-1.2**
NKC				*e* SG		**Sg**	**15 37 01.5**	**+0.9**
	comp=Z,68nm,0.3s							
WERN	**Wernitzgruen**	**2.66**	**244**	*e* Pn		**Pn**	**15 36 20.8**	**+1.1**
OJC	**Ojcow**	**2.67**	**118**	*e* Pg		**Pg**	**15 36 26.2**	**-0.6**
OJC				*e* Sg		**Sg**	**15 37 01.2**	**-0.2**
KHC	**Kasperske Hory**	**2.88**	**215**	*e* PN		**Pn**	**15 36 22.7**	**0.0**
KHC				*e* PG		**Pg**	**15 36 29.2**	**-1.6**
KHC				*e* SN		**Sn**	**15 36 56.0**	**-2.0**
KHC				*e* SG		**Sg**	**15 37 06.8**	**-1.3**
	comp=Z,21nm,0.5s							
MOX	**Moxa**	**2.96**	**255**	*e* Pn		**Pn**	**15 36 23.6**	**-0.2**
MOX	**Moxa**	**2.96**	**255**	*e* PN		**Pn**	**15 36 23.7**	**-0.1**
MOX				*e* PG		**Pg**	**15 36 31.9**	**-0.4**
MOX				*i* SG		**Sg**	**15 37 12.2**	**+1.5**
GEC2	**GERESS Array S**	**3.08**	**211**	*e* Pn		**Pn**	**15 36 25.9**	**+0.4**
GERES	**GERESS Array B**	**3.08**	**211**	Pn		**Pn**	**15 36 26.3**	**+0.8**
	comp=Z,1.6nm,0.3s,baz=31,slow=12,SNR=48							
GERES				Pg		**Pg**	**15 36 32.8**	**-1.9**
	comp=Z,3.4nm,0.3s,baz=29,slow=18,SNR=28							
GERES				Sn		**Sn**	**15 36 57.9**	**-5.1**
	comp=Z,1.6nm,0.3s,baz=11,slow=30,SNR=4.7							
GERES				Lg			15 37 13.2	
	comp=Z,2.4nm,0.3s,baz=31,slow=26,SNR=5.9							
WET	**Wettzell**	**3.15**	**222**	*e* Pn		**Pn**	**15 36 26.8**	**+0.4**
WET	**Wettzell**	**3.15**	**222**	*e* Pn		**Pn**	**15 36 26.7**	**+0.4**
MODS	**Modra-Piesok**	**3.23**	**166**	*e* PG		**Pg**	**15 36 37.2**	**-0.3**
MODS				*e* SG		**Sg**	**15 37 19.3**	**0.0**
ZST	**Bratislava**	**3.38**	**169**	*e* SG		**Sg**	**15 37 22.4**	**-1.8**
NIE	**Niedzica**	**3.41**	**126**	*e* P		**Pg**	**15 36 40.7**	**-0.2**
NIE				*e* S		**Sg**	**15 37 24.5**	**-0.5**
VYHS	**Vyhne**	**3.50**	**149**	*e* PN		**Pn**	**15 36 31.0**	**-0.1**
VYHS				*e* PG		**Pg**	**15 36 41.4**	**-1.2**
VYHS				*e* SG		**Sg**	**15 37 31.0**	**+3.1**
VYHS	**Vyhne**	**3.50**	**149**	*e* Pn		**Pn**	**15 36 31.0**	**-0.1**
VYHS				*e* Pg		**Pg**	**15 36 41.4**	**-1.2**
VYHS				*e* Sg		**Sg**	**15 37 31.0**	**+3.1**
CONA	**Conrad Observa**	**3.59**	**183**	⇓ *i* Pn		**Pn**	**15 36 33.4**	**+1.0**
CONA				⇓ *i* Sg		**Sg**	**15 37 30.0**	**-0.9**
	comp=Z,20nm,0.5s							
CSNA	**Conrad Observa**	**3.59**	**183**	⇓ *i* Pn		**Pn**	**15 36 33.4**	**+1.0**
CSNA				⇑ *i* Sg		**Sg**	**15 37 30.6**	**-0.3**
	comp=Z,18nm,0.5s							
GRA1	**Grafenberg Arr**	**3.61**	**242**	Sg		**Sg**	**15 37 30.7**	**-0.6**
GRF	**Grafenberg Arr**	**3.61**	**242**	*e* Sg		**Sg**	**15 37 30.7**	**-0.6**
MOA	**Molln**	**3.86**	**199**	⇑ *i* Pn		**Pn**	**15 36 37.0**	**+1.0**
MOA				⇓ *i* Sg		**Sg**	**15 37 39.9**	**+0.6**
	comp=Z,16nm,0.5s							
STHS	**Stebnicka Huta**	**3.90**	**121**	*e* PG		**Pg**	**15 36 50.0**	**-0.2**
STHS				*e* SG		**Sg**	**15 37 45.8**	**+5.2**
ARSA	**Arzberg**	**4.28**	**185**	⇑ *i* Pn		**Pn**	**15 36 43.2**	**+1.3**
ARSA				⇓ *i* Sg		**Sg**	**15 37 53.5**	**+0.4**
	comp=Z,11nm,0.5s							
CRVS	**Cervenica-Dubn**	**4.32**	**125**	*e* PG		**Pg**	**15 36 57.9**	**-0.4**
KWP	**Kalwaria**	**4.61**	**112**	*e* Pn		**Pn**	**15 36 43.0**	**-3.4**
KBA	**Koelnbreinsper**	**4.79**	**203**	⇑ *i* Pn		**Pn**	**15 36 50.2**	**+1.3**
KBA				⇑ *i* Sg		**Sg**	**15 38 10.1**	**+0.7**
	comp=Z,10nm,0.6s							
AKASG	**Malin Array Be**	**8.30**	**90**	Pn		**Pn**	**15 37 38.0**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=278,slow=11,SNR=4.2							
ARCES	**ARCESS Array B**	**18.62**	**10**	Pn		**Pn**	**15 39 50.1**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=195,slow=14,SNR=3.9							

IDC 22 16:05:26.0±2.1, 379N×12786E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.4/17, mbtmp3.6/3, Error ellipse: s-maj=148.7km s-min=24.8km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.42**	**165**	P		P	16 10 47.0	+0.5
	1.3nm,0.6s,baz=345,slow=10,SNR=24							
ASAR	**Alice Springs**	**27.91**	**168**	P		P	16 11 17.7	-0.3
	0.2nm,0.6s,baz=349,slow=8.0,SNR=7.9							
MKAR	**Makanchi Array**	**58.16**	**

NKC	Novy Kostel	2.63	243	ePN	Pn	16 46 54.8	+0.6
NKC				ePG	Pg	16 47 00.1	-0.8
NKC				eSG	Sg	16 47 36.7	+1.7
	comp=Z,64nm,0.3s						
OJC	Ojcow	2.82	117	eP	Pn	16 46 53.4	-1.2
OJC				eSg	Pg	16 47 01.4	-0.2
OJC				eSg	Sg	16 47 36.3	+0.2
JAVC	Velka Javorina	2.82	158	eSg	Sg	16 47 41.5	+0.6
	comp=Z,16nm,0.5s						
KHC	Kasperske Hory	2.86	215	ePN	Pn	16 46 57.2	-0.1
KHC				ePG	Pg	16 47 02.4	-2.9
KHC				eSN	Sn	16 47 30.0	-2.4
KHC				eSG	Sg	16 47 41.0	-1.3
	comp=Z,14nm,0.3s						
MOX	Moxa	2.95	255	ePN	Pn	16 46 58.6	0.0
MOX				ePG	Pg	16 47 06.6	-0.5
MOX				eSG	Sg	16 47 46.4	+1.1
GEC2	GERESS Array S	3.06	211	ePn	Pn	16 47 00.9	+0.8
MODS	Modra-Piesok	3.21	166	eSg	Sg	16 47 55.4	+1.9
ZST	Bratislava	3.36	168	eSg	Sg	16 47 56.9	-1.4
NIE	Niedzica	3.40	126	eP	Pg	16 47 15.0	-0.6
NIE				eS	Sg	16 47 58.9	-0.6
VYHS	Vyhne	3.48	148	ePN	Pn	16 47 06.4	+0.6
VYHS				ePG	Pg	16 47 15.0	-2.1
VYHS	Vyhne	3.48	148	ePn	Pn	16 47 06.4	+0.6
VYHS				ePg	Pg	16 47 15.0	-2.1
CONA	Conrad Observa	3.56	183	⇓iPn	Pn	16 47 06.9	-0.1
CONA				⇑iSg	Sg	16 48 04.6	-0.4
	comp=Z,35nm,0.6s						
CSNA	Conrad Observa	3.56	183	⇓iPn	Pn	16 47 06.5	-0.5
CSNA				⇑iSg	Sg	16 48 04.7	-0.2
	comp=Z,14nm,0.4s						
MOA	Molin	3.83	199	⇑iPn	Pn	16 47 11.2	+0.5
MOA				⇑iSg	Sg	16 48 14.3	+0.9
	comp=Z,13nm,0.4s						
STHS	Stebnicka Huta	3.88	120	ePN	Pn	16 47 12.2	+0.8
STHS				ePG	Pg	16 47 24.6	-0.3
STHS				eSG	Sg	16 48 16.9	+1.7
STHS	Stebnicka Huta	3.88	120	ePn	Pn	16 47 12.2	+0.8
STHS				ePg	Pg	16 47 24.6	-0.3
STHS				eSg	Sg	16 48 16.9	+1.7
ARSA	Arzberg	4.26	185	⇓iPn	Pn	16 47 16.2	-0.3
ARSA				⇑iSg	Sg	16 48 25.4	-1.7
	comp=Z,16nm,0.6s						
CRVS	Cervenica-Dubn	4.31	125	eSg	Sg	16 48 31.9	+3.1
CRVS	Cervenica-Dubn	4.31	125	eSG	Sg	16 48 31.9	+3.1

IDC 22 17:08:06.5±1.9, 227N×12505E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, Error ellipse: s-maj=189.5km s-min=24.2km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.88	158	P	P	17 13 20.8	-1.3
	0.6nm,0.4s,baz=336,slow=11,SNR=16						
ASAR	Alice Springs	27.18	162	P	P	17 13 53.5	+1.5
	0.2nm,0.3s,baz=342,slow=11,SNR=12						
MKAR	Makanchi Array	57.82	327	P	P	17 17 59.5	-0.2
	0.3nm,0.5s,baz=122,slow=7.6,SNR=3.1						

*NEIC **22** 17:08:47.1±0.9, 2020S×17434W, h10km, mb4.4/10, Error ellipse: s-maj=55.2km s-min=10.2km az=153.0*
*ISCJB **22** 17:08:50.1±0.4, 199S±0.1×1746W±0.1, h33km, mb4.2/16, Error ellipse: s-maj=21.0km s-min=11.6km az=143.1*
*IDC **22** 17:08:51.8±1.1, 2060S×17414W, h46km±7km, mb3.8/7, mb1 4.1/8, mb1mx3.9/19, mbtmp3.9/8, ML4.8/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/27, Error ellipse: s-maj=67.9km s-min=17.1km az=158.0*

ISC 22 17:08:51.9±0.5, 199S±01×1745W±01, h35km, n54, σ0§88/28, mb4.2/16, 3C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	13.88	98	P	Pn	17 11 57.8	-8.3
	4.4nm,0.3s,baz=272,slow=12,SNR=7.6						
RAR	Rarotonga	13.88	98	ePn	Pn	17 11 53.5	-13
	29nm,0.8s						
DZM	Mont Dzumac	17.89	260	eP	Pn	17 13 04.4	+6.3
TBI	Tubuai	23.54	103	eLR	LR	17 19 33.4	
	124nm,28.5s						
TBI	Tubuai	23.54	103	eT		17 37 40.6	
	17nm,0.3s						
PAE	Paea	23.72	89	eT		17 37 50.4	
	66nm,0.3s						
PPT	Papeete	23.74	88	eLR	LR	17 19 36.0	
	148nm,25.2s						
PPT	Papeete	23.74	88	LR	LR	17 20 26.1	
	comp=Z,99nm,21.2s,baz=298,slow=30						
TVO	Taravao	24.01	89	eT		17 38 12.1	
	41nm,0.4s						
MEH	Mehetia	25.11	90	eT		17 39 34.0	
	3µm,0.2s						
PMOR	Pomariorio Ree	25.86	83	eT		17 40 28.2	
	2.4nm,0.3s						
CTA	Charters Tower	36.79	263	P	P	17 15 57.3	+0.7
	1.9nm,0.4s,mb4.3,baz=90,slow=12,SNR=12						
CTAO	Charters Tower	36.79	263	eP	P	17 15 56.7	+0.1
	4.5nm,0.6s,mb4.5						
RKT	Rikitea	36.85	102	eT		17 54 18.8	
	4.7nm,0.3s						
STKA	Stephens Creek	40.97	244	eP	P	17 16 31.9	+0.5
STKA	Stephens Creek	40.97	244	P	P	17 16 32.0	+0.6
	1.0nm,0.5s,mb3.8,baz=113,slow=14,SNR=2.9						
ASAR	Alice Springs	47.82	256	P	P	17 17 25.9	-0.5
	1.1nm,0.7s,mb4.0,baz=94,slow=7.8,SNR=15						
ASAR				PcP	PcP	17 18 56.0	+1.1
	0.5nm,0.7s,baz=101,slow=4.3,SNR=3.6						
ASAR				pPcP		17 19 08.6	
	1.7nm,0.7s,baz=104,slow=4.1,SNR=9.6						
WB2	Warramunga Arr	47.90	261	eP	P	17 17 26.2	-0.8
WRAB	Tennant Creek	47.90	261	eP	P	17 17 21.9	-5.1
	2.2nm,0.9s,mb4.2						
WRA	Warramunga Arr	47.91	261	P	P	17 17 25.9	-1.2
	0.6nm,0.6s,mb3.8,baz=97,slow=7.3,SNR=20						
WRA				PcP	PcP	17 18 55.8	+0.6
	0.4nm,0.7s,baz=97,slow=3.5,SNR=3.0						
WRA				pPcP		17 19 09.1	
	1.2nm,0.8s,baz=91,slow=3.5,SNR=6.6						
SBA	Scott Base	58.67	185	eP	P	17 18 47.3	+2.0
	2.5nm,0.9s,mb4.2						
ISA	Isabella	76.64	44	P	P	17 20 39.2	0.0
	3.7nm,1.1s,mb4.2						
NVAR	Mina Array Bea	78.40	42	P	P	17 20 49.4	+0.4
	3.0nm,0.7s,mb4.3,baz=226,slow=9.5,SNR=15						
NVAR				pP	pP	17 21 03.5	+3.5
	2.1nm,0.8s,baz=223,slow=9.3,SNR=7.2						
NVAR	Mina Array Bea	78.40	42	P	P	17 20 49.4	+0.4
NVAR				pP	pP	17 21 03.5	+3.5
TPH	Tonopah	78.88	43	P	P	17 20 51.6	0.0
	5.5nm,0.8s,mb4.5						
CCUT	Cedar City	81.09	45	P	P	17 21 04.2	+0.6
HLID	Hailey	83.80	39	eP	P	17 21 18.1	+0.5
	3.8nm,1.4s,mb4.3						
TXAR	Lajitas Array	84.02	56	P	P	17 21 17.0	-2.0
	0.5nm,0.8s,mb3.7,baz=219,slow=9.7,SNR=5.8						
ANMO	Albuquerque	84.53	50	eP	P	17 21 21.2	-0.3
	3.4nm,1.1s,mb4.4						
ANMO				e		17 21 36.0	
TRF	Thorofare Moun	85.25	11	eP	P	17 21 24.2	-0.2
	2µm,0.7s						
MCK	McKinley	85.75	11	eP	P	17 21 27.0	+0.1
	6.6nm,0.7s,mb5.0						
COLA	College	86.99	11	P	P	17 21 33.1	+0.1
	5.6nm,0.8s,mb4.8						
SNAA	Sanae	88.45	177	e	P	17 21 39.4	-0.7
SNAA				e		17 21 53.3	
SNAA	Sanae	88.45	177	P	P	17 21 39.3	-0.9
	1.1nm,0.8s,mb4.1						
VNA3	Neumayer Olymp	88.46	175	e	P	17 21 39.7	-0.4
VNA3				e		17 21 53.4	
VNA2	Neumayer--Watz	88.94	176	e	P	17 21 42.2	-0.2
	baz=205,slow=3.8						
VNA2				e		17 21 56.3	
CMAR	Chiang Mai Arr	93.02	288	P	P	17 22 04.3	+2.0
	0.8nm,0.8s,mb4.2,baz=118,slow=3.9,SNR=5.7						
ARCES	ARCESS Array B	128.91	351	PKP	PKPdf	17 27 54.5	-0.7
	1.4nm,0.7s,baz=23,slow=1.6,SNR=10						
ARCES				pPKP	pPKPdf	17 28 08.9	+2.3
	0.8nm,0.6s,baz=169,slow=0.6,SNR=1.4						
ARCES	ARCESS Array B	128.91	351	PKP	PKPdf	17 27 54.5	-0.7
ARCES				pPKP	pPKPdf	17 28 08.9	+2.3
AKASG	Malin Array Be	144.02	334	PKP	PKPdf	17 28 21.3	-2.3
	0.3nm,0.3s,baz=40,slow=4.7,SNR=4.1						
BAIF	Baives	149.93	2	ePKP1	PKPbc	17 28 38.7	+0.4
GERES	GERESS Array B	150.41	349	PKPbc	PKPbc	17 28 40.1	+0.5
	1.4nm,0.9s,baz=18,slow=1.7,SNR=9.4						
GERES				pPKPbc	pPKPbc	17 28 53.6	+2.6
	1.0nm,0.7s,baz=30,slow=3.2,SNR=5.8						
ROSF	Rostrenen	150.80	12	ePKP1	PKPbc	17 28 40.1	-0.4
FLN	La Foliniere	150.84	8	i/PKP1	PKPbc	17 28 40.4	-0.2
	9.2nm,0.6s						
SGMF	Saint Gilles	151.01	11	ePKP1	PKPbc	17 28 40.6	-0.4
LDF	La Druitiere	151.06	8	⇑i/PKP1	PKPbc	17 28 40.7	-0.4
GRR	Gorron	151.16	9	⇑i/PKP1	PKPbc	17 28 41.2	-0.1
	9.4nm,0.5s						
MEZF	Maizieres J'vi	151.50	1	ePKP1	PKPbc	17 28 42.5	+0.4
CDF	Champ du Feu	151.55	357	ePKP1	PKPbc	17 28 42.4	+0.2
	2.7nm,0.6s						
HINF	Hinteralfeld	152.16	358	ePKP1	PKPbc	17 28 43.4	-0.2
LOR	Lormes	152.71	2	ePKP1	PKPbc	17 28 44.9	0.0
SSF	Saint Saulge	152.90	3	ePKP1	PKPbc	17 28 45.5	+0.2
	2.7nm,0.6s						
MFF	Saint Martin d	153.01	9	ePKP1	PKPbc	17 28 45.3	-0.3
	3.1nm,0.6s						

IGQ 22 17:23:10.4, 104N×7796W, h12km±5km, Mb4.0, Ms3.8, 1C-4D, Error ellipse: s-maj=3.9km s-min=2.2km az=117.4, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COTA	Cotacachi	0.79	208	⇓P	Pg	17 23 25.9	+0.1
CAYA	Cayambe	0.96	182	⇓P	Pg	17 23 29.4	+0.4
CAYA	Cayambe	0.96	182	⇓S	Sg	17 23 43.5	+1.9
CONE	Cono NE Rev Vo	1.15	164	⇑P	Pb	17 23 32.3	+0.1
LAV3	Lava3-Reventad	1.18	164	⇓P	Pb	17 23 32.6	-0.1
YANA	Yana	1.30	208	P	Pn	17 23 35.7	+1.2
PINO	Pino	1.35	208	P	Pn	17 23 35.7	+0.5
GGP	Refugio Guagua	1.36	208	P	Pn	17 23 36.1	+0.8
GGP	Refugio Guagua	1.36	208	S	Sb	17 23 55.8	+2.6
TERV	Terraza Guagua	1.36	208	P	Pn	17 23 37.5	+2.2
JUA2	San Juan 2	1.40	207	P	Pn	17 23 36.9	+1.1
ANTI	Antisana	1.49	188	P	Pn	17 23 39.0	+1.9
VC1	Cotopaxi 1	1.73	195	P	Pn	17 23 43.2	+2.9
TAMB	Tambo	1.77	193	P	Pn	17 23 44.6	+3.7
CAMI	Rancho Maria	1.79	198	P	Pn	17 23 44.6	+3.5
MAG1	Magdalena	2.12	239	P	Pn	17 23 48.0	+2.3
QIL2	Quilotoa	2.12	207	P	Pn	17 23 53.0	+7.3
QIL2	Quilotoa	2.12	207	S	Sn	17 24 21.5	+9.5
PISA	Pisayambo	2.12	191	P	Pn	17 23 52.6	+6.8

*HLW **22** 17:31:47.5, 3478N×24.19E, h25km, Mb3.3*
*ISCJB **22** 17:31:48.5±0.6, 3447N±007×245E±0.1, h10km, Error ellipse: s-maj=19.9km s-min=4.8km az=150.5*
*ATH **22** 17:31:48.8, 3437N×2402E, h5km±3km, MD3.3/4*
*CSEM **22** 17:31:48.9±0.3, 3442N×2450E, h8km, MD3.3, Error ellipse: s-maj=21.6km s-min=5.6km az=61.0*
*NEIC **22** 17:31:48.0, 3436N×2400E, h5km, MD3.3(ATH), After ATH.*

ISC 22 17:31:50.0±0.8, 3440N±004×242E±01, h10km, n10, σ0§95/16, 3C-1D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.46	344	ePB	Pg	17 31 58.0	-0.9
GVD				eSB	Sg	17 32 04.5	-0.5
VAM	Vamos	1.01	358	ePG	Pg	17 32 08.5	-0.9
VAM				eSB	Sb	17 32 23.5	+0.7
VAM	Vamos	1.01	358	ePg	Pg	17 32 07.8	-1.6
VAM				eSb	Sb	17 32 24.0	+1.2
NPS	Neapolis	1.42	52	ePB	Pb	17 32 18.1	+1.5
VLI	Veliai	2.55	336	ePN	Pn	17 32 32.5	+1.2
SLUM		3.01	164	⇑P	Pn	17 32 37.8	+0.1
SLUM				S	Sn	17 33 14.7	+0.8
HMAT	Matruh	4.08	143	⇓eP	Pn	17 32 52.4	-0.1
HMAT				S	Sn	17 33 39.4	-0.8
HMAT	Matruh	4.08	143	P	Pn	17 32 52.3	-0.1
HMAT				S	Sn	17 33 39.4	-0.9
HFRF	Wahat Farafira	8.03	153	⇑P	Pn	17 33 47.3	+0.6
AMAG	Maghara	8.45	114	⇑eP	Pn	17 33 51.0	-1.5

IDC 22 18:20:12.9±7.8, 331S×10093E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.2/19, mbtmp3.1/3, Error ellipse: s-maj=292.0km s-min=29.0km az=61.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	21.71	355	P	P	18 25 06.5	+0.7
	0.2nm,0.4s,baz=191,slow=6.6,SNR=4.8						
WRA	Warramunga Arr	36.54	120	P	P	18 27 19.7	-0.9
	0.6nm,1.3s,baz=292,slow=8.1,SNR=4.7						
ASAR	Alice Springs	37.74	125	P	P	18 27 31.8	+1.0
	0.1nm,0.3s,baz=302,slow=8.1,SNR=9.1						
TXAR	Lajitas Array	145.15	39	PKPbc	PKPbc	18 39 51.0	-1.6
	0.2nm,0.6s,baz=238,slow=1.7,SNR=4.1						

IDC 22 18:21:22.3±4.9, 2006N×14408E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/19, mbtmp3.6/3, Error ellipse: s-maj=327.2km s-min=33.0km az=118.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	40.88	194	P	P	18 29 06.2	-0.1
	0.8nm,0.7s,baz=15,slow=9.0,SNR=14						
ASAR	Alice Springs	44.58	193	P	P	18 29 36.3	+0.1
	0.1nm,0.4s,baz=20,slow=6.8,SNR=5.8						
NVAR	Mina Array Bea	83.50	52	P	P	18 33 52.6	+0.3
	0.8nm,0.7s,baz=270,slow=4.5,SNR=5.1						

*ISCJB **22** 19:09:38.7±0.4, 5897N±005×14287W±006, h10km, Error ellipse: s-maj=6.9km s-min=4.0km az=23.7*
*NEIC **22** 19:09:43.3, 5906N×14287W, h13km, ML3.4(AEIC), ML3.5(PMR), After AEIC.*
*PGC **22** 19:09:44.4, 5907N×14229W, h1km, ML3.2, 161km west of Yakutat, Ak Gulf Of Alaska*

ISC 22 19:09:40.9±0.4, 5902N±005×14285W±007, h10km, n36, σ0§63/44, 6D, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAGM	Ragged Mountai	1.65	327	P	Pn	19 10 09.4	-0.5
PCA	Pinnacle	1.71	50	P	Pn	19 10 10.6	-0.1
YKU2	Yakutat	1.71	72	P	Pn	19 10 11.5	+0.8
MID	Middleton Isla	1.84	284	eP	Pn	19 10 11.8	-0.6
PNL	Peninsula	1.89	68	ePn	Pn	19 10 12.6	-0.5
PNL				P		19 10 12.9	
PNL				eSn	Sn	19 10 34.0	-2.9
EYAK	Cordova Ski Ar	2.12	318	P	Pn	19 10 17.2	+0.8
HYT	Haines Junctio	3.25	54	⇓Pn	Pn	19 10 32.4	+0.6
HYT				⇓Pg	Pg	19 10 38.0	-5.0
HYT				⇑Sg	Sg	19 11 17.4	-7.5
SEW	Seward	3.53	291	P	Pn	19 10 35.3	-0.3
HARP	HAARP	3.58	343	P	Pn	19 10 36.8	+0.4
SKAG	Skagway	3.89	80	ePn	Pn	19 10 40.8	+0.1
SKAG				eP		19 10 41.7	
MENT	Mentasta	3.95	354	eP	Pn	19 10 41.3	-0.2
SLKM	Skilak Lake	4.01	295	P	Pn	19 10 42.0	-0.3
SLKM				ePn	Pn	19 10 42.4	0.0
SLKM				eSn	Sn	19 11 23.4	-5.9
RC01	Rabbit Creek A	4.03	304	ePn	Pn	19 10 41.7	-0.8
RC01				eSn	Sn	19 11 24.9	-4.8
PMR	Palmer	4.05	312	eP	Pn	19 10 43.4	+0.6
BCA3	Beaver Creek A	4.09	7	P	Pn	19 10 43.5	0.0
SIT	Sitka	4.46	113	P	Pn	19 10 48.2	-0.2
KDAK	Kodiak Island	5.27	261	P	Pn	19 10 59.3	-0.2
DAWY	Dawson	5.33	17	⇓Pn	Pn	19 10 59.3	+0.5
DAWY	Dawson	5.33	17	P	Pn	19 11 01.1	+0.8
MCK	McKinley	5.56	331	P	Pn	19 11 04.1	+0.6
TRF	Thorofare Moun	5.71	324	P	Pn	19 11 06.2	+0.6
OHAK	Old Harbor	5.82	256	P	Pn	19 11 07.3	+0.2
PPLA	Purkeypile	5.98	315	P	Pn	19 11 09.6	+0.3
KTH	Kantishna Hill	5.98	323	P	Pn	19 11 09.3	0.0
ILB	Eielson Array	6.08	343	P	Pn	19 11 10.0	-0.6
IL1	Eielson Array	6.08	343	P	Pn	19 11 10.0	-0.6
BPAW	Bear Paw Mtn.	6.40	326	P	Pn	19 11 14.8	-0.3
SVW2	Sparrevohn	6.70	294	eP	Pn	19 11 20.0	+0.8
DLBC	Dease Lake	6.71	89	⇑Pn	Pn	19 11 20.8	+1.5
DLBC				⇓Sg	Sb	19 13 03.8	+6.3
DLBC	Dease Lake	6.71	89	P	Pn	19 11 20.1	+0.8
NDB	Naden	7.47	129	⇑Pn	Pn	19 11 29.4	-0.4
TT01	Tatalina	7.49	307	P	Pn	19 11 29.3	-0.8
VIB	Van Inlet	8.15	131	⇓Pn	Pn	19 11 39.3	+0.2
DIB	Dawson Inlet,	8.22	131	⇑Pn	Pn	19 11 39.9	-0.1
MOBC	Moresby Island	8.46	129	⇑Pn	Pn	19 11 43.5	+0.1
MOBC				⇓Sn	Sn	19 13 14.3	-4.5
BNB	Barry Inlet	8.98	131	⇑Pn	Pn	19 11 50.5	0.0

*ISCJB **22** 19:24:08.3±4.5, 569N±008×777W±0.1, h12km±29km, mb3.8/5, MS3.9/2, Error ellipse: s-maj=18.7km s-min=13.0km az=172.2*
*NEIC **22** 19:24:10.5±4.6, 579N×7763W, h12km±30km, mb3.8/1, Error ellipse: s-maj=16.5km s-min=13.7km az=73.0*
*IDC **22** 19:24:16.7±4.7, 559N×7729W, h48km±40km, mb3.6/5, mb1 3.8/7, mb1mx3.5/21, mbtmp3.7/7, ML2.4/2, MS3.6/3, Ms1 3.6/3, ms1mx3.0/27, Error ellipse: s-maj=44.2km s-min=22.7km az=107.0*

ISC 22 19:24:16.4±2.2, 56N±01×773W±02, h47km±17km, n16, σ0§78/14, mb3.8/5, MS3.9/2, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	El Rosal	3.07	103	P	Pn	19 25 03.0	+0.6
	1.3nm,0.3s,baz=92,slow=20,SNR=1.7						
BCIP	Isla Barro Col	4.37	325	ePn	Pn	19 25 10.4	-10
OTAV	Otavalo	5.40	192	ePn	Pn	19 25 35.4	+1.0
	15nm,1.0s						
OTAV				eSn	Sn	19 26 33.9	-1.4
SDV	Santo Domingo	7.42	63	P	Pn	19 26 02.8	+0.5
	0.9nm,0.3s,baz=292,slow=13,SNR=23						
SDV				S	Sn	19 27 24.2	-1.0
	0.8nm,0.3s,baz=327,slow=11,SNR=1.9						
SDV	Santo Domingo	7.42	63	ePn	Pn	19 26 02.6	+0.4
SDV				P		19 26 02.8	
SDV				S	Sn	19 27 24.2	-1.0
JTS	JuntasAbangare	8.89	302	LR	LR	19 29 46.4	
	comp=Z,142nm,21.7s,baz=71,slow=37						
LPAZ	La Paz	23.53	157	P	P	19 29 22.7	+0.1
	1.1nm,0.7s,mb3.4,baz=313,slow=12,SNR=3.9						
LPAZ	La Paz	23.53	157	P	P	19 29 22.7	+0.1
	2.5nm,1.0s,mb3.6						
SIV	San Ignacio	26.78	143	P	P	19 29 52.7	+0.5
	2.6nm,0.8s,mb3.8,baz=326,slow=11,SNR=12						
BDFB	Brasilia	35.87	126	LR	LR	19 46 57.3	
	comp=Z,68nm,18.0s,MS3.5,baz=198,slow=38						
TORD	Torodi Ar. Bea	78.09	78	P	P	19 36 11.7	+0.7
	0.7nm,0.6s,mb3.8,baz=288,slow=6.0,SNR=6.4						
GERES	GERESS Array B	86.54	41	P	P	19 36 54.3	-0.2
	0.5nm,0.8s,mb3.8,baz=258,slow=5.3,SNR=4.8						
ARCES	ARCESS Array B	89.30	20	P	P	19 37 06.4	-0.8
	0.9nm,0.8s,mb4.1,baz=329,slow=4.2,SNR=4.7						
AKASG	Malin Array Be	96.10	38	LR	LR	20 14 12.3	
	comp=Z,115nm,21.2s,MS4.3,baz=195,slow=31						
ASAR	Alice Springs	144.96	236	PKPbc	PKPdf	19 43 48.4	-0.9
	0.9nm,0.8s,baz=120,slow=3.8,SNR=21						
WRA	Warramunga Arr	146.05	242	PKPbc	PKPbc	19 43 51.8	-0.3
	0.7nm,0.8s,baz=102,slow=3.1,SNR=6.8						

IDC 22 19:37:12.6±6.2, 211S×10282E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.5/18, mbtmp3.4/4, Error ellipse: s-maj=240.3km s-min=23.6km az=61.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	20.79	350	P	P	19 41 56.3	+0.8
	0.6nm,0.8s,baz=188,slow=8.6,SNR=5.4						
WRA	Warramunga Arr	35.53	122	P	P	19 44 11.9	+0.3
	0.3nm,0.3s,baz=308,slow=8.9,SNR=11						
ASAR	Alice Springs	36.94	128	P	P	19 44 23.4	-0.2
	0.4nm,0.4s,baz=300,slow=7.8,SNR=22						
SONM	Songino Array	49.84	3	P	P	19 46 06.9	-0.4
	0.4nm,0.6s,baz=186,slow=9.0,SNR=4.5						
TXAR	Lajitas Array	143.02	40	PKP	PKPdf	19 56 48.9	-0.3
	0.4nm,0.6s,baz=289,slow=0.7,SNR=3.9						

*IDC **22** 20:01:20.4±1.0, 098S×7875W, h0km, mb3.6/5, mb1 3.9/8, mb1mx3.8/22, mbtmp3.8/8, ML3.9/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/24, Error ellipse: s-maj=54.5km s-min=16.1km az=62.0*
*IGQ **22** 20:01:20.0, 113S×7881W, h19km±2km, Mb4.3, Ms4.1, Error ellipse: s-maj=1.3km s-min=0.8km az=173.7*
*ISCJB **22** 20:01:21.7±0.3, 120S±003×7871W±005, h33km, mb3.8/9, Error ellipse: s-maj=6.7km s-min=4.1km az=170.3*
*NEIC **22** 20:01:23.9±0.6, 099S×7814W, h35km, mb4.2/6, MD4.0(IGQ), Error ellipse: s-maj=25.1km s-min=10.8km az=78.0*
NEIC Felt at Ambato.

ISC 22 20:01:21.9±0.4, 119S±003×7868W±005, h35km, n52, σ1§26/51, mb3.8/9, 5C-18D, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PORT	Chimborazo Vol	0.28	200	⇑P	Pn	20 01 28.6	-1.1
PORT	Chimborazo Vol	0.28	200	⇑S	Sn	20 01 33.7	-1.3
IGUA	Igualata	0.30	173	⇑P	Pn	20 01 28.9	-0.9
JUI6	Juive	0.31	138	⇓P	Pn	20 01 29.3	-0.6
BIL2	Estacion Bilba	0.31	146	⇓P	Pn	20 01 29.4	-0.6
PISA	Pisayambo	0.32	65	⇑P	Pn	20 01 29.2	-0.9
RUN5	Runtun	0.33	131	⇓P	Pn	20 01 29.9	-0.4
RETU	Refugio	0.34	138	⇓P	Pn	20 01 30.3	-0.1
ULBA	Ulba	0.37	134	⇓P	Pn	20 01 30.3	-0.4
ARRY	Arrayan	0.38	145	⇓P	Pn	20 01 30.5	-0.4
PATA	Patacocha	0.39

ANMO Albuquerque 44.37 327 *eP* **P 20 09 32.5 +3.4**
2.8nm,0.8s,mb4.0
SDCO Great Sand Dun 46.00 330 *eP* **P 20 09 46.0 +4.1**
1.5nm,0.8s,mb4.0
WALA Waterton Lakes 58.56 334 P **P 20 11 18.5 +3.5**
4.6nm,0.9s,mb4.5
DLBC Dease Lake 71.89 334 *eP* **P 20 12 44.8 +3.6**
KURK Kurchatov 127.04 18 PKP PKPdf 20 20 26.4 +4.0
0.1nm,0.3s,baz=334,slow=2.1,SNR=2.2
ASAR Alice Springs 139.84 230 PKhKP 20 20 44.4
0.3nm,1.1s,baz=214,slow=38,SNR=3.0
ASAR PKP PKPdf 20 20 49.5 +2.3
0.3nm,0.7s,baz=120,slow=2.9,SNR=4.8
WRA Warramunga Arr 141.41 235 PKhKP 20 20 49.3
0.4nm,0.9s,baz=118,slow=2.4,SNR=3.1
WRA PKP PKPdf 20 20 53.6 +3.4
0.7nm,0.8s,baz=118,slow=1.4,SNR=6.5
FITZ Fitzroy Crossi 149.34 230 PKPbc PKPbc 20 21 11.6 +3.5
1.3nm,0.7s,baz=118,slow=14,SNR=4.4

GII **22** *20:04:30.9±1.1,3552N×2558E,h0km±18km,mb4.5/5, ML4.4/5*
ISK **22** *20:04:49.1,3481N×2690E,h36km,ML4.7*
ISCJB **22** *20:04:51.6±0.3,3505N±001×27.12E±001,h22km±3km, mb4.6/102,MS3.9/35,Error ellipse: s-maj=2.2km s-min=1.5km az=36.6*
BJI **22** *20:04:51.5,3492N×2671E,h35km,mB5.0,mb4.8,Ms4.9, Msz4.6*
CSEM **22** *20:04:51.9±0.0,3505N×2720E,h20km,mb4.4/11,Ms3.5, Error ellipse: s-maj=1.0km s-min=0.7km az=40.0*
MOS **22** *20:04:51.9±1.2,3511N×2705E,h22km,mb4.6/48,Error ellipse: s-maj=5.1km s-min=2.6km az=114.9*
HLW **22** *20:04:52.2,3537N×2724E,h48km,Mb4.4*
ATH **22** *20:04:52.4,3523N×2709E,h24km,MD4.4/24,ML4.5*
THE **22** *20:04:53.3,3513N×2711E,h3km,ML4.6*
NEIC **22** *20:04:53.7±1.0,3509N×2707E,h24km±7km,mb4.4/69, ML4.2(ATH),ML4.6(THE),Error ellipse: s-maj=5.3km s-min=3.7km az=185.0*
DDA **22** *20:04:57.8,3568N×2750E,h4km±4km,Md3.8,Ml3.7*
IDC **22** *20:04:58.7±1.7,3527N×2698E,h64km±16km,mb4.0/19, mb1 4.1/26,mb1mx4.0/31,mbtmp4.0/26,MS3.9/22, Ms1 3.9/22,ms1mx3.7/44,Error ellipse: s-maj=15.4km s-min=10.5km az=148.0*
SZGRF **22** *20:05:05.9,3608N×2660E,h10km,mb4.2,Dodecanese Islands, Greece*
ISC 22 20:04:54.2±0.4,3507N±001×2709E±001,h25km±3km, n630,σ1§23/684,mb4.6/102,MS3.9/35,33C-26D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.48**	**7**	⇑*i*PB	**Pb**	**20 04 59.6**	**-4.5**
KARP				*e*SB	**Sb**	**20 05 05.2**	**-5.6**
ZKR	**Zakros**	**0.72**	**274**	*e*Pg	**Pb**	**20 05 05.6**	**-2.4**
ZKR				*e*Sg	**Sb**	**20 05 17.5**	**0.0**
NPS	**Neapolis**	**1.22**	**279**	*e*PN	**Pn**	**20 05 15.0**	**-0.7**
NPS				*e*SN	**Sn**	**20 05 32.5**	**+1.1**
LAST	**Lasithi**	**1.32**	**274**	*e*Pg	**Pn**	**20 05 16.4**	**-0.6**
LAST				*e*Sg	**Sn**	**20 05 35.8**	**+1.9**
ARG	**Arkhangelos**	**1.42**	**36**	⇓*i*PN	**Pn**	**20 05 16.7**	**-1.7**
ARG				*e*SN	**Sn**	**20 05 35.6**	**-0.7**
IDI	**Anoyia**	**1.81**	**278**	P	**Pn**	**20 05 24.4**	**+0.6**
	326nm,0.3s,baz=85,slow=16,SNR=333						
IDI				S	**Sn**	**20 05 48.0**	**+2.0**
	286nm,0.3s,baz=319,slow=15,SNR=6.2						
SANT	**Santorini**	**1.85**	**315**	*e*Pb	**Pb**	**20 05 23.2**	**-4.2**
SANT				*e*Sb	**Sb**	**20 05 48.2**	**-1.9**
THR1	**Thera Island**	**1.85**	**315**	*e*Pb	**Pb**	**20 05 23.2**	**-4.2**
SIVA	**Sivas**	**1.87**	**269**	*e*Pb	**Pb**	**20 05 27.7**	**0.0**
SIVA				*e*Sb	**Sb**	**20 05 50.6**	**0.0**
THR6	**Thira Island,**	**1.88**	**313**	*e*Pb	**Pb**	**20 05 23.7**	**-4.2**
THR3	**Thira Island,**	**1.92**	**315**	*e*Pb	**Pb**	**20 05 25.1**	**-3.4**
THR3	**Thira Island,**	**1.92**	**315**	*e*Pb	**Pb**	**20 05 25.0**	**-3.4**
THR5	**Thira Island,**	**1.95**	**314**	*e*Pb	**Pb**	**20 05 24.7**	**-4.4**
THR4	**Thira Island,**	**1.95**	**316**	*e*Pb	**Pb**	**20 05 24.6**	**-4.4**
THR4	**Thira Island,**	**1.95**	**316**	*e*Pb	**Pb**	**20 05 24.6**	**-4.5**
BODT	**Bodrum**	**2.00**	**5**	*e*PN	**Pn**	**20 05 25.0**	**-1.3**
BODT				*e*SN	**Sn**	**20 05 52.5**	**+2.0**
BDRM	**Kayabasi**	**2.01**	**8**	*i* P	**Pn**	**20 05 25.0**	**-1.5**
BDRM				*i* S	**Sn**	**20 05 54.6**	**+3.7**
TURN	**Turunc**	**2.18**	**34**	*i* P	**Pn**	**20 05 24.9**	**-3.9**
TURN				*i* S	**Sn**	**20 05 51.4**	**-3.6**
YER	**Yerkesik**	**2.28**	**25**	*e*PN	**Pn**	**20 05 29.6**	**-0.6**
YER				*e*SN	**Sn**	**20 05 59.5**	**+2.1**
MLSB	**Milas**	**2.29**	**14**	*e*PN	**Pn**	**20 05 29.9**	**-0.4**
AKAS	**Kas**	**2.36**	**60**	*i* P	**Pn**	**20 05 31.5**	**+0.2**
AKAS				*i* S	**Sn**	**20 05 57.8**	**-1.5**
APE	**Apeiranthos**	**2.36**	**328**	*e*Pn	**Pn**	**20 05 29.5**	**-1.8**
APE				*e*Sn	**Sn**	**20 05 60.0**	**+0.5**
APE	**Apeiranthos**	**2.36**	**328**	*e*PN	**Pn**	**20 05 29.9**	**-1.4**
APE				*e*Sn	**Sn**	**20 05 57.5**	**-1.9**
VAM	**Vamos**	**2.39**	**279**	*e*PN	**Pn**	**20 05 32.6**	**+0.9**
VAM	**Vamos**	**2.39**	**279**	*e*Pb	**Pb**	**20 05 34.1**	**-2.4**
GCAM	**G?zelcaml?**	**2.63**	**3**	*e*P	**Pn**	**20 05 35.6**	**+0.6**
GCAM				*i* S	**Sn**	**20 06 09.2**	**+3.2**
GCAM	**G?zelcaml?**	**2.63**	**3**	*e*P	**Pn**	**20 05 35.6**	**+0.6**
GCAM				*i* S	**Sn**	**20 06 09.2**	**+3.2**
SMG	**Samos**	**2.64**	**356**	*e*PN	**Pn**	**20 05 33.5**	**-1.7**
AYDN	**Tasoluk**	**2.66**	**14**	*i* P	**Pn**	**20 05 34.8**	**-0.7**
AYDN				*i* S	**Sn**	**20 06 08.4**	**+1.5**
ELL	**Elmali**	**2.84**	**53**	*e*PN	**Pn**	**20 05 37.5**	**-0.4**
GOLH	**Golhisar**	**2.95**	**42**	*i* P	**Pn**	**20 05 40.5**	**+1.1**
GOLH				*i* S	**Sb**	**20 05 25.9**	**+4.3**
DNZL	**Cakiroluk**	**3.05**	**31**	*i* P	**Sn**	**20 05 41.1**	**+0.3**
DNZL				*i* S	**Sn**	**20 06 23.5**	**+6.9**
BLCB	**Balcova**	**3.31**	**359**	*e*PN	**Pn**	**20 05 44.6**	**+0.3**
KDAG	**Bornova**	**3.33**	**2**	*i* P	**Pn**	**20 05 44.8**	**+0.1**
CHOS	**Chios island**	**3.41**	**346**	*e*Pn	**Pn**	**20 05 44.6**	**-1.2**
CHOS				*e*Sn	**Sn**	**20 06 25.5**	**+0.1**
ANTB	**Antalya**	**3.42**	**57**	*e*PN	**Pn**	**20 05 45.9**	**0.0**
KYTH	**Kithira**	**3.51**	**291**	*e*PN	**Pn**	**20 05 47.5**	**+0.4**
MANT	**Manisa**	**3.61**	**19**	*i* P	**Pn**	**20 05 48.1**	**-0.4**
MANT				*i* S	**Sn**	**20 06 35.2**	**+4.9**
KULA	**Kula-Manisa**	**3.66**	**20**	*e*PN	**Pn**	**20 05 49.1**	**-0.1**
BCK	**Bucak**	**3.70**	**49**	*e*PN	**Pn**	**20 05 50.2**	**+0.5**
VLI	**Veliai**	**3.75**	**297**	*e*PN	**Pn**	**20 05 50.5**	**+0.1**
KHL	**Karahalli**	**3.79**	**30**	*e*PN	**Pn**	**20 05 51.7**	**+0.8**
AKHS	**Akhisar**	**3.84**	**8**	*i* P	**Pn**	**20 05 51.5**	**-0.3**
AKHS				*i* S	**Sn**	**20 06 39.9**	**+3.8**
AKS	**Akhisar**	**3.84**	**8**	*e*PN	**Pn**	**20 05 51.9**	**+0.2**
SLUM		**3.90**	**204**	P	**Pn**	**20 05 54.5**	**+2.1**
SLUM				S	**Sn**	**20 06 39.1**	**+1.7**
ISP	**Isparta**	**3.91**	**44**	*e*PN	**Pn**	**20 05 52.9**	**+0.4**
ISP	**Isparta**	**3.91**	**44**	*e*Pn	**Pn**	**20 05 52.6**	**+0.1**
ISP				*e*Sn	**Sn**	**20 06 39.3**	**+1.7**
ISP	**Isparta**	**3.91**	**44**	*c i*P	**Pn**	**20 05 52.6**	**0.0**
TKTP	**Tekketepe**	**3.94**	**40**	*i* P	**Pn**	**20 05 53.6**	**+0.6**
PTL	**Penteli**	**3.95**	**320**	*e*PN	**Pn**	**20 05 52.5**	**-0.6**
PTL	**Penteli**	**3.95**	**320**	*e*Pn	**Pn**	**20 05 53.0**	**-0.1**
DID	**Didima**	**3.95**	**309**	*e*Pn	**Pn**	**20 05 52.9**	**-0.2**
DID				*e*Sn	**Sn**	**20 06 40.1**	**+1.5**
NAIG	**Nisos Aigina**	**3.95**	**314**	*e*PN	**Pn**	**20 05 53.2**	**0.0**
NAIG	**Nisos Aigina**	**3.95**	**314**	*e*Pn	**Pn**	**20 05 53.5**	**+0.3**
HMAT	**Matruh**	**3.97**	**180**	⇑P	**Pn**	**20 05 55.6**	**+2.2**
HMAT				S	**Sn**	**20 06 40.9**	**+1.8**
ATH	**Athens Observa**	**3.97**	**318**	*e*PN	**Pn**	**20 05 53.9**	**+0.5**
LTBQ	**Tobuq**	**4.00**	**222**	*i* P	**Pn**	**20 05 57.1**	**+3.2**
	SNR=23						
DEMI	**Demirci**	**4.17**	**18**	*i* P	**Pn**	**20 05 56.4**	**+0.1**
DEMI	**Demirci**	**4.17**	**18**	*i* P	**Pn**	**20 05 56.3**	**+0.1**
PRK	**Paraskevi**	**4.22**	**351**	*e*Pn	**Pn**	**20 05 55.9**	**-0.9**
PRK				*e*Sn	**Sn**	**20 06 44.9**	**-0.3**
PRK	**Paraskevi**	**4.22**	**351**	*e*Pn	**Pn**	**20 05 55.7**	**-1.1**
PRK				*e*Sn	**Sn**	**20 06 44.9**	**-0.4**
LTK	**Loutraki**	**4.44**	**313**	*e*Pn	**Pn**	**20 06 00.2**	**+0.4**
LTK				*e*Sn	**Sn**	**20 06 51.8**	**+1.1**
GDZ	**Gediz**	**4.44**	**25**	*i* P	**Pn**	**20 05 59.9**	**-0.1**
VLX	**Vlachokerasia**	**4.45**	**302**	*e*Pn	**Pn**	**20 06 00.9**	**+1.0**
SHUT	**Suhut-Afyon**	**4.45**	**38**	*e*PN	**Pn**	**20 06 00.2**	**+0.2**
BALB	**Balikesir**	**4.61**	**8**	*e*PN	**Pn**	**20 06 02.1**	**0.0**
ALT	**Altintas**	**4.65**	**30**	*e*PN	**Pn**	**20 06 03.0**	**+0.2**
ITM	**Ithomi**	**4.68**	**298**	*e*Pn	**Pn**	**20 06 05.8**	**+2.6**
DST	**Dursunbey**	**4.69**	**15**	*e*PN	**Pn**	**20 06 03.1**	**-0.2**
PYL	**PYLOS**	**4.70**	**294**	*e*Pn	**Pn**	**20 06 04.1**	**+0.6**
LEF	**Lefka**	**4.76**	**88**	*e*PN	**Pn**	**20 06 04.0**	**-0.3**
LEF	**Lefka**	**4.76**	**88**	*e*Pn	**Pn**	**20 06 03.4**	**-0.9**
HDMB	**Hadim**	**4.77**	**65**	*e*PN	**Pn**	**20 06 04.6**	**+0.2**
EZN	**Ezine**	**4.79**	**353**	*e*PN	**Pn**	**20 06 04.6**	**0.0**
AOS	**Alonnisos**	**4.83**	**329**	*e*Pn	**Pn**	**20 06 05.0**	**-0.2**
LKR	**Lokris**	**4.85**	**319**	*e*Pn	**Pn**	**20 06 05.8**	**+0.2**
LKR	**Lokris**	**4.85**	**319**	*e*Pn	**Pn**	**20 06 05.5**	**0.0**
ERMK	**Ermenek**	**4.98**	**70**	*i* P	**Pn**	**20 06 08.8**	**+1.4**
ERMK				*i* S	**Sn**	**20 07 06.3**	**+2.1**
LIA	**Limnos Island**	**5.05**	**343**	*e*PN	**Pn**	**20 06 07.5**	**-0.8**
CSS	**Prodhromos**	**5.12**	**89**	*e*Pn	**Pn**	**20 06 08.7**	**-0.6**
CSS				*e*Sn	**Sn**	**20 07 08.2**	**+0.6**
CSS	**Prodhromos**	**5.12**	**89**	*e*Pn	**Pn**	**20 06 08.7**	**-0.6**
CSS				*e*Sn	**Sn**	**20 07 08.2**	**+0.6**
KONT	**Konya--Tatoy**	**5.12**	**54**	*e*PN	**Pn**	**20 06 09.6**	**+0.3**
NEO	**Neokhori**	**5.23**	**325**	*e*PN	**Pn**	**20 06 11.1**	**+0.3**
LADK	**Ladik-KONYA**	**5.27**	**52**	*e*PN	**Pn**	**20 06 11.9**	**+0.6**
LFK	**Lefkose**	**5.28**	**86**	*e*PN	**Pn**	**20 06 11.9**	**+0.4**
XOR	**Xorichti**	**5.30**	**325**	*e*PN	**Pn**	**20 06 11.8**	**+0.2**
LPK	**Lapseki**	**5.30**	**357**	*e*PN	**Pn**	**20 06 12.6**	**+0.9**
KDHN	**Kadinhani**	**5.30**	**48**	*i* P	**Pn**	**20 06 11.9**	**+0.1**
ULDT	**Uludag**	**5.32**	**17**	*i* P	**Pn**	**20 06 12.3**	**+0.4**
ESKT	**Eskisehir**	**5.36**	**33**	*i* P	**Pn**	**20 06 12.6**	**+0.1**
SEYT	**Eskypehyr**	**5.36**	**33**	*i* P	**Pn**	**20 06 12.6**	**+0.1**
KIZT	**Kizilcal**	**5.40**	**44**	*e*PN	**Pn**	**20 06 13.5**	**+0.4**
RLS	**Riolos of Patr**	**5.42**	**305**	*e*Pn	**Pn**	**20 06 16.3**	**+3.0**
AGG	**Agios Georgios**	**5.48**	**317**	*e*Pn	**Pn**	**20 06 15.2**	**+1.1**
AGG				*e*Sn	**Sn**	**20 07 16.8**	**+0.4**
AGG	**Agios Georgios**	**5.48**	**317**	*e*Pn	**Pn**	**20 06 15.2**	**+1.0**
IKL	**Isikli**	**5.50**	**76**	*e*PN	**Pn**	**20 06 14.2**	**-0.2**
MRMT	**Marmara Adasi**	**5.54**	**4**	*e*PN	**Pn**	**20 06 16.4**	**+1.4**
PAIG	**Paliouri**	**5.55**	**332**	*e*Pn	**Pn**	**20 06 14.5**	**-0.6**
PAIG				*e*Sn	**Sn**	**20 07 17.8**	**-0.4**
GEMT	**Gemlik**	**5.61**	**17**	*e*PN	**Pn**	**20 06 17.0**	**+1.1**
ENEZ	**Enez**	**5.70**	**353**	*e*PN	**Pn**	**20 06 17.6**	**+0.4**
EVR	**Evrytania**	**5.71**	**314**	*e*PN	**Pn**	**20 06 18.5**	**+1.2**
EVR	**Evrytania**	**5.71**	**314**	*e*Pn	**Pn**	**20 06 19.2**	**+1.9**
ADVT	**Abdulvahap**	**5.75**	**21**	*e*PN	**Pn**	**20 06 19.6**	**+1.7**
YLV	**Yalova**	**5.78**	**18**	*e*PN	**Pn**	**20 06 19.3**	**+1.0**
ALN	**Alexandroupoli**	**5.88**	**352**	*e*Pn	**Pn**	**20 06 18.7**	**-0.9**
ALN				*e*Sn	**Sn**	**20 07 26.6**	**+0.6**
MEST	**Erdemli**	**5.93**	**73**	*i* P	**Pn**	**20 06 20.2**	**-0.2**
MEST				*i* S	**Sn**	**20 07 25.5**	**-1.9**
AANS		**5.99**	**141**	⇓*e*P	**Pn**	**20 06 21.4**	**+0.1**
GULT	**Gulveren**	**6.00**	**26**	*e*PN	**Pn**	**20 06 22.3**	**+0.9**
PLG	**Polygyros**	**6.03**	**332**	*e*PN	**Pn**	**20 06 21.4**	**-0.3**
PLG	**Polygyros**	**6.03**	**332**	*e*Pn	**Pn**	**20 06 21.3**	**-0.4**
THL	**Klokotos Trika**	**6.04**	**319**	*e*Pn	**Pn**	**20 06 22.9**	**+1.0**
VLS	**Valsamata**	**6.08**	**303**	*e*PN	**Pn**	**20 06 23.5**	**+1.1**
VLS				*e*SN	**Sn**	**20 07 29.5**	**-1.5**
VLS	**Valsamata**	**6.08**	**303**	*e*PN	**Pn**	**20 06 24.5**	**+2.1**
VLS	**Valsamata**	**6.08**	**303**	*e*Pn	**Pn**	**20 06 24.5**	**+2.1**
VLS	**Valsamata**	**6.08**	**303**	*e*Pn	**Pn**	**20 06 22.8**	**+0.4**
VLS				*e*Sn	**Sn**	**20 07 29.5**	**-1.5**
HMYD	**Mayadein**	**6.12**	**148**	⇓P	**Pn**	**20 06 23.7**	**+0.6**
RDO	**Rodhopi**	**6.19**	**349**	*e*PN	**Pn**	**20 06 23.6**	**-0.3**
HNAT	**Natroun**	**6.19**	**150**	P	**Pn**	**20 06 24.5**	**+0.6**
LIT	**Litokhoron**	**6.21**	**325**	*e*Pn	**Pn**	**20 06 24.4**	**+0.2**
SQR		**6.23**	**145**	⇑P	**Pn**	**20 06 24.4**	**-0.1**
LKD	**Levkas**	**6.31**	**307**	*e*Pn	**Pn**	**20 06 26.9**	**+1.4**
FYM	**Al Fayyum**	**6.32**	**147**	⇑*i*P	**Pn**	**20 06 25.6**	**-0.1**
FYM				S	**Sn**	**20 07 34.8**	**-2.3**
AYT	**Al 'Ayyat**	**6.36**	**146**	P	**Pn**	**20 06 26.8**	**+0.6**
KOT	**Kottamia**	**6.51**	**141**	P	**Pn**	**20 06 28.0**	**-0.3**
LOD	**Lodumlu**	**6.59**	**42**	*e*PN	**Pn**	**20 06 31.0**	**+1.5**
ANTO	**Ankara**	**6.60**	**42**	*e*P	**Pn**	**20 06 29.2**	**-0.3**
ANTO				pmax	pmax		
	comp=Z,56nm,0.8s						
ANTO	**Ankara**	**6.60**	**42**	⇑*i*P	**Pn**	**20 06 30.0**	**+0.5**
ANTO	**Ankara**	**6.60**	**42**	*e*P	**Pn**	**20 06 29.2**	**-0.3**
	comp=Z,56nm,0.8s						
ANTO	**Ankara**	**6.60**	**42**	*e*Pn	**Pn**	**20 06 30.3**	**+0.8**
ANTO	**Ankara**	**6.60**	**42**	*e*Pn	**Pn**	**20 06 29.2**	**-0.3**
	comp=Z,56nm,0.8s						
HSAF	**As Saff**	**6.62**	**144**	⇓P	**Pn**	**20 06 30.1**	**+0.2**
HHAG	**Hagoal**	**6.63**	**139**	⇑*e*P	**Pn**	**20 06 29.9**	**-0.1**
KZN	**Kozani**	**6.71**	**323**	*e*PN	**Pn**	**20 06 30.9**	**-0.2**
JAN	**Janina**	**6.75**	**315**	*e*Pn	**Pn**	**20 06 29.4**	**-2.3**
NVR	**Nevrokopi**	**6.76**	**339**	*e*PN	**Pn**	**20 06 31.6**	**-0.2**
EDRB	**Edirne**	**6.77**	**358**	*e*PN	**Pn**	**20 06 32.9**	**+1.0**
AMAG	**Maghara**	**6.78**	**129**	P	**Pn**	**20 06 31.4**	**-0.6**
AWBH		**6.90**	**167**	⇑*e*P	**Pn**	**20 06 35.4**	**+1.6**
RSH		**6.92**	**124**	P	**Pn**	**20 06 32.6**	**+1.3**
KNT	**Kendrikon**	**6.92**	**333**	*e*Pn	**Pn**	**20 06 34.9**	**+1.0**
GRG	**Griva**	**6.94**	**329**	*e*Pn	**Pn**	**20 06 34.7**	**+0.4**
GRG				*e*Sn	**Sn**	**20 07 53.7**	**+1.3**
IGT	**Igoumenitsa**	**6.99**	**312**	*e*PN	**Pn**	**20 06 35.2**	**+0.4**
IGT	**Igoumenitsa**	**6.99**	**312**	*e*Pn	**Pn**	**20 06 35.2**	**+0.3**
OFRI	**'Ofer**	**7.01**	**108**	Pn	**Pn**	**20 06 34.7**	**-0.5**
HBNS	**Bani Suwayf**	**7.03**	**149**	P	**Pn**	**20 06 36.3**	**+0.7**
LJBD	**Adjabya**	**7.12**	**236**	*i* P	**Pn**	**20 06 38.5**	**+1.8**
	SNR=22						
LJBD				*e*S	**Sn**	**20 07 56.8**	**0.0**
	SNR=22						
SUZ		**7.12**	**135**	P	**Pn**	**20 06 37.0**	**+0.2**
SUZ				S	**Sn**	**20 07 53.0**	**-3.9**
BHL	**Bhannes**	**7.17**	**97**	*e*Pn	**Pn**	**20 06 34.8**	**-2.6**
VAY	**Valandovo**	**7.18**	**332**	*e*Pn	**Pn**	**20 06 40.6**	**+3.1**
VAY				*i* Sn	Sx	20 08 57.2	
MMC7	**Mount Meron ar**	**7.19**	**104**	Pn	**Pn**	**20 06 37.1**	**-0.6**
MMA0B	**Mount Meron ar**	**7.20**	**104**	Pn	**Pn**	**20 06 37.8**	**0.0**
MMAI	**Mount Meron Ar**	**7.20**	**104**	P	**Pn**	**20 06 37.0**	**-0.8**
	comp=Z,14nm,0.3s,baz=315,slow=12,SNR=53						
MMAI				S	**Sn**	**20 07 56.3**	**-2.5**
	comp=Z,11nm,0.3s,baz=280,slow=26,SNR=3.5						
SLTI	**Sal'it**	**7.21**	**111**	Pn	**Pn**	**20 06 37.2**	**-0.7**
HRSH	**Kfar Ka'horesh**	**7.21**	**107**	⇓*e*P	**Pn**	**20 06 32.6**	**-5.4**
FNA	**Florina**	**7.27**	**323**	*e*Pn	**Pn**	**20 06 40.3**	**+1.6**
HWQ	**Hawqa**	**7.34**	**94**	*e*Pn	**Pn**	**20 06 38.2**	**-1.5**
KSZI	**Kefar Szold**	**7.35**	**102**	Pn	**Pn**	**20 06 39.2**	**-0.6**
ZAF		**7.40**	**140**	⇓*e*P	**Pn**	**20 06 40.7**	**+0.2**
RCY	**Rachaya**	**7.40**	**100**	*e*Pn	**Pn**	**20 06 39.6**	**-0.9**
KZIT	**Kziot**	**7.41**	**122**	Pn	**Pn**	**20 06 39.2**	**-1.6**
MMLI	**Mount Malkishu**	**7.42**	**108**	Pn	**Pn**	**20 06 40.0**	**-0.8**
KEK	**Kerkira**	**7.42**	**311**	*e*PN	**Pn**	**20 06 42.0**	**+1.1**
KEK	**Kerkira**	**7.42**	**311**	*e*Pn	**Pn**	**20 06 40.6**	**-0.3**
ZNM		**7.50**	**138**	P	**Pn**	**20 06 42.0**	**0.0**
RTMI	**Retamim**	**7.53**	**120**	Pn	**Pn**	**20 06 41.4**	**-1.0**
HMDT	**Nahal Hemdat**	**7.58**	**109**	Pn	**Pn**	**20 06 43.0**	**+0.1**
COBT	**Iskenderun**	**7.59**	**76**	*i* P	**Pn**	**20 06 42.9**	**-0.3**
FKH	**Fakeheh**	**7.72**	**94**	*e*Pn	**Pn**	**20 06 44.0**	**-1.0**
HNKL	**Nakhl**	**7.75**	**129**	⇑P	**Pn**	**20 06 44.9**	**-0.5**
DSI	**Dead Sea**	**7.77**	**114**	Pn	**Pn**	**20 06 44.9**	**-0.7**
KRUS	**Krusevo**	**7.79**	**326**	*e*Pn	**Pn**	**20 06 46.9**	**+1.1**
OHR	**Ohrid**	**7.81**	**322**	*e*Pn	**Pn**	**20 06 49.4**	**+3.3**
OHR				*i* Sn	Sx	20 09 16.5	
MZDA	**Masada**	**7.88**	**116**	Pn	**Pn**	**20 06 46.7**	**-0.5**
HFFR	**Wahat Farafira**	**7.97**	**172**	⇓P	**Pn**	**20 06 47.4**	**+1.8**
KRMI	**Paran Flat**	**8.12**	**125**	Pn	**Pn**	**20 06 49.7**	**-0.7**
PRNI	**Paran**	**8.16**	**123**	Pn	**Pn**	**20 06 49.9**	**-1.1**
ZFRI	**Zfri**	**8.16**	**121**	Pn	**Pn**	**20 06 49.5**	**-1.5**
SKO	**Skopje**	**8.19**	**329**	*e*Pn	**Pn**	**20 06 53.2**	**+1.9**
SKO				*i* Sn	Sx	20 09 26.4	
GRB	**Gharib**	**8.34**	**143**	⇑P	**Pn**	**20 06 53.6**	**+0.2**
HRFI	**Mount Harif**	**8.38**	**125**	Pn	**Pn**	**20 06 53.9**	**-0.1**
MBRI	**Mt Berech**	**8.45**	**126**	Pn	**Pn**	**20 06 55.0**	**+0.1**
EIL	**Elat**	**8.55**	**127**	P	**Pn**	**20 06 56.9**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=338,slow=12,SNR=24						
EIL				S	**Sn**	**20 08 27.5**	**-4.6**
	comp=Z,4.9nm,0.3s,baz=124,slow=22,SNR=4.1						
EIL	**Elat**	**8.55**	**127**	Pn	**Pn**	**20 06 56.3**	**-0.1**
ASF	**Jabal al Asfar**	**8.68**	**107**	P	**Pn**	**20 06 57.6**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=153,slow=13,SNR=13						
ASF				S	**Sn**	**20 08 35.3**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=147,slow=16,SNR=3.4						
ASF	**Jabal al Asfar**	**8.68**	**107**	P	**Pn**	**20 06 57.6**	**-0.5**
ASF				S	**Sn**	**20 08 35.3**	**+0.2**
ASF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASF				smax			
	comp=N,2.0nm,0.3s						
ASF	**Jabal al Asfar**	**8.68**	**107**	*e*P	**Pn**	**20 06 58.3**	**+0.2**
	SNR=33						
ASF				S	**Sn**	**20 08 35.3**	**+0.2**
	comp=N,2.0nm,0.3s						
GLFJ		**8.70**	**127**	*e*P	**Pn**	**20 06 59.5**	**+1.1**
	SNR=33						
GLFJ				*e*S	**Sn**	**20 08 34.5**	**-1.1**
	SNR=33						
HBST	**Basata**	**8.72**	**130**	⇓*e*P	**Pn**	**20 06 58.3**	**-0.4**
TR2		**8.73**	**138**	⇓*e*P	**Pn**	**20 06 58.6**	**-0.2**
HKAT	**Jabal Katrina**	**8.78**	**136**	⇑P	**Pn**	**20 06 59.3**	**-0.2**
TR1		**9.16**	**138**	⇑P	**Pn**	**20 07 04.9**	**+0.2**
TIP	**Timpagrande**	**9.21**	**299**	*e*Pn	**Pn**	**20 07 03.6**	**-1.8**
	comp=N,32nm,0.6s						
TIP	**Timpagrande**	**9.21**	**299**	*e*Pn	**Pn**	**20 07 03.6**	**-1.8**
	comp=N,32nm,0.6s						
SHRM		**9.34**	**138**	⇓*e*P	**Pn**	**20 07 07.4**	**+0.2**
TIRR	**Tirgusor**	**9.43**	**6**	*e*P	**Pn**	**20 07 09.6**	**+1.2**
TIRR				pmax	pmax		
	comp=Z,13nm,0.6s						
TIRR	**Tirgusor**	**9.43**	**6**	⇓*i*P	**Pn**	**20 07 09.4**	**+1.0**
TIRR	**Tirgusor**	**9.43**	**6**	*e*P	**Pn**	**20 07 09.6**	**+1.2**
	comp=Z,13nm,0.6s						
TIRR	**Tirgusor**	**9.43**	**6**	*e*Pn	**Pn**	**20 07 09.6**	**+1.2**
	comp=Z,13nm,0.6s						
HHRG	**Al Ghardaqah**	**9.59**	**143**	⇑*e*P	**Pn**	**20 07 11.3**	**+0.6**
HARR	**Harsova**	**9.63**	**4**	⇓*i*P	**Pn**	**20 07 11.9**	**+0.8**
MALT	**Malatya**	**9.66**	**67**	*e*P	**Pn**	**20 07 07.3**	**-4.3**
MALT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MALT	**Malatya**	**9.66**	**67**	⇑*i*P	**Pn**	**20 07 07.4**	**-4.2**
MALT	**Malatya**	**9.66**	**67**	*e*Pn	**Pn**	**20 07 07.3**	**-4.3**
	comp=Z,10nm,0.7s						
MALT	**Malatya**	**9.66**	**67**	Pn	**Pn**	**20 07 07.2**	**-4.3**
HDK1	**Dakhla**	**9.70**	**167**	⇓P	**Pn**	**20 07 14.2**	**+2.1**
AKRG	**Al Kharijah**	**9.98**	**162**	⇑*e*P	**Pn**	**20 07 17.8**	**+1.8**
GTR	**Jabal at Tayr**	**9.99**	**162**	⇑P	**Pn**	**20 07 17.9**	**+1.8**
SG1	**Sgolgore (BA)**	**10.03**	**308**	*e*Pn	**Pn**	**20 07 15.2**	**-1.4**
ISR	**Istrita**	**10.04**	**358**	⇑*i*P	**Pn**	**20 07 19.7**	**+2.9**
CUC	**Castrocucco**	**10.21**	**302**	*e*Pn	**Pn**

comp=Z,7.0nm,1.1s
CSNA Conrad Observa 15.33 330 ⇑*i*P **Pn 20 08 30.8 +2.1**
comp=Z,7.2nm,1.1s
TBLG Delisi 15.34 59 *e*P **Pn 20 08 34.6 +5.7**
TBLG Delisi 15.34 59 P **Pn 20 08 34.7 +5.8**
MTA Mtatsminda 15.37 59 P **Pn 20 08 34.3 +5.0**
KIEV Kiev 15.69 5 *e*P **Pn 20 08 32.1 -1.3**
KIEV pmax pmax
comp=Z,15nm,0.6s
KIEV Kiev 15.69 5 *e*P **Pn 20 08 32.1 -1.3**
comp=Z,15nm,0.6s
KIEV Kiev 15.69 5 *e*Pn **Pn 20 08 32.1 -1.3**
comp=Z,15nm,0.6s
AKASG Malin Array Be 15.70 5 P **Pn 20 08 34.6 +1.1**
comp=Z,3.2nm,0.3s,baz=196,slow=11,SNR=13
AKASG Malin Array Be 15.70 5 P **Pn 20 08 34.6 +1.1**
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKBB Malin Array Si 15.70 5 *e*P **Pn 20 08 27.1 -6.4**
DGRG David-gareji 15.70 61 P **Pn 20 08 38.6 +5.0**
CORF Corte 15.74 303 *e*P **Pn 20 08 38.0 +3.9**
KBA Koelnbreinsper 15.82 323 ⇑*i*P **Pn 20 08 36.7 +1.6**
comp=Z,50nm,1.5s
PGF Pioggiola 15.94 303 *e*P **Pn 20 08 39.2 +2.6**
comp=Z,30nm,0.7s
PGF Pioggiola 15.94 303 *e*P **Pn 20 08 39.2 +2.6**
PGF pmax pmax
comp=Z,15nm,0.7s
PGF Pioggiola 15.94 303 *e*P **Pn 20 08 39.2 +2.6**
comp=Z,15nm,0.7s
OJC Ojcow 16.05 343 *e*P **Pn 20 08 40.5 +2.5**
OKC Ostrava-Krasne 16.15 339 *e*P **Pn 20 08 38.7 -0.6**
comp=Z,500nm,17.7s
OKC Ostrava-Krasne 16.15 339 *e*P **Pn 20 08 38.7 -0.6**
OKC AMS AMS 20 14 50.0
comp=Z,500nm,17.7s
VRAC Vranov 16.19 335 P **Pn 20 08 41.0 +1.2**
baz=285,slow=20,SNR=7.0
MORC Moravsky Berou 16.28 337 *e*P **Pn 20 08 42.3 +1.4**
MORC pmax pmax
comp=Z,10.0nm,0.9s
MORC Moravsky Berou 16.28 337 ⇓*i*P **Pn 20 08 42.7 +1.8**
MORC Moravsky Berou 16.28 337 *e*P **Pn 20 08 42.3 +1.4**
comp=Z,10.0nm,0.9s
MORC Moravsky Berou 16.28 337 *e*Pn **Pn 20 08 42.3 +1.3**
comp=Z,10nm,0.9s
WTTA Wattenberg 16.81 321 ⇑*i*P **Pn 20 08 48.8 +1.2**
comp=Z,36nm,1.8s
GEC2 GERESS Array S 16.95 328 *e*P **Pn 20 08 49.5 +0.1**
GERES GERESS Array B 16.95 328 P **Pn 20 08 49.6 +0.2**
comp=Z,0.2nm,0.3s,baz=145,slow=12,SNR=33
FETA Feichten 17.13 319 ⇑*i*P **Pn 20 08 51.7 0.0**
comp=Z,26nm,1.1s
MOTA Moosalm 17.14 321 ⇓*i*P **Pn 20 08 51.3 -0.5**
comp=Z,13nm,1.3s
DPC Dobruska-Polom 17.17 336 *e*P **Pn 20 08 52.3 +0.1**
comp=Z,400nm,10.3s
DPC Dobruska-Polom 17.17 336 *e*P **Pn 20 08 52.3 +0.1**
DPC AMS AMS 20 17 10.0
comp=Z,400nm,10.3s
KHC Kasperske Hory 17.22 329 *e*P **Pn 20 08 52.0 -0.8**
comp=Z,500nm,13.5s
KHC Kasperske Hory 17.22 329 *e*P **Pn 20 08 52.0 -0.8**
KHC *e*pP pP 20 08 59.0 -2.1
KHC *ex* x 20 09 02.0
KHC AMS AMS 20 16 00.0
comp=Z,500nm,13.5s
KHC Kasperske Hory 17.22 329 *e*P **Pn 20 08 52.0 -0.8**
KHC *e* 20 08 59.0
KHC *e* 20 09 02.0
UPC Upice 17.41 336 *e*P **Pn 20 08 55.8 +0.7**
DAVOX Davos/Dischmat 17.45 317 P **Pn 20 08 56.5 +0.8**
comp=Z,0.5nm,0.3s,baz=136,slow=17,SNR=5.2
DAVOX LR LR 20 16 01.2
comp=Z,349nm,18.6s,baz=117,slow=38
SAOF Saorge 17.47 306 *e*P **Pn 20 08 57.1 +1.1**
REVF Revere 17.50 306 *e*P **Pn 20 08 55.4 -0.9**
SBF Sospel 17.50 306 *e*P **Pn 20 08 56.6 +0.3**
comp=Z,51nm,0.7s
SBF Sospel 17.50 306 *e*P **Pn 20 08 56.6 +0.3**
SBF pmax pmax
comp=Z,26nm,0.7s
SBF Sospel 17.50 306 *e*P **Pn 20 08 56.6 +0.3**
comp=Z,26nm,0.7s
PRU Pruhonice 17.50 332 *e*P **Pn 20 08 55.2 -1.1**
comp=Z,500nm,12.0s
PRU Pruhonice 17.50 332 *e*P **Pn 20 08 55.2 -1.1**
PRU AMS AMS 20 16 20.0
comp=Z,500nm,12.0s
DAVOS Davos 17.53 317 P **Pn 20 08 56.5 -0.2**
WET Wettzell 17.53 328 *e*P **Pn 20 08 54.3 -2.4**
WET pmax pmax
comp=Z,24nm,1.3s
WET Wettzell 17.53 328 *e*P **Pn 20 08 54.3 -2.4**
comp=Z,24nm,1.3s
AUTN L'Aution 17.56 306 *e*P **Pn 20 08 58.5 +1.4**
LUCF Luceram 17.57 306 *e*P **Pn 20 08 58.5 +1.3**
KSP Ksiaz 17.60 337 *e*P **Pn 20 08 58.4 +0.9**
KSP *e*S **Sn 20 12 14.0 +1.3**
TOUF Mont Tournerai 17.68 306 *e*P **Pn 20 08 58.5 -0.1**
MVIF Mont Vial 17.70 306 *e*P **Pn 20 08 59.6 +0.8**
RST Umm Al-Ruwaisa 17.72 103 *e*P **Pn 20 08 57.6 -1.5**
comp=Z,25nm,0.8s
RST Umm Al-Ruwaisa 17.72 103 *e*P **Pn 20 08 57.6 -1.5**
baz=103
RST AMb AMB 20 09 03.9
comp=Z,25nm,0.8s,baz=103
DAVA Damuels 17.75 319 ⇑*i*P **Pn 20 08 59.4 0.0**
comp=Z,12nm,0.6s
CALN Calern 17.82 305 *e*P **Pn 20 09 00.4 +0.1**
MIB Mutribah 17.87 101 *e*P **Pn 20 08 59.7 -1.4**
comp=Z,49nm,0.7s
MIB Mutribah 17.87 101 *e*P **Pn 20 08 59.6 -1.4**
baz=101
MIB AMb AMB 20 09 06.5
comp=Z,49nm,0.7s,baz=101
FRF La Foret Royal 17.91 304 *e*P **Pn 20 09 01.4 0.0**
comp=Z,10nm,0.5s
FRF La Foret Royal 17.91 304 *e*P **Pn 20 09 01.4 0.0**
FRF pmax pmax
comp=Z,5.0nm,0.5s
FRF La Foret Royal 17.91 304 *e*P **Pn 20 09 01.4 0.0**
comp=Z,5.2nm,0.5s
LMR La Mourre 17.93 304 *e*P **Pn 20 09 01.1 -0.5**
comp=Z,9.5nm,0.6s
LMR La Mourre 17.93 304 *e*P **Pn 20 09 01.1 -0.5**
LMR pmax pmax
comp=Z,5.0nm,0.6s
LMR La Mourre 17.93 304 *e*P **Pn 20 09 01.1 -0.5**
comp=Z,4.8nm,0.6s
PVCC Panska Ves 17.93 333 *e*P **Pn 20 09 00.5 -1.1**
NAY Al-Naaiem 18.01 103 *e*P **Pn 20 09 01.5 -1.3**
comp=Z,14nm,0.8s
NAY Al-Naaiem 18.01 103 *e*P **Pn 20 09 01.4 -1.3**
baz=103
NAY AMb AMB 20 09 23.6
comp=Z,14nm,0.8s,baz=103
UMR Umm Al-Rimmam 18.27 102 *e*P **Pn 20 09 03.8 -2.2**
comp=Z,51nm,0.6s
UMR Umm Al-Rimmam 18.27 102 *e*P **Pn 20 09 03.9 -2.1**
baz=102
UMR AMb AMB 20 09 09.8
comp=Z,51nm,0.6s,baz=102
MBDF Montbardon 18.29 308 *e*P **Pn 20 09 05.1 -0.9**
comp=Z,14nm,0.6s
MBDF Montbardon 18.29 308 *e*P **Pn 20 09 05.1 -0.9**
MBDF pmax pmax
comp=Z,7.0nm,0.6s
MBDF Montbardon 18.29 308 *e*P **Pn 20 09 05.1 -0.9**
comp=Z,6.8nm,0.6s
TAVF Tavernes 18.33 304 *e*P **Pn 20 09 06.2 -0.4**
VSR Storozhevoye 18.35 25 *e*P **Pn 20 09 05.8 -0.9**
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,6.0nm,1.0s
BRG Berggiesshubel 18.45 333 *e*P **Pn 20 09 07.6 -0.3**
BRG S **Sn 20 12 28.0 -5.1**
BRG pmax pmax
comp=Z,5.0nm,1.0s
BRG MLR MLR
comp=N,281nm,17.9s
BRG MLR MLR
comp=E,289nm,18.5s
BRG MLR MLR
comp=Z,256nm,15.1s
BRG Berggiesshubel 18.45 333 *e*P **Pn 20 09 07.0 -0.9**
comp=Z,12nm,1.2s
BRG Berggiesshubel 18.45 333 *e*P **Pn 20 09 07.6 -0.3**
comp=Z,7.8nm,1.0s
BRG S **Sn 20 12 28.0 -5.1**
BRG
comp=N,469nm,17.9s
BRG
comp=E,483nm,18.5s
BRG
comp=Z,428nm,15.1s
BERF Bertagne 18.48 303 *e*P **Pn 20 09 07.8 -0.6**
BNI Bardonecchia 18.49 309 *e*P **Pn 20 09 08.8 +0.4**
BNI pmax pmax
comp=Z,8.0nm,0.8s
BNI Bardonecchia 18.49 309 *e*P **Pn 20 09 08.8 +0.4**
comp=Z,8.4nm,0.8s
BNI Bardonecchia 18.49 309 *e*P **Pn 20 09 08.8 +0.3**
comp=Z,8.4nm,0.8s
NKC Novy Kostel 18.54 329 *e*P **Pn 20 09 07.3 -1.7**
comp=Z,600nm,14.0s
NKC Novy Kostel 18.54 329 *e*P **Pn 20 09 07.3 -1.7**
NKC AMS AMS 20 17 50.0
comp=Z,600nm,14.0s
PUYF Puyloubier 18.55 304 *e*P **Pn 20 09 08.8 -0.4**
STOF St-Etienne Org 18.57 305 *e*P **Pn 20 09 15.4 +5.9**
LPG La Plagne 18.64 310 *e*P **Pn 20 09 09.5 -0.8**
comp=Z,21nm,0.7s
LPG La Plagne 18.64 310 *e*P **Pn 20 09 09.5 -0.8**
LPG pmax pmax
comp=Z,10.0nm,0.7s
LPG La Plagne 18.64 310 *e*P **Pn 20 09 09.5 -0.8**
comp=Z,10nm,0.7s
VILF Villemus 18.65 304 *e*P **Pn 20 09 08.5 -1.9**
LPL La Plagne 18.66 310 *e*P **Pn 20 09 09.6 -0.9**
comp=Z,11nm,0.4s
LPL La Plagne 18.66 310 *e*P **Pn 20 09 09.6 -0.9**
comp=Z,5.6nm,0.4s
TANN Tannenbergstha 18.67 330 *e*P **Pn 20 09 08.8 -1.8**
comp=Z,11nm,1.1s
GRA1 Grafenberg Arr 18.67 326 *e*P **Pn 20 09 08.9 -1.8**
comp=Z,60nm,1.4s
GRF Grafenberg Arr 18.67 326 *e*P **Pn 20 09 08.9 -1.8**
GRF pmax pmax
comp=Z,60nm,1.4s
GRF Grafenberg Arr 18.67 326 *e*P **Pn 20 09 08.9 -1.8**
GRF pmax pmax
comp=Z,60nm,1.4s
GRF Grafenberg Arr 18.67 326 *e*P **Pn 20 09 08.9 -1.8**
comp=Z,60nm,1.4s
GELF Grande-Etoile 18.68 303 *e*P **Pn 20 09 09.7 -1.2**
SMRF Simiane la Rot 18.79 305 *e*P **Pn 20 09 11.7 -0.4**
comp=Z,27nm,1.1s
SMRF Simiane la Rot 18.79 305 *e*P **Pn 20 09 11.7 -0.4**
comp=Z,14nm,1.1s
VOR Voronezh 18.79 24 P **Pn 20 09 13.0 +0.9**
VOR pmax pmax
comp=Z,100nm,1.0s
VOR Voronezh 18.79 24 P **Pn 20 09 13.0 +0.9**
comp=Z,100nm,1.0s
TREF Trevaresse 18.80 304 *e*P **Pn 20 09 12.5 +0.3**
SPAK Spaichingen-Ko 18.83 319 *e*P **Pn 20 09 09.2 -3.4**
ORIF Oris-en-Rattie 18.95 308 *e*P **Pn 20 09 11.8 -2.2**
comp=Z,12nm,0.7s
ORIF *e*MLR MLR
comp=Z,536nm,22.2s
ORIF Oris-en-Rattie 18.95 308 *e*P **Pn 20 09 11.8 -2.2**
ORIF pmax pmax
comp=Z,6.0nm,0.7s
ORIF Oris-en-Rattie 18.95 308 *e*P **Pn 20 09 11.8 -2.2**
comp=Z,5.8nm,0.7s
PRAF Pradon 19.00 304 *e*P **Pn 20 09 09.0 -5.7**
STU Stuttgart 19.03 321 P **Pn 20 09 15.4 +0.4**
STU pmax pmax
comp=Z,8.0nm,0.5s
STU Stuttgart 19.03 321 P **Pn 20 09 15.4 +0.4**
comp=Z,8.0nm,0.5s
STU Stuttgart 19.03 321 P **Pn 20 09 15.4 +0.4**
comp=Z,8.0nm,0.5s
FELD Feldberg im Sc 19.12 318 *e*P **Pn 20 09 16.8 +0.7**
SUW Suwalki 19.14 353 *e*P **Pn 20 09 16.2 -0.1**
CLL Collm 19.15 332 *i*P **Pn 20 09 15.2 -1.2**
CLL pmax pmax
comp=Z,46nm,1.5s
CLL Collm 19.15 332 *e*P **Pn 20 09 14.6 -1.8**
comp=Z,46nm,1.5s
CLL Collm 19.15 332 *i*P **Pn 20 09 15.2 -1.2**
comp=Z,46nm,1.5s
CLL *e*(sP) sP 20 09 26.0 +0.4
CLL *e*S **Sn 20 12 49.0 -1.1**
MOX Moxa 19.20 329 *e*P **Pn 20 09 16.8 -0.2**
comp=Z,40nm,1.6s
MOX
comp=Z,400nm,17.0s
MOX Moxa 19.20 329 *e*P **Pn 20 09 16.8 -0.2**
MOX pmax pmax
comp=Z,40nm,1.6s
MOX MLR MLR
comp=Z,400nm,17.0s
BFO Black Forest 19.21 319 *e*P **Pn 20 09 13.8 -3.4**
BFO pmax pmax
comp=Z,7.0nm,0.8s
BFO Black Forest 19.21 319 *e*P **Pn 20 09 13.8 -3.3**
comp=Z,6.5nm,0.8s
GKP Gorka Klasztor 19.48 342 *e*P **Pn 20 09 19.4 -1.0**
CABF La Chapelle 19.57 312 *e*P **Pn 20 09 18.4 -3.0**
comp=Z,34nm,0.7s
CABF La Chapelle 19.57 312 *e*P **Pn 20 09 18.4 -3.0**
CABF pmax pmax
comp=Z,17nm,0.7s
CABF La Chapelle 19.57 312 *e*P **Pn 20 09 18.4 -3.0**
comp=Z,17nm,0.7s
MOF Molkenrain 19.59 317 *e*P **Pn 20 09 23.7 +2.0**
OG05 Jujurieux 19.69 310 *e*P **Pn 20 09 20.1 -2.8**
VIVF Saint-Julien-l 19.71 306 *e*P **Pn 20 09 19.3 -3.9**
comp=Z,31nm,0.9s
VIVF Saint-Julien-l 19.71 306 *e*P **Pn 20 09 19.3 -3.9**
VIVF pmax pmax
comp=Z,15nm,0.9s
VIVF Saint-Julien-l 19.71 306 *e*P **Pn 20 09 19.3 -3.9**
comp=Z,15nm,0.9s
HINF Hinteralfeld 19.73 316 *e*P **Pn 20 09 19.4 -4.0**
comp=Z,8.8nm,0.7s
HINF Hinteralfeld 19.73 316 *e*P **Pn 20 09 19.4 -4.0**
HINF pmax pmax
comp=Z,4.0nm,0.7s
HINF Hinteralfeld 19.73 316 *e*P **Pn 20 09 19.4 -4.0**
comp=Z,4.4nm,0.7s
TOD Tromm 19.76 323 *e*P **Pn 20 09 21.2 -2.6**
ECH Echery 19.78 318 *e*P **Pn 20 09 19.4 -4.6**
CDF Champ du Feu 19.83 318 *e*P **Pn 20 09 23.3 -1.2**
comp=Z,17nm,0.8s
CDF Champ du Feu 19.83 318 *e*P **Pn 20 09 23.3 -1.2**
CDF pmax pmax
comp=Z,9.0nm,0.8s
CDF Champ du Feu 19.83 318 *e*P **Pn 20 09 23.3 -1.2**
comp=Z,8.7nm,0.8s
LANF Langenberg 19.88 320 *e*P **Pn 20 09 24.6 -0.5**
SSB Saint Sauveur 19.96 308 *e*P **Pn 20 09 22.9 -3.2**
SSB Saint Sauveur 19.96 308 *e*P **Pn 20 09 22.9 -3.2**
LASF Ste Croix 19.99 304 *e*P **Pn 20 09 23.9 -2.5**
HAU Haudompre 20.12 316 *e*P **P 20 09 25.1 -0.9**
comp=Z,8.9nm,0.4s
HAU *e*MLR MLR
comp=Z,345nm,20.5s,MS3.4
HAU Haudompre 20.12 316 *e*P **P 20 09 25.1 -0.9**
comp=Z,4.4nm,0.4s
TNS Taunus Mts 20.34 324 *e*P **P 20 09 29.5 +1.1**
TNS pmax pmax
comp=Z,25nm,1.0s
TNS Taunus Mts 20.34 324 *e*P **P 20 09 29.5 +1.1**
comp=Z,25nm,1.0s
THEF They Montfort 20.44 316 *e*P **P 20 09 27.6 -2.0**
RUP Ruppelstein 20.71 321 *e*P **P 20 09 31.6 -0.8**
MTLF Montolieu 20.91 301 *e*P **P 20 09 34.8 +0.1**
comp=Z,16nm,0.9s
MTLF Montolieu 20.91 301 *e*P **P 20 09 34.8 +0.1**
MTLF pmax pmax
comp=Z,8.0nm,0.9s
MTLF Montolieu 20.91 301 *e*P **P 20 09 34.8 +0.1**
comp=Z,7.8nm,0.9s
SMF Signal de Mont 20.96 311 *e*P **P 20 09 33.2 -2.0**
comp=Z,19nm,0.6s
SMF Signal de Mont 20.96 311 *e*P **P 20 09 33.2 -2.0**
SMF pmax pmax
comp=Z,10.0nm,0.6s
SMF Signal de Mont 20.96 311 *e*P **P 20 09 33.2 -2.0**
comp=Z,9.6nm,0.6s
OBN Obninsk 21.09 15 *i*P **P 20 09 36.4 -0.1**
OBN *e* 20 09 41.8
OBN *e*S **S 20 13 31.0 +1.2**
OBN *e*SS 20 13 58.4
OBN pmax pmax
comp=Z,10.0nm,0.7s,mb4.2
OBN MLR MLR
comp=Z,100nm,14.0s,MS3.4
OBN Obninsk 21.09 15 *e*P **P 20 09 36.3 -0.2**
comp=Z,60nm,1.0s,mb4.9
OBN Obninsk 21.09 15 *e*P **P 20 09 36.3 -0.2**
comp=Z,60nm,1.0s,mb4.9
MEZF Maizieres J'vi 21.12 316 *e*P **P 20 09 35.2 -1.6**
comp=Z,25nm,0.7s,mb4.4
MEZF Maizieres J'vi 21.12 316 *e*P **P 20 09 35.2 -1.6**
comp=Z,13nm,0.7s,mb4.4
WLF Walferdange 21.16 320 P **P 20 09 38.4 +1.1**
comp=Z,14nm,1.5s,mb4.1
WLF Walferdange 21.16 320 *e*P **P 20 09 36.1 -1.2**
WLF pmax pmax
comp=Z,52nm,1.5s,mb4.6
WLF Walferdange 21.16 320 *e*P **P 20 09 36.1 -1.2**
comp=Z,52nm,1.5s,mb4.6
WLF Walferdange 21.16 320 *e*P **P 20 09 36.1 -1.2**
comp=Z,52nm,1.5s,mb4.6
LOR Lormes 21.22 312 *e*P **P 20 09 36.1 -1.9**
comp=Z,21nm,0.7s,mb4.3
LOR *e*MLR MLR
comp=Z,207nm,19.8s
LOR Lormes 21.22 312 *e*P **P 20 09 36.1 -1.9**
LOR pmax pmax
comp=Z,10.0nm,0.7s,mb4.2
LOR MLR MLR
comp=Z,210nm,19.8s,MS3.5
LOR Lormes 21.22 312 *e*P **P 20 09 36.1 -1.9**
comp=Z,10nm,0.7s,mb4.3
LOR LR LR
comp=Z,210nm,19.8s,MS3.5
FRNF Fournols 21.30 306 *e*P **P 20 09 38.4 -0.4**
AVF Avril sur Loir 21.33 310 *e*P **P 20 09 37.1 -2.0**
comp=Z,20nm,0.7s,mb4.3
AVF Avril sur Loir 21.33 310 *e*P **P 20 09 37.1 -2.0**
AVF pmax pmax
comp=Z,10.0nm,0.6s,mb4.3
AVF Avril sur Loir 21.33 310 *e*P **P 20 09 37.1 -2.0**
comp=Z,10nm,0.7s,mb4.3
SSF Saint Saulge 21.35 311 *e*P **P 20 09 36.7 -2.6**
comp=Z,54nm,0.9s,mb4.6
SSF Saint Saulge 21.35 311 *e*P **P 20 09 36.7 -2.6**
SSF pmax pmax
comp=Z,27nm,0.9s,mb4.6
SSF Saint Saulge 21.35 311 *e*P **P 20 09 36.7 -2.6**
comp=Z,27nm,0.9s,mb4.6
CAF Calviac 21.47 305 *e*P **P 20 09 39.8 -0.9**
comp=Z,6.1nm,0.6s,mb3.8
CAF Calviac 21.47 305 *e*P **P 20 09 39.8 -0.9**
CAF pmax pmax
comp=Z,3.0nm,0.6s,mb3.8
CAF Calviac 21.47 305 *e*P **P 20 09 39.8 -0.9**
comp=Z,3.0nm,0.6s,mb3.8
BGF Bois d'Agland 21.55 310 *e*P **P 20 09 39.9 -1.6**
comp=Z,20nm,0.7s,mb4.3
BGF Bois d'Agland 21.55 310 *e*P **P 20 09 39.9 -1.6**
BGF pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
BGF Bois d'Agland 21.55 310 *e*P **P 20 09 39.9 -1.6**
comp=Z,9.9nm,0.7s,mb4.3
BUG Bochum--Univer 21.71 325 *e*P **P 20 09 45.8 +2.7**
comp=Z,25nm,1.2s,mb4.5
MEM Membach 21.80 322 P **P 20 09 43.8 -0.3**
comp=Z,14nm,0.9s,mb4.4
MOS Moscow 21.90 16 *e*P **P 20 09 42.7 -2.5**
MOS *e* 20 09 48.6
MOS *e*PPP 20 10 11.2
MOS *e*S **S 20 13 44.7 -1.0**
MOS pmax pmax
comp=Z,25nm,0.6s,mb4.8
HGN Heimansgroeve 21.93 322 *e*P **P 20 09 46.1 +0.6**
comp=Z,35nm,2.2s,mb4.4
HGN Heimansgroeve 21.93 322 *e*S **S 20 13 46.3 0.0**
RJF Les Rejaudoux 21.96 305 *e*P **P 20 09 44.9 -1.0**
comp=Z,34nm,0.9s,mb4.5
RJF *e*MLR MLR
comp=Z,272nm,19.5s,MS3.4
RJF Les Rejaudoux 21.96 305 *e*P **P 20 09 44.9 -1.0**
RJF pmax pmax
comp=Z,17nm,0.9s,mb4.5
RJF MLR MLR
comp=Z,270nm,19.5s,MS3.7
RJF Les Rejaudoux 21.96 305 *e*P **P 20 09 44.9 -1.0**
comp=Z,17nm,0.9s,mb4.5
RJF LR LR
comp=Z,270nm,19.5s,MS3.7
BCLA Clavier 22.04 321 P **P 20 09 46.7 0.0**
comp=Z,13nm,1.5s,mb4.1
GIVF Givet 22.11 320 *e*P **P 20 09 45.0 -2.5**
EPF Esparros 22.18 299 *e*P **P 20 09 48.7 +0.5**
comp=Z,7.3nm,0.7s,mb3.9
EPF Esparros 22.18 299 *e*P **P 20 09 48.7 +0.5**
EPF pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
EPF Esparros 22.18 299 *e*P **P 20 09 48.7 +0.5**
comp=Z,3.7nm,0.7s,mb3.9
DOU Dourbes 22.23 319 P **P 20 09 46.8 -1.9**
WTSB Winterswijk 22.27 326 *e*P **P 20 09 51.2 +2.1**
comp=Z,15nm,1.0s,mb4.3
LFF La Frestale 22.37 304 *e*P **P 20 09 50.4 +0.1**
comp=Z,17nm,0.7s,mb4.3
LFF La Frestale 22.37 304 *e*P **P 20 09 50.4 +0.1**
LFF pmax pmax
comp=Z,9.0nm,0.7s,mb4.3
LFF La Frestale 22.37 304 *e*P **P 20 09 50.4 +0.1**
comp=Z,8.6nm,0.7s,mb4.3
BAIF Baives 22.42 319 *e*P **P 20 09 48.7 -2.0**
comp=Z,24nm,0.7s,mb4.5
BAIF Baives 22.42 319 *e*P **P 20 09 48.7 -2.0**
BAIF pmax pmax
comp=Z,12nm,0.7s,mb4.4
BAIF Baives 22.42 319 *e*P **P 20 09 48.7 -2.0**
comp=Z,12nm,0.7s,mb4.4
TAM Tamanrasset 22.44 243 *e*P **P 20 09 52.5 +1.3**
SNF Seneffe 22.63 320 P **P 20 09 52.0 -0.9**
comp=Z,14nm,2.6s,mb3.9
UCC Uccle 22.75 321 P **P 20 09 53.3 -1.0**
comp=Z,17nm,1.4s,mb4.3
UCC Uccle 22.75 321 P **P 20 09 53.2 -1.1**
comp=Z,17nm,1.4s,mb4.3
ETSF Etsaut 22.80 298 *e*P **P 20 09 54.3 -0.5**
comp=Z,11nm,0.7s,mb4.1
ETSF Etsaut 22.80 298 *e*P **P 20 09 54.3 -0.5**
ETSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.2
ETSF Etsaut 22.80 298 *e*P **P 20 09 54.3 -0.5**
comp=Z,5.7nm,0.6s,mb4.2
SJPF Ste Jean 23.32 299 *e*P **P 20 09 59.7 -0.6**
comp=Z,20nm,0.9s,mb4.3
SJPF Ste Jean 23.32 299 *e*P **P 20 09 59.7 -0.6**
SJPF pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
SJPF Ste Jean 23.32 299 *e*P **P 20 09 59.7 -0.6**
comp=Z,10nm,0.9s,mb4.2
MFF Saint Martin d 23.49 308 *e*P **P 20 09 59.3 -2.7**
comp=Z,12nm,0.6s,mb4.2
MFF Saint Martin d 23.49 308 *e*P **P 20 09 59.3 -2.7**
MFF pmax pmax
comp=Z,6.0nm,0.6s,mb4.2
MFF Saint Martin d 23.49 308 *e*P **P 20 09 59.3 -2.7**
comp=Z,5.9nm,0.6s,mb4.2
LDF La Druitiere 24.21 312 *e*P **P 20 10 06.4 -2.2**
comp=Z,6.2nm,0.4s,mb4.1
FLN La Foliniere 24.50 312 *e*P **P 20 10 08.8 -2.4**
comp=Z,14nm,0.5s,mb4.4
FLN *e*MLR MLR
comp=Z,206nm,18.5s,MS3.4
FLN La Foliniere 24.50 312 *e*P **P 20 10 08.8 -2.4**
FLN pmax pmax
comp=Z,7.0nm,0.5s,mb4.3
FLN MLR MLR
comp=Z,210nm,18.5s,MS3.7
FLN La Foliniere 24.50 312 *e*P **P 20 10 08.8 -2.4**
comp=Z,6.8nm,0.5s,mb4.3
FLN LR LR
comp=Z,210nm,18.5s,MS3.7

GRR Gorron 24.58 311 *e*P **P** **20 10 10.0 -2.0**
comp=Z,17nm,0.5s,mb4.6
GRR Gorron 24.58 311 *e*P **P** **20 10 10.0 -2.0**
GRR pmax pmax
comp=Z,9.0nm,0.4s,mb4.7
GRR Gorron 24.58 311 *e*P **P** **20 10 10.0 -2.0**
comp=Z,8.7nm,0.4s,mb4.6
ESDC Sonseca Array 25.03 290 P **P** **20 10 15.5 -0.7**
comp=Z,1.8nm,0.4s,mb4.0,baz=81,slow=9.5,SNR=27
ESLA Sonseca Array 25.03 290 *e*P **P** **20 10 15.4 -0.8**
comp=Z,2.5nm,0.9s,mb3.7
SGMF Saint Gilles 25.59 310 *e*P **P** **20 10 19.5 -1.6**
comp=Z,12nm,0.8s,mb4.2
SGMF Saint Gilles 25.59 310 *e*P **P** **20 10 19.5 -1.6**
SGMF pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
SGMF Saint Gilles 25.59 310 *e*P **P** **20 10 19.5 -1.6**
comp=Z,6.1nm,0.8s,mb4.2
QUIF Quistinic 25.86 309 *e*P **P** **20 10 21.2 -2.4**
comp=Z,10nm,0.6s,mb4.3
QUIF Quistinic 25.86 309 *e*P **P** **20 10 21.2 -2.4**
QUIF pmax pmax
comp=Z,5.0nm,0.6s,mb4.2
QUIF Quistinic 25.86 309 *e*P **P** **20 10 21.2 -2.4**
comp=Z,5.2nm,0.6s,mb4.2
ROSF Rostrenen 26.07 310 *e*P **P** **20 10 22.7 -2.8**
comp=Z,18nm,0.7s,mb4.4
ROSF Rostrenen 26.07 310 *e*P **P** **20 10 22.7 -2.8**
ROSF pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
ROSF Rostrenen 26.07 310 *e*P **P** **20 10 22.7 -2.8**
comp=Z,8.9nm,0.7s,mb4.4
ZFT Errachidia 26.32 272 *i* P **P** **20 10 29.0 +1.1**
MDT Midelt 26.34 274 P **P** **20 10 28.4 +0.2**
comp=Z,5.0nm,1.0s,mb4.0,baz=88,slow=11,SNR=4.9
MDT LR LR 20 22 57.9
comp=Z,150nm,21.2s,MS3.5,baz=185,slow=41
DKH Dar Kharkhour 26.43 280 *i* P **P** **20 10 31.0 +2.1**
HFS Hagfors 26.55 345 P **P** **20 10 27.8 -1.9**
comp=Z,4.2nm,0.7s,mb4.1,baz=129,slow=12,SNR=9.9
HFS LR LR 20 22 07.9
comp=Z,357nm,18.6s,MS4.0,baz=160,slow=39
HFS Hagfors 26.55 345 P **P** **20 10 27.8 -1.9**
HFS pmax pmax
comp=Z,4.0nm,0.7s
HFS MLR MLR
comp=Z,357nm,18.6s
KLMR Klimovskoe 27.01 13 *e*P **P** **20 10 32.5 -1.4**
KLMR pmax pmax
comp=Z,44nm,1.6s,mb4.7
KAF Kangasniemi 27.07 359 *e*p **P** **20 10 34.1 -0.2**
comp=Z,3.3nm,0.6s,mb4.0
KAF Kangasniemi 27.07 359 *e*P **P** **20 10 34.1 -0.2**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.0
AKTK Aktyubinsk 27.16 46 P **P** **20 10 33.9 -1.4**
AKTK LR LR 20 24 25.5
AKTO Aktyubinsk 27.16 46 P **P** **20 10 33.9 -1.4**
comp=Z,10.0nm,0.7s,mb4.5,baz=252,slow=8.9,SNR=12
AKTO LR LR 20 24 25.5
comp=Z,143nm,20.1s,MS3.5,baz=43,slow=43
AKTO Aktyubinsk 27.16 46 P **P** **20 10 33.9 -1.4**
AKTO pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
AKTO MLR MLR
comp=Z,143nm,20.1s,MS3.5
PBRG Braganca 27.21 294 *e*P **P** **20 10 38.2 +2.3**
comp=Z,34nm,1.9s,mb4.5
MVO Moncorvo 27.40 293 *e*P **P** **20 10 38.3 +0.7**
comp=Z,30nm,1.9s,mb4.5
PBAR Barrancos 27.48 287 *e*P **P** **20 10 38.9 +0.6**
comp=Z,28nm,1.6s,mb4.5
NAO01 NORSAR Array S 27.82 343 *e*P **P** **20 10 38.3 -2.8**
comp=Z,5.8nm,0.7s,mb4.3
NB2 NORSAR Subarra 27.91 343 P **P** **20 10 39.4 -2.5**
comp=Z,1.7nm,0.5s,mb3.9,baz=158,slow=11
NOA NORSAR Array B 27.91 343 P **P** **20 10 39.2 -2.7**
comp=Z,1.8nm,0.7s,mb3.8,baz=155,slow=9.6,SNR=6.4
NOA NORSAR Array B 27.91 343 P **P** **20 10 39.2 -2.7**
NOA pmax pmax
comp=Z,2.0nm,0.7s
JOF Joensuu 28.00 4 *e*p **P** **20 10 38.9 -3.7**
comp=Z,2.0nm,0.5s,mb4.0
JOF Joensuu 28.00 4 *e*P **P** **20 10 38.9 -3.7**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
EVO Evora 28.21 287 *e*P **P** **20 10 45.1 +0.2**
comp=Z,27nm,1.3s,mb4.4
EVO *e*MLR MLR
comp=Z,164nm,18.2s,MS3.4
EKA Eskdalemuir Ar 29.04 324 P **P** **20 10 50.3 -1.7**
comp=Z,0.9nm,0.6s,mb3.7,baz=125,slow=9.3,SNR=6.8
EKA Eskdalemuir Ar 29.04 324 P **P** **20 10 50.3 -1.7**
EKA pmax pmax
comp=Z,1.0nm,0.6s
ESK Eskdalemuir 29.05 324 *e*P **P** **20 10 50.4 -1.7**
ESK pmax pmax
comp=Z,102nm,1.8s,mb5.2
ESK Eskdalemuir 29.05 324 *e*P **P** **20 10 50.4 -1.7**
comp=Z,102nm,1.8s,mb5.2
ARU Arti 30.20 35 *e*P **P** **20 11 03.2 +0.9**
ARU *e* 20 11 59.5
ARU *e*S **S** **20 16 04.4 +4.5**
ARU *e*SS SS 20 17 36.4 -32
ARU Arti 30.20 35 *e*P **P** **20 11 00.7 -1.6**
SVE Sverdlovsk 31.39 36 *e*P **P** **20 11 12.6 -0.2**
SVE pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
SVE MLR MLR
comp=Z,144nm,13.0s,MS3.8
TOA0 Torodi Ar. Sit 31.67 233 *e*P **P** **20 11 16.0 +0.4**
TORD Torodi Ar. Bea 31.67 233 P **P** **20 11 16.8 +1.1**
comp=Z,4.7nm,0.5s,mb4.6,baz=33,slow=8.8,SNR=80
TORD LR LR 20 25 34.6
comp=Z,181nm,20.5s,MS3.7,baz=45,slow=39
KBL Kabul 34.27 79 *e*P **P** **20 11 39.0 +0.8**
KBL pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
KBL Kabul 34.27 79 *e*P **P** **20 11 39.0 +0.8**
comp=Z,9.9nm,1.0s,mb4.7
ARCES ARCESS Array B 34.53 359 P **P** **20 11 38.0 -2.0**
comp=Z,2.3nm,0.7s,mb4.2,baz=173,slow=7.9,SNR=16
ARCES ARCESS Array B 34.53 359 P **P** **20 11 38.0 -2.0**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARE0 ARCESS Array S 34.53 359 P **P** **20 11 40.2 +0.2**
KEV Kevo 34.74 360 *e*p **P** **20 11 42.6 +0.8**
comp=Z,0.5nm,0.3s,mb3.9
KEV Kevo 34.74 360 *e*P **P** **20 11 42.6 +0.8**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
BRVK Borovoye 35.22 46 P **P** **20 11 46.6 +0.5**
BRVK pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
BRVK Borovoye 35.22 46 P **P** **20 11 46.6 +0.4**
comp=Z,6.7nm,0.9s,mb4.6
BVAR Borovoye Array 35.27 46 LR LR 20 29 47.2
comp=Z,154nm,18.5s,MS3.8,baz=139,slow=42
EKS2 Erkin-Say 36.75 64 *e*P **P** **20 12 00.6 +1.2**
comp=Z,28nm,1.1s,mb5.0
UCH Uchtor 37.33 64 *e*P **P** **20 12 04.4 +0.1**
comp=Z,16nm,1.2s,mb4.7
TKM2 Tokmak 2 38.07 63 *e*P **P** **20 12 11.4 +0.8**
TKM2 pmax pmax
comp=Z,15nm,1.0s,mb4.7
TKM2 Tokmak 2 38.07 63 *e*P **P** **20 12 11.4 +0.8**
comp=Z,15nm,1.0s,mb4.7
KURK Kurchatov 40.01 51↓ *e*P **P** **20 12 26.3 -0.4**
KURK pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
KURK Kurchatov 40.01 51 *e*P **P** **20 12 26.2 -0.5**
comp=Z,28nm,1.4s,mb4.8
KURK *e*PP PP 20 13 57.3 -1.5
DBIC Dimbokro 40.77 234 P **P** **20 12 33.0 -0.3**
comp=Z,2.2nm,0.4s,mb4.2,baz=30,slow=8.3,SNR=9.5
DBIC LR LR 20 32 17.6
comp=Z,143nm,18.0s,MS3.9,baz=28,slow=40
DBIC Dimbokro 40.77 234 P **P** **20 12 33.0 -0.4**
DBIC pmax pmax
comp=Z,2.0nm,0.4s
DBIC MLR MLR
comp=Z,143nm,18.0s
TIC Toumodi 40.89 234 *e*P **P** **20 12 32.6 -1.8**
comp=Z,7.4nm,0.2s,mb4.9
KIC Kosan Boka 40.92 233 *e*P **P** **20 12 34.8 +0.2**
comp=Z,135nm,1.6s,mb5.3
LIC Lamto 41.21 233 *e*P **P** **20 12 37.2 +0.2**
LIC *e*MLR MLR
comp=Z,208nm,17.2s,MS3.8
LIC Lamto 41.21 233 *e*P **P** **20 12 31.9 -5.1**
comp=Z,34nm,1.1s,mb4.9
LIC Lamto 41.21 233 *e*P **P** **20 12 37.2 +0.2**
LIC LR LR
comp=Z,100nm,17.3s,MS3.7
MK31 Makanchi Array 42.51 57 *e*P **P** **20 12 47.6 +0.3**
MKAR Makanchi Array 42.51 57 P **P** **20 12 47.7 +0.5**
comp=Z,10nm,0.7s,mb4.7,baz=278,slow=6.8,SNR=73
MKAR LR LR 20 31 21.8
comp=Z,66nm,20.0s,MS3.5,baz=86,slow=37
MKAR Makanchi Array 42.51 57 *i* P **P** **20 12 47.7 +0.4**
MKAR pmax pmax
comp=Z,10.0nm,0.7s
MKAR Makanchi Array 42.51 57 P **P** **20 12 47.7 +0.4**
MKAR LR LR 20 31 21.8
NVS Novosibirsk 43.04 45 *i* P **P** **20 12 51.0 -0.5**
NVS pmax pmax
comp=Z,21nm,1.1s,mb4.8
NVS pmax pmax
comp=N,3.0nm,0.8s
NVS pmax pmax
comp=E,9.0nm,0.8s
ZAA0 Zalesovo Array 43.93 46 *e*P **P** **20 12 57.0 -1.7**
ZALV Zalesovo Beam 43.93 46 P **P** **20 12 58.0 -0.6**
comp=E,5.8nm,0.6s,mb4.5,baz=267,slow=10,SNR=14
ZALV LR LR 20 33 55.5
comp=E,59nm,21.9s,MS3.5,baz=258,slow=40
ZALV Zalesovo Beam 43.93 46 P **P** **20 12 58.1 -0.6**
ZALV pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
ZALV MLR MLR
comp=Z,59nm,22.0s,MS3.5
WMQ Urumqi 46.68 60 P **P** **20 13 22.3 +1.6**
WMQ PCP PcP 20 14 55.5 +1.5
WMQ *e*S **S** **20 20 10.0 +1.5**
WMQ AMB AMB
comp=Z,26nm,1.0s,mb5.1
WMQ AMB AMB
comp=Z,116nm,4.4s
WMQ LR LR
comp=N,342nm,29.2s,MS4.3
WMQ LR LR
comp=E,245nm,24.7s,MS4.3
WMQ LR LR
comp=Z,194nm,21.3s,MS4.0
DANN Dangsing 48.13 81 *e*P **P** **20 13 33.7 +1.5**
comp=Z,95nm,0.7s
KOLN Koldanda 48.23 82 *e*P **P** **20 13 33.9 +1.0**
comp=Z,17nm,0.6s,mb5.2
KRAR Krasnoyarsk 48.53 43↑ *e*P **P** **20 13 36.0 +1.2**
KRAR MLR MLR
comp=Z,100nm,23.0s,MS3.7
GKN Gorkha 48.98 81 *e*P **P** **20 13 38.8 +0.1**
comp=Z,23nm,0.5s,mb5.4
DMN Daman 49.52 82 *e*P **P** **20 13 43.8 +1.0**
comp=Z,40nm,0.8s,mb5.5
KKN Kakani 49.59 81 *e*P **P** **20 13 43.9 +0.6**
comp=Z,14nm,0.5s,mb5.2
SUMG Summit 49.63 339 *e*P **P** **20 13 41.5 -1.5**
comp=Z,2.4nm,0.9s,mb4.2
GUN Gumba 50.02 81 *e*P **P** **20 13 47.5 +0.8**
comp=Z,32nm,0.8s,mb5.4
LSZ Lusaka 50.08 179 LR LR 20 39 37.3
comp=Z,108nm,18.6s,MS3.9,baz=359,slow=41
LSZ Lusaka 50.08 179 *e*P **P** **20 13 48.7 +1.7**
LSZ pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
LSZ Lusaka 50.08 179 *e*P **P** **20 13 48.7 +1.7**
comp=Z,8.3nm,1.2s,mb4.6
RAMN Ramite 51.00 82 *e*P **P** **20 13 52.8 -1.2**
ODAN Odare 51.68 82 *e*P **P** **20 13 59.1 0.0**
comp=Z,20nm,0.8s,mb5.1
TAPN Taplejung 51.73 81 *e*P **P** **20 14 00.1 +0.6**
comp=Z,40nm,1.0s,mb5.3
LSA Lhasa 53.55 77 *e*P **P** **20 14 13.8 +0.8**
LSA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
LSA Lhasa 53.55 77 *e*P **P** **20 14 13.8 +0.8**
comp=Z,9.7nm,1.0s,mb4.7
MOY Mondy 53.90 48 *e*P **P** **20 14 21.4 +6.2**
TSUM Tsumeb 54.72 191 *e*P **P** **20 14 23.0 +1.6**
comp=Z,6.2nm,1.1s,mb4.5
TLY Talaya 55.51 47 *e*P **P** **20 14 29.1 +2.3**
TLY pmax pmax
comp=Z,17nm,1.0s,mb5.0
TLY MLR MLR
comp=Z,85nm,18.0s,MS3.9
TLY Talaya 55.51 47 *e*P **P** **20 14 27.0 +0.2**
comp=Z,17nm,1.0s,mb5.0
ZAK Zakamensk 55.62 49 *e*P **P** **20 14 27.3 -0.3**
ZAK pmax pmax
comp=Z,17nm,1.0s,mb5.0
GTA Gaotai 56.61 62 *e*P **P** **20 14 35.8 +0.9**
GTA PP PP 20 16 45.4 +4.7
GTA S **S** **20 22 29.3 +4.0**
GTA AMB AMB
comp=Z,5.0nm,0.8s,mb4.6
GTA AMB AMB
comp=Z,101nm,4.5s
GTA LR LR
comp=N,89nm,13.1s,MS4.2
GTA LR LR
comp=E,83nm,14.0s,MS4.2
GTA LR LR
comp=Z,83nm,15.8s,MS3.9
SONM Songino Array 58.32 51 P **P** **20 14 47.8 +1.0**
comp=Z,6.6nm,0.9s,mb4.6,baz=288,slow=7.9,SNR=27
SONM LR LR 20 45 44.9
comp=Z,167nm,19.4s,MS4.2,baz=146,slow=42
SONM Songino Array 58.32 51 P **P** **20 14 47.8 +1.0**
SONM pmax pmax
comp=Z,7.0nm,1.0s
SONM MLR MLR
comp=Z,167nm,19.5s
ULN Ulaanbaatar 58.73 51 *e*P **P** **20 14 50.0 +0.3**
ULN pmax pmax
comp=Z,19nm,0.9s,mb5.1
ULN Ulaanbaatar 58.73 51↓ *e*P **P** **20 14 50.9 +1.2**
ULN Ulaanbaatar 58.73 51 *e*P **P** **20 14 50.0 +0.3**
comp=Z,19nm,0.9s,mb5.1
BOD Bodaibo 59.55 38 *e*P **P** **20 14 55.4 +0.2**
BOD pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
LBTB Lobatse 59.77 182 *e*P **P** **20 14 58.3 +1.3**
LBTB pmax pmax
comp=Z,11nm,1.1s,mb4.8
LBTB Lobatse 59.77 182 *e*P **P** **20 14 58.3 +1.3**
comp=Z,11nm,1.1s,mb4.8
LZH Lanzhou 60.81 65 *e*P **P** **20 15 05.0 +0.8**
LZH *e*PP PP 20 17 20.6 +2.5
LZH AMB AMB
comp=Z,22nm,1.3s,mb5.1
LZH AMB AMB
comp=Z,53nm,6.7s
LZH LR LR
comp=N,452nm,16.5s
LZH LR LR
comp=Z,603nm,18.0s,MS4.8
CD2 Chengdu 62.94 70 P **P** **20 15 20.0 +1.4**
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.5
CD2 AMB AMB
comp=Z,30nm,4.2s
BOSA Boshof 63.36 182 P **P** **20 15 22.6 +1.4**
comp=Z,0.9nm,0.4s,mb4.3,baz=30,slow=10,SNR=8.9
BOSA LR LR 20 42 37.4
comp=Z,95nm,18.6s,MS4.0,baz=9.9,slow=36
BOSA Boshof 63.36 182 P **P** **20 15 22.6 +1.4**
BOSA pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
BOSA MLR MLR
comp=Z,95nm,18.6s,MS4.0
SCHQ Schefferville 64.27 320 P **P** **20 15 26.8 -0.2**
comp=Z,4.1nm,0.5s,mb4.7,baz=62,slow=4.7,SNR=9.2
SCHQ LR LR 20 40 06.7
comp=Z,54nm,22.0s,MS3.7,baz=8.1,slow=33
HHC Hu-ho-hao-te 64.37 57 *e*P **P** **20 15 26.5 -1.4**
HHC PCP PcP 20 16 01.5 -0.7
HHC PP PP 20 17 49.8 +0.5
HHC PCS 20 20 03.5
HHC S **S** **20 24 03.3 -1.3**
HHC SCS ScS 20 25 17.5 -2.9
HHC SS SS 20 28 14.0 -0.2
HHC AMB AMB
comp=Z,12nm,0.5s,mb5.2
HHC AMB AMB
comp=Z,148nm,7.0s
HHC LR LR
comp=N,130nm,17.8s,MS4.4
HHC LR LR
comp=E,148nm,16.3s,MS4.4
HHC LR LR
comp=Z,126nm,17.6s,MS4.2
KMI Kunming 64.80 76 P **P** **20 15 32.8 +1.9**
KMI AMB AMB
comp=Z,4.0nm,0.5s,mb4.7
CHTO Chiang Mai 64.83 84 *e*P **P** **20 15 30.7 -0.5**
CHTO pmax pmax
comp=Z,25nm,1.6s,mb5.0
CHTO Chiang Mai 64.83 84 *e*P **P** **20 15 30.7 -0.5**
comp=Z,25nm,1.6s,mb5.0
CM31 Chiang Mai Arr 65.01 84 *e*P **P** **20 15 31.9 -0.5**
comp=Z,4.5nm,0.8s,mb4.5
CMAR Chiang Mai Arr 65.01 84 P **P** **20 15 32.6 +0.3**
comp=Z,3.4nm,0.8s,mb4.4,baz=297,slow=8.1,SNR=21
CMAR LR LR 20 47 53.2
comp=Z,81nm,18.4s,MS4.0,baz=88,slow=40
CMAR Chiang Mai Arr 65.01 84 *i* P **P** **20 15 32.7 +0.3**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
YAK Yakutsk 65.16 30↑ *e*P **P** **20 15 33.0 +0.4**
YAK pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
YAK MLR MLR
comp=Z,100nm,13.0s,MS4.2
YAK Yakutsk 65.16 30 P **P** **20 15 31.3 -1.3**
XAN Xi'an 65.45 65 P **P** **20 15 39.8 +4.8**
XAN AP pP 20 15 46.3 +3.3
XAN XP sP 20 15 49.3 +3.2
XAN AMB AMB
comp=Z,7.0nm,1.3s,mb4.5
XAN AMB AMB
comp=Z,29nm,4.2s
HIA Hailar 65.97 46 *e*P **P** **20 15 39.5 +1.4**
HIA pmax pmax
comp=Z,18nm,1.0s
HIA Hailar 65.97 46 *e*P **P** **20 15 39.5 +1.4**
comp=Z,18nm,1.0s,mb5.1
NANT Nan 66.27 83 P **P** **20 15 39.0 -1.5**
GYA Guiyang 67.26 73 *e*P **P** **20 15 45.6 -1.1**
GYA PP PP 20 18 18.4 +3.5
GYA S S 20 24 42.3 +1.9
GYA SS SS 20 29 02.8 +3.0
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,80nm,5.4s
GYA LR LR
comp=N,480nm,20.8s,MS4.8
GYA LR LR
comp=E,360nm,21.6s,MS4.8
GYA LR LR
comp=Z,430nm,20.7s,MS4.7
BJI Beijing 67.88 56 P **P** **20 15 56.0 +5.6**
BJI AMB AMB
comp=Z,19nm,1.1s,mb5.0
BJT Baijiatuau 67.89 56 *e*P **P** **20 15 51.8 +1.3**
BJT pmax pmax
comp=Z,28nm,1.1s
BJT Baijiatuau 67.89 56 *e*P **P** **20 15 51.8 +1.3**
comp=Z,28nm,1.1s,mb5.2
BILL Bilibino 72.75 15 *e*P **P** **20 16 22.8 +3.1**
BILL pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
NJ2 Nanjing 73.70 62 *e*P **P** **20 16 26.8 +0.8**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
KSRS Korea Array 77.08 53 P **P** **20 16 45.7 +0.4**
comp=Z,8.7nm,1.0s,mb4.7,baz=307,slow=4.5,SNR=12
KSRS LR LR 20 57 33.8
comp=Z,80nm,18.4s,MS4.1,baz=178,slow=41
KSRS Korea Array 77.08 53 P **P** **20 16 45.7 +0.4**
KSRS pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KSRS MLR MLR
comp=Z,80nm,18.4s,MS4.1
YKA Yellowknife Ar 78.01 343 P **P** **20 16 48.2 -1.8**
comp=Z,1.0nm,0.6s,mb3.9,baz=31,slow=5.2,SNR=3.8
YKA LR LR 20 50 24.3
comp=Z,44nm,19.8s,MS3.8,baz=165,slow=35
YKA Yellowknife Ar 78.01 343 P **P** **20 16 48.2 -1.8**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA MLR MLR
comp=Z,44nm,19.8s
YKA Yellowknife Ar 78.01 343 P **P** **20 16 48.2 -1.8**
YKA LR LR 20 50 24.3
DAWY Dawson 80.62 354 *e*P **P** **20 17 03.2 -1.0**
ULM Lac du Bonnet 81.26 327 P **P** **20 17 05.3 -2.5**
comp=Z,1.4nm,0.4s,mb4.2,baz=198,slow=6.4,SNR=1.9
ULM LR LR 20 52 04.3
comp=Z,103nm,20.4s,MS4.2,baz=17,slow=35
PETK Petropavlovsk- 82.27 28 LR LR 20 59 45.4
comp=Z,122nm,19.5s,MS4.3,baz=181,slow=40
PPLA Purkeypile 82.37 360 *e*P **P** **20 17 11.9 -1.6**
MAJO Matsushiro 84.20 49 P **P** **20 17 20.7 -2.7**
MAT Matsushiro 84.20 49 P **P** **20 17 24.7 +1.3**
MJAR Matsushiro Arr 84.20 49 P **P** **20 17 22.8 -0.6**
comp=Z,1.6nm,1.0s,mb4.1,baz=313,slow=2.4,SNR=3.9
MJAR Matsushiro Arr 84.20 49 P **P** **20 17 22.8 -0.7**
MJAR pmax pmax
comp=Z,2.0nm,1.0s
BDFB Brasilia 87.14 249 LR LR 20 59 52.0
comp=Z,120nm,19.6s,MS4.3,baz=55,slow=38
PDAR Pinedale Array 93.00 330 LR LR 21 00 07.2
comp=Z,61nm,20.6s,MS4.0,baz=247,slow=36
WRA Warramunga Arr 115.01 98 PKiKP PKiKP 20 23 33.1 -0.2
comp=Z,0.4nm,1.0s,baz=314,slow=1.9,SNR=3.1
WRA Warramunga Arr 115.01 98 *i* PKiKP PKiKP 20 23 33.1 -0.2
ASAR Alice Springs 116.48 101 PKiKP PKiKP 20 23 36.5 +0.5
comp=Z,0.3nm,0.5s,baz=315,slow=1.3,SNR=6.5
ASAR Alice Springs 116.48 101 *i* PKiKP PKPdf 20 23 36.5 +0.5

IDC ***22*** *20:09:03.1±2.8, 491S×10286E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.8/20, mbtmp3.8/9, Error ellipse: s-maj=128.0km s-min=15.7km az=55.0*
ISCJB ***22*** *20:09:05.8±1.9, 495S±04×1028E±05, h33km, mb3.8/9, Error ellipse: s-maj=85.9km s-min=11.5km az=143.6*
NEIC ***22*** *20:09:08.5±1.4, 485S×10297E, h35km, Error ellipse: s-maj=66.5km s-min=8.7km az=53.0*
ISC 22 20:09:08.8±1.9**, 48S**±04×**1030E**±05**, h35**km**, n15**, σ0§**63**/14**, mb3.8**/9**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CMAR	**Chiang Mai Arr**	**23.47**	**350**	P	**P**	**20 14 14.9**	**-0.6**
	0.4nm,0.4s,mb3.2,baz=182,slow=7.6,SNR=6.4						
FITZ	**Fitzroy Crossi**	**25.77**	**123**	*e*P	**P**	**20 14 36.7**	**+0.2**
FITZ	**Fitzroy Crossi**	**25.77**	**123**	P	**P**	**20 14 35.9**	**-0.6**
	1.8nm,0.9s,mb3.6,baz=334,slow=2.1,SNR=6.7						
WRA	**Warramunga Arr**	**34.00**	**119**	P	**P**	**20 15 48.8**	**-0.8**
	0.3nm,0.3s,mb3.7,baz=304,slow=9.0,SNR=17						
WB2	**Warramunga Arr**	**34.01**	**119**	*e*P	**P**	**20 15 49.5**	**-0.1**
ASAR	**Alice Springs**	**35.19**	**125**	P	**P**	**20 16 00.1**	**+0.4**
	0.7nm,0.9s,mb4.0,baz=302,slow=8.0,SNR=27						
STKA	**Stephens Creek**	**45.05**	**131**	*e*P	**P**	**20 17 22.2**	**+0.8**
STKA	**Stephens Creek**	**45.05**	**131**	P	**P**	**20 17 21.8**	**+0.4**
	1.8nm,0.7s,mb4.0,baz=137,slow=8.2,SNR=3.8						
SONM	**Songino Array**	**52.51**	**3**	P	**P**	**20 18 19.7**	**+1.4**
	1.0nm,0.8s,mb3.8,baz=178,slow=8.4,SNR=4.9						
TKM2	**Tokmak 2**	**53.61**	**335**	*e*P	**P**	**20 18 27.1**	**+0.5**
MKAR	**Makanchi Array**	**54.56**	**343**	P	**P**	**20 18 33.2**	**-0.2**
	1.1nm,0.9s,mb3.9,baz=178,slow=5.8,SNR=4.1						
KURK	**Kurchatov**	**59.16**	**342**	P	**P**	**20 19 05.3**	**-0.6**
	0.3nm,0.2s,mb3.9,baz=159,slow=5.9,SNR=2.1						
ZALV	**Zalesovo Beam**	**60.50**	**348**	P	**P**	**20 19 14.8**	**-0.3**
	0.9nm,0.4s,mb4.2,baz=174,slow=1.5,SNR=4.6						
ZALV	**Zalesovo Beam**	**60.50**	**348**	P	**P**	**20 19 14.8**	**-0.3**
TXAR	**Lajitas Array**	**144.90**	**43**	PKPbc	PKPdf	20 28 42.6	-0.3
	0.3nm,0.4s,baz=360,slow=0.8,SNR=9.0						

ISCJB ***22*** *20:14:13.7±1.1, 436N±0.1×4076E±008, h10km, Error ellipse: s-maj=18.1km s-min=7.2km az=18.1*
MOS ***22*** *20:14:14.5±0.1, 4331N×4065E, h16km, mb3.8/1, Error ellipse: s-maj=85.1km s-min=37.4km az=172.3*
ISC 22 20:14:14.5±1.1**, 436N**±01×**4073E**±008**, h10**km**, n6**, σ0§**67**/8**,**

2C-2D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOMR	**Dombai**	**0.71**	**114**	*e*PG	**Pg**	**20 14 28.9**	**+0.6**
DOMR				*e*S	**Sg**	**20 14 36.5**	**-1.1**
SOC	**Sochi**	**0.74**	**270**	*c i*PG	**Pg**	**20 14 28.7**	**-0.1**
SOC				*e*		20 14 39.2	
SOC	comp=Z,42nm,0.2s			pmax	pmax		
SOC	comp=N,417nm,0.3s			smax			
SHAR	**Shatzhatmas**	**1.41**	**83**	⇓*i*PG	**Pg**	**20 14 41.7**	**0.0**
KIV	**Kislovodsk**	**1.46**	**75**	⇓*i*PG	**Pg**	**20 14 42.8**	**+0.2**
ONI	**Oni**	**2.23**	**116**	P	**Pg**	**20 14 56.3**	**-0.9**
ONI				S	**Sg**	**20 15 26.2**	**+0.1**
GOR	**Gori**	**2.95**	**122**	S	**Sb**	**20 15 44.5**	**+1.1**

*CSEM **22** 20:17:47.5±0.1, 3892N×27.17E, h2km, MD3.5, Error ellipse: s-maj=2.1km s-min=1.4km az=84.0*
*ISCJB **22** 20:17:48.7±0.4, 3894N±002×27.15E±003, h5km±4km, Error ellipse: s-maj=3.4km s-min=2.8km az=163.3*
*NEIC **22** 20:17:48.0, 3893N×27.13E, h4km, MD3.5(ATH), ML3.3(ISK), After ISK.*
*ISK **22** 20:17:48.0, 3893N×27.15E, h3km, ML3.3*
*ATH **22** 20:17:51.3, 3867N×2648E, h40km±4km, MD3.5/6*
ISC 22 20:17:48.8±0.4, 3893N±002×2714E±003, h1km±3km, n51, σ1§00/71, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.52**	**317**	*i* P	**Pg**	**20 17 58.8**	**+0.1**
AYVA				*i* S	**Sg**	**20 18 06.7**	**+1.3**
AKS	**Akhisar**	**0.53**	**95**	*e*PG	**Pg**	**20 17 59.1**	**+0.2**
AKS				*e*SG	**Sg**	**20 18 06.8**	**+1.1**
AKHS	**Akhisar**	**0.53**	**96**	*i* P	**Pg**	**20 17 58.5**	**-0.4**
AKHS				*i* S	**Sg**	**20 18 06.7**	**+0.9**
KDAG	**Bornova**	**0.54**	**170**	*i* P	**Pg**	**20 17 59.2**	**+0.1**
KDAG				*i* S	**Sg**	**20 18 09.2**	**+3.2**
BLCB	**Balcova**	**0.55**	**188**	*e*PG	**Pg**	**20 17 59.2**	**-0.1**
BLCB				*e*SG	**Sg**	**20 18 07.7**	**+1.2**
PRK	**Paraskevi**	**0.75**	**295**	*e*P	**Pg**	**20 18 03.4**	**+0.3**
PRK				*e*S	**Sg**	**20 18 13.8**	**+1.0**
BALY	**Balya**	**0.89**	**24**	*e*P	**Pg**	**20 18 05.9**	**+0.1**
BALY				*i* S	**Sg**	**20 18 17.5**	**+0.1**
BALB	**Balikesir**	**0.91**	**39**	*e*PG	**Pg**	**20 18 06.0**	**-0.3**
BALB				*e*SG	**Sg**	**20 18 19.1**	**+1.0**
EZN	**Ezine**	**1.09**	**325**	*e*PN	**Pn**	**20 18 09.8**	**-1.5**
MANT	**Manisa**	**1.19**	**111**	*i* P	**Pg**	**20 18 10.9**	**-0.8**
MANT				*i* S	**Sg**	**20 18 27.1**	**0.0**
MANT	**Manisa**	**1.19**	**111**	*i* P	**Pg**	**20 18 10.9**	**-0.8**
MANT				*i* S	**Sg**	**20 18 27.0**	**-0.1**
DURS	**Dursunbey**	**1.23**	**57**	*i* P	**Pg**	**20 18 11.3**	**-1.2**
DURS				*i* S	**Sg**	**20 18 27.7**	**-0.7**
GCAM	**G?zelcaml?**	**1.23**	**177**	*i* P	**Pg**	**20 18 11.4**	**-1.0**
GCAM				*i* S	**Sg**	**20 18 27.6**	**-0.7**
GCAM	**G?zelcaml?**	**1.23**	**177**	*i* P	**Pg**	**20 18 11.4**	**-1.0**
GCAM				*i* S	**Sg**	**20 18 27.6**	**-0.8**
DEMI	**Demirci**	**1.23**	**84**	*i* P	**Pg**	**20 18 11.5**	**-0.9**
DEMI				*i* S	**Sg**	**20 18 26.9**	**-1.4**
SMG	**Samos**	**1.24**	**191**	*e*P	**Pg**	**20 18 10.3**	**-2.4**
KULA	**Kula-Manisa**	**1.26**	**109**	*e*PN	**Pn**	**20 18 12.3**	**-1.2**
DST	**Dursunbey**	**1.33**	**59**	*e*PN	**Pn**	**20 18 13.6**	**-1.0**
AYDN	**Tasoluk**	**1.40**	**155**	*i* P	**Pn**	**20 18 13.6**	**-1.8**
AYDN				*i* S	**Sg**	**20 18 34.0**	**+0.3**
LPK	**Lapseki**	**1.47**	**349**	*e*PN	**Pn**	**20 18 15.7**	**-0.7**
KCT	**Karacabey**	**1.63**	**35**	*e*PN	**Pn**	**20 18 18.5**	**-0.1**
MRMT	**Marmara Adasi**	**1.71**	**12**	*e*PN	**Pn**	**20 18 20.0**	**+0.3**
MLSB	**Milas**	**1.71**	**163**	*e*PN	**Pn**	**20 18 19.8**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.75**	**1**	*e*PN	**Pn**	**20 18 19.9**	**-0.5**
SART	**Tekirdag**	**1.76**	**1**	*i* P	**Pn**	**20 18 19.9**	**-0.5**
SART				*i* S	**Sn**	**20 18 42.4**	**-0.9**
LIA	**Limnos Island**	**1.80**	**303**	*e*P	**Pn**	**20 18 18.8**	**-2.1**
GDZ	**Gediz**	**1.83**	**84**	*i* P	**Pn**	**20 18 19.8**	**-1.5**
GDZ				*i* S	**Sn**	**20 18 45.8**	**+0.7**
MFT	**Murefte**	**1.86**	**3**	*e*PN	**Pn**	**20 18 22.5**	**+0.7**
BODT	**Bodrum**	**1.87**	**176**	*e*PN	**Pn**	**20 18 22.2**	**+0.2**
BDRM	**Kayabasi**	**1.88**	**173**	*i* P	**Pn**	**20 18 24.0**	**+2.0**
BDRM				*i* S	**Sg**	**20 18 52.3**	**+3.2**
ENEZ	**Enez**	**1.96**	**337**	*e*PN	**Pn**	**20 18 23.4**	**+0.3**
ULDT	**Uludag**	**1.96**	**51**	*i* P	**Pn**	**20 18 22.4**	**-0.8**
ULDT				*i* S	**Sn**	**20 18 49.6**	**+1.3**
KHL	**Karahalli**	**1.96**	**107**	*e*PN	**Pn**	**20 18 23.1**	**-0.1**
YER	**Yerkesik**	**2.01**	**153**	*e*PN	**Pn**	**20 18 24.4**	**+0.7**
GEMT	**Gemlik**	**2.18**	**46**	*e*PN	**Pn**	**20 18 26.3**	**+0.1**
APE	**Apeiranthos**	**2.25**	**215**	*e*P	**Pn**	**20 18 21.1**	**-6.1**
ALT	**Altintas**	**2.32**	**86**	*e*PN	**Pn**	**20 18 28.4**	**+0.3**
YLV	**Yalova**	**2.37**	**46**	*e*PN	**Pn**	**20 18 29.5**	**+0.7**
SLVT	**Silivri**	**2.44**	**19**	*e*PN	**Pn**	**20 18 29.2**	**+0.3**
ADVT	**Abdulvahap**	**2.50**	**52**	*e*PN	**Pn**	**20 18 31.0**	**+0.4**
RDO	**Rodhopi**	**2.53**	**331**	*e*P	**Pn**	**20 18 32.0**	**+1.0**
RDO	**Rodhopi**	**2.53**	**331**	*e*Pn	**Pn**	**20 18 31.0**	**0.0**
BGKT	**Bogazkoy**	**2.57**	**29**	*e*PN	**Pn**	**20 18 32.7**	**+1.1**
ISK	**Istanbul-Kandi**	**2.59**	**34**	*e*PN	**Pn**	**20 18 32.5**	**+0.6**
HRT	**Hereke**	**2.71**	**45**	*e*PN	**Pn**	**20 18 34.6**	**+1.2**
GPA	**Golpazari**	**2.80**	**60**	*e*PN	**Pn**	**20 18 34.8**	**+0.1**
EDRB	**Edirne**	**2.93**	**354**	*e*PN	**Pn**	**20 18 37.0**	**+0.5**
ESKT	**Eskisehir**	**2.94**	**77**	*e*P	**Pg**	**20 18 43.1**	**-2.0**
ESKT				*i* S	**Sg**	**20 19 25.9**	**+2.6**
GULT	**Gulveren**	**3.00**	**59**	*e*PN	**Pn**	**20 18 37.7**	**+0.2**
ELL	**Elmali**	**3.09**	**134**	*e*PN	**Pn**	**20 18 39.1**	**+0.5**
PLG	**Polygyros**	**3.20**	**298**	*e*P	**Pn**	**20 18 36.4**	**-3.8**

*ISCJB **22** 20:20:46.2±0.7, 678S±009×720E±0.1, h10km, mb4.0/13, Error ellipse: s-maj=20.9km s-min=10.8km az=153.1*
*IDC **22** 20:20:46.7±1.1, 679S×7197E, h0km, mb3.9/12, mb1 4.0/12, mb1mx3.8/25, mbtmp3.9/12, Error ellipse: s-maj=28.1km s-min=22.5km az=43.0*
*NEIC **22** 20:20:48.0±0.5, 684S×7202E, h10km, mb4.5/1, Error ellipse: s-maj=15.8km s-min=8.2km az=61.0*
ISC 22 20:20:48.1±0.7, 684S±009×720E±01, h10km, n19, σ0§77/18, mb4.0/13, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**0.72**	**143**	*e*Pg	**Pg**	**20 21 01.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**36.57**	**46**	P	**P**	**20 27 55.6**	**+1.1**
	1.8nm,1.0s,mb3.9,baz=241,slow=10,SNR=8.4						
LSA	**Lhasa**	**40.72**	**26**	P	**P**	**20 28 29.5**	**+0.4**
KBL	**Kabul**	**41.25**	**356**	P	**P**	**20 28 35.0**	**+1.6**
LSZ	**Lusaka**	**43.75**	**255**	P	**P**	**20 28 55.2**	**+1.1**
	0.4nm,0.3s,mb3.6,baz=154,slow=6.8,SNR=3.9						
MK31	**Makanchi Array**	**54.17**	**9**	*e*P	**P**	**20 30 13.0**	**-0.6**
MKAR	**Makanchi Array**	**54.17**	**9**	P	**P**	**20 30 13.5**	**0.0**
	1.5nm,0.6s,mb4.1,baz=190,slow=8.1,SNR=13						
KURK	**Kurchatov**	**57.60**	**5**	P	**P**	**20 30 37.5**	**-0.6**
	1.3nm,0.5s,mb4.2,baz=202,slow=7.3,SNR=6.1						
AKTK	**Aktyubinsk**	**58.31**	**350**	P	**P**	**20 30 42.2**	**-0.9**
AKTO	**Aktyubinsk**	**58.31**	**350**	P	**P**	**20 30 42.2**	**-0.9**
	1.4nm,0.6s,mb4.1,baz=125,slow=5.8,SNR=2.7						
BVAR	**Borovoye Array**	**59.65**	**359**	P	**P**	**20 30 51.8**	**-0.5**
	1.1nm,0.7s,mb4.0,baz=156,slow=11,SNR=7.3						
BRVK	**Borovoye**	**59.68**	**359**	*e*P	**P**	**20 30 51.5**	**-1.0**
	3.3nm,0.9s,mb4.4						
ZALV	**Zalesovo Beam**	**61.51**	**9**	P	**P**	**20 31 04.7**	**-0.3**
	0.9nm,0.4s,mb4.2,baz=235,slow=5.2,SNR=8.7						
ASAR	**Alice Springs**	**61.56**	**113**	P	**P**	**20 31 06.5**	**+0.5**
	0.7nm,0.8s,mb3.9,baz=288,slow=6.2,SNR=6.3						
WRA	**Warramunga Arr**	**61.71**	**109**	P	**P**	**20 31 07.1**	**0.0**
	0.9nm,0.7s,mb4.0,baz=283,slow=6.9,SNR=5.3						
SONM	**Songino Array**	**62.30**	**25**	P	**P**	**20 31 11.6**	**+1.1**
	1.9nm,0.8s,mb4.2,baz=213,slow=6.8,SNR=13						
AKASG	**Malin Array Be**	**68.15**	**332**	P	**P**	**20 31 48.0**	**-0.4**
	0.2nm,0.3s,mb3.6,baz=128,slow=5.5,SNR=4.6						
ARCES	**ARCESS Array B**	**82.55**	**345**	P	**P**	**20 33 11.1**	**+0.3**
	1.2nm,0.9s,mb3.9,baz=133,slow=6.6,SNR=5.4						
TXAR	**Lajitas Array**	**157.25**	**350**	PKPab	PKPab	20 41 14.9	-0.8
	0.3nm,0.7s,baz=107,slow=1.3,SNR=4.3						

*NNC **22** 20:35:57.6±5.3, 3731N×7027E, h122km±63km, mb3.6, mpv4.7, Error ellipse: s-maj=42.8km s-min=28.6km az=3.0*
*IDC **22** 20:36:06.2±0.7, 3850N×7047E, h0km, mb3.9/12, mb1 4.0/18, mb1mx3.9/29, mbtmp3.9/18, ML3.4/6, MS3.4/5, Ms1 3.4/5, ms1mx2.8/49, Error ellipse: s-maj=15.2km s-min=11.7km az=162.0*
*ISCJB **22** 20:36:10.5±0.5, 3880N±002×7034E±004, h33km±8km, mb3.9/22, MS3.7/4, Error ellipse: s-maj=5.9km s-min=4.0km az=165.0*
*BJI **22** 20:36:11.9, 3871N×7035E, h35km, mb3.9*
*MOS **22** 20:36:11.7±1.3, 3878N×7024E, h46km, mb4.1/13, Error ellipse: s-maj=9.8km s-min=5.7km az=87.5*
*NEIC **22** 20:36:14.0±0.9, 3876N×7018E, h52km±10km, mb4.0/4, Error ellipse: s-maj=8.7km s-min=8.2km az=162.0*
ISC 22 20:36:12.2±1.3, 3881N±002×7031E±004, h28km±10km, n131, σ1§16/145, mb3.9/22, MS3.7/4, 4C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.20**	**37**	P	**Pn**	**20 37 18.4**	**+4.0**
	SNR=2						
AML	**Almayashu**	**4.20**	**37**	*e*Pn	**Pn**	**20 37 18.2**	**+3.7**
KK31	**Karatay Array**	**4.29**	**2**	P	**Pn**	**20 37 19.6**	**+3.9**
	29nm,0.5s,baz=186,slow=13,SNR=161						
KK31				⇑S	Sn	20 38 28.4	+24
	68nm,0.5s,baz=184,slow=28,SNR=5.1						
KK31	**Karatay Array**	**4.29**	**2**	PN	**Pn**	**20 37 19.5**	**+3.9**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.2s						
KBL	**Kabul**	**4.38**	**194**	*e*PN	**Pn**	**20 37 17.8**	**+0.9**
EKS2	**Erkin-Say**	**4.66**	**33**	P	**Pn**	**20 37 27.6**	**+6.8**
	SNR=11						
EKS2	**Erkin-Say**	**4.66**	**33**	*e*Pn	**Pn**	**20 37 25.9**	**+5.1**
UCH	**Uchtor**	**4.68**	**42**	P	**Pn**	**20 37 25.5**	**+4.5**
	SNR=7.8						
UCH	**Uchtor**	**4.68**	**42**	*e*Pn	**Pn**	**20 37 24.9**	**+3.9**
AAK	**Ala-Archa**	**4.97**	**38**	P	**Pn**	**20 37 32.1**	**+7.2**
	SNR=8.9						
CEP	**Cherat**	**5.14**	**165**	P	**Pn**	**20 37 28.0**	**+0.6**
CEP				S	**Sn**	**20 38 26.0**	**+0.2**
KBK	**Karagaybulak**	**5.21**	**41**	P	**Pn**	**20 37 35.9**	**+7.6**
	SNR=11						
CHMS	**Chumysh**	**5.37**	**37**	P	**Pn**	**20 37 37.4**	**+7.0**
	SNR=8.1						
USP	**Ospenovka**	**5.46**	**34**	P	**Pn**	**20 37 35.3**	**+3.5**
	SNR=13						
CHCP	**Chirah Chowk**	**5.67**	**154**	P	**Pn**	**20 37 36.3**	**+1.7**
TKM2	**Tokmak 2**	**5.74**	**43**	⇓P	**Pn**	**20 37 38.9**	**+3.4**
	comp=Z,35nm,0.5s						
TKM2				⇑S	**Sn**	**20 38 53.3**	**+13**
	comp=Z,31nm,0.6s						
TKM2	**Tokmak 2**	**5.74**	**43**	PN	**Pn**	**20 37 38.9**	**+3.4**
TKM2				S	**Sn**	**20 38 53.2**	**+13**
TKM2				pmax	pmax		
	comp=Z,35nm,0.5s						
TKM2				smax			
	comp=Z,31nm,0.6s						
TKM2	**Tokmak 2**	**5.74**	**43**	P	**Pn**	**20 37 42.6**	**+7.1**
	SNR=21						
TKM2	**Tokmak 2**	**5.74**	**43**	*e*Pn	**Pn**	**20 37 39.1**	**+3.7**
	comp=Z,45nm,0.5s						
THW	**Thamme Wali**	**6.12**	**169**	P	**Pn**	**20 37 40.2**	**-0.5**
THW				S	**Sn**	**20 38 50.0**	**+0.2**
DRP	**Derazinda**	**7.05**	**181**	P	**Pn**	**20 37 49.5**	**-4.1**
THN	**Thein Dam**	**7.74**	**144**	*e*P	**Pn**	**20 38 03.6**	**+0.6**
THN				*ex*	x	20 39 37.1	
SMLA	**Simla**	**9.51**	**142**	*i* P	**Pn**	**20 38 26.4**	**-0.9**
SMLA				*i* S	**Sn**	**20 40 10.6**	**-2.5**
SMLA				*ex*	x	20 40 14.4	
	comp=E,91nm,0.5s						
SMLA				*ex*	x	20 40 16.3	
	comp=N,104nm,0.3s						
DDI	**Dehra Dun**	**10.60**	**141**	*ex*	**Sn**	**20 40 41.2**	**+1.2**
JOSI	**Joshimath**	**11.21**	**134**	*e*P	**Pn**	**20 38 50.9**	**+0.3**
JOSI				*e*S	**Sn**	**20 40 48.4**	**-6.6**
JOSI				AML	AML	20 41 12.2	
	comp=N,81nm,0.6s						
JOSI				AML	AML	20 41 18.4	
	comp=E,45nm,0.8s						
MK31	**Makanchi Array**	**11.87**	**44**	P	**Pn**	**20 38 58.5**	**-1.0**
	comp=E,4.1nm,0.8s,baz=230,slow=14,SNR=9.9						
MK31	**Makanchi Array**	**11.87**	**44**	*e*Pn	**Pn**	**20 39 02.4**	**+2.9**
MKAR	**Makanchi Array**	**11.87**	**44**	Pn	**Pn**	**20 38 58.1**	**-1.4**
	comp=E,0.0nm,0.3s,baz=243,slow=17,SNR=4.9						
MKAR				Sn	**Sn**	**20 41 06.2**	**-4.7**
	comp=E,0.6nm,0.3s,baz=196,slow=30,SNR=4.3						
MKAR	**Makanchi Array**	**11.87**	**44**	P	**Pn**	**20 38 58.1**	**-1.4**
MKAR						20 41 06.2	
MKAR				smax			
	comp=N,1.0nm,0.3s						
SONA	**Sohna**	**11.95**	**150**	*e*S	**Sn**	**20 41 03.7**	**-9.3**
SONA				AML	AML	20 42 32.2	
	comp=E,7.4nm,0.1s						
SONA				AML	AML	20 42 32.5	
	comp=N,6.8nm,0.3s						
AB31	**Akbulak array**	**12.82**	**328**	⇑P	**Pn**	**20 39 10.8**	**-1.6**
	comp=N,11nm,0.6s,baz=145,slow=12,SNR=200						
AB31	**Akbulak array**	**12.82**	**328**	*e*P	**Pn**	**20 39 10.8**	**-1.6**
AB31				S	**Sn**	**20 41 29.2**	**-4.8**
AB31				pmax	pmax		
	comp=Z,8.0nm,0.3s						
AB31				smax			
	comp=Z,6.0nm,0.4s						
KURK	**Kurchatov**	**13.28**	**24**	⇓P	**Pn**	**20 39 18.0**	**-0.7**
	comp=Z,4.6nm,1.3s						
KURK	**Kurchatov**	**13.28**	**24**	Pn	**Pn**	**20 39 16.6**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=14						
KURK				LR	LR	20 44 51.4	
	comp=Z,72nm,18.6s,baz=250,slow=39						
KURK	**Kurchatov**	**13.28**	**24**	P	**Pn**	**20 39 18.0**	**-0.7**
KURK				pmax	pmax		
	comp=Z,12nm,2.0s						
VOSK	**Vostochnaya**	**13.92**	**2**	⇓P	**Pn**	**20 39 27.4**	**-0.1**
	comp=Z,2.9nm,0.9s						
VOSK	**Vostochnaya**	**13.92**	**2**	P	**Pn**	**20 39 27.3**	**-0.2**
VOSK				S	**Sn**	**20 42 01.0**	**0.0**
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VOSK				smax			
	comp=Z,18nm,1.3s						
BVA0	**Borovoye Array**	**14.22**	**0**	P	**Pn**	**20 39 33.1**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=174,slow=14,SNR=23						
BVA0	**Borovoye Array**	**14.22**	**0**	*e*P	**Pn**	**20 39 33.0**	**+1.5**
BVA0				*i* S	**Sn**	**20 42 07.5**	**-0.7**
BVA0				smax			
	comp=Z,7.0nm,1.9s						
BVAR	**Borovoye Array**	**14.22**	**0**	Pn	**Pn**	**20 39 31.3**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=173,slow=13,SNR=9.1						
BVAR				Sn	**Sn**	**20 42 08.8**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=172,slow=21,SNR=4.1						
BVAR	**Borovoye Array**	**14.22**	**0**	P	**Pn**	**20 39 31.3**	**-0.2**
BVAR						20 42 08.8	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**14.25**	**360**	*e*P	**Pn**	**20 39 32.4**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BRVK	**Borovoye**	**14.25**	**360**	*e*Pn	**Pn**	**20 39 32.4**	**+0.5**
	comp=Z,5.1nm,0.5s						
AKTK	**Aktyubinsk**	**14.52**	**327**	Pn	**Pn**	**20 39 35.2**	**-0.5**
AKTK				Sn	**Sn**	**20 42 14.3**	**-1.4**
AKTO	**Aktyubinsk**	**14.52**	**327**	⇓P	**Pn**	**20 39 34.7**	**-1.0**
	comp=Z,1.8nm,0.5s						
AKTO	**Aktyubinsk**	**14.52**	**327**	Pn	**Pn**	**20 39 35.2**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=137,slow=13,SNR=20						
AKTO				Sn	**Sn**	**20 42 14.3**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=139,slow=22,SNR=4.6						
AKTO	**Aktyubinsk**	**14.52**	**327**	P	**Pn**	**20 39 35.2**	**-0.5**
AKTO						20 42 14.3	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
DANN	**Dangsing**	**15.30**	**129**	*e*P	**Pn**	**20 39 41.0**	**-5.2**
	comp=N,26nm,0.6s						
KOLN	**Koldanda**	**15.63**	**131**	*e*P	**Pn**	**20 39 44.7**	**-5.8**
	comp=N,8.6nm,0.4s						
GKN	**Gorkha**	**16.08**	**128**	*e*P	**Pn**	**20 39 51.5**	**-4.9**
	comp=N,69nm,0.6s						
KKN	**Kakani**	**16.63**	**127**	*e*P	**Pn**	**20 39 57.4**	**-6.0**
DMN	**Daman**	**16.65**	**128**	*e*P	**Pn**	**20 39 58.8**	**-4.8**
GUN	**Gumba**	**16.93**	**125**	*e*P	**Pn**	**20 40 03.3**	**-3.8**
	comp=N,43nm,0.9s						
JIRN	**Jiri**	**17.30**	**125**	*e*P	**Pn**	**20 40 06.4**	**-5.3**
RAMN	**Ramite**	**18.05**	**126**	*e*P	**Pn**	**20 40 16.8**	**-4.3**
ZAA0	**Zalesovo Array**	**18.09**	**28**	*e*Pn	**Pn**	**20 40 20.6**	**-0.7**
ZALV	**Zalesovo Beam**	**18.09**	**28**	P	**Pn**	**20 40 21.4**	**+0.1**
	comp=N,1.0nm,0.3s,baz=227,slow=11,SNR=21						
ZALV	**Zalesovo Beam**	**18.09**	**28**	P	**Pn**	**20 40 21.4**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVS	**Novosibirsk**	**18.26**	**24**	*i* P	**Pn**	**20 40 23.5**	**+0.1**
ODAN	**Odare**	**18.62**	**125**	*e*P	**Pn**	**20 40 24.1**	**-3.9**
	comp=Z,22nm,0.8s						
SVE	**Sverdlovsk**	**19.12**	**344**	*e*P	**Pn**	**20 40 35.2**	**+1.4**
SVE				*e*S	**Sn**	**20 44 00.9**	**-6.2**
SVE				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SVE				MLR	MLR		
	comp=Z,184nm,11.0s						
DGRG	**David-gareji**	**19.23**	**286**	P	**Pn**	**20 40 31.8**	**-3.4**
ARU	**Arti**	**19.27**	**340**	*c i*P	**Pn**	**20 40 36.4**	**+0.8**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARU				MLR	MLR		
	comp=Z,118nm,13.0s						
ARU	**Arti**	**19.27**	**340**	*e*Pn	**Pn**	**20 40 35.4**	**-0.2**
	comp=Z,4.6nm,0.7s						
LSA	**Lhasa**	**19.45**	**112**	*e*P	**Pn**	**20 40 36.6**	**-1.3**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	**Lhasa**	**19.45**	**112**	*e*P	**Pn**	**20 40 36.6**	**-1.3**
	comp=Z,5.3nm,0.8s						
MTA	**Mtatsminda**	**19.66**	**287**	P	**Pn**	**20 40 39.1**	**-1.3**
TBLG	**Delisi**	**19.71**	**287**	*e*P	**Pn**	**20 40 39.6**	**-1.3**
TBLG	**Delisi**	**19.71**	**287**	P	**Pn**	**20 40 39.6**	**-1.2**
GNI	**Garni**	**19.76**	**282**	P	**Pn**	**20 40 39.8**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=14,slow=11,SNR=4.4						
GNI				LR	LR	20 49 18.3	
	comp=Z,27nm,20.8s,baz=240,slow=40						
GOR	**Gori**	**20.18**	**287**	P	**P**	**20 40 45.7**	**+1.3**
ONI	**Oni**	**20.68**	**289**	P	**P**	**20 40 51.4**	**+1.6**
KIV	**Kislovodsk**	**21.30**	**293**	*i* P	**P**	**20 40 55.0**	**-1.6**
KIV				*e*		20 41 13.7	
KIV				*e*SS		20 45 17.2	
KIV				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.9						
KIV				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.3						
KIV	**Kislovodsk**	**21.30**	**293**	*e*P	**P**	**20 40 53.5**	**-3.1**
	comp=Z,9.4nm,0.7s,mb4.2						
GTA	**Gaotai**	**22.86**	**79**	*e*P	**P**	**20 41 14.0**	**+0.7**
GTA				AP		20 41 19.9	
GTA				XP	sP	20 41 22.8	-1.5
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb3.9						
MALT	**Malatya**	**24.87**	**279**	P	**P**	**20 41 30.2**	**-2.2**
VSR	**Storozhevoye**	**25.06**	**310**	*e*P	**P**	**20 41 33.1**	**-0.9**
VSR				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
VSR				pmax	pmax		
	comp=N,4.0nm,0.7s						
VSR				pmax	pmax		
	comp=E,6.0nm,0.7s						
ZAK	**Zakamensk**	**25.96**	**53**	*e*P	**P**	**20 41 41.0**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
TLY	**Talaya**	**26.51**	**50**	*e*P	**P**	**20 41 48.6**	**+1.5**
SONM	**Songino Array**	**27.55**	**59**	P	**P**	**20 41 56.5**	**0.0**
	comp=Z,1.0nm,0.8s,mb3.5,baz=265,slow=8.7,SNR=7.3						
SONM				S	**S**	**20 46 35.1**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=61,slow=46,SNR=2.4						
SONM	**Songino Array**	**27.55**	**59**	P	**P**	**20 41 56.5**	**0.0**
SONM				S	**S**	**20 46 35.1**	**-0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULN	**Ulaanbaatar**	**27.99**	**59**	⇓*e*P	**P**	**20 42 01.8**	**+1.3**
EIL	**Elat**	**30.46**	**263**	LR	LR	20 57 20.2	
	comp=Z,46nm,18.3s,MS3.2,baz=22,slow=42						
AKASG	**Malin Array Be**	**31.11**	**306**	P	**P**	**20 42 27.1**	**-0.9**
	comp=Z,1.3nm,0.6s,mb4.0,baz=79,slow=7.7,SNR=4.4						
AKASG	**Malin Array Be**	**31.11**	**306**	P	**P**	**20 42 27.1**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
JOF	**Joensuu**	**33.60**	**329**	*e*p	**P**	**20 42 49.9**	**+0.2**
	comp=Z,1.3nm,0.5s,mb4.1						
JOF	**Joensuu**	**33.60**	**329**	*e*P	**P**	**20 42 49.9**	**+0.2**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
BUR08	**Bucovina Ar. S**	**33.62**	**300**	*e*P	**P**	**20 42 49.7**	**-0.4**
BOD	**Bodaibo**	**33.95**	**41**	*e*P	**P**	**20 42 53.5**	**+0.7**
KEV	**Kevo**	**38.46**	**337**	*e*p	**P**

0.6nm,0.3s,baz=201,slow=4.3,SNR=3.8
WRA Warramunga Arr 33.00 120 P P 20 46 03.5 -0.6
0.3nm,0.5s,baz=296,slow=9.6,SNR=7.9
ASAR Alice Springs 34.28 126 P P 20 46 14.7 -0.5
0.3nm,0.6s,baz=303,slow=8.1,SNR=8.6
STKA Stephens Creek 44.25 132 P P 20 47 39.4 +1.0
1.1nm,0.6s,baz=310,slow=10.0,SNR=4.1

IDC 22 20:46:06.8±23.0, 2032S×17774W, h435km±224km, mb3.4/5, mb1 3.6/6, mb1mx3.2/17, mbtmp3.4/6, Error ellipse: s-maj=174.5km s-min=47.2km az=33.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**18.42**	**193**	P		P	20 49 53.9	-0.3
	1.1nm,0.3s,baz=343,slow=17,SNR=9.2							
CTA	**Charters Tower**	**33.75**	**264**	P		P	20 52 11.1	+0.5
	3.4nm,0.3s,baz=81,slow=10,SNR=3.8							
ASAR	**Alice Springs**	**44.80**	**257**	P		P	20 53 40.5	+0.1
	3.6nm,0.7s,baz=96,slow=7.6,SNR=68							
WB2	**Warramunga Arr**	**44.86**	**262**	*e*P		P	20 53 40.1	-0.8
WRA	**Warramunga Arr**	**44.87**	**262**	P		P	20 53 40.3	-0.7
	1.4nm,0.6s,baz=97,slow=8.3,SNR=44							
FITZ	**Fitzroy Crossi**	**53.30**	**262**	*e*P		P	20 54 43.3	-0.5
FITZ	**Fitzroy Crossi**	**53.30**	**262**	P		P	20 54 43.9	+0.1
	0.9nm,0.5s,baz=170,slow=4.9,SNR=7.6							
CMAR	**Chiang Mai Arr**	**90.29**	**289**	P		P	20 58 20.4	0.0
	0.9nm,0.8s,baz=99,slow=2.1,SNR=7.3							

*MOS **22** 20:47:53.2±0.7, 5540N×11032E, h9km, mb4.2/1, Error ellipse: s-maj=29.8km s-min=10.9km az=54.6*

BYKL 22 20:47:54.5±0.3, 5539N×11033E, 4C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KMO	**Kumora**	**0.70**	**44**	*e*PG		Pg	20 48 06.9	-1.0
KMO				*e*			20 48 15.9	
KMO				pmax		pmax		
	comp=Z,272nm,0.4s							
KMO				smax				
	comp=N,604nm,1.0s							
KMO	**Kumora**	**0.70**	**44**	⇓*i*Pg		Pg	20 48 07.1	-0.8
KMO				*e*Sg		Sg	20 48 16.7	-0.3
KMO				Pmax				
	comp=N,273nm,0.4s							
KMO				Smax				
	comp=N,602nm,0.9s							
YLYR	**Ulyunkhan**	**0.70**	**137**	⇑*i*Pg		Pg	20 48 06.3	-1.6
YLYR				*i* Sg		Sg	20 48 15.4	-1.6
YLYR				Pmax				
	comp=N,106nm,0.7s							
YLYR				Smax				
	comp=N,300nm,1.4s							
YOA	**Uoyan**	**1.08**	**46**	⇑*i*PG		Pg	20 48 14.6	-0.7
YOA				*e*			20 48 29.6	
YOA				pmax		pmax		
	comp=Z,285nm,0.3s							
YOA				smax				
	comp=N,899nm,0.7s							
YOA	**Uoyan**	**1.08**	**46**	*e*Pg		Pg	20 48 14.5	-0.8
YOA				*i* Sg		Sg	20 48 29.5	+0.2
YOA				Pmax				
	comp=N,267nm,0.4s							
YOA				Smax				
	comp=N,900nm,1.0s							
SYVR	**Suvo**	**1.75**	**186**	*e*PN		Pn	20 48 25.3	-0.7
SYVR				*e*			20 48 48.7	
SYVR				pmax		pmax		
	comp=Z,65nm,0.5s							
SYVR				smax				
	comp=N,348nm,0.9s							
SYVR	**Suvo**	**1.75**	**186**	⇓*i*Pg		Pg	20 48 25.2	-2.7
SYVR				*e*Sn		Sn	20 48 48.8	-0.1
SYVR				*i* Sg		Sg	20 48 49.1	-1.4
SYVR				*e*			20 48 51.5	
SYVR				Pmax				
	comp=N,54nm,0.5s							
SYVR				max				
	comp=N,341nm,0.9s							
UKT	**Uakit**	**1.88**	**86**	*e*PN		Pn	20 48 27.3	-0.5
UKT				*e*			20 48 52.6	
UKT				pmax		pmax		
	comp=Z,94nm,0.4s							
UKT				smax				
	comp=N,158nm,0.5s							
UKT	**Uakit**	**1.88**	**86**	⇑*i*Pg		Pg	20 48 27.4	-3.1
UKT				*i* Sg		Sg	20 48 52.8	-2.1
UKT				Pmax				
	comp=N,117nm,1.0s							
UKT				Smax				
	comp=N,222nm,1.0s							
SVKR	**Severomuysk**	**1.96**	**67**	*e*PN		Pn	20 48 29.4	+0.4
SVKR				*e*			20 48 56.1	
SVKR				pmax		pmax		
	comp=Z,79nm,0.6s							
SVKR				smax				
	comp=N,557nm,2.1s							
SVKR	**Severomuysk**	**1.96**	**67**	*e*Pg		Pg	20 48 29.8	-2.3
SVKR				*e*Sg		Sg	20 48 57.0	-0.6
SVKR				Pmax				
	comp=N,69nm,0.6s							
SVKR				Smax				
	comp=N,557nm,1.2s							
MXMB	**Maximikha**	**2.33**	**204**	*e*Pn		Pn	20 48 33.8	-0.1
MXMB				⇓*i*Pg		Pg	20 48 35.7	-3.3
MXMB				*e*Sg		Sg	20 49 07.5	-1.6
MXMB				Pmax				
	comp=N,62nm,1.2s							
MXMB				Smax				
	comp=N,466nm,0.9s							
OGRR	**Ongureny**	**2.37**	**223**	*e*Pn		Pn	20 48 34.8	+0.3
OGRR				⇓*i*Pg		Pg	20 48 36.8	-3.0
OGRR				*e*Sg		Sg	20 49 07.3	-3.2
OGRR				Pmax				
	comp=N,38nm,0.4s							
OGRR				Smax				
	comp=N,115nm,0.5s							
BOD	**Bodaibo**	**3.17**	**38**	*e*Pn		Pn	20 48 45.0	-0.6
BOD				*e*Pg		Pg	20 48 50.6	-4.6
BOD				*e*Sg		Sg	20 49 31.8	-4.5
BOD				Pmax				
	comp=N,17nm,0.4s							
BOD				Smax				
	comp=N,72nm,0.8s							
NLYR	**Nelyaty**	**3.22**	**68**	*e*PN		Pn	20 48 45.8	-0.4
NLYR				*e*			20 48 52.9	
NLYR				*e*			20 49 33.7	
NLYR				pmax		pmax		
	comp=Z,24nm,0.8s							
NLYR				smax				
	comp=E,150nm,1.2s							
NLYR	**Nelyaty**	**3.22**	**68**	*e*Pn		Pn	20 48 46.2	0.0
NLYR				*e*Pg		Pg	20 48 53.0	-3.1
NLYR				*e*Sg		Sg	20 49 34.4	-3.4
NLYR				Pmax				
	comp=E,17nm,0.5s							
NLYR				Smax				
	comp=E,150nm,1.1s							
TRG	**Tyrgan**	**3.53**	**223**	*e*Pn		Pn	20 48 50.7	+0.2
TRG				*e*Pg		Pg	20 48 59.4	-2.7
TRG				*e*Sn		Sn	20 49 34.4	+1.6
TRG				*e*Sg		Sg	20 49 45.8	-1.9
TRG				Pmax				
	comp=E,12nm,1.0s							
TRG				Smax				
	comp=E,59nm,0.9s							
UUDB	**Ulan-Yde**	**3.87**	**205**	*e*Sg		Sg	20 49 55.4	-3.3
UUDB				Smax				
	comp=E,61nm,1.5s							
CIT	**Chita**	**3.88**	**149**	*e*Sg		Sg	20 49 55.4	-3.7
CIT				Smax				
	comp=E,85nm,0.6s							
HRMR	**Khuramsha**	**4.27**	**210**	*e*Pn		Pn	20 49 00.9	+0.2
HRMR				*e*Pg		Pg	20 49 10.5	-5.8
HRMR				*e*Sg		Sg	20 50 07.1	-4.6
HRMR				Pmax				
	comp=E,36nm,0.8s							
HRMR				Smax				
	comp=E,132nm,1.2s							
CRS	**Chara**	**4.69**	**68**	*e*PN		Pg	20 49 18.7	-5.6
CRS				*e*			20 50 20.7	
CRS				pmax		pmax		
	comp=Z,46nm,1.3s							
CRS				smax				
	comp=E,57nm,1.3s							
CRS	**Chara**	**4.69**	**68**	*e*Pg		Pg	20 49 19.7	-4.6
CRS				*e*Sg		Sg	20 50 21.3	-3.8
CRS				Pmax				
	comp=E,15nm,1.1s							
CRS				Smax				
	comp=E,67nm,1.4s							
LSTR	**Listvyanka**	**4.81**	**225**	*e*Sg		Sg	20 50 24.7	-4.2
LSTR				Smax				
	comp=E,62nm,1.3s							
TLY	**Talaya**	**5.45**	**230**	*e*PN		Pn	20 49 15.5	-1.4
TLY				*e*			20 49 31.8	
TLY				*e*			20 50 42.2	
TLY				pmax		pmax		
	comp=Z,8.0nm,0.5s							
TLY				smax				
	comp=N,42nm,1.0s							
TLY	**Talaya**	**5.45**	**230**	*e*Sg		Sg	20 50 42.4	-7.0
TLY				Smax				
	comp=N,32nm,1.1s							
KPC	**Khapcheranga**	**5.83**	**167**	*e*Pn		Pn	20 49 23.0	+0.9
KPC				*e*Pg		Pg	20 49 39.8	-6.4
KPC				*e*Sn		Sn	20 50 24.3	-5.3
KPC				*e*Sg		Sg	20 50 54.5	-7.2
KPC				Pmax				
	comp=N,3.0nm,0.6s							
KPC				Smax				
	comp=N,43nm,1.0s							
ARS	**Arshan**	**5.84**	**237**	*e*PN		Pn	20 49 23.4	+1.1
ARS				*e*			20 49 40.5	
ARS				*e*			20 50 54.8	
ARS				pmax		pmax		
	comp=Z,22nm,0.5s							
ARS				smax				
	comp=E,113nm,0.9s							
ARS	**Arshan**	**5.84**	**237**	*e*Pn		Pn	20 49 23.5	+1.2
ARS				*e*Pg		Pg	20 49 40.0	-6.4
ARS				*e*			20 50 28.9	
ARS				*e*Sg		Sg	20 50 54.7	-7.4
ARS				Pmax				
	comp=E,22nm,0.6s							
ARS				Smax				
	comp=E,113nm,1.0s							
ZAK	**Zakamensk**	**6.58**	**223**	*e*Sg		Sg	20 51 20.0	-5.8
ZAK				Smax				
	comp=E,20nm,1.2s							
MOY	**Mondy**	**6.70**	**240**	*e*PN		Pn	20 49 35.6	+1.6
MOY				*e*			20 49 56.8	
MOY				*e*			20 51 20.4	
MOY				pmax		pmax		
	comp=Z,4.0nm,0.4s							
MOY				smax				
	comp=E,46nm,1.4s							
MOY	**Mondy**	**6.70**	**240**	⇓*i*Pn		Pn	20 49 35.6	+1.6
MOY				*e*			20 50 51.7	
MOY				*e*Sg		Sg	20 51 20.9	-8.6
MOY				max				
	comp=E,10.0nm,0.7s							
MOY				Smax				
	comp=E,47nm,1.3s							
ORL	**Orlik**	**6.83**	**250**	*e*PN		Pn	20 49 36.7	+0.9
ORL				*e*S		Sg	20 51 28.3	-5.4
ORL				smax				
	comp=N,103nm,1.1s							
ORL	**Orlik**	**6.83**	**250**	⇑*i*Pn		Pn	20 49 36.7	+0.9
ORL				*e*			20 50 54.4	
ORL				*e*Sg		Sg	20 51 26.5	-7.2
ORL				max				
	comp=N,4.0nm,1.2s							
ORL				Smax				
	comp=N,103nm,1.2s							
TDJR	**Todzha**	**8.92**	**256**	*e*Sg		Sg	20 52 28.4	-12

*DJA **22** 20:52:18, 606S×10552E, h10km, MLv3.6/6*

IDC 22 20:51:54.4±38.0, 430S×10419E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/18, mbtmp3.5/3, Error ellipse: s-maj=668.9km s-min=209.9km az=136.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**33.23**	**120**	P		P	20 58 33.4	-0.1
	0.3nm,0.5s,baz=296,slow=9.6,SNR=5.1							
ASAR	**Alice Springs**	**34.53**	**127**	P		P	20 58 44.8	0.0
	0.2nm,0.6s,baz=301,slow=8.1,SNR=5.3							
STKA	**Stephens Creek**	**44.52**	**133**	P		P	21 00 08.0	+0.1
	1.4nm,0.7s,baz=322,slow=10,SNR=4.3							

*DDA **22** 20:58:24.6, 3976N×3950E, h7km±4km, Md2.8, Ml3.1*
*CSEM **22** 20:58:25.9±0.1, 3961N×3979E, h2km, MD2.8, Error ellipse: s-maj=1.9km s-min=1.5km az=102.0*
*ISK **22** 20:58:26.7, 3961N×3980E, h6km, MD2.8*
*ISCJB **22** 20:58:27.6±0.8, 3963N±005×3969E±007, h8km±8km, Error ellipse: s-maj=11.3km s-min=5.2km az=36.4*

ISC 22 20:58:28.3±0.7, 3962N±005×3970E±007, h15km±6km, n10, σ1§21/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EZC	**Erzincan**	**0.15**	**35**	*e*PG		**Pg**	**20 58 34.4**	**+2.2**
EZC				*e*SG		**Sg**	**20 58 40.2**	**+5.3**
KOPT	**Kop Dagi**	**0.73**	**57**	*i* P		**Pn**	**20 58 40.4**	**-2.1**
KOPT				*i* S		**Sg**	**20 58 52.7**	**+0.6**
PTK	**Pertek**	**0.77**	**198**	*e*PG		**Pg**	**20 58 42.3**	**-0.9**
PTK				*e*SG		**Sg**	**20 58 53.4**	**0.0**
GUMT	**Gumushane**	**0.85**	**349**	*e*PG		**Pg**	**20 58 43.9**	**-0.9**
ELZG	**Elazig**	**1.25**	**207**	*i* P		**Pn**	**20 58 49.9**	**-1.4**
ELZG				*i* S		**Sb**	**20 59 08.8**	**+1.1**
SVRC	**Sivrice-ELAZID**	**1.28**	**194**	*e*PN		**Pn**	**20 58 51.9**	**+0.2**
EZM	**Erzurum**	**1.31**	**77**	*e*PN		**Pn**	**20 58 51.0**	**-1.1**
ERZM	**Erzurum**	**1.31**	**77**	*i* P		**Pn**	**20 58 51.0**	**-1.1**
ERZM				*i* S		**Sb**	**20 59 11.1**	**+1.8**
ESPY	**Espiye-Giresun**	**1.49**	**330**	*e*PN		**Pn**	**20 58 55.4**	**+0.8**
AKCD	**Akcadag**	**1.92**	**227**	*i* P		**Pn**	**20 59 01.5**	**+1.1**
AKCD				*i* S		**Sn**	**20 59 30.1**	**+5.8**

*ISCJB **22** 20:58:30.2±0.5, 239S±01×697E±01, h10km, mb4.1/13, MS4.0/12, Error ellipse: s-maj=15.6km s-min=14.8km az=173.9*
*IDC **22** 20:58:30.5±1.1, 2392S×6967E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/23, mbtmp3.9/9, MS4.0/12, Ms1 4.0/12, ms1mx3.7/31, Error ellipse: s-maj=36.7km s-min=22.3km az=19.0*
*NEIC **22** 20:58:32.0±0.4, 2385S×6966E, h10km, mb4.6/4, Error ellipse: s-maj=12.0km s-min=11.5km az=85.0*

ISC 22 20:58:32.2±0.5, 239S±01×697E±01, h10km, n27, σ0§66/16, mb4.1/13, MS4.0/12, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSZ	**Lusaka**	**39.89**	**275**	P		**P**	**21 06 07.3**	**+0.8**
	1.1nm,0.7s,mb3.7,baz=140,slow=6.9,SNR=4.2							
BOSA	**Boshof**	**39.95**	**253**	LR		LR	21 19 24.2	
	comp=Z,240nm,18.9s,MS4.1,baz=108,slow=31							
LBTB	**Lobatse**	**40.02**	**259**	P		**P**	**21 06 06.6**	**-0.8**
	10.0nm,1.4s,mb4.3							
MAW	**Mawson**	**43.96**	**184**	LR		LR	21 20 22.2	
	comp=Z,112nm,20.7s,MS3.8,baz=240,slow=30							
MAW	**Mawson**	**43.96**	**184**	P		**P**	**21 06 39.2**	**+0.1**
CASY	**Casey**	**49.62**	**160**	*e*P		**P**	**21 07 24.3**	**+0.9**
	59nm,1.2s,mb5.5							
CMAR	**Chiang Mai Arr**	**50.84**	**37**	LR		LR	21 24 55.0	
	comp=Z,94nm,19.5s,MS3.8,baz=216,slow=31							
BATI	**Baumata**	**53.08**	**85**	LR		LR	21 24 18.7	
	comp=Z,191nm,19.1s,MS4.2,baz=267,slow=29							
ASAR	**Alice Springs**	**58.30**	**104**	P		**P**	**21 08 27.6**	**0.0**
	1.0nm,0.7s,mb4.0,baz=253,slow=6.0,SNR=21							
WRA	**Warramunga Arr**	**59.67**	**100**	P		**P**	**21 08 36.7**	**-0.4**
	1.3nm,0.9s,mb4.0,baz=254,slow=6.9,SNR=8.0							
WRAB	**Tennant Creek**	**59.69**	**100**	P		**P**	**21 08 36.4**	**-0.8**
	12nm,1.5s,mb4.7							
SNAA	**Sanae**	**62.06**	**200**	*e*P		**P**	**21 08 52.3**	**-0.2**
	0.9nm,0.7s,mb4.0							
STKA	**Stephens Creek**	**63.06**	**115**	LR		LR	21 31 08.6	
	comp=Z,108nm,19.7s,MS4.0,baz=204,slow=31							
CTA	**Charters Tower**	**70.30**	**104**	LR		LR	21 38 30.9	
	comp=Z,180nm,18.9s,MS4.3,baz=229,slow=34							
MK31	**Makanchi Array**	**71.23**	**9**	P		**P**	**21 09 50.3**	**-0.9**
MKAR	**Makanchi Array**	**71.23**	**9**	P		**P**	**21 09 52.1**	**+0.8**
	1.7nm,0.7s,mb4.1,baz=194,slow=6.0,SNR=12							
KURK	**Kurchatov**	**74.66**	**6**	P		**P**	**21 10 11.6**	**+0.1**
	1.2nm,0.7s,mb3.9,baz=204,slow=6.3,SNR=6.7							
TORD	**Torodi Ar. Bea**	**75.91**	**291**	P		**P**	**21 10 19.0**	**-0.5**
	0.5nm,0.9s,mb3.4,baz=87,slow=3.2,SNR=3.6							
TORD				LR		LR	21 43 35.0	
	comp=Z,73nm,18.6s,MS4.0,baz=145,slow=36							
TORD	**Torodi Ar. Bea**	**75.91**	**291**	P		**P**	**21 10 19.0**	**-0.5**
TORD				LR		LR	21 43 35.0	
BVAR	**Borovoye Array**	**76.55**	**0**	P		**P**	**21 10 22.2**	**-0.1**
	0.6nm,0.6s,mb3.7,baz=153,slow=8.0,SNR=4.4							
ZALV	**Zalesovo Beam**	**78.58**	**9**	P		**P**	**21 10 33.2**	**-0.3**
	1.5nm,0.7s,mb4.1,baz=206,slow=4.3,SNR=8.4							
SONM	**Songino Array**	**78.62**	**24**	P		**P**	**21 10 35.2**	**+1.3**
	0.6nm,0.8s,mb3.6,baz=211,slow=4.7,SNR=4.1							
DBIC	**Dimbokro**	**78.69**	**282**	LR		LR	21 43 24.5	
	comp=Z,108nm,18.5s,MS4.2,baz=106,slow=34							
KSRS	**Korea Array**	**81.96**	**43**	LR		LR	21 45 30.3	
	comp=Z,43nm,19.6s,MS3.8,baz=160,slow=34							
KEST	**Kesra**	**82.24**	**314**	LR		LR	21 47 33.9	
	comp=Z,25nm,20.1s,MS3.6,baz=199,slow=36							
PMSA	**Palmer Station**	**84.71**	**198**	LR		LR	21 44 55.3	
	comp=Z,265nm,18.6s,MS4.7,baz=296,slow=33							
MJAR	**Matsushiro Arr**	**88.20**	**49**	LR		LR	21 49 43.8	
	comp=Z,86nm,19.9s,MS4.2,baz=75,slow=35							

*UPP **22** 21:03:07.5, 3781N×1522E, h32km*
*ROM **22** 21:03:29.6±0.2, 3979N×1561E, h285km±2km, Ml3.6/57, Error ellipse: s-maj=3.8km s-min=1.9km az=87.0*
*ISCJB **22** 21:03:30.9±0.2, 3982N±002×1545E±003, h279km±1km, mb3.6/15, Error ellipse: s-maj=3.5km s-min=2.9km az=38.3*
*LDG **22** 21:03:30.4±0.7, 3990N×1551E, h280km, Mb4.1/36, Ms2.3/5, Error ellipse: s-maj=22.4km s-min=13.8km az=9.0*
*CSEM **22** 21:03:30.0±0.1, 3978N×1552E, h280km, mb3.8/9, ML4.0/14, Ms2.3, Error ellipse: s-maj=1.7km s-min=1.5km az=78.0*
*MOS **22** 21:03:32.9±0.9, 3998N×1530E, h309km, mb3.8/10, Error ellipse: s-maj=6.5km s-min=3.5km az=118.6*
*NEIC **22** 21:03:32.6±0.4, 3989N×1538E, h287km±4km, mb4.1/37, Error ellipse: s-maj=5.6km s-min=3.8km az=181.0*
*IDC **22** 21:03:32.4±0.9, 3993N×1534E, h284km±11km, mb3.4/15, mb1 3.5/29, mb1mx3.4/39, mbtmp3.4/29, Error ellipse: s-maj=10.5km s-min=8.4km az=39.0*

ISC 22 21:03:31.8±0.2, 3982N±002×1546E±003, h273km±1km, n344, σ1§08/369, mb3.6/15, 35C-43D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BULG	**Bulgheria - Ca**	**0.27**	**347**	⇓*i*Pg		**Pn**	**21 04 07.3**	**+0.5**
BULG				Sg		**S**	**21 04 34.7**	**+0.1**
	199nm,0.5s							
CUC	**Castrocucco**	**0.33**	**57**	⇓*i*Pg		**Pn**	**21 04 06.9**	**0.0**
CUC				Sg		**S**	**21 04 33.3**	**-1.4**
	269nm,0.5s							
CUC	**Castrocucco**	**0.33**	**57**	⇓*i*Pn		**Pn**	**21 04 07.0**	**+0.1**
SIRI	**Monte Sirino -**	**0.48**	**41**	⇓*e*Pg		**Pn**	**21 04 07.3**	**0.0**
SIRI				Sg		**S**	**21 04 36.6**	**+1.3**
	300nm,0.8s							
MTSN	**Montesano sull**	**0.50**	**27**	⇓*e*Pg		**Pn**	**21 04 07.3**	**0.0**
MTSN				Sg		**S**	**21 04 36.0**	**+0.6**
	156nm,0.7s							
CMPR	**Campora**	**0.52**	**347**	⇓*i*Pg		**Pn**	**21 04 07.8**	**+0.5**
CMPR				Sg		**S**	**21 04 35.4**	**-0.1**
	170nm,0.8s							
MCEL	**Monticello**	**0.57**	**27**	⇓*e*Pg		**Pn**	**21 04 08.3**	**+0.8**
MCEL				Sg		**S**	**21 04 35.7**	**-0.1**
	454nm,0.9s							
SCHR	**S. Chirico Rap**	**0.61**	**51**	⇓*i*Pg		**Pn**	**21 04 07.9**	**+0.3**
SCHR				Sg		**S**	**21 04 35.8**	**-0.2**
	133nm,0.8s							
CDRU	**Civita di Ruta**	**0.68**	**350**	Pg		**Pn**	**21 04 08.4**	**+0.5**
CDRU				Sg		**S**	**21 04 35.8**	**-0.6**
	95nm,0.9s							
SGO	**Sicignano**	**0.75**	**351**	Pg		**Pn**	**21 04 08.8**	**+0.7**
	52nm,0.3s							
ORI	**Oriolo Calabro**	**0.80**	**72**	⇓*e*Pg		**Pn**	**21 04 08.5**	**+0.1**
ORI				Sg		**S**	**21 04 37.5**	**+0.2**
	614nm,0.4s							
CARO	**Carolei**	**0.81**	**133**	⇓*i*Pg		**Pn**	**21 04 07.8**	**-0.7**
CARO				Sg		**S**	**21 04 35.6**	**-1.9**
	908nm,0.8s							
PTRP	**Pietrapertosa**	**0.84**	**33**	⇓*i*Pg		**Pn**	**21 04 08.6**	**+0.1**
	432nm,0.5s							
CRAC	**Craco**	**0.93**	**54**	⇓*i*Pg		**Pn**	**21 04 08.7**	**-0.2**
CRAC				Sg		**S**	**21 04 38.5**	**+0.2**
	268nm,0.6s							
MCRV	**Calabrutti - M**	**0.99**	**347**	⇑*i*Pg		**Pn**	**21 04 09.7**	**+0.5**
MCRV				Sg		**S**	**21 04 38.6**	**-0.2**
	356nm,1.0s							
CSSN	**Cassano Irpino**	**1.09**	**343**	⇑*i*Pg		**Pn**	**21 04 10.4**	**+0.7**
	20nm,0.3s							
TIP	**Timpagrande**	**1.19**	**122**	⇓*i*Pg		**Pn**	**21 04 10.4**	**0.0**
TIP				Sg		**S**	**21 04 39.5**	**-1.4**
	230nm,0.5s							
TIP	**Timpagrande**	**1.19**	**122**	⇓*i*Pn		**Pn**	**21 04 10.5**	**+0.1**
CAFE	**Carife**	**1.22**	**352**	⇑*i*Pg		**Pn**	**21 04 11.3**	**+0.8**
	374nm,2.1s							
SERS	**Sersale**	**1.23**	**129**	⇓*i*Pg		**Pn**	**21 04 10.7**	**+0.1**
SERS				Sg		**S**	**21 04 39.9**	**-1.4**
	786nm,0.3s							
GRI	**Girifalco**	**1.24**	**143**	Pg		**Pn**	**21 04 10.6**	**-0.1**
GRI				Sg		**S**	**21 04 40.8**	**-0.7**
	630nm,0.7s							
JOPP	**Joppolo**	**1.25**	**164**	⇑*e*Pg		**Pn**	**21 04 10.0**	**-0.8**
JOPP				Sg		**S**	**21 04 39.4**	**-2.2**
	423nm,0.2s							
SGTA	**Sant Agata di**	**1.32**	**357**	⇑*i*Pg		**Pn**	**21 04 11.7**	**+0.6**
	58nm,0.7s							
SLNA	**Salina**	**1.34**	**201**	⇓*i*Pg		**Pn**	**21 04 12.1**	**+0.7**
	383nm,0.4s							
MRVN	**Minervino Murg**	**1.37**	**24**	Pg		**Pn**	**21 04 11.0**	**-0.4**
MRVN				Sg		**S**	**21 04 40.8**	**-1.9**
	385nm,1.9s							
SG1	**Sgolgore (BA)**	**1.39**	**42**	*i* P		**Pn**	**21 04 10.8**	**-0.7**
AMUR	**Altamura**	**1.40**	**38**	Pg		**Pn**	**21 04 11.2**	**-0.4**
AMUR				Sg		**S**	**21 04 41.0**	**-2.1**
	309nm,1.1s							
LLI	**Lipari**	**1.43**	**196**	⇓*i*Pg		**Pn**	**21 04 12.8**	**+0.9**
	741nm,0.4s							
FG5	**Orsara di Pugl**	**1.47**	**354**	⇑*i*Pg		**Pn**	**21 04 12.8**	**+0.7**
	30nm,0.4s							
VPL	**Vulcano Piano**	**1.48**	**195**	Pg		**Pn**	**21 04 12.4**	**+0.1**
	316nm,0.5s							
PSB1	**Pescosannita**	**1.49**	**341**	Pg		**Pn**	**21 04 12.8**	**+0.6**
	44nm,0.9s							
ACL	**Alicudi**	**1.54**	**214**	⇓*i*Pg		**Pn**	**21 04 13.2**	**+0.5**
	103nm,0.7s							
MSRU	**Castanea**	**1.55**	**178**	⇓*i*Pg		**Pn**	**21 04 12.0**	**-0.8**
MSRU				Sg		**S**	**21 04 43.3**	**-1.9**
	918nm,1.2s							
PLAC	**Placanica**	**1.56**	**150**	⇓*e*Pg		**Pn**	**21 04 12.2**	**-0.7**
PLAC				Sg		**S**	**21 04 43.5**	**-1.9**
	126nm,0.5s							
NOCI	**Noci**

302nm,0.5s
MPAZ Palizzi 1.91 167⇓*e*Pg Pn 21 04 14.8 -0.8
277nm,0.4s
FGMS Monte Sant'Ang 1.93 11 Pg Pn 21 04 15.4 -0.1
24nm,0.3s
FG2 Serracapriola 2.00 354⇑*i*Pg Pn 21 04 16.1 0.0
64nm,0.3s
MIDA Miranda 2.04 334 Pg Pn 21 04 17.3 +0.8
55nm,0.4s
CERA Filignano 2.09 329⇑*i*Pg Pn 21 04 17.7 +0.8
54nm,0.6s
RNI2 Rionero Sannit 2.13 333⇑*i*Pg Pn 21 04 18.8 +1.5
71nm,0.5s
GIB Gibilmanna 2.14 212⇓*i*Pg Pn 21 04 18.3 +0.8
221nm,0.6s
CSLB Castelbuono 2.17 211⇓*i*Pg Pn 21 04 18.5 +0.7
58nm,0.2s
GALF Gagliano Caste 2.21 199⇓*i*Pg Pn 21 04 19.2 +1.0
348nm,0.6s
SDI San Donato 2.27 327⇑*i*Pg Pn 21 04 19.3 +0.8
23nm,0.4s
POFI Posta Fibreno 2.32 326⇑*i*Pg Pn 21 04 19.9 +1.0
35nm,0.6s
SCTE Santa Cesarea 2.33 83⇓*i*Pg Pn 21 04 18.9 -0.2
SCTE Sg S 21 04 53.6 -3.0
295nm,0.8s
GIUL Giuliano Di Ro 2.42 317⇑*i*Pg Pn 21 04 20.6 +0.7
20nm,0.6s
VAE Valguarnera 2.47 200 P Pn 21 04 22.6 +2.0
2.9nm,0.3s,baz=1.2,slow=2.6,SNR=18
VVLD Villa Vallelon 2.48 326⇑*i*Pg Pn 21 04 21.5 +1.0
54nm,0.6s
INTR Introdacqua 2.49 332⇑*i*Pg Pn 21 04 21.5 +0.9
89nm,1.1s
HAGA Augusta 2.54 185⇑*i*Pg Pn 21 04 20.5 -0.7
89nm,0.7s
CORL Corleone 2.55 222⇑*i*Pg Pn 21 04 22.5 +1.2
186nm,1.1s
SSY Sortino 2.67 187 Pg Pn 21 04 22.1 -0.4
95nm,0.6s
HVZN Vizzini 2.70 193⇓*i*Pg Pn 21 04 23.1 +0.3
253nm,0.7s
RAFF Raffo Rosso 2.73 199 Pg Pn 21 04 24.0 +0.9
FAGN Fagnano 2.83 331⇑*i*Pg Pn 21 04 25.2 +1.3
33nm,0.5s
CERT Cerreto 2.84 319⇑*i*Pg Pn 21 04 24.9 +0.9
19nm,0.4s
HAVL Avola 2.86 185 Pg Pn 21 04 23.9 -0.5
156nm,0.8s
HMDC Modica 2.90 191⇓*i*Pg Pn 21 04 24.9 +0.1
141nm,1.0s
FIAM Fiamignano 3.02 325⇑*i*Pg Pn 21 04 27.5 +1.6
101nm,0.3s
KEK Kerkira 3.35 90 *e*P Pn 21 04 28.4 -1.0
JAN Janina 4.16 90 *e*P Pn 21 04 39.2 +0.8
OHR Ohrid 4.28 71 *e*Pn Pn 21 04 39.0 -0.8
OHR *e*Sn S 21 05 26.3 -7.7
VLS Valsamata 4.32 111 *e*P Pn 21 04 40.0 -0.4
KRUS Krusevo 4.67 69 *e*Pn Pn 21 04 44.1 -0.3
KRUS *e*Sn S 21 05 28.8 -14
KRUS Krusevo 4.67 69 *e*Pn Pn 21 04 44.0 -0.4
RLS Riolos of Patr 5.00 109 *e*P Pn 21 04 49.2 +0.8
EVR Evrytania 5.00 98 *e*P Pn 21 04 50.1 +1.8
THL Klokotos Trika 5.07 91 *e*P Pn 21 04 50.1 +1.0
STIP Stip 5.44 68 *e*Pn Pn 21 04 53.3 -0.3
DIVS Divibare 5.45 37 *e*P Pn 21 04 52.9 -0.8
PGF Pioggiola 5.58 301 *e*P Pn 21 04 55.6 +0.3
8.5nm,0.7s
PGF Pioggiola 5.58 301 *e*P Pn 21 04 55.6 +0.3
4.2nm,0.7s
BOJS Bojanci 5.69 359 *i* Pn Pn 21 04 57.1 +0.6
ITM Ithomi 5.72 115 *e*P Pn 21 04 57.5 +0.6
ITM Ithomi 5.72 115 *e*P Pn 21 04 57.5 +0.6
SARO Sassorosso 5.76 321 P Pn 21 04 57.1 -0.3
VISS Visnje 6.00 356 *i* Pn Pn 21 05 00.5 +0.2
PLG Polygyros 6.15 82 *e*P Pn 21 05 02.3 0.0
JAVS Javornik 6.16 351 *i* Pn Pn 21 05 02.1 -0.2
LJU Ljubljana 6.26 354 *i* Pn Pn 21 05 03.8 +0.3
KEST Kesra 6.33 232 P Pn 21 05 05.9 +1.4
0.1nm,0.3s,baz=337,slow=2.9,SNR=9.7
VLI Veliai 6.65 115 *e*P Pn 21 05 10.0 +1.6
OBKA Obir 6.72 355⇓*i*P Pn 21 05 09.2 +0.1
8.9nm,0.6s,SNR=12
PKSM Moragy 6.80 19⇑*i*P Pn 21 05 10.2 0.0
PKSM Moragy 6.80 19⇑P Pn 21 05 10.2 0.0
SOKA Soboth 6.87 358⇓*i*P Pn 21 05 10.8 -0.2
6.5nm,0.8s
FIN Finale Ligure 6.96 311 P Pn 21 05 13.6 +1.5
PCP Piancastagn 6.97 315 P Pn 21 05 12.2 -0.1
ROB Robourent 7.19 311 P Pn 21 05 16.0 +1.0
REVF Revere 7.20 306 *e*P Pn 21 05 15.6 +0.4
SAOF Saorge 7.22 308 *e*P Pn 21 05 15.8 +0.5
SBF Sospel 7.22 307 *e*P Pn 21 05 16.0 +0.6
19nm,0.6s
SBF Sospel 7.22 307 *e*P Pn 21 05 16.0 +0.6
9.6nm,0.6s
ABTA Abfaltersbach 7.25 344 *i* P Pn 21 05 16.0 +0.3
28nm,0.5s,SNR=59
LUCF Luceram 7.29 307 *e*P Pn 21 05 18.8 +2.5
BZS Buzias 7.36 36⇑*i*P Pn 21 05 17.7 +0.6
MVIF Mont Vial 7.42 306 *e*P Pn 21 05 18.8 +1.0
TOUF Mont Tournerai 7.42 307 *e*P Pn 21 05 18.4 +0.6
KBA Koelnbreinsper 7.42 349 *i* P Pn 21 05 18.1 +0.3
6.5nm,0.5s,SNR=11
ENR Entracque 7.43 309 P Pn 21 05 19.3 +1.3
CALN Calern 7.51 304 *e*P Pn 21 05 18.8 -0.2
LMR La Mourre 7.57 301 *e*P Pn 21 05 19.4 -0.3
11nm,0.8s
LMR La Mourre 7.57 301 *e*P Pn 21 05 19.4 -0.3
5.7nm,0.8s
FRF La Foret Royal 7.58 302 *e*P Pn 21 05 19.8 0.0
9.7nm,0.8s
FRF La Foret Royal 7.58 302 *e*P Pn 21 05 19.8 0.0
4.8nm,0.8s
GZR Gura Zlata 7.76 42⇓*i*P Pn 21 05 24.1 +2.1
GZR Gura Zlata 7.76 42 ⇓P Pn 21 05 24.1 +2.1
WTTA Wattenberg 7.94 341⇓*i*P Pn 21 05 25.6 +1.3
6.9nm,0.5s
FETA Feichten 7.98 336⇑*i*P Pn 21 05 24.7 0.0
13nm,0.8s
TUE Stuetta 8.01 328 *e*Pn Pn 21 05 24.2 -0.9
12nm,0.5s
WATA Walderalm 8.03 341 *i* P Pn 21 05 26.0 +0.7
8.6nm,0.5s,SNR=9.4
TRAV Traversella 8.04 318 P Pn 21 05 23.8 -1.7
OG22 Abries 8.05 311 *e*P Pn 21 05 26.1 +0.5
DAVOX Davos/Dischmat 8.06 332 P Pn 21 05 26.7 +1.0
1.2nm,0.3s,baz=324,slow=23,SNR=16
MOA Molln 8.08 354⇓*i*P Pn 21 05 26.2 +0.3
3.6nm,0.6s,SNR=8.8
MBDF Montbardon 8.09 310 *e*P Pn 21 05 27.3 +1.1
59nm,0.7s
MBDF Montbardon 8.09 310 *e*P Pn 21 05 27.3 +1.1
29nm,0.7s
DAVOS Davos 8.14 331 P Pn 21 05 26.8 0.0
MOTA Moosalm 8.16 339⇓*i*P Pn 21 05 27.4 +0.4
7.9nm,0.7s,SNR=11
MOTA Moosalm 8.16 339 P Pn 21 05 27.4 +0.4
7.9nm,0.7s,SNR=11
RRL Rocca Remolon 8.19 311 P Pn 21 05 28.1 +0.6
LSD Lago del Serru 8.33 315 P Pn 21 05 27.0 -2.2
BNI Bardonecchia 8.34 312 *e*P Pn 21 05 30.4 +1.2
BNI pmax pmax
comp=Z,14nm,0.8s
BNI Bardonecchia 8.34 312 *e*P Pn 21 05 30.4 +1.2
comp=Z,14nm,0.8s
BNI Bardonecchia 8.34 312 *e*Pn Pn 21 05 30.4 +1.2
comp=Z,14nm,0.8s
RETA Reutte 8.39 338⇑*i*P Pn 21 05 29.8 -0.1
comp=Z,12nm,0.9s,SNR=16
SMRF Simiane la Rot 8.46 303 *e*P Pn 21 05 32.4 +1.6
DAVA Damuels 8.49 333⇓*i*P Pn 21 05 31.4 +0.3
comp=Z,11nm,0.5s,SNR=7.6
LPG La Plagne 8.56 314 *e*P Pn 21 05 32.6 +0.5
comp=Z,52nm,0.8s
LPG La Plagne 8.56 314 *e*P Pn 21 05 32.6 +0.5
comp=Z,26nm,0.8s
LPL La Plagne 8.59 314 *e*P Pn 21 05 32.7 +0.4
comp=Z,58nm,0.9s
LPL La Plagne 8.59 314 *e*P Pn 21 05 32.7 +0.4
comp=Z,29nm,0.9s
ORIF Oris-en-Rattie 8.73 309 *e*P Pn 21 05 34.4 +0.3
comp=Z,24nm,0.8s
ORIF *e*MLR MLR
comp=Z,44nm,19.5s
ORIF Oris-en-Rattie 8.73 309 *e*P Pn 21 05 34.4 +0.3
comp=Z,12nm,0.8s
IDI Anoyia 8.75 118 P Pn 21 05 36.6 +2.0
comp=Z,1.8nm,0.3s,baz=31,slow=13,SNR=9.8
FUR Furstenfeldbru 8.87 342 *e*P Pn 21 05 35.8 -0.1
VOIR 9.03 48⇑*i*P Pn 21 05 39.6 +1.7
VOIR 9.03 48 ⇑P Pn 21 05 39.6 +1.8
GEC2 GERESS Array S 9.11 353 *e*P Pn 21 05 38.5 -0.4
GERES GERESS Array B 9.11 353 P Pn 21 05 38.7 -0.2
comp=Z,0.4nm,0.3s,baz=168,slow=13,SNR=30
KHC Kasperske Hory 9.41 352 *e*P Pn 21 05 41.9 -0.7
KHC *ex* x 21 05 51.6
VIVF Saint-Julien-l 9.44 306 *e*P Pn 21 05 43.0 0.0
comp=Z,35nm,1.4s
VIVF Saint-Julien-l 9.44 306 *e*P Pn 21 05 43.0 0.0
comp=Z,18nm,1.4s
WET Wettzell 9.51 350 *e*P Pn 21 05 42.8 -1.0
VRAC Vranov 9.53 5 P Pn 21 05 44.5 +0.5
comp=Z,0.6nm,0.3s,baz=201,slow=12,SNR=7.0
VRAC Vranov 9.53 5 P Pn 21 05 44.5 +0.5
VRAC pmax pmax
comp=Z,1.0nm,0.3s
VRAC Vranov 9.53 5⇓*i*P Pn 21 05 45.0 +1.0
VRAC Vranov 9.53 5 ⇓P Pn 21 05 45.0 +1.0
BBS Basel-Blauen 9.57 326 *e*P Pn 21 05 42.2 -2.4
MLR Muntele Rosu 9.58 50 P Pn 21 05 46.9 +2.1
comp=Z,1.4nm,0.3s,baz=266,slow=5.7,SNR=20
MLR Muntele Rosu 9.58 50 P Pn 21 05 46.9 +2.1
MLR pmax pmax
comp=Z,1.0nm,0.3s
MLR Muntele Rosu 9.58 50⇑*i*P Pn 21 05 47.4 +2.6
OG05 Jujurieux 9.61 314 *e*P Pn 21 05 44.7 -0.4
LASF Ste Croix 9.63 300 *e*P Pn 21 05 44.9 -0.5
comp=Z,24nm,0.9s
LASF Ste Croix 9.63 300 *e*P Pn 21 05 44.9 -0.5
comp=Z,12nm,0.9s
CABF La Chapelle 9.63 318 *e*P Pn 21 05 44.0 -1.4
comp=Z,18nm,0.5s
CABF La Chapelle 9.63 318 *e*P Pn 21 05 44.0 -1.4
comp=Z,8.9nm,0.5s
FELD Feldberg im Sc 9.69 329 *e*P Pn 21 05 45.2 -0.8
BFO Black Forest 9.93 331 *e*P Pn 21 05 48.7 -0.4
MOF Molkenrain 10.03 326 *e*P Pn 21 05 49.1 -1.2
HINF Hinteralfeld 10.12 325 *e*P Pn 21 05 49.9 -1.6
comp=Z,55nm,0.8s
HINF Hinteralfeld 10.12 325 *e*P Pn 21 05 49.9 -1.6
HINF pmax pmax
comp=Z,27nm,0.8s
HINF Hinteralfeld 10.12 325 *e*P Pn 21 05 49.9 -1.6
comp=Z,27nm,0.8s
PLOR Plostina 10.19 50⇑*i*P Pn 21 05 53.4 +1.1
PRU Pruhonice 10.19 357 *e*P Pn 21 05 56.7 +4.4
PRU *ex* x 21 06 01.4
NIE Niedzica 10.20 18 *e*P Pn 21 05 59.8 +7.4
VRI Vrincioaia 10.24 50⇓*i*P Pn 21 05 54.9 +1.9
VRI Vrincioaia 10.24 50 ⇑P Pn 21 05 54.9 +1.9
ECH Echery 10.30 327 *e*P Pn 21 05 52.7 -1.0
GRA1 Grafenberg Arr 10.32 344 *e*P Pn 21 05 52.6 -1.3
GRF Grafenberg Arr 10.32 344 *e*P Pn 21 05 52.6 -1.3
CDF Champ du Feu 10.41 328 *e*P Pn 21 05 54.3 -0.7
comp=Z,9.8nm,0.4s
CDF Champ du Feu 10.41 328 *e*P Pn 21 05 54.3 -0.7
CDF pmax pmax
comp=Z,5.0nm,0.4s
CDF Champ du Feu 10.41 328 *e*P Pn 21 05 54.3 -0.7
comp=Z,4.9nm,0.4s
STHS Stebnicka Huta 10.44 21 *e* Pn 21 06 01.9 +6.5
STHS *e* 21 06 07.2
HAU Haudompre 10.49 324 *e*P Pn 21 05 54.6 -1.4
comp=Z,18nm,0.6s
HAU *e*MLR MLR
comp=Z,40nm,17.5s
HAU Haudompre 10.49 324 *e*P Pn 21 05 54.6 -1.4
HAU pmax pmax
comp=Z,9.0nm,0.6s
HAU Haudompre 10.49 324 *e*P Pn 21 05 54.6 -1.4
comp=Z,9.1nm,0.6s
LBL Lubilhac 10.51 305 *e*P Pn 21 05 56.9 +0.6
BURAR Bucovina Array 10.51 39⇓*i*P Pn 21 05 59.0 +2.7
BURAR Bucovina Array 10.51 39 ⇓P Pn 21 05 59.0 +2.7
MTLF Montolieu 10.52 294 *e*P Pn 21 05 56.3 -0.2
comp=Z,4.9nm,0.7s
MTLF Montolieu 10.52 294 *e*P Pn 21 05 56.3 -0.2
MTLF pmax pmax
comp=Z,2.0nm,0.7s
MTLF Montolieu 10.52 294 *e*P Pn 21 05 56.3 -0.2
comp=Z,2.5nm,0.7s
DPC Dobruska-Polom 10.55 3 *e*P Pn 21 05 59.0 +2.2
PLDF La Plantade 10.63 309 *e*P Pn 21 05 56.9 -0.9
UPC Upice 10.70 2 *e*P Pn 21 05 59.0 +0.4
UPC *ex* x 21 06 02.5
OJC Ojcow 10.85 15 *e*P Pn 21 06 05.3 +4.9
SMF Signal de Mont 10.87 313 *e*P Pn 21 05 58.6 -2.2
comp=Z,17nm,0.8s
SMF Signal de Mont 10.87 313 *e*P Pn 21 05 58.6 -2.2
SMF pmax pmax
comp=Z,8.0nm,0.8s
SMF Signal de Mont 10.87 313 *e*P Pn 21 05 58.6 -2.2
comp=Z,8.3nm,0.8s
PYM Petit Puy Mans 10.90 307 *e*P Pn 21 06 00.2 -0.9
AGO Saint Agoulin 10.97 309 *e*P Pn 21 06 01.1 -0.9
BRG Berggiesshubel 11.11 355 *e*P Pn 21 06 03.8 +0.2
BRG pmax pmax
comp=Z,1.0nm,0.6s
BRG pmax pmax
comp=Z,6.0nm,1.1s
BRG Berggiesshubel 11.11 355 *e*P Pn 21 06 03.8 +0.2
comp=Z,2.0nm,0.6s
BRG *e* 21 06 07.9
comp=Z,9.9nm,1.1s
CAF Calviac 11.14 302 *e*P Pn 21 06 03.7 -0.4
comp=Z,9.2nm,0.8s
CAF Calviac 11.14 302 *e*P Pn 21 06 03.7 -0.4
CAF pmax pmax
comp=Z,5.0nm,0.8s
CAF Calviac 11.14 302 *e*P Pn 21 06 03.7 -0.4
comp=Z,4.6nm,0.8s
LOR Lormes 11.23 315 *e*P Pn 21 06 02.7 -2.5
comp=Z,9.3nm,0.6s
LOR *e*MLR MLR
comp=Z,40nm,19.0s
LOR Lormes 11.23 315 *e*P Pn 21 06 02.7 -2.5
LOR pmax pmax
comp=Z,5.0nm,0.6s
LOR Lormes 11.23 315 *e*P Pn 21 06 02.7 -2.5
comp=Z,4.7nm,0.6s
AVF Avril sur Loir 11.23 312 *e*P Pn 21 06 03.3 -1.9
comp=Z,10nm,0.4s
AVF Avril sur Loir 11.23 312 *e*P Pn 21 06 03.3 -1.9
AVF pmax pmax
comp=Z,5.0nm,0.4s
AVF Avril sur Loir 11.23 312 *e*P Pn 21 06 03.3 -1.9
comp=Z,5.2nm,0.4s
SSF Saint Saulge 11.30 314 *e*P Pn 21 06 03.6 -2.5
comp=Z,8.0nm,0.6s
SSF Saint Saulge 11.30 314 *e*P Pn 21 06 03.6 -2.5
SSF pmax pmax
comp=Z,4.0nm,0.6s
SSF Saint Saulge 11.30 314 *e*P Pn 21 06 03.6 -2.5
comp=Z,4.0nm,0.6s
BGF Bois d'Agland 11.40 310 *e*P Pn 21 06 06.2 -1.1
comp=Z,4.1nm,0.9s
BGF Bois d'Agland 11.40 310 *e*P Pn 21 06 06.2 -1.1
BGF pmax pmax
comp=Z,21nm,0.9s
BGF Bois d'Agland 11.40 310 *e*P Pn 21 06 06.2 -1.1
comp=Z,21nm,0.9s
MEZF Maizieres J'vi 11.45 323 *e*P Pn 21 06 07.1 -0.7
comp=Z,12nm,0.7s
MEZF Maizieres J'vi 11.45 323 *e*P Pn 21 06 07.1 -0.7
comp=Z,6.0nm,0.7s
ERTA Horta de San J 11.59 280 P Pn 21 06 11.4 +1.6
comp=Z,40nm,1.3s
ERTA Horta de San J 11.59 280 P Pn 21 06 11.4 +1.7
comp=Z,40nm,1.3s
CLL Collm 11.62 352 *e*P Pn 21 06 10.0 +0.1
CLL pmax pmax
comp=Z,4.0nm,0.6s
CLL Collm 11.62 352 *e*P Pn 21 06 10.0 +0.1
comp=Z,4.0nm,0.6s
CLL *ex* x 21 06 14.0
RJF Les Rejaudoux 11.65 303 *e*P Pn 21 06 10.7 +0.3
RJF *e*MLR MLR
comp=Z,49nm,18.5s
EPF Esparros 11.79 291 *e*P Pn 21 06 11.7 -0.5
comp=Z,10nm,0.8s
EPF Esparros 11.79 291 *e*P Pn 21 06 11.7 -0.5
EPF pmax pmax
comp=Z,5.0nm,0.8s
EPF Esparros 11.79 291 *e*P Pn 21 06 11.7 -0.5
comp=Z,5.2nm,0.8s
EBIE Bielsa 11.88 289 P Pn 21 06 15.1 +1.8
comp=Z,9.0nm,0.6s
EBIE Bielsa 11.88 289 P Pn 21 06 15.1 +1.9
comp=Z,9.0nm,0.6s
LFF La Frestale 12.02 300 *e*P Pn 21 06 15.9 +0.9
comp=Z,11nm,0.7s
LFF La Frestale 12.02 300 *e*P Pn 21 06 15.9 +0.9
LFF pmax pmax
comp=Z,5.0nm,0.6s
LFF La Frestale 12.02 300 *e*P Pn 21 06 15.9 +0.9
comp=Z,5.4nm,0.7s
ESAC San Caprasio 12.23 284 P Pn 21 06 19.2 +1.7
comp=Z,9.9nm,0.4s
ESAC San Caprasio 12.23 284 P Pn 21 06 19.2 +1.7
comp=Z,9.9nm,0.4s
ETSF Etsaut 12.42 290 *e*P Pn 21 06 18.9 -1.0
comp=Z,16nm,0.7s
ETSF Etsaut 12.42 290 *e*P Pn 21 06 18.9 -1.0
ETSF pmax pmax
comp=Z,8.0nm,0.7s
ETSF Etsaut 12.42 290 *e*P Pn 21 06 18.9 -1.0
comp=Z,8.1nm,0.7s
GIVF Givet 12.73 327 *e*P Pn 21 06 25.1 +1.5
comp=Z,13nm,0.6s
GIVF Givet 12.73 327 *e*P Pn 21 06 25.1 +1.5
GIVF pmax pmax
comp=Z,7.0nm,0.6s
GIVF Givet 12.73 327 *e*P Pn 21 06 25.1 +1.5
comp=Z,6.7nm,0.6s
HGN Heimansgroeve 12.82 332 *e*P Pn 21 06 27.0 +2.3
comp=Z,22nm,1.0s
SJPF Ste Jean 12.94 290 *e*P Pn 21 06 25.0 -1.2
comp=Z,9.2nm,0.6s
SJPF Ste Jean 12.94 290 *e*P Pn 21 06 25.0 -1.2
SJPF pmax pmax
comp=Z,5.0nm,0.6s
SJPF Ste Jean 12.94 290 *e*P Pn 21 06 25.0 -1.2
comp=Z,4.6nm,0.6s
BAIF Baives 12.96 326 *e*P Pn 21 06 26.0 -0.4
comp=Z,2.4nm,0.4s
BAIF Baives 12.96 326 *e*P Pn 21 06 26.0 -0.4
BAIF pmax pmax
comp=Z,1.0nm,0.4s
BAIF Baives 12.96 326 *e*P Pn 21 06 26.0 -0.4
comp=Z,1.2nm,0.4s
ELIZ Elizondo 13.17 290 P Pn 21 06 26.5 -2.5
MFF Saint Martin d 13.24 306 *e*P Pn 21 06 30.3 +0.5
comp=Z,35nm,1.0s
MFF Saint Martin d 13.24 306 *e*P Pn 21 06 30.3 +0.5
MFF pmax pmax
comp=Z,18nm,1.0s
MFF Saint Martin d 13.24 306 *e*P Pn 21 06 30.3 +0.5
comp=Z,18nm,1.0s
ETOR Torete 13.40 280 P Pn 21 06 32.7 +0.8
ETOR pmax pmax
comp=Z,6.0nm,0.3s
ETOR Torete 13.40 280 P Pn 21 06 32.7 +0.8
comp=Z,5.7nm,0.3s
ETOR Torete 13.40 280 P Pn 21 06 32.7 +0.8
comp=Z,5.7nm,0.3s
WTSB Winterswijk 13.55 337 *e*P Pn 21 06 34.8 +1.3
comp=Z,15nm,1.0s
EVIA Vianos 13.97 271 P Pn 21 06 40.2 +1.4
EVIA Vianos 13.97 271 P Pn 21 06 40.1 +1.3
LDF La Druitiere 14.19 313 *e*P Pn 21 06 39.4 -1.8
comp=Z,10.0nm,0.6s
LDF La Druitiere 14.19 313 *e*P Pn 21 06 39.4 -1.8
LDF pmax pmax
comp=Z,5.0nm,0.6s
LDF La Druitiere 14.19 313 *e*P Pn 21 06 39.4 -1.8
comp=Z,5.0nm,0.6s
FLN La Foliniere 14.48 313 *e*P Pn 21 06 42.2 -2.5
comp=Z,15nm,0.8s
FLN *e*MLR MLR
comp=Z,38nm,17.2s
FLN La Foliniere 14.48 313 *e*P Pn 21 06 42.2 -2.5
FLN pmax pmax
comp=Z,8.0nm,0.8s
FLN La Foliniere 14.48 313 *e*P Pn 21 06 42.2 -2.5
comp=Z,7.7nm,0.8s
GRR Gorron 14.50 312 *e*P Pn 21 06 42.8 -2.1
comp=Z,18nm,0.7s
GRR Gorron 14.50 312 *e*P Pn 21 06 42.8 -2.1
GRR pmax pmax
comp=Z,9.0nm,0.7s
GRR Gorron 14.50 312 *e*P Pn 21 06 42.8 -2.1
comp=Z,8.9nm,0.7s
AKASG Malin Array Be 14.55 37 P Pn 21 06 45.1 -0.4
comp=Z,1.9nm,0.3s,baz=230,slow=11,SNR=14
AKASG Malin Array Be 14.55 37 P Pn 21 06 45.1 -0.4
AKASG pmax pmax
comp=Z,2.0nm,0.3s
ELAN Lanestosa 14.55 290 P Pn 21 06 46.0 +0.3
comp=Z,7.4nm,0.7s
ELAN Lanestosa 14.55 290 P Pn 21 06 46.0 +0.3
comp=Z,7.4nm,0.7s
ESDC Sonseca Array 14.94 276 P Pn 21 06 49.5 -0.9
comp=Z,0.8nm,0.3s,baz=74,slow=11,SNR=21
GUD Guadarrama 15.01 279 P Pn 21 06 50.4 -0.7
GUD pmax pmax
comp=Z,8.0nm,0.5s
GUD Guadarrama 15.01 279 P Pn 21 06 50.4 -0.7
comp=Z,8.2nm,0.5s
GUD Guadarrama 15.01 279 P Pn 21 06 50.4 -0.7
comp=Z,8.2nm,0.5s
ERON Agron 15.36 266 P Pn 21 06 53.5 -1.8
ERON Agron 15.36 266 P Pn 21 06 53.5 -1.8
SGMF Saint Gilles 15.43 309 *e*P Pn 21 06 53.3 -2.7
comp=Z,14nm,0.9s
SGMF Saint Gilles 15.43 309 *e*P Pn 21 06 53.3 -2.7
SGMF pmax pmax
comp=Z,7.0nm,0.9s
SGMF Saint Gilles 15.43 309 *e*P Pn 21 06 53.3 -2.7
comp=Z,6.9nm,0.9s
QUIF Quistinic 15.65 307 *e*P Pn 21 06 55.4 -3.3
EARI Arriondas 15.85 289 P Pn 21 07 00.3 -0.8
comp=Z,5.7nm,0.7s
EARI Arriondas 15.85 289 P Pn 21 07 00.3 -0.8
comp=Z,5.7nm,0.7s
ROSF Rostrenen 15.90 309 *e*P Pn 21 06 57.6 -3.9
comp=Z,10nm,0.5s
ROSF Rostrenen 15.90 309 *e*P Pn 21 06 57.6 -3.9
ROSF pmax pmax
comp=Z,5.0nm,0.5s
ROSF Rostrenen 15.90 309 *e*P Pn 21 06 57.6 -3.9
comp=Z,5.3nm,0.5s
ECAL Calabor 16.91 284 P P 21 07 13.8 +2.7
comp=Z,7.4nm,0.6s
ECAL Calabor 16.91 284 P P 21 07 13.8 +2.7
comp=Z,7.4nm,0.6s
PBRG Braganca 16.92 284 *e*P P 21 07 11.3 +0.1
comp=Z,9.8nm,0.8s
MVO Moncorvo 17.15 282 *e*P P 21 07 14.3 +0.6
EMIN Mina Concepcio 17.37 270 P P 21 07 16.5 +0.4
comp=Z,12nm,0.9s
EMIN Mina Concepcio 17.37 270 P P 21 07 16.5 +0.4
comp=Z,12nm,0.9s
MMAI Mount Meron Ar 17.41 107 P P 21 07 18.4 +1.8
comp=Z,2.1nm,0.3s,baz=317,slow=8.4,SNR=31
PBAR Barrancos 17.56 272 *e*P P 21 07 18.9 +0.7
comp=Z,16nm,1.7s
MDT Midelt 17.60 253 P P 21 07 17.5 -1.1
comp=Z,0.1nm,0.3s,baz=90,slow=10,SNR=3.3
PVIS Viseu 17.84 280 *e*P P 21 07 21.8 +0.7
GOTU Gotland 18.00 5 P P 21 07 21.9 -0.7
PBEJ Beja 18.23 272 *e*P P 21 07 23.9 -1.5
comp=Z,18nm,1.4s
PVAQ Vaqueiros 18.26 270 *e*P P 21 07 25.0 -0.7
comp=Z,21nm,1.9s
PTOM Tomar 18.36 277 *e*P P 21 07 26.8 +0.1
comp=Z,27nm,2.3s
PBDV Barranco-do-Ve 18.47 269 *e*P P 21 07 29.9 +1.9
comp=Z,36nm,0.9s
EIL Elat 18.91 116 P P 21 07 34.1 +1.4
comp=Z,0.3nm,0.3s,baz=326,slow=9.2,SNR=5.8
ASF Jabal al Asfar 18.93 107 P P 21 07 34.4 +1.6
comp=Z,0.3nm,0.3s,baz=260,slow=6.1,SNR=4.1
EKA Eskdalemuir Ar 19.87 328 P P 21 07 40.4 -2.2
comp=Z,1.2nm,0.3s,baz=146,slow=11,SNR=25
EKA Eskdalemuir Ar 19.87 328 P P 21 07 40.4 -2.2
EKA pmax pmax
comp=Z,1.0nm,0.3s

HFS	**Hagfors**	**20.37**	**357**	P	**P**	**21 07 45.9**	**-1.9**
	comp=Z,11nm,0.5s,baz=168,slow=9.9,SNR=56							
HFS	**Hagfors**	**20.37**	**357**	P	**P**	**21 07 45.9**	**-1.9**
HFS				pmax	pmax			
	comp=Z,11nm,0.5s							
NB2	**NORSAR Subarra**	**21.41**	**354**	P	**P**	**21 07 56.0**	**-2.1**
	comp=Z,5.7nm,0.8s,mb4.0,baz=171,slow=11							
NB2	**NORSAR Subarra**	**21.41**	**354**	P	**P**	**21 07 56.0**	**-2.1**
	comp=Z,5.7nm,0.8s,mb4.0,baz=171,slow=11,SNR=1.9							
NOA	**NORSAR Array B**	**21.41**	**354**	P	**P**	**21 07 55.6**	**-2.5**
	comp=Z,3.3nm,0.5s,mb3.9,baz=170,slow=7.7,SNR=14							
NOA	**NORSAR Array B**	**21.41**	**354**	P	**P**	**21 07 55.6**	**-2.5**
NOA				pmax	pmax			
	comp=Z,3.0nm,0.5s							
GNI	**Garni**	**22.40**	**80**	P	**P**	**21 08 07.4**	**-0.1**
	comp=Z,3.0nm,0.7s,mb3.8,baz=122,slow=18,SNR=3.3							
GNI	**Garni**	**22.40**	**80**	P	**P**	**21 08 07.4**	**0.0**
GNI				pmax	pmax			
	comp=Z,3.0nm,0.7s							
KAF	**Kangasniemi**	**23.28**	**13**	*ep*	**P**	**21 08 13.4**	**-1.8**
	comp=Z,2.9nm,0.5s,mb3.9							
KAF	**Kangasniemi**	**23.28**	**13**	*eP*	**P**	**21 08 13.4**	**-1.8**
KAF				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb3.9							
JOF	**Joensuu**	**25.02**	**17**	*ep*	**P**	**21 08 29.4**	**-1.4**
TORD	**Torodi Ar. Bea**	**29.20**	**208**	P	**P**	**21 09 08.5**	**0.0**
	comp=Z,0.1nm,0.3s,mb2.7,baz=13,slow=9.1,SNR=5.5							
TORD	**Torodi Ar. Bea**	**29.20**	**208**	P	**P**	**21 09 08.5**	**0.0**
ARCES	**ARCESS Array B**	**30.26**	**7**	P	**P**	**21 09 15.8**	**-1.4**
	comp=Z,1.4nm,0.4s,mb3.8,baz=188,slow=9.7,SNR=29							
ARCES	**ARCESS Array B**	**30.26**	**7**	P	**P**	**21 09 15.8**	**-1.4**
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KEV	**Kevo**	**30.62**	**8**	*ep*	**P**	**21 09 18.4**	**-1.9**
KURK	**Kurchatov**	**44.49**	**54**	P	**P**	**21 11 15.1**	**-1.0**
	comp=Z,0.2nm,0.4s,mb2.7,baz=276,slow=9.6,SNR=3.6							
KMBO	**Kilima Mbogo**	**45.37**	**149**	P	**P**	**21 11 23.7**	**+0.3**
	comp=Z,1.2nm,0.3s,mb3.6,baz=70,slow=23,SNR=5.7							
KMBO	**Kilima Mbogo**	**45.37**	**149**	P	**P**	**21 11 23.7**	**+0.3**
KMBO				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ZALV	**Zalesovo Beam**	**47.55**	**49**	P	**P**	**21 11 39.3**	**-0.6**
	comp=Z,0.7nm,0.4s,mb3.3,baz=287,slow=7.8,SNR=3.9							
ZALV	**Zalesovo Beam**	**47.55**	**49**	P	**P**	**21 11 39.3**	**-0.6**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb3.5							
MKAR	**Makanchi Array**	**47.81**	**58**	P	**P**	**21 11 41.9**	**-0.1**
	comp=Z,1.1nm,0.4s,mb3.5,baz=284,slow=6.8,SNR=8.9							
MKAR	**Makanchi Array**	**47.81**	**58**	P	**P**	**21 11 41.9**	**0.0**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
MKAR	**Makanchi Array**	**47.81**	**58**	P	**P**	**21 11 41.8**	**-0.1**
SCHQ	**Schefferville**	**54.55**	**315**	P	**P**	**21 12 30.4**	**-1.2**
	comp=Z,5.9nm,0.4s,mb4.4,baz=73,slow=4.8,SNR=23							
SONM	**Songino Array**	**62.43**	**49**	P	**P**	**21 13 26.1**	**+0.1**
	comp=Z,0.1nm,0.3s,mb3.0,baz=164,slow=28,SNR=2.4							
YKA	**Yellowknife Ar**	**70.45**	**338**	P	**P**	**21 14 14.9**	**-1.3**
	comp=Z,0.9nm,0.7s,mb3.6,baz=81,slow=33,SNR=3.8							
YKA	**Yellowknife Ar**	**70.45**	**338**	P	**P**	**21 14 14.9**	**-1.3**
YKA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
ULM	**Lac du Bonnet**	**71.99**	**321**	P	**P**	**21 14 24.4**	**-1.3**
	comp=Z,6.5nm,0.6s,mb4.5,baz=42,slow=3.5,SNR=7.7							
PDAR	**Pinedale Array**	**83.91**	**323**	P	**P**	**21 15 31.4**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.7,baz=54,slow=7.5,SNR=5.1							
TXAR	**Lajitas Array**	**90.94**	**310**	P	**P**	**21 16 05.8**	**+0.9**
	comp=Z,0.7nm,0.8s,mb3.6,baz=73,slow=4.8,SNR=8.2							
TXAR	**Lajitas Array**	**90.94**	**310**	P	**P**	**21 16 05.9**	**+0.9**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							

*NEIC **22** 21:18:23.6, 3699N×2767E, h40km, MD3.4(ATH), After ATH.*
*ATH **22** 21:18:23.6, 3699N×2767E, h40km±24km, MD3.4/5*
*DDA **22** 21:18:24.7, 3688N×2751E, h5km±2km, Md3.0*
*ISCJB **22** 21:18:24.6±0.6, 3683N±003×2748E±004, h4km±5km, Error ellipse: s-maj=5.7km s-min=3.8km az=143.1*
*CSEM **22** 21:18:24.9±0.3, 3689N×2740E, h2km, MD3.0, Error ellipse: s-maj=7.7km s-min=4.7km az=28.0*
*ISK **22** 21:18:25.8, 3693N×2752E, h5km, MD3.1*
ISC 22 21:18:24.9±0.6, 3683N±003×2743E±004, h0km±6km, n28, σ1§15/39, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	**0.23**	**2**	*i* P	**Pg**	**21 18 29.4**	**+0.1**
BDRM				*i* S	**Sg**	**21 18 33.4**	**+1.1**
BODT	**Bodrum**	**0.25**	**337**	*e*PG	**Pg**	**21 18 30.2**	**+0.5**
BODT				*e*SG	**Sg**	**21 18 34.6**	**+1.7**
MLSB	**Milas**	**0.54**	**31**	*e*PG	**Pg**	**21 18 35.3**	**+0.2**
MLSB				*e*SG	**Sg**	**21 18 42.3**	**+0.1**
YER	**Yerkesik**	**0.74**	**66**	*e*PG	**Pg**	**21 18 38.7**	**-0.4**
YER				*e*SG	**Sg**	**21 18 49.5**	**+0.7**
ARG	**Arkhangelos**	**0.83**	**138**	*e*P	**Pg**	**21 18 40.1**	**-0.7**
ARG				*e*S	**Sg**	**21 18 52.9**	**+1.4**
GCAM	**G?zelcaml?**	**0.88**	**350**	*i* P	**Pg**	**21 18 41.6**	**-0.1**
GCAM				*i* S	**Sg**	**21 18 54.6**	**+1.4**
AYDN	**Tasoluk**	**0.90**	**23**	*i* P	**Pg**	**21 18 41.3**	**-0.9**
AYDN				*i* S	**Sg**	**21 18 52.9**	**-0.9**
TURN	**Turunc**	**0.94**	**87**	*i* P	Px	21 18 35.8	
TURN				*i* S	Sx	21 18 45.1	
SMG	**Samos**	**0.99**	**332**	*e*P	**Pg**	**21 18 43.5**	**-0.4**
KARP	**Karpathos**	**1.30**	**190**	*e*P	**Pg**	**21 18 49.7**	**-0.1**
APE	**Apeiranthos**	**1.54**	**279**	*e*P	**Pn**	**21 18 52.3**	**-1.3**
DNZL	**Cakiroluk**	**1.54**	**56**	*i* P	**Pg**	**21 18 53.2**	**-1.3**
DNZL				*i* S	**Sg**	**21 19 16.5**	**+2.0**
KDAG	**Bornova**	**1.57**	**355**	*i* P	**Pg**	**21 18 55.1**	**+0.1**
KDAG				*i* S	**Sg**	**21 19 19.9**	**+4.5**
BLCB	**Balcova**	**1.58**	**349**	*e*PN	**Pn**	**21 18 54.5**	**+0.4**
GOLH	**Golhisar**	**1.75**	**76**	*i* P	**Pg**	**21 18 56.8**	**-1.6**
GOLH				*i* S	**Sg**	**21 19 20.1**	**-1.0**
AKAS	**Kas**	**1.85**	**108**	*i* P	**Pg**	**21 18 59.6**	**-0.7**
AKAS				*i* S	**Sg**	**21 19 25.4**	**+1.2**
MANT	**Manisa**	**1.88**	**28**	*e*P	**Pg**	**21 19 00.2**	**-0.7**
KULA	**Kula-Manisa**	**1.94**	**30**	*e*PN	**Pn**	**21 18 59.2**	**+0.2**
ELL	**Elmali**	**1.99**	**92**	*e*PN	**Pn**	**21 19 00.5**	**+0.8**
AKHS	**Akhisar**	**2.06**	**8**	*i* P	**Pb**	**21 19 03.5**	**+0.3**
AKHS				*i* S	**Sn**	**21 19 24.4**	**-2.8**
AKS	**Akhisar**	**2.06**	**8**	*e*PN	**Pg**	**21 19 02.1**	**-2.3**
KHL	**Karahalli**	**2.23**	**48**	*e*PN	**Pg**	**21 19 04.4**	**-3.2**
DEMI	**Demirci**	**2.43**	**24**	*e*P	**Pg**	**21 19 08.5**	**-2.9**
PRK	**Paraskevi**	**2.58**	**340**	*e*P	**Pn**	**21 19 03.1**	**-4.7**
TKTP	**Tekketepe**	**2.59**	**61**	*i* P	**Pg**	**21 19 14.9**	**+0.3**
TKTP				*i* S	Sx	21 19 52.5	
BCK	**Bucak**	**2.60**	**75**	*e*PN	**Pn**	**21 19 09.6**	**+1.5**
BALB	**Balikesir**	**2.83**	**7**	*e*PN	**Pn**	**21 19 12.7**	**+1.4**
DST	**Dursunbey**	**2.92**	**18**	*e*PN	**Pn**	**21 19 13.8**	**+1.2**

*ISCJB **22** 21:28:53.7±0.7, 3682N±003×2745E±003, h2km±6km, Error ellipse: s-maj=5.8km s-min=3.6km az=40.6*
*ATH **22** 21:28:53.6, 3680N×2737E, h5km, MD3.4/7*
*NEIC **22** 21:28:53.5, 3680N×2737E, h5km, MD3.4(ATH), After ATH.*
*DDA **22** 21:28:54.7, 3686N×2754E, h5km±3km, Md2.6*
*ISK **22** 21:28:54.6, 3686N×2750E, h8km, MD2.9*
*CSEM **22** 21:28:54.0±0.1, 3687N×2747E, h3km, MD2.6, Error ellipse: s-maj=2.7km s-min=2.1km az=75.0*
ISC 22 21:28:54.4±0.7, 3682N±003×2744E±004, h4km±6km, n27, σ0§99/42, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	**0.25**	**1**	*i* P	**Pg**	**21 28 59.0**	**-0.3**
BDRM				*i* S	**Sg**	**21 29 03.0**	**+0.5**
BODT	**Bodrum**	**0.27**	**337**	*e*PG	**Pg**	**21 28 59.8**	**+0.2**
BODT				*e*SG	**Sg**	**21 29 04.4**	**+1.3**
MLSB	**Milas**	**0.55**	**29**	*e*PG	**Pg**	**21 29 04.9**	**-0.1**
MLSB				*e*SG	**Sg**	**21 29 11.4**	**-0.7**
YER	**Yerkesik**	**0.74**	**65**	*e*PG	**Pg**	**21 29 07.9**	**-0.8**
YER				*e*SG	**Sg**	**21 29 18.6**	**+0.2**
ARG	**Arkhangelos**	**0.82**	**137**	*e*PG	**Pg**	**21 29 09.6**	**-0.5**
ARG				*e*SB	**Sb**	**21 29 22.0**	**-0.5**
ARG	**Arkhangelos**	**0.82**	**137**	*e*Pg	**Pg**	**21 29 09.3**	**-0.8**
ARG				*e*Sb	**Sb**	**21 29 22.0**	**-0.5**
GCAM	**G?zelcaml?**	**0.90**	**349**	*i* P	**Pg**	**21 29 11.8**	**+0.2**
GCAM				*i* S	**Sg**	**21 29 25.0**	**+1.8**
AYDN	**Tasoluk**	**0.91**	**22**	*i* P	**Pg**	**21 29 10.8**	**-1.1**
AYDN				*i* S	**Sg**	**21 29 22.9**	**-0.9**
TURN	**Turunc**	**0.93**	**86**	*i* P	**Pg**	**21 29 05.3**	**-7.1**
TURN				*i* S	**Sg**	**21 29 14.7**	**-10**
SMG	**Samos**	**1.01**	**332**	*e*PN	**Pg**	**21 29 13.2**	**-0.6**
SMG				*e*SB	**Sg**	**21 29 27.2**	**+0.2**
KARP	**Karpathos**	**1.29**	**190**	*e*PB	**Pn**	**21 29 18.0**	**-1.2**
DNZL	**Cakiroluk**	**1.55**	**55**	*i* P	**Pn**	**21 29 22.6**	**-0.2**
DNZL				*i* S	**Sg**	**21 29 46.0**	**+1.8**
APE	**Apeiranthos**	**1.55**	**280**	*e*PB	**Pn**	**21 29 21.9**	**-0.9**
KDAG	**Bornova**	**1.59**	**355**	*i* P	**Pg**	**21 29 24.5**	**-0.4**
KDAG				*i* S	**Sg**	**21 29 46.5**	**+1.0**
BLCB	**Balcova**	**1.60**	**349**	*e*PN	**Pn**	**21 29 22.4**	**-1.0**
GOLH	**Golhisar**	**1.75**	**76**	*i* P	**Pn**	**21 29 26.0**	**+0.5**
GOLH				*i* S	**Sg**	**21 29 50.0**	**-0.6**
AKAS	**Kas**	**1.84**	**108**	*i* P	**Pn**	**21 29 28.2**	**+1.4**
AKAS				*i* S	**Sg**	**21 29 55.7**	**+2.2**
KSL	**Kastellorizon**	**1.85**	**110**	*e*PN	**Pg**	**21 29 29.5**	**-0.4**
KULA	**Kula-Manisa**	**1.95**	**29**	*e*PN	**Pn**	**21 29 28.1**	**-0.2**
AKHS	**Akhisar**	**2.08**	**8**	*i* P	**Pg**	**21 29 33.4**	**-0.9**
AKHS				*i* S	**Sg**	**21 29 59.6**	**-1.6**
AKS	**Akhisar**	**2.08**	**8**	*e*PN	**Pn**	**21 29 29.9**	**-0.2**
NPS	**Neapolis**	**2.15**	**224**	*e*PN	**Pn**	**21 29 32.0**	**+1.0**
PRK	**Paraskevi**	**2.59**	**339**	*e*PN	**Pn**	**21 29 38.7**	**+1.6**
PRK	**Paraskevi**	**2.59**	**339**	*e*Pn	**Pn**	**21 29 35.7**	**-1.4**
BCK	**Bucak**	**2.60**	**75**	*e*PN	**Pn**	**21 29 38.2**	**+1.0**
LIA	**Limnos Island**	**3.55**	**331**	*e*Pn	**Pn**	**21 29 49.4**	**-0.9**
CEL	**Celeste** 79nm,1.0s	**9.29**	**282**	*e*Pn	**Pn**	**21 31 12.1**	**+3.0**

*ISCJB **22** 21:31:01.8±0.8, 3683N±003×2749E±004, h3km±7km, Error ellipse: s-maj=6.6km s-min=4.3km az=43.1*
*CSEM **22** 21:31:01.9±0.2, 3688N×2748E, h2km, MD2.7, Error ellipse: s-maj=5.1km s-min=3.7km az=55.0*
*ATH **22** 21:31:01.7, 3684N×2749E, h10km, MD3.0/3*
*ISK **22** 21:31:02.7, 3690N×2749E, h5km, MD2.9*
*DDA **22** 21:31:02.8, 3688N×2756E, h7km±5km, Md2.7*
ISC 22 21:31:02.3±0.8, 3683N±004×2746E±004, h6km±6km, n18, σ0§92/28, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	**0.24**	**357**	*i* P	**Pg**	**21 31 06.5**	**-0.5**
BDRM				*i* S	**Sg**	**21 31 10.6**	**+0.4**
BODT	**Bodrum**	**0.26**	**333**	*e*PG	**Pg**	**21 31 07.2**	**-0.3**
BODT				*e*SG	**Sg**	**21 31 11.5**	**+0.5**
MLSB	**Milas**	**0.53**	**28**	*e*PG	**Pg**	**21 31 12.6**	**+0.1**
MLSB				*e*SG	**Sg**	**21 31 19.1**	**-0.4**
YER	**Yerkesik**	**0.73**	**65**	*e*PG	**Pg**	**21 31 15.9**	**-0.4**
YER				*e*SG	**Sg**	**21 31 25.6**	**-0.1**
ARG	**Arkhangelos**	**0.81**	**139**	*e*PB	**Pg**	**21 31 17.1**	**-0.8**
GCAM	**G?zelcaml?**	**0.89**	**348**	*i* P	**Pg**	**21 31 19.6**	**+0.2**
GCAM				*i* S	**Sg**	**21 31 32.2**	**+1.3**
GCAM	**G?zelcaml?**	**0.89**	**348**	*i* P	**Pg**	**21 31 19.6**	**+0.2**
GCAM				*i* S	**Sg**	**21 31 32.2**	**+1.2**
AYDN	**Tasoluk**	**0.90**	**22**	*i* P	**Pg**	**21 31 18.2**	**-1.3**
AYDN				*i* S	**Sg**	**21 31 31.0**	**-0.2**
TURN	**Turunc**	**0.92**	**87**	*i* P	Px	21 31 12.8	
TURN				*i* S	Sx	21 31 22.3	
SMG	**Samos**	**1.01**	**331**	*e*PB	**Pn**	**21 31 20.9**	**-2.1**
KARP	**Karpathos**	**1.30**	**191**	*e*PB	**Pn**	**21 31 26.5**	**-0.5**
DNZL	**Cakiroluk**	**1.53**	**55**	*i* P	**Pg**	**21 31 32.2**	**+0.5**
DNZL				*i* S	**Sn**	**21 31 49.0**	**-1.3**
BLCB	**Balcova**	**1.59**	**348**	*e*PN	**Pn**	**21 31 31.0**	**+0.1**
GOLH	**Golhisar**	**1.73**	**76**	*i* P	**Pg**	**21 31 34.7**	**-0.8**
GOLH				*i* S	**Sg**	**21 31 57.1**	**-0.8**
AKAS	**Kas**	**1.83**	**108**	*i* P	**Pn**	**21 31 35.6**	**+1.4**
AKAS				*i* S	**Sg**	**21 32 02.5**	**+1.5**
KULA	**Kula-Manisa**	**1.93**	**29**	*e*PN	**Pn**	**21 31 36.9**	**+1.2**
ELL	**Elmali**	**1.97**	**92**	*e*PN	**Pn**	**21 31 38.1**	**+1.9**
AKHS	**Akhisar**	**2.07**	**8**	*i* P	**Pg**	**21 31 41.6**	**-0.3**
AKHS				*i* S	**Sg**	**21 32 09.4**	**+0.7**

*BJI **22** 22:00:45.6, 4230N×814E, h15km, ML3.1*
*NNC **22** 22:00:47.3±2.2, 4252N×8139E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=23.2km s-min=12.1km az=143.0*
*ISCJB **22** 22:00:49.2±1.3, 4267N±010×8127E±007, h10km, Error ellipse: s-maj=13.9km s-min=7.8km az=2.0*
*NEIC **22** 22:00:57.8±1.7, 4306N×8248E, h10km, Error ellipse: s-maj=23.1km s-min=14.8km az=161.0*
*IDC **22** 22:00:58.1±3.5, 4322N×8277E, h0km, mb1 3.2/5, mb1mx3.1/26, mbtmp3.2/5, ML3.0/4, Error ellipse: s-maj=42.8km s-min=28.0km az=47.0*
ISC 22 22:00:51.1±1.2, 4263N±010×8131E±007, h10km, n14, σ1§33/20, 7C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2** 22nm,1.0s	**4.21**	**276**	⇑P	n	**22 01 53.5**	**-1.8**
TKM2				⇑S	n	**22 02 46.8**	**+2.2**
	45nm,1.0s						
MK31	**Makanchi Array**	**4.23**	**9**	⇑P	n	**22 01 55.2**	**-0.3**
	2.5nm,0.5s,baz=187,slow=14,SNR=79						
MK31				⇑Lg		22 03 03.4	
	34nm,0.7s,baz=188,slow=25,SNR=7.0						
MKAR	**Makanchi Array**	**4.23**	**9**	Pn	**Pn**	**22 01 55.8**	**+0.2**
	1.1nm,0.3s,baz=182,slow=13,SNR=24						
MKAR				Sn	**Sn**	**22 02 39.7**	**-5.1**
	2.2nm,0.3s,baz=176,slow=21,SNR=5.5						
MKAR				⇑Lg		22 03 03.3	
	4.1nm,0.3s,baz=185,slow=26,SNR=6.8						
MKAR	**Makanchi Array**	**4.23**	**9**	Pn	**Pn**	**22 01 55.8**	**+0.2**
MKAR				Sn	**Sn**	**22 02 39.7**	**-5.2**
WMQ	**Urumqi**	**4.82**	**73**	*e*P	**Pn**	**22 02 04.3**	**+0.6**
WMQ				S	**Sn**	**22 03 00.5**	**+1.0**
WMQ				Smax			
	comp=N,51nm,1.2s						
WMQ				Smax			
	comp=E,53nm,1.2s						
AML	**Almayashu**	**5.66**	**268**	*e*Pn	**Pg**	**22 02 34.6**	**-4.9**
KURBB	**Kurchatov Arra**	**8.22**	**348**	⇓Pn	**Pn**	**22 02 49.4**	**-1.0**
	comp=E,0.5nm,1.0s,baz=170,slow=14						
KURBB				⇑Lg		22 05 11.6	
	comp=E,4.2nm,0.8s,baz=172,slow=28						
KURK	**Kurchatov**	**8.30**	**348**	⇑Pn	**Pn**	**22 02 50.3**	**-1.1**
	comp=E,5.0nm,1.3s						
KURK				⇑Lg		22 05 15.3	
	comp=E,17nm,1.0s						
KURK	**Kurchatov**	**8.30**	**348**	Pn	**Pn**	**22 02 57.0**	**+5.6**
	comp=E,0.1nm,0.3s,baz=169,slow=15,SNR=6.3						
KURK				Sn	**Sn**	**22 04 26.5**	**+1.4**
	comp=E,0.1nm,0.3s,baz=154,slow=17,SNR=3.5						
KURK				Lg		22 05 10.2	
	comp=E,0.2nm,0.3s,baz=158,slow=34,SNR=8.7						
KURK	**Kurchatov**	**8.30**	**348**	Pn	**Pn**	**22 02 57.0**	**+5.6**
KURK				Sn	**Sn**	**22 04 26.5**	**+1.4**
ZALV	**Zalesovo Beam**	**11.57**	**10**	Pn	**Pn**	**22 03 33.9**	**-2.2**
	comp=E,0.1nm,0.3s,baz=191,slow=13,SNR=3.5						
ZALV	**Zalesovo Beam**	**11.57**	**10**	Pn	**Pn**	**22 03 33.9**	**-2.2**
BVAR	**Borovoye Array**	**12.71**	**329**	Pn	**Pn**	**22 03 59.0**	**+7.2**
	comp=E,0.1nm,0.3s,baz=144,slow=11,SNR=2.7						
SONM	**Songino Array**	**18.39**	**65**	P	**Pn**	**22 05 01.0**	**-4.9**
	comp=E,0.1nm,0.3s,baz=256,slow=10,SNR=3.1						

*ISCJB **22** 22:04:45.3±3.4, 1351S±006×771W±0.1, h28km±24km, mb4.0/7, MS3.5/5, Error ellipse: s-maj=21.1km s-min=8.3km az=163.5*
*MOS **22** 22:04:47.0±1.3, 1351S×7699W, h33km, mb4.8/1, Error ellipse: s-maj=48.4km s-min=19.8km az=37.7*
*NEIC **22** 22:04:48.5±0.5, 1339S×7702W, h35km, mb4.5/2, Error ellipse: s-maj=16.7km s-min=8.2km az=54.0*
*IDC **22** 22:04:49.0±3.1, 1341S×7696W, h38km±25km, mb3.7/5, mb1 3.9/10, mb1mx3.8/20, mbtmp3.7/10, ML3.5/5, MS3.5/6, Ms1 3.5/6, ms1mx3.2/34, Error ellipse: s-maj=40.7km s-min=14.8km az=61.0*
ISC 22 22:04:48.6±1.5, 1345S±008×771W±01, h39km±14km, n30, σ0§98/21, mb4.0/7, MS3.5/5, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana** 54nm,0.3s,baz=186,slow=13,SNR=94	**1.47**	**8**	Pn	**Pn**	**22 05 10.7**	**-2.0**
NNA				Sn	**Sn**	**22 05 30.7**	**+0.1**
	275nm,0.3s,baz=219,slow=14,SNR=20						
ATAH	**Atahualpa** 3.5nm,0.3s,baz=163,slow=7.9,SNR=9.8	**6.54**	**348**	Pn	**Pn**	**22 06 22.2**	**-0.1**
LPAZ	**La Paz** 0.1nm,0.3s,baz=284,slow=12,SNR=1.9	**9.08**	**109**	Pn	**Pn**	**22 06 58.4**	**+1.2**
LPAZ				LR	LR	22 11 05.1	
	comp=Z,230nm,21.3s,baz=77,slow=42						
LPAZ	**La Paz**	**9.08**	**109**	Pn	**Pn**	**22 06 58.4**	**+1.2**
LVC	**Limon Verde** 0.5nm,0.3s,baz=314,slow=11,SNR=3.8	**11.96**	**141**	Pn	**Pn**	**22 07 38.6**	**+2.0**
LVC	**Limon Verde**	**11.96**	**141**	Pn	**Pn**	**22 07 38.6**	**+2.0**
SIV	**San Ignacio** 0.1nm,0.3s,baz=269,slow=12,SNR=4.0	**15.67**	**101**	Pn	**Pn**	**22 08 27.0**	**+0.3**
CFAA	**Coronel Fontan** 0.0nm,0.3s,baz=316,slow=12,SNR=4.8	**19.80**	**157**	P		**22 09 16.4**	**-1.1**
CPUP	**Villa Florida** 0.3nm,0.3s,mb3.2,baz=316,slow=3.0,SNR=2.8	**22.51**	**128**	P	**P**	**22 09 43.0**	**-2.0**
CPUP				LR	LR	22 19 49.8	
	comp=Z,92nm,18.6s,MS3.2,baz=318,slow=40						
JTS	**JuntasAbangare**	**24.85**	**341**	LR	LR	22 18 32.8	
	comp=Z,74nm,20.5s,MS3.2,baz=242,slow=33						
BDFB	**Brasilia**	**28.19**	**98**	LR	LR	22 22 21.7	
	comp=Z,92nm,21.1s,MS3.3,baz=288,slow=38						
TXAR	**Lajitas Array** 0.7nm,0.6s,mb3.9,baz=151,slow=9.4,SNR=12	**49.69**	**329**	P	**P**	**22 13 38.1**	**+1.2**
HWUT	**Hardware Ranch** 3.2nm,0.8s,mb4.5	**63.36**	**332**	*e*P	**P**	**22 15 14.2**	**+0.2**
PDAR	**Pinedale Array** 0.9nm,0.6s,mb4.0,baz=108,slow=5.8,SNR=3.9	**63.39**	**334**	P	**P**	**22 15 15.1**	**+1.0**
VNA1	**Neumayer--Stat**	**70.42**	**161**	*e*	**P**	**22 15 58.2**	**-0.2**
VNA1				*e*		22 16 00.9	
VNA2	**Neumayer--Watz** baz=298,slow=6.3	**70.77**	**161**	*e*	**P**	**22 16 00.1**	**-0.5**
VNA2				*e*		22 16 03.6	
SNAA	**Sanae**	**72.37**	**161**	*e*	**P**	**22 16 09.5**	**-0.7**
SNAA				*e*		22 16 12.7	
SNAA	**Sanae**	**72.37**	**161**	*e*P	**P**	**22 16 09.8**	**-0.4**
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SNAA	**Sanae**	**72.37**	**161**	*e*P	**P**	**22 16 09.8**	**-0.4**
	comp=Z,8.6nm,1.4s,mb4.5						
DBIC	**Dimbokro**	**74.41**	**79**	LR	LR	22 47 46.2	
	comp=Z,46nm,19.8s,MS3.8,baz=55,slow=35						
YKA	**Yellowknife Ar**	**81.17**	**343**	P	**P**	**22 17 00.0**	**+0.2**
	comp=Z,0.9nm,0.6s,mb3.9,baz=146,slow=6.8,SNR=3.0						
TOA0	**Torodi Ar. Sit**	**82.38**	**75**	*e*P	**P**	**22 17 07.3**	**0.0**
TORD	**Torodi Ar. Bea**	**82.38**	**75**	P	**P**	**22 17 07.4**	**+0.1**
	comp=Z,3.8nm,0.9s,mb4.3,baz=260,slow=4.9,SNR=16						
BOSA	**Boshof**	**94.15**	**121**	LR	LR	22 55 48.4	
	comp=Z,51nm,18.8s,MS4.0,baz=335,slow=32						
ASAR	**Alice Springs**	**132.28**	**220**	PKP	PKPdf	22 23 59.4	+0.1
	comp=Z,0.3nm,0.8s,baz=130,slow=1.7,SNR=3.2						
WRA	**Warramunga Arr**	**134.66**	**224**	PKP	PKPdf	22 24 04.0	+0.1
	comp=Z,0.7nm,0.7s,baz=136,slow=1.8,SNR=9.7						
MKAR	**Makanchi Array**	**142.51**	**23**	PKP	PKPdf	22 24 14.8	-2.6
	comp=Z,0.2nm,0.7s,baz=341,slow=3.1,SNR=2.3						
ULN	**Ulaanbaatar**	**145.52**	**355**	*e*PKP2	PKPab	22 24 23.8	+0.8
SONM	**Songino Array**	**145.60**	**356**	PKPbc	PKPbc	22 24 24.0	+1.0
	comp=Z,4.2nm,1.0s,baz=327,slow=2.0,SNR=15						
KSRS	**Korea Array**	**147.33**	**321**	PKPbc	PKPbc	22 24 27.0	-1.4
	comp=Z,1.0nm,0.7s,baz=67,slow=4.7,SNR=3.1						

*CSEM **22** 22:09:49.4±0.1, 3627N×3102E, h60km, Mw2.8, Error ellipse: s-maj=2.0km s-min=1.1km az=64.0*
*DDA **22** 22:09:50.9, 3635N×3099E, h42km±5km, Md3.2*
*ISCJB **22** 22:09:50.2±0.4, 3628N±003×3102E±003, h87km±8km, Error ellipse: s-maj=5.0km s-min=3.4km az=36.2*
*ISK **22** 22:09:51.5, 3629N×3108E, h35km, MD3.5*
*NIC **22** 22:09:53.2±0.3, 3643N×3145E, h33km, ML3.5, MW2.8*
*HLW **22** 22:09:53.6, 3590N×3099E, h8km, Mb3.7*
ISC 22 22:09:51.8±0.4, 3629N±003×3104E±003, h63km±11km, n46, σ0§99/66, 1C-2D, Turkey

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

LAO				*e*Sn		**Sn**	**22 32 13.1**	**+0.5**
RLMT	**Red Lodge**	**3.33**	**297**	*e*Pn		**Pn**	**22 31 37.2**	**-1.1**
PDAR	**Pinedale Array**	**3.41**	**256**	Pn		**Pn**	**22 31 38.4**	**-1.1**
	4.8nm,0.3s,baz=74,slow=17,SNR=26							
PDAR				Lg			22 32 26.4	
	10nm,0.3s,baz=76,slow=34,SNR=7.0							
OGNE	**Ogallala**	**3.56**	**140**	*e*Pn		**Pn**	**22 31 40.1**	**-1.4**
OGNE				*e*Pg		**Pg**	**22 31 54.7**	**+1.5**
GCMT	**Greycliff**	**3.88**	**304**	*e*Pn		**Pn**	**22 31 45.0**	**-0.9**
ISCO	**Idaho Springs**	**3.93**	**186**	*e*Pn		**Pn**	**22 31 48.1**	**+1.6**
ISCO				*e*Sg		**Sg**	**22 32 50.9**	**-0.3**
LOHW	**Long Hollow**	**4.02**	**271**	*e*Pn		**Pn**	**22 31 48.0**	**+0.3**
MOOW	**Moose Ponds**	**4.12**	**273**	*e*Pn		**Pn**	**22 31 49.1**	**0.0**
MOOW				*e*Sn		**Sn**	**22 32 39.3**	**+1.4**
SNOW	**Snow King Moun**	**4.14**	**269**	*e*Pn		**Pn**	**22 31 49.4**	**0.0**
YNR	**Norris Junctio**	**4.16**	**286**	*e*Pn		**Pn**	**22 31 50.0**	**+0.3**
YNR				*e*Pg		**Pg**	**22 31 59.4**	**-5.3**
REDW	**Red Top Meadow**	**4.22**	**267**	*e*Pn		**Pn**	**22 31 50.1**	**-0.4**
IMW	**Indian Meadow**	**4.26**	**275**	*e*Pn		**Pn**	**22 31 50.5**	**-0.5**
TPAW	**Teton Pass**	**4.28**	**269**	*e*Pn		**Pn**	**22 31 50.6**	**-0.8**
TPAW				*e*Sn		**Sn**	**22 32 44.3**	**+2.4**
RRI2	**Red Ridge**	**4.56**	**268**	*e*Pn		**Pn**	**22 31 54.9**	**-0.4**
DGMT	**Dagmar**	**4.80**	**7**	*e*Pn		**Pn**	**22 31 59.5**	**+1.0**
BOZ	**Bozeman (W)**	**5.07**	**295**	*e*Pn		**Pn**	**22 32 00.1**	**-2.0**
HWUT	**Hardware Ranch**	**5.23**	**249**	*e*Pn		**Pn**	**22 32 03.7**	**-0.8**
	7.0nm,0.5s							
EGMT	**Eagleton**	**5.42**	**324**	*e*Pn		**Pn**	**22 32 05.8**	**-1.2**
	18nm,0.5s							
EGMT				*e*Sg		**Sg**	**22 33 39.6**	**+0.7**
HRY	**Holter Researc**	**5.64**	**304**	*e*Pn		**Pn**	**22 32 11.5**	**+1.4**
DAU	**Daniels Canyon**	**5.66**	**237**	*e*Pn		**Pn**	**22 32 10.9**	**+0.6**
DAU				*e*Sg		**Sg**	**22 33 47.0**	**+0.2**
JLU	**Jordanelle**	**5.67**	**239**	*e*Pn		**Pn**	**22 32 08.7**	**-1.7**
MCMT	**McKenzie Canyo**	**5.70**	**284**	*e*Pn		**Pn**	**22 32 12.4**	**+1.5**
MCMT				*e*Sg		**Sg**	**22 33 51.3**	**+3.2**
MPU	**Maple Canyon**	**6.13**	**235**	*e*Pn		**Pn**	**22 32 15.9**	**-0.9**
SRU	**San Rafael**	**6.16**	**224**	*e*Pn		**Pn**	**22 32 16.9**	**-0.3**
	7.7nm,0.4s							
CHMT	**Chamberlain Mo**	**6.60**	**302**	*e*Pn		**Pn**	**22 32 22.0**	**-1.2**
DUG	**Dugway**	**6.76**	**241**	*e*Pn		**Pn**	**22 32 24.9**	**-0.4**
	2.0nm,0.4s							
MSO	**Missoula**	**7.00**	**300**	*e*Pn		**Pn**	**22 32 27.5**	**-1.1**
MSU	**Marysvale**	**7.47**	**228**	*e*Pn		**Pn**	**22 32 35.4**	**+0.3**
ELK	**Elko**	**8.11**	**252**	Pn		**Pn**	**22 32 44.7**	**+0.8**
	0.5nm,0.3s,baz=70,slow=13,SNR=8.8							
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn		**Pn**	**22 32 56.9**	**-0.1**
	1.0nm,0.3s,baz=228,slow=13,SNR=8.0							
ULM				Pg		**Pg**	**22 33 30.7**	**-7.8**
	0.8nm,0.3s,baz=226,slow=17,SNR=3.4							
ARCES	**ARCESS Array B**	**61.40**	**18**	P		**P**	**22 41 02.0**	**-0.3**
	1.3nm,0.9s,baz=335,slow=8.2,SNR=4.1							

FUNV 22 22:32:19.3, 1002N×6976W, h5km, MW3.6, 2C-2D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CURV	**Curarigua**	**0.20**	**268**	⇑*i*P	Pg	22 32 22.4	-0.9
TEPV	**Terepaima**	**0.56**	**96**	⇓*i*P	Pg	22 32 29.4	-0.7
SIQV	**Siquisique**	**0.63**	**355**	⇓*i*P	Pg	22 32 30.9	-0.4
SIQV				*e*S	Sg	22 32 41.3	+1.8
QARV	**Quebrada Arrib**	**0.78**	**284**	*e*P	Pg	22 32 33.7	-0.6
QARV				*e*S	Sg	22 32 45.1	+0.7
DABV	**Dabajuro**	**1.25**	**316**	*e*P	Pg	22 32 42.4	-0.9
JACV	**Jacura**	**1.40**	**41**	*e*P	Pn	22 32 45.0	-0.5
TURV	**Turiamo**	**1.93**	**77**	*e*P	Pn	22 32 51.4	-1.5
TURV				*e*S	Sn	22 33 17.0	-0.6
VIGV	**El Vigia**	**1.97**	**234**	*e*P	Pn	22 32 53.7	+0.3
VIGV				*e*S	Sn	22 33 17.9	-0.6
BAUV	**El Baul**	**2.00**	**122**	*e*P	Pn	22 32 53.4	-0.4
SOCV	**Socops**	**2.04**	**212**	*e*P	Pn	22 32 53.8	-0.5
SOCV				*e*S	Sn	22 33 19.5	-0.7
VIRV	**Villa del Rosa**	**2.65**	**281**	⇑*i*P	Pn	22 33 01.5	-1.2
ELOV	**Elorza**	**3.01**	**175**	*e*P	Pn	22 33 07.2	-0.6
CAPV	**Capacho**	**3.31**	**230**	*e*P	Pn	22 33 11.1	-0.7
CAPV				*e*S	Sn	22 33 49.1	-2.5
CUPV	**Cœpira**	**3.91**	**89**	*e*P	Pn	22 33 19.4	-0.6
CAOV	**Caicara del Or**	**4.33**	**128**	*e*P	Pn	22 33 24.5	-1.3

*ISCJB **22** 22:33:59.1±0.8, 1757N±007×7036W±004, h33km, Error ellipse: s-maj=9.7km s-min=5.0km az=12.6*
*RSPR **22** 22:34:02.6, 1760N×7030W, h25km±38km, MD4.0/16, MD4.0/16*
*NEIC **22** 22:34:02.6, 1760N×7030W, h25km, MD4.0(RSPR), After RSPR.*

ISC 22 22:34:00.1±0.7, 1767N±007×7043W±003, h35km, n26, σ1§01/45, 17C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STDO	**Santo Domingo**	**0.91**	**32**	⇑*e*P	**Pn**	**22 34 17.1**	**+0.7**
STDO				*e*S	**Sn**	**22 34 29.5**	**+1.2**
DR08	**Loma La Naviza**	**1.34**	**17**	⇓*e*P	**Pn**	**22 34 23.6**	**+1.3**
DR12	**Loma Pena Alta**	**1.49**	**42**	*e*S	**Sn**	**22 34 43.7**	**+1.0**
IMO	**Isla Mona**	**2.44**	**79**	⇑*e*P	**Pn**	**22 34 38.7**	**+1.3**
IMO				*e*S	**Sn**	**22 35 06.0**	**-0.1**
CRPR	**Cabo Rojo, PR**	**3.18**	**83**	⇑*e*P	**Pn**	**22 34 47.5**	**-0.1**
CRPR				*e*S	**Sn**	**22 35 23.7**	**-0.7**
LSP	**Las Mesas**	**3.22**	**81**	⇑*e*P	**Pn**	**22 34 49.0**	**+0.8**
LSP				*e*S	**Sn**	**22 35 25.1**	**-0.2**
AGPR	**Aguadilla, PR**	**3.25**	**75**	⇑*e*P	**Pn**	**22 34 50.1**	**+1.4**
AGPR				*e*S	**Sn**	**22 35 26.4**	**+0.2**
GBPR	**Guanica, Bosqu**	**3.40**	**84**	⇑*e*P	**Pn**	**22 34 51.4**	**+0.8**
GBPR	**Guanica, Bosqu**	**3.40**	**84**	*e*S	**Sn**	**22 35 27.9**	**-1.8**
LRS	**Lares**	**3.47**	**79**	⇑*e*P	**Pn**	**22 34 51.5**	**-0.1**
LRS				*e*S	**Sn**	**22 35 29.8**	**-1.6**
AOPR	**Arecibo Observ**	**3.56**	**79**	⇑*e*P	**Pn**	**22 34 53.5**	**+0.6**
AOPR				*e*S	**Sn**	**22 35 33.4**	**-0.4**
OBIP	**Obispado Ponce**	**3.66**	**84**	⇓*i*P	**Pn**	**22 34 54.4**	**+0.1**
OBIP				*e*S	**Sn**	**22 35 35.2**	**-0.9**
CELP	**Cerrillos**	**3.69**	**83**	⇑*e*P	**Pn**	**22 34 54.9**	**+0.2**
CELP				*e*S	**Sn**	**22 35 36.4**	**-0.5**
ICM	**Isla Caja Muer**	**3.73**	**86**	⇑*e*P	**Pn**	**22 34 55.9**	**+0.7**
ICM				*e*S	**Sn**	**22 35 37.0**	**-1.0**
SJG	**San Juan**	**4.10**	**83**	⇑*e*P	**Pn**	**22 35 01.8**	**+1.6**
SJG				*e*S	**Sn**	**22 35 45.7**	**-1.3**
SJG	**San Juan**	**4.10**	**83**	⇑*e*P	**Pn**	**22 35 01.6**	**+1.4**
SJG	**San Juan**	**4.10**	**83**	⇑*e*P	**Pn**	**22 35 01.6**	**+1.4**
SJG				*e*S	**Sn**	**22 35 45.8**	**-1.2**
CPD	**Cerro la Pandu**	**4.32**	**84**	⇑*e*P	**Pn**	**22 35 04.7**	**+1.4**
CPD				*e*S	**Sn**	**22 35 50.9**	**-1.5**
MASC	**Masc**	**4.38**	**305**	*e*P	**Pn**	**22 35 03.9**	**-0.1**
	baz=119						
MASC				*e*S	**Sn**	**22 35 50.3**	**-3.5**
	comp=N,81nm,0.4s						
MASC				*e*			
	comp=E,78nm,0.5s						
HUMP	**Col San Antoni**	**4.39**	**83**	⇑*e*P	**Pn**	**22 35 05.4**	**+1.2**
HUMP				*e*S	**Sn**	**22 35 52.9**	**-1.2**
CBYP	**Canovanas**	**4.39**	**81**	⇑*e*P	**Pn**	**22 35 05.4**	**+1.1**
CBYP				*e*S	**Sn**	**22 35 54.0**	**-0.3**
MTP	**Monte Pirata**	**4.66**	**84**	⇑*e*P	**Pn**	**22 35 08.5**	**+0.5**
MTP				*e*S	**Sn**	**22 35 59.7**	**-1.2**
MOAC	**Moa**	**5.21**	**305**	*e*P	**Pn**	**22 35 15.0**	**-0.6**
MOAC				*e*S	**Sn**	**22 36 12.4**	**-2.1**
	comp=N,17nm,0.0s						
MOAC				*e*			
	comp=E,16nm,0.0s						
CDVI	**St. Croix**	**5.40**	**88**	*e*S	**Sn**	**22 36 19.7**	**+0.6**
RCC	**Rio Carpintero**	**5.50**	**296**	*e*P	**Pn**	**22 35 15.6**	**-3.9**
RCC				*e*S	**Sn**	**22 36 08.6**	**-13**
	comp=N,11nm,0.5s						
RCC				*e*			
	comp=E,18nm,0.4s						
LZG	**Guadaloupe-1**	**8.42**	**99**	*e*P	**Pn**	**22 36 00.2**	**+0.5**

*DDA **22** 22:38:37.2, 3625N×2800E, h29km±5km, Md2.8*
*ISCJB **22** 22:38:38.9±0.8, 3625N±004×2790E±005, h58km±9km, Error ellipse: s-maj=7.3km s-min=6.3km az=36.4*
*ATH **22** 22:38:39.2, 3634N×2766E, h28km±1km, MD3.2/5*
*CSEM **22** 22:38:39.4±0.1, 3626N×2785E, h30km, MD3.2, Error ellipse: s-maj=2.8km s-min=1.6km az=120.0*
*NEIC **22** 22:38:39.2, 3634N×2765E, h27km, MD3.2(ATH), After ATH.*

ISC 22 22:38:39.7±0.7, 3624N±004×2790E±005, h54km±10km, n13, σ0§78/23, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.19**	**98**	*e*PB	**Pn**	**22 38 48.1**	**-0.2**
ARG				*e*SB	**Sn**	**22 38 54.8**	**+0.3**
TURN	**Turunc**	**0.85**	**42**	*i* P	**Pn**	**22 38 52.2**	**-3.3**
TURN				*i* S	**Sn**	**22 39 01.4**	**-5.7**
BDRM	**Kayabasi**	**0.90**	**336**	*i* P	**Pn**	**22 38 55.9**	**-0.3**
BDRM				*i* S	**Sn**	**22 39 08.3**	**+0.1**
KARP	**Karpathos**	**0.92**	**221**	*e*PN	**Pn**	**22 38 56.5**	**+0.1**
KARP				*e*SN	**Sn**	**22 39 09.1**	**+0.4**
AKAS	**Kas**	**1.38**	**90**	*i* P	**Pn**	**22 39 01.9**	**-0.7**
AKAS				*i* S	**Sn**	**22 39 18.5**	**-1.3**
GCAM	**G?zelcaml?**	**1.55**	**340**	*i* P	**Pn**	**22 39 04.9**	**0.0**
GCAM				*i* S	**Sn**	**22 39 23.9**	**+0.1**
GOLH	**Golhisar**	**1.66**	**53**	*i* P	**Pn**	**22 39 07.2**	**+0.8**
GOLH				*i* S	**Sn**	**22 39 28.5**	**+1.8**
SMG	**Samos**	**1.69**	**330**	*e*PN	**Pn**	**22 39 06.7**	**-0.1**
SMG				*e*SN	**Sn**	**22 39 26.5**	**-0.8**
NPS	**Neapolis**	**2.10**	**243**	*e*PN	**Pn**	**22 39 12.6**	**+0.2**
MANT	**Manisa**	**2.30**	**13**	*i* P	**Pn**	**22 39 16.3**	**+1.1**
MANT				*i* S	**Sn**	**22 39 43.0**	**+0.7**
AKHS	**Akhisar**	**2.63**	**359**	*i* P	**Pn**	**22 39 19.4**	**-0.3**
AKHS				*i* S	**Sn**	**22 39 49.6**	**-0.7**
VAM	**Vamos**	**3.12**	**256**	*e*PN	**Pn**	**22 39 26.6**	**+0.3**
VAM	**Vamos**	**3.12**	**256**	*e*Pn	**Pn**	**22 39 26.3**	**0.0**

*SKO **22** 22:48:54.2, 4041N×1869E, h38km*
*TIR **22** 22:48:56.3±1.2, 4242N×1935E, h22km±5km*
*BEO **22** 22:48:56.7±0.7, 4241N×1947E, ML1.8/2*
*ISCJB **22** 22:48:57.1±0.4, 4246N±002×1934E±003, h14km±3km, Error ellipse: s-maj=3.8km s-min=3.5km az=170.2*
*PDG **22** 22:48:57.0±0.2, 4244N×1934E, h17km±1km, MD2.1/1, ML2.1/9, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*

ISC 22 22:48:57.6±0.4, 4244N±002×1936E±003, h13km±3km, n26, σ1§05/51, 5C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDG	**Podgorica**	**0.07**	**263**	*i* PG	**Pg**	**22 49 00.2**	**0.0**
PDG				*i* SG	**Sg**	**22 49 03.4**	**+1.3**
TTG	**Podgorica**	**0.07**	**263**	⇑*i*Pg	**Pg**	**22 49 00.2**	**0.0**
TTG				*e*Sg	**Sg**	**22 49 03.4**	**+1.3**
BUM	**Brajici-Budva**	**0.36**	**248**	⇓*i*Pg	**Pg**	**22 49 03.9**	**-1.0**
BUM				*e*Sg	**Sg**	**22 49 10.3**	**+0.5**
BUM	**Brajici-Budva**	**0.36**	**248**	*i* PG	**Pg**	**22 49 03.9**	**-1.0**
BUM				*i* SG	**Sg**	**22 49 10.3**	**+0.5**
NKY	**Niksic**	**0.46**	**325**	⇓*i*Pg	**Pg**	**22 49 05.3**	**-1.3**
NKY				*e*Sg	**Sg**	**22 49 13.6**	**+0.8**
NKY	**Niksic**	**0.46**	**325**	*i* PG	**Pg**	**22 49 05.3**	**-1.3**
NKY				*i* SG	**Sg**	**22 49 13.6**	**+0.8**
ULC	**Ulcinj**	**0.48**	**189**	⇑*i*Pg	**Pg**	**22 49 06.6**	**-0.4**
ULC				*e*Sg	**Sg**	**22 49 13.4**	**0.0**
ULC	**Ulcinj**	**0.48**	**189**	*i* PG	**Pg**	**22 49 06.6**	**-0.4**
ULC				*i* SG	**Sg**	**22 49 13.4**	**0.0**
PVY	**Plav**	**0.48**	**71**	⇑*i*Pg	**Pg**	**22 49 06.4**	**-0.7**
PVY				*e*Sg	**Sg**	**22 49 14.4**	**+0.9**
PVY	**Plav**	**0.48**	**71**	*i* PG	**Pg**	**22 49 06.4**	**-0.7**
PVY				*i* SG	**Sg**	**22 49 14.4**	**+0.9**
BEY	**Berane**	**0.59**	**43**	*i* PG	**Pg**	**22 49 08.5**	**-0.6**
BEY				*i* SG	**Sg**	**22 49 17.9**	**+1.0**
IVA	**Berane**	**0.59**	**43**	⇓*i*Pg	**Pg**	**22 49 08.5**	**-0.6**
IVA				*e*Sg	**Sg**	**22 49 17.9**	**+1.0**
HCY	**Herceg Novi**	**0.64**	**271**	⇑*i*Pg	**Pg**	**22 49 08.2**	**-1.7**
HCY				*e*Sg	**Sg**	**22 49 18.9**	**+0.6**
HCY	**Herceg Novi**	**0.64**	**271**	*i* PG	**Pg**	**22 49 08.2**	**-1.7**
HCY				*i* SG	**Sg**	**22 49 18.9**	**+0.6**
BRY	**Bratogost**	**0.76**	**308**	⇓*i*Pg	**Pg**	**22 49 11.4**	**-0.8**
BRY				*e*Sg	**Sg**	**22 49 23.3**	**+1.1**
BRY	**Bratogost**	**0.76**	**308**	*i* PG	**Pg**	**22 49 11.4**	**-0.8**
BRY				*i* SG	**Sg**	**22 49 23.3**	**+1.1**
TREB	**Trebinje**	**0.79**	**291**	*e*Pg	**Pg**	**22 49 13.5**	**+0.6**
TREB				*e*Sg	**Sg**	**22 49 24.2**	**+0.9**
UPM	**Unac-Piva**	**0.83**	**337**	⇑*i*Pg	**Pg**	**22 49 12.4**	**-1.3**
UPM				*e*Sg	**Sg**	**22 49 25.7**	**+1.1**
SJES	**Sjenica**	**0.94**	**29**	*e*Pg	**Pg**	**22 49 14.3**	**-1.4**
SJES				*e*Sg	**Sg**	**22 49 27.0**	**-1.0**
STON	**Ston**	**1.30**	**290**	*e*Pg	**Pn**	**22 49 19.8**	**-1.5**
STON				Sg	**Sg**	**22 49 39.6**	**+0.2**
BBLS	**Lazići**	**1.43**	**1**	*e*Pg	**Pn**	**22 49 23.5**	**+0.4**
BBLS				*e*Sg	**Sg**	**22 49 43.5**	**0.0**
OHR	**Ohrid**	**1.71**	**140**	*e*Pn	**Pn**	**22 49 23.6**	**-3.4**
OHR				*e*Sn	**Sn**	**22 49 51.2**	**+2.5**
DIVS	**Divibare**	**1.72**	**15**	*e*Pg	**Pn**	**22 49 27.6**	**+0.4**
DIVS				*e*Sg	**Sn**	**22 49 50.2**	**+1.2**
KRUS	**Krusevo**	**1.77**	**126**	*e*Pn	**Pn**	**22 49 28.5**	**+0.6**
KRUS				*e*Sn	**Sn**	**22 49 53.0**	**+2.8**
BARS	**Barje**	**1.85**	**77**	*e*Pg	**Pn**	**22 49 27.9**	**-1.1**
NVLJ	**Novalja**	**3.89**	**305**	*e*Pn	**Pn**	**22 49 57.2**	**+0.2**
NVLJ				Sn	**Sn**	**22 50 41.8**	**-0.7**

IDC 22 22:51:13.1±4.0, 326N×12710E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/18, mbtmp3.9/4, Error ellipse: s-maj=108.5km s-min=59.0km az=78.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.27**	**184**	P	P	22 56 01.6	+0.3
	0.5nm,0.3s,baz=4.5,slow=15,SNR=6.5						
WRA	**Warramunga Arr**	**24.13**	**163**	P	P	22 56 30.9	0.0
	6.3nm,0.5s,baz=343,slow=10.0,SNR=56						
WB2	**Warramunga Arr**	**24.13**	**163**	*e*P	P	22 56 30.7	-0.2
ASAR	**Alice Springs**	**27.57**	**166**	P	P	22 57 01.6	-0.5
	0.6nm,0.5s,baz=339,slow=8.1,SNR=15						
STKA	**Stephens Creek**	**37.56**	**160**	P	P	22 58 29.6	+0.4
	1.5nm,0.6s,baz=343,slow=11,SNR=4.7						

*ISCJB **22** 22:57:05.5±1.1, 2495N±009×9537E±009, h42km±13km, mb3.7/14, Error ellipse: s-maj=19.5km s-min=6.7km az=39.3*
*MOS **22** 22:57:05.2±0.8, 2504N×9554E, h33km, mb4.1/3, Error ellipse: s-maj=31.4km s-min=9.5km az=114.9*
*IDC **22** 22:57:06.5±4.3, 2494N×9535E, h33km±36km, mb3.5/11, mb1 3.6/12, mb1mx3.5/26, mbtmp3.5/12, ML4.3/1, MS2.8/1, Ms1 2.8/1, ms1mx2.5/21, Error ellipse: s-maj=42.1km s-min=14.6km az=61.0*
*NEIC **22** 22:57:08.6±0.9, 2502N×9549E, h53km±10km, mb4.2/2, Error ellipse: s-maj=21.6km s-min=7.3km az=57.0*
*BJI **22** 22:57:10.8, 2541N×9523E, h37km, mb4.3*

ISC 22 22:57:07.5±0.8, 2503N±008×9545E±007, h39km±10km, n38, σ0§93/39, mb3.7/14, 1C, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.40**	**260**	*i* P	**Pn**	**22 57 30.0**	**-0.5**
IMP				*i* S	**Sn**	**22 57 49.0**	**+1.2**
LSA	**Lhasa**	**6.02**	**322**	P	**Pn**	**22 58 38.4**	**+4.4**
LSA	**Lhasa**	**6.02**	**322**	*e*P	**Pn**	**22 58 35.3**	**+1.3**
LSA				pmax	pmax		
	comp=Z,15nm,0.6s						
LSA	**Lhasa**	**6.02**	**322**	*e*Pn	**Pn**	**22 58 35.3**	**+1.3**
	comp=Z,15nm,0.6s						
CHRT	**Chiangrai**	**6.51**	**141**	⇑P	**Pn**	**22 58 41.5**	**+0.7**
	comp=Z,184nm,1.0s						
CHTO	**Chiang Mai**	**6.98**	**152**	*e*P	**Pn**	**22 58 48.0**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CHTO	**Chiang Mai**	**6.98**	**152**	*e*Pn	**Pn**	**22 58 48.0**	**+0.7**
	comp=Z,7.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**7.30**	**153**	Pn	**Pn**	**22 58 52.4**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=327,slow=12,SNR=21						
CMAR				Pg	Pn	22 59 19.1	+27
	comp=Z,1.1nm,0.3s,baz=325,slow=18,SNR=6.9						
CMAR				Lg		23 00 53.2	
	baz=322,slow=28,SNR=4.5						
TAPN	**Taplejung**	**7.33**	**290**	*e*P	**Pn**	**22 58 52.7**	**+0.7**
ODAN	**Odare**	**7.48**	**286**	*e*P	**Pn**	**22 58 54.9**	**+0.8**
	comp=Z,117nm,0.7s						
NANT	**Nan**	**7.88**	**141**	P	**Pn**	**22 58 58.0**	**-1.6**
RAMN	**Ramite**	**8.19**	**285**	*e*P	**Pn**	**22 59 04.3**	**+0.5**
	comp=Z,93nm,0.5s						
JIRN	**Jiri**	**8.71**	**289**	*e*P	**Pn**	**22 59 11.4**	**+0.4**
GUN	**Gumba**	**9.04**	**291**	*e*P	**Pn**	**22 59 15.6**	**+0.1**
	comp=Z,46nm,0.5s						
PKIN	**Phulchoki**	**9.37**	**288**	*e*P	**Pn**	**22 59 19.5**	**-0.5**
	comp=Z,50nm,0.5s						
KKN	**Kakani**	**9.53**	**289**	*e*P	**Pn**	**22 59 21.6**	**-0.5**
	comp=Z,33nm,0.4s						
DMN	**Daman**	**9.63**	**288**	*e*P	**Pn**	**22 59 22.8**	**-0.8**
	comp=Z,22nm,0.4s						
GKN	**Gorkha**	**10.13**	**289**	*e*P	**Pn**	**22 59 29.6**	**-0.8**
	comp=Z,68nm,0.6s						
DANN	**Dangsing**	**10.97**	**290**	*e*P	**Pn**	**22 59 39.7**	**-2.1**
	comp=Z,21nm,0.4s						
KOLN	**Koldanda**	**10.97**	**287**	*e*P	**Pn**	**22 59 40.0**	**-1.9**
	comp=Z,28nm,0.5s						
MKAR	**Makanchi Array**	**24.13**	**337**	P	**P**	**23 02 20.4**	**+0.8**
	comp=Z,2.4nm,0.6s,mb3.8,baz=147,slow=12,SNR=14						
SONM	**Songino Array**	**24.35**	**18**	P	**P**	**23 02 22.2**	**+0.6**
	comp=Z,0.6nm,0.7s,mb3.1,baz=213,slow=10,SNR=4.7						
SONM				LR	LR	23 13 45.5	
	comp=Z,23nm,19.1s,baz=26,slow=41						
KBL	**Kabul**	**24.74**	**299**	*e*P	**P**	**23 02 26.6**	**+1.3**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
KBL	**Kabul**	**24.74**	**299**	*e*P	**P**	**23 02 26.6**	**+1.3**
	comp=Z,3.9nm,0.6s,mb4.1						
ZAK	**Zakamensk**	**26.02**	**11**	*e*P	**P**	**23 02 36.5**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.4						
KURK	**Kurchatov**	**28.74**	**337**	P	**P**	**23 03 01.1**	**0.0**
	comp=Z,1.2nm,0.4s,mb3.9,baz=150,slow=9.8,SNR=14						
ZALV	**Zalesovo Beam**	**29.96**	**347**	P	**P**	**23 03 12.2**	**+0.5**
	comp=Z,0.8nm,0.4s,mb3.8,baz=168,slow=8.7,SNR=6.3						
BVAR	**Borovoye Array**	**33.73**	**333**	P	**P**	**23 03 45.1**	**+0.2**
	comp=Z,0.7nm,0.5s,mb3.9,baz=138,slow=10,SNR=6.2						
BRVK	**Borovoye**	**33.79**	**333**	*e*P	**P**	**23 03 46.0**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
BRVK	**Borovoye**	**33.79**	**333**	*e*P	**P**	**23 03 46.0**	**+0.5**
	comp=Z,3.8nm,1.1s,mb4.2						
AKTK	**Aktyubinsk**	**38.36**	**321**	P	**P**	**23 04 25.6**	**+1.0**
AKTO	**Aktyubinsk**	**38.36**	**321**	P	**P**	**23 04 25.6**	**+1.0**
	comp=Z,0.7nm,0.4s,mb3.8,baz=96,slow=10,SNR=4.1						
WRA	**Warramunga Arr**	**58.56**	**136**	P	**P**	**23 06 59.7**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.7,baz=322,slow=7.4,SNR=4.2						
ASAR	**Alice Springs**	**61.09**	**139**	P	**P**	**23 07 18.1**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.7,baz=323,slow=6.8,SNR=6.7						
NOA	**NORSAR Array B**	**65.68**	**328**	P	**P**	**23 07 46.1**	**-1.4**
	comp=Z,0.6nm,0.9s,mb3.6,baz=72,slow=4.3,SNR=2.5						
GERES	**GERESS Array B**	**66.31**	**314**	P	**P**	**23 07 51.3**	**-0.5**
	comp=Z,0.2nm,0.4s,mb3.5,baz=67,slow=7.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**87.87**	**283**	P	**P**	**23 09 53.0**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.6,baz=46,slow=3.0,SNR=7.2						
DLBC	**Dease Lake**	**88.67**	**22**	*e*P	**P**	**23 09 54.4**	**-2.0**

NNC 22 23:06:35.4±2.4, 4251N×8101E, h0km, mb3.5, mpv3.2, 3C-9D, Error ellipse: s-maj=22.5km s-min=12.3km az=136.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**4.01**	**278**	⇓Pn	**Pn**	**23 07 37.5**	**-0.5**
	5.9nm,0.8s						
TKM2				⇓Sn	**Sn**	**23 08 28.1**	**+2.4**
	13nm,0.5s						
MK31	**Makanchi Array**	**4.38**	**12**	⇓Pn	**Pn**	**23 07 43.9**	**+0.7**
	1.8nm,0.4s,baz=187,slow=15						
MK31				⇓Lg		**23 08 56.4**	
	17nm,0.6s,baz=193,slow=27						
KK31	**Karatay Array**	**7.74**	**278**	⇓Pg	**Pg**	**23 08 56.4**	**-7.3**
	0.3nm,0.4s,baz=89,slow=16						
KK31				⇓Lg		**23 10 42.1**	
	2.0nm,0.6s,baz=88,slow=27						
KURBB	**Kurchatov Arra**	**

KK31 ⇓S **Sn** **23 51 40.2 -6.1**
10nm,0.3s,baz=172,slow=23
THN **Thein Dam** **5.83 148** *e*P **Pn** **23 50 42.4 +0.4**
THN *e*S **Sn** **23 51 44.5 -3.6**
DLH **Dalhousie** **5.85 146** *e*P **Pn** **23 50 44.0 +1.8**
DLH *e*S **Sn** **23 51 48.0 -0.4**
CHMS **Chumysh** **5.89 19** P **Pn** **23 50 42.5 -0.1**
SNR=12
USP **Ospenovka** **6.08 17** P **Pn** **23 50 44.5 -0.7**
SNR=9.4
SMLA **Simla** **7.58 145** *i* P **Pn** **23 51 06.2 +0.8**
SMLA *i* S **Sn** **23 52 23.8 -6.3**
SMLA *ex* x 23 52 27.8
comp=E,300nm,0.3s
SMLA *ex* x 23 52 29.0
comp=N,251nm,0.4s
JOSI **Joshimath** **9.26 136** *e*P **Pn** **23 51 17.7 -10**
JOSI *e*S **Sn** **23 52 58.0 -12**
JOSI AML AML 23 53 10.3
comp=E,28nm,0.9s
JOSI AML AML 23 53 10.9
comp=N,36nm,0.5s
AB31 **Akbulak array** **14.71 327** P **Pn** **23 52 38.0 -0.2**
comp=N,0.2nm,0.2s,baz=134,slow=16,SNR=36

BJI ***23*** *00:28:40.3, 47.92N×153.88E, h58km, mB4.8, mb4.6, Ms4.6, Msz4.2*
ISCJB ***23*** *00:28:44.7±0.3, 47.59N±0.005×153.11E±0.005, h59km, mb4.3/55, MS3.7/9, Error ellipse: s-maj=8.3km s-min=3.6km az=154.0*
IDC ***23*** *00:28:45.1±0.6, 47.43N×153.03E, h60km±5km, mb3.7/17, mb1 3.9/19, mb1mx3.9/25, mbtmp3.7/19, MS3.4/8, Ms1 3.4/8, ms1mx3.1/33, Error ellipse: s-maj=17.1km s-min=11.7km az=135.0*
MOS ***23*** *00:28:45.4±0.9, 47.50N×153.15E, h72km, mb4.6/24, Error ellipse: s-maj=11.0km s-min=7.2km az=82.3*
NEIC ***23*** *00:28:46.2±0.2, 47.61N×152.96E, mb4.5/29, Error ellipse: s-maj=6.6km s-min=4.0km az=159.0*
ISC 23 00:28:46.9±0.3, 47.66N±0.005×153.00E±0.006, h61km, h61km±.3km: pP-P, n181, σ0.92/177, mb4.3/55, 12C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.65**	**33**	*e*PN		**Pn**	**Pn**	**00 29 40.4**	**-0.4**
SKR				*i* S		**Sn**	**Sn**	**00 30 23.0**	**+0.4**
SKR				pmax		pmax			
	comp=Z,30nm,0.5s								
SKR				smax					
	comp=N,250nm,0.5s								
SKR				smax					
	comp=E,310nm,0.5s								
KUR	**Kuril'sk**	**4.30**	**237**	*e*PN		**Pn**	**Pn**	**00 29 43.2**	**-6.6**
KUR				*e*S		**Sn**	**Sn**	**00 30 36.5**	**-2.1**
KUR				pmax		pmax			
	comp=Z,500nm,0.9s								
KUR				pmax		pmax			
	comp=N,140nm,0.5s								
KUR				pmax		pmax			
	comp=E,140nm,0.5s								
KUR				pmax		pmax			
	comp=N,2μm,5.0s								
KUR				pmax		pmax			
	comp=E,2μm,5.0s								
KUR				pmax		pmax			
	comp=E,5μm,5.0s								
KUR				smax					
	comp=N,570nm,1.0s								
KUR				smax					
	comp=E,720nm,1.0s								
KUR				smax					
	comp=N,2μm,2.0s								
KUR				smax					
	comp=E,4μm,2.0s								
PEA0B	**Petropavlovsk-**	**6.22**	**27**	*e*Pn		**Pn**	**Pn**	**00 30 16.3**	**+0.3**
PETK	**Petropavlovsk-**	**6.22**	**27**	P		**Pn**	**Pn**	**00 30 18.3**	**+2.3**
	comp=E,1.2nm,0.3s,baz=169,slow=13,SNR=29								
PETK				LR		LR	LR	00 32 47.9	
	comp=E,175nm,18.0s,baz=210,slow=38								
PET	**Petropavlovsk**	**6.47**	**32**	*e*PN		**Pn**	**Pn**	**00 30 20.2**	**+0.8**
PET				MLR		MLR			
	comp=Z,200nm,18.0s								
PET	**Petropavlovsk**	**6.47**	**32**	*e*Pn		**Pn**	**Pn**	**00 30 18.8**	**-0.6**
YSS	**Yuzh-Sakhalins**	**7.00**	**268**	⇑*i*PN		**Pn**	**Pn**	**00 30 30.0**	**+3.2**
YSS				*e*S		**Sn**	**Sn**	**00 31 49.0**	**+4.1**
YSS				pmax		pmax			
	comp=N,90nm,0.6s								
YSS				pmax		pmax			
	comp=E,90nm,0.6s								
YSS				pmax		pmax			
	comp=Z,90nm,0.6s								
YSS				MLR		MLR			
	comp=Z,700nm,18.0s								
YSS	**Yuzh-Sakhalins**	**7.00**	**268**	*e*Pn		**Pn**	**Pn**	**00 30 29.2**	**+2.5**
ASAJ	**Asahikawa**	**8.08**	**248**	P		**Pn**	**Pn**	**00 30 43.5**	**+2.1**
	comp=Z,1.2nm,0.3s,baz=78,slow=13,SNR=8.6								
ASAJ				LR		LR	LR	00 33 34.4	
	comp=Z,281nm,20.7s,baz=36,slow=36								
ASAJ	**Asahikawa**	**8.08**	**248**	PN		**Pn**	**Pn**	**00 30 43.6**	**+2.1**
ASAJ				pmax		pmax			
	comp=Z,1.0nm,0.3s								
ASAJ				MLR		MLR			
	comp=Z,281nm,20.7s								
ERM	**Erimo**	**8.98**	**235**	*e*PN		**Pn**	**Pn**	**00 30 54.8**	**+0.9**
KLR	**Kul'dur**	**14.19**	**284**	*e*P		**Pn**	**Pn**	**00 32 09.1**	**+4.6**
MAJO	**Matsushiro**	**15.59**	**230**	*e*P		**Pn**	**Pn**	**00 32 22.7**	**-0.1**
MAT	**Matsushiro**	**15.59**	**230**	P		**Pn**	**Pn**	**00 32 25.1**	**+2.3**
MJAR	**Matsushiro Arr**	**15.59**	**230**	P		**Pn**	**Pn**	**00 32 17.6**	**-5.1**
	comp=Z,0.1nm,0.3s,baz=28,slow=13,SNR=5.0								
MJAR				LR		LR	LR	00 37 22.7	
	comp=Z,106nm,20.7s,baz=45,slow=34								
MDJ	**Mudanjiang**	**16.50**	**268**	P		**Pn**	**Pn**	**00 32 35.1**	**+1.0**
MDJ				AP		pP	pP	00 32 47.8	-0.9
MDJ				S		**S**	**S**	**00 35 38.9**	**-6.2**
MDJ				PCP		PcP	PcP	00 37 21.5	-0.7
MDJ				SCS		ScS	ScS	00 44 29.0	-1.4
MDJ				AMB		AMB	AMB		
	comp=Z,5.0nm,0.6s								
MDJ				AMB		AMB	AMB		
	comp=Z,29nm,3.9s								
CLNS	**Chul'man**	**19.38**	**309**	*e*P		**Pn**	**Pn**	**00 33 11.7**	**+2.6**
CLNS				pmax		pmax			
	comp=Z,15nm,1.0s								
CLNS				pmax		pmax			
	comp=N,9.0nm,1.0s								
CLNS				pmax		pmax			
	comp=E,9.0nm,0.8s								
CLNS				MLR		MLR			
	comp=Z,158nm,14.0s								
CLNS				MLR		MLR			
	comp=E,138nm,15.0s								
CN2	**Changchun**	**19.57**	**269**	*e*P		**Pn**	**Pn**	**00 33 11.5**	**0.0**
CN2				LR		LR			
	comp=N,200nm,13.0s								
CN2				LR		LR			
	comp=E,200nm,13.0s								
CN2				LR		LR			
	comp=Z,230nm,15.0s								
KSRS	**Korea Array**	**21.02**	**250**	P		**P**	**P**	**00 33 25.2**	**-0.2**
	comp=Z,7.0nm,1.0s,mb4.0,baz=52,slow=10,SNR=11								
KSRS	**Korea Array**	**21.02**	**250**	P		**P**	**P**	**00 33 25.2**	**-0.2**
KSRS				pmax		pmax			
	comp=Z,7.0nm,1.0s,mb4.0								
BJI	**Beijing**	**27.43**	**268**	P		**P**	**P**	**00 34 27.4**	**+0.7**
BJI				S		**S**	**S**	**00 39 05.8**	**+3.1**
BJI				AMB		AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.4								
BJI				LR		LR	LR		
	comp=Z,118nm,22.9s								
HHC	**Hu-ho-hao-te**	**30.17**	**272**	*e*P		**P**	**P**	**00 34 50.6**	**-0.5**
HHC				PP		PP	PP	00 35 51.4	-8.5
HHC				PCP		PcP	PcP	00 37 50.5	-0.3
HHC				S		**S**	**S**	**00 39 44.1**	**-1.6**
HHC				SCP		ScP	ScP	00 41 26.3	-1.4
HHC				PCS		PcS	PcS	00 41 33.3	-1.0
HHC				SCS		ScS	ScS	00 45 20.3	-3.0
HHC				AMB		AMB	AMB		
	comp=Z,14nm,0.5s,mb5.0								
HHC				AMB		AMB	AMB		
	comp=Z,74nm,4.0s								
HHC				LR		LR	LR		
	comp=N,147nm,13.5s								
HHC				LR		LR	LR		
	comp=E,135nm,12.6s								
HHC				LR		LR			
	comp=Z,115nm,12.7s								
NJ2	**Nanjing**	**30.20**	**251**	*e*P		**P**	**P**	**00 34 53.8**	**+2.3**
NJ2				AMB		AMB			
	comp=Z,10.0nm,1.1s,mb4.5								
SONM	**Songino Array**	**30.97**	**288**	LR		LR		00 48 26.3	
	comp=Z,98nm,19.9s,baz=355,slow=38								
COLD	**Coldfoot**	**34.62**	**35**	*e*P		**P**	**P**	**00 35 29.7**	**0.0**
	comp=Z,2.6nm,0.6s,mb4.3								
COLA	**College**	**35.47**	**39**	⇑*e*P		**P**	**P**	**00 35 37.1**	**0.0**
LZH	**Lanzhou**	**37.79**	**271**	*e*P		**P**	**P**	**00 35 58.5**	**+1.4**
LZH				AP		pP	pP	00 36 13.8	+1.5
LZH				*e*PP		PP	PP	00 37 29.5	+5.2
LZH				AMB		AMB	AMB		
	comp=Z,18nm,1.2s,mb4.7								
LZH				AMB		AMB	AMB		
	comp=Z,52nm,5.1s								
LZH				LR		LR	LR		
	comp=N,461nm,13.4s								
LZH				LR		LR	LR		
	comp=Z,597nm,17.8s								
GYA	**Guiyang**	**41.85**	**256**	P		**P**	**P**	**00 36 33.3**	**+2.4**
GYA				AP		pP	pP	00 36 48.9	+2.7
GYA				PP		PP	PP	00 38 12.6	+4.1
GYA				PCP		PcP	PcP	00 38 28.0	+2.2
GYA				SCP		ScP	ScP	00 42 12.4	+1.8
GYA				S		**S**	**S**	**00 42 46.0**	**+1.7**
GYA				AMB		AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5								
GYA				AMB		AMB	AMB		
	comp=Z,70nm,5.0s								
GYA				LR		LR	LR		
	comp=N,380nm,18.8s								
GYA				LR		LR	LR		
	comp=E,260nm,19.6s								
GYA				LR		LR	LR		
	comp=Z,330nm,18.7s								
ZALV	**Zalesovo Beam**	**42.02**	**305**	P		**P**	**P**	**00 36 31.4**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.5,baz=40,slow=7.1,SNR=3.1								
ZALV				PcP		PcP		00 38 23.6	-2.2
	comp=Z,0.6nm,0.4s,baz=77,slow=3.1,SNR=5.8								
ZALV				LR		LR		00 55 20.1	
	comp=Z,61nm,19.0s,baz=236,slow=38								
ZALV	**Zalesovo Beam**	**42.02**	**305**	P		**P**	**P**	**00 36 31.4**	**-0.6**
ZALV								00 38 23.6	
ZALV				pmax		pmax			
	comp=Z,1.0nm,0.5s,mb3.7								
ZALV				MLR		MLR			
	comp=Z,61nm,19.0s								
KMI	**Kunming**	**45.34**	**259**	P		**P**	**P**	**00 36 59.3**	**+0.3**
KMI				AMB		AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.7								
MKAR	**Makanchi Array**	**46.46**	**297**	P		**P**	**P**	**00 37 05.6**	**-1.9**
	comp=Z,0.3nm,0.4s,mb3.6,baz=48,slow=7.6,SNR=3.9								
MKAR	**Makanchi Array**	**46.46**	**297**	*i* P		**P**	**P**	**00 37 07.3**	**-0.2**
KURK	**Kurchatov**	**46.80**	**303**	P		**P**	**P**	**00 37 09.2**	**-0.9**
	comp=Z,2.5nm,0.9s,mb4.1,baz=69,slow=8.3,SNR=15								
KURK	**Kurchatov**	**46.80**	**303**	P		**P**	**P**	**00 37 09.2**	**-0.9**
KURK				pmax		pmax			
	comp=Z,3.0nm,1.0s,mb4.2								
BVAR	**Borovoye Array**	**50.23**	**309**	P		**P**	**P**	**00 37 35.9**	**-0.5**
	comp=Z,0.4nm,0.3s,mb3.9,baz=74,slow=11,SNR=4.6								
YKA	**Yellowknife Ar**	**50.24**	**37**	P		**P**	**P**	**00 37 36.8**	**+0.5**
	comp=Z,5.2nm,0.9s,mb4.6,baz=301,slow=7.7,SNR=9.6								
YKA				LR		LR	LR	01 02 21.8	
	comp=Z,21nm,19.0s,baz=195,slow=40								
CHTO	**Chiang Mai**	**52.26**	**256**	*e*P		**P**	**P**	**00 37 51.9**	**-0.2**
CHTO				pmax		pmax			
	comp=Z,6.0nm,0.9s,mb4.5								
CHTO	**Chiang Mai**	**52.26**	**256**	*e*P		**P**	**P**	**00 37 51.9**	**-0.1**
	comp=Z,5.9nm,0.9s,mb4.5								
CMAR	**Chiang Mai Arr**	**52.52**	**256**	P		**P**	**P**	**00 37 53.0**	**-0.9**
	comp=Z,1.5nm,0.3s,mb4.3,baz=30,slow=7.8,SNR=16								
CMAR	**Chiang Mai Arr**	**52.52**	**256**	P		**P**	**P**	**00 37 53.1**	**-0.9**
CMAR				pmax		pmax			
	comp=Z,2.0nm,0.3s								
EDM	**Edmonton**	**55.74**	**47**	*e*P		**P**	**P**	**00 38 16.7**	**-0.3**
EDM				*e**PP		pP	pP	00 38 32.3	-0.6
ARCES	**ARCESS Array B**	**56.97**	**341**	P		**P**	**P**	**00 38 25.4**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=28,slow=7.7,SNR=7.8								
ARCES	**ARCESS Array B**	**56.97**	**341**	P		**P**	**P**	**00 38 25.4**	**-0.1**
ARCES				pmax		pmax			
	comp=Z,1.0nm,0.5s								
BMO	**Blue Mountains**	**58.63**	**56**	*e*P		**P**	**P**	**00 38 37.7**	**+0.2**
BMO				*e*pP		pP	pP	00 38 53.2	-0.3
MSO	**Missoula**	**59.27**	**53**	*e*P		**P**	**P**	**00 38 42.0**	**+0.2**
	comp=Z,7.3nm,1.3s,mb4.5								
MSO				*e*pP		pP	pP	00 38 57.8	-0.2
KAPI	**Kappang**	**60.05**	**219**	LR		LR	LR	01 01 52.1	
	comp=Z,35nm,21.5s,baz=108,slow=33								
JOF	**Joensuu**	**60.48**	**333**	*e*p		**P**	**P**	**00 38 53.2**	**+3.3**
	comp=Z,0.4nm,0.3s,mb3.9								
LRM	**Limekiln Ridge**	**60.70**	**53**	*e*P		**P**	**P**	**00 38 52.4**	**+0.7**
LRM				*e*pP		pP	pP	00 39 07.5	-0.3
HLID	**Hailey**	**61.06**	**56**	*e*P		**P**	**P**	**00 38 54.5**	**+0.3**
HLID				*e*pP		pP	pP	00 39 10.3	0.0
BOZ	**Bozeman (W)**	**61.26**	**53**	*e*P		**P**	**P**	**00 38 55.8**	**+0.3**
BOZ				*e**PP		pP	pP	00 39 11.7	0.0
BOZ				pmax		pmax			
	comp=Z,3.0nm,1.0s,mb4.4								
BOZ	**Bozeman (W)**	**61.26**	**53**	*e*P		**P**	**P**	**00 38 55.8**	**+0.4**
	comp=Z,3.3nm,1.0s,mb4.4								
BOZ				*e*pP		pP	pP	00 39 11.7	0.0
QLMT	**Earthquake Lak**	**61.89**	**53**	*e*P		**P**	**P**	**00 39 00.7**	**+0.9**
QLMT				*e*pP		pP	pP	00 39 16.4	+0.4
ELK	**Elko**	**62.40**	**59**	*e*pP		pP	pP	00 39 19.4	0.0
KAF	**Kangasniemi**	**62.58**	**335**	*e*p		**P**	**P**	**00 39 05.3**	**+1.2**
	comp=Z,0.6nm,0.4s,mb4.1								
KAF	**Kangasniemi**	**62.58**	**335**	*e*P		**P**	**P**	**00 39 05.3**	**+1.2**
KAF				pmax		pmax			
	comp=Z,1.0nm,0.4s,mb4.3								
IMW	**Indian Meadow**	**62.77**	**54**	*e*P		**P**	**P**	**00 39 06.4**	**+0.8**
IMW				*e*pP		pP	pP	00 39 22.7	+0.8
RLMT	**Red Lodge**	**62.87**	**52**	*e*P		**P**	**P**	**00 39 06.4**	**+0.1**
	comp=Z,5.8nm,1.0s,mb4.7								
RLMT				*e*pP		pP	pP	00 39 22.7	+0.2
RRI2	**Red Ridge**	**62.92**	**55**	*e*P		**P**	**P**	**00 39 07.5**	**+0.8**
	comp=Z,2.6nm,0.8s,mb4.4								
RRI2				*e*pP		pP	pP	00 39 23.0	+0.1
MOOW	**Moose Ponds**	**62.97**	**54**	*e*P		**P**	**P**	**00 39 07.7**	**+0.7**
	comp=Z,6.1nm,1.4s,mb4.5								
MOOW				*e*pP		pP	pP	00 39 23.9	+0.7
TPAW	**Teton Pass**	**63.03**	**54**	*e*P		**P**	**P**	**00 39 07.8**	**+0.4**
TPAW				*e*pP		pP	pP	00 39 24.3	+0.7
LOHW	**Long Hollow**	**63.14**	**54**	*e*P		**P**	**P**	**00 39 08.6**	**+0.5**
	comp=Z,5.8nm,1.1s,mb4.6								
LOHW				*e*pP		pP	pP	00 39 24.3	0.0
SNOW	**Snow King Moun**	**63.15**	**54**	*e*P		**P**	**P**	**00 39 09.1**	**+0.9**
SNOW				*e*pP		pP	pP	00 39 25.2	+0.7
REDW	**Red Top Meadow**	**63.17**	**54**	*e*P		**P**	**P**	**00 39 09.0**	**+0.7**
	comp=Z,7.2nm,0.9s,mb4.8								
FINES	**FINESS Array B**	**63.18**	**335**	*e*P		**P**	**P**	**00 39 06.1**	**-2.0**
HWUT	**Hardware Ranch**	**63.93**	**56**	*e*P		**P**	**P**	**00 39 13.6**	**+0.3**
HWUT				*e*pP		pP	pP	00 39 29.4	-0.2
DUG	**Dugway**	**64.16**	**58**	*e*P		**P**	**P**	**00 39 15.0**	**+0.2**
DUG				*e**PP		pP	pP	00 39 30.7	-0.4
DUG				pmax		pmax			
	comp=Z,7.0nm,1.0s,mb4.7								
DUG	**Dugway**	**64.16**	**58**	*e*P		**P**	**P**	**00 39 15.0**	**+0.1**
	comp=Z,7.2nm,1.0s,mb4.7								
DUG				*e*pP		pP	pP	00 39 30.7	-0.4
BW06	**Boulder Array**	**64.27**	**54**	*e*P		**P**	**P**	**00 39 15.5**	**-0.1**
	comp=Z,5.7nm,0.9s,mb4.6								
BW06				*e*pP		pP	pP	00 39 31.6	-0.2
PDAR	**Pinedale Array**	**64.27**	**54**	P		**P**	**P**	**00 39 15.4**	**-0.2**
	comp=Z,1.8nm,0.9s,mb4.1,baz=318,slow=2.0,SNR=12								
PDAR				pP		pP	pP	00 39 31.1	-0.7
	comp=Z,4.9nm,0.8s,baz=311,slow=2.2,SNR=21								
TPNV	**Topopah Spring**	**64.28**	**63**	*e*P		**P**	**P**	**00 39 16.2**	**+0.5**
TPNV				*e**PP		pP	pP	00 39 31.3	-0.7
NLU	**North Lily Min**	**64.74**	**58**	*e*P		**P**	**P**	**00 39 19.5**	**+0.8**
NLU				*e*pP		pP	pP	00 39 34.9	0.0
MPU	**Maple Canyon**	**64.95**	**58**	*e*P		**P**	**P**	**00 39 20.1**	**+0.1**
MPU				*e*pP		pP	pP	00 39 36.7	+0.4
TMUT	**Trail Mountain**	**65.67**	**58**	*e*P		**P**	**P**	**00 39 24.9**	**+0.1**
TMUT				*e*pP		pP	pP	00 39 40.7	-0.4
ULM	**Lac du Bonnet**	**65.88**	**41**	P		**P**	**P**	**00 39 24.4**	**-1.5**
	comp=Z,1.4nm,0.5s,mb4.2,baz=314,slow=18,SNR=2.9								
SRU	**San Rafael**	**66.19**	**58**	*e*P		**P**	**P**	**00 39 28.3**	**+0.3**
SRU				*e**PP		pP	pP	00 39 44.1	-0.3
RSSD	**Black Hills**	**66.30**	**50**	*e*P		**P**	**P**	**00 39 28.4**	**-0.2**
RSSD				*e**PP		pP	pP	00 39 44.6	-0.4
RSSD				pmax		pmax			
	comp=Z,7.0nm,0.9s,mb4.7								
RSSD				*e*pP		pP	pP	00 39 44.6	-0.4
NB2	**NORSAR Subarra**	**67.34**	**341**	P		**P**	**P**	**00 39 34.5**	**-0.5**
	comp=Z,3.0nm,0.8s,mb4.4,baz=27,slow=6.5								
NOA	**NORSAR Array B**	**67.34**	**341**	P		**P**	**P**	**00 39 35.0**	**+0.1**
	comp=Z,2.2nm,1.0s,mb4.1,baz=27,slow=7.0,SNR=4.0								
NOA	**NORSAR Array B**	**67.34**	**341**	P		**P**	**P**	**00 39 35.0**	**0.0**
NOA				pmax		pmax			
	comp=Z,2.0nm,1.0s								
PHWY	**Pilot Hill**	**67.50**	**53**	*e*P		**P**	**P**	**00 39 36.1**	**-0.2**
WUAZ	**Wupatki**	**68.15**	**61**	*e*P		**P**	**P**	**00 39 40.8**	**+0.2**
	comp=Z,5.3nm,0.8s,mb4.6								
WUAZ				*e*pP		pP	pP	00 39 57.2	+0.3
ISCO	**Idaho Springs**	**68.47**	**54**	*e*P		**P**	**P**	**00 39 42.5**	**+0.1**
ISCO				*e**PP		pP	pP	00 39 59.1	+0.3
ISCO				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.5								
ISCO	**Idaho Springs**	**68.47**	**54**	*e*P		**P**	**P**	**00 39 42.5**	**+0.1**
	comp=Z,4.5nm,0.8s,mb4.5								
ISCO				*e*pP		pP	pP	00 39 59.1	+0.2
WRA	**Warramunga Arr**	**69.35**	**199**	P		**P**	**P**	**00 39 44.7**	**-3.2**
	comp=Z,0.2nm,0.2s,mb3.6,baz=18,slow=6.8,SNR=4.9								
WRA				pP		pP	pP	00 40 00.6	-3.8
	comp=Z,1.0nm,0.7s,baz=22,slow=7.0,SNR=5.3								
WRA	**Warramunga Arr**	**69.35**	**199**	P		**P**	**P**	**00 39 44.7**	**-3.2**
WRA				*PP		pP	pP	00 40 00.6	-3.8
WRA				pmax		pmax			
	comp=Z,1.0nm,0.7s								
FITZ	**Fitzroy Crossi**	**69.92**	**208**	P		**P**	**P**	**00 39 47.9**	**-3.5**
	comp=Z,0.6nm,0.8s,mb3.6,baz=22,slow=13,SNR=4.8								
SDCO	**Great Sand Dun**	**69.98**	**56**	*e*P		**P**	**P**	**00 39 51.7**	**0.0**
SDCO				*e*pP		pP	pP	00 40 08.0	-0.2
ECSD	**EROS,Sioux Fal**	**70.31**	**46**	*e*P		**P**	**P**	**00 39 52.7**	**-1.0**
	comp=Z,8.9nm,1.0s,mb4.7								
ECSD				*e*pP		pP	pP	00 40 08.9	-1.3
AKASG	**Malin Array Be**	**70.75**	**326**	P		**P**	**P**	**00 39 55.4**	**-0.9**
	comp=Z,0.7nm,0.4s,mb4.0,baz=31,slow=7.4,SNR=4.7								
AKASG	**Malin Array Be**	**70.75**	**326**	*i* P		**P**	**P**	**00 39 55.9**	**-0.4**
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.4s								
ANMO	**Albuquerque**	**71.42**	**58**	*i* P		**P**	**P**	**00 39 58.4**	**-2.2**
ANMO	**Albuquerque**	**71.42**	**58**	*e*P		**P**	**P**	**00 40 00.6**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.8								
ANMO				*e*pP		pP	pP	00 40 16.8	-0.4
EIDS	**Eidsvold**	**72.71**	**182**	*e*P		**P**	**P**	**00 40 09.0**	**+0.9**
ASAR	**Alice Springs**	**73.05**	**198**	P		**P**	**P**	**00 40 07.5**	**-2.7**
	comp=Z,2.6nm,0.8s,mb4.2,baz=14,slow=5.9,SNR=26								
ASAR				pP		pP	pP	00 40 24.4	-2.4
	comp=Z,2.1nm,0.8s,baz=13,slow=5.5,SNR=7.2								
ASAR	**Alice Springs**	**73.05**	**198**	P		**P**	**P**	**00 40 07.6**	**-2.6**
ASAR				*PP		pP	pP	00 40 24.5	-2.3
ASAR				pmax		pmax			
	comp=Z,3.0nm,0.8s								
BUR08	**Bucovina Ar. S**	**74.77**	**326**	*e*P		**P**	**P**	**00 40 20.2**	**+0.1**
BURAR	**Bucovina Array**	**74.79**	**326**	⇑*i*P		**P**	**P**	**00 40 20.2**	**0.0**
BURAR	**Bucovina Array**	**74.79**	**326**	⇑P		**P**	**P**	**00 40 20.2**	**0.0**
UPC	**Upice**	**75.43**	**333**	*e*P		**P**	**P**	**00 40 23.5**	**-0.4**
DPC	**Dobruska-Polom**	**75.48**	**333**	*e*P		**P**	**P**	**00 40 24.4**	**+0.2**
MORC	**Moravsky Berou**	**75.60**	**332**	⇑*i*P		**P**	**P**	**00 40 25.4**	**+0.5**
MORC	**Moravsky Berou**	**75.60**	**332**	⇑P		**P**	**P**	**00 40 25.4**	**+0.5**
CLL	**Collm**	**75.61**	**335**	*i* P		**P**	**P**	**00 40 24.8**	**-0.1**
CLL				pmax		pmax			
	comp=Z,8.0nm,0.7s,mb4.8								
CLL	**Collm**	**75.61**	**335**	*i* P		**P**	**P**	**00 40 24.8**	**-0.1**
	comp=Z,8.0nm,0.7s,mb4.8								
BRG	**Berggiesshubel**	**75.72**	**335**	*e*P		**P**	**P**	**00 40 24.7**	**-0.9**
BRG				pmax		pmax			
	comp=Z,2.0nm,1.3s,mb3.9								
BRG	**Berggiesshubel**	**75.72**	**335**	*e*P		**P**	**P**	**00 40 24.7**	**-0.8**
	comp=Z,3.2nm,1.2s,mb4.1								
WMOK	**Wichita Mounta**	**75.88**	**54**	*e*P		**P**	**P**	**00 40 25.7**	**-1.0**
WMOK				*e**PP		pP	pP	00 40 42.1	-1.3
TIRR	**Tirgusor**	**76.14**	**323**	⇑*i*P		**P**	**P**	**00 40 27.2**	**-0.9**
TIRR	**Tirgusor**	**76.14**	**323**	⇑P		**P**	**P**	**00 40 27.2**	**-0.8**
PRU	**Pruhonice**	**76.33**	**334**	*e*P		**P**	**P**	**00 40 29.0**	**-0.1**
MALT	**Malatya**	**76.48**	**313**	⇓*i*P		**P**	**P**	**00 40 28.6**	**-1.5**
MALT	**Malatya**	**76.48**	**313**	⇓P		**P**	**P**	**00 40 28.6**	**-1.5**
TXAR	**Lajitas Array**	**77.11**	**61**	P		**P**	**P**	**00 40 32.8**	**-1.0**
	comp=Z,1.1nm,0.7s,mb3.9,baz=305,slow=4.4,SNR=13								
TXAR				pP		pP	pP	00 40 49.2	-1.3
	comp=Z,8.5nm,0.6s,baz=298,slow=4.2,SNR=36						

BRYW	**Bryant College**	**82.48**	**32**	*e*P		**P**	**00 41 02.1**	**-0.5**	
LPL	**La Plagne**	**82.60**	**337**	*e*P		**P**	**00 41 03.9**	**+0.7**	
LPG	**La Plagne**	**82.62**	**337**	*e*P		**P**	**00 41 04.2**	**+0.9**	
PPT	**Papeete** comp=Z,76nm,20.9s,baz=349,slow=31	**82.75**	**126**	LR		LR	01 11 04.9		
ORIF	**Oris-en-Rattie** comp=Z,7.4nm,1.0s,mb4.4	**83.38**	**337**	*e*P		**P**	**00 41 06.7**	**-0.5**	
ORIF	**Oris-en-Rattie** comp=Z,4.0nm,1.0s,mb4.4	**83.38**	**337**	*e*P		**P**	**00 41 06.7**	**-0.5**	
ORIF				pmax		pmax			
ORIF	**Oris-en-Rattie** comp=Z,3.7nm,1.0s,mb4.4	**83.38**	**337**	*e*P		**P**	**00 41 06.7**	**-0.5**	
VIVF	**Saint-Julien-l** comp=Z,10nm,1.1s,mb4.6	**83.75**	**338**	*e*P		**P**	**00 41 09.4**	**+0.3**	
VIVF	**Saint-Julien-l** comp=Z,5.0nm,1.1s,mb4.6	**83.75**	**338**	*e*P		**P**	**00 41 09.4**	**+0.3**	
VIVF				pmax		pmax			
VIVF	**Saint-Julien-l** comp=Z,5.2nm,1.1s,mb4.6	**83.75**	**338**	*e*P		**P**	**00 41 09.4**	**+0.3**	
FRF	**La Foret Royal** comp=Z,26nm,1.6s,mb4.8	**84.44**	**336**	*e*P		**P**	**00 41 12.0**	**-0.6**	
FRF	**La Foret Royal**	**84.44**	**336**	*e*P		**P**	**00 41 12.0**	**-0.6**	
FRF	comp=Z,13nm,1.6s,mb4.8			pmax		pmax			
FRF	**La Foret Royal** comp=Z,13nm,1.6s,mb4.8	**84.44**	**336**	*e*P		**P**	**00 41 12.0**	**-0.6**	
LMR	**La Mourre** comp=Z,21nm,1.3s,mb4.8	**84.69**	**336**	*e*P		**P**	**00 41 13.7**	**-0.2**	
LMR	**La Mourre**	**84.69**	**336**	*e*P		**P**	**00 41 13.7**	**-0.2**	
LMR	comp=Z,10.0nm,1.3s,mb4.8			pmax		pmax			
LMR	**La Mourre** comp=Z,10nm,1.3s,mb4.8	**84.69**	**336**	*e*P		**P**	**00 41 13.7**	**-0.2**	
BDFB	**Brasilia** comp=Z,1.3nm,0.6s,baz=47,slow=2.1,SNR=4.5	**143.65**	**36**	PKP		PKPdf	00 48 22.7	-2.8	
CPUP	**Villa Florida** comp=Z,1.3nm,0.6s,baz=47,slow=2.1,SNR=4.5	**148.07**	**59**	PKPbc		PKPbc	00 48 22.7	-2.8	
CPUP				PKP2		PKPbc			
				pmax		pmax			
	comp=Z,1.0nm,0.6s								
SNAA	**Sanae**	**153.41**	**197**	*e*PKPdf		PKPbc	00 48 33.5	-3.2	
SNAA				*e*			00 48 46.3		
SNAA				*e*			00 48 50.6		
VNA2	**Neumayer--Watz** baz=176,slow=0.4	**154.87**	**195**	*e*PKPdf		PKPbc	00 48 36.4	-3.5	
VNA2				*e*			00 48 52.7		
VNA2				*e*			00 49 10.2		
VNA3	**Neumayer Olymp**	**154.97**	**193**	*e*PKPdf		PKPbc	00 48 36.4	-3.7	
VNA3				*e*			00 48 52.7		
VNA3				*e*			00 49 10.1		
VNA1	**Neumayer--Stat**	**155.25**	**195**	*e*PKPdf		PKPdf	00 48 37.8	+6.1	
VNA1				*e*			00 48 54.7		
VNA1				*e*			00 49 11.9		

*ISCJB **23** 00:38:48.7±0.7,3120S×1007×1795W±0.2,h207km±9km, mb4.0/5, Error ellipse: s-maj=22.1km s-min=9.4km az=20.5*

*NEIC **23** 00:38:48.4±0.8,3129S×17902W,h221km±7km, Error ellipse: s-maj=19.9km s-min=10.2km az=123.0*

*IDC **23** 00:38:49.0±1.0,3132S×179.11W,h220km±8km, mb3.8/5, mb1 4.0/8, mb1mx3.7/17, mbtmp3.9/8, Error ellipse: s-maj=23.7km s-min=11.5km az=125.0*

ISC 23 00:38:49.5±0.7,3123S×007×1795W±01,h202km±8km,n23, σ0§87/15,mb4.0/5,1D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.39**	**35**	P		P	**Pn**	**00 39 31.0**	**-1.3**
	131nm,0.3s,baz=229,slow=23,SNR=9.6								
RAO				S			**Sn**	**00 40 06.8**	**+1.1**
	208nm,0.3s,baz=111,slow=22,SNR=4.5								
URZ	**Urewera**	**7.55**	**201**	P		P	**Pn**	**00 40 36.9**	**0.0**
	3.4nm,0.3s,baz=260,slow=5.2,SNR=24								
URZ				S			**Sn**	**00 42 01.8**	**-0.5**
	19nm,0.3s,baz=272,slow=13,SNR=15								
RPZ	**Rata Peaks**	**14.54**	**208**	P			**Pn**	**00 42 05.8**	**0.0**
	1.8nm,0.3s,baz=53,slow=20,SNR=3.9								
RPZ				S			**S**	**00 44 37.2**	**-10**
	3.8nm,0.3s,baz=141,slow=23,SNR=11								
CTA	**Charters Tower**	**32.70**	**282**	P			**P**	**00 45 03.4**	**+0.4**
	1.6nm,0.4s,mb3.9,baz=164,slow=7.4,SNR=4.9								
STKA	**Stephens Creek**	**33.06**	**259**	P			**P**	**00 45 08.2**	**+2.1**
	7.4nm,0.8s,mb4.3,baz=92,slow=9.3,SNR=11								
ASAR	**Alice Springs**	**41.80**	**269**	P			**P**	**00 46 19.4**	**0.0**
	2.8nm,0.7s,mb3.8,baz=105,slow=7.5,SNR=34								
WB2	**Warramunga Arr**	**42.86**	**274**	⇓*i*P			**P**	**00 46 27.5**	**-0.5**
WRA	**Warramunga Arr**	**42.87**	**274**	P			**P**	**00 46 27.7**	**-0.5**
	4.9nm,0.7s,mb4.0,baz=112,slow=7.8,SNR=42								
SNAA	**Sanae**	**77.36**	**179**	*e*PKPdf			**P**	**00 50 21.4**	**0.0**
SNAA				*e*				00 50 26.7	
VNA3	**Neumayer Olymp**	**77.56**	**177**	*e*PKPdf			**P**	**00 50 22.9**	**+0.4**
VNA3				*e*				00 50 27.9	
VNA3				*e*				00 50 36.3	
VNA3				*e*				00 50 45.1	
VNA2	**Neumayer--Watz** baz=206,slow=4.8	**77.98**	**177**	*e*PKPdf			**P**	**00 50 25.5**	**+0.7**
VNA2				*e*				00 50 30.8	
VNA2				*e*				00 50 38.6	
VNA2				*e*				00 50 47.2	
PETK	**Petropavlovsk-**	**86.31**	**346**	P			**P**	**00 51 06.5**	**-1.6**
	2.0nm,0.7s,mb4.0,baz=114,slow=7.2,SNR=5.2								
MKAR	**Makanchi Array**	**117.33**	**310**	PKP			PKPdf	00 57 07.3	-3.1
	0.2nm,0.3s,baz=243,slow=1.5,SNR=4.0								
MIV	**Mineville/With**	**121.82**	**55**	*e*PKPdf			PKPdf	00 57 14.5	-4.7
BVAR	**Borovoye Array**	**126.11**	**315**	PKP			PKPdf	00 57 24.9	-2.2
	0.9nm,0.4s,baz=118,slow=1.0,SNR=9.1								
KEV	**Kevo**	**138.64**	**346**	*e*pkp			PKPdf	00 57 55.7	+5.5
ARCES	**ARCESS Array B**	**139.12**	**347**	PKhKP				00 57 43.7	
	0.4nm,0.5s,baz=2.3,slow=2.2,SNR=6.0								
ARCES				PKP			PKPdf	00 57 49.0	-2.2
	4.2nm,1.0s,baz=79,slow=2.8,SNR=6.8								
KAF	**Kangasniemi**	**144.89**	**339**	*e*pkp			PKPdf	00 57 57.7	-3.9
	2.2nm,0.4s,baz=42,slow=3.1								
NB2	**NORSAR Subarra**	**149.36**	**350**	PKP			PKPdf	00 58 11.1	+2.1
	comp=Z,1.5nm,0.7s,baz=11,slow=3.4								
NOA	**NORSAR Array B**	**149.36**	**350**	PKPbc			PKPbc	00 58 11.2	-2.5
	comp=Z,1.1nm,0.7s,baz=9.9,slow=4.0,SNR=4.4								
NOA				PKPab			PKPab	00 58 16.4	-2.6
	comp=Z,0.8nm,0.5s,baz=29,slow=6.5,SNR=3.9								
NOA	**NORSAR Array B**	**149.36**	**350**	PKPbc			PKPbc	00 58 11.2	-2.5
NOA				PKPab			PKPab	00 58 16.4	-2.6
HFS	**Hagfors**	**149.78**	**347**	PKPbc			PKPbc	00 58 11.8	-2.9
	comp=Z,0.7nm,0.3s,baz=93,slow=2.5,SNR=13								
HFS				PKPab			PKPab	00 58 18.1	-2.8
	comp=Z,0.9nm,0.3s,baz=90,slow=4.4,SNR=7.8								
TORD	**Torodi Ar. Bea**	**161.97**	**184**	PKPab			PKPab	00 59 11.7	-2.4
	comp=Z,0.5nm,0.6s,baz=157,slow=3.9,SNR=5.5								

NNC 23 00:43:00.6±2.9,4266N×8121E,h0km,mb3.7,mpv3.3, 2C-4D,Error ellipse: s-maj=33.8km s-min=16.4km az=150.0,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**4.14**	**276**	⇑Pn			Pn	00 44 06.4	+1.4
	37nm,1.8s								
TKM2				⇓Lg				00 45 08.4	
	8.0nm,0.6s								
MK31	**Makanchi Array**	**4.21**	**10**	⇑Pn			Pn	00 44 08.5	+2.5
	0.7nm,0.4s,baz=192,slow=12								
MK31				⇓Lg				00 45 14.0	
	6.2nm,0.5s,baz=190,slow=26								
KURBB	**Kurchatov Arra**	**8.18**	**348**	⇓Lg				00 47 21.9	
	1.4nm,0.8s								
KURK	**Kurchatov**	**8.26**	**348**	⇓Lg				00 47 24.4	
	11nm,1.4s								

*GII **23** 00:54:16.8±0.7,3548N×2647E,h0km±8km,mb4.9/4, ML4.9/4*

*ISK **23** 00:54:23.9,3484N×2691E,h11km,ML5.1*

*DDA **23** 00:54:25.4,3510N×2701E,h5km±4km, Ml5.2*

*SZGRF **23** 00:54:26.1,3462N×2670E,h10km,mb4.9,MS4.5,Crete, Greece*

*MOS **23** 00:54:26.2±1.4,3500N×2711E,h15km,mb5.2/78, MS4.7/45,Error ellipse: s-maj=4.8km s-min=2.2km az=113.5*

*ISCJB **23** 00:54:26.4±0.3,35087N±0010×27.10E±001,h4km±2km, mb5.1/209,MS4.7/51,Error ellipse: s-maj=1.7km s-min=1.3km az=27.6*

*NIC **23** 00:54:27.7±0.2,3560N×2697E,h17km,mb5.3,ML5.1, MW4.2*

*IDC **23** 00:54:27.8±0.4,3536N×2704E,h0km,mb4.8/29, mb1 4.9/35,mb1mx4.8/36,mbtmp4.8/35,ML4.5/5,MS4.8/20, Ms1 4.7/20,ms1mx4.6/34,Error ellipse: s-maj=10.0km s-min=9.3km az=133.0*

*CSEM **23** 00:54:27.5±0.0,3508N×27.14E,h10km,mb5.2/99,Ms4.6, Mw5.0,Error ellipse: s-maj=0.9km s-min=0.7km az=37.0*

*PDG **23** 00:54:28.5±0.8,3490N×2703E,h29km±4km,ML5.0/10, Error ellipse: s-maj=1.7km s-min=1.4km az=90.0*

*ATH **23** 00:54:28.9,3522N×2715E,h22km±1km,MD4.9/22,ML5.1*

*BGS **23** 00:54:28.4±2.1,3495N×2739E,h33km,mb5.2*

*THE **23** 00:54:29.8,3516N×2712E,h1km,ML5.6*

*NEIC **23** 00:54:29.6,3527N×2712E,h24km,mb5.1/149, ML5.1(ATH),ML5.6(THE),After ATH.*

NEIC Felt on Karpathos.

*GCMT **23** 00:54:29.6±0.2,3524N×2692E,h18km,MW5.3/102, Moment Tensor Solution. s61,c86; s102,c204; Duration: 1§1 Moment tensor: Scale 10^17^Nm; Mrr~0.51±.02; Mθθ~0.46±.02; Mφφ0.96±.02; Mrθ0.39±.05; Mθφ0.47±.01; Mφr~0.77±.06; Best double couple: M=1.28600×10^17^ NP1:φ=234.00000°,δ41.00000°, λ~23.00000°. NP2:φ=342.00000°,δ75.00000°, λ~129.00000°. Principal axes: T 1.3410, Plg20.0000°, Azm100.0000°; N -0.1090, Plg37.0000°, Azm354.0000°; P -1.2320, Plg46.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*BJI **23** 00:54:29.5,3536N×2723E,h16km,mB5.3,mb5.0,Ms5.1, Msz4.8*

*HLW **23** 00:54:30.4,3522N×27.19E,h20km,Mb5.2*

*DJA **23** 00:54:59,3371N×2740E,h0km,Mw6.8/6*

*ORF **23** 00:55:01.7,3616N×2403E,h30km,mb4.9*

ISC 23 00:54:29.5±0.3,35111N±0010×27065E±0010,h12km±2km, h14km±.9km:pP-P,n1296,σ1§31/1445,mb5.1/209,MS4.7/51, 59C-33D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.44**	**10**	⇓*i*PB			**Pg**	**00 54 35.8**	**-2.4**
KARP				*e*SB			**Sg**	**00 54 41.8**	**-2.4**
ZKR	**Zakros**	**0.70**	**271**	*e*Pg			**Pg**	**00 54 42.4**	**-0.6**
ZKR				*e*Sg			**Sg**	**00 54 57.1**	**+5.0**
NPS	**Neapolis**	**1.20**	**278**	⇑*i*PN			**Pn**	**00 54 51.7**	**-0.4**
NPS				*e*SN			**Sn**	**00 55 10.3**	**+2.0**
LAST	**Lasithi**	**1.30**	**273**	*e*Pg			**Pg**	**00 54 53.1**	**-1.4**
LAST				*e*Sg			**Sg**	**00 55 14.2**	**+2.8**
ARG	**Arkhangelos**	**1.40**	**38**	⇓*i*PN			**Pn**	**00 54 53.0**	**-1.8**
ARG				*e*SN			**Sn**	**00 55 11.1**	**-2.1**
IDI	**Anoyia**	**1.79**	**276**	Pn			**Pn**	**00 55 01.5**	**+1.4**
	2µm,0.3s,baz=92,slow=14,SNR=956								
IDI							Sn	**00 55 25.6**	**+2.7**
	842nm,0.3s,baz=30,slow=20,SNR=14								
IDI	**Anoyia**	**1.79**	**276**	Sn			**Sn**	**00 55 25.5**	**+2.7**
IDI	**Anoyia**	**1.79**	**276**	Sn			**Sn**	**00 55 25.6**	**+2.7**
THR1	**Thera Island**	**1.81**	**314**	*e*Pb			**Pb**	**00 54 59.8**	**-2.8**
SANT	**Santorini**	**1.81**	**314**	*e*Pb			**Pb**	**00 54 59.5**	**-3.1**
SANT				*e*Sb			**Sb**	**00 55 24.6**	**-0.6**
THR6	**Thira Island,**	**1.84**	**313**	*e*Pb			**Pb**	**00 54 59.9**	**-3.1**
SIVA	**Sivas**	**1.85**	**268**	*e*Pb			**Pb**	**00 55 02.8**	**-0.5**
SIVA				*e*Sb			**Sb**	**00 55 26.8**	**+0.4**
THR3	**Thira Island,**	**1.87**	**314**	*e*Pb			**Pb**	**00 55 00.0**	**-2.9**
THR4	**Thira Island,**	**1.91**	**315**	*e*Pb			**Pb**	**00 55 01.1**	**-3.2**
THR5	**Thira Island,**	**1.91**	**314**	*e*Pb			**Pb**	**00 55 01.0**	**-3.3**
BODT	**Bodrum**	**1.96**	**6**	*e*PN			**Pn**	**00 55 01.9**	**-0.6**
BODT				*e*SN			**Sn**	**00 55 29.0**	**+2.0**
BDRM	**Kayabasi**	**1.98**	**9**	*i*P			**Pn**	**00 55 01.3**	**-1.4**
BDRM				*i*S			**Sn**	**00 55 20.0**	**-7.4**
TURN	**Turunc**	**2.16**	**35**	*i*P			**Pn**	**00 55 01.2**	**-4.0**
TURN				*i*S			**Sn**	**00 55 26.9**	**-5.0**
YER	**Yerkesik**	**2.25**	**26**	*e*PN			**Pn**	**00 55 06.4**	**-0.1**
YER				*e*SN			**Sn**	**00 55 37.7**	**+3.6**
MLSB	**Milas**	**2.25**	**15**	*e*PN			**Pn**	**00 55 06.7**	**+0.1**
KSL	**Kastellorizon**	**2.30**	**62**	*e*PB			**Pb**	**00 55 06.8**	**-4.1**
KSL	**Kastellorizon**	**2.30**	**62**	*e*Pb			**Pb**	**00 55 07.5**	**-3.4**
APE	**Apeiranthos**	**2.32**	**328**	*e*Pn			**Pn**	**00 55 06.1**	**-1.3**
APE				*e*Sn			**Sn**	**00 55 36.5**	**+0.6**
APE	**Apeiranthos**	**2.32**	**328**	*e*Pn			**Pn**	**00 55 06.6**	**-0.8**
APE	**Apeiranthos**	**2.32**	**328**	*i*P			**Pn**	**00 55 06.0**	**-1.4**
AKAS	**Kas**	**2.35**	**61**	*i*P			**Pn**	**00 55 08.2**	**+0.3**
AKAS				*i*S			**Sg**	**00 55 44.1**	**-1.0**
VAM	**Vamos**	**2.36**	**278**	*e*PN			**Pn**	**00 55 09.7**	**+1.6**
VAM	**Vamos**	**2.36**	**278**	*e*Pb			**Pb**	**00 55 11.2**	**-0.8**
GVD	**Gavdhos**	**2.46**	**265**	*e*PN			**Pn**	**00 55 11.2**	**+1.8**
GCAM	**G?zelcaml?**	**2.59**	**3**	*i*P			**Pn**	**00 55 11.8**	**+0.7**
SMG	**Samos**	**2.60**	**356**	*e*PN			**Pn**	**00 55 10.2**	**-1.1**
AYDN	**Tasoluk**	**2.63**	**14**	*i*P			**Pn**	**00 55 11.6**	**-0.1**
AYDN				*i*S			**Sn**	**00 55 46.5**	**+2.9**
ELL	**Elmali**	**2.83**	**54**	*e*PN			**Pn**	**00 55 14.5**	**+0.1**
GOLH	**Golhisar**	**2.93**	**43**	*i*P			**Pn**	**00 55 17.1**	**+1.2**
GOLH				*i*S			**Sg**	**00 56 02.8**	**-0.7**
DNZL	**Cakiroluk**	**3.03**	**31**	*i*P			**Pn**	**00 55 16.7**	**-0.5**
BLCB	**Balcova**	**3.27**	**360**	*e*PN			**Pn**	**00 55 20.4**	**-0.1**
KDAG	**Bornova**	**3.29**	**3**	*i*P			**Pn**	**00 55 20.9**	**+0.1**
CHOS	**Chios island**	**3.37**	**346**	*e*Pn			**Pn**	**00 55 21.2**	**-0.7**
CHOS				*e*Sn			**Sn**	**00 56 03.3**	**+1.5**
ANTB	**Antalya**	**3.41**	**57**	*e*PN			**Pn**	**00 55 22.4**	**-0.1**
KYTH	**Kithira**	**3.48**	**291**	*e*Pn			**Pn**	**00 55 23.0**	**-0.4**
MANT	**Manisa**	**3.58**	**19**	*i*P			**Pn**	**00 55 25.9**	**+1.1**
KULA	**Kula-Manisa**	**3.63**	**20**	*e*PN			**Pn**	**00 55 25.2**	**-0.3**
BCK	**Bucak**	**3.69**	**49**	*e*PN			**Pn**	**00 55 27.3**	**+1.0**
KHL	**Karahalli**	**3.77**	**31**	*e*PN			**Pn**	**00 55 27.7**	**+0.4**
KVR	**Kavouri**	**3.80**	**317**	*e*PN			**Pn**	**00 55 28.5**	**+0.7**
KVR	**Kavouri**	**3.80**	**317**	*e*Pn			**Pn**	**00 55 28.7**	**+0.9**
AKHS	**Akhisar**	**3.81**	**9**	*i*P			**Pn**	**00 55 28.1**	**+0.2**
AKHS				*i*S			**Sn**	**00 56 19.6**	**+7.0**
AKS	**Akhisar**	**3.81**	**9**	*e*PN			**Pn**	**00 55 28.6**	**+0.6**
ISP	**Isparta**	**3.89**	**44**	*e*PN			**Pn**	**00 55 29.0**	**-0.1**
ISP	**Isparta**	**3.89**	**44**	*e*Pn			**Pn**	**00 55 29.3**	**+0.2**
ISP				*e*Sn			**Sn**	**00 56 14.6**	**-0.1**
ISP	**Isparta**	**3.89**	**44**	*e*Pn			**Pn**	**00 55 29.2**	**+0.1**
PTL	**Penteli**	**3.90**	**320**	*e*PN			**Pn**	**00 55 30.0**	**+0.8**
DID	**Didima**	**3.91**	**309**	*e*Pn			**Pn**	**00 55 30.5**	**+1.2**
DID				*e*Sn			**Sn**	**00 56 16.8**	**+1.7**
NAIG	**Nisos Aigina**	**3.91**	**314**	*e*PN			**Pn**	**00 55 29.0**	**+0.7**
NAIG	**Nisos Aigina**	**3.91**	**314**	*e*Pn			**Pn**	**00 55 29.5**	**+0.2**
TKTP	**Tekketepe**	**3.92**	**41**	*i*P			**Pn**	**00 55 31.0**	**+1.4**
ATH	**Athens Observa**	**3.93**	**318**	*e*PN			**Pn**	**00 55 29.9**	**+0.3**
SLUM		**3.93**	**204**	P			**Pn**	**00 55 31.2**	**+1.6**
SLUM				S			**Sn**	**00 56 14.3**	**-1.3**
HMAT	**Matruh**	**4.01**	**180**	⇑*i*P			**Pn**	**00 55 31.3**	**+0.6**
LTBQ	**Tobruq** SNR=23	**4.02**	**222**	*i*P			**Pn**	**00 55 32.7**	**+1.8**
DEMI	**Demirci**	**4.14**	**18**	*i*P			**Pn**	**00 55 32.5**	**0.0**
PRK	**Paraskevi**	**4.18**	**352**	*e*Pn			**Pn**	**00 55 32.2**	**-0.7**
PRK				*e*Sn			**Sn**	**00 56 22.1**	**+0.4**
PRK	**Paraskevi**	**4.18**	**352**	*e*PN			**Pn**	**00 55 32.5**	**-0.5**
PRK	**Paraskevi**	**4.18**	**352**	*e*Pn			**Pn**	**00 55 32.2**	**-0.8**
PRK				*e*Sn			**Sn**	**00 56 22.0**	**+0.3**
AYVA	**Ayvalik**	**4.20**	**356**	*i*P			**Pn**	**00 55 34.6**	**+1.3**
AKMC	**Akamas**	**4.32**	**90**	P			**Pn**	**00 55 34.1**	**-0.9**
PPCY	**Paphos**	**4.34**	**91**	⇑*i*P			**Pn**	**00 55 34.1**	**-1.1**
LTK	**Loutraki**	**4.40**	**313**	*e*Pn			**Pn**	**00 55 38.1**	**+2.0**
LTK				*e*Sn			**Sn**	**00 56 28.0**	**+0.9**
VLX	**Vlachokerasia**	**4.41**	**302**	*e*Pn			**Pn**	**00 55 37.5**	**+1.3**
GDZ	**Gediz**	**4.42**	**25**	*i*P			**Pn**	**00 55 36.5**	**+0.3**
SHUT	**Suhut-Afyon**	**4.43**	**38**	*e*PN			**Pn**	**00 55 37.4**	**+1.0**
ALFC	**Alevga** 64nm,0.8s	**4.54**	**88**	P			**Pn**	**00 55 36.7**	**-1.2**
ALFC				S			**Sn**	**00 56 30.5**	**-0.1**
BALB	**Balikesir**	**4.57**	**8**	*e*PN			**Pn**	**00 55 38.9**	**+0.6**
DURS	**Dursunbey**	**4.62**	**14**	*i*P			**Pn**	**00 55 39.0**	**-0.1**
ALT	**Altintas**	**4.63**	**31**	*e*PN			**Pn**	**00 55 39.9**	**+0.7**
BALY	**Balya**	**4.64**	**5**	*i*P			**Pn**	**00 55 39.3**	**-0.1**
BALY				*i*S			**Sn**	**00 56 37.0**	**+3.9**
ITM	**Ithomi**	**4.64**	**298**	*e*PN			**Pn**	**00 55 41.8**	**+2.4**
ITM	**Ithomi**	**4.64**	**298**	*e*Pn			**Pn**	**00 55 42.0**	**+2.6**
DST	**Dursunbey**	**4.66**	**15**	*e*PN			**Pn**	**00 55 39.9**	**+0.4**
PYL	**PYLOS**	**4.67**	**294**	*e*Pn			**Pn**	**00 55 40.5**	**+0.7**
EZN	**Ezine**	**4.74**	**353**	*e*Pn			**Pn**	**00 55 41.4**	**+0.6**
HDMB	**Hadim**	**4.77**	**66**	*e*Pn			**Pn**	**00 55 41.9**	**+0.8**
LEF	**Lefka**	**4.78**	**88**	*e*PN			**Pn**	**00 55 39.1**	**-2.1**
AOS	**Alonnisos**	**4.78**	**329**	*e*Pn			**Pn**	**00 55 41.6**	**+0.2**
SZAC	**Souni-Zanaja**	**4.79**	**93**	P			**Pn**	**00 55 41.0**	**-0.5**
SZAC				S			**Sn**	**00 56 38.1**	**+1.2**
LKR	**Lokris**	**4.81**	**319**	*e*Pn			**Pn**	**00 55 42.3**	**+0.7**
LKR	**Lokris**	**4.81**	**319**	*e*PN			**Pn**	**00 55 43.0**	**+1.4**
LIA	**Limnos Island**	**5.01**	**343**	*e*PN			**Pn**	**00 55 44.0**	**-0.4**
LIA	**Limnos Island**	**5.01**	**343**	*e*Pn			**Pn**	**00 55 44.4**	**0.0**
MAMC	**Mammari**	**5.04**	**88**	*i*P			**Pn**	**00 55 44.0**	**-0.9**
KONT	**Konya--Tatoy**	**5.12**	**55**	*e*PN			**Pn**	**00 55 46.9**	**+1.0**
CSS	**Prodhromos** 19nm,0.6s	**5.14**	**90**	P			**Pn**	**00 55 45.0**	**-1.3**
CSS				S			**Sn**	**00 56 46.0**	**+0.5**
CSS	**Prodhromos**	**5.14**	**90**	*e*Pn			**Pn**	**00 55 45.5**	**-0.7**
CSS				*e*Sn			**Sn**	**00 56 46.4**	**+0.9**
CSS	**Prodhromos**	**5.14**	**90**	*e*Pn			**Pn**	**00 55 45.8**	**-0.4**
CSS				S			**Sn**	**00 56 46.0**	**+0.5**
CSS				*e*Sn			**Sn**	**00 56 46.4**	**+0.9**
CSS	**Prodhromos**	**5.14**	**90**	*e*Pn			**Pn**	**00 55 44.9**	**-1.3**
CSS				S			**Sn**	**00 56 46.4**	**+0.9**
NEO	**Neokhori**	**5.19**	**325**	*e*PN			**Pn**	**00 55 47.5**	**+0.6**
XOR	**Xorichti**	**5.25**	**325**	*e*Pn			**Pn**	**00 55 48.3**	**+0.5**
LADK	**Ladik-KONYA**	**5.26**	**53**	*e*PN			**Pn**	**00 55 48.0**	**+0.2**
LPK	**Lapseki**	**5.26**	**357**	*e*PN			**Pn**	**00 55 49.0**	**+1.1**
LFK	**Lefkose**	**5.30**	**86**	*e*PN			**Pn**	**00 55 47.2**	**-1.2**
ESKT	**Eskisehir**	**5.33**	**33**	*i*P			**Pn**	**00 55 49.0**	**+0.1**
RLS	**Riolos of Patr**	**5.38**	**305**	*e*Pn			**Pn**	**00 55 52.4**	**+2.9**
KIZT	**Kizilcal**	**5.38**	**44**	*e*PN			**Pn**	**00 55 50.1**	**+0.5**
AGG	**Agios Georgios**	**5.44**	**317**	*e*Pn			**Pn**	**00 55 51.6**	**+1.3**
AGG				*e*Sn			**Sn**	**00 56 53.6**	**+0.8**
BORA	**Eskisehir**	**5.47**	**28**	*i*P			**Pn**	**00 55 50.5**	**-0.2**
BORA				*i*S			**Sg**	**00 57 32.1**	**+7.1**
MRMT	**Marmara Adasi**	**5.50**	**4**	*e*PN			**Pn**	**00 55 52.0**	**+0.9**
IKL	**Isikli**	**5.50**	**76**	*e*PN			**Pn**	**00 55 50.8**	**-0.5**
PAIG	**Paliouri**	**5.51**	**332**	*e*Pn			**Pn**	**00 55 51.5**	**+0.3**
PAIG				*e*Sn			**Sn**	**00 56 55.8**	**+1.3**
PAIG	**Paliouri**	**5.51**	**332**	*e*Pn			**Pn**	**00 55 51.5**	**+0.2**
PAIG				*e*Sn			**Sn**	**00 56 55.8**	**+1.2**
RKY	**Sarkoy-Tekirda**	**5.57**	**1**	*e*PN			**Pn**	**00 55 54.0**	**+1.9**
GEMT	**Gemlik**	**5.58**	**17**	*e*PN			**Pn**	**00 55 53.5**	**+1.3**
MANS	**Anshas**	**5.58**	**137**	P			**Pn**	**00 55 58.4**	**+6.1**
ENEZ	**Enez**	**5.66**	**353**	*e*PN			**Pn**	**00 55 54.4**	**+1.0**
EVR	**Evrytania**	**5.67**	**314**	⇓*i*PN			**Pn**	**00 55 55.5**	**+2.0**
EVR	**Evrytania**	**5.67**	**314**	⇓*i*Pn			**Pn**	**00 55 56.3**	**+2.8**
MFT	**Murefte**	**5.67**	**2**	*e*PN			**Pn**	**00 55 54.7**	**+1.2**
PHNC	**Paralimni**	**5.71**	**89**	P			**Pn**	**00 55 54.1**	**0.0**
PHNC				S			**Sn**	**00 57 06.8**	**+7.1**
ADVT	**Abdulvahap**	**5.72**	**21**	*e*PN			**Pn**	**00 55 56.6**	**+2.4**
YLV	**Yalova**	**5.74**	**18**	*e*PN			**Pn**	**00 55 55.6**	**+1.1**
OUR	**Ouranopolis**	**5.76**	**336**	*e*Pn			**Pn**	**00 55 55.1**	**+0.4**
GPA	**Golpazari**	**5.77**	**25**	*e*PN			**Pn**	**00 55 56.2**	**+1.3**

STIP Stip 7.61 331 *e*Pn **Pn** 00 56 22.7 +2.6
STIP *e*Sn **Sb** 00 58 05.8 -6.1
STIP Stip 7.61 331 *e*Pn **Pn** 00 56 22.1 +2.0
LUJL Ujela 7.72 221 *i* P **Pn** 00 56 21.7 +0.1
SNR=22
KRUS Krusevo 7.74 326 *e*Pn **Pn** 00 56 26.5 +4.5
KRUS *e*Sn **Sb** 00 58 12.1 -3.7
OHR Ohrid 7.76 322 *e*Pn **Pn** 00 56 25.2 +3.0
OHR *e*Sn **Sn** 00 57 56.2 +6.2
HNKL Nakhl 7.79 130 ⇓P **Pn** 00 56 22.4 -0.3
DSI Dead Sea 7.80 115 Pn **Pn** 00 56 21.4 -1.4
CORM Corum 7.85 48 *e*PN **Pn** 00 56 25.0 +1.6
ANDN Andirin 7.88 69 *i* P **Pn** 00 56 24.1 +0.2
MZDA Masada 7.92 116 Pn **Pn** 00 56 23.1 -1.3
BNN Bunyan 7.96 59 *e*PN **Pn** 00 56 25.8 +0.9
HFRF Wahat Farafira 8.01 172 P **Pn** 00 56 27.3 +1.7
TOS Tosya 8.07 41 *e*PN **Pn** 00 56 28.2 +1.8
SKO Skopje 8.14 329 *e*Pn **Pn** 00 56 30.5 +3.1
SKO *e*Sn **Sn** 00 58 14.4 +15
KRMI Paran Flat 8.15 125 Pn **Pn** 00 56 26.4 -1.3
PRNI Paran 8.20 123 Pn **Pn** 00 56 27.6 -0.7
KMRS Kahramanmaras 8.29 70 *e*PN **Pn** 00 56 28.5 -1.0
GRB Gharib 8.38 143 P **Pn** 00 56 31.1 +0.4
HRFI Mount Harif 8.41 125 P **Pn** 00 56 30.7 -0.5
HRFI Mount Harif 8.41 125 Pn **Pn** 00 56 31.0 -0.3
TIR Tirane 8.42 320 *e*PN **Pn** 00 56 33.0 +1.8
TIR Tirane 8.42 320 *e*PN **Pn** 00 56 38.3 +7.1
GAZ Gaziantep 8.46 73 *e*PN **Pn** 00 56 31.1 -0.7
MBRI Mt Berech 8.49 126 Pn **Pn** 00 56 32.1 -0.2
QSH Qafa e Shtames 8.52 321 *e*PN **Pn** 00 56 40.0 +7.4
EIL Elat 8.59 127 Pn **Pn** 00 56 33.0 -0.7
2.5nm,0.3s,baz=328,slow=9.3,SNR=37
EIL Sn **Sn** 00 58 07.1 -3.4
8.9nm,0.3s,baz=318,slow=16,SNR=3.5
EIL Elat 8.59 127 Sn **Sn** 00 58 07.1 -3.4
EIL Elat 8.59 127 Sn **Sn** 00 58 07.1 -3.4
EIL Elat 8.59 127 Pn **Pn** 00 56 33.6 0.0
ASUT 8.60 152 P **Pn** 00 56 34.8 +1.1
ZIMR 8.64 352 ⇑*i*P **Pn** 00 56 40.7 +6.5
ASF Jabal al Asfar 8.71 107 Pn **Pn** 00 56 34.5 -0.7
1.5nm,0.3s,baz=161,slow=9.2,SNR=18
ASF Sn **Sn** 00 58 18.0 +4.7
1.9nm,0.3s,baz=53,slow=20,SNR=2.3
ASF Jabal al Asfar 8.71 107 P **Pn** 00 56 34.5 -0.7
ASF 00 58 18.0
ASF pmax pmax
comp=Z,2.0nm,0.3s
ASF smax
comp=N,2.0nm,0.3s
ASF Jabal al Asfar 8.71 107 *e*P **Pn** 00 56 34.7 -0.5
SNR=33
ASF Sn **Sn** 00 58 18.0 +4.7
BZK Bozkurt 8.73 36 *e*PN **Pn** 00 56 37.0 +1.4
GLFJ 8.74 128 *e*P **Pn** 00 56 36.4 +0.7
SNR=33
HBST Basata 8.76 130 ⇑P **Pn** 00 56 36.0 0.0
TR2 8.78 138 P **Pn** 00 56 35.8 -0.4
PUK Puka 8.91 323 *e*PN **Pn** 00 56 44.9 +6.9
HQLS 8.91 128 P **Pn** 00 56 36.5 -1.5
BCI Bajram Curri 9.07 325 *e*PN **Pn** 00 56 44.8 +4.6
DIKM Dikmen 9.16 42 *e*PN **Pn** 00 56 42.7 +1.3
TIP Timpagrande 9.18 299 *e*Pn **Pn** 00 56 40.4 -1.2
TIP Timpagrande 9.18 299 *e*Pn **Pn** 00 56 40.4 -1.2
ULC Ulcinj 9.18 321 ⇑*i*Pn **Pn** 00 56 42.5 +0.9
ULC *e*Sn **Sn** 00 58 23.2 -1.6
TR1 9.20 138 ⇓P **Pn** 00 56 42.1 +0.1
SVSK Karacayir 9.23 56 *e*PN **Pn** 00 56 43.0 +0.6
KVT Kavak 9.25 47 *e*PN **Pn** 00 56 44.0 +1.3
AKCD Akcadag 9.28 67 *e*P **Pn** 00 56 41.9 -1.1
PVY Plav 9.29 326 ⇑*i*Pn **Pn** 00 56 45.8 +2.6
PVY *e*Sn **Sn** 00 58 26.4 -1.2
SHRM 9.39 138 ⇑P **Pn** 00 56 44.7 +0.2
TIRR Tirgusor 9.39 6 ⇑*i*P **Pn** 00 56 46.5 +1.9
TIRR Tirgusor 9.39 6 P **Pn** 00 56 46.2 +1.6
TIRR Tirgusor 9.39 6 P **Pn** 00 56 46.2 +1.6
DARE Darende-Malaty 9.40 63 *e*PN **Pn** 00 56 39.8 -4.9
RSHS 9.46 134 P **Pn** 00 56 46.9 +1.4
PDG Podgorica 9.51 323 ⇑*i*Pn **Pn** 00 56 47.8 +1.6
PDG *i* Sn **Sn** 00 58 39.7 +6.7
TTG Podgorica 9.51 323 ⇑*i*Pn **Pn** 00 56 47.8 +1.6
TTG *i* Sn **Sn** 00 58 39.7 +6.7
CRAR CRAIOVA 9.54 346 P **Pn** 00 56 49.9 +3.3
BDAS Al Bad' 9.54 132 P **Pn** 00 56 46.7 0.0
BEY Berane 9.54 326 ⇑*i*Pn **Pn** 00 56 48.8 +2.1
BEY *e*Sn **Sn** 00 58 32.9 -0.9
IVA Berane 9.54 326 ⇑*i*Pn **Pn** 00 56 48.8 +2.1
IVA *e*Sn **Sn** 00 58 32.9 -0.9
JLOS 9.57 129 P **Pn** 00 56 45.5 -1.5
JLOS 9.57 129 P **Pn** 00 56 45.5 -1.6
HARR Harsova 9.59 4 ⇑*i*P **Pn** 00 56 49.6 +2.3
BUM Brajici-Budva 9.60 321 ⇑*i*Pn **Pn** 00 56 48.8 +1.4
BUM *e*Sn **Sn** 00 58 33.2 -2.0
MALT Malatya 9.67 67 *e*PN **Pn** 00 56 48.1 -0.3
MALT Malatya 9.67 67 ⇓*i*P **Pn** 00 56 44.5 -3.8
MALT Malatya 9.67 67 *e*Pn **Pn** 00 56 44.3 -4.0
MALT Malatya 9.67 67 Pn **Pn** 00 56 43.8 -4.5
MYA Malatya 9.67 67 *e*PN **Pn** 00 56 48.8 +0.4
RSDY Resadiye-TOKAT 9.69 54 *e*PN **Pn** 00 56 49.3 +0.7
URFA Urfa 9.77 73 *e*PN **Pn** 00 56 48.8 -1.0
SJES Sjenica 9.82 328 *e*Pn **Pn** 00 56 51.9 +1.5
SJES *e*Sn **Sn** 00 58 31.6 -9.0
HCY Herceg Novi 9.91 320 ⇓*i*Pn **Pn** 00 56 53.1 +1.4
HCY *e*Sn **Sn** 00 58 40.8 -2.1
NKY Niksic 9.93 323 ⇑*i*Pn **Pn** 00 56 53.2 +1.3
NKY *e*Sn **Sn** 00 58 40.8 -2.3
ISR Istrita 10.01 358 ⇓*i*P **Pn** 00 56 55.5 +2.6
AKRG Al Kharijah 10.02 162 ⇑P **Pn** 00 56 54.0 +0.7
GTR Jabal at Tayr 10.03 162 P **Pn** 00 56 54.1 +0.6
PLE Pljevlja 10.13 326 ⇑*i*Pn **Pn** 00 56 56.9 +2.2
PLE *e*Sn **Sn** 00 58 47.2 -1.0
TLCR 10.15 7 ⇑*i*P **Pn** 00 56 57.7 +2.7
CUC Castrocucco 10.17 302 *e*Pn **Pn** 00 56 53.9 -1.4
comp=N,321nm,0.7s
CUC Castrocucco 10.17 302 *e*Pn **Pn** 00 56 53.9 -1.4
comp=N,321nm,0.7s
TREB Trebinje 10.18 321 *e*Pn **Pn** 00 56 53.7 -1.7
TREB *e*Sn **Sn** 00 58 33.3 -14
BRY Bratogost 10.22 322 ⇓*i*Pn **Pn** 00 56 56.6 +0.7
BRY *e*Sn **Sn** 00 58 48.1 -2.2
UPM Unac-Piva 10.26 324 ⇓*i*Pn **Pn** 00 56 57.4 +0.9
UPM *e*Sn **Sn** 00 58 49.6 -1.8
SVRC Sivrice-ELAZID 10.35 68 *e*PN **Pn** 00 56 57.4 -0.3
HSFG 10.36 143 ⇑P **Pn** 00 56 58.2 +0.4
HSFG 10.36 143 P **Pn** 00 56 58.2 +0.4
LZLA Zalla 10.39 234 *i* P **Pn** 00 56 57.5 -0.8
SNR=22
MLR Muntele Rosu 10.40 356 Pn **Pn** 00 56 57.8 -0.6
comp=N,0.7nm,0.3s,baz=178,slow=7.7,SNR=36
MLR LR LR 01 01 30.5
comp=N,6µm,18.0s,baz=3.3,slow=42
MLR Muntele Rosu 10.40 356 P **Pn** 00 56 57.8 -0.6
MLR pmax pmax
comp=Z,1.0nm,0.3s
MLR MLR MLR
comp=Z,6µm,18.0s
MLR Muntele Rosu 10.40 356 ⇓*i*P **Pn** 00 57 01.4 +3.0
LMSR Misrath 10.42 258 *i* P **Pn** 00 56 59.5 +0.8
SNR=22
VOIR 10.43 352 ⇑*i*P **Pn** 00 57 00.7 +1.9
VAE Valguarnera 10.48 287 Pn **Pn** 00 57 00.2 +0.6
comp=Z,5.4nm,0.3s,baz=56,slow=3.6,SNR=15
VAE Sn **Sn** 00 58 53.0 -3.9
comp=Z,5.7nm,0.3s,baz=68,slow=18,SNR=3.0
DIVS Divibare 10.50 331 *e*Pn **Pn** 00 57 01.2 +1.5
PTK Pertek 10.55 65 *e*PN **Pn** 00 57 00.3 -0.2
STON Ston 10.63 320 *e*Pn **Pn** 00 56 58.9 -2.7
STON Sn **Sn** 00 58 54.9 -5.5
ODB Odobesti 10.65 360 ⇑*i*P **Pn** 00 57 04.8 +3.0
PLOR Plostina 10.73 358 P **Pn** 00 57 05.6 +2.7
PLOR Plostina 10.73 358 ⇑*i*P **Pn** 00 57 06.1 +3.2
VRI Vrincioaia 10.75 359 ⇑*i*P **Pn** 00 57 06.1 +3.0
GZR Gura Zlata 10.78 344 ⇓*i*P **Pn** 00 57 05.5 +2.0
ESPY Espiye-Giresun 10.87 54 *e*PN **Pn** 00 57 05.2 +0.4
HDK2 Wahat Dakhilah 10.88 171 ⇑*i*P **Pn** 00 57 06.3 +1.3
GUMT Gumushane 11.18 58 *e*PN **Pn** 00 57 09.7 +0.6
MDB Medias 11.21 350 ⇓*i*P **Pn** 00 57 14.4 +5.0
SIM Simferopol' 11.21 27 *d*P **Pn** 00 57 11.0 +1.6
SIM S **Sn** 00 59 21.0 +6.4
SIM pmax pmax
comp=Z,61nm,0.9s
SIM MLR MLR
comp=Z,2µm,15.0s
HQSR 11.26 144 P **Pn** 00 57 10.9 +0.7
BZS Buzias 11.28 340 ⇑*i*P **Pn** 00 57 11.8 +1.4
LKFR Kufra 11.41 198 *i* P **Pn** 00 57 12.1 -0.2
SNR=22
FGSL Fruska Gora 11.46 333 *e*Pn **Pn** 00 57 14.4 +1.5
HADB 11.71 144 P **Pn** 00 57 17.3 +0.9
BIDS Bi'r al Bayda' 11.81 131 P **Pn** 00 57 18.6 +0.9
KIS Kishinev 11.95 6 *e*P **Pn** 00 57 17.0 -2.5
KIS *e*S **Sn** 00 59 28.0 -4.7
KIS pmax pmax
comp=Z,600nm,5.0s
KIS pmax pmax
comp=N,800nm,4.0s
KIS MLR MLR
comp=Z,8µm,12.0s
KIS MLR MLR
comp=N,6µm,10.0s
KIS MLR MLR
comp=Z,7µm,14.0s
KIS Kishinev 11.95 6 *e*P **Pn** 00 57 17.0 -2.5
comp=Z,600nm,5.0s
KIS Kishinev 11.95 6 *e*PP 00 57 29.0
KIS *e*S **Sn** 00 59 28.0 -4.7
KIS *e*Li 01 00 22.0
KIS *e*Lg 01 00 39.0
KIS *e*Lg2 01 01 10.0
KIS *e*Rg 01 01 44.0
KIS LRM 01 02 34.0
comp=Z,7µm,14.0s
LSHF Shwairf 11.96 248 *i* P **Pn** 00 57 18.3 -1.5
SNR=22
GHAR Gharyan 12.03 260 *i* P **Pn** 00 57 21.1 +0.4
SNR=22
IAS Iasi 12.08 2 ⇑*i*P **Pn** 00 57 22.9 +1.6
IAS Iasi 12.08 2 P **Pn** 00 57 24.3 +3.0
IAS Iasi 12.08 2 P **Pn** 00 57 24.3 +3.0
EMRS Mersa Alam 12.10 144 ⇑*e*P **Pn** 00 57 22.9 +1.1
BLY Banja Luka 12.24 325 *e*Pn **Pn** 00 57 23.4 -0.2
BLY *e*Sn **Sn** 00 59 26.6 -13
EZM Erzurum 12.32 63 *e*PN **Pn** 00 57 24.5 -0.1
AAHD Abu Hadid 12.36 155 P **Pn** 00 57 26.3 +1.1
AKRL Khor El Raml 12.42 155 P **Pn** 00 57 27.7 +1.5
ASHG Umm Shaghir 12.46 160 P **Pn** 00 57 28.1 +1.4
ANN Anapa 12.52 36 *e*P **Pn** 00 57 25.2 -2.1
ANN *e*S **Sn** 00 59 44.8 -1.8
ANN pmax pmax
comp=Z,82nm,1.8s
ANN MLR MLR
comp=Z,1µm,11.0s
BURAR Bucovina Array 12.57 354 ⇓*i*P **Pn** 00 57 31.8 +3.8
BURAR Bucovina Array 12.57 354 P **Pn** 00 57 31.6 +3.6
BURAR Bucovina Array 12.57 354 P **Pn** 00 57 31.6 +3.6
BUR08 Bucovina Ar. S 12.60 354 *e*Pn **Pn** 00 57 30.7 +2.3
HAGS Hagol 12.71 145 ⇓P **Pn** 00 57 31.2 +1.1
PKSM Moragy 12.79 333 ⇓*i*P **Pn** 00 57 32.2 +1.1
PKSM Moragy 12.79 333 ⇓P **Pn** 00 57 32.1 +1.1
HMSM Jabal Masmas 12.89 160 P **Pn** 00 57 34.4 +1.8
SOC Sochi 12.93 45 *c i*P **Pn** 00 57 31.5 -1.4
SOC *e* 00 59 52.2
SOC pmax pmax
comp=Z,9.0nm,0.9s
SOC MLR MLR
comp=Z,2µm,15.0s
HKFR Khafra 13.02 162 ⇓P **Pn** 00 57 36.1 +1.9
BCA Borcka 13.06 57 *e*PN **Pn** 00 57 34.9 +0.1
MSL Mosul 13.08 80 *ex* x 00 57 38.0
MSL *ex* x 01 00 15.0
SISC Sisak 13.17 325 *e*Pn **Pn** 00 57 36.3 +0.1
UMJS Umm Lajj 13.24 135 P **Pn** 00 57 38.8 +1.6
NVLJ Novalja 13.29 319 *e*Pn **Pn** 00 57 35.9 -1.9
AGRB Hanur-Agry 13.43 66 *e*PN **Pn** 00 57 39.5 -0.3
AADN Adndan 13.52 162 ⇓P **Pn** 00 57 43.5 +2.4
VANB Van 13.53 70 *e*PN **Pn** 00 57 40.2 -0.9
BOJS Bojanci 13.73 323 *e*Pn **Pn** 00 57 40.8 -3.1
BUD Budapest 13.75 336 *es*P 00 57 50.1
KARS Kars 13.80 62 *e*PN **Pn** 00 57 44.9 0.0
CRES Cresnjev 13.86 324 *e*Pn **Pn** 00 57 43.9 -1.8
CRES *e*Sn **Sn** 01 00 04.7 -15
PSZ Piszkesteto 13.87 339 ⇑*e*P **Pn** 00 57 47.6 +1.8
PSZ Piszkesteto 13.87 339 ⇓*i*P **Pn** 00 57 47.1 +1.3
PSZ Piszkesteto 13.87 339 *e*Pn **Pn** 00 57 46.2 +0.4
PSZ Piszkesteto 13.87 339 *e*Pn **Pn** 00 57 46.2 +0.5
UZH Uzhgorod 13.96 347 *e*P **Pn** 00 57 47.3 +0.2
UZH *e*S **Sn** 01 00 23.0 +1.1
UZH MLR MLR
comp=N,5µm,10.0s
UZH MLR MLR
comp=E,6µm,10.0s
UZH MLR MLR
comp=Z,4µm,10.0s
CLDR Caldiran 14.03 68 *e*PN **Pn** 00 57 46.4 -1.7
KOLS Kolonicke sedl 14.26 347 *e*P **Pn** 00 57 53.2 +2.1
KOLS Kolonicke sedl 14.26 347 *e*P **Pn** 00 57 53.2 +2.1
KOLS *e* 00 58 02.3
KOLS *e* 01 00 41.6
KOLS *e* 01 02 41.9
CEY Cerknica 14.31 322 *e*Pn **Pn** 00 57 51.0 -0.8
CEY Cerknica 14.31 322 *e*Pn **Pn** 00 57 49.9 -1.9
CEY *e*Sn **Sn** 01 00 13.3 -17
CRVS Cervenica-Dubn 14.39 345 *e*P **Pn** 00 57 54.7 +1.8
CRVS *e*S **Sn** 01 00 43.5 +11
CRVS Cervenica-Dubn 14.39 345 *e*P **Pn** 00 57 54.7 +1.8
CRVS *e* 00 58 02.8
CRVS *e* 01 00 43.5
CRVS *e* 01 02 39.1
BHD Baghdad 14.45 92 *ex* x 00 57 53.0
BHD *ex* x 01 00 35.0
KEST Kesra 14.47 278 Pn **Pn** 00 57 54.6 +0.6
comp=Z,0.2nm,0.3s,baz=49,slow=7.4,SNR=17
KEST Sn **Sn** 01 00 31.9 -2.4
comp=Z,0.1nm,0.3s,baz=246,slow=20,SNR=4.2
LJU Ljubljana 14.47 323 *e*Pn **Pn** 00 57 52.0 -2.0
LJU *e*Sn **Sn** 01 00 41.5 +7.2
LJU Ljubljana 14.47 323 *e*Pn **Pn** 00 57 51.9 -2.1
LJU *e*Sn **Sn** 01 00 18.2 -16
PERS Pernice 14.62 326 *e*Pn **Pn** 00 57 58.1 +2.1
SOKA Soboth 14.69 326 ⇑*i*P **Pn** 00 57 58.2 +1.3
comp=Z,85nm,1.2s
VYHS Vyhne 14.70 338 *e*P **Pn** 00 57 58.9 +1.8
VYHS *e*S **Sn** 01 00 48.2 +8.4
VYHS pmax pmax
comp=Z,36nm,1.8s
VYHS MLR MLR
comp=Z,4µm,21.1s
VYHS Vyhne 14.70 338 *e*P **Pn** 00 57 58.9 +1.8
comp=Z,36nm,1.8s
VYHS *e*S **Sn** 01 00 48.2 +8.4
VSL Villasalto 14.74 292 *e*Pn **Pn** 00 57 58.9 +1.2
VSL Villasalto 14.74 292 *e*Pn **Pn** 00 57 58.9 +1.2
ONI Oni 14.77 55 P **Pn** 00 57 57.9 -0.2
VOY Vojsko 14.78 322 *e*Pn **Pn** 00 57 58.5 +0.3
VOY *e* 00 58 02.8
VOY *e* 00 58 40.5
OBKA Obir 14.79 324 ⇑*i*P **Pn** 00 57 55.1 -3.2
comp=Z,64nm,1.3s
OBKA Obir 14.79 324 ⇑*i*Pn **Pn** 00 57 58.5 +0.2
comp=Z,64nm,1.3s
SOP Sopron 14.81 331 *e*P **Pn** 00 58 01.2 +2.6
KWP Kalwaria 14.86 349 *e*P **Pn** 00 58 03.4 +4.1
KWP *e*S **Sn** 01 00 56.4 +13
KWP LMZ 01 03 43.9
comp=Z,4µm,19.9s
KWP Kalwaria 14.86 349 ⇓*i*P **Pn** 00 58 03.9 +4.6
LVV L'vov 14.87 352 *e*P **Pn** 00 58 02.2 +2.9
LVV *e*S **Sn** 01 00 50.6 +6.7
LVV MLR MLR
comp=N,2µm,12.0s
LVV MLR MLR
comp=Z,2µm,12.0s
LVV MLR MLR
comp=E,5µm,11.0s
GNI Garni 14.88 65 *e*PN **Pn** 00 57 58.5 -1.1
GNI Garni 14.88 65 Pn **Pn** 00 57 58.5 -1.0
comp=E,0.3nm,0.3s,baz=312,slow=17,SNR=5.2
GNI LR LR 01 04 22.4
comp=E,918nm,20.3s,baz=270,slow=40
GNI Garni 14.88 65 *e*Pn **Pn** 00 58 00.3 +0.8
GNI Garni 14.88 65 P **Pn** 00 58 02.0 +2.5
SNR=16
GNI Garni 14.88 65 *e*Pn **Pn** 00 58 00.3 +0.7
ARSA Arzberg 14.90 328 ⇑*i*P **Pn** 00 58 00.8 +1.0
comp=E,37nm,0.8s
KOLL Kolacno 14.91 337 *e*P **Pn** 00 58 01.7 +1.8
KOLL *e* 00 58 07.0
KIV Kislovodsk 14.92 49 *e*P **Pn** 00 57 59.8 -0.4
KIV *e*S **Sn** 01 00 46.3 +1.0
KIV pmax pmax
comp=Z,71nm,1.1s
KIV MLR MLR
comp=Z,2µm,12.0s
KIV Kislovodsk 14.92 49 ⇑*i*P **Pn** 00 58 07.1 +6.9
KIV Kislovodsk 14.92 49 P **Pn** 00 58 02.1 +1.9
SNR=45
KIV Kislovodsk 14.92 49 *e*Pn **Pn** 00 58 01.7 +1.5
STHS Stebnicka Huta 14.92 345 *e*P **Pn** 00 58 05.8 +5.7
STHS pmax pmax
comp=Z,67nm,0.9s
STHS Stebnicka Huta 14.92 345 *e*P **Pn** 00 58 05.8 +5.7
GOR Gori 14.99 58 P **Pn** 00 58 02.3 +1.3
ZST Bratislava 15.03 333 *e*P **Pn** 00 58 06.7 +5.2
ZST *e*S **Sn** 01 00 58.0 +10
ZST pmax pmax
comp=Z,75nm,1.6s
ZST MLR MLR
comp=Z,4µm,14.7s
ZST Bratislava 15.03 333 *e*P **Pn** 00 58 06.6 +5.1
ZST *e*S **Sn** 01 00 58.0 +10
MODS Modra-Piesok 15.11 334 *e*P **Pn** 00 58 05.0 +2.3
MODS *e*S **Sn** 01 00 58.9 +9.0
MODS Modra-Piesok 15.11 334 *e*P **Pn** 00 58 05.0 +2.3
MODS *e*S **Sn** 01 00 58.9 +9.0
MODS *e* 01 02 48.0
NIE Niedzica 15.14 343 *e*P **Pn** 00 58 07.1 +4.1
NIE e 00 58 13.9
NIE *e*S Sn 01 01 10.9 +20
NAX Nakhchivan 15.24 69 P **Pn** 00 58 07.4 +2.9
SNR=30
NAX S **Sn** 01 01 11.1 +18
CONA Conrad Observa 15.29 330 ⇓*i*P **Pn** 00 58 05.5 +0.6
comp=Z,31nm,1.3s
TBLG Delisi 15.34 59 *e*P **Pn** 00 58 06.9 +1.3
TBLG Delisi 15.34 59 P **Pn** 00 58 06.9 +1.3
MTA Mtatsminda 15.36 59 P **Pn** 00 58 06.1 +0.1
OSPF L'Ospedale 15.46 300 *e*P **Pn** 00 58 07.2 0.0
KIEV Kiev 15.65 5 *e*P **Pn** 00 58 09.3 -0.4
KIEV pmax pmax
comp=Z,61nm,0.8s
KIEV Kiev 15.65 5 *e*Pn **Pn** 00 58 09.2 -0.5
comp=Z,61nm,0.8s
KIEV Kiev 15.65 5 *e*Pn **Pn** 00 58 09.2 -0.5
comp=Z,61nm,0.8s
AKASG Malin Array Be 15.66 5 Pn **Pn** 00 58 09.5 -0.4
comp=Z,8.0nm,0.3s,baz=195,slow=12,SNR=32
AKASG LR LR 01 04 41.7
comp=Z,3µm,18.3s,baz=190,slow=40
AKASG Malin Array Be 15.66 5 P **Pn** 00 58 09.5 -0.3
AKASG pmax pmax
comp=Z,8.0nm,0.3s
AKASG MLR MLR
comp=Z,3µm,18.3s
AKBB Malin Array Si 15.66 5 *e*Pn **Pn** 00 58 02.4 -7.4
AKBB Malin Array Si 15.66 5 *e*Pn **Pn** 00 58 02.4 -7.4
VLC Villacollemand 15.69 310 *e*Pn **Pn** 00 58 10.6 +0.4
VLC Villacollemand 15.69 310 *e*Pn **Pn** 00 58 10.6 +0.4
DGRG David-gareji 15.70 61 P **Pn** 00 58 13.9 +3.6
LGHD Ghdames 15.70 256 *i* P **Pn** 00 58 08.8 -1.7
SNR=45
CORF Corte 15.70 303 *e*P **Pn** 00 58 10.8 +0.4
KBA Koelnbreinsper 15.78 323 ⇑*i*P **Pn** 00 58 10.8 -0.6
comp=Z,86nm,0.8s
PGF Pioggiola 15.90 303 *e*P **Pn** 00 58 12.3 -0.7
comp=Z,204nm,0.8s
PGF Pioggiola 15.90 303 *e*P **Pn** 00 58 12.3 -0.7
PGF pmax pmax
comp=Z,102nm,0.8s
PGF Pioggiola 15.90 303 *e*P **Pn** 00 58 12.3 -0.7
comp=Z,102nm,0.8s
MOA Molln 15.91 327 ⇑*i*P **Pn** 00 58 13.9 +0.9
comp=Z,116nm,1.0s
ABTA Abfaltersbach 15.97 321 ⇑*i*P **Pn** 00 58 12.8 -1.1
comp=Z,29nm,0.7s
OJC Ojcow 16.00 343 *e*P **Pn** 00 58 16.2 +1.9
OJC *e*S **Sn** 01 01 19.7 +8.2
OJC MLR MLR
comp=Z,5µm,9.9s
OJC Ojcow 16.00 343 *e*P **Pn** 00 58 16.2 +1.9
OJC *e*PP 00 58 30.1
OJC *e*S **Sn** 01 01 19.7 +8.2
KRUC Moravsky 16.01 334 P **Pn** 00 58 16.0 +1.7
OKC Ostrava-Krasne 16.10 339 *e*P **Pn** 00 58 16.8 +1.3
OKC *e*pP pP 00 58 23.6 +1.4
OKC *e*S **Sn** 01 01 16.4 +2.5
OKC AMS AMS 01 06 30.0
comp=Z,5µm,11.3s
OKC Ostrava-Krasne 16.10 339 *e*P **Pn** 00 58 16.8 +1.3
OKC *e* 00 58 23.6
OKC *e*S **Sn** 01 01 16.4 +2.5
VRAC Vranov 16.15 335 Pn **Pn** 00 58 14.9 -1.2
comp=Z,0.6nm,0.3s,baz=152,slow=13,SNR=13
VRAC Vranov 16.15 335 P **Pn** 00 58 14.9 -1.2
VRAC pmax pmax
comp=Z,1.0nm,0.3s
VRAC Vranov 16.15 335 ⇑*i*P **Pn** 00 58 17.4 +1.3
VRAC Vranov 16.15 335 P **Pn** 00 58 17.5 +1.4
VRAC Vranov 16.15 335 P **Pn** 00 58 17.5 +1.4
GANJ Ganja 16.17 64 P **Pn** 00 58 15.6 -0.9
SNR=14
GANJ S **Sn** 01 01 30.3 +15
MORC Moravsky Berou 16.23 337 ⇑*i*P **Pn** 00 58 19.2 +2.0
MORC Moravsky Berou 16.23 337 *e*Pn **Pn** 00 58 17.6 +0.4
MORC Moravsky Berou 16.23 337 *e*Pn **Pn** 00 58 17.6 +0.3
RAC Raciborz 16.31 339 *e*P **Pn** 00 58 19.1 +0.9
RAC MLR MLR
comp=Z,6µm,11.0s
RAC Raciborz 16.31 339 *e*P **Pn** 00 58 19.1 +0.9
RAC *e*S **Sn** 01 01 29.6 +11
CAEH 'Ain El Ouahch 16.46 282 P **Pn** 00 58 29.0 +8.8
RJOB Jochberg 16.51 324 *e*P **Pn** 00 58 21.4 +0.7
comp=Z,46nm,1.2s
BRDA Brd 16.72 66 P **Pn** 00 58 26.8 +3.3
SNR=15
BRDA S **Sn** 01 01 46.8 +18
CASM Ain Smara 16.76 280 P **Pn** 00 58 25.0 +1.0
WTTA Wattenberg 16.76 321 ⇑*i*P **Pn** 00 58 23.6 -0.4
comp=Z,138nm,1.2s
CTEI Djebel Teioual 16.83 279 P **Pn** 00 58 28.0 +3.0
WATA Walderalm 16.84 321 ⇑*i*P **Pn** 00 58 24.8 -0.2
comp=Z,97nm,0.9s
GEC2 GERESS Array S 16.91 328 *e*P **Pn** 00 58 25.2 -0.6
GEC2 pmax pmax
comp=Z,111nm,1.0s
GEC2 GERESS Array S 16.91 328 *e*P **Pn** 00 58 25.2 -0.6
comp=Z,111nm,1.0s
GERES GERESS Array B 16.91 328 Pn **Pn** 00 58 25.2 -0.6
comp=Z,1.7nm,0.3s,baz=148,slow=10,SNR=78
GERES GERESS Array B 16.91 328 P **Pn** 00 58 25.2 -0.6
GERES pmax pmax
comp=Z,2.0nm,0.3s
SEKA Sheki 16.95 63 P **Pn** 00 58 28.6 +2.2
SNR=15
SEKA S **Sn** 01 01 45.1 +10
FETA Feichten 17.09 319 ⇑*i*P **Pn** 00 58 28.7 +0.7
comp=Z,53nm,1.0s
MOTA Moosalm 17.09 320 ⇓*i*P **Pn** 00 58 27.9 -0.2
comp=Z,36nm,0.7s
DPC Dobruska-Polom 17.12 336 *e*P **Pn** 00 58 28.4 -0.1
DPC *e*pP pP 00 58 34.5 +1.0
DPC *e*S **Sn** 01 01 42.6 +3.9
DPC AMS AMS 01 07 00.0
comp=Z,3µm,11.2s
DPC Dobruska-Polom 17.12 336 *e*P **Pn** 00 58 28.4 -0.1
DPC *e* 00 58 34.5
DPC *e*S **Sn** 01 01 42.6 +3.9
KHC Kasperske Hory 17.18 329 *e*P **Pn** 00 58 28.5 -0.7
KHC *e*pP pP 00 58 34.8 +0.7
KHC *ex* x 00 58 54.0
KHC *e*S **Sn** 01 01 45.2 +5.2
KHC AMS AMS 01 05 40.0
comp=Z,6µm,11.0s
KHC Kasperske Hory 17.18 329 *e*P **Pn** 00 58 28.5 -0.7
KHC *e* 00 58 34.8
KHC *e* 00 58 54.0
KHC *e*S **Sn** 01 01 45.2 +5.2
DFRA Djebel Bou Aff 17.24 281 P **Pn** 00 58 33.0 +2.9
RETA Reutte 17.36 320 ⇑*i*P **Pn** 00 58 30.6 -0.8
comp=Z,38nm,0.7s

UPC	**Upice**	**17.36**	**336**	*e*P		**Pn**	**00 58 30.9 -0.6**
UPC				*ep*P		pP	00 58 37.3 +1.1
DAVOX	**Davos/Dischmat**	**17.41**	**317**	P		**Pn**	**00 58 32.9 +0.8**
	comp=Z,2.1nm,0.3s,baz=124,slow=8.7,SNR=24						
DAVOX				LR		LR	01 05 38.4
	comp=Z,5µm,18.9s,baz=180,slow=39						
DAVOX	**Davos/Dischmat**	**17.41**	**317**	P		**Pn**	**00 58 32.9 +0.8**
DAVOX				LR		LR	01 05 38.4
SAOF	**Saorge**	**17.43**	**306**	*e*P		**Pn**	**00 58 31.5 -0.9**
REVF	**Revere**	**17.46**	**305**	*e*P		**Pn**	**00 58 31.6 -1.1**
PRU	**Pruhonice**	**17.46**	**332**	*e*P		**Pn**	**00 58 30.9 -1.8**
PRU				*ep*P		pP	00 58 36.2 -1.1
PRU				*e*S		**Sn**	**01 01 45.4 -1.5**
PRU				AMS		AMS	01 05 50.0
	comp=Z,4µm,12.0s						
PRU	**Pruhonice**	**17.46**	**332**	*e*P		**Pn**	**00 58 30.9 -1.8**
PRU				*e*			00 58 36.2
PRU				*e*S		**Sn**	**01 01 45.4 -1.5**
SBF	**Sospel**	**17.46**	**306**	*e*P		**Pn**	**00 58 31.6 -1.2**
	comp=Z,343nm,0.7s						
SBF	**Sospel**	**17.46**	**306**	*e*P		**Pn**	**00 58 31.6 -1.2**
SBF				pmax		pmax	
	comp=Z,172nm,0.7s						
SBF	**Sospel**	**17.46**	**306**	*e*P		**Pn**	**00 58 31.6 -1.2**
	comp=Z,172nm,0.7s						
GLBA	**Clilabad**	**17.48**	**70**	P		**Pn**	**00 58 33.8 +0.7**
	SNR=12						
GLBA				S		**Sn**	**01 01 58.0 +10**
DAVOS	**Davos**	**17.49**	**317**	P		**Pn**	**00 58 32.9 -0.2**
WET	**Wettzell**	**17.49**	**328**	*e*P		**Pn**	**00 58 32.9 -0.1**
WET				*e*S		**Sn**	**01 01 52.9 +5.3**
WET				pmax		pmax	
	comp=Z,114nm,1.3s						
WET	**Wettzell**	**17.49**	**328**	*e*P		**Pn**	**00 58 32.9 -0.1**
	comp=Z,114nm,1.3s						
WET				*e*S		**Sn**	**01 01 52.9 +5.3**
AUTN	**L'Aution**	**17.52**	**306**	*e*P		**Pn**	**00 58 34.4 +0.9**
TUE	**Stuetta**	**17.53**	**316**	*e*Pn		**Pn**	**00 58 35.0 +1.4**
	comp=Z,58nm,0.8s						
TUE	**Stuetta**	**17.53**	**316**	*e*Pn		**Pn**	**00 58 35.0 +1.4**
	comp=Z,58nm,0.8s						
LUCF	**Luceram**	**17.53**	**306**	*e*P		**Pn**	**00 58 34.6 +1.0**
FUR	**Furstenfeldbru**	**17.54**	**323**	*e*P		**Pn**	**00 58 33.4 -0.3**
FUR				pmax		pmax	
	comp=Z,62nm,0.8s						
FUR	**Furstenfeldbru**	**17.54**	**323**	*e*P		**Pn**	**00 58 33.4 -0.3**
	comp=Z,62nm,0.8s						
KSP	**Ksiaz**	**17.56**	**337**	*e*P		**Pn**	**00 58 34.6 +0.7**
KSP				*e*S		**Sn**	**01 01 54.6 +5.5**
KSP				LMZ			01 05 55.4
	comp=Z,5µm,19.4s						
KSP	**Ksiaz**	**17.56**	**337**	*e*P		**Pn**	**00 58 33.4 -0.5**
KSP				*ep*P		pP	00 58 39.2 +0.9
KSP	**Ksiaz**	**17.56**	**337**	*e*P		**Pn**	**00 58 33.4 -0.5**
KSP				*ep*P		pP	00 58 39.2 +0.9
KSP				*e*S		**Sn**	**01 01 51.0 +1.8**
CKHR	**Kef el Ahmar**	**17.56**	**279**	P		**Pn**	**00 58 37.0 +3.0**
SET	**Setif**	**17.64**	**280**	P		**Pn**	**00 58 38.0 +3.0**
TOUF	**Mont Tournerai**	**17.64**	**306**	*e*P		**Pn**	**00 58 34.6 -0.4**
MVIF	**Mont Vial**	**17.66**	**306**	*e*P		**Pn**	**00 58 34.7 -0.5**
WAR	**Warsaw**	**17.66**	**348**	*e*P		**Pn**	**00 58 38.6 +3.4**
WAR				*e*S		**Sn**	**01 01 54.5 +2.8**
MAK	**Makhachkala**	**17.68**	**58**	*e*P		**Pn**	**00 58 31.5 -4.0**
MAK				S		**Sn**	**01 01 48.7 -3.6**
MAK				pmax		pmax	
	comp=Z,660nm,1.2s						
MAK				MLR		MLR	
	comp=Z,2µm,10.0s						
DAVA	**Damuels**	**17.71**	**319**	⇑ *i*P		**Pn**	**00 58 35.6 -0.2**
	comp=Z,117nm,0.9s						
DAVA	**Damuels**	**17.71**	**319**	P		**Pn**	**00 58 36.5 +0.7**
RST	**Umm Al-Ruwaisa**	**17.75**	**103**	*e*P		**Pn**	**00 58 34.9 -1.5**
	baz=105						
RST				AMb		AMB	00 58 59.1
	comp=Z,97nm,0.9s,baz=105						
CALN	**Calern**	**17.78**	**305**	*e*P		**Pn**	**00 58 34.4 -2.3**
UBR	**Ueberruh**	**17.83**	**320**	P		**Pn**	**00 58 37.0 -0.2**
FRF	**La Foret Royal**	**17.88**	**304**	*e*P		**Pn**	**00 58 36.6 -1.3**
	comp=Z,294nm,1.3s						
FRF	**La Foret Royal**	**17.88**	**304**	*e*P		**Pn**	**00 58 36.6 -1.3**
FRF				pmax		pmax	
	comp=Z,147nm,1.3s						
FRF	**La Foret Royal**	**17.88**	**304**	*e*P		**Pn**	**00 58 36.6 -1.3**
	comp=Z,147nm,1.3s						
PQL	**Pirkuli**	**17.88**	**65**	P		**Pn**	**00 58 42.0 +4.0**
	SNR=6.2						
PQL				S		**Sn**	**01 02 06.6 +9.4**
LMR	**La Mourre**	**17.89**	**303**	*e*P		**Pn**	**00 58 36.9 -1.1**
	comp=Z,129nm,0.9s						
LMR	**La Mourre**	**17.89**	**303**	*e*P		**Pn**	**00 58 36.9 -1.1**
LMR				pmax		pmax	
	comp=Z,65nm,0.9s						
LMR	**La Mourre**	**17.89**	**303**	*e*P		**Pn**	**00 58 36.9 -1.1**
	comp=Z,65nm,0.9s						
PVCC	**Panska Ves**	**17.89**	**333**	*e*P		**Pn**	**00 58 38.1 +0.1**
PVCC				*e*S		**Sn**	**01 01 56.5 -0.7**
PVCC	**Panska Ves**	**17.89**	**333**	*e*P		**Pn**	**00 58 38.1 +0.1**
PVCC				*e*S		**Sn**	**01 01 56.5 -0.7**
PVCC				AMS		AMS	01 07 10.0
	comp=Z,3µm,10.4s						
NAY	**Al-Naaiem**	**18.04**	**103**	*e*P		**Pn**	**00 58 38.5 -1.6**
	baz=106						
NAY				AMb		AMB	00 58 52.3
	comp=Z,48nm,1.5s,baz=106						
ALIB	**Ii-Bayraml**	**18.05**	**68**	P		**Pn**	**00 58 41.4 +1.4**
	SNR=5.3						
ALIB				S		**Sn**	**01 02 15.9 +15**
SURF	**Saint Ours**	**18.12**	**307**	*e*P		**Pn**	**00 58 42.0 +1.1**
SURF	**Saint Ours**	**18.12**	**307**	*e*P		**Pn**	**00 58 42.3 +1.4**
SURF	**Saint Ours**	**18.12**	**307**	*e*P		**Pn**	**00 58 42.4 +1.5**
SURF	**Saint Ours**	**18.12**	**307**	*e*P		**Pn**	**00 58 42.3 +1.4**
SIZA	**Siyzn**	**18.17**	**64**	P		**Pn**	**00 58 41.7 +0.2**
	SNR=4.0						
SIZA				S		**Sn**	**01 02 12.9 +8.7**
MBDF	**Montbardon**	**18.25**	**308**	*e*P		**Pn**	**00 58 40.7 -1.8**
	comp=Z,169nm,0.7s						
MBDF	**Montbardon**	**18.25**	**308**	*e*P		**Pn**	**00 58 40.7 -1.8**
MBDF				pmax		pmax	
	comp=Z,85nm,0.7s						
MBDF	**Montbardon**	**18.25**	**308**	*e*P		**Pn**	**00 58 40.7 -1.8**
	comp=Z,84nm,0.7s						
AKF	**Akfadou**	**18.30**	**281**	P		**Pn**	**00 58 46.5 +3.4**
TAVF	**Tavernes**	**18.30**	**304**	*e*P		**Pn**	**00 58 44.0 +1.0**
UMR	**Umm Al-Rimmam**	**18.30**	**102**	*e*P		**Pn**	**00 58 42.1 -1.1**
	baz=104						
UMR				AMb		AMB	00 58 49.9
	comp=Z,140nm,1.1s,baz=104						
VSR	**Storozhevoye**	**18.32**	**25**	*e*P		**Pn**	**00 58 41.9 -1.3**
VSR				pmax		pmax	
	comp=Z,6.0nm,0.5s						
VSR				pmax		pmax	
	comp=N,20nm,1.3s						
VSR				pmax		pmax	
	comp=E,10.0nm,1.3s						
VSR				MLR		MLR	
	comp=Z,350nm,12.0s						
VSR				MLR		MLR	
	comp=N,410nm,13.0s						
VSR				MLR		MLR	
	comp=E,650nm,12.0s						
BRG	**Berggiesshubel**	**18.40**	**333**	*e*P		**Pn**	**00 58 43.2 -1.1**
BRG				S		**Sn**	**01 02 07.0 -2.6**
BRG				pmax		pmax	
	comp=Z,7.0nm,1.4s						
BRG				MLR		MLR	
	comp=N,2µm,14.4s						
BRG				MLR		MLR	
	comp=E,2µm,16.1s						
BRG				MLR		MLR	
	comp=Z,2µm,13.8s						
BRG	**Berggiesshubel**	**18.40**	**333**	*e*P		**Pn**	**00 58 42.7 -1.6**
	comp=Z,81nm,1.2s						
BRG	**Berggiesshubel**	**18.40**	**333**	*e*P		**Pn**	**00 58 43.2 -1.1**
	comp=Z,12nm,1.4s						
BRG				*e*			00 58 45.3
	comp=Z,37nm,1.4s						
BRG				*i*			00 58 54.9
	comp=Z,81nm,1.2s						
BRG				S		**Sn**	**01 02 07.0 -2.6**
BRG				SCP		ScP	01 06 52.0 +2.0
BRG							
	comp=N,4µm,14.4s						
BRG							
	comp=E,4µm,16.1s						
BRG							
	comp=Z,4µm,13.8s						
BRG	**Berggiesshubel**	**18.40**	**333**	*e*P		**Pn**	**00 58 43.2 -1.1**
	comp=Z,7.3nm,1.4s						
BRG				*e*			00 58 45.3
BRG				*i*			00 58 54.9
RDF	**Al-Radifah**	**18.42**	**104**	*e*P		**Pn**	**00 58 43.8 -0.9**
	baz=106						
RDF				AMb		AMB	00 58 54.2
	comp=Z,97nm,1.2s,baz=106						
BERF	**Bertagne**	**18.44**	**303**	*e*P		**Pn**	**00 58 44.7 -0.2**
BNI	**Bardonecchia**	**18.45**	**309**	*e*P		**Pn**	**00 58 44.4 -0.5**
BNI				pmax		pmax	
	comp=Z,45nm,0.8s						
BNI	**Bardonecchia**	**18.45**	**309**	*e*Pn		**Pn**	**00 58 44.4 -0.5**
	comp=Z,45nm,0.8s						
BNI	**Bardonecchia**	**18.45**	**309**	*e*Pn		**Pn**	**00 58 44.4 -0.5**
	comp=Z,45nm,0.8s						
MANZ	**Manzenberg**	**18.45**	**328**	*e*P		**Pn**	**00 58 43.4 -1.5**
	comp=Z,83nm,1.2s						
NKC	**Novy Kostel**	**18.49**	**329**	*e*P		**Pn**	**00 58 44.1 -1.3**
NKC				*ep*P		pP	00 58 49.2 +0.6
NKC				*e*S		**Sn**	**01 02 10.5 -1.3**
NKC				AMS		AMS	01 07 30.0
	comp=Z,5µm,15.6s						
NKC	**Novy Kostel**	**18.49**	**329**	*e*P		**Pn**	**00 58 44.1 -1.3**
NKC				*e*			00 58 49.2
NKC				*e*S		**Sn**	**01 02 10.5 -1.3**
PUYF	**Puyloubier**	**18.51**	**303**	*e*P		**Pn**	**00 58 45.2 -0.5**
STOF	**St-Etienne Org**	**18.53**	**305**	*e*P		**Pn**	**00 58 46.6 +0.7**
ATAF	**Djebel Tarf**	**18.57**	**279**	P		**Pn**	**00 58 55.7 +9.2**
LPG	**La Plagne**	**18.60**	**310**	*e*P		**Pn**	**00 58 45.8 -0.9**
	comp=Z,210nm,0.8s						
LPG	**La Plagne**	**18.60**	**310**	*e*P		**Pn**	**00 58 45.8 -0.9**
LPG				pmax		pmax	
	comp=Z,105nm,0.8s						
LPG	**La Plagne**	**18.60**	**310**	*e*P		**Pn**	**00 58 45.8 -0.9**
	comp=Z,105nm,0.8s						
VILF	**Villemus**	**18.61**	**304**	*e*P		**Pn**	**00 58 45.9 -1.0**
LPL	**La Plagne**	**18.62**	**310**	*e*P		**Pn**	**00 58 46.3 -0.7**
	comp=Z,144nm,0.7s						
LPL	**La Plagne**	**18.62**	**310**	*e*P		**Pn**	**00 58 46.3 -0.7**
LPL				pmax		pmax	
	comp=Z,72nm,0.7s						
LPL	**La Plagne**	**18.62**	**310**	*e*P		**Pn**	**00 58 46.3 -0.7**
	comp=Z,72nm,0.7s						
TANN	**Tannenbergstha**	**18.62**	**330**	*e*P		**Pn**	**00 58 45.6 -1.4**
	comp=Z,44nm,1.4s						
GRA1	**Grafenberg Arr**	**18.63**	**326**	*e*P		**Pn**	**00 58 45.4 -1.7**
	comp=Z,203nm,1.1s						
GRA1				*e*S		**Sn**	**01 02 14.1 -1.0**
GRF	**Grafenberg Arr**	**18.63**	**326**	*e*P		**Pn**	**00 58 45.4 -1.7**
GRF				*e*S		**Sn**	**01 02 14.1 -1.0**
GRF				pmax		pmax	
	comp=Z,203nm,1.1s						
GRF				MLR		MLR	
	comp=Z,2µm,20.8s						
GRF	**Grafenberg Arr**	**18.63**	**326**	*e*P		**Pn**	**00 58 45.4 -1.7**
	comp=Z,203nm,1.1s						
GRF				*e*S		**Sn**	**01 02 14.1 -1.0**
GRF				*e*L			01 06 30.2
	comp=Z,2µm,20.8s						
GRF	**Grafenberg Arr**	**18.63**	**326**	*e*P		**Pn**	**00 58 45.4 -1.7**
	comp=Z,203nm,1.1s						
GRF				*e*S		**Sn**	**01 02 14.1 -1.0**
GRFO	**Grafenberg**	**18.63**	**326**	P		**Pn**	**00 58 46.5 -0.6**
GELF	**Grande-Etoile**	**18.65**	**303**	*e*P		**Pn**	**00 58 45.7 -1.6**
GOBA	**Gobu**	**18.67**	**67**	P		**Pn**	**00 58 49.9 +2.3**
GOBA				S		**Sn**	**01 02 25.0 +8.8**
BUCH	**Bad Urach**	**18.70**	**321**	P		**Pn**	**00 58 47.8 -0.2**
SMRF	**Simiane la Rot**	**18.75**	**305**	*e*P		**Pn**	**00 58 46.5 -2.1**
	comp=Z,88nm,1.0s						
SMRF	**Simiane la Rot**	**18.75**	**305**	*e*P		**Pn**	**00 58 46.5 -2.1**
	comp=Z,44nm,1.0s						
TREF	**Trevaresse**	**18.76**	**303**	*e*P		**Pn**	**00 58 48.7 0.0**
VOR	**Voronezh**	**18.76**	**24**	*e*P		**Pn**	**00 58 48.0 -0.7**
VOR				pmax		pmax	
	comp=Z,200nm,1.4s						
SPAK	**Spaichingen-Ko**	**18.79**	**319**	*e*P		**Pn**	**00 58 47.8 -1.2**
GDM	**Grand'Maison**	**18.87**	**309**	*e*P		**Pn**	**00 58 49.9 -0.1**
GDM	**Grand'Maison**	**18.87**	**309**	*e*P		**Pn**	**00 58 50.1 +0.1**
GDM	**Grand'Maison**	**18.87**	**309**	*e*P		**Pn**	**00 58 50.1 +0.1**
AKET	**Djebel Ketaf**	**18.88**	**280**	P		**Pn**	**00 58 53.9 +3.7**
ORIF	**Oris-en-Rattie**	**18.91**	**308**	*e*P		**Pn**	**00 58 47.3 -3.2**
	comp=Z,88nm,0.8s						
ORIF				*e*MLR		MLR	
	comp=Z,6µm,21.2s						
ORIF	**Oris-en-Rattie**	**18.91**	**308**	*e*P		**Pn**	**00 58 47.3 -3.2**
ORIF				pmax		pmax	
	comp=Z,44nm,0.8s						
ORIF	**Oris-en-Rattie**	**18.91**	**308**	*e*P		**Pn**	**00 58 47.3 -3.2**
	comp=Z,44nm,0.8s						
PRAF	**Pradon**	**18.96**	**304**	*e*P		**Pn**	**00 58 49.5 -1.7**
STU	**Stuttgart**	**18.99**	**321**	*e*P		**Pn**	**00 58 50.8 -0.6**
OG01	**Vacheresse**	**19.03**	**312**	*e*P		**Pn**	**00 58 49.8 -2.1**
FELD	**Feldberg im Sc**	**19.08**	**318**	*e*P		**Pn**	**00 58 48.8 -3.7**
SUW	**Suwalki**	**19.09**	**353**	*e*P		**Pn**	**00 58 50.7 -2.0**
SUW				*e*S		**Sn**	**01 02 20.4 -6.0**
SUW				LMZ			01 06 59.9
	comp=Z,4µm,17.6s						
CLL	**Collm**	**19.11**	**332**	*e*P		**Pn**	**00 58 51.0 -1.8**
	comp=Z,88nm,1.5s						
CLL				*es*P		sP	00 59 01.0 +4.1
	comp=Z,88nm,1.0s						
CLL				*e*S		**Sn**	**01 02 26.0 -0.6**
	comp=N,1µm,15.0s						
CLL				*e*S		**Sn**	**01 02 26.0 -0.6**
	comp=E,1µm,11.2s						
CLL				*e*S		**Sn**	**01 02 26.0 -0.6**
	comp=Z,1µm,13.7s						
GRN	**Grenoble**	**19.13**	**308**	*e*P		**Pn**	**00 58 49.9 -3.2**
GRN	**Grenoble**	**19.13**	**308**	*e*P		**Pn**	**00 58 51.5 -1.6**
GRN	**Grenoble**	**19.13**	**308**	*e*P		**Pn**	**00 58 51.5 -1.6**
BBS	**Basel-Blauen**	**19.13**	**316**	*e*P		**Pn**	**00 58 51.8 -1.3**
VRHR	**Novokhopersk**	**19.13**	**29**	*e*P		**Pn**	**00 58 51.4 -1.7**
VRHR				*e*S		**Sn**	**01 02 22.4 -4.8**
VRHR				pmax		pmax	
	comp=Z,50nm,0.7s						
VRHR				pmax		pmax	
	comp=N,70nm,1.3s						
VRHR				pmax		pmax	
	comp=E,50nm,0.9s						
VRHR				smax			
	comp=N,460nm,8.0s						
VRHR				smax			
	comp=Z,560nm,10.0s						
VRHR				smax			
	comp=E,350nm,8.4s						
VRHR				MLR		MLR	
	comp=Z,1µm,12.0s						
VRHR				MLR		MLR	
	comp=N,760nm,11.0s						
VRHR				MLR		MLR	
	comp=E,1µm,11.0s						
MOX	**Moxa**	**19.15**	**329**	*e*P		**Pn**	**00 58 51.6 -1.8**
	comp=E,210nm,1.8s						
MOX							
	comp=Z,3µm,22.0s						
MOX	**Moxa**	**19.15**	**329**	*e*P		**Pn**	**00 58 51.6 -1.8**
MOX				pmax		pmax	
	comp=Z,210nm,1.8s						
MOX				MLR		MLR	
	comp=Z,3µm,22.0s						
MOX	**Moxa**	**19.15**	**329**	*e*P		**Pn**	**00 58 51.4 -2.0**
	comp=Z,88nm,1.3s						
MOX				*e*S		**Sn**	**01 02 26.7 -1.1**
BFO	**Black Forest**	**19.17**	**319**	*e*P		**Pn**	**00 58 48.6 -5.0**
BFO				pmax		pmax	
	comp=Z,50nm,1.3s						
BFO	**Black Forest**	**19.17**	**319**	*e*P		**Pn**	**00 58 48.6 -5.0**
	comp=Z,50nm,1.3s						
KIZ	**Kinzharten**	**19.17**	**318**	P		**Pn**	**00 58 53.9 +0.2**
ADJB	**Djebel Djouab**	**19.23**	**280**	P		**Pn**	**00 58 55.2 +0.8**
GKP	**Gorka Klasztor**	**19.44**	**342**	*e*P		**Pn**	**00 58 53.7 -3.1**
GKP				*e*S		**Sn**	**01 02 36.1 +1.4**
CABF	**La Chapelle**	**19.52**	**312**	*e*P		**Pn**	**00 58 55.4 -2.5**
	comp=Z,213nm,0.6s						
CABF	**La Chapelle**	**19.52**	**312**	*e*P		**Pn**	**00 58 55.4 -2.5**
CABF				pmax		pmax	
	comp=Z,106nm,0.6s						
CABF	**La Chapelle**	**19.52**	**312**	*e*P		**Pn**	**00 58 55.4 -2.5**
	comp=Z,106nm,0.6s						
MOF	**Molkenrain**	**19.55**	**317**	*e*P		**Pn**	**00 58 57.2 -1.0**
EMHD	**Djebel Mahouad**	**19.62**	**280**	P		**Pn**	**00 58 54.4 -4.7**
STR	**Strasbourg**	**19.62**	**319**	*e*P		**Pn**	**00 58 58.5 -0.5**
VIVF	**Saint-Julien-l**	**19.67**	**306**	*e*P		**Pn**	**00 58 56.4 -3.3**
	comp=Z,111nm,0.8s						
VIVF	**Saint-Julien-l**	**19.67**	**306**	*e*P		**Pn**	**00 58 56.4 -3.3**
VIVF				pmax		pmax	
	comp=Z,56nm,0.8s						
VIVF	**Saint-Julien-l**	**19.67**	**306**	*e*P		**Pn**	**00 58 56.4 -3.3**
	comp=Z,56nm,0.8s						
HINF	**Hinteralfeld**	**19.69**	**316**	*e*P		**Pn**	**00 58 55.8 -4.0**
	comp=Z,72nm,0.8s						
HINF	**Hinteralfeld**	**19.69**	**316**	*e*P		**Pn**	**00 58 55.8 -4.0**
HINF				pmax		pmax	
	comp=Z,36nm,0.8s						
HINF	**Hinteralfeld**	**19.69**	**316**	*e*P		**Pn**	**00 58 55.8 -4.0**
	comp=Z,36nm,0.8s						
SWS	**Schriesheim-Wi**	**19.69**	**322**	P		**Pn**	**00 58 59.0 -0.9**
TOD	**Tromm**	**19.72**	**323**	*e*P		**Pn**	**00 58 58.6 -1.6**
ECH	**Echery**	**19.74**	**318**	*e*P		**Pn**	**00 58 58.2 -2.2**
ECH	**Echery**	**19.74**	**318**	*e*P		**Pn**	**00 58 58.0 -2.5**
RUE	**Ruedersdorf**	**19.78**	**335**	*e*P		**Pn**	**00 58 57.7 -3.1**
	comp=Z,112nm,1.2s						
RUE	**Ruedersdorf**	**19.78**	**335**	*e*P		**Pn**	**00 58 59.6 -1.2**
	comp=Z,175nm,1.2s						
RUE	**Ruedersdorf**	**19.78**	**335**	*e*P		**Pn**	**00 58 59.6 -1.3**
	comp=Z,175nm,1.2s						
CDF	**Champ du Feu**	**19.79**	**318**	*e*P		**Pn**	**00 58 58.7 -2.3**
	comp=Z,83nm,0.9s						
CDF	**Champ du Feu**	**19.79**	**318**	*e*P		**Pn**	**00 58 58.7 -2.3**
CDF				pmax		pmax	
	comp=Z,42nm,0.9s						
CDF	**Champ du Feu**	**19.79**	**318**	*e*P		**Pn**	**00 58 58.7 -2.3**
	comp=Z,42nm,0.9s						
LANF	**Langenberg**	**19.84**	**320**	*e*P		**Pn**	**00 59 00.3 -1.3**
KTD	**Kalmit**	**19.90**	**321**	*e*P		**Pn**	**00 59 01.4 -0.9**
MRKH	**Merkhyat**	**19.91**	**165**	*e*		**Pn**	**00 58 58.4 -4.2**
	baz=347,slow=5.6						
MRKH				*i* P			00 59 00.1
MRKH				AMb		AMB	00 59 16.2
	comp=Z,303nm,1.5s						
MRKH				*i* S		**Sn**	**01 02 46.4 +0.1**
SSB	**Saint Sauveur**	**19.92**	**307**	*e*P		**Pn**	**00 58 59.4 -3.2**
SSB	**Saint Sauveur**	**19.92**	**307**	*e*P		**Pn**	**00 59 00.3 -2.3**
SSB	**Saint Sauveur**	**19.92**	**307**	*e*P		**Pn**	**00 59 00.3 -2.3**
LASF	**Ste Croix**	**19.95**	**304**	*e*P		**Pn**	**00 59 01.0 -2.0**
	comp=Z,92nm,0.9s						
LASF	**Ste Croix**	**19.95**	**304**	*e*P		**Pn**	**00 59 01.0 -2.0**
	comp=Z,46nm,0.9s						
UBBA	**Unterbreizbach**	**19.98**	**327**	*e*P		**Pn**	**00 58 59.4 -3.9**
	comp=Z,90nm,1.6s						
HAU	**Haudompre**	**20.08**	**316**	*e*P		**P**	**00 59 01.7 -0.9**
	comp=Z,64nm,0.5s						
HAU				*e*MLR		MLR	
	comp=Z,4µm,21.0s,MS4.4						
HAU	**Haudompre**	**20.08**	**316**	*e*P		**P**	**00 59 01.7 -0.9**
HAU				pmax		pmax	
	comp=Z,32nm,0.5s						
HAU	**Haudompre**	**20.08**	**316**	*e*P		**P**	**00 59 01.7 -0.9**
	comp=Z,32nm,0.5s						
EJON	**La Jonquera**	**20.18**	**299**	P		**P**	**00 59 03.9 +0.1**
	comp=Z,176nm,2.1s						
EJON	**La Jonquera**	**20.18**	**299**	P		**P**	**00 59 03.9 +0.1**
	comp=Z,176nm,2.1s						
TNS	**Taunus Mts**	**20.30**	**324**	*e*P		**P**	**00 59 02.8 -2.2**
TNS				pmax		pmax	
	comp=Z,85nm,1.0s						
TNS	**Taunus Mts**	**20.30**	**324**	*e*P		**P**	**00 59 02.8 -2.2**
	comp=Z,85nm,1.0s						
JAWL	**J.Aulia**	**20.38**	**165**	*i* P		**P**	**00 59 04.9 -1.2**
JAWL				AMb		AMB	00 59 12.3
	comp=Z,322nm,1.7s						
THEF	**They Montfort**	**20.40**	**316**	*e*P		**P**	**00 59 04.1 -2.0**
ABH	**Alteburg**	**20.53**	**322**	*e*P		**P**	**00 59 07.6 +0.1**
LRDF	**Laroque-de-Fa**	**20.55**	**300**	*e*P		**P**	**00 59 06.1 -1.7**
COLF	**Collangettes**	**20.56**	**307**	*e*P		**P**	**00 59 06.5 -1.4**
RUP	**Ruppelstein**	**20.66**	**321**	*e*P		**P**	**00 59 07.3 -1.7**
EBNR	**Beni Rached**	**20.76**	**281**	P		**P**	**00 59 10.2 +0.1**
CARF	**Carcanieres**	**20.80**	**299**	*e*P		**P**	**00 59 11.9 +1.3**
MTLF	**Montolieu**	**20.88**	**301**	*e*P		**P**	**00 59 10.0 -1.3**
	comp=Z,106nm,1.0s						
MTLF	**Montolieu**	**20.88**	**301**	*e*P		**P**	**00 59 10.0 -1.3**
MTLF				pmax		pmax	
	comp=Z,53nm,1.0s						
MTLF	**Montolieu**	**20.88**	**301**	*e*P		**P**	**00 59 10.0 -1.3**
	comp=Z,53nm,1.0s						
ECHA	**Ech Chlef**	**20.90**	**280**	P		**P**	**00 59 12.0 +0.3**
SMF	**Signal de Mont**	**20.92**	**310**	*e*P		**P**	**00 59 10.1 -1.7**
	comp=Z,428nm,0.6s						
SMF	**Signal de Mont**	**20.92**	**310**	*e*P		**P**	**00 59 10.1 -1.7**
SMF				pmax		pmax	
	comp=Z,64nm,0.6s						
SMF	**Signal de Mont**	**20.92**	**310**	*e*P		**P**	**00 59 10.1 -1.7**
	comp=Z,64nm,0.6s						
ETRT	**Tiaret**	**21.03**	**278**	P		**P**	**00 59 10.6 -2.5**
OBN	**Obninsk**	**21.06**	**15**	⇓ *e*P		**P**	**00 59 14.1 +0.9**
OBN				*e*S		**S**	**01 03 03.8 -3.5**
OBN				pmax		pmax	
	comp=Z,227nm,1.7s,mb5.2						
OBN				MLR		MLR	
	comp=Z,2µm,15.0s,MS4.5						
OBN	**Obninsk**	**21.06**	**15**	*e*P		**P**	**00 59 11.2 -2.0**
	comp=Z,148nm,1.0s,mb5.3						
OBN	**Obninsk**	**21.06**	**15**	*e*P		**P**	**00 59 11.2 -2.0**
	comp=Z,148nm,1.0s,mb5.3						
MEZF	**Maizieres J'vi**	**21.08**	**316**	*e*P		**P**	**00 59 12.5 -0.9**
	comp=Z,117nm,0.6s,mb

comp=Z,127nm,1.1s,mb5.3
RGN Rugen 21.67 338 *e*P P **00 59 18.4 -1.4**
comp=Z,127nm,1.1s,mb5.3
MEM Membach 21.75 322 P P **00 59 19.7 -1.0**
comp=Z,102nm,1.2s,mb5.1
ERTA Horta de San J 21.81 293 P P **00 59 19.4 -2.0**
comp=Z,176nm,1.9s,mb5.2
ERTA Horta de San J 21.81 293 P P **00 59 19.4 -2.0**
comp=Z,176nm,1.9s,mb5.2
MELF Melles 21.81 299 *e*P P **00 59 21.9 +0.6**
MOS Moscow 21.87 16 *e*P P **00 59 21.1 -0.8**
MOS *e* 00 59 41.5
MOS *e* 01 03 17.1
MOS *e*S **S 01 03 23.8 +0.6**
MOS *e*SS 01 03 50.8
MOS *e*SSS 01 04 06.1
MOS *e* 01 10 38.4
MOS pmax pmax
comp=Z,202nm,1.4s,mb5.4
HGN Heimansgroeve 21.89 322 *e*P P **00 59 21.4 -0.7**
HGN Heimansgroeve 21.89 322 *e*P P **00 59 21.5 -0.6**
comp=Z,114nm,2.0s,mb5.0
HGN Heimansgroeve 21.89 322 *e*S **S 01 03 25.6 +2.1**
RJF Les Rejaudoux 21.93 305 *e*P P **00 59 21.9 -0.7**
comp=Z,156nm,0.7s,mb5.3
RJF *e*MLR MLR
comp=Z,3µm,22.0s,MS4.4
RJF Les Rejaudoux 21.93 305 *e*P P **00 59 21.9 -0.7**
RJF pmax pmax
comp=Z,78nm,0.7s,mb5.2
RJF MLR MLR
comp=Z,3µm,22.0s,MS4.7
RJF Les Rejaudoux 21.93 305 *e*P P **00 59 21.9 -0.7**
comp=Z,78nm,0.7s,mb5.2
RJF LR LR
comp=Z,3µm,22.0s,MS4.7
BCLA Clavier 22.00 321 P P **00 59 22.3 -1.1**
comp=Z,87nm,1.4s,mb5.0
GIVF Givet 22.07 320 *e*P P **00 59 23.7 -0.4**
comp=Z,96nm,0.7s,mb5.0
GIVF Givet 22.07 320 *e*P P **00 59 23.7 -0.4**
GIVF pmax pmax
comp=Z,48nm,0.7s,mb5.0
GIVF Givet 22.07 320 *e*P P **00 59 23.7 -0.4**
comp=Z,48nm,0.7s,mb5.0
EBEN Beniarda 22.08 287 P P **00 59 24.6 +0.2**
comp=Z,63nm,0.9s,mb5.0
EBEN Beniarda 22.08 287 P P **00 59 24.6 +0.3**
comp=Z,63nm,0.9s,mb5.0
EPF Esparros 22.14 299 *e*P P **00 59 23.1 -1.8**
comp=Z,27nm,0.6s,mb4.2
EPF Esparros 22.14 299 *e*P P **00 59 23.1 -1.8**
EPF pmax pmax
comp=Z,14nm,0.6s,mb4.6
EPF Esparros 22.14 299 *e*P P **00 59 23.1 -1.8**
comp=Z,14nm,0.6s,mb4.5
DOU Dourbes 22.19 319 P P **00 59 24.1 -1.3**
comp=Z,50nm,1.1s,mb4.9
EBIE Bielsa 22.21 298 P P **00 59 26.6 +0.9**
comp=Z,30nm,1.2s,mb4.6
EBIE Bielsa 22.21 298 P P **00 59 26.6 +0.9**
comp=Z,30nm,1.2s,mb4.6
WTSB Winterswijk 22.23 325 *e*P P **00 59 22.6 -3.2**
comp=Z,61nm,1.7s,mb4.8
LABF Labassere 22.34 299 *e*P P **00 59 27.5 +0.5**
LFF La Frestale 22.34 304 *e*P P **00 59 25.8 -1.2**
comp=Z,74nm,0.7s,mb4.9
LFF La Frestale 22.34 304 *e*P P **00 59 25.8 -1.2**
LFF pmax pmax
comp=Z,37nm,0.7s,mb4.9
LFF La Frestale 22.34 304 *e*P P **00 59 25.8 -1.2**
comp=Z,37nm,0.7s,mb4.9
VIEF Viey 22.34 298 *e*P P **00 59 26.4 -0.6**
BAIF Baives 22.38 319 *e*P P **00 59 24.7 -2.7**
comp=Z,423nm,1.1s,mb5.5
BAIF Baives 22.38 319 *e*P P **00 59 24.7 -2.7**
BAIF pmax pmax
comp=Z,212nm,1.1s,mb5.5
BAIF Baives 22.38 319 *e*P P **00 59 24.7 -2.7**
comp=Z,212nm,1.1s,mb5.5
TAM Tamanrasset 22.44 243 *e*P P **00 59 29.7 +1.4**
TAM Tamanrasset 22.44 243 *e*P P **00 59 29.7 +1.5**
ESAC San Caprasio 22.50 295 P P **00 59 30.4 +1.6**
comp=Z,84nm,0.9s,mb5.2
ESAC San Caprasio 22.50 295 P P **00 59 30.4 +1.6**
comp=Z,84nm,0.9s,mb5.2
SNF Seneffe 22.59 320 P P **00 59 29.5 -0.1**
comp=Z,52nm,1.4s,mb4.8
REYF Montagne du Re 22.67 299 *e*P P **00 59 32.7 +2.1**
CART Cartagena 22.71 284 *e*P P **00 59 33.0 +2.0**
comp=Z,72nm,0.9s,mb5.1
CART Cartagena 22.71 284 *e*P P **00 59 33.0 +1.9**
comp=Z,72nm,0.9s,mb5.1
UCC Uccle 22.71 321 P P **00 59 31.0 +0.1**
comp=Z,142nm,1.5s,mb5.2
ETSF Etsaut 22.76 298 *e*P P **00 59 31.8 +0.3**
comp=Z,95nm,0.8s,mb5.0
ETSF Etsaut 22.76 298 *e*P P **00 59 31.8 +0.3**
ETSF pmax pmax
comp=Z,47nm,0.8s,mb5.0
ETSF Etsaut 22.76 298 *e*P P **00 59 31.8 +0.3**
comp=Z,47nm,0.8s,mb5.0
COP Copenhagen 22.91 338 *e*P P **00 59 35.2 +2.3**
COP *i*S **S 01 03 40.0 -2.5**
COP MLR MLR
comp=Z,870nm,20.0s,MS4.2
COP Copenhagen 22.91 338 *i*P P **00 59 35.2 +2.3**
COP *i*S **S 01 03 40.0 -2.5**
COP
comp=Z,870nm,20.0s
LARF Larrau 23.10 298 *e*P P **00 59 35.1 0.0**
ETOB Tobarra 23.12 287 P P **00 59 35.5 +0.2**
comp=Z,465nm,4.2s
ETOB Tobarra 23.12 287 P P **00 59 35.5 +0.2**
comp=Z,465nm,4.2s
SJPF Ste Jean 23.28 299 *e*P P **00 59 36.6 -0.4**
comp=Z,161nm,0.7s,mb5.2
SJPF Ste Jean 23.28 299 *e*P P **00 59 36.6 -0.4**
SJPF pmax pmax
comp=Z,80nm,0.7s,mb5.3
SJPF Ste Jean 23.28 299 *e*P P **00 59 36.6 -0.4**
comp=Z,80nm,0.7s,mb5.2
OSSF Osses 23.33 299 *e*P P **00 59 37.2 -0.4**
VSU Vasula 23.36 360 *i*P P **00 59 35.4 -2.3**
MFF Saint Martin d 23.45 308 *e*P P **00 59 36.5 -2.2**
comp=Z,129nm,0.9s,mb5.1
MFF Saint Martin d 23.45 308 *e*P P **00 59 36.5 -2.2**
MFF pmax pmax
comp=Z,64nm,0.9s,mb5.0
MFF Saint Martin d 23.45 308 *e*P P **00 59 36.5 -2.2**
comp=Z,64nm,0.9s,mb5.1
EALK Alkurruntz 23.50 299 P P **00 59 38.0 -1.3**
comp=Z,184nm,2.4s,mb5.1
EALK Alkurruntz 23.50 299 P P **00 59 38.0 -1.3**
comp=Z,184nm,2.4s,mb5.1
ELIZ Elizondo 23.51 299 P P **00 59 39.6 +0.2**
ELIZ pmax pmax
comp=Z,16nm,0.8s,mb4.5
ELIZ Elizondo 23.51 299 P P **00 59 39.6 +0.2**
comp=Z,16nm,0.8s,mb4.5
ELIZ Elizondo 23.51 299 P P **00 59 39.6 +0.2**
comp=Z,16nm,0.8s,mb4.5
ETOR Torete 23.59 293 P P **00 59 39.1 -1.1**
ETOR pmax pmax
comp=Z,8.0nm,0.6s,mb4.3
ETOR Torete 23.59 293 P P **00 59 39.1 -1.1**
comp=Z,7.8nm,0.6s,mb4.3
ETOR Torete 23.59 293 P P **00 59 39.1 -1.1**
comp=Z,7.8nm,0.6s,mb4.3
ENIJ Nijar 23.70 283 P P **00 59 40.9 -0.4**
ENIJ pmax pmax
comp=Z,26nm,0.8s,mb4.7
ENIJ Nijar 23.70 283 P P **00 59 40.9 -0.4**
comp=Z,26nm,0.8s,mb4.7
ENIJ Nijar 23.70 283 P P **00 59 40.9 -0.4**
comp=Z,26nm,0.8s,mb4.7
MENF Mencas 23.76 318 *e*P P **00 59 40.6 -1.0**
EVIA Vianos 23.87 287 P P **00 59 43.1 +0.4**
EVIA pmax pmax
comp=Z,16nm,0.8s,mb4.5
EVIA Vianos 23.87 287 P P **00 59 43.1 +0.4**
comp=Z,16nm,0.8s,mb4.5
EVIA Vianos 23.87 287 P P **00 59 43.1 +0.3**
comp=Z,16nm,0.8s,mb4.5
EHUE Huescar 23.96 285 P P **00 59 43.9 +0.3**
EHUE pmax pmax
comp=Z,70nm,2.0s,mb4.7
EHUE Huescar 23.96 285 P P **00 59 43.9 +0.3**
comp=Z,70nm,2.0s,mb4.7
EHUE Huescar 23.96 285 P P **00 59 43.9 +0.3**
comp=Z,70nm,2.0s,mb4.7
LDF La Druitiere 24.17 312 *e*P P **00 59 42.8 -2.6**
comp=Z,117nm,0.8s,mb5.0
LDF La Druitiere 24.17 312 *e*P P **00 59 42.8 -2.6**
LDF pmax pmax
comp=Z,58nm,0.8s,mb5.1
LDF La Druitiere 24.17 312 *e*P P **00 59 42.8 -2.6**
comp=Z,58nm,0.8s,mb5.0
EBER Berja 24.26 283 P P **00 59 46.4 +0.1**
comp=Z,457nm,2.2s,mb5.5
EBER Berja 24.26 283 P P **00 59 46.4 0.0**
comp=Z,457nm,2.2s,mb5.5
EQES Quesada 24.34 285 P P **00 59 46.6 -0.5**
comp=Z,23nm,0.7s,mb4.7
EQES Quesada 24.34 285 P P **00 59 46.6 -0.4**
comp=Z,23nm,0.7s,mb4.7
FLN La Foliniere 24.45 312 *e*P P **00 59 45.6 -2.4**
comp=Z,91nm,0.6s,mb5.1
FLN *e*MLR MLR
comp=Z,2µm,19.8s,MS4.3
FLN La Foliniere 24.45 312 *e*P P **00 59 45.6 -2.4**
FLN pmax pmax
comp=Z,45nm,0.6s,mb5.1
FLN MLR MLR
comp=Z,2µm,19.8s,MS4.6
FLN La Foliniere 24.45 312 *e*P P **00 59 45.6 -2.4**
comp=Z,46nm,0.6s,mb5.1
FLN LR LR
comp=Z,2µm,19.8s,MS4.6
GRR Gorron 24.54 311 *e*P P **00 59 46.8 -2.0**
comp=Z,147nm,0.9s,mb5.2
GRR Gorron 24.54 311 *e*P P **00 59 46.8 -2.0**
GRR pmax pmax
comp=Z,73nm,0.9s,mb5.2
GRR Gorron 24.54 311 *e*P P **00 59 46.8 -2.0**
comp=Z,73nm,0.9s,mb5.2
MUD Monsted U'grnd 24.58 336 *e*P P **00 59 47.8 -1.3**
MUD *i*S **S 01 04 15.8 +6.2**
MUD MLR MLR
comp=Z,2µm,17.0s,MS4.6
MUD Monsted U'grnd 24.58 336 *i*P P **00 59 47.8 -1.3**
MUD *i*S **S 01 04 15.8 +6.2**
MUD
comp=Z,2µm,17.0s
MUD Monsted U'grnd 24.58 336 *e*P P **00 59 47.8 -1.3**
MUD *i*S **S 01 04 15.8 +6.2**
TFO1 Folkestone 24.59 319 *e*P P **00 59 48.5 -0.8**
ECOG Cogollos-Vega 24.77 284 P P **00 59 52.3 +1.3**
ECOG pmax pmax
comp=Z,10.0nm,1.4s,mb4.2
ECOG Cogollos-Vega 24.77 284 P P **00 59 52.3 +1.3**
comp=Z,10nm,1.4s,mb4.2
ECOG Cogollos-Vega 24.77 284 P P **00 59 52.3 +1.4**
comp=Z,10nm,1.4s,mb4.2
EGUA Guajares 24.80 283 P P **00 59 51.6 +0.3**
EGUA pmax pmax
comp=Z,141nm,1.0s,mb5.5
EGUA Guajares 24.80 283 P P **00 59 51.6 +0.3**
comp=Z,141nm,1.0s,mb5.5
EGUA Guajares 24.80 283 P P **00 59 51.6 +0.3**
comp=Z,141nm,1.0s,mb5.5
EBAN Banos Encina 24.89 286 P P **00 59 52.0 -0.1**
EBAN pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
EBAN Banos Encina 24.89 286 P P **00 59 52.0 -0.1**
comp=Z,6.9nm,0.7s,mb4.3
EBAN Banos Encina 24.89 286 P P **00 59 52.0 -0.1**
comp=Z,6.9nm,0.7s,mb4.3
ELAN Lanestosa 24.89 298 P P **00 59 53.0 +0.9**
comp=Z,51nm,0.7s,mb5.2
ELAN Lanestosa 24.89 298 P P **00 59 53.0 +0.9**
comp=Z,51nm,0.7s,mb5.2
ERON Agron 24.98 283 P P **00 59 53.7 +0.8**
ERON Agron 24.98 283 P P **00 59 53.7 +0.8**
ESDC Sonseca Array 25.00 290 P P **00 59 52.6 -0.5**
comp=Z,8.1nm,0.5s,mb4.5,baz=84,slow=9.9,SNR=54
ESDC Sonseca Array 25.00 290 P P **00 59 51.4 -1.7**
comp=Z,7.3nm,0.4s,mb4.6
ESDC Sonseca Array 25.00 290 P P **00 59 51.4 -1.7**
comp=Z,7.3nm,0.4s,mb4.6
ESLA Sonseca Array 25.00 290 *e*P P **00 59 53.5 +0.4**
ABKT Ailbek 25.06 74 P P **00 59 53.9 +0.3**
comp=Z,317nm,0.7s,mb6.0,SNR=14
GUD Guadarrama 25.18 292 P P **00 59 54.3 -0.4**
GUD pmax pmax
comp=Z,27nm,1.0s,mb4.7
GUD Guadarrama 25.18 292 P P **00 59 54.3 -0.4**
comp=Z,27nm,1.0s,mb4.7
GUD Guadarrama 25.18 292 P P **00 59 54.3 -0.3**
comp=Z,27nm,1.0s,mb4.7
ELOJ Sierra Loja 25.24 284 P P **00 59 54.8 -0.5**
ELOJ pmax pmax
comp=Z,17nm,0.8s,mb4.6
ELOJ Sierra Loja 25.24 284 P P **00 59 54.8 -0.5**
comp=Z,17nm,0.8s,mb4.6
ELOJ Sierra Loja 25.24 284 P P **00 59 54.8 -0.5**
comp=Z,17nm,0.8s,mb4.6
PAB San Pablo 25.30 289 *e*P P **00 59 55.4 -0.4**
PAB pmax pmax
comp=Z,84nm,1.3s,mb5.1
PAB San Pablo 25.30 289 *e*P P **00 59 55.4 -0.4**
comp=Z,84nm,1.3s,mb5.1
PAB San Pablo 25.30 289 *e*P P **00 59 55.4 -0.4**
comp=Z,84nm,1.3s,mb5.1
AEU East Anglia Un 25.34 322 *e*P P **00 59 55.0 -1.1**
EADA Adamuz 25.51 286 P P **00 59 56.5 -1.2**
comp=Z,363nm,3.2s
EADA Adamuz 25.51 286 P P **00 59 56.5 -1.2**
comp=Z,363nm,3.2s
SGMF Saint Gilles 25.55 310 *e*P P **00 59 55.4 -2.5**
comp=Z,140nm,0.9s,mb5.2
SGMF Saint Gilles 25.55 310 *e*P P **00 59 55.4 -2.5**
SGMF pmax pmax
comp=Z,70nm,0.9s,mb5.2
SGMF Saint Gilles 25.55 310 *e*P P **00 59 55.4 -2.5**
comp=Z,70nm,0.9s,mb5.2
JQE Queens East 25.57 312 *e*P P **00 59 57.2 -1.0**
JRS Jersey 25.60 312 *e*P P **00 59 57.6 -0.8**
JLP Les Platons 25.63 312 *e*P P **00 59 57.9 -0.8**
JSA Saint Aubin 25.65 312 *e*P P **00 59 58.3 -0.5**
JSA AMb AMB 01 00 07.1
comp=Z,63nm,1.1s,mb5.1
EMIJ Mijas 25.79 283 P P **00 59 58.6 -1.7**
comp=Z,43nm,1.3s,mb4.8
EMIJ Mijas 25.79 283 P P **00 59 58.6 -1.7**
comp=Z,43nm,1.3s,mb4.8
QUIF Quistinic 25.82 309 *e*P P **00 59 59.0 -1.4**
comp=Z,122nm,0.9s,mb5.1
QUIF Quistinic 25.82 309 *e*P P **00 59 59.0 -1.4**
QUIF pmax pmax
comp=Z,61nm,0.9s,mb5.1
QUIF Quistinic 25.82 309 *e*P P **00 59 59.0 -1.4**
comp=Z,61nm,0.9s,mb5.1
WOL Wolverton 25.99 317 *e*P P **00 59 59.0 -2.9**
WOL AMb AMB 01 00 04.3
comp=Z,101nm,1.5s,mb5.1
ROSF Rostrenen 26.02 310 *e*P P **01 00 00.7 -1.6**
comp=Z,70nm,0.6s,mb5.0
ROSF Rostrenen 26.02 310 *e*P P **01 00 00.7 -1.6**
ROSF pmax pmax
comp=Z,35nm,0.6s,mb5.1
ROSF Rostrenen 26.02 310 *e*P P **01 00 00.7 -1.6**
comp=Z,35nm,0.6s,mb5.0
EARI Arriondas 26.19 298 P P **01 00 06.7 +2.9**
comp=Z,37nm,1.0s,mb4.9
EARI Arriondas 26.19 298 P P **01 00 06.7 +2.9**
comp=Z,37nm,1.0s,mb4.9
MDT Midelt 26.32 274 P P **01 00 04.1 -1.0**
comp=Z,18nm,0.9s,mb4.6,baz=93,slow=9.6,SNR=23
EJIF Jimena Fronter 26.36 282 P P **01 00 04.0 -1.5**
EJIF Jimena Fronter 26.36 282 P P **01 00 04.0 -1.5**
SWN1 Swindon 26.40 317 *e*P P **01 00 03.0 -2.7**
SWN1 AMb AMB 01 00 12.0
comp=Z,111nm,1.6s,mb5.1
HFS Hagfors 26.50 345 P P **01 00 03.6 -2.9**
comp=Z,15nm,0.7s,mb4.7,baz=139,slow=9.7,SNR=19
HFS LR LR 01 11 36.3
comp=Z,4µm,18.3s,MS5.0,baz=164,slow=39
HFS Hagfors 26.50 345 P P **01 00 03.6 -2.9**
HFS pmax pmax
comp=Z,15nm,0.7s
HFS MLR MLR
comp=Z,4µm,18.3s
HFA0 Hagfors New Ar 26.51 345 P P **01 00 06.0 -0.5**
ASUD Al Ashush, Dub 26.56 105 P P **01 00 08.7 +1.3**
SNR=5.4
ESPR Espera 26.63 283 P P **01 00 08.7 +0.9**
comp=Z,64nm,1.1s,mb5.1
ESPR Espera 26.63 283 P P **01 00 08.7 +0.8**
comp=Z,64nm,1.1s,mb5.1
CWF Charnwood Fore 26.72 320 *e*P P **01 00 05.7 -2.8**
CWF AMb AMB 01 00 15.3
comp=Z,57nm,1.3s,mb4.9
HGH Gray Hill 27.02 317 *e*P P **01 00 09.4 -1.8**
KAF Kangasniemi 27.03 359 *e*p P **01 00 08.2 -3.0**
comp=Z,4.8nm,0.4s,mb4.4,baz=176,slow=9.0
KAF Kangasniemi 27.03 359 *e*P P **01 00 08.2 -3.0**
KAF pmax pmax
comp=Z,5.0nm,0.4s,mb4.4
KONO Kongsberg 27.08 340 *e*S **S 01 04 54.2 +5.1**
KONO AMS AMS 01 11 16.2
comp=Z,724nm,20.2s,MS4.2
KONO Kongsberg 27.08 340 *e*S **S 01 04 54.2 +5.0**
SNR=28
KBI1 Birley Grange 27.10 321 *e*P P **01 00 11.3 -0.6**
HATD Hatta, Dubai 27.10 104 P P **01 00 13.4 +1.2**
SNR=15
ASHO Ashiyiah 27.11 105 P P **01 00 13.1 +0.8**
SNR=13
KWE Weaver Farm 27.14 320 *e*P P **01 00 11.8 -0.5**
AKTK Aktyubinsk 27.15 46 P P **01 00 10.9 -1.5**
AKTK Aktyubinsk 27.15 46 P P **01 00 10.8 -1.5**
AKTK LR LR 01 14 03.4
AKTO Aktyubinsk 27.15 46 P P **01 00 10.8 -1.5**
comp=Z,13nm,0.7s,mb4.6,baz=245,slow=7.4,SNR=15
AKTO LR LR 01 14 03.4
comp=Z,1µm,20.0s,MS4.5,baz=74,slow=44
AKTO Aktyubinsk 27.15 46 P P **01 00 10.7 -1.7**
AKTO pmax pmax
comp=Z,17nm,1.7s,mb4.3
DYA Yadsworthy 27.18 314 AMb AMB 01 00 24.5
comp=Z,68nm,1.5s,mb5.0
DYA Yadsworthy 27.18 314 AMb AMB 01 00 24.5
comp=Z,68nm,1.5s,mb5.0
PBRG Braganca 27.18 294 *e*P P **01 00 12.9 +0.1**
comp=Z,116nm,1.4s,mb5.2
ECAL Calabor 27.19 295 P P **01 00 14.9 +2.1**
comp=Z,52nm,0.9s,mb5.1
ECAL Calabor 27.19 295 P P **01 00 14.9 +2.1**
comp=Z,52nm,0.9s,mb5.1
EMIN Mina Concepcio 27.19 286 P P **01 00 12.3 -0.6**
comp=Z,47nm,1.1s,mb4.9
EMIN Mina Concepcio 27.19 286 P P **01 00 12.3 -0.6**
comp=Z,47nm,1.1s,mb4.9
MCH1 Michaelchurch 27.29 317 *e*P P **01 00 12.2 -1.4**
MCH1 AMb AMB 01 00 18.1
comp=Z,50nm,1.0s,mb5.0
MVO Moncorvo 27.37 293 *e*P P **01 00 13.8 -0.7**
comp=Z,128nm,2.4s,mb5.0
MVO *e*S **S 01 04 57.6 +3.4**
MVO A 01 12 24.0
comp=Z,1µm,16.0s
MVO Moncorvo 27.37 293 *e*P P **01 00 13.8 -0.7**
comp=Z,128nm,2.4s,mb5.0
MVO *e*S **S 01 04 57.6 +3.4**
comp=Z,1µm,16.0s
EBAD Badajoz 27.39 288 P P **01 00 13.3 -1.4**
comp=Z,50nm,1.3s,mb4.9
EBAD Badajoz 27.39 288 P P **01 00 13.3 -1.4**
comp=Z,50nm,1.3s,mb4.9
LHO Holmfirth 27.42 321 *e*P P **01 00 13.1 -1.6**
PBAR Barrancos 27.45 287 *e*P P **01 00 14.3 -0.9**
comp=Z,83nm,1.2s,mb5.1
PBAR *e*S **S 01 04 58.2 +2.8**
PBAR A 01 05 56.7
comp=Z,620nm,22.0s
PBAR Barrancos 27.45 287 *e*P P **01 00 14.3 -0.9**
comp=Z,83nm,1.2s,mb5.1
PBAR *e*S **S 01 04 58.2 +2.8**
comp=Z,620nm,22.0s
HTR Trewern Hill 27.47 317 *e*P P **01 00 13.7 -1.6**
HPK Haverah Park 27.51 322 *e*P P **01 00 15.2 -0.4**
HPK AMb AMB 01 00 25.5
comp=Z,96nm,1.5s,mb5.2
ERUA La Rua 27.52 296 P P **01 00 18.8 +3.0**
ERUA La Rua 27.52 296 P P **01 00 18.8 +3.0**
EPON Pontenova 27.60 298 P P **01 00 15.8 -0.7**
EPON Pontenova 27.60 298 P P **01 00 15.8 -0.7**
PMRV Marv??o 27.66 289 *e*P P **01 00 16.9 -0.2**
comp=Z,85nm,1.3s,mb5.2
PMRV *e*S **S 01 05 00.9 +2.2**
PMRV A 01 06 01.4
comp=Z,650nm,20.0s
PMRV Marv??o 27.66 289 *e*P P **01 00 16.9 -0.2**
comp=Z,85nm,1.3s,mb5.2
PMRV *e*S **S 01 05 00.9 +2.2**
comp=Z,650nm,20.0s
HTL Hartland 27.72 315 *e*P P **01 00 15.8 -1.7**
HTL AMb AMB 01 00 19.2
comp=Z,73nm,1.7s,mb5.0
MTE Manteigas 27.75 291 *e*P P **01 00 19.3 +1.4**
comp=Z,81nm,1.8s,mb5.0
MTE *e*S **S 01 05 02.9 +2.7**
MTE A 01 12 29.2
comp=Z,1µm,18.0s
MTE Manteigas 27.75 291 *e*P P **01 00 19.3 +1.4**
comp=Z,81nm,1.8s,mb5.0
MTE *e*S **S 01 05 02.9 +2.7**
comp=Z,1µm,18.0s
MTE Manteigas 27.75 291 *e*P P **01 00 19.7 +1.8**
comp=Z,107nm,1.7s,mb5.2
NAO01 NORSAR Array S 27.77 343 *e*P P **01 00 16.7 -1.2**
NAO01 NORSAR Array S 27.77 343 *e*P P **01 00 16.7 -1.1**
PESTR Estremoz 27.83 288 *e*P P **01 00 18.6 -0.1**
comp=Z,80nm,1.5s,mb5.1
PESTR *e*S **S 01 05 03.8 +2.3**
PESTR A 01 13 20.8
comp=Z,848nm,18.0s
PESTR Estremoz 27.83 288 *e*P P **01 00 18.6 -0.1**
comp=Z,80nm,1.5s,mb5.1
PESTR *e*S **S 01 05 03.8 +2.3**
comp=Z,848nm,18.0s
SBD1 Bryn Du 27.84 319 *e*P P **01 00 17.0 -1.6**
EGRO El Granado 27.85 285 P P **01 00 16.5 -2.3**
comp=Z,23nm,0.7s,mb4.9
EGRO El Granado 27.85 285 P P **01 00 16.5 -2.3**
comp=Z,23nm,0.7s,mb4.9
NB2 NORSAR Subarra 27.87 343 P P **01 00 15.3 -3.4**
comp=Z,7.3nm,0.7s,mb4.4,baz=155,slow=10
NOA NORSAR Array B 27.87 343 P P **01 00 15.2 -3.5**
comp=Z,3.3nm,0.5s,mb4.2,baz=155,slow=9.4,SNR=14
NOA NORSAR Array B 27.87 343 P P **01 00 15.2 -3.5**
NOA pmax pmax
comp=Z,3.0nm,0.5s
PVRL Vila Real 27.89 293 *e*P P **01 00 28.0 +8.8**
AB31 Akbulak array 27.91 49 *i*P P **01 00 17.9 -1.3**
AB31 pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
JOF Joensuu 27.96 4 *e*p P **01 00 16.4 -3.1**
comp=Z,4.4nm,0.4s,mb4.4
JOF Joensuu 27.96 4 *e*P P **01 00 16.4 -3.1**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.4
PVIS Viseu 28.02 292 *e*P P **01 00 22.3 +2.0**
comp=Z,91nm,1.3s,mb5.2
PVAQ Vaqueiros 28.05 285 *e*P P **01 00 20.4 -0.2**
comp=Z,87nm,1.7s,mb5.1
PVAQ *e*S **S 01 05 05.8 +0.8**
PVAQ A 01 15 23.5
comp=Z,756nm,20.0s
PVAQ Vaqueiros 28.05 285 *e*P P **01 00 20.4 -0.2**
comp=Z,87nm,1.7s,mb5.1
PVAQ *e*S **S 01 05 05.8 +0.8**
comp=Z,756nm,20.0s
PBEJ Beja 28.11 286 *e*P P **01 00 22.4 +1.3**
comp=Z,69nm,1.2s,mb5.2
PCAB Cabril 28.14 294 *e*P P **01 00 21.8 +0.4**
comp=Z,88nm,1.5s,mb5.2
ELOB Lobios 28.17 294 P P **01 00 22.1 +0.5**
comp=Z,12nm,0.6s,mb4.7
ELOB Lobios 28.17 294 P P **01 00 22.1 +0.4**
comp=Z,12nm,0.6s,mb4.7
EVO Evora 28.18 287 *e*P P **01 00 20.4 -1.4**
comp=Z,75nm,1.2s,mb4.9
EVO *e*MLR MLR
comp=Z,2µm,19.5s,MS4.3
EVO Evora 28.18 287 *e*P P **01 00 21.8 0.0**
comp=Z,57nm,1.6s,mb5.0
EVO *e*S **S 01 05 07.5 +0.4**

PBDV Barranco-do-Ve 28.24 285 *e*P **P** **01 00 21.5 -0.8**
comp=Z,132nm,1.5s,mb5.3
PBDV *e*S **S** **01 05 09.4 +1.5**
PBDV A 01 15 40.8
comp=Z,725nm,20.0s
PBDV Barranco-do-Ve 28.24 285 *e*P **P** **01 00 21.5 -0.8**
comp=Z,132nm,1.5s,mb5.3
PBDV *e*S **S** **01 05 09.4 +1.5**
comp=Z,725nm,20.0s
EVOP Sao Brissos 28.27 287 *e*P **P** **01 00 20.4 -2.2**
comp=Z,37nm,1.2s,mb4.9
XAL Allendale 28.28 323 *e*P **P** **01 00 21.0 -1.5**
PTOM Tomar 28.43 290 *e*P **P** **01 00 26.4 +2.4**
comp=Z,54nm,1.1s,mb5.1
PTOM Tomar 28.43 290 *e*P **P** **01 00 26.3 +2.3**
PTO Porto 28.56 293 *e*P **P** **01 00 26.2 +1.1**
comp=Z,109nm,2.6s,mb5.1
STS Santiago 28.59 297 P **P** **01 00 28.1 +2.8**
STS pmax pmax
comp=Z,18nm,0.8s,mb4.8
STS Santiago 28.59 297 P **P** **01 00 28.1 +2.8**
comp=Z,18nm,0.8s,mb4.8
STS Santiago 28.59 297 P **P** **01 00 28.1 +2.8**
comp=Z,18nm,0.8s,mb4.8
XSO Sourhope Farm 28.64 324 *e*P **P** **01 00 25.1 -0.6**
HOQ Hoqain 28.65 105 P **P** **01 00 26.7 +0.7**
SNR=19
PTEO Sao Teotonio 28.83 285 *e*P **P** **01 00 30.5 +2.9**
comp=Z,138nm,1.3s,mb5.5
ECK Cauldkaine Hil 28.90 323 *e*P **P** **01 00 27.0 -1.0**
BER Bergen 28.93 338 AMS AMS 01 13 36.0
comp=Z,2μm,19.1s,MS4.7
PFVI Vila Bisbo 28.96 285 *e*S **S** **01 05 20.9 +1.6**
PFVI A 01 15 49.7
comp=Z,692nm,20.0s
PFVI Vila Bisbo 28.96 285 *e*S **S** **01 05 20.9 +1.6**
comp=Z,692nm,20.0s
BSY Bisya 28.99 107 P **P** **01 00 30.3 +1.2**
SNR=10
EKA Eskdalemuir Ar 28.99 324 P **P** **01 00 26.6 -2.2**
comp=Z,8.3nm,0.5s,mb4.8,baz=123,slow=11,SNR=25
EKA PcP PcP 01 03 37.7 +0.6
comp=Z,3.7nm,0.9s,baz=123,slow=3.0,SNR=4.0
EKA Eskdalemuir Ar 28.99 324 P **P** **01 00 26.6 -2.2**
EKA 01 03 37.7
EKA pmax pmax
comp=Z,8.0nm,0.5s
EKA pmax pmax
comp=Z,4.0nm,0.9s
EKA Eskdalemuir Ar 28.99 324 PcP PcP 01 03 37.7 +0.6
ESK Eskdalemuir 29.01 324 *e*P **P** **01 00 27.7 -1.3**
ESK AMb AMB 01 00 35.9
comp=Z,53nm,2.1s,mb4.9
BSYO Bisya 29.03 107 P **P** **01 00 30.3 +0.8**
SNR=10
EBL Broad Law 29.17 324 *e*P **P** **01 00 28.9 -1.5**
EDI Edinburgh 29.32 325 *e*P **P** **01 00 29.9 -1.8**
EDI AMb AMB 01 00 30.8
comp=Z,59nm,1.7s,mb5.0
SMDO Samad 29.50 106 P **P** **01 00 34.5 +0.9**
SNR=12
EBH Black Hill 29.65 325 *e*P **P** **01 00 33.0 -1.6**
EAB Aberfoyle 30.01 324 *e*P **P** **01 00 35.9 -1.9**
MOL Molde 30.08 342 AMS AMS 01 12 51.8
comp=Z,813nm,17.2s,MS4.4
ARU Arti 30.18 35 *e*P **P** **01 00 39.0 -0.3**
ARU *e* 01 01 35.6
ARU *e*S **S** **01 05 39.7 +1.7**
ARU *e*SS SS 01 07 20.6 -26
ARU MLR MLR
comp=Z,1μm,19.0s,MS4.5
ARU Arti 30.18 35 *e*P **P** **01 00 37.8 -1.5**
ARU Arti 30.18 35 *e*P **P** **01 00 37.8 -1.5**
NSS Namsos 30.85 347 *e*P **P** **01 00 44.3 -0.8**
NSS AMS AMS 01 15 13.0
comp=Z,2μm,19.0s,MS4.8
SVE Sverdlovsk 31.37 36⇑ *e*P **P** **01 00 48.8 -1.0**
SVE *e*S **S** **01 05 58.5 +1.8**
SVE pmax pmax
comp=Z,23nm,0.7s,mb5.1
SVE MLR MLR
comp=Z,1μm,14.0s,MS4.7
TOA0 Torodi Ar. Sit 31.68 233 *e*P **P** **01 00 53.8 +0.9**
TOA0 Torodi Ar. Sit 31.68 233 *e*P **P** **01 00 53.8 +0.9**
TORD Torodi Ar. Bea 31.68 233 P **P** **01 00 53.1 +0.2**
comp=Z,32nm,0.7s,mb5.2,baz=34,slow=8.8,SNR=306
TORD LR LR 01 15 22.2
comp=Z,2μm,21.3s,MS4.8,baz=35,slow=39
MOR8 Moi Rana 31.98 350 *e*P **P** **01 00 53.4 -1.7**
MOR8 AMb AMB 01 01 04.0
comp=Z,53nm,2.1s,mb5.0
MOR8 Moi Rana 31.98 350 *e*P **P** **01 00 53.4 -1.7**
comp=Z,53nm,2.1s,mb5.0,SNR=27
MOR8 Moi Rana 31.98 350 *e*P **P** **01 00 53.4 -1.7**
comp=Z,53nm,2.1s,mb5.0
APA Apatity 32.71 4⇑ *i*P **P** **01 00 59.0 -2.4**
APA *e*S **S** **01 06 13.0 -4.3**
APA pmax pmax
comp=Z,200nm,2.0s,mb5.7
APA MLR MLR
comp=Z,3μm,13.0s,MS5.2
KTK1 Kautokeino 34.02 358 *e*P **P** **01 01 09.8 -3.0**
KTK1 AMb AMB 01 01 18.2
comp=Z,48nm,1.3s,mb5.3
KTK1 Kautokeino 34.02 358 *e*P **P** **01 01 09.8 -3.0**
comp=Z,48nm,1.3s,mb5.3,SNR=27
KBL Kabul 34.28 79 *e*P **P** **01 01 16.5 +1.0**
KBL pmax pmax
comp=Z,23nm,1.0s,mb5.1
KBL Kabul 34.28 79 *e*P **P** **01 01 16.5 +1.0**
comp=Z,23nm,1.0s,mb5.1
KBL Kabul 34.28 79 *e*P **P** **01 01 16.5 +0.9**
comp=Z,23nm,1.0s,mb5.1
KK31 Karatay Array 34.33 63 P **P** **01 01 14.1 -1.8**
KK31 pmax pmax
comp=Z,35nm,1.0s,mb5.2
ARCES ARCESS Array B 34.49 359 P **P** **01 01 14.0 -2.9**
comp=Z,2.2nm,0.4s,mb4.5,baz=178,slow=9.6,SNR=18
ARCES ARCESS Array B 34.49 359 P **P** **01 01 14.0 -2.9**
ARCES pmax pmax
comp=Z,2.0nm,0.4s
ARE0 ARCESS Array S 34.49 359 *e*P **P** **01 01 15.8 -1.1**
ARE0 ARCESS Array S 34.49 359 *e*P **P** **01 01 15.8 -1.1**
KEV Kevo 34.70 360 *e*p **P** **01 01 16.7 -2.0**
comp=Z,1.4nm,0.3s,mb4.4
KEV Kevo 34.70 360 *e*P **P** **01 01 16.7 -2.0**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
TRO Tromso 34.87 355 *e*P **P** **01 01 18.1 -2.0**
TRO *e*S **S** **01 06 46.5 -4.2**
TRO AMS AMS 01 17 13.9
comp=Z,1μm,17.0s,MS4.8
TRO Tromso 34.87 355 *e*P **P** **01 01 18.1 -2.1**
SNR=27
TRO *e*S **S** **01 06 46.5 -4.2**
SNR=28
BRVK Borovoye 35.20 46 P **P** **01 01 23.3 +0.1**
SNR=9.9
BRVK Borovoye 35.20 46 *e*P **P** **01 01 22.9 -0.3**
BVA0 Borovoye Array 35.26 46 *i*P **P** **01 01 21.4 -2.3**
BVA0 pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
BVAR Borovoye Array 35.26 46 P **P** **01 01 23.4 -0.3**
comp=Z,3.4nm,0.6s,mb4.4,baz=245,slow=6.4,SNR=20
BVAR Borovoye Array 35.26 46 P **P** **01 01 23.4 -0.3**
BVAR pmax pmax
comp=Z,3.0nm,0.6s
PMPS Porto Santo 35.80 279 *e*P **P** **01 01 32.6 +4.0**
comp=Z,193nm,1.7s,mb5.8
PMAR Madeira 36.36 279 *e*P **P** **01 01 36.6 +3.2**
comp=Z,179nm,2.1s,mb5.6
AML Almayashu 36.73 65 *e*P **P** **01 01 37.7 +1.2**
comp=Z,175nm,1.8s,mb5.6
AML Almayashu 36.73 65 *e*P **P** **01 01 37.7 +1.2**
comp=Z,175nm,1.8s,mb5.6
EKS2 Erkin-Say 36.75 64 *e*P **P** **01 01 37.0 +0.4**
comp=Z,60nm,1.1s,mb5.3
KMBO Kilima Mbogo 37.29 163 P **P** **01 01 43.6 +2.2**
comp=Z,7.1nm,1.2s,mb4.4,baz=320,slow=13,SNR=5.5
KMBO LR LR 01 20 22.5
comp=Z,989nm,19.2s,MS4.6,baz=333,slow=41
KMBO Kilima Mbogo 37.29 163 P **P** **01 01 43.6 +2.2**
KMBO pmax pmax
comp=Z,7.0nm,1.2s
KMBO MLR MLR
comp=Z,989nm,19.2s

TKM2 Tokmak 2 38.06 63 *e*P **P** **01 01 47.9 +0.1**
TKM2 pmax pmax
comp=Z,33nm,0.9s,mb5.1
TKM2 Tokmak 2 38.06 63 *e*P **P** **01 01 47.9 +0.1**
comp=Z,33nm,0.9s,mb5.1
TKM2 Tokmak 2 38.06 63 *e*P **P** **01 01 47.9 +0.1**
comp=Z,33nm,0.9s,mb5.1
BJO Bjornoya 39.66 357 AMS AMS 01 19 32.4
comp=Z,927nm,20.7s,MS4.6
KURK Kurchatov 40.00 51 P **P** **01 02 03.1 -0.8**
comp=Z,14nm,0.8s,mb4.8,baz=274,slow=8.6,SNR=28
KURK Kurchatov 40.00 51 *e*P **P** **01 02 02.9 -1.0**
KURK pmax pmax
comp=Z,33nm,0.8s,mb5.1
KURK Kurchatov 40.00 51 P **P** **01 02 04.1 +0.2**
SNR=12
KURK Kurchatov 40.00 51 *e*P **P** **01 02 02.9 -1.0**
comp=Z,33nm,0.8s,mb5.1
DBIC Dimbokro 40.77 234 P **P** **01 02 10.6 -0.1**
comp=Z,14nm,0.6s,mb4.8,baz=22,slow=10,SNR=20
DBIC LR LR 01 21 54.7
comp=Z,2μm,18.2s,MS5.0,baz=197,slow=40
DBIC Dimbokro 40.77 234 P **P** **01 02 10.6 -0.1**
DBIC pmax pmax
comp=Z,14nm,0.6s
DBIC MLR MLR
comp=Z,2μm,18.2s
DBIC Dimbokro 40.77 234 P **P** **01 02 10.6 -0.1**
DBIC LR LR 01 21 54.7
TIC Toumodi 40.90 234 *e*P **P** **01 02 11.7 0.0**
comp=Z,97nm,0.7s,mb5.5
KIC Kosan Boka 40.93 233 *e*P **P** **01 02 11.7 -0.3**
comp=Z,235nm,1.0s,mb5.8
LIC Lamto 41.22 233⇑ *i*P **P** **01 02 14.8 +0.5**
comp=Z,162nm,1.2s,mb5.2
LIC *e*MLR MLR
comp=Z,3μm,17.8s,MS4.9
LIC Lamto 41.22 233 *e*P **P** **01 02 14.0 -0.3**
comp=Z,230nm,1.4s,mb5.6
LIC Lamto 41.22 233⇑ *i*P **P** **01 02 14.8 +0.5**
comp=Z,81nm,1.2s,mb5.2
LIC LR LR
comp=Z,1μm,17.8s,MS4.9
MK31 Makanchi Array 42.50 57 P **P** **01 02 23.9 -0.6**
MK31 pmax pmax
comp=Z,47nm,0.7s,mb5.2
MK31 Makanchi Array 42.50 57 *e*P **P** **01 02 24.1 -0.4**
MK31 Makanchi Array 42.50 57 *e*P **P** **01 02 24.1 -0.4**
MKAR Makanchi Array 42.50 57 P **P** **01 02 24.4 0.0**
comp=Z,24nm,0.6s,mb5.0,baz=277,slow=7.1,SNR=165
MKAR Makanchi Array 42.50 57 P **P** **01 02 24.5 0.0**
MKAR pmax pmax
comp=Z,24nm,0.6s
NVS Novosibirsk 43.02 45 *i*P **P** **01 02 27.6 -1.0**
NVS *i*S **S** **01 08 53.2 -0.5**
NVS pmax pmax
comp=Z,55nm,0.9s,mb5.3
NVS pmax pmax
comp=N,34nm,1.3s
NVS pmax pmax
comp=E,40nm,1.2s
NVS smax
comp=N,38nm,1.8s
NVS smax
comp=E,8.0nm,0.9s
ZAA0 Zalesovo Array 43.91 46 *e*P **P** **01 02 35.1 -0.7**
ZAA0 Zalesovo Array 43.91 46 *e*P **P** **01 02 35.1 -0.7**
ZALV Zalesovo Beam 43.91 46 P **P** **01 02 34.5 -1.3**
comp=E,4.3nm,0.4s,mb4.6,baz=269,slow=8.9,SNR=32
ZALV LR LR 01 25 00.4
comp=E,474nm,20.1s,MS4.4,baz=267,slow=42
ZALV Zalesovo Beam 43.91 46 P **P** **01 02 34.5 -1.3**
ZALV pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
ZALV MLR MLR
comp=Z,474nm,20.1s,MS4.4
BBTS Babate 44.06 254 P **P** **01 02 38.9 +1.5**
comp=Z,111nm,0.9s,mb5.6,baz=26,slow=2.6,SNR=16
BBTS Babate 44.06 254 P **P** **01 02 38.9 +1.5**
KBS Kingsbay 44.38 356 *e*P **P** **01 02 37.1 -2.1**
KBS *e*SS SS 01 12 31.6 +0.3
KBS AMS AMS 01 20 48.0
comp=Z,698nm,16.7s,MS4.7
KBS Kingsbay 44.38 356 *e*P **P** **01 02 37.5 -1.7**
KBS *e*SS SS 01 12 31.6 +0.3
SNR=36
KBS Kingsbay 44.38 356 *e*P **P** **01 02 37.5 -1.7**
DAG Danmarks Havn 46.45 347 *i*P **P** **01 02 52.0 -3.7**
DAG Danmarks Havn 46.45 347 *e*P **P** **01 02 52.0 -3.7**
WMQ Urumqi 46.68 60 P **P** **01 02 58.4 +0.5**
WMQ AP pP 01 03 03.0 +1.3
WMQ XP sP 01 03 05.5 +2.3
WMQ PCP PcP 01 04 33.0 +1.6
WMQ PP PP 01 04 48.0 +0.6
WMQ PCS PcS 01 08 25.0 -1.1
WMQ S **S** **01 09 46.0 -1.0**
WMQ XS sS 01 09 57.0 +3.8
WMQ SS SS 01 13 05.0 -8.0
WMQ AMB AMB
comp=Z,64nm,1.3s,mb5.4
WMQ AMB AMB
comp=Z,225nm,5.6s
WMQ LR LR
comp=N,2μm,18.5s,MS5.2
WMQ LR LR
comp=E,2μm,19.3s,MS5.2
WMQ LR LR
comp=Z,2μm,21.6s,MS5.0
KRAR Krasnoyarsk 48.52 43⇓ *e*P **P** **01 03 12.5 +0.5**
KRAR pmax pmax
comp=Z,24nm,0.8s,mb5.3
HYB Hyderabad 48.87 97 *i*P **P** **01 03 15.5 +0.3**
HYB Hyderabad 48.87 97 *e*P **P** **01 03 15.5 +0.3**
SUMG Summit 49.59 339 *e*P **P** **01 03 17.9 -2.1**
SUMG Summit 49.59 339 *e*P **P** **01 03 17.9 -2.1**
LSZ Lusaka 50.12 179 P **P** **01 03 26.9 +2.3**
comp=Z,10nm,0.7s,mb5.0,baz=11,slow=7.9,SNR=30
LSZ Lusaka 50.12 179 *e*P **P** **01 03 26.7 +2.1**
LSZ Lusaka 50.12 179 *e*P **P** **01 03 26.7 +2.1**
SFJD Kangerlussuaq 53.47 331 *e*P **P** **01 03 47.2 -1.9**
SFJD *e*S **S** **01 11 17.0 -4.1**
SFJD pmax pmax
comp=Z,21nm,0.8s,mb5.1
SFJD MLR MLR
comp=Z,690nm,19.0s,MS4.7
SFJD Kangerlussuaq 53.47 331 *i*P **P** **01 03 47.2 -1.9**
comp=Z,21nm,0.8s,mb5.1
SFJD *e*S **S** **01 11 17.0 -4.1**
SFJD
comp=Z,690nm,19.0s
LSA Lhasa 53.56 77 P **P** **01 03 51.0 +0.7**
LSA AMB AMB
comp=Z,20nm,1.0s,mb5.0
LSA Lhasa 53.56 77 *e*P **P** **01 03 51.2 +0.9**
LSA pmax pmax
comp=Z,23nm,0.9s,mb5.1
LSA Lhasa 53.56 77 *e*P **P** **01 03 51.2 +0.9**
comp=Z,23nm,0.9s,mb5.1
LSA Lhasa 53.56 77 *e*P **P** **01 03 51.2 +0.9**
comp=Z,23nm,0.9s,mb5.1
MOY Mondy 53.89 48 *e*P **P** **01 03 53.4 +1.0**
MOY pmax pmax
comp=Z,65nm,2.0s,mb5.2
TSUM Tsumeb 54.76 191 P **P** **01 04 00.8 +1.9**
comp=Z,13nm,0.8s,mb5.0,baz=340,slow=8.6,SNR=24
TSUM Tsumeb 54.76 191 *e*P **P** **01 04 01.2 +2.2**
comp=Z,28nm,1.1s,mb5.2
TSUM Tsumeb 54.76 191 *e*P **P** **01 04 01.2 +2.2**
comp=Z,28nm,1.1s,mb5.2
TLY Talaya 55.49 47⇓ P **P** **01 04 04.8 +0.8**
SNR=15
TLY Talaya 55.49 47 *e*P **P** **01 04 04.9 +0.9**
TLY *e* 01 06 08.8
TLY *e*PPP 01 07 21.3
TLY *e*S **S** **01 11 51.2 +2.5**
TLY *e* 01 13 53.9
TLY pmax pmax
comp=Z,31nm,1.2s,mb5.2
TLY Talaya 55.49 47 P **P** **01 04 04.8 +0.8**
SNR=15
TLY Talaya 55.49 47 *e*P **P** **01 04 05.2 +1.2**
comp=Z,27nm,1.0s,mb5.2
ZAK Zakamensk 55.60 49 *e*P **P** **01 04 05.3 +0.5**
ZAK *e* 01 12 11.5
ZAK pmax pmax
comp=Z,25nm,1.2s,mb5.1

IRK Irkutsk 55.73 47 *e*P **P** **01 04 11.6 +5.9**
GTA Gaotai 56.61 62 *e*P **P** **01 04 12.8 +0.6**
GTA AP pP 01 04 16.9 +0.9
GTA PP PP 01 06 20.5 +2.6
GTA S **S** **01 12 04.5 +0.6**
GTA AMB AMB
comp=Z,11nm,1.1s,mb4.8
GTA AMB AMB
comp=Z,172nm,4.8s
GTA LR LR
comp=N,571nm,17.8s,MS4.9
GTA LR LR
comp=E,669nm,14.9s,MS4.9
GTA LR LR
comp=Z,722nm,20.2s
OPO Ambohidratompo 56.70 157 P **P** **01 04 15.8 +2.9**
comp=Z,12nm,0.9s,mb5.0,baz=6.2,slow=6.9,SNR=11
SONM Songino Array 58.31 51 P **P** **01 04 24.6 +0.5**
comp=Z,9.1nm,0.4s,mb5.1,baz=288,slow=7.7,SNR=73
SONM Songino Array 58.31 51 P **P** **01 04 24.6 +0.6**
SONM pmax pmax
comp=Z,9.0nm,0.4s
ULN Ulaanbaatar 58.72 51 P **P** **01 04 27.9 +1.0**
SNR=11
ULN Ulaanbaatar 58.72 51 *e*P **P** **01 04 26.9 0.0**
ULN pmax pmax
comp=Z,30nm,1.1s,mb5.2
ULN Ulaanbaatar 58.72 51 *e*P **P** **01 04 26.9 0.0**
comp=Z,30nm,1.1s,mb5.2
BOD Bodaibo 59.53 38 *e*P **P** **01 04 30.7 -1.7**
BOD pmax pmax
comp=Z,16nm,0.9s,mb5.0
LBTB Lobatse 59.81 182 P **P** **01 04 37.0 +2.5**
comp=Z,15nm,0.7s,mb5.1,baz=6.3,slow=6.5,SNR=20
LBTB Lobatse 59.81 182 P **P** **01 04 37.1 +2.5**
LBTB pmax pmax
comp=Z,15nm,0.7s,mb5.1
LBTB Lobatse 59.81 182 *e*P **P** **01 04 37.3 +2.7**
comp=Z,30nm,1.1s,mb5.2
LBTB Lobatse 59.81 182 *e*P **P** **01 04 37.3 +2.8**
comp=Z,30nm,1.1s,mb5.2
TIXI Tiksi 60.66 21 *e*P **P** **01 04 40.7 +0.8**
TIXI pmax pmax
comp=Z,30nm,1.0s,mb5.4
TIXI MLR MLR
comp=Z,1μm,16.0s,MS5.1
TIXI Tiksi 60.66 21 *e*P **P** **01 04 39.6 -0.3**
comp=Z,21nm,0.8s,mb5.3
TIXI Tiksi 60.66 21 *e*P **P** **01 04 39.6 -0.3**
comp=Z,21nm,0.8s,mb5.3
LZH Lanzhou 60.81 65 *e*P **P** **01 04 38.5 -3.0**
LZH PP PP 01 06 54.0 -1.3
LZH *e*S **S** **01 12 51.6 -7.2**
LZH *e*SS SS 01 16 51.4 -5.9
LZH AMB AMB
comp=Z,61nm,1.6s,mb5.5
LZH AMB AMB
comp=Z,183nm,6.2s
LZH LR LR
comp=N,589nm,13.2s
LZH LR LR
comp=Z,1μm,17.5s,MS5.1
CD2 Chengdu 62.94 70⇓ *i*P **P** **01 04 56.0 0.0**
CD2 AP pP 01 05 00.8 +1.0
CD2 XP sP 01 05 03.5 +2.2
CD2 PP PP 01 07 15.6 +1.4
CD2 PCS PcS 01 09 36.6 -1.0
CD2 S **S** **01 13 21.8 -4.1**
CD2 SCS ScS 01 14 44.0 -4.8
CD2 SS SS 01 17 26.3 -4.6
CD2 AMB AMB
comp=Z,40nm,1.3s,mb5.4
CD2 AMB AMB
comp=Z,140nm,6.0s
CD2 LR LR
comp=N,670nm,26.4s
CD2 LR LR
comp=E,440nm,20.4s
CD2 LR LR
comp=Z,660nm,20.4s
BTO Baotou 63.40 58 *e*P **P** **01 04 59.3 +0.5**
BOSA Boshof 63.40 182 P **P** **01 05 00.7 +1.9**
comp=Z,8.7nm,0.5s,mb5.1,baz=360,slow=7.8,SNR=23
BOSA LR LR 01 35 40.6
comp=Z,998nm,18.9s,MS5.0,baz=8.5,slow=39
BOSA Boshof 63.40 182 P **P** **01 05 00.7 +1.9**
BOSA pmax pmax
comp=Z,9.0nm,0.5s,mb5.2
BOSA MLR MLR
comp=Z,998nm,18.9s,MS5.0
BOSA Boshof 63.40 182 *e*P **P** **01 05 00.8 +2.0**
comp=Z,19nm,0.9s,mb5.2
BOSA Boshof 63.40 182 *e*P **P** **01 05 00.8 +2.1**
comp=Z,19nm,0.9s,mb5.2
SCHQ Schefferville 64.23 320 P **P** **01 05 03.1 -0.9**
comp=Z,18nm,0.5s,mb5.3,baz=59,slow=5.8,SNR=21
SCHQ Schefferville 64.23 320 *e*P **P** **01 05 04.7 +0.7**
comp=Z,33nm,0.5s,mb5.6
SCHQ Schefferville 64.23 320 *e*P **P** **01 05 04.7 +0.6**
comp=Z,33nm,0.5s,mb5.6
HHC Hu-ho-hao-te 64.36 57 *e*P **P** **01 05 05.0 -0.2**
HHC PCP PcP 01 05 39.5 -0.1
HHC PP PP 01 07 28.5 +2.1
HHC SCP 01 09 40.3
HHC PCS 01 09 41.8
HHC S **S** **01 13 41.0 -2.2**
HHC SCS ScS 01 14 55.5 -3.7
HHC SS SS 01 17 53.4 +0.8
HHC AMB AMB
comp=Z,25nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,280nm,7.1s
HHC LR LR
comp=N,566nm,16.5s,MS5.0
HHC LR LR
comp=E,748nm,17.3s,MS5.0
HHC LR LR
comp=Z,778nm,16.8s,MS5.0
KMI Kunming 64.81 76 P **P** **01 05 10.0 +1.7**
KMI AP pP 01 05 13.5 +1.3
KMI PCP PcP 01 05 44.0 +2.3
KMI PP PP 01 07 34.3 +3.6
KMI PPP 01 09 05.0
KMI PCS 01 09 46.8
KMI S **S** **01 13 45.8 -3.4**
KMI PS 01 14 08.4
KMI SKS 01 15 00.3
KMI SS SS 01 17 59.4 -0.8
KMI SSS 01 20 50.3
KMI AMB AMB
comp=Z,9.0nm,0.7s,mb4.9
KMI AMB AMB
comp=Z,145nm,3.7s
KMI LR LR
comp=N,404nm,17.0s,MS4.8
KMI LR LR
comp=E,350nm,18.1s,MS4.8
KMI LR LR
comp=Z,466nm,17.6s,MS4.7
CHTO Chiang Mai 64.84 84 *e*P **P** **01 05 08.3 -0.3**
CHTO pmax pmax
comp=Z,17nm,0.9s,mb5.1
CHTO Chiang Mai 64.84 84 *e*P **P** **01 05 08.3 -0.3**
comp=Z,17nm,0.9s,mb5.1
CHTO Chiang Mai 64.84 84 *e*P **P** **01 05 08.3 -0.3**
comp=Z,17nm,0.9s,mb5.1
CMAR Chiang Mai Arr 65.02 84 P **P** **01 05 09.6 -0.2**
comp=Z,3.0nm,0.3s,mb4.8,baz=297,slow=7.8,SNR=19
CMAR LR LR 01 39 34.0
comp=Z,184nm,20.9s,MS4.2,baz=181,slow=42
CMAR Chiang Mai Arr 65.02 84 *i*P **P** **01 05 09.6 -0.2**
CMAR pmax pmax
comp=Z,3.0nm,0.3s
YAK Yakutsk 65.13 30⇓ *e*P **P** **01 05 12.5 +2.7**
YAK pmax pmax
comp=Z,20nm,1.0s,mb5.1
XAN Xi'an 65.45 65 P **P** **01 05 12.3 -0.1**
XAN AP pP 01 05 22.3 +6.0
XAN XP sP 01 05 27.3 +10
XAN S S 01 13 53.9 -2.9
XAN SCS ScS 01 15 04.3 -3.5
XAN AMB AMB
comp=Z,5.0nm,0.6s,mb4.7
XAN AMB AMB
comp=Z,27nm,4.7s

XAN LR LR
comp=N,388nm,29.7s
XAN LR LR
comp=E,412nm,21.2s
XAN LR LR
comp=Z,384nm,18.2s
HIA Hailar 65.95 46 ⇑ *e*P **P 01 05 15.3 0.0**
HIA Hailar 65.95 46 *e*P **P 01 05 15.7 +0.4**
comp=Z,33nm,1.0s,mb5.3
HIA Hailar 65.95 46 *e*P **P 01 05 15.7 +0.4**
comp=Z,33nm,1.0s,mb5.3
GYA Guiyang 67.27 73 P **P 01 05 23.6 -0.5**
GYA PP PP 01 07 53.4 +1.2
GYA SCP 01 09 54.8
GYA S S 01 14 16.9 -2.2
GYA SKS 01 15 19.6
GYA SS SS 01 18 37.9 -0.5
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,330nm,6.8s
GYA LR LR
comp=N,700nm,19.6s,MS5.0
GYA LR LR
comp=E,630nm,18.4s,MS5.0
GYA LR LR
comp=Z,510nm,19.2s,MS4.8
SUR Sutherland 67.39 186 *e*P **P 01 05 27.1 +2.6**
SUR Sutherland 67.39 186 *e*P **P 01 05 27.1 +2.6**
NST Nakhon Sawan 67.44 86 P **P 01 05 25.7 +0.4**
BJI Beijing 67.87 56 P **P 01 05 27.8 +0.1**
BJI PP PP 01 07 55.8 -1.3
BJI S S 01 14 23.6 -2.4
BJI AMB AMB
comp=Z,14nm,1.1s,mb4.9
BJI LR LR
comp=N,557nm,19.6s,MS5.0
BJI LR LR
comp=E,686nm,19.0s,MS5.0
BJI LR LR
comp=Z,761nm,24.7s
BJT Baijiatuao 67.88 56 *e*P **P 01 05 28.0 +0.2**
BJT pmax pmax
comp=Z,36nm,1.0s
BJT Baijiatuao 67.88 56 *e*P **P 01 05 28.0 +0.2**
comp=Z,36nm,1.0s,mb5.4
BJT Baijiatuao 67.88 56 *e*P **P 01 05 28.0 +0.2**
comp=Z,36nm,1.0s,mb5.4
EMMW East Machias 69.19 310 *e*P **P 01 05 37.3 +1.5**
PKME Peaks-Kenny Pk 70.05 312 *e*P **P 01 05 42.7 +1.6**
comp=Z,14nm,0.8s,mb5.0
TIA Tai'an 70.36 59 *e*P **P 01 05 43.1 -0.1**
SNY Shenyang 71.89 51 ⇑ P **P 01 05 55.5 +3.1**
SNY S S 01 15 09.6 -3.4
SNY AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
SNY AMB AMB
comp=Z,184nm,3.8s
SNY LR LR
comp=N,619nm,16.9s,MS5.1
SNY LR LR
comp=E,751nm,21.6s,MS5.1
SNY LR LR
comp=Z,771nm,19.6s,MS5.0
CN2 Changchun 72.04 49 *e*P **P 01 05 57.6 +4.3**
CN2 PCP PcP 01 06 12.1 +0.3
CN2 *e*S S 01 15 10.4 -4.3
CN2 *e*SS SS 01 19 47.5 -3.4
CN2 AMB AMB
comp=Z,10.0nm,1.2s,mb4.6
CN2 AMB AMB
comp=Z,220nm,3.0s
CN2 LR LR
comp=N,460nm,17.0s,MS5.2
CN2 LR LR
comp=E,870nm,17.0s,MS5.2
CN2 LR LR
comp=Z,770nm,18.0s,MS5.0
LBNH Lisbon 72.18 312 *e*P **P 01 05 55.7 +1.6**
LBNH pmax pmax
comp=Z,20nm,0.8s,mb5.1
LBNH Lisbon 72.18 312 *e*P **P 01 05 55.7 +1.6**
comp=Z,20nm,0.8s,mb5.1
LBNH Lisbon 72.18 312 *e*P **P 01 05 55.7 +1.6**
comp=Z,20nm,0.8s,mb5.1
HNH Hanover 72.69 311 *e*P **P 01 05 59.1 +2.0**
BILL Bilibino 72.72 15 *i*P **P 01 06 00.6 +3.7**
BILL MLR MLR
comp=Z,2μm,19.0s,MS5.3
KLR Kul'dur 72.78 42 *e*P **P 01 05 54.6 -2.9**
WES Weston 72.79 310 *e*P **P 01 05 59.2 +1.5**
WES Weston 72.79 310 *e*P **P 01 05 59.1 +1.4**
FRNY Flat Rock 72.87 313 *e*P **P 01 05 59.4 +1.2**
FRNY Flat Rock 72.87 313 *e*P **P 01 05 59.4 +1.2**
SEY Seymchan 73.00 23 *i*P **P 01 05 56.9 -1.7**
MDV Middlebury 73.08 312 *e*P **P 01 06 01.4 +2.0**
MDV Middlebury 73.08 312 *e*P **P 01 06 01.4 +2.0**
QIZ Qiongzhong 73.56 78 P **P 01 06 04.5 +1.8**
QIZ S S 01 15 31.1 -1.6
QIZ LR LR
comp=N,495nm,24.6s
QIZ LR LR
comp=Z,388nm,21.6s,MS4.7
LONY Lake Ozonia 73.59 313 *e*P **P 01 06 03.5 +1.1**
comp=Z,16nm,0.7s,mb5.0
LONY Lake Ozonia 73.59 313 *e*P **P 01 06 03.5 +1.1**
comp=Z,16nm,0.7s,mb5.0
NJ2 Nanjing 73.70 62 *e*P **P 01 06 04.6 +1.3**
NJ2 AP pP 01 06 09.3 +2.0
NJ2 XP sP 01 06 12.1 +3.4
NJ2 PCP PcP 01 06 20.3 +1.2
NJ2 S S 01 15 34.5 +0.5
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
NJ2 AMB AMB
comp=Z,170nm,3.5s
NJ2 LR LR
comp=N,590nm,24.5s,MS4.9
NJ2 LR LR
comp=E,580nm,28.5s,MS4.9
NJ2 LR LR
comp=Z,570nm,28.6s,MS4.7
ACCN Adirondack Com 73.71 312 *e*P **P 01 06 05.0 +1.8**
comp=Z,23nm,0.9s,mb5.1
ACCN Adirondack Com 73.71 312 *e*P **P 01 06 05.0 +1.9**
comp=Z,23nm,0.9s,mb5.1
MDJ Mudanjiang 74.11 46 P **P 01 06 04.6 -0.9**
MDJ PCP PcP 01 06 19.8 -0.8
MDJ S S 01 15 35.6 -2.6
MDJ SCS ScS 01 16 12.8 -2.8
MDJ SS SS 01 20 24.3 +1.8
MDJ AMB AMB
comp=Z,4.0nm,0.8s,mb4.4
MDJ AMB AMB
comp=Z,78nm,4.0s
MDJ LR LR
comp=N,404nm,36.5s
MDJ LR LR
comp=E,125nm,27.8s
MDJ LR LR
comp=Z,140nm,33.1s,MS4.0
BINY Binghamton 75.78 312 *e*P **P 01 06 15.9 +0.7**
comp=Z,17nm,0.7s,mb5.1
BINY Binghamton 75.78 312 *e*P **P 01 06 15.9 +0.7**
comp=Z,17nm,0.7s,mb5.1
SSE Sheshan 75.89 62 P **P 01 06 15.6 -0.5**
SSE XP sP 01 06 25.1 +3.6
SSE PP PP 01 09 04.6 -1.4
SSE S S 01 15 54.4 -4.1
SSE SS SS 01 20 45.1 -5.2
SSE AMB AMB
comp=Z,25nm,0.8s,mb5.2
SSE AMB AMB
comp=Z,89nm,4.2s
SSE LR LR
comp=N,241nm,20.5s,MS4.7
SSE LR LR
comp=E,287nm,20.5s,MS4.7
SSE LR LR
comp=Z,264nm,16.8s,MS4.6
VLA Vladivostok 76.33 47 *e*P **P 01 06 19.9 +1.6**
VLA *e* 01 06 25.6
VLA pmax pmax
comp=Z,52nm,1.3s,mb5.3
KSRS Korea Array 77.07 53 P **P 01 06 22.4 -0.1**
comp=Z,4.4nm,0.6s,mb4.5,baz=306,slow=4.6,SNR=14
KSRS LR LR 01 47 21.9
comp=Z,732nm,19.6s,MS5.0,baz=309,slow=41
SSPA Standing Stone 77.85 311 *e*P **P 01 06 27.9 +1.0**
SSPA Standing Stone 77.85 311 *e*P **P 01 06 27.9 +1.0**
YKW3 Yellowknife Ar 77.91 343 *e*P **P 01 06 26.8 0.0**
YKW3 Yellowknife Ar 77.91 343 *e*P **P 01 06 26.8 0.0**
SDMD Soldier's Deli 77.91 310 *e*P **P 01 06 28.0 +0.7**
comp=Z,29nm,0.9s,mb5.2
SDMD Soldier's Deli 77.91 310 *e*P **P 01 06 28.0 +0.7**
comp=Z,29nm,0.9s,mb5.2
YKA Yellowknife Ar 77.97 343 P **P 01 06 25.2 -1.9**
comp=Z,6.0nm,0.6s,mb4.7,baz=30,slow=5.3,SNR=12
YKA LR LR 01 42 44.9
comp=Z,273nm,20.1s,MS4.6,baz=205,slow=37
YKA Yellowknife Ar 77.97 343 *i*P **P 01 06 25.2 -1.9**
YKA pmax pmax
comp=Z,6.0nm,0.6s
YKA Yellowknife Ar 77.97 343 P **P 01 06 25.2 -1.9**
YKA LR LR 01 42 44.9
ERPA Erie 78.25 313 *e*P **P 01 06 29.8 +0.7**
comp=Z,38nm,0.8s,mb5.4
ERPA Erie 78.25 313 *e*P **P 01 06 29.8 +0.7**
comp=Z,38nm,0.8s,mb5.4
ALLY Alegheny Colle 78.62 313 *e*P **P 01 06 31.5 +0.3**
ALLY Alegheny Colle 78.62 313 *e*PcP PcP 01 06 40.4 +0.2
ALLY Alegheny Colle 78.62 313 *e*P **P 01 06 31.6 +0.4**
ALLY *e*PcP PcP 01 06 40.4 +0.2
CBN Corbin 78.95 309 *e*P **P 01 06 34.2 +1.1**
comp=Z,22nm,0.7s,mb5.2
CBN Corbin 78.95 309 *e*P **P 01 06 34.2 +1.1**
comp=Z,22nm,0.7s,mb5.2
GLMI Grayling 79.24 318 *e*P **P 01 06 34.9 +0.4**
comp=Z,54nm,0.8s,mb5.5
GLMI Grayling 79.24 318 *e*P **P 01 06 34.9 +0.4**
comp=Z,54nm,0.8s,mb5.5
URVA University of 79.43 309 *e*P **P 01 06 36.1 +0.4**
URVA University of 79.43 309 *e*P **P 01 06 36.1 +0.4**
MCWV Mont Chateau 79.64 311 *e*P **P 01 06 38.1 +1.3**
comp=Z,36nm,0.9s,mb5.3
MCWV Mont Chateau 79.64 311 *e*P **P 01 06 38.1 +1.4**
comp=Z,36nm,0.9s,mb5.3
YSS Yuzh-Sakhalins 80.00 39 *e*P **P 01 06 38.0 -0.6**
YSS *e* 01 06 47.3
YSS *e*S S 01 16 40.0 -2.3
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 80.00 39 *e*P **P 01 06 38.8 +0.2**
comp=Z,52nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 80.00 39 *e*P **P 01 06 38.8 +0.2**
comp=Z,52nm,1.0s,mb5.4
FDF Fort de France 80.25 281 *e*P **P 01 06 41.4 +1.0**
FDF Fort de France 80.25 281 *e*P **P 01 06 41.4 +0.9**
COLA College 80.27 358 *e*P **P 01 06 39.4 -0.3**
COLA *e* 01 06 45.4
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
COLA College 80.27 358 *e*P **P 01 06 39.4 -0.3**
comp=Z,7.1nm,0.8s,mb4.7
COLA *e* 01 06 45.4
FFC Flin Flon 80.40 333 *e*P **P 01 06 39.9 -0.7**
FFC *e*PP pP 01 06 43.9 -0.7
FFC pmax pmax
comp=Z,25nm,1.0s,mb5.1
FFC Flin Flon 80.40 333 *e*P **P 01 06 39.9 -0.7**
comp=Z,25nm,1.0s,mb5.1
FFC *e*pP pP 01 06 43.9 -0.7
FFC Flin Flon 80.40 333 *e*P **P 01 06 39.9 -0.7**
comp=Z,25nm,1.0s,mb5.1
FFC *e*pP pP 01 06 43.9 -0.7
DAWY Dawson 80.58 354 *e*P **P 01 06 40.3 -1.1**
DAWY Dawson 80.58 354 *e*P **P 01 06 40.3 -1.1**
BPAW Bear Paw Mtn. 81.11 359 *e*P **P 01 06 42.3 -1.9**
comp=Z,13nm,0.9s,mb4.9
BPAW Bear Paw Mtn. 81.11 359 *e*P **P 01 06 42.3 -1.9**
comp=Z,13nm,0.9s,mb4.9
ACSO Alum Creek Sta 81.19 313 *e*P **P 01 06 45.5 +0.4**
ACSO Alum Creek Sta 81.19 313 *e*P **P 01 06 45.5 +0.4**
ULM Lac du Bonnet 81.21 327 P **P 01 06 43.1 -1.9**
comp=Z,7.4nm,0.8s,mb4.7,baz=37,slow=7.7,SNR=6.2
ULM LR LR 01 42 03.6
comp=Z,1μm,21.4s,MS5.1,baz=188,slow=35
ULM Lac du Bonnet 81.21 327 *e*P **P 01 06 43.8 -1.2**
comp=Z,6.1nm,0.5s,mb4.8
ULM Lac du Bonnet 81.21 327 *e*P **P 01 06 43.8 -1.2**
comp=Z,6.1nm,0.5s,mb4.8
KTH Kantisha Hill 81.66 359 *e*P **P 01 06 46.9 -0.2**
comp=Z,38nm,1.4s,mb5.1
KTH *e*pP pP 01 06 50.6 -0.5
KTH Kantishna Hill 81.66 359 *e*P **P 01 06 46.9 -0.2**
comp=Z,38nm,1.4s,mb5.1
KTH *e*pP pP 01 06 50.6 -0.6
KTH *e*PcP PcP 01 06 53.6 +0.7
ELN Prospectdale 81.68 310 *e*P **P 01 06 48.5 +0.7**
ELN Prospectdale 81.68 310 *e*P **P 01 06 48.5 +0.7**
TRF Thorofare Moun 81.75 359 *e*P **P 01 06 48.1 +0.5**
comp=Z,14nm,0.9s,mb4.9
TRF Thorofare Moun 81.75 359 *e*P **P 01 06 48.1 +0.4**
comp=Z,14nm,0.9s,mb4.9
MTP Monte Pirata 81.89 286 *e*P **P 01 06 50.8 +1.7**
MTP Monte Pirata 81.89 286 *e*P **P 01 06 50.8 +1.6**
CBYP Canovanas 82.03 287 *e*P **P 01 06 52.5 +2.6**
comp=Z,20nm,1.1s,mb5.0
CBYP Canovanas 82.03 287 *e*P **P 01 06 52.5 +2.6**
comp=Z,20nm,1.1s,mb5.0
HUMP Col San Antoni 82.09 287 *e*P **P 01 06 52.1 +1.9**
comp=Z,33nm,1.1s,mb5.2
HUMP Col San Antoni 82.09 287 *e*P **P 01 06 52.1 +1.9**
comp=Z,33nm,1.1s,mb5.2
CPD Cerro la Pandu 82.20 286 *e*P **P 01 06 53.0 +2.2**
PETK Petropavlovsk- 82.25 28 P **P 01 06 47.6 -2.8**
comp=Z,1.5nm,0.4s,mb4.2,baz=331,slow=8.3,SNR=4.1
PETK LR LR 01 49 57.8
comp=Z,244nm,19.8s,MS4.6,baz=136,slow=41
PPLA Purkeypile 82.33 360 *e*P **P 01 06 50.1 -0.6**
comp=Z,17nm,0.6s,mb5.1
PPLA *e*pP pP 01 06 54.1 -0.6
PPLA Purkeypile 82.33 360 *e*P **P 01 06 50.1 -0.6**
comp=Z,17nm,0.6s,mb5.1
PPLA *e*pP pP 01 06 54.1 -0.5
JFWS Jewell Farm 83.56 319 *e*P **P 01 06 57.2 -0.3**
JFWS pmax pmax
comp=Z,20nm,0.8s,mb5.3
JFWS Jewell Farm 83.56 319 *e*P **P 01 06 57.2 -0.3**
comp=Z,20nm,0.8s,mb5.3
JFWS Jewell Farm 83.56 319 *e*P **P 01 06 57.2 -0.2**
comp=Z,20nm,0.8s,mb5.3
HYT Haines Junctio 83.58 352 *e*P **P 01 06 58.0 +0.8**
HYT *e*pP pP 01 07 01.1 -0.1
HYT Haines Junctio 83.58 352 *e*P **P 01 06 58.0 +0.9**
HYT *e*pP pP 01 07 01.1 -0.1
PMR Palmer 83.59 358 *e*P **P 01 06 57.6 +0.4**
PMR Palmer 83.59 358 *e*P **P 01 06 57.6 +0.4**
TZTN Tazewell 83.86 311 *e*P **P 01 06 59.4 +0.3**
comp=Z,23nm,1.1s,mb5.2
TZTN *e*pP pP 01 07 03.9 +0.8
TZTN Tazewell 83.86 311 *e*P **P 01 06 59.4 +0.3**
comp=Z,23nm,1.1s,mb5.2
TZTN *e*pP pP 01 07 03.9 +0.8
BLO Bloomington 83.96 314 *e*P **P 01 06 58.6 -1.0**
BLO Bloomington 83.96 314 *e*P **P 01 06 58.6 -1.0**
BMRM Bremner River 84.02 356 *e*P **P 01 06 59.9 +0.4**
BMRM Bremner River 84.02 356 *e*P **P 01 06 59.9 +0.4**
RC01 Rabbit Creek A 84.11 358 *e*P **P 01 07 00.5 +0.6**
comp=Z,11nm,0.5s,mb5.2
RC01 Rabbit Creek A 84.11 358 *e*P **P 01 07 00.5 +0.6**
comp=Z,11nm,0.5s,mb5.2
SVW2 Sparrevohn 84.11 1 *e*P **P 01 06 59.0 -0.9**
SVW2 *e*pP pP 01 07 02.8 -1.1
SVW2 Sparrevohn 84.11 1 *e*P **P 01 06 59.0 -0.9**
SVW2 *e*pP pP 01 07 02.8 -1.1
MAJO Matsushiro 84.19 49 *e*P **P 01 07 00.8 0.0**
MAJO *e*PP pP 01 07 04.7 -0.1
MAJO pmax pmax
comp=Z,38nm,1.1s,mb5.4
MAJO Matsushiro 84.19 49 *e*P **P 01 07 00.8 0.0**
comp=Z,38nm,1.1s,mb5.4
MAJO *e*pP pP 01 07 04.7 -0.1
MAJO Matsushiro 84.19 49 *e*P **P 01 07 00.8 +0.1**
comp=Z,38nm,1.1s,mb5.4
MAJO *e*pP pP 01 07 04.7 -0.1
MAT Matsushiro 84.19 49 P **P 01 07 00.9 +0.1**
MAT S S 01 17 20.0 -5.7
MJAR Matsushiro Arr 84.19 49 P **P 01 07 00.2 -0.6**
comp=Z,11nm,0.8s,mb5.0,baz=315,slow=4.6,SNR=14
MJAR LR LR 01 48 04.7
comp=Z,469nm,21.8s,MS4.8,baz=295,slow=38
MJAR Matsushiro Arr 84.19 49 P **P 01 07 00.2 -0.6**
MJAR pmax pmax
comp=Z,11nm,0.8s
MJAR MLR MLR
comp=Z,469nm,21.8s
MJAR Matsushiro Arr 84.19 49 P **P 01 07 00.2 -0.6**
MJAR LR LR 01 48 04.7
WCI Wyandotte Cave 84.44 313 *e*P **P 01 07 01.8 -0.2**
WCI pmax pmax
comp=Z,41nm,1.1s,mb5.5
WCI Wyandotte Cave 84.44 313 *e*P **P 01 07 01.8 -0.2**
comp=Z,41nm,1.1s,mb5.5
WCI Wyandotte Cave 84.44 313 *e*P **P 01 07 01.8 -0.3**
comp=Z,41nm,1.1s,mb5.5
EYAK Cordova Ski Ar 84.50 356 *e*P **P 01 07 02.0 +0.1**
EYAK Cordova Ski Ar 84.50 356 *e*P **P 01 07 02.0 +0.2**
TKL Tuckaleechee C 84.56 310 LR LR 01 45 18.6
comp=Z,456nm,20.0s,MS4.9,baz=63,slow=36
TKL Tuckaleechee C 84.56 310 *e*P **P 01 07 02.6 -0.1**
TKL Tuckaleechee C 84.56 310 *e*P **P 01 07 02.6 -0.1**
HDIL Hopedale 84.64 317 *e*P **P 01 07 03.8 +0.8**
HDIL Hopedale 84.64 317 *e*P **P 01 07 03.8 +0.8**
DLBC Dease Lake 84.85 348 *e*P **P 01 07 05.7 +2.0**
DLBC Dease Lake 84.85 348 *e*P **P 01 07 05.7 +2.0**
CPCT Cooper Cave 85.16 310 *e*P **P 01 07 06.4 +0.7**
CPCT Cooper Cave 85.16 310 *e*P **P 01 07 06.4 +0.7**
OLIL Olney 85.17 315 *e*P **P 01 07 05.4 -0.3**
comp=Z,34nm,0.8s,mb5.5
OLIL Olney 85.17 315 *e*P **P 01 07 05.4 -0.3**
comp=Z,34nm,0.8s,mb5.5
USIN University of 85.43 314 *e*P **P 01 07 09.7 +2.7**
USIN University of 85.43 314 *e*P **P 01 07 09.7 +2.6**
EDM Edmonton 85.55 337 *e*P **P 01 07 06.3 -1.0**
EDM Edmonton 85.55 337 *e*P **P 01 07 06.3 -1.0**
GOGA Godfrey 85.80 308 *e*P **P 01 07 09.3 +0.4**
GOGA Godfrey 85.80 308 *e*P **P 01 07 09.3 +0.3**
SCIA State Center 85.85 320 *e*P **P 01 07 09.6 +0.6**
SCIA State Center 85.85 320 *e*P **P 01 07 09.6 +0.6**
SWET Sewanee 86.19 311 *e*P **P 01 07 11.9 +1.1**
SWET Sewanee 86.19 311 *e*P **P 01 07 11.8 +1.0**
ECSD EROS,Sioux Fal 86.28 323 *e*P **P 01 07 11.7 +0.6**
ECSD EROS,Sioux Fal 86.28 323 *e*P **P 01 07 11.7 +0.6**
SLM Saint Louis 86.47 316 *e*P **P 01 07 12.1 -0.1**
SLM pmax pmax
comp=Z,16nm,0.4s,mb5.6
SLM Saint Louis 86.47 316 *e*P **P 01 07 12.1 -0.1**
comp=Z,16nm,0.4s,mb5.6
SLM Saint Louis 86.47 316 *e*P **P 01 07 12.1 -0.1**
comp=Z,16nm,0.4s,mb5.6
SIUC Southern Illin 86.51 315 *e*P **P 01 07 12.7 +0.3**
SIUC Southern Illin 86.51 315 *e*P **P 01 07 12.7 +0.3**
WVT Waverly 86.75 313 *e*P **P 01 07 11.7 -1.9**
WVT Waverly 86.75 313 *e*P **P 01 07 11.7 -1.9**
FVM French Village 87.03 315 *e*P **P 01 07 13.7 -1.2**
FVM French Village 87.03 315 *e*P **P 01 07 13.7 -1.2**
BDFB Brasilia 87.14 249 P **P 01 07 17.5 +1.9**
comp=Z,7.5nm,0.7s,mb5.0,baz=58,slow=5.7,SNR=13
BDFB LR LR 01 49 18.7
comp=Z,996nm,18.1s,MS5.3,baz=232,slow=38
BDFB Brasilia 87.14 249 P **P 01 07 17.5 +1.9**
BDFB pmax pmax
comp=Z,8.0nm,0.7s
BDFB MLR MLR
comp=Z,997nm,18.1s
BDFB Brasilia 87.14 249 *e*P **P 01 07 18.0 +2.4**
comp=Z,13nm,0.8s,mb5.2
BDFB Brasilia 87.14 249 *e*P **P 01 07 18.0 +2.4**
comp=Z,13nm,0.8s,mb5.2
WRAK Wrangell Islan 87.16 349 *e*P **P 01 07 15.7 +0.6**
comp=Z,44nm,1.1s,mb5.6
CCM Cathedral Cave 87.45 316 *e*P **P 01 07 16.2 -0.7**
OHAK Old Harbor 88.02 0 *e*P **P 01 07 18.2 -1.1**
comp=Z,21nm,0.9s,mb5.4
OHAK Old Harbor 88.02 0 *e*P **P 01 07 18.2 -1.1**
comp=Z,21nm,0.9s,mb5.4
LRAL Lakeview Retre 88.29 310 *e*P **P 01 07 20.6 -0.4**
LRAL Lakeview Retre 88.29 310 *e*P **P 01 07 20.6 -0.5**
LAO LASA Array 88.38 330 *e*P **P 01 07 22.1 +0.9**
LAO LASA Array 88.38 330 *e*P **P 01 07 22.1 +0.9**
EGMT Eagleton 88.68 333 *e*P **P 01 07 22.7 +0.1**
comp=Z,200nm,1.9s,mb6.1
EGMT Eagleton 88.68 333 *e*P **P 01 07 22.7 +0.1**
comp=Z,200nm,1.9s,mb6.1
WALA Waterton Lakes 89.30 336 *e*P **P 01 07 24.5 -1.0**
comp=Z,5.4nm,0.7s,mb5.0
WALA *e*PcP PcP 01 07 28.0 +1.1
RSSD Black Hills 89.48 327 *e*P **P 01 07 26.9 +0.5**
RSSD pmax pmax
comp=Z,60nm,1.8s,mb5.6
RSSD Black Hills 89.48 327 *e*P **P 01 07 26.9 +0.5**
comp=Z,60nm,1.8s,mb5.6
RSSD Black Hills 89.48 327 *e*P **P 01 07 26.9 +0.5**
comp=Z,60nm,1.8s,mb5.6
RLMT Red Lodge 90.89 331 *e*P **P 01 07 33.6 +0.6**
RLMT Red Lodge 90.89 331 *e*P **P 01 07 33.6 +0.6**
CHMT Chamberlain Mo 90.90 334 *e*P **P 01 07 33.0 0.0**
CHMT Chamberlain Mo 90.90 334 *e*P **P 01 07 33.0 0.0**
NEW Newport 91.05 337 *e*P **P 01 07 32.9 -0.7**
NEW Newport 91.05 337 *e*P **P 01 07 32.9 -0.8**
MSO Missoula 91.22 334 *e*P **P 01 07 34.2 -0.3**
MSO Missoula 91.22 334 *e*P **P 01 07 34.2 -0.3**
comp=Z,14nm,1.4s,mb5.1
MSO *e* 01 07 40.2
MIAR Mount Ida 91.24 315 *e*P **P 01 07 34.7 -0.1**
MIAR pmax pmax
comp=Z,19nm,1.0s,mb5.4
MIAR Mount Ida 91.24 315 *e*P **P 01 07 34.7 -0.1**
comp=Z,19nm,1.0s,mb5.4
MIAR Mount Ida 91.24 315 *e*P **P 01 07 34.7 -0.2**
comp=Z,19nm,1.0s,mb5.4
BOZ Bozeman (W) 91.37 332 *e*P **P 01 07 34.8 -0.4**
BOZ *e* 01 07 41.5
BOZ pmax pmax
comp=Z,32nm,1.8s,mb5.3
BOZ Bozeman (W) 91.37 332 *e*P **P 01 07 34.8 -0.5**
comp=Z,32nm,1.8s,mb5.3
BOZ *e* 01 07 41.5
LRM Limekiln Ridge 91.53 333 *e*P **P 01 07 36.3 +0.4**
LRM Limekiln Ridge 91.53 333 *e*P **P 01 07 36.3 +0.3**
DLMT Dillon 91.98 333 *e*P **P 01 07 38.2 +0.2**
DLMT Dillon 91.98 333 *e*P **P 01 07 38.2 +0.2**
RPW Rockport 92.21 340 *e*P **P 01 07 37.2 -1.8**
RPW Rockport 92.21 340 *e*P **P 01 07 37.2 -1.8**
OD2 Odessa Site #2 92.32 338 *e*P **P 01 07 39.0 -0.5**
OD2 Odessa Site #2 92.32 338 *e*P **P 01 07 39.0 -0.6**
OD2 *e* 01 07 45.7
PHWY Pilot Hill 92.35 326 *e*P **P 01 07 40.4 +0.6**
PHWY Pilot Hill 92.35 326 *e*P **P 01 07 40.4 +0.6**
MCMT McKenzie Canyo 92.53 333 *e*P **P 01 07 41.5 +0.9**
MCMT *e*pP pP 01 07 45.5 +0.9
MCMT McKenzie Canyo 92.53 333 *e*P **P 01 07 41.5 +0.9**
MCMT *e*pP pP 01 07 45.5 +0.9
JCW Jim Creek 92.56 340 *e*P **P 01 07 39.0 -1.6**
JCW Jim Creek 92.56 340 *e*P **P 01 07 39.0 -1.6**
JCW *e* 01 07 45.8
IMW Indian Meadow 92.57 331 *e*P **P 01 07 41.4 +0.6**
comp=Z,20nm,1.6s,mb5.3
ETW Entiat 92.63 339 *e*P **P 01 07 41.2 +0.2**
ETW Entiat 92.63 339 *e*P **P 01 07 41.2 +0.3**
ETW *e* pP 01 07 46.6 +1.6
TPAW Teton Pass 92.92 331 *e*P **P 01 07 42.5 +0.1**
comp=Z,2.8nm,0.6s,mb4.9
TPAW Teton Pass 92.92 331 *e*P **P 01 07 42.5 +0.1**
comp=Z,2.8nm,0.6s,mb4.9
PDAR Pinedale Array 92.95 330 P **P 01 07 42.1 -0.4**
comp=Z,1.3nm,0.8s,mb4.4,baz=46,slow=5.2,SNR=5.6
PDAR LR LR 01 49 45.2
comp=Z,642nm,21.2s,MS5.0,baz=43,slow=36
RRI2 Red Ridge 93.18 331 *e*P **P 01 07 43.9 +0.3**
comp=Z,13nm,1.1s,mb5.3
GNW Green Mountain 93.39 340 *e*P **P 01 07 44.2 -0.2**
GNW Green Mountain 93.39 340 *e*P **P 01 07 44.2 -0.3**
RSW Rattlesnake Hi 93.48 338 *e*P **P 01 07 44.8 -0.1**
RSW Rattlesnake Hi 93.48 338 *e*P **P 01 07 44.8 -0.2**
RSW *e* 01 07 51.3
ISCO Idaho Springs 93.62 325 *e*P **P 01 07 44.6 -1.1**
ISCO Idaho Springs 93.62 325 *e*P **P 01 07 44.6 -1.1**
NATX Nacogdoches 93.86 313 *e*P **P 01 07 46.8 -0.1**
comp=Z,22nm,1.3s,mb5.4
WMOK Wichita Mounta 94.05 318 *e*P **P 01 07 48.5 +0.7**
WMOK pmax pmax
comp=Z,7.0nm,0.9s,mb5.1

WMOK	**Wichita Mounta**	94.05	318	*e*P		P	01 07 48.5	+0.7
	comp=Z,7.3nm,0.9s,mb5.1							
WMOK	**Wichita Mounta**	94.05	318	*e*P		P	01 07 48.5	+0.7
	comp=Z,7.3nm,0.9s,mb5.1							
BMO	**Blue Mountains**	94.10	335	*e*P		P	01 07 46.2	-1.6
	comp=Z,3.0nm,0.6s,mb4.9							
BMO	**Blue Mountains**	94.10	335	*e*P		P	01 07 46.2	-1.6
	comp=Z,3.0nm,0.6s,mb4.9							
HWUT	**Hardware Ranch**	94.74	330	*e*P		P	01 07 49.9	-0.9
	comp=Z,6.1nm,0.7s,mb5.1							
HWUT	**Hardware Ranch**	94.74	330	*e*P		P	01 07 49.9	-0.9
	comp=Z,6.1nm,0.7s,mb5.1							
DAU	**Daniels Canyon**	95.61	329	*e*P		P	01 07 55.3	+0.5
DAU	**Daniels Canyon**	95.61	329	*e*P		P	01 07 55.3	+0.5
TXAR	**Lajitas Array**	100.84	318	P		Pdif	01 08 19.5	+1.2
	comp=Z,0.3nm,0.6s,baz=58,slow=6.4,SNR=4.4							
WRA	**Warramunga Arr**	115.03	97	PKP		PKiKP	01 13 11.5	+0.7
	comp=Z,1.2nm,0.7s,baz=304,slow=2.1,SNR=9.5							
WRA	**Warramunga Arr**	115.03	97	PKIKP	PKiKP		01 13 11.5	+0.7
WRA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	116.51	101	PKP		PKPdf	01 13 12.9	-0.6
	comp=Z,0.7nm,0.5s,baz=302,slow=1.1,SNR=16							
ASAR	**Alice Springs**	116.51	101	PKIKP	PKPdf		01 13 13.0	-0.5
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ASAR	**Alice Springs**	116.51	101	PKIKP	PKPdf		01 13 12.9	-0.6
STKA	**Stephens Creek**	126.19	106	PKP	PKPdf		01 13 33.7	+1.8
	comp=Z,5.2nm,0.9s,baz=303,slow=22,SNR=3.0							
STKA	**Stephens Creek**	126.19	106	PKP	PKPdf		01 13 33.7	+1.8
PPT	**Papeete**	162.27	349	eLR		LR	02 10 00.5	
	comp=Z,392nm,24.5s							
TBI	**Tubuai**	167.90	345	*e*SS		SS	01 40 13.4	-5.3
	comp=Z,227nm,29.8s							
TBI	**Tubuai**	167.90	345	*e*LR		LR	02 12 13.0	
	comp=Z,391nm,29.5s							

*ISCJB **23** 00:59:13.4±0.3,2421N±002×12227E±002,h40km±16km,*
Error ellipse: s-maj=3.9km s-min=2.5km az=158.8
*TAP **23** 00:59:13.2,2425N×12221E,h56km,ML3.8,C*
*JMA **23** 00:59:13.5±0.2,2448N×12233E,h71km±2km,M2.9*
ISC 23 00:59:13.6±0.4,2422N±002×12227E±002,h32km±3km,
n52,σ0§77/98,10C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.52**	**293**	⇑*i*P	**Pb**	**00 59 24.9**	**+0.4**
	baz=299						
ENA				S	**Sb**	**00 59 33.2**	**+1.2**
	baz=299						
TWC	**Suao**	**0.54**	**316**	*i* P	**Pb**	**00 59 25.0**	**+0.2**
	baz=317						
TWC				S	**Sb**	**00 59 32.8**	**+0.2**
	baz=317						
TWD	**Chiawan**	**0.63**	**257**	⇑*i*P	**Pb**	**00 59 25.8**	**-0.5**
	baz=247						
TWD				*i* S	**Sb**	**00 59 35.0**	**+0.2**
	baz=247						
HWA	**Hwalien**	**0.65**	**248**	*i* P	**Pb**	**00 59 26.4**	**-0.2**
	baz=238						
HWA				*e*S	**Sb**	**00 59 35.9**	**+0.5**
	baz=238						
EGS		**0.69**	**334**	P	**Pb**	**00 59 26.5**	**-0.8**
	baz=337						
EGS				S	**Sb**	**00 59 37.0**	**+0.3**
	baz=337						
YOJ	**Yonaguni jima**	**0.72**	**70**	P	**Pb**	**00 59 27.8**	**+0.1**
YOJ				S	**Sb**	**00 59 38.3**	**+1.0**
ILA	**Ilan**	**0.72**	**319**	*e*P	**Pb**	**00 59 27.3**	**-0.4**
	baz=328						
ILA				*e*S	**Sb**	**00 59 39.0**	**+1.6**
	baz=328						
TWE	**Neicheng**	**0.74**	**312**	⇑*i*P	**Pb**	**00 59 27.8**	**-0.2**
	baz=309						
TWE				S	**Sb**	**00 59 37.9**	**-0.1**
	baz=309						
ENTT	**Nioudou**	**0.77**	**303**	⇑*i*P	**Pb**	**00 59 28.1**	**-0.4**
	baz=303						
ENTT				*i* S	**Sb**	**00 59 38.8**	**+0.2**
	baz=303						
TWB1	**Santiao Chiao**	**0.82**	**342**	P	**Pn**	**00 59 28.2**	**-0.8**
	baz=345						
TWB1				*e*S	**Sb**	**00 59 38.7**	**-1.6**
	baz=345						
NNS	**Nan Shan**	**0.84**	**285**	⇑*i*P	**Pn**	**00 59 28.8**	**-0.5**
	baz=284						
NNS				S	**Sb**	**00 59 40.1**	**-0.8**
	baz=284						
ESL	**Shilin**	**0.86**	**242**	P	**Pn**	**00 59 28.5**	**-1.0**
	baz=232						
ESL				S	**Sb**	**00 59 40.7**	**-0.7**
	baz=232						
WHF	**Hehuan Shan**	**0.92**	**266**	⇑*i*P	**Pn**	**00 59 30.0**	**-0.3**
	baz=255						
WHF				S	**Sb**	**00 59 42.2**	**-0.8**
	baz=255						
NSK	**Sanguang**	**0.95**	**299**	⇑*i*P	**Pn**	**00 59 30.3**	**-0.3**
	baz=291						
NSK				*e*S	**Sb**	**00 59 42.4**	**-1.3**
	baz=291						
NWF	**Wu-fen Shan**	**0.96**	**332**	*e*P	**Pn**	**00 59 30.3**	**-0.5**
	baz=344						
NWF				*e*S	**Sn**	**00 59 42.3**	**-1.0**
	baz=344						
TWA	**Mucha**	**0.98**	**321**	P	**Pn**	**00 59 31.1**	**-0.1**
	baz=332						
TWA				S	**Sn**	**00 59 44.2**	**+0.3**
	baz=332						
TWT	**Tachien**	**1.00**	**272**	P	**Pn**	**00 59 31.6**	**+0.3**
	baz=270						
TWT				S	**Sn**	**00 59 44.1**	**-0.2**
	baz=270						
EHY	**Hungye**	**1.12**	**231**	*e*P	**Pn**	**00 59 31.8**	**-1.3**
	baz=228						
EHY				*e*S	**Sn**	**00 59 45.8**	**-1.5**
	baz=228						
TWS1	**Kuangyinshan**	**1.17**	**319**	P	**Pn**	**00 59 33.4**	**-0.3**
	baz=328						
TWS1				S	**Sn**	**00 59 48.7**	**+0.1**
	baz=328						
TWY	**Chenhua**	**1.21**	**330**	*e*P	**Pn**	**00 59 34.5**	**+0.1**
	baz=340						
TWY				*e*S	**Sn**	**00 59 49.1**	**-0.6**
	baz=340						
NSTT	**Nanjuang**	**1.23**	**290**	P	**Pn**	**00 59 34.7**	**+0.2**
	baz=289						
NSTT				S	**Sn**	**00 59 50.3**	**+0.3**
	baz=289						
TWF1	**Yuli**	**1.24**	**226**	⇑*i*P	**Pn**	**00 59 33.8**	**-0.9**
	baz=234						
TWF1				*e*S	**Sn**	**00 59 49.2**	**-1.1**
	baz=234						
SMLT	**Sun Moon Lake**	**1.29**	**255**	⇑*i*P	**Pn**	**00 59 35.4**	**0.0**
	baz=247						
SMLT				S	**Sn**	**00 59 51.5**	**-0.2**
	baz=247						
TYC	**Yuchr**	**1.33**	**257**	⇑*i*P	**Pn**	**00 59 35.9**	**0.0**
	baz=249						
TYC				*e*S	**Sn**	**00 59 52.5**	**0.0**
	baz=249						
IRIF	**Iriomote-Funau**	**1.34**	**85**	P	**Pn**	**00 59 35.9**	**-0.1**
IRIF				*e*S	**Sn**	**00 59 52.7**	**-0.1**
TWQ1	**Liyutan**	**1.37**	**276**	P	**Pn**	**00 59 36.9**	**+0.4**
	baz=274						
TWQ1				S	**Sn**	**00 59 53.8**	**+0.2**
	baz=274						
CHKT	**Chengkung**	**1.39**	**217**	*e*P	**Pn**	**00 59 35.1**	**-1.6**
	baz=206						
CHKT				*e*S	**Sn**	**00 59 51.7**	**-2.3**
	baz=206						
NSY	**Sanyi**	**1.39**	**278**	*e*P	**Pn**	**00 59 37.1**	**+0.3**
	baz=278						
YUS	**Yu-Shan**	**1.41**	**239**	P	**Pn**	**00 59 37.4**	**+0.4**
	baz=230						
YUS				S	**Sn**	**00 59 54.4**	**-0.1**
	baz=230						
HATJ	**Hateruma jima**	**1.41**	**96**	P	**Pn**	**00 59 37.6**	**+0.5**
HATJ				*e*S	**Sn**	**00 59 55.8**	**+1.2**
TCU	**Taichung**	**1.46**	**267**	*e*P	**Pn**	**00 59 38.3**	**+0.6**
	baz=279						
TCU				*e*S	**Sn**	**00 59 56.2**	**+0.6**
	baz=279						
WNT	**Mingjian**	**1.49**	**257**	*e*P	**Pn**	**00 59 38.6**	**+0.5**
	baz=256						
ALS	**Alishan**	**1.51**	**242**	*e*P	**Pn**	**00 59 39.0**	**+0.5**
	baz=234						
ALS				*e*S	**Sn**	**00 59 56.7**	**-0.4**
	baz=234						
ELDTW	**Lidau**	**1.54**	**228**	*e*P	**Pn**	**00 59 37.8**	**-1.0**
	baz=227						
ELDTW				*e*S	**Sn**	**00 59 56.2**	**-1.5**
	baz=227						
CHN5	**Tsauling**	**1.58**	**247**	*e*P	**Pn**	**00 59 39.8**	**+0.4**
	baz=237						
CHN5				*e*S	**Sn**	**00 59 59.6**	**+0.8**
	baz=237						
JKRS	**Kuro-shima**	**1.59**	**89**	P	**Pn**	**00 59 39.9**	**+0.4**
JKRS				*e*S	**Sn**	**00 59 59.4**	**+0.5**
WGK	**Gukeng**	**1.65**	**252**	*e*P	**Pn**	**00 59 40.8**	**+0.5**
	baz=240						
WGK				*e*S	**Sn**	**01 00 01.4**	**+1.0**
	baz=240						
JIJ	**Ishigaki jima**	**1.72**	**85**	P	**Pn**	**00 59 40.7**	**-0.5**
JIJ				S	**Sn**	**01 00 01.1**	**-1.0**
STYT	**Tauyuan**	**1.74**	**233**	P	**Pn**	**00 59 41.9**	**+0.3**
	baz=226						
STYT				*e*S	**Sn**	**01 00 02.5**	**-0.1**
	baz=226						
CHN4	**Tsaushan**	**1.76**	**241**	*e*P	**Pn**	**00 59 42.7**	**+0.9**
	baz=231						
CHN4				*e*S	**Sn**	**01 00 04.3**	**+1.1**
	baz=231						
TWG	**Pinlang**	**1.77**	**218**	*e*P	**Pn**	**00 59 41.1**	**-0.9**
	baz=217						
TWG				*e*S	**Sn**	**01 00 01.2**	**-2.3**
	baz=217						
CHN2	**Minshiung**	**1.78**	**248**	*e*P	**Pn**	**00 59 43.0**	**+0.9**
	baz=246						
CHN2				*e*S	**Sn**	**01 00 06.1**	**+2.5**
	baz=246						
WTP	**Ta-pu**	**1.80**	**238**	P	**Pn**	**00 59 42.9**	**+0.5**
	baz=228						
WTP				*e*S	**Sn**	**01 00 04.0**	**-0.1**
	baz=228						
WTCT	**Ta-ch'eng**	**1.85**	**259**	*e*P	**Pn**	**00 59 43.1**	**0.0**
	baz=258						
TWK	**Hsinying**	**1.89**	**240**	*e*P	**Pn**	**00 59 44.1**	**+0.5**
	baz=239						
TWK				*e*S	**Sn**	**01 00 06.7**	**+0.4**
	baz=239						
CHN1	**Nanshi**	**1.90**	**237**	*e*P	**Pn**	**00 59 44.4**	**+0.7**
	baz=236						
CHN1				*e*S	**Sn**	**01 00 06.7**	**+0.1**
	baz=236						
SGST	**Jiashian**	**1.92**	**234**	*e*P	**Pn**	**00 59 44.7**	**+0.7**
	baz=233						
SGST				*e*S	**Sn**	**01 00 07.4**	**+0.4**
	baz=233						
SSD	**Sandimen**	**2.10**	**226**	*e*P	**Pn**	**00 59 47.5**	**+0.9**
	baz=225						
SSD				*e*S	**Sn**	**01 00 11.9**	**+0.4**
	baz=225						
TWM1	**Shoushan**	**2.19**	**231**	*e*P	**Pn**	**00 59 48.7**	**+0.9**
	baz=230						
EAST	**Anshuo**	**2.25**	**216**	*e*P	**Pn**	**00 59 50.0**	**+1.5**
	baz=208						
JTJ	**Tarama**	**2.26**	**79**	P	**Pn**	**00 59 48.8**	**+0.1**
JTJ				*e*S	**Sn**	**01 00 14.8**	**-0.6**
SCZT	**Fangliau**	**2.38**	**220**	*e*P	**Pn**	**00 59 50.2**	**-0.2**
	baz=216						

*ISK **23** 01:34:45.1,3494N×2676E,h5km,MD3.7*
*CSEM **23** 01:34:49.4±0.1,3505N×2716E,h10km,mb3.8/3, Error ellipse: s-maj=1.8km s-min=1.4km az=69.0*
*HLW **23** 01:34:49.7,3520N×2731E,h3km,Mb3.2*
*MOS **23** 01:34:50.1±2.2,3511N×2700E,h17km,mb4.0/10, Error ellipse: s-maj=11.3km s-min=5.1km az=130.7*
*ISCJB **23** 01:34:50.2±0.5,3506N±002×2703E±002,h24km±4km, mb3.8/13, Error ellipse: s-maj=3.4km s-min=2.8km az=33.2*
*NEIC **23** 01:34:51.4,3526N×2708E,h22km,mb3.8/14, ML3.9(THE),ML4.2(ATH),After ATH.*
*ATH **23** 01:34:51.3,3525N×2708E,h22km±1km,MD3.9/16,ML4.2*
*THE **23** 01:34:53.0,3535N×2705E,h0km,ML3.9*
*IDC **23** 01:34:54.6±1.2,3517N×2712E,h43km±17km,mb3.6/7, mb1 3.7/13,mb1mx3.6/26,mbtmp3.6/13,ML3.7/5, Error ellipse: s-maj=23.8km s-min=8.3km az=9.0*
*DDA **23** 01:34:54.5,3548N×2745E,h8km±2km,Md3.4*
ISC 23 01:34:51.2±0.7,3513N±002×2701E±002,h14km±4km,
n167,σ1§48/196,mb3.8/13,6C-6D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.44**	**16**	⇓*i*PB	**Pg**	**01 34 57.7**	**-2.3**
KARP				*e*SB	**Sg**	**01 35 03.3**	**-2.6**
NPS	**Neapolis**	**1.16**	**277**	*e*PN	**Pn**	**01 35 13.9**	**+1.0**
NPS				*e*SN	**Sn**	**01 35 30.3**	**+1.8**
LAST	**Lasithi**	**1.26**	**272**	*e*Pg	**Pg**	**01 35 16.1**	**+0.6**
LAST				*e*Sg	**Sg**	**01 35 35.8**	**+3.9**
ARG	**Arkhangelos**	**1.42**	**39**	*e*PN	**Pn**	**01 35 16.4**	**-0.1**
ARG				*e*SN	**Sn**	**01 35 33.5**	**-1.4**
IDI	**Anoyia**	**1.75**	**276**	P	**Pn**	**01 35 24.0**	**+3.0**
	107nm,0.3s,baz=80,slow=15,SNR=102						
IDI				S	**Sn**	**01 35 46.0**	**+2.9**
	34nm,0.3s,baz=284,slow=23,SNR=4.6						
THR1	**Thera Island**	**1.77**	**315**	*e*Pb	**Pb**	**01 35 21.8**	**-1.7**
SANT	**Santorini**	**1.77**	**315**	*e*Pb	**Pb**	**01 35 21.7**	**-1.8**
SANT				*e*Sb	**Sb**	**01 35 44.3**	**-1.3**
SANT	**Santorini**	**1.77**	**315**	*e*Pn	**Pn**	**01 35 18.8**	**-2.6**
SANT				*e*Sn	**Sn**	**01 35 40.9**	**-2.8**
THR6	**Thira Island,**	**1.80**	**314**	*e*Pb	**Pb**	**01 35 22.0**	**-1.9**
SIVA	**Sivas**	**1.81**	**267**	*e*Pb	**Pb**	**01 35 25.7**	**+1.6**
SIVA				*e*Sb	**Sb**	**01 35 50.1**	**+3.5**
THR3	**Thira Island,**	**1.83**	**315**	*e*Pb	**Pb**	**01 35 22.7**	**-1.8**
THR5	**Thira Island,**	**1.87**	**314**	*e*Pb	**Pb**	**01 35 23.3**	**-1.8**
THR4	**Thira Island,**	**1.87**	**316**	*e*Pb	**Pb**	**01 35 23.0**	**-2.2**
BODT	**Bodrum**	**1.95**	**7**	*e*PN	**Pn**	**01 35 23.4**	**-0.4**
BODT				*e*SN	**Sn**	**01 35 51.3**	**+3.2**
BDRM	**Kayabasi**	**1.97**	**10**	*e*P	**Pn**	**01 35 24.4**	**+0.3**
BDRM				*i* S	**Sn**	**01 35 50.8**	**+2.3**
TURN	**Turunc**	**2.17**	**36**	*i* P	**Pn**	**01 35 23.5**	**-3.4**
TURN				*i* S	**Sn**	**01 35 49.8**	**-3.7**
MLSB	**Milas**	**2.25**	**16**	*e*PN	**Pn**	**01 35 28.5**	**+0.5**
MLSB				*e*SN	**Sn**	**01 35 59.7**	**+4.2**
YER	**Yerkesik**	**2.25**	**27**	*e*PN	**Pn**	**01 35 28.5**	**+0.5**
APE	**Apeiranthos**	**2.28**	**329**	*e*Pn	**Pn**	**01 35 27.5**	**-0.9**
APE				*e*Sn	**Sn**	**01 35 55.3**	**-1.0**
APE	**Apeiranthos**	**2.28**	**329**	*e*PB	**Pb**	**01 35 28.6**	**-3.5**
APE	**Apeiranthos**	**2.28**	**329**	*e*Pb	**Pb**	**01 35 28.1**	**-4.0**
APE				*e*Sn	**Sn**	**01 35 55.3**	**-1.0**
APE	**Apeiranthos**	**2.28**	**329**	*e*Pb	**Pb**	**01 35 28.1**	**-4.0**
VAM	**Vamos**	**2.32**	**278**	*e*PB	**Pb**	**01 35 31.4**	**-1.4**
VAM	**Vamos**	**2.32**	**278**	*e*Pb	**Pb**	**01 35 32.8**	**0.0**
KSL	**Kastellorizon**	**2.33**	**63**	*e*PN	**Pn**	**01 35 29.0**	**-0.1**
AKAS	**Kas**	**2.38**	**62**	*i* P	**Pn**	**01 35 30.0**	**+0.2**
AKAS				*i* S	**Sn**	**01 35 56.7**	**-2.1**
GCAM	**G?zelcaml?**	**2.58**	**4**	*i* P	**Pn**	**01 35 33.8**	**+1.3**
SMG	**Samos**	**2.58**	**357**	*e*PN	**Pn**	**01 35 31.8**	**-0.8**
SMG				*e*SN	**Sn**	**01 36 02.8**	**-0.9**
AYDN	**Tasoluk**	**2.62**	**15**	*i* P	**Pn**	**01 35 34.9**	**+1.7**
AYDN				*i* S	**Sn**	**01 36 07.8**	**+3.1**
ELL	**Elmali**	**2.85**	**55**	*e*PN	**Pn**	**01 35 37.2**	**+0.9**
GOLH	**Golhisar**	**2.95**	**44**	*i* P	**Pn**	**01 35 39.0**	**+1.4**
DNZL	**Cakiroluk**	**3.04**	**32**	*i* P	**Pn**	**01 35 40.1**	**+1.3**
BLCB	**Balcova**	**3.25**	**0**	*e*PN	**Pn**	**01 35 42.3**	**+0.5**
KDAG	**Bornova**	**3.28**	**3**	*i* P	**Pn**	**01 35 44.7**	**+2.6**
CHOS	**Chios island**	**3.34**	**347**	*e*Pn	**Pn**	**01 35 42.8**	**-0.2**
CHOS				*e*Sn	**Sn**	**01 36 21.9**	**-0.6**
KYTH	**Kithira**	**3.44**	**291**	*e*PN	**Pn**	**01 35 46.5**	**+2.2**
ANTB	**Antalya**	**3.44**	**58**	*e*PN	**Pn**	**01 35 45.5**	**+1.1**
ANTB	**Antalya**	**3.44**	**58**	*e*SN	**Sn**	**01 36 30.6**	**+5.6**
MANT	**Manisa**	**3.58**	**20**	*i* P	**Pn**	**01 35 47.1**	**+0.9**
KULA	**Kula-Manisa**	**3.63**	**21**	*e*PN	**Pn**	**01 35 48.7**	**+1.8**
VLI	**Veliai**	**3.67**	**297**	*e*PN	**Pn**	**01 35 48.5**	**+1.0**
BCK	**Bucak**	**3.71**	**50**	*e*PN	**Pn**	**01 35 49.5**	**+1.5**
KVR	**Kavouri**	**3.76**	**317**	*e*PN	**Pn**	**01 35 50.5**	**+1.8**
KVR	**Kavouri**	**3.76**	**317**	*e*Pn	**Pn**	**01 35 51.0**	**+2.3**
KHL	**Karahalli**	**3.77**	**32**	*e*PN	**Pn**	**01 35 51.0**	**+2.1**
AKHS	**Akhisar**	**3.80**	**9**	*i* P	**Pn**	**01 35 50.6**	**+1.3**
AKS	**Akhisar**	**3.80**	**9**	*e*PN	**Pn**	**01 35 50.1**	**+0.8**
ATH	**Athens Observa**	**3.89**	**318**	*e*PN	**Pn**	**01 35 52.0**	**+1.5**
ISP	**Isparta**	**3.91**	**45**	*e*PN	**Pn**	**01 35 53.3**	**+2.4**
SLUM		**3.92**	**203**	⇑*i*P	**Pn**	**01 35 53.0**	**+1.9**
SLUM				S	**Sn**	**01 36 38.4**	**+1.6**
HMAT	**Matruh**	**4.02**	**179**	⇑*e*P	**Pn**	**01 35 53.0**	**+0.6**
HMAT				S	**Sn**	**01 36 39.2**	**0.0**

DEMI	**Demirci**	**4.14**	**19**	*i* P		**Pn**	**01 35 54.5**	**+0.5**
DEMI				*i* S		**Sn**	**01 36 40.7**	**-1.4**
PRK	**Paraskevi**	**4.16**	**352**	*e*PN		**Pn**	**01 35 54.3**	**+0.1**
GDZ	**Gediz**	**4.42**	**26**	*i* P		**Pn**	**01 35 58.4**	**+0.5**
GDZ	**Gediz**	**4.42**	**26**	*i* P		**Pn**	**01 35 58.3**	**+0.5**
SHUT	**Suhut-Afyon**	**4.45**	**39**	*e*PN		**Pn**	**01 35 59.3**	**+1.2**
BALB	**Balikesir**	**4.56**	**8**	*e*PN		**Pn**	**01 36 00.2**	**+0.5**
ITM	**Ithomi**	**4.60**	**298**	*e*PN		**Pn**	**01 36 03.6**	**+3.3**
BALY	**Balya**	**4.63**	**6**	*i* P		**Pn**	**01 36 02.6**	**+1.8**
DST	**Dursunbey**	**4.65**	**16**	*e*PN		**Pn**	**01 36 02.3**	**+1.3**
LKR	**Lokris**	**4.77**	**319**	*e*Pn		**Pn**	**01 36 03.0**	**+0.4**
HDMB	**Hadim**	**4.80**	**66**	*e*PN		**Pn**	**01 36 04.8**	**+1.8**
ERMK	**Ermenek**	**5.02**	**71**	*i* P		**Pn**	**01 36 08.3**	**+2.2**
ERMK				*i* S		**Sn**	**01 37 04.6**	**+0.7**
KONT	**Konya--Tatoy**	**5.14**	**55**	*e*PN		**Pn**	**01 36 09.4**	**+1.7**
CSS	**Prodhromos**	**5.19**	**90**	*e*Pn		**Pn**	**01 36 07.2**	**-1.1**
	24nm,0.8s							
CSS				*e*Sn		**Sn**	**01 37 05.6**	**-2.3**
CSS	**Prodhromos**	**5.19**	**90**	*e*Pn		**Pn**	**01 36 07.2**	**-1.2**
	24nm,0.8s							
CSS				*e*Sn		**Sn**	**01 37 05.6**	**-2.3**
EDC	**Edincik**	**5.26**	**7**	*e*PN		**Pn**	**01 36 10.8**	**+1.5**
LADK	**Ladik-KONYA**	**5.28**	**53**	*e*PN		**Pn**	**01 36 11.7**	**+2.0**
KDHN	**Kadinhani**	**5.31**	**49**	*i* P		**Pn**	**01 36 10.2**	**+0.1**
RLS	**Riolos of Patr**	**5.34**	**305**	*e*Pn		**Pn**	**01 36 13.9**	**+3.5**
KIZT	**Kizilcal**	**5.41**	**45**	*e*PN		**Pn**	**01 36 13.6**	**+2.2**
EVR	**Evrytania**	**5.63**	**314**	*e*PN		**Pn**	**01 36 17.3**	**+2.9**
YLV	**Yalova**	**5.74**	**18**	*e*PN		**Pn**	**01 36 18.2**	**+2.2**
THL	**Klokotos Trika**	**5.96**	**320**	*e*PN		**Pn**	**01 36 21.1**	**+2.2**
VLS	**Valsamata**	**6.00**	**302**	*e*PN		**Pn**	**01 36 22.2**	**+2.8**
AMAG	**Maghara**	**6.86**	**129**	⇓P		**Pn**	**01 36 29.6**	**-1.9**
AMAG	**Maghara**	**6.86**	**129**	P		**Pn**	**01 36 29.5**	**-1.9**
AWBH		**6.97**	**166**	⇓*e*P		**Pn**	**01 36 33.0**	**+0.1**
RSH		**7.00**	**125**	P		**Pn**	**01 36 31.0**	**-2.2**
SUZ		**7.21**	**135**	⇓P		**Pn**	**01 36 34.4**	**-1.7**
MMAI	**Mount Meron Ar**	**7.27**	**104**	P		**Pn**	**01 36 36.3**	**-0.7**
	3.4nm,0.3s,baz=306,slow=11,SNR=14							
MMAI				S		**Sn**	**01 37 58.4**	**-1.0**
	4.1nm,0.3s,baz=315,slow=26,SNR=5.3							
HRSH	**Kfar Ka'horesh**	**7.29**	**107**	⇓P		**Pn**	**01 36 31.0**	**-6.2**
KRUS	**Krusevo**	**7.71**	**326**	*e*PN		**Pn**	**01 36 47.5**	**+4.6**
HNKL	**Nakhl**	**7.84**	**129**	P		**Pn**	**01 36 43.0**	**-1.8**
HFRF	**Wahat Farafira**	**8.03**	**172**	P		**Pn**	**01 36 48.1**	**+0.7**
ASUT		**8.63**	**152**	⇓P		**Pn**	**01 36 55.5**	**-0.1**
EIL	**Elat**	**8.64**	**127**	P		**Pn**	**01 36 54.9**	**-0.8**
	0.5nm,0.3s,baz=358,slow=16,SNR=16							
EIL				S		**Sn**	**01 38 28.8**	**-4.1**
	1.0nm,0.3s,baz=312,slow=23,SNR=4.3							
ASF	**Jabal al Asfar**	**8.75**	**107**	P		**Pn**	**01 36 56.9**	**-0.4**
	0.3nm,0.3s,baz=180,slow=10,SNR=4.1							
ASF				S		**Sn**	**01 38 34.9**	**-0.8**
	0.1nm,0.3s,baz=217,slow=20,SNR=2.7							
TR2		**8.82**	**138**	⇑P		**Pn**	**01 36 56.4**	**-1.8**
HKAT	**Jabal Katrina**	**8.86**	**136**	⇑*e*P		**Pn**	**01 36 57.5**	**-1.3**
TIP	**Timpagrande**	**9.13**	**299**	*e*Pn		**Pn**	**01 37 01.7**	**-0.8**
	6.4nm,0.8s							
TIP				*e*Sn		**Sn**	**01 38 42.7**	**-2.3**
TIP	**Timpagrande**	**9.13**	**299**	*e*Pn		**Pn**	**01 37 01.7**	**-0.8**
	6.4nm,0.8s							
TIP				*e*Sn		**Sn**	**01 38 42.7**	**-2.2**
GTR	**Jabal at Tayr**	**10.06**	**161**	⇑*i*P		**Pn**	**01 37 14.8**	**-0.5**
CUC	**Castrocucco**	**10.13**	**302**	*e*Pn		**Pn**	**01 37 16.2**	**+0.1**
	8.2nm,0.6s							
CUC	**Castrocucco**	**10.13**	**302**	*e*Pn		**Pn**	**01 37 16.2**	**+0.1**
	8.2nm,0.6s							
HDK2	**Wahat Dakhilah**	**10.90**	**171**	⇑*e*P		**Pn**	**01 37 27.7**	**+1.0**
KEST	**Kesra**	**14.42**	**278**	P		**Pn**	**01 38 18.9**	**+4.1**
	0.0nm,0.3s,baz=46,slow=14,SNR=2.1							
PGF	**Pioggiola**	**15.86**	**303**	*e*P		**Pn**	**01 38 28.3**	**-5.6**
	16nm,0.8s							
PGF	**Pioggiola**	**15.86**	**303**	*e*P		**Pn**	**01 38 28.3**	**-5.6**
PGF				pmax	pmax			
	comp=Z,8.0nm,0.8s							
PGF	**Pioggiola**	**15.86**	**303**	*e*P		**Pn**	**01 38 28.3**	**-5.6**
	comp=Z,8.1nm,0.8s							
VRAC	**Vranov**	**16.11**	**335**	P		**Pn**	**01 38 39.9**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=174,slow=15,SNR=2.3							
GERES	**GERESS Array B**	**16.87**	**328**	P		**Pn**	**01 38 48.4**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=142,slow=12,SNR=11							
SBF	**Sospel**	**17.42**	**306**	*e*P		**Pn**	**01 38 54.8**	**+1.1**
	comp=Z,13nm,0.8s							

	comp=Z,5.3nm,1.0s,mb3.9							
BAIF	**Baives**	**22.34**	**319**	*e*P		**P**	**01 39 46.7**	**-1.7**
MFF	**Saint Martin d**	**23.40**	**308**	*e*P		**P**	**01 39 57.8**	**-1.9**
LDF	**La Druitiere**	**24.13**	**312**	*e*P		**P**	**01 40 04.6**	**-1.8**
FLN	**La Foliniere**	**24.41**	**312**	*e*P		**P**	**01 40 07.0**	**-2.0**
GRR	**Gorron**	**24.50**	**311**	*e*P		**P**	**01 40 07.1**	**-2.7**
ESDC	**Sonseca Array**	**24.96**	**290**	P		**P**	**01 40 14.4**	**+0.3**
	comp=Z,1.4nm,0.7s,mb3.6,baz=82,slow=9.9,SNR=16							
TOA0	**Torodi Ar. Sit**	**31.65**	**233**	*e*P		**P**	**01 41 14.8**	**+0.7**
TOA0	**Torodi Ar. Sit**	**31.65**	**233**	*e*P		**P**	**01 41 14.8**	**+0.7**
TORD	**Torodi Ar. Bea**	**31.65**	**233**	P		**P**	**01 41 14.9**	**+0.9**
	comp=Z,0.7nm,0.6s,mb3.7,baz=30,slow=8.9,SNR=19							
ARCES	**ARCESS Array B**	**34.48**	**359**	P		**P**	**01 41 35.6**	**-2.5**
	comp=Z,0.8nm,0.7s,mb3.7,baz=164,slow=8.4,SNR=3.5							
ARCES	**ARCESS Array B**	**34.48**	**359**	P		**P**	**01 41 35.6**	**-2.6**
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MK31	**Makanchi Array**	**42.53**	**57**	*e*P		**P**	**01 42 45.9**	**-0.2**
MKAR	**Makanchi Array**	**42.53**	**57**	P		**P**	**01 42 46.2**	**+0.1**
	comp=Z,1.5nm,0.5s,mb4.0,baz=271,slow=8.7,SNR=7.4							
MKAR	**Makanchi Array**	**42.53**	**57**	P		**P**	**01 42 46.2**	**+0.1**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.5s							
MKAR	**Makanchi Array**	**42.53**	**57**	P		**P**	**01 42 46.2**	**+0.1**
ZALV	**Zalesovo Beam**	**43.93**	**46**	P		**P**	**01 42 56.7**	**-0.7**
	comp=Z,0.6nm,0.5s,mb3.6,baz=277,slow=7.4,SNR=3.6							
ZALV	**Zalesovo Beam**	**43.93**	**46**	P		**P**	**01 42 56.7**	**-0.6**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.8							
ZALV	**Zalesovo Beam**	**43.93**	**46**	P		**P**	**01 42 56.7**	**-0.7**
LSZ	**Lusaka**	**50.13**	**179**	*e*P		**P**	**01 43 46.2**	**+0.1**
LSZ				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb4.0							
LSZ	**Lusaka**	**50.13**	**179**	*e*P		**P**	**01 43 46.2**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.8							
LSZ	**Lusaka**	**50.13**	**179**	*e*P		**P**	**01 43 46.2**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.8							
SONM	**Songino Array**	**58.33**	**51**	P		**P**	**01 44 45.6**	**0.0**
	comp=Z,0.5nm,0.6s,mb3.8,baz=290,slow=8.7,SNR=3.8							
SONM	**Songino Array**	**58.33**	**51**	P		**P**	**01 44 45.6**	**0.0**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.6s							
SCHQ	**Schefferville**	**64.19**	**320**	P		**P**	**01 45 24.0**	**-1.2**
	comp=Z,2.4nm,0.6s,mb4.4,baz=54,slow=8.7,SNR=3.1							

IDC 23 01:40:24.9±4.1, 387N×7677W, h123km±29km, mb3.1/2, mb1 3.3/3, mb1mx3.0/19, mbtmp3.2/3, Error ellipse: s-maj=133.5km s-min=37.1km az=154.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**2.62**	**68**	P	Pn	01 41 04.9	-1.5
	11nm,0.3s,baz=56,slow=3.6,SNR=37						
ROSC				S	Sn	01 41 40.3	+1.9
	7.8nm,0.3s,baz=84,slow=20,SNR=6.8						
ESDC	**Sonseca Array**	**74.32**	**50**	P	P	01 51 49.2	+0.1
	0.2nm,0.4s,baz=266,slow=6.0,SNR=5.3						
TORD	**Torodi Ar. Bea**	**77.91**	**77**	P	P	01 52 09.6	-0.3
	0.3nm,0.5s,baz=275,slow=5.9,SNR=9.7						
ASAR	**Alice Springs**	**144.45**	**234**	PKP	PKPdf	01 59 46.3	-1.2
	0.3nm,0.5s,baz=125,slow=3.7,SNR=6.5						
WRA	**Warramunga Arr**	**145.73**	**240**	PKPbc	PKPbc	01 59 50.8	+0.4
	0.3nm,0.7s,baz=117,slow=3.2,SNR=3.5						

*CSEM **23** 01:40:45.2±0.1, 3839N×3923E, h5km, MD2.6, Error ellipse: s-maj=2.7km s-min=2.2km az=114.0*
*ISK **23** 01:40:45.2, 3838N×3930E, h12km, MD2.6*
*DDA **23** 01:40:46.3, 3843N×3923E, h8km±6km, Md2.5*
*ISCJB **23** 01:40:47.1±0.5, 3843N±004×3921E±004, h10km, Error ellipse: s-maj=6.1km s-min=3.8km az=20.5*

ISC 23 01:40:47.1±0.5, 3840N±004×3922E±003, h1km±7km, n11, σ0§87/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.07**	**111**	*e*PG	**Pg**	**01 40 47.8**	**-0.7**
SVRC				*e*SG	**Sg**	**01 40 48.9**	**-0.5**
ELZG	**Elazig**	**0.21**	**297**	*i* P	**Pg**	**01 40 51.0**	**-0.1**
ELZG				*i* S	**Sg**	**01 40 55.0**	**+1.1**
PTK	**Pertek**	**0.51**	**15**	*e*PG	**Pg**	**01 40 55.6**	**-1.2**
PTK				*e*SG	**Sg**	**01 41 03.8**	**+0.3**
MYA	**Malataya**	**0.63**	**263**	*e*PG	**Pg**	**01 40 59.0**	**-0.2**
DIYA	**Diyarbakir**	**0.86**	**124**	*i* P	**Pg**	**01 41 04.5**	**+1.0**
DIYA				*i* S	**Sg**	**01 41 16.6**	**+1.9**
DIYA	**Diyarbakir**	**0.86**	**124**	*i* P	**Pg**	**01 41 04.6**	**+1.1**
DIYA				*i* S	**Sg**	**01 41 16.5**	**+1.9**
URFA	**Urfa**	**1.01**	**198**	*e*PG	**Pg**	**01 41 05.0**	**-1.5**
AKCD	**Akcadag**	**1.03**	**264**	*i* P	**Pg**	**01 41 06.0**	**-0.9**
AKCD				*i* S	**Sg**	**01 41 21.5**	**+1.3**
MARD	**Mardin**	**1.64**	**131**	*i* P	**Pn**	**01 41 17.1**	**0.0**
MARD				*i* S	**Sn**	**01 41 39.1**	**+0.3**
GZT	**Gaziantep**	**1.68**	**232**	*i* P	**Pn**	**01 41 17.0**	**-0.6**
GZT				*i* S	**Sn**	**01 41 47.5**	**+7.7**
BEST	**Besiri**	**1.69**	**107**	*i* P	**Pn**	**01 41 17.9**	**+0.1**
BEST				*i* S	**Sn**	**01 41 40.0**	**-0.1**

*CSEM **23** 02:13:36.9±0.1, 3826N×3876E, h2km, MD2.8, Error ellipse: s-maj=4.2km s-min=1.9km az=175.0*
*DDA **23** 02:13:37.8, 3828N×3879E, h15km±2km, Md2.5*
*ISCJB **23** 02:13:38.7±0.4, 3834N±004×3873E±003, h10km, Error ellipse: s-maj=5.1km s-min=3.0km az=168.8*
*ISK **23** 02:13:38.0, 3830N×3873E, h7km, MD2.8*

ISC 23 02:13:38.8±0.5, 3831N±003×3874E±003, h3km±5km, n16, σ0§94/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYA	**Malataya**	**0.25**	**274**	*e*PG	**Pg**	**02 13 43.2**	**-0.4**
MYA				*e*SG	**Sg**	**02 13 47.5**	**+0.7**
ELZG	**Elazig**	**0.27**	**46**	*i* P	**Pg**	**02 13 44.2**	**+0.2**
ELZG				*i* S	**Sg**	**02 13 48.8**	**+1.3**
SVRC	**Sivrice-ELAZID**	**0.45**	**81**	*e*PG	**Pg**	**02 13 46.7**	**-0.8**
SVRC				*e*SG	**Sg**	**02 13 54.6**	**+1.3**
AKCD	**Akcadag**	**0.64**	**269**	*i* P	**Pg**	**02 13 50.2**	**-1.0**
AKCD				*i* S	**Sg**	**02 13 59.8**	**+0.3**
PTK	**Pertek**	**0.77**	**41**	*e*PG	**Pg**	**02 13 53.5**	**-0.1**
URFA	**Urfa**	**0.87**	**176**	*e*PG	**Pg**	**02 13 54.9**	**-0.6**
ATAB	**Bozova**	**0.91**	**203**	*i* P	**Pg**	**02 13 56.2**	**-0.1**
ATAB				*i* S	**Sg**	**02 14 08.5**	**+0.5**
DARE	**Darende-Malaty**	**0.97**	**312**	*e*PG	**Pg**	**02 13 57.9**	**+0.5**
DIYA	**Diyarbakir**	**1.16**	**109**	*e*P	**Pg**	**02 13 59.4**	**-1.6**
DIYA				*i* S	**Sg**	**02 14 16.0**	**0.0**
GZT	**Gaziantep**	**1.33**	**225**	*i* P	**Pg**	**02 14 03.8**	**-0.6**
GZT				*i* S	**Sg**	**02 14 22.4**	**+0.7**
KMRS	**Kahramanmaras**	**1.66**	**242**	*e*PN	**Pn**	**02 14 08.1**	**-0.7**
EZC	**Erzincan**	**1.66**	**30**	*e*PN	**Pn**	**02 14 06.6**	**-2.3**
MARD	**Mardin**	**1.90**	**121**	*e*P	**Pn**	**02 14 12.4**	**+0.3**
MARD				*e*S	**Sn**	**02 14 37.2**	**+0.7**
ANDN	**Andirin**	**2.03**	**250**	*i* P	**Pn**	**02 14 15.7**	**+1.8**
ANDN				*i* S	**Sn**	**02 14 45.2**	**+5.5**
BEST	**Besiri**	**2.04**	**101**	*i* P	**Pn**	**02 14 12.4**	**-1.7**
BEST				*i* S	**Sn**	**02 14 41.2**	**+1.1**
SVSK	**Karacayir**	**2.10**	**320**	*e*PN	**Pn**	**02 14 14.7**	**-0.2**

*IDC **23** 02:27:04.1±2.5, 932N×12666E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/19, mbtmp3.5/4, Error ellipse: s-maj=203.3km s-min=22.4km az=67.0*
*ISCJB **23** 02:27:06.8±1.0, 929N±008×12678E±008, h33km, mb3.4/4, Error ellipse: s-maj=12.1km s-min=10.0km az=137.9*
*MAN **23** 02:27:13, 918N×12624E, h27km, mb4.1, ML3.0, MS2.7*

ISC 23 02:27:05.4±2.3, 924N±008×12667E±009, h4km±13km, n9, σ0§96/13, mb3.4/4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.07**	**255**	*e*P	**Pg**	**02 27 26.1**	**+0.3**
BUTP				*e*S	**Sg**	**02 27 36.9**	**-2.8**
SCPH	**Surigao**	**1.28**	**295↑**	*e*P	**Pg**	**02 27 30.3**	**+0.4**
SCPH				*e*S	**Sg**	**02 27 46.8**	**+0.3**
MSLP	**Maasin**	**1.99**	**297**	*e*P	**Pn**	**02 27 40.3**	**+0.4**
BUKP	**Musuan**	**2.08**	**230**	*e*P	**Pn**	**02 27 41.9**	**+0.7**
BUKP				*e*S	**Sn**	**02 28 07.8**	**+0.2**
TBP	**Tagbilaran**	**2.80**	**279**	*e*P	**Pn**	**02 27 52.5**	**+1.4**
TBP				*e*S	**Sn**	**02 28 14.9**	**-10**
WRA	**Warramunga Arr**	**29.96**	**165**	P	**P**	**02 33 15.7**	**+0.7**
	0.1nm,0.5s,mb2.8,baz=347,slow=8.9,SNR=2.4						
ASAR	**Alice Springs**	**33.46**	**168**	P	**P**	**02 33 45.1**	**-0.7**
	0.1nm,0.4s,mb3.1,baz=345,slow=6.7,SNR=3.3						
MKAR	**Makanchi Array**	**53.08**	**323**	P	**P**	**02 36 23.0**	**-1.0**
	0.7nm,0.6s,mb3.6,baz=120,slow=8.5,SNR=3.8						
KURK	**Kurchatov**	**57.13**	**326**	P	**P**	**02 36 51.9**	**-1.3**
	0.7nm,0.5s,mb4.0,baz=123,slow=7.3,SNR=7.0						

*NEIC **23** 02:51:09.9±0.9, 590S×13076E, h35km, mb3.8/2, Error ellipse: s-maj=16.7km s-min=12.1km az=54.0*
*ISCJB **23** 02:51:14.4±0.8, 610S±006×13098E±005, h128km±11km, Error ellipse: s-maj=10.3km s-min=8.4km az=13.4*
*IDC **23** 02:51:15.8±9.7, 599S×13090E, h116km±96km, mb3.3/1, mb1 4.0/5, mb1mx3.5/15, mbtmp3.8/5, ML4.5/4, Error ellipse: s-maj=76.5km s-min=30.2km az=40.0*
*DJA **23** 02:51:21, 528S×13083E, h100km, MLv4.5/3*

ISC 23 02:51:15.7±0.8, 620S±005×13105E±005, h121km±11km, n13, σ1§30/22, 1C, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLE	**Tual**	**1.77**	**72↑**	*e*P	**Pn**	**02 51 47.5**	**+1.2**
TLE				*e*S	**Sn**	**02 52 08.5**	**-1.2**
BATI	**Baumata**	**8.33**	**241**	P	**Pn**	**02 53 14.8**	**+1.1**
	4.3nm,0.3s,baz=43,slow=3.1,SNR=8.5						
BATI				S	**Sn**	**02 54 45.2**	**-0.9**
	7.9nm,0.3s,baz=12,slow=20,SNR=7.4						
FITZ	**Fitzroy Crossi**	**12.96**	**204**	*e*P	**Pn**	**02 54 15.2**	**-0.2**
FITZ				*e*S	**Sn**	**02 56 28.5**	**-10**
FITZ	**Fitzroy Crossi**	**12.96**	**204**	P	**Pn**	**02 54 15.6**	**+0.2**
	2.0nm,0.3s,baz=30,slow=13,SNR=61						
FITZ				S	**Sn**	**02 56 32.8**	**-5.5**
	2.6nm,0.3s,baz=100,slow=22,SNR=12						
WRAB	**Tennant Creek**	**14.03**	**167**	*e*Pn	**Pn**	**02 54 30.4**	**+1.2**
	6.7nm,0.4s						
WRAB				*e*Sn	**Sn**	**02 56 59.5**	**-4.5**
WRA	**Warramunga Arr**	**14.03**	**167**	P	**Pn**	**02 54 30.8**	**+1.5**
	2.5nm,0.3s,baz=350,slow=13,SNR=58						
WRA				S	**Sn**	**02 57 04.0**	**-0.2**
	1.7nm,0.3s,baz=351,slow=24,SNR=6.6						
WB2	**Warramunga Arr**	**14.03**	**167**	*e*P	**Pn**	**02 54 30.2**	**+0.9**
WB2				*e*S	**Sn**	**02 57 02.4**	**-1.9**
COEN	**Coen**	**14.20**	**124**	*e*Pn	**Pn**	**02 54 34.6**	**+3.1**
	3.3nm,0.6s						
COEN				*e*Sn	**Sn**	**02 57 07.1**	**-1.3**
PMG	**Port Moresby**	**16.27**	**102**	*e*P	**Pn**	**02 55 01.1**	**+3.7**
	5.6nm,0.9s						
ASAR	**Alice Springs**	**17.58**	**171**	P	**Pn**	**02 55 17.5**	**+4.2**
	1.7nm,0.3s,baz=348,slow=9.1,SNR=101						
ASAR				S	**S**	**02 58 28.5**	**-0.5**
	0.5nm,0.3s,baz=351,slow=27,SNR=5.0						
MBWA	**Marble Bar**	**18.48**	**215**	*e*P	**P**	**02 55 23.1**	**+0.6**
	8.9nm,1.1s						
KKM	**Kota Kinabalu**	**19.16**	**309**	*e*P	**P**	**02 55 27.7**	**-2.2**
MKAR	**Makanchi Array**	**68.14**	**326**	P	**P**	**03 02 01.7**	**-1.1**
	0.5nm,0.6s,baz=136,slow=9.6,SNR=2.8						

*ISCJB **23** 03:31:53.5±0.8, 1314N±006×1438E±01, h154km±8km, mb3.9/22, Error ellipse: s-maj=18.0km s-min=10.2km az=1.4*
*MOS **23** 03:31:53.7±0.7, 1318N×14375E, h158km, mb4.2/6, Error ellipse: s-maj=23.3km s-min=13.4km az=93.0*
*IDC **23** 03:31:55.0±0.8, 1318N×14390E, h152km±9km, mb3.7/12, mb1 3.9/13, mb1mx3.8/21, mbtmp3.7/13, Error ellipse: s-maj=23.3km s-min=11.4km az=84.0*
*NEIC **23** 03:31:55.3±0.6, 1317N×14390E, h158km±6km, mb4.0/10, Error ellipse: s-maj=9.8km s-min=5.4km az=91.0*

ISC 23 03:31:55.1±0.7, 1316N±006×1439E±01, h154km±7km, n34, σ0§55/33, mb3.9/22, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.04**	**65**	P	**Pn**	**03 32 21.0**	**+0.5**
	250nm,0.3s,baz=189,slow=3.6,SNR=88						
GUMO				S	**Sn**	**03 32 39.6**	**-0.4**
	1µm,0.3s,baz=180,slow=20,SNR=95						
JOW	**Kunigami**	**19.98**	**315**	P	**P**	**03 36 16.6**	**+1.0**
	1.6nm,0.3s,baz=141,slow=14,SNR=4.5						
MJAR	**Matsushiro Arr**	**23.84**	**349**	P	**P**	**03 36 52.8**	**-1.2**
	2.2nm,0.7s,mb3.8,baz=166,slow=10,SNR=7.7						
COEN	**Coen**	**26.95**	**182**	*e*P	**P**	**03 37 22.0**	**-0.3**
	1.1nm,0.6s,mb3.7						
KSRS	**Korea Array**	**28.09**	**332**	P	**P**	**03 37 32.6**	**+0.3**
	2.8nm,0.6s,mb4.2,baz=141,slow=9.0,SNR=11						
CTA	**Charters Tower**	**33.12**	**176**	P	**P**	**03 38 17.5**	**+0.9**
	2.2nm,0.6s,mb4.0,baz=6.1,slow=12,SNR=3.4						
CTAO	**Charters Tower**	**33.12**	**176**	*e*P	**P**	**03 38 17.2**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
CTAO	**Charters Tower**	**33.12**	**176**	*e*P	**P**	**03 38 17.2**	**+0.6**
	comp=Z,2.8nm,0.6s,mb4.2						
WRAB	**Tennant Creek**	**34.20**	**196**	*e*P	**P**	**03 38 25.9**	**0.0**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**34.20**	**196**	*e*P	**P**	**03 38 25.9**	**0.0**
	comp=Z,8.4nm,0.8s,mb4.5						
WB2	**Warramunga Arr**	**34.20**	**196**	*e*P	**P**	**03 38 25.7**	**-0.3**
WRA	**Warramunga Arr**	**34.21**	**196**	P	**P**	**03 38 25.9**	**-0.1**
	comp=Z,7.6nm,0.8s,mb4.5,baz=16,slow=9.3,SNR=124						
ASAR	**Alice Springs**	**37.88**	**195**	P	**P**	**03 38 57.4**	**+0.2**
	comp=Z,1.6nm,0.6s,mb3.8,baz=17,slow=12,SNR=36						
MBWA	**Marble Bar**	**41.55**	**215**	*e*P	**P**	**03 39 27.1**	**-0.5**
	comp=Z,1.1nm,0.3s,mb4.0						
STKA	**Stephens Creek**	**44.83**	**183**	P	**P**	**03 39 53.6**	**-0.1**
	comp=Z,1.2nm,0.4s,mb3.9,baz=18,slow=6.5,SNR=2.9						
ULN	**Ulaanbaatar**	**46.20**	**326**	*e*P	**P**	**03 40 05.0**	**+0.6**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
ULN	**Ulaanbaatar**	**46.20**	**326**	*e*P	**P**	**03 40 05.0**	**+0.6**
	comp=Z,1.1nm,0.5s,mb3.7						
SONM	**Songino Array**	**46.55**	**326**	P	**P**	**03 40 07.4**	**+0.3**
	comp=Z,0.9nm,0.5s,mb3.7,baz=148,slow=7.5,SNR=7.8						
ZAK	**Zakamensk**	**49.68**	**327**	*e*P	**P**	**03 40 26.8**	**-4.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.5						
MKAR	**Makanchi Array**	**61.15**	**316**	P	**P**	**03 41 53.1**	**0.0**
	comp=Z,1.2nm,0.6s,mb3.9,baz=90,slow=9.1,SNR=7.3						
ZALV	**Zalesovo Beam**	**61.43**	**325**	P	**P**	**03 41 54.1**	**-0.8**
	comp=Z,1.0nm,0.5s,mb3.9,baz=126,slow=8.0,SNR=5.4						
BRVK	**Borovoye**	**69.75**	**322**	*e*P	**P**	**03 42 47.6**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
BRVK	**Borovoye**	**69.75**	**322**	*e*P	**P**	**03 42 47.6**	**-0.7**
	comp=Z,3.5nm,0.5s,mb4.3						
YKA	**Yellowknife Ar**	**83.68**	**27**	P	**P**	**03 44 05.8**	**-0.4**
	comp=Z,0.5nm,0.3s,mb3.6,baz=284,slow=5.3,SNR=5.2						
NEW	**Newport**	**86.18**	**41**	*e*P	**P**	**03 44 18.7**	**-0.3**
NEW				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NEW	**Newport**	**86.18**	**41**	*e*P	**P**	**03 44 18.7**	**-0.3**
	comp=Z,1.8nm,0.6s,mb4.0						
NVAR	**Mina Array Bea**	**87.93**	**51**	P	**P**	**03 44 28.9**	**+1.2**
	comp=Z,2.3nm,0.7s,mb4.2,baz=262,slow=5.9,SNR=22						
HLID	**Hailey**	**89.32**	**45**	*e*P	**P**	**03 44 34.4**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.8						
ELK	**Elko**	**89.57**	**48**	*e*P	**P**	**03 44 35.2**	**-0.1**
ELK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ELK	**Elko**	**89.57**	**48**	*e*P	**P**	**03 44 35.2**	**-0.1**
	comp=Z,1.3nm,0.7s,mb4.0						
MOOW	**Moose Ponds**	**91.78**	**44**	*e*P	**P**	**03 44 45.5**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.7						
PDAR	**Pinedale Array**	**92.94**	**45**	P	**P**	**03 44 50.8**	**0.0**
	comp=Z,0.3nm,0.6s,mb3.6,baz=339,slow=2.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**134.32**	**303**	PKP	PKPdf	03 50 55.6	+0.1
	comp=Z,0.4nm,0.8s,baz=32,slow=2.6,SNR=6.5						
LPAZ	**La Paz**	**148.89**	**100**	*e*PKP2	PKPab	03 51 26.1	-3.8

IDC 23 03:39:11.9±3.9, 1727S×17864W, h585km±49km, mb3.0/4, mb1 3.4/4, mb1mx3.0/16, mbtmp3.0/4, Error ellipse: s-maj=175.2km s-min=16.2km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.53**	**259**	P	P	03 46 33.2	+0.3
	1.0nm,0.4s,baz=98,slow=6.9,SNR=46						
ASAR	**Alice Springs**	**44.75**	**254**	P	P	03 46 34.2	-0.4
	1.6nm,0.5s,baz=90,slow=8.4,SNR=28						
ASAR				S	S	03 52 30.8	+0.9
	0.3nm,0.8s,baz=93,slow=14,SNR=4.4						
NVAR	**Mina Array Bea**	**79.12**	**44**	P	P	03 50 17.7	+0.9
	0.6nm,0.7s,baz=225,slow=9.9,SNR=5.4						
TXAR	**Lajitas Array**	**85.84**	**58**	P	P	03 50 50.9	+0.1
	0.7nm,0.8s,baz=216,slow=6.2,SNR=6.8						
ARCES	**ARCESS Array B**	**125.66**	**350**	PKP	PKPdf	03 57 06.3	-0.6
	1.1nm,0.8s,baz=321,slow=1.2,SNR=4.0						
GERES	**GERESS Array B**	**146.95**	**345**	PKPbc	PKPbc	03 57 48.4	-1.1
	0.6nm,0.8s,baz=25,slow=3.5,SNR=4.4						

IDC 23 04:00:48.0±3.0, 324S×12805E, h0km, mb2.7/1, mb1 3.1/2, mb1mx3.0/16, mbtmp2.8/2, ML2.9/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/6, Error ellipse: s-maj=149.7km s-min=44.1km az=82.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.70**	**160**	P	Pn	04 04 55.4	-0.6
	0.0nm,0.3s,baz=340,slow=11,SNR=4.6						
ASAR	**Alice Springs**	**21.08**	**165**	P	P	04 05 33.1	-0.8
	0.2nm,0.6s,baz=348,slow=12,SNR=4.5						
CTA	**Charters Tower**	**24.40**	**135**	LR	LR	04 16 42.9	
	comp=Z,110nm,19.6s,baz=49,slow=39						
TXAR	**Lajitas Array**	**124.57**	**56**	PKP	PKPdf	04 19 50.9	+0.7
	0.2nm,0.6s,baz=224,slow=1.6,SNR=3.7						

IDC 23 04:03:06.3±8.4, 1218S×16566E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/16, mbtmp3.8/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/25, Error ellipse: s-maj=246.8km s-min=39.3km az=124.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.03**	**252**	P	P	04 09 26.1	+0.2
	0.7nm,0.6s,baz=83,slow=9.1,SNR=9.1						
ASAR	**Alice Springs**	**32.22**	**245**	P	P	04 09 36.4	0.0
	1.2nm,0.7s,baz=70,slow=9.4,SNR=19						
FITZ	**Fitzroy Crossi**	**39.02**	**256**	LR	LR	04 26 07.8	
	comp=Z,64nm,20.4s,baz=169,slow=35						
SONM	**Songino Array**	**79.52**	**324**	P	P	04 15 15.2	+0.3
	0.4nm,0.5s,baz=116,slow=3.4,SNR=4.3						
MKAR	**Makanchi Array**	**94.28**	**317**	P	P	04 16 27.5	0.0
	0.3nm,0.4s,baz=101,slow=7.5,SNR=3.4						

*MAN **23** 04:04:04, 489N×125.35E, h1km, mb5.1, ML4.1, MS4.3*
MAN INTENSITY II - GENERAL SANTOS CITY.
*ISCJB **23** 04:04:17.8±0.8, 550N±006×125.10E±007, h75km±10km, mb3.9/12, Error ellipse: s-maj=12.4km s-min=9.2km az=173.1*
*IDC **23** 04:04:19.1±1.6, 550N×125.14E, h69km±15km, mb3.6/8, mb1 3.8/9, mb1mx3.6/21, mbtmp3.7/9, MS3.3/8, Ms1 3.3/8, ms1mx3.1/26, Error ellipse: s-maj=32.3km s-min=11.2km az=90.0*
*NEIC **23** 04:04:19.3±0.9, 550N×125.17E, h70km±9km, mb4.2/5, Error ellipse: s-maj=14.6km s-min=7.4km az=84.0*
NEIC Felt [II PIVS] at General Santos.

ISC 23 04:04:18.9±0.7, 550N±005×12510E±007, h66km±9km, n36, σ0§94/35, mb3.9/12, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.60**	**346↓**	*e*P	**Pn**	**04 04 26.8**	**-5.5**
GSPH				*i* S	**Sn**	**04 04 35.4**	**-6.9**
KCP	**Kidapawan**	**1.50**	**360↑**	*i* P	**Pn**	**04 04 41.8**	**-1.9**
KCP				*i* S	**Sn**	**04 05 00.8**	**-1.6**
DAV	**Davao City (W)**	**1.63**	**17**	P	**Pn**	**04 04 45.4**	**-0.1**
	334nm,0.3s,baz=104,slow=8.3,SNR=22						
DAV				S	**Sn**	**04 05 05.8**	**+0.3**
	206nm,0.3s,baz=88,slow=21,SNR=8.2						
DAV				LR	LR	04 05 32.1	
	comp=Z,1µm,19.9s,baz=227,slow=45						
MATI	**Mati**	**1.84**	**39**	*e*P	**Pn**	**04 04 43.7**	**-4.5**
MATI				*e*S	**Sn**	**04 05 12.8**	**+2.2**
CTBH	**Cotabato--PC H**	**1.91**	**334↑**	*e*P	**Pn**	**04 04 48.0**	**-1.2**
CTBH				*i* S	**Sn**	**04 05 13.5**	**+1.3**
BUKP	**Musuan**	**2.36**	**359**	*e*P	**Pn**	**04 04 54.8**	**-0.6**
BUKP				*e*S	**Sn**	**04 05 36.6**	**+13**
PAGZ	**Pagadian**	**2.89**	**324**	*e*P	**Pn**	**04 05 02.6**	**+0.1**
IPIL	**Ipil**	**3.39**	**312**	*e*P	**Pn**	**04 05 09.6**	**+0.2**
SCPH	**Surigao**	**4.27**	**5↓**	*e*P	**Pn**	**04 05 22.9**	**+1.4**

LFRS	**El Faro**	**2.22**	**235**	*e*P	x	04 51 28.1		
LFRS				*e*S	x	04 51 57.9		
TELN	**Telica**	**2.32**	**171**	*e*S	Sn	04 52 03.2	+4.7	
SNET	**Serv Nac Est T**	**2.33**	**239**	*e*P	x	04 51 29.7		
SNET				*e*S	x	04 52 01.5		
SNET				*i*		04 52 08.8		
	comp=Z,1μm,0.9s							
BOQS	**Boqueron**	**2.34**	**240**⇓	*e*P	x	04 51 30.0		
BOQS				*e*S	x	04 52 01.2		
TEL3	**Telica 3**	**2.35**	**172**⇓	*e*P	Pn	04 51 30.3	+0.7	
CNGN	**Cerro Negro**	**2.45**	**169**⇓	*e*P	Pn	04 51 31.8	+0.9	
LEON	**Leon**	**2.50**	**173**	*e*P	Pn	04 51 32.6	+0.9	
LEON				*e*S	Sn	04 52 03.4	+0.5	
MIRN	**Miramar**	**2.50**	**169**	*e*P	Pn	04 51 34.8	+3.1	
RBDL	**Robledal**	**2.55**	**252**	*e*P	x	04 51 32.4		
RBDL				*e*S	x	04 52 06.4		
SNJE	**San Jose**	**2.56**	**246**	*e*P	x	04 51 33.2		
RTR	**El Retiro**	**2.59**	**247**	*e*P	x	04 51 33.0		
SBLS	**San Blas**	**2.59**	**246**	*e*P	x	04 51 33.6		
SBLS				*e*P	x	04 51 33.8		
SBLS				*e*S	x	04 52 08.0		
HUEN		**2.75**	**159**	*e*P	Pn	04 51 33.8	-1.2	
CHI2		**16.72**	**126**⇑	*e*P		04 51 28.4		

*BJI **23** 04:51:51.9, 4182N×7948E, h17km, ML3.2*
*MOS **23** 04:51:53.9±2.3, 4180N×7940E, h21km, mb4.3/1, Error ellipse: s-maj=21.4km s-min=10.8km az=91.2*
*IDC **23** 04:51:54.9±2.0, 4185N×7957E, h0km, mb3.6/1, mb1 3.4/6, mb1mx3.2/27, mbtmp3.4/6, ML3.4/5, Error ellipse: s-maj=27.6km s-min=19.2km az=119.0*
*ISCJB **23** 04:51:54.5±0.8, 4184N±006×7952E±006, h10km, Error ellipse: s-maj=9.2km s-min=4.8km az=147.2*
*NNC **23** 04:51:56.3±2.7, 4207N×7945E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=27.7km s-min=10.3km az=155.0*
*NEIC **23** 04:51:56.8±1.5, 4204N×7950E, h10km, Error ellipse: s-maj=25.1km s-min=11.9km az=155.0*

ISC 23 04:51:56.0±0.9, 4182N±007×7950E±006, h10km, n26, σ1℘45/32, 9C-1D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDC	**Almaty**	**2.34**	**308**	⇑Pn	**Pn**	**04 52 35.7**	**+1.2**
	16nm,0.2s						
KNDC				⇓Lg		04 53 04.9	
	467nm,0.8s						
AAA	**Alma-Ata**	**2.38**	**308**	*i* PN	**Pn**	**04 52 34.6**	**-0.5**
AAA				*i* S	**Sn**	**04 53 05.5**	**+1.1**
AAA				pmax	pmax		
	comp=Z,156nm,0.3s						
AAA				smax			
	comp=N,920nm,0.8s						
TKM2	**Tokmak 2**	**3.10**	**292**	⇑Pn	**Pn**	**04 52 43.3**	**-1.6**
	comp=N,13nm,0.3s						
TKM2				⇑Lg		04 53 28.1	
	comp=N,190nm,0.5s						
TKM2	**Tokmak 2**	**3.10**	**292**	*e*Pn	**Pn**	**04 52 43.1**	**-1.8**
TKM2				*e*Sn	**Sn**	**04 53 21.6**	**-0.4**
KSH	**Kashi**	**3.53**	**231**	*e*PG	**Pb**	**04 52 55.5**	**-3.1**
KSH				SG	**Sn**	**04 53 35.4**	**+2.7**
KSH				Smax			
	comp=N,101nm,0.3s						
KSH				Smax			
	comp=E,123nm,0.4s						
UCH	**Uchtor**	**3.74**	**278**	*e*Pn	**Pn**	**04 52 54.0**	**+0.3**
UCH				*e*Sn	**Sn**	**04 53 36.9**	**-0.9**
EKS2	**Erkin-Say**	**4.33**	**283**	*e*Pn	**Pn**	**04 53 03.7**	**+1.8**
EKS2				*e*Sn	**Sn**	**04 53 51.0**	**-1.4**
AML	**Almayashu**	**4.34**	**276**	*e*Pn	**Pn**	**04 53 03.4**	**+1.4**
MK31	**Makanchi Array**	**5.36**	**21**	Pn	**Pn**	**04 53 16.8**	**+0.7**
	comp=E,1.9nm,0.4s,baz=202,slow=13,SNR=45						
MK31				⇑Sn	**Sn**	**04 54 21.0**	**+3.2**
	comp=E,2.4nm,0.5s,baz=247,slow=51,SNR=4.8						
MK31				⇑Lg		04 54 37.4	
	comp=E,9.8nm,0.8s,baz=209,slow=27,SNR=4.2						
MK31	**Makanchi Array**	**5.36**	**21**	*e*Pn	**Pn**	**04 53 16.4**	**+0.3**
MKAR	**Makanchi Array**	**5.36**	**21**	Pn	**Pn**	**04 53 16.9**	**+0.8**
	comp=E,3.1nm,0.3s,baz=202,slow=13,SNR=42						
MKAR				Sn	**Sn**	**04 54 18.0**	**+0.2**
	comp=E,0.9nm,0.3s,baz=208,slow=17,SNR=4.6						
MKAR				Lg		04 54 47.7	
	comp=E,2.5nm,0.3s,baz=203,slow=30,SNR=6.1						
MKAR	**Makanchi Array**	**5.36**	**21**	PN	**Pn**	**04 53 16.9**	**+0.8**
MKAR						04 54 18.0	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MKAR				smax			
	comp=N,1.0nm,0.3s						
KK31	**Karatay Array**	**6.77**	**284**	⇑Pg	**Pg**	**04 53 57.8**	**-7.8**
	comp=N,3.6nm,0.6s,baz=97,slow=15,SNR=28						
KK31				⇑Lg		04 55 26.3	
	comp=N,4.4nm,0.6s,baz=76,slow=29,SNR=8.3						
KURBB	**Kurchatov Arra**	**8.84**	**356**	⇑Lg		04 56 29.6	
	comp=N,7.3nm,0.9s						
KURK	**Kurchatov**	**8.92**	**356**	⇑Lg		04 56 35.0	
	comp=N,24nm,1.1s						
KURK	**Kurchatov**	**8.92**	**356**	Pn	**Pn**	**04 54 04.0**	**-0.8**
	comp=N,0.1nm,0.3s,baz=183,slow=12,SNR=4.8						
KURK				Lg		04 56 35.0	
	comp=N,0.2nm,0.3s,baz=170,slow=29,SNR=7.6						
KURK	**Kurchatov**	**8.92**	**356**	*e*P	**Pn**	**04 54 04.2**	**-0.7**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**8.92**	**356**	*e*Pn	**Pn**	**04 54 04.2**	**-0.7**
	comp=Z,0.9nm,0.5s						
KURK				Lg		04 56 35.0	
ZALV	**Zalesovo Beam**	**12.65**	**14**	Pn	**Pn**	**04 54 53.9**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=192,slow=12,SNR=2.5						
ZALV				Sn	**Sn**	**04 57 12.7**	**-3.9**
	comp=Z,0.3nm,0.3s,baz=199,slow=22,SNR=6.2						
BVAR	**Borovoye Array**	**12.79**	**334**	Pn	**Pn**	**04 54 54.1**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=155,slow=14,SNR=2.4						
BVAR				Lg		04 58 40.8	
	comp=Z,0.2nm,0.3s,baz=154,slow=30,SNR=3.2						
KRAR	**Krasnoyarsk**	**16.66**	**27**	*e*P	**Pn**	**04 55 49.9**	**+0.5**
KRAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ARU	**Arti**	**19.92**	**324**	*e*P	**Pn**	**04 56 24.1**	**-5.2**
ARU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**19.95**	**63**	P	**Pn**	**04 56 27.0**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=269,slow=11,SNR=4.6						
SONM	**Songino Array**	**19.95**	**63**	P	**Pn**	**04 56 27.0**	**-2.7**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**72.31**	**272**	P	**P**	**05 03 23.8**	**+1.7**
	comp=Z,0.8nm,1.1s,baz=51,slow=5.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**72.31**	**272**	P	**P**	**05 03 23.8**	**+1.7**

IDC 23 06:39:44.5±7.2, 321S×10100E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/19, mbtmp3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.1/23, Error ellipse: s-maj=274.0km s-min=30.4km az=60.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.52**	**120**	P	P	06 46 51.2	-0.8
	0.1nm,0.5s,baz=303,slow=8.9,SNR=3.2						
ASAR	**Alice Springs**	**37.74**	**126**	P	P	06 47 03.4	+1.0
	0.1nm,0.3s,baz=278,slow=18,SNR=3.3						
SONM	**Songino Array**	**51.05**	**5**	P	P	06 48 49.3	+0.9
	0.6nm,0.7s,baz=194,slow=9.4,SNR=3.8						
JHJ	**Hachijo jima 2**	**51.47**	**42**	LR	LR	07 06 29.4	
	comp=Z,13nm,21.4s,baz=285,slow=31						
TXAR	**Lajitas Array**	**145.02**	**39**	PKPbc	PKPbc	06 59 22.4	-1.4
	0.4nm,0.5s,baz=297,slow=0.5,SNR=9.9						

*DDA **23** 06:54:45.0, 3912N×2744E, h7km±2km, Md2.8*
*CSEM **23** 06:54:44.6±0.2, 3907N×2747E, h5km, MD2.6, Error ellipse: s-maj=4.4km s-min=2.9km az=101.0*
*ISCJB **23** 06:54:45.9±0.9, 3912N±004×2756E±008, h10km±8km, Error ellipse: s-maj=11.0km s-min=5.0km az=20.0*
*ISK **23** 06:54:46.3, 3911N×2763E, h12km, MD2.6*

ISC 23 06:54:46.6±0.9, 3911N±004×2757E±008, h13km±7km, n10, σ1℘15/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKS	**Akhisar**	**0.30**	**141**	*e*PG	**Pg**	**06 54 52.0**	**-0.7**
AKS				*e*SG	**Sg**	**06 54 57.1**	**+0.3**
BALB	**Balikesir**	**0.58**	**24**	*e*PG	**Pg**	**06 54 57.8**	**-0.1**
BALB				*e*SG	**Sg**	**06 55 05.7**	**0.0**
KDAG	**Bornova**	**0.75**	**199**	*i* P	**Pg**	**06 54 59.0**	**-2.1**
KDAG				*i* S	**Sg**	**06 55 12.7**	**+1.8**
BLCB	**Balcova**	**0.83**	**210**	*e*PG	**Pg**	**06 55 03.7**	**+0.9**
DST	**Dursunbey**	**0.95**	**59**	*e*PG	**Pg**	**06 55 05.0**	**0.0**
MANT	**Manisa**	**0.99**	**129**	*i* P	**Pn**	**06 55 04.8**	**-1.3**
MANT				*i* S	**Sn**	**06 55 21.0**	**+1.1**
MANT	**Manisa**	**0.99**	**129**	*i* P	**Pn**	**06 55 04.8**	**-1.4**
MANT				*i* S	**Sn**	**06 55 21.0**	**+1.0**
KULA	**Kula-Manisa**	**1.04**	**125**	*e*PG	**Pg**	**06 55 05.5**	**-1.1**
ULDT	**Uludag**	**1.59**	**49**	*i* P	**Pg**	**06 55 16.4**	**-0.7**
ULDT				*i* S	**Sg**	**06 55 40.0**	**+2.4**
ULDT	**Uludag**	**1.59**	**49**	*i* P	**Pg**	**06 55 16.4**	**-0.7**
ULDT				*i* S	**Sg**	**06 55 40.0**	**+2.3**

*ISCJB **23** 07:01:19.6±0.4, 3372N±003×3584E±006, h10km, Error ellipse: s-maj=7.6km s-min=3.0km az=19.5*
*GII **23** 07:01:19.8±0.8, 3366N×3580E, h0km, ML2.5/7, Mw2.3/3*
*CSEM **23** 07:01:20.6, 3369N×3584E, h3km, ML3.1, After GRAL*
*GRAL **23** 07:01:20.6±0.6, 3369N×3584E, h4km±22km, MD3.1, Fault plane solution: NP1:℘s193.90000°, δ64.34000°, λ56.31000°.*

ISC 23 07:01:20.1±0.4, 3373N±003×3583E±006, h10km, n24, σ0℘98/33, 2C-4D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHL	**Bhannes**	**0.23**	**320**⇓	*e*Pg	**Pg**	**07 01 25.2**	**+0.3**
RCY	**Rachaya**	**0.24**	**183**⇓	*e*Pg	**Pg**	**07 01 24.0**	**-1.0**
RCY				*e*Sg	**Sg**	**07 01 26.8**	**-1.5**
BEYL	**Beyrouth**	**0.32**	**297**⇓	*e*Pg	**Pg**	**07 01 26.8**	**+0.4**
HRI	**Mount Hermon**	**0.47**	**190**	Pg	**Pg**	**07 01 28.3**	**-0.9**
MATL	**Matirih**	**0.48**	**241**⇓	*e*Pg	**Pg**	**07 01 29.0**	**-0.5**
KSDI	**Kefar Szold**	**0.55**	**195**	Pg	**Pg**	**07 01 30.2**	**-0.6**
KSDI				Sg	**Sg**	**07 01 37.7**	**-0.3**
HWQ	**Hawqa**	**0.56**	**10**⇓	*e*Pg	**Pg**	**07 01 31.7**	**+0.7**
FKH	**Fakeheh**	**0.69**	**43**⇓	*e*Pg	**Pg**	**07 01 33.6**	**0.0**
FKH				*e*Sg	**Sg**	**07 01 43.4**	**+0.7**
KSHT	**Keshet**	**0.74**	**181**	Pg	**Pg**	**07 01 34.0**	**-0.4**
MMC7	**Mount Meron ar**	**0.79**	**208**	Pg	**Pg**	**07 01 34.6**	**-0.8**
MMA0B	**Mount Meron ar**	**0.79**	**207**	Pg	**Pg**	**07 01 34.6**	**-0.9**
MMA0B				Sg	**Sg**	**07 01 46.5**	**+0.7**
MMC5	**Mount Meron ar**	**0.80**	**206**	Pg	**Pg**	**07 01 34.5**	**-0.9**
MMC6	**Mount Meron ar**	**0.80**	**208**	Pg	**Pg**	**07 01 34.8**	**-0.8**
HNTI	**Hanita**	**0.84**	**221**	Pg	**Pg**	**07 01 35.7**	**-0.7**
HNTI				Sg	**Sg**	**07 01 48.5**	**+1.1**
OFRI	**'Ofer**	**1.31**	**213**	Pg	**Pg**	**07 01 43.8**	**-1.5**
MMLI	**Mount Malkishu**	**1.33**	**195**	Pg	**Pg**	**07 01 44.2**	**-1.4**
MMLI				Sg	**Sg**	**07 02 03.0**	**+0.1**
HMDT	**Nahal Hemdat**	**1.49**	**190**	Pn	**Pn**	**07 01 46.8**	**-0.2**
HMDT				Sn	**Sn**	**07 02 07.4**	**+1.0**
SLTI	**Sal'it**	**1.62**	**204**	Pn	**Pn**	**07 01 49.1**	**+0.3**
SLTI				Sn	**Sn**	**07 02 11.1**	**+1.4**
DSI	**Dead Sea**	**2.18**	**190**	Pn	**Pn**	**07 01 57.0**	**+0.6**
DSI				Sn	**Sn**	**07 02 25.5**	**+2.0**
YTIR	**Yattir**	**2.43**	**195**	Sn	**Sn**	**07 02 31.9**	**+2.2**
COBT	**Iskenderun**	**2.81**	**7**	*i* P	**Pg**	**07 02 13.1**	**-0.9**
PRNI	**Paran**	**3.44**	**192**	Pn	**Pn**	**07 02 14.2**	**+0.5**
KRMI	**Paran Flat**	**3.72**	**195**	Sn	**Sn**	**07 03 03.9**	**+2.5**
GZT	**Gaziantep**	**3.89**	**21**	*i* P	**Pb**	**07 02 28.9**	**+0.1**

ROM 23 07:12:46.1±0.2, 3859N×1479E, h10km±1km, MI3.5/36, 2C, Error ellipse: s-maj=1.8km s-min=1.5km az=173.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLNA	**Salina**	**0.04**	**130**⇑	*i*Pg	Pg	07 12 49.2	+1.2
LLI	**Lipari**	**0.19**	**140**	Pg	Pg	07 12 50.6	+0.5
LLI				Sg	Sg	07 12 54.2	+1.4
	69μm,0.5s						
VPL	**Vulcano Piano**	**0.26**	**145**	Pg	Pg	07 12 51.4	+0.1
VPL				Sg	Sg	07 12 55.6	+0.7
	13μm,0.6s						
ACL	**Alicudi**	**0.35**	**261**	Pg	Pg	07 12 54.4	+1.5
ACL				Sg	Sg	07 12 59.5	+1.9
	11μm,0.4s						
MILZ	**Milazzo**	**0.47**	**133**	Pg	Pg	07 12 55.2	-0.1
MILZ				Sg	Sg	07 13 03.7	+2.2
	8μm,0.5s						
MSRU	**Castanea**	**0.65**	**120**	Pg	Pg	07 12 59.0	+0.3
MSRU				Sg	Sg	07 13 08.7	+1.5
	3μm,0.7s						
MSI	**Messina ING**	**0.71**	**123**	Pg	Pg	07 13 00.0	+0.2
MSI				Sg	Sg	07 13 10.7	+1.6
MMME	**Mongiuffi-Meli**	**0.75**	**151**	Pg	Pg	07 13 00.1	-0.4
MMME				Sg	Sg	07 13 11.2	+0.9
	5μm,0.5s						
SCLL	**Scilla**	**0.80**	**114**	Pg	Pg	07 13 01.4	-0.1
	329nm,0.5s						
GIB	**Gibilmanna**	**0.85**	**225**	Pg	Pg	07 13 02.7	+0.2
GIB				Sg	Sg	07 13 14.3	+0.8
	5μm,0.6s						
JOPP	**Joppolo**	**0.86**	**89**	Pg	Pg	07 13 02.9	+0.3
JOPP				Sg	Sg	07 13 15.1	+1.3
	488nm,0.5s						
CSLB	**Castelbuono**	**0.87**	**222**	Pg	Pg	07 13 02.3	-0.6
CSLB				Sg	Sg	07 13 16.2	+2.0
	1μm,0.4s						
GALF	**Gagliano Caste**	**0.90**	**192**	Pg	Pg	07 13 04.2	+0.8
	7μm,0.5s						
ESLN	**Serra La Nave**	**0.91**	**171**	Pg	Pg	07 13 04.0	+0.4
	3μm,0.7s						
MTTG	**Motta San Giov**	**0.92**	**129**	Pg	Pg	07 13 03.3	-0.5
MTTG				Sg	Sg	07 13 15.7	-0.1
	1μm,0.6s						
CEL	**Celeste**	**0.93**	**111**	Pg	Pg	07 13 03.8	-0.1
CEL				Sg	Sg	07 13 16.1	+0.1
	622nm,0.5s						
ECNV	**Catenanuova**	**1.00**	**184**	Pg	Pg	07 13 05.9	+0.7
	9μm,1.6s						
SOI	**Samo**	**1.12**	**117**	Pg	Pg	07 13 06.3	-1.3
	382nm,0.5s						
MPAZ	**Palizzi**	**1.15**	**123**	Pg	Pg	07 13 06.9	-1.3
	1μm,0.7s						
USI	**Ustica**	**1.27**	**276**	Pg	Pg	07 13 08.4	-2.0
USI				Sg	Sg	07 13 24.9	-2.0
	238nm,0.2s						
CARO	**Carolei**	**1.29**	**59**	Pg	Pg	07 13 09.6	-1.4
CARO				Sg	Sg	07 13 27.8	0.0
	940nm,0.6s						
GRI	**Girifalco**	**1.29**	**79**	Pg	Pg	07 13 09.9	-1.0
GRI				Sg	Sg	07 13 28.1	+0.3
	432nm,0.5s						
PLAC	**Placanica**	**1.30**	**96**	Pg	Pg	07 13 09.6	-1.4
PLAC				Sg	Sg	07 13 27.4	-0.5
	259nm,0.5s						
HAGA	**Augusta**	**1.33**	**167**	Pg	Pg	07 13 10.0	-1.7
HAGA				Sg	Sg	07 13 27.3	-1.7
	811nm,0.7s						
CORL	**Corleone**	**1.36**	**240**	Pg	Pg	07 13 11.8	-0.4
	581nm,0.6s						
AGST	**Augusta-Monte**	**1.38**	**165**	Pg	Pg	07 13 10.6	-1.9
AGST				Sg	Sg	07 13 28.3	-2.1
	862nm,0.4s						
RAFF	**Raffo Rosso**	**1.41**	**194**	Pg	Pg	07 13 12.1	-1.0
	1μm,1.0s						
HVZN	**Vizzini**	**1.41**	**182**	Pg	Pg	07 13 11.4	-1.8
HVZN				Sg	Sg	07 13 32.1	+0.6
	2μm,0.7s						
SSY	**Sortino**	**1.45**	**171**	Pg	Pg	07 13 11.3	-2.6
	1μm,0.4s						
SERS	**Sersale**	**1.55**	**73**⇑	*i*Pg	Pg	07 13 13.9	-1.9
	177nm,0.5s						
BULG	**Bulgheria - Ca**	**1.55**	**17**	Pg	Pg	07 13 13.8	-2.1
	263nm,0.7s						
FAVR	**Favara**	**1.59**	**214**	Pg	Pg	07 13 17.0	+0.3
	148nm,0.4s						
CUC	**Castrocucco**	**1.61**	**29**	Pg	Pn	07 13 14.6	0.0
	266nm,0.6s						
HMDC	**Modica**	**1.63**	**180**	Pg	Pn	07 13 14.2	-0.7
	790nm,0.6s						
TIP	**Timpagrande**	**1.64**	**68**	Pg	Pn	07 13 15.3	+0.3
HAVL	**Avola**	**1.65**	**171**	Pg	Pn	07 13 14.1	-1.0
	645nm,0.5s						
CMPR	**Campora**	**1.77**	**13**	Pg	Pn	07 13 15.8	-1.0
	64nm,0.6s						
SIRI	**Monte Sirino -**	**1.79**	**27**	Pg	Pn	07 13 17.8	+0.7
	352nm,1.0s						
MTSN	**Montesano sull**	**1.83**	**24**	Pg	Pn	07 13 18.4	+0.8
	204nm,0.8s						

SCHR	**S. Chirico Rap**	**1.89**	**31**	Pg	Pn	07 13 19.3	+0.9	
	72nm,0.7s							
MCEL	**Monticello**	**1.90**	**24**	Pg	Pn	07 13 19.0	+0.4	
	146nm,0.8s							
CDRU	**Civita di Ruta**	**1.94**	**12**	Pg	Pn	07 13 19.0	-0.1	
	77nm,1.0s							
CRAC	**Craco**	**2.18**	**35**	Pg	Pn	07 13 25.1	+2.7	
	339nm,0.9s							
MRVN	**Minervino Murg**	**2.69**	**23**	Pg	Pn	07 13 30.7	+1.2	
AMUR	**Altamura**	**2.70**	**31**	Pg	Pn	07 13 31.8	+2.2	
VSL	**Villasalto**	**4.31**	**284**	Pg	Pn	07 13 49.9	-1.8	

*NIED **23** 07:32:00, 3650N×14270E, h5km, Mw3.9 Best double couple: M0 8.53000×10^14 NP1:℘s195.00000°, δ56.00000°, λ-95.00000°. NP2:℘s25.00000°, δ35.00000°, λ-82.00000°.*
*IDC **23** 07:32:26.9±0.9, 3633N×14276E, h0km, mb3.7/10, mb1 3.9/13, mb1mx3.8/26, mbtmp3.9/13, ML3.9/3, MS2.9/4, Ms1 2.9/4, ms1mx2.3/37, Error ellipse: s-maj=22.4km s-min=18.0km az=60.0*
*ISCJB **23** 07:32:27.4±1.4, 3648N±004×14274E±006, h14km±10km, mb3.7/10, Error ellipse: s-maj=7.6km s-min=6.1km az=19.3*
*NEIC **23** 07:32:29.7, 3650N×14270E, h75km, MG3.7(JMA), After JMA.*
*JMA **23** 07:32:29.6±0.3, 3650N×14270E, h75km, M3.7*

ISC 23 07:32:28.4±1.7, 3650N±004×14269E±005, h11km±11km, n34, σ1℘12/45, mb3.7/10, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.63**	**292**	P	**Pn**	**07 32 56.8**	**-0.3**
CHOJ	**Chosi**	**1.68**	**242**	P	**Pn**	**07 32 58.1**	**+0.3**
CHOJ				*e*S	**Sn**	**07 33 18.8**	**-0.5**
JFK	**Kawauchi**	**1.69**	**301**	P	**Pn**	**07 32 57.5**	**-0.4**
JFK				S	**Sn**	**07 33 18.8**	**-0.8**
JHO	**Hitachi**	**1.71**	**274**	P	**Pn**	**07 32 57.9**	**-0.3**
JHO				*e*S	**Sn**	**07 33 18.9**	**-1.1**
JMM	**Marumori**	**2.04**	**313**	P	**Pn**	**07 33 22.8**	**+0.1**
JMM				S	**Sn**	**07 33 27.7**	**-0.4**
JFT	**Otama**	**2.14**	**299**	P	**Pn**	**07 33 04.8**	**+0.7**
JIO	**Ouri**	**2.22**	**332**	P	**Pn**	**07 33 04.4**	**-0.8**
BSO1	**Boso 1**	**2.31**	**218**	P	**Pn**	**07 33 04.2**	**-2.2**
BSO1				*e*S	**Sn**	**07 33 34.5**	**-0.3**
BSO3	**Boso 3**	**2.45**	**227**	P	**Pn**	**07 33 07.5**	**-0.9**
BSO3				S	**Sn**	**07 33 39.3**	**+1.0**
JFY	**Yanaizu**	**2.55**	**292**	P	**Pn**	**07 33 11.0**	**+1.2**
JAG	**Ashikaga**	**2.61**	**269**	P	**Pn**	**07 33 10.8**	**+0.3**
JAG				S	**Sn**	**07 33 41.7**	**-0.5**
JMK	**Ichinoseki**	**2.71**	**335**	P	**Pn**	**07 33 11.7**	**-0.2**
JYK	**Kaneyama**	**3.04**	**323**	P	**Pn**	**07 33 16.7**	**+0.2**
JRY	**Ryogami san**	**3.10**	**262**	P	**Pn**	**07 33 17.3**	**+0.1**
JRY				S	**Sn**	**07 33 52.8**	**-1.5**
JOD2	**Odawara 2**	**3.17**	**248**	P	**Pn**	**07 33 19.3**	**+1.0**
MJAR	**Matsushiro Arr**	**3.61**	**272**	Pn	**Pn**	**07 33 25.1**	**+0.9**
	2.6nm,0.3s,baz=22,slow=27,SNR=29						
MJAR				Sn	**Sn**	**07 34 10.6**	**+3.7**
	4.6nm,0.3s,baz=80,slow=17,SNR=5.2						
MJAR				LR	LR	07 35 06.9	
	comp=Z,193nm,19.0s,baz=125,slow=44						
MAJO	**Matsushiro**	**3.61**	**272**	*e*Pn	**Pn**	**07 33 25.8**	**+1.5**
MAT	**Matsushiro**	**3.61**	**272**	P	**Pn**	**07 33 23.8**	**-0.5**
MAT				S	**Sn**	**07 34 08.7**	**+1.8**
JHJ	**Hachijo jima 2**	**4.13**	**216**	Pn	**Pn**	**07 33 30.1**	**-1.4**
	33nm,0.3s,baz=65,slow=11,SNR=8.8						
JHJ				Sn	**Sn**	**07 34 15.8**	**-4.0**
	30nm,0.3s,baz=269,slow=23,SNR=7.9						
ERM	**Erimo**	**5.52**	**4**	*e*Pn	**Pn**	**07 33 47.8**	**-2.8**
	14nm,0.3s						
ERM				*e*Sn	**Sn**	**07 34 51.7**	**-2.3**
ASAJ	**Asahikawa**	**7.61**	**360**	Pn	**Pn**	**07 34 18.8**	**-0.5**
	3.5nm,0.3s,baz=253,slow=11,SNR=17						
ASAJ				LR	LR	07 37 56.9	
	comp=Z,75nm,21.0s,baz=179,slow=42						
CBIJ	**Chichi jima**	**9.38**	**183**	Pn	**Pn**	**07 34 39.7**	**-3.9**
	6.7nm,0.3s,baz=279,slow=18,SNR=5.2						
KSRS	**Korea Array**	**11.85**	**279**	LR	LR	07 39 27.8	
	comp=Z,49nm,20.2s,baz=159,slow=35						
SONM	**Songino Array**	**28.93**	**304**	P	**P**	**07 38 30.5**	**+3.0**
	1.2nm,0.9s,mb3.6,baz=102,slow=11,SNR=6.6						
SONM				LR	LR	07 50 26.2	
	comp=Z,27nm,21.8s,baz=77,slow=37						
ZALV	**Zalesovo Beam**	**43.03**	**313**	P	**P**	**07 40 28.8**	**+0.9**
	0.7nm,0.6s,mb3.6,baz=96,slow=9.1,SNR=3.9						
MKAR	**Makanchi Array**	**45.27**	**303**	P	**P**	**07 40 46.9**	**+1.1**
	0.2nm,0.2s,mb3.5,baz=98,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**45.27**	**303**	P	**P**	**07 40 46.9**	**+1.1**
KURK	**Kurchatov**	**47.06**	**309**	P	**P**	**07 41 01.2**	**+1.3**
	1.3nm,0.6s,mb4.1,baz=83,slow=7.6,SNR=9.0						
BVAR	**Borovoye Array**	**51.69**	**313**	P	**P**	**07 41 34.9**	**-0.3**
	0.4nm,0.5s,mb3.6,baz=105,slow=9.1,SNR=2.3						
WRA	**Warramunga Arr**	**56.69**	**189**	P	**P**	**07 42

mb3.9/4, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**16.35**	**184**	*e*P	**Pn**	**08 06 40.3**	**-0.1**
	81nm,0.9s						
NWAO	**Narrogin (SRO)**	**17.34**	**11**	Pn	**Pn**	**08 06 49.8**	**-3.4**
	2.5nm,0.3s,baz=167,slow=10,SNR=32						
NWAO	**Narrogin (SRO)**	**17.34**	**11**	*e*Pn	**Pn**	**08 06 49.8**	**-3.4**
	8.8nm,0.5s						
MUN	**Mundaring**	**18.17**	**8**	*e*P	**Pn**	**08 07 04.0**	**+0.5**
STKA	**Stephens Creek**	**27.72**	**60**	P	**P**	**08 08 39.1**	**-0.4**
	1.6nm,0.7s,mb3.8,baz=224,slow=13,SNR=4.4						
MAW	**Mawson**	**30.34**	**216**	*e*P	**P**	**08 09 02.6**	**+0.1**
	2.6nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**30.81**	**39**	P	**P**	**08 09 07.2**	**+0.2**
	1.7nm,0.7s,mb4.0,baz=201,slow=8.7,SNR=23						
WRA	**Warramunga Arr**	**34.34**	**37**	P	**P**	**08 09 38.7**	**+0.8**
	1.1nm,0.8s,mb3.8,baz=202,slow=8.6,SNR=6.2						
POO	**Poona**	**76.70**	**322**	*ex*	x	08 14 18.0	

*ISCJB **23** 08:03:01.3±0.5, 5137N±003×16.14E±003, h0km, Error ellipse: s-maj=4.1km s-min=2.5km az=23.5*
*IPEC **23** 08:03:01.7±0.1, 5146N×1625E, h0km, ML1.9/3, Error ellipse: s-maj=1.2km s-min=0.7km az=42.0*
*NEIC **23** 08:03:02.6±1.0, 5142N×1614E, h5km, ML2.6(SZGRF), Error ellipse: s-maj=12.0km s-min=5.1km az=191.0*
*WAR **23** 08:03:03.0, 5145N×1618E, ML2.5, Mining Induced*
*CSEM **23** 08:03:03.2±0.1, 5141N×1612E, h0km, ML3.1/10, Error ellipse: s-maj=2.4km s-min=1.4km az=20.0*
*VIE **23** 08:03:03.2±0.4, 5129N×1615E, h0km, mb2.0/3, ML2.7/4, Error ellipse: s-maj=2.5km s-min=2.4km az=108.0 64 km WNW of Breslau Suspected Mining induced.*
*PRU **23** 08:03:04.3, 5135N×1612E, h0km*

ISC 23 08:03:02.3±0.5, 5142N±003×1614E±003, h0km, n33, σ1§05/63, 5C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.59**	**171**	*e*Pg	**Pg**	**08 03 14.1**	**+0.6**
KSP				*e*Sg	**Sg**	**08 03 22.4**	**+1.3**
KSP	**Ksiaz**	**0.59**	**171**	*e*Pg	**Pg**	**08 03 13.8**	**+0.3**
KSP				*e*Sg	**Sg**	**08 03 21.5**	**+0.4**
KSP	**Ksiaz**	**0.59**	**171**	⇓*i*Pg	**Pg**	**08 03 14.2**	**+0.7**
KSP				*e*Sg	**Sg**	**08 03 22.3**	**+1.2**
UPC	**Upice**	**0.92**	**185**	*e*Pg	**Pg**	**08 03 20.3**	**+0.4**
DPC	**Dobruska-Polom**	**1.08**	**174**	*e*PG	**Pg**	**08 03 23.0**	**0.0**
DPC				*e*SG	**Sg**	**08 03 37.1**	**+0.2**
	comp=Z,36nm,0.7s						
PVCC	**Panska Ves**	**1.34**	**229**	*e*Pn	**Pn**	**08 03 28.6**	**+0.4**
PVCC				Sg	**Sg**	**08 03 46.5**	**+1.2**
	comp=Z,115nm,0.5s						
PVCC	**Panska Ves**	**1.34**	**229**	*e*PG	**Pg**	**08 03 28.4**	**+0.4**
PVCC				*e*SG	**Sg**	**08 03 46.5**	**+1.2**
	comp=Z,115nm,0.5s						
BRG	**Berggiesshubel**	**1.49**	**249**	Pg	**Pg**	**08 03 31.0**	**+0.1**
BRG				*e*Sg	**Sg**	**08 03 50.8**	**+0.6**
BRG	**Berggiesshubel**	**1.49**	**249**	PN	**Pn**	**08 03 29.3**	**-1.0**
BRG				PG	**Pg**	**08 03 31.0**	**+0.1**
BRG				SG	**Sg**	**08 03 51.4**	**+1.2**
	comp=Z,41nm,0.5s						
PRU	**Pruhonice**	**1.76**	**216**	*e*PG	**Pg**	**08 03 35.4**	**-0.6**
PRU				*e*SG	**Sg**	**08 03 58.8**	**0.0**
	comp=Z,27nm,0.5s						
RUE	**Ruedersdorf**	**1.81**	**307**	*e*Pn	**Pn**	**08 03 33.0**	**-1.7**
RUE				*e*Sg	**Sg**	**08 04 00.2**	**-0.2**
MORC	**Moravsky Berou**	**1.87**	**151**	*e*Pn	**Pn**	**08 03 34.9**	**-0.7**
MORC				*e*Sg	**Sg**	**08 03 59.7**	**-2.7**
	comp=Z,8.9nm,0.4s						
CLL	**Collm**	**1.97**	**268**	*e*Pg	**Pg**	**08 03 40.0**	**-0.1**
CLL				*e*Sg	**Sg**	**08 04 08.0**	**+2.3**
	comp=Z,17nm,0.5s						
OKC	**Ostrava-Krasne**	**2.03**	**140**	*e*PG	**Pg**	**08 03 41.4**	**+0.1**
OKC				*e*SG	**Sg**	**08 04 05.7**	**-1.9**
	comp=Z,14nm,0.4s						
VRAC	**Vranov**	**2.13**	**172**	*e*Pn	**Pn**	**08 03 39.9**	**+0.7**
VRAC				*e*Sg	**Sg**	**08 04 08.7**	**-2.1**
	comp=Z,5.8nm,0.3s						
KRUC	**Moravsky**	**2.37**	**176**	*e*Pn	**Pn**	**08 03 42.9**	**+0.5**
KRUC				*e*Sg	**Sg**	**08 04 17.3**	**-1.0**
	comp=Z,5.1nm,0.3s						
OJC	**Ojcow**	**2.61**	**116**	*e*Pg	**Pg**	**08 03 52.5**	**+0.2**
OJC				*e*Sg	**Sg**	**08 04 27.0**	**+0.8**
NKC	**Novy Kostel**	**2.63**	**245**	*e*Pn	**Pn**	**08 03 46.1**	**+0.1**
NKC	**Novy Kostel**	**2.63**	**245**	*e*PN	**Pn**	**08 03 46.2**	**+0.2**
NKC				*e*PG	**Pg**	**08 03 51.4**	**-1.3**
NKC				*e*SG	**Sg**	**08 04 26.4**	**-0.3**
	comp=Z,27nm,0.3s						
JAVC	**Velka Javorina**	**2.75**	**158**	*e*Pn	**Pn**	**08 03 49.0**	**+1.4**
KHC	**Kasperske Hory**	**2.82**	**217**	*e*Pn	**Pn**	**08 03 49.2**	**+0.6**
KHC	**Kasperske Hory**	**2.82**	**217**	*e*PN	**Pn**	**08 03 49.6**	**+1.0**
KHC				*e*PG	**Pg**	**08 03 54.7**	**-1.7**
KHC				*e*SG	**Sg**	**08 04 30.8**	**-2.1**
MOX	**Moxa**	**2.96**	**257**	*e*PG	**Pg**	**08 03 59.5**	**+0.4**
MOX				*e*SG	**Sg**	**08 04 38.7**	**+1.2**
MOX	**Moxa**	**2.96**	**257**	*e*Sg	**Sg**	**08 04 37.2**	**-0.3**
WET	**Wettzell**	**3.10**	**224**	*e*Pn	**Pn**	**08 03 52.0**	**-0.4**
MODS	**Modra-Piesok**	**3.14**	**166**	*e*Sg	**Sg**	**08 04 44.9**	**+1.8**
VYHS	**Vyhne**	**3.41**	**148**	*e*Sg	**Sg**	**08 04 53.7**	**+2.0**
CONA	**Conrad Observa**	**3.50**	**183**	⇑*i*Pn	**Pn**	**08 03 57.1**	**-0.8**
CONA				⇑*i*Sg	**Sg**	**08 04 54.6**	**-0.1**
	comp=Z,4.6nm,0.3s						
CSNA	**Conrad Observa**	**3.50**	**183**	⇑*i*Pn	**Pn**	**08 03 57.1**	**-0.8**
CSNA				⇓*i*Sg	**Sg**	**08 04 54.5**	**-0.3**
	comp=Z,4.2nm,0.3s						
CSNA	**Conrad Observa**	**3.50**	**183**	Pn	**Pn**	**08 03 57.1**	**-0.9**
CSNA				Sg	**Sg**	**08 04 54.5**	**-0.2**
	comp=Z,4.2nm,0.3s						
MOA	**Molln**	**3.78**	**200**	⇑*i*Pn	**Pn**	**08 04 01.6**	**-0.1**
MOA				⇑*i*Sg	**Sg**	**08 05 04.5**	**+0.9**
	comp=Z,6.0nm,0.3s						
STHS	**Stebnicka Huta**	**3.83**	**120**	*e*PN	**Pn**	**08 04 02.5**	**+0.1**
STHS				*e*PG	**Pg**	**08 04 15.6**	**-0.1**
STHS				*e*SG	**Sg**	**08 05 08.6**	**+3.3**
STHS	**Stebnicka Huta**	**3.83**	**120**	*e*Pn	**Pn**	**08 04 02.5**	**+0.1**
STHS				*e*Pg	**Pg**	**08 04 15.6**	**-0.1**
STHS				*e*Sg	**Sg**	**08 05 08.6**	**+3.3**

*NIED **23** 08:12:00, 3650N×14270E, h8km, Mw3.8 Best double couple: M0 5.82000×10^14 NP1:φs=208.00000°, δ53.00000°, λ=-91.00000°. NP2:φs=29.00000°, δ37.00000°, λ=-89.00000°.*
*IDC **23** 08:12:29.8±1.1, 3632N×14279E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.7/23, mbtmp3.7/9, ML3.5/2, MS2.6/2, Ms1 2.6/2, ms1mx2.0/42, Error ellipse: s-maj=27.3km s-min=22.5km az=8.0*
*ISCJB **23** 08:12:32.9±0.6, 3649N±003×14267E±005, h33km, mb3.6/7, Error ellipse: s-maj=6.0km s-min=4.4km az=12.9*
*JMA **23** 08:12:32.5±0.2, 3652N×14265E, h86km, M3.5*
*NEIC **23** 08:12:32.6, 3652N×14266E, h86km, MG3.5(JMA), After JMA.*

ISC 23 08:12:34.4±0.6, 3649N±003×14265E±005, h35km, n28, σ1§13/44, mb3.6/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.60**	**293**	P	**Pn**	**08 12 59.8**	**-0.4**
ONAJ				*e*S	**Sn**	**08 13 20.8**	**+1.1**
CHOJ	**Chosi**	**1.65**	**242**	P	**Pn**	**08 13 00.8**	**0.0**
CHOJ				*e*S	**Sn**	**08 13 21.7**	**+1.0**
JFK	**Kawauchi**	**1.67**	**302**	P	**Pn**	**08 13 00.3**	**-0.8**
JFK				*e*S	**Sn**	**08 13 21.5**	**+0.2**
JHO	**Hitachi**	**1.68**	**275**	P	**Pn**	**08 13 00.6**	**-0.6**
JHO				*e*S	**Sn**	**08 13 21.1**	**-0.4**
JMM	**Marumori**	**2.02**	**313**	P	**Pn**	**08 13 05.1**	**-0.9**
JMM				*e*S	**Sn**	**08 13 30.0**	**0.0**
BSO1	**Boso 1**	**2.28**	**217**	P	**Pn**	**08 13 08.5**	**-1.0**
BSO1				*e*S	**Sn**	**08 13 36.4**	**0.0**
JAG	**Ashikaga**	**2.58**	**270**	P	**Pn**	**08 13 13.8**	**+0.2**
JAG				*e*S	**Sn**	**08 13 44.0**	**+0.3**
JMK	**Ichinoseki**	**2.71**	**336**	P	**Pn**	**08 13 14.4**	**-1.0**
JMK				*e*S	**Sn**	**08 13 46.0**	**-0.9**
JYK	**Kaneyama**	**3.03**	**324**	P	**Pn**	**08 13 19.7**	**-0.1**
JYK				*e*S	**Sn**	**08 13 56.0**	**+1.1**
JRY	**Ryogami san**	**3.06**	**262**	P	**Pn**	**08 13 20.2**	**-0.1**
JRY				*e*S	**Sn**	**08 13 55.8**	**+0.1**
JOD2	**Odawara 2**	**3.14**	**248**	P	**Pn**	**08 13 22.4**	**+1.1**
JOD2				*e*S	**Sn**	**08 13 57.7**	**+0.2**
JOM	**Ohasama**	**3.17**	**341**	P	**Pn**	**08 13 20.5**	**-1.2**
JOM				*e*S	**Sn**	**08 13 57.1**	**-1.1**
JYN	**Shimob**	**3.47**	**255**	P	**Pn**	**08 13 27.0**	**+1.1**
MJAR	**Matsushiro Arr**	**3.58**	**272**	Pn	**Pn**	**08 13 28.3**	**+0.9**
	2.0nm,0.3s,baz=86,slow=9.3,SNR=25						
MJAR				Sn	**Sn**	**08 14 12.3**	**+3.9**
	2.6nm,0.3s,baz=58,slow=9.4,SNR=6.3						
MJAR	**Matsushiro Arr**	**3.58**	**272**	Pn	**Pn**	**08 13 28.3**	**+0.9**
MJAR				Sn	**Sn**	**08 14 12.3**	**+3.9**
MAJO	**Matsushiro**	**3.58**	**272**	*e*Pn	**Pn**	**08 13 28.9**	**+1.5**
MAT	**Matsushiro**	**3.58**	**272**	P	**Pn**	**08 13 24.7**	**-2.7**
MAT				S	**Sn**	**08 14 07.1**	**-1.3**
JHJ2	**Mitsune**	**4.09**	**215**	P	**Pn**	**08 13 34.0**	**-0.5**
JHJ2				*e*S	**Sn**	**08 14 18.4**	**-2.8**
JHJ	**Hachijo jima 2**	**4.10**	**216**	Pn	**Pn**	**08 13 33.8**	**-0.8**
	19nm,0.3s,baz=31,slow=19,SNR=6.5						
JHJ				Sn	**Sn**	**08 14 17.4**	**-4.0**
	30nm,0.3s,baz=265,slow=23,SNR=7.6						
ASAJ	**Asahikawa**	**7.62**	**360**	Pn	**Pn**	**08 14 21.3**	**-1.6**
	2.7nm,0.3s,baz=207,slow=10,SNR=18						
ASAJ				LR	LR	08 18 07.4	
	comp=Z,51nm,18.7s,baz=0.5,slow=43						
KSRS	**Korea Array**	**11.82**	**279**	LR	LR	08 19 53.4	
	comp=Z,18nm,20.0s,baz=80,slow=37						
SONM	**Songino Array**	**28.91**	**304**	P	**P**	**08 18 32.8**	**+3.0**
	1.1nm,0.9s,mb3.6,baz=90,slow=8.6,SNR=5.2						
ZALV	**Zalesovo Beam**	**43.01**	**313**	P	**P**	**08 20 31.5**	**+1.3**
	0.4nm,0.3s,mb3.6,baz=107,slow=4.8,SNR=2.3						
MKAR	**Makanchi Array**	**45.25**	**303**	P	**P**	**08 20 51.1**	**+2.9**
	0.3nm,0.4s,mb3.5,baz=84,slow=13,SNR=2.3						
KURK	**Kurchatov**	**47.05**	**309**	P	**P**	**08 21 03.8**	**+1.5**
	1.0nm,0.5s,mb4.0,baz=83,slow=7.8,SNR=7.1						
ASAR	**Alice Springs**	**60.40**	**189**	P	**P**	**08 22 39.2**	**-0.9**
	0.2nm,0.4s,mb3.5,baz=1.2,slow=6.2,SNR=5.1						
NVAR	**Mina Array Bea**	**74.52**	**54**	P	**P**	**08 24 11.1**	**+1.7**
	0.5nm,0.6s,mb3.6,baz=286,slow=5.8,SNR=5.0						
TXAR	**Lajitas Array**	**89.66**	**53**	P	**P**	**08 25 30.1**	**+1.2**
	0.3nm,0.8s,mb3.7,baz=310,slow=2.7,SNR=4.3						

*NEIC **23** 08:13:41.8, 3270N×11605W, h9km, ML3.6(PAS), After PAS.*
NEIC Felt in the Ocotillo area.

ECX 23 08:13:42.0±0.6, 3271N×11604W, h3km±1km, MD3.5, ML3.6, 16C-7D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVTC	**Desert V Tower**	**0.07**	**227**	*e*P	Pg	08 13 43.7	+0.2
DVTC				*i* S	Sg	08 13 45.4	+0.8
RMX	**La Rumorosa**	**0.11**	**198**	⇑*i*P	Pg	08 13 44.2	0.0
RMX				*e*S	Sg	08 13 46.3	+0.5
YUH	**Yuha Desert**	**0.11**	**123**	⇑*e*P	Pg	08 13 43.9	-0.3
YUH	**Yuha Desert**	**0.11**	**123**	⇑*i*P	Pg	08 13 43.9	-0.4
CRR	**Carrizo Plain**	**0.18**	**18**	⇓*e*P	Pg	08 13 45.4	-0.3
CRR	**Carrizo Plain**	**0.18**	**18**	⇓*i*P	Pg	08 13 45.4	-0.3
WESC	**Westside Schoo**	**0.26**	**79**	*e*P	Pg	08 13 47.0	0.0
WESC				*i* S	Sg	08 13 51.5	+1.1
CBKC	**Canebrake**	**0.26**	**316**	⇓*i*P	Pg	08 13 47.1	0.0
SGL	**Mount Signal**	**0.27**	**103**	⇑*e*P	Pg	08 13 46.9	-0.3
SGL	**Mount Signal**	**0.27**	**103**	⇑*i*P	Pg	08 13 46.9	-0.3
COK	**Cook Ranch**	**0.29**	**62**	⇑*e*P	Pg	08 13 47.7	0.0
COK	**Cook Ranch**	**0.29**	**62**	*e*P	Pg	08 13 47.7	0.0
SWSC	**Sam W. Stewart**	**0.31**	**41**	*e*P	Pg	08 13 47.6	-0.3
SWSC				*e*S	Sg	08 13 52.0	+0.1
ERPC	**Ernies Place**	**0.32**	**84**	⇑*i*P	Pg	08 13 48.3	+0.2
BAR	**Barrett**	**0.54**	**267**	⇑*e*P	Pg	08 13 51.6	-0.7
BAR	**Barrett**	**0.54**	**267**	⇑*i*P	Pg	08 13 51.6	-0.7
BAR				*e*S	Sg	08 13 58.9	-0.4
CBX	**Cerro Bola**	**0.66**	**233**	⇑*e*P	Pg	08 13 53.9	-0.7
CBX				*e*S	Sg	08 14 02.8	-0.4
CPBX	**Cerro Prieto**	**0.68**	**115**	⇑*e*P	Pg	08 13 54.5	-0.6
CPBX				*e*S	Sg	08 14 03.5	-0.5
CPBX				⇓*e*		08 14 05.8	
	comp=N,9μm,0.4s						
CPBX	**Cerro Prieto**	**0.68**	**115**	⇑*e*P	Pg	08 13 54.5	-0.6
CPBX				*e*S	Sg	08 14 03.5	-0.5
RDX	**Rancho Dowling**	**0.78**	**174**	⇓*e*P	Pg	08 13 55.8	-1.1
RDX				*e*S	Sg	08 14 06.2	-0.9
COA	**Coachella**	**0.78**	**78**	⇑*e*P	Pg	08 13 56.0	-1.0
ENX	**Ensenada**	**0.98**	**213**	⇑*e*P	Pg	08 13 59.6	-1.3
ENX				*e*S	Sg	08 14 12.5	-1.1
ENX				⇓*e*		08 14 13.9	
	comp=N,2μm,0.6s						
ENX	**Ensenada**	**0.98**	**213**	⇑*e*P	Pg	08 13 59.6	-1.3
ENX				*e*S	Sg	08 14 12.5	-1.1
EMX	**El Mayor**	**0.98**	**137**	*e*P	Pg	08 13 59.4	-1.5
EMX				*e*S	Sg	08 14 12.5	-1.2
PBX	**Punta Banda**	**1.13**	**211**	*e*P	Pg	08 14 01.9	-1.7
PBX				*e*S	Sg	08 14 17.0	-1.2
ECNX	**Esteban Cantu**	**1.15**	**205**	⇓*e*P	Pg	08 14 02.6	-1.5
ECNX				*e*P		08 13 59.8	
ECNX				*e*S	Sg	08 14 12.9	-6.1
ECNX				*e*S	Sg	08 14 17.8	-1.2
YMD	**Yuma Desert**	**1.27**	**97**	⇑*e*P	Pg	08 14 02.8	-3.5
ECBX	**El Chinero**	**1.49**	**146**	*e*P	Pn	08 14 07.7	-2.0
ECBX				*e*S	Sn	08 14 27.7	-1.9
SPX	**San Pedro Mart**	**1.73**	**164**	*e*P	Pn	08 14 11.9	-1.0
SPX				*e*S	Sn	08 14 35.3	-0.2

IDC 23 08:18:22.4±12.0, 7195×12292E, h72km±132km, mb3.3/1, mb1 3.3/4, mb1mx3.1/17, mbtmp3.1/4, ML3.2/3, Error ellipse: s-maj=200.9km s-min=46.6km az=48.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.17**	**167**	P	Pn	08 20 59.4	+0.1
	0.1nm,0.3s,baz=352,slow=15,SNR=2.5						
FITZ				S	Sn	08 22 51.1	-11
	0.1nm,0.3s,baz=73,slow=23,SNR=6.4						
WRA	**Warramunga Arr**	**16.84**	**140**	P	Pn	08 22 13.3	-0.3
	0.1nm,0.3s,baz=313,slow=12,SNR=10						
WRA				S	S	08 25 08.9	-18
	0.1nm,0.3s,baz=307,slow=24,SNR=3.7						
ASAR	**Alice Springs**	**19.49**	**148**	P	Pn	08 22 43.9	-1.7
	0.2nm,0.3s,baz=329,slow=12,SNR=19						
MKAR	**Makanchi Array**	**64.71**	**330**	P	P	08 28 53.0	+0.1
	0.3nm,0.3s,baz=127,slow=9.2,SNR=2.4						

*ISCJB **23** 08:21:16.2±0.4, 4890S±007×95W±0.1, h10km, mb4.2/13, MS3.8/11, Error ellipse: s-maj=12.1km s-min=9.8km az=177.0*
*IDC **23** 08:21:16.5±0.6, 4889S×953W, h0km, mb4.2/12, mb1 4.2/12, mb1mx4.1/18, mbtmp4.2/12, MS3.8/11, Ms1 3.8/11, ms1mx3.6/24, Error ellipse: s-maj=19.5km s-min=16.6km az=166.0*
*NEIC **23** 08:21:17.9±0.3, 4893S×952W, h10km, mb4.7/1, Error ellipse: s-maj=10.3km s-min=9.3km az=148.0*

ISC 23 08:21:18.2±0.4, 4893S±007×95W±01, h10km, n33, σ0§64/23, mb4.2/13, MS3.8/11, 1C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**21.80**	**179**	*e*	**P**	**08 26 10.6**	**+0.7**
VNA1				*e*		08 26 15.0	
VNA2	**Neumayer--Watz**	**22.09**	**178**	*e*	**P**	**08 26 13.5**	**+0.5**
VNA2				*e*		08 26 17.1	
VNA2				*e*		08 26 19.6	
VNA2				*e*		08 26 26.1	
VNA3	**Neumayer Olymp**	**22.39**	**180**	*e*	**P**	**08 26 16.3**	**+0.1**
VNA3				*e*		08 26 19.7	
VNA3				*e*		08 26 22.1	
VNA3				*e*		08 26 27.3	
SNAA	**Sanae**	**23.02**	**175**	*e*	**P**	**08 26 22.9**	**0.0**
SNAA				*e*		08 26 25.5	
SNAA				*e*		08 26 27.8	
SNAA	**Sanae**	**23.02**	**175**	*e*P	**P**	**08 26 22.4**	**-0.5**
	31nm,1.1s,mb4.7						
SUR	**Sutherland**	**28.06**	**65**	LR	LR	08 36 03.5	
	comp=Z,194nm,18.3s,MS3.7,baz=228,slow=32						
SYO	**Syowa Base**	**31.03**	**148**	⇑*e*P	**P**	**08 27 34.4**	**-1.2**
BOSA	**Boshof**	**33.43**	**65**	P	**P**	**08 27 57.1**	**+0.2**
	3.0nm,0.9s,mb4.2,baz=204,slow=10.0,SNR=2.9						
BOSA				LR	LR	08 38 38.9	
	comp=Z,160nm,19.0s,MS3.8,baz=184,slow=31						
LBTB	**Lobatse**	**36.32**	**62**	P	**P**	**08 28 21.8**	**-0.1**
	4.6nm,0.8s,mb4.5,baz=231,slow=6.2,SNR=6.8						
LBTB				LR	LR	08 42 01.7	
	comp=Z,86nm,18.2s,MS3.6,baz=69,slow=34						
TSUM	**Tsumeb**	**36.80**	**46**	P	**P**	**08 28 26.0**	**-0.1**
	7.5nm,0.8s,mb4.6,baz=203,slow=11,SNR=10						
MAW	**Mawson**	**39.56**	**145**	P	**P**	**08 28 49.3**	**+0.4**
	10nm,0.9s,mb4.5,baz=265,slow=7.5,SNR=16						
QSPA	**South Pole Qui**	**41.33**	**180**	P	**P**	**08 29 03.8**	**+0.5**
	3.9nm,0.8s,mb4.1,baz=218,slow=5.2,SNR=9.3						
QSPA				PcP	PcP	08 31 01.4	0.0
	2.3nm,0.6s,baz=204,slow=2.8,SNR=5.4						
PLCA	**Paso Flores**	**43.02**	**257**	P	**P**	**08 29 18.6**	**+0.9**
	1.2nm,0.9s,mb3.6,baz=160,slow=5.2,SNR=2.9						
PLCA				LR	LR	08 45 58.6	
	comp=Z,126nm,19.1s,MS3.8,baz=149,slow=34						
CPUP	**Villa Florida**	**43.21**	**284**	P	**P**	**08 29 18.3**	**-1.0**
	0.9nm,0.7s,mb3.6,baz=97,slow=8.1,SNR=3.1						
CPUP				LR	LR	08 44 21.7	
	comp=Z,83nm,18.2s,MS3.7,baz=301,slow=32						
BDFB	**Brasilia**	**45.70**	**303**	P	**P**	**08 29 39.4**	**+0.1**
	9.5nm,1.0s,mb4.7,baz=135,slow=8.6,SNR=8.9						
CFAA	**Coronel Fontan**	**46.85**	**269**	P	**P**	**08 29 47.5**	**-0.7**
	0.4nm,0.8s,mb3.4,baz=139,slow=6.6,SNR=6.0						
CFAA	**Coronel Fontan**	**46.85**	**269**	P	**P**	**08 29 47.5**	**-0.7**
DBIC	**Dimbokro**	**55.51**	**6**	P	**P**	**08 30 53.5**	**+0.2**
	2.9nm,0.9s,mb4.3,baz=147,slow=11,SNR=3.3						
DBIC				LR	LR	08 47 51.2	
	comp=Z,54nm,21.5s,MS3.6,baz=99,slow=29						
CASY	**Casey**	**56.36**	**155**	*e*P	**P**	**08 30 57.5**	**-1.3**
LPAZ	**La Paz**	**57.38**	**283**	P	**P**	**08 31 06.5**	**-0.2**
	0.5nm,0.7s,mb3.7,baz=174,slow=3.4,SNR=3.2						
LPAZ				LR	LR	08 52 21.8	
	comp=Z,64nm,19.7s,MS3.7,baz=267,slow=32						
LPAZ	**La Paz**	**57.38**	**283**	P	**P**	**08 31 06.5**	**-0.2**
LPAZ				LR	LR	08 52 21.8	
KMBO	**Kilima Mbogo**	**62.19**	**55**	LR	LR	08 57 12.6	
	comp=Z,156nm,18.2s,MS4.2,baz=292,slow=35						
TORD	**Torodi Ar. Bea**	**62.59**	**12**	P	**P**	**08 31 42.1**	**-0.2**
	1.9nm,0.9s,mb4.2,baz=200,slow=7.1,SNR=8.9						
TORD				LR	LR	08 52 50.9	
	comp=Z,47nm,19.5s,MS3.7,baz=315,slow=30						
TAM	**Tamanrasset**	**72.64**	**15**	*e*P	**P**	**08 32 46.9**	**+1.2**
RPN	**Rapa Nui**	**76.09**	**245**	*e*P	**P**	**08 33 06.1**	**+0.1**
ROSC	**El Rosal**	**77.52**	**293**	LR	LR	09 06 11.2	
	comp=Z,39nm,21.5s,MS3.7,baz=138,slow=35						
NWAO	**Narrogin (SRO)**	**85.70**	**137**	LR	LR	09 03 16.4	
	comp=Z,61nm,21.6s,MS4.0,baz=224,slow=29						
MKAR	**Makanchi Array**	**124.07**	**56**	PKP	PKPdf	08 40 14.6	-1.3
	0.4nm,0.5s,baz=276,slow=2.8,SNR=3.8						
PDAR	**Pinedale Array**	**126.41**	**296**	PKP	PKPdf	08 40 20.0	-0.5
	0.5nm,0.8s,baz=134,slow=2.6,SNR=3.0						
NVAR	**Mina Array Bea**	**129.22**	**286**	PKP	PKPdf	08 40 26.9	+0.9
	0.3nm,0.6s,baz=129,slow=1.9,SNR=3.8						
SONM	**Songino Array**	**138.54**	**66**	PKP	PKPdf	08 40 42.9	-0.3
	0.8nm,0.6s,baz=219,slow=4.3,SNR=5.4						
DLBC	**Dease Lake**	**144.65**	**308**	PKP	PKPdf	08 40 52.6	-1.1
	baz=127,slow=4.2						
KSRS	**Korea Array**	**147.31**	**94**	PKPbc	PKPbc	08 41 01.3	-0.1
	2.8nm,0.9s,baz=216,slow=3.1,SNR=6.4						

*IDC **23** 08:27:23.8±2.4, 6024N×15346W, h114km±29km, mb3.6/5, mb1 3.7/7, mb1mx3.4/24, mbtmp3.5/7, Error ellipse: s-maj=27.9km s-min=17.5km az=13.0*
*ISCJB **23** 08:27:24.4±0.4, 6013N±003×15328W±008, h150km±4km, mb3.8/5, Error ellipse: s-maj=6.3km s-min=5.6km az=20.6*
*MOS **23** 08:27:24.4±0.8, 6017N×15346W, h144km, mb4.0/1, Error ellipse: s-maj=25.7km s-min=12.4km az=83.3*
*NEIC **23** 08:27:27.0, 6015N×15328W, h148km, MG3.8(AEIC), After AEIC.*

ISC 23 08:27:25.6±0.4, 6013N±003×15329W±008, h142km±5km, n43, σ1§03/50, mb3.8/5, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.76**	**186**	P	**Pn**	**08 27 49.3**	**+1.7**
AUL				S	**Sn**	**08 28 07.0**	**+2.7**
SVW2	**Sparrevohn**	**1.49**	**311**	P	**Pn**	**08 27 54.6**	**+0.3**
SLKM	**Skilak Lake**	**1.57**	**75**	P	**Pn**	**08 27 55.8**	**+0.6**
FIB	**Fire Island**	**1.85**	**55**	P	**Pn**	**08 27 59.

GKN				*e*Sn		**Sg**	**08 37 50.3**	**-1.3**
	257nm,0.2s							
DANN	**Dangsing**	**4.56**	**244**	*e*Pn		**Pg**	**08 37 07.8**	**+0.4**
DANN				*e*Sn		**Sg**	**08 38 03.9**	**-2.6**
	111nm,0.3s							
KOLN	**Koldanda**	**4.98**	**239**	*e*Pn		**Pg**	**08 37 11.9**	**-3.5**
KOLN				*e*Sn		**Sg**	**08 38 12.3**	**-7.6**
	105nm,0.2s							
CMAR	**Chiang Mai Arr**	**15.30**	**139**	Pn		**Pn**	**08 39 20.6**	**+4.4**
	0.6nm,0.3s,baz=314,slow=12,SNR=4.7							
WRA	**Warramunga Arr**	**66.80**	**133**	P		**P**	**08 46 30.8**	**-1.2**
	0.2nm,0.4s,baz=326,slow=6.7,SNR=11							
ASAR	**Alice Springs**	**69.29**	**136**	P		**P**	**08 46 46.9**	**-0.8**
	0.2nm,0.4s,baz=322,slow=5.9,SNR=6.8							

IDC 23 08:50:36.6±23.0, 2192N×14293E, h186km±230km, mb3.2/4, mb1 3.4/4, mb1mx3.0/21, mbtmp3.2/4, MS2.8/2, Ms1 2.8/2, ms1mx2.5/11, Error ellipse: s-maj=157.3km s-min=33.0km az=102.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.19**	**323**	LR	LR	09 03 24.0	
	comp=Z,14nm,18.4s,baz=240,slow=38						
CTA	**Charters Tower**	**41.88**	**175**	LR	LR	09 13 26.4	
	comp=Z,23nm,19.3s,baz=230,slow=33						
WB2	**Warramunga Arr**	**42.45**	**192**	*e*P	P	08 58 12.9	-0.4
WRA	**Warramunga Arr**	**42.45**	**192**	P	P	08 58 13.0	-0.3
	1.1nm,0.4s,baz=13,slow=8.1,SNR=26						
FITZ	**Fitzroy Crossi**	**43.23**	**204**	P	P	08 58 19.7	0.0
	1.1nm,0.8s,baz=34,slow=11,SNR=4.2						
ASAR	**Alice Springs**	**46.16**	**192**	P	P	08 58 42.7	0.0
	0.2nm,0.5s,baz=13,slow=8.9,SNR=8.1						
YKA	**Yellowknife Ar**	**76.36**	**28**	P	P	09 02 05.0	+0.1
	0.5nm,0.8s,baz=295,slow=5.6,SNR=3.2						
PLCA	**Paso Flores**	**146.08**	**131**	PKPbc	PKPbc	09 09 54.2	-0.6
	2.0nm,1.1s,baz=236,slow=2.9,SNR=3.6						

*ISCJB **23** 08:56:15.7±0.7, 3934N±005×7432E±006, h10km, mb3.8/5, Error ellipse: s-maj=7.4km s-min=5.9km az=30.7*
*IDC **23** 08:56:15.9±0.9, 3942N×7431E, h0km, mb3.8/5, mb1 3.8/9, mb1mx3.6/26, mbtmp3.6/9, ML3.2/4, Error ellipse: s-maj=20.8km s-min=18.7km az=68.0*
*NNC **23** 08:56:16.5±3.3, 3951N×7419E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=27.8km s-min=14.7km az=158.0*
*BJI **23** 08:56:19.9, 3995N×7448E, h24km, ML3.3*
*NEIC **23** 08:56:22.8±3.2, 3967N×7415E, h35km, Error ellipse: s-maj=42.0km s-min=19.9km az=160.0*
*MOS **23** 08:56:27.7±1.8, 3994N×7422E, h108km, mb4.0/3, Error ellipse: s-maj=27.5km s-min=12.5km az=84.2*
ISC 23 08:56:17.2±0.7, 3935N±005×7430E±006, h10km, n35, σ1℗01/43, mb3.8/5, 4C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.31**	**82**	*e*PG	**Pg**	**08 56 42.0**	**-0.3**
KSH				SG	**Sg**	**08 56 58.3**	**-0.9**
KSH				Smax			
	comp=N,2μm,0.7s						
KSH				Smax			
	comp=E,2μm,0.7s						
AML	**Almayashu**	**2.82**	**351**	P	**Pn**	**08 57 02.8**	**+0.6**
	SNR=24						
AML	**Almayashu**	**2.82**	**351**	⇓*e*Pn	**Pn**	**08 57 02.1**	**-0.1**
AML				*e*Sn	**Sn**	**08 57 35.9**	**-0.4**
KZA	**Kyzart**	**2.82**	**15**	P	**Pn**	**08 57 02.9**	**+0.7**
	SNR=12						
UCH	**Uchtor**	**2.88**	**3**	P	**Pn**	**08 57 03.7**	**+0.6**
	SNR=87						
UCH	**Uchtor**	**2.88**	**3**	⇓*i*Pn	**Pn**	**08 57 03.4**	**+0.3**
UCH				*e*Sn	**Sn**	**08 57 38.2**	**+0.4**
ULHL	**Ulahol**	**3.25**	**26**	P	**Pn**	**08 57 08.9**	**+0.8**
	SNR=18						
AAK	**Ala-Archa**	**3.29**	**3**	P	**Pn**	**08 57 09.4**	**+0.8**
	SNR=142						
EKS2	**Erkin-Say**	**3.33**	**353**	P	**Pn**	**08 57 09.7**	**+0.4**
	SNR=28						
EKS2	**Erkin-Say**	**3.33**	**353**	*e*Pn	**Pn**	**08 57 09.6**	**+0.3**
EKS2				*e*Sn	**Sn**	**08 57 50.0**	**+1.0**
KBK	**Karagaybulak**	**3.34**	**8**	P	**Pn**	**08 57 10.3**	**+0.9**
	SNR=57						
CHMS	**Chumysh**	**3.66**	**5**	P	**Pn**	**08 57 14.4**	**+0.6**
	SNR=10.0						
TKM2	**Tokmak 2**	**3.70**	**15**	⇑Pn	**Pn**	**08 57 14.8**	**+0.4**
	comp=E,21nm,0.3s						
TKM2				⇓Sn	**Sn**	**08 57 56.8**	**-1.3**
	comp=E,106nm,0.9s						
TKM2	**Tokmak 2**	**3.70**	**15**	P	**Pn**	**08 57 15.1**	**+0.7**
	SNR=23						
TKM2	**Tokmak 2**	**3.70**	**15**	⇓*i*Pn	**Pn**	**08 57 15.0**	**+0.6**
TKM2				*e*Sn	**Sn**	**08 57 57.2**	**-0.8**
USP	**Ospenovka**	**3.92**	**2**	P	**Pn**	**08 57 17.9**	**+0.6**
	SNR=9.8						
AAA	**Alma-Ata**	**4.40**	**26**	*e*PN	**Pb**	**08 57 30.8**	**-3.7**
AAA				pmax	pmax		
	comp=Z,95nm,0.4s						
KK31	**Karatay Array**	**4.71**	**324**	Pn	**Pn**	**08 57 28.5**	**+0.2**
	comp=Z,2.2nm,0.4s,baz=127,slow=12,SNR=85						
KK31				⇓Pg	**Pg**	**08 57 39.0**	**-8.4**
	comp=Z,2.9nm,0.3s,baz=146,slow=17,SNR=20						
KK31				⇑Sn	**Sn**	**08 58 27.7**	**+4.7**
	comp=Z,8.9nm,0.6s,baz=137,slow=26,SNR=4.8						
KK31				⇓Lg		08 58 40.3	
	comp=Z,7.1nm,0.3s						
MKAR	**Makanchi Array**	**9.46**	**36**	Pn	**Pn**	**08 58 33.8**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=215,slow=12,SNR=2.2						
KURK	**Kurchatov**	**11.77**	**14**	Lg		09 02 13.8	
	baz=309,slow=42,SNR=2.1						
BVAR	**Borovoye Array**	**13.94**	**350**	Pn	**Pn**	**08 59 30.8**	**-3.8**
	comp=Z,0.3nm,0.3s,baz=156,slow=14,SNR=4.8						
BVAR				Lg		09 03 23.7	
	comp=Z,0.3nm,0.3s,baz=165,slow=24,SNR=3.2						
AB31	**Akbulak array**	**14.25**	**319**	⇓Pn	**Pn**	**08 59 35.9**	**-2.9**
	comp=Z,1.4nm,0.5s,baz=122,slow=12,SNR=27						
AB31				⇑Sn	**Sn**	**09 02 11.4**	**-5.5**
	comp=Z,0.7nm,0.6s						
AKTK	**Aktyubinsk**	**15.96**	**319**	Pn	**Pn**	**08 59 59.2**	**-2.4**
AKTO	**Aktyubinsk**	**15.96**	**319**	⇑Pn	**Pn**	**09 00 01.0**	**-0.6**
	comp=Z,1.7nm,1.9s						
AKTO	**Aktyubinsk**	**15.96**	**319**	Pn	**Pn**	**08 59 59.2**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=121,slow=17,SNR=2.5						
ZALV	**Zalesovo Beam**	**16.26**	**23**	Pn	**Pn**	**09 00 03.2**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=208,slow=11,SNR=2.9						
ZALV	**Zalesovo Beam**	**16.26**	**23**	Pn	**Pn**	**09 00 03.2**	**-2.3**
ARCES	**ARCESS Array B**	**39.58**	**335**	P	**P**	**09 03 47.5**	**-0.6**
	comp=Z,2.0nm,0.9s,mb3.8,baz=94,slow=22,SNR=5.5						
ARCES	**ARCESS Array B**	**39.58**	**335**	P	**P**	**09 03 47.5**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES	**GERESS Array B**	**43.49**	**303**	P	**P**	**09 04 21.2**	**+0.8**
	comp=Z,0.5nm,0.7s,mb3.4,baz=53,slow=6.9,SNR=4.4						
GERES	**GERESS Array B**	**43.49**	**303**	P	**P**	**09 04 21.2**	**+0.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**68.38**	**269**	P	**P**	**09 07 19.2**	**+0.1**
	comp=Z,1.0nm,0.4s,mb4.2,baz=47,slow=5.5,SNR=38						
WRA	**Warramunga Arr**	**81.36**	**124**	P	**P**	**09 08 34.9**	**+0.8**
	comp=Z,0.7nm,0.5s,mb3.8,baz=327,slow=5.1,SNR=18						
WRA	**Warramunga Arr**	**81.36**	**124**	P	**P**	**09 08 34.9**	**+0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**83.82**	**127**	P	**P**	**09 08 47.5**	**+0.6**
	comp=Z,0.3nm,0.7s,mb3.5,baz=310,slow=4.7,SNR=8.3						

*IDC **23** 08:59:28.1±9.6, 1147S×16657E, h192km±72km, mb3.4/3, mb1 3.5/4, mb1mx3.2/17, mbtmp3.5/4, Error ellipse: s-maj=145.1km s-min=73.3km az=31.0*
*NEIC **23** 08:59:36.2±2.9, 1369S×16465E, h35km, Error ellipse: s-maj=56.4km s-min=15.1km az=60.0*
ISC 23 08:59:26.6±5.6, 128S±05×1662E±06, h93km±19km, n7, σ1℗01/8, mb3.7/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.96**	**298**	P	**Pn**	**09 01 06.2**	**+0.3**
	9.1nm,0.3s,baz=190,slow=5.5,SNR=9.4						
HNR				S	**Sn**	**09 02 23.6**	**0.0**
	6.8nm,0.3s,baz=150,slow=19,SNR=3.0						
DZM	**Mont Dzumac**	**9.26**	**179**	*e*P	**Pn**	**09 01 37.0**	**-0.2**
DZM	**Mont Dzumac**	**9.26**	**179**	*e*Pn	**Pn**	**09 01 36.9**	**-0.4**
STKA	**Stephens Creek**	**29.53**	**226**	P	**P**	**09 05 23.9**	**+1.5**
	1.0nm,0.4s,mb3.8,baz=49,slow=9.3,SNR=3.2						
WB2	**Warramunga Arr**	**31.33**	**253**	*e*P	**P**	**09 05 37.3**	**-1.1**
WRA	**Warramunga Arr**	**31.34**	**253**	P	**P**	**09 05 38.3**	**-0.2**
	0.6nm,0.7s,mb3.5,baz=80,slow=8.5,SNR=8.7						
ASAR	**Alice Springs**	**32.45**	**246**	P	**P**	**09 05 48.0**	**-0.1**
	1.2nm,0.6s,mb3.8,baz=67,slow=10.0,SNR=34						

*ISCJB **23** 09:03:43.5±1.2, 67S±02×72.1E±03, h10km, mb4.1/9, Error ellipse: s-maj=51.1km s-min=11.9km az=156.0*
*IDC **23** 09:03:45.0±1.8, 667S×7216E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/23, mbtmp4.0/9, Error ellipse: s-maj=65.3km s-min=22.1km az=53.0*
*NEIC **23** 09:03:45.5±1.1, 681S×7207E, h10km, Error ellipse: s-maj=48.3km s-min=10.4km az=63.0*
ISC 23 09:03:45.2±1.6, 68S±02×720E±04, h10km, n14, σ0℗74/12, mb4.1/9, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**0.72**	**142**	*e*Pg	**Pg**	**09 03 58.6**	**-0.6**
MKAR	**Makanchi Array**	**54.17**	**9**	P	**P**	**09 13 10.6**	**-0.1**
	1.4nm,0.6s,mb4.1,baz=182,slow=7.5,SNR=8.5						
MKAR	**Makanchi Array**	**54.17**	**9**	P	**P**	**09 13 10.6**	**-0.1**
KURK	**Kurchatov**	**57.61**	**5**	P	**P**	**09 13 33.7**	**-1.5**
	1.3nm,0.5s,mb4.2,baz=200,slow=7.2,SNR=3.9						
KURK	**Kurchatov**	**57.61**	**5**	P	**P**	**09 13 33.7**	**-1.5**
BVAR	**Borovoye Array**	**59.65**	**359**	P	**P**	**09 13 49.1**	**-0.3**
	0.4nm,0.3s,mb3.9,baz=147,slow=8.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**61.52**	**9**	P	**P**	**09 14 01.5**	**-0.6**
	1.8nm,0.7s,mb4.3,baz=206,slow=5.8,SNR=8.5						
ASAR	**Alice Springs**	**61.57**	**113**	P	**P**	**09 14 03.6**	**+0.4**
	0.7nm,0.8s,mb3.9,baz=278,slow=6.7,SNR=8.8						
WRA	**Warramunga Arr**	**61.72**	**109**	P	**P**	**09 14 04.9**	**+0.6**
	1.2nm,0.8s,mb4.1,baz=283,slow=6.6,SNR=11						
SONM	**Songino Array**	**62.31**	**25**	P	**P**	**09 14 08.8**	**+1.1**
	1.8nm,0.8s,mb4.2,baz=218,slow=7.7,SNR=10						
AKASG	**Malin Array Be**	**68.15**	**332**	P	**P**	**09 14 45.6**	**+0.2**
	0.4nm,0.4s,mb3.8,baz=128,slow=5.4,SNR=4.3						
ARCES	**ARCESS Array B**	**82.55**	**345**	P	**P**	**09 16 08.7**	**+0.8**
	3.4nm,1.0s,mb4.3,baz=136,slow=4.5,SNR=5.6						
NVAR	**Mina Array Bea**	**147.20**	**15**	PKPbc	PKPbc	09 23 31.4	+2.2
	0.5nm,0.7s,baz=279,slow=2.1,SNR=4.7						
TXAR	**Lajitas Array**	**157.26**	**350**	PKPab	PKPab	09 24 14.7	+1.8
	0.4nm,0.8s,baz=44,slow=1.7,SNR=4.5						

*IDC **23** 09:15:56.5±5.3, 3802N×7497E, h110km±47km, mb3.7/12, mb1 3.7/16, mb1mx3.6/29, mbtmp3.6/16, Error ellipse: s-maj=31.3km s-min=17.5km az=26.0*
*ISCJB **23** 09:15:57.9±0.4, 3814N±003×7511E±007, h135km±5km, mb4.0/22, Error ellipse: s-maj=8.7km s-min=4.0km az=163.8*
*NEIC **23** 09:15:58.9±0.8, 3816N×7507E, h130km±6km, mb4.4/1, Error ellipse: s-maj=10.2km s-min=7.6km az=122.0*
*MOS **23** 09:15:58.8±0.9, 3817N×7496E, h140km, mb4.1/10, Error ellipse: s-maj=16.3km s-min=8.9km az=97.1*
*NNC **23** 09:16:00.2±5.5, 3846N×7382E, h0km, mb4.0, mpv4.4, Error ellipse: s-maj=43.4km s-min=32.1km az=1.0*
*BJI **23** 09:16:01.0, 3842N×7509E, h109km, mB4.4, mb4.6*
ISC 23 09:15:58.9±0.3, 3814N±003×7514E±007, h130km±5km, n82, σ0℗93/95, mb4.0/22, 4C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZA	**Kyzart**	**3.94**	**1**	P	**Pn**	**09 16 58.1**	**+0.3**
	SNR=89						
UCH	**Uchtor**	**4.12**	**354**	P	**Pn**	**09 17 00.5**	**+0.4**
	SNR=70						
UCH	**Uchtor**	**4.12**	**354**	*i* Pn	**Pn**	**09 17 00.3**	**+0.2**
AML	**Almayashu**	**4.14**	**345**	P	**Pn**	**09 17 00.0**	**-0.4**
	SNR=41						
AML	**Almayashu**	**4.14**	**345**	*e*Pn	**Pn**	**09 16 60.0**	**-0.5**
ULHL	**Ulahol**	**4.19**	**11**	P	**Pn**	**09 17 02.0**	**+0.8**
	SNR=28						
KBK	**Karagaybulak**	**4.52**	**358**	P	**Pn**	**09 17 06.0**	**+0.5**
	SNR=25						
AAK	**Ala-Archa**	**4.52**	**354**	P	**Pn**	**09 17 05.8**	**+0.3**
	SNR=20						
EKS2	**Erkin-Say**	**4.64**	**348**	P	**Pn**	**09 17 07.2**	**+0.1**
	SNR=16						
EKS2	**Erkin-Say**	**4.64**	**348**	*e*Pn	**Pn**	**09 17 05.9**	**-1.2**
TKM2	**Tokmak 2**	**4.79**	**4**	⇓Pn	**Pn**	**09 17 09.2**	**0.0**
	24nm,0.3s						
TKM2				⇑Sn	**Sn**	**09 18 08.0**	**+4.1**
	17nm,0.7s						
TKM2	**Tokmak 2**	**4.79**	**4**	P	**Pn**	**09 17 09.7**	**+0.6**
	SNR=26						
TKM2	**Tokmak 2**	**4.79**	**4**	*e*Pn	**Pn**	**09 17 09.3**	**+0.2**
CHMS	**Chumysh**	**4.87**	**357**	P	**Pn**	**09 17 10.0**	**-0.1**
	SNR=15						
USP	**Ospenovka**	**5.15**	**355**	P	**Pn**	**09 17 13.6**	**-0.3**
	SNR=20						
DLH	**Dalhousie**	**5.62**	**173**	*e*P	**Pn**	**09 17 22.0**	**+1.6**
DLH				*ex*	x	09 18 28.0	
THN	**Thein Dam**	**5.71**	**175**	*e*P	**Pn**	**09 17 22.5**	**+1.0**
THN				*e*S	**Sn**	**09 18 24.5**	**-1.4**
KK31	**Karatay Array**	**6.08**	**326**	Pn	**Pn**	**09 17 24.8**	**-1.7**
	13nm,0.3s,baz=155,slow=14,SNR=818						
KK31				Sn	**Sn**	**09 18 28.3**	**-6.5**
	37nm,0.4s,baz=154,slow=24,SNR=24						
KBL	**Kabul**	**6.09**	**236**	*e*PN	**Pn**	**09 17 27.0**	**+0.4**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KBL	**Kabul**	**6.09**	**236**	*e*Pn	**Pn**	**09 17 27.0**	**+0.5**
	comp=Z,10.0nm,0.4s						
SDNR	**Sundarnagar**	**6.79**	**167**	*e*P	**Pn**	**09 17 38.0**	**+1.9**
SDNR				*e*S	**Sn**	**09 18 46.0**	**-6.0**
SMLA	**Simla**	**7.19**	**166**	*i* P	**Pn**	**09 17 42.4**	**+1.0**
SMLA				*i* S	**Sn**	**09 18 57.0**	**-4.6**
SMLA				*ex*	x	09 19 01.9	
	comp=N,746nm,0.3s						
SMLA				*ex*	x	09 19 03.0	
	comp=E,476nm,0.2s						
DDI	**Dehra Dun**	**8.16**	**162**	*e*P	**Pn**	**09 17 55.2**	**+0.7**
DDI				*ex*	x	09 19 27.0	
JOSI	**Joshimath**	**8.40**	**153**	*e*P	**Pn**	**09 17 58.0**	**+0.3**
JOSI				*e*S	**Sn**	**09 19 24.4**	**-6.4**
JOSI				AML	AML	09 19 35.6	
	comp=E,460nm,0.5s						
JOSI				AML	AML	09 19 36.2	
	comp=N,214nm,0.4s						
SONA	**Sohna**	**9.99**	**170**	*e*P	**Pn**	**09 18 18.6**	**-0.6**
SONA				*e*S	**Sn**	**09 20 02.8**	**-6.7**
SONA				AML	AML	09 20 11.8	
	comp=E,55nm,0.4s						
SONA				AML	AML	09 20 11.8	
	comp=N,22nm,0.3s						
KUDL	**Kundal**	**10.03**	**173**	*e*P	**Pn**	**09 18 19.9**	**+0.2**
KUDL				*e*S	**Sn**	**09 20 03.9**	**-6.4**
MKAR	**Makanchi Array**	**10.13**	**29**	P	**Pn**	**09 18 20.4**	**-0.5**
	comp=N,0.4nm,0.3s,baz=210,slow=15,SNR=6.8						
DANN	**Dangsing**	**12.13**	**141**	*e*P	**Pn**	**09 18 46.3**	**-1.1**
	comp=N,57nm,0.3s						
KOLN	**Koldanda**	**12.54**	**143**	*e*P	**Pn**	**09 18 52.2**	**-0.5**
	comp=N,30nm,0.3s						
KOLN				*e*S	**Sn**	**09 21 04.8**	**-6.2**
KURK	**Kurchatov**	**12.82**	**10**	*e*P	**Pn**	**09 18 52.6**	**-3.6**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GKN	**Gorkha**	**12.86**	**139**	*e*P	**Pn**	**09 18 55.7**	**-1.2**
	comp=Z,41nm,0.3s						
KKN	**Kakani**	**13.37**	**138**	*e*P	**Pn**	**09 19 02.3**	**-1.2**
	comp=Z,48nm,0.5s						
DMN	**Daman**	**13.42**	**139**	*e*P	**Pn**	**09 19 03.5**	**-0.7**
	comp=Z,18nm,0.4s						
GUN	**Gumba**	**13.60**	**135**	*e*P	**Pn**	**09 19 06.1**	**-0.3**
PKIN	**Phulchoki**	**13.60**	**138**	*e*P	**Pn**	**09 19 05.8**	**-0.6**
JIRN	**Jiri**	**13.96**	**135**	*e*P	**Pn**	**09 19 10.6**	**-0.5**
	comp=Z,47nm,0.4s						
BVA0	**Borovoye Array**	**15.25**	**349**	⇑Pn	**Pn**	**09 19 27.9**	**+0.9**
	comp=Z,0.8nm,1.2s,baz=165,slow=14,SNR=12						
BVAR	**Borovoye Array**	**15.25**	**349**	P	**Pn**	**09 19 27.6**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=163,slow=14,SNR=10.0						
AB31	**Akbulak array**	**15.60**	**320**	⇓Pn	**Pn**	**09 19 27.9**	**-3.5**
	comp=Z,0.8nm,0.5s						
AB31				⇑Sn	**Sn**	**09 22 09.4**	**-15**
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**17.16**	**20**	P	**Pn**	**09 19 49.8**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=209,slow=12,SNR=12						
ZALV	**Zalesovo Beam**	**17.16**	**20**	P	**Pn**	**09 19 49.8**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTK	**Aktyubinsk**	**17.31**	**321**	P	**Pn**	**09 19 51.5**	**-0.8**
AKTO	**Aktyubinsk**	**17.31**	**321**	⇓Pn	**Pn**	**09 19 50.2**	**-2.1**
	comp=Z,1.2nm,1.3s						
AKTO				⇑Sn	**Sn**	**09 22 52.3**	**-13**
	comp=Z,1.0nm,1.3s						
AKTO	**Aktyubinsk**	**17.31**	**321**	P	**Pn**	**09 19 51.5**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=126,slow=15,SNR=5.0						
ARU	**Arti**	**21.38**	**334**	*d* P	**P**	**09 20 37.1**	**+1.4**
ARU				*e*S	**S**	**09 24 36.8**	**+12**
ARU				*e*SS		09 25 00.3	
ARU				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.6						
LZH	**Lanzhou**	**22.95**	**86**	*e*P	**P**	**09 20 58.5**	**+6.7**
LZH				AP		09 21 19.6	
LZH				XP	sP	09 21 31.5	-1.4
LZH				*e*PP		09 21 33.3	
LZH				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.4						
LZH				AMB	AMB		
	comp=Z,45nm,4.8s						
LZH				LR	LR		
	comp=N,265nm,11.5s						
LZH				LR	LR		
	comp=Z,372nm,14.3s						
TLY	**Talaya**	**24.12**	**47**	*e*P	**P**	**09 21 04.4**	**+2.0**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
MIB	**Mutribah**	**24.44**	**258**	*e*P	**P**	**09 21 06.5**	**+1.1**
	baz=260						
MIB				AMb	AMB	09 21 07.9	
	comp=Z,14nm,0.9s,mb4.5,baz=260						
RDF	**Al-Radifah**	**24.69**	**256**	*e*P	**P**	**09 21 08.8**	**+1.1**
	baz=258						
RDF				AMb	AMB	09 21 19.9	
	comp=Z,20nm,1.1s,mb4.6,baz=258						
NAY	**Al-Naaiem**	**24.77**	**257**	*e*P	**P**	**09 21 09.4**	**+1.0**
	baz=259						
NAY				AMb	AMB	09 21 10.4	
	comp=Z,11nm,0.6s,mb4.6,baz=259						
RST	**Umm Al-Ruwaisa**	**24.84**	**258**	*e*P	**P**	**09 21 09.7**	**+0.6**
	baz=259						
RST				AMb	AMB	09 21 10.4	
	comp=Z,26nm,0.5s,mb5.0,baz=259						
HHC	**Hu-ho-hao-te**	**28.12**	**73**	*e*P	**P**	**09 21 44.3**	**+5.9**
HHC				AP	pP	09 22 05.6	-0.7
HHC				XP	sP	09 22 17.3	-4.1
HHC				PP	PP	09 22 38.6	-5.6
HHC				PCP	PcP	09 24 56.4	+7.1
HHC				S	**S**	**09 26 20.9**	**+7.1**
HHC				XS	sS	09 26 58.3	-4.6
HHC				SS	SS	09 27 50.8	-27
HHC				SCP	ScP	09 28 27.6	+10
HHC				PCS	PcS	09 28 37.4	+5.9
HHC				SCS	ScS	09 32 18.9	+8.2
HHC				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
HHC				AMB	AMB		
	comp=Z,65nm,3.8s						
HHC				LR	LR		
	comp=N,108nm,11.1s						
HHC				LR	LR		
	comp=E,185nm,12.7s						
HHC				LR	LR		
	comp=Z,122nm,11.1s						
HIA	**Hailar**	**33.65**	**56**	*e*P	**P**	**09 22 18.7**	**-8.2**
AKASG	**Malin Array Be**	**34.56**	**306**	P	**P**	**09 22 34.1**	**-0.7**
	comp=Z,1.9nm,0.4s,mb4.1,baz=71,slow=7.4,SNR=7.0						
AKASG	**Malin Array Be**	**34.56**	**306**	P	**P**	**09 22 34.1**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
JOF	**Joensuu**	**36.18**	**328**	*ep*	**P**	**09 22 48.6**	**+0.2**
	comp=Z,1.0nm,0.4s,mb3.8						
JOF	**Joensuu**	**36.18**	**328**	*e*P	**P**	**09 22 48.6**	**+0.2**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
FINES	**FINESS Array B**	**38.04**	**324**	*e*P	**P**	**09 23 03.0**	**-1.1**
ARCES	**ARCESS Array B**	**40.95**	**336**	P	**P**	**09 23 28.5**	**+0.4**
	comp=Z,1.2nm,0.5s,mb3.8,baz=111,slow=8.4,SNR=15						
ARCES	**ARCESS Array B**	**40.95**	**336**	P	**P**	**09 23 28.5**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**40.95**	**336**	P	**P**	**09 23 28.5**	**+0.4**
TIXI	**Tiksi**	**43.03**	**22**	*e*P	**P**	**09 23 46.6**	**+1.6**
TIXI				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.4						
HFS	**Hagfors**	**43.86**	**321**	P	**P**	**09 23 51.7**	**0.0**
	comp=Z,3.3nm,0.5s,mb4.2,baz=95,slow=11,SNR=17						
HFS	**Hagfors**	**43.86**	**321**	P	**P**	**09 23 51.7**	**-0.1**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GERES	**GERESS Array B**	**44.70**	**304**	P	**P**	**09 23 58.7**	**0.0**
	comp=Z,0.4nm,0.6s,mb3.3,baz=57,slow=9.7,SNR=5.2						
NB2	**NORSAR Subarra**	**45.10**	**322**	P	**P**	**09 24 01.0**	**-0.6**
	comp=Z,1.5nm,0.5s,mb3.9,baz=90,slow=7.9						
NOA	**NORSAR Array B**	**45.10**	**322**	P	**P**	**09 24 01.3**	**-0.3**
	comp=Z,2.0nm,0.6s,mb3.9,baz=91,slow=7.8,SNR=8.1

*CSEM **23** 10:02:49.1±0.1,37.19N×28.16E, h20km, MD2.8, Error ellipse: s-maj=4.2km s-min=2.5km az=9.0*
*ISCJB **23** 10:02:50.2±0.8, 3717N±006×2809E±006, h15km±7km, Error ellipse: s-maj=10.9km s-min=6.0km az=34.3*
*DDA **23** 10:02:50.1, 37.19N×28.16E, h7km±2km, Md2.8*
ISC 23 10:02:50.3±1.0, 3718N±006×2811E±006, h19km±8km, n6, σ0§75/10, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.14**	**108**	*e*PG	**Pg**	**10 02 53.4**	**-1.1**
YER				*e*SG	**Sg**	**10 02 57.3**	**0.0**
MLSB	**Milas**	**0.29**	**293**	*e*PG	**Pg**	**10 02 56.4**	**-0.3**
TURN	**Turunc**	**0.50**	**128**	*i* P	**Pg**	**10 02 59.7**	**-0.6**
TURN				*i* S	**Sg**	**10 03 08.6**	**+1.5**
AYDN	**Tasoluk**	**0.52**	**339**	*i* P	**Pg**	**10 03 00.8**	**+0.2**
AYDN				*i* S	**Sg**	**10 03 08.2**	**+0.6**
BODT	**Bodrum**	**0.65**	**260**	*e*PG	**Pg**	**10 03 03.5**	**+0.4**
DNZL	**Cakiroluk**	**0.90**	**55**	*i* P	**Pb**	**10 03 06.3**	**-1.0**
DNZL				*i* S	**Sb**	**10 03 19.5**	**+0.5**

*NEIC **23** 10:27:24.3, 1930N×6835W, h12km, MD3.9(RSPR), After RSPR.*
RSPR 23 10:27:24.3, 1930N×6835W, h12km±3km, MD3.9/12, MD3.9/12, 18C-1D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**1.10**	**243**	⇑*e*P	Pb	10 27 41.5	-3.8
DR12				*e*S	Sb	10 27 55.9	-3.6
AGPR	**Aguadilla, PR**	**1.44**	**125**	⇑*e*P	Pn	10 27 46.9	-3.2
AGPR				*e*S	Sn	10 28 05.0	-3.9
MPR	**Mayaguez**	**1.58**	**133**	⇑*e*P	Pn	10 27 50.0	-2.1
MPR				*e*S	Sn	10 28 07.5	-4.9
DR08	**Loma La Naviza**	**1.61**	**258**	⇑*e*P	Pn	10 27 50.4	-2.2
DR08				*e*S	Sn	10 28 09.3	-4.1
LSP	**Las Mesas**	**1.64**	**133**	⇑*e*P	Pn	10 27 48.7	-4.2
LSP				*e*S	Sn	10 28 10.4	-3.6
STDO	**Santo Domingo**	**1.71**	**241**	⇓*i*P	Pn	10 27 51.0	-2.9
STDO				*e*S	Sn	10 28 11.9	-3.9
CRPR	**Cabo Rojo, PR**	**1.74**	**137**	⇑*e*P	Pn	10 27 50.0	-4.4
CRPR				*e*S	Sn	10 28 11.9	-4.6
LRS	**Lares**	**1.74**	**125**	⇑*e*P	Pn	10 27 51.2	-3.2
LRS				*e*S	Sn	10 28 12.2	-4.3
AOPR	**Arecibo Observ**	**1.79**	**122**	⇑*e*P	Pn	10 27 52.1	-2.8
AOPR				*e*S	Sn	10 28 13.9	-3.7
GBPR	**Guanica, Bosqu**	**1.92**	**133**	⇑*e*P	Pn	10 27 54.5	-2.3
GBPR	**Guanica, Bosqu**	**1.92**	**133**	*e*S	Sn	10 28 17.4	-3.4
OBIP	**Obispado Ponce**	**2.07**	**127**	⇑*e*P	Pn	10 27 56.1	-2.8
OBIP				*e*S	Sn	10 28 21.5	-3.1
CELP	**Cerrillos**	**2.08**	**126**	⇑*e*P	Pn	10 27 56.0	-2.9
CELP				*e*S	Sn	10 28 21.2	-3.5
ICM	**Isla Caja Muer**	**2.23**	**129**	⇑*e*P	Pn	10 27 59.0	-2.0
ICM				*e*S	Sn	10 28 25.1	-3.4
SJG	**San Juan**	**2.40**	**119**	⇑*e*P	Pn	10 27 59.9	-3.5
SJG				*e*S	Sn	10 28 29.8	-2.8
SJG	**San Juan**	**2.40**	**119**	⇑*e*P	Pn	10 28 00.6	-2.8
SJG				*e*S	Sn	10 28 28.9	-3.8
CPD	**Cerro la Pandu**	**2.63**	**118**	⇑*e*P	Pn	10 28 04.2	-2.3
CPD				*e*S	Sn	10 28 34.7	-3.7
HUMP	**Col San Antoni**	**2.63**	**116**	⇑*e*P	Pn	10 28 03.6	-3.1
HUMP				*e*S	Sn	10 28 35.1	-3.4
MTP	**Monte Pirata**	**2.91**	**114**	⇑*e*P	Pn	10 28 07.0	-3.4
MTP				*e*S	Sn	10 28 41.5	-3.9
TBVI	**Tortola**	**3.64**	**103**	⇑*e*P	Pn	10 28 18.6	-1.9

*IDC **23** 10:34:00.6±12.0, 57.13N×119.34E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.3/23, mbtmp3.5/3, Error ellipse: s-maj=411.3km s-min=37.4km az=25.0*
*BYKL **23** 10:34:02.5±0.3, 5753N×11938E, h13km±14km*
*MOS **23** 10:34:05.4±1.7, 5724N×11891E, h12km, mb4.2/2, Error ellipse: s-maj=38.3km s-min=23.2km az=34.7*
ISC 23 10:34:01.5±0.4, 5736N±005×11932E±003, h10km, n38, σ1§73/58, mb3.4/2, 6C-4D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	**Chara**	**0.74**	**232**	*e*PG	**Pg**	**10 34 18.9**	**+3.2**
CRS				pmax	pmax		
	comp=Z,307nm,0.4s						
CRS	**Chara**	**0.74**	**232**	⇑*i*Pg	**Pg**	**10 34 18.9**	**+3.2**
CRS				*e*Pb	**Pb**	**10 34 20.8**	**+4.5**
CRS				max		10 34 21.0	
	comp=Z,304nm,0.3s						
CRS				*e*Sg	**Sg**	**10 34 29.8**	**+4.6**
CRS				*e*Sb	**Sb**	**10 34 33.9**	**+7.5**
CRS				max		10 34 34.2	
	comp=Z,1μm,0.6s						
NLYR	**Nelyaty**	**2.17**	**248**	⇑*i*Pn	**Pn**	**10 34 40.0**	**+2.5**
NLYR				⇑*i*Pg	**Pg**	**10 34 43.2**	**+0.2**
NLYR				*e*		10 34 50.7	
NLYR				max		10 34 51.2	
	comp=Z,278nm,0.4s						
NLYR				*e*Sn	**Sn**	**10 35 07.4**	**+3.0**
NLYR				*e*Sg	**Sg**	**10 35 11.7**	**+0.7**
NLYR				Smax		10 35 12.4	
	comp=Z,698nm,1.0s						
BOD	**Bodaibo**	**2.90**	**281**	*e*PN	**Pg**	**10 34 56.6**	**-0.4**
BOD				*e*		10 35 33.4	
BOD				pmax	pmax		
	comp=Z,58nm,0.4s						
BOD				smax			
	comp=N,1μm,0.6s						
BOD	**Bodaibo**	**2.90**	**281**	*e*Pn	**Pn**	**10 34 48.7**	**+1.1**
BOD				*e*Pg	**Pg**	**10 34 55.3**	**-1.7**
BOD				Pmax		10 34 56.3	
	comp=N,71nm,0.8s						
BOD				*e*Sn	**Sn**	**10 35 22.6**	**+0.1**
BOD				*e*Sg	**Sg**	**10 35 32.4**	**-2.2**
BOD				Smax		10 35 34.5	
	comp=N,1μm,0.9s						
CLNS	**Chul'man**	**3.08**	**97**	*e*PN	**Pn**	**10 34 52.1**	**+2.0**
CLNS				*e*		10 35 36.0	
CLNS				pmax	pmax		
	comp=Z,14nm,0.2s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.1s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.2s						
CLNS				smax			
	comp=E,1.0nm,0.6s						
CLNS				smax			
	comp=N,1.0nm,0.6s						
CLNS	**Chul'man**	**3.08**	**97**	*e*Pn	**Pn**	**10 34 52.0**	**+1.9**
CLNS				*e*Pg	**Pg**	**10 34 57.5**	**-3.0**
CLNS				*e*Sn	**Sn**	**10 35 28.9**	**+1.9**
CLNS				*e*Sg	**Sg**	**10 35 35.9**	**-4.5**
IENR	**Iengra**	**3.25**	**108**	*i* Pn	**Pn**	**10 34 54.1**	**+1.7**
IENR				⇑*e*Pg	**Pg**	**10 35 02.1**	**-1.6**
IENR				*e*Sg	**Sg**	**10 35 44.4**	**-1.4**
SVKR	**Severomuysk**	**3.41**	**251**	*e*Pg	**Pg**	**10 35 05.7**	**-1.1**
SVKR				Pmax		10 35 06.3	
	comp=N,67nm,0.2s						
SVKR				*e*Sg	**Sg**	**10 35 50.6**	**-0.3**
SVKR				Smax		10 36 08.8	
	comp=N,616nm,0.8s						
ALDR	**Aldan**	**3.48**	**66**	*e*Pn	**Pn**	**10 34 54.8**	**-0.7**
ALDR				*e*Pg	**Pg**	**10 35 03.6**	**-4.4**
ALDR				*e*Sn	**Sn**	**10 35 35.5**	**-1.1**
ALDR				*e*Sg	**Sg**	**10 35 46.5**	**-6.5**
UKT	**Uakit**	**3.68**	**242**	⇓*i*Pn	**Pn**	**10 35 00.6**	**+2.3**
UKT				⇓*i*Pg	**Pg**	**10 35 10.7**	**-1.1**
UKT				Pmax		10 35 22.1	
	comp=N,33nm,0.7s						
UKT				*e*Sg	**Sg**	**10 35 59.0**	**-0.4**
UKT				Smax		10 36 05.1	
	comp=N,159nm,1.1s						
TNDR	**Tynda**	**3.74**	**124**	⇓*i*Pn	**Pn**	**10 35 01.2**	**+2.1**
TNDR				*e*Pg	**Pg**	**10 35 10.8**	**-2.2**
TNDR				*e*Sn	**Sn**	**10 35 44.0**	**+0.9**
TNDR				*e*Sg	**Sg**	**10 36 00.1**	**-1.3**
YOA	**Uoyan**	**4.36**	**257**	*e*Pg	**Pg**	**10 35 21.5**	**-3.4**
YOA				Pmax		10 35 34.1	
	comp=N,44nm,0.3s						
YOA				*e*Sg	**Sg**	**10 36 18.3**	**-3.1**
YOA				Smax		10 36 34.6	
	comp=N,936nm,1.7s						
KMO	**Kumora**	**4.72**	**255**	⇑*i*Pn	**Pn**	**10 35 14.8**	**+2.2**
KMO				*e*		10 35 26.2	
KMO				max		10 35 39.6	
	comp=N,16nm,0.5s						
KMO				*e*Sg	**Sg**	**10 36 30.1**	**-2.9**
KMO				Smax		10 36 45.2	
	comp=N,246nm,1.1s						
YLYR	**Ulyunkhan**	**5.20**	**245**	*e*PN	**Pg**	**10 35 36.5**	**-4.5**
YLYR				*e*		10 36 42.9	
YLYR				pmax	pmax		
	comp=Z,18nm,0.7s						
YLYR				smax			
	comp=N,85nm,1.8s						
YLYR	**Ulyunkhan**	**5.20**	**245**	⇑*i*Pn	**Pn**	**10 35 21.5**	**+2.3**
YLYR				*e*		10 35 39.9	
YLYR				max		10 35 46.9	
	comp=N,3.0nm,0.5s						
YLYR				*e*Sg	**Sg**	**10 36 46.1**	**-2.2**
YLYR				Smax		10 37 02.7	
	comp=N,79nm,1.4s						
KROS	**Kirovskiy**	**5.21**	**121**	*i* Sg	**Sg**	**10 36 43.0**	**-5.5**
NIZ	**Nizh Angarsk**	**5.64**	**258**	*e*PN	**Pn**	**10 35 29.3**	**+4.1**
NIZ				*e*		10 36 58.7	
NIZ				pmax	pmax		
	comp=Z,11nm,0.7s						
NIZ				smax			
	comp=N,92nm,0.8s						
NIZ	**Nizh Angarsk**	**5.64**	**258**	*e*Pn	**Pn**	**10 35 28.4**	**+3.2**
NIZ				*e*		10 35 47.3	
NIZ				max		10 35 49.3	
	comp=N,17nm,1.1s						
NIZ				*e*Sg	**Sg**	**10 36 58.3**	**-4.0**
NIZ				Smax		10 37 14.9	
	comp=N,97nm,0.9s						
SYVR	**Suvo**	**6.46**	**239**	⇓*i*Pn	**Pn**	**10 35 39.1**	**+2.5**
SYVR				*e*		10 36 02.7	
SYVR				max		10 36 10.2	
	comp=N,5.0nm,1.0s						
SYVR				*e*Sg	**Sg**	**10 37 26.0**	**-2.8**
SYVR				Smax		10 37 34.7	
	comp=N,68nm,1.6s						
MXMB	**Maximikha**	**7.30**	**240**	*e*Sg	**Sg**	**10 37 52.5**	**-2.9**
MXMB				Smax		10 37 58.7	
	comp=N,125nm,1.2s						
OGRR	**Ongureny**	**7.63**	**246**	*e*PG	**Pg**	**10 36 21.5**	**-5.9**
OGRR	**Ongureny**	**7.63**	**246**	*e*Pn	**Pn**	**10 35 57.5**	**+5.0**
OGRR				*e*		10 36 26.8	
OGRR				max		10 36 41.9	
	comp=N,1.0nm,0.3s						
OGRR				*e*Sg	**Sg**	**10 38 01.1**	**-4.9**
OGRR				Smax		10 38 42.5	
	comp=N,41nm,1.6s						
HIA	**Hailar**	**8.11**	**178**	*e*Sg	Sx	10 38 18.1	
KPC	**Khapcheranga**	**8.71**	**211**	*e*Pn	**Pn**	**10 36 12.0**	**+4.7**
KPC				*e*Pg	Pn	10 36 43.0	+36
KPC				Pmax		10 37 00.9	
	comp=N,2.0nm,0.4s						
KPC				*e*Sg	Sn	10 38 37.4	+52
KPC				Smax		10 38 45.0	
	comp=N,66nm,2.6s						
UUDB	**Ulan-Yde**	**8.71**	**236**	*e*Sg	Sx	10 38 36.2	
UUDB				Smax		10 38 54.4	
	comp=N,68nm,1.7s						
TRG	**Tyrgan**	**8.75**	**244**	*e*Sg	Sx	10 38 35.9	
TRG				Smax		10 38 49.1	
	comp=N,22nm,2.6s						
HRMR	**Khuramsha**	**9.20**	**237**	*e*Sg	Sx	10 38 51.5	
HRMR				Smax		10 39 06.9	
	comp=N,111nm,1.1s						
LSTR	**Listvyanka**	**10.04**	**243**	*e*Sg	Sx	10 39 15.2	
ARS	**Arshan**	**11.19**	**248**	*e*Sg	Sx	10 39 51.6	
ARS				Smax		10 40 12.4	
	comp=N,78nm,1.1s						
MOY	**Mondy**	**12.06**	**250**	*e*Sg	Sx	10 40 17.8	
MOY				Smax		10 40 43.9	
	comp=N,41nm,1.8s						
ORL	**Orlik**	**12.20**	**255**	*e*Sg	Sx	10 40 22.2	
ORL				Smax		10 40 35.7	
	comp=N,45nm,1.8s						
SONM	**Songino Array**	**12.34**	**225**	Lg		10 40 30.9	
	comp=N,0.5nm,0.3s,baz=30,slow=27,SNR=5.1						
ZALV	**Zalesovo Beam**	**19.63**	**275**	P	**Pn**	**10 38 30.4**	**-0.8**
	comp=N,0.1nm,0.3s,baz=52,slow=9.3,SNR=3.6						
MKAR	**Makanchi Array**	**24.79**	**261**	P	**P**	**10 39 23.8**	**+0.6**
	comp=N,0.8nm,0.6s,mb3.4,baz=51,slow=9.6,SNR=5.1						
MKAR	**Makanchi Array**	**24.79**	**261**	P	**P**	**10 39 23.8**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**78.02**	**166**	P	**P**	**10 45 59.5**	**-0.3**
	comp=Z,0.5nm,0.9s,mb3.4,baz=352,slow=6.6,SNR=4.8						
WRA	**Warramunga Arr**	**78.02**	**166**	P	**P**	**10 45 59.5**	**-0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						

*ISCJB **23** 10:39:30.0±1.4, 2992N±006×3635E±008, h0km, Error ellipse: s-maj=10.6km s-min=7.7km az=154.6*
*GII **23** 10:39:29.2±0.6, 2986N×3639E, h0km, ML1.9/2, EXPLOSION*
*CSEM **23** 10:39:33.5, 2999N×3609E, h6km, ML2.7, After SNSN*
*SGS **23** 10:39:33.5, 2999N×3609E, h6km*
ISC 23 10:39:30.0±1.4, 2989N±006×3640E±008, h0km, n10, σ0§96/13, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.18**	**262**	Pg	**Pg**	**10 39 52.2**	**-0.5**
HRFI	**Mount Harif**	**1.19**	**277**	Pg	**Pg**	**10 39 52.5**	**-0.4**
EIL	**Elat**	**1.28**	**260**	Pg	**Pg**	**10 39 54.0**	**-0.5**
EIL				Sg	**Sg**	**10 40 11.8**	**+0.8**
MBRI	**Mt Berech**	**1.29**	**266**	Pg	**Pg**	**10 39 54.2**	**-0.6**
PRNI	**Paran**	**1.29**	**291**	Pg	**Pg**	**10 39 54.5**	**-0.4**
PRNI				Sg	**Sg**	**10 40 13.3**	**+1.8**
HQLS		**1.30**	**244**	P	**Pg**	**10 39 53.8**	**-1.2**
JLOS		**1.40**	**215**	P	**Pn**	**10 39 57.0**	**+0.3**
JLOS		**1.40**	**215**	P	**Pn**	**10 39 57.0**	**+0.2**
JLOS				S	**Sg**	**10 40 14.6**	**-0.3**
TBKS	**Tabuk**	**1.67**	**176**	P	**Pn**	**10 40 03.2**	**+2.7**
DSI	**Dead Sea**	**1.89**	**333**	Pn	**Pn**	**10 40 03.0**	**-0.5**

IDC 23 10:41:29.6±3.6, 1449N×9338E, h0km, mb3.8/2, mb1 3.9/3, mb1mx3.4/21, mbtmp3.6/3, ML3.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/25, Error ellipse: s-maj=87.5km s-min=47.2km az=111.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.64**	**53**	Pn	Pn	10 43 08.7	+0.3
	0.3nm,0.3s,baz=242,slow=15,SNR=4.1						
CMAR				Sn	Sn	10 44 20.5	-4.4
	0.4nm,0.3s,baz=243,slow=28,SNR=6.4						
GNI	**Garni**	**49.44**	**311**	LR	LR	11 13 48.0	
	comp=Z,30nm,18.6s,baz=254,slow=39						
WRA	**Warramunga Arr**	**52.85**	**129**	P	P	10 50 46.9	-0.5
	1.2nm,0.8s,baz=313,slow=8.2,SNR=24						
WRA				PcP	PcP	10 51 56.9	+0.1
	0.3nm,0.7s,baz=316,slow=3.4,SNR=7.0						
ASAR	**Alice Springs**	**54.84**	**133**	P	P	10 51 01.9	0.0
	0.7nm,0.7s,baz=311,slow=6.6,SNR=17						
ASAR				PcP	PcP	10 52 04.4	+0.2
	0.2nm,0.6s,baz=303,slow=3.5,SNR=4.9						

*ISCJB **23** 10:41:50.7±0.7, 1924S±006×683W±02, h167km±8km, mb3.5/4, Error ellipse: s-maj=24.2km s-min=9.0km az=8.4*
*IDC **23** 10:41:51.2±0.8, 1922S×6830W, h153km±8km, mb3.4/4, mb1 3.5/6, mb1mx3.3/18, mbtmp3.3/6, Error ellipse: s-maj=24.4km s-min=8.6km az=96.0*
*NEIC **23** 10:41:51.6±0.8, 1922S×6824W, h157km±7km, Error ellipse: s-maj=16.9km s-min=10.9km az=106.0*
ISC 23 10:41:51.7±0.7, 1924S±006×682W±02, h161km±8km, n12, σ0§44/13, mb3.5/4, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.94**	**2**	P	**Pn**	**10 42 39.6**	**+0.8**
	0.9nm,0.3s,baz=196,slow=6.8,SNR=33						
LPAZ				S	**Sn**	**10 43 15.2**	**-0.1**
	0.4nm,0.3s,baz=303,slow=17,SNR=6.8						
LPAZ	**La Paz**	**2.94**	**2**	*e*Pn	**Pn**	**10 42 39.2**	**+0.4**
LPAZ				S	**Sn**	**10 43 15.2**	**-0.1**
LVC	**Limon Verde**	**3.41**	**191**	P	**Pn**	**10 42 43.8**	**-0.9**
	1.4nm,0.3s,baz=9.0,slow=10.0,SNR=11						
LVC				S	**Sn**	**10 43 26.1**	**+0.2**
	3.3nm,0.3s,baz=326,slow=8.4,SNR=8.9						
LVC	**Limon Verde**	**3.41**	**191**	*e*Pn	**Pn**	**10 42 44.9**	**+0.2**
LVC				S	**Sn**	**10 43 26.1**	**+0.2**
SIV	**San Ignacio**	**7.55**	**66**	P	**Pn**	**10 43 38.7**	**-0.4**
	1.9nm,0.3s,baz=254,slow=12,SNR=28						
TXAR	**Lajitas Array**	**59.17**	**324**	P	**P**	**10 51 35.5**	**-0.3**
	0.1nm,0.6s,mb2.8,baz=128,slow=6.9,SNR=2.9						
ULM	**Lac du Bonnet**	**73.37**	**342**	P	**P**	**10 53 05.2**	**-0.5**
	3.8nm,1.0s,mb4.1,baz=157,slow=7.7,SNR=3.0						
TORD	**Torodi Ar. Bea**	**76.00**	**71**	P	**P**	**10 53 22.3**	**+0.7**
	0.5nm,0.4s,mb3.5,baz=255,slow=4.4,SNR=13						
YKA	**Yellowknife Ar**	**89.28**	**340**	P	**P**	**10 54 29.2**	**+0.2**
	0.5nm,0.7s,mb3.6,baz=135,slow=4.9,SNR=4.6						
ASAR	**Alice Springs**	**132.20**	**208**	PKP	PKPdf	11 00 47.6	+0.4
	0.2nm,0.7s,baz=132,slow=1.4,SNR=3.6						
WRA	**Warramunga Arr**	**135.21**	**211**	PKP	PKPdf	11 00 54.0	+1.1
	0.3nm,0.8s,baz=152,slow=1.6,SNR=6.5						
SONM	**Songino Array**	**151.15**	**8**	PKPbc	PKPbc	11 01 27.1	+1.3
	0.9nm,0.5s,baz=354,slow=2.4,SNR=6.0						

*GII **23** 10:53:48.5±0.0, 3377N×3690E, h0km, ML2.5/1, EXPLOSION*
ISC 23 10:53:47.7±2.2, 3377N±008×370E±02, h0km, n13, σ0§67/15, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWQ	**Hawqa**	**1.00**	**300**	*e*P	**Pg**	**10 54 07.7**	**+0.8**
RCY	**Rachaya**	**1.02**	**254**	*e*P	**Pg**	**10 54 06.5**	**-0.7**
KSDI	**Kefar Szold**	**1.25**	**243**	Pg	**Pg**	**10 54 11.1**	**-0.6**
KSHT	**Keshet**	**1.26**	**232**	Pg	**Pg**	**10 54 10.9**	**-1.0**
MMA1	**Mount Meron ar**	**1.52**	**241**	Pn	**Pn**	**10 54 16.5**	**+0.3**
MMB4	**Mount Meron ar**	**1.52**	**241**	Pn	**Pn**	**10 54 16.2**	**+0.1**
MMA0	**Mount Meron ar**	**1.53**	**241**	Pn	**Pn**	**10 54 16.7**	**+0.5**
MMA0B	**Mount Meron ar**	**1.53**	**241**	Sn	**Sn**	**10 54 37.1**	**+0.3**
MMB3	**Mount Meron ar**	**1.53**	**241**	Pn	**Pn**	**10 54 15.5**	**-0.7**
MMC7	**Mount Meron ar**	**1.53**	**241**	Pn	**Pn**	**10 54 15.3**	**-1.0**
MMLI	**Mount Malkishu**	**1.87**	**225**	Pn	**Pn**	**10 54 21.4**	**+0.4**
MMLI				Sn	**Sn**	**10 54 44.8**	**-0.5**
HMDT	**Nahal Hemdat**	**1.95**	**219**	Pn	**Pn**	**10 54 22.4**	**+0.3**
HMDT				Sn	**Sn**	**10 54 48.1**	**+0.9**
SLTI	**Sal'it**	**2.24**	**227**	Sn	**Sn**	**10 54 55.3**	**+1.0**

*CSEM **23** 11:13:03.7, 3017N×3623E, h7km, ML2.9, After SNSN*
*SGS **23** 11:13:03.7, 3017N×3623E, h7km*
*GII **23** 11:13:04.6±0.0, 2979N×3627E, h0km, ML1.6/3, EXPLOSION*
*ISCJB **23** 11:13:05.1±0.9, 2986N±004×3624E±006, h0km, Error ellipse: s-maj=8.7km s-min=4.8km az=147.6*
ISC 23 11:13:05.3±0.9, 2985N±004×3627E±006, h0km, n24, σ0§95/28, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQBJ	**Aqaba**	**1.07**	**264**	Pg	**Pg**	**11 13 25.2**	**-0.6**
AQBJ	**Aqaba**	**1.07**	**264**	Pg	**Pg**	**11 13 24.7**	**-1.1**
HRFI	**Mount Harif**	**1.09**	**280**	Pg	**Pg**	**11 13 25.4**	**-0.7**
HRFI				Sg	**Sg**	**11 13 41.8**	**+1.5**
HRFI	**Mount Harif**	**1.09**	**280**	Pg	**Pg**	**11 13 25.4**	**-0.8**
HRFI				Sg	**Sg**	**11 13 42.1**	**+1.8**
EIL	**Elat**	**1.16**	**262**	Pg	**Pg**	**11 13 26.9**	**-0.6**
EIL	**Elat**	**1.16**	**262**	Pg	**Pg**	**11 13 27.0**	**-0.6**
ZFRI	**Zfri**	**1.18**	**307**	Pg	**Pg**	**11 13 27.4**	**-0.5**
ZFRI				Sg	**Sg**	**11 13 44.3**	**+1.0**
ZFRI	**Zfri**	**1.18**	**307**	Pg	**Pg**	**11 13 27.5**	**-0.4**
MBRI	**Mt Berech**	**1.18**	**268**	Pg	**Pg**	**11 13 27.3**	**-0.7**
MBRI	**Mt Berech**	**1.18**	**268**	Pg	**Pg**	**11 13 27.1**	**-0.9**
HQLS		**1.19**	**243**	S	**Sg**	**11 13 44.2**	**+0.7**
PRNI	**Paran**	**1.21**	**295**	Pg	**Pg**	**11 13 27.4**	**-1.1**
PRNI	**Paran**	**1.21**	**295**	Pg	**Pg**	**11 13 27.7**	**-0.8**
PRNI				Sg	**Sg**	**11 13 44.9**	**+0.8**
JLOS		**1.30**	**212**	P	**Pg**	**11 13 30.0**	**-0.3**
KRMI	**Paran Flat**	**1.37**	**282**	Pg	**Pg**	**11 13 30.4**	**-1.2**
KRMI	**Paran Flat**	**1.37**	**282**	Pn	**Pn**	**11 13 30.5**	**-1.2**
TBKS	**Tabuk**	**1.64**	**172**	S	**Sn**	**11 13 59.3**	**+2.2**
TBKS	**Tabuk**	**1.64**	**172**	P	**Pn**	**11 13 35.5**	**+0.1**
MZDA	**Masada**	**1.66**	**332**	Pn	**Pn**	**11 13 36.0**	**+0.4**
BDAS	**Al Bad'**	**1.75**	**216**	P	**Pn**	**11 13 36.0**	**-0.8**
DSI	**Dead Sea**	**1.88**	**336**	Pn	**Pn**	**11 13 39.9**	**+1.2**
DSI	**Dead Sea**	**1.88**	**336**	Pn	**Pn**	**11 13 39.4**	**+0.7**
KZIT	**Kziot**	**1.93**	**304**	Pn	**Pn**	**11 13 40.1**	**+0.7**
KZIT	**Kziot**	**1.93**	**304**	Pn	**Pn**	**11 13 39.9**	**+0.5**

IDC 23 12:04:25.6±5.0, 229S×10226E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.4/18, mbtmp3.6/3, Error ellipse: s-maj=252.0km s-min=28.4km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.91**	**122**	P	P	12 11 28.3	+0.4
	0.3nm,0.4s,baz=302,slow=8.9,SNR=11						
ASAR	**Alice Springs**	**37.27**	**127**	P	P	12 11 39.1	-0.3
	0.3nm,0.7s,baz=301,slow=9.0,SNR=8.8						
ZALV	**Zalesovo Beam**	**57.89**	**348**	P	P	12 14 19.5	+0.3
	0.8nm,0.5s,baz=172,slow=5.4,SNR=4.8						
TXAR	**Lajitas Array**	**143.51**	**40**	PKP	PKPdf	12 24 00.7	-2.4
	0.3nm,0.7s,baz=247,slow=1.8,SNR=4.5						

*IDC **23** 12:20:16.1±1.3, 3837N×7091E, h0km, mb3.8/6, mb1 4.0/10, mb1mx3.8/27, mbtmp3.8/10, ML3.5/4, MS3.1/2, Ms1 3.1/2, ms1mx2.5/35, Error ellipse: s-maj=24.2km s-min=18.0km az=154.0*
*NNC **23** 12:20:20.4±1.6, 3888N×7034E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=12.0km s-min=10.0km az=5.0*
*MOS **23** 12:20:23.7±1.5, 3883N×7077E, h63km, mb4.1/4, Error ellipse: s-maj=18.8km s-min=10.7km az=75.4*
*ISCJB **23** 12:20:24.8±0.9, 3888N±005×7056E±007, h75km±12km, mb3.9/10, Error ellipse: s-maj=9.7km s-min=7.8km az=16.5*
*NEIC **23** 12

AB31				⇑Sn		**Sn**	**12 25 47.2**	**+1.0**
	comp=Z,4.4nm,0.6s,baz=146,slow=22,SNR=6.9							
VOSK	**Vostochnaya**	**13.85**	**2**	⇓Pn		**Pn**	**12 23 39.3**	**+0.4**
	comp=Z,4.2nm,1.1s							
VOSK				⇑Sn		**Sn**	**12 26 13.1**	**+0.5**
	comp=Z,3.1nm,0.9s							
BVA0	**Borovoye Array**	**14.15**	**0**	Pn		**Pn**	**12 23 41.3**	**-1.5**
	comp=Z,0.8nm,1.2s,baz=218,slow=27,SNR=9.3							
BVAR	**Borovoye Array**	**14.15**	**0**	Pn		**Pn**	**12 23 42.9**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=181,slow=8.5,SNR=6.5							
BVAR				LR		LR	12 29 03.4	
	comp=Z,21nm,20.2s,baz=84,slow=36							
AKTK	**Aktyubinsk**	**14.48 327**		Pn		**Pn**	**12 23 48.7**	**+1.3**
AKTO	**Aktyubinsk**	**14.48 327**		⇑Pn		**Pn**	**12 23 47.8**	**+0.4**
	comp=Z,1.0nm,0.8s							
AKTO				⇓Sn		**Sn**	**12 26 26.2**	**-1.7**
	comp=Z,2.5nm,1.7s							
AKTO	**Aktyubinsk**	**14.48 327**		Pn		**Pn**	**12 23 48.7**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=139,slow=14,SNR=5.2							
ZALV	**Zalesovo Beam**	**18.02 29**		P		**Pn**	**12 24 29.3**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=226,slow=10,SNR=6.2							
GNI	**Garni**	**19.77 282**		P		**Pn**	**12 24 52.1**	**-2.1**
	comp=Z,4.1nm,0.5s,baz=2.5,slow=21,SNR=3.6							
GNI	**Garni**	**19.77 282**		P		**Pn**	**12 24 52.1**	**-2.2**
GNI				pmax		pmax		
	comp=Z,4.0nm,0.5s							
RDF	**Al-Radifah**	**21.31 249**		*eP*		**P**	**12 25 09.7**	**+0.2**
	baz=45							
RDF				AMb		AMB	12 25 13.4	
	comp=Z,23nm,1.1s,mb4.4,baz=45							
NAY	**Al-Naaiem**	**21.36 250**		*eP*		**P**	**12 25 10.3**	**+0.3**
	baz=45							
NAY				AMb		AMB	12 25 15.1	
	comp=Z,21nm,1.0s,mb4.4,baz=45							
RST	**Umm Al-Ruwaisa**	**21.41 251**		*eP*		**P**	**12 25 10.3**	**-0.2**
	baz=44							
RST				AMb		AMB	12 25 14.5	
	comp=Z,18nm,1.1s,mb4.3,baz=44							
ZAK	**Zakamensk**	**25.90**	**53**	*eP*		**P**	**12 25 48.4**	**-6.1**
ZAK				pmax		pmax		
	comp=Z,2.0nm,1.3s,mb3.5							
AKASG	**Malin Array Be**	**31.09 306**		P		**P**	**12 26 40.0**	**-0.7**
	comp=Z,0.4nm,0.3s,mb3.7,baz=78,slow=7.4,SNR=4.5							
ARCES	**ARCESS Array B**	**38.75 337**		LR		LR	12 44 52.3	
	comp=Z,70nm,18.6s,baz=272,slow=38							
BRG	**Berggiesshuebel**	**40.77 306**		*e*		**P**	**12 28 03.6**	**0.0**
	comp=Z,2.8nm,0.9s,mb3.9							
GERES	**GERESS Array B**	**41.16 303**		P		**P**	**12 28 08.0**	**+1.1**
	comp=Z,0.2nm,0.3s,mb3.3,baz=57,slow=4.9,SNR=3.4							
NOA	**NORSAR Array B**	**42.18 322**		P		**P**	**12 28 17.2**	**+2.2**
	comp=Z,1.2nm,0.8s,mb3.5,baz=123,slow=5.5,SNR=3.3							
NOA	**NORSAR Array B**	**42.18 322**		P		**P**	**12 28 17.2**	**+2.2**
NOA				pmax		pmax		
	comp=Z,1.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**65.28 267**		P		**P**	**12 31 02.4**	**-2.5**
	comp=Z,2.0nm,0.7s,mb4.3,baz=51,slow=5.4,SNR=10							
WRA	**Warramunga Array**	**83.69 122**		P		**P**	**12 32 45.0**	**-6.6**
	comp=Z,1.7nm,0.9s,mb4.2,baz=320,slow=6.2,SNR=5.0							
WRA	**Warramunga Array**	**83.69 122**		P		**P**	**12 32 45.0**	**-6.7**
WRA				pmax		pmax		
	comp=Z,2.0nm,0.9s							

*IDC **23** 12:20:22.4±0.9, 1223N×12481E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.8/20, mbtmp3.8/9, MS3.2/1, Ms1 3.2/1, ms1mx2.5/26, Error ellipse: s-maj=44.5km s-min=15.1km az=70.0*
*MAN **23** 12:20:25, 1227N×12468E, h24km, mb4.9, ML3.9, MS4.0*
MAN INTENSITY III - CATARMAN, NORTHERN SAMAR.
*ISCJB **23** 12:20:26.4±0.4, 1228N±003×12471E±004, h38km±5km, mb3.7/9, Error ellipse: s-maj=6.8km s-min=3.9km az=154.8*

ISC 23 12:20:26.9±0.6, 1224N±003×12469E±004, h26km±5km, n39, σ0$89/49, mb3.7/9, 5D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.27**	**354**	*eP*		**Pb**		**12 20 33.2**	**-0.4**
CNP				*eS*		**Sb**		**12 20 37.9**	**-0.2**
BESP	**Borongan**	**0.97**	**131**	*eP*		**Pn**		**12 20 43.9**	**-0.9**
BESP				*eS*		**Sb**		**12 20 58.1**	**+0.8**
MMPH	**Masbate**	**1.05**	**276**	‖*iP*		**Pn**		**12 20 45.0**	**-0.9**
MMPH				*i*	S	**Sb**		**12 20 59.0**	**-0.8**
PLP	**Palo**	**1.10**	**165**	‖*eP*		**Pn**		**12 20 45.8**	**-0.9**
PLP				*eS*		**Sn**		**12 21 00.9**	**-0.2**
OCLP	**Ormoc**	**1.19**	**184**	*eP*		**Pn**		**12 20 45.9**	**-1.9**
OCLP				*eS*		**Sn**		**12 21 02.5**	**-0.6**
PVCP	**Virac**	**1.45**	**339**	*eP*		**Pn**		**12 20 50.2**	**-1.2**
PVCP				*eS*		**Sn**		**12 21 14.5**	**+5.0**
RCP	**Roxas**	**2.02**	**251**	‖*eP*		**Pn**		**12 20 59.5**	**+0.1**
RCP				*eS*		**Sn**		**12 21 24.7**	**+0.9**
LLP	**Lapu-Lapu**	**2.04**	**201**	*eP*		**Pn**		**12 20 59.1**	**-0.4**
LLP				*eS*		**Sn**		**12 21 23.6**	**-0.6**
MSLP	**Maasin**	**2.10**	**176**	*eP*		**Pn**		**12 21 01.3**	**+0.9**
MSLP				*eS*		**Sn**		**12 21 34.4**	**+8.8**
AUQP	**San Andres**	**2.24**	**299**	*eP*		**Pn**		**12 21 02.3**	**-0.1**
AUQP				*eS*		Sn		12 21 50.5	+21
KALP	**Kalibo**	**2.37**	**257**	*eP*		**Pn**		**12 21 03.3**	**-0.8**
SCPH	**Surigao**	**2.56**	**162**	‖*eP*		**Pn**		**12 21 07.5**	**+0.7**
GUIM	**Jordan**	**2.61**	**232**	*eP*		**Pn**		**12 21 07.7**	**+0.2**
OTRP	**Odiongan**	**2.62**	**273**	*eP*		**Pn**		**12 21 07.0**	**-0.4**
OTRP				*eS*		**Sn**		**12 21 43.0**	**+4.6**
TBP	**Tagbilaran**	**2.66**	**198**	*eP*		**Pn**		**12 21 07.9**	**-0.2**
GQP	**Guinayangan**	**2.75**	**307**	‖*eP*		**Pn**		**12 21 09.6**	**+0.3**
GQP				*eS*		**Sn**		**12 21 41.6**	**0.0**
BUTP	**Butuan**	**3.38**	**164**	*eP*		**Pn**		**12 21 21.0**	**+3.1**
BUTP				*eS*		Sn		12 22 18.8	+22
SJMP	**San Jose**	**3.50**	**274**	*eP*		**Pn**		**12 21 20.5**	**+0.9**
POLP	**Polillo Island**	**3.65**	**313**	*eP*		**Pn**		**12 21 23.3**	**+1.6**
CUYO	**Cuyo Island**	**3.86**	**249**	*eP*		**Pn**		**12 21 24.8**	**+0.2**
DCPH	**Dipolog City**	**3.87**	**200**	*eP*		**Pn**		**12 21 24.8**	**+0.1**
BUKP	**Musuan**	**4.35**	**175**	*eP*		**Pn**		**12 21 33.1**	**+1.8**
BUKP				*eS*		Sn		12 22 44.8	+24
BUSP	**Coron**	**4.40**	**267**	*eP*		**Pn**		**12 21 32.1**	**+0.1**
PAGZ	**Pagadian**	**4.55**	**197**	*eP*		**Pn**		**12 21 35.7**	**+1.6**
BALP	**Baler**	**4.61**	**319**	*eP*		**Pn**		**12 21 34.6**	**-0.3**
PALP	**Palanan**	**5.27**	**336**	*eP*		**Pn**		**12 21 48.3**	**+4.3**
CAUP	**Cauayan**	**5.44**	**330**	*eP*		**Pn**		**12 21 46.1**	**-0.2**
APYP	**Conner**	**6.51**	**330**	*eP*		**Pn**		**12 22 02.5**	**+1.5**
ABRA	**Dolores**	**6.61**	**325**	*eP*		**Pn**		**12 22 03.0**	**+0.6**
KSRS	**Korea Array**	**25.27**	**6**	P		**P**		**12 25 50.2**	**-0.9**
	1.0nm,0.8s,mb3.4,baz=262,slow=33,SNR=5.1								
CMAR	**Chiang Mai Arr**	**25.57**	**287**	P		**P**		**12 25 53.6**	**-0.4**
	0.4nm,0.3s,mb3.4,baz=88,slow=7.9,SNR=6.2								
FITZ	**Fitzroy Crossi**	**30.16**	**178**	P		**P**		**12 26 35.9**	**+0.9**
	0.8nm,0.7s,mb3.5,baz=27,slow=14,SNR=3.4								
WRA	**Warramunga Array**	**33.36**	**163**	P		**P**		**12 27 01.6**	**-1.6**
	0.6nm,0.6s,mb3.7,baz=343,slow=9.2,SNR=9.8								
ASAR	**Alice Springs**	**36.80**	**166**	P		**P**		**12 27 31.4**	**-1.4**
	1.1nm,0.5s,mb4.0,baz=345,slow=6.9,SNR=17								
SONM	**Songino Array**	**38.65**	**340**	P		**P**		**12 27 48.4**	**+0.3**
	0.5nm,0.6s,mb3.4,baz=162,slow=8.6,SNR=4.8								
SONM				LR		LR		12 45 14.0	
	comp=Z,33nm,20.7s,baz=208,slow=38								
MKAR	**Makanchi Array**	**49.53**	**322**	P		**P**		**12 29 16.3**	**+0.9**
	1.1nm,0.8s,mb3.9,baz=116,slow=9.8,SNR=3.1								
ZALV	**Zalesovo Beam**	**52.17**	**331**	P		**P**		**12 29 34.7**	**-0.4**
	1.4nm,0.7s,mb4.0,baz=134,slow=6.4,SNR=4.8								
KURK	**Kurchatov**	**53.58**	**325**	P		**P**		**12 29 45.5**	**-0.1**
	1.9nm,0.7s,mb4.1,baz=124,slow=7.4,SNR=7.2								
PLCA	**Paso Flores**	**148.61**	**157**	PKPbc		PKPbc		12 40 10.7	-1.2
	3.6nm,1.1s,baz=275,slow=1.1,SNR=2.8								

*ISCJB **23** 12:21:15.2±0.8, 347N±0.1×137.1E±0.1, h345km±10km, mb3.2/2, Error ellipse: s-maj=23.6km s-min=15.1km az=163.3*
*IDC **23** 12:21:15.8±1.3, 3448N×13705E, h320km±82km, mb3.1/2, mb1 3.2/4, mb1mx2.9/24, mbtmp2.9/4, Error ellipse: s-maj=133.1km s-min=32.3km az=15.0*
*JMA **23** 12:21:15.9±0.4, 3472N×13701E, h342km±4km, M2.7*

ISC 23 12:21:16.4±0.8, 347N±01×1371E±01, h337km±10km, n17, σ0$51/21, mb3.2/2, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HMMJ	**Hamamatsu 2**	**0.54**	**69**	P		**Pn**		**12 21 59.5**	**+0.3**
JAO	**Obara**	**0.61**	**11**	P		**Pn**		**12 21 59.7**	**+0.4**
JEG	**Eigenji**	**0.76**	**309**	P		**Pn**		**12 21 59.9**	**+0.2**
JKN2	**Miekihoku**	**0.81**	**239**	P		**Pn**		**12 21 59.9**	**-0.1**
JNY	**Yasuok**	**0.93**	**41**	P		**Pn**		**12 22 00.7**	**+0.4**
JGM	**Miyama**	**1.08**	**343**	P		**Pn**		**12 22 01.1**	**+0.2**
JWY	**Kouya**	**1.33**	**251**	P		**Pn**		**12 22 02.1**	**-0.1**
JWT	**Wachi**	**1.53**	**294**	P		**Pn**		**12 22 03.0**	**-0.3**
JKG	**Kaga**	**1.73**	**339**	P		**Pn**		**12 22 04.1**	**-0.4**
JRY	**Ryogami san**	**1.99**	**47**	P		**Pn**		**12 22 07.0**	**+0.7**
JRY				*eS*		**S**		**12 22 46.1**	**-0.2**
MAT	**Matsushiro**	**2.08**	**25**	P		**Pn**		**12 22 07.9**	**+1.0**
MAT				S		**S**		**12 22 47.9**	**+0.5**
MAT	**Matsushiro**	**2.08**	**25**	P		**Pn**		**12 22 07.1**	**+0.2**
MJAR	**Matsushiro Arr**	**2.08**	**25**	P		**Pn**		**12 22 07.1**	**+0.2**
	3.3nm,0.3s,baz=207,slow=8.4,SNR=74								
MJAR				S		**S**		**12 22 47.2**	**-0.3**
	baz=198,slow=14,SNR=3.0								
JHU	**Hanno**	**2.13**	**56**	P		**Pn**		**12 22 07.7**	**+0.3**
JHU				S		**S**		**12 22 46.6**	**-1.7**
KSRS	**Korea Array**	**7.95**	**293**	P		**Pn**		**12 23 09.1**	**-0.5**
	0.1nm,0.3s,baz=108,slow=12,SNR=5.4								
WRA	**Warramunga Arr**	**54.37**	**183**	P		**P**		**12 30 08.9**	**-0.4**
	0.7nm,0.3s,mb3.4,baz=358,slow=7.6,SNR=16								
ASAR	**Alice Springs**	**58.09**	**183**	P		**P**		**12 30 35.3**	**0.0**
	0.3nm,0.4s,mb3.0,baz=358,slow=5.9,SNR=4.9								

*ISCJB **23** 12:27:22.7±3.2, 05N±02×1234E±03, h273km±32km, mb3.8/11, Error ellipse: s-maj=58.3km s-min=10.9km az=150.1*
*IDC **23** 12:27:22.9±1.9, 055N×12360E, h260km±17km, mb3.6/10, mb1 3.7/13, mb1mx3.5/21, mbtmp3.6/13, Error ellipse: s-maj=40.1km s-min=8.5km az=66.0*
*NEIC **23** 12:27:22.9±3.5, 052N×12350E, h259km±35km, mb4.1/1, Error ellipse: s-maj=48.7km s-min=9.0km az=57.0*

ISC 23 12:27:25.8±3.0, 04N±02×1233E±03, h290km±31km, n18, σ0$74/18, mb3.8/11, 1C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.40**	**213**	P		**Pn**		**12 28 58.9**	**-0.9**
	1.3nm,0.3s,baz=11,slow=7.2,SNR=7.6								
BATI	**Baumata**	**10.52**	**178**	P		**Pn**		**12 29 51.4**	**+0.9**
	6.4nm,0.3s,baz=3.6,slow=2.0,SNR=7.8								
FITZ	**Fitzroy Crossi**	**18.51**	**173**	*eP*		**P**		**12 31 21.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**18.51**	**173**	P		**P**		**12 31 21.3**	**-0.3**
	0.4nm,0.3s,baz=9.8,slow=5.3,SNR=11								
WRAB	**Tennant Creek**	**22.93**	**152**	*eP*		**P**		**12 32 04.9**	**-0.3**
	2.1nm,0.3s,mb4.0								
WRA	**Warramunga Arr**	**22.93**	**152**	P		**P**		**12 32 05.1**	**-0.1**
	3.6nm,0.3s,mb4.2,baz=334,slow=11,SNR=100								
WRA				S		**S**		**12 35 53.0**	**-0.3**
	0.9nm,0.8s,baz=338,slow=15,SNR=5.0								
WRA				ScP		ScP		12 39 01.8	+5.7
	0.3nm,0.7s,baz=330,slow=2.4,SNR=5.9								
WB2	**Warramunga Arr**	**22.94**	**152**	‖*iP*		**P**		**12 32 04.9**	**-0.3**
ASAR	**Alice Springs**	**26.04**	**157**	P		**P**		**12 32 33.8**	**+0.6**
	0.8nm,0.4s,mb3.5,baz=332,slow=8.7,SNR=33								
ASAR				ScP		ScP		12 39 10.7	+5.9
	0.6nm,0.5s,baz=340,slow=2.8,SNR=15								
CMAR	**Chiang Mai Arr**	**29.88**	**308**	P		**P**		**12 33 09.8**	**+2.6**
	0.7nm,0.6s,mb3.4,baz=133,slow=6.8,SNR=5.5								
STKA	**Stephens Creek**	**36.48**	**153**	P		**P**		**12 34 04.6**	**+0.8**
	1.4nm,0.4s,mb3.8,baz=38,slow=3.8,SNR=4.4								
SONM	**Songino Array**	**49.49**	**345**	P		**P**		**12 35 47.0**	**-0.2**
	1.5nm,0.7s,mb3.5,baz=161,slow=8.2,SNR=9.9								
MKAR	**Makanchi Array**	**58.43**	**328**	P		**P**		**12 36 51.7**	**+0.1**
	3.9nm,0.4s,mb4.2,baz=126,slow=8.4,SNR=29								
MKAR				PcP		PcP		12 37 38.4	-0.4
	0.7nm,0.4s,baz=144,slow=4.0,SNR=4.2								
MKAR	**Makanchi Array**	**58.43**	**328**	P		**P**		**12 36 51.7**	**+0.1**
MKAR				PcP		PcP		12 37 38.4	-0.4
ZALV	**Zalesovo Beam**	**62.08**	**335**	P		**P**		**12 37 16.1**	**+0.1**
	1.0nm,0.5s,mb3.7,baz=114,slow=6.6,SNR=3.8								
KURK	**Kurchatov**	**62.78**	**330**	P		**P**		**12 37 20.4**	**-0.3**
	3.6nm,0.6s,mb4.2,baz=139,slow=6.4,SNR=16								
BVAR	**Borovoye Array**	**68.29**	**329**	P		**P**		**12 37 55.3**	**-0.4**
	1.1nm,0.6s,mb3.8,baz=133,slow=10,SNR=5.0								
ARCES	**ARCESS Array B**	**92.37**	**340**	P		**P**		**12 40 02.3**	**-0.9**
	1.7nm,0.8s,mb4.0,baz=93,slow=8.5,SNR=4.2								
TORD	**Torodi Ar. Bea**	**120.56**	**285**	PKP		PKPdf		12 45 45.1	+1.0
	0.2nm,0.3s,baz=80,slow=1.6,SNR=11								

*ISCJB **23** 13:14:38.4±4.9, 202S±02×178.1W±02, h513km±54km, mb3.5/6, Error ellipse: s-maj=37.9km s-min=19.3km az=159.9*
*IDC **23** 13:14:40.5±3.8, 1995S×17821W, h521km±45km, mb3.1/6, mb1 3.4/6, mb1mx3.1/16, mbtmp3.1/6, Error ellipse: s-maj=187.4km s-min=14.4km az=158.0*

ISC 23 13:14:39.7±4.7, 203S±02×1781W±02, h517km±52km, n10, σ0$51/10, mb3.5/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.51**	**257**	P		**P**		**13 22 05.0**	**-0.1**
	1.1nm,0.5s,mb3.7,baz=84,slow=8.2,SNR=38								
ASAR				S		**S**		**13 28 02.6**	**-0.1**
	0.4nm,1.0s,baz=94,slow=15,SNR=4.1								
WRA	**Warramunga Arr**	**44.57**	**262**	P		**P**		**13 22 05.0**	**-0.6**
	0.9nm,0.3s,mb3.7,baz=96,slow=7.5,SNR=84								
FITZ	**Fitzroy Crossi**	**52.99**	**262**	P		**P**		**13 23 09.2**	**+0.9**
	0.4nm,0.4s,mb3.1,baz=90,slow=4.0,SNR=4.6								
NVAR	**Mina Array Bea**	**80.91**	**43**	P		**P**		**13 25 60.0**	**+0.1**
	1.1nm,0.8s,mb3.3,baz=223,slow=8.3,SNR=6.6								
TXAR	**Lajitas Array**	**86.99**	**57**	P		**P**		**13 26 30.5**	**+0.3**
	1.0nm,0.8s,mb3.5,baz=227,slow=7.0,SNR=12								
VNA3	**Neumayer Olymp**	**88.36**	**176**	*e*		**P**		**13 26 35.2**	**-0.6**
VNA2	**Neumayer--Watz**	**88.80**	**177**	*e*		**P**		**13 26 37.6**	**-0.2**
	baz=213,slow=3.8								
PDAR	**Pinedale Array**	**88.85**	**43**	P		**P**		**13 26 38.0**	**-0.5**
	0.9nm,0.8s,mb3.6,baz=197,slow=2.8,SNR=5.9								
VNA1	**Neumayer--Stat**	**89.02**	**177**	*e*		**P**		**13 26 39.6**	**+0.7**
GERES	**GERESS Array B**	**149.98**	**344**	PKPbc		PKPbc		13 33 30.9	-0.6
	0.4nm,0.6s,baz=18,slow=4.1,SNR=4.3								

*IDC **23** 13:31:31.6±1.1, 096S×12753E, h0km, mb4.2/9, mb1 4.2/10, mb1mx4.0/19, mbtmp4.2/10, ML3.3/1, MS3.4/2, Ms1 3.4/2, ms1mx2.5/24, Error ellipse: s-maj=111.1km s-min=15.5km az=69.0*
*ISCJB **23** 13:31:34.4±1.3, 1.10S±005×12731E±008, h28km±10km, mb4.6/16, Error ellipse: s-maj=14.1km s-min=8.1km az=163.6*
*DJA **23** 13:31:35, 106S×12724E, h10km, MLv4.3/6*
*BJI **23** 13:31:37.2, 1.10S×12720E, h35km, mB4.9, mb4.6*
*NEIC **23** 13:31:37.2±0.4, 1.14S×12720E, h35km, mb4.2/4, Error ellipse: s-maj=30.7km s-min=7.4km az=67.0*

ISC 23 13:31:35.2±1.4, 108S±005×12736E±009, h19km±9km, n38, σ1$06/37, mb4.6/16, 2D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.46**	**18**	P		**Pg**		**13 31 44.9**	**+0.3**
	0.0nm,0.0s								
TNE	**Ternate**	**1.85**	**0**	‖*eP*		**Pn**		**13 32 04.0**	**-2.0**
AAI	**Ambon**	**2.72**	**162**	P		**Pn**		**13 32 21.1**	**+3.1**
	0.0nm,0.0s								
AAI	**Ambon**	**2.72**	**162**	P		**Pn**		**13 32 21.1**	**+3.1**
	0.0nm,0.0s								
AAI	**Ambon**	**2.72**	**162**	‖*eP*		**Pn**		**13 32 18.5**	**+0.5**
SWI	**Sorong**	**3.90**	**87**	P		**Pn**		**13 32 39.1**	**+4.9**
	0.0nm,0.0s								
KDI	**Kendari**	**5.54**	**239**	P		**Pn**		**13 32 56.3**	**-0.4**
	0.0nm,0.0s								
PCI	**Palu**	**7.53**	**271**	P		**Pn**		**13 33 23.5**	**-0.6**
	0.0nm,0.0s								
BATI	**Baumata**	**9.79**	**202**	LR		LR		13 37 47.6	
	comp=Z,151nm,18.4s,baz=113,slow=38								
FITZ	**Fitzroy Crossi**	**17.00**	**186**	P		**Pn**		**13 35 33.1**	**+0.9**
	0.1nm,0.3s,baz=40,slow=17,SNR=3.4								
WRAB	**Tennant Creek**	**19.95**	**160**	*eP*		**Pn**		**13 36 05.6**	**-2.5**
	5.8nm,0.8s								
WRA	**Warramunga Arr**	**19.95**	**160**	P		**Pn**		**13 36 05.3**	**-2.9**
	1.9nm,0.5s,baz=341,slow=12,SNR=43								
WB2	**Warramunga Arr**	**19.96**	**160**	*eP*		**Pn**		**13 36 05.0**	**-3.2**
COEN	**Coen**	**20.21**	**130**	*eP*		**P**		**13 36 11.7**	**+2.5**
	6.7nm,0.8s								
ASAR	**Alice Springs**	**23.34**	**165**	P		**P**		**13 36 42.2**	**-0.4**
	4.7nm,0.8s,mb3.9,baz=345,slow=11,SNR=56								
STKA	**Stephens Creek**	**33.45**	**158**	*eP*		**P**		**13 38 14.3**	**+1.1**
STKA	**Stephens Creek**	**33.45**	**158**	P		**P**		**13 38 13.4**	**+0.2**
	2.7nm,0.8s,mb4.2,baz=329,slow=11,SNR=5.4								
STKA				LR		LR		13 52 25.5	
	comp=Z,85nm,20.8s,baz=24,slow=37								
LZH	**Lanzhou**	**42.97**	**332**	*eP*		**P**		**13 39 34.0**	**+0.7**
LZH				AMB		AMB			
	comp=Z,16nm,1.1s,mb4.7								
LZH				AMB		AMB			
	comp=Z,62nm,4.3s								
GTA	**Gaotai**	**47.55**	**331**	*eP*		**P**		**13 40 10.4**	**+0.8**
GTA				AMB		AMB			
	comp=Z,5.0nm,1.0s,mb4.5								
JIRN	**Jiri**	**48.78**	**309**	*eP*		**P**		**13 40 19.7**	**+0.4**
GUN	**Gumba**	**49.14**	**309**	*eP*		**P**		**13 40 22.9**	**+0.8**
	comp=Z,26nm,0.8s,mb5.3								
KKN	**Kakani**	**49.55**	**309**	*eP*		**P**		**13 40 25.3**	**+0.1**
DMN	**Daman**	**49.60**	**308**	*eP*		**P**		**13 40 26.4**	**+0.8**
GKN	**Gorkha**	**50.15**	**309**	*eP*		**P**		**13 40 30.2**	**+0.4**
	comp=Z,19nm,0.9s,mb5.1								
KOLN	**Koldanda**	**50.86**	**308**	*eP*		**P**		**13 40 36.2**	**+1.0**
	comp=Z,26nm,0.7s,mb5.2								
DANN	**Dangsing**	**51.00**	**309**	*eP*		**P**		**13 40 37.2**	**+1.0**
	comp=Z,39nm,0.7s,mb5.4								
ULN	**Ulaanbaatar**	**51.86**	**343**	P		**P**		**13 40 42.7**	**+0.5**
	comp=Z,3.9nm,0.9s,mb4.3								
SONM	**Songino Array**	**52.03**	**342**	P		**P**		**13 40 43.0**	**-0.5**
	comp=Z,2.6nm,0.9s,mb4.2,baz=148,slow=9.3,SNR=9.9								
MK31	**Makanchi Array**	**61.86**	**327**	*eP*		**P**		**13 41 53.0**	**-0.3**
MKAR	**Makanchi Array**	**61.86**	**327**	P		**P**		**13 41 53.3**	**0.0**
	comp=Z,6.8nm,0.9s,mb4.8,baz=116,slow=8.2,SNR=19								
ZALV	**Zalesovo Beam**	**65.14**	**334**	P		**P**		**13 42 13.5**	**-1.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=122,slow=5.4,SNR=5.3								
ZALV	**Zalesovo Beam**	**65.14**	**334**	P		**P**		**13 42 13.5**	**-1.3**
KURK	**Kurchatov**	**66.12**	**328**	P		**P**		**13 42 20.5**	**-0.7**
	comp=Z,3.5nm,0.7s,mb4.5,baz=129,slow=5.9,SNR=16								
KURK	**Kurchatov**	**66.12**	**328**	P		**P**		**13 42 20.5**	**-0.7**
BVAR	**Borovoye Array**	**71.68**	**328**	P		**P**		**13 42 55.1**	**-0.7**
	comp=Z,1.6nm,0.8s,mb4.0,baz=141,slow=7.5,SNR=8.0								
BRVK	**Borovoye**	**71.75**	**328**	*eP*		**P**		**13 42 56.2**	**0.0**
	comp=Z,4.6nm,0.8s,mb4.5								
AKTK	**Aktyubinsk**	**77.81**	**322**	P		**P**		**13 43 30.9**	**-0.4**
AKTO	**Aktyubinsk**	**77.81**	**322**	P		**P**		**13 43 30.9**	**-0.4**
	comp=Z,3.0nm,1.0s,mb4.2,baz=85,slow=5.0,SNR=6.7								

IDC 23 13:38:34.2±7.1, 026N×10148E, h0km, mb3.0/2, mb1 3.3/2, mb1mx3.1/18, mbtmp3.0/2, Error ellipse: s-maj=292.7km s-min=108.2km az=50.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.93**	**124**	P		P		13 45 54.3	+0.6
	0.2nm,0.4s,baz=303,slow=9.2,SNR=3.5								
ASAR	**Alice Springs**	**39.48**	**129**	P		P		13 46 05.7	-0.8
	0.1nm,0.5s,baz=299,slow=7.7,SNR=4.8								
TXAR	**Lajitas Array**	**142.02**	**37**	PKP		PKPdf		13 58 09.0	-0.1
	0.1nm,0.5s,baz=221,slow=1.3,SNR=5.2								

**IDC 23 13:44:20.1±2.6, 164S×9949E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/20, mbtmp3.7/7, ML3.9/1,

	6.7nm,0.3s,baz=288,slow=18,SNR=6.7									
LPAZ					LR	LR	14 12 45.1			
	comp=Z,419nm,21.0s,baz=85,slow=49									
LPAZ	**La Paz**	**1.95**	**67**	*e*Pn	**Pn**	**14 11 39.9**	**+0.4**			
LPAZ				Sn	**Sn**	**14 12 09.4**	**+6.7**			
LPAZ				LR	LR	14 12 45.1				
LVC	**Limon Verde**	**5.63**	**170**	Pn	**Pn**	**14 12 29.2**	**-0.9**			
	1.2nm,0.3s,baz=308,slow=19,SNR=3.6									
LVC				Sn	**Sn**	**14 13 40.0**	**+6.5**			
	1.8nm,0.3s,baz=352,slow=15,SNR=3.2									
LVC	**Limon Verde**	**5.63**	**170**	*e*Pn	**Pn**	**14 12 29.6**	**-0.5**			
LVC				Sn	**Sn**	**14 13 40.0**	**+6.5**			
NNA	**Nana**	**8.32**	**306**	Pn	**Pn**	**14 13 02.8**	**-4.3**			
	5.6nm,0.3s,baz=105,slow=15,SNR=16									
NNA	**Nana**	**8.32**	**306**	*e*P	**Pn**	**14 13 04.4**	**-2.6**			
SIV	**San Ignacio**	**8.63**	**84**	Pn	**Pn**	**14 13 10.6**	**-0.7**			
	1.3nm,0.3s,baz=266,slow=12,SNR=21									
CPUP	**Villa Florida**	**14.96**	**130**	Pn	**Pn**	**14 14 38.4**	**+0.8**			
	0.2nm,0.3s,baz=337,slow=7.7,SNR=3.0									
PLCA	**Paso Flores**	**23.60**	**181**	P	**P**	**14 16 16.2**	**+0.2**			
	1.6nm,0.8s,mb3.5,baz=359,slow=13,SNR=3.0									
TORD	**Torodi Ar. Bea**	**76.89**	**72**	P	**P**	**14 22 57.1**	**-0.2**			
	0.7nm,0.9s,mb3.6,baz=258,slow=5.6,SNR=3.0									

IDC ***23*** *14:11:55.9±1.3, 1727S×6996W, h0km, mb3.7/3, mb1 3.9/6, mb1mx3.7/20, mbtmp3.7/6, ML3.6/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/31, Error ellipse: s-maj=27.2km s-min=24.3km az=37.0*

NEIC ***23*** *14:12:01.0±0.9, 1730S×6994W, h35km, Error ellipse: s-maj=20.5km s-min=15.0km az=68.0*

ISCJB ***23*** *14:12:02.2±0.9, 1734S±006×6994W±007, h66km±12km, mb3.6/3, Error ellipse: s-maj=10.9km s-min=9.5km az=142.4*

ISC 23 14:12:03.4±0.8,**1731S**±006×**6993W**±007,**h57**km±12km,**n9,** σ1§**28**/13,**mb3.7**/3,**Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res ISC
ARE	**Arequipa**	**1.72**	**299**	*e*S		**Sn**	**14 12 52.0**	**+0.1**
LPAZ	**La Paz**	**2.00**	**60**	Pn		**Pn**	**14 12 33.3**	**-1.4**
	6.7nm,0.3s,baz=238,slow=19,SNR=9.3							
LPAZ				Sn		**Sn**	**14 13 00.1**	**+1.5**
	9.1nm,0.3s,baz=295,slow=19,SNR=3.4							
LPAZ	**La Paz**	**2.00**	**60**	*e*Pn		**Pn**	**14 12 33.1**	**-1.7**
LPAZ				Sn		**Sn**	**14 13 00.1**	**+1.5**
LVC	**Limon Verde**	**5.36**	**170**	Pn		**Pn**	**14 13 19.1**	**-1.8**
	1.2nm,0.3s,baz=28,slow=11,SNR=2.6							
LVC				Sn		**Sn**	**14 14 23.1**	**+1.8**
	baz=171,slow=19,SNR=1.0							
LVC	**Limon Verde**	**5.36**	**170**	Pn		**Pn**	**14 13 18.3**	**-2.6**
LVC				Sn		**Sn**	**14 14 23.1**	**+1.8**
CPUP	**Villa Florida**	**14.74**	**130**	Pn		**Pn**	**14 15 28.3**	**-0.2**
	0.1nm,0.3s,baz=337,slow=13,SNR=2.2							
CPUP				LR		LR	14 21 05.2	
	comp=Z,51nm,21.9s,baz=153,slow=37							
TXAR	**Lajitas Array**	**56.66**	**325**	P		**P**	**14 21 40.9**	**-0.1**
	0.3nm,0.6s,mb3.5,baz=150,slow=8.1,SNR=4.9							
NVAR	**Mina Array Bea**	**71.62**	**322**	P		**P**	**14 23 20.2**	**+1.4**
	0.4nm,0.6s,mb3.5,baz=160,slow=4.7,SNR=3.7							
TORD	**Torodi Ar. Bea**	**76.90**	**72**	P		**P**	**14 23 49.0**	**-1.1**
	1.1nm,0.6s,mb4.0,baz=255,slow=6.2,SNR=8.2							

IDC ***23*** *14:13:36.2±2.8, 1380N×124.09E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=215.1km s-min=28.0km az=63.0*

ISCJB ***23*** *14:13:38.6±1.4, 137N±02×1240E±02, h33km, mb3.8/3, Error ellipse: s-maj=29.8km s-min=17.7km az=44.2*

ISC 23 14:13:40.9±1.4,**137N**±02×**1239E**±02,**h35**km,**n6,** σ1§**58**/6, **mb3.8**/3,**1C-1D,Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res ISC
BTM	**Bintulu**	**14.97**	**227**	⇑P		**Pn**	**14 17 10.6**	**+0.5**
UBT	**Ubonrachathani**	**18.39**	**277**	⇓P		**Pn**	**14 17 52.5**	**-0.8**
	417nm,0.8s							
WRA	**Warramunga Arr**	**34.97**	**163**	P		**P**	**14 20 29.5**	**-0.4**
	3.2nm,0.7s,mb4.4,baz=343,slow=10,SNR=25							
WB2	**Warramunga Arr**	**34.97**	**163**	*e*P		**P**	**14 20 28.2**	**-1.7**
ASAR	**Alice Springs**	**38.40**	**165**	P		**P**	**14 21 01.0**	**+1.9**
	0.2nm,0.3s,mb3.3,baz=347,slow=12,SNR=13							
MKAR	**Makanchi Array**	**47.93**	**322**	P		**P**	**14 22 16.4**	**+0.5**
	0.3nm,0.5s,mb3.6,baz=125,slow=7.5,SNR=3.7							

BJI ***23*** *14:13:41.8, 240S×9990E, h43km, mB5.6, mb5.6, Ms5.7, Msz5.5*

MOS ***23*** *14:13:41.9±1.1, 2.16S×9998E, h33km, mb5.9/91, MS5.2/74, Error ellipse: s-maj=26.0km s-min=13.2km az=100.9*

ISCJB ***23*** *14:13:42.6±0.1, 2.14S±002×9990E±002, h30km, mb5.5/216, MS5.3/242, Error ellipse: s-maj=3.7km s-min=2.5km az=27.1*

GCMT ***23*** *14:13:43.9±0.2, 2.45S×9962E, h37km, MW5.5/95, Moment Tensor Solution. s84,c154; s95,c166; Duration: 1§4 Moment tensor: Scale 10^17 Nm; Mrr 1.84±.04; Mθθ-1.08±.03; Mϕϕ-0.75±.04; Mrθ 1.38±.04; Mθϕ 1.12±.02; Mϕr-1.07±.05; Best double couple: Mo 2.61400×10^17 NP1:ϕs 314.00000°, δ 24.00000°, λ 94.00000°. NP2:ϕs 129.00000°, δ 66.00000°, λ 88.00000°. Principal axes: T 2.5110, Plg69.0000°, Azm35.0000°; N 0.2110, Plg2.0000°, Azm129.0000°; P -2.7170, Plg21.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***23*** *14:13:43.9±0.1, 2.14S×9994E, mb5.5/98, MS5.4/190, MW5.5 Error ellipse: s-maj=4.6km s-min=3.2km az=42.0, Moment Tensor Solution. s41 Moment tensor: Scale 10^17 Nm; Mrr 1.53; Mθθ-0.54; Mϕϕ-0.99; Mrθ 1.16; Mθϕ 0.80; Mϕr-0.48; Best double couple: Mo 2.00000×10^17 NP1: ϕs 125.00000°, δ 65.00000°, λ 74.00000°. NP2: ϕs 339.00000°, δ 30.00000°, λ 120.00000°. Principal axes: T 2.0500, Plg66.0000°, Azm5.0000°; N -0.1000, Plg14.0000°, Azm132.0000°; P -1.9500, Plg18.0000°, Azm226.0000°;*

NEIC Felt [IV] at Padang and Painan; [III] at Mukomuko and Padangpanjang, Sumatra.

SZGRF ***23*** *14:13:44.9, 238S×9966E, h33km, mb5.4, MS5.1, Southern Sumatera, Indonesia*

DJA ***23*** *14:13:46, 2.19S×99.74E, h49km, Mw5.7/29*

IDC ***23*** *14:13:47.7±0.6, 2.13S×10007E, h62km±5km, mb5.2/35, mb1 5.2/36, mb1mx5.2/36, mbtmp5.2/36, MS5.1/34, Ms1 5.2/34, ms1mx5.0/42, Error ellipse: s-maj=10.6km s-min=6.2km az=47.0*

ISC 23 14:13:44.7±0.1,**216S**±002×**9987E**±002,**h33**km, **h33**km±1.5km**:pP-P,n872,** σ1§**05**/684,**mb5.5**/216,**MS5.3**/242, **62C-39D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res ISC
KSI	**Kapahiang**	**3.10**	**119**	P		**Pn**	**14 14 31.7**	**+0.5**
	0.0nm,0.0s							
JMBI	**JAMBI**	**3.81**	**82**	P		**Pn**	**14 14 43.3**	**+2.3**
	0.0nm,0.0s							
TRSI	**Tarutung**	**4.26**	**348**	P		**Pn**	**14 14 49.1**	**+1.9**
	0.0nm,0.0s							
DSRI	**Dabo**	**4.99**	**71**	P		**Pn**	**14 14 58.9**	**+1.5**
	0.0nm,0.0s							
KGM	**Kluang**	**5.39**	**40**	⇓P		**Pn**	**14 15 05.9**	**+3.0**
MYKOM	**Kota Tinggi**	**5.59**	**45**	⇑P		**Pn**	**14 15 08.2**	**+2.7**
FRIM	**Kepong**	**5.64**	**18**	⇑P		**Pn**	**14 15 08.7**	**+2.4**
TSI	**Tuntungan**	**5.77**	**347**	P		**Pn**	**14 15 08.2**	**+0.1**
	3μm,0.9s							
PPBI	**Pangkal Pinang**	**6.26**	**90**	P		**Pn**	**14 15 18.2**	**+3.4**
	280nm,0.9s							
IPM	**Ipoh**	**6.70**	**10**	⇑P		**Pn**	**14 15 23.8**	**+3.0**
SBJI	**Serang**	**7.38**	**122**	P		**Pn**	**14 15 33.2**	**+3.1**
	915nm,1.0s							
TPI	**Tanjungpandan**	**7.80**	**95**	P		**Pn**	**14 15 39.2**	**+3.3**
	335nm,0.8s							
TPI	**Tanjungpandan**	**7.80**	**95**	⇑*e*P		**Pn**	**14 15 37.0**	**+1.1**
TNG	**Tangerang**	**7.84**	**121**	P		**Pn**	**14 15 40.6**	**+4.1**
	2μm,1.1s							
KTGM	**Kuala Trenggan**	**8.12**	**24**	⇓P		**Pn**	**14 15 43.2**	**+2.8**
DBJI	**Dramaga**	**8.13**	**123**	P		**Pn**	**14 15 40.8**	**+0.4**
	725nm,1.2s							
CBJI	**Citeko**	**8.14**	**122**	P		**Pn**	**14 15 43.7**	**+3.1**
	3μm,0.8s							
SKJI	**Sukabumi**	**8.22**	**126**	P		**Pn**	**14 15 42.3**	**+0.6**
	1μm,0.6s							
BSI	**Banda Aceh**	**8.87**	**329**	P		**Pn**	**14 15 49.0**	**-1.7**
	245nm,1.2s							
LEM	**Lembang**	**9.01**	**121**	P		**Pn**	**14 15 54.5**	**+2.0**
	986nm,1.0s							
SNG	**Songkhla**	**9.31**	**5**	P		**Pn**	**14 15 55.0**	**-1.6**
	760nm,1.0s							
JCJI	**Jatiwangi**	**9.41**	**117**	P		**Pn**	**14 16 02.8**	**+4.7**
	760nm,0.9s							
XMIS	**Christmas Isla**	**10.06**	**145**	*e*P		**Pn**	**14 15 59.2**	**-7.8**
XMIS				*e*S		**Sn**	**14 17 42.5**	**-16**
COCO	**West Island**	**10.41**	**197**	*e*P		**Pn**	**14 16 09.9**	**-1.8**
	187nm,0.9s							
KSM	**Kuching**	**11.04**	**71**	⇓P		**Pn**	**14 16 27.0**	**+6.6**
KSM	**Kuching**	**11.04**	**71**	*e*Pn		**Pn**	**14 16 21.8**	**+1.4**
BJII	**Banjamegara**	**11.07**	**118**	P		**Pn**	**14 16 22.1**	**+1.4**
	260nm,1.3s							
PBKI	**Pangkalan Bun**	**11.80**	**93**	P			14 16 41.6	
	534nm,1.2s							
STKI	**Sintang**	**11.81**	**79**	P		**Pn**	**14 16 35.8**	**+4.8**
	239nm,1.3s							
SJI	**Sawahan**	**13.08**	**115**	P		**Pn**	**14 16 46.9**	**-1.4**
	492nm,0.7s							
SBUM	**Sibu**	**13.17**	**70**	⇓P		**Pn**	**14 16 54.1**	**+4.6**
TRT	**Tretes**	**13.85**	**114**	⇓*e*P		**Pn**	**14 17 02.0**	**+3.1**
PLKI	**Palangkaraya**	**14.06**	**91**	P		**Pn**	**14 17 10.2**	**+8.4**
	1μm,1.0s							
NNT	**Nongplab**	**14.66**	**359**	P		**Pn**	**14 17 10.4**	**+0.6**
BBKI	**Banjar Baru**	**15.01**	**95**	P		**Pn**	**14 17 17.2**	**+2.7**
	578nm,0.9s							
PBA	**Port Blair**	**15.45**	**333**	*ex*		x	14 17 40.9	
PBA				*ex*		x	14 22 13.5	
NBBI	**Negara**	**15.92**	**113**	P		**Pn**	**14 17 32.7**	**+6.3**
	363nm,1.4s							
IGBI	**Denpasar**	**16.57**	**114**	P		**Pn**	**14 17 39.6**	**+4.9**
	358nm,1.1s							
DNP	**Denpasar**	**16.58**	**114**	P		**Pn**	**14 17 45.1**	**+10**
	437nm,0.9s							
KHKI	**Kahang-Kahang**	**16.83**	**112**	P		**Pn**	**14 17 39.9**	**+1.9**
	264nm,0.8s							
SMKI	**Samarinda**	**17.42**	**85**	P		**Pn**	**14 17 48.4**	**+3.1**
	369nm,0.9s							
NST	**Nakhon Sawan**	**17.72**	**1**	P		**Pn**	**14 17 47.5**	**-1.5**
KKM	**Kota Kinabalu**	**18.24**	**63**	⇓P		**Pn**	**14 17 57.2**	**+1.7**
KKM	**Kota Kinabalu**	**18.24**	**63**	*e*P		**Pn**	**14 17 55.8**	**+0.3**
KKTK	**Khon Kaen**	**18.61**	**9**	P		**Pn**	**14 17 58.0**	**-1.9**
SDKM	**Sandakan**	**18.96**	**66**	⇓P		**Pn**	**14 18 05.1**	**+0.9**
TSM	**Tawau**	**19.10**	**70**	⇓P		**Pn**	**14 18 06.3**	**+0.4**
KDM	**Kudat**	**19.18**	**62**	⇑P		**Pn**	**14 18 07.5**	**+0.7**
BDT	**Bhumibol Dam**	**19.30**	**357**	⇑P		**Pn**	**14 18 06.2**	**-2.0**
	58nm,0.9s							
MKS	**Makassar**	**19.79**	**99**	⇑*e*P		**Pn**	**14 18 13.8**	**-0.3**
MKS				*e*S		**Sn**	**14 21 47.5**	**-8.3**
MYLDM	**Lahad Datu**	**19.99**	**69**	⇑P		**Pn**	**14 18 17.3**	**+0.9**
PCI	**Palu**	**20.00**	**87**	P		**Pn**	**14 18 15.3**	**-1.3**
	728nm,1.3s							
PCI	**Palu**	**20.00**	**87**	⇓*e*P		**Pn**	**14 18 15.0**	**-1.6**
KAPI	**Kappang**	**20.04**	**99**	P		**P**	**14 18 13.8**	**-1.4**
	2μm,0.7s,SNR=40							
KAPI	**Kappang**	**20.04**	**99**	P		**P**	**14 18 13.9**	**-1.3**
	6.2nm,0.3s,baz=284,slow=8.7,SNR=70							
KAPI				LR		LR	14 26 53.4	
	comp=Z,7μm,18.3s,MS5.1,baz=45,slow=40							
KAPI	**Kappang**	**20.04**	**99**	*e*P		**P**	**14 18 13.2**	**-1.9**
	242nm,0.8s							
CM31	**Chiang Mai Arr**	**20.51**	**357**	PFAKE			14 18 30.0	+10
CM31				LR		LR		
	comp=Z,10μm,20.0s,MS5.2							
CMAR	**Chiang Mai Arr**	**20.51**	**357**	P		**P**	**14 18 19.3**	**-0.8**
	comp=Z,185nm,1.0s,baz=183,slow=8.4,SNR=247							
CMAR				S		**S**	**14 22 10.7**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=326,slow=33,SNR=2.2							
CMAR				PcP		PcP	14 22 30.8	-0.4
	comp=Z,11nm,0.8s,baz=218,slow=3.4,SNR=7.9							
CMAR				LR		LR	14 26 39.9	
	comp=Z,9μm,19.4s,MS5.1,baz=320,slow=38							
CMAR	**Chiang Mai Arr**	**20.51**	**357**	P		**P**	**14 18 19.3**	**-0.9**
CMAR				S		**S**	**14 22 10.7**	**+2.7**
CMAR							14 22 30.8	
CMAR				pmax		pmax		
	comp=Z,185nm,1.0s							
CMAR				pmax		pmax		
	comp=Z,11nm,0.8s							
CMAR				MLR		MLR		
	comp=Z,9μm,19.4s							
CMAR	**Chiang Mai Arr**	**20.51**	**357**	P		**P**	**14 18 19.3**	**-0.8**
CMAR				S		**S**	**14 22 10.7**	**+2.6**
CMAR				PcP		PcP	14 22 30.8	-0.4
CMAR				LR		LR	14 26 39.9	
NANT	**Nan**	**20.84**	**2**	⇑P		**P**	**14 18 20.0**	**-3.8**
	comp=Z,1μm,1.0s							
CHG	**Chiang Mai**	**20.86**	**358**	⇓P		**P**	**14 18 22.9**	**-1.1**
	comp=Z,106nm,0.9s							
CHTO	**Chiang Mai**	**20.86**	**358**	*e*P		**P**	**14 18 22.0**	**-2.0**
	comp=Z,95nm,0.9s							
CHTO				LR		LR		
	comp=Z,9μm,20.0s,MS5.1							
BATP	**Bataraza**	**20.93**	**58**	*e*P		**P**	**14 18 25.1**	**+0.4**
WSI	**Waingapu**	**21.63**	**111**	⇑*e*P		**P**	**14 18 28.0**	**-4.3**
WSI				*e*S		**S**	**14 22 32.5**	**+2.2**
WSI	**Waingapu**	**21.63**	**111**	⇑*e*P		**P**	**14 18 28.0**	**-4.3**
WSI				*e*S		**S**	**14 22 32.5**	**+2.2**
KDI	**Kendari**	**22.79**	**95**	P		**P**	**14 18 45.5**	**+0.8**
	comp=Z,234nm,1.0s,mb5.6							
KDI	**Kendari**	**22.79**	**95**	⇑*e*P		**P**	**14 18 43.5**	**-1.2**
KDI				*e*S		**S**	**14 22 45.9**	**-6.1**
QIZ	**Qiongzhong**	**23.23**	**25**	P		**P**	**14 18 48.8**	**-0.4**
QIZ				S		**S**	**14 23 00.8**	**+1.8**
QIZ				AMB		AMB		
	comp=Z,171nm,0.8s,mb5.5							
QIZ				AMB		AMB		
	comp=Z,1μm,5.8s							
QIZ				LR		LR		
	comp=N,8μm,16.4s							
QIZ				LR		LR		
	comp=Z,11μm,17.6s,MS5.3							
QIZ	**Qiongzhong**	**23.23**	**25**	*e*P		**P**	**14 18 48.6**	**-0.7**
	comp=Z,134nm,0.8s,mb5.4							
QIZ				LR		LR		
	comp=Z,9μm,19.0s,MS5.2							
ENPP	**El Nido**	**23.55**	**55**	*e*P		**P**	**14 18 51.5**	**-0.9**
BUSP	**Coron**	**24.62**	**55**	*e*P		**P**	**14 18 59.8**	**-2.4**
MDRS	**Chennai**	**24.66**	**308**	*e*P		**P**	**14 19 03.6**	**+0.9**
MDRS				*ex*		x	14 23 33.0	
CUYO	**Cuyo Island**	**24.69**	**58**	*e*P		**P**	**14 19 02.3**	**-0.7**
BATI	**Baumata**	**24.95**	**110**	P		**P**	**14 19 02.4**	**-2.9**
	comp=Z,122nm,0.8s,mb5.5							
BATI	**Baumata**	**24.95**	**110**	P		**P**	**14 19 02.2**	**-3.1**
	comp=Z,120nm,0.7s,mb5.5,baz=278,slow=2.5,SNR=31							
BATI				S		**S**	**14 23 25.1**	**-1.9**
	comp=Z,49nm,0.8s,baz=18,slow=17,SNR=6.7							
TRD	**Trivandrum**	**25.18**	**295**	*e*P		**P**	**14 19 06.9**	**-0.5**
MNI	**Manado**	**25.22**	**82**	P		**P**	**14 19 10.1**	**+2.3**
	comp=Z,2μm,1.4s,mb6.5							
MNI	**Manado**	**25.22**	**82**	⇓*e*P		**P**	**14 19 09.5**	**+1.7**
KOD	**Kodaikanal**	**25.48**	**299**	*e*P		**P**	**14 19 12.6**	**+2.5**
KOD				AMb		AMB	14 19 27.9	
	comp=Z,54nm,0.8s,mb5.1							
VIS	**Vishakhapatnam**	**25.62**	**321**	*e*P		**P**	**14 19 12.3**	**+1.0**
VIS				AMb		AMB	14 19 16.7	
	comp=Z,143nm,1.4s,mb5.3							
LUBP	**Lubang**	**25.64**	**51**	*e*P		**P**	**14 19 11.2**	**-0.3**
DCPH	**Dipolog City**	**25.73**	**65**	⇓*e*P		**P**	**14 19 13.1**	**+0.7**
GUIM	**Jordan**	**25.93**	**60**	*e*P		**P**	**14 19 07.8**	**-6.4**
KALP	**Kalibo**	**26.23**	**58**	*e*P		**P**	**14 19 14.0**	**-2.9**
BWNR	**Bhubaneshwar**	**26.24**	**329**	*e*P		**P**	**14 19 17.0**	**+0.1**
BWNR				*ex*		x	14 23 26.0	
OTRP	**Odiongan**	**26.31**	**56**	*e*P		**P**	**14 19 16.9**	**-0.7**
RCP	**Roxas**	**26.51**	**59**	⇑*e*P		**P**	**14 19 19.5**	**0.0**
TBP	**Tagbilaran**	**26.64**	**63**	*e*P		**P**	**14 19 21.6**	**+0.9**
LLP	**Lapu-Lapu**	**27.00**	**62**	*e*P		**P**	**14 19 22.7**	**-1.2**
CAL	**Calcutta**	**27.01**	**336**	*e*P		**P**	**14 19 23.2**	**-0.7**
CAL				*e*S		**S**	**14 24 02.6**	**+3.2**
MBWA	**Marble Bar**	**27.04**	**136**	*e*P		**P**	**14 19 22.9**	**-1.2**
	comp=Z,38nm,0.7s,mb5.0							
MBWA				LR		LR		
	comp=Z,6μm,21.0s,MS5.2							
DAV	**Davao City (W)**	**27.25**	**70**	LR		LR	14 31 33.1	
	comp=Z,5μm,20.1s,MS5.1,baz=44,slow=39							
DAV	**Davao City (W)**	**27.25**	**70**	⇑*i*P		**P**	**14 19 23.2**	**-2.9**
KMI	**Kunming**	**27.27**	**6**	P		**P**	**14 19 27.3**	**+1.2**
KMI				PP			14 20 15.6	
KMI				PPP			14 20 27.8	
KMI				PCP		PcP	14 22 47.3	+1.8
KMI				S		**S**	**14 24 02.3**	**-1.0**
KMI				SS			14 25 22.0	
KMI				SSS			14 25 42.3	
KMI				AMB		AMB		
	comp=Z,69nm,1.0s,mb5.1							
KMI				AMB		AMB		
	comp=Z,518nm,4.3s							
KMI				LR		LR		
	comp=N,5μm,16.6s,MS5.4							
KMI				LR		LR		
	comp=E,6μm,12.7s,MS5.4							
KMI				LR		LR		
	comp=Z,7μm,15.9s,MS5.3							
IMP	**Imphal**	**27.40**	**348**	*i* x		x	14 19 22.0	
IMP				*ex*		x	14 24 05.0	
PCPH	**Palayan**	**27.40**	**49**	⇓*e*P		**P**	**14 19 26.5**	**-0.9**
TNE	**Ternate**	**27.65**	**84**	⇓*e*P		**P**	**14 19 31.0**	**+1.3**
LBMI	**Labuha**	**27.66**	**87**	P		**P**	**14 19 29.0**	**-0.8**
	comp=Z,508nm,0.8s,mb6.2							
MSLP	**Maasin**	**27.72**	**63**	*e*P		**P**	**14 19 29.7**	**-0.6**
DGAR	**Diego Garcia**	**27.81**	**258**	PFAKE			14 19 40.0	+8.9
DGAR				LR		LR		
	comp=Z,5μm,21.0s,MS5.1							
BALP	**Baler**	**27.88**	**50**	*e*P		**P**	**14 19 31.5**	**-0.2**
PLP	**Palo**	**28.27**	**62**	⇓*e*P		**P**	**14 19 35.6**	**+0.4**
ABRA	**Dolores**	**28.45**	**45**	*e*P		**P**	**14 19 36.0**	**-0.8**
HYB	**Hyderabad**	**28.64**	**314**	*e*P		**P**	**14 19 39.0**	**+0.5**
HYB				*e*		pP	14 19 51.0	+3.0
HYB				*e*S		**S**	**14 24 28.0**	**+2.8**
HYB	**Hyderabad**	**28.64**	**314**	*i* P		**P**	**14 19 39.0**	**+0.5**
HYB				*e*		pP	14 19 51.0	+3.0
HYB				*e*S		**S**	**14 24 28.0**	**+2.8**
HYB				LR		LR	14 32 04.0	
	comp=Z,5.1nm,18.0s							
HYB	**Hyderabad**	**28.64**	**314**	*e*P		**P**	**14 19 39.0**	**+0.5**
HYB				*e*		pP	14 19 51.0	+3.0
HYB				*e*S		**S**	**14 24 28.0**	**+2.8**
HYB				*e*			14 32 04.0	
PVCP	**Virac**	**28.73**	**56**	*e*P		**P**	**14 19 38.7**	**-0.5**
CAUP	**Cauayan**	**28.80**	**48**	*e*P		**P**	**14 19 36.8**	**-3.2**
APYP	**Conner**	**28.97**	**46**	*e*P		**P**	**14 19 40.6**	**-0.8**
GYA	**Guiyang**	**29.20**	**13**	⇑*i*P		**P**	**14 19 42.5**	**-0.8**
GYA				PP		PP	14 20 38.6	-11
GYA				PPP			14 20 51.9	
GYA				S		**S**	**14 24 33.5**	**-0.3**
GYA				SS		SS	14 26 06.4	-32
GYA				SCP		ScP	14 26 28.6	-1.1
GYA				SCS		ScS	14 30 21.8	-2.1
GYA				AMB		AMB		
	comp=Z,110nm,1.0s,mb5.5							
GYA				AMB		AMB		
	comp=Z,510nm,4.5s							
GYA				LR		LR		
	comp=N,13μm,15.6s,MS5.8							
GYA				LR		LR		
	comp=E,12μm,14.4s,MS5.8							
GYA				LR		LR		
	comp=Z,15μm,15.2s,MS5.7							
FITZ	**Fitzroy Crossi**	**29.83**	**124**	*e*P		**P**	**14 19 46.6**	**-2.4**
FITZ				*e*S		**S**	**14 24 38.2**	**-5.7**
FITZ	**Fitzroy Crossi**	**29.83**	**124**	P		**P**	**14 19 47.5**	**-1.5**
	comp=Z,34nm,0.9s,mb5.1,baz=289,slow=6.0,SNR=65							
FITZ				S		**S**	**14 24 38.1**	**-5.8**
	comp=Z,2.1nm,0.7s,baz=120,slow=24,SNR=3.1							
NGP	**Nagpur**	**30.86**	**320**	*e*P		**P**	**14 19 57.1**	**-1.0**
NGP				AMb		AMB	14 19 58.2	
	comp=Z,36nm,1.2s,mb5.1							
ODAN	**Odare**	**31.27**	**338**	*e*P		**P**	**14 20 02.7**	**+1.1**
	comp=Z,346nm,0.8s,mb6.2							
SWI	**Sorong**	**31.40**	**88**	P		**P**	**14 20 01.6**	**-1.4**
	comp=Z,417nm,0.9s,mb6.3							
RAMN	**Ramite**	**31.65**	**337**	*e*P		**P**	**14 20 06.8**	**+1.9**
	comp=Z,269nm,0.8s,mb6.1							
KAD	**Karad**	**31.88**	**308**	*e*P		**P**	**14 20 08.2**	**+1.1**
KAD				AMb		AMB	14 20 14.5	
	comp=Z,50nm,1.7s,mb5.1							
AKL	**Akola**	**31.90**	**317**	*ex*		x	14 20 22.3	
JIRN	**Jiri**	**32.44**	**337**	*e*P		**P**	**14 20 13.1**	**+1.2**
	comp=Z,472nm,0.8s,mb6.4							
QZH	**Quanzhou**	**32.49**	**33**	P		**P**	**14 20 11.0**	**-1.4**
QZH				S		**S**	**14 25 19.0**	**-6.4**
QZH				AMB		AMB		
	comp=Z,150nm,1.0s,mb5.8							
QZH				LR		LR		
	comp=N,13μm,16.6s,MS5.9							
QZH				LR		LR		
	comp=E,10μm,12.9s,MS5.9							
QZH				LR		LR		
	comp=Z,18μm,16.6s,MS5.8							
PKIN	**Phulchoki**	**32.69**	**336**	*e*P		**P**	**14 20 14.9**	**+0.8**
LSA	**Lhasa**	**32.76**	**346**	P

WHN Wuhan 35.33 22 P **P** **14 20 36.3 -0.7**
WHN PP PP 14 21 55.5 -2.2
WHN LR LR
comp=N,24µm,16.7s,MS6.1
WHN LR LR
comp=E,11µm,13.8s,MS6.1
WHN LR LR
comp=Z,30µm,16.2s,MS6.1
PTH Pithoragarh 36.72 331 *e*P **P** **14 20 49.9 +1.0**
PTH *e*S **S** **14 26 31.9 +1.5**
XAN Xi'an 37.00 13 P **P** **14 20 49.8 -1.4**
XAN AP pP 14 20 58.8 -2.1
XAN XP sP 14 21 03.5 -1.4
XAN S **S** **14 26 27.9 -6.8**
XAN SS SS 14 29 06.5 -11
XAN AMB AMB
comp=Z,104nm,0.7s,mb5.8
XAN AMB AMB
comp=Z,167nm,6.3s
XAN LR LR
comp=N,5µm,15.1s,MS5.5
XAN LR LR
comp=E,5µm,16.5s,MS5.5
XAN LR LR
comp=Z,6µm,16.9s,MS5.5
AJM Ajmer 37.48 321 *e*P **P** **14 20 55.6 +0.3**
AJM AMb AMB 14 20 58.2
comp=Z,52nm,0.8s,mb5.4
NDI New Delhi 37.59 326 *e*P **P** **14 20 54.5 -1.8**
WRA Warramunga Arr 38.02 120 P **P** **14 20 58.3 -1.9**
comp=Z,194nm,0.8s,mb5.9,baz=296,slow=9.5,SNR=430
WRA PcP PcP 14 23 15.7 +0.3
comp=Z,16nm,0.8s,baz=307,slow=2.5,SNR=4.6
WRA S **S** **14 26 45.7 -4.9**
comp=Z,17nm,1.0s,baz=295,slow=16,SNR=8.2
WRA LR LR 14 38 45.6
comp=Z,3µm,20.5s,MS5.0,baz=320,slow=40
WRA Warramunga Arr 38.02 120 P **P** **14 20 58.3 -1.8**
WRA 14 23 15.7
WRA S **S** **14 26 45.7 -4.9**
WRA pmax pmax
comp=Z,194nm,0.8s
WRA smax
comp=N,17nm,1.0s
WRA MLR MLR
comp=Z,3µm,20.5s
WRAB Tennant Creek 38.03 120 P **P** **14 20 58.0 -2.2**
comp=Z,2µm,0.7s
WRAB Tennant Creek 38.03 120 P **P** **14 20 58.6 -1.6**
WRAB pmax pmax
comp=Z,230nm,0.8s,mb6.0
WRAB Tennant Creek 38.03 120 *e*P **P** **14 20 58.4 -1.8**
comp=Z,233nm,0.8s,mb6.0
WRAB LR LR
comp=Z,3µm,20.0s,MS5.2
WB2 Warramunga Arr 38.03 120 *e*P **P** **14 20 57.6 -2.6**
WB2 *e*S **S** **14 26 44.8 -6.0**
LZH Lanzhou 38.23 5 ⇑P **P** **14 21 00.8 -0.8**
LZH AP pP 14 21 10.8 -0.5
LZH XP sP 14 21 14.6 -0.7
LZH PP PP 14 22 35.0 +5.5
LZH PCP PcP 14 23 14.1 -1.5
LZH S **S** **14 26 54.0 +0.8**
LZH XS sS 14 27 09.3 +0.1
LZH SS SS 14 29 33.5 -8.3
LZH AMB AMB
comp=Z,59nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,498nm,4.2s
LZH LR LR
comp=N,5µm,13.7s
LZH LR LR
comp=Z,7µm,15.3s,MS5.6
DDI Dehra Dun 38.43 329 *e*P **P** **14 21 02.9 -0.5**
DDI *ex* x 14 27 28.8
NJ2 Nanjing 38.50 26 *e*P **P** **14 21 03.3 -0.6**
NJ2 S **S** **14 27 00.0 +2.6**
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
NJ2 AMB AMB
comp=Z,250nm,3.9s
NJ2 LR LR
comp=N,2µm,24.4s,MS5.3
NJ2 LR LR
comp=E,5µm,23.4s,MS5.3
NJ2 LR LR
comp=Z,5µm,23.4s,MS5.3
SSE Sheshan 38.80 30 P **P** **14 21 07.8 +1.3**
SSE PP PP 14 22 36.3 +0.5
SSE S **S** **14 27 04.8 +2.8**
SSE AMB AMB
comp=Z,83nm,1.1s,mb5.4
SSE AMB AMB
comp=Z,480nm,3.9s
SSE LR LR
comp=N,3µm,18.3s,MS5.5
SSE LR LR
comp=E,5µm,18.2s,MS5.5
SSE LR LR
comp=Z,6µm,14.1s,MS5.5
FORT Forrest 39.00 140 *e*P **P** **14 21 08.4 +0.2**
ASAR Alice Springs 39.26 126 P **P** **14 21 10.2 -0.3**
comp=Z,66nm,0.8s,mb5.4,baz=305,slow=7.9,SNR=355
ASAR PcP PcP 14 23 19.9 +0.8
comp=Z,28nm,0.8s,baz=309,slow=2.2,SNR=9.7
ASAR S **S** **14 27 04.5 -4.7**
comp=Z,11nm,1.0s,baz=296,slow=17,SNR=10
ASAR Alice Springs 39.26 126 P **P** **14 21 10.2 -0.3**
ASAR 14 23 20.0
ASAR S **S** **14 27 04.5 -4.7**
ASAR pmax pmax
comp=Z,66nm,0.8s
ASAR smax
comp=N,11nm,1.0s
SMLA Simla 39.53 329 *i* P **P** **14 21 11.9 -0.7**
comp=Z,309nm,0.5s,mb6.3
SMLA *i* x x 14 27 29.5
JOW Kunigami 39.77 42 P **P** **14 21 14.3 -0.3**
comp=Z,46nm,0.5s,mb5.5,baz=216,slow=7.9,SNR=30
JOW LR LR 14 37 26.7
comp=Z,1µm,20.4s,MS4.8,baz=331,slow=36
SDNR Sundarnagar 39.93 329 *e*P **P** **14 21 15.4 -0.5**
JAY Jayapura 40.80 91 P **P** **14 21 30.5 +7.1**
comp=Z,323nm,0.3s,mb6.4
DLH Dalhousie 41.27 329 *e*P **P** **14 21 26.0 -1.0**
THN Thein Dam 41.32 328 *e*P **P** **14 21 25.7 -1.6**
THN *ex* x 14 27 58.6
TIY Taiyuan 41.35 15 *e*P **P** **14 21 27.9 +0.4**
TIY S **S** **14 27 41.3 +1.4**
TIY LR LR
comp=N,2µm,12.0s,MS5.6
TIY LR LR
comp=E,4µm,12.7s,MS5.6
TIY LR LR
comp=Z,5µm,14.5s,MS5.5
GTA Gaotai 41.37 360 *e*P **P** **14 21 27.3 -0.3**
GTA PP PP 14 23 06.8 +3.2
GTA PCP PcP 14 23 26.8 +1.3
GTA SCP ScP 14 27 14.3 +1.0
GTA S **S** **14 27 41.5 +1.3**
GTA SS SS 14 30 42.3 -2.7
GTA SCS ScS 14 31 28.8 -0.4
GTA AMB AMB
comp=Z,38nm,1.6s,mb4.8
GTA AMB AMB
comp=Z,674nm,4.5s
GTA LR LR
comp=N,3µm,17.4s,MS5.5
GTA LR LR
comp=E,5µm,15.3s,MS5.5
GTA LR LR
comp=Z,5µm,15.6s,MS5.5
TIA Tai'an 41.43 21 *e*P **P** **14 21 27.0 -1.2**
TIA S **S** **14 27 44.5 +3.3**
TIA LR LR
comp=N,9µm,14.0s,MS5.8
TIA LR LR
comp=E,5µm,14.0s,MS5.8
BTO Baotou 43.56 11 *e*P **P** **14 21 44.5 -0.9**
HHC Hu-ho-hao-te 44.12 13 ⇑P **P** **14 21 49.9 0.0**
HHC PP PP 14 23 34.3 +1.1
HHC SCP ScP 14 27 24.4 +0.1
HHC PCS PcS 14 27 26.1 -1.6
HHC S **S** **14 28 22.8 +2.3**
HHC SS SS 14 31 33.6 -5.4
HHC SCS ScS 14 31 45.0 -1.2
HHC AMB AMB
comp=Z,30nm,0.7s,mb5.1
HHC AMB AMB
comp=Z,631nm,6.5s
HHC LR LR
comp=N,5µm,14.8s,MS5.7
HHC LR LR
comp=E,5µm,14.5s,MS5.7
HHC LR LR
comp=Z,5µm,14.2s,MS5.6
COEN Coen 44.36 108 *e*P **P** **14 21 50.0 -2.3**
comp=Z,15nm,1.2s,mb4.6
MSEY Mahe Island 44.38 266 PFAKE 14 22 00.0 +7.5
MSEY LR LR
comp=Z,2µm,21.0s,MS5.1
BJT Baijiatuau 44.55 18 *e*P **P** **14 21 53.7 +0.3**
BJT pmax pmax
comp=Z,136nm,1.1s
BJT MLR MLR
comp=Z,3µm,19.0s
BJT Baijiatuau 44.55 18 *e*P **P** **14 21 53.7 +0.3**
comp=Z,136nm,1.1s,mb5.7
BJT LR LR
comp=Z,3µm,19.0s,MS5.2
BJI Beijing 44.58 18 P **P** **14 21 53.8 +0.2**
BJI PP PP 14 23 42.3 +4.2
BJI S **S** **14 28 27.8 +0.5**
BJI AMB AMB
comp=Z,11nm,1.0s,mb4.6
BJI AMB AMB
comp=Z,1µm,4.5s
BJI LR LR
comp=N,7µm,15.2s,MS5.7
BJI LR LR
comp=E,2µm,13.6s,MS5.7
BJI LR LR
comp=Z,5µm,17.1s,MS5.5
DL2 Dalian 45.52 24 ⇑*i*P **P** **14 22 00.8 -0.3**
DL2 PP PP 14 23 48.0 -0.1
DL2 SCP ScP 14 27 30.8 +0.7
DL2 S **S** **14 28 41.1 +0.2**
DL2 AMB AMB
comp=Z,70nm,0.9s,mb5.6
DL2 AMB AMB
comp=Z,570nm,4.4s
DL2 LR LR
comp=N,2µm,17.3s,MS5.2
DL2 LR LR
comp=E,2µm,14.3s,MS5.2
DL2 LR LR
comp=Z,2µm,18.1s,MS5.1
KBL Kabul 46.59 324 *e*P **P** **14 22 07.8 -1.8**
KBL pmax pmax
comp=Z,24nm,0.6s,mb5.3
KBL Kabul 46.59 324 *e*P **P** **14 22 07.8 -1.9**
comp=Z,24nm,0.6s,mb5.3
INCN Inchon 46.60 30 *e*P **P** **14 22 08.5 -1.2**
comp=Z,41nm,0.7s,mb5.5
INCN LR LR
comp=Z,3µm,19.0s,MS5.2
KSH Kashi 46.92 335 P **P** **14 22 13.1 +0.9**
KSH *e*PCP PcP 14 23 45.1 +0.6
KSH *e*PP PP 14 24 01.1 -1.8
KSH *e*PPP 14 24 47.1
KSH *e*SCP ScP 14 27 36.1 +0.1
KSH *e*PCS PcS 14 27 39.0 -0.4
KSH *e*S **S** **14 29 01.6 +0.5**
KSH *e*SCS ScS 14 32 03.0 -1.3
KSH *e*SS SS 14 32 19.0 -9.3
KSH LR LR
comp=N,2µm,8.4s
KSH LR LR
comp=E,2µm,8.6s
KSH LR LR
comp=Z,4µm,16.1s,MS5.5
WMQ Urumqi 47.06 348 P **P** **14 22 14.1 +0.9**
WMQ PCP PcP 14 23 46.0 +1.1
WMQ PP PP 14 24 05.0 +0.8
WMQ S **S** **14 29 05.0 +2.1**
WMQ SCS ScS 14 32 05.0 0.0
WMQ SS SS 14 32 26.0 -4.4
WMQ AMB AMB
comp=Z,595nm,0.9s,mb6.5
WMQ AMB AMB
comp=Z,2µm,3.8s
WMQ LR LR
comp=N,3µm,17.5s,MS5.5
WMQ LR LR
comp=E,4µm,16.4s,MS5.5
WMQ LR LR
comp=Z,3µm,27.8s
KSRS Korea Array 47.22 31 P **P** **14 22 14.0 -0.5**
comp=Z,109nm,0.7s,mb5.9,baz=223,slow=7.9,SNR=310
KSRS PcP PcP 14 23 46.0 +0.4
comp=Z,14nm,0.9s,baz=222,slow=3.8,SNR=4.8
KSRS LR LR 14 41 56.1
comp=Z,2µm,20.9s,MS5.1,baz=224,slow=36
KSRS Korea Array 47.22 31 P **P** **14 22 14.0 -0.5**
KSRS 14 23 46.0
KSRS pmax pmax
comp=Z,109nm,0.7s,mb5.9
KSRS MLR MLR
comp=Z,2µm,20.9s,MS5.1
GUMO Guam 47.28 69 P **P** **14 22 12.2 -3.2**
comp=Z,75nm,0.5s,mb5.8,baz=186,slow=8.3,SNR=13
GUMO Guam 47.28 69 P **P** **14 22 12.2 -3.2**
GUMO pmax pmax
comp=Z,75nm,0.5s,mb5.9
GUMO Guam 47.28 69 *e*P **P** **14 22 11.2 -4.2**
comp=Z,68nm,0.6s,mb5.8
GUMO LR LR
comp=Z,1µm,20.0s,MS4.8
PMG Port Moresby 47.55 101 *e*P **P** **14 22 16.0 -1.5**
PMG pmax pmax
comp=Z,15nm,0.7s
PMG MLR MLR
comp=Z,2µm,22.0s
PMG Port Moresby 47.55 101 *e*P **P** **14 22 16.0 -1.5**
comp=Z,15nm,0.7s,mb5.1
PMG LR LR
comp=Z,2µm,22.0s,MS5.0
CTA Charters Tower 48.65 115 *e*P **P** **14 22 24.0 -1.9**
CTA Charters Tower 48.65 115 P **P** **14 22 24.1 -1.8**
comp=Z,95nm,0.7s,mb5.9,baz=286,slow=9.5,SNR=64
CTA S **S** **14 29 19.9 -6.3**
comp=Z,5.7nm,0.9s,baz=183,slow=5.2,SNR=1.6
CTA LR LR 14 45 36.4
comp=Z,4µm,20.8s,MS5.4,baz=288,slow=39
CTA Charters Tower 48.65 115 P **P** **14 22 24.1 -1.8**
CTA S **S** **14 29 19.9 -6.3**
CTA pmax pmax
comp=Z,95nm,0.7s
CTA smax
comp=N,6.0nm,1.0s
CTA MLR MLR
comp=Z,4µm,20.8s
CTAO Charters Tower 48.65 115 *e*P **P** **14 22 24.6 -1.3**
CTAO pmax pmax
comp=Z,92nm,0.8s,mb5.9
CTAO MLR MLR
comp=Z,4µm,21.0s,MS5.4
CTAO Charters Tower 48.65 115 *e*P **P** **14 22 24.6 -1.2**
comp=Z,92nm,0.8s,mb5.9
CTAO LR LR
comp=Z,4µm,21.0s,MS5.4
SNY Shenyang 48.78 24 ⇑P **P** **14 22 24.8 -1.7**
SNY S **S** **14 29 32.3 +4.9**
SNY AMB AMB
comp=Z,50nm,1.9s,mb5.2
SNY AMB AMB
comp=Z,755nm,3.5s
SNY LR LR
comp=E,5µm,13.7s
SNY LR LR
comp=Z,5µm,14.7s,MS5.6
ULHL Ulahol 49.10 337 P **P** **14 22 30.4 +1.4**
SNR=6.6
STKA Stephens Creek 49.14 132 *e*P **P** **14 22 29.1 -0.4**
STKA *e*S **S** **14 29 33.6 +0.8**
STKA Stephens Creek 49.14 132 P **P** **14 22 29.1 -0.4**
comp=Z,80nm,0.7s,mb5.9,baz=306,slow=8.0,SNR=94
STKA S **S** **14 29 30.2 -2.6**
comp=Z,1.3nm,0.8s,baz=55,slow=21,SNR=1.8
STKA LR LR 14 44 47.2
comp=Z,4µm,21.1s,MS5.4,baz=297,slow=38
KZA Kyzart 49.36 336 P **P** **14 22 32.1 +1.2**
SNR=13
UCH Uchtor 49.79 335 P **P** **14 22 35.4 +1.2**
SNR=52
UCH Uchtor 49.79 335 *e*P **P** **14 22 35.1 +0.9**
comp=Z,54nm,0.9s,mb5.6
UCH LR LR
comp=Z,2µm,21.0s,MS5.1
TKM2 Tokmak 2 49.93 337 *e*P **P** **14 22 36.1 +0.8**
TKM2 pmax pmax
comp=Z,188nm,0.8s,mb6.2
TKM2 MLR MLR
comp=Z,2µm,20.0s,MS5.1
TKM2 Tokmak 2 49.93 337 P **P** **14 22 36.3 +1.0**
SNR=156
TKM2 Tokmak 2 49.93 337 *e*P **P** **14 22 36.1 +0.9**
comp=Z,188nm,0.8s,mb6.2
TKM2 LR LR
comp=Z,2µm,20.0s,MS5.1
KBK Karagaybulak 49.97 336 P **P** **14 22 37.2 +1.7**
SNR=57
AML Almayashu 50.05 335 P **P** **14 22 37.3 +1.1**
SNR=52
AML Almayashu 50.05 335 *e*P **P** **14 22 37.1 +0.9**
comp=Z,79nm,0.7s,mb5.8
AML LR LR
comp=Z,1µm,21.0s,MS4.9
CBIJ Chichi jima 50.07 51 P **P** **14 22 35.2 -1.4**
comp=Z,73nm,0.7s,mb5.8,baz=280,slow=22,SNR=5.5
CBIJ LR LR 14 43 09.9
comp=Z,1µm,20.0s,MS4.9,baz=247,slow=35
SONM Songino Array 50.12 6 P **P** **14 22 36.7 +0.2**
comp=Z,313nm,0.8s,mb6.4,baz=188,slow=8.1,SNR=753
SONM PcP PcP 14 23 55.6 -0.2
comp=Z,35nm,0.9s,baz=194,slow=4.3,SNR=3.0
SONM pScP 14 28 13.8
comp=Z,5.5nm,1.0s,baz=191,slow=2.6,SNR=4.5
SONM LR LR 14 47 36.6
comp=Z,5µm,20.7s,MS5.5,baz=192,slow=40
SONM Songino Array 50.12 6 P **P** **14 22 36.7 +0.2**
SONM PcP PcP 14 23 55.6 -0.2
SONM pScP 14 28 13.8
SONM LR LR 14 47 36.6
AAK Ala-Archa 50.13 336 P **P** **14 22 38.2 +1.4**
SNR=24
ULN Ulaanbaatar 50.22 6 *e*P **P** **14 22 37.9 +0.6**
ULN pmax pmax
comp=Z,193nm,0.8s,mb6.2
ULN MLR MLR
comp=Z,3µm,21.0s,MS5.2
ULN Ulaanbaatar 50.22 6 *e*P **P** **14 22 37.9 +0.6**
comp=Z,193nm,0.8s,mb6.2
ULN LR LR
comp=Z,3µm,21.0s,MS5.2
FRU Bishkek 50.25 336 ⇑*i*P **P** **14 22 38.0 +0.3**
FRU *e*S **S** **14 29 50.0 +2.1**
FRU pmax pmax
comp=Z,700nm,6.0s
FRU MLR MLR
comp=Z,2µm,19.0s,MS5.0
CHMS Chumysh 50.33 336 P **P** **14 22 38.7 +0.4**
SNR=36
EKS2 Erkin-Say 50.45 335 P **P** **14 22 39.9 +0.7**
SNR=114
EKS2 Erkin-Say 50.45 335 *e*P **P** **14 22 40.1 +0.9**
comp=Z,149nm,0.9s,mb6.0
EKS2 LR LR
comp=Z,2µm,21.0s,MS5.1
USP Ospenovka 50.66 336 P **P** **14 22 41.2 +0.5**
SNR=126
MK31 Makanchi Array 51.15 345 *i* P **P** **14 22 44.5 +0.1**
MK31 pmax pmax
comp=Z,394nm,0.9s,mb6.3
MKAR Makanchi Array 51.15 345 P **P** **14 22 44.3 -0.1**
comp=Z,264nm,0.7s,mb6.3,baz=149,slow=7.3,SNR=806
MKAR S **S** **14 29 55.8 -4.4**
comp=Z,0.2nm,0.3s,baz=211,slow=16,SNR=1.8
MKAR LR LR 14 48 49.9
comp=Z,1µm,18.2s,MS4.9,baz=163,slow=41
MKAR Makanchi Array 51.15 345 P **P** **14 22 44.3 -0.1**
MKAR S **S** **14 29 55.8 -4.4**
MKAR pmax pmax
comp=Z,264nm,0.7s
MKAR MLR MLR
comp=Z,1µm,18.2s
CN2 Changchun 51.18 24 *e*P **P** **14 22 43.3 -1.4**
CN2 *e*PP PP 14 24 41.0 -0.8
CN2 *e*S **S** **14 30 00.5 -0.3**
CN2 *e*SS SS 14 33 33.3 -3.4
CN2 AMB AMB
comp=Z,240nm,0.8s,mb6.2
CN2 AMB AMB
comp=Z,820nm,3.0s
CN2 LR LR
comp=N,3µm,16.0s,MS5.6
CN2 LR LR
comp=E,3µm,16.0s,MS5.6
CN2 LR LR
comp=Z,4µm,17.0s,MS5.6
JHJ Hachijo jima 2 51.47 43 LR LR 14 43 07.4
comp=Z,986nm,19.6s,MS4.8,baz=280,slow=34
KK31 Karatay Array 52.24 333 *i* P **P** **14 22 52.1 -0.5**
KK31 pmax pmax
comp=Z,12nm,0.5s,mb5.1
MAJO Matsushiro 52.48 39 P **P** **14 22 52.9 -1.6**
MAJO pmax pmax
comp=Z,64nm,0.8s,mb5.6
MAJO Matsushiro 52.48 39 *e*P **P** **14 22 52.0 -2.6**
comp=Z,64nm,0.8s,mb5.6
MAJO LR LR
comp=Z,2µm,19.0s,MS5.1
MAT Matsushiro 52.48 39 P **P** **14 22 53.6 -0.9**
MAT S **S** **14 30 24.0 +5.1**
MJAR Matsushiro Arr 52.48 39 P **P** **14 22 53.6 -1.0**
comp=Z,68nm,1.0s,mb5.5,baz=227,slow=7.5,SNR=113
MJAR pScP 14 28 13.7
comp=Z,3.0nm,0.9s,baz=224,slow=4.4,SNR=5.1
MJAR LR LR 14 46 44.5
comp=Z,1µm,19.1s,MS5.0,baz=225,slow=38
HVS Khovu-Aksy 53.35 355 ⇑*i*P **P** **14 23 00.5 -0.2**
HVS pmax pmax
comp=Z,172nm,1.0s,mb5.9
VLA Vladivostok 53.50 29 *d*P **P** **14 23 01.2 -0.7**
VLA *e*S **S** **14 30 37.4 +4.9**
VLA pmax pmax
comp=Z,71nm,0.7s,mb5.7
VLA MLR MLR
comp=Z,2µm,18.0s,MS5.1
VLA Vladivostok 53.50 29 *e*P **P** **14 22 59.7 -2.2**
MDJ Mudanjiang 53.59 26 P **P** **14 23 02.1 -0.5**
MDJ PCP PcP 14 24 06.0 -2.9
MDJ PP PP 14 25 05.6 +2.0
MDJ SCP ScP 14 28 03.8 -0.7
MDJ S **S** **14 30 35.5 +1.8**
MDJ AMB AMB
comp=Z,75nm,0.8s,mb5.7
MDJ AMB AMB
comp=Z,543nm,5.5s
MDJ LR LR
comp=N,3µm,22.9s,MS5.3
MDJ LR LR
comp=E,2µm,19.9s,MS5.3
MDJ LR LR
comp=Z,4µm,19.9s,MS5.4
MDJ Mudanjiang 53.59 26 *e*P **P** **14 23 02.3 -0.3**
comp=Z,61nm,0.8s,mb5.6
MDJ LR LR
comp=Z,4µm,21.0s,MS5.5
MOY Mondy 53.63 1 *e*P **P** **14 23 03.4 +0.7**
MOY pmax pmax
comp=Z,84nm,1.2s,mb5.5
TLY Talaya 53.74 3 P **P** **14 23 04.7 +1.2**
comp=Z,1µm,0.8s,mb6.8,SNR=49
TLY Talaya 53.74 3 *e*P **P** **14 23 03.6 +0.1**
TLY *e* 14 25 04.6
TLY *e*S **S** **14 30 44.1 +8.7**
TLY *e* 14 32 49.3
TLY pmax pmax
comp=Z,151nm,0.8s,mb6.0
TLY MLR MLR
comp=Z,4µm,16.0s,MS5.6
TLY Talaya 53.74 3 *e*P **P** **14 23 04.1 +0.7**
comp=Z,156nm,0.8s,mb6.0
TLY LR LR
comp=Z,2µm,22.0s,MS5.1
HIA Hailar 54.03 16 *e*P **P** **14 23 05.1 -0.6**

HIA pmax pmax
comp=Z,56nm,0.8s
HIA MLR MLR
comp=Z,4μm,19.0s
HIA Hailar 54.03 16 *eP* **P 14 23 05.1 -0.6**
comp=Z,56nm,0.8s,mb5.5
HIA LR LR
comp=Z,4μm,19.0s,MS5.5
ABPO Ambohimpanom 54.14 248 PFAKE 14 23 20.0 +13
ABPO LR LR
comp=Z,4μm,20.0s,MS5.5
IRK Irkutsk 54.33 3⇓ *iP* **P 14 23 08.8 +1.0**
IRK pmax pmax
comp=Z,194nm,3.5s
TOO Toolangi 54.68 136 *eP* **P 14 23 12.2 +1.5**
TOO *eS* **S 14 30 50.9 +2.1**
CIT Chita 55.21 10 *eP* **P 14 23 16.0 +1.8**
CIT *e* pP 14 23 23.7 -0.5
CIT pmax pmax
comp=Z,300nm,2.3s,mb5.9
ABKT Ailbek 55.49 320 P **P 14 23 15.9 -0.6**
comp=Z,314nm,0.7s,mb6.5,SNR=9.3
KURK Kurchatov 55.73 344 P **P 14 23 18.4 +0.5**
comp=Z,2μm,0.9s
KURK Kurchatov 55.73 344 P **P 14 23 17.0 -0.9**
comp=Z,114nm,0.9s,mb5.9,baz=162,slow=6.8,SNR=97
KURK S **S 14 31 01.2 -1.0**
comp=Z,0.5nm,0.2s,baz=144,slow=14,SNR=3.5
KURK LR LR 14 51 51.7
comp=Z,1μm,18.4s,MS5.0,baz=175,slow=41
KURK PKPPKP 14 53 22.9
comp=Z,0.6nm,0.2s,baz=298,slow=2.8,SNR=3.6
KURK PKP2ab 14 53 47.4
comp=Z,0.7nm,0.2s,baz=359,slow=1.7,SNR=4.6
KURK Kurchatov 55.73 344 *eP* **P 14 23 18.0 +0.1**
comp=Z,225nm,0.8s,mb6.2
KURK LR LR
comp=Z,1μm,19.0s,MS5.0
CAN Canberra 56.20 132 *eP* **P 14 23 22.4 +0.7**
ARMA Armidale 56.41 125 *eP* **P 14 23 24.1 +0.8**
CNB Canberra Magne 56.47 132 *eP* **P 14 23 24.1 +0.5**
ZAA0 Zalesovo Array 57.30 349 *eP* **P 14 23 28.8 -0.3**
ZALV Zalesovo Beam 57.30 349 P **P 14 23 28.4 -0.7**
comp=Z,228nm,0.8s,mb6.3,baz=173,slow=5.7,SNR=463
ZALV S **S 14 31 22.6 -0.4**
comp=Z,4.7nm,0.9s,baz=159,slow=18,SNR=7.0
ZALV LR LR 14 50 38.2
comp=Z,1μm,21.1s,MS5.0,baz=7.6,slow=39
ZALV PKP2bc 14 53 26.8
comp=Z,0.9nm,0.7s,baz=318,slow=2.0,SNR=4.5
ZALV PKP2ab 14 53 45.1
comp=Z,0.9nm,0.7s,baz=298,slow=3.2,SNR=3.7
ZALV Zalesovo Beam 57.30 349 P **P 14 23 28.4 -0.7**
ZALV S **S 14 31 22.6 -0.4**
ZALV LR LR 14 50 38.2
ZALV ⇑*e* 14 53 26.8
ZALV P'P'ab 14 53 45.1
KLR Kul'dur 58.13 24 *eP* **P 14 23 30.7 -4.3**
KLR *e* 14 25 40.0
KLR *eS* **S 14 31 38.0 +4.0**
KLR pmax pmax
comp=E,120nm,1.4s
KLR pmax pmax
comp=Z,260nm,1.4s,mb6.1
KLR smax
comp=N,1μm,9.5s
KLR smax
comp=E,500nm,9.5s
KLR MLR MLR
comp=E,2μm,14.0s
KLR MLR MLR
comp=Z,6μm,14.0s,MS5.9
KRAR Krasnoyarsk 58.26 355 *eP* **P 14 23 33.3 -2.5**
KRAR pmax pmax
comp=Z,121nm,1.3s,mb5.8
TAU Tasmania Unive 58.54 141 PFAKE 14 23 50.0 +12
TAU LR LR
comp=Z,2μm,20.0s,MS5.2
RDF Al-Radifah 58.84 306 *eP* **P 14 23 39.6 -0.8**
baz=306
RDF AMb AMB 14 23 59.1
comp=Z,225nm,1.0s,mb6.2,baz=306
ERM Erimo 58.86 37 P **P 14 23 40.4 +0.1**
comp=Z,420nm,0.9s,mb6.5,SNR=8.8
ERM Erimo 58.86 37 P **P 14 23 40.7 +0.4**
ERM pmax pmax
comp=Z,64nm,0.9s,mb5.7
ERM Erimo 58.86 37 *eP* **P 14 23 40.0 -0.3**
comp=Z,64nm,0.8s,mb5.7
ERM LR LR
comp=Z,1μm,19.0s,MS5.1
UMR Umm Al-Rimmam 58.95 307 *eP* **P 14 23 39.8 -1.3**
baz=306
UMR AMb AMB 14 23 59.2
comp=Z,136nm,0.8s,mb6.0,baz=306
NAY Al-Naaiem 59.21 306 *eP* **P 14 23 41.2 -1.8**
baz=306
NAY AMb AMB 14 24 00.9
comp=Z,87nm,0.9s,mb5.8,baz=306
MIB Mutribah 59.35 307 *eP* **P 14 23 42.0 -1.9**
baz=307
MIB AMb AMB 14 24 12.6
comp=Z,160nm,0.8s,mb6.1,baz=307
RST Umm Al-Ruwaisa 59.51 306 *eP* **P 14 23 43.6 -1.4**
baz=306
RST AMb AMB 14 24 02.7
comp=Z,136nm,0.8s,mb6.0,baz=306
ASAJ Asahikawa 59.82 34 P **P 14 23 47.3 +0.5**
comp=Z,89nm,0.5s,mb6.1,baz=256,slow=11,SNR=115
ASAJ LR LR 14 52 38.9
comp=Z,1μm,18.7s,MS5.0,baz=68,slow=39
ASAJ Asahikawa 59.82 34 P **P 14 23 47.3 +0.5**
ASAJ pmax pmax
comp=Z,89nm,0.5s
ASAJ MLR MLR
comp=Z,1μm,18.7s
HNR Honiara 60.14 100 P **P 14 23 48.6 -1.0**
comp=Z,113nm,0.9s,mb5.9,baz=231,slow=2.9,SNR=12
HNR Honiara 60.14 100 P **P 14 23 48.6 -1.0**
HNR pmax pmax
comp=Z,113nm,0.9s,mb5.9
HNR Honiara 60.14 100 *eP* **P 14 23 48.1 -1.5**
comp=Z,159nm,1.0s,mb6.0
HNR LR LR
comp=Z,905nm,22.0s,MS4.9
BVA0 Borovoye Array 60.29 340 *i* P **P 14 23 48.7 -1.2**
BVA0 pmax pmax
comp=Z,14nm,0.8s,mb5.0
BVAR Borovoye Array 60.29 340 P **P 14 23 48.9 -1.0**
comp=Z,21nm,0.5s,mb5.4,baz=140,slow=7.7,SNR=71
BVAR LR LR 14 54 29.3
comp=Z,1μm,19.9s,MS5.1,baz=150,slow=40
BVAR Borovoye Array 60.29 340 P **P 14 23 48.9 -1.0**
BVAR pmax pmax
comp=Z,21nm,0.5s
BVAR MLR MLR
comp=Z,1μm,20.0s
BRVK Borovoye 60.35 340 P **P 14 23 49.7 -0.6**
comp=Z,602nm,0.9s,mb6.6,SNR=10
BRVK Borovoye 60.35 340 P **P 14 23 49.4 -0.9**
BRVK pmax pmax
comp=Z,90nm,0.9s,mb5.8
BRVK Borovoye 60.35 340 *eP* **P 14 23 49.1 -1.2**
comp=Z,90nm,0.8s,mb5.8
BRVK LR LR
comp=Z,2μm,20.0s,MS5.3
BOD Bodaibo 60.86 9 *eP* **P 14 23 53.6 -0.1**
BOD pmax pmax
comp=Z,173nm,0.9s,mb6.2
YSS Yuzh-Sakhalins 61.69 32⇓ *iP* **P 14 23 59.8 +0.3**
YSS pmax pmax
comp=N,150nm,1.0s
YSS pmax pmax
comp=E,120nm,1.0s
YSS pmax pmax
comp=Z,320nm,1.0s,mb6.4
YSS MLR MLR
comp=E,2μm,16.0s
YSS MLR MLR
comp=Z,2μm,16.0s,MS5.3
YSS Yuzh-Sakhalins 61.69 32 *eP* **P 14 23 59.1 -0.3**
comp=Z,242nm,0.8s,mb6.4
YSS LR LR
comp=Z,383nm,19.0s,MS4.6
AB31 Akbulak array 61.72 331 *i* P **P 14 23 58.3 -1.4**
AB31 pmax pmax
comp=Z,59nm,0.7s,mb5.8
AB31 Akbulak array 61.72 331⇑ *eP* **P 14 23 58.3 -1.4**
CLNS Chul'man 62.20 15*c iP* **P 14 24 03.3 +0.6**
CLNS *e* 14 24 41.8
CLNS *e*PPP 14 27 46.4
CLNS *eS* **S 14 32 27.2 +1.2**
CLNS *e*SS SS 14 36 33.4 +3.8
CLNS pmax pmax
comp=Z,163nm,0.8s,mb6.2
CLNS pmax pmax
comp=E,69nm,0.9s
CLNS pmax pmax
comp=N,97nm,0.8s
CLNS smax
comp=E,174μm,11.5s
CLNS smax
comp=N,135μm,11.5s
CLNS MLR MLR
comp=Z,3μm,13.0s,MS5.6
CLNS MLR MLR
comp=N,2μm,14.0s,MS5.5
CLNS MLR MLR
comp=E,2μm,19.0s,MS5.5
KMBO Kilima Mbogo 62.60 270 P **P 14 24 08.0 +1.7**
comp=E,4.8nm,0.8s,mb4.7,baz=60,slow=9.1,SNR=10
KMBO LR LR 14 47 10.3
comp=E,2μm,19.9s,MS5.3,baz=280,slow=32
KMBO Kilima Mbogo 62.60 270⇑ *eP* **P 14 24 08.0 +1.7**
KMBO Kilima Mbogo 62.60 270 *eP* **P 14 24 07.3 +1.0**
comp=E,28nm,1.4s,mb5.2
KMBO LR LR
comp=Z,2μm,20.0s,MS5.2
AKTK Aktyubinsk 63.44 332 P **P 14 24 10.2 -0.8**
AKTO Aktyubinsk 63.44 332 P **P 14 24 10.2 -0.8**
comp=Z,35nm,1.0s,mb5.5,baz=123,slow=8.3,SNR=42
AKTO Aktyubinsk 63.44 332 P **P 14 24 10.3 -0.8**
AKTO pmax pmax
comp=Z,35nm,1.0s,mb5.4
CASY Casey 64.43 175 PFAKE 14 24 30.0 +13
CASY LR LR
comp=Z,2μm,20.0s,MS5.2
MIR Mirnyy 64.44 183 *eP* **P 14 24 19.0 +1.6**
MIR pmax pmax
comp=Z,100nm,0.8s,mb5.9
MAK Makhachkala 65.01 320 *eP* **P 14 24 12.4 -9.2**
MAK MLR MLR
comp=Z,917nm,21.0s,MS5.0
MSL Mosul 65.18 312 *ex* x 14 24 22.0
HAKT HAKKARI 65.20 313 *i* P **P 14 24 20.6 -2.3**
GNI Garni 65.55 316 P **P 14 24 26.3 +1.2**
comp=Z,15nm,0.7s,mb5.1,baz=167,slow=21,SNR=3.2
GNI LR LR 14 54 24.1
comp=Z,501nm,21.3s,MS4.7,baz=269,slow=37
GNI Garni 65.55 316 P **P 14 24 26.3 +1.1**
GNI pmax pmax
comp=Z,15nm,0.7s
GNI MLR MLR
comp=Z,501nm,21.3s
GNI Garni 65.55 316 *eP* **P 14 24 26.2 +1.1**
comp=Z,41nm,1.1s,mb5.4
GNI LR LR
comp=Z,521nm,20.0s,MS4.7
DGRG David-gareji 65.70 318 P **P 14 24 27.4 +1.3**
MTA Mtatsminda 66.20 318 P **P 14 24 30.3 +1.0**
TBLG Delisi 66.25 318 *eP* **P 14 24 30.7 +1.1**
TBLG Delisi 66.25 318 P **P 14 24 30.8 +1.1**
SVE Sverdlovsk 66.78 338⇑ *eP* **P 14 24 32.6 -0.1**
SVE *eS* S 14 33 21.0 -1.6
SVE pmax pmax
comp=Z,116nm,1.0s,mb5.9
SVE MLR MLR
comp=Z,2μm,21.0s,MS5.3
BEST Besiri 67.11 313 *i* P pP 14 24 49.0 +3.6
MARD Mardin 67.25 312 *i* P **P 14 24 35.9 -0.2**
ARU Arti 67.30 337 P **P 14 24 35.7 -0.3**
comp=Z,295nm,0.9s,mb6.3,SNR=15
ARU Arti 67.30 337*c iP* **P 14 24 35.0 -1.0**
ARU *e* 14 25 02.6
ARU *e* 14 27 00.0
ARU *e*PPP 14 28 40.1
ARU *eS* S 14 33 30.3 +1.4
ARU *e*SS SS 14 37 50.0 +0.9
ARU pmax pmax
comp=Z,60nm,1.0s,mb5.6
ARU MLR MLR
comp=Z,2μm,20.0s,MS5.3
ARU Arti 67.30 337 *eP* **P 14 24 34.9 -1.1**
comp=Z,56nm,0.9s,mb5.6
ARU LR LR
comp=Z,2μm,21.0s,MS5.3
ONI Oni 67.48 318 P **P 14 24 37.6 +0.2**
HOMI Horasan 67.49 315 *i* P **P 14 24 38.4 +0.8**
ARTV Artvin 67.93 316 *i* P **P 14 24 41.9 +1.6**
YAK Yakutsk 67.93 15 *eP* **P 14 24 38.5 -1.4**
YAK *e**PP pP 14 24 47.7 -2.4
YAK *e* 14 25 04.4
YAK *e* 14 27 06.2
YAK *eS* S 14 33 34.2 -2.0
YAK *e* 14 34 12.2
YAK pmax pmax
comp=Z,232nm,1.1s,mb6.1
YAK pmax pmax
comp=N,61nm,1.2s
YAK pmax pmax
comp=E,55nm,1.1s
YAK pmax pmax
comp=Z,185nm,4.0s
YAK pmax pmax
comp=N,148nm,3.3s
YAK pmax pmax
comp=E,180nm,3.3s
YAK smax
comp=E,186μm,4.4s
YAK smax
comp=N,132μm,3.3s
YAK Yakutsk 67.93 15 *eP* **P 14 24 38.5 -1.3**
comp=N,392nm,0.9s,mb6.4
YAK LR LR
comp=Z,3μm,19.0s,MS5.5
ASF Jabal al Asfar 68.58 306 P **P 14 24 44.9 +0.3**
comp=Z,9.0nm,0.5s,mb4.9,baz=14,slow=4.8,SNR=11
ASF Jabal al Asfar 68.58 306 P **P 14 24 44.9 +0.3**
ASF pmax pmax
comp=Z,9.0nm,0.5s
KIV Kislovodsk 68.58 319 P **P 14 24 45.5 +1.2**
comp=Z,401nm,0.9s,mb6.3,SNR=7.0
KIV Kislovodsk 68.58 319 *eP* **P 14 24 44.2 -0.1**
KIV *e* 14 25 08.7
KIV *eS* S 14 33 44.3 -0.3
KIV *e*SS SS 14 38 09.8 +0.4
KIV pmax pmax
comp=Z,69nm,1.0s,mb5.5
KIV pmax pmax
comp=Z,99nm,5.1s
KIV MLR MLR
comp=Z,681nm,19.0s,MS4.9
KIV Kislovodsk 68.58 319⇑ *iP* **P 14 24 44.5 +0.2**
KIV Kislovodsk 68.58 319 *eP* **P 14 24 44.6 +0.2**
comp=Z,61nm,0.8s,mb5.6
KIV LR LR
comp=Z,847nm,21.0s,MS5.0
ELZG Elazig 69.00 313 *i* P **P 14 24 48.4 +1.3**
ATAB Bozova 69.16 312 *i* P **P 14 24 49.0 +0.9**
MALT Malatya 69.35 312 P **P 14 24 50.5 +1.3**
MALT pmax pmax
comp=Z,27nm,0.8s,mb5.2
MALT Malatya 69.35 312⇓ *iP* **P 14 24 51.2 +2.0**
MALT Malatya 69.35 312 *eP* **P 14 24 50.6 +1.3**
comp=Z,26nm,0.8s,mb5.2
MALT LR LR
comp=Z,1μm,21.0s,MS5.2
GZT Gaziantep 69.67 311 *i* P **P 14 24 51.5 +0.2**
MMAI Mount Meron Ar 70.03 306 P **P 14 24 53.9 +0.4**
comp=Z,20nm,0.9s,mb5.0,baz=93,slow=7.8,SNR=11
MMAI pP pP 14 25 11.3 +7.5
comp=Z,17nm,0.7s,baz=90,slow=8.3,SNR=8.1
MAW Mawson 70.10 194 *eP* **P 14 24 54.0 +0.8**
MAW Mawson 70.10 194 P **P 14 24 54.2 +0.9**
comp=Z,6.3nm,0.9s,mb4.5,baz=20,slow=8.1,SNR=13
MAW pP pP 14 25 10.9 +7.4
comp=Z,9.1nm,0.8s,baz=13,slow=7.5,SNR=6.3
MAW LR LR 14 48 51.8
comp=Z,3μm,21.6s,MS5.4,baz=33,slow=30
DRV Dumont d'Urvil 70.20 164 P PcP 14 25 15.0 -0.6
DRV S S 14 34 09.0 +6.0
DRV R 14 46 00.0
SOC Sochi 70.39 318 *eP* **P 14 24 54.4 -1.1**
SOC *e**SP sP 14 25 06.6 -3.0
SOC *e* 14 25 13.6
SOC *e* 14 27 28.9
SOC *eS* S 14 34 02.8 -3.1
SOC *e* 14 34 47.7
SOC pmax pmax
comp=Z,61nm,0.9s,mb5.5
SOC Sochi 70.39 318 *i* P **P 14 24 55.4 -0.1**
COBT Iskenderun 70.39 310 *i* P pP 14 25 09.2 +3.2
ANDN Andirin 70.66 311 *i* P **P 14 24 57.5 +0.2**
SKR Severo-Kuril's 71.08 34 *eP* **P 14 24 58.5 -1.0**
SKR pmax pmax
comp=E,60nm,0.8s
SKR pmax pmax
comp=Z,240nm,0.8s,mb6.2
LSZ Lusaka 71.77 255 LR LR 14 52 25.1
comp=Z,1μm,20.8s,MS5.2,baz=76,slow=32
LSZ Lusaka 71.77 255 *ePn* **P 14 25 05.2 +0.8**
comp=Z,26nm,1.1s,mb5.1
LSZ LR LR
comp=Z,1μm,20.0s,MS5.2
MEST Erdemli 72.04 310 *i* P **P 14 25 05.5 -0.2**
CSS Prodhromos 72.22 308 *eP* **P 14 25 06.7 -0.1**
comp=Z,24nm,0.8s,mb5.2
ANN Anapa 72.37 319 *eP* **P 14 25 01.0 -6.4**
ANN *eS* S 14 34 22.0 -6.8
ANN *e*SSS 14 42 19.7
ANN pmax pmax
comp=Z,50nm,1.2s,mb5.3
VRHR Novokhopersk 72.39 326 *eP* **P 14 25 06.2 -1.2**
VRHR *e**PP pP 14 25 16.2 -1.5
VRHR pmax pmax
comp=Z,170nm,0.9s,mb6.0
VRHR pmax pmax
comp=N,30nm,1.1s
VRHR pmax pmax
comp=E,50nm,0.8s
VRHR MLR MLR
comp=Z,1μm,19.0s,MS5.1
VRHR MLR MLR
comp=N,640nm,21.0s,MS5.1
VRHR MLR MLR
comp=E,820nm,20.0s,MS5.1
CTKT Corum 72.77 314 *i* P pP 14 25 23.8 +3.5
PEA0B Petropavlovsk- 73.09 32 *eP* **P 14 25 10.6 -0.9**
PETK Petropavlovsk- 73.09 32 P **P 14 25 10.6 -0.9**
comp=E,53nm,0.7s,mb5.6,baz=237,slow=1.5,SNR=86
PETK LR LR 15 02 15.2
comp=E,759nm,18.0s,MS5.0,baz=124,slow=40
PETK Petropavlovsk- 73.09 32 P **P 14 25 10.6 -1.0**
PETK LR LR 15 02 15.2
PET Petropavlovsk 73.56 33 *eP* **P 14 25 13.8 -0.5**
PET *eS* S 14 34 40.1 -1.9
PET pmax pmax
comp=Z,210nm,0.8s,mb6.1
PET pmax pmax
comp=Z,300nm,19.7s
PET MLR MLR
comp=Z,700nm,18.0s,MS5.0
PET Petropavlovsk 73.56 33 *eP* **P 14 25 13.6 -0.7**
comp=Z,132nm,0.7s,mb6.0
VSR Storozhevoye 73.83 325 *eP* **P 14 25 14.6 -1.4**
VSR *e**PP pP 14 25 24.4 -1.9
VSR pmax pmax
comp=Z,60nm,0.9s,mb5.5
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,40nm,0.6s
ANTO Ankara 74.00 312 P **P 14 25 17.0 -0.2**
SNR=6.0
ANTO Ankara 74.00 312⇑ *iP* **P 14 25 17.0 -0.2**
ANTO Ankara 74.00 312 *eP* **P 14 25 16.6 -0.6**
comp=E,35nm,0.8s,mb5.3
ANTO LR LR
comp=Z,577nm,19.0s,MS4.9
VOR Voronezh 74.03 326 *eP* **P 14 25 16.0 -1.1**
VOR pmax pmax
comp=Z,240nm,1.0s,mb6.1
BALT Daday 74.06 314 *i* P **P 14 25 17.8 +0.3**
KDHN Kadinhani 74.13 311 *i* P **P 14 25 16.3 -1.7**
SIM Simferopol' 74.63 318 *eP* **P 14 25 21.0 +0.2**
SIM *eS* S 14 34 50.0 -4.4
SIM pmax pmax
comp=Z,107nm,0.6s,mb6.0
LBTB Lobatse 74.84 245 LR LR 14 53 34.5
comp=Z,3μm,19.7s,MS5.7,baz=96,slow=32
LBTB Lobatse 74.84 245 *eP* **P 14 25 27.4 +5.0**
LBTB pmax pmax
comp=Z,21nm,1.0s,mb5.0
LBTB MLR MLR
comp=Z,4μm,20.0s,MS5.7
LBTB Lobatse 74.84 245 *eP* **P 14 25 27.4 +5.0**
comp=Z,20nm,1.0s,mb5.0
LBTB LR LR
comp=Z,4μm,20.0s,MS5.7
RPZ Rata Peaks 74.96 135 LR LR 14 58 36.2
comp=Z,3μm,21.5s,MS5.5,baz=276,slow=36
ISP Isparta 75.17 310 PFAKE 14 25 40.0 +16
ISP LR LR
comp=Z,881nm,20.0s,MS5.1
TKTP Tekketepe 75.36 310 *i* P **P 14 25 24.4 -0.8**
BOSA Boshof 75.47 241 P **P 14 25 26.2 +0.3**
comp=Z,3.0nm,0.7s,mb4.3,baz=140,slow=11,SNR=6.5
BOSA pP pP 14 25 43.7 +7.4
comp=Z,9.9nm,0.7s,baz=82,slow=5.9,SNR=3.9
BOSA LR LR 14 55 09.4
comp=Z,2μm,18.2s,MS5.5,baz=83,slow=33
BOSA Boshof 75.47 241 *eP* **P 14 25 27.7 +1.8**
BOSA pmax pmax
comp=Z,26nm,1.0s,mb5.1
BOSA MLR MLR
comp=Z,3μm,20.0s,MS5.5
BOSA Boshof 75.47 241 *eP* **P 14 25 27.7 +1.7**
comp=Z,26nm,1.0s,mb5.1
BOSA LR LR
comp=Z,3μm,20.0s,MS5.5
SEY Seymchan 75.82 22⇑ *eP* **P 14 25 27.2 0.0**
TIXI Tiksi 76.03 9*c iP* **P 14 25 26.4 -1.9**
TIXI *e* pP 14 25 38.4 -0.2
TIXI *eS* S 14 35 05.4 -3.6
TIXI pmax pmax
comp=E,14nm,0.7s
TIXI pmax pmax
comp=N,9.0nm,0.5s
TIXI pmax pmax
comp=Z,79nm,0.6s,mb5.8
TIXI Tiksi 76.03 9 *eP* **P 14 25 27.1 -1.2**
comp=Z,94nm,0.6s,mb5.9
TIXI LR LR
comp=Z,4μm,21.0s,MS5.7
TURN Turunc 76.41 309 *i* P **P 14 25 32.9 +1.7**
MOS Moscow 76.57 329 *eP* **P 14 25 28.5 -3.1**
MOS *e* pP 14 25 39.9 -2.1
MOS *eS* S 14 35 10.6 -4.8
MOS *e* 14 35 34.3
MOS pmax pmax
comp=Z,161nm,0.9s,mb6.0
MOS MLR MLR
comp=Z,1μm,20.0s,MS5.2
ULDT Uludag 76.78 312 *i* P **P 14 25 32.9 -0.3**
OBN Obninsk 76.86 328⇑ *eP* **P 14 25 32.0 -1.3**
OBN *e* 14 28 24.2
OBN *i* S S 14 35 15.9 -2.7
OBN *eSS* SS 14 40 21.5 +6.0
OBN pmax pmax
comp=Z,150nm,1.2s,mb5.8
OBN MLR MLR
comp=Z,800nm,22.0s,MS5.0
OBN Obninsk 76.86 328 *eP* **P 14 25 33.1 -0.2**
comp=Z,90nm,0.8s,mb5.8
OBN *e* pP 14 25 42.4 -1.2
OBN LR LR
comp=Z,1μm,20.0s,MS5.1
SNZO South Karori 77.20 132 *eP* **P 14 25 35.2 -0.3**
SNZO LR LR
comp=Z,4μm,20.0s,MS5.7
SYO Syowa Base 77.67 199⇑ *eP* **P 14 25 37.0 -0.6**
SYO Syowa Base 77.67 199⇓ *epP* pP 14 25 44.2 -3.8
KDAG Bornova 77.79 310 *i* P **P 14 25 36.7 -2.2**
KLMR Klimovskoe 77.92 334 *eP* **P 14 25 38.2 -0.9**
KLMR pmax pmax
comp=Z,98nm,1.3s,mb5.6
TLCR 78.29 317⇓ *iP* **P 14 25 41.1 -0.4**

TIRR Tirgusor 78.38 316 ⇑*iP* **P 14 25 41.9 -0.1**
TIRR Tirgusor 78.38 316 *eP* **P 14 25 41.1 -0.9**
comp=Z,52nm,0.9s,mb5.5
URZ Urewera 78.65 128 LR LR 15 01 15.7
comp=Z,2µm,21.2s,MS5.4,baz=102,slow=36
KIS Kishinev 78.77 319 ⇓*iP* **P 14 25 44.0 -0.1**
comp=Z,100nm,1.0s,mb5.7
KIS *eL* 14 57 28.0
KIS LRM 15 09 36.0
comp=Z,800nm,20.0s
HARR Harsova 78.77 316 ⇑*iP* **P 14 25 43.7 -0.4**
HARR Harsova 78.77 316 P **P 14 25 44.6 +0.5**
SANT Santorini 78.78 308 PFAKE 14 26 00.0 +16
SANT LR LR
comp=Z,1µm,20.0s,MS5.2
FUNA Funafuti 79.13 98 PFAKE 14 26 00.0 +13
FUNA LR LR
comp=Z,13µm,19.0s,MS6.3
AKASG Malin Array Be 79.53 322 P **P 14 25 47.6 -0.5**
comp=Z,11nm,0.7s,mb4.9,baz=84,slow=3.7,SNR=34
AKASG LR LR 15 05 20.5
comp=Z,819nm,21.3s,MS5.0,baz=70,slow=39
AKASG Malin Array Be 79.53 322 P **P 14 25 47.6 -0.6**
AKASG pmax pmax
comp=Z,11nm,0.7s
AKASG MLR MLR
comp=Z,819nm,21.3s
KIEV Kiev 79.54 322 *eP* **P 14 25 46.6 -1.6**
KIEV *e* pP 14 25 58.0 -0.6
KIEV pmax pmax
comp=Z,28nm,0.6s,mb5.4
KIEV MLR MLR
comp=Z,923nm,21.0s,MS5.1
KIEV Kiev 79.54 322 *eP* **P 14 25 46.6 -1.6**
comp=Z,28nm,0.6s,mb5.4
KIEV *e* pP 14 25 58.0 -0.6
KIEV LR LR
comp=Z,923nm,21.0s,MS5.1
SUR Sutherland 79.60 238 LR LR 14 54 26.6
comp=Z,3µm,21.1s,MS5.6,baz=71,slow=31
SUR Sutherland 79.60 238 PFAKE 14 26 00.0 +11
SUR LR LR
comp=Z,3µm,20.0s,MS5.7
VRI Vrincioaia 79.88 317 ⇓*iP* **P 14 25 50.7 +0.5**
VRI Vrincioaia 79.88 317 P **P 14 25 51.0 +0.8**
PLOR Plostina 79.93 317 ⇓*iP* **P 14 25 51.1 +0.7**
MLR Muntele Rosu 80.33 317 ⇑*iP* **P 14 25 53.4 +0.8**
MLR Muntele Rosu 80.33 317 P **P 14 25 53.1 +0.5**
ZIMR 80.33 315 P **P 14 25 53.4 +0.8**
PTL Penteli 80.34 309 *eP* **P 14 25 51.0 -1.8**
VOIR 80.93 317 ⇑*iP* **P 14 25 55.4 -0.4**
PLG Polygyros 81.08 311 *eP* **P 14 25 56.0 -0.8**
BURAR Bucovina Array 81.30 319 ⇑*iP* **P 14 25 58.5 +0.8**
BURAR Bucovina Array 81.30 319 ⇑P **P 14 25 58.5 +0.8**
BUR08 Bucovina Ar. S 81.31 319 *eP* **P 14 25 58.2 +0.4**
MNIK Minsk 81.41 326 *eP* **P 14 25 56.0 -2.2**
VTS Vitosha 81.66 313 P **P 14 26 00.0 +0.2**
PUL Pulkovo 81.70 331 ⇑*eP* **P 14 25 58.7 -0.9**
ITM Ithomi 81.71 308 *eP* **P 14 26 00.0 -0.2**
VAY Valandovo 81.91 312 *eP* **P 14 25 59.4 -1.7**
TSUM Tsumeb 82.01 251 *eP* **P 14 26 03.1 +1.0**
comp=Z,22nm,1.3s,mb4.9
TSUM LR LR
comp=Z,3µm,20.0s,MS5.6
EVR Evrytania 82.08 310 *eP* **P 14 26 01.5 -0.6**
RAO Raoul Island 82.15 119 LR LR 15 03 54.1
comp=Z,1µm,18.4s,MS5.3,baz=68,slow=37
RAO Raoul Island 82.15 119 PFAKE 14 26 10.0 +7.3
RAO LR LR
comp=Z,2µm,20.0s,MS5.4
JOF Joensuu 82.31 335 *ep* **P 14 26 02.8 +0.1**
comp=Z,45nm,0.8s,mb5.5
JOF Joensuu 82.31 335 *eP* **P 14 26 02.8 +0.1**
JOF pmax pmax
comp=Z,45nm,0.8s,mb5.5
GZR Gura Zlata 82.49 316 ⇓*iP* **P 14 26 04.3 +0.2**
GZR Gura Zlata 82.49 316 P **P 14 26 05.2 +1.1**
LVV L'vov 82.54 321 *eP* **P 14 26 04.2 0.0**
LVV *e* pP 14 26 14.2 -0.5
BIA Bitola 82.78 312 *eP* **P 14 26 04.6 -1.1**
DRGR 82.80 318 ⇑*iP* **P 14 26 06.0 +0.4**
DRGR 82.80 318 P **P 14 26 06.6 +1.0**
SKO Skopje 82.85 313 *eP* **P 14 26 05.9 -0.1**
LVZ Lovozero 82.89 340 P **P 14 26 05.0 -0.6**
comp=Z,357nm,0.7s,mb6.5,SNR=6.7
LVZ Lovozero 82.89 340 PFAKE 14 26 20.0 +14
LVZ LR LR
comp=Z,2µm,21.0s,MS5.5
KRUS Krusevo 82.89 312 *eP* **P 14 26 05.3 -1.0**
VLS Valsamata 82.91 309 *eP* **P 14 26 01.5 -4.9**
JAN Janina 82.93 310 *eP* **P 14 26 06.1 -0.4**
SBA Scott Base 83.12 169 *eP* **P 14 26 08.9 +2.1**
comp=Z,21nm,1.0s,mb5.1
SBA LR LR
comp=Z,866nm,22.0s,MS5.1
OHR Ohrid 83.19 312 *eP* **P 14 26 05.7 -2.1**
APA Apatity 83.19 339 ⇑*iP* **P 14 26 08.0 +0.8**
APA *i* pP 14 26 15.3 -2.4
APA *eS* S 14 36 24.0 -0.8
APA pmax pmax
comp=Z,39nm,1.0s,mb5.4
APA MLR MLR
comp=Z,2µm,20.0s,MS5.5
BZS Buzias 83.33 316 ⇓*iP* **P 14 26 08.1 -0.3**
BZS Buzias 83.33 316 P **P 14 26 09.0 +0.6**
KWP Kalwaria 83.34 320 *eP* **P 14 26 08.6 +0.2**
KWP Kalwaria 83.34 320 ⇑*iP* **P 14 26 09.0 +0.6**
KWP Kalwaria 83.34 320 *eP* **P 14 26 08.6 +0.2**
BILL Bilibino 83.35 20 *eP* **P 14 26 07.6 -0.4**
BILL pmax pmax
comp=Z,16nm,1.0s,mb5.0
BILL MLR MLR
comp=Z,3µm,22.0s,MS5.6
BILL Bilibino 83.35 20 *eP* **P 14 26 07.8 -0.3**
comp=Z,8.8nm,0.5s,mb5.0
BILL LR LR
comp=Z,2µm,19.0s,MS5.6
UZH Uzhgorod 83.42 319 *eP* **P 14 26 09.3 +0.5**
UZH *e* pP 14 26 19.0 -0.3
UZH *e* 14 26 24.3
UZH *e* 14 31 23.0
UZH *eS* S 14 36 28.0 +0.1
UZH *ePS* 14 37 25.0
UZH *eSSS* 14 45 21.0
KOLS Kolonicke sedl 83.49 320 *eP* **P 14 26 10.1 +0.9**
KEK Kerkira 83.74 310 *eP* **P 14 26 09.1 -1.6**
SUW Suwalki 83.94 325 *eP* **P 14 26 10.8 -0.6**
SUW Suwalki 83.94 325 *eP* **P 14 26 10.8 -0.5**
CRVS Cervenica-Dubn 84.01 319 *eP* **P 14 26 11.9 +0.1**
STHS Stebnicka Huta 84.24 320 *eP* **P 14 26 13.6 +0.6**
STHS *e* pP 14 26 26.5 +3.0
STHS pmax pmax
comp=Z,33nm,0.8s,mb5.5
STHS Stebnicka Huta 84.24 320 *eP* **P 14 26 13.6 +0.6**
comp=Z,33nm,0.8s,mb5.5
STHS *e* pP 14 26 26.5 +3.0
KAF Kangasniemi 84.27 333 *ep* **P 14 26 13.0 +0.2**
comp=Z,67nm,0.6s,mb6.0,baz=100,slow=4.6
KAF Kangasniemi 84.27 333 *eP* **P 14 26 13.0 +0.2**
KAF pmax pmax
comp=Z,67nm,0.6s,mb6.0
NIE Niedzica 84.84 320 *eP* **P 14 26 17.0 +1.0**
NIE *epP* pP 14 26 26.2 -0.3
NIE *esP* sP 14 26 29.2 -1.1
PSZ Piszkesteto 84.88 318 P **P 14 26 16.9 +0.7**
PSZ Piszkesteto 84.88 318 ⇓*eP* **P 14 26 16.8 +0.6**
PSZ Piszkesteto 84.88 318 ⇑*iP* **P 14 26 16.8 +0.6**
PSZ Piszkesteto 84.88 318 *eP* **P 14 26 15.3 -0.9**
comp=Z,28nm,0.8s,mb5.4
PSZ LR LR
comp=Z,731nm,20.0s,MS5.1
OJC Ojcow 85.30 321 *eP* **P 14 26 18.2 -0.1**
OJC *e**PP pP 14 26 27.1 -1.7
OJC *e**SP sP 14 26 30.1 -2.5
OJC *eS* S 14 36 45.7 -0.9
OJC Ojcow 85.30 321 *eP* **P 14 26 18.2 -0.1**
OJC *epP* pP 14 26 27.1 -1.7
OJC *esP* sP 14 26 30.1 -2.5
OJC *eS* S 14 36 45.7 -0.9
OJC LR LR
comp=Z,800nm,21.0s,MS5.1
BUD Budapest 85.39 318 ⇓*eP* **P 14 26 19.8 +1.0**
PKSM Moragy 85.48 316 ⇑*iP* **P 14 26 19.2 -0.1**
PKSM Moragy 85.48 316 P **P 14 26 19.6 +0.3**
VYHS Vyhne 85.66 319 *eP* **P 14 26 19.9 -0.2**
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
VYHS Vyhne 85.66 319 *eP* **P 14 26 19.9 -0.2**
comp=Z,3.8nm,1.0s,mb4.6
TIP Timpagrande 86.01 309 *eP* **P 14 26 22.6 +0.6**
comp=Z,31nm,1.0s,mb5.5
TIP LR LR
comp=Z,828nm,20.0s,MS5.1
KEV Kevo 86.14 341 *ep* **P 14 26 22.0 0.0**
comp=Z,32nm,0.7s,mb5.7
KEV Kevo 86.14 341 *eP* **P 14 26 22.0 0.0**
KEV pmax pmax
comp=Z,32nm,0.7s,mb5.7
OKC Ostrava-Krasne 86.30 320 *eP* **P 14 26 23.7 +0.5**
OKC AMS AMS 15 13 50.0
comp=Z,600nm,23.5s
ARCES ARCESS Array B 86.58 340 P **P 14 26 24.3 +0.1**
comp=Z,59nm,0.8s,mb5.9,baz=100,slow=5.0,SNR=105
ARCES PP PP 14 29 51.3 +5.0
comp=Z,6.3nm,0.9s,baz=101,slow=6.3,SNR=4.3
ARCES LR LR 15 09 11.0
comp=Z,2µm,20.7s,MS5.5,baz=110,slow=38
ARCES ARCESS Array B 86.58 340 P **P 14 26 24.3 +0.1**
ARCES 14 29 51.3
ARCES pmax pmax
comp=Z,59nm,0.8s
ARCES pmax pmax
comp=Z,6.0nm,0.9s
ARCES MLR MLR
comp=Z,2µm,20.7s
ARE0 ARCESS Array S 86.58 340 *eP* **P 14 26 24.6 +0.4**
ARE0 *e* pP 14 26 32.8 -1.9
MODS Modra-Piesok 86.68 319 *eP* **P 14 26 25.4 +0.3**
MODS *epP* pP 14 26 33.5 -2.2
MORC Moravsky Berou 86.68 320 P **P 14 26 26.1 +1.0**
MORC Moravsky Berou 86.68 320 ⇓*iP* **P 14 26 25.8 +0.7**
MORC Moravsky Berou 86.68 320 *eP* **P 14 26 25.1 0.0**
comp=Z,22nm,0.8s,mb5.4
ZST Bratislava 86.77 318 *eP* **P 14 26 26.4 +0.8**
ZST *epP* pP 14 26 32.1 -4.0
ZST Bratislava 86.77 318 *eP* **P 14 26 26.4 +0.8**
comp=Z,28nm,0.9s,mb5.5
ZST *e* 14 26 32.1
ZST LR LR
comp=Z,300nm,20.8s,MS4.7
CUC Castrocucco 86.82 310 *eP* **P 14 26 25.7 -0.4**
comp=Z,19nm,0.8s,mb5.4
SOP Sopron 87.08 318 *eP* **P 14 26 26.8 -0.3**
VRAC Vranov 87.23 319 ⇓*iP* **P 14 26 28.0 +0.2**
VRAC Vranov 87.23 319 ⇓P **P 14 26 28.0 +0.2**
NVL N'lazarevskaya 87.32 199 P **P 14 26 32.1 +4.2**
NVL *eS* S 14 36 49.8 -16
NVL pmax pmax
comp=Z,22nm,1.6s,mb5.1
MAIT Maitri 87.36 199 *eP* **P 14 26 31.1 +3.1**
DPC Dobruska-Polom 87.53 320 *eP* **P 14 26 29.9 +0.7**
DPC AMS AMS 15 13 10.0
comp=Z,700nm,17.8s
CONA Conrad Observa 87.57 318 ⇑*iP* **P 14 26 29.3 -0.2**
comp=Z,14nm,1.1s,mb5.1
CSNA Conrad Observa 87.57 318 ⇑*iP* **P 14 26 29.3 -0.2**
comp=Z,13nm,1.1s,mb5.1
KSP Ksiaz 87.60 321 *eP* **P 14 26 30.8 +1.2**
KSP Ksiaz 87.60 321 *eP* **P 14 26 30.7 +1.1**
KSP *eS* S 14 37 10.0 +1.1
KSP Ksiaz 87.60 321 *eP* **P 14 26 30.7 +1.1**
KSP *eS* S 14 37 10.0 +1.1
KSP LR LR
comp=Z,1µm,20.9s,MS5.3
VAE Valguarnera 87.69 307 P **P 14 26 32.2 +1.9**
comp=Z,18nm,1.0s,mb5.2,baz=188,slow=11,SNR=4.0
ARSA Arzberg 87.73 317 ⇑*iP* **P 14 26 30.3 0.0**
comp=Z,23nm,1.1s,mb5.3
UPC Upice 87.74 321 *eP* **P 14 26 30.9 +0.7**
BOJS Bojanci 87.75 316 *eP* **P 14 26 30.4 0.0**
PERS Pernice 87.95 317 *eP* **P 14 26 31.6 +0.3**
SOKA Soboth 88.01 317 ⇑*iP* **P 14 26 31.8 +0.2**
comp=Z,32nm,1.0s,mb5.5
LJU Ljubljana 88.30 316 *i* P **P 14 26 33.5 +0.5**
OBKA Obir 88.33 316 ⇑*iP* **P 14 26 33.6 +0.5**
comp=Z,19nm,1.1s,mb5.2
PRU Pruhonice 88.63 320 *eP* **P 14 26 34.6 +0.1**
PRU AMS AMS 15 12 50.0
comp=Z,600nm,19.3s
MOA Molln 88.63 318 ⇑*iP* **P 14 26 34.5 -0.1**
comp=Z,8.6nm,0.8s,mb5.2
PVCC Panska Ves 88.66 320 *eP* **P 14 26 35.3 +0.7**
VOY Vojsko 88.74 316 *eP* **P 14 26 35.2 +0.1**
VOY *e* pP 14 26 44.2 -1.4
VOY *e* 14 26 48.8
VOY *e* 14 27 06.3
TRO Tromso 88.86 340 *eP* **P 14 26 33.5 -1.6**
TRO *eSKS* 14 37 04.0
TRO AMS AMS 15 11 15.0
comp=Z,1µm,24.5s,MS5.3
CADS Cadrg 88.86 316 *eP* **P 14 26 35.4 -0.3**
BRG Berggiesshubel 89.08 321 ⇓*iP* **P 14 26 37.9 +1.3**
BRG *i* pP 14 26 48.6 +1.5
BRG S S 14 37 24.0 +1.0
BRG pmax pmax
comp=Z,19nm,1.0s,mb5.4
BRG MLR MLR
comp=N,454nm,21.6s,MS5.0
BRG MLR MLR
comp=E,276nm,19.3s,MS5.0
BRG MLR MLR
comp=Z,454nm,21.6s,MS4.9
BRG Berggiesshubel 89.08 321 *eP* **P 14 26 37.1 +0.5**
comp=Z,31nm,1.0s,mb5.6
BRG Berggiesshubel 89.08 321 ⇓*iP* **P 14 26 37.9 +1.3**
comp=Z,31nm,1.0s,mb5.6
BRG *i* pP 14 26 48.6 +1.5
comp=Z,17nm,0.7s
BRG *i* 14 27 11.6
comp=Z,21nm,1.1s
BRG PP PP 14 30 24.1 +17
comp=Z,16nm,1.4s
BRG S S 14 37 24.0 +1.0
BRG
comp=N,758nm,21.6s
BRG
comp=E,461nm,19.3s
BRG
comp=Z,758nm,21.6s
BRG Berggiesshubel 89.08 321 ⇓*iP* **P 14 26 37.9 +1.3**
comp=Z,19nm,1.0s,mb5.4
BRG *i* pP 14 26 48.6 +1.5
BRG *i* 14 27 11.6
BRG PP PP 14 30 24.1 +17
BRG S S 14 37 24.0 +1.0
BRG LR LR
comp=Z,450nm,21.6s,MS4.9
GEC2 GERESS Array S 89.08 319 *eP* **P 14 26 37.1 +0.5**
GEC2 pmax pmax
comp=Z,43nm,1.3s,mb5.6
GEC2 GERESS Array S 89.08 319 *eP* **P 14 26 37.1 +0.5**
comp=Z,43nm,1.3s,mb5.6
GERES GERESS Array B 89.08 319 P **P 14 26 37.1 +0.5**
comp=Z,13nm,0.8s,mb5.3,baz=86,slow=4.1,SNR=92
GERES GERESS Array B 89.08 319 P **P 14 26 37.1 +0.5**
GERES pmax pmax
comp=Z,13nm,0.8s
KHC Kasperske Hory 89.19 319 *eP* **P 14 26 37.4 +0.3**
KHC *epP* pP 14 26 48.5 +0.8
KHC AMS AMS 15 12 30.0
comp=Z,800nm,20.6s
KBA Koelnbreinsper 89.20 317 ⇑*iP* **P 14 26 36.7 -0.5**
comp=Z,14nm,1.1s,mb5.2
RUE Ruedersdorf 89.31 322 *eP* **P 14 26 38.1 +0.4**
comp=Z,116nm,1.0s,mb6.2
RJOB Jochberg 89.61 318 *eP* **P 14 26 39.3 +0.2**
comp=Z,26nm,1.0s,mb5.5
WET Wettzell 89.65 319 *eP* **P 14 26 39.6 +0.3**
WET pmax pmax
comp=Z,35nm,1.0s,mb5.6
WET Wettzell 89.65 319 *eP* **P 14 26 39.6 +0.3**
comp=Z,35nm,1.0s,mb5.6
CLL Collm 89.71 321 *iP* **P 14 26 40.0 +0.5**
CLL *eS* S 14 37 30.0 +1.2
CLL pmax pmax
comp=Z,31nm,1.1s,mb5.5
CLL MLR MLR
comp=Z,700nm,19.7s,MS5.1
CLL Collm 89.71 321 *eP* **P 14 26 39.5 0.0**
comp=Z,31nm,1.1s,mb5.5
CLL Collm 89.71 321 *iP* **P 14 26 40.0 +0.5**
comp=Z,31nm,1.1s,mb5.5
CLL *ex* x 14 27 16.0
CLL *eS* S 14 37 31.0 +2.2
CLL *ePS* PS 14 38 45.0 +6.6
CLL *eSSS* 14 47 12.0
CLL *eSSSS* 14 50 24.0
CLL LmV 15 16 00.0
comp=Z,700nm,19.7s
CLL Collm 89.71 321 *iP* **P 14 26 40.0 +0.5**
comp=Z,31nm,1.1s,mb5.5
CLL S S 14 37 30.0 +1.2
CLL LR LR
comp=Z,700nm,19.7s,MS5.1
ABTA Abfaltersbach 89.74 317 ⇑*iP* **P 14 26 39.8 0.0**
comp=Z,19nm,1.0s,mb5.4
NKC Novy Kostel 89.99 320 *eP* **P 14 26 41.9 +1.0**
TANN Tannenbergstha 89.99 320 *eP* **P 14 26 41.6 +0.7**
comp=Z,18nm,1.1s,mb5.3
MOR8 Moi Rana 90.11 336 *eP* **P 14 26 40.7 -0.4**
MOR8 AMb AMB 14 26 44.7
comp=Z,53nm,2.2s,mb5.5
MOR8 *epP* pP 14 26 49.8 -1.8
MOR8 Moi Rana 90.11 336 *eP* **P 14 26 40.7 -0.4**
comp=Z,53nm,2.2s,mb5.5
MANZ Manzenberg 90.20 320 *eP* **P 14 26 42.9 +1.1**
comp=Z,44nm,1.0s,mb5.7
WTTA Wattenberg 90.37 317 ⇑*iP* **P 14 26 42.9 +0.2**
comp=Z,44nm,1.0s,mb5.8
WATA Walderalm 90.42 317 ⇑*iP* **P 14 26 42.8 -0.1**
comp=Z,20nm,0.8s,mb5.5
MOX Moxa 90.55 320 *eP* **P 14 26 44.2 +0.8**
comp=Z,32nm,1.4s,mb5.5
MOX
comp=Z,400nm,20.0s
MOX Moxa 90.55 320 *eP* **P 14 26 44.2 +0.8**
MOX pmax pmax
comp=Z,32nm,1.4s,mb5.5
MOX MLR MLR
comp=Z,400nm,20.0s,MS4.8
MOX Moxa 90.55 320 *eP* **P 14 26 44.0 +0.6**
comp=Z,28nm,1.3s,mb5.4
FUR Furstenfeldbru 90.65 318 *eP* **P 14 26 44.4 +0.4**
FUR pmax pmax
comp=Z,33nm,0.8s,mb5.7
FUR Furstenfeldbru 90.65 318 *eP* **P 14 26 44.4 +0.4**
comp=Z,33nm,0.8s,mb5.7
MOTA Moosalm 90.74 317 ⇓*iP* **P 14 26 44.2 -0.2**
comp=Z,40nm,0.9s,mb5.8
GRA1 Grafenberg Arr 90.76 320 *eP* **P 14 26 45.1 +0.7**
comp=Z,45nm,1.0s,mb5.8
GRA1 *eS* S 14 37 39.5 +1.0
GRA1 LR LR
comp=Z,700nm,18.7s,MS5.1
GRF Grafenberg Arr 90.76 320 *eP* **P 14 26 45.1 +0.7**
GRF *eS* S 14 37 39.5 +1.0
GRF pmax pmax
comp=Z,45nm,1.0s,mb5.8
GRF MLR MLR
comp=Z,700nm,18.7s,MS5.1
GRF Grafenberg Arr 90.76 320 *eP* **P 14 26 45.1 +0.7**
comp=Z,45nm,1.0s,mb5.8
GRF *eS* S 14 37 39.5 +1.0
GRF *eL* 15 16 44.3
comp=Z,680nm,18.7s
RETA Reutte 90.97 317 ⇑*iP* **P 14 26 45.4 -0.1**
comp=Z,38nm,1.0s,mb5.7
FETA Feichten 90.98 317 ⇑*iP* **P 14 26 45.7 +0.2**
comp=Z,28nm,1.0s,mb5.5
NSS Namsos 91.03 334 *eP* **P 14 26 44.8 -0.6**
NSS AMS AMS 15 15 27.3
comp=Z,1µm,16.9s,MS5.3
VLC Villacollemand 91.12 314 PFAKE 14 27 00.0 +14
VLC LR LR
comp=Z,573nm,20.0s,MS5.0
NB2 NORSAR Subarra 91.22 331 P **P 14 26 45.8 -0.5**
comp=Z,1.0nm,0.7s,mb4.2,baz=93,slow=5.6
NOA NORSAR Array B 91.22 331 P **P 14 26 46.0 -0.4**
comp=Z,7.1nm,0.8s,mb5.0,baz=95,slow=5.0,SNR=24
NOA PP PP 14 30 34.8 +11
comp=Z,1.3nm,0.7s,baz=76,slow=7.4,SNR=3.5
NOA LR LR 15 12 50.0
comp=Z,769nm,21.1s,MS5.1,baz=75,slow=39
CLZ Clausthal 91.37 322 *eP* **P 14 26 47.8 +0.6**
CLZ pmax pmax
comp=Z,33nm,1.2s,mb5.5
CLZ Clausthal 91.37 322 *eP* **P 14 26 47.8 +0.6**
comp=Z,33nm,1.2s,mb5.5
BSEG Bad Segeberg 91.47 324 *eP* **P 14 26 48.5 +0.9**
BSEG pmax pmax
comp=Z,11nm,1.0s,mb5.1
BSEG Bad Segeberg 91.47 324 *eP* **P 14 26 48.5 +0.9**
comp=Z,11nm,1.0s,mb5.1
DAVOX Davos/Dischmat 91.55 317 P **P 14 26 49.0 +0.8**
comp=Z,37nm,0.9s,mb5.7,baz=111,slow=6.1,SNR=30
NRDL Niedersach Rie 91.55 322 *eP* **P 14 26 48.7 +0.6**
comp=Z,17nm,1.1s,mb5.3
DAVA Damuels 91.57 317 ⇑*iP* **P 14 26 48.6 +0.3**
comp=Z,64nm,0.9s,mb5.9
DAVA Damuels 91.57 317 ⇑*iPcP* **P 14 26 48.6 +0.3**
comp=Z,64nm,0.9s,mb5.9
UBBA Unterbreizbach 91.58 321 *eP* **P 14 26 48.6 +0.4**
comp=Z,6.0nm,1.0s,mb4.9
DAVOS Davos 91.61 317 P **P 14 26 49.0 +0.5**
KEST Kesra 91.67 306 P **P 14 26 50.6 +1.6**
comp=Z,16nm,0.9s,mb5.3,baz=315,slow=1.4,SNR=35
KEST LR LR 15 11 24.3
comp=Z,445nm,18.4s,MS4.9,baz=11,slow=38
KBS Kingsbay 91.71 349 ⇑*eP* **P 14 26 48.4 +0.1**
KBS LR LR
comp=Z,2µm,19.0s,MS5.5
VSL Villasalto 91.74 309 *eP* **P 14 26 48.8 -0.4**
comp=Z,28nm,0.9s,mb5.6
VSL LR LR
comp=Z,431nm,21.0s,MS4.9
TUE Stuetta 91.91 316 *eP* **P 14 26 50.4 +0.5**
comp=Z,14nm,0.9s,mb5.3
SNAA Sanae 91.95 198 ⇑*eP* **P 14 26 50.3 +0.8**
SNAA Sanae 91.95 198 *eP* **P 14 26 49.8 +0.3**
comp=Z,16nm,1.4s,mb5.2
CORF Corte 91.97 312 *eP* **P 14 26 50.7 +0.4**
KONO Kongsberg 91.99 329 ⇑*eP* **P 14 26 50.3 +0.4**
STU Stuttgart 92.06 319 *eP* **P 14 26 51.0 +0.5**
STU pmax pmax
comp=Z,17nm,0.8s,mb5.4
STU Stuttgart 92.06 319 *eP* **P 14 26 51.3 +0.8**
comp=Z,20nm,0.8s,mb5.5
STU Stuttgart 92.06 319 *eP* **P 14 26 51.0 +0.5**
comp=Z,17nm,0.8s,mb5.4
PGF Pioggiola 92.09 312 *eP* **P 14 26 50.6 -0.2**
comp=Z,40nm,1.0s,mb5.4
PGF Pioggiola 92.09 312 *eP* **P 14 26 50.6 -0.2**
PGF pmax pmax
comp=Z,20nm,1.0s,mb5.4
PGF Pioggiola 92.09 312 *eP* **P 14 26 50.6 -0.2**
comp=Z,20nm,1.0s,mb5.4
TNS Taunus Mts 92.56 320 *eP* **P 14 26 53.4 +0.6**
TNS pmax pmax
comp=Z,36nm,0.9s,mb5.8
TNS Taunus Mts 92.56 320 *eP* **P 14 26 53.4 +0.6**
comp=Z,36nm,0.9s,mb5.8
BFO Black Forest 92.63 318 P **P 14 26 53.3 +0.2**
comp=Z,74nm,0.9s,mb6.1,SNR=6.2
BFO Black Forest 92.63 318 *eP* **P 14 26 53.5 +0.4**
BFO pmax pmax
comp=Z,14nm,1.0s,mb5.3
BFO Black Forest 92.63 318 *eP* **P 14 26 53.5 +0.4**
comp=Z,14nm,1.0s,mb5.3
LANF Langenberg 92.98 319 *eP* **P 14 26 55.9 +1.2**
IBBN Ibbenburen 92.99 322 *eP* **P 14 26 55.4 +0.7**
comp=Z,13nm,0.9s,mb5.4
SBF Sospel 93.24 314 *eP* **P 14 26 55.7 -0.4**
comp=Z,37nm,0.9s,mb5.5
SBF Sospel 93.24 314 *eP* **P 14 26 55.7 -0.4**
SBF pmax pmax
comp=Z,19nm,0.9s,mb5.5
SBF Sospel 93.24 314 *eP* **P 14 26 55.7 -0.4**
comp=Z,19nm,0.9s,mb5.5
CDF Champ du Feu 93.33 318 *eP* **P 14 26 55.8 -0.6**
comp=Z,24nm,1.1s,mb5.2
CDF Champ du Feu 93.33 318 *eP* **P 14 26 55.8 -0.6**
CDF pmax pmax
comp=Z,12nm,1.1s,mb5.2
CDF Champ du Feu 93.33 318 *eP* **P 14 26 55.8 -0.6**
comp=Z,12nm,1.1s,mb5.2

ECH Echery 93.41 318 *e*P **P 14 26 57.5 +0.8**
ECH Echery 93.41 318 *e*P **P 14 26 56.8 0.0**
HINF Hinteralfeld 93.62 318 *e*P **P 14 26 56.8 -0.9**
MBDF Montbardon 93.72 314 *e*P **P 14 26 57.3 -0.9**
LPG La Plagne 93.72 315 *e*P **P 14 26 58.1 -0.1**
comp=Z,22nm,0.9s,mb5.3
LPG La Plagne 93.72 315 *e*P **P 14 26 58.1 -0.1**
LPG pmax pmax
comp=Z,11nm,0.9s,mb5.3
LPG La Plagne 93.72 315 *e*P **P 14 26 58.1 -0.1**
comp=Z,11nm,0.9s,mb5.3
LPL La Plagne 93.73 315 *e*P **P 14 26 58.1 -0.2**
comp=Z,20nm,0.9s,mb5.3
LPL La Plagne 93.73 315 *e*P **P 14 26 58.1 -0.2**
LPL pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
LPL La Plagne 93.73 315 *e*P **P 14 26 58.1 -0.2**
comp=Z,10nm,0.9s,mb5.2
BNI Bardonecchia 93.78 315 *e*P **P 14 27 01.7 +3.2**
BNI pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
BNI MLR MLR
comp=Z,801nm,20.0s,MS5.2
BNI Bardonecchia 93.78 315 *e*P **P 14 27 01.7 +3.1**
comp=Z,4.0nm,0.8s,mb4.9
BNI LR LR
comp=Z,801nm,20.0s,MS5.2
FRF La Foret Royal 93.82 313 *e*P **P 14 26 58.4 -0.3**
comp=Z,15nm,0.8s,mb5.2
FRF La Foret Royal 93.82 313 *e*P **P 14 26 58.4 -0.3**
FRF pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
FRF La Foret Royal 93.82 313 *e*P **P 14 26 58.4 -0.3**
comp=Z,7.3nm,0.8s,mb5.2
LMR La Mourre 93.92 313 *e*P **P 14 26 58.7 -0.5**
comp=Z,31nm,1.1s,mb5.3
LMR La Mourre 93.92 313 *e*P **P 14 26 58.7 -0.5**
LMR pmax pmax
comp=Z,15nm,1.1s,mb5.3
LMR La Mourre 93.92 313 *e*P **P 14 26 58.7 -0.5**
comp=Z,15nm,1.1s,mb5.3
HAU Haudompre 93.96 318 *e*P **P 14 26 58.6 -0.7**
comp=Z,29nm,1.0s,mb5.4
HAU *e*MLR MLR
comp=Z,549nm,22.2s,MS4.7
HAU Haudompre 93.96 318 *e*P **P 14 26 58.6 -0.7**
HAU pmax pmax
comp=Z,14nm,1.0s,mb5.3
HAU MLR MLR
comp=Z,550nm,22.3s,MS5.0
HAU Haudompre 93.96 318 *e*P **P 14 26 58.6 -0.7**
comp=Z,14nm,1.0s,mb5.4
HAU LR LR
comp=Z,550nm,22.3s,MS5.0
WLF Walferdange 94.05 319 P **P 14 27 00.3 +0.7**
comp=Z,9.7nm,1.2s,mb5.1
WLF Walferdange 94.05 319 *e*P **P 14 27 00.6 +1.0**
comp=Z,13nm,1.0s,mb5.3
WLF Walferdange 94.05 319 PFAKE 14 27 10.0 +10
WLF LR LR
comp=Z,475nm,21.0s,MS4.9
MEM Membach 94.12 320 P **P 14 27 00.0 +0.1**
comp=Z,4.7nm,0.9s,mb4.9
CABF La Chapelle 94.16 316 *e*P **P 14 27 00.1 -0.2**
comp=Z,21nm,1.1s,mb5.2
CABF La Chapelle 94.16 316 *e*P **P 14 27 00.1 -0.2**
CABF pmax pmax
comp=Z,11nm,1.1s,mb5.2
CABF La Chapelle 94.16 316 *e*P **P 14 27 00.1 -0.2**
comp=Z,11nm,1.1s,mb5.2
THEF They Montfort 94.19 318 *e*P **P 14 26 59.6 -0.8**
BEBN Eben Emael 94.32 321 P **P 14 26 59.5 -1.3**
ORIF Oris-en-Rattie 94.35 315 *e*P **P 14 27 00.9 -0.2**
comp=Z,12nm,0.8s,mb5.1
ORIF *e*MLR MLR
comp=Z,880nm,22.0s,MS4.9
ORIF Oris-en-Rattie 94.35 315 *e*P **P 14 27 00.9 -0.2**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
ORIF Oris-en-Rattie 94.35 315 *e*P **P 14 27 00.9 -0.2**
comp=Z,5.9nm,0.8s,mb5.1
SMRF Simiane la Rot 94.59 314 *e*P **P 14 27 02.5 +0.2**
comp=Z,15nm,1.0s,mb5.1
SMRF Simiane la Rot 94.59 314 *e*P **P 14 27 02.5 +0.2**
comp=Z,15nm,1.0s,mb5.4
MEZF Maizieres J'vi 94.81 318 *e*P **P 14 27 02.7 -0.5**
comp=Z,24nm,1.0s,mb5.3
MEZF Maizieres J'vi 94.81 318 *e*P **P 14 27 02.7 -0.5**
comp=Z,24nm,1.0s,mb5.6
GIVF Givet 94.89 320 *e*P **P 14 27 03.0 -0.5**
DOU Dourbes 95.04 320 P **P 14 27 04.0 -0.2**
VIVF Saint-Julien-l 95.21 315 *e*P **P 14 27 04.6 -0.5**
comp=Z,13nm,1.0s,mb5.0
VIVF Saint-Julien-l 95.21 315 *e*P **P 14 27 04.6 -0.5**
VIVF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
VIVF Saint-Julien-l 95.21 315 *e*P **P 14 27 04.6 -0.5**
comp=Z,6.7nm,1.0s,mb5.0
SSB Saint Sauveur 95.28 315 *e*P **P 14 27 04.3 -1.1**
BAIF Baives 95.29 320 *e*P **P 14 27 05.1 -0.2**
comp=Z,14nm,0.9s,mb5.1
BAIF Baives 95.29 320 *e*P **P 14 27 05.1 -0.2**
BAIF pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
BAIF Baives 95.29 320 *e*P **P 14 27 05.1 -0.2**
comp=Z,7.1nm,0.9s,mb5.1
LOR Lormes 95.67 317 *e*P **P 14 27 06.6 -0.5**
comp=Z,25nm,1.1s,mb5.2
LOR *e*MLR MLR
comp=Z,563nm,20.0s,MS4.7
LOR Lormes 95.67 317 *e*P **P 14 27 06.6 -0.5**
LOR pmax pmax
comp=Z,12nm,1.1s,mb5.2
LOR MLR MLR
comp=Z,560nm,20.0s,MS5.0
LOR Lormes 95.67 317 *e*P **P 14 27 06.6 -0.5**
comp=Z,12nm,1.1s,mb5.2
LOR LR LR
comp=Z,560nm,20.0s,MS5.0
SMF Signal de Mont 95.71 316 *e*P **P 14 27 06.7 -0.6**
comp=Z,21nm,1.0s,mb5.2
SMF Signal de Mont 95.71 316 *e*P **P 14 27 06.7 -0.6**
SMF pmax pmax
comp=Z,11nm,1.0s,mb5.2
SMF Signal de Mont 95.71 316 *e*P **P 14 27 06.7 -0.6**
comp=Z,10nm,1.0s,mb5.2
SSF Saint Saulge 95.92 317 *e*P **P 14 27 07.8 -0.5**
comp=Z,25nm,1.3s,mb5.2
SSF Saint Saulge 95.92 317 *e*P **P 14 27 07.8 -0.5**
SSF pmax pmax
comp=Z,13nm,1.3s,mb5.2
SSF Saint Saulge 95.92 317 *e*P **P 14 27 07.8 -0.5**
comp=Z,13nm,1.3s,mb5.2
AVF Avril sur Loir 96.04 317 *e*P **P 14 27 08.2 -0.6**
comp=Z,12nm,1.0s,mb5.0
AVF Avril sur Loir 96.04 317 *e*P **P 14 27 08.2 -0.6**
AVF pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
AVF Avril sur Loir 96.04 317 *e*P **P 14 27 08.2 -0.6**
comp=Z,6.2nm,1.0s,mb5.0
BGF Bois d'Agland 96.40 316 *e*P **P 14 27 10.1 -0.4**
MTLF Montolieu 97.05 313 *e*P **P 14 27 13.2 -0.3**
comp=Z,9.8nm,1.0s,mb4.9
MTLF Montolieu 97.05 313 *e*P **P 14 27 13.2 -0.3**
MTLF pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
MTLF Montolieu 97.05 313 *e*P **P 14 27 13.2 -0.3**
comp=Z,4.9nm,1.0s,mb4.9
CAF Calviac 97.05 315 *e*P **P 14 27 13.5 0.0**
comp=Z,15nm,1.2s,mb5.0
CAF Calviac 97.05 315 *e*P **P 14 27 13.5 0.0**
CAF pmax pmax
comp=Z,7.0nm,1.2s,mb5.0
CAF Calviac 97.05 315 *e*P **P 14 27 13.5 0.0**
comp=Z,7.3nm,1.2s,mb5.0
RJF Les Rejaudoux 97.41 315 *e*P **P 14 27 14.9 -0.2**
comp=Z,29nm,1.4s,mb5.2
RJF *e*MLR MLR
comp=Z,755nm,22.0s,MS4.8
RJF Les Rejaudoux 97.41 315 *e*P **P 14 27 14.9 -0.2**
RJF pmax pmax
comp=Z,15nm,1.4s,mb5.2
RJF MLR MLR
comp=Z,760nm,22.0s,MS5.1
RJF Les Rejaudoux 97.41 315 *e*P **P 14 27 14.9 -0.2**
comp=Z,15nm,1.4s,mb5.2
RJF LR LR
comp=Z,760nm,22.0s,MS5.1
LFF La Frestale 97.99 315 *e*P **P 14 27 17.4 -0.3**
LDF La Druitiere 98.23 319 *e*P **P 14 27 18.0 -0.7**
comp=Z,12nm,0.9s,mb5.1
LDF La Druitiere 98.23 319 *e*P **P 14 27 18.0 -0.7**
LDF pmax pmax
comp=Z,6.0nm,0.9s,mb5.1
LDF La Druitiere 98.23 319 *e*P **P 14 27 18.0 -0.7**
comp=Z,6.2nm,0.9s,mb5.1
DAG Danmarks Havn 98.42 348‖ *e*P **P 14 27 18.0 -1.0**
DAG pmax pmax
comp=Z,8.0nm,0.8s,mb5.3
DAG Danmarks Havn 98.42 348‖ *i*P **P 14 27 18.0 -1.0**
comp=Z,8.2nm,0.8s,mb5.3
DAG Danmarks Havn 98.42 348‖ *e*P **P 14 27 18.0 -1.0**
comp=Z,8.2nm,0.8s,mb5.3
EPF Esparros 98.44 313 *e*P **P 14 27 16.4 -3.4**
TORD Torodi Ar. Bea 98.45 283 P **P 14 27 20.2 -0.2**
comp=Z,0.4nm,0.4s,mb4.3,baz=79,slow=3.0,SNR=5.8
TORD PP PP 14 31 28.6 +7.5
comp=Z,1.1nm,1.0s,baz=100,slow=4.5,SNR=4.8
TORD PKKPbc PKKPbc 14 43 51.6 +1.1
comp=Z,1.1nm,0.8s,baz=287,slow=3.2,SNR=5.2
TORD LR LR 15 14 33.8
comp=Z,820nm,18.2s,MS5.3,baz=110,slow=37
TORD Torodi Ar. Bea 98.45 283 P **P 14 27 20.2 -0.2**
TORD PP PP 14 31 28.6 +7.6
TORD PKKPbc PKKPbc 14 43 51.6 +1.1
FLN La Foliniere 98.45 319 *e*P **P 14 27 18.8 -0.9**
FLN *e*MLR MLR
comp=Z,694nm,21.8s,MS4.8
FLN La Foliniere 98.45 319 *e*P **P 14 27 18.8 -0.9**
FLN LR LR
comp=Z,690nm,21.8s,MS5.1
MFF Saint Martin d 98.45 317 *e*P **P 14 27 19.0 -0.7**
comp=Z,7.2nm,0.9s,mb4.9
MFF Saint Martin d 98.45 317 *e*P **P 14 27 19.0 -0.7**
MFF pmax pmax
comp=Z,4.0nm,0.9s,mb5.0
MFF Saint Martin d 98.45 317 *e*P **P 14 27 19.0 -0.7**
comp=Z,3.6nm,0.9s,mb4.9
GRR Gorron 98.74 318 *e*P **P 14 27 20.6 -0.4**
ETSF Etsaut 99.11 313 *e*P **P 14 27 23.5 +0.7**
comp=Z,21nm,1.2s,mb5.2
ETSF Etsaut 99.11 313 *e*P **P 14 27 23.5 +0.7**
ETSF pmax pmax
comp=Z,10.0nm,1.2s,mb5.2
ETSF Etsaut 99.11 313 *e*P **P 14 27 23.5 +0.7**
comp=Z,10nm,1.2s,mb5.2
SJPF Ste Jean 99.58 313 *e*P Pdif 14 27 24.6 +0.1
PPLA Purkeypile 100.04 26 *e*Pdif Pdif 14 27 27.7 +1.1
BPAW Bear Paw Mtn. 100.23 25 *e*Pdif Pdif 14 27 26.8 -0.6
KDAK Kodiak Island 101.13 31 PFAKE 14 27 40.0 +8.6
KDAK LR LR
comp=Z,447nm,21.0s,MS5.0
COLA College 101.28 24 PFAKE 14 27 40.0 +7.9
COLA LR LR
comp=Z,697nm,20.0s,MS5.2
PMR Palmer 101.78 27 PFAKE 14 27 50.0 +16
PMR LR LR
comp=Z,842nm,20.0s,MS5.3
ESDC Sonseca Array 102.02 310 PKKPbc PKKPbc 14 43 42.0 +0.9
comp=Z,1.2nm,0.8s,baz=272,slow=3.8,SNR=6.3
ESLA Sonseca Array 102.02 310 PFAKE 14 27 50.0 +15
ESLA LR LR
comp=Z,3μm,20.0s,MS5.8
PAB San Pablo 102.33 310 PFAKE 14 27 50.0 +13
PAB LR LR
comp=Z,488nm,19.0s,MS5.0
SFS San Fernando 104.20 307 PFAKE 14 28 00.0 +15
SFS LR LR
comp=Z,1μm,21.0s,MS5.4
SHEL Horse Pasture 104.39 253 PFAKE 14 28 00.0 +14
SHEL LR LR
comp=Z,1μm,19.0s,MS5.5
MTE Manteigas 104.63 311 PFAKE 14 28 00.0 +13
MTE LR LR
comp=Z,688nm,22.0s,MS5.2
DAWY Dawson 104.97 23 *e*Pdif Pdif 14 27 47.9 -0.6
TBI Tubuai 108.02 115 *e*LR LR 15 03 45.3
comp=Z,1μm,22.2s
PPT Papeete 108.87 109 *e*LR LR 15 04 11.2
comp=Z,1μm,25.2s
SIT Sitka 110.06 29 PFAKE 14 32 20.0 +7.3
SIT LR LR
comp=Z,1μm,21.0s,MS5.5
WRAK Wrangell Islan 111.80 28 PFAKE 14 32 30.0 +14
WRAK LR LR
comp=Z,840nm,20.0s,MS5.3
SFJD Kangerlussuaq 112.10 348 PFAKE 14 32 30.0 +14
SFJD LR LR
comp=Z,2μm,21.0s,MS5.6
ASCN Ascension 113.65 260 PFAKE 14 32 30.0 +9.2
ASCN LR LR
comp=Z,1μm,21.0s,MS5.6
YKA Yellowknife Ar 114.56 17 PKP PKiKP 14 32 20.2 -0.9
comp=Z,3.1nm,0.8s,baz=322,slow=2.3,SNR=6.8
YKA PP PP 14 33 18.1 +0.4
comp=Z,3.0nm,0.8s,baz=326,slow=7.1,SNR=5.8
YKA Yellowknife Ar 114.56 17 PKIKP PKiKP 14 32 20.2 -0.9
YKA 14 33 18.1
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA Yellowknife Ar 114.56 17 PKP PKiKP 14 32 20.2 -0.9
YKA PP PP 14 33 18.1 +0.4
RKT Rikitea 121.00 119 *e*PS PS 14 43 54.0 -2.7
comp=Z,304nm,26.5s
RKT *e*SS SS 14 50 39.1 +4.4
comp=Z,392nm,30.8s
RKT Rikitea 121.00 119 *e*LR LR 15 09 49.0
comp=Z,1μm,27.8s
VDB Vedder Mountai 121.15 31 P PKPdf 14 32 34.0 -0.2
NLWA Neilton Lookou 121.20 33 PFAKE 14 32 50.0 +16
NLWA LR LR
comp=Z,764nm,20.0s,MS5.3
GNW Green Mountain 121.67 33 *e*PKPdf PKPdf 14 32 35.5 +0.2
JCW Jim Creek 121.75 32 *e*PKPdf PKPdf 14 32 35.1 -0.3
RPW Rockport 121.81 31 *e*PKPdf PKPdf 14 32 34.8 -0.7
EDM Edmonton 122.18 23 *e*PKIKP PKPdf 14 32 35.7 -0.4
FL2 Flat Top 2 122.75 34 P PKPdf 14 32 38.3 +0.9
ETW Entiat 122.96 31 *e*PKPdf PKPdf 14 32 37.6 -0.1
COR Corvallis 123.16 36 PFAKE 14 32 50.0 +12
COR LR LR
comp=Z,718nm,20.0s,MS5.3
EFI East Falkland 123.19 196 PFAKE 14 32 50.0 +12
EFI LR LR
comp=Z,1μm,20.0s,MS5.5
OD2 Odessa Site #2 123.94 31 *e*PKPdf PKPdf 14 32 39.5 -0.1
RSW Rattlesnake Hi 124.13 32 *e*PKPdf PKPdf 14 32 40.9 +0.9
NEW Newport 124.14 29 *e*PKIKP PKPdf 14 32 39.7 -0.3
NEW MLR MLR
comp=Z,829nm,22.0s
HAWA Hanford 124.16 32 *e*PKPdf PKPdf 14 32 39.5 -0.6
HAWA LR LR
comp=Z,830nm,20.0s,MS5.4
REDWA Red Mountain 124.27 32 P PKPdf 14 32 41.5 +1.2
HUMO Hull Mountain 124.50 38 *e*PKPdf PKPdf 14 32 41.1 +0.3
HUMO LR LR
comp=Z,682nm,22.0s,MS5.3
FFC Flin Flon 124.65 15 *e*PKIKP PKPdf 14 32 39.9 -0.9
FFC MLR MLR
comp=Z,858nm,21.0s,MS5.4
YBH Yreka Blue Hor 125.14 38 PFAKE 14 32 50.0 +7.9
YBH LR LR
comp=Z,604nm,20.0s,MS5.3
LNOR Lincton Mounta 125.16 32 *e*PKIKP PKPdf 14 32 41.8 -0.2
WDC Whiskeytown Da 125.89 39 PFAKE 14 33 00.0 +16
WDC LR LR
comp=Z,688nm,21.0s,MS5.3
BMO Blue Mountains 126.35 32 *e*PKIKP PKPdf 14 32 43.9 -0.4
BMO MLR MLR
comp=Z,668nm,22.0s,MS5.3
SCHQ Schefferville 126.39 350 PKP PKPdf 14 32 43.2 -0.9
comp=Z,15nm,0.9s,baz=49,slow=4.1,SNR=6.2
SCHQ Schefferville 126.39 350 PKP PKPdf 14 32 43.2 -0.9
SCHQ LR LR
comp=Z,2μm,20.0s,MS5.7
HOPS Hopland 126.41 41 PFAKE 14 33 00.0 +15
HOPS LR LR
comp=Z,773nm,20.0s,MS5.4
LBCM Butte Creek Ri 126.49 38 P PKPdf 14 32 45.5 +0.8
MOD Modoc 126.51 37 *e*PKPdf PKPdf 14 32 45.2 +0.4
MOD LR LR
comp=Z,605nm,20.0s,MS5.3
MSO Missoula 126.68 28 *e*PKPdf PKPdf 14 32 44.0 -0.9
MSO LR LR
comp=Z,838nm,20.0s,MS5.4
CHMT Chamberlain Mo 126.94 28 *e*PKPdf PKPdf 14 32 45.3 -0.1
NSHM Saint Helena R 126.97 42 *e*PKPdf PKPdf 14 32 46.6 +0.9
MCCM Marconi Confer 126.99 42 PFAKE 14 33 00.0 +14
MCCM LR LR
comp=Z,616nm,19.0s,MS5.3
WVOR Wild Horse Val 127.16 35 *e*PKIKP PKPdf 14 32 46.9 +0.9
WVOR MLR MLR
comp=Z,734nm,20.0s,MS5.4
EGMT Eagleton 127.66 25 *e*PKPdf PKPdf 14 32 47.1 +0.4
EGMT LR LR
comp=Z,692nm,19.0s,MS5.4
DLMT Dillon 128.39 29 *e*PKPdf PKPdf 14 32 48.7 +0.5
BOZ Bozeman (W) 128.64 28 PFAKE 14 33 00.0 +11
BOZ LR LR
comp=Z,832nm,21.0s,MS5.4
MCMT McKenzie Canyo 128.65 30 *e*PKPdf PKPdf 14 32 49.9 +1.2
SAO San Andreas Ge 128.68 43 PFAKE 14 33 00.0 +11
SAO LR LR
comp=Z,514nm,19.0s,MS5.2
CMB Columbia Colle 128.70 41 *e*PKIKP PKPdf 14 32 49.7 +0.7
CMB MLR MLR
comp=Z,641nm,22.0s,MS5.3
HLID Hailey 128.75 32 *e*PKPdf PKPdf 14 32 50.4 +1.5
HLID LR LR
comp=Z,1μm,21.0s,MS5.5
BMN Battle Mountai 129.25 36 PFAKE 14 33 00.0 +10
BMN LR LR
comp=Z,536nm,20.0s,MS5.2
QLMT Earthquake Lak 129.34 29 *e*PKPdf PKPdf 14 32 52.2 +2.2
GCMT Greycliff 129.43 27 *e*PKPdf PKPdf 14 32 51.0 +0.8
DGMT Dagmar 129.44 21 PFAKE 14 33 00.0 +10
DGMT LR LR
comp=Z,1μm,20.0s,MS5.6
YMR Madison River 129.68 28 PFAKE 14 33 00.0 +9.3
YMR LR LR
comp=Z,1μm,21.0s,MS5.5
NVAR Mina Array Bea 129.81 39 PKP PKPdf 14 32 50.3 -0.8
comp=Z,5.8nm,0.7s,baz=228,slow=2.9,SNR=7.9
NVAR PP PP 14 35 11.1 +9.1
comp=Z,2.6nm,0.8s,baz=282,slow=7.1,SNR=5.3
NVAR SKP 14 36 30.1
comp=Z,3.1nm,0.8s,baz=268,slow=2.4,SNR=4.7
LKWY Lake 130.03 28 PFAKE 14 33 00.0 +8.7
LKWY LR LR
comp=Z,2μm,19.0s,MS5.7
PTRM Twissleman Ran 130.12 43 *e*PKPdf PKPdf 14 32 53.5 +1.7
RLMT Red Lodge 130.12 27 *e*PKPdf PKPdf 14 32 52.9 +1.4
RLMT LR LR
comp=Z,1μm,20.0s,MS5.7
LAO LASA Array 130.16 23 PFAKE 14 33 00.0 +8.5
LAO LR LR
comp=Z,992nm,22.0s,MS5.5
ELK Elko 130.20 35 *e*PKIKP PKPdf 14 32 53.3 +1.5
ELK MLR MLR
comp=Z,761nm,20.0s
ULM Lac du Bonnet 130.25 13 PKP PKPdf 14 32 50.5 -1.1
comp=Z,15nm,0.7s,baz=41,slow=3.2,SNR=17
ULM PP PP 14 35 08.6 +4.6
comp=Z,2.4nm,0.6s,baz=305,slow=5.3,SNR=3.1
ULM Lac du Bonnet 130.25 13 *e*PKPdf PKPdf 14 32 50.6 -1.0
ULM LR LR
comp=Z,1μm,21.0s,MS5.5
MOOW Moose Ponds 130.47 29 *e*PKPdf PKPdf 14 32 53.0 +0.8
RRI2 Red Ridge 130.49 30 *e*PKPdf PKPdf 14 32 53.4 +1.2
TPAW Teton Pass 130.56 29 *e*PKPdf PKPdf 14 32 53.3 +0.9
LOHW Long Hollow 130.64 29 *e*PKPdf PKPdf 14 32 53.1 +0.5
SNOW Snow King Moun 130.68 29 *e*PKPdf PKPdf 14 32 53.5 +0.9
TPH Tonopah 130.70 39 *e*PKIKP PKPdf 14 32 54.2 +1.4
TPH MLR MLR
comp=Z,470nm,19.0s,MS5.2
REDW Red Top Meadow 130.71 29 *e*PKPdf PKPdf 14 32 53.3 +0.7
HVU Hansel Valley 130.86 32 *e*PKIKP PKPdf 14 32 53.7 +0.7
AHID Auburn Hatcher 131.02 30 PFAKE 14 33 10.0 +17
AHID LR LR
comp=Z,1μm,20.0s,MS5.5
ISA Isabella 131.30 42 PFAKE 14 33 10.0 +16
ISA LR LR
comp=Z,597nm,21.0s,MS5.3
BGU Big Grassy Mou 131.32 33 *e*PKPdf PKPdf 14 32 54.1 +0.2
DAC Darwin (Calif) 131.53 41 PFAKE 14 33 10.0 +16
DAC LR LR
comp=Z,502nm,20.0s,MS5.2
HWUT Hardware Ranch 131.62 32 *e*PKPdf PKPdf 14 32 54.8 +0.3
HWUT LR LR
comp=Z,1μm,20.0s,MS5.5
BW06 Boulder Array 131.78 29 PFAKE 14 33 10.0 +15
BW06 LR LR
comp=Z,649nm,21.0s,MS5.3
PDAR Pinedale Array 131.78 29 PKP PKPdf 14 32 53.6 -1.1
comp=Z,2.1nm,0.6s,baz=94,slow=6.1,SNR=3.7
PDAR PP PP 14 35 17.4 +3.1
comp=Z,3.3nm,1.2s,baz=320,slow=4.4,SNR=4.0
PDAR SKP 14 36 30.1
comp=Z,6.1nm,0.8s,baz=40,slow=0.9,SNR=3.6
DUG Dugway 131.94 34 *e*PKIKP PKPdf 14 32 56.1 +1.0
DUG MLR MLR
comp=Z,729nm,20.0s,MS5.4
TPNV Topopah Spring 132.00 39 *e*PKIKP PKPdf 14 32 54.6 -0.7
TPNV MLR MLR
comp=Z,671nm,22.0s,MS5.3
NOQ North Oquirrh 132.00 33 *e*PKPdf PKPdf 14 32 56.5 +1.3
AGMN Agassiz Refuge 132.08 14 PFAKE 14 33 10.0 +15
AGMN LR LR
comp=Z,1μm,21.0s,MS5.7
MWC Mount Wilson 132.38 44 *e*PKIKP PKPdf 14 32 55.3 -0.8
MWC MLR MLR
comp=Z,743nm,21.0s,MS5.4
JLU Jordanelle 132.40 32 *e*PKPdf PKPdf 14 32 57.0 +1.0
NLU North Lily Min 132.51 33 *e*PKPdf PKPdf 14 32 55.6 -0.6
GSC Goldstone 132.62 42 *e*PKIKP PKPdf 14 32 58.3 +1.8
GSC MLR MLR
comp=Z,776nm,22.0s,MS5.4
DAU Daniels Canyon 132.64 32 *e*PKIKP PKPdf 14 32 57.4 +1.0
MPU Maple Canyon 132.71 33 PFAKE 14 33 10.0 +13
MPU LR LR
comp=Z,1μm,21.0s,MS5.6
RSSD Black Hills 133.15 24 *e*PKIKP PKPdf 14 32 57.0 -0.3
RSSD MLR MLR
comp=Z,1μm,21.0s,MS5.6
ARUT Antelope Range 133.20 37 *e*PKIKP PKPdf 14 32 59.0 +1.4
EYMN Ely 133.35 10 PFAKE 14 33 10.0 +12
EYMN LR LR
comp=Z,1μm,20.0s,MS5.5
MVU Marysvale 133.44 35 PFAKE 14 33 10.0 +12
MVU LR LR
comp=Z,896nm,22.0s,MS5.4
MSU Marysvale 133.45 35 *e*PKIKP PKPdf 14 32 59.9 +1.9
TMUT Trail Mountain 133.45 33 *e*PKPdf PKPdf 14 32 57.9 -0.1
PFO Pinyon Flat Ob 133.83 43 *e*PKIKP PKPdf 14 32 59.8 +0.9
PFO MLR MLR
comp=Z,664nm,19.0s,MS5.4
LDFC Landfair 133.87 41 *e*PKPdf PKPdf 14 32 60.0 +1.1
SRU San Rafael 133.96 33 *e*PKIKP PKPdf 14 32 57.9 -1.1
BAR Barrett 134.20 44 PFAKE 14 33 10.0 +10
BAR LR LR
comp=Z,457nm,20.0s,MS5.2
PHWY Pilot Hill 134.84 27 *e*PKPdf PKPdf 14 32 59.0 -1.6
GLA Glamis 135.26 43 *e*PKIKP PKPdf 14 33 02.4 +0.8
GLA MLR MLR
comp=Z,553nm,19.0s,MS5.3
COWI Conover 135.53 9 PKPpre 14 32 57.6
COWI LR LR
comp=Z,1μm,20.0s,MS5.6
WUAZ Wupatki 135.94 37 PKPdf PKPdf 14 33 02.8 0.0
WUAZ LR LR
comp=Z,496nm,20.0s,MS5.2
ISCO Idaho Springs 135.96 28 PFAKE 14 33 10.0 +7.3
ISCO LR LR
comp=Z,630nm,19.0s,MS5.4
PKME Peaks-Kenny Pk 136.03 349 PFAKE 14 33 10.0 +7.4
PKME LR LR
comp=Z,1μm,19.0s,MS5.6
ECSD EROS,Sioux Fal 136.09 17 PKPpre 14 32 56.6
ECSD LR LR
comp=Z,1μm,20.0s,MS5.6
PLCA Paso Flores 136.42 191 PKP PKPdf 14 33 03.6 +0.1
comp=Z,4.0nm,1.1s,baz=244,slow=20,SNR=4.3
PLCA Paso Flores 136.42 191 PKP PKPdf 14 33 03.6 +0.1
PLCA LR LR
comp=Z,1μm,21.0s,MS5.6
MVCO Mesa Verde 136.43 33 *e*PKPdf PKPdf 14 33 03.7 0.0

MVCO LR LR
comp=Z,1μm,21.0s,MS5.5
TRQA Tornquist 136.60 201 PFAKE 14 33 20.0 +16
TRQA LR LR
comp=Z,1μm,19.0s,MS5.6
OGNE Ogallala 136.62 24 PFAKE 14 33 20.0 +16
OGNE LR LR
comp=Z,963nm,22.0s,MS5.5
GLMI Grayling 137.33 5 PFAKE 14 33 20.0 +15
GLMI LR LR
comp=Z,1μm,22.0s,MS5.6
LONY Lake Ozonia 137.44 354 PFAKE 14 33 20.0 +15
LONY LR LR
comp=Z,779nm,19.0s,MS5.5
LBNH Lisbon 137.47 351 PFAKE 14 33 20.0 +15
LBNH LR LR
comp=Z,872nm,20.0s,MS5.5
SDCO Great Sand Dun 137.61 30 PFAKE 14 33 20.0 +14
SDCO LR LR
comp=Z,734nm,20.0s,MS5.4
MDV Middlebury 137.89 353 *e*PKPdf PKPdf 14 33 05.8 -0.3
NCB Newcomb 138.04 354 PFAKE 14 33 20.0 +14
NCB LR LR
comp=Z,639nm,19.0s,MS5.4
TUC Tucson 138.41 41 *e*PKHKP 14 32 58.0
TUC MLR MLR
comp=Z,689nm,20.0s,MS5.4
JFWS Jewell Farm 138.43 11 *e*PKHKP 14 32 57.7
JFWS MLR MLR
comp=Z,1μm,20.0s,MS5.6
SCIA State Center 138.72 15 PFAKE 14 33 20.0 +12
SCIA LR LR
comp=Z,916nm,20.0s,MS5.5
HRV Adam Dziewonsk 139.11 350 PFAKE 14 33 20.0 +12
HRV LR LR
comp=Z,880nm,20.0s,MS5.5
WES Weston 139.18 350 PFAKE 14 33 20.0 +11
WES LR LR
comp=Z,714nm,21.0s,MS5.4
ANMO Albuquerque 139.21 34⇑ *i*PKIKP PKPdf 14 33 06.2 -2.6
ANMO Albuquerque 139.21 34 *e*PKPpre 14 33 01.0
ANMO LR LR
comp=Z,880nm,19.0s,MS5.5
LAZ Ladron 139.22 35 *e*PKPdf PKPdf 14 33 09.9 +1.0
CBKS Cedar Bluff 139.36 24 PFAKE 14 33 20.0 +11
CBKS LR LR
comp=Z,1μm,21.0s,MS5.7
LENM Lemitar 139.49 35 *e*PKPdf PKPdf 14 33 10.9 +1.5
LPM Los Pinos Moun 139.58 35 *e*PKPdf PKPdf 14 33 10.8 +1.3
BNM Barren Site 139.69 35 *e*PKPpre 14 33 02.2
BINY Binghamton 139.97 355 *e*PKPdf PKPdf 14 33 10.5 +0.5
BINY LR LR
comp=Z,999nm,19.0s,MS5.6
ERPA Erie 140.22 360 PFAKE 14 33 20.0 +10
ERPA LR LR
comp=Z,1μm,19.0s,MS5.6
KSU1 Kansas State U 140.28 20 *e*PKPpre 14 33 05.5
KSU1 LR LR
comp=Z,998nm,22.0s,MS5.5
HDIL Hopedale 140.89 11 PFAKE 14 33 20.0 +8.3
HDIL LR LR
comp=Z,1μm,21.0s,MS5.6
SSPA Standing Stone 141.65 357 *e*PKPpre 14 33 07.5
SSPA LR LR
comp=Z,1μm,21.0s,MS5.6
AMTX Amarillo 141.76 29 *e*PKPpre 14 33 09.4
AMTX LR LR
comp=Z,1μm,21.0s,MS5.6
ACSO Alum Creek Sta 142.02 4 *e*PKPpre 14 33 09.0
ACSO LR LR
comp=Z,1μm,21.0s,MS5.7
MCWV Mont Chateau 142.68 360 PFAKE 14 33 30.0 +15
MCWV LR LR
comp=Z,2μm,21.0s,MS5.9
BLO Bloomington 142.71 8 *e*PKIKP PKPdf 14 33 09.7 -5.3
CCM Cathedral Cave 142.85 15 *e*PKHKP 14 33 09.2
CCM MLR MLR
comp=Z,1μm,21.0s,MS5.6
OLIL Olney 142.88 10 *e*PKPpre 14 33 11.2
FVM French Village 143.12 14 *e*PKHKP 14 33 09.8
WMOK Wichita Mounta 143.23 26 *e*PKIKP PKPdf 14 33 11.4 -4.6
WMOK MLR MLR
comp=Z,1μm,22.0s,MS5.7
SIUC Southern Illin 143.65 12 *e*PKPpre 14 33 13.3
BDFB Brasilia 143.65 240 PKP PKPdf 14 33 17.5 +0.2
comp=Z,3.7nm,0.9s,baz=158,slow=4.5,SNR=3.6
BDFB Brasilia 143.65 240 PKP PKPdf 14 33 17.5 +0.2
BDFB LR LR
comp=Z,2μm,20.0s,MS5.8
WCI Wyandotte Cave 143.66 8 *e*PKIKP PKPdf 14 33 12.6 -4.1
WCI MLR MLR
comp=Z,1μm,19.0s,MS5.7
USIN University of 143.70 10 *e*PKPpre 14 33 13.5
CBN Corbin 144.04 356 PFAKE 14 33 30.0 +13
CBN LR LR
comp=Z,1μm,19.0s,MS5.6
CPUP Villa Florida 144.12 216 PKP PKPdf 14 33 16.9 -1.0
comp=Z,6.5nm,0.6s,baz=95,slow=3.5,SNR=22
CPUP Villa Florida 144.12 216 PKIKP PKPdf 14 33 16.9 -1.0
CPUP pmax pmax
comp=Z,7.0nm,0.6s
CPUP Villa Florida 144.12 216 *e*PKPpre 14 33 16.4
PARMO Parma 144.54 13 *e*PKP PKPdf 14 33 17.2 -1.1
URVA University of 144.68 356 *e*PKPpre 14 33 16.6
TXAR Lajitas Array 144.91 37 PKP PKPdf 14 33 18.3 -0.8
comp=Z,149nm,0.8s,baz=281,slow=1.2,SNR=699
TXAR Lajitas Array 144.91 37 PKIKP PKPdf 14 33 18.3 -0.8
TXAR pmax pmax
comp=Z,149nm,0.8s
GLAT Glass 145.02 13 *e*PKP PKPdf 14 33 18.4 -0.8
UTMT University of 145.04 12 *e*PKP PKPdf 14 33 17.9 -1.3
ELN Prospectdale 145.10 1 *e*PKP PKPdf 14 33 17.4 -1.8
BLA Blacksburg 145.12 0 *e*PKIKP PKPdf 14 33 17.9 -1.4
BLA MLR MLR
comp=Z,2μm,21.0s,MS5.8
GNAR Gosnell 145.14 14 *e*PKPbc PKPbc 14 33 18.6 -0.2
HALT Halls 145.35 13 *e*PKP PKPdf 14 33 18.7 -1.0
HBAR Harrisburg 145.37 15 *e*PKP PKPdf 14 33 19.4 -0.3
WVT Waverly 145.46 11 *e*PKIKP PKPdf 14 33 18.7 -1.2
WVT MLR MLR
comp=Z,1μm,20.0s,MS5.6
UALR University of 145.62 18 *e*PKP PKPdf 14 33 20.0 -0.2
TZTN Tazewell 145.64 5 *e*PKP PKPdf 14 33 19.2 -1.0
TZTN LR LR
comp=Z,1μm,21.0s,MS5.7
JCT Junction City 146.23 32 *e*PKP2 PKPab 14 33 21.5 -1.6
JCT MLR MLR
comp=Z,627nm,21.0s,MS5.4
TKL Tuckaleechee C 146.50 5 *e*PKP2 PKPab 14 33 21.3 -2.7
BBSR BB Station 146.63 336 *e*PKPdf PKPdf 14 33 22.1 +0.1
BBSR LR LR
comp=Z,559nm,21.0s,MS5.3
CPCT Cooper Cave 146.63 7 *e*PKPdf PKPdf 14 33 21.8 -0.1
OXF Oxford 146.67 14 *e*PKP2 PKPab 14 33 22.2 -2.5
OXF MLR MLR
comp=Z,1μm,21.0s,MS5.7
SWET Sewanee 146.67 9 *e*PKPdf PKPdf 14 33 21.3 -0.7
NATX Nacogdoches 147.53 23 *e*PKPdf PKPdf 14 33 23.7 +0.2
NATX LR LR
comp=Z,978nm,21.0s,MS5.6
LCO Las Campanas 147.71 196 PKPbc PKPbc 14 33 26.3 -0.3
LCO LR LR
comp=Z,885nm,19.0s,MS5.6
JSC Jenkinsville 148.03 2 *e*PKIKP PKPdf 14 33 24.1 -0.2
JSC *e* 14 33 26.8
VBMS Vicksburg 148.54 17 *e*PKPbc PKPbc 14 33 28.4 -0.3
VBMS LR LR
comp=Z,1μm,22.0s,MS5.6
HKT Hockley 148.60 27 *e*PKIKP PKPdf 14 33 25.5 +0.2
HKT *e* 14 33 29.0
HKT MLR MLR
comp=Z,1μm,22.0s,MS5.6
LRAL Lakeview Retre 148.62 11 *e*PKPdf PKPdf 14 33 25.1 -0.2
LRAL *e*PKPbc PKPbc 14 33 27.8 -1.1
LRAL LR LR
comp=Z,1μm,20.0s,MS5.7
GOGA Godfrey 148.76 5 *e*PKIKP PKPdf 14 33 24.4 -1.1
GOGA *e* 14 33 28.4
GOGA MLR MLR
comp=Z,1μm,21.0s,MS5.6
COW Cow Castle Cre 148.94 1 *e*PKPbc PKPbc 14 33 29.6 -0.1
NHSC New Hope 149.22 0 *e*PKPbc PKPbc 14 33 29.8 -0.7
NHSC LR LR
comp=Z,1μm,22.0s,MS5.7

KVTX Kingsville 149.57 32 *e*PKPbc PKPbc 14 33 30.3 -1.2
KVTX LR LR
comp=Z,1μm,19.0s,MS5.7
BRAL Brewton 150.57 12 *e*PKPbc PKPbc 14 33 33.5 -0.3
BRAL LR LR
comp=Z,1μm,20.0s,MS5.7
LVC Limon Verde 153.05 203 PKPbc PKPbc 14 33 40.6 +0.9
comp=Z,6.8nm,0.7s,baz=3.8,slow=5.8,SNR=6.2
LVC PKPab PKPab 14 33 50.6 -0.4
comp=Z,13nm,0.8s,baz=102,slow=3.8,SNR=7.4
LVC Limon Verde 153.05 203 *e*PKPbc PKPbc 14 33 40.5 +0.7
LVC LR LR
comp=Z,858nm,19.0s,MS5.6
SIV San Ignacio 153.92 226 PKP PKPdf 14 33 34.1 +0.3
comp=Z,2.8nm,0.8s,baz=164,slow=10,SNR=3.0
SIV PKPbc PKPbc 14 33 41.4 -0.4
comp=Z,2.2nm,0.7s,baz=113,slow=9.4,SNR=3.5
SIV PKPab PKPab 14 33 53.9 -0.9
comp=Z,3.4nm,0.7s,baz=134,slow=4.9,SNR=5.3
DWPF Disney 154.17 3 PFAKE 14 33 40.0 +6.2
DWPF LR LR
comp=Z,975nm,21.0s,MS5.6
BBGH Gun Hill 156.91 299 PFAKE 14 33 50.0 +12
BBGH LR LR
comp=Z,1μm,20.0s,MS5.7
FDF Fort de France 157.48 305 *e*PKIKP PKPdf 14 33 39.2 +0.6
LPAZ La Paz 158.17 212 PKP PKPdf 14 33 41.3 +1.9
comp=Z,3.7nm,0.9s,baz=64,slow=4.5,SNR=7.6
LPAZ PKPab PKPab 14 34 11.9 -1.1
comp=Z,7.4nm,1.2s,baz=59,slow=6.6,SNR=4.7
LPAZ PP PP 14 37 57.5 +5.7
comp=Z,0.8nm,0.3s,baz=248,slow=12,SNR=6.7
LPAZ La Paz 158.17 212 PKP2 PKPab 14 34 12.0 -1.0
LPAZ 14 37 57.5
LPAZ pmax pmax
comp=Z,7.0nm,1.2s
LPAZ pmax pmax
comp=Z,1.0nm,0.3s
LPAZ La Paz 158.17 212 PKP PKPdf 14 33 41.3 +1.9
LPAZ PKPab PKPab 14 34 11.9 -1.1
LPAZ PP PP 14 37 57.5 +5.7
LPAZ LR LR
comp=Z,980nm,22.0s,MS5.6
SJG San Juan 159.04 320 PFAKE 14 33 50.0 +10
SJG LR LR
comp=Z,505nm,20.0s,MS5.4
GRGR Grenville 159.18 299 PFAKE 14 33 50.0 +9.3
GRGR LR LR
comp=Z,546nm,21.0s,MS5.4
TEIG Tepich 160.36 23 PKP PKPdf 14 33 42.5 +0.6
comp=Z,18nm,1.2s,baz=180,slow=18,SNR=3.9
TEIG Tepich 160.36 23 PKP PKPdf 14 33 42.5 +0.6
TEIG LR LR
comp=Z,1μm,22.0s
NNA Nana 165.57 193 PFAKE 14 34 00.0 +13
NNA LR LR
comp=Z,859nm,21.0s
TGUH Tegucigalpa,Un 166.23 30 PFAKE 14 34 00.0 +12
TGUH LR LR
comp=Z,698nm,19.0s
SDV Santo Domingo 168.43 306 PFAKE 14 34 00.0 +11
SDV LR LR
comp=Z,355nm,19.0s
PAYG Puerto Ayora 169.46 105 PFAKE 14 34 00.0 +10
PAYG LR LR
comp=Z,1μm,20.0s
JTS JuntasAbangare 170.61 30 PFAKE 14 34 00.0 +10
JTS LR LR
comp=Z,567nm,22.0s
BCIP Isla Barro Col 173.03 358 PFAKE 14 34 00.0 +8.4
BCIP LR LR
comp=Z,777nm,20.0s
OTAV Otavalo 177.46 221 *e*PKPdf PKPdf 14 33 53.4 +0.5
OTAV LR LR
comp=Z,1μm,20.0s

*KRSC **23** 14:45:06.3± 1.0, 5009N× 156 86E, h41km± 40km, ML4.0*
*MOS **23** 14:45:10.9± 0.6, 5075N× 156 01E, h51km, mb4.7/7, Error ellipse: s-maj=70.3km s-min=16.9km az=66.8*
ISC 23 14:45:07.9±1.7, 5007N±010×15660E±009, h35km, n10, σ1°13/18, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.69**	**333**⇑	*i*PN	**Pn**	**14 45 19.5**	**-1.6**
SKR				*i* S	**Sn**	**14 45 29.5**	**-1.0**
SKR				pmax	pmax		
	comp=N,430nm,0.4s						
SKR				pmax	pmax		
	comp=E,330nm,0.4s						
SKR				pmax	pmax		
	comp=Z,810nm,0.4s						
SKR				smax			
	comp=N,4μm,0.2s						
SKR				smax			
	comp=E,2μm,0.2s						
ALID	**Alaid**	**1.04**	**320**	*e*P	**Pn**	**14 45 26.0**	**0.0**
ALID				*i* S	**Sn**	**14 45 39.9**	**+0.6**
RUS	**Russkaya**	**2.65**	**26**	*e*P	**Pn**	**14 45 48.0**	**-0.1**
RUS				*i* S	**Sn**	**14 46 18.8**	**-0.2**
PET	**Petropavlovsk**	**3.22**	**23**	*e*PN	**Pn**	**14 45 54.0**	**-1.9**
PET	**Petropavlovsk**	**3.22**	**23**	*e*P	**Pn**	**14 45 57.0**	**+1.1**
PET				*i* S	**Sn**	**14 46 34.8**	**+1.8**
AVH	**Avacha**	**3.46**	**22**	*e*P	**Pn**	**14 46 00.3**	**+1.0**
AVH				*i* S	**Sn**	**14 46 39.2**	**+0.2**
NLC	**Nalytchevo**	**3.54**	**28**	*e*P	**Pn**	**14 45 59.9**	**-0.5**
NLC				*i* S	**Sn**	**14 46 39.2**	**-1.8**
SPN	**Mys Shipunski**	**3.71**	**34**	*e*P	**Pn**	**14 46 02.6**	**0.0**
SPN				*i* S	**Sn**	**14 46 43.2**	**-1.8**
GNL	**Ganaly**	**3.72**	**12**	*e*P	**Pn**	**14 46 04.8**	**+2.0**
GNL				*i* S	**Sn**	**14 46 46.7**	**+1.3**
KBTR	**Krutoberegovo**	**7.19**	**29**	*e*P	**Pn**	**14 46 50.8**	**+0.4**

IDC 23 15:24:13.3±57.0, 2331S×17579W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/16, mbtmp3.6/3, Error ellipse: s-maj=1064.0km s-min=179.0km az=88.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.52**	**248**	P	P	15 31 36.9	-0.7
	1.8nm,1.0s,baz=98,slow=14,SNR=3.8						
ASAR	**Alice Springs**	**45.94**	**259**	P	P	15 32 38.1	0.0
	0.1nm,0.3s,baz=92,slow=6.7,SNR=11						
WRA	**Warramunga Arr**	**46.30**	**264**	P	P	15 32 41.5	+0.4
	0.4nm,0.3s,baz=102,slow=8.2,SNR=7.2						

*MOS **23** 15:29:52.5± 0.8, 7605× 11137E, h154km, mb4.7/7, Error ellipse: s-maj=15.2km s-min=9.6km az=122.5*
*BJI **23** 15:29:53.9, 7805× 11130E, h155km, mB5.1, mb4.7*
*ISCJB **23** 15:29:53.7± 0.3, 7855± 004× 11135E± 003, h172km± 3km, mb4.7/55, Error ellipse: s-maj=7.1km s-min=4.1km az=26.6*
*NEIC **23** 15:29:54.0± 0.8, 7755× 11126E, h155km± 7km, mb4.8/14, Error ellipse: s-maj=8.2km s-min=5.5km az=51.0*
NEIC Felt [III] at Madiun and Pacitan.
*IDC **23** 15:29:54.6± 1.6, 7645× 11134E, h156km± 14km, mb4.2/22, mb1 4.3/24, mb1mx4.3/27, mbtmp4.2/24, Error ellipse: s-maj=14.7km s-min=8.4km az=52.0*
*DJA **23** 15:29:56, 7905× 11137E, h111km, Mw5.3/9*
ISC 23 15:29:54.6±0.3, 7845±004×11135E±003, h164km±3km, h154km±3.4km: pP-P, n157, σ1°21/141, mb4.7/55, 10C-9D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJI	**Sawahan**	**0.43**	**76**	P	**Pn**	**15 30 15.2**	**-2.0**
	0.0nm,0.0s						
KRKI	**Karangkates**	**1.14**	**106**⇓	*i*P	**Pn**	**15 30 21.4**	**-0.5**
KRKI				*i* S	**Sn**	**15 30 42.4**	**-0.3**
TRT	**Tretes**	**1.28**	**84**⇓	*e*P	**Pn**	**15 30 22.0**	**-1.2**
TRT				*e*S	**Sn**	**15 30 38.0**	**-7.0**
BJII	**Banjamegara**	**1.70**	**287**	P	**Pn**	**15 30 26.3**	**-1.1**
	0.0nm,0.0s						
BJII	**Banjamegara**	**1.70**	**287**⇓	*e*P	**Pn**	**15 30 27.2**	**-0.2**
BJII				*e*S	**Sn**	**15 30 56.9**	**+4.4**
CLJI	**Cilicap**	**2.32**	**273**	P	**Pn**	**15 30 33.9**	**-0.4**
	0.0nm,0.0s						
NBBI	**Negara**	**3.28**	**99**	P	**Pn**	**15 30 49.1**	**+3.0**
	0.0nm,0.0s						

JCJI Jatiwangi 3.34 294 P **Pn** **15 30 45.8 -1.0**
0.0nm,0.0s
LEM Lembang 3.84 285 P **Pn** **15 30 54.0 +0.8**
0.0nm,0.0s
IGBI Denpasar 3.88 105 P **Pn** **15 30 53.4 -0.3**
0.0nm,0.0s
DNP Denpasar 3.91 103 P **Pn** **15 30 54.2 +0.1**
0.0nm,0.0s
KHKI Kahang-Kahang 4.25 97 P **Pn** **15 30 57.4 -1.1**
0.0nm,0.0s
DBJI Dramaga 4.74 285 P **Pn** **15 31 05.4 +0.5**
0.0nm,0.0s
SKJI Sukabumi 4.83 280 P **Pn** **15 31 11.9 +5.9**
0.0nm,0.0s
MTNI Mataram 4.84 100 P **Pn** **15 31 04.5 -1.7**
0.0nm,0.0s
PBKI Pangkalan Bun 5.11 4 P **Pn** **15 31 10.6 +0.8**
425nm,1.1s
BBKI Banjar Baru 5.57 39 P **Pn** **15 31 17.2 +1.4**
244nm,1.1s
PLKI Palangkaraya 6.15 25 P **Pn** **15 31 24.2 +0.7**
539nm,0.4s
XMIS Christmas Isla 6.21 245 *e*Pn **Pn** **15 31 20.9 -3.3**
XMIS *e*Sn **Sn** **15 32 22.8 -12**
TPI Tanjungpandan 6.25 324 P **Pn** **15 31 25.5 +0.7**
79nm,1.1s
TPI Tanjungpandan 6.25 324⇑ *e*P **Pn** **15 31 25.0 +0.2**
TPI *e*S **Sn** **15 32 39.0 +3.4**
PPBI Pangkal Pinang 7.67 317 P **Pn** **15 31 46.8 +3.2**
71nm,0.6s
STKI Sintang 7.86 1 P **Pn** **15 31 47.7 +1.6**
61nm,1.0s
KAPI Kappang 8.81 72 P **Pn** **15 31 58.2 -0.5**
2.4nm,0.3s,baz=262,slow=7.8,SNR=25
KAPI S **Sn** **15 33 34.6 -2.3**
0.8nm,0.3s,baz=216,slow=15,SNR=1.6
KAPI Kappang 8.81 72 *e*Pn **Pn** **15 31 57.9 -0.8**
72nm,1.1s
KSM Kuching 9.31 354 Pn **Pn** **15 32 06.2 +0.8**
KSI Kapahiang 9.65 295 P **Pn** **15 32 11.5 +1.6**
654nm,0.7s
DSRI Dabo 9.95 317 P **Pn** **15 32 15.2 +1.3**
33nm,1.0s
SBUM Sibu 10.26 5⇓ P **Pn** **15 32 26.7 +8.8**
PCI Palu 10.91 51 P **Pn** **15 32 28.1 +1.7**
117nm,1.4s
KDI Kendari 11.85 72 P **Pn** **15 32 47.0 +8.2**
38nm,1.3s
MYKOM Kota Tinggi 12.14 322⇑ P **Pn** **15 32 43.6 +1.1**
BATI Baumata 12.39 102 P **Pn** **15 32 43.6 -2.0**
101nm,0.9s
BATI Baumata 12.39 102 P **Pn** **15 32 43.0 -2.6**
18nm,0.3s,baz=323,slow=1.4,SNR=33
BATI S **Sn** **15 34 49.9 -13**
6.8nm,0.3s,baz=332,slow=18,SNR=3.3
KGM Kluang 12.65 320⇑ P **Pn** **15 32 50.5 +1.5**
TSM Tawau 13.70 29⇓ P **Pn** **15 33 05.7 +3.4**
SDKM Sandakan 14.61 24⇑ P **Pn** **15 33 17.7 +4.0**
KKM Kota Kinabalu 14.62 20⇑ P **Pn** **15 33 18.9 +5.0**
KKM Kota Kinabalu 14.62 20 *e*P **Pn** **15 33 13.8 -0.1**
FRIM Kepong 14.67 318⇑ P **Pn** **15 33 14.7 +0.2**
MYLDM Lahad Datu 14.77 29⇓ P **Pn** **15 33 20.3 +4.5**
MBWA Marble Bar 15.52 149 *e*P **Pn** **15 33 25.4 +0.5**
35nm,0.6s
MBWA *e*Sn **Sn** **15 36 03.4 -15**
IPM Ipoh 15.99 320⇑ P **Pn** **15 33 29.5 -1.3**
FITZ Fitzroy Crossi 17.25 128 *e*P **Pn** **15 33 46.4 +0.6**
FITZ *e*S **S** **15 36 45.3 -11**
FITZ Fitzroy Crossi 17.25 128 P **Pn** **15 33 46.6 +0.8**
0.6nm,0.3s,baz=314,slow=8.6,SNR=52
FITZ S **S** **15 36 44.5 -12**
0.9nm,0.3s,baz=268,slow=6.7,SNR=3.6
AAI Ambon 17.26 77 P **Pn** **15 33 45.6 -0.4**
519nm,1.4s
AAI Ambon 17.26 77 P **Pn** **15 33 45.6 -0.4**
754nm,1.5s
AAI Ambon 17.26 77⇑ *e*P **Pn** **15 33 42.7 -3.3**
LBMI Labuha 17.62 67 P **Pn** **15 33 50.4 +0.1**
371nm,1.1s
SWI Sorong 21.02 72 P **P** **15 34 24.5 -1.2**
165nm,0.9s,mb5.4
WRA Warramunga Arr 25.31 121 P **P** **15 35 07.3 +0.9**
39nm,0.6s,mb5.1,baz=296,slow=11,SNR=128
WRAB Tennant Creek 25.32 121 *e*P **P** **15 35 07.6 +1.2**
WRAB Tennant Creek 25.32 121 *e*P **P** **15 35 07.4 +1.0**
44nm,0.6s,mb5.2
WB2 Warramunga Arr 25.32 121 *e*P **P** **15 35 07.3 +0.9**
WB2 *e*S S 15 39 58.1 +38
NWAO Narrogin (SRO) 25.55 168 P **P** **15 35 10.8 +2.4**
13nm,1.1s,mb4.5,baz=0.0,slow=3.0,SNR=2.5
NWAO Narrogin (SRO) 25.55 168 P **P** **15 35 11.2 +2.9**
NWAO pmax pmax
comp=Z,79nm,1.6s
NWAO Narrogin (SRO) 25.55 168 P **P** **15 35 11.2 +2.8**
comp=Z,79nm,1.6s,mb5.1
ASAR Alice Springs 26.74 129 P **P** **15 35 20.7 +1.5**
comp=Z,30nm,0.6s,mb5.1,baz=303,slow=8.3,SNR=683
ASAR PcP PcP 15 38 39.5 +1.3
comp=Z,2.5nm,0.4s,baz=307,slow=1.8,SNR=7.3
CMAR Chiang Mai Arr 28.86 335 P **P** **15 35 38.2 +0.3**
comp=Z,1.8nm,0.6s,mb4.0,baz=171,slow=7.2,SNR=19
CMAR ScP ScP 15 42 11.6 +1.8
comp=Z,5.1nm,0.9s,baz=188,slow=3.3,SNR=29
COEN Coen 31.81 104 *e*P **P** **15 36 04.6 +0.5**
comp=Z,18nm,0.6s,mb5.0
KMI Kunming 33.82 346 P **P** **15 36 24.3 +2.9**
KMI AMB AMB
comp=Z,6.0nm,0.8s,mb4.4
GYA Guiyang 34.40 353⇑ *i*P **P** **15 36 28.4 +2.1**
GYA AP pP 15 37 01.6 +0.6
GYA XP sP 15 37 20.8 +1.0
GYA PP PP 15 37 51.3 +3.5
GYA PCP PcP 15 39 01.3 +2.9
GYA S **S** **15 41 43.8 +1.7**
GYA SCP ScP 15 42 28.9 +0.6
GYA XS sS 15 42 44.3 +1.1
GYA SCS ScS 15 46 30.8 -0.6
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
GYA AMB AMB
comp=Z,90nm,4.8s
PMG Port Moresby 35.43 95 *e*P **P** **15 36 36.8 +1.4**
CTA Charters Tower 35.91 113 *e*P **P** **15 36 41.6 +2.2**
CTA Charters Tower 35.91 113 P **P** **15 36 41.7 +2.3**
comp=Z,16nm,0.8s,mb4.7,baz=283,slow=12,SNR=13
STKA Stephens Creek 36.93 134⇓ *i*P **P** **15 36 50.2 +2.3**
STKA *i* 15 42 38.5
STKA Stephens Creek 36.93 134 P **P** **15 36 50.2 +2.3**
comp=Z,55nm,0.5s,mb5.4,baz=311,slow=8.5,SNR=337
STKA ScP ScP 15 42 37.6 +0.1
comp=Z,4.2nm,0.7s,baz=343,slow=1.4,SNR=6.6
CD2 Chengdu 39.21 350 *e*P **P** **15 37 07.5 +0.6**
CD2 AP pP 15 37 42.5 +0.1
CD2 XP sP 15 38 00.9 0.0
CD2 S **S** **15 42 54.8 -0.2**
CD2 XS sS 15 43 56.8 -0.2
CD2 SS SS 15 45 48.6 -6.8
CD2 AMB AMB
comp=Z,20nm,0.7s,mb4.9
CD2 AMB AMB
comp=Z,40nm,6.8s
GUMO Guam 39.51 58 P **P** **15 37 08.6 -1.1**
comp=Z,14nm,0.3s,mb5.0,baz=173,slow=20,SNR=4.1
NJ2 Nanjing 40.31 10 *e*P **P** **15 37 17.6 +1.6**
NJ2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
ODAN Odare 41.59 327 *e*P **P** **15 37 26.0 -0.6**
comp=Z,13nm,0.5s,mb4.8
ODAN Odare 41.59 327 *e*P ScP 15 42 54.5 -1.1
LSA Lhasa 42.08 333 *e*P **P** **15 37 31.6 +1.1**
LSA pmax pmax
comp=Z,12nm,0.6s,mb4.7
LSA Lhasa 42.08 333 *e*P **P** **15 37 31.6 +1.1**
comp=Z,12nm,0.6s,mb4.7
RAMN Ramite 42.09 326 *e*P **P** **15 37 29.6 -1.0**
comp=Z,22nm,0.4s,mb5.2
RAMN Ramite 42.09 326 *e*P ScP 15 42 56.0 -1.6
comp=Z,57nm,0.6s
JIRN Jiri 42.87 326 *e*P **P** **15 37 36.5 -0.4**
comp=Z,20nm,0.5s,mb5.0
JIRN Jiri 42.87 326 *e*P ScP 15 42 57.1 -3.6
comp=Z,16nm,0.8s
GUN Gumba 43.24 326 *e*P **P** **15 37 39.2 -0.7**
comp=Z,37nm,0.5s,mb5.3
GUN Gumba 43.24 326 *e*P ScP 15 42 57.6 -4.6
comp=Z,12nm,0.5s

DMN	Daman	43.44	325	*e*P		P	15 37 40.5	-1.0	
	comp=Z,18nm,0.6s,mb4.9								
DMN	Daman	43.44	325	*e*P		ScP	15 43 01.7	-1.3	
	comp=Z,13nm,0.7s								
KKN	Kakani	43.48	326	*e*P		P	15 37 40.9	-0.9	
KKN	Kakani	43.48	326	*e*P		ScP	15 43 00.8	-2.4	
	comp=Z,11nm,0.6s								
GKN	Gorkha	44.01	325	*e*P		P	15 37 44.9	-1.1	
	comp=Z,10nm,0.3s,mb4.9								
GKN	Gorkha	44.01	325	*e*P		ScP	15 43 03.5	-1.8	
	comp=Z,12nm,0.6s								
KOLN	Koldanda	44.42	324	*e*P		P	15 37 48.3	-1.1	
	comp=Z,8.8nm,0.3s,mb4.8								
KOLN	Koldanda	44.42	324	*e*P		ScP	15 43 07.8	+0.8	
	comp=Z,13nm,0.5s								
DANN	Dangsing	44.77	325	*e*P		P	15 37 50.4	-1.7	
	comp=Z,19nm,0.5s,mb5.0								
DANN	Dangsing	44.77	325	*e*P		ScP	15 43 05.9	-2.5	
	comp=Z,15nm,0.5s								
KSRS	Korea Array	47.65	18	P		P	15 38 15.2	+0.8	
	comp=Z,4.1nm,0.7s,mb4.2,baz=198,slow=8.4,SNR=20								
HNR	Honiara	48.04	96	P		P	15 38 18.4	+0.5	
	comp=Z,114nm,0.7s,mb5.6,baz=236,slow=2.6,SNR=15								
HNR	Honiara	48.04	96	*e*P		P	15 38 18.3	+0.4	
HNR				pmax		pmax			
	comp=Z,120nm,0.9s,mb5.5								
HNR	Honiara	48.04	96	*e*P		P	15 38 18.3	+0.4	
	comp=Z,120nm,0.9s,mb5.5								
GTA	Gaotai	48.21	348	*e*P		P	15 38 19.8	+1.1	
GTA				AP		pP	15 38 52.3	-3.1	
GTA				XP		sP	15 39 10.3	-3.3	
GTA				SCP		ScP	15 43 24.5	+1.9	
GTA				AMB		AMB			
	comp=Z,4.0nm,0.9s,mb4.0								
HHC	Hu-ho-hao-te	48.45	0	*e*P		P	15 38 20.8	+0.4	
HHC				AP		pP	15 38 55.9	-1.3	
HHC				XP		sP	15 39 13.5	-1.9	
HHC				PCP		PcP	15 39 44.4	+0.3	
HHC				PP		PP	15 40 15.3	+0.4	
HHC				SCP		ScP	15 43 22.5	-1.0	
HHC				PCS		PcS	15 43 39.1	-1.1	
HHC				S		**S**	**15 45 09.3**	**+0.6**	
HHC				XS		sS	15 46 11.3	-1.3	
HHC				SCS		ScS	15 47 53.4	-2.7	
HHC				SS		SS	15 48 36.9	-4.1	
HHC				AMB		AMB			
	comp=Z,19nm,0.6s,mb4.9								
HHC				AMB		AMB			
	comp=Z,97nm,6.4s								
HHC				LR		LR			
	comp=N,156nm,15.5s								
HHC				LR		LR			
	comp=E,156nm,15.9s								
HHC				LR		LR			
	comp=Z,139nm,14.9s								
MAT	Matsushiro	50.84	28	P		P	15 38 37.6	-1.0	
MJAR	Matsushiro Arr	50.84	28	P		P	15 38 37.1	-1.5	
	comp=Z,1.1nm,0.6s,mb3.7,baz=140,slow=32,SNR=12								
CN2	Changchun	52.97	13	*e*P		P	15 38 53.5	-0.7	
ULN	Ulaanbaatar	55.59	356	*e*P		P	15 39 12.8	-0.3	
SONM	Songino Array	55.60	356	P		P	15 39 13.5	+0.4	
	comp=Z,1.7nm,0.7s,mb4.0,baz=173,slow=8.5,SNR=9.4								
SONM				PcP		PcP	15 40 11.0	+0.2	
	comp=Z,0.7nm,0.3s,baz=168,slow=3.9,SNR=5.4								
SONM				ScP		ScP	15 43 55.1	+0.7	
	comp=Z,6.6nm,1.1s,baz=179,slow=4.1,SNR=16								
SONM	Songino Array	55.60	356	P		P	15 39 13.5	+0.3	
SONM							15 40 11.0		
WMQ	Urumqi	55.71	339⇓	*i*P		P	15 39 14.8	+0.8	
WMQ				AMB		AMB			
	comp=Z,12nm,0.7s,mb4.8								
WMQ				AMB		AMB			
	comp=Z,252nm,5.7s								
TLY	Talaya	59.65	354	*e*P		P	15 39 45.5	+4.1	
TLY				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb4.5								
TKM2	Tokmak 2	60.09	330	*e*P		P	15 39 43.7	-0.8	
TKM2				pmax		pmax			
	comp=Z,10.0nm,0.7s,mb4.8								
TKM2	Tokmak 2	60.09	330	*e*P		P	15 39 43.6	-0.9	
	comp=Z,10nm,0.7s,mb4.8								
MKAR	Makanchi Array	60.23	337	P		P	15 39 44.9	-0.5	
	comp=Z,13nm,0.5s,mb5.0,baz=149,slow=7.5,SNR=144								
AML	Almayashu	60.47	329	*e*P		P	15 39 46.4	-0.7	
	comp=Z,6.1nm,0.6s,mb4.6								
EKS2	Erkin-Say	60.81	329	*e*P		P	15 39 49.0	-0.5	
	comp=Z,5.6nm,0.7s,mb4.5								
RPZ	Rata Peaks	62.89	135	P		P	15 40 05.7	+2.3	
	comp=Z,17nm,0.8s,mb4.9,baz=226,slow=1.0,SNR=5.1								
KURK	Kurchatov	64.83	338	P		P	15 40 14.6	-1.3	
	comp=Z,3.5nm,0.7s,mb4.3,baz=153,slow=5.9,SNR=15								
KURK	Kurchatov	64.83	338	*e*P		P	15 40 14.9	-1.0	
KURK				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.4								
KURK	Kurchatov	64.83	338	*e*P		P	15 40 14.9	-0.9	
	comp=Z,4.8nm,0.8s,mb4.4								
ZAA0	Zalesovo Array	65.50	343	*e*P		P	15 40 18.8	-1.3	
ZALV	Zalesovo Beam	65.50	343	P		P	15 40 19.0	-1.1	
	comp=Z,4.4nm,0.4s,mb4.6,baz=156,slow=4.9,SNR=26								
BVAR	Borovoye Array	69.88	335	P		P	15 40 46.7	-0.8	
	comp=Z,2.5nm,0.6s,mb4.1,baz=143,slow=9.3,SNR=17								
BRVK	Borovoye	69.95	335	*e*P		P	15 40 47.5	-0.5	
BRVK				pmax		pmax			
	comp=Z,1.0nm,0.4s,mb3.9								
BRVK	Borovoye	69.95	335	*e*P		P	15 40 47.5	-0.5	
	comp=Z,1.4nm,0.4s,mb4.0								
YAK	Yakutsk	71.10	9	*e*P		P	15 40 53.8	-1.0	
YAK				pmax		pmax			
	comp=Z,6.0nm,0.6s,mb4.5								
YAK	Yakutsk	71.10	9	*e*P		P	15 40 53.8	-0.9	
	comp=Z,6.2nm,0.6s,mb4.5								
KBD	Kabd	71.41	304	*e*P		P	15 40 56.0	-1.4	
	baz=304								
KBD				AMb		AMB	15 40 56.6		
	comp=Z,11nm,0.4s,mb4.9,baz=304								
RDF	Al-Radifah	71.44	304	*e*P		P	15 40 55.8	-1.8	
	baz=304								
RDF				AMb		AMB	15 40 56.8		
	comp=Z,23nm,0.7s,mb5.0,baz=304								
UMR	Umm Al-Rimmam	71.52	305	*e*P		P	15 40 56.8	-1.3	
	baz=305								
UMR				AMb		AMB	15 40 57.3		
	comp=Z,44nm,0.4s,mb5.5,baz=305								
NAY	Al-Naaiem	71.81	304	*e*P		P	15 40 58.1	-1.6	
	baz=304								
NAY				AMb		AMB	15 40 58.7		
	comp=Z,14nm,0.8s,mb4.7,baz=304								
RST	Umm Al-Ruwaisa	72.09	304	*e*P		P	15 40 59.8	-1.7	
	baz=304								
RST				AMb		AMB	15 41 00.3		
	comp=Z,40nm,0.5s,mb5.4,baz=304								
PETK	Petropavlovsk-	72.29	27	P		P	15 41 01.9	-0.2	
	comp=Z,5.4nm,0.8s,mb4.3,baz=225,slow=0.5,SNR=8.9								
AKTK	Aktyubinsk	74.09	328	P		P	15 41 11.8	-0.9	
AKTO	Aktyubinsk	74.09	328	P		P	15 41 11.8	-0.9	
	comp=Z,4.5nm,0.5s,mb4.4,baz=87,slow=3.8,SNR=23								
KMBO	Kilima Mbogo	74.09	271	P		P	15 41 14.7	+1.2	
	comp=Z,1.5nm,0.6s,mb3.9,baz=73,slow=15,SNR=5.3								
KMBO	Kilima Mbogo	74.09	271	*i* P		P	15 41 14.6	+1.1	
KMBO				pmax		pmax			
	comp=Z,2.0nm,0.6s								
SBA	Scott Base	75.43	170	P		P	15 41 21.1	+1.1	
	comp=Z,1.0nm,0.4s,mb3.8								
SYO	Syowa Base	76.22	201⇑	*e*pP		pP	15 42 02.0	-2.5	
ASF	Jabal al Asfar	81.17	304	P		P	15 41 52.9	+0.5	
	comp=Z,4.0nm,0.7s,mb4.2,baz=346,slow=3.3,SNR=10								
MMAI	Mount Meron Ar	82.61	305	P		P	15 42 00.7	+0.9	
	comp=Z,3.3nm,0.5s,mb4.3,baz=105,slow=9.8,SNR=4.2								
BOSA	Boshof	82.88	242	P		P	15 42 02.8	+1.4	
	comp=Z,2.2nm,0.6s,mb4.1,baz=253,slow=19,SNR=6.2								
OBN	Obninsk	87.79	326⇓	*e*P		P	15 42 23.8	-1.2	
OBN				*e*			15 45 52.6		
OBN				pmax		pmax			
	comp=Z,13nm,1.0s,mb4.7								
SNAA	Sanae	89.99	197	*e*P		P	15 42 35.7	+0.6	
AKASG	Malin Array Be	91.05	321	P		P	15 42 39.1	-1.3	
	comp=Z,1.3nm,0.4s,mb4.3,baz=78,slow=4.0,SNR=5.0								
TORD	Torodi Ar. Bea	110.81	281	PKiKP		PKiKP	15 48 08.9	-0.3	
	comp=Z,0.3nm,0.5s,baz=56,slow=1.6,SNR=5.8								
NVAR	Mina Array Bea	125.99	48	SKPbc			15 51 42.7		
	comp=Z,0.5nm,0.6s,baz=267,slow=3.9,SNR=3.5								
PDAR	Pinedale Array	130.02	39	SKPab			15 51 53.8		
	comp=Z,2.2nm,0.7s,baz=57,slow=0.4,SNR=14								
ULM	Lac du Bonnet	132.03	23	SKPab			15 52 00.4		
	comp=Z,6.7nm,0.6s,baz=345,slow=1.6,SNR=12								
TXAR	Lajitas Array	140.77	52	PKhKP			15 48 58.8		
	comp=Z,0.4nm,0.6s,baz=208,slow=3.0,SNR=6.4								
TXAR				SKP			15 52 29.1		
	comp=Z,2.5nm,0.9s,baz=258,slow=1.6,SNR=14								
JCT	Junction City	143.17	48	*e*PKIKP		PKPdf	15 49 07.7	-2.2	
CPUP	Villa Florida	144.30	198	PKP		PKPdf	15 49 12.4	+0.4	
	comp=Z,1.3nm,0.4s,baz=118,slow=1.6,SNR=8.0								
CPUP				SKPbc		SKPbc	15 52 37.6	+1.7	
	comp=Z,0.3nm,0.5s,baz=4.8,slow=7.5,SNR=3.1								
OLIL	Olney	144.60	27	*e*PKPdf		PKPdf	15 49 11.4	-0.7	
BLO	Bloomington	144.91	25	*e*PKIKP		PKPdf	15 49 12.3	-0.3	
UALR	University of	145.47	36	*e*PKP		PKPdf	15 49 14.3	+0.6	
WCI	Wyandotte Cave	145.80	25	*e*PKP2		PKPab	15 49 15.0	-0.6	
SSPA	Standing Stone	146.32	13	*e*PKP		PKPdf	15 49 16.8	+1.8	
MCWV	Mont Chateau	146.77	16	*e*PKPbc		PKPbc	15 49 18.0	+0.2	
WVT	Waverly	146.84	29	*e*PKP2		PKPab	15 49 18.5	-1.2	
OXF	Oxford	147.30	33	*e*PKP2		PKPbc	15 49 19.3	-0.1	
SWET	Sewanee	148.48	28	*e*PKPbc		PKPbc	15 49 22.2	-0.3	
ELN	Prospectdale	148.75	19	*e*PKPbc		PKPbc	15 49 23.0	-0.1	
CPCT	Cooper Cave	148.91	26	*e*PKPbc		PKPbc	15 49 23.6	0.0	
TKL	Tuckaleechee C	149.04	24	*e*PKP2		PKPbc	15 49 24.5	+0.6	

IDC 23 15:31:58.2±8.5, 394S×10457E, h0km, mb4.0/2, mb1 4.2/2, mb1mx3.6/18, mbtmp4.0/2, Error ellipse: s-maj=320.0km s-min=36.8km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	33.09	121	P		P	15 38 36.1	0.0
	1.2nm,0.6s,baz=287,slow=8.2,SNR=4.7							
SONM	Songino Array	51.58	2	P		P	15 41 06.2	0.0
	1.3nm,0.8s,baz=185,slow=7.6,SNR=4.0							
TXAR	Lajitas Array	143.20	44	PKP		PKPdf	15 51 35.3	+0.2
	0.7nm,0.8s,baz=242,slow=1.0,SNR=4.2							

*NEIC **23** 15:38:49.9±1.4, 937S×12230E, h91km±15km, mb3.9/1, Error ellipse: s-maj=58.7km s-min=10.8km az=57.0*
*ISCJB **23** 15:38:50.5±0.7, 876S±007×12312E±008, h110km±7km, mb3.9/6, Error ellipse: s-maj=15.5km s-min=7.0km az=139.6*
*IDC **23** 15:38:51.6±1.2, 883S×12299E, h100km±16km, mb3.8/6, mb1 3.7/9, mb1mx3.6/18, mbtmp3.7/9, MS2.8/2, Ms1 2.8/2, ms1mx2.7/29, Error ellipse: s-maj=95.7km s-min=10.5km az=56.0*

ISC 23 15:38:52.0±0.7, 90S±01×1228E±02, h106km±7km, n21, σ0§53/28, mb3.9/6, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	Baumata	1.49	145	P		Pn	15 39 19.8	+1.2
	82nm,0.3s,baz=16,slow=1.7,SNR=35							
BATI				S		Sn	15 39 38.0	-0.7
	72nm,0.3s,baz=247,slow=12,SNR=7.2							
WSI	Waingapu	2.56	254	*e*S		Sn	15 40 12.0	+9.2
WSI	Waingapu	2.56	254	*e*S		Sn	15 40 12.0	+9.2
KAPI	Kappang	4.96	322	P		Pn	15 40 04.2	-0.1
	4.4nm,0.3s,baz=175,slow=7.8,SNR=20							
KAPI				S		Sn	15 41 00.4	-0.1
	0.9nm,0.3s,baz=253,slow=19,SNR=2.7							
KAPI				LR		LR	15 42 10.8	
	comp=Z,88nm,20.7s,baz=300,slow=40							
KAPI	Kappang	4.96	322	*e*Pn		Pn	15 40 04.2	-0.1
KAPI				S		Sn	15 41 00.4	-0.1
KAPI				LR		LR	15 42 10.8	
FITZ	Fitzroy Crossi	9.48	163	*e*P		Pn	15 40 58.4	-7.3
FITZ				*e*S		Sn	15 42 33.0	-17
FITZ	Fitzroy Crossi	9.48	163	P		Pn	15 40 59.2	-6.5
	0.6nm,0.3s,baz=354,slow=9.2,SNR=7.9							
FITZ				S		Sn	15 42 34.4	-16
	1.7nm,0.3s,baz=231,slow=16,SNR=10.0							
FITZ				LR		LR	15 45 05.1	
	comp=Z,88nm,21.8s,baz=220,slow=39							
FITZ	Fitzroy Crossi	9.48	163	*e*Pn		Pn	15 40 58.7	-7.0
FITZ				S		Sn	15 42 34.4	-16
FITZ				LR		LR	15 45 05.1	
WRA	Warramunga Arr	15.61	136	P		Pn	15 42 25.4	-0.7
	0.4nm,0.3s,baz=309,slow=15,SNR=6.6							
WRA				S		S	15 45 05.4	-22
	0.6nm,0.3s,baz=308,slow=20,SNR=5.7							
WRAB	Tennant Creek	15.61	136	Pn		Pn	15 42 25.9	-0.2
	6.1nm,0.8s							
ASAR	Alice Springs	18.07	145	P		P	15 42 55.9	+0.7
	0.3nm,0.3s,baz=280,slow=29,SNR=5.5							
ASAR				S		S	15 46 06.7	-10
	0.3nm,0.3s,baz=321,slow=21,SNR=5.4							
NWAO	Narrogin (SRO)	24.38	191	S		S	15 48 11.9	-0.5
	20nm,1.1s,baz=294,slow=7.0,SNR=5.5							
STKA	Stephens Creek	28.71	145	P		P	15 44 39.5	+0.2
	1.5nm,0.5s,mb3.9,baz=40,slow=6.2,SNR=4.4							
STKA	Stephens Creek	28.71	145	P		P	15 44 39.5	+0.2
SONM	Songino Array	58.40	347	P		P	15 48 35.9	-0.4
	0.8nm,0.6s,mb3.9,baz=170,slow=6.5,SNR=5.5							
MKAR	Makanchi Array	66.20	331	P		P	15 49 28.6	+0.2
	2.8nm,0.6s,mb4.2,baz=139,slow=7.5,SNR=24							
ZALV	Zalesovo Beam	70.41	337	P		P	15 49 54.1	-0.3
	2.2nm,0.7s,mb4.1,baz=139,slow=4.8,SNR=11							
KURK	Kurchatov	70.68	332	P		P	15 49 56.7	+0.5
	1.2nm,0.6s,mb3.9,baz=142,slow=5.5,SNR=7.0							
KURK	Kurchatov	70.68	332	P		P	15 49 56.7	+0.5
BVAR	Borovoye Array	76.08	330	P		P	15 50 27.9	+0.1
	0.6nm,0.7s,mb3.5,baz=107,slow=9.2,SNR=2.9							
TORD	Torodi Ar. Bea	122.15	280	PKP		PKPdf	15 57 35.9	+0.6
	0.4nm,0.6s,baz=103,slow=0.9,SNR=3.9							

*BJI **23** 16:17:10.6, 378S×10132E, h40km, mB5.2, mb4.8, Ms4.8, Msz4.4*
*NEIC **23** 16:17:12.4±4.2, 3.12S×10137E, h9km±25km, mb4.8/13, Error ellipse: s-maj=13.5km s-min=6.0km az=53.0*
*MOS **23** 16:17:15.1±1.2, 291S×10148E, h33km, mb4.9/15, Error ellipse: s-maj=16.4km s-min=7.1km az=111.5*
*IDC **23** 16:17:19.5±2.1, 306S×10151E, h60km±16km, mb4.3/21, mb1 4.4/22, mb1mx4.3/27, mbtmp4.3/22, MS3.5/5, Ms1 3.6/5, ms1mx3.1/43, Error ellipse: s-maj=25.1km s-min=8.7km az=45.0*
*ISCJB **23** 16:17:19.5±1.0, 3.15S±005×10136E±005, h78km±7km, mb4.7/67, Error ellipse: s-maj=11.6km s-min=5.3km az=44.6*
*DJA **23** 16:17:21, 3.12S×10109E, h39km, Mw5.2/5*

ISC 23 16:17:20.8±0.9, 320S±006×10136E±005, h75km±7km, n159, σ1§03/152, mb4.7/67, 20C-8D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSI	Kapahiang	1.31	110	P		Pn	16 17 41.2	-2.3
	0.0nm,0.0s							
RGRI	Rengat	3.00	19	P		Pn	16 18 04.8	-1.2
	0.0nm,0.0s							
DSRI	Dabo	4.20	50	P		Pn	16 18 22.0	-0.5
	0.0nm,0.0s							
PPBI	Pangkal Pinang	4.88	78	P		Pn	16 18 31.3	-0.5
	0.0nm,0.0s							
KGM	Kluang	5.54	21	⇑P		Pn	16 18 40.8	+0.1
MYKOM	Kota Tinggi	5.55	27	⇓P		Pn	16 18 41.0	+0.2
GSI	Gunungsitoli	5.86	320⇑	*e*P		Pn	16 18 39.0	-6.0
TPI	Tanjungpandan	6.30	86⇓	*e*P		Pn	16 18 50.0	-1.2
TPI				*e*S		Sn	16 20 25.0	+23
DBJI	Dramaga	6.32	122	P		Pn	16 18 54.4	+3.0
	0.0nm,0.0s							
CBJI	Citeko	6.34	121	P		Pn	16 18 56.8	+5.2
	0.0nm,0.0s							
FRIM	Kepong	6.40	2	⇓P		Pn	16 18 52.5	0.0
LEM	Lembang	7.20	120	P		Pn	16 19 08.5	+5.1
	0.0nm,0.0s							
IPM	Ipoh	7.63	358	⇑P		Pn	16 19 11.1	+1.8
XMIS	Christmas Isla	8.40	150	*e*Pn		Pn	16 19 12.9	-6.8
XMIS				*e*Sn		Sn	16 20 42.4	-11
KTGM	Kuala Trenggan	8.65	12	⇓P		Pn	16 19 24.9	+1.6
KSM	Kuching	10.08	63	⇓P		Pn	16 19 43.3	+0.5
KSM	Kuching	10.08	63	*e*Pn		Pn	16 19 42.9	+0.1
SJI	Sawahan	11.30	114	P		Pn	16 19 59.3	-0.1
	0.0nm,0.0s							
SBUM	Sibu	12.22	63	⇑P		Pn	16 20 16.2	+4.2
KKM	Kota Kinabalu	17.45	58	⇑P		Pn	16 21 21.7	+2.4
KKM	Kota Kinabalu	17.45	58	*e*Pn		Pn	16 21 15.1	-4.2
SDKM	Sandakan	18.09	61	⇑P		Pn	16 21 29.7	+2.5
TSM	Tawau	18.11	66	⇑P		Pn	16 21 29.4	+2.1
KDM	Kudat	18.43	57	⇓P		Pn	16 21 33.8	+2.6
KAPI	Kappang	18.44	96	P		Pn	16 21 29.2	-2.2
	2.0nm,0.3s,baz=82,slow=14,SNR=3.5							
KAPI				LR		LR	16 29 07.6	
	comp=Z,122nm,18.4s,baz=321,slow=39							
KAPI	Kappang	18.44	96	P		Pn	16 21 29.2	-2.2
KAPI				LR		LR	16 29 07.6	
PCI	Palu	18.61	83	P		Pn	16 21 34.6	+1.2
	0.0nm,0.0s							
MYLDM	Lahad Datu	19.04	64	⇑P		Pn	16 21 39.8	+1.2
CMAR	Chiang Mai Arr	21.65	354	P		P	16 22 01.9	-3.3
	4.5nm,0.7s,mb3.9,baz=184,slow=8.5,SNR=31							
CMAR				PcP		PcP	16 26 05.0	+0.8
	1.2nm,0.8s,baz=208,slow=3.1,SNR=8.6							
CMAR				LR		LR	16 30 04.7	
	comp=Z,132nm,20.1s,baz=151,slow=36							
CMAR	Chiang Mai Arr	21.65	354	P		P	16 22 01.9	-3.3
CMAR							16 26 05.1	
CHTO	Chiang Mai	22.00	354	*e*P		P	16 22 07.4	-1.5
	2.1nm,0.7s							
BATI	Baumata	23.21	109	P		P	16 22 19.8	-1.6
	13nm,0.5s,mb4.5,baz=214,slow=3.6,SNR=7.9							
MBWA	Marble Bar	25.27	136	*e*P		P	16 22 41.2	+1.1
LBMI	Labuha	26.25	85	P		P	16 22 49.4	+0.2
	0.0nm,0.0s							
FITZ	Fitzroy Crossi	28.02	124	*e*P		P	16 23 05.0	0.0
FITZ	Fitzroy Crossi	28.02	124	P		P	16 23 04.8	-0.2
	4.1nm,0.7s,mb4.1,baz=204,slow=2.8,SNR=16							
FITZ				LR		LR	16 33 48.6	
	comp=Z,82nm,21.4s,baz=149,slow=35							
KMI	Kunming	28.19	3	P		P	16 23 07.3	+1.0
KMI				AMB		AMB		
	comp=Z,5.0nm,1.2s,mb3.9							
GYA	Guiyang	29.93	10	P		P	16 23 21.8	+0.1
GYA				PP		PP	16 24 21.4	-9.3
GYA				PCP		PcP	16 26 23.3	+0.3
GYA				S		**S**	**16 28 20.6**	**+6.7**
GYA				SS		SS	16 29 58.6	-26
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.5							
GYA				AMB		AMB		
	comp=Z,120nm,4.5s							
GYA				LR		LR		
	comp=N,420nm,13.4s							
GYA				LR		LR		
	comp=E,390nm,13.8s							
GYA				LR		LR		
	comp=Z,440nm,13.9s							
ODAN	Odare	32.79	337	*e*P		P	16 23 47.2	+0.3
	comp=Z,65nm,0.7s,mb5.6							
NWAO	Narrogin (SRO)	33.10	155	LR		LR	16 36 01.1	
	comp=Z,115nm,21.4s,baz=46,slow=34							
RAMN	Ramite	33.19	335	*e*P		P	16 23 50.9	+0.5
JIRN	Jiri	33.98	335	*e*P		P	16 23 58.2	+0.9
	comp=Z,99nm,0.8s,mb5.7							
CD2	Chengdu	34.00	4	P		P	16 23 56.3	-1.1
CD2				PP		PP	16 25 10.4	-5.3
CD2				S		**S**	**16 29 21.3**	**+4.1**
CD2				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.8							
CD2				AMB		AMB		
	comp=Z,30nm,5.2s							
CD2				LR		LR		
	comp=N,320nm,12.0s							
CD2				LR		LR		
	comp=Z,310nm,15.6s							
PKIN	Phulchoki	34.25	334	*e*P		P	16 23 59.8	+0.2
	comp=Z,17nm,0.7s,mb5.0							
GUN	Gumba	34.34	335	*e*P		P	16 24 01.2	+0.9
	comp=Z,187nm,0.9s							
DMN	Daman	34.40	334	*e*P		P	16 24 01.1	+0.2
	comp=Z,33nm,0.9s,mb5.2							
KKN	Kakani	34.48	334	*e*P		P	16 24 01.9	+0.3
	comp=Z,70nm,0.8s,mb5.5							
GKN	Gorkha	34.95	334	*e*P		P	16 24 06.1	+0.4
	comp=Z,26nm,0.4s,mb5.4							
KOLN	Koldanda	35.22	332	*e*P		P	16 24 08.2	+0.2
	comp=Z,44nm,0.7s,mb5.4							
DANN	Dangsing	35.64	333	*e*P		P	16 24 12.3	+0.7
	comp=Z,78nm,0.4s							
WRA	Warramunga Arr	36.22	120	P		P	16 24 16.5	-0.2
	comp=Z,9.1nm,0.4s,mb5.1,baz=303,slow=8.9,SNR=115							
WRA				S		S	16 29 52.2	+0.4
	comp=Z,1.5nm,0.8s,baz=293,slow=16,SNR=8.6							
WRAB	Tennant Creek	36.23	120	*e*P		P	16 24 16.5	-0.3
WRAB				pmax		pmax		
	comp=Z,12nm,0.6s,mb5.0							
WRAB	Tennant Creek	36.23	120	*e*P		P	16 24 16.5	-0.2
	comp=Z,12nm,0.6s,mb5.0							
WB2	Warramunga Arr	36.23	120	*e*P		P	16 24 16.6	-0.2
ASAR	Alice Springs	37.45	126	P		P	16 24 27.8	+0.6

AML	**Almayashu**	**51.63**	**334**	*e*P		**P**	**16 26 19.8**	**+0.1**
	comp=Z,12nm,0.7s,mb5.0							
EKS2	**Erkin-Say**	**52.02**	**334**	*e*P		**P**	**16 26 22.7**	**+0.1**
	comp=Z,24nm,0.8s,mb5.3							
MJAR	**Matsushiro Arr**	**52.37**	**38**	P		**P**	**16 26 23.7**	**-1.6**
	comp=Z,1.2nm,0.6s,mb4.1,baz=209,slow=7.6,SNR=6.2							
MK31	**Makanchi Array**	**52.55**	**344**	*i* P		**P**	**16 26 26.1**	**-0.3**
MK31				pmax	pmax			
	comp=Z,8.0nm,0.4s,mb5.1							
MKAR	**Makanchi Array**	**52.55**	**344**	P		**P**	**16 26 26.1**	**-0.3**
	comp=Z,17nm,0.6s,mb5.3,baz=149,slow=8.0,SNR=139							
ZAK	**Zakamensk**	**53.40**	**2**	*e*P		**P**	**16 26 31.8**	**-0.8**
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.3							
HVS	**Khovu-Aksy**	**54.52**	**354**	*e*P		**P**	**16 26 40.3**	**-0.5**
TLY	**Talaya**	**54.71**	**2**	*e*P		**P**	**16 26 42.6**	**+0.5**
TLY				pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.8							
KURK	**Kurchatov**	**57.14**	**343**	P		**P**	**16 26 58.6**	**-0.9**
	comp=Z,5.6nm,0.6s,mb4.8,baz=162,slow=7.0,SNR=47							
KURK	**Kurchatov**	**57.14**	**343**⇑	*e*P		**P**	**16 26 58.0**	**-1.5**
KURK				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.7							
KURK	**Kurchatov**	**57.14**	**343**	*e*P		**P**	**16 26 58.8**	**-0.6**
	comp=Z,12nm,0.8s,mb5.0							
KLR	**Kul'dur**	**58.49**	**23**	*e*P		**P**	**16 27 05.0**	**-4.0**
ZAA0	**Zalesovo Array**	**58.60**	**349**	*e*P		**P**	**16 27 09.0**	**-0.6**
ZALV	**Zalesovo Beam**	**58.60**	**349**	P		**P**	**16 27 09.1**	**-0.5**
	comp=Z,32nm,0.6s,mb5.5,baz=160,slow=4.7,SNR=137							
KRAR	**Krasnoyarsk**	**59.42**	**354**	*e*P		**P**	**16 27 13.7**	**-1.6**
KRAR				pmax	pmax			
	comp=Z,20nm,0.8s,mb5.2							
KBD	**Kabd**	**60.63**	**306**	*e*P		**P**	**16 27 23.9**	**-0.3**
	baz=306							
RDF	**Al-Radifah**	**60.65**	**306**	*e*P		**P**	**16 27 24.3**	**0.0**
	baz=306							
RDF				AMb	AMb		16 27 36.1	
	comp=Z,18nm,1.6s,mb4.8,baz=306							
NAY	**Al-Naaiem**	**61.02**	**306**	*e*P		**P**	**16 27 26.5**	**-0.3**
	baz=306							
NAY				AMb	AMb		16 27 27.3	
	comp=Z,3.0nm,0.6s,mb4.5,baz=306							
MIB	**Mutribah**	**61.15**	**307**	*e*P		**P**	**16 27 27.9**	**+0.2**
	baz=306							
MIB				AMb	AMb		16 27 29.4	
	comp=Z,16nm,0.9s,mb5.0,baz=306							
RST	**Umm Al-Ruwaisa**	**61.31**	**306**	*e*P		**P**	**16 27 28.3**	**-0.5**
	baz=306							
RST				AMb	AMb		16 27 29.1	
	comp=Z,10.0nm,0.7s,mb5.0,baz=306							
BVA0	**Borovoye Array**	**61.77**	**339**	*i* P		**P**	**16 27 29.3**	**-2.1**
BVA0				pmax	pmax			
	comp=Z,1.0nm,0.7s,mb4.0							
BVAR	**Borovoye Array**	**61.77**	**339**	P		**P**	**16 27 30.4**	**-1.0**
	comp=Z,3.5nm,0.5s,mb4.7,baz=141,slow=9.6,SNR=26							
YSS	**Yuzh-Sakhalins**	**61.79**	**31**	*e*P		**P**	**16 27 31.0**	**-0.6**
YSS				pmax	pmax			
	comp=Z,40nm,0.9s,mb5.5							
BRVK	**Borovoye**	**61.84**	**339**	*e*P		**P**	**16 27 30.6**	**-1.2**
AB31	**Akbulak array**	**63.34**	**331**	*i* P		**P**	**16 27 40.8**	**-1.1**
AB31				pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.6							
AKTO	**Aktyubinsk**	**65.05**	**331**	P		**P**	**16 27 50.6**	**-2.5**
AKTO				pmax	pmax			
	comp=Z,2.0nm,1.2s,mb3.8							
SVE	**Sverdlovsk**	**68.30**	**337**⇑	*e*P		**P**	**16 28 13.7**	**+0.1**
SVE				pmax	pmax			
	comp=Z,11nm,0.9s,mb4.7							
YAK	**Yakutsk**	**68.56**	**14**	*e*P		**P**	**16 28 13.7**	**-1.4**
YAK				pmax	pmax			
	comp=Z,25nm,0.8s,mb5.1							
YAK				pmax	pmax			
	comp=E,5.0nm,1.2s							
YAK				pmax	pmax			
	comp=N,8.0nm,1.1s							
ARU	**Arti**	**68.84**	**336**	*d i* P		**P**	**16 28 16.4**	**-0.6**
ARU				*e*			16 30 56.9	
ARU				*e*S		S	16 37 14.0	-1.0
ARU				*e*SS		SS	16 41 41.6	0.0
ARU				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.5							
ARU	**Arti**	**68.84**	**336**	*e*P		**P**	**16 28 15.7**	**-1.3**
	comp=Z,5.9nm,0.9s,mb4.4							
EIL	**Elat**	**71.31**	**303**	P		**P**	**16 28 33.4**	**+0.7**
	comp=Z,3.4nm,0.9s,mb4.2,baz=75,slow=17,SNR=3.9							
MMAI	**Mount Meron Ar**	**71.83**	**306**	P		**P**	**16 28 36.9**	**+1.1**
	comp=Z,3.0nm,0.7s,mb4.3,baz=54,slow=9.7,SNR=3.5							
LSZ	**Lusaka**	**72.93**	**255**	LR		LR	16 58 00.3	
	comp=Z,50nm,19.0s,baz=189,slow=33							
PETK	**Petropavlovsk-**	**73.18**	**32**	P		**P**	**16 28 43.5**	**+0.2**
	comp=Z,2.9nm,0.7s,mb4.2,baz=242,slow=2.1,SNR=7.8							
OBN	**Obninsk**	**78.52**	**328**⇓	*e*P		**P**	**16 29 12.9**	**-0.8**
OBN				*e*			16 32 09.2	
OBN				*e*S		S	16 39 09.3	+5.2
OBN				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.7							
AKASG	**Malin Array Be**	**81.26**	**322**	P		**P**	**16 29 27.4**	**-1.2**
	comp=Z,2.9nm,0.7s,mb4.2,baz=85,slow=3.5,SNR=11							
AKASG	**Malin Array Be**	**81.26**	**322**	*i* P		**P**	**16 29 26.7**	**-1.9**
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.7s							
MLR	**Muntele Rosu**	**82.10**	**317**	P		**P**	**16 29 34.2**	**+1.1**
	comp=Z,5.1nm,0.9s,mb4.4,baz=354,slow=1.8,SNR=7.6							
MLR	**Muntele Rosu**	**82.10**	**317**⇑	*i* P		**P**	**16 29 34.1**	**+0.9**
MLR	**Muntele Rosu**	**82.10**	**317**	⇑P		**P**	**16 29 34.1**	**+1.0**
BURAR	**Bucovina Array**	**83.05**	**319**⇑	*i* P		**P**	**16 29 39.4**	**+1.3**
BURAR	**Bucovina Array**	**83.05**	**319**	⇑P		**P**	**16 29 39.4**	**+1.4**
BUR08	**Bucovina Ar. S**	**83.07**	**319**	*e*P		**P**	**16 29 39.0**	**+0.9**
BILL	**Bilibino**	**83.81**	**20**	*e*P		**P**	**16 29 40.7**	**-0.8**
BILL				pmax	pmax			
	comp=Z,5.0nm,1.3s,mb4.2							
JOF	**Joensuu**	**83.88**	**334**	*e*p		**P**	**16 29 42.4**	**+0.5**
	comp=Z,2.3nm,0.6s,mb4.2							
DRGR		**84.56**	**317**⇑	*i* P		**P**	**16 29 46.4**	**+0.6**
DRGR		**84.56**	**317**	⇑P		**P**	**16 29 46.4**	**+0.6**
BZS	**Buzias**	**85.11**	**316**⇑	*i* P		**P**	**16 29 48.3**	**-0.2**
BZS	**Buzias**	**85.11**	**316**	⇑P		**P**	**16 29 48.3**	**-0.3**
KOLS	**Kolonicke sedl**	**85.24**	**319**	*e*P		**P**	**16 29 50.3**	**+1.2**
KOLS	**Kolonicke sedl**	**85.24**	**319**	*e*P		**P**	**16 29 50.4**	**+1.3**
CRVS	**Cervenica-Dubn**	**85.76**	**319**	*e*P		**P**	**16 29 53.1**	**+1.4**
KAF	**Kangasniemi**	**85.86**	**333**	*e*p		**P**	**16 29 52.4**	**+0.5**
	comp=Z,5.1nm,0.8s,mb4.5							
KAF	**Kangasniemi**	**85.86**	**333**	*e*P		**P**	**16 29 52.4**	**+0.5**
KAF				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.5							
STHS	**Stebnicka Huta**	**85.99**	**320**	*e*P		**P**	**16 29 53.7**	**+0.9**
STHS				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4							
STHS	**Stebnicka Huta**	**85.99**	**320**	*e*P		**P**	**16 29 53.7**	**+0.9**
	comp=Z,4.2nm,0.8s,mb4.4							
LIKS	**Likavka**	**87.32**	**319**	*e*P		**P**	**16 29 56.8**	**-2.5**
LIKS				pmax	pmax			
	comp=Z,45nm,1.0s,mb5.3							
LIKS	**Likavka**	**87.32**	**319**	*e*P		**P**	**16 29 56.8**	**-2.5**
LIKS	**Likavka**	**87.32**	**319**	*e*P		**P**	**16 29 56.8**	**-2.5**
	comp=Z,45nm,1.0s,mb5.3							
VYHS	**Vyhne**	**87.42**	**319**	*e*P		**P**	**16 30 00.7**	**+0.9**
ARCES	**ARCESS Array B**	**88.06**	**340**	P		**P**	**16 30 02.7**	**+0.3**
	comp=Z,3.5nm,0.8s,mb4.5,baz=99,slow=5.7,SNR=13							
ARCES	**ARCESS Array B**	**88.06**	**340**	P		**P**	**16 30 02.7**	**+0.3**
MORC	**Moravsky Berou**	**88.42**	**320**	*e*P		**P**	**16 30 05.3**	**+0.7**
MORC				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.5							
MORC	**Moravsky Berou**	**88.42**	**320**⇑	*i* P		**P**	**16 30 05.5**	**+0.9**
MORC	**Moravsky Berou**	**88.42**	**320**	*e*P		**P**	**16 30 05.3**	**+0.7**
	comp=Z,4.7nm,0.9s,mb4.5							
MODS	**Modra-Piesok**	**88.43**	**318**	*e*P		**P**	**16 30 04.9**	**+0.2**
GOLS	**Golise**	**89.31**	**316**	*i* P		**P**	**16 30 10.0**	**+1.2**
BOJS	**Bojanci**	**89.53**	**315**	*e*P		**P**	**16 30 10.6**	**+0.7**
VISS	**Visnje**	**89.84**	**316**	*e*P		**P**	**16 30 12.1**	**+0.8**
BRG	**Berggiesshubel**	**90.82**	**321**	*e*P		**P**	**16 30 16.6**	**+0.8**
BRG				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.3							
BRG	**Berggiesshubel**	**90.82**	**321**	*e*P		**P**	**16 30 16.6**	**+0.9**
	comp=Z,3.2nm,0.8s,mb4.5							
GERES	**GERESS Array B**	**90.84**	**319**	P		**P**	**16 30 17.0**	**+1.1**
	comp=Z,1.5nm,0.7s,mb4.2,baz=76,slow=5.6,SNR=14							
KHC	**Kasperske Hory**	**90.94**	**319**⇑	*e*P		**P**	**16 30 14.1**	**-2.3**
CLL	**Collm**	**91.44**	**321**	*e*P		**P**	**16 30 19.0**	**+0.4**
CLL				*ex*		x	16 30 25.0	
NVAR	**Mina Array Bea**	**129.65**	**41**	PKP		PKPdf	16 36 23.7	+2.1
	comp=Z,0.6nm,0.7s,baz=264,slow=0.9,SNR=5.2							
ULM	**Lac du Bonnet**	**130.90**	**15**	PKP		PKPdf	16 36 22.2	-1.4
	comp=Z,2.5nm,0.6s,baz=336,slow=2.2,SNR=3.9							
PDAR	**Pinedale Array**	**131.94**	**31**	PKP		PKPdf	16 36 25.2	-0.7
	comp=Z,0.2nm,0.6s,baz=311,slow=1.6,SNR=2.6							
PDAR				SKPbc		SKPbc	16 39 47.9	+2.5
	comp=Z,0.5nm,0.8s,baz=336,slow=3.3,SNR=4.0							
TXAR	**Lajitas Array**	**144.79**	**40**	PKP		PKPdf	16 36 49.9	+0.2
	comp=Z,5.1nm,0.7s,baz=295,slow=1.2,SNR=79							
WVT	**Waverly**	**146.15**	**13**	*e*PKP2		PKPab	16 36 52.1	-1.5
JCT	**Junction City**	**146.29**	**34**	*e*PKP2		PKPab	16 36 53.3	-1.0
TZTN	**Tazewell**	**146.51**	**7**	*e*PKPdf		PKPdf	16 36 53.0	+0.5
TKL	**Tuckaleechee C**	**147.36**	**8**	PKPbc		PKPbc	16 36 55.9	-0.4
	comp=Z,4.6nm,0.7s,baz=315,slow=1.4,SNR=7.2							
TKL	**Tuckaleechee C**	**147.36**	**8**	*e*PKPbc		PKPbc	16 36 55.7	-0.6
CPCT	**Cooper Cave**	**147.45**	**9**	*e*PKPbc		PKPbc	16 36 56.4	-0.3
JSC	**Jenkinsville**	**148.98**	**4**	*e*PKP2		PKPbc	16 37 00.2	-0.5

ISCJB ***23*** *16:42:46.4±1.1, 1865N×006×1453E×02, h219km±11km, mb3.6/15, Error ellipse: s-maj=26.6km s-min=9.6km az=177.1*

IDC ***23*** *16:42:47.7×1.8, 1857N×14542E, h222km±18km, mb3.4/14, mb1 3.5/16, mb1mx3.4/23, mbtmp3.3/16, Error ellipse: s-maj=22.5km s-min=10.6km az=90.0*

NEIC ***23*** *16:42:48.6±1.1, 1862N×14541E, h229km±11km, mb4.0/1, Error ellipse: s-maj=16.5km s-min=7.6km az=91.0*

ISC 23 16:42:47.0±1.1, 1864N±006×1454E±02, h211km±11km, n23, σ0°78/25, mb3.6/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.04**	**186**		Op	**Pn**	**16 44 02.2**	**-0.1**
	9.2nm,0.3s,baz=336,slow=3.2,SNR=11							
GUMO				S		**S**	**16 45 02.0**	**+0.2**
	9.3nm,0.3s,baz=307,slow=18,SNR=4.2							
GUMO	**Guam**	**5.04**	**186**	*e*Pn		**Pn**	**16 44 04.0**	**+1.8**
GUMO				*e*S		**S**	**16 45 01.6**	**-0.3**
CBIJ	**Chichi jima**	**8.93**	**341**	P		**Pn**	**16 44 50.5**	**-1.6**
	14nm,0.3s,baz=255,slow=18,SNR=26							
MJAR	**Matsushiro Arr**	**18.93**	**342**	P		**P**	**16 46 53.2**	**+1.1**
	0.4nm,0.3s,baz=120,slow=18,SNR=7.5							
KSRS	**Korea Array**	**24.20**	**324**	P		**P**	**16 47 45.8**	**+1.5**
	0.3nm,0.4s,mb3.3,baz=148,slow=9.1,SNR=4.3							
PETK	**Petropavlovsk-**	**35.71**	**13**	P		**P**	**16 49 25.1**	**0.0**
	5.6nm,1.0s,mb4.0,baz=234,slow=12,SNR=3.2							
WRAB	**Tennant Creek**	**39.84**	**196**	*e*P		**P**	**16 50 00.3**	**+0.3**
	2.5nm,0.4s,mb4.0							
WB2	**Warramunga Arr**	**39.84**	**196**	*e*P		**P**	**16 50 00.3**	**+0.2**
WRA	**Warramunga Arr**	**39.85**	**196**	P		**P**	**16 50 00.0**	**-0.1**
	1.7nm,0.3s,mb3.9,baz=13,slow=8.3,SNR=76							
FITZ	**Fitzroy Crossi**	**41.35**	**209**	*e*P		**P**	**16 50 12.9**	**+0.4**
FITZ	**Fitzroy Crossi**	**41.35**	**209**	P		**P**	**16 50 11.5**	**-1.0**
	0.9nm,0.3s,mb3.7,baz=39,slow=13,SNR=19							
SONM	**Songino Array**	**43.02**	**322**	P		**P**	**16 50 25.7**	**+0.1**
	0.4nm,0.6s,mb3.1,baz=138,slow=9.7,SNR=3.3							
ASAR	**Alice Springs**	**43.52**	**195**	P		**P**	**16 50 28.5**	**-1.3**
	0.4nm,0.4s,mb3.1,baz=14,slow=6.7,SNR=44							
ZALV	**Zalesovo Beam**	**57.90**	**323**	P		**P**	**16 52 16.3**	**-0.5**
	0.6nm,0.6s,mb3.4,baz=119,slow=5.4,SNR=2.8							
MKAR	**Makanchi Array**	**58.31**	**314**	P		**P**	**16 52 18.9**	**-0.8**
	0.4nm,0.3s,mb3.5,baz=91,slow=7.6,SNR=5.0							
MKAR	**Makanchi Array**	**58.31**	**314**	P		**P**	**16 52 18.9**	**-0.8**
KURK	**Kurchatov**	**61.13**	**318**	P		**P**	**16 52 39.5**	**+0.6**
	0.5nm,0.4s,mb3.5,baz=92,slow=7.4,SNR=7.6							
BVAR	**Borovoye Array**	**66.35**	**320**	P		**P**	**16 53 13.1**	**+0.3**
	1.8nm,0.5s,mb4.0,baz=92,slow=6.3,SNR=11							
YKA	**Yellowknife Ar**	**78.17**	**28**	P		**P**	**16 54 22.3**	**-0.4**
	0.7nm,0.7s,mb3.4,baz=294,slow=2.8,SNR=2.8							
ARCES	**ARCESS Array B**	**82.47**	**342**	P		**P**	**16 54 44.9**	**-0.5**
	1.5nm,0.8s,mb3.6,baz=89,slow=9.9,SNR=4.0							
NVAR	**Mina Array Bea**	**83.40**	**52**	P		**P**	**16 54 51.5**	**+0.7**
	1.4nm,0.6s,mb3.9,baz=263,slow=5.8,SNR=14							
NVAR	**Mina Array Bea**	**83.40**	**52**	P		**P**	**16 54 51.5**	**+0.7**
PDAR	**Pinedale Array**	**88.07**	**45**	P		**P**	**16 55 13.4**	**-0.2**
	0.3nm,0.3s,mb3.6,baz=156,slow=2.1,SNR=4.5							

BJI ***23*** *16:45:39.6, 480S×10130E, h35km, mB4.9, mb4.9, Ms4.6, Msz4.2*

IDC ***23*** *16:45:40.7±0.7, 4.18S×10136E, h0km, mb4.5/18, mb1 4.6/19, mb1mx4.5/23, mbtmp4.5/19, ML4.5/1, MS3.8/8, Ms1 3.8/8, ms1mx3.4/39, Error ellipse: s-maj=23.9km s-min=12.1km az=57.0*

ISCJB ***23*** *16:45:43.0±0.4, 4.32S±005×101.18E±004, h30km, mb4.8/56, MS4.0/16, Error ellipse: s-maj=8.1km s-min=4.4km az=40.1*

DJA ***23*** *16:45:44, 4.38S×10106E, h22km, Mw5.1/5*

MOS ***23*** *16:45:45.0±1.8, 4.00S×10157E, h33km, mb5.0/12, Error ellipse: s-maj=16.1km s-min=8.1km az=96.6*

NEIC ***23*** *16:45:46.8±0.4, 4.03S×10156E, h35km, mb4.7/9, Error ellipse: s-maj=13.4km s-min=7.7km az=50.0*

ISC 23 16:45:45.4±0.4, 430S±005×10119E±004, h32km, h32km±1.4km: pP-P, n126, σ1°08/113, mb4.8/56, MS4.0/16, 9C-4D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.54**	**65**	P		**Pn**	**16 46 10.9**	**+0.4**
	0.0nm,0.0s							
JMBI	**JAMBI**	**3.60**	**43**	P		**Pn**	**16 46 40.9**	**+1.9**
	0.0nm,0.0s							
PPI	**Pangkalpanjang**	**3.90**	**348**	P		**Pn**	**16 46 43.4**	**+0.4**
	0.0nm,0.0s							
DSRI	**Dabo**	**5.08**	**42**	P		**Pn**	**16 47 00.6**	**+1.3**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.37**	**67**	P		**Pn**	**16 47 04.0**	**+0.7**
	0.0nm,0.0s							
DBJI	**Dramaga**	**5.97**	**112**	P		**Pn**	**16 47 11.3**	**-0.2**
	0.0nm,0.0s							
SKJI	**Sukabumi**	**5.98**	**117**	P		**Pn**	**16 47 10.2**	**-1.4**
	0.0nm,0.0s							
CBJI	**Citeko**	**6.01**	**111**	P		**Pn**	**16 47 14.9**	**+2.7**
	0.0nm,0.0s							
TPI	**Tanjungpandan**	**6.63**	**77**⇑	*e*P		**Pn**	**16 47 22.0**	**+1.4**
TPI				*e*S		**Sn**	**16 48 47.0**	**+12**
GSI	**Gunungsitoli**	**6.63**	**327**⇓	*e*P		**Pn**	**16 47 18.0**	**-2.7**
LEM	**Lembang**	**6.87**	**112**	P		**Pn**	**16 47 24.6**	**+0.7**
	0.0nm,0.0s							
BJII	**Banjamegara**	**8.99**	**110**	P		**Pn**	**16 47 54.2**	**+1.1**
	0.0nm,0.0s							
KSM	**Kuching**	**10.76**	**58**	*e*P		**Pn**	**16 48 12.7**	**-4.6**
SJI	**Sawahan**	**11.06**	**108**	P		**Pn**	**16 48 20.3**	**-1.1**
	0.0nm,0.0s							
BSI	**Banda Aceh**	**11.37**	**329**	P		**Pn**	**16 48 24.0**	**-1.7**
	0.0nm,0.0s							
TARAI	**Tarakan**	**18.03**	**65**	P		**Pn**	**16 49 55.0**	**+1.3**
	0.0nm,0.0s							
KKM	**Kota Kinabalu**	**18.18**	**56**	P		**Pn**	**16 49 56.6**	**+1.1**
KAPI	**Kappang**	**18.51**	**93**	P		**Pn**	**16 49 55.5**	**-4.0**
	1.6nm,0.3s,baz=196,slow=14,SNR=4.3							
PCI	**Palu**	**18.92**	**80**	P		**Pn**	**16 50 04.5**	**0.0**
	0.0nm,0.0s							
BDT	**Bhumibol Dam**	**21.51**	**354**	P		**P**	**16 50 30.5**	**-1.2**
CMAR	**Chiang Mai Arr**	**22.72**	**354**	P		**P**	**16 50 42.6**	**-2.0**
	23nm,1.0s,mb4.5,baz=184,slow=8.4,SNR=51							
CMAR				PcP		PcP	16 54 37.5	+1.1
	1.0nm,0.8s,baz=200,slow=3.7,SNR=5.0							
CMAR				LR		LR	17 01 22.3	
	comp=Z,183nm,18.6s,MS3.5,baz=180,slow=42							
CMAR	**Chiang Mai Arr**	**22.72**	**354**⇑	*e*P		**P**	**16 50 45.4**	**+0.8**
BATI	**Baumata**	**23.04**	**106**	P		**P**	**16 50 46.1**	**-2.0**
	0.0nm,0.0s							
BATI	**Baumata**	**23.04**	**106**	P		**P**	**16 50 45.9**	**-2.2**
	16nm,0.6s,mb4.6,baz=263,slow=17,SNR=7.2							
CHG	**Chiang Mai**	**23.07**	**355**	⇑P		**P**	**16 50 48.0**	**-0.3**
	17nm,0.9s,mb4.5							
CHTO	**Chiang Mai**	**23.07**	**355**	*e*P		**P**	**16 50 46.9**	**-1.4**
CHTO				pmax	pmax			
	comp=Z,16nm,1.0s,mb4.4							
CHTO	**Chiang Mai**	**23.07**	**355**	*e*P		**P**	**16 50 46.9**	**-1.4**
	comp=Z,16nm,1.0s,mb4.4							
MNI	**Manado**	**24.31**	**77**	P		**P**	**16 51 00.6**	**+0.4**
	comp=Z,0.0nm,0.0s							
MBWA	**Marble Bar**	**24.60**	**135**	P		**P**	**16 50 55.0**	**-7.9**
LBMI	**Labuha**	**26.53**	**83**	P		**P**	**16 51 19.7**	**-0.7**
	comp=Z,0.0nm,0.0s							
FITZ	**Fitzroy Crossi**	**27.57**	**122**	*e*P		**P**	**16 51 28.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**27.57**	**122**	P		**P**	**16 51 29.0**	**-0.7**
	comp=Z,4.0nm,0.7s,mb4.2,baz=296,slow=6.5,SNR=13							
KMI	**Kunming**	**29.28**	**3**	P		**P**	**16 51 46.3**	**+1.5**
KMI				AP		pP	16 51 56.8	+2.6
KMI				XP		sP	16 52 00.9	+2.8
KMI				PP		PP	16 52 41.8	-10
KMI				S		**S**	**16 56 35.0**	**-0.9**
KMI				SSS			16 58 26.9	
KMI				SCS		ScS	17 02 24.4	-0.8
KMI				AMB		AMB		
	comp=Z,16nm,0.9s,mb4.8							
KMI				AMB		AMB		
	comp=Z,79nm,3.2s							
KMI				LR		LR		
	comp=N,382nm,9.4s							
KMI				LR		LR		
	comp=E,300nm,9.9s							
KMI				LR		LR		
	comp=Z,212nm,15.7s,MS3.9							
GYA	**Guiyang**	**31.03**	**10**	P		**P**	**16 52 00.3**	**0.0**
GYA				AP		pP	16 52 10.3	+0.7
GYA				XP		sP	16 52 15.0	+1.4
GYA				PP		PP	16 53 01.8	-9.0
GYA				PCP		PcP	16 54 55.6	-0.2
GYA				S		**S**	**16 57 00.4**	**-2.9**
GYA				XS		sS	16 57 17.9	-0.9
GYA				SCP		ScP	16 58 35.3	-1.2
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.7							
GYA				AMB		AMB		
	comp=Z,110nm,4.5s							
GYA				LR		LR		
	comp=N,420nm,13.1s,MS4.4							
GYA				LR		LR		
	comp=E,390nm,13.3s,MS4.4							
GYA				LR		LR		
	comp=Z,440nm,13.6s,MS4.3							
NWAO	**Narrogin (SRO)**	**32.19**	**154**	LR		LR	17 03 25.6	
	comp=Z,229nm,21.7s,MS3.8,baz=220,slow=33							
ODAN	**Odare**	**33.73**	**337**	*e*P		**P**	**16 52 25.1**	**+1.2**
	comp=Z,50nm,0.8s,mb5.5							
JIRN	**Jiri**	**34.91**	**336**	*e*P		**P**	**16 52 35.6**	**+1.4**
	comp=Z,67nm,0.8s,mb5.6							
CD2	**Chengdu**	**35.09**	**4**⇓	*i* P		**P**	**16 52 35.3**	**-0.4**
CD2				AP		pP	16 52 45.0	-0.1
CD2				XP		sP	16 52 48.9	-0.2
CD2				PP		PP	16 53 54.0	-1.8
CD2				S		**S**	**16 58 04.3**	**-2.0**
CD2				AMB		AMB		
	comp=Z,30nm,0.8s,mb5.3							
CD2				AMB		AMB		
	comp=Z,60nm,5.2s							
CD2				LR		LR		
	comp=N,190nm,15.6s,MS4.3							
CD2				LR		LR		
	comp=E,500nm,19.2s,MS4.3							
CD2				LR		LR		
	comp=Z,230nm,13.2s							
LSA	**Lhasa**	**35.15**	**345**	*e*P		**P**	**16 52 36.9**	**+0.7**
LSA				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4							
LSA	**Lhasa**	**35.15**	**345**	*e*P		**P**	**16 52 36.9**	**+0.7**
	comp=Z,3.3nm,0.6s,mb4.4							
GUN	**Gumba**	**35.26**	**336**	*e*P		**P**	**16 52 38.6**	**+1.4**
	comp=Z,56nm,0.8s,mb5.5							
DMN	**Daman**	**35.31**	**335**	*e*P		**P**	**16 52 38.5**	**+0.8**
	comp=Z,19nm,0.9s,mb5.0							
KKN	**Kakani**	**35.40**	**335**	*e*P		**P**	**16 52 39.1**	**+0.7**
	comp=Z,45nm,1.0s,mb5.3							
WRA	**Warramunga Arr**	**35.83**	**119**	P		**P**	**16 52 41.3**	**-1.0**
	comp=Z,4.2nm,0.9s,mb4.4,baz=293,slow=9.8,SNR=21							
WRAB	**Tennant Creek**	**35.84**	**118**	*e*P		**P**	**16 52 41.6**	**-0.7**
WRAB	**Tennant Creek**	**35.84**	**118**	*e*P		**P**	**16 52 41.5**	**-0.8**
	comp=Z,5.3nm,0.6s,mb4.7							
WB2	**Warram

ULN	**Ulaanbaatar**	**52.20**	**5**	*e*P	**P**	**16 54 52.9**	**-0.1**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ULN	**Ulaanbaatar**	**52.20**	**5**	*e*P	**P**	**16 54 52.9**	**-0.1**
	comp=Z,8.9nm,0.9s,mb4.7						
TKM2	**Tokmak 2**	**52.40**	**336**	*e*P	**P**	**16 54 54.8**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
TKM2	**Tokmak 2**	**52.40**	**336**	*e*P	**P**	**16 54 54.8**	**+0.2**
	comp=Z,7.4nm,0.8s,mb4.7						
AML	**Almayashu**	**52.54**	**334**	*e*P	**P**	**16 54 56.4**	**+0.8**
	comp=Z,4.8nm,0.8s,mb4.5						
CN2	**Changchun**	**52.63**	**22**	*e*P	**P**	**16 54 54.8**	**-1.5**
CN2				*e*AP	pP	16 55 03.3	-2.7
CN2				*e*PP	PP	16 56 54.6	-1.1
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
EKS2	**Erkin-Say**	**52.93**	**335**	*e*P	**P**	**16 54 59.3**	**+0.8**
	comp=Z,9.1nm,0.8s,mb4.8						
MAT	**Matsushiro**	**53.33**	**37**	P	**P**	**16 55 00.8**	**-0.8**
MJAR	**Matsushiro Arr**	**53.33**	**37**	P	**P**	**16 55 00.2**	**-1.4**
	comp=Z,7.6nm,1.0s,mb4.6,baz=216,slow=7.2,SNR=20						
MKAR	**Makanchi Array**	**53.55**	**344**	P	**P**	**16 55 03.0**	**0.0**
	comp=Z,10nm,0.7s,mb4.9,baz=148,slow=8.3,SNR=81						
MKAR	**Makanchi Array**	**53.55**	**344**	P	**P**	**16 55 03.0**	**0.0**
ZAK	**Zakamensk**	**54.49**	**2**	*e*P	**P**	**16 55 08.5**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
TLY	**Talaya**	**55.80**	**2**	*e*P	**P**	**16 55 19.8**	**+0.6**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
IRK	**Irkutsk**	**56.38**	**2**	*e*P	**P**	**16 55 26.5**	**+3.1**
IRK				pmax	pmax		
	comp=Z,64nm,2.0s,mb5.3						
KURK	**Kurchatov**	**58.13**	**343**	P	**P**	**16 55 35.3**	**-0.5**
	comp=Z,5.5nm,0.8s,mb4.6,baz=162,slow=6.6,SNR=26						
KURK	**Kurchatov**	**58.13**	**343**	*e*P	**P**	**16 55 35.1**	**-0.7**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
KURK	**Kurchatov**	**58.13**	**343**	*e*P	**P**	**16 55 35.1**	**-0.7**
	comp=Z,9.7nm,0.8s,mb4.9						
KLR	**Kul'dur**	**59.55**	**23**	*e*P	**P**	**16 55 41.2**	**-4.5**
ZAA0	**Zalesovo Array**	**59.63**	**349**	*e*P	**P**	**16 55 45.3**	**-0.8**
ZALV	**Zalesovo Beam**	**59.63**	**349**	P	**P**	**16 55 45.6**	**-0.5**
	comp=Z,9.6nm,0.7s,mb4.9,baz=182,slow=4.5,SNR=41						
ZALV				LR	LR	17 25 09.2	
	comp=Z,60nm,18.1s,MS3.8,baz=191,slow=40						
BVAR	**Borovoye Array**	**62.73**	**340**	P	**P**	**16 56 06.3**	**-0.9**
	comp=Z,3.9nm,0.6s,mb4.7,baz=143,slow=8.8,SNR=29						
BOD	**Bodaibo**	**62.77**	**8**	*e*P	**P**	**16 56 05.8**	**-1.5**
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
BRVK	**Borovoye**	**62.80**	**340**	*e*P	**P**	**16 56 06.7**	**-0.9**
BRVK				*e*	pP	16 56 15.0	-2.6
YSS	**Yuzh-Sakhalins**	**62.81**	**31⇑**	*e*P	**P**	**16 56 06.9**	**-0.9**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.4						
AKTK	**Aktyubinsk**	**65.93**	**331**	P	**P**	**16 56 27.6**	**-0.6**
AKTK				LR	LR	17 29 42.6	
AKTO	**Aktyubinsk**	**65.93**	**331**	P	**P**	**16 56 27.6**	**-0.6**
	comp=Z,3.0nm,1.2s,mb4.2,baz=87,slow=15,SNR=4.4						
AKTO				LR	LR	17 29 42.6	
	comp=Z,52nm,18.2s,MS3.8,baz=319,slow=40						
MAW	**Mawson**	**68.38**	**195**	P	**P**	**16 56 45.3**	**+1.9**
	comp=Z,3.8nm,0.2s,mb5.0,baz=19,slow=11,SNR=31						
SVE	**Sverdlovsk**	**69.25**	**338⇑**	*e*P	**P**	**16 56 49.2**	**+0.3**
SVE				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
YAK	**Yakutsk**	**69.66**	**14**	*e*P	**P**	**16 56 49.7**	**-1.7**
YAK				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK	**Yakutsk**	**69.66**	**14**	*e*P	**P**	**16 56 50.2**	**-1.2**
	comp=N,21nm,0.8s,mb5.1						
ARU	**Arti**	**69.77**	**336**	*d*P	P	**16 56 52.1**	**-0.1**
ARU				*e*S	S	17 06 00.4	+1.3
ARU				*e*SS	SS	17 10 20.9	-7.3
ARU				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.5						
MMAI	**Mount Meron Ar**	**72.35**	**306**	LR	LR	17 30 15.5	
	comp=Z,61nm,18.6s,MS3.9,baz=295,slow=37						
PETK	**Petropavlovsk-**	**74.19**	**32**	P	**P**	**16 57 18.4**	**-0.4**
	comp=Z,7.7nm,1.0s,mb4.6,baz=216,slow=1.6,SNR=4.7						
PET	**Petropavlovsk**	**74.65**	**32**	*e*P	**P**	**16 57 22.9**	**+1.5**
PET				pmax	pmax		
	comp=Z,66nm,1.3s,mb5.4						
LBTB	**Lobatse**	**75.15**	**245**	P	**P**	**16 57 31.9**	**+7.0**
	comp=Z,1.3nm,0.5s,mb4.1,baz=131,slow=3.8,SNR=4.3						
BOSA	**Boshof**	**75.61**	**242**	P	**P**	**16 57 34.0**	**+6.4**
	comp=Z,1.9nm,0.7s,mb4.2,baz=125,slow=8.0,SNR=4.7						
BOSA				LR	LR	17 24 26.6	
	comp=Z,65nm,18.2s,MS4.0,baz=269,slow=31						
BOSA	**Boshof**	**75.61**	**242**	P		**16 57 34.0**	**+6.4**
BOSA				LR	LR	17 24 26.6	
SEY	**Seymchan**	**77.31**	**21⇑**	*e*P	**P**	**16 57 35.8**	**-0.6**
OBN	**Obninsk**	**79.36**	**328⇑**	*e*P	**P**	**16 57 47.5**	**-0.4**
OBN				*e*		17 00 43.1	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
BURAR	**Bucovina Array**	**83.76**	**319⇓**	*i*P	**P**	**16 58 12.5**	**+1.2**
BUR08	**Bucovina Ar. S**	**83.78**	**319**	*e*P	**P**	**16 58 11.7**	**+0.3**
QSPA	**South Pole Qui**	**85.68**	**180**	LR	LR	17 33 34.4	
	comp=Z,54nm,20.1s,MS3.9,baz=234,slow=34						
BZS	**Buzias**	**85.78**	**316⇑**	*i*P	**P**	**16 58 22.2**	**+0.6**
ARCES	**ARCESS Array B**	**89.02**	**340**	P	**P**	**16 58 37.0**	**+0.3**
	comp=Z,3.4nm,0.8s,mb4.7,baz=66,slow=6.0,SNR=6.8						
ARCES	**ARCESS Array B**	**89.02**	**340**	P	**P**	**16 58 37.0**	**+0.3**
SNAA	**Sanae**	**90.34**	**198⇑**	*e*P	**P**	**16 58 43.5**	**+0.6**
GERES	**GERESS Array B**	**91.55**	**319**	P	**P**	**16 58 48.3**	**-0.6**
	comp=Z,0.6nm,0.7s,mb4.1,baz=71,slow=10,SNR=4.1						
NOA	**NORSAR Array B**	**93.72**	**331**	LR	LR	17 45 02.8	
	comp=Z,45nm,18.4s,MS4.0,baz=270,slow=38						
MCMT	**McKenzie Canyo**	**129.81**	**31**	*e*PKPdf	PKPdf	17 04 51.4	-0.4
NVAR	**Mina Array Bea**	**130.57**	**41**	PKP	PKPdf	17 04 54.2	+0.8
	comp=Z,0.5nm,0.7s,baz=180,slow=0.1,SNR=4.8						
WMOK	**Wichita Mounta**	**144.50**	**29**	*e*PKIKP	PKPdf	17 05 16.5	-2.6
CCM	**Cathedral Cave**	**144.53**	**17**	*e*PKIKP	PKPdf	17 05 16.3	-2.7
OLIL	**Olney**	**144.69**	**13**	*e*PKPpre	PKPdf	17 05 17.4	-1.9
FVM	**French Village**	**144.83**	**16**	*e*PKIKP	PKPdf	17 05 17.4	-2.1
WCI	**Wyandotte Cave**	**145.54**	**10**	*e*PKIKP	PKPdf	17 05 20.2	-0.6
TXAR	**Lajitas Array**	**145.72**	**41**	PKPbc	PKPbc	17 05 22.3	+0.6
	comp=Z,10nm,0.9s,baz=284,slow=1.3,SNR=74						
WVT	**Waverly**	**147.25**	**14**	*e*PKP2	PKPbc	17 05 25.3	-0.7
JCT	**Junction City**	**147.28**	**35**	*e*PKP2	PKPab	17 05 26.3	-1.7
TZTN	**Tazewell**	**147.61**	**7**	*e*PKPbc	PKPbc	17 05 26.1	-0.8
TKL	**Tuckaleechee C**	**148.46**	**8**	*e*PKP2	PKPbc	17 05 28.3	-0.9
SWET	**Sewanee**	**148.53**	**11**	*e*PKPbc	PKPbc	17 05 28.2	-1.2
CPCT	**Cooper Cave**	**148.55**	**9**	*e*PKPbc	PKPbc	17 05 29.2	-0.3
HKT	**Hockley**	**149.83**	**30**	*e*PKP2	PKPbc	17 05 31.6	-1.3
GOGA	**Godfrey**	**150.71**	**8**	PKIKP	PKPbc	17 05 34.2	-0.7

JSN 23 17:03:05.6±0.6, 1949N×7820W, h15km±999km, MD3.9, 4C-1D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CVJ	**Coleyville**	**1.41**	**153⇑**	*i*P	Pn	17 03 29.0	-1.7
MCJ	**Malvern**	**1.63**	**163⇑**	*e*P	Pn	17 03 32.6	-1.2
MCJ				*i*S	Sn	17 03 52.5	-2.1
STH	**Stony Hill**	**1.93**	**137⇓**	*e*P	Pn	17 03 36.3	-1.6
PCJ	**Portland Cotta**	**2.00**	**150⇑**	*i*P	Pn	17 03 38.0	-0.8
PCJ				*i*S	Sn	17 04 02.0	-1.7

*IDC **23** 17:05:26.0±1.0, 3677N×2752E, h0km, mb3.8/6, mb1 3.8/8, mb1mx3.6/25, mbtmp3.7/8, ML3.5/2, MS3.0/5, Ms1 3.0/5, ms1mx2.7/47, Error ellipse: s-maj=33.4km s-min=15.8km az=155.0*
*DDA **23** 17:05:26.2, 3680N×2758E, h5km±5km, Md3.5*
*ATH **23** 17:05:26.9, 3680N×2742E, h29km±2km, MD3.9/9, ML4.1*
*ISCJB **23** 17:05:27.0±0.6, 3677N±002×2735E±002, h5km±4km, mb3.7/6, Error ellipse: s-maj=3.7km s-min=3.2km az=164.0*
*NEIC **23** 17:05:26.8, 3680N×2741E, h28km, ML3.7(ISK), ML4.1(ATH), After ATH.*
*CSEM **23** 17:05:28.5±0.1, 3686N×2747E, h0km, MD3.5, Error ellipse: s-maj=3.6km s-min=1.5km az=37.0*
*ISK **23** 17:05:29.8, 3692N×2748E, h4km, ML3.7*
*THE **23** 17:05:31.6, 3706N×2745E, h13km, ML3.8*
*HLW **23** 17:05:46.3, 3560N×2807E, h33km, Mb3.2*

ISC 23 17:05:27.9±0.5, 3677N±002×2740E±002, h2km±4km, n95, σ1§55/123, mb3.7/6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	**0.30**	**7**	*i*P	**Pg**	**17 05 32.1**	**-1.5**
BDRM				*i*S	**Sg**	**17 05 36.2**	**-1.3**
BODT	**Bodrum**	**0.30**	**347**	*e*PG	**Pg**	**17 05 34.2**	**+0.5**
BODT				*e*SG	**Sg**	**17 05 37.5**	**-0.1**
MLSB	**Milas**	**0.61**	**30**	*e*PG	**Pg**	**17 05 38.7**	**-0.8**
MLSB				*e*SG	**Sg**	**17 05 45.4**	**-2.1**
YER	**Yerkesik**	**0.80**	**63**	*e*PG	**Pg**	**17 05 43.3**	**+0.1**
YER				*e*SG	**Sg**	**17 05 54.0**	**+0.5**
ARG	**Arkhangelos**	**0.81**	**133**	*e*PN	**Pn**	**17 05 43.3**	**-3.0**
ARG				*e*SN	**Sg**	**17 05 54.8**	**+1.0**
GCAM	**G?zelcaml?**	**0.94**	**352**	*i*P	**Pg**	**17 05 45.0**	**-0.8**
GCAM				*i*S	**Sg**	**17 05 59.0**	**+0.9**
GCAM	**G?zelcaml?**	**0.94**	**352**	*i*P	**Pg**	**17 05 45.0**	**-0.9**
GCAM				*i*S	**Sg**	**17 05 59.0**	**+0.9**
AYDN	**Tasoluk**	**0.97**	**23**	*i*P	**Pg**	**17 05 56.2**	**-2.8**
AYDN				*i*S	**Sg**	**17 05 56.8**	**-2.2**
TURN	**Turunc**	**0.97**	**84**	*i*P	**Pg**	**17 05 38.6**	**-7.9**
TURN				*i*S	**Sg**	**17 05 47.7**	**-12**
SMG	**Samos**	**1.04**	**335**	*e*PN	**Pn**	**17 05 46.8**	**-2.7**
SMG				*e*SN	**Sn**	**17 06 00.7**	**-3.9**
KARP	**Karpathos**	**1.23**	**189**	*e*PN	**Pn**	**17 05 50.6**	**-1.5**
KARP				*e*SN	**Sn**	**17 06 08.0**	**-1.4**
APE	**Apeiranthos**	**1.52**	**282**	*e*Pg	**Pg**	**17 05 54.9**	**-2.2**
APE				*e*Sg	**Sg**	**17 06 17.1**	**+0.2**
APE	**Apeiranthos**	**1.52**	**282**	*e*PN	**Pn**	**17 05 54.5**	**-1.7**
APE				*e*SN	**Sn**	**17 06 14.5**	**-2.1**
APE	**Apeiranthos**	**1.52**	**282**	*e*Pg	**Pg**	**17 05 54.9**	**-2.2**
APE				*e*Sn	**Sn**	**17 06 14.5**	**-2.1**
APE				*e*Sg	**Sg**	**17 06 17.1**	**+0.2**
DNZL	**Cakiroluk**	**1.61**	**55**	*i*P	**Pn**	**17 05 55.2**	**-2.1**
DNZL				*i*S	**Sn**	**17 06 18.0**	**-0.6**
SANT	**Santorini**	**1.61**	**256**	*e*Pb	**Pb**	**17 06 01.6**	**+3.3**
SANT				*e*Sb	**Sb**	**17 06 23.0**	**+3.9**
THR1	**Thera Island**	**1.61**	**256**	*e*Pb	**Pb**	**17 06 01.0**	**+2.7**
KDAG	**Bornova**	**1.64**	**356**	*i*P	**Pn**	**17 05 54.2**	**-3.4**
KDAG				*i*S	**Sn**	**17 06 14.5**	**-4.8**
THR4	**Thira Island,**	**1.64**	**260**	*e*Pb	**Pb**	**17 06 00.9**	**+2.1**
BLCB	**Balcova**	**1.64**	**350**	*e*PN	**Pn**	**17 05 58.1**	**+0.4**
THR3	**Thira Island,**	**1.65**	**258**	*e*Pb	**Pb**	**17 06 00.7**	**+1.8**
THR6	**Thira Island,**	**1.66**	**256**	*e*Pb	**Pb**	**17 06 01.3**	**+2.1**
THR5	**Thira Island,**	**1.69**	**259**	*e*Pb	**Pb**	**17 06 02.3**	**+2.7**
URLA	**Izmir**	**1.71**	**338**	*i*P	**Pn**	**17 05 59.7**	**+0.9**
URLA				*i*S	**Sn**	**17 06 24.7**	**+3.5**
GOLH	**Golhisar**	**1.79**	**74**	*i*P	**Pn**	**17 06 01.9**	**+2.0**
AKAS	**Kas**	**1.86**	**106**	*i*P	**Pn**	**17 06 02.0**	**+1.3**
AKAS				*i*S	**Sn**	**17 06 29.4**	**+4.6**
CHOS	**Chios island**	**1.94**	**327**	*e*Pb	**Pb**	**17 05 59.5**	**-4.4**
CHOS				*e*Sb	**Sb**	**17 06 21.5**	**-7.0**
KULA	**Kula-Manisa**	**2.01**	**30**	*e*PN	**Pn**	**17 06 02.8**	**-0.1**
ELL	**Elmali**	**2.02**	**90**	*e*PN	**Pn**	**17 06 04.6**	**+1.6**
NPS	**Neapolis**	**2.08**	**224**	*e*PN	**Pn**	**17 06 02.4**	**-1.5**
AKS	**Akhisar**	**2.13**	**9**	*e*PN	**Pn**	**17 06 05.5**	**+0.9**
LAST	**Lasithi**	**2.23**	**225**	*e*Pn	**Pn**	**17 06 07.1**	**+1.2**
LAST				*e*Sn	**Sn**	**17 06 39.8**	**+5.8**
KHL	**Karahalli**	**2.29**	**47**	*e*PN	**Pn**	**17 06 07.3**	**+0.5**
DEMI	**Demirci**	**2.50**	**24**	*i*P	**Pn**	**17 06 08.9**	**-0.7**
DEMI				*i*S	**Sg**	**17 06 48.2**	**0.0**
IDI	**Anoyia**	**2.51**	**235**	Pn	**Pn**	**17 06 10.5**	**+0.8**
	3.5nm,0.3s,baz=82,slow=17,SNR=14						
IDI				Sn	**Sn**	**17 06 42.8**	**+1.9**
	8.4nm,0.3s,baz=317,slow=16,SNR=3.8						
AYVA	**Ayvalik**	**2.60**	**348**	*i*P	**Pn**	**17 06 15.6**	**+4.7**
AYVA				*i*S	**Sn**	**17 06 47.7**	**+4.7**
ANTB	**Antalya**	**2.62**	**86**	*e*PN	**Pn**	**17 06 12.4**	**+1.2**
PRK	**Paraskevi**	**2.63**	**341**	*e*Pn	**Pn**	**17 06 08.2**	**-3.2**
PRK				*e*Sn	**Sn**	**17 06 37.5**	**-6.3**
PRK	**Paraskevi**	**2.63**	**341**	*e*PN	**Pn**	**17 06 09.0**	**-2.3**
BCK	**Bucak**	**2.64**	**74**	*e*PN	**Pn**	**17 06 12.4**	**+0.9**
TKTP	**Tekketepe**	**2.65**	**61**	*i*P	**Pn**	**17 06 12.4**	**+0.8**
TKTP				*i*S	**Sg**	**17 06 57.7**	**+4.7**
ISP	**Isparta**	**2.70**	**66**	*e*PN	**Pn**	**17 06 14.3**	**+1.9**
ISP	**Isparta**	**2.70**	**66**	*e*Pn	**Pn**	**17 06 12.1**	**-0.3**
ISP				*e*Sn	**Sn**	**17 06 42.5**	**-3.2**
ISP	**Isparta**	**2.70**	**66**	*e*Pn	**Pn**	**17 06 14.3**	**+1.9**
ISP				*e*Sn	**Sn**	**17 06 42.5**	**-3.2**
BALB	**Balikesir**	**2.89**	**7**	*e*PN	**Pn**	**17 06 16.2**	**+1.2**
BALY	**Balya**	**2.97**	**3**	*i*S	**Sb**	**17 06 59.6**	**+1.3**
DST	**Dursunbey**	**2.99**	**19**	*e*PN	**Pn**	**17 06 17.7**	**+1.3**
SHUT	**Suhut-Afyon**	**3.07**	**54**	*e*PN	**Pn**	**17 06 18.8**	**+1.4**
KVR	**Kavouri**	**3.08**	**291**	*e*PN	**Pn**	**17 06 16.0**	**-1.5**
PTL	**Penteli**	**3.09**	**295**	*e*Pn	**Pn**	**17 06 14.4**	**-1.3**
PTL	**Penteli**	**3.09**	**296**	*e*Pn	**Pn**	**17 06 13.4**	**-4.3**
ALT	**Altintas**	**3.13**	**42**	*e*PN	**Pn**	**17 06 19.4**	**+1.1**
EZN	**Ezine**	**3.17**	**345**	*e*PN	**Pn**	**17 06 20.2**	**+1.5**
ATH	**Athens Observa**	**3.17**	**293**	*e*PN	**Pn**	**17 06 17.0**	**-1.7**
ATH	**Athens Observa**	**3.17**	**293**	*e*Pn	**Pn**	**17 06 14.5**	**-4.2**
KCT	**Karacabey**	**3.57**	**12**	*e*PN	**Pn**	**17 06 25.3**	**+1.0**
LIA	**Limnos Island**	**3.58**	**332**	P	**Pn**	**17 06 23.6**	**-0.8**
EDC	**Edincik**	**3.59**	**6**	*e*PN	**Pn**	**17 06 26.4**	**+1.9**
MRMT	**Marmara Adasi**	**3.83**	**2**	*e*PN	**Pn**	**17 06 29.9**	**+2.0**
RKY	**Sarkoy-Tekirda**	**3.92**	**358**	*e*PN	**Pn**	**17 06 30.8**	**+1.8**
GEMT	**Gemlik**	**3.92**	**20**	*e*PN	**Pn**	**17 06 30.8**	**+1.7**
ENEZ	**Enez**	**4.08**	**347**	*e*PN	**Pn**	**17 06 33.5**	**+2.2**
HDMB	**Hadim**	**4.09**	**86**	*e*PN	**Pn**	**17 06 33.7**	**+2.3**
ADVT	**Abdulvahap**	**4.09**	**26**	*e*PN	**Pn**	**17 06 33.0**	**+1.5**
YLV	**Yalova**	**4.10**	**22**	*e*PN	**Pn**	**17 06 33.5**	**+2.0**
NEO	**Neokhori**	**4.16**	**309**	P	**Pn**	**17 06 32.9**	**+0.6**
ALN	**Alexandroupoli**	**4.25**	**346**	*e*Pn	**Pn**	**17 06 31.4**	**-2.3**
ALN				*e*Sn	**Sn**	**17 07 17.9**	**-6.0**
ITM	**Ithomi**	**4.40**	**277**	P	**Pn**	**17 06 40.2**	**+4.5**
GULT	**Gulveren**	**4.40**	**33**	*e*PN	**Pn**	**17 06 37.2**	**+1.6**
HRT	**Hereke**	**4.42**	**23**	*e*PN	**Pn**	**17 06 37.8**	**+1.9**
AGG	**Agios Georgios**	**4.59**	**301**	*e*Pn	**Pn**	**17 06 38.0**	**-0.4**
AGG				*e*Sn	**Sn**	**17 07 30.3**	**-2.0**
RDO	**Rodhopi**	**4.61**	**342**	P	**Pn**	**17 06 38.0**	**-0.5**
CSS	**Prodhromos**	**5.15**	**109**	*e*Pn	**Pn**	**17 06 41.7**	**-4.2**
CSS	**Prodhromos**	**5.15**	**109**	*e*Pn	**Pn**	**17 06 41.7**	**-4.2**
NVR	**Nevrokopi**	**5.34**	**330**	P	**Pn**	**17 06 48.8**	**+0.2**
HMAT	**Matruh**	**5.67**	**183**	P	**Pn**	**17 06 53.2**	**+0.1**
HMAT				S	**Sn**	**17 07 42.1**	**-17**
MMAI	**Mount Meron Ar**	**7.57**	**117**	Pn	**Pn**	**17 07 16.4**	**-2.9**
	2.0nm,0.3s,baz=300,slow=13,SNR=6.1						
MMAI				Sn	**Sn**	**17 08 41.2**	**-4.4**
	4.1nm,0.3s,baz=304,slow=24,SNR=5.1						
AMAG	**Maghara**	**7.79**	**140**	P	**Pn**	**17 07 20.5**	**-1.9**
GLL	**Jalalah**	**8.03**	**152**	P	**Pn**	**17 07 24.1**	**-1.5**
SUZ		**8.27**	**145**	P	**Pn**	**17 07 27.2**	**-1.6**
SUZ		**8.27**	**145**	P	**Pn**	**17 07 27.2**	**-1.7**
TIP	**Timpagrande**	**8.74**	**289**	*e*Pn	**Pn**	**17 07 35.8**	**+0.6**
TIP	**Timpagrande**	**8.74**	**289**	*e*Pn	**Pn**	**17 07 35.8**	**+0.6**
	8.7nm,0.6s						
MLR	**Muntele Rosu**	**8.78**	**353**	LR	LR	17 10 43.5	
	comp=Z,83nm,21.3s,baz=358,slow=36						
MALT	**Malatya**	**8.90**	**77**	Pn	**Pn**	**17 07 29.9**	**-7.5**
	0.6nm,0.4s						
GNI	**Garni**	**14.01**	**71**	LR	LR	17 13 39.0	
	comp=Z,30nm,19.1s,baz=270,slow=35						
VRAC	**Vranov**	**14.79**	**331**	LR	LR	17 14 51.8	
	comp=Z,68nm,19.7s,baz=92,slow=38						
GERES	**GERESS Array B**	**15.67**	**325**	LR	LR	17 14 41.5	
	comp=Z,95nm,20.4s,baz=198,slow=35						
ESDC	**Sonseca Array**	**24.74**	**286**	P	**P**	**17 10 49.5**	**-1.1**
	0.3nm,0.4s,mb3.1,baz=90,slow=11,SNR=5.2						
NOA	**NORSAR Array B**	**26.37**	**342**	LR	LR	17 23 27.3	
	comp=Z,27nm,18.7s,baz=255,slow=41						
TORD	**Torodi Ar. Bea**	**32.91**	**231**	P	**P**	**17 12 02.9**	**-0.8**
	0.6nm,0.4s,mb3.9,baz=33,slow=8.9,SNR=6.4						
KURK	**Kurchatov**	**38.76**	**52**	P	**P**	**17 12 50.6**	**-2.9**
	0.7nm,0.8s,mb3.5,baz=278,slow=8.7,SNR=5.1						
MKAR	**Makanchi Array**	**41.38**	**58**	P	**P**	**17 13 13.4**	**-2.0**
	0.8nm,0.7s,mb3.5,baz=288,slow=6.2,SNR=7.4						
ZALV	**Zalesovo Beam**	**42.58**	**47**	P	**P**	**17 13 23.1**	**-1.9**
	0.5nm,0.4s,mb3.6,baz=255,slow=8.8,SNR=2.9						
BDFB	**Brasilia**	**87.98**	**249**	P	**P**	**17 18 17.7**	**-2.1**
	2.1nm,0.5s,mb4.6,baz=22,slow=5.6,SNR=3.1						

*ISCJB **23** 17:09:15.5±0.6, 3684N±002×2767E±003, h12km±4km, mb3.3/5, Error ellipse: s-maj=4.2km s-min=3.6km az=160.6*
*NEIC **23** 17:09:15.8, 3678N×2749E, h33km, MD3.7(ATH), ML3.4(ISK), After ATH.*
*DDA **23** 17:09:15.9, 3686N×2748E, h18km±2km, Md3.3*
*ATH **23** 17:09:15.8, 3678N×2749E, h33km, MD3.7/4*
*THE **23** 17:09:18.2, 3692N×2785E, h30km, ML4.1*
*CSEM **23** 17:09:18.1±0.1, 3702N×2751E, h10km, MD3.1, Error ellipse: s-maj=2.2km s-min=1.3km az=177.0*
*ISK **23** 17:09:18.3, 3704N×2749E, h10km, MD3.1*
*IDC **23** 17:09:20.4±3.0, 3655N×2756E, h53km±38km, mb3.2/5, mb1 3.3/8, mb1mx3.2/25, mbtmp3.3/8, ML3.1/3, Error ellipse: s-maj=38.4km s-min=14.8km az=176.0*
*HLW **23** 17:09:31.9, 3579N×2802E, h33km, Mb3.1*

ISC 23 17:09:17.0±0.5, 3687N±002×2763E±003, h12km±3km, n56, σ1§38/80, mb3.3/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	**0.24**	**323**	*i*P	**Pg**	**17 09 20.9**	**-1.2**
BDRM				*i*S	**Sg**	**17 09 24.9**	**-0.6**
BODT	**Bodrum**	**0.32**	**307**	PG	**Pg**	**17 09 22.1**	**-1.4**
MLSB	**Milas**	**0.44**	**16**	*e*PG	**Pg**	**17 09 26.0**	**+0.2**
YER	**Yerkesik**	**0.59**	**63**	*e*PG	**Pg**	**17 09 30.8**	**+2.3**
YER				*e*SG	**Sg**	**17 09 40.6**	**+4.3**
ARG	**Arkhangelos**	**0.77**	**148**	*e*PN	**Pn**	**17 09 31.5**	**-2.1**
ARG				*e*SN	**Sn**	**17 09 41.8**	**-3.2**
AYDN	**Tasoluk**	**0.81**	**14**	*i*P	**Pg**	**17 09 32.6**	**-0.1**
AYDN				*i*S	**Sg**	**17 09 44.1**	**+0.7**
GCAM	**G?zelcaml?**	**0.89**	**339**	*i*P	**Pg**	**17 09 33.7**	**-0.4**
GCAM				*i*S	**Sg**	**17 09 45.8**	**+0.1**
SMG	**Samos**	**1.05**	**323**	*e*PN	**Pn**	**17 09 35.5**	**-1.9**
SMG				*e*SN	**Sn**	**17 09 50.5**	**-1.4**
KARP	**Karpathos**	**1.37**	**196**	*e*PN	**Pn**	**17 09 39.3**	**-2.6**
KARP				*e*SN	**Sn**	**17 09 55.3**	**-4.6**
DNZL	**Cakiroluk**	**1.40**	**54**	*i*P	**Pn**	**17 09 43.8**	**+1.5**
DNZL				*i*S	**Sn**	**17 10 07.0**	**+6.4**
BLCB	**Balcova**	**1.58**	**343**	*e*PN	**Pn**	**17 09 43.5**	**-1.2**
APE	**Apeiranthos**	**1.69**	**277**	*e*Pb	**Pb**	**17 09 47.5**	**-0.5**
APE				*e*Sb	**Sb**	**17 10 10.1**	**+1.0**
APE	**Apeiranthos**	**1.69**	**277**	*e*Pn	**Pn**	**17 09 44.0**	**-2.2**
APE	**Apeiranthos**	**1.69**	**277**	*e*Pb	**Pb**	**17 09 47.5**	**-0.4**
APE				*e*Sb	**Sb**	**17 10 10.1**	**+1.0**
AKAS	**Kas**	**1.72**	**111**	*i*P	**Pn**	**17 09 49.8**	**+3.1**
AKAS				*i*S	**Sg**	**17 10 17.9**	**+5.7**
MANT	**Manisa**	**1.78**	**24**	*i*P	**Pn**	**17 09 49.9**	**+2.4**
MANT				*i*S	**Sg**	**17 10 14.7**	**+0.4**
MANT	**Manisa**	**1.78**	**24**	*i*P	**Pn**	**17 09 49.9**	**+2.4**
MANT				*i*S

NPS	Neapolis	2.07	223	*e*P	Pn	17 21 31.8	-1.0
AKS	Akhisar	2.12	10	*e*PN	Pn	17 21 34.8	+1.3
KHL	Karahalli	2.31	48	*e*PN	Pn	17 21 37.4	+1.3
KHL	Karahalli	2.31	48	Pn	Pn	17 21 37.3	+1.2
DEMI	Demirci	2.50	25	*i* P	Pg	17 21 42.8	-3.1
DEMI				*i* S	Sg	17 22 15.8	-2.5
PRK	Paraskevi	2.60	341	*e*P	Pn	17 21 37.5	-2.6
PRK				*e*S	Sn	17 22 08.8	-3.0
ANTB	Antalya	2.65	86	*e*PN	Pn	17 21 42.0	+1.3
BCK	Bucak	2.67	74	*e*PN	Pn	17 21 42.0	+1.0
TKTP	Tekketepe	2.68	61	*i* P	Pn	17 21 43.5	+2.4
TKTP				*i* S	Sg	17 22 25.4	+1.5
ISP	Isparta	2.73	66	*e*PN	Pn	17 21 42.8	+1.0
ISP	Isparta	2.73	66	Pn	Pn	17 21 42.2	+0.3
GDZ	Gediz	2.85	36	*i* P	Pb	17 21 49.1	+0.1
GDZ				*i* S	Sg	17 22 29.4	-0.2
BALB	Balikesir	2.88	8	*e*PN	Pb	17 21 45.0	+1.1
DURS	Dursunbey	2.95	17	*i* P	Pb	17 21 51.1	+0.4
DURS				*i* S	Sg	17 22 32.9	+0.2
DST	Dursunbey	2.99	19	*e*PN	Pn	17 21 46.6	+1.2
PTL	Penteli	3.05	296	P	Pn	17 21 47.5	+1.3
SHUT	Suhut-Afyon	3.09	54	*e*PN	Pn	17 21 47.4	+0.5
EZN	Ezine	3.14	345	*e*PN	Pn	17 21 49.6	+2.0
ALT	Altintas	3.15	43	*e*PN	Pn	17 21 48.2	+0.7
GEMT	Gemlik	3.92	21	*e*PN	Pn	17 21 59.3	+1.1
ENEZ	Enez	4.06	347	*e*PN	Pn	17 22 02.7	+2.6
ADVT	Abdulvahap	4.10	26	*e*PN	Pn	17 22 01.8	+1.1
YLV	Yalova	4.10	22	*e*PN	Pn	17 22 02.9	+2.3
HDMB	Hadim	4.12	86	*e*PN	Pn	17 22 02.5	+1.6
LADK	Ladik-KONYA	4.23	69	*e*PN	Pn	17 22 04.1	+1.7
ITM	Ithomi	4.36	277	P	Pn	17 22 09.6	+5.3
GULT	Gulveren	4.41	33	*e*PN	Pn	17 22 06.7	+1.8
HMAT	Matruh	5.68	182	P	Pn	17 22 22.3	-0.1
HMAT				S	Sn	17 23 24.6	-3.0
AMAG	Maghara	7.83	140	P	Pn	17 22 48.6	-3.3
HHAG	Hagoal	7.88	148	P	Pn	17 22 50.6	-2.0
GLL	Jalalah	8.06	152	P	Pn	17 22 53.5	-1.6
TIP	Timpagrande 10nm,0.8s	8.70	289	*e*Pn	Pn	17 23 03.7	-0.1
TIP	Timpagrande 10nm,0.8s	8.70	289	*e*Pn	Pn	17 23 03.7	-0.1
HKAT	Jabal Katrina	9.95	144	P	Pn	17 23 18.2	-2.8

IDC ***23*** *18:01:06.8₂2.9, 6.14S×148 21E, h0km, mb4.4/4, mb1 4.5/5, mb1mx3.9/16, mbtmp4.4/5, ML4.3/1, Error ellipse: s-maj=55.2km s-min=40.6km az=79.0*
NEIC ***23*** *18:01:12.4₂1.7, 6.10S×147 96E, h35km, mb4.3/2, Error ellipse: s-maj=31.7km s-min=19.3km az=87.0*

ISC 23 18:01:11.8₂2.9, 60S₂01×1480E₂03, h35km, n12, σ1§24/12, mb4.4/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.45	193	*e*Pn	Pn	18 02 02.2	-0.8
PMG				*e*Sn	Sn	18 02 44.5	+1.8
WRAB	Tennant Creek 10nm,0.9s	19.14	223	*e*P	Pn	18 05 31.8	-1.4
WB2	Warramunga Arr	19.15	222	*e*P	Pn	18 05 31.9	-1.3
WRA	Warramunga Arr 1.0nm,0.3s,baz=48,slow=11,SNR=88	19.16	223	P	Pn	18 05 31.8	-1.5
ASAR	Alice Springs 7.1nm,0.4s,mb4.4,baz=51,slow=9.0,SNR=521	22.16	216	P	P	18 06 05.0	+0.3
BATI	Baumata 6.9nm,0.7s,mb4.2,baz=3.1,slow=17,SNR=3.2	24.42	259	P	P	18 06 29.8	+2.6
FITZ	Fitzroy Crossi	24.88	239	*e*P	P	18 06 32.2	+0.8
FITZ	Fitzroy Crossi 10nm,0.6s,mb4.6,baz=69,slow=8.9,SNR=64	24.88	239	P	P	18 06 32.5	+1.1
STKA	Stephens Creek	26.40	192	*e*P	P	18 06 45.6	+0.6
STKA	Stephens Creek 5.1nm,0.8s,mb4.1,baz=360,slow=11,SNR=9.0	26.40	192	P	P	18 06 44.9	-0.1
MBWA	Marble Bar 3.8nm,0.5s,mb4.5	31.21	238	*e*P	P	18 07 28.2	+0.2
TORD	Torodi Ar. Bea 0.2nm,0.3s,baz=79,slow=2.8,SNR=6.2	146.03	285	PKPbc	PKPbc	18 20 49.6	+0.6

MAN 23 18:03:40, 1347N×121 49E, h102km, mb4.4, ML3.2, MS3.0, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	Guinayangan	1.03	65	*e*P	Pn	18 04 00.7	-0.1
GQP				*e*S	Sn	18 04 17.6	+1.0
SJMP	San Jose	1.06	200	*e*P	Pn	18 04 02.4	+1.1
SJMP				*e*S	Sn	18 04 18.0	+0.7
AUQP	San Andres	1.17	97	*e*P	Pn	18 04 04.2	+1.9
AUQP				*e*S	Sn	18 04 22.0	+2.7
OTRP	Odiongan	1.22	155	*e*P	Pn	18 04 03.9	+0.9
OTRP				*e*S	Sn	18 04 23.7	+3.3
LUBP	Lubang	1.23	282	*e*P	Pn	18 04 03.6	+0.5
LUBP				*e*S	Sn	18 04 22.3	+1.5
POLP	Polilio Island	1.33	19	*e*P	Pn	18 04 04.7	+0.4
POLP				*e*S	Sn	18 04 29.4	+6.7
BUSP	Coron	1.92	221	*e*P	Pn	18 04 14.2	+2.5
BUSP				*e*S	Sn	18 04 47.2	+11
BALP	Baler	2.26	2	*e*P	Pn	18 04 21.4	+5.4
PVCP	Virac	2.60	87	*e*P	Pn	18 04 26.0	+5.6

ISCJB ***23*** *18:24:15.2₂0.4, 43.78N₂003×10522W₂005, h0km, mb4.1/4, Error ellipse: s-maj=5.2km s-min=4.4km az=33.9*
NEIC ***23*** *18:24:17.0₂0.3, 43.77N×105 22W, h0km, ML3.4, Error ellipse: s-maj=5.1km s-min=4.1km az=152.0, Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.
IDC ***23*** *18:24:17.4₂0.8, 44.12N×105 84W, h0km, mb4.0/4, mb1 3.9/10, mb1mx3.7/26, mbtmp3.7/10, ML3.5/6, Error ellipse: s-maj=21.4km s-min=8.0km az=145.0*

ISC 23 18:24:16.9₂0.4, 4379N₂003×10521W₂005, h0km, n53, σ1§02/58, mb4.0/4, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.91	69	*e*Pg	Pg	18 24 35.2	+0.9
PHWY	Pilot Hill	2.50	184	*e*Pn	Pn	18 24 58.0	-0.7
PHWY				*e*Sn	Sn	18 25 31.1	+1.3
RWWY	Rawlins	2.57	216	*e*Pb	Pb	18 25 00.0	-3.8
RWWY				*e*Sn	Sn	18 25 32.0	+0.4
LAO	LASA Array	2.98	346	*e*Pn	Pn	18 25 05.6	+0.2
RLMT	Red Lodge	3.19	296	*e*Pn	Pn	18 25 08.1	-0.2
BW06	Boulder Array	3.34	254	*e*Pn	Pn	18 25 09.4	-0.8
PDAR	Pinedale Array 6.2nm,0.3s,baz=66,slow=16,SNR=37	3.34	254	Pn	Pn	18 25 08.5	-1.8
PDAR	11nm,0.3s,baz=71,slow=31,SNR=9.3			Lg		18 25 54.0	
OGNE	Ogallala	3.69	139	*e*Pn	Pn	18 25 15.6	+0.4
LKWY	Lake	3.81	283	*e*Pn	Pn	18 25 17.7	+0.9
LOHW	Long Hollow	3.92	269	*e*Pn	Pn	18 25 18.8	+0.6
ISCO	Idaho Springs	4.00	184	*e*Pn	Pn	18 25 19.3	-0.2
MOOW	Moose Ponds	4.01	271	*e*Pn	Pn	18 25 19.9	+0.4
YNR	Norris Junctio	4.04	285	*e*Pn	Pn	18 25 19.5	-0.3
SNOW	Snow King Moun	4.04	267	*e*Pb	Pb	18 25 22.8	-6.1
REDW	Red Top Meadow	4.12	266	*e*Pn	Pn	18 25 21.5	+0.4
IMW	Indian Meadow	4.14	273	*e*Pn	Pn	18 25 22.4	+1.0
TPAW	Teton Pass	4.18	268	*e*Pn	Pn	18 25 22.6	+0.7
DCID1	Drake Creek	4.34	269	*e*Pn	Pb	18 25 34.7	+0.8
AHID	Auburn Hatcher	4.42	259	*e*Pn	Pb	18 25 35.9	+0.5
RRI2	Red Ridge	4.46	266	*e*Pn	Pn	18 25 25.6	-0.1
QLMT	Earthquake Lak	4.58	285	*e*Pn	Pn	18 25 33.0	+5.6
DGMT	Dagmar	4.73	8	*e*Pn	Pn	18 25 31.4	+2.0
BOZ	Bozeman (W)	4.94	294	*e*Pn	Pn	18 25 32.1	-0.1
HWUT	Hardware Ranch	5.17	247	*e*Pn	Pn	18 25 34.8	-0.7
EGMT	Eagleton	5.29	325	*e*Pn	Pn	18 25 37.1	+0.1
DLMT	Dillon	5.50	289	*e*Pn	Pn	18 25 39.4	-0.6
HRY	Holter Researc	5.51	304	*e*Pn	Pn	18 25 40.8	+0.7
LRM	Limekiln Ridge	5.54	294	*e*Pb	Pn	18 25 43.5	+3.0
DAU	Daniels Canyon	5.62	235	*e*Pn	Pn	18 25 42.4	+0.7
JLU	Jordanelle	5.62	238	*e*Pn	Pn	18 25 43.2	+1.5
JLU				*e*Pb	Pb	18 25 50.5	-5.4
HVU	Hansel Valley 12nm,0.7s	5.92	253	*e*Pn	Pn	18 25 40.4	-5.3
MPU	Maple Canyon	6.10	234	*e*Pn	Pn	18 25 48.4	+0.1
SRU	San Rafael	6.15	222	*e*Pn	Pn	18 25 48.0	-1.0
ECSD	EROS,Sioux Fal	6.23	88	*e*Pn	Pn	18 25 50.4	+0.4
TMUT	Trail Mountain	6.36	227	*e*Pn	Pn	18 25 52.1	+0.3
NLU	North Lily Min	6.40	236	*e*Pb	Pn	18 25 50.5	-1.8
CHMT	Chamberlain Mo	6.47	302	*e*Pn	Pn	18 25 53.3	+0.1
HLID	Hailey	6.68	271	*e*Pn	Pn	18 25 57.8	+1.6
DUG	Dugway	6.71	240	*e*Pn	Pn	18 25 55.0	-1.6
MVCO	Mesa Verde	7.04	202	*e*Pn	Pn	18 26 03.0	+1.9
MSU	Marysvale	7.45	227	*e*Pn	Pn	18 26 06.8	+0.1
AGMN	Agassiz Refuge	7.91	52	*e*Pn	Pn	18 26 11.2	-1.8
ELK	Elko 0.3nm,0.3s,baz=84,slow=16,SNR=5.1	8.04	251	Pn	Pn	18 26 14.1	-0.8
CCUT	Cedar City	8.79	228	*e*Pn	Pn	18 26 24.9	-0.3
ULM	Lac du Bonnet 0.8nm,0.3s,baz=229,slow=12,SNR=7.5	9.07	41	Pn	Pn	18 26 29.1	+0.2
ULM	2.2nm,0.3s,baz=232,slow=15,SNR=8.7			Pg	Pg	18 27 04.1	-6.4
ULM	1.2nm,0.3s,baz=141,slow=18,SNR=3.5			Lg		18 29 06.7	
ULM	Lac du Bonnet	9.07	41	Pn	Pn	18 26 29.1	+0.2
ULM				Pg	Pg	18 27 04.1	-6.4
ULM				Lg		18 29 06.7	
NVAR	Mina Array Bea 0.2nm,0.3s,baz=56,slow=11,SNR=8.6	11.23	246	Pn	Pn	18 26 58.0	-0.6
YBH	Yreka Blue Hor 0.2nm,0.3s,baz=80,slow=11,SNR=2.7	13.03	267	Pn	Pn	18 27 21.1	-2.0
TXAR	Lajitas Array 0.1nm,0.3s,baz=358,slow=9.4,SNR=7.0	14.48	175	Pn	Pn	18 27 50.0	+6.9
TXAR	0.1nm,0.3s,baz=5.7,slow=14,SNR=8.4			Pg	Pn	18 28 44.4	+61
TXAR	0.0nm,0.3s,baz=353,slow=26,SNR=5.1			Lg		18 32 02.8	
ARCES	ARCESS Array B	61.35	18	P	P	18 34 32.7	-1.1
MJAR	0.8nm,0.5s,mb4.1,baz=339,slow=5.7,SNR=11 Matsushiro Arr 0.5nm,0.4s,mb3.9,baz=19,slow=12,SNR=4.2	81.50	313	P	P	18 36 33.1	-2.9
ZALV	Zalesovo Beam 0.8nm,0.4s,mb4.2,baz=346,slow=4.8,SNR=5.4	82.26	354	P	P	18 36 39.0	-0.7
MKAR	Makanchi Array 0.7nm,0.7s,mb4.0,baz=11,slow=4.1,SNR=6.3	89.55	355	P	P	18 37 15.5	-0.4

MOS ***23*** *18:50:56.9₂0.8, 1244N×142 35E, h33km, mb5.0/7, Error ellipse: s-maj=25.6km s-min=14.1km az=110.6*
ISCJB ***23*** *18:50:59.0₂0.6, 1234N₂009×1418E₂01, h33km, mb4.5/16, MS3.5/5, Error ellipse: s-maj=15.6km s-min=12.8km az=177.0*
BJI ***23*** *18:50:58.4, 1230N×142.17E, h46km, mB5.3, mb4.4*
NEIC ***23*** *18:51:01.2₂0.4, 1234N×141 85E, h35km, mb4.9/6, Error ellipse: s-maj=11.6km s-min=10.1km az=86.0*
IDC ***23*** *18:51:02.3₂4.1, 1235N×141 90E, h42km₂44km, mb3.8/5, mb1 4.0/6, mb1mx3.7/20, mbtmp3.9/6, ML3.5/1, MS3.5/6, Ms1 3.5/6, ms1mx3.0/31, Error ellipse: s-maj=35.2km s-min=20.5km az=80.0*

ISC 23 18:50:59.4₂0.9, 1242N₂009×1424E₂02, h35km, (h26km₂2.4km:pP-P), n31, σ0§58/24, mb4.5/16, MS3.5/5, 3C, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam 6.2nm,0.3s,baz=171,slow=7.3,SNR=5.1	2.71	64	P	Pn	18 51 49.4	+8.9
JOW	Kunigami comp=Z,70nm,21.5s,baz=100,slow=31	19.50	319	LR	LR	19 01 00.8	
KSRS	Korea Array comp=Z,48nm,18.6s,MS3.1,baz=102,slow=32	28.08	335	LR	LR	19 05 55.1	
CTA	Charters Tower comp=Z,100nm,19.9s,MS3.5,baz=49,slow=33	32.53	173	LR	LR	19 08 57.4	
WRAB	Tennant Creek	33.10	194	*e*P	P	18 57 31.3	-0.9
WRAB	comp=Z,13nm,1.3s,mb4.7			pmax	pmax		
WRAB	Tennant Creek comp=Z,13nm,1.3s,mb4.7	33.10	194	*e*P	P	18 57 31.3	-0.9
WRA	Warramunga Arr comp=Z,2.4nm,0.9s,mb4.1,baz=15,slow=9.5,SNR=17	33.11	194	P	P	18 57 32.7	+0.4
FITZ	Fitzroy Crossi comp=Z,40nm,19.2s,MS3.2,baz=170,slow=34	34.52	209	LR	LR	19 10 43.0	
ASAR	Alice Springs comp=Z,0.7nm,0.7s,mb3.6,baz=17,slow=13,SNR=12	36.81	193	P	P	18 58 04.8	+0.7
CMAR	Chiang Mai Arr comp=Z,2.7nm,0.9s,mb3.9,baz=91,slow=6.5,SNR=14	42.20	284	P	P	18 58 48.5	-0.7
GTA	Gaotai	46.15	313	*e*P	P	18 59 20.3	-0.3
GTA	comp=Z,3.0nm,1.2s,mb4.1			AMB	AMB		
ZAK	Zakamensk	49.48	328	*e*P	P	18 59 38.7	-7.5
ZAK	comp=Z,4.0nm,1.4s,mb4.3			pmax	pmax		
LSA	Lhasa	50.37	298	*e*P	P	18 59 52.9	-0.4
LSA	comp=Z,2.0nm,0.6s,mb4.3			pmax	pmax		
LSA	Lhasa comp=Z,1.9nm,0.6s,mb4.3	50.37	298	*e*P	P	18 59 52.9	-0.4
YAK	Yakutsk	50.37	352	*e*P	P	18 59 53.1	+0.3
YAK	comp=Z,20nm,0.9s,mb5.2			pmax	pmax		
YAK	Yakutsk comp=Z,17nm,0.8s,mb5.1	50.37	352	*e*P	P	18 59 53.8	+1.0
HVS	Khovu-Aksy	55.07	325	*e*P	P	19 00 28.5	+0.8
HVS	comp=Z,18nm,1.3s,mb4.9			pmax	pmax		
BILL	Bilibino	57.73	10	*e*P	P	19 00 45.1	-1.3
BILL	comp=Z,7.0nm,1.3s,mb4.5			pmax	pmax		
MK31	Makanchi Array	60.65	317	*e*P	P	19 01 06.9	0.0
MKAR	Makanchi Array comp=Z,3.1nm,0.7s,mb4.5,baz=91,slow=8.3,SNR=26	60.65	317	P	P	19 01 07.3	+0.4
ZALV	Zalesovo Beam comp=Z,1.4nm,0.7s,mb4.2,baz=111,slow=7.8,SNR=5.8	61.16	325	P	P	19 01 10.3	+0.1
KURK	Kurchatov	63.91	321	*e*P	P	19 01 28.7	0.0
KURK				*e*	pP	19 01 37.0	-2.5
KURK	comp=Z,14nm,0.9s,mb5.0			pmax	pmax		
KURK	Kurchatov comp=Z,14nm,0.9s,mb5.0	63.91	321	*e*P	P	19 01 28.6	-0.1
KURK				*e*	pP	19 01 37.0	-2.5
UCH	Uchtor comp=Z,13nm,1.5s,mb4.7	65.37	311	*e*P	P	19 01 39.2	+0.8
BVAR	Borovoye Array comp=Z,60nm,18.4s,MS3.9,baz=264,slow=35	69.33	322	LR	LR	19 31 22.7	
BRVK	Borovoye	69.40	322	*e*P	P	19 02 03.4	-0.3
BRVK				*e*	pP	19 02 11.9	-2.6
BRVK	comp=Z,24nm,1.2s,mb5.0			pmax	pmax		
BRVK	Borovoye comp=Z,24nm,1.2s,mb5.0	69.40	322	*e*P	P	19 02 03.4	-0.2
BRVK				*e*	pP	19 02 11.9	-2.6
ARU	Arti	76.33	325	*c* *i*P	P	19 02 44.8	+0.1
ARU				*e*	pP	19 02 52.5	-3.1
ARU				*e*		19 05 37.2	
ARU				*e*S	S	19 12 27.5	+0.5
ARU				*e*SS	SS	19 17 24.2	+3.0
ARU	comp=Z,10.0nm,1.7s,mb4.5			pmax	pmax		
KBS	Kingsbay	85.00	352	*e*P	P	19 03 30.8	+0.1
AKASG	Malin Array Be comp=Z,35nm,18.3s,MS3.9,baz=290,slow=39	94.54	324	LR	LR	19 52 11.8	
LPAZ	La Paz comp=Z,0.8nm,0.6s,baz=273,slow=4.0,SNR=3.9	150.23	101	PKPbc	PKPab	19 10 51.8	-2.1

ISCJB ***23*** *18:53:08.2₂2.2, 25S₂03×101 8E₂04, h156km₂28km, mb3.6/10, Error ellipse: s-maj=73.7km s-min=14.2km az=143.7*
DJA ***23*** *18:53:11, 234S×101 90E, h155km, MLv3.7/6*
IDC ***23*** *18:53:13.4₂11.0, 244S×101 86E, h185km₂94km, mb3.3/8, mb1 3.4/8, mb1mx3.3/18, mbtmp3.3/8, Error ellipse: s-maj=129.9km s-min=13.2km az=57.0*
NEIC ***23*** *18:53:14.8₂6.7, 237S×102 04E, h198km₂56km, mb3.8/2, Error ellipse: s-maj=82.9km s-min=10.1km az=56.0*

ISC 23 18:53:08.9₂2.1, 26S₂02×1017E₂03, h146km₂25km, n15, σ0§72/14, mb3.6/10, 1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	5.66	313	*e*P	Pn	18 54 31.0	-0.1
CMAR	Chiang Mai Arr 1.0nm,0.8s,mb3.2,baz=187,slow=8.2,SNR=11	21.06	353	P	P	18 57 42.3	+0.7
WRA	Warramunga Arr 0.4nm,0.4s,mb3.4,baz=297,slow=12,SNR=12	36.21	121	P	P	18 59 58.5	+0.6
WRAB	Tennant Creek 0.5nm,0.3s,mb3.6	36.22	121	*e*P	P	18 59 55.8	-2.1
ASAR	Alice Springs 0.8nm,0.7s,mb3.5,baz=302,slow=7.5,SNR=13	37.52	127	P	P	19 00 09.2	+0.3
STKA	Stephens Creek 0.5nm,0.3s,mb3.6,baz=284,slow=12,SNR=3.1	47.48	132	P	P	19 01 30.2	+0.9
SONM	Songino Array 0.6nm,0.5s,mb3.5,baz=197,slow=8.7,SNR=3.8	50.35	4	P	P	19 01 50.6	-0.1
TKM2	Tokmak 2 2.1nm,0.5s,mb4.0	51.05	335	*e*P	P	19 01 56.5	+0.4
MK31	Makanchi Array	52.05	343	*e*P	P	19 02 03.0	-0.4
MKAR	Makanchi Array	52.05	343	P	P	19 02 03.4	0.0
	1.0nm,0.6s,mb3.6,baz=157,slow=8.9,SNR=10.0						
MKAR	Makanchi Array	52.05	343	P	P	19 02 03.4	0.0
ZALV	Zalesovo Beam 1.1nm,0.4s,mb4.0,baz=158,slow=5.6,SNR=7.6	58.05	348	P	P	19 02 46.0	-0.4
ZALV	Zalesovo Beam	58.05	348	P	P	19 02 46.0	-0.4
ARCES	ARCESS Array B 1.0nm,0.8s,mb3.7,baz=46,slow=3.5,SNR=3.7	87.59	340	P	P	19 05 40.1	0.0
TXAR	Lajitas Array 0.1nm,0.6s,baz=335,slow=4.1,SNR=3.3	144.05	40	PKP	PKPdf	19 12 26.8	-1.0

NIED ***23*** *19:10:00, 3650N×142 70E, h5km, Mw4.2 Best double couple: M₀2.25000×10¹⁵ NP1:φ₅188.00000°, δ54.00000°, λ-110.00000°. NP2:φ₅40.00000°, δ40.00000°, λ-65.00000°.*
IDC ***23*** *19:10:26.6₂0.7, 3638N×142 78E, h0km, mb4.1/14, mb1 4.2/19, mb1mx4.1/27, mbtmp4.1/19, ML4.1/4, MS3.4/7, Ms1 3.4/7, ms1mx2.9/39, Error ellipse: s-maj=17.3km s-min=15.8km az=73.0*
ISCJB ***23*** *19:10:29.6₂0.5, 3651N₂003×142 71E₂004, h33km, mb4.1/18, MS3.5/5, Error ellipse: s-maj=5.2km s-min=4.0km az=28.8*
JMA ***23*** *19:10:29.5₂0.3, 3649N×142 72E, h48km, M3.9*
NEIC ***23*** *19:10:29.5, 3649N×142 72E, h48km, mb4.6/3, MW4.2(NIED), After JMA.*
MOS ***23*** *19:10:29.4₂1.4, 3661N×142 88E, h33km, mb4.7/4, Error ellipse: s-maj=13.3km s-min=8.7km az=106.0*

ISC 23 19:10:31.6₂0.5, 3652N₂003×14267E₂004, h35km, n61, σ1§27/74, mb4.1/18, MS3.5/5, 1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	1.61	292	P	Pn	19 10 57.0	-0.5
JFK	Kawauchi	1.67	301	P	Pn	19 10 57.5	-0.8
JFK				S	Sn	19 11 18.6	+0.2
CHOJ	Chosi	1.68	241	P	Pn	19 10 56.6	-1.9
CHOJ				S	Sn	19 11 17.9	-0.9
JHO	Hitachi	1.69	274	P	Pn	19 10 58.0	-0.7
JMM	Marumori	2.01	312	P	Pn	19 11 02.3	-0.7
JMM				S	Sn	19 11 27.2	+0.3
JFT	Otama	2.12	299	P	Pn	19 11 04.6	+0.1
JFT				S	Sn	19 11 28.8	-0.7
JIO	Ouri	2.19	332	P	Pn	19 11 03.3	-2.3
JIO				S	Sn	19 11 31.6	+0.1
BSO1	Boso 1	2.32	217	P	Pn	19 11 06.1	-1.2
BSO1				S	Sn	19 11 32.5	-2.1
JAG	Ashikaga	2.59	269	P	Pn	19 11 11.1	+0.1
JAG				S	Sn	19 11 41.2	-0.1
JMK	Ichinoseki	2.68	335	P	Pn	19 11 11.1	-1.2
JMK				S	Sn	19 11 43.2	-0.3
JYK	Kaneyama	3.01	323	P	Pn	19 11 16.3	-0.5
JRY	Ryogami san	3.09	262	P	Pn	19 11 17.3	-0.5
JRY				S	Sn	19 11 52.2	-1.3
JOM	Ohasama	3.14	340	P	Pn	19 11 17.5	-1.0
JOM				S	Sn	19 11 54.1	-0.7
JOD2	Odawara 2	3.17	248	P	Pn	19 11 19.3	+0.4
JOD2				S	Sn	19 11 56.6	+1.1
JAW	Awa shima	3.33	306	P	Pn	19 11 23.2	+2.0
JYN	Shimob	3.50	254	P	Pn	19 11 23.6	+0.1
MJAR	Matsushiro Arr 3.7nm,0.3s,baz=96,slow=8.2,SNR=56	3.59	272	Pn	Pn	19 11 25.4	+0.7
MJAR	4.0nm,0.3s,baz=86,slow=18,SNR=6.5			Sn	Sn	19 12 09.0	+3.0
MJAR	Matsushiro Arr	3.59	272	Pn	Pn	19 11 25.4	+0.6
MJAR				Sn	Sn	19 12 09.0	+3.0
MAJO	Matsushiro	3.59	272	*e*P	Pn	19 11 26.0	+1.2
MAT	Matsushiro	3.59	272	P	Pn	19 11 22.9	-1.9
MAT				S	Sn	19 12 06.9	+0.9
MAT	Matsushiro	3.59	272	P	Pn	19 11 26.3	+1.5
JHJ	Hachijo jima 2 41nm,0.3s,baz=74,slow=20,SNR=12	4.14	216	Pn	Pn	19 11 30.2	-2.2
JHJ	34nm,0.3s,baz=252,slow=21,SNR=3.3			Sn	Sn	19 12 14.4	-5.1
ERM	Erimo	5.50	4	*e*P	Pn	19 11 47.7	-3.2
ERM				*e*		19 12 50.0	
ERM	comp=Z,37nm,0.6s			pmax	pmax		
ERM	Erimo comp=Z,37nm,0.6s	5.50	4	*e*Pn	Pn	19 11 47.7	-3.3
ERM				*e*Sn	Sn	19 12 50.0	-2.8
ASAJ	Asahikawa comp=Z,5.4nm,0.3s,baz=219,slow=12,SNR=50	7.58	360	Pn	Pn	19 12 18.3	-1.3
ASAJ	comp=Z,208nm,18.5s,baz=161,slow=44			LR	LR	19 16 06.7	
ASAJ	Asahikawa comp=Z,5.0nm,0.3s	7.58	360	P	Pn	19 12 18.3	-1.3
ASAJ	comp=Z,208nm,18.5s			MLR	MLR		
YUK	Yuzh-Kuril'sk	7.89	17	*e*P	Pn	19 12 19.8	-3.9
YUK				*e*S	Sn	19 13 44.5	-7.2
YUK	comp=E,1μm,0.6s			smax			
YUK	comp=N,130nm,0.5s			smax			
CBIJ	Chichi jima comp=N,6.6nm,0.3s,baz=116,slow=20,SNR=8.3	9.41	183	Pn	Pn	19 12 39.8	-4.9
CBIJ	comp=N,7.7nm,0.3s,baz=265,slow=19,SNR=6.2			Sn	Sn	19 14 18.3	-11
YSS	Yuzh-Sakhalins comp=Z,30nm,0.7s	10.42	0	*e*P	Pn	19 12 57.8	-0.6
YSS				pmax	pmax		
YSS	Yuzh-Sakhalins comp=Z,15nm,0.6s	10.42	0	*e*Pn	Pn	19 12 57.1	-1.4
KSRS	Korea Array comp=Z,0.1nm,0.3s,baz=92,slow=13,SNR=6.5	11.83	279	Pn	Pn	19 13 20.2	+2.4
KSRS				LR	LR	19 18 01.2	
YAK	Yakutsk comp=Z,64nm,18.6s,baz=348,slow=38	26.79	346	*e*P	P	19 16 07.6	-0.4
YAK				*e*		19 16 20.2	
YAK	comp=Z,28nm,1.1s,mb4.7			pmax	pmax		
YAK	com

comp=Z,3.2nm,0.9s,mb4.4,baz=35,slow=11,SNR=5.0
NVAR Mina Array Bea 74.48 54 P **P** 19 22 08.2 +1.8
comp=Z,1.5nm,0.7s,mb4.1,baz=288,slow=6.4,SNR=15
NOA NORSAR Array B 75.04 338 P **P** 19 22 10.3 +1.1
NOA comp=Z,3.3nm,0.9s,mb4.2,baz=39,slow=5.7,SNR=5.1 LR LR 20 01 20.0
comp=Z,48nm,18.3s,MS3.8,baz=340,slow=41
AKASG Malin Array Be 75.31 323 P **P** 19 22 12.1 +1.1
comp=Z,0.2nm,0.3s,mb3.5,baz=41,slow=7.0,SNR=5.8
AKASG Malin Array Be 75.31 323 P **P** 19 22 12.1 +1.1
GERES GERESS Array B 83.67 329 P **P** 19 22 57.7 +1.2
comp=Z,0.9nm,0.8s,mb3.9,baz=30,slow=6.3,SNR=7.1
ANMO Albuquerque 84.14 50 LR LR 19 57 26.9
comp=Z,44nm,21.3s,MS3.8,baz=156,slow=34
TXAR Lajitas Array 89.63 53 P **P** 19 23 27.1 +1.1
comp=Z,1.1nm,0.8s,mb4.2,baz=302,slow=3.1,SNR=12
LPAZ La Paz 146.06 62 PKPbc PKPbc 19 30 09.6 +1.4
comp=Z,1.3nm,0.8s,baz=312,slow=4.8,SNR=5.2
LPAZ La Paz 146.06 62 PKPbc PKPbc 19 30 09.6 +1.4

*MOS **23** 19:10:28.0±0.9, 1241N×14175E, h33km, mb4.6/2, Error ellipse: s-maj=21.6km s-min=18.1km az=98.1*
*NEIC **23** 19:10:30.1±0.7, 1241N×14183E, h35km, mb4.8/3, Error ellipse: s-maj=16.9km s-min=14.6km az=109.0*
*IDC **23** 19:10:32.6±5.6, 1236N×14199E, h63km±67km, mb3.6/7, mb1 3.7/8, mb1mx3.5/22, mbtmp3.6/8, ML3.7/1, Error ellipse: s-maj=59.9km s-min=18.9km az=87.0*
*ISCJB **23** 19:10:34.3±2.6, 124N±0.1×1423E±02, h109km±29km, mb3.9/9, Error ellipse: s-maj=36.9km s-min=18.2km az=4.4*
ISC 23 19:10:35.6±2.5, 124N±01×1423E±02, h104km±29km, n14, σ0§86/14, mb3.9/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.78**	**65**	P		**Pn**		**19 11 18.6**	**+0.2**
	9.0nm,0.3s,baz=202,slow=12,SNR=6.2								
MAJO	**Matsushiro**	**24.32**	**352**	*e*P		**P**		**19 15 41.7**	**-1.8**
MAJO				pmax		pmax			
	comp=Z,4.0nm,1.0s,mb3.7								
MAJO	**Matsushiro**	**24.32**	**352**	*e*P		**P**		**19 15 41.7**	**-1.8**
	comp=Z,4.4nm,1.0s,mb3.7								
WRA	**Warramunga Arr**	**33.08**	**194**	P		**P**		**19 17 01.4**	**-0.2**
	comp=Z,1.0nm,0.7s,mb3.8,baz=14,slow=9.6,SNR=14								
ASAR	**Alice Springs**	**36.77**	**193**	P		**P**		**19 17 33.5**	**+0.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=18,slow=13,SNR=11								
CMAR	**Chiang Mai Arr**	**42.14**	**284**	P		**P**		**19 18 16.9**	**-1.1**
	comp=Z,1.4nm,1.0s,mb3.7,baz=82,slow=6.6,SNR=5.5								
CMAR	**Chiang Mai Arr**	**42.14**	**284**	P		**P**		**19 18 16.9**	**-1.1**
YAK	**Yakutsk**	**50.38**	**352**	*e*P		**P**		**19 19 23.0**	**+1.1**
YAK				pmax		pmax			
	comp=Z,7.0nm,0.7s,mb4.7								
YAK	**Yakutsk**	**50.38**	**352**	*e*P		**P**		**19 19 23.0**	**+1.1**
	comp=Z,6.7nm,0.7s,mb4.7								
MKAR	**Makanchi Array**	**60.62**	**317**	P		**P**		**19 20 36.5**	**+1.0**
	comp=Z,1.1nm,0.8s,mb3.9,baz=99,slow=8.0,SNR=3.3								
ZALV	**Zalesovo Beam**	**61.14**	**325**	P		**P**		**19 20 39.3**	**+0.4**
	comp=Z,0.7nm,0.6s,mb3.9,baz=108,slow=4.7,SNR=2.5								
KURK	**Kurchatov**	**63.88**	**321**	P		**P**		**19 20 58.1**	**+0.9**
	comp=Z,3.2nm,0.8s,mb4.2,baz=107,slow=6.4,SNR=8.9								
BVAR	**Borovoye Array**	**69.31**	**322**	P		**P**		**19 21 31.6**	**0.0**
	comp=Z,2.1nm,0.7s,mb4.1,baz=101,slow=7.7,SNR=8.9								
PNL	**Peninsula**	**73.48**	**31**	*e*P		**P**		**19 21 55.8**	**-0.8**
	comp=Z,24nm,0.4s								

SKHL 23 19:19:27.2±1.7, 5292N×13159E, h9km±1km, mb3.6/3, 1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EKMR	**Ekimchan**	**0.84**	**79**	⇓*i*Pg		Pg		19 19 42.1	-1.2
EKMR				AMB	AMB			19 19 43.5	
	36nm,0.4s								
EKMR				pPg				19 19 44.8	
EKMR				*e*Sg		Sg		19 19 53.0	-1.1
EKMR				A				19 19 56.5	
	230nm,0.5s								
EKMR				A				19 19 56.5	
	280nm,0.5s								
EKMR				A				19 19 56.5	
	180nm,0.5s								
BMKR	**Bomnak**	**2.42**	**319**	*e*Pn		Pn		19 20 06.5	-0.4
BMKR				*e*Pg		Pg		19 20 11.3	-2.3
BMKR				AMB	AMB			19 20 12.6	
	14nm,0.3s								
BMKR				pPg				19 20 14.3	
BMKR				*e*Sg		Sg		19 20 42.0	-3.0
BMKR				A				19 20 46.0	
	93nm,0.5s								
BMKR				A				19 20 46.0	
	71nm,0.5s								
ZEA	**Zeya**	**2.73**	**289**	*e*Sg		Sg		19 20 51.9	-2.9
KROS	**Kirovskiy**	**3.14**	**301**	*e*Pn		Pn		19 20 16.5	-0.2
KROS				*e*Pg		Pg		19 20 23.3	-4.0
KROS				AMB	AMB			19 20 25.5	
	6.0nm,0.5s								
KROS				AMB	AMB			19 20 25.5	
	8.0nm,0.5s								
KROS				AMB	AMB			19 20 25.5	
	7.0nm,0.5s								
KROS				*e*Sn		Sn		19 20 55.6	+1.3
KROS				*e*Sg		Sg		19 21 04.6	-3.3
KROS				A				19 21 09.7	
	22nm,0.5s								
KROS				A				19 21 09.7	
	82nm,0.5s								
KROS				A				19 21 09.7	
	47nm,0.5s								
GRNR	**Gornyy**	**3.69**	**124**	*e*Sg		Sg		19 21 21.2	-4.4
GRNR				A				19 21 23.5	
	48nm,0.4s								
NKL	**Nikolayevsk**	**5.49**	**84**	*e*rx		rx		19 22 22.0	

*IDC **23** 19:32:26.1±2.4, 2096S×17627W, h0km, mb4.2/5, mb1 4.4/5, mb1mx3.9/18, mbtmp4.2/5, Error ellipse: s-maj=130.0km s-min=40.5km az=156.0*
*NEIC **23** 19:32:29.0±1.2, 2215S×17575W, h35km, mb4.6/3, Error ellipse: s-maj=35.7km s-min=25.1km az=180.0*
ISC 23 19:32:21.6±6.6, 212S±09×1749W±08, h35km, n16, σ0§43/11, mb4.3/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.31**	**265**	*e*P		**P**		**19 39 23.1**	**+0.9**
CTA	**Charters Tower**	**36.31**	**265**	P		**P**		**19 39 22.8**	**+0.6**
	7.0nm,0.7s,mb4.7,baz=98,slow=12,SNR=9.4								
CTAO	**Charters Tower**	**36.31**	**265**	*e*P		**P**		**19 39 22.3**	**+0.1**
	6.6nm,0.6s,mb4.7								
STKA	**Stephens Creek**	**40.11**	**245**	P		**P**		**19 39 54.1**	**+0.1**
	0.8nm,0.4s,mb3.8,baz=89,slow=9.3,SNR=6.0								
ASAR	**Alice Springs**	**47.18**	**257**	P		**P**		**19 40 50.9**	**-0.2**
	5.6nm,0.7s,mb4.6,baz=89,slow=8.2,SNR=46								
ASAR				PcP		PcP		19 42 26.6	+4.2
	0.6nm,0.7s,baz=104,slow=3.7,SNR=4.6								
WB2	**Warramunga Arr**	**47.36**	**262**	*e*P		**P**		**19 40 52.0**	**-0.5**
WRA	**Warramunga Arr**	**47.38**	**262**	P		**P**		**19 40 52.2**	**-0.4**
	1.6nm,0.6s,mb4.2,baz=95,slow=7.9,SNR=68								
FITZ	**Fitzroy Crossi**	**55.81**	**262**	*e*P		**P**		**19 41 56.2**	**+0.5**
FITZ	**Fitzroy Crossi**	**55.81**	**262**	P		**P**		**19 41 56.5**	**+0.8**
	0.9nm,0.5s,mb4.0,baz=86,slow=13,SNR=12								
SBA	**Scott Base**	**57.37**	**185**	*e*P		**P**		**19 42 06.0**	**0.0**
	13nm,1.6s,mb4.7								
MBWA	**Marble Bar**	**60.53**	**257**	*e*P		**P**		**19 42 28.5**	**-0.2**
	2.0nm,0.6s,mb4.4								
ARCES	**ARCESS Array B**	**130.11**	**351**	PKP		PKPdf		19 51 37.4	+10
	0.8nm,0.6s,baz=48,slow=1.8,SNR=5.7								
ARCES	**ARCESS Array B**	**130.11**	**351**	PKP		PKPdf		19 51 37.4	+10
AKASG	**Malin Array Be**	**145.00**	**333**	PKP		PKPdf		19 52 02.1	+7.2
	1.5nm,0.3s,baz=42,slow=4.2,SNR=12								
AKASG	**Malin Array Be**	**145.00**	**333**	PKP		PKPdf		19 52 02.1	+7.2
CLL	**Colim**	**149.33**	**350**	*e*PKPbc		PKPbc		19 52 18.0	+11

NNC 23 19:50:59.0±4.6, 4254N×8154E, h0km, mb4.0, mpv3.6, 4C-5D, Error ellipse: s-maj=51.9km s-min=17.6km az=156.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**3.43**	**283**	⇓Pn		Pn		19 51 53.1	-0.6
	43nm,0.8s								
KNDC				⇑Sn		Sn		19 52 35.0	0.0
	142nm,1.0s								
MK31	**Makanchi Array**	**4.29**	**7**	⇓Pn		Pn		19 52 08.4	+2.8
	1.0nm,0.4s,baz=190,slow=12,SNR=119								
MK31				⇑Lg				19 53 16.2	
	17nm,0.7s,baz=190,slow=25,SNR=6.3								
TKM2	**Tokmak 2**	**4.40**	**277**	⇓Pn		Pn		19 52 06.0	-1.0
	26nm,1.6s								
TKM2				⇑Sn		Sn		19 53 04.3	+5.4
	24nm,0.5s								
KK31	**Karatay Array**	**8.13**	**278**	⇓Lg				19 55 12.2	
	3.6nm,0.7s,baz=91,slow=27,SNR=3.5								
KURBB	**Kurchatov Arra**	**8.35**	**347**	⇑Lg				19 55 24.5	
	3.7nm,0.9s								
KURK	**Kurchatov**	**8.43**	**347**	⇓Lg				19 55 22.8	
	19nm,1.6s								

*TAP **23** 19:56:50.0, 2460N×12250E, h18km, ML3.0, D*
*ISCJB **23** 19:56:51.9±0.8, 2459N±003×12248E±002, h15km±6km, Error ellipse: s-maj=5.8km s-min=3.0km az=16.8*
*JMA **23** 19:56:53.4±0.1, 2470N×12257E, h23km±2km, M2.4*
ISC 23 19:56:51.7±0.5, 2460N±004×12247E±002, h13km±4km, n28, σ0§89/50, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.51**	**105**	P		**Pg**		**19 57 02.8**	**+1.1**
YOJ				*e*S		**Sg**		**19 57 09.3**	**+0.9**
EGS		**0.55**	**297**	P		**Pg**		**19 57 02.5**	**0.0**
	baz=288								
EGS				S		**Sg**		**19 57 10.7**	**+1.0**
	baz=288								
TWC	**Suao**	**0.57**	**271**	*i* P		**Pg**		**19 57 01.9**	**-0.9**
	baz=264								
TWC				S		**Sg**		**19 57 11.2**	**+0.9**
	baz=264								
TWB1	**Santiao Chiao**	**0.60**	**313**	*i* P		**Pg**		**19 57 02.9**	**-0.6**
	baz=311								
TWB1				*i* S		**Sg**		**19 57 11.8**	**+0.4**
	baz=311								
ENA	**Nanau**	**0.69**	**256**	*e*P		**Pg**		**19 57 04.0**	**-1.1**
	baz=261								
ENA				*e*S		**Sg**		**19 57 13.6**	**-0.6**
	baz=261								
TWE	**Neicheng**	**0.74**	**280**	*i* P		**Pg**		**19 57 05.5**	**-0.6**
	baz=279								
TWE				*i* S		**Sg**		**19 57 16.5**	**+0.6**
	baz=279								
NWF	**Wu-fen Shan**	**0.79**	**307**	*e*P		**Pg**		**19 57 05.7**	**-1.2**
	baz=317								
NWF				*e*S		**Sg**		**19 57 18.2**	**+1.0**
	baz=317								
ENTT	**Nioudou**	**0.83**	**273**	P		**Pg**		**19 57 07.2**	**-0.5**
	baz=273								
ENTT				S		**Sg**		**19 57 18.9**	**+0.4**
	baz=273								
TWA	**Mucha**	**0.89**	**295**	*e*P		**Pg**		**19 57 07.4**	**-1.6**
	baz=295								
TWA				*e*S		**Sg**		**19 57 20.7**	**0.0**
	baz=295								
TWD	**Chiawan**	**0.95**	**237**	*e*P		**Pb**		**19 57 08.9**	**-1.1**
	baz=247								
NNS	**Nan Shan**	**1.01**	**261**	*e*P		**Pb**		**19 57 10.2**	**-1.0**
	baz=261								
NNS				*e*S		**Sb**		**19 57 23.1**	**-1.4**
	baz=261								
NSK	**Sanguang**	**1.02**	**275**	*i* P		**Pb**		**19 57 10.6**	**-0.6**
	baz=274								
NSK				*i* S		**Sb**		**19 57 23.6**	**-0.9**
	baz=274								
TWY	**Chenhua**	**1.04**	**311**	*e*P		**Pb**		**19 57 10.7**	**-0.9**
	baz=310								
TWY				*e*S		**Sb**		**19 57 26.1**	**+0.9**
	baz=310								
TWS1	**Kuangyinshan**	**1.08**	**298**	*e*P		**Pb**		**19 57 12.6**	**+0.3**
	baz=297								
IRIF	**Iriomote-Funau**	**1.18**	**103**	P		**Pn**		**19 57 13.4**	**-0.5**
WHF	**Hehuan Shan**	**1.19**	**248**	P		**Pn**		**19 57 13.4**	**-0.7**
	baz=255								
WHF				S		**Sb**		**19 57 29.4**	**0.0**
	baz=255								
TWT	**Tachien**	**1.23**	**254**	*e*P		**Pn**		**19 57 17.2**	**+2.6**
	baz=254								
HATJ	**Hateruma jima**	**1.33**	**114**	P		**Pn**		**19 57 16.1**	**+0.1**
HATJ				*e*S		**Sb**		**19 57 33.1**	**-0.4**
NSTT	**Nanjuang**	**1.34**	**272**	*e*P		**Pn**		**19 57 17.1**	**+0.9**
	baz=284								
NSTT				*e*S		**Sb**		**19 57 33.1**	**-0.7**
	baz=284								
JKRS	**Kuro-shima**	**1.45**	**104**	P		**Pn**		**19 57 17.8**	**+0.2**
JKRS				*e*S		**Sn**		**19 57 36.0**	**-0.5**
JIJ	**Ishigaki jima**	**1.54**	**98**	P		**Pn**		**19 57 18.8**	**-0.1**
JIJ				*e*S		**Sn**		**19 57 37.3**	**-1.5**
TWQ1	**Liyutan**	**1.57**	**261**	*e*P		**Pn**		**19 57 20.7**	**+1.4**
	baz=259								
SMLT	**Sun Moon Lake**	**1.60**	**244**	*e*P		**Pn**		**19 57 21.4**	**+1.6**
	baz=229								
TYC	**Yuchr**	**1.63**	**245**	*e*P		**Pn**		**19 57 21.5**	**+1.4**
	baz=231								
TYC				*e*S		**Sn**		**19 57 41.0**	**+0.1**
	baz=231								
YUS	**Yu-Shan**	**1.78**	**232**	*e*P		**Pn**		**19 57 22.8**	**+0.7**
	baz=231								
YUS				*e*S		**Sn**		**19 57 44.6**	**0.0**
	baz=231								
ALS	**Alishan**	**1.87**	**235**	*e*P		**Pn**		**19 57 25.5**	**+2.1**
	baz=221								
ALS				*e*S		**Sn**		**19 57 47.2**	**+0.2**
	baz=221								
CHN5	**Tsauling**	**1.92**	**239**	*e*P		**Pn**		**19 57 24.6**	**+0.5**
	baz=237								
CHN5				*e*S		**Sn**		**19 57 47.9**	**-0.2**
	baz=237								
CHN4	**Tsaushan**	**2.12**	**235**	*e*P		**Pn**		**19 57 26.5**	**-0.4**
	baz=233								
CHN4				*e*S		**Sn**		**19 57 53.2**	**+0.1**
	baz=233								

*JMA **23** 20:05:49.4±0.2, 2484N×12242E, h19km, M2.6*
*ISCJB **23** 20:05:50.8±0.5, 2452N±002×12246E±002, h5km±3km, Error ellipse: s-maj=4.0km s-min=2.5km az=8.2*
*TAP **23** 20:05:50.8, 2452N×12237E, h4km, ML3.4, D*
ISC 23 20:05:51.1±0.4, 2454N±002×12247E±002, h7km±3km, n41, σ0§72/78, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.50**	**99**	P		**Pg**		**20 06 01.9**	**+1.2**
YOJ				S		**Sg**		**20 06 10.9**	**+3.6**
TWC	**Suao**	**0.57**	**277**	⇑*i*P		**Pg**		**20 06 01.0**	**-1.1**
	baz=281								
TWC				S		**Sg**		**20 06 09.9**	**+0.4**
	baz=281								
EGS		**0.58**	**302**	P		**Pg**		**20 06 02.3**	**+0.1**
	baz=309								
EGS				*i* S		**Sg**		**20 06 10.5**	**+0.7**
	baz=309								
TWB1	**Santiao Chiao**	**0.64**	**317**	P		**Pg**		**20 06 03.7**	**+0.3**
	baz=324								
TWB1				*e*S		**Sg**		**20 06 11.1**	**-0.7**
	baz=324								
ENA	**Nanau**	**0.67**	**261**	*e*P		**Pg**		**20 06 03.3**	**-0.7**
	baz=261								
ENA				*e*S		**Sg**		**20 06 11.8**	**-1.0**
	baz=261								
ILA	**Ilan**	**0.69**	**289**	P		**Pg**		**20 06 04.2**	**-0.3**
	baz=293								
ILA				*e*S		**Sg**		**20 06 14.6**	**+1.1**
	baz=293								
TWE	**Neicheng**	**0.75**	**284**	⇑*i*P		**Pg**		**20 06 04.7**	**-0.9**
	baz=287								
TWE				*i* S		**Sg**		**20 06 15.5**	**+0.1**
	baz=287								
NWF	**Wu-fen Shan**	**0.82**	**310**	P		**Pg**		**20 06 07.5**	**+0.6**
	baz=315								
NWF				*i* S		**Sg**		**20 06 18.2**	**+0.6**
	baz=315								
ENTT	**Nioudou**	**0.83**	**277**	*e*P		**Pg**		**20 06 06.6**	**-0.5**
	baz=279								
ENTT				*e*S		**Sg**		**20 06 18.1**	**+0.3**
	baz=279								
TWA	**Mucha**	**0.92**	**299**	P		**Pg**		**20 06 08.3**	**-0.4**
	baz=302								
TWA				*e*S		**Sg**		**20 06 19.7**	**-1.0**
	baz=302								
TWD	**Chiawan**	**0.92**	**240**	*e*P		**Pg**		**20 06 09.1**	**+0.4**
	baz=238								
TWD				*e*S		**Sg**		**20 06 21.5**	**+0.9**
	baz=238								
TAP1	**Taipei**	**0.99**	**300**	*e*P		**Pg**		**20 06 10.2**	**0.0**
	baz=304								
TAP1				*e*S		**Sg**		**20 06 23.6**	**+0.4**
	baz=304								
NNS	**Nan Shan**	**1.00**	**265**	*e*P		**Pg**		**20 06 09.4**	**-0.9**
	baz=265								
NNS				*e*S		**Sg**		**20 06 22.1**	**-1.3**
	baz=265								
NSK	**Sanguang**	**1.02**	**278**	*i* P		**Pg**		**20 06 10.0**	**-0.7**
	baz=279								
NSK				*e*S		**Sg**		**20 06 23.0**	**-0.9**
	baz=279								
TWY	**Chenhua**	**1.08**	**313**	*e*P		**Pg**		**20 06 11.4**	**-0.4**
	baz=317								
TWY				*e*S		**Sg**		**20 06 25.5**	**-0.3**
	baz=317								
TWS1	**Kuangyinshan**	**1.11**	**301**	*e*P		**Pg**		**20 06 12.6**	**+0.2**
	baz=303								
TWS1				*e*S		**Sg**		**20 06 27.4**	**+0.6**
	baz=303								
PCYT	**Pengchaiyu**	**1.15**	**342**	*e*P		**Pg**		**20 06 13.8**	**+0.7**
	baz=346								
PCYT				*e*S		**Sg**		**20 06 29.2**	**+1.2**
	baz=346								
IRIF	**Iriomote-Funau**	**1.17**	**100**	P		**Pg**		**20 06 12.7**	**-0.8**
IRIF				*e*S		**Sg**		**20 06 28.8**	**+0.2**
WHF	**Hehuan Shan**	**1.17**	**251**	*e*P		**Pg**		**20 06 13.3**	**-0.2**
	baz=249								
WHF				*e*S		**Sg**		**20 06 28.4**	**-0.2**
	baz=249								
ESL	**Shilin**	**1.19**	**233**	*e*P		**Pg**		**20 06 13.3**	**-0.6**
	baz=230								
ESL				*e*S		**Sg**		**20 06 30.3**	**+0.9**
	baz=230								
TWT	**Tachien**	**1.21**	**257**	*e*P		**Pb**		**20 06 13.6**	**-0.8**
	baz=256								
TWT				*e*S		**Sg**		**20 06 30.2**	**+0.1**
	baz=256								
NCU	**National Centr**	**1.24**	**291**	*e*P		**Pn**		**20 06 13.9**	**-0.9**
	baz=292								
NCU				*e*S		**Sb**		**20 06 31.3**	**+0.2**
	baz=292								
HATJ	**Hateruma jima**	**1.31**	**111**	P		**Pn**		**20 06 15.4**	**-0.3**
HATJ				*e*S		**Sb**		**20 06 33.9**	**+0.9**
NSTT	**Nanjuang**	**1.34**	**274**	*e*P		**Pn**		**20 06 16.1**	**0.0**
	baz=275								
NSTT				*e*S		**Sb**		**20 06 33.5**	**-0.4**
	baz=275								
HSN	**Hsinchu**	**1.39**	**281**	*e*P		**Pn**		**20 06 16.6**	**-0.3**
	baz=284								
HSN				*e*S		**Sb**		**20 06 35.1**	**-0.2**
	baz=284								
JKRS	**Kuro-shima**	**1.44**	**102**	P		**Pn**		**20 06 17.1**	**-0.4**
JKRS				*e*S		**Sn**		**20 06 35.8**	**-0.8**
JIJ	**Ishigaki jima**	**1.54**	**96**	P		**Pn**		**20 06 17.7**	**-1.1**
JIJ				*e*S		**Sn**		**20 06 37.1**	**-1.9**
TWQ1	**Liyutan**	**1.56**	**263**	*e*P		**Pn**		**20 06 19.3**	**+0.2**
	baz=263								
TWQ1				*e*S		**Sn**		**20 06 40.7**	**+1.1**
	baz=263								
NSY	**Sanyi**	**1.56**	**266**	*e*P		**Pn**		**20 06 19.4**	**+0.2**
	baz=266								
SMLT	**Sun Moon Lake**	**1.57**	**246**	*e*P		**Pn**		**20 06 19.6**	**+0.2**
	baz=244								
SMLT				*e*S		**Sn**		**20 06 39.2**	**-0.8**
	baz=244								
TYC	**Yuchr**	**1.60**	**247**	*e*P		**Pn**		**20 06 20.5**	**+0.7**
	baz=246								
TYC				*e*S		**Sn**		**20 06 40.6**	**0.0**
	baz=246								
YUS	**Yu-Shan**	**1.74**	**233**	*e*P		**Pn**		**20 06 22.1**	**+0.4**
	baz=231								
YUS				*e*S		**Sn**		**20 06 43.9**	**-0.1**
	baz=231								
ALS	**Alishan**	**1.83**	**236**	*e*P		**Pn**		**20 06 23.0**	**0.0**
	baz=235								
ALS				*e*S		**Sn**		**20 06 46.0**	**-0.4**
	baz=235								
CHN5	**Tsauling**	**1.89**	**241**	*e*P		**Pn**		**20 06 24.5**	**+0.8**
	baz=239								
CHN2	**Minshiung**	**2.08**	**242**	*e*P		**Pn**		**20 06 26.4**	**+0.1**
	baz=240								
CHN2				*e*S		**Sn**		**20 06 52.2**	**-0.3**
	baz=240								
STYT	**Tauyuan**	**2.08**	**229**	*e*P		**Pn**		**20 06 25.9**	**-0.5**
	baz=227								
STYT				*e*S		**Sn**		**20 06 52.3**	**-0.2**
	baz=227								
CHN4	**Tsaushan**	**2.08**	**236**	*e*P		**Pn**		**20 06 28.0**	**+1.6**
	baz=234								
WTP	**Ta-pu**	**2.13**	**233**	*e*P		**Pn**		**20 06 28.4**	**+1.3**
	baz=231								
WTP				*e*S		**Sn**		**20 06 53.6**	**-0.1**
	baz=231								
CHN1	**Nanshi**	**2.23**	**233**	*e*P		**Pn**		**20 06 29.7**	**+1.3**
	baz=231								
CHN1				*e*S		**Sn**		**20 06 56.1**	**-0.1**
	baz=231								
SGST	**Jiashian**	**2.25**	**230**	*e*P		**Pn**		**20 06 30.0**	**+1.3**
	baz=228								
SSD	**Sandimen**	**2.45**	**224**	*e*P		**Pn**		**20 06 31.9**	**+0.4**
	baz=222								
SSD				*e*S		**Sn**		**20 07 02.0**	**+0.3**
	baz=222								

DJA 23 20:08:53, 288S×12912E, h10km, MLv3.6/6, 1D, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.22**	**229**	⇓*e*P		Pn		20 09 12.8	-3.4

*DDA **23** 20:44:09.6, 3677N×2745E, h16km±4km, Md3.2*
*CSEM **23** 20:44:09.8±0.1, 3671N×2736E, h2km, MD3.2, Error ellipse: s-maj=2.8km s-min=2.2km az=99.0*
*NEIC **23** 20:44:10.9, 3677N×2748E, h56km, MD3.2(ISK), MD3.4(ATH), After ATH.*
*ISCJB **23** 20:44:10.2±0.7, 3678N±003×2743E±004, h6km±6km, Error ellipse: s-maj=5.7km s-min=3.9km az=155.9*
*ATH **23** 20:44:10.9, 3677N×2748E, h56km±6km, MD3.4/4*
*ISK **23** 20:44:13.4, 3698N×2753E, h5km, MD3.2*
ISC 23 20:44:10.7±0.6, 3680N±003×2744E±004, h14km±4km, n25, σ1§21/38, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.27**	**1**	*i* P		**Pg**		**20 44 16.0**	**-0.4**
BDRM				*i* S		**Sg**		**20 44 20.2**	**0.0**
BODT	**Bodrum**	**0.28**	**338**	*e*PG		**Pg**		**20 44 18.1**	**+1.4**
BODT				*e*SG		**Sg**

DST	Dursunbey	2.96	18	*e*PN	Pb	20 45 01.1	-2.0
SHUT	Suhut-Afyon	3.03	54	*e*PN	Pb	20 45 02.1	-2.3
EZN	Ezine	3.15	344	*e*PN	Pb	20 45 03.9	-2.6

IDC 23 20:50:04.2±1.7,3061N×14040E,h0km,mb3.7/2, mb1 3.7/5,mb1mx3.5/23,mbtmp3.7/5,ML3.1/3,Error ellipse: s-maj=98.5km s-min=21.6km az=80.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.56**	**348**	Pn	Pn	20 50 46.1	-0.9
	5.5nm,0.3s,baz=50,slow=17,SNR=6.3						
JHJ				Sn	Sn	20 51 13.5	-5.4
	12nm,0.3s,baz=250,slow=22,SNR=3.0						
CBIJ	**Chichi jima**	**3.83**	**155**	Pn	Pn	20 51 04.7	+0.2
	2.5nm,0.3s,baz=305,slow=23,SNR=7.2						
CBIJ				Sn	Sn	20 51 47.7	-2.5
	8.5nm,0.3s,baz=304,slow=21,SNR=5.6						
MJAR	**Matsushiro Arr**	**6.20**	**343**	Pn	Pn	20 51 37.9	+0.9
	0.5nm,0.3s,baz=163,slow=15,SNR=8.0						
WRA	**Warramunga Arr**	**50.59**	**187**	P	P	20 59 04.8	-0.1
	0.6nm,0.3s,baz=6.1,slow=7.7,SNR=44						
ASAR	**Alice Springs**	**54.32**	**187**	P	P	20 59 32.4	-0.1
	0.2nm,0.3s,baz=360,slow=4.8,SNR=7.8						

DDA 23 20:52:13.2,3676N×2767E,h7km±5km,Md2.9
ATH 23 20:52:14.9,3709N×2795E,h24km±1km,MD3.3/3
ISCJB 23 20:52:16.1±1.1,3681N±005×2743E±006,h8km±5km, Error ellipse: s-maj=9.7km s-min=5.5km az=138.2
ISK 23 20:52:16.9,3690N×2749E,h5km,MD3.0
CSEM 23 20:52:17.2±0.2,3690N×2749E,h2km,MD3.0,Error ellipse: s-maj=3.5km s-min=2.0km az=35.0

ISC 23 20:52:18.3±1.1,3690N±005×2744E±005,h7km±6km,n16, σ0§99/25,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.17**	**0**	*i* P	Pg	20 52 21.0	-0.8
BDRM				*i* S	Sg	20 52 24.8	+0.6
BODT	**Bodrum**	**0.20**	**327**	*e*PG	Pg	20 52 21.8	-0.5
BODT				*e*SG	Sg	20 52 26.2	+1.2
MLSB	**Milas**	**0.48**	**34**	*e*PG	Pg	20 52 26.9	-0.8
MLSB				*e*SG	Sg	20 52 34.2	+0.3
YER	**Yerkesik**	**0.71**	**70**	*e*PG	Pg	20 52 30.9	-1.1
YER				*e*SG	Sg	20 52 42.2	+0.9
GCAM	**G?zelcaml?**	**0.82**	**348**	*i* P	Pg	20 52 33.4	-0.7
GCAM				*i* S	Sg	20 52 46.3	+1.5
AYDN	**Tasoluk**	**0.84**	**24**	*i* P	Pg	20 52 33.1	-1.4
AYDN				*i* S	Sg	20 52 44.6	-0.7
ARG	**Arkhangelos**	**0.87**	**141**	*e*PN	Pn	20 52 32.1	-4.9
ARG				*e*SN	Sn	20 52 45.0	-5.0
TURN	**Turunc**	**0.93**	**91**	*i* P	Pg	20 52 27.6	-8.6
TURN				*i* S	Sg	20 52 38.4	-10
SMG	**Samos**	**0.94**	**329**	⇑*i*PN	Pn	20 52 35.5	-2.5
SMG				*e*SN	Sn	20 52 50.5	-1.2
KARP	**Karpathos**	**1.37**	**190**	*e*PN	Pn	20 52 44.7	+0.9
BLCB	**Balcova**	**1.52**	**348**	*e*PN	Pn	20 52 46.7	+0.8
KULA	**Kula-Manisa**	**1.88**	**31**	*e*PN	Pn	20 52 51.3	+0.4
ELL	**Elmali**	**1.98**	**94**	*e*PN	Pn	20 52 52.2	-0.1
AKS	**Akhisar**	**2.00**	**8**	*e*PN	Pn	20 52 53.1	+0.6
BCK	**Bucak**	**2.58**	**76**	*e*PN	Pn	20 53 00.9	+0.5
DST	**Dursunbey**	**2.86**	**19**	*e*PN	Pn	20 53 05.5	+1.2

ISCJB 23 20:58:25.3±1.2,1426N±007×4333E±006,h10km,Error ellipse: s-maj=12.9km s-min=4.8km az=-36.9
CSEM 23 20:58:25.0±0.5,1433N×4343E,h5km,ML3.3,Error ellipse: s-maj=14.1km s-min=5.3km az=-46.0
SGS 23 20:58:27.1,1418N×4290E,h5km
DHMR 23 20:58:29.4±1.8,1423N×4355E,h25km±11km,ML3.3

ISC 23 20:58:26.1±1.4,1427N±007×4336E±006,h9km±6km,n13, σ1§12/23,3C-1D,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	**Al 'Udayn**	**0.66**	**117**	⇓*i*P	Pg	20 58 38.5	-0.3
UDYN				*i* S	Sg	20 58 47.4	0.0
UDYN				AML	AML	20 58 49.6	
	comp=N,822nm,0.5s						
ERIN	**Erian - IBB Go**	**0.84**	**93**	*i* P	Pg	20 58 41.3	-1.0
ERIN				*i* S	Sg	20 58 53.7	+0.5
	comp=N,123nm,0.7s						
DHBB	**Dhamar BB**	**1.04**	**73**	*i* P	Pg	20 58 46.6	+0.6
DHBB				*i* S	Sg	20 58 59.0	-0.5
HAJJ	**Hajjah**	**1.44**	**9**	⇑*i*P	Pn	20 58 54.5	+2.2
HAJJ				*i* S	Sn	20 59 15.1	+3.7
HAJJ				AML	AML	20 59 20.0	
	comp=Z,784nm,0.6s						
HAJJ	**Hajjah**	**1.44**	**9**	⇑*i*P	Pn	20 58 54.5	+2.2
HAJJ				*i* S	Sn	20 59 15.1	+3.7
	comp=Z,392nm,0.6s						
RADA	**Ahram - Rada'a**	**1.45**	**83**	*i* P	Pn	20 58 51.6	-0.9
RADA				*i* S	Sn	20 59 10.6	-1.1
LBOS		**1.87**	**102**	⇑*i*P	Pn	20 58 58.6	+0.3
LBOS				*i* S	Sn	20 59 21.5	-0.5
BDHA	**Al Bayda'**	**2.16**	**98**	*i* P	Pn	20 59 04.1	+1.9
BDHA				*i* S	Sn	20 59 29.7	+0.6
BDHA				AML	AML	20 59 36.3	
	comp=N,247nm,0.7s						
BDHA	**Al Bayda'**	**2.16**	**98**	*i* P	Pn	20 59 04.1	+1.9
BDHA				*i* S	Sn	20 59 29.7	+0.6
FRSS	**Farasan al Kab**	**2.73**	**334**	S	Sn	20 59 40.0	-3.3
FRSS	**Farasan al Kab**	**2.73**	**334**	P	Pn	20 59 08.6	-1.6
JAZS	**Jizan**	**2.82**	**351**	P	Pn	20 59 10.8	-0.5
JAZS				S	Sn	20 59 45.1	-0.3
DJNS	**Zahran al Janu**	**3.42**	**3**	P	Pn	20 59 21.3	+1.8

ISCJB 23 20:58:37.9±0.8,286S±008×1296E±0.1,h33km,mb3.7/6, Error ellipse: s-maj=16.3km s-min=9.4km az=148.6
DJA 23 20:58:38,263S×12948E,h10km,MLv4.3/5
NEIC 23 20:58:39.8±0.7,288S×12969E,h35km,mb3.8/1,Error ellipse: s-maj=19.2km s-min=9.7km az=63.0
IDC 23 20:58:42.4±3.9,294S×12960E,h54km±31km,mb3.5/6, mb1 3.8/10,mb1mx3.6/18,mbtmp3.7/10,ML3.9/4,MS3.2/3, Ms1 3.2/3,ms1mx2.8/22,Error ellipse: s-maj=47.8km s-min=12.0km az=68.0

ISC 23 20:58:40.4±2.5,29S±01×1296E±02,h35km±21km,n18, σ0§96/19,mb3.7/6,1C-1D,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.60**	**242**	⇑*e*P	Pn	20 59 03.7	-2.5
BATI	**Baumata**	**9.33**	**219**	P	Pn	21 00 56.1	+3.7
	1.0nm,0.3s,baz=308,slow=17,SNR=3.2						
BATI				LR	LR	21 04 22.4	
	comp=Z,181nm,20.4s,baz=240,slow=36						
KAPI	**Kappang**	**10.05**	**258**	P	Pn	21 01 03.1	+0.8
	0.9nm,0.3s,baz=108,slow=9.6,SNR=5.3						
KAPI				LR	LR	21 05 14.3	
	comp=Z,148nm,20.6s,baz=90,slow=39						
FITZ	**Fitzroy Crossi**	**15.57**	**194**	*e*P	Pn	21 02 17.6	+0.3
FITZ	**Fitzroy Crossi**	**15.57**	**194**	P	Pn	21 02 16.8	-0.5
	0.1nm,0.3s,baz=18,slow=13,SNR=3.7						
FITZ				LR	LR	21 08 33.1	
	comp=Z,59nm,18.6s,baz=187,slow=38						
FITZ	**Fitzroy Crossi**	**15.57**	**194**	*e*Pn	Pn	21 02 17.4	0.0
FITZ				*e*P		21 02 17.6	
WRAB	**Tennant Creek**	**17.52**	**165**	*e*Pn	Pn	21 02 41.8	-0.2
	2.9nm,0.4s						
WRA	**Warramunga Arr**	**17.52**	**165**	P	Pn	21 02 41.1	-0.9
	0.9nm,0.3s,baz=348,slow=12,SNR=51						
WRA				S	S	21 05 57.9	-5.4
	0.1nm,0.3s,baz=341,slow=21,SNR=3.4						
WB2	**Warramunga Arr**	**17.53**	**165**	⇓*i*P	Pn	21 02 41.6	-0.5
ASAR	**Alice Springs**	**21.02**	**169**	P	P	21 03 22.3	+1.1
	5.5nm,0.5s,mb4.1,baz=347,slow=11,SNR=134						
ASAR				S	S	21 07 13.6	+0.1
	1.4nm,0.8s,baz=349,slow=19,SNR=6.8						
STKA	**Stephens Creek**	**30.92**	**160**	*e*P	P	21 04 55.5	+1.6
STKA	**Stephens Creek**	**30.92**	**160**	P	P	21 04 55.1	+1.1
	0.5nm,0.4s,mb3.7,baz=346,slow=11,SNR=5.6						
CMAR	**Chiang Mai Arr**	**36.93**	**306**	P	P	21 05 46.6	+0.4
	0.3nm,0.7s,mb3.2,baz=154,slow=6.4,SNR=4.3						
MKAR	**Makanchi Array**	**64.64**	**326**	P	P	21 09 14.6	+0.1
	0.2nm,0.4s,mb3.5,baz=122,slow=5.2,SNR=3.2						
ZALV	**Zalesovo Beam**	**67.79**	**333**	P	P	21 09 34.1	-0.4
	0.7nm,0.6s,mb3.9,baz=128,slow=4.1,SNR=4.5						
PAF	**Port-aux-Franc**	**68.22**	**217**	*e*P	P	21 09 36.3	-1.1
MAW	**Mawson**	**78.57**	**201**	P	P	21 10 37.8	-0.2
	1.1nm,0.6s,mb4.0,baz=27,slow=9.0,SNR=6.6						
RLMT	**Red Lodge**	**113.67**	**41**	*e*PKPdf	PKiKP	21 17 12.9	-2.4

IGQ 23 20:59:11.0,278S×7868W,h92km±5km,Mb4.1,Ms3.9, 4C-3D,Error ellipse: s-maj=5.5km s-min=4.7km az=84.5, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGUA	**Igualata**	**1.29**	**2**	P	Pn	20 59 35.7	+1.4
ARRY	**Arrayan**	**1.29**	**10**	⇓P	Pn	20 59 34.8	+0.5
ARRY	**Arrayan**	**1.29**	**10**	⇓S	Sn	20 59 52.2	+0.5
PATA	**Patacocha**	**1.29**	**11**	P	Pn	20 59 35.3	+0.9
BIL2	**Estacion Bilba**	**1.33**	**8**	⇑P	Pn	20 59 36.1	+1.3
RETU	**Refugio**	**1.34**	**10**	⇑P	Pn	20 59 36.3	+1.3
ULBA	**Ulba**	**1.35**	**12**	⇑P	Pn	20 59 36.3	+1.2
JUI6	**Juive**	**1.37**	**9**	P	Pn	20 59 35.9	+0.7
RUN5	**Runtun**	**1.38**	**11**	⇑P	Pn	20 59 36.5	+1.0
QIL2	**Quilotoa**	**1.92**	**353**	P	Pn	20 59 44.2	+2.0
QIL2	**Quilotoa**	**1.92**	**353**	S	Sn	21 00 11.0	+5.0
TAMB	**Tambo**	**2.10**	**9**	P	Pn	20 59 46.4	+1.7
CAMI	**Rancho Maria**	**2.10**	**5**	P	Pn	20 59 46.7	+2.0
VC1	**Cotopaxi 1**	**2.15**	**7**	P	Pn	20 59 47.1	+1.8
ANTI	**Antisana**	**2.38**	**13**	⇓P	Pn	20 59 49.8	+1.5
JUA2	**San Juan 2**	**2.55**	**2**	P	Pn	20 59 52.2	+1.5
GGP	**Refugio Guagua**	**2.59**	**2**	P	Pn	20 59 52.5	+1.3
TERV	**Terraza Guagua**	**2.59**	**2**	P	Pn	20 59 53.4	+2.2
TERV	**Terraza Guagua**	**2.59**	**2**	S	Sn	21 00 31.2	+9.2
PINO	**Pino**	**2.61**	**2**	P	Pn	20 59 53.4	+2.0
YANA	**Yana**	**2.65**	**2**	P	Pn	20 59 53.3	+1.3
MAG1	**Magdalena**	**2.91**	**338**	P	Pn	20 59 55.4	0.0
CAYA	**Cayambe**	**2.92**	**14**	P	Pn	20 59 56.8	+1.3
COTA	**Cotacachi**	**3.12**	**6**	P	Pn	21 00 01.0	+2.8

ISCJB 23 21:06:03.1±0.5,2701N±004×5572E±006,h10km,Error ellipse: s-maj=7.4km s-min=5.5km az=20.7
CSEM 23 21:06:04.4±0.1,2720N×5573E,h20km,ML3.2,Error ellipse: s-maj=2.6km s-min=2.4km az=100.0
THR 23 21:06:07.6±0.3,2724N×5610E,h41km±1km,ML3.2

ISC 23 21:06:04.4±0.5,2696N±004×5584E±006,h10km,n16, σ1§02/20,1C-1D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.53**	**34**	*e*Pg	Pg	21 06 15.1	+0.5
BNDS				*e*Sg	Sg	21 06 20.8	-0.7
BNDS				AML	AML	21 06 34.9	
	comp=N,2μm,0.4s						
BNDS	**Bandar-Abbas**	**0.53**	**34**	*e*Pg	Pg	21 06 15.1	+0.5
	SNR=155						
BNDS				*e*Sg	Sg	21 06 20.8	-0.8
	comp=N,2μm,0.4s,SNR=155						
BANOM	**Banah**	**1.11**	**158**	⇓P	Pb	21 06 24.6	-1.1
	SNR=224						
HATD	**Hatta, Dubai**	**2.14**	**173**	Pn	Pn	21 06 40.3	+0.1
FAQ	**Al Faqa, Dubai**	**2.22**	**186**	Pn	Pn	21 06 41.6	+0.4
ASHO	**Ashiyiah**	**2.28**	**175**	⇑P	Pn	21 06 41.9	-0.1
	SNR=18						
ASHO	**Ashiyiah**	**2.28**	**175**	Pn	Pn	21 06 42.5	+0.5
	SNR=18						
ASUD	**Al Ashush, Dub**	**2.37**	**191**	Pn	Pn	21 06 44.6	+1.3
	SNR=23						
GHIR	**Ghir-Karzin**	**2.85**	**298**	*e*Pn	Pn	21 06 53.6	+3.7
GHIR				AML	AML	21 07 58.9	
	comp=E,68nm,0.6s						
GHIR				AML	AML	21 08 04.7	
	comp=N,71nm,0.6s						
KRBR	**Kerman**	**3.12**	**15**	*e*Pn	Pn	21 06 51.7	-1.9
KRBR				*e*Sg	Sn	21 07 33.3	+2.4
KRBR				AML	AML	21 07 47.5	
	comp=E,111nm,0.6s						
KRBR				AML	AML	21 07 49.4	
	comp=N,76nm,0.6s						
KRBR	**Kerman**	**3.12**	**15**	*e*Pn	Pn	21 06 51.7	-1.9
	SNR=54						
KRBR				*e*Sg	Sn	21 07 33.3	+2.4
	SNR=95						
NASN	**Na'in**	**6.38**	**336**	*e*Pn	Pn	21 07 39.2	+0.7
UMR	**Umm Al-Rimmam**	**7.61**	**292**	*e*P	Pn	21 07 54.7	-0.7
NAY	**Al-Naaiem**	**7.93**	**289**	*e*P	Pn	21 07 59.5	-0.2
	baz=285						
NAY				AML	AML	21 09 27.6	
	comp=Z,3.0nm,0.5s,baz=285						
MIB	**Mutribah**	**8.00**	**293**	*e*P	Pn	21 08 00.1	-0.6
	baz=289						
MIB				AML	AML	21 09 30.3	
	comp=Z,4.0nm,0.4s,baz=289						
RST	**Umm Al-Ruwaisa**	**8.20**	**290**	*e*P	Pn	21 08 03.1	-0.3
	baz=286						
RST				AML	AML	21 09 36.1	
	comp=Z,10.0nm,0.6s,baz=286						

ISCJB 23 21:15:08.5±0.8,1715S±005×6975W±006,h59km±8km, mb4.2/15,MS3.7/3,Error ellipse: s-maj=11.1km s-min=6.1km az=149.5
NEIC 23 21:15:09.4±0.6,1718S×6983W,h49km±5km,mb4.3/8, Error ellipse: s-maj=7.4km s-min=4.8km az=63.0
IDC 23 21:15:10.7±2.2,1717S×6975W,h60km±21km,mb3.8/9, mb1 4.0/11,mb1mx3.9/19,mbtmp3.8/11,ML4.7/2,MS3.7/3, Ms1 3.6/3,ms1mx3.1/25,Error ellipse: s-maj=23.0km s-min=15.1km az=101.0

ISC 23 21:15:10.5±0.7,1717S±005×6976W±006,h61km±7km,n49, σ0§63/49,mb4.2/15,Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.79**	**61**	P	Pn	21 15 40.8	+1.6
LPAZ	32nm,0.3s,baz=238,slow=13,SNR=437			S	Sn	21 16 07.9	+7.0
	17nm,0.3s,baz=262,slow=19,SNR=4.9						
ARE	**Arequipa**	**1.80**	**293**	*e*P	Pn	21 15 35.0	-4.2
ARE				*e*S	Sn	21 16 01.0	0.0
LVC	**Limon Verde**	**5.48**	**172**	P	Pn	21 16 28.7	-0.9
	2.8nm,0.3s,baz=353,slow=5.5,SNR=20						
LVC				S	Sn	21 17 33.6	+2.4
	1.7nm,0.3s,baz=208,slow=16,SNR=2.1						
LVC	**Limon Verde**	**5.48**	**172**	P	Pn	21 16 28.7	-0.9
LVC				S	Sn	21 17 33.6	+2.4
SIV	**San Ignacio**	**8.42**	**83**	P	Pn	21 17 09.2	-0.7
	3.3nm,0.3s,baz=267,slow=14,SNR=29						
NNA	**Nana**	**8.57**	**306**	*e*Pn	Pn	21 17 11.8	-0.1
LCO	**Las Campanas**	**11.82**	**184**	*e*Pn	Pn	21 17 56.2	-0.1
CFAA	**Coronel Fontan**	**14.44**	**175**	P	Pn	21 18 30.7	-0.9
	baz=353,slow=11,SNR=3.2						
CPUP	**Villa Florida**	**14.71**	**130**	*e*Pn	Pn	21 18 35.1	-0.1
OTAV	**Otavalo**	**19.30**	**333**	*e*P	Pn	21 19 31.7	-0.5
	1.8nm,0.7s						
BDFB	**Brasilia**	**20.92**	**89**	LR	LR	21 28 24.1	
	comp=Z,66nm,21.0s,baz=267,slow=38						
TRQA	**Tornquist**	**21.91**	**163**	*e*P	P	21 19 58.0	-0.6
	6.7nm,0.7s,mb4.2						
PLCA	**Paso Flores**	**23.49**	**182**	P	P	21 20 14.5	-0.4
	3.4nm,0.9s,mb3.8,baz=16,slow=13,SNR=4.9						
PLCA	**Paso Flores**	**23.49**	**182**	*e*P	P	21 20 14.7	-0.2
	3.1nm,0.8s,mb3.8						
SDV	**Santo Domingo**	**25.90**	**358**	P	P	21 20 36.6	-0.4
PAYG	**Puerto Ayora**	**26.01**	**307**	*e*P	P	21 20 38.2	+0.1
	58nm,0.9s,mb5.1						
JTS	**JuntasAbangare**	**31.14**	**330**	P	P	21 21 22.9	-0.8
BBGH	**Gun Hill**	**31.76**	**19**	P	P	21 21 28.3	-0.8
EFI	**East Falkland**	**35.66**	**167**	P	P	21 22 03.0	+0.4
PMSA	**Palmer Station**	**47.72**	**177**	*e*P	P	21 23 40.4	-0.6
	16nm,1.0s,mb5.0						
BBSR	**BB Station**	**49.49**	**6**	P	P	21 23 54.5	-0.5
TXAR	**Lajitas Array**	**56.64**	**324**	P	P	21 24 47.7	+0.1
	0.3nm,0.7s,mb3.4,baz=142,slow=10,SNR=4.6						
TXAR	**Lajitas Array**	**56.64**	**324**	P	P	21 24 47.7	+0.1
SIUC	**Southern Illin**	**57.58**	**342**	*e*P	P	21 24 54.1	+0.1
	18nm,0.3s						
WMOK	**Wichita Mounta**	**58.53**	**332**	*e*P	P	21 25 00.7	0.0
	0.9nm,0.6s,mb4.0						
ANMO	**Albuquerque**	**62.46**	**326**	P	P	21 25 27.1	-0.4
SDCO	**Great Sand Dun**	**64.13**	**329**	*e*P	P	21 25 39.0	+0.5
SNAA	**Sanae**	**66.62**	**162**	*e*P	P	21 25 54.6	+0.4
	4.2nm,1.3s,mb4.3						
DBIC	**Dimbokro**	**68.35**	**75**	P	P	21 26 06.3	+0.2
	5.0nm,0.8s,mb4.6,baz=271,slow=6.2,SNR=6.1						
DBIC				LR	LR	21 52 06.5	
	comp=Z,66nm,18.8s,baz=212,slow=32						
DBIC	**Dimbokro**	**68.35**	**75**	P	P	21 26 06.3	+0.2
DBIC				LR	LR	21 52 06.5	
PDAR	**Pinedale Array**	**69.97**	**330**	P	P	21 26 15.9	+0.5
	0.6nm,0.6s,mb3.7,baz=127,slow=8.9,SNR=6.1						
HWUT	**Hardware Ranch**	**70.10**	**328**	*e*P	P	21 26 16.7	+0.4
TPH	**Tonopah**	**70.73**	**322**	*e*P	P	21 26 20.4	+0.2
ULM	**Lac du Bonnet**	**70.96**	**343**	P	P	21 26 21.1	-0.2
	1.6nm,0.4s,mb4.3,baz=138,slow=7.5,SNR=5.3						
NVAR	**Mina Array Bea**	**71.61**	**322**	P	P	21 26 26.3	+0.8
	0.5nm,0.7s,mb3.6,baz=143,slow=6.8,SNR=4.2						
CMB	**Columbia Colle**	**72.61**	**320**	P	P	21 26 31.7	+0.1
HLID	**Hailey**	**72.97**	**328**	*e*P	P	21 26 34.0	+0.5
WALA	**Waterton Lakes**	**76.69**	**332**	*e*P	P	21 26 54.9	0.0
TORD	**Toroldi Ar. Bea**	**76.71**	**72**	P	P	21 26 55.1	-0.7
	3.0nm,0.6s,mb4.4,baz=254,slow=3.2,SNR=54						
TORD				LR	LR	21 59 24.4	
	comp=Z,101nm,18.6s,baz=100,slow=35						
NEW	**Newport**	**77.61**	**330**	P	P	21 27 00.8	+0.7
ESDC	**Sonseca Array**	**83.34**	**45**	P	P	21 27 31.3	+0.3
	0.8nm,0.8s,mb3.8,baz=253,slow=5.1,SNR=4.9						
YKA	**Yellowknife Ar**	**86.85**	**341**	P	P	21 27 48.4	+0.4
	2.2nm,0.9s,mb4.4,baz=134,slow=4.9,SNR=9.7						
YKA	**Yellowknife Ar**	**86.85**	**341**	P	P	21 27 48.4	+0.4
LBTB	**Lobatse**	**87.58**	**115**	*e*P	P	21 27 52.0	-0.6
	5.5nm,1.1s,mb4.7						
MAW	**Mawson**	**88.69**	**164**	*e*P	P	21 27 56.8	-0.1
DLBC	**Dease Lake**	**90.00**	**333**	*e*P	P	21 28 03.7	+0.6
WRA	**Warramunga Arr**	**136.18**	**214**	PKP	PKPdf	21 34 27.5	+1.6
	0.4nm,0.8s,baz=140,slow=1.9,SNR=3.4						
ZALV	**Zalesovo Beam**	**138.33**	**22**	PKP	PKPdf	21 34 30.4	+1.6
	0.7nm,0.5s,baz=302,slow=2.8,SNR=4.7						
SONM	**Songino Array**	**149.25**	**5**	PKPbc	PKPbc	21 34 54.3	+2.0
	2.2nm,0.9s,baz=321,slow=1.9,SNR=9.2						

IDC 23 21:35:26.1±1.0,129N×9706E,h0km,mb4.2/15, mb1 4.3/16,mb1mx4.2/22,mbtmp4.2/16,ML4.3/1,MS3.9/8, Ms1 3.9/8,ms1mx3.5/36,Error ellipse: s-maj=35.1km s-min=14.6km az=55.0
DJA 23 21:35:26,1.16N×96.76E,h21km,MLv4.8/4
BJI 23 21:35:28.6,089N×9730E,h57km,mB4.9,mb4.7,Ms4.6, Msz4.4
MOS 23 21:35:29.1±0.6,135N×9709E,h33km,mb5.0/9,Error ellipse: s-maj=14.6km s-min=7.7km az=96.2
ISCJB 23 21:35:29.2±1.5,134N±006×9710E±007,h32km±10km, mb4.6/44,MS4.1/11,Error ellipse: s-maj=13.1km s-min=6.6km az=143.2
NEIC 23 21:35:31.3±0.3,133N×9712E,h35km,mb4.7/12,Error ellipse: s-maj=9.1km s-min=4.9km az=59.0

ISC 23 21:35:28.7±1.6,132N±005×9708E±006,h14km±9km,n84, σ0§97/83,mb4.6/44,MS4.1/11,2C-1D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.50**	**92**	⇑*e*P	Pg	21 35 39.0	+0.5
TRSI	**Tarutung**	**2.01**	**69**	P	Pn	21 36 02.9	+0.8
	0.0nm,0.0s						
PSI	**Prapat**	**2.36**	**51**	⇑*e*P	Pn	21 36 07.0	0.0
TSI	**Tuntungan**	**2.63**	**34**	P	Pn	21 36 10.7	0.0
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.76**	**118**	P	Pn	21 36 28.2	+2.0
	0.0nm,0.0s						
BSI	**Banda Aceh**	**4.52**	**337**	P	Pn	21 36 34.6	-2.1
	0.0nm,0.0s						
SNG	**Songkhla**	**6.81**	**31**	P	Pn	21 37 07.0	-1.2
	280nm,0.8s						
TPI	**Tanjungpandan**	**11.32**	**111**	P	Pn	21 38 10.9	+0.8
	0.0nm,0.0s						
BWJI	**Bawean**	**17.11**	**115**	P	Pn	21 39 29.8	+2.2
	0.0nm,0.0s						
CM31	**Chiang Mai Arr**	**17.13**	**6**	*e*Pn	Pn	21 39 27.1	-0.8
CMAR	**Chiang Mai Arr**	**17.13**	**6**	P	Pn	21 39 26.9	-1.0
	0.4nm,0.3s,baz=193,slow=13,SNR=27						
CMAR				LR	LR	21 46 35.0	
	comp=Z,486nm,19.0s,baz=185,slow=39						
CHTO	**Chiang Mai**	**17.48**	**6**	*e*P	Pn	21 39 30.7	-1.5
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	**Chiang Mai**	**17.48**	**6**	*e*Pn	Pn	21 39 30.6	-1.6
	comp=Z,5.5nm,0.8s						
NANT	**Nan**	**17.73**	**11**	P	Pn	21 39 32.0	-3.3
KMI	**Kunming**	**24.29**	**13**	⇓P	P	21 40 47.1	+1.4
KMI				AMB	AMB		
	comp=Z,22nm,1.5s,mb4.4						
KMI				AMB	AMB		
	comp=Z,335nm,3.1s						
KMI				LR	LR		
	comp=N,1μm,14.9s,MS4.7						
KMI				LR	LR		
	comp=E,804nm,11.1s,MS4.7						
KMI				LR	LR		
	comp=Z,2μm,12.4s,MS4.7						
KDI	**Kendari**	**26.06**	**102**	P	P	21 41 02.0	0.0
	comp=Z,0.0nm,0.0s						
ODAN	**Odare**	**27.05**	**341**	*e*P	P	21 41 12.0	+1.3
	comp=Z,50nm,0.7s,mb5.2						
JIRN	**Jiri**	**28.19**	**339**	*e*P	P	21 41 22.7	+1.7
	comp=Z,54nm,0.8s,mb5.2						
GUN	**Gumba**	**28.53**	**339**	*e*P	P	21 41 26.2	+2.2
	comp=Z,42nm,0.7s,mb5.3						
DMN	**Daman**	**28.55**	**337**	*e*P	P	21 41 25.7	+1.6
KKN	**Kakani**	**28.64**	**338**	*e*P	P	21 41 26.1	+1.1
	comp=Z,24nm,0.9s,mb5.0						
LSA	**Lhasa**	**28.78**	**349**	P	P	21 41 29.0	+2.8
LSA				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.0						
LSA	**Lhasa**	**28.78**	**349**	*e*P	P	21 41 27.2

comp=Z,31nm,0.7s,mb5.0
BJI LR LR
comp=N,248nm,13.2s,MS4.4
BJI LR LR
comp=E,244nm,14.7s,MS4.4
BJI LR LR
comp=Z,177nm,24.3s
ASAR Alice Springs 43.56 127 P **P** 21 43 32.1 -0.3
comp=Z,1.1nm,0.7s,mb3.7,baz=301,slow=8.0,SNR=13
UCH Uchtor 45.49 336 *eP* **P** 21 43 48.3 +0.7
comp=Z,5.3nm,0.8s,mb4.4
AML Almayashu 45.75 336 *eP* **P** 21 43 50.8 +1.3
comp=Z,3.4nm,0.6s,mb4.5
AML *ePcP* PcP 21 45 27.1 -0.2
KSRS Korea Array 45.82 35 P **P** 21 43 49.9 -0.4
comp=Z,7.0nm,0.8s,mb4.6,baz=221,slow=9.4,SNR=30
KSRS LR LR 22 03 44.0
comp=Z,134nm,20.0s,MS3.9,baz=106,slow=37
SONM Songino Array 47.03 9 P **P** 21 44 00.1 +0.5
comp=Z,7.1nm,0.7s,mb4.7,baz=194,slow=9.2,SNR=56
MK31 Makanchi Array 47.10 346 *eP* **P** 21 44 00.1 0.0
MKAR Makanchi Array 47.10 346 P **P** 21 44 00.4 +0.3
comp=Z,4.3nm,0.7s,mb4.5,baz=159,slow=7.9,SNR=33
MKAR LR LR 22 07 34.3
comp=Z,111nm,19.8s,MS3.8,baz=161,slow=41
ULN Ulaanbaatar 47.16 9 P **P** 21 44 00.7 +0.1
ULN pmax pmax
comp=Z,14nm,0.6s,mb5.1
ULN Ulaanbaatar 47.16 9 P **P** 21 44 00.7 +0.1
comp=Z,14nm,0.6s,mb5.1
KK31 Karatay Array 47.90 334 *i* P **P** 21 44 07.0 +0.6
KK31 pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
GUMO Guam 48.82 73 *eP* **P** 21 44 13.6 -0.4
ZAK Zakamensk 49.17 5 *eP* **P** 21 44 16.3 +0.2
ZAK pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
CN2 Changchun 49.25 27 *eP* **P** 21 44 16.0 -0.9
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
HIA Hailar 51.57 19 *eP* **P** 21 44 33.3 -1.0
HIA pmax pmax
comp=Z,5.0nm,0.4s
HIA Hailar 51.57 19 *eP* **P** 21 44 33.3 -0.9
comp=Z,4.6nm,0.4s,mb4.8
KURK Kurchatov 51.65 345 P **P** 21 44 34.6 -0.2
comp=Z,4.6nm,0.7s,mb4.5,baz=168,slow=7.0,SNR=30
KURK LR LR 22 09 59.7
comp=Z,108nm,20.5s,MS3.9,baz=165,slow=40
MAJO Matsushiro 51.69 42 P **P** 21 44 35.0 -0.4
MJAR Matsushiro Arr 51.69 42 P **P** 21 44 35.0 -0.4
comp=Z,1.2nm,0.7s,mb3.9,baz=220,slow=5.5,SNR=5.2
MDJ Mudanjiang 51.82 29 *eP* **P** 21 44 35.8 -0.4
comp=Z,6.3nm,0.5s,mb4.8
ZAA0 Zalesovo Array 53.42 351 *eP* **P** 21 44 48.1 +0.2
ZALV Zalesovo Beam 53.42 351 P **P** 21 44 48.0 0.0
comp=Z,11nm,0.6s,mb5.0,baz=178,slow=6.3,SNR=60
ZALV LR LR 22 13 17.2
comp=Z,85nm,18.6s,MS3.8,baz=151,slow=42
STKA Stephens Creek 53.52 132 *eP* **P** 21 44 48.5 -0.6
STKA Stephens Creek 53.52 132 P **P** 21 44 49.9 +0.8
comp=Z,1.9nm,0.7s,mb4.1,baz=334,slow=15,SNR=5.4
STKA LR LR 22 09 36.6
comp=Z,258nm,20.5s,MS4.3,baz=275,slow=38
BVA0 Borovoye Array 56.10 341 *i* P **P** 21 45 06.9 -0.4
BVA0 pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
BRVK Borovoye 56.16 341 *eP* **P** 21 45 07.4 -0.4
BRVK *e* 21 46 01.6
BRVK pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
BRVK Borovoye 56.16 341 *eP* **P** 21 45 07.4 -0.4
comp=Z,7.9nm,0.8s,mb4.8
BRVK *ePcP* PcP 21 46 01.6 -3.9
KLR Kul'dur 56.20 27 *eP* **P** 21 45 04.8 -3.4
AB31 Akbulak array 57.35 332 *i* P **P** 21 45 15.7 -0.6
AB31 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
BOD Bodaibo 57.92 11 *eP* **P** 21 45 20.2 +0.1
BOD pmax pmax
comp=Z,6.0nm,1.7s,mb4.3
YSS Yuzh-Sakhalins 60.32 34 P **P** 21 45 36.4 -0.6
GNI Garni 61.13 316 LR LR 22 14 53.4
comp=Z,57nm,19.1s,MS3.7,baz=183,slow=39
SVE Sverdlovsk 62.53 338 *eP* **P** 21 45 51.3 -0.5
SVE pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
ARU Arti 63.03 337 *eP* **P** 21 45 54.2 -0.9
ARU pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
ARU Arti 63.03 337 *eP* **P** 21 45 54.2 -0.9
comp=Z,3.6nm,0.7s,mb4.6
MALT Malatya 64.96 312 P **P** 21 46 07.4 -0.8
YAK Yakutsk 65.34 16 *eP* **P** 21 46 09.1 -1.1
YAK pmax pmax
comp=Z,24nm,0.9s,mb5.2
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK Yakutsk 65.34 16 *eP* **P** 21 46 09.4 -0.7
comp=N,27nm,0.7s,mb5.4
PETK Petropavlovsk- **71.70 34** P **P** 21 46 49.7 -0.4
comp=N,3.2nm,0.8s,mb4.3,baz=238,slow=8.3,SNR=2.5
LBTB Lobatse 73.83 244 *eP* **P** 21 47 02.4 -1.0
AKASG Malin Array Be 75.09 322 P **P** 21 47 08.9 -1.3
comp=N,0.4nm,0.4s,mb3.7,baz=114,slow=3.5,SNR=4.1
ARCES ARCESS Array B 82.38 340 P **P** 21 47 49.5 -0.3
comp=N,1.3nm,0.7s,mb4.0,baz=101,slow=5.6,SNR=9.8
GERES GERESS Array B 84.64 319 P **P** 21 48 02.4 +0.4
comp=N,0.8nm,0.9s,mb3.9,baz=49,slow=4.1,SNR=5.7
NOA NORSAR Array B 86.84 331 P **P** 21 48 12.5 -0.1
comp=N,0.5nm,0.7s,mb3.9,baz=118,slow=4.0,SNR=3.3
TXAR Lajitas Array 143.63 31 PKP PKPdf 21 55 01.2 -2.7
comp=N,0.4nm,0.8s,baz=36,slow=1.7,SNR=4.5

*ISCJB **23** 21:36:13.9±1.0, 21.11S×005×6832W±007, h96km±10km, mb4.4/13, Error ellipse: s-maj=10.8km s-min=7.8km az=2.6*
*NEIC **23** 21:36:17.0±0.7, 21.17S×6835W, h111km±7km, mb4.3/8, Error ellipse: s-maj=12.6km s-min=7.4km az=84.0*
*IDC **23** 21:36:18.3±0.9, 21.12S×6823W, h119km±8km, mb4.1/9, mb1 4.1/13, mb1mx3.9/21, mbtmp4.1/13, Error ellipse: s-maj=23.0km s-min=10.5km az=115.0*
ISC 23 21:36:15.1±0.8, 2113S±004×6834W±007, h91km±8km, n48, σ1°06/45, mb4.4/13, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.57**	**200**	P		**Pn**	**21 36 47.2**	**+5.4**
	397nm,0.3s,baz=14,slow=8.9,SNR=2511							
LVC				S		**Sn**	**21 37 09.4**	**+7.3**
	158nm,0.3s,baz=107,slow=23,SNR=35							
LPAZ	**La Paz**	**4.82**	**2**	P		**Pn**	**21 37 30.7**	**+5.4**
	20nm,0.3s,baz=173,slow=9.0,SNR=278							
LPAZ	**La Paz**	**4.82**	**2**	P		**Pn**	**21 37 30.7**	**+5.4**
LPAZ				Sn		**Sn**	**21 38 17.5**	**-2.4**
ARE	**Arequipa**	**5.52**	**327**	*eP*		**Pn**	**21 37 36.0**	**+1.2**
LCO	**Las Campanas**	**8.14**	**195**	*ePn*		**Pn**	**21 38 08.9**	**-1.5**
	70nm,0.4s							
LCO				*eSn*		**Sn**	**21 39 35.9**	**-4.9**
SIV	**San Ignacio**	**8.58**	**55**	P		**Pn**	**21 38 18.5**	**+1.9**
	21nm,0.3s,baz=254,slow=11,SNR=304							
SIV				S		**Sn**	**21 39 51.5**	**-0.1**
	baz=314,slow=22,SNR=4.2							
CFAA	**Coronel Fontan**	**10.44**	**180**	P		**Pn**	**21 38 40.8**	**-0.9**
	0.6nm,0.3s,baz=354,slow=14,SNR=36							
CFAA				S		**Sn**	**21 40 29.3**	**-7.5**
	0.1nm,0.3s,baz=90,slow=20,SNR=3.0							
NNA	**Nana**	**12.20**	**317**	Pn		**Pn**	**21 39 07.2**	**+1.3**
TRQA	**Tornquist**	**17.75**	**163**	*eP*		**Pn**	**21 40 16.5**	**+0.3**
	15nm,1.3s							
PLCA	**Paso Flores**	**19.63**	**185**	P		**Pn**	**21 40 38.2**	**-0.5**
	0.4nm,0.3s,baz=5.7,slow=13,SNR=15							
PLCA	**Paso Flores**	**19.63**	**185**	*eP*		**Pn**	**21 40 38.0**	**-0.7**
	5.2nm,0.7s							
BDFB	**Brasilia**	**20.04**	**78**	P		**P**	**21 40 40.5**	**-0.5**
	0.5nm,0.3s,baz=242,slow=15,SNR=3.5							
BDFB	**Brasilia**	**20.04**	**78**	*eP*		**P**	**21 40 41.4**	**+0.4**
	3.5nm,0.8s							
OTAV	**Otavalo**	**23.42**	**334**	*eP*		**P**	**21 41 19.8**	**+3.5**
	29nm,1.4s,mb4.4							
PCRV	**Puerto La Cruz**	**31.32**	**7**	P		**P**	**21 42 26.8**	**-0.2**
	23nm,1.0s,mb4.8,baz=66,slow=5.7,SNR=6.3							
USHA	**Ushuaia**	**33.65**	**180**	P		**P**	**21 42 46.0**	**-0.9**
	7.4nm,0.9s,mb4.5,baz=321,slow=6.5,SNR=2.4							
SJG	**San Juan**	**39.05**	**3**	P		**P**	**21 43 30.9**	**-2.4**
OXF	**Oxford**	**58.85**	**340**	P		**P**	**21 46 05.2**	**+0.9**
VNA3	**Neumayer Olymp**	**60.26**	**161**	*e*		**P**	**21 46 14.5**	**+1.0**
VNA3				*e*			21 46 18.3	
VNA1	**Neumayer--Stat**	**60.46**	**161**	*e*		**P**	**21 46 16.4**	**+1.5**
VNA2	**Neumayer--Watz**	**60.83**	**161**	*e*		**P**	**21 46 18.6**	**+1.2**
VNA2				*e*			21 46 21.9	
BRNJ	**Basking Ridge**	**61.76**	**355**	P		**P**	**21 46 24.6**	**+0.6**
SNAA	**Sanae**	**62.46**	**161**	*e*		**P**	**21 46 29.0**	**+0.7**
SNAA				*e*			21 46 32.5	
SNAA	**Sanae**	**62.46**	**161**	*eP*		**P**	**21 46 29.1**	**+0.8**
	7.8nm,1.0s,mb4.7							
WMOK	**Wichita Mounta**	**62.64**	**332**	P		**P**	**21 46 30.4**	**+0.4**
DBIC	**Dimbokro**	**68.12**	**73**	P		**P**	**21 47 05.8**	**-0.1**
	4.7nm,0.8s,mb4.4,baz=219,slow=7.8,SNR=7.8							
RSSD	**Black Hills**	**72.69**	**334**	P		**P**	**21 47 31.1**	**-1.9**
ISA	**Isabella**	**73.78**	**319**	*eP*		**P**	**21 47 40.2**	**+0.6**
SCHQ	**Schefferville**	**75.66**	**1**	*eP*		**P**	**21 47 48.7**	**-1.3**
TOA0	**Torodi Ar. Sit**	**76.73**	**70**	*eP*		**P**	**21 47 56.3**	**-0.7**
TORD	**Torodi Ar. Bea**	**76.73**	**70**	P		**P**	**21 47 56.4**	**-0.6**
	7.5nm,0.5s,mb4.7,baz=255,slow=5.3,SNR=239							
TSUM	**Tsumeb**	**79.64**	**107**	*eP*		**P**	**21 48 12.6**	**-0.5**
	3.9nm,0.6s,mb4.4							
BOSA	**Boshof**	**83.15**	**118**	P		**P**	**21 48 31.0**	**-0.5**
	1.6nm,0.5s,mb4.1,baz=168,slow=8.0,SNR=6.7							
MAW	**Mawson**	**84.53**	**163**	P		**P**	**21 48 38.1**	**+0.4**
	3.2nm,0.5s,mb4.5,baz=208,slow=5.6,SNR=13							
MAW	**Mawson**	**84.53**	**163**	*eP*		**P**	**21 48 37.4**	**-0.3**
	3.0nm,0.6s,mb4.4							
LBTB	**Lobatse**	**84.69**	**115**	*eP*		**P**	**21 48 39.8**	**+0.4**
	4.0nm,0.6s,mb4.5							
ESDC	**Sonseca Array**	**85.20**	**44**	P		**P**	**21 48 41.3**	**-0.1**
	0.2nm,0.4s,mb3.4,baz=230,slow=4.5,SNR=5.7							
LSZ	**Lusaka**	**90.49**	**106**	P		**P**	**21 49 08.3**	**+0.9**
	0.8nm,0.5s,mb4.1,baz=201,slow=6.3,SNR=4.5							
YKA	**Yellowknife Ar**	**91.01**	**340**	P		**P**	**21 49 07.7**	**-0.9**
	0.8nm,0.5s,mb4.1,baz=134,slow=4.5,SNR=9.5							
YKA	**Yellowknife Ar**	**91.01**	**340**	P		**P**	**21 49 07.7**	**-0.9**
ASAR	**Alice Springs**	**130.49**	**207**	PKP	PKPdf		21 55 15.2	-0.8
	1.1nm,0.6s,baz=127,slow=1.7,SNR=14							
WRA	**Warramunga Arr**	**133.54**	**210**	PKP	PKPdf		21 55 21.0	-0.7
	1.6nm,0.6s,baz=158,slow=1.7,SNR=27							
WRAB	**Tennant Creek**	**133.55**	**210**	*ePKPdf*	PKPdf		21 55 21.2	-0.5
KURK	**Kurchatov**	**140.73**	**33**	PKP	PKPdf		21 55 34.5	+0.5
	0.6nm,0.6s,baz=305,slow=2.8,SNR=4.1							
ZALV	**Zalesovo Beam**	**141.39**	**25**	PKP	PKPdf		21 55 35.2	+0.1
	1.4nm,0.5s,baz=316,slow=2.0,SNR=7.2							
MK31	**Makanchi Array**	**145.02**	**36**	*ePKP*	PKPdf		21 55 40.8	-0.9
MKAR	**Makanchi Array**	**145.02**	**36**	PKP	PKPdf		21 55 41.3	-0.4
	5.5nm,0.7s,baz=336,slow=2.7,SNR=46							
SONM	**Songino Array**	**153.02**	**8**	PKPbc	PKPbc		21 56 01.8	-0.1
	0.7nm,0.6s,baz=289,slow=1.1,SNR=5.1							

*IDC **23** 21:46:30.0±4.4, 16.11S×16884E, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.0/17, mbtmp4.2/7, MS3.6/4, Ms1 3.6/4, ms1mx3.1/26, Error ellipse: s-maj=115.9km s-min=35.4km az=122.0*
*ISCJB **23** 21:46:48.3±4.0, 162S±02×1679E±0.1, h115km±39km, mb4.2/13, Error ellipse: s-maj=34.2km s-min=15.7km az=174.3*
*NEIC **23** 21:46:48.5±2.2, 1607S×16791E, h104km±21km, mb4.5/7, Error ellipse: s-maj=22.6km s-min=9.9km az=170.0*
ISC 23 21:46:48.4±3.2, 161S±02×16792E±010, h102km±31km, n29, σ0°77/24, mb4.2/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.10**	**193**	*eP*		**Pn**	**21 48 15.9**	**-0.2**
DZM				*eS*		**Sn**	**21 49 32.4**	**+7.9**
DZM	**Mont Dzumac**	**6.10**	**193**	*ePn*		**Pn**	**21 48 16.5**	**+0.4**
DZM				*eSn*		**Sn**	**21 49 23.9**	**-0.6**
HNR	**Honiara**	**10.21**	**310**	LR		LR	21 52 59.5	
	comp=Z,131nm,18.2s,baz=318,slow=36							
CTA	**Charters Tower**	**20.96**	**256**	LR		LR	21 57 31.0	
	comp=Z,178nm,21.4s,baz=242,slow=30							
PMG	**Port Moresby**	**21.30**	**286**	*eP*		**P**	**21 51 26.7**	**-0.3**
	15nm,0.8s,mb4.4							
STKA	**Stephens Creek**	**28.61**	**232**	P		**P**	**21 52 34.5**	**-0.7**
	1.1nm,0.7s,mb3.6,baz=76,slow=3.3,SNR=2.3							
STKA	**Stephens Creek**	**28.61**	**232**	*eP*		**P**	**21 52 35.4**	**+0.3**
	10nm,1.2s,mb4.3							
WB2	**Warramunga Arr**	**32.11**	**258**	*eP*		**P**	**21 53 06.4**	**+0.2**
WRAB	**Tennant Creek**	**32.12**	**258**	*eP*		**P**	**21 53 05.7**	**-0.5**
	3.8nm,0.9s,mb4.1							
WRA	**Warramunga Arr**	**32.12**	**258**	P		**P**	**21 53 06.2**	**-0.1**
	1.1nm,0.7s,mb3.7,baz=80,slow=6.0,SNR=13							
ASAR	**Alice Springs**	**32.80**	**251**	P		**P**	**21 53 12.8**	**+0.7**
	3.7nm,0.7s,mb4.3,baz=77,slow=9.0,SNR=30							
GUMO	**Guam**	**37.27**	**321**	LR		LR	22 06 42.1	
	comp=Z,102nm,20.9s,baz=111,slow=32							
FITZ	**Fitzroy Crossi**	**40.39**	**261**	*eP*		**P**	**21 54 17.9**	**+1.2**
TBI	**Tubuai**	**40.65**	**107**	*eLR*		LR	22 06 03.1	
	111nm,32.8s							
PPT	**Papeete**	**40.65**	**98**	*eLQ*			22 04 20.3	
	157nm,22.2s							
PPT				*eLR*		LR	22 06 00.4	
	150nm,25.2s							
PPT	**Papeete**	**40.65**	**98**	LR		LR	22 07 38.6	
	comp=Z,91nm,18.8s,baz=143,slow=32							
BATI	**Baumata**	**43.42**	**272**	P		**P**	**21 54 42.3**	**+0.9**
	8.2nm,0.4s,mb4.8,baz=198,slow=3.2,SNR=4.9							
MBWA	**Marble Bar**	**45.80**	**256**	P		**P**	**21 54 59.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**76.07**	**294**	P		**P**	**21 58 25.6**	**+0.4**
	0.7nm,0.8s,mb3.5,baz=125,slow=4.8,SNR=7.2							
SONM	**Songino Array**	**83.96**	**323**	P		**P**	**21 59 04.0**	**-3.1**
	0.5nm,0.8s,mb3.4,baz=108,slow=4.7,SNR=2.4							
PMR	**Palmer**	**84.58**	**19**	P		**P**	**21 59 10.8**	**+1.0**
	7.5nm,0.9s,mb4.6							
CMB	**Columbia Colle**	**86.03**	**49**	*eP*		**P**	**21 59 17.2**	**-0.4**
	7.7nm,1.4s,mb4.4							
ISA	**Isabella**	**86.51**	**52**	*eP*		**P**	**21 59 19.7**	**-0.3**
LSA	**Lhasa**	**86.81**	**302**	*eP*		**P**	**21 59 21.2**	**-0.5**
	16nm,2.0s,mb4.6							
SRU	**San Rafael**	**93.63**	**50**	P		**P**	**21 59 53.7**	**+0.4**
	1.8nm,0.6s,mb4.6							
WALA	**Waterton Lakes**	**94.47**	**40**	P		**P**	**21 59 57.5**	**+0.6**
SDCO	**Great Sand Dun**	**97.04**	**53**	P		**P**	**22 00 09.1**	**+0.2**
MKAR	**Makanchi Array**	**98.62**	**316**	P		**P**	**22 00 14.3**	**-1.4**
	0.5nm,0.8s,mb4.1,baz=112,slow=3.4,SNR=2.9							
TOA0	**Torodi Ar. Sit**	**166.35**	**259**	PKPdf	PKPdf		22 06 42.5	0.0

*IDC **23** 21:53:19.6±6.9, 3630N×7093E, h179km±62km, mb3.2/6, mb1 3.3/8, mb1mx3.0/24, mbtmp3.1/8, Error ellipse: s-maj=34.9km s-min=24.5km az=18.0*
*ISCJB **23** 21:53:22.7±0.7, 3660N±005×7112E±009, h218km±8km, mb3.8/8, Error ellipse: s-maj=12.1km s-min=7.8km az=166.4*
*MOS **23** 21:53:24.0±1.2, 3665N×7102E, h226km, mb4.2/4, Error ellipse: s-maj=21.0km s-min=10.7km az=80.4*
*NEIC **23** 21:53:24.2±0.7, 3661N×7107E, h217km±7km, mb4.5/8, Error ellipse: s-maj=13.8km s-min=8.3km az=133.0*
ISC 23 21:53:23.2±0.8, 3651N±006×711E±01, h210km±8km, n44, σ0°71/44, mb3.8/8, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.58**	**221**	*ePn*		**Pn**	**21 54 11.9**	**+3.3**
KBL				*eSn*			21 54 35.2	
AML	**Almayashu**	**5.96**	**19**	P		**Pn**	**21 54 50.0**	**0.0**
	SNR=45							
AML	**Almayashu**	**5.96**	**19**	*ePn*		**Pn**	**21 54 49.8**	**-0.2**
	56nm,0.4s							
AML				*eSn*			21 55 54.1	
UCH	**Uchtor**	**6.29**	**24**	P		**Pn**	**21 54 54.5**	**+0.3**
	SNR=29							
UCH	**Uchtor**	**6.29**	**24**	*ePn*		**Pn**	**21 54 54.6**	**+0.4**
	30nm,0.6s							
UCH				*eS*			21 56 00.7	
EKS2	**Erkin-Say**	**6.48**	**18**	P		**Pn**	**21 54 57.1**	**+0.4**
	SNR=10.0							
EKS2	**Erkin-Say**	**6.48**	**18**	*ePn*		**Pn**	**21 54 56.4**	**-0.3**
	5.4nm,0.6s							
EKS2				*eS*			21 56 06.0	
KK31	**Karatay Array**	**6.60**	**356**	↓↓Pn		**Pn**	**21 54 57.4**	**-0.8**
	0.8nm,0.3s,baz=175,slow=12,SNR=54							
KK31				Sn			21 56 06.7	
	20nm,0.9s,baz=181,slow=22,SNR=16							
AAK	**Ala-Archa**	**6.66**	**22**	P		**Pn**	**21 54 59.3**	**+0.4**
	SNR=9.2							
KBK	**Karagaybulak**	**6.82**	**25**	P		**Pn**	**21 55 01.4**	**+0.4**
	SNR=11							
ULHL	**Ulahol**	**6.98**	**33**	P		**Pn**	**21 55 03.2**	**+0.2**
	SNR=7.9							
CHMS	**Chumysh**	**7.07**	**22**	P		**Pn**	**21 55 03.7**	**-0.5**
	SNR=5.4							
TKM2	**Tokmak 2**	**7.28**	**27**	⇑Pn		**Pn**	**21 55 06.8**	**-0.1**
	12nm,0.6s							
TKM2				⇑Sn			21 56 13.8	
	5.6nm,0.8s							
TKM2	**Tokmak 2**	**7.28**	**27**	*ePN*		**Pn**	**21 55 06.9**	**-0.1**
TKM2				pmax		pmax		
	comp=Z,21nm,0.8s							
TKM2	**Tokmak 2**	**7.28**	**27**	P		**Pn**	**21 55 07.0**	**+0.1**
	SNR=13							
TKM2	**Tokmak 2**	**7.28**	**27**	*ePn*		**Pn**	**21 55 06.9**	**-0.1**
	comp=Z,21nm,0.8s							
SMLA	**Simla**	**7.37**	**135**	*i* P		**Pn**	**21 55 08.7**	**+0.5**
SMLA				*i* S			21 56 30.3	
SMLA				*i* S			21 56 31.0	
SMLA				*ex*	x		21 56 34.2	
	comp=N,195nm,0.3s							
SMLA				*ex*	x		21 56 35.0	
	comp=E,162nm,0.3s							
MKAR	**Makanchi Array**	**13.24**	**36**	P		**Pn**	**21 56 23.3**	**+0.2**
	comp=E,0.1nm,0.3s,baz=212,slow=14,SNR=4.2							
MKAR	**Makanchi Array**	**13.24**	**36**	P		**Pn**	**21 56 23.3**	**+0.2**
MK31	**Makanchi Array**	**13.24**	**36**	P		**Pn**	**21 56 16.3**	**-6.8**
KURK	**Kurchatov**	**15.20**	**19**	*eP*		**Pn**	**21 56 46.1**	**-1.0**
KURK				pmax		pmax		
	comp=Z,8.0nm,1.7s							
KURK	**Kurchatov**	**15.20**	**19**	*ePn*		**Pn**	**21 56 46.1**	**-1.0**
	comp=Z,7.9nm,1.7s							
BRVK	**Borovoye**	**16.56**	**358**	P		**P**	**21 57 02.3**	**0.0**
AKTK	**Aktyubinsk**	**16.81**	**330**	P		**P**	**21 57 04.5**	**-0.5**
AKTO	**Aktyubinsk**	**16.81**	**330**	P		**P**	**21 57 04.5**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=147,slow=7.8,SNR=5.0							
ZALV	**Zalesovo Beam**	**19.88**	**24**	P		**P**	**21 57 39.8**	**+1.5**
	comp=Z,0.7nm,0.4s,baz=207,slow=9.5,SNR=5.3							
ZALV	**Zalesovo Beam**	**19.88**	**24**	P		**P**	**21 57 39.8**	**+1.6**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.4s							
KIV	**Kislovodsk**	**22.85**	**298**	P		**P**	**21 58 08.6**	**+0.5**
ULN	**Ulaanbaatar**	**28.71**	**55**	*eP*		**P**	**21 59 01.1**	**+0.5**
ARCES	**ARCESS Array B**	**41.17**	**338**	P		**P**	**22 00 47.2**	**+0.7**
	comp=Z,1.8nm,0.8s,mb3.5,baz=113,slow=9.1,SNR=11							
ARCES	**ARCESS Array B**	**41.17**	**338**	P		**P**	**22 00 47.2**	**+0.7**
ARCES				pmax		pmax		
	comp=Z,2.0nm,0.8s							
ARCES	**ARCESS Array B**	**41.17**	**338**	P		**P**	**22 00 47.2**	**+0.7**
YAK	**Yakutsk**	**43.91**	**35**	*eP*		**P**	**22 01 08.3**	**-0.4**
YAK				pmax		pmax		
	comp=Z,18nm,0.4s,mb4.8							
YAK	**Yakutsk**	**43.91**	**35**	*eP*		**P**	**22 01 08.3**	**-0.4**
	comp=Z,18nm,0.4s,mb4.8							
NB2	**NORSAR Subarra**	**44.42**	**323**	P		**P**	**22 01 13.0**	**+0.3**
	comp=Z,0.9nm,0.5s,mb3.4,baz=94,slow=7.9							
NOA	**NORSAR Array B**	**44.42**	**323**	P		**P**	**22 01 13.1**	**+0.3**
	comp=Z,1.6nm,0.8s,mb3.4,baz=96,slow=7.7,SNR=3.8							
NOA	**NORSAR Array B**	**44.42**	**323**	P		**P**	**22 01 13.1**	**+0.4**
NOA				pmax		pmax		
	comp=Z,2.0nm,0.8s							
STU	**Stuttgart**	**45.95**	**306**	*eP*		**P**	**22 01 23.8**	**-1.1**
STU				pmax		pmax		
	comp=Z,5.0nm,0.3s,mb4.3							
STU	**Stuttgart**	**45.95**	**306**	*eP*		**P**	**22 01 23.8**	**-1.1**
	comp=Z,4.6nm,0.3s,mb4.3							
TORD	**Torodi Ar. Bea**	**65.80**	**269**	P		**P**	**22 03 44.9**	**-1.2**
	comp=Z,0.2nm,0.5s,mb3.0,baz=45,slow=6.2,SNR=7.7							
TORD	**Torodi Ar. Bea**	**65.80**	**269**	P		**P**	**22 03 44.9**	**-1.2**
COLD	**Coldfoot**	**71.94**	**16**	*eP*		**P**	**22 04 23.1**	**0.0**
	comp=Z,52nm,2.5s,mb4.7							
YKA	**Yellowknife Ar**	**81.23**	**3**	P		**P**	**22 05 15.9**	**+0.8**
	comp=Z,0.4nm,0.4s,mb3.4,baz=350,slow=5.4,SNR=3.4							
WRA	**Warramunga Arr**	**81.93**	**122**	P		**P**	**22 05 19.6**	**+0.2**
	comp=Z,0.4nm,1.0s,mb3.0,baz=324,slow=5.1,SNR=5.7							

*IDC **23** 22:00:32.3±1.4, 2427N×12524E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.3/20, mbtmp3.4/4, ML2.4/1, Error ellipse: s-maj=43.4km s-min=26.7km az=75.0*
*ISCJB **23** 22:00:36.8±0.9, 244N±0.1×12533E±007, h51km±12km, mb3.4/3, Error ellipse: s-maj=24.1km s-min=8.2km az=161.6*
*JMA **23** 22:00:36.0±0.2, 2424N×12524E, h0km, M3.3*
ISC 23 22:00:35.2±1.8, 2418N±010×12532E±005, h14km±12km, n10, σ0°93/15, mb3.4/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.58**	**8**	P		**Pg**	**22 00 47.2**	**+0.6**
JOGS				*eS*		**Sg**	**22 00 55.2**	**+0.9**
JMJ	**Miyako jima 2**	**0.63**	**358**	P		**Pg**	**22 00 47.7**	**+0.2**
JMJ				S		**Sg**	**22 00 56.1**	**+0.2**
JTJ	**Tarama**	**0.72**	**309**	P		**Pg**	**22 00 48.9**	**-0.4**
JTJ				*eS*		**Sg**	**22 00 57.6**	**-1.2**
JIJ	**Ishigaki jima**	**1.09**	**280**	P		**Pb**	**22 00 55.6**	**-0.2**
JIJ				*eS*		**Sb**	**22 01 09.1**	**-0.7**
JKRS	**Kuro-shima**	**1.20**	**273**	P		**Pn**	**22 00 57.6**	**+0.1**
IRIF	**Iriomote-Funau**	**1.46**	**276**	P		**Pn**	**22 01 02.6**	**+1.5**
IRIF				*eS*		**Sn**	**22 01 21.6**	**+1.7**
JOW	**Kunigami**

0.0nm,0.0s
PPBI Pangkal Pinang 5.59 74 P **Pn 22 25 18.0 +0.1**
0.0nm,0.0s
SBJI Serang 5.87 114 P **Pn 22 25 22.0 +0.2**
0.0nm,0.0s
GSI Gunungsitoli 5.90 327⇑*e*P **Pn 22 25 17.0 -5.2**
TRSI Tarutung 5.96 342 P **Pn 22 25 24.7 +1.6**
0.0nm,0.0s
KGM Kluang 6.23 24 ⇑P **Pn 22 25 28.0 +1.3**
MYKOM **Kota Tinggi 6.27 30** ⇓P **Pn 22 25 28.9 +1.6**
TNG Tangerang 6.36 113 P **Pn 22 25 29.5 +0.9**
0.0nm,0.0s
DBJI Dramaga 6.61 116 P **Pn 22 25 32.5 +0.5**
0.0nm,0.0s
SKJI Sukabumi 6.64 120 P **Pn 22 25 32.9 +0.5**
0.0nm,0.0s
CBJI Citeko 6.65 114 P **Pn 22 25 35.6 +3.1**
0.0nm,0.0s
PSI Prapat 6.71 344⇓*e*P **Pn 22 25 32.3 -1.1**
FRIM Kepong 6.95 7 ⇑P **Pn 22 25 38.0 +1.4**
TPI Tanjungpandan 6.96 82 P **Pn 22 25 37.4 +0.7**
0.0nm,0.0s
TPI Tanjungpandan 6.96 82⇑*e*P **Pn 22 25 38.0 +1.3**
TPI *e*S **Sn 22 26 59.0 +4.1**
TSI Tuntungan 7.48 343 P **Pn 22 25 44.6 +0.7**
0.0nm,0.0s
LEM Lembang 7.51 115 P **Pn 22 25 45.8 +1.5**
0.0nm,0.0s
JCJI Jatiwangi 7.98 111 P **Pn 22 25 54.7 +3.9**
0.0nm,0.0s
IPM Ipoh 8.13 2 ⇑P **Pn 22 25 55.4 +2.6**
XMIS Christmas Isla 8.30 144 Pn **Pn 22 25 48.9 -6.3**
KTGM Kuala Trenggan 9.28 15 ⇓P **Pn 22 26 09.4 +0.7**
COCO West Island 9.28 204 *e*Pn **Pn 22 26 07.0 -1.6**
COCO Sn **Sn 22 27 52.1 0.0**
BJII Banjamegara 9.62 112 P **Pn 22 26 13.7 +0.5**
0.0nm,0.0s
BJII Banjamegara 9.62 112⇓*e*P **Pn 22 26 13.4 +0.2**
BJII *e*S **Sn 22 27 50.6 -10**
BSI Banda Aceh 10.64 329 P **Pn 22 26 26.0 -1.2**
0.0nm,0.0s
SNG Songkhla 10.81 359 P **Pn 22 26 28.0 -1.6**
220nm,0.8s
KSM Kuching 10.85 62 ⇑P **Pn 22 26 31.9 +1.8**
KSM Kuching 10.85 62 *e*Pn **Pn 22 26 29.2 -0.9**
KSM *e*Sn **Sn 22 28 33.0 +2.4**
PBKI Pangkalan Bun 10.95 85 P **Pn 22 26 35.8 +4.3**
0.0nm,0.0s
STKI Sintang 11.35 71 P **Pn 22 26 39.6 +2.6**
0.0nm,0.0s
SJI Sawahan 11.67 111 P **Pn 22 26 40.6 -0.7**
0.0nm,0.0s
TRT Tretes 12.47 109⇓*e*P **Pn 22 26 52.0 -0.4**
SBUM Sibu 12.99 62 ⇓P **Pn 22 27 03.4 +4.0**
PLKI Palangkaraya 13.26 84 P **Pn 22 27 04.2 +1.1**
0.0nm,0.0s
BBKI Banjar Baru 14.06 89 P **Pn 22 27 14.5 +0.4**
0.0nm,0.0s
KHKI Kahang-Kahang 15.48 108 P **Pn 22 27 34.3 +1.2**
0.0nm,0.0s
KKM Kota Kinabalu 18.23 58 ⇓P **Pn 22 28 09.2 +1.5**
KKM Kota Kinabalu 18.23 58 *e*Pn **Pn 22 28 08.6 +0.9**
MKS Makassar 18.72 95⇓*e*P **Pn 22 28 13.9 +0.2**
MKS *e*S **Sn 22 31 38.7 -3.8**
TSM Tawau 18.86 65 ⇑P **Pn 22 28 16.5 +1.1**
SDKM Sandakan 18.86 61 ⇓P **Pn 22 28 16.0 +0.5**
KAPI Kappang 18.99 95 P **Pn 22 28 15.5 -1.5**
1µm,0.8s,SNR=16
KAPI Kappang 18.99 95 P **Pn 22 28 15.3 -1.7**
SNR=14
KAPI Kappang 18.99 95 P **Pn 22 28 13.6 -3.4**
4.3nm,0.3s,baz=273,slow=11,SNR=28
KAPI Kappang 18.99 95 *e*Pn **Pn 22 28 14.9 -2.1**
KDM Kudat 19.21 57 ⇑P **Pn 22 28 20.0 +0.5**
NST Nakhon Sawan 19.26 358 P **Pn 22 28 15.5 -4.6**
PCI Palu 19.27 82 P **Pn 22 28 19.8 -0.5**
0.0nm,0.0s
PCI Palu 19.27 82⇑*e*P **Pn 22 28 20.0 -0.3**
UBT Ubonrachathani 19.29 13 ⇓P **Pn 22 28 19.0 -1.6**
MYLDM **Lahad Datu 19.80 64** ⇑P **Pn 22 28 28.0 +1.3**
BDT Bhumibol Dam 20.88 355 P **P 22 28 34.5 -2.2**
27nm,1.0s
KDI Kendari 21.82 91 P **P 22 28 46.4 -0.5**
0.0nm,0.0s
KDI Kendari 21.82 91⇑*e*P **P 22 28 46.1 -0.8**
KDI *e*S **S 22 32 43.6 -3.2**
CM31 Chiang Mai Arr 22.09 355 *e*P **P 22 28 47.7 -1.9**
CMAR Chiang Mai Arr 22.09 355 P **P 22 28 47.2 -2.4**
45nm,0.8s,mb5.0,baz=184,slow=9.9,SNR=50
CMAR LR LR 22 38 10.4
comp=Z,3µm,19.6s,MS4.7,baz=10,slow=39
CMAR Chiang Mai Arr 22.09 355⇑*e*P **P 22 28 47.5 -2.1**
NANT Nan 22.36 360 ⇑P **P 22 28 47.5 -5.0**
148nm,1.0s,mb5.4
CHG Chiang Mai 22.45 356 ⇓P **P 22 28 51.5 -1.9**
61nm,1.0s,mb5.0
CHTO Chiang Mai 22.45 356 P **P 22 28 52.4 -0.9**
SNR=16
CHTO Chiang Mai 22.45 356 *e*P **P 22 28 51.8 -1.6**
BATI Baumata 23.63 107 P **P 22 29 03.4 -2.4**
0.0nm,0.0s
BATI Baumata 23.63 107 P **P 22 29 03.6 -2.2**
25nm,0.5s,mb4.9,baz=170,slow=3.0,SNR=15
BATI S **S 22 33 10.2 -8.4**
80nm,0.6s,baz=266,slow=15,SNR=4.8
QIZ Qiongzhong 24.30 21 P **P 22 29 11.6 -0.1**
QIZ S **S 22 33 30.0 +0.9**
QIZ XS sS 22 33 46.6 +3.5
QIZ AMB AMB
comp=Z,82nm,1.5s,mb4.9
QIZ AMB AMB
comp=Z,1µm,6.2s
QIZ LR LR
comp=N,4µm,12.7s
QIZ LR LR
comp=Z,5µm,15.4s,MS5.1
QIZ Qiongzhong 24.30 21 *e*P **P 22 29 11.5 -0.2**
QIZ *e*PcP PcP 22 32 58.4 +7.0
MBWA Marble Bar 25.33 135 *e*P **P 22 29 23.5 +2.3**
comp=Z,90nm,1.3s,mb5.1
DAV Davao City (W) 26.99 67 P **P 22 29 36.1 -0.2**
comp=Z,148nm,0.4s,mb5.9,baz=5.4,slow=6.7,SNR=3.8
FITZ Fitzroy Crossi 28.26 122 *e*P **P 22 29 47.1 -0.5**
FITZ Fitzroy Crossi 28.26 122 P **P 22 29 47.2 -0.4**
comp=Z,15nm,1.1s,mb4.5,baz=308,slow=8.6,SNR=17
FITZ LR LR 22 41 13.5
comp=Z,1µm,20.9s,MS4.4,baz=309,slow=37
DGAR Diego Garcia 28.40 261 P **P 22 29 50.1 +1.2**
KMI Kunming 28.72 4 P **P 22 29 52.5 +1.0**
KMI AP pP 22 30 03.3 +3.2
KMI PP PP 22 30 48.8 -8.0
KMI PPP 22 31 02.3
KMI PCP PcP 22 33 02.9 +1.2
KMI AMB AMB
comp=Z,38nm,0.7s,mb5.2
KMI AMB AMB
comp=Z,413nm,4.7s
KMI LR LR
comp=N,6µm,15.5s,MS5.5
KMI LR LR
comp=E,9µm,16.7s,MS5.5
KMI LR LR
comp=Z,8µm,13.8s,MS5.5
IMP Imphal 29.08 347 *e*P **P 22 29 55.0 +0.2**
IMP *e*S **S 22 34 45.0 +0.3**
HYB Hyderabad 30.34 314 *i* P **P 22 30 06.5 +0.5**
HYB *e* pP 22 30 15.0 +0.4
HYB *e*S **S 22 35 06.0 +1.3**
HYB Hyderabad 30.34 314 *e*P **P 22 30 06.5 +0.5**
HYB *e* pP 22 30 15.0 +0.4
HYB *e*S **S 22 35 06.0 +1.3**
GYA Guiyang 30.52 10 P **P 22 30 07.8 +0.3**
GYA AP pP 22 30 18.3 +2.2
GYA PP PP 22 31 09.4 -7.4
GYA PCP PcP 22 33 05.8 -0.5
GYA S **S 22 35 06.3 -1.1**
GYA SS SS 22 36 50.4 -28
GYA AMB AMB
comp=Z,30nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,160nm,4.8s
GYA LR LR
comp=N,890nm,13.4s,MS4.7
GYA LR LR
comp=E,670nm,13.7s,MS4.7
GYA LR LR
comp=Z,830nm,13.5s,MS4.5
NWAO Narrogin (SRO) 32.91 154 LR LR 22 45 16.2
comp=Z,4µm,18.2s,MS5.2,baz=329,slow=39
ODAN Odare 33.01 338 *e*P **P 22 30 30.8 +1.4**
comp=Z,360nm,0.9s,mb6.3
QZH Quanzhou 33.34 30 P **P 22 30 31.8 -0.5**
QZH *e*S **S 22 35 54.0 +2.7**
JIRN Jiri 34.20 337 *e*P **P 22 30 41.3 +1.6**
comp=Z,374nm,1.0s,mb6.3
NACB Ninganchiao 34.34 35 *e*P **P 22 30 40.5 -0.6**
comp=Z,178nm,0.8s,mb6.0
PKIN Phulchoki 34.44 335 *e*P **P 22 30 42.7 +0.8**
comp=Z,41nm,0.8s,mb5.4
LSA Lhasa 34.46 345 P **P 22 30 43.4 +1.4**
LSA AP pP 22 30 55.8 +5.2
LSA XP sP 22 31 02.0 +7.8
LSA AMB AMB
comp=Z,40nm,1.0s,mb5.3
LSA AMB AMB
comp=Z,480nm,6.0s
LSA LR LR
comp=N,1µm,25.0s,MS4.8
LSA LR LR
comp=E,2µm,28.0s,MS4.8
LSA LR LR
comp=Z,2µm,26.0s,MS4.8
LSA Lhasa 34.46 345 *e*P **P 22 30 42.9 +0.9**
LSA *e**PP pP 22 30 52.2 +1.6
LSA pmax pmax
comp=Z,153nm,1.5s,mb5.7
LSA Lhasa 34.46 345 *e*P **P 22 30 42.9 +0.9**
comp=Z,153nm,1.5s,mb5.7
LSA *e*pP pP 22 30 52.2 +1.6
CD2 Chengdu 34.54 5⇑*i*P **P 22 30 41.6 -1.0**
CD2 PP PP 22 31 59.0 -2.3
CD2 PCP PcP 22 33 14.8 -2.4
CD2 S **S 22 36 09.1 -0.7**
CD2 PCS PcS 22 37 00.3 -3.4
CD2 SS SS 22 38 23.4 -17
CD2 SCS ScS 22 40 58.3 -5.2
CD2 AMB AMB
comp=Z,80nm,0.8s,mb5.7
CD2 AMB AMB
comp=Z,560nm,7.2s
CD2 LR LR
comp=N,6µm,15.6s,MS5.8
CD2 LR LR
comp=E,13µm,18.0s,MS5.8
CD2 LR LR
comp=Z,8µm,16.8s,MS5.5
GUN Gumba 34.54 336 *e*P **P 22 30 44.2 +1.5**
comp=Z,295nm,0.8s,mb6.3
DMN Daman 34.59 335 *e*P **P 22 30 44.3 +1.1**
comp=Z,128nm,1.0s,mb5.8
YHNB Yeheng 34.60 34 *e*P **P 22 30 43.3 0.0**
comp=Z,59nm,1.1s,mb5.4
YHNB *e*pP pP 22 30 52.8 +0.9
YHNB *e*PP PP 22 32 01.2 -1.0
KKN Kakani 34.68 335 *e*P **P 22 30 44.9 +1.0**
comp=Z,191nm,0.8s,mb6.1
GKN Gorkha 35.14 335 *e*P **P 22 30 48.9 +1.0**
comp=Z,112nm,0.7s,mb5.9
KOLN Koldanda 35.39 333 *e*P **P 22 30 51.3 +1.3**
comp=Z,155nm,0.8s,mb6.0
DANN Dangsing 35.82 334 *e*P **P 22 30 54.8 +1.1**
comp=Z,187nm,0.6s,mb6.2
WRA Warramunga Arr 36.50 119 P **P 22 30 59.0 -0.8**
comp=Z,15nm,0.9s,mb4.8,baz=321,slow=11,SNR=63
WRA S **S 22 36 37.9 -2.4**
comp=Z,11nm,1.0s,baz=292,slow=17,SNR=5.7
WRA LR LR 22 47 28.2
comp=Z,3µm,21.5s,MS5.0,baz=295,slow=39
WRA Warramunga Arr 36.50 119 *i* P **P 22 30 59.0 -0.7**
WRA pmax pmax
comp=Z,15nm,1.0s
WRAB Tennant Creek 36.51 119 P **P 22 30 59.0 -0.8**
comp=Z,279nm,0.4s,mb6.4,SNR=27
WRAB Tennant Creek 36.51 119 *e*P **P 22 30 59.2 -0.6**
WB2 Warramunga Arr 36.51 119⇑*i*P **P 22 30 58.8 -1.0**
FORT Forrest 37.27 139 *e*P **P 22 31 08.8 +2.7**
FORT Forrest 37.27 139 P **P 22 31 03.4 -2.7**
comp=Z,5.3nm,0.6s,mb4.5
FORT *e*P 22 31 08.8
ASAR Alice Springs 37.66 125 P **P 22 31 09.5 0.0**
comp=Z,10nm,0.9s,mb4.6,baz=299,slow=8.2,SNR=57
ASAR pPcP 22 33 36.2
comp=Z,7.0nm,0.8s,baz=296,slow=2.6,SNR=6.4
ASAR S **S 22 36 59.8 +1.9**
comp=Z,6.2nm,0.8s,baz=298,slow=15,SNR=3.3
ASAR Alice Springs 37.66 125 P **P 22 31 09.5 0.0**
ASAR S **S 22 36 59.8 +2.0**
ASAR pmax pmax
comp=Z,11nm,0.9s
ASAR smax
comp=N,6.0nm,0.8s
XAN Xi'an 38.32 11 P **P 22 31 13.9 -1.0**
XAN PPP 22 33 51.8
XAN S **S 22 37 13.3 +5.8**
XAN SS SS 22 39 47.4 -9.2
XAN AMB AMB
comp=Z,109nm,0.8s,mb5.6
XAN AMB AMB
comp=Z,80nm,5.3s
XAN LR LR
comp=N,2µm,18.8s,MS5.4
XAN LR LR
comp=E,5µm,17.4s,MS5.4
XAN LR LR
comp=Z,4µm,16.1s,MS5.3
PTH Pithoragarh 38.48 331 *e*P **P 22 31 16.9 +0.6**
PTH *ex* x 23 35 07.1
NJ2 Nanjing 39.50 25 *e*P **P 22 31 25.0 +0.2**
NJ2 AP pP 22 31 35.0 +1.4
NJ2 PP PP 22 32 59.1 +3.2
NJ2 S **S 22 37 28.0 +2.6**
NJ2 AMB AMB
comp=Z,20nm,1.0s,mb4.8
NJ2 AMB AMB
comp=Z,270nm,4.8s
NJ2 LR LR
comp=N,2µm,19.4s,MS5.3
NJ2 LR LR
comp=E,3µm,17.5s,MS5.3
NJ2 LR LR
comp=Z,3µm,17.5s,MS5.2
LZH Lanzhou 39.69 4⇑P **P 22 31 26.8 +0.5**
LZH AP pP 22 31 36.5 +1.5
LZH PP PP 22 33 03.3 +5.4
LZH AMB AMB
comp=Z,176nm,1.1s,mb5.7
LZH AMB AMB
comp=Z,759nm,8.3s
LZH LR LR
comp=N,5µm,13.1s
LZH LR LR
comp=Z,7µm,16.7s,MS5.6
SSE Sheshan 39.72 28 P **P 22 31 27.3 +0.7**
SSE AP pP 22 31 38.1 +2.8
SSE S **S 22 37 30.3 +1.7**
SSE XS sS 22 37 48.3 +5.3
SSE AMB AMB
comp=Z,90nm,1.0s,mb5.5
SSE AMB AMB
comp=Z,475nm,7.1s
SSE LR LR
comp=N,3µm,12.8s,MS5.6
SSE LR LR
comp=E,4µm,12.8s,MS5.6
SSE LR LR
comp=Z,5µm,12.5s,MS5.6
DDI Dehra Dun 40.20 329 *e*P **P 22 31 30.9 +0.3**
DDI *ex* x 22 33 12.8
JOW Kunigami 40.36 40 P **P 22 31 32.1 +0.1**
comp=Z,32nm,0.6s,mb5.3,baz=251,slow=9.4,SNR=13
SMLA Simla 41.30 329 *i* P **P 22 31 39.8 +0.1**
SMLA *ex* x 22 31 48.9
comp=Z,103nm,1.6s
SMLA *i* x x 22 35 31.6
SDNR Sundarnagar 41.69 329 *e*P **P 22 31 43.0 0.0**
TIA Tai'an 42.56 20 *e*P **P 22 31 48.8 -1.1**
TIY Taiyuan 42.61 14 *e*P **P 22 31 51.3 +1.0**
TIY AP pP 22 31 59.8 +0.7
TIY S **S 22 38 11.0 -0.4**
TIY LR LR
comp=N,3µm,16.0s,MS5.4
TIY LR LR
comp=E,1µm,14.6s,MS5.4
TIY LR LR
comp=Z,2µm,15.6s,MS5.2
GTA Gaotai 42.91 359⇑*i*P **P 22 31 53.3 +0.6**
GTA AP pP 22 32 03.3 +1.8
GTA PP PP 22 33 36.4 +3.7
GTA AMB AMB
comp=Z,71nm,1.2s,mb5.3
GTA AMB AMB
comp=Z,806nm,7.5s
GTA LR LR
comp=N,4µm,15.3s,MS5.5
GTA LR LR
comp=E,4µm,18.6s,MS5.5
GTA LR LR
comp=Z,5µm,15.9s,MS5.5
COEN Coen 43.07 106 *e*P **P 22 31 52.3 -2.1**
comp=Z,12nm,1.1s,mb4.5
THN Thein Dam 43.08 328 *e*P **P 22 31 52.3 -1.9**
BTO Baotou 44.90 10 *e*P **P 22 32 08.5 -0.2**
BTO AMB AMB
comp=Z,21nm,1.9s,mb4.6
HHC Hu-ho-hao-te 45.43 12 *e*P **P 22 32 13.8 +0.9**
HHC AP pP 22 32 24.1 +2.4
HHC PCP PcP 22 33 52.0 +0.2
HHC PP PP 22 34 01.5 +1.9
HHC PCS PcS 22 37 45.8 +0.1
HHC S **S 22 38 53.4 +1.0**
HHC SS SS 22 42 09.5 -7.2
HHC AMB AMB
comp=Z,78nm,0.9s,mb5.5
HHC AMB AMB
comp=Z,729nm,7.6s
HHC LR LR
comp=N,4µm,14.5s,MS5.6
HHC LR LR
comp=E,3µm,14.3s,MS5.6
HHC LR LR
comp=Z,5µm,14.8s,MS5.5
BJT Baijiatuau 45.76 17 *e*P **P 22 32 15.2 -0.3**
BJT *e**PP pP 22 32 23.3 -1.0
BJT pmax pmax
comp=Z,158nm,1.3s
BJT Baijiatuau 45.76 17 *e*P **P 22 32 15.2 -0.3**
comp=Z,158nm,1.3s,mb5.8
BJT *e*pP pP 22 32 23.3 -1.0
BJI Beijing 45.78 17 P **P 22 32 15.8 +0.1**
BJI PP PP 22 34 03.3 0.0
BJI S **S 22 39 00.4 +2.9**
BJI AMB AMB
comp=Z,83nm,0.9s,mb5.7
BJI AMB AMB
comp=Z,912nm,4.6s
BJI LR LR
comp=N,5µm,15.6s,MS5.6
BJI LR LR
comp=E,2µm,15.0s,MS5.6
BJI LR LR
comp=Z,4µm,17.2s,MS5.5
JNU Nakatsue 46.41 36 P **P 22 32 20.1 -0.7**
PMG Port Moresby 46.42 99 *e*P **P 22 32 21.0 -0.2**
PMG *e* 22 33 54.7
PMG *e* 22 34 08.5
DL2 Dalian 46.58 23⇑*i*P **P 22 32 21.8 -0.2**
DL2 PP PP 22 34 14.8 +3.0
DL2 PPP 22 34 58.4
DL2 SCP ScP 22 37 40.8 -6.7
DL2 S **S 22 39 09.1 +0.1**
DL2 AMB AMB
comp=Z,30nm,1.0s,mb5.2
DL2 AMB AMB
comp=Z,360nm,3.7s
DL2 LR LR
comp=N,1µm,19.2s,MS5.0
DL2 LR LR
comp=E,990nm,16.7s,MS5.0
DL2 LR LR
comp=Z,2µm,15.5s,MS5.3
GUMO Guam 47.03 68 *e*P **P 22 32 24.7 -1.2**
CTA Charters Tower 47.21 114 *e*P **P 22 32 26.8 -0.5**
CTA Charters Tower 47.21 114 P **P 22 32 27.4 +0.1**
comp=Z,16nm,0.7s,mb5.0,baz=286,slow=9.9,SNR=11
CTA Charters Tower 47.21 114 P **P 22 32 27.4 +0.1**
CTA pmax pmax
comp=Z,16nm,0.7s
CTAO Charters Tower 47.21 114 *e*P **P 22 32 26.2 -1.1**
CTAO pmax pmax
comp=Z,38nm,0.9s,mb5.3
CTAO Charters Tower 47.21 114 *e*P **P 22 32 26.2 -1.1**
comp=Z,38nm,0.9s,mb5.3
STKA Stephens Creek 47.47 131 *e*P **P 22 32 29.3 +0.2**
STKA Stephens Creek 47.47 131 P **P 22 32 30.1 +0.9**
comp=Z,8.8nm,0.9s,mb4.7,baz=311,slow=9.1,SNR=9.8
STKA pP pP 22 32 36.7 -1.3
comp=Z,24nm,0.7s,baz=309,slow=8.7,SNR=17
STKA LR LR 22 53 50.9
comp=Z,3µm,21.4s,MS5.2,baz=298,slow=38
INCN Inchon 47.52 28 *e*P **P 22 32 28.4 -1.0**
comp=Z,35nm,0.8s,mb5.4
KS15 Wonju Array Si 48.08 29 *e*P **P 22 32 34.0 +0.3**
KSRS Korea Array 48.11 29 P **P 22 32 33.5 -0.4**
comp=Z,70nm,0.9s,mb5.7,baz=220,slow=8.2,SNR=143
KSRS pP pP 22 32 41.4 -1.4
comp=Z,33nm,0.8s,baz=228,slow=7.7,SNR=12
KSRS Korea Array 48.11 29 P **P 22 32 33.6 -0.4**
KSRS *PP pP 22 32 41.4 -1.4
KSRS pmax pmax
comp=Z,70nm,1.0s,mb5.7
KSRS pmax pmax
comp=Z,33nm,0.8s,mb5.4
KBL Kabul 48.35 324 *e*P **P 22 32 35.0 -0.8**
KBL *e**PP pP 22 32 45.1 +0.4
KBL pmax pmax
comp=Z,14nm,0.7s,mb5.1
KBL Kabul 48.35 324 *e*P **P 22 32 35.0 -0.8**
comp=Z,14nm,0.7s,mb5.1
KBL *e*pP pP 22 32 45.1 +0.4
JMN Monobe 48.62 37 P **P 22 32 37.7 -0.3**
KSH Kashi 48.68 334⇑*i*P **P 22 32 39.0 +0.7**
KSH *e*PCP PcP 22 34 04.0 +0.7
KSH *e*PP PP 22 34 30.0 -1.6
KSH *e*PPP 22 35 22.1
KSH *e*PCS PcS 22 37 59.3 -0.1
KSH *e*S **S 22 39 36.3 -2.6**
KSH *e*SCS ScS 22 42 25.1 -3.8
KSH *e*SS SS 22 43 00.0 -10
KSH AMB AMB
comp=Z,2µm,3.4s
KSH LR LR
comp=N,4µm,17.5s
KSH LR LR
comp=E,2µm,8.7s
KSH LR LR
comp=Z,5µm,19.4s,MS5.5
WMQ Urumqi 48.74 347⇑*i*P **P 22 32 39.5 +0.8**
WMQ PCP PcP 22 34 04.0 +0.5
WMQ PP PP 22 34 32.0 -0.1
WMQ AMB AMB
comp=Z,103nm,0.9s,mb5.9
WMQ AMB AMB
comp=Z,659nm,4.8s
WMQ LR LR
comp=N,2µm,16.8s,MS5.2
WMQ LR LR
comp=E,2µm,20.0s,MS5.2
WMQ LR LR
comp=Z,1µm,25.6s
JHS Saijyo 49.05 36 P **P 22 32 39.9 -1.3**
JAD Aida 49.63 36 P **P 22 32 45.0 -0.7**
SNY Shenyang 49.85 22⇑P **P 22 32 46.0 -1.2**
SNY AMB AMB
comp=Z,30nm,1.1s,mb5.2
SNY AMB AMB
comp=Z,380nm,6.3s
SNY LR LR
comp=N,2µm,14.5s,MS5.6
SNY LR LR
comp=E,4µm,14.7s,MS5.6
SNY LR LR
comp=Z,5µm,16.5s,MS5.6
HOQ Hoqain 50.26 305 P pP 22 33 00.6 +1.0
SNR=5.7
JWT Wachi 50.60 37 P **P 22 32 52.2 -0.8**
JIE Ise 50.80 39 P **P 22 32 53.6 -1.0**

KZA **Kyzart** 51.12 336 P P 22 32 58.5 +1.8
SNR=8.4
UCH **Uchtor** 51.55 335 P P 22 33 01.2 +1.2
SNR=20
UCH **Uchtor** 51.55 335 *e*P P 22 33 00.9 +0.9
comp=Z,22nm,0.8s,mb5.1
UCH *e*pP pP 22 33 08.6 -0.3
SONM Songino Array 51.56 5 P P 22 33 00.9 +0.9
comp=Z,51nm,0.8s,mb5.5,baz=184,slow=8.9,SNR=292
SONM pP pP 22 33 08.8 -0.1
comp=Z,82nm,0.8s,baz=184,slow=8.6,SNR=31
SONM Songino Array 51.56 5 P P 22 33 00.9 +0.9
SONM *PP pP 22 33 08.8 -0.1
SONM pmax pmax
comp=Z,51nm,0.8s
SONM pmax pmax
comp=Z,82nm,0.8s
ULN Ulaanbaatar 51.65 5 ⇓P P 22 32 59.5 -1.1
SNR=35
ULN Ulaanbaatar 51.65 5⇑ *e*P P 22 32 58.6 -2.0
TKM2 Tokmak 2 51.68 337 *e*P P 22 33 01.7 +0.7
TKM2 *e**PP pP 22 33 10.5 +0.6
TKM2 pmax pmax
comp=Z,66nm,0.8s,mb5.6
TKM2 Tokmak 2 51.68 337 P P 22 33 01.3 +0.3
SNR=71
TKM2 Tokmak 2 51.68 337 *e*P P 22 33 01.7 +0.7
comp=Z,66nm,0.8s,mb5.6
TKM2 *e*pP pP 22 33 10.5 +0.6
KBK Karagaybulak 51.72 336 P P 22 33 02.5 +1.2
SNR=18
AML Almayashu 51.81 335 P P 22 33 03.1 +1.1
SNR=16
AML Almayashu 51.81 335 *e*P P 22 33 02.9 +0.9
comp=Z,52nm,0.8s,mb5.5
AML *e*pP pP 22 33 11.3 +0.4
AAK Ala-Archa 51.89 335 P P 22 33 03.5 +1.0
SNR=8.5
FRU Bishkek 52.01 336⇑ *i*P P 22 33 03.0 -0.4
FRU *i* pP 22 33 12.0 -0.4
FRU *e* 22 35 08.0
FRU *e* 22 40 26.0
FRU pmax pmax
comp=Z,600nm,4.0s
FRU MLR MLR
comp=Z,2μm,21.0s,MS5.0
CHMS Chumysh 52.09 336 P P 22 33 04.2 +0.2
SNR=19
EKS2 Erkin-Say 52.21 335 P P 22 33 05.9 +1.0
SNR=37
EKS2 Erkin-Say 52.21 335 *e*P P 22 33 05.8 +0.8
comp=Z,85nm,0.8s,mb5.7
EKS2 *e*pP pP 22 33 14.0 +0.1
CN2 Changchun 52.25 22 *e*P P 22 33 03.8 -1.4
CN2 *e*PP PP 22 35 03.6 -0.4
CN2 AMB AMB
comp=Z,90nm,0.8s,mb5.8
CN2 AMB AMB
comp=Z,600nm,6.0s
CN2 LR LR
comp=N,3μm,16.0s,MS5.5
CN2 LR LR
comp=E,2μm,16.0s,MS5.5
CN2 LR LR
comp=Z,2μm,17.0s,MS5.3
USP Ospenovka 52.41 336 P P 22 33 06.8 +0.3
SNR=20
MK31 Makanchi Array 52.86 344 *e*P P 22 33 09.3 -0.4
MKAR Makanchi Array 52.86 344 P P 22 33 09.7 0.0
comp=Z,34nm,0.8s,mb5.4,baz=147,slow=8.2,SNR=256
MKAR LR LR 23 00 31.1
comp=Z,1μm,18.5s,MS4.9,baz=355,slow=42
MKAR Makanchi Array 52.86 344 P P 22 33 09.7 0.0
MKAR pmax pmax
comp=Z,34nm,0.8s
MKAR MLR MLR
comp=Z,1μm,18.5s
JOD2 Odawara 2 52.87 40 P P 22 33 07.7 -2.2
MAJO Matsushiro 53.13 38 *e*P P 22 33 10.6 -1.3
MAJO *e* 22 34 18.4
MAT Matsushiro 53.13 38 P P 22 33 11.2 -0.7
MAT S S 22 40 43.0 +2.3
MAT Matsushiro 53.13 38 P P 22 33 09.8 -2.1
MJAR Matsushiro Arr 53.13 38 P P 22 33 10.6 -1.4
comp=Z,27nm,0.8s,mb5.2,baz=214,slow=7.4,SNR=86
MJAR pP pP 22 33 18.2 -2.7
comp=Z,21nm,0.8s,baz=213,slow=7.8,SNR=13
MJAR Matsushiro Arr 53.13 38 P P 22 33 10.6 -1.3
MJAR *PP pP 22 33 18.2 -2.7
MJAR pmax pmax
comp=Z,27nm,0.8s
MJAR pmax pmax
comp=Z,21nm,0.9s
MJAR Matsushiro Arr 53.13 38 P P 22 33 10.6 -1.4
MJAR pP pP 22 33 18.2 -2.7
JRY Ryogami san 53.22 39 P P 22 33 10.3 -2.3
ZAK Zakamensk 53.91 2⇓ *i*P P 22 33 17.3 0.0
ZAK pmax pmax
comp=Z,17nm,1.3s,mb4.8
KK31 Karatay Array 54.00 333 *i* P P 22 33 16.8 -1.3
KK31 pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
JSD Sado 54.15 36 P P 22 33 18.4 -0.9
OPO Ambohidratompo 54.37 250 P P 22 33 22.5 +1.2
comp=Z,1.7nm,0.9s,baz=78,slow=16,SNR=3.8
VLA Vladivostok 54.43 28 *e*P P 22 33 20.6 -0.6
VLA *e*S S 22 40 57.6 -0.4
VLA pmax pmax
comp=Z,157nm,1.7s,mb5.7
VLA MLR MLR
comp=Z,2μm,13.0s,MS5.4
MDJ Mudanjiang 54.59 25 P P 22 33 22.1 -0.3
MDJ PCP PcP 22 34 25.0 -0.3
MDJ PP PP 22 35 30.1 +5.0
MDJ PCS PcS 22 38 24.6 -0.1
MDJ S S 22 41 05.4 +5.3
MDJ SS SS 22 44 43.1 -0.2
MDJ AMB AMB
comp=Z,20nm,1.2s,mb5.0
MDJ AMB AMB
comp=Z,408nm,6.1s
MDJ LR LR
comp=N,2μm,12.7s,MS5.6
MDJ LR LR
comp=E,2μm,11.8s,MS5.6
MDJ LR LR
comp=Z,4μm,14.2s,MS5.7
MDJ Mudanjiang 54.59 25 *e*P P 22 33 21.5 -0.8
comp=Z,17nm,0.8s,mb5.1
MDJ *e*pP pP 22 33 32.3 +1.0
ARMA Armidale 54.81 125 *e*P P 22 33 24.8 +0.5
HVS Khovu-Aksy 54.96 355⇓ *i*P P 22 33 24.1 -0.8
MOY Mondy 55.16 0 *e*P P 22 33 26.0 -0.3
MOY pmax pmax
comp=Z,99nm,3.4s
TLY Talaya 55.23 2 P P 22 33 27.8 +1.0
comp=Z,232nm,0.9s,mb6.2,SNR=5.5
TLY Talaya 55.23 2 ⇓P P 22 33 26.8 -0.1
SNR=7.9
TLY Talaya 55.23 2 *e*P P 22 33 27.7 +0.9
TLY *e* pP 22 33 35.4 -0.4
TLY *e* 22 34 26.4
TLY *e*S S 22 41 20.2 +12
TLY pmax pmax
comp=Z,31nm,0.9s,mb5.3
TLY MLR MLR
comp=Z,4μm,16.0s,MS5.6
TLY Talaya 55.23 2 *e*P P 22 33 25.3 -1.5
HIA Hailar 55.27 15 *e*P P 22 33 26.3 -0.9
HIA pmax pmax
comp=Z,11nm,0.6s
HIA Hailar 55.27 15 *e*P P 22 33 26.3 -1.0
comp=Z,11nm,0.6s,mb5.1
JYA Atsumi 55.37 37 P P 22 33 28.8 +0.6
JMM Marumori 55.57 38 P P 22 33 28.1 -1.5
IRK Irkutsk 55.81 3 *e*P P 22 33 31.7 +0.6
IRK *e* pP 22 33 39.7 -0.4
IRK pmax pmax
comp=Z,82nm,2.7s,mb5.3
JOM Ohasama 56.88 37 P P 22 33 37.7 -1.2
ABKT Ailbek 57.23 320 P P 22 33 41.3 -0.1
comp=Z,125nm,1.0s,mb5.9,SNR=6.3
KURK Kurchatov 57.44 343⇑ P P 22 33 42.8 +0.1
SNR=25
KURK Kurchatov 57.44 343 P P 22 33 42.0 -0.6
comp=Z,31nm,0.8s,mb5.4,baz=163,slow=6.7,SNR=99
KURK pP pP 22 33 50.3 -1.4
comp=Z,24nm,0.8s,baz=160,slow=7.3,SNR=11
KURK LR LR 23 02 49.5
comp=Z,2μm,19.7s,MS5.2,baz=175,slow=41
KURK Kurchatov 57.44 343 P P 22 33 42.0 -0.7
KURK *PP pP 22 33 50.3 -1.4
KURK pmax pmax
comp=Z,31nm,0.8s,mb5.4
KURK pmax pmax
comp=Z,24nm,0.8s,mb5.3
KURK MLR MLR
comp=Z,2μm,19.7s,MS5.2
KURK Kurchatov 57.44 343 P P 22 33 42.0 -0.6
KURK pP pP 22 33 50.3 -1.4
KURK LR LR 23 02 49.5
ZAA0 Zalesovo Array 58.97 349 *e*P P 22 33 52.7 -0.6
ZAA0 *e*pP pP 22 34 03.2 +0.9
ZALV Zalesovo Beam 58.97 349 P P 22 33 52.9 -0.4
comp=Z,56nm,0.8s,mb5.6,baz=170,slow=4.5,SNR=232
ZALV pP pP 22 34 01.0 -1.4
comp=Z,53nm,0.8s,baz=171,slow=6.7,SNR=13
ZALV LR LR 23 02 42.1
comp=Z,732nm,18.8s,MS4.8,baz=166,slow=40
ZALV Zalesovo Beam 58.97 349 P P 22 33 52.9 -0.4
ZALV *PP pP 22 34 01.0 -1.3
ZALV pmax pmax
comp=Z,56nm,0.8s,mb5.7
ZALV pmax pmax
comp=Z,53nm,0.8s,mb5.6
ZALV MLR MLR
comp=Z,732nm,18.8s,MS4.8
HNR Honiara 59.02 99 P P 22 33 52.6 -1.9
comp=Z,38nm,0.3s,mb5.9,baz=188,slow=6.9,SNR=11
HNR pP pP 22 34 01.5 -2.1
comp=Z,48nm,0.4s,baz=199,slow=8.9,SNR=2.2
HNR Honiara 59.02 99 P P 22 33 52.6 -1.9
HNR *PP pP 22 34 01.5 -2.0
HNR pmax pmax
comp=Z,38nm,0.3s,mb5.9
HNR pmax pmax
comp=Z,48nm,0.4s,mb5.9
KLR Kul'dur 59.18 23⇓ *i*P P 22 33 50.5 -4.4
KLR *e*S S 22 42 00.0 -0.6
KLR pmax pmax
comp=E,50nm,1.8s
KLR pmax pmax
comp=Z,130nm,1.8s,mb5.7
KLR MLR MLR
comp=E,2μm,14.0s
KLR MLR MLR
comp=Z,4μm,14.0s,MS5.7
KRAR Krasnoyarsk 59.86 355 *e*P P 22 33 59.0 -0.4
KRAR pmax pmax
comp=Z,101nm,1.3s,mb5.7
RDF Al-Radifah 60.45 306 *e*P P 22 34 11.9 +7.8
baz=306
RDF AMb AMB 22 34 13.4
comp=Z,77nm,1.2s,mb5.6,baz=306
NAY Al-Naaiem 60.83 306 *e*P P 22 34 14.4 +7.8
baz=306
NAY AMb AMB 22 34 15.3
comp=Z,25nm,1.1s,mb5.3,baz=306
JMP Maruseppu 60.95 34 P P 22 34 07.0 -0.1
MIB Mutribah 60.97 307 *e*P P 22 34 15.5 +7.9
baz=307
MIB AMb AMB 22 34 27.2
comp=Z,74nm,0.9s,mb5.8,baz=307
JWK2 Keihoku 61.00 32 P P 22 34 07.5 +0.1
RST Umm Al-Ruwaisa 61.12 307 *e*P P 22 34 16.2 +7.6
baz=306
RST AMb AMB 22 34 23.1
comp=Z,55nm,1.6s,mb5.4,baz=306
VOSK Vostochnaya 61.58 340 P P 22 34 09.3 -1.9
VOSK pmax pmax
comp=Z,29nm,0.8s,mb5.5
BVA0 Borovoye Array 62.03 340 *i* P P 22 34 12.7 -1.5
BVA0 pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
BVAR Borovoye Array 62.03 340 P P 22 34 13.4 -0.8
comp=Z,28nm,0.7s,mb5.5,baz=143,slow=8.6,SNR=146
BVAR pP pP 22 34 21.1 -2.2
comp=Z,26nm,0.7s,baz=144,slow=8.9,SNR=20
BVAR Borovoye Array 62.03 340 P P 22 34 13.4 -0.8
BVAR *PP pP 22 34 21.1 -2.2
BVAR pmax pmax
comp=Z,28nm,0.7s
BVAR pmax pmax
comp=Z,26nm,0.7s
BRVK Borovoye 62.09 340 P P 22 34 13.8 -0.8
comp=Z,341nm,0.8s,SNR=16
BRVK Borovoye 62.09 340⇑ *e*P P 22 34 13.8 -0.8
BOD Bodaibo 62.25 8 *e*P P 22 34 15.1 -0.5
BOD pmax pmax
comp=Z,33nm,1.0s,mb5.4
YSS Yuzh-Sakhalins 62.53 31⇑ *i*P P 22 34 16.8 -0.9
YSS *e* pP 22 34 25.0 -1.8
YSS pmax pmax
comp=Z,150nm,1.0s,mb6.1
YSS MLR MLR
comp=Z,1μm,18.0s,MS5.0
YSS Yuzh-Sakhalins 62.53 31⇑ *e*P P 22 34 16.5 -1.2
CASY Casey 62.84 176 *e*P P 22 34 18.6 -0.8
MIR Mirnyy 62.97 183⇓ *i*P P 22 34 20.0 -0.3
MIR pmax pmax
comp=Z,100nm,1.8s,mb5.6
MIR MLR MLR
comp=Z,2μm,19.0s,MS5.4
CLNS Chul'man 63.45 15 *e*P P 22 34 23.6 0.0
CLNS *e**PP pP 22 34 32.8 +0.1
CLNS *e* 22 34 59.3
CLNS *e*PPP 22 38 11.3
CLNS *e*S S 22 42 56.2 +1.6
CLNS *e* 22 44 16.0
CLNS pmax pmax
comp=N,12nm,0.9s
CLNS pmax pmax
comp=Z,23nm,1.0s,mb5.3
CLNS pmax pmax
comp=E,10.0nm,1.1s
CLNS smax
comp=E,178μm,14.9s
CLNS smax
comp=N,208μm,13.3s
CLNS MLR MLR
comp=E,1μm,15.0s,MS5.6
CLNS MLR MLR
comp=Z,3μm,15.0s,MS5.6
CLNS MLR MLR
comp=N,3μm,17.0s,MS5.6
KMBO Kilima Mbogo 63.48 271 P P 22 34 26.0 +1.3
comp=N,2.4nm,0.9s,mb4.3,baz=36,slow=14,SNR=3.6
KMBO pP pP 22 34 34.1 +0.3
comp=N,5.6nm,1.0s,baz=55,slow=11,SNR=3.8
KMBO LR LR 23 01 28.8
comp=N,979nm,18.2s,MS5.0,baz=75,slow=35
KMBO Kilima Mbogo 63.48 271⇑ *e*P P 22 34 26.2 +1.5
AB31 Akbulak array 63.48 331 *i* P P 22 34 22.8 -1.2
AB31 pmax pmax
comp=Z,62nm,0.7s,mb5.8
AKTO Aktyubinsk 65.20 331 P P 22 34 32.7 -2.5
MAK Makhachkala 66.75 320 *e*P P 22 34 43.7 -1.6
MAK *e* 22 35 12.1
MAK *i*S S 22 43 31.6 -4.0
GNI Garni 67.27 316 *e*P P 22 34 49.0 +0.3
DGRG David-gareji 67.42 318 P P 22 34 48.3 -1.3
DGRG S S 22 43 45.4 +1.6
MTA Mtatsminda 67.92 318 P P 22 34 53.1 +0.3
MTA S S 22 43 47.7 -2.1
TBLG Delisi 67.97 318 *e*P P 22 34 53.5 +0.4
TBLG Delisi 67.97 318 P P 22 34 53.5 +0.3
TBLG S S 22 43 48.9 -1.4
DRV Dumont d'Urvil 68.49 164 P P 22 35 04.0 +8.1
DRV S S 22 43 59.0 +3.3
DRV SS SS 22 48 22.0 +2.1
DRV L 22 51 00.0
DRV R 22 55 00.0
SVE Sverdlovsk 68.53 338⇓ *e*P P 22 34 56.2 -0.1
SVE *e* 22 35 22.7
SVE *e*PPP 22 39 04.6
SVE *e*S S 22 43 50.3 -6.1
SVE *e* 22 44 50.5
SVE pmax pmax
comp=Z,72nm,1.0s,mb5.6
SVE MLR MLR
comp=Z,2μm,21.0s,MS5.3
MAW Mawson 68.83 195⇓ *i*P P 22 34 58.7 +0.7
MAW Mawson 68.83 195 P P 22 34 58.9 +0.9
comp=Z,5.6nm,1.0s,mb4.4,baz=41,slow=7.4,SNR=9.5
MAW pP pP 22 35 07.2 -0.1
comp=Z,7.9nm,1.1s,baz=43,slow=9.7,SNR=8.9
MAW LR LR 22 58 34.8
comp=Z,2μm,21.1s,MS5.3,baz=44,slow=30
MAW Mawson 68.83 195 P P 22 34 58.9 +0.9
MAW *PP pP 22 35 07.2 0.0
MAW pmax pmax
comp=Z,6.0nm,1.0s
MAW pmax pmax
comp=Z,8.0nm,1.1s
MAW MLR MLR
comp=Z,2μm,21.1s
ARU Arti 69.06 336 P P 22 34 59.7 +0.1
comp=Z,175nm,1.1s,mb5.9,SNR=11
ARU Arti 69.06 336*c* *i*P P 22 34 58.9 -0.7
ARU *e* 22 35 19.5
ARU *e* 22 37 30.1
ARU *e*PPP 22 39 14.8
ARU *e*S S 22 44 03.5 +0.8
ARU *e*SS SS 22 48 31.2 +2.1
ARU pmax pmax
comp=Z,61nm,1.7s,mb5.2
ARU MLR MLR
comp=Z,1μm,22.0s,MS5.1
ARU Arti 69.06 336⇑ *e*P P 22 34 58.8 -0.8
YAK Yakutsk 69.19 14 *e*P P 22 34 58.8 -1.5
YAK *e**PP pP 22 35 06.3 -3.2
YAK *e* 22 35 19.7
YAK *e*S S 22 44 08.1 +4.0
YAK *e**SS sS 22 44 32.1 +13
YAK pmax pmax
comp=Z,58nm,1.0s,mb5.5
YAK pmax pmax
comp=E,21nm,1.5s
YAK pmax pmax
comp=N,27nm,1.2s
YAK smax
comp=N,110μm,8.6s
YAK MLR MLR
comp=Z,3μm,17.0s,MS5.7
YAK MLR MLR
comp=E,1μm,19.0s,MS5.5
YAK MLR MLR
comp=N,3μm,20.0s,MS5.5
YAK Yakutsk 69.19 14⇑ *e*P P 22 34 58.6 -1.7
ONI Oni 69.21 318 P P 22 35 01.4 +0.6
ONI S S 22 44 05.9 +0.9
KIV Kislovodsk 70.31 319*c* *i*P P 22 35 07.5 -0.1
KIV *e* 22 35 27.4
KIV *e*S S 22 44 17.7 -0.3
KIV *e*SS SS 22 48 46.7 -2.3
KIV pmax pmax
comp=Z,31nm,1.2s,mb5.1
KIV MLR MLR
comp=Z,543nm,20.0s,MS4.8
KIV Kislovodsk 70.31 319⇑ *e*P P 22 35 07.5 -0.1
MALT Malatya 71.03 313 *e*P P 22 35 13.0 +0.9
MALT *e**PP pP 22 35 21.4 +0.1
MALT *e**SP sP 22 35 27.3 +2.5
MALT pmax pmax
comp=Z,13nm,0.9s,mb4.9
MALT Malatya 71.03 313 *e*P P 22 35 13.0 +0.9
comp=Z,13nm,0.9s,mb4.9
MALT *e*pP pP 22 35 21.4 0.0
MALT *e*sP sP 22 35 27.2 +2.5
SOC Sochi 72.11 318*c* *i*P P 22 35 17.2 -1.3
SOC *e**PP pP 22 35 25.9 -1.8
SOC *e* 22 35 28.9
SOC *e* 22 35 35.2
SOC *e*S S 22 44 37.2 -1.6
SOC *e* 22 45 19.7
SOC *e*SS SS 22 49 20.2 +3.6
SOC pmax pmax
comp=Z,22nm,0.9s,mb5.1
SOC MLR MLR
comp=Z,105nm,16.0s,MS4.2
SOC Sochi 72.11 318 *i*P P 22 35 18.9 +0.4
LSZ Lusaka 72.22 255 *e*P P 22 35 20.1 +0.4
LSZ *e**PP pP 22 35 28.2 -0.7
LSZ pmax pmax
comp=Z,15nm,1.3s,mb4.8
LSZ Lusaka 72.22 255 *e*P P 22 35 20.1 +0.4
comp=Z,15nm,1.3s,mb4.8
LSZ *e*pP pP 22 35 28.2 -0.8
CSS Prodhromos 73.85 308 *e*P P 22 35 29.4 +0.4
comp=Z,31nm,1.0s,mb5.2
CSS *e*pP pP 22 35 36.9 -1.3
PETK Petropavlovsk- 73.92 32 P P 22 35 28.4 -0.5
comp=Z,11nm,0.7s,mb4.9,baz=184,slow=2.0,SNR=9.5
PETK LR LR 23 13 28.5
comp=Z,554nm,18.1s,MS4.9,baz=254,slow=40
PETK Petropavlovsk- 73.92 32 P P 22 35 28.4 -0.5
PETK LR LR 23 13 28.5
ANN Anapa 74.10 319 *e*P P 22 35 24.6 -5.6
ANN *e*PPP 22 39 56.8
ANN *e*S S 22 44 56.5 -4.8
ANN pmax pmax
comp=Z,23nm,1.2s,mb5.0
ANN MLR MLR
comp=Z,573nm,22.0s,MS4.8
PET Petropavlovsk 74.38 32 *e*P P 22 35 36.3 +4.6
PET *e* 22 38 22.4
PET *e*S S 22 45 09.1 +4.9
PET pmax pmax
comp=Z,100nm,10.4s
PET pmax pmax
comp=Z,200nm,12.2s
PET MLR MLR
comp=Z,800nm,19.0s,MS5.0
LBTB Lobatse 74.99 245 *e*P P 22 35 36.3 +0.5
BOSA Boshof 75.50 242 P P 22 35 40.1 +1.4
comp=Z,5.7nm,0.9s,mb4.5,baz=56,slow=13,SNR=3.9
BOSA LR LR 23 02 50.8
comp=Z,1μm,20.0s,MS5.1,baz=89,slow=31
BOSA Boshof 75.50 242 P P 22 35 40.1 +1.4
BOSA pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BOSA MLR MLR
comp=Z,1μm,20.0s,MS5.1
BOSA Boshof 75.50 242 *e*P P 22 35 38.9 +0.2
BOSA *e*PcP PcP 22 35 52.4 +0.7
VSR Storozhevoye 75.59 325 *e*P P 22 35 37.4 -1.3
VSR *e**PP pP 22 35 46.1 -1.9
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VSR pmax pmax
comp=N,9.0nm,1.3s
VSR pmax pmax
comp=E,20nm,0.9s
ANTO Ankara 75.68 313⇑ *i*P P 22 35 38.8 -0.7
ANTO Ankara 75.68 313⇑ P P 22 35 38.8 -0.7
VOR Voronezh 75.79 326 *e*P P 22 35 38.0 -1.8
VOR pmax pmax
comp=Z,140nm,1.6s,mb5.6
SIM Simferopol' 76.36 318 *e*P P 22 35 43.0 -0.2
SIM *e*S S 22 45 26.0 -0.4
SIM pmax pmax
comp=Z,21nm,0.7s,mb5.2
SYO Syowa Base 76.51 199⇑ *e*X 22 35 42.0
SEY Seymchan 76.92 22⇑ *e*P P 22 35 45.6 -0.4
TIXI Tiksi 77.41 9 *e*P P 22 35 46.8 -1.8
TIXI pmax pmax
comp=Z,57nm,2.0s,mb5.2
MOS Moscow 78.33 329 *e*P P 22 35 51.8 -2.2
MOS *e* pP 22 36 00.0 -3.3
MOS *e*S S 22 45 43.7 -3.7
MOS pmax pmax
comp=Z,65nm,1.1s,mb5.5
OBN Obninsk 78.63 328⇑ *e*P P 22 35 55.5 -0.2
OBN *i*S S 22 45 49.8 -0.8
OBN pmax pmax
comp=Z,68nm,1.4s,mb5.4
OBN MLR MLR
comp=Z,700nm,19.0s,MS5.0
OBN Obninsk 78.63 328 *e*P P 22 35 55.1 -0.6
OBN *e*PcP PcP 22 36 04.0 -0.6
KLMR Klimovskoe 79.68 334⇑ *i*P P 22 36 01.1 -0.2
KLMR *e* pP 22 36 09.3 -1.3
KLMR pmax pmax
comp=Z,48nm,1.2s,mb5.3

TIRR **Tirgusor** 80.09 316⇑ *i*P P 22 36 03.0 -0.9
TIRR **Tirgusor** 80.09 316 ⇑P P 22 36 03.0 -0.9
HARR **Harsova** 80.49 316⇑ *i*P P 22 36 06.6 +0.6
HARR **Harsova** 80.49 316 ⇑P P 22 36 06.6 +0.6
KIS **Kishinev** 80.50 319 *e*P P 22 36 05.0 -1.0
KIS *e* pP 22 36 13.0 -2.4
KIS *e*S S 22 46 08.0 -2.7
KIS MLR MLR
comp=E,300nm,20.0s
KIS MLR MLR
comp=Z,600nm,20.0s,MS4.9
KIS MLR MLR
comp=Z,600nm,20.0s
KIS Kishinev 80.50 319 *e*P P 22 36 05.0 -1.0
KIS *e*S S 22 46 08.0 -2.7
KIS LRM 23 22 20.0
comp=Z,600nm,20.0s
AKASG **Malin Array Be** 81.28 322 P P 22 36 09.0 -1.1
comp=Z,5.2nm,0.8s,mb4.5,baz=91,slow=4.7,SNR=20
AKASG pP pP 22 36 17.2 -2.3
comp=Z,5.1nm,0.7s,baz=90,slow=4.8,SNR=9.2
AKASG PP PP 22 39 15.7 -0.3
comp=Z,0.2nm,0.2s,baz=96,slow=8.6,SNR=4.4
AKASG LR LR 23 16 39.8
comp=Z,846nm,21.9s,MS5.1,baz=95,slow=39
AKASG **Malin Array Be** 81.28 322 P P 22 36 09.0 -1.1
AKASG *PP pP 22 36 17.2 -2.3
AKASG 22 39 15.7
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKASG MLR MLR
comp=Z,846nm,21.9s
AKASG **Malin Array Be** 81.28 322 P P 22 36 09.0 -1.1
AKASG pP pP 22 36 17.2 -2.3
AKASG PP PP 22 39 15.7 -0.3
AKASG LR LR 23 16 39.8
KIEV **Kiev** 81.29 322 *e*P P 22 36 09.2 -1.0
KIEV *e* pP 22 36 17.4 -2.1
KIEV pmax pmax
comp=Z,11nm,1.0s,mb4.7
KIEV **Kiev** 81.29 322 *e*P P 22 36 09.2 -0.9
comp=Z,11nm,1.0s,mb4.8
KIEV *e*PcP PcP 22 36 17.4 +1.1
SBA **Scott Base** 81.45 169 *e*P P 22 36 09.9 -0.7
SBA pmax pmax
comp=Z,41nm,1.5s,mb5.1
SBA Scott Base 81.45 169 *e*P P 22 36 09.9 -0.6
comp=Z,41nm,1.5s,mb5.1
VRI **Vrincioaia** 81.60 317⇓ *i*P P 22 36 12.9 +1.0
VRI **Vrincioaia** 81.60 317 ⇓P P 22 36 12.9 +1.0
PLOR **Plostina** 81.65 317⇑ *i*P P 22 36 12.5 +0.3
MLR **Muntele Rosu** 82.05 317⇑ *i*P P 22 36 14.7 +0.4
MLR **Muntele Rosu** 82.05 317 ⇑P P 22 36 14.7 +0.5
BURAR **Bucovina Array** 83.03 319⇓ *i*P P 22 36 20.3 +1.0
BURAR **Bucovina Array** 83.03 319 ⇓P P 22 36 20.2 +0.9
BUR08 **Bucovina Ar. S** 83.04 319 *e*P P 22 36 20.4 +1.0
BUR08 *e*pP pP 22 36 29.1 +0.3
MNK **Minsk** 83.17 326 *e*P P 22 36 18.0 -1.9
VAY **Valandovo** 83.58 312 *e*P P 22 36 20.6 -1.7
JOF **Joensuu** 84.07 334 *e*p P 22 36 24.6 +0.3
comp=Z,7.4nm,0.7s,mb4.9
JOF **Joensuu** 84.07 334 *e*P P 22 36 24.6 +0.3
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
LVV **L'vov** 84.28 321⇓ *i*P P 22 36 25.9 +0.2
LVV *e* pP 22 36 33.9 -1.2
LVV *e* 22 39 41.5
LVV MLR MLR
comp=Z,500nm,19.0s,MS4.9
LVV MLR MLR
comp=N,200nm,20.0s,MS4.9
LVV MLR MLR
comp=E,400nm,18.0s,MS4.9
BILL Bilibino 84.48 20 *e*P P 22 36 25.7 -0.7
BILL pmax pmax
comp=Z,58nm,2.5s,mb5.3
DRGR 84.52 318⇓ *i*P P 22 36 28.3 +1.3
DRGR 84.52 318 ⇓P P 22 36 28.3 +1.3
KRUS **Krusevo** 84.57 312 *e*P P 22 36 26.7 -0.7
APA **Apatity** 84.94 339⇑ *i*P P 22 36 37.0 +8.4
APA pmax pmax
comp=Z,65nm,1.4s,mb5.6
BZS Buzias 85.05 316⇓ *i*P P 22 36 29.6 -0.1
BZS Buzias 85.05 316 ⇓P P 22 36 29.6 -0.1
KWP Kalwaria 85.08 320 *e*P P 22 36 29.8 +0.1
KWP Kalwaria 85.08 320⇑ *i*P P 22 36 29.6 -0.2
KWP Kalwaria 85.08 320 *e*P P 22 36 29.8 0.0
UZH Uzhgorod 85.16 319 *e*P P 22 36 31.0 +0.8
UZH *e* 22 36 37.0
UZH *e* 22 36 49.8
KOLS Kolonicke sedl 85.23 320 *e*P P 22 36 31.2 +0.7
KOLS *e*pP pP 22 36 45.5 +5.6
SUW Suwalki 85.70 325 *e*P P 22 36 32.5 -0.3
SUW *e* pP 22 36 40.8 -1.3
SUW Suwalki 85.70 325 *e*P P 22 36 32.5 -0.2
SUW *e* pP 22 36 40.8 -1.4
CRVS **Cervenica-Dubn** 85.75 319 *e*P P 22 36 33.3 +0.2
CRVS *e*pP pP 22 36 44.2 +1.7
STHS **Stebnicka Huta** 85.98 320 *e*P P 22 36 35.1 +0.9
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
STHS Stebnicka Huta 85.98 320 *e*P P 22 36 35.1 +0.9
comp=Z,7.3nm,0.9s,mb4.9
KAF Kangasniemi 86.03 333 *e*p P 22 36 34.5 +0.3
comp=Z,9.1nm,0.7s,mb5.1,baz=98,slow=4.5
KAF Kangasniemi 86.03 333 *e*P P 22 36 34.5 +0.3
KAF pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
MAIT **Maitri** 86.20 199 *e*P P 22 36 37.5 +2.5
NIE **Niedzica** 86.58 320 *e*P P 22 36 37.8 +0.6
PSZ **Piszkesteto** 86.61 318⇓ *e*P P 22 36 37.6 +0.2
PSZ **Piszkesteto** 86.61 318⇑ *i*P P 22 36 37.5 +0.1
PSZ **Piszkesteto** 86.61 318 ⇑P P 22 36 37.5 +0.1
OJC **Ojcow** 87.04 321 *e*P P 22 36 39.5 +0.1
VYHS **Vyhne** 87.39 319 *e*P P 22 36 40.7 -0.5
TIP **Timpagrande** 87.66 309 *e*P P 22 36 41.5 -1.2
comp=Z,145nm,2.2s,mb5.8
TIP *e*pP pP 22 36 53.9 +1.7
KEV Kevo 87.87 340 *e*p P 22 36 42.6 -0.4
comp=Z,4.9nm,0.8s,mb4.8
KEV Kevo 87.87 340 *e*P P 22 36 42.6 -0.4
KEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
OKC Ostrava-Krasne 88.03 320 *e*P P 22 36 45.0 +0.8
OKC *e*pP pP 22 36 53.4 -0.3
OKC *e*S S 22 47 23.9 -2.1
OKC AMS AMS 23 28 30.0
comp=Z,500nm,15.9s
OKC Ostrava-Krasne 88.03 320 *e*P P 22 36 45.0 +0.8
OKC *e*pP pP 22 36 53.4 -0.3
OKC *e*S S 22 47 23.9 -2.1
ARCES **ARCESS Array B** 88.32 340 P P 22 36 45.4 +0.3
comp=Z,14nm,0.8s,mb5.2,baz=95,slow=6.1,SNR=29
ARCES pP pP 22 36 54.0 -0.6
comp=Z,11nm,0.8s,baz=113,slow=2.6,SNR=11
ARCES LR LR 23 20 32.0
comp=Z,1μm,20.9s,MS5.4,baz=103,slow=38
ARCES ARCESS Array B 88.32 340 P P 22 36 45.4 +0.3
ARCES *PP pP 22 36 54.0 -0.6
ARCES pmax pmax
comp=Z,15nm,0.8s
ARCES pmax pmax
comp=Z,11nm,0.8s
ARCES MLR MLR
comp=Z,1μm,20.9s
ARE0 ARCESS Array S 88.32 340 *e*P P 22 36 45.4 +0.3
ARE0 *e*pP pP 22 36 53.8 -0.8
MODS **Modra-Piesok** 88.41 318 *e*P P 22 36 46.3 +0.3
MODS *e*pP pP 22 36 54.8 -0.7
MORC **Moravsky Berou** 88.42 320⇑ *i*P P 22 36 46.6 +0.6
MORC **Moravsky Berou** 88.42 320 ⇑P P 22 36 46.6 +0.6
CUC **Castrocucco** 88.47 310 *e*P P 22 36 46.3 -0.2
comp=Z,14nm,0.8s,mb5.2
CUC *e*pP pP 22 36 55.8 -0.2
ZST **Bratislava** 88.50 318 *e*P P 22 36 47.3 +0.8
ZST *e*pP pP 22 36 55.4 -0.5
ZST **Bratislava** 88.50 318 *e*P P 22 36 47.3 +0.8
comp=Z,7.8nm,0.7s,mb5.0
ZST *e* pP 22 36 55.4 -0.5
ZST LR LR
comp=Z,300nm,19.3s,MS4.7
GKP **Gorka Klasztor** 89.06 323 *e*P P 22 36 49.3 +0.3
GKP *e* pP 22 36 57.5 -0.9
GKP **Gorka Klasztor** 89.06 323 *e*P P 22 36 49.3 +0.3
GKP *e* pP 22 36 57.5 -0.9
DPC **Dobruska-Polom** 89.27 320 *e*P P 22 36 50.2 +0.2
DPC *e*pP pP 22 36 59.6 +0.1
DPC *e*sP sP 22 37 07.9 +5.0
DPC *e*S S 22 47 29.9 -7.7
DPC AMS AMS 23 27 50.0
comp=Z,600nm,15.8s
KSP Ksiaz 89.34 321 *e*P P 22 36 55.0 +4.6
KSP Ksiaz 89.34 321 *e*P P 22 36 51.2 +0.8
KSP *e*pP pP 22 37 00.0 +0.2
KSP *e*S S 22 47 38.0 -0.3
KSP LR LR
comp=Z,1μm,24.2s,MS5.2
DOBS **Dobrina** 89.37 316 *i* P P 22 36 51.1 +0.5
BOJS **Bojanci** 89.46 315 *e*P P 22 36 51.4 +0.4
BOJS *i* pP pP 22 36 60.0 -0.5
UPC **Upice** 89.48 321 *e*P P 22 36 52.2 +1.2
UPC *e*pP pP 22 37 00.5 0.0
PERS **Pernice** 89.66 317 *e*P P 22 36 52.6 +0.7
LJU **Ljubljana** 90.01 316 *i* P P 22 36 54.2 +0.6
LJU *e*pP pP 22 37 02.4 -0.7
PRU **Pruhonice** 90.37 320 *e*P P 22 36 56.1 +0.9
PRU *e*pP pP 22 37 04.3 -0.3
PRU *e*SKS 22 47 28.4
PRU AMS AMS 23 27 50.0
comp=Z,600nm,20.8s
PVCC **Panska Ves** 90.40 320 *e*P P 22 36 56.4 +1.1
PVCC *e*pP pP 22 37 04.6 -0.2
PVCC AMS AMS 23 20 50.0
comp=Z,700nm,18.0s
VOJS **Vojsko** 90.46 316 *e*P P 22 36 55.6 -0.1
VOJS *e*pP pP 22 37 03.7 -1.5
SNAA **Sanae** 90.76 198 *e*P P 22 36 58.5 +1.9
SNAA *e* pP 22 37 05.5 -0.6
SNAA *e* 22 37 20.5
SNAA **Sanae** 90.76 198 *e*P P 22 36 57.6 +1.0
SNAA pmax pmax
comp=Z,11nm,1.0s
SNAA **Sanae** 90.76 198 *e*P P 22 36 57.6 +1.0
comp=Z,11nm,1.0s,mb5.1
GEC2 **GERESS Array S** 90.81 319 *e*P P 22 36 57.1 -0.2
GEC2 pmax pmax
comp=Z,26nm,1.5s,mb5.3
GEC2 **GERESS Array S** 90.81 319 *e*P P 22 36 57.1 -0.2
comp=Z,26nm,1.5s,mb5.3
GERES **GERESS Array B** 90.81 319 P P 22 36 57.8 +0.6
comp=Z,3.0nm,0.9s,mb4.6,baz=100,slow=5.5,SNR=29
GERES pP pP 22 37 06.0 -0.7
comp=Z,4.0nm,0.8s,baz=90,slow=5.3,SNR=15
GERES **GERESS Array B** 90.81 319 P P 22 36 57.8 +0.5
GERES *PP pP 22 37 06.0 -0.7
GERES pmax pmax
comp=Z,3.0nm,0.9s
GERES pmax pmax
comp=Z,4.0nm,0.8s
BRG Berggiesshubel 90.83 321 *e*P P 22 36 57.9 +0.6
BRG *e* pP 22 37 06.7 -0.1
BRG S S 22 47 56.0 +4.0
BRG pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
BRG MLR MLR
comp=Z,470nm,18.6s,MS5.0
BRG Berggiesshubel 90.83 321 *e*P P 22 36 57.9 +0.6
comp=Z,10.0nm,1.1s,mb5.0
BRG *e* pP 22 37 06.7 -0.1
comp=Z,56nm,2.0s
BRG S S 22 47 56.0 +4.0
BRG
comp=N,372nm,21.5s
BRG
comp=E,458nm,15.9s
BRG
comp=Z,780nm,18.6s
BRG Berggiesshubel 90.83 321 *e*P P 22 36 57.9 +0.6
comp=Z,6.0nm,1.1s,mb4.8
BRG *e* pP 22 37 06.7 -0.1
BRG S S 22 47 56.0 +4.0
BRG LR LR
comp=Z,470nm,18.6s,MS5.0
KHC Kasperske Hory 90.92 319 *e*P P 22 36 58.4 +0.6
KHC *e*pP pP 22 37 06.7 -0.5
KHC *e*sP sP 22 37 16.1 +5.5
KHC *e*S S 22 47 53.7 +0.7
KHC AMS AMS 23 24 10.0
comp=Z,900nm,25.5s
RJOB **Jochberg** 91.33 318 *e*P P 22 36 59.4 -0.3
comp=Z,12nm,1.3s,mb5.1
WET Wettzell 91.38 319 *e*P P 22 37 00.2 +0.3
WET pmax pmax
comp=Z,14nm,1.2s,mb5.2
WET Wettzell 91.38 319 *e*P P 22 37 00.2 +0.3
comp=Z,14nm,1.2s,mb5.2
CLL Collm 91.45 321⇓ *i*P P 22 37 00.0 -0.2
CLL *e*S S 22 47 59.0 +1.3
CLL pmax pmax
comp=Z,8.0nm,1.3s,mb4.9
CLL MLR MLR
comp=Z,600nm,20.6s,MS5.0
CLL Collm 91.45 321 *e*P P 22 36 59.9 -0.3
comp=Z,8.0nm,1.3s,mb4.9
CLL Collm 91.45 321⇓ *i*P P 22 37 00.0 -0.2
comp=Z,8.0nm,1.3s,mb4.9
CLL *e*pP pP 22 37 09.0 -0.6
CLL *e*S S 22 47 59.0 +1.3
CLL *e*PS PS 22 49 18.0 +7.7
CLL *e*SSSS 23 01 12.0
CLL LmV 23 27 00.0
comp=Z,600nm,20.6s
CLL Collm 91.45 321⇓ *i*P P 22 37 00.0 -0.2
comp=Z,8.0nm,1.3s,mb4.9
CLL S S 22 47 59.0 +1.3
CLL LR LR
comp=Z,600nm,20.6s,MS5.0
NKC Novy Kostel 91.73 320 *e*P P 22 37 02.5 +1.0
NKC *e*PP pP 22 37 10.9 -0.1
NKC MLR MLR
comp=Z,900nm,19.0s,MS5.2
NKC Novy Kostel 91.73 320 *e*P P 22 37 02.5 +1.0
NKC *e*pP pP 22 37 10.9 -0.1
NKC *e*S S 22 48 08.1 +7.8
NKC AMS AMS 23 27 20.0
comp=Z,900nm,19.0s
NKC Novy Kostel 91.73 320 *e*P P 22 37 02.5 +1.0
NKC *e*pP pP 22 37 10.9 -0.1
NKC *e*S S 22 48 08.1 +7.8
MANZ Manzenberg 91.93 320 *e*P P 22 37 03.1 +0.7
comp=Z,16nm,1.3s,mb5.2
MOX Moxa 92.29 320 *e*P P 22 37 04.5 +0.4
comp=Z,15nm,1.6s,mb5.1
VNA2 **Neumayer--Watz** 92.38 198 *e*P P 22 37 05.0 +0.9
VNA2 *e* pP 22 37 12.7 -0.9
VNA2 *e* 22 37 29.3
GRA1 **Grafenberg Arr** 92.49 319 *e*P P 22 37 05.5 +0.5
comp=Z,25nm,1.5s,mb5.3
GRA1 *e*pP pP 22 37 13.8 -0.7
GRF **Grafenberg Arr** 92.49 319 *e*P P 22 37 05.5 +0.5
GRF *e*PP pP 22 37 13.8 -0.7
GRF pmax pmax
comp=Z,25nm,1.5s,mb5.3
GRF Grafenberg Arr 92.49 319 *e*P P 22 37 05.5 +0.5
GRF *e*PP pP 22 37 13.8 -0.7
GRF pmax pmax
comp=Z,25nm,1.5s,mb5.3
GRF Grafenberg Arr 92.49 319 *e*P P 22 37 05.5 +0.5
comp=Z,25nm,1.5s,mb5.3
GRF *e*pP pP 22 37 13.8 -0.7
VNA3 **Neumayer Olymp** 92.98 198 *e*P pP 22 37 15.4 -0.9
VNA3 *e* 22 37 30.7
NB2 **NORSAR Subarra** 92.99 331 P P 22 37 06.0 -1.1
comp=Z,7.5nm,1.1s,mb5.0,baz=91,slow=4.8
NOA **NORSAR Array B** 92.99 331 P P 22 37 06.4 -0.7
comp=Z,2.9nm,0.9s,mb4.7,baz=95,slow=5.0,SNR=5.9
NOA pP pP 22 37 15.2 -1.3
comp=Z,3.5nm,0.8s,baz=93,slow=4.7,SNR=7.0
NOA LR LR 23 25 20.7
comp=Z,475nm,19.4s,MS5.0,baz=50,slow=40
NOA **NORSAR Array B** 92.99 331 P P 22 37 06.4 -0.7
NOA *PP pP 22 37 15.2 -1.3
NOA pmax pmax
comp=Z,3.0nm,0.9s
NOA pmax pmax
comp=Z,4.0nm,0.8s
NOA MLR MLR
comp=Z,475nm,19.4s
CLZ **Clausthal** 93.12 322 *e*P P 22 37 08.4 +0.5
CLZ pmax pmax
comp=Z,28nm,1.7s,mb5.4
CLZ **Clausthal** 93.12 322 *e*P P 22 37 08.4 +0.5
comp=Z,28nm,1.7s,mb5.4
KEST **Kesra** 93.28 305 P P 22 37 10.4 +1.4
comp=Z,2.6nm,1.1s,mb4.6,baz=54,slow=13,SNR=3.1
KEST pP pP 22 37 18.9 +0.5
comp=Z,4.0nm,1.1s,baz=14,slow=5.1,SNR=6.5
KEST LR LR 23 21 51.2
comp=Z,342nm,18.2s,MS4.8,baz=8.9,slow=37
NRDL **Niedersach Rie** 93.30 322 *e*P P 22 37 09.0 +0.3
comp=Z,59nm,2.4s,mb5.6
PGF **Pioggiola** 93.77 312 *e*P P 22 37 11.0 -0.1
comp=Z,32nm,1.4s,mb5.3
PGF **Pioggiola** 93.77 312 *e*P P 22 37 11.0 -0.1
PGF pmax pmax
comp=Z,16nm,1.4s,mb5.3
PGF Pioggiola 93.77 312 *e*P P 22 37 11.0 -0.1
comp=Z,16nm,1.4s,mb5.3
TNS **Taunus Mts** 94.30 320 *e*P P 22 37 13.6 +0.3
TNS pmax pmax
comp=Z,13nm,1.2s,mb5.2
TNS Taunus Mts 94.30 320 *e*P P 22 37 13.6 +0.3
comp=Z,13nm,1.2s,mb5.2
LPG **La Plagne** 95.43 315 *e*P P 22 37 18.5 -0.1
comp=Z,11nm,1.1s,mb4.9
LPG La Plagne 95.43 315 *e*P P 22 37 18.5 -0.1
LPG pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
LPG La Plagne 95.43 315 *e*P P 22 37 18.5 -0.1
comp=Z,5.7nm,1.1s,mb4.9
LPL **La Plagne** 95.44 315 *e*P P 22 37 18.5 -0.2
comp=Z,9.1nm,1.0s,mb4.8
LPL La Plagne 95.44 315 *e*P P 22 37 18.5 -0.2
LPL pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
LPL La Plagne 95.44 315 *e*P P 22 37 18.5 -0.2
comp=Z,4.6nm,1.0s,mb4.9
CABF **La Chapelle** 95.88 316 *e*P P 22 37 19.1 -1.6
SMF **Signal de Mont** 97.42 316 *e*P P 22 37 27.2 -0.5
AVF **Avril sur Loir** 97.75 317 *e*P P 22 37 28.9 -0.2
TORD **Torodi Ar. Bea** 99.64 283 LR LR 23 19 32.9
comp=Z,653nm,20.7s,MS5.1,baz=95,slow=34
MCK **McKinley** 102.22 25 *e*P Pdif 22 37 47.3 -1.6
TBI **Tubuai** 106.57 116 *e*SS SS 22 57 31.0 -6.0
comp=Z,484nm,26.0s
TBI Tubuai 106.57 116 *e*LR LR 23 13 19.7
comp=Z,2μm,23.0s
PPT Papeete 107.53 110 *e*LR LR 23 13 42.6
comp=Z,773nm,22.2s
YKA Yellowknife Ar 115.77 17 PKP PKPdf 22 42 34.8 -1.2
comp=Z,0.8nm,0.7s,baz=324,slow=3.1,SNR=3.6
YKA pPKP pPKPdf 22 42 43.9 -1.9
comp=Z,1.0nm,0.7s,baz=350,slow=2.1,SNR=4.8
YKA Yellowknife Ar 115.77 17 PKP PKPdf 22 42 34.8 -1.2
YKA pPKP pPKPdf 22 42 43.9 -1.9
RKT Rikitea 119.50 119 *e*PS PS 22 53 53.8 -1.9
comp=Z,203nm,26.0s
RKT *e*SS SS 23 00 21.7 -6.4
comp=Z,390nm,27.0s
RKT Rikitea 119.50 119 *e*LR LR 23 19 20.2
comp=Z,1μm,26.5s
JCW **Jim Creek** 122.58 33 *e*PKPdf PKPdf 22 42 50.2 +0.6
EDM **Edmonton** 123.24 24 *e*PKIKP PKPdf 22 42 50.1 -0.6
HAWA **Hanford** 124.97 33 *e*PKPdf PKPdf 22 42 54.4 +0.2
LNOR **Lincton Mounta** 125.98 33 *e*PKIKP PKPdf 22 42 56.3 +0.1
MOD **Modoc** 127.19 38 *e*PKPdf PKPdf 22 42 59.4 +0.8
WVOR **Wild Horse Val** 127.89 37 *e*PKIKP PKPdf 22 42 59.6 -0.3
EGMT **Eagleton** 128.66 26 *e*PKPdf PKPdf 22 43 01.1 -0.1
DLMT **Dillon** 129.29 30 *e*PKPdf PKPdf 22 43 02.9 +0.4
HLID **Hailey** 129.58 33 *e*PKPdf PKPdf 22 43 03.5 +0.4
QLMT **Earthquake Lak** 130.25 30 *e*PKPdf PKPdf 22 43 02.2 -2.2
NVAR **Mina Array Bea** 130.42 41 PKP PKPdf 22 43 06.7 +1.8
comp=Z,1.3nm,0.3s,baz=258,slow=2.8,SNR=11
NVAR SKPbc SKPbc 22 46 27.3 +1.0
comp=Z,2.2nm,0.9s,baz=304,slow=2.3,SNR=6.0
NVAR Mina Array Bea 130.42 41 PKP PKPdf 22 43 06.7 +1.8
NVAR SKPbc SKPbc 22 46 27.3 +1.0
ELK Elko 130.94 36 SKPbc SKPbc 22 46 29.1 +0.9
comp=Z,0.4nm,0.3s,baz=312,slow=3.5,SNR=6.8
ELK Elko 130.94 36 *e*PKIKP PKPdf 22 43 06.0 +0.2
LAO **LASA Array** 131.21 25 *e*PKPdf PKPdf 22 43 06.5 +0.5
ULM **Lac du Bonnet** 131.53 14 PKP PKPdf 22 43 06.3 -0.3
comp=Z,2.7nm,0.8s,baz=342,slow=3.9,SNR=4.0
BGU **Big Grassy Mou** 132.10 35 *e*PKPdf PKPdf 22 43 09.5 +1.6
HWUT **Hardware Ranch** 132.45 33 *e*PKPdf PKPdf 22 43 08.1 -0.5
PDAR **Pinedale Array** 132.68 30 PKP PKPdf 22 43 09.8 +0.8
comp=Z,0.9nm,0.9s,baz=354,slow=1.5,SNR=5.1
PDAR SKPbc SKPbc 22 46 34.9 +0.5
comp=Z,0.8nm,0.9s,baz=294,slow=1.5,SNR=3.6
DUG **Dugway** 132.70 35 *e*PKIKP PKPdf 22 43 09.6 +0.5
MSU **Marysvale** 134.18 36 *e*PKIKP PKPdf 22 43 13.7 +1.7
PFO **Pinyon Flat Ob** 134.32 45 PKIKP PKPdf 22 43 13.6 +1.2
comp=Z,3.0nm,0.7s,baz=347,slow=3.5,SNR=5.8
PFO SKPbc SKPbc 22 46 41.0 +0.8
comp=Z,4.7nm,1.1s,baz=264,slow=4.7,SNR=6.7
PFO Pinyon Flat Ob 134.32 45 PKIKP PKPdf 22 43 13.6 +1.2
PFO pmax pmax
comp=Z,3.0nm,0.7s
PFO pmax pmax
comp=N,5.0nm,1.1s
MVCO **Mesa Verde** 137.20 35 *e*PKPdf PKPdf 22 43 17.8 +0.2
ECSD **EROS,Sioux Fal** 137.27 19 *e*PKPdf PKPdf 22 43 14.1 -3.4
ANMO **Albuquerque** 139.96 36 PKhKP 22 43 16.9
comp=N,1.7nm,0.8s,baz=256,slow=4.5,SNR=4.9
ANMO PKP PKPdf 22 43 23.1 +0.3
comp=N,3.8nm,1.1s,baz=226,slow=2.2,SNR=5.3
ANMO SKPbc SKPbc 22 46 58.2 +1.4
comp=N,1.3nm,1.0s,baz=347,slow=4.0,SNR=6.4
ANMO SKPab 22 47 07.5
comp=N,2.2nm,0.9s,baz=114,slow=3.8,SNR=3.8
ANMO Albuquerque 139.96 36 *i* PKIKP PKPdf 22 43 16.9 -5.9
ANMO 22 43 23.1
ANMO pmax pmax
comp=Z,2.0nm,0.8s
ANMO Albuquerque 139.96 36 PKP PKPdf 22 43 16.9 -5.9
ANMO PKP PKPdf 22 43 23.1 +0.3
ANMO SKPbc SKPbc 22 46 58.2 +1.4
ANMO SKPab 22 47 07.5
BNM **Barren Site** 140.42 37 *e*PKPdf PKPdf 22 43 24.7 +1.1
CPUP **Villa Florida** 143.37 214 PKP PKPdf 22 43 27.9 -1.3
comp=Z,0.4nm,0.4s,baz=180,slow=4.7
BDFB **Brasilia** 143.60 237 PKP PKPdf 22 43 31.2 +1.5
comp=Z,1.6nm,0.6s,baz=209,slow=1.9,SNR=2.4
BDFB pPKP pPKPdf 22 43 37.2 -2.3
comp=Z,3.0nm,0.7s,baz=153,slow=4.5,SNR=3.2
BDFB Brasilia 143.60 237 PKIKP PKPdf 22 43 31.2 +1.4
BDFB 22 43 37.2
BDFB pmax pmax
comp=Z,2.0nm,0.6s
CCM **Cathedral Cave** 144.09 16 *e*PKIKP PKPdf 22 43 26.9 -3.1
WMOK **Wichita Mounta** 144.19 28 *e*PKIKP PKPdf 22 43 27.8 -2.5
MCWV **Mont Chateau** 144.21 1 *e*PKPdf PKPdf 22 43 27.6 -2.6
FVM **French Village** 144.38 15 *e*PKIKP PKPdf 22 43 27.5 -3.1
WCI **Wyandotte Cave** 145.04 10 *e*PKIKP PKPdf 22 43 30.0 -1.7
USIN **University of** 145.04 12 *e*PKPab PKPab 22 43 30.4 -0.6
TXAR **Lajitas Array** 145.56 40 PKPbc PKPbc 22 43 33.8 +0.8
comp=Z,52nm,0.8s,baz=281,slow=1.5,SNR=372
TXAR pPKPbc pPKPbc 22 43 41.8 -0.8
comp=Z,38nm,0.7s,baz=338,slow=1.0,SNR=18
TXAR Lajitas Array 145.56 40 PKIKP PKPdf 22 43 33.8 +1.0
TXAR 22 43 41.8
TXAR pmax pmax
comp=Z,52nm,0.8s
CBN **Corbin** 145.62 357 *e*PKPdf PKPdf 22 43 32.0 -0.7
PARMO **Parma** 145.80 15 *e*PKPdf PKPdf 22 43 32.8 -0.3
URVA **University of** 146.26 358 *e*PKPdf PKPdf 22 43 34.6 +0.8
URVA *ep*PKPdf pPKPdf 22 43 43.9 +0.4
GNAR **Gosnell** 146.39 16 PKPdf PKPdf 22 43 33.9 -0.1
ELN **Prospectdale** 146.61 2 *e*PKPdf PKPdf 22 43 34.5 +0.1
ELN *ep*PKPdf pPKPdf 22 43 45.0 +0.9
BLA **Blacksburg** 146.63 2 *e*PKPdf PKPdf 22 43 34.9 +0.5
BLA *ep*PKPdf pPKPdf 22 43 43.0 -1.2
WVT **Waverly** 146.77 13 *e*PKP2 PKPdf 22 43 34.5 -0.2
UALR **University of** 146.78 20 *e*PKPdf PKPdf 22 43 33.2 -1.5
JCT **Junction City** 147.04 34 *e*PKPdf PKPdf 22 43 35.5 +0.2
JCT *ep*PKPdf pPKPdf 22 43 45.7 +0.7
TZTN **Tazewell** 147.08 6 *e*PKPdf PKPdf 22 43 35.2 0.0
TZTN *ep*PKPdf pPKPdf 22 43 45.1 +0.2
TKL **Tuckaleechee C** 147.93 7 *e*PKP2 PKPbc 22 43 37.2 -2.4
SWET **Sewanee** 148.04 10 *e*PKPdf PKPdf 22 43 36.5 -0.3
SWET *e*PKPbc PKPbc 22 43 39.0 -0.9
SWET *ep*PKPdf pPKPdf 22 43 47.7 +1.1

BBSR	**BB Station**	**148.38**	**336**	*e*PKPbc	PKPbc	PKPbc	22 43 41.1	+0.1
NATX	**Nacogdoches**	**148.55**	**26**	*e*PKPbc	PKPbc	PKPbc	22 43 41.1	-0.3
JSC	**Jenkinsville**	**149.52**	**3**	*e*PKP2	PKPbc	PKPbc	22 43 43.8	0.0
HKT	**Hockley**	**149.54**	**29**	*e*PKHKP	PKPdf	PKPdf	22 43 39.8	+0.4
LRAL	**Lakeview Retre**	**149.93**	**13**	*e*PKPdf	PKPdf	PKPdf	22 43 39.9	-0.1
LRAL				*e*PKPbc	PKPbc	PKPbc	22 43 44.2	-0.7
GOGA	**Godfrey**	**150.18**	**7**	*e*PKIKP	PKPbc	PKPbc	22 43 45.2	-0.2
COW	**Cow Castle Cre**	**150.44**	**2**	*e*PKPbc	PKPbc	PKPbc	22 43 46.2	+0.2
BRAL	**Brewton**	**151.86**	**14**	*e*PKPbc	PKPbc	PKPbc	22 43 48.6	-0.8
LVC	**Limon Verde**	**151.96**	**201**	*e*PKPdf	PKPdf	PKPdf	22 43 42.8	-0.6

*ISCJB **23** 22:25:59.7±0.6, 4339N±005×4588E±003, h18km±6km, Error ellipse: s-maj=8.8km s-min=3.4km az=12.3*
*MOS **23** 22:25:59.3±2.0, 4332N×4584E, h19km, mb4.4/1, Error ellipse: s-maj=10.1km s-min=7.4km az=14.1*
*CSEM **23** 22:25:59.3, 4332N×4584E, h19km, mb4.4, After OBN*
ISC 23 22:25:59.1±0.5, 4331N±004×4585E±003, h2km±4km, n29, σ1§30/54, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.70**	**157**	*e*PG		**Pg**	**22 26 09.2**	**-3.4**
BTLR				*i* S		**Sg**	**22 26 20.0**	**-1.7**
BTLR				pmax		pmax		
	comp=Z,53nm,0.2s							
BTLR	**Botlikh**	**0.70**	**157**	*e*Pg		**Pg**	**22 26 09.2**	**-3.4**
	comp=Z,53nm,0.2s							
BTLR				*i* Sg		**Sg**	**22 26 20.0**	**-1.7**
DBC	**Dubki**	**0.77**	**112**	*i* PG		**Pg**	**22 26 13.0**	**-1.0**
DBC				*i* S		**Sg**	**22 26 25.5**	**+1.5**
SNJR	**Sundja**	**0.80**	**253**	*i* Pg		**Pg**	**22 26 12.9**	**-1.5**
SNJR				*i* Sg		**Sg**	**22 26 24.7**	**-0.1**
VLKR	**Vladikavkaz**	**0.90**	**253**	*i* Pg		**Pg**	**22 26 15.9**	**-0.4**
VLKR				*e*Sg		**Sg**	**22 26 29.1**	**+1.1**
TRKR	**Terskaya**	**0.91**	**297**	*i* Pg		**Pg**	**22 26 16.7**	**+0.1**
TRKR				*i* Sg		**Sg**	**22 26 30.3**	**+1.9**
BTKR	**Batakoyurt**	**0.96**	**274**	*i* Pg		**Pg**	**22 26 17.0**	**-0.5**
BTKR				*i* Sg		**Sg**	**22 26 31.3**	**+1.4**
BUJR	**Buynaksk**	**1.04**	**117**	*e*PG		**Pg**	**22 26 17.6**	**-1.5**
BUJR				*i* S		**Sg**	**22 26 34.0**	**+1.4**
BUJR				pmax		pmax		
	comp=Z,67nm,0.2s							
BUJR	**Buynaksk**	**1.04**	**117**	*e*Pg		**Pg**	**22 26 17.6**	**-1.5**
	comp=Z,67nm,0.2s							
BUJR				*i* Sg		**Sg**	**22 26 34.0**	**+1.4**
KMSR	**Komsomolskaya**	**1.14**	**274**	*i* Pg		**Pg**	**22 26 20.5**	**-0.5**
KMSR				*e*Sg		**Sg**	**22 26 36.9**	**+1.2**
ARNR	**Ardon**	**1.16**	**264**	*i* Pg		**Pg**	**22 26 20.1**	**-1.2**
ARNR				*i* Sg		**Sg**	**22 26 36.7**	**+0.5**
PRTR	**Priterechnaya**	**1.22**	**292**	*i* Pg		**Pg**	**22 26 22.0**	**-0.6**
PRTR				*i* Sg		**Sg**	**22 26 39.8**	**+1.4**
LACR	**Lac**	**1.24**	**247**	*i* Pg		**Pg**	**22 26 25.3**	**+2.4**
LACR				*i* Sg		**Sg**	**22 26 41.7**	**+2.8**
MAK	**Makhachkala**	**1.26**	**106**	*e*PG		**Pg**	**22 26 25.6**	**+2.3**
MAK				*e*			22 26 47.2	
MAK				pmax		pmax		
	comp=Z,76nm,0.2s							
MAK				smax				
	comp=E,770nm,0.6s							
MAK				smax				
	comp=N,879nm,0.5s							
MAK	**Makhachkala**	**1.26**	**106**	*e*Pg		**Pg**	**22 26 25.6**	**+2.3**
	comp=N,76nm,0.2s							
MAK				*e*Sg		**Sg**	**22 26 47.2**	**+7.6**
	comp=N,879nm,0.5s							
KORR	**Kora**	**1.32**	**261**	*i* Pg		**Pg**	**22 26 22.4**	**-2.1**
KORR				*i* Sg		**Sg**	**22 26 41.3**	**-0.3**
LSNR	**Lesken**	**1.49**	**269**	*i* Pg		**Pg**	**22 26 25.5**	**-2.1**
LSNR				*i* Sg		**Sg**	**22 26 46.3**	**-0.6**
ZEI	**Tsey**	**1.53**	**250**	*e*Pg		**Pg**	**22 26 24.8**	**-3.7**
URKR	**Urkarakh**	**1.74**	**130**	*i* PN		**Pn**	**22 26 30.0**	**-0.3**
URKR				*i* S		**Sn**	**22 26 53.0**	**0.0**
URKR				pmax		pmax		
	comp=Z,67nm,0.2s							
URKR	**Urkarakh**	**1.74**	**130**	*i* Pn		**Pn**	**22 26 30.0**	**-0.3**
	comp=Z,67nm,0.2s							
URKR				*i* Sg		**Sn**	**22 26 53.0**	**0.0**
TBLG	**Delisi**	**1.78**	**208**	*e*Pn		**Pn**	**22 26 30.4**	**-0.4**
TBLG				*e*Sg		**Sg**	**22 26 56.2**	**-0.1**
TBLG	**Delisi**	**1.78**	**208**	P		**Pn**	**22 26 30.4**	**-0.4**
TBLG				S		**Sn**	**22 26 56.2**	**+2.2**
MTA	**Mtatsminda**	**1.80**	**206**	P		**Pn**	**22 26 30.6**	**-0.4**
MTA				S		**Sn**	**22 26 54.4**	**+0.1**
GOR	**Gori**	**1.85**	**225**	P		**Pn**	**22 26 31.1**	**-0.6**
GOR				S		**Sn**	**22 26 55.6**	**0.0**
DGRG	**David-gareji**	**1.89**	**191**	P		**Pn**	**22 26 33.9**	**+1.5**
DGRG				S		**Sn**	**22 27 01.7**	**+5.0**
ONI	**Oni**	**1.91**	**248**	P		**Pn**	**22 26 30.6**	**-2.0**
ONI				S		**Sn**	**22 26 56.8**	**-0.3**
KIV	**Kislovodsk**	**2.39**	**287**	*e*PN		**Pn**	**22 26 37.1**	**-2.1**
KSMR	**Kasumkent**	**2.40**	**135**	*e*Pn		**Pn**	**22 26 40.0**	**+0.7**
KSMR				*i* Sn		**Sn**	**22 27 13.0**	**+3.8**
GNI	**Garni**	**3.27**	**195**	*e*Pn		**Pn**	**22 26 55.8**	**+4.5**

*BJI **23** 22:27:44.0, 4305×10095E, h58km, mB5.4, mb5.2, Ms5.4, Msz5.3*
*ISCJB **23** 22:27:45.1±0.2, 3595±004×10083E±004, h27km, mb5.1/76, MS5.2/3, Error ellipse: s-maj=7.1km s-min=4.2km az=40.4*
*NEIC **23** 22:27:46.6±2.7, 3605×10084E, h27km±18km, mb5.1/23, Error ellipse: s-maj=7.5km s-min=4.5km az=48.0*
*MOS **23** 22:27:46.4±1.0, 3495×10086E, h33km, mb5.3/25, Error ellipse: s-maj=13.6km s-min=7.5km az=115.5*
*IDC **23** 22:27:47.2±0.7, 3575×10083E, h28km±3km, mb4.7/24, mb1 4.7/24, mb1mx4.7/26, mbtmp4.7/24, Error ellipse: s-maj=17.0km s-min=13.2km az=43.0*
*SZGRF **23** 22:28:00.1, 3505×9650E, h33km, mb4.9, Southwest of Sumatera, Indonesia*
ISC 23 22:27:47.2±0.2, 3625±004×10079E±004, h29km, h29km±5km: pP-P, n223, σ087/193, mb5.1/76, MS5.2/3, 20C-9D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**3.16**	**353**	P		**Pn**	**22 28 36.9**	**+1.9**
	0.0nm,0.0s							
RGRI	**Rengat**	**3.60**	**25**	P		**Pn**	**22 28 43.5**	**+2.5**
	0.0nm,0.0s							
DBJI	**Dramaga**	**6.62**	**116**	P		**Pn**	**22 29 23.1**	**+0.6**
	0.0nm,0.0s							
CBJI	**Citeko**	**6.65**	**115**	P		**Pn**	**22 29 25.4**	**+2.4**
	0.0nm,0.0s							
SKJI	**Sukabumi**	**6.66**	**121**	P		**Pn**	**22 29 24.7**	**+1.6**
	0.0nm,0.0s							
LEM	**Lembang**	**7.51**	**115**	P		**Pn**	**22 29 36.0**	**+1.2**
	0.0nm,0.0s							
COCO	**West Island**	**9.37**	**204**	*e*Pn		**Pn**	**22 29 55.7**	**-4.7**
BSI	**Banda Aceh**	**10.59**	**329**	P		**Pn**	**22 30 15.7**	**-1.3**
	0.0nm,0.0s							
SJI	**Sawahan**	**11.66**	**111**	P		**Pn**	**22 30 32.5**	**+0.7**
	0.0nm,0.0s							
KKM	**Kota Kinabalu**	**18.15**	**58**	*e*Pn		**Pn**	**22 31 57.7**	**+0.5**
CM31	**Chiang Mai Arr**	**22.01**	**355**	*e*P		**P**	**22 32 38.2**	**-1.0**
CMAR	**Chiang Mai Arr**	**22.01**	**355**	P		**P**	**22 32 37.6**	**-1.6**
	19nm,0.7s,mb4.6,baz=186,slow=8.1,SNR=14							
CHTO	**Chiang Mai**	**22.36**	**355**	*e*P		**P**	**22 32 42.3**	**-0.7**
BATI	**Baumata**	**23.62**	**107**	P		**P**	**22 32 55.2**	**-1.0**
	31nm,0.5s,mb5.0,baz=341,slow=18,SNR=3.4							
BATI				S		**S**	**22 37 04.0**	**-4.9**
	29nm,0.6s,baz=313,slow=16,SNR=4.8							
QIZ	**Qiongzhong**	**24.20**	**21**	*e*P		**P**	**22 33 00.5**	**-0.8**
MBWA	**Marble Bar**	**25.36**	**135**	*e*P		**P**	**22 33 12.4**	**+0.4**
	13nm,0.9s,mb4.5							
DAV	**Davao City (W)**	**26.93**	**67**	*e*P		**P**	**22 33 25.8**	**-0.4**
KMI	**Kunming**	**28.63**	**4**	P		**P**	**22 33 42.3**	**+1.0**
KMI				AMB		AMB		
	comp=Z,11nm,0.8s,mb4.6							
ODAN	**Odare**	**32.95**	**338**	*e*P		**P**	**22 34 20.6**	**+1.2**
	comp=Z,129nm,0.9s,mb5.9							
NWAO	**Narrogin (SRO)**	**32.97**	**154**	*e*P		**P**	**22 34 19.0**	**-0.5**
NWAO				*e**PP		pP	22 34 28.2	+0.1
RAMN	**Ramite**	**33.34**	**337**	*e*P		**P**	**22 34 24.9**	**+2.1**
	comp=Z,108nm,0.6s,mb5.9							
JIRN	**Jiri**	**34.13**	**337**	*e*P		**P**	**22 34 31.1**	**+1.4**
	comp=Z,124nm,0.9s,mb5.8							
NACB	**Ninganchiao**	**34.25**	**35**	*e*P		**P**	**22 34 30.9**	**+0.1**
	comp=Z,142nm,0.8s,mb6.0							
NACB				*e*pP		pP	22 34 39.0	-0.3
LSA	**Lhasa**	**34.39**	**345**	*e*P		**P**	**22 34 33.1**	**+1.2**
LSA	**Lhasa**	**34.39**	**345**	*e*P		**P**	**22 34 32.4**	**+0.5**
GUN	**Gumba**	**34.48**	**336**	*e*P		**P**	**22 34 34.0**	**+1.3**
	comp=Z,72nm,0.5s,mb5.8							
YHNB	**Yeheng**	**34.51**	**34**	*e*P		**P**	**22 34 32.4**	**-0.6**
	comp=Z,36nm,0.9s,mb5.3							
DMN	**Daman**	**34.53**	**335**	*e*P		**P**	**22 34 34.1**	**+1.0**
	comp=Z,67nm,1.0s,mb5.5							
KKN	**Kakani**	**34.62**	**335**	*e*P		**P**	**22 34 34.8**	**+0.9**
	comp=Z,78nm,0.8s,mb5.7							
GKN	**Gorkha**	**35.08**	**335**	*e*P		**P**	**22 34 38.6**	**+0.8**
	comp=Z,61nm,0.7s,mb5.6							
KOLN	**Koldanda**	**35.33**	**333**	*e*P		**P**	**22 34 41.2**	**+1.2**
	comp=Z,68nm,0.7s,mb5.7							
DANN	**Dangsing**	**35.76**	**334**	*e*P		**P**	**22 34 44.5**	**+0.8**
	comp=Z,77nm,0.6s,mb5.8							
WRA	**Warramunga Arr**	**36.51**	**119**	P		**P**	**22 34 49.8**	**-0.5**
	comp=Z,10nm,0.5s,mb4.9,baz=304,slow=9.0,SNR=4.9							
WRAB	**Tennant Creek**	**36.52**	**119**	*e*P		**P**	**22 34 47.9**	**-2.4**
WB2	**Warramunga Arr**	**36.52**	**119**	*e*P		**P**	**22 34 50.6**	**+0.2**
ASAR	**Alice Springs**	**37.68**	**125**	S		**S**	**22 40 50.6**	**+2.0**
	comp=Z,3.5nm,0.9s,baz=299,slow=16,SNR=4.5							
LZH	**Lanzhou**	**39.60**	**4**	⇑P		**P**	**22 35 16.5**	**+0.4**
LZH				PP		PP	22 36 53.0	+5.6
LZH				PCP		PcP	22 37 23.1	+0.1
LZH				*e*S		**S**	**22 41 18.0**	**+0.8**
LZH				SS		SS	22 44 08.8	-4.3
LZH				AMB		AMB		
	comp=Z,87nm,1.1s,mb5.4							
LZH				AMB		AMB		
	comp=Z,236nm,5.2s							
LZH				LR		LR		
	comp=N,2μm,13.2s							
LZH				LR		LR		
	comp=Z,3μm,17.0s,MS5.2							
JOW	**Kunigami**	**40.27**	**40**	P		**P**	**22 35 21.6**	**-0.2**
	comp=Z,32nm,0.9s,mb5.0,baz=257,slow=7.1,SNR=7.1							
GTA	**Gaotai**	**42.82**	**359**	*e*P		**P**	**22 35 42.9**	**+0.4**
GTA				AP		pP	22 35 53.3	+2.1
GTA				PP		PP	22 37 27.3	+5.0
GTA				S		**S**	**22 42 03.5**	**-1.5**
GTA				AMB		AMB		
	comp=Z,23nm,1.0s,mb4.9							
GTA				AMB		AMB		
	comp=Z,148nm,3.9s							
GTA				LR		LR		
	comp=N,1μm,15.9s,MS5.2							
GTA				LR		LR		
	comp=E,2μm,16.8s,MS5.2							
GTA				LR		LR		
	comp=Z,1μm,15.9s,MS4.9							
BJT	**Baijiatuan**	**45.66**	**17**	*e*P		**P**	**22 36 05.1**	**-0.2**
BJT				*e**PP		pP	22 36 13.0	-1.0
BJT				pmax		pmax		
	comp=Z,22nm,0.8s							
BJT	**Baijiatuan**	**45.66**	**17**	*e*P		**P**	**22 36 05.1**	**-0.1**
	comp=Z,22nm,0.8s,mb5.2							
BJT				*e*pP		pP	22 36 13.0	-1.0
PMG	**Port Moresby**	**46.40**	**99**	*e*P		**P**	**22 36 09.8**	**-1.7**
GUMO	**Guam**	**46.96**	**68**	P		**P**	**22 36 14.1**	**-1.8**
CTA	**Charters Tower**	**47.21**	**114**	*e*P		**P**	**22 36 16.9**	**-0.9**
CTA	**Charters Tower**	**47.21**	**114**	P		**P**	**22 36 16.9**	**-0.9**
	comp=Z,15nm,0.9s,mb4.9,baz=300,slow=9.4,SNR=3.8							
CTAO	**Charters Tower**	**47.21**	**114**	*e*P		**P**	**22 36 18.0**	**+0.2**
CTAO				*e**PP		pP	22 36 26.5	-0.1
CTAO				pmax		pmax		
	comp=Z,19nm,0.9s,mb5.0							
CTAO	**Charters Tower**	**47.21**	**114**	*e*P		**P**	**22 36 18.0**	**+0.2**
	comp=Z,19nm,0.9s,mb5.0							
CTAO				*e*pP		pP	22 36 26.5	-0.1
STKA	**Stephens Creek**	**47.50**	**131**	P		**P**	**22 36 20.3**	**+0.5**
	comp=Z,13nm,1.0s,mb4.8,baz=321,slow=12,SNR=3.7							
STKA	**Stephens Creek**	**47.50**	**131**	*e*P		**P**	**22 36 18.8**	**-1.0**
STKA				*e*pP		pP	22 36 27.0	-1.6
KSRS	**Korea Array**	**48.02**	**29**	P		**P**	**22 36 23.6**	**-0.1**
	comp=Z,41nm,1.0s,mb5.4,baz=220,slow=8.0,SNR=36							
KSRS				pP		pP	22 36 31.8	-0.8
	comp=Z,25nm,0.9s,baz=239,slow=6.7,SNR=13							
KBL	**Kabul**	**48.30**	**324**	*e*P		**P**	**22 36 25.4**	**-0.5**
KBL				*e**PP		pP	22 36 34.6	-0.2
WMQ	**Urumqi**	**48.67**	**347**	⇑*i*P		**P**	**22 36 29.5**	**+0.9**
WMQ				AMB		AMB		
	comp=Z,56nm,0.8s,mb5.7							
WMQ				AMB		AMB		
	comp=Z,222nm,3.8s							
SONM	**Songino Array**	**51.47**	**5**	P		**P**	**22 36 50.9**	**+1.1**
	comp=Z,29nm,0.8s,mb5.3,baz=184,slow=8.7,SNR=25							
SONM				pP		pP	22 36 58.5	-0.2
	comp=Z,31nm,0.9s,baz=186,slow=9.2,SNR=15							
SONM				PcP		PcP	22 38 04.3	+0.5
	comp=Z,5.5nm,0.8s,baz=200,slow=3.8,SNR=2.4							
UCH	**Uchtor**	**51.48**	**335**	*e*P		**P**	**22 36 50.8**	**+0.7**
	comp=Z,7.4nm,0.8s,mb4.7							
UCH				*e*pP		pP	22 36 59.1	+0.2
ULN	**Ulaanbaatar**	**51.56**	**5**	*e*P		**P**	**22 36 51.0**	**+0.5**
ULN				*e**PP		pP	22 36 58.7	-0.7
TKM2	**Tokmak 2**	**51.62**	**336**	*e*P		**P**	**22 36 51.7**	**+0.7**
TKM2				pmax		pmax		
	comp=Z,45nm,0.8s,mb5.5							
TKM2	**Tokmak 2**	**51.62**	**336**	P		**P**	**22 36 51.6**	**+0.5**
	SNR=20							
TKM2	**Tokmak 2**	**51.62**	**336**	*e*P		**P**	**22 36 51.7**	**+0.7**
	comp=Z,46nm,0.8s,mb5.5							
AML	**Almayashu**	**51.75**	**334**	P		**P**	**22 36 53.2**	**+1.1**
	SNR=6.4							
AML	**Almayashu**	**51.75**	**334**	*e*P		**P**	**22 36 52.8**	**+0.8**
	comp=Z,11nm,0.6s,mb5.0							
CHMS	**Chumysh**	**52.02**	**336**	P		**P**	**22 36 54.0**	**0.0**
	SNR=8.0							
EKS2	**Erkin-Say**	**52.15**	**335**	P		**P**	**22 36 56.1**	**+1.2**
	SNR=18							
EKS2	**Erkin-Say**	**52.15**	**335**	*e*P		**P**	**22 36 55.8**	**+0.8**
EKS2				*e*pP		pP	22 37 03.8	-0.1
CN2	**Changchun**	**52.16**	**22**	*e*P		**P**	**22 36 53.6**	**-1.4**
CN2				AMB		AMB		
	comp=Z,20nm,1.1s,mb5.0							
USP	**Ospenovka**	**52.35**	**336**	P		**P**	**22 36 56.6**	**+0.2**
	SNR=10							
MK31	**Makanchi Array**	**52.79**	**344**	*e*P		**P**	**22 37 00.2**	**+0.6**
MK31				*e**PP		pP	22 37 08.2	-0.3
MKAR	**Makanchi Array**	**52.79**	**344**	P		**P**	**22 36 59.7**	**+0.1**
	comp=Z,38nm,0.8s,mb5.3,baz=148,slow=7.7,SNR=25							
MKAR	**Makanchi Array**	**52.79**	**344**	P		**P**	**22 36 59.7**	**0.0**
MAJO	**Matsushiro**	**53.05**	**38**	*e*P		**P**	**22 37 01.1**	**-0.7**
	comp=Z,27nm,1.0s,mb5.1							
MAT	**Matsushiro**	**53.05**	**38**	P		**P**	**22 37 01.1**	**-0.6**
MJAR	**Matsushiro Arr**	**53.05**	**38**	P		**P**	**22 37 00.8**	**-0.9**
	comp=Z,14nm,0.8s,mb5.0,baz=216,slow=7.5,SNR=22							
ZAK	**Zakamensk**	**53.83**	**2**	*e*P		**P**	**22 37 07.5**	**+0.3**
ZAK				*e*			22 38 10.8	
ZAK				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.8							
MDJ	**Mudanjiang**	**54.50**	**25**	*e*P		**P**	**22 37 12.0**	**-0.2**
	comp=Z,17nm,0.9s,mb5.0							
MDJ				*e*pP		pP	22 37 20.7	-0.4
TLY	**Talaya**	**55.14**	**2**	*e*P		**P**	**22 37 16.5**	**-0.2**
TLY				pmax		pmax		
	comp=Z,22nm,1.0s,mb5.1							
TLY	**Talaya**	**55.14**	**2**	*e*P		**P**	**22 37 16.5**	**-0.2**
	comp=Z,22nm,1.0s,mb5.1							
HIA	**Hailar**	**55.18**	**15**	*e*P		**P**	**22 37 16.7**	**-0.4**
HIA				*e**PP		pP	22 37 25.0	-1.0
TAU	**Tasmania Unive**	**56.84**	**140**	*e*P		**P**	**22 37 29.8**	**+0.7**
KURK	**Kurchatov**	**57.37**	**343**	P		**P**	**22 37 31.9**	**-0.8**
	comp=Z,28nm,0.9s,mb5.3,baz=165,slow=6.8,SNR=18							
KURK	**Kurchatov**	**57.37**	**343**	*e*P		**P**	**22 37 32.5**	**-0.1**
KURK				pmax		pmax		
	comp=Z,40nm,0.8s,mb5.5							
KURK	**Kurchatov**	**57.37**	**343**	*e*P		**P**	**22 37 32.5**	**-0.2**
	comp=Z,40nm,0.8s,mb5.5							
ZAA0	**Zalesovo Array**	**58.89**	**349**	*e*P		**P**	**22 37 42.7**	**-0.5**
ZAA0				*e*			22 37 54.0	
ZALV	**Zalesovo Beam**	**58.89**	**349**	P		**P**	**22 37 42.8**	**-0.5**
	comp=Z,49nm,0.8s,mb5.6,baz=179,slow=4.3,SNR=26							
HNR	**Honiara**	**59.00**	**99**	P		**P**	**22 37 43.8**	**-1.0**
	comp=Z,68nm,0.7s,mb5.8,baz=282,slow=2.6,SNR=4.6							
HNR	**Honiara**	**59.00**	**99**	*e*P		**P**	**22 37 44.2**	**-0.6**
HNR				*e*		pP	22 37 53.6	-0.2
KLR	**Kul'dur**	**59.09**	**23**	*e*P		**P**	**22 37 40.0**	**-4.7**
RDF	**Al-Radifah**	**60.43**	**306**	*e*P		**P**	**22 37 53.8**	**-0.6**
	baz=306							
RDF				AMb		AMB	22 37 55.2	
	comp=Z,40nm,1.0s,mb5.4,baz=306							
NAY	**Al-Naaiem**	**60.81**	**306**	*e*P		**P**	**22 37 56.3**	**-0.7**
	baz=306							
NAY				AMb		AMB	22 37 57.5	
	comp=Z,12nm,0.9s,mb5.0,baz=306							
MIB	**Mutribah**	**60.95**	**307**	*e*P		**P**	**22 37 57.6**	**-0.2**
	baz=307							
MIB				AMb		AMB	22 37 58.9	
	comp=Z,25nm,0.9s,mb5.3,baz=307							
RST	**Umm Al-Ruwaisa**	**61.10**	**307**	*e*P		**P**	**22 37 57.8**	**-1.1**
	baz=306							
RST				AMb		AMB	22 37 59.0	
	comp=Z,19nm,1.0s,mb5.2,baz=306							
BVAR	**Borovoye Array**	**61.96**	**340**	P		**P**	**22 38 03.2**	**-1.0**
	comp=Z,21nm,0.7s,mb5.4,baz=143,slow=8.5,SNR=28							
BRVK	**Borovoye**	**62.03**	**340**	*e*P		**P**	**22 38 03.2**	**-1.5**
BOD	**Bodaibo**	**62.16**	**8**	*e*P		**P**	**22 38 05.3**	**-0.2**
BOD				pmax		pmax		
	comp=Z,98nm,0.8s,mb6.0							
YSS	**Yuzh-Sakhalins**	**62.44**	**31**	⇓*e*P		**P**	**22 38 07.0**	**-0.6**
YSS				*e*		pP	22 38 14.5	-2.1
YSS				pmax		pmax		
	comp=Z,90nm,1.0s,mb5.8							
YSS				MLR		MLR		
	comp=E,2μm,16.0s							
YSS				MLR		MLR		
	comp=Z,2μm,16.0s,MS5.2							
YSS	**Yuzh-Sakhalins**	**62.44**	**31**	*e*P		**P**	**22 38 07.1**	**-0.5**
	comp=Z,74nm,0.8s,mb5.9							
YSS				*e*pP		pP	22 38 15.6	-1.0
KMBO	**Kilima Mbogo**	**63.52**	**271**	P		**P**	**22 38 17.5**	**+2.0**
	comp=Z,1.6nm,0.9s,mb4.0,baz=253,slow=19,SNR=3.6							
KMBO	**Kilima Mbogo**	**63.52**	**271**	*e*P		**P**	**22 38 16.4**	**+1.0**
KMBO				*e*pP		pP	22 38 25.4	+0.9
SVE	**Sverdlovsk**	**68.47**	**338**	⇑*e*P		**P**	**22 38 46.4**	**0.0**
SVE				pmax		pmax		
	comp=Z,31nm,0.9s,mb5.3							
MAW	**Mawson**	**68.92**	**195**	P		**P**	**22 38 49.0**	**-0.1**
	comp=Z,2.2nm,1.0s,mb4.0,baz=71,slow=11,SNR=3.5							
MAW	**Mawson**	**68.92**	**195**	*e*P		**P**	**22 38 49.1**	**+0.1**
MAW				*e*pP		pP	22 38 57.9	-0.4
ARU	**Arti**	**68.99**	**336**	*c i*P		**P**	**22 38 48.5**	**-1.1**
ARU				*e*			22 39 15.1	
ARU				*e*			22 41 20.1	
ARU				*e*PPP			22 42 57.1	
ARU				*e*S		S	22 47 47.3	-5.1
ARU				pmax		pmax		
	comp=Z,18nm,1.0s,mb5.0							
ARU	**Arti**	**68.99**	**336**	*e*P		**P**	**22 38 47.7**	**-2.0**
YAK	**Yakutsk**	**69.10**	**14**	*e*P		**P**	**22 38 48.6**	**-1.6**
YAK				pmax		pmax		
	comp=Z,42nm,1.1s,mb5.3							
YAK	**Yakutsk**	**69.10**	**14**	*e*P		**P**	**22 38 49.2**	**-1.1**
ASF	**Jabal al Asfar**	**70.17**	**306**	P		**P**	**22 38 58.1**	**+0.7**
	comp=Z,5.4nm,0.8s,mb4.5,baz=19,slow=3.0,SNR=6.1							
KIV	**Kislovodsk**	**70.27**	**319**	*e*P		**P**	**22 38 58.0**	**+0.2**
KIV				pmax		pmax		
	comp=Z,14nm,1.0s,mb4.8							
KIV	**Kislovodsk**	**70.27**	**319**	*e*P		**P**	**22 38 57.6**	**-0.2**
MALT	**Malatya**	**71.00**	**313**	⇓*i*P		**P**	**22 39 03.8**	**+1.4**
MALT	**Malatya**	**71.00**	**313**	*e*P		**P**	**22 39 02.5**	**+0.1**
MALT				*e*pP		pP	22 39 11.2	-0.4
SOC	**Sochi**	**72.08**	**318**	*i*P		**P**	**22 39 09.0**	**+0.3**
LSZ	**Lusaka**	**72.27**	**255**	P		**P**	**22 39 10.8**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.2,baz=54,slow=8.7,SNR=3.6							
LSZ	**Lusaka**	**72.27**	**255**	*e*P		**P**	**22 39 10.5**	**0.0**
LSZ				*e*pP		pP	22 39 18.5	-1.2
PETK	**Petropavlovsk-**	**73.83**	**32**	P		**P**	**22 39 18.7**	**-0.2**
	comp=Z,3.1nm,0.6s,mb4.4,baz=109,slow=0.6,SNR=6.4							
VSR	**Storozhevoye**	**75.55**	**325**	*e*P		**P**	**22 39 27.2**	**-1.7**
VSR				*e**PP		pP	22 39 36.0	-2.1
VSR				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.8							
VSR				pmax		pmax		
	comp=N,9.0nm,0.9s							
VSR				pmax		pmax		
	comp=E,20nm,

	comp=Z,4.3nm,0.8s,mb4.8,baz=90,slow=5.3,SNR=17									
GERES					pP		pP		22 40 57.2	+0.2
	comp=Z,2.4nm,0.9s,baz=91,slow=5.3,SNR=6.1									
BRG	**Berggiesshubel**	**90.78**	**321**	*eP*		**P**			**22 40 47.7**	**+0.1**
	comp=Z,6.0nm,0.9s,mb4.9									
BRG	**Berggiesshubel**	**90.78**	**321**	*e*		**P**			**22 40 47.8**	**+0.3**
	comp=Z,5.7nm,0.9s,mb4.9									
BRG	**Berggiesshubel**	**90.78**	**321**	*e*		**P**			**22 40 47.8**	**+0.3**
SNAA	**Sanae**	**90.86**	**198**	P		**P**			**22 40 43.8**	**-3.7**
KHC	**Kasperske Hory**	**90.88**	**319**⇑	*eP*		**P**			**22 40 48.1**	**0.0**
KHC	**Kasperske Hory**	**90.88**	**319**	*eP*		**P**			**22 40 47.8**	**-0.3**
KHC				*ep*	P		pP		22 40 55.5	-2.0
RJOB	**Jochberg**	**91.30**	**318**	*eP*		**P**			**22 40 48.8**	**-1.2**
	comp=Z,7.0nm,1.0s,mb5.0									
WET	**Wettzell**	**91.34**	**319**	*eP*		**P**			**22 40 49.6**	**-0.6**
WET				pmax	pmax					
	comp=Z,6.0nm,0.9s,mb4.9									
WET	**Wettzell**	**91.34**	**319**	*eP*		**P**			**22 40 49.6**	**-0.6**
	comp=Z,6.0nm,0.9s,mb4.9									
CLL	**Collm**	**91.41**	**321**	*eP*		**P**			**22 40 51.0**	**+0.5**
CLL				pmax	pmax					
	comp=Z,5.0nm,1.0s,mb4.8									
CLL	**Collm**	**91.41**	**321**	*eP*		**P**			**22 40 51.0**	**+0.5**
	comp=Z,5.0nm,1.0s,mb4.8									
TANN	**Tannenbergstha**	**91.69**	**320**	*eP*		**P**			**22 40 51.0**	**-0.8**
	comp=Z,6.0nm,1.1s,mb4.8									
MANZ	**Manzenberg**	**91.89**	**320**	*eP*		**P**			**22 40 52.7**	**0.0**
	comp=Z,11nm,1.2s,mb5.1									
GRA1	**Grafenberg Arr**	**92.45**	**319**	*eP*		**P**			**22 40 55.7**	**+0.4**
	comp=Z,7.0nm,1.1s,mb4.9									
GRF	**Grafenberg Arr**	**92.45**	**319**	*eP*		**P**			**22 40 55.7**	**+0.4**
GRF				pmax	pmax					
	comp=Z,7.0nm,1.1s,mb4.9									
GRF	**Grafenberg Arr**	**92.45**	**319**	*eP*		**P**			**22 40 55.7**	**+0.4**
GRF				pmax	pmax					
	comp=Z,7.0nm,1.1s,mb4.9									
GRF	**Grafenberg Arr**	**92.45**	**319**	*eP*		**P**			**22 40 55.7**	**+0.4**
	comp=Z,7.0nm,1.1s,mb4.9									
NB2	**NORSAR Subarra**	**92.93**	**331**	P		**P**			**22 40 56.6**	**-0.7**
	comp=Z,4.2nm,0.7s,mb4.4,baz=93,slow=4.6									
NOA	**NORSAR Array B**	**92.93**	**331**	P		**P**			**22 40 56.6**	**-0.6**
	comp=Z,2.0nm,0.9s,mb4.5,baz=99,slow=6.9,SNR=5.9									
KEST	**Kesra**	**93.26**	**305**	P		**P**			**22 40 59.8**	**+0.4**
	comp=Z,2.8nm,0.9s,mb4.7,baz=36,slow=5.5,SNR=6.0									
TNS	**Taunus Mts**	**94.26**	**320**	*eP*		**P**			**22 41 03.6**	**0.0**
TNS				pmax	pmax					
	comp=Z,8.0nm,0.9s,mb5.2									
TNS	**Taunus Mts**	**94.26**	**320**	*eP*		**P**			**22 41 03.6**	**0.0**
	comp=Z,8.0nm,0.9s,mb5.2									
MOD	**Modoc**	**127.10**	**38**	*e*PKPdf		PKPdf			22 46 49.7	+0.7
NVAR	**Mina Array Bea**	**130.33**	**41**	PKP		PKPdf			22 46 56.9	+1.7
	comp=Z,1.9nm,0.8s,baz=250,slow=1.3,SNR=4.3									
NVAR				SKPbc		SKPbc			22 50 17.3	+0.8
	comp=Z,1.5nm,0.9s,baz=271,slow=5.3,SNR=5.3									
NVAR	**Mina Array Bea**	**130.33**	**41**	PKP		PKPdf			22 46 56.9	+1.7
NVAR				SKPbc		SKPbc			22 50 17.3	+0.8
ELK	**Elko**	**130.85**	**36**	PKP		PKPdf			22 46 57.0	+1.0
	comp=Z,0.8nm,0.7s,baz=296,slow=2.4,SNR=6.2									
ELK	**Elko**	**130.85**	**36**	PKP		PKPdf			22 46 57.0	+1.0
ELK				*e*PKPdf		PKPdf			22 46 57.7	+1.6
LAO	**LASA Array**	**131.12**	**25**	*e*PKPdf		PKPdf			22 46 57.4	+0.9
ULM	**Lac du Bonnet**	**131.44**	**14**	PKP		PKPdf			22 46 56.6	-0.3
	comp=Z,3.3nm,0.7s,baz=332,slow=7.4,SNR=3.6									
TPNV	**Topopah Spring**	**132.51**	**41**	*e*PKIKP		PKPdf			22 46 58.2	-1.2
PDAR	**Pinedale Array**	**132.58**	**30**	PKP		PKPdf			22 46 59.5	+0.2
	comp=Z,1.3nm,1.0s,baz=158,slow=0.8,SNR=3.4									
MSU	**Marysvale**	**134.09**	**36**	*e*PKIKP		PKPdf			22 47 02.1	-0.2
RSSD	**Black Hills**	**134.10**	**25**	*e*PKIKP		PKPdf			22 47 02.4	+0.3
PFO	**Pinyon Flat Ob**	**134.24**	**45**	PKP		PKPdf			22 47 03.0	+0.2
	comp=Z,6.7nm,1.0s,baz=282,slow=2.2,SNR=6.3									
PFO				SKPbc		SKPbc			22 50 29.8	-0.6
	comp=Z,2.2nm,0.9s,baz=51,slow=2.6,SNR=3.7									
CCM	**Cathedral Cave**	**144.00**	**16**	*e*PKIKP		PKPdf			22 47 17.4	-3.0
WMOK	**Wichita Mounta**	**144.10**	**28**	*e*PKIKP		PKPdf			22 47 17.7	-2.9
FVM	**French Village**	**144.29**	**15**	*e*PKIKP		PKPdf			22 47 17.6	-3.3
SIUC	**Southern Illin**	**144.85**	**14**	*e*PKPdf		PKPdf			22 47 20.5	-1.4
WCI	**Wyandotte Cave**	**144.95**	**10**	*e*PKIKP		PKPdf			22 47 20.3	-1.7
USIN	**University of**	**144.95**	**12**	*e*PKPdf		PKPdf			22 47 20.2	-1.8
USIN				*ep*PKPdf		pPKPdf			22 47 29.4	-2.3
TXAR	**Lajitas Array**	**145.47**	**40**	PKPbc		PKPbc			22 47 23.7	+0.5
	comp=Z,38nm,0.8s,baz=259,slow=0.5,SNR=59									
TXAR				pPKPbc		pPKPbc			22 47 32.2	-0.6
	comp=Z,32nm,0.8s,baz=294,slow=0.9,SNR=19									
TXAR	**Lajitas Array**	**145.47**	**40**	PKPbc		PKPbc			22 47 23.7	+0.5
TXAR				pPKPbc		pPKPbc			22 47 32.2	-0.6
URVA	**University of**	**146.17**	**358**	*e*PKPdf		PKPdf			22 47 24.3	+0.1
URVA				*ep*PKPdf		pPKPdf			22 47 33.1	-0.7
BLA	**Blacksburg**	**146.55**	**2**	*e*PKP2		PKPab			22 47 25.0	-2.2
WVT	**Waverly**	**146.68**	**13**	*e*PKP2		PKPab			22 47 25.3	-2.4
UALR	**University of**	**146.69**	**20**	*e*PKPdf		PKPdf			22 47 25.6	+0.5
JCT	**Junction City**	**146.95**	**34**	*e*PKPdf		PKPdf			22 47 26.4	+0.7
JCT				*ep*PKPdf		pPKPdf			22 47 36.0	+0.6
TZTN	**Tazewell**	**146.99**	**6**	*e*PKPdf		PKPdf			22 47 26.4	+0.9
TKL	**Tuckaleechee C**	**147.84**	**7**	*e*PKIKP		PKPdf			22 47 26.7	-0.3
CPCT	**Cooper Cave**	**147.95**	**8**	*e*PKP		PKPbc			22 47 29.1	-1.1
SWET	**Sewanee**	**147.95**	**10**	*e*PKP		PKPbc			22 47 28.7	-1.5
NATX	**Nacogdoches**	**148.46**	**26**	*e*PKPbc		PKPbc			22 47 31.1	-0.5
HKT	**Hockley**	**149.45**	**29**	*e*PKP2		PKPbc			22 47 34.1	-0.1
LRAL	**Lakeview Retre**	**149.84**	**13**	*e*PKPbc		PKPbc			22 47 33.8	-1.3

IDC ***23*** *22:29:20.7±0.7, 180S×12781E, h0km, mb4.4/10, mb1 4.6/12, mb1mx4.4/20, mbtmp4.4/12, ML4.5/2, Error ellipse: s-maj=34.3km s-min=14.3km az=74.0*
NEIC ***23*** *22:29:22.6±3.8, 178S×12785E, h16km±24km, mb4.7/3, Error ellipse: s-maj=12.5km s-min=6.3km az=65.0*
MOS ***23*** *22:29:22.5±1.2, 189S×12780E, h33km, mb5.6/4, Error ellipse: s-maj=25.9km s-min=11.2km az=114.0*
ISCJB ***23*** *22:29:25.3±1.2, 186S±005×12780E±006, h55km±11km, mb4.5/13, Error ellipse: s-maj=12.5km s-min=6.3km az=142.4*
DJA ***23*** *22:29:26, 187S×12778E, h7km, MLv5.1/9*
ISC 23 22:29:26.9±1.1, 188S±006×12787E±007, h53km±11km, n52, σ1§09/51, mb4.5/13, 2C-2D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAI	**Ambon**	**1.82**	**170**⇑	*eP*		**Pn**	**22 29 56.0**	**+0.1**
MNI	**Manado**	**4.48**	**318**⇓	*eP*		**Pn**	**22 30 36.5**	**+4.2**
MNI				*eS*		**Sn**	**22 31 31.5**	**+8.3**
TLE	**Tual**	**6.13**	**128**⇑	*eP*		**Pn**	**22 31 00.5**	**+5.6**
TLE				*eS*		**Sn**	**22 32 07.5**	**+3.8**
PCI	**Palu**	**8.08**	**277**	*eP*		**Pn**	**22 31 22.5**	**+0.8**
KAPI	**Kappang**	**8.67**	**249**	Pn		**Pn**	**22 31 31.0**	**+1.1**
	5.7nm,0.3s,baz=99,slow=6.7,SNR=19							
DAV	**Davao City (W)**	**9.18**	**346**	Pn		**Pn**	**22 31 32.5**	**-4.3**
KKM	**Kota Kinabalu**	**14.05**	**304**	*e*Pn		**Pn**	**22 32 39.6**	**-3.7**
FITZ	**Fitzroy Crossi**	**16.27**	**188**	Pn		**Pn**	**22 33 09.8**	**-2.2**
	0.2nm,0.3s,baz=295,slow=19,SNR=2.4							
FITZ	**Fitzroy Crossi**	**16.27**	**188**	*e*Pn		**Pn**	**22 33 10.7**	**-1.2**
KSM	**Kuching**	**17.87**	**281**	Pn		**Pn**	**22 33 30.5**	**-1.4**
WRAB	**Tennant Creek**	**19.03**	**161**	*eP*		**Pn**	**22 33 45.0**	**-0.9**
WRAB				*e*			22 33 54.5	
WRA	**Warramunga Arr**	**19.03**	**161**	P		**Pn**	**22 33 44.6**	**-1.3**
	4.2nm,0.3s,baz=343,slow=12,SNR=27							
WRA				S		**S**	**22 37 13.5**	**-4.5**
	0.8nm,0.3s,baz=337,slow=22,SNR=5.0							
WB2	**Warramunga Arr**	**19.04**	**161**	*eP*		**Pn**	**22 33 44.3**	**-1.6**
COEN	**Coen**	**19.31**	**129**	*eP*		**Pn**	**22 33 50.3**	**+1.0**
	29nm,0.7s							
MBWA	**Marble Bar**	**20.73**	**202**	*eP*		**P**	**22 34 02.9**	**-0.3**
	42nm,1.1s							
ASAR	**Alice Springs**	**22.43**	**165**	P		**P**	**22 34 21.9**	**+0.6**
	66nm,0.8s,mb5.1,baz=343,slow=9.4,SNR=54							
ASAR				S		**S**	**22 38 24.8**	**0.0**
	21nm,1.0s,baz=346,slow=20,SNR=12							
CTA	**Charters Tower**	**25.50**	**136**	P		**P**	**22 34 55.8**	**+5.2**
	5.7nm,0.6s,mb4.3,baz=306,slow=9.1,SNR=3.5							
CTAO	**Charters Tower**	**25.50**	**136**	*eP*		**P**	**22 34 51.0**	**+0.5**
YHNB	**Yeheng**	**27.14**	**347**	*eP*		**P**	**22 35 04.4**	**-0.8**
NWAO	**Narrogin (SRO)**	**32.45**	**197**	P		**P**	**22 35 51.9**	**-0.3**
	14nm,1.1s,mb4.7,baz=42,slow=12,SNR=2.9							
STKA	**Stephens Creek**	**32.52**	**158**	P		**P**	**22 35 55.0**	**+2.1**
	6.5nm,0.9s,mb4.6,baz=343,slow=9.9,SNR=4.8							
STKA	**Stephens Creek**	**32.52**	**158**	*eP*		**P**	**22 35 53.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**34.91**	**307**	P		**P**	**22 36 14.9**	**+1.2**
	3.1nm,0.8s,mb4.3,baz=139,slow=8.3,SNR=7.2							
CHTO	**Chiang Mai**	**35.09**	**307**	*eP*		**P**	**22 36 15.8**	**+0.4**
MJAR	**Matsushiro Arr**	**39.42**	**13**	P		**P**	**22 36 51.2**	**-0.6**
	1.4nm,0.5s,mb3.9,baz=187,slow=9.5,SNR=5.9							
MJAR	**Matsushiro Arr**	**39.42**	**13**	P		**P**	**22 36 51.2**	**-0.6**
MJAR	**Matsushiro Arr**	**39.42**	**13**	P		**P**	**22 36 51.2**	**-0.6**
BJT	**Baijiatuao**	**43.05**	**347**	P		**P**	**22 37 21.0**	**-0.5**
MDJ	**Mudanjiang**	**46.32**	**2**	*eP*		**P**	**22 37 47.3**	**-0.2**
LSA	**Lhasa**	**47.08**	**315**	*eP*		**P**	**22 37 52.5**	**-1.2**
HYB	**Hyderabad**	**52.24**	**294**	*iP*		**P**	**22 38 35.0**	**+1.8**
DGAR	**Diego Garcia**	**55.47**	**262**	P		**P**	**22 38 54.9**	**-2.0**
MK31	**Makanchi Array**	**62.81**	**327**	*eP*		**P**	**22 39 47.1**	**+0.1**
MKAR	**Makanchi Array**	**62.81**	**327**	P		**P**	**22 39 47.5**	**+0.4**
	0.6nm,0.4s,mb4.1,baz=114,slow=9.3,SNR=3.7							
MKAR	**Makanchi Array**	**62.81**	**327**	P		**P**	**22 39 47.5**	**+0.4**
YAK	**Yakutsk**	**63.76**	**1**	*eP*		**P**	**22 39 52.9**	**-0.1**
YAK				pmax	pmax			
	comp=Z,33nm,0.4s,mb5.7							
YAK	**Yakutsk**	**63.76**	**1**	*eP*		**P**	**22 39 52.9**	**-0.1**
	comp=Z,32nm,0.4s,mb5.7							
AML	**Almayashu**	**65.58**	**319**	*eP*		**P**	**22 40 06.0**	**+0.7**
	comp=Z,2.9nm,0.4s,mb4.7							
EKS2	**Erkin-Say**	**65.77**	**319**	P		**P**	**22 40 07.3**	**+0.8**
KBL	**Kabul**	**65.88**	**309**	P		**P**	**22 40 06.0**	**-1.4**
KURK	**Kurchatov**	**67.07**	**328**	P		**P**	**22 40 13.9**	**-0.7**
	comp=Z,1.6nm,0.8s,mb4.1,baz=128,slow=5.2,SNR=2.6							
KURK	**Kurchatov**	**67.07**	**328**	*eP*		**P**	**22 40 14.4**	**-0.2**
BVAR	**Borovoye Array**	**72.63**	**328**	P		**P**	**22 40 49.4**	**+0.6**
	comp=Z,2.0nm,0.9s,mb4.0,baz=148,slow=8.5,SNR=3.1							
BRVK	**Borovoye**	**72.70**	**328**	P		**P**	**22 40 48.2**	**-1.0**
MAW	**Mawson**	**78.93**	**201**	P		**P**	**22 41 26.6**	**+2.2**
	comp=Z,6.8nm,1.0s,mb4.5,baz=68,slow=8.4,SNR=8.3							
OPO	**Ambohidratompo**	**80.56**	**252**	P		**P**	**22 41 36.2**	**+1.8**
	comp=Z,4.5nm,0.8s,mb4.5,baz=94,slow=4.5,SNR=9.1							
SYO	**Syowa Base**	**87.63**	**201**⇓	*eP*		**P**	**22 42 09.6**	**+0.4**
OD2	**Odessa Site #2**	**107.09**	**41**	*e*PKiKP		PKiKP	22 47 47.0	-0.2
TORD	**Torodi Ar. Bea**	**125.59**	**285**	PKP		PKPdf	22 48 24.1	+0.7
	comp=Z,1.2nm,0.8s,baz=69,slow=1.7,SNR=5.4							
CPUP	**Villa Florida**	**151.51**	**170**	PKPbc		PKPbc	22 49 18.2	+2.3
	baz=162,slow=0.6							
LPAZ	**La Paz**	**156.01**	**139**	PKPab		PKPab	22 49 47.7	+4.1
	comp=Z,0.7nm,0.6s,baz=209,slow=3.0,SNR=3.5							
LPAZ	**La Paz**	**156.01**	**139**	PKPab		PKPab	22 49 47.7	+4.1

ISCJB ***23*** *22:32:34.1±0.5, 367S×007×10068E±009, h27km, mb4.5/20, Error ellipse: s-maj=13.7km s-min=9.0km az=147.5*
BJI ***23*** *22:32:34.4, 398S×9997E, h36km, mB5.2, mb5.0*
MOS ***23*** *22:32:34.8±1.1, 369S×10064E, h33km, mb4.6/3, Error ellipse: s-maj=32.0km s-min=13.3km az=92.6*
NEIC ***23*** *22:32:35.7±3.3, 365S×10070E, h24km±24km, mb4.6/5, Error ellipse: s-maj=13.0km s-min=8.4km az=57.0*
IDC ***23*** *22:32:36.8±1.1, 361S×10073E, h27km±3km, mb4.2/13, mb1 4.3/14, mb1mx4.1/22, mbtmp4.3/14, ML4.5/1, Error ellipse: s-maj=33.2km s-min=16.2km az=48.0*
ISC 23 22:32:36.6±0.5, 365S±007×10072E±009, h29km, h29km±.7km: pP-P, n44, σ0§85/40, mb4.5/20, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
COCO	**West Island**	**9.31**	**204**	*eP*		**Pn**	**22 34 49.2**	**+0.2**
KAPI	**Kappang**	**19.03**	**95**	Pn		**Pn**	**22 36 56.8**	**-0.6**
	1.4nm,0.3s,baz=182,slow=20,SNR=4.2							
KAPI	**Kappang**	**19.03**	**95**	Pn		**Pn**	**22 36 56.8**	**-0.6**
CM31	**Chiang Mai Arr**	**22.04**	**356**	*eP*		**P**	**22 37 28.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**22.04**	**356**	P		**P**	**22 37 27.6**	**-1.5**
	5.2nm,0.5s,mb4.3,baz=186,slow=8.2,SNR=10							
CHTO	**Chiang Mai**	**22.39**	**356**	*eP*		**P**	**22 37 33.6**	**+0.8**
CHTO				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.1							
CHTO	**Chiang Mai**	**22.39**	**356**	*eP*		**P**	**22 37 33.6**	**+0.8**
	comp=Z,3.7nm,0.5s,mb4.1							
BATI	**Baumata**	**23.68**	**107**	S		**S**	**22 41 51.3**	**-8.0**
	comp=Z,11nm,0.4s,baz=281,slow=5.2,SNR=2.8							
FITZ	**Fitzroy Crossi**	**28.31**	**122**	*eP*		**P**	**22 38 32.6**	**+4.5**
	comp=Z,7.7nm,0.7s,mb4.4							
HYB	**Hyderabad**	**30.28**	**314**	*eP*		**P**	**22 38 43.5**	**-2.0**
LSA	**Lhasa**	**34.41**	**345**	*eP*		**P**	**22 39 22.4**	**+0.9**
WRA	**Warramunga Arr**	**36.55**	**119**	P		**P**	**22 39 40.0**	**-0.2**
	comp=Z,1.3nm,0.4s,mb4.2,baz=306,slow=8.7,SNR=3.7							
WRAB	**Tennant Creek**	**36.56**	**119**	*eP*		**P**	**22 39 40.7**	**+0.5**
WRAB				pmax	pmax			
	comp=Z,4.0nm,0.4s,mb4.6							
WRAB	**Tennant Creek**	**36.56**	**119**	*eP*		**P**	**22 39 40.7**	**+0.5**
	comp=Z,3.7nm,0.4s,mb4.6							
ASAR	**Alice Springs**	**37.72**	**125**	P		**P**	**22 39 49.6**	**-0.3**
	comp=Z,1.2nm,0.4s,mb4.0,baz=300,slow=7.7,SNR=5.5							
KSRS	**Korea Array**	**48.08**	**29**	P		**P**	**22 41 13.8**	**+0.1**
	comp=Z,7.2nm,0.9s,mb4.7,baz=237,slow=8.4,SNR=19							
KSRS				pP		pP	22 41 21.5	-1.0
	comp=Z,7.8nm,1.0s,baz=223,slow=8.2,SNR=11							
KBL	**Kabul**	**48.29**	**324**	P		**P**	**22 41 14.4**	**-1.0**
WMQ	**Urumqi**	**48.69**	**347**	P		**P**	**22 41 19.5**	**+1.2**
WMQ				AMB	AMB			
	comp=Z,17nm,0.9s,mb5.1							
WMQ				AMB	AMB			
	comp=Z,184nm,6.0s							
UCH	**Uchtor**	**51.49**	**335**	*eP*		**P**	**22 41 40.6**	**+1.0**
	comp=Z,996nm,1.2s							
SONM	**Songino Array**	**51.51**	**5**	P		**P**	**22 41 40.7**	**+1.1**
	comp=Z,6.4nm,0.8s,mb4.6,baz=187,slow=9.2,SNR=16							
SONM				pP		pP	22 41 48.4	0.0
	comp=Z,8.0nm,0.8s,baz=187,slow=9.4,SNR=13							
ULN	**Ulaanbaatar**	**51.60**	**5**	*eP*		**P**	**22 41 40.4**	**+0.1**
ULN				*e*		pP	22 41 49.3	+0.2
TKM2	**Tokmak 2**	**51.62**	**337**	*eP*		**P**	**22 41 41.4**	**+0.8**
TKM2				pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.5							
TKM2	**Tokmak 2**	**51.62**	**337**	*eP*		**P**	**22 41 41.4**	**+0.8**
	comp=Z,4.4nm,0.6s,mb4.6							
EKS2	**Erkin-Say**	**52.15**	**335**	*eP*		**P**	**22 41 45.5**	**+1.0**
	comp=Z,4.6nm,0.6s,mb4.6							
EKS2				*ep*	P		pP	22 41 52.7	-0.6
CN2	**Changchun**	**52.21**	**23**	*eP*		**P**	**22 41 52.4**	**+7.5**
CN2				*eAP*		pP	22 42 01.4	+7.6
CN2				AMB	AMB			
	comp=Z,10.0nm,0.7s,mb4.8							
MK31	**Makanchi Array**	**52.80**	**344**	*eP*		**P**	**22 41 49.6**	**+0.4**
MK31				*e*PP		pP	22 41 57.7	-0.4
MKAR	**Makanchi Array**	**52.80**	**344**	P		**P**	**22 41 49.7**	**+0.5**
	comp=Z,5.9nm,0.7s,mb4.6,baz=152,slow=8.1,SNR=8.6							
MKAR				pP		pP	22 41 58.2	+0.2
	comp=Z,6.7nm,0.7s,baz=148,slow=8.1,SNR=9.5							
MKAR	**Makanchi Array**	**52.80**	**344**	P		**P**	**22 41 49.7**	**+0.5**
MKAR				pP		pP	22 41 58.2	+0.2
MJAR	**Matsushiro Arr**	**53.12**	**38**	P		**P**	**22 41 51.0**	**-0.8**
	comp=Z,7.7nm,0.7s,mb4.3,baz=213,slow=8.2,SNR=6.8							
KURK	**Kurchatov**	**57.38**	**344**	P		**P**	**22 42 21.7**	**-0.6**
	comp=Z,4.9nm,0.8s,mb4.6,baz=162,slow=6.7,SNR=7.3							
KURK				pP		pP	22 42 30.5	-0.6
	comp=Z,2.7nm,0.7s,baz=180,slow=6.8,SNR=6.2							
KURK	**Kurchatov**	**57.38**	**344**	*eP*		**P**	**22 42 22.3**	**+0.1**
KURK				pP		pP	22 42 30.5	-0.6
ZAA0	**Zalesovo Array**	**58.91**	**349**	*eP*		**P**	**22 42 32.6**	**-0.3**
ZALV	**Zalesovo Beam**	**58.91**	**349**	P		**P**	**22 42 32.6**	**-0.2**
	comp=Z,9.6nm,0.8s,mb4.9,baz=182,slow=9.9,SNR=17							
ZALV				pP		pP	22 42 41.2	-0.6
	comp=Z,13nm,0.9s,baz=161,slow=7.7,SNR=9.7							
BVAR	**Borovoye Array**	**61.97**	**340**	P		**P**	**22 42 53.2**	**-0.6**
	comp=Z,3.5nm,0.6s,mb4.6,baz=142,slow=8.5,SNR=7.4							
BVAR				pP		pP	22 43 01.3	-1.5
	comp=Z,2.8nm,0.5s,baz=136,slow=9.0,SNR=7.4							
BRVK	**Borovoye**	**62.03**	**340**	*eP*		**P**	**22 42 52.8**	**-1.4**
BOD	**Bodaibo**	**62.20**	**8**	*eP*		**P**	**22 42 54.3**	**-1.0**
MALT	**Malatya**	**70.97**	**313**	*eP*		**P**	**22 43 51.1**	**-0.6**
MALT				*e*		pP	22 44 00.8	0.0
PETK	**Petropavlovsk-**	**73.89**	**32**	P		**P**	**22 44 10.0**	**+1.2**
	comp=Z,5.6nm,0.9s,mb4.5,baz=224,slow=8.1,SNR=3.0							
ARCES	**ARCESS Array B**	**88.26**	**340**	P		**P**	**22 45 26.1**	**+1.2**
	comp=Z,1.9nm,0.9s,mb4.3,baz=111,slow=4.9,SNR=2.9							
GERES	**GERESS Array B**	**90.76**	**319**	P		**P**	**22 45 37.2**	**+0.2**
	comp=Z,0.8nm,0.8s,mb4.1,baz=108,slow=4.3,SNR=5.0							
GERES				pP		pP	22 45 46.0	-0.3
	comp=Z,0.6nm,0.6s,baz=96,slow=4.0,SNR=4.4							
WMOK	**Wichita Mounta**	**144.16**	**28**	*e*PKIKP		PKPdf	22 52 08.1	-2.2
WCI	**Wyandotte Cave**	**144.99**	**10**	*e*PKIKP		PKPdf	22 52 10.1	-1.5
TXAR	**Lajitas Array**	**145.54**	**40**	PKPbc		PKPbc	22 52 13.9	+1.0
	comp=Z,3.0nm,0.4s,baz=254,slow=0.6,SNR=55							
TXAR				pPKPbc		pPKPbc	22 52 22.6	+0.2
	comp=Z,6.5nm,0.8s,baz=180,slow=4.6,SNR=19							
JCT	**Junction City**	**147.02**	**34**	*e*PKP2		PKPbc	22 52 16.9	-0.4

IDC ***23*** *22:39:31.1±1.0, 296S×12935E, h0km, mb4.0/8, mb1 4.2/11, mb1mx4.0/19, mbtmp4.0/11, ML3.8/3, Error ellipse: s-maj=42.0km s-min=16.9km az=74.0*
ISCJB ***23*** *22:39:34.1±0.6, 301S±007×1293E±0.1, h33km, mb4.0/10, Error ellipse: s-maj=19.9km s-min=8.3km az=160.0*

DJA ***23*** *22:39:35, 265S×12934E, h10km, MLv4.3/6*
NEIC ***23*** *22:39:36.1±0.5, 299S×12932E, h35km, mb4.3/2, Error ellipse: s-maj=17.3km s-min=7.5km az=70.0*
ISC 23 22:39:34.6±3.8, 301S±008×1294E±01, h23km±27km, n23, σ1§00/24, mb4.0/10, Seram

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAPI	**Kappang**	**9.78**	**258**	Pn		**Pn**	**22 41 53.2**	**-0.7**
	0.1nm,0.3s,baz=66,slow=20,SNR=3.0							
FITZ	**Fitzroy Crossi**	**15.44**	**193**	*eP*		**Pn**	**22 43 13.0**	**+2.0**
FITZ	**Fitzroy Crossi**	**15.44**	**193**	Pn		**Pn**	**22 43 12.9**	**+1.8**
	0.1nm,0.3s,baz=31,slow=15,SNR=6.0							
WRAB	**Tennant Creek**	**17.52**	**164**	*eP*n		**Pn**	**22 43 37.2**	**-0.3**
WRA	**Warramunga Arr**	**17.52**	**164**	P		**Pn**	**22 43 36.9**	**-0.7**
	1.5nm,0.3s,baz=340,slow=13,SNR=33							
WRA				S		**Sn**	**22 46 44.9**	**-7.2**
	0.2nm,0.3s,baz=344,slow=24,SNR=3.2							
WB2	**Warramunga Arr**	**17.53**	**164**	*eP*		**Pn**	**22 43 36.4**	**-1.2**
ASAR	**Alice Springs**	**21.01**	**168**	P		**P**	**22 44 17.9**	**+1.3**
	15nm,0.5s,mb4.6,baz=346,slow=10,SNR=48							
ASAR				S		**S**	**22 48 08.2**	**-1.4**
	1.7nm,0.7s,baz=349,slow=20,SNR=8.0							
KLBR	**Kellerberrin**	**30.46**	**200**	*eP*		**P**	**22 45 45.3

VSM	**San Miguel**	**3.00**	**96**⇑	*e*P		x	23 07 50.0		
BLLM	**Bellamira**	**3.04**	**95**	*e*P		x	23 07 49.9		
CAHU	**Cacacuatique**	**3.05**	**89**‖	*e*P		x	23 07 49.8		
SCX	**San Cristobal**	**3.23**	**337**	*i* P		**Pn**	**23 07 54.7**	**+1.7**	
CNCH	**Conchagua**	**3.45**	**97**⇑	*e*P		x	23 07 55.4		
TGIG		**3.47**	**331**	*i* P		**Pn**	**23 07 56.7**	**+0.4**	
TGIG				*i* S		**Sn**	**23 08 38.8**	**+2.6**	
TGUH	**Tegucigalpa,Un**	**3.97**	**85**	*e*P		**Pn**	**23 08 01.3**	**-1.8**	
TGUH				*e*S		**Sn**	**23 08 43.9**	**-4.5**	
TGUH	**Tegucigalpa,Un**	**3.97**	**85**	*e*Pn		**Pn**	**23 08 01.2**	**-1.9**	
TGUH				*e*Sn		**Sn**	**23 08 58.4**	**+10**	
LEON	**Leon**	**4.53**	**106**	*e*P		**Pn**	**23 08 09.2**	**-1.7**	
CNGN	**Cerro Negro**	**4.69**	**105**	*e*P		**Pn**	**23 08 12.9**	**-0.2**	
CNGN				*e*S		**Sn**	**23 09 04.3**	**-1.9**	
CNGN				AML		AML	23 09 22.4		
	comp=E,355nm,0.6s								
CMIG	**Matias Romero**	**4.77**	**315**	P		**Pn**	**23 08 14.1**	**0.0**	
	comp=E,7.5nm,0.3s,baz=128,slow=10,SNR=45								
CMIG				S		**Sn**	**23 09 07.0**	**-1.0**	
	comp=E,15nm,0.3s,baz=123,slow=16,SNR=3.9								
CMIG				LR		LR	23 09 39.8		
	comp=E,143nm,19.2s,baz=190,slow=31								
CMIG	**Matias Romero**	**4.77**	**315**	P		**Pn**	**23 08 14.1**	**0.0**	
CMIG				S		**Sn**	**23 09 07.0**	**-1.0**	
CMIG				LR		LR	23 09 39.8		
MOMN	**Momotombo**	**4.87**	**105**‖	*e*P		**Pn**	**23 08 15.4**	**-0.1**	
CSAN		**5.04**	**107**	*e*P		**Pn**	**23 08 17.2**	**-0.7**	
APYN	**Apoyeque**	**5.09**	**107**	*e*P		**Pn**	**23 08 17.2**	**-1.3**	
XAVN	**Gruta Xavier**	**5.14**	**107**	*e*P		**Pn**	**23 08 18.6**	**-0.6**	
HUEN		**5.23**	**105**	*e*P		**Pn**	**23 08 19.9**	**-0.6**	
HUEN				*e*S		**Sn**	**23 09 17.8**	**-1.7**	
VHO	**Vista Hermosa**	**6.16**	**303**	*i* P		**Pn**	**23 08 34.4**	**+1.2**	
VHO				*i* S		**Sn**	**23 09 40.2**	**-2.1**	
VCR	**Vista de Mar**	**6.65**	**122**	*e*P		**Pn**	**23 08 41.0**	**+1.1**	
PNIG	**Pinotepa**	**7.06**	**293**	*i* P		**Pn**	**23 08 44.6**	**-1.0**	
PNIG				*i* S		**Sn**	**23 10 02.1**	**-2.4**	
TEIG	**Tepich**	**7.08**	**24**	P		**Pn**	**23 08 46.0**	**+0.1**	
	comp=E,25nm,0.3s,baz=330,slow=20,SNR=112								
TEIG				S		**Sn**	**23 10 02.9**	**-2.2**	
	comp=E,3.6nm,0.3s,baz=214,slow=23,SNR=7.9								
TEIG	**Tepich**	**7.08**	**24**	*e*P		**Pn**	**23 08 46.0**	**+0.2**	
TEIG	**Tepich**	**7.08**	**24**	*e*Pn		**Pn**	**23 08 45.7**	**-0.2**	
TEIG				S		**Sn**	**23 10 02.9**	**-2.2**	
TEIG				*e*Sn		**Sn**	**23 10 14.4**	**+9.3**	
JTS	**JuntasAbangare**	**7.13**	**118**	P		**Pn**	**23 08 46.8**	**+0.2**	
	comp=E,6.7nm,0.3s,baz=310,slow=21,SNR=18								
JTS				S		**Sn**	**23 10 02.2**	**-4.1**	
	baz=180,slow=20,SNR=1.1								
JTS	**JuntasAbangare**	**7.13**	**118**	*e*Pn		**Pn**	**23 08 47.8**	**+1.3**	
JTS				*e*Sn		**Sn**	**23 10 14.7**	**+8.4**	
JCR	**Jicaral**	**7.22**	**122**	*e*P		**Pn**	**23 08 48.7**	**+0.9**	
TPIG	**Tehuac#an**	**7.42**	**310**	*i* P		**Pn**	**23 08 52.4**	**+1.9**	
TPIG				*i* S		**Sn**	**23 10 11.7**	**-1.6**	
PRS1	**Puriscal**	**7.83**	**118**	*e*P		**Pn**	**23 08 58.5**	**+2.3**	
BUS	**Buena Vista**	**8.52**	**118**	*e*P		**Pn**	**23 09 07.8**	**+2.3**	
BUS				*e*S		**Sn**	**23 10 40.8**	**+0.5**	
PPM	**Popocatepetl**	**8.77**	**308**	*i* P		**Pn**	**23 09 14.6**	**+5.7**	
PPM				*i* S		**Sn**	**23 10 44.2**	**-2.1**	
BAR1		**9.05**	**119**	*e*P		**Pn**	**23 09 16.1**	**+3.2**	
BAR1				*e*S		**Sn**	**23 10 54.0**	**+0.5**	
ACR	**Cerro Adams**	**9.48**	**121**	*e*P		**Pn**	**23 09 20.9**	**+2.1**	
HKT	**Hockley**	**16.66**	**346**	*e*Pn		**Pn**	**23 10 59.5**	**+4.9**	
	comp=E,33nm,1.8s								
HKT				*e*Sn		**Sn**	**23 14 06.4**	**+7.7**	
TXAR	**Lajitas Array**	**19.26**	**326**	P		**Pn**	**23 11 27.6**	**+1.1**	
	comp=E,0.3nm,0.3s,baz=149,slow=12,SNR=9.7								
CHI2		**19.57**	**116**	*e*P		Px	23 08 09.2		
LRAL	**Lakeview Retre**	**19.61**	**11**	*e*Pn		**Pn**	**23 11 31.7**	**+1.2**	
	comp=E,16nm,0.9s								
OXF	**Oxford**	**20.75**	**5**	*e*Pn		**P**	**23 11 47.7**	**+6.5**	
	comp=E,61nm,1.2s								
UALR	**University of**	**20.96**	**358**	*e*P		**P**	**23 11 47.1**	**+3.7**	
	comp=E,37nm,1.3s								
SWET	**Sewanee**	**21.93**	**12**	*e*P		**P**	**23 12 00.4**	**+6.6**	
WMOK	**Wichita Mounta**	**21.96**	**343**	*e*P		**P**	**23 11 59.8**	**+5.6**	
	comp=E,6.1nm,1.1s,mb3.9								
TKL	**Tuckaleechee C**	**22.86**	**16**	P		**P**	**23 12 02.2**	**-1.5**	
	comp=E,2.8nm,0.4s,mb4.1,baz=182,slow=11,SNR=12								
TKL	**Tuckaleechee C**	**22.86**	**16**	P		**P**	**23 12 02.2**	**-1.5**	
TKL				*e*Pn		**P**	**23 12 10.7**	**+7.0**	
CCM	**Cathedral Cave**	**24.22**	**0**	*e*P		**P**	**23 12 15.6**	**-0.9**	
	comp=E,16nm,1.0s,mb4.4								
ATAH	**Atahualpa**	**24.29**	**147**	P		**P**	**23 12 20.6**	**+3.2**	
	comp=E,6.7nm,0.7s,mb4.2,baz=358,slow=10,SNR=4.9								
BNM	**Barren Site**	**24.59**	**328**	*e*P		**P**	**23 12 21.9**	**+1.9**	
ANMO	**Albuquerque**	**25.14**	**330**	P		**P**	**23 12 26.5**	**+1.4**	
	comp=E,0.4nm,0.4s,mb3.3,baz=135,slow=14,SNR=4.0								
SADO	**Sadowa**	**32.63**	**16**	P		**P**	**23 13 30.8**	**-0.7**	
	baz=233,slow=13								
SADO				pP		pP	23 13 42.8	-2.2	
	baz=225,slow=8.4								
PDAR	**Pinedale Array**	**32.92**	**335**	PcP		PcP	23 16 18.3	+0.8	
	comp=E,0.3nm,0.6s,baz=92,slow=5.4,SNR=2.8								
NVAR	**Mina Array Bea**	**34.27**	**321**	P		**P**	**23 13 48.2**	**+2.3**	
	comp=E,2.0nm,0.8s,mb4.1,baz=135,slow=7.8,SNR=10								
NVAR				pP		pP	23 14 01.3	+1.9	
	comp=E,3.3nm,0.7s,baz=134,slow=8.5,SNR=11								
NVAR				PcP		PcP	23 16 22.4	+1.0	
	comp=E,0.9nm,0.7s,baz=167,slow=2.7,SNR=4.0								
NVAR				ScP		ScP	23 20 06.0	+3.7	
	comp=E,0.5nm,0.6s,baz=153,slow=4.0,SNR=3.6								
NVAR	**Mina Array Bea**	**34.27**	**321**	P		**P**	**23 13 48.2**	**+2.3**	
NVAR				pP		pP	23 14 01.3	+1.9	
NVAR				PcP		PcP	23 16 22.4	+1.0	
NVAR				ScP		ScP	23 20 06.0	+3.7	
LPAZ	**La Paz**	**37.64**	**142**	P		**P**	**23 14 13.4**	**-1.5**	
	comp=E,0.9nm,0.6s,mb3.6,baz=322,slow=11,SNR=3.6								
SIV	**San Ignacio**	**42.05**	**134**	P		**P**	**23 14 50.4**	**-1.2**	
	comp=E,3.0nm,0.6s,mb4.1,baz=318,slow=8.6,SNR=20								
SCHQ	**Schefferville**	**45.25**	**20**	P		**P**	**23 15 14.1**	**-2.7**	
	comp=E,5.2nm,0.8s,mb4.4,baz=238,slow=9.5,SNR=3.3								
CFAA	**Coronel Fontan**	**50.24**	**154**	P		**P**	**23 15 55.4**	**-0.4**	
	comp=E,0.2nm,0.7s,mb3.3,baz=336,slow=10.0,SNR=3.5								
YKA	**Yellowknife Ar**	**51.42**	**346**	P		**P**	**23 16 02.8**	**-1.4**	
	comp=E,0.9nm,0.6s,mb3.9,baz=150,slow=7.8,SNR=6.8								
TORD	**Torodi Ar. Bea**	**89.82**	**77**	P		**P**	**23 19 55.0**	**-3.5**	
	comp=E,0.3nm,0.8s,mb3.7,baz=265,slow=6.2,SNR=2.9								
CMAR	**Chiang Mai Arr**	**146.44**	**342**	PKPbc		PKPbc	23 26 40.3	-0.6	
	comp=E,2.8nm,0.6s,baz=339,slow=3.1,SNR=16								
CMAR				pPKPbc		pPKPbc	23 26 54.6	-1.8	
	comp=E,4.4nm,0.7s,baz=338,slow=3.7,SNR=4.6								

*IDC **23** 23:17:42.5±1.1,276S×12955E,h0km,mb4.2/5,mb1 4.2/8, mb1mx4.0/18,mbtmp4.2/8,ML4.0/2,Error ellipse: s-maj=49.6km s-min=18.5km az=71.0*

*ISCJB **23** 23:17:44.4±0.8,278S±008×1296E±0.1,h33km,mb4.0/5, Error ellipse: s-maj=17.1km s-min=9.7km az=157.7*

*NEIC **23** 23:17:46.6±0.8,276S×12970E,h35km,mb3.9/1,Error ellipse: s-maj=23.0km s-min=9.6km az=70.0*

*DJA **23** 23:17:47,264S×12934E,h9km,MLv4.2/5*

ISC 23 23:17:46.7±0.8,279S±008×1296E±01,h35km,n14, σ1§20/14,mb4.0/5,1C,Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**1.70**	**238**⇑	*e*P	**Pn**	**23 18 10.7**	**-3.2**
KAPI	**Kappang**	**10.11**	**257**	Pn	**Pn**	**23 20 10.0**	**+0.5**
	baz=224,slow=11,SNR=5.8						
DAV	**Davao City (W)**	**10.60**	**338**	*e*Pn	**Pn**	**23 20 14.5**	**-1.7**
FITZ	**Fitzroy Crossi**	**15.72**	**194**	*e*P	**Pn**	**23 21 26.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**15.72**	**194**	Pn	**Pn**	**23 21 26.6**	**+1.0**
	0.3nm,0.3s,baz=22,slow=14,SNR=9.6						
WRAB	**Tennant Creek**	**17.65**	**165**	*e*Pn	**Pn**	**23 21 49.3**	**-0.6**
	5.7nm,0.6s						
WRA	**Warramunga Arr**	**17.66**	**165**	P	**Pn**	**23 21 49.0**	**-1.1**
	0.8nm,0.3s,baz=341,slow=13,SNR=40						
WB2	**Warramunga Arr**	**17.66**	**165**	*e*P	**Pn**	**23 21 48.7**	**-1.4**
ASAR	**Alice Springs**	**21.16**	**169**	P	**P**	**23 22 29.4**	**+0.4**
	9.7nm,0.7s,mb4.3,baz=349,slow=11,SNR=73						
STKA	**Stephens Creek**	**31.05**	**160**	P	**P**	**23 24 03.6**	**+2.2**
	0.7nm,0.4s,mb3.9,baz=352,slow=7.1,SNR=4.2						
MKAR	**Makanchi Array**	**64.54**	**326**	P	**P**	**23 28 21.3**	**+1.1**
	0.7nm,0.7s,mb3.8,baz=121,slow=7.5,SNR=6.8						
ZALV	**Zalesovo Beam**	**67.68**	**333**	P	**P**	**23 28 40.4**	**+0.2**
	0.5nm,0.5s,mb3.9,baz=108,slow=4.7,SNR=3.2						
KURK	**Kurchatov**	**68.77**	**328**	P	**P**	**23 28 47.6**	**+0.5**
	0.6nm,0.2s,mb4.1,baz=125,slow=5.6,SNR=5.1						
KURK	**Kurchatov**	**68.77**	**328**	P	**P**	**23 28 47.6**	**+0.5**

*ISCJB **23** 23:17:45.4±4.8,180S±02×1786W±02,h558km±60km, mb4.1/10,Error ellipse: s-maj=29.7km s-min=22.5km az=9.5*

*IDC **23** 23:17:46.0±8.7,1803S×17843W,h554km±110km,mb3.5/9, mb1 3.7/9,mb1mx3.5/19,mbtmp3.5/9,Error ellipse: s-maj=52.6km s-min=20.9km az=7.0*

*NEIC **23** 23:17:48.6±5.2, 1807S×17850W,h590km±66km,mb4.4/4, Error ellipse: s-maj=37.4km s-min=17.2km az=182.0*

ISC 23 23:17:46.9±5.1,180S±02×1785W±02,h565km±60km,n23, σ0§72/22,mb4.1/10,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**20.55**	**190**	P	**P**	**23 21 45.8**	**-1.3**
	2.4nm,0.3s,baz=297,slow=9.0,SNR=5.2						
CNB	**Canberra Magne**	**33.30**	**232**	*e*P	**P**	**23 23 40.3**	**+1.8**
CTA	**Charters Tower**	**33.34**	**261**	*e*P	**P**	**23 23 39.5**	**+0.4**
CTA	**Charters Tower**	**33.34**	**261**	P	**P**	**23 23 39.6**	**+0.5**
	6.4nm,0.6s,mb4.3,baz=102,slow=11,SNR=8.7						
STKA	**Stephens Creek**	**38.50**	**241**	*e*P	**P**	**23 24 22.5**	**+0.9**
STKA	**Stephens Creek**	**38.50**	**241**	P	**P**	**23 24 22.9**	**+1.4**
	5.7nm,0.5s,mb4.4,baz=92,slow=9.4,SNR=14						
STKA	**Stephens Creek**	**38.50**	**241**	*e*P	**P**	**23 24 22.2**	**+0.6**
	7.9nm,0.7s,mb4.3						
WB2	**Warramunga Arr**	**44.51**	**260**	*e*P	**P**	**23 25 08.6**	**-0.5**
WRAB	**Tennant Creek**	**44.51**	**260**	*e*P	**P**	**23 25 08.8**	**-0.3**
	5.1nm,0.4s,mb4.4						
WRA	**Warramunga Arr**	**44.52**	**260**	P	**P**	**23 25 08.6**	**-0.6**
	5.9nm,0.5s,mb4.4,baz=95,slow=7.1,SNR=31						
ASAR	**Alice Springs**	**44.67**	**254**	P	**P**	**23 25 10.6**	**+0.3**
	34nm,0.5s,mb5.1,baz=86,slow=8.5,SNR=124						
FORT	**Forrest**	**49.88**	**245**	*e*P	**P**	**23 25 48.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**52.92**	**261**	P	**P**	**23 26 11.4**	**0.0**
	1.6nm,0.7s,mb3.5,baz=139,slow=10,SNR=5.2						
FITZ	**Fitzroy Crossi**	**52.92**	**261**	*e*P	**P**	**23 26 11.5**	**+0.1**
	2.7nm,0.6s,mb3.8						
KLBR	**Kellerberrin**	**58.70**	**244**	*e*P	**P**	**23 26 50.6**	**-0.6**
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**23 28 55.7**	**-0.1**
	0.8nm,0.7s,mb3.2,baz=220,slow=8.0,SNR=5.9						
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**23 28 55.7**	**-0.1**
TXAR	**Lajitas Array**	**86.12**	**58**	P	**P**	**23 29 29.9**	**+1.0**
	0.8nm,0.7s,mb3.4,baz=205,slow=4.0,SNR=9.0						
PDAR	**Pinedale Array**	**87.48**	**43**	P	**P**	**23 29 34.7**	**-0.3**
	0.6nm,0.7s,mb3.4,baz=240,slow=2.9,SNR=4.8						
VNA3	**Neumayer Olymp**	**90.66**	**176**	*e*	**P**	**23 29 49.0**	**-0.3**
VNA2	**Neumayer−Watz**	**91.10**	**177**	*e*	**P**	**23 29 51.9**	**+0.6**
	baz=186,slow=3.8						
ULN	**Ulaanbaatar**	**93.16**	**319**	*e*P	**P**	**23 30 00.4**	**-0.6**
	8.1nm,0.5s,mb5.0						
GERES	**GERESS Array B**	**147.67**	**345**	PKPbc	PKPbc	23 36 27.8	-0.5
	0.4nm,0.6s,baz=354,slow=2.7,SNR=4.7						

*IDC **23** 23:19:50.2±2.1,350S×12794E,h0km,mb3.8/2,mb1 4.2/3, mb1mx3.7/16,mbtmp4.0/3,ML4.2/1,Error ellipse: s-maj=175.1km s-min=26.9km az=67.0*

DJA 23 23:19:52,267S×12934E,h10km,MLv4.0/5,1C,Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**1.53**	**229**⇑	*e*P	Pn	23 20 16.5	-2.8
WRA	**Warramunga Arr**	**17.85**	**164**	P	Pn	23 23 54.0	-6.6
	0.9nm,0.3s,baz=341,slow=13,SNR=9.9						
ASAR	**Alice Springs**	**21.34**	**168**	P	P	23 24 35.0	-4.3
	5.0nm,0.5s,baz=348,slow=11,SNR=11						
MKAR	**Makanchi Array**	**64.28**	**326**	P	P	23 30 26.8	-0.7
	0.3nm,0.5s,baz=133,slow=6.3,SNR=3.6						

*SZGRF **23** 23:23:56.9,657S×10067E,h34km,mb4.9,Southwest of Sumatera, Indonesia*

*ISCJB **23** 23:24:03.6±0.2,368S±003×10073E±003,h29km, mb5.0/103,MS4.7/33,Error ellipse: s-maj=5.0km s-min=3.5km az=35.3*

*BJI **23** 23:24:04.3,394S×10067E,h59km,mB5.2,mb5.1,Ms5.1, Msz4.9*

*MOS **23** 23:24:04.4±1.1,353S×10088E,h33km,mb5.1/35, MS4.5/6,Error ellipse: s-maj=10.4km s-min=5.7km az=116.4*

*IDC **23** 23:24:05.0±0.5,363S×10081E,h28km±2km,mb4.5/25, mb1 4.6/25,mb1mx4.6/26,mbtmp4.5/25,ML5.0/1,MS4.4/13, Ms1 4.4/13,ms1mx4.3/22,Error ellipse: s-maj=14.8km s-min=8.4km az=45.0*

*GCMT **23** 23:24:06.6±0.5,409S×10058E,h30km±1km,MW5.0/50, Moment Tensor Solution. s33,c45; s50,c77; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.50±.21; Mθθ-1.40±.13; Mϕϕ-2.10±.17; Mrθ2.36±.17; Mrϕ1.76±.09; Mθϕ-0.71±.22; Best double couple: M=4.29000×10¹⁶ NP1:ϕ=336.00000°,δ32.00000°,λ119.00000°. NP2: ϕ=123.00000°,δ62.00000°,λ73.00000°. Principal axes: T 4.4520, Plg68.0000°, Azm0.0000°; N -0.3240, Plg15.0000°, Azm131.0000°; P -4.1280, Plg16.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **23** 23:24:06.6±0.8,361S×10083E,h40km±6km,mb4.9/27 Error ellipse: s-maj=8.0km s-min=5.1km az=47.0*

*DJA **23** 23:24:11,354S×10087E,h48km,Mw5.3/15*

ISC 23 23:24:05.5±0.2,372S±003×10071E±003,h31km, h31km±.8km:pP-P,n306,σ1§05/275,mb5.0/103,MS4.7/33, 25C-16D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.88**	**88**	P	**Pn**	**23 24 34.9**	**-0.6**
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.58**	**55**	P	**Pb**	**23 25 13.7**	**+5.4**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.63**	**74**	P	**Pn**	**23 25 29.4**	**+2.2**
	112nm,1.1s						
GSI	**Gunungsitoli**	**5.89**	**328**‖	*e*P	**Pn**	**23 25 29.0**	**-1.7**
SBJI	**Serang**	**5.90**	**114**	P	**Pb**	**23 25 41.1**	**-6.7**
	437nm,1.1s						
TRSI	**Tarutung**	**5.97**	**343**	P	**Pb**	**23 25 52.9**	**+4.1**
	416nm,1.0s						
KGM	**Kluang**	**6.26**	**25**	‖P	**Pn**	**23 25 37.2**	**+1.3**
MYKOM	**Kota Tinggi**	**6.30**	**30**	⇑P	**Pn**	**23 25 38.0**	**+1.5**
DBJI	**Dramaga**	**6.64**	**115**	P	**Pn**	**23 25 42.4**	**+1.3**
	494nm,1.0s						
SKJI	**Sukabumi**	**6.67**	**120**	P	**Pn**	**23 25 51.6**	**+10**
	567nm,0.9s						
CBJI	**Citeko**	**6.68**	**114**	P	**Pn**	**23 25 44.6**	**+3.0**
	1μm,0.6s						
PSI	**Prapat**	**6.71**	**345**⇑	*e*P	**Pn**	**23 25 43.5**	**+1.4**
FRIM	**Kepong**	**6.97**	**8**	‖P	**Pn**	**23 25 46.8**	**+1.3**
TPI	**Tanjungpandan**	**7.00**	**82**	P	Px	23 25 56.5	
	40nm,1.6s						
TPI	**Tanjungpandan**	**7.00**	**82**⇑	*e*P	**Pn**	**23 25 46.0**	**+0.1**
TPI				*e*S	Sn	23 27 26.0	+21
TSI	**Tuntungan**	**7.48**	**343**	P	Px	23 26 12.3	
	211nm,1.4s						
LEM	**Lembang**	**7.54**	**114**	P	**Pn**	**23 25 55.5**	**+2.1**
	358nm,1.0s						
JCJI	**Jatiwangi**	**8.02**	**110**	P	Px	23 26 13.7	
	248nm,1.1s						
IPM	**Ipoh**	**8.15**	**2**	‖P	**Pn**	**23 26 03.7**	**+1.9**
COCO	**West Island**	**9.25**	**204**	P	**Pn**	**23 26 14.8**	**-2.1**
KTGM	**Kuala Trenggan**	**9.30**	**15**	‖P	**Pn**	**23 26 17.9**	**+0.2**
BJII	**Banjamegara**	**9.65**	**112**	P	**Pn**	**23 26 27.8**	**+5.4**
	63nm,1.2s						
SNG	**Songkhla**	**10.82**	**360**	P	**Pn**	**23 26 39.0**	**+0.6**
KSM	**Kuching**	**10.89**	**62**	Pn	**Pn**	**23 26 29.8**	**-10**
STKI	**Sintang**	**11.39**	**71**	P	Px	23 27 00.7	
	57nm,0.5s						
SJI	**Sawahan**	**11.70**	**110**	P	**Pn**	**23 26 50.8**	**+0.3**
	86nm,0.7s						
SBUM	**Sibu**	**13.03**	**62**	‖P	**Pn**	**23 27 13.7**	**+5.0**
BBKI	**Banjar Baru**	**14.10**	**89**	P	**Pn**	**23 27 30.2**	**+6.8**
	543nm,0.9s						
KKM	**Kota Kinabalu**	**18.27**	**58**	*e*Pn	**Pn**	**23 28 16.8**	**0.0**
TSM	**Tawau**	**18.90**	**65**	⇑P	**Pn**	**23 28 25.6**	**+1.0**
SDKM	**Sandakan**	**18.91**	**61**	‖P	**Pn**	**23 28 25.8**	**+1.2**
KAPI	**Kappang**	**19.03**	**95**	Pn	**Pn**	**23 28 25.5**	**-0.6**
	400nm,0.9s,SNR=5.4						
KAPI	**Kappang**	**19.03**	**95**	P	**Pn**	**23 28 24.3**	**-1.8**
	4.8nm,0.3s,baz=94,slow=11,SNR=15						
KAPI	**Kappang**	**19.03**	**95**	*e*Pn	**Pn**	**23 28 24.9**	**-1.3**
NST	**Nakhon Sawan**	**19.27**	**358**	P	**Pn**	**23 28 25.0**	**-4.0**
PCI	**Palu**	**19.31**	**82**	P	**Pn**	**23 28 31.6**	**+2.1**
	190nm,1.0s						
MYLDM	**Lahad Datu**	**19.84**	**64**	‖P	**Pn**	**23 28 36.9**	**+1.0**
BDT	**Bhumibol Dam**	**20.89**	**355**	P	**P**	**23 28 40.0**	**-5.4**
	20nm,1.0s						
BBSI	**Bau Bau**	**21.86**	**95**	P	**P**	**23 28 58.9**	**+3.0**
	106nm,1.2s,mb5.1						
KDI	**Kendari**	**21.86**	**91**	P	**P**	**23 28 58.2**	**+2.3**
	118nm,1.1s,mb5.2						
KDI	**Kendari**	**21.86**	**91**⇑	*e*P	**P**	**23 28 54.2**	**-1.7**
KDI				*e*S	**S**	**23 32 51.9**	**-4.2**
CM31	**Chiang Mai Arr**	**22.10**	**356**	*e*P	**P**	**23 28 57.7**	**-0.7**
	40nm,0.8s,mb4.9						
CMAR	**Chiang Mai Arr**	**22.10**	**356**	P	**P**	**23 28 55.8**	**-2.6**
	32nm,0.8s,mb4.8,baz=185,slow=9.1,SNR=40						
CMAR	**Chiang Mai Arr**	**22.10**	**356**	*i* P	**P**	**23 28 57.4**	**-1.0**
CMAR				pmax	pmax		
	comp=Z,32nm,0.8s						
CHG	**Chiang Mai**	**22.45**	**356**	⇑P	**P**	**23 29 03.0**	**+0.8**
	comp=Z,45nm,1.2s,mb4.8						
CHTO	**Chiang Mai**	**22.45**	**356**	*e*P	**P**	**23 29 00.8**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,36nm,0.9s,mb4.8						
CHTO	**Chiang Mai**	**22.45**	**356**	*e*P	**P**	**23 29 00.8**	**-1.3**
	comp=Z,36nm,0.9s,mb4.8						
BATI	**Baunata**	**23.66**	**107**	P	**P**	**23 29 14.4**	**-0.3**
	comp=Z,46nm,1.1s,mb4.8						
BATI	**Baumata**	**23.66**	**107**	P	**P**	**23 29 13.1**	**-1.6**
	comp=Z,16nm,0.4s,mb4.8,baz=231,slow=0.5,SNR=5.0						
BATI				S	**S**	**23 33 20.9**	**-6.6**
	comp=Z,11nm,0.4s,baz=297,slow=18,SNR=4.6						
QIZ	**Qiongzhong**	**24.32**	**21**	P	**P**	**23 29 19.6**	**-1.0**
QIZ				S	**S**	**23 33 38.9**	**+0.9**
QIZ				XS	sS	23 33 54.4	+1.7
QIZ				LR	LR		
	comp=N,2μm,12.8s						
QIZ				LR	LR		
	comp=Z,2μm,14.7s,MS4.7						
MBWA	**Marble Bar**	**25.35**	**135**	*e*P	**P**	**23 29 30.6**	**+0.6**
	comp=Z,13nm,0.8s,mb4.5						
LBMI	**Labuha**	**26.94**	**84**	P	**P**	**23 29 51.2**	**+6.7**
	comp=Z,86nm,1.2s,mb5.2						
FITZ	**Fitzroy Crossi**	**28.28**	**122**	*e*P	**P**	**23 29 55.4**	**-1.0**
FITZ	**Fitzroy Crossi**	**28.28**	**122**	P	**P**	**23 29 55.7**	**-0.8**
	comp=Z,5.2nm,0.8s,mb4.2,baz=276,slow=6.6,SNR=12						
FITZ				LR	LR	23 41 42.3	
	comp=Z,451nm,18.4s,MS4.1,baz=310,slow=37						
KMI	**Kunming**	**28.73**	**4**	P	**P**	**23 30 01.4**	**+1.1**
KMI				AP	pP	23 30 12.9	+3.6
KMI				XP	sP	23 30 17.3	+4.3
KMI				PP	PP	23 30 57.1	-8.5
KMI				PPP		23 31 10.5	
KMI				PCP	PcP	23 33 11.1	+0.8
KMI				S	**S**	**23 34 47.8**	**0.0**
KMI				XS	sS	23 35 06.6	+4.0
KMI				SS	SS	23 36 18.4	-32
KMI				SSS		23 36 38.5	
KMI				AMB	AMB		
	comp=Z,18nm,1.1s,mb4.7						
KMI				AMB	AMB		
	comp=Z,140nm,3.6s						
KMI				LR	LR		
	comp=N,1μm,12.9s,MS5.0						
KMI				LR	LR		
	comp=E,2μm,16.0s,MS5.0						
KMI				LR	LR		
	comp=Z,2μm,12.8s,MS4.9						
HYB	**Hyderabad**	**30.32**	**314**	*i* P	**P**	**23 30 15.5**	**+1.0**
HYB	**Hyderabad**	**30.32**	**314**	*e*P	**P**	**23 30 15.5**	**+1.0**
GYA	**Guiyang**	**30.54**	**11**	P	**P**	**23 30 15.8**	**-0.6**
GYA				AP	pP	23 30 26.4	+1.1
GYA		

NJ2 LR LR
comp=E,1µm,20.5s,MS4.8
NJ2 LR LR
comp=Z,1µm,20.5s,MS4.7
LZH Lanzhou 39.70 4 ⇑P **P 23 31 34.9 -0.2**
LZH PCP PcP 23 33 42.0 +0.6
LZH S **S 23 37 35.3 -1.4**
LZH SS SS 23 40 22.3 -11
LZH AMB AMB
comp=Z,93nm,1.2s,mb5.4
LZH AMB AMB
comp=Z,235nm,5.3s
LZH LR LR
comp=N,2µm,14.3s
LZH LR LR
comp=Z,2µm,16.7s,MS5.1
SSE Sheshan 39.74 28 P **P 23 31 36.3 +0.8**
SSE XP sP 23 31 52.8 +4.4
SSE PP PP 23 33 07.6 +0.4
SSE S **S 23 37 38.4 +0.9**
SSE XS sS 23 37 59.1 +6.5
SSE AMB AMB
comp=Z,50nm,1.1s,mb5.2
SSE AMB AMB
comp=Z,318nm,3.9s
SSE LR LR
comp=N,441nm,12.0s,MS4.8
SSE LR LR
comp=E,677nm,12.0s,MS4.8
SSE LR LR
comp=Z,578nm,14.0s,MS4.6
DDI Dehra Dun 40.19 329 *ex* x 23 31 29.0
SMLA Simla 41.29 329 *i* P **P 23 31 48.9 +0.7**
GTA Gaotai 42.92 359 *eP* **P 23 32 01.1 -0.3**
GTA AP pP 23 32 11.9 +1.3
GTA PP PP 23 33 43.3 +1.8
GTA S **S 23 38 23.5 -0.9**
GTA SS SS 23 41 27.9 -9.0
GTA AMB AMB
comp=Z,27nm,1.0s,mb4.9
GTA AMB AMB
comp=Z,243nm,7.2s
GTA LR LR
comp=N,1µm,15.3s,MS5.0
GTA LR LR
comp=E,1µm,19.5s,MS5.0
GTA LR LR
comp=Z,1µm,15.0s,MS5.0
BTO Baotou 44.92 10 *eP* **P 23 32 17.5 0.0**
HHC Hu-ho-hao-te 45.45 12 *eP* **P 23 32 21.9 +0.2**
HHC AP pP 23 32 32.0 +1.1
HHC PCP PcP 23 34 00.3 -0.1
HHC PP PP 23 34 09.0 +0.5
HHC PCS PcS 23 37 53.8 -0.5
HHC S **S 23 39 01.1 -0.1**
HHC SS SS 23 42 16.9 -8.6
HHC AMB AMB
comp=Z,29nm,1.1s,mb5.0
HHC AMB AMB
comp=Z,229nm,6.2s
HHC LR LR
comp=N,1µm,13.0s,MS5.1
HHC LR LR
comp=E,565nm,13.0s,MS5.1
HHC LR LR
comp=Z,1µm,14.5s,MS5.0
BJI Beijing 45.80 17 P **P 23 32 24.3 -0.2**
BJI PP PP 23 34 15.9 +3.7
BJI S **S 23 39 09.0 +2.7**
BJI AMB AMB
comp=Z,29nm,1.1s,mb5.1
BJI AMB AMB
comp=Z,205nm,5.9s
BJI LR LR
comp=N,2µm,16.8s,MS5.2
BJI LR LR
comp=E,625nm,13.7s,MS5.2
BJI LR LR
comp=Z,1µm,17.4s,MS5.0
PMG Port Moresby 46.45 99 *eP* **P 23 32 28.7 -1.4**
PMG pmax pmax
comp=Z,12nm,0.7s
PMG Port Moresby 46.45 99 *eP* **P 23 32 28.7 -1.4**
comp=Z,12nm,0.7s,mb5.0
DL2 Dalian 46.60 23 *eP* **P 23 32 33.0 +2.2**
DL2 S **S 23 39 22.9 +5.0**
DL2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
DL2 LR LR
comp=N,500nm,15.1s,MS4.7
DL2 LR LR
comp=E,380nm,15.6s,MS4.7
DL2 LR LR
comp=Z,850nm,16.0s,MS4.8
CTA Charters Tower 47.24 114 *eP* **P 23 32 36.2 0.0**
CTA Charters Tower 47.24 114 P **P 23 32 36.1 0.0**
comp=Z,11nm,0.9s,mb4.8,baz=284,slow=8.7,SNR=6.3
CTA Charters Tower 47.24 114 P **P 23 32 36.1 -0.1**
CTA pmax pmax
comp=Z,11nm,0.9s
CTA Charters Tower 47.24 114 *eP* **P 23 32 36.2 0.0**
CTAO Charters Tower 47.24 114 *eP* **P 23 32 35.9 -0.3**
CTAO pmax pmax
comp=Z,14nm,0.8s,mb4.9
CTAO Charters Tower 47.24 114 *eP* **P 23 32 35.9 -0.3**
comp=Z,14nm,0.8s,mb4.9
STKA Stephens Creek 47.49 131 *eP* **P 23 32 37.7 -0.2**
STKA Stephens Creek 47.49 131 P **P 23 32 38.4 +0.5**
comp=Z,3.2nm,0.7s,mb4.4,baz=289,slow=9.1,SNR=11
STKA pP pP 23 32 46.0 -1.2
comp=Z,18nm,0.7s,baz=306,slow=7.5,SNR=15
STKA LR LR 23 54 08.3
comp=Z,956nm,20.2s,MS4.8,baz=294,slow=38
KS15 Wonju Array Si 48.11 29 *eP* **P 23 32 42.5 -0.1**
KSRS Korea Array 48.14 29 P **P 23 32 42.0 -0.9**
comp=Z,34nm,1.0s,mb5.3,baz=219,slow=8.1,SNR=67
KSRS pP pP 23 32 50.4 -1.7
comp=Z,41nm,1.0s,baz=220,slow=7.0,SNR=18
KSRS LR LR 23 54 28.4
comp=Z,333nm,18.9s,MS4.3,baz=255,slow=38
KSRS Korea Array 48.14 29 P **P 23 32 42.0 -0.8**
KSRS *PP pP 23 32 50.4 -1.7
KSRS pmax pmax
comp=Z,34nm,1.0s,mb5.3
KSRS MLR MLR
comp=Z,333nm,18.9s,MS4.3
KBL Kabul 48.33 325 *eP* **P 23 32 42.6 -1.8**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KBL Kabul 48.33 325 *eP* **P 23 32 42.6 -1.7**
comp=Z,3.6nm,0.6s,mb4.6
WMQ Urumqi 48.75 347 P **P 23 32 47.4 0.0**
WMQ AP pP 23 32 57.0 +0.3
WMQ PCP PcP 23 34 13.0 +0.9
WMQ PP PP 23 34 41.0 +0.2
WMQ S **S 23 39 46.5 -1.7**
WMQ AMB AMB
comp=Z,67nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,305nm,4.5s
WMQ LR LR
comp=N,1µm,17.0s,MS5.0
WMQ LR LR
comp=E,836nm,15.6s,MS5.0
WMQ LR LR
comp=Z,899nm,23.2s
UCH Uchtor 51.54 335 P **P 23 33 10.1 +1.5**
SNR=6.6
UCH Uchtor 51.54 335 *eP* **P 23 33 09.4 +0.8**
comp=Z,24nm,1.2s,mb5.0
UCH *e*PcP PcP 23 34 22.8 +0.4
SONM Songino Array 51.58 5 P **P 23 33 08.8 +0.1**
comp=Z,26nm,0.9s,mb5.2,baz=188,slow=7.6,SNR=83
SONM pP pP 23 33 17.7 -0.3
comp=Z,31nm,1.0s,baz=189,slow=8.2,SNR=16
ULN Ulaanbaatar 51.66 5 *eP* **P 23 33 09.5 +0.1**
TKM2 Tokmak 2 51.68 337 *eP* **P 23 33 09.8 +0.2**
TKM2 pmax pmax
comp=Z,28nm,0.8s,mb5.2
TKM2 Tokmak 2 51.68 337 P **P 23 33 09.9 +0.3**
SNR=31
TKM2 Tokmak 2 51.68 337 *eP* **P 23 33 09.8 +0.2**
comp=Z,28nm,0.8s,mb5.2
KBK Karagaybulak 51.72 336 P **P 23 33 11.5 +1.6**
SNR=9.2
AML Almayashu 51.81 335 P **P 23 33 11.9 +1.3**
SNR=5.2
AML Almayashu 51.81 335 *eP* **P 23 33 10.8 +0.2**
comp=Z,26nm,1.1s,mb5.1
AML *e*pP pP 23 33 20.5 +0.5
CHMS Chumysh 52.08 336 P **P 23 33 13.0 +0.4**
SNR=8.4
EKS2 Erkin-Say 52.21 335 P **P 23 33 14.9 +1.3**
SNR=20
EKS2 Erkin-Say 52.21 335 *eP* **P 23 33 13.5 -0.1**
comp=Z,22nm,0.8s,mb5.2
CN2 Changchun 52.28 23 *eP* **P 23 33 13.0 -1.0**
CN2 *e*PP PP 23 35 12.8 -0.1
CN2 *e*S **S 23 40 35.0 -2.2**
CN2 *e*SS SS 23 44 11.6 -3.7
CN2 AMB AMB
comp=Z,30nm,1.2s,mb5.1
CN2 AMB AMB
comp=Z,210nm,6.0s
CN2 LR LR
comp=N,930nm,15.0s,MS5.0
CN2 LR LR
comp=E,500nm,15.0s,MS5.0
CN2 LR LR
comp=Z,630nm,16.0s,MS4.8
USP Ospenovka 52.41 336 P **P 23 33 15.7 +0.6**
SNR=9.9
MK31 Makanchi Array 52.86 344 *i* P **P 23 33 18.2 -0.1**
MK31 pmax pmax
comp=Z,16nm,0.6s,mb5.1
MKAR Makanchi Array 52.86 344 P **P 23 33 17.6 -0.7**
comp=Z,34nm,0.9s,mb5.3,baz=155,slow=8.4,SNR=104
MKAR LR LR 00 00 40.1
comp=Z,286nm,19.1s,MS4.3,baz=160,slow=42
EIDS Eidsvold 52.90 119 *e*pP pP 23 33 30.9 +2.6
MAJO Matsushiro 53.17 38 *eP* **P 23 33 18.9 -1.9**
MAJO *e*PP pP 23 33 27.8 -2.4
MAJO pmax pmax
comp=Z,29nm,1.1s,mb5.1
MAJO Matsushiro 53.17 38 *eP* **P 23 33 18.9 -1.9**
comp=Z,29nm,1.1s,mb5.1
MAJO *e*pP pP 23 33 27.8 -2.4
MAT Matsushiro 53.17 38 P **P 23 33 19.6 -1.2**
MAT S **S 23 40 49.0 -0.6**
MJAR Matsushiro Arr 53.17 38 P **P 23 33 18.6 -2.2**
comp=Z,14nm,1.0s,mb4.8,baz=219,slow=7.8,SNR=27
MJAR pP pP 23 33 27.3 -2.9
comp=Z,19nm,1.0s,baz=218,slow=7.3,SNR=14
ZAK Zakamensk 53.93 2 *eP* **P 23 33 25.4 -0.7**
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
KK31 Karatay Array 53.99 333 *i* P **P 23 33 26.6 -0.1**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
MDJ Mudanjiang 54.62 25 P **P 23 33 32.1 +0.9**
MDJ AP pP 23 33 41.6 +1.0
MDJ PCP PcP 23 34 33.3 -0.7
MDJ PP PP 23 35 37.3 +3.3
MDJ PCS PcS 23 38 34.8 +1.3
MDJ S **S 23 41 10.3 +1.3**
MDJ SS SS 23 44 49.4 -2.9
MDJ AMB AMB
comp=Z,9.0nm,0.9s,mb4.8
MDJ AMB AMB
comp=Z,107nm,6.5s
MDJ LR LR
comp=N,364nm,23.6s,MS4.5
MDJ LR LR
comp=E,375nm,26.7s,MS4.5
MDJ LR LR
comp=Z,606nm,19.7s
ARMA Armidale 54.84 125 *eP* **P 23 33 40.3 +7.2**
TLY Talaya 55.24 2 *eP* **P 23 33 36.3 +0.7**
TLY pmax pmax
comp=Z,11nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,1µm,17.0s,MS5.0
TLY Talaya 55.24 2 *eP* **P 23 33 33.3 -2.3**
HIA Hailar 55.30 15 *eP* **P 23 33 34.5 -1.5**
KURK Kurchatov 57.44 344 P **P 23 33 49.8 -1.5**
comp=Z,20nm,0.9s,mb5.2,baz=161,slow=6.1,SNR=57
KURK Kurchatov 57.44 344 *eP* **P 23 33 50.9 -0.4**
KURK *e*PP pP 23 34 00.8 0.0
KURK pmax pmax
comp=Z,25nm,0.6s,mb5.4
KURK Kurchatov 57.44 344 *eP* **P 23 33 50.9 -0.4**
comp=Z,25nm,0.6s,mb5.4
KURK *e*pP pP 23 34 00.8 +0.1
ZAA0 Zalesovo Array 58.98 349 *eP* **P 23 34 01.5 -0.5**
ZALV Zalesovo Beam 58.98 349 P **P 23 34 01.1 -0.8**
comp=Z,44nm,0.8s,mb5.5,baz=172,slow=4.5,SNR=124
ZALV LR LR 00 02 11.6
comp=Z,252nm,21.4s,MS4.3,baz=336,slow=39
KLR Kul'dur 59.21 23 *eP* **P 23 34 01.7 -2.0**
BVA0 Borovoye Array 62.03 340 *i* P **P 23 34 20.8 -2.0**
BVA0 pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
BVAR Borovoye Array 62.03 340 P **P 23 34 22.0 -0.8**
comp=Z,12nm,0.8s,mb5.1,baz=142,slow=8.5,SNR=62
BRVK Borovoye 62.09 340 P **P 23 34 22.9 -0.3**
comp=Z,148nm,0.8s,mb6.2,SNR=9.8
BRVK Borovoye 62.09 340 *eP* **P 23 34 22.0 -1.2**
BOD Bodaibo 62.27 8 *eP* **P 23 34 23.1 -1.2**
BOD pmax pmax
comp=Z,17nm,1.0s,mb5.1
YSS Yuzh-Sakhalins 62.56 31⇑ *e*P **P 23 34 25.5 -1.0**
YSS *e* pP 23 34 33.2 -2.9
YSS *e* 23 34 40.0
YSS pmax pmax
comp=Z,80nm,1.0s,mb5.8
YSS Yuzh-Sakhalins 62.56 31 *eP* **P 23 34 25.8 -0.8**
YSS *e*pP pP 23 34 34.2 -1.8
KMBO Kilima Mbogo 63.44 271 P **P 23 34 34.5 +1.5**
comp=Z,1.4nm,0.8s,mb4.1,baz=104,slow=8.3,SNR=2.3
KMBO LR LR 23 58 47.6
comp=Z,193nm,18.7s,MS4.3,baz=114,slow=33
KMBO Kilima Mbogo 63.44 271 P **P 23 34 34.5 +1.4**
KMBO pmax pmax
comp=Z,1.0nm,0.8s
KMBO MLR MLR
comp=Z,193nm,18.7s
KMBO Kilima Mbogo 63.44 271 *eP* **P 23 34 33.7 +0.6**
KMBO *e*pP pP 23 34 40.0 -2.6
AB31 Akbulak array 63.48 331 P **P 23 34 31.4 -1.1**
AB31 pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
AKTK Aktyubinsk 65.19 331 P **P 23 34 43.0 -0.8**
AKTO Aktyubinsk 65.19 331 P **P 23 34 43.0 -0.8**
comp=Z,4.3nm,0.9s,mb4.5,baz=140,slow=6.0,SNR=9.6
GNI Garni 67.25 316 *eP* **P 23 34 56.9 -0.3**
DGRG David-gareji 67.41 318 P pP 23 35 08.6 +0.8
MTA Mtatsminda 67.91 318 P **P 23 35 01.8 +0.5**
SVE Sverdlovsk 68.53 338⇓ *eP* **P 23 35 04.7 -0.2**
SVE *e* 23 37 43.6
SVE *e*S S 23 44 08.1 +3.2
SVE *e*SS SS 23 48 25.0 -4.4
SVE pmax pmax
comp=Z,31nm,1.1s,mb5.2
SVE MLR MLR
comp=Z,522nm,18.0s,MS4.8
MAW Mawson 68.81 195 *eP* **P 23 35 05.8 -0.7**
MAW Mawson 68.81 195 P **P 23 35 06.6 +0.2**
comp=Z,2.2nm,0.8s,mb4.1,baz=357,slow=7.4,SNR=6.3
MAW Mawson 68.81 195 P **P 23 35 06.6 +0.1**
MAW pmax pmax
comp=Z,2.0nm,0.8s
ARU Arti 69.05 336 P **P 23 35 07.7 -0.4**
comp=Z,81nm,1.2s,mb5.5,SNR=5.8
ARU Arti 69.05 336 *e*/P **P 23 35 07.7 -0.4**
ARU *e* 23 35 30.5
ARU *e* 23 37 43.6
ARU *e*PPP 23 39 18.7
ARU *e*S S 23 44 12.8 +1.7
ARU *e*SS SS 23 48 41.3 +3.8
ARU pmax pmax
comp=Z,29nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,364nm,21.0s,MS4.6
ARU Arti 69.05 336 *eP* **P 23 35 07.8 -0.3**
comp=Z,18nm,1.1s,mb4.9
ONI Oni 69.19 318 P pP 23 35 21.9 +2.9
YAK Yakutsk 69.22 14⇑ *eP* **P 23 35 08.1 -0.9**
YAK pmax pmax
comp=Z,50nm,1.1s,mb5.4
KIV Kislovodsk 70.30 319 *eP* **P 23 35 16.7 +0.6**
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,133nm,18.0s,MS4.2
KIV Kislovodsk 70.30 319 *eP* **P 23 35 16.6 +0.5**
KIV *e*pP pP 23 35 26.9 +1.2
MALT Malatya 71.01 313 *eP* **P 23 35 20.3 -0.3**
MALT *e*PP pP 23 35 30.7 +0.4
MALT pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
MALT Malatya 71.01 313 *eP* **P 23 35 20.2 -0.3**
comp=Z,7.4nm,1.0s,mb4.6
MALT *e*pP pP 23 35 30.7 +0.4
SOC Sochi 72.10 318 *eP* **P 23 35 26.4 -0.6**
SOC *e*PP pP 23 35 34.7 -2.0
SOC *e*S S 23 44 44.0 -3.1
SOC pmax pmax
comp=Z,16nm,1.0s,mb4.9
LSZ Lusaka 72.18 255 P **P 23 35 28.7 +0.6**
comp=Z,4.6nm,1.1s,mb4.3,baz=92,slow=6.5,SNR=4.8
RPZ Rata Peaks 73.28 135 P **P 23 35 34.6 +0.5**
comp=Z,6.8nm,0.8s,mb4.6,baz=315,slow=5.7,SNR=3.2
PETK Petropavlovsk- 73.95 32 P **P 23 35 37.6 -0.1**
comp=Z,6.9nm,0.8s,mb4.6,baz=226,slow=7.1,SNR=5.6
ANN Anapa 74.08 319 *eP* **P 23 35 32.1 -6.6**
ANN pmax pmax
comp=Z,27nm,1.1s,mb5.1
LBTB Lobatse 74.95 245 LR LR 00 03 15.0
comp=Z,336nm,18.7s,MS4.7,baz=91,slow=31
BOSA Boshof 75.46 242 P **P 23 35 47.5 +0.4**
comp=Z,3.8nm,1.0s,mb4.3,baz=100,slow=18,SNR=3.6
BOSA LR LR 00 02 03.0
comp=Z,325nm,21.1s,MS4.6,baz=157,slow=30
BOSA Boshof 75.46 242 *eP* **P 23 35 47.5 +0.4**
VSR Storozhevoye 75.58 325 *eP* **P 23 35 46.7 -0.5**
VSR *e*PP pP 23 35 54.7 -2.3
VSR pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.9s
SIM Simferopol' **76.34 318** *eP* **P 23 35 50.0 -1.7**
SIM pmax pmax
comp=Z,15nm,0.9s,mb4.9
SYO Syowa Base 76.48 199⇑ *e*PcP PcP 23 36 03.3 -0.3
SEY Seymchan 76.94 22⇑ *eP* **P 23 35 55.2 +0.5**
TIXI Tiksi 77.43 9 *eP* **P 23 35 55.7 -1.6**
TIXI pmax pmax
comp=Z,12nm,1.3s,mb4.7
OBN Obninsk 78.62 328⇑ *i*P **P 23 36 04.1 -0.1**
OBN *e* 23 39 00.8
OBN *e*S S 23 46 07.1 +8.2
OBN pmax pmax
comp=Z,25nm,1.1s,mb5.1
OBN MLR MLR
comp=Z,200nm,21.0s,MS4.4
SUR Sutherland 79.49 238 LR LR 00 04 33.3
comp=Z,240nm,18.7s,MS4.6,baz=102,slow=30
KLMR Klimovskoe 79.67 334 *eP* **P 23 36 09.1 -0.8**
KLMR pmax pmax
comp=Z,18nm,1.2s,mb4.9
RAO Raoul Island 80.67 119 *eP* **P 23 36 15.5 -0.5**
AKASG Malin Array Be 81.27 322 P **P 23 36 17.8 -0.9**
comp=Z,1.2nm,0.5s,mb4.1,baz=91,slow=4.5,SNR=10
AKASG pP pP 23 36 25.9 -2.6
comp=Z,2.7nm,0.7s,baz=92,slow=4.8,SNR=5.2
KIEV Kiev 81.28 322 *eP* **P 23 36 17.5 -1.2**
KIEV *e* pP 23 36 25.4 -3.1
KIEV pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KIEV Kiev 81.28 322 *eP* **P 23 36 17.5 -1.2**
comp=Z,3.8nm,0.8s,mb4.4
KIEV *e*PcP PcP 23 36 25.4 +0.6
SBA Scott Base 81.45 169 *eP* **P 23 36 19.7 +0.5**
SBA *e*PP pP 23 36 27.5 -1.5
VRI Vrincioaia 81.58 317⇓ *i*P **P 23 36 21.4 +0.9**
VRI Vrincioaia 81.58 317⇓ P **P 23 36 21.4 +1.0**
PLOR Plostina 81.63 317⇓ *i*P **P 23 36 24.1 +3.4**
MLR Muntele Rosu 82.03 317⇓ *i*P **P 23 36 23.9 +1.1**
TSUM Tsumeb 82.31 251 P **P 23 36 25.9 +1.0**
BURAR Bucovina Array 83.01 319⇑ *i*P **P 23 36 27.9 0.0**
BURAR Bucovina Array 83.01 319 ⇑P **P 23 36 27.9 0.0**
BUR08 Bucovina Ar. S 83.03 319 *eP* **P 23 36 28.2 +0.3**
VAY Valandovo 83.56 312 *eP* **P 23 36 29.8 -1.1**
JOF Joensuu 84.06 334 *ep* **P 23 36 33.3 +0.4**
comp=Z,2.5nm,0.7s,mb4.5
GZR Gura Zlata 84.19 316⇑ *i*P **P 23 36 34.4 +0.4**
GZR Gura Zlata 84.19 316 ⇑P **P 23 36 34.4 +0.5**
LVV L'vov 84.27 321 *eP* **P 23 36 33.9 -0.4**
DRGR 84.50 318⇑ *i*P **P 23 36 33.7 -1.8**
DRGR 84.50 318 ⇑P **P 23 36 33.7 -1.9**
BILL Bilibino 84.51 20 *eP* **P 23 36 33.9 -1.2**
BILL pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
KRUS Krusevo 84.55 312 *eP* **P 23 36 35.3 -0.6**
BZS Buzias 85.03 316⇑ *i*P **P 23 36 38.3 +0.1**
BZS Buzias 85.03 316 ⇑P **P 23 36 38.3 +0.1**
KWP Kalwaria 85.07 320 *eP* **P 23 36 36.2 -2.1**
KWP *e*PP pP 23 36 49.3 +1.1
KWP pmax pmax
comp=Z,16nm,1.2s,mb5.0
KWP Kalwaria 85.07 320 *eP* **P 23 36 36.2 -2.1**
comp=Z,16nm,1.2s,mb5.0
KWP *e*pP pP 23 36 49.3 +1.2
KOLS Kolonicke sedl 85.21 320 *eP* **P 23 36 40.0 +1.0**
SUW Suwalki 85.69 325 *eP* **P 23 36 40.5 -0.8**
SUW *e*PP pP 23 36 48.7 -2.5
CRVS Cervenica-Dubn 85.73 319 *eP* **P 23 36 41.9 +0.3**
STHS Stebnicka Huta 85.96 320 *eP* **P 23 36 43.9 +1.1**
STHS *e* 23 36 49.7
STHS pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
STHS Stebnicka Huta 85.96 320 *eP* **P 23 36 43.9 +1.1**
comp=Z,5.8nm,0.8s,mb4.9
STHS *e* 23 36 49.7
KAF Kangasniemi 86.03 333 *ep* **P 23 36 50.6 +7.8**
comp=Z,4.8nm,0.7s,mb4.8
KAF Kangasniemi 86.03 333 *eP* **P 23 36 50.6 +7.8**
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
QSPA South Pole Qui 86.26 180 LR LR 00 12 36.3
comp=Z,370nm,19.5s,MS4.8,baz=129,slow=34
PSZ Piszkesteto 86.59 318⇑ *i*P **P 23 36 46.2 +0.3**
PSZ Piszkesteto 86.59 318 ⇑P **P 23 36 46.2 +0.3**
PKSM Moragy 87.17 316⇓ *i*P **P 23 36 47.4 -1.4**
PKSM Moragy 87.17 316 ⇓P **P 23 36 47.4 -1.4**
OKC Ostrava-Krasne 88.02 320 *eP* **P 23 37 01.3 +8.5**
ARCES ARCESS Array B 88.32 340 P **P 23 36 54.2 +0.5**
comp=Z,7.8nm,0.9s,mb5.0,baz=93,slow=5.2,SNR=15
ARCES pP pP 23 37 01.8 -1.8
comp=Z,8.2nm,1.0s,baz=109,slow=5.8,SNR=4.8
MODS Modra-Piesok 88.39 318 *eP* **P 23 36 52.3 -2.2**
MODS *e*pP pP 23 37 03.2 -1.2
MORC Moravsky Berou 88.40 320 *eP* **P 23 36 55.0 +0.4**
MORC *e*PP pP 23 37 04.3 -0.2
MORC pmax pmax
comp=Z,19nm,1.7s,mb5.0
MORC Moravsky Berou 88.40 320 *eP* **P 23 36 55.0 +0.4**
comp=Z,19nm,1.7s,mb5.0
MORC *e*pP pP 23 37 04.3 -0.2
ZST Bratislava 88.48 318 *eP* **P 23 36 52.0 -3.0**
ZST *e*pP pP 23 37 03.3 -1.6
DPC Dobruska-Polom 89.25 320 *eP* **P 23 36 59.6 +1.1**
DPC *e*pP pP 23 37 08.1 -0.4
DOBS Dobrina 89.35 316 *eP* **P 23 37 00.0 +0.9**
BOJS Bojanci 89.44 315 *eP* **P 23 37 00.1 +0.6**
BOJS *i* pP pP 23 37 08.6 -0.8
UPC Upice 89.47 321 *eP* **P 23 37 00.7 +1.1**
UPC *e*pP pP 23 37 09.3 -0.2
PERS Pernice 89.65 317 *i* P **P 23 37 00.8 +0.3**
LJU Ljubljana 90.00 316 *i* P **P 23 37 03.2 +1.1**
LJU *e*pP pP 23 37 11.6 -0.5
PRU Pruhonice 90.35 320 *eP* **P 23 37 04.2 +0.5**
PRU *e*pP pP 23 37 13.0 -0.6
PVCC Panska Ves 90.38 320 *eP* **P 23 37 04.9 +1.1**
SNAA Sanae 90.74 198 *eP* **P 23 37 13.5 +8.4**
SNAA *e* 23 37 18.5
SNAA Sanae 90.74 198 *eP* **P 23 37 06.7 +1.6**
SNAA *e*PP pP 23 37 16.4 +1.4
SNAA pmax pmax
comp=Z,6.0nm,1.0s
SNAA Sanae 90.74 198 *eP* **P 23 37 06.7 +1.6**
comp=Z,6.4nm,1.0s,mb4.9
SNAA *e*pP pP 23 37 16.4 +1.3

GEC2	**GERESS Array S**	**90.80**	**319**	*eP*		**P**		**23 37 06.3**	**+0.5**
GEC2					pmax	pmax				
	comp=Z,5.0nm,0.9s,mb4.8									
GEC2	**GERESS Array S**	**90.80**	**319**	*eP*		**P**		**23 37 06.3**	**+0.5**
	comp=Z,5.0nm,0.9s,mb4.8									
GERES	**GERESS Array B**	**90.80**	**319**	P		**P**		**23 37 06.4**	**+0.6**
	comp=Z,2.4nm,0.8s,mb4.6,baz=92,slow=4.1,SNR=22									
GERES					pP	pP		23 37 13.6	-2.1	
	comp=Z,2.6nm,0.7s,baz=96,slow=3.4,SNR=10									
BRG	**Berggiesshubel**	**90.81**	**321**	*eP*		**P**		**23 37 06.8**	**+1.0**
BRG				*i*		pP		23 37 15.8	+0.1	
BRG					pmax	pmax				
	comp=Z,5.0nm,1.2s,mb4.7									
BRG	**Berggiesshubel**	**90.81**	**321**	*eP*		**P**		**23 37 07.0**	**+1.2**
	comp=Z,5.0nm,0.9s,mb4.8									
BRG	**Berggiesshubel**	**90.81**	**321**	*eP*		**P**		**23 37 06.8**	**+0.9**
	comp=Z,7.7nm,1.2s,mb4.9									
BRG				*i*		pP		23 37 15.8	0.0	
	comp=Z,4.8nm,0.9s									
KHC	**Kasperske Hory**	**90.90**	**319**	*eP*		**P**		**23 37 07.1**	**+0.8**
KHC				*e*pP		pP		23 37 16.8	+0.6	
RUE	**Ruedersdorf**	**91.05**	**322**	*eP*		**P**		**23 37 07.7**	**+0.8**
	comp=Z,15nm,0.4s,mb5.7									
RJOB	**Jochberg**	**91.32**	**318**	*eP*		**P**		**23 37 08.3**	**0.0**
	comp=Z,6.0nm,0.9s,mb4.9									
WET	**Wettzell**	**91.36**	**319**	*eP*		**P**		**23 37 08.8**	**+0.4**
WET					pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.9									
WET	**Wettzell**	**91.36**	**319**	*eP*		**P**		**23 37 08.8**	**+0.4**
	comp=Z,6.0nm,1.0s,mb4.9									
CLL	**Collm**	**91.44**	**321**	*eP*		**P**		**23 37 09.0**	**+0.3**
	comp=Z,5.0nm,1.3s,mb4.7									
NKC	**Novy Kostel**	**91.72**	**320**	*eP*		**P**		**23 37 11.1**	**+1.1**
NKC				*e*pP		pP		23 37 19.3	-0.6	
TANN	**Tannenbergstha**	**91.72**	**320**	*eP*		**P**		**23 37 10.4**	**+0.4**
	comp=Z,3.0nm,1.1s,mb4.5									
WERN	**Wernitzgruen**	**91.76**	**320**	*eP*		**P**		**23 37 11.5**	**+1.2**
	comp=Z,6.0nm,1.6s,mb4.7									
MANZ	**Manzenberg**	**91.92**	**320**	*eP*		**P**		**23 37 11.8**	**+0.8**
	comp=Z,5.0nm,1.0s,mb4.8									
MOX	**Moxa**	**92.27**	**320**	*eP*		**P**		**23 37 13.0**	**+0.4**
	comp=Z,10.0nm,1.5s,mb4.9									
VNA2	**Neumayer--Watz**	**92.36**	**198**	*eP*		**P**		**23 37 16.5**	**+3.9**
VNA2				*e*		pP		23 37 25.1	+2.6	
VNA2				*e*				23 37 28.7		
VNA2				*e*				23 37 33.6		
GRA1	**Grafenberg Arr**	**92.47**	**319**	*eP*		**P**		**23 37 14.4**	**+0.8**
	comp=Z,6.0nm,1.0s,mb4.9									
GRA1				*e*pP		pP		23 37 24.3	+0.8	
GRF	**Grafenberg Arr**	**92.47**	**319**	*eP*		**P**		**23 37 14.4**	**+0.8**
GRF				*e**PP		pP		23 37 24.3	+0.8	
GRF					pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.9									
GRF	**Grafenberg Arr**	**92.47**	**319**	*eP*		**P**		**23 37 14.4**	**+0.8**
GRF				*e**PP		pP		23 37 24.3	+0.8	
GRF					pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.9									
GRF	**Grafenberg Arr**	**92.47**	**319**	*eP*		**P**		**23 37 14.4**	**+0.8**
	comp=Z,6.0nm,1.0s,mb4.9									
GRF				*e*pP		pP		23 37 24.3	+0.8	
VNA1	**Neumayer--Stat**	**92.72**	**198**	*eP*		pP		23 37 25.8	+1.6	
VNA1				*e*				23 37 29.6		
VNA1				*e*				23 37 34.8		
VNA3	**Neumayer Olymp**	**92.95**	**198**	*eP*		pP		23 37 27.6	+2.3	
VNA3				*e*				23 37 30.8		
VNA3				*e*				23 37 36.0		
NOA	**NORSAR Array B**	**92.98**	**331**	LR		LR		00 26 44.8		
	comp=Z,127nm,18.3s,MS4.4,baz=45,slow=40									
KEST	**Kesra**	**93.25**	**305**	P		**P**		**23 37 17.9**	**+0.4**
	comp=Z,2.2nm,1.1s,mb4.5,baz=58,slow=9.5,SNR=3.3									
KEST					pP	pP		23 37 27.0	-0.4	
	comp=Z,3.7nm,1.0s,baz=280,slow=4.9,SNR=5.8									
TNS	**Taunus Mts**	**94.28**	**320**	*eP*		**P**		**23 37 22.3**	**+0.4**
TOA0	**Torodi Ar. Sit**	**99.61**	**283**	*e*Pdif		Pdif		23 37 47.3	+1.4	
TORD	**Torodi Ar. Bea**	**99.61**	**283**	pP		pP		23 37 55.3	-1.4	
	comp=Z,1.9nm,1.2s,baz=100,slow=3.3,SNR=4.8									
TORD					LR	LR		00 18 02.2		
	comp=Z,227nm,21.9s,MS4.6,baz=250,slow=32									
MCK	**McKinley**	**102.25**	**25**	*eP*		Pdif		23 37 57.2	-0.4	
ESLA	**Sonseca Array**	**103.65**	**310**	*e*Pdif		Pdif		23 38 04.1	+0.2	
TBI	**Tubuai**	**106.60**	**116**	*e*LR		LR		00 13 32.8		
	comp=Z,355nm,23.0s									
PPT	**Papeete**	**107.56**	**110**	*e*LR		LR		00 13 59.8		
	comp=Z,286nm,27.0s									
RKT	**Rikitea**	**119.52**	**119**	*e*LR		LR		00 19 31.8		
	comp=Z,212nm,23.0s									
NLWA	**Neilton Lookou**	**122.02**	**34**	*e*Pdif		Pdif		23 39 23.9	-1.6	
DLMT	**Dillon**	**129.32**	**30**	*e*PKPdf		PKPdf		23 43 11.9	+0.8	
DLMT				*ep*PKPdf		pPKPdf		23 43 21.7	+0.3	
NVAR	**Mina Array Bea**	**130.45**	**41**	PKP		PKPdf		23 43 15.1	+1.6	
	comp=Z,1.5nm,0.8s,baz=243,slow=3.4,SNR=5.9									
NVAR					pPKP	pPKPdf		23 43 23.1	-0.6	
	comp=Z,1.6nm,0.9s,baz=260,slow=2.4,SNR=4.4									
NVAR					SKPbc	SKPbc		23 46 35.0	+0.1	
	comp=Z,2.0nm,1.0s,baz=271,slow=3.9,SNR=5.3									
ULM	**Lac du Bonnet**	**131.56**	**14**	PKP		PKPdf		23 43 13.6	-1.6	
	comp=Z,3.8nm,0.9s,baz=9.5,slow=6.1,SNR=2.8									
PDAR	**Pinedale Array**	**132.71**	**30**	PKP		PKPdf		23 43 18.0	+0.3	
	comp=Z,0.6nm,0.7s,baz=132,slow=2.2,SNR=4.2									
MSU	**Marysvale**	**134.21**	**36**	*e*PKIKP		PKPdf		23 43 21.6	+1.0	
ANMO	**Albuquerque**	**140.00**	**36**	*e*PKIKP		PKPdf		23 43 25.6	-5.8	
CCM	**Cathedral Cave**	**144.12**	**16**	*e*PKIKP		PKPdf		23 43 35.3	-3.4	
WMOK	**Wichita Mounta**	**144.22**	**28**	*e*PKIKP		PKPdf		23 43 36.4	-2.6	
OLIL	**Olney**	**144.23**	**12**	*e*PKPdf		PKPdf		23 43 36.5	-2.3	
FVM	**French Village**	**144.41**	**15**	*e*PKIKP		PKPdf		23 43 36.7	-2.5	
SIUC	**Southern Illin**	**144.96**	**14**	*e*PKPdf		PKPdf		23 43 38.8	-1.4	
WCI	**Wyandotte Cave**	**145.06**	**10**	*e*PKIKP		PKPdf		23 43 39.2	-1.1	
TXAR	**Lajitas Array**	**145.59**	**40**	PKPbc		PKPbc		23 43 41.9	+0.2	
	comp=Z,68nm,1.1s,baz=279,slow=1.4,SNR=134									
TXAR					pPKPbc	pPKPbc		23 43 51.2	-0.6	
	comp=Z,30nm,0.8s,baz=288,slow=0.9,SNR=26									
TXAR	**Lajitas Array**	**145.59**	**40**	PKPbc		PKPbc		23 43 41.9	+0.2	
TXAR					pPKPbc	pPKPbc		23 43 51.2	-0.6	
URVA	**University of**	**146.27**	**357**	*e*PKPdf		PKPdf		23 43 43.1	+0.7	
ELN	**Prospectdale**	**146.62**	**2**	PKPdf		PKPdf		23 43 42.7	-0.3	
BLA	**Blacksburg**	**146.65**	**2**	*e*PKP2		PKPbc		23 43 43.0	-1.6	
WVT	**Waverly**	**146.79**	**13**	*e*PKP2		PKPbc		23 43 43.7	-1.4	
UALR	**University of**	**146.80**	**20**	*e*PKP		PKPdf		23 43 43.5	+0.1	
JCT	**Junction City**	**147.07**	**34**	*e*PKP2		PKPbc		23 43 43.8	-2.2	
TZTN	**Tazewell**	**147.10**	**6**	*e*PKP		PKPdf		23 43 44.4	+0.6	
TKL	**Tuckaleechee C**	**147.95**	**7**	*e*PKPdf		PKPdf		23 43 46.3	+1.0	
TKL				*e*PKPbc		PKPbc		23 43 47.3	-0.9	
OXF	**Oxford**	**147.95**	**16**	*e*PKIKP		PKPdf		23 43 45.5	+0.2	
OXF				*e*				23 43 48.0		
NATX	**Nacogdoches**	**148.58**	**26**	*e*PKPbc		PKPbc		23 43 50.6	+0.5	
HKT	**Hockley**	**149.57**	**29**	*e*PKP2		PKPbc		23 43 52.6	0.0	
LRAL	**Lakeview Retre**	**149.95**	**13**	*e*PKPdf		PKPdf		23 43 49.2	+0.6	
LRAL				*e*PKPbc		PKPbc		23 43 53.1	-0.4	
GOGA	**Godfrey**	**150.20**	**7**	*e*PKP2		PKPbc		23 43 53.6	-0.5	

ISCJB ***23*** *23:35:41.7±0.8, 3320N±0.003×4881E±0.008, h4km±10km, Error ellipse: s-maj=10.9km s-min=5.6km az=9.3*
THR ***23*** *23:35:44.1±0.3, 3317N×4889E, h14km±3km, ML2.8*
CSEM ***23*** *23:35:44.6±0.1, 3312N×4893E, h30km, ML2.8, Error ellipse: s-maj=4.2km s-min=2.0km az=98.0*

ISC 23 23:35:43.1±0.9, 3317N±0.003×4890E±0.006, h2km±10km, n12, σ0=98/19, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.06**	**185**	*e*Pg	**Pg**	**23 36 03.8**	**+0.4**
SHGR				*e*Sg	**Sg**	**23 36 18.2**	**+1.0**
SHGR				AML	AML	23 36 24.8	
	comp=N,238nm,0.4s						
SHGR				AML	AML	23 36 27.8	
	comp=E,213nm,0.4s						
SHGR	**Shooshtar-Gavs**	**1.06**	**185**	*e*Pg	**Pg**	**23 36 03.8**	**+0.4**
	SNR=90						
SHGR				*e*Sg	**Sg**	**23 36 18.2**	**+1.1**
	SNR=90						
ASAO	**Ashtian**	**1.66**	**34**	*e*Pg	**Pg**	**23 36 14.8**	**-0.1**
ASAO				*e*Sg	**Sg**	**23 36 37.3**	**+0.8**
ASAO				AML	AML	23 36 43.6	
	comp=N,86nm,0.6s						
ASAO	**Ashtian**	**1.66**	**34**	*e*Pg	**Pg**	**23 36 14.8**	**-0.2**
	SNR=90						
ASAO				*e*Sg	**Sg**	**23 36 37.3**	**+0.8**
	SNR=90						
SNGE	**Sanandaj**	**2.31**	**327**	*e*Pn	**Pn**	**23 36 23.9**	**+1.8**
SNGE				*e*Sg	**Sg**	**23 36 56.7**	**-0.7**
GHVR	**GHOM**	**2.38**	**56**	*e*Pn	**Pn**	**23 36 24.6**	**+1.5**
GHVR				*e*Sg	**Sg**	**23 36 58.0**	**-1.6**
GHVR				AML	AML	23 37 05.2	
	comp=E,45nm,0.4s						
GHVR	**GHOM**	**2.38**	**56**	*e*Pn	**Pn**	**23 36 24.6**	**+1.5**
	SNR=52						
GHVR				*e*Sg	**Sg**	**23 36 58.0**	**-1.6**
	SNR=90						
MIB	**Mutribah**	**3.61**	**202**	*e*P	**Pn**	**23 36 39.3**	**-0.7**
	baz=200						
MIB				AML	AML	23 37 28.8	
	comp=Z,4.0nm,0.4s,baz=200						
UMR	**Umm Al-Rimmam**	**3.75**	**196**	*e*P	**Pn**	**23 36 41.0**	**-0.8**
RST	**Umm Al-Ruwaisa**	**4.00**	**205**	*e*P	**Pn**	**23 36 44.3**	**-1.1**
	baz=203						
RST				AML	AML	23 37 45.4	
	comp=Z,5.0nm,0.6s,baz=203						
NAY	**Al-Naaiem**	**4.16**	**200**	*e*P	**Pn**	**23 36 47.2**	**-0.3**
RDF	**Al-Radifah**	**4.39**	**196**	*e*P	**Pn**	**23 36 50.6**	**0.0**
	baz=194						
RDF				AML	AML	23 37 43.6	
	comp=Z,9.0nm,0.4s,baz=194						

ISCJB ***23*** *23:52:22.9±2.0, 157S±0.1×700W±0.03, h253km±15km, mb3.4/2, Error ellipse: s-maj=40.6km s-min=15.5km az=17.8*
IDC ***23*** *23:52:23.0±2.1, 1574S×6999W, h240km±16km, mb3.2/2, mb1 3.5/4, mb1mx3.1/20, mbtmp3.3/4, Error ellipse: s-maj=38.7km s-min=20.6km az=112.0*

ISC 23 23:52:23.7±2.0, 158S±01×700W±03, h249km±15km, n8, σ0=82/8, mb3.4/2, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.84**	**106**	P	**Pn**	**23 53 04.9**	**+0.2**
	42nm,0.3s,baz=309,slow=8.3,SNR=839						
LPAZ				S	**S**	**23 53 36.6**	**-0.3**
	12nm,0.3s,baz=15,slow=23,SNR=12						
LVC	**Limon Verde**	**6.86**	**172**	P	**Pn**	**23 54 03.7**	**+1.1**
	4.7nm,0.3s,baz=344,slow=8.4,SNR=63						
LVC				S	**S**	**23 55 21.3**	**-0.7**
	3.0nm,0.3s,baz=169,slow=21,SNR=11						
SIV	**San Ignacio**	**8.56**	**93**	P	**Pn**	**23 54 24.2**	**0.0**
	0.5nm,0.3s,baz=282,slow=10,SNR=14						
CPUP	**Villa Florida**	**15.78**	**134**	P	**Pn**	**23 55 59.2**	**+6.1**
	0.2nm,0.3s,baz=317,slow=13,SNR=3.5						
TORD	**Torodi Ar. Bea**	**76.47**	**72**	P	**P**	**00 03 47.0**	**+0.3**
	0.5nm,1.0s,mb3.1,baz=275,slow=4.3,SNR=3.6						
YKA	**Yellowknife Ar**	**85.49**	**341**	P	**P**	**00 04 32.4**	**-0.7**
	1.0nm,0.8s,mb3.6,baz=135,slow=5.7,SNR=6.0						
ZALV	**Zalesovo Beam**	**137.14**	**22**	PKP	PKPdf	00 11 18.4	+1.6
	0.4nm,0.4s,baz=292,slow=3.9,SNR=3.4						
SONM	**Songino Array**	**147.90**	**5**	PKPbc	PKPbc	00 11 39.3	0.0
	0.6nm,0.7s,baz=351,slow=2.8,SNR=3.3						

MOS ***23*** *23:57:54.6±0.7, 5754S×2596W, h33km, mb5.2/1, Error ellipse: s-maj=43.7km s-min=20.9km az=110.0*
ISCJB ***23*** *23:57:57.9±8.3, 575S±0.1×259W±0.2, h63km±77km, mb4.6/15, Error ellipse: s-maj=23.2km s-min=14.8km az=43.6*
IDC ***23*** *23:57:59.5±3.1, 5750S×2588W, h62km±26km, mb4.2/13, mb1 4.2/14, mb1mx4.1/20, mbtmp4.2/14, ML5.2/1, MS4.1/3, Ms1 4.0/3, ms1mx3.5/18, Error ellipse: s-maj=18.1km s-min=13.5km az=50.0*
NEIC ***23*** *23:58:01.1±2.5, 5748S×2590W, h79km±22km, Error ellipse: s-maj=11.4km s-min=8.9km az=225.0*

ISC 23 23:57:59.0±5.9, 575S±01×259W±02, h57km±57km, n43, σ0=76/20, mb4.6/15, MS4.2/2, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**19.51**	**232**	P	**Pn**	**00 02 22.9**	**+0.1**
	0.8nm,0.3s,baz=80,slow=9.6,SNR=8.6						
PMSA				LR	LR	00 08 43.5	
	comp=Z,294nm,18.0s,baz=30,slow=33						
USHA	**Ushuaia**	**23.53**	**258**	P	**P**	**00 03 04.2**	**+0.5**
	6.1nm,0.8s,mb4.1,baz=153,slow=4.5,SNR=3.3						
QSPA	**South Pole Qui**	**32.75**	**180**	P	**P**	**00 04 26.4**	**+0.8**
	11nm,0.6s,mb5.0,baz=208,slow=3.3,SNR=108						
QSPA				PcP	PcP	00 07 09.4	0.0
	1.9nm,0.6s,baz=236,slow=1.7,SNR=5.1						
QSPA				ScP	ScP	00 10 48.0	-0.1
	1.3nm,0.8s,baz=196,slow=2.3,SNR=2.3						
QSPA	**South Pole Qui**	**32.75**	**180**	P	**P**	**00 04 26.4**	**+0.8**
QSPA				PcP	PcP	00 07 09.4	0.0
QSPA				ScP	ScP	00 10 48.0	-0.2
PLCA	**Paso Flores**	**32.95**	**281**	P	**P**	**00 04 27.2**	**-0.5**
	4.6nm,0.9s,mb4.4,baz=128,slow=8.2,SNR=8.6						
CPUP	**Villa Florida**	**38.29**	**311**	P	**P**	**00 05 12.6**	**-1.0**
	2.4nm,0.6s,mb4.1,baz=127,slow=9.1,SNR=11						
CPUP				PcP	PcP	00 07 25.9	-0.7
	1.5nm,0.6s,baz=148,slow=4.5,SNR=4.2						
MAW	**Mawson**	**38.57**	**142**	P	**P**	**00 05 15.3**	**-0.2**
	2.2nm,0.7s,mb4.0,baz=233,slow=7.4,SNR=5.9						
MAW				PcP	PcP	00 07 27.0	+0.1
	1.3nm,0.7s,baz=244,slow=3.9,SNR=4.9						
CFAA	**Coronel Fontan**	**38.77**	**293**	P	**P**	**00 05 15.6**	**-2.1**
	0.3nm,0.5s,baz=145,slow=4.0,SNR=8.1						
CFAA				PcP	PcP	00 07 27.4	-0.7
	0.2nm,0.7s,baz=203,slow=2.9,SNR=4.4						
CFAA	**Coronel Fontan**	**38.77**	**293**	P	**P**	**00 05 15.6**	**-2.1**
CFAA				PcP	PcP	00 07 27.4	-0.7
BDFB	**Brasilia**	**44.97**	**329**	P	**P**	**00 06 09.3**	**+1.1**
	6.4nm,0.7s,mb4.5,baz=159,slow=7.1,SNR=7.9						
BOSA	**Boshof**	**45.69**	**73**	P	**P**	**00 06 13.7**	**-0.2**
	2.9nm,0.9s,mb4.2,baz=246,slow=20,SNR=3.6						
BOSA				LR	LR	00 20 43.0	
	comp=Z,226nm,18.8s,MS4.1,baz=326,slow=30						
LVC	**Limon Verde**	**46.63**	**300**	P	**P**	**00 06 22.1**	**+0.8**
	4.3nm,0.5s,mb4.6,baz=198,slow=4.2,SNR=7.5						
SIV	**San Ignacio**	**49.08**	**313**	P	**P**	**00 06 39.8**	**-0.5**
	3.0nm,0.6s,mb4.5,baz=160,slow=9.0,SNR=16						
SIV				PcP	PcP	00 08 03.7	+0.5
	2.0nm,0.7s,baz=148,slow=5.3,SNR=6.4						
LPAZ	**La Paz**	**51.78**	**305**	P	**P**	**00 07 01.3**	**+0.6**
	7.4nm,0.6s,mb4.8,baz=162,slow=6.1,SNR=40						
LPAZ				PcP	PcP	00 08 14.0	+0.8
	1.7nm,0.7s,baz=224,slow=5.6,SNR=2.3						
DBIC	**Dimbokro**	**66.22**	**23**	P	**P**	**00 08 40.6**	**0.0**
	1.9nm,0.7s,mb4.2,baz=139,slow=13,SNR=4.8						
TOA0	**Torodi Ar. Sit**	**74.00**	**28**	*e*P	**P**	**00 09 28.2**	**0.0**
TORD	**Torodi Ar. Bea**	**74.00**	**28**	P	**P**	**00 09 28.4**	**+0.2**
	9.8nm,0.6s,mb4.9,baz=199,slow=6.6,SNR=104						
PCRV	**Puerto La Cruz**	**74.51**	**320**	P	**P**	**00 09 32.2**	**+1.0**
	35nm,0.6s,mb5.5,baz=139,slow=3.1,SNR=24						
GRGR	**Grenville**	**75.35**	**324**	*e*P	**P**	**00 09 36.2**	**+0.1**
	38nm,0.4s,mb5.7						
STKA	**Stephens Creek**	**90.35**	**169**	LR	LR	00 48 05.6	
	comp=Z,116nm,19.4s,MS4.3,baz=205,slow=33						
ASAR	**Alice Springs**	**97.39**	**161**	P	**P**	**00 11 25.1**	**-0.9**
	0.9nm,0.8s,mb4.2,baz=179,slow=3.8,SNR=9.3						
WRA	**Warramunga Arr**	**101.11**	**161**	P	Pdif	00 11 41.3	-1.4
	0.3nm,0.9s,baz=190,slow=4.5,SNR=3.2						
DUG	**Dugway**	**121.24**	**297**	*e*PKIKP	PKPdf	00 16 44.9	+0.4
PDAR	**Pinedale Array**	**121.69**	**301**	PKP	PKPdf	00 16 44.4	-0.9
	0.9nm,0.6s,baz=137,slow=4.4,SNR=5.8						
HWUT	**Hardware Ranch**	**121.73**	**298**	*e*PKPdf	PKPdf	00 16 45.7	+0.3
ULM	**Lac du Bonnet**	**121.77**	**315**	PKP	PKPdf	00 16 44.2	-0.9
	3.2nm,0.7s,baz=211,slow=2.9,SNR=3.4						
ULM	**Lac du Bonnet**	**121.77**	**315**	PKP	PKPdf	00 16 44.2	-0.9
NVAR	**Mina Array Bea**	**122.59**	**291**	PKP	PKPdf	00 16 47.4	+0.2
	1.0nm,0.7s,baz=162,slow=3.9,SNR=6.2						
TPAW	**Teton Pass**	**122.90**	**300**	*e*PKPdf	PKPdf	00 16 47.6	+0.1
CMAR	**Chiang Mai Arr**	**123.91**	**110**	PKP	PKPdf	00 16 49.7	-0.6
	1.4nm,0.5s,baz=245,slow=3.6,SNR=7.9						
KAF	**Kangasniemi**	**125.98**	**27**	*ep*	PKPdf	00 16 51.4	-1.4
	3.0nm,0.5s						
CHMT	**Chamberlain Mo**	**126.55**	**302**	PKPdf	PKPdf	00 16 54.7	+0.3
JOF	**Joensuu**	**127.93**	**29**	*ep*	PKPdf	00 16 55.3	-1.3
	5.3nm,0.7s						
JCW	**Jim Creek**	**131.55**	**297**	*e*PKPdf	PKPdf	00 17 04.0	+0.1
ARCES	**ARCESS Array B**	**132.04**	**22**	PKP	PKPdf	00 17 02.9	-1.3
	1.2nm,0.6s,baz=153,slow=1.4,SNR=11						
MKAR	**Makanchi Array**	**136.69**	**72**	PKP	PKPdf	00 17 13.1	-0.5
	0.2nm,0.3s,baz=262,slow=1.5,SNR=3.3						
YKA	**Yellowknife Ar**	**137.71**	**316**	PKP	PKPdf	00 17 14.5	-0.4
	5.4nm,0.8s,baz=127,slow=2.1,SNR=22						
YKA	**Yellowknife Ar**	**137.71**	**316**	PKIKP	PKPdf	00 17 14.5	-0.5
YKA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZALV	**Zalesovo Beam**	**142.37**	**65**	PKhKP		00 17 19.2	
	comp=Z,0.6nm,0.4s,baz=248,slow=2.3,SNR=4.2						
DAWY	**Dawson**	**148.27**	**310**	*e*PKPdf	PKPdf	00 17 32.4	-1.1
DAWY				*e*PKPbc	PKPbc	00 17 36.7	-0.3
ZAK	**Zakamensk**	**149.90**	**82**	*e*PKHKP	PKPdf	00 17 36.0	-0.6
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SONM	**Songino Array**	**150.10**	**88**	PKPbc	PKPbc	00 17 41.6	-0.5
	comp=Z,4.5nm,0.6s,baz=229,slow=3.0,SNR=24						
COLD	**Coldfoot**	**153.34**	**314**	*e*PKPbc	PKPbc	00 17 49.5	+0.7

NEIC 23 23:58:14.0, 3778S×17682E, h2km, ML3.7(WEL), After WEL., North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.24**	**209**	P	Pg	23 58 19.3	+0.7
MARZ				S	Sg	23 58 23.2	+1.6
EDRZ	**Edgecumbe**	**0.33**	**191**	P	Pg	23 58 21.1	+0.7
WIZ	**White Island**	**0.39**	**49**	P	Pg	23 58 22.3	+0.9
LIRZ	**Lichensteins R**	**0.41**	**237**	P	Pg	23 58 22.9	+1.0
TGRZ	**Tauranga**	**0.45**	**276**	P	Pg	23 58 23.2	+0.6
MKRZ	**Makatiti**	**0.46**	**218**	P	Pg	23 58 23.9	+1.2
MKRZ				S	Sg	23 58 31.3	+2.6
TAZ	**Tarawera**	**0.52**	**208**	P	Pg	23 58 25.0	+1.1
KARZ	**Kaharoa**	**0.52**	**242**	P	Pg	23 58 24.7	+0.8
URZ	**Urewera**	**0.53**	**155**	P	Pg	23 58 24.6	+0.4
UTU	**Utuhina**	**0.64**	**231**	P	Pg	23 58 27.9	+1.7
MWZ	**Matawai**	**0.79**	**135**	P	Pg	23 58 29.5	+0.4

ISCJB ***24*** *00:02:34.7±0.5, 1371N±0.005×9130W±0.004, h54km±6km, mb3.9/10, Error ellipse: s-maj=10.0km s-min=3.1km az=34.4*
CASC ***24*** *00:02:35.8±1.7, 1377N×9127W, h64km±21km, MD4.2, ML4.2, mb4.4(NEIC)*
MEX ***24*** *00:02:35.1±0.7, 1360N×9141W, h8km±76km, MD4.7*
NEIC ***24*** *00:02:36.6±0.6, 1373N×9125W, mb4.4/3, MD4.8(MEX), Error ellipse: s-maj=13.8km s-min=6.8km az=217.0*
IDC ***24*** *00:02:36.9±0.8, 1380N×9118W, h54km±7km, mb3.6/8, mb1 3.9/12, mb1mx3.7/27, mbtmp3.8/12, MS3.5/1, Ms1 3.5/1, ms1mx2.9/31, Error ellipse: s-maj=21.3km s-min=9.7km az=48.0*

ISC 24 00:02:37.0±0.4, 1381N±005×9124W±004, h53km±6km, n73, σ1=913/73, mb3.9/10, 14C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.74**	**32**	*e*P	**Pn**	**00 02 51.4**	**0.0**
FG6		**0.82**	**25**	*e*P	**Pn**	**00 02 52.5**	**+0.1**
PCG	**Pacaya**	**0.84**	**47**	*e*P	**Pn**	**00 02 53.3**	**+0.6**
NBG	**Las Nubes**	**1.16**	**48**	*e*P	**Pn**	**00 02 58.5**	**+1.5**
THIG		**1.47**	**318**	*i*P	**Pn**	**00 02 59.4**	**-1.7**
THIG				*i*S	**Sn**	**00 03 17.5**	**-1.8**
RTR	**El Retiro**	**1.55**	**87**	*e*P	x	00 03 02.2	
SBLS	**San Blas**	**1.57**	**89**	*e*P	x	00 03 02.1	
SNJE	**San Jose**	**1.59**	**88**	*e*P	x	00 03 02.6	
BOQS	**Boqueron**	**1.91**	**92**	*e*P	x	00 03 07.0	
BOQS				*e*S	x	00 03 31.7	
SNET	**Serv Nac Est T**	**1.96**

LPAZ	**La Paz**	**37.63**	**142**	P	**P**	**00 09 45.6**	**-1.4**
	comp=E,0.7nm,0.6s,mb3.6,baz=303,slow=12,SNR=3.2						
SIV	**San Ignacio**	**42.03**	**134**	P	**P**	**00 10 21.9**	**-1.7**
	comp=E,4.7nm,0.9s,mb4.1,baz=301,slow=7.9,SNR=13						
YKA	**Yellowknife Ar**	**51.38**	**346**	P	**P**	**00 11 34.5**	**-1.5**
	comp=E,0.7nm,0.8s,mb3.6,baz=148,slow=8.0,SNR=4.5						
YKA				pP	pP	00 11 49.6	-0.7
	comp=E,0.5nm,0.6s,baz=155,slow=7.9,SNR=4.1						
YKA	**Yellowknife Ar**	**51.38**	**346**	P	**P**	**00 11 34.5**	**-1.5**
YKA				pP	pP	00 11 49.6	-0.6
WRA	**Warramunga Arr**	**136.06**	**256**	PKP	PKPdf	00 21 51.7	-1.3
	comp=E,0.3nm,0.9s,baz=88,slow=3.0,SNR=2.9						
CMAR	**Chiang Mai Arr**	**146.40**	**342**	PKPbc	PKPbc	00 22 11.9	-1.0
	comp=E,1.9nm,0.6s,baz=334,slow=3.0,SNR=10						
CMAR				pPKPbc	pPKPbc	00 22 26.4	-2.2
	comp=E,1.7nm,0.5s,baz=338,slow=3.7,SNR=4.1						

IDC 24 00:32:13.5±2.0, 276N×12702E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/16, mbtmp3.7/3, Error ellipse: s-maj=143.5km s-min=28.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.67**	**163**	P	P	00 37 26.6	-0.5
	2.2nm,0.7s,baz=342,slow=10,SNR=17						
WB2	**Warramunga Arr**	**23.68**	**163**	*e*P	P	00 37 26.4	-0.7
STKA	**Stephens Creek**	**37.12**	**159**	P	P	00 39 25.9	0.0
	0.9nm,0.5s,baz=344,slow=8.2,SNR=3.5						
MKAR	**Makanchi Array**	**58.52**	**325**	P	P	00 42 12.0	+0.3
	0.3nm,0.5s,baz=124,slow=7.8,SNR=2.8						

*SKO **24** 00:33:43.7, 4127N×2097E, h25km, M1.5, ML1.9*
*ISCJB **24** 00:33:44.4±0.6, 4130N±003×2098E±004, h15km±7km, Error ellipse: s-maj=5.6km s-min=4.4km az=159.0*
*CSEM **24** 00:33:44.6±0.1, 4131N×2097E, h10km, ML1.9, Error ellipse: s-maj=3.0km s-min=2.4km az=158.0*
*THE **24** 00:33:44.9, 4130N×2098E, h0km, ML3.1*
ISC 24 00:33:45.0±0.6, 4129N±003×2098E±004, h16km±6km, n19, σ0°65/35, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRUS	**Krusevo**	**0.22**	**69**	*i* Pg	**Pg**	**00 33 50.6**	**+0.6**
KRUS				*e*Sg	**Sg**	**00 33 54.7**	**+1.2**
KRUS				eLg		00 33 54.8	
	comp=N,153nm,0.5s						
KRUS				eLg		00 33 54.8	
	comp=E,172nm,0.4s						
KRUS	**Krusevo**	**0.22**	**69**	*i* Pg	**Pg**	**00 33 50.6**	**+0.6**
KRUS				*e*Sg	**Sg**	**00 33 54.6**	**+1.1**
KRUS				eLg		00 33 54.7	
	comp=E,153nm,0.5s						
OHR	**Ohrid**	**0.22**	**217**	*e*Pg	**Pg**	**00 33 49.4**	**-0.7**
OHR				*e*Sg	**Sg**	**00 33 53.5**	**0.0**
OHR	**Ohrid**	**0.22**	**217**	*i* Pg	**Pg**	**00 33 49.5**	**-0.6**
OHR				*i* Sg	**Sg**	**00 33 53.5**	**0.0**
OHR				eLg		00 33 53.6	
	comp=N,96nm,0.3s						
OHR				eLg		00 33 53.8	
	comp=E,210nm,0.4s						
OHR	**Ohrid**	**0.22**	**217**	*i* Pg	**Pg**	**00 33 49.4**	**-0.7**
OHR				*e*Sg	**Sg**	**00 33 53.5**	**0.0**
OHR				eLg		00 33 53.6	
	comp=E,96nm,0.3s						
BIA	**Bitola**	**0.38**	**136**	*e*Pg	**Pg**	**00 33 51.8**	**-0.9**
BIA				*e*Sg	**Sg**	**00 33 58.0**	**+0.1**
BIA	**Bitola**	**0.38**	**136**	*i* Pg	**Pg**	**00 33 51.9**	**-0.8**
BIA				*e*Sg	**Sg**	**00 33 58.2**	**+0.3**
BIA				eLg		00 33 58.4	
	comp=N,64nm,0.4s						
BIA				eLg		00 33 59.0	
	comp=E,117nm,0.3s						
BIA	**Bitola**	**0.38**	**136**	*i* Pg	**Pg**	**00 33 51.9**	**-0.8**
BIA				*e*Sg	**Sg**	**00 33 58.1**	**+0.2**
BIA				eLg		00 33 58.3	
	comp=E,64nm,0.4s						
FNA	**Florina**	**0.59**	**149**	*e*Pg	**Pg**	**00 33 56.4**	**-0.2**
FNA				*e*Sg	**Sg**	**00 34 05.1**	**+0.7**
SKO	**Skopje**	**0.77**	**27**	*e*Pg	**Pg**	**00 33 58.9**	**-1.0**
SKO				*e*Sg	**Sg**	**00 34 10.2**	**+0.2**
SKO				eLg		00 34 10.7	
	comp=E,37nm,0.3s						
SKO				eLg		00 34 10.8	
	comp=N,57nm,0.2s						
SKO	**Skopje**	**0.77**	**27**	*e*Pg	**Pg**	**00 33 58.8**	**-1.1**
SKO				*e*Sg	**Sg**	**00 34 10.2**	**+0.2**
SKO				eLg		00 34 10.7	
	comp=N,37nm,0.3s						
TIR	**Tirane**	**0.84**	**274**	*e*Pg	**Pg**	**00 34 01.2**	**-0.1**
TIR				*e*Sg	**Sg**	**00 34 13.1**	**+0.7**
STIP	**Stip**	**0.99**	**66**	*e*Pg	**Pg**	**00 34 03.8**	**-0.5**
STIP				*e*Sg	**Sg**	**00 34 17.4**	**+0.2**
STIP				eLg		00 34 18.0	
	comp=E,11nm,0.3s						
STIP				eLg		00 34 18.1	
	comp=N,37nm,0.4s						
STIP	**Stip**	**0.99**	**66**	*e*Pg	**Pg**	**00 34 03.7**	**-0.6**
STIP				*e*Sg	**Sg**	**00 34 17.4**	**+0.1**
STIP				eLg		00 34 18.0	
	comp=N,11nm,0.3s						
GRG	**Griva**	**1.13**	**107**	*e*Pg	**Pg**	**00 34 06.3**	**-0.5**
VAY	**Valandovo**	**1.20**	**88**	*e*Pg	**Pg**	**00 34 07.2**	**-0.9**
VAY	**Valandovo**	**1.20**	**88**	*e*Pg	**Pn**	**00 34 07.0**	**-0.1**
VAY				*e*Sg	**Sg**	**00 34 23.6**	**-0.2**
VAY				eLg		00 34 24.1	
	comp=N,28nm,0.6s						
VAY				eLg		00 34 24.5	
	comp=E,16nm,0.4s						
VAY	**Valandovo**	**1.20**	**88**	*e*Pg	**Pn**	**00 34 07.2**	**+0.1**
VAY				*e*Sg	**Sg**	**00 34 23.6**	**-0.2**
KNT	**Kendrikon**	**1.46**	**94**	*e*Pg	**Pn**	**00 34 11.8**	**+1.3**

*IDC **24** 00:37:13.2±3.0, 190S×10030E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.8/21, mbtmp4.0/7, Error ellipse: s-maj=170.6km s-min=17.3km az=53.0*
*ISCJB **24** 00:37:18.0±3.3, 14S±08×1009E±10, h33km, mb4.0/8, Error ellipse: s-maj=175.4km s-min=13.0km az=141.3*
*NEIC **24** 00:37:18.5±1.6, 183S×10042E, h35km, mb4.1/1, Error ellipse: s-maj=93.4km s-min=8.9km az=50.0*
*DJA **24** 00:37:32, 110S×10092E, h15km, MLv3.6/4*
ISC 24 00:37:18.9±3.4, 18S±08×1005E±10, h35km, n13, σ0°37/11, mb4.0/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**29.53**	**125**	P	**P**	**00 43 20.5**	**+0.2**
	1.1nm,0.7s,mb3.7,baz=234,slow=7.2,SNR=5.6						
WRA	**Warramunga Arr**	**37.68**	**121**	P	**P**	**00 44 30.9**	**-0.3**
	0.7nm,0.4s,mb3.7,baz=301,slow=9.3,SNR=14						
WRA				PcP	PcP	00 46 48.3	+0.1
	0.2nm,0.6s,baz=310,slow=2.5,SNR=3.6						
WRAB	**Tennant Creek**	**37.68**	**121**	*e*P	**P**	**00 44 30.9**	**-0.3**
	156nm,3.5s						
WB2	**Warramunga Arr**	**37.69**	**121**	*e*P	**P**	**00 44 30.9**	**-0.4**
ASAR	**Alice Springs**	**38.98**	**127**	P	**P**	**00 44 42.6**	**+0.5**
	1.6nm,0.6s,mb4.0,baz=302,slow=7.9,SNR=25						
CTAO	**Charters Tower**	**48.24**	**116**	*e*P	**P**	**00 45 57.1**	**+0.3**
	1.7nm,0.8s,mb4.1						
MKAR	**Makanchi Array**	**50.94**	**344**	P	**P**	**00 46 17.2**	**+0.4**
	1.5nm,0.6s,mb4.1,baz=147,slow=7.6,SNR=14						
MKAR	**Makanchi Array**	**50.94**	**344**	P	**P**	**00 46 17.2**	**+0.4**
KURK	**Kurchatov**	**55.53**	**343**	P	**P**	**00 46 49.9**	**-0.6**
	0.6nm,0.4s,mb4.0,baz=177,slow=5.9,SNR=6.6						
ZALV	**Zalesovo Beam**	**57.03**	**349**	P	**P**	**00 47 01.5**	**+0.3**
	1.2nm,0.4s,mb4.3,baz=175,slow=8.1,SNR=9.2						
ARCES	**ARCESS Array B**	**86.42**	**340**	P	**P**	**00 49 57.4**	**-0.1**
	2.8nm,1.0s,mb4.4,baz=82,slow=8.9,SNR=3.5						
TXAR	**Lajitas Array**	**144.21**	**38**	PKP	PKPdf	00 56 51.1	-0.7
	0.5nm,0.5s,baz=212,slow=0.9,SNR=13						
JCT	**Junction City**	**145.56**	**32**	*e*PKPdf	PKPdf	00 56 54.5	+0.3

*NEIC **24** 00:46:51.6, 3486N×2424E, h4km, MD3.6(ATH), After ATH.*
*CSEM **24** 00:46:51.6, 3486N×2424E, h4km, MD3.5/3, After ATH*
ATH 24 00:46:51.6, 3486N×2424E, h4km±2km, MD3.6/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.13**	**261**	*e*PG	Pg	00 46 54.2	+0.1
VAM	**Vamos**	**0.55**	**357**	*e*PG	Pg	00 47 02.5	+0.4
VAM				*e*SG	Sg	00 47 10.0	+0.8
NPS	**Neapolis**	**1.20**	**70**	*e*PB	Pb	00 47 13.7	-1.1
VLI	**Veliai**	**2.13**	**331**	*e*PN	Pn	00 47 30.1	+2.1

*IDC **24** 01:37:29.0±1.8, 4389N×15028E, h0km, mb3.7/4, mb1 4.0/7, mb1mx3.7/24, mbtmp3.8/7, ML3.8/3, Error ellipse: s-maj=64.8km s-min=22.3km az=170.0*
*MOS **24** 01:37:30.7±3.0, 4377N×15085E, h63km, mb4.2/1, Error ellipse: s-maj=29.9km s-min=21.3km az=162.0*
*ISCJB **24** 01:37:44.7±1.5, 449N±01×1490E±02, h151km±18km, mb3.5/3, Error ellipse: s-maj=24.3km s-min=19.2km az=139.3*
*JMA **24** 01:37:46.0±0.4, 4488N×14894E, h143km, M3.9*
ISC 24 01:37:45.1±1.4, 449N±01×1491E±02, h136km±18km, n31, σ0°76/30, mb3.5/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**2.48**	**251**	PN	**Pn**	**01 38 25.1**	**-0.1**
NEM2	**Nemuro 2**	**2.86**	**239**	P	**Pn**	**01 38 30.2**	**+0.1**
NEM2				*e*S	**Sn**	**01 39 04.6**	**-0.2**
JRA	**Rausu**	**3.01**	**253**	P	**Pn**	**01 38 32.4**	**+0.4**
JNK	**Nakash**	**3.41**	**249**	P	**Pn**	**01 38 37.9**	**+0.7**
JAK	**Akkeshi**	**3.71**	**241**	P	**Pn**	**01 38 41.2**	**+0.1**
JAR	**Ashorobuto**	**4.16**	**249**	P	**Pn**	**01 38 48.0**	**+0.9**
JMP	**Maruseppu**	**4.21**	**260**	*e*S	**Sn**	**01 39 36.2**	**0.0**
JOB	**Onbets**	**4.30**	**244**	P	**Pn**	**01 38 49.4**	**+0.5**
JOB				*e*S	**Sn**	**01 39 38.4**	**0.0**
JKK2	**Kamakawa 2**	**4.67**	**260**	P	**Pn**	**01 38 53.6**	**-0.2**
ASAJ	**Asahikawa**	**4.72**	**263**	Pn	**Pn**	**01 38 54.0**	**-0.4**
	4.0nm,0.3s,baz=83,slow=9.0,SNR=16						
ASAJ	**Asahikawa**	**4.72**	**263**	P	**Pn**	**01 38 54.2**	**-0.3**
ASAJ	**Asahikawa**	**4.72**	**263**	PN	**Pn**	**01 38 54.1**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
JCH	**Churui**	**4.74**	**243**	P	**Pn**	**01 38 55.2**	**+0.4**
JCH				*e*S	Sx	01 39 47.9	
YSS	**Yuzh-Sakhalins**	**4.88**	**297**	*e*PN	**Pn**	**01 38 56.9**	**+0.3**
ERM	**Erimo**	**5.20**	**238**	*e*PN	**Pn**	**01 39 02.7**	**+1.8**
JNBK	**Urakawa-nobuka**	**5.30**	**243**	P	**Pn**	**01 39 01.4**	**-0.9**
JNB	**Noboribetsu**	**6.33**	**250**	P	**Pn**	**01 39 15.2**	**-0.8**
JNB				*e*S	Sx	01 40 25.5	
JKB	**Kayabe**	**6.61**	**246**	P	**Pn**	**01 39 18.5**	**-1.2**
JKB				*e*S	Sx	01 40 28.9	
JYM2	**Yakumo 2**	**6.93**	**249**	P	**Pn**	**01 39 23.1**	**-1.0**
JSH	**Shimam**	**6.94**	**254**	P	**Pn**	**01 39 24.3**	**+0.2**
JANG	**Nango**	**7.19**	**234**	P	**Pn**	**01 39 26.3**	**-1.3**
JTM	**Tenmabayashi**	**7.19**	**238**	*e*S	Sx	01 40 42.3	
OFUJ	**Ofunato**	**8.03**	**226**	*e*S	Sx	01 41 05.8	
JIO	**Ouri**	**8.66**	**225**	*e*S	Sx	01 41 19.9	
PETK	**Petropavlovsk-**	**9.96**	**31**	Pn	**Pn**	**01 39 59.5**	**-5.1**
	comp=Z,0.4nm,0.3s,baz=184,slow=10,SNR=4.3						
KSRS	**Korea Array**	**17.57**	**252**	P	**Pn**	**01 41 40.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=58,slow=10,SNR=7.6						
KSRS	**Korea Array**	**17.57**	**252**	*e*P	**Pn**	**01 41 43.4**	**+2.0**
KURK	**Kurchatov**	**46.06**	**304**	P	**P**	**01 46 04.8**	**+10**
	comp=Z,0.2nm,0.3s,baz=73,slow=8.6,SNR=2.7						
NVAR	**Mina Array Bea**	**65.78**	**59**	P	**P**	**01 48 16.1**	**+0.7**
	comp=Z,0.8nm,0.5s,mb3.8,baz=296,slow=7.5,SNR=4.4						
PDAR	**Pinedale Array**	**68.10**	**51**	P	**P**	**01 48 29.1**	**-0.9**
	comp=Z,0.6nm,0.6s,mb3.5,baz=51,slow=1.3,SNR=5.1						
TXAR	**Lajitas Array**	**80.85**	**58**	P	**P**	**01 49 44.2**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.2,baz=300,slow=3.5,SNR=6.0						

*NEIC **24** 01:39:15.8±0.9, 1661S×17690W, h10km, mb4.4/2, Error ellipse: s-maj=23.8km s-min=18.8km az=111.0*
*IDC **24** 01:39:15.7±1.3, 1671S×17710W, h0km, mb4.3/4, mb1 4.5/4, mb1mx4.0/17, mbtmp4.3/4, Error ellipse: s-maj=42.7km s-min=34.1km az=149.0*
*ISCJB **24** 01:39:17.1±1.2, 167S±02×1769W±02, h33km, mb4.3/6, Error ellipse: s-maj=25.4km s-min=23.8km az=173.0*
ISC 24 01:39:19.0±1.2, 166S±02×1769W±02, h35km, n9, σ0°89/7, mb4.3/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**12.63**	**184**	*e*Pn	**Pn**	**01 42 15.2**	**-0.9**
CTAO	**Charters Tower**	**35.14**	**259**	*e*P	**P**	**01 46 09.7**	**+0.2**
	4.4nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**40.56**	**240**	P	**P**	**01 46 55.8**	**+0.7**
	1.7nm,0.5s,mb3.9,baz=73,slow=8.1,SNR=8.7						
WRA	**Warramunga Arr**	**46.34**	**258**	P	**P**	**01 47 41.4**	**-0.5**
	1.5nm,0.5s,mb4.2,baz=93,slow=7.0,SNR=25						
ASAR	**Alice Springs**	**46.58**	**253**	P	**P**	**01 47 43.2**	**-0.6**
	14nm,0.5s,mb5.1,baz=88,slow=8.2,SNR=236						
QSPA	**South Pole Qui**	**73.45**	**180**	P	**P**	**01 50 49.1**	**+1.9**
	0.6nm,0.5s,mb3.8,baz=34,slow=7.3,SNR=10						
SDCO	**Great Sand Dun**	**85.99**	**49**	*e*P	**P**	**01 51 55.2**	**-0.6**
	3.4nm,1.3s,mb4.4						
GERES	**GERESS Array B**	**146.70**	**347**	PKPbc	PKPbc	01 58 59.7	+2.6
	0.4nm,0.6s,baz=3.3,slow=3.4,SNR=3.0						
DAVOX	**Davos/Dischmat**	**149.39**	**351**	PKPbc	PKPbc	01 59 06.4	+2.2
	1.8nm,0.6s,baz=243,slow=2.3,SNR=4.0						

*IDC **24** 01:49:57.7±0.8, 2451N×10984W, h0km, mb4.0/5, mb1 4.5/11, mb1mx4.2/25, mbtmp4.2/11, ML3.8/6, MS4.2/19, Ms1 4.2/19, ms1mx3.9/36, Error ellipse: s-maj=20.2km s-min=7.2km az=129.0*
*ISCJB **24** 01:49:58.9±1.1, 2447N±004×10987W±005, h7km±8km, mb4.6/26, MS4.2/16, Error ellipse: s-maj=7.5km s-min=7.1km az=36.6*
*MEX **24** 01:49:58.9±0.4, 2442N×10981W, h3km±17km, MD4.8*
*NEIC **24** 01:50:00.3±0.4, 2437N×10991W, h10km, mb4.7/31, MS4.7/1, MD4.8(MEX), Error ellipse: s-maj=6.3km s-min=4.6km az=15.0*
NEIC Felt [III] at La Paz, Mexico.
*GCMT **24** 01:50:00.3±0.5, 2468N×10993W, h22km±1km, MW5.0/60, Moment Tensor Solution. s22,c23; s60,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.98±.21; $M_{\theta\theta}$-0.18±.14; $M_{\phi\phi}$2.15±.16; $M_{r\theta}$-0.78±.23; $M_{\theta\phi}$-2.73±.12; $M_{\phi r}$0.77±.23; Best double couple: $M_0$3.22700×10^{16} NP1:ϕ_s359.00000°, δ45.00000°, λ-40.00000°. NP2: ϕ_s120.00000°, δ63.00000°, λ-128.00000°. Principal axes: T 4.1400, Plg10.0000°, Azm236.0000°; N -1.8360, Plg33.0000°, Azm140.0000°; P -2.3130, Plg55.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **24** 01:50:00.3, 2440N×10990W, h10km, mB5.3, mb5.3, Ms5.1, Msz4.7*
*MOS **24** 01:50:00.2±1.4, 2464N×10977W, h10km, mb4.8/7, Error ellipse: s-maj=14.2km s-min=8.8km az=81.9*
ISC 24 01:50:01.3±1.0, 2439N±004×10991W±005, h16km±7km, n108, σ1°94/98, mb4.6/26, MS4.2/16, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**0.46**	**232**	Pg	**Pg**	**01 50 09.2**	**-1.4**
	2μm,0.3s,baz=28,slow=5.2,SNR=362						
LPIG				Lg		01 50 16.9	
	8μm,0.3s,baz=18,slow=6.4,SNR=103						
LPIG	**La Paz**	**0.46**	**232**	*i* P	**Pg**	**01 50 09.2**	**-1.4**
LPIG				*i* S	**Sg**	**01 50 17.2**	**+0.3**
HPIG		**4.59**	**56**	*i* P	**Pn**	**01 51 06.0**	**-4.1**
HPIG				*i* S	**Sn**	**01 51 56.5**	**-6.6**
HSIG		**4.71**	**349**	*i* P	**Pn**	**01 51 08.0**	**-3.7**
CGIG		**6.20**	**16**	*i* P	**Pn**	**01 51 29.0**	**-3.1**
CGIG				*i* S	**Sn**	**01 52 40.9**	**-1.7**
TXAR	**Lajitas Array**	**7.44**	**47**	Pn	**Pn**	**01 51 44.8**	**-4.3**
	1.3nm,0.3s,baz=223,slow=12,SNR=49						
TXAR				Sn	**Sn**	**01 53 07.5**	**-5.7**
	0.2nm,0.3s,baz=225,slow=23,SNR=2.6						
TXAR				Lg		01 53 48.0	
	0.4nm,0.3s,baz=230,slow=26,SNR=2.8						
TXAR				LR	LR	01 54 43.6	
	comp=Z,4μm,18.0s,baz=5.0,slow=39						
TXAR	**Lajitas Array**	**7.44**	**47**	P	**Pn**	**01 51 44.8**	**-4.4**
TXAR						01 53 07.5	
TXAR	**Lajitas Array**	**7.44**	**47**	Pn	**Pn**	**01 51 44.8**	**-4.3**
TXAR				Sn	**Sn**	**01 53 07.5**	**-5.7**
TXAR				Lg		01 53 48.0	
TXAR				LR	LR	01 54 43.6	
TUC	**Tucson**	**7.93**	**355**	*e*P	**Pn**	**01 51 52.4**	**-3.5**
GLA	**Glamis**	**9.65**	**335**	*e*P	**Pn**	**01 52 20.3**	**+0.8**
LENM	**Lemitar**	**10.07**	**14**	*e*Pn	**Pn**	**01 52 24.4**	**-0.9**
BNM	**Barren Site**	**10.14**	**16**	*e*Pn	**Pn**	**01 52 25.9**	**-0.3**
BAR	**Barrett**	**10.17**	**326**	*e*Pn	**Pn**	**01 52 27.0**	**+0.3**
LAZ	**Ladron**	**10.27**	**13**	*e*Pn	**Pn**	**01 52 27.4**	**-0.5**
PFO	**Pinyon Flat Ob**	**10.82**	**330**	Pn	**Pn**	**01 52 33.6**	**-2.0**
	0.2nm,0.3s,baz=154,slow=13,SNR=32						
PFO				LR	LR	01 56 06.6	
	comp=Z,719nm,21.6s,baz=167,slow=34						
PFO	**Pinyon Flat Ob**	**10.82**	**330**	*e*Pn	**Pn**	**01 52 36.3**	**+0.7**
JCT	**Junction City**	**10.83**	**54**	*e*P	**Pn**	**01 52 34.5**	**-1.2**
ANMO	**Albuquerque**	**11.94**	**15**	Pn	**Pn**	**01 52 35.6**	**-1.6**
	0.1nm,0.3s,baz=201,slow=13,SNR=14						
SNCC	**San Nicolas Is**	**12.20**	**319**	*e*Pn	**Pn**	**01 52 54.6**	**+0.3**
	103nm,1.2s						
OSI	**Osito Adit**	**12.75**	**325**	*e*Pn	**Pn**	**01 53 03.0**	**+1.1**
	83nm,0.9s						
CCUT	**Cedar City**	**13.45**	**348**	*e*Pn	**Pn**	**01 53 13.1**	**+1.6**
ARUT	**Antelope Range**	**13.69**	**348**	*e*P	**Pn**	**01 53 16.2**	**+1.4**
HKT	**Hockley**	**13.70**	**63**	*e*P	**Pn**	**01 53 14.3**	**-0.6**
HKT				pmax	pmax		
	comp=Z,58nm,2.0s						
HKT	**Hockley**	**13.70**	**63**	*e*Pn	**Pn**	**01 53 14.3**	**-0.6**
	comp=Z,58nm,2.0s						
SDCO	**Great Sand Dun**	**13.84**	**15**	*e*Pn	**Pn**	**01 53 19.2**	**+2.5**
	comp=Z,21nm,1.4s						
PTRM	**Twissleman Ran**	**14.33**	**324**	*e*Pn	**Pn**	**01 53 23.1**	**-0.3**
NVAR	**Mina Array Bea**	**15.71**	**335**	Pn	**Pn**	**01 53 42.7**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=162,slow=11,SNR=34						
NVAR	**Mina Array Bea**	**15.71**	**335**	Pn	**Pn**	**01 53 42.7**	**+0.8**
CMIG	**Matias Romero**	**15.81**	**114**	LR	LR	01 59 34.8	
	comp=Z,789nm,19.4s,baz=281,slow=36						
BGU	**Big Grassy Mou**	**16.70**	**352**	*e*Pn	**Pn**	**01 53 55.1**	**+0.7**
ELK	**Elko**	**16.91**	**346**	Pn	**Pn**	**01 53 57.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=170,slow=8.1,SNR=13						
ELK				LR	LR	02 00 20.0	
	comp=Z,648nm,18.8s,baz=306,slow=37						
HWUT	**Hardware Ranch**	**17.23**	**356**	*e*Pn	**Pn**	**01 54 00.8**	**-0.4**
	comp=Z,131nm,1.4s						
NSHM	**Saint Helena R**	**17.74**	**326**	*e*Pn	**Pn**	**01 54 07.6**	**0.0**
PDAR	**Pinedale Array**	**18.33**	**1**	P	**Pn**	**01 54 13.2**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=168,slow=8.8,SNR=48						
AHID	**Auburn Hatcher**	**18.36**	**357**	*e*Pn	**Pn**	**01 54 15.9**	**+0.8**
	comp=Z,60nm,1.7s						
DCID1	**Drake Creek**	**19.19**	**357**	*e*P	**Pn**	**01 54 25.1**	**0.0**
	comp=Z,16nm,0.7s						
WVOR	**Wild Horse Val**	**19.39**	**340**	*e*P	**Pn**	**01 54 26.9**	**-0.8**
WVOR				pmax	pmax		
	comp=Z,73nm,1.6s						
WVOR	**Wild Horse Val**	**19.39**	**340**	*e*P	**Pn**	**01 54 26.9**	**-0.8**
	comp=Z,72nm,1.6s						
HLID	**Hailey**	**19.48**	**350**	*e*P	**Pn**	**01 54 27.8**	**-0.9**
	comp=Z,27nm,1.5s						
MOD	**Modoc**	**19.48**	**336**	*e*P	**Pn**	**01 54 28.4**	**-0.4**
	comp=Z,20nm,1.1s						
HBAR	**Harrisburg**	**20.01**	**52**	*e*P	**Pn**	**01 54 32.3**	**-2.8**
LKWY	**Lake**	**20.13**	**359**	*e*P	**P**	**01 54 35.9**	**+1.4**
LKWY				pmax	pmax		
	comp=Z,25nm,1.1s						
LKWY	**Lake**	**20.13**	**359**	*e*P	**P**	**01 54 35.9**	**+1.4**
	comp=Z,25nm,1.1s						
YMR	**Madison River**	**20.25**	**358**	*e*P	**P**	**01 54 37.3**	**+1.6**
	comp=Z,86nm,1.4s						
RSSD	**Black Hills**	**20.26**	**12**	*e*P	**P**	**01 54 37.3**	**+1.4**
RSSD				pmax	pmax		
	comp=Z,12nm,1.3s						
RSSD	**Black Hills**	**20.26**	**12**	*e*P	**P**	**01 54 37.3**	**+1.4**
	comp=Z,12nm,1.3s						
YBH	**Yreka Blue Hor**	**20.31**	**331**	P	**P**	**01 54 35.2**	**-1.3**
	comp=Z,1.9nm,0.8s,baz=116,slow=6.0,SNR=3.2						
YBH				LR	LR	02 02 51.5	
	comp=Z,346nm,19.8s,MS3.7,baz=146,slow=38						
TEIG	**Tepich**	**20.43**	**97**	LR	LR	02 03 01.4	
	comp=Z,276nm,21.8s,MS3.6,baz=337,slow=38						
MCMT	**McKenzie Canyo**	**20.53**	**354**	*e*P	**P**	**01 54 40.3**	**+1.4**
CCM	**Cathedral Cave**	**20.93**	**45**	*e*P	**P**	**01 54 43.8**	**+0.5**
CCM				pmax	pmax		
	comp=Z,38nm,1.5s						
CCM	**Cathedral Cave**	**20.93**	**45**	*e*P	**P**	**01 54 43.8**	**+0.5**
	comp=Z,38nm,1.5s						
BOZ	**Bozeman (W)**	**21.25**	**357**	*e*P	**P**	**01 54 46.9**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,63nm,1.8s,mb4.6						
BOZ	**Bozeman (W)**	**21.25**	**357**	*e*P	**P**	**01 54 46.9**	**+0.3**
	comp=Z,63nm,1.8s,mb4.6						
BMO	**Blue Mountains**	**21.28**	**345**	*e*P	**P**	**01 54 46.8**	**-0.2**
	comp=Z,60nm,1.6s,mb4.7						
GCMT	**Greycliff**	**21.36**	**0**	*e*P	**P**	**01 54 47.7**	**-0.1**
FVM	**French Village**	**21.43**	**46**	*e*P	**P**	**01 54 49.1**	**+0.5**
FVM				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.3						
FVM	**French Village**	**21.43**	**46**	*e*P	**P**	**01 54 49.1**	**+0.5**
	comp=

TBI	**Tubuai**	**61.03**	**222**	*e*S		**S**	**02 08 30.5**	**-2.0**
	comp=Z,61nm,27.2s								
TBI				*e*LR		LR	02 18 06.3		
	comp=Z,381nm,29.0s								
RAR	**Rarotonga**	**66.38**	**231**	LR		LR	02 21 50.4		
	comp=Z,237nm,19.2s,MS4.4,baz=285,slow=29								
CPUP	**Villa Florida**	**71.57**	**131**	P		**P**	**02 01 21.4**	**-0.4**	
	comp=Z,1.2nm,0.7s,mb3.9,baz=285,slow=12,SNR=2.1								
ARCES	**ARCESS Array B**	**81.03**	**14**	P		**P**	**02 02 12.3**	**-2.6**	
	comp=Z,2.5nm,0.7s,mb4.2,baz=339,slow=4.8,SNR=8.5								
ARCES				LR		LR	02 42 39.0		
	comp=Z,128nm,19.1s,MS4.3,baz=192,slow=39								
NOA	**NORSAR Array B**	**82.57**	**25**	P		**P**	**02 02 22.9**	**-0.3**	
	comp=Z,2.2nm,0.9s,mb4.2,baz=304,slow=5.1,SNR=3.6								
NOA				LR		LR	02 39 01.0		
	comp=Z,210nm,18.3s,MS4.5,baz=300,slow=36								
NOA	**NORSAR Array B**	**82.57**	**25**	P		**P**	**02 02 22.9**	**-0.3**	
NOA				LR		LR	02 39 01.1		
ESDC	**Sonseca Array**	**86.11**	**48**	LR		LR	02 36 48.8		
	comp=Z,177nm,21.5s,MS4.4,baz=275,slow=33								
GERES	**GERESS Array B**	**91.44**	**33**	LR		LR	02 42 40.0		
	comp=Z,191nm,21.6s,MS4.5,baz=307,slow=35								
AKASG	**Malin Array Be**	**96.98**	**25**	LR		LR	02 48 56.3		
	comp=Z,164nm,18.8s,MS4.5,baz=300,slow=36								
KEST	**Kesra**	**97.11**	**46**	LR		LR	02 46 28.4		
	comp=Z,80nm,19.1s,MS4.2,baz=272,slow=35								
LZH	**Lanzhou**	**111.92**	**331**	*e*PKP		PKiKP	02 08 36.3	+0.4	
LZH				XPKP			02 08 41.8		
LZH				LR		LR			
	comp=N,147nm,18.2s								
LZH				LR		LR			
	comp=Z,196nm,20.3s,MS4.7								
LZH	**Lanzhou**	**111.92**	**331**	*e*PKP		PKiKP	02 08 36.3	+0.4	
LZH				pPKP			02 08 39.5		
LZH				sPKP			02 08 41.7		
LZH				LR		LR			
	comp=Z,200nm,20.3s,MS4.7								
CD2	**Chengdu**	**116.25**	**328**	*e*PKP		PKPdf	02 08 42.3	-2.1	
ASAR	**Alice Springs**	**122.20**	**256**	PKP		PKPdf	02 08 55.2	-0.7	
	comp=Z,1.2nm,0.9s,baz=70,slow=1.1,SNR=3.6								

DDA ***24*** *01:54:56.3,3673N×2765E,h6km±7km,Md2.9*
ISK ***24*** *01:55:00.4,3691N×2749E,h2km,MD2.9*
CSEM ***24*** *01:55:00.6±0.2,3693N×2747E,h2km,MD2.9,Error ellipse: s-maj=4.8km s-min=2.5km az=17.0*

ISC 24 01:55:00.4±1.7,3682N±007×2745E±007,h3km±7km,n13, σ0§79/21,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BDRM	**Kayabasi**	**0.25**	**359**	*i* P		**Pg**	**01 55 04.5**	**-0.7**
BDRM				*i* S		**Sg**	**01 55 08.5**	**0.0**
BODT	**Bodrum**	**0.27**	**335**	*e*PG		**Pg**	**01 55 05.3**	**-0.3**
BODT				*e*SG		**Sg**	**01 55 09.6**	**+0.4**
MLSB	**Milas**	**0.55**	**28**	*e*PG		**Pg**	**01 55 10.3**	**-0.6**
MLSB				*e*SG		**Sg**	**01 55 17.1**	**-0.8**
YER	**Yerkesik**	**0.74**	**64**	*e*PG		**Pg**	**01 55 14.0**	**-0.5**
YER				*e*SG		**Sg**	**01 55 24.7**	**+0.6**
GCAM	**G?zelcaml?**	**0.90**	**349**	*i* P		**Pg**	**01 55 16.5**	**-1.2**
GCAM				*i* S		**Sg**	**01 55 30.4**	**+1.0**
TURN	**Turunc**	**0.93**	**86**	*i* P		**Pg**	**01 55 11.0**	**-7.2**
TURN				*i* S		**Sg**	**01 55 22.2**	**-7.9**
KDAG	**Bornova**	**1.59**	**355**	*i* P		**Pn**	**01 55 24.2**	**-5.2**
KDAG				*i* S		**Sg**	**01 55 53.1**	**+1.6**
BLCB	**Balcova**	**1.60**	**348**	*e*PN		**Pn**	**01 55 29.0**	**-0.6**
MANT	**Manisa**	**1.89**	**27**	*i* P		**Pn**	**01 55 33.3**	**-0.2**
MANT				*i* S		**Sn**	**01 55 56.8**	**-1.0**
KULA	**Kula-Manisa**	**1.95**	**29**	*e*PN		**Pn**	**01 55 34.5**	**+0.2**
ELL	**Elmali**	**1.97**	**91**	*e*PN		**Pn**	**01 55 36.1**	**+1.4**
AKS	**Akhisar**	**2.08**	**8**	*e*PN		**Pn**	**01 55 35.9**	**-0.3**
KHL	**Karahalli**	**2.23**	**47**	*e*PN		**Pn**	**01 55 39.1**	**+0.9**

MOS ***24*** *01:59:17.6±0.9,373N×12660E,h33km,mb5.1/13,Error ellipse: s-maj=20.4km s-min=8.3km az=112.7*
ISCJB ***24*** *01:59:19.9±1.0,371N±004×12659E±007,h54km±9km, mb4.6/42,MS3.9/15,Error ellipse: s-maj=11.9km s-min=6.5km az=173.7*
DJA ***24*** *01:59:20,369N×12660E,h9km,MLv4.7/4*
BJI ***24*** *01:59:21.1,392N×12649E,h49km,mB5.0,mb4.7,Ms4.5, Msz4.0*
IDC ***24*** *01:59:21.1±2.9,363N×12625E,h47km±28km,mb4.1/15, mb1 4.2/16,mb1mx4.2/20,mbtmp4.1/16,ML4.8/1,MS3.7/8, Ms1 3.7/8,ms1mx3.3/27,Error ellipse: s-maj=31.9km s-min=11.5km az=74.0*
NEIC ***24*** *01:59:22.5±1.2,367N×12654E,h61km±11km,mb4.8/14, Error ellipse: s-maj=13.8km s-min=6.0km az=77.0*

ISC 24 01:59:21.7±0.8,371N±004×12665E±007,h54km±8km,n85, σ0§88/87,mb4.6/42,MS3.9/15,5C-1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MNI	**Manado**	**2.88**	**219**	P		**Pn**	**02 00 04.7**	**-0.5**
	0.0nm,0.0s							
DAV	**Davao City (W)**	**3.50**	**342**	P		**Pn**	**02 00 14.7**	**+1.0**
	79nm,0.3s,baz=24,slow=10,SNR=3.7							
DAV				LR		LR	02 02 05.6	
	comp=Z,1μm,18.0s,baz=151,slow=47							
LBMI	**Labuha**	**4.40**	**169**	P		**Pn**	**02 00 26.6**	**+0.6**
	0.0nm,0.0s							
SWI	**Sorong**	**6.47**	**134**	P		**Pn**	**02 00 55.5**	**+1.1**
	0.0nm,0.0s							
KDI	**Kendari**	**8.61**	**208**	P		**Pn**	**02 01 23.2**	**-0.6**
	0.0nm,0.0s							
KDI	**Kendari**	**8.61**	**208‖**	*e*P		**Pn**	**02 01 18.7**	**-5.1**
KDI				*e*S		**Sn**	**02 03 00.6**	**+1.1**
KAPI	**Kappang**	**11.07**	**219**	P		**Pn**	**02 01 56.9**	**-0.5**
	0.5nm,0.3s,baz=76,slow=4.2,SNR=2.7							
KAPI				LR		LR	02 06 10.5	
	comp=Z,329nm,19.8s,baz=223,slow=38							
KAPI	**Kappang**	**11.07**	**219**	P		**Pn**	**02 01 56.9**	**-0.5**
KAPI				LR		LR	02 06 10.5	
GUMO	**Guam**	**20.50**	**60**	LR		LR	02 11 00.6	
	comp=Z,97nm,19.1s,MS3.2,baz=294,slow=34							
FITZ	**Fitzroy Crossi**	**21.69**	**183**	*e*P		**P**	**02 04 07.0**	**-1.2**
FITZ	**Fitzroy Crossi**	**21.69**	**183**	P		**P**	**02 04 06.7**	**-1.5**
	3.1nm,0.4s,mb4.1,baz=16,slow=13,SNR=17							
WRAB	**Tennant Creek**	**24.68**	**162**	*e*P		**P**	**02 04 37.8**	**+0.1**
WRAB				pmax		pmax		
	comp=Z,23nm,0.7s,mb4.8							
WRAB	**Tennant Creek**	**24.68**	**162**	*e*P		**P**	**02 04 37.8**	**+0.1**
	comp=Z,23nm,0.7s,mb4.8							
WRA	**Warramunga Arr**	**24.69**	**162**	P		**P**	**02 04 36.8**	**-1.0**
	comp=Z,16nm,0.7s,mb4.7,baz=343,slow=11,SNR=67							
WB2	**Warramunga Arr**	**24.69**	**162**	*e*P		**P**	**02 04 37.5**	**-0.3**
MBWA	**Marble Bar**	**25.62**	**195**	*e*P		**P**	**02 04 46.9**	**+0.6**
	comp=Z,9.2nm,0.6s,mb4.5							
ASAR	**Alice Springs**	**28.11**	**166**	P		**P**	**02 05 08.3**	**-0.3**
	comp=Z,1.4nm,0.5s,mb3.8,baz=350,slow=7.3,SNR=21							
NJ2	**Nanjing**	**29.13**	**346**	*e*P		**P**	**02 05 18.3**	**+0.7**
NJ2				AMB		AMB		
	comp=Z,20nm,0.8s,mb4.9							
GYA	**Guiyang**	**29.63**	**322**	P		**P**	**02 05 21.6**	**-0.6**
GYA				PP		PP	02 06 20.0	-10
GYA				PCP		PcP	02 08 25.8	0.0
GYA				S		**S**	**02 10 16.3**	**+2.3**
GYA				SCP		ScP	02 12 06.9	+3.4
GYA				SCS		ScS	02 16 00.8	+2.3
GYA				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.7							
GYA				AMB		AMB		
	comp=Z,120nm,3.9s							
GYA				LR		LR		
	comp=N,510nm,14.6s,MS4.4							
GYA				LR		LR		
	comp=E,480nm,15.2s,MS4.4							
GYA				LR		LR		
	comp=Z,420nm,15.3s,MS4.2							
CMAR	**Chiang Mai Arr**	**30.81**	**301**	P		**P**	**02 05 31.2**	**-1.4**
	comp=Z,1.0nm,0.3s,mb4.1,baz=122,slow=7.2,SNR=10.0							
CMAR				LR		LR	02 19 54.0	
	comp=Z,184nm,18.1s,MS3.8,baz=277,slow=40							
CMAR	**Chiang Mai Arr**	**30.81**	**301‖**	*e*P		**P**	**02 05 32.4**	**-0.3**
KMI	**Kunming**	**31.34**	**315**	P		**P**	**02 05 37.1**	**-0.1**
KMI				S		**S**	**02 10 44.0**	**+3.3**
KMI				MLR		MLR		
	comp=Z,160nm,29.6s,MS3.5							
COCO	**West Island**	**33.58**	**242**	*e*P		**P**	**02 05 57.8**	**+0.8**
KSRS	**Korea Array**	**33.61**	**2**	P		**P**	**02 05 56.7**	**-0.2**
	comp=Z,2.1nm,0.7s,mb4.2,baz=184,slow=9.8,SNR=8.8							
MJAR	**Matsushiro Arr**	**34.37**	**17**	LR		LR	02 19 28.4	
	comp=Z,235nm,19.6s,MS3.9,baz=205,slow=35							

XAN	**Xi'an**	**34.40**	**333**	P		**P**	**02 06 01.8**	**-2.1**
XAN				AMB		AMB		
	comp=Z,9.0nm,1.1s,mb4.6							
XAN				AMB		AMB		
	comp=Z,167nm,4.5s							
CD2	**Chengdu**	**34.61**	**324**	*e*P		**P**	**02 06 06.6**	**+0.8**
CD2				PP		PP	02 07 24.0	-1.1
CD2				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
CD2				AMB		AMB		
	comp=Z,40nm,8.2s							
CD2				LR		LR		
	comp=N,220nm,15.6s							
CD2				LR		LR		
	comp=Z,210nm,14.4s,MS4.0							
BJT	**Baijiatuao**	**37.37**	**347**	*e*P		**P**	**02 06 29.4**	**+0.2**
BJT				pmax		pmax		
	comp=Z,21nm,1.0s							
BJT	**Baijiatuao**	**37.37**	**347**	*e*P		**P**	**02 06 29.4**	**+0.2**
	comp=Z,22nm,1.0s,mb4.9							
BJI	**Beijing**	**37.39**	**347**	P		**P**	**02 06 29.8**	**+0.4**
BJI				S		**S**	**02 12 14.8**	**+1.1**
BJI				AMB		AMB		
	comp=Z,22nm,1.2s,mb4.9							
BJI				AMB		AMB		
	comp=Z,108nm,3.2s							
BJI				LR		LR		
	comp=N,203nm,14.9s,MS4.0							
BJI				LR		LR		
	comp=E,100nm,19.9s,MS4.0							
BJI				LR		LR		
	comp=Z,61nm,21.5s,MS3.4							
BJI	**Beijing**	**37.39**	**347**	P		**P**	**02 06 29.8**	**+0.4**
	comp=Z,22nm,1.2s,mb4.9							
BJI				S		**S**	**02 12 14.8**	**+1.1**
BJI				SS		SS	02 15 05.3	+5.8
BJI				LR		LR		
	comp=Z,60nm,21.5s,MS3.4							
STKA	**Stephens Creek**	**38.14**	**159**	*e*P		**P**	**02 06 36.5**	**+0.7**
STKA	**Stephens Creek**	**38.14**	**159**	P		**P**	**02 06 36.6**	**+0.9**
	comp=Z,7.4nm,0.6s,mb4.6,baz=333,slow=8.1,SNR=21							
LZH	**Lanzhou**	**38.48**	**330**	*e*P		**P**	**02 06 39.0**	**+0.4**
LZH				*e*PP		PP	02 08 05.3	-2.3
LZH				AMB		AMB		
	comp=Z,24nm,1.2s,mb4.8							
LZH				AMB		AMB		
	comp=Z,70nm,5.4s							
LZH				LR		LR		
	comp=E,567nm,13.7s							
LZH				LR		LR		
	comp=Z,786nm,17.8s,MS4.6							
LZH	**Lanzhou**	**38.48**	**330**	*e*P		**P**	**02 06 39.0**	**+0.4**
LZH				*e*SP		sP	02 06 46.2	-13
LZH				*e*			02 08 05.3	
LZH				pmax		pmax		
	comp=Z,24nm,1.2s,mb4.8							
LZH				MLR		MLR		
	comp=Z,790nm,17.8s,MS4.6							
LZH	**Lanzhou**	**38.48**	**330**	*e*P		**P**	**02 06 39.0**	**+0.4**
	comp=Z,24nm,1.2s,mb4.8							
LZH				pP		pP	02 06 43.6	-8.9
LZH				sP		sP	02 06 46.2	-13
LZH				*e*PP		PP	02 08 05.3	-2.3
LZH				LR		LR		
	comp=Z,790nm,17.8s,MS4.6							
HHC	**Hu-ho-hao-te**	**39.39**	**342**	*e*P		**P**	**02 06 46.3**	**+0.1**
HHC				PP		PP	02 08 21.1	+3.6
HHC				PCP		PcP	02 08 54.5	+0.9
HHC				SCP		ScP	02 12 41.3	+3.4
HHC				PCS		PcS	02 12 43.8	+0.4
HHC				S		**S**	**02 12 48.0**	**+4.0**
HHC				SCS		ScS	02 16 52.6	+2.7
HHC				AMB		AMB		
	comp=Z,14nm,0.6s,mb4.9							
HHC				AMB		AMB		
	comp=Z,104nm,5.9s							
HHC				LR		LR		
	comp=N,150nm,13.5s,MS4.2							
HHC				LR		LR		
	comp=E,174nm,12.9s,MS4.2							
HHC				LR		LR		
	comp=Z,157nm,13.9s,MS4.0							
CN2	**Changchun**	**39.94**	**359**	*e*P		**P**	**02 06 48.3**	**-2.4**
CN2				AMB		AMB		
	comp=Z,10.0nm,0.1s,mb5.5							
MDJ	**Mudanjiang**	**40.82**	**3**	P		**P**	**02 06 58.0**	**0.0**
MDJ				PP		PP	02 08 34.1	+1.1
MDJ				PCP		PcP	02 08 54.5	-3.6
MDJ				SCP		ScP	02 12 44.5	+1.1
MDJ				PCS		PcS	02 12 46.8	-2.0
MDJ				S		**S**	**02 13 12.8**	**+7.6**
MDJ				SCS		ScS	02 17 01.0	+2.8
MDJ				AMB		AMB		
	comp=Z,9.0nm,0.8s,mb4.5							
MDJ				AMB		AMB		
	comp=Z,50nm,4.3s							
MDJ				LR		LR		
	comp=N,61nm,26.4s,MS3.5							
MDJ				LR		LR		
	comp=E,54nm,28.2s,MS3.5							
MDJ				LR		LR		
	comp=Z,66nm,24.5s,MS3.4							
LSA	**Lhasa**	**42.39**	**311**	*e*P		**P**	**02 07 11.8**	**+0.7**
LSA				pmax		pmax		
	comp=Z,11nm,0.5s,mb4.7							
LSA	**Lhasa**	**42.39**	**311**	*e*P		**P**	**02 07 11.8**	**+0.7**
	comp=Z,11nm,0.5s,mb4.7							
GTA	**Gaotai**	**43.07**	**329**	*e*P		**P**	**02 07 15.6**	**-0.8**
GTA				S		**S**	**02 13 42.6**	**+4.0**
GTA				AMB		AMB		
	comp=Z,4.0nm,1.3s,mb4.0							
GTA				LR		LR		
	comp=N,206nm,14.7s,MS4.4							
GTA				LR		LR		
	comp=E,251nm,14.7s,MS4.4							
GTA				LR		LR		
	comp=Z,191nm,18.9s,MS4.0							
KLR	**Kul'dur**	**45.56**	**5**	*e*P		**P**	**02 07 31.8**	**-4.4**
HIA	**Hailar**	**45.77**	**354**	*e*P		**P**	**02 07 38.8**	**+1.0**
HIA				pmax		pmax		
	comp=Z,52nm,1.3s							
HIA	**Hailar**	**45.77**	**354**	*e*P		**P**	**02 07 38.8**	**+0.9**
	comp=Z,52nm,1.3s,mb5.3							
ULN	**Ulaanbaatar**	**47.11**	**342**	*e*P		**P**	**02 07 48.4**	**0.0**
ULN				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
ULN	**Ulaanbaatar**	**47.11**	**342**	*e*P		**P**	**02 07 48.4**	**0.0**
	comp=Z,3.1nm,0.8s,mb4.3							
SONM	**Songino Array**	**47.29**	**341**	P		**P**	**02 07 49.4**	**-0.3**
	comp=Z,1.3nm,0.6s,mb4.1,baz=166,slow=8.8,SNR=5.6							
SONM				LR		LR	02 28 30.4	
	comp=Z,114nm,20.4s,MS3.8,baz=62,slow=37							
WMQ	**Urumqi**	**52.69**	**325**	*e*P		**P**	**02 08 30.8**	**0.0**
WMQ				*e*S		**S**	**02 15 56.6**	**+1.9**
WMQ				AMB		AMB		
	comp=Z,7.0nm,1.0s,mb4.5							
WMQ				AMB		AMB		
	comp=Z,101nm,4.2s							
WMQ				LR		LR		
	comp=N,560nm,25.4s,MS4.5							
WMQ				LR		LR		
	comp=E,228nm,26.2s,MS4.5							
WMQ				LR		LR		
	comp=Z,342nm,28.0s,MS4.2							
HVS	**Khovu-Aksy**	**54.72**	**335**	*e*P		**P**	**02 08 45.1**	**-0.4**
HVS				pmax		pmax		
	comp=Z,17nm,1.0s,mb5.0							
BOD	**Bodaibo**	**54.87**	**352**	*e*P		**P**	**02 08 46.2**	**-0.3**
BOD				pmax		pmax		
	comp=Z,11nm,1.4s,mb4.7							
PETK	**Petropavlovsk-**	**55.48**	**22**	P		**P**	**02 08 53.0**	**+2.1**
	comp=Z,3.6nm,0.7s,mb4.5,baz=167,slow=7.1,SNR=3.4							
MK31	**Makanchi Array**	**57.53**	**325**	*e*P		**P**	**02 09 05.2**	**-0.4**
MKAR	**Makanchi Array**	**57.53**	**325**	P		**P**	**02 09 04.5**	**-1.1**
	comp=Z,1.3nm,0.5s,mb4.2,baz=124,slow=8.2,SNR=9.1							
MKAR				LR		LR	02 36 52.4	
	comp=Z,61nm,18.7s,MS3.7,baz=25,slow=39							
TKM2	**Tokmak 2**	**59.71**	**319**	*e*P		**P**	**02 09 20.7**	**-0.1**
TKM2				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.4							
TKM2	**Tokmak 2**	**59.71**	**319**	*e*P		**P**	**02 09 20.7**	**-0.1**
	comp=Z,2.6nm,0.8s,mb4.3							
UCH	**Uchtor**	**60.13**	**317**	*e*P		**P**	**02 09 24.3**	**+0.5**
	comp=Z,487nm,0.6s							
ZALV	**Zalesovo Beam**	**60.57**	**333**	P		**P**	**02 09 24.9**	**-1.6**
	comp=Z,1.0nm,0.5s,mb4.2,baz=101,slow=7.7,SNR=5.8							
ZALV				LR		LR	02 35 31.9	
	comp=Z,27nm,20.1s,MS3.4,baz=242,slow=36							
AML	**Almayashu**	**60.65**	**317**	*e*P		**P**	**02 09 27.8**	**+0.4**
	comp=Z,7.1nm,0.8s,mb4.8							
EKS2	**Erkin-Say**	**60.81**	**318**	*e*P		**P**	**02 09 28.6**	**+0.2**
	comp=Z,3.4nm,0.7s,mb4.6							
KURK	**Kurchatov**	**61.71**	**328**	P		**P**	**02 09 33.1**	**-1.3**
	comp=Z,2.3nm,0.6s,mb4.5,baz=128,slow=6.5,SNR=13							
KURK	**Kurchatov**	**61.71**	**328**	*e*P		**P**	**02 09 34.3**	**0.0**
KURK				pmax		pmax		
	comp=Z,8.0nm,0.7s,mb5.0							
KURK	**Kurchatov**	**61.71**	**328**	*e*P		**P**	**02 09 34.3**	**-0.1**
	comp=Z,8.2nm,0.7s,mb5.0							
SEY	**Seymchan**	**62.07**	**13‖**	*e*P		**P**	**02 09 36.3**	**-0.2**
BRVK	**Borovoye**	**67.36**	**327**	*e*P		**P**	**02 10 11.9**	**+0.7**
ARU	**Arti**	**74.91**	**328**	*e i*P		**P**	**02 10 56.0**	**-0.8**
ARU				*e*			02 13 43.4	
ARU				*e*S		S	02 20 32.1	+2.2
ARU				*e*SS		SS	02 25 18.3	-0.7
ARU				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.5							
ARU	**Arti**	**74.91**	**328**	*e*P		**P**	**02 10 56.8**	**0.0**
	comp=Z,9.0nm,1.2s,mb4.6							
KDAK	**Kodiak Island**	**81.95**	**32**	*e*P		**P**	**02 11 36.3**	**+0.7**
KDAK				pmax		pmax		
	comp=Z,54nm,1.3s,mb5.3							
KDAK	**Kodiak Island**	**81.95**	**32**	*e*P		**P**	**02 11 36.2**	**+0.7**
	comp=Z,54nm,1.3s,mb5.3							
KIV	**Kislovodsk**	**83.09**	**314**	*e*P		**P**	**02 11 41.8**	**0.0**
KIV				pmax		pmax		
	comp=Z,5.0nm,1.0s,mb4.5							
MAW	**Mawson**	**83.70**	**200**	P		**P**	**02 11 45.3**	**+0.9**
	comp=Z,1.8nm,0.8s,mb4.2,baz=72,slow=6.8,SNR=3.6							
KLMR	**Klimovskoe**	**85.38**	**331**	*i* P		**P**	**02 11 52.4**	**-0.7**
KLMR				pmax		pmax		
	comp=Z,30nm,1.5s,mb5.2							
OBN	**Obninsk**	**87.03**	**325‖**	*e*P		**P**	**02 12 01.3**	**0.0**
OBN				*e*			02 12 09.4	
OBN				pmax		pmax		
	comp=Z,24nm,1.6s,mb5.2							
ARCES	**ARCESS Array B**	**90.44**	**340**	P		**P**	**02 12 16.1**	**-1.0**
	comp=Z,3.9nm,1.0s,mb4.7,baz=77,slow=5.4,SNR=10							
AKASG	**Malin Array Be**	**91.86**	**321**	P		**P**	**02 12 21.5**	**-2.5**
	comp=Z,0.6nm,0.6s,mb4.1,baz=90,slow=2.9,SNR=4.4							
AKASG	**Malin Array Be**	**91.86**	**321**	P		**P**	**02 12 21.5**	**-2.6**
SYO	**Syowa Base**	**92.37**	**201‖**	*e*P		**P**	**02 12 26.0**	**0.0**
BUR08	**Bucovina Ar. S**	**94.97**	**318**	*e*P		**P**	**02 12 38.6**	**+0.1**
NOA	**NORSAR Array B**	**98.77**	**334**	P		**P**	**02 12 55.5**	**+0.1**
	comp=Z,1.2nm,0.9s,mb4.4,baz=66,slow=4.6,SNR=2.7							
NOA	**NORSAR Array B**	**98.77**	**334**	P		**P**	**02 12 55.5**	**+0.1**
YNR	**Norris Junctio**	**109.82**	**40**	*e*Pdif		Pdif	02 13 44.2	-0.4
YNR				*e*PKiKP		PKiKP	02 17 46.5	-0.6
TORD	**Torodi Ar. Bea**	**122.85**	**288**	PKP		PKPdf	02 18 11.9	-0.9
	comp=Z,0.5nm,0.8s,baz=59,slow=1.5,SNR=5.3							
JTS	**JuntasAbangare**	**145.60**	**66**	PKPbc		PKPbc	02 18 58.4	+3.0
	comp=Z,1.2nm,0.2s,baz=318,slow=20,SNR=3.7							
JTS	**JuntasAbangare**	**145.60**	**66**	PKPbc		PKPbc	02 18 58.4	+3.0
CPUP	**Villa Florida**	**157.19**	**171**	PKPab		PKPab	02 19 44.7	+1.7
	comp=Z,1.2nm,0.6s,baz=154,slow=4.8,SNR=3.9							

IDC 24 02:02:16.6±7.9,1243S×16760E,h0km,mb4.5/5, mb1 4.7/5,mb1mx4.1/17,mbtmp4.4/5,MS3.3/1,Ms1 3.3/1, ms1mx2.8/25,Error ellipse: s-maj=213.6km s-min=46.8km az=124.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNR	**Honiara**	**8.08**	**291**	LR		LR	02 06 57.7	
	comp=Z,198nm,18.9s,baz=121,slow=35							
WRA	**Warramunga Arr**	**32.76**	**252**	P		**P**	**02 08 51.0**	**-0.5**
	3.2nm,0.7s,baz=85,slow=9.0,SNR=11							
ASAR	**Alice Springs**	**33.84**	**246**	P		**P**	**02 09 01.6**	**+0.6**
	3.5nm,0.7s,baz=73,slow=9.5,SNR=18							
FITZ	**Fitzroy Crossi**	**40.80**	**257**	P		**P**	**02 09 59.8**	**-0.3**
	2.8nm,0.7s,baz=100,slow=18,SNR=5.0							
CMAR	**Chiang Mai Arr**	**74.32**	**293**	P		**P**	**02 13 56.8**	**+0.3**
	1.0nm,0.3s,baz=128,slow=4.3,SNR=5.1							
MKAR	**Makanchi Array**	**95.76**	**317**	P		**P**	**02 15 44.4**	**-0.2**
	0.9nm,0.7s,baz=97,slow=6.3,SNR=4.9							
MKAR				pP			02 15 55.7	
	1.1nm,0.7s,baz=90,slow=6.1,SNR=5.6							

NEIC ***24*** *02:08:06.5±2.9,24.11N×109.55W,h10km,mb3.9/2,Error ellipse: s-maj=38.5km s-min=12.1km az=157.0*
ISCJB ***24*** *02:08:07.0±1.0,2436N±009×10962W±0.10,h10km, mb4.0/2,MS3.4/2,Error ellipse: s-maj=15.9km s-min=10.0km az=136.6*
IDC ***24*** *02:08:07.1±1.0,2435N×10969W,h0km,mb4.1/2, mb1 4.1/8,mb1mx3.8/24,mbtmp3.8/8,ML3.5/6,MS3.5/4, Ms1 3.5/4,ms1mx3.0/37,Error ellipse: s-maj=22.3km s-min=8.1km az=147.0*

ISC 24 02:08:08.6±1.1,243N±01×10962W±009,h10km,n20, σ1§33/17,mb4.0/2,MS3.4/2,Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LPIG	**La Paz**	**0.66**	**254**	Pg		**Pg**	**02 08 19.6**	**-1.7**
	1μm,0.3s,baz=30,slow=5.7,SNR=371							

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
ARE	**Arequipa**	**3.72**	**183**	*i*P	**Pn**	**02 26 43.1**	**+2.9**
LPAZ	**La Paz**	**4.69**	**139**	Pn	**Pn**	**02 26 57.4**	**+3.7**
	4.7nm,0.3s,baz=308,slow=11,SNR=56						
LPAZ				Lg		02 28 13.3	
	125nm,0.3s,baz=199,slow=19,SNR=10						
LPAZ				LR	LR	02 29 07.7	
	comp=Z,2μm,19.4s,baz=328,slow=43						
LPAZ	**La Paz**	**4.69**	**139**	*e*Pn	**Pn**	**02 26 57.0**	**+3.3**
NNA	**Nana**	**5.45**	**277**	Pn	**Pn**	**02 27 05.9**	**+1.8**
	904nm,0.5s,SNR=14						
NNA	**Nana**	**5.45**	**277**	Pn	**Pn**	**02 27 04.9**	**+0.8**
	23nm,0.3s,baz=109,slow=9.1,SNR=44						
NNA				Lg		02 28 33.9	
	20nm,0.3s,baz=148,slow=23,SNR=3.7						
NNA	**Nana**	**5.45**	**277**	*e*Pn	**Pn**	**02 27 04.9**	**+0.8**
ATAH	**Atahualpa**	**9.00**	**309**	Pn	**Pn**	**02 27 53.7**	**+0.8**
	6.1nm,0.3s,baz=133,slow=12,SNR=58						
ATAH				Lg		02 30 27.4	
	4.8nm,0.3s,baz=15,slow=7.0,SNR=3.6						
ATAH				LR	LR	02 31 35.9	
	comp=Z,822nm,20.0s,baz=141,slow=39						
LVC	**Limon Verde**	**10.09**	**167**	Pn	**Pn**	**02 28 07.9**	**+0.1**
	5.3nm,0.3s,baz=314,slow=7.4,SNR=58						
LVC				Sn	**Sn**	**02 29 58.5**	**-1.8**
	1.0nm,0.3s,baz=270,slow=16,SNR=3.2						
LVC				LR	LR	02 31 59.1	
	comp=Z,272nm,19.8s,baz=318,slow=37						
LVC	**Limon Verde**	**10.09**	**167**	*e*Pn	**Pn**	**02 28 08.2**	**+0.4**
	55nm,0.8s						
SIV	**San Ignacio**	**10.44**	**109**	Pn	**Pn**	**02 28 14.7**	**+2.1**
	3.8nm,0.3s,baz=301,slow=11,SNR=31						
SIV				Sn	**Sn**	**02 30 09.9**	**+1.1**
	13nm,0.3s,baz=231,slow=20,SNR=3.0						
SIV				Lg		02 31 11.6	
	19nm,0.3s,baz=234,slow=23,SNR=3.0						
OTAV	**Otavalo**	**14.70**	**331**	*e*Pn	**Pn**	**02 29 11.6**	**+0.7**
ROSC	**El Rosal**	**17.72**	**350**	P	**Pn**	**02 29 52.0**	**+2.4**
	1.5nm,0.3s,baz=102,slow=12,SNR=9.6						
ROSC				Lg		02 35 04.6	
	baz=278,slow=20,SNR=4.0						
ROSC				LR	LR	02 37 09.6	
	comp=Z,734nm,19.2s,baz=188,slow=38						
ROSC	**El Rosal**	**17.72**	**350**	*e*Pn	**Pn**	**02 29 49.1**	**-0.5**
CPUP	**Villa Florida**	**18.86**	**138**	P	**Pn**	**02 30 02.5**	**-1.0**
	1.4nm,0.3s,baz=299,slow=11,SNR=24						
CPUP	**Villa Florida**	**18.86**	**138**	*e*P	**Pn**	**02 30 02.8**	**-0.7**
CPUP				pmax	pmax		
	comp=Z,39nm,0.7s						
CPUP	**Villa Florida**	**18.86**	**138**	*e*P	**Pn**	**02 30 02.8**	**-0.7**
	comp=Z,39nm,0.7s						
CFAA	**Coronel Fontan**	**19.00**	**172**	P	**Pn**	**02 30 04.2**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=341,slow=9.6,SNR=20						
LMEL	**Las Melosas**	**21.05**	**177**	*i*P	**P**	**02 30 26.9**	**+0.4**
SDV	**Santo Domingo**	**21.48**	**2**	Lg		02 37 19.4	
	comp=Z,18nm,0.3s,baz=277,slow=20,SNR=5.3						
SDV				LR	LR	02 39 44.2	
	comp=Z,674nm,18.1s,MS4.1,baz=145,slow=39						
BDFB	**Brasilia**	**22.77**	**100**	P	**P**	**02 30 47.1**	**+1.9**
	comp=Z,10.0nm,0.8s,mb4.3,baz=256,slow=15,SNR=8.0						
BDFB				LR	LR	02 40 40.4	
	comp=Z,782nm,18.3s,MS4.2,baz=266,slow=39						
BDFB	**Brasilia**	**22.77**	**100**	*e*P	**P**	**02 30 47.3**	**+2.2**
BDFB				pmax	pmax		
	comp=Z,16nm,0.8s						
BDFB	**Brasilia**	**22.77**	**100**	*e*P	**P**	**02 30 47.3**	**+2.2**
	comp=Z,16nm,0.8s,mb4.5						
PCRV	**Puerto La Cruz**	**23.70**	**17**	P	**P**	**02 30 56.3**	**+1.8**
	comp=Z,18nm,0.7s,mb4.6,baz=153,slow=5.0,SNR=8.6						
PCRV				Lg		02 38 26.5	
	comp=Z,25nm,1.0s,baz=325,slow=18,SNR=2.5						
PCRV				LR	LR	02 40 55.3	
	comp=Z,1μm,20.1s,MS4.3,baz=186,slow=38						
JTS	**JuntasAbangare**	**26.58**	**329**	LR	LR	02 43 17.0	
	comp=Z,247nm,18.5s,MS3.8,baz=335,slow=40						
PLCA	**Paso Flores**	**27.90**	**179**	P	**P**	**02 31 30.9**	**-1.4**
	comp=Z,9.3nm,0.9s,mb4.4,baz=334,slow=12,SNR=15						
PLCA	**Paso Flores**	**27.90**	**179**	P	**P**	**02 31 30.9**	**-1.4**
MPR	**Mayaguez**	**31.02**	**8**	*e*P	**P**	**02 31 59.4**	**-0.7**
SJG	**San Juan**	**31.06**	**10**	*e*P	**P**	**02 31 58.9**	**-1.7**
AOPR	**Arecibo Observ**	**31.20**	**8**	*e*P	**P**	**02 32 01.3**	**-0.5**
TEIG	**Tepich**	**36.75**	**333**	P	**P**	**02 32 50.6**	**+0.6**
	comp=Z,26nm,1.0s,mb5.0,baz=156,slow=11,SNR=9.9						
TEIG	**Tepich**	**36.75**	**333**	*e*P	**P**	**02 32 48.7**	**-1.3**
	comp=Z,27nm,1.0s,mb5.0						
LHS	**Liberty Hill**	**47.80**	**349**	*e*pP	pP	02 34 25.6	-2.3
LRAL	**Lakeview Retre**	**47.91**	**342**	*e*P	**P**	**02 34 20.0**	**-0.6**
HKT	**Hockley**	**48.57**	**331**	*e*P	**P**	**02 34 25.7**	**-0.1**
HKT				pmax	pmax		
	comp=Z,22nm,1.4s,mb5.0						
HKT	**Hockley**	**48.57**	**331**	*e*P	**P**	**02 34 25.7**	**0.0**
	comp=Z,22nm,1.4s,mb5.0						
TKL	**Tuckaleechee C**	**49.55**	**347**	P	**P**	**02 34 31.4**	**-1.8**
	comp=Z,5.8nm,1.0s,mb4.6,baz=152,slow=9.4,SNR=6.4						
TKL	**Tuckaleechee C**	**49.55**	**347**	*e*P	**P**	**02 34 31.3**	**-1.9**
TKL				*e*pP	pP	02 34 39.1	-2.2
TKL				*e*sP	sP	02 34 41.1	-3.4
NATX	**Nacogdoches**	**49.57**	**334**	*e*P	**P**	**02 34 33.2**	**-0.2**
SWET	**Sewanee**	**49.65**	**344**	*e*P	**P**	**02 34 32.8**	**-1.2**
SWET				*e*pP	pP	02 34 47.9	+5.8
OXF	**Oxford**	**50.03**	**340**	*e*P	**P**	**02 34 36.1**	**-0.7**
OXF				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.5						
OXF	**Oxford**	**50.03**	**340**	*e*P	**P**	**02 34 36.1**	**-0.7**
	comp=Z,47nm,1.0s,mb5.5						
ELN	**Prospectdale**	**50.48**	**350**	*e*P	**P**	**02 34 39.3**	**-0.8**
WVT	**Waverly**	**51.04**	**343**	*e*P	**P**	**02 34 42.5**	**-1.9**
UALR	**University of**	**51.28**	**338**	*e*P	**P**	**02 34 45.0**	**-1.3**
	comp=Z,53nm,1.2s,mb5.3						
TXAR	**Lajitas Array**	**52.19**	**324**	P	**P**	**02 34 52.8**	**-0.4**
	comp=Z,1.9nm,0.6s,mb4.2,baz=151,slow=8.5,SNR=30						
TXAR				PcP	PcP	02 36 05.0	+0.3
	comp=Z,1.5nm,0.7s,baz=144,slow=5.8,SNR=4.7						
USIN	**University of**	**52.70**	**344**	*e*P	**P**	**02 34 55.0**	**-1.9**
	comp=Z,53nm,1.2s,mb5.3						
SIUC	**Southern Illin**	**52.91**	**342**	*e*P	**P**	**02 34 56.8**	**-1.6**
	comp=Z,31nm,0.8s,mb5.3						
FVM	**French Village**	**53.53**	**341**	*e*P	**P**	**02 35 01.6**	**-1.3**
BLO	**Bloomington**	**53.54**	**345**	*e*P	**P**	**02 35 01.1**	**-1.9**
ACSO	**Alum Creek Sta**	**53.79**	**349**	*e*P	**P**	**02 35 03.5**	**-1.3**
CCM	**Cathedral Cave**	**53.86**	**341**	*e*P	**P**	**02 35 03.9**	**-1.4**
CCM				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
CCM	**Cathedral Cave**	**53.86**	**341**	*e*P	**P**	**02 35 03.9**	**-1.5**
	comp=Z,15nm,0.8s,mb5.0						
WMOK	**Wichita Mounta**	**53.93**	**332**	*e*P	**P**	**02 35 05.3**	**-0.6**
WMOK				pmax	pmax		
	comp=Z,64nm,2.3s,mb5.1						
WMOK	**Wichita Mounta**	**53.93**	**332**	*e*P	**P**	**02 35 05.3**	**-0.6**
	comp=Z,64nm,2.3s,mb5.1						
SLM	**Saint Louis**	**54.07**	**342**	*e*P	**P**	**02 35 05.6**	**-1.3**
SLM				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
SLM	**Saint Louis**	**54.07**	**342**	*e*P	**P**	**02 35 05.6**	**-1.2**
	comp=Z,38nm,1.1s,mb5.2						
ALLY	**Alegheny Colle**	**54.71**	**352**	*e*P	**P**	**02 35 10.4**	**-1.1**
BINY	**Binghamton**	**54.82**	**356**	*e*P	**P**	**02 35 10.8**	**-1.5**
	comp=Z,40nm,1.6s,mb5.2						
ERPA	**Erie**	**55.15**	**352**	*e*P	**P**	**02 35 13.5**	**-1.2**
	comp=Z,30nm,0.8s,mb5.4						
KSU1	**Kansas State U**	**56.71**	**337**	*e*P	**P**	**02 35 25.1**	**-0.7**
BNM	**Barren Site**	**57.45**	**325**	*e*P	**P**	**02 35 31.6**	**+0.4**
CBKS	**Cedar Bluff**	**57.74**	**334**	*e*P	**P**	**02 35 32.5**	**-0.7**
LAZ	**Ladron**	**57.92**	**325**	*e*P	**P**	**02 35 35.0**	**+0.4**
ANMO	**Albuquerque**	**57.96**	**326**	*e*P	**P**	**02 35 34.7**	**-0.1**
JFWS	**Jewell Farm**	**58.03**	**344**	*e*P	**P**	**02 35 32.5**	**-2.6**
JFWS				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.2						
JFWS	**Jewell Farm**	**58.03**	**344**	*e*P	**P**	**02 35 32.5**	**-2.6**
	comp=Z,16nm,0.6s,mb5.2						
TUC	**Tucson**	**58.57**	**321**	*e*P	**P**	**02 35 39.3**	**+0.2**
SDCO	**Great Sand Dun**	**59.58**	**329**	*e*P	**P**	**02 35 46.5**	**+0.5**
OGNE	**Ogallala**	**60.49**	**334**	*e*P	**P**	**02 35 52.6**	**+0.4**
	comp=Z,16nm,0.6s,mb5.2						
MVCO	**Mesa Verde**	**60.74**	**326**	*e*P	**P**	**02 35 54.1**	**+0.2**
ECSD	**EROS,Sioux Fal**	**60.75**	**339**	*e*P	**P**	**02 35 52.9**	**-1.0**
	comp=Z,26nm,1.3s,mb5.2						
RKT	**Rikitea**	**61.05**	**251**	*e*LR	LR	02 54 16.6	
	comp=Z,176nm,26.0s						
WUAZ	**Wupatki**	**61.14**	**323**	*e*P	**P**	**02 35 57.8**	**+1.0**
WUAZ				*e*pP	pP	02 36 06.3	+1.2
ISCO	**Idaho Springs**	**61.22**	**330**	*e*P	**P**	**02 35 57.5**	**+0.3**
ISCO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
ISCO	**Idaho Springs**	**61.22**	**330**	*e*P	**P**	**02 35 57.5**	**+0.3**
	comp=Z,6.3nm,0.8s,mb4.8						
EYMN	**Ely**	**63.02**	**345**	*e*P	**P**	**02 36 07.5**	**-1.6**
LDFC	**Landfair**	**63.10**	**320**	*e*P	**P**	**02 36 11.2**	**+1.3**
SRU	**San Rafael**	**63.21**	**327**	*e*P	**P**	**02 36 11.1**	**+0.6**
MSU	**Marysvale**	**63.69**	**325**	*e*P	**P**	**02 36 14.5**	**+0.8**
TMUT	**Trail Mountain**	**63.72**	**326**	*e*P	**P**	**02 36 14.7**	**+0.8**
ARUT	**Antelope Range**	**63.91**	**324**	*e*P	**P**	**02 36 15.8**	**+0.6**
RSSD	**Black Hills**	**63.94**	**334**	*e*P	**P**	**02 36 15.7**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.1						
RSSD	**Black Hills**	**63.94**	**334**	*e*P	**P**	**02 36 15.7**	**+0.5**
	comp=Z,30nm,1.4s,mb5.1						
SHPR	**Sheep Range**	**64.07**	**322**	*e*P	**P**	**02 36 17.0**	**+0.7**
GSC	**Goldstone**	**64.31**	**320**	*e*P	**P**	**02 36 18.8**	**+0.9**
GSC				pmax	pmax		
	comp=Z,26nm,1.8s,mb5.0						
GSC	**Goldstone**	**64.31**	**320**	*e*P	**P**	**02 36 18.8**	**+1.0**
	comp=Z,26nm,1.8s,mb5.0						
DAU	**Daniels Canyon**	**64.54**	**327**	*e*P	**P**	**02 36 20.4**	**+1.1**
AGMN	**Agassiz Refuge**	**64.55**	**342**	*e*P	**P**	**02 36 17.6**	**-1.5**
JLU	**Jordanelle**	**64.78**	**327**	*e*P	**P**	**02 36 21.9**	**+1.1**
TPNV	**Topopah Spring**	**65.02**	**321**	*e*P	**P**	**02 36 23.0**	**+0.5**
TPNV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
TPNV	**Topopah Spring**	**65.02**	**321**	*e*P	**P**	**02 36 23.0**	**+0.5**
	comp=Z,6.9nm,0.8s,mb4.7						
DUG	**Dugway**	**65.22**	**326**	*e*P	**P**	**02 36 24.0**	**+0.3**
DUG				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
DUG	**Dugway**	**65.22**	**326**	*e*P	**P**	**02 36 24.0**	**+0.2**
	comp=Z,16nm,1.1s,mb5.0						
PDAR	**Pinedale Array**	**65.40**	**330**	P	**P**	**02 36 24.8**	**0.0**
	comp=Z,1.4nm,0.7s,mb4.1,baz=126,slow=7.5,SNR=10						
PDAR				PcP	PcP	02 36 56.3	-0.4
	comp=Z,3.5nm,0.7s,baz=128,slow=6.9,SNR=7.5						
PDAR				LR	LR	03 07 54.0	
	comp=Z,72nm,20.6s,MS3.9,baz=118,slow=39						
ISA	**Isabella**	**65.59**	**319**	*e*P	**P**	**02 36 27.1**	**+0.9**
ULM	**Lac du Bonnet**	**66.30**	**343**	P	**P**	**02 36 29.1**	**-1.3**
	comp=Z,22nm,0.8s,mb5.2,baz=151,slow=5.8,SNR=19						
ULM				LR	LR	03 07 27.6	
	comp=Z,90nm,18.9s,MS4.0,baz=175,slow=38						
ULM	**Lac du Bonnet**	**66.30**	**343**	*e*P	**P**	**02 36 28.9**	**-1.5**
	comp=Z,14nm,0.8s,mb5.0						
HVU	**Hansel Valley**	**66.32**	**327**	*e*P	**P**	**02 36 31.1**	**+0.3**
REDW	**Red Top Meadow**	**66.48**	**330**	*e*P	**P**	**02 36 32.3**	**+0.6**
SNOW	**Snow King Moun**	**66.51**	**330**	*e*P	**P**	**02 36 32.4**	**+0.5**
TPAW	**Teton Pass**	**66.62**	**330**	*e*P	**P**	**02 36 33.0**	**+0.4**
RRI2	**Red Ridge**	**66.70**	**329**	*e*P	**P**	**02 36 33.8**	**+0.6**
MOOW	**Moose Ponds**	**66.71**	**330**	*e*P	**P**	**02 36 33.2**	**0.0**
IMW	**Indian Meadow**	**66.92**	**330**	*e*P	**P**	**02 36 35.1**	**+0.5**
RLMT	**Red Lodge**	**67.04**	**332**	*e*P	**P**	**02 36 35.6**	**+0.4**
NVAR	**Mina Array Bea**	**67.22**	**321**	P	**P**	**02 36 36.8**	**+0.3**
	comp=Z,2.4nm,0.9s,mb4.2,baz=157,slow=7.6,SNR=12						
NVAR				PcP	PcP	02 37 04.8	+0.4
	comp=Z,3.1nm,0.8s,baz=141,slow=4.5,SNR=8.5						
SCHQ	**Schefferville**	**67.40**	**3**	LR	LR	03 05 24.9	
	comp=Z,61nm,20.7s,MS3.8,baz=167,slow=35						
YMR	**Madison River**	**67.50**	**330**	*e*P	**P**	**02 36 38.8**	**+0.6**
	comp=Z,7.2nm,0.7s,mb4.8						
DGMT	**Dagmar**	**67.55**	**337**	*e*P	**P**	**02 36 39.2**	**+0.8**
GCMT	**Greycliff**	**67.73**	**332**	*e*P	**P**	**02 36 40.1**	**+0.5**
WAKR	**Walker**	**67.96**	**321**	*e*P	**P**	**02 36 42.7**	**+1.5**
HLID	**Hailey**	**68.43**	**328**	*e*P	**P**	**02 36 44.8**	**+0.7**
	comp=Z,7.0nm,1.1s,mb4.6						
LIC	**Lamto**	**68.50**	**78**	*i*P	**P**	**02 36 44.6**	**-0.6**
	comp=Z,40nm,1.0s,mb5.1,baz=270						
LIC	**Lamto**	**68.50**	**78**	*e*P	**P**	**02 36 44.4**	**-0.8**
	comp=Z,53nm,1.0s,mb5.5						
LIC	**Lamto**	**68.50**	**78**	*i*P	**P**	**02 36 44.6**	**-0.6**
	comp=Z,20nm,1.0s,mb5.1						
MCMT	**McKenzie Canyo**	**68.53**	**330**	*e*P	**P**	**02 36 45.3**	**+0.6**
BOZ	**Bozeman (W)**	**68.54**	**331**	*e*P	**P**	**02 36 44.8**	**+0.1**
TIC	**Toumodi**	**68.62**	**78**	*e*P	**P**	**02 36 42.4**	**-3.5**
	comp=Z,141nm,1.6s,mb5.7						
PAHR	**Pah Rah Range**	**68.67**	**322**	*e*P	**P**	**02 36 47.0**	**+1.3**
DBIC	**Dimbokro**	**68.78**	**78**	P	**P**	**02 36 47.0**	**0.0**
	comp=Z,8.7nm,0.5s,mb4.9,baz=218,slow=5.3,SNR=26						
DBIC				LR	LR	03 03 50.6	
	comp=Z,215nm,21.3s,MS4.4,baz=248,slow=33						
DBIC	**Dimbokro**	**68.78**	**78**	P	**P**	**02 36 47.0**	**0.0**
DBIC				LR	LR	03 03 50.6	
KIC	**Kosan Boka**	**68.81**	**78**	*e*P	**P**	**02 36 46.5**	**-0.6**
	comp=Z,80nm,1.4s,mb5.5						
PMAR	**Madeira**	**68.84**	**47**	*e*P	**P**	**02 36 44.6**	**-2.3**
	comp=Z,142nm,1.0s,mb5.8						
VNA3	**Neumayer Olymp**	**69.08**	**162**	*e*P	**P**	**02 36 47.2**	**-0.6**
VNA3				*e*		02 36 50.0	
VNA3				*e*	pP	02 36 53.9	-2.3
VNA3				*e*		02 36 58.6	
VNA1	**Neumayer--Stat**	**69.28**	**161**	*e*P	**P**	**02 36 49.0**	**0.0**
VNA1				*e*		02 36 51.5	
VNA1				*e*	pP	02 36 55.6	-1.8
VNA1				*e*		02 37 00.1	
EGMT	**Eagleton**	**69.46**	**334**	*e*P	**P**	**02 36 50.7**	**+0.3**
	comp=Z,42nm,1.1s,mb5.3						
VNA2	**Neumayer--Watz**	**69.65**	**162**	*e*P	**P**	**02 36 50.6**	**-0.7**
	baz=276,slow=6.1						
VNA2				*e*		02 36 53.6	
VNA2				*e*	pP	02 36 57.6	-2.1
VNA2				*e*		02 37 02.2	
VNA2				*e*		02 37 10.7	
WVOR	**Wild Horse Val**	**69.97**	**325**	*e*P	**P**	**02 36 53.5**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
WVOR	**Wild Horse Val**	**69.97**	**325**	*e*P	**P**	**02 36 53.5**	**-0.1**
	comp=Z,6.1nm,1.1s,mb4.4						
CHMT	**Chamberlain Mo**	**70.23**	**331**	*e*P	**P**	**02 36 55.3**	**+0.2**
MSO	**Missoula**	**70.50**	**330**	*e*P	**P**	**02 36 58.0**	**+1.2**
	comp=Z,20nm,1.3s,mb4.9						
MOD	**Modoc**	**70.59**	**323**	*e*P	**P**	**02 36 58.0**	**+0.5**
	comp=Z,29nm,1.1s,mb5.1						
BMO	**Blue Mountains**	**70.83**	**327**	*e*P	**P**	**02 36 58.9**	**+0.1**
	comp=Z,3.5nm,0.8s,mb4.3						
SNAA	**Sanae**	**71.28**	**162**	*e*P	**P**	**02 37 00.5**	**-0.7**
SNAA				*e*		02 37 02.8	
SNAA				*e*	pP	02 37 06.6	-3.1
SNAA				*e*		02 37 11.7	
SNAA				*e*		02 37 20.4	
SNAA	**Sanae**	**71.28**	**162**	*e*P	**P**	**02 37 00.2**	**-1.0**
SNAA				pmax	pmax		
	comp=Z,19nm,0.7s						
SNAA	**Sanae**	**71.28**	**162**	*e*P	**P**	**02 37 00.1**	**-1.1**
	comp=Z,19nm,0.7s,mb5.1						
LNOR	**Lincton Mounta**	**72.03**	**328**	*e*P	**P**	**02 37 06.0**	**0.0**
WALA	**Waterton Lakes**	**72.08**	**332**	*e*P	**P**	**02 37 06.3**	**0.0**
	comp=Z,28nm,1.3s,mb5.0						
WALA				*e*pP	pP	02 37 15.1	+0.3
HAWA	**Hanford**	**73.02**	**327**	*e*P	**P**	**02 37 12.8**	**+0.9**
	comp=Z,9.6nm,1.0s,mb4.7						
HAWA				*e*pP	pP	02 37 20.4	0.0
HAWA				*e*PcP	PcP	02 37 28.4	-0.3
NEW	**Newport**	**73.05**	**330**	*e*P	**P**	**02 37 12.1**	**0.0**
NEW				pmax	pmax		
	comp=Z,12nm,1.4s						
NEW	**Newport**	**73.05**	**330**	*e*P	**P**	**02 37 12.1**	**+0.1**
	comp=Z,12nm,1.4s,mb4.7						
RSW	**Rattlesnake Hi**	**73.06**	**327**	*e*P	**P**	**02 37 13.1**	**+0.9**
ETW	**Entiat**	**74.22**	**328**	*e*P	**P**	**02 37 19.5**	**+0.5**
TBI	**Tubuai**	**74.31**	**249**	*e*LR	LR	03 00 23.4	
	comp=Z,166nm,26.0s						
EDM	**Edmonton**	**74.88**	**335**	*e*P	**P**	**02 37 22.2**	**-0.5**
PPT	**Papeete**	**75.22**	**255**	*e*LR	LR	03 00 48.6	
	comp=Z,84nm,26.0s						
RPW	**Rockport**	**75.37**	**328**	*e*P	**P**	**02 37 25.6**	**0.0**
JCW	**Jim Creek**	**75.43**	**328**	*e*P	**P**	**02 37 25.6**	**-0.3**
GNW	**Green Mountain**	**75.51**	**327**	*e*P	**P**	**02 37 26.6**	**+0.2**
	comp=Z,12nm,1.2s,mb4.7						
MAIT	**Maitri**	**75.78**	**160**	*e*P	**P**	**02 37 28.9**	**+1.2**
TOA0	**Torodi Ar. Sit**	**76.80**	**73**	*e*P	**P**	**02 37 33.8**	**-0.8**
TOA0				*e*pP	pP	02 37 42.6	-0.5
TOA0				*e*PcP	PcP	02 37 45.5	-0.2
TORD	**Torodi Ar. Bea**	**76.80**	**73**	P	**P**	**02 37 33.6**	**-0.9**
	comp=Z,9.4nm,0.4s,mb5.0,baz=260,slow=4.5,SNR=385						
TORD				LR	LR	03 09 31.0	
	comp=Z,187nm,19.6s,MS4.4,baz=320,slow=34						
MORF	**Marmelete**	**76.99**	**47**	*e*P	**P**	**02 37 37.3**	**+2.2**
	comp=Z,37nm,1.9s,mb5.0						
PTEO	**Sao Teotonio**	**77.04**	**46**	*e*P	**P**	**02 37 35.6**	**+0.2**
	comp=Z,75nm,1.6s,mb5.4						
PBEJ	**Beja**	**77.87**	**46**	*e*P	**P**	**02 37 41.8**	**+1.8**
	comp=Z,17nm,1.3s,mb4.8						
PTOM	**Tomar**	**78.21**	**45**	*e*P	**P**	**02 37 42.8**	**+0.9**
	comp=Z,26nm,1.3s,mb5.0						
PESTR	**Estremoz**	**78.44**	**46**	*e*P	**P**	**02 37 45.0**	**+1.8**
	comp=Z,16nm,1.6s,mb4.7						
EMIN	**Mina Concepcio**	**78.60**	**47**	P	**P**	**02 37 45.9**	**+1.8**
	comp=Z,22nm,1.3s,mb4.9						
PCAB	**Cabril**	**79.44**	**43**	*e*P	**P**	**02 37 48.7**	**+0.1**
	comp=Z,30nm,1.5s,mb5.0						
ELOJ	**Sierra Loja**	**80.16**	**48**	P	**P**	**02 37 52.9**	**+0.3**
ELOJ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
ELOJ	**Sierra Loja**	**80.16**	**48**	P	**P**	**02 37 52.9**	**+0.3**
	comp=Z,5.2nm,0.6s,mb4.6						
PBRG	**Braganca**	**80.34**	**43**	*e*P	**P**	**02 37 53.4**	**0.0**
EPON	**Pontenova**	**80.76**	**42**	P	**P**	**02 37 55.5**	**-0.2**
	comp=Z,105nm,1.7s,mb5.5						
EBER	**Berja**	**80.98**	**49**	P	**P**	**02 37 57.8**	**+0.8**
	comp=Z,12nm,1.0s,mb4.8						
EQES	**Quesada**	**81.21**	**48**	P	**P**	**02 37 58.3**	**+0.1**
	comp=Z,17nm,1.1s,mb4.9						
ESDC	**Sonseca Array**	**81.33**	**46**	P	**P**	**02 37 59.2**	**+0.5**
	comp=Z,0.9nm,0.5s,mb4.0,baz=249,slow=5.7,SNR=12						
ESDC				LR	LR	03 12 16.4	
	comp=Z,76nm,18.5s,MS4.1,baz=330,slow=34						
ESDC	**Sonseca Array**	**81.33**	**46**	P	**P**	**02 37 58.8**	**0.0**
	comp=Z,5.9nm,1.2s,mb4.4						
EHUE	**Huescar**	**81.56**	**48**	P	**P**	**02 37 59.8**	**-0.3**
EHUE				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
EHUE	**Huescar**	**81.56**	**48**	P	**P**	**02 37 59.8**	**-0.2**
	comp=Z,2.7nm,0.5s,mb4.4						
EVIA	**Vianos**	**81.95**	**48**	P	**P**	**02 38 04.1**	**+2.0**
EVIA				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
EVIA	**Vianos**	**81.95**	**48**	P	**P**	**02 38 04.1**	**+2.0**
	comp=Z,5.7nm,0.5s,mb4.8						
EARI	**Arriondas**	**82.01**	**42**	P	**P**	**02 38 03.3**	**+1.0**
	comp=Z,163nm,2.4s,mb5.5						
YKA	**Yellowknife Ar**	**82.19**	**341**	P	**P**	**02 38 02.0**	**-0.7**
	comp=Z,15nm,0.9s,mb4.9,baz=136,slow=5.3,SNR=46						
YKA				LR	LR	03 16 33.1	
	comp=Z,70nm,18.4s,MS4.1,baz=125,slow=37						
ETOB	**Tobarra**	**82.64**	**48**	P	**P**	**02 38 05.9**	**+0.2**
	comp=Z,18nm,0.9s,mb5.1						
ETOR	**Torete**	**83.12**	**46**	P	**P**	**02 38 09.0**	**+0.8**
ETOR				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.2						
ETOR	**Torete**	**83.12**	**46**	P	**P**	**02 38 09.0**	**+0.9**
	comp=Z,16nm,0.6s,mb5.2						
ELAN	**Lanestosa**	**83.16**	**43**	P	**P**	**02 38 09.7**	**+1.5**
	comp=Z,30nm,1.3s,mb5.2						
EBEN	**Beniarda**	**83.62**	**48**	P	**P**	**02 38 11.1**	**+0.3**
	comp=Z,170nm,0.4s						
EMOS	**Mosqueruela**	**84.06**	**47**	P	**P**	**02 38 13.6**	**+0.6**

comp=Z,21nm,0.7s,baz=338,slow=3.2,SNR=26
SONM pPKPbc 02 45 28.9
comp=Z,9.8nm,0.7s,baz=334,slow=3.6,SNR=5.9
FITZ Fitzroy Crossi 145.10 209 *e*PKP PKPdf 02 45 18.8 -1.7
CN2 Changchun 145.84 338 *e*PKP PKPdf 02 45 18.6 -2.4
CN2 *e*XPKP 02 45 33.0
KSRS Korea Array 149.97 328 PKP PKPdf 02 45 28.0 0.0
comp=Z,15nm,1.0s,baz=14,slow=1.4,SNR=5.9
KSRS PKPbc PKPbc 02 45 32.2 -0.7
comp=Z,22nm,0.8s,baz=19,slow=2.6,SNR=34
KSRS pPKPbc pPKPbc 02 45 43.1 +1.3
comp=Z,12nm,0.9s,baz=34,slow=2.0,SNR=12
HHC Hu-ho-hao-te 151.87 355 *e*PKP PKPdf 02 45 25.5 -5.4
HHC APKP 02 45 36.8
HHC XPKP 02 45 40.6
HHC PKS 02 48 58.9
HHC SKS SKSdf 02 52 27.8 -8.9
HHC PP PP
comp=Z,60nm,8.3s
HHC LR LR
comp=N,370nm,20.2s,MS5.3
HHC LR LR
comp=E,288nm,20.0s,MS5.3
HHC LR LR
comp=Z,429nm,20.5s,MS5.2
BJI Beijing 152.00 348 PKP PKPdf 02 45 29.3 -1.8
GTA Gaotai 152.29 15 PKP PKPdf 02 45 31.6 +0.1
GTA XPKP 02 45 46.1
GTA PKS 02 49 04.8
GTA PP PP 02 49 22.5 +3.4
GTA SKS SKSdf 02 52 34.5 -2.7
GTA SKKS SKKSac 02 56 06.1 -2.9
GTA PP PP
comp=Z,136nm,5.4s
GTA LR LR
comp=N,451nm,15.5s,MS5.5
GTA LR LR
comp=E,470nm,16.4s,MS5.5
GTA LR LR
comp=Z,663nm,17.2s,MS5.5
LZH Lanzhou 156.34 10 *e*PKP PKPdf 02 45 37.3 0.0
LZH APKP 02 45 48.3
LZH XPKP 02 45 51.8
LZH PP PP 02 49 47.1 +5.3
LZH SKKS SKKSac 02 56 27.5 -3.4
LZH PP PP
comp=Z,137nm,8.6s
LZH LR LR
comp=N,197nm,18.5s
LZH LR LR
comp=Z,254nm,20.1s,MS5.0
NJ2 Nanjing 158.62 336 *e*PKP PKPdf 02 45 39.3 -1.0
CD2 Chengdu 161.34 13 *e*PKP PKPdf 02 45 42.1 -1.3
CD2 APKP 02 45 51.0
CD2 XPKP 02 45 57.0
CD2 PKP2 PKPab 02 46 27.5 +0.3
CD2 PP PP 02 50 11.8 +2.7
CD2 SKS SKSdf 02 52 41.8 -5.1
CD2 SKKS SKKSac 02 56 54.6 -2.6
CD2 PP PP
comp=Z,160nm,10.2s
CD2 LR LR
comp=N,210nm,18.4s
CD2 LR LR
comp=E,180nm,14.8s
CD2 LR LR
comp=Z,210nm,19.2s
GYA Guiyang 166.21 8 *e*PKP PKPdf 02 45 46.5 -1.5
GYA PKP2 PKPab 02 46 48.8 +0.2
GYA PKS 02 49 18.3
GYA PP PP 02 50 37.6 +3.0
GYA SKS SKSdf 02 52 45.3 -5.3
GYA SKKS SKKSac 02 57 18.6 -3.4
GYA PP PP
comp=Z,120nm,8.6s
GYA LR LR
comp=N,240nm,24.8s
GYA LR LR
comp=E,160nm,25.6s
GYA LR LR
comp=Z,130nm,24.4s

*ISCJB **24** 02:48:02.6±0.6, 1361N±007×1448E±01, h118km±5km, mb4.4/17, Error ellipse: s-maj=21.1km s-min=11.1km az=0.4*
*MOS **24** 02:48:02.8±0.9, 1364N×144?5E, h119km, mb4.8/1, Error ellipse: s-maj=22.3km s-min=13.4km az=98.1*
*NEIC **24** 02:48:03.5±0.3, 1364N×1448?E, mb4.7/5, Error ellipse: s-maj=14.2km s-min=7.8km az=93.0*
*IDC **24** 02:48:03.6±0.5, 1361N×1448?E, h110km±2km, mb4.1/13, mb1 4.2/13, mb1mx4.1/21, mbtmp4.0/13, MS3.9/2, Ms1 3.9/2, ms1mx3.0/38, Error ellipse: s-maj=19.5km s-min=9.5km az=87.0*
ISC 24 02:48:03.6±0.6, 1364N±007×1449E±01, h113km±5km, h117km±3.0km:pP-P, n44, σ0.971/32, mb4.4/17, 1D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.05**	**197**	P			**Pn**	**02 48 19.9**	**+0.7**
	10μm,0.3s,baz=187,slow=1.0,SNR=1452								
GUMO				S			**Sn**	**02 48 30.5**	**-0.4**
	5μm,0.3s,baz=0.0,slow=20,SNR=88								
MJAR	**Matsushiro Arr**	**23.58**	**346**	P			**P**	**02 53 02.5**	**-1.4**
	2.3nm,0.8s,mb3.6,baz=176,slow=10.0,SNR=6.2								
MJAR				LR			LR	03 00 38.9	
	comp=Z,132nm,19.4s,baz=130,slow=32								
KSRS	**Korea Array**	**28.13**	**331**	P			**P**	**02 53 44.8**	**-0.2**
	1.7nm,0.7s,mb3.7,baz=142,slow=9.7,SNR=6.8								
KSRS				pP			pP	02 54 11.2	+1.4
	2.8nm,0.8s,baz=146,slow=9.7,SNR=4.7								
KSRS				PcP			PcP	02 56 57.7	+1.3
	2.0nm,0.9s,baz=153,slow=1.4,SNR=5.8								
CTA	**Charters Tower**	**33.54**	**178**	P			**P**	**02 54 32.7**	**0.0**
	5.0nm,0.7s,mb4.5,baz=342,slow=11,SNR=5.0								
CTA	**Charters Tower**	**33.54**	**178**	P			**P**	**02 54 32.7**	**0.0**
WRAB	**Tennant Creek**	**34.93**	**197**	*e*P			**P**	**02 54 44.6**	**-0.1**
WRAB				pmax			pmax		
	comp=Z,17nm,0.9s,mb4.9								
WRAB	**Tennant Creek**	**34.93**	**197**	*e*P			**P**	**02 54 44.6**	**-0.1**
	comp=Z,17nm,0.9s,mb4.9								
WB2	**Warramunga Arr**	**34.94**	**197**	*e*P			**P**	**02 54 43.7**	**-1.1**
WRA	**Warramunga Arr**	**34.94**	**197**	P			**P**	**02 54 44.4**	**-0.4**
	comp=Z,7.2nm,0.5s,mb4.8,baz=20,slow=9.3,SNR=52								
WRA				PcP			PcP	02 57 15.6	+0.6
	comp=Z,2.2nm,0.7s,baz=9.5,slow=3.4,SNR=7.9								
FITZ	**Fitzroy Crossi**	**36.81**	**212**	*e*P			**P**	**02 55 00.7**	**0.0**
FITZ	**Fitzroy Crossi**	**36.81**	**212**	P			**P**	**02 55 01.0**	**+0.3**
	comp=Z,6.6nm,0.6s,mb4.7,baz=37,slow=11,SNR=34								
FITZ				PcP			PcP	02 57 20.9	+0.3
	comp=Z,1.8nm,0.6s,baz=224,slow=1.8,SNR=3.6								
ASAR	**Alice Springs**	**38.59**	**196**	P			**P**	**02 55 15.7**	**-0.1**
	comp=Z,4.1nm,0.6s,mb4.4,baz=22,slow=12,SNR=68								
ASAR				PcP			PcP	02 57 26.2	+0.2
	comp=Z,1.9nm,0.7s,baz=36,slow=2.6,SNR=6.2								
CMAR	**Chiang Mai Arr**	**44.32**	**283**	P			**P**	**02 56 03.6**	**+1.0**
	comp=Z,2.1nm,0.5s,mb4.1,baz=85,slow=6.0,SNR=4.7								
CMAR				PcP			PcP	02 57 47.0	+2.0
	comp=Z,1.3nm,0.3s,baz=98,slow=1.5,SNR=5.2								
STKA	**Stephens Creek**	**45.36**	**184**	⇓*i*P			**P**	**02 56 09.7**	**-0.9**
STKA	**Stephens Creek**	**45.36**	**184**	P			**P**	**02 56 09.9**	**-0.6**
	comp=Z,9.1nm,0.5s,mb4.8,baz=358,slow=7.5,SNR=34								
TOO	**Toolangi**	**50.93**	**179**	*e*P			**P**	**02 56 54.5**	**+1.1**
MK31	**Makanchi Array**	**61.47**	**316**	*e*P			**P**	**02 58 09.1**	**+0.9**
MKAR	**Makanchi Array**	**61.47**	**316**	P			**P**	**02 58 08.3**	**+0.1**
	comp=Z,1.7nm,0.7s,mb4.2,baz=93,slow=8.5,SNR=9.7								
MKAR				pP			pP	02 58 37.0	+1.2
	comp=Z,4.4nm,0.8s,baz=95,slow=8.6,SNR=9.6								
ZALV	**Zalesovo Beam**	**61.59**	**324**	pP			pP	02 58 37.4	+0.8
	comp=Z,2.7nm,0.7s,baz=111,slow=7.7,SNR=5.7								
KURK	**Kurchatov**	**64.56**	**320**	P			**P**	**02 58 28.5**	**0.0**
	comp=Z,3.9nm,0.6s,mb4.5,baz=103,slow=6.9,SNR=3.8								
KURK				pP			pP	02 58 57.6	+1.1
	comp=Z,12nm,0.9s,baz=102,slow=6.7,SNR=6.2								
KURK	**Kurchatov**	**64.56**	**320**	P			**P**	**02 58 28.5**	**-0.1**
KURK				*PP			pP	02 58 57.6	+1.1
KURK				pmax			pmax		
	comp=Z,2.0nm,1.0s,mb3.9								
BVAR	**Borovoye Array**	**69.90**	**322**	P			**P**	**02 59 02.3**	**+0.1**
	baz=115,slow=7.9								
BVAR				pP			pP	02 59 31.0	+0.5
	comp=Z,2.1nm,0.6s,baz=95,slow=8.5,SNR=3.0								
HYT	**Haines Junctio**	**72.16**	**30**	*e*P			**P**	**02 59 12.3**	**-3.4**
YKA	**Yellowknife Ar**	**82.81**	**27**	P			**P**	**03 00 14.2**	**-0.8**
	comp=Z,0.7nm,0.6s,mb3.7,baz=285,slow=5.2,SNR=8.3								
YKA	**Yellowknife Ar**	**82.81**	**27**	P			**P**	**03 00 14.2**	**-0.8**
NVAR	**Mina Array Bea**	**86.88**	**51**	P			**P**	**03 00 36.5**	**+0.6**
	comp=Z,2.8nm,0.8s,mb4.3,baz=264,slow=5.2,SNR=17								
NVAR				pP			pP	03 01 04.1	-1.1
	comp=Z,1.0nm,0.6s,baz=268,slow=6.5,SNR=3.8								
ARCES	**ARCESS Array B**	**87.05**	**342**	P			**P**	**03 00 35.6**	**-0.4**
	comp=Z,3.1nm,0.8s,mb4.3,baz=72,slow=8.0,SNR=6.5								
ELK	**Elko**	**88.53**	**48**	*e*P			**P**	**03 00 44.1**	**+0.4**
ELK				pmax			pmax		
	comp=Z,9.0nm,1.1s								
ELK	**Elko**	**88.53**	**48**	*e*P			**P**	**03 00 44.1**	**+0.4**
	comp=Z,9.1nm,1.1s,mb4.7								
GSC	**Goldstone**	**88.86**	**54**	*e*P			**P**	**03 00 46.0**	**+0.6**
GSC				pmax			pmax		
	comp=Z,7.0nm,1.0s,mb4.7								
GSC	**Goldstone**	**88.86**	**54**	*e*P			**P**	**03 00 46.0**	**+0.6**
	comp=Z,6.5nm,1.0s,mb4.6								
LDFC	**Landfair**	**90.26**	**54**	*e*P			**P**	**03 00 52.5**	**+0.5**
	comp=Z,5.9nm,0.8s,mb4.8								
SFJD	**Kangerlussuaq**	**98.79**	**6**	LR			LR	03 47 15.1	
	comp=Z,111nm,18.6s,baz=206,slow=36								
SNAA	**Sanae**	**118.83**	**191**	*e*			PKPdf	03 06 37.6	-0.4
SNAA				*e*				03 06 41.4	
VNA2	**Neumayer--Watz**	**120.28**	**190**	*e*			PKPdf	03 06 41.0	+0.3
	baz=350,slow=0.8								
VNA2				*e*				03 06 44.9	
VNA3	**Neumayer Olymp**	**120.37**	**189**	*e*			PKPdf	03 06 40.4	-0.5
VNA3				*e*				03 06 44.2	
TORD	**Torodi Ar. Bea**	**134.85**	**305**	PKP			PKPdf	03 07 09.7	-0.4
	comp=Z,1.0nm,0.7s,baz=53,slow=1.8,SNR=14								
TORD				SKPbc			SKPbc	03 10 31.7	+1.4
	comp=Z,1.0nm,0.9s,baz=61,slow=3.6,SNR=5.6								
PLCA	**Paso Flores**	**138.96**	**138**	PKP			PKPdf	03 07 17.8	+0.8
	comp=Z,3.8nm,1.1s,baz=346,slow=2.3,SNR=4.7								
DBIC	**Dimbokro**	**143.81**	**302**	PKP			PKPdf	03 07 24.3	-2.2
	comp=Z,8.2nm,0.7s,baz=27,slow=4.3,SNR=17								
KIC	**Kosan Boka**	**143.89**	**301**	*e*PKP2			PKPdf	03 07 24.1	-2.5
	comp=Z,88nm,1.0s								
TIC	**Toumodi**	**143.96**	**302**	*e*PKP2			PKPdf	03 07 24.4	-2.4
	comp=Z,17nm,0.4s								
LIC	**Lamto**	**144.20**	**302**	*e*PKP2			PKPdf	03 07 25.3	-1.9
	comp=Z,41nm,0.9s								
LPAZ	**La Paz**	**148.02**	**99**	PKP			PKPdf	03 07 33.5	0.0
	comp=Z,5.7nm,0.8s,baz=307,slow=5.1,SNR=5.9								
LPAZ				PKPbc			PKPbc	03 07 38.2	+1.4
	comp=Z,5.9nm,0.8s,baz=289,slow=2.5,SNR=19								
CPUP	**Villa Florida**	**155.65**	**125**	PKPab			PKPab	03 08 12.3	+0.9
	comp=Z,2.5nm,0.7s,baz=235,slow=3.6,SNR=7.1								

*NNC **24** 03:12:26.1±3.0, 3865N×7463E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=23.4km s-min=17.5km az=161.0*
ISC 24 03:12:26.1±2.7, 384N±02×752E±02, h126km±41km, n8, σ0.37/10, 6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KZA	**Kyzart**	**3.72**	**1**	P			**Pn**	**03 13 21.7**	**-0.3**
	SNR=11								
UCH	**Uchtor**	**3.91**	**352**	P			**Pn**	**03 13 24.9**	**+0.4**
	SNR=30								
AML	**Almayashu**	**3.95**	**343**	P			**Pn**	**03 13 25.7**	**+0.7**
	SNR=21								
ULHL	**Ulahol**	**3.97**	**11**	P			**Pn**	**03 13 24.7**	**-0.6**
	SNR=13								
TKM2	**Tokmak 2**	**4.58**	**4**	⇓Pn			**Pn**	**03 13 33.5**	**+0.1**
	3.2nm,0.3s								
TKM2				⇓Sn			**Sn**	**03 14 25.7**	**+0.1**
	8.1nm,0.8s								
TKM2				⇓Lg				03 14 46.1	
	5.0nm,0.6s								
TKM2	**Tokmak 2**	**4.58**	**4**	P			**Pn**	**03 13 33.6**	**+0.2**
	SNR=7.9								
KK31	**Karatay Array**	**5.94**	**325**	⇓Pn			**Pn**	**03 13 51.3**	**-0.3**
	0.7nm,0.2s,baz=121,slow=12,SNR=31								
KK31				⇓Sn			**Sn**	**03 14 58.2**	**-0.2**
	2.6nm,0.4s,baz=134,slow=23,SNR=12								
AB31	**Akbulak array**	**15.47**	**320**	⇓Pn			**Pn**	**03 15 57.2**	**+0.1**
	1.3nm,0.9s,baz=135,slow=13,SNR=5.8								

*MAN **24** 03:21:42, 931N×12699E, h8km, mb4.6, ML3.6, MS3.6 MAN INTENSITY II - BUTUAN CITY.*
*ISCJB **24** 03:21:44.9±0.2, 929N±003×12690E±003, h39km, mb4.9/82, MS4.3/29, Error ellipse: s-maj=4.9km s-min=3.7km az=173.8*
*MOS **24** 03:21:45.3±1.3, 928N×12648E, h33km, mb5.1/37, MS4.2/8, Error ellipse: s-maj=13.6km s-min=5.9km az=109.9*
*BJI **24** 03:21:45.7, 9.15N×12660E, h43km, mB5.1, mb4.8, Ms4.6, Msz4.3*
*NEIC **24** 03:21:47.5±0.2, 9.19N×12649E, mb5.1/21, Error ellipse: s-maj=9.6km s-min=4.8km az=79.0*
NEIC Felt [II PIVS] at Butuan.
*GCMT **24** 03:21:47.5±0.3, 9.33N×12687E, h16km, MW5.0/67, Moment Tensor Solution. s22,c26; s67,c92; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.20±.11; Mθθ0.36±.09; Mϕϕ-2.56±.09; Mrθ0.17±.34; Mϕθ0.37±.07; Mϕr4.01±.24; Best double couple: Mo4.68200×10^16 NP1:ϕs1.00000°, δ75.00000°, λ96.00000°. Principal axes: T 4.5100, Plg60.0000°, Azm279.0000°; N 0.3450, Plg5.0000°, Azm180.0000°; P -4.8540, Plg30.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **24** 03:21:47.5±0.6, 9.26N×12645E, h38km±4km, mb4.3/24, mb1 4.4/25, mb1mx4.4/26, mbtmp4.4/25, ML5.2/1, MS4.2/14, Ms1 4.2/14, ms1mx4.0/29 Error ellipse: s-maj=20.3km s-min=9.4km az=76.0*
*DJA **24** 03:22:02, 9.18N×12630E, h91km, Mw5.4/4*
ISC 24 03:21:47.4±0.2, 926N±003×12677E±004, h41km, h41km±1.1km:pP-P, n202, σ1.917/208, mb4.9/82, MS4.3/29, 16C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.15**	**201**	⇑*i*P			**Pn**	**03 22 05.8**	**-1.2**
BIPH				*i*S			**Sn**	**03 22 21.3**	**-0.1**
BUTP	**Butuan**	**1.18**	**256**	*e*P			**Pn**	**03 22 07.2**	**-0.1**
BUTP				*e*S			**Sn**	**03 22 28.5**	**+6.4**
SCPH	**Surigao**	**1.37**	**292**	⇑*e*P			**Pn**	**03 22 09.1**	**-0.9**
SCPH				*e*S			**Sn**	**03 22 29.4**	**+2.5**
MSLP	**Maasin**	**2.08**	**295**	*e*P			**Pn**	**03 22 20.7**	**+0.9**
MSLP				*e*S			**Sn**	**03 22 54.2**	**+10**
BUKP	**Musuan**	**2.18**	**231**	*e*P			**Pn**	**03 22 23.4**	**+2.2**
BUKP				*e*S			**Sn**	**03 23 01.3**	**+14**
DAV	**Davao City (W)**	**2.48**	**209**	Pn			**Pn**	**03 22 28.7**	**+3.5**
	79nm,0.3s,baz=120,slow=4.4,SNR=11								
DAV				Sn			**Sn**	**03 23 01.8**	**+7.5**
	185nm,0.3s,baz=37,slow=21,SNR=5.6								
DAV				LR			LR	03 23 35.6	
	comp=Z,10μm,20.3s,baz=33,slow=46								
OCLP	**Ormoc**	**2.78**	**310**	*e*P			**Pn**	**03 22 30.5**	**+1.1**
KCP	**Kidapawan**	**2.79**	**217**	⇓*e*P			**Pn**	**03 22 34.9**	**+5.3**
KCP				*e*S			**Sn**	**03 23 10.4**	**+8.4**
TBP	**Tagbilaran**	**2.90**	**279**	*e*P			**Pn**	**03 22 32.5**	**+1.4**
TBP				*e*S			**Sn**	**03 23 10.1**	**+5.3**
LLP	**Lapu-Lapu**	**2.96**	**291**	*e*P			**Pn**	**03 22 32.6**	**+0.7**
LLP				*e*S			**Sn**	**03 23 14.5**	**+8.3**
CTBH	**Cotabato--PC H**	**3.22**	**231**	⇓*e*P			**Pn**	**03 22 37.2**	**+1.8**
DCPH	**Dipolog City**	**3.45**	**259**	⇓*e*P			**Pn**	**03 22 39.9**	**+1.3**
DCPH				*e*S			**Sn**	**03 23 22.5**	**+4.3**
CNP	**Catarman**	**3.84**	**327**	*e*P			**Pn**	**03 22 44.3**	**+0.3**
GUIM	**Jordan**	**4.34**	**289**	*e*P			**Pn**	**03 22 52.9**	**+2.1**
RCP	**Roxas**	**4.57**	**300**	⇑*e*P			**Pn**	**03 22 55.1**	**+1.0**
PVCP	**Virac**	**5.02**	**329**	*e*P			**Pn**	**03 23 02.0**	**+1.8**
OTRP	**Odiongan**	**5.59**	**304**	*e*P			**Pn**	**03 23 11.3**	**+3.2**
TNE	**Ternate**	**8.44**	**176**	⇓*e*P			**Pn**	**03 23 57.0**	**+10**
KAPI	**Kappang**	**15.81**	**207**	Pn			**Pn**	**03 25 30.6**	**+3.3**
	9.1nm,0.3s,baz=158,slow=11,SNR=6.5								
KAPI	**Kappang**	**15.81**	**207**	*e*Pn			**Pn**	**03 25 25.9**	**-1.4**
	61nm,1.2s								
YHNB	**Yeheng**	**16.16**	**342**	*e*Pn			**Pn**	**03 25 32.3**	**+0.7**
JOW	**Kunigami**	**17.54**	**4**	P			**Pn**	**03 25 52.6**	**+3.8**
	0.5nm,0.3s,baz=268,slow=28,SNR=2.7								
KSM	**Kuching**	**18.12**	**246**	*e*Pn			**Pn**	**03 25 54.2**	**-1.8**
GUMO	**Guam**	**18.25**	**75**	LR			LR	03 33 34.3	
	comp=Z,696nm,18.2s,baz=260,slow=38								
QIZ	**Qiongzhong**	**19.06**	**302**	P			**Pn**	**03 26 04.0**	**-3.4**
QIZ				S			**S**	**03 29 32.8**	**-7.7**
BATI	**Baumata**	**19.59**	**189**	P			**Pn**	**03 26 13.9**	**+0.2**
	7.8nm,0.3s,baz=312,slow=1.8,SNR=15								
SSE	**Sheshan**	**22.34**	**347**	P			**P**	**03 26 43.3**	**+1.6**
SSE				AP				03 26 53.1	
SSE				S			**S**	**03 30 41.8**	**-3.4**
SSE				XS			sS	03 30 58.9	-3.0
SSE				AMB			AMB		
	comp=Z,58nm,0.8s,mb5.1								
SSE				AMB			AMB		
	comp=Z,239nm,5.6s								
SSE	**Sheshan**	**22.34**	**347**	P			**P**	**03 26 43.3**	**+1.6**
	comp=Z,58nm,0.8s,mb5.1								
SSE				pP				03 26 53.1	
SSE				S			**S**	**03 30 41.7**	**-3.5**
SSE				sS			sS	03 30 58.9	-3.0
SSE				LR			LR		
	comp=Z,250nm,16.4s,MS3.7								
CBIJ	**Chichi jima**	**22.95**	**37**	LR			LR	03 35 52.5	
	comp=Z,328nm,18.0s,MS3.8,baz=183,slow=36								
NJ2	**Nanjing**	**23.84**	**343**	*e*P			**P**	**03 26 57.6**	**+0.8**
NJ2				AP				03 27 08.3	
NJ2				XP			sP	03 27 14.5	+1.6
NJ2				PP				03 27 31.9	
NJ2				S			**S**	**03 31 08.0**	**-1.9**
NJ2				XS			sS	03 31 27.0	-1.5
NJ2				AMB			AMB		
	comp=Z,60nm,1.0s,mb5.0								
NJ2				AMB			AMB		
	comp=Z,260nm,4.5s								
NJ2				LR			LR		
	comp=N,210nm,22.1s,MS3.9								
NJ2				LR			LR		
	comp=E,340nm,19.6s,MS3.9								
NJ2				LR			LR		
	comp=Z,590nm,20.0s,MS4.1								
WHN	**Wuhan**	**24.14**	**333**	⇓P			**P**	**03 26 59.1**	**-0.5**
WHN				LR			LR		
	comp=Z,1μm,13.5s,MS4.6								
GYA	**Guiyang**	**25.60**	**314**	P			**P**	**03 27 12.4**	**-0.5**
GYA				AP			pP	03 27 22.6	-1.5
GYA				XP			sP	03 27 28.4	-0.7
GYA				PP				03 27 53.6	
GYA				PCP			PcP	03 30 44.5	+1.2
GYA				S			**S**	**03 31 33.3**	**-5.0**
GYA				XS			sS	03 31 52.8	-4.2
GYA				SS				03 32 37.6	
GYA				AMB			AMB		
	comp=Z,20nm,0.8s,mb4.7								
GYA				AMB			AMB		
	comp=Z,120nm,4.2s								
GYA				LR			LR		
	comp=N,590nm,14.8s,MS4.4								
GYA				LR			LR		
	comp=E,560nm,15.6s,MS4.4								
GYA				LR			LR		
	comp=Z,530nm,14.4s,MS4.2								
JHJ	**Hachijo jima 2**	**26.61**	**25**	LR			LR	03 36 59.6	
	comp=Z,472nm,18.7s,MS4.1,baz=250,slow=34								
FITZ	**Fitzroy Crossi**	**27.21**	**182**	*e*P			**P**	**03 27 26.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**27.21**	**182**	P			**P**	**03 27 28.0**	**+0.6**
	comp=Z,15nm,0.9s,mb4.5,baz=12,slow=20,SNR=18								
KMI	**Kunming**	**27.78**	**308**	P			**P**	**03 27 33.6**	**+1.0**
KMI				AP			pP	03 27 43.3	-0.5
KMI				S			**S**	**03 32 11.5**	**-1.2**
KMI				SSS				03 33 50.3	
KMI				AMB			AMB		
	comp=Z,12nm,0.5s,mb4.8								
KMI				AMB			AMB		
	comp=Z,203nm,4.1s								
KMI				LR			LR		
	comp=N,460nm,19.0s,MS4.2								
KMI				LR			LR		
	comp=E,556nm,20.9s,MS4.2								
KMI				LR			LR		
	comp=Z,661nm,16.5s,MS4.3								
KMI	**Kunming**	**27.78**	**308**	P			**P**	**03 27 33.6**	**+1.0**
	comp=Z,12nm,0.5s,mb4.8								
KMI				pP			pP	03 27 43.3	-0.5
KMI				S			**S**	**03 32 11.5**	**-1.2**
KMI				SSS				03 33 50.2	
KMI				LR			LR		
	comp=Z,660nm,16.5s,MS4.3								
KSRS	**Korea Array**	**28.09**	**2**	P			**P**	**03 27 36.0**	**+0.9**
	comp=Z,3.3nm,0.9s,mb4.0,baz=177,slow=9.6,SNR=13								
KSRS				PcP			PcP	03 30 50.0	+1.1
	comp=Z,1.9nm,0.9s,baz=230,slow=2.9,SNR=4.5								
KSRS	**Korea Array**	**28.09**	**2**	P			**P**	**03 27 36.1**	**+1.0**
KSRS								03 30 50.1	
KSRS				pmax			pmax		
	comp=Z,3.0nm,0.9s,mb3.9								
CMAR	**Chiang Mai Arr**	**28.49**	**292**	P			**P**	**03 27 38.2**	**-0.7**
	comp=Z,1.7nm,0.4s,mb4.1,baz=108,slow=7.2,SNR=15								
CMAR				PcP			PcP	03 30 51.3	+1.0
	comp=Z,1.0nm,0.3s,baz=97,slow=0.9,SNR=4.2								
CMAR				pScP				03 34 46.5	
	comp=Z,1.7nm,0.3s,baz=87,slow=1.2,SNR=16								
CMAR				LR			LR	03 39 37.4	
	comp=Z,480nm,18.2s,MS4.1,baz=306,slow=38								
CMAR	**Chiang Mai Arr**	**28.49**	**292**	P			**P**	**03 27 38.2**	**-0.7**
CMAR				PcP			PcP	03 30 51.3	+1.0
CHTO	**Chiang Mai**	**28.58**	**292**	*e*P			**P**	**03 27 37.1**	**-2.7**
MJAR	**Matsushiro Arr**	**29.08**	**19**	P			**P**	**03 27 42.8**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=191,slow=12,SNR=4.1								
MJAR				PcP			PcP	03 30 52.2	+0.8
	comp=Z,2.2nm,0.8s,baz=190,slow=2.5,SNR=4.6								
MJAR	**Matsushiro Arr**	**29.08**	**19**	P			**P**	**03 27 42.8**	**-1.2**
MJAR								03 30 52.2	
MJAR				pmax			pmax		
	comp=Z,1.0nm,0.4s								
XAN	**Xi'an**	**29.62**	**329**	P			**P**	**03 27 47.3**	**-1.5**
XAN				AMB			AMB		
	comp=Z,9.0nm,0.8s,mb4.5								
XAN				AMB			AMB		
	comp=Z,114nm,4.5s								
XAN				LR			LR		
	comp=N,245nm,15.7s,MS4.2								
XAN				LR			LR		
	comp=E,349nm,15.5s,MS4.2								
XAN				LR			LR		
	comp=Z,698nm,15.3s,MS4.4								
WRAB	**Tennant Creek**	**29.95**	**166**	*e*P			**P**	**03 27 52.6**	**+0.7**
WRAB	**Tennant Creek**	**29.95**	**166**	*e*P			**P**	**03 27 52.0**	**+0.2**
	comp=Z,79nm,2.0s,mb5.1								
WRA	**Warramunga Arr**	**29.96**	**166**	P			**P**	**

BJI S **S** **03 33 19.5 -0.2**
BJI LR LR
comp=Z,220nm,22.7s,MS3.8
SNY Shenyang 32.56 356 ⇑P **P** **03 28 15.8 +1.2**
SNY AMB AMB
comp=Z,18nm,0.8s,mb5.0
SNY AMB AMB
comp=Z,49nm,3.5s
SNY LR LR
comp=N,500nm,23.1s
SNY LR LR
comp=E,430nm,15.3s
SNY LR LR
comp=Z,479nm,18.6s,MS4.2
ASAR Alice Springs 33.46 168 P **P** **03 28 22.6 -0.1**
comp=Z,2.0nm,0.6s,mb4.2,baz=354,slow=6.9,SNR=22
ASAR PcP PcP 03 31 04.4 +1.1
comp=Z,1.0nm,0.6s,baz=348,slow=5.3,SNR=2.7
ASAR pPcP 03 31 16.8
comp=Z,2.6nm,0.8s,baz=356,slow=2.7,SNR=5.7
LZH Lanzhou 33.88 326 *e*P **P** **03 28 27.0 +0.7**
LZH AP pP 03 28 36.8 -0.8
LZH PP PP 03 29 40.5 -3.0
LZH *e*S **S** **03 33 47.3 -0.7**
LZH *e*SS SS 03 35 54.8 -21
LZH AMB AMB
comp=Z,23nm,1.1s,mb5.0
LZH AMB AMB
comp=Z,142nm,5.0s
LZH LR LR
comp=N,796nm,14.2s
LZH LR LR
comp=Z,1μm,16.7s,MS4.6
LZH Lanzhou 33.88 326 *e*P **P** **03 28 27.0 +0.7**
LZH *PP pP 03 28 36.7 -0.9
LZH *SP sP 03 28 40.6 -2.0
LZH 03 29 40.5
LZH *e*S **S** **03 33 47.3 -0.7**
LZH *SS sS 03 34 03.5 -3.4
LZH *e*SS SS 03 35 54.7 -21
LZH pmax pmax
comp=Z,23nm,1.1s,mb5.0
LZH MLR MLR
comp=Z,1μm,16.7s,MS4.6
LZH Lanzhou 33.88 326 *e*P **P** **03 28 27.0 +0.7**
comp=Z,23nm,1.1s,mb5.0
LZH pP pP 03 28 36.7 -0.9
LZH sP sP 03 28 40.6 -2.0
LZH PP PP 03 29 40.5 -3.0
LZH *e*S **S** **03 33 47.3 -0.7**
LZH sS sS 03 34 03.5 -3.4
LZH *e*SS SS 03 35 54.7 -21
LZH LR LR
comp=Z,1μm,16.7s,MS4.6
HHC Hu-ho-hao-te 34.23 339 *e*P **P** **03 28 29.8 +0.6**
HHC AP pP 03 28 42.9 +2.4
HHC XP sP 03 28 48.8 +3.3
HHC PP PP 03 29 45.8 -1.5
HHC PCP PcP 03 31 05.3 +0.1
HHC S **S** **03 33 52.8 -0.4**
HHC SCP ScP 03 34 45.5 -1.6
HHC PCS PcS 03 34 50.6 -0.8
HHC SCS ScS 03 38 46.6 -2.8
HHC AMB AMB
comp=Z,30nm,0.6s,mb5.4
HHC AMB AMB
comp=Z,215nm,6.3s
HHC LR LR
comp=N,347nm,13.5s,MS4.4
HHC LR LR
comp=E,286nm,12.7s,MS4.4
HHC LR LR
comp=Z,427nm,13.9s,MS4.3
CN2 Changchun 34.43 358 *e*P **P** **03 28 34.3 +3.4**
CN2 *e*XP sP 03 28 52.9 +5.7
CN2 *e*S **S** **03 33 59.5 +3.4**
CN2 *e*SS SS 03 36 13.3 -13
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CN2 LR LR
comp=N,510nm,16.0s,MS4.4
CN2 LR LR
comp=E,190nm,16.0s,MS4.4
CN2 LR LR
comp=Z,350nm,18.0s,MS4.1
CTA Charters Tower 34.90 147 P **P** **03 28 36.3 +1.1**
comp=Z,5.1nm,0.6s,mb4.7,baz=334,slow=7.3,SNR=4.1
CTA Charters Tower 34.90 147 P **P** **03 28 36.3 +1.1**
CTA pmax pmax
comp=Z,5.0nm,0.6s
MDJ Mudanjiang 35.31 3 P **P** **03 28 40.5 +2.1**
MDJ AP pP 03 28 51.8 +2.0
MDJ XP sP 03 28 57.5 +2.7
MDJ PP PP 03 30 02.3 +3.2
MDJ PCP PcP 03 31 09.3 +1.0
MDJ S **S** **03 34 12.8 +3.1**
MDJ SCP ScP 03 34 50.8 -0.1
MDJ PCS PcS 03 34 56.8 +1.7
MDJ AMB AMB
comp=Z,15nm,1.2s,mb4.8
MDJ AMB AMB
comp=Z,73nm,3.8s
ASAJ Asahikawa 37.35 19 P **P** **03 28 58.0 +2.1**
comp=Z,12nm,0.9s,mb4.7,baz=223,slow=10,SNR=5.7
ASAJ Asahikawa 37.35 19 P **P** **03 28 58.0 +2.1**
ASAJ pmax pmax
comp=Z,12nm,0.9s
HNR Honiara 37.89 118 LR LR 03 41 32.8
comp=Z,271nm,21.5s,MS4.0,baz=324,slow=31
GTA Gaotai 38.49 326 *e*P **P** **03 29 05.0 -0.6**
GTA AP pP 03 29 17.0 0.0
GTA XP sP 03 29 20.8 -1.2
GTA S **S** **03 34 59.0 +0.7**
GTA XS sS 03 35 21.1 +3.7
GTA SS SS 03 37 43.4 -5.5
GTA AMB AMB
comp=Z,7.0nm,0.7s,mb4.5
GTA LR LR
comp=N,451nm,15.6s,MS4.6
GTA LR LR
comp=E,528nm,15.9s,MS4.6
GTA LR LR
comp=Z,664nm,17.4s,MS4.5
FORT Forrest 39.83 178 *e*P **P** **03 29 16.5 -0.3**
YSS Yuzh-Sakhalins 39.95 17 *e*P **P** **03 29 21.4 +3.7**
YSS pmax pmax
comp=Z,18nm,1.3s,mb4.6
KLR Kul'dur 40.06 5 *e*P **P** **03 29 14.3 -4.2**
HIA Hailar 40.31 353 *e*P **P** **03 29 20.0 -0.6**
ODAN Odare 41.11 300 *e*P **P** **03 29 26.9 -0.7**
comp=Z,48nm,0.7s,mb5.2
KLBR Kellerberrin 41.53 192 *e*P **P** **03 29 31.1 +0.3**
ULN Ulaanbaatar 41.93 340*c* *i*P **P** **03 29 34.1 +0.1**
ULN Ulaanbaatar 41.93 340 *e*P **P** **03 29 33.2 -0.8**
comp=Z,15nm,1.2s,mb4.5
SONM Songino Array 42.13 340 P **P** **03 29 34.7 -0.9**
comp=Z,2.4nm,0.6s,mb4.0,baz=150,slow=11,SNR=4.6
SONM Songino Array 42.13 340 P **P** **03 29 34.7 -0.9**
SONM pmax pmax
comp=Z,2.0nm,0.6s
MUN Mundaring 42.23 193 *e*P **P** **03 29 37.7 +1.1**
JIRN Jiri 42.37 301 *e*P **P** **03 29 37.4 -0.5**
comp=Z,59nm,0.8s,mb5.3
GUN Gumba 42.71 301 *e*P **P** **03 29 40.1 -0.5**
comp=Z,90nm,0.8s,mb5.5
NWAO Narrogin (SRO) 42.92 192 P **P** **03 29 43.2 +1.0**
comp=Z,16nm,0.8s,mb4.8,baz=16,slow=7.3,SNR=7.3
NWAO Narrogin (SRO) 42.92 192 P **P** **03 29 43.2 +1.0**
NWAO pmax pmax
comp=Z,16nm,0.8s
NWAO Narrogin (SRO) 42.92 192 P **P** **03 29 43.2 +1.0**
PKIN Phulchoki 43.02 301 *e*P **P** **03 29 41.8 -1.3**
KKN Kakani 43.18 301 *e*P **P** **03 29 43.3 -1.1**
DMN Daman 43.27 301 *e*P **P** **03 29 44.1 -1.1**
comp=Z,45nm,1.0s,mb5.1
STKA Stephens Creek 43.29 161 *e*P **P** **03 29 45.5 +0.3**
STKA Stephens Creek 43.29 161 P **P** **03 29 45.6 +0.5**
comp=Z,3.5nm,0.5s,mb4.3,baz=336,slow=8.6,SNR=16
GKN Gorkha 43.79 301 *e*P **P** **03 29 48.0 -1.3**
KOLN Koldanda 44.60 300 *e*P **P** **03 29 55.0 -0.9**
comp=Z,50nm,0.7s,mb5.4
DANN Dangsing 44.63 301 *e*P **P** **03 29 55.1 -0.9**
comp=Z,74nm,0.8s,mb5.6
ZAK Zakamensk 45.38 339 *e*P **P** **03 30 02.9 +1.3**
ZAK *e* 03 31 44.5
ZAK pmax pmax
comp=Z,4.0nm,1.6s,mb4.0
CLNS Chul'man 47.48 359 *e*P **P** **03 30 18.5 +0.5**
CLNS pmax pmax
comp=E,7.0nm,0.8s
CLNS pmax pmax
comp=N,6.0nm,0.8s
CLNS pmax pmax
comp=Z,15nm,0.8s,mb5.0
CLNS MLR MLR
comp=E,250nm,12.0s
CLNS MLR MLR
comp=N,201nm,18.0s
CLNS MLR MLR
comp=Z,155nm,16.0s,MS4.1
WMQ Urumqi 48.32 322 *e*P **P** **03 30 24.8 0.0**
WMQ AP pP 03 30 36.0 -0.5
WMQ XP sP 03 30 41.0 -0.3
WMQ PCP PcP 03 31 52.0 +0.9
WMQ *e*S **S** **03 37 20.0 -2.0**
WMQ XS sS 03 37 41.0 -0.5
WMQ AMB AMB
comp=Z,10.0nm,1.2s,mb4.7
WMQ AMB AMB
comp=Z,171nm,4.7s
WMQ LR LR
comp=N,556nm,16.7s,MS4.8
WMQ LR LR
comp=E,412nm,13.4s,MS4.8
WMQ LR LR
comp=Z,573nm,16.7s,MS4.6
BOD Bodaibo 49.44 351 *e*P **P** **03 30 33.4 +0.3**
BOD pmax pmax
comp=Z,22nm,1.1s,mb5.1
HVS Khovu-Aksy 49.81 333 *e*P **P** **03 30 36.5 +0.5**
HVS pmax pmax
comp=Z,24nm,1.0s,mb5.2
DDI Dehra Dun 49.95 302 *e*x **P** **03 30 36.7 -0.8**
PEA0B Petropavlovsk- 50.35 24 *e*P **P** **03 30 43.6 +3.5**
PETK Petropavlovsk- 50.35 24 P **P** **03 30 42.1 +2.0**
comp=Z,6.0nm,0.8s,mb4.7,baz=200,slow=2.5,SNR=6.4
PETK LR LR 03 52 23.2
comp=Z,192nm,18.1s,MS4.2,baz=36,slow=36
YAK Yakutsk 52.71 2 *e*P **P** **03 30 57.2 -0.4**
YAK *e* pP 03 31 10.8 +1.3
YAK pmax pmax
comp=Z,25nm,1.0s,mb5.1
YAK pmax pmax
comp=N,16nm,1.3s
MK31 Makanchi Array 53.13 323 *e*P **P** **03 31 00.5 -0.4**
MK31 *e**PP pP 03 31 11.9 -0.9
MKAR Makanchi Array 53.13 323 P **P** **03 31 00.3 -0.6**
comp=N,15nm,0.9s,mb4.9,baz=123,slow=7.8,SNR=74
MKAR pScP 03 36 21.4
comp=N,0.4nm,0.4s,baz=123,slow=4.5,SNR=4.2
MKAR LR LR 03 52 42.9
comp=N,173nm,21.1s,MS4.1,baz=241,slow=35
MKAR Makanchi Array 53.13 323⇑*e*P **P** **03 31 00.3 -0.6**
MKAR Makanchi Array 53.13 323 P **P** **03 31 00.3 -0.6**
MKAR LR LR 03 52 42.9
KZA Kyzart 55.67 315 P **P** **03 31 20.3 +0.8**
SNR=14
TKM2 Tokmak 2 55.73 316 *e*P **P** **03 31 19.8 -0.1**
TKM2 pmax pmax
comp=Z,11nm,0.8s,mb4.9
TKM2 Tokmak 2 55.73 316 P **P** **03 31 19.7 -0.2**
SNR=8.1
TKM2 Tokmak 2 55.73 316 *e*P **P** **03 31 19.8 -0.1**
comp=Z,11nm,0.8s,mb5.0
ZAA0 Zalesovo Array 55.74 331 *e*pP pP 03 31 30.5 -1.2
ZALV Zalesovo Beam 55.74 331 P **P** **03 31 18.7 -1.1**
comp=Z,4.1nm,0.7s,mb4.6,baz=116,slow=6.8,SNR=13
ZALV pScP 03 36 33.1
comp=Z,0.6nm,0.3s,baz=127,slow=4.4,SNR=4.0
ZALV LR LR 03 58 08.7
comp=Z,146nm,18.2s,MS4.1,baz=246,slow=39
ZALV Zalesovo Beam 55.74 331 P **P** **03 31 18.7 -1.1**
KBK Karagaybulak 56.08 316 P **P** **03 31 22.6 +0.2**
SNR=8.2
UCH Uchtor 56.23 315 P **P** **03 31 24.4 +0.9**
SNR=32
UCH Uchtor 56.23 315 *e*P **P** **03 31 24.2 +0.6**
comp=Z,43nm,1.0s,mb5.4
CHMS Chumysh 56.34 316 P **P** **03 31 24.0 -0.3**
SNR=6.0
USP Ospenovka 56.60 316 P **P** **03 31 25.6 -0.5**
SNR=9.0
SEY Seymchan 56.67 14⇑*e*P **P** **03 31 27.0 +0.7**
AML Almayashu 56.77 315 P **P** **03 31 27.6 +0.2**
SNR=17
AML Almayashu 56.77 315 *e*P **P** **03 31 27.5 +0.1**
comp=Z,29nm,0.9s,mb5.3
AML *e*pP pP 03 31 38.7 -0.7
EKS2 Erkin-Say 56.89 315 P **P** **03 31 28.3 +0.1**
SNR=9.8
EKS2 Erkin-Say 56.89 315 *e*P **P** **03 31 28.0 -0.2**
comp=Z,24nm,1.0s,mb5.2
EKS2 *e*pP pP 03 31 39.3 -0.9
NVS Novosibirsk 57.02 332 *e*P **P** **03 31 26.7 -2.2**
NVS pmax pmax
comp=N,6.0nm,1.1s
NVS pmax pmax
comp=E,6.0nm,1.1s
NVS pmax pmax
comp=Z,12nm,1.1s,mb4.8
KURK Kurchatov 57.17 326 P **P** **03 31 29.2 -0.9**
comp=Z,10.0nm,0.9s,mb4.8,baz=102,slow=5.2,SNR=32
KURK pP pP 03 31 39.9 -2.1
comp=Z,19nm,0.9s,baz=126,slow=6.3,SNR=16
KURK Kurchatov 57.17 326 P **P** **03 31 29.2 -0.9**
KURK *PP pP 03 31 39.9 -2.1
KURK pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KURK pmax pmax
comp=Z,19nm,0.9s,mb5.1
KURK Kurchatov 57.17 326 *e*P **P** **03 31 29.6 -0.5**
KURK *e*pP pP 03 31 41.1 -0.9
KBL Kabul 58.31 305 *e*P **P** **03 31 37.9 -0.5**
KBL *e**PP pP 03 31 49.0 -1.4
KBL pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KBL Kabul 58.31 305 *e*P **P** **03 31 37.9 -0.5**
comp=Z,9.8nm,0.8s,mb4.9
KBL *e*pP pP 03 31 49.0 -1.4
KK31 Karatay Array 59.31 315 *i* P **P** **03 31 43.9 -1.2**
KK31 pmax pmax
comp=Z,13nm,0.8s,mb5.0
TIXI Tiksi 62.35 1 *e*P **P** **03 32 05.4 +0.1**
TIXI pmax pmax
comp=Z,23nm,1.0s,mb5.3
TIXI MLR MLR
comp=Z,240nm,16.0s,MS4.5
BVA0 Borovoye Array 62.77 326 *i* P **P** **03 32 07.0 -1.4**
BVA0 pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
BRVK Borovoye 62.84 326 P **P** **03 32 08.1 -0.8**
comp=Z,338nm,0.9s,SNR=14
BRVK Borovoye 62.84 326 *e*P pP 03 32 20.5 -0.5
BRVK Borovoye 62.84 326 *e*pP pP 03 32 20.4 -0.6
BILL Bilibino 64.24 15 *e*P **P** **03 32 19.3 +1.5**
BILL pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
RPZ Rata Peaks 66.28 146 P **P** **03 32 33.5 +2.1**
comp=Z,11nm,0.7s,mb5.0,baz=79,slow=1.6,SNR=6.7
AB31 Akbulak array 67.96 319 *i* P **P** **03 32 40.9 -1.2**
AB31 pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SVE Sverdlovsk 69.32 327⇑*e*P **P** **03 32 50.5 +0.1**
SVE *e*SSS 03 49 18.4
SVE pmax pmax
comp=Z,49nm,1.0s,mb5.4
SVE MLR MLR
comp=Z,317nm,16.0s,MS4.7
AKTK Aktyubinsk 69.41 320 P **P** **03 32 50.4 -0.7**
AKTK pP pP 03 33 01.1 -2.2
AKTO Aktyubinsk 69.41 320 P **P** **03 32 50.4 -0.7**
comp=Z,4.6nm,0.8s,mb4.4,baz=86,slow=6.9,SNR=11
AKTO pP pP 03 33 01.1 -2.2
comp=Z,12nm,1.0s,baz=82,slow=4.2,SNR=9.7
AKTO Aktyubinsk 69.41 320 P **P** **03 32 50.4 -0.7**
AKTO *PP pP 03 33 01.1 -2.3
AKTO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
AKTO pmax pmax
comp=Z,13nm,1.0s,mb4.8
ARU Arti 70.34 327*c* *i*P **P** **03 32 55.8 -0.9**
ARU 03 35 33.2
ARU *e*S S 03 42 07.1 +1.2
ARU *e*SS SS 03 46 30.8 -6.1
ARU pmax pmax
comp=Z,25nm,1.2s,mb5.0
RDF Al-Radifah 76.19 298 *e*P **P** **03 33 30.2 -1.6**
baz=298
RDF AMb AMB 03 33 32.2
comp=Z,28nm,1.1s,mb5.1,baz=298
MIB Mutribah 76.33 298 *e*P **P** **03 33 31.4 -1.1**
baz=298
MIB AMb AMB 03 33 32.3
comp=Z,38nm,0.7s,mb5.4,baz=298
NAY Al-Naaiem 76.44 298 *e*P **P** **03 33 31.8 -1.4**
baz=298
NAY AMb AMB 03 33 32.5
comp=Z,23nm,0.9s,mb5.1,baz=298
MCK McKinley 79.23 27 *e*P **P** **03 33 49.9 +1.9**
KIV Kislovodsk 79.40 313⇑*e*P **P** **03 33 49.5 +0.2**
KIV pmax pmax
comp=Z,24nm,1.4s,mb4.9
KIV Kislovodsk 79.40 313 *e*P **P** **03 33 49.3 0.0**
comp=Z,22nm,1.0s,mb5.0
KIV *e*pP pP 03 34 01.4 -0.4
KLMR Klimovskoe 80.64 330⇑*i*P **P** **03 33 55.1 -0.6**
KLMR *e* 03 34 03.7
KLMR pmax pmax
comp=Z,38nm,1.2s,mb5.2
VSR Storozhevoye 81.36 321 *e*P **P** **03 33 58.3 -1.4**
VSR pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
VSR pmax pmax
comp=N,5.0nm,1.0s
VSR pmax pmax
comp=E,7.0nm,0.8s
OBN Obninsk 82.60 325⇑*e*P **P** **03 34 05.7 -0.4**
OBN *e* pP 03 34 17.3 -1.3
OBN pmax pmax
comp=Z,21nm,1.2s,mb5.0
APA Apatity 82.80 337⇑*i*P **P** **03 34 07.6 +0.7**
APA *i* pP 03 34 19.3 -0.1
APA pmax pmax
comp=Z,29nm,1.0s,mb5.3
MALT Malatya 83.04 308 *e*P **P** **03 34 09.3 +0.5**
MALT pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
MALT Malatya 83.04 308 *e*P **P** **03 34 09.3 +0.5**
comp=Z,5.9nm,0.9s,mb4.6
ANN Anapa 83.09 314 *e*P **P** **03 34 07.1 -1.8**
ANN pmax pmax
comp=Z,20nm,0.8s,mb5.2
OPO Ambohidratompo 83.19 250 P **P** **03 34 09.0 -0.9**
comp=Z,1.2nm,0.5s,mb4.2,baz=72,slow=3.6,SNR=4.4
DAWY Dawson 83.42 26 *e*P **P** **03 34 12.4 +2.2**
JOF Joensuu 84.31 333 *e*p **P** **03 34 11.9 -2.9**
comp=Z,16nm,0.7s,mb5.2
JOF Joensuu 84.31 333 *e*P **P** **03 34 11.9 -2.9**
JOF pmax pmax
comp=Z,16nm,0.7s,mb5.3
KEV Kevo 84.75 340 *e*p **P** **03 34 18.9 +2.1**
comp=Z,6.3nm,1.0s,mb4.7
KEV Kevo 84.75 340 *e*P **P** **03 34 18.9 +2.1**
KEV pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
HYT Haines Junctio 84.77 29 *e*P **P** **03 34 20.3 +3.2**
ARCES ARCESS Array B 85.31 340 P **P** **03 34 19.7 +0.1**
comp=Z,4.7nm,0.6s,mb4.8,baz=83,slow=6.1,SNR=30
ARCES ARCESS Array B 85.31 340 P **P** **03 34 19.7 +0.1**
ARCES pmax pmax
comp=Z,5.0nm,0.6s
ARE0 ARCESS Array S 85.31 340 *e*P **P** **03 34 19.5 -0.1**
KAF Kangasniemi 86.75 332 *e*p **P** **03 34 25.4 -1.5**
comp=Z,12nm,1.0s,mb5.1,baz=83,slow=4.9
KAF Kangasniemi 86.75 332 *e*P **P** **03 34 25.4 -1.5**
KAF pmax pmax
comp=Z,12nm,1.0s,mb5.1
PPT Papeete 86.78 108 *e*LR LR 04 02 13.4
comp=Z,136nm,22.8s
PPT Papeete 86.78 108 LR LR 04 08 42.8
comp=Z,121nm,19.9s,MS4.3,baz=290,slow=32
AKASG Malin Array Be 87.66 321 P **P** **03 34 29.2 -2.3**
comp=Z,3.6nm,0.9s,mb4.6,baz=73,slow=4.2,SNR=7.8
AKASG LR LR 04 19 43.5
comp=Z,89nm,18.1s,MS4.2,baz=295,slow=40
KIEV Kiev 87.67 321 *e*P **P** **03 34 31.5 -0.1**
KIEV pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
KIEV Kiev 87.67 321 *e*P **P** **03 34 31.5 -0.1**
comp=Z,5.0nm,0.9s,mb4.7
TBI Tubuai 87.96 114 *e*LR LR 04 02 37.4
comp=Z,162nm,23.8s
MAW Mawson 88.93 200 P **P** **03 34 36.6 -0.5**
comp=Z,1.7nm,0.9s,mb4.4,baz=32,slow=6.4,SNR=4.8
MAW pP pP 03 34 50.0 +0.3
comp=Z,8.4nm,1.0s,baz=59,slow=5.9,SNR=11
MAW Mawson 88.93 200 P **P** **03 34 36.6 -0.5**
MAW *PP pP 03 34 50.0 +0.3
MAW pmax pmax
comp=Z,2.0nm,0.9s
MAW Mawson 88.93 200 *e*P **P** **03 34 37.8 +0.8**
comp=Z,39nm,1.5s,mb5.5
KMBO Kilima Mbogo 89.71 269 P **P** **03 34 40.9 -1.1**
comp=Z,3.8nm,0.8s,mb4.8,baz=33,slow=4.1,SNR=7.7
KMBO pP pP 03 34 53.8 -0.8
comp=Z,8.8nm,1.1s,baz=39,slow=6.3,SNR=6.1
KMBO LR LR 04 15 57.7
comp=Z,97nm,18.2s,MS4.3,baz=215,slow=36
KMBO Kilima Mbogo 89.71 269⇑*e*P **P** **03 34 42.7 +0.7**
KMBO Kilima Mbogo 89.71 269 *e*P **P** **03 34 41.8 -0.2**
comp=Z,18nm,1.3s,mb5.2
KMBO *e*pP pP 03 34 54.0 -0.6
SBA Scott Base 89.77 172 *e*P **P** **03 34 40.7 -0.2**
SBA pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
SBA Scott Base 89.77 172 *e*P **P** **03 34 40.7 -0.2**
comp=Z,6.2nm,0.8s,mb5.0
DAG Danmarks Havn 91.81 352⇓*e*P **P** **03 34 46.0 -4.5**
DAG pmax pmax
comp=Z,9.0nm,0.7s,mb5.2
DAG Danmarks Havn 91.81 352⇓*i*P **P** **03 34 46.0 -4.5**
comp=Z,8.9nm,0.7s,mb5.2
KWP Kalwaria 91.98 321 *e*P **P** **03 34 51.5 -0.3**
KWP Kalwaria 91.98 321 *e*P **P** **03 34 51.5 -0.3**
NOA NORSAR Array B 93.88 334 P **P** **03 34 59.3 -1.0**
comp=Z,0.8nm,0.7s,mb4.3,baz=65,slow=4.5,SNR=2.9
NOA LR LR 04 23 21.3
comp=Z,124nm,20.4s,MS4.4,baz=25,slow=39
YKA Yellowknife Ar 94.47 24 P **P** **03 35 04.5 +1.5**
comp=Z,1.7nm,0.7s,mb4.6,baz=300,slow=4.4,SNR=6.7
YKA pP pP 03 35 16.7 +1.1
comp=Z,2.5nm,0.8s,baz=298,slow=4.7,SNR=6.8
GERES GERESS Array B 97.79 322 P **P** **03 35 17.8 -0.6**
comp=Z,0.3nm,0.6s,mb4.0,baz=62,slow=3.2,SNR=4.8
GERES pP pP 03 35 29.3 -1.8
comp=Z,1.5nm,0.9s,baz=46,slow=3.9,SNR=5.7
GERES LR LR 04 26 19.4
comp=Z,134nm,19.3s,MS4.5,baz=228,slow=40
ANMO Albuquerque 113.22 46⇑*i*PKIKP PKiKP 03 40 22.5 +1.5
TXAR Lajitas Array 118.10 50 PKP PKPdf 03 40 32.7 +2.1
comp=Z,0.9nm,0.9s,baz=263,slow=0.5,SNR=7.9
TXAR Lajitas Array 118.10 50 PKIKP PKPdf 03 40 32.7 +2.1
TXAR pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 118.10 50 PKP PKPdf 03 40 32.7 +2.1
JCT Junction City 120.34 47 *e*PKIKP PKPdf 03 40 36.8 +2.0
TORD Torodi Ar. Bea 121.10 291 PKP PKPdf 03 40 36.5 -0.1
comp=Z,1.1nm,0.8s,baz=61,slow=1.0,SNR=7.2
OXF Oxford 124.60 36 *e*PKIKP PKPdf 03 40 44.1 +1.2
PLCA Paso Flores 145.09 157 PKPbc PKPbc 03 41 21.2 +1.1
comp=Z,3.3nm,0.8s,baz=187,slow=2.9,SNR=3.3
PLCA Paso Flores 145.09 157 *e*PKPbc PKPbc 03 41 22.4 +2.3
SIV San Ignacio 169.84 132 PKP PKPdf 03 41 51.5 0.0
comp=Z,0.5nm,0.4s,baz=162,slow=23,SNR=7.3
BDFB Brasilia 171.87 218 PKPab PKPab 03 43 14.5 -0.4
comp=Z,2.3nm,0.9s,baz=135,slow=11,SNR=2.4
BDFB Brasilia 171.87 218 PKP2 PKPab 03 43 14.5 -0.4
BDFB pmax pmax
comp=Z,2.0nm,0.9s

NIED ***24*** *03:25:00, 29.20N×130.10E, h35km, Mw4.0 Best double couple: M₀1.20000×10^15 NP1:φs43.00000°, δ72.00000°, λ90.00000°. NP2:φs222.00000°, δ18.00000°, λ89.00000°.*
JMA 24 03:25:15.3±0.1**, 29.17N×130.13E, h57km**±3km**, M3.6, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.70**	**342**	P	Pn	03 25 29.6	+0.2
JZK	**Kikaishima**	**0.86**	**189**	P	Pn	03 25 31.7	+0.2
JAM	**Amami Oshima**	**0.89**	**211**	P	Pn	03 25 31.7	0.0
JAM				S	Sn	03 25 44.0	+0.2
JKC	**Kuchinoerabu**	**1.29**	**3**	P	Pn	03 25 37.3	+0.2
JTN	**Tanegashima 3**	**1.65**	**26**	P	Pn	03 25 42.2	+0.2
JTN				*eS*	Sn	03 26 03.0	+0.9
JTK	**Tokunoshima**	**1.73**	**217**	P	Pn	03 25 44.1	+1.1
JTK				*eS*	Sn	03 26 05.9	+2.0
JTSR	**Tashiro 2**	**2.10**	**19**	P	Pn	03 25 48.9	+0.8
JTSR				*eS*	Sn	03 26 13.8	+0.6
JSU	**Suzuyama**	**2.34**	**7**	P	Pn	03 25 52.6	+1.2
JSU				S	Sn	03 26 21.1	+2.1
JOW	**Kunigami**	**2.85**	**216**	P	Pn	03 25 59.1	+0.8
JOW				*eS*	Sn	03 26 32.1	+0.7

IDC 24 03:38:16.8±4.1, 2213S×17500W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/28, Error ellipse: s-maj=181.8km s-min=52.6km az=148.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**14.19**	**89**	LR	LR	03 45 11.3	
	comp=Z,226nm,22.0s,baz=353,slow=29						
ASAR	**Alice Springs**	**46.89**	**258**	P	P	03 46 48.9	-0.3
	1.5nm,1.0s,baz=93,slow=8.2,SNR=9.3						
ASAR				PcP	PcP	03 48 20.6	-1.5
	0.5nm,0.8s,baz=118,slow=3.5,SNR=4.4						
WRA	**Warramunga Arr**	**47.16**	**263**	P	P	03 46 50.8	-0.5
	0.5nm,0.4s,baz=96,slow=8.4,SNR=10.0						
FITZ	**Fitzroy Crossi**	**55.59**	**263**	P	P	03 47 55.1	+0.5
	0.8nm,0.7s,baz=98,slow=14,SNR=4.2						
CMAR	**Chiang Mai Arr**	**93.29**	**288**	P	P	03 51 35.4	+1.4
	0.6nm,0.3s,baz=119,slow=2.8,SNR=6.5						
AKASG	**Malin Array Be**	**145.77**	**332**	PKPbc	PKPbc	03 57 56.5	-1.0
	1.0nm,0.5s,baz=41,slow=4.2,SNR=5.4						

IDC 24 04:02:57.8±10.0, 029N×12748E, h137km±99km, mb3.4/4, mb1 3.5/4, mb1mx3.3/16, mbtmp3.4/4, 1D, Error ellipse: s-maj=165.9km s-min=28.7km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	**Ternate**	**0.50**	**347**	⇓*eP*	Pn	04 03 15.0	-2.6
WRA	**Warramunga Arr**	**21.20**	**162**	P	P	04 07 31.9	-0.8
	1.4nm,0.4s,baz=341,slow=11,SNR=24						
ASAR	**Alice Springs**	**24.62**	**166**	P	P	04 08 06.4	+0.9
	0.6nm,0.4s,baz=344,slow=12,SNR=14						
MKAR	**Makanchi Array**	**60.80**	**326**	P	P	04 12 55.7	+0.4
	0.4nm,0.3s,baz=134,slow=8.3,SNR=3.7						
KURK	**Kurchatov**	**65.03**	**328**	P	P	04 13 23.1	-0.1
	0.9nm,0.4s,baz=127,slow=6.7,SNR=5.5						
TORD	**Torodi Ar. Bea**	**124.64**	**286**	PKP	PKPdf	04 21 41.4	-0.7
	0.2nm,0.5s,baz=77,slow=2.0,SNR=7.8						

NEIC 24 04:06:24.3, 6357N×14732W, h3km, ML3.1(AEIC), **ML3.5**(PMR), **After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCK	**McKinley**	**0.74**	**284**	P	Pg	04 06 38.2	-0.3
MCK				S	Sg	04 06 48.6	+0.5
IL1	**Eielson Array**	**1.22**	**9**	P	Pg	04 06 47.2	-0.6
IL1				S	Sg	04 07 03.7	+0.1
ILB	**Eielson Array**	**1.22**	**9**	P	Pg	04 06 47.2	-0.5
COLA	**College**	**1.33**	**350**	P	Pn	04 06 49.2	-0.6
COLA				S	Sg	04 07 07.2	+0.1
TRF	**Thorofare Moun**	**1.34**	**266**	P	Pn	04 06 49.0	-0.8
TRF				S	Sg	04 07 10.0	+2.7
DOT	**Dot Lake**	**1.46**	**85**	P	Pn	04 06 50.7	-0.9
DOT				S	Sb	04 07 11.8	+0.9
HARP	**HAARP**	**1.53**	**139**	P	Pn	04 06 52.2	-0.2
HARP				S	Sn	04 07 14.8	+2.1
KTH	**Kantishna Hill**	**1.61**	**271**	P	Pn	04 06 53.4	-0.2
BPAW	**Bear Paw Mtn.**	**1.71**	**290**	P	Pn	04 06 54.2	-0.8
PMR	**Palmer**	**2.15**	**204**	P	Pn	04 07 02.0	+1.0
CHUM	**Lake Minchumin**	**2.25**	**280**	*e*Pn	Pn	04 07 02.9	+0.5
PPLA	**Purkeypile**	**2.31**	**255**	P	Pn	04 07 05.1	+2.0
BCA3	**Beaver Creek A**	**2.55**	**99**	P	Pn	04 07 06.6	+0.2
RC01	**Rabbit Creek A**	**2.73**	**206**	P	Pn	04 07 10.6	+1.6
EYAK	**Cordova Ski Ar**	**3.12**	**166**	P	Pn	04 07 16.5	+2.2
SLKM	**Skilak Lake**	**3.36**	**205**	*e*Pn	Pn	04 07 19.2	+1.6
RAGM	**Ragged Mountai**	**3.43**	**157**	P	Pn	04 07 21.3	+2.8
DAWY	**Dawson**	**3.55**	**78**	P	Pn	04 07 20.1	-0.1
SEW	**Seward**	**3.62**	**197**	P	Pn	04 07 24.2	+3.1
IM3	**Indian Mountai**	**3.67**	**314**	P	Pn	04 07 21.8	0.0
COLD	**Coldfoot**	**3.87**	**343**	P	Pn	04 07 25.2	+0.6
TTA	**Tatalina**	**3.98**	**265**	*e*P	Pn	04 07 27.6	+1.4
TT01	**Tatalina**	**3.99**	**264**	P	Pn	04 07 26.7	+0.4
BM3	**Burnt Mountain**	**4.03**	**15**	P	Pn	04 07 27.0	+0.2
SVW2	**Sparrevohn**	**4.58**	**241**	*e*P	Pn	04 07 36.1	+1.7

JMA 24 04:21:07.4±0.5, 4401N×14800E, h0km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.76**	**249**	P	Pn	04 21 39.5	+0.4
NEM2				*eS*	Sn	04 22 03.2	+1.0
JRA	**Rausu**	**2.08**	**269**	P	Pn	04 21 44.4	+0.9
JAK	**Akkeshi**	**2.61**	**248**	P	Pn	04 21 51.8	+1.0
JKB	**Kayabe**	**5.54**	**250**	P	Pn	04 22 32.7	+1.7
JKB				*eS*	Sn	04 23 37.2	+1.9

BJI **24** *04:42:08.3, 8.19S×122 23E, h26km, mB5.1, mb4.8, Ms4.4, Msz4.2*

ISCJB **24** *04:42:10.7±0.2, 763S±003×122 59E±003, h24km, mb4.7/39, MS4.2/18, Error ellipse: s-maj=4.9km s-min=3.5km az=150.9*

IDC **24** *04:42:12.7±0.6, 758S×122 39E, h23km±3km, mb4.1/15, mb1 4.2/18, mb1mx4.2/24, mbtmp4.2/18, ML4.3/3, MS4.1/19, Ms1 4.1/19, ms1mx3.9/28, Error ellipse: s-maj=22.4km s-min=11.1km az=69.0*

GCMT **24** *04:42:12.4±0.2, 755S×122.49E, h21km±1km, MW5.1/82, Moment Tensor Solution. s38,c47; s82,c118; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.75±.23; Mθθ -5.79±.18; Mφφ 5.03±.21; Mrθ -0.30±.30; Mθφ -1.10±.18; Mφr -0.64±.39; Best double couple: Mo 5.57100×10^16 NP1: ϕs 220.00000°, δ 87.00000°, λ 8.00000°. Principal axes: T 5.2220, Plg 8.0000°, Azm 85.0000°; N 0.6900, Plg 82.0000°, Azm 242.0000°; P -5.9210, Plg 3.0000°, Azm 354.0000°; nsta 1 refers to body waves, cutoff=40s. nsta 2 refers to surface waves, cutoff=50s.*

MOS **24** *04:42:12.3±1.2, 757S×122 54E, h33km, mb4.9/10 Error ellipse: s-maj=19.1km s-min=8.4km az=118.5*

NEIC **24** *04:42:12.4±0.3, 761S×122 54E, mb4.7/9, Error ellipse: s-maj=10.8km s-min=5.3km az=60.0*

DJA **24** *04:42:14, 755S×122 63E, h13km, Mw5.3/10*

ISC 24 04:42:12.9±0.2, 765S±003×12259E±003, h25km, h25km±1.8km: pP-P, n114, σ1 9 12/111, mb4.7/39, MS4.2/18, 6C-9D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSI	**Bau Bau**	**2.15**	**359**	P	**Pn**	**04 42 46.4**	**-0.7**
	0.0nm,0.0s						
BATI	**Baumata**	**2.75**	**157**	Pn	**Pn**	**04 43 00.3**	**+4.9**
	85nm,0.3s,baz=341,slow=0.9,SNR=80						
BATI					**Sn**	**04 43 39.1**	**+11**
	59nm,0.3s,baz=124,slow=21,SNR=4.0						
BATI				LR	LR	04 44 27.9	
	comp=Z,4μm,21.8s,baz=172,slow=47						
WSI	**Waingapu**	**3.03**	**228**	⇓*eP*	**Pn**	**04 42 58.8**	**-0.5**
WSI				*eS*	**Sn**	**04 43 33.2**	**-1.6**
KDI	**Kendari**	**3.67**	**0**	P	**Pn**	**04 43 07.3**	**-0.7**
	0.0nm,0.0s						
KDI	**Kendari**	**3.67**	**0**	⇓*eP*	**Pn**	**04 43 06.9**	**-1.1**
KDI				*eS*	**Sn**	**04 43 49.3**	**-1.1**
KAPI	**Kappang**	**3.85**	**313**	Pn	**Pn**	**04 43 08.9**	**-1.6**
	27nm,0.3s,baz=162,slow=6.2,SNR=30						
KAPI					**Sn**	**04 43 50.5**	**-4.4**
	119nm,0.3s,baz=66,slow=21,SNR=8.2						
MKS	**Makassar**	**3.93**	**308**	⇑*eP*	**Pn**	**04 43 11.9**	**+0.3**
MKS				*eS*	**Sn**	**04 43 54.7**	**-2.3**
MTNI	**Mataram**	**6.43**	**261**	P	**Pn**	**04 43 47.3**	**+1.2**
	0.0nm,0.0s						
KHKI	**Kahang-Kahang**	**6.95**	**264**	P	**Pn**	**04 43 54.3**	**+1.1**
	0.0nm,0.0s						
PCI	**Palu**	**7.24**	**338**	P	**Pn**	**04 43 59.1**	**+2.0**
	0.0nm,0.0s						
PCI	**Palu**	**7.24**	**338**	⇓*eP*	**Pn**	**04 43 57.0**	**-0.1**
BBKI	**Banjar Baru**	**8.76**	**298**	P	**Pn**	**04 44 20.6**	**+2.5**
	0.0nm,0.0s						
TRT	**Tretes**	**9.87**	**269**	⇓*eP*	**Pn**	**04 44 40.0**	**+6.8**
SJI	**Sawahan**	**10.73**	**269**	P	**Pn**	**04 44 48.3**	**+3.3**
	0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**10.81**	**164**	*e*P	**Pn**	**04 44 45.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**10.81**	**164**	Pn	**Pn**	**04 44 46.4**	**+0.3**
	1.4nm,0.3s,baz=356,slow=12,SNR=43						
FITZ				Sn	**Sn**	**04 46 43.9**	**-2.3**
	0.6nm,0.3s,baz=97,slow=16,SNR=3.9						
FITZ				LR	LR	04 50 20.0	
	comp=Z,530nm,18.4s,baz=344,slow=45						
SWI	**Sorong**	**10.96**	**52**	P	**Pn**	**04 44 49.2**	**+1.0**
	0.0nm,0.0s						
TSM	**Tawau**	**12.76**	**338**	⇓P	**Pn**	**04 45 13.9**	**+1.1**
BJII	**Banjamegara**	**12.78**	**271**	P	**Pn**	**04 45 14.7**	**+1.6**
	0.0nm,0.0s						
STKI	**Sintang**	**13.47**	**304**	P	**Pn**	**04 45 23.6**	**+1.0**
	0.0nm,0.0s						
MBWA	**Marble Bar**	**13.71**	**191**	*e*Pn	**Pn**	**04 45 25.8**	**-0.1**
	20nm,1.0s						
SBUM	**Sibu**	**14.41**	**314**	⇓P	**Pn**	**04 45 33.4**	**-2.0**
DAV	**Davao City (W)**	**14.92**	**12**	LR	LR	04 51 57.2	
	comp=Z,734nm,18.4s,baz=189,slow=39						
KSM	**Kuching**	**15.24**	**306**	⇓P	**Pn**	**04 45 47.9**	**+1.3**
DBJI	**Dramaga**	**15.76**	**273**	P	**Pn**	**04 45 52.3**	**-1.0**
	0.0nm,0.0s						
WRA	**Warramunga Arr**	**16.70**	**138**	Pn	**Pn**	**04 46 04.6**	**-0.7**
	0.6nm,0.3s,baz=318,slow=12,SNR=31						
WRA				Sn	**Sn**	**04 49 09.9**	**-0.3**
	baz=306,slow=24,SNR=6.7						
WRA				LR	LR	04 53 20.4	
	comp=Z,850nm,19.6s,baz=320,slow=40						
WRA	**Warramunga Arr**	**16.70**	**138**	P	**Pn**	**04 46 04.6**	**-0.7**
WRA						04 49 09.9	
WRAB	**Tennant Creek**	**16.70**	**138**	*e*P	**Pn**	**04 46 05.9**	**+0.6**
WRAB	**Tennant Creek**	**16.70**	**138**	*e*Pn	**Pn**	**04 46 04.6**	**-0.8**
	62nm,1.3s						
WB2	**Warramunga Arr**	**16.71**	**138**	*e*P	**Pn**	**04 46 04.1**	**-1.3**
XMIS	**Christmas Isla**	**16.96**	**259**	*e*Pn	**Pn**	**04 46 09.4**	**+0.8**
ASAR	**Alice Springs**	**19.27**	**147**	P	**Pn**	**04 46 38.2**	**+1.3**
	1.5nm,0.3s,baz=326,slow=12,SNR=78						
ASAR				S	**Sn**	**04 50 05.8**	**-6.7**
	baz=317,slow=22,SNR=3.7						
MYKOM	**Kota Tinggi**	**20.91**	**296**	⇑P	**P**	**04 46 55.2**	**+1.4**
COEN	**Coen**	**21.16**	**109**	*e*P	**P**	**04 46 57.3**	**+1.0**
	22nm,1.1s,mb4.4						
KGM	**Kluang**	**21.49**	**296**	⇑P	**P**	**04 47 01.6**	**+1.6**
PPI	**Padang Panjang**	**23.25**	**287**	P	**P**	**04 47 17.9**	**-0.8**
	0.0nm,0.0s						
KTGM	**Kuala Trenggan**	**23.30**	**303**	⇓P	**P**	**04 47 26.2**	**+6.9**
FORT	**Forrest**	**23.57**	**168**	*e*P	**P**	**04 47 22.5**	**+0.7**
KLBR	**Kellerberrin**	**24.25**	**190**	*e*P	**P**	**04 47 27.5**	**-0.4**
PMG	**Port Moresby**	**24.36**	**96**	*e*P	**P**	**04 47 28.3**	**-0.8**
NWAO	**Narrogin (SRO)**	**25.64**	**190**	P	**P**	**04 47 39.9**	**-0.7**
	17nm,0.9s,mb4.5,baz=14,slow=7.9,SNR=5.1						
NWAO				LR	LR	04 59 19.6	
	comp=Z,529nm,19.4s,MS4.1,baz=202,slow=40						
CTA	**Charters Tower**	**26.04**	**121**	P	**P**	**04 47 47.3**	**+2.9**
	3.9nm,0.7s,mb4.0,baz=265,slow=12,SNR=3.1						
STKA	**Stephens Creek**	**29.91**	**146**	*e*P	**P**	**04 48 20.5**	**+1.7**
STKA	**Stephens Creek**	**29.91**	**146**	P	**P**	**04 48 20.7**	**+1.9**
	3.6nm,0.5s,mb4.4,baz=312,slow=8.9,SNR=22						
STKA				LR	LR	05 01 37.5	
	comp=Z,605nm,18.4s,MS4.3,baz=123,slow=39						
CMAR	**Chiang Mai Arr**	**34.89**	**318**	P	**P**	**04 49 01.8**	**-0.8**
	1.3nm,0.3s,mb4.3,baz=140,slow=7.2,SNR=11						
CMAR				pP	pP	04 49 09.8	-0.3
	8.8nm,0.8s,baz=140,slow=6.6,SNR=6.6						
CMAR				LR	LR	05 03 16.0	
	comp=Z,438nm,19.0s,MS4.2,baz=143,slow=36						
CMAR	**Chiang Mai Arr**	**34.89**	**318**	P	**P**	**04 49 01.8**	**-0.8**
CMAR				*PP	pP	04 49 09.9	-0.2
CHTO	**Chiang Mai**	**35.15**	**319**	*e*P	**P**	**04 49 04.4**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
CHTO	**Chiang Mai**	**35.15**	**319**	*e*P	**P**	**04 49 04.4**	**-0.4**
	comp=Z,17nm,1.2s,mb4.8						
HNR	**Honiara**	**36.97**	**96**	LR	LR	05 05 00.6	
	comp=Z,433nm,21.2s,MS4.2,baz=92,slow=37						
SSE	**Sheshan**	**38.55**	**358**	P	**P**	**04 49 34.1**	**+0.6**
SSE				XP	sP	04 49 46.8	+2.6
SSE				S	**S**	**04 55 28.1**	**+0.1**
SSE				XS	sS	04 55 42.8	+2.3
SSE				AMB	AMB		
	comp=Z,47nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,96nm,6.8s						
SSE				LR	LR		
	comp=N,231nm,20.2s,MS4.0						
SSE				LR	LR		
	comp=E,63nm,20.2s,MS4.0						
SSE				LR	LR		
	comp=Z,327nm,18.9s,MS4.2						
SSE	**Sheshan**	**38.55**	**358**	P	**P**	**04 49 34.1**	**+0.6**
	comp=Z,47nm,0.7s,mb5.3						
SSE				sP	sP	04 49 46.8	+2.6
SSE				S	**S**	**04 55 28.1**	**+0.1**
SSE				sS	sS	04 55 42.7	+2.2
SSE				LR	LR		
	comp=Z,330nm,18.9s,MS4.2						
NJ2	**Nanjing**	**39.63**	**355**	*e*P	**P**	**04 49 45.3**	**+2.7**
NJ2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.3						
XAN	**Xi'an**	**43.44**	**343**	P	**P**	**04 50 14.0**	**+0.2**
XAN				AP	pP	04 50 20.1	-1.4
XAN				XP	sP	04 50 23.4	-1.1
XAN				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.7						
XAN				AMB	AMB		
	comp=Z,52nm,3.4s						
XAN				LR	LR		
	comp=E,371nm,23.7s						
XAN				LR	LR		
	comp=Z,316nm,23.7s,MS4.1						
KSRS	**Korea Array**	**45.14**	**6**	P	**P**	**04 50 26.9**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=178,slow=5.6,SNR=2.4						
KSRS				pP	pP	04 50 34.3	-0.8
	comp=Z,5.7nm,1.2s,baz=185,slow=7.9,SNR=4.3						
KSRS				LR	LR	05 08 44.7	
	comp=Z,161nm,20.6s,MS3.9,baz=334,slow=35						
MAT	**Matsushiro**	**46.34**	**17**	P	**P**	**04 50 37.0**	**+0.2**
MAT				S	**S**	**04 57 29.0**	**+6.4**
MJAR	**Matsushiro Arr**	**46.34**	**17**	P	**P**	**04 50 36.2**	**-0.6**
	comp=Z,1.7nm,0.5s,mb4.3,baz=200,slow=8.7,SNR=6.1						
MJAR				pP	pP	04 50 42.9	-1.7
	comp=Z,1.6nm,0.5s,baz=187,slow=8.6,SNR=5.5						
MJAR				LR	LR	05 07 54.6	
	comp=Z,192nm,19.9s,MS4.0,baz=230,slow=33						
MJAR	**Matsushiro Arr**	**46.34**	**17**	P	**P**	**04 50 36.2**	**-0.6**
MJAR				*PP	pP	04 50 42.9	-1.7
LSA	**Lhasa**	**47.88**	**322**	*e*P	**P**	**04 50 49.4**	**+0.3**
ODAN	**Odare**	**48.38**	**316**	*e*P	**P**	**04 50 57.7**	**+4.7**
JIRN	**Jiri**	**49.71**	**316**	*e*P	**P**	**04 51 03.3**	**+0.1**
	comp=Z,90nm,1.3s,mb5.7						
GUN	**Gumba**	**50.08**	**316**	*e*P	**P**	**04 51 05.3**	**-0.7**
	comp=Z,128nm,1.2s,mb5.8						
DMN	**Daman**	**50.43**	**316**	*e*P	**P**	**04 51 09.1**	**+0.5**
	comp=Z,42nm,1.0s,mb5.4						
GKN	**Gorkha**	**51.00**	**316**	*e*P	**P**	**04 51 11.7**	**-1.2**
	comp=Z,48nm,0.9s,mb5.4						
GTA	**Gaotai**	**51.36**	**337**	*e*P	**P**	**04 51 16.8**	**+1.4**
GTA				AP	pP	04 51 22.4	-0.8
GTA				XP	sP	04 51 26.0	-0.2
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.3						
KOLN	**Koldanda**	**51.58**	**315**	*e*P	**P**	**04 51 17.5**	**+0.2**
	comp=Z,30nm,0.9s,mb5.2						
DANN	**Dangsing**	**51.82**	**315**	*e*P	**P**	**04 51 16.3**	**-2.7**
	comp=Z,53nm,0.7s,mb5.6						
ASAJ	**Asahikawa**	**54.61**	**18**	P	**P**	**04 51 39.9**	**+0.6**
	comp=Z,2.0nm,0.3s,mb4.6,baz=180,slow=20,SNR=4.7						
ULN	**Ulaanbaatar**	**56.95**	**348**	*e*P	**P**	**04 51 56.6**	**+0.6**
ULN				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
ULN	**Ulaanbaatar**	**56.95**	**348**	*e*P	**P**	**04 51 56.6**	**+0.6**
	comp=Z,14nm,1.0s,mb4.9						
SONM	**Songino Array**	**57.07**	**347**	P	**P**	**04 51 56.7**	**-0.1**
	comp=Z,3.7nm,0.5s,mb4.6,baz=168,slow=15,SNR=4.7						
SONM				pP	pP	04 52 03.9	-0.8
	comp=Z,4.8nm,0.6s,baz=166,slow=8.4,SNR=4.2						
ZAK	**Zakamensk**	**60.18**	**346**	*e*P	**P**	**04 52 17.2**	**-1.2**
ZAK				*e*		04 52 56.6	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.4						
WMQ	**Urumqi**	**60.18**	**331**	*e*P	**P**	**04 52 19.6**	**+1.0**
WMQ				AP	pP	04 52 30.0	+3.5
WMQ				XP	sP	04 52 34.0	+4.5
WMQ				PCP	PcP	04 53 06.0	+2.0
WMQ				S	**S**	**05 00 26.0**	**-4.7**
WMQ				XS	sS	05 00 42.0	-1.8
WMQ				SCS	ScS	05 02 04.0	-3.6
WMQ				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,145nm,4.9s						
WMQ				LR	LR		
	comp=N,633nm,16.2s,MS4.9						
WMQ				LR	LR		
	comp=E,534nm,21.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,352nm,11.3s						
HVS	**Khovu-Aksy**	**63.63**	**340**	*e*P	**P**	**04 52 41.3**	**-0.3**
HVS				pmax	pmax		
	comp=Z,57nm,1.5s,mb5.4						
MK31	**Makanchi Array**	**64.95**	**331**	*e*P	**P**	**04 52 49.6**	**-0.8**
MKAR	**Makanchi Array**	**64.95**	**331**	P	**P**	**04 52 49.7**	**-0.7**
	comp=Z,1.5nm,0.5s,mb4.3,baz=133,slow=7.6,SNR=14						
MKAR				pP	pP	04 52 56.5	-1.8
	comp=Z,4.3nm,0.5s,baz=137,slow=7.5,SNR=17						
MKAR				LR	LR	05 25 22.1	
	comp=Z,105nm,20.6s,MS4.0,baz=259,slow=40						
MKAR	**Makanchi Array**	**64.95**	**331**	P	**P**	**04 52 49.7**	**-0.7**
MKAR				*PP	pP	04 52 56.6	-1.8
MKAR	**Makanchi Array**	**64.95**	**331**	P	**P**	**04 52 49.7**	**-0.7**
MKAR				pP	pP	04 52 56.5	-1.8
MKAR				LR	LR	05 25 22.1	
BOD	**Bodaibo**	**65.61**	**355**	*e*P	**P**	**04 52 56.1**	**+1.7**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.8s,mb4.5						
KBL	**Kabul**	**65.70**	**313**	*e*P	**P**	**04 52 55.7**	**+0.2**
KBL				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
KBL	**Kabul**	**65.70**	**313**	*e*P	**P**	**04 52 55.7**	**+0.2**
	comp=Z,12nm,0.8s,mb5.0						
TKM2	**Tokmak 2**	**65.99**	**324**	*e*P	**P**	**04 52 57.1**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
TKM2	**Tokmak 2**	**65.99**	**324**	*e*P	**P**	**04 52 57.0**	**-0.1**
	comp=Z,2.9nm,0.7s,mb4.4						
AML	**Almayashu**	**66.65**	**322**	*e*P	**P**	**04 53 01.5**	**0.0**
	comp=Z,7.8nm,1.0s,mb4.7						
EKS2	**Erkin-Say**	**66.91**	**323**	*e*P	**P**	**04 53 02.8**	**-0.2**
	comp=Z,4.5nm,1.1s,mb4.4						
PETK	**Petropavlovsk-**	**67.45**	**22**	LR	LR	05 18 39.1	
	comp=Z,54nm,21.5s,MS3.7,baz=160,slow=32						
ZAA0	**Zalesovo Array**	**69.11**	**337**	*e*P	**P**	**04 53 15.1**	**-1.6**
ZALV	**Zalesovo Beam**	**69.11**	**337**	P	**P**	**04 53 14.8**	**-1.9**
	comp=Z,1.6nm,0.5s,mb4.2,baz=139,slow=4.6,SNR=7.7						
ZALV				LR	LR	05 25 41.3	
	comp=Z,72nm,19.8s,MS3.9,baz=210,slow=38						
KURK	**Kurchatov**	**69.42**	**332**	P	**P**	**04 53 17.4**	**-1.3**
	comp=Z,1.0nm,0.5s,mb4.0,baz=143,slow=5.7,SNR=9.5						
KURK	**Kurchatov**	**69.42**	**332**	*e*P	**P**	**04 53 20.3**	**+1.6**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
NVS	**Novosibirsk**	**70.40**	**337**	*e*P	**P**	**04 53 20.1**	**-4.5**
NVS				pmax	pmax		
	comp=N,16nm,1.5s						
NVS				pmax	pmax		
	comp=E,15nm,1.5s						
NVS				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.9						
MAW	**Mawson**	**71.72**	**200**	P	**P**	**04 53 33.1**	**+0.7**
	comp=Z,1.3nm,0.8s,mb3.9,baz=38,slow=12,SNR=2.7						
MAW				LR	LR	05 23 02.0	
	comp=Z,168nm,18.4s,MS4.3,baz=282,slow=34						
OPO	**Ambohidratompo**	**73.81**	**253**	P	**P**	**04 53 44.7**	**-1.1**
	comp=Z,1.7nm,0.9s,mb4.0,baz=128,slow=18,SNR=2.0						
SEY	**Seymchan**	**73.98**	**14**	⇓*eP*	**P**	**04 53 44.6**	**-1.2**
BVAR	**Borovoye Array**	**74.83**	**330**	P	**P**	**04 53 50.2**	**-0.8**
	comp=Z,1.3nm,0.7s,mb4.0,baz=108,slow=9.5,SNR=5.6						
BVAR				LR	LR	05 31 45.0	
	comp=Z,199nm,18.2s,MS4.5,baz=232,slow=40						
TIXI	**Tiksi**	**79.24**	**2**	⇑*eP*	**P**	**04 54 15.0**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.8						
AKTK	**Aktyubinsk**	**80.18**	**324**	P	**P**	**04 54 20.5**	**-0.5**
AKTO	**Aktyubinsk**	**80.18**	**324**	P	**P**	**04 54 20.5**	**-0.5**
	comp=Z,1.9nm,0.6s,mb4.2,baz=119,slow=6.1,SNR=7.7						
BILL	**Bilibino**	**81.54**	**15**	*e*P	**P**	**04 54 29.3**	**+1.5**
BILL				pmax	pmax		
	comp=Z,4

1.5nm,0.4s,mb4.2,baz=302,slow=9.0,SNR=34
WRAB Tennant Creek 36.41 120 *e*P **P 05 48 31.8 -0.1**
WRAB pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
WRAB Tennant Creek 36.41 120 *e*P **P 05 48 31.8 -0.1**
comp=Z,1.7nm,0.4s,mb4.3
WB2 Warramunga Arr 36.41 120 *e*P **P 05 48 31.2 -0.7**
ASAR Alice Springs 37.62 126 P **P 05 48 42.2 +0.1**
comp=Z,1.6nm,0.8s,mb3.8,baz=299,slow=8.2,SNR=22
STKA Stephens Creek 47.50 132 P **P 05 50 02.8 +0.5**
comp=Z,1.8nm,0.7s,mb4.1,baz=339,slow=8.6,SNR=3.7
SONM Songino Array 51.05 5 P **P 05 50 28.9 -0.1**
comp=Z,1.0nm,0.4s,mb4.1,baz=185,slow=11,SNR=3.9
TKM2 Tokmak 2 51.40 336 *e*P **P 05 50 32.5 +0.7**
TKM2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TKM2 Tokmak 2 51.40 336 *e*P **P 05 50 32.5 +0.7**
comp=Z,4.5nm,0.7s,mb4.5
EKS2 Erkin-Say 51.94 334 *e*P **P 05 50 36.3 +0.4**
comp=Z,6.6nm,0.7s,mb4.7
MK31 Makanchi Array 52.50 344 *e*P **P 05 50 39.3 -0.7**
MKAR Makanchi Array 52.50 344 P **P 05 50 39.3 -0.7**
comp=Z,6.6nm,0.7s,mb4.7,baz=147,slow=8.1,SNR=65
KURK Kurchatov 57.09 343 P **P 05 51 11.8 -1.3**
comp=Z,2.3nm,0.5s,mb4.5,baz=164,slow=7.4,SNR=15
ZAA0 Zalesovo Array 58.57 349 *e*P **P 05 51 22.5 -0.9**
ZALV Zalesovo Beam 58.57 349 P **P 05 51 22.3 -1.2**
comp=Z,8.5nm,0.4s,mb5.1,baz=170,slow=5.3,SNR=52
ZALV Zalesovo Beam 58.57 349 P **P 05 51 22.3 -1.2**
BVAR Borovoye Array 61.71 339 P **P 05 51 43.4 -1.5**
comp=Z,1.6nm,0.4s,mb4.5,baz=143,slow=7.9,SNR=9.6
NVAR Mina Array Bea 129.80 40 PKP PKPdf 06 00 36.5 -0.1
comp=Z,0.3nm,0.3s,baz=204,slow=9.7,SNR=4.4
TXAR Lajitas Array 144.94 40 PKPbc PKPdf 06 01 03.5 -1.1
comp=Z,1.3nm,0.7s,baz=284,slow=0.9,SNR=10

BJI **24** *05:42:08.7, 300S×101 40E, h35km, mB5.0, mb4.9, Ms4.7, Msz4.3*
MOS **24** *05:42:09.1±1.0, 288S×101 45E, h33km, mb5.1/33, Error ellipse: s-maj=12.4km s-min=6.1km az=113.0*
ISCJB **24** *05:42:09.6±0.3, 3.13S±004×10121E±003, h40km, mb5.0/72, MS4.1/9, Error ellipse: s-maj=5.9km s-min=4.6km az=21.6*
NEIC **24** *05:42:10.7±0.2, 301S×101 38E, h35km, mb5.0/21, Error ellipse: s-maj=8.5km s-min=4.5km az=48.0*
NEIC Felt [IV] at Mukomuko and [III] at Lebong.
IDC **24** *05:42:10.5±7.1, 300S×101 29E, h33km, 52km, mb4.6/22, mb1 4.7/23, mb1mx4.6/25, mbtmp4.6/23, ML5.0/1, MS3.8/2, Ms1 3.8/2, ms1mx3.0/30, Error ellipse: s-maj=21.4km s-min=11.3km az=60.0*
DJA **24** *05:42:14, 333S×100 50E, h137km, Mw4.9/4*
ISC 24 05:42:11.8±0.3, 314S±004×10118E±003, h44km, h44km±4.2km:pP-P, n225, σ1§08/216, mb5.0/72, MS4.1/9, 22C-11D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.50**	**110**	P		**Pn**	**05 42 42.0**	**+5.8**
	0.0nm,0.0s							
PPI	**Padang Panjang**	**2.78**	**344**	P		**Pn**	**05 42 54.7**	**+0.8**
	0.0nm,0.0s							
JMBI	**JAMBI**	**2.87**	**59**	P		**Pn**	**05 42 58.3**	**+3.1**
	0.0nm,0.0s							
RGRI	**Rengat**	**3.00**	**23**	P		**Pn**	**05 42 58.2**	**+1.3**
	0.0nm,0.0s							
BLSI	**Bandar Lampung**	**4.62**	**119**	P		**Pn**	**05 43 26.4**	**+7.3**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.04**	**79**	P		**Pn**	**05 43 25.6**	**+0.6**
	0.0nm,0.0s							
KGM	**Kluang**	**5.55**	**23**	⇓P		**Pn**	**05 43 33.5**	**+1.6**
MYKOM	**Kota Tinggi**	**5.57**	**29**	⇑P		**Pn**	**05 43 33.7**	**+1.5**
FRIM	**Kepong**	**6.35**	**4**	⇑P		**Pn**	**05 43 45.3**	**+2.4**
TPI	**Tanjungpandan**	**6.47**	**87**	P		**Pn**	**05 43 44.4**	**-0.2**
	0.0nm,0.0s							
TPI	**Tanjungpandan**	**6.47**	**87**	⇑*e*P		**Pn**	**05 43 45.0**	**+0.4**
TPI				*e*S		**Sn**	**05 45 04.0**	**+6.8**
DBJI	**Dramaga**	**6.50**	**122**	P		**Pn**	**05 43 49.5**	**+4.5**
	0.0nm,0.0s							
LEM	**Lembang**	**7.38**	**120**	P		**Pn**	**05 44 03.8**	**+6.7**
	0.0nm,0.0s							
IPM	**Ipoh**	**7.57**	**359**	⇑P		**Pn**	**05 44 03.4**	**+3.7**
XMIS	**Christmas Isla**	**8.54**	**149**	*e*Pn		**Pn**	**05 44 08.1**	**-4.8**
XMIS				*e*Sn		**Sn**	**05 45 37.1**	**-11**
KTGM	**Kuala Trenggan**	**8.63**	**13**	⇓P		**Pn**	**05 44 17.6**	**+3.3**
KSM	**Kuching**	**10.21**	**63**	⇑P		**Pn**	**05 44 36.0**	**+0.2**
BSI	**Banda Aceh**	**10.40**	**326**	P		**Pn**	**05 44 38.3**	**-0.2**
	0.0nm,0.0s							
SJI	**Sawahan**	**11.48**	**114**	P		**Pn**	**05 44 54.1**	**+0.8**
	0.0nm,0.0s							
SBUM	**Sibu**	**12.35**	**63**	⇓P		**Pn**	**05 45 05.3**	**+0.2**
BTM	**Bintulu**	**13.46**	**62**	⇑P		**Pn**	**05 45 20.6**	**+0.3**
KHKI	**Kahang-Kahang**	**15.26**	**111**	P		**Pn**	**05 45 47.2**	**+2.8**
	0.0nm,0.0s							
SDKM	**Sandakan**	**18.21**	**61**	⇑P		**Pn**	**05 46 23.0**	**+1.4**
TSM	**Tawau**	**18.24**	**66**	⇑P		**Pn**	**05 46 23.0**	**+1.1**
KDM	**Kudat**	**18.54**	**57**	⇑P		**Pn**	**05 46 26.3**	**+0.8**
KAPI	**Kappang**	**18.61**	**96**	Pn		**Pn**	**05 46 25.2**	**-1.2**
	366nm,0.8s,SNR=6.6							
KAPI	**Kappang**	**18.61**	**96**	P		**Pn**	**05 46 24.9**	**-1.5**
	4.9nm,0.3s,baz=279,slow=11,SNR=21							
KAPI	**Kappang**	**18.61**	**96**	*e*P		**Pn**	**05 46 24.3**	**-2.1**
MYLDM	**Lahad Datu**	**19.17**	**65**	⇑P		**Pn**	**05 46 34.7**	**+1.6**
CMAR	**Chiang Mai Arr**	**21.57**	**354**	P		**P**	**05 46 54.9**	**-2.9**
	10nm,0.7s,mb4.3,baz=186,slow=8.6,SNR=28							
CMAR					PcP	PcP	05 50 58.6	-0.3
	1.7nm,0.3s,baz=219,slow=2.8,SNR=7.7							
CMAR	**Chiang Mai Arr**	**21.57**	**354**	P		**P**	**05 46 54.9**	**-2.9**
CMAR							05 50 58.7	
CMAR					pmax	pmax		
	comp=Z,10.0nm,0.7s							
CMAR					pmax	pmax		
	comp=Z,2.0nm,0.4s							
CHTO	**Chiang Mai**	**21.92**	**354**	*e*P		**P**	**05 46 59.9**	**-1.7**
CHTO					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2							
CHTO	**Chiang Mai**	**21.92**	**354**	*e*P		**P**	**05 46 59.9**	**-1.7**
	comp=Z,9.5nm,1.0s,mb4.2							
MBWA	**Marble Bar**	**25.43**	**136**	*e*P		**P**	**05 47 36.3**	**+0.7**
KMI	**Kunming**	**28.13**	**3**	P		**P**	**05 48 02.8**	**+2.9**
KMI				S		**S**	**05 52 43.7**	**+1.6**
KMI				pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.5							
KMI				MLR	MLR			
	comp=Z,110nm,19.5s,MS3.5							
KMI	**Kunming**	**28.13**	**3**	P		**P**	**05 48 02.8**	**+2.9**
	comp=Z,10.0nm,0.7s,mb4.5							
KMI				S		**S**	**05 52 43.7**	**+1.6**
KMI				LR	LR			
	comp=Z,110nm,19.5s,MS3.5							
FITZ	**Fitzroy Crossi**	**28.20**	**124**	*e*P		**P**	**05 47 59.3**	**-1.3**
FITZ	**Fitzroy Crossi**	**28.20**	**124**	P		**P**	**05 47 59.7**	**-0.9**
	comp=Z,5.8nm,0.5s,mb4.5,baz=304,slow=8.0,SNR=21							
GYA	**Guiyang**	**29.89**	**10**	P		**P**	**05 48 15.3**	**-0.2**
GYA				AP	pP		05 48 25.8	-1.5
GYA				XP	sP		05 48 29.3	-3.3
GYA				PP	PP		05 49 14.0	-10
GYA				S	**S**		**05 53 10.4**	**+0.6**
GYA				XS	sS		05 53 27.0	-2.6
GYA				SCP	ScP		05 54 55.3	-1.2
GYA				SCS	ScS		05 58 50.3	-1.6
GYA				AMB	AMB			
	comp=Z,30nm,0.8s,mb5.1							
GYA				AMB	AMB			
	comp=Z,130nm,4.9s							
GYA				LR	LR			
	comp=N,580nm,14.9s,MS4.5							
GYA				LR	LR			
	comp=E,560nm,13.8s,MS4.5							
GYA				LR	LR			
	comp=Z,480nm,14.5s,MS4.3							
CD2	**Chengdu**	**33.95**	**4**	⇑*i*P		**P**	**05 48 52.8**	**+1.8**
CD2				AP	pP		05 49 02.5	-0.4
CD2				XP	sP		05 49 06.3	-1.9
CD2				PP	PP		05 50 07.1	-1.5
CD2				S	**S**		**05 54 14.8**	**+1.9**
CD2				XS	sS		05 54 30.8	-2.0
CD2				AMB	AMB			
	comp=Z,20nm,0.8s,mb5.1							
CD2				AMB	AMB			
	comp=Z,50nm,5.2s							
CD2				LR	LR			
	comp=N,320nm,20.4s,MS4.1							
CD2				LR	LR			
	comp=E,200nm,19.2s,MS4.1							
CD2				LR	LR			
	comp=Z,380nm,20.4s,MS4.1							
LSA	**Lhasa**	**34.04**	**344**	*e*P		**P**	**05 48 51.9**	**+0.1**
LSA				pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.8							
LSA	**Lhasa**	**34.04**	**344**	*e*P		**P**	**05 48 51.9**	**0.0**
	comp=Z,7.8nm,0.6s,mb4.8							
WHN	**Wuhan**	**35.77**	**20**	P		**P**	**05 49 06.4**	**-0.4**
WHN				AMB	AMB			
	comp=Z,33nm,0.7s,mb5.4							
WRA	**Warramunga Arr**	**36.40**	**120**	P		**P**	**05 49 11.3**	**-1.0**
	comp=Z,19nm,0.5s,mb5.3,baz=307,slow=9.2,SNR=77							
WRA				PcP	PcP		05 51 35.0	-1.1
	comp=Z,2.1nm,0.5s,baz=310,slow=2.1,SNR=5.8							
WRA				S	**S**		**05 54 43.3**	**-7.7**
	comp=Z,1.0nm,0.7s,baz=299,slow=16,SNR=4.3							
WRA	**Warramunga Arr**	**36.40**	**120**	P		**P**	**05 49 11.3**	**-1.1**
WRA							05 51 35.0	
WRA				S	**S**		**05 54 43.3**	**-7.7**
WRA				pmax	pmax			
	comp=Z,19nm,0.5s							
WRA				smax				
	comp=N,1.0nm,0.7s							
WRAB	**Tennant Creek**	**36.41**	**120**	P		**P**	**05 49 11.0**	**-1.4**
	comp=N,232nm,0.4s,SNR=22							
WRAB	**Tennant Creek**	**36.41**	**120**	*e*P		**P**	**05 49 11.0**	**-1.4**
WRAB	**Tennant Creek**	**36.41**	**120**	*e*P		**P**	**05 49 10.9**	**-1.5**
	comp=N,23nm,0.6s,mb5.3							
WB2	**Warramunga Arr**	**36.41**	**120**	*e*P		**P**	**05 49 11.0**	**-1.4**
ASAR	**Alice Springs**	**37.63**	**126**	P		**P**	**05 49 22.4**	**-0.4**
	comp=N,9.7nm,0.4s,mb4.9,baz=298,slow=8.3,SNR=50							
ASAR				PcP	PcP		05 51 39.5	-0.3
	comp=N,2.6nm,0.7s,baz=304,slow=2.6,SNR=6.2							
ASAR				S	**S**		**05 55 05.3**	**-4.3**
	comp=N,1.9nm,0.6s,baz=297,slow=14,SNR=11							
ASAR	**Alice Springs**	**37.63**	**126**	P		**P**	**05 49 22.4**	**-0.4**
ASAR							05 51 39.6	
ASAR				S	**S**		**05 55 05.4**	**-4.3**
ASAR				pmax	pmax			
	comp=Z,10.0nm,0.4s							
ASAR				smax				
	comp=N,2.0nm,0.6s							
XAN	**Xi'an**	**37.69**	**11**	P		**P**	**05 49 21.3**	**-1.8**
XAN				AP	pP		05 49 30.0	-5.1
XAN				XP	sP		05 49 34.4	-5.9
XAN				AMB	AMB			
	comp=Z,36nm,0.7s,mb5.2							
XAN				AMB	AMB			
	comp=Z,74nm,4.4s							
PTH	**Pithoragarh**	**38.21**	**330**	*e*P		**P**	**05 49 28.9**	**+1.4**
NJ2	**Nanjing**	**38.81**	**24**	*e*P		**P**	**05 49 32.1**	**-0.4**
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.5s,mb4.8							
LZH	**Lanzhou**	**39.10**	**3**	*e*P		**P**	**05 49 34.5**	**-0.4**
LZH				AP	pP		05 49 44.1	-2.8
LZH				XP	sP		05 49 48.3	-3.8
LZH				*e*PP	PP		05 51 10.6	+5.4
LZH				*e*S	**S**		**05 55 34.8**	**+3.4**
LZH				XS	sS		05 55 50.3	-1.3
LZH				AMB	AMB			
	comp=Z,25nm,1.0s,mb4.9							
LZH				AMB	AMB			
	comp=Z,123nm,4.7s							
LZH				LR	LR			
	comp=N,567nm,13.8s							
LZH				LR	LR			
	comp=Z,832nm,17.0s,MS4.6							
LZH	**Lanzhou**	**39.10**	**3**	*e*P		**P**	**05 49 34.5**	**-0.4**
LZH				*PP	pP		05 49 44.1	-2.8
LZH				*SP	sP		05 49 48.3	-3.8
LZH				*e			05 51 10.6	
LZH				*eS	**S**		**05 55 34.7**	**+3.3**
LZH				*SS	sS		05 55 50.3	-1.3
LZH				pmax	pmax			
	comp=Z,25nm,1.0s,mb4.9							
LZH				MLR	MLR			
	comp=Z,830nm,17.0s,MS4.6							
LZH	**Lanzhou**	**39.10**	**3**	*e*P		**P**	**05 49 34.5**	**-0.4**
	comp=Z,25nm,1.0s,mb4.9							
LZH				pP	pP		05 49 44.1	-2.8
LZH				sP	sP		05 49 48.3	-3.8
LZH				*ePP	PP		05 51 10.6	+5.4
LZH				*eS	**S**		**05 55 34.7**	**+3.3**
LZH				sS	sS		05 55 50.3	-1.3
LZH				*eSS	SS		05 58 21.5	-3.9
LZH				LR	LR			
	comp=Z,830nm,17.0s,MS4.6							
NDI	**New Delhi**	**39.13**	**326**	*ex*		x	05 49 39.0	
GTA	**Gaotai**	**42.36**	**358**	*e*P		**P**	**05 50 00.8**	**-0.9**
GTA				AP	pP		05 50 12.3	-1.5
GTA				XP	sP		05 50 15.4	-3.6
GTA				PCP	PcP		05 51 54.5	0.0
GTA				AMB	AMB			
	comp=Z,3.0nm,0.4s,mb4.3							
THN	**Thein Dam**	**42.83**	**328**	*ex*		x	05 50 04.7	
HHC	**Hu-ho-hao-te**	**44.79**	**11**	*e*P		**P**	**05 50 21.3**	**0.0**
HHC				AP	pP		05 50 31.8	-1.7
HHC				XP	sP		05 50 35.8	-2.9
HHC				PCP	PcP		05 52 03.0	+0.2
HHC				PP	PP		05 52 06.5	-0.1
HHC				SCP	ScP		05 55 51.8	+0.1
HHC				PCS	PcS		05 55 55.0	-1.2
HHC				S	**S**		**05 56 57.0**	**+1.6**
HHC				SCS	ScS		06 00 14.0	-1.1
HHC				AMB	AMB			
	comp=Z,19nm,0.6s,mb5.1							
HHC				AMB	AMB			
	comp=Z,102nm,6.8s							
HHC				LR	LR			
	comp=N,169nm,14.0s,MS4.4							
HHC				LR	LR			
	comp=E,276nm,14.0s,MS4.4							
HHC				LR	LR			
	comp=Z,136nm,14.4s,MS4.0							
BJI	**Beijing**	**45.12**	**16**	P		**P**	**05 50 22.9**	**-1.0**
BJI				S	**S**		**05 56 59.8**	**-0.4**
BJI				AMB	AMB			
	comp=Z,11nm,0.5s,mb4.9							
BJI				LR	LR			
	comp=N,128nm,13.9s,MS4.3							
BJI				LR	LR			
	comp=E,213nm,15.9s,MS4.3							
BJI				LR	LR			
	comp=Z,142nm,21.8s							
BJI	**Beijing**	**45.12**	**16**	P		**P**	**05 50 22.9**	**-1.0**
	comp=Z,11nm,0.5s,mb4.9							
BJI				S	**S**		**05 56 59.8**	**-0.4**
BJI				LR	LR			
	comp=Z,140nm,21.8s,MS3.9							
CTA	**Charters Tower**	**47.05**	**115**	*e*P		**P**	**05 50 38.3**	**-1.1**
CTAO	**Charters Tower**	**47.05**	**115**	*e*P		**P**	**05 50 38.7**	**-0.7**
CTAO				pmax	pmax			
	comp=Z,16nm,0.8s,mb5.0							
CTAO	**Charters Tower**	**47.05**	**115**	*e*P		**P**	**05 50 38.7**	**-0.7**
	comp=Z,16nm,0.8s,mb5.0							
KS15	**Wonju Array Si**	**47.38**	**29**	*e*P		**P**	**05 50 41.4**	**-0.4**
KSRS	**Korea Array**	**47.41**	**29**	P		**P**	**05 50 41.0**	**-0.9**
	comp=Z,7.0nm,1.0s,mb4.5,baz=236,slow=8.3,SNR=20							
KSRS	**Korea Array**	**47.41**	**29**	P		**P**	**05 50 41.1**	**-0.9**
KSRS				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.5							
STKA	**Stephens Creek**	**47.51**	**132**	*e*P		**P**	**05 50 42.9**	**0.0**
STKA	**Stephens Creek**	**47.51**	**132**	P		**P**	**05 50 43.0**	**+0.1**
	comp=Z,5.9nm,0.5s,mb4.9,baz=305,slow=9.9,SNR=18							
WMQ	**Urumqi**	**48.29**	**347**	⇑*i*P		**P**	**05 50 48.8**	**+0.1**
WMQ				AP	pP		05 50 58.5	-2.5
WMQ				XP	sP		05 51 02.5	-3.7
WMQ				PCP	PcP		05 52 16.0	+1.0
WMQ				S	**S**		**05 57 45.0**	**-0.4**
WMQ				SCS	ScS		06 00 36.0	-1.9
WMQ				AMB	AMB			
	comp=Z,101nm,1.0s,mb5.8							
WMQ				AMB	AMB			
	comp=Z,208nm,3.9s							
WMQ				LR	LR			
	comp=N,220nm,16.9s							
WMQ				LR	LR			
	comp=E,350nm,23.3s							
WMQ				LR	LR			
	comp=Z,228nm,10.0s							
KZA	**Kyzart**	**50.79**	**335**	P		**P**	**05 51 08.5**	**+0.8**
	SNR=11							
SONM	**Songino Array**	**50.96**	**5**	P		**P**	**05 51 09.1**	**+0.1**
	comp=Z,9.7nm,0.5s,mb5.0,baz=184,slow=9.0,SNR=16							
SONM				PcP	PcP		05 52 23.7	-1.0
	comp=Z,3.5nm,0.5s,baz=172,slow=4.9,SNR=2.6							
SONM	**Songino Array**	**50.96**	**5**	P		**P**	**05 51 09.1**	**+0.2**
SONM							05 52 23.7	
SONM				pmax	pmax			
	comp=Z,10.0nm,0.5s							
ULN	**Ulaanbaatar**	**51.05**	**5**	*e*P		**P**	**05 51 09.4**	**-0.2**
ULN				pmax	pmax			
	comp=Z,7.0nm,0.7s,mb4.7							
ULN	**Ulaanbaatar**	**51.05**	**5**	*e*P		**P**	**05 51 09.4**	**-0.2**
	comp=Z,7.2nm,0.7s,mb4.7							
UCH	**Uchtor**	**51.22**	**335**	P		**P**	**05 51 11.5**	**+0.6**
	SNR=12							
UCH	**Uchtor**	**51.22**	**335**	*e*P		**P**	**05 51 11.4**	**+0.4**
	comp=Z,5.6nm,0.4s,mb4.8							
TKM2	**Tokmak 2**	**51.34**	**336**	*e*P		**P**	**05 51 11.8**	**-0.1**
TKM2				*e*SP		sP	05 51 26.0	-3.4
TKM2				pmax	pmax			
	comp=Z,39nm,0.7s,mb5.5							
TKM2	**Tokmak 2**	**51.34**	**336**	P		**P**	**05 51 11.9**	**+0.1**
	SNR=38							
TKM2	**Tokmak 2**	**51.34**	**336**	*e*P		**P**	**05 51 11.8**	**-0.1**
	comp=Z,39nm,0.7s,mb5.4							
TKM2				*es*P		sP	05 51 25.9	-3.5
KBK	**Karagaybulak**	**51.39**	**335**	P		**P**	**05 51 12.6**	**+0.4**
	SNR=7.5							
AML	**Almayashu**	**51.50**	**334**	P		**P**	**05 51 13.8**	**+0.7**
	SNR=23							
AML	**Almayashu**	**51.50**	**334**	*e*P		**P**	**05 51 13.7**	**+0.7**
	comp=Z,28nm,0.8s,mb5.2							
AML				*es*P		sP	05 51 27.2	-3.4
AAK	**Ala-Archa**	**51.56**	**335**	P		**P**	**05 51 14.1**	**+0.5**
	SNR=5.5							
CN2	**Changchun**	**51.56**	**22**	*e*P		**P**	**05 51 11.9**	**-1.6**
CN2				*e*XP		sP	05 51 25.9	-5.2
CN2				*e*S		**S**	**05 58 30.1**	**-1.0**
CN2				AMB	AMB			
	comp=Z,30nm,0.7s,mb5.3							
CN2				LR	LR			
	comp=N,540nm,20.0s,MS4.6							
CN2				LR	LR			
	comp=E,280nm,20.0s,MS4.6							
CN2				LR	LR			
	comp=Z,390nm,20.0s,MS4.4							
CHMS	**Chumysh**	**51.75**	**335**	P		**P**	**05 51 13.7**	**-1.2**
	SNR=5.6							
EKS2	**Erkin-Say**	**51.89**	**334**	P		**P**	**05 51 16.5**	**+0.5**
	SNR=40							
EKS2	**Erkin-Say**	**51.89**	**334**	*e*P		**P**	**05 51 16.5**	**+0.5**
	comp=Z,53nm,0.8s,mb5.5							
USP	**Ospenovka**	**52.08**	**335**	P		**P**	**05 51 17.2**	**-0.1**
	SNR=18							
MAT	**Matsushiro**	**52.43**	**38**	P		**P**	**05 51 19.5**	**-0.6**
MK31	**Makanchi Array**	**52.44**	**344**	*i* P		**P**	**05 51 19.2**	**-0.8**
MK31				pmax	pmax			
	comp=Z,67nm,0.8s,mb5.6							
MK31	**Makanchi Array**	**52.44**	**344**	*e*P		**P**	**05 51 19.2**	**-0.7**
MKAR	**Makanchi Array**	**52.44**	**344**	P		**P**	**05 51 19.3**	**-0.7**
	comp=Z,47nm,0.7s,mb5.5,baz=146,slow=8.1,SNR=124							
MKAR	**Makanchi Array**	**52.44**	**344**	P		**P**	**05 51 19.3**	**-0.7**
MKAR				pmax	pmax			
	comp=Z,47nm,0.7s							
ZAK	**Zakamensk**	**53.34**	**2**	*e*P		**P**	**05 51 24.5**	**-2.0**
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.3							
KK31	**Karatay Array**	**53.70**	**332**	*i* P		**P**	**05 51 28.4**	**-0.9**
KK31				pmax	pmax			
	comp=Z,2.0nm,0.3s,mb4.5							
MDJ	**Mudanjiang**	**53.90**	**25**	P		**P**	**05 51 29.3**	**-1.4**
MDJ				AMB	AMB			
	comp=Z,8.0nm,0.8s,mb4.7							
MDJ				AMB	AMB			
	comp=Z,40nm,3.6s							
HVS	**Khovu-Aksy**	**54.44**	**354**	*d* *i*P		**P**	**05 51 33.1**	**-1.5**
HVS				pmax	pmax			
	comp=Z,38nm,0.6s,mb5.5							
KURK	**Kurchatov**	**57.03**	**343**	P		**P**	**05 51 52.8**	**-0.3**
	comp=Z,269nm,0.7s,SNR=21							
KURK	**Kurchatov**	**57.03**	**343**	P		**P**	**05 51 51.9**	**-1.3**
	comp=Z,16nm,0.5s,mb5.3,baz=162,slow=7.3,SNR=42							
KURK	**Kurchatov**	**57.03**	**343**	*e*P		**P**	**05 51 52.3**	**-0.8**
ZAA0	**Zalesovo Array**	**58.50**	**349**	*e*P		**P**	**05 52 02.4**	**-1.0**
ZALV	**Zalesovo Beam**	**58.50**	**349**	P		**P**	**05 52 02.4**	**-1.0**
	comp=Z,70nm,0.5s,mb6.0,baz=170,slow=5.4,SNR=130							
KRAR	**Krasnoyarsk**	**59.34**	**355**	⇑*i*P		**P**	**05 52 06.4**	**-2.8**
NVS	**Novosibirsk**	**59.66**	**348**	*e*P		**P**	**05 52 08.8**	**-2.6**
NVS				pmax	pmax			
	comp=N,18nm,0.9s							
NVS				pmax	pmax			
	comp=E,12nm,0.9s							
NVS				pmax	pmax			
	comp=Z,28nm,0.9s,mb5.3							
ASAJ	**Asahikawa**	**59.89**	**33**	P		**P**	**05 52 12.7**	**-0.6**
	comp=Z,9.0nm,0.4s,mb5.1,baz=226,slow=10,SNR=5.8							
ASAJ	**Asahikawa**	**59.89**	**33**	P		**P**	**05 52 12.7**	**-0.5**
ASAJ				pmax	pmax			
	comp=Z,9.0nm,0.4s							
NAY	**Al-Naaiem**	**60.84**	**306**	*e*P		**P**	**05 52 19.9**	**-0.1**
	baz=306							
NAY				AMb	AMB		05 52 21.1	
	comp=Z,18nm,1.0s,mb5.2,baz=306							
MIB	**Mutribah**	**60.98**	**307**	*e*P		**P**	**05 52 21.1**	**+0.2**
	baz=306							
MIB				AMb	AMB		05 52 22.4	
	comp=Z,33nm,1.2s,mb5.3,baz=306							
RST	**Umm Al-Ruwaisa**	**61.14**	**306**	*e*P		**P**	**05 52 21.8**	**-0.2**
	baz=306							
RST				AMb	AMB		05 52 22.7	
	comp=Z,24nm,0.7s,mb5.4,baz=306							
BOD	**Bodaibo**	**61.63**	**8**	*e*P		**P**	**05 52 23.8**	**-1.0**
BVA0	**Borovoye Array**	**61.66**	**339**	*i* P		**P**	**05 52 23.5**	**-1.5**
BVA0				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.7							
BVAR	**Borovoye Array**	**61.66**	**339**	P		**P**	**05 52 23.6**	**-1.4**
	comp=Z,18nm,0.6s,mb5.4,baz=144,slow=8.8,SNR=51							
BVAR	**Borovoye Array**	**61.66**	**339**	P		**P**	**05 52 23.6**	**-1.4**
BVAR			

comp=Z,0.9nm,0.5s,mb4.0,baz=61,slow=8.3,SNR=2.8
LSZ Lusaka 72.78 255 P **P** **05 53 38.0 +1.7**
LSZ pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
PETK Petropavlovsk- 73.22 32 P **P** **05 53 36.8 -1.3**
comp=Z,6.0nm,0.7s,mb4.7,baz=284,slow=1.6,SNR=8.2
VSR Storozhevoye 75.38 325 *eP* **P** **05 53 49.2 -1.6**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
BOSA Boshof 76.15 241 P **P** **05 53 57.1 +1.4**
comp=E,1.3nm,0.5s,mb4.1,baz=302,slow=19,SNR=4.1
BOSA Boshof 76.15 241 P **P** **05 53 57.1 +1.4**
BOSA pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
SEY Seymchan 76.24 22⇑ *eP* **P** **05 53 54.1 -1.3**
OBN Obninsk 78.38 328 *c iP* **P** **05 54 07.1 -0.5**
OBN *e* 05 57 05.9
OBN pmax pmax
comp=Z,28nm,1.1s,mb5.1
KLMR Klimovskoe 79.36 334 *eP* **P** **05 54 12.4 -0.4**
KLMR pmax pmax
comp=Z,17nm,1.4s,mb4.8
TIRR Tirgusor 79.99 316⇓ *iP* **P** **05 54 16.4 -0.2**
TIRR Tirgusor 79.99 316 ⇓P **P** **05 54 16.4 -0.2**
SUR Sutherland 80.20 238 LR LR 06 21 44.2
comp=Z,84nm,22.0s,MS4.0,baz=203,slow=30
IDI Anoyia 80.66 306 P **P** **05 54 21.1 +0.6**
comp=Z,19nm,1.1s,mb4.9,baz=30,slow=14,SNR=3.3
AKASG Malin Array Be 81.10 322 P **P** **05 54 21.4 -1.0**
comp=Z,4.3nm,0.7s,mb4.5,baz=92,slow=4.6,SNR=15
AKASG Malin Array Be 81.10 322 *i* P **P** **05 54 21.5 -0.9**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
VRI Vrincioaia 81.48 317⇑ *iP* **P** **05 54 25.3 +0.7**
MLR Muntele Rosu 81.93 317⇓ *iP* **P** **05 54 27.7 +0.7**
BURAR Bucovina Array 82.89 319⇑ *iP* **P** **05 54 33.1 +1.2**
BUR08 Bucovina Ar. S 82.91 319 *eP* **P** **05 54 33.9 +1.4**
BUR08 *es*P sP 05 54 48.4 -1.7
BZS Buzias 84.94 316⇓ *iP* **P** **05 54 41.9 -0.5**
BZS Buzias 84.94 316 ⇓P **P** **05 54 41.9 -0.5**
KOLS Kolonicke sedl 85.08 319 *eP* **P** **05 54 44.0 +1.0**
KOLS *ep*P pP 05 54 59.6 +3.4
SUW Suwalki 85.49 325 *eP* **P** **05 54 44.7 -0.3**
SUW Suwalki 85.49 325 *eP* **P** **05 54 44.7 -0.3**
CRVS Cervenica-Dubn 85.60 319 *eP* **P** **05 54 45.2 -0.4**
CRVS *ep*P pP 05 55 02.2 +3.4
STHS Stebnicka Huta 85.83 320 *eP* **P** **05 54 47.5 +0.8**
STHS *e* pP 05 55 03.6 +3.6
STHS pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
STHS Stebnicka Huta 85.83 320 *eP* **P** **05 54 47.5 +0.8**
comp=Z,6.7nm,0.7s,mb5.0
STHS *e* pP 05 55 03.6 +3.6
PSZ Piszkesteto 86.47 318⇑ *iP* **P** **05 54 50.2 +0.2**
PSZ Piszkesteto 86.47 318 ⇑P **P** **05 54 50.2 +0.3**
PKSM Moragy 87.08 316⇑ *iP* **P** **05 54 52.9 -0.1**
PKSM Moragy 87.08 316 ⇑P **P** **05 54 52.9 -0.1**
VYHS Vyhne 87.26 319 *eP* **P** **05 54 54.7 +0.9**
ARCES ARCESS Array B 87.94 340 P **P** **05 54 56.0 -0.6**
comp=Z,4.7nm,0.7s,mb4.8,baz=94,slow=4.0,SNR=16
ARCES ARCESS Array B 87.94 340 P **P** **05 54 56.0 -0.6**
ARCES pmax pmax
comp=Z,5.0nm,0.7s
ARCES ARCESS Array B 87.94 340 P **P** **05 54 56.0 -0.6**
MORC Moravsky Berou 88.26 320⇓ *iP* **P** **05 54 59.1 +0.6**
MORC Moravsky Berou 88.26 320 ⇓P **P** **05 54 59.1 +0.5**
MODS Modra-Piesok 88.27 318 *eP* **P** **05 54 59.1 +0.5**
MODS *e* pP 05 55 14.1 +2.2
MODS pmax pmax
comp=Z,7.0nm,1.3s,mb4.7
MODS Modra-Piesok 88.27 318 *eP* **P** **05 54 59.1 +0.5**
comp=Z,6.8nm,1.3s,mb4.7
MODS *e* pP 05 55 14.1 +2.2
DPC Dobruska-Polom 89.11 320 *eP* **P** **05 55 03.6 +1.1**
UPC Upice 89.32 320 *eP* **P** **05 55 04.2 +0.7**
BOJS Bojanci 89.36 315 *i P* **P** **05 55 04.4 +0.6**
PERS Pernice 89.55 317 *i P* **P** **05 55 05.2 +0.5**
VISS Visnje 89.67 316 *i P* **P** **05 55 05.7 +0.4**
PRU Pruhonice 90.22 320 *eP* **P** **05 55 08.3 +0.6**
JAVS Javornik 90.22 316 *i P* **P** **05 55 07.9 +0.1**
BRG Berggiesshubel 90.67 321 *eP* **P** **05 55 10.5 +0.7**
BRG pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
BRG Berggiesshubel 90.67 321 *eP* **P** **05 55 10.6 +0.8**
comp=Z,19nm,1.5s,mb5.2
BRG Berggiesshubel 90.67 321 *eP* **P** **05 55 10.4 +0.7**
comp=Z,8.2nm,0.9s,mb5.0
GEC2 GERESS Array S 90.68 319 *eP* **P** **05 55 10.2 +0.3**
GEC2 pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
GEC2 GERESS Array S 90.68 319 *eP* **P** **05 55 10.2 +0.3**
comp=Z,7.0nm,0.9s,mb5.0
GERES GERESS Array B 90.68 319 P **P** **05 55 09.8 -0.1**
comp=Z,3.0nm,0.7s,mb4.7,baz=85,slow=4.6,SNR=20
GERES GERESS Array B 90.68 319 P **P** **05 55 09.8 -0.1**
GERES pmax pmax
comp=Z,3.0nm,0.7s
KHC Kasperske Hory 90.78 319 *eP* **P** **05 55 10.8 +0.5**
KHC *ex* x 05 58 02.5
WET Wettzell 91.24 319 *eP* **P** **05 55 13.3 +0.8**
WET pmax pmax
comp=Z,14nm,1.4s,mb5.1
WET Wettzell 91.24 319 *eP* **P** **05 55 13.3 +0.8**
comp=Z,14nm,1.4s,mb5.1
GUNZ Gunzen 91.66 320 *eP* **P** **05 55 14.9 +0.5**
comp=Z,8.0nm,1.1s,mb5.0
MANZ Manzenberg 91.78 320 *eP* **P** **05 55 15.3 +0.3**
comp=Z,6.0nm,1.1s,mb4.8
MOX Moxa 92.13 320 *eP* **P** **05 55 17.9 +1.3**
MOX Moxa 92.13 320 *eP* **P** **05 55 17.8 +1.2**
comp=Z,39nm,2.3s,mb5.3
GRA1 Grafenberg Arr 92.34 319 *eP* **P** **05 55 18.2 +0.6**
comp=Z,11nm,0.5s,mb5.4
GRF Grafenberg Arr 92.34 319 *eP* **P** **05 55 18.2 +0.6**
GRF pmax pmax
comp=Z,11nm,0.5s,mb5.4
GRF Grafenberg Arr 92.34 319 *eP* **P** **05 55 18.2 +0.6**
GRF pmax pmax
comp=Z,11nm,0.5s,mb5.4
GRF Grafenberg Arr 92.34 319 *eP* **P** **05 55 18.2 +0.6**
comp=Z,11nm,0.5s,mb5.4
NOA NORSAR Array B 92.71 331 P **P** **05 55 18.4 -0.6**
comp=Z,0.7nm,0.7s,mb4.2,baz=94,slow=4.5,SNR=3.4
NOA NORSAR Array B 92.71 331 P **P** **05 55 18.4 -0.6**
NOA pmax pmax
comp=Z,1.0nm,0.7s
DAVOX Davos/Dischmat 93.16 317 P **P** **05 55 22.1 +0.7**
comp=Z,4.0nm,0.6s,mb5.0,baz=72,slow=14,SNR=5.3
DAVOS Davos 93.22 317 P **P** **05 55 22.1 +0.4**
KEST Kesra 93.31 305 P **P** **05 55 23.4 +1.0**
comp=Z,2.4nm,0.9s,mb4.6,baz=218,slow=6.3,SNR=5.7
NVAR Mina Array Bea 129.71 40 PKP PKPdf 06 01 17.1 +0.4
comp=Z,0.7nm,0.5s,baz=278,slow=2.2,SNR=5.1
ULM Lac du Bonnet 130.88 14 PKP PKPdf 06 01 17.7 -0.8
comp=Z,5.0nm,0.6s,baz=347,slow=3.8,SNR=9.8
ULM Lac du Bonnet 130.88 14 PKP PKPdf 06 01 17.7 -0.9
PDAR Pinedale Array 131.97 30 PKP PKPdf 06 01 20.6 -0.3
comp=Z,0.5nm,0.6s,baz=110,slow=1.5,SNR=4.7
PLCA Paso Flores 135.69 189 PKP PKPdf 06 01 28.6 +0.8
comp=Z,0.5nm,0.6s,baz=220,slow=9.3,SNR=3.5
PLCA Paso Flores 135.69 189 PKIKP PKPdf 06 01 28.7 +0.8
PLCA pmax pmax
comp=Z,1.0nm,0.6s
WMOK Wichita Mounta 143.49 28 *e*PKIKP PKPdf 06 01 37.5 -4.7
CPUP Villa Florida 144.08 214 PKP PKPdf 06 01 42.0 -1.5
comp=Z,2.2nm,0.7s,baz=138,slow=4.5,SNR=5.4
CPUP Villa Florida 144.08 214 PKIKP PKPdf 06 01 42.1 -1.4
CPUP pmax pmax
comp=Z,2.0nm,0.7s
BDFB Brasilia 144.27 238 PKP PKPdf 06 01 43.5 -0.5
comp=Z,1.2nm,0.4s,baz=168,slow=7.4,SNR=3.4
BDFB Brasilia 144.27 238 PKIKP PKPdf 06 01 43.5 -0.6
BDFB pmax pmax
comp=Z,1.0nm,0.4s
WCI Wyandotte Cave 144.41 10 *e*PKIKP PKPdf 06 01 40.5 -3.2
TXAR Lajitas Array 144.85 40 PKP PKPdf 06 01 43.5 -1.3
comp=Z,10nm,0.7s,baz=297,slow=1.1,SNR=50
TXAR Lajitas Array 144.85 40 PKIKP PKPdf 06 01 43.5 -1.3
TXAR pmax pmax
comp=Z,10.0nm,0.7s
URVA University of 145.71 358 *e*PKPdf PKPdf 06 01 45.0 -1.0
UALR University of 146.10 20 *e*PKPdf PKPdf 06 01 46.0 -0.8
WVT Waverly 146.13 13 *e*PKP2 PKPbc 06 01 45.8 -1.9
TZTN Tazewell 146.47 7 *e*PKPdf PKPdf 06 01 46.7 -0.7
TKL Tuckaleechee C 147.32 7 *e*PKP2 PKPbc 06 01 49.5 -1.6
SWET Sewanee 147.41 11 *e*PKPbc PKPbc 06 01 49.1 -2.3
JSC Jenkinsville 148.93 4 *e*PKIKP PKPdf 06 01 50.0 -1.5
JSC *e* 06 01 54.1
LRAL Lakeview Retre 149.29 14 *e*PKPbc PKPbc 06 01 54.5 -1.9
SIV San Ignacio 154.13 222 PKPbc PKPbc 06 02 07.7 -0.3
comp=Z,1.0nm,0.7s,baz=94,slow=10,SNR=4.7

NIED ***24*** *05:46:00, 4700N×15300E, h35km, Mw4.4 Best double couple: M₀4.05000×10¹⁵ NP1:φ=125.00000°, δ81.00000°, λ-31.00000°. NP2:φ=221.00000°, δ59.00000°, λ-169.00000°.*

SZGRF ***24*** *05:46:04.9, 4621N×15338E, h33km, mb4.5, Kuril Islands, Russia*

JMA ***24*** *05:46:08.4±0.8, 4702N×15299E, h30km, M4.9*

ISCJB ***24*** *05:46:09.4±0.7, 4685N±005×15273E±007, h58km±6km, mb4.6/54, MS3.6/11, Error ellipse: s-maj=10.4km s-min=5.2km az=143.3*

SKHL ***24*** *05:46:10.5±3.4, 4684N×15282E, h58km±20km, mb4.8/4, Ms4.0/1*

BJI ***24*** *05:46:10.8, 4704N×15285E, h74km, mB4.5, mb4.6*

NEIC ***24*** *05:46:11.8±1.0, 4692N×15272E, h63km±9km, mb4.6/24, Error ellipse: s-maj=10.7km s-min=6.4km az=146.0*

IDC ***24*** *05:46:11.6±0.6, 4700N×15269E, h60km±5km, mb4.0/17, mb1 4.2/18, mb1mx4.1/24, mbtmp4.0/18, MS3.5/15, Ms1 3.5/15, ms1mx3.2/51, Error ellipse: s-maj=16.6km s-min=11.6km az=138.0*

MOS ***24*** *05:46:14.3±1.2, 4707N×15274E, h95km, mb4.5/27, Error ellipse: s-maj=11.4km s-min=6.7km az=99.4*

ISC 24 05:46:11.6±0.6, 4687N±005×15272E±007, h61km±5km, h60km±.9km:pP-P, n197, σ1°15/187, mb4.6/54, 15C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.76**	**246**	⇑ *iP*	**Pn**	**05 47 05.9**	**-1.1**
KUR				*eS*	**Sn**	**05 47 50.0**	**+0.1**
KUR				pmax	pmax		
	comp=N,50nm,0.6s						
KUR				pmax	pmax		
	comp=E,80nm,0.6s						
KUR				pmax	pmax		
	comp=Z,240nm,0.6s						
KUR				smax			
	comp=N,720nm,0.6s						
KUR				smax			
	comp=E,910nm,0.6s						
KUR	**Kuril'sk**	**3.76**	**246**	⇑ *iP*	**Pn**	**05 47 05.9**	**-1.1**
KUR				AMB	AMB	05 47 07.3	
	comp=E,46nm,0.6s						
KUR				AMB	AMB	05 47 07.3	
	comp=E,76nm,0.6s						
KUR				AMB	AMB	05 47 07.3	
	comp=E,236nm,0.6s						
KUR				*i* S	**Sn**	**05 47 50.0**	**+0.1**
KUR				A		05 47 51.0	
	comp=E,2μm,1.8s						
KUR				A		05 47 51.0	
	comp=E,3μm,1.8s						
KUR				A		05 48 05.9	
	comp=E,722nm,0.6s						
KUR				A		05 48 05.9	
	comp=E,912nm,0.6s						
SKR	**Severo-Kuril's**	**4.42**	**29**	*eP*	**Pn**	**05 47 15.2**	**-0.9**
SKR				AMB	AMB	05 47 17.6	
	comp=E,80nm,0.5s						
SKR				*eS*	**Sn**	**05 48 01.2**	**-5.0**
SKR				A		05 48 15.5	
	comp=E,240nm,0.5s						
SKR				A		05 48 15.5	
	comp=E,230nm,0.5s						
SKR				A		05 48 15.5	
	comp=E,80nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.60**	**242**	*erx*	rx	05 47 58.9	
YUK				*eS*	**Sn**	**05 48 43.5**	**+8.4**
YUK				A		05 48 58.0	
	comp=E,3μm,1.0s						
YUK				A		05 48 58.0	
	comp=E,2μm,0.8s						
YUK				A		05 49 04.5	
	comp=E,850nm,0.5s						
YUK				A		05 49 04.5	
	comp=E,730nm,0.5s						
NEM2	**Nemuro 2**	**6.06**	**237**	P	**Pn**	**05 47 38.2**	**-0.2**
NEM2				*eS*	**Sn**	**05 48 45.0**	**-1.3**
JRA	**Rausu**	**6.10**	**244**	P	**Pn**	**05 47 41.7**	**+2.6**
JNK	**Nakash**	**6.54**	**243**	P	**Pn**	**05 47 47.1**	**+2.1**
YSS	**Yuzh-Sakhalins**	**6.83**	**274**	*eP*	**Pn**	**05 47 53.0**	**+4.0**
YSS				AMB	AMB	05 47 54.0	
	comp=E,60nm,1.0s						
YSS				*eS*	**Sn**	**05 49 06.0**	**+0.8**
YSS				AMS	AMS	05 50 14.0	
	comp=E,800nm,20.0s						
YSS				AMB	AMB	05 52 26.0	
	comp=E,50nm,1.0s						
YSS	**Yuzh-Sakhalins**	**6.83**	**274**	*ePn*	**Pn**	**05 47 51.0**	**+2.0**
	comp=E,31nm,0.6s						
JTKR	**Abashiri--Toko**	**6.85**	**248**	P	**Pn**	**05 47 52.2**	**+3.0**
JAK	**Akkeshi**	**6.89**	**239**	P	**Pn**	**05 47 49.6**	**-0.2**
JAK				*eS*	**Sn**	**05 49 04.5**	**-2.2**
PETK	**Petropavlovsk-**	**7.02**	**25**	P	**Pn**	**05 47 51.5**	**0.0**
	comp=E,1.5nm,0.3s,baz=172,slow=8.8,SNR=10						
PETK				LR	LR	05 50 46.8	
	comp=E,114nm,18.1s,baz=222,slow=40						
PETK	**Petropavlovsk-**	**7.02**	**25**	P	**Pn**	**05 47 51.5**	**0.0**
PETK				LR	LR	05 50 46.8	
JMP	**Maruseppu**	**7.18**	**250**	P	**Pn**	**05 47 57.1**	**+3.3**
PET	**Petropavlovsk**	**7.25**	**30**	*ePn*	**Pn**	**05 47 51.3**	**-3.4**
JAR	**Ashorobuto**	**7.28**	**244**	P	**Pn**	**05 47 57.0**	**+1.9**
JOB	**Onbets**	**7.46**	**241**	P	**Pn**	**05 47 58.4**	**+0.8**
JOB				*eS*	**Sn**	**05 49 19.3**	**-1.3**
UGL	**Uglegorsk**	**7.49**	**291**	⇑ *iP*	**Pn**	**05 48 02.2**	**+4.2**
UGL				AMB	AMB	05 48 03.0	
	comp=E,130nm,0.8s						
UGL				AMS	AMS	05 50 50.0	
	comp=E,300nm,20.0s						
UGL				AMS	AMS	05 50 50.0	
	comp=E,800nm,20.0s						
UGL				AMS	AMS	05 50 50.0	
	comp=E,2μm,20.0s						
ASAJ	**Asahikawa**	**7.63**	**253**	P	**Pn**	**05 48 04.0**	**+4.0**
	comp=E,3.5nm,0.3s,baz=74,slow=13,SNR=17						
ASAJ				LR	LR	05 50 50.1	
	comp=E,329nm,21.4s,baz=70,slow=36						
ASAJ	**Asahikawa**	**7.63**	**253**	P	**Pn**	**05 48 04.1**	**+4.1**
ASAJ	**Asahikawa**	**7.63**	**253**	PN	**Pn**	**05 48 04.0**	**+4.0**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,329nm,21.4s						
JKK2	**Kamakawa 2**	**7.64**	**251**	P	**Pn**	**05 48 03.6**	**+3.5**
JCH	**Churui**	**7.91**	**241**	P	**Pn**	**05 48 04.8**	**+1.1**
JCH				*eS*	**Sn**	**05 49 30.5**	**-1.2**
JEM	**Erimo**	**8.39**	**238**	P	**Pn**	**05 48 11.1**	**+0.8**
ERM	**Erimo**	**8.39**	**238**	⇑ *iPN*	**Pn**	**05 48 12.1**	**+1.8**
ERM	**Erimo**	**8.39**	**238**	*ePn*	**Pn**	**05 48 11.3**	**+0.9**
	comp=Z,75nm,0.6s						
JBT2	**Biratori 2**	**8.42**	**245**	P	**Pn**	**05 48 12.4**	**+1.6**
JNBK	**Urakawa-nobuka**	**8.47**	**241**	P	**Pn**	**05 48 11.5**	**+0.1**
JNBK				*eS*	**Sn**	**05 49 42.6**	**-2.8**
JNB	**Noboribetsu**	**9.41**	**246**	P	**Pn**	**05 48 25.0**	**+0.6**
JKB	**Kayabe**	**9.74**	**243**	P	**Pn**	**05 48 26.5**	**-2.3**
JYM2	**Yakumo 2**	**10.02**	**246**	P	**Pn**	**05 48 33.1**	**+0.4**
JTM	**Tenmabayashi**	**10.38**	**238**	P	**Pn**	**05 48 36.2**	**-1.4**
JTM				*eS*	**Sn**	**05 50 25.0**	**-7.3**
JANG	**Nango**	**10.40**	**235**	P	**Pn**	**05 48 34.7**	**-3.1**
JANG				*eS*	**Sn**	**05 50 23.5**	**-9.1**
JTH	**Tanohata**	**10.50**	**233**	*eS*	**Sn**	**05 50 26.7**	**-8.5**
JOSM	**Okushiri--Mats**	**10.61**	**248**	P	**Pn**	**05 48 40.8**	**+0.2**
OFUJ	**Ofunato**	**11.22**	**230**	P	**Pn**	**05 48 46.3**	**-2.8**
OFUJ				*eS*	**Sn**	**05 50 43.8**	**-9.1**
JRG	**Rokugo**	**11.56**	**234**	P	**Pn**	**05 48 51.9**	**-1.7**
JRG				*eS*	**Sn**	**05 50 53.7**	**-7.3**
JIO	**Ouri**	**11.86**	**229**	*eS*	**Sn**	**05 50 59.6**	**-8.7**
KLR	**Kul'dur**	**14.22**	**287**	*eP*	**Pn**	**05 49 33.9**	**+4.3**
KLR				*e*		05 51 58.8	
MAJO	**Matsushiro**	**14.94**	**232**	*eP*	**Pn**	**05 49 37.4**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,23nm,1.1s						
MAJO	**Matsushiro**	**14.94**	**232**	*ePn*	**Pn**	**05 49 37.4**	**-1.7**
	comp=Z,23nm,1.1s						
MJAR	**Matsushiro Arr**	**14.94**	**232**	P	**Pn**	**05 49 37.1**	**-2.0**
	comp=E,0.3nm,0.3s,baz=22,slow=13,SNR=7.6						
MJAR				LR	LR	05 55 14.0	
	comp=Z,137nm,20.9s,baz=100,slow=36						
SEY	**Seymchan**	**16.10**	**359**	⇓ *iP*	**Pn**	**05 49 54.9**	**+1.3**
JHJ	**Hachijo jima 2**	**16.91**	**220**	LR	LR	05 55 26.0	
	comp=Z,55nm,20.9s,baz=34,slow=33						
YAK	**Yakutsk**	**20.07**	**327**	⇑ *iP*	**P**	**05 50 40.9**	**+1.3**
YAK				pmax	pmax		
	comp=Z,22nm,0.6s						
KSRS	**Korea Array**	**20.58**	**252**	P	**P**	**05 50 46.4**	**+1.1**
	comp=Z,4.7nm,0.9s,baz=52,slow=11,SNR=16						
KSRS				PcP	PcP	05 54 54.1	+0.2
	comp=Z,0.8nm,1.0s,baz=163,slow=0.4,SNR=5.4						
KSRS				LR	LR	05 57 39.2	
	comp=Z,80nm,21.2s,baz=60,slow=33						
KSRS	**Korea Array**	**20.58**	**252**	P	**P**	**05 50 46.4**	**+1.1**
KSRS						05 54 54.1	
KSRS				MLR	MLR		
	comp=Z,80nm,21.2s						
INCN	**Inchon**	**21.41**	**253**	*eP*	**P**	**05 50 55.9**	**+1.7**
	comp=Z,23nm,0.8s,mb4.6						
BOD	**Bodaibo**	**25.70**	**309**	*eP*	**P**	**05 51 34.5**	**-1.2**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.9						
BOD				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5						
NJ2	**Nanjing**	**29.78**	**252**	*eP*	**P**	**05 52 13.3**	**+1.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
COLA	**College**	**36.21**	**38**⇑	*iP*	**P**	**05 53 07.6**	**-0.4**
COLA	**College**	**36.21**	**38**	*eP*	**P**	**05 53 08.2**	**+0.2**
	comp=E,11nm,0.9s,mb4.8						
GTA	**Gaotai**	**38.69**	**279**	*eP*	**P**	**05 53 31.0**	**+1.8**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb3.9						
ZALV	**Zalesovo Beam**	**42.32**	**306**	PcP	PcP	05 55 51.5	0.0
	comp=Z,2.9nm,0.7s,baz=64,slow=3.4,SNR=4.6						
ZALV				LR	LR	06 12 45.7	
	comp=Z,113nm,19.1s,baz=241,slow=38						
DLBC	**Dease Lake**	**45.70**	**46**	P	**P**	**05 54 27.2**	**+1.2**
	baz=268,slow=5.2						
MKAR	**Makanchi Array**	**46.65**	**297**	P	**P**	**05 54 33.0**	**-0.6**
	comp=Z,1.1nm,0.8s,mb3.9,baz=71,slow=7.9,SNR=3.5						
MKAR				PcP	PcP	05 56 06.2	-0.2
	comp=Z,1.3nm,0.6s,baz=65,slow=3.2,SNR=5.7						
MKAR	**Makanchi Array**	**46.65**	**297**	P	**P**	**05 54 33.0**	**-0.6**
MKAR						05 56 06.3	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**47.08**	**303**	P	**P**	**05 54 36.7**	**-0.2**
	comp=Z,1.6nm,0.6s,mb4.1,baz=68,slow=8.3,SNR=3.6						
KURK				PcP	PcP	05 56 07.7	-0.2
	comp=Z,1.5nm,0.7s,baz=65,slow=3.0,SNR=3.6						
KURK				LR	LR	06 15 41.2	
	comp=Z,120nm,20.1s,baz=90,slow=38						
KURK	**Kurchatov**	**47.08**	**303**	P	**P**	**05 54 36.7**	**-0.2**
KURK						05 56 07.7	
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
KURK				MLR	MLR		
	comp=Z,120nm,20.1s						
KURK	**Kurchatov**	**47.08**	**303**	P	**P**	**05 54 36.7**	**-0.2**
KURK				PcP	PcP	05 56 07.7	-0.2
KURK				LR	LR	06 15 41.2	
BBB	**Bella Bella**	**49.26**	**53**	LR	LR	06 12 11.3	
	comp=Z,50nm,20.7s,baz=150,slow=32						
LSA	**Lhasa**	**50.00**	**273**	*eP*	**P**	**05 55 01.9**	**+2.3**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
LSA	**Lhasa**	**50.00**	**273**	*eP*	**P**	**05 55 01.9**	**+2.3**
	comp=Z,8.4nm,0.6s,mb5.0						
BVAR	**Borovoye Array**	**50.58**	**309**	P	**P**	**05 55 02.4**	**-1.2**
	comp=Z,0.8nm,0.4s,mb4.0,baz=50,slow=8.3,SNR=4.1						
BVAR				PcP	PcP	05 56 20.5	0.0
	comp=Z,2.1nm,0.4s,baz=93,slow=3.0,SNR=7.2						
BVAR				LR	LR	06 15 43.6	
	comp=Z,85nm,19.2s,baz=123,slow=35						
BVAR	**Borovoye Array**	**50.58**	**309**	P	**P**	**05 55 02.5**	**-1.1**
BVAR						05 56 20.5	
BVAR	**Borovoye Array**	**50.58**	**309**	P	**P**	**05 55 02.5**	**-1.2**
BVAR				PcP	PcP	05 56 20.5	0.0
BVAR				LR	LR	06 15 43.6	
YKA	**Yellowknife Ar**	**50.99**	**37**	P	**P**	**05 55 06.5**	**-0.1**
	comp=Z,1.8nm,0.7s,mb4.1,baz=297,slow=7.1,SNR=5.0						
YKA				pP	pP	05 55 21.6	-0.8
	comp=Z,4.0nm,0.7s,baz=299,slow=7.5,SNR=9.0						
YKA				PcP	PcP	05 56 21.4	-0.4
	comp=Z,1.4nm,0.7s,baz=306,slow=3.8,SNR=4.6						
YKA	**Yellowknife Ar**	**50.99**	**37**	*i* P	**P**	**05 55 06.5**	**-0.1**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA	**Yellowknife Ar**	**50.99**	**37**	P	**P**	**05 55 06.5**	**-0.1**
YKA				pP	pP	05 55 21.6	-0.8
YKA				PcP	PcP	05 56 21.4	-0.4
CHTO	**Chiang Mai**	**51.89**	**256**	*eP*	**P**	**05 55 15.5**	**+1.6**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**51.89**	**256**	*eP*	**P**	**05 55 15.5**	**+1.6**
	comp=Z,4.2nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	**52.14**	**256**	P	**P**	**05 55 17.6**	**+1.8**
	comp=Z,4.4nm,0.8s,mb4.5,baz=36,slow=6.7,SNR=16						
CMAR				LR	LR	06 19 33.5	
	comp=Z,32nm,18.7s,baz=195,slow=38						
CMAR	**Chiang Mai Arr**	**52.14**	**256**	P	**P**	**05 55 17.6**	**+1.8**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,32nm,18.7s						
JIRN	**Jiri**	**54.67**	**274**	*eP*	**P**	**05 55 34.1**	**-0.1**
	comp=Z,9.3nm,0.5s,mb5.1						
GUN	**Gumba**	**54.72**	**275**	*eP*	**P**	**05 55 35.3**	**+0.7**
ARU	**Arti**	**54.74**	**317**	⇑ *iP*	**P**	**05 55 32.9**	**-1.4**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.4						
KKN	**Kakani**	**55.21**	**275**	*eP*	**P**	**05 55 37.4**	**-0.7**
	comp=Z,19nm,0.8s,mb5.2						
DMN	**Daman**	**55.44**	**275**	*eP*	**P**	**05 55 40.4**	**+0.6**
	comp=Z,26nm,0.8s,mb5.3						
GKN	**Gorkha**	**55.52**	**276**	*eP*	**P**	**05 55 41.2**	**+0.9**
	comp=Z,33nm,0.9s,mb5.4						
DANN	**Dangsing**	**55.89**	**277**	*eP*	**P**	**05 55 44.2**	**+1.2**
	comp=Z,18nm,0.6s,mb5.3						
KOLN	**Koldanda**	**56.37**	**276**	*eP*	**P**	**05 55 47.6**	**+1.2**
	comp=Z,9.6nm,0.6s,mb5.0						
EDM	**Edmonton**	**56.42**	**46**	*eP*	**P**	**05 55 46.3**	**-0.2**
EDM				*ep*P	pP	05 56 02.2	-0.3
EDM				*es*P	sP	05 56 10.7	+1.3
ARCES	**ARCESS Array B**	**57.65**	**341**	P	**P**	**05 55 53.8**	**-1.0**
	comp=Z,1.5nm,0.7s,mb4.1,baz=28,slow=8.4,SNR=2.7						
ARCES				PcP	PcP	05 56 46.8	-0.5
	comp=Z,2.9nm,0.8s,baz=44,slow=3.7,SNR=4.3			

comp=Z,1.7nm,0.8s,baz=286,slow=7.6,SNR=5.8
KAF Kangasniemi 63.22 335 *ep* **P 05 56 31.3 -1.6**
comp=Z,5.7nm,0.6s,mb4.9,baz=38,slow=6.3
KAF Kangasniemi 63.22 335 *eP* **P 05 56 31.3 -1.6**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
FINES FINESS Array B 63.82 335 *eP* **P 05 56 35.0 -1.9**
PDAR Pinedale Array 64.89 54 P **P 05 56 44.5 +0.3**
comp=Z,4.3nm,0.7s,mb4.6,baz=314,slow=1.2,SNR=33
PDAR LR LR 06 23 23.6
comp=Z,38nm,21.8s,baz=194,slow=34
ULM Lac du Bonnet 66.61 41 P **P 05 56 53.9 -1.2**
comp=Z,2.6nm,0.9s,mb4.2,baz=322,slow=4.8,SNR=3.0
NB2 NORSAR Subarra 68.03 341 P **P 05 57 02.7 -1.2**
comp=Z,8.0nm,0.6s,mb4.9,baz=26,slow=6.5
NOA NORSAR Array B 68.03 341 P **P 05 57 03.3 -0.6**
comp=Z,8.3nm,0.7s,mb4.9,baz=27,slow=6.4,SNR=25
NOA LR LR 06 28 30.7
comp=Z,67nm,19.0s,baz=110,slow=37
NOA NORSAR Array B 68.03 341 P **P 05 57 03.3 -0.6**
NOA pmax pmax
comp=Z,8.0nm,0.7s
NOA MLR MLR
comp=Z,67nm,19.0s
WRA Warramunga Arr 68.54 199 P **P 05 57 07.4 -0.1**
comp=Z,0.8nm,0.4s,mb4.0,baz=16,slow=6.6,SNR=8.8
WRA Warramunga Arr 68.54 199 *iP* **P 05 57 08.3 +0.8**
WRA pmax pmax
comp=Z,1.0nm,0.4s
ISCO Idaho Springs 69.08 54 *eP* **P 05 57 11.8 +0.9**
ISCO pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
ISCO Idaho Springs 69.08 54 *eP* **P 05 57 11.8 +0.9**
comp=Z,2.3nm,0.6s,mb4.3
FITZ Fitzroy Crossi 69.12 208 P **P 05 57 11.3 +0.1**
comp=Z,2.1nm,0.9s,mb4.1,baz=13,slow=7.1,SNR=4.6
AKASG Malin Array Be 71.30 326 P **P 05 57 23.2 -1.0**
comp=Z,5.8nm,0.4s,mb4.9,baz=32,slow=6.1,SNR=18
AKASG Malin Array Be 71.30 326 *iP* **P 05 57 23.2 -1.0**
AKASG pmax pmax
comp=Z,6.0nm,0.4s
ANMO Albuquerque 71.99 58⇑ *iP* **P 05 57 28.7 0.0**
ASAR Alice Springs 72.24 198 P **P 05 57 31.6 +1.5**
comp=Z,1.8nm,0.6s,mb4.2,baz=11,slow=5.2,SNR=17
ASAR pP pP 05 57 48.2 +1.6
comp=Z,1.0nm,0.5s,baz=12,slow=5.5,SNR=4.5
ASAR Alice Springs 72.24 198 P **P 05 57 31.6 +1.6**
ASAR *PP pP 05 57 48.2 +1.6
ASAR pmax pmax
comp=Z,2.0nm,0.6s
STHS Stebnicka Huta 75.28 330 *eP* **P 05 57 48.3 +0.7**
STHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
STHS Stebnicka Huta 75.28 330 *eP* **P 05 57 48.3 +0.7**
comp=Z,4.7nm,0.7s,mb4.5
BUR08 Bucovina Ar. S 75.32 326 *eP* **P 05 57 47.7 -0.2**
KOLS Kolonicke sedl 75.32 329 *eP* **P 05 57 47.6 -0.3**
BURAR Bucovina Array 75.34 326⇑ *iP* **P 05 57 48.1 +0.1**
CRVS Cervenica-Dubn 75.64 329 *eP* **P 05 57 47.2 -2.5**
MORC Moravsky Berou 76.21 332⇓ *iP* **P 05 57 52.9 -0.1**
MORC Moravsky Berou 76.21 332⇓ *iP* **P 05 57 52.9 -0.1**
CLL Collm 76.25 335 *iP* **P 05 57 52.1 -1.0**
CLL pmax pmax
comp=Z,14nm,1.2s,mb4.8
CLL Collm 76.25 335 *iP* **P 05 57 52.1 -1.0**
comp=Z,14nm,1.2s,mb4.8
MLR Muntele Rosu 76.81 325⇑ *iP* **P 05 57 57.3 +0.9**
MLR Muntele Rosu 76.81 325 ⇑P **P 05 57 57.3 +0.9**
MALT Malatya 76.88 313⇓ *iP* **P 05 57 59.2 +2.3**
MALT Malatya 76.88 313 ⇓P **P 05 57 59.2 +2.3**
VYHS Vyhne 76.89 331 *eP* **P 05 57 56.9 +0.1**
PSZ Piszkesteto 77.02 330⇑ *iP* **P 05 57 58.1 +0.5**
PSZ Piszkesteto 77.02 330 ⇑P **P 05 57 58.1 +0.5**
VOIR 77.21 325⇑ *iP* **P 05 57 59.4 +0.7**
VOIR 77.21 325 ⇑P **P 05 57 59.4 +0.7**
MODS Modra-Piesok 77.51 331 *eP* **P 05 57 59.1 -1.2**
TXAR Lajitas Array 77.67 60 P **P 05 58 01.5 0.0**
comp=Z,3.3nm,0.7s,mb4.4,baz=297,slow=4.2,SNR=39
TXAR pP pP 05 58 17.4 -0.8
comp=Z,2.2nm,0.7s,baz=302,slow=5.5,SNR=9.5
TXAR Lajitas Array 77.67 60 P **P 05 58 01.5 0.0**
TXAR *PP pP 05 58 17.5 -0.8
TXAR pmax pmax
comp=Z,3.0nm,0.7s
KHC Kasperske Hory 78.01 334⇓ *iP* **P 05 58 02.7 -0.4**
GRA1 Grafenberg Arr 78.20 336 *eP* **P 05 58 04.0 -0.1**
comp=Z,4.0nm,0.8s,mb4.4
GRF Grafenberg Arr 78.20 336 *eP* **P 05 58 04.0 -0.1**
GRF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
GRF Grafenberg Arr 78.20 336 *eP* **P 05 58 04.0 -0.1**
GRF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
GRF Grafenberg Arr 78.20 336 *eP* **P 05 58 04.0 -0.1**
comp=Z,4.0nm,0.8s,mb4.4
GERES CERESS Array B 78.23 334 P **P 05 58 03.8 -0.5**
comp=Z,0.8nm,0.4s,mb4.0,baz=35,slow=4.9,SNR=4.2
GERES GERESS Array B 78.23 334 P **P 05 58 03.8 -0.5**
GERES pmax pmax
comp=Z,1.0nm,0.4s
MIB Mutribah 78.37 301 *eP* **P 05 58 05.4 0.0**
baz=301
MIB AMb AMB 05 58 06.2
comp=Z,42nm,0.8s,mb5.4,baz=301
RST Umm Al-Ruwaisa 78.80 301 *eP* **P 05 58 07.7 -0.1**
baz=301
RST AMb AMB 05 58 08.3
comp=Z,28nm,0.8s,mb5.2,baz=301
NAY Al-Naaiem 78.84 301 *eP* **P 05 58 07.9 -0.1**
baz=301
NAY AMb AMB 05 58 08.3
comp=Z,16nm,0.9s,mb5.0,baz=301
RDF Al-Radifah 78.89 300 *eP* **P 05 58 08.2 -0.1**
baz=301
RDF AMb AMB 05 58 11.9
comp=Z,51nm,1.5s,mb5.2,baz=301
CDF Champ du Feu 80.44 337 *eP* **P 05 58 15.8 -0.5**
comp=Z,4.5nm,0.5s,mb4.3
CDF Champ du Feu 80.44 337 *eP* **P 05 58 15.8 -0.5**
CDF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
CDF Champ du Feu 80.44 337 *eP* **P 05 58 15.8 -0.5**
comp=Z,2.3nm,0.5s,mb4.4
PMOR Pomariorio Ree 81.34 123 *eT* 07 27 44.8
comp=Z,11nm,0.2s
LOR Lormes 82.37 339 *eP* **P 05 58 25.9 -0.7**
comp=Z,16nm,0.8s,mb4.7
LOR Lormes 82.37 339 *eP* **P 05 58 25.9 -0.7**
LOR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LOR Lormes 82.37 339 *eP* **P 05 58 25.9 -0.7**
comp=Z,8.1nm,0.8s,mb4.7
PPT Papeete 82.44 126 *eLR* LR 06 23 57.2
comp=Z,89nm,24.2s
PPT Papeete 82.44 126 LR LR 06 32 01.6
comp=Z,57nm,18.8s,baz=310,slow=33
SSF Saint Saulge 82.65 339 *eP* **P 05 58 27.4 -0.6**
comp=Z,16nm,0.8s,mb4.8
SSF Saint Saulge 82.65 339 *eP* **P 05 58 27.4 -0.6**
SSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
SSF Saint Saulge 82.65 339 *eP* **P 05 58 27.4 -0.6**
comp=Z,8.2nm,0.8s,mb4.8
SWET Sewanee 82.80 45 *eP* **P 05 58 28.0 -1.0**
AVF Avril sur Loir 82.94 339 *eP* **P 05 58 29.1 -0.4**
SMF Signal de Mont 82.96 339 *eP* **P 05 58 29.1 -0.5**
comp=Z,43nm,1.2s,mb5.0
SMF Signal de Mont 82.96 339 *eP* **P 05 58 29.1 -0.5**
SMF pmax pmax
comp=Z,21nm,1.2s,mb5.0
SMF Signal de Mont 82.96 339 *eP* **P 05 58 29.1 -0.5**
comp=Z,21nm,1.2s,mb5.0
LPL La Plagne 83.26 337 *eP* **P 05 58 31.5 +0.3**
LPG La Plagne 83.27 337 *eP* **P 05 58 31.6 +0.4**
comp=Z,9.4nm,0.8s,mb4.6
LPG La Plagne 83.27 337 *eP* **P 05 58 31.6 +0.4**
LPG pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
LPG La Plagne 83.27 337 *eP* **P 05 58 31.6 +0.4**
comp=Z,4.7nm,0.8s,mb4.6
MBDF Montbardon 83.97 336 *eP* **P 05 58 34.3 -0.6**
comp=Z,11nm,0.9s,mb4.7
MBDF Montbardon 83.97 336 *eP* **P 05 58 34.3 -0.6**
MBDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
MBDF Montbardon 83.97 336 *eP* **P 05 58 34.3 -0.6**
comp=Z,5.6nm,0.9s,mb4.7
ORIF Oris-en-Rattie 84.04 337 *eP* **P 05 58 34.6 -0.6**
comp=Z,10nm,0.8s,mb4.7
ORIF Oris-en-Rattie 84.04 337 *eP* **P 05 58 34.6 -0.6**
ORIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
ORIF Oris-en-Rattie 84.04 337 *eP* **P 05 58 34.6 -0.6**
comp=Z,5.2nm,0.8s,mb4.7
VIVF Saint-Julien-l 84.42 338 *eP* **P 05 58 37.2 +0.1**
comp=Z,17nm,1.1s,mb4.8
VIVF Saint-Julien-l 84.42 338 *eP* **P 05 58 37.2 +0.1**
VIVF pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
VIVF Saint-Julien-l 84.42 338 *eP* **P 05 58 37.2 +0.1**
comp=Z,8.4nm,1.1s,mb4.8
SBF Sospel 84.58 336 *eP* **P 05 58 39.6 +1.6**
comp=Z,13nm,0.6s,mb4.9
SBF Sospel 84.58 336 *eP* **P 05 58 39.6 +1.6**
SBF pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
SBF Sospel 84.58 336 *eP* **P 05 58 39.6 +1.6**
comp=Z,6.5nm,0.6s,mb4.9
LMR La Mourre 85.33 336 *eP* **P 05 58 41.3 -0.4**
comp=Z,12nm,0.9s,mb4.7
LMR La Mourre 85.33 336 *eP* **P 05 58 41.3 -0.4**
LMR pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
LMR La Mourre 85.33 336 *eP* **P 05 58 41.3 -0.4**
comp=Z,6.0nm,0.9s,mb4.7
TBI Tubuai 87.18 129 *eLR* LR 06 26 16.4
comp=Z,49nm,26.5s
TBI Tubuai 87.18 129 *eT* 07 35 04.1
comp=Z,10nm,0.3s
TORD Torodi Ar. Bea 114.85 329 PKP PKiKP 06 04 43.8 -1.8
comp=Z,0.2nm,0.6s,baz=29,slow=1.8,SNR=3.8
MAW Mawson 132.17 211 PKP PKPdf 06 05 17.1 +0.1
comp=Z,0.4nm,0.6s,baz=3.2,slow=16,SNR=4.2
QSPA South Pole Qui 136.61 180 PKP PKPdf 06 05 24.8 -0.2
comp=Z,0.7nm,0.5s,baz=75,slow=1.7,SNR=3.7
BDFB Brasilia 144.40 36 PKP PKPdf 06 05 38.9 -2.0
comp=Z,1.8nm,0.8s,baz=10,slow=4.7,SNR=3.4
BDFB Brasilia 144.40 36 PKIKP PKPdf 06 05 38.9 -2.0
BDFB pmax pmax
comp=Z,2.0nm,0.8s
PLCA Paso Flores 148.48 95 PKPbc PKPbc 06 05 50.2 -0.5
comp=Z,1.5nm,0.9s,baz=261,slow=6.1,SNR=7.9
PLCA Paso Flores 148.48 95 PKP2 PKPbc 06 05 50.3 -0.5
PLCA pmax pmax
comp=Z,2.0nm,0.9s
CPUP Villa Florida 148.64 60 PKPbc PKPbc 06 05 50.4 -1.2
comp=Z,3.3nm,0.6s,baz=339,slow=2.8,SNR=10
CPUP Villa Florida 148.64 60 PKP2 PKPbc 06 05 50.4 -1.2
CPUP pmax pmax
comp=Z,3.0nm,0.6s
SNAA Sanae 152.59 197 *e*PKPdf PKPbc 06 05 59.2 -0.4
SNAA *e* 06 06 04.3
SNAA *e* 06 06 10.9
SNAA *e* 06 06 24.1
VNA2 Neumayer--Watz 154.05 195 *e*PKPdf PKPbc 06 06 02.8 0.0
VNA2 *e* 06 06 09.4
VNA2 *e* 06 06 17.1
VNA2 *e* 06 06 33.8
VNA3 Neumayer Olymp 154.15 193 *e*PKPdf PKPbc 06 06 02.9 -0.1
VNA3 *e* 06 06 17.1
VNA3 *e* 06 06 33.4
VNA1 Neumayer--Stat 154.44 195 *e*PKPdf PKPab 06 06 19.4 +1.1

ISCJB ***24*** *05:56:57.0±0.5, 5267N±008×174.71W±007, h178km±5km, mb4.1/33, Error ellipse: s-maj=14.2km s-min=6.5km az=166.1*
NEIC ***24*** *05:56:58.4±0.6, 5265N×174.61W, h174km±6km, mb4.3/15, Error ellipse: s-maj=11.9km s-min=6.1km az=172.0*
IDC ***24*** *05:57:01.8±5.5, 5271N×174.57W, h208km±51km, mb3.7/18, mb1 3.9/18, mb1mx3.8/27, mbtmp3.7/18, Error ellipse: s-maj=19.8km s-min=11.1km az=16.0*

ISC 24 05:56:58.0±0.5, 5270N±008×17464W±007, h170km±5km, n56, σ0°89/55, mb4.1/33, 1D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**1.50**	**238**⇓	*i*Pn	**Pn**	**05 57 29.1**	**+0.1**
ADK				*e*Sn	**Sn**	**05 57 52.0**	**-0.9**
ADK				S	**Sn**	**05 57 52.3**	**-0.5**
AMKA	**Amchitka**	**3.97**	**253**	P	**Pn**	**05 57 59.0**	**+0.8**
UNV	**Unalaska Valle**	**5.02**	**74**	P	**Pn**	**05 58 12.3**	**+0.5**
AKUT	**Akutan**	**5.50**	**71**	P	**Pn**	**05 58 18.5**	**+0.4**
SMY	**Shemya**	**6.84**	**275**	P	**Pn**	**05 58 31.3**	**-4.5**
SVW2	**Sparrevohn**	**13.34**	**43**	*e*Pn	**Pn**	**06 00 05.5**	**+5.0**
KDAK	**Kodiak Island**	**13.54**	**59**	P	**Pn**	**05 59 59.8**	**-3.3**
	4.8nm,0.3s,baz=271,slow=7.7,SNR=22						
KDAK				S	**Sn**	**06 02 31.9**	**-1.4**
	0.8nm,0.3s,baz=122,slow=12,SNR=7.2						
KDAK	**Kodiak Island**	**13.54**	**59**	P	**Pn**	**05 59 59.8**	**-3.3**
KDAK				S	**Sn**	**06 02 31.9**	**-1.4**
SLKM	**Skilak Lake**	**15.48**	**50**	*e*Pn	**Pn**	**06 00 27.1**	**+0.1**
PPLA	**Purkeypile**	**15.64**	**40**	*e*P	**Pn**	**06 00 31.9**	**+2.9**
	68nm,1.2s						
SEW	**Seward**	**15.71**	**52**	*e*Pn	**Pn**	**06 00 28.8**	**-1.1**
DIV	**Divide**	**17.74**	**50**	*e*Pn	**Pn**	**06 00 54.0**	**-0.3**
COLD	**Coldfoot**	**18.81**	**30**	*e*P	**P**	**06 01 06.7**	**+2.4**
	9.3nm,0.7s						
DLBC	**Dease Lake**	**25.48**	**59**	pP	pP	06 02 45.9	+1.1
	baz=244,slow=11						
YKA	**Yellowknife Ar**	**32.45**	**49**	P	**P**	**06 03 09.9**	**-1.7**
	0.6nm,0.3s,mb3.8,baz=284,slow=7.9,SNR=11						
YKA				PcP	PcP	06 05 53.6	-0.7
	0.6nm,0.5s,baz=278,slow=2.9,SNR=5.0						
LON	**Longmire**	**34.01**	**78**	*e*P	**P**	**06 03 26.1**	**+0.8**
	2.7nm,0.7s,mb4.1						
RSW	**Rattlesnake Hi**	**35.51**	**78**	*e*P	**P**	**06 03 38.9**	**+0.7**
OD2	**Odessa Site #2**	**35.53**	**76**	*e*P	**P**	**06 03 38.1**	**-0.2**
HAWA	**Hanford**	**35.55**	**78**	*e*P	**P**	**06 03 38.9**	**+0.4**
	6.4nm,0.7s,mb4.4						
EDM	**Edmonton**	**35.92**	**64**	*e*P	**P**	**06 03 40.9**	**-0.7**
NEW	**Newport**	**36.03**	**73**	*e*P	**P**	**06 03 42.3**	**-0.3**
	11nm,0.9s,mb4.5						
YBH	**Yreka Blue Hor**	**36.19**	**86**	P	**P**	**06 03 45.3**	**+1.3**
	4.2nm,0.9s,mb4.1,baz=278,slow=4.6,SNR=6.1						
MJAR	**Matsushiro Arr**	**36.51**	**263**	P	**P**	**06 03 47.3**	**+0.5**
	0.4nm,0.5s,mb3.3,baz=38,slow=6.8,SNR=3.3						
MOD	**Modoc**	**37.55**	**84**	*e*P	**P**	**06 03 56.5**	**+1.0**
	3.2nm,0.5s,mb4.2						
WVOR	**Wild Horse Val**	**38.25**	**83**	*e*P	**P**	**06 04 01.9**	**+0.5**
	4.1nm,0.8s,mb4.1						
MSO	**Missoula**	**38.61**	**74**	*e*P	**P**	**06 04 04.1**	**-0.2**
	4.5nm,0.9s,mb4.1						
PAHR	**Pah Rah Range**	**39.42**	**87**	*e*P	**P**	**06 04 11.2**	**+0.1**
	9.8nm,1.0s,mb4.4						
NVAR	**Mina Array Bea**	**40.88**	**87**	P	**P**	**06 04 23.9**	**+0.8**
	4.0nm,0.7s,mb4.2,baz=296,slow=7.6,SNR=22						
IMW	**Indian Meadow**	**42.00**	**76**	*e*P	**P**	**06 04 32.5**	**+0.4**
	4.9nm,1.2s,mb4.0						
TPNV	**Topopah Spring**	**43.08**	**87**	*e*P	**P**	**06 04 41.4**	**+0.5**
	13nm,0.9s,mb4.5						
PDAR	**Pinedale Array**	**43.48**	**76**	P	**P**	**06 04 43.8**	**-0.3**
	6.2nm,0.5s,mb4.5,baz=320,slow=3.1,SNR=48						
GSC	**Goldstone**	**43.82**	**90**	*e*P	**P**	**06 04 47.1**	**+0.2**
	8.7nm,0.8s,mb4.4						
LDFC	**Landfair**	**45.00**	**89**	*e*P	**P**	**06 04 56.2**	**-0.1**
	7.2nm,0.8s,mb4.3						
RSSD	**Black Hills**	**45.89**	**71**	*e*P	**P**	**06 05 02.6**	**-0.5**
	2.9nm,0.5s,mb4.2						
ULM	**Lac du Bonnet**	**46.80**	**60**	P	**P**	**06 05 08.8**	**-1.3**
	0.8nm,0.3s,mb3.8,baz=262,slow=7.1,SNR=3.4						
TXAR	**Lajitas Array**	**55.95**	**85**	P	**P**	**06 06 17.7**	**-0.6**
	2.9nm,0.7s,mb4.2,baz=301,slow=5.5,SNR=19						
TXAR				PcP	PcP	06 07 14.8	+0.1
	0.6nm,0.5s,baz=245,slow=1.9,SNR=7.1						
TXAR	**Lajitas Array**	**55.95**	**85**	P	**P**	**06 06 17.7**	**-0.6**
TXAR				PcP	PcP	06 07 14.8	+0.1
KEV	**Kevo**	**56.84**	**351**	*ep*	**P**	**06 06 25.3**	**+1.3**
	5.5nm,0.7s,mb4.5						
ARCES	**ARCESS Array B**	**57.19**	**352**	P	**P**	**06 06 25.8**	**-0.7**
	1.8nm,0.7s,mb4.0,baz=25,slow=7.2,SNR=8.1						
KURK	**Kurchatov**	**59.93**	**315**	P	**P**	**06 06 46.4**	**+0.7**
	1.1nm,0.2s,mb4.2,baz=43,slow=6.9,SNR=6.1						
MKAR	**Makanchi Array**	**61.19**	**310**	P	**P**	**06 06 54.2**	**-0.1**
	0.8nm,0.7s,mb3.7,baz=54,slow=9.1,SNR=5.8						
BVAR	**Borovoye Array**	**61.50**	**321**	P	**P**	**06 06 56.9**	**+0.7**
	4.7nm,0.5s,mb4.6,baz=48,slow=6.2,SNR=21						
BVAR				PcP	PcP	06 07 36.6	+0.2
	0.3nm,0.3s,baz=30,slow=4.0,SNR=2.2						
JOF	**Joensuu**	**62.93**	**347**	*ep*	**P**	**06 07 05.3**	**-0.3**
	3.1nm,0.4s,mb4.5						
KAF	**Kangasniemi**	**64.34**	**349**	*ep*	**P**	**06 07 14.5**	**-0.3**
	2.1nm,0.4s,mb4.3,baz=5.6,slow=6.0						
NB2	**NORSAR Subarra**	**66.52**	**357**	P	**P**	**06 07 29.1**	**+0.3**
	comp=Z,0.7nm,0.5s,mb3.8,baz=5.7,slow=6.9						
NOA	**NORSAR Array B**	**66.52**	**357**	P	**P**	**06 07 29.2**	**+0.4**
	comp=Z,1.6nm,0.8s,mb3.9,baz=5.7,slow=6.6,SNR=4.9						
AKTO	**Aktyubinsk**	**68.04**	**327**	P	**P**	**06 07 39.0**	**+0.4**
	comp=Z,6.2nm,0.5s,mb4.6,baz=55,slow=7.3,SNR=20						
CMAR	**Chiang Mai Arr**	**73.39**	**279**	P	**P**	**06 08 10.4**	**-0.9**
	comp=Z,1.1nm,0.3s,mb4.1,baz=17,slow=6.9,SNR=4.2						
AKASG	**Malin Array Be**	**75.02**	**345**	P	**P**	**06 08 19.0**	**-1.3**
	comp=Z,0.5nm,0.3s,mb3.6,baz=16,slow=5.7,SNR=5.5						
GERES	**GERESS Array B**	**78.58**	**354**	P	**P**	**06 08 40.3**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.3,baz=40,slow=4.4,SNR=3.5						
WRA	**Warramunga Arr**	**84.77**	**227**	P	**P**	**06 09 11.0**	**-1.9**
	comp=Z,0.4nm,0.8s,mb3.2,baz=40,slow=6.9,SNR=3.3						
ASAR	**Alice Springs**	**88.22**	**226**	P	**P**	**06 09 29.3**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.5,baz=25,slow=4.7,SNR=5.9						
TORD	**Torodi Ar. Bea**	**114.35**	**4**	PKP	PKiKP	06 15 15.2	-2.3
	comp=Z,0.4nm,0.7s,baz=359,slow=1.8,SNR=4.7						
PLCA	**Paso Flores**	**128.93**	**109**	SKPbc		06 18 45.7	
	comp=Z,1.0nm,0.8s,baz=278,slow=6.6,SNR=3.9						
MAW	**Mawson**	**149.11**	**219**	PKPbc	PKPbc	06 16 23.3	-1.3
	comp=Z,2.2nm,0.9s,baz=60,slow=3.6,SNR=6.0						
BOSA	**Boshof**	**151.78**	**321**	PKPbc	PKPbc	06 16 31.0	-1.1
	comp=Z,2.2nm,0.8s,baz=330,slow=15,SNR=3.9						

IDC 24 06:07:03.3±3.4, 580S×15154E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.6/15, mbtmp3.8/3, Error ellipse: s-maj=118.0km s-min=47.1km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.85**	**228**	P	P	06 11 58.0	+0.3
	2.7nm,0.6s,baz=53,slow=10.0,SNR=25						
ASAR	**Alice Springs**	**24.57**	**222**	P	P	06 12 25.5	+0.4
	0.8nm,0.5s,baz=58,slow=8.7,SNR=13						
FITZ	**Fitzroy Crossi**	**28.09**	**242**	P	P	06 12 56.4	-0.5
	0.9nm,0.4s,baz=50,slow=9.2,SNR=9.2						
TORD	**Torodi Ar. Bea**	**149.40**	**286**	PKPbc	PKPbc	06 26 55.0	-0.4
	0.7nm,0.6s,baz=89,slow=2.7,SNR=7.7						

IDC 24 06:08:58.3±1.6, 282N×12747E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.7/6, MS4.4/1, Ms1 4.4/1, ms1mx2.7/31, Error ellipse: s-maj=101.5km s-min=19.1km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.86**	**185**	P	P	06 13 42.4	+0.3
	0.7nm,0.6s,baz=26,slow=11,SNR=3.2						
WRA	**Warramunga Arr**	**23.60**	**164**	P	P	06 14 11.1	-0.1
	1.7nm,0.6s,baz=343,slow=11,SNR=21						
ASAR	**Alice Springs**	**27.06**	**167**	P	P	06 14 42.4	-0.3
	0.2nm,0.3s,baz=344,slow=7.2,SNR=4.9						
CTA	**Charters Tower**	**29.29**	**142**	LR	LR	06 25 54.9	
	comp=Z,703nm,18.4s,baz=18,slow=35						
MKAR	**Makanchi Array**	**58.72**	**325**	P	P	06 18 57.7	-0.2
	0.4nm,0.6s,baz=116,slow=6.7,SNR=5.2						
KURK	**Kurchatov**	**62.90**	**327**	P	P	06 19 26.2	-0.1
	0.3nm,0.3s,baz=127,slow=6.5,SNR=3.6						
AKTO	**Aktyubinsk**	**74.83**	**322**	P	P	06 20 41.2	+0.6
	0.9nm,0.6s,baz=101,slow=9.4,SNR=4.5						

IDC 24 06:11:08.0±0.8, 2237S×6840W, h98km±11km, mb3.7/2, mb1 3.4/5, mb1mx3.2/19, mbtmp3.4/5, Error ellipse: s-maj=28.9km s-min=22.6km az=94.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.53**	**243**	P	Pn	06 11 25.8	+2.0
	159nm,0.3s,baz=42,slow=7.7,SNR=5216						
LVC				S	Sn	06 11 37.9	+2.3
	289nm,0.3s,baz=245,slow=1.6,SNR=69						
LPAZ	**La Paz**	**6.06**	**2**	P	Pn	06 12 37.5	+2.4
	0.5nm,0.3s,baz=190,slow=6.7,SNR=19						
CFAA	**Coronel Fontan**	**9.20**	**179**	P	Pn	06 13 17.4	-0.3
	0.1nm,0.3s,baz=344,slow=11,SNR=7.7						
SIV	**San Ignacio**	**9.39**	**49**	P	Pn	06 13 19.5	-0.9
	2.0nm,0.3s,baz=248,slow=10,SNR=26						
SIV				S	Sn	06 14 57.5	-6.8
	0.2nm,0.3s,baz=306,slow=21,SNR=3.2						
ANMO	**Albuquerque**	**67.49**	**327**	P	P	06 21 54.0	+0.4
	0.9nm,0.7s,baz=104,slow=8.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**77.20**	**70**	P	P	06 22 51.3	-0.4
	1.0nm,0.6s,baz=256,slow=5.0,SNR=12						
MKAR	**Makanchi Array**	**146.05**	**37**	PKPbc	PKPbc	06 30 36.0	-0.5
	0.8nm,0.6s,baz=299,slow=2.5,SNR=4.3						

BJI ***24*** *06:16:24.6, 623S×146.66E, h78km, mB5.1, mb4.8*
MOS ***24*** *06:16:29.5±1.2, 545S×146.15E, h67km, mb4.8/5, Error ellipse: s-maj=15.0km s-min=9.6km az=94.3*
ISCJB ***24*** *06:16:30.6±2.0, 560S±006×146.24E±006, h78km±19km, mb4.7/32, Error ellipse: s-maj=10.5km s-min=9.9km az=152.0*
IDC ***24*** *06:16:31.8±3.0, 553S×146.15E, h74km±27km, mb4.4/18, mb1 4.4/21, mb1mx4.4/25, mbtmp4.4/21, MS3.8/16, Ms1 3.8/16, ms1mx3.6/25, Error ellipse: s-maj=14.1km s-min=10.8km az=85.0*
NEIC ***24*** *06:16:31.7±1.6, 550S×146.15E, h78km±15km, mb4.5/2, Error ellipse: s-maj=10.3km s-min=9.3km az=163.0*
DJA ***24*** *06:16:39, 587S×146.05E, h110km, mb5.0/13*

ISC 24 06:16:32.1±1.4, 562S±005×14623E±006, h76km±14km, n84, σ1893/66, mb4.7/32, 9C-3D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COEN	**Coen**	**8.81**	**200**	*e*Pn	**Pn**	**06 18 37.0**	**+0.2**
	55nm,0.8s						
COEN				*e*Sn	**Sn**	**06 20 13.3**	**-1.3**
HNR	**Honiara**	**14.12**	**106**	P	**Pn**	**06 19 49.4**	**+0.8**
	baz=203,slow=14,SNR=3.1						
HNR				LR	LR	06 24 26.5	
	comp=Z,201nm,19.6s,baz=92,slow=33						
HNR	**Honiara**	**14.12**	**106**	P	**Pn**	**06 19 49.4**	**+0.8**
HNR				LR	LR	06 24 26.5	
CTA	**Charters Tower**	**14.38**	**180**	*e*P	**Pn**	**06 19 54.3**	**+2.3**
CTA	**Charters Tower**	**14.38**	**180**	P	**Pn**	**06 19 53.4**	**+1.4**
	7.5nm,0.3s,baz=349,slow=14,SNR=24						
CTAO	**Charters Tower**	**14.38**	**180**	*e*P	**Pn**	**06 19 54.4**	**+2.4**
CTAO				pmax	pmax		
	comp=Z,19nm,0.4s						
CTAO	**Charters Tower**	**14.38**	**180**	*e*P	**Pn**	**06 19 54.4**	**+2.3**
	comp=Z,19nm,0.4s						
WRAB	**Tennant Creek**	**18.33**	**218**	*e*P	**Pn**	**06 20 40.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,31nm,0.8s						
WRAB	**Tennant Creek**	**18.33**	**218**	*e*P

TSM	Tawau	29.98	289	⇑P	P	06 22 36.2	+2.4
FORT	Forrest	30.30	212	*e*P	P	06 22 36.3	-0.1
BTM	Bintulu	34.24	284	⇓P	P	06 23 12.9	+1.7
SBUM	Sibu	34.90	282	⇑P	P	06 23 18.6	+1.8
KSM	Kuching	36.56	280	⇑P	P	06 23 32.8	+1.7
KLBR	Kellerberrin	37.13	222	*e*P	P	06 23 35.4	-0.2
NWAO	Narrogin (SRO)	38.30	221	LR	LR	06 40 47.8	
	comp=Z,314nm,20.7s,baz=158,slow=38						
JHJ	Hachijo jima 2	39.01	351	LR	LR	06 36 02.9	
	comp=Z,123nm,21.6s,baz=200,slow=30						
MJAR	Matsushiro Arr	42.61	350	P	P	06 24 18.3	-2.6
	comp=Z,3.3nm,1.1s,mb4.0,baz=174,slow=9.3,SNR=4.7						
MJAR				LR	LR	06 40 07.0	
	comp=Z,85nm,19.1s,baz=200,slow=33						
URZ	Urewera	42.91	144	P	P	06 24 24.0	+0.6
	comp=Z,12nm,0.5s,mb4.8,baz=324,slow=3.7,SNR=14						
RPZ	Rata Peaks	43.78	154	P	P	06 24 31.4	+1.1
	comp=Z,34nm,0.8s,mb5.1,baz=342,slow=2.6,SNR=14						
NJ2	Nanjing	45.64	327	*e*P	P	06 24 45.5	+0.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
KSRS	Korea Array	46.13	340	P	P	06 24 49.2	+0.2
	comp=Z,3.1nm,0.5s,mb4.3,baz=155,slow=8.6,SNR=30						
KSRS				LR	LR	06 42 01.7	
	comp=Z,96nm,20.2s,baz=186,slow=33						
ASAJ	Asahikawa	49.61	357	LR	LR	06 46 03.9	
	comp=Z,45nm,20.1s,baz=62,slow=36						
CMAR	Chiang Mai Arr	52.40	298	P	P	06 25 34.5	-2.7
	comp=Z,1.9nm,0.2s,mb4.7,baz=115,slow=5.9,SNR=6.5						
CMAR	Chiang Mai Arr	52.40	298	*i* P	P	06 25 37.0	-0.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.2s						
YSS	Yuzh-Sakhalins	52.43	357	⇓*i*P	P	06 25 38.1	+1.2
YSS				*i* *PP	pP	06 26 06.1	+10
YSS				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.1						
RAR	Rarotonga	54.49	112	P	P	06 25 51.5	-1.0
	comp=Z,22nm,0.9s,mb5.2,baz=339,slow=3.3,SNR=4.2						
KLR	Kul'dur	56.06	349	*e*P	P	06 26 00.0	-3.2
PETK	Petropavlovsk-	59.30	8	P	P	06 26 25.3	-0.6
	comp=Z,2.8nm,0.8s,mb4.4,baz=161,slow=6.6,SNR=4.9						
PETK				LR	LR	06 46 46.3	
	comp=Z,91nm,21.3s,baz=350,slow=31						
HIA	Hailar	59.33	340	⇑*i*P	P	06 26 25.8	-0.4
GTA	Gaotai	61.96	321	*e*P	P	06 26 45.3	+1.1
GTA				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb4.9						
ULN	Ulaanbaatar	63.41	332	⇑*i*P	P	06 26 54.1	+0.4
ODAN	Odare	65.39	303	*e*P	P	06 27 07.5	+0.4
	comp=Z,17nm,0.5s,mb5.1						
CASY	Casey	65.42	195	*e*P	P	06 27 05.0	-1.5
JIRN	Jiri	66.67	303	*e*P	P	06 27 15.5	+0.2
	comp=Z,21nm,0.6s,mb5.1						
ZAK	Zakamensk	66.94	332	*e*P	P	06 27 16.7	+0.2
ZAK				*e*	pP	06 27 33.6	-2.7
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
GUN	Gumba	67.02	303	*e*P	P	06 27 18.1	+0.6
	comp=Z,37nm,0.4s,mb5.5						
KKN	Kakani	67.48	303	*e*P	P	06 27 20.6	+0.2
DMN	Daman	67.56	303	*e*P	P	06 27 21.4	+0.5
	comp=Z,21nm,0.5s,mb5.2						
GKN	Gorkha	68.08	303	*e*P	P	06 27 24.2	0.0
	comp=Z,21nm,0.5s,mb5.2						
BOD	Bodaibo	68.38	342	*e*P	P	06 27 24.4	-1.0
BOD				pmax	pmax		
	comp=Z,4.0nm,1.9s,mb3.9						
SEY	Seymchan	68.52	3	⇑*i*P	P	06 27 26.1	-0.1
KOLN	Koldanda	68.88	302	*e*P	P	06 27 29.3	+0.1
	comp=Z,15nm,0.5s,mb5.0						
DANN	Dangsing	68.93	303	*e*P	P	06 27 29.4	-0.1
	comp=Z,22nm,0.5s,mb5.2						
HVS	Khovu-Aksy	72.18	328	⇑*i*P	P	06 27 48.8	0.0
HVS				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.1						
SBA	Scott Base	72.99	176	*e*P	P	06 27 55.3	+2.1
SBA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
SBA	Scott Base	72.99	176	*e*P	P	06 27 55.3	+2.1
	comp=Z,5.3nm,1.0s,mb4.3						
MK31	Makanchi Array	76.72	321	*e*P	P	06 28 14.8	-0.4
MKAR	Makanchi Array	76.72	321	P	P	06 28 14.9	-0.3
	comp=Z,2.5nm,0.8s,mb4.8,baz=98,slow=7.2,SNR=23						
ZALV	Zalesovo Beam	78.28	328	P	P	06 28 22.2	-1.5
	comp=Z,1.5nm,0.6s,mb3.9,baz=97,slow=5.1,SNR=6.1						
ZALV				LR	LR	07 01 41.2	
	comp=Z,68nm,19.3s,baz=68,slow=35						
KURK	Kurchatov	80.45	323	P	P	06 28 34.2	-1.4
	comp=Z,0.8nm,0.5s,mb3.8,baz=109,slow=4.8,SNR=4.1						
KURK	Kurchatov	80.45	323	⇓*i*P	P	06 28 34.7	-0.9
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
MAW	Mawson	82.30	203	⇑*i*P	P	06 28 45.7	+0.6
MAW	Mawson	82.30	203	P	P	06 28 45.8	+0.7
	comp=Z,7.3nm,0.7s,mb4.6,baz=85,slow=5.5,SNR=27						
MAW				LR	LR	06 59 57.8	
	comp=Z,97nm,20.5s,baz=232,slow=32						
COLA	College	85.10	23	⇑*i*P	P	06 28 58.1	-1.3
BVAR	Borovoye Array	86.01	324	P	P	06 29 03.0	-1.2
	comp=Z,2.8nm,0.8s,mb4.2,baz=104,slow=6.3,SNR=9.7						
BVAR				LR	LR	07 07 10.8	
	comp=Z,45nm,18.1s,baz=95,slow=35						
OPO	Ambohidrampo	96.75	251	P	P	06 29 55.3	+0.2
	comp=Z,5.1nm,0.9s,mb4.9,baz=204,slow=3.9						
YKA	Yellowknife Ar	99.19	28	LR	LR	07 11 44.2	
	comp=Z,38nm,18.2s,baz=220,slow=33						
SNAA	Sanae	100.24	190	*e*Pdiff	Pdif	06 30 08.9	-1.0
VNA2	Neumayer--Watz	101.61	189	*e*Pdiff	Pdif	06 30 15.2	-0.8
VNA3	Neumayer Olymp	101.65	188	*e*Pdiff	Pdif	06 30 14.0	-2.1
PLCA	Paso Flores	122.86	147	PKP	PKPdf	06 35 19.8	-0.1
	comp=Z,2.3nm,0.7s,baz=286,slow=1.4,SNR=10						
EKA	Eskdalemuir Ar	124.70	339	PKP	PKPdf	06 35 21.2	-1.8
	comp=Z,3.7nm,1.0s,baz=7.0,slow=10,SNR=3.9						
LPAZ	La Paz	135.83	123	PKHKP		06 35 43.8	
	comp=Z,1.3nm,0.9s,baz=79,slow=2.2,SNR=4.3						
CPUP	Villa Florida	140.88	145	PKHKP		06 35 45.7	
	comp=Z,0.5nm,0.4s,baz=245,slow=6.8,SNR=3.0						
CPUP				PKP	PKPdf	06 35 54.7	+0.5
	comp=Z,1.3nm,0.6s,baz=309,slow=5.3,SNR=4.6						
TORD	Torodi Ar. Bea	144.25	285	PKP	PKPdf	06 35 58.4	-2.1
	comp=Z,4.5nm,0.8s,baz=78,slow=3.3,SNR=45						
SIV	San Ignacio	145.49	129	PKPbc	PKPbc	06 36 03.0	+0.3
	comp=Z,50nm,0.9s,baz=235,slow=3.7,SNR=146						
KIC	Kosan Boka	151.12	273	*e*PKP1	PKPbc	06 36 18.8	+1.0
	comp=Z,39nm,0.8s						
DBIC	Dimbokro	151.23	274	PKPbc	PKPbc	06 36 17.9	-0.2
	comp=Z,5.4nm,0.5s,baz=100,slow=3.3,SNR=21						
DBIC				PKPab	PKPab	06 36 26.7	+0.5
	comp=Z,4.1nm,0.6s,baz=89,slow=5.9,SNR=4.2						
TIC	Toumodi	151.40	274	*e*PKP1	PKPbc	06 36 19.4	+1.0
	comp=Z,36nm,0.5s						
LIC	Lamto	151.41	273	*e*PKP1	PKPbc	06 36 19.4	+1.0
	comp=Z,31nm,0.5s						
BDFB	Brasilia	154.60	146	PKPbc	PKPbc	06 36 26.3	+0.9
	comp=Z,4.0nm,0.8s,baz=210,slow=6.6,SNR=3.0						
BDFB				PKPab	PKPab	06 36 40.6	+0.6
	comp=Z,4.6nm,0.8s,baz=180,slow=10,SNR=3.5						

*PNSN **24** 06:20:54.3, 45.10N×123.03W, h24km, MD3.6, Fault plane solution: NP1:φ=50.00000°, δ=45.00000°, NP2: φ=298.00000°, δ=69.00000°, Principal axes: T Plg49.0000°, Azm252.0000°; P Plg14.0000°, Azm359.0000°;*

NEIC 24 06:20:54.3, 45.10N×123.03W, h24km, ML3.6(SEA), MW3.7(SLM), 12C-18D, After SEA., Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COLT	Colton High Sc	0.42	81	⇑P	Pb	06 21 03.3	+0.1
KEEL	Keeler	0.46	12	P	Pb	06 21 04.0	+0.3
SSOR	Sweet Springs	0.47	121	⇑P	Pb	06 21 04.1	+0.2
HEBO	Mount Hebo	0.52	282	⇑P	Pb	06 21 04.8	0.0
GT2	Goat Mountain	0.54	84	⇑P	Pb	06 21 05.3	+0.2
PGO	Gresham	0.55	48	P	Pb	06 21 05.4	+0.2
COR	Corvallis	0.55	201	P	Pb	06 21 05.1	-0.2
KMOR	Kings Mountain	0.62	329	P	Pb	06 21 06.4	-0.1
MPOR	Mary's Peak	0.70	212	⇓P	Pb	06 21 07.8	0.0
VLMM	Larch Mountain	0.82	58	⇓P	Pb	06 21 10.0	+0.1
TDH	Tom, Dick, Har	0.90	78	⇑P	Pb	06 21 11.0	-0.2
BROR	Big Rock Looko	0.93	154	⇓P	Pb	06 21 11.3	-0.4
VLL	Laurance Lake	1.02	69	⇑P	Pn	06 21 13.2	+0.2
VBEM	Beaver Butte	1.02	92	⇑P	Pn	06 21 13.4	+0.3
NLO	Nicolai Mounta	1.03	343	⇓P	Pn	06 21 13.4	+0.2
BPO	Bald Peter	1.05	115	⇑P	Pn	06 21 14.1	+0.5
LVP	Lakeview Peak	1.06	24	⇓P	Pn	06 21 13.4	-0.3
RVW	Rose Valley	1.07	11	⇓P	Pn	06 21 13.4	-0.3
EUO	Eugene	1.07	181	⇓P	Pn	06 21 13.6	-0.3
MTMW	Mount Mitchell	1.09	32	⇓P	Pn	06 21 13.8	-0.3
VFP	Flag Point	1.13	78	⇑P	Pn	06 21 15.0	+0.5
IRO	Indian Ridge	1.23	153	⇓P	Pn	06 21 16.3	+0.3
ERK	Elk Rock	1.30	22	⇓P	Pn	06 21 17.0	+0.1
GULW	Guler Mountain	1.30	50	⇑P	Pn	06 21 17.6	+0.6
HBO	Huckleberry Mo	1.36	158	⇓P	Pn	06 21 18.5	+0.8
BMW	Boistfort Moun	1.38	354	⇓P	Pn	06 21 18.0	0.0
ASR	Mount Adams--S	1.45	43	⇓P	Pn	06 21 20.2	+1.1
TAKO	Tahkenitch	1.55	209	⇑P	Pn	06 21 21.9	+1.5
LMW	Ladd Mountain	1.65	18	⇑P	Pn	06 21 23.1	+1.4
VIPM	Ingram Point	1.82	108	⇓P	Pn	06 21 25.6	+1.6
LON	Longmire	1.85	27	*e*Pn	Pn	06 21 26.2	+1.7
GSM	Grass Mountain	2.27	22	P	Pn	06 21 32.9	+2.7
NLWA	Neilton Lookou	2.36	346	*e*Pn	Pn	06 21 33.6	+2.0
KEBM	Edson Butte	2.42	203	*e*Pn	Pn	06 21 34.4	+2.1
GNW	Green Mountain	2.47	3	*e*Pn	Pn	06 21 35.1	+2.1
HUMO	Hull Mountain	2.50	179	*e*Pn	Pn	06 21 37.3	+3.9
TBM	Table Mountain	2.67	38	⇓P	Pn	06 21 38.4	+2.7
RSW	Rattlesnake Hi	2.73	61	⇓P	Pn	06 21 38.8	+2.2
HAWA	Hanford	2.77	61	*e*Pn	Pn	06 21 39.3	+2.2
KBO	Bosley Butte	3.02	197	Pn	Pn	06 21 43.3	+2.8
OBC	Olympics--Boni	3.02	347	P	Pn	06 21 42.8	+2.2
ETW	Entiat	3.12	36	*e*Pn	Pn	06 21 44.7	+2.7
ETW				*e*Sn	Sn	06 22 28.5	+10
EPH	Ephrata	3.28	45	⇓P	Pn	06 21 46.5	+2.3
YBH	Yreka Blue Hor	3.38	176	*e*Pn	Pn	06 21 50.6	+5.1
LNOR	Lincton Mounta	3.42	75	*e*Pn	Pn	06 21 47.3	+1.2
LNOR				*e*Sn	Sn	06 22 37.9	+12
RPW	Rockport	3.50	17	*e*Pn	Pn	06 21 50.5	+3.2
RPW				*e*Sn	Sn	06 22 32.4	+4.5
LHEM	Herd Peak	3.52	170	⇓P	Pn	06 21 51.6	+4.1
PGC	Sidney	3.56	355	*e*Pn	Pn	06 21 50.1	+2.1
PGC				*e*Sn	Sn	06 22 33.7	+4.4
KRMB	Red Mountain	3.63	190	*e*Pn	Pn	06 21 52.3	+3.2
MOD	Modoc	3.76	147	*e*Pn	Pn	06 21 55.7	+4.8
OD2	Odessa Site #2	3.77	51	*e*Pn	Pn	06 21 52.8	+1.9
BMO	Blue Mountains	4.07	92	*e*Pn	Pn	06 21 57.0	+2.0
BMO				*e*Sn	Sn	06 22 57.0	+15
WVOR	Wild Horse Val	4.15	128	*e*Pn	Pn	06 21 58.7	+2.5
WDC	Whiskeytown Da	4.54	175	*e*Pn	Pn	06 22 07.6	+6.2
NEW	Newport	5.15	50	*e*Pn	Pn	06 22 14.3	+4.5
	6.0nm,0.6s						
HLID	Hailey	6.37	101	*e*Pn	Pn	06 22 31.1	+4.5
	3.1nm,0.7s						
MSO	Missoula	6.57	72	*e*Pn	Pn	06 22 31.3	+2.0
	2.9nm,0.6s						
MSO				*e*S	Sn	06 23 37.9	-5.4
CHMT	Chamberlain Mo	7.05	72	*e*Pn	Pn	06 22 38.1	+2.2
CHMT				*e*Sn	Sn	06 24 41.0	+46
DLMT	Dillon	7.37	84	*e*Pn	Pn	06 22 43.3	+3.0
	11nm,1.4s						

*IDC **24** 06:25:23.6±1.0, 7.16S×122.98E, h0km, mb4.0/3, mb1 4.0/8, mb1mx3.8/20, mbtmp3.9/8, ML3.3/3, MS3.5/2, Ms1 3.5/2, ms1mx3.0/29, Error ellipse: s-maj=73.3km s-min=17.7km az=62.0*

*ISCJB **24** 06:25:27.2±1.5, 7.54S±006×122.53E±009, h44km±17km, mb4.0/3, MS3.4/2, Error ellipse: s-maj=16.3km s-min=9.3km az=158.5*

ISC 24 06:25:30.4±1.0, 7.53S±006×122.45E±009, h53km±14km, n14, σ0=95/13, mb4.0/3, MS3.4/2, 1C-1D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.91	156	Pn	Pn	06 26 15.8	+1.5
	18nm,0.3s,baz=293,slow=3.2,SNR=8.6						
WSI	Waingapu	3.01	225	⇓*e*P	Pn	06 26 12.0	-3.5
WSI				*e*S	Sn	06 26 51.3	+0.9
KDI	Kendari	3.56	3	⇑*e*P	Pn	06 26 24.1	+1.0
KDI				*e*S	Sn	06 26 53.1	-11
KAPI	Kappang	3.67	313	Pn	Pn	06 26 24.1	-0.6
	2.5nm,0.3s,baz=159,slow=9.5,SNR=15						
KAPI				Sn	Sn	06 27 06.3	-0.5
	7.3nm,0.3s,baz=273,slow=21,SNR=8.7						
FITZ	Fitzroy Crossi	10.95	164	Pn	Pn	06 28 03.4	-1.0
	0.2nm,0.3s,baz=59,slow=4.8,SNR=5.2						
WRA	Warramunga Arr	16.88	138	Pn	Pn	06 29 18.8	-4.3
	0.0nm,0.3s,baz=315,slow=12,SNR=2.4						
ASAR	Alice Springs	19.44	147	P	Pn	06 29 54.0	-0.3
	0.1nm,0.3s,baz=322,slow=12,SNR=14						
CTA	Charters Tower	26.22	121	LR	LR	06 41 35.2	
	comp=Z,78nm,19.0s,MS3.3,baz=39,slow=37						
STKA	Stephens Creek	30.08	146	LR	LR	06 44 55.8	
	comp=Z,109nm,18.2s,MS3.5,baz=24,slow=39						
MKAR	Makanchi Array	64.79	331	P	P	06 36 04.3	+0.8
	1.9nm,0.7s,mb4.2,baz=136,slow=7.8,SNR=18						
ZALV	Zalesovo Beam	68.96	337	P	P	06 36 29.2	-0.6
	0.8nm,0.5s,mb3.9,baz=123,slow=5.5,SNR=3.9						
KURK	Kurchatov	69.26	332	P	P	06 36 32.1	+0.3
	0.8nm,0.7s,mb3.8,baz=142,slow=6.3,SNR=4.8						
TORD	Torodi Ar. Bea	121.56	281	PKP	PKPdf	06 44 19.8	+0.7
	0.5nm,1.0s,baz=338,slow=1.6,SNR=3.0						
CPUP	Villa Florida	146.34	180	PKPbc	PKPbc	06 45 06.5	+0.5
	1.2nm,0.8s,baz=207,slow=6.6,SNR=3.2						

*IDC **24** 06:52:46.5±4.2, 5.35S×147.08E, h169km±28km, mb3.6/3, mb1 3.8/4, mb1mx3.4/15, mbtmp3.6/4, MS3.2/1, Ms1 3.2/1, ms1mx2.6/24, Error ellipse: s-maj=102.9km s-min=19.6km az=109.0*

ISC 24 06:52:48.6±3.4, 53S±03×1466E±07, h163km±34km, n7, σ0=89/8, mb3.9/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WB2	Warramunga Arr	18.85	218	*e*P	P	06 56 56.6	+0.4
WRA	Warramunga Arr	18.86	218	P	P	06 56 56.6	+0.2
	0.8nm,0.3s,baz=40,slow=12,SNR=57						
WRA				S	S	07 00 21.5	-0.7
	0.1nm,0.3s,baz=36,slow=20,SNR=5.8						
ASAR	Alice Springs	22.02	213	P	P	06 57 29.3	-0.7
	4.1nm,0.6s,mb4.0,baz=49,slow=9.0,SNR=34						
ASAR				S	S	07 01 22.4	+1.0
	4.1nm,0.8s,baz=33,slow=23,SNR=20						
FITZ	Fitzroy Crossi	24.15	236	*e*P	P	06 57 50.8	+1.1
FITZ	Fitzroy Crossi	24.15	236	P	P	06 57 50.1	+0.4
	1.4nm,0.4s,mb3.9,baz=69,slow=12,SNR=20						
FITZ				LR	LR	07 08 47.2	
	comp=Z,66nm,21.8s,baz=281,slow=39						
ZALV	Zalesovo Beam	78.19	328	P	P	07 04 29.3	-0.4
	1.3nm,0.7s,mb3.7,baz=102,slow=6.1,SNR=3.0						
TORD	Torodi Ar. Bea	144.54	285	PKPbc	PKPdf	07 12 02.9	-3.7
	0.5nm,0.4s,baz=62,slow=3.2,SNR=14						

*ISCJB **24** 07:10:52.8±1.6, 5.60S±006×146.04E±007, h73km±16km, mb4.5/21, Error ellipse: s-maj=12.7km s-min=9.1km az=26.1*

*BJI **24** 07:10:54.0, 5.50S×146.00E, h71km, mb4.9, Ms4.5*

*NEIC **24** 07:10:54.1±1.4, 5.54S×146.04E, h71km±14km, mb4.4/1, Error ellipse: s-maj=11.8km s-min=9.9km az=117.0*

*IDC **24** 07:10:55.6±3.5, 5.60S×146.03E, h86km±31km, mb4.1/15, mb1 4.2/18, mb1mx4.2/20, mbtmp4.2/18, MS3.5/9, Ms1 3.5/9, ms1mx3.3/22, Error ellipse: s-maj=18.2km s-min=12.1km az=73.0*

*DJA **24** 07:11:14, 7.00S×144.35E, h10km, mb4.9/8*

ISC 24 07:10:54.8±1.5, 562S±007×14604E±007, h75km±15km, n53, σ0=86/41, mb4.5/21, 1D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.92	164	*e*Pn	Pn	07 11 50.9	-1.7
COEN	Coen	8.75	199	*e*Pn	Pn	07 12 59.0	+0.4
	23nm,0.6s						
COEN				*e*Sn	Sn	07 14 34.9	-0.8
HNR	Honiara	14.29	106	P	Pn	07 14 14.5	+0.9
	15nm,0.3s,baz=208,slow=7.0,SNR=4.4						
HNR				LR	LR	07 18 51.4	
	comp=Z,110nm,20.7s,baz=10,slow=33						
CTA	Charters Tower	14.38	179	*e*P	Pn	07 14 15.2	+0.5
CTA	Charters Tower	14.38	179	P	Pn	07 14 16.1	+1.4
	4.6nm,0.3s,baz=360,slow=14,SNR=24						
CTA				LR	LR	07 19 57.5	
	comp=Z,236nm,18.5s,baz=24,slow=38						
CTAO	Charters Tower	14.38	179	*e*Pn	Pn	07 14 16.2	+1.6
	16nm,0.5s						
WRAB	Tennant Creek	18.21	218	*e*P	Pn	07 15 02.9	+0.3
	28nm,1.0s						
WB2	Warramunga Arr	18.22	218	*e*P	Pn	07 15 02.8	+0.1
WB2				*e*S	S	07 18 20.4	-5.9
WRA	Warramunga Arr	18.23	218	P	Pn	07 15 02.8	0.0
	1.1nm,0.3s,baz=37,slow=12,SNR=28						
WRA				PcP	PcP	07 19 32.2	+0.2
	0.3nm,0.3s,baz=22,slow=1.8,SNR=8.2						
WRA				LR	LR	07 22 42.7	
	comp=Z,99nm,20.3s,baz=45,slow=39						
GUMO	Guam	19.12	357	LR	LR	07 21 39.7	
	comp=Z,90nm,19.6s,baz=281,slow=34						
ASAR	Alice Springs	21.41	212	P	P	07 15 37.1	+0.5
	3.7nm,0.5s,mb4.0,baz=48,slow=9.4,SNR=38						
ASAR				PcP	PcP	07 19 36.1	-1.6
	3.6nm,0.8s,baz=52,slow=1.3,SNR=7.7						
BATI	Baumata	22.62	257	P	P	07 15 50.5	+0.9
	44nm,0.4s,mb5.1,baz=227,slow=0.6,SNR=8.9						
FITZ	Fitzroy Crossi	23.47	236	*e*P	P	07 15 57.6	-0.2
FITZ	Fitzroy Crossi	23.47	236	P	P	07 15 57.8	-0.1
	11nm,0.6s,mb4.4,baz=52,slow=10,SNR=40						
FITZ				LR	LR	07 26 10.9	
	comp=Z,126nm,19.7s,baz=53,slow=39						
ARMA	Armidale	25.22	169	*e*P	P	07 16 15.7	+2.1
STKA	Stephens Creek	26.45	189	*e*P	P	07 16 24.2	-0.5
STKA	Stephens Creek	26.45	189	P	P	07 16 24.0	-0.8
	4.9nm,0.7s,mb4.1,baz=2.1,slow=9.6,SNR=13						
STKA				LR	LR	07 28 40.6	
	comp=Z,187nm,20.0s,baz=24,slow=40						
NWAO	Narrogin (SRO)	38.18	221	LR	LR	07 35 01.6	
	comp=Z,184nm,21.7s,baz=174,slow=38						
MJAR	Matsushiro Arr	42.58	351	P	P	07 18 42.1	-1.3
	0.8nm,0.7s,mb3.5,baz=256,slow=41,SNR=4.2						
URZ	Urewera	43.02	143	P	P	07 18 46.0	-1.0
	6.3nm,0.5s,mb4.6,baz=111,slow=12,SNR=11						
RPZ	Rata Peaks	43.86	154	P	P	07 18 53.4	-0.2
	14nm,0.8s,mb4.8,baz=206,slow=2.3,SNR=7.4						
KSRS	Korea Array	46.07	340	P	P	07 19 11.1	-0.2
	2.4nm,0.5s,mb4.2,baz=155,slow=8.7,SNR=26						
KSRS				LR	LR	07 36 23.9	
	comp=Z,52nm,18.2s,baz=338,slow=33						
CMAR	Chiang Mai Arr	52.23	298	P	P	07 19 57.4	-1.3
	3.9nm,0.8s,mb4.5,baz=118,slow=5.7,SNR=12						
PETK	Petropavlovsk-	59.34	8	P	P	07 20 48.9	+0.1
	2.5nm,0.8s,mb4.3,baz=147,slow=5.6,SNR=6.2						
PETK				LR	LR	07 41 30.3	
	comp=Z,42nm,21.5s,baz=169,slow=31						
PETK	Petropavlovsk-	59.34	8	P	P	07 20 48.9	+0.1
PETK				LR	LR	07 41 30.3	
GTA	Gaotai	61.85	321	*e*P	P	07 21 07.1	+0.9
GTA				AMB	AMB		
	comp=Z,8.0nm,0.5s,mb5.0						
SONM	Songino Array	63.62	331	P	P	07 21 18.2	+0.5
	comp=Z,1.2nm,0.6s,mb3.9,baz=182,slow=4.5,SNR=3.5						
CASY	Casey	65.37	195	*e*P	P	07 21 28.9	0.0
JIRN	Jiri	66.52	303	*e*P	P	07 21 37.8	+0.8
	comp=Z,9.6nm,0.5s,mb4.9						
GUN	Gumba	66.87	303	*e*P	P	07 21 39.9	+0.7
	comp=Z,26nm,0.5s						
KKN	Kakani	67.32	303	*e*P	P	07 21 42.4	+0.3
	comp=Z,21nm,0.7s,mb5.1						
DMN	Daman	67.41	303	*e*P	P	07 21 43.2	+0.5
	comp=Z,18nm,0.6s,mb5.1						
GKN	Gorkha	67.93	303	*e*P	P	07 21 46.1	+0.1
	comp=Z,19nm,0.6s,mb5.1						
DANN	Dangsing	68.78	303	*e*P	P	07 21 51.3	+0.1
	comp=Z,18nm,0.6s,mb5.1						
MK31	Makanchi Array	76.60	321	*e*P	P	07 22 36.8	-0.5
MKAR	Makanchi Array	76.60	321	P	P	07 22 36.8	-0.5
	comp=Z,2.3nm,0.6s,mb4.1,baz=99,slow=7.2,SNR=22						
ZALV	Zalesovo Beam	78.19	328	P	P	07 22 44.0	-1.9
	comp=Z,1.4nm,0.5s,mb3.9,baz=102,slow=6.2,SNR=6.1						
MAW	Mawson	82.23	203	*e*P	P	07 23 07.6	+0.2
MAW

IMO			*e*S	Sn	07 37 41.3	-0.3
DR12	**Loma Pena Alta**	**0.88 304**⇑	*e*P	Pn	07 37 25.9	+0.4
DR12			*e*S	Sn	07 37 43.8	-0.2
STDO	**Santo Domingo**	**1.26 277**⇑	*e*P	Pn	07 37 28.9	+0.1
STDO			*e*S	Sn	07 37 49.1	-0.6
AGPR	**Aguadilla, PR**	**1.44 83**⇓	*e*P	Pn	07 37 30.7	0.0
AGPR			*e*S	Sn	07 37 53.5	+0.5
LSP	**Las Mesas**	**1.46 94**⇑	*e*P	Pn	07 37 31.2	+0.3
LSP			*e*S	Sn	07 37 54.0	+0.7
CRPR	**Cabo Rojo, PR**	**1.46 101**⇑	*e*P	Pn	07 37 31.7	+0.8
CRPR			*e*S	Sn	07 37 53.6	+0.3
DR08	**Loma La Naviza**	**1.49 297**⇑	*e*P	Pn	07 37 31.4	+0.2
DR08			*e*S	Sn	07 37 54.2	+0.3
GBPR	**Guanica, Bosqu**	**1.68 101**⇑	*e*P	Pn	07 37 33.7	+0.5
GBPR	**Guanica, Bosqu**	**1.68 101**	*e*S	Sn	07 37 58.3	+0.8
LRS	**Lares**	**1.68 90**⇑	*e*P	Pn	07 37 33.0	-0.2
LRS			*e*S	Sn	07 37 58.3	+0.8
AOPR	**Arecibo Observ**	**1.77 88**⇓	*e*P	Pn	07 37 33.7	-0.5
AOPR			*e*S	Sn	07 37 58.7	-0.5
OBIP	**Obispado Ponce**	**1.93 97**⇑	*e*P	Pn	07 37 35.6	-0.3
OBIP			*e*S	Sn	07 38 02.5	+0.2
CELP	**Cerrillos**	**1.95 96**⇑	*e*P	Pn	07 37 36.3	+0.1
CELP			*e*S	Sn	07 38 03.0	+0.2
ICM	**Isla Caja Muer**	**2.03 101**⇓	*e*P	Pn	07 37 37.1	-0.1
ICM			*e*S	Sn	07 38 04.5	-0.1
SJG	**San Juan**	**2.35 94**	*e*S	Sn	07 38 12.7	+1.4
SJG	**San Juan**	**2.35 94**	*e*S	Sn	07 38 12.0	+0.7
CPD	**Cerro la Pandu**	**2.58 95**⇓	*e*P	Pn	07 37 43.3	-0.4
CPD			*e*S	Sn	07 38 16.6	+0.3
HUMP	**Col San Antoni**	**2.63 93**⇑	*e*P	Pn	07 37 43.6	-0.7
HUMP			*e*S	Sn	07 38 18.6	+1.2
MTP	**Monte Pirata**	**2.92 93**⇓	*e*P	Pn	07 37 47.4	-0.5
MTP			*e*S	Sn	07 38 24.7	+0.9

NDI ***24*** *07:45:25.6±3.3, 3468N×7188E, h33km, ML3.1*
IDC ***24*** *07:45:30.0±1.0, 3455N×7316E, h0km, mb3.8/5, mb1 3.8/8, mb1mx3.6/25, mbtmp3.7/8, ML3.5/3, Error ellipse: s-maj=31.2km s-min=21.2km az=62.0*
ISCJB ***24*** *07:45:35.1±0.7, 3478N±004×7325E±007, h47km±11km, mb3.6/4, Error ellipse: s-maj=9.5km s-min=6.4km az=162.0*
NNC ***24*** *07:45:42.0±7.4, 3535N×7238E, h0km, mb3.5, mpv4.0, Error ellipse: s-maj=82.8km s-min=54.5km az=93.0*

ISC 24 07:45:37.1±0.6, 3472N±004×7320E±007, h51km±10km, n24, σ1§24/31, mb3.6/4, 4C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.06**	**177**		⇑P	**Pn**	**07 45 51.3**	**-4.3**
CEP	**Cherat**	**1.39**	**230**		P	**Pn**	**07 45 58.1**	**-2.0**
CEP					S	**Sn**	**07 46 19.0**	**+1.6**
THW	**Thamme Wali**	**2.27**	**213**		P	**Pn**	**07 46 12.0**	**-0.1**
THN	**Thein Dam**	**3.10**	**137**		*e*P	**Pn**	**07 46 25.0**	**+1.5**
THN					*e*S	**Sn**	**07 47 06.9**	**+7.6**
DLH	**Dalhousie**	**3.17**	**132**		*ex*	**Pn**	**07 46 28.0**	**+3.6**
DLH					*e*S	**Sn**	**07 47 08.0**	**+7.0**
BHK	**Bhakra**	**4.26**	**140**		*ex*	**Sn**	**07 47 39.0**	**+11**
SDNR	**Sundarnagar**	**4.51**	**134**		*e*P	**Pn**	**07 46 42.0**	**-0.8**
SDNR					*ex*	**Sn**	**07 47 49.6**	**+16**
SMLA	**Simla**	**4.89**	**136**		*i* P	**Pn**	**07 46 46.5**	**-1.6**
SMLA					*i* S	**Sn**	**07 47 45.4**	**+2.0**
DDI	**Dehra Dun**	**6.00**	**136**		*ex*	**Sn**	**07 48 09.0**	**-1.7**
KHET	**Khetri**	**6.99**	**161**		*e*S	**Sn**	**07 48 27.2**	**-7.8**
KHET	comp=E,12nm,0.4s				AML	AML	07 49 12.7	
KHET	comp=N,8.0nm,0.6s				AML	AML	07 49 12.9	
KUDL	**Kundal**	**7.13**	**156**	*e*S		**Sn**	**07 48 32.4**	**-6.0**
KUDL	comp=N,7.2nm,0.3s				AML	AML	07 49 25.3	
SONA	**Sohna**	**7.25**	**152**	*e*S		**Sn**	**07 48 37.6**	**-3.8**
SONA	comp=N,11nm,0.3s				AML	AML	07 49 24.8	
SONA	comp=E,24nm,0.4s				AML	AML	07 49 26.5	
TKM2	**Tokmak 2**	**8.40**	**12**		Sn	**Sn**	**07 49 10.2**	**+0.7**
KK31	**Karatay Array**	**8.63**	**347**		⇑Pn	**Pn**	**07 47 40.5**	**+1.3**
KK31	comp=E,3.1nm,0.3s,baz=157,slow=12,SNR=64				Sn	**Sn**	**07 49 14.4**	**-0.6**
KURK	**Kurchatov**	**16.47**	**12**		Pn	**Pn**	**07 49 22.0**	**-2.4**
AB31	**Akbulak array**	**17.51**	**330**		⇓Pn	**Sn**	**07 49 37.7**	**+0.3**
AB31	comp=E,0.5nm,0.5s,baz=149,slow=22,SNR=5.2				⇑Sn	**Sn**	**07 52 41.9**	**-10**
BVAR	**Borovoye Array**	**18.41**	**355**		P	**Pn**	**07 49 49.1**	**+0.8**
AKTO	**Aktyubinsk**	**19.22**	**329**		⇑Pn	**Pn**	**07 49 57.3**	**-0.7**
AKTO	**Aktyubinsk**	**19.22**	**329**		P	**Pn**	**07 49 57.3**	**-0.7**
ZALV	**Zalesovo Beam**	**20.89**	**20**		P	**P**	**07 50 14.1**	**-0.7**
ARCES	**ARCESS Array B**	**43.47**	**338**		P	**P**	**07 53 35.5**	**+0.9**
TORD	**Torodi Ar. Bea**	**67.50**	**271**		P	**P**	**07 56 27.9**	**-0.2**
WRA	**Warramunga Arr**	**79.52**	**123**		P	**P**	**07 57 38.7**	**+0.2**
ASAR	**Alice Springs**	**81.76**	**126**		P	**P**	**07 57 50.6**	**+0.3**

comp=E,0.2nm,0.4s,baz=47,slow=6.3,SNR=12
comp=E,0.4nm,0.5s,mb3.6,baz=323,slow=5.2,SNR=16
comp=E,0.3nm,0.6s,mb3.4,baz=310,slow=5.3,SNR=7.1

IDC 24 08:03:07.9±4.4, 332S×10007E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/19, mbtmp3.7/5, Error ellipse: s-maj=188.7km s-min=23.1km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.28**	**119**		P	P	08 10 21.4	-0.5
ASAR	**Alice Springs**	**38.43**	**125**		P	P	08 10 31.7	+0.1
SONM	**Songino Array**	**51.24**	**5**		P	P	08 12 13.4	+0.2
MKAR	**Makanchi Array**	**52.31**	**345**		P	P	08 12 21.1	-0.2
ZALV	**Zalesovo Beam**	**58.47**	**349**		P	P	08 13 05.2	-0.3
TXAR	**Lajitas Array**	**145.69**	**39**		PKPbc	PKPbc	08 22 49.7	+0.3

0.2nm,0.4s,baz=306,slow=9.0,SNR=5.1
0.2nm,0.3s,baz=299,slow=7.7,SNR=4.0
0.7nm,0.3s,baz=172,slow=11,SNR=3.8
1.1nm,0.6s,baz=142,slow=8.3,SNR=12
1.1nm,0.7s,baz=181,slow=8.6,SNR=4.0
0.3nm,0.5s,baz=318,slow=1.7,SNR=3.5

ISCJB ***24*** *08:11:49.4±4.5, 183S±0.1×178.3W±0.1, h495km±50km, mb3.9/13, Error ellipse: s-maj=22.8km s-min=19.2km az=150.1*
IDC ***24*** *08:11:52.2±4.5, 1832S×17823W, h519km±54km, mb3.5/13, mb1 3.7/13, mb1mx3.6/21, mbtmp3.5/13, Error ellipse: s-maj=21.4km s-min=15.9km az=3.0*
NEIC ***24*** *08:11:54.5±0.8, 1835S×17827W, h550km, mb4.0/1, Error ellipse: s-maj=22.0km s-min=15.7km az=132.0*

ISC 24 08:11:52.2±4.6, 183S±01×1783W±02, h516km±53km, n22, σ0§77/21, mb3.9/13, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**20.29**	**191**		P	**P**	**08 15 50.6**	**-1.9**
RPZ	**Rata Peaks**	**26.89**	**197**		P	**P**	**08 16 52.1**	**+0.9**
CTA	**Charters Tower**	**33.51**	**261**		P	**P**	**08 17 48.9**	**+0.1**
TOO	**Toolangi**	**37.03**	**231**		*e*P	**P**	**08 18 19.0**	**+1.2**
STKA	**Stephens Creek**	**38.56**	**242**		*e*P	**P**	**08 18 31.9**	**+1.5**
STKA	**Stephens Creek**	**38.56**	**242**		P	**P**	**08 18 31.5**	**+1.1**
WB2	**Warramunga Arr**	**44.68**	**260**		⇓*i*P	**P**	**08 19 18.3**	**-0.7**
WRAB	**Tennant Creek**	**44.68**	**260**		*e*P	**P**	**08 19 18.3**	**-0.8**
WRA	**Warramunga Arr**	**44.69**	**260**		P	**P**	**08 19 18.6**	**-0.5**
ASAR	**Alice Springs**	**44.81**	**255**		P	**P**	**08 19 20.6**	**+0.5**
ASAR					PcP	PcP	08 20 50.5	-0.5
FITZ	**Fitzroy Crossi**	**53.09**	**261**		P	**P**	**08 20 21.6**	**0.0**

3.3nm,0.3s,mb4.3,baz=93,slow=8.8,SNR=37
2.2nm,0.4s,mb4.0
1.7nm,0.3s,mb4.1,baz=97,slow=7.6,SNR=77
1.2nm,0.9s,baz=86,slow=4.1,SNR=4.9
18nm,0.5s,mb4.8,baz=89,slow=8.5,SNR=408
1.2nm,0.5s,baz=100,slow=3.9,SNR=6.3
0.5nm,0.3s,mb3.4,baz=126,slow=8.5,SNR=9.9

MJAR	**Matsushiro Arr**	**68.30**	**323**	P	**P**	**08 22 00.3**	**-1.1**
KSRS	**Korea Array**	**75.08**	**318**	P	**P**	**08 22 41.5**	**+0.4**
YBH	**Yreka Blue Hor**	**78.74**	**39**	P	**P**	**08 23 01.2**	**+0.2**
NVAR	**Mina Array Bea**	**79.61**	**44**	P	**P**	**08 23 05.9**	**+0.2**
TXAR	**Lajitas Array**	**86.09**	**58**	P	**P**	**08 23 39.1**	**+0.6**
PDAR	**Pinedale Array**	**87.54**	**43**	P	**P**	**08 23 44.9**	**-0.1**
SNAA	**Sanae**	**90.21**	**179**	*e*	**P**	**08 23 56.1**	**-0.8**
VNA3	**Neumayer Olymp**	**90.34**	**176**	*e*	**P**	**08 23 57.0**	**-0.5**
VNA2	**Neumayer--Watz**	**90.78**	**177**	*e*	**P**	**08 23 59.6**	**0.0**
VNA1	**Neumayer--Stat**	**91.01**	**177**	*e*	**P**	**08 24 01.3**	**+0.7**
TORD	**Torodi Ar. Bea**	**174.88**	**180**	PKPab	PKPab	08 32 40.7	-0.7

0.5nm,0.8s,baz=190,slow=3.4,SNR=4.9

1.7nm,0.6s,mb3.8,baz=157,slow=5.8,SNR=7.0
0.5nm,0.7s,mb3.0,baz=128,slow=5.0,SNR=4.2
1.4nm,0.6s,mb3.5,baz=232,slow=3.8,SNR=6.2
2.1nm,0.7s,mb3.6,baz=223,slow=9.0,SNR=20
4.0nm,0.7s,mb4.2,baz=219,slow=5.5,SNR=29
1.6nm,0.7s,mb3.9,baz=211,slow=1.8,SNR=15
2.9nm,0.3s,baz=158,slow=14,SNR=54
12nm,0.3s,baz=162,slow=31,SNR=8.3
comp=Z,93nm,19.3s,baz=150,slow=36
43nm,0.4s
1.0nm,0.3s,baz=245,slow=14,SNR=18
651nm,1.6s
0.9nm,0.7s,mb3.5,baz=99,slow=8.8,SNR=3.7
0.7nm,0.5s,mb3.9,baz=106,slow=9.2,SNR=3.6
0.5nm,0.8s,mb3.5,baz=351,slow=8.0,SNR=3.8
0.6nm,0.7s,mb3.8,baz=12,slow=8.1,SNR=6.3
0.5nm,0.5s,mb3.8,baz=54,slow=6.4,SNR=3.2
0.2nm,0.3s,mb3.7,baz=323,slow=10,SNR=2.5
0.5nm,0.9s,mb3.7,baz=48,slow=2.2,SNR=3.5

NIED ***24*** *08:12:00, 3260N×13000E, h5km, Mw4.1 Best double couple: M0 1.45000×10^15 NP1:φ=66.00000°, δ=66.00000°, λ=-142.00000°. NP2:φ=319.00000°, δ=55.00000°, λ=-29.00000°.*
IDC ***24*** *08:12:34.3±1.0, 3251N×12980E, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.7/24, mbtmp3.7/8, ML3.7/2, MS2.8/1, Ms1 2.8/1, ms1mx2.5/37, Error ellipse: s-maj=34.1km s-min=17.1km az=71.0*
ISCJB ***24*** *08:12:35.4±0.4, 3258N±003×12995E±004, h21km±3km, mb3.7/7, Error ellipse: s-maj=5.6km s-min=4.8km az=146.8*
JMA ***24*** *08:12:35.9, 3258N×12997E, h14km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φ=61.00000°, δ=65.00000°, λ=-155.00000°. NP2: φ=320.00000°, δ=68.00000°, λ=-28.00000°. Principal axes: T Plg2.0000°, Azm11.0000°; N Plg55.0000°, Azm104.0000°; P Plg35.0000°, Azm280.0000°;*
JMA Felt III J1.
NEIC ***24*** *08:12:36.0, 3258N×12997E, h14km, MG4.4(JMA), After JMA.*
NEIC Recorded [3 JMA] in Nagasaki and Kumamoto; [1 JMA] in Fukuoka, Kagoshima and Saga Prefectures.

ISC 24 08:12:36.0±0.4, 3256N±003×12996E±003, h11km±3km, n20, σ0§85/29, mb3.7/7, 3C-4D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NGSJ	**Nagasakinomoza**	**0.15**	**298**		⇓P	**Pg**	**08 12 39.7**	**+0.3**
NGSJ					*e*S	**Sg**	**08 12 42.2**	**+0.4**
JHD	**Hondo**	**0.18**	**123**		⇓P	**Pg**	**08 12 40.2**	**+0.3**
JHD					*e*S	**Sg**	**08 12 42.9**	**+0.4**
JUR	**Ureshino**	**0.53**	**359**		⇑P	**Pg**	**08 12 45.9**	**-0.4**
JUR					*e*S	**Sg**	**08 12 53.4**	**+0.1**
JTA	**Tamana**	**0.63**	**50**		⇑P	**Pg**	**08 12 47.5**	**-0.7**
JTA					S	**Sg**	**08 12 56.0**	**-0.5**
JZO	**Okuchi**	**0.69**	**128**		⇓P	**Pg**	**08 12 49.0**	**-0.3**
JZO					S	**Sg**	**08 12 58.2**	**0.0**
JIU2	**Izumi 2**	**0.72**	**91**		⇓P	**Pg**	**08 12 49.0**	**-1.0**
JIU2					S	**Sg**	**08 12 59.0**	**-0.4**
JSJ	**Shimokoshiki**	**0.91**	**193**		⇑P	**Pg**	**08 12 52.7**	**-0.7**
JSJ					S	**Sg**	**08 13 06.1**	**+0.9**
KSRS	**Korea Array**	**5.16**	**342**		Pn	**Pn**	**08 13 53.1**	**-0.1**
KSRS					Lg		08 15 14.2	
KSRS					LR	LR	08 15 42.6	
INCN	**Inchon**	**5.62**	**332**		*e*Pn	**Pn**	**08 13 59.5**	**0.0**
INCN					*e*Sn	**Sn**	**08 15 03.2**	**-0.8**
MAJO	**Matsushiro**	**7.88**	**57**		*e*Pn	**Pn**	**08 14 31.7**	**+1.2**
MAT	**Matsushiro**	**7.88**	**57**		P	**Pn**	**08 14 33.1**	**+2.6**
MAT					S	**Sn**	**08 15 59.2**	**-0.5**
MJAR	**Matsushiro Arr**	**7.88**	**57**		Pn	**Pn**	**08 14 32.7**	**+2.2**
SMKI	**Samarinda**	**34.97**	**203**		P	**P**	**08 19 27.0**	**-1.4**
KURK	**Kurchatov**	**41.51**	**311**		P	**P**	**08 20 22.6**	**-0.5**
BVAR	**Borovoye Array**	**46.75**	**314**		P	**P**	**08 21 05.2**	**+0.2**
WRA	**Warramunga Arr**	**52.37**	**175**		P	**P**	**08 21 47.3**	**-1.0**
ASAR	**Alice Springs**	**56.04**	**176**		P	**P**	**08 22 14.3**	**-0.6**
AKASG	**Malin Array Be**	**71.74**	**319**		P	**P**	**08 23 58.4**	**+0.3**
NVAR	**Mina Array Bea**	**85.07**	**47**		P	**P**	**08 25 13.4**	**+1.4**
PDAR	**Pinedale Array**	**87.31**	**39**		P	**P**	**08 25 27.8**	**+4.8**

MOS ***24*** *08:15:19.9±0.5, 392S×10036E, h33km, mb5.9/75, MS5.5/66, Error ellipse: s-maj=20.4km s-min=8.9km az=89.0*
DJA ***24*** *08:15:23, 347S×9998E, h10km, Mw6.0/10*
BJI ***24*** *08:15:24.8, 345S×10039E, h50km, mB5.9, mb5.8, Ms6.0, Msz5.8*
ISCJB ***24*** *08:15:24.6±0.1, 3.14S±002×10038E±002, h25km, mb5.7/191, MS5.6/239, Error ellipse: s-maj=3.4km s-min=2.4km az=31.2*
NEIC ***24*** *08:15:25.2±0.1, 3.16S×10036E, h18km, mb5.6/68, ME5.7, MS5.6/194, MW5.6, Error ellipse: s-maj=4.8km s-min=3.3km az=42.0, Moment Tensor Solution. s70 Moment tensor: Scale 10^17 Nm; Mrr 2.04; Mθθ -0.10; Mφφ -1.95; Mrθ 1.97; Mrφ 1.17; Mθφ -1.18; Best double couple: M0 3.30000×10^17 NP1:φ=131.00000°, δ=69.00000°, λ=69.00000°. NP2:φ=357.00000°, δ=29.00000°, λ=132.00000°. Principal axes: T 3.2500, Plg60.0000°, Azm10.0000°; N 0.0100, Plg19.0000°, Azm138.0000°; P -3.2700, Plg21.0000°, Azm236.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [III] Sungaipenuh and [II] at Bengkulu, Sumatra. Also felt at Padang.
IDC ***24*** *08:15:25.2±2.7, 3.13S×10040E, h18km±16km, mb5.4/32, mb1 5.4/32, mb1mx5.4/32, mbtmp5.4/32, MS5.3/9, Ms1 5.3/19, ms1mx5.1/33 Error ellipse: s-maj=13.1km s-min=9.6km az=47.0*
GCMT ***24*** *08:15:27.7±0.1, 3.48S×10007E, h15km, MW5.8/91, Moment Tensor Solution. s76, c118; s91, c188; Duration: 1§6 Moment tensor: Scale 10^17 Nm; Mrr 2.08±.04; Mθθ -0.99±.03; Mφφ -1.08±.04; Mrθ 3.86±.11; Mθφ 1.12±.02; Mrφ -2.67±.12; Best double couple: M0 5.15000×10^17 NP1:φ=327.00000°, δ=13.00000°, λ=110.00000°. NP2:φ=126.00000°, δ=78.00000°, λ=85.00000°. Principal axes: T 5.1480, Plg57.0000°, Azm30.0000°; N 0.0110, Plg4.0000°, Azm127.0000°; P -5.1520, Plg33.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
SZGRF ***24*** *08:15:28.7, 3.58S×9.888E, h24km, mb5.6, MS5.4, Southwest of Sumatera, Indonesia*

ISC 24 08:15:26.7±0.1, 315S±002×10035E±002, h26km, h26km±.8km: pP-P, n840, σ0§96/641, mb5.7/191, MS5.6/239, 110C-26D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**2.29**	**103**		P	**Pn**	**08 16 02.6**	**-0.2**
PPI	**Padang Panjang**	**2.68**	**1**		P	**Pn**	**08 16 08.3**	**+0.2**
RGRI	**Rengat**	**3.42**	**36**		P	**Pn**	**08 16 19.7**	**+1.4**
JMBI	**JAMBI**	**3.62**	**65**		P	**Pn**	**08 16 23.5**	**+2.5**
TRSI	**Tarutung**	**5.33**	**345**		P	**Pn**	**08 16 48.2**	**+3.7**
BLSI	**Bandar Lampung**	**5.36**	**114**		P	**Pn**	**08 16 45.7**	**+0.8**
PPBI	**Pangkal Pinang**	**5.87**	**80**		P	**Pn**	**08 16 54.1**	**+2.2**
KGM	**Kluang**	**5.93**	**30**		⇑P	**Pn**	**08 16 54.4**	**+1.6**

0.0nm,0.0s
0.0nm,0.0s
0.0nm,0.0s
3µm,1.1s
2µm,1.2s
370nm,1.3s

MYKOM	**Kota Tinggi**	**6.03**	**36**	⇑P	**Pn**	**08 16 55.9**	**+1.7**
FRIM	**Kepong**	**6.47**	**11**	⇑P	**Pn**	**08 17 01.5**	**+1.2**
SBJI	**Serang**	**6.47**	**117**	P	**Pn**	**08 17 01.0**	**+0.7**
TSI	**Tuntungan**	**6.84**	**345**	P	**Pn**	**08 17 07.0**	**+1.6**
TNG	**Tangerang**	**6.96**	**116**	P	**Pn**	**08 17 08.4**	**+1.5**
DBJI	**Dramaga**	**7.22**	**118**	P	**Pn**	**08 17 10.7**	**+0.2**
SKJI	**Sukabumi**	**7.27**	**122**	P	**Pn**	**08 17 13.7**	**+2.4**
TPI	**Tanjungpandan**	**7.31**	**87**⇑	*e*P	**Pn**	**08 17 18.5**	**+6.8**
IPM	**Ipoh**	**7.61**	**5**	⇓P	**Pn**	**08 17 17.8**	**+1.9**
LEM	**Lembang**	**8.11**	**117**	P	**Pn**	**08 17 24.0**	**+1.2**
JCJI	**Jatiwangi**	**8.56**	**113**	P	**Pn**	**08 17 31.0**	**+2.0**
KTGM	**Kuala Trenggan**	**8.87**	**18**	⇑P	**Pn**	**08 17 35.6**	**+2.4**
XMIS	**Christmas Isla**	**8.98**	**144**	*e*P	**Pn**	**08 17 29.1**	**-5.7**
XMIS				*e*S	**Sn**	**08 19 00.0**	**-15**
COCO	**West Island**	**9.63**	**201**	Pn	**Pn**	**08 17 39.1**	**-4.5**
COCO	**West Island**	**9.63**	**201**	*e*Pn	**Pn**	**08 17 39.2**	**-4.4**
BSI	**Banda Aceh**	**9.96**	**330**	P	**Pn**	**08 17 46.7**	**-1.5**
BJII	**Banjamegara**	**10.20**	**114**	P	**Pn**	**08 17 52.1**	**+0.6**
SNG	**Songkhla**	**10.26**	**1**	P	**Pn**	**08 17 49.0**	**-3.3**
KSM	**Kuching**	**10.96**	**65**	⇑P	**Pn**	**08 18 04.4**	**+2.4**
KSM	**Kuching**	**10.96**	**65**	*e*Pn	**Pn**	**08 18 03.7**	**+1.7**
PBKI	**Pangkalan Bun**	**11.32**	**88**	P	**Pn**	**08 18 12.0**	**+5.3**
STKI	**Sintang**	**11.57**	**74**	P	**Pn**	**08 18 10.8**	**+0.5**
SJI	**Sawahan**	**12.24**	**112**	P	**Pn**	**08 18 18.6**	**-0.8**
TRT	**Tretes**	**13.04**	**111**⇑	*e*P	**Pn**	**08 18 31.0**	**+0.7**
SBUM	**Sibu**	**13.11**	**65**	⇑P	**Pn**	**08 18 35.1**	**+3.9**
PLKI	**Palangkaraya**	**13.61**	**86**	P	**Pn**	**08 18 43.3**	**+5.1**
BBKI	**Banjar Baru**	**14.47**	**92**	P	**Pn**	**08 18 51.6**	**+1.7**
NNT	**Nongplab**	**15.65**	**358**	P	**Pn**	**08 19 04.0**	**-1.5**
IGBI	**Denpasar**	**15.75**	**112**	P	**Pn**	**08 19 07.8**	**+0.9**
KHKI	**Kahang-Kahang**	**16.04**	**109**	P	**Pn**	**08 19 08.5**	**-2.1**
MTNI	**Mataram**	**16.65**	**110**	P	**Pn**	**08 19 14.3**	**-4.1**
KKM	**Kota Kinabalu**	**18.29**	**60**	⇓P	**Pn**	**08 19 39.4**	**+0.7**
KKM	**Kota Kinabalu**	**18.29**	**60**	*e*P	**Pn**	**08 19 38.7**	**0.0**
NST	**Nakhon Sawan**	**18.70**	**359**	P	**Pn**	**08 19 40.0**	**-3.7**
UBT	**Ubonrachathani**	**18.86**	**14**	P	**Pn**	**08 19 43.5**	**-2.0**
SDKM	**Sandakan**	**18.96**	**63**	⇑P	**Pn**	**08 19 46.9**	**0.0**
KDM	**Kudat**	**19.26**	**59**	⇑P	**Pn**	**08 19 50.4**	**0.0**
KAPI	**Kappang**	**19.44**	**96**	P	**Pn**	**08 19 49.9**	**-2.8**
KAPI	**Kappang**	**19.44**	**96**	P	**Pn**	**08 19 49.7**	**-3.0**
KAPI	**Kappang**	**19.44**	**96**	*e*Pn	**Pn**	**08 19 49.4**	**-3.3**
KKTK	**Khon Kaen**	**19.52**	**7**	P	**Pn**	**08 19 50.8**	**-2.7**
PCI	**Palu**	**19.60**	**84**	P	**Pn**	**08 19 54.6**	**0.0**
MYLDM	**Lahad Datu**	**19.93**	**66**	⇓P	**Pn**	**08 19 59.0**	**+0.5**
BDT	**Bhumibol Dam**	**20.31**	**356**	P	**P**	**08 19 59.5**	**-1.3**
WSI	**Waingapu**	**20.84**	**109**⇓	*e*P	**P**	**08 20 02.6**	**-4.0**
WSI				*e*S	**S**	**08 23 54.5**	**-3.6**
CM31	**Chiang Mai Arr**	**21.52**	**356**	PFAKE		08 20 20.0	+6.2
CM31				LR	LR		
CMAR	**Chiang Mai Arr**	**21.52**	**356**	P	**P**	**08 20 09.3**	**-4.5**
CMAR				PcP	PcP	08 24 16.9	+0.7
CMAR				LR	LR	08 30 15.9	
CMAR	**Chiang Mai Arr**	**21.52**	**356**	P	**P**	**08 20 09.3**	**-4.5**
CMAR						08 24 16.9	
CMAR				pmax	pmax		
CMAR				MLR	MLR		
CHG	**Chiang Mai**	**21.87**	**356**	⇑P	**P**	**08 20 15.7**	**-1.9**
CHG	**Chiang Mai**	**21.87**	**356**	SG	**S**	**08 24 22.9**	**+4.9**
CHTO	**Chiang Mai**	**21.87**	**356**	*e*P	**P**	**08 20 14.9**	**-2.6**
CHTO				LR	LR		
PALK	**Pallekele**	**22.17**	**298**	*e*P	**P**	**08 20 23.1**	**+2.2**
PALK				LR	LR		
KDI	**Kendari**	**22.24**	**93**	P	**P**	**08 20 21.6**	**-0.1**
KDI				*e*S	**S**	**08 24 22.6**	**-2.9**
BBSI	**Bau Bau**	**22.28**	**97**	P	**P**	**08 20 25.5**	**+3.4**
PPR	**Puerto Princes**	**22.37**	**55**⇓	*e*P	**P**	**08 20 23.0**	**0.0**
ENPP	**El Nido**	**23.74**	**53**	*e*P	**P**	**08 20 36.0**	**-1.1**
QIZ	**Qiongzhong**	**23.94**	**23**	P	**P**	**08 20 38.3**	**-0.5**
QIZ				XP	sP	08 20 53.3	+3.5
QIZ				S	**S**	**08 24 56.3**	**+2.4**
QIZ				XS	sS	08 25 10.8	+4.1
QIZ				AMB	AMB		
KDI	**Kendari**	**22.24**	**93**⇑	*e*P	**P**	**08 20 21.2**	**-0.5**
PALK	**Pallekele**	**22.17**	**298**	*e*P	**P**	**08 20 23.1**	**+2.2**
BBSI	**Bau Bau**	**22.28**	**97**	P	**P**	**08 20 25.5**	**+3.4**
PPR	**Puerto Princes**	**22.37**	**55**⇓	*e*P	**P**	**08 20 23.0**	**0.0**
ENPP	**El Nido**	**23.74**	**53**	*e*P	**P**	**08 20 36.0**	**-1.1**
QIZ	**Qiongzhong**	**23.94**	**23**	P	**P**	**08 20 38.3**	**-0.5**
QIZ				XP	sP	08 20 53.3	+3.5
QIZ				S	**S**	**08 24 56.3**	**+2.4**
QIZ				XS	sS	08 25 10.8	+4.1
QIZ				AMB	AMB		
QIZ	**Qiongzhong**	**23.94**	**23**	*e*P	**P**	**08 20 38.6**	**-0.2**
QIZ				LR	LR		
BATI	**Baumata**	**24.18**	**108**	P	**P**	**08 20 38.9**	**-2.2**
BATI	**Baumata**	**24.18**	**108**	P	**P**	**08 20 37.3**	**-3.8**
BATI				S	**S**	**08 24 52.4**	**-5.6**
BUSP	**Coron**	**24.82**	**52**	*e*P	**P**	**08 20 47.0**	**+0.1**
MNI	**Manado**	**24.90**	**80**	P	**P**	**08 20 48.5**	**+0.8**
MDRS	**Chennai**	**25.65**	**309**	*e*P	**P**	**08 20 56.2**	**+1.7**
MDRS				*e*S	**S**	**08 25 23.3**	**+1.8**
SJMP	**San Jose**	**25.82**	**53**	*e*P	**P**	**08 20 55.9**	**-0.1**
LUBP	**Lubang**	**25.91**	**49**	*e*P	**P**	**08 20 56.4**	**-0.4**
MBWA	**Marble Bar**	**26.00**	**135**	*e*P	**P**	**08 20 56.1**	**-1.4**
GUIM	**Jordan**	**26.03**	**58**	*e*P	**P**	**08 20 57.9**	**0.0**
TRD	**Trivandrum**	**26.04**	**297**	*e*P	**P**	**08 21 00.0**	**+2.0**
TRD				AMb	AMB	08 21 18.2	
KOD

CAL ex S 08 25 57.9 -2.1
KMI Kunming 28.20 5 ⇑P P **08 21 18.1 +0.8**
KMI PP PP 08 22 11.3 -10
KMI PCP PcP 08 24 32.0 +1.2
KMI S S **08 26 05.6 +4.1**
KMI SS 08 27 29.8
KMI SSS 08 27 49.3
KMI AMB AMB
comp=Z,146nm,1.4s,mb5.4
KMI LR LR
comp=N,11μm,16.9s,MS5.7
KMI LR LR
comp=E,11μm,14.3s,MS5.7
KMI LR LR
comp=Z,15μm,19.5s
KMI Kunming 28.20 5 ⇑P P **08 21 18.1 +0.8**
KMI *PP pP 08 21 23.1 -2.0
KMI 08 22 11.3
KMI 08 24 32.0
KMI S S **08 26 05.6 +4.1**
KMI SS 08 27 29.8
KMI SSS 08 27 49.2
KMI 08 32 03.2
KMI pmax pmax
comp=Z,146nm,1.4s,mb5.4
KMI MLR MLR
comp=Z,15μm,19.5s,MS5.6
KMI Kunming 28.20 5 ⇑P P **08 21 18.1 +0.8**
comp=Z,146nm,1.4s,mb5.4
KMI pP pP 08 21 23.1 -2.0
KMI PP PP 08 22 11.3 -10
KMI PcP PcP 08 24 32.0 +1.2
KMI S S **08 26 05.6 +4.1**
KMI sS sS 08 26 11.0 -3.4
KMI SS 08 27 29.8
KMI SSS 08 27 49.2
KMI ScS ScS 08 32 03.2 +0.2
KMI LR LR
comp=Z,15μm,19.5s,MS5.6
IMP Imphal 28.46 348 *eP* P **08 21 19.0 -0.6**
IMP *ex* x 08 26 22.0
HKC Hong Kong Obse 28.68 27 P P **08 21 22.0 +0.4**
FITZ Fitzroy Crossi 28.89 123 ⇑*iP* P **08 21 22.6 -0.9**
FITZ *eS* S **08 26 12.2 -0.4**
FITZ Fitzroy Crossi 28.89 123 P P **08 21 22.8 -0.8**
comp=Z,48nm,0.9s,mb5.2,baz=306,slow=8.5,SNR=71
HYB Hyderabad 29.67 314 *eP* P **08 21 30.0 -0.4**
HYB *eS* S **08 26 26.0 +1.2**
HYB pmax pmax
comp=Z,60nm,1.0s,mb5.3
HYB Hyderabad 29.67 314 *i* P P **08 21 33.0 +2.6**
comp=Z,60nm,1.0s,mb5.3
HYB *eS* S **08 26 27.0 +2.2**
HYB LR LR 08 34 34.0
comp=Z,11nm,18.0s
HYB Hyderabad 29.67 314 *eP* P **08 21 30.0 -0.4**
comp=Z,60nm,1.0s,mb5.3
HYB *eS* S **08 26 26.0 +1.2**
HYB *e* 08 34 34.0
GYA Guiyang 30.06 11 P P **08 21 35.3 +1.5**
GYA AP pP 08 21 45.3 +3.7
GYA XP sP 08 21 49.8 +4.9
GYA PP PP 08 22 35.4 -6.6
GYA PCP PcP 08 24 36.0 +0.5
GYA S S **08 26 32.4 +1.7**
GYA XS sS 08 26 48.3 +4.6
GYA SS SS 08 28 11.8 -28
GYA AMB AMB
comp=Z,60nm,0.8s,mb5.4
GYA AMB AMB
comp=Z,230nm,5.9s
GYA LR LR
comp=N,9μm,14.6s,MS5.6
GYA LR LR
comp=E,7μm,13.9s,MS5.6
GYA LR LR
comp=Z,8μm,14.7s,MS5.5
BOK Bokaro 30.26 333 *eP* P **08 21 36.7 +1.1**
BOK *eS* S **08 26 34.6 +0.7**
SWI Sorong 30.97 86 P P **08 21 40.5 -1.6**
comp=Z,267nm,1.3s,mb5.9
MUN Mundaring 32.32 154 *eP* P **08 21 55.5 +1.8**
KLBR Kellerberrin 32.70 152 *eP* P **08 21 58.1 +1.1**
AKL Akola 32.95 317 *eP* P **08 22 00.1 +0.8**
AKL AMb AMB 08 22 09.8
comp=Z,118nm,1.8s,mb5.5
QZH Quanzhou 33.07 31 ⇑*iP* P **08 22 00.1 -0.2**
QZH S S **08 27 24.8 +7.0**
QZH AMB AMB
comp=Z,890nm,1.8s,mb6.4
QZH LR LR
comp=N,9μm,15.6s,MS6.0
QZH LR LR
comp=E,22μm,14.1s,MS6.0
QZH LR LR
comp=Z,21μm,19.0s,MS5.9
NWAO Narrogin (SRO) 33.58 154 P P **08 22 05.9 +1.2**
comp=Z,35nm,1.0s,mb5.2,baz=5.7,slow=10,SNR=3.0
NWAO Narrogin (SRO) 33.58 154 P P **08 22 05.9 +1.2**
NWAO LR LR
comp=Z,10μm,20.0s,MS5.5
LSA Lhasa 33.83 346 *eP* P **08 22 08.5 +1.6**
LSA pmax pmax
comp=Z,290nm,1.1s,mb6.1
LSA MLR MLR
comp=Z,6μm,19.0s,MS5.3
LSA Lhasa 33.83 346 *eP* P **08 22 08.5 +1.6**
comp=Z,290nm,1.1s,mb6.1
LSA LR LR
comp=Z,6μm,19.0s,MS5.3
POO Poona 33.84 311 *eP* P **08 22 08.2 +1.1**
POO AMb AMB 08 22 18.9
comp=Z,126nm,1.2s,mb5.7
CD2 Chengdu 34.03 5 ⇑*iP* P **08 22 07.6 -0.9**
CD2 AP pP 08 22 17.3 +0.9
CD2 PP PP 08 23 22.8 -3.2
CD2 PCP PcP 08 24 44.3 -1.9
CD2 S S **08 27 31.0 -1.5**
CD2 PCS PcS 08 28 29.3 -3.0
CD2 SS SS 08 29 40.8 -20
CD2 SCS ScS 08 32 26.3 -5.2
CD2 AMB AMB
comp=Z,220nm,1.1s,mb6.0
CD2 AMB AMB
comp=Z,1μm,12.0s
CD2 LR LR
comp=N,17μm,15.6s,MS6.0
CD2 LR LR
comp=E,20μm,19.2s,MS6.0
CD2 LR LR
comp=Z,18μm,14.4s,MS5.9
NACB Ninganchiao 34.13 36 *eP* P **08 22 10.5 +0.9**
comp=Z,78nm,0.9s,mb5.6
YHNB Yeheng 34.38 35 *eP* P **08 22 11.7 -0.1**
comp=Z,222nm,1.6s,mb5.8
YHNB LR LR
comp=Z,5μm,20.0s,MS5.2
TATO Taipei 34.68 35 PFAKE 08 22 20.0 +5.7
TATO LR LR
comp=Z,4μm,19.0s,MS5.2
WHN Wuhan 36.08 21 ⇑P P **08 22 26.4 +0.2**
WHN XP sP 08 22 41.5 +4.1
WHN PP PP 08 23 54.8 +6.2
WHN PCP PcP 08 24 52.6 +0.5
WHN S S **08 28 07.5 +3.5**
WHN AMB AMB
comp=Z,415nm,1.1s,mb6.3
WHN AMB AMB
comp=Z,858nm,7.0s
WHN LR LR
comp=N,26μm,13.4s,MS6.2
WHN LR LR
comp=E,7μm,11.5s,MS6.2
WHN LR LR
comp=Z,39μm,14.5s,MS6.3
WRA Warramunga Arr 37.12 119 P P **08 22 34.0 -1.3**
comp=Z,55nm,0.7s,mb5.5,baz=293,slow=9.8,SNR=122
WRA S S **08 28 16.8 -3.5**
comp=Z,22nm,1.2s,baz=298,slow=15,SNR=6.5
WRA LR LR 08 39 43.0
comp=Z,8μm,20.6s,MS5.5,baz=300,slow=39
WRA Warramunga Arr 37.12 119 P P **08 22 34.0 -1.3**
WRA S S **08 28 16.8 -3.5**
WRA pmax pmax
comp=Z,55nm,0.7s
WRA smax
comp=N,22nm,1.2s
WRA MLR MLR
comp=Z,8μm,20.7s
WRAB Tennant Creek 37.13 119 P P **08 22 34.0 -1.4**
comp=Z,668nm,0.4s,mb6.8,SNR=54
WRAB Tennant Creek 37.13 119 *c iP* P **08 22 34.1 -1.3**
WRAB Tennant Creek 37.13 119 *eP* P **08 22 34.0 -1.4**
WRAB LR LR
comp=Z,11μm,21.0s,MS5.6
WB2 Warramunga Arr 37.13 119 ⇑*iP* P **08 22 34.0 -1.4**
WB2 *eS* S **08 28 15.7 -4.8**
PTH Pithoragarh 37.81 331 *eP* P **08 22 42.2 +1.2**
PTH *eS* S **08 28 31.9 +1.5**
XAN Xi'an 37.87 12 P P **08 22 40.3 -1.1**
XAN PP PP 08 24 08.0 -0.2
XAN S S **08 28 30.0 -1.2**
XAN AMB AMB
comp=Z,388nm,1.0s,mb6.1
XAN AMB AMB
comp=Z,1μm,6.0s
XAN LR LR
comp=N,7μm,16.1s,MS5.9
XAN LR LR
comp=E,14μm,14.6s,MS5.9
XAN LR LR
comp=Z,25μm,16.6s,MS6.1
FORT Forrest 37.94 139 *eP* P **08 22 42.2 0.0**
ASAR Alice Springs 38.30 125 P P **08 22 45.0 -0.2**
comp=Z,103nm,0.9s,mb5.6,baz=301,slow=7.8,SNR=427
ASAR PcP PcP 08 24 59.2 +0.1
comp=Z,15nm,0.8s,baz=300,slow=3.3,SNR=6.0
ASAR S S **08 28 36.1 -2.0**
comp=Z,3.8nm,0.9s,baz=296,slow=12,SNR=4.4
AJM Ajmer 38.54 321 *eP* P **08 22 47.6 +0.3**
AJM AMb AMB 08 23 00.1
comp=Z,143nm,1.3s,mb5.5
NDI New Delhi 38.67 326 *ex* P **08 22 45.0 -3.3**
NDI *ex* x 08 29 00.0
LZH Lanzhou 39.17 4 ⇑P P **08 22 52.8 +0.5**
LZH AP pP 08 23 02.6 +2.3
LZH XP sP 08 23 06.8 +3.3
LZH PP PP 08 24 28.1 +5.6
LZH S S **08 28 52.3 +1.4**
LZH SS SS 08 31 39.5 -5.0
LZH SCS ScS 08 32 57.3 -2.6
LZH AMB AMB
comp=Z,401nm,1.2s,mb6.0
LZH AMB AMB
comp=Z,2μm,5.5s
LZH LR LR
comp=N,12μm,16.0s
LZH LR LR
comp=Z,17μm,18.7s,MS5.9
LZH Lanzhou 39.17 4 ⇑P P **08 22 52.8 +0.5**
LZH *PP pP 08 23 02.6 +2.3
LZH *SP sP 08 23 06.7 +3.2
LZH 08 24 28.1
LZH S S **08 28 52.2 +1.3**
LZH *SS sS 08 29 08.3 +4.4
LZH SS SS 08 31 39.5 -5.0
LZH 08 32 57.2
LZH pmax pmax
comp=Z,401nm,1.2s,mb6.0
LZH MLR MLR
comp=Z,17μm,18.7s,MS5.9
LZH Lanzhou 39.17 4 ⇑P P **08 22 52.8 +0.5**
comp=Z,401nm,1.2s,mb6.0
LZH pP pP 08 23 02.6 +2.3
LZH sP sP 08 23 06.7 +3.2
LZH PP PP 08 24 28.1 +5.6
LZH S S **08 28 52.2 +1.3**
LZH sS sS 08 29 08.3 +4.4
LZH SS SS 08 31 39.5 -5.0
LZH ScS ScS 08 32 57.2 -2.7
LZH LR LR
comp=Z,17μm,18.7s,MS5.9
NJ2 Nanjing 39.17 25 *eP* P **08 22 53.0 +0.6**
NJ2 AP pP 08 23 03.0 +2.6
NJ2 XP sP 08 23 06.6 +3.0
NJ2 PP PP 08 24 29.4 +6.8
NJ2 S S **08 28 51.0 -0.1**
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
NJ2 AMB AMB
comp=Z,590nm,10.4s
NJ2 LR LR
comp=N,6μm,14.4s,MS5.9
NJ2 LR LR
comp=E,11μm,13.8s,MS5.9
NJ2 LR LR
comp=Z,2μm,14.5s,MS5.0
SSE Sheshan 39.42 29 P P **08 22 55.0 +0.5**
SSE XP sP 08 23 11.3 +5.6
SSE PP PP 08 24 26.5 +1.1
SSE S S **08 28 55.8 +1.0**
SSE XS sS 08 29 15.3 +7.4
SSE AMB AMB
comp=Z,92nm,1.2s,mb5.4
SSE AMB AMB
comp=Z,817nm,8.8s
SSE LR LR
comp=N,6μm,12.7s,MS5.9
SSE LR LR
comp=E,8μm,12.7s,MS5.9
SSE LR LR
comp=Z,11μm,12.4s,MS5.9
SSE Sheshan 39.42 29 P P **08 22 55.0 +0.5**
comp=Z,92nm,1.2s,mb5.4
SSE sP sP 08 23 11.2 +5.5
SSE PP PP 08 24 26.5 +1.1
SSE S S **08 28 55.7 +0.9**
SSE sS sS 08 29 15.2 +7.3
SSE SS SS 08 31 53.2 +3.5
SSE LR LR
comp=Z,11μm,12.4s,MS5.9
DDI Dehra Dun 39.52 329 ⇑*iP* P **08 22 54.7 -0.6**
DDI *ex* x 08 29 09.7
JOW Kunigami 40.20 40 P P **08 23 00.9 -0.2**
baz=209,slow=10
JOW LR LR 08 39 45.5
comp=Z,3μm,18.6s,MS5.1,baz=129,slow=36
SMLA Simla 40.62 329 *i* P P **08 23 04.5 0.0**
SMLA *i* x x 08 29 23.8
SDNR Sundarnagar 41.02 329 *eP* P **08 23 07.0 -0.8**
PONG Pong 41.91 328 *eP* P **08 23 15.0 0.0**
TIY Taiyuan 42.18 14 ⇑P P **08 23 19.1 +1.9**
TIY S S **08 29 39.3 +3.7**
TIY XS sS 08 29 53.5 +4.7
TIY LR LR
comp=N,7μm,13.4s,MS5.8
TIY LR LR
comp=E,3μm,12.5s,MS5.8
TIY LR LR
comp=Z,7μm,14.5s,MS5.7
TIA Tai'an 42.18 20 ⇑P P **08 23 15.5 -1.7**
TIA AMB AMB
comp=Z,53nm,1.1s,mb5.1
TIA LR LR
comp=N,9μm,16.0s,MS5.9
TIA LR LR
comp=E,6μm,14.0s,MS5.9
GTA Gaotai 42.35 359 ⇑P P **08 23 19.0 +0.4**
GTA AP pP 08 23 30.6 +4.0
GTA XP sP 08 23 33.8 +4.0
GTA PCP PcP 08 25 12.9 +1.2
GTA S S **08 29 38.3 +0.1**
GTA SS SS 08 32 42.8 -4.9
GTA SCS ScS 08 33 15.6 -3.3
GTA AMB AMB
comp=Z,158nm,1.3s,mb5.5
GTA AMB AMB
comp=Z,1μm,6.5s
GTA LR LR
comp=N,9μm,14.0s,MS6.1
GTA LR LR
comp=E,16μm,15.5s,MS6.1
GTA LR LR
comp=Z,8μm,14.0s,MS5.8
DLH Dalhousie 42.36 329 *eP* P **08 23 19.0 +0.3**
THN Thein Dam 42.41 328 *eP* P **08 23 17.7 -1.4**
COEN Coen 43.61 107 *eP* P **08 23 26.6 -2.5**
comp=Z,248nm,1.8s,mb5.6
BTO Baotou 44.44 11 *eP* P **08 23 34.9 -0.5**
BTO AMB AMB
comp=Z,59nm,1.6s,mb5.1
MSEY Mahe Island 44.78 267 PFAKE 08 23 50.0 +11
MSEY LR LR
comp=Z,3μm,19.0s,MS5.2
HHC Hu-ho-hao-te 44.98 12 ⇑*iP* P **08 23 40.9 +1.3**
HHC AP pP 08 23 51.3 +3.6
HHC XP sP 08 23 55.4 +4.5
HHC PCP PcP 08 25 21.3 +0.7
HHC PP PP 08 25 27.4 +2.3
HHC PCS PcS 08 29 13.0 -1.2
HHC S S **08 30 18.0 +1.5**
HHC XS sS 08 30 35.0 +5.3
HHC SS SS 08 33 32.8 -6.1
HHC AMB AMB
comp=Z,325nm,1.0s,mb6.1
HHC AMB AMB
comp=Z,2μm,7.0s
HHC LR LR
comp=N,11μm,13.5s,MS6.0
HHC LR LR
comp=E,4μm,13.1s,MS6.0
HHC LR LR
comp=Z,9μm,13.1s,MS5.9
BJT Baijiatuao 45.35 17 ⇑*iP* P **08 23 43.0 +0.4**
BJT pmax pmax
comp=Z,258nm,1.1s
BJT MLR MLR
comp=Z,18μm,19.0s
BJT Baijiatuao 45.35 17 ⇑*iP* P **08 23 43.0 +0.3**
comp=Z,258nm,1.1s,mb6.0
BJT LR LR
comp=Z,18μm,19.0s,MS6.0
BJI Beijing 45.37 17 P P **08 23 42.8 0.0**
BJI S S **08 30 18.8 -3.4**
BJI AMB AMB
comp=Z,208nm,1.1s,mb5.9
BJI AMB AMB
comp=Z,2μm,4.1s
BJI LR LR
comp=N,20μm,15.0s,MS6.2
BJI LR LR
comp=E,9μm,18.0s,MS6.2
BJI LR LR
comp=Z,15μm,18.0s,MS6.0
BJI Beijing 45.37 17 P P **08 23 42.8 0.0**
comp=Z,208nm,1.1s,mb5.9
BJI S S **08 30 18.8 -3.4**
BJI SS SS 08 33 51.0 +4.7
BJI LR LR
comp=Z,15μm,18.0s,MS6.0
DL2 Dalian 46.23 23 ⇑*iP* P **08 23 49.5 -0.1**
DL2 AP pP 08 23 59.3 +1.6
DL2 PP PP 08 25 41.6 +3.2
DL2 S S **08 30 35.0 +0.4**
DL2 AMB AMB
comp=Z,80nm,1.2s,mb5.5
DL2 AMB AMB
comp=Z,530nm,5.5s
DL2 LR LR
comp=N,6μm,15.2s,MS5.7
DL2 LR LR
comp=E,3μm,14.7s,MS5.7
DL2 LR LR
comp=Z,7μm,15.2s,MS5.8
PMG Port Moresby 46.91 100 ⇑*eP* P **08 23 54.9 -0.5**
PMG Port Moresby 46.91 100 *eP* P **08 23 54.8 -0.6**
comp=Z,35nm,0.9s,mb5.3
PMG LR LR
comp=Z,3μm,22.0s,MS5.2
GUMO Guam 47.20 68 P P **08 23 54.2 -3.3**
comp=Z,39nm,0.4s,mb5.7,baz=180,slow=8.6,SNR=8.7
GUMO Guam 47.20 68 P P **08 23 54.2 -3.3**
GUMO LR LR
comp=Z,2μm,22.0s,MS5.0
INCN Inchon 47.23 29 P P **08 23 56.7 -0.7**
SNR=5.7
INCN Inchon 47.23 29 *eP* P **08 23 56.5 -1.0**
comp=Z,80nm,1.1s,mb5.6
INCN LR LR
comp=Z,4μm,19.0s,MS5.4
ADE Adelaide 47.61 136 P P **08 24 02.1 +1.6**
KBL Kabul 47.67 325 *eP* P **08 24 00.0 -0.9**
KBL pmax pmax
comp=Z,61nm,1.1s,mb5.5
KBL Kabul 47.67 325 *eP* P **08 23 60.0 -0.9**
comp=Z,61nm,1.1s,mb5.5
CTA Charters Tower 47.80 114 *eP* P **08 24 01.5 -0.7**
CTA *eS* S **08 30 54.7 -3.0**
CTA Charters Tower 47.80 114 P P **08 24 01.8 -0.5**
comp=Z,57nm,0.8s,mb5.6,baz=286,slow=9.7,SNR=31
CTA LR LR 08 46 52.8
comp=Z,8μm,20.1s,MS5.7,baz=287,slow=40
CTAO Charters Tower 47.80 114 *eP* P **08 24 01.7 -0.5**
comp=Z,90nm,1.0s,mb5.8
CTAO *ep* pP 08 24 12.6 +2.3
CTAO LR LR
comp=Z,8μm,20.0s,MS5.7
KS15 Wonju Array Si 47.80 30 *eP* P **08 24 01.9 0.0**
WBK Wadi Bani Khal 47.82 304 P P **08 24 03.5 +1.1**
SNR=7.9
KSRS Korea Array 47.83 30 P P **08 24 01.8 -0.4**
comp=Z,146nm,1.1s,mb5.9,baz=222,slow=8.2,SNR=287
KSRS PcP PcP 08 25 30.9 +0.2
comp=Z,11nm,0.9s,baz=224,slow=3.1,SNR=4.8
KSRS LR LR 08 46 23.1
comp=Z,4μm,18.4s,MS5.4,baz=239,slow=39
KSRS Korea Array 47.83 30 P P **08 24 01.8 -0.4**
KSRS 08 25 30.9
KSRS pmax pmax
comp=Z,146nm,1.1s,mb5.9
KSRS MLR MLR
comp=Z,4μm,18.4s,MS5.4
KSH Kashi 48.02 335 ⇑*iP* P **08 24 04.5 +1.0**
KSH *e*AP pP 08 24 13.1 +1.5
KSH *e*PCP PcP 08 25 32.4 +1.1
KSH *e*PP PP 08 25 55.5 -0.4
KSH *e*PPP 08 26 46.3
KSH *e*SCP ScP 08 29 22.1 -2.2
KSH *e*PCS PcS 08 29 28.5 +1.5
KSH *e*S S **08 30 58.4 -1.7**
KSH *e*SCS ScS 08 33 52.1 -3.1
KSH *e*SS SS 08 34 23.3 -6.1
KSH AMB AMB
comp=Z,3μm,3.7s
KSH LR LR
comp=N,8μm,16.6s,MS6.0
KSH LR LR
comp=E,10μm,15.7s,MS6.0
KSH LR LR
comp=Z,11μm,19.8s,MS5.8
WMQ Urumqi 48.12 348 ⇑*iP* P **08 24 05.5 +1.2**
WMQ AP pP 08 24 14.0 +1.6
WMQ XP sP 08 24 19.0 +3.4
WMQ PCP PcP 08 25 33.0 +1.4
WMQ PP PP 08 25 58.0 +1.2
WMQ PCS PcS 08 29 28.0 +0.8
WMQ S S **08 31 02.0 +0.5**
WMQ SCS ScS 08 33 53.0 -2.7
WMQ SS SS 08 34 25.0 -6.0
WMQ AMB AMB
comp=Z,283nm,1.0s,mb6.2
WMQ AMB AMB
comp=Z,2μm,5.8s
WMQ LR LR
comp=N,4μm,16.2s,MS5.7
WMQ LR LR
comp=E,5μm,16.3s,MS5.7
WMQ LR LR
comp=Z,4μm,25.6s
STKA Stephens Creek 48.13 131 ⇑*iP* P **08 24 04.6 0.0**
STKA *i* S S **08 30 59.4 -2.7**
STKA Stephens Creek 48.13 131 P P **08 24 04.8 +0.2**
comp=Z,44nm,0.8s,mb5.6,baz=305,slow=7.8,SNR=78
STKA LR LR 08 46 04.9
comp=Z,11μm,21.3s,MS5.8,baz=300,slow=38
SMDO Samad 48.78 305 P P **08 24 10.0 +0.3**
SNR=8.4
BSY Bisya 49.34 304 P P **08 24 15.2 +1.2**
SNR=19
SNY Shenyang 49.50 23 ⇑P P **08 24 13.9 -1.0**
SNY AP pP 08 24 24.1 +1.1
SNY PP PP 08 26 12.3 +2.9
SNY XS sS 08 31 44.0 +10
SNY AMB AMB

comp=Z,100nm,1.2s,mb5.7
SNY AMB AMB
comp=Z,1µm,3.8s
SNY LR LR
comp=N,5µm,15.6s,MS5.9
SNY LR LR
comp=E,8µm,16.2s,MS5.9
SNY LR LR
comp=Z,8µm,13.9s,MS5.9
ULHL Ulahol 50.20 337 P **P 08 24 21.0 +0.8**
SNR=48
CBIJ Chichi jima 50.32 51 P **P 08 24 20.1 -1.4**
comp=Z,71nm,0.5s,mb6.0,baz=306,slow=21,SNR=7.3
CBIJ LR LR 08 46 42.2
comp=Z,1µm,20.4s,MS5.0,baz=130,slow=37
KZA Kyzart 50.45 336 P **P 08 24 23.4 +1.2**
SNR=70
UCH Uchtor 50.88 335 P **P 08 24 26.5 +1.1**
SNR=89
UCH Uchtor 50.88 335⇑ *i*P **P 08 24 26.3 +1.0**
comp=Z,117nm,1.2s,mb5.7
UCH LR LR
comp=Z,2µm,21.0s,MS5.2
TKM2 Tokmak 2 51.02 337⇑ *i*P **P 08 24 27.0 +0.6**
TKM2 pmax pmax
comp=Z,6.0nm,0.3s,mb5.0
TKM2 Tokmak 2 51.02 337 P **P 08 24 27.2 +0.8**
SNR=162
TKM2 Tokmak 2 51.02 337⇑ *i*P **P 08 24 27.0 +0.6**
comp=Z,6.1nm,0.3s,mb5.0
SONM Songino Array 51.05 5 P **P 08 24 27.3 +0.8**
comp=Z,213nm,0.9s,mb6.1,baz=188,slow=8.4,SNR=313
SONM PcP PcP 08 25 42.9 +0.7
comp=Z,34nm,0.8s,baz=192,slow=4.0,SNR=4.1
SONM Songino Array 51.05 5 P **P 08 24 27.3 +0.8**
SONM 08 25 42.9
SONM pmax pmax
comp=Z,213nm,0.9s
KBK Karagaybulak 51.06 336 P **P 08 24 27.9 +1.2**
SNR=56
ASHO Ashiyiah 51.13 305 P **P 08 24 27.8 +0.2**
SNR=7.5
ULN Ulaanbaatar 51.14 6 P **P 08 24 28.5 +1.3**
SNR=121
ULN Ulaanbaatar 51.14 6 *e*P **P 08 24 28.5 +1.3**
ULN LR LR
comp=Z,7µm,19.0s,MS5.7
AML Almayashu 51.15 335 P **P 08 24 28.3 +0.9**
SNR=27
AML Almayashu 51.15 335⇑ *i*P **P 08 24 28.1 +0.7**
comp=Z,241nm,1.3s,mb6.0
AML LR LR
comp=Z,3µm,19.0s,MS5.3
AAK Ala-Archa 51.23 336 P **P 08 24 29.0 +1.1**
SNR=26
FRU Bishkek 51.34 336⇑ *i*P **P 08 24 29.0 +0.2**
FRU *e* 08 26 34.0
FRU *e*S **S 08 31 48.0 +1.5**
FRU pmax pmax
comp=Z,590nm,2.4s,mb6.1
FRU smax
comp=N,3µm,8.0s
CHMS Chumysh 51.42 336 P **P 08 24 29.8 +0.4**
SNR=32
EKS2 Erkin-Say 51.55 335 P **P 08 24 31.2 +0.9**
SNR=162
EKS2 Erkin-Say 51.55 335⇑ *i*P **P 08 24 31.1 +0.8**
comp=N,158nm,0.9s,mb6.0
EKS2 LR LR
comp=Z,4µm,19.0s,MS5.5
USP Ospenovka 51.75 336 P **P 08 24 32.2 +0.4**
SNR=100
CN2 Changchun 51.90 23 *e*P **P 08 24 32.3 -0.7**
CN2 PCP PcP 08 25 44.4 -1.1
CN2 *e*PP PP 08 26 31.4 +0.2
CN2 *e*S **S 08 31 52.6 -1.6**
CN2 *e*SS SS 08 35 28.0 -3.4
CN2 AMB AMB
comp=Z,390nm,1.0s,mb6.3
CN2 AMB AMB
comp=Z,1µm,4.0s
CN2 LR LR
comp=N,5µm,16.0s,MS5.8
CN2 LR LR
comp=E,5µm,16.0s,MS5.8
CN2 LR LR
comp=Z,8µm,16.0s,MS5.9
MK31 Makanchi Array 52.22 344 *e*P **P 08 24 35.4 +0.1**
MK31 Makanchi Array 52.22 344 *i* P **P 08 24 35.3 0.0**
MKAR Makanchi Array 52.22 344 P **P 08 24 35.5 +0.2**
comp=Z,235nm,0.8s,mb6.2,baz=150,slow=7.8,SNR=960
MKAR LR LR 08 51 40.4
comp=Z,3µm,20.1s,MS5.3,baz=163,slow=42
MKAR PKPPKP 08 55 13.2
comp=Z,0.5nm,0.9s,baz=29,slow=2.8,SNR=4.5
MAJO Matsushiro 52.95 38 P **P 08 24 39.2 -1.7**
MAJO pmax pmax
comp=Z,170nm,1.2s,mb5.8
MAJO Matsushiro 52.95 38⇑ *i*P **P 08 24 39.1 -1.8**
comp=Z,166nm,1.3s,mb5.8
MAJO LR LR
comp=Z,3µm,20.0s,MS5.3
MAT Matsushiro 52.95 38 P **P 08 24 40.4 -0.5**
MAT S **S 08 32 10.0 +1.2**
MJAR Matsushiro Arr 52.95 38 P **P 08 24 39.5 -1.5**
comp=Z,91nm,1.1s,mb5.6,baz=218,slow=7.5,SNR=145
MJAR PcP PcP 08 25 50.0 +0.3
comp=Z,18nm,1.1s,baz=222,slow=5.6,SNR=4.7
MJAR ScP ScP 08 29 45.5 -0.1
comp=Z,2.6nm,1.0s,baz=227,slow=7.8,SNR=4.1
MJAR LR LR 08 48 39.1
comp=Z,2µm,20.2s,MS5.2,baz=240,slow=38
MJAR Matsushiro Arr 52.95 38 P **P 08 24 39.5 -1.5**
MJAR PcP PcP 08 25 50.0 +0.3
MJAR ScP ScP 08 29 45.5 -0.1
MJAR LR LR 08 48 39.1
KK31 Karatay Array 53.33 333 *i* P **P 08 24 42.8 -0.8**
KK31 pmax pmax
comp=Z,28nm,1.0s,mb5.2
ZAK Zakamensk 53.38 2⇓ *i*P **P 08 24 43.6 -0.2**
ZAK *e* 08 25 50.8
ZAK pmax pmax
comp=Z,45nm,1.9s,mb5.1
TOO Toolangi 53.65 136 *e*P **P 08 24 46.6 +0.6**
TOO *e*S **S 08 32 20.9 +2.6**
VLA Vladivostok 54.13 28 *d* *i*P **P 08 24 49.7 +0.2**
VLA *e*S **S 08 32 25.8 +1.2**
VLA pmax pmax
comp=Z,322nm,1.3s,mb6.1
VLA MLR MLR
comp=Z,6µm,16.0s,MS5.8
VLA Vladivostok 54.13 28 *i* P **P 08 24 49.6 +0.1**
ABPO Ambohimpanom 54.22 249 *e*P **P 08 24 51.0 +0.4**
comp=Z,29nm,1.3s,mb5.0
ABPO LR LR
comp=Z,4µm,20.0s,MS5.5
MDJ Mudanjiang 54.27 25 P **P 08 24 50.4 0.0**
MDJ AP pP 08 24 59.4 +0.8
MDJ PCP PcP 08 25 54.8 +0.4
MDJ PP PP 08 26 54.5 +2.0
MDJ PCS PcS 08 29 54.3 +0.6
MDJ S **S 08 32 22.8 -3.6**
MDJ AMB AMB
comp=Z,125nm,0.9s,mb5.8
MDJ AMB AMB
comp=Z,881nm,6.7s
MDJ LR LR
comp=N,8µm,14.2s,MS5.9
MDJ LR LR
comp=E,5µm,18.6s,MS5.9
MDJ LR LR
comp=Z,10µm,17.5s,MS6.0
MDJ Mudanjiang 54.27 25⇑ *i*P **P 08 24 50.2 -0.2**
comp=Z,157nm,1.1s,mb5.9
MDJ LR LR
comp=Z,6µm,20.0s,MS5.7
HVS Khovu-Aksy 54.38 355 *d* *i*P **P 08 24 50.6 -0.5**
HVS pmax pmax
comp=Z,191nm,1.3s,mb5.9
MOY Mondy 54.61 0 *e*P **P 08 24 53.3 +0.5**
MOY pmax pmax
comp=Z,207nm,2.8s,mb5.7
TLY Talaya 54.70 3 P **P 08 24 54.8 +1.4**
comp=Z,441nm,1.1s,mb6.4,SNR=14
TLY Talaya 54.70 3 P **P 08 24 54.8 +1.5**
SNR=19
TLY Talaya 54.70 3*c* *i*P **P 08 24 54.3 +0.9**
TLY *e*S **S 08 32 34.1 +2.2**
TLY *e* 08 34 40.1
TLY *e*SS SS 08 36 24.2 +8.9
TLY *e*SSS 08 38 26.9
TLY pmax pmax
comp=Z,109nm,1.2s,mb5.8
TLY MLR MLR
comp=Z,10µm,15.0s,MS6.0
HIA Hailar 54.85 15 *e*P **P 08 24 54.2 -0.3**
HIA pmax pmax
comp=Z,162nm,1.1s
HIA MLR MLR
comp=Z,12µm,19.0s
HIA Hailar 54.85 15 *e*P **P 08 24 54.2 -0.4**
comp=Z,162nm,1.1s,mb6.0
HIA LR LR
comp=Z,12µm,19.0s,MS6.0
CAN Canberra 55.19 132 *e*P **P 08 24 57.8 +0.5**
comp=Z,84nm,1.3s,mb5.6
CAN *e*PcP PcP 08 25 53.9 -4.4
IRK Irkutsk 55.29 3 *e*P **P 08 24 58.0 +0.4**
IRK *e* pP 08 25 05.5 -0.3
IRK *e*S **S 08 32 52.3 +13**
IRK pmax pmax
comp=Z,142nm,1.5s,mb5.8
ARMA Armidale 55.46 125⇑ *i*P **P 08 25 00.6 +1.3**
CNB Canberra Magne 55.46 131 *e*P **P 08 24 58.9 -0.4**
CIT Chita 56.10 10 *e*P **P 08 25 04.5 +1.0**
CIT *e* pP 08 25 11.2 -0.5
CIT *e* 08 25 17.4
CIT *e* 08 26 00.2
CIT *e* 08 33 09.6
CIT pmax pmax
comp=Z,599nm,2.0s,mb6.3
ABKT Ailbek 56.55 320 P **P 08 25 06.8 -0.2**
comp=Z,487nm,1.0s,mb6.5,SNR=19
KURK Kurchatov 56.80 344 P **P 08 25 08.8 +0.3**
comp=Z,2µm,0.9s,mb7.1
KURK Kurchatov 56.80 344 P **P 08 25 08.8 +0.2**
SNR=155
KURK Kurchatov 56.80 344 P **P 08 25 07.7 -0.8**
comp=Z,158nm,0.9s,mb6.0,baz=156,slow=6.7,SNR=210
KURK Kurchatov 56.80 344 P **P 08 25 08.4 -0.1**
KURK pmax pmax
comp=Z,358nm,1.0s,mb6.3
KURK Kurchatov 56.80 344 P **P 08 25 07.7 -0.8**
TAU Tasmania Unive 57.48 140 PFAKE 08 25 20.0 +6.5
TAU LR LR
comp=Z,4µm,20.0s,MS5.6
ZAA0 Zalesovo Array 58.36 349⇑ *i*P **P 08 25 19.0 -0.4**
ZALV Zalesovo Beam 58.36 349 P **P 08 25 19.1 -0.2**
comp=Z,316nm,0.9s,mb6.3,baz=172,slow=4.3,SNR=526
ZALV LR LR 08 53 14.6
comp=Z,2µm,21.3s,MS5.2,baz=168,slow=39
ZALV PKP2bc 08 55 03.5
comp=Z,1.3nm,0.7s,baz=320,slow=4.4,SNR=3.6
ZALV Zalesovo Beam 58.36 349 P **P 08 25 19.1 -0.2**
ZALV LR LR 08 53 14.6
ZALV ⇑*e* 08 55 03.5
KLR Kul'dur 58.84 24⇓ *i*P **P 08 25 18.9 -3.9**
KLR *e*S **S 08 33 21.5 -5.2**
KLR pmax pmax
comp=N,70nm,1.8s
KLR pmax pmax
comp=E,260nm,1.8s
KLR pmax pmax
comp=Z,660nm,1.8s,mb6.4
KLR pmax pmax
comp=Z,1µm,7.0s
KLR smax
comp=N,3µm,11.0s
KLR smax
comp=E,700nm,11.0s
KLR MLR MLR
comp=E,4µm,14.5s
KLR MLR MLR
comp=Z,10µm,14.5s,MS6.1
KRAR Krasnoyarsk 59.28 355*c* *i*P **P 08 25 25.9 +0.1**
ERM Erimo 59.37 36 P **P 08 25 26.5 -0.2**
ERM pmax pmax
comp=Z,59nm,1.0s,mb5.6
ERM Erimo 59.37 36⇑ *i*P **P 08 25 25.0 -1.7**
ERM LR LR
comp=Z,2µm,20.0s,MS5.2
NVS Novosibirsk 59.51 349⇑ *i*P **P 08 25 25.7 -1.6**
NVS *e*S **S 08 33 34.3 -0.9**
NVS pmax pmax
comp=E,92nm,1.3s
NVS pmax pmax
comp=Z,180nm,1.3s,mb5.9
NVS pmax pmax
comp=N,192nm,1.7s
NVS smax
comp=N,142nm,2.1s
NVS smax
comp=E,186nm,2.7s
HNR Honiara 59.51 99 P **P 08 25 27.2 -0.9**
comp=E,498nm,0.9s,mb6.5,baz=200,slow=4.5,SNR=31
HNR Honiara 59.51 99 P **P 08 25 27.2 -1.0**
HNR pmax pmax
comp=Z,498nm,0.9s,mb6.5
HNR Honiara 59.51 99 *e*P **P 08 25 27.1 -1.1**
comp=Z,894nm,1.1s,mb6.7
HNR LR LR
comp=Z,2µm,20.0s,MS5.2
KBD Kabd 59.79 306 *e*P **P 08 25 29.2 -0.7**
baz=306
KBD AMb AMB 08 25 39.7
comp=Z,102nm,1.7s,mb5.6,baz=306
RDF Al-Radifah 59.80 306 *e*P **P 08 25 29.5 -0.5**
baz=306
RDF AMb AMB 08 25 40.5
comp=Z,182nm,1.7s,mb5.8,baz=306
UMR Umm Al-Rimmam 59.92 307 *e*P **P 08 25 30.5 -0.3**
baz=307
UMR AMb AMB 08 25 39.6
comp=Z,179nm,1.9s,mb5.8,baz=307
NAY Al-Naaiem 60.18 306 *e*P **P 08 25 31.9 -0.6**
baz=306
NAY AMb AMB 08 25 33.2
comp=Z,57nm,1.1s,mb5.5,baz=306
ASAJ Asahikawa 60.37 34 P **P 08 25 32.4 -1.1**
comp=Z,90nm,1.0s,mb5.7,baz=249,slow=12,SNR=22
ASAJ Asahikawa 60.37 34 P **P 08 25 32.4 -1.1**
ASAJ pmax pmax
comp=Z,90nm,1.0s
RST Umm Al-Ruwaisa 60.47 307 *e*P **P 08 25 33.5 -1.1**
baz=306
RST AMb AMB 08 25 45.1
comp=Z,108nm,1.2s,mb5.8,baz=306
BVA0 Borovoye Array 61.38 340 *i* P **P 08 25 38.7 -1.5**
BVA0 pmax pmax
comp=Z,22nm,1.0s,mb5.2
BVAR Borovoye Array 61.38 340 P **P 08 25 39.2 -1.0**
comp=Z,58nm,0.8s,mb5.8,baz=141,slow=7.6,SNR=210
BVAR Borovoye Array 61.38 340 P **P 08 25 39.2 -1.0**
BVAR pmax pmax
comp=Z,58nm,0.8s
BRVK Borovoye 61.44 340 P **P 08 25 39.3 -1.3**
comp=Z,776nm,0.9s,mb6.8,SNR=26
BRVK Borovoye 61.44 340 P **P 08 25 40.1 -0.5**
SNR=38
BRVK Borovoye 61.44 340⇑ *e*P **P 08 25 39.7 -0.9**
BRVK LR LR
comp=Z,3µm,20.0s,MS5.4
BOD Bodaibo 61.76 8 *e*P **P 08 25 42.4 -0.3**
BOD pmax pmax
comp=Z,186nm,1.2s,mb6.1
YUK Yuzh-Kuril'sk 62.17 36 *e*P **P 08 25 45.0 -0.7**
YUK MLR MLR
comp=Z,3µm,17.0s,MS5.5
YUK MLR MLR
comp=E,2µm,16.0s
YSS Yuzh-Sakhalins 62.27 31⇑ *i*P **P 08 25 46.0 -0.3**
YSS *e* pP 08 25 54.7 +0.1
YSS *e* 08 26 20.0
YSS *e* 08 28 00.0
YSS *e*S **S 08 34 24.0 +13**
YSS *e*PS 08 34 44.0
YSS *e* 08 35 32.0
YSS pmax pmax
comp=N,150nm,1.0s
YSS pmax pmax
comp=Z,450nm,1.0s,mb6.5
YSS MLR MLR
comp=Z,2µm,18.0s,MS5.3
YSS MLR MLR
comp=N,2µm,16.0s
YSS Yuzh-Sakhalins 62.27 31⇑ *e*P **P 08 25 45.9 -0.4**
YSS LR LR
comp=Z,1µm,19.0s,MS5.0
AB31 Akbulak array 62.81 331⇑ *e*P **P 08 25 48.8 -1.1**
CLNS Chul'man 63.03 15*c* *i*P **P 08 25 50.2 -1.0**
CLNS *e**PP pP 08 25 58.2 -1.3
CLNS *e* 08 26 25.6
CLNS *e* 08 28 09.0
CLNS *e*PPP 08 29 38.9
CLNS *e*S **S 08 34 22.1 +2.2**
CLNS pmax pmax
comp=Z,91nm,1.2s,mb5.8
CLNS pmax pmax
comp=E,49nm,1.1s
CLNS pmax pmax
comp=N,56nm,1.1s
CLNS smax
comp=N,660µm,13.9s
CLNS smax
comp=E,389µm,13.5s
CLNS MLR MLR
comp=N,6µm,14.0s,MS6.0
CLNS MLR MLR
comp=Z,11µm,19.0s,MS6.0
CLNS MLR MLR
comp=E,4µm,15.0s,MS6.0
KMBO Kilima Mbogo 63.08 270 P **P 08 25 53.1 +0.7**
comp=E,3.8nm,0.9s,mb4.5,baz=58,slow=14,SNR=6.1
KMBO LR LR 08 49 58.7
comp=E,2µm,18.5s,MS5.3,baz=275,slow=33
KMBO Kilima Mbogo 63.08 270 *e*P **P 08 25 52.8 +0.4**
comp=E,59nm,1.6s,mb5.5
KMBO LR LR
comp=Z,2µm,20.0s,MS5.2
CASY Casey 63.41 175 *e*P **P 08 25 54.1 +0.5**
CASY *e*S **S 08 34 26.0 +1.5**
CASY Casey 63.41 175 *e*P **P 08 25 54.1 +0.5**
CASY *e*S **S 08 34 26.0 +1.5**
CASY LR LR
comp=Z,5µm,21.0s,MS5.7
MIR Mirnyy 63.49 183⇓ *i*P **P 08 25 54.0 -0.1**
MIR *i* pP 08 26 03.0 +0.6
MIR *e*S **S 08 34 26.0 +0.6**
MIR pmax pmax
comp=Z,100nm,1.0s,mb5.9
AKTK Aktyubinsk 64.53 332 P **P 08 26 00.2 -1.0**
AKTO Aktyubinsk 64.53 332 P **P 08 26 00.2 -1.0**
comp=Z,61nm,1.0s,mb5.6,baz=131,slow=7.2,SNR=107
AKTO Aktyubinsk 64.53 332 P **P 08 26 00.2 -1.0**
AKTO pmax pmax
comp=Z,61nm,1.0s,mb5.6
MAK Makhachkala 66.07 320*c* *i*P **P 08 26 08.6 -2.7**
MAK *e* 08 26 42.7
MAK *e*PPP 08 30 21.2
MAK *i*S S 08 34 54.9 -3.1
MAK *e* 08 36 06.3
MAK pmax pmax
comp=E,227nm,0.6s
MAK pmax pmax
comp=Z,906nm,1.8s,mb6.5
MAK pmax pmax
comp=N,221nm,1.0s
MAK smax
comp=N,4402µm,8.1s
MAK smax
comp=E,5637µm,8.5s
HAKT HAKKARI 66.22 314 *i* P **P 08 26 12.1 -0.3**
GNI Garni 66.59 316 P **P 08 26 15.1 +0.3**
SNR=17
GNI Garni 66.59 316 P **P 08 26 14.9 +0.1**
comp=E,27nm,0.9s,mb5.3,baz=239,slow=3.5,SNR=16
GNI Garni 66.59 316 P **P 08 26 15.8 +1.0**
GNI pmax pmax
comp=Z,180nm,1.4s
DZM Mont Dzumac 66.69 113 *e*P **P 08 26 15.9 +0.2**
comp=Z,43nm,1.1s,mb5.4
DYDN Diyadin 67.06 315 *i* P **P 08 26 18.4 +0.6**
MTA Mtatsminda 67.25 318 P **P 08 26 19.1 +0.2**
TBLG Delisi 67.30 318 *e*P **P 08 26 19.8 +0.6**
TBLG Delisi 67.30 318 P **P 08 26 19.8 +0.6**
GOR Gori 67.83 318 P **P 08 26 23.6 +1.0**
SVE Sverdlovsk 67.87 338⇓ *e*P **P 08 26 22.5 0.0**
SVE *e*PPP 08 30 40.2
SVE *e*S S 08 35 14.2 -5.0
SVE *e*SS SS 08 39 39.9 -1.5
SVE pmax pmax
comp=Z,243nm,1.1s,mb6.1
SVE MLR MLR
comp=Z,4µm,21.0s,MS5.6
MARD Mardin 68.27 312 *i* P **P 08 26 25.3 -0.1**
ARU Arti 68.39 337 P **P 08 26 25.7 -0.1**
comp=Z,608nm,1.1s,mb6.5,SNR=10
ARU Arti 68.39 337⇑ *e*P **P 08 26 24.9 -0.9**
ARU LR LR
comp=Z,3µm,20.0s,MS5.6
HOMI Horasan 68.52 315 *i* P **P 08 26 26.7 -0.3**
ONI Oni 68.53 318 P **P 08 26 27.6 +0.6**
YAK Yakutsk 68.76 14*c* *i*P **P 08 26 26.7 -1.3**
YAK *e**PP pP 08 26 35.6 -0.8
YAK *e* 08 26 53.8
YAK *e*S S 08 35 22.9 -6.7
YAK *e* 08 36 23.7
YAK *e*SS SS 08 39 54.2 -0.7
YAK pmax pmax
comp=Z,452nm,1.2s,mb6.3
YAK pmax pmax
comp=E,98nm,1.1s
YAK pmax pmax
comp=N,123nm,1.0s
YAK smax
comp=E,191µm,3.1s
YAK smax
comp=N,238µm,7.1s
YAK MLR MLR
comp=Z,8µm,15.0s,MS6.1
YAK MLR MLR
comp=N,7µm,19.0s,MS6.0
YAK MLR MLR
comp=E,5µm,19.0s,MS6.0
YAK Yakutsk 68.76 14⇑ *e*P **P 08 26 26.7 -1.3**
YAK LR LR
comp=Z,5µm,21.0s,MS5.8
ERZM Erzurum 68.84 315 *i* P **P 08 26 30.4 +1.4**
ARTV Artvin 68.97 316 *i* P **P 08 26 29.8 0.0**
DIYA Diyarbakir 68.98 313 *i* P **P 08 26 30.3 +0.4**
DRV Dumont d'Urvil 69.13 164 P **P 08 26 34.0 +3.8**
DRV S S 08 35 34.0 +0.1
DRV L 08 43 00.0
DRV R 08 47 00.0
MAW Mawson 69.26 194 *e*P **P 08 26 30.8 -0.2**
MAW *e*S S 08 35 37.9 +2.5
MAW Mawson 69.26 194 P **P 08 26 31.2 +0.2**
comp=Z,7.1nm,0.9s,mb4.6,baz=30,slow=9.2,SNR=14
MAW LR LR 08 50 27.6
comp=Z,3µm,21.6s,MS5.5,baz=37,slow=30
ASF Jabal al Asfar 69.54 306 P **P 08 26 34.0 +0.5**
comp=Z,24nm,0.9s,mb5.1,baz=340,slow=5.6
ASF Jabal al Asfar 69.54 306 P **P 08 26 34.0 +0.5**
ASF pmax pmax
comp=Z,24nm,1.0s
KIV Kislovodsk 69.64 319 P **P 08 26 33.5 -0.3**
comp=Z,692nm,0.9s,mb6.6,SNR=15
KIV Kislovodsk 69.64 319 P **P 08 26 34.1 +0.3**
SNR=28
KIV Kislovodsk 69.64 319 *e*P **P 08 26 33.6 -0.2**
KIV *e* 08 26 56.9
KIV *e*S S 08 35 40.3 -0.4
KIV *e*SS SS 08 40 15.8 +6.6
KIV pmax pmax
comp=Z,151nm,1.1s,mb5.8
KIV pmax pmax
comp=Z,355nm,8.1s
KIV MLR MLR
comp=Z,1µm,18.0s,MS5.2
KIV Kislovodsk 69.64 319⇑ *i*P **P 08 26 33.7 -0.1**
KIV Kislovodsk 69.64 319 ⇑P **P 08 26 33.7 -0.1**
KIV LR LR
comp=Z,1µm,20.0s,MS5.2
ELZG Elazig 70.02 313 *i* P **P 08 26 37.0 +0.6**
ATAB Bozova 70.17 312 *i* P **P 08 26 38.0 +0.7**
MALT Malatya 70.37 313⇑ *i*P **P 08 26 40.2 +1.8**
MALT Malatya 70.37 313⇑ *i*P **P 08 26 39.5 +1.1**

comp=Z,100nm,1.1s,mb5.7
MALT LR LR
comp=Z,3µm,22.0s,MS5.5
MACK Trabzon 70.37 316 *i* P **P** **08 26 38.4 0.0**
GZT Gaziantep 70.68 311 *i* P **P** **08 26 40.4 +0.1**
AKCD Akcadag 70.73 312 *i* P **P** **08 26 41.0 +0.4**
SOC Sochi 71.44 318*c* *i*P **P** **08 26 44.0 -0.8**
SOC *e**SP sP 08 26 55.0 -1.3
SOC *e* 08 27 01.1
SOC *e* 08 29 26.0
SOC *e*S S 08 35 59.0 -2.7
SOC *e* 08 36 46.9
SOC *e*SS SS 08 40 33.6 -3.3
SOC pmax pmax
comp=Z,98nm,0.7s,mb5.8
SOC pmax pmax
comp=Z,133nm,4.9s
SOC MLR MLR
comp=Z,223nm,22.0s,MS4.4
SOC Sochi 71.44 318 *i* P **P** **08 26 44.3 -0.5**
SKR Severo-Kuril's 71.63 34 *e*P **P** **08 26 45.5 -0.3**
SKR *e* 08 26 56.0
SKR *e* 08 36 48.0
SKR *e*SS SS 08 40 40.0 +0.5
SKR pmax pmax
comp=Z,2µm,4.0s
SKR pmax pmax
comp=E,180nm,1.0s
SKR pmax pmax
comp=Z,450nm,1.0s,mb6.3
SKR MLR MLR
comp=N,3µm,18.0s,MS5.8
SKR MLR MLR
comp=E,3µm,18.0s,MS5.8
SKR MLR MLR
comp=Z,5µm,18.0s,MS5.8
ANDN Andirin 71.67 311 *i* P **P** **08 26 46.5 +0.2**
LSZ Lusaka 71.97 255 P **P** **08 26 49.1 +0.5**
comp=Z,10nm,1.1s,mb4.7,baz=98,slow=5.7,SNR=5.4
LSZ Lusaka 71.97 255 P **P** **08 26 49.1 +0.5**
LSZ pmax pmax
comp=Z,33nm,1.3s,mb5.1
LSZ Lusaka 71.97 255 *e*P **P** **08 26 49.0 +0.5**
comp=Z,33nm,1.4s,mb5.1
LSZ LR LR
comp=Z,2µm,20.0s,MS5.4
MEST Erdemli 73.03 310 *i* P **P** **08 26 54.5 0.0**
CSS Prodhromos 73.20 308 *e*P **P** **08 26 55.4 -0.2**
comp=Z,176nm,1.4s,mb5.8
ANN Anapa 73.42 319 *e*P **P** **08 26 54.1 -2.5**
ANN *e* 08 27 10.1
ANN *e*S S 08 36 20.0 -4.3
ANN *e* 08 37 01.3
ANN pmax pmax
comp=Z,37nm,1.2s,mb5.2
PEA0B Petropavlovsk- 73.67 32 *e*P **P** **08 26 57.4 -0.5**
PETK Petropavlovsk- 73.67 32 P **P** **08 26 56.9 -1.0**
comp=Z,43nm,0.9s,mb5.4,baz=210,slow=2.3,SNR=21
PETK LR LR 09 02 52.3
comp=Z,1µm,21.0s,MS5.1,baz=251,slow=39
CDAG Cicekdag 73.78 313 *i* P **P** **08 26 58.1 -0.7**
CTKT Corum 73.80 314 *i* P **P** **08 26 59.2 +0.3**
RPZ Rata Peaks 73.93 135 P **P** **08 26 58.9 -0.7**
comp=Z,24nm,0.9s,mb5.1,baz=224,slow=3.7,SNR=7.5
PET Petropavlovsk 74.14 32 *e*P **P** **08 27 00.2 -0.4**
PET *e* 08 29 45.9
PET *e*S S 08 36 31.8 -0.2
PET pmax pmax
comp=Z,191nm,0.9s,mb6.0
PET pmax pmax
comp=Z,500nm,15.8s
PET MLR MLR
comp=Z,2µm,13.0s,MS5.6
PET MLR MLR
comp=Z,2µm,18.0s
PET Petropavlovsk 74.14 32⇑ *e*P **P** **08 26 59.9 -0.7**
PET LR LR
comp=Z,2µm,20.0s,MS5.4
ILGA Ilgaz 74.70 314 *i* P **P** **08 27 02.9 -1.3**
LBTB Lobatse 74.86 245 P **P** **08 27 06.3 +0.9**
LBTB pmax pmax
comp=Z,23nm,1.1s,mb5.0
LBTB Lobatse 74.86 245 *e*P **P** **08 27 06.2 +0.7**
comp=Z,23nm,1.1s,mb5.0
LBTB LR LR
comp=Z,2µm,20.0s,MS5.5
ANTO Ankara 75.02 313 P **P** **08 27 06.0 0.0**
ANTO pmax pmax
comp=Z,130nm,1.3s,mb5.7
ANTO Ankara 75.02 313⇑ *i*P **P** **08 27 05.3 -0.7**
ANTO Ankara 75.02 313⇑ *i*P **P** **08 27 05.3 -0.7**
ANTO LR LR
comp=Z,2µm,20.0s,MS5.3
BALT Daday 75.09 314 *i* P **P** **08 27 06.1 -0.3**
VOR Voronezh 75.11 326⇑ *i*P **P** **08 27 05.0 -1.3**
VOR pmax pmax
comp=Z,460nm,1.6s,mb6.2
KDHN Kadinhani 75.13 311 *i* P **P** **08 27 04.9 -1.8**
BOSA Boshof 75.41 241 P **P** **08 27 08.7 +0.1**
comp=Z,15nm,1.0s,mb4.9,baz=92,slow=5.5,SNR=11
BOSA LR LR 08 55 46.5
comp=Z,2µm,18.7s,MS5.4,baz=103,slow=32
BOSA Boshof 75.41 241 *e*P **P** **08 27 08.5 0.0**
comp=Z,26nm,1.1s,mb5.1
BOSA LR LR
comp=Z,2µm,20.0s,MS5.5
SIM Simferopol' 75.68 318*c* *i*P **P** **08 27 09.5 -0.2**
SIM *e* pP 08 27 17.0 -1.2
SIM *i*S S 08 36 47.5 -2.1
SIM *e*PS 08 37 29.0
SIM *e*SS SS 08 41 41.0 -0.5
SIM pmax pmax
comp=Z,68nm,1.1s,mb5.5
SIM MLR MLR
comp=Z,1µm,23.2s,MS5.1
SIM Simferopol' 75.68 318 *i* P **P** **08 27 09.8 +0.1**
ISP Isparta 76.17 310 PFAKE 08 27 20.0 +7.3
ISP LR LR
comp=Z,2µm,20.0s,MS5.4
SNZO South Karori 76.19 132 PFAKE 08 27 20.0 +7.3
SNZO LR LR
comp=Z,7µm,22.0s,MS6.0
ESKT Eskisehir 76.36 312 *i* P **P** **08 27 13.4 -0.3**
TKTP Tekketepe 76.36 310 *i* P **P** **08 27 12.7 -1.0**
SEY Seymchan 76.56 22⇑ *e*P **P** **08 27 14.1 -0.2**
BORA Eskisehir 76.75 312 *i* P **P** **08 27 15.2 -0.8**
ARG Arkhangelos 77.62 308 *e*P **P** **08 27 21.5 +0.6**
MOS Moscow 77.66 329 *e*P **P** **08 27 18.9 -1.7**
MOS *e* pP 08 27 26.9 -2.2
MOS *e* pP 08 27 27.2 -1.9
MOS *e* 08 30 13.1
MOS *e*S S 08 37 06.5 -4.3
MOS *i* 08 37 20.4
MOS *e* 08 37 36.6
MOS pmax pmax
comp=Z,227nm,0.9s,mb6.1
MOS Moscow 77.66 329 *e*P **P** **08 27 19.0 -1.6**
URZ Urewera 77.66 128 P **P** **08 27 19.3 -1.8**
comp=Z,13nm,0.7s,mb4.9,baz=224,slow=3.3,SNR=8.8
ULDT Uludag 77.79 312 *i* P **P** **08 27 21.9 +0.2**
MANT Manisa 77.82 310 *i* P **P** **08 27 22.1 +0.1**
OBN Obninsk 77.95 328 P **P** **08 27 22.9 +0.6**
comp=Z,1µm,1.1s,mb6.7,SNR=11
OBN Obninsk 77.95 328*c* *i*P **P** **08 27 21.8 -0.5**
OBN *i* pP 08 27 29.9 -0.9
OBN *i* 08 27 37.8
OBN *e* 08 30 16.3
OBN *e*PPP 08 32 08.4
OBN *i*S S 08 37 10.9 -3.1
OBN *i* 08 37 22.9
OBN *i*PS 08 37 58.7
OBN pmax pmax
comp=Z,397nm,1.6s,mb6.1
OBN Obninsk 77.95 328⇑ *i*P **P** **08 27 21.9 -0.4**
OBN LR LR
comp=Z,2µm,20.0s,MS5.3
KARP Karpathos 78.23 307 *e*P **P** **08 27 25.0 +0.7**
FUNA Funafuti 78.52 98 PFAKE 08 27 40.0 +14
FUNA LR LR
comp=Z,5µm,19.0s,MS5.9
KDAG Bornova 78.78 310 *i* P **P** **08 27 27.9 +0.6**
KLMR Klimovskoe 79.01 334⇑ *i*P **P** **08 27 27.7 -0.3**
KLMR *e* pP 08 27 33.8 -2.7
KLMR pmax pmax
comp=Z,301nm,1.6s,mb6.0
TLCR 79.34 317⇓ *i*P **P** **08 27 30.7 +0.5**
TLCR 79.34 317 P **P** **08 27 30.2 +0.1**
TIRR Tirgusor 79.42 316⇓ *i*P **P** **08 27 30.4 -0.2**
TIRR Tirgusor 79.42 316 P **P** **08 27 30.7 +0.1**
SUR Sutherland 79.48 238 PFAKE 08 27 40.0 +8.7
SUR LR LR
comp=Z,3µm,19.0s,MS5.7
SANT Santorini 79.76 308 PFAKE 08 27 40.0 +7.3
SANT LR LR
comp=Z,1µm,20.0s,MS5.3
HARR Harsova 79.81 316 P **P** **08 27 33.0 +0.2**
HARR Harsova 79.81 316⇑ *i*P **P** **08 27 32.9 +0.1**
HARR Harsova 79.81 316⇑ *i*P **P** **08 27 32.9 +0.2**
KIS Kishinev 79.82 319 *e*P **P** **08 27 32.0 -0.8**
KIS *i* pP 08 27 39.0 -2.3
KIS *e* 08 27 49.0
KIS *e* 08 30 41.0
KIS *e*S S 08 37 30.0 -4.3
KIS *e*PS 08 38 16.0
KIS pmax pmax
comp=Z,280nm,1.4s,mb6.0
KIS Kishinev 79.82 319 *e*P **P** **08 27 32.0 -0.8**
comp=Z,300nm,1.4s,mb6.0
KIS Kishinev 79.82 319 *i* PcP PcP 08 27 39.0 -1.3
KIS Kishinev 79.82 319 *e*PP PP 08 30 41.0 +6.7
KIS Kishinev 79.82 319 *e*PS 08 38 16.0
KIS *e*L 09 01 18.0
KIS LRM 09 12 36.0
comp=Z,1µm,20.0s
GVD Gavdhos 80.56 306 *e*P **P** **08 27 35.0 -2.0**
VAM Vamos 80.57 306 *e*P **P** **08 27 38.0 +0.9**
AKASG Malin Array Be 80.60 322 P **P** **08 27 35.4 -1.5**
comp=Z,26nm,1.0s,mb5.1,baz=85,slow=4.0,SNR=70
AKASG PP PP 08 30 38.0 -2.7
comp=Z,0.6nm,0.3s,baz=102,slow=6.3,SNR=4.9
AKASG Malin Array Be 80.60 322 P **P** **08 27 35.4 -1.5**
AKASG 08 30 38.0
AKASG pmax pmax
comp=Z,26nm,1.0s
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 80.60 322 P **P** **08 27 35.4 -1.5**
AKASG PP PP 08 30 38.0 -2.7
KIEV Kiev 80.61 322 *e*P **P** **08 27 36.0 -0.9**
KIEV *e* pP 08 27 43.6 -1.8
KIEV pmax pmax
comp=Z,44nm,1.3s,mb5.2
KIEV MLR MLR
comp=Z,2µm,21.0s,MS5.5
KIEV Kiev 80.61 322 *e*P **P** **08 27 36.0 -1.0**
comp=Z,44nm,1.3s,mb5.2
KIEV *e*PcP PcP 08 27 43.5 -0.2
KIEV LR LR
comp=Z,2µm,21.0s,MS5.5
VRI Vrincioaia 80.93 317 *i*P **P** **08 27 39.0 +0.3**
VRI Vrincioaia 80.93 317 P **P** **08 27 39.4 +0.7**
PLOR Plostina 80.98 317 P **P** **08 27 39.9 +0.9**
RAO Raoul Island 81.26 119 PFAKE 08 27 50.0 +9.1
RAO LR LR
comp=Z,4µm,20.0s,MS5.8
ZIMR 81.36 315 P **P** **08 27 41.8 +0.7**
MLR Muntele Rosu 81.37 317⇑ *i*P **P** **08 27 41.2 +0.1**
MLR Muntele Rosu 81.37 317 P **P** **08 27 41.6 +0.5**
KYTH Kithira 81.66 307 *e*P **P** **08 27 42.5 -0.4**
VLI Veliai 81.82 308 *e*P **P** **08 27 44.0 +0.3**
PAIG Paliouri 81.83 311 *e*P **P** **08 27 42.8 -0.9**
VOIR 81.97 317⇑ *i*P **P** **08 27 44.2 -0.1**
VOIR 81.97 317⇑ P **P** **08 27 44.2 0.0**
SBA Scott Base 82.07 169 *e*P **P** **08 27 45.4 +1.2**
SBA pmax pmax
comp=Z,30nm,1.0s,mb5.2
SBA MLR MLR
comp=Z,2µm,22.0s,MS5.4
SBA Scott Base 82.07 169 *e*P **P** **08 27 45.4 +1.2**
comp=Z,30nm,1.0s,mb5.2
SBA LR LR
comp=Z,2µm,22.0s,MS5.4
PLG Polygyros 82.09 311 *e*P **P** **08 27 44.8 -0.2**
TSUM Tsumeb 82.14 251 PFAKE 08 28 00.0 +14
TSUM LR LR
comp=Z,3µm,20.0s,MS5.6
BURAR Bucovina Array 82.35 319⇑ *i*P **P** **08 27 47.2 +1.0**
BURAR Bucovina Array 82.35 319⇑ P **P** **08 27 47.2 +1.0**
BUR08 Bucovina Ar. S 82.37 319 *e*P **P** **08 27 47.0 +0.7**
VLX Vlachokerasia 82.37 308 *e*P **P** **08 27 46.0 -0.5**
MNK Minsk 82.49 326⇑ *i*P **P** **08 27 44.0 -2.8**
MNK *e* pP 08 27 52.0 -3.3
MNK *e*S S 08 37 56.0 -5.7
MNK pmax pmax
comp=Z,290nm,1.2s,mb6.1
KNT Kendrikon 82.65 312 *e*P **P** **08 27 46.7 -1.2**
ITM Ithomi 82.69 308 *e*P **P** **08 27 48.0 -0.2**
LIT Litokhoron 82.76 311 *e*P **P** **08 27 47.5 -1.1**
PYL PYLOS 82.79 308 *e*P **P** **08 27 47.7 -1.0**
PUL Pulkovo 82.79 331⇑ *e*P **P** **08 27 48.5 +0.3**
VAY Valandovo 82.92 312 *e*P **P** **08 27 47.7 -1.6**
VAY Valandovo 82.92 312 *e*P **P** **08 27 47.7 -1.6**
EVR Evrytania 83.07 310 *e*P **P** **08 27 50.0 -0.2**
JOF Joensuu 83.40 335 *e*p **P** **08 27 51.3 0.0**
comp=Z,82nm,0.9s,mb5.8
JOF Joensuu 83.40 335 *e*P **P** **08 27 51.3 0.0**
JOF pmax pmax
comp=Z,82nm,0.9s,mb5.8
GZR Gura Zlata 83.53 316⇑ *i*P **P** **08 27 53.0 +0.6**
GZR Gura Zlata 83.53 316 P **P** **08 27 52.6 +0.3**
LVV L'vov 83.61 321 *e*P **P** **08 27 52.1 -0.6**
LVV *e*S S 08 38 12.1 -1.1
DRGR 83.85 318⇑ *i*P **P** **08 27 54.2 +0.2**
DRGR 83.85 318 P **P** **08 27 54.5 +0.5**
SKO Skopje 83.87 313 *e*P **P** **08 27 53.3 -0.9**
VLS Valsamata 83.90 309 *e*P **P** **08 27 54.5 +0.1**
KRUS Krusevo 83.91 312 *e*P **P** **08 27 53.6 -0.8**
JAN Janina 83.93 310 *e*P **P** **08 27 55.5 +0.9**
LKD Levkas 83.93 309 *e*P **P** **08 27 54.5 -0.1**
LVZ Lovozero 83.97 340 P **P** **08 27 54.0 -0.2**
comp=Z,590nm,0.8s,mb6.8,SNR=7.9
LVZ Lovozero 83.97 340 PFAKE 08 28 00.0 +5.8
LVZ LR LR
comp=Z,3µm,20.0s,MS5.7
BILL Bilibino 84.11 20⇓ *i*P **P** **08 27 54.3 -0.6**
BILL pmax pmax
comp=Z,52nm,1.0s,mb5.6
BILL Bilibino 84.11 20⇓ *i*P **P** **08 27 54.4 -0.5**
BILL LR LR
comp=Z,4µm,19.0s,MS5.8
OHR Ohrid 84.20 312 *e*P **P** **08 27 53.7 -2.2**
APA Apatity 84.28 339⇓ *i*P **P** **08 27 55.3 -0.4**
APA *i* pP 08 28 03.0 -1.3
APA *i*S S 08 38 20.0 +0.7
APA pmax pmax
comp=Z,110nm,1.2s,mb5.9
APA pmax pmax
comp=Z,1µm,16.0s
APA MLR MLR
comp=Z,3µm,21.0s,MS5.6
BZS Buzias 84.37 316⇓ *i*P **P** **08 27 57.1 +0.4**
BZS Buzias 84.37 316 P **P** **08 27 56.6 -0.1**
KWP Kalwaria 84.41 320 *e*P **P** **08 27 57.2 +0.5**
KWP *e*pP pP 08 28 04.5 -0.8
KWP LMZ 09 09 06.9
comp=Z,1µm,23.4s
KWP Kalwaria 84.41 320⇑ *i*P **P** **08 27 56.8 +0.1**
KWP Kalwaria 84.41 320 *e*P **P** **08 27 57.2 +0.5**
KWP *e*pP pP 08 28 04.5 -0.8
UZH Uzhgorod 84.48 319 *d* *i*P **P** **08 27 56.7 -0.4**
UZH *e* pP 08 28 03.0 -2.7
UZH *e* 08 31 16.0
UZH *e*PPP 08 33 14.0
UZH *e*S S 08 38 20.0 -2.0
UZH *e*PS 08 39 14.0
KOLS Kolonicke sedl 84.55 320 *e*P **P** **08 27 58.2 +0.7**
KOLS *e*pP pP 08 28 05.7 -0.3
MIDW Midway 84.68 61 PFAKE 08 28 10.0 +11
MIDW LR LR
comp=Z,1µm,19.0s,MS5.2
KEK Kerkira 84.74 310 *e*P **P** **08 27 59.0 +0.3**
TIR Tirane 84.93 312 PFAKE 08 28 10.0 +10
TIR LR LR
comp=Z,1µm,20.0s,MS5.3
SUW Suwalki 85.02 325 *e*P **P** **08 27 59.6 -0.2**
SUW *e*S S 08 38 23.6 -3.6
SUW LMZ 09 12 20.2
comp=Z,2µm,21.7s
SUW Suwalki 85.02 325 P **P** **08 27 59.7 0.0**
SUW pmax pmax
comp=Z,130nm,0.7s,mb6.2
SUW Suwalki 85.02 325 *e*P **P** **08 27 59.6 -0.1**
SUW *e*S S 08 38 23.6 -3.6
CRVS Cervenica-Dubn 85.07 319 *e*P **P** **08 28 00.4 +0.3**
DIVS Divibare 85.26 315 *e*P **P** **08 28 01.0 -0.2**
STHS Stebnicka Huta 85.30 320 *e*P **P** **08 28 02.2 +0.9**
STHS pmax pmax
comp=Z,39nm,1.0s,mb5.5
STHS Stebnicka Huta 85.30 320 *e*P **P** **08 28 02.1 +0.8**
STHS Stebnicka Huta 85.30 320 *e*P **P** **08 28 02.2 +0.9**
comp=Z,38nm,1.0s,mb5.5
KAF Kangasniemi 85.36 333 *e*p **P** **08 28 00.0 -1.3**
comp=Z,121nm,0.9s,mb6.0,baz=100,slow=4.5
KAF Kangasniemi 85.36 333 *e*P **P** **08 28 00.0 -1.3**
KAF pmax pmax
comp=Z,121nm,0.9s,mb6.0
NIE Niedzica 85.90 320 *e*P **P** **08 28 05.3 +1.1**
PSZ Piszkesteto 85.93 318⇑ *e*PcP PcP 08 28 04.6 -2.5
PSZ Piszkesteto 85.93 318⇓ *i*P **P** **08 28 05.1 +0.7**
OJC Ojcow 86.36 321 *e*P **P** **08 28 06.6 +0.1**
OJC *e**PP pP 08 28 17.1 +2.0
OJC *e* 08 38 29.6
OJC Ojcow 86.36 321 *e*P **P** **08 28 06.6 +0.1**
OJC *e*PcP PcP 08 28 08.8 -0.2
OJC *e*pP pP 08 28 17.1 +2.0
OJC *e*SKSac SKSac 08 38 29.6 -1.5
OJC LR LR
comp=Z,1µm,22.6s,MS5.3
BUD Budapest 86.44 318⇑ *e*PcP PcP 08 28 07.2 -2.2
PKSM Moragy 86.52 316⇓ *i*P **P** **08 28 07.3 -0.1**
PKSM Moragy 86.52 316⇑ *e*P **P** **08 28 07.3 -0.1**
MAIT Maitri 86.59 199 *e*P **P** **08 28 10.2 +3.0**
VYHS Vyhne 86.72 319 *e*P **P** **08 28 08.4 +0.1**
VYHS *e*pP pP 08 28 16.1 -0.8
TIP Timpagrande 87.00 309 *e*P **P** **08 28 10.5 +0.6**
comp=Z,58nm,1.3s,mb5.7
TIP LR LR
comp=Z,1µm,20.0s,MS5.2
KOLL Kolacno 87.02 319 *e*P **P** **08 28 10.7 +1.0**
KEV Kevo 87.22 340 *e*p **P** **08 28 10.1 -0.2**
comp=Z,80nm,1.0s,mb5.9
KEV Kevo 87.22 340 P **P** **08 28 10.3 0.0**
KEV pmax pmax
comp=Z,51nm,0.9s,mb5.8
OKC Ostrava-Krasne 87.36 320⇑ *e*P **P** **08 28 11.5 +0.1**
OKC *e*pP pP 08 28 19.1 -0.9
OKC *e*S S 08 38 49.4 -0.8
OKC AMS AMS 09 20 40.0
comp=Z,1µm,17.9s
OKC Ostrava-Krasne 87.36 320 *e*P **P** **08 28 11.5 +0.1**
OKC *e*PcP PcP 08 28 19.1 +5.7
OKC *e*SKS 08 38 49.4
CEL Celeste 87.58 308 PFAKE 08 28 20.0 +7.3
CEL LR LR
comp=Z,26µm,21.0s,MS6.6
ARCES ARCESS Array B 87.67 340 P **P** **08 28 12.5 0.0**
comp=Z,63nm,0.9s,mb5.9,baz=100,slow=5.0,SNR=102
ARCES PP PP 08 31 37.9 0.0
comp=Z,13nm,1.1s,baz=96,slow=8.7,SNR=5.2
ARCES LR LR 09 12 29.9
comp=Z,3µm,18.5s,MS5.7,baz=105,slow=39
ARCES ARCESS Array B 87.67 340 P **P** **08 28 12.5 +0.1**
ARCES 08 31 37.9
ARCES pmax pmax
comp=Z,63nm,0.9s
ARCES pmax pmax
comp=Z,13nm,1.1s
ARE0 ARCESS Array S 87.67 340 *e*P **P** **08 28 12.7 +0.3**
ARE0 *e*PP PP 08 31 40.9 +3.0
MODS Modra-Piesok 87.73 319 *e*P **P** **08 28 13.8 +0.6**
MODS *e* pP 08 28 21.3 -0.5
MODS pmax pmax
comp=Z,41nm,1.5s,mb5.4
MODS Modra-Piesok 87.73 319 *e*P **P** **08 28 13.8 +0.6**
comp=Z,41nm,1.5s,mb5.4
MODS *e* pP 08 28 21.3 -0.5
MORC Moravsky Berou 87.74 320⇑ *i*P **P** **08 28 13.4 +0.2**
MORC Moravsky Berou 87.74 320 *e*P **P** **08 28 13.5 +0.3**
CUC Castrocucco 87.81 310 *e*P **P** **08 28 13.7 -0.1**
comp=Z,60nm,1.3s,mb5.7
CUC LR LR
comp=Z,2µm,20.0s,MS5.5
ZST Bratislava 87.82 318 *e*P **P** **08 28 14.5 +0.9**
ZST *e* pP 08 28 22.1 -0.1
ZST pmax pmax
comp=Z,25nm,1.0s,mb5.4
ZST Bratislava 87.82 318 *e*P **P** **08 28 14.5 +0.9**
comp=Z,25nm,1.0s,mb5.4
ZST *e* pP 08 28 22.1 -0.1
ADK Adak 88.11 38 PFAKE 08 28 20.0 +5.1
ADK LR LR
comp=Z,2µm,19.0s,MS5.5
VRAC Vranov 88.29 319 P **P** **08 28 16.5 +0.7**
VRAC Vranov 88.29 319 *e*P **P** **08 28 15.8 0.0**
GKP Gorka Klasztor 88.38 323 *e*P **P** **08 28 16.4 +0.2**
GKP *e* pP 08 28 23.9 -0.8
GKP LMZ 09 14 33.1
comp=Z,1µm,22.1s
GKP Gorka Klasztor 88.38 323 *e*P **P** **08 28 16.4 +0.2**
GKP *e* pP 08 28 23.9 -0.9
GKP Gorka Klasztor 88.38 323 *e*P **P** **08 28 16.4 +0.2**
GKP *e* pP 08 28 23.9 -0.9
GKP LR LR
comp=Z,1µm,22.1s,MS5.3
DPC Dobruska-Polom 88.59 320⇑ *i*P **P** **08 28 18.1 +0.9**
DPC *e*pP pP 08 28 25.3 -0.5
DPC *e*S S 08 39 02.2 +0.3
DPC AMS AMS 09 15 40.0
comp=Z,1µm,18.2s
CONA Conrad Observa 88.62 318⇑ *i*P **P** **08 28 17.4 0.0**
comp=Z,20nm,1.2s,mb5.3
CSNA Conrad Observa 88.62 318⇑ *i*P **P** **08 28 17.5 0.0**
comp=Z,19nm,1.2s,mb5.3
KSP Ksiaz 88.66 321 *e*P **P** **08 28 18.4 +0.8**
KSP *e*pP pP 08 28 25.9 -0.3
KSP *e*S S 08 39 01.8 -0.8
KSP LMZ 09 11 31.6
comp=Z,3µm,23.3s
KSP Ksiaz 88.66 321 *e*P **P** **08 28 17.5 -0.1**
KSP *e*pP pP 08 28 25.2 -1.0
KSP *e*S S 08 39 01.0 -1.6
KSP LR LR
comp=Z,3µm,23.3s,MS5.7
ARSA Arzberg 88.78 317⇑ *i*P **P** **08 28 18.4 +0.2**
comp=Z,64nm,1.8s,mb5.7
BOJS Bojanci 88.79 316 *i* P **P** **08 28 18.5 +0.2**
BOJS *i* pP pP 08 28 25.1 -1.7
BOJS *e*S S 08 39 00.1 -3.9
BOJS *e* 08 39 16.9
UPC Upice 88.80 321⇑ *i*P **P** **08 28 18.9 +0.7**
UPC *e*pP pP 08 28 26.6 -0.2
PERS Pernice 88.99 317 *i* P **P** **08 28 19.5 +0.3**
PERS *i* pP pP 08 28 26.6 -1.2
PERS *e*S S 08 39 05.6 -0.3
PERS *e* 08 39 20.3
SOKA Soboth 89.05 317⇑ *i*P **P** **08 28 19.7 +0.2**
VISS Visnje 89.10 316 *i* P **P** **08 28 19.8 +0.1**
VISS *i* pP pP 08 28 27.1 -1.2
OBKA Obir 89.37 316⇑ *i*P **P** **08 28 21.4 +0.4**
comp=Z,39nm,1.2s,mb5.6
JAVS Javornik 89.65 316 *i* P **P** **08 28 22.1 -0.3**
MOA Molln 89.68 318⇓ *i*P **P** **08 28 22.2 -0.2**
comp=Z,21nm,1.1s,mb5.4,SNR=10
PRU Pruhonice 89.69 320⇑ *i*P **P** **08 28 22.8 +0.4**
PRU *e*pP pP 08 28 28.9 -2.1
PRU *e*S S 08 39 11.3 -1.0
PRU AMS AMS 09 19 20.0
comp=Z,1µm,19.0s
PVCC Panska Ves 89.72 320⇑ *e*P **P** **08 28 23.4 +0.9**
PVCC *e*pP pP 08 28 30.0 -1.1
PVCC AMS AMS 09 14 50.0
comp=Z,1µm,18.3s
VOY Vojsko 89.78 316 *e*P **P** **08 28 22.8 -0.1**
VOY *e*pP pP 08 28 29.3 -2.2
VOY *e* 08 29 50.0
VOY *e* 08 29 03.0
TRO Tromso 89.94 340 *e*P **P** **08 28 21.3 -1.8**
TRO AMS AMS 09 13 33.5
comp=Z,2µm,22.5s,MS5.5
MYKA Terra Mystica 90.00 317⇑ *i*P **P** **08 28 24.2 +0.2**

comp=Z,159nm,1.7s,mb6.1
GEC2 GERESS Array S 90.14 319 *e*P P **08 28 24.3 -0.2**
GEC2 *e*S S 08 39 13.9 -2.6
GEC2 pmax pmax
comp=Z,132nm,1.6s,mb6.0
GEC2 GERESS Array S 90.14 319 *e*P P **08 28 24.3 -0.2**
comp=Z,132nm,1.6s,mb6.0
GEC2 *e*S S 08 39 13.9 -2.6
GERES GERESS Array B 90.14 319 P P **08 28 24.8 +0.3**
comp=Z,19nm,0.9s,mb5.4,baz=101,slow=4.3,SNR=98
GERES LR LR 09 16 07.0
comp=Z,2μm,20.5s,MS5.5,baz=210,slow=40
BRG Berggiesshubel 90.15 321 *i* P P **08 28 25.0 +0.5**
BRG *i* pP 08 28 32.3 -0.8
BRG *e* 08 32 03.8
BRG S S 08 39 09.0 -7.5
BRG pmax pmax
comp=Z,32nm,1.2s,mb5.5
BRG MLR MLR
comp=N,579nm,18.5s,MS5.2
BRG MLR MLR
comp=E,566nm,17.4s,MS5.2
BRG MLR MLR
comp=Z,890nm,21.8s,MS5.2
BRG Berggiesshubel 90.15 321 *e*P P **08 28 24.6 +0.1**
comp=Z,54nm,1.2s,mb5.8
BRG *e*S S 08 39 10.1 -6.4
BRG Berggiesshubel 90.15 321 *i* P P **08 28 25.0 +0.5**
comp=Z,54nm,1.2s,mb5.8
BRG *i* pP 08 28 32.3 -0.9
comp=Z,86nm,1.5s
BRG PP PP 08 31 45.7 -12
comp=Z,14nm,1.5s
BRG *e* 08 32 03.8
comp=Z,35nm,1.8s
BRG S S 08 39 09.0 -7.5
BRG
comp=N,967nm,18.5s
BRG
comp=E,945nm,17.4s
BRG
comp=Z,2μm,21.8s
BRG Berggiesshubel 90.15 321 *i* P P **08 28 25.0 +0.5**
comp=Z,32nm,1.2s,mb5.5
BRG *i* pP 08 28 32.3 -0.9
BRG PP PP 08 31 45.7 -12
BRG *e* 08 32 03.8
BRG S S 08 39 09.0 -7.5
BRG LR LR
comp=Z,890nm,21.8s,MS5.2
KBA Koelnbreinsper 90.24 317⇓ *i*P P **08 28 24.3 -0.7**
comp=Z,28nm,1.4s,mb5.4,SNR=9.0
KHC Kasperske Hory 90.24 319⇑ *e*P P **08 28 25.2 +0.2**
KHC Kasperske Hory 90.24 319⇑ *i*P P **08 28 25.2 +0.2**
KHC *e*pP pP 08 28 31.5 -2.1
KHC *e*S S 08 39 15.7 -1.7
KHC AMS AMS 09 15 40.0
comp=Z,1μm,21.3s
RUE Ruedersdorf 90.38 322 *e*P P **08 28 25.9 +0.3**
comp=Z,153nm,1.2s,mb6.2
RUE Ruedersdorf 90.38 322 *e*P P **08 28 25.5 -0.1**
comp=Z,204nm,1.4s,mb6.3
RUE *e*pP pP 08 28 34.1 -0.1
BJO Bjornoya 90.65 345 AMS AMS 09 18 41.1
comp=Z,2μm,26.1s,MS5.5
RJOB Jochberg 90.66 318 *e*P P **08 28 26.2 -0.8**
comp=Z,30nm,1.3s,mb5.5
WET Wettzell 90.70 319 *e*P P **08 28 27.2 +0.1**
WET *e*S S 08 39 21.6 -0.1
WET pmax pmax
comp=Z,51nm,1.1s,mb5.8
WET Wettzell 90.70 319 *e*P P **08 28 27.2 +0.1**
comp=Z,51nm,1.1s,mb5.8
WET *e*S S 08 39 21.6 -0.1
CLL Collm 90.77 321 *e*P P **08 28 27.0 -0.4**
CLL pmax pmax
comp=Z,65nm,1.4s,mb5.8
CLL MLR MLR
comp=Z,2μm,19.0s,MS5.5
CLL Collm 90.77 321 *e*P P **08 28 26.9 -0.5**
comp=Z,38nm,1.2s,mb5.6
CLL *e*S S 08 39 21.3 -0.9
CLL Collm 90.77 321 *e*P P **08 28 27.0 -0.4**
comp=Z,65nm,1.4s,mb5.8
CLL LmV 08 18 00.0
comp=Z,2μm,19.0s
CLL *e*pP pP 08 28 32.0 -4.0
CLL *e*S S 08 39 22.0 -0.2
CLL *e*PS PS 08 40 39.0 +6.0
CLL *e*SSSS 08 52 18.0
CLL Collm 90.77 321 *e*P P **08 28 27.0 -0.4**
comp=Z,65nm,1.4s,mb5.8
CLL *e*S S 08 39 30.0 +7.8
CLL LR LR
comp=Z,2μm,19.0s,MS5.5
ABTA Abfaltersbach 90.79 317⇑ *i*P P **08 28 27.1 -0.5**
comp=Z,22nm,1.1s,mb5.4
NKC Novy Kostel 91.05 320⇑ *e*P P **08 28 29.5 +0.8**
NKC AMS AMS 09 18 30.0
comp=Z,2μm,19.0s
TANN Tannenbergstha 91.06 320 *e*P P **08 28 27.2 -1.6**
comp=Z,35nm,1.5s,mb5.5
TANN *e*S S 08 39 24.9 +0.1
GUNZ Gunzen 91.14 320 *e*P P **08 28 29.2 +0.1**
comp=Z,47nm,1.3s,mb5.7
WERD Werda 91.16 320 *e*P P **08 28 28.4 -0.8**
comp=Z,29nm,1.2s,mb5.5
SNAA Sanae 91.16 198 *e*P P **08 28 29.7 +0.9**
SNAA *e* pP 08 28 37.1 -0.4
SNAA *e* 08 28 44.3
SNAA *e* 08 28 51.1
SNAA Sanae 91.16 198 *e*P P **08 28 30.3 +1.5**
SNAA *e**PP pP 08 28 37.3 -0.2
SNAA pmax pmax
comp=Z,91nm,1.8s
SNAA Sanae 91.16 198⇑ *e*P P **08 28 30.6 +1.8**
SNAA Sanae 91.16 198 *e*P P **08 28 30.3 +1.5**
comp=Z,92nm,1.8s,mb5.8
SNAA *e*pP pP 08 28 37.3 -0.1
MANZ Manzenberg 91.26 320 *e*P P **08 28 30.4 +0.7**
comp=Z,71nm,1.3s,mb5.8
MANZ *e*S S 08 39 27.1 +0.4
WTTA Wattenberg 91.42 317⇓ *i*P P **08 28 29.9 -0.6**
comp=Z,37nm,0.9s,mb5.7,SNR=10
MOX Moxa 91.61 320 *e*P P **08 28 31.9 +0.6**
comp=Z,51nm,1.6s,mb5.6
MOX *e* pP 08 28 39.3 -0.6
MOX
comp=Z,1μm,22.0s
MOX Moxa 91.61 320 *e*P P **08 28 31.9 +0.6**
MOX *e* pP 08 28 39.3 -0.6
MOX pmax pmax
comp=Z,51nm,1.6s,mb5.6
MOX MLR MLR
comp=Z,1μm,22.0s,MS5.3
MOX Moxa 91.61 320 *e*P P **08 28 31.1 -0.2**
comp=Z,37nm,1.3s,mb5.5
FUR Furstenfeldbru 91.70 318 *e*P P **08 28 31.0 -0.8**
FUR *e*S S 08 39 29.7 -1.1
FUR pmax pmax
comp=Z,74nm,1.3s,mb5.9
FUR Furstenfeldbru 91.70 318 *e*P P **08 28 31.0 -0.8**
comp=Z,74nm,1.3s,mb5.9
FUR *e*S S 08 39 29.7 -1.1
MOTA Moosalm 91.78 317⇑ *i*P P **08 28 31.9 -0.3**
comp=Z,25nm,0.9s,mb5.6,SNR=9.3
GRA1 Grafenberg Arr 91.81 319 *e*P P **08 28 32.7 +0.4**
comp=Z,59nm,1.2s,mb5.8
GRA1 *e*pP pP 08 28 39.9 -1.0
GRA1 *e*S S 08 39 31.2 -0.5
GRA1 LR LR
comp=Z,1μm,19.2s,MS5.4
GRF Grafenberg Arr 91.81 319 *e*P P **08 28 32.7 +0.4**
GRF *e**PP pP 08 28 39.9 -1.0
GRF *e*S S 08 39 31.2 -0.5
GRF pmax pmax
comp=Z,59nm,1.2s,mb5.8
GRF MLR MLR
comp=Z,1μm,19.2s,MS5.4
GRF Grafenberg Arr 91.81 319 *e*P P **08 28 32.7 +0.4**
comp=Z,59nm,1.2s,mb5.8
GRF *e*pP pP 08 28 39.9 -1.0
GRF *e*S S 08 39 31.2 -0.5
GRF *e*L 09 18 18.3
comp=Z,1μm,19.2s

RETA Reutte 92.02 317⇓ *i*P P **08 28 32.9 -0.4**
comp=Z,31nm,1.0s,mb5.6
FETA Feichten 92.02 317⇓ *i*P P **08 28 33.4 0.0**
comp=Z,26nm,1.2s,mb5.4,SNR=9.7
NSS Namsos 92.12 334 *e*P P **08 28 32.4 -1.0**
NSS *e*SS SS 08 45 41.4 -2.1
NSS AMS AMS 09 18 26.3
comp=Z,2μm,20.4s,MS5.5
VLC Villacollemand 92.15 314 PFAKE 08 28 40.0 +6.0
VLC LR LR
comp=Z,1μm,20.0s,MS5.4
NB2 NORSAR Subarra 92.31 331 P P **08 28 33.8 -0.5**
comp=Z,31nm,1.0s,mb5.6,baz=92,slow=4.8
NB2 NORSAR Subarra 92.31 331 P P **08 28 33.7 -0.6**
comp=Z,31nm,1.0s,mb5.6,baz=92,slow=4.8
NB2 NORSAR Subarra 92.31 331 P P **08 28 33.7 -0.6**
baz=92,slow=4.8
NOA NORSAR Array B 92.31 331 P P **08 28 34.3 0.0**
comp=Z,19nm,0.9s,mb5.4,baz=95,slow=4.6,SNR=27
NOA PP PP 08 32 12.4 -2.6
comp=Z,3.7nm,0.9s,baz=96,slow=7.7,SNR=4.4
NOA LR LR 09 17 11.0
comp=Z,1μm,20.0s,MS5.3,baz=80,slow=40
NOA NORSAR Array B 92.31 331 P P **08 28 34.3 0.0**
NOA 08 32 12.4
NOA pmax pmax
comp=Z,19nm,0.9s
NOA pmax pmax
comp=Z,4.0nm,0.9s
CLZ Clausthal 92.44 322 *e*P P **08 28 35.1 0.0**
CLZ pmax pmax
comp=Z,42nm,1.4s,mb5.6
CLZ Clausthal 92.44 322 *e*P P **08 28 35.1 0.0**
comp=Z,42nm,1.4s,mb5.6
NAO01 NORSAR Array S 92.47 331 *e*P P **08 28 34.9 -0.2**
comp=Z,19nm,1.0s,mb5.4
BSEG Bad Segeberg 92.54 324 *e*P P **08 28 35.6 0.0**
BSEG *e*S S 08 39 39.2 +1.1
BSEG pmax pmax
comp=Z,36nm,1.4s,mb5.6
BSEG Bad Segeberg 92.54 324 *e*P P **08 28 35.6 0.0**
comp=Z,36nm,1.4s,mb5.6
BSEG *e*S S 08 39 39.2 +1.1
DAVA Damuels 92.61 317⇑ *i*P P **08 28 35.5 -0.5**
comp=Z,39nm,1.0s,mb5.8
NRDL Niedersach Rie 92.62 322 *e*P P **08 28 36.0 0.0**
comp=Z,47nm,1.4s,mb5.7
KEST Kesra 92.64 305 P P **08 28 37.8 +1.4**
comp=Z,18nm,1.0s,mb5.5,baz=250,slow=1.4,SNR=28
KEST LR LR 09 13 05.7
comp=Z,886nm,18.8s,MS5.2,baz=235,slow=37
UBBA Unterbreizbach 92.64 321 *e*P P **08 28 35.7 -0.4**
comp=Z,34nm,1.6s,mb5.5
UBBA *e*S S 08 39 38.0 -1.1
VSL Villasalto 92.73 309 PFAKE 08 28 50.0 +13
VSL LR LR
comp=Z,668nm,20.0s,MS5.1
KBS Kingsbay 92.76 349 *e*P P **08 28 41.1 +4.9**
KBS *e*PP PP 08 32 22.3 +4.1
KBS *e*SS SS 08 45 56.7 +4.5
KBS AMS AMS 09 17 32.5
comp=Z,3μm,14.3s,MS5.9
KBS Kingsbay 92.76 349⇑ *e*P P **08 28 35.6 -0.5**
VNA2 Neumayer--Watz 92.78 198 *e*P P **08 28 37.2 +0.9**
baz=71,slow=4.4
VNA2 *e* pP 08 28 45.2 +0.3
VNA2 *e* 08 28 51.3
VNA2 *e* 08 28 58.5
TUE Stuetta 92.95 316 *e*P P **08 28 37.0 -0.7**
comp=Z,18nm,1.3s,mb5.3
TUE LR LR
comp=Z,1μm,20.0s,MS5.3
KONO Kongsberg 93.08 329 AMS AMS 09 18 34.6
comp=Z,1μm,22.3s,MS5.3
KONO Kongsberg 93.08 329⇑ *e*P P **08 28 37.9 0.0**
KONO Kongsberg 93.08 329⇑ *e*P P **08 28 37.0 -0.9**
PGF Pioggiola 93.11 312 *e*P P **08 28 38.5 +0.1**
comp=Z,37nm,1.1s,mb5.4
PGF Pioggiola 93.11 312 *e*P P **08 28 38.5 +0.1**
PGF pmax pmax
comp=Z,19nm,1.1s,mb5.4
PGF Pioggiola 93.11 312 *e*P P **08 28 38.5 +0.1**
comp=Z,19nm,1.1s,mb5.4
STU Stuttgart 93.11 319 *e*S S 08 39 37.8 -5.6
VNA1 Neumayer--Stat 93.14 198 *e*P P **08 28 39.5 +1.5**
VNA1 *e* pP 08 28 47.1 +0.5
VNA1 *e* 08 28 53.6
VNA1 *e* 08 29 01.1
VNA3 Neumayer Olymp 93.38 198 *e*P P **08 28 39.1 0.0**
VNA3 *e* pP 08 28 46.8 -0.9
VNA3 *e* 08 28 53.5
VNA3 *e* 08 28 59.4
TNS Taunus Mts 93.62 320 *e*P P **08 28 40.8 +0.2**
TNS *e*S S 08 39 44.4 -3.4
TNS pmax pmax
comp=Z,38nm,1.0s,mb5.8
TNS Taunus Mts 93.62 320 *e*P P **08 28 40.8 +0.2**
comp=Z,38nm,1.0s,mb5.8
TNS *e*S S 08 39 44.4 -3.4
TNS *e*pS 08 39 50.9
BFO Black Forest 93.68 318 *e*P P **08 28 39.7 -1.2**
comp=Z,17nm,1.2s,mb5.3
BFO *e*S S 08 39 42.8 -5.6
BFO Black Forest 93.68 318 *e*P P **08 28 39.7 -1.2**
comp=Z,17nm,1.2s,mb5.3
BFO *e*S S 08 39 42.8 -5.6
BFO LR LR
comp=Z,1μm,21.0s,MS5.3
MOL Molde 94.07 332 AMS AMS 09 17 18.7
comp=Z,2μm,21.2s,MS5.5
SBF Sospel 94.27 314 *e*P P **08 28 43.4 -0.3**
CDF Champ du Feu 94.38 318 *e*P P **08 28 43.8 -0.4**
MBDF Montbardon 94.75 314 *e*P P **08 28 45.0 -0.9**
comp=Z,13nm,1.1s,mb5.0
MBDF Montbardon 94.75 314 *e*P P **08 28 45.0 -0.9**
MBDF pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
MBDF Montbardon 94.75 314 *e*P P **08 28 45.0 -0.9**
comp=Z,6.7nm,1.1s,mb5.0
LPG La Plagne 94.75 315 *e*P P **08 28 45.9 0.0**
comp=Z,24nm,1.0s,mb5.3
LPG La Plagne 94.75 315 *e*P P **08 28 45.9 0.0**
LPG pmax pmax
comp=Z,12nm,1.0s,mb5.3
LPG La Plagne 94.75 315 *e*P P **08 28 45.9 0.0**
comp=Z,12nm,1.0s,mb5.3
LPL La Plagne 94.77 315 *e*P P **08 28 45.9 -0.1**
comp=Z,17nm,0.9s,mb5.2
LPL La Plagne 94.77 315 *e*P P **08 28 45.9 -0.1**
LPL pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
LPL La Plagne 94.77 315 *e*P P **08 28 45.9 -0.1**
comp=Z,8.6nm,0.9s,mb5.2
BNI Bardonecchia 94.81 315 PFAKE 08 29 00.0 +14
BNI LR LR
comp=Z,1μm,22.0s,MS5.4
FRF La Foret Royal 94.84 313 *e*P P **08 28 46.1 -0.3**
comp=Z,44nm,1.1s,mb5.5
FRF La Foret Royal 94.84 313 *e*P P **08 28 46.1 -0.3**
FRF pmax pmax
comp=Z,22nm,1.1s,mb5.5
FRF La Foret Royal 94.84 313 *e*P P **08 28 46.1 -0.3**
comp=Z,22nm,1.1s,mb5.5
LMR La Mourre 94.94 313 *e*P P **08 28 46.4 -0.5**
HAU Haudompre 95.00 318 *e*P P **08 28 46.5 -0.5**
comp=Z,25nm,0.9s,mb5.3
HAU *e*MLR MLR
comp=Z,1μm,20.2s,MS5.1
HAU Haudompre 95.00 318 *e*P P **08 28 46.5 -0.5**
HAU pmax pmax
comp=Z,12nm,0.9s,mb5.3
HAU MLR MLR
comp=Z,1μm,20.3s,MS5.4
HAU Haudompre 95.00 318 *e*P P **08 28 46.5 -0.5**
comp=Z,12nm,0.9s,mb5.3
HAU LR LR
comp=Z,1μm,20.3s,MS5.4
WLF Walferdange 95.11 319 *e*P P **08 28 47.8 +0.4**
comp=Z,27nm,1.1s,mb5.6
WLF *e*S S 08 39 51.2 -10
WLF Walferdange 95.11 319 PFAKE 08 29 00.0 +13
WLF LR LR
comp=Z,2μm,21.0s,MS5.5
CABF La Chapelle 95.20 316 *e*P P **08 28 47.9 -0.1**
BER Bergen 95.21 330 AMS AMS 09 17 08.7
comp=Z,2μm,19.9s,MS5.5

ORIF Oris-en-Rattie 95.38 315 *e*P P **08 28 48.6 -0.2**
ORIF *e*MLR MLR
comp=Z,1μm,20.8s,MS5.1
SMRF Simiane la Rot 95.61 314 *e*P P **08 28 48.8 -1.1**
MEZF Maizieres J'vi 95.86 318 *e*P P **08 28 50.6 -0.3**
BAIF Baives 96.35 320 *e*P P **08 28 53.0 -0.1**
LOR Lormes 96.71 317 *e*P P **08 28 54.4 -0.4**
comp=Z,13nm,0.9s,mb5.0
LOR Lormes 96.71 317 *e*P P **08 28 54.4 -0.4**
LOR pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
LOR Lormes 96.71 317 *e*P P **08 28 54.4 -0.4**
comp=Z,6.6nm,0.9s,mb5.1
SMF Signal de Mont 96.75 316 *e*P P **08 28 54.5 -0.5**
comp=Z,35nm,1.2s,mb5.4
SMF Signal de Mont 96.75 316 *e*P P **08 28 54.5 -0.5**
SMF pmax pmax
comp=Z,18nm,1.2s,mb5.4
SMF Signal de Mont 96.75 316 *e*P P **08 28 54.5 -0.5**
comp=Z,18nm,1.2s,mb5.4
LASF Ste Croix 96.85 314 *e*P P **08 28 55.2 -0.3**
comp=Z,19nm,1.3s,mb5.1
AVF Avril sur Loir 97.08 317 *e*P P **08 28 56.0 -0.5**
comp=Z,16nm,1.0s,mb5.1
AVF Avril sur Loir 97.08 317 *e*P P **08 28 56.0 -0.5**
AVF pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
AVF Avril sur Loir 97.08 317 *e*P P **08 28 56.0 -0.5**
comp=Z,7.8nm,1.0s,mb5.1
RAR Rarotonga 98.06 112 PFAKE 08 29 10.0 +8.5
RAR LR LR
comp=Z,2μm,19.0s,MS5.5
MTLF Montolieu 98.07 313 *e*P P **08 29 00.8 -0.2**
JMIC Jan Mayen 99.06 342 AMS AMS 09 18 21.5
comp=Z,1μm,22.0s,MS5.3
TORD Torodi Ar. Bea 99.13 283 P P **08 29 05.5 -0.9**
comp=Z,1.7nm,1.1s,mb4.5,baz=92,slow=5.6,SNR=7.0
TORD LR LR 09 14 17.4
comp=Z,1μm,18.5s,MS5.4,baz=75,slow=36
KDAK Kodiak Island 101.72 32 PFAKE 08 29 30.0 +13
KDAK LR LR
comp=Z,615nm,19.0s,MS5.1
MCK McKinley 101.89 25 *e*P Pdif 08 29 17.0 -0.8
MCK pmax pmax
comp=Z,22nm,1.2s
MCK McKinley 101.89 25 *e*Pdif Pdif 08 29 17.0 -0.8
comp=Z,22nm,1.2s
COLA College 101.99 24 PFAKE 08 29 30.0 +12
COLA LR LR
comp=Z,2μm,19.0s,MS5.7
PMR Palmer 102.44 27 PFAKE 08 29 30.0 +10
PMR LR LR
comp=Z,2μm,20.0s,MS5.7
ESLA Sonseca Array 103.02 310 PFAKE 08 29 30.0 +7.2
ESLA LR LR
comp=Z,5μm,19.0s,MS6.0
PAB San Pablo 103.33 310 PFAKE 08 29 30.0 +5.8
PAB LR LR
comp=Z,894nm,21.0s,MS5.3
SHEL Horse Pasture 104.56 253 PFAKE 08 29 40.0 +10
SHEL LR LR
comp=Z,2μm,20.0s,MS5.7
SFS San Fernando 105.17 307 PFAKE 08 34 00.0 +13
SFS LR LR
comp=Z,2μm,20.0s,MS5.6
MTE Manteigas 105.64 311 PFAKE 08 34 00.0 +12
MTE LR LR
comp=Z,1μm,21.0s,MS5.3
TBI Tubuai 107.17 115 *e*PS PS 08 43 32.6 +2.0
comp=Z,408nm,28.2s
TBI *e*SS SS 08 49 18.7 +2.9
comp=Z,1μm,26.8s
TBI Tubuai 107.17 115 *e*LR LR 09 05 20.1
comp=Z,2μm,24.2s
PPT Papeete 108.09 110 *e*PS PS 08 43 46.9 +6.7
comp=Z,297nm,27.2s
PPT Papeete 108.09 110 *e*LR LR 09 05 47.0
comp=Z,2μm,24.2s
SIT Sitka 110.69 29 PFAKE 08 34 10.0 +13
SIT LR LR
comp=Z,3μm,20.0s,MS5.8
PMSA Palmer Station 111.27 187 PFAKE 08 34 10.0 +12
PMSA LR LR
comp=Z,1μm,21.0s,MS5.5
WRAK Wrangell Islan 112.44 29 PFAKE 08 34 10.0 +10
WRAK LR LR
comp=Z,2μm,22.0s,MS5.6
SFJD Kangerlussuaq 113.16 348 PFAKE 08 34 10.0 +8.7
SFJD LR LR
comp=Z,2μm,19.0s,MS5.7
ASCN Ascension 113.95 260 PFAKE 08 34 10.0 +5.6
ASCN LR LR
comp=Z,1μm,20.0s,MS5.6
YKA Yellowknife Ar 115.36 17 PKP PKPdf 08 34 04.8 -0.8
comp=Z,4.6nm,0.8s,baz=316,slow=2.7,SNR=5.3
YKA PP PP 08 35 05.5 -0.8
comp=Z,6.5nm,1.0s,baz=320,slow=6.3,SNR=5.5
YKA Yellowknife Ar 115.36 17 PKIKP PKPdf 08 34 04.8 -0.9
YKA 08 35 05.5
YKA pmax pmax
comp=Z,5.0nm,0.8s
YKA pmax pmax
comp=Z,7.0nm,1.0s
YKA Yellowknife Ar 115.36 17 PKP PKPdf 08 34 04.8 -0.8
YKA PP PP 08 35 05.5 -0.8
RKT Rikitea 120.11 119 *e*PS PS 08 45 37.4 +5.8
comp=Z,519nm,27.5s
RKT *e*SS SS 08 52 12.2 +5.5
comp=Z,1μm,28.2s
RKT Rikitea 120.11 119 *e*LR LR 09 10 50.0
comp=Z,2μm,26.5s
NLWA Neilton Lookou 121.76 34 PFAKE 08 34 30.0 +12
NLWA LR LR
comp=Z,1μm,19.0s,MS5.5
GNW Green Mountain 122.23 33 *e*PKPdf PKPdf 08 34 20.0 +0.7
GNW *e*PP PP 08 35 54.8 +0.5
EFI East Falkland 122.37 196 PFAKE 08 34 30.0 +11
EFI LR LR
comp=Z,1μm,22.0s,MS5.6
RPW Rockport 122.40 32 *e*PKPdf PKPdf 08 34 19.1 -0.5
EDM Edmonton 122.90 23 *e*PKIKP PKPdf 08 34 20.4 0.0
NLW Nelson Butte 123.25 32 P PKPdf 08 34 21.4 +0.1
LON Longmire 123.27 34 *e*PKIKP PKPdf 08 34 21.4 0.0
TDL Tradedollar La 123.28 34 P PKPdf 08 34 22.2 +0.8
ETW Entiat 123.55 32 *e*PKPdf PKPdf 08 34 21.8 -0.1
TWW Teanaway 123.55 33 P PKPdf 08 34 22.6 +0.7
MPOR Mary's Peak 123.57 37 P PKPdf 08 34 23.0 +1.0
COR Corvallis 123.67 36 PFAKE 08 34 30.0 +7.8
COR LR LR
comp=Z,1μm,21.0s,MS5.5
TBM Table Mountain 123.68 33 P PKPdf 08 34 22.5 +0.4
VLMM Larch Mountain 123.86 35 P PKPdf 08 34 23.3 +0.7
EPH Ephrata 124.09 32 P PKPdf 08 34 23.0 +0.1
OD2 Odessa Site #2 124.53 31 P PKPdf 08 34 23.8 0.0
RSW Rattlesnake Hi 124.70 33 P PKPdf 08 34 24.9 +0.8
HAWA Hanford 124.73 33 *e*PKPdf PKPdf 08 34 24.8 +0.7
HAWA LR LR
comp=Z,1μm,20.0s,MS5.6
NEW Newport 124.76 30 *e*PKIKP PKPdf 08 34 24.3 +0.1
NEW *e* 08 36 12.9
NEW MLR MLR
comp=Z,1μm,20.0s
H2OWA Water 124.79 33 P PKPdf 08 34 24.9 +0.6
HUMO Hull Mountain 124.98 38 *e*PKPdf PKPdf 08 34 25.4 +0.7
HUMO LR LR
comp=Z,970nm,20.0s,MS5.5
FFC Flin Flon 125.47 16 *e*PKIKP PKPdf 08 34 24.9 -0.4
FFC MLR MLR
comp=Z,3μm,20.0s,MS5.9
YBH Yreka Blue Hor 125.61 39 PKP PKPdf 08 34 26.1 +0.1
comp=Z,4.0nm,0.9s,baz=127,slow=14,SNR=5.5
YBH Yreka Blue Hor 125.61 39 *e*PKPdf PKPdf 08 34 26.6 +0.6
YBH LR LR
comp=Z,907nm,20.0s,MS5.4
WALA Waterton Lakes 125.73 27 *e*PKPdf PKPdf 08 34 25.9 -0.1
WALA *e*PP PP 08 36 16.7 -0.8
LNOR Lincton Mounta 125.74 33 *e*PKIKP PKPdf 08 34 26.1 0.0
LNOR *e* 08 36 19.1
KIPM Iron Peak 126.14 41 *e*PKPdf PKPdf 08 34 28.1 +1.0
WDC Whiskeytown Da 126.34 40 PFAKE 08 34 40.0 +13
WDC LR LR
comp=Z,1μm,19.0s,MS5.5
LTIM Timbered Crate 126.69 39 P PKPdf 08 34 28.8 +0.8
HOPS Hopland 126.83 42 PFAKE 08 34 40.0 +12
HOPS LR LR

comp=Z,1µm,19.0s,MS5.5
BMO Blue Mountains 126.92 33 *e*PKIKP PKPdf 08 34 27.7 -0.7
BMO MLR MLR
comp=Z,1µm,19.0s,MS5.5
MOD Modoc 127.00 38 *e*PKPdf PKPdf 08 34 29.2 +0.5
MOD *ep*PKPdf pPKPdf 08 34 40.0 +2.5
MOD LR LR
comp=Z,981nm,20.0s,MS5.5
MSO Missoula 127.31 29 *e*PKPdf PKPdf 08 34 28.9 -0.2
MSO LR LR
comp=Z,1µm,20.0s,MS5.7
NSHM Saint Helena R 127.38 42 *e*PKPdf PKPdf 08 34 30.5 +1.0
MCCM Marconi Confer 127.39 43 PFAKE 08 34 40.0 +10
MCCM LR LR
comp=Z,1µm,19.0s,MS5.5
SCHQ Schefferville 127.44 351 PKP PKPdf 08 34 29.7 +0.6
comp=Z,15nm,0.9s,baz=18,slow=3.9,SNR=6.2
SCHQ Schefferville 127.44 351 PKP PKPdf 08 34 29.7 +0.6
SCHQ LR LR
comp=Z,2µm,21.0s,MS5.8
CHMT Chamberlain Mo 127.58 29 *e*PKPdf PKPdf 08 34 29.3 -0.3
CHMT *e*PP PP 08 36 32.8 +2.9
WVOR Wild Horse Val 127.69 36 *e*PKIKP PKPdf 08 34 31.0 +1.1
WVOR *e* 08 36 36.8
WVOR MLR MLR
comp=Z,1µm,21.0s,MS5.5
EGMT Eagleton 128.34 25 *e*PKPdf PKPdf 08 34 31.3 +0.3
EGMT *e*PP PP 08 36 34.7 -0.1
EGMT LR LR
comp=Z,1µm,20.0s,MS5.6
DLMT Dillon 129.01 30 *e*PKPdf PKPdf 08 34 32.4 0.0
DLMT *e*PP PP 08 36 42.8 +3.5
SAO San Andreas Ge 129.08 44 PFAKE 08 34 40.0 +7.2
SAO LR LR
comp=Z,667nm,19.0s,MS5.3
CMB Columbia Colle 129.12 42 *e*PKIKP PKPdf 08 34 32.9 +0.1
CMB *e* 08 36 38.5
CMB MLR MLR
comp=Z,1µm,20.0s,MS5.5
MCMT McKenzie Canyo 129.27 30 *e*PKPdf PKPdf 08 34 32.9 0.0
BOZ Bozeman (W) 129.28 29 *e*PKIKP PKPdf 08 34 33.1 +0.2
BOZ *e* 08 36 37.1
BOZ MLR MLR
comp=Z,1µm,19.0s,MS5.6
HLID Hailey 129.33 32 *e*PKPdf PKPdf 08 34 33.4 +0.3
HLID *e*PP PP 08 36 39.7 -1.8
HLID LR LR
comp=Z,1µm,20.0s,MS5.7
BMN Battle Mountai 129.75 37 *e*PKIKP PKPdf 08 34 34.9 +1.0
BMN MLR MLR
comp=Z,1µm,19.0s,MS5.6
QLMT Earthquake Lak 129.97 29 *e*PKPdf PKPdf 08 34 35.4 +1.2
QLMT *e*PP PP 08 36 46.9 +1.3
GCMT Greycliff 130.09 27 *e*PKPdf PKPdf 08 34 36.1 +1.7
DGMT Dagmar 130.18 21 *e*PKPdf PKPdf 08 34 34.5 0.0
DGMT *e*PP PP 08 36 47.9 +1.3
DGMT LR LR
comp=Z,2µm,19.0s,MS5.8
NVAR Mina Array Bea 130.26 40 PKP PKPdf 08 34 35.4 +0.4
comp=Z,7.9nm,0.8s,baz=270,slow=2.4,SNR=37
NVAR PP PP 08 36 52.8 +5.0
comp=Z,4.8nm,1.1s,baz=288,slow=5.8,SNR=5.2
NVAR SKPbc SKPbc 08 37 56.4 0.0
comp=Z,5.9nm,0.9s,baz=270,slow=3.5,SNR=7.9
YMR Madison River 130.31 29 *e*PKPdf PKPdf 08 34 36.3 +1.5
YMR *e*PP PP 08 36 46.9 -0.9
YMR LR LR
comp=Z,3µm,19.0s,MS6.0
LKWY Lake 130.66 29 *e*PKIKP PKPdf 08 34 38.0 +2.5
LKWY *e* 08 36 50.3
LKWY MLR MLR
comp=Z,3µm,20.0s,MS5.9
LKWY Lake 130.66 29 *e*PKPdf PKPdf 08 34 38.0 +2.5
LKWY *e*PP PP 08 36 50.3 +0.2
LKWY *e*SKPbc SKPbc 08 37 59.2 +1.5
LKWY LR LR
comp=Z,3µm,20.0s,MS6.0
ELK Elko 130.73 36 *e*PKIKP PKPdf 08 34 36.2 +0.4
ELK MLR MLR
comp=Z,1µm,21.0s
RLMT Red Lodge 130.78 28 *e*PKPdf PKPdf 08 34 35.0 -0.7
RLMT LR LR
comp=Z,2µm,20.0s,MS5.7
LAO LASA Array 130.87 24 *e*PKPdf PKPdf 08 34 36.2 +0.3
LAO LR LR
comp=Z,2µm,19.0s,MS5.8
IMW Indian Meadow 130.89 30 *e*PKPdf PKPdf 08 34 36.4 +0.4
IMW *e*PP PP 08 36 52.6 +1.1
MOOW Moose Ponds 131.09 30 *e*PKPdf PKPdf 08 34 36.8 +0.4
RRI2 Red Ridge 131.10 31 *e*PKPdf PKPdf 08 34 37.1 +0.7
RRI2 *e*PP PP 08 36 56.1 +3.2
ULM Lac du Bonnet 131.10 14 PKP PKPdf 08 34 35.1 -1.0
comp=Z,25nm,0.9s,baz=353,slow=4.1,SNR=24
ULM Lac du Bonnet 131.10 14 *e*PKPdf PKPdf 08 34 35.6 -0.6
ULM LR LR
comp=Z,3µm,20.0s,MS5.9
TPH Tonopah 131.16 40 *e*PKIKP PKPdf 08 34 38.3 +1.6
TPH MLR MLR
comp=Z,1µm,21.0s,MS5.5
TPAW Teton Pass 131.18 30 *e*PKPdf PKPdf 08 34 37.6 +1.0
TPAW *e*PP PP 08 36 50.8 -2.6
LOHW Long Hollow 131.26 30 *e*PKPdf PKPdf 08 34 37.4 +0.7
SNOW Snow King Moun 131.30 30 *e*PKPdf PKPdf 08 34 37.9 +1.1
SNOW *e*PP PP 08 36 56.7 +2.6
REDW Red Top Meadow 131.32 30 *e*PKPdf PKPdf 08 34 37.6 +0.8
REDW *e*PP PP 08 36 57.4 +3.0
HVU Hansel Valley 131.43 33 *e*PKIKP PKPdf 08 34 37.8 +0.7
HVU *e* 08 36 51.5
AHID Auburn Hatcher 131.63 31 PFAKE 08 34 50.0 +13
AHID LR LR
comp=Z,1µm,20.0s,MS5.6
ISA Isabella 131.70 43 *e*PKIKP PKPdf 08 34 36.4 -1.4
ISA *e* 08 36 52.9
ISA MLR MLR
comp=Z,712nm,20.0s,MS5.4
BGU Big Grassy Mou 131.87 34 *e*PKPdf PKPdf 08 34 39.0 +1.1
DAC Darwin (Calif) 131.95 42 PFAKE 08 34 50.0 +12
DAC LR LR
comp=Z,923nm,21.0s,MS5.5
SNCC San Nicolas Is 132.22 47 PFAKE 08 34 50.0 +11
SNCC LR LR
comp=Z,1µm,20.0s,MS5.6
BW06 Boulder Array 132.40 30 PFAKE 08 34 50.0 +11
BW06 LR LR
comp=Z,1µm,19.0s,MS5.6
PDAR Pinedale Array 132.40 30 PKhKP 08 34 26.5
comp=Z,0.5nm,0.8s,baz=64,slow=3.4,SNR=3.7
PDAR PKP PKPdf 08 34 38.0 -0.9
comp=Z,3.7nm,0.9s,baz=354,slow=1.5,SNR=16
PDAR PP PP 08 37 00.2 -1.1
comp=Z,2.4nm,1.0s,baz=77,slow=2.0,SNR=3.9
PDAR Pinedale Array 132.40 30 PKP PKPdf 08 34 38.0 -0.9
PDAR PP PP 08 37 00.2 -1.1
TPNV Topopah Spring 132.45 40 *e*PKIKP PKPdf 08 34 37.7 -1.5
TPNV MLR MLR
comp=Z,977nm,19.0s,MS5.5
DUG Dugway 132.49 35 *e*PKIKP PKPdf 08 34 39.1 0.0
DUG *e* 08 37 00.6
DUG MLR MLR
comp=Z,1µm,20.0s,MS5.6
NOQ North Oquirrh 132.56 34 *e*PKPdf PKPdf 08 34 40.0 +0.8
MWC Mount Wilson 132.76 45 PFAKE 08 34 50.0 +10
MWC LR LR
comp=Z,838nm,20.0s,MS5.5
AGMN Agassiz Refuge 132.91 15 PFAKE 08 34 50.0 +10
AGMN LR LR
comp=Z,717nm,21.0s,MS5.4
JLU Jordanelle 132.97 33 *e*PKPdf PKPdf 08 34 40.9 +0.8
GSC Goldstone 133.03 43 *e*PKIKP PKPdf 08 34 41.9 +1.6
GSC MLR MLR
comp=Z,1µm,20.0s,MS5.5
NLU North Lily Min 133.06 34 *e*PKPdf PKPdf 08 34 40.5 +0.2
DAU Daniels Canyon 133.21 33 *e*PKIKP PKPdf 08 34 41.5 +1.0
MPU Maple Canyon 133.27 34 PFAKE 08 34 50.0 +9.4
MPU LR LR
comp=Z,1µm,21.0s,MS5.6
ARUT Antelope Range 133.69 38 *e*PKIKP PKPdf 08 34 42.4 +0.9
RSSD Black Hills 133.86 24 *e*PKIKP PKPdf 08 34 41.8 +0.2
RSSD *e* 08 37 10.7
RSSD MLR MLR
comp=Z,990nm,20.0s,MS5.5
RSSD Black Hills 133.86 24 *e*PKPdf PKPdf 08 34 41.8 +0.2
RSSD *e*PP PP 08 37 10.7 +0.3
RSSD *e*SKPbc SKPbc 08 38 09.4 +0.4
RSSD LR LR
comp=Z,990nm,20.0s,MS5.5
MVU Marysvale 133.96 36 PFAKE 08 34 50.0 +8.0
MVU LR LR
comp=Z,1µm,19.0s,MS5.6
MSU Marysvale 133.98 36 *e*PKIKP PKPdf 08 34 43.6 +1.6
TMUT Trail Mountain 134.00 34 *e*PKPdf PKPdf 08 34 43.1 +1.1
PFO Pinyon Flat Ob 134.21 44 *e*PKIKP PKPdf 08 34 43.9 +1.3
PFO MLR MLR
comp=Z,858nm,20.0s,MS5.5
EYMN Ely 134.22 11 PFAKE 08 34 50.0 +7.9
EYMN LR LR
comp=Z,3µm,20.0s,MS5.9
LDFC Landfair 134.29 42 *e*PKPdf PKPdf 08 34 44.0 +1.3
RWWY Rawlins 134.36 29 *e*PKPdf PKPdf 08 34 41.6 -1.0
RWWY *e*PP PP 08 37 15.0 +1.3
RWWY *e*SKPbc SKPbc 08 38 10.5 -0.2
SRU San Rafael 134.51 34 *e*PKIKP PKPdf 08 34 43.6 +0.6
SRU *e* 08 37 16.3
BAR Barrett 134.56 45 *e*PKPdf PKPdf 08 34 42.3 -0.9
BAR LR LR
comp=Z,779nm,21.0s,MS5.4
PHWY Pilot Hill 135.50 28 *e*PKPdf PKPdf 08 34 44.2 -0.5
PHWY *e*PP PP 08 37 20.4 -0.5
PLCA Paso Flores 135.54 190 PKP PKPdf 08 34 45.3 +0.4
comp=Z,2.6nm,1.0s,baz=196,slow=6.3,SNR=3.8
PLCA Paso Flores 135.54 190 PKP PKPdf 08 34 45.3 +0.4
PLCA LR LR
comp=Z,1µm,19.0s,MS5.6
GLA Glamis 135.65 44 *e*PKIKP PKPdf 08 34 46.1 +0.8
GLA *e* 08 37 21.2
GLA MLR MLR
comp=Z,823nm,21.0s,MS5.4
GLA Glamis 135.65 44 *e*PKPdf PKPdf 08 34 46.1 +0.8
GLA *e*PP PP 08 37 21.1 -1.4
GLA *e*SKPbc SKPbc 08 38 16.5 +1.4
GLA LR LR
comp=Z,823nm,21.0s,MS5.4
TRQA Tornquist 135.85 200 PFAKE 08 35 00.0 +14
TRQA LR LR
comp=Z,1µm,20.0s,MS5.6
WUAZ Wupatki 136.43 38 *e*PKPdf PKPdf 08 34 48.0 +1.3
WUAZ LR LR
comp=Z,1µm,20.0s,MS5.6
COWI Conover 136.43 10 PFAKE 08 35 00.0 +14
COWI LR LR
comp=Z,2µm,21.0s,MS5.8
ISCO Idaho Springs 136.59 29 *e*PKIKP PKPdf 08 34 46.6 -0.2
ISCO MLR MLR
comp=Z,1µm,20.0s,MS5.6
ECSD EROS,Sioux Fal 136.88 18 *e*PKPdf PKPdf 08 34 46.2 -1.0
ECSD *e*PP PP 08 37 25.4 -3.9
ECSD LR LR
comp=Z,2µm,19.0s,MS5.8
MVCO Mesa Verde 136.98 34 PFAKE 08 35 00.0 +12
MVCO LR LR
comp=Z,1µm,20.0s,MS5.6
PKME Peaks-Kenny Pk 137.08 349 PFAKE 08 35 00.0 +12
PKME LR LR
comp=Z,2µm,20.0s,MS5.9
OGNE Ogallala 137.31 25 PFAKE 08 35 00.0 +12
OGNE LR LR
comp=Z,2µm,21.0s,MS5.8
SDCO Great Sand Dun 138.21 31 PFAKE 08 35 00.0 +10
SDCO LR LR
comp=Z,2µm,21.0s,MS5.8
GLMI Grayling 138.27 5 PKPdf PKPdf 08 34 44.5 -5.3
GLMI LR LR
comp=Z,2µm,21.0s,MS5.9
LONY Lake Ozonia 138.46 355 PFAKE 08 35 00.0 +10
LONY LR LR
comp=Z,2µm,22.0s,MS5.9
LBNH Lisbon 138.52 352 PFAKE 08 35 00.0 +10
LBNH LR LR
comp=Z,2µm,19.0s,MS5.9
TUC Tucson 138.83 42 PFAKE 08 35 00.0 +8.8
TUC LR LR
comp=Z,905nm,20.0s,MS5.5
MDV Middlebury 138.92 353 *e*PKPdf PKPdf 08 34 51.0 0.0
NCB Newcomb 139.07 354 *e*PKPdf PKPdf 08 34 50.5 -0.7
NCB LR LR
comp=Z,2µm,20.0s,MS5.8
JFWS Jewell Farm 139.30 12 *e*PKIKP PKPdf 08 34 50.9 -0.8
JFWS *e* 08 37 42.0
JFWS MLR MLR
comp=Z,2µm,21.0s,MS5.9
SCIA State Center 139.54 16 *e*PKPdf PKPdf 08 34 52.0 -0.2
SCIA LR LR
comp=Z,2µm,19.0s,MS5.9
LAZ Ladron 139.74 36 *e*PKPdf PKPdf 08 34 54.1 +1.3
ANMO Albuquerque 139.75 35 PKIKP PKPdf 08 34 45.3 -7.5
ANMO MLR MLR
comp=Z,1µm,20.0s
LENM Lemitar 140.00 36 *e*PKPdf PKPdf 08 34 52.5 -0.7
CBKS Cedar Bluff 140.06 25 PFAKE 08 35 00.0 +6.8
CBKS LR LR
comp=Z,2µm,19.0s,MS5.8
LPM Los Pinos Moun 140.10 36 *e*PKPdf PKPdf 08 34 49.9 -3.5
HRV Adam Dziewonsk 140.16 351 PFAKE 08 35 00.0 +6.7
HRV LR LR
comp=Z,2µm,19.0s,MS5.8
BNM Barren Site 140.22 36 *e*PKPdf PKPdf 08 34 48.9 -4.7
WES Weston 140.24 350 PFAKE 08 35 00.0 +6.6
WES LR LR
comp=Z,2µm,22.0s,MS5.7
QUA2 Belchertown 140.50 351 *e*PKPdf PKPdf 08 34 53.9 0.0
BINY Binghamton 140.99 356 *e*PKPdf PKPdf 08 34 55.1 +0.3
BINY LR LR
comp=Z,2µm,19.0s,MS5.9
KSU1 Kansas State U 141.03 21 PKPdf PKPdf 08 34 49.0 -6.0
KSU1 LR LR
comp=Z,2µm,21.0s,MS5.8
ERPA Erie 141.21 0 PFAKE 08 35 10.0 +15
ERPA LR LR
comp=Z,2µm,21.0s,MS5.8
HDIL Hopedale 141.76 12 PKPdf PKPdf 08 34 50.0 -6.3
HDIL LR LR
comp=Z,3µm,20.0s,MS6.0
AMTX Amarillo 142.38 30 *e*PKPdf PKPdf 08 34 52.8 -4.8
AMTX LR LR
comp=Z,1µm,19.0s,MS5.7
SSPA Standing Stone 142.65 358 *e*PKPdf PKPdf 08 34 53.8 -4.0
SSPA LR LR
comp=Z,2µm,21.0s,MS5.8
ACSO Alum Creek Sta 142.97 4 *e*PKPdf PKPdf 08 34 53.8 -4.6
ACSO LR LR
comp=Z,2µm,20.0s,MS5.9
BDFB Brasilia 143.55 238 PKP PKPdf 08 34 57.9 -2.2
comp=Z,5.7nm,0.9s,baz=109,slow=3.1,SNR=3.2
BDFB Brasilia 143.55 238 PKP PKPdf 08 34 57.9 -2.2
BDFB LR LR
comp=Z,1µm,21.0s,MS5.7
CPUP Villa Florida 143.59 215 PKhKP 08 34 56.3
comp=Z,9.9nm,1.0s,baz=112,slow=2.2,SNR=13
CPUP Villa Florida 143.59 215 *i* PKIKP PKPdf 08 34 56.3 -3.6
CPUP pmax pmax
comp=Z,10.0nm,1.0s
CPUP Villa Florida 143.59 215 *e*PKPdf PKPdf 08 34 56.9 -3.1
BLO Bloomington 143.61 9 *e*PKIKP PKPdf 08 34 56.0 -3.6
MCWV Mont Chateau 143.66 0 *e*PKPdf PKPdf 08 34 56.7 -3.0
MCWV LR LR
comp=Z,2µm,20.0s,MS5.9
CCM Cathedral Cave 143.68 16 *e*PKIKP PKPdf 08 34 56.1 -3.6
CCM *e* 08 38 07.7
CCM MLR MLR
comp=Z,2µm,20.0s,MS5.8
OLIL Olney 143.76 11 *e*PKPdf PKPdf 08 34 56.8 -3.0
CFAA Coronel Fontan 143.77 197 PKP PKPdf 08 34 57.3 -2.8
comp=Z,1.7nm,0.9s,baz=197,slow=2.5,SNR=18
SDMD Soldier's Deli 143.82 356 *e*PKPdf PKPdf 08 34 56.6 -3.3
WMOK Wichita Mounta 143.89 27 *e*PKIKP PKPdf 08 34 57.0 -3.2
WMOK MLR MLR
comp=Z,2µm,20.0s,MS6.0
FVM French Village 143.96 15 *e*PKIKP PKPdf 08 34 57.1 -3.1
SIUC Southern Illin 144.50 13 *e*PKPdf PKPdf 08 34 59.0 -2.2
WCI Wyandotte Cave 144.56 9 *e*PKIKP PKPdf 08 34 59.2 -2.1
WCI MLR MLR
comp=Z,2µm,21.0s,MS5.9
USIN University of 144.58 11 *e*PKPdf PKPdf 08 34 59.5 -1.8
CBN Corbin 145.05 357 *e*PKPbc PKPbc 08 35 01.0 -0.5
CBN LR LR
comp=Z,3µm,22.0s,MS6.0
PARMO Parma 145.38 14 *e*PKPbc PKPbc 08 35 02.1 -0.4
TXAR Lajitas Array 145.39 39 PKPbc PKPbc 08 35 03.3 +0.5
TXAR pmax pmax
comp=Z,280nm,0.9s
PVMO Portageville 145.63 14 *e*PKPbc PKPbc 08 35 03.4 0.0
URVA University of 145.69 357 *e*PKPbc PKPbc 08 35 03.2 -0.3
GLAT Glass 145.87 14 *e*PKPbc PKPbc 08 35 04.3 +0.2
UTMT University of 145.90 13 *e*PKPdf PKPdf 08 35 04.3 +0.7
ELN Prospectdale 146.07 2 *e*PKPbc PKPbc 08 35 03.9 -0.8
BLA Blacksburg 146.10 1 *e*PKP2 PKPab 08 35 04.3 -1.1
BLA MLR MLR
comp=Z,2µm,19.0s,MS5.9
HBAR Harrisburg 146.19 16 *e*PKPbc PKPbc 08 35 04.8 -0.3
HALT Halls 146.19 14 *e*PKPbc PKPbc 08 35 04.5 -0.6
WVT Waverly 146.33 12 *e*PKP2 PKPab 08 35 04.2 -2.1
WVT MLR MLR
comp=Z,2µm,20.0s,MS5.9
UALR University of 146.40 19 *e*PKPbc PKPbc 08 35 04.5 -1.3
TZTN Tazewell 146.58 6 *e*PKPbc PKPbc 08 35 04.8 -1.4
TZTN LR LR
comp=Z,3µm,19.0s,MS6.0
JCT Junction City 146.81 33 *e*PKP2 PKPab 08 35 07.6 -0.7
JCT MLR MLR
comp=Z,1µm,20.0s,MS5.7
LCO Las Campanas 146.89 194 *e*Pn PKPdf 08 35 08.2 +2.7
LCO LR LR
comp=Z,1µm,21.0s,MS5.7
TKL Tuckaleechee C 147.43 6 *e*PKPdf PKPdf 08 35 06.3 +0.1
TKL *e*PKPbc PKPbc 08 35 08.4 -0.2
OXF Oxford 147.50 15 *e*PKP2 PKPab 08 35 08.5 -2.4
OXF MLR MLR
comp=Z,1µm,21.0s,MS5.7
BBSR BB Station 147.72 336 *e*PKPdf PKPdf 08 35 06.9 +0.1
BBSR LR LR
comp=Z,1µm,20.0s,MS5.6
CNNC Cliffs of the 148.03 357 *e*PKPbc PKPbc 08 35 10.8 +0.5
CNNC LR LR
comp=Z,1µm,19.0s,MS5.8
NATX Nacogdoches 148.23 25 *e*PKPdf PKPdf 08 35 08.1 +0.4
NATX *e*PKPbc PKPbc 08 35 11.5 +0.5
NATX LR LR
comp=Z,2µm,20.0s,MS5.9
JSC Jenkinsville 148.99 3 *e*PKPdf PKPdf 08 35 09.3 +0.5
JSC *e*PKPbc PKPbc 08 35 12.8 0.0
HKT Hockley 149.25 28 *e*PKP2 PKPdf 08 35 09.9 +0.5
HKT MLR MLR
comp=Z,2µm,20.0s,MS5.9
VBMS Vicksburg 149.34 18 *e*PKPdf PKPdf 08 35 08.3 -1.1
VBMS *e*PKPbc PKPbc 08 35 14.3 +0.6
VBMS LR LR
comp=Z,2µm,19.0s,MS5.8
LRAL Lakeview Retre 149.49 12 *e*PKPdf PKPdf 08 35 09.7 +0.1
LRAL LR LR
comp=Z,2µm,20.0s,MS6.0
GOGA Godfrey 149.69 6 *e*PKIKP PKPdf 08 35 09.7 -0.3
GOGA MLR MLR
comp=Z,3µm,20.0s,MS6.0
COW Cow Castle Cre 149.91 2 *e*PKPbc PKPbc 08 35 15.2 +0.1
COW *e*PKPab PKPab 08 35 20.6 0.0
KVTX Kingsville 150.13 34 PKPdf PKPdf 08 35 12.6 +1.8
KVTX LR LR
comp=Z,2µm,20.0s,MS5.8
NHSC New Hope 150.20 1 *e*PKPdf PKPdf 08 35 11.1 +0.3
NHSC LR LR
comp=Z,2µm,20.0s,MS5.9
BRAL Brewton 151.42 13 *e*PKPdf PKPdf 08 35 12.5 -0.3
BRAL *e*PKPbc PKPbc 08 35 19.4 +0.6
BRAL LR LR
comp=Z,2µm,21.0s,MS5.9
LVC Limon Verde 152.33 202 PFAKE 08 35 20.0 +5.7
LVC LR LR
comp=Z,1µm,21.0s,MS5.7
DWPF Disney 155.12 4 *e*PKPab PKPab 08 35 41.9 -0.6
DWPF LR LR
comp=Z,1µm,20.0s,MS5.7
LPAZ La Paz 157.58 210 PFAKE 08 35 30.0 +8.4
LPAZ LR LR
comp=Z,1µm,19.0s,MS5.7
BBGH Gun Hill 157.79 298 PFAKE 08 35 30.0 +8.0
BBGH LR LR
comp=Z,2µm,20.0s,MS5.9
GRGR Grenville 160.07 298 PFAKE 08 35 30.0 +5.3
GRGR LR LR
comp=Z,797nm,20.0s
SJG San Juan 160.10 319 PFAKE 08 35 30.0 +5.4
SJG LR LR
comp=Z,995nm,21.0s
TEIG Tepich 161.06 26 PFAKE 08 35 40.0 +14
TEIG LR LR
comp=Z,2µm,20.0s
NNA Nana 164.70 190 PFAKE 08 35 40.0 +11
NNA LR LR
comp=Z,2µm,20.0s
TGUH Tegucigalpa,Un 166.81 34 *e*PKPdf PKPdf 08 35 30.7 -0.2
TGUH LR LR
comp=Z,1µm,22.0s
PAYG Puerto Ayora 168.71 110 PFAKE 08 35 40.0 +7.6
PAYG LR LR
comp=Z,1µm,22.0s
SDV Santo Domingo 169.38 303 PFAKE 08 35 40.0 +7.2
SDV LR LR
comp=Z,441nm,20.0s
ATAH Atahualpa 169.84 187 PKP PKPdf 08 35 34.2 +1.1
comp=Z,4.2nm,0.8s,baz=165,slow=3.6,SNR=4.5
JTS JuntasAbangare 171.17 36 PFAKE 08 35 40.0 +6.2
JTS LR LR
comp=Z,1µm,20.0s
BCIP Isla Barro Col 174.02 2 PFAKE 08 35 40.0 +5.0
BCIP LR LR
comp=Z,1µm,21.0s
ROSC El Rosal 174.43 288 PKP PKPdf 08 35 34.3 -0.9
comp=Z,5.6nm,0.9s,baz=270,slow=22,SNR=5.4
ROSC El Rosal 174.43 288 ePKPdf PKPdf 08 35 35.2 0.0
OTAV Otavalo 176.87 203 *e*PKPdf PKPdf 08 35 36.2 +0.4
OTAV LR LR
comp=Z,1µm,21.0s

*TRN **24** 08:25:00.9, 1782N×6392W, h26km, MD3.6, MD3.5(RSPR)*
*ISCJB **24** 08:25:02.3±1.0, 1772N±007×6395W±004, h25km±8km, Error ellipse: s-maj=12.3km s-min=6.4km az=179.1*
*RSPR **24** 08:25:02.8, 1771N×6389W, h8km±17km, MD3.5/9, MD3.5/9*
*NEIC **24** 08:25:02.8, 1771N×6389W, h8km, MD3.5(RSPR), After RSPR.*

ISC 24 08:25:01.8±1.8, 1773N±007×6396W±004, h14km±14km, n16, σ0°60/29, 10C-5D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CDVI	**St. Croix**	**0.77**	**272**	⇑*e*P		**Pb**	**08 25 16.9**	**-0.1**
CDVI				*e*S		**Sb**	**08 25 28.0**	**+0.6**
STMA	**St. Maarten, A**	**0.87**	**69**	*e*P		**Pb**	**08 25 18.3**	**-0.4**
STMA				*e*S		**Sb**	**08 25 30.4**	**+0.2**
TBVI	**Tortola**	**0.93**	**318**	⇑*i*P		**Pb**	**08 25 18.8**	**-0.9**
TBVI				*e*S		**Sb**	**08 25 31.7**	**-0.2**
TBVI	**Tortola**	**0.93**	**318**	⇑*i*P		**Pb**	**08 25 18.8**	**-0.9**
TBVI				*e*S		**Sb**	**08 25 31.7**	**-0.2**
ABV	**Anegada**	**1.06**	**340**	‖*e*P		**Pb**	**08 25 22.2**	**+0.3**
ABV				*e*S		**Sb**	**08 25 36.1**	**+0.5**
MTP	**Monte Pirata**	**1.56**	**284**	‖*e*P		**Pn**	**08 25 28.8**	**-0.4**
MTP				*e*S		**Sn**	**08 25 47.8**	**-1.4**
HUMP	**Col San Antoni**	**1.85**	**283**	⇑*e*P		**Pn**	**08 25 32.3**	**-0.8**
HUMP	**Col San Antoni**	**1.85**	**283**	⇑*e*P		**Pn**	**08 25 32.3**	**-0.8**
HUMP				*e*S		**Sn**	**08 25 56.5**	**+0.2**
HUMP	**Col San Antoni**	**1.85**	**283**	⇑*e*P		**Pn**	**08 25 32.3**	**-0.8**
HUMP				*e*S		**Sn**	**08 25 56.5**	**+0.2**
CBYP	**Canovanas**	**1.89**	**287**	‖*e*P		**Pn**	**08 25 34.4**	**+0.8**
CBYP				*e*S		**Sn**	**08 25 56.9**	**-0.3**
CPD	**Cerro la Pandu**	**1.89**	**280**	⇑*e*P		**Pn**	**08 25 33.1**	**-0.6**
CPD				*e*S		**Sn**	**08 25 57.7**	**+0.5**
CPD	**Cerro la Pandu**	**1.89**	**280**	⇑*e*P		**Pn**	**08 25 33.8**	**+0.1**
CPD				*e*S		**Sn**	**08 25 57.7**	**+0.5**
AOPR	**Arecibo Observ**	**2.73**	**283**	‖*e*P		**Pn**	**08 25 46.0**	**+0.8**
AOPR	**Arecibo Observ**	**2.73**	**283**	‖*e*P		**Pn**	**08 25 46.3**	**+1.1**
AOPR				*e*S		**Sn**	**08 26 18.3**	**+0.2**
AOPR	**Arecibo Observ**	**2.73**	**283**	‖*e*P		**Pn**	**08 25 46.0**	**+0.8**
AOPR				*e*S		**Sn**	**08 26 18.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**3.01**	**276**	⇑*e*P		**Pn**	**08 25 49.6**	**+0.5**

*ISCJB **24** 08:33:16.1±0.6, 1990S±005×6685W±009, h257km±6km, mb3.8/10, Error ellipse: s-maj=13.1km s-min=8.7km az=179.4*
*NEIC **24** 08:33:16.9±0.7, 1991S×6686W, h245km±18km, Error ellipse: s-maj=15.2km s-min=12.1km az=106.0*
*IDC **24** 08:33:16.2±0.8, 1988S×6683W, h244km±8km, mb3.6/10, mb1 3.7/17, mb1mx3.6/24, mbtmp3.6/17, Error ellipse: s-maj=14.3km s-min=8.6km az=93.0*
ISC 24 08:33:16.9±0.6, 1991S±005×6684W±009, h249km±6km, n23, σ0 93/27, mb3.7/9, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
LVC	**Limon Verde**	**3.31**	**215**	P			**Pn**	**08 34 13.6**	**+1.0**
	30nm,0.3s,baz=44,slow=9.4,SNR=304								
LVC				S			**S**	**08 34 56.2**	**-0.6**
	28nm,0.3s,baz=233,slow=16,SNR=18								
LPAZ	**La Paz**	**3.80**	**341**	P			**Pn**	**08 34 19.7**	**+1.3**
	2.2nm,0.3s,baz=124,slow=7.3,SNR=61								
LPAZ				S			**S**	**08 35 06.6**	**-0.5**
	2.3nm,0.3s,baz=306,slow=18,SNR=11								
LPAZ	**La Paz**	**3.80**	**341**	P			**Pn**	**08 34 19.7**	**+1.3**
LPAZ				S			**S**	**08 35 06.6**	**-0.5**
LPAZ				eS			**S**	**08 35 07.8**	**+0.6**
ARE	**Arequipa**	**5.59**	**307**	eP			**Pn**	**08 34 39.0**	**-0.9**
ARE				eS			**S**	**08 35 41.0**	**-5.2**
SIV	**San Ignacio**	**6.73**	**56**	P			**Pn**	**08 34 53.7**	**-0.6**
	5.6nm,0.3s,baz=251,slow=12,SNR=74								
SIV				S			**S**	**08 36 05.7**	**-6.6**
	baz=200,slow=21,SNR=2.4								
CFAA	**Coronel Fontan**	**11.71**	**186**	P			**Pn**	**08 35 55.4**	**-1.4**
	0.1nm,0.3s,baz=9.7,slow=12,SNR=5.1								
CFAA				S			**S**	**08 37 59.0**	**-8.6**
	0.1nm,0.3s,baz=154,slow=19,SNR=6.8								
NNA	**Nana**	**12.42**	**308**	P			**Pn**	**08 36 05.8**	**0.0**
	2.0nm,0.3s,baz=186,slow=6.2,SNR=6.5								
ATAH	**Atahualpa**	**17.04**	**317**	P			**P**	**08 36 59.6**	**+0.4**
	0.2nm,0.3s,baz=229,slow=2.7,SNR=4.6								
BDFB	**Brasilia**	**18.43**	**80**	P			**P**	**08 37 15.5**	**+1.3**
	2.0nm,0.3s,baz=252,slow=16,SNR=6.3								
PLCA	**Paso Flores**	**21.00**	**188**	P			**P**	**08 37 42.5**	**+1.2**
	6.1nm,0.6s,baz=4.2,slow=10,SNR=18								
PLCA	**Paso Flores**	**21.00**	**188**	P			**P**	**08 37 42.5**	**+1.2**
TXAR	**Lajitas Array**	**60.48**	**323**	P			**P**	**08 43 00.9**	**+0.2**
	0.4nm,0.6s,mb3.3,baz=143,slow=8.3,SNR=4.9								
DBIC	**Dimbokro**	**66.43**	**73**	P			**P**	**08 43 39.1**	**-0.8**
	1.9nm,0.5s,mb4.0,baz=207,slow=4.2,SNR=5.2								
PDAR	**Pinedale Array**	**73.73**	**329**	P			**P**	**08 44 24.3**	**+0.7**
	0.4nm,0.5s,mb3.3,baz=123,slow=8.8,SNR=4.3								
ULM	**Lac du Bonnet**	**74.42**	**341**	P			**P**	**08 44 26.6**	**-0.7**
	2.0nm,0.6s,mb3.9,baz=114,slow=5.6,SNR=5.0								
TORD	**Torodi Ar. Bea**	**75.00**	**70**	P			**P**	**08 44 30.3**	**-1.2**
	5.4nm,0.4s,mb4.5,baz=254,slow=5.4,SNR=69								
TORD				pP			pP	08 45 29.6	-0.2
	1.1nm,0.7s,baz=247,slow=3.9,SNR=3.4								
NVAR	**Mina Array Bea**	**75.47**	**321**	P			**P**	**08 44 34.1**	**+0.5**
	0.6nm,0.7s,mb3.3,baz=180,slow=10,SNR=4.3								
YBH	**Yreka Blue Hor**	**80.17**	**321**	P			**P**	**08 44 59.6**	**+0.1**
	1.2nm,0.8s,mb3.6,baz=208,slow=17,SNR=3.8								
MAW	**Mawson**	**85.28**	**163**	P			**P**	**08 45 26.7**	**+1.4**
	1.8nm,1.0s,mb3.8,baz=182,slow=8.5,SNR=7.5								
YKA	**Yellowknife Ar**	**90.35**	**340**	P			**P**	**08 45 47.7**	**-1.5**
	0.9nm,0.5s,mb3.9,baz=128,slow=4.9,SNR=5.4								
ASAR	**Alice Springs**	**132.20**	**206**	PKP			PKPdf	08 52 01.8	-0.1
	0.3nm,0.5s,baz=144,slow=1.5,SNR=7.9								
WRA	**Warramunga Arr**	**135.29**	**209**	PKP			PKPdf	08 52 08.0	+0.3
	0.4nm,0.5s,baz=175,slow=1.5,SNR=8.1								
ZALV	**Zalesovo Beam**	**139.69**	**26**	PKP			PKPdf	08 52 16.3	+1.7
	0.7nm,0.5s,baz=336,slow=3.2,SNR=3.0								

*ISCJB **24** 08:45:06.5±0.4, 3642N±003×13978E±006, h101km±3km, mb3.7/9, Error ellipse: s-maj=8.5km s-min=4.8km az=20.1*
*JMA **24** 08:45:07.9±0.1, 3642N×13978E, h88km±1km, M3.7*
Broadband fault plane solution: P waves. NP1: φs95.00000°, δ14.00000°, λ-11.00000°. NP2: φs196.00000°, δ87.00000°, λ-103.00000°. Principal axes: T Plg41.0000°, Azm298.0000°; N Plg13.0000°, Azm196.0000°; P Plg46.0000°, Azm92.0000°;
JMA Felt II J1.
*IDC **24** 08:45:08.8±1.5, 3637N×13968E, h106km±12km, mb3.5/9, mb1 3.7/11, mb1mx3.6/23, mbtmp3.6/11, MS3.7/1, Ms1 3.7/1, ms1mx3.3/35 Error ellipse: s-maj=26.8km s-min=9.2km az=64.0*
ISC 24 08:45:07.6±0.4, 3643N±003×13979E±006, h94km±3km, n25, σ0 65/38, mb3.7/9, 2C-8D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
JAG	**Ashikaga**	**0.27**	**269**	⇓P			**Pn**	**08 45 21.0**	**-0.4**
JAG				eS			**Sn**	**08 45 30.8**	**-0.8**
JKT	**Katashina**	**0.55**	**308**	⇓P			**Pn**	**08 45 23.0**	**-0.2**
JKT				S			**Sn**	**08 45 34.9**	**+0.1**
JRY	**Ryogami san**	**0.82**	**240**	⇓P			**Pn**	**08 45 25.9**	**+0.2**
JRY				eS			**Sn**	**08 45 39.0**	**-0.3**
JFY	**Yanaizu**	**0.98**	**356**	⇓P			**Pn**	**08 45 27.3**	**-0.1**
JFY				S			**Sn**	**08 45 42.0**	**-0.2**
JHK	**Hiroka**	**1.03**	**323**	⇓P			**Pn**	**08 45 27.8**	**-0.1**
JHK				S			**Sn**	**08 45 42.7**	**-0.4**
JFT	**Otama**	**1.17**	**22**	⇑P			**Pn**	**08 45 29.9**	**+0.3**
JFT				S			**Sn**	**08 45 46.7**	**+0.5**
MJAR	**Matsushiro Arr**	**1.28**	**276**	P			**Pn**	**08 45 30.3**	**-0.6**
	96nm,0.3s,baz=89,slow=12,SNR=776								
MJAR				S			**Sn**	**08 45 49.0**	**+0.7**
	35nm,0.3s,baz=270,slow=11,SNR=13								
MAT	**Matsushiro**	**1.28**	**276**	P			**Pn**	**08 45 31.8**	**+1.0**
MAT				S			**Sn**	**08 45 48.9**	**+0.5**
MAT	**Matsushiro**	**1.28**	**276**	P			**Pn**	**08 45 30.8**	**0.0**
JOD2	**Odawara 2**	**1.29**	**206**	⇓P			**Pn**	**08 45 30.6**	**-0.5**
JOD2				S			**Sn**	**08 45 48.0**	**-0.7**
JYN	**Shimob**	**1.37**	**228**	⇓P			**Pn**	**08 45 32.4**	**+0.4**
JYN				S			**Sn**	**08 45 51.0**	**+0.6**
JNS	**Sasagawa**	**1.44**	**345**	⇓P			**Pn**	**08 45 32.8**	**0.0**
JNS				S			**Sn**	**08 45 51.6**	**-0.2**
JMM	**Marumori**	**1.65**	**29**	⇑P			**Pn**	**08 45 35.7**	**+0.3**
JMM				eS			**Sn**	**08 45 57.2**	**+0.7**
JHJ	**Hachijo jima 2**	**3.30**	**180**	P			**Pn**	**08 45 57.5**	**+0.2**
	76nm,0.3s,baz=250,slow=10,SNR=26								
JHJ				S			**Sn**	**08 46 35.9**	**+0.2**
	62nm,0.3s,baz=58,slow=23,SNR=5.8								
JHJ				LR			LR	08 47 22.5	
	comp=Z,1μm,21.0s,baz=343,slow=41								
ASAJ	**Asahikawa**	**7.97**	**15**	P			**Pn**	**08 46 59.5**	**-1.2**
	0.9nm,0.3s,baz=180,slow=11,SNR=6.1								
KSRS	**Korea Array**	**9.55**	**280**	P			**Pn**	**08 47 23.9**	**+1.7**
	0.3nm,0.3s,baz=95,slow=13,SNR=11								
ZALV	**Zalesovo Beam**	**41.36**	**313**	P			**P**	**08 52 43.5**	**-0.5**
	1.8nm,0.4s,mb4.2,baz=96,slow=7.1,SNR=6.1								
MKAR	**Makanchi Array**	**43.34**	**302**	P			**P**	**08 52 59.5**	**-0.7**
	1.0nm,0.5s,mb3.8,baz=85,slow=9.9,SNR=13								
WRA	**Warramunga Arr**	**56.30**	**186**	P			**P**	**08 54 37.9**	**-0.6**
	0.6nm,0.3s,mb4.1,baz=0.7,slow=7.5,SNR=18								
ASAR	**Alice Springs**	**60.03**	**186**	P			**P**	**08 55 05.3**	**+0.9**
	0.2nm,0.5s,mb3.4,baz=8.1,slow=6.5,SNR=4.7								
ARCES	**ARCESS Array B**	**64.10**	**339**	P			**P**	**08 55 30.8**	**-0.4**
	1.7nm,0.9s,mb3.9,baz=61,slow=8.6,SNR=4.6								
STKA	**Stephens Creek**	**67.97**	**178**	P			**P**	**08 55 55.5**	**-0.8**
	0.8nm,0.6s,mb3.7,baz=346,slow=13,SNR=3.2								
AKASG	**Malin Array Be**	**73.97**	**322**	P			**P**	**08 56 31.7**	**-0.8**
	0.2nm,0.3s,mb3.4,baz=44,slow=5.1,SNR=7.4								
NVAR	**Mina Array Bea**	**76.39**	**52**	P			**P**	**08 56 48.5**	**+1.8**
	0.9nm,0.7s,mb3.6,baz=291,slow=4.8,SNR=8.4								
TXAR	**Lajitas Array**	**91.52**	**51**	P			**P**	**08 58 04.0**	**+0.1**
	0.2nm,0.8s,mb3.4,baz=318,slow=3.4,SNR=3.7								

*IDC **24** 08:46:45.2±4.4, 2971N×14178E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.7/20, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=171.7km s-min=25.9km az=73.0*
*ISCJB **24** 08:46:47.4±3.1, 304N±0.1×1432E±03, h86km±32km, mb3.8/3, Error ellipse: s-maj=47.5km s-min=17.8km az=167.3*
*JMA **24** 08:46:49.3±0.5, 3048N×14298E, h55km, M3.9*
ISC 24 08:46:48.4±2.6, 304N±01×1432E±03, h69km±28km, n10, σ0 93/12, mb3.8/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
CBIJ	**Chichi jima**	**3.37**	**195**	Sn			**Sn**	**08 48 00.8**	**-17**
	21nm,0.3s,baz=290,slow=23,SNR=6.7								
BSO1	**Boso 1**	**4.66**	**337**	eS			**Sn**	**08 48 49.1**	**+0.2**
JHU	**Hanno**	**6.36**	**330**	eS			**Sn**	**08 49 29.2**	**-1.5**
JRY	**Ryogami san**	**6.67**	**329**	P			**Pn**	**08 48 24.3**	**+0.6**
JRY				eS			**Sn**	**08 49 38.9**	**+0.7**
JAG	**Ashikaga**	**6.79**	**334**	P			**Pn**	**08 48 26.5**	**+1.1**
JAG				eS			**Sn**	**08 49 40.3**	**-0.9**
MJAR	**Matsushiro Arr**	**7.42**	**327**	Pn			**Pn**	**08 48 33.8**	**-0.1**
	0.9nm,0.3s,baz=159,slow=11,SNR=5.5								
JMK	**Ichinoseki**	**8.71**	**350**	eS			**Sn**	**08 50 28.0**	**-0.3**
MKAR	**Makanchi Array**	**49.11**	**307**	P			**P**	**08 55 30.6**	**+1.7**
	1.3nm,0.5s,mb4.1,baz=85,slow=9.9,SNR=9.3								
WRA	**Warramunga Arr**	**50.73**	**191**	P			**P**	**08 55 40.2**	**-1.1**
	0.8nm,0.6s,mb3.9,baz=6.8,slow=7.7,SNR=7.1								
ASAR	**Alice Springs**	**54.45**	**190**	P			**P**	**08 56 08.3**	**-0.4**
	0.2nm,0.5s,mb3.4,baz=0.8,slow=5.6,SNR=3.3								

*NEIC **24** 08:52:00.6, 1958N×6865W, h57km, MD3.7(RSPR), After RSPR.*
RSPR 24 08:52:00.6, 1958N×6865W, h57km±19km, MD3.7/17, MD3.7/17, 15C-3D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
DR12	**Loma Pena Alta**	**1.05**	**221**	⇑P			Pn	08 52 16.3	-2.9
DR12				eS			Sn	08 52 30.2	-2.8
DR08	**Loma La Naviza**	**1.43**	**245**	⇑P			Pn	08 52 23.6	-0.8
DR08				eS			Sn	08 52 43.3	+1.1
IMO	**Isla Mona**	**1.62**	**154**	⇑P			Pn	08 52 23.4	-3.5
IMO				eS			Sn	08 52 42.7	-4.1
STDO	**Santo Domingo**	**1.65**	**227**	⇑P			Pn	08 52 26.8	-0.5
STDO				eS			Sn	08 52 45.9	-1.5
AGPR	**Aguadilla, PR**	**1.83**	**127**	⇑P			Pn	08 52 28.5	-1.2
AGPR				eS			Sn	08 52 50.7	-1.1
MPR	**Mayaguez**	**1.98**	**133**	eS			Sn	08 52 54.9	-0.5
LSP	**Las Mesas**	**2.04**	**133**	⇑P			Pn	08 52 31.0	-1.5
LSP				eS			Sn	08 52 56.3	-0.5
LRS	**Lares**	**2.14**	**127**	⇑P			Pn	08 52 32.9	-1.0
LRS				eS			Sn	08 52 58.4	-1.0
CRPR	**Cabo Rojo, PR**	**2.14**	**137**	⇑P			Pn	08 52 32.4	-1.6
CRPR				eS			Sn	08 52 58.7	-0.7
AOPR	**Arecibo Observ**	**2.17**	**124**	⇓P			Pn	08 52 33.4	-1.1
AOPR				eS			Sn	08 53 00.3	+0.1
GBPR	**Guanica, Bosqu**	**2.32**	**133**	⇑P			Pn	08 52 36.4	0.0
GBPR	**Guanica, Bosqu**	**2.32**	**133**	eS			Sn	08 53 02.6	-1.2
CELP	**Cerrillos**	**2.47**	**127**	⇑P			Pn	08 52 38.4	0.0
CELP				eS			Sn	08 53 06.2	-1.2
OBIP	**Obispado Ponce**	**2.47**	**128**	⇓P			Pn	08 52 38.8	+0.3
OBIP				eS			Sn	08 53 07.5	+0.1
ICM	**Isla Caja Muer**	**2.62**	**129**	⇑P			Pn	08 52 40.8	+0.2
ICM				eS			Sn	08 53 11.3	0.0
SJG	**San Juan**	**2.78**	**121**	⇑P			Pn	08 52 41.8	-0.9
SJG				eS			Sn	08 53 15.0	-0.2
SJG	**San Juan**	**2.78**	**121**	⇓P			Pn	08 52 42.1	-0.6
SJG				eS			Sn	08 53 14.0	-1.2
CPD	**Cerro la Pandu**	**3.01**	**120**	⇑P			Pn	08 52 45.5	-0.4
CPD				eS			Sn	08 53 19.9	-0.9
HUMP	**Col San Antoni**	**3.01**	**118**	⇑P			Pn	08 52 44.8	-1.1
HUMP				eS			Sn	08 53 20.9	+0.1
MTP	**Monte Pirata**	**3.28**	**116**	⇑P			Pn	08 52 48.5	-1.1
MTP				eS			Sn	08 53 27.9	+0.4

*NEIC **24** 09:33:33.8±0.3, 1534S×16784E, h10km, mb5.0/18, Error ellipse: s-maj=11.0km s-min=6.5km az=150.0*
*BJI **24** 09:33:33.7, 1530S×16780E, h6km, mB5.2, mb4.9, Ms5.2, Msz5.0*
*ISCJB **24** 09:33:35.4±0.3, 1560S±005×16787E±006, h33km, mb4.8/45, MS4.6/13, Error ellipse: s-maj=8.5km s-min=5.9km az=28.2*
*MOS **24** 09:33:36.6±1.5, 1542S×16774E, h33km, mb5.1/13, Error ellipse: s-maj=14.7km s-min=11.3km az=172.1*
*IDC **24** 09:33:42.0±4.4, 1588S×16797E, h84km±38km, mb4.2/18, mb1 4.3/19, mb1mx4.3/22, mbtmp4.2/19, MS4.1/5, Ms1 4.1/5, ms1mx3.7/25, Error ellipse: s-maj=22.7km s-min=18.2km az=138.0*
*DJA **24** 09:33:46, 1724S×16683E, h10km, mb5.1/12*
ISC 24 09:33:37.7±0.3, 1543S±006×16785E±006, h35km, (h10km±4.5km: pP-P), n107, σ1 9/16/87, mb4.7/45, MS4.6/13, 1C-3D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
DZM	**Mont Dzumac**	**6.74**	**191**	eP			**Pn**	**09 35 11.3**	**-2.9**
DZM				eS			**Sn**	**09 36 26.7**	**-3.0**
DZM	**Mont Dzumac**	**6.74**	**191**	ePn			**Pn**	**09 35 11.7**	**-2.4**
DZM				eSn			**Sn**	**09 36 31.0**	**+1.4**
HNR	**Honiara**	**9.75**	**307**	P			**Pn**	**09 36 03.7**	**+8.2**
	6.1nm,0.3s,baz=157,slow=14,SNR=5.1								
HNR	**Honiara**	**9.75**	**307**	eP			**Pn**	**09 35 51.5**	**-4.0**
HNR				pmax			pmax		
	comp=Z,134nm,1.0s								
HNR	**Honiara**	**9.75**	**307**	ePn			**Pn**	**09 35 51.5**	**-4.0**
	comp=Z,134nm,1.0s								
EIDS	**Eidsvold**	**18.55**	**235**	ePn			**Pn**	**09 37 52.5**	**+0.7**
	comp=Z,72nm,0.8s								
EIDS				eSP			sP	09 38 03.6	-1.5
PMG	**Port Moresby**	**21.06**	**284**	eP			**P**	**09 38 19.2**	**+0.2**
PMG				pmax			pmax		
	comp=Z,59nm,1.0s								
PMG	**Port Moresby**	**21.06**	**284**	eP			**P**	**09 38 19.2**	**+0.2**
	comp=Z,59nm,1.0s,mb4.9								
ARMA	**Armidale**	**21.07**	**222**	eP			**P**	**09 38 19.9**	**+1.0**
CTA	**Charters Tower**	**21.07**	**254**	⇓P			**P**	**09 38 21.2**	**+2.1**
CTA	**Charters Tower**	**21.07**	**254**	P			**P**	**09 38 19.9**	**+0.9**
	comp=Z,15nm,0.9s,mb4.3,baz=87,slow=13,SNR=8.5								
CTA				LR			LR	09 45 28.0	
	comp=Z,568nm,18.9s,MS4.0,baz=60,slow=34								
CTAO	**Charters Tower**	**21.07**	**254**	eP			**P**	**09 38 17.1**	**-2.0**
COEN	**Coen**	**23.91**	**270**	eP			**P**	**09 38 47.4**	**-1.2**
	comp=Z,70nm,1.5s,mb4.9								
URZ	**Urewera**	**24.16**	**162**	P			**P**	**09 38 46.7**	**-3.9**
	comp=Z,4.8nm,0.7s,mb4.0,baz=342,slow=19,SNR=2.5								
STKA	**Stephens Creek**	**28.97**	**231**	eP			**P**	**09 39 34.1**	**0.0**
STKA				esP			sP	09 39 38.2	-10
STKA	**Stephens Creek**	**28.97**	**231**	P			**P**	**09 39 32.2**	**-1.8**
	comp=Z,7.9nm,1.0s,mb4.4,baz=30,slow=5.9,SNR=8.0								
STKA				LR			LR	09 50 03.2	
	comp=Z,373nm,18.6s,MS4.0,baz=23,slow=34								
RAR	**Rarotonga**	**31.23**	**105**	LR			LR	09 49 09.4	
	comp=Z,355nm,18.1s,MS4.1,baz=67,slow=30								
WB2	**Warramunga Arr**	**32.19**	**257**	⇓P			**P**	**09 40 01.9**	**-0.7**
WB2				esP			sP	09 40 06.3	-11
WRAB	**Tennant Creek**	**32.19**	**257**	P			**P**	**09 40 02.0**	**-0.6**
	comp=Z,173nm,1.0s,mb5.8,SNR=7.4								
WRAB	**Tennant Creek**	**32.19**	**257**	eP			**P**	**09 40 02.0**	**-0.6**
WRAB				pmax			pmax		
	comp=Z,22nm,0.9s,mb5.0								
WRAB	**Tennant Creek**	**32.19**	**257**	eP			**P**	**09 40 02.0**	**-0.6**
	comp=Z,22nm,0.9s,mb5.0								
WRA	**Warramunga Arr**	**32.20**	**257**	P			**P**	**09 40 01.6**	**-1.1**
	comp=Z,19nm,0.9s,mb4.9,baz=88,slow=8.4,SNR=6.6								
WRA				LR			LR	09 52 23.8	
	comp=Z,492nm,19.0s,MS4.2,baz=95,slow=35								
ASAR	**Alice Springs**	**32.95**	**250**	P			**P**	**09 40 08.7**	**-0.5**
	comp=Z,14nm,0.8s,mb4.9,baz=79,slow=9.1,SNR=103								
GUMO	**Guam**	**36.72**	**321**	LR			LR	09 53 02.7	
	comp=Z,159nm,19.2s,MS3.8,baz=270,slow=31								
FITZ	**Fitzroy Crossi**	**40.44**	**260**	⇓P			**P**	**09 41 13.1**	**0.0**
FITZ				esP			sP	09 41 17.6	-10
PPT	**Papeete**	**40.82**	**99**	eLR			LR	09 52 40.6	
	comp=Z,479nm,27.5s								
TBI	**Tubuai**	**40.91**	**108**	eLR			LR	09 53 00.9	
	comp=Z,294nm,28.5s								
BATI	**Baumata**	**43.34**	**271**	P			**P**	**09 41 38.1**	**+1.3**
	comp=Z,32nm,0.6s,mb5.2,baz=86,slow=6.3,SNR=8.1								
MBWA	**Marble Bar**	**45.90**	**255**	eP			**P**	**09 41 57.0**	**-0.2**
	comp=Z,38nm,1.0s,mb5.3								
KAPI	**Kappang**	**48.34**	**277**	P			**P**	**09 42 17.3**	**+0.9**
	comp=Z,11nm,0.8s,mb5.0,baz=130,slow=6.3,SNR=6.5								
KAPI	**Kappang**	**48.34**	**277**	P			**P**	**09 42 17.2**	**+0.9**
RKT	**Rikitea**	**54.23**	**108**	eLR			LR	09 59 02.6	
	comp=Z,310nm,25.5s								
MJAR	**Matsushiro Arr**	**58.78**	**332**	P			**P**	**09 43 33.6**	**+1.2**
	comp=Z,3.9nm,1.1s,mb4.3,baz=160,slow=4.4,SNR=4.4								
SBA	**Scott Base**	**62.44**	**180**	eP			**P**	**09 43 58.0**	**+1.2**
SBA				pmax			pmax		
	comp=Z,14nm,1.1s,mb5.0								
SBA	**Scott Base**	**62.44**	**180**	eP			**P**	**09 43 58.0**	**+1.2**
	comp=Z,14nm,1.1s,mb5.0								
KSRS	**Korea Array**	**64.63**	**326**	P			**P**	**09 44 14.8**	**+3.0**
	comp=Z,1.2nm,0.8s,mb4.0,baz=141,slow=5.5,SNR=4.8								
NJ2	**Nanjing**	**66.56**	**316**	eP			**P**	**09 44 23.3**	**-1.2**
NJ2				AMB			AMB		
	comp=Z,10.0nm,0.8s,mb4.9								
VLA	**Vladivostok**	**66.95**	**332**	eP			**P**	**09 44 32.7**	**+6.0**
VLA				pmax			pmax		
	comp=Z,44nm,0.7s,mb5.6								
PETK	**Petropavlovsk-**	**68.82**	**353**	P			**P**	**09 44 41.1**	**+3.0**
	comp=Z,7.1nm,0.9s,mb4.6,baz=120,slow=8.5,SNR=4.4								
MDJ	**Mudanjiang**	**69.16**	**332**	P			**P**	**09 44 39.8**	**-0.7**
MDJ				AP			pP	09 44 43.1	-8.2
MDJ				SCS			ScS	09 54 39.8	+1.2
MDJ				AMB			AMB		
	comp=Z,4.0nm,1.0s,mb4.3								
MDJ				AMB			AMB		
	comp=Z,98nm,6.4s								
MDJ				LR			LR		
	comp=N,693nm,32.8s,MS4.9								
MDJ				LR			LR		
	comp=E,980nm,31.6s,MS4.9								
MDJ				LR			LR		
	comp=Z,723nm,22.6s								
CN2	**Changchun**	**70.53**	**329**	eP			**P**	**09 44 53.8**	**+4.8**
CN2				AMB			AMB		
	comp=Z,10.0nm,1.0s,mb4.7								
GYA	**Guiyang**	**72.57**	**305**	P			**P**	**09 45 01.9**	**+0.3**
GYA				PCP			PcP	09 45 20.4	+1.3
GYA				AMB			AMB		
	comp=Z,20nm,1.0s,mb5.0								
GYA				AMB			AMB		
	comp=Z,120nm,5.2s								
GYA				LR			LR		
	comp=N,340nm,18.9s,MS4.8								
GYA				LR			LR		
	comp=E,280nm,19.4s,MS4.8								
GYA				LR			LR		
	comp=Z,310nm,20.7s,MS4.6								
BJI	**Beijing**	**73.16**	**321**	P			**P**	**09 45 08.3**	**+3.5**
BJI				AMB			AMB		
	comp=Z,11nm,1.8s,mb4.5								
BJI				AMB			AMB		
	comp=Z,261nm,4.3s								
BJI				LR			LR		
	comp=N,686nm,19.4s,MS5.2								
BJI				LR			LR		
	comp=E,1μm,19.9s,MS5.2								
BJI				LR			LR		
	comp=Z,557nm,29.6s								
BJI	**Beijing**	**73.16**	**321**	P			**P**	**09 45 08.3**	**+3.5**
	comp=Z,11nm,1.8s,mb4.5								
BJI				S			S	09 54 28.5	-1.8
BJI				LR			LR		
	comp=Z,560nm,29.6s,MS4.7								
KMI	**Kunming**	**75.15**	**302**	P			**P**	**09 45 17.5**	**+0.7**
KMI				S			S	09 54 55.3	+2.1
KMI				SS			SS	09 59 45.5	+2.1
KMI				pmax			pmax		
	comp=Z,18nm,0.5s,mb5.3								
KMI				MLR			MLR		
	comp=Z,1μm,22.5s,MS5.2								
KMI	**Kunming**	**75.15**	**302**	P			**P**	**09 45 17.5**	**+0.7**
	comp=Z,18nm,0.5s,mb5.3								
KMI				S			S	09 54 55.3	+2.1
KMI				SS			SS	09 59 45.5	+2.1
KMI				LR			LR		
	comp=Z,1μm,22.5s,MS5.2								
CMAR	**Chiang Mai Arr**	**75.74**	**294**	P			**P**	**09 45 19.5**	**-0.8**
	comp=Z,0.9nm,0.4s,mb4.0,baz=133,slow=5.2,SNR=5.8								
HHC	**Hu-ho-hao-te**	**76.48**	**320**	eP			**P**	**09 45 22.8**	**-1.2**
HHC				PCP			PcP	09 45 35.3	-0.3
HHC				SKS				09 55 28.8	
HHC				SCS			ScS	09 55 34.3	-2.9
HHC				AMB			AMB		
	comp=Z,14nm,0.8s,mb4.9								
HHC				AMB			AMB		
	comp=Z,162nm,7.9s								
HHC				LR			LR		
	comp=N,1μm,17.5s,MS5.4								
HHC				LR			LR		
	comp=E,1μm,17.6s,MS5.4								
HHC				LR			LR		
	comp=Z,1μm,18.5s,MS5.2								
CD2	**Ch

TPNV	**Topopah Spring**	**88.29**	**51**	*e*P		**P**	**09 46 25.5**	**-0.3**
TPNV				pmax		pmax		
	comp=Z,12nm,1.1s,mb5.0							
TPNV	**Topopah Spring**	**88.29**	**51**	*e*P		**P**	**09 46 25.5**	**-0.3**
	comp=Z,12nm,1.1s,mb5.0							
SHPR	**Sheep Range**	**88.95**	**52**	*e*P		**P**	**09 46 28.4**	**-0.5**
HAWA	**Hanford**	**89.51**	**41**	*e*P		**P**	**09 46 31.1**	**-0.2**
	comp=Z,8.1nm,1.0s,mb5.0							
ELK	**Elko**	**90.34**	**48**	*e*P		**P**	**09 46 36.5**	**+1.2**
BMO	**Blue Mountains**	**90.38**	**43**	*e*P		**P**	**09 46 34.9**	**-0.5**
BMO				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.6							
BMO	**Blue Mountains**	**90.38**	**43**	*e*P		**P**	**09 46 34.9**	**-0.5**
	comp=Z,2.7nm,0.9s,mb4.6							
OD2	**Odessa Site #2**	**90.42**	**41**	*e*P		**P**	**09 46 37.1**	**+1.6**
WUAZ	**Wupatki**	**91.54**	**54**	*e*P		**P**	**09 46 40.4**	**-0.6**
	comp=Z,5.6nm,1.0s,mb4.8							
MSU	**Marysvale**	**91.85**	**51**	*e*P		**P**	**09 46 42.8**	**+0.4**
SNAA	**Sanae**	**92.88**	**183**	*e*P		**P**	**09 46 49.0**	**+2.4**
JLU	**Jordanelle**	**93.03**	**49**	*e*P		**P**	**09 46 52.3**	**+4.5**
WMQ	**Urumqi**	**93.61**	**314**	*e*P		**P**	**09 46 51.0**	**+0.6**
WMQ				AP		pP	09 46 55.5	-6.0
WMQ				XP		sP	09 46 58.0	-7.5
WMQ				SKS			09 57 23.0	
WMQ				AMB		AMB		
	comp=Z,11nm,1.6s,mb5.0							
WMQ				AMB		AMB		
	comp=Z,176nm,4.5s							
WMQ				LR		LR		
	comp=N,282nm,26.7s,MS4.8							
WMQ				LR		LR		
	comp=E,241nm,23.0s,MS4.8							
WMQ				LR		LR		
	comp=Z,302nm,21.3s,MS4.7							
PDAR	**Pinedale Array**	**95.01**	**47**	P		**P**	**09 46 56.0**	**-0.8**
	comp=Z,0.4nm,0.8s,mb3.9,baz=139,slow=4.3,SNR=2.5							
TXAR	**Lajitas Array**	**96.12**	**61**	P		**P**	**09 47 03.0**	**+0.7**
	comp=Z,0.3nm,0.7s,mb3.8,baz=236,slow=5.4,SNR=3.4							
MK31	**Makanchi Array**	**98.09**	**316**	*e*P		**P**	**09 47 09.4**	**-1.3**
MKAR	**Makanchi Array**	**98.09**	**316**	P		**P**	**09 47 09.0**	**-1.7**
	comp=Z,0.8nm,0.8s,mb4.3,baz=101,slow=7.5,SNR=6.3							
ZALV	**Zalesovo Beam**	**98.28**	**324**	P		**P**	**09 47 10.3**	**-1.0**
	comp=Z,0.5nm,0.3s,mb4.5,baz=96,slow=11,SNR=3.4							
CDF	**Champ du Feu**	**143.43**	**338**	*e*PKP1		PKPdf	09 53 07.7	-0.8
TUE	**Stuetta**	**144.22**	**334**	*e*PKPdf		PKPdf	09 53 08.7	-1.2
TIP	**Timpagrande**	**145.34**	**319**	*e*PKPbc		PKPbc	09 53 10.6	-1.4
CABF	**La Chapelle**	**145.39**	**338**	*e*PKP1		PKPbc	09 53 11.3	-0.6
	comp=Z,130nm,1.4s							
LOR	**Lormes**	**145.58**	**341**	*e*PKP1		PKPbc	09 53 11.4	-1.1
	comp=Z,138nm,1.6s							
SSF	**Saint Saulge**	**145.88**	**341**	*e*PKP1		PKPbc	09 53 12.4	-1.0
	comp=Z,62nm,1.3s							
LPL	**La Plagne**	**146.06**	**336**	*e*PKP1		PKPbc	09 53 13.5	-0.5
LPG	**La Plagne**	**146.07**	**336**	*e*PKP1		PKPbc	09 53 13.7	-0.3
SMF	**Signal de Mont**	**146.14**	**340**	*e*PKP1		PKPbc	09 53 13.3	-0.9
	comp=Z,95nm,1.6s							
AVF	**Avril sur Loir**	**146.17**	**341**	*e*PKP1		PKPbc	09 53 13.5	-0.8
	comp=Z,127nm,1.7s							
BNI	**Bardonecchia**	**146.46**	**336**	*e*PKP2		PKPab	09 53 14.4	-1.8
ORIF	**Oris-en-Rattie**	**146.89**	**336**	*e*PKP1		PKPbc	09 53 15.4	-1.1
	comp=Z,16nm,0.9s							
SBF	**Sospel**	**147.12**	**333**	*e*PKP1		PKPbc	09 53 15.5	-1.7
PGF	**Pioggiola**	**147.44**	**330**	*e*PKP1		PKPbc	09 53 16.5	-1.6
	comp=Z,32nm,1.1s							
LMR	**La Mourre**	**147.94**	**334**	*e*PKP1		PKPbc	09 53 18.0	-1.4
	comp=Z,21nm,1.0s							
ESDC	**Sonseca Array**	**154.81**	**345**	PKPab		PKPab	09 53 51.7	+1.1
	comp=Z,0.3nm,0.4s,baz=29,slow=3.4,SNR=4.3							
TORD	**Torodi Ar. Bea**	**166.39**	**262**	PKPab		PKPab	09 54 40.3	-1.6
	comp=Z,0.5nm,0.8s,baz=112,slow=3.5,SNR=3.3							

IDC 24 09:35:39.2±1.7, 658S×15659E, h0km, mb4.1/5, mb1 4.3/5, mb1mx4.0/14, mbtmp4.1/5, Error ellipse: s-maj=68.4km s-min=32.0km az=109.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.36**	**236**	P	P	09 41 08.4	+0.2
	0.9nm,0.3s,baz=60,slow=9.1,SNR=11						
WRA				PcP	PcP	09 44 41.0	-0.2
	0.1nm,0.4s,baz=67,slow=2.6,SNR=4.8						
ASAR	**Alice Springs**	**27.64**	**230**	P	P	09 41 28.6	-0.3
	1.4nm,0.3s,baz=61,slow=9.3,SNR=4.1						
ASAR				PcP	PcP	09 44 46.0	-0.4
	0.3nm,0.5s,baz=69,slow=2.8,SNR=4.8						
STKA	**Stephens Creek**	**28.81**	**207**	P	P	09 41 45.1	+6.0
	1.4nm,0.8s,baz=41,slow=12,SNR=3.9						
MKAR	**Makanchi Array**	**84.14**	**318**	P	P	09 48 12.7	+0.4
	1.0nm,0.7s,baz=93,slow=8.0,SNR=6.1						
ZALV	**Zalesovo Beam**	**84.73**	**326**	P	P	09 48 15.4	+0.3
	0.6nm,0.3s,baz=96,slow=5.0,SNR=2.5						
MAW	**Mawson**	**85.39**	**203**	P	P	09 48 18.7	+0.5
	0.6nm,0.6s,baz=93,slow=8.9,SNR=7.7						
TORD	**Torodi Ar. Bea**	**154.44**	**287**	PKPbc	PKPbc	09 55 41.8	-1.1
	0.4nm,0.8s,baz=34,slow=1.5,SNR=2.7						

JMA 24 09:45:41.2±0.4, 3165N×14242E, h0km, M4.1, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.64**	**304**	P	Pn	09 46 26.2	+1.1
JHJ2				*e*S	Sn	09 46 58.9	+1.1
BSO1	**Boso 1**	**3.23**	**338**	P	Pn	09 46 34.1	+0.9
BSO1				*e*S	Sn	09 47 15.1	+2.8
BSO2	**Boso 2**	**3.39**	**336**	*e*S	Sn	09 47 18.8	+2.4
BSO4	**Boso 4**	**3.76**	**333**	*e*S	Sn	09 47 28.6	+3.2
JOD2	**Odawara 2**	**4.55**	**323**	P	Pn	09 46 54.9	+3.5
JOD2				*e*S	Sn	09 47 47.3	+2.3
JYT	**Yasato**	**4.93**	**339**	P	Pn	09 46 58.7	+2.2
JHU	**Hanno**	**4.94**	**329**	P	Pn	09 46 58.1	+1.5
JHU				*e*S	Sn	09 47 54.6	+0.1
JHO	**Hitachi**	**5.18**	**343**	P	Pn	09 47 01.0	+1.0
JHO				*e*S	Sn	09 47 59.3	-1.1
JRY	**Ryogami san**	**5.25**	**327**	P	Pn	09 47 04.9	+4.0
JRY				*e*S	Sn	09 48 05.2	+3.1
JAG	**Ashikaga**	**5.36**	**333**	P	Pn	09 47 04.0	+1.6
JFK	**Kawauchi**	**5.84**	**348**	P	Pn	09 47 10.3	+1.2
JFK				*e*S	Sn	09 48 15.9	-0.9
JMK	**Ichinoseki**	**7.35**	**353**	P	Pn	09 47 30.4	+0.6
JMK				*e*S	Sn	09 48 51.2	-2.7

SZGRF ***24*** *09:50:48.9, 572S×10170E, h33km, mb5.7, MS4.7, Southwest of Sumatera, Indonesia*

BJI ***24*** *09:51:04.9, 181S×9998E, h48km, mB5.2, mb5.2, Ms5.1, Msz4.8*

MOS ***24*** *09:51:05.6±1.0, 146S×100.11E, h33km, mb5.6/61, MS4.6/12, Error ellipse: s-maj=8.9km s-min=4.4km az=116.5*

ISCJB ***24*** *09:51:07.6±0.1, 155S±003×9994E±002, h49km, mb5.5/180, MS4.7/45, Error ellipse: s-maj=4.2km s-min=3.0km az=36.5*

GCMT ***24*** *09:51:07.0±0.2, 164S×9978E, h44km±1km, MW5.4/84, Moment Tensor Solution. s62,c85; s84,c151; Duration: 1s2 Moment tensor: Scale 10^17Nm; Mrr=0.37±.03; Mθθ=0.45±.03; Mφφ=0.81±.03; Mrθ=0.05±.03; Mθφ=-1.08±.02; Mφr=0.61±.04; Best double couple: M=0.37900×10^17 NP1:φs105.00000°, δ64.00000°, λ=-176.00000°. NP2: φs13.00000°, δ87.00000°, λ=-27.00000°. Principal axes: T 1.5950, Plg16.0000°, Azm62.0000°; N -0.4310, Plg63.0000°, Azm186.0000°; P -1.1640, Plg21.0000°, Azm325.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***24*** *09:51:07.0±0.1, 157S×10007E, h35km, mb5.4/69, MS4.5/1 Error ellipse: s-maj=5.5km s-min=3.6km az=46.0*

NEIC Felt [IV] at Padang and Painan; [III] at Padangpanjang; [II] at Bukittinggi. Also felt [III] in the Kepulauan Mentawai.

IDC ***24*** *09:51:08.1±1.5, 157S×100.10E, h44km±12km, mb4.9/31, mb1 5.0/33, mb1mx5.0/33, mbtmp4.9/33, ML5.1/2, MS4.5/21, Ms1 4.5/21, ms1mx4.4/25, Error ellipse: s-maj=14.7km s-min=9.5km az=49.0*

DJA ***24*** *09:51:10, 167S×99.77E, h50km, Mw5.5/24*

ISC 24 09:51:09.5±0.1, 157S±003×9992E±002, h51km, h51km±2.1km; pP-P, n527, σ1s06/520, mb5.5/180, MS4.7/45, 34C-50D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.20**	**23**	P	Pn	**09 51 30.0**	**0.0**
	0.0nm,0.0s						
RGRI	**Rengat**	**2.70**	**63**	P	Pn	**09 51 51.4**	**+1.0**
	0.0nm,0.0s						
KSI	**Kapahiang**	**3.38**	**128**	P	Pn	**09 52 02.2**	**+2.5**
	0.0nm,0.0s						
TRSI	**Tarutung**	**3.70**	**345**	P	Pn	**09 52 07.1**	**+2.9**
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.72**	**91**	P	Pn	**09 52 07.9**	**+3.5**
	0.0nm,0.0s						
KGM	**Kluang**	**4.92**	**44**	⇑P	Pn	**09 52 22.3**	**+1.4**
FRIM	**Kepong**	**5.07**	**20**	⇓P	Pn	**09 52 25.7**	**+2.8**
MYKOM	**Kota Tinggi**	**5.15**	**50**	⇓P	Pn	**09 52 26.4**	**+2.3**
TSI	**Tuntungan**	**5.21**	**345**	P	Pn	**09 52 25.6**	**+0.6**
	6μm,0.9s						
IPM	**Ipoh**	**6.11**	**10**	⇑P	Pn	**09 52 40.5**	**+3.3**
PPBI	**Pangkal Pinang**	**6.24**	**96**	P	Pn	**09 52 42.4**	**+3.4**
	155nm,1.2s						
BLSI	**Bandar Lampung**	**6.51**	**126**	P	Pn	**09 52 43.8**	**+1.0**
	506nm,0.7s						
KTGM	**Kuala Trenggan**	**7.56**	**25**	⇓P	Pn	**09 53 00.6**	**+3.4**
SBJI	**Serang**	**7.67**	**126**	P	Pn	**09 52 59.7**	**+1.1**
	545nm,1.1s						
TPI	**Tanjungpandan**	**7.81**	**99**	⇓*e*P	Pn	**09 53 01.5**	**+0.9**
BSI	**Banda Aceh**	**8.40**	**327**	P	Pn	**09 53 07.6**	**-1.1**
	340nm,1.1s						
DBJI	**Dramaga**	**8.42**	**126**	P	Pn	**09 53 08.8**	**-0.1**
	662nm,1.5s						
SNG	**Songkhla**	**8.71**	**5**	P	Pn	**09 53 12.0**	**-1.0**
	800nm,1.0s						
LEM	**Lembang**	**9.28**	**124**	P	Pn	**09 53 22.3**	**+1.6**
	398nm,1.6s						
XMIS	**Christmas Isla**	**10.53**	**147**	*e*Pn	Pn	**09 53 31.8**	**-6.0**
KSM	**Kuching**	**10.81**	**74**	⇑P	Pn	**09 53 45.1**	**+3.4**
KSM	**Kuching**	**10.81**	**74**	*e*Pn	Pn	**09 53 37.8**	**-4.0**
BJII	**Banjamegara**	**11.31**	**121**	P	Pn	**09 53 48.1**	**-0.4**
	138nm,1.8s						
STKI	**Sintang**	**11.66**	**82**	P	Pn	**09 53 58.9**	**+5.5**
	152nm,1.4s						
SBUM	**Sibu**	**12.92**	**72**	⇓P	Pn	**09 54 14.4**	**+3.9**
SJI	**Sawahan**	**13.29**	**118**	P	Pn	**09 54 13.7**	**-1.9**
	179nm,1.1s						
BTM	**Bintulu**	**13.98**	**70**	⇑P	Pn	**09 54 28.3**	**+3.4**
BBKI	**Banjar Baru**	**15.02**	**97**	P	Pn	**09 54 41.0**	**+2.3**
	177nm,0.9s						
KHKI	**Kahang-Kahang**	**17.01**	**114**	P	Pn	**09 55 03.9**	**-0.1**
	128nm,0.8s						
NST	**Nakhon Sawan**	**17.13**	**1**	P	Pn	**09 55 02.0**	**-3.4**
SMKI	**Samarinda**	**17.32**	**86**	P	Pn	**09 55 11.4**	**+3.6**
	160nm,1.3s						
KKM	**Kota Kinabalu**	**17.94**	**65**	⇓P	Pn	**09 55 17.6**	**+2.2**
KKM	**Kota Kinabalu**	**17.94**	**65**	*e*P	Pn	**09 55 13.2**	**-2.2**
SDKM	**Sandakan**	**18.68**	**67**	⇑P	Pn	**09 55 24.9**	**+0.5**
TSM	**Tawau**	**18.86**	**72**	⇑P	Pn	**09 55 27.2**	**+0.6**
KDM	**Kudat**	**18.86**	**63**	⇓P	Pn	**09 55 27.4**	**+0.8**
MKS	**Makassar**	**19.84**	**101**	⇑*e*P	Pn	**09 55 38.1**	**-0.2**
MKS				*e*S	S	**09 59 20.1**	**+2.9**
PCI	**Palu**	**19.92**	**88**	P	Pn	**09 55 41.2**	**+2.0**
	276nm,1.4s						
PCI	**Palu**	**19.92**	**88**	⇓*e*P	Pn	**09 55 39.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**19.92**	**357**	P	Pn	**09 55 36.4**	**-2.7**
	2.8nm,0.3s,baz=186,slow=9.7,SNR=90						
CMAR				S	S	**09 59 25.8**	**+7.1**
	0.7nm,0.3s,baz=120,slow=38,SNR=3.6						
CMAR				ScP	ScP	10 03 24.8	0.0
	0.4nm,0.3s,baz=216,slow=3.8,SNR=4.8						
CMAR				LR	LR	10 04 09.2	
	comp=Z,2μm,18.1s,baz=179,slow=39						
KAPI	**Kappang**	**20.09**	**100**	P	P	**09 55 36.2**	**-2.8**
	506nm,1.0s,SNR=6.0						
KAPI	**Kappang**	**20.09**	**100**	P	P	**09 55 39.8**	**+0.8**
	SNR=7.8						
KAPI	**Kappang**	**20.09**	**100**	P	P	**09 55 35.5**	**-3.5**
	4.1nm,0.3s,baz=275,slow=10.0,SNR=13						
KAPI				S	S	**09 59 19.6**	**-2.5**
	0.4nm,0.3s,baz=244,slow=22,SNR=3.3						
KAPI				LR	LR	10 03 38.5	
	comp=Z,2μm,20.4s,MS4.5,baz=287,slow=38						
KAPI	**Kappang**	**20.09**	**100**	*e*P	P	**09 55 35.4**	**-3.6**
KAPI				*e*S	S	**09 59 20.4**	**-1.7**
CHG	**Chiang Mai**	**20.28**	**357**	⇓P	P	**09 55 40.4**	**-0.6**
	37nm,0.9s						
CHTO	**Chiang Mai**	**20.28**	**357**	P	P	**09 55 41.3**	**+0.3**
	SNR=10						
CHTO	**Chiang Mai**	**20.28**	**357**	*e*P	P	**09 55 40.0**	**-1.0**
PALK	**Pallekele**	**21.09**	**295**	P	P	**09 55 52.9**	**+3.0**
	716nm,0.9s,mb6.0,SNR=10						
PALK	**Pallekele**	**21.09**	**295**	P	P	**09 55 52.0**	**+2.1**
	SNR=5.6						
PALK	**Pallekele**	**21.09**	**295**	*e*P	P	**09 55 51.5**	**+1.6**
PALK				*e*S	S	**09 59 41.9**	**-0.1**
PALK				pmax	pmax		
	comp=Z,124nm,1.0s,mb5.2						
PALK	**Pallekele**	**21.09**	**295**	*e*P	P	**09 55 51.5**	**+1.6**
	comp=Z,124nm,1.0s,mb5.2						
PALK				*e*S	S	**09 59 41.9**	**-0.1**
CHRT	**Chiangrai**	**21.30**	**360**	⇑P	P	**09 55 52.0**	**-0.1**
	comp=Z,408nm,1.0s,mb5.7						
QIZ	**Qiongzhong**	**22.67**	**25**	P	P	**09 56 06.4**	**-0.2**
QIZ				S	S	**10 00 11.8**	**+0.2**
QIZ				AMB	AMB		
	comp=Z,117nm,1.2s,mb5.2						
QIZ				LR	LR		
	comp=E,3μm,18.5s						
QIZ				LR	LR		
	comp=Z,2μm,18.0s,MS4.6						
QIZ	**Qiongzhong**	**22.67**	**25**	*e*P	P	**09 56 06.2**	**-0.5**
	comp=Z,156nm,1.2s,mb5.3						
KDI	**Kendari**	**22.79**	**96**	P	P	**09 56 08.8**	**+0.8**
	comp=Z,87nm,1.2s,mb5.1						
KDI	**Kendari**	**22.79**	**96**	⇑*e*P	P	**09 56 06.0**	**-2.0**
KDI				*e*S	S	**10 00 12.3**	**-1.4**
MNI	**Manado**	**25.09**	**83**	P	P	**09 56 31.3**	**+1.6**
	comp=Z,1μm,1.1s,mb6.3						
BATI	**Baumata**	**25.10**	**111**	P	P	**09 56 24.0**	**-5.7**
	comp=Z,27nm,0.5s,mb5.0,baz=270,slow=5.1,SNR=2.4						
BATI				S	S	**10 00 46.6**	**-4.5**
	comp=Z,33nm,0.7s,baz=97,slow=22,SNR=3.7						
BATI				LR	LR	10 07 30.6	
	comp=Z,2μm,21.1s,MS4.7,baz=301,slow=39						
KOD	**Kodaikanal**	**25.24**	**298**	*e*P	P	**09 56 33.2**	**+2.2**
KOD				AMb	AMB	09 56 38.6	
	comp=Z,82nm,1.1s,mb5.2						
BWNR	**Bhubaneshwar**	**25.76**	**328**	*e*P	P	**09 56 35.0**	**-0.6**
KMI	**Kunming**	**26.67**	**6**	P	P	**09 56 47.1**	**+3.3**
KMI				AP	pP	09 56 57.3	+0.5
KMI				XP	sP	09 57 01.4	-1.5
KMI				PPP		09 57 43.6	
KMI				S	S	**10 01 17.1**	**+1.5**
KMI				SS		10 02 28.8	
KMI				SSS		10 02 46.8	
KMI				AMB	AMB		
	comp=Z,14nm,0.7s,mb4.6						
KMI				LR	LR		
	comp=N,2μm,18.7s						
KMI				LR	LR		
	comp=E,3μm,12.2s						
KMI				LR	LR		
	comp=Z,2μm,21.1s,MS4.5						
KMI	**Kunming**	**26.67**	**6**	P	P	**09 56 47.1**	**+3.3**
	comp=Z,14nm,0.7s,mb4.6						
KMI				pP	pP	09 56 57.3	+0.5
KMI				sP	sP	09 57 01.4	-1.5
KMI				PPP		09 57 43.6	
KMI				S	S	**10 01 17.1**	**+1.5**
KMI				sS	sS	10 01 34.4	-3.3
KMI				SS		10 02 28.7	
KMI				SSS		10 02 46.7	
KMI				LR	LR		
	comp=Z,2μm,21.1s,MS4.5						
IMP	**Imphal**	**26.83**	**348**	*e*P	P	**09 56 45.0**	**-0.2**
IMP				*ex*	x	10 01 16.0	
DAV	**Davao City (W)**	**27.00**	**71**	LR	LR	10 09 02.2	
	comp=Z,1μm,22.0s,MS4.4,baz=92,slow=40						
MBWA	**Marble Bar**	**27.43**	**137**	*e*P	P	**09 56 48.7**	**-1.9**
	comp=Z,8.4nm,0.5s,mb4.5						
HYB	**Hyderabad**	**28.28**	**313**	*i* P	P	**09 56 59.0**	**+0.8**
HYB	**Hyderabad**	**28.28**	**313**	*e*P	P	**09 56 59.0**	**+0.8**
GYA	**Guiyang**	**28.61**	**13**	P	P	**09 57 01.3**	**+0.2**
GYA				AP	pP	09 57 11.4	-2.8
GYA				PP	PP	09 57 54.3	-12
GYA				S	S	**10 01 46.3**	**+0.2**
GYA				SS	SS	10 03 14.8	-34
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.2						
GYA				AMB	AMB		
	comp=Z,190nm,5.0s						
GYA				LR	LR		
	comp=N,5μm,14.6s,MS5.3						
GYA				LR	LR		
	comp=E,4μm,13.9s,MS5.3						
GYA				LR	LR		
	comp=Z,4μm,14.7s,MS5.2						
FITZ	**Fitzroy Crossi**	**30.12**	**125**	*e*P	P	**09 57 11.9**	**-2.7**
FITZ	**Fitzroy Crossi**	**30.12**	**125**	P	P	**09 57 11.6**	**-3.0**
	comp=Z,12nm,0.5s,mb4.8,baz=278,slow=5.5,SNR=42						
FITZ				LR	LR	10 10 51.9	
	comp=Z,343nm,19.7s,MS4.0,baz=101,slow=40						
ODAN	**Odare**	**30.74**	**338**	*e*P	P	**09 57 21.0**	**+1.1**
	comp=Z,276nm,0.8s,mb6.2						
GOA	**Goa**	**30.88**	**304**	*e*P	P	**09 57 22.7**	**+1.4**
GOA				AMb	AMB	09 57 38.9	
	comp=Z,111nm,1.5s,mb5.5						
SWI	**Sorong**	**31.34**	**89**	P	P	**09 57 24.8**	**-0.6**
	comp=Z,154nm,1.2s,mb5.7						
AKL	**Akola**	**31.52**	**316**	*e*P	P	**09 57 27.2**	**+0.3**
AKL				AMb	AMB	09 57 29.4	
	comp=Z,56nm,1.1s,mb5.3						
JIRN	**Jiri**	**31.92**	**337**	*e*P	P	**09 57 31.4**	**+1.0**
	comp=Z,518nm,0.8s,mb6.4						
PKIN	**Phulchoki**	**32.17**	**335**	*e*P	P	**09 57 33.0**	**+0.4**
	comp=Z,61nm,0.6s,mb5.6						
LSA	**Lhasa**	**32.20**	**346**	P	P	**09 57 34.3**	**+1.5**
LSA				XP	sP	09 57 50.1	-2.0
LSA				S	S	**10 02 35.0**	**-7.3**
LSA				AMB	AMB		
	comp=Z,120nm,1.0s,mb5.7						
LSA				AMB	AMB		
	comp=Z,170nm,4.0s						
LSA	**Lhasa**	**32.20**	**346**	*e*P	P	**09 57 33.8**	**+1.0**
LSA				pmax	pmax		
	comp=Z,112nm,1.0s,mb5.7						
LSA	**Lhasa**	**32.20**	**346**	*e*P	P	**09 57 33.8**	**+1.0**
	comp=Z,112nm,1.0s,mb5.7						
GUN	**Gumba**	**32.27**	**336**	*e*P	P	**09 57 34.1**	**+0.7**
	comp=Z,442nm,0.5s,mb6.5						
DMN	**Daman**	**32.32**	**335**	*e*P	P	**09 57 34.5**	**+0.6**
	comp=Z,126nm,0.8s,mb5.8						
KKN	**Kakani**	**32.41**	**335**	*e*P	P	**09 57 35.3**	**+0.7**
	comp=Z,277nm,0.8s,mb6.1						
CD2	**Chengdu**	**32.50**	**6**	⇑*i*P	P	**09 57 33.9**	**-1.5**
CD2				PP	PP	09 58 43.1	-6.6
CD2				PCP	PcP	10 00 19.8	-1.6
CD2				S	S	**10 02 42.3**	**-4.7**
CD2				PCS	PcS	10 04 03.8	-2.8
CD2				SCS	ScS	10 07 58.0	-2.7
CD2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
CD2				AMB	AMB		
	comp=Z,150nm,7.2s						
CD2				LR	LR		
	comp=N,2μm,15.6s,MS5.1						
CD2				LR	LR		
	comp=E,3μm,20.4s,MS5.1						
CD2				LR	LR		
	comp=Z,2μm,19.8s,MS4.8						
POO	**Poona**	**32.51**	**309**	⇑*i*P	P	**09 57 36.0**	**+0.4**
	comp=Z,150nm,1.0s,mb5.9						
GKN	**Gorkha**	**32.87**	**335**	*e*P	P	**09 57 39.2**	**+0.6**
	comp=Z,326nm,0.9s,mb6.2						
TLE	**Tual**	**32.99**	**98**	P	P	**09 57 36.5**	**-3.4**
	comp=Z,4μm,1.4s						
KOLN	**Koldanda**	**33.12**	**333**	*e*P	P	**09 57 41.7**	**+0.8**
	comp=Z,213nm,0.7s,mb6.2						
DANN	**Dangsing**	**33.55**	**334**	*e*P	P	**09 57 45.3**	**+0.7**
	comp=Z,342nm,0.8s,mb6.3						
MUN	**Mundaring**	**33.92**	**155**	*e*P	P	**09 57 48.7**	**+0.9**
KLBR	**Kellerberrin**	**34.28**	**152**	*e*P	P	**09 57 51.4**	**+0.5**
WHN	**Wuhan**	**34.77**	**22**	P	P	**09 57 55.0**	**-0.1**
WHN				S	S	**10 03 18.4**	**-3.6**
WHN				AMB	AMB		
	comp=Z,120nm,1.3s,mb5.7						
WHN				LR	LR		
	comp=N,4μm,18.4s,MS5.2						
WHN				LR	LR		
	comp=E,2μm,20.0s,MS5.2						
WHN				LR	LR		
	comp=Z,5μm,13.1s						
NWAO	**Narrogin (SRO)**	**35.18**	**154**	P	P	**09 57 58.2**	**-0.4**
	comp=Z,45nm,1.0s,mb5.4,baz=328,slow=9.9,SNR=9.4						
NWAO	**Narrogin (SRO)**	**35.18**	**154**	*e*P	P	**09 57 59.5**	**+0.8**
NWAO				pmax	pmax		
	comp=Z,49nm,1.0s						
NWAO	**Narrogin (SRO)**	**35.18**	**154**	*e*P	P	**09 57 59.5**	**+0.9**
	comp=Z,49nm,1.0s,mb5.4						
PTH	**Pithoragarh**	**36.23**	**330**	*e*P	P	**09 58 08.9**	**+1.2**
PTH				*e*S	S	**10 03 49.9**	**+5.4**
XAN	**Xi'an**	**36.41**	**13**	P	P	**09 58 07.4**	**-1.8**
XAN				S	S	**10 03 37.8**	**-9.4**
XAN				AMB	AMB		
	comp=Z,83nm,1.0s,mb5.6						
XAN				AMB	AMB		
	comp=Z,274nm,19.0s						
XAN				LR	LR		
	comp=E,3μm,20.9s						
XAN				LR	LR		
	comp=Z,2μm,19.6s,MS5.0						
SONA	**Sohna**	**36.88**	**325**	*e*P	P	**09 58 12.4**	**-0.8**
SONA				AMb	AMB	09 58 14.0	
	comp=Z,36nm,0.9s,mb5.2						
KALG	**Kalgarh**	**36.94**	**328**	*e*P	P	**09 58 11.0**	**-2.7**
KALG				AMb	AMB	09 58 12.8	
	comp=Z,144nm,0.8s,mb5.9						
AYAN	**Aya Nagar**	**37.03**	**325**	*e*P	P	**09 58 14.0**	**-0.5**
AYAN				AMb	AMB	09 58 15.3	
	comp=Z,32nm,1.0s,mb5.1						
AJM	**Ajmer**	**37.05**	**321**	*e*P	P	**09 58 14.0**	**-0.7**
NDI	**New Delhi**	**37.13**	**326**	*e*P	P	**09 58 14.0**	**-1.4**
KHET	**Khetri**	**37.49**	**324**	*e*P	P	**09 58 18.3**	**-0.1**
LZH	**Lanzhou**	**37.64**	**5**	⇑P	P	**09 58

LZH LR LR
comp=Z,2μm,16.5s,MS5.0
NJ2 Nanjing 37.95 27 *e*P **P** **09 58 22.9 +0.7**
NJ2 AP pP 09 58 32.8 -2.8
NJ2 PP PP 09 59 53.0 +3.2
NJ2 S **S** **10 04 11.0 +0.4**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
NJ2 AMB AMB
comp=Z,620nm,3.8s
NJ2 LR LR
comp=N,410nm,21.0s,MS4.7
NJ2 LR LR
comp=E,1μm,21.3s,MS4.7
DDI Dehra Dun 37.95 328 *e*P **P** **09 58 22.2 -0.1**
SSE Sheshan 38.26 30 P **P** **09 58 26.8 +1.9**
SSE XP sP 09 58 42.9 -1.4
SSE S **S** **10 04 18.8 +3.4**
SSE XS sS 10 04 38.0 0.0
SSE AMB AMB
comp=Z,42nm,0.8s,mb5.2
SSE AMB AMB
comp=Z,171nm,3.9s
SSE LR LR
comp=N,528nm,19.5s,MS4.7
SSE LR LR
comp=E,893nm,19.5s,MS4.7
SSE LR LR
comp=Z,1μm,14.1s
SSE Sheshan 38.26 30 P **P** **09 58 26.8 +1.9**
comp=Z,42nm,0.8s,mb5.2
SSE sP sP 09 58 42.9 -1.4
SSE S **S** **10 04 18.7 +3.3**
SSE sS sS 10 04 38.0 0.0
SSE LR LR
comp=Z,1μm,14.1s,MS4.8
WRA Warramunga Arr 38.28 121 P **P** **09 58 22.3 -2.9**
comp=Z,32nm,0.6s,mb5.2,baz=301,slow=9.1,SNR=239
WRA S **S** **10 04 07.9 -8.1**
comp=Z,13nm,1.1s,baz=292,slow=15,SNR=10
WRA LR LR 10 16 21.1
comp=Z,367nm,21.4s,MS4.2,baz=295,slow=40
WRA Warramunga Arr 38.28 121 *i* P **P** **09 58 22.2 -3.0**
WRA pmax pmax
comp=Z,32nm,0.6s
WRAB Tennant Creek 38.28 121 P **P** **09 58 22.0 -3.2**
comp=Z,501nm,0.5s,mb6.5,SNR=57
WRAB Tennant Creek 38.28 121 *e*P **P** **09 58 22.8 -2.5**
WRAB pmax pmax
comp=Z,53nm,0.5s,mb5.5
WRAB Tennant Creek 38.28 121 *e*P **P** **09 58 22.8 -2.5**
comp=Z,53nm,0.5s,mb5.5
WB2 Warramunga Arr 38.29 121 *e*P **P** **09 58 21.8 -3.5**
WB2 *e*S **S** **10 04 07.8 -8.3**
SMLA Simla 39.06 328 *e*P **P** **09 58 31.3 -0.3**
SMLA AMb AMB 09 58 33.5
comp=Z,166nm,1.6s,mb5.5
FORT Forrest 39.42 140 *e*P **P** **09 58 34.3 -0.3**
SDNR Sundarnagar 39.45 328 *e*P **P** **09 58 34.6 -0.3**
ASAR Alice Springs 39.57 126 P **P** **09 58 33.5 -2.4**
comp=Z,35nm,0.8s,mb5.1,baz=298,slow=7.6,SNR=213
ASAR S **S** **10 04 25.8 -9.5**
comp=Z,1.3nm,0.6s,baz=299,slow=15,SNR=8.4
JASL Jaisalmer 39.81 317 *e*P **P** **09 58 39.0 +1.1**
GTA Gaotai 40.78 360 ⇑P **P** **09 58 45.8 +0.1**
GTA AP pP 09 58 58.8 -0.4
GTA XP sP 09 59 03.3 -1.9
GTA PP PP 10 00 24.5 +3.9
GTA PCP PcP 10 00 46.9 +0.7
GTA SCP ScP 10 04 31.5 -0.2
GTA S **S** **10 04 52.1 -0.8**
GTA SCS ScS 10 08 44.5 -1.9
GTA AMB AMB
comp=Z,24nm,1.2s,mb4.7
GTA AMB AMB
comp=Z,140nm,4.2s
GTA LR LR
comp=N,553nm,19.3s,MS4.8
GTA LR LR
comp=E,1μm,14.6s,MS4.8
GTA LR LR
comp=Z,784nm,22.0s
DLH Dalhousie 40.80 328 *e*P **P** **09 58 45.0 -1.0**
THN Thein Dam 40.84 328 *e*P **P** **09 58 45.4 -1.0**
BTO Baotou 42.97 11 *e*P **P** **09 59 02.8 -0.8**
HHC Hu-ho-hao-te 43.53 13 *e*P **P** **09 59 08.3 +0.2**
HHC AP pP 09 59 18.8 -2.9
HHC PP PP 10 00 51.8 +1.6
HHC PCP PcP 10 00 55.6 +0.3
HHC PCS PcS 10 04 47.3 -0.6
HHC S **S** **10 05 36.0 +2.6**
HHC AMB AMB
comp=Z,25nm,1.1s,mb4.9
HHC AMB AMB
comp=Z,168nm,7.7s
HHC LR LR
comp=N,1μm,14.6s,MS5.0
HHC LR LR
comp=E,666nm,14.7s,MS5.0
HHC LR LR
comp=Z,1μm,14.4s,MS4.9
BJT Baijiatuau 43.98 18 *e*P **P** **09 59 11.9 +0.2**
BJT pmax pmax
comp=Z,60nm,1.3s
BJT Baijiatuau 43.98 18 *e*P **P** **09 59 11.9 +0.2**
comp=Z,60nm,1.3s,mb5.2
BJI Beijing 44.00 18 P **P** **09 59 10.8 -1.1**
BJI AMB AMB
comp=Z,39nm,1.2s,mb5.0
BJI LR LR
comp=N,686nm,19.2s,MS4.8
BJI LR LR
comp=E,1μm,20.6s,MS4.8
BJI LR LR
comp=Z,557nm,28.5s
BJI Beijing 44.00 18 P **P** **09 59 10.7 -1.2**
comp=Z,39nm,1.2s,mb5.0
BJI S **S** **10 05 28.5 -12**
BJI LR LR
comp=Z,560nm,28.5s,MS4.3
DL2 Dalian 44.95 24⇑ *i*P **P** **09 59 19.6 0.0**
DL2 S **S** **10 05 55.4 +1.2**
DL2 AMB AMB
comp=Z,40nm,1.0s,mb5.2
DL2 AMB AMB
comp=Z,100nm,4.7s
DL2 LR LR
comp=N,430nm,18.3s,MS4.7
DL2 LR LR
comp=E,620nm,17.3s,MS4.7
DL2 LR LR
comp=Z,500nm,19.1s,MS4.5
INCN Inchon 46.06 30 *e*P **P** **09 59 26.4 -1.9**
comp=Z,76nm,1.6s,mb5.4
KBL Kabul 46.14 324 *e*P **P** **09 59 28.8 -0.2**
KBL pmax pmax
comp=Z,17nm,0.8s,mb5.0
KBL Kabul 46.14 324 *e*P **P** **09 59 28.8 -0.3**
comp=Z,17nm,0.8s,mb5.0
KSH Kashi 46.41 334 *i* P **P** **09 59 31.5 +0.4**
KSH *e*PCP PcP 10 01 05.1 -0.2
KSH *e*PP PP 10 01 18.0 -2.9
KSH *e*PPP 10 02 02.1
KSH *e*PCS PcS 10 04 59.0 -0.9
KSH *e*S **S** **10 06 08.3 -6.9**
KSH *e*SCS ScS 10 09 20.1 -1.7
KSH AMB AMB
comp=Z,1μm,2.7s,mb6.3
KSH LR LR
comp=N,759nm,5.8s
KSH LR LR
comp=E,791nm,5.6s
KSH LR LR
comp=Z,690nm,8.3s
WMQ Urumqi 46.50 348⇓ *i*P **P** **09 59 32.5 +0.9**
WMQ AP pP 09 59 42.0 -3.3
WMQ PCP PcP 10 01 08.0 +2.6
WMQ PP PP 10 01 24.0 +2.3
WMQ S **S** **10 06 18.0 +1.7**
WMQ SS SS 10 09 35.0 -7.9
WMQ AMB AMB
comp=Z,274nm,1.0s,mb6.1
WMQ AMB AMB
comp=Z,1μm,3.8s
WMQ LR LR
comp=N,520nm,21.8s,MS4.6
WMQ LR LR
comp=E,385nm,19.3s,MS4.6
WMQ LR LR
comp=Z,566nm,27.0s
KS15 Wonju Array Si 46.66 31 *e*P **P** **09 59 33.1 +0.1**
KSRS Korea Array 46.69 31 P **P** **09 59 32.5 -0.8**
comp=Z,26nm,1.0s,mb5.1,baz=225,slow=8.6,SNR=93
KSRS ScP ScP 10 04 56.3 +0.5
comp=Z,2.0nm,1.0s,baz=212,slow=4.9,SNR=4.6
KSRS LR LR 10 19 09.6
comp=Z,720nm,19.7s,MS4.6,baz=220,slow=36
GUMO Guam 47.03 70 P **P** **09 59 30.8 -5.5**
comp=Z,27nm,0.5s,mb5.4,baz=193,slow=16,SNR=4.5
SMDO Samad 47.55 304 P **P** **09 59 41.5 +1.3**
SNR=6.4
BIDO Bidbid 47.68 304 P **P** **09 59 42.7 +1.4**
SNR=9.8
BSY Bisya 48.13 303 P **P** **09 59 45.2 +0.5**
SNR=8.9
SNY Shenyang 48.22 24⇓P **P** **09 59 43.1 -2.0**
SNY AP pP 09 59 55.5 -3.3
SNY S **S** **10 06 37.3 -3.5**
SNY AMB AMB
comp=Z,23nm,1.3s,mb5.0
SNY AMB AMB
comp=Z,181nm,12.0s
SNY LR LR
comp=N,703nm,14.4s,MS5.0
SNY LR LR
comp=E,982nm,15.0s,MS5.0
SNY LR LR
comp=Z,884nm,21.6s
HOQ Hoqain 48.38 304 P **P** **09 59 47.3 +0.7**
SNR=5.6
ULHL Ulahol 48.58 337 P **P** **09 59 49.1 +1.3**
SNR=43
KZA Kyzart 48.84 336 P **P** **09 59 50.9 +1.0**
SNR=31
CTA Charters Tower 48.85 115 *e*P **P** **09 59 48.1 -2.2**
CTA Charters Tower 48.85 115 P **P** **09 59 47.5 -2.8**
comp=Z,7.2nm,0.7s,mb4.8,baz=242,slow=7.9,SNR=7.0
CTAO Charters Tower 48.85 115 *e*P **P** **09 59 48.1 -2.2**
CTAO pmax pmax
comp=Z,20nm,1.0s,mb5.1
CTAO Charters Tower 48.85 115 *e*P **P** **09 59 48.1 -2.2**
comp=Z,20nm,1.0s,mb5.1
UCH Uchtor 49.27 335 P **P** **09 59 54.2 +1.1**
SNR=55
UCH Uchtor 49.27 335 *e*P **P** **09 59 54.0 +0.9**
comp=Z,68nm,1.1s,mb5.6
TKM2 Tokmak 2 49.41 337 *e*P **P** **09 59 54.6 +0.4**
TKM2 pmax pmax
comp=Z,304nm,1.3s,mb6.2
TKM2 Tokmak 2 49.41 337 P **P** **09 59 54.8 +0.6**
SNR=144
TKM2 Tokmak 2 49.41 337 *e*P **P** **09 59 54.6 +0.4**
comp=Z,304nm,1.3s,mb6.2
KBK Karagaybulak 49.45 336 P **P** **09 59 55.6 +1.1**
SNR=38
STKA Stephens Creek 49.49 132 *e*P **P** **09 59 53.2 -1.8**
STKA *e*S **S** **10 06 56.2 -2.9**
STKA Stephens Creek 49.49 132 P **P** **09 59 53.8 -1.2**
comp=Z,24nm,0.6s,mb5.4,baz=307,slow=7.1,SNR=67
STKA S **S** **10 06 56.5 -2.7**
comp=Z,3.5nm,0.8s,baz=46,slow=23,SNR=5.1
STKA LR LR 10 23 07.0
comp=Z,520nm,18.4s,MS4.6,baz=110,slow=39
SONM Songino Array 49.52 6 P **P** **09 59 54.4 -0.5**
comp=Z,29nm,0.6s,mb5.5,baz=188,slow=9.1,SNR=76
SONM LR LR 10 23 33.6
comp=Z,625nm,20.6s,MS4.6,baz=194,slow=39
AML Almayashu 49.55 334 P **P** **09 59 56.2 +1.0**
SNR=43
AML Almayashu 49.55 334 *e*P **P** **09 59 56.1 +0.9**
comp=Z,118nm,1.1s,mb5.8
AAK Ala-Archa 49.62 335 P **P** **09 59 57.5 +1.7**
SNR=20
ULN Ulaanbaatar 49.62 6 P **P** **09 59 56.4 +0.7**
SNR=14
ULN Ulaanbaatar 49.62 6 *e*P **P** **09 59 55.6 -0.1**
ULN pmax pmax
comp=Z,25nm,0.8s,mb5.3
ULN Ulaanbaatar 49.62 6 *e*P **P** **09 59 55.6 -0.1**
comp=Z,25nm,0.8s,mb5.3
FRU Bishkek 49.73 336⇓ *i*P **P** **09 59 57.0 +0.4**
FRU *e* pP 10 00 13.0 +2.5
FRU *e*S **S** **10 07 05.0 +2.9**
FRU pmax pmax
comp=Z,270nm,2.0s,mb5.9
CHMS Chumysh 49.81 336 P **P** **09 59 58.2 +1.0**
SNR=23
EKS2 Erkin-Say 49.94 335 P **P** **09 59 58.8 +0.5**
SNR=105
EKS2 Erkin-Say 49.94 335 *e*P **P** **09 59 59.0 +0.8**
comp=Z,112nm,0.9s,mb5.9
USP Ospenovka 50.14 336 P **P** **10 00 00.1 +0.4**
SNR=84
MK31 Makanchi Array 50.59 344 *e*P **P** **10 00 03.0 -0.1**
MKAR Makanchi Array 50.59 344 P **P** **10 00 03.0 -0.1**
comp=Z,58nm,0.6s,mb5.7,baz=151,slow=7.8,SNR=373
MKAR S **S** **10 07 15.1 +1.2**
comp=Z,5.0nm,1.0s,baz=152,slow=16,SNR=7.0
MKAR LR LR 10 25 08.0
comp=Z,258nm,20.7s,MS4.2,baz=155,slow=40
MKAR Makanchi Array 50.59 344 P **P** **10 00 03.0 -0.1**
MKAR S **S** **10 07 15.1 +1.2**
CN2 Changchun 50.62 24 *e*P **P** **10 00 02.3 -1.1**
CN2 PP PP 10 01 58.0 -1.8
CN2 *e*S **S** **10 07 07.8 -6.6**
CN2 AMB AMB
comp=Z,50nm,1.3s,mb5.3
CN2 AMB AMB
comp=Z,270nm,4.0s
CN2 LR LR
comp=N,840nm,15.0s,MS4.9
CN2 LR LR
comp=E,460nm,15.0s,MS4.9
CN2 LR LR
comp=Z,980nm,17.0s,MS4.9
KK31 Karatay Array 51.74 333 *i* P **P** **10 00 10.6 -1.1**
ZAK Zakamensk 51.83 3 *e*P **P** **10 00 11.3 -1.0**
MAJO Matsushiro 51.99 39 *e*P **P** **10 00 12.0 -1.7**
MAJO pmax pmax
comp=Z,58nm,1.5s,mb5.3
MAJO Matsushiro 51.99 39 *e*P **P** **10 00 12.0 -1.8**
comp=Z,58nm,1.5s,mb5.3
MAT Matsushiro 51.99 39 P **P** **10 00 12.8 -0.9**
MAT S **S** **10 07 28.0 -5.5**
MJAR Matsushiro Arr 51.99 39 P **P** **10 00 12.6 -1.2**
comp=Z,6.8nm,0.7s,mb4.7,baz=224,slow=7.4,SNR=24
MJAR ScP ScP 10 05 17.7 -0.8
comp=Z,0.8nm,0.6s,baz=221,slow=4.8,SNR=4.0
MJAR LR LR 10 23 57.5
comp=Z,492nm,20.2s,MS4.5,baz=230,slow=38
HVS Khovu-Aksy 52.77 355 *d* P **P** **10 00 18.7 -0.5**
HVS pmax pmax
comp=Z,130nm,1.7s,mb5.6
VLA Vladivostok 52.96 29 *e*P **P** **10 00 17.6 -3.2**
VLA *e*S **S** **10 07 48.5 +2.0**
VLA MLR MLR
comp=Z,700nm,19.0s,MS4.7
VLA Vladivostok 52.96 29⇑ *i*P **P** **10 00 17.9 -2.9**
MDJ Mudanjiang 53.04 26 P **P** **10 00 20.9 -0.4**
MDJ PCP PcP 10 01 29.1 -0.3
MDJ PP PP 10 02 17.6 -4.0
MDJ PCS PcS 10 05 29.5 +1.5
MDJ S **S** **10 07 49.1 +1.6**
MDJ ScS ScS 10 10 05.5 -1.0
MDJ AMB AMB
comp=Z,15nm,1.8s,mb4.6
MDJ AMB AMB
comp=Z,178nm,7.5s
MDJ LR LR
comp=N,670nm,28.1s,MS4.8
MDJ LR LR
comp=E,965nm,30.5s,MS4.8
MDJ LR LR
comp=Z,723nm,21.3s
MDJ Mudanjiang 53.04 26 *e*P **P** **10 00 20.9 -0.5**
comp=Z,12nm,0.8s,mb4.9
MOY Mondy 53.04 1 *e*P **P** **10 00 21.7 +0.5**
MOY pmax pmax
comp=Z,72nm,2.7s,mb5.1
TLY Talaya 53.14 3 P **P** **10 00 23.1 +1.1**
SNR=5.5
TLY Talaya 53.14 3 *e*P **P** **10 00 22.8 +0.8**
TLY pmax pmax
comp=Z,32nm,1.4s,mb5.1
TLY MLR MLR
comp=Z,550nm,16.0s,MS4.7
TLY Talaya 53.14 3 *e*P **P** **10 00 22.5 +0.5**
ABPO Ambohimpanom 54.41 248 *e*P **P** **10 00 32.9 +1.0**
ABPO pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ABPO Ambohimpanom 54.41 248 *e*P **P** **10 00 32.9 +1.1**
comp=Z,7.4nm,0.9s,mb4.6
ABKT Ailbek 55.07 320 P **P** **10 00 35.6 -0.7**
comp=Z,354nm,1.0s,mb6.3,SNR=12
KURK Kurchatov 55.17 344 P **P** **10 00 36.2 -0.6**
comp=Z,954nm,0.9s,mb6.8
KURK Kurchatov 55.17 344 P **P** **10 00 36.9 +0.1**
SNR=64
KURK Kurchatov 55.17 344 P **P** **10 00 36.6 -0.2**
KURK pmax pmax
comp=Z,192nm,1.0s,mb6.1
KURK Kurchatov 55.17 344 *e*P **P** **10 00 36.5 -0.3**
comp=Z,131nm,0.9s,mb6.0
ARMA Armidale 56.71 126 *e*P **P** **10 00 48.4 +0.2**
ZAA0 Zalesovo Array 56.73 349 *e*P **P** **10 00 47.3 -0.6**
ZALV Zalesovo Beam 56.73 349 P **P** **10 00 47.3 -0.6**
comp=Z,136nm,0.8s,mb6.0,baz=173,slow=5.5,SNR=383
ZALV S **S** **10 08 35.0 -1.8**
comp=Z,5.7nm,0.8s,baz=163,slow=11,SNR=13
KLR Kul'dur 57.57 24 *e*P **P** **10 00 50.0 -3.9**
KLR *e*S **S** **10 08 42.5 -5.5**
KLR pmax pmax
comp=E,50nm,1.8s
KLR pmax pmax
comp=Z,130nm,1.8s,mb5.7
KRAR Krasnoyarsk 57.68 355⇓ *i*P **P** **10 00 53.4 -1.1**
NVS Novosibirsk 57.88 349⇓ *i*P **P** **10 00 54.1 -1.8**
NVS *e* 10 01 13.1
NVS *e*S **S** **10 08 48.6 -3.2**
NVS pmax pmax
comp=E,46nm,1.2s
NVS pmax pmax
comp=Z,95nm,1.2s,mb5.7
NVS pmax pmax
comp=N,85nm,1.5s
NVS smax
comp=N,43nm,2.0s
NVS smax
comp=E,54nm,1.7s
RDF Al-Radifah 58.54 306 *e*P **P** **10 01 00.4 -0.7**
baz=305
RDF AMb AMB 10 01 01.9
comp=Z,166nm,1.2s,mb5.9,baz=305
UMR Umm Al-Rimmam 58.64 306 *e*P **P** **10 01 01.6 -0.2**
baz=306
UMR AMb AMB 10 01 02.7
comp=Z,140nm,1.0s,mb6.0,baz=306
NAY Al-Naaiem 58.91 306 *e*P **P** **10 01 02.7 -1.0**
baz=306
NAY AMb AMB 10 01 04.3
comp=Z,64nm,1.3s,mb5.5,baz=306
MIB Mutribah 59.04 306 *e*P **P** **10 01 04.0 -0.5**
baz=306
MIB AMb AMB 10 01 05.5
comp=Z,191nm,1.0s,mb6.1,baz=306
RST Umm Al-Ruwaisa 59.20 306 *e*P **P** **10 01 04.8 -0.9**
baz=306
RST AMb AMB 10 01 05.8
comp=Z,80nm,0.8s,mb5.8,baz=306
BVA0 Borovoye Array 59.76 340 *i* P **P** **10 01 07.9 -1.1**
BVA0 pmax pmax
comp=Z,20nm,1.0s,mb5.1
BRVK Borovoye 59.82 340 P **P** **10 01 08.9 -0.5**
comp=Z,525nm,1.1s,mb6.5,SNR=18
BRVK Borovoye 59.82 340 *e*P **P** **10 01 08.5 -0.9**
BRVK pmax pmax
comp=Z,31nm,0.6s,mb5.5
BRVK Borovoye 59.82 340 *e*P **P** **10 01 08.5 -0.9**
comp=Z,31nm,0.6s,mb5.5
BOD Bodaibo 60.27 9 *e*P **P** **10 01 12.2 -0.2**
BOD pmax pmax
comp=Z,35nm,1.8s,mb5.1
YSS Yuzh-Sakhalins 61.16 32 *e*P **P** **10 01 18.0 -0.7**
YSS *e* pP 10 01 30.0 -2.9
YSS pmax pmax
comp=Z,50nm,0.9s,mb5.6
YSS Yuzh-Sakhalins 61.16 32 *e*P **P** **10 01 18.5 -0.2**
comp=Z,91nm,1.2s,mb5.8
AB31 Akbulak array 61.23 331 *i* P **P** **10 01 17.9 -1.2**
AB31 pmax pmax
comp=Z,196nm,0.9s,mb6.2
AB31 Akbulak array 61.23 331⇑ *e*P **P** **10 01 17.0 -2.1**
CLNS Chul'man 61.62 15 *e*P **P** **10 01 20.6 -1.0**
CLNS *e**PP pP 10 01 27.8 -8.0
CLNS *e* 10 02 00.6
CLNS *e* 10 03 36.3
CLNS *e*PPP 10 05 01.3
CLNS *e*S **S** **10 09 41.4 +1.5**
CLNS *e*SSS 10 16 25.2
CLNS pmax pmax
comp=Z,14nm,1.0s,mb5.0
CLNS pmax pmax
comp=N,9.0nm,1.1s
CLNS pmax pmax
comp=E,9.0nm,1.0s
CLNS smax
comp=E,182μm,13.1s
CLNS smax
comp=N,156μm,13.1s
CLNS MLR MLR
comp=N,408nm,15.0s,MS4.8
CLNS MLR MLR
comp=Z,520nm,17.0s,MS4.8
CLNS MLR MLR
comp=E,208nm,14.0s,MS4.8
KMBO Kilima Mbogo 62.66 270 P **P** **10 01 30.0 +0.6**
comp=E,1.7nm,0.3s,mb4.7,baz=58,slow=9.5,SNR=8.5
KMBO LR LR 10 25 32.1
comp=E,677nm,19.3s,MS4.8,baz=97,slow=33
KMBO Kilima Mbogo 62.66 270 *e*P **P** **10 01 30.1 +0.7**
KMBO pmax pmax
comp=Z,90nm,2.3s
KMBO Kilima Mbogo 62.66 270 *e*P **P** **10 01 30.1 +0.6**
comp=Z,90nm,2.3s,mb5.5
AKTK Aktyubinsk 62.94 331 P **P** **10 01 29.4 -1.3**
AKTO Aktyubinsk 62.94 331 P **P** **10 01 29.4 -1.3**
comp=Z,43nm,0.9s,mb5.6,baz=100,slow=5.7
CASY Casey 65.02 175 *e*P **P** **10 01 45.0 +1.1**
CASY *e* pP 10 02 01.4 +3.1
MIR Mirnyy 65.04 183⇑ *i*P **P** **10 01 46.0 +1.9**
MIR pmax pmax
comp=Z,100nm,1.2s,mb5.7
GNI Garni 65.16 316 P **P** **10 01 46.6 +1.2**
SNR=8.6
GNI Garni 65.16 316 P **P** **10 01 46.0 +0.6**
comp=Z,11nm,0.8s,mb5.0,baz=158,slow=5.4,SNR=4.2
GNI LR LR 10 28 53.2
comp=Z,150nm,21.8s,MS4.2,baz=324,slow=35
GNI Garni 65.16 316 *e*P **P** **10 01 46.3 +0.9**
GNI pmax pmax
comp=Z,100nm,1.4s
GNI Garni 65.16 316 *e*P **P** **10 01 46.3 +0.9**
comp=Z,100nm,1.4s,mb5.7
MTA Mtatsminda 65.80 318 P **P** **10 01 49.8 +0.3**
TBLG Delisi 65.85 318 *e*P **P** **10 01 50.4 +0.6**
TBLG Delisi 65.85 318 P **P** **10 01 50.4 +0.6**
SVE Sverdlovsk 66.26 338⇓ *e*P **P** **10 01 52.0 -0.1**
SVE *e*PPP 10 05 58.6
SVE *e*S S 10 10 38.1 +0.7
SVE *e*SS SS 10 15 01.0 +6.6
SVE pmax pmax
comp=Z,191nm,1.3s,mb6.0
SVE MLR MLR
comp=Z,375nm,22.0s,MS4.5
GOR Gori 66.38 318 P **P** **10 01 54.5 +1.3**
ARU Arti 66.78 336 P **P** **10 01 54.5 -1.0**
comp=Z,416nm,1.3s,mb6.3,SNR=6.7
ARU Arti 66.78 336*c* *i*P **P** **10 01 55.1 -0.4**
ARU *e* 10 04 22.6
ARU *e*S S 10 10 47.9 +4.1
ARU *e*SS SS 10 14 56.6 -6.0
ARU pmax pmax
comp=Z,120nm,1.2s,mb5.8
ARU Arti 66.78 336 *e*P **P** **10 01 54.5 -1.0**
comp=Z,121nm,1.3s,mb5.8
ONI Oni 67.08 318 P **P** **10 01 58.0 +0.3**
YAK Yakutsk 67.34 15 *e*P **P** **10 01 56.8 -2.1**

YAK e*PP pP 10 02 04.7 -8.6
YAK e 10 02 25.0
YAK eS S 10 10 45.5 -4.9
YAK e 10 11 45.3
YAK eSS SS 10 15 07.4 -3.7
YAK pmax pmax
comp=Z,139nm,1.4s,mb5.8
YAK pmax pmax
comp=N,66nm,1.6s
YAK pmax pmax
comp=E,45nm,1.5s
YAK smax
comp=N,199µm,3.8s
YAK smax
comp=E,58µm,2.5s
YAK MLR MLR
comp=E,379nm,20.0s,MS4.8
YAK MLR MLR
comp=Z,710nm,16.0s,MS5.0
YAK MLR MLR
comp=N,427nm,16.0s,MS4.8
YAK Yakutsk 67.34 15 eP P **10 01 57.8 -1.1**
comp=N,183nm,1.2s,mb6.0
KIV Kislovodsk 68.17 319 P P **10 02 05.2 +0.7**
comp=N,541nm,1.1s,mb6.5,SNR=7.9
KIV Kislovodsk 68.17 319 P P **10 02 04.7 +0.2**
SNR=16
KIV Kislovodsk 68.17 319d iP P **10 02 03.8 -0.7**
KIV pmax pmax
comp=Z,147nm,1.3s,mb5.8
KIV Kislovodsk 68.17 319⇓ iP P **10 02 04.5 0.0**
KIV Kislovodsk 68.17 319 eP P **10 02 04.7 +0.2**
comp=Z,64nm,0.9s,mb5.7
MALT Malatya 68.99 312 eP P **10 02 11.3 +1.5**
MALT pmax pmax
comp=Z,25nm,0.9s,mb5.1
MALT Malatya 68.99 312⇓ iP P **10 02 10.8 +1.0**
MALT Malatya 68.99 312 eP P **10 02 11.3 +1.6**
comp=Z,24nm,0.9s,mb5.1
MMAI Mount Meron Ar 69.72 306 P P **10 02 15.2 +0.8**
comp=Z,266nm,0.7s,mb5.3,baz=100,slow=8.6,SNR=7.7
SOC Sochi 69.98 318⇑ iP P **10 02 14.0 -1.8**
SOC e*SP pP 10 02 24.3 -5.9
SOC e 10 02 35.2
SOC eS S 10 11 21.0 -1.4
SOC e 10 12 14.1
SOC pmax pmax
comp=Z,1µm,3.0s
SOC MLR MLR
comp=Z,160nm,18.0s,MS4.3
MAW Mawson 70.68 194 eP P **10 02 19.9 +0.4**
MAW e pP 10 02 35.0 +1.0
MAW Mawson 70.68 194 P P **10 02 20.2 +0.6**
comp=Z,14nm,0.8s,mb4.9,baz=30,slow=6.5,SNR=38
MAW LR LR 10 26 49.4
comp=Z,416nm,20.1s,MS4.7,baz=38,slow=30
CSS Prodhromos 71.90 308 eP P **10 02 27.1 -0.5**
comp=Z,94nm,1.3s,mb5.6
ANN Anapa 71.96 318 eP P **10 02 30.5 +2.8**
ANN e pP 10 02 48.7 +6.4
ANN pmax pmax
comp=Z,38nm,1.3s,mb5.2
LSZ Lusaka 71.97 255 eP P **10 02 29.0 +0.6**
LSZ pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
LSZ Lusaka 71.97 255 eP P **10 02 29.0 +0.6**
comp=Z,6.0nm,1.0s,mb4.5
PETK Petropavlovsk- 72.56 32 P P **10 02 30.7 -0.4**
comp=Z,5.3nm,0.6s,mb4.6,baz=183,slow=2.1,SNR=16
PETK LR LR 10 34 50.2
comp=Z,163nm,18.7s,MS4.3,baz=237,slow=36
VSR Storozhevoye 73.38 325 eP P **10 02 34.4 -1.6**
VSR pmax pmax
comp=Z,50nm,0.9s,mb5.4
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,70nm,0.9s
VOR Voronezh 73.58 326 eP P **10 02 36.0 -1.1**
VOR pmax pmax
comp=Z,380nm,1.2s,mb6.2
ANTO Ankara 73.64 312 P P **10 02 37.9 +0.1**
SNR=6.8
ANTO Ankara 73.64 312 eP P **10 02 37.5 -0.3**
ANTO pmax pmax
comp=Z,43nm,1.3s,mb5.2
ANTO Ankara 73.64 312⇓ iP P **10 02 37.1 -0.7**
ANTO Ankara 73.64 312 eP P **10 02 37.5 -0.3**
comp=Z,43nm,1.3s,mb5.2
SIM Simferopol' 74.23 318 i P P **10 02 41.2 +0.1**
SIM e pP 10 02 57.0 +1.3
SIM pmax pmax
comp=Z,68nm,0.9s,mb5.6
SEY Seymchan 75.26 22⇑ eP P **10 02 46.8 +0.1**
RPZ Rata Peaks 75.34 135 P P **10 02 46.7 -0.9**
comp=Z,18nm,0.7s,mb5.2,baz=258,slow=4.3,SNR=22
BOSA Boshof 75.80 241 P P **10 02 50.4 -0.1**
comp=Z,7.2nm,0.8s,mb4.7,baz=69,slow=7.7,SNR=11
BOSA LR LR 10 29 26.2
comp=Z,636nm,20.6s,MS4.9,baz=20,slow=30
BOSA Boshof 75.80 241 eP P **10 02 50.8 +0.2**
MOS Moscow 76.09 329⇓ iP P **10 02 48.7 -2.9**
MOS e pP 10 03 05.0 -1.2
MOS e 10 05 37.7
MOS pmax pmax
comp=Z,224nm,1.3s,mb5.9
ARG Arkhangelos 76.32 308 eP P **10 02 49.5 -3.8**
OBN Obninsk 76.39 328d iP P **10 02 52.4 -0.9**
OBN i 10 02 58.4
OBN i pP 10 03 04.2 -3.7
OBN i pP 10 03 08.0 +0.1
OBN pmax pmax
comp=Z,211nm,1.6s,mb5.8
OBN Obninsk 76.39 328 eP P **10 02 52.7 -0.6**
comp=Z,243nm,1.4s,mb5.9
KARP Karpathos 76.95 307 eP P **10 02 57.5 +0.6**
KLMR Klimovskoe 77.41 334 i P P **10 02 58.1 -0.8**
KLMR pmax pmax
comp=Z,115nm,1.1s,mb5.7
TIRR Tirgusor 77.99 316 P P **10 03 02.3 -0.2**
TIRR Tirgusor 77.99 316⇑ iP P **10 03 02.2 -0.3**
TIRR Tirgusor 77.99 316 eP P **10 03 02.0 -0.5**
comp=Z,43nm,0.8s,mb5.4
SYO Syowa Base 78.25 199⇑ eP P **10 03 02.4 -1.1**
SYO Syowa Base 78.25 199⇓ esP sP 10 03 19.0 -4.9
KIS Kishinev 78.36 319k iP P **10 03 03.5 -1.0**
KIS e pP 10 03 19.0 -0.2
KIS eS S 10 12 52.0 -4.2
KIS pmax pmax
comp=Z,180nm,1.4s,mb5.8
KIS Kishinev 78.36 319 i P P **10 03 03.5 -1.0**
comp=Z,200nm,1.4s,mb5.8
KIS eS S 10 12 52.0 -4.2
HARR Harsova 78.38 316⇓ iP P **10 03 04.6 -0.1**
HARR Harsova 78.38 316 P P **10 03 04.8 +0.1**
IDI Anoyia 78.72 306 P P **10 03 06.5 -0.3**
comp=Z,38nm,0.7s,mb5.5,baz=89,slow=6.8,SNR=11
AKASG Malin Array Be 79.10 322 P P **10 03 07.5 -0.9**
comp=Z,8.8nm,0.7s,mb4.8,baz=86,slow=4.3,SNR=36
AKASG PP PP 10 06 07.5 -0.8
comp=Z,0.9nm,0.4s,baz=106,slow=6.3,SNR=4.6
AKASG LR LR 10 37 49.2
comp=Z,109nm,21.1s,MS4.2,baz=75,slow=35
AKASG Malin Array Be 79.10 322 P P **10 03 07.5 -1.0**
AKASG 10 06 07.5
AKASG Malin Array Be 79.10 322 P P **10 03 07.5 -0.9**
AKASG PP PP 10 06 07.5 -0.8
AKASG LR LR 10 37 49.2
KIEV Kiev 79.11 322 eP P **10 03 07.6 -0.9**
KIEV pmax pmax
comp=Z,38nm,1.4s,mb5.1
KIEV Kiev 79.11 322 eP P **10 03 07.6 -0.9**
comp=Z,38nm,1.4s,mb5.1
VRI Vrincioaia 79.49 317⇓ iP P **10 03 11.3 +0.6**
VRI Vrincioaia 79.49 317 P P **10 03 11.4 +0.7**
PLOR Plostina 79.53 317 P P **10 03 11.9 +0.9**
MLR Muntele Rosu 79.94 317 P P **10 03 13.5 +0.4**
comp=Z,59nm,1.0s,mb5.5,baz=162,slow=1.4,SNR=52
MLR Muntele Rosu 79.94 317⇓ iP P **10 03 13.3 +0.1**
MLR Muntele Rosu 79.94 317 P P **10 03 13.6 +0.4**
KYTH Kithira 80.37 307 eP P **10 03 27.0 +11**
VOIR 80.54 316⇑ iP P **10 03 16.0 -0.4**
VOIR 80.54 316⇑⇑ P P **10 03 16.0 -0.5**
BURAR Bucovina Array 80.89 319⇑ iP P **10 03 19.3 +1.1**
BURAR Bucovina Array 80.89 319⇑⇑ P P **10 03 19.2 +1.0**

BUR08 Bucovina Ar. S 80.91 319 eP P **10 03 18.9 +0.6**
MNK Minsk 80.95 326⇑⇑ eP P **10 03 16.0 -2.4**
MNK e pP 10 03 32.0 -1.2
MNK pmax pmax
comp=Z,180nm,1.4s,mb5.8
VAY Valandovo 81.55 312 eP P **10 03 19.7 -2.2**
EVR Evrytania 81.74 310 eP P **10 03 23.0 0.0**
JOF Joensuu 81.80 334 ep P **10 03 21.0 -1.7**
comp=Z,54nm,0.9s,mb5.5
GZR Gura Zlata 82.10 316 P P **10 03 25.2 +0.5**
LVV L'vov 82.12 321 eP P **10 03 23.7 -1.0**
TSUM Tsumeb 82.25 251 eP P **10 03 26.8 +0.8**
comp=Z,5.6nm,0.8s,mb4.5
DRGR 82.40 317⇓ iP P **10 03 26.6 +0.4**
DRGR 82.40 317 P P **10 03 26.5 +0.3**
KRUS Krusevo 82.54 312 eP P **10 03 26.1 -1.0**
JAN Janina 82.59 310 eP P **10 03 28.5 +1.1**
VSU Vasula 82.60 330 i P P **10 03 26.6 -0.4**
VSU Vasula 82.60 330 i P P **10 03 26.6 -0.4**
APA Apatity 82.66 339⇓ iP P **10 03 27.6 +0.5**
APA i 10 03 34.0
APA pmax pmax
comp=Z,47nm,1.0s,mb5.5
APA MLR MLR
comp=Z,600nm,19.0s,MS5.0
BILL Bilibino 82.78 20⇑ iP P **10 03 28.9 +1.2**
BILL pmax pmax
comp=Z,8.0nm,0.4s,mb5.1
BILL Bilibino 82.78 20⇑ iP P **10 03 28.0 +0.3**
OHR Ohrid 82.84 312 eP P **10 03 26.4 -2.2**
BZS Buzias 82.94 316⇓ iP P **10 03 28.7 -0.4**
BZS Buzias 82.94 316 P P **10 03 29.0 -0.1**
UZH Uzhgorod 83.01 319ce P P **10 03 29.2 -0.1**
KOLS Kolonicke sedl 83.08 320 eP P **10 03 30.8 +1.1**
KOLS ePCP PcP 10 03 38.0 +3.8
KOLS epP pP 10 03 45.2 +0.7
KEK Kerkira 83.40 310 eP P **10 03 31.5 -0.1**
SUW Suwalki 83.49 325 eP P **10 03 31.4 -0.3**
SUW Suwalki 83.49 325 eP P **10 03 31.4 -0.3**
CRVS Cervenica-Dubn 83.60 319 eP P **10 03 32.9 +0.5**
CRVS ePCP PcP 10 03 36.4 -0.1
CRVS epP pP 10 03 49.5 +2.3
SBA Scott Base 83.69 169 eP P **10 03 33.1 +0.8**
SBA pmax pmax
comp=Z,18nm,0.8s,mb5.2
SBA Scott Base 83.69 169 eP P **10 03 33.1 +0.8**
comp=Z,18nm,0.8s,mb5.2
KAF Kangasniemi 83.77 333 ep P **10 03 31.9 -1.0**
comp=Z,34nm,0.7s,mb5.6,baz=98,slow=4.6
KAF Kangasniemi 83.77 333 eP P **10 03 31.9 -1.0**
KAF pmax pmax
comp=Z,34nm,0.7s,mb5.6
STHS Stebnicka Huta 83.83 320 eP P **10 03 34.4 +0.9**
STHS pmax pmax
comp=Z,27nm,0.9s,mb5.4
STHS Stebnicka Huta 83.83 320 eP P **10 03 34.4 +0.9**
comp=Z,27nm,0.9s,mb5.4
NIE Niedzica 84.43 320 eP P **10 03 37.5 +0.9**
PSZ Piszkesteto 84.47 318⇓ eP P **10 03 36.7 -0.1**
OJC Ojcow 84.88 321 eP P **10 03 38.7 -0.1**
OJC ePcP PcP 10 03 41.3 -0.8
PKSM Moragy 85.09 316⇓ iP P **10 03 39.7 -0.3**
PKSM Moragy 85.09 316 P P **10 03 39.5 -0.4**
VYHS Vyhne 85.25 319 eP P **10 03 41.1 +0.3**
VYHS epP pP 10 03 56.6 +1.0
VYHS Vyhne 85.25 319 eP P **10 03 41.1 +0.3**
VYHS e pP 10 03 56.6 +1.0
KEV Kevo 85.60 341 ep P **10 03 40.4 -1.6**
comp=Z,31nm,0.9s,mb5.5
KEV Kevo 85.60 341 eP P **10 03 40.4 -1.6**
KEV pmax pmax
comp=Z,31nm,0.9s,mb5.5
TIP Timpagrande 85.68 309 eP P **10 03 43.3 +0.2**
comp=Z,36nm,1.3s,mb5.5
OKC Ostrava-Krasne 85.88 320 eP P **10 03 44.2 +0.4**
ARCES ARCESS Array B 86.04 340 P P **10 03 43.6 -0.6**
comp=Z,27nm,0.8s,mb5.5,baz=99,slow=5.3,SNR=66
ARCES LR LR 10 50 51.8
comp=Z,246nm,19.4s,MS4.6,baz=208,slow=42
ARE0 ARCESS Array S 86.04 340 eP P **10 03 44.4 +0.2**
MORC Moravsky Berou 86.26 320 eP P **10 03 46.2 +0.5**
MORC pmax pmax
comp=Z,56nm,1.5s,mb5.6
MORC Moravsky Berou 86.26 320⇓ iP P **10 03 46.0 +0.3**
MORC Moravsky Berou 86.26 320 eP P **10 03 46.2 +0.5**
comp=Z,56nm,1.5s,mb5.6
MODS Modra-Piesok 86.27 318 eP P **10 03 46.4 +0.6**
MODS e 10 03 54.1
MODS pmax pmax
comp=Z,17nm,1.3s,mb5.1
MODS Modra-Piesok 86.27 318 eP P **10 03 46.4 +0.6**
MODS epP pP 10 03 54.0 -6.7
MODS Modra-Piesok 86.27 318 eP P **10 03 46.4 +0.6**
comp=Z,17nm,1.3s,mb5.1
MODS e 10 03 54.1
ZST Bratislava 86.37 318 eP P **10 03 46.7 +0.4**
ZST e 10 03 52.6
ZST e pP 10 04 00.5 -0.6
ZST pmax pmax
comp=Z,28nm,1.0s,mb5.5
ZST Bratislava 86.37 318 eP P **10 03 46.7 +0.4**
comp=Z,28nm,1.0s,mb5.5
ZST e 10 03 52.6
ZST e pP 10 04 00.5 -0.6
CUC Castrocucco 86.48 310 eP P **10 03 46.7 -0.3**
comp=Z,17nm,0.8s,mb5.3
VRAC Vranov 86.82 319 P P **10 03 48.6 +0.1**
comp=Z,4.0nm,0.4s,mb5.0,baz=159,slow=8.1,SNR=5.2
DPC Dobruska-Polom 87.11 320 eP P **10 03 50.8 +1.0**
DPC ex x 10 04 04.8
CONA Conrad Observa 87.17 318⇓ iP P **10 03 50.0 -0.2**
comp=Z,10nm,1.0s,mb5.0,SNR=5.9
CSNA Conrad Observa 87.17 318⇓ iP P **10 03 49.9 -0.3**
comp=Z,9.4nm,1.0s,mb5.0
KSP Ksiaz 87.17 321 eP P **10 03 50.6 +0.4**
KSP Ksiaz 87.17 321⇓ eP P **10 03 50.4 +0.2**
KSP epP pP 10 04 05.5 +0.5
UPC Upice 87.32 321 eP P **10 03 51.7 +0.8**
UPC epP pP 10 04 00.7 -5.1
ARSA Arzberg 87.33 317⇓ iP P **10 03 51.1 +0.1**
comp=Z,29nm,1.2s,mb5.4,SNR=8.0
BOJS Bojanci 87.37 315 eP P **10 03 51.0 -0.2**
VAE Valguarnera 87.38 307 P P **10 03 53.6 +2.2**
comp=Z,13nm,0.4s,mb5.5,baz=66,slow=12,SNR=2.8
VAE Valguarnera 87.38 307 P P **10 03 53.6 +2.2**
PERS Pernice 87.56 317 i P P **10 03 52.3 +0.2**
SOKA Soboth 87.62 317⇓ iP P **10 03 52.8 +0.4**
VISS Visnje 87.68 316 i P P **10 03 52.8 +0.1**
LJU Ljubljana 87.92 316 eP P **10 03 54.0 +0.2**
MAIT Maitri 87.93 199 eP P **10 03 56.3 +2.9**
OBKA Obir 87.94 316⇓ iP P **10 03 54.3 +0.4**
comp=Z,26nm,1.5s,mb5.2,SNR=8.8
PRU Pruhonice 88.21 320 eP P **10 03 55.3 +0.2**
PRU epP pP 10 04 09.5 -0.6
JAVS Javornik 88.23 316 eP P **10 03 55.0 -0.3**
MOA Molln 88.23 318⇓ iP P **10 03 54.7 -0.6**
comp=Z,9.3nm,0.9s,mb5.0
PVCC Panska Ves 88.24 320 eP P **10 03 55.3 +0.1**
VOY Vojsko 88.36 316 eP P **10 03 55.9 0.0**
VOY e 10 04 16.7
MYKA Terra Mystica 88.57 317⇓ iP P **10 03 57.0 +0.1**
comp=Z,17nm,0.9s,mb5.4
BRG Berggiesshubel 88.66 321 i P P **10 03 57.7 +0.5**
BRG e pP 10 04 12.9 +0.7
BRG 10 07 32.3
BRG pmax pmax
comp=Z,30nm,1.4s,mb5.4
BRG Berggiesshubel 88.66 321 eP P **10 03 57.6 +0.4**
comp=Z,51nm,1.4s,mb5.7
BRG Berggiesshubel 88.66 321 i P P **10 03 57.7 +0.5**
comp=Z,50nm,1.4s,mb5.7
BRG e pP 10 04 12.9 +0.7
comp=Z,22nm,1.2s
BRG PP PP 10 07 32.3 +5.9
comp=Z,9.7nm,1.4s
GEC2 GERESS Array S 88.68 319 eP P **10 03 57.6 +0.3**
GEC2 pmax pmax
comp=Z,74nm,1.6s,mb5.8
GEC2 GERESS Array S 88.68 319 eP P **10 03 57.6 +0.3**
comp=Z,74nm,1.6s,mb5.8
GERES GERESS Array B 88.68 319 P P **10 03 57.5 +0.1**
comp=Z,9.1nm,0.8s,mb5.2,baz=96,slow=4.0,SNR=54
KHC Kasperske Hory 88.78 319⇑ eP P **10 03 58.3 +0.5**
KHC Kasperske Hory 88.78 319 eP P **10 03 57.9 +0.1**

KHC epP pP 10 04 10.8 -1.9
RUE Ruedersdorf 88.88 322 eP P **10 03 58.7 +0.5**
comp=Z,118nm,1.0s,mb6.2
RUE Ruedersdorf 88.88 322 eP P **10 03 58.8 +0.6**
comp=Z,55nm,0.8s,mb5.9
FBE Freiberg 89.04 321 eP P **10 03 59.5 +0.5**
comp=Z,53nm,1.2s,mb5.8
RJOB Jochberg 89.21 318 eP P **10 03 59.4 -0.5**
WET Wettzell 89.24 319 eP P **10 04 00.4 +0.4**
WET pmax pmax
comp=Z,31nm,1.1s,mb5.5
WET Wettzell 89.24 319 eP P **10 04 00.4 +0.4**
comp=Z,31nm,1.1s,mb5.5
CLL Collm 89.28 321 eP P **10 04 00.5 +0.4**
comp=Z,47nm,1.4s,mb5.6
CLL Collm 89.28 321⇑ iP P **10 04 00.6 +0.5**
comp=Z,34nm,1.2s,mb5.5
CLL esP sP 10 04 15.0 -5.7
CLL L 10 44 00.0
comp=Z,300nm,19.0s
HFS Hagfors 89.46 330 P P **10 04 00.9 +0.1**
comp=Z,6.4nm,0.7s,mb5.1,baz=143,slow=3.7,SNR=11
NKC Novy Kostel 89.57 320 eP P **10 04 02.1 +0.6**
TANN Tannenbergstha 89.58 320 eP P **10 04 01.8 +0.3**
comp=Z,18nm,1.2s,mb5.3
GUNZ Gunzen 89.66 320 eP P **10 04 01.9 0.0**
comp=Z,26nm,1.2s,mb5.4
WERD Werda 89.67 320 eP P **10 04 02.0 0.0**
comp=Z,24nm,1.1s,mb5.4
MANZ Manzenberg 89.78 320 eP P **10 04 02.9 +0.4**
comp=Z,52nm,1.2s,mb5.7
WTTA Wattenberg 89.97 317⇓ iP P **10 04 02.3 -0.2**
comp=Z,32nm,0.8s,mb5.7,SNR=10
WATA Walderalm 90.02 317⇓ iP P **10 04 03.3 -0.3**
comp=Z,12nm,0.8s,mb5.3
MOX Moxa 90.12 320 eP P **10 04 04.8 +0.7**
comp=Z,41nm,1.6s,mb5.5
MOX Moxa 90.12 320 eP P **10 04 04.8 +0.7**
MOX pmax pmax
comp=Z,41nm,1.6s,mb5.5
MOX Moxa 90.12 320 eP P **10 04 04.2 +0.1**
comp=Z,46nm,1.5s,mb5.6
MOTA Moosalm 90.34 317⇓ iP P **10 04 05.0 -0.1**
comp=Z,26nm,0.9s,mb5.6,SNR=12
GRA1 Grafenberg Arr 90.34 320 eP P **10 04 05.8 +0.7**
comp=Z,51nm,1.0s,mb5.8
GRA1 LR LR
comp=Z,300nm,20.9s,MS4.7
GRF Grafenberg Arr 90.34 320 eP P **10 04 05.8 +0.7**
GRF pmax pmax
comp=Z,51nm,1.0s,mb5.8
GRF MLR MLR
comp=Z,300nm,20.9s,MS4.7
GRF Grafenberg Arr 90.34 320 eP P **10 04 05.8 +0.7**
GRF pmax pmax
comp=Z,51nm,1.0s,mb5.8
GRF MLR MLR
comp=Z,300nm,20.9s,MS4.7
GRF Grafenberg Arr 90.34 320 eP P **10 04 05.8 +0.7**
comp=Z,51nm,1.0s,mb5.8
GRF eL 10 36 53.3
comp=Z,269nm,20.9s
RETA Reutte 90.58 317⇓ iP P **10 04 06.3 0.0**
comp=Z,28nm,0.9s,mb5.6,SNR=8.5
FETA Feichten 90.58 317⇓ iP P **10 04 06.6 +0.3**
comp=Z,22nm,1.0s,mb5.4,SNR=11
FETA Feichten 90.58 317⇓ iPcP P **10 04 06.6 +0.3**
comp=Z,22nm,1.0s,mb5.4,SNR=11
NB2 NORSAR Subarra 90.73 331 P P **10 04 05.9 -0.8**
comp=Z,8.0nm,0.8s,mb5.1,baz=94,slow=4.8
NOA NORSAR Array B 90.73 331 P P **10 04 06.7 0.0**
comp=Z,4.0nm,0.7s,mb4.8,baz=94,slow=4.7,SNR=9.0
NOA LR LR 10 53 53.2
comp=Z,164nm,18.2s,MS4.5,baz=280,slow=42
CLZ Clausthal 90.94 322 eP P **10 04 08.2 +0.3**
CLZ pmax pmax
comp=Z,36nm,1.4s,mb5.5
CLZ Clausthal 90.94 322 eP P **10 04 08.2 +0.3**
comp=Z,36nm,1.4s,mb5.5
BSEG Bad Segeberg 91.02 324 eP P **10 04 09.1 +0.9**
comp=Z,21nm,1.2s,mb5.3
NRDL Niedersach Rie 91.12 322 eP P **10 04 08.5 -0.2**
comp=Z,64nm,1.7s,mb5.7
KBS Kingsbay 91.14 349 eP P **10 04 11.0 +2.7**
KBS eS pP 10 04 23.3 +0.1
KBS AML AML 10 04 24.5
comp=Z,58nm,0.5s
KBS Kingsbay 91.14 349 eP P **10 04 08.1 -0.2**
KBS pmax pmax
comp=Z,56nm,0.5s,mb6.2
KBS Kingsbay 91.14 349 eP P **10 04 08.1 -0.2**
comp=Z,56nm,0.5s,mb6.2
DAVOX Davos/Dischmat 91.16 317 P P **10 04 09.8 +0.8**
comp=Z,30nm,0.8s,mb5.7,baz=115,slow=5.6,SNR=27
DAVA Damuels 91.17 317⇓ iP P **10 04 09.5 +0.4**
comp=Z,50nm,1.0s,mb5.8,SNR=13
DAVA Damuels 91.17 317⇓ iPcP P **10 04 09.5 +0.4**
comp=Z,50nm,1.0s,mb5.8,SNR=13
DAVOS Davos 91.22 317 P P **10 04 09.8 +0.5**
KEST Kesra 91.38 306 P P **10 04 11.8 +1.5**
comp=Z,17nm,0.8s,mb5.4,baz=34,slow=0.6,SNR=36
KEST LR LR 10 48 22.4
comp=Z,95nm,18.2s,MS4.3,baz=219,slow=38
STU Stuttgart 91.65 319 eP P **10 04 11.4 +0.2**
comp=Z,16nm,0.9s,mb5.3
TNS Taunus Mts 92.14 320 eP P **10 04 13.6 +0.1**
TNS pmax pmax
comp=Z,28nm,1.0s,mb5.5
TNS Taunus Mts 92.14 320 eP P **10 04 13.6 +0.1**
comp=Z,28nm,1.0s,mb5.5
BFO Black Forest 92.22 318 eP P **10 04 13.5 -0.4**
BFO pmax pmax
comp=Z,14nm,1.0s,mb5.2
BFO Black Forest 92.22 318 eP P **10 04 13.5 -0.4**
comp=Z,14nm,1.0s,mb5.2
SNAA Sanae 92.53 198 eP P **10 04 15.9 +1.1**
SNAA e 10 04 25.4
SNAA e pP 10 04 33.1 +3.3
SNAA Sanae 92.53 198⇑ eP P **10 04 16.1 +1.3**
SBF Sospel 92.88 314 eP P **10 04 16.5 -0.5**
comp=Z,65nm,1.0s,mb5.7
SBF Sospel 92.88 314 eP P **10 04 16.5 -0.5**
SBF pmax pmax
comp=Z,33nm,1.0s,mb5.7
SBF Sospel 92.88 314 eP P **10 04 16.5 -0.5**
comp=Z,33nm,1.0s,mb5.7
CDF Champ du Feu 92.93 318 eP P **10 04 16.3 -0.8**
HINF Hinteralfeld 93.22 318 eP P **10 04 17.1 -1.4**
LPG La Plagne 93.34 315 eP P **10 04 18.6 -0.5**
comp=Z,15nm,0.8s,mb5.2
LPG La Plagne 93.34 315 eP P **10 04 18.6 -0.5**
LPG pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
LPG La Plagne 93.34 315 eP P **10 04 18.6 -0.5**
comp=Z,7.7nm,0.8s,mb5.2
MBDF Montbardon 93.34 315 eP P **10 04 17.9 -1.2**
comp=Z,11nm,1.0s,mb5.0
MBDF Montbardon 93.34 315 eP P **10 04 17.9 -1.2**
MBDF pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
MBDF Montbardon 93.34 315 eP P **10 04 17.9 -1.2**
comp=Z,5.4nm,1.0s,mb4.9
FRF La Foret Royal 93.45 313 eP P **10 04 19.1 -0.6**
comp=Z,21nm,0.9s,mb5.3
FRF La Foret Royal 93.45 313 eP P **10 04 19.1 -0.6**
FRF pmax pmax
comp=Z,11nm,0.9s,mb5.3
FRF La Foret Royal 93.45 313 eP P **10 04 19.1 -0.6**
comp=Z,11nm,0.9s,mb5.3
HAU Haudompre 93.56 318 eP P **10 04 19.0 -1.0**
LMR La Mourre 93.56 313 eP P **10 04 18.4 -1.8**
comp=Z,20nm,1.0s,mb5.2
LMR La Mourre 93.56 313 eP P **10 04 18.4 -1.8**
LMR pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
LMR La Mourre 93.56 313 eP P **10 04 18.4 -1.8**
comp=Z,10.0nm,1.0s,mb5.2
WLF Walferdange 93.63 319 eP P **10 04 20.4 0.0**
comp=Z,26nm,1.4s,mb5.5
CABF La Chapelle 93.77 316 eP P **10 04 20.8 -0.3**
ORIF Oris-en-Rattie 93.97 315 eP P **10 04 21.5 -0.5**
comp=Z,10nm,0.8s,mb5.0
ORIF Oris-en-Rattie 93.97 315 eP P **10 04 21.5 -0.5**
ORIF pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
ORIF Oris-en-Rattie 93.97 315 eP P **10 04 21.5 -0.5**
comp=Z,5.2nm,0.8s,mb5.0

VNA2	**Neumayer--Watz**	**94.14**	**198**	*eP*		**P**		**10 04 23.9**	**+1.6**
VNA2				*e*				10 04 33.3	
VNA2				*e*		pP		10 04 41.4	+4.2
SMRF	**Simiane la Rot**	**94.22**	**314**	*eP*		**P**		**10 04 23.1**	**-0.1**
	comp=Z,16nm,1.1s,mb5.1								
SMRF	**Simiane la Rot**	**94.22**	**314**	*eP*		**P**		**10 04 23.1**	**-0.1**
	comp=Z,16nm,1.0s,mb5.4								
MEZF	**Maizieres J'vi**	**94.40**	**318**	*eP*		**P**		**10 04 23.2**	**-0.7**
VNA1	**Neumayer--Stat**	**94.50**	**199**	*eP*		**P**		**10 04 25.8**	**+1.9**
VNA1				*e*				10 04 34.6	
VNA1				*e*		pP		10 04 42.8	+3.9
VIVF	**Saint-Julien-l**	**94.83**	**315**	*eP*		**P**		**10 04 25.2**	**-0.8**
	comp=Z,8.5nm,0.9s,mb4.9								
VIVF	**Saint-Julien-l**	**94.83**	**315**	*eP*		**P**		**10 04 25.2**	**-0.8**
VIVF				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.8								
VIVF	**Saint-Julien-l**	**94.83**	**315**	*eP*		**P**		**10 04 25.2**	**-0.8**
	comp=Z,4.3nm,0.9s,mb4.9								
LOR	**Lormes**	**95.27**	**317**	*eP*		**P**		**10 04 26.9**	**-1.0**
	comp=Z,13nm,0.9s,mb5.1								
LOR	**Lormes**	**95.27**	**317**	*eP*		**P**		**10 04 26.9**	**-1.0**
LOR				pmax		pmax			
	comp=Z,6.0nm,0.9s,mb5.0								
LOR	**Lormes**	**95.27**	**317**	*eP*		**P**		**10 04 26.9**	**-1.0**
	comp=Z,6.4nm,0.9s,mb5.0								
SMF	**Signal de Mont**	**95.32**	**317**	*eP*		**P**		**10 04 27.2**	**-1.0**
	comp=Z,36nm,1.2s,mb5.4								
SMF	**Signal de Mont**	**95.32**	**317**	*eP*		**P**		**10 04 27.2**	**-1.0**
SMF				pmax		pmax			
	comp=Z,18nm,1.2s,mb5.4								
SMF	**Signal de Mont**	**95.32**	**317**	*eP*		**P**		**10 04 27.2**	**-1.0**
	comp=Z,18nm,1.2s,mb5.4								
LASF	**Ste Croix**	**95.45**	**314**	*eP*		**P**		**10 04 28.3**	**-0.5**
	comp=Z,33nm,1.3s,mb5.3								
AVF	**Avril sur Loir**	**95.64**	**317**	*eP*		**P**		**10 04 28.6**	**-1.0**
CAF	**Calviac**	**96.67**	**315**	*eP*		**P**		**10 04 33.9**	**-0.5**
MTLF	**Montolieu**	**96.68**	**313**	*eP*		**P**		**10 04 33.7**	**-0.8**
TORD	**Torodi Ar. Bea**	**98.37**	**283**	P		**P**		**10 04 42.1**	**-0.6**
	comp=Z,2.6nm,0.9s,mb4.8,baz=82,slow=5.0,SNR=13								
TORD				LR		LR		10 46 41.8	
	comp=Z,246nm,19.0s,MS4.7,baz=15,slow=34								
SJPF	**Ste Jean**	**99.21**	**313**	*eP*		**P**		**10 04 45.6**	**-0.2**
TBI	**Tubuai**	**108.23**	**115**	*e*LR		LR		10 41 14.0	
	comp=Z,431nm,30.8s								
PPT	**Papeete**	**109.01**	**109**	*e*LR		LR		10 41 44.0	
	comp=Z,316nm,25.5s								
HAWA	**Hanford**	**123.63**	**32**	*e*PKPdf		PKPdf		10 10 01.7	+0.1
SCHQ	**Schefferville**	**125.81**	**351**	PKP		PKPdf		10 10 04.8	-0.7
	comp=Z,7.1nm,0.8s,baz=37,slow=5.1,SNR=3.1								
SCHQ	**Schefferville**	**125.81**	**351**	PKP		PKPdf		10 10 04.8	-0.7
MOD	**Modoc**	**126.00**	**37**	*e*PKPdf		PKPdf		10 10 06.5	+0.2
MSO	**Missoula**	**126.14**	**28**	*e*PKPdf		PKPdf		10 10 05.7	-0.7
CHMT	**Chamberlain Mo**	**126.40**	**28**	*e*PKPdf		PKPdf		10 10 06.5	-0.3
EGMT	**Eagleton**	**127.10**	**25**	*e*PKPdf		PKPdf		10 10 07.4	-0.8
DLMT	**Dillon**	**127.84**	**29**	*e*PKPdf		PKPdf		10 10 10.1	+0.4
NVAR	**Mina Array Bea**	**129.31**	**39**	PKP		PKPdf		10 10 13.2	+0.5
	comp=Z,0.7nm,0.6s,baz=240,slow=2.0,SNR=5.8								
ULM	**Lac du Bonnet**	**129.67**	**13**	PKP		PKPdf		10 10 11.9	-1.1
	comp=Z,2.9nm,0.6s,baz=321,slow=6.7,SNR=4.5								
LOHW	**Long Hollow**	**130.10**	**29**	*e*PKPdf		PKPdf		10 10 14.4	+0.3
SNOW	**Snow King Moun**	**130.14**	**29**	*e*PKPdf		PKPdf		10 10 14.5	+0.4
REDW	**Red Top Meadow**	**130.16**	**29**	*e*PKPdf		PKPdf		10 10 15.1	+1.0
PDAR	**Pinedale Array**	**131.24**	**29**	PKP		PKPdf		10 10 16.5	+0.3
	comp=Z,1.0nm,0.6s,baz=278,slow=0.7,SNR=7.1								
PDAR				PP		PP		10 12 35.4	+1.8
	comp=Z,1.1nm,0.9s,baz=336,slow=2.0,SNR=4.7								
PDAR				SKPbc		SKPbc		10 13 35.1	-1.9
	comp=Z,1.8nm,0.9s,baz=297,slow=0.3,SNR=6.6								
DUG	**Dugway**	**131.42**	**34**	*e*PKIKP		PKPdf		10 10 16.8	+0.2
RSSD	**Black Hills**	**132.59**	**23**	*e*PKIKP		PKPdf		10 10 19.5	+0.8
MSU	**Marysvale**	**132.94**	**35**	*e*PKIKP		PKPdf		10 10 20.1	+0.5
ECSD	**EROS,Sioux Fal**	**135.51**	**17**	*e*PKPdf		PKPdf		10 10 23.0	-1.2
PLCA	**Paso Flores**	**137.01**	**191**	PKP		PKPdf		10 10 27.9	+0.7
	comp=Z,0.8nm,0.7s,baz=15,slow=12,SNR=2.8								
LAZ	**Ladron**	**138.71**	**35**	*e*PKPdf		PKPdf		10 10 29.6	-0.9
WMOK	**Wichita Mounta**	**142.67**	**26**	*e*PKIKP				10 10 32.3	
WCI	**Wyandotte Cave**	**143.07**	**8**	*e*PKIKP		PKPdf		10 10 33.8	-4.4
BDFB	**Brasilia**	**143.99**	**240**	PKP		PKPdf		10 10 38.5	-1.9
	comp=Z,6.0nm,0.6s,baz=148,slow=5.6,SNR=4.8								
TXAR	**Lajitas Array**	**144.41**	**37**	PKP		PKPdf		10 10 39.0	-1.7
	comp=Z,11nm,0.7s,baz=281,slow=1.3,SNR=104								
TXAR				SKPbc		SKPbc		10 14 15.5	-0.3
	comp=Z,1.7nm,0.9s,baz=49,slow=2.9,SNR=4.2								
ELN	**Prospectdale**	**144.51**	**1**	*e*PKPdf		PKPdf		10 10 37.8	-2.9
BLA	**Blacksburg**	**144.53**	**0**	*e*PKIKP		PKPdf		10 10 38.1	-2.7
GNAR	**Gosnell**	**144.55**	**14**	*e*PKPdf		PKPdf		10 10 38.9	-1.9
CPUP	**Villa Florida**	**144.62**	**217**	PKP		PKPdf		10 10 38.9	-2.4
	comp=Z,44nm,0.8s,baz=101,slow=2.7,SNR=88								
CPUP	**Villa Florida**	**144.62**	**217**	*e*PKPdf		PKPdf		10 10 39.5	-1.7
HBAR	**Harrisburg**	**144.78**	**15**	*e*PKPdf		PKPdf		10 10 39.7	-1.6
WVT	**Waverly**	**144.87**	**11**	*e*PKIKP		PKPdf		10 10 39.0	-2.4
UALR	**University of**	**145.04**	**18**	*e*PKPab		PKPab		10 10 39.8	-1.3
TZTN	**Tazewell**	**145.05**	**5**	*e*PKPdf		PKPdf		10 10 39.9	-1.8
JCT	**Junction City**	**145.69**	**31**	*e*PKP2		PKPab		10 10 42.7	-1.0
TKL	**Tuckaleechee C**	**145.91**	**5**	PKPbc		PKPbc		10 10 42.1	-1.8
	comp=Z,26nm,1.0s,baz=107,slow=1.3,SNR=28								
TKL				SKPbc		SKPbc		10 14 24.4	+5.3
	comp=Z,3.7nm,0.8s,baz=243,slow=2.3,SNR=4.1								
TKL	**Tuckaleechee C**	**145.91**	**5**	*e*PKPdf		PKPdf		10 10 42.1	-1.1
CPCT	**Cooper Cave**	**146.04**	**7**	*e*PKPdf		PKPdf		10 10 43.0	-0.4
SWET	**Sewanee**	**146.08**	**9**	*e*PKPbc		PKPbc		10 10 42.4	-2.0
OXF	**Oxford**	**146.09**	**14**	*e*PKP2		PKPbc		10 10 42.9	-1.5
BBSR	**BB Station**	**146.11**	**336**	*e*PKPbc		PKPbc		10 10 43.7	-0.9
CNNC	**Cliffs of the**	**146.44**	**357**	*e*PKPbc		PKPbc		10 10 45.4	-0.1
NATX	**Nacogdoches**	**146.96**	**23**	*e*PKPbc		PKPbc		10 10 46.7	-0.3
JSC	**Jenkinsville**	**147.44**	**2**	*e*PKP2		PKPbc		10 10 47.2	-1.1
VBMS	**Vicksburg**	**147.96**	**17**	*e*PKPbc		PKPbc		10 10 49.3	-0.5
LRAL	**Lakeview Retre**	**148.03**	**11**	*e*PKPbc		PKPbc		10 10 48.8	-1.1
HKT	**Hockley**	**148.05**	**26**	*e*PKP2		PKPbc		10 10 50.2	+0.1
GOGA	**Godfrey**	**148.16**	**5**	*e*PKP2		PKPbc		10 10 49.1	-1.2
LPAZ	**La Paz**	**158.69**	**213**	PKP		PKPdf		10 11 02.7	+0.2
	comp=Z,2.2nm,0.8s,baz=316,slow=3.0,SNR=9.4								
LPAZ	**La Paz**	**158.69**	**213**	PKP		PKPdf		10 11 02.7	+0.2
OTAV	**Otavalo**	**177.91**	**231**	*e*PKPdf		PKPdf		10 11 15.5	+0.1

IDC ***24*** *10:29:12.6±0.5, 9.34N×126.47E, h0km, mb4.5/20, mb1 4.6/21, mb1mx4.6/24, mbtmp4.6/21, MS4.3/14, Ms1 4.3/14, ms1mx4.1/30, Error ellipse: s-maj=22.8km s-min=11.3km az=79.0*

MOS ***24*** *10:29:15.4±1.1, 9.32N×126.48E, h33km, mb5.2/32, MS4.3/7, Error ellipse: s-maj=15.1km s-min=6.4km az=110.4*

ISCJB ***24*** *10:29:15.1±0.2, 9.35N±0.002×126.92E±0.003, h38km, mb4.9/72, MS4.3/26, Error ellipse: s-maj=4.4km s-min=3.5km az=179.5*

GCMT ***24*** *10:29:18.0±0.3, 9.32N×126.88E, h23km±1km, MW5.0/63, Moment Tensor Solution. s28,c29; s63,c94; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.80±.28; Mθθ=0.23±.14; Mφφ=-4.03±.18; Mrθ=0.19±.20; Mrφ=0.28±.08; Mθφ=2.48±.20; Best double couple: Mo=4.64*10^16 NP1:φs=171.00000°, δ29.00000°, λ82.00000°. NP2: φs=1.00000°, δ61.00000°, λ95.00000°. Principal axes: T 4.5360, Plg73.0000°, Azm282.0000°; N 0.2260, Plg4.0000°, Azm179.0000°; P -4.7590, Plg16.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***24*** *10:29:18.0±0.2, 9.33N×126.66E, mb5.0/22, MS4.2/1 Error ellipse: s-maj=9.2km s-min=5.2km az=82.0*

BJI ***24*** *10:29:18.0, 9.30N×126.70E, h39km, mB5.1, mb4.8, Ms4.6, Msz4.4*

DJA ***24*** *10:29:39, 9.95N×125.76E, h160km, Mw5.2/8*

ISC 24 10:29:17.6±0.2, 9.35N±0.003×126.81E±0.003, h40km, h40km±.7km:pP-P,n187,σ1=19/204, mb4.9/72, MS4.3/26, 18C-15D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.24**	**252**	*eP*	**Pn**	**10 29 37.0**	**-1.5**
BUTP				*eS*	**Sn**	**10 29 57.4**	**+3.4**
BIPH	**Bislig**	**1.24**	**201↑**	*eP*	**Pn**	**10 29 35.6**	**-3.0**
BIPH				*eS*	**Sn**	**10 29 50.9**	**-3.2**
SCPH	**Surigao**	**1.38**	**288↑**	*eP*	**Pn**	**10 29 39.0**	**-1.4**
SCPH				*eS*	**Sn**	**10 29 58.4**	**+1.1**
MSLP	**Maasin**	**2.08**	**292**	*eP*	**Pn**	**10 29 50.5**	**+0.5**
MSLP				*eS*	**Sn**	**10 30 20.2**	**+5.5**
BUKP	**Musuan**	**2.27**	**230**	*eP*	**Pn**	**10 29 53.3**	**+0.6**
BUKP				*eS*	**Sn**	**10 30 24.7**	**+5.3**
MATI	**Mati**	**2.45**	**193**	*eP*	**Pn**	**10 29 54.2**	**-1.0**
DAV	**Davao City (W)**	**2.58**	**208**	Pn	**Pn**	**10 30 00.3**	**+3.4**
	56nm,0.3s,baz=57,slow=4.8,SNR=7.4						
DAV				Sn	**Sn**	**10 30 35.7**	**+8.7**
	180nm,0.3s,baz=86,slow=23,SNR=7.3						
DAV				LR	LR	10 31 05.2	
	comp=Z,12μm,19.9s,baz=36,slow=46						
BESP	**Borongan**	**2.61**	**329**	*eP*	**Pn**	**10 29 56.1**	**-1.3**
OCLP	**Ormoc**	**2.75**	**308**	*eP*	**Pn**	**10 30 00.4**	**+1.1**
OCLP				*eS*	**Sn**	**10 30 45.7**	**+14**
KCP	**Kidapawan**	**2.89**	**216↓**	*eP*	**Pn**	**10 30 04.2**	**+3.0**
KCP				*i S*	**Sn**	**10 30 46.2**	**+12**
TBP	**Tagbilaran**	**2.93**	**277**	*eP*	**Pn**	**10 30 01.9**	**+0.1**
LLP	**Lapu-Lapu**	**2.97**	**289**	*eP*	**Pn**	**10 30 03.2**	**+0.9**
LLP				*eS*	**Sn**	**10 30 44.0**	**+7.4**
CTBH	**Cotabato--PC H**	**3.31**	**230↓**	*eP*	**Pn**	**10 30 07.3**	**+0.4**
DCPH	**Dipolog City**	**3.50**	**258↓**	*eP*	**Pn**	**10 30 09.5**	**-0.1**
DCPH				*eS*	**Sn**	**10 30 50.4**	**+0.5**
PAGZ	**Pagadian**	**3.71**	**247**	*eP*	**Pn**	**10 30 12.7**	**+0.3**
PAGZ				*eS*	**Sn**	**10 31 00.5**	**+5.6**
CNP	**Catarman**	**3.78**	**326**	*eP*	**Pn**	**10 30 13.6**	**+0.1**
CNP				*eS*	**Sn**	**10 31 12.1**	**+15**
GUIM	**Jordan**	**4.35**	**287**	*eP*	**Pn**	**10 30 22.8**	**+1.5**
GUIM				*eS*	**Sn**	**10 31 19.2**	**+8.4**
RCP	**Roxas**	**4.56**	**299↑**	*eP*	**Pn**	**10 30 24.9**	**+0.7**
PVCP	**Virac**	**4.96**	**329**	*eP*	**Pn**	**10 30 31.6**	**+2.0**
KALP	**Kalibo**	**4.97**	**298↓**	*eP*	**Pn**	**10 30 37.2**	**+7.4**
OTRP	**Odiongan**	**5.58**	**303**	*eP*	**Pn**	**10 30 39.3**	**+1.1**
SJMP	**San Jose**	**6.39**	**299**	*eP*	**Pn**	**10 30 51.0**	**+1.7**
LUBP	**Lubang**	**7.77**	**305**	*eP*	**Pn**	**10 31 11.4**	**+3.2**
TNE	**Ternate**	**8.53**	**176↓**	*eP*	**Pn**	**10 31 25.0**	**+6.3**
TSM	**Tawau**	**10.20**	**241↑**	*P*	**Pn**	**10 31 43.5**	**+1.9**
SDKM	**Sandakan**	**10.22**	**250**	*↓P*	**Pn**	**10 31 46.7**	**+4.8**
KKM	**Kota Kinabalu**	**11.01**	**253**	*↓P*	**Pn**	**10 31 57.1**	**+4.5**
KKM	**Kota Kinabalu**	**11.01**	**253**	*eP*	**Pn**	**10 31 52.4**	**-0.3**
KDI	**Kendari**	**13.87**	**198**	*eS*	**Sn**	**10 35 12.0**	**+7.5**
BTM	**Bintulu**	**14.95**	**247**	*↓P*	**Pn**	**10 32 51.7**	**+5.4**
KAPI	**Kappang**	**15.91**	**207**	Pn	**Pn**	**10 33 01.3**	**+2.5**
	0.1nm,0.3s,baz=46,slow=15,SNR=3.1						
KAPI				LR	LR	10 39 41.7	
	comp=Z,646nm,18.5s,baz=37,slow=40						
KAPI	**Kappang**	**15.91**	**207**	*eP*	**Pn**	**10 33 00.1**	**+1.3**
SBUM	**Sibu**	**16.05**	**246**	*↓P*	**Pn**	**10 33 06.1**	**+5.6**
QZH	**Quanzhou**	**17.37**	**334**	*P*	**Pn**	**10 33 20.6**	**+3.5**
QZH				*S*	**S**	**10 36 29.0**	**-7.7**
QZH				LR	LR		
	comp=Z,3μm,18.2s						
GUMO	**Guam**	**18.19**	**75**	LR	LR	10 40 55.8	
	comp=Z,962nm,18.1s,baz=276,slow=38						
KSM	**Kuching**	**18.19**	**245**	*↓P*	**Pn**	**10 33 28.6**	**+1.3**
KSM	**Kuching**	**18.19**	**245**	*eP*	**Pn**	**10 33 27.2**	**-0.1**
QIZ	**Qiongzhong**	**19.04**	**302**	*P*	**Pn**	**10 33 35.9**	**-1.7**
QIZ				*S*	**S**	**10 37 08.0**	**-2.7**
QIZ				AMB	AMB		
	comp=Z,57nm,1.8s						
QIZ				LR	LR		
	comp=Z,1μm,16.9s						
BATI	**Baumata**	**19.68**	**189**	*P*	**Pn**	**10 33 43.9**	**-1.3**
	comp=Z,6.2nm,0.3s,baz=349,slow=5.2,SNR=18						
CBIJ	**Chichi jima**	**22.86**	**37**	*P*	**P**	**10 34 19.9**	**+2.2**
	comp=Z,38nm,0.6s,mb5.0,baz=225,slow=7.1,SNR=4.2						
CBIJ				LR	LR	10 43 23.3	
	comp=Z,349nm,18.2s,MS3.8,baz=223,slow=37						
NJ2	**Nanjing**	**23.76**	**343**	*eP*	**P**	**10 34 26.4**	**-0.1**
NJ2				PP		10 35 02.6	
NJ2				*S*	**S**	**10 38 33.0**	**-6.1**
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,370nm,3.8s						
NJ2				LR	LR		
	comp=N,240nm,15.1s,MS3.9						
NJ2				LR	LR		
	comp=E,250nm,17.0s,MS3.9						
KTGM	**Kuala Trenggan**	**23.82**	**262**	*↓P*	**P**	**10 34 27.9**	**+0.7**
MYKOM	**Kota Tinggi**	**24.04**	**253**	*↓P*	**P**	**10 34 28.5**	**-0.7**
KGM	**Kluang**	**24.47**	**254**	*↑P*	**P**	**10 34 34.0**	**+0.9**
GYA	**Guiyang**	**25.57**	**314**	*P*	**P**	**10 34 43.8**	**+0.8**
GYA				AP	pP	10 34 53.8	-0.2
GYA				XP	sP	10 35 01.3	+2.5
GYA				PP		10 35 25.4	
GYA				PCP	PcP	10 38 15.4	+1.8
GYA				*S*	**S**	**10 39 06.8**	**-1.4**
GYA				XS	sS	10 39 25.6	-1.0
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,130nm,4.6s						
GYA				LR	LR		
	comp=N,560nm,12.9s,MS4.4						
GYA				LR	LR		
	comp=E,520nm,15.8s,MS4.4						
GYA				LR	LR		
	comp=Z,490nm,14.5s,MS4.2						
FRIM	**Kepong**	**25.75**	**258**	*↓P*	**P**	**10 34 45.3**	**+0.5**
IPM	**Ipoh**	**26.05**	**261**	*↓P*	**P**	**10 34 46.9**	**-0.6**
JHJ	**Hachijo jima 2**	**26.51**	**25**	LR	LR	10 44 39.8	
	comp=Z,487nm,20.3s,MS4.0,baz=71,slow=35						
FITZ	**Fitzroy Crossi**	**27.30**	**182**	*eP*	**P**	**10 34 58.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**27.30**	**182**	*P*	**P**	**10 34 58.7**	**0.0**
	comp=Z,4.7nm,0.5s,mb4.3,baz=8.9,slow=7.8,SNR=15						
KMI	**Kunming**	**27.75**	**307**	*P*	**P**	**10 35 06.8**	**+4.1**
KMI				AP	pP	10 35 17.8	+4.0
KMI				XP	sP	10 35 22.3	+3.7
KMI				PP		10 35 56.4	
KMI				PPP		10 36 09.3	
KMI				*S*	**S**	**10 39 45.4**	**+2.6**
KMI				XS	sS	10 40 04.3	+3.1
KMI				SS		10 41 06.6	
KMI				SSS		10 41 25.8	
KMI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
KMI				AMB	AMB		
	comp=Z,199nm,4.6s						
KMI				LR	LR		
	comp=N,459nm,14.2s,MS4.4						
KMI				LR	LR		
	comp=E,546nm,13.2s,MS4.4						
KMI				LR	LR		
	comp=Z,713nm,20.7s						
KMI	**Kunming**	**27.75**	**307**	*P*	**P**	**10 35 06.8**	**+4.1**
KMI				*PP	pP	10 35 17.7	+3.9
KMI				*SP	sP	10 35 22.2	+3.6
KMI						10 35 56.4	
KMI						10 38 22.7	
KMI				*S	**S**	**10 39 45.4**	**+2.6**
KMI				*SS	sS	10 40 04.2	+3.0
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
KMI				MLR	MLR		
	comp=Z,710nm,20.7s,MS4.2						
KMI	**Kunming**	**27.75**	**307**	*P*	**P**	**10 35 06.8**	**+4.1**
	comp=Z,9.0nm,0.8s,mb4.5						
KMI				pP	pP	10 35 17.7	+3.9
KMI				sP	sP	10 35 22.2	+3.6
KMI				PP		10 35 56.4	
KMI				PPP		10 36 09.2	
KMI				PcP	PcP	10 38 22.7	+3.9
KMI				*S	**S**	**10 39 45.4**	**+2.6**
KMI				sS	sS	10 40 04.2	+3.0
KMI				SS		10 41 06.6	
KMI				SSS		10 41 25.8	
KMI				LR	LR		
	comp=Z,710nm,20.7s,MS4.2						
KSRS	**Korea Array**	**28.00**	**2**	*P*	**P**	**10 35 06.1**	**+1.4**
	comp=Z,4.3nm,0.9s,mb4.1,baz=176,slow=10.0,SNR=13						
KSRS				PcP	PcP	10 38 20.9	+1.9
	comp=Z,1.3nm,0.9s,baz=196,slow=3.2,SNR=4.6						
CMAR	**Chiang Mai Arr**	**28.49**	**292**	*P*	**P**	**10 35 08.2**	**-1.2**
	comp=Z,1.2nm,0.3s,mb4.0,baz=105,slow=6.9,SNR=14						
CMAR				LR	LR	10 47 05.9	
	comp=Z,460nm,18.4s,MS4.1,baz=95,slow=38						
MJAR	**Matsushiro Arr**	**28.98**	**19**	*P*	**P**	**10 35 14.4**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=200,slow=9.2,SNR=4.4						
MJAR				LR	LR	10 46 09.5	
	comp=Z,408nm,19.0s,MS4.1,baz=215,slow=35						
WRAB	**Tennant Creek**	**30.03**	**166**	*dP*	**P**	**10 35 24.0**	**+1.1**
WRAB	**Tennant Creek**	**30.03**	**166**	*eP*	**P**	**10 35 23.0**	**+0.1**
	comp=Z,4.5nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**30.04**	**166**	*P*	**P**	**10 35 21.7**	**-1.3**
	comp=Z,3.8nm,0.6s,mb4.3,baz=347,slow=9.4,SNR=31						
WB2	**Warramunga Arr**	**30.04**	**166**	*eP*	**P**	**10 35 22.3**	**-0.7**
CD2	**Chengdu**	**30.35**	**318**	*eP*	**P**	**10 35 26.8**	**+1.1**
CD2				AP	pP	10 35 37.3	+0.5
CD2				PP	PP	10 36 27.0	-7.7
CD2				*S*	**S**	**10 40 24.0**	**+0.6**
CD2				XS	sS	10 40 46.9	+5.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CD2				AMB	AMB		
	comp=Z,30nm,5.8s						
CD2				LR	LR		
	comp=N,2μm,18.0s,MS5.0						
CD2				LR	LR		
	comp=E,1μm,15.6s,MS5.0						
CD2				LR	LR		
	comp=Z,1μm,15.6s,MS4.7						
MBWA	**Marble Bar**	**31.11**	**193**	*eP*	**P**	**10 35 30.9**	**-1.5**
	comp=Z,8.8nm,0.6s,mb4.8						
BJT	**Baijiatuao**	**31.98**	**344**	*eP*	**P**	**10 35 40.9**	**+1.0**
BJT				pmax	pmax		
	comp=Z,77nm,1.2s						
BJT	**Baijiatuao**	**31.98**	**344**	*eP*	**P**	**10 35 40.9**	**+1.0**
	comp=Z,78nm,1.2s,mb5.4						
BJI	**Beijing**	**32.00**	**344**	P	**P**	**10 35 40.0**	**-0.1**
BJI				S	**S**	**10 40 50.8**	**+1.8**
BJI				AMB	AMB		
	comp=Z,38nm,1.5s,mb5.0						
BJI				AMB	AMB		
	comp=Z,241nm,3.9s						
BJI				LR	LR		
	comp=N,367nm,14.6s,MS4.3						
BJI				LR	LR		
	comp=E,312nm,16.6s,MS4.3						
BJI				LR	LR		
	comp=Z,285nm,22.1s						
BJI	**Beijing**	**32.00**	**344**	P	**P**	**10 35 40.0**	**-0.1**
	comp=Z,38nm,1.5s,mb5.0						
BJI				S	**S**	**10 40 50.8**	**+1.8**
BJI				SS	SS	10 43 00.7	-6.7
BJI				LR	LR		
	comp=Z,290nm,22.1s,MS3.9						
SNY	**Shenyang**	**32.47**	**355↑**	P	**P**	**10 35 45.0**	**+0.8**
SNY				S	**S**	**10 40 49.5**	**-6.8**
SNY				AMB	AMB		
	comp=Z,187nm,3.8s						
SNY				LR	LR		
	comp=N,543nm,17.4s,MS4.4						
SNY				LR	LR		
	comp=E,442nm,16.5s,MS4.4						
SNY				LR	LR		
	comp=Z,718nm,15.9s,MS4.5						
ASAR	**Alice Springs**	**33.54**	**168**	P	**P**	**10 35 53.1**	**-0.6**
	comp=Z,0.3nm,0.9s,baz=348,slow=6.2,SNR=4.9						
ASAR				S	**S**	**10 41 09.9**	**-3.3**
	comp=Z,0.8nm,0.8s,baz=356,slow=22,SNR=4.1						
LZH	**Lanzhou**	**33.83**	**325**	*eP*	**P**	**10 35 52.0**	**-4.2**
LZH				*PP	pP	10 36 01.6	-5.7
LZH				*SP	sP	10 36 05.7	-6.5
LZH						10 37 05.8	
LZH				*eS	**S**	**10 41 12.5**	**-5.1**
LZH				*SS	sS	10 41 28.4	-7.8
LZH				*eSS	SS	10 43 19.6	-25
LZH				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
LZH				MLR	MLR		
	comp=Z,990nm,16.5s,MS4.6						
LZH	**Lanzhou**	**33.83**	**325**	*eP*	**P**	**10 35 52.0**	**-4.2**
	comp=Z,19nm,1.2s,mb4.9						
LZH				pP	pP	10 36 01.6	-5.7
LZH				sP	sP	10 36 05.7	-6.5
LZH				PP	PP	10 37 05.8	-7.5
LZH				*eS	**S**	**10 41 12.5**	**-5.1**
LZH				sS	sS	10 41 28.4	-7.8
LZH				*eSS	SS	10 43 19.6	-25
LZH				LR	LR		
	comp=Z,990nm,16.5s,MS4.6						
HHC	**Hu-ho-hao-te**	**34.16**	**339**	*eP*	**P**	**10 35 59.4**	**+0.4**
HHC				AP	pP	10 36 10.0	-0.1
HHC				PP	PP	10 37 15.0	-1.9
HHC				PCP

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,112nm,1.1s,mb5.5						
NWAO	**Narrogin (SRO)**	**43.02**	**192**	P	**P**	**10 37 13.1**	**-0.3**
	comp=Z,24nm,0.8s,mb5.0,baz=10,slow=5.8,SNR=6.9						
NWAO	**Narrogin (SRO)**	**43.02**	**192**	P	**P**	**10 37 13.1**	**-0.3**
KKN	**Kakani**	**43.17**	**301**	*e*P	**P**	**10 37 13.5**	**-1.2**
	comp=Z,52nm,1.0s,mb5.2						
DMN	**Daman**	**43.26**	**301**	*e*P	**P**	**10 37 14.6**	**-0.9**
	comp=Z,39nm,1.0s,mb5.1						
STKA	**Stephens Creek**	**43.37**	**162**	*e*P	**P**	**10 37 16.9**	**+0.8**
STKA	**Stephens Creek**	**43.37**	**162**	P	**P**	**10 37 18.5**	**+2.4**
	comp=Z,5.4nm,0.6s,mb4.4,baz=348,slow=7.8,SNR=16						
GKN	**Gorkha**	**43.77**	**301**	*e*P	**P**	**10 37 18.2**	**-1.4**
KOLN	**Koldanda**	**44.59**	**300**	*e*P	**P**	**10 37 25.2**	**-0.9**
	comp=Z,63nm,0.8s,mb5.5						
DANN	**Dangsing**	**44.61**	**301**	*e*P	**P**	**10 37 25.4**	**-0.9**
	comp=Z,41nm,0.7s,mb5.3						
ZAK	**Zakamensk**	**45.31**	**339**	*e*P	**P**	**10 37 30.9**	**-0.6**
TLY	**Talaya**	**46.27**	**340**	*e*P	pP	10 37 53.9	+3.4
TLY				*e*	PP	10 39 26.3	-1.9
TLY				*e*S	**S**	**10 44 29.3**	**+6.3**
TLY				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
TLY				MLR	MLR		
	comp=Z,255nm,18.0s,MS4.2						
CLNS	**Chul'man**	**47.39**	**359**	*e*P	**P**	**10 37 48.2**	**+0.5**
CLNS				*e*		10 39 17.5	
CLNS				*e*		10 39 40.4	
CLNS				*e*		10 47 31.4	
CLNS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
CLNS				pmax	pmax		
	comp=N,13nm,0.9s						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
WMQ	**Urumqi**	**48.27**	**322**	*e*P	**P**	**10 37 54.8**	**0.0**
WMQ				AP	pP	10 38 06.0	-0.3
WMQ				PCP	PcP	10 39 22.0	+0.7
WMQ				*e*S	**S**	**10 44 50.0**	**-1.8**
WMQ				SCS	ScS	10 47 41.0	-3.5
WMQ				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,206nm,6.4s						
WMQ				LR	LR		
	comp=N,827nm,22.7s,MS4.8						
WMQ				LR	LR		
	comp=E,532nm,17.8s,MS4.8						
WMQ				LR	LR		
	comp=Z,399nm,17.9s,MS4.4						
BOD	**Bodaibo**	**49.35**	**351**	*e*P	**P**	**10 38 04.1**	**+1.3**
BOD				*e*	pP	10 38 14.9	+0.5
BOD				pmax	pmax		
	comp=Z,23nm,1.5s,mb5.0						
BOD				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
HVS	**Khovu-Aksy**	**49.75**	**333⇑**	*e*P	**P**	**10 38 06.0**	**+0.1**
HVS				pmax	pmax		
	comp=Z,47nm,1.7s,mb5.2						
DDI	**Dehra Dun**	**49.94**	**302**	*e*x	**P**	**10 38 06.2**	**-1.6**
PETK	**Petropavlovsk-**	**50.25**	**24**	P	**P**	**10 38 12.3**	**+2.6**
	comp=Z,5.1nm,0.8s,mb4.6,baz=237,slow=7.9,SNR=4.9						
YAK	**Yakutsk**	**52.62**	**2**	*e*P	**P**	**10 38 27.4**	**+0.1**
YAK				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
YAK				pmax	pmax		
	comp=N,18nm,1.1s						
MK31	**Makanchi Array**	**53.08**	**323**	*e*P	**P**	**10 38 30.8**	**-0.2**
MKAR	**Makanchi Array**	**53.08**	**323**	P	**P**	**10 38 30.6**	**-0.3**
	comp=N,9.7nm,0.8s,mb4.8,baz=116,slow=8.2,SNR=76						
MKAR				LR	LR	11 00 21.0	
	comp=N,222nm,18.7s,MS4.2,baz=243,slow=35						
ULHL	**Ulahol**	**55.00**	**316**	P	**P**	**10 38 45.4**	**+0.3**
	SNR=11						
KZA	**Kyzart**	**55.63**	**315**	P	**P**	**10 38 50.7**	**+1.0**
	SNR=18						
ZALV	**Zalesovo Beam**	**55.68**	**331**	P	**P**	**10 38 49.0**	**-0.8**
	comp=N,2.0nm,0.4s,mb4.5,baz=111,slow=6.5,SNR=9.7						
ZALV				LR	LR	11 04 30.2	
	comp=N,265nm,18.4s,MS4.4,baz=237,slow=38						
TKM2	**Tokmak 2**	**55.69**	**316**	*e*P	**P**	**10 38 49.7**	**-0.3**
TKM2				*e**PP	pP	10 39 00.4	-1.4
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
TKM2	**Tokmak 2**	**55.69**	**316**	P	**P**	**10 38 49.5**	**-0.5**
	SNR=8.0						
TKM2	**Tokmak 2**	**55.69**	**316**	*e*P	**P**	**10 38 49.6**	**-0.4**
	comp=Z,7.3nm,0.8s,mb4.8						
TKM2				*e*pP	pP	10 39 00.4	-1.4
KBK	**Karagaybulak**	**56.05**	**316**	P	**P**	**10 38 52.8**	**+0.2**
	SNR=7.0						
UCH	**Uchtor**	**56.20**	**315**	P	**P**	**10 38 54.1**	**+0.4**
	SNR=43						
UCH	**Uchtor**	**56.20**	**315**	*e*P	**P**	**10 38 53.9**	**+0.2**
	comp=Z,1μm,1.1s						
UCH				*e*pP	pP	10 39 05.5	+0.1
UCH				*e*PcP	PcP	10 39 51.1	0.0
CHMS	**Chumysh**	**56.30**	**316**	P	**P**	**10 38 53.5**	**-0.9**
	SNR=5.5						
USP	**Ospenovka**	**56.57**	**316**	P	**P**	**10 38 55.9**	**-0.4**
	SNR=6.0						
SEY	**Seymchan**	**56.58**	**14⇑**	*e*P	**P**	**10 38 58.3**	**+2.3**
AML	**Almayashu**	**56.74**	**315**	P	**P**	**10 38 58.0**	**+0.5**
	SNR=10						
AML	**Almayashu**	**56.74**	**315**	*e*P	**P**	**10 38 57.8**	**+0.3**
	comp=Z,26nm,0.9s,mb5.2						
AML				*e*pP	pP	10 39 09.7	+0.4
EKS2	**Erkin-Say**	**56.86**	**315**	P	**P**	**10 38 58.5**	**+0.2**
	SNR=14						
EKS2	**Erkin-Say**	**56.86**	**315**	*e*P	**P**	**10 38 57.9**	**-0.4**
	comp=Z,16nm,0.9s,mb5.0						
EKS2				*e*pP	pP	10 39 09.8	-0.3
NVS	**Novosibirsk**	**56.96**	**332**	*e*P	**P**	**10 38 56.8**	**-2.0**
KURK	**Kurchatov**	**57.12**	**326**	P	**P**	**10 38 59.8**	**-0.3**
	comp=Z,168nm,1.0s,SNR=18						
KURK	**Kurchatov**	**57.12**	**326**	P	**P**	**10 38 58.6**	**-1.5**
	comp=Z,17nm,1.0s,mb5.0,baz=125,slow=6.5,SNR=48						
KURK	**Kurchatov**	**57.12**	**326**	*e*P	**P**	**10 38 59.3**	**-0.8**
KURK				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
KURK	**Kurchatov**	**57.12**	**326**	*e*P	**P**	**10 38 59.3**	**-0.8**
	comp=Z,20nm,0.9s,mb5.2						
KBL	**Kabul**	**58.29**	**305**	*e*P	**P**	**10 39 08.0**	**-0.6**
KBL				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
KBL	**Kabul**	**58.29**	**305**	*e*P	**P**	**10 39 08.0**	**-0.7**
	comp=Z,24nm,1.0s,mb5.2						
KK31	**Karatay Array**	**59.27**	**315**	P	**P**	**10 39 14.0**	**-1.3**
KK31				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
BVA0	**Borovoye Array**	**62.72**	**326**	*i* P	**P**	**10 39 37.7**	**-0.8**
BVA0				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.6						
BVAR	**Borovoye Array**	**62.72**	**326**	P	**P**	**10 39 38.2**	**-0.3**
	comp=Z,9.4nm,0.8s,mb5.0,baz=118,slow=8.6,SNR=38						
BRVK	**Borovoye**	**62.79**	**326**	P	**P**	**10 39 38.7**	**-0.2**
	comp=Z,207nm,1.0s,SNR=9.9						
BRVK	**Borovoye**	**62.79**	**326**	*e*P	**P**	**10 39 38.7**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.3						
BRVK	**Borovoye**	**62.79**	**326**	*e*P	**P**	**10 39 38.7**	**-0.3**
	comp=Z,21nm,0.8s,mb5.3						
BILL	**Bilibino**	**64.14**	**15⇑**	*i*P	**P**	**10 39 50.0**	**+2.4**
BILL				pmax	pmax		
	comp=Z,19nm,1.7s,mb4.8						
AB31	**Akbulak array**	**67.92**	**319**	*i* P	**P**	**10 40 11.0**	**-1.2**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
SVE	**Sverdlovsk**	**69.27**	**327⇑**	*e*P	**P**	**10 40 20.3**	**-0.2**
SVE				*e*	pP	10 40 31.1	-1.4
SVE				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
SVE				MLR	MLR		
	comp=Z,310nm,16.0s,MS4.6						
AKTK	**Aktyubinsk**	**69.37**	**320**	P	**P**	**10 40 20.4**	**-0.8**
AKTO	**Aktyubinsk**	**69.37**	**320**	P	**P**	**10 40 20.4**	**-0.8**
	comp=Z,4.3nm,0.9s,mb4.4,baz=95,slow=7.1,SNR=11						
ARU	**Arti**	**70.28**	**327***c*	*i*P	**P**	**10 40 25.5**	**-1.2**
ARU				*e*	pP	10 40 37.1	-1.6
ARU				*e*		10 42 58.9	
ARU				*e*PPP		10 44 42.0	
ARU				*e*S	S	10 49 35.5	-0.3
ARU				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
ARU	**Arti**	**70.28**	**327**	*e*P	**P**	**10 40 26.1**	**-0.6**
	comp=Z,16nm,0.6s,mb5.1						
UMR	**Umm Al-Rimmam**	**76.00**	**298**	*e*P	**P**	**10 40 59.6**	**-1.5**
	baz=298						
UMR				AMb	AMB	10 41 03.4	
	comp=Z,32nm,0.8s,mb5.3,baz=298						
RDF	**Al-Radifah**	**76.18**	**298**	*e*P	**P**	**10 41 00.4**	**-1.7**
	baz=298						
RDF				AMb	AMB	10 41 02.2	
	comp=Z,55nm,1.6s,mb5.2,baz=298						
MIB	**Mutribah**	**76.32**	**298**	*e*P	**P**	**10 41 01.4**	**-1.4**
	baz=298						
MIB				AMb	AMB	10 41 02.8	
	comp=Z,38nm,0.8s,mb5.4,baz=298						
NAY	**Al-Naaiem**	**76.43**	**298**	*e*P	**P**	**10 41 01.6**	**-1.9**
	baz=298						
NAY				AMb	AMB	10 41 03.0	
	comp=Z,19nm,1.0s,mb5.0,baz=298						
GNI	**Garni**	**78.00**	**309⇑**	*i*P	**P**	**10 41 10.4**	**-1.7**
GNI				pmax	pmax		
	comp=Z,24nm,1.3s						
MCK	**McKinley**	**79.13**	**27**	*e*P	**P**	**10 41 18.9**	**+1.1**
MCK				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
MCK	**McKinley**	**79.13**	**27**	*e*P	**P**	**10 41 18.9**	**+1.1**
	comp=Z,30nm,1.4s,mb5.0						
KIV	**Kislovodsk**	**79.36**	**313**	*e*P	**P**	**10 41 19.1**	**-0.4**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,259nm,19.0s,MS4.6						
KLMR	**Klimovskoe**	**80.59**	**330⇓**	*i*P	**P**	**10 41 25.7**	**-0.1**
KLMR				*e*		10 41 30.7	
KLMR				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
SOC	**Sochi**	**81.53**	**313**	*e*P	**P**	**10 41 27.8**	**-3.4**
SOC				*e*		10 44 34.9	
SOC				*e*PPP		10 46 27.0	
SOC				*e*S	S	10 51 36.8	-3.4
SOC				*e*SS	SS	10 56 49.5	-7.9
SOC				*e*SSS		11 00 21.9	
SOC				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
OBN	**Obninsk**	**82.55**	**325⇑**	*e*P	**P**	**10 41 34.8**	**-1.4**
OBN				*e*	pP	10 41 45.6	-2.9
OBN				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.0						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.5						
MALT	**Malatya**	**83.02**	**308**	*e*P	**P**	**10 41 40.8**	**+1.7**
MALT				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
MALT	**Malatya**	**83.02**	**308**	*e*P	**P**	**10 41 40.8**	**+1.7**
	comp=Z,7.1nm,1.0s,mb4.7						
DAWY	**Dawson**	**83.32**	**26**	*e*P	**P**	**10 41 40.5**	**+0.4**
DAWY				*e*PcP	PcP	10 41 45.7	+1.2
DAWY				*e*pP	pP	10 41 53.3	+0.9
ARCES	**ARCESS Array B**	**85.24**	**340**	P	**P**	**10 41 50.4**	**+0.7**
	comp=Z,3.5nm,0.5s,mb4.7,baz=86,slow=6.6,SNR=24						
ARCES				LR	LR	11 24 47.9	
	comp=Z,127nm,18.6s,MS4.3,baz=280,slow=39						
SIM	**Simferopol'**	**85.37**	**315**	*e*P	**P**	**10 41 50.5**	**-0.4**
SIM				*e*	pP	10 42 02.0	-1.2
SIM				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1						
AKASG	**Malin Array Be**	**87.61**	**321**	P	**P**	**10 42 00.7**	**-1.0**
	comp=Z,1.8nm,0.6s,mb4.5,baz=66,slow=4.8,SNR=6.4						
MAW	**Mawson**	**89.03**	**200**	P	**P**	**10 42 09.2**	**+1.2**
	comp=Z,2.5nm,0.9s,mb4.6,baz=2.3,slow=6.0,SNR=7.4						
KMBO	**Kilima Mbogo**	**89.75**	**269**	P	**P**	**10 42 12.2**	**-0.4**
	comp=Z,3.2nm,0.9s,mb4.6,baz=38,slow=8.5,SNR=4.3						
KMBO	**Kilima Mbogo**	**89.75**	**269**	*e*P	**P**	**10 42 11.1**	**-1.5**
KMBO				*e**PP	pP	10 42 22.5	-2.5
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMBO	**Kilima Mbogo**	**89.75**	**269**	*e*P	**P**	**10 42 11.1**	**-1.4**
	comp=Z,7.1nm,1.0s,mb5.0						
KMBO				*e*pP	pP	10 42 22.4	-2.5
DAG	**Danmarks Havn**	**91.73**	**352⇑**	*i*P	**P**	**10 42 21.0**	**+0.5**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.9						
DAG	**Danmarks Havn**	**91.73**	**352⇑**	*i*P	**P**	**10 42 21.0**	**+0.5**
	comp=Z,5.2nm,0.8s,mb4.9						
UZH	**Uzhgorod**	**92.49**	**320**	*e*P	**P**	**10 42 24.0**	**-0.6**
GNW	**Green Mountain**	**96.53**	**40**	*e*P	**P**	**10 42 45.5**	**+2.3**
	comp=Z,8.8nm,1.3s,mb5.0						
GNW				*e*pP	pP	10 42 58.6	+3.1
SYO	**Syowa Base**	**97.66**	**201⇑**	*e*P	**P**	**10 42 48.8**	**+1.1**
GERES	**GERESS Array B**	**97.74**	**322**	LR	LR	11 31 03.4	
	comp=Z,180nm,18.6s,MS4.6,baz=270,slow=38						
NVAR	**Mina Array Bea**	**103.07**	**47**	PKKP	PKKPbc	10 59 20.9	+11
	comp=Z,0.5nm,0.8s,baz=134,slow=3.9,SNR=5.1						
PDAR	**Pinedale Array**	**107.05**	**40**	PKKP	PKKPbc	10 59 09.9	+12
	comp=Z,0.5nm,0.7s,baz=94,slow=4.5,SNR=4.6						
TXAR	**Lajitas Array**	**118.01**	**50**	PKP	PKPdf	10 48 02.7	+1.9
	comp=Z,0.3nm,0.6s,baz=30,slow=1.6,SNR=4.5						
TXAR	**Lajitas Array**	**118.01**	**50**	PKP	PKPdf	10 48 02.7	+1.9
JCT	**Junction City**	**120.25**	**47**	*e*PKIKP	PKPdf	10 48 07.1	+2.0
TORD	**Torodi Ar. Bea**	**121.10**	**291**	PKP	PKPdf	10 48 06.9	-0.1
	comp=Z,1.0nm,0.8s,baz=44,slow=1.7,SNR=5.1						
HALT	**Halls**	**123.55**	**35**	*e*PKPdf	PKPdf	10 48 12.3	+1.0
PLCA	**Paso Flores**	**145.16**	**157**	PKPbc	PKPbc	10 48 51.9	+1.2
	comp=Z,3.3nm,0.8s,baz=183,slow=6.0,SNR=9.0						
PLCA	**Paso Flores**	**145.16**	**157**	*e*PKPbc	PKPbc	10 48 52.5	+1.8
LPAZ	**La Paz**	**163.89**	**117**	*e*PKIKP	PKPdf	10 49 21.1	+3.6

NEIC ***24*** *10:31:12.2±5.3, 1725S×7001W, h8km±38km, mb4.4/1, Error ellipse: s-maj=12.8km s-min=11.0km az=67.0*
IDC ***24*** *10:31:13.9±4.6, 1723S×6982W, h23km±30km, mb3.5/4, mb1 3.8/6, mb1mx3.7/19, mbtmp3.6/6, ML4.6/2, MS3.6/2, Ms1 3.6/2, ms1mx3.0/31, Error ellipse: s-maj=31.5km s-min=22.8km az=96.0*
ISCJB ***24*** *10:31:16.5±1.0, 1730S±009×6976W±008, h61km±12km, mb3.8/5, Error ellipse: s-maj=15.4km s-min=10.9km az=28.3*
ISC 24 10:31:17.7±0.9**, 1731S**±009×**6978W**±008**, h55**km±12km**, n12,** σ**0.s40**/12**, mb3.8**/5**, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**1.84**	**297**	*e*P	**Pn**	**10 31 41.0**	**-5.9**
ARE				*e*S	**Sn**	**10 32 09.0**	**-0.1**
LPAZ	**La Paz**	**1.88**	**58**	Pg	**Pn**	**10 31 47.8**	**+0.4**
	14nm,0.3s,baz=246,slow=10,SNR=342						
LPAZ				Lg		10 32 14.6	
	16nm,0.3s,baz=159,slow=20,SNR=6.0						
LPAZ	**La Paz**	**1.88**	**58**	Pg	**Pn**	**10 31 47.8**	**+0.4**
LPAZ				Lg		10 32 14.6	
LVC	**Limon Verde**	**5.34**	**171**	Pn	**Pn**	**10 32 35.2**	**+0.3**
	3.8nm,0.3s,baz=336,slow=11,SNR=16						
LVC				Lg		10 33 56.4	
	4.5nm,0.3s,baz=199,slow=21,SNR=9.4						
LVC	**Limon Verde**	**5.34**	**171**	*e*Pn	**Pn**	**10 32 34.7**	**-0.2**
LVC				Lg		10 33 56.4	
SIV	**San Ignacio**	**8.45**	**82**	Pn	**Pn**	**10 33 17.1**	**-0.5**
	2.0nm,0.3s,baz=261,slow=14,SNR=14						
SIV				Lg		10 35 38.0	
	1.0nm,0.3s,baz=180,slow=20,SNR=3.1						
SIV				LR	LR	10 36 59.5	
	comp=Z,471nm,20.6s,baz=118,slow=41						
TRQA	**Tornquist**	**21.78**	**163**	*e*P	**P**	**10 36 05.7**	**+0.8**
	22nm,1.4s,mb4.4						
PLCA	**Paso Flores**	**23.36**	**181**	P	**P**	**10 36 20.7**	**-0.7**
	2.5nm,0.9s,mb3.6,baz=6.7,slow=17,SNR=3.7						
PCRV	**Puerto La Cruz**	**27.77**	**11**	LR	LR	10 47 51.5	
	comp=Z,89nm,20.4s,baz=354,slow=36						
TXAR	**Lajitas Array**	**56.74**	**324**	P	**P**	**10 40 56.3**	**+0.2**
	0.2nm,0.6s,mb3.3,baz=134,slow=5.2,SNR=2.5						
PDAR	**Pinedale Array**	**70.08**	**330**	P	**P**	**10 42 24.1**	**+0.1**
	0.5nm,0.7s,mb3.5,baz=134,slow=4.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**76.77**	**72**	P	**P**	**10 43 03.8**	**-0.2**
	1.0nm,0.6s,mb3.9,baz=253,slow=5.5,SNR=7.6						

IDC ***24*** *10:33:18.2±1.8, 949N×12731E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/21, mbtmp3.9/7, Error ellipse: s-maj=130.2km s-min=19.1km az=72.0*
ISCJB ***24*** *10:33:21.5±0.8, 934N±007×12704E±008, h33km, mb3.9/7, Error ellipse: s-maj=12.1km s-min=9.1km az=161.1*
ISC 24 10:33:24.0±0.8**, 930N**±007×**12693E**±009**, h35**km**, n9,** σ**0.s79**/11**, mb3.9**/7**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.24**	**207⇑**	*i*P	**Pn**	**10 33 44.0**	**-0.9**
BIPH				*i* S	**Sn**	**10 34 00.2**	**-0.1**
SCPH	**Surigao**	**1.51**	**289⇑**	*e*P	**Pn**	**10 33 46.9**	**-1.6**
SCPH				*e*S	**Sn**	**10 34 08.1**	**+1.2**
FITZ	**Fitzroy Crossi**	**27.25**	**183**	P	**P**	**10 39 05.7**	**+0.7**
	1.6nm,0.6s,mb3.8,baz=354,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	**29.95**	**166**	P	**P**	**10 39 29.3**	**+0.3**
	0.5nm,0.6s,mb3.4,baz=350,slow=9.5,SNR=2.8						
ASAR	**Alice Springs**	**33.46**	**168**	P	**P**	**10 40 00.5**	**+0.7**
	0.5nm,0.4s,mb3.8,baz=347,slow=7.5,SNR=4.6						
MKAR	**Makanchi Array**	**53.20**	**323**	P	**P**	**10 42 39.5**	**+0.9**
	0.8nm,0.5s,mb3.9,baz=121,slow=8.5,SNR=5.4						
KURK	**Kurchatov**	**57.24**	**326**	P	**P**	**10 43 07.1**	**-0.6**
	1.0nm,0.6s,mb4.0,baz=127,slow=6.6,SNR=4.4						
BVAR	**Borovoye Array**	**62.84**	**325**	P	**P**	**10 43 45.8**	**-0.3**
	0.6nm,0.5s,mb4.0,baz=150,slow=6.1,SNR=2.6						
ARCES	**ARCESS Array B**	**85.33**	**340**	P	**P**	**10 45 56.8**	**-0.3**
	1.9nm,0.8s,mb4.3,baz=79,slow=6.4,SNR=4.6						

VIE ***24*** *11:05:00.5±0.4, 5021N×1277E, h0km, ML2.5/2, Error ellipse: s-maj=4.6km s-min=1.2km az=40.0 23 km E of Klingenthal Suspected Mining explosion.*
CSEM 24 11:04:58.3±0.4**, 5038N**×**1269E, h1**km**, ML2.5**/2**, 1C-4D, Error ellipse: s-maj=9.0km s-min=5.0km az=84.0, Suspected Mining explosion., Germany**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOA	**Molln**	**2.74**	**157⇓**	*i*Pg	Pg	11 05 49.9	-0.8
MOA			⇑	*i*Sg	Sg	11 06 24.5	-1.7
	9.0nm,0.5s						
CSNA	**Conrad Observa**	**3.22**	**138⇓**	*i*Pg	Pg	11 05 59.4	-0.6
CSNA			⇓	*i*Sg	Sg	11 06 41.5	-0.1
	10nm,0.5s						
CONA	**Conrad Observa**	**3.22**	**138⇓**	*i*Sg	Sg	11 06 41.6	-0.1
	9.6nm,0.6s						
VYHS	**Vyhne**	**4.43**	**113**	*e*PN	Pn	11 06 09.1	+2.5
VYHS				*e*SN	Pg	11 06 28.4	+5.2
VYHS	**Vyhne**	**4.43**	**113**	*e*Pn	Pn	11 06 09.1	+2.5
STHS	**Stebnicka Huta**	**5.62**	**97**	*e*PN	Pn	11 06 20.7	-2.1
STHS				*e*SG	Pg	11 06 47.2	+1.4
STHS	**Stebnicka Huta**	**5.62**	**97**	*e*Pn	Pn	11 06 20.7	-2.1

IDC ***24*** *11:12:54.0±0.7, 1182S×166.12E, h0km, mb4.5/15, mb1 4.6/16, mb1mx4.5/21, mbtmp4.5/16, ML4.9/1, MS4.1/9, Ms1 4.1/9, ms1mx3.6/31, Error ellipse: s-maj=22.6km s-min=17.7km az=101.0*
ISCJB ***24*** *11:12:57.0±4.4, 1187S±007×166.1E±0.1, h29km±29km, mb4.7/29, MS4.1/10, Error ellipse: s-maj=18.6km s-min=10.8km az=159.1*
MOS ***24*** *11:12:57.8±0.9, 1189S×16604E, h33km, mb5.1/9, Error ellipse: s-maj=15.9km s-min=12.3km az=6.7*
BJI ***24*** *11:12:58.4, 1125S×16654E, h31km, mB5.1, mb4.8, Ms4.7, Msz4.1*
GCMT ***24*** *11:13:00.3±0.4, 1205S×16607E, h27km±1km, MW5.0/48, Moment Tensor Solution. s38,c44; s48,c61; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.01±.21; Mθθ-0.19±.15; Mφφ-2.82±.14; Mrθ1.81±.33; Mθφ0.67±.12; Mφr-1.02±.23; Best double couple: Mo3.61300×10^16 NP1:φs4.00000°, δ35.00000°, λ124.00000°. NP2: φs144.00000°, δ62.00000°, λ69.00000°. Principal axes: T 3.8910, Plg66.0000°, Azm14.0000°; N -0.5580, Plg19.0000°, Azm155.0000°; P -3.3350, Plg14.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***24*** *11:13:00.3±1.8, 1183S×166.10E, h43km±14km, mb4.8/9 Error ellipse: s-maj=14.3km s-min=10.0km az=71.0*
DJA ***24*** *11:13:01, 1290S×16628E, h10km, mb4.8/7*
ISC 24 11:13:00.2±1.8**, 1184S**±007×**16607E**±010**, h41**km±15km**, n76,** σ**1.s00**/63**, mb4.7**/29**, MS4.1**/10**, 2C-3D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.47**	**291**	Pn	**Pn**	**11 14 33.1**	**0.0**
	24nm,0.3s,baz=357,slow=3.4,SNR=22						
HNR				Sn	**Sn**	**11 15 43.0**	**-2.6**
	24nm,0.3s,baz=18,slow=22,SNR=4.3						
DZM	**Mont Dzumac**	**10.19**	**178**	*e*P	**Pn**	**11 15 24.2**	**+0.3**
DZM				*e*S	**Sn**	**11 17 29.0**	**+12**
DZM	**Mont Dzumac**	**10.19**	**178**	*e*Pn	**Pn**	**11 15 24.2**	**+0.3**
CTA	**Charters Tower**	**20.72**	**244⇓**	*i*P	**P**	**11 17 38.6**	**+1.2**
CTA	**Charters Tower**	**20.72**	**244**	P	**P**	**11 17 37.6**	**+0.2**
	25nm,1.0s,baz=71,slow=13,SNR=11						
CTA				LR	LR	11 24 48.1	
	comp=Z,476nm,19.0s,MS3.9,baz=61,slow=34						
CTAO	**Charters Tower**	**20.72**	**244**	*e*P	**P**	**11 17 38.2**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,28nm,1.0s						
CTAO	**Charters Tower**	**20.72**	**244**	*e*P	**P**	**11 17 38.2**	**+0.8**
	comp=Z,28nm,1.0s						
COEN	**Coen**	**22.41**	**262**	*e*P	**P**	**11 17 56.5**	**+1.0**
	comp=Z,38nm,1.9s,mb4.5						
ARMA	**Armidale**	**22.83**	**214**	*e*P	**P**	**11 18 01.7**	**+1.9**
URZ	**Urewera**	**28.10**	**161**	LR	LR	11 28 36.4	
	comp=Z,352nm,18.5s,MS4.0,baz=341,slow=34						
STKA	**Stephens Creek**	**30.09**	**225**	*e*P	**P**	**11 19 06.7**	**+0.7**
STKA	**Stephens Creek**	**30.09**	**225**	P	**P**	**11 19 06.3**	**+0.3**
	comp=Z,4.3nm,1.1s,mb4.1,baz=27,slow=12,SNR=2.8						
STKA				PcP	PcP	11 22 07.3	+0.3
	comp=Z,6.1nm,0.8s,baz=38,slow=3.2,SNR=5.4						
STKA				LR	LR	11 30 56.4	
	comp=Z,510nm,19.4s,MS4.2,baz=32,slow=36						
STKA	**Stephens Creek**	**30.09**	**225**	*e*P	**P**	**11 19 06.0**	**0.0**
	comp=Z,5.7nm,0.8s,mb4.3						
WRAB	**Tennant Creek**	**31.50**	**251**	*e*P	**P**	**11 19 17.9**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**31.50**	**251**	*e*P	**P**	**11 19 17.9**	**-0.6**
	comp=Z,7.9nm,1.0s,mb4.5						
WB2	**Warramunga Arr**	**31.51**	**251**	*e*P	**P**	**11 19 17.8**	**-0.8**
WB2	**Warramunga Arr**	**31.51**	**251**	*e*P	**P**	**11 19 18.2**	**-0.3**
WRA	**Warramunga Arr**	**31.52**	**251**	P	**P**	**11 19 17.6**	**-1.0**
	comp=Z,4.0nm,0.7s,mb4.4,baz=84,slow=9.3,SNR=49						
WRA				LR	LR	11 31 17.8	
	comp=Z,238nm,18.8s,MS3.9,baz=65,slow=35						
RPZ	**Rata Peaks**	**32.06**	**173**	P	**P**	**11 19 22.6**	**-0.5**
	comp=Z,20nm,0.7s,mb5.1,baz=307,slow=2.1,SNR=12						
ASAR	**Alice Springs**	**32.73**	**245**	P	**P**	**11 19 28.4**	**-0.9**
	comp=Z,3.6nm,0.8s,mb4.3,baz=73,slow=9.7,SNR=26						
ASAR				PcP	PcP	11 22 14.7	+0.5
	comp=Z,5.2nm,1.0s,baz=87,slow=2.5,SNR=16						
ASAR				ScP	ScP	11 25 59.8	+4.6
	comp=Z,1.0nm,1.0s,baz=68,slow=3.4,SNR=4.6						
ASAR	**Alice Springs**	**32.73**	**245**	P	**P**	**11 19 28.4**	**-0.9**
ASAR						11 22 14.7	
GUMO	**Guam**	**32.86**	**320**	LR	LR	11 31 09.6	
	comp=Z,350nm,21.3s,MS4.0,baz=269,slow=33						
FITZ	**Fitzroy Crossi**	**39.49**	**256**	*e*P	**P**	**11 20 27.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**39.49**	**256**	P	**P**	**11 20 26.9**	**-0.2**
	comp=Z,3.3nm,0.9s,mb4.1,baz=78,slow=7.2,SNR=6.9						
FITZ				LR	LR	11 35 55.1	
	comp=Z,219nm,19.8s,MS4.0,baz=92,slow=35						
BATI	**Baumata**	**41.62**	**268**	LR	LR	11 37 31.5	
	comp=Z,339nm,20.2s,MS4.2,baz=117,slow=36						
PPT	**Papeete**	**43.21**	**103**	*e*S	**S**	**11 27 34.1**	**+12**
	comp=Z,140nm,25.8s						
PPT				*e*LR	LR	11 33 18.5	
	comp=Z,228nm,22.5s,baz=282						
PPT	**Papeete**	**43.21**	**103**	LR	LR	11 36 02.0	
	comp=Z,242nm,18.1s,MS4.1,baz=287,slow=32						
TBI	**Tubuai**	**43.75**	**111**	*e*S	**S**	**11 27 39.8**	**+10**
	comp=Z,103nm,29.2s						
TBI				*e*LR	LR	11 33 17.3	
	comp=Z,236nm,23.5s						
KAPI	**Kappang**	**46.26**	**274**	P	**P**	**11 21 21.2**	**-0.9**
	comp=Z,7.5nm,0.7s,mb4.7,baz=152,slow=12,SNR=4.3						
KLBR	**Kellerberrin**	**48.56**	**238**	*e*P	**P**	**11 21 39.4**	**-0.3**
MJAR	**Matsushiro Arr**	**54.81**	**333**	P	**P**	**11 22 24.1**	**-2.1**
	comp=Z,3.4nm,0.8s,mb4.4,baz=170,slow=8.3,SNR=11						
RKT	**Rikitea**	**57.02**	**110**	*e*LR	LR	11 39 40.3	
	comp=Z,272nm,26.8s						
ASAJ	**Asahikawa**	**59.64**	**341**	LR	LR	11 44 00.2	
	comp=Z,198nm,20.1s,MS4.2,baz=170,slow=31						
KSRS	**Korea Array**	**60.70**	**326**	P	**P**	**11 23 07.3**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.3,baz=138,slow=7.3,SNR=15						
CASY	**Casey**	**65.76**	**201**	*e*P	**P**	**11 23 40.8**	**+0.1**
SBA	**Scott Base**	**66.01**	**180**	*e*P	**P**	**11 23 42.8**	**+0.7**
SBA				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
SBA	**Scott Base**	**66.01**	**180**	*e*P	**P**	**11 23 42.8**	**+0.7**
	comp=Z,23nm,0.9s,mb5.2						

CN2	**Changchun**	**66.58**	**329**	*e*P	**P**	**11**	**23**	**45.8 -0.4**
CN2				AMB	AMB			
	comp=Z,20nm,1.0s,mb5.1							
MIR	**Mirnyy**	**72.48**	**204**	⇑*i*P	**P**	**11**	**24**	**23.0 +0.7**
MIR				pmax	pmax			
	comp=Z,100nm,1.0s,mb5.7							
CMAR	**Chiang Mai Arr**	**72.71**	**294**	P	**P**	**11**	**24**	**25.9 +1.3**
	comp=Z,2.8nm,0.7s,mb4.3,baz=122,slow=4.4,SNR=12							
HIA	**Hailar**	**73.21**	**330**	*e*P	**P**	**11**	**24**	**27.5 +0.7**
HIA				pmax	pmax			
	comp=Z,17nm,1.2s							
HIA	**Hailar**	**73.21**	**330**	*e*P	**P**	**11**	**24**	**27.5 +0.7**
	comp=Z,17nm,1.2s,mb4.8							
LZH	**Lanzhou**	**75.52**	**312**	⇓P	**P**	**11**	**24**	**42.0 +1.4**
LZH				AMB	AMB			
	comp=Z,21nm,1.3s,mb4.9							
LZH				AMB	AMB			
	comp=Z,91nm,4.6s							
LZH	**Lanzhou**	**75.52**	**312**	⇓P	**P**	**11**	**24**	**42.0 +1.4**
	comp=Z,21nm,1.3s,mb4.9							
LZH				pP	pP	11	24	46.5 -6.4
LZH				sP	sP	11	24	49.1 -8.4
ULN	**Ulaanbaatar**	**79.12**	**324**	*e*P	**P**	**11**	**25**	**01.1 +0.6**
ULN				pmax	pmax			
	comp=Z,28nm,1.1s,mb5.1							
ULN	**Ulaanbaatar**	**79.12**	**324**	*e*P	**P**	**11**	**25**	**01.1 +0.6**
	comp=Z,28nm,1.1s,mb5.1							
SONM	**Songino Array**	**79.48**	**324**	P	**P**	**11**	**25**	**04.0 +1.5**
	comp=Z,7.9nm,0.9s,mb4.6,baz=134,slow=5.8,SNR=20							
GTA	**Gaotai**	**79.83**	**314**	⇑P	**P**	**11**	**25**	**06.8 +2.3**
GTA				AMB	AMB			
	comp=Z,26nm,1.0s,mb5.1							
GTA				AMB	AMB			
	comp=Z,112nm,4.2s							
GTA				LR	LR			
	comp=N,109nm,15.5s,MS4.5							
GTA				LR	LR			
	comp=E,97nm,12.2s,MS4.5							
GTA				LR	LR			
	comp=Z,107nm,18.4s							
BOD	**Bodaibo**	**81.37**	**335**	*e*P	**P**	**11**	**25**	**11.7 -0.7**
BOD				pmax	pmax			
	comp=Z,5.0nm,1.3s,mb4.3							
ZAK	**Zakamensk**	**82.52**	**325**	*e*P	**P**	**11**	**25**	**19.1 +0.5**
ZAK				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.8							
TLY	**Talaya**	**82.95**	**326**	*e*P	**P**	**11**	**25**	**20.9 +0.1**
TLY				pmax	pmax			
	comp=Z,13nm,1.0s,mb4.9							
MAW	**Mawson**	**84.11**	**202**	*e*P	**P**	**11**	**25**	**26.8 +0.2**
MAW	**Mawson**	**84.11**	**202**	P	**P**	**11**	**25**	**26.7 +0.1**
	comp=Z,4.1nm,0.9s,mb4.6,baz=97,slow=8.4,SNR=10							
NVAR	**Mina Array Bea**	**86.29**	**50**	P	**P**	**11**	**25**	**37.6 -0.4**
	comp=Z,0.4nm,0.6s,mb3.8,baz=242,slow=9.9,SNR=3.3							
WMQ	**Urumqi**	**89.87**	**315**	P	**P**	**11**	**25**	**55.8 +0.9**
WMQ				AMB	AMB			
	comp=Z,18nm,1.0s,mb5.4							
WMQ				AMB	AMB			
	comp=Z,218nm,5.8s							
PDAR	**Pinedale Array**	**93.85**	**47**	PKKPbc	PKKPbc	11	43	16.9 -1.5
	comp=Z,0.5nm,0.7s,baz=85,slow=3.1,SNR=4.2							
MK31	**Makanchi Array**	**94.31**	**317**	*e*P	**P**	**11**	**26**	**15.9 +0.5**
MKAR	**Makanchi Array**	**94.31**	**317**	P	**P**	**11**	**26**	**16.0 +0.6**
	comp=Z,21nm,0.8s,mb5.6,baz=101,slow=6.3,SNR=141							
MKAR	**Makanchi Array**	**94.31**	**317**	P	**P**	**11**	**26**	**16.0 +0.6**
ZAA0	**Zalesovo Array**	**94.38**	**324**	*e*P	**P**	**11**	**26**	**15.0 -0.5**
ZALV	**Zalesovo Beam**	**94.38**	**324**	P	**P**	**11**	**26**	**15.1 -0.4**
	comp=Z,5.8nm,0.9s,mb5.0,baz=102,slow=3.6,SNR=19							
ZALV	**Zalesovo Beam**	**94.38**	**324**	P	**P**	**11**	**26**	**15.1 -0.4**
TXAR	**Lajitas Array**	**95.93**	**61**	PKKPbc	PKKPbc	11	43	13.5 +1.2
	comp=Z,0.2nm,0.7s,baz=101,slow=2.6,SNR=4.2							
SNAA	**Sanae**	**96.35**	**184**	*e*	**P**	**11**	**26**	**23.0 -1.3**
SNAA				*e*		11	26	26.0
SNAA	**Sanae**	**96.35**	**184**	*e*P	**P**	**11**	**26**	**22.2 -2.1**
SNAA				pmax	pmax			
	comp=Z,7.0nm,1.3s							
SNAA	**Sanae**	**96.35**	**184**	*e*P	**P**	**11**	**26**	**22.2 -2.2**
	comp=Z,6.6nm,1.3s,mb4.9							
VNA3	**Neumayer Olymp**	**97.07**	**181**	*e*	**P**	**11**	**26**	**26.1 -1.5**
VNA3				*e*		11	26	29.2
VNA2	**Neumayer--Watz**	**97.32**	**182**	*e*	**P**	**11**	**26**	**27.6 -1.1**
VNA2				*e*		11	26	30.5
KURK	**Kurchatov**	**97.44**	**320**	P	**P**	**11**	**26**	**28.1 -1.5**
	comp=Z,0.7nm,0.4s,mb4.5,baz=82,slow=3.9,SNR=5.1							
ARCES	**ARCESS Array B**	**117.17**	**345**	PKP	PKPdf	11	31	43.0 +2.5
	comp=Z,1.3nm,0.7s,baz=62,slow=2.9,SNR=6.6							
BOSA	**Boshof**	**124.75**	**223**	PKP	PKPdf	11	31	56.4 +0.2
	comp=Z,5.0nm,0.8s,baz=27,slow=2.9,SNR=7.4							
BOSA	**Boshof**	**124.75**	**223**	PKP	PKPdf	11	31	56.4 +0.2
AKASG	**Malin Array Be**	**127.69**	**327**	PKP	PKPdf	11	31	59.4 -1.7
	comp=Z,0.6nm,0.3s,baz=320,slow=8.7,SNR=6.6							
KEST	**Kesra**	**148.23**	**322**	PKPbc	PKPbc	11	32	43.3 +1.0
	comp=Z,4.2nm,1.0s,baz=325,slow=5.9,SNR=5.1							
TORD	**Torodi Ar. Bea**	**164.68**	**277**	PKP	PKPdf	11	33	00.5 -0.2
	comp=Z,1.7nm,1.0s,baz=201,slow=1.0,SNR=6.9							
TORD	**Torodi Ar. Bea**	**164.68**	**277**	PKP	PKPdf	11	33	00.5 -0.2

*IDC **24** 11:17:02.1±0.7,264N×12703E,h0km,mb4.2/10, mb1 4.3/11,mb1mx4.1/20,mbtmp4.2/11,ML3.8/1, Error ellipse: s-maj=28.2km s-min=15.0km az=74.0*
*NEIC **24** 11:17:04.0±0.4,264N×12709E,h15km,mb4.3/1, Error ellipse: s-maj=12.6km s-min=8.5km az=82.0*
*ISCJB **24** 11:17:05.1±0.6,260N±008×1269E±0.1,h33km,mb4.0/10, Error ellipse: s-maj=20.2km s-min=10.2km az=167.3*
ISC 24 11:17:06.9±0.6,261N±007×1271E±01,h35km,n17, σ0§80/16,mb4.0/10,1D,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	**Ternate**	**1.84**	**170**	⇓*e*P	**Pn**	**11 17 40.0**	**+4.0**
KAPI	**Kappang**	**10.52**	**224**	Pn	**Pn**	**11 19 34.5**	**-0.8**
	0.8nm,0.3s,baz=187,slow=21,SNR=5.1						
GUMO	**Guam**	**20.71**	**57**	P	**P**	**11 21 42.4**	**-2.0**
	22nm,0.5s,baz=195,slow=20,SNR=3.4						
WRAB	**Tennant Creek**	**23.52**	**163**	*e*P	**P**	**11 22 13.9**	**-0.2**
	6.1nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**23.52**	**163**	P	**P**	**11 22 14.2**	**+0.1**
	5.9nm,0.6s,mb4.2,baz=344,slow=10,SNR=35						
WB2	**Warramunga Arr**	**23.53**	**163**	*e*P	**P**	**11 22 14.0**	**-0.2**
ASAR	**Alice Springs**	**26.95**	**166**	P	**P**	**11 22 45.6**	**+0.4**
	1.2nm,0.6s,mb3.6,baz=344,slow=7.6,SNR=16						
ASAR				PcP	PcP	11	26	08.4 +1.7
	0.8nm,0.7s,baz=342,slow=2.2,SNR=5.9							
CMAR	**Chiang Mai Arr**	**31.73**	**302**	P	**P**	**11 23 27.9**	**+0.2**
	1.0nm,0.8s,mb3.7,baz=118,slow=7.3,SNR=7.1							
KSRS	**Korea Array**	**34.69**	**1**	P	**P**	**11 23 54.5**	**+1.1**
	1.2nm,0.7s,mb4.0,baz=176,slow=9.0,SNR=7.6							
MJAR	**Matsushiro Arr**	**35.30**	**16**	P	**P**	**11 23 59.5**	**+0.8**
	1.5nm,0.9s,mb3.9,baz=182,slow=12,SNR=3.2							
STKA	**Stephens Creek**	**36.97**	**159**	*e*P	**P**	**11 24 14.0**	**+1.0**
STKA	**Stephens Creek**	**36.97**	**159**	P	**P**	**11 24 14.0**	**+1.0**
	4.0nm,0.8s,mb4.3,baz=347,slow=8.9,SNR=6.8							
MKAR	**Makanchi Array**	**58.66**	**325**	P	**P**	**11 27 00.6**	**-0.1**
	1.3nm,0.7s,mb4.1,baz=127,slow=8.5,SNR=2.6							
KURK	**Kurchatov**	**62.85**	**328**	P	**P**	**11 27 28.9**	**-0.3**
	1.0nm,0.7s,mb4.0,baz=127,slow=5.9,SNR=5.3							
KURK	**Kurchatov**	**62.85**	**328**	P	**P**	**11 27 28.9**	**-0.3**
BVAR	**Borovoye Array**	**68.43**	**327**	P	**P**	**11 28 04.8**	**-0.4**
	1.1nm,0.5s,mb4.2,baz=146,slow=10,SNR=5.9							
TORD	**Torodi Ar. Bea**	**123.57**	**288**	PKP	PKPdf	11	36	01.6 -0.2
	0.4nm,0.7s,baz=13,slow=1.9,SNR=3.1							

*BJI **24** 11:27:08.9,39.11N×10562E,h24km,mb4.3,ML4.0,Ms3.9, Msz3.4*
*ISCJB **24** 11:27:09.0±0.5,3928N±005×10569E±005,h10km, mb3.6/4,Error ellipse: s-maj=6.6km s-min=5.6km az=9.6*
*IDC **24** 11:27:10.7±1.0,3922N×10554E,h0km,mb3.6/5, mb1 3.7/8,mb1mx3.6/24,mbtmp3.6/8,ML3.2/3,Error ellipse: s-maj=31.4km s-min=17.2km az=66.0*
ISC 24 11:27:10.6±0.5,3927N±004×10575E±004,h10km,n13, σ1§52/24,mb3.6/4,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**3.52**	**206**	PG	**Pn**	**11 28 07.8**	**+2.5**
LZH				S	**Sn**	**11 28 38.0**	**-8.9**
LZH				SG	**Sn**	**11 28 47.5**	**+0.6**
LZH				Smax			
	comp=N,623nm,0.8s						
LZH				Smax			
	comp=E,394nm,0.9s						
LZH				LR	LR		
	comp=N,836nm,5.1s						
LZH				LR	LR		
	comp=Z,976nm,6.8s						
BTO	**Baotou**	**3.54**	**66**	*e*P	**Pn**	**11 28 05.9**	**+0.3**
BTO				PG	**Pg**	**11 28 16.1**	**-2.4**
BTO				SG	**Sg**	**11 29 02.3**	**-2.0**
BTO				Smax			
	comp=N,67nm,0.4s						
BTO				Smax			
	comp=E,49nm,0.2s						
GTA	**Gaotai**	**4.61**	**274**	P	**Pn**	**11 28 18.8**	**-1.4**
GTA				PG	**Pg**	**11 28 30.8**	**-8.0**
GTA				S	**Sn**	**11 29 11.9**	**-1.9**
GTA				SG	**Sg**	**11 29 30.3**	**-8.2**
GTA				Smax			
	comp=N,237nm,1.2s						
GTA				Smax			
	comp=E,265nm,0.5s						
GTA				LR	LR		
	comp=N,807nm,5.4s						
GTA				LR	LR		
	comp=E,344nm,3.9s						
GTA				LR	LR		
	comp=Z,184nm,5.9s						
HHC	**Hu-ho-hao-te**	**4.73**	**69**	*e*P	**Pn**	**11 28 22.3**	**+0.4**
HHC				PG	**Pg**	**11 28 35.6**	**-5.6**
HHC				S	**Sn**	**11 29 17.8**	**+1.0**
HHC				SG	**Sg**	**11 29 38.1**	**-4.3**
HHC				Smax			
	comp=N,251nm,0.5s						
HHC				Smax			
	comp=E,355nm,0.4s						
XAN	**Xi'an**	**5.81**	**153**	PG	**Pb**	**11 28 50.5**	**-1.4**
XAN				SG	**Sb**	**11 30 00.3**	**-1.2**
XAN				Smax			
	comp=N,73nm,0.8s						
XAN				Smax			
	comp=E,68nm,0.8s						
SONM	**Songino Array**	**8.58**	**3**	Pn	**Pn**	**11 29 17.6**	**+2.9**
	comp=E,0.6nm,0.3s,baz=186,slow=13,SNR=6.5						
SONM				Lg		11 31 47.6	
	comp=E,2.9nm,0.3s,baz=183,slow=31,SNR=12						
KSRS	**Korea Array**	**17.48**	**89**	P	**Pn**	**11 31 15.6**	**+1.3**
	comp=E,0.1nm,0.3s,baz=283,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**18.68**	**301**	P	**Pn**	**11 31 27.9**	**-1.3**
	comp=E,0.0nm,0.3s,baz=109,slow=14,SNR=4.7						
ZALV	**Zalesovo Beam**	**20.44**	**323**	P	**P**	**11 31 48.0**	**+0.2**
	comp=E,2.5nm,0.7s,baz=129,slow=9.8,SNR=8.8						
CMAR	**Chiang Mai Arr**	**21.56**	**198**	P	**P**	**11 32 00.9**	**+0.6**
	comp=E,0.9nm,0.8s,mb3.3,baz=8.1,slow=8.9,SNR=7.0						
KURK	**Kurchatov**	**22.21**	**310**	P	**P**	**11 32 08.2**	**+1.3**
	comp=E,1.8nm,0.3s,mb4.0,baz=119,slow=10,SNR=7.7						
WRA	**Warramunga Arr**	**64.69**	**150**	P	**P**	**11 37 50.4**	**+1.7**
	comp=E,0.2nm,0.6s,mb3.3,baz=344,slow=6.7,SNR=6.2						
ASAR	**Alice Springs**	**67.92**	**152**	P	**P**	**11 38 12.2**	**+2.8**
	comp=E,0.3nm,0.4s,mb3.6,baz=338,slow=6.5,SNR=8.5						

*IDC **24** 11:55:01.1±0.6,1173S×166.17E,h0km,mb5.0/17, mb1 5.0/18,mb1mx5.0/19,mbtmp5.0/18,ML5.2/1,MS5.1/18, Ms1 5.1/18,ms1mx4.9/32,Error ellipse: s-maj=20.1km s-min=15.0km az=103.0*
*ISCJB **24** 11:55:02.1±1.8,1176S±004×166.12E±004,h15km±11km, mb5.3/73,MS5.1/46,Error ellipse: s-maj=7.5km s-min=6.9km az=137.7*
*BJI **24** 11:55:03.9,11.15S×166.38E,h12km,mB5.4,mb5.3,Ms5.2, Msz5.0*
*MOS **24** 11:55:04.8±1.1,1174S×166.08E,h33km,mb5.5/33, MS5.1/14,Error ellipse: s-maj=9.5km s-min=8.4km az=35.3*
*NEIC **24** 11:55:06.3±0.2,1177S×166.18E,h35km,mb5.3/30, MS5.3/2,MW5.4,Error ellipse: s-maj=7.7km s-min=5.7km az=135.0,Moment Tensor Solution. s50 Moment tensor: Scale 10^{17}Nm; M_{rr}1.13; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-1.27; $M_{r\theta}$0.45; $M_{\theta\phi}$-0.27; $M_{\phi r}$-1.29; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s169.00000°,δ70.00000°,λ73.00000°. NP2: ϕ_s32.00000°,δ26.00000°,λ130.00000°. Principal axes: T 1.8500, Plg61.0000°, Azm52.0000°; N -0.0100, Plg16.0000°, Azm175.0000°; P -1.8300, Plg23.0000°, Azm272.0000°;*
*GCMT **24** 11:55:06.3±0.1,1188S×16593E,h27km,MW5.6/99, Moment Tensor Solution. s99,c197; s96,c190; Duration: 1§5 Moment tensor: Scale 10^{17}Nm; M_{rr}2.72±.04; $M_{\theta\theta}$-0.09±.03; $M_{\phi\phi}$-2.63±.03; $M_{r\theta}$0.80±.07; $M_{\theta\phi}$0.82±.02; $M_{\phi r}$-1.36±.06; Best double couple: $M_0$3.21300×10^{17} NP1:ϕ_s351.00000°,δ31.00000°, λ102.00000°. NP2:ϕ_s156.00000°,δ60.00000°,λ83.00000°. Principal axes: T 3.1570, Plg74.0000°, Azm47.0000°; N 0.1070, Plg6.0000°, Azm160.0000°; P -3.2680, Plg14.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **24** 11:56:07,1233S×16226E,h349km,Mw5.3/7*
ISC 24 11:55:06.7±1.1,1179S±004×16616E±005,h35km±9km, h55km±4.4km:pP-P,n223,σ0§99/187,mb5.3/73,MS5.1/46, 27C-5D,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.54**	**290**	Pn	**Pn**	**11 56 40.1**	**-0.3**
	46nm,0.3s,baz=150,slow=5.1,SNR=42						
HNR				Sn	**Sn**	**11 57 49.6**	**-4.2**
	26nm,0.3s,baz=200,slow=24,SNR=7.0						
HNR	**Honiara**	**6.54**	**290**	*e*P	**Pn**	**11 56 40.0**	**-0.4**
HNR				*e*		11 57 52.7	
HNR				pmax	pmax		
	comp=Z,2μm,1.1s						
HNR	**Honiara**	**6.54**	**290**	*e*Pn	**Pn**	**11 56 40.0**	**-0.4**
	comp=Z,2μm,1.1s						
HNR				*e*Sn	**Sn**	**11 57 52.7**	**-1.1**
DZM	**Mont Dzumac**	**10.23**	**179**	*e*P	**Pn**	**11 57 31.7**	**+0.6**
DZM				*e*S	**Sn**	**11 59 45.2**	**+21**
DZM	**Mont Dzumac**	**10.23**	**179**	*e*Pn	**Pn**	**11 57 31.7**	**+0.6**
PMG	**Port Moresby**	**18.82**	**275**	⇑*e*P	**Pn**	**11 59 24.6**	**+0.3**
EIDS	**Eidsvold**	**19.64**	**224**	*e*P	**Pn**	**11 59 38.0**	**+4.0**
	comp=Z,142nm,0.8s						
CTA	**Charters Tower**	**20.83**	**244**	*e*P	**P**	**11 59 45.4**	**0.0**
CTA				*e*S	**S**	**12 03 37.2**	**+1.3**
CTA	**Charters Tower**	**20.83**	**244**	P	**P**	**11 59 45.2**	**-0.2**
	comp=Z,99nm,1.1s,baz=68,slow=12,SNR=31						
CTA				S	**S**	**12 03 31.5**	**-4.4**
	comp=Z,3.5nm,0.9s,baz=44,slow=20,SNR=1.6						
CTA				LR	LR	12 06 46.7	
	comp=Z,5μm,20.8s,MS4.9,baz=62,slow=34						
CTA	**Charters Tower**	**20.83**	**244**	P	**P**	**11 59 45.2**	**-0.2**
CTA				S	**S**	**12 03 31.5**	**-4.4**
CTA				pmax	pmax		
	comp=Z,99nm,1.1s						
CTA				smax			
	comp=N,4.0nm,0.9s						
CTA				MLR	MLR		
	comp=Z,5μm,20.8s						
CTAO	**Charters Tower**	**20.83**	**244**	*e*P	**P**	**11 59 45.6**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,167nm,1.2s						
CTAO	**Charters Tower**	**20.83**	**244**	*e*P	**P**	**11 59 45.5**	**+0.2**
	comp=Z,167nm,1.2s						
COEN	**Coen**	**22.51**	**262**	*e*P	**P**	**12 00 03.1**	**-0.3**
	comp=Z,67nm,1.4s,mb4.9						
RAO	**Raoul Island**	**22.85**	**142**	LR	LR	12 07 21.4	
	comp=Z,4μm,19.3s,MS4.8,baz=231,slow=32						
ARMA	**Armidale**	**22.92**	**214**	⇑*i*P	**P**	**12 00 08.2**	**+0.6**
CNB	**Canberra Magne**	**27.94**	**210**	*e*P	**P**	**12 00 55.4**	**+1.6**
URZ	**Urewera**	**28.12**	**161**	P	**P**	**12 00 58.8**	**+3.5**
	comp=Z,80nm,1.3s,mb5.2,baz=166,slow=7.5,SNR=3.3						
STKA	**Stephens Creek**	**30.19**	**225**	⇑*i*P	**P**	**12 01 14.0**	**+0.2**
STKA				*e*PCP	PcP	12 04 14.9	+0.5
STKA				*e*S	**S**	**12 06 07.1**	**-3.8**
STKA	**Stephens Creek**	**30.19**	**225**	P	**P**	**12 01 14.0**	**+0.2**
	comp=Z,11nm,1.0s,mb4.5,baz=35,slow=11,SNR=4.8						
STKA				PcP	PcP	12 04 13.9	-0.5
	comp=Z,17nm,0.9s,baz=10.0,slow=1.7,SNR=6.4						
STKA				LR	LR	12 13 04.5	
	comp=Z,7μm,18.9s,MS5.3,baz=48,slow=36						
WRAB	**Tennant Creek**	**31.61**	**251**	P	**P**	**12 01 25.3**	**-1.1**
	comp=Z,119nm,0.8s,mb5.8,SNR=11						
WRAB	**Tennant Creek**	**31.61**	**251**	⇑*i*P	**P**	**12 01 25.6**	**-0.8**
WRAB	**Tennant Creek**	**31.61**	**251**	*e*P	**P**	**12 01 24.9**	**-1.5**
	comp=Z,58nm,1.4s,mb5.2						
WB2	**Warramunga Arr**	**31.61**	**251**	⇑*i*P	**P**	**12 01 25.6**	**-0.8**
WB2				*e*PCP	PcP	12 04 19.3	+0.9
WB2				*e*SCP	ScP	12 08 02.6	+3.5
WRA	**Warramunga Arr**	**31.62**	**251**	P	**P**	**12 01 25.2**	**-1.3**
	comp=Z,15nm,0.9s,mb4.8,baz=84,slow=9.3,SNR=23						
WRA				PcP	PcP	12 04 18.7	+0.4
	comp=Z,8.8nm,1.0s,baz=75,slow=2.9,SNR=8.6						
WRA				ScP	ScP	12 08 02.1	+3.0
	comp=Z,5.6nm,1.1s,baz=78,slow=3.4,SNR=13						
WRA				LR	LR	12 13 54.2	
	comp=Z,3μm,18.1s,MS5.0,baz=75,slow=36						
TOO	**Toolangi**	**31.66**	**212**	*e*P	**P**	**12 01 27.6**	**+0.9**
RPZ	**Rata Peaks**	**32.10**	**173**	P	**P**	**12 01 31.2**	**+0.8**
	comp=Z,65nm,0.8s,mb5.5,baz=326,slow=0.9,SNR=29						
RPZ				LR	LR	12 12 38.7	
	comp=Z,3μm,20.9s,MS4.9,baz=342,slow=33						
ASAR	**Alice Springs**	**32.83**	**244**	P	**P**	**12 01 35.5**	**-1.6**
	comp=Z,14nm,0.8s,mb4.9,baz=75,slow=9.5,SNR=83						
ASAR				PcP	PcP	12 04 21.6	0.0
	comp=Z,16nm,0.9s,baz=77,slow=3.2,SNR=17						
ASAR				ScP	ScP	12 08 06.3	+3.1
	comp=Z,7.5nm,1.1s,baz=77,slow=4.0,SNR=15						
GUMO	**Guam**	**32.88**	**319**	LR	LR	12 13 28.3	
	comp=Z,4μm,21.6s,MS5.1,baz=132,slow=34						
RAR	**Rarotonga**	**33.92**	**110**	LR	LR	12 12 50.2	
	comp=Z,3μm,21.6s,MS5.0,baz=277,slow=32						
FITZ	**Fitzroy Crossi**	**39.59**	**256**	*e*P	**P**	**12 02 34.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**39.59**	**256**	LR	LR	12 18 58.3	
	comp=Z,3μm,18.4s,MS5.2,baz=76,slow=36						
FORT	**Forrest**	**39.96**	**236**	*e*P	**P**	**12 02 37.3**	**-0.6**
BATI	**Baumata**	**41.72**	**268**	LR	LR	12 20 00.8	
	comp=Z,3μm,21.1s,MS5.2,baz=327,slow=36						
PPT	**Papeete**	**43.13**	**103**	*e*S	**S**	**12 09 45.7**	**+17**
	comp=Z,2μm,25.8s						
PPT				*e*LQ		12 13 33.3	
	comp=Z,7μm,28.0s						
PPT				*e*LR	LR	12 15 24.9	
	comp=Z,3μm,22.5s,baz=284						
PPT	**Papeete**	**43.13**	**103**	LR	LR	12 17 40.7	
	comp=Z,3μm,18.6s,MS5.1,baz=273,slow=32						
TBI	**Tubuai**	**43.68**	**111**	*e*S	**S**	**12 09 51.6**	**+15**
	comp=Z,1μm,27.8s						
TBI				*e*LQ		12 13 39.8	
	comp=Z,4μm,33.2s						
TBI				*e*LR	LR	12 15 39.3	
	comp=Z,3μm,23.8s,baz=288						
MBWA	**Marble Bar**	**45.35**	**252**	*e*P	**P**	**12 03 22.1**	**+0.3**
	comp=Z,47nm,1.1s,mb5.2						
MBWA				*e*pP	pP	12 03 36.3	+4.0
KAPI	**Kappang**	**46.35**	**274**	*e*P	**P**	**12 03 29.8**	**0.0**
	comp=Z,54nm,1.1s,mb5.4						
PCI	**Palu**	**47.21**	**280**	⇓*e*P	**P**	**12 03 40.0**	**+3.5**
PCI				*e*S	pP	12 03 56.5	+10
KLBR	**Kellerberrin**	**48.66**	**238**	⇑*i*P	**P**	**12 03 46.8**	**-0.7**
NWAO	**Narrogin (SRO)**	**49.39**	**237**	LR	LR	12 24 51.3	
	comp=Z,5μm,19.0s,MS5.5,baz=246,slow=36						
MUN	**Mundaring**	**50.03**	**238**	*e*P	**P**	**12 03 58.5**	**+0.5**
KKM	**Kota Kinabalu**	**52.74**	**287**	*e*P	**P**	**12 04 18.6**	**+0.1**
JOW	**Kunigami**	**53.17**	**317**	P	**P**	**12 04 19.9**	**-1.5**
	comp=Z,61nm,0.9s,mb5.5,baz=143,slow=7.4,SNR=6.4						
JOW				LR	LR	12 26 30.2	
	comp=Z,1μm,19.1s,MS5.0,baz=138,slow=36						
JOW	**Kunigami**	**53.17**	**317**	P	**P**	**12 04 19.9**	**-1.5**
JOW				LR	LR	12 26 30.2	
MJAR	**Matsushiro Arr**	**54.81**	**332**	P	**P**	**12 04 32.1**	**-1.1**
	comp=Z,14nm,0.9s,mb5.0,baz=169,slow=8.2,SNR=29						
MJAR	**Matsushiro Arr**	**54.81**	**332**	P	**P**	**12 04 32.1**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,14nm,0.9s						
MAJO	**Matsushiro**	**54.81**	**332**	*e*P	**P**	**12 04 32.3**	**-0.9**
MAJO				*e*		12 05 29.4	
MAJO				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
MAJO	**Matsushiro**	**54.81**	**332**	*e*P	**P**	**12 04 32.3**	**-0.9**
	comp=Z,28nm,0.9s,mb5.3						
MAJO				*e*PcP	PcP	12 05 29.4	-5.9
MAT	**Matsushiro**	**54.81**	**332**	P	**P**	**12 04 33.0**	**-0.2**
MAT				S	**S**	**12 12 13.0**	**+1.2**
YHNB	**Yeheng**	**56.76**	**310**	*e*P	**P**	**12 04 46.7**	**-0.8**
	comp=Z,88nm,1.1s,mb5.7						
RKT	**Rikitea**	**56.96**	**110**	*e*S	**S**	**12 12 55.0**	**+14**
	comp=Z,1μm,31.0s						
RKT				*e*LQ		12 19 21.4	
	comp=Z,2μm,31.2s						
RKT				*e*LR	LR	12 21 42.5	
	comp=Z,3μm,25.0s,baz=281						
KSM	**Kuching**	**57.02**	**280**	*e*P	**P**	**12 04 49.6**	**+0.1**
KSM				*e*PP	PP	12 06 57.4	+0.8
DRV	**Dumont d'Urvil**	**57.57**	**192**	P	pP	12 05 04.0	+0.8
DRV				S	**S**	**12 13 02.0**	**+14**
DRV				SS	SS	12 16 57.0	+19
DRV				L		12 19 00.0	
DRV				R		12 22 00.0	
QZH	**Quanzhou**	**59.02**	**309**	P	**P**	**12 05 05.0**	**+1.7**
Q

comp=Z,718nm,21.7s,MS4.8,baz=174,slow=31
WHN Wuhan 65.18 312 ⇑P P 12 05 43.6 -1.0
WHN S S 12 14 26.4 +1.0
WHN LR LR
comp=Z,2μm,20.5s,MS5.3
MDJ Mudanjiang 65.19 332 P P **12 05 44.4 +0.1**
MDJ PCP PcP 12 06 15.4 -1.2
MDJ PP PP 12 08 08.0 -0.2
MDJ S S 12 14 23.9 -1.0
MDJ SCS ScS 12 15 34.9 -1.8
MDJ SS SS 12 18 37.4 -0.9
MDJ AMB AMB
comp=Z,30nm,1.1s,mb5.2
MDJ AMB AMB
comp=Z,292nm,9.6s
MDJ LR LR
comp=N,370nm,21.9s,MS4.8
MDJ LR LR
comp=E,605nm,23.6s,MS4.8
MDJ LR LR
comp=Z,900nm,16.9s
MDJ Mudanjiang 65.19 332 *e*P P **12 05 44.6 +0.4**
comp=Z,34nm,1.0s,mb5.3
DL2 Dalian 65.31 323 ⇑P P 12 05 45.5 +0.3
DL2 S S 12 14 24.3 -2.3
DL2 AMB AMB
comp=Z,30nm,1.1s,mb5.2
DL2 AMB AMB
comp=Z,200nm,7.0s
DL2 LR LR
comp=N,230nm,15.8s,MS4.7
DL2 LR LR
comp=E,320nm,17.0s,MS4.7
DL2 LR LR
comp=Z,520nm,19.6s,MS4.7
CASY Casey 65.84 201 ⇑*i*P P 12 05 47.5 -0.7
SBA Scott Base 66.06 180 *e*P P **12 05 50.0 +0.5**
SNY Shenyang 66.17 326 ⇑P P 12 05 49.8 -0.9
SNY S S 12 14 35.4 -1.6
SNY AMB AMB
comp=Z,19nm,1.1s,mb5.0
SNY AMB AMB
comp=Z,292nm,6.8s
SNY LR LR
comp=N,714nm,16.5s
SNY LR LR
comp=E,488nm,23.7s
SNY LR LR
comp=Z,754nm,21.0s,MS4.9
TIA Tai'an 66.43 318 *e*P P **12 05 52.0 -0.5**
CN2 Changchun 66.58 329 *e*P P **12 05 53.1 -0.2**
CN2 *e*S S 12 14 39.5 -2.4
CN2 SS SS 12 19 00.3 +0.3
CN2 AMB AMB
comp=Z,50nm,1.0s,mb5.5
CN2 AMB AMB
comp=Z,320nm,9.0s
CN2 LR LR
comp=N,760nm,18.0s,MS5.0
CN2 LR LR
comp=E,560nm,18.0s,MS5.0
CN2 LR LR
comp=Z,890nm,20.0s,MS5.0
KLR Kul'dur 67.89 336 *e*P P **12 05 57.8 -3.6**
KLR pmax pmax
comp=E,24nm,1.4s
KLR pmax pmax
comp=Z,48nm,1.4s,mb5.3
GYA Guiyang 69.17 304 ⇑*i*P P 12 06 12.4 +2.5
GYA PCP PcP 12 06 35.4 +1.7
GYA PP PP 12 08 47.4 +4.2
GYA SCP 12 10 33.5
GYA PCS 12 10 40.3
GYA S S 12 15 11.8 -1.7
GYA SKS 12 16 03.3
GYA SS SS 12 19 41.5 +0.9
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,140nm,5.8s
GYA LR LR
comp=N,840nm,18.6s,MS5.1
GYA LR LR
comp=E,680nm,19.2s,MS5.1
GYA LR LR
comp=Z,610nm,20.0s,MS4.8
BJT Baijiatuau 69.30 321 *e*P P **12 06 10.6 +0.2**
BJT pmax pmax
comp=Z,68nm,1.1s
BJT Baijiatuau 69.30 321 *e*P P **12 06 10.6 +0.1**
comp=Z,68nm,1.1s,mb5.5
BJI Beijing 69.31 321 P P **12 06 10.8 +0.3**
BJI AMB AMB
comp=Z,55nm,1.1s,mb5.4
BJI AMB AMB
comp=Z,490nm,6.3s
BJI LR LR
comp=N,729nm,27.2s,MS5.0
BJI LR LR
comp=E,1μm,24.1s,MS5.0
BJI LR LR
comp=Z,2μm,27.2s,MS5.1
BJI Beijing 69.31 321 P P **12 06 10.7 +0.2**
BJI pmax pmax
comp=Z,55nm,1.1s,mb5.4
BJI MLR MLR
comp=Z,2μm,27.2s,MS5.1
BJI Beijing 69.31 321 P P **12 06 10.7 +0.2**
comp=Z,55nm,1.1s,mb5.4
BJI S S 12 15 02.7 -12
BJI LR LR
comp=Z,2μm,27.2s,MS5.1
XAN Xi'an 70.91 312 P P **12 06 21.0 +0.5**
XAN AP pP 12 06 31.1 -0.4
XAN XP sP 12 06 36.3 +0.8
XAN S S 12 15 27.6 -6.2
XAN AMB AMB
comp=Z,37nm,1.2s,mb5.2
XAN AMB AMB
comp=Z,333nm,9.2s
XAN LR LR
comp=E,542nm,20.5s
XAN LR LR
comp=Z,926nm,22.0s,MS5.0
KMI Kunming 71.85 301 P P **12 06 28.4 +2.1**
KMI PP PP 12 09 10.4 +4.0
KMI S S 12 15 44.3 -0.6
KMI PS 12 16 21.1
KMI SKS 12 16 23.5
KMI SS SS 12 20 23.4 +1.4
KMI SSS 12 23 32.1
KMI AMB AMB
comp=Z,33nm,1.4s,mb5.1
KMI AMB AMB
comp=Z,413nm,10.7s
KMI LR LR
comp=N,490nm,19.7s,MS5.0
KMI LR LR
comp=E,687nm,18.7s,MS5.0
KMI LR LR
comp=Z,908nm,20.7s,MS5.0
KMI Kunming 71.85 301 P P **12 06 28.4 +2.1**
KMI *PP pP 12 06 42.4 +5.1
KMI 12 09 10.4
KMI S S 12 15 44.2 -0.7
KMI *SS sS 12 16 07.7 +4.7
KMI PS 12 16 21.1
KMI 12 16 23.5
KMI SS SS 12 20 23.4 +1.4
KMI SSS 12 23 32.1
KMI pmax pmax
comp=Z,33nm,1.4s,mb5.1
KMI MLR MLR
comp=Z,910nm,20.7s,MS5.0
KMI Kunming 71.85 301 P P **12 06 28.4 +2.1**
comp=Z,33nm,1.4s,mb5.1
KMI pP pP 12 06 42.4 +5.1
KMI sP sP 12 06 47.8 +6.4
KMI PP PP 12 09 10.4 +4.0
KMI S S 12 15 44.2 -0.7
KMI sS sS 12 16 07.7 +4.7
KMI PS 12 16 21.1
KMI SKS 12 16 23.5
KMI SS SS 12 20 23.4 +1.4
KMI SSS 12 23 32.1
KMI LR LR
comp=Z,910nm,20.7s,MS5.0
CHRT Chiangrai 72.50 295 ⇓P P **12 06 31.5 +1.2**
comp=Z,110nm,0.9s,mb5.8
MIR Mirnyy 72.57 204 ⇑*i*P P 12 06 30.0 +0.1
MIR pmax pmax
comp=Z,200nm,1.4s,mb5.8
HHC Hu-ho-hao-te 72.65 320 ⇑P P 12 06 31.9 +1.1
HHC PCP PcP 12 06 49.3 +1.2
HHC PP PP 12 09 16.5 +3.6
HHC S S 12 15 51.8 -1.7
HHC SKS 12 16 27.8
HHC SCS ScS 12 16 30.3 -5.2
HHC SS SS 12 20 35.6 +1.9
HHC AMB AMB
comp=Z,49nm,1.3s,mb5.3
HHC AMB AMB
comp=Z,351nm,8.4s
HHC LR LR
comp=N,839nm,17.7s,MS5.2
HHC LR LR
comp=E,811nm,18.0s,MS5.2
HHC LR LR
comp=Z,1μm,17.3s,MS5.3
CMAR Chiang Mai Arr 72.78 294 P P **12 06 33.4 +1.4**
comp=Z,10nm,1.0s,mb4.7,baz=115,slow=4.2,SNR=36
CMAR Chiang Mai Arr 72.78 294 ⇓*e*P P 12 06 33.4 +1.4
CHG Chiang Mai 72.89 294 ⇓P P **12 06 34.0 +1.3**
comp=Z,15nm,1.1s,mb4.8
CHTO Chiang Mai 72.89 294 *e*P P **12 06 33.0 +0.3**
CHTO pmax pmax
comp=Z,11nm,1.0s,mb4.7
CHTO Chiang Mai 72.89 294 *e*P P **12 06 33.0 +0.3**
comp=Z,11nm,1.0s,mb4.8
HIA Hailar 73.21 330 *e*P P **12 06 34.3 +0.4**
HIA pmax pmax
comp=Z,59nm,1.1s
HIA Hailar 73.21 330 *e*P P **12 06 34.3 +0.5**
comp=Z,59nm,1.1s,mb5.4
CD2 Chengdu 73.37 307 ⇑*i*P P 12 06 35.6 +0.3
CD2 AMB AMB
comp=Z,60nm,1.3s,mb5.4
CD2 AMB AMB
comp=Z,150nm,12.0s
CD2 LR LR
comp=N,890nm,16.8s,MS5.2
CD2 LR LR
comp=E,800nm,18.0s,MS5.2
CD2 LR LR
comp=Z,800nm,16.8s,MS5.1
BTO Baotou 73.51 319 *e*P P **12 06 36.0 +0.1**
LZH Lanzhou 75.55 312 ⇑P P 12 06 49.8 +2.0
LZH AP pP 12 07 00.3 +1.4
LZH XP sP 12 07 04.1 +1.2
LZH PP PP 12 09 40.3 +2.6
LZH S S 12 16 27.3 +1.0
LZH XS sS 12 16 44.3 -0.2
LZH SKS 12 16 52.5
LZH SS SS 12 21 21.0 +3.0
LZH AMB AMB
comp=Z,208nm,1.5s,mb5.8
LZH AMB AMB
comp=Z,517nm,5.7s
LZH LR LR
comp=N,1μm,17.5s
LZH LR LR
comp=Z,3μm,19.3s,MS5.6
LZH Lanzhou 75.55 312 ⇑P P 12 06 49.7 +1.9
LZH *PP pP 12 07 00.2 +1.3
LZH *SP sP 12 07 04.1 +1.2
LZH 12 09 40.3
LZH S S 12 16 27.2 +0.9
LZH *SS sS 12 16 44.3 -0.2
LZH 12 16 52.5
LZH SS SS 12 21 21.0 +3.0
LZH pmax pmax
comp=Z,208nm,1.5s,mb5.8
LZH MLR MLR
comp=Z,3μm,19.3s,MS5.6
LZH Lanzhou 75.55 312 ⇑P P 12 06 49.7 +1.9
comp=Z,208nm,1.5s,mb5.8
LZH pP pP 12 07 00.2 +1.3
LZH sP sP 12 07 04.1 +1.2
LZH PP PP 12 09 40.3 +2.6
LZH S S 12 16 27.2 +0.9
LZH sS sS 12 16 44.3 -0.2
LZH SKS 12 16 52.5
LZH SS SS 12 21 21.0 +3.0
LZH LR LR
comp=Z,3μm,19.3s,MS5.6
CLNS Chul'man 76.41 338 *e*P P **12 06 52.5 +0.3**
CLNS *e* pP 12 07 02.3 -1.0
CLNS *e* 12 09 40.6
CLNS *e*PPP 12 11 31.3
CLNS *e*S S 12 16 33.8 -1.0
CLNS pmax pmax
comp=Z,36nm,1.0s,mb5.3
CLNS pmax pmax
comp=E,9.0nm,0.8s
CLNS pmax pmax
comp=N,27nm,1.4s
CLNS smax
comp=N,277μm,12.5s
CLNS smax
comp=E,174μm,12.5s
CLNS MLR MLR
comp=N,170nm,13.0s,MS4.7
CLNS MLR MLR
comp=Z,341nm,16.0s,MS4.8
CLNS MLR MLR
comp=E,222nm,14.0s,MS4.7
CIT Chita 78.00 330 *e*P P **12 07 01.8 +0.5**
CIT pmax pmax
comp=Z,254nm,1.3s,mb6.0
YAK Yakutsk 78.92 343 *e*P P **12 07 04.3 -1.8**
YAK pmax pmax
comp=N,12nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.2s
YAK pmax pmax
comp=Z,38nm,1.0s,mb5.3
YAK MLR MLR
comp=Z,2μm,19.0s,MS5.5
YAK MLR MLR
comp=E,1μm,21.0s,MS5.4
YAK MLR MLR
comp=N,1μm,19.0s,MS5.4
YAK Yakutsk 78.92 343 *e*P P **12 07 05.4 -0.7**
ULN Ulaanbaatar 79.13 324 *e*P P **12 07 08.5 +0.9**
ULN pmax pmax
comp=Z,70nm,1.0s,mb5.5
ULN Ulaanbaatar 79.13 324 *e*P P **12 07 08.5 +0.9**
comp=Z,70nm,1.0s,mb5.5
SONM Songino Array 79.50 324 P P **12 07 10.9 +1.3**
comp=Z,36nm,1.0s,mb5.2,baz=135,slow=5.7,SNR=76
SONM Songino Array 79.50 324 P P **12 07 10.9 +1.3**
SONM pmax pmax
comp=Z,36nm,1.0s
BILL Bilibino 79.61 0 ⇑*i*P P 12 07 08.6 -1.2
BILL pmax pmax
comp=Z,23nm,1.0s,mb5.1
BILL Bilibino 79.61 0 ⇑*i*P P 12 07 08.7 -1.1
GTA Gaotai 79.86 314 ⇑*i*P P 12 07 13.4 +1.6
GTA PP PP 12 10 17.9 +4.2
GTA S S 12 17 14.8 +2.1
GTA SKS 12 17 19.4
GTA PS 12 18 04.9
GTA SS SS 12 22 27.8 +4.9
GTA AMB AMB
comp=Z,98nm,1.2s,mb5.6
GTA AMB AMB
comp=Z,477nm,8.6s
GTA LR LR
comp=N,550nm,18.7s,MS5.2
GTA LR LR
comp=E,906nm,20.5s,MS5.2
GTA LR LR
comp=Z,1μm,20.2s,MS5.2
BOD Bodaibo 81.37 335 *e*P P **12 07 18.6 -0.8**
BOD pmax pmax
comp=Z,21nm,1.3s,mb4.9
IRK Irkutsk 82.89 327 *e*P P **12 07 26.9 -0.7**
IRK pmax pmax
comp=Z,42nm,0.9s,mb5.5
TLY Talaya 82.96 326 P P **12 07 28.5 +0.6**
comp=Z,258nm,1.0s,mb6.2,SNR=10
TLY Talaya 82.96 326 *e*P P **12 07 28.0 +0.1**
TLY *e*S S 12 17 46.7 +2.4
TLY *e* 12 19 03.1
TLY pmax pmax
comp=Z,53nm,1.0s,mb5.5
TLY MLR MLR
comp=Z,498nm,19.0s,MS4.9
TLY Talaya 82.96 326 *e*P P **12 07 28.1 +0.2**
comp=Z,32nm,0.8s,mb5.4
LSA Lhasa 83.09 302 P P **12 07 31.4 +2.3**
LSA AMB AMB
comp=Z,20nm,1.0s,mb5.1
IMA2 Indian Mountai 83.11 15 *e*P P **12 07 29.2 +0.8**
COLA College 83.86 18 ⇑*i*P P 12 07 30.3 -1.9
COLA College 83.86 18 *e*P P **12 07 30.0 -2.2**
comp=Z,11nm,0.9s,mb5.0
MAW Mawson 84.19 202 ⇑*i*P P 12 07 33.7 -0.4
MAW Mawson 84.19 202 P P **12 07 34.3 +0.3**
comp=Z,18nm,1.0s,mb5.2,baz=101,slow=7.0,SNR=28
MAW Mawson 84.19 202 P P **12 07 34.3 +0.2**
MAW pmax pmax
comp=Z,18nm,1.0s
HUMO Hull Mountain 84.27 45 *e*P P **12 07 33.2 -1.6**
comp=Z,14nm,1.1s,mb5.0
HUMO *e*pP pP 12 07 52.9 +6.9
CMB Columbia Colle 84.51 50 *e*P P **12 07 36.8 +0.6**
ISA Isabella 85.20 52 *e*P P **12 07 39.3 -0.4**
ISA pmax pmax
comp=Z,18nm,1.6s,mb5.0
ISA Isabella 85.20 52 *e*P P **12 07 39.3 -0.5**
comp=Z,18nm,1.6s,mb5.0
WAKR Walker 85.37 49 *e*P P **12 07 39.9 -0.6**
ODAN Odare 85.46 298 *e*P P **12 07 41.8 +0.6**
comp=Z,151nm,1.3s,mb6.0
MOD Modoc 85.86 46 *e*P P **12 07 45.9 +3.0**
NVAR Mina Array Bea 86.19 50 P P **12 07 44.0 -0.5**
comp=Z,1.5nm,0.9s,baz=232,slow=8.0,SNR=9.2
JIRN Jiri 86.70 299 *e*P P **12 07 47.9 +0.6**
GUN Gumba 87.03 299 *e*P P **12 07 49.6 +0.7**
WVOR Wild Horse Val 87.21 46 *e*P P **12 07 49.0 -0.4**
WVOR pmax pmax
comp=Z,19nm,1.5s,mb5.1
WVOR Wild Horse Val 87.21 46 *e*P P **12 07 49.0 -0.4**
comp=Z,19nm,1.5s,mb5.1
PKIN Phulchoki 87.36 299 *e*P P **12 07 51.2 +0.7**
comp=Z,120nm,1.6s,mb5.9
KKN Kakani 87.51 299 *e*P P **12 07 51.5 +0.2**
DMN Daman 87.61 299 *e*P P **12 07 52.0 +0.2**
comp=Z,133nm,1.3s,mb6.0
HAWA Hanford 87.89 42 *e*P P **12 07 53.6 +1.0**
comp=Z,30nm,1.8s,mb5.2
GKN Gorkha 88.11 299 *e*P P **12 07 53.8 -0.3**
comp=Z,40nm,1.0s,mb5.6
HVS Khovu-Aksy 88.37 323 *d*iP P **12 07 54.7 -0.1**
HVS pmax pmax
comp=Z,170nm,1.0s,mb6.2
BMO Blue Mountains 88.88 44 *e*P P **12 07 56.7 -0.6**
DANN Dangsing 88.95 299 *e*P P **12 07 57.8 -0.3**
comp=Z,64nm,1.0s,mb5.9
ARUT Antelope Range 89.68 51 *e*P P **12 08 01.9 +0.6**
ARUT *e**PP pP 12 08 17.3 +4.8
WMQ Urumqi 89.90 315 ⇑*i*P P 12 08 02.5 +0.4
WMQ PP PP 12 11 38.0 +2.7
WMQ SKS 12 18 28.0
WMQ *e*S S 12 18 48.0 -4.2
WMQ PS PS 12 20 04.0 +1.4
WMQ SS SS 12 24 50.0 -0.7
WMQ AMB AMB
comp=Z,73nm,1.1s,mb5.9
WMQ AMB AMB
comp=Z,246nm,5.0s
WMQ LR LR
comp=N,530nm,20.6s,MS5.2
WMQ LR LR
comp=E,668nm,20.6s,MS5.2
WMQ LR LR
comp=Z,559nm,20.6s,MS5.0
HLID Hailey 90.50 46 *e*P P **12 08 04.8 -0.2**
comp=Z,34nm,2.3s,mb5.3
WUAZ Wupatki 90.72 54 *e*P P **12 08 06.3 +0.1**
comp=Z,8.1nm,1.1s,mb5.0
WUAZ *e*pP pP 12 08 23.8 +6.3
MSU Marysvale 90.83 51 *e*P P **12 08 07.5 +0.9**
MSU *e**PP pP 12 08 22.2 +4.4
SYO Syowa Base 91.20 197 ⇑*e*P P 12 08 05.6 -2.2
HVU Hansel Valley 91.20 48 *e*P P **12 08 08.6 +0.3**
HVU *e**PP pP 12 08 26.8 +7.3
NLU North Lily Min 91.26 50 *e*P P **12 08 08.8 +0.2**
NLU *e*pP pP 12 08 26.1 +6.3
CHMT Chamberlain Mo 92.18 43 *e*P P **12 08 11.1 -1.5**
DLMT Dillon 92.23 44 *e*P P **12 08 14.9 +2.0**
comp=Z,15nm,1.1s,mb5.2
SRU San Rafael 92.23 51 *e*P P **12 08 11.9 -1.2**
PDAR Pinedale Array 93.75 47 P P **12 08 20.4 +0.4**
comp=Z,0.9nm,1.1s,baz=188,slow=3.0,SNR=3.7
PDAR PKKP PKKPbc 12 25 24.6 -1.1
comp=Z,1.1nm,0.9s,baz=95,slow=4.8,SNR=7.8
PDAR LR LR 12 46 11.6
comp=Z,877nm,18.8s,MS5.2,baz=85,slow=33
MK31 Makanchi Array 94.33 317 *e*P P **12 08 22.8 +0.2**
MKAR Makanchi Array 94.33 317 P P **12 08 22.8 +0.2**
comp=Z,74nm,0.9s,mb6.1,baz=98,slow=6.2,SNR=264
MKAR Makanchi Array 94.33 317 P P **12 08 22.8 +0.2**
MKAR pmax pmax
comp=Z,74nm,0.9s
MKAR Makanchi Array 94.33 317 P P **12 08 22.8 +0.2**
ZAA0 Zalesovo Array 94.39 324 *e*P P **12 08 21.8 -0.9**
ZALV Zalesovo Beam 94.39 324 P P **12 08 22.0 -0.7**
comp=Z,30nm,1.0s,mb5.7,baz=103,slow=4.7,SNR=72
ZALV Zalesovo Beam 94.39 324 P P **12 08 22.0 -0.7**
ZALV pmax pmax
comp=Z,30nm,1.0s,mb5.7
YKA Yellowknife Ar 95.44 27 LR LR 12 53 22.9
comp=Z,419nm,18.1s,MS5.0,baz=215,slow=37
NVS Novosibirsk 95.49 325 ⇑*i*P P 12 08 25.8 -1.9
NVS pmax pmax
comp=Z,45nm,1.6s,mb5.7
NVS pmax pmax
comp=N,16nm,1.8s
NVS pmax pmax
comp=E,27nm,1.6s
NVL N'lazarevskaya 95.80 188 P P **12 08 28.0 -0.9**
NVL pmax pmax
comp=Z,25nm,1.6s,mb5.4
NVL MLR MLR
comp=N,772nm,22.0s,MS5.3
NVL MLR MLR
comp=E,681nm,22.0s,MS5.3
NVL MLR MLR
comp=Z,2μm,22.0s,MS5.5
TXAR Lajitas Array 95.83 61 P P **12 08 30.4 +0.6**
comp=Z,0.3nm,0.8s,baz=216,slow=6.2,SNR=3.5
TXAR PKKP PKKPbc 12 25 21.2 +1.5
comp=Z,0.7nm,0.9s,baz=86,slow=3.8,SNR=7.7
TXAR LR LR 12 44 01.3
comp=Z,2μm,19.9s,MS5.5,baz=20,slow=31
TXAR Lajitas Array 95.83 61 P P **12 08 30.4 +0.6**
TXAR PKKP PKKPbc 12 25 21.2 +1.5
TXAR LR LR 12 44 01.3
SNAA Sanae 96.41 183 *e*P P **12 08 29.7 -2.0**
SNAA *e* 12 08 33.0
SNAA *e* 12 08 43.5
SNAA Sanae 96.41 183 *e*P P **12 08 29.6 -2.0**
comp=Z,21nm,1.3s,mb5.4
SNAA *e*PP PP 12 12 20.6 -4.4
VNA3 Neumayer Olymp 97.12 181 *e*P P **12 08 32.7 -2.2**
VNA3 *e* 12 08 37.3
VNA3 *e* 12 08 52.3
VNA3 *e* 12 08 57.5
VNA2 Neumayer--Watz 97.37 182 *e*P P **12 08 34.5 -1.5**
VNA2 *e* 12 08 39.4
VNA2 *e* 12 08 51.2
VNA2 *e* 12 08 57.3
KURK Kurchatov 97.46 320 P P **12 08 36.2 -0.5**
comp=Z,52nm,1.8s,mb5.7,SNR=7.5
KURK Kurchatov 97.46 320 P P **12 08 35.8 -0.9**
comp=Z,3.8nm,0.9s,mb4.8,baz=103,slow=3.3,SNR=19
KURK LR LR 12 51 49.9
comp=Z,769nm,20.6s,MS5.2,baz=95,slow=35
KURK Kurchatov 97.46 320 P P **12 08 35.8 -0.9**
KURK pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
KURK MLR MLR
comp=Z,769nm,20.6s,MS5.2

KURK	**Kurchatov**	**97.46**	**320**	*e*P		**P**	**12 08 35.8**	**-0.9**
	comp=Z,19nm,1.4s,mb5.3								
KSH	**Kashi**	**97.53**	**309**	*e*P		**P**	**12 08 38.1**	**+0.8**
KSH				*e*PP		PP	12 12 38.1	+3.0
KSH				*e*PPP			12 14 45.3	
KSH				*e*S		S	12 19 52.5	-7.3
KSH				*e*SS		SS	12 26 39.1	-0.8
KSH				LR		LR		
	comp=Z,1μm,16.2s,MS5.5								
VNA1	**Neumayer--Stat**	**97.67**	**182**	*e*P		**P**	**12 08 37.1**	**-0.3**
VNA1				*e*			12 08 41.6	
BVAR	**Borovoye Array**	**102.78**	**322**	P		Pdif	12 08 60.0	-0.5
	comp=Z,4.5nm,0.8s,baz=97,slow=6.1,SNR=13								
BVAR	**Borovoye Array**	**102.78**	**322**	P		Pdif	12 09 00.0	-0.4
BVAR				pmax		pmax		
	comp=Z,5.0nm,0.8s								
APA	**Apatity**	**116.26**	**342**	⇓*i* PKIKP		PKPdf	12 13 40.0	-5.8
APA				pmax		pmax		
	comp=Z,13nm,1.0s								
APA				MLR		MLR		
	comp=Z,1μm,22.0s,MS5.5								
ARCES	**ARCESS Array B**	**117.15**	**345**	PKP		PKPdf	12 13 45.9	-1.6
	comp=Z,0.7nm,0.3s,baz=84,slow=2.6,SNR=13								
ARCES	**ARCESS Array B**	**117.15**	**345**	PKIKP		PKPdf	12 13 45.9	-1.6
ARCES				pmax		pmax		
	comp=Z,1.0nm,0.3s								
BOSA	**Boshof**	**124.85**	**223**	PKP		PKPdf	12 14 03.1	-0.5
	comp=Z,14nm,0.9s,baz=183,slow=2.8,SNR=12								
BOSA	**Boshof**	**124.85**	**223**	PKIKP		PKPdf	12 14 03.1	-0.5
BOSA				pmax		pmax		
	comp=Z,14nm,0.9s								
ANN	**Anapa**	**125.35**	**317**	*i* PKIKP		PKPdf	12 14 02.7	-1.3
ANN				pmax		pmax		
	comp=Z,52nm,1.7s								
ANN				MLR		MLR		
	comp=N,933nm,22.0s,MS5.5								
ANN				MLR		MLR		
	comp=E,493nm,22.0s,MS5.5								
ANN				MLR		MLR		
	comp=Z,515nm,22.0s,MS5.2								
KMBO	**Kilima Mbogo**	**127.65**	**259**	PKP		PKPdf	12 14 10.7	+1.4
	comp=Z,3.9nm,0.9s,baz=26,slow=1.6,SNR=6.3								
KMBO	**Kilima Mbogo**	**127.65**	**259**	PKIKP		PKPdf	12 14 10.7	+1.4
KMBO				pmax		pmax		
	comp=Z,4.0nm,0.9s								
AKASG	**Malin Array Be**	**127.70**	**327**	PKP		PKPdf	12 14 07.8	-0.5
	comp=Z,1.0nm,0.6s,baz=32,slow=1.3,SNR=7.1								
AKASG	**Malin Array Be**	**127.70**	**327**	PKIKP		PKPdf	12 14 07.8	-0.5
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.6s								
CLL	**Collm**	**134.94**	**336**	*e*PKIKP		PKPdf	12 14 23.0	+1.1
CLL				MLR		MLR		
	comp=Z,600nm,21.9s,MS5.3								
KHC	**Kasperske Hory**	**136.38**	**334**	*e*PKPDF		PKPdf	12 14 19.5	-5.2
GERES	**GERESS Array B**	**136.54**	**334**	PKP		PKPdf	12 14 24.9	-0.1
	comp=Z,2.6nm,1.0s,baz=318,slow=1.8,SNR=6.7								
GERES				SKPbc		SKPbc	12 17 59.8	+4.9
	comp=Z,1.7nm,0.8s,baz=36,slow=3.4,SNR=5.2								
GRF	**Grafenberg Arr**	**136.91**	**336**	*e*SKPab			12 18 01.4	
SMF	**Signal de Mont**	**142.17**	**340**	*e*PKP1		PKPdf	12 14 34.7	-0.6
AVF	**Avril sur Loir**	**142.20**	**341**	*e*PKP1		PKPdf	12 14 34.2	-1.2
VIVF	**Saint-Julien-l**	**143.42**	**338**	*e*PKP1		PKPdf	12 14 35.1	-2.5
	comp=Z,30nm,1.2s								
PGF	**Pioggiola**	**143.47**	**331**	*e*PKP1		PKPdf	12 14 35.5	-2.3
	comp=Z,48nm,1.1s								
FRF	**La Foret Royal**	**143.72**	**335**	*e*PKP1		PKPdf	12 14 35.5	-2.7
SMRF	**Simiane la Rot**	**143.82**	**336**	*e*PKP1		PKPdf	12 14 36.3	-2.0
LMR	**La Mourre**	**143.96**	**334**	*e*PKP1		PKPdf	12 14 36.3	-2.3
	comp=Z,82nm,1.2s								
CAF	**Calviac**	**144.27**	**341**	*e*PKP1		PKPdf	12 14 37.7	-1.4
	comp=Z,30nm,1.2s								
LASF	**Ste Croix**	**144.39**	**338**	*e*PKP1		PKPdf	12 14 38.3	-1.0
	comp=Z,48nm,1.1s								
LFF	**La Frestale**	**144.68**	**342**	*e*PKP1		PKPdf	12 14 38.7	-1.1
MTLF	**Montolieu**	**145.62**	**339**	*e*PKP1		PKPbc	12 14 42.2	+0.5
	comp=Z,36nm,1.0s								
ETSF	**Etsaut**	**146.92**	**342**	*e*PKP1		PKPbc	12 14 46.1	+0.5
	comp=Z,37nm,1.1s								
KEST	**Kesra**	**148.25**	**323**	PKPbc		PKPbc	12 14 49.2	-0.2
	comp=Z,8.1nm,1.0s,baz=321,slow=1.1,SNR=11								
CKFL	**Kef-Lekhel**	**149.27**	**326**	P		PKPbc	12 14 52.0	-0.1
CASM	**Ain Smara**	**149.50**	**326**	P		PKPbc	12 14 52.0	-0.6
DFRA	**Djebel Bou Aff**	**149.61**	**328**	P		PKPbc	12 14 53.0	+0.1
CTEI	**Djebel Teioual**	**149.69**	**326**	P		PKPbc	12 14 54.0	+0.9
SET	**Setif**	**150.12**	**328**	P		PKPbc	12 14 55.0	+0.8
ESDC	**Sonseca Array**	**150.88**	**344**	PKPbc		PKPbc	12 14 55.5	-0.4
	comp=Z,2.9nm,0.9s,baz=0.6,slow=2.9,SNR=8.5								
TORD	**Torodi Ar. Bea**	**164.77**	**277**	PKP		PKPdf	12 15 07.1	-0.8
	comp=Z,5.1nm,0.9s,baz=33,slow=1.1,SNR=21								
KIC	**Kosan Boka**	**169.52**	**240**	*e*P		PKPab	12 16 24.5	-0.2
	comp=Z,69nm,1.0s								
LIC	**Lamto**	**169.69**	**238**	*e*PKIKP		PKPdf	12 15 09.3	-2.3
	comp=Z,54nm,1.3s								
LIC	**Lamto**	**169.69**	**238**	*e*P		PKPab	12 16 25.2	-0.3
	comp=Z,78nm,1.5s								
DBIC	**Dimbokro**	**169.78**	**241**	PKP		PKPdf	12 15 10.6	-1.0
	comp=Z,6.0nm,1.0s,baz=121,slow=1.2,SNR=4.1								
DBIC				PKPab		PKPab	12 16 26.8	+0.9
	comp=Z,7.4nm,0.9s,baz=99,slow=6.5,SNR=5.2								
DBIC	**Dimbokro**	**169.78**	**241**	PKIKP		PKPdf	12 15 10.6	-1.0
DBIC				pmax		pmax		
	comp=Z,6.0nm,1.0s								
DBIC				pmax		pmax		
	comp=Z,7.0nm,0.9s								
TIC	**Toumodi**	**169.91**	**240**	*e*P		PKPab	12 16 26.8	+0.4
	comp=Z,75nm,1.0s								

ISC 24 11:58:59.5±2.5, 4604N±006×135E±02, h0km, n5, σ0.8 37/9, 1C, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRE	**Drenchia**	**0.17**	**34**	⇑*i* Pg	**Pg**	**11 59 02.8**	**+0.1**
CADS	**Cadrg**	**0.25**	**39**	*i* Pg	**Pg**	**11 59 04.2**	**0.0**
CADS				*i* Sg	**Sg**	**11 59 07.9**	**+0.5**
CADS							
	comp=Z,13nm,0.1s						
VOY	**Vojsko**	**0.27**	**91**	*e*Pg	**Pg**	**11 59 04.2**	**-0.4**
VOY				*e*		11 59 05.0	
VOY				*e*Sg	**Sg**	**11 59 07.5**	**-0.5**
JAVS	**Javornik**	**0.41**	**110**	*i* Pg	**Pg**	**11 59 07.5**	**+0.1**
JAVS				*i* Sg	**Sg**	**11 59 13.3**	**+0.6**
JAVS							
	comp=Z,6.0nm,0.2s						
GORS	**Gorjuse**	**0.44**	**50**	*i* Pg	**Pg**	**11 59 07.5**	**-0.4**
GORS				*i* Sg	**Sg**	**11 59 13.4**	**-0.1**

IDC 24 12:09:54.2±64.0, 1814S×17918E, h699km±490km, mb2.9/4, mb1 3.1/4, mb1mx2.8/16, mbtmp2.9/4, Error ellipse: s-maj=703.9km s-min=146.9km az=70.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.51**	**241**	P	P	12 16 05.5	+0.1
	0.8nm,0.3s,baz=77,slow=9.0,SNR=13						
WRA	**Warramunga Arr**	**42.33**	**260**	P	P	12 16 50.7	-0.9
	0.7nm,0.4s,baz=98,slow=6.9,SNR=33						
ASAR	**Alice Springs**	**42.52**	**255**	P	P	12 16 53.1	+0.1
	6.1nm,0.5s,baz=89,slow=8.0,SNR=151						
FITZ	**Fitzroy Crossi**	**50.73**	**261**	P	P	12 17 54.6	+0.6
	0.4nm,0.3s,baz=70,slow=9.2,SNR=4.7						

*NEIC **24** 12:17:10.9±0.8, 5452N×16928E, h10km, mb4.6/2, Error ellipse: s-maj=26.6km s-min=10.3km az=185.0*
*MOS **24** 12:17:10.5±1.9, 5425N×16907E, h17km, mb4.3/4, Error ellipse: s-maj=25.7km s-min=16.0km az=178.4*
*KRSC **24** 12:17:11.4±1.5, 5381N×16877E, h15km±15km, ML4.2*
*ISCJB **24** 12:17:12.8±0.6, 5380N±008×16885E±006, h33km, mb3.9/6, Error ellipse: s-maj=11.1km s-min=5.1km az=9.2*
*IDC **24** 12:17:16.5±4.3, 5445N×16880E, h48km±41km, mb3.4/4, mb1 3.7/5, mb1mx3.4/24, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=39.1km s-min=25.7km az=155.0*

ISC 24 12:17:15.1±0.8, 5383N±008×16892E±007, h37km±14km, n25, σ1.9 32/36, mb3.9/6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMY	**Shemya**	**3.30**	**108**	*e*PN	**Pn**	**12 18 03.0**	**-1.1**
KBTR	**Krutoberegovo**	**4.24**	**307**	*e*P	**Pn**	**12 18 16.0**	**-1.1**
KBTR				S	**Sn**	**12 19 04.0**	**-1.3**
BZMR	**Bezymyannaya**	**5.30**	**297**	P	**Pn**	**12 18 32.5**	**+0.9**
BZMR				S	**Sn**	**12 19 32.8**	**+1.4**
KLY	**Klyuchi**	**5.36**	**301**	S	**Sn**	**12 19 27.9**	**-5.0**
SPN	**Mys Shipunski**	**5.37**	**266**	P	**Pn**	**12 18 32.1**	**-0.4**
SPN				S	**Sn**	**12 19 30.6**	**-2.4**
KPT	**Kopyto**	**5.46**	**297**	P	**Pn**	**12 18 34.2**	**+0.5**
KPT				S	**Sn**	**12 19 35.6**	**+0.4**
NLC	**Nalytchevo**	**5.76**	**267**	*e*P	**Pn**	**12 18 38.1**	**+0.2**
NLC				*e*S	**Sn**	**12 19 39.9**	**-2.7**
SRDR	**Sredinnyy**	**5.84**	**299**	*e*P	**Pn**	**12 18 39.3**	**+0.2**
AVH	**Avacha**	**6.10**	**269**	*e*P	**Pn**	**12 18 43.9**	**+1.3**
AVH				S	**Sn**	**12 19 49.8**	**-1.2**
PET	**Petropavlovsk**	**6.19**	**267**	*e*P	**Pn**	**12 18 45.0**	**+1.1**
PET				S	**Sn**	**12 19 53.9**	**+0.6**
RUS	**Russkaya**	**6.42**	**262**	*e*P	**Pn**	**12 18 47.4**	**+0.4**
RUS				S	**Sn**	**12 19 57.5**	**-1.4**
GNL	**Ganaly**	**6.51**	**273**	*e*P	**Pn**	**12 18 49.1**	**+0.8**
GNL				S	**Sn**	**12 20 01.5**	**+0.3**
PEA0B	**Petropavlovsk-**	**6.74**	**268**	*e*Pn	**Pn**	**12 18 53.0**	**+1.6**
PEA0B				*e*Sn	**Sn**	**12 20 04.5**	**-2.4**
PETK	**Petropavlovsk-**	**6.74**	**268**	P	**Pn**	**12 18 53.1**	**+1.8**
	0.9nm,0.3s,baz=83,slow=13,SNR=50						
PETK				S	**Sn**	**12 20 07.5**	**+0.6**
	0.6nm,0.3s,baz=98,slow=16,SNR=3.6						
AMKA	**Amchitka**	**6.78**	**107**	*e*Pn	**Pn**	**12 18 51.1**	**-0.9**
MAJO	**Matsushiro**	**27.40**	**243**	*e*P	**P**	**12 23 03.1**	**+6.3**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.3						
MAJO	**Matsushiro**	**27.40**	**243**	*e*P	**P**	**12 23 03.1**	**+6.3**
	comp=Z,5.2nm,0.5s,mb4.3						
BMO	**Blue Mountains**	**46.85**	**69**	*e*P	**P**	**12 25 36.7**	**-4.3**
	comp=Z,15nm,1.8s,mb4.6						
BVAR	**Borovoye Array**	**53.93**	**312**	P	**P**	**12 26 31.2**	**-3.2**
	comp=Z,0.6nm,0.4s,mb3.9,baz=64,slow=9.8,SNR=3.1						
BVAR	**Borovoye Array**	**53.93**	**312**	P	**P**	**12 26 31.2**	**-3.2**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	**Lajitas Array**	**65.42**	**74**	P	**P**	**12 27 53.3**	**-0.5**
	comp=Z,1.0nm,0.6s,mb4.0,baz=302,slow=5.0,SNR=16						
TXAR	**Lajitas Array**	**65.42**	**74**	P	**P**	**12 27 53.3**	**-0.5**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**79.28**	**213**	P	**P**	**12 29 19.0**	**+2.7**
	comp=Z,0.5nm,0.9s,mb3.4,baz=26,slow=6.3,SNR=8.6						
WRA	**Warramunga Arr**	**79.28**	**213**	P	**P**	**12 29 19.0**	**+2.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**82.90**	**212**	P	**P**	**12 29 38.6**	**+3.1**
	comp=Z,0.2nm,0.5s,mb3.4,baz=22,slow=5.5,SNR=7.6						

*CSEM **24** 12:24:51.0, 3538N×2698E, h24km, MD3.7/7, After ATH*
*NEIC **24** 12:24:52.0, 3545N×2698E, h10km, MD3.7(ATH), After ATH.*

ATH 24 12:24:51.4, 3547N×2691E, h18km±3km, MD3.7/7, 5D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.22**	**69**	⇑*i* Pb	Pg	12 24 55.9	-0.7
KARP				*e*SB	Sg	12 25 00.6	+0.4
KARP	**Karpathos**	**0.22**	**69**	*i* Pb	Pg	12 24 55.9	-0.7
KARP				*e*Sb	Sg	12 25 01.6	+1.4
NPS	**Neapolis**	**1.08**	**259**	⇓*i* Pn	Pn	12 25 11.8	+0.2
NPS				*e*Sn	Sn	12 25 28.4	+2.3
ARG	**Arkhangelos**	**1.24**	**53**	⇓*i* PN	Pn	12 25 14.9	+1.1
ARG				*e*SN	Sn	12 25 32.1	+2.1
ARG	**Arkhangelos**	**1.24**	**53**	⇓*i* Pb	Pb	12 25 13.9	-0.3
ARG				*e*Sn	Sn	12 25 32.8	+2.8
SANT	**Santorini**	**1.48**	**308**	*e*Pn	Pn	12 25 19.6	+2.5
IDI	**Anoyia**	**1.66**	**264**	P	Pn	12 25 23.3	+3.7
APE	**Apeiranthos**	**1.95**	**325**	P	Pn	12 25 26.4	+2.9
VAM	**Vamos**	**2.21**	**269**	⇓*i* PN	Pn	12 25 30.4	+3.2
GVD	**Gavdhos**	**2.40**	**256**	*e*PN	Pn	12 25 32.0	+2.3
KYTH	**Kithira**	**3.25**	**286**	*e*PN	Pn	12 25 44.0	+2.6
VLI	**Veliai**	**3.45**	**292**	⇓*i* PN	Pn	12 25 46.5	+2.3

*IDC **24** 12:26:25.0±0.4, 4.39S×101.51E, h0km, mb5.0/29, mb1 5.0/30, mb1mx5.0/31, mbtmp5.0/30, ML4.6/1, MS4.9/16, Ms1 4.9/16, ms1mx4.8/31, Error ellipse: s-maj=12.7km s-min=7.4km az=41.0*
*ISCJB **24** 12:26:28.0±0.2, 4.46S±003×101.33E±002, h28km, mb5.4/127, MS5.2/200, Error ellipse: s-maj=4.2km s-min=2.8km az=41.6*
*BJI **24** 12:26:27.9, 4.91S×101.36E, h66km, mB5.5, mb5.4, Ms5.4, Msz5.2*
*MOS **24** 12:26:29.1±1.1, 4.35S×101.54E, h33km, mb5.7/56, MS5.1/39, Error ellipse: s-maj=9.5km s-min=4.9km az=110.8*
*NEIC **24** 12:26:31.0±0.1, 4.39S×101.47E, h35km, mb5.5/45, MS5.2/171, Error ellipse: s-maj=6.7km s-min=4.1km az=47.0*
NEIC Felt [IV] at Bengkulu; [III] at Kapahiang and Mukomuko; [II] at Lebong.
*DJA **24** 12:26:30, 4.60S×101.16E, h45km, Mw5.5/31*
*GCMT **24** 12:26:31.0±0.2, 4.96S×101.03E, h36km±1km, MW5.3/76, Moment Tensor Solution. s56,c95; s76,c119; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_r0.75±.03; $M_{\theta\theta}$-0.58±.02; $M_{\phi\phi}$-0.16±.03; $M_{r\theta}$0.71±.03; $M_{\theta\phi}$0.61±.02; $M_{\phi r}$-0.35±.04; Best double couple: $M_0$1.18700×10^{17} NP1:ϕ8317.00000°, δ25.00000°, λ107.00000°. NP2: ϕ8118.00000°, δ66.00000°, λ82.00000°. Principal axes: T 1.0620, Plg68.0000°, Azm13.0000°; N 0.2520, Plg7.0000°, Azm121.0000°; P -1.3130, Plg21.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface waves, cutoff=40s.*

ISC 24 12:26:30.2±0.2, 4465±002×10134E±002, h29km, h29km±.6km: pP-P, n539, σ1.9 08/374, mb5.4/127, MS5.2/200, 43C-25D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.49**	**57**	P	**Pn**	**12 26 55.0**	**+0.1**
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.63**	**39**	P	**Pn**	**12 27 28.0**	**+3.6**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**4.08**	**347**	P	**Pn**	**12 27 30.7**	**0.0**
	0.0nm,0.0s						
RGRI	**Rengat**	**4.20**	**14**	P	**Pn**	**12 27 33.9**	**+1.6**
	0.0nm,0.0s						
SBJI	**Serang**	**5.05**	**109**	P	**Pn**	**12 27 45.1**	**+1.1**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.31**	**65**	P	**Pn**	**12 27 50.2**	**+2.7**
	0.0nm,0.0s						
DBJI	**Dramaga**	**5.78**	**111**	P	**Pn**	**12 27 53.9**	**-0.1**
	2μm,1.3s						
TPI	**Tanjungpandan**	**6.53**	**75**	P	**Pn**	**12 28 06.3**	**+2.0**
	133nm,1.1s						
TPI	**Tanjungpandan**	**6.53**	**75**	⇓*e*P	**Pn**	**12 28 06.0**	**+1.7**
LEM	**Lembang**	**6.68**	**111**	P	**Pn**	**12 28 07.5**	**+1.1**
	2μm,1.2s						
MYKOM	**Kota Tinggi**	**6.69**	**22**	⇓P	**Pn**	**12 28 08.9**	**+2.3**
KGM	**Kluang**	**6.73**	**17**	⇑P	**Pn**	**12 28 08.5**	**+1.5**
JCJI	**Jatiwangi**	**7.19**	**107**	P	**Pn**	**12 28 15.4**	**+2.0**
	412nm,1.3s						
XMIS	**Christmas Isla**	**7.36**	**145**	*e*Pn	**Pn**	**12 28 16.0**	**+0.4**
XMIS				*e*Sn	**Sn**	**12 29 38.2**	**0.0**
FRIM	**Kepong**	**7.65**	**2**	⇑P	**Pn**	**12 28 20.2**	**+0.5**
BJII	**Banjamegara**	**8.80**	**109**	P	**Pn**	**12 28 35.8**	**+0.2**
	311nm,1.6s						
COCO	**West Island**	**8.88**	**210**	Pn	**Pn**	**12 28 31.5**	**-5.1**
	6μm,0.7s,SNR=8.6						
COCO	**West Island**	**8.88**	**210**	*e*Pn	**Pn**	**12 28 30.9**	**-5.7**
	413nm,0.8s						
IPM	**Ipoh**	**8.88**	**358**	⇑P	**Pn**	**12 28 38.6**	**+1.9**
KTGM	**Kuala Trenggan**	**9.88**	**10**	⇑P	**Pn**	**12 28 51.9**	**+1.6**
PBKI	**Pangkalan Bun**	**10.46**	**81**	P	**Pn**	**12 29 02.0**	**+3.8**
	706nm,1.1s						
KSM	**Kuching**	**10.73**	**57**	⇓P	**Pn**	**12 29 05.1**	**+3.2**
KSM	**Kuching**	**10.73**	**57**	*e*Pn	**Pn**	**12 29 04.0**	**+2.1**
SJI	**Sawahan**	**10.87**	**108**	P	**Pn**	**12 29 03.4**	**-0.5**
	362nm,1.2s						
STKI	**Sintang**	**11.08**	**66**	P	**Pn**	**12 29 11.0**	**+4.2**
	144nm,1.4s						
SNG	**Songkhla**	**11.58**	**356**	P	**Pn**	**12 29 12.0**	**-1.6**
	160nm,1.0s						
BSI	**Banda Aceh**	**11.58**	**329**	P	**Pn**	**12 29 12.4**	**-1.2**
	207nm,1.2s						
TRT	**Tretes**	**11.69**	**107**	⇓*e*P	**Pn**	**12 29 16.0**	**+0.9**
PLKI	**Palangkaraya**	**12.78**	**80**	P	**Pn**	**12 29 34.9**	**+4.9**
	358nm,1.3s						
SBUM	**Sibu**	**12.86**	**58**	⇓P	**Pn**	**12 29 35.9**	**+4.8**
BBKI	**Banjar Baru**	**13.51**	**86**	P	**Pn**	**12 29 44.1**	**+4.1**
	328nm,1.3s						
BTM	**Bintulu**	**13.98**	**57**	⇑P	**Pn**	**12 29 51.4**	**+4.9**
IGBI	**Denpasar**	**14.38**	**108**	P	**Pn**	**12 29 57.0**	**+5.1**
	648nm,1.0s						
DNP	**Denpasar**	**14.40**	**108**	P	**Pn**	**12 30 01.6**	**+9.4**
	427nm,0.6s						
KHKI	**Kahang-Kahang**	**14.70**	**106**	P	**Pn**	**12 29 58.4**	**+2.1**
	156nm,1.1s						
MTNI	**Mataram**	**15.31**	**106**	P	**Pn**	**12 30 05.7**	**+1.4**
	172nm,1.2s						
SMKI	**Samarinda**	**16.35**	**76**	P	**Pn**	**12 30 20.4**	**+2.7**
	421nm,1.7s						
KKM	**Kota Kinabalu**	**18.15**	**55**	⇑P	**Pn**	**12 30 41.4**	**+1.2**
KKM	**Kota Kinabalu**	**18.15**	**55**	*e*P	**Pn**	**12 30 39.8**	**-0.4**
KAPI	**Kappang**	**18.36**	**92**	P	**Pn**	**12 30 40.2**	**-2.6**
	SNR=12						
KAPI	**Kappang**	**18.36**	**92**	P	**Pn**	**12 30 40.3**	**-2.5**
	2.0nm,0.3s,baz=249,slow=8.9,SNR=15						
KAPI				LR	LR	12 38 17.8	
	comp=Z,4μm,21.5s,baz=279,slow=39						
KAPI	**Kappang**	**18.36**	**92**	*e*Pn	**Pn**	**12 30 39.9**	**-2.9**
TSM	**Tawau**	**18.67**	**62**	⇑P	**Pn**	**12 30 47.2**	**+0.7**
SDKM	**Sandakan**	**18.75**	**58**	⇓P	**Pn**	**12 30 47.9**	**+0.4**
PCI	**Palu**	**18.81**	**80**	P	**Pn**	**12 30 48.6**	**+0.3**
	1μm,1.4s						
KDM	**Kudat**	**19.15**	**54**	⇑P	**Pn**	**12 30 52.7**	**+0.3**
WSI	**Waingapu**	**19.51**	**106**	⇓*e*P	**Pn**	**12 30 51.0**	**-5.7**
WSI				*e*S	**Sn**	**12 34 21.5**	**-13**
MYLDM	**Lahad Datu**	**19.63**	**61**	⇑P	**Pn**	**12 30 59.0**	**+0.8**
UBT	**Ubonrachathani**	**19.91**	**10**	P	**Pn**	**12 30 59.0**	**-2.4**
NST	**Nakhon Sawan**	**20.04**	**357**	P	**P**	**12 31 00.0**	**-0.9**
KKTK	**Khon Kaen**	**20.71**	**4**	⇓P	**P**	**12 31 07.5**	**-0.8**
	679nm,0.9s						
BBSI	**Bau Bau**	**21.18**	**94**	P	**P**	**12 31 16.6**	**+3.2**
	187nm,1.2s,mb5.3						
KDI	**Kendari**	**21.23**	**89**	P	**P**	**12 31 13.9**	**-0.1**
	363nm,1.2s,mb5.6						
KDI	**Kendari**	**21.23**	**89**	⇑*e*P	**P**	**12 31 12.8**	**-1.2**
KDI				*e*S	**S**	**12 35 06.2**	**-2.5**
BATI	**Baumata**	**22.86**	**106**	P	**P**	**12 31 30.7**	**-0.7**
	126nm,0.8s,mb5.4						
BATI	**Baumata**	**22.86**	**106**	P	**P**	**12 31 28.6**	**-2.8**
	43nm,0.3s,mb5.3,baz=230,slow=4.0,SNR=12						
BATI				S	**S**	**12 35 35.5**	**-3.9**
	62nm,0.7s,baz=315,slow=19,SNR=6.8						
CMAR	**Chiang Mai Arr**	**22.89**	**354**	P	**P**	**12 31 30.3**	**-1.3**
	53nm,0.8s,mb5.0,baz=184,slow=8.3,SNR=100						
CMAR				PcP	PcP	12 35 21.4	-0.6
	2.7nm,0.9s,baz=215,slow=2.9,SNR=4.9						
CMAR				ScP	ScP	12 38 58.2	+0.3
	0.6nm,0.5s,baz=214,slow=3.8,SNR=5.9						
CMAR				LR	LR	12 41 40.6	
	comp=Z,4μm,19.6s,MS4.8,baz=186,slow=40						
CMAR	**Chiang Mai Arr**	**22.89**	**354**	*i* P	**P**	**12 31 31.5**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,53nm,0.8s						
CMAR	**Chiang Mai Arr**	**22.89**	**354**	P	**P**	**12 31 30.3**	**-1.3**
CMAR				PcP	PcP	12 35 21.4	-0.6
CMAR				ScP	ScP	12 38 58.2	+0.3
CMAR				LR	LR	12 41 40.6	
CHG	**Chiang Mai**	**23.24**	**354**	⇓P	**P**	**12 31 34.3**	**-1.0**
	comp=Z,64nm,1.2s,mb4.9						
CHTO	**Chiang Mai**	**23.24**	**354**	P	**P**	**12 31 34.5**	**-0.8**
	SNR=21						
CHTO	**Chiang Mai**	**23.24**	**354**	*e*P	**P**	**12 31 34.5**	**-0.9**
	comp=Z,37nm,0.9s,mb4.8						
CHTO				LR	LR		
	comp=Z,4μm,19.0s,MS4.9						
PALK	**Pallekele**	**23.66**	**299**	PFAKE		12 31 50.0	+11
PALK				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
CHRT	**Chiangrai**	**24.22**	**356**	⇑P	**P**	**12 31 44.0**	**-0.5**
	comp=Z,337nm,1.3s,mb5.6						
MBWA	**Marble Bar**	**24.39**	**134**	*e*P	**P**	**12 31 45.6**	**-0.4**
	comp=Z,21nm,1.0s,mb4.5						
MBWA				LR	LR		
	comp=Z,4μm,20.0s,MS4.9						
QIZ	**Qiongzhong**	**24.80**	**19**	P	**P**	**12 31 50.4**	**+0.7**
QIZ				S	**S**	**12 36 11.9**	**+1.3**
QIZ				AMB	AMB		
	comp=Z,64nm,1.4s,mb5.0						
QIZ				AMB	AMB		
	comp=Z,1μm,

comp=Z,4µm,14.7s,MS5.2
TLE Tual 31.30 94 P **P** **12 32 49.7 +1.6**
comp=Z,6µm,0.8s
NWAO Narrogin (SRO) 31.98 154 LR LR 12 43 42.9
comp=Z,3µm,21.1s,MS5.0,baz=328,slow=32
NWAO Narrogin (SRO) 31.98 154 *e*P **P** **12 32 53.6 -0.2**
NWAO pmax pmax
comp=Z,23nm,0.9s
NWAO MLR MLR
comp=Z,3µm,20.0s
NWAO Narrogin (SRO) 31.98 154 *e*P **P** **12 32 53.6 -0.2**
comp=Z,23nm,0.9s,mb5.0
NWAO LR LR
comp=Z,3µm,20.0s,MS5.0
QZH Quanzhou 33.70 29 P **P** **12 33 10.5 +1.6**
QZH S **S** **12 38 29.3 -1.1**
QZH LR LR
comp=N,4µm,10.7s
QZH LR LR
comp=E,8µm,20.9s
QZH LR LR
comp=Z,4µm,17.7s
ODAN Odare 33.93 337 *e*P **P** **12 33 11.8 +0.9**
RAMN Ramite 34.32 336 *e*P **P** **12 33 15.7 +1.4**
YHNB Yeheng 34.90 33 PFAKE 12 33 30.0 +11
YHNB LR LR
comp=Z,2µm,19.0s,MS4.9
JIRN Jiri 35.12 336 *e*P **P** **12 33 22.6 +1.4**
TATO Taipei 35.21 33 PFAKE 12 33 30.0 +8.0
TATO LR LR
comp=Z,1µm,21.0s,MS4.6
CD2 Chengdu 35.24 4⇑*i*P **P** **12 33 21.5 -0.7**
CD2 PP PP 12 34 42.3 -0.3
CD2 PCP PcP 12 35 50.1 -2.6
CD2 S **S** **12 38 54.5 +0.4**
CD2 PCS PcS 12 39 36.3 -3.4
CD2 SS SS 12 41 12.0 -16
CD2 SCS ScS 12 43 36.3 -4.4
CD2 AMB AMB
comp=Z,80nm,1.4s,mb5.5
CD2 AMB AMB
comp=Z,210nm,5.8s
CD2 LR LR
comp=N,6µm,19.2s,MS5.5
CD2 LR LR
comp=E,6µm,18.0s,MS5.5
CD2 LR LR
comp=Z,6µm,19.2s,MS5.3
LSA Lhasa 35.34 345 P **P** **12 33 24.0 +1.0**
LSA XP sP 12 33 44.0 +8.7
LSA AMB AMB
comp=Z,240nm,1.0s,mb6.1
LSA AMB AMB
comp=Z,310nm,5.0s
LSA LR LR
comp=N,1µm,25.0s
LSA LR LR
comp=Z,2µm,27.0s,MS4.6
LSA Lhasa 35.34 345 *e*P **P** **12 33 24.1 +1.1**
LSA *e* 12 35 55.2
LSA pmax pmax
comp=Z,129nm,1.4s,mb5.7
LSA MLR MLR
comp=Z,2µm,20.0s,MS4.8
LSA Lhasa 35.34 345 *e*P **P** **12 33 24.1 +1.1**
comp=Z,129nm,1.4s,mb5.7
LSA *e*PcP PcP 12 35 55.2 +2.1
LSA LR LR
comp=Z,2µm,20.0s,MS4.8
PKIN Phulchoki 35.37 335 *e*P **P** **12 33 23.8 +0.5**
GUN Gumba 35.46 336 *e*P **P** **12 33 25.2 +1.1**
DMN Daman 35.52 335 *e*P **P** **12 33 25.5 +0.9**
comp=Z,301nm,1.6s,mb6.0
KKN Kakani 35.60 335 *e*P **P** **12 33 26.1 +0.7**
comp=Z,243nm,1.3s,mb6.0
WRA Warramunga Arr 35.63 118 P **P** **12 33 24.4 -1.3**
comp=Z,24nm,0.8s,mb5.2,baz=302,slow=9.0,SNR=98
WRA PcP PcP 12 35 52.9 -1.2
comp=Z,4.6nm,0.8s,baz=292,slow=2.8,SNR=3.7
WRA S **S** **12 39 00.5 +0.1**
comp=Z,5.5nm,1.1s,baz=298,slow=15,SNR=5.0
WRAB Tennant Creek 35.64 118 P **P** **12 33 24.0 -1.8**
comp=Z,261nm,0.7s,mb6.3,SNR=25
WRAB Tennant Creek 35.64 118 *e*P **P** **12 33 24.7 -1.0**
comp=Z,49nm,1.1s,mb5.3
WRAB LR LR
comp=Z,2µm,20.0s,MS4.8
WB2 Warramunga Arr 35.64 118⇑*i*P **P** **12 33 24.5 -1.3**
WB2 *e*S **S** **12 38 56.5 -4.1**
GKN Gorkha 36.06 334 *e*P **P** **12 33 30.3 +1.0**
comp=Z,666nm,1.7s,mb6.3
FORT Forrest 36.32 139 *e*P pP 12 33 42.7 +2.6
KOLN Koldanda 36.32 333 *e*P **P** **12 33 32.5 +1.0**
comp=Z,78nm,0.8s,mb5.7
DANN Dangsing 36.75 334 *e*P **P** **12 33 36.0 +0.9**
comp=Z,468nm,1.3s,mb6.2
ASAR Alice Springs 36.75 124 P **P** **12 33 34.4 -0.9**
comp=Z,13nm,0.9s,mb4.8,baz=298,slow=7.5,SNR=93
ASAR PcP PcP 12 35 56.1 -1.3
comp=Z,4.6nm,0.8s,baz=322,slow=2.7,SNR=4.4
ASAR S **S** **12 39 16.7 -0.8**
comp=Z,9.0nm,1.2s,baz=293,slow=15,SNR=8.8
WHN Wuhan 36.96 19 P **P** **12 33 36.3 -0.6**
WHN LR LR
comp=N,4µm,18.4s,MS5.6
WHN LR LR
comp=E,7µm,14.8s,MS5.6
WHN LR LR
comp=Z,6µm,18.6s,MS5.4
XAN Xi'an 38.95 10 P **P** **12 33 52.8 -0.9**
XAN S **S** **12 39 57.6 +7.1**
XAN AMB AMB
comp=Z,111nm,1.4s,mb5.4
XAN AMB AMB
comp=Z,332nm,9.2s
XAN LR LR
comp=E,5µm,19.0s
XAN LR LR
comp=Z,2µm,19.8s,MS5.0
PTH Pithoragarh 39.42 330 *e*P **P** **12 33 59.1 +1.4**
NJ2 Nanjing 39.95 23 *e*P **P** **12 34 02.8 +0.8**
NJ2 PP PP 12 35 38.8 +4.5
NJ2 S **S** **12 40 03.5 -2.0**
NJ2 AMB AMB
comp=Z,20nm,1.0s,mb4.8
NJ2 AMB AMB
comp=Z,520nm,6.5s
NJ2 LR LR
comp=N,1µm,15.0s,MS5.1
NJ2 LR LR
comp=E,2µm,17.0s,MS5.1
NDI New Delhi 40.30 326 *e*P **P** **12 34 05.0 0.0**
LZH Lanzhou 40.40 3 ⇑P **P** **12 34 06.1 +0.4**
LZH PP PP 12 35 43.6 +4.5
LZH PCP PcP 12 36 09.5 +1.0
LZH S **S** **12 40 12.3 +0.2**
LZH SS SS 12 43 06.5 -5.5
LZH AMB AMB
comp=Z,157nm,1.3s,mb5.6
LZH AMB AMB
comp=Z,569nm,5.2s
LZH LR LR
comp=N,4µm,15.0s
LZH LR LR
comp=Z,6µm,17.4s,MS5.5
LZH Lanzhou 40.40 3 ⇑P **P** **12 34 06.1 +0.4**
LZH *PP pP 12 34 16.0 +1.6
LZH *SP sP 12 34 20.1 +2.1
LZH 12 35 43.6
LZH 12 36 09.5
LZH S **S** **12 40 12.3 +0.2**
LZH *SS sS 12 40 28.2 +1.7
LZH SS SS 12 43 06.5 -5.5
LZH pmax pmax
comp=Z,157nm,1.3s,mb5.6
LZH MLR MLR
comp=Z,6µm,17.4s,MS5.5
LZH Lanzhou 40.40 3 ⇑P **P** **12 34 06.1 +0.4**
comp=Z,157nm,1.3s,mb5.6
LZH pP pP 12 34 16.0 +1.6
LZH sP sP 12 34 20.1 +2.1
LZH PP PP 12 35 43.6 +4.5
LZH PcP PcP 12 36 09.5 +1.0
LZH S **S** **12 40 12.3 +0.2**
LZH sS sS 12 40 28.2 +1.7
LZH SS SS 12 43 06.5 -5.5
LZH LR LR
comp=Z,6µm,17.4s,MS5.5
DDI Dehra Dun 41.14 329 *e*P **P** **12 34 11.8 -0.1**
SMLA Simla 42.24 329 *i* P **P** **12 34 20.4 -0.6**
comp=Z,102nm,0.8s,mb5.5
COEN Coen 42.30 106 *e*P **P** **12 34 19.7 -1.9**
comp=Z,14nm,1.0s,mb4.5
SDNR Sundarnagar 42.64 329 *e*P **P** **12 34 24.0 -0.1**
TIA Tai'an 43.07 19 *e*P **P** **12 34 27.0 -0.6**
TIA AMB AMB
comp=Z,31nm,1.0s,mb5.0
GTA Gaotai 43.67 358 P **P** **12 34 32.9 +0.6**
GTA PCP PcP 12 36 19.8 +0.6
GTA S **S** **12 41 01.3 +0.9**
GTA AMB AMB
comp=Z,63nm,1.2s,mb5.2
GTA AMB AMB
comp=Z,862nm,3.8s
GTA LR LR
comp=N,3µm,20.5s
GTA LR LR
comp=E,2µm,15.2s
GTA LR LR
comp=Z,3µm,22.6s,MS5.2
THN Thein Dam 44.03 328 *e*P **P** **12 34 33.4 -1.9**
BTO Baotou 45.54 9 *e*P **P** **12 34 46.8 -0.5**
BTO AMB AMB
comp=Z,15nm,1.6s,mb4.7
MSEY Mahe Island 45.71 268 PFAKE 12 35 00.0 +11
MSEY LR LR
comp=Z,1µm,19.0s,MS4.9
PMG Port Moresby 45.72 99 *e*P **P** **12 34 48.2 -1.0**
comp=Z,131nm,1.2s,mb5.7
PMG LR LR
comp=Z,2µm,22.0s,MS5.0
HHC Hu-ho-hao-te 46.05 11 ⇑P **P** **12 34 52.1 +0.8**
HHC AP pP 12 35 02.3 +2.2
HHC PCP PcP 12 36 28.0 +0.6
HHC PP PP 12 36 40.4 +0.7
HHC PCS PcS 12 40 21.9 +0.2
HHC S **S** **12 41 34.3 -0.5**
HHC SS SS 12 44 52.1 -8.2
HHC AMB AMB
comp=Z,91nm,1.1s,mb5.6
HHC AMB AMB
comp=Z,1µm,7.2s
HHC LR LR
comp=N,2µm,14.2s,MS5.2
HHC LR LR
comp=E,1µm,14.7s,MS5.2
HHC LR LR
comp=Z,2µm,14.1s,MS5.2
BJT Baijiatuao 46.31 16 *e*P **P** **12 34 53.5 +0.2**
BJT *e**PP pP 12 35 01.9 -0.3
BJT pmax pmax
comp=Z,181nm,1.1s
BJT MLR MLR
comp=Z,4µm,19.0s
BJT Baijiatuao 46.31 16 *e*P **P** **12 34 53.5 +0.1**
comp=Z,181nm,1.1s,mb5.9
BJT *e*pP pP 12 35 01.9 -0.3
BJT LR LR
comp=Z,4µm,19.0s,MS5.3
BJI Beijing 46.33 16 P **P** **12 34 53.6 +0.1**
BJI S **S** **12 41 38.8 -0.1**
BJI AMB AMB
comp=Z,89nm,1.1s,mb5.6
BJI AMB AMB
comp=Z,819nm,3.4s
BJI LR LR
comp=E,2µm,16.6s,MS5.5
BJI LR LR
comp=N,4µm,16.6s,MS5.5
BJI LR LR
comp=Z,2µm,19.9s,MS5.1
BJI Beijing 46.33 16 P **P** **12 34 53.6 +0.1**
comp=Z,89nm,1.1s,mb5.6
BJI S **S** **12 41 38.8 -0.1**
BJI SS SS 12 45 03.4 -1.6
BJI LR LR
comp=Z,2µm,19.9s,MS5.1
CTA Charters Tower 46.37 114 *e*P **P** **12 34 53.5 -0.7**
CTA *e*S **S** **12 41 38.0 -2.2**
CTA Charters Tower 46.37 114 P **P** **12 34 53.8 -0.5**
comp=Z,78nm,1.1s,mb5.5,baz=287,slow=8.4,SNR=22
CTA LR LR 12 55 31.2
comp=Z,1µm,21.2s,MS4.8,baz=18,slow=38
CTAO Charters Tower 46.37 114 *e*P **P** **12 34 53.5 -0.7**
comp=Z,111nm,1.2s,mb5.7
CTAO LR LR
comp=Z,1µm,19.0s,MS4.9
STKA Stephens Creek 46.54 131 *e*P **P** **12 34 54.7 -0.6**
STKA Stephens Creek 46.54 131 P **P** **12 34 54.8 -0.5**
comp=Z,15nm,0.8s,mb5.0,baz=300,slow=8.4,SNR=20
STKA LR LR 12 53 47.2
comp=Z,2µm,19.4s,MS5.1,baz=293,slow=35
DL2 Dalian 47.05 22 P **P** **12 34 57.8 -1.3**
DL2 *e*S **S** **12 41 45.8 -3.4**
DL2 AMB AMB
comp=Z,30nm,1.1s,mb5.1
DL2 AMB AMB
comp=Z,330nm,4.5s
DL2 LR LR
comp=N,900nm,17.5s,MS4.9
DL2 LR LR
comp=E,670nm,15.1s,MS4.9
DL2 LR LR
comp=Z,1µm,17.9s,MS5.0
INCN Inchon 47.91 27 *e*P **P** **12 35 04.5 -1.3**
comp=Z,22nm,0.9s,mb5.2
INCN *e*PcP PcP 12 36 33.8 -0.3
INCN LR LR
comp=Z,995nm,19.0s,MS4.8
KSRS Korea Array 48.49 28 P **P** **12 35 09.7 -0.7**
comp=Z,59nm,1.1s,mb5.5,baz=215,slow=7.9,SNR=110
KBL Kabul 49.30 324 *e*P **P** **12 35 16.2 -0.4**
KBL *e**PP pP 12 35 24.2 -1.3
KBL pmax pmax
comp=Z,28nm,1.1s,mb5.2
KBL Kabul 49.30 324 *e*P **P** **12 35 16.2 -0.4**
comp=Z,28nm,1.1s,mb5.2
KBL *e*pP pP 12 35 24.2 -1.3
WMQ Urumqi 49.60 347⇑*i*P **P** **12 35 19.5 +0.7**
WMQ PCP PcP 12 36 42.0 +2.0
WMQ PP PP 12 37 15.0 +1.6
WMQ S **S** **12 42 24.0 -1.2**
WMQ SS SS 12 45 53.0 -4.8
WMQ AMB AMB
comp=Z,130nm,1.1s,mb5.9
WMQ AMB AMB
comp=Z,472nm,4.6s
WMQ LR LR
comp=N,2µm,20.8s,MS5.3
WMQ LR LR
comp=E,3µm,23.0s,MS5.3
WMQ LR LR
comp=Z,3µm,22.2s,MS5.2
KSH Kashi 49.61 334 P **P** **12 35 15.3 -3.6**
KSH *e*PCP PcP 12 36 38.1 -2.1
KSH *e*PP PP 12 37 10.1 -3.5
KSH *e*PPP 12 38 03.0
KSH *e*S **S** **12 42 13.1 -12**
KSH *e*SCS ScS 12 45 03.0 -5.6
KSH AMB AMB
comp=Z,877nm,2.6s,mb6.3
KSH LR LR
comp=N,2µm,15.0s,MS5.5
KSH LR LR
comp=E,3µm,15.8s,MS5.5
KSH LR LR
comp=Z,3µm,18.5s,MS5.3
SNY Shenyang 50.33 22 ⇑P **P** **12 35 23.0 -1.3**
SNY AMB AMB
comp=Z,44nm,1.5s,mb5.3
SNY AMB AMB
comp=Z,688nm,12.0s
SNY LR LR
comp=N,1µm,18.0s,MS5.1
SNY LR LR
comp=E,1µm,21.0s,MS5.1
SNY LR LR
comp=Z,2µm,18.6s,MS5.1
ULHL Ulahol 51.78 336 P **P** **12 35 35.4 +0.2**
SNR=21
EIDS Eidsvold 51.99 119 *e*P **P** **12 35 44.0 +6.8**
comp=Z,68nm,0.9s,mb5.6
TOO Toolangi 52.03 135 *e*P pP 12 35 47.2 +1.0
KZA Kyzart 52.04 335 P **P** **12 35 37.9 +0.8**
SNR=13
SONM Songino Array 52.26 4 P **P** **12 35 38.5 -0.1**
comp=Z,85nm,0.9s,mb5.7,baz=186,slow=8.2,SNR=126
ULN Ulaanbaatar 52.34 5 P **P** **12 35 40.3 +1.0**
SNR=46
ULN Ulaanbaatar 52.34 5 *e*P **P** **12 35 40.0 +0.8**
comp=Z,82nm,1.1s,mb5.6
ULN LR LR
comp=Z,2µm,19.0s,MS5.1
UCH Uchtor 52.47 335 P **P** **12 35 40.8 +0.4**
SNR=21
UCH Uchtor 52.47 335 PFAKE 12 35 50.0 +10
UCH LR LR
comp=Z,1µm,21.0s,MS4.9
TKM2 Tokmak 2 52.60 336 *e*P **P** **12 35 41.6 +0.3**
TKM2 pmax pmax
comp=Z,77nm,1.2s,mb5.5
TKM2 MLR MLR
comp=Z,2µm,20.0s,MS5.1
TKM2 Tokmak 2 52.60 336 P **P** **12 35 41.7 +0.4**
SNR=54
TKM2 Tokmak 2 52.60 336 *e*P **P** **12 35 41.6 +0.3**
comp=Z,77nm,1.2s,mb5.5
TKM2 LR LR
comp=Z,2µm,20.0s,MS5.1
KBK Karagaybulak 52.65 336 P **P** **12 35 42.1 +0.5**
SNR=13
CN2 Changchun 52.72 22 *e*P **P** **12 35 41.0 -1.2**
CN2 *e*S **S** **12 43 05.3 -2.9**
CN2 SS SS 12 46 42.3 -5.0
CN2 AMB AMB
comp=Z,130nm,1.1s,mb5.8
CN2 AMB AMB
comp=Z,140nm,4.0s
CN2 LR LR
comp=N,2µm,19.0s,MS5.2
CN2 LR LR
comp=E,1µm,19.0s,MS5.2
CN2 LR LR
comp=Z,1µm,20.0s,MS5.0
AML Almayashu 52.74 334 P **P** **12 35 43.0 +0.7**
SNR=9.8
AML Almayashu 52.74 334 *e*P **P** **12 35 42.5 +0.1**
comp=Z,205nm,1.8s,mb5.8
AML LR LR
comp=Z,936nm,21.0s,MS4.8
AAK Ala-Archa 52.81 335 P **P** **12 35 43.5 +0.6**
SNR=7.8
FRU Bishkek 52.93 336 *e*P **P** **12 35 43.6 -0.1**
FRU *e*S **S** **12 43 13.0 +1.9**
FRU *e* 12 43 29.0
FRU pmax pmax
comp=Z,190nm,2.2s,mb5.6
CHMS Chumysh 53.01 336 P **P** **12 35 44.2 -0.1**
SNR=8.3
EKS2 Erkin-Say 53.14 335 P **P** **12 35 46.0 +0.7**
SNR=32
EKS2 Erkin-Say 53.14 335 *e*P **P** **12 35 45.7 +0.5**
comp=Z,43nm,1.0s,mb5.3
EKS2 LR LR
comp=Z,1µm,21.0s,MS5.0
USP Ospenovka 53.34 336 P **P** **12 35 46.6 -0.1**
SNR=32
MAJO Matsushiro 53.37 37 *e*P **P** **12 35 45.3 -1.9**
comp=Z,96nm,1.2s,mb5.6
MAJO LR LR
comp=Z,636nm,19.0s,MS4.7
MAT Matsushiro 53.37 37 P **P** **12 35 46.1 -1.0**
MJAR Matsushiro Arr 53.38 37 P **P** **12 35 45.3 -1.9**
comp=Z,40nm,0.9s,mb5.3,baz=218,slow=7.6,SNR=75
CAN Canberra 53.59 131 *e*P **P** **12 35 49.0 +0.2**
CAN *e**PP pP 12 35 57.9 +0.1
MK31 Makanchi Array 53.74 344 *i* P **P** **12 35 49.1 -0.5**
MK31 pmax pmax
comp=Z,61nm,1.1s,mb5.4
MKAR Makanchi Array 53.74 344 P **P** **12 35 49.4 -0.2**
comp=Z,21nm,0.7s,mb5.2,baz=141,slow=7.8,SNR=89
MKAR S **S** **12 43 21.7 -0.3**
comp=Z,0.1nm,0.3s,baz=182,slow=32,SNR=2.1
MKAR LR LR 13 04 02.6
comp=Z,799nm,19.7s,MS4.8,baz=157,slow=42
MKAR Makanchi Array 53.74 344 P **P** **12 35 49.4 -0.2**
MKAR S **S** **12 43 21.7 -0.3**
ARMA Armidale 53.91 125 *e*P **P** **12 35 52.5 +1.3**
ZAK Zakamensk 54.65 2 *e*P **P** **12 35 55.5 -0.6**
ZAK pmax pmax
comp=Z,30nm,1.4s,mb5.1
OPO Ambohidratompo 54.67 250 P **P** **12 35 56.2 -0.7**
comp=Z,3.2nm,0.7s,mb4.5,baz=55,slow=3.3,SNR=9.3
ABPO Ambohimpanom 54.69 250 PFAKE 12 36 10.0 +13
ABPO LR LR
comp=Z,1µm,19.0s,MS5.0
VLA Vladivostok 54.82 27*d i*P **P** **12 35 57.2 -0.4**
VLA pmax pmax
comp=Z,119nm,1.5s,mb5.7
VLA Vladivostok 54.82 27 *i* P **P** **12 35 57.0 -0.6**
MDJ Mudanjiang 55.03 24 P **P** **12 35 58.3 -0.7**
MDJ PCP PcP 12 37 00.5 +0.1
MDJ PP PP 12 38 04.5 +2.0
MDJ PCS PcS 12 41 00.6 +0.5
MDJ S **S** **12 43 38.3 -1.1**
MDJ SS SS 12 47 22.8 -0.9
MDJ AMB AMB
comp=Z,29nm,1.4s,mb5.1
MDJ AMB AMB
comp=Z,705nm,14.4s
MDJ LR LR
comp=N,1µm,17.4s,MS5.0
MDJ LR LR
comp=E,532nm,16.9s,MS5.0
MDJ LR LR
comp=Z,910nm,20.2s,MS4.8
MDJ Mudanjiang 55.03 24 *e*P **P** **12 35 58.3 -0.7**
comp=Z,33nm,1.0s,mb5.3
MDJ LR LR
comp=Z,1µm,21.0s,MS4.9
HVS Khovu-Aksy 55.76 354*d i*P **P** **12 36 03.3 -0.9**
HVS pmax pmax
comp=Z,179nm,1.7s,mb5.8
HIA Hailar 55.85 14 *e*P **P** **12 36 04.1 -0.7**
HIA pmax pmax
comp=Z,64nm,1.1s
HIA MLR MLR
comp=Z,2µm,19.0s
HIA Hailar 55.85 14 *e*P **P** **12 36 04.1 -0.7**
comp=Z,64nm,1.1s,mb5.6
HIA LR LR
comp=Z,2µm,19.0s,MS5.3
TAU Tasmania Unive 55.85 140 *e*P **P** **12 36 06.4 +1.4**
comp=Z,92nm,1.2s,mb5.7
TAU LR LR
comp=Z,2µm,21.0s,MS5.1
MOY Mondy 55.91 360 *e*P **P** **12 36 05.6 +0.4**
MOY pmax pmax
comp=Z,108nm,2.4s,mb5.5
TLY Talaya 55.95 2 P **P** **12 36 06.0 +0.5**
comp=Z,330nm,1.0s,mb6.3,SNR=12
TLY Talaya 55.95 2⇓P **P** **12 36 06.2 +0.7**
SNR=19
TLY Talaya 55.95 2*c i*P **P** **12 36 06.2 +0.7**
TLY pmax pmax
comp=Z,118nm,1.7s,mb5.6
TLY Talaya 55.95 2 *e*P **P** **12 36 06.2 +0.6**
comp=Z,116nm,1.4s,mb5.7
TLY *e*pP pP 12 36 15.3 +0.8
TLY LR LR
comp=Z,902nm,20.0s,MS4.9
IRK Irkutsk 56.54 2 *e*P **P** **12 36 09.7 0.0**
IRK pmax pmax
comp=Z,54nm,1.4s,mb5.4
CIT Chita 57.22 9 *e*P **P** **12 36 15.1 +0.6**
CIT *e* pP 12 36 22.7 -0.9
CIT pmax pmax
comp=Z,235nm,1.6s,mb6.0
ABKT Ailbek 58.18 320 P **P** **12 36 21.4 -0.2**
comp=Z,111nm,1.1s,mb5.8,SNR=8.2
KURK Kurchatov 58.33 343 P **P** **12 36 21.6 -0.7**
comp=Z,277nm,1.1s,mb6.2,SNR=36
KURK Kurchatov 58.33 343 P **P** **12 36 22.2 -0.1**
SNR=36
KURK Kurchatov 58.33 343 P **P** **12 36 21.4 -0.9**
comp=Z,18nm,0.9s,mb5.1,baz=161,slow=6.1,SNR=65
KURK S **S** **12 44 27.7 +4.9**
comp=Z,0.1nm,0.4s,baz=117,slow=37,SNR=3.1

KURK **Kurchatov** 58.33 343 *e*P P 12 36 21.9 -0.5
comp=Z,115nm,1.4s,mb5.7
KURK *e*PP PP 12 38 34.2 +2.4
KURK LR LR
comp=Z,2µm,19.0s,MS5.2
HNR Honiara 58.34 98 P P **12 36 21.9 -1.2**
comp=Z,93nm,0.9s,mb5.8,baz=189,slow=4.8,SNR=18
HNR Honiara 58.34 98 *e*P P **12 36 21.3 -1.8**
HNR pmax pmax
comp=Z,670nm,1.6s,mb6.4
HNR Honiara 58.34 98 *e*P P **12 36 21.1 -2.1**
comp=Z,669nm,1.6s,mb6.4
HNR *e*pP pP 12 36 31.2 -1.0
HNR LR LR
comp=Z,833nm,20.0s,MS4.8
KLR Kul'dur 59.64 23⇓ *i*P P **12 36 27.0 -4.5**
KLR pmax pmax
comp=E,64nm,1.8s
KLR pmax pmax
comp=Z,180nm,1.8s,mb5.8
ZAA0 Zalesovo Array 59.82 349 *e*P P **12 36 31.9 -0.7**
ZAA0 *e*pP pP 12 36 41.3 -0.4
ZALV Zalesovo Beam 59.82 349 P P **12 36 32.0 -0.6**
comp=Z,46nm,0.9s,mb5.5,baz=181,slow=4.6,SNR=89
ZALV S S **12 44 39.4 -2.7**
comp=Z,0.2nm,0.3s,baz=171,slow=20,SNR=4.0
ZALV PKPPKP 13 06 04.9
comp=Z,0.3nm,0.4s,baz=296,slow=4.3,SNR=3.8
ZALV LR LR 13 06 17.9
comp=Z,744nm,18.9s,MS4.8,baz=171,slow=40
ZALV Zalesovo Beam 59.82 349 P P **12 36 32.0 -0.6**
ZALV S S **12 44 39.4 -2.6**
ZALV Zalesovo Beam 59.82 349 P P **12 36 32.0 -0.6**
ZALV S S **12 44 39.4 -2.7**
ZALV P'P' 13 06 04.9
ZALV LR LR 13 06 17.9
ERM Erimo 59.85 35 P P **12 36 31.3 -1.8**
comp=Z,229nm,0.9s,mb6.2,SNR=11
ERM Erimo 59.85 35⇑ *i*P P **12 36 31.0 -2.1**
ERM Erimo 59.85 35 *e*P P **12 36 30.9 -2.2**
comp=Z,36nm,0.9s,mb5.4
ERM LR LR
comp=Z,663nm,19.0s,MS4.8
KRAR Krasnoyarsk 60.66 355⇓ *i*P P **12 36 37.7 -0.6**
KRAR pmax pmax
comp=Z,134nm,1.3s,mb5.9
ASAJ Asahikawa 60.90 33 P P **12 36 40.0 -0.2**
comp=Z,17nm,0.4s,mb5.5,baz=238,slow=11,SNR=49
NVS Novosibirsk 60.97 348⇑ *i*P P **12 36 38.5 -2.0**
NVS *e*S S **12 44 53.6 -3.2**
NVS pmax pmax
comp=Z,89nm,1.8s,mb5.6
NVS pmax pmax
comp=N,79nm,1.7s
NVS pmax pmax
comp=E,41nm,1.7s
NVS smax
comp=N,35nm,1.9s
NAY Al-Naaiem 61.74 307 *e*P P **12 36 45.9 -0.4**
baz=306
NAY AMb AMB 12 36 47.1
comp=Z,20nm,1.2s,mb5.1,baz=306
MIB Mutribah 61.89 307 *e*P P **12 36 46.5 -0.7**
baz=307
MIB AMb AMB 12 36 57.5
comp=Z,68nm,1.4s,mb5.6,baz=307
RST Umm Al-Ruwaisa 62.04 307 *e*P P **12 36 47.7 -0.5**
baz=307
RST AMb AMB 12 36 49.6
comp=Z,36nm,1.2s,mb5.4,baz=307
CASY Casey 62.05 176 PFAKE 12 37 00.0 +12
CASY LR LR
comp=Z,1µm,20.0s,MS5.2
MIR Mirnyy 62.26 184 *e*P P **12 36 48.0 -1.0**
MIR *e*S S **12 45 20.0 +7.2**
MIR pmax pmax
comp=Z,100nm,1.5s,mb5.7
YSS Yuzh-Sakhalins 62.87 31⇑ *i*P P **12 36 53.0 -0.4**
YSS *e* 12 36 59.0
YSS *e* 12 37 29.0
YSS pmax pmax
comp=Z,120nm,1.0s,mb6.0
YSS MLR MLR
comp=Z,700nm,20.0s,MS4.8
YSS Yuzh-Sakhalins 62.87 31 *e*P P **12 36 51.8 -1.7**
comp=Z,98nm,0.9s,mb5.9
YSS LR LR
comp=Z,273nm,22.0s,MS4.4
BOD Bodaibo 62.91 8 *e*P P **12 36 52.8 -0.7**
BOD pmax pmax
comp=Z,63nm,1.3s,mb5.6
BVA0 Borovoye Array 62.94 340 P P **12 36 51.3 -2.4**
BVA0 pmax pmax
comp=Z,17nm,1.4s,mb5.0
BVAR Borovoye Array 62.94 340 P P **12 36 52.7 -1.0**
comp=Z,16nm,0.8s,mb5.2,baz=143,slow=8.5,SNR=44
BRVK Borovoye 63.00 340 P P **12 36 53.8 -0.3**
comp=Z,230nm,1.1s,mb6.2,SNR=8.4
BRVK Borovoye 63.00 340 P P **12 36 53.4 -0.7**
SNR=15
BRVK Borovoye 63.00 340 P P **12 36 53.1 -1.0**
BRVK pmax pmax
comp=Z,62nm,1.1s,mb5.7
BRVK Borovoye 63.00 340 *e*P P **12 36 52.9 -1.2**
comp=Z,62nm,1.1s,mb5.7
BRVK LR LR
comp=Z,2µm,20.0s,MS5.3
CLNS Chul'man 64.03 14 *e*P P **12 36 59.7 -1.2**
CLNS *e**PP pP 12 37 08.1 -2.0
CLNS *e* 12 37 35.6
CLNS *e* 12 39 19.1
CLNS *e*PPP 12 40 49.8
CLNS *e*S S **12 45 33.3 -2.0**
CLNS *e*SSS 12 52 27.7
CLNS pmax pmax
comp=Z,67nm,1.5s,mb5.5
CLNS pmax pmax
comp=E,23nm,1.2s
CLNS pmax pmax
comp=N,38nm,1.3s
CLNS smax
comp=E,264µm,16.6s
CLNS smax
comp=N,205µm,14.4s
CLNS MLR MLR
comp=Z,1µm,15.0s,MS5.2
CLNS MLR MLR
comp=N,917nm,18.0s,MS5.2
CLNS MLR MLR
comp=E,689nm,14.0s,MS5.2
KMBO Kilima Mbogo 64.08 271 P P **12 37 02.8 +0.7**
comp=E,0.5nm,0.3s,baz=57,slow=14,SNR=3.4
KMBO Kilima Mbogo 64.08 271 P P **12 37 02.8 +0.7**
KMBO LR LR
comp=Z,913nm,19.0s,MS5.0
AB31 Akbulak array 64.42 331 *i* P P **12 37 02.3 -1.3**
AB31 pmax pmax
comp=Z,96nm,1.1s,mb5.7
AB31 Akbulak array 64.42 331⇑ *e*P P **12 37 02.3 -1.3**
AKTK Aktyubinsk 66.14 331 P P **12 37 12.8 -1.9**
AKTO Aktyubinsk 66.14 331 P P **12 37 12.8 -1.9**
comp=Z,13nm,1.0s,mb4.9,baz=123,slow=6.0,SNR=30
MAK Makhachkala 67.70 320 *e*P P **12 37 21.1 -3.7**
MAK *e* 12 39 53.5
MAK *i* S S 12 46 18.1 -2.4
MAK *e* 12 47 21.1
MAK pmax pmax
comp=Z,640nm,1.5s,mb6.4
GNI Garni 68.21 316 LR LR 13 08 27.1
comp=Z,315nm,21.1s,MS4.5,baz=96,slow=37
GNI Garni 68.21 316 PFAKE 12 37 40.0 +12
GNI LR LR
comp=Z,431nm,22.0s,MS4.6
MAW Mawson 68.26 195 *e*P P **12 37 27.4 -0.5**
MAW Mawson 68.26 195 P P **12 37 27.9 0.0**
comp=Z,4.3nm,0.7s,mb4.6,baz=25,slow=5.2,SNR=17
MAW LR LR 13 01 51.2
comp=Z,2µm,19.8s,MS5.3,baz=38,slow=31
DGRG David-gareji 68.37 318 P P **12 37 30.6 +1.5**
TBLG Delisi 68.92 318 *e*P P **12 37 34.2 +1.7**
TBLG Delisi 68.92 318 P P **12 37 34.2 +1.7**
SVE Sverdlovsk 69.45 337⇓ *e*P P **12 37 35.3 -0.1**
SVE *e* 12 38 00.8
SVE *e*PPP 12 41 52.4
SVE *e* 12 47 24.9
SVE *e*SS SS 12 51 05.2 -3.4
SVE *e*SSS 12 54 09.3
SVE pmax pmax
comp=Z,114nm,1.3s,mb5.6
SVE MLR MLR
comp=Z,2µm,21.0s,MS5.3
GOR Gori 69.46 318 P P **12 37 35.9 +0.1**
YAK Yakutsk 69.78 14*c i*P P **12 37 35.7 -1.7**
YAK *e**PP pP 12 37 44.1 -2.5
YAK *e* 12 37 55.0
YAK *e*S S 12 46 40.9 -3.5
YAK *e* 12 47 37.7
YAK *e*SS SS 12 51 12.8 -0.7
YAK *e*SSS 12 54 19.3
YAK pmax pmax
comp=Z,90nm,1.0s,mb5.7
YAK pmax pmax
comp=N,34nm,1.0s
YAK pmax pmax
comp=E,31nm,1.1s
YAK smax
comp=E,83µm,3.2s
YAK MLR MLR
comp=E,1µm,17.0s
YAK MLR MLR
comp=Z,1µm,14.0s,MS5.3
YAK MLR MLR
comp=N,1µm,20.0s
YAK Yakutsk 69.78 14 *e*P P **12 37 35.9 -1.5**
comp=N,69nm,0.7s,mb5.7
YAK LR LR
comp=Z,931nm,19.0s,MS5.0
ARU Arti 69.98 336 P P **12 37 38.3 -0.4**
comp=Z,320nm,1.5s,mb6.0,SNR=9.4
ARU Arti 69.98 336*c i*P P **12 37 38.0 -0.7**
ARU *e* 12 37 58.4
ARU *e* 12 40 09.4
ARU *e*PPP 12 41 52.2
ARU *e*S S 12 46 48.6 +1.6
ARU *e*SS SS 12 51 22.0 +5.2
ARU pmax pmax
comp=Z,108nm,1.7s,mb5.5
ARU MLR MLR
comp=Z,1µm,22.0s,MS5.1
ARU Arti 69.98 336 *e*P P **12 37 38.0 -0.7**
comp=Z,135nm,1.4s,mb5.7
ARU LR LR
comp=Z,1µm,21.0s,MS5.1
ONI Oni 70.16 318 P P **12 37 40.5 +0.4**
ASF Jabal al Asfar 71.10 306 P P **12 37 45.8 -0.3**
comp=Z,8.6nm,1.1s,mb4.6,baz=360,slow=4.2,SNR=8.1
KIV Kislovodsk 71.26 319 *e*P P **12 37 46.2 -0.6**
KIV *e* 12 38 07.0
KIV *e*S S 12 47 01.7 -0.8
KIV pmax pmax
comp=Z,23nm,1.2s,mb5.0
KIV MLR MLR
comp=Z,479nm,18.0s,MS4.8
KIV Kislovodsk 71.26 319⇓ *i*P P **12 37 46.2 -0.6**
KIV LR LR
comp=Z,598nm,21.0s,MS4.8
EIL Elat 71.97 303 P P **12 37 51.6 +0.2**
comp=Z,11nm,0.9s,mb4.8,baz=139,slow=5.5,SNR=6.1
MALT Malatya 71.97 313 P P **12 37 52.5 +1.3**
MALT pmax pmax
comp=Z,16nm,1.1s,mb4.9
MALT Malatya 71.97 313⇑ *i*P P **12 37 52.5 +1.3**
MALT Malatya 71.97 313 *e*P P **12 37 52.1 +0.9**
comp=Z,16nm,1.1s,mb4.9
MALT LR LR
comp=Z,595nm,20.0s,MS4.9
RPZ Rata Peaks 72.32 134 LR LR 13 09 00.4
comp=Z,2µm,21.1s,MS5.3,baz=199,slow=35
MMAI Mount Meron Ar 72.56 306 P P **12 37 55.7 +0.9**
comp=Z,1.3nm,0.4s,mb4.2,baz=91,slow=7.6,SNR=3.4
LSZ Lusaka 72.59 255 P P **12 37 55.7 +0.3**
comp=Z,1.3nm,0.5s,mb4.1,baz=39,slow=10,SNR=2.2
LSZ Lusaka 72.59 255 *e*P P **12 37 58.5 +3.1**
LSZ pmax pmax
comp=Z,32nm,1.6s,mb5.0
LSZ MLR MLR
comp=Z,940nm,20.0s,MS5.1
LSZ Lusaka 72.59 255 *e*P P **12 37 58.5 +3.1**
comp=Z,32nm,1.6s,mb5.0
LSZ LR LR
comp=Z,940nm,20.0s,MS5.1
SOC Sochi 73.06 318 *e*P P **12 37 52.9 -4.7**
SOC *e* 12 40 43.9
SOC *e*S S 12 47 21.1 -2.0
SOC *e* 12 48 06.4
SOC pmax pmax
comp=Z,21nm,1.1s,mb5.0
PETK Petropavlovsk- 74.25 31 P P **12 38 03.3 -1.1**
comp=Z,10nm,0.8s,mb4.8,baz=211,slow=1.7,SNR=12
SNZO South Karori 74.59 132 PFAKE 12 38 20.0 +13
SNZO LR LR
comp=Z,2µm,22.0s,MS5.4
PET Petropavlovsk 74.71 32 PFAKE 12 38 20.0 +13
PET LR LR
comp=Z,721nm,20.0s,MS5.0
CSS Prodhromos 74.77 308 *e*P P **12 38 07.4 -0.4**
comp=Z,19nm,1.0s,mb5.0
CSS LR LR
comp=Z,1µm,19.0s,MS5.2
ANN Anapa 75.05 319 *e*P P **12 38 08.8 -0.4**
LBTB Lobatse 75.21 245 PFAKE 12 38 20.0 +9.4
LBTB LR LR
comp=Z,2µm,20.0s,MS5.5
BOSA Boshof 75.66 242 P P **12 38 13.6 +0.4**
comp=Z,3.8nm,0.9s,mb4.3,baz=138,slow=11,SNR=3.9
BOSA LR LR 13 07 12.0
comp=Z,1µm,18.8s,MS5.3,baz=102,slow=32
SYO Syowa Base 75.99 199⇓ *e*P P **12 38 12.4 -1.7**
SYO Syowa Base 75.99 199⇓ *e*pP pP 12 38 24.4 +0.9
VSR Storozhevoye 76.54 325 *e*P P **12 38 16.5 -1.1**
VSR pmax pmax
comp=Z,20nm,1.3s,mb4.9
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,20nm,1.2s
ANTO Ankara 76.62 313 PFAKE 12 38 30.0 +12
ANTO LR LR
comp=Z,693nm,20.0s,MS5.0
SIM Simferopol' 77.31 318 P P **12 38 22.3 +0.3**
SIM *e*S S 12 48 17.8 +7.6
SIM pmax pmax
comp=Z,14nm,0.8s,mb4.9
SIM MLR MLR
comp=Z,990nm,24.4s,MS5.0
FUNA Funafuti 77.36 98 PFAKE 12 38 30.0 +7.0
FUNA LR LR
comp=Z,12µm,20.0s,MS6.2
SEY Seymchan 77.40 21⇑ *e*P P **12 38 21.8 -0.3**
ISP Isparta 77.76 310 PFAKE 12 38 40.0 +15
ISP LR LR
comp=Z,599nm,20.0s,MS4.9
MOS Moscow 79.28 329 *e*P P **12 38 29.0 -3.7**
MOS *e* pP 12 38 39.2 -2.8
MOS *e* 12 41 35.4
MOS *e*S S 12 48 25.5 -5.4
MOS pmax pmax
comp=Z,70nm,1.2s,mb5.5
MOS Moscow 79.28 329 *e*P P **12 38 29.9 -2.8**
OBN Obninsk 79.57 328*c i*P P **12 38 33.8 -0.5**
OBN *i* pP 12 38 41.4 -2.2
OBN *e* 12 38 51.1
OBN *e*S S 12 48 35.8 +1.7
OBN pmax pmax
comp=Z,108nm,1.6s,mb5.5
OBN MLR MLR
comp=Z,800nm,20.0s,MS5.1
RAO Raoul Island 79.77 119 LR LR 13 14 51.2
comp=Z,477nm,19.7s,MS4.8,baz=338,slow=36
SBA Scott Base 80.60 169 P P **12 38 40.8 +1.3**
SBA pmax pmax
comp=Z,15nm,1.1s,mb4.8
SBA Scott Base 80.60 169 *e*P P **12 38 40.7 +1.2**
comp=Z,14nm,1.2s,mb4.8
SBA LR LR
comp=Z,684nm,19.0s,MS5.0
KLMR Klimovskoe 80.61 334⇓ *i*P P **12 38 40.0 +0.2**
KLMR *e* pP 12 38 47.5 -1.6
KLMR pmax pmax
comp=Z,103nm,1.4s,mb5.6
SANT Santorini 81.33 308 PFAKE 12 39 00.0 +16
SANT LR LR
comp=Z,663nm,20.0s,MS5.0
KIS Kishinev 81.45 319 *e*P P **12 38 44.0 -0.6**
AKASG Malin Array Be 82.23 322 P P **12 38 47.4 -1.2**
comp=Z,2.8nm,0.7s,mb4.3,baz=84,slow=4.2,SNR=19
AKASG Malin Array Be 82.23 322 *i* P P **12 38 47.9 -0.7**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
KIEV Kiev 82.24 322 PFAKE 12 39 00.0 +11
KIEV LR LR
comp=Z,716nm,20.0s,MS5.0
VRI Vrincioaia 82.55 317⇓ *i*P P **12 38 51.0 +0.6**
VRI Vrincioaia 82.55 317⇓ P P **12 38 51.0 +0.7**
TSUM Tsumeb 82.66 251 PFAKE 12 39 00.0 +8.5
TSUM LR LR
comp=Z,1µm,20.0s,MS5.3
MLR Muntele Rosu 82.99 317⇑ *i*P P **12 38 52.6 -0.1**
MLR Muntele Rosu 82.99 317 ⇑P P **12 38 52.6 -0.1**
BURAR Bucovina Array 83.97 319⇑ *i*P P **12 38 58.3 +0.6**
BURAR Bucovina Array 83.97 319 ⇑P P **12 38 58.3 +0.6**
BUR08 Bucovina Ar. S 83.99 319 *e*P P **12 38 58.6 +0.8**
MNK Minsk 84.12 326 *e*P P **12 38 55.0 -3.3**
BILL Bilibino 84.99 20*c i*P P **12 39 01.2 -1.2**
BILL pmax pmax
comp=Z,68nm,2.5s,mb5.3
BILL Bilibino 84.99 20⇑ *i*P P **12 39 01.3 -1.1**
BILL LR LR
comp=Z,1µm,20.0s,MS5.2
JOF Joensuu 84.99 334 *ep* P **12 39 02.6 +0.1**
comp=Z,30nm,0.9s,mb5.4
JOF Joensuu 84.99 334 *e*P P **12 39 02.6 +0.1**
JOF pmax pmax
comp=Z,31nm,0.9s,mb5.4
LVV L'vov 85.23 321 *e*P P **12 39 03.0 -1.0**
LVV *e* 12 39 09.2
LVZ Lovozero 85.53 340 PFAKE 12 39 20.0 +15
LVZ LR LR
comp=Z,1µm,22.0s,MS5.2
VSU Vasula 85.79 329⇑ *i*P P **12 39 06.3 -0.2**
APA Apatity 85.84 339⇑ *i*P P **12 39 07.9 +1.3**
APA pmax pmax
comp=Z,54nm,1.6s,mb5.5
APA MLR MLR
comp=Z,1µm,22.0s,MS5.3
BZS Buzias 85.99 316⇑ *i*P P **12 39 07.6 -0.3**
BZS Buzias 85.99 316 ⇑P P **12 39 07.6 -0.3**
KWP Kalwaria 86.03 320 *e*P P **12 39 07.5 -0.5**
KWP *e*pP pP 12 39 17.2 -0.2
KWP LMZ 13 12 08.1
comp=Z,600nm,21.9s
KWP Kalwaria 86.03 320⇓ *i*P P **12 39 09.4 +1.4**
KWP Kalwaria 86.03 320 *e*P P **12 39 07.4 -0.6**
KWP *e*pP pP 12 39 17.2 -0.2
KWP LR LR
comp=Z,932nm,21.0s,MS5.2
UZH Uzhgorod 86.10 319 *e*P P **12 39 10.0 +1.7**
UZH *e* 12 42 29.0
UZH *e* 12 49 24.0
UZH *e*S S 12 49 42.0 +1.1
UZH MLR MLR
comp=N,640nm,19.0s,MS5.2
UZH MLR MLR
comp=E,700nm,19.0s,MS5.2
UZH MLR MLR
comp=Z,420nm,19.0s,MS4.9
KOLS Kolonicke sedl 86.17 320 *e*P P **12 39 09.6 +0.9**
KOLS *e*pP pP 12 39 18.6 +0.5
TIR Tirane 86.53 312 PFAKE 12 39 20.0 +9.4
TIR LR LR
comp=Z,696nm,21.0s,MS5.0
SUW Suwalki 86.65 325 *e*P P **12 39 11.6 +0.7**
SUW *e*pP pP 12 39 19.9 -0.5
SUW LMZ 13 08 38.4
comp=Z,1µm,23.7s
SUW Suwalki 86.65 325 *e*P P **12 39 11.6 +0.7**
SUW *e*pP pP 12 39 19.9 -0.4
CRVS Cervenica-Dubn 86.69 319 *e*P P **12 39 12.7 +1.5**
CRVS *e*pP pP 12 39 21.2 +0.5
STHS Stebnicka Huta 86.93 320 *e*P P **12 39 13.5 +1.1**
STHS *e* pP 12 39 22.9 +1.1
STHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
STHS Stebnicka Huta 86.93 320 *e*P P **12 39 13.5 +1.1**
comp=Z,6.3nm,1.1s,mb4.8
STHS *e* pP 12 39 22.9 +1.1
KAF Kangasniemi 86.96 333 *ep* P **12 39 11.7 -0.6**
comp=Z,32nm,0.9s,mb5.5,baz=100,slow=4.4
KAF Kangasniemi 86.96 333 *e*P P **12 39 11.7 -0.6**
KAF pmax pmax
comp=Z,32nm,0.9s,mb5.5
PSZ Piszkesteto 87.55 318⇑ *e*P P **12 39 15.4 0.0**
PSZ Piszkesteto 87.55 318 PFAKE 12 39 30.0 +15
PSZ LR LR
comp=Z,1µm,20.0s,MS5.2
OJC Ojcow 87.99 321 *e*P P **12 39 17.4 -0.1**
OJC *e**PP pP 12 39 26.0 -0.9
VYHS Vyhne 88.34 319 *e*P P **12 39 19.5 +0.3**
VYHS *e*pP pP 12 39 28.6 0.0
TIP Timpagrande 88.59 309 *e*P P **12 39 20.6 +0.1**
comp=Z,3.8nm,0.9s,mb4.7
TIP *e*pP pP 12 39 30.0 0.0
TIP LR LR
comp=Z,593nm,22.0s,MS5.0
KOLL Kolacno 88.64 319 *e*P P **12 39 22.1 +1.5**
KOLL *e*pP pP 12 39 30.0 0.0
KEV Kevo 88.78 340 *e*P P **12 39 19.7 -1.1**
comp=Z,35nm,1.0s,mb5.6
KEV LR LR
comp=Z,1µm,21.0s,MS5.3
OKC Ostrava-Krasne 88.98 320 *e*P P **12 39 21.8 -0.4**
OKC *e*pP pP 12 39 30.8 -0.8
OKC AMS AMS 13 09 30.0
comp=Z,800nm,18.5s
OKC Ostrava-Krasne 88.98 320 *e*P P **12 39 21.8 -0.4**
OKC *e* pP 12 39 30.8 -0.8
CEL Celeste 89.16 308 PFAKE 12 39 30.0 +6.7
CEL LR LR
comp=Z,27µm,21.0s,MS6.6
ARCES ARCESS Array B 89.22 340 P P **12 39 22.7 -0.2**
comp=Z,9.8nm,1.0s,mb5.1,baz=93,slow=4.5,SNR=20
ARCES LR LR 13 23 23.6
comp=Z,1µm,21.3s,MS5.3,baz=102,slow=38
ARCES ARCESS Array B 89.22 340 P P **12 39 22.7 -0.2**
ARCES LR LR 13 23 23.6
MODS Modra-Piesok 89.35 318 *e*P P **12 39 24.2 +0.3**
MODS *e* pP 12 39 33.4 0.0
MODS pmax pmax
comp=Z,20nm,1.8s,mb5.2
MODS Modra-Piesok 89.35 318 *e*P P **12 39 24.2 +0.3**
comp=Z,20nm,1.8s,mb5.2
MODS *e* pP 12 39 33.4 0.0
MORC Moravsky Berou 89.36 320 *e*P P **12 39 24.0 +0.1**
MORC pmax pmax
comp=Z,30nm,1.3s,mb5.5
MORC Moravsky Berou 89.36 320⇓ *i*P P **12 39 24.9 +0.9**
MORC Moravsky Berou 89.36 320 *e*P P **12 39 23.9 0.0**
comp=Z,30nm,1.3s,mb5.5
CUC Castrocucco 89.41 310 PFAKE 12 39 40.0 +16
CUC LR LR
comp=Z,896nm,21.0s,MS5.2
ZST Bratislava 89.45 318 *e*P P **12 39 25.5 +1.1**
ZST *e* pP 12 39 33.6 -0.2
ZST pmax pmax
comp=Z,41nm,1.6s,mb5.5
ZST Bratislava 89.45 318 *e*P P **12 39 25.5 +1.1**
comp=Z,41nm,1.6s,mb5.5
ZST *e* pP 12 39 33.6 -0.2
DPC Dobruska-Polom 90.22 320 *e*P P **12 39 27.7 -0.2**
DPC *e*pP pP 12 39 34.2 -3.2
DPC AMS AMS 13 13 00.0
comp=Z,800nm,19.1s
SNAA Sanae 90.23 198 *e*P P **12 39 28.0 +0.4**
SNAA *e* pP 12 39 37.9 +0.8
SNAA *e* 12 39 45.3
KSP Ksiaz 90.29 321 *e*P P **12 39 29.6 +1.3**
KSP *e*pP pP 12 39 38.0 +0.3
KSP LMZ 13 13 09.7
comp=Z,2µm,22.1s
KSP Ksiaz 90.29 321⇓ *e*P P **12 39 29.5 +1.2**
KSP *e**PP pP 12 39 36.0 -1.7
KSP *e*S S 12 50 22.0 +1.4
KSP Ksiaz 90.29 321⇓ *e*P P **12 39 29.5 +1.2**
KSP *e*pP pP 12 39 36.0 -1.7
KSP *e*S S 12 50 22.0 +1.4

KSP LR LR
comp=Z,2µm,22.1s,MS5.5
BOJS Bojanci 90.40 315 *e*P **P** **12 39 28.4 -0.5**
BOJS *e* pP 12 39 37.7 -0.7
UPC Upice 90.43 320 *e*P **P** **12 39 30.4 +1.5**
UPC *e*pP pP 12 39 37.1 -1.3
PERS Pernice 90.61 317 *i*P **P** **12 39 29.6 -0.3**
PERS *i* pP 12 39 39.0 -0.3
LJU Ljubljana 90.96 316 *i*P **P** **12 39 31.6 +0.1**
LJU *i* pP 12 39 40.7 -0.3
PRU Pruhonice 91.32 320 *e*P **P** **12 39 33.5 +0.5**
PRU *e*pP pP 12 39 42.0 -0.5
PRU AMS AMS 13 12 10.0
comp=Z,800nm,22.1s
PVCC Panska Ves 91.35 320 *e*P **P** **12 39 34.7 +1.5**
PVCC *e*pP pP 12 39 41.8 -0.9
PVCC AMS AMS 13 18 50.0
comp=Z,1µm,19.8s
GERES GERESS Array B 91.76 319 P **P** **12 39 35.2 +0.1**
comp=Z,3.0nm,0.8s,mb4.7,baz=104,slow=5.6,SNR=18
BRG Berggiesshubel 91.78 321 *i*P **P** **12 39 35.9 +0.7**
BRG *i* pP 12 39 43.9 -0.7
BRG pmax pmax
comp=Z,15nm,1.5s,mb5.1
BRG MLR MLR
comp=N,515nm,18.1s
BRG MLR MLR
comp=E,376nm,26.9s
BRG MLR MLR
comp=Z,834nm,19.8s,MS5.2
BRG Berggiesshubel 91.78 321 *i*P **P** **12 39 35.9 +0.7**
comp=Z,24nm,1.5s,mb5.3
BRG *i* pP 12 39 43.9 -0.7
comp=Z,31nm,1.4s
BRG *e* 12 40 00.2
comp=Z,8.2nm,1.3s
BRG *e* 12 40 11.4
comp=Z,22nm,1.5s
BRG
comp=N,860nm,18.1s
BRG
comp=E,628nm,26.9s
BRG
comp=Z,1µm,19.8s
BRG Berggiesshubel 91.78 321 *i*P **P** **12 39 35.9 +0.7**
comp=Z,15nm,1.5s,mb5.1
BRG *i* pP 12 39 43.9 -0.7
BRG *e* 12 40 00.2
BRG *e* 12 40 11.4
BRG LR LR
comp=Z,830nm,19.8s,MS5.2
VNA2 Neumayer--Watz 91.85 198 *e*P **P** **12 39 36.3 +1.1**
VNA2 *e* pP 12 39 46.4 +1.8
VNA2 *e* 12 39 53.0
KHC Kasperske Hory 91.87 319 *e*P **P** **12 39 35.9 +0.3**
KHC *e*pP pP 12 39 44.2 -0.9
KHC AMS AMS 13 13 20.0
comp=Z,1µm,19.8s
VNA1 Neumayer--Stat 92.22 198 *e*P **P** **12 39 38.8 +2.0**
VNA1 *e* pP 12 39 48.9 +2.6
VNA1 *e* 12 39 55.6
CLL Collm 92.40 321 *e*P pP 12 39 47.0 -0.5
CLL MLR MLR
comp=Z,600nm,21.9s,MS5.0
CLL Collm 92.40 321 *e*P **P** **12 39 38.0 0.0**
CLL *e*pP pP 12 39 47.0 -0.5
CLL *e*(sP) sP 12 39 50.0 -0.9
CLL *e*S S 12 50 45.0 +5.3
CLL Lm 13 19 00.0
comp=Z,600nm,19.8s
CLL Lm 13 26 00.0
comp=N,600nm,21.4s
CLL Lm 13 26 00.0
comp=E,500nm,21.8s
CLL Lm 13 26 00.0
comp=Z,600nm,20.4s
VNA3 Neumayer Olymp 92.44 198 *e*P **P** **12 39 39.8 +1.9**
VNA3 *e* pP 12 39 48.8 +1.5
VNA3 *e* 12 39 55.6
GRA1 Grafenberg Arr 93.44 319 *e*P **P** **12 39 43.8 +0.9**
comp=Z,34nm,1.6s,mb5.5
GRF Grafenberg Arr 93.44 319 *e*P **P** **12 39 43.8 +0.9**
GRF pmax pmax
comp=Z,34nm,1.6s,mb5.5
GRF Grafenberg Arr 93.44 319 *e*P **P** **12 39 43.8 +0.9**
GRF pmax pmax
comp=Z,34nm,1.6s,mb5.5
GRF Grafenberg Arr 93.44 319 *e*P **P** **12 39 43.8 +0.9**
comp=Z,34nm,1.6s,mb5.5
VLC Villacollemand 93.76 314 PFAKE 12 40 00.0 +16
VLC LR LR
comp=Z,887nm,20.0s,MS5.2
NOA NORSAR Array B 93.93 331 P **P** **12 39 44.3 -0.6**
comp=Z,2.4nm,0.8s,mb4.7,baz=94,slow=5.3,SNR=3.6
KEST Kesra 94.19 305 LR LR 13 30 38.9
comp=Z,317nm,18.3s,MS4.8,baz=182,slow=41
KBS Kingsbay 94.23 349 PFAKE 12 40 00.0 +14
KBS LR LR
comp=Z,1µm,22.0s,MS5.3
VSL Villasalto 94.32 309 PFAKE 12 40 00.0 +13
VSL LR LR
comp=Z,628nm,22.0s,MS5.0
TUE Stuetta 94.57 316 PFAKE 12 40 00.0 +12
TUE LR LR
comp=Z,1µm,21.0s,MS5.3
BFO Black Forest 95.30 318 PFAKE 12 40 00.0 +8.6
BFO LR LR
comp=Z,614nm,20.0s,MS5.1
BNI Bardonecchia 96.42 315 PFAKE 12 40 10.0 +13
BNI LR LR
comp=Z,1µm,21.0s,MS5.3
RAR Rarotonga 96.66 112 LR LR 13 19 30.3
comp=Z,474nm,20.3s,MS5.0,baz=269,slow=33
WLF Walferdange 96.73 319 PFAKE 12 40 10.0 +12
WLF LR LR
comp=Z,2µm,19.0s,MS5.5
COLA College 102.77 24 PFAKE 12 40 40.0 +15
COLA LR LR
comp=Z,416nm,21.0s,MS4.9
PMR Palmer 103.13 28 PFAKE 12 40 40.0 +14
PMR LR LR
comp=Z,618nm,22.0s,MS5.1
ESLA Sonseca Array 104.60 310 PFAKE 12 40 50.0 +17
ESLA LR LR
comp=Z,4µm,20.0s,MS6.0
PAB San Pablo 104.91 310 PFAKE 12 40 50.0 +16
PAB LR LR
comp=Z,842nm,20.0s,MS5.3
SHEL Horse Pasture 105.11 252 PFAKE 12 45 00.0 +9.3
SHEL LR LR
comp=Z,706nm,19.0s,MS5.2
TBI Tubuai 105.72 116 *e*SS SS 13 00 03.8 +4.9
comp=Z,517nm,25.8s
TBI Tubuai 105.72 116 *e*LR LR 13 15 42.2
comp=Z,983nm,22.5s
PPT Papeete 106.73 110 *e*LR LR 13 16 08.3
comp=Z,628nm,23.0s
SFS San Fernando 106.73 307 PFAKE 12 45 00.0 +6.8
SFS LR LR
comp=Z,2µm,21.0s,MS5.5
MTE Manteigas 107.23 311 PFAKE 12 45 10.0 +16
MTE LR LR
comp=Z,1µm,20.0s,MS5.4
PMSA Palmer Station 110.10 187 PFAKE 12 45 10.0 +11
PMSA LR LR
comp=Z,754nm,20.0s,MS5.3
SIT Sitka 111.35 29 PFAKE 12 45 10.0 +8.8
SIT LR LR
comp=Z,734nm,20.0s,MS5.3
WRAK Wrangell Islan 113.10 29 PFAKE 12 45 20.0 +15
WRAK LR LR
comp=Z,509nm,19.0s,MS5.1
ASCN Ascension 114.69 259 PFAKE 12 45 20.0 +11
ASCN LR LR
comp=Z,920nm,20.0s,MS5.4
RKT Rikitea 118.62 119 *e*SS SS 13 02 54.9 +4.7
comp=Z,337nm,28.0s
RKT Rikitea 118.62 119 *e*LR LR 13 21 38.6
comp=Z,936nm,25.2s
NLWA Neilton Lookou 122.27 35 PFAKE 12 45 30.0 +7.5
NLWA LR LR
comp=Z,430nm,20.0s,MS5.1
JCW Jim Creek 122.90 33 *e*PKPdf PKPdf 12 45 24.0 +0.4
EDM Edmonton 123.69 24 *e*PKIKP PKPdf 12 45 24.6 -0.4
ETW Entiat 124.11 33 *e*PKPdf PKPdf 12 45 25.4 -0.6

OD2 Odessa Site #2 125.11 32 *e*PKPdf PKPdf 12 45 27.9 0.0
RSW Rattlesnake Hi 125.25 34 *e*PKPdf PKPdf 12 45 29.1 +0.9
HAWA Hanford 125.28 34 *e*PKPdf PKPdf 12 45 28.6 +0.3
HUMO Hull Mountain 125.38 39 *e*PKPdf PKPdf 12 45 29.0 +0.4
HUMO LR LR
comp=Z,407nm,21.0s,MS5.1
NEW Newport 125.39 31 PFAKE 12 45 40.0 +12
NEW LR LR
comp=Z,627nm,20.0s,MS5.3
YBH Yreka Blue Hor 125.98 40 PFAKE 12 45 40.0 +10
YBH LR LR
comp=Z,316nm,19.0s,MS5.0
LNOR Lincton Mounta 126.28 34 *e*PKIKP PKPdf 12 45 29.8 -0.4
FFC Flin Flon 126.44 17 PFAKE 12 45 40.0 +10
FFC LR LR
comp=Z,773nm,20.0s,MS5.4
WDC Whiskeytown Da 126.68 41 PFAKE 12 45 40.0 +8.9
WDC LR LR
comp=Z,374nm,21.0s,MS5.0
MOD Modoc 127.42 39 *e*PKPdf PKPdf 12 45 32.9 +0.4
MOD *e*pPKPdf pPKPdf 12 45 42.9 +0.6
MOD LR LR
comp=Z,338nm,19.0s,MS5.0
BMO Blue Mountains 127.46 34 PKIKP PKPdf 12 45 32.8 +0.3
BMO Blue Mountains 127.46 34 *e*PKPdf PKPdf 12 45 32.2 -0.3
BMO LR LR
comp=Z,526nm,19.0s,MS5.2
MSO Missoula 127.95 30 *e*PKPdf PKPdf 12 45 33.5 +0.2
MSO LR LR
comp=Z,300nm,20.0s,MS5.0
WVOR Wild Horse Val 128.14 37 *e*PKIKP PKPdf 12 45 34.5 +0.6
WVOR *e* 12 45 43.6
WVOR MLR MLR
comp=Z,418nm,19.0s,MS5.1
CHMT Chamberlain Mo 128.24 30 *e*PKPdf PKPdf 12 45 34.3 +0.4
EGMT Eagleton 129.08 27 *e*PKPdf PKPdf 12 45 35.8 +0.3
EGMT LR LR
comp=Z,501nm,20.0s,MS5.2
CMB Columbia Colle 129.42 43 PFAKE 12 45 50.0 +14
CMB LR LR
comp=Z,428nm,22.0s,MS5.1
DLMT Dillon 129.64 31 *e*PKPdf PKPdf 12 45 36.7 0.0
DLMT *e*pPKPdf pPKPdf 12 45 46.5 +0.2
MCMT McKenzie Canyo 129.88 31 *e*PKPdf PKPdf 12 45 38.4 +1.3
MCMT *e*pPKPdf pPKPdf 12 45 47.1 +0.3
HLID Hailey 129.88 34 *e*PKPdf PKPdf 12 45 38.3 +1.1
HLID *e*pPKPdf pPKPdf 12 45 47.2 +0.4
HLID LR LR
comp=Z,496nm,20.0s,MS5.2
BOZ Bozeman (W) 129.93 30 PKIKP PKPdf 12 45 37.9 +0.7
BOZ Bozeman (W) 129.93 30 *e*PKPdf PKPdf 12 45 37.8 +0.7
BOZ *e*pPKPdf pPKPdf 12 45 46.9 0.0
BOZ LR LR
comp=Z,447nm,19.0s,MS5.2
BMN Battle Mountai 130.16 39 PFAKE 12 45 50.0 +12
BMN LR LR
comp=Z,337nm,21.0s,MS5.0
NVAR Mina Array Bea 130.60 41 PKP PKPdf 12 45 40.3 +1.6
comp=Z,2.6nm,0.7s,baz=270,slow=2.3,SNR=19
NVAR SKPbc SKPbc 12 49 01.7 +1.3
comp=Z,7.0nm,1.1s,baz=270,slow=4.3,SNR=13
NVAR Mina Array Bea 130.60 41 PKP PKPdf 12 45 40.3 +1.6
NVAR SKPbc SKPbc 12 49 01.7 +1.2
QLMT Earthquake Lak 130.60 30 *e*PKPdf PKPdf 12 45 40.3 +1.9
QLMT *e*pPKPdf pPKPdf 12 45 48.8 +0.6
GCMT Greycliff 130.77 28 *e*PKPdf PKPdf 12 45 39.9 +1.2
GCMT *e*pPKPdf pPKPdf 12 45 48.4 -0.1
YMR Madison River 130.95 30 *e*PKPdf PKPdf 12 45 41.5 +2.3
YMR LR LR
comp=Z,998nm,22.0s,MS5.5
DGMT Dagmar 131.02 22 PFAKE 12 45 50.0 +11
DGMT LR LR
comp=Z,625nm,19.0s,MS5.3
ELK Elko 131.19 37 *e*PKIKP PKPdf 12 45 41.2 +1.5
ELK MLR MLR
comp=Z,501nm,22.0s
LKWY Lake 131.31 30 PFAKE 12 45 50.0 +10
LKWY LR LR
comp=Z,546nm,19.0s,MS5.3
RLMT Red Lodge 131.46 29 *e*PKPdf PKPdf 12 45 40.9 +0.8
RLMT LR LR
comp=Z,468nm,20.0s,MS5.2
TPH Tonopah 131.51 41 PFAKE 12 45 50.0 +10
TPH LR LR
comp=Z,362nm,21.0s,MS5.0
LAO LASA Array 131.64 25 PFAKE 12 45 50.0 +10
LAO LR LR
comp=Z,407nm,20.0s,MS5.1
RRI2 Red Ridge 131.69 32 *e*PKPdf PKPdf 12 45 41.7 +1.1
REDW Red Top Meadow 131.93 31 *e*PKPdf PKPdf 12 45 42.4 +1.3
ISA Isabella 131.95 45 PFAKE 12 45 50.0 +8.7
ISA LR LR
comp=Z,237nm,20.0s,MS4.9
ULM Lac du Bonnet 132.11 15 PKP PKPdf 12 45 41.4 +0.2
comp=Z,5.2nm,0.7s,baz=345,slow=4.3,SNR=8.2
AHID Auburn Hatcher 132.21 32 PFAKE 12 45 50.0 +8.4
AHID LR LR
comp=Z,383nm,20.0s,MS5.1
DAC Darwin (Calif) 132.24 43 PFAKE 12 45 50.0 +8.2
DAC LR LR
comp=Z,329nm,19.0s,MS5.1
TPNV Topopah Spring 132.78 42 PFAKE 12 45 50.0 +7.2
TPNV LR LR
comp=Z,299nm,19.0s,MS5.0
DUG Dugway 132.97 36 *e*PKIKP PKPdf 12 45 44.5 +1.4
DUG MLR MLR
comp=Z,450nm,20.0s,MS5.2
MWC Mount Wilson 132.97 46 PFAKE 12 45 50.0 +6.7
MWC LR LR
comp=Z,532nm,19.0s,MS5.3
BW06 Boulder Array 133.02 31 PFAKE 12 45 50.0 +6.9
BW06 LR LR
comp=Z,477nm,19.0s,MS5.2
PDAR Pinedale Array 133.02 31 PKP PKPdf 12 45 41.5 -1.6
comp=Z,1.5nm,0.9s,baz=222,slow=2.0,SNR=8.3
PDAR PP PP 12 48 09.8 +1.4
comp=Z,1.1nm,1.0s,baz=289,slow=4.5,SNR=4.1
GSC Goldstone 133.30 44 *e*PKIKP PKPdf 12 45 45.4 +1.5
GSC *e* 12 45 55.6
GSC MLR MLR
comp=Z,269nm,19.0s,MS5.0
DAU Daniels Canyon 133.73 35 *e*PKPdf PKPdf 12 45 47.4 +2.9
MPU Maple Canyon 133.78 35 PFAKE 12 46 00.0 +15
MPU LR LR
comp=Z,884nm,19.0s,MS5.5
AGMN Agassiz Refuge 133.90 16 PFAKE 12 46 00.0 +15
AGMN LR LR
comp=Z,505nm,21.0s,MS5.2
MVU Marysvale 134.41 37 PFAKE 12 46 00.0 +14
MVU LR LR
comp=Z,351nm,19.0s,MS5.1
PLCA Paso Flores 134.42 189 PFAKE 12 46 00.0 +14
PLCA LR LR
comp=Z,779nm,19.0s,MS5.5
MSU Marysvale 134.43 37 *e*PKIKP PKPdf 12 45 48.1 +2.2
MSU *e* 12 45 58.0
PFO Pinyon Flat Ob 134.43 46 *e*PKIKP PKPdf 12 45 45.4 -0.7
PFO MLR MLR
comp=Z,298nm,21.0s,MS5.0
RSSD Black Hills 134.62 26 *e*PKIKP PKPdf 12 45 46.3 +0.2
BAR Barrett 134.75 47 PFAKE 12 46 00.0 +13
BAR LR LR
comp=Z,354nm,19.0s,MS5.1
TRQA Tornquist 134.95 199 PFAKE 12 46 00.0 +13
TRQA LR LR
comp=Z,488nm,20.0s,MS5.2
RWWY Rawlins 135.00 30 *e*PKPdf PKPdf 12 45 47.4 +0.6
EYMN Ely 135.29 12 PFAKE 12 46 00.0 +13
EYMN LR LR
comp=Z,659nm,21.0s,MS5.3
GLA Glamis 135.88 45 *e*PKIKP PKPdf 12 45 49.6 +0.8
GLA *e* 12 45 58.9
GLA MLR MLR
comp=Z,284nm,22.0s,MS5.0
PHWY Pilot Hill 136.16 29 *e*PKPdf PKPdf 12 45 49.7 +0.7
WUAZ Wupatki 136.80 40 *e*PKPdf PKPdf 12 45 51.1 +0.7
WUAZ LR LR
comp=Z,317nm,19.0s,MS5.1
ISCO Idaho Springs 137.21 31 PFAKE 12 46 00.0 +9.0
ISCO LR LR
comp=Z,557nm,22.0s,MS5.2
MVCO Mesa Verde 137.47 36 PFAKE 12 46 00.0 +8.4
MVCO LR LR
comp=Z,406nm,22.0s,MS5.1

COWI Conover 137.53 11 PFAKE 12 46 00.0 +8.6
COWI LR LR
comp=Z,749nm,21.0s,MS5.4
ECSD EROS,Sioux Fal 137.79 19 *e*PKPdf PKPdf 12 45 52.1 +0.1
ECSD LR LR
comp=Z,883nm,20.0s,MS5.5
OGNE Ogallala 138.05 27 PFAKE 12 46 00.0 +7.5
OGNE LR LR
comp=Z,607nm,20.0s,MS5.3
PKME Peaks-Kenny Pk 138.54 350 PFAKE 12 46 10.0 +17
PKME LR LR
comp=Z,798nm,19.0s,MS5.5
SDCO Great Sand Dun 138.79 33 PFAKE 12 46 10.0 +16
SDCO LR LR
comp=Z,612nm,19.0s,MS5.4
TUC Tucson 139.12 43 *e*PKIKP PKPdf 12 45 52.1 -2.7
TUC MLR MLR
comp=Z,313nm,20.0s,MS5.0
GLMI Grayling 139.46 7 PFAKE 12 46 10.0 +15
GLMI LR LR
comp=Z,573nm,20.0s,MS5.3
LBNH Lisbon 139.94 352 PFAKE 12 46 10.0 +14
LBNH LR LR
comp=Z,711nm,20.0s,MS5.4
LAZ Ladron 140.18 38 *e*PKPdf PKPdf 12 45 56.0 -0.6
LAZ *e*pPKPdf pPKPdf 12 46 07.0 +0.6
ANMO Albuquerque 140.22 37 *e*PKIKP PKPdf 12 45 56.0 -0.7
ANMO MLR MLR
comp=Z,420nm,20.0s
JFWS Jewell Farm 140.35 13 PFAKE 12 46 10.0 +13
JFWS LR LR
comp=Z,591nm,19.0s,MS5.4
NCB Newcomb 140.46 355 PFAKE 12 46 10.0 +13
NCB LR LR
comp=Z,763nm,22.0s,MS5.4
SCIA State Center 140.51 17 PFAKE 12 46 10.0 +13
SCIA LR LR
comp=Z,706nm,19.0s,MS5.4
LPM Los Pinos Moun 140.55 38 *e*PKPdf PKPdf 12 45 57.8 +0.5
BNM Barren Site 140.66 38 *e*PKPdf PKPdf 12 45 58.6 +1.1
CBKS Cedar Bluff 140.81 26 PFAKE 12 46 10.0 +12
CBKS LR LR
comp=Z,600nm,21.0s,MS5.3
HRV Adam Dziewonsk 141.59 352 PFAKE 12 46 10.0 +11
HRV LR LR
comp=Z,346nm,19.0s,MS5.1
WES Weston 141.67 351 PFAKE 12 46 10.0 +11
WES LR LR
comp=Z,934nm,21.0s,MS5.5
KSU1 Kansas State U 141.86 23 PFAKE 12 46 10.0 +10
KSU1 LR LR
comp=Z,680nm,22.0s,MS5.4
BINY Binghamton 142.34 357 PFAKE 12 46 10.0 +10
BINY LR LR
comp=Z,658nm,20.0s,MS5.4
ERPA Erie 142.48 2 PFAKE 12 46 10.0 +9.5
ERPA LR LR
comp=Z,668nm,20.0s,MS5.4
HDIL Hopedale 142.81 13 PFAKE 12 46 10.0 +8.8
HDIL LR LR
comp=Z,703nm,22.0s,MS5.4
AMTX Amarillo 142.97 32 PFAKE 12 46 10.0 +8.4
AMTX LR LR
comp=Z,692nm,19.0s,MS5.4
BDFB Brasilia 143.68 236 PFAKE 12 46 20.0 +17
BDFB LR LR
comp=Z,1µm,22.0s,MS5.6
SSPA Standing Stone 143.97 359 *e*PKPdf PKPdf 12 45 59.8 -3.5
SSPA LR LR
comp=Z,801nm,20.0s,MS5.5
ACSO Alum Creek Sta 144.17 6 *e*PKPdf PKPdf 12 46 00.4 -3.2
ACSO LR LR
comp=Z,971nm,19.0s,MS5.6
WMOK Wichita Mounta 144.57 29 PKIKP PKPdf 12 46 02.2 -2.2
WMOK Wichita Mounta 144.57 29 *e*PKPdf PKPdf 12 46 02.1 -2.4
WMOK LR LR
comp=Z,572nm,19.0s,MS5.4
CCM Cathedral Cave 144.64 17 *e*PKIKP PKPdf 12 46 02.0 -2.5
CCM MLR MLR
comp=Z,705nm,19.0s,MS5.5
BLO Bloomington 144.72 11 *e*PKIKP PKPdf 12 46 02.8 -1.8
OLIL Olney 144.82 13 *e*PKPdf PKPdf 12 46 03.0 -1.7
MCWV Mont Chateau 144.94 2 *e*PKPdf PKPdf 12 46 03.7 -1.3
MCWV LR LR
comp=Z,1µm,19.0s,MS5.6
FVM French Village 144.94 16 *e*PKIKP PKPdf 12 46 03.0 -2.0
SDMD Soldier's Deli 145.17 358 *e*PKPab PKPab 12 46 04.6 -0.3
SIUC Southern Illin 145.52 15 *e*PKPbc PKPbc 12 46 05.2 -0.9
USIN University of 145.65 13 *e*PKPbc PKPbc 12 46 05.6 -0.8
WCI Wyandotte Cave 145.67 11 *e*PKP2 PKPab 12 46 05.7 -1.1
WCI MLR MLR
comp=Z,683nm,20.0s,MS5.4
TXAR Lajitas Array 145.75 41 PKPbc PKPbc 12 46 07.5 +0.4
comp=Z,42nm,0.7s,baz=304,slow=1.2,SNR=207
PARMO Parma 146.37 16 *e*PKPbc PKPbc 12 46 09.4 +0.7
CBN Corbin 146.39 358 *e*PKPbc PKPbc 12 46 08.8 +0.1
CBN LR LR
comp=Z,693nm,20.0s,MS5.4
GLAT Glass 146.87 16 *e*PKPbc PKPbc 12 46 10.2 0.0
GNAR Gosnell 146.94 17 *e*PKPbc PKPbc 12 46 09.6 -0.7
MIAR Mount Ida 147.02 23 PFAKE 12 46 20.0 +11
MIAR LR LR
comp=Z,774nm,20.0s,MS5.5
URVA University of 147.03 358 *e*PKPbc PKPbc 12 46 10.2 -0.4
HBAR Harrisburg 147.13 18 *e*PKPbc PKPbc 12 46 11.5 +0.6
HALT Halls 147.19 16 *e*PKPbc PKPbc 12 46 11.1 0.0
UALR University of 147.28 21 *e*PKPbc PKPbc 12 46 10.6 -0.8
JCT Junction City 147.33 35 *e*PKP2 PKPab 12 46 10.6 -2.8
JCT MLR MLR
comp=Z,494nm,21.0s,MS5.3
ELN Prospectdale 147.33 3 *e*PKPbc PKPbc 12 46 10.3 -1.1
BLA Blacksburg 147.36 3 *e*PKP2 PKPab 12 46 10.4 -2.9
BLA MLR MLR
comp=Z,924nm,21.0s,MS5.5
WVT Waverly 147.37 14 *e*PKP2 PKPab 12 46 10.8 -2.6
WVT MLR MLR
comp=Z,723nm,21.0s,MS5.4
TZTN Tazewell 147.75 7 *e*PKPbc PKPbc 12 46 11.6 -1.0
TZTN LR LR
comp=Z,967nm,19.0s,MS5.6
OXF Oxford 148.48 17 *e*PKPbc PKPbc 12 46 13.5 -1.0
OXF *e*PKPab PKPab 12 46 17.8 0.0
OXF LR LR
comp=Z,585nm,20.0s,MS5.4
SWET Sewanee 148.66 11 *e*PKPdf PKPdf 12 46 11.0 -0.4
SWET *e*PKPbc PKPbc 12 46 14.0 -1.0
CPCT Cooper Cave 148.69 9 *e*PKPbc PKPbc 12 46 14.5 -0.6
NATX Nacogdoches 148.96 27 *e*PKPbc PKPbc 12 46 16.0 +0.1
NATX LR LR
comp=Z,617nm,21.0s,MS5.4
BBSR BB Station 149.30 336 *e*PKPbc PKPbc 12 46 16.6 -0.2
BBSR LR LR
comp=Z,520nm,20.0s,MS5.3
CNNC Cliffs of the 149.36 359 PFAKE 12 46 20.0 +7.5
CNNC LR LR
comp=Z,846nm,22.0s,MS5.5
HKT Hockley 149.89 31 *e*PKHKP PKPdf 12 46 14.5 +1.0
HKT *e* 12 46 18.3
HKT MLR MLR
comp=Z,605nm,19.0s,MS5.4
JSC Jenkinsville 150.23 4 PKIKP PKPbc 12 46 18.5 -0.5
VBMS Vicksburg 150.23 21 *e*PKPbc PKPbc 12 46 18.8 -0.2
VBMS LR LR
comp=Z,615nm,21.0s,MS5.4
LRAL Lakeview Retre 150.52 14 *e*PKPbc PKPbc 12 46 19.0 -0.7
LRAL LR LR
comp=Z,955nm,22.0s,MS5.5
KVTX Kingsville 150.62 37 PFAKE 12 46 30.0 +15
KVTX LR LR
comp=Z,440nm,20.0s,MS5.3
GOGA Godfrey 150.85 8 *e*PKIKP PKPdf 12 46 15.3 +0.5
GOGA *e* 12 46 19.9
GOGA MLR MLR
comp=Z,908nm,19.0s,MS5.6
COW Cow Castle Cre 151.16 4 *e*PKPbc PKPbc 12 46 21.8 +0.6
LVC Limon Verde 151.46 199 *e*PKPbc PKPbc 12 46 22.8 +0.7
NHSC New Hope 151.46 3 PFAKE 12 46 30.0 +14
NHSC LR LR
comp=Z,761nm,22.0s,MS5.5
BRAL Brewton 152.43 16 PFAKE 12 46 30.0 +13
BRAL LR LR
comp=Z,651nm,22.0s,MS5.4
DWPF Disney 156.33 6 PFAKE 12 46 30.0 +7.2
DWPF LR LR

comp=Z,638nm,20.0s,MS5.5
LPAZ La Paz 156.91 207 PKP PKPdf 12 46 24.1 +0.3
comp=Z,1.0nm,0.9s,baz=56,slow=15,SNR=2.7
LPAZ PKPab PKPab 12 46 55.6 +2.0
comp=Z,2.0nm,0.9s,baz=118,slow=4.2,SNR=4.4
LPAZ La Paz 156.91 207 PKP PKPdf 12 46 24.1 +0.3
LPAZ PKPab PKPab 12 46 55.6 +2.0
LPAZ LR LR
comp=Z,475nm,19.0s,MS5.3
BBGH Gun Hill 159.26 296 PFAKE 12 46 40.0 +13
BBGH LR LR
comp=Z,692nm,19.0s,MS5.5
GRGR Grenville 161.53 295 PFAKE 12 46 40.0 +11
GRGR LR LR
comp=Z,318nm,19.0s
SJG San Juan 161.72 319 PFAKE 12 46 40.0 +11
SJG LR LR
comp=Z,400nm,21.0s
TEIG Tepich 161.74 30 PFAKE 12 46 40.0 +11
TEIG LR LR
comp=Z,469nm,20.0s
NNA Nana 163.56 186 PFAKE 12 46 40.0 +8.7
NNA LR LR
comp=Z,491nm,19.0s
TGUH Tegucigalpa,Un 167.23 41 PFAKE 12 46 40.0 +5.7
TGUH LR LR
comp=Z,534nm,21.0s
SDV Santo Domingo 170.89 299 PFAKE 12 46 50.0 +13
SDV LR LR
comp=Z,204nm,19.0s
JTS JuntasAbangare 171.49 47 PFAKE 12 46 50.0 +13
JTS LR LR
comp=Z,206nm,20.0s
BCIP Isla Barro Col 175.18 14 PFAKE 12 46 50.0 +12
BCIP LR LR
comp=Z,621nm,20.0s
OTAV Otavalo 175.80 183 *e*PKPdf PKPdf 12 46 38.9 +0.2
OTAV LR LR
comp=Z,492nm,19.0s

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*BJI **24** 12:47:32.0, 4282N×8229E, h11km, ML3.1*
*NNC **24** 12:47:36.1±3.1, 4311N×8214E, h21km±18km, mb3.7, mpv3.3, Error ellipse: s-maj=24.6km s-min=15.7km az=139.0*
*ISCJB **24** 12:47:38.1±1.3, 4334N±009×818E±0.1, h10km, Error ellipse: s-maj=14.3km s-min=11.4km az=147.1*
ISC 24 12:47:39.4±1.4, 4327N±009×819E±01, h10km, n6, σ1§39/8, 7C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.54**	**5**	Pn		**Pn**		**12 48 33.9**	**-0.5**
	1.1nm,0.2s,baz=178,slow=12,SNR=113								
MK31				⇓Pg		**Pg**		**12 48 43.8**	**-3.4**
	2.4nm,0.3s,baz=180,slow=14,SNR=12								
MK31				⇑Lg				12 49 36.6	
	91nm,0.6s,baz=185,slow=25,SNR=3.7								
WMQ	**Urumqi**	**4.29**	**81**	*e*PG		**Pn**		**12 48 45.8**	**+1.2**
WMQ				Smax					
	comp=N,21nm,0.8s								
WMQ				Smax					
	comp=E,26nm,0.4s								
TKM2	**Tokmak 2**	**4.59**	**268**	⇑Pn		**Pn**		**12 48 49.4**	**+0.5**
	comp=E,2.9nm,0.8s								
TKM2				⇓Lg				12 50 04.9	
	comp=E,22nm,0.6s								
KURBB	**Kurchatov Arra**	**7.70**	**344**	⇑Pn		**Pn**		**12 49 28.3**	**-3.2**
KURBB				⇓Sn		**Sn**		**12 50 59.8**	**+1.1**
	comp=E,2.1nm,0.7s								
KURBB				⇑Lg				12 51 51.7	
	comp=E,4.2nm,0.6s								
KURK	**Kurchatov**	**7.77**	**345**	⇑Pn		**Pn**		**12 49 31.1**	**-1.4**
	comp=E,9.8nm,2.0s								
KURK				⇑Sn		**Sn**		**12 51 01.8**	**+1.4**
	comp=E,4.4nm,0.7s								
KURK				⇑Lg				12 51 48.7	
	comp=E,47nm,1.7s								
KK31	**Karatay Array**	**8.29**	**273**	⇓Lg				12 52 04.7	
	comp=E,1.3nm,0.4s,baz=81,slow=29,SNR=5.8								

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*ISCJB **24** 13:37:57.6±0.4, 2294N±002×12161E±002, h18km±4km, Error ellipse: s-maj=3.5km s-min=3.0km az=13.8*
*JMA **24** 13:37:58.5±0.3, 2304N×12176E, h1km, M2.8*
*TAP **24** 13:37:59.0, 2297N×12150E, h2km, ML3.0, C*
ISC 24 13:37:58.0±0.5, 2294N±002×12158E±002, h18km±2km, n50, σ0§69/94, 4C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.26**	**310**	⇑*i*P		**Pg**		**13 38 04.3**	**+0.5**
	baz=317								
CHKT				*i* S		**Sg**		**13 38 08.0**	**+0.2**
	baz=317								
TTN	**Taitung**	**0.44**	**246**	*e*P		**Pg**		**13 38 07.4**	**+0.5**
	baz=237								
TTN				*e*S		**Sg**		**13 38 13.7**	**+0.7**
	baz=237								
TWG	**Pinlang**	**0.48**	**256**	P		**Pg**		**13 38 07.8**	**+0.1**
	baz=243								
TWG				S		**Sg**		**13 38 14.8**	**+0.5**
	baz=243								
TWF1	**Yuli**	**0.49**	**328**	⇑*i*P		**Pg**		**13 38 08.1**	**+0.2**
	baz=338								
TWF1				S		**Sg**		**13 38 14.9**	**+0.4**
	baz=338								
ELDTW	**Lidau**	**0.58**	**296**	⇑*i*P		**Pg**		**13 38 08.8**	**-0.7**
	baz=296								
ELDTW				*e*S		**Sg**		**13 38 15.5**	**-1.7**
	baz=296								
EHY	**Hungye**	**0.61**	**337**	P		**Pg**		**13 38 10.2**	**0.0**
	baz=346								
EHY				S		**Sg**		**13 38 17.9**	**-0.5**
	baz=346								
ECL	**Taimali**	**0.67**	**240**	*e*P		**Pb**		**13 38 10.4**	**-0.6**
	baz=234								
ECL				*e*S		**Sb**		**13 38 18.3**	**-1.7**
	baz=234								
STYT	**Tauyuan**	**0.79**	**287**	P		**Pb**		**13 38 12.5**	**-0.6**
	baz=292								
STYT				*e*S		**Sb**		**13 38 21.9**	**-1.6**
	baz=292								
YUS	**Yu-Shan**	**0.80**	**314**	P		**Pb**		**13 38 13.1**	**-0.2**
	baz=316								
YUS				S		**Sb**		**13 38 23.2**	**-0.5**
	baz=316								
EAST	**Anshuo**	**0.87**	**231**	P		**Pb**		**13 38 14.0**	**-0.6**
	baz=226								
ESL	**Shilin**	**0.88**	**351**	*e*P		**Pb**		**13 38 14.4**	**-0.4**
	baz=343								
ESL				*e*S		**Sb**		**13 38 24.5**	**-1.7**
	baz=343								
LAY	**Lan-yu**	**0.89**	**182**	P		**Pb**		**13 38 14.6**	**-0.4**
	baz=167								
LAY				*e*S		**Sb**		**13 38 25.6**	**-0.9**
	baz=167								
SSD	**Sandimen**	**0.89**	**258**	*e*P		**Pb**		**13 38 14.1**	**-0.9**
	baz=255								
ALS	**Alishan**	**0.91**	**309**	⇑*i*P		**Pb**		**13 38 15.2**	**-0.1**
	baz=310								
ALS				*e*S		**Sb**		**13 38 26.6**	**-0.5**
	baz=310								
SGST	**Jiashian**	**0.93**	**279**	*e*P		**Pb**		**13 38 15.4**	**-0.1**
	baz=278								
SGST				*e*S		**Sb**		**13 38 27.6**	**0.0**
	baz=278								
WTP	**Ta-pu**	**0.94**	**289**	P		**Pb**		**13 38 15.6**	**-0.1**
	baz=289								
WTP				*e*S		**Sb**		**13 38 28.0**	**+0.2**
	baz=289								
CHN4	**Tsaushan**	**1.00**	**295**	P		**Pb**		**13 38 16.9**	**+0.2**
	baz=300								
CHN4				S		**Sb**		**13 38 30.1**	**+0.6**
	baz=300								
CHN1	**Nanshi**	**1.00**	**285**	P		**Pb**		**13 38 17.0**	**+0.3**
	baz=284								
CHN1				*e*S		**Sb**		**13 38 29.8**	**+0.2**
	baz=284								
HWA	**Hwalien**	**1.04**	**1**	*e*P		**Pb**		**13 38 16.4**	**-0.9**
	baz=18								
HWA				*e*S		**Sb**		**13 38 30.4**	**-0.2**
	baz=18								
SCZT	**Fangliau**	**1.05**	**238**	*e*P		**Pb**		**13 38 17.4**	**-0.1**
	baz=233								
SCZT				*e*S		**Sb**		**13 38 30.9**	**0.0**
	baz=233								
TWK	**Hsinying**	**1.06**	**288**	*e*P		**Pb**		**13 38 17.5**	**-0.2**
	baz=288								
TWK				*e*S		**Sb**		**13 38 31.6**	**+0.4**
	baz=288								
CHN5	**Tsauling**	**1.06**	**309**	P		**Pb**		**13 38 17.7**	**0.0**
	baz=318								
CHN5				*e*S		**Sb**		**13 38 31.6**	**+0.4**
	baz=318								
TWM1	**Shoushan**	**1.07**	**264**	*e*P		**Pb**		**13 38 18.9**	**+0.9**
	baz=262								
SMLT	**Sun Moon Lake**	**1.13**	**327**	P		**Pn**		**13 38 18.3**	**-0.6**
	baz=339								
SMLT				*e*S		**Sb**		**13 38 32.5**	**-0.8**
	baz=339								
TWD	**Chiawan**	**1.14**	**1**	*e*P		**Pn**		**13 38 18.3**	**-0.7**
	baz=16								
TWD				*e*S		**Sb**		**13 38 32.1**	**-1.5**
	baz=16								
TYC	**Yuchr**	**1.17**	**326**	*e*P		**Pn**		**13 38 19.6**	**+0.2**
	baz=337								
TYC				*e*S		**Sb**		**13 38 34.2**	**-0.3**
	baz=337								
CHN2	**Minshiung**	**1.18**	**301**	*e*P		**Pn**		**13 38 19.5**	**0.0**
	baz=301								
CHN2				*e*S		**Sb**		**13 38 35.2**	**+0.5**
	baz=301								
WGK	**Gukeng**	**1.20**	**309**	*e*P		**Pn**		**13 38 20.2**	**+0.4**
	baz=310								
WGK				*e*S		**Sb**		**13 38 35.6**	**+0.4**
	baz=310								
HEN	**Hengchun**	**1.21**	**220**	*e*P		**Pn**		**13 38 20.0**	**+0.1**
	baz=216								
HEN				*e*S		**Sb**		**13 38 35.6**	**0.0**
	baz=216								
WHF	**Hehuan Shan**	**1.24**	**347**	*e*P		**Pn**		**13 38 20.4**	**0.0**
	baz=350								
WHF				*e*S		**Sb**		**13 38 35.6**	**-0.8**
	baz=350								
WNT	**Mingjian**	**1.25**	**319**	*e*P		**Pn**		**13 38 21.0**	**+0.6**
	baz=321								
WNT				*e*S		**Sb**		**13 38 36.5**	**-0.2**
	baz=321								
SCLT	**Jiali**	**1.30**	**281**	*e*P		**Pn**		**13 38 21.4**	**+0.2**
	baz=280								
SCLT				*e*S		**Sn**		**13 38 38.3**	**+0.2**
	baz=280								
CHN8	**Yiju**	**1.32**	**288**	*e*P		**Pn**		**13 38 21.4**	**-0.2**
	baz=288								
CHN8				*e*S		**Sn**		**13 38 39.1**	**+0.4**
	baz=288								
WSF	**Szhu**	**1.43**	**300**	*e*P		**Pn**		**13 38 24.0**	**+1.0**
	baz=300								
WSF				*e*S		**Sn**		**13 38 42.1**	**+0.8**
	baz=300								
TCU	**Taichung**	**1.46**	**326**	*e*P		**Pn**		**13 38 24.1**	**+0.7**
	baz=328								
TCU				*e*S		**Sn**		**13 38 43.7**	**+1.5**
	baz=328								
NNS	**Nan Shan**	**1.51**	**353**	*e*P		**Pn**		**13 38 24.9**	**+0.8**
	baz=355								
NNS				*e*S		**Sn**		**13 38 44.0**	**+0.7**
	baz=355								
TWQ1	**Liyutan**	**1.59**	**332**	*e*P		**Pn**		**13 38 26.5**	**+1.3**
	baz=348								
TWQ1				*e*S		**Sn**		**13 38 46.4**	**+1.1**
	baz=348								
NSY	**Sanyi**	**1.65**	**333**	*e*P		**Pn**		**13 38 26.8**	**+0.8**
	baz=335								
NSY				*e*S		**Sn**		**13 38 47.1**	**+0.2**
	baz=335								
TWC	**Suao**	**1.68**	**8**	*e*P		**Pn**		**13 38 26.5**	**0.0**
	baz=11								
TWC				*e*S		**Sn**		**13 38 45.9**	**-1.7**
	baz=11								
ENTT	**Nioudou**	**1.70**	**360**	*e*P		**Pn**		**13 38 26.8**	**+0.2**
	baz=2.0								
ENTT				*e*S		**Sn**		**13 38 48.9**	**+1.0**
	baz=2.0								
NSK	**Sanguang**	**1.74**	**353**	*e*P		**Pn**		**13 38 28.0**	**+0.7**
	baz=8.0								
NSK				*e*S		**Sn**		**13 38 48.4**	**-0.7**
	baz=8.0								
NSTT	**Nanjuang**	**1.77**	**343**	*e*P		**Pn**		**13 38 28.5**	**+0.9**
	baz=345								
NSTT				*e*S		**Sn**		**13 38 50.0**	**+0.3**
	baz=345								
TWE	**Neicheng**	**1.78**	**3**	*e*P		**Pn**		**13 38 28.5**	**+0.7**
	baz=5.0								
TWE				*e*S		**Sn**		**13 38 49.9**	**0.0**
	baz=5.0								
PNG	**Penghu**	**1.96**	**289**	*e*P		**Pn**		**13 38 31.1**	**+0.7**
	baz=288								
PNG				*e*S		**Sn**		**13 38 53.2**	**-1.3**
	baz=288								
YOJ	**Yonaguni jima**	**2.01**	**41**	P		**Pn**		**13 38 31.4**	**+0.5**
YOJ				*e*S		**Sn**		**13 38 55.6**	**0.0**
HATJ	**Hateruma jima**	**2.33**	**61**	*e*S		**Sn**		**13 39 02.7**	**-0.8**
IRIF	**Iriomote-Funau**	**2.41**	**54**	P		**Pn**		**13 38 37.4**	**+0.9**
IRIF				*e*S		**Sn**		**13 39 06.1**	**+0.5**
JKRS	**Kuro-shima**	**2.58**	**59**	*e*S		**Sn**		**13 39 09.6**	**-0.1**
JIJ	**Ishigaki jima**	**2.75**	**58**	P		**Pn**		**13 38 42.0**	**+0.9**
JIJ				*e*S		**Sn**		**13 39 13.1**	**-0.7**
JTJ	**Tarama**	**3.33**	**59**	*e*S		**Sn**		**13 39 28.2**	**+0.1**

IDC 24 13:40:25.4±5.4, 2355N×10130E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/19, mbtmp3.3/3, Error ellipse: s-maj=293.7km s-min=28.4km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.70**	**121**	P		P	P	13 47 34.8	+0.4
	0.5nm,0.9s,baz=301,slow=8.8,SNR=4.6								
ASAR	**Alice Springs**	**38.00**	**127**	P		P	P	13 47 45.1	-0.3
	0.5nm,0.9s,baz=294,slow=7.9,SNR=6.0								
MKAR	**Makanchi Array**	**51.72**	**343**	P		P	P	13 49 34.5	+0.1
	0.4nm,0.4s,baz=160,slow=8.6,SNR=5.7								
TXAR	**Lajitas Array**	**144.17**	**39**	PKP		PKPdf	PKPdf	14 00 03.4	-0.7
	0.5nm,0.6s,baz=238,slow=1.4,SNR=6.2								

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*IDC **24** 13:58:09.4±1.6, 2045×10000E, h0km, mb4.1/11, mb1 4.2/11, mb1mx4.0/21, mbtmp4.1/11, Error ellipse: s-maj=57.2km s-min=15.3km az=59.0*
*ISCJB **24** 13:58:12.5±1.1, 2025±02×1001E±02, h33km, mb4.2/12, Error ellipse: s-maj=40.0km s-min=10.5km az=145.7*
*NEIC **24** 13:58:15.2±3.9, 1965×10013E, h38km±33km, mb4.3/2, Error ellipse: s-maj=34.4km s-min=7.1km az=56.0*
ISC 24 13:58:14.8±1.1, 2025±02×1001E±02, h35km, n19, σ0§57/16, mb4.2/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.35**	**357**	P		**P**	**P**	**14 02 47.6**	**-0.8**
	2.1nm,0.7s,baz=187,slow=9.8,SNR=20								
FITZ	**Fitzroy Crossi**	**29.75**	**124**	P		**P**	**P**	**14 04 18.1**	**-0.1**
	1.1nm,0.8s,mb3.6,baz=301,slow=15,SNR=3.7								
WRA	**Warramunga Arr**	**37.92**	**121**	P		**P**	**P**	**14 05 28.8**	**-0.4**
	2.3nm,0.5s,mb4.2,baz=303,slow=9.0,SNR=38								
WB2	**Warramunga Arr**	**37.93**	**120**	*e*P		**P**	**P**	**14 05 28.6**	**-0.6**
ASAR	**Alice Springs**	**39.19**	**126**	P		**P**	**P**	**14 05 39.9**	**+0.1**
	1.6nm,0.5s,mb4.0,baz=299,slow=7.5,SNR=40								
KSRS	**Korea Array**	**46.97**	**31**	P		**P**	**P**	**14 06 43.4**	**+0.9**
	1.6nm,0.7s,mb4.0,baz=225,slow=8.2,SNR=12								
STKA	**Stephens Creek**	**49.09**	**132**	P		**P**	**P**	**14 06 59.8**	**+0.8**
	1.5nm,0.8s,mb4.1,baz=276,slow=14,SNR=2.6								
TKM2	**Tokmak 2**	**49.86**	**337**	*e*P		**P**	**P**	**14 07 04.5**	**-0.2**
	1.4nm,0.4s,mb4.3								
SONM	**Songino Array**	**49.93**	**6**	P		**P**	**P**	**14 07 06.0**	**+0.9**
	2.1nm,0.4s,mb4.5,baz=189,slow=7.5,SNR=8.7								
EKS2	**Erkin-Say**	**50.39**	**335**	*e*P		**P**	**P**	**14 07 08.9**	**+0.2**
	2.3nm,0.7s,mb4.3								
MK31	**Makanchi Array**	**51.04**	**344**	*e*P		**P**	**P**	**14 07 13.9**	**+0.4**
MKAR	**Makanchi Array**	**51.04**	**344**	P		**P**	**P**	**14 07 13.8**	**+0.3**
	5.5nm,0.6s,mb4.7,baz=149,slow=8.1,SNR=55								
MJAR	**Matsushiro Arr**	**52.22**	**39**	P		**P**	**P**	**14 07 22.0**	**-0.5**
	1.5nm,0.9s,mb3.9,baz=216,slow=6.6,SNR=3.2								
KURK	**Kurchatov**	**55.62**	**344**	P		**P**	**P**	**14 07 46.1**	**-1.0**
	0.7nm,0.3s,mb4.2,baz=159,slow=7.1								
ZAA0	**Zalesovo Array**	**57.18**	**349**	*e*P		**P**	**P**	**14 07 57.8**	**-0.3**
ZALV	**Zalesovo Beam**	**57.18**	**349**	P		**P**	**P**	**14 07 58.1**	**0.0**
	3.3nm,0.7s,mb4.5,baz=181,slow=5.5,SNR=16								
TXAR	**Lajitas Array**	**144.65**	**37**	PKP		PKPdf	PKPdf	14 17 48.2	-0.3
	2.1nm,0.7s,baz=274,slow=1.1,SNR=27								
TZTN	**Tazewell**	**145.46**	**5**	*e*PKPbc		PKPbc	PKPbc	14 17 48.7	-1.0
JCT	**Junction City**	**145.97**	**32**	*e*PKPbc		PKPbc	PKPbc	14 17 51.7	+0.2

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*ISCJB **24** 14:05:11.9±1.2, 1242N±003×12583E±004, h11km±8km, mb4.1/17, MS3.5/5, Error ellipse: s-maj=6.8km s-min=5.2km az=170.1*
*MAN **24** 14:05:14, 1243N×12571E, h15km, MS3.6*
MAN INTENSITY II - TACLOBAN CITY.
*NEIC **24** 14:05:17.0±0.5, 1219N×12563E, h35km, mb4.4/3, Error ellipse: s-maj=25.9km s-min=8.1km az=65.0*
NEIC Fel [III PIVS] at Borongan. Felt [II PIVS] at Tacloban, Leyte.
*IDC **24** 14:05:19.2±3.0, 1213N×12547E, h48km±29km, mb3.9/14, mb1 4.0/14, mb1mx3.9/22, mbtmp3.9/14, MS3.6/7, Ms1 3.7/7, ms1mx3.2/34, Error ellipse: s-maj=36.8km s-min=11.6km az=71.0*
*DJA **24** 14:05:51, 1168N×12465E, h337km, mb4.3/8*
ISC 24 14:05:13.7±1.0, 1238N±003×12578E±004, h9km±5km, n54, σ1§11/59, mb4.1/17, MS3.5/5, 4C-3D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.84**	**204**	*e*P		**Pg**		**14 05 31.1**	**+1.2**
CNP	**Catarman**	**1.10**	**277**	*e*P		**Pb**		**14 05 32.7**	**-2.3**
CNP				*e*S		**Sg**		**14 05 48.8**	**-0.5**
OCLP	**Ormoc**	**1.75**	**221**	*e*P		**Pn**		**14 05 44.2**	**-0.1**
OCLP				*e*S		**Sn**		**14 06 08.2**	**+1.6**
PVCP	**Virac**	**2.00**	**308**	*e*P		**Pn**		**14 05 46.8**	**-0.9**
PVCP				*e*S		**Sn**		**14 06 19.3**	**+6.5**
MMPH	**Masbate**	**2.11**	**270**	⇓*e*P		**Pn**		**14 05 48.4**	**-0.8**
MMPH				*i* S		**Sn**		**14 06 13.4**	**-2.1**
MSLP	**Maasin**	**2.41**	**202**	*e*P		**Pn**		**14 05 54.5**	**+1.2**
MSLP				*e*S		**Sn**		**14 06 23.4**	**+0.6**
SCPH	**Surigao**	**2.59**	**186**	⇓*e*P		**Pn**		**14 05 55.4**	**-0.4**
LLP	**Lapu-Lapu**	**2.71**	**221**	⇑*e*P		**Pn**		**14 05 56.9**	**-0.6**
LLP				*e*S		**Sn**		**14 06 30.2**	**-0.2**
RCP	**Roxas**	**3.08**	**255**	⇑*e*P		**Pn**		**14 06 02.1**	**-0.5**
AUQP	**San Andres**	**3.17**	**288**	*e*P		**Pn**		**14 06 05.2**	**+1.3**
TBP	**Tagbilaran**	**3.27**	**215**	*e*P		**Pn**		**14 06 04.1**	**-1.0**
BUTP	**Butuan**	**3.39**	**183**	*e*P		**Pn**		**14 06 09.7**	**+2.9**
BUTP				*e*S		**Sg**		**14 07 01.5**	**-1.2**
KALP	**Kalibo**	**3.44**	**259**	⇑*e*P		**Pn**		**14 06 08.2**	**+0.7**
GUIM	**Jordan**	**3.58**	**241**	*e*P		**Pn**		**14 06 08.9**	**-0.5**
GUIM				*e*S		**Sn**		**14 06 43.2**	**-8.7**
GQP	**Guinayangan**	**3.59**	**295**	⇓*e*P		**Pn**		**14 06 12.8**	**+3.3**
GQP				*e*S		**Sn**		**14 06 52.3**	**+0.2**
OTRP	**Odiongan**	**3.67**	**270**	*e*P		**Pn**		**14 06 10.1**	**-0.6**
OTRP				*e*S		**Sn**		**14 06 55.1**	**+0.9**
POLP	**Polilio Island**	**4.41**	**302**	*e*P		**Pn**		**14 06 25.7**	**+4.9**
DCPH	**Dipolog City**	**4.46**	**213**	⇑*e*P		**Pn**		**14 06 22.3**	**+0.7**
DCPH				*e*S		**Sn**		**14 07 14.5**	**+0.8**
BUKP	**Musuan**	**4.53**	**189**	*e*P		**Pn**		**14 06 24.0**	**+1.5**
BUKP				*e*S		**Sn**		**14 07 20.4**	**+5.2**
SJMP	**San Jose**	**4.55**	**272**	*e*P		**Pn**		**14 06 23.8**	**+1.0**
CUYO	**Cuyo Island**	**4.91**	**252**	*e*P		**Pn**		**14 06 27.4**	**-0.3**
DAV	**Davao City (W)**	**5.28**	**182**	LR		LR	LR	14 08 45.4	
	comp=Z,369nm,19.4s,baz=244,slow=41								
BUSP	**Coron**	**5.47**	**267**	*e*P		**Pn**		**14 06 35.4**	**-0.1**
CAUP	**Cauayan**	**5.94**	**320**	*e*P		**Pn**		**14 06 43.1**	**+1.2**
CAUP				*e*S		**Pg**		**14 07 08.4**	**+0.9**
APYP	**Conner**	**7.00**	**322**	*e*P		**Pn**		**14 07 03.9**	**+7.5**
GUMO	**Guam**	**18.64**	**84**	LR		LR	LR	14 14 52.7	
	comp=Z,178nm,21.2s,baz=90,slow=30								
CBIJ	**Chichi jima**	**21.24**	**44**	LR		LR	LR	14 17 08.5	
	comp=Z,109nm,18.7s,MS3.3,baz=218,slow=33								
BATI	**Baumata**	**22.53**	**185**	P		**P**	**P**	**14 10 13.9**	**-0.1**
	24nm,0.6s,mb4.8,baz=259,slow=0.3,SNR=5.6								
JHJ	**Hachijo jima 2**	**24.30**	**30**	LR		LR	LR	14 18 06.8	
	comp=Z,101nm,19.3s,MS3.3,baz=270,slow=31								
KSRS	**Korea Array**	**25.05**	**4**	P		**P**	**P**	**14 10 42.7**	**+4.4**
	1.5nm,0.8s,mb3.6,baz=183,slow=10,SNR=9.5								
MJAR	**Matsushiro Arr**	**26.53**	**23**	LR		LR	LR	14 19 43.9	
	comp=Z,163nm,20.8s,MS3.6,baz=185,slow=32								
CMAR	**Chiang Mai Arr**	**26.55**	**287**	P		**P**	**P**	**14 10 50.8**	**-1.4**
	5.3nm,0.8s,mb4.1,baz=93,slow=7.5,SNR=38								
CMAR				LR		LR	LR	14 22 20.4	
	comp=Z,189nm,18.0s,MS3.7,baz=249,slow=39								
CHTO	**Chiang Mai**	**26.61**	**287**	*e*P		**P**	**P**	**14 10 50.7**	**-1.9**
	3.6nm,0.9s,mb3.9								
FITZ	**Fitzroy Crossi**	**30.28**	**180**	*e*P		**P**	**P**	**14 11 24.0**	**-1.4**
FITZ	**Fitzroy Crossi**	**30.28**	**180**	P		**P**	**P**	**14 11 23.6**	**-1.8**
	2.6nm,0.5s,mb4.3,baz=20,slow=9.4,SNR=11								
WRA	**Warramunga Arr**	**33.20**	**165**	P		**P**	**P**	**14 11 48.8**	**-2.2**
	0.3nm,0.4s,mb3.5,baz=344,slow=8.8,SNR=8.5								
WRA				PcP		PcP	PcP	14 14 33.8	-0.1
	0.6nm,0.7s,baz=344,slow=2.9,SNR=5.1								
WRA				ScP		ScP	ScP	14 18 14.3	-4.3
	0.6nm,0.9s,baz=352,slow=4.2,SNR=5.0								
WB2	**Warramunga Arr**	**33.20**	**165**	*e*P		**P**	**P**	**14 11 44.0**	**-7.1**
ASAR	**Alice Springs**	**36.69**	**167**	P		**P**	**P**	**14 12 20.4**	**-0.7**
	0.8nm,0.3s,mb4.0,baz=341,slow=6.9,SNR=59								
SONM	**Songino Array**	**38.89**	**339**	P		**P**	**P**	**14 12 40.3**	**+0.8**
	1.2nm,0.7s,mb3.7,baz=156,slow=11,SNR=3.7								
HNR	**Honiara**	**40.27**	**121**	LR		LR	LR	14 26 49.0	
	comp=Z,152nm,18.1s,MS3.9,baz=80,slow=32								
STKA	**Stephens Creek**	**46.54**	**161**	*e*P		**P**	**P**	**14 13 44.1**	**+2.4**
STKA	**Stephens Creek**	**46.54**	**161**	P		**P**	**P**	**14 13 40.7**	**-1.0**
	1.5nm,0.6s,mb4.1,baz=333,slow=10,SNR=3.1								
MK31	**Makanchi Array**	**50.08**	**322**	*e*P		**P**	**P**	**14 14 09.2**	**+0.3**
MKAR	**Makanchi Array**	**50.08**	**322**	P		**P**	**P**	**14 14 09.9**	**+0.9**
	3.2nm,0.8s,mb4.4,baz=117,slow=8.6,SNR=26								
ZALV	**Zalesovo Beam**	**52.56**	**331**	P		**P**	**P**	**14 14 27.6**	**+0.2**
	0.5nm,0.4s,mb3.8,baz=83,slow=4.6,SNR=3.7								
UCH	**Uchtor**	**53.37**	**314**	*e*P		**P**	**P**	**14 14 35.1**	**+1.5**
	4.0nm,0.9s,mb4.3								
KURK	**Kurchatov**	**54.08**

ISCJB ***24*** *14:30:60.0±1.5, 2596S×009.×1787W×02, h320km±20km, mb3.2/4, Error ellipse: s-maj=28.0km s-min=9.3km az=23.0.*

NEIC ***24*** *14:31:02.7±2.9, 2599S×17878W, h330km±43km, Error ellipse: s-maj=34.1km s-min=15.5km az=112.0*

IDC ***24*** *14:31:02.1±4.0, 2597S×17877W, h325km±44km, mb3.2/4, mb1 3.5/7, mb1mx3.3/17, mbtmp3.4/7, Error ellipse: s-maj=32.2km s-min=25.6km az=76.0*

ISC 24 14:31:02.4±1.8, 260S±01×1787W±02, h331km±23km, n11, σ0=57/14, mb3.2/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.75**	**195**	P			**Pn**	**14 33 53.5**	**+0.4**
	6.2nm,0.3s,baz=87,slow=0.4,SNR=42								
URZ				S			**S**	**14 36 08.1**	**-6.1**
	0.8nm,0.3s,baz=313,slow=22,SNR=8.7								
AFI	**Afiamalu**	**13.66**	**30**	P			**Pn**	**14 34 04.2**	**0.0**
	5.6nm,0.3s,baz=253,slow=23,SNR=9.3								
AFI				S			**S**	**14 36 27.6**	**-5.7**
	1.7nm,0.3s,baz=178,slow=20,SNR=3.5								
AFI	**Afiamalu**	**13.66**	**30**	*eP*			**Pn**	**14 34 04.2**	**0.0**
AFI				S			**S**	**14 36 27.6**	**-5.7**
RPZ	**Rata Peaks**	**19.56**	**203**	P			**P**	**14 35 05.8**	**-0.8**
	0.8nm,0.3s,baz=93,slow=18,SNR=5.5								
STKA	**Stephens Creek**	**35.09**	**251**	*eP*			**P**	**14 37 26.5**	**+1.3**
STKA	**Stephens Creek**	**35.09**	**251**	P			**P**	**14 37 26.2**	**+1.0**
	0.9nm,0.4s,mb3.4,baz=102,slow=14,SNR=5.1								
ASAR	**Alice Springs**	**42.88**	**262**	P			**P**	**14 38 28.6**	**-0.8**
	0.4nm,0.4s,mb3.0,baz=90,slow=7.0,SNR=10								
WRA	**Warramunga Arr**	**43.46**	**268**	P			**P**	**14 38 33.9**	**-0.1**
	0.3nm,0.3s,mb2.9,baz=103,slow=7.7,SNR=5.3								
MAW	**Mawson**	**76.22**	**200**	P			**P**	**14 42 14.8**	**+0.3**
	0.9nm,0.4s,mb3.8,baz=148,slow=7.4,SNR=12								
VNA3	**Neumayer Olymp**	**82.75**	**176**	*e*			**P**	**14 42 49.1**	**-0.2**
VNA2	**Neumayer--Watz**	**83.18**	**177**	*e*			**P**	**14 42 51.7**	**+0.2**
	baz=192,slow=5.0								

BJI ***24*** *14:48:08.4, 5171N×17890W, h18km, mB5.1, mb5.2, Ms4.5, Msz4.3*

IDC ***24*** *14:48:08.5±4.2, 5144N×17855W, h20km±26km, mb4.8/21, mb1 4.9/22, mb1mx4.9/26, mbtmp4.8/22, MS4.0/21, Ms1 4.0/21, ms1mx3.8/37, Error ellipse: s-maj=17.7km s-min=10.4km az=157.0*

ISCJB ***24*** *14:48:09.1±0.2, 5137N±004×17857W±003, h33km, mb5.0/192, MS4.1/43, Error ellipse: s-maj=5.8km s-min=2.3km az=176.5*

MOS ***24*** *14:48:09.1±0.9, 5141N×17859W, h33km, mb5.2/81, MS4.1/10, Error ellipse: s-maj=6.9km s-min=4.9km az=89.0*

NEIC ***24*** *14:48:10.7±0.2, 5139N×17861W, h35km, mb5.0/135, MS4.2/7, ML5.1(AEIC), Error ellipse: s-maj=5.3km s-min=2.4km az=179.0*

GCMT ***24*** *14:48:10.7±0.5, 5128N×17845W, h34km±1km, MW4.9/52, Moment Tensor Solution. s24,c27; s52,c74; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.05±.17; Mθθ-2.07±.13; Mφφ0.02±.09; Mrθ1.07±.15; Mrφ-0.81±.07; Mθφ1.30±.12; Best double couple: Mo2.78100×10^16 NP1:ϕ=270.00000°, δ31.00000°, λ124.00000°. NP2: ϕ=52.00000°, δ64.00000°, λ71.00000°. Principal axes: T 2.7690, Plg66.0000°, Azm289.0000°; N 0.0330, Plg17.0000°, Azm61.0000°; P -2.7940, Plg17.0000°, Azm156.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

DJA ***24*** *14:48:11, 51.17N×17944W, h10km, mb5.2/8*

SZGRF ***24*** *14:48:23.0, 5344N×17766E, h33km, mb5.0, Rat Islands, Aleutian Islands, United States*

ISC 24 14:48:11.2±0.2, 5143N±004×17860W±003, h35km, h35km±1.8km: pP-P, n560, σ0=96/547, mb5.0/192, MS4.1/43, 45C-14D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.28**	**68**	P			**Pn**	**14 48 32.4**	**-0.1**
ADK				S			**Sn**	**14 48 50.2**	**+1.8**
AMKA	**Amchitka**	**1.31**	**269**	P			**Pn**	**14 48 33.2**	**+0.2**
AMKA				S			**Sn**	**14 48 52.4**	**+3.1**
SMY	**Shemya**	**4.69**	**289**	*eP*			**Pn**	**14 49 21.1**	**+1.8**
SMY	**Shemya**	**4.69**	**289**	P			**Pn**	**14 49 21.8**	**+2.5**
SMY				S			**Sn**	**14 50 19.6**	**+7.2**
FX1	**Attu Island--F**	**5.27**	**289**	P			**Pn**	**14 49 29.6**	**+2.2**
NIKO	**Nikolski**	**6.19**	**72**	P			**Pn**	**14 49 40.0**	**0.0**
NIKO				S			**Sn**	**14 50 51.5**	**+2.1**
OKCE	**Okmok Cone E**	**6.69**	**69**	P			**Pn**	**14 49 48.7**	**+1.9**
OKCD	**Okmok Cone D**	**6.72**	**69**	P			**Pn**	**14 49 48.8**	**+1.5**
SPIA	**Saint Paul Isl**	**7.55**	**37**	P			**Pn**	**14 50 02.2**	**+3.7**
UNV	**Unalaska Valle**	**7.75**	**67**	P			**Pn**	**14 50 02.7**	**+1.4**
AKUT	**Akutan**	**8.24**	**66**	*eP*			**Pn**	**14 50 10.6**	**+2.6**
SDPT	**Sand Point**	**11.50**	**63**	*eP*			**Pn**	**14 50 53.7**	**+1.0**
CHGN	**Chignik**	**12.86**	**60**	*eP*			**Pn**	**14 51 12.4**	**+1.2**
PET	**Petropavlovsk**	**14.02**	**285**	*eP*			**Pn**	**14 51 36.3**	**+9.2**
PET				*e*				14 53 59.2	
PEA0B	**Petropavlovsk-**	**14.59**	**286**	*eP*			**Pn**	**14 51 43.1**	**+8.3**
PETK	**Petropavlovsk-**	**14.59**	**286**	Pn			**Pn**	**14 51 37.6**	**+2.8**
	1.1nm,0.3s,baz=88,slow=17,SNR=29								
OHAK	**Old Harbor**	**15.81**	**59**	*eP*			**Pn**	**14 51 51.3**	**+0.5**
SKR	**Severo-Kuril's**	**15.89**	**277**	*eP*			**Pn**	**14 51 57.0**	**+5.1**
SVW2	**Sparrevohn**	**15.95**	**44**	*eP*			**Pn**	**14 51 55.6**	**+3.0**
KDAK	**Kodiak Island**	**16.29**	**57**	Pn			**Pn**	**14 51 55.0**	**-2.0**
	368nm,0.5s,SNR=13								
KDAK	**Kodiak Island**	**16.29**	**57**	Pn			**Pn**	**14 51 53.2**	**-3.8**
	9.2nm,0.3s,baz=264,slow=6.2,SNR=28								
KDAK	**Kodiak Island**	**16.29**	**57**	*eP*			**Pn**	**14 51 54.9**	**-2.0**
	41nm,0.7s								
TTA	**Tatalina**	**16.70**	**38**	*eP*			**Pn**	**14 52 06.8**	**+4.8**
SLKM	**Skilak Lake**	**18.16**	**49**	P			**Pn**	**14 52 21.0**	**+0.8**
SLKM	**Skilak Lake**	**18.16**	**49**	*eP*			**Pn**	**14 52 20.5**	**+0.4**
PPLA	**Purkeypile**	**18.20**	**41**	*eP*			**Pn**	**14 52 23.5**	**+2.9**
	56nm,0.8s								
BILL	**Bilibino**	**18.22**	**342**	*iP*			**Pn**	**14 52 24.2**	**+3.3**
BILL					pmax		pmax		
	comp=Z,56nm,1.6s								
BILL	**Bilibino**	**18.22**	**342**	*eP*			**Pn**	**14 52 21.8**	**+1.0**
	comp=Z,20nm,0.6s								
SEW	**Seward**	**18.42**	**51**	*eP*			**Pn**	**14 52 22.2**	**-1.1**
RC01	**Rabbit Creek A**	**18.57**	**47**	*eP*			**Pn**	**14 52 24.5**	**-0.6**
	comp=Z,15nm,0.4s								
CHUM	**Lake Minchumin**	**18.61**	**38**	*eP*			**Pn**	**14 52 26.8**	**+1.1**
	comp=Z,29nm,0.8s								
KTH	**Kantishna Hill**	**19.00**	**40**	*eP*			**Pn**	**14 52 29.6**	**-0.8**
	comp=Z,34nm,0.5s								
PMR	**Palmer**	**19.00**	**46**	*eP*			**Pn**	**14 52 30.2**	**-0.2**
PMR					pmax		pmax		
	comp=Z,13nm,0.6s								
PMR	**Palmer**	**19.00**	**46**	*eP*			**Pn**	**14 52 30.2**	**-0.1**
	comp=Z,13nm,0.6s								
TRF	**Thorofare Moun**	**19.21**	**40**	*eP*			**Pn**	**14 52 32.2**	**-0.7**
	comp=Z,2μm,0.6s								
BPAW	**Bear Paw Mtn.**	**19.23**	**38**	*eP*			**Pn**	**14 52 33.0**	**-0.1**
	comp=Z,28nm,0.6s								
SEY	**Seymchan**	**19.29**	**318**	*iP*			**Pn**	**14 52 35.3**	**+1.5**
IMA2	**Indian Mountai**	**19.34**	**31**	*eP*			**Pn**	**14 52 35.1**	**+0.8**
MCK	**McKinley**	**19.88**	**40**	P			**Pn**	**14 52 40.1**	**-0.7**
MCK					pmax		pmax		
	comp=Z,10μm,0.6s								
MCK	**McKinley**	**19.88**	**40**	*eP*			**Pn**	**14 52 39.7**	**-1.2**
	comp=Z,10μm,0.6s								
EYAK	**Cordova Ski Ar**	**20.31**	**51**	*eP*			**P**	**14 52 43.5**	**-0.2**
COLA	**College**	**20.80**	**38**	P			**P**	**14 52 50.7**	**+1.8**
COLA					pmax		pmax		
	comp=Z,21nm,0.7s								
COLA	**College**	**20.80**	**38**	*eP*			**P**	**14 52 46.8**	**-2.1**
	comp=Z,21nm,0.6s								
COLD	**Coldfoot**	**21.15**	**31**	*eP*			**P**	**14 52 53.5**	**+0.8**
	comp=Z,16nm,0.7s,mb4.5								
MENT	**Mentasta**	**21.82**	**45**	*eP*			**P**	**14 53 00.6**	**+0.7**
PNL	**Peninsula**	**23.35**	**54**	*eP*			**P**	**14 53 14.8**	**-1.3**
DAWY	**Dawson**	**23.98**	**43**	*eP*			**P**	**14 53 20.8**	**-1.1**
SKAG	**Skagway**	**25.41**	**55**	P			**P**	**14 53 34.1**	**-0.9**
YSS	**Yuzh-Sakhalins**	**25.44**	**275**	*iP*			**P**	**14 53 36.9**	**+1.6**
YSS				*e*				14 53 50.0	
YSS					pmax		pmax		
	comp=Z,110nm,0.9s,mb5.4								
YSS	**Yuzh-Sakhalins**	**25.44**	**275**	*eP*			**P**	**14 53 36.7**	**+1.4**
	comp=Z,93nm,0.8s,mb5.4								
ASAJ	**Asahikawa**	**26.83**	**270**	P			**P**	**14 53 48.9**	**+0.9**
	comp=Z,72nm,1.0s,mb5.2,baz=53,slow=5.1,SNR=18								
ASAJ					LR		LR	15 02 31.3	
	comp=Z,199nm,20.3s,MS3.7,baz=41,slow=32								
ASAJ	**Asahikawa**	**26.83**	**270**	P			**P**	**14 53 48.9**	**+1.0**
ASAJ					pmax		pmax		
	comp=Z,72nm,1.0s								
ASAJ					MLR		MLR		
	comp=Z,199nm,20.3s								
ERM	**Erimo**	**27.57**	**265**	P			**P**	**14 53 55.0**	**+0.4**
	comp=Z,169nm,1.1s,mb5.6,SNR=6.9								
ERM	**Erimo**	**27.57**	**265**	P			**P**	**14 53 55.9**	**+1.3**
ERM					pmax		pmax		
	comp=Z,33nm,1.2s,mb4.8								
ERM	**Erimo**	**27.57**	**265**	*eP*			**P**	**14 53 55.6**	**+1.0**
	comp=Z,33nm,1.3s,mb4.8								
YAK	**Yakutsk**	**29.48**	**311**	*eP*			pP	14 54 23.6	+2.1
YAK					pmax		pmax		
	comp=Z,11nm,0.9s,mb4.6								
YAK					MLR		MLR		
	comp=Z,329nm,15.0s,MS4.1								
KLR	**Kul'dur**	**31.29**	**286**	*iP*			**P**	**14 54 23.9**	**-3.5**
KLR					pmax		pmax		
	comp=E,30nm,1.2s								
KLR					pmax		pmax		
	comp=Z,60nm,1.2s,mb5.3								
MAJO	**Matsushiro**	**33.91**	**261**	P			**P**	**14 54 51.3**	**+0.7**
MAJO					pmax		pmax		
	comp=Z,46nm,0.9s,mb5.4								
MAJO	**Matsushiro**	**33.91**	**261**	*eP*			**P**	**14 54 51.0**	**+0.4**
	comp=Z,46nm,0.9s,mb5.4								
MAJO					LR		LR		
	comp=Z,294nm,22.0s,MS4.0								
MAT	**Matsushiro**	**33.91**	**261**	P			**P**	**14 54 52.2**	**+1.6**
MAT				S			**S**	**15 00 12.0**	**-0.7**
MJAR	**Matsushiro Arr**	**33.91**	**261**	P			**P**	**14 54 51.3**	**+0.8**
	comp=Z,13nm,0.7s,mb5.0,baz=52,slow=7.6,SNR=40								
MJAR					PcP		PcP	14 57 28.5	+0.2
	comp=Z,4.5nm,0.9s,baz=61,slow=1.9,SNR=7.7								
MJAR					LR		LR	15 06 35.0	
	comp=Z,177nm,21.8s,MS3.8,baz=90,slow=33								
MJAR	**Matsushiro Arr**	**33.91**	**261**	P			**P**	**14 54 51.3**	**+0.7**
MJAR								14 57 28.5	
MDJ	**Mudanjiang**	**34.69**	**279**	P			**P**	**14 54 56.8**	**-0.4**
MDJ					AP		pP	14 55 05.8	-1.6
MDJ					XP		sP	14 55 09.8	-1.8
MDJ					PP		PP	14 56 17.8	+1.8
MDJ					PCP		PcP	14 57 31.1	+0.7
MDJ					S		**S**	**15 00 23.6**	**-0.8**
MDJ					SCP		ScP	15 01 13.8	+1.0
MDJ					PCS		PcS	15 01 18.0	+1.1
MDJ					SCS		ScS	15 05 17.3	+1.5
MDJ					AMB		AMB		
	comp=Z,19nm,0.9s,mb5.0								
MDJ					AMB		AMB		
	comp=Z,55nm,3.3s								
MDJ					LR		LR		
	comp=N,119nm,28.6s								
MDJ					LR		LR		
	comp=E,167nm,33.9s								
MDJ					LR		LR		
	comp=Z,222nm,28.6s,MS3.8								
MDJ	**Mudanjiang**	**34.69**	**279**	*eP*			**P**	**14 54 56.3**	**-0.8**
	comp=Z,25nm,1.0s,mb5.1								
OBC	**Olympics--Boni**	**34.72**	**74**	P			**P**	**14 54 59.3**	**+1.8**
YKA	**Yellowknife Ar**	**35.11**	**47**	P			**P**	**14 55 00.3**	**-0.3**
	comp=Z,3.7nm,0.5s,mb4.6,baz=280,slow=8.5,SNR=11								
YKA					PcP		PcP	14 57 31.3	0.0
	comp=Z,5.6nm,0.8s,baz=281,slow=3.0,SNR=12								
YKA					LR		LR	15 11 20.8	
	comp=Z,112nm,20.1s,MS3.6,baz=195,slow=40								
YKA	**Yellowknife Ar**	**35.11**	**47**	P			**P**	**14 55 00.3**	**-0.3**
YKA								14 57 31.3	
YKA	**Yellowknife Ar**	**35.11**	**47**	P			**P**	**14 55 00.3**	**-0.3**
YKA					PcP		PcP	14 57 31.3	0.0
YKA					LR		LR	15 11 20.9	
NLWA	**Neilton Lookou**	**35.14**	**75**	*eP*			**P**	**14 55 02.1**	**+1.0**
	comp=Z,27nm,1.3s,mb5.0								
JHJ	**Hachijo jima 2**	**35.23**	**255**	LR			LR	15 07 22.0	
	comp=Z,110nm,21.6s,MS3.6,baz=77,slow=33								
VDB	**Vedder Mountai**	**35.46**	**71**	P			**P**	**14 55 04.5**	**+0.7**
GNW	**Green Mountain**	**35.69**	**74**	*eP*			**P**	**14 55 05.3**	**-0.5**
	comp=Z,15nm,0.7s,mb5.0								
MBW	**Mount Baker**	**35.69**	**71**	P			**P**	**14 55 06.7**	**+0.9**
JCW	**Jim Creek**	**35.94**	**72**	*eP*			**P**	**14 55 08.6**	**+0.7**
BMW	**Boistfort Moun**	**35.96**	**76**	P			**P**	**14 55 09.7**	**+1.6**
BMW	**Boistfort Moun**	**35.96**	**76**	*eP*			**P**	**14 55 09.0**	**+0.9**
RPW	**Rockport**	**36.07**	**72**	*eP*			**P**	**14 55 09.1**	**0.0**
FL2	**Flat Top 2**	**36.63**	**75**	P			**P**	**14 55 14.8**	**+1.1**
TDL	**Tradedollar La**	**36.63**	**75**	P			**P**	**14 55 15.0**	**+1.2**
LON	**Longmire**	**36.68**	**74**	P			**P**	**14 55 15.3**	**+1.0**
LON					pmax		pmax		
	comp=Z,16nm,0.6s,mb5.0								
LON	**Longmire**	**36.68**	**74**	*eP*			**P**	**14 55 14.9**	**+0.6**
	comp=Z,16nm,0.6s,mb5.0								
WPW	**White Pass**	**36.87**	**74**	P			**P**	**14 55 16.7**	**+0.9**
ASR	**Mount Adams--S**	**37.11**	**75**	P			**P**	**14 55 18.6**	**+0.7**
ETW	**Entiat**	**37.16**	**72**	*eP*			**P**	**14 55 18.9**	**+0.6**
TBM	**Table Mountain**	**37.21**	**73**	P			**P**	**14 55 19.6**	**+0.8**
CN2	**Changchun**	**37.66**	**281**	*eP*			**P**	**14 55 21.8**	**-0.8**
CN2					*eS*		**S**	**15 01 08.9**	**-1.0**
CN2					AMB		AMB		
	comp=Z,20nm,0.6s,mb5.0								
CN2					AMB		AMB		
	comp=Z,410nm,4.0s								
CN2					LR		LR		
	comp=N,160nm,22.0s,MS4.0								
CN2					LR		LR		
	comp=E,250nm,22.0s,MS4.0								
CN2					LR		LR		
	comp=Z,200nm,22.0s,MS3.9								
EPH	**Ephrata**	**37.72**	**72**	P			**P**	**14 55 23.3**	**+0.2**
BOD	**Bodaibo**	**38.05**	**307**	*eP*			**P**	**14 55 24.3**	**-1.4**
BOD					pmax		pmax		
	comp=Z,5.0nm,1.1s,mb4.2								
RSW	**Rattlesnake Hi**	**38.19**	**74**	*eP*			**P**	**14 55 27.6**	**+0.6**
CBIJ	**Chichi jima**	**38.22**	**246**	P			**P**	**14 55 27.5**	**+0.1**
	comp=Z,45nm,0.5s,mb5.4,baz=270,slow=22,SNR=12								
CBIJ					LR		LR	15 07 45.7	
	comp=Z,181nm,22.0s,MS3.8,baz=132,slow=31								
HAWA	**Hanford**	**38.23**	**74**	*eP*			**P**	**14 55 27.7**	**+0.3**
	comp=Z,30nm,0.6s,mb5.2								
OD2	**Odessa Site #2**	**38.23**	**72**	P			**P**	**14 55 27.4**	**+0.1**
HIA	**Hailar**	**38.38**	**292**	*eP*			**P**	**14 55 28.3**	**-0.3**
HIA					pmax		pmax		
	comp=Z,10.0nm,0.6s								
HIA	**Hailar**	**38.38**	**292**	*eP*			**P**	**14 55 28.3**	**-0.3**
	comp=Z,10nm,0.6s,mb4.7								
VIPM	**Ingram Point**	**38.53**	**77**	P			**P**	**14 55 30.8**	**+0.9**
EDM	**Edmonton**	**38.68**	**61**	P			**P**	**14 55 30.6**	**-0.5**
EDM	**Edmonton**	**38.68**	**61**	*eP*			**P**	**14 55 30.4**	**-0.7**
NEW	**Newport**	**38.75**	**70**	P			**P**	**14 55 31.9**	**+0.2**
NEW					pmax		pmax		
	comp=Z,37nm,0.8s								
NEW	**Newport**	**38.75**	**70**	*eP*			**P**	**14 55 31.6**	**-0.1**
	comp=Z,37nm,0.8s,mb5.2								
YBH	**Yreka Blue Hor**	**38.75**	**82**	*eP*			**P**	**14 55 33.3**	**+1.5**
YBH					pmax		pmax		
	comp=Z,12nm,1.0s								
YBH	**Yreka Blue Hor**	**38.75**	**82**	*eP*			**P**	**14 55 33.2**	**+1.5**
	comp=Z,12nm,1.0s,mb4.6								
LNOR	**Lincton Mounta**	**39.24**	**74**	P			**P**	**14 55 36.0**	**+0.1**
LNOR	**Lincton Mounta**	**39.24**	**74**	*eP*			**P**	**14 55 35.8**	**0.0**
WDC	**Whiskeytown Da**	**39.51**	**83**	*eP*			**P**	**14 55 38.4**	**+0.2**
WDC					pmax		pmax		
	comp=Z,11nm,0.9s,mb4.6								
WDC	**Whiskeytown Da**	**39.51**	**83**	*eP*			**P**	**14 55 38.4**	**+0.2**
	comp=Z,11nm,0.9s,mb4.6								
KSRS	**Korea Array**	**39.76**	**271**	P			**P**	**14 55 41.3**	**+1.0**
	comp=Z,16nm,0.8s,mb4.8,baz=58,slow=8.1,SNR=88								
KSRS					PcP		PcP	14 57 46.1	+0.1
	comp=Z,2.9nm,1.0s,baz=61,slow=4.2,SNR=6.3								
KSRS					LR		LR	15 11 49.5	
	comp=Z,68nm,18.9s,MS3.5,baz=55,slow=36								
KSRS	**Korea Array**	**39.76**	**271**	P			**P**	**14 55 41.3**	**+1.0**
KSRS								14 57 46.1	
KSRS					pmax		pmax		
	comp=Z,16nm,0.8s,mb4.8								
KSRS					MLR		MLR		
	comp=Z,68nm,18.9s,MS3.5								
LTIM	**Timbered Crate**	**39.82**	**82**	P			**P**	**14 55 42.0**	**+1.2**
MOD	**Modoc**	**40.14**	**80**	*eP*			**P**	**14 55 44.4**	**+1.0**
	comp=Z,18nm,0.8s,mb4.8								
WALA	**Waterton Lakes**	**40.24**	**67**	*eP*			**P**	**14 55 42.9**	**-1.2**
	comp=Z,16nm,0.9s,mb4.8								
INCN	**Inchon**	**40.55**	**272**	*eP*			**P**	**14 55 47.4**	**+0.6**
	comp=Z,46nm,0.9s,mb5.1								
WVOR	**Wild Horse Val**	**40.87**	**78**	P			**P**	**14 55 50.0**	**+0.6**
WVOR					pmax		pmax		
	comp=Z,19nm,0.8s,mb4.8								
WVOR	**Wild Horse Val**	**40.87**	**78**	*eP*			**P**	**14 55 49.7**	**+0.3**
	comp=Z,19nm,0.8s,mb4.8								
MSO	**Missoula**	**41.33**	**70**	*eP*			**P**	**14 55 52.7**	**-0.4**
	comp=Z,10.0nm,0.7s,mb4.5								
CHMT	**Chamberlain Mo**	**41.69**	**70**	*eP*			**P**	**14 55 55.5**	**-0.5**
PAHR	**Pah Rah Range**	**41.98**	**82**	*eP*			**P**	**14 55 58.7**	**+0.1**
	comp=Z,15nm,0.9s,mb4.6								
HLID	**Hailey**	**42.81**	**74**	*eP*			**P**	**14 56 05.3**	**+0.1**
	comp=Z,9.6nm,0.7s,mb4.6								
BMN	**Battle Mountai**	**42.89**	**80**	P			**P**	**14 56 06.8**	**+0.9**
BMN					pmax		pmax		
	comp=Z,3.0nm,0.5s,mb4.3								
BMN	**Battle Mountai**	**42.89**	**80**	*eP*			**P**	**14 56 06.4**	**+0.5**
	comp=Z,3.3nm,0.5s,mb4.3								
DLMT	**Dillon**	**42.90**	**71**	*eP*			**P**	**14 56 05.1**	**-0.8**
	comp=Z,3.4nm,0.6s,mb4.2								
MCMT	**McKenzie Canyo**	**43.05**	**72**	*eP*			**P**	**14 56 07.0**	**-0.2**
EGMT	**Eagleton**	**43.15**	**66**	*eP*			**P**	**14 56 06.9**	**-1.0**
	comp=Z,26nm,0.8s,mb5.0								
BOZ	**Bozeman (W)**	**43.32**	**70**	P			**P**	**14 56 09.2**	**-0.1**
BOZ					pmax		pmax		
	comp=Z,19nm,0.7s,mb4.9								
BOZ	**Bozeman (W)**	**43.32**	**70**	*eP*			**P**	**14 56 09.0**	**-0.4**
	comp=Z,19nm,0.6s,mb5.0								
NVAR	**Mina Array Bea**	**43.42**	**83**	P			**P**	**14 56 10.9**	**+0.6**
	comp=Z,3.4nm,0.7s,mb4.2,baz=290,slow=7.5,SNR=20								
NVAR					ScP		ScP	15 01 48.7	+2.2
	comp=Z,0.5nm,0.7s,baz=293,slow=4.6,SNR=3.4								
NVAR	**Mina Array Bea**	**43.42**	**83**	P			**P**	**14 56 10.9**	**+0.6**
NVAR					ScP		ScP	15 01 48.7	+2.2
QLMT	**Earthquake Lak**	**43.89**	**71**	*eP*			**P**	**14 56 13.4**	**-0.4**
ELK	**Elko**	**43.92**	**78**	P			**P**	**14 56 14.9**	**+0.6**
ELK					pmax		pmax		
	comp=Z,14nm,0.8s								
ELK	**Elko**	**43.92**	**78**	*eP*			**P**	**14 56 14.1**	**-0.1**
	comp=Z,14nm,0.8s,mb4.7								
ELK					LR		LR		
	comp=Z,358nm,22.0s,MS4.2								
YMR	**Madison River**	**44.25**	**71**	*eP*			**P**	**14 56 17.3**	**+0.5**
	comp=Z,36nm,0.3s,mb5.6								
TPH	**Tonopah**	**44.31**	**83**	P			**P**	**14 56 18.2**	**+0.8**
TPH					pmax		pmax		
	comp=Z,8.0nm,0.7s,mb4.6								
TPH	**Tonopah**	**44.31**	**83**	*eP*			**P**	**14 56 17.5**	**+0.1**
	comp=Z,7.6nm,0.7s,mb4.5								
GCMT	**Greycliff**	**44.39**	**69**	*eP*			**P**	**14 56 17.9**	**-0.1**
LKWY	**Lake**	**44.64**	**71**	P			**P**	**14 56 21.8**	**+1.9**
LKWY					pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.7								
LKWY	**Lake**	**44.64**	**71**	*eP*			**P**	**14 56 21.2**	**+1.2**
	comp=Z,9.9nm,0.8s,mb4.7								
IMW	**Indian Meadow**	**44.70**	**72**	*eP*			**P**	**14 56 20.4**	**0.0**
	comp=Z,11nm,0.9s,mb4.7								
RRI2	**Red Ridge**	**44.79**	**73**	*eP*			**P**	**14 56 22.1**	**+1.0**
	comp=Z,11nm,0.6s,mb4.9								
HVU	**Hansel Valley**	**44.82**	**75**	P			**P**	**14 56 21.5**	**+0.1**
HVU					pmax		pmax		
	comp=Z,27nm,0.9s,mb5.1								
HVU	**Hansel Valley**	**44.82**	**75**	*eP*			**P**	**14 56 20.3**	**-1.1**
	comp=Z,27nm,0.9s,mb5.1								
MOOW	**Moose Ponds**	**44.90**	**72**	*eP*			**P**	**14 56 22.0**	**0.0**
	comp=Z,4.1nm,1.0s,mb4.2								
TPAW	**Teton Pass**	**44.93**	**72**	*eP*			**P**	**14 56 22.6**	**+0.4**
	comp=Z,4.4nm,0.6s,mb4.5								
RLMT	**Red Lodge**	**45.00**	**70**	*eP*			**P**	**14 56 22.8**	**0.0**
	comp=Z,43nm,1.0s,mb5.2								
ISA	**Isabella**	**45.05**	**86**	P			**P**	**14 56 22.7**	**-0.6**
ISA					pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.4								

comp=Z,310nm,13.2s,MS4.5
SRU San Rafael 47.80 77 *e*P **P 14 56 45.4 +0.6**
SRU pmax pmax
comp=Z,19nm,0.8s,mb5.2
SRU San Rafael 47.80 77 *e*P **P 14 56 44.9 0.0**
comp=Z,19nm,0.8s,mb5.2
GUMO Guam 47.84 231 P **P 14 56 43.4 -2.0**
comp=Z,30nm,0.4s,mb5.6,baz=8.1,slow=14,SNR=9.0
GUMO LR LR 15 12 01.8
comp=Z,53nm,21.0s,MS3.5,baz=83,slow=30
RWWY Rawlins 48.22 72 *e*P **P 14 56 47.5 -0.5**
comp=Z,15nm,0.8s,mb5.1
RSSD Black Hills 48.63 68 P **P 14 56 50.6 -0.5**
RSSD pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
RSSD Black Hills 48.63 68 *e*P **P 14 56 50.5 -0.7**
comp=Z,10.0nm,0.6s,mb5.0
BTO Baotou 48.87 287 *e*P **P 14 56 53.8 +0.8**
KRAR Krasnoyarsk 49.14 312⇑*i*P **P 14 56 56.4 +1.5**
KRAR pmax pmax
comp=Z,7.0nm,0.3s,mb5.2
PHWY Pilot Hill 49.50 72 *e*P **P 14 56 57.1 -0.7**
comp=Z,4.5nm,0.4s,mb4.8
ULM Lac du Bonnet 49.55 57 P **P 14 56 57.2 -0.9**
comp=Z,7.4nm,0.6s,mb4.9,baz=311,slow=7.6,SNR=12
ULM LR LR 15 17 07.8
comp=Z,147nm,18.5s,MS4.0,baz=303,slow=35
ULM Lac du Bonnet 49.55 57 P **P 14 56 57.2 -0.9**
ULM LR LR 15 17 07.8
WUAZ Wupatki 49.56 81 *e*P **P 14 56 58.9 +0.5**
comp=Z,9.0nm,0.7s,mb4.9
MVCO Mesa Verde 50.23 78 *e*P **P 14 57 03.1 -0.4**
comp=Z,9.0nm,0.6s,mb5.0
ISCO Idaho Springs 50.34 73 P **P 14 57 05.0 +0.8**
ISCO pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ISCO Idaho Springs 50.34 73 *e*P **P 14 57 04.7 +0.4**
comp=Z,6.0nm,0.7s,mb4.7
ISCO LR LR
comp=Z,262nm,22.0s,MS4.2
HVS Khovu-Aksy 51.58 307*c i*P **P 14 57 13.2 -0.2**
HVS pmax pmax
comp=Z,60nm,1.3s,mb5.4
SDCO Great Sand Dun 51.71 75 *e*P **P 14 57 14.9 +0.3**
comp=Z,16nm,1.2s,mb4.8
OGNE Ogallala 51.74 70 *e*P **P 14 57 15.1 +0.3**
comp=Z,12nm,0.5s,mb5.1
TUC Tucson 52.05 84 P **P 14 57 17.2 0.0**
TUC pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
TUC Tucson 52.05 84 P **P 14 57 16.7 -0.5**
comp=Z,3.3nm,0.6s,mb4.4
WHN Wuhan 52.78 274 ⇓P **P 14 57 22.3 -0.3**
WHN AMB AMB
comp=Z,87nm,0.8s,mb5.7
LAZ Ladron 52.91 79 *e*P **P 14 57 24.0 +0.5**
ANMO Albuquerque 52.96 78⇑*e*P **P 14 57 23.8 -0.1**
ECSD EROS,Sioux Fal 53.10 64 *e*P **P 14 57 22.4 -2.4**
comp=Z,12nm,0.9s,mb4.8
SUMG Summit 53.22 14 *e*P **P 14 57 25.8 +0.5**
comp=Z,7.7nm,1.2s,mb4.5
LPM Los Pinos Moun 53.28 79 *e*P **P 14 57 26.6 +0.4**
BNM Barren Site 53.39 79 *e*P **P 14 57 26.9 -0.1**
XAN Xi'an 53.77 281 P **P 14 57 29.8 0.0**
XAN AP pP 14 57 38.6 -1.9
XAN XP sP 14 57 43.0 -1.6
XAN AMB AMB
comp=Z,31nm,0.9s,mb5.2
XAN AMB AMB
comp=Z,90nm,5.1s
ZALV Zalesovo Beam 54.09 314 P **P 14 57 30.9 -0.9**
comp=Z,0.7nm,0.6s,mb3.8,baz=22,slow=4.7,SNR=3.4
ZALV PcP PcP 14 58 36.4 +0.1
comp=Z,8.3nm,0.6s,baz=27,slow=3.6,SNR=19
ZALV LR LR 15 22 17.6
comp=Z,103nm,18.4s,MS3.9,baz=175,slow=38
ZALV Zalesovo Beam 54.09 314 P **P 14 57 30.9 -0.9**
ZALV 14 58 36.4
NVS Novosibirsk 54.22 315 *e*P **P 14 57 29.4 -3.4**
CBKS Cedar Bluff 54.46 70 P **P 14 57 34.6 -0.2**
CBKS Cedar Bluff 54.46 70 *e*P **P 14 57 33.6 -1.2**
comp=Z,43nm,0.5s,mb5.6
LZH Lanzhou 55.49 286 ⇑P **P 14 57 43.5 +1.2**
LZH AP pP 14 57 53.8 +0.9
LZH XP sP 14 57 57.6 +0.5
LZH PP PP 14 59 48.9 +2.8
LZH *e*S **S 15 05 24.3 -0.5**
LZH XS sS 15 05 40.8 -1.5
LZH *e*SS SS 15 09 08.5 -0.9
LZH AMB AMB
comp=Z,36nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,157nm,6.4s
LZH LR LR
comp=N,587nm,16.3s
LZH LR LR
comp=Z,812nm,17.8s,MS4.8
LZH Lanzhou 55.49 286 ⇑P **P 14 57 43.5 +1.2**
LZH *PP pP 14 57 53.7 +0.8
LZH *SP sP 14 57 57.6 +0.5
LZH 14 59 48.9
LZH *e*S **S 15 05 24.2 -0.6**
LZH *SS sS 15 05 40.7 -1.6
LZH *e*SS SS 15 09 08.5 -0.9
LZH pmax pmax
comp=Z,36nm,1.5s,mb5.2
LZH MLR MLR
comp=Z,810nm,17.8s,MS4.8
LZH Lanzhou 55.49 286 ⇑P **P 14 57 43.5 +1.2**
comp=Z,36nm,1.5s,mb5.2
LZH pP pP 14 57 53.7 +0.8
LZH sP sP 14 57 57.6 +0.5
LZH PP PP 14 59 48.9 +2.8
LZH *e*S **S 15 05 24.2 -0.6**
LZH sS sS 15 05 40.7 -1.6
LZH *e*SS SS 15 09 08.5 -0.9
LZH LR LR
comp=Z,810nm,17.8s,MS4.8
COWI Conover 55.66 57 *e*P **P 14 57 41.9 -1.4**
comp=Z,11nm,0.6s,mb5.1
GTA Gaotai 55.66 292⇑*i*P **P 14 57 44.3 +0.8**
GTA AP pP 14 57 54.4 +0.3
GTA XP sP 14 57 58.5 +0.2
GTA PP PP 14 59 49.8 +2.2
GTA S **S 15 05 29.0 +2.0**
GTA AMB AMB
comp=Z,87nm,0.7s,mb5.9
GTA AMB AMB
comp=Z,167nm,3.8s
GTA LR LR
comp=N,259nm,17.5s,MS4.5
GTA LR LR
comp=E,205nm,15.8s,MS4.5
GTA LR LR
comp=Z,258nm,19.9s,MS4.3
KSU1 Kansas State U 56.11 68 *e*P **P 14 57 45.4 -1.2**
comp=Z,46nm,0.8s,mb5.5
KEV Kevo 57.69 350 *e*p **P 14 57 57.7 +0.3**
WMOK Wichita Mounta 57.76 73 P **P 14 57 57.9 -0.5**
WMOK pmax pmax
comp=Z,14nm,0.7s,mb5.1
WMOK Wichita Mounta 57.76 73 *e*P **P 14 57 57.5 -0.9**
comp=Z,14nm,0.7s,mb5.1
ARCES ARCESS Array B 58.06 350 P **P 14 57 59.2 -0.8**
comp=Z,8.1nm,0.5s,mb5.0,baz=26,slow=8.0,SNR=95
ARCES PcP PcP 14 58 50.9 -0.6
comp=Z,6.9nm,0.6s,baz=3.4,slow=4.1,SNR=8.9
ARCES ARCESS Array B 58.06 350 P **P 14 57 59.2 -0.8**
ARCES PcP PcP 14 58 50.9 -0.6
TXAR Lajitas Array 58.52 81 P **P 14 58 03.5 -0.3**
comp=Z,5.0nm,0.6s,mb4.7,baz=301,slow=4.7,SNR=30
TXAR LR LR 15 19 55.8
comp=Z,106nm,22.0s,MS3.9,baz=185,slow=33
KURK Kurchatov 59.07 314 P **P 14 58 06.4 -0.9**
KURK pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KURK Kurchatov 59.07 314 *e*P **P 14 58 06.2 -1.2**
comp=Z,10nm,0.8s,mb4.9
KURK *e*PcP PcP 14 58 55.5 -0.3
CD2 Chengdu 59.09 282⇑*i*P **P 14 58 07.9 +0.2**
CD2 AP pP 14 58 18.0 -0.4
CD2 XP sP 14 58 21.9 -0.7
CD2 PP PP 15 00 20.1 +1.9
CD2 S **S 15 06 10.4 -1.8**
CD2 XS sS 15 06 27.3 -2.5
CD2 SS SS 15 10 06.1 0.0
CD2 AMB AMB
comp=Z,40nm,0.8s,mb5.5
CD2 AMB AMB
comp=Z,100nm,5.8s
CD2 LR LR
comp=N,290nm,19.2s,MS4.5
CD2 LR LR
comp=E,250nm,18.0s,MS4.5
CD2 LR LR
comp=Z,240nm,19.2s,MS4.3
WMQ Urumqi 59.42 303 P **P 14 58 10.3 +0.5**
WMQ AP pP 14 58 20.5 -0.1
WMQ XP sP 14 58 24.5 -0.2
WMQ PCP PcP 14 58 58.1 +0.8
WMQ PP PP 15 00 23.5 +2.7
WMQ S **S 15 06 17.0 +0.9**
WMQ XS sS 15 06 33.1 -0.7
WMQ SCS ScS 15 07 54.0 -2.9
WMQ AMB AMB
comp=Z,17nm,0.6s,mb5.2
WMQ AMB AMB
comp=Z,96nm,3.6s
WMQ LR LR
comp=N,450nm,15.6s,MS4.8
WMQ LR LR
comp=E,395nm,15.8s,MS4.8
WMQ LR LR
comp=Z,392nm,22.0s
SCHQ Schefferville 59.89 38 LR LR 15 23 15.2
comp=Z,136nm,20.1s,MS4.1,baz=270,slow=35
CCM Cathedral Cave 59.90 66 *e*P **P 14 58 11.2 -2.1**
CCM pmax pmax
comp=Z,12nm,0.6s,mb5.1
CCM Cathedral Cave 59.90 66 *e*P **P 14 58 11.2 -2.0**
comp=Z,12nm,0.6s,mb5.1
JCT Junction City 60.10 78 P **P 14 58 13.6 -1.1**
JCT pmax pmax
comp=Z,14nm,0.6s,mb5.2
JCT Junction City 60.10 78 *e*P **P 14 58 12.3 -2.4**
comp=Z,14nm,0.6s,mb5.2
MK31 Makanchi Array 60.10 309 P **P 14 58 13.1 -1.4**
MK31 Makanchi Array 60.10 309 *e*P **P 14 58 12.4 -2.0**
MKAR Makanchi Array 60.10 309 P **P 14 58 12.9 -1.5**
comp=Z,2.5nm,0.6s,mb4.4,baz=52,slow=7.9,SNR=14
MKAR PcP PcP 14 58 59.0 -0.9
comp=Z,1.0nm,0.4s,baz=19,slow=3.2,SNR=4.2
MKAR LR LR 15 27 08.9
comp=Z,112nm,18.1s,MS4.0,baz=20,slow=39
MKAR Makanchi Array 60.10 309 P **P 14 58 12.9 -1.6**
MKAR 14 58 59.0
MKAR Makanchi Array 60.10 309 P **P 14 58 12.9 -1.5**
MKAR PcP PcP 14 58 59.0 -0.9
MKAR LR LR 15 27 08.9
FVM French Village 60.42 65 P **P 14 58 15.4 -1.4**
FVM pmax pmax
comp=Z,19nm,0.7s,mb5.2
FVM French Village 60.42 65 *e*P **P 14 58 15.2 -1.6**
comp=Z,19nm,0.7s,mb5.2
GYA Guiyang 60.44 276⇑*i*P **P 14 58 17.9 +0.8**
GYA AP pP 14 58 29.6 +1.8
GYA XP sP 14 58 33.8 +1.8
GYA PCP PcP 14 59 03.3 +1.6
GYA PP PP 15 00 34.5 +4.2
GYA SCP ScP 15 03 01.4 +1.5
GYA S **S 15 06 29.6 -0.1**
GYA XS sS 15 06 46.4 -1.0
GYA SS SS 15 10 28.5 +1.0
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,140nm,5.9s
GYA LR LR
comp=N,640nm,18.8s,MS4.9
GYA LR LR
comp=E,580nm,19.0s,MS4.9
GYA LR LR
comp=Z,610nm,20.2s,MS4.7
BRVK Borovoye 60.95 320 *e*P **P 14 58 19.7 -0.4**
BRVK pmax pmax
comp=Z,8.0nm,0.4s,mb5.2
BRVK Borovoye 60.95 320 *e*P **P 14 58 19.7 -0.5**
comp=Z,7.9nm,0.4s,mb5.2
OLIL Olney 61.21 63 *e*P **P 14 58 21.6 -0.6**
comp=Z,93nm,0.7s,mb6.0
PARMO Parma 61.73 66 *e*P **P 14 58 25.2 -0.5**
BLO Bloomington 61.78 62 P **P 14 58 25.5 -0.5**
BLO pmax pmax
comp=Z,43nm,0.7s,mb5.7
BLO Bloomington 61.78 62 *e*P **P 14 58 24.9 -1.1**
comp=Z,43nm,0.6s,mb5.8
USIN University of 61.99 64 *e*P **P 14 58 26.9 -0.5**
comp=Z,128nm,0.6s,mb6.2
WCI Wyandotte Cave 62.57 62 P **P 14 58 30.5 -0.8**
WCI pmax pmax
comp=Z,58nm,0.9s,mb5.7
WCI Wyandotte Cave 62.57 62 *e*P **P 14 58 30.2 -1.1**
comp=Z,58nm,0.8s,mb5.8
ARU Arti 62.62 328*c i*P **P 14 58 30.8 -0.6**
ARU *e* 14 59 07.1
ARU *e* 15 00 45.8
ARU *e*S **S 15 06 59.3 +2.7**
ARU *e*SS SS 15 11 09.6 +9.3
ARU pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
ARU Arti 62.62 328 *e*P **P 14 58 30.8 -0.5**
comp=Z,8.0nm,0.7s,mb5.0
WVT Waverly 63.20 65 P **P 14 58 34.7 -0.8**
WVT pmax pmax
comp=Z,22nm,0.8s,mb5.3
WVT Waverly 63.20 65 *e*P **P 14 58 34.3 -1.2**
comp=Z,22nm,0.8s,mb5.3
OXF Oxford 63.44 67 P **P 14 58 36.4 -0.8**
OXF pmax pmax
comp=Z,69nm,0.7s,mb5.9
OXF Oxford 63.44 67 *e*P **P 14 58 36.2 -0.9**
comp=Z,69nm,0.7s,mb5.9
JOF Joensuu 63.58 345 *e*p **P 14 58 36.2 -1.4**
comp=Z,10.0nm,0.5s,mb5.1
KMI Kunming 63.84 278 P **P 14 58 39.6 -0.3**
KMI AP pP 14 58 51.9 +1.2
KMI S **S 15 07 12.3 -0.3**
KMI SS SS 15 11 19.5 -1.2
KMI SSS 15 14 10.9
KMI AMB AMB
comp=Z,24nm,1.0s,mb5.2
KMI LR LR
comp=Z,91nm,27.8s,MS3.8
KMI Kunming 63.84 278 P **P 14 58 39.6 -0.3**
comp=Z,24nm,1.0s,mb5.2
KMI pP pP 14 58 51.9 +1.2
KMI S **S 15 07 12.3 -0.3**
KMI SS SS 15 11 19.5 -1.2
KMI SSS 15 14 10.9
KMI LR LR
comp=Z,90nm,27.8s,MS3.8
KLMR Klimovskoe 63.97 340 *e*P **P 14 58 39.2 -1.0**
KLMR pmax pmax
comp=Z,12nm,1.0s,mb4.9
VBMS Vicksburg 64.44 70 *e*P **P 14 58 43.4 -0.3**
comp=Z,38nm,0.9s,mb5.4
KAF Kangasniemi 65.09 347 *e*p **P 14 58 45.7 -1.8**
comp=Z,11nm,0.5s,mb5.1,baz=12,slow=5.8
KAF Kangasniemi 65.09 347 *e*P **P 14 58 45.7 -1.8**
KAF pmax pmax
comp=Z,11nm,0.5s,mb5.1
TZTN Tazewell 65.30 62 *e*P **P 14 58 48.3 -1.0**
comp=Z,18nm,0.9s,mb5.1
SSPA Standing Stone 65.34 55 *e*P **P 14 58 48.4 -1.0**
comp=Z,4.9nm,0.6s,mb4.7
TKL Tuckaleechee C 65.82 63 P **P 14 58 52.1 -0.5**
TKL Tuckaleechee C 65.82 63 *e*P **P 14 58 52.0 -0.7**
LRAL Lakeview Retre 65.90 67 *e*P **P 14 58 51.8 -1.4**
comp=Z,14nm,0.6s,mb5.2
TKM2 Tokmak 2 66.18 309 P **P 14 58 56.1 +1.3**
TKM2 pmax pmax
comp=Z,11nm,1.0s,mb4.8
TKM2 Tokmak 2 66.18 309 P **P 14 58 56.9 +2.0**
SNR=11
TKM2 Tokmak 2 66.18 309 *e*P **P 14 58 55.7 +0.8**
comp=Z,10nm,0.9s,mb4.9
USP Osenovka 66.44 310 P **P 14 58 58.7 +2.2**
SNR=15
BLA Blacksburg 66.52 59 P **P 14 58 56.6 -0.5**
BLA pmax pmax
comp=Z,37nm,0.6s,mb5.6
BLA Blacksburg 66.52 59 P **P 14 58 56.6 -0.5**
comp=Z,37nm,0.6s,mb5.6
KBK Karagaybulak 66.69 310 P **P 14 58 59.0 +0.9**
SNR=8.1
AAK Ala-Archa 66.93 310 P **P 14 59 02.2 +2.6**
SNR=10
KZA Kyzart 66.98 309 P **P 14 59 03.2 +3.2**
SNR=5.2
UCH Uchtor 67.23 310 P **P 14 59 04.1 +2.6**
SNR=7.0
UCH Uchtor 67.23 310 *e*P **P 14 59 04.1 +2.6**
comp=Z,4.8nm,1.0s,mb4.5
UCH LR LR
comp=Z,134nm,19.0s,MS4.2
EKS2 Erkin-Say 67.25 310 P **P 14 59 01.9 +0.2**
SNR=23
EKS2 Erkin-Say 67.25 310 *e*P **P 14 59 01.5 -0.2**
comp=Z,13nm,0.6s,mb5.1
LSA Lhasa 67.54 290 P **P 14 59 05.6 +1.9**
LSA AMB AMB
comp=Z,20nm,0.9s,mb5.2
LSA Lhasa 67.54 290 *e*P **P 14 59 05.8 +2.1**
LSA pmax pmax
comp=Z,48nm,0.6s,mb5.7
LSA Lhasa 67.54 290 *e*P **P 14 59 05.8 +2.1**
comp=Z,48nm,0.6s,mb5.7
NB2 NORSAR Subarra 67.61 355 P **P 14 59 02.6 -1.0**
comp=Z,2.0nm,0.5s,mb4.4,baz=4.8,slow=6.2
NOA NORSAR Array B 67.61 355 P **P 14 59 03.2 -0.4**
comp=Z,2.5nm,0.5s,mb4.5,baz=3.2,slow=6.0,SNR=9.0
NOA LR LR 15 27 30.3
comp=Z,97nm,18.7s,MS4.0,baz=0.0,slow=35
GOGA Godfrey 67.64 64 P **P 14 59 03.3 -1.0**
GOGA pmax pmax
comp=Z,52nm,0.9s,mb5.6
GOGA Godfrey 67.64 64 *e*P **P 14 59 03.0 -1.3**
comp=Z,52nm,0.9s,mb5.6
AML Almayashu 67.69 310 *e*P **P 14 59 07.4 +2.9**
comp=Z,6.2nm,0.4s,mb5.0
LHS Liberty Hill 68.33 62 *e*P **P 14 59 04.8 -3.8**
COW Cow Castle Cre 69.21 62 *e*P **P 14 59 14.1 0.0**
NHSC New Hope 69.70 62 *e*P **P 14 59 17.0 -0.1**
comp=Z,105nm,0.9s,mb5.8
OBN Obninsk 69.96 339*c i*P **P 14 59 16.8 -1.0**
OBN pmax pmax
comp=Z,45nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.4
CHTO Chiang Mai 70.86 276 P **P 14 59 24.2 -0.2**
CHTO pmax pmax
comp=Z,13nm,1.1s,mb4.8
CHTO Chiang Mai 70.86 276 *e*P **P 14 59 23.9 -0.5**
comp=Z,13nm,1.1s,mb4.8
CMAR Chiang Mai Arr 71.13 276 P **P 14 59 26.1 0.0**
comp=Z,9.2nm,0.8s,mb4.8,baz=26,slow=6.3,SNR=72
CMAR LR LR 15 34 23.1
comp=Z,125nm,19.6s,MS4.2,baz=169,slow=39
CMAR Chiang Mai Arr 71.13 276⇑*e*P **P 14 59 26.1 +0.1**
PMOR Pomariorio Ree 71.36 149 *e*T 16 17 14.6
comp=Z,55nm,0.3s
ODAN Odare 71.86 290 *e*P **P 14 59 31.5 +1.2**
comp=Z,142nm,0.9s,mb5.9
GUN Gumba 71.95 292 *e*P **P 14 59 32.6 +1.7**
comp=Z,825nm,0.4s
JIRN Jiri 71.96 292 *e*P **P 14 59 32.5 +1.6**
comp=Z,602nm,0.6s
RAMN Ramite 72.25 291 *e*P **P 14 59 33.9 +1.2**
comp=Z,493nm,0.6s
KKN Kakani 72.39 292 *e*P **P 14 59 34.8 +1.3**
comp=Z,361nm,0.6s
PKIN Phulchoki 72.48 292 *e*P **P 14 59 35.2 +1.1**
comp=Z,214nm,0.6s
GKN Gorkha 72.60 293 *e*P **P 14 59 35.8 +1.0**
comp=Z,355nm,0.7s
DMN Daman 72.63 292 *e*P **P 14 59 36.2 +1.3**
comp=Z,156nm,0.6s,mb6.1
DANN Dangsing 72.84 294 *e*P **P 14 59 37.6 +1.4**
comp=Z,378nm,0.8s
PPT Papeete 73.25 151 *e*LR LR 15 21 53.1
comp=Z,220nm,26.0s
PPT Papeete 73.25 151 *e*T 16 19 37.7
comp=Z,17nm,0.2s
PPT Papeete 73.25 151 LR LR 15 25 35.1
comp=Z,78nm,19.9s,MS4.0,baz=326,slow=31
TIAR Tiarei 73.31 151 *e*T 16 19 41.7
comp=Z,97nm,0.3s
PAE Paea 73.33 151 *e*T 16 19 44.1
comp=Z,72nm,0.3s
KOLN Koldanda 73.37 294 *e*P **P 14 59 40.4 +1.1**
comp=Z,133nm,0.8s,mb5.9
TVO Taravao 73.55 151 *e*T 16 20 00.0
comp=Z,20nm,0.3s
RAR Rarotonga 74.20 162 LR LR 15 24 10.4
comp=Z,298nm,20.1s,MS4.5,baz=298,slow=29
DDI Dehra Dun 74.53 299 *ex* **P 14 59 46.2 +0.2**
AKASG Malin Array Be 75.54 342 P **P 14 59 50.6 -0.9**
comp=Z,6.0nm,0.5s,mb4.8,baz=22,slow=6.2,SNR=23
AKASG LR LR 15 38 32.2
comp=Z,110nm,18.1s,MS4.2,baz=345,slow=40
AKBB Malin Array Si 75.54 342 P **P 14 59 50.8 -0.7**
AKBB Malin Array Si 75.54 342 *e*P **P 14 59 50.6 -1.0**
KIEV Kiev 75.55 342 P **P 14 59 50.6 -1.0**
KIEV pmax pmax
comp=Z,11nm,0.6s,mb5.0
KIEV Kiev 75.55 342 *e*P **P 14 59 50.2 -1.4**
comp=Z,11nm,0.6s,mb5.0
KBL Kabul 75.90 308 *e*P **P 14 59 53.0 -0.9**
KBL pmax pmax
comp=Z,11nm,0.8s,mb4.8
KBL Kabul 75.90 308 *e*P **P 14 59 53.0 -0.9**
comp=Z,12nm,0.8s,mb4.9
NRDL Niedersach Rie 76.19 355 *e*P **P 14 59 55.9 +0.7**
comp=Z,10.0nm,1.0s,mb4.7
IBBN Ibbenburen 76.50 356 *e*P **P 14 59 57.6 +0.6**
comp=Z,28nm,0.8s,mb5.2
CLZ Clausthal 76.82 354 *e*P **P 14 59 58.7 -0.1**
CLZ pmax pmax
comp=Z,23nm,0.8s,mb5.2
CLZ Clausthal 76.82 354 *e*P **P 14 59 58.7 -0.1**
comp=Z,23nm,0.8s,mb5.2
KSM Kuching 77.13 256 *e*P **P 15 00 00.4 -0.7**
CLL Collm 77.17 353 *e*P **P 15 00 01.0 +0.3**
BUG Bochum--Univer 77.39 356 *e*P **P 15 00 01.8 -0.2**
comp=Z,18nm,0.6s,mb5.2
BRG Berggieshubel 77.52 352 *e*P **P 15 00 01.6 -1.1**
CTA Charters Tower 77.59 214 *e*P **P 15 00 02.6 -0.8**
UPC Upice 77.68 351 *e*P **P 15 00 03.8 +0.2**
KWP Kalwaria 77.69 346 P **P 14 59 55.5 -8.2**
KWP pmax pmax
comp=Z,63nm,0.5s,mb5.8
DPC Dobruska-Polom 77.81 350 *e*P **P 15 00 04.6 +0.3**
UBBA Unterbreizbach 77.87 354 *e*P **P 15 00 05.5 +0.8**
comp=Z,24nm,1.7s,mb4.8
MOX Moxa 77.93 353 *e*P **P 15 00 04.7 -0.3**
comp=Z,34nm,1.6s,mb5.0
MOX Moxa 77.93 353 *e*P **P 15 00 04.7 -0.3**
MOX pmax pmax
comp=Z,34nm,1.6s,mb5.0
MOX Moxa 77.93 353 *e*P **P 15 00 05.2 +0.2**
comp=Z,13nm,1.1s,mb4.8
HGN Heimansgroeve 78.11 357 *e*P **P 15 00 06.6 +0.6**
comp=Z,22nm,0.9s,mb5.1
STHS Stebnicka Huta 78.11 347 *e*P **P 15 00 07.1 +1.0**
STHS pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
STHS Stebnicka Huta 78.11 347 *e*P **P 15 00 07.1 +1.0**
comp=Z,7.1nm,0.7s,mb4.7
MEM Membach 78.26 357 P **P 15 00 07.7 +0.8**
comp=Z,8.5nm,1.2s,mb4.5
NKC Novy Kostel 78.28 353 *e*P **P 15 00 07.1 +0.1**
PRU Pruhonice 78.34 351 *e*P **P 15 00 07.3 0.0**
KOLS Kolonicke sedl 78.44 346 *e*P **P 15 00 08.4 +0.6**
BCLA Clavier 78.47 357 P **P 15 00 08.3 +0.3**
KIV Kislovodsk 78.48 331 *e*P **P 15 00 08.3 +0.1**
KIV pmax pmax
comp=Z,17nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,153nm,20.0s,MS4.3
TNS Taunus Mts 78.55 355 *e*P **P 15 00 08.7 +0.3**
TNS pmax pmax
comp=Z,15nm,0.7s,mb5.0
TNS Taunus Mts 78.55 355 *e*P **P 15 00 08.7 +0.3**
comp=Z,15nm,0.7s,mb5.0
MANZ Manzenberg 78.55 353 *e*P **P 15 00 08.6 +0.1**
comp=Z,33nm,2.3s,mb4.9
CRVS Cervenica-Dubn 78.58 347 *e*P **P 15 00 09.1 +0.4**

TBI	**Tubuai**	**78.74**	**153**	*e*LR		LR	15 24 15.1	
	comp=Z,208nm,23.0s							
TBI	**Tubuai**	**78.74**	**153**	*e*T			16 26 30.4	
	comp=Z,7.8nm,0.3s							
GIVF	**Givet**	**78.80**	**358**	*e*P		**P**	**15 00 08.8**	**-1.0**
VRAC	**Vranov**	**78.81**	**350**⇓	*i*P		**P**	**15 00 10.0**	**+0.1**
VRAC	**Vranov**	**78.81**	**350**	⇓P		**P**	**15 00 10.0**	**+0.2**
DOU	**Dourbes**	**78.81**	**358**	P		**P**	**15 00 10.2**	**+0.3**
BAIF	**Baives**	**78.86**	**358**	*e*P		**P**	**15 00 09.7**	**-0.5**
	comp=Z,34nm,0.9s,mb5.0							
BAIF	**Baives**	**78.86**	**358**	*e*P		**P**	**15 00 09.7**	**-0.5**
BAIF					pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0							
BAIF	**Baives**	**78.86**	**358**	*e*P		**P**	**15 00 09.7**	**-0.5**
	comp=Z,17nm,0.9s,mb5.0							
GRA1	**Grafenberg Arr**	**78.91**	**354**	*e*P		**P**	**15 00 10.9**	**+0.5**
	comp=Z,25nm,1.2s,mb5.0							
GRF	**Grafenberg Arr**	**78.91**	**354**	*e*P		**P**	**15 00 10.9**	**+0.5**
GRF					pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0							
GRF	**Grafenberg Arr**	**78.91**	**354**	*e*P		**P**	**15 00 10.9**	**+0.5**
GRF					pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0							
GRF	**Grafenberg Arr**	**78.91**	**354**	*e*P		**P**	**15 00 10.9**	**+0.5**
	comp=Z,25nm,1.2s,mb5.0							
BATI	**Baumata**	**78.95**	**238**	P		**P**	**15 00 10.2**	**-0.8**
	comp=Z,34nm,0.7s,mb5.4,baz=303,slow=1.5,SNR=9.4							
RUP	**Ruppelstein**	**79.13**	**356**	*e*P		**P**	**15 00 11.6**	**-0.1**
TOD	**Tromm**	**79.14**	**355**	*e*P		**P**	**15 00 11.5**	**-0.2**
KIS	**Kishinev**	**79.16**	**341**	*e*P		**P**	**15 00 11.0**	**-0.8**
KIS	**Kishinev**	**79.16**	**341**	*e*UNK		**P**	**15 00 11.0**	**-0.8**
KIS				eL			15 37 00.0	
BUR08	**Bucovina Ar. S**	**79.21**	**344**	*e*P		**P**	**15 00 12.1**	**0.0**
BURAR	**Bucovina Array**	**79.24**	**344**⇓	*i*P		**P**	**15 00 12.3**	**0.0**
BURAR	**Bucovina Array**	**79.24**	**344**	⇓P		**P**	**15 00 12.3**	**+0.1**
KHC	**Kasperske Hory**	**79.28**	**352**	*e*P		**P**	**15 00 12.8**	**+0.3**
KHC				*e*PCP		PcP	15 00 17.5	-3.1
WET	**Wettzell**	**79.33**	**352**	*e*P		**P**	**15 00 13.2**	**+0.5**
WET					pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6							
WET	**Wettzell**	**79.33**	**352**	*e*P		**P**	**15 00 13.2**	**+0.5**
	comp=Z,6.0nm,0.7s,mb4.6							
VYHS	**Vyhne**	**79.34**	**348**	*e*P		**P**	**15 00 12.7**	**-0.1**
GEC2	**GERESS Array S**	**79.55**	**352**	*e*P		**P**	**15 00 13.7**	**-0.3**
GEC2					pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6							
GEC2	**GERESS Array S**	**79.55**	**352**	*e*P		**P**	**15 00 13.7**	**-0.3**
	comp=Z,6.0nm,0.7s,mb4.6							
GERES	**GERESS Array B**	**79.55**	**352**	P		**P**	**15 00 13.6**	**-0.4**
	comp=Z,3.9nm,0.6s,mb4.5,baz=29,slow=5.3,SNR=30							
GERES					LR	LR	15 40 23.9	
	comp=Z,109nm,18.3s,MS4.2,baz=185,slow=39							
MODS	**Modra-Piesok**	**79.65**	**349**	*e*P		**P**	**15 00 15.5**	**+1.0**
MODS					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4							
MODS	**Modra-Piesok**	**79.65**	**349**	*e*P		**P**	**15 00 15.5**	**+1.0**
	comp=Z,4.3nm,0.8s,mb4.4							
PSZ	**Piszkesteto**	**79.77**	**347**⇑	*i*P		**P**	**15 00 16.3**	**+1.2**
PSZ	**Piszkesteto**	**79.77**	**347**	⇑P		**P**	**15 00 16.3**	**+1.2**
FLN	**La Foliniere**	**80.17**	**1**	*e*P		**P**	**15 00 16.4**	**-0.9**
	comp=Z,30nm,0.7s,mb5.0							
FLN				*e*MLR		MLR		
	comp=Z,131nm,19.8s,MS4.0							
FLN	**La Foliniere**	**80.17**	**1**	*e*P		**P**	**15 00 16.4**	**-0.9**
FLN					pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0							
FLN					MLR	MLR		
	comp=Z,130nm,19.8s,MS4.3							
FLN	**La Foliniere**	**80.17**	**1**	*e*P		**P**	**15 00 16.4**	**-0.9**
	comp=Z,15nm,0.7s,mb5.0							
FLN					LR	LR		
	comp=Z,130nm,19.8s,MS4.3							
CONA	**Conrad Observa**	**80.25**	**350**⇓	*i*P		**P**	**15 00 17.7**	**0.0**
	comp=Z,6.5nm,0.7s,mb4.7							
LDF	**La Druitiere**	**80.35**	**1**	*e*P		**P**	**15 00 16.8**	**-1.5**
	comp=Z,19nm,0.5s,mb5.0							
LDF	**La Druitiere**	**80.35**	**1**	*e*P		**P**	**15 00 16.8**	**-1.5**
LDF					pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0							
LDF	**La Druitiere**	**80.35**	**1**	*e*P		**P**	**15 00 16.8**	**-1.5**
	comp=Z,9.4nm,0.5s,mb5.0							
MEZF	**Maizieres J'vi**	**80.40**	**358**	*e*P		**P**	**15 00 18.1**	**-0.4**
CDF	**Champ du Feu**	**80.41**	**356**	*e*P		**P**	**15 00 17.9**	**-0.7**
	comp=Z,8.9nm,0.7s,mb4.5							
CDF	**Champ du Feu**	**80.41**	**356**	*e*P		**P**	**15 00 17.9**	**-0.7**
CDF					pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5							
CDF	**Champ du Feu**	**80.41**	**356**	*e*P		**P**	**15 00 17.9**	**-0.7**
	comp=Z,4.4nm,0.7s,mb4.5							
DRGR		**80.45**	**345**⇑	*i*P		**P**	**15 00 19.7**	**+0.8**
DRGR		**80.45**	**345**	⇑P		**P**	**15 00 19.7**	**+0.8**
ROSF	**Rostrenen**	**80.53**	**3**	*e*P		**P**	**15 00 18.5**	**-0.8**
GRR	**Gorron**	**80.54**	**2**	*e*P		**P**	**15 00 18.3**	**-1.0**
	comp=Z,28nm,0.7s,mb5.0							
GRR	**Gorron**	**80.54**	**2**	*e*P		**P**	**15 00 18.3**	**-1.0**
GRR					pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0							
GRR	**Gorron**	**80.54**	**2**	*e*P		**P**	**15 00 18.3**	**-1.0**
	comp=Z,14nm,0.7s,mb5.0							
ECH	**Echery**	**80.61**	**356**	*e*P		**P**	**15 00 19.7**	**0.0**
THEF	**They Montfort**	**80.64**	**357**	*e*P		**P**	**15 00 19.7**	**-0.2**
VRI	**Vrincioaia**	**80.65**	**342**⇑	*i*P		**P**	**15 00 20.4**	**+0.5**
VRI	**Vrincioaia**	**80.65**	**342**	⇑P		**P**	**15 00 20.4**	**+0.5**
RJOB	**Jochberg**	**80.73**	**352**	*e*P		**P**	**15 00 20.8**	**+0.5**
	comp=Z,6.0nm,0.9s,mb4.5							
HAU	**Haudompre**	**80.85**	**357**	*e*P		**P**	**15 00 20.3**	**-0.7**
	comp=Z,15nm,0.6s,mb4.8							
HAU	**Haudompre**	**80.85**	**357**	*e*P		**P**	**15 00 20.3**	**-0.7**
HAU					pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8							
HAU	**Haudompre**	**80.85**	**357**	*e*P		**P**	**15 00 20.3**	**-0.7**
	comp=Z,7.5nm,0.6s,mb4.8							
TLCR		**80.89**	**341**⇑	*i*P		**P**	**15 00 21.4**	**+0.2**
TLCR		**80.89**	**341**	⇑P		**P**	**15 00 21.4**	**+0.1**
FELD	**Feldberg im Sc**	**80.91**	**356**	*e*P		**P**	**15 00 20.0**	**-1.3**
HINF	**Hinteralfeld**	**81.02**	**356**	*e*P		**P**	**15 00 20.9**	**-1.0**
MLR	**Muntele Rosu**	**81.16**	**343**⇓	*i*P		**P**	**15 00 24.1**	**+1.4**
MLR	**Muntele Rosu**	**81.16**	**343**	⇓P		**P**	**15 00 24.1**	**+1.4**
WATA	**Walderalm**	**81.23**	**353**⇑	*i*P		**P**	**15 00 23.9**	**+0.9**
	comp=Z,7.3nm,0.6s,mb4.8							
MOTA	**Moosalm**	**81.25**	**353**⇑	*i*P		**P**	**15 00 23.8**	**+0.6**
	comp=Z,30nm,1.5s,mb5.0							
GNI	**Garni**	**81.27**	**328**⇑	*e*P		**P**	**15 00 24.2**	**+0.9**
GNI					pmax	pmax		
	comp=Z,24nm,1.5s							
WTTA	**Wattenberg**	**81.29**	**353**⇑	*i*P		**P**	**15 00 24.1**	**+0.8**
	comp=Z,16nm,0.6s,mb5.1							
KBA	**Koelnbreinsper**	**81.33**	**352**⇑	*i*P		**P**	**15 00 24.2**	**+0.7**
	comp=Z,28nm,0.5s,mb5.4							
VOIR		**81.37**	**343**⇑	*i*P		**P**	**15 00 24.6**	**+0.8**
VOIR		**81.37**	**343**⇑	⇑P		**P**	**15 00 24.6**	**+0.8**
HARR	**Harsova**	**81.55**	**341**⇓	*i*P		**P**	**15 00 25.0**	**+0.3**
HARR	**Harsova**	**81.55**	**341**	⇓P		**P**	**15 00 25.0**	**+0.3**
SOKA	**Soboth**	**81.57**	**351**⇑	*i*P		**P**	**15 00 24.9**	**+0.1**
FETA	**Feichten**	**81.60**	**354**⇑	*i*P		**P**	**15 00 24.9**	**-0.1**
	comp=Z,18nm,1.2s,mb4.9							
PERS	**Pernice**	**81.60**	**350**	*i* P		**P**	**15 00 25.6**	**+0.6**
PKSM	**Moragy**	**81.61**	**348**⇑	*i*P		**P**	**15 00 26.2**	**+1.2**
PKSM	**Moragy**	**81.61**	**348**	⇑P		**P**	**15 00 26.2**	**+1.2**
LOR	**Lormes**	**81.66**	**358**	*e*P		**P**	**15 00 24.3**	**-1.0**
LOR				*e*MLR		MLR		
	comp=Z,108nm,20.0s,MS3.9							
LOR	**Lormes**	**81.66**	**358**	*e*P		**P**	**15 00 24.3**	**-1.0**
LOR					LR	LR		
	comp=Z,110nm,20.0s,MS4.2							
TIRR	**Tirgusor**	**81.67**	**341**⇑	*i*P		**P**	**15 00 25.1**	**-0.3**
TIRR	**Tirgusor**	**81.67**	**341**	⇑P		**P**	**15 00 25.1**	**-0.2**
ABTA	**Abfaltersbach**	**81.74**	**352**⇑	*i*P		**P**	**15 00 24.1**	**-1.6**
	comp=Z,13nm,1.1s,mb4.8							
MYKA	**Terra Mystica**	**81.75**	**352**⇑	*i*P		**P**	**15 00 25.5**	**-0.3**
	comp=Z,5.5nm,0.6s,mb4.7							
BZS	**Buzias**	**81.77**	**346**⇑	*i*P		**P**	**15 00 25.5**	**-0.4**
BZS	**Buzias**	**81.77**	**346**	⇑P		**P**	**15 00 25.5**	**-0.4**
OBKA	**Obir**	**81.78**	**351**⇑	*i*P		**P**	**15 00 25.6**	**-0.3**
	comp=Z,111nm,0.9s,mb4.8							
GZR	**Gura Zlata**	**81.80**	**345**⇓	*i*P		**P**	**15 00 26.3**	**+0.2**
GZR	**Gura Zlata**	**81.80**	**345**	⇓P		**P**	**15 00 26.3**	**+0.2**
SSF	**Saint Saulge**	**81.87**	**359**	*e*P		**P**	**15 00 25.7**	**-0.7**
	comp=Z,22nm,1.0s,mb4.8							
SSF	**Saint Saulge**	**81.87**	**359**	*e*P		**P**	**15 00 25.7**	**-0.7**
SSF					pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7							
SSF	**Saint Saulge**	**81.87**	**359**	*e*P		**P**	**15 00 25.7**	**-0.7**
	comp=Z,11nm,1.0s,mb4.8							
WB2	**Warramunga Arr**	**82.13**	**224**	*e*P		**P**	**15 00 26.5**	**-1.5**
WB2				*e*			15 00 47.8	
WB2				*e*			15 01 05.5	
WRA	**Warramunga Arr**	**82.14**	**224**	P		**P**	**15 00 26.6**	**-1.4**
	comp=Z,3.8nm,0.6s,mb4.5,baz=31,slow=5.8,SNR=73							
WRA					PKiKP	PKiKP	15 05 48.5	-1.5
	comp=Z,0.4nm,0.8s,baz=327,slow=1.6,SNR=5.7							
AVF	**Avril sur Loir**	**82.14**	**359**	*e*P		**P**	**15 00 27.0**	**-0.8**
	comp=Z,29nm,0.9s,mb4.9							
AVF	**Avril sur Loir**	**82.14**	**359**	*e*P		**P**	**15 00 27.0**	**-0.8**
AVF					pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9							
AVF	**Avril sur Loir**	**82.14**	**359**	*e*P		**P**	**15 00 27.0**	**-0.8**
	comp=Z,14nm,0.9s,mb4.9							
TUE	**Stuetta**	**82.24**	**354**	*e*P		**P**	**15 00 28.9**	**+0.5**
	comp=Z,7.0nm,0.6s,mb4.8							
CABF	**La Chapelle**	**82.26**	**357**	*e*P		**P**	**15 00 28.0**	**-0.4**
	comp=Z,31nm,1.0s,mb4.9							
CABF	**La Chapelle**	**82.26**	**357**	*e*P		**P**	**15 00 28.0**	**-0.4**
CABF					pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9							
CABF	**La Chapelle**	**82.26**	**357**	*e*P		**P**	**15 00 28.0**	**-0.4**
	comp=Z,16nm,1.0s,mb4.9							
SMF	**Signal de Mont**	**82.28**	**358**	*e*P		**P**	**15 00 27.8**	**-0.8**
	comp=Z,45nm,0.9s,mb5.1							
SMF	**Signal de Mont**	**82.28**	**358**	*e*P		**P**	**15 00 27.8**	**-0.8**
SMF					pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1							
SMF	**Signal de Mont**	**82.28**	**358**	*e*P		**P**	**15 00 27.8**	**-0.8**
	comp=Z,23nm,0.9s,mb5.1							
MFF	**Saint Martin d**	**82.34**	**1**	*e*P		**P**	**15 00 28.3**	**-0.6**
	comp=Z,33nm,0.8s,mb5.0							
MFF	**Saint Martin d**	**82.34**	**1**	*e*P		**P**	**15 00 28.3**	**-0.6**
MFF					pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0							
MFF	**Saint Martin d**	**82.34**	**1**	*e*P		**P**	**15 00 28.3**	**-0.6**
	comp=Z,17nm,0.8s,mb5.0							
JAVS	**Javornik**	**82.44**	**351**	*i* P		**P**	**15 00 28.9**	**-0.5**
VISS	**Visnje**	**82.45**	**351**	*e*P		**P**	**15 00 29.1**	**-0.3**
TCF	**Toulx Ste Croi**	**82.66**	**359**	*e*P		**P**	**15 00 29.8**	**-0.7**
BOJS	**Bojanci**	**82.71**	**350**	*i* P		**P**	**15 00 30.5**	**-0.3**
AGO	**Saint Agoulin**	**82.89**	**359**	*e*P		**P**	**15 00 32.1**	**+0.4**
PLDF	**La Plantade**	**82.96**	**358**	*e*P		**P**	**15 00 32.6**	**+0.5**
PYM	**Petit Puy Mans**	**83.19**	**359**	*e*P		**P**	**15 00 32.2**	**-1.1**
RKT	**Rikitea**	**83.53**	**140**	*e*LR		LR	15 26 38.4	
	comp=Z,256nm,27.2s							
RKT	**Rikitea**	**83.53**	**140**	*e*T			16 32 18.9	
	comp=Z,6.5nm,0.2s							
RJF	**Les Rejaudoux**	**83.65**	**360**	*e*P		**P**	**15 00 34.8**	**-0.8**
RJF				*e*MLR		MLR		
	comp=Z,174nm,17.2s,MS4.2							
RJF	**Les Rejaudoux**	**83.65**	**360**	*e*P		**P**	**15 00 34.8**	**-0.8**
RJF					LR	LR		
	comp=Z,170nm,17.3s,MS4.5							
LBL	**Lubilhac**	**83.70**	**359**	*e*P		**P**	**15 00 37.3**	**+1.3**
BNI	**Bardonecchia**	**83.79**	**356**	*e*P		**P**	**15 00 37.7**	**+1.3**
BNI					pmax	pmax		
	comp=Z,23nm,1.1s,mb5.2							
BNI	**Bardonecchia**	**83.79**	**356**	*e*P		**P**	**15 00 37.7**	**+1.3**
	comp=Z,23nm,1.1s,mb5.2							
ORIF	**Oris-en-Rattie**	**83.95**	**357**	*e*P		**P**	**15 00 37.2**	**0.0**
	comp=Z,14nm,0.6s,mb4.9							
ORIF				*e*MLR		MLR		
	comp=Z,132nm,17.8s,MS4.1							
ORIF	**Oris-en-Rattie**	**83.95**	**357**	*e*P		**P**	**15 00 37.2**	**0.0**
ORIF					pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0							
ORIF	**Oris-en-Rattie**	**83.95**	**357**	*e*P		**P**	**15 00 37.2**	**0.0**
	comp=Z,6.8nm,0.6s,mb5.0							
LFF	**La Frestale**	**84.01**	**0**	*e*P		**P**	**15 00 37.0**	**-0.5**
	comp=Z,72nm,0.8s,mb5.5							
LFF	**La Frestale**	**84.01**	**0**	*e*P		**P**	**15 00 37.0**	**-0.5**
LFF					pmax	pmax		
	comp=Z,36nm,0.8s,mb5.5							
LFF	**La Frestale**	**84.01**	**0**	*e*P		**P**	**15 00 37.0**	**-0.5**
	comp=Z,36nm,0.8s,mb5.5							
CAF	**Calviac**	**84.02**	**360**	*e*P		**P**	**15 00 37.2**	**-0.4**
	comp=Z,35nm,0.9s,mb5.2							
CAF	**Calviac**	**84.02**	**360**	*e*P		**P**	**15 00 37.2**	**-0.4**
CAF					pmax	pmax		
	comp=Z,18nm,0.9s,mb5.2							
CAF	**Calviac**	**84.02**	**360**	*e*P		**P**	**15 00 37.2**	**-0.4**
	comp=Z,18nm,0.9s,mb5.2							
VIVF	**Saint-Julien-l**	**84.05**	**358**	*e*P		**P**	**15 00 37.4**	**-0.3**
	comp=Z,21nm,0.9s,mb5.0							
VIVF	**Saint-Julien-l**	**84.05**	**358**	*e*P		**P**	**15 00 37.4**	**-0.3**
VIVF					pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0							
VIVF	**Saint-Julien-l**	**84.05**	**358**	*e*P		**P**	**15 00 37.4**	**-0.3**
	comp=Z,11nm,0.9s,mb5.0							
MBDF	**Montbardon**	**84.11**	**356**	*e*P		**P**	**15 00 38.2**	**+0.2**
	comp=Z,27nm,0.9s,mb5.1							
MBDF	**Montbardon**	**84.11**	**356**	*e*P		**P**	**15 00 38.2**	**+0.2**
MBDF					pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1							
MBDF	**Montbardon**	**84.11**	**356**	*e*P		**P**	**15 00 38.2**	**+0.2**
	comp=Z,14nm,0.9s,mb5.1							
HYB	**Hyderabad**	**84.31**	**291**	*i* P		**P**	**15 00 39.5**	**0.0**
HYB	**Hyderabad**	**84.31**	**291**	*e*P		**P**	**15 00 39.5**	**0.0**
FITZ	**Fitzroy Crossi**	**84.59**	**232**	*e*P		**P**	**15 00 40.3**	**-0.4**
FITZ				*e*			15 00 46.1	
FITZ				*e*			15 00 58.2	
TOUF	**Mont Tournerai**	**84.80**	**356**	*e*P		**P**	**15 00 41.7**	**+0.2**
AUTN	**L'Aution**	**84.81**	**356**	*e*P		**P**	**15 00 42.0**	**+0.4**
AUTN	**L'Aution**	**84.81**	**356**	*e*P		**P**	**15 00 42.1**	**+0.5**
SAOF	**Saorge**	**84.81**	**356**	*e*P		**P**	**15 00 41.2**	**-0.4**
LASF	**Ste Croix**	**84.85**	**358**	*e*P		**P**	**15 00 41.2**	**-0.6**
	comp=Z,17nm,1.0s,mb4.8							
SMRF	**Simiane la Rot**	**84.91**	**357**	*e*P		**P**	**15 00 42.2**	**+0.1**
	comp=Z,43nm,0.9s,mb5.3							
SMRF	**Simiane la Rot**	**84.91**	**357**	*e*P		**P**	**15 00 42.2**	**+0.1**
	comp=Z,43nm,0.9s,mb5.6							
LUCF	**Luceram**	**84.92**	**356**	*e*P		**P**	**15 00 41.7**	**-0.4**
MVIF	**Mont Vial**	**84.92**	**356**	*e*P		**P**	**15 00 42.0**	**-0.2**
MALT	**Malatya**	**84.94**	**332**	P		**P**	**15 00 43.8**	**+1.5**
MALT					pmax	pmax		
	comp=Z,22nm,1.1s,mb5.2							
MALT	**Malatya**	**84.94**	**332**⇑	*i*P		**P**	**15 00 43.6**	**+1.3**
MALT	**Malatya**	**84.94**	**332**	*e*P		**P**	**15 00 43.1**	**+0.8**
	comp=Z,22nm,1.1s,mb5.2							
SBF	**Sospel**	**84.94**	**356**	*e*P		**P**	**15 00 41.4**	**-0.9**
	comp=Z,89nm,0.9s,mb5.6							
SBF	**Sospel**	**84.94**	**356**	*e*P		**P**	**15 00 41.4**	**-0.9**
SBF					pmax	pmax		
	comp=Z,45nm,0.9s,mb5.6							
SBF	**Sospel**	**84.94**	**356**	*e*P		**P**	**15 00 41.4**	**-0.9**
	comp=Z,45nm,0.9s,mb5.6							
VILF	**Villemus**	**85.02**	**357**	*e*P		**P**	**15 00 43.3**	**+0.6**
ANTO	**Ankara**	**85.03**	**336**⇑	*i*P		**P**	**15 00 42.6**	**-0.2**
ANTO	**Ankara**	**85.03**	**336**	⇑P		**P**	**15 00 42.6**	**-0.2**
REVF	**Revere**	**85.07**	**356**	*e*P		**P**	**15 00 42.3**	**-0.6**
PRAF	**Pradon**	**85.09**	**357**	*e*P		**P**	**15 00 42.6**	**-0.4**
TAVF	**Tavernes**	**85.25**	**357**	*e*P		**P**	**15 00 43.5**	**-0.3**
TREF	**Trevaresse**	**85.26**	**357**	*e*P		**P**	**15 00 43.8**	**-0.1**
FRF	**La Foret Royal**	**85.28**	**356**	*e*P		**P**	**15 00 43.0**	**-0.9**
	comp=Z,30nm,0.9s,mb5.1							
FRF	**La Foret Royal**	**85.28**	**356**	*e*P		**P**	**15 00 43.0**	**-0.9**
FRF					pmax	pmax		
	comp=Z,15nm,0.9s,mb5.1							
FRF	**La Foret Royal**	**85.28**	**356**	*e*P		**P**	**15 00 43.0**	**-0.9**
	comp=Z,15nm,0.9s,mb5.1							
PUYF	**Puyloubier**	**85.34**	**357**	*e*P		**P**	**15 00 43.7**	**-0.6**
GELF	**Grande-Etoile**	**85.50**	**357**	*e*P		**P**	**15 00 43.8**	**-1.3**
LMR	**La Mourre**	**85.51**	**356**	*e*P		**P**	**15 00 44.4**	**-0.7**
	comp=Z,30nm,0.9s,mb5.2							
LMR	**La Mourre**	**85.51**	**356**	*e*P		**P**	**15 00 44.4**	**-0.7**
LMR					pmax	pmax		
	comp=Z,15nm,0.9s,mb5.2							
LMR	**La Mourre**	**85.51**	**356**	*e*P		**P**	**15 00 44.4**	**-0.7**
	comp=Z,15nm,0.9s,mb5.2							
BERF	**Bertagne**	**85.56**	**357**	*e*P		**P**	**15 00 43.1**	**-2.3**
MTLF	**Montolieu**	**85.61**	**359**	*e*P		**P**	**15 00 44.1**	**-1.5**
	comp=Z,11nm,0.7s,mb4.9							
MTLF	**Montolieu**	**85.61**	**359**	*e*P		**P**	**15 00 44.1**	**-1.5**
MTLF					pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.9							
MTLF	**Montolieu**	**85.61**	**359**	*e*P		**P**	**15 00 44.1**	**-1.5**
	comp=Z,5.6nm,0.7s,mb4.9							
ARMA	**Armidale**	**85.61**	**205**	*e*P		**P**	**15 00 46.0**	**+0.5**
ASAR	**Alice Springs**	**85.61**	**223**	P		**P**	**15 00 45.0**	**-0.6**
	comp=Z,7.0nm,0.6s,mb5.1,baz=23,slow=5.7,SNR=213							
ASAR					PKKPbc	PKKPbc	15 18 47.5	+0.2
	comp=Z,0.6nm,1.0s,baz=206,slow=2.2,SNR=5.3							
SJPF	**Ste Jean**	**85.81**	**2**	*e*P		**P**	**15 00 45.5**	**-1.1**
	comp=Z,12nm,0.8s,mb4.9							
SJPF	**Ste Jean**	**85.81**	**2**	*e*P		**P**	**15 00 45.5**	**-1.1**
SJPF					pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9							
SJPF	**Ste Jean**	**85.81**	**2**	*e*P		**P**	**15 00 45.5**	**-1.1**
	comp=Z,6.0nm,0.8s,mb4.9							
EPF	**Esparros**	**85.92**	**1**	*e*P		**P**	**15 00 45.9**	**-1.2**
ETSF	**Etsaut**	**86.04**	**1**	*e*P		**P**	**15 00 46.5**	**-1.2**
	comp=Z,18nm,0.9s,mb5.0							
ETSF	**Etsaut**	**86.04**	**1**	*e*P		**P**	**15 00 46.5**	**-1.2**
ETSF					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.0							
ETSF	**Etsaut**	**86.04**	**1**	*e*P		**P**	**15 00 46.5**	**-1.2**
	comp=Z,9.2nm,0.9s,mb5.0							
POO	**Poona**	**86.14**	**295**	*ex*		**P**	**15 00 47.0**	**-1.6**
PGF	**Pioggiola**	**86.17**	**354**	*e*P		**P**	**15 00 47.5**	**-0.9**
	comp=Z,51nm,0.8s,mb5.5							
PGF	**Pioggiola**	**86.17**	**354**	*e*P		**P**	**15 00 47.5**	**-0.9**
PGF					pmax	pmax		
	comp=Z,25nm,0.8s,mb5.5							
PGF	**Pioggiola**	**86.17**	**354**	*e*P		**P**	**15 00 47.5**	**-0.9**
	comp=Z,26nm,0.8s,mb5.5							
CORF	**Corte**	**86.41**	**354**	*e*P		**P**	**15 00 49.2**	**-0.4**
CUC	**Castrocucco**	**88.09**	**349**	*e*P		**P**	**15 00 56.2**	**-1.6**
	comp=Z,10nm,0.8s,mb5.1							
TIP	**Timpagrande**	**88.77**	**348**	*e*P		**P**	**15 00 59.8**	**-1.2**
	comp=Z,19nm,1.1s,mb5.3							
ESDC	**Sonseca Array**	**89.15**	**4**	P		**P**	**15 01 01.7**	**-1.1**
	comp=Z,5.7nm,0.7s,mb5.0,baz=358,slow=4.4,SNR=16							
SJG	**San Juan**	**89.22**	**62**	*e*P		**P**	**15 01 03.7**	**+0.3**
	comp=Z,43nm,0.6s,mb6.0							
MIB	**Mutribah**	**89.59**	**321**	*e*P		**P**	**15 01 03.4**	**-1.5**
	baz=321							
MIB					AMb	AMB	15 01 04.8	
	comp=Z,34nm,0.8s,mb5.7,baz=321							
RST	**Umm Al-Ruwaisa**	**89.99**	**321**	*e*P		**P**	**15 01 05.0**	**-1.8**
	baz=321							
RST					AMb	AMB	15 01 09.3	
	comp=Z,12nm,1.1s,mb5.1,baz=321							
STKA	**Stephens Creek**	**90.04**	**213**	*e*P		**P**	**15 01 06.6**	**-0.1**
STKA				*e*		pP	15 01 15.8	-2.1
STKA				*e*			15 01 23.1	
STKA	**Stephens Creek**	**90.04**	**213**	P		**P**	**15 01 06.7**	**0.0**
	comp=Z,9.5nm,0.6s,mb5.3,baz=1.8,slow=5.7,SNR

FDF	**Fort de France**	**1.18**	**342**	*e*P	Pn	15 04 55.8 +0.1
FDF				*e*S	Sn	15 05 11.8 +0.9
GRCU	**Cariacou**	**1.30**	**210**	*e*P	Pn	15 04 57.9 +0.5
GRCU				*e*S	Sn	15 05 14.8 +0.8
GRIC	**Isle de Caille**	**1.53**	**211**	*e*P	Pn	15 05 02.2 +1.7
GRIC				*e*S	Sn	15 05 21.5 +2.0
GRSS	**Sisters**	**1.53**	**212**	*e*P	Pn	15 05 02.2 +1.7
GRSS				*e*S	Sn	15 05 21.3 +1.7
GRW	**Mount Saint Ca**	**1.67**	**211**	*e*P	Pn	15 05 04.3 +1.8
GRW				*e*S	Sn	15 05 25.5 +2.4
GRGR	**Grenville**	**1.69**	**210**	*e*Pn	Pn	15 05 03.4 +0.7
TOSP	**Speyside**	**2.31**	**174**	*e*P	Pn	15 05 10.6 -0.6
TOSP				*e*S	Sn	15 05 22.6 -16

IDC 24 15:20:54.2±14.0, 3142S×17752W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, ML3.4/1, MS3.4/2, Ms1 3.4/2, ms1mx3.0/25, Error ellipse: s-maj=252.9km s-min=43.4km az=94.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.19**	**351**	LR	LR	15 21 59.4	
	comp=Z,656nm,19.9s,baz=190,slow=30						
URZ	**Urewera**	**8.12**	**211**	Pn	Pn	15 22 53.4	0.0
	0.5nm,0.3s,baz=111,slow=22,SNR=2.9						
URZ				Sn	Sn	15 24 26.0	+0.1
	1.5nm,0.3s,baz=238,slow=23,SNR=8.5						
CTA	**Charters Tower**	**34.38**	**280**	LR	LR	15 39 44.3	
	comp=Z,89nm,19.4s,baz=136,slow=33						
STKA	**Stephens Creek**	**34.66**	**258**	P	P	15 27 46.0	+0.4
	0.7nm,0.3s,baz=121,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**43.48**	**268**	P	P	15 28 59.4	0.0
	0.6nm,0.6s,baz=107,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**44.56**	**273**	P	P	15 29 07.7	-0.3
	0.8nm,0.3s,baz=111,slow=8.1,SNR=18						

MEX 24 15:28:04.0±1.1, 1620N×9067W, h15km±155km, MD4.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.41**	**273**	*i* P	Pn	15 28 25.2	-3.9
CCIG				*i* S	Sn	15 28 42.3	-5.2
SCX	**San Cristobal**	**1.96**	**286**	*i* P	Pn	15 28 34.7	-2.0
SCX				*i* S	Sn	15 28 57.7	-3.3
THIG		**2.00**	**230**	*i* P	Pn	15 28 32.5	-4.8
THIG				*i* S	Sn	15 28 58.0	-4.1
TGIG		**2.42**	**284**	*i* P	Pn	15 28 41.5	-1.6
TGIG				*i* S	Sn	15 29 08.9	-3.5

NNC 24 15:35:14.3±10.0, 37.18N×7007E, h0km, mb3.6, mpv3.6, Error ellipse: s-maj=87.8km s-min=76.8km az=108.0
ISC 24 15:35:17.6±3.1, 369N±02×707E±02, h225km±48km, n9, σ0°44/11, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.69**	**23**	P	**Pn**	**15 36 41.3**	**+0.1**
	SNR=28						
UCH	**Uchtor**	**6.05**	**28**	P	**Pn**	**15 36 45.7**	**-0.1**
	SNR=32						
KK31	**Karatay Array**	**6.18**	**359**	⇓Pn	**Pn**	**15 36 47.3**	**-0.1**
	1.4nm,0.4s,baz=176,slow=11,SNR=3.6						
KK31				⇓Sn	**S**	**15 37 58.8**	**-0.1**
	4.4nm,0.5s,baz=192,slow=25,SNR=3.7						
EKS2	**Erkin-Say**	**6.20**	**21**	P	**Pn**	**15 36 47.7**	**+0.1**
	SNR=5.4						
AAK	**Ala-Archa**	**6.40**	**26**	P	**Pn**	**15 36 50.4**	**+0.1**
	SNR=8.1						
TKM2	**Tokmak 2**	**7.07**	**31**	⇑Pn	**Pn**	**15 36 58.2**	**-0.5**
	4.0nm,0.5s						
TKM2				⇑Sn	**S**	**15 38 19.7**	**+0.2**
	6.1nm,1.1s						
TKM2	**Tokmak 2**	**7.07**	**31**	P	**Pn**	**15 36 58.3**	**-0.4**
	SNR=7.3						
AB31	**Akbulak array**	**14.61**	**331**	⇑Pn	**Pn**	**15 38 34.7**	**+1.0**
	0.2nm,0.3s,baz=139,slow=11,SNR=14						
AKTO	**Aktyubinsk**	**16.30**	**330**	⇑Pn	**Pn**	**15 38 53.3**	**-0.8**
	0.2nm,0.5s						

NEIC 24 15:36:04.3±3.9, 5.92S×130.58E, h106km±39km, Error ellipse: s-maj=47.1km s-min=12.2km az=53.0
ISCJB 24 15:36:07.3±0.8, 6.16S±006×130.33E±006, h155km±11km, mb3.7/3, Error ellipse: s-maj=10.9km s-min=9.6km az=140.3
IDC 24 15:36:09.6±4.4, 6.18S×130.29E, h159km±40km, mb3.9/3, mb1 3.8/7, mb1mx3.5/15, mbtmp3.6/7, Error ellipse: s-maj=38.6km s-min=14.0km az=62.0
ISC 24 15:36:08.5±0.7, 617S±006×13034E±006, h149km±9km, n15, σ0°77/23, mb3.7/3, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.45**	**78**	⇑*e*P	**Pn**	**15 36 50.0**	**+1.0**
TLE				*e*S	**Sn**	**15 37 19.0**	**-1.1**
BATI	**Baumata**	**7.73**	**238**	P	**Pn**	**15 37 58.2**	**-0.1**
	1.7nm,0.3s,baz=316,slow=18,SNR=4.7						
BATI				S	**Sn**	**15 39 24.0**	**-0.6**
	3.5nm,0.3s,baz=345,slow=8.7,SNR=4.1						
FITZ	**Fitzroy Crossi**	**12.71**	**201**	*e*P	**Pn**	**15 39 05.4**	**+1.3**
FITZ				*e*S	**Sn**	**15 41 15.4**	**-9.3**
FITZ	**Fitzroy Crossi**	**12.71**	**201**	P	**Pn**	**15 39 05.2**	**+1.1**
	0.2nm,0.3s,baz=36,slow=14,SNR=12						
FITZ				S	**Sn**	**15 41 19.7**	**-5.0**
	0.8nm,0.3s,baz=259,slow=21,SNR=7.1						
FITZ	**Fitzroy Crossi**	**12.71**	**201**	*e*Pn	**Pn**	**15 39 05.3**	**+1.1**
FITZ				*e*Sn	**Sn**	**15 41 15.4**	**-9.4**
WRAB	**Tennant Creek**	**14.22**	**164**	*e*Pn	**Pn**	**15 39 22.8**	**-0.6**
WRA	**Warramunga Arr**	**14.23**	**165**	P	**Pn**	**15 39 23.5**	**+0.1**
	1.0nm,0.3s,baz=348,slow=11,SNR=31						
WRA				S	**Sn**	**15 41 54.7**	**-6.6**
	1.3nm,0.3s,baz=341,slow=21,SNR=11						
WB2	**Warramunga Arr**	**14.23**	**164**	*e*P	**Pn**	**15 39 23.3**	**-0.2**
WB2				*e*S	**Sn**	**15 41 49.6**	**-12**
ASAR	**Alice Springs**	**17.73**	**169**	P	**Pn**	**15 40 07.3**	**+1.1**
	1.3nm,0.3s,baz=350,slow=10,SNR=178						
ASAR				S	**S**	**15 43 20.1**	**-1.2**
	0.3nm,0.3s,baz=348,slow=25,SNR=7.4						
KKM	**Kota Kinabalu**	**18.60**	**310**	*e*P	**P**	**15 40 14.7**	**+0.1**
STKA	**Stephens Creek**	**27.66**	**159**	*e*P	**P**	**15 41 43.5**	**+1.1**
STKA	**Stephens Creek**	**27.66**	**159**	P	**P**	**15 41 43.4**	**+1.0**
	1.4nm,0.7s,mb3.8,baz=337,slow=9.4,SNR=7.3						
CMAR	**Chiang Mai Arr**	**39.47**	**309**	P	**P**	**15 43 24.0**	**-0.6**
	0.8nm,0.8s,mb3.4,baz=134,slow=7.9,SNR=6.4						
MKAR	**Makanchi Array**	**67.72**	**326**	P	**P**	**15 46 49.7**	**-0.2**
	1.2nm,0.6s,mb3.8,baz=122,slow=8.4,SNR=11						
MKAR	**Makanchi Array**	**67.72**	**326**	P	**P**	**15 46 49.7**	**-0.2**

IDC 24 15:47:42.7±4.3, 355S×10176E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/18, mbtmp3.8/5, Error ellipse: s-maj=233.3km s-min=20.6km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.70**	**120**	P	P	15 54 43.2	0.0
	0.4nm,0.4s,baz=304,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**36.92**	**126**	P	P	15 54 53.5	-0.1
	0.4nm,0.5s,baz=296,slow=8.0,SNR=18						
STKA	**Stephens Creek**	**46.81**	**132**	P	P	15 56 14.8	+0.4
	5.6nm,1.2s,baz=304,slow=13,SNR=3.5						
MKAR	**Makanchi Array**	**53.00**	**343**	P	P	15 57 01.6	+0.5
	0.8nm,0.6s,baz=143,slow=8.4,SNR=7.6						
ZALV	**Zalesovo Beam**	**59.02**	**348**	P	P	15 57 43.9	-0.2
	1.0nm,0.5s,baz=180,slow=5.5,SNR=6.8						
TXAR	**Lajitas Array**	**144.80**	**41**	PKP	PKPdf	16 07 21.0	-1.4
	0.9nm,0.6s,baz=267,slow=1.2,SNR=9.6						

ISK 24 16:03:26.9, 37.31N×2826E, h4km, MD2.7
DDA 24 16:03:27.8, 37.32N×2812E, h46km±1km, Md2.9
CSEM 24 16:03:27.7±0.1, 37.27N×2822E, h10km, MD2.7, Error ellipse: s-maj=4.0km s-min=2.4km az=14.0
ISCJB 24 16:03:28.7±0.6, 37.23N±005×2820E±004, h13km±6km, Error ellipse: s-maj=9.0km s-min=5.6km az=14.6
ISC 24 16:03:28.8±0.7, 3722N±005×2821E±004, h16km±7km, n9, σ0°92/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**146**	*e*PG	**Pg**	**16 03 31.3**	**-0.9**
YER				*e*SG	**Sg**	**16 03 34.4**	**0.0**
MLSB	**Milas**	**0.35**	**282**	*e*PG	**Pg**	**16 03 35.2**	**-0.9**
MLSB				*e*SG	**Sg**	**16 03 41.6**	**+0.5**
AYDN	**Tasoluk**	**0.51**	**329**	*i* P	**Pg**	**16 03 38.2**	**-0.8**
AYDN				*i* S	**Sg**	**16 03 46.1**	**+0.3**
BDRM	**Kayabasi**	**0.63**	**256**	*i* P	**Pg**	**16 03 41.0**	**-0.1**
BDRM	**Kayabasi**	**0.63**	**256**	*i* P	**Pg**	**16 03 41.0**	**-0.2**
BODT	**Bodrum**	**0.74**	**258**	*e*PG	**Pg**	**16 03 42.9**	**-0.2**
BODT				*e*SG	**Sg**	**16 03 54.3**	**+1.4**
DNZL	**Cakiroluk**	**0.81**	**55**	*i* P	**Pg**	**16 03 44.3**	**-0.3**
DNZL				*i* S	**Sg**	**16 03 57.0**	**+1.7**
KULA	**Kula-Manisa**	**1.34**	**15**	*e*PN	**Pn**	**16 03 51.1**	**-1.6**
ELL	**Elmali**	**1.44**	**109**	*e*PN	**Pn**	**16 03 55.2**	**+1.0**

ISCJB 24 16:27:21.0±3.5, 12.1S±02×165.8E±02, h45km±25km, mb4.0/3, MS3.1/3, Error ellipse: s-maj=49.4km s-min=14.3km az=138.8
NEIC 24 16:27:22.4±2.7, 1197S×16597E, h50km±18km, Error ellipse: s-maj=43.0km s-min=15.7km az=58.0
IDC 24 16:27:23.3±9.7, 1200S×16587E, h52km±71km, mb3.9/3, mb1 4.0/4, mb1mx3.6/17, mbtmp4.0/4, ML4.6/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/31, Error ellipse: s-maj=65.5km s-min=45.2km az=98.0
ISC 24 16:27:22.8±3.0, 120S±02×1659E±02, h50km±20km, n11, σ0°28/9, mb4.1/3, MS3.1/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.39**	**293**	P	**Pn**	**16 28 54.8**	**+0.5**
	12nm,0.3s,baz=13,slow=3.0,SNR=11						
HNR				S	**Sn**	**16 30 05.8**	**-0.3**
	11nm,0.3s,baz=184,slow=22,SNR=6.2						
HNR	**Honiara**	**6.39**	**293**	*e*Pn	**Pn**	**16 28 54.6**	**+0.2**
HNR				*e*Sn	**Sn**	**16 30 05.8**	**-0.3**
DZM	**Mont Dzumac**	**10.04**	**177**	*e*P	**Pn**	**16 29 44.3**	**-0.2**
AFI	**Afiamalu**	**21.82**	**97**	LR	LR	16 38 15.4	
	comp=Z,114nm,18.3s,MS3.3,baz=44,slow=30						
STKA	**Stephens Creek**	**29.89**	**225**	LR	LR	16 45 10.0	
	comp=Z,122nm,21.8s,MS3.5,baz=24,slow=36						
WRA	**Warramunga Arr**	**31.33**	**251**	P	**P**	**16 33 39.1**	**+0.4**
	0.7nm,0.5s,mb3.8,baz=84,slow=9.3,SNR=15						
ASAR	**Alice Springs**	**32.53**	**245**	P	**P**	**16 33 49.1**	**-0.1**
	0.7nm,0.7s,mb3.7,baz=73,slow=9.6,SNR=17						
ASAR				PcP	PcP	16 36 35.1	-0.1
	0.8nm,0.9s,baz=72,slow=4.1,SNR=5.1						
GUMO	**Guam**	**32.88**	**320**	LR	LR	16 47 18.6	
	comp=Z,10.0nm,18.3s,MS2.6,baz=303,slow=36						
PPT	**Papeete**	**43.32**	**103**	*e*LR	LR	16 47 33.2	
	42nm,21.2s						
MKAR	**Makanchi Array**	**94.32**	**317**	P	**P**	**16 40 36.7**	**-0.2**
	2.1nm,0.6s,mb4.8,baz=99,slow=6.0,SNR=6.6						
MKAR	**Makanchi Array**	**94.32**	**317**	P	**P**	**16 40 36.7**	**-0.2**

ISCJB 24 16:33:46.8±1.2, 3973N±007×7788E±007, h10km, Error ellipse: s-maj=11.9km s-min=5.5km az=149.4
IDC 24 16:33:51.1±3.1, 4022N×7696E, h0km, mb3.7/1, mb1 3.6/4, mb1mx3.3/25, mbtmp3.6/4, ML3.1/3, MS2.9/2, Ms1 2.9/2, ms1mx2.3/38, Error ellipse: s-maj=76.6km s-min=21.8km az=127.0
NNC 24 16:33:52.4±6.7, 4023N×7755E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=67.8km s-min=32.4km az=153.0
NEIC 24 16:33:53.1±1.9, 3985N×7761E, h35km, Error ellipse: s-maj=24.7km s-min=14.2km az=158.0
BJI 24 16:33:53.4, 40.13N×77.43E, h8km, ML3.4
MOS 24 16:34:19.0±1.5, 42.34N×77.34E, h15km, mb3.8/1, Error ellipse: s-maj=44.0km s-min=22.0km az=88.7
ISC 24 16:33:49.0±1.2, 3974N±008×7780E±008, h10km, n28, σ0°82/35, 4C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.43**	**262**	PG	**Pg**	**16 34 16.8**	**+0.4**
KSH				SG	**Sg**	**16 34 35.8**	**+0.9**
KSH				Smax			
	comp=N,5μm,0.3s						
KSH				Smax			
	comp=E,5μm,0.3s						
ULHL	**Ulahol**	**2.77**	**335**	P	**Pn**	**16 34 32.9**	**-0.5**
	SNR=91						
KZA	**Kyzart**	**3.03**	**321**	P	**Pn**	**16 34 36.4**	**-0.7**
	SNR=79						
UCH	**Uchtor**	**3.52**	**316**	P	**Pn**	**16 34 43.5**	**-0.2**
	SNR=28						
UCH	**Uchtor**	**3.52**	**316**	*e*P	**Pn**	**16 34 42.8**	**-0.9**
UCH				*e*Sg	**Sn**	**16 35 25.9**	**+0.5**
KNDC	**Almaty**	**3.53**	**350**	⇓Pn	**Pg**	**16 34 48.3**	**-8.4**
	comp=E,68nm,0.6s						
KNDC				⇑Lg		16 35 29.8	
	comp=E,803nm,0.6s						
TKM2	**Tokmak 2**	**3.59**	**333**	⇑Pn	**Pn**	**16 34 44.4**	**-0.3**
	comp=E,26nm,0.7s						
TKM2				⇑Lg		16 35 27.6	
	comp=E,116nm,0.8s						
TKM2	**Tokmak 2**	**3.59**	**333**	P	**Pn**	**16 34 44.8**	**+0.1**
	SNR=25						
TKM2	**Tokmak 2**	**3.59**	**333**	*e*P	**Pn**	**16 34 44.0**	**-0.7**
TKM2				*e*S	**Sn**	**16 35 27.7**	**+0.6**
KBK	**Karagaybulak**	**3.62**	**325**	P	**Pn**	**16 34 45.2**	**+0.1**
	SNR=56						
AAK	**Ala-Archa**	**3.82**	**320**	P	**Pn**	**16 34 47.8**	**-0.1**
	SNR=21						
AML	**Almayashu**	**3.92**	**309**	P	**Pn**	**16 34 49.3**	**+0.1**
	SNR=15						
AML	**Almayashu**	**3.92**	**309**	*e*Pg	**Pn**	**16 34 48.8**	**-0.4**
CHMS	**Chumysh**	**3.98**	**326**	P	**Pn**	**16 34 49.7**	**-0.4**
	SNR=6.9						
EKS2	**Erkin-Say**	**4.21**	**315**	P	**Pn**	**16 34 53.5**	**+0.2**
	SNR=8.2						
EKS2	**Erkin-Say**	**4.21**	**315**	*e*P	**Pn**	**16 34 53.3**	**+0.1**
EKS2				*e*S	**Sn**	**16 35 46.8**	**+4.3**
USP	**Ospenovka**	**4.31**	**326**	P	**Pn**	**16 34 54.7**	**+0.1**
	SNR=7.6						
KK31	**Karatay Array**	**6.43**	**304**	⇓Pn	**Pn**	**16 35 22.6**	**-1.1**
	comp=E,0.2nm,0.3s,baz=136,slow=14,SNR=6.9						
KK31				⇓Pg	**Pg**	**16 35 40.3**	**-12**
	comp=E,5.2nm,0.8s,baz=126,slow=16,SNR=5.8						
KK31				⇑Lg		16 36 57.3	
	comp=E,5.7nm,0.6s,baz=118,slow=27,SNR=7.7						
MK31	**Makanchi Array**	**7.78**	**23**	⇓Pn	**Pn**	**16 35 44.1**	**+1.9**
	comp=E,0.5nm,0.4s,baz=197,slow=15,SNR=7.8						
MK31				⇓Sn	**Sn**	**16 37 10.7**	**+0.5**
	comp=E,3.8nm,0.7s						
MK31				⇓Lg		16 37 47.5	
	comp=E,3.0nm,0.6s						
MKAR	**Makanchi Array**	**7.78**	**23**	Pn	**Pn**	**16 35 44.2**	**+2.0**
	comp=E,0.4nm,0.3s,baz=204,slow=15,SNR=8.4						
MKAR				Sn	**Sn**	**16 37 09.4**	**-0.8**
	comp=E,0.4nm,0.3s,baz=201,slow=20,SNR=3.5						
MKAR				Lg		16 37 48.0	
	comp=E,0.5nm,0.3s,baz=197,slow=28,SNR=3.8						
MKAR	**Makanchi Array**	**7.78**	**23**	PN	**Pn**	**16 35 44.2**	**+2.0**
MKAR						16 37 09.5	
MKAR	**Makanchi Array**	**7.78**	**23**	Pn	**Pn**	**16 35 44.2**	**+2.0**
MKAR				Sn	**Sn**	**16 37 09.4**	**-0.8**
MKAR				Lg		16 37 48.0	
KURK	**Kurchatov**	**10.99**	**3**	Pn	**Pn**	**16 36 22.3**	**-4.0**
	comp=E,0.0nm,0.3s,baz=192,slow=12,SNR=3.8						
KURK				Lg		16 39 21.8	
	comp=E,0.5nm,0.3s,baz=192,slow=27,SNR=2.8						
BVAR	**Borovoye Array**	**14.23**	**342**	Pn	**Pn**	**16 37 09.4**	**-1.0**
	comp=E,0.1nm,0.3s,baz=157,slow=13,SNR=4.8						
BVAR				Lg		16 40 59.6	
	comp=E,0.1nm,0.3s,baz=150,slow=26,SNR=3.1						
ZALV	**Zalesovo Beam**	**14.99**	**16**	Pn	**Pn**	**16 37 20.3**	**-0.5**
	comp=E,0.1nm,0.3s,baz=210,slow=11,SNR=2.7						
ZALV				LR	LR	16 43 18.3	
	comp=E,22nm,21.8s,baz=161,slow=38						
KSRS	**Korea Array**	**38.83**	**77**	LR	LR	17 00 13.8	
	comp=E,41nm,18.6s,baz=187,slow=40						
TORD	**Torodi Ar. Bea**	**71.08**	**272**	P	**P**	**16 45 07.2**	**-0.4**
	comp=E,0.5nm,0.6s,baz=55,slow=6.4,SNR=3.5						
TORD	**Torodi Ar. Bea**	**71.08**	**272**	P	**P**	**16 45 07.2**	**-0.4**

ISK 24 16:46:38.8, 37.02N×3005E, h5km, MD3.1
DDA 24 16:46:38.9, 37.08N×3018E, h18km±1km, Md3.2
CSEM 24 16:46:39.0±0.1, 37.01N×3005E, h2km, MD3.1, Error ellipse: s-maj=1.8km s-min=1.6km az=142.0
ISCJB 24 16:46:40.1±0.6, 37.01N±004×3008E±003, h3km±6km, Error ellipse: s-maj=6.0km s-min=4.6km az=169.6
ISC 24 16:46:40.6±0.5, 3701N±003×3007E±003, h6km±5km, n14, σ1°02/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELL	**Elmali**	**0.29**	**207**	*e*PG	**Pg**	**16 46 45.5**	**-0.8**
ELL				*e*SG	**Sg**	**16 46 50.7**	**+0.6**
GOLH	**Golhisar**	**0.47**	**300**	*i* P	**Pg**	**16 46 48.6**	**-1.1**
GOLH				*i* S	**Sg**	**16 46 57.6**	**+1.8**
ANTB	**Antalya**	**0.48**	**103**	*e*PG	**Pg**	**16 46 49.5**	**-0.3**
ANTB				*e*SG	**Sg**	**16 46 57.8**	**+1.8**
BCK	**Bucak**	**0.61**	**42**	*e*PG	**Pg**	**16 46 51.0**	**-1.4**
BCK				*e*SG	**Sg**	**16 47 00.9**	**+0.5**
AKAS	**Kas**	**0.86**	**206**	*i* P	**Pg**	**16 46 57.5**	**+0.4**
AKAS				*i* S	**Sg**	**16 47 15.7**	**+7.5**
ISP	**Isparta**	**0.91**	**22**	*e*PG	**Pg**	**16 46 57.2**	**-0.8**
DNZL	**Cakiroluk**	**1.07**	**310**	*i* P	**Pg**	**16 46 59.5**	**-1.6**
DNZL				*i* S	**Sg**	**16 47 16.8**	**+1.8**
KHL	**Karahalli**	**1.39**	**342**	*e*PN	**Pn**	**16 47 05.6**	**-1.0**
YER	**Yerkesik**	**1.44**	**276**	*e*PN	**Pn**	**16 47 06.6**	**-0.6**
KULA	**Kula-Manisa**	**1.88**	**324**	*e*PN	**Pn**	**16 47 13.0**	**-0.3**
MANT	**Manisa**	**1.91**	**321**	*i* P	**Pg**	**16 47 12.9**	**-0.8**
MANT				*i* S	**Sn**	**16 47 39.6**	**+1.5**
HDMB	**Hadim**	**1.93**	**90**	*e*PN	**Pn**	**16 47 13.9**	**-0.1**
KONT	**Konya--Tatoy**	**2.05**	**62**	*e*PN	**Pn**	**16 47 15.9**	**+0.3**
KDHN	**Kadinhani**	**2.22**	**46**	*i* P	**Pn**	**16 47 17.7**	**-0.2**
KDHN				*i* S	**Sn**	**16 47 46.4**	**+0.7**

ISCJB 24 16:54:01.7±0.7, 3346N±004×14047E±007, h67km±7km, mb3.6/3, Error ellipse: s-maj=9.9km s-min=5.9km az=15.2
JMA 24 16:54:03.2±0.1, 3352N×14043E, h55km±3km, M2.8
IDC 24 16:54:05.1±1.9, 3308N×13927E, h47km±22km, mb3.3/3, mb1 3.6/4, mb1mx3.3/21, mbtmp3.2/4, ML2.8/1, Error ellipse: s-maj=37.7km s-min=26.2km az=60.0
ISC 24 16:54:02.9±0.7, 3347N±004×14046E±007, h57km±9km, n16, σ0°78/27, mb3.6/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.65**	**237**	P	**Pn**	**16 54 16.8**	**+0.5**
JHJ2				S	**Sn**	**16 54 26.3**	**+0.2**
JHJ	**Hachijo jima 2**	**0.67**	**239**	P	**Pn**	**16 54 16.9**	**+0.3**
	96nm,0.3s,baz=82,slow=22,SNR=101						
JHJ				S	**Sn**	**16 54 25.8**	**-0.8**
	738nm,0.3s,baz=94,slow=22,SNR=125						
BSO1	**Boso 1**	**1.26**	**20**	P	**Pn**	**16 54 24.0**	**-0.2**
BSO1				S	**Sn**	**16 54 39.2**	**-1.0**
BSO2	**Boso 2**	**1.30**	**11**	S	**Sn**	**16 54 41.4**	**+0.1**
JKO	**Kozu shima**	**1.32**	**303**	P	**Pn**	**16 54 25.1**	**+0.1**
JKO				*e*S	**Sn**	**16 54 42.1**	**+0.5**
BSO3	**Boso 3**	**1.33**	**2**	P	**Pn**	**16 54 25.6**	**+0.4**
BSO3				S	**Sn**	**16 54 42.2**	**+0.3**
JIM2	**Oshima 3**	**1.51**	**326**	P	**Pn**	**16 54 27.1**	**-0.6**
JIM2				S	**Sn**	**16 54 45.8**	**-0.5**
BSO4	**Boso 4**	**1.52**	**356**	P	**Pn**	**16 54 27.8**	**0.0**
BSO4				S	**Sn**	**16 54 47.1**	**+0.6**
JIZS	**Izushimoda**	**1.81**	**314**	P	**Pn**	**16 54 32.2**	**+0.5**
JIZS				*e*S	**Sn**	**16 54 53.7**	**+0.1**
KTJJ	**Kamata 2**	**1.86**	**322**	P	**Pn**	**16 54 32.4**	**0.0**
KTJJ				S	**Sn**	**16 54 53.5**	**-1.2**
JOD2	**Odawara 2**	**2.12**	**328**	P	**Pn**	**16 54 35.7**	**-0.2**
JOD2				S	**Sn**	**16 54 59.3**	**-1.8**
MJAR	**Matsushiro Arr**	**3.58**	**330**	P	**Pn**	**16 54 57.4**	**+1.5**
	0.8nm,0.3s,baz=157,slow=12,SNR=13						
MAT	**Matsushiro**	**3.58**	**330**	P	**Pn**	**16 54 56.6**	**+0.7**
MAT				S	**Sn**	**16 55 40.0**	**+3.0**
WRA	**Warramunga Arr**	**53.43**	**187**	P	**P**	**17 03 16.0**	**-1.0**
	0.2nm,0.7s,mb3.2,baz=4.6,slow=7.5,SNR=4.3						
ASAR	**Alice Springs**	**57.16**	**187**	P	**P**	**17 03 44.0**	**+0.2**
	0.4nm,0.9s,mb3.4,baz=1.5,slow=6.2,SNR=7.2						
TXAR	**Lajitas Array**	**92.92**	**52**	P	**P**	**17 07 18.3**	**+8.4**
	0.5nm,0.6s,mb4.1,baz=270,slow=1.3,SNR=4.3						

ISCJB 24 17:07:21.1±0.7, 3349N±004×14047E±007, h66km±7km, mb3.5/2, Error ellipse: s-maj=9.5km s-min=5.7km az=12.3
JMA 24 17:07:22.3±0.1, 3353N×14046E, h55km±3km, M2.7
IDC 24 17:07:24.0±2.6, 3336N×14013E, h68km±18km, mb3.1/2, mb1 3.3/3, mb1mx3.1/21, mbtmp3.1/3, Error ellipse: s-maj=67.9km s-min=11.5km az=81.0
ISC 24 17:07:22.3±0.7, 3349N±004×14048E±007, h56km±9km, n15, σ0°89/26, mb3.4/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.67**	**236**	P	**Pn**	**17 07 36.2**	**+0.3**
JHJ2				S	**Sn**	**17 07 46.0**	**+0.2**
JHJ	**Hachijo jima 2**	**0.69**	**238**	P	**Pn**	**17 07 36.2**	**+0.1**
	171nm,0.3s,baz=239,slow=23,SNR=113						
JHJ				S	**Sn**	**17 07 45.9**	**-0.3**
	802nm,0.3s,baz=84,slow=23,SNR=149						
BSO1	**Boso 1**	**1.23**	**20**	P	**Pn**	**17 07 42.6**	**-0.7**
BSO1				S	**Sn**	**17 07 59.0**	**+0.1**
BSO2	**Boso 2**	**1.28**	**10**	*e*S	**Sn**	**17 07 59.7**	**-0.3**
BSO3	**Boso 3**	**1.31**	**1**	P	**Pn**	**17 07 44.4**	**+0.1**
BSO3				*e*S	**Sn**	**17 08 00.5**	**-0.3**
JKO	**Kozu shima**	**1.31**	**302**	P	**Pn**

7.0nm,0.5s
EKMR A 17 29 56.9
4.0nm,0.5s
EKMR A 17 29 56.9
5.0nm,0.5s

ISCJB ***24*** *17:28:36.5±1.5, 14.17N±005×12477E±007, h2km±9km, mb3.5/4, Error ellipse: s-maj=12.9km s-min=7.3km az=153.1*
MAN ***24*** *17:28:36, 14.17N×12472E, h1km, mb4.9, ML3.8, MS3.8*
IDC ***24*** *17:28:39.4±2.2, 1367N×12426E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/18, mbtmp3.6/4, MS2.6/1, Ms1 2.6/1, ms1mx2.4/36, Error ellipse: s-maj=89.1km s-min=22.8km az=54.0*
ISC 24 17:28:38.4±1.7, 1410N±006×12469E±007, h0km±9km, n23, σ1°10/29, mb3.5/4, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.72**	**227**	*eP*			**Pg**	**17 28 52.2**	**-0.1**
PVCP				*eS*			**Sg**	**17 28 59.5**	**-2.2**
CNP	**Catarman**	**1.57**	**181**	*eP*			**Pn**	**17 29 07.6**	**0.0**
CNP				*eS*			**Sn**	**17 29 20.0**	**+0.3**
AUQP	**San Andres**	**2.11**	**249**	*eP*			**Pn**	**17 29 16.5**	**+1.6**
AUQP				*eS*			**Sn**	**17 29 45.8**	**+4.0**
GQP	**Guinayangan**	**2.19**	**265⇓**	*eP*			**Pn**	**17 29 15.9**	**-0.1**
GQP				*eS*			**Sn**	**17 29 44.0**	**+0.1**
POLP	**Polilio Island**	**2.74**	**284**	*eP*			**Pn**	**17 29 24.6**	**+1.0**
POLP				*eS*			**Sn**	**17 30 03.9**	**+6.4**
PLP	**Palo**	**2.92**	**175⇑**	*eP*			**Pg**	**17 29 35.6**	**+1.0**
PLP				*eS*			**Sg**	**17 30 17.5**	**+4.9**
OCLP	**Ormoc**	**3.03**	**182**	*eP*			**Pn**	**17 29 33.2**	**+5.6**
OTRP	**Odiongan**	**3.12**	**237**	*eP*			**Pn**	**17 29 28.5**	**-0.4**
OTRP				*eS*			**Pg**	**17 29 45.3**	**+7.0**
RCP	**Roxas**	**3.16**	**217⇑**	*eP*			**Pn**	**17 29 30.2**	**+0.8**
BALP	**Baler**	**3.43**	**299**	*eP*			**Pn**	**17 29 31.6**	**-1.6**
PALP	**Palanan**	**3.67**	**324**	*eP*			**Sn**	**17 30 13.3**	**-7.2**
SJMP	**San Jose**	**3.84**	**245**	*eP*			**Pn**	**17 29 39.3**	**+0.5**
MSLP	**Maasin**	**3.94**	**178**	*eP*			**Pn**	**17 29 43.6**	**+3.4**
CAUP	**Cauayan**	**3.96**	**316**	*eP*			**Pn**	**17 29 40.7**	**+0.3**
GUIM	**Jordan**	**4.01**	**211**	*eP*			**Pn**	**17 29 41.1**	**-0.1**
CUYO	**Cuyo Island**	**4.83**	**228**	*eP*			**Pn**	**17 29 52.2**	**-0.2**
BUSP	**Coron**	**4.85**	**245**	*eP*			**Pn**	**17 29 53.1**	**+0.5**
DAV	**Davao City (W)**	**7.04**	**173**	LR			LR	17 33 08.2	
	comp=Z,48nm,18.2s,baz=308,slow=40								
MATI	**Mati**	**7.27**	**168**	*eP*			**Sn**	**17 31 32.1**	**-17**
CMAR	**Chiang Mai Arr**	**25.09**	**283**	P			**P**	**17 34 03.2**	**-1.7**
	0.8nm,0.7s,mb3.6,baz=99,slow=7.6,SNR=8.6								
WRA	**Warramunga Arr**	**35.13**	**164**	P			**P**	**17 35 31.7**	**-2.2**
	0.1nm,0.4s,mb3.1,baz=345,slow=8.9,SNR=7.7								
ASAR	**Alice Springs**	**38.59**	**166**	P			**P**	**17 36 02.1**	**-1.1**
	0.7nm,0.5s,mb3.6,baz=339,slow=7.0,SNR=65								
MKAR	**Makanchi Array**	**48.08**	**321**	P			**P**	**17 37 21.2**	**+1.5**
	0.6nm,0.6s,mb3.9,baz=113,slow=8.3,SNR=4.3								

ISCJB ***24*** *17:35:25.0±0.2, 604S±003×10538E±003, h19km, mb5.0/82, MS4.4/23, Error ellipse: s-maj=5.4km s-min=3.7km az=33.1*
IDC ***24*** *17:35:26.6±4.2, 594S×10556E, h18km±25km, mb4.7/23, mb1 4.8/23, mb1mx4.7/28, mbtmp4.7/23, MS4.1/9, Ms1 4.1/9, ms1mx3.7/35, Error ellipse: s-maj=17.8km s-min=10.1km az=48.0*
MOS ***24*** *17:35:27.5±1.6, 575S×10569E, h33km, mb5.3/31, MS4.5/4, Error ellipse: s-maj=12.7km s-min=5.8km az=119.0*
DJA ***24*** *17:35:28, 6.19S×10544E, h14km, Mw5.3/7*
BJI ***24*** *17:35:29.1, 590S×10560E, h35km, mB5.1, mb4.8, Ms4.9, Msz4.6*
NEIC ***24*** *17:35:29.1±0.2, 588S×10557E, h35km, mb5.0/29, Error ellipse: s-maj=9.9km s-min=5.4km az=48.0*
NEIC Felt [II] at Jakarta, Java.
ISC 24 17:35:26.7±0.2, 603S±003×10542E±003, h19km, h19km±1.4km: pP-P, n294, σ1°33/250, mb5.0/82, MS4.4/23, 27C-20D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SBJI	**Serang**	**0.71**	**98**	P			**Pb**	**17 35 38.7**	**-1.8**
	0.0nm,0.0s								
TNG	**Tangerang**	**1.23**	**97**	P			**Pn**	**17 35 48.0**	**-0.8**
	0.0nm,0.0s								
DBJI	**Dramaga**	**1.42**	**112**	P			**Pn**	**17 35 48.7**	**-2.8**
	0.0nm,0.0s								
CBJI	**Citeko**	**1.48**	**106**	P			**Pn**	**17 35 52.7**	**+0.5**
	0.0nm,0.0s								
SKJI	**Sukabumi**	**1.49**	**131**	P			**Pn**	**17 35 51.4**	**-1.1**
	0.0nm,0.0s								
LEM	**Lembang**	**2.33**	**110**	P			**Pn**	**17 36 05.3**	**+1.4**
	0.0nm,0.0s								
JCJI	**Jatiwangi**	**2.87**	**99**	P			**Pn**	**17 36 19.0**	**+7.5**
	0.0nm,0.0s								
KSI	**Kapahiang**	**3.67**	**310**	P			**Pn**	**17 36 26.5**	**+4.0**
	0.0nm,0.0s								
PPBI	**Pangkal Pinang**	**3.90**	**11**	P			**Pn**	**17 36 28.4**	**+2.7**
	0.0nm,0.0s								
TPI	**Tanjungpandan**	**3.94**	**35**	P			**Pn**	**17 36 28.0**	**+1.9**
	0.0nm,0.0s								
TPI	**Tanjungpandan**	**3.94**	**35⇑**	*eP*			**Pn**	**17 36 28.0**	**+1.9**
TPI				*eS*			**Sg**	**17 37 26.0**	**-7.2**
CLJI	**Cilicap**	**3.95**	**115**	P			**Pn**	**17 36 31.8**	**+5.5**
	0.0nm,0.0s								
XMIS	**Christmas Isla**	**4.43**	**177**	*eP*			**Pn**	**17 36 27.0**	**-6.0**
BJII	**Banjamegara**	**4.46**	**107**	P			**Pn**	**17 36 38.2**	**+5.0**
	0.0nm,0.0s								
JMBI	**JAMBI**	**4.71**	**338**	P			**Pg**	**17 36 53.5**	**-3.5**
	0.0nm,0.0s								
SJI	**Sawahan**	**6.53**	**105**	P			**Pn**	**17 37 06.1**	**+4.4**
	210nm,1.7s								
PPI	**Padang Panjang**	**7.46**	**318**	P			**Pn**	**17 37 24.3**	**+10**
	83nm,1.6s								
MYKOM	**Kota Tinggi**	**7.92**	**349**	*⇑P*			**Pn**	**17 37 29.2**	**+8.4**
STKI	**Sintang**	**8.55**	**45**	P			**Pn**	**17 37 36.0**	**+6.4**
	72nm,1.0s								
KSM	**Kuching**	**8.90**	**33**	*eP*			**Pn**	**17 37 33.1**	**-1.3**
KHKI	**Kahang-Kahang**	**10.37**	**104**	P			**Pn**	**17 38 01.9**	**+7.4**
	96nm,0.8s								
SBUM	**Sibu**	**10.82**	**39**	*⇑P*			**Pn**	**17 38 07.8**	**+7.2**
IPM	**Ipoh**	**11.32**	**337**	*⇑P*			**Pn**	**17 38 14.5**	**+7.0**
MKS	**Makassar**	**14.01**	**87⇓**	*eP*			**Pn**	**17 38 45.3**	**+1.0**
PCI	**Palu**	**15.26**	**71**	P			**Pn**	**17 39 07.5**	**+6.3**
	224nm,1.4s								
PCI	**Palu**	**15.26**	**71⇓**	*eP*			**Pn**	**17 39 10.0**	**+8.8**
	5.0nm,1.0s								
TSM	**Tawau**	**16.11**	**51**	*⇑P*			**Pn**	**17 39 18.4**	**+6.0**
KKM	**Kota Kinabalu**	**16.12**	**42**	*⇓P*			**Pn**	**17 39 13.5**	**+1.1**
KKM	**Kota Kinabalu**	**16.12**	**42**	P			**Pn**	**17 39 12.2**	**-0.2**
SDKM	**Sandakan**	**16.51**	**46**	*⇓P*			**Pn**	**17 39 20.1**	**+2.8**
KDM	**Kudat**	**17.17**	**42**	*⇑P*			**Pn**	**17 39 34.2**	**+8.4**
KDI	**Kendari**	**17.26**	**84**	P			**Pn**	**17 39 30.5**	**+3.7**
	55nm,1.8s								
KDI	**Kendari**	**17.26**	**84⇑**	*eP*			**Pn**	**17 39 27.3**	**+0.5**
KDI				*eS*			**Sn**	**17 42 38.6**	**+0.1**
BATI	**Baumata**	**18.53**	**104**	P			**Pn**	**17 39 43.5**	**+1.0**
	125nm,1.1s								
BATI	**Baumata**	**18.53**	**104**	P			**Pn**	**17 39 43.9**	**+1.4**
	3.3nm,0.3s,baz=122,slow=1.5,SNR=19								
MBWA	**Marble Bar**	**20.46**	**139**	*eP*			**P**	**17 40 02.0**	**-1.3**
	111nm,1.5s								
UBT	**Ubonrachathani**	**21.14**	**359**	P			**P**	**17 40 17.0**	**+6.4**
NST	**Nakhon Sawan**	**22.18**	**346**	P			**P**	**17 40 23.5**	**+1.6**
KKTK	**Khon Kaen**	**22.37**	**353**	P			**P**	**17 40 26.8**	**+3.0**
	309nm,1.0s,mb5.7								
LBMI	**Labuha**	**22.68**	**77**	P			**P**	**17 40 29.2**	**+2.0**
	127nm,1.2s,mb5.2								
FITZ	**Fitzroy Crossi**	**23.10**	**123**	*eP*			**P**	**17 40 29.9**	**-1.7**
FITZ				*eS*			**S**	**17 44 53.1**	**+11**
FITZ	**Fitzroy Crossi**	**23.10**	**123**	P			**P**	**17 40 30.4**	**-1.2**
	13nm,0.8s,mb4.5,baz=317,slow=11,SNR=18								
FITZ				LR			LR	17 47 49.7	
	comp=Z,25nm,20.4s,baz=302,slow=32								
CMAR	**Chiang Mai Arr**	**25.15**	**345**	P			**P**	**17 40 50.0**	**-0.8**
	4.3nm,1.0s,mb3.9,baz=181,slow=8.3,SNR=25								
CMAR				PcP			PcP	17 44 25.9	+1.0
	4.1nm,0.9s,baz=216,slow=2.6,SNR=13								
CMAR				LR			LR	17 51 18.7	
	comp=Z,226nm,18.4s,MS3.7,baz=184,slow=38								
CMAR	**Chiang Mai Arr**	**25.15**	**345**	*i* P			**P**	**17 40 50.0**	**-0.8**
CMAR				pmax			pmax		
	comp=Z,4.0nm,1.0s								
QIZ	**Qiongzhong**	**25.27**	**10**	P			**P**	**17 40 54.8**	**+2.8**
QIZ				AMB			AMB		
	comp=Z,618nm,4.0s								
QIZ				LR			LR		
	comp=N,1μm,11.8s								
QIZ				LR			LR		
	comp=Z,1μm,15.2s,MS4.5								
CHG	**Chiang Mai**	**25.49**	**346**	*⇑P*			**P**	**17 40 55.7**	**+1.7**
	comp=Z,17nm,0.9s,mb4.6								
CHTO	**Chiang Mai**	**25.49**	**346**	*eP*			**P**	**17 40 52.4**	**-1.6**
CHTO				pmax			pmax		
	comp=Z,14nm,1.0s,mb4.5								
CHTO	**Chiang Mai**	**25.49**	**346**	*eP*			**P**	**17 40 52.4**	**-1.5**
	comp=Z,14nm,1.0s,mb4.4								
SWI	**Sorong**	**26.29**	**80**	P			**P**	**17 41 03.2**	**+1.9**
	comp=Z,32nm,1.3s,mb4.7								
TLE	**Tual**	**27.18**	**91**	P			**P**	**17 41 03.4**	**-5.9**
	comp=Z,3μm,0.8s								
NWAO	**Narrogin (SRO)**	**28.94**	**159**	LR			LR	17 53 11.9	
	comp=Z,475nm,20.0s,MS4.1,baz=307,slow=37								
KMI	**Kunming**	**31.07**	**355**	P			**P**	**17 41 47.5**	**+3.8**
KMI				AP			pP	17 41 51.9	+2.3
KMI				PP			PP	17 42 50.3	-3.8
KMI				PPP				17 43 05.1	
KMI				S			**S**	**17 46 51.6**	**+3.4**
KMI				XS			sS	17 46 59.0	+1.2
KMI				SS			SS	17 48 36.9	-25
KMI				SSS				17 48 59.1	
KMI				LR			LR		
	comp=N,2μm,10.6s,MS5.2								
KMI				LR			LR		
	comp=E,1μm,10.9s,MS5.2								
KMI				LR			LR		
	comp=Z,3μm,11.1s,MS5.1								
KMI	**Kunming**	**31.07**	**355**	P			**P**	**17 41 47.5**	**+3.8**
KMI				*SP			sP	17 41 53.6	+1.6
KMI								17 42 50.2	
KMI				PPP				17 43 05.1	
KMI				S			**S**	**17 46 51.6**	**+3.4**
KMI				MLR			MLR		
	comp=Z,3μm,11.1s,MS5.1								
KMI	**Kunming**	**31.07**	**355**	P			**P**	**17 41 47.5**	**+3.8**
KMI				pP			pP	17 41 51.9	+2.3
KMI				sP			sP	17 41 53.6	+1.6
KMI				PP			PP	17 42 50.2	-3.9
KMI				PPP				17 43 05.1	
KMI				S			**S**	**17 46 51.6**	**+3.4**
KMI				sS			sS	17 46 59.0	+1.2
KMI				SS			SS	17 48 36.9	-25
KMI				SSS				17 48 59.1	
KMI				LR			LR		
	comp=Z,3μm,11.1s,MS5.1								
WRA	**Warramunga Arr**	**31.32**	**119**	P			**P**	**17 41 44.9**	**-1.1**
	comp=Z,23nm,0.8s,mb5.1,baz=296,slow=9.6,SNR=69								
WRA				PcP			PcP	17 44 40.1	0.0
	comp=Z,3.9nm,0.8s,baz=294,slow=2.3,SNR=8.5								
WRAB	**Tennant Creek**	**31.32**	**119**	P			**P**	**17 41 45.6**	**-0.5**
	comp=Z,285nm,0.8s,mb6.2,SNR=21								
WRAB	**Tennant Creek**	**31.32**	**119**	*eP*			**P**	**17 41 44.9**	**-1.2**
WRAB				pmax			pmax		
	comp=Z,36nm,0.8s,mb5.2								
WRAB	**Tennant Creek**	**31.32**	**119**	*eP*			**P**	**17 41 44.9**	**-1.2**
	comp=Z,36nm,0.8s,mb5.3								
WB2	**Warramunga Arr**	**31.33**	**119**	*eP*			**P**	**17 41 44.5**	**-1.6**
WB2				*e*PcP			PcP	17 44 40.7	+0.6
WB2				*e*S			S	17 46 16.8	-36
GYA	**Guiyang**	**32.31**	**2**	P			**P**	**17 41 55.3**	**+0.7**
GYA				AP			pP	17 42 01.3	+0.8
GYA				PP			PP	17 43 03.8	-4.1
GYA				S			**S**	**17 47 08.6**	**+1.0**
GYA				SCP			ScP	17 48 24.5	-1.0
GYA				SS			SS	17 49 03.3	-24
GYA				AMB			AMB		
	comp=Z,30nm,0.8s,mb5.2								
GYA				AMB			AMB		
	comp=Z,190nm,5.8s								
GYA				LR			LR		
	comp=N,2μm,14.8s,MS5.0								
GYA				LR			LR		
	comp=E,660nm,13.7s,MS5.0								
GYA				LR			LR		
	comp=Z,980nm,14.5s,MS4.6								
ASAR	**Alice Springs**	**32.53**	**126**	P			**P**	**17 41 55.9**	**-0.7**
	comp=Z,25nm,1.1s,mb5.1,baz=299,slow=7.9,SNR=109								
ASAR				PcP			PcP	17 44 43.6	+0.3
	comp=Z,6.2nm,0.9s,baz=310,slow=2.4,SNR=13								
ASAR				S			**S**	**17 47 09.6**	**-1.5**
	comp=Z,2.2nm,1.1s,baz=296,slow=15,SNR=4.7								
CD2	**Chengdu**	**36.76**	**358**	P			**P**	**17 42 33.3**	**+0.2**
CD2				PP			PP	17 43 59.6	+2.6
CD2				S			**S**	**17 48 17.4**	**+1.3**
CD2				SS			SS	17 50 46.8	-11
CD2				AMB			AMB		
	comp=Z,10.0nm,0.7s,mb4.8								
CD2				AMB			AMB		
	comp=Z,120nm,8.4s								
CD2				LR			LR		
	comp=N,1μm,12.0s,MS5.2								
CD2				LR			LR		
	comp=E,1μm,10.8s,MS5.2								
CD2				LR			LR		
	comp=Z,2μm,9.6s								
WHN	**Wuhan**	**37.35**	**13**	*eP*			**P**	**17 42 43.6**	**+5.5**
COEN	**Coen**	**37.96**	**105**	*eP*			**P**	**17 42 42.1**	**-1.4**
	comp=Z,51nm,1.1s,mb5.2								
LSA	**Lhasa**	**38.07**	**340**	*eP*			**P**	**17 42 44.1**	**-0.1**
LSA				pmax			pmax		
	comp=Z,8.0nm,0.8s,mb4.5								
LSA	**Lhasa**	**38.07**	**340**	*eP*			**P**	**17 42 44.1**	**-0.1**
	comp=Z,8.2nm,0.8s,mb4.5								
NJ2	**Nanjing**	**39.97**	**18**	*eP*			**P**	**17 43 00.3**	**+0.2**
NJ2				AP			pP	17 43 05.6	-0.4
NJ2				PP			PP	17 44 35.8	+3.6
NJ2				S			**S**	**17 49 05.0**	**+0.4**
NJ2				AMB			AMB		
	comp=Z,50nm,1.0s,mb5.2								
NJ2				AMB			AMB		
	comp=Z,1μm,3.8s								
NJ2				LR			LR		
	comp=N,110nm,10.0s								
NJ2				LR			LR		
	comp=E,180nm,9.9s								
NJ2				LR			LR		
	comp=Z,2μm,11.4s,MS5.1								
XAN	**Xi'an**	**39.98**	**5**	P			**P**	**17 43 01.5**	**+1.3**
XAN				AP			pP	17 43 09.0	+2.9
XAN				XP			sP	17 43 12.8	+4.3
XAN				AMB			AMB		
	comp=Z,11nm,0.9s,mb4.6								
XAN				AMB			AMB		
	comp=Z,118nm,4.0s								
XAN				LR			LR		
	comp=E,265nm,9.3s								
XAN				LR			LR		
	comp=Z,274nm,9.3s								
PMG	**Port Moresby**	**41.48**	**97**	*d iP*			**P**	**17 43 12.0**	**-0.9**
LZH	**Lanzhou**	**41.91**	**358**	*eP*			**P**	**17 43 12.0**	**-4.0**
LZH				*SP			pP	17 43 19.1	-2.9
LZH								17 44 52.8	
LZH				*e*S			**S**	**17 49 28.5**	**-4.9**
LZH				*e*SS			SS	17 52 31.9	-8.7
LZH				pmax			pmax		
	comp=Z,31nm,1.3s,mb4.8								
LZH				MLR			MLR		
	comp=Z,1μm,15.5s,MS4.8								
LZH	**Lanzhou**	**41.91**	**358**	*eP*			**P**	**17 43 12.0**	**-4.0**
	comp=Z,31nm,1.3s,mb4.8								
LZH				pP			pP	17 43 16.6	-5.4
LZH				sP			sP	17 43 19.1	-5.3
LZH				PP			PP	17 44 52.8	-0.5
LZH				*e*S			**S**	**17 49 28.5**	**-4.9**
LZH				sS			sS	17 49 37.7	-5.6
LZH				*e*SS			SS	17 52 31.9	-8.7
LZH				LR			LR		
	comp=Z,1μm,15.5s,MS4.8								
CTA	**Charters Tower**	**42.02**	**113**	*eP*			**P**	**17 43 17.3**	**0.0**
CTA				*e*PCP			PcP	17 45 15.5	+3.2
CTA	**Charters Tower**	**42.02**	**113**	P			**P**	**17 43 16.1**	**-1.1**
	comp=Z,24nm,1.0s,mb4.8,baz=282,slow=8.5,SNR=11								
CTAO	**Charters Tower**	**42.02**	**113**	*eP*			**P**	**17 43 16.8**	**-0.5**
CTAO				pmax			pmax		
	comp=Z,56nm,1.1s,mb5.1								
CTAO	**Charters Tower**	**42.02**	**113**	*eP*			**P**	**17 43 16.8**	**-0.4**
	comp=Z,56nm,1.1s,mb5.1								
STKA	**Stephens Creek**	**42.45**	**132**	*eP*			**P**	**17 43 20.2**	**-0.4**
STKA				*e*PCP			PcP	17 45 13.1	-0.4
STKA	**Stephens Creek**	**42.45**	**132**	P			**P**	**17 43 20.5**	**-0.1**
	comp=Z,52nm,0.8s,mb5.2,baz=304,slow=8.0,SNR=50								
STKA				LR			LR	18 02 50.1	
	comp=Z,164nm,19.9s,MS3.9,baz=312,slow=39								
GTA	**Gaotai**	**45.50**	**354**	*eP*			**P**	**17 43 44.9**	**0.0**
GTA				PP			PP	17 45 32.1	+0.4
GTA				S			**S**	**17 50 25.9**	**+0.1**
GTA				AMB			AMB		
	comp=Z,6.0nm,1.0s,mb4.5								
GTA				AMB			AMB		
	comp=Z,106nm,3.9s								
GTA				LR			LR		
	comp=N,358nm,15.2s,MS4.7								
GTA				LR			LR		
	comp=E,410nm,11.6s,MS4.7								
GTA				LR			LR		
	comp=Z,410nm,17.0s								
BJI	**Beijing**	**46.90**	**11**	P			**P**	**17 43 56.5**	**+0.7**
BJI				S			**S**	**17 50 49.8**	**+4.0**
BJI				AMB			AMB		
	comp=Z,6.0nm,0.5s,mb4.8								
BJI				AMB			AMB		
	comp=Z,92nm,4.0s								
BJI				LR			LR		
	comp=N,559nm,12.8s,MS4.8								
BJI				LR			LR		
	comp=E,344nm,13.8s,MS4.8								
BJI				LR			LR		
	comp=Z,255nm,14.3s,MS4.3								
BJI	**Beijing**	**46.90**	**11**	P			**P**	**17 43 56.5**	**+0.7**
	comp=Z,6.0nm,0.5s,mb4.8								
BJI				S			**S**	**17 50 49.7**	**+3.9**
BJI				SS			SS	17 54 19.1	+6.2
BJI				LR			LR		
	comp=Z,260nm,14.3s,MS4.3								
HHC	**Hu-ho-hao-te**	**46.98**	**6**	*eP*			**P**	**17 43 56.8**	**+0.3**
HHC				PCP			PcP	17 45 28.8	+0.1
HHC				PP			PP	17 45 47.1	-0.2
HHC				SCP			ScP	17 49 21.0	-0.8
HHC				PCS			PcS	17 49 23.4	-0.2
HHC				S			**S**	**17 50 47.4**	**+0.4**
HHC				SCS			ScS	17 53 48.3	-1.8
HHC				SS			SS	17 54 07.3	-7.0
HHC				AMB			AMB		
	comp=Z,18nm,0.6s,mb5.2								
HHC				AMB			AMB		
	comp=Z,151nm,6.1s								
HHC				LR			LR		
	comp=N,551nm,13.6s,MS4.8								
HHC				LR			LR		
	comp=E,405nm,13.9s,MS4.8								
HHC				LR			LR		
	comp=Z,460nm,13.4s,MS4.6								
KSRS	**Korea Array**	**48.08**	**24**	P			**P**	**17 44 05.1**	**0.0**
	comp=Z,8.0nm,1.0s,mb4.7,baz=205,slow=7.7,SNR=17								
KSRS				PcP			PcP	17 45 34.4	+1.6
	comp=Z,2.1nm,1.0s,baz=199,slow=4.2,SNR=5.7								
TOO	**Toolangi**	**48.08**	**137**	*eP*			**P**	**17 44 07.7**	**+2.5**
ARMA	**Armidale**	**49.68**	**125**	*eP*			**P**	**17 44 20.3**	**+2.7**
CNB	**Canberra Magne**	**49.79**	**132**	*eP*			**P**	**17 44 19.5**	**+1.2**
WMQ	**Urumqi**	**52.14**	**344**	P			**P**	**17 44 34.8**	**-1.0**
WMQ				PCP			PcP	17 45 46.0	-1.5
WMQ				*e*S			**S**	**17 51 57.0**	**-2.1**
WMQ				AMB			AMB		
	comp=Z,20nm,1.2s,mb4.9								
WMQ				AMB			AMB		
	comp=Z,191nm,7.0s								
WMQ				LR			LR		
	comp=N,267nm,15.8s,MS4.6								
WMQ				LR			LR		
	comp=E,354nm,15.5s,MS4.6								
WMQ				LR			LR		
	comp=Z,258nm,16.8s,MS4.3								
CN2	**Changchun**	**52.80**	**18**	*eP*			**P**	**17 44 39.6**	**-1.1**
CN2				*e*S			**S**	**17 52 06.8**	**-1.3**
CN2				AMB			AMB		
	comp=Z,20nm,1.0s,mb5.0								
CN2				AMB			AMB		
	comp=Z,270nm,5.0s								
CN2				LR			LR		
	comp=N,270nm,18.0s,MS4.4								
CN2				LR			LR		
	comp=E,210nm,18.0s,MS4.4								
CN2				LR			LR		
	comp=Z,200nm,19.0s,MS4.2								
KBL	**Kabul**	**52.97**	**322**	*eP*			**P**	**17 44 40.4**	**-1.8**
SONM	**Songino Array**	**53.63**	**1**	P			**P**	**17 44 47.2**	**+0.5**
	comp=Z,8.2nm,0.9s,mb4.6,baz=177,slow=8.3,SNR=14								
SONM				PcP			PcP	17 45 54.5	+1.5
	comp=Z,3.2nm,0.8s,baz=177,slow=2.8,SNR=4.4								
SONM				LR			LR	18 10 32.5	
	comp=Z,304nm,18.6s,MS4.4,baz=80,slow=39								
SONM	**Songino Array**	**53.63**	**1**	P			**P**	**17 44 47.2**	**+0.5**
SONM								17 45 54.5	
ULN	**Ulaanbaatar**	**53.68**	**1**	*eP*			**P**	**17 44 46.8**	**-0.3**
ULN				pmax			pmax		
	comp=Z,8.0nm,0.9s,mb4.7								
ULN	**Ulaanbaatar**	**53.68**	**1**	*eP*			**P**	**17 44 46.8**	**-0.2**
	comp=Z,7.8nm,0.9s,mb4.6								
MDJ	**Mudanjiang**	**54.90**	**21**	P			**P**	**17 44 57.3**	**+1.3**
MDJ				PCP			PcP	17 45 58.4	+0.5
MDJ				PP			PP	17 47 02.8	+3.6
MDJ				SCP			ScP	17 49 57.6	+1.9
MDJ				S			**S**	**17 52 40.5**	**+3.9**
MDJ				SS			SS	17 56 20.5	+0.1
MDJ				AMB			AMB		
	comp=Z,14nm,1.6s,mb4.7								
MDJ				AMB			AMB		
	comp=Z,82nm,3.4s								
MDJ				LR			LR		
	comp=N,42nm,15.5s,MS3.9								
MDJ				LR			LR		
	comp=E,71nm,17.4s,MS3.9								
MD

comp=Z,136nm,18.2s,MS4.2,baz=150,slow=38
ZALV PKPPKP 18 15 02.1
comp=Z,0.4nm,0.3s,baz=270,slow=1.5,SNR=6.0
YSS Yuzh-Sakhalins 62.24 28⇑*iP* **P 17 45 46.4 -0.8**
YSS pmax pmax
comp=Z,71nm,1.6s,mb5.5
KRAR Krasnoyarsk 62.68 352⇑*iP* **P 17 45 47.6 -2.3**
KRAR pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
NVS Novosibirsk 63.41 346 *eP* **P 17 45 49.3 -5.5**
BOD Bodaibo 64.01 5 *eP* **P 17 45 56.0 -2.7**
BOD pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
RDF Al-Radifah 65.57 305 *eP* **P 17 46 08.6 -0.9**
baz=305
RDF AMb AMB 17 46 13.8
comp=Z,62nm,1.7s,mb5.4,baz=305
UMR Umm Al-Rimmam 65.68 306 *eP* **P 17 46 09.6 -0.6**
baz=306
UMR AMb AMB 17 46 14.6
comp=Z,73nm,1.4s,mb5.5,baz=306
BVAR Borovoye Array 65.87 338 P **P 17 46 09.3 -1.6**
comp=Z,3.0nm,0.8s,mb4.4,baz=155,slow=7.6,SNR=4.3
BVAR PcP PcP 17 46 41.3 -0.4
comp=Z,4.5nm,1.0s,baz=132,slow=4.4,SNR=4.9
BRVK Borovoye 65.93 338 *eP* **P 17 46 10.1 -1.2**
BRVK pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BRVK Borovoye 65.93 338 *eP* **P 17 46 10.1 -1.2**
comp=Z,8.0nm,1.0s,mb4.7
NAY Al-Naaiem 65.95 306 *eP* **P 17 46 10.6 -1.4**
baz=306
NAY AMb AMB 17 46 14.4
comp=Z,25nm,0.7s,mb5.3,baz=306
MIB Mutribah 66.08 306 *eP* **P 17 46 12.1 -0.7**
baz=306
MIB AMb AMB 17 46 17.8
comp=Z,71nm,1.1s,mb5.6,baz=306
RST Umm Al-Ruwaisa 66.24 306 *eP* **P 17 46 12.2 -1.6**
baz=306
RST AMb AMB 17 46 18.5
comp=Z,56nm,1.1s,mb5.5,baz=306
MAW Mawson 67.85 196 *eP* **P 17 46 23.3 0.0**
MAW Mawson 67.85 196 P **P 17 46 23.8 +0.5**
comp=Z,10nm,1.2s,mb4.8,baz=51,slow=7.6,SNR=12
MAW LR LR 18 08 38.5
comp=Z,107nm,20.2s,MS4.1,baz=256,slow=29
RPZ Rata Peaks 68.33 135 P **P 17 46 27.1 +0.3**
comp=Z,28nm,1.1s,mb5.2,baz=147,slow=8.5,SNR=3.7
RPZ LR LR 18 16 10.6
comp=Z,226nm,18.5s,MS4.4,baz=184,slow=36
AKTK Aktyubinsk 69.49 330 P **P 17 46 32.6 -1.2**
AKTO Aktyubinsk 69.49 330 P **P 17 46 32.6 -1.2**
comp=Z,2.3nm,0.8s,mb4.2,baz=153,slow=6.6,SNR=5.9
YAK Yakutsk 70.39 12 *eP* **P 17 46 35.7 -3.4**
YAK pmax pmax
comp=Z,33nm,1.0s,mb5.2
YAK Yakutsk 70.39 12 *eP* **P 17 46 36.6 -2.5**
comp=Z,32nm,0.9s,mb5.2
URZ Urewera 71.92 128 LR LR 18 16 42.9
comp=Z,116nm,18.3s,MS4.2,baz=234,slow=34
GNI Garni 72.16 315*c iP* **P 17 46 51.5 +1.2**
GNI pmax pmax
comp=Z,51nm,1.7s
GNI Garni 72.16 315 *eP* **P 17 46 50.6 +0.3**
comp=Z,27nm,1.2s,mb5.0
SVE Sverdlovsk 72.48 336⇓*eP* **P 17 46 50.7 -1.1**
SVE *eS* S 17 56 16.3 +1.4
SVE pmax pmax
comp=Z,25nm,1.2s,mb5.0
ARU Arti 73.08 335*d iP* **P 17 46 54.3 -1.1**
ARU *e* 17 47 13.6
ARU *e* 17 49 36.0
ARU *eS* S 17 56 19.1 -2.6
ARU *eSS* SS 18 01 04.8 +1.7
ARU pmax pmax
comp=Z,26nm,1.7s,mb4.9
ARU Arti 73.08 335 *eP* **P 17 46 53.8 -1.5**
comp=Z,16nm,1.1s,mb4.9
PETK Petropavlovsk- 73.52 30 P **P 17 46 57.4 -0.7**
comp=Z,3.5nm,0.7s,mb4.4,baz=260,slow=3.6,SNR=4.0
KIV Kislovodsk 75.11 318⇓*iP* **P 17 47 07.6 0.0**
KIV pmax pmax
comp=Z,31nm,1.0s,mb5.2
KIV Kislovodsk 75.11 318 *eP* **P 17 47 07.0 -0.5**
comp=Z,44nm,1.3s,mb5.2
ASF Jabal al Asfar 75.31 305 P **P 17 47 10.0 +1.1**
comp=Z,13nm,0.9s,mb4.8,baz=326,slow=1.4,SNR=12
SYO Syowa Base 75.88 200⇓*eX* **P 17 47 10.0 -1.5**
SYO Syowa Base 75.88 200⇓*eX* **P 17 47 15.0 +3.5**
MALT Malatya 76.03 312⇓*iP* **P 17 47 15.1 +2.1**
MALT Malatya 76.03 312 *eP* **P 17 47 13.8 +0.9**
comp=Z,32nm,1.2s,mb5.1
LSZ Lusaka 76.15 256 *eP* **P 17 47 14.2 +0.1**
LSZ pmax pmax
comp=Z,15nm,1.2s,mb4.8
LSZ Lusaka 76.15 256 *eP* **P 17 47 14.2 +0.1**
comp=Z,15nm,1.2s,mb4.8
EIL Elat 76.23 302 P **P 17 47 15.4 +1.2**
comp=Z,27nm,1.0s,mb5.1,baz=116,slow=3.7,SNR=11
MMAI Mount Meron Ar 76.76 306 P **P 17 47 18.6 +1.4**
comp=Z,5.2nm,0.6s,mb4.6,baz=84,slow=8.5,SNR=5.9
SOC Sochi 76.95 317 *eP* **P 17 47 18.7 +0.6**
SOC *e* 17 47 27.1
SOC *e**SP sP 17 47 30.3 +3.6
SOC *eS* S 17 57 06.9 +1.5
SOC *e* 17 57 32.7
SOC *eSS* SS 18 01 57.5 -5.1
SOC pmax pmax
comp=Z,26nm,0.9s,mb5.2
SOC MLR MLR
comp=Z,111nm,14.0s,MS4.3
SBA Scott Base 78.29 169 *eP* **P 17 47 25.5 +0.5**
SBA pmax pmax
comp=Z,22nm,1.4s,mb4.9
SBA Scott Base 78.29 169 *eP* **P 17 47 25.5 +0.5**
comp=Z,22nm,1.4s,mb4.9
BOSA Boshof 78.52 242 P **P 17 47 28.5 +1.3**
comp=Z,18nm,1.2s,mb4.9,baz=102,slow=10,SNR=5.8
CSS Prodhromos 78.95 307 *eP* **P 17 47 29.4 +0.1**
comp=Z,52nm,1.1s,mb5.4
VSR Storozhevoye 80.16 324 *eP* **P 17 47 33.7 -1.9**
VSR pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
VSR pmax pmax
comp=N,7.0nm,0.9s
VSR pmax pmax
comp=E,20nm,1.2s
ANTO Ankara 80.68 312 *eP* **P 17 47 39.6 +1.0**
ANTO pmax pmax
comp=Z,40nm,1.4s,mb5.2
ANTO Ankara 80.68 312 *eP* **P 17 47 39.6 +1.0**
comp=Z,40nm,1.4s,mb5.2
SIM Simferopol' 81.20 317 *eP* **P 17 47 41.9 +0.6**
SIM pmax pmax
comp=Z,28nm,0.9s,mb5.2
MOS Moscow 82.73 328 *eP* **P 17 47 50.9 +1.8**
MOS pmax pmax
comp=Z,73nm,1.5s,mb5.5
OBN Obninsk 83.06 327⇑*iP* **P 17 47 49.9 -0.9**
OBN pmax pmax
comp=Z,62nm,1.6s,mb5.4
OBN Obninsk 83.06 327 *eP* **P 17 47 50.1 -0.7**
comp=Z,13nm,0.3s,mb5.4
KLMR Klimovskoe 83.81 333 *eP* **P 17 47 55.4 +0.9**
KLMR pmax pmax
comp=Z,51nm,1.7s,mb5.4
TIRR Tirgusor 84.99 316⇓*iP* **P 17 48 02.9 +2.0**
TIRR Tirgusor 84.99 316⇓*iP* **P 17 48 02.9 +2.0**
HARR Harsova 85.38 316⇑*iP* **P 17 48 04.6 +1.7**
HARR Harsova 85.38 316⇑⇑*P* **P 17 48 04.6 +1.8**
PRD Provadia 85.42 314 *iP* **P 17 48 01.7 -1.4**
JMB Yambol 85.85 313 *iP* **P 17 48 04.4 -0.9**
AKASG Malin Array Be 85.96 322 P **P 17 48 04.7 -0.9**
comp=Z,10nm,0.9s,mb5.1,baz=81,slow=4.4,SNR=19
KIEV Kiev 85.97 322 *eP* **P 17 48 04.6 -1.0**
KIEV pmax pmax
comp=Z,27nm,1.3s,mb5.3
KIEV Kiev 85.97 322 *eP* **P 17 48 04.6 -1.1**
comp=Z,27nm,1.3s,mb5.3
TSUM Tsumeb 86.01 251 *eP* **P 17 48 06.9 +0.3**
comp=Z,13nm,1.1s,mb5.1
VRI Vrincioaia 86.46 317⇑*iP* **P 17 48 09.2 +1.0**
VRI Vrincioaia 86.46 317⇑⇑*P* **P 17 48 09.2 +1.0**
PLOR Plostina 86.51 317⇓*iP* **P 17 48 09.5 +1.0**
KDZ Kurdzhali 86.54 312 *iP* **P 17 48 10.2 +1.5**
MLR Muntele Rosu 86.92 316 P **P 17 48 10.6 +0.1**
comp=Z,48nm,1.0s,mb5.7,baz=112,slow=1.2,SNR=20
MLR Muntele Rosu 86.92 316⇓*iP* **P 17 48 11.5 +1.0**
MLR Muntele Rosu 86.92 316⇓⇓*P* **P 17 48 11.5 +1.1**
RZN Rozhen 87.06 312 *iP* **P 17 48 10.8 -0.4**
VOIR 87.53 316⇓*iP* **P 17 48 13.8 +0.4**
VOIR 87.53 316⇓⇓*P* **P 17 48 13.8 +0.3**
MNK Minsk 87.71 325 *eP* **P 17 48 11.0 -3.0**
MMB Musomiste 87.77 312 *iP* **P 17 48 14.9 +0.2**
BURAR Bucovina Array 87.84 318⇑*iP* **P 17 48 15.3 +0.5**
BUR08 Bucovina Ar. S 87.86 318 *eP* **P 17 48 15.2 +0.2**
JOF Joensuu 88.17 334 *ep* **P 17 48 14.4 -1.6**
comp=Z,25nm,1.2s,mb5.3
KKB Krupnik 88.30 312 *iP* **P 17 48 15.8 -1.3**
VTS Vitosha 88.33 313 *iP* **P 17 48 15.8 -1.5**
VAY Valandovo 88.59 312 *eP* **P 17 48 17.6 -1.0**
LVV L'vov 89.03 320 *eP* **P 17 48 22.8 +2.4**
GZR Gura Zlata 89.10 316⇓*iP* **P 17 48 23.6 +2.8**
GZR Gura Zlata 89.10 316⇓⇓*P* **P 17 48 23.6 +2.8**
VSU Vasula 89.20 329⇑*iP* **P 17 48 20.1 -0.9**
DRGR 89.37 317⇑*iP* **P 17 48 22.7 +0.6**
DRGR 89.37 317⇑⇑*P* **P 17 48 22.7 +0.6**
KRUS Krusevo 89.58 312 *eP* **P 17 48 22.2 -1.0**
KWP Kalwaria 89.84 320 *eP* **P 17 48 24.7 +0.5**
KWP Kalwaria 89.84 320 *eP* **P 17 48 24.7 +0.5**
OHR Ohrid 89.88 311 *eP* **P 17 48 22.3 -2.3**
BZS Buzias 89.94 316⇑*iP* **P 17 48 26.1 +1.3**
BZS Buzias 89.94 316⇑⇑*P* **P 17 48 26.1 +1.4**
UZH Uzhgorod 89.95 319 *eP* **P 17 48 28.0 +3.3**
UZH *e* 17 48 44.7
SNAA Sanae 89.98 197 *eP* **P 17 48 25.5 +1.0**
SNAA *e* pP 17 48 30.7 -0.2
SNAA Sanae 89.98 197 *eP* **P 17 48 25.1 +0.6**
SNAA pmax pmax
comp=Z,29nm,1.2s
SNAA Sanae 89.98 197 *eP* **P 17 48 25.1 +0.6**
comp=Z,29nm,1.2s,mb5.5
KOLS Kolonicke sedl 90.01 319 *eP* **P 17 48 25.7 +0.7**
KAF Kangasniemi 90.21 332 *ep* **P 17 48 24.4 -1.3**
comp=Z,22nm,1.0s,mb5.5,baz=93,slow=4.4
KAF Kangasniemi 90.21 332 *eP* **P 17 48 24.4 -1.3**
KAF pmax pmax
comp=Z,22nm,1.0s,mb5.4
SUW Suwalki 90.28 324 *eP* **P 17 48 25.4 -0.8**
SUW Suwalki 90.28 324 *eP* **P 17 48 25.4 -0.8**
CRVS Cervenica-Dubn 90.53 319 *eP* **P 17 48 28.8 +1.3**
STHS Stebnicka Huta 90.75 319 *eP* **P 17 48 28.8 +0.3**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
STHS Stebnicka Huta 90.75 319 *eP* **P 17 48 28.8 +0.3**
comp=Z,7.4nm,0.9s,mb5.0
PSZ Piszkesteto 91.43 318⇑*iP* **P 17 48 31.7 0.0**
PSZ Piszkesteto 91.43 318⇑⇑*P* **P 17 48 31.7 +0.1**
VNA2 Neumayer--Watz 91.62 198 *eP* **P 17 48 33.3 +1.2**
baz=89,slow=3.1
VNA2 *e* pP 17 48 38.5 -0.1
VNA2 *e* 17 48 41.8
VNA1 Neumayer--Stat 92.00 198 *eP* **P 17 48 35.7 +1.8**
VNA1 *e* pP 17 48 40.4 +0.1
VNA1 *e* 17 48 43.6
PKSM Moragy 92.08 316⇑*iP* **P 17 48 37.4 +2.7**
VNA3 Neumayer Olymp 92.17 197 *eP* **P 17 48 34.5 -0.1**
VNA3 *e* pP 17 48 40.7 -0.4
VNA3 *e* 17 48 44.0
VYHS Vyhne 92.20 318 *eP* **P 17 48 35.4 +0.2**
OKC Ostrava-Krasne 92.80 320 *eP* **P 17 48 40.5 +2.6**
MORC Moravsky Berou 93.18 320⇑*iP* **P 17 48 39.8 +0.1**
MORC Moravsky Berou 93.18 320⇑⇑*P* **P 17 48 39.8 +0.1**
MODS Modra-Piesok 93.22 318 *eP* **P 17 48 38.1 -1.8**
DPC Dobruska-Polom 94.02 320 *eP* **P 17 48 45.3 +1.8**
PVCC Panska Ves 95.15 320 *eP* **P 17 48 51.0 +2.3**
GEC2 GERESS Array S 95.62 318 *eP* **P 17 48 52.7 +1.8**
GERES GERESS Array B 95.62 318 P **P 17 48 50.6 -0.3**
comp=Z,2.3nm,1.1s,mb4.5,baz=106,slow=4.3,SNR=11
HFS Hagfors 96.04 330 P **P 17 48 53.4 +0.8**
comp=Z,7.4nm,0.9s,mb5.1,baz=208,slow=5.0,SNR=6.2
CLL Collm 96.17 321 *e*(P) **P 17 48 57.0 +3.6**
GRA1 Grafenberg Arr 97.27 319 *e*Pdif **P 17 48 57.6 -0.8**
GRF Grafenberg Arr 97.27 319 *eP* **P 17 48 57.6 -0.8**
YKA Yellowknife Ar 116.48 19 PKP PKPdf 17 54 10.8 +1.9
comp=Z,1.7nm,0.7s,baz=291,slow=1.3,SNR=4.7
JCW Jim Creek 121.89 35 *e*PKPdf PKPdf 17 54 19.5 -0.3
ETW Entiat 123.12 35 *e*PKPdf PKPdf 17 54 21.9 -0.2
EDM Edmonton 123.34 27 *e*PKIKP PKPdf 17 54 22.1 -0.3
OD2 Odessa Site #2 124.16 35 *e*PKPdf PKPdf 17 54 24.4 +0.2
RSW Rattlesnake Hi 124.19 36 *e*PKPdf PKPdf 17 54 24.5 +0.2
HAWA Hanford 124.22 36 *e*PKPdf PKPdf 17 54 24.8 +0.5
LNOR Lincton Mounta 125.23 36 *e*PKIKP PKPdf 17 54 26.3 0.0
MOD Modoc 125.99 41 *e*PKPdf PKPdf 17 54 28.6 +0.7
BMO Blue Mountains 126.37 37 *e*PKIKP PKPdf 17 54 30.3 +1.8
WVOR Wild Horse Val 126.81 40 *e*PKIKP PKPdf 17 54 30.0 +0.6
MSO Missoula 127.14 33 *e*PKPdf PKPdf 17 54 29.5 -0.4
EGMT Eagleton 128.54 30 *e*PKPdf PKPdf 17 54 32.8 +0.3
DLMT Dillon 128.78 34 *e*PKPdf PKPdf 17 54 33.2 +0.1
NVAR Mina Array Bea 128.98 44 PKP PKPdf 17 54 35.3 +1.6
comp=Z,4.4nm,1.0s,baz=285,slow=1.5,SNR=14
BOZ Bozeman 129.13 35 *e*PKIKP PKPdf 17 54 34.2 +0.5
MTUM Tungsten Hills 129.29 46 *e*PKPdf PKPdf 17 54 33.7 -0.6
QLMT Earthquake Lak 129.76 34 *e*PKPdf PKPdf 17 54 36.3 +1.4
GCMT Greyclift 130.08 32 *e*PKPdf PKPdf 17 54 36.0 +0.5
REDW Red Top Meadow 131.00 35 *e*PKPdf PKPdf 17 54 38.4 +1.1
PDAR Pinedale Array 132.12 35 PKP PKPdf 17 54 40.5 +1.1
comp=Z,3.4nm,1.1s,baz=48,slow=2.2,SNR=10.0
ULM Lac du Bonnet 132.44 18 PKP PKPdf 17 54 39.3 -0.6
comp=Z,11nm,0.9s,baz=359,slow=2.6,SNR=9.7
RSSD Black Hills 134.11 30 *e*PKIKP PKPdf 17 54 43.6 +0.4
RWWY Rawlins 134.14 34 *e*PKPdf PKPdf 17 54 43.9 +0.6
WUAZ Wupatki 135.24 44 *e*PKPdf PKPdf 17 54 49.8 +4.2
PHWY Pilot Hill 135.37 33 *e*PKPdf PKPdf 17 54 46.6 +0.9
ECSD EROS,Sioux Fal 137.74 24 *e*PKPdf PKPdf 17 54 49.0 -0.4
BNM Barren Site 139.23 42 *e*PKPdf PKPdf 17 54 52.0 -1.0
HRV Adam Dziewonsk 143.57 356 *e*PKIKP PKPdf 17 55 03.7 +3.2
CPUP Villa Florida 143.75 207 PKP PKPdf 17 54 59.9 -1.5
comp=Z,1.5nm,0.6s,baz=132,slow=6.2,SNR=3.9
BINY Binghamton 143.96 2 *e*PKPdf PKPdf 17 55 00.1 -1.2
TXAR Lajitas Array 144.07 46 PKP PKPdf 17 54 59.9 -1.9
comp=Z,10nm,1.0s,baz=281,slow=1.2,SNR=22
CCM Cathedral Cave 144.70 23 *e*PKIKP PKPdf 17 55 00.1 -2.6
FVM French Village 145.08 22 *e*PKIKP PKPdf 17 55 03.4 +0.1
ACSO Alum Creek Sta 145.12 11 *e*PKPdf PKPdf 17 55 02.4 -0.9
PAL Palisades 145.16 359 *e*PKIKP PKPdf 17 55 01.6 -1.8
OLIL Olney 145.21 19 *e*PKPdf PKPdf 17 55 03.9 +0.4
SSPA Standing Stone 145.41 4 *e*PKPbc PKPbc 17 55 02.6 -1.0
BDFB Brasilia 146.00 230 PKPbc PKPbc 17 55 06.5 +0.3
comp=Z,8.9nm,0.7s,baz=85,slow=2.7,SNR=5.9
JCT Junction City 146.03 41 *e*PKP2 PKPbc 17 55 05.5 -0.5
MCWV Mont Chateau 146.18 7 *e*PKPdf PKPdf 17 55 05.5 +0.3
SDMD Soldier's Deli 146.70 3 *e*PKPdf PKPdf 17 55 06.4 +0.4
UALR University of 147.02 27 *e*PKPbc PKPbc 17 55 08.1 -0.6
WVT Waverly 147.66 20 *e*PKIKP PKPdf 17 55 07.3 -0.4
NATX Nacogdoches 148.25 34 *e*PKPbc PKPbc 17 55 11.1 -1.1
ELN Prospectdale 148.44 9 *e*PKPdf PKPdf 17 55 10.1 +1.2
URVA University of 148.49 4 *e*PKPbc PKPbc 17 55 12.0 -0.6
OXF Oxford 148.51 24 *e*PKP2 PKPbc 17 55 11.7 -1.1
TZTN Tazewell 148.53 14 *e*PKPbc PKPbc 17 55 11.2 -1.5
HKT Hockley 148.90 38 *e*PKP2 PKPbc 17 55 14.5 +0.6
SWET Sewanee 149.12 18 *e*PKPbc PKPbc 17 55 12.8 -1.5
CPCT Cooper Cave 149.32 16 *e*PKPbc PKPbc 17 55 12.9 -1.9
TKL Tuckaleechee C 149.32 15 *e*PKP2 PKPbc 17 55 13.6 -1.2
VBMS Vicksburg 149.99 28 *e*PKPbc PKPbc 17 55 16.3 -0.2
LRAL Lakeview Retre 150.75 22 *e*PKPbc PKPbc 17 55 17.4 -1.0
LVC Limon Verde 151.00 191 *e*PKPbc PKPbc 17 55 20.5 +1.3
JSC Jenkinsville 151.21 12 *e*PKIKP PKPbc 17 55 18.2 -1.2
GOGA Godfrey 151.53 16 *e*PKIKP PKPbc 17 55 17.8 -2.3
LPAZ La Paz 156.93 196 PKP PKPdf 17 55 23.3 +1.3
comp=Z,4.3nm,1.2s,baz=124,slow=2.7,SNR=6.3
OTAV Otavalo 173.07 146 *e*PKPdf PKPdf 17 55 36.3 +0.5

IDC 24 17:55:02.9±8.0, 1787S×17826W, h544km±91km, mb2.6/4, mb1 3.0/4, mb1mx2.8/16, mbtmp2.6/4, Error ellipse: s-maj=135.5km s-min=28.8km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.77**	**259**	P		P	18 02 27.8	-0.8
	0.2nm,0.5s,baz=96,slow=6.7,SNR=6.4							
ASAR	**Alice Springs**	**44.93**	**254**	P		P	18 02 30.1	+0.4
	0.9nm,0.5s,baz=88,slow=8.6,SNR=34							
ASAR				PcP		PcP	18 03 59.0	-0.6
	0.2nm,0.8s,baz=99,slow=3.6,SNR=4.3							

NVAR Mina Array Bea 79.30 44 P P 18 06 12.4 +0.1
0.2nm,0.4s,baz=234,slow=7.7,SNR=3.1
TXAR Lajitas Array 85.86 58 P P 18 06 45.9 +0.4
0.3nm,0.8s,baz=239,slow=5.1,SNR=3.5
GERES GERESS Array B 147.61 345 PKPbc PKPbc 18 13 46.0 -0.2
0.3nm,0.5s,baz=19,slow=4.2,SNR=3.2

*ISCJB **24** 18:08:08.3±0.4, 1081N×6226W×003, h86km±6km, Error ellipse: s-maj=5.3km s-min=3.5km az=140.2*
*TRN **24** 18:08:09.8, 1081N×6220W, h82km, MD3.1*
*NEIC **24** 18:08:10.0, 1083N×6221W, h77km, MD3.2(TRN), After TRN.*
*FUNV **24** 18:08:10.1, 1085N×6226W, h75km, MW3.1*
ISC 24 18:08:09.3±0.5, 1082N×003×6226W×003, h78km±6km, n34, σ0°84/54, 10C-3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUIV	**Guiria**	**0.18**	**170**⇑	*eP*		**Pn**	**18 08 21.3**	**+0.4**
GUIV				*eS*		**Sn**	**18 08 29.6**	**+0.2**
TCE	**Chacachacare**	**0.51**	**104**⇑	*eP*		**Pn**	**18 08 23.3**	**+0.3**
TCE				*eS*		**Sn**	**18 08 33.5**	**+0.4**
TRN	**Trinidad (W)**	**0.85**	**102**⇑	*eP*		**Pn**	**18 08 27.0**	**+0.4**
TRN				*eS*		**Sn**	**18 08 38.4**	**-1.0**
TPP	**Pointe-a-Pierr**	**0.94**	**122**	*eP*		**Pn**	**18 08 28.4**	**+0.8**
TPP				*eS*		**Sn**	**18 08 41.5**	**+0.4**
GUNV	**Guanoco**	**0.94**	**226**⇑	*eP*		**Pn**	**18 08 28.7**	**+1.1**
GUNV				*eS*		**Sn**	**18 08 42.1**	**+0.9**
CRUV	**Carupano**	**0.97**	**262**⇓	*iP*		**Pn**	**18 08 28.1**	**+0.1**
CRUV				*eS*		**Sn**	**18 08 40.7**	**-1.2**
ITEV	**Isla Los Testi**	**1.01**	**302**⇑	*eP*		**Pn**	**18 08 28.2**	**-0.2**
ITEV				*eS*		**Sn**	**18 08 42.0**	**-0.7**
TBH	**Brigand Hill**	**1.22**	**106**⇑	*eP*		**Pn**	**18 08 31.5**	**+0.5**
TBH				*eS*		**Sn**	**18 08 46.5**	**-0.6**
GRGR	**Grenville**	**1.43**	**24**	*eP*		**Pn**	**18 08 33.0**	**-0.7**
GRW	**Mount Saint Ca**	**1.45**	**24**⇓	*iP*		**Pn**	**18 08 33.6**	**-0.4**
GRW				*eS*		**Sn**	**18 08 50.5**	**-2.1**
TPR	**Prospect**	**1.50**	**76**	*eS*		**Sn**	**18 08 53.1**	**-0.5**
GRHS	**Sauteurs**	**1.52**	**23**	*eP*		**Pn**	**18 08 35.1**	**+0.2**
GRHS				*eS*		**Sn**	**18 08 53.8**	**-0.3**
BOT	**Bacolet**	**1.55**	**77**	*eP*		**Pn**	**18 08 35.2**	**0.0**
BOT				*eS*		**Sn**	**18 08 54.0**	**-0.8**
GRIC	**Isle de Caille**	**1.60**	**24**	*eP*		**Pn**	**18 08 36.6**	**+0.7**
GRIC				*eS*		**Sn**	**18 08 56.7**	**+0.8**
GRSS	**Sisters**	**1.60**	**23**	*eP*		**Pn**	**18 08 36.8**	**+0.3**
GRSS				*eS*		**Sn**	**18 08 56.8**	**+0.8**
TOSP	**Speyside**	**1.75**	**74**	*eP*		**Pn**	**18 08 37.6**	**-0.4**
TOSP				*eS*		**Sn**	**18 08 58.4**	**-1.2**
GRCU	**Cariacou**	**1.82**	**26**	*eP*		**Pn**	**18 08 39.1**	**+0.3**
GRCU				*eS*		**Sn**	**18 09 01.8**	**+0.6**
ORIV	**Oritupano**	**2.08**	**213**	*eP*		**Pn**	**18 08 42.9**	**+0.6**
PCRV	**Puerto La Cruz**	**2.43**	**255**⇓	*eP*		**Pn**	**18 08 47.3**	**+0.4**
IBAV	**Isla La Blanqu**	**2.48**	**294**⇓	*eP*		**Pn**	**18 08 47.4**	**-0.3**
SVB	**Belmont**	**2.63**	**22**	*eP*		**Pn**	**18 08 51.2**	**+1.5**
SVB				*eS*		**Sn**	**18 09 23.3**	**+2.7**
SVV	**Soufriere Volc**	**2.68**	**22**	*eP*		**Pn**	**18 08 50.3**	**0.0**
SVV				*eS*		**Sn**	**18 09 18.9**	**-3.0**
BHS	**Barnard House**	**2.70**	**24**	*eP*		**Pn**	**18 08 52.0**	**+1.4**
BHS				*eS*		**Sn**	**18 09 22.6**	**+0.4**
SSV	**Crater Summit**	**2.70**	**23**	*eP*		**Pn**	**18 08 51.6**	**+1.0**
SSV				*eS*		**Sn**	**18 09 20.8**	**-1.5**
PRGV	**PARIAGUAN**	**3.12**	**229**	*eP*		**Pn**	**18 08 56.2**	**-0.1**
GURV	**El Guri**	**3.15**	**195**⇑	*eP*		**Pn**	**18 09 56.6**	**-0.1**
CUPV	**Cœpira**	**3.56**	**258**⇑	*eP*		**Pn**	**18 09 02.9**	**+0.7**
BIRV	**Birongo**	**3.96**	**265**	*eP*		**Pn**	**18 09 07.6**	**-0.1**
BIRV				*eS*		**Sn**	**18 09 48.9**	**-4.1**
ORCV	**Isla La Orchil**	**3.99**	**285**	*eP*		**Pn**	**18 09 07.6**	**-0.5**
MERV	**Las Mercedes**	**4.28**	**249**	*eP*		**Pn**	**18 09 11.8**	**-0.2**
LUEV	**Luepa**	**5.01**	**171**	*eP*		**Pn**	**18 09 21.1**	**-0.9**
CAOV	**Caicara del Or**	**5.31**	**229**	*eP*		**Pn**	**18 09 25.6**	**-0.5**
TURV	**Turiamo**	**5.50**	**267**	*eP*		**Pn**	**18 09 28.5**	**-0.2**
BAUV	**El Baul**	**6.00**	**252**⇑	*eP*		**Pn**	**18 09 34.4**	**-1.2**

*NIED **24** 18:09:00, 3160N×14050E, h92km, Mw4.5 Best double couple: M0 7.15000×10^15 NP1:φs331.00000°, δ70.00000°, λ-93.00000°. NP2:φs160.00000°, δ20.00000°, λ-81.00000°.*
*MOS **24** 18:09:47.8±0.7, 3135N×14081E, h117km, mb5.3/25, Error ellipse: s-maj=25.1km s-min=10.6km az=114.6*
*BJI **24** 18:09:50.0, 3150N×14062E, h127km, mB4.8, mb4.5*
*ISCJB **24** 18:09:50.8±0.5, 3139N±003×14033E±005, h106km±3km, mb4.6/51, Error ellipse: s-maj=7.8km s-min=5.0km az=159.4*
*IDC **24** 18:09:51.9±0.6, 3139N×14006E, h98km±5km, mb4.2/25, mb1 4.3/26, mb1mx4.3/31, mbtmp4.2/26, MS3.2/6, Ms1 3.2/6, ms1mx2.8/40, Error ellipse: s-maj=14.9km s-min=6.3km az=76.0*
*NEIC **24** 18:09:51.8±0.3, 3140N×140.16E, mb5.0/23, MW4.5(NIED), Error ellipse: s-maj=8.7km s-min=6.6km az=89.0*
*JMA **24** 18:09:53.1±0.2, 3159N×14053E, h98km±2km, M4.4*
ISC 24 18:09:52.2±0.5, 3142N±003×14036E±005, h107km±3km, h102km±2.8km: pP-P, n162, σ1°06/165, mb4.6/51, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHJ2	**Mitsune**	**1.75**	**345**	P		**Pn**	**18 10 21.4**	**-0.5**
JHJ2				*eS*		**Sn**	**18 10 43.3**	**-1.2**
JHJ	**Hachijo jima 2**	**1.77**	**344**	P		**Pn**	**18 10 21.8**	**-0.3**
	265nm,0.3s,baz=185,slow=8.4,SNR=154							
JHJ				S		**Sn**	**18 10 42.8**	**-2.1**
	792nm,0.3s,baz=82,slow=13,SNR=31							
JMY	**Miyakejima3**	**2.74**	**345**	P		**Pn**	**18 10 34.2**	**-0.5**
JMY				*eS*		**Sn**	**18 11 06.7**	**-0.6**
JKO	**Kozu shima**	**2.95**	**340**	P		**Pn**	**18 10 37.9**	**+0.5**
BSO1	**Boso 1**	**3.27**	**9**	P		**Pn**	**18 10 40.7**	**-1.0**
BSO1				*eS*		**Sn**	**18 11 16.3**	**-3.5**
TK01	**Tokai 1**	**3.31**	**316**	P		**Pn**	**18 10 43.4**	**+1.2**
TK01				*eS*		**Sn**	**18 11 21.9**	**+1.0**
TK02	**Tokai 2**	**3.34**	**320**	P		**Pn**	**18 10 43.9**	**+1.2**
TK02				*eS*		**Sn**	**18 11 23.4**	**+1.7**
JOD2	**Odawara 2**	**3.98**	**345**	P		**Pn**	**18 10 51.0**	**-0.2**
JOD2				*eS*		**Sn**	**18 11 37.1**	**+0.2**
JIE	**Ise**	**4.27**	**315**	P		**Pn**	**18 10 56.2**	**+1.1**
JIE				*eS*		**Sn**	**18 11 43.6**	**-0.4**
JYN	**Shimodo**	**4.34**	**340**	P		**Pn**	**18 10 57.0**	**+0.9**
JWZ	**Kozaga**	**4.46**	**299**	P		**Pn**	**18 10 58.2**	**+0.6**
JWZ				*eS*		**Sn**	**18 11 47.5**	**-0.9**
CBIJ	**Chichi jima**	**4.59**	**159**	P		**Pn**	**18 10 59.8**	**+0.3**
	6.1nm,0.3s,baz=334,slow=19,SNR=21							
CBIJ				S		**Sn**	**18 11 51.4**	**-0.4**
	34nm,0.3s,baz=290,slow=22,SNR=9.6							
CBIJ				LR		LR	18 12 45.7	
	comp=Z,164nm,21.8s,baz=146,slow=37							
CBIJ	**Chichi jima**	**4.59**	**159**	P		**Pn**	**18 11 00.

ASAJ pmax pmax
comp=Z,2.0nm,0.3s
ASAJ smax
comp=N,1.0nm,0.3s
ASAJ MLR MLR
comp=Z,156nm,20.0s
INCN Inchon 12.84 302 *e*P **Pn** **18 12 53.9 +3.2**
comp=Z,30nm,1.1s
YHNB Yeheng 18.05 253 *e*P **P** **18 13 56.3 +1.2**
comp=Z,100nm,1.3s
KLR Kul'dur 18.94 342 *e*P **P** **18 14 02.3 -2.4**
HIA Hailar 23.64 325 *e*P **P** **18 14 51.7 -1.8**
HIA pmax pmax
comp=Z,13nm,1.0s
HIA Hailar 23.64 325 *e*P **P** **18 14 51.7 -1.8**
comp=Z,14nm,1.0s,mb4.2
PETK Petropavlovsk- 25.06 25 P **P** **18 15 07.8 +1.5**
comp=Z,4.3nm,0.7s,mb4.0,baz=188,slow=8.5,SNR=5.2
DAV Davao City (W) 27.89 213 LR LR 18 25 16.1
comp=Z,90nm,18.4s,baz=249,slow=33
ULN Ulaanbaatar 30.16 313 *e*P **P** **18 15 52.1 +0.1**
ULN pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
ULN Ulaanbaatar 30.16 313 *e*P **P** **18 15 52.1 +0.1**
comp=Z,7.9nm,1.0s,mb4.3
SONM Songino Array 30.57 312 P **P** **18 15 55.6 +0.1**
comp=Z,3.3nm,0.7s,mb4.2,baz=105,slow=8.4,SNR=12
SONM LR LR 18 27 58.6
comp=Z,56nm,18.1s,baz=262,slow=36
SONM Songino Array 30.57 312 P **P** **18 15 55.6 +0.1**
SONM LR LR 18 27 58.6
YAK Yakutsk 31.40 350 *e*P **P** **18 16 01.7 -1.0**
YAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
BOD Bodaibo 31.99 333 *e*P **P** **18 16 06.6 -1.3**
BOD pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
ZAK Zakamensk 33.37 315 *e*P **P** **18 16 14.0 -6.1**
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.1
GTA Gaotai 33.77 295 *e*P **P** **18 16 19.3 -4.4**
GTA AMB AMB
comp=Z,2.0nm,1.4s,mb3.8
CHTO Chiang Mai 39.33 261 *e*P **P** **18 17 10.3 -0.8**
CHTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
CHTO Chiang Mai 39.33 261 *e*P **P** **18 17 10.3 -0.8**
comp=Z,5.3nm,0.6s,mb4.5
CM31 Chiang Mai Arr 39.49 261 *e*P **P** **18 17 11.8 -0.6**
comp=Z,1.2nm,0.6s,mb3.9
CMAR Chiang Mai Arr 39.49 261 P **P** **18 17 11.2 -1.2**
comp=Z,3.1nm,0.7s,mb4.2,baz=52,slow=7.6,SNR=32
CMAR PcP PcP 18 19 19.7 +1.5
comp=Z,2.0nm,0.9s,baz=18,slow=1.1,SNR=11
BATI Baumata 44.38 204 P **P** **18 17 50.1 -2.0**
comp=Z,6.9nm,0.4s,mb4.7,baz=63,slow=2.3,SNR=3.5
ZALV Zalesovo Beam 45.23 317 P **P** **18 17 57.3 -1.2**
comp=Z,0.6nm,0.3s,mb3.9,baz=108,slow=9.5,SNR=4.5
ZALV PcP PcP 18 19 37.1 +0.4
comp=Z,7.4nm,0.6s,baz=101,slow=3.5,SNR=20
NVS Novosibirsk 46.25 318 *e*P **P** **18 18 03.4 -3.1**
NVS *e* 18 19 35.9
MK31 Makanchi Array 46.56 307 *e*P **P** **18 18 08.2 -0.9**
MKAR Makanchi Array 46.56 307 P **P** **18 18 08.0 -1.1**
comp=Z,5.9nm,0.5s,mb4.5,baz=89,slow=9.9,SNR=32
MKAR PcP PcP 18 19 42.0 +0.5
comp=Z,1.8nm,0.8s,baz=68,slow=8.0,SNR=3.5
MKAR ScP ScP 18 23 24.9 -0.3
comp=Z,2.6nm,0.7s,baz=105,slow=5.8,SNR=3.1
MKAR Makanchi Array 46.56 307 P **P** **18 18 08.0 -1.1**
MKAR 18 19 42.0
MKAR Makanchi Array 46.56 307 P **P** **18 18 08.0 -1.1**
MKAR PcP PcP 18 19 42.0 +0.5
MKAR ScP ScP 18 23 24.9 -0.3
KURK Kurchatov 48.87 312 P **P** **18 18 25.9 -1.0**
comp=Z,11nm,0.7s,mb4.9,baz=90,slow=7.9,SNR=58
FITZ Fitzroy Crossi 51.23 198 P **P** **18 18 44.5 -0.4**
comp=Z,3.0nm,0.8s,mb4.4,baz=11,slow=7.9,SNR=9.1
WRAB Tennant Creek 51.38 187 *e*P **P** **18 18 45.4 -0.6**
WRAB pmax pmax
comp=Z,13nm,1.3s,mb4.8
WRAB Tennant Creek 51.38 187 *e*P **P** **18 18 45.4 -0.6**
comp=Z,13nm,1.3s,mb4.8
WB2 Warramunga Arr 51.39 187 *e*P **P** **18 18 45.6 -0.5**
WRA Warramunga Arr 51.39 187 P **P** **18 18 45.6 -0.5**
comp=Z,5.0nm,0.7s,mb4.7,baz=3.5,slow=7.6,SNR=86
WRA PcP PcP 18 20 00.8 +1.5
comp=Z,4.4nm,1.0s,baz=2.3,slow=3.8,SNR=6.9
KDAK Kodiak Island 51.93 39 P **P** **18 18 50.3 +0.6**
comp=Z,7.3nm,0.8s,mb4.8,baz=211,slow=5.9,SNR=3.5
KDAK pP pP 18 19 15.4 +0.1
comp=Z,9.9nm,0.8s,baz=193,slow=3.2,SNR=3.2
PPLA Purkeypile 52.32 32 *e*P **P** **18 18 54.8 +2.3**
AML Almayashu 53.23 302 *e*P **P** **18 18 59.7 +0.1**
comp=Z,5.4nm,0.9s,mb4.6
MCK McKinley 53.82 31 *e*P **P** **18 19 04.9 +1.3**
BVAR Borovoye Array 53.83 315 P **P** **18 19 03.1 -0.7**
comp=Z,2.2nm,0.5s,mb4.5,baz=93,slow=7.2,SNR=26
BRVK Borovoye 53.89 315 *e*P **P** **18 19 01.7 -2.5**
BRVK pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BRVK Borovoye 53.89 315 *e*P **P** **18 19 01.7 -2.4**
comp=Z,10.0nm,1.0s,mb4.8
ASAR Alice Springs 55.12 187 P **P** **18 19 13.1 -0.3**
comp=Z,1.8nm,0.6s,mb4.2,baz=14,slow=12,SNR=40
STKA Stephens Creek 62.96 179 P **P** **18 20 08.2 +0.8**
comp=Z,3.0nm,1.0s,mb4.2,baz=328,slow=9.5,SNR=3.9
ARCES ARCESS Array B 68.95 340 P **P** **18 20 46.0 +0.7**
comp=Z,17nm,0.7s,mb5.0,baz=76,slow=7.6,SNR=13
ARE0 ARCESS Array S 68.95 340 *e*P **P** **18 20 46.3 +1.0**
KIV Kislovodsk 73.96 312 *e*P **P** **18 21 15.8 -0.1**
KIV pmax pmax
comp=Z,20nm,1.1s,mb4.8
KIV Kislovodsk 73.96 312 *e*P **P** **18 21 17.7 +1.8**
AKASG Malin Array Be 78.21 323 P **P** **18 21 39.6 -0.2**
comp=Z,10nm,0.8s,mb4.6,baz=46,slow=5.5,SNR=14
KIEV Kiev 78.22 323 *e*P **P** **18 21 39.8 -0.1**
HFS Hagfors 78.84 336 P **P** **18 21 43.2 +0.1**
comp=Z,16nm,0.6s,mb5.0,baz=75,slow=7.8,SNR=10
NOA NORSAR Array B 79.02 337 P **P** **18 21 44.5 +0.4**
comp=Z,14nm,0.7s,mb4.9,baz=44,slow=5.6,SNR=15
NVAR Mina Array Bea 79.10 52 P **P** **18 21 47.5 +2.5**
comp=Z,1.3nm,0.6s,mb3.9,baz=287,slow=5.7,SNR=12
NVAR pP pP 18 22 13.3 +1.0
comp=Z,1.5nm,0.7s,baz=279,slow=6.0,SNR=5.0
NVAR Mina Array Bea 79.10 52 P **P** **18 21 47.5 +2.5**
NVAR pP pP 18 22 13.3 +1.0
PDAR Pinedale Array 82.25 44 P **P** **18 22 03.9 +2.2**
comp=Z,0.6nm,0.8s,mb3.5,baz=258,slow=2.7,SNR=3.2
PDAR pP pP 18 22 30.9 +1.6
comp=Z,1.0nm,0.7s,baz=253,slow=2.4,SNR=4.3
VRI Vrincioaia 82.44 320 S S 18 32 01.9 -8.2
PLOR Plostina 82.49 320 S S 18 32 01.0 -10
KOLS Kolonicke sedl 82.85 324 *e*P **P** **18 22 05.7 +1.1**
STHS Stebnicka Huta 83.04 325 *e*P **P** **18 22 06.8 +1.2**
STHS Stebnicka Huta 83.04 325 *e* **P** **18 22 06.8 +1.2**
MLR Muntele Rosu 83.10 320 P **P** **18 22 05.7 -0.3**
comp=Z,2.1nm,0.5s,mb4.2,baz=327,slow=14,SNR=4.2
MLR Muntele Rosu 83.10 320 S S 18 32 02.4 -14
CRVS Cervenica-Dubn 83.27 324 *e*P **P** **18 22 07.8 +1.0**
OKC Ostrava-Krasne 84.25 327 *e*P **P** **18 22 12.0 +0.2**
MMAI Mount Meron Ar 84.50 305 P **P** **18 22 13.9 +0.6**
comp=Z,14nm,0.9s,mb4.8,baz=64,slow=11,SNR=5.4
DPC Dobruska-Polom 84.74 328 *e*P **P** **18 22 15.0 +0.8**
UPC Upice 84.77 328 *e*P **P** **18 22 15.0 +0.6**
VYHS Vyhne 84.84 325 *e*P **P** **18 22 15.7 +0.9**
VYHS Vyhne 84.84 325 *e* **P** **18 22 15.7 +0.9**
VRAC Vranov 85.34 327 P **P** **18 22 18.0 +0.7**
comp=Z,4.2nm,0.7s,mb4.5,baz=49,slow=8.8,SNR=4.6
VRAC Vranov 85.34 327 P **P** **18 22 18.0 +0.7**
VRAC pmax pmax
comp=Z,4.0nm,0.7s
VRAC Vranov 85.34 327 P **P** **18 22 17.9 +0.7**
PVCC Panska Ves 85.40 329 *e*P **P** **18 22 20.0 +2.5**
CLL Collm 85.52 330 *e*P **P** **18 22 19.0 +0.9**
CLL pmax pmax
comp=Z,23nm,1.4s,mb4.9
CLL Collm 85.52 330 *e*P **P** **18 22 19.0 +0.9**
comp=Z,23nm,1.4s,mb4.9
CLL Collm 85.52 330 *ex* **P** **18 22 19.0 +0.9**
comp=Z,23nm,1.4s,mb4.9
PRU Pruhonice 85.80 328 *e*P **P** **18 22 20.0 +0.5**
PRU Pruhonice 85.80 328 *e*P **P** **18 22 20.0 +0.5**
KHC Kasperske Hory 86.86 328 *e*P **P** **18 22 24.8 +0.1**
KHC Kasperske Hory 86.86 328 *e*P **P** **18 22 24.8 +0.1**
GERES GERESS Array B 87.01 328 P **P** **18 22 24.9 -0.6**
comp=Z,1.0nm,0.6s,mb3.9,baz=46,slow=5.8,SNR=5.0
GERES GERESS Array B 87.01 328 P **P** **18 22 24.9 -0.6**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES GERESS Array B 87.01 328 P **P** **18 22 24.9 -0.6**
DAVOS Davos 90.26 329 P **P** **18 22 41.0 +0.2**
DAVOX Davos/Dischmat 90.27 328 P **P** **18 22 41.0 +0.1**
comp=Z,3.3nm,0.6s,mb4.6,baz=24,slow=12,SNR=5.0
CABF La Chapelle 92.05 330 *e*P **P** **18 22 48.2 -0.9**
LOR Lormes 92.44 332 *e*P **P** **18 22 50.4 -0.5**
comp=Z,41nm,1.4s,mb5.2
LOR Lormes 92.44 332 *e*P **P** **18 22 50.4 -0.5**
LOR pmax pmax
comp=Z,21nm,1.4s,mb5.2
LOR Lormes 92.44 332 *e*P **P** **18 22 50.4 -0.5**
comp=Z,21nm,1.4s,mb5.2
LPL La Plagne 92.63 329 *e*P **P** **18 22 51.7 -0.1**
comp=Z,6.9nm,0.7s,mb4.8
LPL La Plagne 92.63 329 *e*P **P** **18 22 51.7 -0.1**
LPL pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
LPL La Plagne 92.63 329 *e*P **P** **18 22 51.7 -0.1**
comp=Z,3.5nm,0.6s,mb4.9
LPG La Plagne 92.64 329 *e*P **P** **18 22 51.9 0.0**
comp=Z,7.2nm,0.6s,mb4.9
LPG La Plagne 92.64 329 *e*P **P** **18 22 51.9 0.0**
LPG pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
LPG La Plagne 92.64 329 *e*P **P** **18 22 51.9 0.0**
comp=Z,3.6nm,0.6s,mb4.9
SSF Saint Saulge 92.75 332 *e*P **P** **18 22 52.1 -0.2**
comp=Z,9.4nm,0.8s,mb4.8
SSF Saint Saulge 92.75 332 *e*P **P** **18 22 52.1 -0.2**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
SSF Saint Saulge 92.75 332 *e*P **P** **18 22 52.1 -0.2**
comp=Z,4.7nm,0.8s,mb4.9
FLN La Foliniere 92.85 335 *e*P **P** **18 22 51.7 -1.1**
LDF La Druitiere 92.86 335 *e*P **P** **18 22 52.5 -0.3**
comp=Z,15nm,0.7s,mb5.1
LDF La Druitiere 92.86 335 *e*P **P** **18 22 52.5 -0.3**
LDF pmax pmax
comp=Z,8.0nm,0.7s,mb5.2
LDF La Druitiere 92.86 335 *e*P **P** **18 22 52.5 -0.3**
comp=Z,7.7nm,0.7s,mb5.1
SMF Signal de Mont 92.95 332 *e*P **P** **18 22 52.9 -0.4**
comp=Z,18nm,1.0s,mb5.1
SMF Signal de Mont 92.95 332 *e*P **P** **18 22 52.9 -0.4**
SMF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
SMF Signal de Mont 92.95 332 *e*P **P** **18 22 52.9 -0.4**
comp=Z,9.1nm,1.0s,mb5.1
AVF Avril sur Loir 93.03 332 *e*P **P** **18 22 53.4 -0.2**
comp=Z,22nm,0.9s,mb5.2
AVF Avril sur Loir 93.03 332 *e*P **P** **18 22 53.4 -0.2**
AVF pmax pmax
comp=Z,11nm,0.9s,mb5.2
AVF Avril sur Loir 93.03 332 *e*P **P** **18 22 53.4 -0.2**
comp=Z,11nm,0.9s,mb5.2
GRR Gorron 93.30 335 *e*P **P** **18 22 54.9 0.0**
comp=Z,49nm,1.0s,mb5.5
GRR Gorron 93.30 335 *e*P **P** **18 22 54.9 0.0**
GRR pmax pmax
comp=Z,24nm,1.0s,mb5.5
GRR Gorron 93.30 335 *e*P **P** **18 22 54.9 0.0**
comp=Z,24nm,1.0s,mb5.5
BGF Bois d'Agland 93.42 332 *e*P **P** **18 22 55.2 -0.3**
comp=Z,39nm,1.2s,mb5.3
BGF Bois d'Agland 93.42 332 *e*P **P** **18 22 55.2 -0.3**
BGF pmax pmax
comp=Z,19nm,1.2s,mb5.3
BGF Bois d'Agland 93.42 332 *e*P **P** **18 22 55.2 -0.3**
comp=Z,19nm,1.2s,mb5.3
ORIF Oris-en-Rattie 93.47 329 *e*P **P** **18 22 55.3 -0.4**
SBF Sospel 93.61 328 *e*P **P** **18 22 55.1 -1.3**
TCF Toulx Ste Croi 93.89 332 *e*P **P** **18 22 57.5 -0.1**
comp=Z,11nm,0.8s,mb5.0
TCF Toulx Ste Croi 93.89 332 *e*P **P** **18 22 57.5 -0.1**
TCF pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
TCF Toulx Ste Croi 93.89 332 *e*P **P** **18 22 57.5 -0.1**
comp=Z,5.6nm,0.8s,mb5.0
VIVF Saint-Julien-l 94.04 330 *e*P **P** **18 22 57.0 -1.3**
FRF La Foret Royal 94.20 328 *e*P **P** **18 22 57.7 -1.4**
comp=Z,23nm,1.3s,mb5.0
FRF La Foret Royal 94.20 328 *e*P **P** **18 22 57.7 -1.4**
FRF pmax pmax
comp=Z,11nm,1.3s,mb5.0
FRF La Foret Royal 94.20 328 *e*P **P** **18 22 57.7 -1.4**
comp=Z,11nm,1.3s,mb5.0
TXAR Lajitas Array 94.25 52 P **P** **18 23 02.2 +2.6**
comp=Z,1.2nm,0.6s,mb4.4,baz=301,slow=3.4,SNR=19
TXAR pP pP 18 23 27.5 -0.1
comp=Z,2.0nm,0.8s,baz=292,slow=3.0,SNR=5.2
TXAR Lajitas Array 94.25 52 P **P** **18 23 02.2 +2.6**
TXAR pP pP 18 23 27.5 -0.1
MFF Saint Martin d 94.54 334 *e*P **P** **18 23 00.8 +0.2**
comp=Z,20nm,0.9s,mb5.3
MFF Saint Martin d 94.54 334 *e*P **P** **18 23 00.8 +0.2**
MFF pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
MFF Saint Martin d 94.54 334 *e*P **P** **18 23 00.8 +0.2**
comp=Z,10nm,0.9s,mb5.2
RJF Les Rejaudoux 94.98 332 *e*P **P** **18 23 02.7 +0.1**
comp=Z,37nm,1.1s,mb5.4
RJF Les Rejaudoux 94.98 332 *e*P **P** **18 23 02.7 +0.1**
RJF pmax pmax
comp=Z,19nm,1.1s,mb5.4
RJF Les Rejaudoux 94.98 332 *e*P **P** **18 23 02.7 +0.1**
comp=Z,19nm,1.1s,mb5.4
TORD Tordi Ar. Bec 120.54 312 PKP PKPdf 18 28 31.6 -0.3
comp=Z,0.6nm,0.6s,baz=1.8,slow=1.6,SNR=10
BOSA Boshof 124.48 255 PKP PKPdf 18 28 39.7 +0.6
comp=Z,1.8nm,0.7s,baz=114,slow=21,SNR=4.5
BOSA Boshof 124.48 255 PKP PKPdf 18 28 39.7 +0.6
SNAA Sanae 135.13 196 *e*PKiKP PKiKP 18 28 59.6 +0.1
VNA2 Neumayer--Watz 136.69 195 *e* PKPdf 18 28 55.6 -5.3
baz=117,slow=2.1
VNA2 *e* 18 29 03.1
VNA3 Neumayer Olymp 136.92 194 *e* PKPdf 18 28 55.9 -5.4
VNA3 *e* 18 29 03.4
LPAZ La Paz 150.02 66 PKPbc PKPbc 18 29 33.7 +2.9
comp=Z,5.2nm,0.9s,baz=354,slow=2.6,SNR=16
PLCA Paso Flores 153.45 119 PKPbc PKPbc 18 29 38.9 +1.0
comp=Z,0.9nm,0.8s,baz=230,slow=13,SNR=3.0

SZGRF ***24*** *18:12:23.4, 3432N×2405E, h10km, mb4.8, MS4.0, Crete, Greece*
ISCJB ***24*** *18:12:28.3±0.5, 3478N±002×2338E±001, h22km±3km, mb5.0/144, MS4.0/34, Error ellipse: s-maj=2.8km s-min=1.6km az=14.8*
INMG ***24*** *18:12:30.9, 3480N×2320E, h80km, ML5.0*
ATH ***24*** *18:12:30.5, 3475N×2334E, h64km±3km, ML4.6*
NEIC ***24*** *18:12:30.4, 3474N×2336E, h69km, mb4.7/119, After ATH.*
BGS ***24*** *18:12:32.4±1.8, 3464N×2388E, h70km, mb5.2*
IDC ***24*** *18:12:32.2±1.2, 3490N×2343E, h35km±9km, mb4.8/22, mb1 4.8/30, mb1mx4.7/37, mbtmp4.8/30, ML4.8/6, MS4.0/22, Ms1 4.0/22, ms1mx3.8/45, Error ellipse: s-maj=12.5km s-min=8.5km az=160.0*
PDG ***24*** *18:12:33.2±0.2, 3503N×2203E, h11km±11km, ML5.0/10, Error ellipse: s-maj=265.0km s-min=90.9km az=90.0*
MOS ***24*** *18:12:33.4±1.3, 3504N×2338E, h59km, mb5.2/43, Error ellipse: s-maj=4.1km s-min=2.1km az=105.9*
BJI ***24*** *18:12:33.0, 3501N×2313E, h71km, mB5.1, mb5.0, Ms4.7, Msz4.3*
CSEM ***24*** *18:12:34.0±0.1, 3508N×2339E, h60km, mb5.0/55, Ms3.7, Mw3.9, Error ellipse: s-maj=2.0km s-min=1.1km az=178.0*
NIC ***24*** *18:12:35.5±0.3, 3493N×2398E, h50km, mb5.0, ML4.5, MW3.9*
THE ***24*** *18:12:35.0, 3502N×2335E, h77km, ML5.1*
GII ***24*** *18:12:40.4±0.0, 3454N×2434E, h15km, mb4.8/5, ML4.7/5*
HLW ***24*** *18:12:46.6, 3415N×2477E, h22km, Mb4.8*
ISC 24 18:12:31.5±0.4, 3477N±001×2337E±001, h32km±3km, n1021, σ1s27/1087, mb5.0/144, MS4.0/34, 77C-47D, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h	m	s	Res ISC
GVD	**Gavdhos**	**0.60**	**84**	*e*P		**Pb**		**18 12 44.5**			**+0.9**
GVD	**Gavdhos**	**0.60**	**84**	*e*P		**Pb**		**18 12 44.2**			**+0.6**
VAM	**Vamos**	**0.93**	**47**	*i*P		**Pn**		**18 12 49.5**			**+1.1**
VAM				*e*S		**Sn**		**18 13 02.9**			**+2.2**
VAM	**Vamos**	**0.93**	**47**	*i*P		**Pn**		**18 12 50.1**			**+1.7**
VAM				*e*S		**Sn**		**18 13 02.9**			**+2.2**
SIVA	**Sivas**	**1.21**	**78**	*e*Pg		**Pn**		**18 12 55.4**			**+3.2**
SIVA				*e*Sg		**Sn**		**18 13 12.6**			**+5.0**
IDI	**Anoyia**	**1.35**	**67**	Pg		**Pn**		**18 12 56.9**			**+2.7**
	507nm,0.3s,baz=247,slow=12,SNR=629										
IDI				LR		LR		18 13 10.5			
	comp=Z,2μm,21.7s,baz=103,slow=30										
KYTH	**Kithira**	**1.53**	**350**	*i*P		**Pn**		**18 12 58.4**			**+1.8**
LAST	**Lasithi**	**1.78**	**77**	*e*Pb		**Pb**		**18 13 03.3**			**-0.1**
NPS	**Neapolis**	**1.91**	**75**	P		**Pn**		**18 13 05.4**			**+3.6**
VLI	**Veliai**	**1.97**	**350**	*i*P		**Pn**		**18 13 03.5**			**+0.8**
THR6	**Thira Island,**	**2.29**	**46**	*e*Pn		**Pn**		**18 13 08.6**			**+1.6**
THR5	**Thira Island,**	**2.30**	**44**	*e*Pn		**Pn**		**18 13 08.3**			**+1.1**
THR3	**Thira Island,**	**2.33**	**45**	*e*Pn		**Pn**		**18 13 09.1**			**+1.5**
SANT	**Santorini**	**2.34**	**46**	*e*Pn		**Pn**		**18 13 08.9**			**+1.2**
THR1	**Thera Island**	**2.34**	**46**	*e*Pn		**Pn**		**18 13 08.9**			**+1.2**
THR1	**Thera Island**	**2.34**	**46**	*e*Pn		**Pn**		**18 13 08.9**			**+1.2**
ZKR	**Zakros**	**2.37**	**81**	*e*Pn		**Pn**		**18 13 11.2**			**+3.0**
ZKR				*e*Sn		**Sn**		**18 13 40.7**			**+4.6**
PYL	**PYLOS**	**2.49**	**329**	*e*Pn		**Pn**		**18 13 09.8**			**-0.1**
PYL				*e*Sn		**Sn**		**18 13 37.7**			**-1.5**
ITM	**Ithomi**	**2.67**	**335**	*i*P		**Pn**		**18 13 13.1**			**+0.8**
VLX	**Vlachokerasia**	**2.71**	**343**	*e*Pn		**Pn**		**18 13 15.1**			**+2.2**
DID	**Didima**	**2.73**	**358**	*e*Pn		**Pn**		**18 13 13.8**			**+0.7**
DID				*e*Sn		**Sn**		**18 13 42.6**			**-2.4**
APE	**Apeiranthos**	**2.89**	**37**	*e*Pn		**Pn**		**18 13 15.7**			**+0.4**
APE				*e*Sn		**Sn**		**18 13 48.5**			**-0.4**
APE	**Apeiranthos**	**2.89**	**37**	*i*P		**Pn**		**18 13 16.0**			**+0.7**
APE	**Apeiranthos**	**2.89**	**37**	*c i*P		**Pn**		**18 13 15.6**			**+0.3**
APE	**Apeiranthos**	**2.89**	**37**	*e*Pn		**Pn**		**18 13 15.6**			**+0.3**
APE				*e*Sn		**Sn**		**18 13 48.5**			**-0.4**
APE	**Apeiranthos**	**2.89**	**37**	*i*P		**Pn**		**18 13 15.8**			**+0.5**
NAIG	**Nisos Aigina**	**2.98**	**2**	*e*P		**Pn**		**18 13 17.5**			**+0.9**
NAIG	**Nisos Aigina**	**2.98**	**2**	*e*P		**Pn**		**18 13 18.0**			**+1.4**
KVR	**Kavouri**	**3.07**	**6**	*e*P		**Pn**		**18 13 18.5**			**+0.8**
ATH	**Athens Observa**	**3.21**	**5**	*i*P		**Pn**		**18 13 20.9**			**+1.2**
KARP	**Karpathos**	**3.21**	**75**	*i*P		**Pn**		**18 13 21.1**			**+1.4**
LTK	**Loutraki**	**3.26**	**354**	*e*Pn		**Pn**		**18 13 21.4**			**+1.0**
LTK				*e*Sn		**Sn**		**18 13 55.6**			**-2.5**
PTL	**Penteli**	**3.29**	**7**	*e*P		**Pn**		**18 13 22.0**			**+1.1**
RLS	**Riolos of Patr**	**3.62**	**336**	*i*P		**Pn**		**18 13 26.8**			**+1.5**
SLUM		**3.62**	**154**	P		**Pn**		**18 13 27.0**			**+1.6**
SLUM				S		**Sn**		**18 13 57.3**			**-10**
LKR	**Lokris**	**3.88**	**356**	*e*Pn		**Pn**		**18 13 29.4**			**+0.4**
LKR	**Lokris**	**3.88**	**356**	*i*P		**Pn**		**18 13 29.6**			**+0.7**
LKR	**Lokris**	**3.88**	**356**	*i*P		**Pn**		**18 13 29.6**			**+0.7**
KFL	**Anninata**	**3.92**	**329**	*e*Pn		**Pn**		**18 13 30.0**			**+0.4**
BODT	**Bodrum**	**3.93**	**53**	*e*P		**Pn**		**18 13 30.4**			**+0.7**
SMG	**Samos**	**4.06**	**43**	*i*P		**Pn**		**18 13 32.0**			**+0.6**
VLS	**Valsamata**	**4.07**	**327**	*e*Pn		**Pn**		**18 13 31.2**			**-0.3**
VLS	**Valsamata**	**4.07**	**327**	*i*P		**Pn**		**18 13 31.9**			**+0.4**
VLS	**Valsamata**	**4.07**	**327**	*i* P		**Pn**		**18 13 31.3**			**-0.2**
ARG	**Arkhangelos**	**4.14**	**68**	*i*P		**Pn**		**18 13 34.2**			**+1.6**
CHOS	**Chios island**	**4.21**	**30**	*e*Pn		**Pn**		**18 13 34.0**			**+0.6**
CHOS				*e*Sn		**Sn**		**18 14 19.9**			**-1.5**
GCAM	**G?zelcaml?**	**4.28**	**46**	*i* P		**Pn**		**18 13 34.0**			**-0.4**
EVR	**Evrytania**	**4.32**	**344**	*i*P		**Pn**		**18 13 36.6**			**+1.6**
AGG	**Agios Georgios**	**4.32**	**349**	*e*Pn		**Pn**		**18 13 35.6**			**+0.6**
AGG				*e*Sn		**Sn**		**18 14 22.2**			**-2.0**
MLSB	**Milas**	**4.37**	**54**	*e*P		**Pn**		**18 13 36.2**			**+0.6**
AOS	**Alonnisos**	**4.41**	**5**	*e*Pn		**Pn**		**18 13 36.6**			**+0.7**
URLA	**Izmir**	**4.42**	**35**	*i* P		**Pn**		**18 13 37.0**			**+0.6**
LKD	**Levkas**	**4.49**	**332**	*e*Pn		**Pn**		**18 13 37.9**			**+0.5**
NEO	**Neokhori**	**4.53**	**359**	*i*P		**Pn**		**18 13 38.5**			**+0.7**
XOR	**Xorichti**	**4.59**	**358**	*e*Pn		**Pn**		**18 13 39.1**			**+0.5**
YER	**Yerkesik**	**4.63**	**58**	*e*P		**Pn**		**18 13 41.7**			**+2.5**
AYDN	**Tasoluk**	**4.65**	**50**	*i* P		**Pn**		**18 13 41.1**			**+1.6**
BLCB	**Balcova**	**4.66**	**38**	*e*P		**Pn**		**18 13 40.1**			**+0.4**
LJBD	**Adjabya**	**4.68**	**216**	*i* P		**Pn**		**18 13 40.8**			**+0.8**
	SNR=23										
LJBD				*e*S		**Sn**		**18 14 33.0**			**-0.2**
	258nm,0.8s,SNR=23										
TURN	**Turunc**	**4.74**	**62**	*i* P		**Pn**		**18 13 37.4**			**-3.4**
KDAG	**Bornova**	**4.79**	**40**	*i* P		**Pn**		**18 13 41.6**			**+0.1**
HMAT	**Matruh**	**4.83**	**138**	*i*P		**Pn**		**18 13 40.6**			**-1.4**
HMAT				S		**Sn**		**18 14 19.7**			**-17**
THL	**Klokotos Trika**	**4.90**	**348**	*e*Pn		**Pn**		**18 13 43.6**			**+0.6**
THL	**Klokotos Trika**	**4.90**	**348**	*i*P		**Pn**		**18 13 43.6**			**+0.6**
PRK	**Paraskevi**	**5.03**	**27**	*e*Pn		**Pn**		**18 13 45.3**			**+0.5**
PRK	**Paraskevi**	**5.03**	**27**	*i*P		**Pn**		**18 13 45.5**			**+0.7**
PRK	**Paraskevi**	**5.03**	**27**	*i*P		**Pn**		**18 13 45.2**			**+0.4**
PAIG	**Palouri**	**5.15**	**3**	*e*Pn		**Pn**		**18 13 46.8**			**+0.4**
AYVA	**Ayvalik**	**5.25**	**29**	*i* P		**Pn**		**18 13 48.0**			**+0.2**
KSL	**Kastellorizon**	**5.26**	**73**	*e*P		**Pn**		**18 13 49.5**			**+1.6**
JAN	**Janina**	**5.27**	**338**	*i*P		**Pn**		**18 13 48.9**			**+0.9**
MEV	**Metsovon**	**5.28**	**342**	*e*Pn		**Pn**		**18 13 50.2**			**+2.0**
AKAS	**Kas**	**5.29**	**72**	*i* P		**Pn**		**18 13 49.0**			**+0.6**
LIA	**Limnos Island**	**5.32**	**15**	*e*Pn		**Pn**		**18 13 48.7**			**0.0**
LIA	**Limnos Island**	**5.32**	**15**	*i*P		**Pn**		**18 13 48.8**			**+0.1**
LOS	**Limnos**	**5.33**	**14**	*e*Pn		**Pn**		**18 13 49.2**			**+0.4**
IGT	**Igoumenitsa**	**5.33**	**334**	*e*Pn		**Pn**		**18 13 48.4**			**-0.5**
IGT				*e*Sn		**Sn**		**18 14 47.7**			**-1.5**
IGT	**Igoumenitsa**	**5.33**	**334**	*e*Pn		**Pn**		**18 13 48.4**			**-0.5**
IGT				S		**Sn**		**18 14 44.5**			**-4.7**
IGT				*e*Sn		**Sn**		**18 14 47.7**			**-1.5**
IGT	**Igoumenitsa**	**5.33**	**334**	P		**Pn**		**18 13 48.4**			**-0.5**
IGT				S		**Sn**		**18 14 44.5**			**-4.7**
LIT	**Litokhoron**	**5.36**	**353**	*e*Pn		**Pn**		**18 13 49.5**			**+0.2**
AKS	**Akhisar**	**5.43**	**40**	*e*P		**Pn**		**18 13 50.9**			**+0.6**
DNZL	**Cakiroluk**	**5.44**	**56**	*i* P		**Pn**		**18 13 52.8**			**+2.5**
OUR	**Ouranopolis**	**5.57**	**5**	*e*Pn		**Pn**		**18 13 52.8**			**+0.6**
MANT	**Manisa**	**5.58**	**47**	*i* P		**Pn**		**18 13 53.6**			**+1.3**
**

STIP	**Stip**	6.97	353	*i* Pn		Pn	18 14 10.9	-0.5	
STIP				*e*Sn		Sn	18 15 17.8	-12	
STIP	**Stip**	6.97	353	*e*Pn		Pn	18 14 10.9	-0.5	
MTTG	**Motta San Giov**	6.97	300	P		Pn	18 14 10.4	-1.0	
HAVL	**Avola**	7.04	290	P		Pn	18 14 11.6	-0.7	
ULDT	**Uludag**	7.05	39	*i* P		Pn	18 14 14.7	+2.1	
SCLL	**Scilla**	7.07	302	P		Pn	18 14 12.2	-0.6	
TIR	**Tirane**	7.12	338	*e*Pn		Pn	18 14 13.2	-0.3	
TIR	**Tirane**	7.12	338	*e*P		Pn	18 14 12.1	-1.3	
TIR	comp=Z,139nm,0.5s			pmax	pmax				
TIR	**Tirane**	7.12	338	*e*PN		Pn	18 14 13.3	-0.1	
TIR	**Tirane**	7.12	338	*e*P		Pn	18 14 12.1	-1.3	
	comp=Z,138nm,0.5s								
TIR	**Tirane**	7.12	338	*e*Pn		Pn	18 14 13.1	-0.3	
TIR	**Tirane**	7.12	338	*e*P		Pn	18 14 12.1	-1.3	
	comp=Z,138nm,0.5s								
SSY	**Sortino**	7.13	292	P		Pn	18 14 16.8	+3.2	
ATN	**Antennamare**	7.21	300	P		Pn	18 14 16.0	+1.4	
QSH	**Qafa e Shtames**	7.27	339	*e*PN		Pn	18 14 14.0	-1.4	
PHP	**Peshkopia**	7.27	342	*e*PN		Pn	18 14 14.7	-0.8	
HMDC	**Modica**	7.30	290	P		Pn	18 14 16.4	+0.5	
SKO	**Skopje**	7.34	349	*i* Pn		Pn	18 14 16.1	-0.4	
SKO				*e*Sn		Sn	18 15 32.3	-6.4	
SKO	**Skopje**	7.34	349	*e*Pn		Pn	18 14 16.3	-0.2	
SKO	**Skopje**	7.34	349	P		Pn	18 14 16.2	-0.3	
AKMC	**Akamas**	7.37	85	P		Pn	18 14 15.0	-1.9	
PPCY	**Paphos**	7.39	87	P		Pn	18 14 15.8	-1.3	
PLD	**Plovdiv**	7.39	8	*e*Pn		Pn	18 14 18.6	+1.4	
HVZN	**Vizzini**	7.41	291	P		Pn	18 14 18.1	+0.7	
YLV	**Yalova**	7.49	38	*e*P		Pn	18 14 18.4	-0.2	
CTT	**Catalca**	7.51	31	*e*P		Pn	18 14 18.9	0.0	
ADVT	**Abdulvahap**	7.58	40	*e*P		Pn	18 14 21.6	+1.8	
ALFC	**Alevga**	7.59	84	P		Pn	18 14 17.9	-2.0	
ALFC	comp=Z,15nm,0.2s			S		Sn	18 15 38.6	-6.2	
BORA	**Eskisehir**	7.61	46	*i* P		Pn	18 14 20.1	0.0	
ORI	**Oriolo Calabro**	7.62	316	P		Pn	18 14 21.3	+1.0	
ESKT	**Eskisehir**	7.62	49	*i* P		Pn	18 14 22.0	+1.6	
HDMB	**Hadim**	7.72	71	*e*P		Pn	18 14 23.6	+1.9	
VAE	**Valguarnera**	7.73	293	Pn		Pn	18 14 23.3	+1.5	
VAE	comp=Z,4.8nm,0.3s,baz=130,slow=12,SNR=7.6			Sn		Sn	18 15 42.6	-5.6	
VAE	comp=Z,20nm,0.3s,baz=103,slow=3.9,SNR=6.6			LR		LR	18 17 44.4		
VAE	comp=Z,322nm,21.4s,baz=313,slow=40	7.73	293	Sn		Sn	18 15 42.6	-5.6	
PUK	**Puka**	7.75	340	*e*PN		Pn	18 14 20.6	-1.5	
VTS	**Vitosha**	7.81	359	P		Pn	18 14 24.1	+1.2	
SLNA	**Salina**	7.83	301	P		Pn	18 14 24.3	+1.1	
LEF	**Lefka**	7.83	85	*e*P		Pn	18 14 19.0	-4.2	
HRT	**Hereke**	7.83	38	*e*P		Pn	18 14 22.5	-0.7	
SZAC	**Souni-Zanaja**	7.83	87	P		Pn	18 14 21.3	-1.9	
SZAC				S		Sn	18 15 45.0	-5.8	
ULC	**Ulcinj**	7.87	337	⇑*i* Pn		Pn	18 14 20.9	-2.8	
ULC				*e*Sn		Sn	18 15 41.8	-10	
KONT	**Konya--Tatoy**	7.92	64	*e*P		Pn	18 14 26.1	+1.8	
CUC	**Castrocucco**	7.95	313	*e*P		Pn	18 14 23.7	-1.1	
CUC	comp=Z,206nm,0.8s **Castrocucco**	7.95	313	*e*P		Pn	18 14 23.7	-1.1	
	comp=Z,206nm,0.8s								
KIZT	**Kizilcal**	7.96	57	*e*P		Pn	18 14 27.3	+2.3	
KDHN	**Kadinhani**	7.97	59	*i* P		Pn	18 14 22.1	-2.9	
AWBH		7.98	142	⇓P		Pn	18 14 24.6	-0.7	
ERMK	**Ermenek**	7.99	74	*i* P		Pn	18 14 26.9	+1.5	
GULT	**Gulveren**	8.01	43	*e*P		Pn	18 14 26.9	+1.3	
BCI	**Bajram Curri**	8.01	342	*e*PN		Pn	18 14 24.8	-0.8	
LADK	**Ladik-KONYA**	8.01	62	*e*P		Pn	18 14 25.4	-0.3	
JMB	**Yambol**	8.08	17	P		Pn	18 14 30.0	+3.4	
MAMC	**Mammari**	8.10	84	P		Pn	18 14 25.7	-1.2	
BARS	**Barje**	8.12	352	P		Pn	18 14 22.7	-4.5	
CSLB	**Castelbuono**	8.14	296	P		Pn	18 14 28.6	+1.1	
PTRP	**Pietrapertosa**	8.15	317	P		Pn	18 14 27.5	-0.1	
GIB	**Gibilmanna**	8.19	296	P		Pn	18 14 30.1	+2.0	
CSS	**Prodhromos**	8.19	86	P		Pn	18 14 26.5	-1.7	
CSS	comp=Z,5.8nm,0.4s			S		Sn	18 15 53.8	-5.9	
CSS	**Prodhromos**	8.19	86	*e*P		Pn	18 14 25.3	-2.9	
CSS	**Prodhromos**	8.19	86	*e*P		Pn	18 14 24.7	-3.5	
	comp=Z,68nm,0.4s								
SQR		8.23	124	⇓P		Pn	18 14 26.2	-2.4	
PVY	**Plav**	8.25	342	⇓*i* Pn		Pn	18 14 25.6	-1.3	
PVY				*e*Sn		Sn	18 15 53.6	-7.3	
BUM	**Brajici-Budva**	8.29	336	⇓*i* Pn		Pn	18 14 26.7	-2.8	
BUM				*e*Sn		Sn	18 15 51.8	-10	
PDG	**Podgorica**	8.29	338	⇓*i* Pn		Pn	18 14 26.9	-2.6	
TTG	**Podgorica**	8.29	338	⇓*i* Pn		Pn	18 14 26.9	-2.6	
TTG				*e*Sn		Sn	18 15 52.6	-9.4	
LFK	**Lefkose**	8.36	84	*e*P		Pn	18 14 28.9	-1.5	
ACER	**Acerenza**	8.40	318	P		Pn	18 14 26.9	-4.0	
BEY	**Berane**	8.53	343	⇓*i* Pn		Pn	18 14 31.6	-1.1	
IVA	**Berane**	8.53	343	⇓*i* Pn		Pn	18 14 31.6	-1.1	
IVA				*e*Sn		Sn	18 15 59.6	-8.1	
IKL	**Isikli**	8.54	77	*e*P		Pn	18 14 32.1	-0.9	
HCY	**Herceg Novi**	8.55	335	⇓*i* Pn		Pn	18 14 30.2	-2.9	
HCY				*e*Sn		Sn	18 15 56.8	-12	
SGO	**Sicignano**	8.61	314	P		Pn	18 14 33.5	-0.4	
MRLC	**Muro Lucano**	8.63	316	P		Pn	18 14 33.9	-0.3	
KOT	**Kottamia**	8.64	122	⇑P		Pn	18 14 32.2	-2.1	
HFRF	**Wahat Farafira**	8.70	149	*e*P		Pn	18 14 35.4	-0.2	
NKY	**Niksic**	8.72	338	⇓*i* Pn		Pn	18 14 32.7	-2.7	
NKY				*e*Sn		Sn	18 16 02.4	-10	
PHNC	**Paralimni**	8.77	85	P		Pn	18 14 36.5	+0.4	
TREB	**Trebinje**	8.84	335	*e*Pn		Pn	18 14 34.2	-2.9	
SJES	**Sjenica**	8.88	344	*e*Pn		Pn	18 14 35.5	-2.0	
EREN	**Erenkoy**	8.88	82	*e*P		Pn	18 14 39.3	+1.6	
BRY	**Bratogost**	8.94	337	⇑*i* Pn		Pn	18 14 35.3	-3.1	
BRY				*e*Sn		Sn	18 16 07.2	-11	
MEST	**Erdemli**	8.96	75	*i* P		Pn	18 14 39.1	+0.4	
CSSN	**Cassano Irpino**	8.97	315	P		Pn	18 14 38.3	-0.5	
SGKT	**Sivrigoynuk**	9.00	47	*i* P		Pn	18 14 40.8	+1.6	
ZIMR		9.01	9	P		Pn	18 14 49.0	+10	
FGMS	**Monte Sant'Ang**	9.05	322	P		Pn	18 14 38.6	-1.3	
LOD	**Lodumlu**	9.06	53	*e*P		Pn	18 14 43.2	+3.1	
ANTO	**Ankara**	9.07	53	*e*P		Pn	18 14 40.6	+0.4	
ANTO	**Ankara**	9.07	53	⇑*i* P		Pn	18 14 42.2	+2.1	
ANTO	**Ankara**	9.07	53	*e*P		Pn	18 14 43.3	+3.2	
USI	comp=Z,42nm,0.6s **Ustica**	9.07	299	P		Pn	18 14 38.5	-1.7	
MSAG	**Monte S. Angel**	9.07	322	P		Pn	18 14 38.9	-1.3	
PLE	**Pljevlja**	9.08	341	⇑*i* Pn		Pn	18 14 38.5	-1.8	
PLE				*e*Sn		Sn	18 16 12.3	-9.1	
UPM	**Unac-Piva**	9.10	339	⇓*i* Pn		Pn	18 14 39.0	-1.6	
UPM				*e*Sn		Sn	18 16 12.5	-9.4	
FG5	**Orsara di Pugl**	9.11	318	P		Pn	18 14 39.9	-0.8	
SGRT	**San Giovanni R**	9.19	322	P		Pn	18 14 40.2	-1.6	
RGNG	**Rignano Grg**	9.21	321	P		Pn	18 14 40.5	-1.6	
STON	**Ston**	9.21	333	⇑*i* Pn		Pn	18 14 38.8	-3.3	
STON				*e*Sn		Sn	18 16 12.8	-12	
AMAG	**Maghara**	9.26	114	⇓P		Pn	18 14 40.2	-2.6	
MERS	**Mersin**	9.30	74	*e*P		Pn	18 14 44.2	+0.8	
PSB1	**Pescosannita**	9.33	316	P		Pn	18 14 43.5	-0.2	
KAMT	**Kaman**	9.45	58	*e*P		Pn	18 14 47.0	+1.6	
ZAF		9.52	123	⇓P		Pn	18 14 44.3	-2.2	
FG2	**Serracapriola**	9.53	320	P		Pn	18 14 46.2	-0.2	
CIGN	**Sant'Elia a Pi**	9.56	318	P		Pn	18 14 47.6	+0.7	
BBLS	**Lazići**	9.58	343	P		Pn	18 14 44.3	-2.9	
SGG	**Gregorio Mates**	9.68	316	P		Pn	18 14 48.4	-0.1	
ZNM		9.70	121	⇑P		Pn	18 14 46.7	-2.1	
KARA	**Karaisali**	9.79	72	*e*P		Pn	18 14 50.5	+0.5	
RFI	**Roccamonfina**	9.85	314	P		Pn	18 14 50.2	-0.7	
DJES	**Djerdap**	9.90	356	P		Pn	18 14 52.8	+1.3	
MIDA	**Miranda**	9.92	316	P		Pn	18 14 52.7	+0.9	
OFRI	**'Ofer**	9.92	99	Pn		Pn	18 14 50.8	-1.0	
RNI2	**Rionero Sannit**	10.01	316	P		Pn	18 14 54.4	+1.3	
CDAG	**Cicekdag**	10.02	58	*i* P		Pn	18 14 53.0	-0.2	
AVNT	**Avonos**	10.04	63	*i* P		Pn	18 14 50.8	-2.8	
KZIT	**Kziot**	10.05	109	Pn		Pn	18 14 51.9	-1.8	
SLTI	**Sal'it**	10.07	101	Pn		Pn	18 14 51.1	-2.8	
MMB4	**Mount Meron ar**	10.16	97	Pn		Pn	18 14 53.9	-1.3	
MMA0B	**Mount Meron ar**	10.16	97	Pn		Pn	18 14 54.0	-1.2	
MMAI	**Mount Meron Ar**	10.16	97	Pn		Pn	18 14 53.1	-2.0	
MMAI	comp=Z,13nm,0.3s,baz=313,slow=12,SNR=32			Sn		Sn	18 16 41.0	-6.9	
MMC3	comp=Z,25nm,0.3s,baz=297,slow=24,SNR=6.1 **Mount Meron ar**	10.17	97	Pn		Pn	18 14 54.2	-1.1	
BHL	**Bhannes**	10.20	91	*e*Pn		Pn	18 14 54.6	-1.1	
SDI	**San Donato**	10.21	315	P		Pn	18 14 55.7	-0.1	
RTMI	**Retamim**	10.22	108	Pn		Pn	18 14 54.6	-1.3	
CEYT	**Ceyhan**	10.29	74	*e*P		Pn	18 14 56.9	0.0	
MMLI	**Mount Malkishu**	10.32	100	P		Pn	18 14 59.8	+2.4	
MMLI	**Mount Malkishu**	10.32	100	Pn		Pn	18 14 55.4	-2.0	
KSDI	**Kefar Szold**	10.33	95	P		Pn	18 14 58.2	+0.7	
INTR	**Introdacqua**	10.36	317	P		Pn	18 14 59.3	+1.5	
HRI	**Mount Hermon**	10.38	95	Pn		Pn	18 14 56.5	-1.6	
HWQ	**Hawqa**	10.39	89	*e*Pn		Pn	18 14 56.8	-1.5	
RCY	**Rachaya**	10.40	94	*e*Pn		Pn	18 14 55.9	-2.6	
TIRR	**Tirgusor**	10.42	20	⇓*i* P		Pn	18 14 59.5	+0.8	
TIRR	**Tirgusor**	10.42	20	*e*P		Pn	18 14 57.8	-0.9	
VVLD	comp=Z,23nm,0.8s **Villa Vallelon**	10.43	316	P		Pn	18 14 58.8	+0.1	
YTIR	**Yattir**	10.43	106	Pn		Pn	18 14 57.3	-1.5	
KOZT	**Kozan**	10.44	71	*e*P		Pn	18 14 59.1	+0.5	
CORM	**Corum**	10.45	56	*e*P		Pn	18 15 00.8	+2.7	
HMDT	**Nahal Hemdat**	10.46	100	Pn		Pn	18 14 57.4	-1.9	
RMNI	**Mount Ramon**	10.47	110	Pn		Pn	18 14 58.4	-1.0	
KSHT	**Keshet**	10.50	96	Pn		Pn	18 14 59.5	-0.3	
HARR	**Harsova**	10.51	18	⇑*i* P		Pn	18 15 00.6	+0.8	
HARR	**Harsova**	10.51	18	⇑P		Pn	18 15 00.6	+0.7	
HTY	**Hatay**	10.51	79	*e*P		Pn	18 14 54.2	-5.7	
DSI	**Dead Sea**	10.56	104	Pn		Pn	18 14 58.8	-1.9	
GZR	**Gura Zlata**	10.62	358	⇓*i* P		Pn	18 15 00.5	-0.8	
GZR	**Gura Zlata**	10.62	358	P		Pn	18 15 01.0	-0.3	
GZR	**Gura Zlata**	10.62	358	⇓P		Pn	18 15 00.5	-0.8	
MZDA	**Masada**	10.64	106	Pn		Pn	18 15 00.5	-1.3	
PTQR	**Pietraquaria**	10.65	316	P		Pn	18 15 03.5	+1.7	
KRMI	**Paran Flat**	10.66	113	Pn		Pn	18 14 59.7	-2.3	
VOIR		10.73	6	⇑*i* P		Pn	18 15 02.3	-0.6	
VOIR		10.73	6	P		Pn	18 15 05.2	+2.3	
VOIR		10.73	6	⇑P		Pn	18 15 02.3	-0.6	
PRNI	**Paran**	10.76	111	Pn		Pn	18 15 02.0	-1.4	
CTKT	**Corum**	10.77	54	*i* P		Pn	18 15 08.4	+4.9	
FKH	**Fakeheh**	10.77	89	*e*Pn		Pn	18 15 01.0	-2.5	
BNN	**Bunyan**	10.80	64	*e*P		Pn	18 15 05.0	+1.1	
ZFRI	**Zfri**	10.81	110	Pn		Pn	18 15 01.7	-2.4	
MLR	**Muntele Rosu**	10.88	10	Pn		Pn	18 15 04.9	-0.1	
MLR	comp=Z,3.0nm,0.3s,baz=233,slow=5.7,SNR=28 **Muntele Rosu**	10.88	10	⇑*i* P		Pn	18 15 05.3	+0.3	
MLR	**Muntele Rosu**	10.88	10	⇑P		Pn	18 15 05.3	+0.3	
BZS	**Buzias**	10.91	354	P		Pn	18 15 03.3	-2.1	
BZS	**Buzias**	10.91	354	⇓*i* P		Pn	18 15 03.2	-2.2	
BZS	**Buzias**	10.91	354	⇓P		Pn	18 15 03.2	-2.1	
TERO	**Teramo**	10.93	319	P		Pn	18 15 07.6	+2.0	
HRFI	**Mount Harif**	10.94	112	P		Pn	18 15 05.3	-0.5	
HRFI	**Mount Harif**	10.94	112	Pn		Pn	18 15 04.9	-0.9	
MBRI	**Mt Berech**	10.96	114	Pn		Pn	18 15 05.0	-1.1	
FIAM	**Fiamignano**	10.97	316	P		Pn	18 15 08.9	+2.8	
BLY	**Banja Luka**	11.04	336	*e*Pn		Pn	18 15 04.1	-3.0	
BLY	**Banja Luka**	11.04	336	P		Pn	18 15 04.2	-2.9	
EIL	**Elat**	11.05	114	Pn		Pn	18 15 06.2	-1.1	
EIL	comp=Z,9.8nm,0.3s,baz=291,slow=6.0,SNR=46			Sn		Sn	18 17 03.4	-6.5	
EIL	comp=Z,11nm,0.3s,baz=303,slow=22,SNR=8.0 **Elat**	11.05	114	Pn		Pn	18 15 06.2	-1.1	
EIL				Sn		Sn	18 17 03.4	-6.4	
EIL	**Elat**	11.05	114	Pn		Pn	18 15 05.7	-1.6	
AQBJ	**Aqaba**	11.10	114	Pn		Pn	18 15 07.0	-1.0	
PINB	**Pinarbasi**	11.16	66	*i* P		Pn	18 15 10.8	+2.0	
TLCR		11.21	20	⇑*i* P		Pn	18 15 09.1	-0.3	
TLCR		11.21	20	⇑P		Pn	18 15 09.1	-0.3	
KMRS	**Kahramanmaras**	11.28	72	*e*P		Pn	18 15 09.3	-1.4	
HQLS		11.32	116	P		Pn	18 15 09.3	-1.8	
HQLS		11.32	116	P		Pn	18 15 09.3	-1.8	
HQLS				S		Sn	18 17 05.7	-11	
NRCA	**Norcia**	11.34	318	P		Pn	18 15 11.0	-0.2	
PLOR	**Plostina**	11.34	12	⇑*i* P		Pn	18 15 13.9	+2.6	
VRI	**Vrincioaia**	11.37	12	⇓*i* P		Pn	18 15 11.7	0.0	
VRI	**Vrincioaia**	11.37	12	P		Pn	18 15 11.8	+0.1	
VRI	**Vrincioaia**	11.37	12	⇓P		Pn	18 15 11.7	0.0	
GAZ	**Gaziantep**	11.47	74	*e*P		Pn	18 15 11.1	-2.0	
KEST	**Kesra**	11.50	279	Pn		Pn	18 15 12.4	-1.1	
KEST	comp=Z,0.1nm,0.3s,baz=48,slow=14,SNR=3.8			Sn		Sn	18 17 14.6	-6.3	
KEST	comp=Z,0.4nm,0.3s,baz=63,slow=21,SNR=4.3			LR		LR	18 20 41.1		
ASF	comp=Z,203nm,21.0s,baz=172,slow=42 **Jabal al Asfar**	11.60	99	Pn		Pn	18 15 12.8	-2.0	
ASF	comp=Z,2.8nm,0.3s,baz=159,slow=5.8,SNR=22			Sn		Sn	18 17 17.8	-5.3	
CING	comp=Z,1.4nm,0.3s,baz=264,slow=18,SNR=3.6 **Cingoli**	11.66	320	P		Pn	18 15 15.2	-0.5	
SNTG	**Esanatoglia**	11.72	319	P		Pn	18 15 17.7	+1.3	
ASS	**Assisi**	11.74	318	P		Pn	18 15 16.9	+0.1	
NVLJ	**Novalja**	11.76	329	*e*Pn		Pn	18 15 14.9	-2.1	
NVLJ				Sn		Sn	18 17 15.2	-12	
JLOS		11.94	117	P		Pn	18 15 17.4	-2.2	
MURB	**Monte Urbino**	11.95	318	P		Pn	18 15 22.4	+2.9	
PKSM	**Moragy**	11.97	344	P		Pn	18 15 15.8	-4.1	
PKSM	**Moragy**	11.97	344	⇑*i* P		Pn	18 15 15.6	-4.3	
PKSM	**Moragy**	11.97	344	⇑P		Pn	18 15 15.6	-4.3	
SVSK	**Karacayir**	12.00	61	*e*P		Pn	18 15 20.1	-0.1	
DRGR		12.02	358	⇑*i* P		Pn	18 15 19.0	-1.5	
DRGR		12.02	358	⇑P		Pn	18 15 19.0	-1.5	
FSSB	**Fossombrone**	12.10	321	P		Pn	18 15 20.1	-1.6	
CGL	**Cagliari Serpe**	12.13	296	P		Pn	18 15 24.8	+2.7	
BOJS	**Bojanci**	12.38	332	*i* Pn		Pn	18 15 22.4	-3.0	
MALT	**Malatya**	12.62	69	*e*P		Pn	18 15 28.9	+0.2	
MALT	**Malatya**	12.62	69	⇓*i* P		Pn	18 15 30.8	+2.1	
MALT	**Malatya**	12.62	69	*e*P		Pn	18 15 29.5	+0.8	
MALT	comp=Z,21nm,0.8s **Malatya**	12.62	69	*e*P		Pn	18 15 29.5	+0.8	
MALT	comp=Z,21nm,0.8s			P			18 15 32.9		
MALT	**Malatya**	12.62	69	Pn		Pn	18 15 29.5	+0.8	
KNDS	**Knezji Dol**	12.74	330	*i* Pn		Pn	18 15 27.5	-2.9	
SFI	**Santa Sofia**	12.74	319	P		Pn	18 15 31.7	+1.3	
VISS	**Visnje**	12.79	332	*i* Pn		Pn	18 15 27.9	-3.1	
KOGS	**Kog**	12.85	337	P		Pn	18 15 29.5	-2.3	
KIS	**Kishinev**	12.88	17	*e*P		Pn	18 15 32.0	-0.3	
KIS				*e*S		Sn	18 17 54.0	-0.5	
KIS	comp=N,900nm,13.0s			MLR	MLR				
KIS	comp=Z,1µm,13.0s			MLR	MLR				
KIS	comp=Z,1µm,14.0s			MLR	MLR				
KIS	**Kishinev**	12.88	17	*e*P		Pn	18 15 32.0	-0.3	
KIS				*e*S		Sn	18 17 54.0	-0.5	
KIS				*e*Rg			18 20 08.0		
KIS				LRM			18 21 06.0		
BURAR	comp=Z,900nm,13.0s **Bucovina Array**	12.90	6	⇓*i* P		Pn	18 15 33.9	+1.3	
BURAR	**Bucovina Array**	12.90	6	⇓P		Pn	18 15 33.9	+1.3	
BUR08	**Bucovina Ar. S**	12.93	6	*e*P		Pn	18 15 33.9	+0.9	
BUR08	**Bucovina Ar. S**	12.93	6	*e*P		Pn	18 15 33.9	+0.9	
TBKS	**Tabuk**	13.00	117	P		Pn	18 15 31.7	-2.3	
SIM	**Simferopol'**	13.08	36	*e*P			18 15 46.7		
SIM				S		Sn	18 18 03.6	+4.2	
SIM	comp=Z,31nm,0.3s			pmax	pmax				
SIM	comp=Z,610nm,20.4s			MLR	MLR				
LJU	**Ljubljana**	13.11	332	*e*Pn		Pn	18 15 27.4	-8.0	
LJU				P			18 15 32.3		
LJU				*e*Sn		Sn	18 17 54.2	-5.7	
BUD	**Budapest**	13.11	347	⇓*e*P		Pn	18 15 30.8	-4.6	
BUD				*e*S		Sn	18 17 53.4	-6.6	
BUD	**Budapest**	13.11	347	P		Pn	18 15 34.1	-1.3	
DBAS	**Duba**	13.17	121	P		Pn	18 15 34.3	-2.1	
SVRC	**Sivrice-ELAZID**	13.31	70	*e*P		Pn	18 15 39.5	+1.4	
VOY	**Vojsko**	13.35	330	*e*(Pn)		Pn	18 15 35.5	-3.2	
VOY				*e*			18 15 37.2		
VOY				*e*			18 15 49.2		
VOY				*e*Sn		Sn	18 17 54.5	-11	
VOY				*e*			18 17 57.6		
PSZ	**Piszkesteto**	13.39	350	P		Pn	18 15 37.0	-2.2	
PSZ	**Piszkesteto**	13.39	350	⇓*e*P		Pn	18 15 36.6	-2.6	
PSZ	**Piszkesteto**	13.39	350	⇓*i* P		Pn	18 15 36.1	-3.1	
PSZ	**Piszkesteto**	13.39	350	*e*P		Pn	18 15 35.6	-3.6	
SOKA	comp=Z,22nm,0.6s **Soboth**	13.46	335	⇑*i* Pn		Pn	18 15 36.9	-3.2	
SOKA				⇑*i* Sn		Sn	18 17 53.3	-15	
PTK	**Pertek**	13.48	68	*e*P		Pn	18 15 39.6	-0.9	
OBKA	**Obir**	13.49	333	⇑*i* Pn		Pn	18 15 36.8	-3.7	
OBKA	comp=Z,8.8nm,0.3s			⇑*i* Sn		Sn	18 17 58.0	-11	
PGF	comp=Z,21nm,0.5s **Pioggiola**	13.64	309	*e*P		Pn	18 15 43.1	+0.5	
PGF	comp=Z,46nm,1.0s **Pioggiola**	13.64	309	*e*P		Pn	18 15 43.1	+0.5	
PGF				pmax	pmax				
PGF	comp=Z,23nm,1.0s **Pioggiola**	13.64	309	*e*P		Pn	18 15 43.1	+0.5	
ARSA	comp=Z,23nm,1.0s **Arzberg**	13.79	337	⇑Pn		Pn	18 15 40.9	-3.7	
ARSA	comp=Z,9.5nm,0.3s			⇓*i* Sn		Sn	18 18 04.2	-12	
ARSA	comp=Z,4.7nm,0.7s **Arzberg**	13.79	337	P		Pn	18 15 42.7	-2.0	
GMNA	**Gemona**	13.82	329	P		Pn	18 15 46.5	+1.5	
SOP	**Sopron**	13.87	340	*e*P		Pn	18 15 42.2	-3.5	
SOP				*e*			18 17 32.8		
UZH	**Uzhgorod**	13.87	357	*de*P		Pn	18 15 45.0	-0.8	
UZH				*e*S		Sn	18 18 16.3	-2.2	
UZH	**Uzhgorod**	13.87	357	*e*P		Pn	18 15 45.0	-0.8	
PTCC	**Patocco-Chiusa**	13.87	330	P		Pn	18 15 43.0	-2.8	
MYKA	**Terra Mystica**	13.94	331	⇑*i* Pn		Pn	18 15 45.1	-1.6	
MYKA	comp=Z,6.0nm,0.3s			⇑*e*Sn		Sn	18 18 07.9	-12	
VYHS	comp=Z,5.3nm,0.5s **Vyhne**	14.12	348	*e*P		Pn	18 15 57.0	+7.9	
VYHS	**Vyhne**	14.12	348	*e*Pn		Pn	18 15 45.8	-3.3	
VYHS				*e*			18 15 57.0		
KOLS	**Kolonicke sedl**	14.17	357	*e*P		Pn	18 15 54.5	+4.6	
KOLS	**Kolonicke sedl**	14.17	357	*e*P		Pn	18 15 49.0	-0.9	
KOLS				*e*			18 15 54.5		
KOLS	**Kolonicke sedl**	14.17	357	*e*		Pn	18 15 49.0	-0.9	
CRVS	**Cervenica-Dubn**	14.19	355	*e*PN		Pn	18 15 48.9	-1.2	
CRVS	**Cervenica-Dubn**	14.19	355	P		Pn	18 15 49.0	-1.1	
CRVS	**Cervenica-Dubn**	14.19	355	*e*		Pn	18 15 48.9	-1.2	
ZST	**Bratislava**	14.20	343	*e*P		Pn	18 15 57.6	+7.3	
ZST	**Bratislava**	14.20	343	*e*Pn		Pn	18 15 46.0	-4.3	
ZST				*e*			18 15 57.6		
FVI	**Forni Avoltri**

GERES **GERESS Array B** 15.78 336 Pn Pn 18 16 08.1 -3.2
comp=Z,2.2nm,0.3s,baz=160,slow=14,SNR=49
GERES Sn Sn 18 18 53.7 -11
comp=Z,0.8nm,0.3s,baz=154,slow=23,SNR=4.9
GERES ScP ScP 18 24 40.6 -0.8
comp=Z,0.1nm,0.3s,baz=151,slow=3.0,SNR=6.7
GERES **GERESS Array B** 15.78 336 P Pn 18 16 08.1 -3.1
GERES 18 18 53.7
GERES **GERESS Array B** 15.78 336 Pn Pn 18 16 08.1 -3.2
GERES Sn Sn 18 18 53.7 -11
GERES ScP ScP 18 24 40.6 -0.8
DAVOS **Davos** 15.81 324 P Pn 18 16 11.7 +0.1
RETA **Reutte** 15.83 327⇑ *i*Pn Pn 18 16 12.6 +0.7
comp=Z,1.9nm,0.4s
RETA **Reutte** 15.83 327 Pn 18 16 16.9 +5.0
comp=Z,41nm,0.6s
KHC **Kasperske Hory** 16.07 336 *e*P Pn 18 16 11.9 -3.0
KHC *ep*P pP 18 16 18.8 -7.5
KHC *ex* x 18 16 33.5
KHC AMS AMS 18 23 40.0
comp=Z,2µm,20.4s
KHC **Kasperske Hory** 16.07 336 *e*P Pn 18 16 11.9 -3.0
KHC *e* 18 16 18.8
KHC *e* 18 16 33.5
DAVA **Damuels** 16.09 325⇓ *i*Pn Pn 18 16 16.9 +1.7
comp=Z,44nm,0.7s
DAVA ⇑*i*Sn Sn 18 19 04.0 -8.5
comp=Z,21nm,0.6s
FUR **Furstenfeldbru** 16.13 330 *e*P Pn 18 16 18.9 +3.2
FUR pmax pmax
comp=Z,206nm,1.3s
FUR **Furstenfeldbru** 16.13 330 *e*P Pn 18 16 18.9 +3.2
comp=Z,206nm,1.3s
MBDF **Montbardon** 16.15 313 *e*P Pn 18 16 13.9 -2.1
comp=Z,107nm,1.1s
MBDF **Montbardon** 16.15 313 *e*P Pn 18 16 13.9 -2.1
MBDF pmax pmax
comp=Z,54nm,1.1s
MBDF **Montbardon** 16.15 313 *e*P Pn 18 16 13.9 -2.1
comp=Z,54nm,1.1s
WET **Wettzell** 16.32 335 *e*P Pn 18 16 21.0 +2.9
WET pmax pmax
comp=Z,192nm,1.4s
WET **Wettzell** 16.32 335 *e*P Pn 18 16 21.0 +2.9
comp=Z,192nm,1.4s
BNI **Bardonecchia** 16.38 314 *e*P Pn 18 16 20.1 +1.2
BNI pmax pmax
comp=Z,24nm,1.2s
BNI **Bardonecchia** 16.38 314 *e*P Pn 18 16 20.0 +1.1
comp=Z,24nm,1.2s
BNI **Bardonecchia** 16.38 314 *e*P Pn 18 16 20.1 +1.1
comp=Z,24nm,1.2s
DPC **Dobruska-Polom** 16.40 344 *e*P Pn 18 16 16.7 -2.4
DPC *ep*P pP 18 16 22.2 -7.8
DPC AMS AMS 18 23 40.0
comp=Z,1µm,17.1s
DPC **Dobruska-Polom** 16.40 344 *e*P Pn 18 16 16.7 -2.4
DPC *e* 18 16 22.2
KIEV **Kiev** 16.47 13 *e*P Pn 18 16 15.9 -4.2
KIEV pmax pmax
comp=Z,31nm,0.6s
KIEV **Kiev** 16.47 13 *e*P Pn 18 16 15.9 -4.1
comp=Z,31nm,0.6s
AKASG **Malin Array Be** 16.48 13 Pn Pn 18 16 16.5 -3.7
comp=Z,15nm,0.3s,baz=207,slow=9.1,SNR=35
AKBB **Malin Array Si** 16.48 13 *e*P Pn 18 16 17.0 -3.2
AKBB **Malin Array Si** 16.48 13 *e*P Pn 18 16 17.0 -3.2
SMRF **Simiane la Rot** 16.52 309 *e*P Pn 18 16 21.6 +0.9
comp=Z,11nm,0.7s
SMRF **Simiane la Rot** 16.52 309 *e*P Pn 18 16 21.6 +0.9
comp=Z,5.3nm,0.7s
PRU **Pruhonice** 16.52 340 *e*P Pn 18 16 18.0 -2.7
PRU *ex* x 18 16 23.1
PRU AMS AMS 18 23 30.0
comp=Z,2µm,20.1s
PRU **Pruhonice** 16.52 340 *e*P Pn 18 16 18.0 -2.7
PRU *e* 18 16 23.1
LPG **La Plagne** 16.58 315 *e*P Pn 18 16 22.7 +1.2
comp=Z,29nm,0.8s
LPG **La Plagne** 16.58 315 *e*P Pn 18 16 22.7 +1.2
LPG pmax pmax
comp=Z,14nm,0.8s
LPG **La Plagne** 16.58 315 *e*P Pn 18 16 22.7 +1.2
comp=Z,14nm,0.8s
LPL **La Plagne** 16.61 315 *e*P Pn 18 16 22.6 +0.8
comp=Z,14nm,0.6s
LPL **La Plagne** 16.61 315 *e*P Pn 18 16 22.6 +0.8
LPL pmax pmax
comp=Z,7.0nm,0.6s
LPL **La Plagne** 16.61 315 *e*P Pn 18 16 22.6 +0.8
comp=Z,7.2nm,0.6s
UPC **Upice** 16.61 343 *e*P Pn 18 16 22.2 +0.3
UPC *ex* x 18 16 25.0
HAKT **HAKKARI** 16.66 74 *i*P Pn 18 16 24.3 +1.8
ORIF **Oris-en-Rattie** 16.79 312 *e*P Pn 18 16 21.9 -2.2
comp=Z,48nm,1.2s
ORIF *e*MLR MLR
comp=Z,1µm,22.2s
ORIF **Oris-en-Rattie** 16.79 312 *e*P Pn 18 16 21.9 -2.2
ORIF pmax pmax
comp=Z,24nm,1.2s
ORIF **Oris-en-Rattie** 16.79 312 *e*P Pn 18 16 21.9 -2.2
comp=Z,24nm,1.2s
SISB **Singen-Schiene** 16.81 324 P Pn 18 16 25.2 +0.9
KSP **Ksiaz** 16.86 344 *e*P Pn 18 16 28.0 +3.0
KSP **Ksiaz** 16.86 344 *e*P Pn 18 16 23.5 -1.5
KSP *i* 18 16 28.0
KSP *e* 18 16 37.3
HDH **Heidenheim-Cha** 16.91 329 P Pn 18 16 28.0 +2.5
PVCC **Panska Ves** 17.00 341 *e*P Pn 18 16 21.7 -5.0
PVCC *ex* x 18 16 26.4
PVCC AMS AMS 18 23 40.0
comp=Z,1µm,18.7s
PVCC **Panska Ves** 17.00 341 *e*P Pn 18 16 21.7 -5.0
PVCC *e* 18 16 26.4
GUT **Gutenstein** 17.01 326 P Pn 18 16 27.2 +0.3
BUCH **Bad Urach** 17.18 327 P Pn 18 16 29.9 +0.9
SPAK **Spaichingen-Ko** 17.19 325 *e*P Pn 18 16 29.5 +0.4
MANZ **Manzenberg** 17.30 335 *e*P Pn 18 16 32.3 +1.9
comp=Z,65nm,0.8s
GRA1 **Grafenberg Arr** 17.37 333 *e*P Pn 18 16 33.1 +1.7
comp=Z,265nm,1.3s
GRF **Grafenberg Arr** 17.37 333 *e*P Pn 18 16 33.1 +1.7
comp=Z,265nm,1.3s
GRF *e*L 18 24 59.8
comp=Z,779nm,18.0s
BBS **Basel-Blauen** 17.38 322 *e*P Pn 18 16 32.8 +1.4
NKC **Novy Kostel** 17.39 336 *e*P Pn 18 16 26.3 -5.3
NKC *ep*P pP 18 16 31.4 -10
NKC AMS AMS 18 24 30.0
comp=Z,2µm,18.2s
NKC **Novy Kostel** 17.39 336 *e*P Pn 18 16 26.3 -5.3
NKC *e* 18 16 31.4
FELD **Feldberg im Sc** 17.41 323 *e*P Pn 18 16 31.1 -0.7
WERN **Wernitzgruen** 17.46 336 *e*P Pn 18 16 33.6 +1.2
comp=Z,41nm,0.8s
BRG **Berggiesshubel** 17.49 340 *e*P Pn 18 16 33.7 +0.9
comp=Z,93nm,1.4s
ONI **Oni** 17.49 58 P Pn 18 16 35.9 +3.0
STU **Stuttgart** 17.49 327 *e*P Pn 18 16 34.1 +1.3
STU pmax pmax
comp=Z,18nm,0.4s
STU **Stuttgart** 17.49 327 *e*P Pn 18 16 33.2 +0.4
comp=Z,39nm,0.7s
STU **Stuttgart** 17.49 327 *e*P Pn 18 16 34.1 +1.3
comp=Z,18nm,0.4s
STU **Stuttgart** 17.49 327 *e*P Pn 18 16 34.1 +1.3
comp=Z,18nm,0.4s
KIV **Kislovodsk** 17.50 53 Pn Pn 18 16 34.1 +1.1
comp=Z,408nm,0.7s,SNR=11
KIV **Kislovodsk** 17.50 53 *e*P Pn 18 16 33.6 +0.6
KIV *e*S Sn 18 19 47.6 +0.9
KIV pmax pmax
comp=Z,74nm,1.1s
KIV MLR MLR
comp=Z,279nm,13.0s
KIV **Kislovodsk** 17.50 53⇓ *i*P Pn 18 16 33.8 +0.8
KIV **Kislovodsk** 17.50 53 *e*P Pn 18 16 33.1 +0.1
comp=Z,74nm,0.9s
KIV **Kislovodsk** 17.50 53 *e*P Pn 18 16 33.1 +0.1
comp=Z,74nm,0.9s
VIVF **Saint-Julien-I** 17.50 311 *e*P Pn 18 16 33.2 +0.2
comp=Z,39nm,1.1s
VIVF **Saint-Julien-I** 17.50 311 *e*P Pn 18 16 33.2 +0.2
VIVF pmax pmax
comp=Z,20nm,1.1s
VIVF **Saint-Julien-I** 17.50 311 *e*P Pn 18 16 33.2 +0.2
comp=Z,20nm,1.1s
KIZ **Kirchzarten** 17.50 323 P Pn 18 16 32.6 -0.4
GUNZ **Gunzen** 17.54 336 *e*P Pn 18 16 35.3 +1.9
comp=Z,51nm,0.8s
TANN **Tannenbergstha** 17.54 336 *e*P Pn 18 16 35.0 +1.6
comp=Z,36nm,0.8s
BFO **Black Forest** 17.56 325 Pn Pn 18 16 34.7 +1.0
comp=Z,152nm,0.5s,SNR=7.2
BFO **Black Forest** 17.56 325 *e*P Pn 18 16 34.2 +0.5
BFO pmax pmax
comp=Z,14nm,0.6s
BFO **Black Forest** 17.56 325 *e*P Pn 18 16 34.2 +0.5
comp=Z,14nm,0.6s
LBG **Lerchenberg** 17.59 327 P Pn 18 16 36.9 +2.9
CABF **La Chapelle** 17.60 317 *e*P Pn 18 16 30.6 -3.7
comp=Z,26nm,0.8s
CABF **La Chapelle** 17.60 317 *e*P Pn 18 16 30.6 -3.7
CABF pmax pmax
comp=Z,13nm,0.8s
CABF **La Chapelle** 17.60 317 *e*P Pn 18 16 30.6 -3.7
comp=Z,13nm,0.8s
WERD **Werda** 17.62 336 *e*P Pn 18 16 35.9 +1.5
comp=Z,25nm,0.8s
LASF **Ste Croix** 17.67 308 *e*P Pn 18 16 34.1 -1.0
comp=Z,97nm,1.4s
LASF **Ste Croix** 17.67 308 *e*P Pn 18 16 34.1 -1.0
comp=Z,48nm,1.4s
FBE **Freiberg** 17.70 339 *e*P Pn 18 16 36.3 +0.9
comp=Z,102nm,0.8s
EJON **La Jonquera** 17.72 302 P Pn 18 16 35.8 +0.1
comp=Z,13nm,0.9s
EJON **La Jonquera** 17.72 302 P Pn 18 16 35.8 +0.1
comp=Z,13nm,0.9s
SIND **Sindeldorf** 17.75 329 P Pn 18 16 37.0 +1.0
GNI **Garni** 17.79 66 Pn Pn 18 16 37.5 +1.0
comp=Z,1.6nm,0.3s,baz=291,slow=5.3,SNR=8.1
GNI LR LR 18 24 46.5
comp=Z,1µm,18.2s,baz=266,slow=42
GNI **Garni** 17.79 66 *e*P Pn 18 16 36.7 +0.1
GNI pmax pmax
comp=Z,47nm,1.0s
GNI **Garni** 17.79 66 *e*P Pn 18 16 36.7 +0.1
comp=Z,47nm,1.0s
GNI **Garni** 17.79 66 *e*P Pn 18 16 36.7 +0.1
comp=Z,47nm,1.0s
SSB **Saint Sauveur** 17.79 312 *e*P Pn 18 16 33.8 -2.7
MOF **Molkenrain** 17.82 322 *e*P Pn 18 16 36.3 -0.6
HINF **Hinteralfeld** 17.94 322 *e*P Pn 18 16 37.4 -1.0
comp=Z,27nm,0.7s
HINF **Hinteralfeld** 17.94 322 *e*P Pn 18 16 37.4 -1.0
HINF pmax pmax
comp=Z,13nm,0.7s
HINF **Hinteralfeld** 17.94 322 *e*P Pn 18 16 37.4 -1.0
comp=Z,13nm,0.7s
MOX **Moxa** 18.02 335 *e*P Pn 18 16 39.3 -0.1
comp=Z,75nm,1.5s
MOX *e* 18 16 51.7
MOX
comp=Z,500nm,19.0s
MOX **Moxa** 18.02 335 *e*P Pn 18 16 39.8 +0.4
comp=Z,33nm,0.6s
MOX **Moxa** 18.02 335 *e*P Pn 18 16 39.3 -0.1
comp=Z,75nm,1.5s
MOX *e* 18 16 51.7
ECH **Echery** 18.05 323 *e*P Pn 18 16 39.2 -0.6
CDF **Champ du Feu** 18.13 324 *e*P Pn 18 16 38.6 -2.1
comp=Z,54nm,1.0s
CDF **Champ du Feu** 18.13 324 *e*P Pn 18 16 38.6 -2.1
CDF pmax pmax
comp=Z,27nm,1.0s
CDF **Champ du Feu** 18.13 324 *e*P Pn 18 16 38.6 -2.1
comp=Z,27nm,1.0s
TBLG **Delisi** 18.14 61 *e*P Pn 18 16 43.6 +2.7
TBLG **Delisi** 18.14 61 P Pn 18 16 43.6 +2.7
CLL **Collm** 18.15 339 *e*P Pn 18 16 39.7 -1.2
comp=Z,64nm,1.0s
CLL **Collm** 18.15 339 *i*P Pn 18 16 40.0 -0.9
comp=Z,64nm,1.0s
CLL *ep*P pP 18 16 53.0 +3.6
CLL Lm 18 25 00.0
comp=N,1µm,21.1s
CLL Lm 18 25 00.0
comp=E,800nm,20.6s
CLL Lm 18 25 00.0
comp=Z,1µm,21.9s
MTA **Mtatsminda** 18.17 61 P Pn 18 16 43.5 +2.2
SWS **Schriesheim-Wi** 18.24 328 P Pn 18 16 43.0 +1.0
LANF **Langenberg** 18.27 326 *e*P Pn 18 16 43.6 +1.2
TOD **Tromm** 18.28 329 *e*P Pn 18 16 43.6 +1.0
HAU **Haudompre** 18.32 321 *e*P Pn 18 16 42.1 -1.0
comp=Z,29nm,0.6s
HAU *e*MLR MLR
comp=Z,668nm,19.5s
HAU **Haudompre** 18.32 321 *e*P Pn 18 16 42.1 -1.0
HAU pmax pmax
comp=Z,15nm,0.6s
HAU **Haudompre** 18.32 321 *e*P Pn 18 16 42.1 -1.0
comp=Z,15nm,0.6s
KTD **Kalmit** 18.39 327 *e*P Pn 18 16 44.6 +0.8
MTLF **Montolieu** 18.48 304 *e*P Pn 18 16 42.5 -2.5
comp=Z,35nm,1.3s
MTLF **Montolieu** 18.48 304 *e*P Pn 18 16 42.5 -2.5
MTLF pmax pmax
comp=Z,18nm,1.3s
MTLF **Montolieu** 18.48 304 *e*P Pn 18 16 42.5 -2.5
comp=Z,18nm,1.3s
EMIR **Miracle** 18.53 299 P Pn 18 16 45.9 +0.3
comp=Z,40nm,1.2s
EMIR **Micle** 18.53 299 P Pn 18 16 45.9 +0.3
comp=Z,40nm,1.2s
DGRG **David-gareji** 18.53 62 P Pn 18 16 46.6 +0.9
THEF **They Montfort** 18.65 321 *e*P Pn 18 16 47.4 +0.3
EPOB **Poblet** 18.71 297 P Pn 18 16 50.4 +2.6
comp=Z,18nm,1.2s
UBBA **Unterbreizbach** 18.75 333 *e*P Pn 18 16 49.1 +0.9
comp=Z,32nm,1.1s
TNS **Taunus Mts** 18.90 329 *e*P Pn 18 16 50.8 +0.8
TNS pmax pmax
comp=Z,47nm,0.7s
TNS **Taunus Mts** 18.90 329 *e*P Pn 18 16 50.8 +0.8
comp=Z,47nm,0.7s
SMF **Signal de Mont** 18.91 315 *e*P Pn 18 16 47.5 -2.7
comp=Z,18nm,0.7s
SMF **Signal de Mont** 18.91 315 *e*P Pn 18 16 47.5 -2.7
SMF pmax pmax
comp=Z,9.0nm,0.7s
SMF **Signal de Mont** 18.91 315 *e*P Pn 18 16 47.5 -2.7
comp=Z,8.8nm,0.7s
RUE **Ruedersdorf** 18.98 342 *e*P Pn 18 16 49.7 -1.3
comp=Z,131nm,1.2s
RUE **Ruedersdorf** 18.98 342 *e*P Pn 18 16 49.7 -1.2
comp=Z,70nm,0.6s
GKP **Gorka Klasztor** 19.00 349 *e*P Pn 18 16 50.5 -0.6
ABH **Alteburg** 19.04 327 *e*P Pn 18 16 51.3 -0.4
RUP **Ruppelstein** 19.13 326 *e*P Pn 18 16 52.0 -0.8
ERTA **Horta de San J** 19.18 296 P Pn 18 16 54.5 +1.0
comp=Z,32nm,1.4s
ERTA **Horta de San J** 19.18 296 P Pn 18 16 54.5 +1.0
comp=Z,32nm,1.4s
CAF **Calviac** 19.19 308 *e*P Pn 18 16 54.2 +0.6
comp=Z,41nm,1.2s
CAF **Calviac** 19.19 308 *e*P Pn 18 16 54.2 +0.6
CAF pmax pmax
comp=Z,20nm,1.2s
CAF **Calviac** 19.19 308 *e*P Pn 18 16 54.2 +0.6
comp=Z,20nm,1.2s
LOR **Lormes** 19.23 316 *e*P Pn 18 16 52.1 -2.0
comp=Z,39nm,0.9s
LOR *e*MLR MLR
comp=Z,276nm,19.8s
LOR **Lormes** 19.23 316 *e*P Pn 18 16 52.1 -2.0
LOR pmax pmax
comp=Z,20nm,0.9s
LOR **Lormes** 19.23 316 *e*P Pn 18 16 52.1 -2.0
comp=Z,20nm,0.9s
SUW **Suwalki** 19.24 360 *e*P Pn 18 16 51.1 -3.0
AVF **Avril sur Loir** 19.27 315 *e*P Pn 18 16 52.4 -2.1
comp=Z,12nm,0.7s
AVF **Avril sur Loir** 19.27 315 *e*P Pn 18 16 52.4 -2.1
AVF pmax pmax
comp=Z,6.0nm,0.7s
AVF **Avril sur Loir** 19.27 315 *e*P Pn 18 16 52.4 -2.1
comp=Z,6.2nm,0.7s
MEZF **Maizieres J'vi** 19.31 321 *e*P Pn 18 16 55.0 0.0
comp=Z,82nm,0.6s
MEZF **Maizieres J'vi** 19.31 321 *e*P Pn 18 16 55.0 0.0
comp=Z,41nm,0.6s
SSF **Saint Saulge** 19.32 315 *e*P Pn 18 16 53.8 -1.3
comp=Z,36nm,1.0s
SSF **Saint Saulge** 19.32 315 *e*P Pn 18 16 53.8 -1.3
SSF pmax pmax
comp=Z,18nm,1.0s
SSF **Saint Saulge** 19.32 315 *e*P Pn 18 16 53.8 -1.3
comp=Z,18nm,1.0s
BGF **Bois d'Agland** 19.45 313 *e*P Pn 18 16 54.2 -2.5
comp=Z,45nm,1.0s
BGF **Bois d'Agland** 19.45 313 *e*P Pn 18 16 54.2 -2.5
BGF pmax pmax
comp=Z,22nm,1.0s
BGF **Bois d'Agland** 19.45 313 *e*P Pn 18 16 54.2 -2.5
comp=Z,22nm,1.0s
CLZ **Clausthal** 19.45 335 *e*P Pn 18 16 55.4 -1.2
CLZ pmax pmax
comp=Z,36nm,1.0s
CLZ **Clausthal** 19.45 335 *e*P Pn 18 16 55.4 -1.2
comp=Z,36nm,1.0s
WLF **Walferdange** 19.52 325 P Pn 18 16 56.6 -0.9
comp=Z,75nm,1.4s
WLF **Walferdange** 19.52 325 *e*P Pn 18 16 56.2 -1.3
WLF pmax pmax
comp=Z,103nm,1.1s
WLF **Walferdange** 19.52 325 *e*P Pn 18 16 58.9 +1.4
comp=Z,166nm,1.4s
WLF **Walferdange** 19.52 325 *e*P Pn 18 16 56.2 -1.3
comp=Z,103nm,1.1s
WLF **Walferdange** 19.52 325 *e*P Pn 18 16 56.2 -1.3
comp=Z,103nm,1.1s
TAM **Tamanrasset** 19.64 237 *e*P Pn 18 16 58.8 -0.3
TAM **Tamanrasset** 19.64 237 *e*P Pn 18 16 58.8 -0.3
EMOS **Mosqueruela** 19.68 293 P Pn 18 17 00.6 +1.2
comp=Z,29nm,1.3s
EMOS **Mosqueruela** 19.68 293 P Pn 18 17 00.6 +1.2
comp=Z,29nm,1.3s
EPF **Esparros** 19.68 302 *e*P Pn 18 16 59.8 +0.3
comp=Z,26nm,1.0s
EPF **Esparros** 19.68 302 *e*P Pn 18 16 59.8 +0.3
EPF pmax pmax
comp=Z,14nm,1.0s
EPF **Esparros** 19.68 302 *e*P Pn 18 16 59.8 +0.3
comp=Z,14nm,1.0s
RJF **Les Rejaudoux** 19.70 309 *e*P Pn 18 16 58.8 -0.9
comp=Z,26nm,0.9s
RJF *e*MLR MLR
comp=Z,547nm,19.5s
RJF **Les Rejaudoux** 19.70 309 *e*P Pn 18 16 58.8 -0.9
RJF pmax pmax
comp=Z,13nm,0.9s
RJF **Les Rejaudoux** 19.70 309 *e*P Pn 18 16 58.8 -0.9
comp=Z,13nm,0.9s
TCF **Toulx Ste Croi** 19.70 312 *e*P Pn 18 16 58.0 -1.7
comp=Z,9.6nm,0.7s
TCF **Toulx Ste Croi** 19.70 312 *e*P Pn 18 16 58.0 -1.7
TCF pmax pmax
comp=Z,5.0nm,0.6s
TCF **Toulx Ste Croi** 19.70 312 *e*P Pn 18 16 58.0 -1.7
comp=Z,4.8nm,0.7s
EBIE **Bielsa** 19.72 301 P Pn 18 17 00.4 +0.4
comp=Z,33nm,1.2s
EBIE **Bielsa** 19.72 301 P Pn 18 17 00.5 +0.5
comp=Z,33nm,1.2s
VIEF **Viey** 19.86 301 *e*P Pn 18 17 00.1 -1.5
ECHE **Chera** 19.95 291 P Pn 18 17 04.3 +1.6
ECHE pmax pmax
comp=Z,19nm,1.1s
ECHE **Chera** 19.95 291 P Pn 18 17 04.3 +1.6
comp=Z,19nm,1.1s
ECHE **Chera** 19.95 291 P Pn 18 17 04.3 +1.6
comp=Z,19nm,1.1s
MNK **Minsk** 19.97 8⇓ *e*P Pn 18 16 55.0 -7.8
MNK pmax pmax
comp=Z,180nm,1.4s
MNK pmax pmax
comp=N,370nm,1.2s
VSR **Storozhevoye** 20.02 30 *e*P P 18 16 58.6 -2.9
VSR pmax pmax
comp=Z,20nm,1.1s
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,8.0nm,0.6s
LFF **La Frestale** 20.06 307 *e*P P 18 17 02.7 +0.7
comp=E,19nm,0.6s
LFF **La Frestale** 20.06 307 *e*P P 18 17 02.7 +0.7
LFF pmax pmax
comp=Z,9.0nm,0.6s
LFF **La Frestale** 20.06 307 *e*P P 18 17 02.7 +0.7
comp=Z,9.4nm,0.6s
NRDL **Niedersach Rie** 20.09 336 *e*P P 18 17 03.0 +0.8
comp=Z,31nm,0.9s
MEM **Membach** 20.25 327 P P 18 17 05.3 +1.3
comp=Z,25nm,1.0s
ETSF **Etsaut** 20.28 301 *e*P P 18 17 05.0 +0.6
comp=Z,30nm,0.8s
ETSF **Etsaut** 20.28 301 *e*P P 18 17 05.0 +0.6
ETSF pmax pmax
comp=Z,15nm,0.8s
ETSF **Etsaut** 20.28 301 *e*P P 18 17 05.0 +0.6
comp=Z,15nm,0.8s
BUG **Bochum--Univer** 20.31 330 *e*P P 18 17 03.3 -1.3
comp=Z,25nm,0.8s
HGN **Heimansgroeve** 20.39 327 *e*P P 18 17 06.8 +1.3
comp=Z,66nm,0.7s
HGN **Heimansgroeve** 20.39 327 *e*S S 18 21 08.4 +16
VOR **Voronezh** 20.43 29 P P 18 17 06.0 +0.1
VOR pmax pmax
comp=Z,220nm,1.0s
VOR **Voronezh** 20.43 29 P P 18 17 06.0 +0.1
comp=Z,220nm,1.0s
BCLA **Clavier** 20.44 325 P P 18 17 07.8 +1.7
comp=Z,12nm,0.9s
MAK **Makhachkala** 20.45 59 *e*P P 18 17 05.7 -0.5
MAK pmax pmax
comp=Z,410nm,1.3s
MAK MLR MLR
comp=Z,451nm,19.0s,MS3.9
MAK **Makhachkala** 20.45 59 *e*P P 18 17 05.7 -0.5
comp=Z,451nm,19.0s
GIVF **Givet** 20.45 324 *e*P P 18 17 06.8 +0.6
comp=Z,83nm,0.5s
GIVF **Givet** 20.45 324 *e*P P 18 17 06.8 +0.6
GIVF pmax pmax
comp=Z,42nm,0.5s
GIVF **Givet** 20.45 324 *e*P P 18 17 06.8 +0.6
comp=Z,42nm,0.5s
BEBN **Eben Emael** 20.53 327 P P 18 17 09.0 +2.0
DOU **Dourbes** 20.56 324 P P 18 17 07.7 +0.3
comp=Z,25nm,0.8s
RST **Umm Al-Ruwaisa** 20.67 98 *e*P P 18 17 09.2 +0.4
baz=99
RST AMb AMB 18 17 10.5
comp=Z,233nm,0.8s,baz=99
BAIF **Baives** 20.73 323 *e*P P 18 17 09.4 +0.2
comp=Z,140nm,0.5s
BAIF **Baives** 20.73 323 *e*P P 18 17 09.4 +0.2
BAIF pmax pmax
comp=Z,70nm,0.5s
BAIF **Baives** 20.73 323 *e*P P 18 17 09.4 +0.2
comp=Z,70nm,0.5s
SJPF **Ste Jean** 20.81 301 *e*P P 18 17 10.4 +0.3
comp=Z,43nm,0.8s
SJPF **Ste Jean** 20.81 301 *e*P P 18 17 10.4 +0.3
SJPF pmax pmax
comp=Z,22nm,0.8s
SJPF **Ste Jean** 20.81 301 *e*P P 18 17 10.4 +0.3
comp=Z,22nm,0.8s
ENIJ **Nijar** 20.82 283 P P 18 17 14.0 +3.7
MIB **Mutribah** 20.85 97 *e*P P 18 17 11.1 +0.4
baz=97
MIB AMb AMB 18 17 12.0
comp=Z,549nm,0.5s,baz=97
WTSB **Winterswijk** 20.90 330 *e*P P 18 17 11.9 +0.9
comp=Z,73nm,0.9s
ETOR **Torete** 20.94 294 P P 18 17 13.9 +2.4
ETOR pmax pmax
comp=Z,11nm,1.1s
ETOR **Torete** 20.94 294 P P 18 17 13.9 +2.4
comp=Z,11nm,1.1s
ETOR **Torete** 20.94 294 P P 18 17 13.9 +2.4
comp=Z,11nm,1.1s
NAY **Al-Naaiem** 20.96 99 *e*P P 18 17 12.1 +0.2
baz=99
NAY AMb AMB 18 17 13.0

comp=Z,132nm,0.4s,baz=99
SNF Seneffe 20.98 324 P **P** **18 17 12.2 +0.2**
EALK Alkurruntz 21.03 301 P **P** **18 17 14.0 +1.4**
comp=Z,82nm,1.4s,mb4.9
ELIZ Elizondo 21.03 301 P **P** **18 17 13.4 +0.8**
ELIZ pmax pmax
comp=Z,75nm,1.3s,mb4.9
ELIZ Elizondo 21.03 301 P **P** **18 17 13.4 +0.8**
comp=Z,75nm,1.3s,mb4.9
ELIZ Elizondo 21.03 301 P **P** **18 17 13.4 +0.9**
comp=Z,75nm,1.3s,mb4.9
EHUE Huescar 21.12 286 P **P** **18 17 14.8 +1.3**
EHUE pmax pmax
comp=Z,14nm,1.0s,mb4.2
EHUE Huescar 21.12 286 P **P** **18 17 14.8 +1.3**
comp=Z,14nm,1.0s,mb4.2
EHUE Huescar 21.12 286 P **P** **18 17 14.8 +1.2**
comp=Z,14nm,1.0s,mb4.2
UCC Uccle 21.14 325 P **P** **18 17 14.1 +0.5**
UMR Umm Al-Rimmam 21.24 97 *e*P **P** **18 17 15.4 +0.5**
baz=98
UMR AMb AMB 18 17 16.3
comp=Z,1µm,0.5s,mb6.5,baz=98
BSEG Bad Segeberg 21.24 338 *e*P **P** **18 17 13.9 -0.8**
comp=Z,185nm,0.8s,mb5.5
MFF Saint Martin d 21.30 311 *e*P **P** **18 17 15.4 0.0**
comp=Z,20nm,0.5s,mb4.4
MFF Saint Martin d 21.30 311 *e*P **P** **18 17 15.4 0.0**
MFF pmax pmax
comp=Z,10.0nm,0.5s,mb4.4
MFF Saint Martin d 21.30 311 *e*P **P** **18 17 15.4 0.0**
comp=Z,10nm,0.5s,mb4.4
RDF Al-Radifah 21.33 99 *e*P **P** **18 17 15.8 -0.1**
baz=100
RDF AMb AMB 18 17 20.1
comp=Z,77nm,0.4s,mb5.4,baz=100
KBD Kabd 21.36 98 *e*P **P** **18 17 16.1 -0.1**
baz=99
KBD AMb AMB 18 17 17.5
comp=Z,81nm,0.6s,mb5.2,baz=99
EBER Berja 21.37 283 P **P** **18 17 17.9 +1.7**
comp=Z,41nm,1.1s,mb4.7
EBER Berja 21.37 283 P **P** **18 17 17.9 +1.7**
comp=Z,41nm,1.1s,mb4.7
EQES Quesada 21.50 286 P **P** **18 17 17.3 -0.3**
comp=Z,42nm,1.0s,mb4.7
EQES Quesada 21.50 286 P **P** **18 17 17.3 -0.3**
comp=Z,42nm,1.0s,mb4.7
ECOG Cogollos-Vega 21.90 284 P **P** **18 17 24.0 +2.1**
ECOG pmax pmax
comp=Z,34nm,1.2s,mb4.7
ECOG Cogollos-Vega 21.90 284 P **P** **18 17 24.0 +2.1**
comp=Z,34nm,1.2s,mb4.7
ECOG Cogollos-Vega 21.90 284 P **P** **18 17 24.0 +2.1**
comp=Z,34nm,1.2s,mb4.7
EGUA Guajares 21.92 283 P **P** **18 17 24.4 +2.3**
EGUA pmax pmax
comp=Z,124nm,0.9s,mb5.3
EGUA Guajares 21.92 283 P **P** **18 17 24.4 +2.3**
comp=Z,124nm,0.9s,mb5.3
EGUA Guajares 21.92 283 P **P** **18 17 24.4 +2.4**
comp=Z,124nm,0.9s,mb5.3
EBAN Banos Encina 22.07 287 P **P** **18 17 24.3 +0.6**
EBAN pmax pmax
comp=Z,8.0nm,1.3s,mb4.0
EBAN Banos Encina 22.07 287 P **P** **18 17 24.3 +0.6**
comp=Z,8.2nm,1.3s,mb4.0
EBAN Banos Encina 22.07 287 P **P** **18 17 24.3 +0.6**
comp=Z,8.2nm,1.3s,mb4.0
ERON Agron 22.10 284 P **P** **18 17 25.8 +1.8**
comp=Z,9.6nm,0.8s,mb4.3
ERON Agron 22.10 284 P **P** **18 17 25.8 +1.7**
comp=Z,9.6nm,0.8s,mb4.3
LDF La Druitiere 22.21 316 *e*P **P** **18 17 24.7 -0.4**
comp=Z,99nm,0.7s,mb5.1
LDF La Druitiere 22.21 316 *e*P **P** **18 17 24.7 -0.4**
LDF pmax pmax
comp=Z,50nm,0.7s,mb5.0
LDF La Druitiere 22.21 316 *e*P **P** **18 17 24.7 -0.4**
comp=Z,50nm,0.7s,mb5.1
COP Copenhagen 22.23 344 *e*P **P** **18 17 24.2 -1.0**
COP pmax pmax
comp=Z,49nm,0.9s,mb4.9
COP MLR MLR
comp=Z,300nm,22.0s,MS3.7
COP Copenhagen 22.23 344 *i* P **P** **18 17 24.2 -1.0**
comp=Z,49nm,0.9s,mb4.9
COP
comp=Z,300nm,22.0s
COP Copenhagen 22.23 344 *e*P **P** **18 17 24.2 -1.0**
comp=Z,49nm,0.9s,mb4.9
COP LR LR
comp=Z,300nm,22.0s,MS3.7
ESDC Sonseca Array 22.26 291 P **P** **18 17 25.1 -0.7**
comp=Z,1.5nm,0.4s,mb3.8,baz=84,slow=9.8,SNR=14
ESDC Sonseca Array 22.26 291 P **P** **18 17 27.0 +1.2**
comp=Z,7.8nm,1.5s,mb3.9
ESDC Sonseca Array 22.26 291 P **P** **18 17 27.0 +1.2**
comp=Z,7.8nm,1.5s,mb3.9
ESLA Sonseca Array 22.26 291 *e*P **P** **18 17 26.4 +0.6**
comp=Z,5.7nm,1.1s,mb3.9
ESLA Sonseca Array 22.26 291 *e*P **P** **18 17 26.4 +0.6**
comp=Z,5.7nm,1.1s,mb3.9
OBN Obninsk 22.31 20 ⇓*i*P **P** **18 17 24.6 -1.5**
OBN *e* 18 17 46.8
OBN *e*S **S** **18 21 28.0 -1.7**
OBN *e*SS 18 21 57.6
OBN pmax pmax
comp=Z,107nm,0.7s,mb5.4
OBN MLR MLR
comp=Z,300nm,13.0s,MS3.9
OBN Obninsk 22.31 20 *i* P **P** **18 17 24.6 -1.5**
comp=Z,107nm,0.7s,mb5.4
OBN Obninsk 22.31 20 *e*P **P** **18 17 23.7 -2.4**
comp=Z,89nm,0.6s,mb5.4
ELOJ Sierra Loja 22.37 284 P **P** **18 17 31.1 +4.2**
ELAN Lanestosa 22.40 300 P **P** **18 17 27.8 +0.6**
ELAN Lanestosa 22.40 300 P **P** **18 17 27.8 +0.6**
ELUQ Luque 22.45 285 P **P** **18 17 28.6 +0.8**
ELUQ Luque 22.45 285 P **P** **18 17 28.6 +0.9**
GUD Guadarrama 22.50 293 P **P** **18 17 30.5 +2.3**
GUD pmax pmax
comp=Z,15nm,0.7s,mb4.5
GUD Guadarrama 22.50 293 P **P** **18 17 30.5 +2.2**
comp=Z,15nm,0.7s,mb4.5
FLN La Foliniere 22.50 316 *e*P **P** **18 17 27.8 -0.4**
comp=Z,189nm,0.8s,mb5.2
FLN *e*MLR MLR
comp=Z,456nm,22.0s,MS3.6
FLN La Foliniere 22.50 316 *e*P **P** **18 17 27.8 -0.4**
FLN pmax pmax
comp=Z,94nm,0.8s,mb5.3
FLN MLR MLR
comp=Z,460nm,22.0s,MS3.9
FLN La Foliniere 22.50 316 *e*P **P** **18 17 27.8 -0.4**
comp=Z,94nm,0.8s,mb5.3
FLN LR LR
comp=Z,460nm,22.0s,MS3.9
GRR Gorron 22.54 314 *e*P **P** **18 17 28.1 -0.5**
comp=Z,235nm,1.4s,mb5.1
GRR Gorron 22.54 314 *e*P **P** **18 17 28.1 -0.5**
GRR pmax pmax
comp=Z,117nm,1.4s,mb5.1
GRR Gorron 22.54 314 *e*P **P** **18 17 28.1 -0.5**
comp=Z,117nm,1.4s,mb5.1
PAB San Pablo 22.55 290 *e*P **P** **18 17 29.6 +0.8**
PAB pmax pmax
comp=Z,31nm,1.3s,mb4.6
PAB San Pablo 22.55 290 *e*P **P** **18 17 29.6 +0.8**
comp=Z,32nm,1.3s,mb4.6
PAB San Pablo 22.55 290 *e*P **P** **18 17 29.6 +0.8**
comp=Z,32nm,1.3s,mb4.6
EADA Adamuz 22.69 287 P **P** **18 17 32.5 +2.2**
comp=Z,5.8nm,0.8s,mb4.1
EMIJ Mijas 22.90 283 P **P** **18 17 35.3 +2.7**
comp=Z,21nm,1.0s,mb4.5
TFO1 Folkestone 22.91 322 *e*P **P** **18 17 33.9 +1.4**
MOS Moscow 23.15 21 *e*P **P** **18 17 32.0 -3.0**
MOS *e* 18 17 50.3
MOS *e*S **S** **18 21 41.8 -2.3**
MOS pmax pmax
comp=Z,128nm,0.8s,mb5.4
MOS Moscow 23.15 21 *e*P **P** **18 17 32.0 -3.0**
comp=Z,128nm,0.8s,mb5.4
MDT Midelt 23.31 273 P **P** **18 17 37.0 +0.2**
comp=Z,2.7nm,0.8s,baz=78,slow=11,SNR=6.4
MDT LR LR 18 29 09.1

comp=Z,396nm,19.7s,MS3.9,baz=314,slow=43
ECAB El Cabril 23.35 287 P **P** **18 17 38.6 +1.3**
comp=Z,17nm,0.8s,mb4.5
ECAB El Cabril 23.35 287 P **P** **18 17 38.6 +1.3**
comp=Z,17nm,0.8s,mb4.5
EJIF Jimena Fronter 23.47 282 P **P** **18 17 39.1 +0.7**
EJIF Jimena Fronter 23.47 282 P **P** **18 17 39.1 +0.6**
SGMF Saint Gilles 23.49 313 *e*P **P** **18 17 37.7 -0.8**
comp=Z,45nm,0.6s,mb4.7
SGMF Saint Gilles 23.49 313 *e*P **P** **18 17 37.7 -0.8**
SGMF pmax pmax
comp=Z,22nm,0.6s,mb4.8
SGMF Saint Gilles 23.49 313 *e*P **P** **18 17 37.7 -0.8**
comp=Z,22nm,0.6s,mb4.7
QUIF Quistinic 23.72 312 *e*P **P** **18 17 39.9 -0.7**
comp=Z,196nm,1.2s,mb5.1
QUIF Quistinic 23.72 312 *e*P **P** **18 17 39.9 -0.7**
QUIF pmax pmax
comp=Z,98nm,1.2s,mb5.1
QUIF Quistinic 23.72 312 *e*P **P** **18 17 39.9 -0.7**
comp=Z,98nm,1.2s,mb5.1
ESPR Espera 23.75 284 P **P** **18 17 40.8 -0.2**
comp=Z,10nm,0.9s,mb4.3
ESPR Espera 23.75 284 P **P** **18 17 40.8 -0.2**
comp=Z,10nm,0.9s,mb4.3
MUD Monsted U'grnd 23.75 340 *i* P **P** **18 17 39.9 -0.9**
comp=Z,45nm,1.0s,mb4.9
MUD *e* 18 17 51.5
MUD comp=Z,690nm,21.0s
MUD Monsted U'grnd 23.75 340 *i* P **P** **18 17 39.9 -0.9**
comp=Z,45nm,1.0s,mb4.9
MUD *e* 18 17 51.5
VSU Vasula 23.80 4 *i* P **P** **18 17 37.8 -3.5**
ROSF Rostrenen 23.96 313 *e*P **P** **18 17 41.2 -1.6**
comp=Z,82nm,0.9s,mb4.8
ROSF Rostrenen 23.96 313 *e*P **P** **18 17 41.2 -1.6**
ROSF pmax pmax
comp=Z,41nm,0.9s,mb4.9
ROSF Rostrenen 23.96 313 *e*P **P** **18 17 41.2 -1.6**
comp=Z,41nm,0.9s,mb4.8
WOL Wolverton 24.24 321 *e*P **P** **18 17 45.1 -0.3**
WOL AMb AMB 18 17 48.0
comp=Z,262nm,2.0s,mb5.3
EMIN Mina Concepcio 24.35 286 P **P** **18 17 46.6 +0.1**
EMIN Mina Concepcio 24.35 286 P **P** **18 17 46.6 +0.1**
EBAD Badajoz 24.60 288 P **P** **18 17 49.9 +1.1**
comp=Z,21nm,0.9s,mb4.7
EBAD Badajoz 24.60 288 P **P** **18 17 49.9 +1.1**
comp=Z,21nm,0.9s,mb4.7
PBAR Barrancos 24.63 287 *e*P **P** **18 17 50.4 +1.4**
comp=Z,25nm,2.0s,mb4.4
MVO Moncorvo 24.72 294 *e*P **P** **18 17 49.6 -0.2**
comp=Z,27nm,1.0s,mb4.7
PMRV Marv??o 24.90 290 *e*P **P** **18 17 43.0 -8.5**
comp=Z,37nm,1.5s,mb4.7
ERUA La Rua 24.94 297 P **P** **18 17 52.0 +0.2**
CWF Charnwood Fore 25.10 323 AMb AMB 18 17 55.5
comp=Z,90nm,1.2s,mb5.2
CWF Charnwood Fore 25.10 323 AMb AMB 18 17 55.5
comp=Z,90nm,1.2s,mb5.2
PVAQ Vaqueiros 25.20 285 *e*P **P** **18 17 55.1 +0.9**
PVRL Vila Real 25.24 294 *e*P **P** **18 17 54.7 +0.1**
HGH Gray Hill 25.25 320 ⇑*e*P **P** **18 17 55.1 +0.5**
PBEJ Beja 25.29 287 *e*P **P** **18 17 54.3 -0.7**
comp=Z,18nm,1.0s,mb4.5
PVIS Viseu 25.34 293 *e*P **P** **18 17 55.5 +0.1**
PBDV Barranco-do-Ve 25.38 285 *e*P **P** **18 17 57.0 +1.1**
comp=Z,40nm,1.3s,mb4.8
EVO Evora 25.39 288 *e*P **P** **18 17 56.9 +1.0**
comp=Z,65nm,1.5s,mb4.6
EVO *e*MLR MLR
comp=Z,219nm,17.2s,MS3.4
EVO Evora 25.39 288 *e*P **P** **18 17 56.6 +0.7**
comp=Z,24nm,2.3s,mb4.3
KBI1 Birley Grange 25.51 324 ⇑*e*P **P** **18 17 57.0 +0.1**
PCAB Cabril 25.51 295 *e*P **P** **18 17 58.2 +1.2**
comp=Z,28nm,1.1s,mb4.7
KWE Weaver Farm 25.52 323 ⇑*e*P **P** **18 17 56.8 -0.2**
KWE Weaver Farm 25.52 323 ⇑*e*P **P** **18 17 56.8 -0.2**
comp=Z,95nm,1.3s,mb5.2
MCH1 Michaelchurch 25.54 320 *e*P **P** **18 17 57.0 -0.2**
MCH1 AMb AMB 18 17 59.0
comp=Z,95nm,1.3s,mb5.2
HTR Trewern Hill 25.73 320 ⇑*e*P **P** **18 17 59.8 +0.9**
STNC Stoke 25.75 323 *e*P **P** **18 17 59.3 +0.3**
HLM1 Long Mynd 25.76 322 ⇑*e*P **P** **18 17 59.1 0.0**
LHO Holmfirth 25.84 324 ⇑*e*P **P** **18 17 59.5 -0.4**
LHO Holmfirth 25.84 324 ⇑*e*P **P** **18 17 59.5 -0.4**
comp=Z,146nm,1.8s,mb5.2
HPK Haverah Park 25.98 325 AMb AMB 18 18 12.1
comp=Z,146nm,1.8s,mb5.2
HPK Haverah Park 25.98 325 AMb AMB 18 18 12.1
comp=Z,146nm,1.8s,mb5.2
HFS Hagfors 26.15 349 P **P** **18 18 01.4 -1.1**
comp=Z,78nm,0.5s,mb5.5,baz=155,slow=11,SNR=179
HFS LR LR 18 29 28.3
comp=Z,720nm,18.2s,MS4.2,baz=166,slow=39
SBD1 Bryn Du 26.17 322 *e*P **P** **18 18 02.6 -0.2**
FINES FINESS Array B 26.75 3 P **P** **18 18 05.0 -2.9**
BLS5 Blasjo 27.05 341 ⇓*i*P **P** **18 18 13.3 +2.6**
XSO Sourhope Farm 27.22 327 *e*P **P** **18 18 12.1 -0.2**
NAO01 NORSAR Array S 27.30 347 *e*P **P** **18 18 11.9 -1.0**
comp=Z,26nm,0.4s,mb5.1
ECK Cauldkaine Hil 27.42 326 ⇑*e*P **P** **18 18 13.8 -0.3**
comp=Z,109nm,2.3s,mb5.0
NB2 NORSAR Subarra 27.42 347 P **P** **18 18 12.9 -1.1**
comp=Z,13nm,0.6s,mb4.6,baz=158,slow=9.3
NOA NORSAR Array B 27.42 347 P **P** **18 18 12.6 -1.4**
comp=Z,26nm,0.6s,mb5.0,baz=148,slow=9.5,SNR=62
NOA LR LR 18 30 38.7
comp=Z,471nm,21.4s,MS4.0,baz=180,slow=40
KAF Kangasniemi 27.42 3 *ep* **P** **18 18 12.3 -1.7**
comp=Z,22nm,0.5s,mb5.0,baz=182,slow=9.2
KAF Kangasniemi 27.42 3 *e*P **P** **18 18 12.3 -1.7**
KAF pmax pmax
comp=Z,22nm,0.5s,mb4.9
EKA Eskdalemuir Ar 27.53 326 P **P** **18 18 14.8 -0.3**
comp=Z,12nm,0.4s,mb4.9,baz=125,slow=8.0,SNR=79
EKA PcP PcP 18 21 33.0 +0.6
comp=Z,2.4nm,0.6s,baz=106,slow=2.5,SNR=4.8
ESK Eskdalemuir 27.54 326 *e*P **P** **18 18 14.4 -0.7**
ESK AMb AMB 18 18 23.2
comp=Z,109nm,2.3s,mb5.1
ESK Eskdalemuir 27.54 326 *e*P **P** **18 18 15.1 0.0**
ESK pmax pmax
comp=Z,122nm,1.3s,mb5.4
ESK Eskdalemuir 27.54 326 *e*P **P** **18 18 15.1 0.0**
comp=Z,122nm,1.3s,mb5.4
ESY Stoneypath 27.64 328 ⇑*e*P **P** **18 18 16.1 0.0**
EBL Broad Law 27.74 327 *e*P **P** **18 18 17.0 0.0**
EBL Broad Law 27.74 327 *e*P **P** **18 18 17.0 0.0**
comp=Z,63nm,1.6s,mb5.0
EDI Edinburgh 27.90 327 ⇑*e*P **P** **18 18 17.4 -0.9**
EDI AMb AMB 18 18 24.1
comp=Z,80nm,1.6s,mb5.1
GAL1 Galloway 27.98 325 *e*P **P** **18 18 18.6 -0.4**
GAL1 AMb AMB 18 18 22.2
comp=Z,63nm,1.6s,mb5.0
ABKT Ailbek 28.07 73 P **P** **18 18 20.3 +0.2**
comp=Z,110nm,0.4s,mb5.8,SNR=11
KLMR Klimovskoe 28.10 17 ⇑*i*P **P** **18 18 17.4 -2.7**
KLMR *e* 18 19 03.2
KLMR pmax pmax
comp=Z,49nm,1.4s,mb4.9
EBH Black Hill 28.24 328 ⇑*e*P **P** **18 18 21.5 +0.1**
EAB Aberfoyle 28.57 327 ⇑*e*P **P** **18 18 24.5 +0.1**
JOF Joensuu 28.61 8 *ep* **P** **18 18 21.7 -2.8**
comp=Z,8.5nm,0.4s,mb4.8
DOMB Dombas 28.76 346 *e*P **P** **18 18 26.1 +0.3**
DOMB AMb AMB 18 18 32.3
comp=Z,52nm,1.4s,mb5.1
DOMB Dombas 28.76 346 *e*P **P** **18 18 26.1 +0.2**
comp=Z,52nm,1.4s,mb5.1,SNR=41
DOMB Dombas 28.76 346 *e*P **P** **18 18 26.1 +0.3**
comp=Z,52nm,1.4s,mb5.1
TOA0 Torodi Ar. Sit 29.13 228 *e*P **P** **18 18 30.2 +0.5**
TORD Torodi Ar. Bea 29.13 228 P **P** **18 18 30.1 +0.5**
comp=Z,7.1nm,0.6s,mb4.6,baz=31,slow=8.5,SNR=104
TORD PcP PcP 18 21 37.6 +0.6
comp=Z,0.7nm,0.7s,baz=48,slow=2.9,SNR=3.0
TORD ScP ScP 18 25 15.8 -0.3
comp=Z,1.2nm,1.1s,baz=29,slow=3.4,SNR=4.1
TORD LR LR 18 31 04.9
comp=Z,212nm,21.2s,MS3.7,baz=35,slow=38
AKTK Aktyubinsk 29.59 47 P **P** **18 18 32.8 -0.7**

AKTK LR LR 18 33 09.5
AKTO Aktyubinsk 29.59 47 P **P** **18 18 32.8 -0.7**
comp=Z,13nm,0.5s,mb4.9,baz=252,slow=8.4,SNR=33
AKTO LR LR 18 33 09.5
comp=Z,219nm,20.0s,MS3.8,baz=255,slow=42
AKTO Aktyubinsk 29.59 47 P **P** **18 18 32.1 -1.4**
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KAR1 Arisaig 29.67 327 ⇑*e*P **P** **18 18 34.0 -0.1**
AB31 Akbulak array 30.45 50 *i* P **P** **18 18 40.3 -0.8**
AB31 pmax pmax
comp=Z,4.0nm,0.3s,mb4.6
AB31 Akbulak array 30.45 50 *i* P **P** **18 18 40.3 -0.8**
comp=Z,4.0nm,0.3s,mb4.6
NSS Namsos 30.59 350 *e*P **P** **18 18 40.4 -1.7**
NSS AMb AMB 18 18 46.4
comp=Z,49nm,0.8s,mb5.4
NSS Namsos 30.59 350 *e*P **P** **18 18 40.4 -1.7**
comp=Z,49nm,0.8s,mb5.4,SNR=41
NSS Namsos 30.59 350 *e*P **P** **18 18 40.4 -1.7**
comp=Z,49nm,0.8s,mb5.4
MOR8 Moi Rana 31.88 353 *e*P **P** **18 18 53.1 -0.3**
MOR8 AMb AMB 18 18 53.9
comp=Z,102nm,0.6s,mb5.8
MOR8 Moi Rana 31.88 353 *e*P **P** **18 18 53.1 -0.3**
comp=Z,102nm,0.6s,mb5.8,SNR=40
MOR8 Moi Rana 31.88 353 *e*P **P** **18 18 53.1 -0.3**
comp=Z,102nm,0.6s,mb5.8
FLOS Flostrand 32.15 352 *e*P **P** **18 18 54.8 -1.0**
STOK Stokkvaagen 32.18 352 ⇓*i*P **P** **18 18 55.5 -0.6**
STOK AMb AMB 18 18 57.4
comp=Z,96nm,1.0s,mb5.6
STOK Stokkvaagen 32.18 352 ⇓*i*P **P** **18 18 55.5 -0.6**
comp=Z,96nm,1.0s,mb5.6,SNR=40
STOK Stokkvaagen 32.18 352 ⇓*i*P **P** **18 18 55.5 -0.6**
comp=Z,96nm,1.0s,mb5.6
ARU Arti 32.24 37 *i* P **P** **18 18 54.9 -1.9**
comp=Z,140nm,1.0s,mb5.8,SNR=8.4
ARU Arti 32.24 37 *c i*P **P** **18 18 55.0 -1.8**
ARU *e* 18 19 59.2
ARU *e* 18 21 42.5
ARU *e*S **S** **18 24 06.8 -1.0**
ARU *e*SS SS 18 25 59.5 -27
ARU pmax pmax
comp=Z,51nm,1.7s,mb5.1
ARU Arti 32.24 37 *i* P **P** **18 18 55.0 -1.8**
comp=Z,51nm,1.7s,mb5.1
ARU Arti 32.24 37 *e*P **P** **18 18 54.8 -2.0**
comp=Z,33nm,0.9s,mb5.2
APA Apatity 33.35 7 ⇓*i*P **P** **18 19 05.0 -1.3**
APA pmax pmax
comp=Z,14nm,0.6s,mb5.1
APA MLR MLR
comp=Z,800nm,16.0s,MS4.5
APA Apatity 33.35 7 *i* P **P** **18 19 05.0 -1.3**
comp=Z,800nm,16.0s
SVE Sverdlovsk 33.45 37 ⇑*e*P **P** **18 19 06.5 -0.8**
SVE *e* 18 26 59.4
SVE pmax pmax
comp=Z,40nm,0.6s,mb5.5
SVE Sverdlovsk 33.45 37 *e*P **P** **18 19 06.5 -0.8**
comp=Z,40nm,0.6s,mb5.5
STEI Steigen 33.53 354 *e*P **P** **18 19 07.4 -0.5**
STEI AMb AMB 18 19 07.9
comp=Z,125nm,0.7s,mb6.0
STEI Steigen 33.53 354 *e*P **P** **18 19 07.4 -0.4**
comp=Z,125nm,0.7s,mb6.0,SNR=40
LOF Lofoten 33.87 353 *e*P **P** **18 19 11.8 +0.9**
ARCES ARCESS Array B 34.84 1 P **P** **18 19 17.5 -1.6**
comp=Z,16nm,0.6s,mb5.1,baz=180,slow=8.6,SNR=110
ARCES PcP PcP 18 21 51.7 +0.1
comp=Z,2.3nm,0.5s,baz=147,slow=2.5,SNR=4.0
ARCES ARCESS Array B 34.84 1 P **P** **18 19 17.5 -1.6**
ARCES PcP PcP 18 21 51.7 +0.1
ARE0 ARCESS Array S 34.84 1 *e*P **P** **18 19 17.0 -2.1**
ARE0 ARCESS Array S 34.84 1 *e*P **P** **18 19 17.0 -2.2**
TRO Tromso 35.00 357 *e*P **P** **18 19 19.1 -1.5**
KEV Kevo 35.09 2 *ep* **P** **18 19 20.0 -1.4**
comp=Z,5.6nm,0.4s,mb4.8
KEV Kevo 35.09 2 *e*P **P** **18 19 20.0 -1.4**
KEV pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
KK31 Karatay Array 37.19 63 P **P** **18 19 39.8 +0.1**
KK31 pmax pmax
comp=Z,17nm,0.5s,mb5.1
KK31 Karatay Array 37.19 63 P **P** **18 19 39.8 +0.1**
comp=Z,17nm,0.5s,mb5.1
KBL Kabul 37.32 77 *e*P **P** **18 19 37.4 -3.5**
comp=Z,10nm,1.0s,mb4.6
BRVK Borovoye 37.62 46 P **P** **18 19 43.8 +0.6**
comp=Z,223nm,0.8s,mb5.9,SNR=8.4
BRVK Borovoye 37.62 46 *e*P **P** **18 19 42.9 -0.3**
BRVK pmax pmax
comp=Z,23nm,0.7s,mb5.0
BRVK Borovoye 37.62 46 *e*P **P** **18 19 42.9 -0.3**
comp=Z,23nm,0.7s,mb5.0
BRVK Borovoye 37.62 46 *e*P **P** **18 19 42.9 -0.3**
comp=Z,23nm,0.7s,mb5.0
BVA0 Borovoye Array 37.68 46 *i* P **P** **18 19 40.9 -2.7**
BVA0 pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
BVAR Borovoye Array 37.68 46 P **P** **18 19 43.3 -0.3**
comp=Z,6.3nm,0.5s,mb4.6,baz=246,slow=6.2,SNR=35
BVAR PcP PcP 18 22 01.1 +0.7
comp=Z,2.0nm,0.5s,baz=252,slow=3.5,SNR=3.3
KMBO Kilima Mbogo 38.01 157 LR LR 18 37 55.3
comp=Z,254nm,19.4s,MS4.0,baz=270,slow=40
DBIC Dimbokro 38.19 229 P **P** **18 19 48.6 +0.3**
comp=Z,7.7nm,0.7s,mb4.6,baz=17,slow=8.4,SNR=15
DBIC LR LR 18 38 04.2
comp=Z,135nm,18.4s,MS3.8,baz=257,slow=40
TIC Toumodi 38.31 230 *e*P **P** **18 19 49.5 +0.2**
comp=Z,38nm,0.5s,mb5.4
KIC Kosan Boka 38.35 229 *e*P **P** **18 19 50.0 +0.3**
comp=Z,64nm,0.8s,mb5.4
LIC Lamto 38.64 229 *e*P **P** **18 19 52.3 +0.2**
comp=Z,28nm,0.7s,mb4.8
LIC *e*MLR MLR
comp=Z,242nm,22.5s,MS3.7
LIC Lamto 38.64 229 *e*P **P** **18 19 52.4 +0.3**
comp=Z,46nm,0.7s,mb5.3
LIC Lamto 38.64 229 *e*P **P** **18 19 52.3 +0.2**
comp=Z,14nm,0.7s,mb4.8
AML Almayashu 39.62 64 *e*P **P** **18 20 00.2 +0.2**
comp=Z,12nm,0.7s,mb4.7
AML Almayashu 39.62 64 *e*P **P** **18 20 00.2 +0.2**
comp=Z,12nm,0.7s,mb4.7
EKS2 Erkin-Say 39.62 63 P **P** **18 20 01.2 +1.1**
SNR=21
EKS2 Erkin-Say 39.62 63 *e*P **P** **18 20 01.0 +0.9**
comp=Z,16nm,0.6s,mb4.9
EKS2 Erkin-Say 39.62 63 *e*P **P** **18 20 01.0 +0.9**
comp=Z,16nm,0.6s,mb4.9
USP Ospenovka 40.09 62 P **P** **18 20 05.1 +1.2**
SNR=7.7
AAK Ala-Archa 40.15 63 P **P** **18 20 04.5 0.0**
SNR=10
UCH Uchtor 40.21 64 P **P** **18 20 05.8 +0.8**
SNR=9.5
UCH Uchtor 40.21 64 *e*P **P** **18 20 05.4 +0.4**
comp=Z,7.9nm,0.6s,mb4.6
UCH Uchtor 40.21 64 *e*P **P** **18 20 05.4 +0.4**
comp=Z,7.9nm,0.6s,mb4.6
FRU Bishkek 40.22 63 ⇑*e*P **P** **18 20 05.0 0.0**
FRU *e* 18 20 18.5
FRU pmax pmax
comp=Z,870nm,1.0s
FRU Bishkek 40.22 63 *e*P **P** **18 20 05.0 0.0**
comp=Z,870nm,1.0s
CHMS Chumysh 40.30 62 P **P** **18 20 06.3 +0.6**
SNR=13
KBK Karagaybulak 40.48 63 P **P** **18 20 08.5 +1.3**
SNR=8.4
TKM2 Tokmak 2 40.92 62 *e*P **P** **18 20 11.4 +0.5**
TKM2 pmax pmax
comp=Z,14nm,0.7s,mb4.7
TKM2 Tokmak 2 40.92 62 P **P** **18 20 11.6 +0.8**
SNR=12
TKM2 Tokmak 2 40.92 62 *e*P **P** **18 20 11.4 +0.5**
comp=Z,14nm,0.7s,mb4.7
TKM2 Tokmak 2 40.92 62 *e*P **P** **18 20 11.3 +0.5**
comp=Z,14nm,0.7s,mb4.7
ULHL Ulahol 41.48 63 P **P** **18 20 17.1 +1.6**
SNR=7.3
KURK Kurchatov 42.57 51 P **P** **18 20 23.0 -1.2**
comp=Z,504nm,0.4s,SNR=43
KURK Kurchatov 42.57 51 P **P** **18 20 23.3 -0.9**

comp=Z,65nm,0.4s,mb5.7,baz=274,slow=8.6,SNR=244
KURK S **S** **18 26 40.8 -3.8**
comp=Z,0.7nm,0.7s,baz=295,slow=21,SNR=3.8
KURK Kurchatov 42.57 51 P **P** **18 20 23.3 -0.9**
KURK S **S** **18 26 40.8 -3.7**
KURK pmax pmax
comp=Z,65nm,0.4s,mb5.7
KURK smax
comp=N,1.0nm,0.7s
KURK Kurchatov 42.57 51 *eP* **P** **18 20 23.5 -0.7**
KURK Kurchatov 42.57 51 *eP* **P** **18 20 23.5 -0.7**
KBS Kingsbay 44.52 357 *eP* **P** **18 20 39.8 +0.2**
comp=N,10nm,0.5s,mb4.9
KBS Kingsbay 44.52 357 *eP* **P** **18 20 39.9 +0.3**
comp=N,10nm,0.5s,mb4.9
MK31 Makanchi Array 45.22 56 *eP* **P** **18 20 45.5 0.0**
MK31 pmax pmax
comp=Z,23nm,0.3s,mb5.5
MK31 Makanchi Array 45.22 56 *eP* **P** **18 20 45.4 -0.1**
MK31 Makanchi Array 45.22 56 *eP* **P** **18 20 45.4 -0.1**
MKAR Makanchi Array 45.22 56 P **P** **18 20 45.5 0.0**
comp=Z,30nm,0.4s,mb5.5,baz=268,slow=7.7,SNR=218
MKAR PcP PcP 18 22 25.9 +0.7
comp=Z,4.2nm,0.5s,baz=267,slow=4.6,SNR=3.6
MKAR ScP ScP 18 26 15.1 -0.4
comp=Z,0.7nm,0.7s,baz=259,slow=3.7,SNR=3.2
MKAR S **S** **18 27 21.9 -1.4**
comp=Z,0.7nm,0.8s,baz=295,slow=14,SNR=3.1
MKAR LR LR 18 43 11.9
comp=Z,90nm,20.4s,MS3.7,baz=34,slow=41
MKAR Makanchi Array 45.22 56 P **P** **18 20 45.6 +0.1**
MKAR 18 22 25.9
MKAR S **S** **18 27 21.9 -1.4**
MKAR Makanchi Array 45.22 56 P **P** **18 20 45.5 0.0**
MKAR Makanchi Array 45.22 56 PcP PcP 18 22 25.9 +0.7
NVS Novosibirsk 45.40 45⇑ *iP* **P** **18 20 46.2 -0.7**
NVS *i* 18 20 59.0
NVS *eS* **S** **18 27 21.7 -4.0**
NVS pmax pmax
comp=Z,75nm,0.5s,mb5.8
NVS pmax pmax
comp=N,15nm,0.6s
NVS pmax pmax
comp=E,34nm,0.7s
NVS smax
comp=N,39nm,1.7s
NDI New Delhi 45.75 82 *eP* **P** **18 20 49.0 -1.0**
ZALV Zalesovo Beam 46.33 46 P **P** **18 20 53.2 -1.0**
comp=N,60nm,0.4s,mb5.8,baz=269,slow=9.8,SNR=150
ZALV PcP PcP 18 22 29.4 +0.4
comp=N,2.0nm,0.4s,baz=249,slow=4.1,SNR=1.9
ZALV S **S** **18 27 35.3 -3.9**
comp=N,2.8nm,0.8s,baz=243,slow=13,SNR=7.8
ZALV LR LR 18 46 13.7
comp=N,100nm,18.0s,MS3.8,baz=257,slow=44
ZALV Zalesovo Beam 46.33 46 P **P** **18 20 53.2 -1.0**
ZALV 18 22 29.4
ZALV S **S** **18 27 35.3 -3.9**
ZALV Zalesovo Beam 46.33 46 PcP PcP 18 22 29.4 +0.4
ZALV Zalesovo Beam 46.33 46 P **P** **18 20 53.2 -1.0**
ZALV PcP PcP 18 22 29.4 +0.4
ZALV S **S** **18 27 35.3 -3.9**
ZALV LR LR 18 46 13.7
SUMG Summit 48.81 339 *eP* **P** **18 21 14.2 +1.0**
comp=N,9.0nm,1.3s,mb4.6
SUMG Summit 48.81 339 *eP* **P** **18 21 14.2 +0.9**
comp=N,9.0nm,1.3s,mb4.6
WMQ Urumqi 49.47 59⇑ *iP* **P** **18 21 19.3 +0.6**
WMQ PCP PcP 18 22 42.0 +1.6
WMQ PP PP 18 23 14.0 +1.2
WMQ S **S** **18 28 23.5 -0.4**
WMQ AMB AMB
comp=Z,29nm,0.7s,mb5.4
WMQ AMB AMB
comp=Z,195nm,6.0s
WMQ LR LR
comp=N,363nm,25.6s,MS4.4
WMQ LR LR
comp=E,277nm,24.0s,MS4.4
WMQ LR LR
comp=Z,269nm,27.8s,MS4.1
KRAR Krasnoyarsk 50.83 43⇑ *iP* **P** **18 21 28.4 -0.4**
KRAR pmax pmax
comp=Z,54nm,0.8s,mb5.5
DANN Dangsing 51.20 80 *eP* **P** **18 21 32.9 +0.9**
comp=Z,84nm,0.7s,mb5.8
HYB Hyderabad 51.86 95 *i P* **P** **18 21 33.0 -4.0**
HYB Hyderabad 51.86 95 *eP* **P** **18 21 37.5 +0.5**
HVS Khovu-Aksy 52.02 49 *d iP* **P** **18 21 37.4 -0.3**
HVS pmax pmax
comp=Z,101nm,0.6s,mb5.9
GKN Gorkha 52.05 80 *eP* **P** **18 21 38.4 +0.1**
comp=Z,46nm,0.5s,mb5.6
DMN Daman 52.59 80 *eP* **P** **18 21 42.5 +0.2**
comp=Z,27nm,0.4s,mb5.5
KKN Kakani 52.65 79 *eP* **P** **18 21 42.7 -0.1**
comp=Z,31nm,0.6s,mb5.4
PKIN Phulchoki 52.83 80 *eP* **P** **18 21 44.4 +0.3**
comp=Z,33nm,0.8s,mb5.3
GUN Gumba 53.09 79 *eP* **P** **18 21 46.0 0.0**
comp=Z,26nm,0.4s,mb5.6
JIRN Jiri 53.44 79 *eP* **P** **18 21 49.0 +0.4**
comp=Z,35nm,0.5s,mb5.5
ODAN Odare 54.74 80 *eP* **P** **18 21 57.6 -0.5**
LSA Lhasa 56.59 75 P **P** **18 22 12.4 +1.1**
LSA AMB AMB
comp=Z,30nm,1.0s,mb5.3
LSA Lhasa 56.59 75 *eP* **P** **18 22 12.3 +1.0**
LSA pmax pmax
comp=Z,19nm,0.6s,mb5.3
LSA Lhasa 56.59 75 *eP* **P** **18 22 12.3 +1.0**
comp=Z,19nm,0.6s,mb5.3
LSA Lhasa 56.59 75 *eP* **P** **18 22 12.3 +0.9**
comp=Z,19nm,0.6s,mb5.3
TLY Talaya 57.94 46 *eP* **P** **18 22 21.0 +0.5**
TLY pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
TLY MLR MLR
comp=Z,122nm,19.0s,MS4.0
ZAK Zakamensk 58.10 48 *eP* **P** **18 22 21.5 -0.2**
ZAK pmax pmax
comp=Z,13nm,0.8s,mb5.0
GTA Gaotai 59.44 61⇑ P **P** **18 22 31.6 +0.4**
GTA PP PP 18 24 46.5 +4.1
GTA S **S** **18 30 39.8 +1.6**
GTA AMB AMB
comp=Z,8.0nm,0.6s,mb4.9
GTA AMB AMB
comp=Z,57nm,3.9s
GTA LR LR
comp=N,97nm,14.3s,MS4.3
GTA LR LR
comp=E,122nm,14.0s,MS4.3
GTA LR LR
comp=Z,93nm,15.5s,MS4.0
SONM Songino Array 60.87 50 P **P** **18 22 41.0 +0.2**
comp=Z,20nm,0.4s,mb5.6,baz=286,slow=6.6,SNR=135
ULN Ulaanbaatar 61.27 50 *eP* **P** **18 22 43.7 +0.2**
ULN pmax pmax
comp=Z,32nm,0.5s,mb5.7
ULN Ulaanbaatar 61.27 50 *eP* **P** **18 22 43.7 +0.2**
comp=Z,32nm,0.5s,mb5.7
BOD Bodaibo 61.66 37 *eP* **P** **18 22 44.9 -1.1**
BOD pmax pmax
comp=Z,18nm,0.8s,mb5.2
SCHQ Schefferville 62.52 319 P **P** **18 22 51.9 +0.1**
comp=Z,12nm,0.6s,mb5.2,baz=68,slow=6.2,SNR=11
BOSA Boshof 63.07 178 P **P** **18 22 56.8 +1.1**
comp=Z,2.1nm,0.6s,mb4.4,baz=323,slow=5.4,SNR=6.9
BOSA LR LR 18 51 15.1
comp=Z,185nm,22.0s,MS4.2,baz=1.3,slow=37
BOSA Boshof 63.07 178 *eP* **P** **18 22 56.5 +0.9**
BOSA Boshof 63.07 178 *eP* **P** **18 22 56.5 +0.9**
CD2 Chengdu 65.90 68⇓ *iP* **P** **18 23 15.1 +0.7**
CD2 AMB AMB
comp=Z,60nm,0.6s,mb5.8
CD2 AMB AMB
comp=Z,200nm,8.4s
CD2 LR LR
comp=E,200nm,15.6s
CD2 LR LR
comp=Z,190nm,18.0s,MS4.3
YAK Yakutsk 66.94 29 *eP* **P** **18 23 18.1 -2.4**
YAK pmax pmax
comp=N,8.0nm,1.8s
YAK pmax pmax
comp=Z,21nm,0.8s,mb5.2
YAK pmax pmax
comp=E,11nm,1.8s
YAK Yakutsk 66.94 29 P **P** **18 23 19.2 -1.3**
comp=E,29nm,0.7s,mb5.4
YAK Yakutsk 66.94 29 P **P** **18 23 19.2 -1.3**
comp=E,29nm,0.7s,mb5.4
HHC Hu-ho-hao-te 67.08 55 *eP* **P** **18 23 18.8 -2.9**
HHC PCP PcP 18 23 46.9 -2.9
HHC PP PP 18 25 48.3 -1.1
HHC SCP 18 27 48.6
HHC PCS 18 27 50.9
HHC S S 18 32 08.1 -5.4
HHC SCS ScS 18 33 10.3 -6.8
HHC SS SS 18 36 28.5 -3.7
HHC AMB AMB
comp=Z,8.0nm,0.7s,mb4.9
HHC AMB AMB
comp=Z,110nm,7.8s
HHC LR LR
comp=N,138nm,16.4s,MS4.5
HHC LR LR
comp=E,196nm,16.1s,MS4.5
HHC LR LR
comp=Z,150nm,16.2s,MS4.3
KMI Kunming 67.83 74 P **P** **18 23 26.4 -0.4**
KMI S S 18 32 24.0 +0.9
KMI AMB AMB
comp=Z,14nm,0.8s,mb5.0
KMI LR LR
comp=Z,58nm,28.7s,MS3.6
KMI Kunming 67.83 74 P **P** **18 23 26.4 -0.4**
comp=Z,14nm,0.8s,mb5.0
KMI pP pP 18 23 34.1 -2.5
KMI S S 18 32 24.0 +0.9
KMI LR LR
comp=Z,60nm,28.7s,MS3.7
CHTO Chiang Mai 67.90 82 *eP* **P** **18 23 26.9 -0.4**
CHTO pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
CHTO Chiang Mai 67.90 82 *eP* **P** **18 23 26.9 -0.4**
comp=Z,8.6nm,0.6s,mb5.0
CHTO Chiang Mai 67.90 82 *eP* **P** **18 23 26.9 -0.4**
comp=Z,8.6nm,0.6s,mb5.0
CMAR Chiang Mai Arr 68.08 82 P **P** **18 23 28.4 0.0**
comp=Z,7.7nm,0.6s,mb4.9,baz=298,slow=7.8,SNR=69
CMAR LR LR 18 58 21.0
comp=Z,73nm,18.4s,MS3.9,baz=200,slow=40
CMAR Chiang Mai Arr 68.08 82 *i P* **P** **18 23 28.5 +0.1**
CMAR pmax pmax
comp=Z,8.0nm,0.6s
HIA Hailar 68.34 44 *eP* **P** **18 23 29.7 +0.1**
HIA pmax pmax
comp=Z,15nm,0.8s
HIA Hailar 68.34 44 *eP* **P** **18 23 29.7 +0.1**
comp=Z,15nm,0.8s,mb5.1
HIA Hailar 68.34 44 *eP* **P** **18 23 29.7 +0.1**
comp=Z,15nm,0.8s,mb5.1
GYA Guiyang 70.26 71 P **P** **18 23 43.3 +1.4**
GYA PCP PcP 18 24 05.6 +2.1
GYA PP PP 18 26 20.8 +3.4
GYA S S 18 32 51.3 -0.5
GYA SS SS 18 37 22.4 +0.3
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,140nm,5.9s
GYA LR LR
comp=N,540nm,18.8s,MS4.9
GYA LR LR
comp=E,480nm,19.4s,MS4.9
GYA LR LR
comp=Z,510nm,20.3s,MS4.8
BJI Beijing 70.56 54 P **P** **18 23 42.6 -0.8**
BJI S S 18 32 54.3 -0.5
BJI AMB AMB
comp=Z,6.0nm,0.5s,mb4.8
BJI AMB AMB
comp=Z,85nm,3.1s
BJI LR LR
comp=N,113nm,16.8s,MS4.3
BJI LR LR
comp=E,99nm,15.9s,MS4.3
BJI LR LR
comp=Z,76nm,21.6s
BJI Beijing 70.56 54 P **P** **18 23 42.6 -0.8**
comp=Z,6.0nm,0.5s,mb4.8
BJI S S 18 32 54.2 -0.6
BJI LR LR
comp=Z,80nm,21.6s,MS3.9
WHN Wuhan 74.05 64 *eP* **P** **18 24 05.3 +0.9**
SEY Seymchan 74.47 22⇑ *eP* **P** **18 24 06.5 +0.2**
CN2 Changchun 74.53 47 *eP* **P** **18 24 07.1 +0.1**
CN2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
KLR Kul'dur 75.02 40 *eP* **P** **18 24 06.1 -3.6**
KLR pmax pmax
comp=Z,40nm,1.6s,mb5.1
NJ2 Nanjing 76.53 60 *eP* **P** **18 24 20.6 +1.9**
NJ2 AMB AMB
comp=Z,60nm,0.8s,mb5.6
YKA Yellowknife Ar 77.36 341 P **P** **18 24 23.1 +0.3**
comp=Z,5.4nm,0.6s,mb4.7,baz=31,slow=5.2,SNR=25
YKA LR LR 18 58 28.0
comp=Z,115nm,20.8s,MS4.2,baz=250,slow=36
YKA Yellowknife Ar 77.36 341 P **P** **18 24 23.1 +0.3**
YKA LR LR 18 58 28.0
COLD Coldfoot 78.20 357 *eP* **P** **18 24 27.9 +0.5**
comp=Z,216nm,1.3s,mb5.9
COLD Coldfoot 78.20 357 *eP* **P** **18 24 27.9 +0.6**
comp=Z,216nm,1.3s,mb5.9
VLA Vladivostok 78.75 45⇑ *iP* **P** **18 24 31.1 +0.2**
COWI Conover 79.13 319 *eP* **P** **18 24 33.8 +0.9**
comp=Z,16nm,1.0s,mb4.9
COWI Conover 79.13 319 *eP* **P** **18 24 33.8 +0.9**
comp=Z,16nm,1.0s,mb4.9
IMA2 Indian Mountai 79.46 359 *eP* **P** **18 24 35.3 +1.0**
IMA2 Indian Mountai 79.46 359 *eP* **P** **18 24 35.3 +1.0**
KSRS Korea Array 79.68 52 P **P** **18 24 36.1 0.0**
comp=Z,14nm,0.5s,mb5.1,baz=310,slow=4.6,SNR=184
KSRS LR LR 19 04 32.4
comp=Z,121nm,19.0s,MS4.3,baz=103,slow=39
KSRS Korea Array 79.68 52 P **P** **18 24 36.1 0.0**
KSRS pmax pmax
comp=Z,14nm,0.5s,mb5.2
KSRS MLR MLR
comp=Z,121nm,19.0s,MS4.3
ULM Lac du Bonnet 79.80 325 P **P** **18 24 36.3 -0.1**
comp=Z,2.8nm,0.6s,mb4.4,baz=31,slow=6.8,SNR=7.0
COLA College 80.44 356⇓ *iP* **P** **18 24 40.5 +0.9**
DAWY Dawson 80.55 352 *eP* **P** **18 24 41.0 +0.8**
DAWY Dawson 80.55 352 *eP* **P** **18 24 41.0 +0.8**
BPAW Bear Paw Mtn. 81.36 357 *eP* **P** **18 24 44.5 0.0**
comp=Z,2µm,0.6s
CHUM Lake Minchumin 81.62 358 *eP* **P** **18 24 46.3 +0.4**
comp=Z,38nm,1.1s,mb5.2
CHUM Lake Minchumin 81.62 358 *eP* **P** **18 24 46.3 +0.4**
comp=Z,38nm,1.1s,mb5.2
MCK McKinley 81.64 357 *eP* **P** **18 24 45.9 -0.1**
MCK pmax pmax
comp=Z,55nm,1.4s,mb5.3
MCK McKinley 81.64 357 *eP* **P** **18 24 45.9 -0.1**
comp=Z,55nm,1.4s,mb5.3
MCK McKinley 81.64 357 *eP* **P** **18 24 45.9 -0.1**
comp=Z,55nm,1.4s,mb5.3
KTH Kantishna Hill 81.90 357 *eP* **P** **18 24 48.0 +0.6**
comp=Z,22nm,1.2s,mb5.0
KTH Kantishna Hill 81.90 357 *eP* **P** **18 24 48.0 +0.6**
comp=Z,22nm,1.2s,mb5.0
TRF Thorofare Moun 81.98 357 *eP* **P** **18 24 48.0 +0.2**
comp=Z,15nm,0.8s,mb5.0
TRF Thorofare Moun 81.98 357 *eP* **P** **18 24 48.0 +0.2**
comp=Z,15nm,0.8s,mb5.0
PPLA Purkeypile 82.60 358 *eP* **P** **18 24 51.1 0.0**
comp=Z,22nm,0.5s,mb5.5
PPLA Purkeypile 82.60 358 *eP* **P** **18 24 51.1 0.0**
comp=Z,22nm,0.5s,mb5.5
PETK Petropavlovsk- 83.91 26 LR LR 19 08 29.6
comp=Z,81nm,19.9s,MS4.1,baz=130,slow=40
ASAJ Asahikawa 84.01 39 P **P** **18 24 59.0 +0.2**
comp=Z,12nm,0.6s,mb5.2,baz=360,slow=9.2,SNR=11
ASAJ Asahikawa 84.01 39 P **P** **18 24 59.0 +0.3**
ASAJ pmax pmax
comp=Z,12nm,0.6s
RC01 Rabbit Creek A 84.31 357 *eP* **P** **18 25 00.6 +0.7**
comp=Z,34nm,1.1s,mb5.4
RC01 Rabbit Creek A 84.31 357 *eP* **P** **18 25 00.6 +0.6**
comp=Z,34nm,1.1s,mb5.4
SVW2 Sparrevohn 84.47 359 *eP* **P** **18 25 01.2 +0.5**
SVW2 Sparrevohn 84.47 359 *eP* **P** **18 25 01.2 +0.5**
DLBC Dease Lake 84.51 346 P **P** **18 25 02.0 +1.0**
baz=350,slow=5.5
ECSD EROS,Sioux Fal 84.67 321 *eP* **P** **18 25 02.2 +0.1**
comp=Z,6.7nm,0.5s,mb5.0
ECSD EROS,Sioux Fal 84.67 321 *eP* **P** **18 25 02.2 +0.2**
comp=Z,6.7nm,0.5s,mb5.0
SLKM Skilak Lake 84.92 357 *eP* **P** **18 25 03.2 +0.2**
SLKM Skilak Lake 84.92 357 *eP* **P** **18 25 03.2 +0.2**
CCM Cathedral Cave 85.53 314 *eP* **P** **18 25 07.4 +0.9**
CCM pmax pmax
comp=Z,4.0nm,0.5s,mb4.9
CCM Cathedral Cave 85.53 314 *eP* **P** **18 25 07.4 +0.9**
comp=Z,4.4nm,0.5s,mb4.9
CCM Cathedral Cave 85.53 314 *eP* **P** **18 25 07.4 +0.9**
comp=Z,4.4nm,0.5s,mb4.9
JOW Kunigami 86.24 60 LR LR 19 07 15.3
comp=Z,56nm,18.9s,MS4.0,baz=100,slow=38
MJAR Matsushiro Arr 86.67 47 P **P** **18 25 12.2 0.0**
comp=Z,4.3nm,0.8s,mb4.7,baz=300,slow=6.1,SNR=12
MJAR LR LR 19 10 15.7
comp=Z,89nm,19.1s,MS4.2,baz=345,slow=40
EGMT Eagleton 87.53 331 *eP* **P** **18 25 16.5 +0.4**
comp=Z,9.9nm,0.7s,mb5.2
EGMT Eagleton 87.53 331 *eP* **P** **18 25 16.5 +0.4**
comp=Z,9.9nm,0.7s,mb5.2
KDAK Kodiak Island 87.74 358 P **P** **18 25 17.4 +0.6**
comp=Z,6.0nm,0.8s,mb4.9,baz=359,slow=16,SNR=7.1
RLMT Red Lodge 89.64 329 *eP* **P** **18 25 28.6 +2.5**
comp=Z,14nm,1.6s,mb5.1
RLMT Red Lodge 89.64 329 *eP* **P** **18 25 28.6 +2.5**
comp=Z,14nm,1.6s,mb5.1
PDAR Pinedale Array 91.65 327 P **P** **18 25 35.5 0.0**
comp=Z,0.8nm,0.6s,mb4.2,baz=64,slow=3.4,SNR=4.7
PDAR Pinedale Array 91.65 327 P **P** **18 25 35.5 0.0**
BMO Blue Mountains 93.09 333 *eP* **P** **18 25 41.7 -0.4**
comp=Z,1.8nm,0.8s,mb4.5
BMO Blue Mountains 93.09 333 *eP* **P** **18 25 41.7 -0.5**
comp=Z,1.8nm,0.8s,mb4.5
ELK Elko 95.74 330 LR LR 19 08 53.3
comp=Z,153nm,20.9s,MS4.5,baz=242,slow=35
ANMO Albuquerque 96.28 321 LR LR 19 11 32.0
comp=Z,85nm,18.2s,MS4.3,baz=157,slow=37
YBH Yreka Blue Hor 97.75 335 LR LR 19 12 07.2
comp=Z,100nm,19.1s,MS4.3,baz=245,slow=37
WUAZ Wupatki 98.30 324 *eP* **P** **18 26 06.3 +0.3**
comp=Z,3.9nm,0.7s,mb5.0
WUAZ Wupatki 98.30 324 *eP* **P** **18 26 06.3 +0.3**
comp=Z,3.9nm,0.7s,mb5.0
WRA Warramunga Arr 118.02 96 PKP PKPdf 18 31 15.1 -0.3
comp=Z,1.4nm,0.5s,baz=317,slow=1.8,SNR=22
ASAR Alice Springs 119.44 100 PKP PKPdf 18 31 18.0 -0.1
comp=Z,1.5nm,0.5s,baz=301,slow=1.4,SNR=24
CTA Charters Tower 127.88 89 PKP PKPdf 18 31 33.9 -0.4
comp=Z,4.6nm,1.0s,baz=297,slow=6.8,SNR=5.3
CTA Charters Tower 127.88 89 PKP PKPdf 18 31 33.9 -0.4
STKA Stephens Creek 129.02 105 PKP PKPdf 18 31 36.6 +0.4
comp=Z,1.8nm,0.7s,baz=307,slow=7.9,SNR=2.7

NEIC ***24*** *18:18:07.8±3.6, 738S×12820E, h89km±38km, Error ellipse: s-maj=45.2km s-min=16.6km az=47.0*
IDC ***24*** *18:18:16.5±3.6, 781S×12809E, h190km±39km, mb3.4/5, mb1 3.6/9, mb1mx3.5/16, mbtmp3.5/9, MS3.1/2, Ms1 3.1/2, ms1mx2.7/18, Error ellipse: s-maj=39.1km s-min=18.7km az=53.0*
ISCJB ***24*** *18:18:17.1±1.9, 80S±0.1×1281E±0.1, h220km±22km, mb3.5/6, Error ellipse: s-maj=22.9km s-min=8.6km az=138.1*

ISC 24 18:18:16.5±1.7**, 784S**±009×**1281E**±01**, h190**km±18km**, n17, σ0°78/23, mb3.6/6, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.99**	**241**	P		**Pn**	**18 19 31.6**	**+1.0**
	14nm,0.3s,baz=130,slow=3.6,SNR=40							
BATI				S		**Sn**	**18 20 28.6**	**-0.1**
	30nm,0.3s,baz=123,slow=4.7,SNR=15							
KAPI	**Kappang**	**8.77**	**288**	LR	LR		18 24 36.4	
	comp=Z,90nm,18.2s,baz=121,slow=44							
FITZ	**Fitzroy Crossi**	**10.48**	**193**	*eP*		**Pn**	**18 20 41.7**	**-0.5**
FITZ				*eS*		**Sn**	**18 22 34.6**	**-4.4**
FITZ	**Fitzroy Crossi**	**10.48**	**193**	P		**Pn**	**18 20 41.7**	**-0.5**
	0.7nm,0.3s,baz=30,slow=14,SNR=45							
FITZ				S		**Sn**	**18 22 36.2**	**-2.8**
	3.0nm,0.3s,baz=164,slow=21,SNR=9.7							
WRAB	**Tennant Creek**	**13.46**	**154**	*eP*		**Pn**	**18 21 20.1**	**-0.1**
	5.2nm,0.6s							
WRAB				*eS*		**Sn**	**18 23 39.6**	**-11**
WRA	**Warramunga Arr**	**13.46**	**154**	P		**Pn**	**18 21 20.1**	**-0.1**
	1.0nm,0.3s,baz=321,slow=14,SNR=18							
WRA				S		**Sn**	**18 23 43.2**	**-7.1**
	3.6nm,0.3s,baz=330,slow=23,SNR=16							
WRA	**Warramunga Arr**	**13.46**	**154**	P		**Pn**	**18 21 20.1**	**-0.1**
WRA				S		**Sn**	**18 23 43.2**	**-7.1**
WB2	**Warramunga Arr**	**13.47**	**154**	*eP*		**Pn**	**18 21 19.8**	**-0.4**
WB2				*eS*		**Sn**	**18 23 41.8**	**-8.6**
ASAR	**Alice Springs**	**16.69**	**161**	P		**Pn**	**18 22 00.9**	**+1.3**
	1.5nm,0.3s,baz=340,slow=11,SNR=118							
ASAR				S		**S**	**18 25 03.8**	**+0.4**
	1.4nm,0.3s,baz=323,slow=16,SNR=7.0							
STKA	**Stephens Creek**	**27.02**	**154**	*eP*		**P**	**18 23 45.5**	**+4.5**
STKA	**Stephens Creek**	**27.02**	**154**	P		**P**	**18 23 45.4**	**+4.4**
	1.0nm,0.4s,mb3.8,baz=334,slow=10,SNR=8.0							
JOW	**Kunigami**	**34.46**	**0**	LR	LR		18 38 54.3	
	comp=Z,45nm,19.1s,baz=66,slow=36							
KSRS	**Korea Array**	**45.05**	**360**	P		**P**	**18 26 12.5**	**-0.9**
	0.9nm,0.6s,mb3.6,baz=178,slow=9.1,SNR=5.7							
SONM	**Songino Array**	**58.66**	**343**	P		**P**	**18 27 54.5**	**+0.7**
	1.1nm,0.6s,mb3.9,baz=165,slow=7.0,SNR=6.0							
MKAR	**Makanchi Array**	**67.91**	**328**	P		**P**	**18 28 54.6**	**0.0**
	0.5nm,0.4s,mb3.6,baz=121,slow=8.9,SNR=11							
ZALV	**Zalesovo Beam**	**71.52**	**335**	P		**P**	**18 29 15.6**	**-0.9**
	0.3nm,0.4s,mb3.4,baz=161,slow=9.2,SNR=2.8							
KURK	**Kurchatov**	**72.27**	**330**	P		**P**	**18 29 21.4**	**+0.4**
	0.8nm,0.5s,mb3.7,baz=126,slow=5.0,SNR=11							

DDA ***24*** *18:22:35.8, 3734N×3500E, h7km±5km, Md2.6*
ISCJB ***24*** *18:22:37.6±0.6, 3731N±005×3502E±005, h19km±6km, Error ellipse: s-maj=9.9km s-min=5.9km az=147.4*
ISK ***24*** *18:22:37.1, 3727N×3503E, h19km, MD2.8*
CSEM ***24*** *18:22:37.0±0.1, 3727N×3503E, h20km, MD2.8, Error ellipse: s-maj=2.8km s-min=1.9km az=151.0*

ISC 24 18:22:37.7±0.6**, 3729N**±005×**3503E**±005**, h18**km±4km**, n10, σ0°58/15, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KARA	**Karaisali**	**0.04**	**146**	*e*PG		**Pg**	**18 22 40.9**	**-0.1**
KARA				*e*SG		**Sg**	**18 22 43.3**	**+0.2**
MERS	**Mersin**	**0.58**	**224**	*e*PG		**Pg**	**18 22 48.5**	**-0.8**
MERS				*e*SG		**Sg**	**18 22 57.6**	**+0.4**
CEYT	**Ceyhan**	**0.64**	**116**	*e*PG		**Pg**	**18 22 49.8**	**-0.5**
CEYT				*e*SG		**Sg**	**18 22 59.7**	**+0.8**
KOZT	**Kozan**	**0.66**	**73**	*e*PG		**Pg**	**18 22 50.9**	**+0.1**
MEST	**Erdemli**	**1.00**	**225**	*i* P		**Pb**	**18 22 56.1**	**-0.3**
MEST				*i* S		**Sb**	**18 23 09.4**	**+0.3**
AVNT	**Avonos**	**1.49**	**355**	*i* P		**Pn**	**18 23 02.3**	**-1.2**
AVNT				*i* S		**Sn**	**18 23 23.3**	**+0.8**
IKL	**Isikli**	**1.51**	**226**	*e*PN		**Pn**	**18 23 03.8**	**+0.1**
KMRS	**Kahramanmaras**	**1.51**	**81**	*e*PN		**Pn**	**18 23 03.0**	**-0.7**
BNN	**Bunyan**	**1.69**	**22**	*e*PN		**Pn**	**18 23 06.7**	**+0.5**
HDMB	**Hadim**	**2.06**	**262**	*e*PN		**Pn**	**18 23 11.7**	**+0.4**

JMA 24 18:23:09.8±0.2**, 4224N**×**14648E, h58**km±4km**, M3.3, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.25**	**334**	P		Pn	18 23 31.4	+0.4
NEM2				*e*S		Sn	18 23 47.1	+0.2
JAK	**Akkeshi**	**1.52**	**300**	P		Pn	18 23 35.3	+0.7
JAK				*e*S		Sn	18 23 53.9	+0.5
JNK	**Nakash**	**1.87**	**317**	P		Pn	18 23 39.7	+0.3
JNK				*e*S		Sn	18 24 01.1	-0.7
JRA	**Rausu**	**1.97**	**330**	P		Pn	18 23 41.5	+0.8
JRA				*e*S		Sn	18 24 05.2	+0.9
JOB	**Onbets**	**2.06**	**290**	P		Pn	18 23 43.0	+1.0
JOB				*e*S		Sn	18 24 07.7	+1.1

JAR	**Ashorobuto**	**2.26**	**299**	P	Pn	18 23 45.4	+0.7
JAR				*e*S	Sn	18 24 11.5	+0.1
JCH	**Churui**	**2.34**	**280**	P	Pn	18 23 46.8	+1.0
JCH				*e*S	Sn	18 24 13.3	0.0
JEM	**Erimo**	**2.48**	**266**	P	Pn	18 23 49.6	+1.9
JTKR	**Abashiri--Toko**	**2.56**	**313**	P	Pn	18 23 50.4	+1.6
JTKR				*e*S	Sn	18 24 20.5	+1.8
JNBK	**Urakawa-nobuka**	**2.77**	**272**	P	Pn	18 23 52.3	+0.7
JNBK				*e*S	Sn	18 24 24.2	+0.4
JMP	**Maruseppu**	**2.89**	**309**	*e*S	Sn	18 24 28.8	+2.0
JFR	**Furan**	**3.01**	**289**	P	Pn	18 23 56.4	+1.4
JFR				*e*S	Sn	18 24 30.1	+0.3
JBT2	**Biratori 2**	**3.09**	**281**	P	Pn	18 23 56.5	+0.4
MAT	**Matsushiro**	**8.56**	**231**	P	Pn	18 25 12.3	+1.3

*ISCJB **24** 18:31:32.8±0.5, 2076S±004×67.13W±005, h186km±4km, mb4.7/61, Error ellipse: s-maj=7.2km s-min=6.0km az=156.2*

*MOS **24** 18:31:33.4±1.2, 2066S×67.14W, h187km, mb4.6/13, Error ellipse: s-maj=17.9km s-min=8.2km az=121.4*

*IDC **24** 18:31:34.7±1.0, 2081S×67.16W, h189km±8km, mb4.3/17, mb1 4.4/23, mb1mx4.3/27, mbtmp4.3/23, Error ellipse: s-maj=12.3km s-min=9.4km az=65.0*

*NEIC **24** 18:31:34.2±0.5, 2082S×67.16W, h186km±4km, mb4.7/47, Error ellipse: s-maj=7.2km s-min=4.7km az=57.0*

*BJI **24** 18:31:34.2, 2080S×6720W, h186km, mB5.2*

ISC 24 18:31:33.8±0.5, 2076S±004×6713W±005, h179km±4km, n162, σ0§91/128, mb4.7/61, 4C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.48**	**222**	P	**Pn**	**18 32 17.1**	**+0.9**
	332nm,0.3s,baz=14,slow=8.1,SNR=1965						
LVC				S	**Sn**	**18 32 48.5**	**-0.6**
	195nm,0.3s,baz=252,slow=19,SNR=15						
LVC	**Limon Verde**	**2.48**	**222**	*e*P	**Pn**	**18 32 17.0**	**+0.8**
LVC				*e*S	**Sn**	**18 32 48.5**	**-0.7**
LPAZ	**La Paz**	**4.55**	**348**	P	**Pn**	**18 32 46.1**	**+4.1**
	33nm,0.3s,baz=163,slow=6.6,SNR=302						
LPAZ				S	**Sn**	**18 33 36.4**	**+1.1**
	baz=319,slow=15,SNR=1.3						
LPAZ	**La Paz**	**4.55**	**348**	*e*P	**Pn**	**18 32 46.1**	**+4.2**
ARE	**Arequipa**	**5.95**	**315**	⇑*i*P	**Pn**	**18 32 59.7**	**-0.5**
ARE				*i* S	**Sn**	**18 34 04.6**	**-3.5**
SIV	**San Ignacio**	**7.45**	**51**	P	**Pn**	**18 33 21.8**	**+1.9**
	71nm,0.3s,baz=255,slow=11,SNR=658						
SIV				S	**Sn**	**18 34 43.1**	**-0.6**
	5.1nm,0.3s,baz=314,slow=23,SNR=11						
CPUP	**Villa Florida**	**10.56**	**124**	P	**Pn**	**18 34 00.9**	**+0.3**
	1.6nm,0.3s,baz=270,slow=11,SNR=8.4						
CPUP	**Villa Florida**	**10.56**	**124**	*e*P	**Pn**	**18 34 01.0**	**+0.4**
CPUP				pmax	pmax		
	comp=Z,62nm,0.6s						
CPUP	**Villa Florida**	**10.56**	**124**	*e*P	**Pn**	**18 34 01.0**	**+0.4**
	comp=Z,62nm,0.6s						
CFAA	**Coronel Fontan**	**10.85**	**185**	P	**Pn**	**18 34 02.7**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=3.0,slow=12,SNR=21						
CFAA				S	**Sn**	**18 35 54.6**	**-10**
	comp=Z,0.6nm,0.3s,baz=80,slow=23,SNR=8.6						
CFAA	**Coronel Fontan**	**10.85**	**185**	P	**Pn**	**18 34 02.7**	**-1.6**
CFAA				S	**Sn**	**18 35 54.6**	**-10**
NNA	**Nana**	**12.76**	**312**	P	**Pn**	**18 34 28.3**	**-0.8**
	comp=Z,2.9nm,0.3s,baz=153,slow=8.3,SNR=9.1						
NNA	**Nana**	**12.76**	**312**	P	**Pn**	**18 34 28.3**	**-0.8**
TRQA	**Tornquist**	**17.80**	**167**	*e*P	**Pn**	**18 35 26.5**	**-4.1**
	comp=Z,16nm,0.6s						
SPB	**Sao Paulo**	**18.45**	**102**	*e*P	**P**	**18 35 36.6**	**+0.6**
BDFB	**Brasilia**	**18.85**	**77**	P	**P**	**18 35 42.1**	**+1.7**
	comp=Z,6.8nm,0.3s,baz=248,slow=14,SNR=52						
PLCA	**Paso Flores**	**20.12**	**188**	P	**P**	**18 35 53.2**	**-0.7**
	comp=Z,7.3nm,0.7s,baz=12,slow=12,SNR=16						
PLCA	**Paso Flores**	**20.12**	**188**	*e*P	**P**	**18 35 53.6**	**-0.3**
PLCA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PLCA	**Paso Flores**	**20.12**	**188**	*e*P	**P**	**18 35 53.5**	**-0.3**
	comp=Z,7.9nm,0.8s						
SDV	**Santo Domingo**	**29.66**	**353**	P	**P**	**18 37 22.2**	**-0.7**
	comp=Z,12nm,0.8s,mb4.7,baz=286,slow=12,SNR=9.8						
SDV	**Santo Domingo**	**29.66**	**353**	*e*P	**P**	**18 37 21.9**	**-0.9**
	comp=Z,12nm,0.8s,mb4.7						
PCRV	**Puerto La Cruz**	**30.84**	**5**	P	**P**	**18 37 33.9**	**+0.7**
	comp=Z,18nm,0.6s,mb5.0,baz=174,slow=3.4,SNR=8.3						
JTS	**JuntasAbangare**	**35.49**	**329**	P	**P**	**18 38 15.2**	**+1.7**
	comp=Z,9.9nm,0.6s,mb4.6,baz=338,slow=22,SNR=10						
SJG	**San Juan**	**38.64**	**1**	*e*P	**P**	**18 38 38.3**	**-1.7**
SJG				pmax	pmax		
	comp=Z,20nm,0.7s						
SJG	**San Juan**	**38.64**	**1**	*e*P	**P**	**18 38 38.3**	**-1.7**
	comp=Z,20nm,0.7s,mb4.8						
TEIG	**Tepich**	**45.69**	**332**	*e*P	**P**	**18 39 36.2**	**-0.8**
	comp=Z,26nm,0.8s,mb4.9						
COW	**Cow Castle Cre**	**55.37**	**346**	*e*P	**P**	**18 40 49.1**	**-0.2**
LRAL	**Lakeview Retre**	**56.76**	**340**	*e*P	**P**	**18 40 57.6**	**-1.5**
	comp=Z,6.3nm,0.6s,mb4.6						
TKL	**Tuckaleechee C**	**58.29**	**344**	P	**P**	**18 41 09.0**	**-0.8**
	comp=Z,14nm,0.8s,mb4.9,baz=162,slow=9.0,SNR=12						
SWET	**Sewanee**	**58.46**	**342**	*e*P	**P**	**18 41 09.7**	**-1.3**
JCT	**Junction City**	**59.85**	**327**	*e*P	**P**	**18 41 20.0**	**-0.6**
JCT				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
JCT	**Junction City**	**59.85**	**327**	*e*P	**P**	**18 41 20.0**	**-0.7**
	comp=Z,6.0nm,0.7s,mb4.5						
WVT	**Waverly**	**59.88**	**341**	*e*P	**P**	**18 41 18.9**	**-1.8**
WVT				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb5.0						
WVT	**Waverly**	**59.88**	**341**	*e*P	**P**	**18 41 18.9**	**-1.8**
	comp=Z,10nm,0.4s,mb5.0						
VNA3	**Neumayer Olymp**	**60.24**	**162**	*e*P	**P**	**18 41 23.2**	**+0.4**
VNA3				*e*		18 41 27.9	
VNA3				*e*		18 41 32.0	
VNA1	**Neumayer--Stat**	**60.43**	**161**	*e*P	**P**	**18 41 25.2**	**+1.2**
VNA1				*e*		18 41 29.9	
VNA1				*e*		18 41 33.7	
VNA1				*e*		18 42 14.6	
VNA2	**Neumayer--Watz**	**60.80**	**161**	*e*P	**P**	**18 41 27.1**	**+0.6**
	baz=276,slow=7.9						
VNA2				*e*		18 41 31.9	
VNA2				*e*		18 41 35.8	
VNA2				*e*		18 42 16.8	
TXAR	**Lajitas Array**	**61.00**	**324**	P	**P**	**18 41 27.8**	**-0.6**
	comp=Z,3.7nm,0.7s,mb4.3,baz=150,slow=8.6,SNR=32						
WCI	**Wyandotte Cave**	**61.38**	**343**	*e*P	**P**	**18 41 29.1**	**-1.7**
WCI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
WCI	**Wyandotte Cave**	**61.38**	**343**	*e*P	**P**	**18 41 29.1**	**-1.6**
	comp=Z,6.3nm,0.6s,mb4.6						
FVM	**French Village**	**62.40**	**339**	*e*P	**P**	**18 41 36.4**	**-1.2**
FVM				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.2						
FVM	**French Village**	**62.40**	**339**	*e*P	**P**	**18 41 36.4**	**-1.2**
	comp=Z,40nm,0.9s,mb5.2						
SNAA	**Sanae**	**62.44**	**161**	*e*P	**P**	**18 41 37.1**	**-0.3**
SNAA				*e*		18 41 42.3	
SNAA				*e*		18 41 46.2	
SNAA				*e*		18 42 27.1	
SNAA	**Sanae**	**62.44**	**161**	*e*P	**P**	**18 41 37.4**	**0.0**
SNAA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SNAA	**Sanae**	**62.44**	**161**	*e*P	**P**	**18 41 37.4**	**0.0**
	comp=Z,4.1nm,0.9s,mb4.3						
SNAA				*e*ScP	ScP	18 45 56.1	-4.0
ACSO	**Alum Creek Sta**	**62.45**	**346**	*e*P	**P**	**18 41 36.8**	**-1.1**
	comp=Z,34nm,0.9s,mb5.2						
CCM	**Cathedral Cave**	**62.74**	**339**	*e*P	**P**	**18 41 38.6**	**-1.3**
CCM				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.2						
CCM	**Cathedral Cave**	**62.74**	**339**	*e*P	**P**	**18 41 38.5**	**-1.3**
	comp=Z,30nm,0.7s,mb5.2						
BINY	**Binghamton**	**63.17**	**353**	*e*P	**P**	**18 41 42.9**	**+0.3**
	comp=Z,17nm,0.8s,mb4.9						
ALLY	**Alegheny Colle**	**63.25**	**349**	*e*P	**P**	**18 41 42.4**	**-0.8**
	comp=Z,30nm,0.8s,mb5.2						
ERPA	**Erie**	**63.68**	**349**	*e*P	**P**	**18 41 45.6**	**-0.4**
	comp=Z,36nm,0.6s,mb5.4						
BNM	**Barren Site**	**66.30**	**325**	*e*P	**P**	**18 42 02.9**	**-0.1**
LPM	**Los Pinos Moun**	**66.42**	**325**	*e*P	**P**	**18 42 04.0**	**+0.2**
LIC	**Lamto**	**66.58**	**73**	*e*P	**P**	**18 42 04.2**	**-1.1**
	comp=Z,28nm,0.6s,mb5.2						
TIC	**Toumodi**	**66.77**	**73**	*e*P	**P**	**18 42 05.3**	**-1.2**
	comp=Z,160nm,1.4s,mb5.7						
ANMO	**Albuquerque**	**66.82**	**325**	*e*P	**P**	**18 42 05.8**	**-0.5**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ANMO	**Albuquerque**	**66.82**	**325**	*e*P	**P**	**18 42 05.8**	**-0.5**
	comp=Z,2.2nm,0.6s,mb4.2						
KIC	**Kosan Boka**	**66.90**	**73**	*e*P	**P**	**18 42 06.4**	**-0.9**
	comp=Z,60nm,0.5s,mb5.7						
DBIC	**Dimbokro**	**66.93**	**73**	P	**P**	**18 42 06.9**	**-0.6**
	comp=Z,12nm,0.6s,mb4.9,baz=228,slow=7.4,SNR=22						
SDCO	**Great Sand Dun**	**68.48**	**328**	*e*P	**P**	**18 42 17.4**	**+0.7**
	comp=Z,24nm,1.2s,mb4.8						
WUAZ	**Wupatki**	**69.94**	**323**	*e*P	**P**	**18 42 26.8**	**+1.1**
	comp=Z,20nm,0.9s,mb4.8						
PFO	**Pinyon Flat Ob**	**71.65**	**318**	P	**P**	**18 42 36.8**	**+0.8**
	comp=Z,6.9nm,0.9s,mb4.4,baz=129,slow=2.6,SNR=6.7						
EYMN	**Ely**	**71.80**	**343**	*e*P	**P**	**18 42 35.3**	**-1.3**
	comp=Z,26nm,1.2s,mb4.8						
SRU	**San Rafael**	**72.08**	**326**	*e*P	**P**	**18 42 38.9**	**+0.4**
SRU				*e*		18 42 57.0	
SRU				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
SRU	**San Rafael**	**72.08**	**326**	*e*P	**P**	**18 42 38.9**	**+0.4**
	comp=Z,14nm,0.9s,mb4.7						
SRU				*e*PcP	PcP	18 42 57.0	+1.1
CCUT	**Cedar City**	**72.50**	**323**	*e*P	**P**	**18 42 42.5**	**+1.4**
MSU	**Marysvale**	**72.53**	**324**	*e*P	**P**	**18 42 41.8**	**+0.6**
MSU				*e*		18 42 58.1	
ARUT	**Antelope Range**	**72.72**	**323**	*e*P	**P**	**18 42 43.2**	**+0.9**
RSSD	**Black Hills**	**72.87**	**333**	*e*P	**P**	**18 42 43.3**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
RSSD	**Black Hills**	**72.87**	**333**	*e*P	**P**	**18 42 43.3**	**+0.3**
	comp=Z,9.6nm,0.9s,mb4.5						
GSC	**Goldstone**	**72.99**	**319**	*e*P	**P**	**18 42 44.8**	**+0.9**
GSC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
GSC	**Goldstone**	**72.99**	**319**	*e*P	**P**	**18 42 44.8**	**+0.8**
	comp=Z,3.7nm,0.8s,mb4.2						
AGMN	**Agassiz Refuge**	**73.40**	**340**	*e*P	**P**	**18 42 45.3**	**-0.7**
	comp=Z,23nm,0.8s,mb5.0						
DAU	**Daniels Canyon**	**73.42**	**326**	*e*P	**P**	**18 42 47.6**	**+1.3**
JLU	**Jordanelle**	**73.66**	**326**	*e*P	**P**	**18 42 48.6**	**+0.9**
TPNV	**Topopah Spring**	**73.75**	**321**	*e*P	**P**	**18 42 49.3**	**+0.9**
TPNV				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.7						
TPNV	**Topopah Spring**	**73.75**	**321**	*e*P	**P**	**18 42 49.3**	**+0.9**
	comp=Z,7.8nm,0.5s,mb4.7						
DUG	**Dugway**	**74.08**	**325**	*e*P	**P**	**18 42 51.0**	**+0.8**
DUG				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.7						
DUG	**Dugway**	**74.08**	**325**	*e*P	**P**	**18 42 51.0**	**+0.8**
	comp=Z,22nm,1.4s,mb4.7						
PDAR	**Pinedale Array**	**74.32**	**329**	P	**P**	**18 42 51.2**	**-0.3**
	comp=Z,9nm,0.7s,mb4.1,baz=133,slow=8.3,SNR=8.4						
BGU	**Big Grassy Mou**	**74.72**	**326**	*e*P	**P**	**18 42 54.0**	**+0.1**
TPH	**Tonopah**	**75.08**	**321**	*e*P	**P**	**18 42 57.0**	**+1.0**
TPH				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
TPH	**Tonopah**	**75.08**	**321**	*e*P	**P**	**18 42 57.0**	**+1.0**
	comp=Z,4.0nm,0.9s,mb4.0						
ULM	**Lac du Bonnet**	**75.13**	**341**	P	**P**	**18 42 55.1**	**-0.9**
	comp=Z,28nm,0.6s,mb5.1,baz=155,slow=6.3,SNR=39						
ULM	**Lac du Bonnet**	**75.13**	**341**	*e*P	**P**	**18 42 54.9**	**-1.1**
	comp=Z,25nm,0.9s,mb4.8						
SCHQ	**Schefferville**	**75.28**	**0**	P	**P**	**18 42 56.1**	**-0.6**
	comp=Z,5.2nm,0.8s,mb4.2,baz=139,slow=6.7,SNR=5.6						
REDW	**Red Top Meadow**	**75.39**	**329**	*e*P	**P**	**18 42 58.1**	**+0.4**
	comp=Z,15nm,1.2s,mb4.5						
LOHW	**Long Hollow**	**75.46**	**329**	*e*P	**P**	**18 42 58.3**	**+0.3**
	comp=Z,9.9nm,0.8s,mb4.5						
TOA0	**Torodi Ar. Sit**	**75.54**	**70**	*e*P	**P**	**18 42 58.1**	**-1.0**
TORD	**Torodi Ar. Bea**	**75.54**	**70**	P	**P**	**18 42 58.4**	**-0.8**
	comp=Z,18nm,0.7s,mb4.8,baz=252,slow=5.4,SNR=154						
TPAW	**Teton Pass**	**75.54**	**329**	*e*P	**P**	**18 42 59.1**	**+0.7**
	comp=Z,25nm,1.3s,mb4.7						
RRI2	**Red Ridge**	**75.61**	**328**	*e*P	**P**	**18 42 59.4**	**+0.5**
	comp=Z,23nm,1.0s,mb4.8						
IMW	**Indian Meadow**	**75.83**	**329**	*e*P	**P**	**18 43 00.9**	**+0.8**
	comp=Z,17nm,0.9s,mb4.7						
NVAR	**Mina Array Bea**	**75.95**	**321**	P	**P**	**18 43 01.6**	**+0.6**
	comp=Z,1.7nm,0.5s,mb4.0,baz=156,slow=6.9,SNR=24						
RLMT	**Red Lodge**	**75.97**	**331**	*e*P	**P**	**18 43 01.3**	**+0.4**
	comp=Z,9.9nm,0.6s,mb4.6						
YMR	**Madison River**	**76.42**	**329**	*e*P	**P**	**18 43 05.0**	**+1.6**
	comp=Z,28nm,1.1s,mb4.8						
DGMT	**Dagmar**	**76.47**	**336**	*e*P	**P**	**18 43 04.1**	**+0.5**
	comp=Z,46nm,1.1s,mb5.0						
QLMT	**Earthquake Lak**	**76.76**	**329**	*e*P	**P**	**18 43 06.6**	**+1.2**
HLID	**Hailey**	**77.32**	**327**	*e*P	**P**	**18 43 10.0**	**+1.5**
	comp=Z,23nm,1.0s,mb4.8						
PAHR	**Pah Rah Range**	**77.43**	**321**	*e*P	**P**	**18 43 10.1**	**+1.0**
	comp=Z,33nm,0.9s,mb5.0						
DLMT	**Dillon**	**77.71**	**329**	*e*P	**P**	**18 43 11.0**	**+0.4**
	comp=Z,21nm,1.4s,mb4.6						
EGMT	**Eagleton**	**78.40**	**332**	*e*P	**P**	**18 43 14.4**	**0.0**
	comp=Z,27nm,1.1s,mb4.8						
MSO	**Missoula**	**79.42**	**329**	*e*P	**P**	**18 43 19.9**	**-0.1**
	comp=Z,1.2nm,0.4s,mb3.9						
WDC	**Whiskeytown Da**	**79.85**	**320**	*e*P	**P**	**18 43 20.8**	**-1.6**
WDC				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.5						
WDC	**Whiskeytown Da**	**79.85**	**320**	*e*P	**P**	**18 43 20.8**	**-1.6**
	comp=Z,9.1nm,0.7s,mb4.6						
WALA	**Waterton Lakes**	**81.02**	**331**	*e*P	**P**	**18 43 28.4**	**-0.1**
	comp=Z,12nm,0.8s,mb4.6						
HAWA	**Hanford**	**81.90**	**326**	*e*P	**P**	**18 43 33.8**	**+0.7**
	comp=Z,15nm,0.8s,mb4.7						
RSW	**Rattlesnake Hi**	**81.94**	**326**	*e*P	**P**	**18 43 34.2**	**+0.9**
OD2	**Odessa Site #2**	**82.15**	**327**	*e*P	**P**	**18 43 34.1**	**-0.3**
BOSA	**Boshof**	**82.32**	**118**	P	**P**	**18 43 36.1**	**+0.2**
	comp=Z,4.9nm,0.8s,mb4.2,baz=280,slow=5.3,SNR=8.6						
TAM	**Tamanrasset**	**83.00**	**63**	*e*P	**P**	**18 43 39.8**	**+0.4**
ETW	**Entiat**	**83.11**	**327**	*e*P	**P**	**18 43 39.9**	**+0.5**
LBTB	**Lobatse**	**83.81**	**114**	*e*P	**P**	**18 43 43.8**	**+0.2**
LBTB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
LBTB	**Lobatse**	**83.81**	**114**	*e*P	**P**	**18 43 43.8**	**+0.2**
	comp=Z,8.4nm,0.8s,mb4.5						
EDM	**Edmonton**	**83.81**	**334**	*e*P	**P**	**18 43 41.6**	**-1.2**
ESDC	**Sonseca Array**	**84.14**	**44**	P	**P**	**18 43 45.5**	**+0.7**
	comp=Z,2.2nm,0.6s,mb4.0,baz=238,slow=4.9,SNR=4.7						
RPW	**Rockport**	**84.27**	**327**	*e*P	**P**	**18 43 44.7**	**-0.5**
JCW	**Jim Creek**	**84.32**	**327**	*e*P	**P**	**18 43 44.8**	**-0.6**
GNW	**Green Mountain**	**84.38**	**326**	*e*P	**P**	**18 43 45.2**	**-0.6**
	comp=Z,5.7nm,0.5s,mb4.6						
MAW	**Mawson**	**84.55**	**163**	P	**P**	**18 43 46.1**	**-0.4**
	comp=Z,1.2nm,0.7s,mb3.8,baz=192,slow=9.5,SNR=4.8						
YKA	**Yellowknife Ar**	**91.06**	**340**	P	**P**	**18 44 17.0**	**-0.3**
	comp=Z,13nm,0.8s,mb5.0,baz=131,slow=4.4,SNR=32						
STKA	**Stephens Creek**	**120.87**	**208**	PKP	PKPdf	18 50 04.5	-0.8
	comp=Z,2.5nm,0.8s,baz=342,slow=20,SNR=3.2						
STKA	**Stephens Creek**	**120.87**	**208**	PKP	PKPdf	18 50 04.5	-0.8
AKTK	**Aktyubinsk**	**127.98**	**42**	PKP	PKPdf	18 50 18.2	+0.1
AKTO	**Aktyubinsk**	**127.98**	**42**	PKP	PKPdf	18 50 18.2	+0.1
	comp=Z,1.1nm,0.9s,baz=357,slow=3.7,SNR=4.1						
SEY	**Seymchan**	**130.06**	**338**	⇑PKIKP	PKPdf	18 50 22.3	+0.5
ASAR	**Alice Springs**	**131.32**	**206**	PKP	PKPdf	18 50 24.4	-1.1
	comp=Z,2.7nm,0.7s,baz=135,slow=1.8,SNR=51						
ASAR				SKPbc	SKPbc	18 53 30.6	-3.2
	comp=Z,3.6nm,0.9s,baz=151,slow=4.6,SNR=16						
PETK	**Petropavlovsk-**	**132.95**	**325**	PKP	PKPdf	18 50 27.4	-0.1
	comp=Z,1.5nm,0.5s,baz=72,slow=4.1,SNR=7.1						
BVAR	**Borovoye Array**	**134.24**	**35**	PKP	PKPdf	18 50 29.8	-0.1
	comp=Z,0.6nm,0.5s,baz=256,slow=1.6,SNR=5.4						
WB2	**Warramunga Arr**	**134.41**	**209**	*e*P	PKPdf	18 50 17.6	-14
WB2				*e*		18 50 30.1	
WRA	**Warramunga Arr**	**134.42**	**209**	PKhKP		18 50 17.8	
	comp=Z,0.6nm,0.8s,baz=142,slow=3.3,SNR=7.6						
WRA				PKP	PKPdf	18 50 30.6	-0.8
	comp=Z,3.5nm,0.7s,baz=158,slow=1.8,SNR=33						
WRA				SKPbc	SKPbc	18 53 41.7	-2.9
	comp=Z,4.5nm,0.9s,baz=148,slow=2.3,SNR=18						
WRA	**Warramunga Arr**	**134.42**	**209**	PKHKP		18 50 17.8	
WRA						18 50 30.6	
YAK	**Yakutsk**	**137.15**	**348**	⇑*i*PKIKP	PKPdf	18 50 34.9	-0.2
NVS	**Novosibirsk**	**139.28**	**26**	*e*PKIKP	PKPdf	18 50 35.5	-3.7
FITZ	**Fitzroy Crossi**	**139.40**	**199**	PKP	PKPdf	18 50 40.2	-0.4
	comp=Z,2.4nm,0.7s,baz=215,slow=5.9,SNR=9.4						
KURK	**Kurchatov**	**139.80**	**34**	PKhKP		18 50 34.9	
	comp=Z,0.3nm,0.6s,baz=309,slow=2.7,SNR=3.1						
KURK				PKP	PKPdf	18 50 40.5	+0.2
	comp=Z,1.2nm,0.7s,baz=298,slow=2.7,SNR=7.2						
KURK	**Kurchatov**	**139.80**	**34**	PKP		18 50 34.9	
KURK				PKP	PKPdf	18 50 40.5	+0.2
ZALV	**Zalesovo Beam**	**140.57**	**26**	PKhKP		18 50 37.0	
	comp=Z,2.4nm,0.6s,baz=288,slow=5.7,SNR=3.7						
ZALV				PKP	PKPdf	18 50 41.6	+0.1
	comp=Z,5.7nm,0.8s,baz=291,slow=3.7,SNR=14						
BOD	**Bodaibo**	**142.98**	**359**	*e*PKHKP		18 50 41.0	
BOD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	**Makanchi Array**	**144.06**	**37**	*e*PKIKP	PKPdf	18 50 46.8	-1.2
MKAR	**Makanchi Array**	**144.06**	**37**	PKP	PKPdf	18 50 46.6	-1.4
	comp=Z,8.6nm,0.8s,baz=308,slow=3.4,SNR=46						
BATI	**Baumata**	**147.45**	**200**	PKPbc	PKPbc	18 50 57.8	+0.3
	comp=Z,24nm,0.6s,baz=216,slow=1.2,SNR=14						
MOY	**Mondy**	**147.78**	**14**	*e*PKP2	PKPbc	18 50 58.1	+0.8
KLR	**Kul'dur**	**147.84**	**337**	*e*PKIKP	PKPdf	18 50 53.3	-1.1
TLY	**Talaya**	**148.31**	**11**	⇑*i*PKP2	PKPab	18 51 01.4	-0.8
WMQ	**Urumqi**	**148.89**	**37**	*e*PKP	PKPbc	18 51 00.0	-0.4
WMQ				PP	PP		
	comp=Z,123nm,5.4s						
ZAK	**Zakamensk**	**149.48**	**12**	*e*PKP2	PKPbc	18 51 01.3	-0.3
SONM	**Songino Array**	**152.49**	**9**	PKP	PKPdf	18 51 02.1	+0.5
	comp=Z,1.8nm,0.9s,baz=207,slow=1.3,SNR=5.3						
SONM				PKPbc	PKPbc	18 51 09.0	+0.3
	comp=Z,3.8nm,0.5s,baz=313,slow=1.0,SNR=13						
SONM				PKPab	PKPab	18 51 20.1	+0.5
	comp=Z,4.8nm,0.6s,baz=310,slow=2.3,SNR=5.2						
SONM	**Songino Array**	**152.49**	**9**	PKP	PKPdf	18 51 02.1	+0.5
SONM				PKPbc	PKPbc	18 51 09.0	+0.3
SONM				PKPab	PKPab	18 51 20.1	+0.5
ULN	**Ulaanbaatar**	**152.55**	**9**	*e*PKPdf	PKPdf	18 51 02.0	+0.3
MJAR	**Matsushiro Arr**	**152.88**	**311**	PKPbc	PKPbc	18 51 09.2	-0.8
	comp=Z,2.6nm,0.6s,baz=86,slow=1.5,SNR=9.9						
MJAR				PKPab	PKPab	18 51 20.6	-1.2
	comp=Z,3.7nm,0.9s,baz=56,slow=1.3,SNR=7.6						
MAJO	**Matsushiro**	**152.89**	**311**	*e*PKIKP	PKPbc	18 51 09.3	-0.7
MAT	**Matsushiro**	**152.89**	**311**	PKP	PKPbc	18 51 09.5	-0.5
CN2	**Changchun**	**154.75**	**338**	*e*PKP	PKPdf	18 51 07.8	+2.8
GTA	**Gaotai**	**158.29**	**28**	PKP	PKPdf	18 51 10.6	+0.9
GTA				PKP2	PKPab	18 51 50.3	+5.5
GTA				APKP		18 52 00.3	
KSRS	**Korea Array**	**158.84**	**325**	PKP	PKPdf	18 51 10.7	+0.2
	comp=Z,1.9nm,0.9s,baz=352,slow=0.8,SNR=13						
KSRS				PKPab	PKPab	18 51 47.4	+0.1
	comp=Z,1.8nm,0.9s,baz=71,slow=3.0,SNR=7.0						
HHC	**Hu-ho-hao-te**	**159.94**	**3**	*e*PKP	PKPdf	18 51 11.0	-0.6
HHC				APKP		18 52 01.3	
HHC				XPKP		18 52 21.6	
HHC				PKS		18 54 43.8	
HHC				PP	PP	18 55 35.8	+2.6
HHC				SKS	SKSdf	18 57 55.8	-4.3
HHC				SKKS	SKKSac	19 02 02.4	-2.9
HHC				SS	SS	19 15 26.8	+0.5
HHC				PP	PP		
	comp=Z,65nm,7.6s						
HHC

BVAR Borovoye Array 129.63 23 PKP PKPdf 18 53 11.3 -0.1
comp=Z,0.2nm,0.5s,baz=270,slow=2.8,SNR=3.5
BVAR pPKP pPKPdf 18 53 27.0 -3.9
comp=Z,0.3nm,0.5s,baz=222,slow=1.9,SNR=2.6
ZALV Zalesovo Beam 133.35 13 PKP PKPdf 18 53 17.8 -0.6
comp=Z,0.6nm,0.3s,baz=306,slow=3.5,SNR=4.1
ZALV pPKP pPKPdf 18 53 35.9 -2.1
comp=Z,0.8nm,0.5s,baz=265,slow=2.5,SNR=2.6
ASAR Alice Springs 134.25 224 PKP PKPdf 18 53 20.0 -1.1
comp=Z,0.4nm,0.7s,baz=119,slow=2.3,SNR=4.5
KURK Kurchatov 134.51 20 PKP PKPdf 18 53 20.5 -0.2
comp=Z,0.9nm,0.6s,baz=322,slow=2.4,SNR=6.4
KURK pPKP pPKPdf 18 53 37.3 -2.9
comp=Z,1.0nm,0.6s,baz=322,slow=2.2,SNR=7.0
WRA Warramunga Arr 136.31 229 PKP PKPdf 18 53 24.2 -0.8
comp=Z,1.0nm,0.6s,baz=118,slow=2.0,SNR=9.9
MKAR Makanchi Array 139.12 20 PKP PKPdf 18 53 30.4 +1.1
comp=Z,0.3nm,0.5s,baz=355,slow=1.6,SNR=4.1
MKAR pPKP pPKPdf 18 53 47.3 -1.6
comp=Z,0.4nm,0.5s,baz=334,slow=1.9,SNR=2.2
KSRS Korea Array 142.63 323 pPKP pPKPdf 18 53 53.5 -2.0
comp=Z,0.8nm,0.6s,baz=338,slow=1.2,SNR=4.9
CMAR Chiang Mai Arr 170.41 11 PKPab PKPab 18 55 26.6 -1.3
comp=Z,1.1nm,0.7s,baz=332,slow=5.8,SNR=10

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*ISCJB **24** 18:37:22.8±0.7, 1003N±004×12624E±006, h72km±7km, mb3.9/15, Error ellipse: s-maj=9.8km s-min=5.5km az=154.5*
*MAN **24** 18:37:22, 1005N×126.15E, h16km, mb5.3, ML4.3, MS4.5*
*NEIC **24** 18:37:30.9±1.8, 993N×126.14E, h134km±15km, mb4.1/1, Error ellipse: s-maj=34.3km s-min=8.4km az=67.0*
*IDC **24** 18:37:33.2±2.4, 978N×12581E, h146km±24km, mb3.5/12, mb1 3.6/14, mb1mx3.5/23, mbtmp3.5/14, Error ellipse: s-maj=27.1km s-min=11.9km az=71.0*
ISC 24 18:37:23.9±0.7, 1004N±004×12625E±006, h63km±7km, n40, σ1s01/54, mb3.9/15, 2C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
SCPH	**Surigao**	**0.79**	**251**	⇓*eP*		**Pn**	**18 37 35.7**	**-3.7**
SCPH				*eS*		**Sn**	**18 37 46.3**	**-4.5**
BUTP	**Butuan**	**1.23**	**210**	*eP*		**Pn**	**18 37 42.6**	**-2.4**
BUTP				*eS*		**Sn**	**18 38 00.4**	**-0.4**
MSLP	**Maasin**	**1.37**	**274**	*eP*		**Pn**	**18 37 45.6**	**-1.2**
MSLP				*eS*		**Sn**	**18 38 03.2**	**-1.0**
BESP	**Borongan**	**1.74**	**333**	*eP*		**Pn**	**18 37 52.3**	**+0.3**
BIPH	**Bislig**	**1.85**	**176**	⇓*iP*		**Pn**	**18 37 50.7**	**-2.7**
BIPH				*i* S		**Sn**	**18 38 15.3**	**-0.4**
OCLP	**Ormoc**	**1.90**	**302**	*eP*		**Pn**	**18 37 54.7**	**+0.7**
OCLP				*eS*		**Sn**	**18 38 21.2**	**+4.3**
LLP	**Lapu-Lapu**	**2.26**	**277**	⇑*eP*		**Pn**	**18 37 59.0**	**0.0**
LLP				*eS*		**Sn**	**18 38 26.6**	**+0.8**
TBP	**Tagbilaran**	**2.37**	**262**	*eP*		**Pn**	**18 38 00.4**	**-0.1**
TBP				*eS*		**Sn**	**18 38 26.4**	**-2.1**
BUKP	**Musuan**	**2.44**	**209**	*eP*		**Pn**	**18 38 02.0**	**+0.5**
BUKP				*eS*		**Sn**	**18 38 33.7**	**+3.4**
CNP	**Catarman**	**2.90**	**328**	*eP*		**Pn**	**18 38 07.4**	**-0.3**
CNP				*eS*		**Sn**	**18 38 52.4**	**+11**
DAV	**Davao City (W)**	**3.02**	**193**	P		**Pn**	**18 38 16.5**	**+7.1**
	52nm,0.3s,baz=53,slow=15,SNR=4.7							
DAV				S		**Sn**	**18 38 58.9**	**+14**
	73nm,0.3s,baz=108,slow=22,SNR=3.7							
DAV	**Davao City (W)**	**3.02**	**193**	P		**Pn**	**18 38 16.5**	**+7.1**
DAV				S		**Sn**	**18 38 58.9**	**+14**
MATI	**Mati**	**3.07**	**180**	*eP*		**Pn**	**18 38 11.6**	**+1.5**
DCPH	**Dipolog City**	**3.20**	**243**	⇑*eP*		**Pn**	**18 38 11.6**	**-0.2**
DCPH				*eS*		**Sn**	**18 38 48.6**	**-0.2**
KCP	**Kidapawan**	**3.22**	**201**	*eP*		**Pn**	**18 38 13.9**	**+1.8**
KCP				*i* S		**Sn**	**18 38 53.9**	**+4.6**
PAGZ	**Pagadian**	**3.57**	**233**	*eP*		**Pn**	**18 38 17.2**	**+0.4**
GUIM	**Jordan**	**3.64**	**280**	*eP*		**Pn**	**18 38 18.1**	**+0.3**
GUIM				*eS*		**Sn**	**18 39 00.3**	**+0.7**
PVCP	**Virac**	**4.08**	**330**	*eP*		**Pn**	**18 38 24.4**	**+0.5**
IPIL	**Ipil**	**4.26**	**239**	*eP*		**Pn**	**18 38 27.6**	**+1.3**
OTRP	**Odiongan**	**4.74**	**300**	*eP*		**Pn**	**18 38 34.4**	**+1.5**
CUYO	**Cuyo Island**	**5.20**	**279**	*eP*		**Pn**	**18 38 39.7**	**+0.5**
CAUP	**Cauayan**	**8.10**	**328**	*eP*		**Pn**	**18 39 17.1**	**-1.7**
BATI	**Baumata**	**20.28**	**187**	P		**P**	**18 41 55.8**	**+1.2**
	0.6nm,0.3s,baz=329,slow=12,SNR=2.9							
CBIJ	**Chichi jima**	**22.67**	**39**	P		**P**	**18 42 27.6**	**+7.5**
	34nm,0.8s,mb4.8,baz=234,slow=19,SNR=2.6							
KSRS	**Korea Array**	**27.34**	**3**	P		**P**	**18 43 08.0**	**+5.0**
	1.0nm,1.0s,mb3.3,baz=181,slow=11,SNR=3.9							
CMAR	**Chiang Mai Arr**	**27.72**	**291**	P		**P**	**18 43 06.3**	**-0.3**
	1.5nm,0.9s,mb3.6,baz=99,slow=7.8,SNR=12							
FITZ	**Fitzroy Crossi**	**27.97**	**181**	P		**P**	**18 43 08.5**	**-0.2**
	1.2nm,0.7s,mb3.6,baz=19,slow=13,SNR=5.2							
WRA	**Warramunga Arr**	**30.84**	**165**	P		**P**	**18 43 33.0**	**-1.1**
	1.2nm,1.1s,mb3.6,baz=344,slow=9.4,SNR=4.2							
ASAR	**Alice Springs**	**34.33**	**167**			**P**	**18 44 04.2**	**-0.4**
	0.9nm,0.8s,mb3.8,baz=351,slow=7.4,SNR=10							
ULN	**Ulaanbaatar**	**41.03**	**340**	*eP*		**P**	**18 45 01.1**	**+0.2**
	4.5nm,1.0s,mb4.0							
SONM	**Songino Array**	**41.23**	**340**	P		**P**	**18 45 03.9**	**+1.4**
	1.2nm,0.8s,mb3.6,baz=152,slow=8.6,SNR=4.3							
STKA	**Stephens Creek**	**44.19**	**161**	P		**P**	**18 45 26.5**	**-0.2**
	2.2nm,0.8s,mb3.9,baz=161,slow=16,SNR=3.3							
MKAR	**Makanchi Array**	**52.19**	**323**	P		**P**	**18 46 28.2**	**-0.1**
	2.6nm,0.8s,mb4.2,baz=116,slow=7.7,SNR=13							
MKAR				PcP		PcP	18 47 40.0	+0.8
	0.4nm,0.6s,baz=108,slow=4.6,SNR=2.8							
MKAR	**Makanchi Array**	**52.19**	**323**	P		**P**	**18 46 28.2**	**-0.1**
MKAR				PcP		PcP	18 47 40.0	+0.8
ZALV	**Zalesovo Beam**	**54.81**	**331**	P		**P**	**18 46 46.9**	**-0.5**
	1.6nm,0.8s,mb4.1,baz=126,slow=7.5,SNR=5.4							
KURK	**Kurchatov**	**56.24**	**326**	P		**P**	**18 46 57.1**	**-0.5**
	2.6nm,0.8s,mb4.3,baz=128,slow=6.7,SNR=16							
BVAR	**Borovoye Array**	**61.84**	**325**	P		**P**	**18 47 36.8**	**+0.4**
	1.0nm,0.7s,mb4.0,baz=111,slow=8.1,SNR=7.3							
AKTK	**Aktyubinsk**	**68.48**	**320**	P		**P**	**18 48 18.8**	**-0.6**
AKTO	**Aktyubinsk**	**68.48**	**320**	P		**P**	**18 48 18.8**	**-0.6**
	0.3nm,0.4s,mb3.7,baz=84,slow=10,SNR=2.3							
ARCES	**ARCESS Array B**	**84.40**	**340**	P		**P**	**18 49 49.4**	**+0.3**
	2.5nm,0.9s,mb4.3,baz=69,slow=6.8,SNR=5.0							

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*SZGRF **24** 18:54:35.5, 2182S×17764W, h33km, Fiji Islands region*
*ISCJB **24** 18:55:34.6±1.0, 2035S±007×17788W±005, h523km±12km, mb4.5/40, Error ellipse: s-maj=11.2km s-min=6.6km az=154.6*
*BJI **24** 18:55:34.0, 2040S×17780W, h535km, mB4.9, mb4.6*
*MOS **24** 18:55:36.5±2.8, 1996S×17803W, h509km, mb5.1/6, Error ellipse: s-maj=14.0km s-min=10.1km az=159.8*
*IDC **24** 18:55:36.8±1.7, 2034S×17785W, h537km±19km, mb4.0/22, mb1 4.1/24, mb1mx4.1/26, mbtmp4.0/24, Error ellipse: s-maj=14.8km s-min=9.2km az=154.0*
*NEIC **24** 18:55:36.3±0.7, 2038S×17785W, h535km±8km, mb4.8/18, Error ellipse: s-maj=10.7km s-min=5.1km az=156.0*
ISC 24 18:55:36.0±0.9, 2035S±007×17786W±005, h527km±12km, n200, σ0s92/89, mb4.5/40, 36C-18D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
AFI	**Afiamalu**	**8.65**	**43**	P		**P**	**18 57 38.8**	**-1.0**
	17nm,0.3s,baz=40,slow=3.8,SNR=13							
AFI				S		**S**	**18 59 14.7**	**-6.8**
	39nm,0.3s,baz=77,slow=18,SNR=8.4							
AFI	**Afiamalu**	**8.65**	**43**	P		**P**	**18 57 38.8**	**-1.1**
AFI				S		**S**	**18 59 14.7**	**-6.8**
DZM	**Mont Dzumac**	**14.73**	**261**	*eP*		**P**	**18 58 43.9**	**+0.8**
DZM	**Mont Dzumac**	**14.73**	**261**	*eP*		**P**	**18 58 43.9**	**+0.8**
RAR	**Rarotonga**	**16.94**	**96**	P		**P**	**18 59 05.4**	**+0.1**
	2.6nm,0.3s,baz=266,slow=8.2,SNR=7.1							
URZ	**Urewera**	**18.37**	**193**	P		**P**	**18 59 15.8**	**-2.3**
	6.2nm,0.3s,baz=318,slow=2.7,SNR=33							
URZ				S		**S**	**19 02 13.5**	**-5.6**
	0.3nm,0.3s,baz=184,slow=20,SNR=6.1							
RPZ	**Rata Peaks**	**25.07**	**199**	P		**P**	**19 00 17.3**	**-1.1**
	14nm,1.1s,mb4.5,baz=50,slow=6.6,SNR=3.2							
PPT	**Papeete**	**26.88**	**89**	*eP*		**P**	**19 00 35.1**	**+0.4**
	36nm,1.1s,mb4.9							
PPT	**Papeete**	**26.88**	**89**	P		**P**	**19 00 35.1**	**+0.4**
	32nm,0.6s,mb5.2,baz=225,slow=15,SNR=3.8							
PPT	**Papeete**	**26.88**	**89**	*eP*		**P**	**19 00 35.1**	**+0.4**
PPT				pmax		pmax		
	comp=Z,36nm,1.1s							
TIAR	**Tiarei**	**27.10**	**89**	*eP*		**P**	**19 00 37.0**	**+0.3**
	comp=Z,184nm,0.7s							
TVO	**Taravao**	**27.15**	**89**	*eP*		**P**	**19 00 37.3**	**+0.2**
	comp=Z,244nm,0.8s							
TVO	**Taravao**	**27.15**	**89**	*eP*		**P**	**19 00 37.3**	**+0.2**
TVO				pmax		pmax		
	comp=Z,244nm,0.8s							
PMOR	**Pomariorio Ree**	**29.02**	**84**	*eP*		**P**	**19 00 53.4**	**-0.1**
	comp=Z,64nm,1.2s,mb5.1							
VAH	**Vaihoa**	**29.21**	**85**	*eP*		**P**	**19 00 54.6**	**-0.5**
	comp=Z,44nm,1.0s,mb5.0							
ARMA	**Armidale**	**29.25**	**244**	*eP*		**P**	**19 00 56.6**	**+1.4**
CNB	**Canberra Magne**	**32.41**	**236**	*eP*		**P**	**19 01 23.4**	**+1.0**
CTA	**Charters Tower**	**33.63**	**264**	*eP*		**P**	**19 01 33.6**	**+0.7**
CTA	**Charters Tower**	**33.63**	**264**	P		**P**	**19 01 33.7**	**+0.8**
	comp=Z,58nm,0.5s,mb5.4,baz=94,slow=10,SNR=132							
CTAO	**Charters Tower**	**33.63**	**264**	*eP*		**P**	**19 01 33.2**	**+0.3**
CTAO				pmax		pmax		
	comp=Z,62nm,0.6s,mb5.3							
CTAO	**Charters Tower**	**33.63**	**264**	*eP*		**P**	**19 01 33.2**	**+0.3**
	comp=Z,62nm,0.6s,mb5.3							
PMG	**Port Moresby**	**35.44**	**283**	⇑*eP*		**P**	**19 01 48.0**	**-0.1**
TOO	**Toolangi**	**36.09**	**234**	*eP*		**P**	**19 01 53.7**	**+0.6**
STKA	**Stephens Creek**	**37.97**	**244**	*eP*		**P**	**19 02 09.0**	**+0.3**
STKA	**Stephens Creek**	**37.97**	**244**	P		**P**	**19 02 09.5**	**+0.8**
	comp=Z,12nm,0.5s,mb4.7,baz=85,slow=8.8,SNR=58							
ASAR	**Alice Springs**	**44.68**	**257**	P		**P**	**19 03 02.1**	**+0.1**
	comp=Z,26nm,0.8s,mb4.8,baz=93,slow=7.0,SNR=389							
ASAR				PcP		PcP	19 04 32.7	-0.6
	comp=Z,4.4nm,0.7s,baz=102,slow=4.3,SNR=8.7							
ASAR				S		**S**	**19 08 57.5**	**-2.6**
	comp=Z,7.3nm,0.9s,baz=94,slow=15,SNR=28							
WB2	**Warramunga Arr**	**44.74**	**262**	*eP*		**P**	**19 03 02.1**	**-0.4**
WB2				*eS*		**S**	**19 08 55.5**	**-5.5**
WRAB	**Tennant Creek**	**44.74**	**262**	*eP*		**P**	**19 03 02.0**	**-0.5**
WRAB				pmax		pmax		
	comp=Z,33nm,1.0s,mb4.8							
WRAB	**Tennant Creek**	**44.74**	**262**	*eP*		**P**	**19 03 02.0**	**-0.6**
	comp=Z,33nm,1.0s,mb4.8							
WRA	**Warramunga Arr**	**44.75**	**262**	P		**P**	**19 03 02.1**	**-0.5**
	comp=Z,24nm,0.9s,mb4.7,baz=99,slow=8.0,SNR=203							
WRA				PcP		PcP	19 04 30.1	-3.5
	comp=Z,2.6nm,0.8s,baz=94,slow=4.6,SNR=4.1							
WRA				S		**S**	**19 08 57.2**	**-4.0**
	comp=Z,3.5nm,1.0s,baz=97,slow=13,SNR=8.4							
FORT	**Forrest**	**49.47**	**246**	*eP*		**P**	**19 03 37.7**	**-0.3**
FITZ	**Fitzroy Crossi**	**53.17**	**262**	*eP*		**P**	**19 04 05.3**	**+0.3**
FITZ	**Fitzroy Crossi**	**53.17**	**262**	P		**P**	**19 04 05.4**	**+0.4**
	comp=Z,3.9nm,0.4s,mb4.1,baz=118,slow=4.6,SNR=35							
BATI	**Baumata**	**57.05**	**271**	P		**P**	**19 04 33.7**	**+1.5**
	comp=Z,8.2nm,0.5s,mb4.2,baz=126,slow=7.6,SNR=3.7							
KLBR	**Kellerberrin**	**58.23**	**245**	*eP*		**P**	**19 04 39.7**	**-0.3**
MUN	**Mundaring**	**59.50**	**244**	*eP*		**P**	**19 04 49.0**	**+0.5**
CBIJ	**Chichi jima**	**61.01**	**319**	P		**P**	**19 04 58.0**	**-0.5**
	comp=Z,31nm,0.6s,mb4.8,baz=247,slow=18,SNR=7.2							
JHJ	**Hachijo jima 2**	**66.80**	**322**	P		**P**	**19 05 35.0**	**-0.2**
	comp=Z,114nm,0.7s,mb5.5,baz=236,slow=18,SNR=8.1							
MJAR	**Matsushiro Arr**	**70.17**	**324**	P		**P**	**19 05 55.0**	**-0.6**
	comp=Z,14nm,0.7s,mb4.6,baz=161,slow=6.0,SNR=47							
MAT	**Matsushiro**	**70.17**	**324**	P		**P**	**19 05 56.0**	**+0.4**
PETK	**Petropavlovsk-**	**76.16**	**345**	P		**P**	**19 06 29.0**	**-0.5**
	comp=Z,16nm,0.7s,mb4.6,baz=131,slow=7.1,SNR=20							
KSRS	**Korea Array**	**76.86**	**318**	P		**P**	**19 06 34.2**	**+0.5**
	comp=Z,3.6nm,0.7s,mb3.9,baz=128,slow=5.9,SNR=31							
CMB	**Columbia Colle**	**79.27**	**43**	*eP*		**P**	**19 06 47.5**	**+0.9**
CMB				pmax		pmax		
	comp=Z,9.0nm,1.0s,mb4.0							
CMB	**Columbia Colle**	**79.27**	**43**	*eP*		**P**	**19 06 47.5**	**+0.8**
	comp=Z,9.0nm,1.0s,mb4.0							
NJ2	**Nanjing**	**79.88**	**310**	*eP*		**P**	**19 06 47.4**	**-2.6**
NJ2				AMB		AMB		
	comp=Z,30nm,1.0s,mb4.6							
YBH	**Yreka Blue Hor**	**80.09**	**39**	P		**P**	**19 06 51.9**	**+1.0**
	comp=Z,14nm,0.7s,mb4.4,baz=177,slow=1.1,SNR=29							
MDJ	**Mudanjiang**	**80.47**	**325**	*eP*		**P**	**19 06 53.5**	**+0.7**
	comp=Z,8.2nm,0.8s,mb4.1							
HUMO	**Hull Mountain**	**80.50**	**38**	*eP*		**P**	**19 06 53.9**	**+0.9**
	comp=Z,14nm,1.1s,mb4.2							
KDAK	**Kodiak Island**	**80.64**	**13**	P		**P**	**19 06 53.5**	**+0.2**
	comp=Z,4.6nm,0.7s,mb4.0,baz=191,slow=7.8,SNR=5.0							
NVAR	**Mina Array Bea**	**80.83**	**43**	P		**P**	**19 06 55.6**	**+0.8**
	comp=Z,7.9nm,0.8s,mb4.2,baz=225,slow=9.1,SNR=19							
TPNV	**Topopah Spring**	**81.35**	**45**	*eP*		**P**	**19 06 57.2**	**-0.3**
TPNV				pmax		pmax		
	comp=Z,7.0nm,0.9s,mb4.1							
TPNV	**Topopah Spring**	**81.35**	**45**	*eP*		**P**	**19 06 57.2**	**-0.3**
	comp=Z,6.9nm,0.9s,mb4.1							
MOD	**Modoc**	**81.62**	**40**	*eP*		**P**	**19 06 59.3**	**+0.5**
	comp=Z,7.2nm,0.3s,mb4.6							
MAW	**Mawson**	**81.75**	**200**	P		**P**	**19 06 59.2**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=142,slow=5.8,SNR=7.7							
WHN	**Wuhan**	**82.46**	**306**	P		**P**	**19 07 05.8**	**+2.5**
WVOR	**Wild Horse Val**	**82.94**	**40**	*eP*		**P**	**19 07 05.6**	**+0.2**
WVOR				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.3							
WVOR	**Wild Horse Val**	**82.94**	**40**	*eP*		**P**	**19 07 05.6**	**+0.2**
	comp=Z,10nm,1.0s,mb4.3							
NLWA	**Neilton Lookou**	**83.04**	**34**	*eP*		**P**	**19 07 05.7**	**-0.2**
	comp=Z,4.9nm,0.6s,mb4.2							
ELK	**Elko**	**84.09**	**43**	P		**P**	**19 07 11.7**	**+0.5**
	comp=Z,2.4nm,0.6s,mb3.9,baz=274,slow=6.1,SNR=5.1							
RC01	**Rabbit Creek A**	**84.26**	**13**	*eP*		**P**	**19 07 10.0**	**-1.6**
	comp=Z,12nm,0.9s,mb4.4							
SEY	**Seymchan**	**86.26**	**347**	⇑*eP*		**P**	**19 07 18.7**	**-2.5**
TRF	**Thorofare Moun**	**86.28**	**12**	*eP*		**P**	**19 07 19.9**	**-1.3**
	comp=Z,27nm,0.8s,mb4.9							
MCK	**McKinley**	**86.80**	**12**	*eP*		**P**	**19 07 22.7**	**-1.0**
MCK				pmax		pmax		
	comp=Z,17nm,0.8s,mb4.7							
MCK	**McKinley**	**86.80**	**12**	*eP*		**P**	**19 07 22.7**	**-1.0**
	comp=Z,17nm,0.8s,mb4.7							
TXAR	**Lajitas Array**	**86.87**	**57**	P		**P**	**19 07 25.8**	**+0.9**
	comp=Z,4.9nm,0.7s,mb4.2,baz=216,slow=6.7,SNR=41							
ANMO	**Albuquerque**	**87.21**	**51**	P		**P**	**19 07 26.4**	**+0.1**
	comp=Z,2.0nm,0.5s,mb4.0,baz=240,slow=9.2,SNR=4.4							
MCMT	**McKenzie Canyo**	**87.76**	**40**	*eP*		**P**	**19 07 29.8**	**+1.1**
DLBC	**Dease Lake**	**87.87**	**23**	P		**P**	**19 07 29.2**	**+0.4**
	baz=277,slow=8.1							
COLA	**College**	**88.04**	**12**	*eP*		**P**	**19 07 28.2**	**-1.3**
COLA				pmax		pmax		
	comp=Z,23nm,0.8s,mb5.0							
COLA	**College**	**88.04**	**12**	*eP*		**P**	**19 07 28.2**	**-1.3**
	comp=Z,24nm,0.8s,mb5.0							
XAN	**Xi'an**	**88.14**	**307**	P		**P**	**19 07 31.4**	**+0.7**
XAN				AMB		AMB		
	comp=Z,21nm,1.0s,mb4.8							
XAN				AMB		AMB		
	comp=Z,137nm,5.4s							
SNAA	**Sanae**	**88.15**	**178**	*eP*		**P**	**19 07 29.3**	**-0.8**
SNAA	**Sanae**	**88.15**	**178**	⇑*eP*		**P**	**19 07 39.8**	**+10**
VNA3	**Neumayer Olymp**	**88.28**	**176**	*eP*		**P**	**19 07 30.1**	**-0.6**
VNA3				*e*			19 09 33.0	
VNA3				*e*			19 09 42.0	
QLMT	**Earthquake Lak**	**88.62**	**41**	*eP*		**P**	**19 07 34.2**	**+1.5**
VNA2	**Neumayer--Watz**	**88.72**	**177**	*eP*		**P**	**19 07 32.5**	**-0.3**
	baz=201,slow=3.4							
VNA2				*e*			19 09 35.2	
PDAR	**Pinedale Array**	**88.77**	**43**	P		**P**	**19 07 33.7**	**+0.3**
	comp=Z,5.5nm,0.6s,mb4.5,baz=222,slow=2.0,SNR=5.8							
VNA1	**Neumayer--Stat**	**88.95**	**177**	*eP*		**P**	**19 07 33.9**	**0.0**
DAWY	**Dawson**	**89.28**	**16**	*eP*		**P**	**19 07 34.9**	**-0.4**
COLD	**Coldfoot**	**89.71**	**10**	*eP*		**P**	**19 07 37.3**	**+0.1**
	comp=Z,106nm,1.2s,mb5.5							
CMAR	**Chiang Mai Arr**	**90.19**	**290**	P		**P**	**19 07 41.7**	**+1.1**
	comp=Z,6.9nm,0.9s,mb4.5,baz=111,slow=2.9,SNR=43							
CMAR				pP		pP	19 09 44.8	+7.7
	comp=Z,0.8nm,0.9s,baz=134,slow=2.1,SNR=4.8							
YAK	**Yakutsk**	**92.03**	**338**	⇑*eP*		**P**	**19 07 46.1**	**-1.9**
YAK				pmax		pmax		
	comp=Z,10.0nm,0.6s,mb5.0							
SONM	**Songino Array**	**95.73**	**319**	P		**P**	**19 08 04.1**	**-1.2**
	comp=Z,0.6nm,0.7s,mb4.0,baz=132,slow=4.3,SNR=2.7							
ZALV	**Zalesovo Beam**	**110.46**	**321**	PKiKP	PKiKP		19 13 06.1	-1.9
	comp=Z,1.7nm,0.6s,baz=161,slow=1.2,SNR=8.4							
MKAR	**Makanchi Array**	**111.19**	**313**	PKiKP	PKiKP		19 13 07.8	-1.8
	comp=Z,1.5nm,0.6s,baz=110,slow=0.4,SNR=16							
KURK	**Kurchatov**	**113.97**	**317**	⇑*i*PKiKP	PKiKP		19 13 11.9	-2.9
ARU	**Arti**	**125.15**	**326**	*i* PKiKP	PKPdf		19 13 34.5	-1.6
ARU							19 15 28.2	
BOSA	**Boshof**	**126.44**	**205**	PKP	PKPdf		19 13 38.6	-0.9
	comp=Z,2.9nm,0.9s,baz=327,slow=10,SNR=3.8							
ARCES	**ARCESS Array B**	**128.80**	**350**	PKP	PKPdf		19 13 41.5	-1.2
	comp=Z,2.1nm,0.6s,baz=34,slow=2.1,SNR=14							
NOA	**NORSAR Array B**	**138.85**	**353**	PKhKP			19 13 52.0	
	comp=Z,1.2nm,0.7s,baz=28,slow=2.8,SNR=3.6							
NOA	**NORSAR Array B**	**138.85**	**353**	PKP	PKPdf		19 13 52.0	-10
SUW	**Suwalki**	**142.75**	**340**	*ePKP*	PKPdf		19 14 05.4	-3.5
SUW	**Suwalki**	**142.75**	**340**	*ePKP*	PKPdf		19 14 05.4	-3.5
AKASG	**Malin Array Be**	**142.95**	**331**	PKhKP			19 14 05.4	
	comp=Z,30nm,0.7s,baz=40,slow=4.2,SNR=105							
MALT	**Malatya**	**143.94**	**308**	⇓*iP*		PKPdf	19 14 12.0	+0.5
MALT	**Malatya**	**143.94**	**308**	⇓P		PKPdf	19 14 12.0	+0.5
SIM	**Simferopol'**	**143.96**	**320**	*i* PKHKP		PKPdf	19 14 10.4	-0.9
SIM				pmax		pmax		
	comp=Z,38nm,0.8s							
GKP	**Gorka Klasztor**	**145.14**	**344**	*e*PKP		PKPdf	19 14 13.3	+0.2
GKP	**Gorka Klasztor**	**145.14**	**344**	*e*PKP		PKPdf	19 14 13.3	+0.2
KIS	**Kishinev**	**145.68**	**327**	⇑*i*PKIKP		PKPdf	19 14 15.0	+0.8
KIS	**Kishinev**	**145.68**	**327**	⇑*i*UNK		PKPdf	19 14 15.0	+0.8
LVV	**L'vov**	**145.83**	**335**	*e*PKHKP		PKPdf	19 14 13.6	-0.8
BSEG	**Bad Segeberg**	**145.90**	**351**	*e*PKPbc		PKPbc	19 14 15.4	-0.7
KWP	**Kalwaria**	**146.50**	**336**	*e*PKP		PKPdf	19 14 17.4	+1.9
KWP				*e*			19 14 20.6	
KWP	**Kalwaria**	**146.50**	**336**	*e*PKP		PKPdf	19 14 17.4	+1.9
KWP				*e*			19 14 20.6	
TLCR		**146.87**	**324**	⇓*iP*		PKPdf	19 14 17.4	+1.1
TLCR		**146.87**	**324**	⇓P		PKPdf	19 14 17.4	+1.2
BURAR	**Bucovina Array**	**147.00**	**331**	⇑*iP*		PKPbc	19 14 20.2	+0.9
BURAR	**Bucovina Array**	**147.00**	**331**	⇑P		PKPbc	19 14 20.2	+0.8
OJC	**Ojcow**	**147.07**	**339**	*e*PKIKP		PKPbc	19 14 18.6	-0.8
KOLS	**Kolonicke sedl**	**147.23**	**335**	*e*PKP		PKPbc	19 14 19.8	-0.1
KOLS				*e*			19 14 23.0	
STHS	**Stebnicka Huta**	**147.23**	**337**	*e*PKP		PKPbc	19 14 19.9	0.0
STHS				*e*			19 14 24.2	
NRDL	**Niedersach Rie**	**147.33**	**351**	*e*PKPbc		PKPbc	19 14 19.2	-0.8
ANTO	**Ankara**	**147.35**	**313**	⇓*iP*		PKPbc	19 14 20.5	0.0
UZH	**Uzhgorod**	**147.47**	**335**	*ci*PKIKP		PKPbc	19 14 20.0	-0.5
VRI	**Vrincioaia**	**147.51**	**327**	⇑*iP*		PKPbc	19 14 20.3	-0.5
VRI	**Vrincioaia**	**147.51**	**327**	⇑P		PKPbc	19 14 20.3	-0.5
PLOR	**Plostina**	**147.56**	**327**	⇓*iP*		PKPbc	19 14 20.3	-0.6
CRVS	**Cervenica-Dubn**	**147.57**	**336**	*e*PKP		PKPbc	19 14 20.7	-0.1
CRVS				*e*			19 14 24.9	
KSP	**Ksiaz**	**147.59**	**343**	*e*PKP		PKPbc	19 14 20.7	0.0
KSP

ABTA	**Abfaltersbach**	**152.34**	**345**	⇑*i*P		PKPbc	19 14 30.5	-1.6
	comp=Z,8.6nm,0.6s								
ABTA	**Abfaltersbach**	**152.34**	**345**	⇓*i*PKPdf		PKPdf	19 14 23.8	-1.0
ABTA				⇑*i*PKPbc		PKPbc	19 14 30.7	-1.5
	comp=Z,8.6nm,0.6s								
ABTA				⇓*i*PKPab		PKPab	19 14 44.1	-0.6
LOR	**Lormes**	**153.12**	**357**	*e*PKP1		PKPbc	19 14 32.9	-0.9
	comp=Z,7.1nm,0.7s								
SSF	**Saint Saulge**	**153.34**	**358**	*e*PKP1		PKPbc	19 14 35.0	+0.7
MFF	**Saint Martin d**	**153.75**	**4**	*e*PKP1		PKPbc	19 14 34.0	-1.2
	comp=Z,10nm,0.8s								
ESDC	**Sonseca Array**	**160.04**	**14**	PKPab		PKPab	19 15 16.7	-1.4
	comp=Z,0.3nm,0.4s,baz=357,slow=3.0,SNR=5.1								
TORD	**Torodi Ar. Bea**	**172.82**	**177**	PKP		PKPdf	19 14 42.8	-2.6
	comp=Z,2.4nm,0.9s,baz=222,slow=3.7,SNR=11								
TORD				PKPab		PKPab	19 16 14.4	-0.6
	comp=Z,0.4nm,0.7s,baz=180,slow=3.7,SNR=3.1								

MOS ***24*** *19:06:34.1±1.3, 1947S×6852W, h33km, mb5.1/7, Error ellipse: s-maj=20.5km s-min=11.0km az=123.8*
ISCJB ***24*** *19:06:35.2±0.9, 1948S±005×6849W±007, h43km±9km, mb4.6/27, MS4.5/17, Error ellipse: s-maj=11.9km s-min=6.3km az=148.9*
IDC ***24*** *19:06:35.8±4.4, 1949S×6856W, h30km±31km, mb4.3/16, mb1 4.3/21, mb1mx4.3/27, mbtmp4.3/21, ML4.4/4, MS4.3/22, Ms1 4.3/22, ms1mx4.2/30, Error ellipse: s-maj=19.2km s-min=12.9km az=62.0*
GCMT ***24*** *19:06:37.9±0.3, 1946S×6871W, h64km±4km, MW5.1/46, Moment Tensor Solution. s36,c39; s46,c63; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.33±.27; Mθθ -1.19±.27; Mφφ 0.85±.35; Mrθ -1.00±.21; Mrφ 4.87±.18; Mθφ 2.13±.32; Best double couple: Mo 5.46500×10^16 NP1: φ 83.00000°, δ 67.00000°, λ -4.00000°. NP2: φ 174.00000°, δ 86.00000°, λ -157.00000°. Principal axes: T 5.0520, Plg 13.0000°, Azm 306.0000°; N 0.8240, Plg 66.0000°, Azm 183.0000°; P -5.8790, Plg 19.0000°, Azm 41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***24*** *19:06:37.9, 1950S×6850W, h51km, mB 5.2, Ms 5.2, Msz 5.0*
NEIC ***24*** *19:06:37.9±0.7, 1953S×6854W, h52km±7km, mb4.8/13, Error ellipse: s-maj=9.5km s-min=6.1km az=71.0*
NEIC Felt [III] at Colchane.

ISC 24 19:06:35.0±2.4, 1944S±005×6843W±008, h24km±17km, h28km±1.5km: pP-P, n99, σ1°08/74, mb4.6/27, MS4.5/17, 2C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.14**	**5**	Pn		**Pn**	**19 07 30.2**	**+7.2**
	31nm,0.3s,baz=189,slow=10.0,SNR=86							
LPAZ				LR		LR	19 08 55.0	
	comp=Z,4μm,21.5s,baz=186,slow=43							
LPAZ	**La Paz**	**3.14**	**5**	*e*P		**Pn**	**19 07 29.7**	**+6.7**
LVC	**Limon Verde**	**3.19**	**188**	Pn		**Pn**	**19 07 25.0**	**+1.3**
	966nm,0.3s,baz=346,slow=8.5,SNR=471							
LVC				Sn		**Sn**	**19 08 06.4**	**+5.4**
	528nm,0.3s,baz=222,slow=18,SNR=13							
LVC				LR		LR	19 08 43.3	
	comp=Z,7μm,18.4s,baz=355,slow=41							
LVC	**Limon Verde**	**3.19**	**188**	*e*P		**Pn**	**19 07 24.8**	**+1.1**
ARE	**Arequipa**	**4.15**	**315**	*e*P		**Pn**	**19 07 37.0**	**+0.1**
ARE				*e*S		**Sn**	**19 08 27.0**	**+2.3**
SIV	**San Ignacio**	**7.80**	**65**	Pn		**Pn**	**19 08 31.2**	**+4.1**
	3.5nm,0.3s,baz=260,slow=11,SNR=56							
SIV				LR		LR	19 12 18.7	
	comp=Z,2μm,21.0s,baz=246,slow=43							
LCO	**Las Campanas**	**9.76**	**192**	*e*P		**Pn**	**19 08 55.1**	**+1.3**
	90nm,0.8s							
NNA	**Nana**	**10.97**	**311**	Pn		**Pn**	**19 09 07.8**	**-2.8**
	1.6nm,0.3s,baz=151,slow=15,SNR=6.0							
NNA				Sn		**Sn**	**19 11 18.4**	**+5.8**
	0.9nm,0.3s,baz=242,slow=17,SNR=2.0							
NNA				LR		LR	19 13 13.9	
	comp=Z,873nm,18.5s,baz=164,slow=36							
NNA	**Nana**	**10.97**	**311**	*e*P		**Pn**	**19 09 05.7**	**-4.8**
	25nm,0.6s							
CFAA	**Coronel Fontan**	**12.12**	**179**	Pn		**Pn**	**19 09 22.5**	**-3.7**
	0.2nm,0.3s,baz=356,slow=13,SNR=12							
CFAA				Sn		**Sn**	**19 11 58.6**	**+18**
	0.0nm,0.3s,baz=173,slow=17,SNR=2.2							
CFAA				LR		LR	19 14 41.7	
	comp=Z,186nm,20.7s,baz=354,slow=40							
CPUP	**Villa Florida**	**12.31**	**126**	Pn		**Pn**	**19 09 30.1**	**+1.2**
	1.1nm,0.3s,baz=282,slow=12,SNR=8.4							
CPUP	**Villa Florida**	**12.31**	**126**	*e*P		**Pn**	**19 09 30.0**	**+1.1**
CPUP				pmax		pmax		
	comp=Z,36nm,0.8s							
CPUP	**Villa Florida**	**12.31**	**126**	*e*P		**Pn**	**19 09 29.9**	**+1.1**
	comp=Z,36nm,0.8s							
ATAH	**Atahualpa**	**15.70**	**321**	Pn		**Pn**	**19 10 13.0**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=171,slow=19,SNR=2.2							
ATAH				LR		LR	19 16 45.9	
	comp=Z,1μm,21.1s,baz=288,slow=39							
TRQA	**Tornquist**	**19.39**	**165**	*e*P		**Pn**	**19 10 58.0**	**-2.3**
	comp=Z,16nm,0.7s							
BDFB	**Brasilia**	**19.83**	**82**	P		**Pn**	**19 11 05.2**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=229,slow=15,SNR=3.5							
BDFB				LR		LR	19 19 47.7	
	comp=Z,916nm,19.7s,baz=248,slow=40							
PLCA	**Paso Flores**	**21.31**	**184**	P		**P**	**19 11 18.5**	**-1.4**
	comp=Z,16nm,0.9s,mb4.3,baz=8.2,slow=11,SNR=17							
PLCA				LR		LR	19 19 18.1	
	comp=Z,911nm,19.3s,MS4.2,baz=357,slow=36							
PLCA	**Paso Flores**	**21.31**	**184**	*e*P		**P**	**19 11 18.8**	**-1.1**
PLCA				pmax		pmax		
	comp=Z,63nm,1.3s							
PLCA	**Paso Flores**	**21.31**	**184**	*e*P		**P**	**19 11 18.8**	**-1.1**
	comp=Z,63nm,1.3s,mb4.8							
OTAV	**Otavalo**	**21.88**	**332**	*e*P		**P**	**19 11 26.4**	**0.0**
	comp=Z,29nm,1.0s,mb4.7							
SDV	**Santo Domingo**	**28.23**	**355**	P		**P**	**19 12 27.8**	**+1.6**
	comp=Z,12nm,0.5s,mb4.8,baz=185,slow=21,SNR=6.3							
SDV				LR		LR	19 25 01.1	
	comp=Z,1μm,18.2s,MS4.6,baz=8.6,slow=39							
PCRV	**Puerto La Cruz**	**29.66**	**8**	LR		LR	19 25 35.0	
	comp=Z,2μm,19.0s,MS4.8,baz=349,slow=38							
TEIG	**Tepich**	**43.95**	**333**	P		**P**	**19 14 40.1**	**-0.2**
	comp=Z,10nm,0.8s,mb4.6,baz=256,slow=4.7,SNR=4.7							
TEIG				LR		LR	19 35 02.5	
	comp=Z,325nm,18.1s,MS4.3,baz=127,slow=39							
TKL	**Tuckaleechee C**	**56.69**	**345**	P		**P**	**19 16 15.3**	**-1.2**
	comp=Z,7.4nm,0.8s,mb4.7,baz=145,slow=12,SNR=5.3							
TKL	**Tuckaleechee C**	**56.69**	**345**	P		**P**	**19 16 15.3**	**-1.2**
ELN	**Prospectdale**	**57.54**	**348**	*e*P		**P**	**19 16 22.2**	**-0.3**
WVT	**Waverly**	**58.23**	**342**	*e*P		**P**	**19 16 26.3**	**-1.1**
WVT				pmax		pmax		
	comp=Z,12nm,0.4s,mb5.3							
WVT	**Waverly**	**58.23**	**342**	*e*P		**P**	**19 16 26.3**	**-1.0**
	comp=Z,12nm,0.4s,mb5.3							
TXAR	**Lajitas Array**	**59.21**	**324**	P		**P**	**19 16 33.1**	**-1.2**
	comp=Z,0.5nm,0.7s,mb3.7,baz=147,slow=7.9,SNR=8.1							
SIUC	**Southern Illin**	**60.12**	**341**	*e*P		**P**	**19 16 39.5**	**-0.9**
	comp=Z,31nm,0.7s,mb5.5							
FVM	**French Village**	**60.74**	**340**	*e*P		**P**	**19 16 44.1**	**-0.5**
FVM				pmax		pmax		
	comp=Z,20nm,0.8s,mb5.3							
FVM	**French Village**	**60.74**	**340**	*e*P		**P**	**19 16 44.1**	**-0.6**
	comp=Z,20nm,0.8s,mb5.3							
CCM	**Cathedral Cave**	**61.07**	**340**	*e*P		**P**	**19 16 46.4**	**-0.5**
CCM				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.9							
CCM	**Cathedral Cave**	**61.07**	**340**	*e*P		**P**	**19 16 46.4**	**-0.5**
	comp=Z,8.0nm,0.8s,mb4.9							
BRYW	**Bryant College**	**61.11**	**357**	*e*P		**P**	**19 16 45.4**	**-1.6**
	comp=Z,37nm,0.8s,mb5.6							
VNA3	**Neumayer Olymp**	**61.88**	**162**	*e*P		**P**	**19 16 52.6**	**+0.6**
VNA3				*e*			19 16 56.9	
VNA3				*e*		pP	19 17 00.9	+1.4
VNA3				*e*			19 17 04.6	
VNA3				*e*			19 17 09.9	
VNA1	**Neumayer--Stat**	**62.08**	**161**	*e*P		**P**	**19 16 54.2**	**+0.9**
VNA1				*e*			19 16 56.7	
VNA1				*e*			19 16 59.0	
VNA1				*e*		pP	19 17 03.1	+2.2
VNA1				*e*			19 17 08.5	
ERPA	**Erie**	**62.17**	**350**	*e*P		**P**	**19 16 52.7**	**-1.5**
VNA2	**Neumayer--Watz**	**62.44**	**161**	*e*P		**P**	**19 16 55.2**	**-0.6**
VNA2				*e*			19 16 58.8	
VNA2				*e*		pP	19 17 02.0	-1.3
VNA2				*e*			19 17 05.3	
VNA2				*e*			19 17 10.5	
SNAA	**Sanae**	**64.08**	**161**	*e*P		**P**	**19 17 06.5**	**-0.1**
SNAA				*e*			19 17 09.1	
SNAA				*e*			19 17 11.2	
SNAA				*e*		pP	19 17 15.3	+1.1
SNAA				*e*			19 17 19.1	
SNAA	**Sanae**	**64.08**	**161**	*e*P		**P**	**19 17 05.1**	**-1.5**
SNAA				pmax		pmax		
	comp=Z,5.0nm,0.8s							
SNAA	**Sanae**	**64.08**	**161**	*e*P		**P**	**19 17 05.1**	**-1.5**
	comp=Z,4.8nm,0.8s,mb4.6							
BNM	**Barren Site**	**64.52**	**325**	*e*P		**P**	**19 17 09.4**	**-0.5**
LAZ	**Ladron**	**64.98**	**325**	*e*P		**P**	**19 17 14.1**	**+1.2**
ANMO	**Albuquerque**	**65.04**	**326**	P		**P**	**19 17 13.2**	**-0.2**
	comp=Z,1.7nm,0.8s,mb4.1,baz=120,slow=5.2,SNR=5.3							
JFWS	**Jewell Farm**	**65.21**	**342**	*e*P		**P**	**19 17 16.3**	**+2.0**
JFWS				pmax		pmax		
	comp=Z,18nm,0.8s,mb5.2							
JFWS	**Jewell Farm**	**65.21**	**342**	*e*P		**P**	**19 17 16.2**	**+2.0**
	comp=Z,18nm,0.8s,mb5.2							
DBIC	**Dimbokro**	**67.72**	**74**	P		**P**	**19 17 32.1**	**+1.1**
	comp=Z,3.8nm,0.8s,mb4.5,baz=232,slow=8.6,SNR=3.2							
DBIC				LR		LR	19 46 03.6	
	comp=Z,251nm,19.8s,MS4.4,baz=227,slow=35							
QSPA	**South Pole Qui**	**70.75**	**180**	P		**P**	**19 17 48.6**	**0.0**
	comp=Z,3.9nm,0.6s,mb4.5,baz=142,slow=1.3,SNR=13							
QSPA	**South Pole Qui**	**70.75**	**180**	P		**P**	**19 17 48.6**	**0.0**
PDAR	**Pinedale Array**	**72.56**	**329**	LR		LR	19 56 02.6	
	comp=Z,117nm,18.3s,MS4.2,baz=144,slow=41							
ULM	**Lac du Bonnet**	**73.50**	**342**	P		**P**	**19 18 07.3**	**+1.9**
	comp=Z,5.2nm,0.6s,mb4.6,baz=138,slow=13,SNR=3.3							
ULM				LR		LR	19 50 14.9	
	comp=Z,244nm,19.1s,MS4.5,baz=172,slow=36							
SCHQ	**Schefferville**	**73.98**	**1**	LR		LR	19 47 34.8	
	comp=Z,206nm,19.4s,MS4.4,baz=356,slow=36							
ELK	**Elko**	**74.00**	**325**	P		**P**	**19 18 08.6**	**+0.1**
	comp=Z,1.8nm,0.8s,mb4.0,baz=115,slow=5.5,SNR=5.1							
NVAR	**Mina Array Bea**	**74.16**	**321**	P		**P**	**19 18 09.5**	**0.0**
	comp=Z,2.0nm,1.0s,mb4.0,baz=147,slow=5.9,SNR=7.7							
NVAR	**Mina Array Bea**	**74.16**	**321**	P		**P**	**19 18 09.5**	**0.0**
HLID	**Hailey**	**75.55**	**327**	*e*P		**P**	**19 18 18.5**	**+1.1**
	comp=Z,9.3nm,1.2s,mb4.6							
PAHR	**Pah Rah Range**	**75.63**	**322**	*e*P		**P**	**19 18 19.0**	**+1.0**
	comp=Z,7.0nm,0.9s,mb4.6							
TOA0	**Torodi Ar. Sit**	**76.24**	**71**	*e*P		**P**	**19 18 21.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**76.24**	**71**	P		**P**	**19 18 22.0**	**0.0**
	comp=Z,17nm,0.9s,mb5.0,baz=252,slow=5.1,SNR=75							
TORD				LR		LR	19 51 58.9	
	comp=Z,336nm,18.1s,MS4.7,baz=235,slow=36							
TORD	**Torodi Ar. Bea**	**76.24**	**71**	P		**P**	**19 18 22.0**	**0.0**
TORD				LR		LR	19 51 58.9	
BMO	**Blue Mountains**	**77.94**	**327**	*e*P		**P**	**19 18 30.9**	**0.0**
BMO				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.5							
BMO	**Blue Mountains**	**77.94**	**327**	*e*P		**P**	**19 18 30.9**	**0.0**
	comp=Z,5.9nm,1.0s,mb4.5							
SYO	**Syowa Base**	**78.27**	**160**	⇑*e*P		**P**	**19 18 27.8**	**-4.7**
SYO	**Syowa Base**	**78.27**	**160**	⇑*e*PcP		PcP	19 18 37.8	-4.0
SYO	**Syowa Base**	**78.27**	**160**	⇓*e*pP		pP	19 18 45.2	+5.0
OD2	**Odessa Site #2**	**80.38**	**328**	*e*P		**P**	**19 18 44.6**	**+0.4**
ETW	**Entiat**	**81.34**	**327**	*e*P		**P**	**19 18 50.0**	**+0.7**
RPW	**Rockport**	**82.50**	**328**	*e*P		**P**	**19 18 54.6**	**-0.8**
TAM	**Tamanrasset**	**83.49**	**63**	*e*P		**P**	**19 19 03.0**	**+1.8**
BOSA	**Boshof**	**84.02**	**118**	P		**P**	**19 19 03.0**	**-0.9**
	comp=Z,4.4nm,1.1s,mb4.5,baz=225,slow=4.3,SNR=2.2							
BOSA				LR		LR	19 51 29.2	
	comp=Z,141nm,19.6s,MS4.3,baz=253,slow=32							
ESDC	**Sonseca Array**	**84.05**	**44**	P		**P**	**19 19 03.7**	**0.0**
	comp=Z,0.2nm,0.3s,mb3.7,baz=257,slow=6.0,SNR=3.3							
ESDC				LR		LR	19 56 43.0	
	comp=Z,132nm,19.6s,MS4.3,baz=225,slow=36							
ESDC	**Sonseca Array**	**84.05**	**44**	P		**P**	**19 19 03.7**	**0.0**
ESDC				LR		LR	19 56 43.0	
MAW	**Mawson**	**86.17**	**163**	P		**P**	**19 19 13.7**	**-0.2**
	comp=Z,1.8nm,0.7s,mb4.4,baz=237,slow=9.1,SNR=8.6							
MAW				LR		LR	19 59 48.3	
	comp=Z,173nm,19.3s,MS4.5,baz=70,slow=37							
YKA	**Yellowknife Ar**	**89.40**	**340**	P		**P**	**19 19 28.7**	**-0.4**
	comp=Z,2.5nm,0.7s,mb4.7,baz=133,slow=4.8,SNR=11							
YKA				LR		LR	19 58 44.4	
	comp=Z,121nm,18.9s,MS4.3,baz=160,slow=35							
KEST	**Kesra**	**91.70**	**53**	LR		LR	20 01 26.6	
	comp=Z,93nm,20.0s,MS4.2,baz=91,slow=36							
GERES	**GERESS Array B**	**99.38**	**42**	LR		LR	20 07 45.3	
	comp=Z,159nm,18.5s,MS4.5,baz=12,slow=37							
ASAR	**Alice Springs**	**131.94**	**208**	PKP		PKPdf	19 25 46.6	-0.5
	comp=Z,0.6nm,0.5s,baz=135,slow=2.1,SNR=12							
WRA	**Warramunga Arr**	**134.95**	**211**	PKP		PKPdf	19 25 52.8	-0.1
	comp=Z,0.7nm,0.5s,baz=155,slow=1.8,SNR=4.7							
NVS	**Novosibirsk**	**138.61**	**25**	*e*PKIKP		PKPdf	19 26 03.0	+4.5
ZAA0	**Zalesovo Array**	**139.90**	**24**	*e*PKPdf		PKPdf	19 25 59.6	-1.3
ZALV	**Zalesovo Beam**	**139.90**	**24**	PKP		PKPdf	19 26 00.2	-0.7
	comp=Z,2.1nm,0.9s,baz=260,slow=2.6,SNR=4.1							
ZALV	**Zalesovo Beam**	**139.90**	**24**	PKP		PKPdf	19 26 00.2	-0.7
MKAR	**Makanchi Array**	**143.69**	**35**	PKP		PKPdf	19 26 06.2	-1.7
	comp=Z,0.8nm,0.7s,baz=166,slow=0.6,SNR=3.3							
KLR	**Kul'dur**	**146.14**	**336**	*e*PKP2		PKPab	19 26 13.7	0.0
MOY	**Mondy**	**146.78**	**12**	*e*PKP2		PKPab	19 26 22.6	+6.6
ZAK	**Zakamensk**	**148.42**	**10**	*e*PKP2		PKPab	19 26 18.9	-3.7
WMQ	**Urumqi**	**148.52**	**34**	*e*PKP		PKPdf	19 26 14.8	-1.4
WMQ				XPKP			19 26 33.0	
WMQ				*e*PP		PP	19 29 52.0	+3.2
WMQ				SKKS		SKKSac	19 36 34.0	-5.2
WMQ				PP		PP		
	comp=Z,190nm,4.2s							
WMQ				LR		LR		
	comp=N,156nm,24.4s,MS4.9							
WMQ				LR		LR		
	comp=E,199nm,22.2s,MS4.9							
WMQ				LR		LR		
	comp=Z,194nm,22.2s,MS4.8							
MJAR	**Matsushiro Arr**	**151.09**	**312**	PKPbc		PKPbc	19 26 27.0	+0.6
	comp=Z,2.1nm,0.7s,baz=84,slow=1.5,SNR=11							
MAT	**Matsushiro**	**151.09**	**312**	PKP2		PKPab	19 26 31.3	-2.7
SONM	**Songino Array**	**151.36**	**7**	PKPbc		PKPbc	19 26 26.9	+0.4
	comp=Z,2.7nm,0.7s,baz=325,slow=2.7,SNR=5.9							
ULN	**Ulaanbaatar**	**151.40**	**6**	*e*PKIKP		PKPdf	19 26 26.1	+5.5
KSRS	**Korea Array**	**157.06**	**325**	PKP		PKPdf	19 26 28.9	+0.1
	comp=Z,0.2nm,0.6s,baz=36,slow=3.0,SNR=3.2							
KSRS				PKPab		PKPab	19 26 59.5	+0.2
	comp=Z,0.7nm,0.8s,baz=50,slow=4.5,SNR=4.6							
HHC	**Hu-ho-hao-te**	**158.66**	**0**	*e*PKP		PKPdf	19 26 25.4	-5.3
HHC				APKP			19 26 43.5	
HHC				XPKP			19 26 50.8	
HHC				PKS			19 29 58.0	
HHC				PP		PP	19 30 45.0	-0.3
HHC				SKS		SKSdf	19 33 23.1	-12
HHC				SKKS		SKKSac	19 37 24.5	-9.3
HHC				SS		SS	19 50 39.8	-5.5
HHC				PP		PP		
	comp=Z,46nm,7.8s							
HHC				LR		LR		
	comp=N,165nm,19.8s,MS5.0							
HHC				LR		LR		
	comp=E,143nm,19.1s,MS5.0							
HHC				LR		LR		
	comp=Z,179nm,19.4s,MS4.9							
LZH	**Lanzhou**	**162.07**	**21**	*e*PKP		PKPdf	19 26 30.5	-4.2
LZH				APKP			19 26 49.3	
LZH				XPKP			19 26 56.0	
LZH				PP		PP	19 31 05.0	+1.0
LZH				SKKS		SKKSac	19 37 45.3	-6.5
LZH				*e*SS		SS	19 51 17.5	-4.2
LZH				PP		PP		
	comp=Z,97nm,9.2s							
LZH				LR		LR		
	comp=N,137nm,18.3s							
LZH				LR		LR		
	comp=Z,175nm,20.5s							
NJ2	**Nanjing**	**165.83**	**334**	*e*PKP		PKPdf	19 26 40.9	+2.7
CD2	**Chengdu**	**166.57**	**30**	*e*PKP		PKPdf	19 26 35.5	-3.3
CD2				PKP2		PKPab	19 27 40.3	-0.6
CD2				PP		PP	19 31 29.6	+1.7
CD2				SKS		SKSdf	19 33 34.1	-7.5
CD2				SKKS		SKKSac	19 38 11.5	-3.3
CD2				SS		SS	19 52 07.6	-0.9
CD2				PP		PP		
	comp=Z,120nm,10.2s							
CD2				LR		LR		
	comp=N,160nm,18.8s							
CD2				LR		LR		
	comp=Z,180nm,16.8s							
CMAR	**Chiang Mai Arr**	**168.01**	**93**	PKPab		PKPab	19 27 49.2	+1.3
	comp=Z,0.8nm,1.0s,baz=238,slow=6.1,SNR=4.2							
GYA	**Guiyang**	**171.68**	**32**	*e*PKP		PKPdf	19 26 40.3	-1.9
GYA				APKP			19 26 58.9	
GYA				XPKP			19 27 05.8	
GYA				PKP2		PKPab	19 28 04.3	+0.7
GYA				PKS			19 30 11.8	
GYA				PP		PP	19 31 56.3	+2.5
GYA				PP		PP		
	comp=Z,90nm,8.8s							

ISCJB ***24*** *19:14:03.9±0.5, 4378N±005×105.19W±006, h0km, Error ellipse: s-maj=6.9km s-min=5.9km az=172.0*
IDC ***24*** *19:14:04.9±1.6, 4388N×10546W, h0km, mb4.0/1, mb1 4.0/4, mb1mx3.7/24, mbtmp3.8/4, ML2.9/2, Error ellipse: s-maj=50.5km s-min=8.9km az=149.0*
NEIC ***24*** *19:14:05.3±0.3, 4376N×105.19W, h0km, ML3.3, Error ellipse: s-maj=5.4km s-min=4.4km az=163.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.

ISC 24 19:14:05.4±0.5, 4377N±005×10519W±006, h0km, n33, σ0°79/33, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.90**	**67**	*e*P		**Pg**	**19 14 23.3**	**+0.7**
PHWY	**Pilot Hill**	**2.48**	**185**	*e*P		**Pn**	**19 14 47.1**	**+0.1**
RWWY	**Rawlins**	**2.56**	**216**	*e*P		**Pn**	**19 14 48.2**	**+0.2**
LAO	**LASA Array**	**3.01**	**346**	*e*Pn		**Pn**	**19 14 54.1**	**-0.2**
RLMT	**Red Lodge**	**3.22**	**296**	*e*Pn		**Pn**	**19 14 57.0**	**-0.2**
PDAR	**Pinedale Array**	**3.35**	**254**	Pn		**Pn**	**19 14 59.2**	**+0.3**
	4.7nm,0.3s,baz=72,slow=18,SNR=54							
PDAR				Lg			19 15 45.6	
	13nm,0.3s,baz=71,slow=35,SNR=9.4							
BW06	**Boulder Array**	**3.35**	**254**	*e*Pn		**Pn**	**19 14 59.1**	**+0.2**
OGNE	**Ogallala**	**3.66**	**139**	*e*Pn		**Pn**	**19 15 04.3**	**+1.1**
GCMT	**Greycliff**	**3.78**	**304**	*e*Pn		**Pn**	**19 15 04.7**	**-0.1**
LKWY	**Lake**	**3.83**	**284**	*e*Pn		**Pn**	**19 15 06.3**	**+0.7**
LOHW	**Long Hollow**	**3.93**	**270**	*e*Pn		**Pn**	**19 15 06.8**	**-0.2**
ISCO	**Idaho Springs**	**3.98**	**185**	*e*Pn		**Pn**	**19 15 06.6**	**-1.0**
MOOW	**Moose Ponds**	**4.03**	**272**	*e*Pn		**Pn**	**19 15 09.3**	**+1.1**
SNOW	**Snow King Moun**	**4.06**	**268**	*e*Pn		**Pn**	**19 15 13.8**	**+5.2**
YNR	**Norris Junctio**	**4.06**	**285**	*e*Pg		**Pg**	**19 15 17.4**	**-5.8**
REDW	**Red Top Meadow**	**4.14**	**266**	*e*Pn		**Pn**	**19 15 15.2**	**+5.4**
IMW	**Indian Meadow**	**4.17**	**274**	*e*Pn		**Pn**	**19 15 10.9**	**+0.8**
TPAW	**Teton Pass**	**4.20**	**268**	*e*Pn		**Pn**	**19 15 11.1**	**+0.5**
RRI2	**Red Ridge**	**4.48**	**267**	*e*Pn		**Pn**	**19 15 14.4**	**-0.1**
QLMT	**Earthquake Lak**	**4.61**	**285**	*e*Pg		**Pg**	**19 15 26.7**	**-6.9**
DGMT	**Dagmar**	**4.75**	**8**	*e*Pn		**Pn**	**19 15 19.5**	**+1.3**
BOZ	**Bozeman (W)**	**4.96**	**294**	*e*Pn		**Pn**	**19 15 19.9**	**-1.2**
EGMT	**Eagleton**	**5.32**	**325**	*e*Pn		**Pn**	**19 15 21.7**	**-4.2**
	30nm,0.6s							
HRY	**Holter Researc**	**5.54**	**304**	*e*Pn		**Pn**	**19 15 29.0**	**0.0**
MCMT	**McKenzie Canyo**	**5.60**	**284**	Pn		**Pn**	**19 15 33.8**	**+3.9**
DAU	**Daniels Canyon**	**5.63**	**235**	*e*Pn		**Pn**	**19 15 29.5**	**-0.7**
SRU	**San Rafael**	**6.14**	**223**	*e*Pn		**Pn**	**19 15 36.2**	**-1.2**
	7.9nm,0.4s							
ECSD	**EROS,Sioux Fal**	**6.21**	**87**	*e*Pn		**Pn**	**19 15 38.5**	**+0.3**
	6.0nm,0.4s							
CHMT	**Chamberlain Mo**	**6.50**	**302**	*e*Pn		**Pn**	**19 15 41.7**	**-0.4**
ULM	**Lac du Bonnet**	**9.08**	**41**	Pn		**Pn**	**19 16 16.1**	**-1.5**
	2.0nm,0.3s,baz=236,slow=10,SNR=12							
NVAR	**Mina Array Bea**	**11.24**	**246**	Pn		**Pn**	**19 16 47.7**	**+0.5**
	0.1nm,0.3s,baz=62,slow=11,SNR=5.5							
NVAR	**Mina Array Bea**	**11.24**

mb3.7/8, Error ellipse: s-maj=21.5km s-min=12.9km az=4.6
*IDC **24** 20:20:27.1±1.7, 2842S×17864W, h336km±13km, mb3.4/7, mb1 3.6/7, mb1mx3.4/17, mbtmp3.4/7, Error ellipse: s-maj=42.2km s-min=18.9km az=32.0*
*NEIC **24** 20:20:29.0±0.9, 2893S×17909W, h317km±10km, mb3.8/2, Error ellipse: s-maj=27.6km s-min=15.5km az=57.0*
ISC 24 20:20:29.0±0.7, 2913S±009×1792W±02, h308km±8km, n19, σ0§92/19, mb3.7/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.15**	**97**	P	**Pn**	**20 21 11.5**	**+0.6**
	142nm,0.3s,baz=76,slow=17,SNR=7.0						
RAO				S	**S**	**20 21 43.4**	**-0.8**
	106nm,0.3s,baz=270,slow=20,SNR=3.0						
URZ	**Urewera**	**9.61**	**198**	P	**Pn**	**20 22 44.7**	**+2.6**
	2.4nm,0.3s,baz=275,slow=5.1,SNR=16						
URZ				S	**S**	**20 24 30.2**	**-0.5**
	1.7nm,0.3s,baz=113,slow=22,SNR=10						
RPZ	**Rata Peaks**	**16.51**	**206**	S	**S**	**20 26 55.0**	**-3.8**
	0.3nm,0.3s,baz=224,slow=2.2,SNR=3.7						
CTA	**Charters Tower**	**32.55**	**278**	P	**P**	**20 26 32.6**	**+0.4**
	2.4nm,0.5s,mb4.0,baz=106,slow=10,SNR=4.5						
CTAO	**Charters Tower**	**32.55**	**278**	*e*P	**P**	**20 26 33.2**	**+1.0**
	3.3nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**33.75**	**255**	P	**P**	**20 26 43.4**	**+1.0**
	1.4nm,0.4s,mb3.8,baz=99,slow=11,SNR=9.9						
ASAR	**Alice Springs**	**42.12**	**266**	P	**P**	**20 27 52.0**	**0.0**
	1.9nm,0.5s,mb3.6,baz=98,slow=6.5,SNR=32						
WB2	**Warramunga Arr**	**42.98**	**271**	*e*P	**P**	**20 27 58.2**	**-0.7**
WRAB	**Tennant Creek**	**42.99**	**271**	*e*P	**P**	**20 27 58.6**	**-0.3**
	2.3nm,0.6s,mb3.6						
WRA	**Warramunga Arr**	**42.99**	**271**	P	**P**	**20 27 58.5**	**-0.4**
	2.4nm,0.5s,mb3.7,baz=110,slow=8.1,SNR=30						
FITZ	**Fitzroy Crossi**	**51.30**	**269**	*e*P	**P**	**20 29 02.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**51.30**	**269**	P	**P**	**20 29 01.7**	**-0.9**
	1.1nm,0.5s,mb3.5,baz=111,slow=8.6,SNR=8.8						
QSPA	**South Pole Qui**	**60.98**	**180**	P	**P**	**20 30 11.0**	**+1.3**
	0.9nm,0.5s,mb3.6,baz=47,slow=2.6,SNR=5.2						
QSPA	**South Pole Qui**	**60.98**	**180**	P	**P**	**20 30 11.0**	**+1.3**
MAW	**Mawson**	**73.12**	**201**	P	**P**	**20 31 25.8**	**0.0**
	0.6nm,0.5s,mb3.5,baz=133,slow=7.1,SNR=7.9						
VNA3	**Neumayer Olymp**	**79.64**	**177**	*e*	**P**	**20 32 01.0**	**-1.1**
VNA2	**Neumayer--Watz**	**80.06**	**177**	*e*	**P**	**20 32 04.2**	**-0.1**
	baz=202,slow=6.2						
AKASG	**Malin Array Be**	**149.65**	**323**	PKPbc	PKPbc	20 39 35.8	-6.2
	0.8nm,0.3s,baz=46,slow=3.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	**164.08**	**183**	PKPab	PKPab	20 40 48.2	-2.9
	0.9nm,0.9s,baz=150,slow=2.6,SNR=7.0						

*ISCJB **24** 20:20:42.7±4.8, 121S±0.1×1658E±0.1, h13km±30km, mb4.1/11, MS3.6/8, Error ellipse: s-maj=21.4km s-min=13.1km az=40.5*
*NEIC **24** 20:20:46.2±4.4, 1202S×16593E, h29km±29km, mb4.1/1, Error ellipse: s-maj=20.9km s-min=11.7km az=63.0*
*IDC **24** 20:20:48.2±1.0, 1201S×16587E, h40km±6km, mb3.9/11, mb1 4.0/12, mb1mx3.9/19, mbtmp4.0/12, ML4.8/1, MS3.7/8, Ms1 3.7/8, ms1mx3.2/34, Error ellipse: s-maj=20.7km s-min=19.3km az=71.0*
ISC 24 20:20:46.4±4.8, 121S±01×1659E±01, h27km±33km, h41km±2.9km:pP-P, n37, σ0§68/15, mb4.1/11, MS3.6/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.39**	**293**	P	**Pn**	**20 22 19.1**	**+0.4**
	19nm,0.3s,baz=152,slow=7.5,SNR=6.9						
HNR				S	**Sn**	**20 23 31.0**	**+0.2**
	5.2nm,0.3s,baz=73,slow=19,SNR=4.3						
DZM	**Mont Dzumac**	**9.98**	**177**	*e*Pn	**Pn**	**20 23 08.1**	**0.0**
CTA	**Charters Tower**	**20.47**	**245**	P	**P**	**20 25 22.6**	**+0.4**
	5.0nm,0.8s,baz=93,slow=11,SNR=4.8						
CTA				LR	LR	20 32 30.8	
	comp=Z,168nm,19.4s,MS3.4,baz=360,slow=34						
AFI	**Afiamalu**	**21.85**	**97**	LR	LR	20 32 45.3	
	comp=Z,169nm,21.4s,MS3.4,baz=50,slow=33						
STKA	**Stephens Creek**	**29.82**	**225**	LR	LR	20 39 05.8	
	comp=Z,183nm,19.3s,MS3.7,baz=21,slow=37						
WRAB	**Tennant Creek**	**31.27**	**251**	*e*P	**P**	**20 27 03.8**	**-0.5**
	2.6nm,0.9s,mb4.1						
WRA	**Warramunga Arr**	**31.28**	**251**	P	**P**	**20 27 03.6**	**-0.7**
	1.4nm,0.8s,mb3.8,baz=84,slow=9.5,SNR=13						
ASAR	**Alice Springs**	**32.47**	**245**	P	**P**	**20 27 13.9**	**-0.9**
	3.1nm,0.7s,mb4.2,baz=70,slow=9.4,SNR=37						
ASAR				pP	pP	20 27 28.0	+5.3
	1.6nm,0.6s,baz=68,slow=9.3,SNR=5.5						
ASAR				PcP	PcP	20 30 02.4	+0.7
	0.3nm,0.6s,baz=60,slow=4.4,SNR=3.0						
FITZ	**Fitzroy Crossi**	**39.26**	**256**	LR	LR	20 43 52.8	
	comp=Z,53nm,19.4s,MS3.4,baz=263,slow=35						
PPT	**Papeete**	**43.34**	**103**	*e*LR	LR	20 40 52.5	
	59nm,23.2s						
PPT	**Papeete**	**43.34**	**103**	LR	LR	20 43 00.6	
	comp=Z,81nm,21.7s,MS3.6,baz=290,slow=31						
NWAO	**Narrogin (SRO)**	**49.02**	**237**	LR	LR	20 51 10.0	
	comp=Z,246nm,19.7s,MS4.2,baz=319,slow=37						
JHJ	**Hachijo jima 2**	**51.36**	**332**	LR	LR	20 51 30.0	
	comp=Z,56nm,18.6s,MS3.6,baz=29,slow=36						
MJAR	**Matsushiro Arr**	**54.92**	**333**	P	**P**	**20 30 13.2**	**-1.7**
	1.4nm,0.8s,mb4.0,baz=167,slow=8.5,SNR=5.7						
KSRS	**Korea Array**	**60.78**	**326**	P	**P**	**20 30 56.5**	**+0.5**
	0.8nm,1.0s,mb3.8,baz=143,slow=8.1,SNR=4.9						
CMAR	**Chiang Mai Arr**	**72.64**	**294**	P	**P**	**20 32 13.3**	**+1.3**
	0.9nm,0.7s,mb3.8,baz=122,slow=5.2,SNR=8.6						
CMAR				LR	LR	21 03 21.4	
	comp=Z,27nm,19.4s,MS3.5,baz=185,slow=35						
QSPA	**South Pole Qui**	**77.96**	**180**	P	**P**	**20 32 42.2**	**+0.5**
	4.9nm,1.0s,mb4.4,baz=30,slow=2.6,SNR=7.4						
SONM	**Songino Array**	**79.55**	**324**	P	**P**	**20 32 50.9**	**0.0**
	0.6nm,0.6s,mb3.7,baz=120,slow=8.7,SNR=2.3						
SONM				pP	pP	20 33 01.9	+2.6
	1.5nm,0.5s,baz=134,slow=6.2,SNR=3.6						
MAW	**Mawson**	**83.85**	**202**	P	**P**	**20 33 13.5**	**+0.3**
	1.6nm,1.0s,mb4.1,baz=124,slow=11,SNR=3.9						
MKAR	**Makanchi Array**	**94.34**	**317**	P	**P**	**20 34 04.0**	**+0.4**
	1.3nm,0.5s,mb4.6,baz=90,slow=6.0,SNR=10						
MKAR				pP	pP	20 34 16.4	+4.1
	4.1nm,0.6s,baz=93,slow=6.3,SNR=11						
ZALV	**Zalesovo Beam**	**94.44**	**324**	P	**P**	**20 34 03.5**	**-0.3**
	1.1nm,0.6s,mb4.4,baz=134,slow=4.3,SNR=5.8						
ZALV				pP	pP	20 34 15.4	+2.8
	1.9nm,0.8s,baz=109,slow=3.6,SNR=4.4						
ARCES	**ARCESS Array B**	**117.33**	**345**	PKP	PKPdf	20 39 26.9	-1.9
	1.6nm,0.6s,baz=72,slow=1.6,SNR=16						
GERES	**GERESS Array B**	**136.66**	**333**	PKP	PKPdf	20 40 06.4	+0.1
	0.6nm,0.7s,baz=48,slow=2.0,SNR=5.4						
CABF	**La Chapelle**	**141.55**	**337**	*e*PKP1	PKPdf	20 40 12.5	-2.7
SSF	**Saint Saulge**	**142.07**	**340**	*e*PKP1	PKPdf	20 40 13.4	-2.8
MBDF	**Montbardon**	**142.84**	**335**	*e*PKP1	PKPdf	20 40 14.1	-3.5
ORIF	**Oris-en-Rattie**	**143.04**	**336**	*e*PKP1	PKPdf	20 40 14.7	-3.3
	10nm,0.9s						
SBF	**Sospel**	**143.26**	**334**	*e*PKP1	PKPdf	20 40 14.6	-3.8
	14nm,0.7s						
VIVF	**Saint-Julien-l**	**143.56**	**337**	*e*PKP1	PKPdf	20 40 16.3	-2.6
PGF	**Pioggiola**	**143.57**	**331**	*e*PKP1	PKPdf	20 40 16.7	-2.3
	8.6nm,0.7s						
FRF	**La Foret Royal**	**143.84**	**334**	*e*PKP1	PKPdf	20 40 16.8	-2.6
	10nm,0.8s						
SMRF	**Simiane la Rot**	**143.95**	**336**	*e*PKP1	PKPdf	20 40 17.9	-1.7
LMR	**La Mourre**	**144.09**	**334**	*e*PKP1	PKPdf	20 40 17.8	-2.0
	22nm,1.0s						
LASF	**Ste Croix**	**144.53**	**337**	*e*PKP1	PKPdf	20 40 19.0	-1.6
	23nm,1.1s						
MTLF	**Montolieu**	**145.77**	**339**	*e*PKP1	PKPbc	20 40 22.7	-0.5
	10nm,0.8s						
KEST	**Kesra**	**148.29**	**322**	PKPbc	PKPbc	20 40 31.4	+0.8
	0.8nm,0.6s,baz=211,slow=21,SNR=4.6						
ESDC	**Sonseca Array**	**151.06**	**344**	PKPbc	PKPbc	20 40 36.4	-0.9
	0.4nm,0.5s,baz=22,slow=1.7,SNR=4.6						

*JMA **24** 20:27:35.6±0.2, 2478N×12264E, h101km±2km, M3.4*
*ISCJB **24** 20:27:36.2±0.6, 2463N±003×12263E±002, h98km±5km, Error ellipse: s-maj=5.5km s-min=3.1km az=176.7*
*TAP **24** 20:27:36.2, 2466N×12257E, h106km, ML3.6, C*
ISC 24 20:27:36.9±0.6, 2463N±003×12263E±002, h96km±5km, n48, σ0§69/86, 7C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.39**	**115**	P	**Pn**	**20 27 51.3**	**-0.1**
YOJ				S	**Sn**	**20 28 03.1**	**+0.9**
EGS		**0.67**	**289**	*e*P	**Pn**	**20 27 51.3**	**-2.2**
	baz=282						
EGS				*e*S	**Sn**	**20 28 06.0**	**-0.1**
	baz=282						
TWB1	**Santiao Chiao**	**0.69**	**303**	*i* P	**Pn**	**20 27 53.9**	**+0.1**
	baz=299						
TWB1				*e*S	**Sn**	**20 28 05.8**	**-0.7**
	baz=299						
TWC	**Suao**	**0.71**	**269**	⇑*i*P	**Pn**	**20 27 53.7**	**-0.2**
	baz=264						
TWC				S	**Sn**	**20 28 06.5**	**-0.2**
	baz=264						
ENA	**Nanau**	**0.83**	**256**	*e*P	**Pn**	**20 27 55.3**	**+0.1**
	baz=250						
ENA				*e*S	**Sn**	**20 28 09.4**	**+0.5**
	baz=250						
TWE	**Neicheng**	**0.88**	**276**	⇑*i*P	**Pn**	**20 27 55.8**	**+0.2**
	baz=277						
TWE				*e*S	**Sn**	**20 28 09.5**	**-0.3**
	baz=277						
NWF	**Wu-fen Shan**	**0.89**	**300**	⇑*i*P	**Pn**	**20 27 56.0**	**+0.3**
	baz=300						
NWF				S	**Sn**	**20 28 10.2**	**+0.3**
	baz=300						
ENTT	**Nioudou**	**0.97**	**271**	⇑P	**Pn**	**20 27 56.9**	**+0.4**
	baz=264						
TWA	**Mucha**	**1.01**	**291**	P	**Pn**	**20 27 56.8**	**-0.3**
	baz=282						
TWA				*e*S	**Sn**	**20 28 11.9**	**-0.4**
	baz=282						
IRIF	**Iriomote-Funau**	**1.04**	**106**	P	**Pn**	**20 27 57.1**	**-0.3**
IRIF				S	**Sn**	**20 28 13.2**	**+0.3**
TAP1	**Taipei**	**1.08**	**292**	*e*P	**Pn**	**20 27 57.6**	**-0.3**
	baz=285						
TWD	**Chiawan**	**1.09**	**240**	P	**Pn**	**20 27 57.4**	**-0.5**
	baz=233						
TWD				*e*S	**Sn**	**20 28 13.3**	**-0.5**
	baz=233						
PCYT	**Pengchaiyu**	**1.12**	**333**	*e*P	**Pn**	**20 27 58.2**	**-0.1**
	baz=339						
TWY	**Chenhua**	**1.14**	**305**	*e*P	**Pn**	**20 27 58.3**	**-0.2**
	baz=305						
HWA	**Hwalien**	**1.14**	**236**	*e*P	**Pn**	**20 27 58.2**	**-0.3**
	baz=229						
HWA				*e*S	**Sn**	**20 28 14.4**	**-0.4**
	baz=229						
NSK	**Sanguang**	**1.16**	**273**	⇑*i*P	**Pn**	**20 27 59.0**	**+0.3**
	baz=264						
NSK				S	**Sn**	**20 28 15.3**	**+0.1**
	baz=264						
NNS	**Nan Shan**	**1.16**	**261**	P	**Pn**	**20 27 58.9**	**+0.1**
	baz=254						
NNS				*e*S	**Sn**	**20 28 15.6**	**+0.3**
	baz=254						
TWS1	**Kuangyinshan**	**1.20**	**293**	P	**Pn**	**20 27 59.1**	**-0.1**
	baz=293						
TWS1				S	**Sn**	**20 28 15.9**	**-0.1**
	baz=293						
HATJ	**Hateruma jima**	**1.21**	**118**	P	**Pn**	**20 27 59.5**	**+0.1**
HATJ				S	**Sn**	**20 28 18.0**	**+1.6**
JKRS	**Kuro-shima**	**1.32**	**107**	P	**Pn**	**20 28 00.7**	**+0.1**
JKRS				S	**Sn**	**20 28 19.3**	**+0.7**
WHF	**Hehuan Shan**	**1.33**	**249**	⇑*i*P	**Pn**	**20 28 01.1**	**+0.3**
	baz=247						
WHF				*e*S	**Sn**	**20 28 19.1**	**+0.2**
	baz=247						
NCU	**National Centr**	**1.35**	**285**	*e*P	**Pn**	**20 28 00.8**	**-0.3**
	baz=291						
NCU				*e*S	**Sn**	**20 28 20.0**	**+0.6**
	baz=291						
ESL	**Shilin**	**1.36**	**234**	P	**Pn**	**20 28 00.5**	**-0.7**
	baz=227						
ESL				S	**Sn**	**20 28 18.5**	**-1.0**
	baz=227						
TWT	**Tachien**	**1.38**	**255**	*e*P	**Pn**	**20 28 01.9**	**+0.5**
	baz=248						
TWT				S	**Sn**	**20 28 20.5**	**+0.6**
	baz=248						
JIJ	**Ishigaki jima**	**1.40**	**100**	P	**Pn**	**20 28 01.1**	**-0.6**
JIJ				S	**Sn**	**20 28 19.7**	**-0.8**
NSTT	**Nanjuang**	**1.48**	**270**	⇑*i*P	**Pn**	**20 28 02.6**	**0.0**
	baz=270						
NSTT				S	**Sn**	**20 28 22.3**	**+0.2**
	baz=270						
HSN	**Hsinchu**	**1.52**	**277**	*e*P	**Pn**	**20 28 02.2**	**-0.9**
	baz=277						
HSN				*e*S	**Sn**	**20 28 21.7**	**-1.3**
	baz=277						
NSY	**Sanyi**	**1.71**	**263**	*e*P	**Pn**	**20 28 06.1**	**+0.5**
	baz=262						
NSY				*e*S	**Sn**	**20 28 27.8**	**+0.4**
	baz=262						
TWQ1	**Liyutan**	**1.71**	**261**	P	**Pn**	**20 28 05.6**	**+0.1**
	baz=260						
TWQ1				*e*S	**Sn**	**20 28 27.5**	**+0.1**
	baz=260						
SMLT	**Sun Moon Lake**	**1.74**	**245**	*e*P	**Pn**	**20 28 06.5**	**+0.5**
	baz=240						
SMLT				*e*S	**Sn**	**20 28 28.2**	**+0.2**
	baz=240						
TWF1	**Yuli**	**1.76**	**224**	*e*P	**Pn**	**20 28 05.2**	**-1.0**
	baz=229						
TWF1				*e*S	**Sn**	**20 28 27.2**	**-1.3**
	baz=229						
TYC	**Yuchr**	**1.77**	**246**	*e*P	**Pn**	**20 28 06.9**	**+0.7**
	baz=242						
TYC				*e*S	**Sn**	**20 28 29.5**	**+0.8**
	baz=242						
TCU	**Taichung**	**1.84**	**255**	*e*P	**Pn**	**20 28 08.0**	**+0.8**
	baz=254						
JTJ	**Tarama**	**1.89**	**89**	P	**Pn**	**20 28 07.4**	**-0.4**
JTJ				S	**Sn**	**20 28 31.3**	**-0.1**
YUS	**Yu-Shan**	**1.91**	**234**	P	**Pn**	**20 28 08.6**	**+0.6**
	baz=228						
YUS				*e*S	**Sn**	**20 28 31.8**	**-0.1**
	baz=228						
ALS	**Alishan**	**2.00**	**237**	*e*P	**Pn**	**20 28 09.3**	**0.0**
	baz=230						
ALS				*e*S	**Sn**	**20 28 34.5**	**+0.5**
	baz=230						
ELDTW	**Lidau**	**2.06**	**226**	*e*P	**Pn**	**20 28 10.2**	**+0.2**
	baz=222						
CHN5	**Tsauling**	**2.06**	**240**	*e*P	**Pn**	**20 28 10.3**	**+0.4**
	baz=231						
CHN5				*e*S	**Sn**	**20 28 35.8**	**+0.5**
	baz=231						
WGK	**Gukeng**	**2.11**	**244**	*e*P	**Pn**	**20 28 11.0**	**+0.3**
	baz=253						
WGK				*e*S	**Sn**	**20 28 37.6**	**+1.1**
	baz=253						
STYT	**Tauyuan**	**2.25**	**230**	*e*P	**Pn**	**20 28 12.2**	**-0.3**
	baz=229						
STYT				*e*S	**Sn**	**20 28 40.6**	**+0.8**
	baz=229						
CHN4	**Tsaushan**	**2.25**	**236**	*e*P	**Pn**	**20 28 14.1**	**+1.5**
	baz=235						
WTCT	**Ta-ch'eng**	**2.27**	**251**	*e*P	**Pn**	**20 28 11.9**	**-0.9**
	baz=250						
TWG	**Pinlang**	**2.29**	**219**	*e*P	**Pn**	**20 28 13.6**	**+0.5**
	baz=223						
TWG				*e*S	**Sn**	**20 28 38.4**	**-2.6**
	baz=223						
WTP	**Ta-pu**	**2.30**	**234**	*e*P	**Pn**	**20 28 13.9**	**+0.7**
	baz=233						
WTP				*e*S	**Sn**	**20 28 41.3**	**+0.2**
	baz=233						
CHN1	**Nanshi**	**2.40**	**234**	*e*P	**Pn**	**20 28 15.1**	**+0.6**
	baz=233						
CHN1				*e*S	**Sn**	**20 28 43.5**	**+0.1**
	baz=233						
SSD	**Sandimen**	**2.62**	**225**	*e*P	**Pn**	**20 28 18.4**	**+1.0**
	baz=224						
LAY	**Lan-yu**	**2.76**	**201**	*e*P	**Pn**	**20 28 17.7**	**-1.6**
	baz=200						
LAY				*e*S	**Sn**	**20 28 49.0**	**-2.9**
	baz=200						
EAST	**Anshuo**	**2.77**	**217**	*e*P	**Pn**	**20 28 18.9**	**-0.5**
	baz=212						

IDC 24 20:34:20.5±2.1, 137N×12636E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, Error ellipse: s-maj=177.3km s-min=26.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.58**	**160**	P	P	20 39 21.6	-1.1
	0.9nm,0.5s,baz=338,slow=10,SNR=13						
ASAR	**Alice Springs**	**25.95**	**164**	P	P	20 39 55.6	+0.8
	0.8nm,0.4s,baz=346,slow=12,SNR=20						
MKAR	**Makanchi Array**	**59.28**	**326**	P	P	20 44 24.1	+0.1
	0.2nm,0.3s,baz=115,slow=7.8,SNR=4.2						

*NIED **24** 20:44:00, 4560N×143.20E, h320km, Mw4.2 Best double couple: M0 2.56000×10^15 NP1:φ§217.00000°, δ73.00000°, λ121.00000°. NP2:φ§332.00000°, δ35.00000°, λ30.00000°.*
*MOS **24** 20:44:09.9±1.1, 4576N×143.07E, h318km, mb4.1/9, Error ellipse: s-maj=12.3km s-min=8.1km az=104.5*
*ISCJB **24** 20:44:10.1±0.3, 4566N±004×143.18E±007, h321km±2km, mb3.9/31, Error ellipse: s-maj=7.6km s-min=6.9km az=162.1*
*BJI **24** 20:44:10.0, 4585N×143.19E, h325km, mB4.6, mb4.5*
*IDC **24** 20:44:11.1±0.5, 4571N×143.08E, h314km±4km, mb3.6/20, mb1 3.7/24, mb1mx3.6/29, mbtmp3.5/24, Error ellipse: s-maj=10.5km s-min=9.0km az=85.0*
*JMA **24** 20:44:11.1±0.3, 4556N×14324E, h322km±3km, M4.1*
*NEIC **24** 20:44:11.1±0.5, 4570N×143.12E, h316km±5km, mb4.3/12, Error ellipse: s-maj=7.0km s-min=6.4km az=128.0*
ISC 24 20:44:11.0±0.3, 4566N±004×14319E±007, h315km±2km, n89, σ1§00/99, mb4.0/31, 5C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSE	**Soyaes**	**0.82**	**211**	⇑P	**Pn**	**20 44 52.9**	**+0.6**
JSE				*e*S	**S**	**20 45 24.9**	**-0.3**
JWK2	**Keihoku**	**0.97**	**250**	⇑P	**Pn**	**20 44 54.0**	**+1.2**
JWK2				*e*S	**S**	**20 45 26.8**	**+0.6**
YSS	**Yuzh-Sakhalins**	**1.33**	**347**	⇑*i*PN	**Pn**	**20 44 55.0**	**+0.5**
YSS				*e*		20 45 27.5	
YSS				pmax	pmax		
	comp=Z,1μm,0.8s						
YSS	**Yuzh-Sakhalins**	**1.33**	**347**	*e*P	**Pn**	**20 44 55.1**	**+0.6**
JRR	**Rishiri**	**1.42**	**249**	⇑P	**Pn**	**20 44 56.0**	**+0.9**
JRR				*e*S	**S**	**20 45 31.5**	**+1.1**
JSS	**Shosan**	**1.58**	**217**	P	**Pn**	**20 44 57.1**	**+1.0**
ASAJ	**Asahikawa**	**1.60**	**195**	P	**Pn**	**20 44 57.2**	**+0.9**
	comp=Z,12nm,0.3s,baz=41,slow=4.4,SNR=119						
ASAJ				S	**S**	**20 45 33.0**	**+0.5**
	comp=Z,4.6nm,0.3s,baz=198,slow=32,SNR=19						
ASAJ	**Asahikawa**	**1.60**	**195**	⇑P	**Pn**	**20 44 57.2**	**+0.9**
ASAJ				*e*S	**S**	**20 45 33.2**	**+0.7**
ASAJ	**Asahikawa**	**1.60**	**195**	PN	**Pn**	**20 44 57.3**	**+1.0**
ASAJ				S	**S**	**20 45 33.0**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,12nm,0.3s						
ASAJ				smax			
	comp=N,5.0nm,0.3s						
JMP	**Maruseppu**	**1.66**	**176**	⇓P	**Pn**	**20 44 57.1**	**+0.4**
JMP				*e*S	**S**	**20 45 33.1**	**-0.1**
JYG	**Yagishiri**	**1.75**	**226**	P	**Pn**	**20 44 58.2**	**+0.9**
JTKR	**Abashiri--Toko**	**1.77**	**163**	⇓P	**Pn**	**20 44 57.9**	**+0.5**
JTKR				*e*S	**S**	**20 45 34.2**	**-0.3**
JKK2	**Kamakawa 2**	**1.82**	**190**	P	**Pn**	**20 44 58.6**	**+0.8**
JKK2				*e*S	**S**	**20 45 35.4**	**+0.2**
JRA	**Rausu**	**2.21**	**141**	⇓P	**Pn**	**20 45 01.0**	**+0.3**
JAR	**Ashorobuto**	**2.40**	**170**	⇓P	**Pn**	**20 45 02.7**	**+0.3**
JFR	**Furan**	**2.53**	**190**	P	**Pn**	**20 45 03.9**	**+0.4**
JFR				*e*S	**S**	**20 45 45.3**	**-0.3**
JAK	**Akkeshi**	**2.88**	**157**	P	**Pn**	**20 45 05.1**	**-1.6**
JAK				*e*S	**S**	**20 45 48.2**	**-3.0**
NEM2	**Nemuro 2**	**2.94**	**141**	P	**Pn**	**20 45 04.8**	**-2.4**
NEM2				*e*S	**S**	**20 45 46.9**	**-5.3**
JCH	**Churui**	**3.05**	**178**	⇓P	**Pn**	**20 45 07.0**	**-1.3**
JCH				*e*S	**S**	**20 45 49.8**	**-4.4**
JEW	**Eniwo**	**3.08**	**204**	*e*S	**S**	**20 45 53.7**	**-1.1**
JNBK	**Urakawa-nobuka**	**3.40**	**185**	P	**Pn**	**20 45 10.7**	**-1.0**
JNBK				*e*S	**S**	**20 45 57.0**	**-3.4**
ERM	**Erimo**	**3.65**	**180**	*e*PN	**Pn**	**20 45 13.7**	**-0.6**
JKB	**Kayabe**	**4.08**	**203**	⇓P	**Pn**	**20 45 18.1**	**-0.8**
JOSM	**Okushiri--Mats**	**4.47**	**218**	P	**Pn**	**20 45 23.3**	**+0.1**
JOT	**Ohata**	**4.55**	**201**	P	**Pn**	**20 45 22.8**	**-1.3**
KLR	**Kul'dur**	**8.53**	**299**	*e*PN	**Pn**	**20 46 07.7**	**-3.2**
MDJ	**Mudanjiang**	**9.67**	**269**	*e*P	**Pn**	**20 46 25.3**	**+0.5**
	comp=N,24nm,1.0s						
MAJO	**Matsushiro**	**9.85**	**204**	*e*PN	**Pn**	**20 46 27.2**	**0.0**
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s						
MAJO	**Matsushiro**	**9.85**	**204**	*e*P	**Pn**	**20 46 27.2**	**0.0**
	comp=Z,16nm,0.8s						
MAT	**Matsushiro**	**9.85**	**204**	P	**Pn**	**20 46 28.1**	**+0.9**
MAT				S	**S**	**20 48 24.0**	**+5.4**
MJAR	**Matsushiro Arr**	**9.85**	**204**	P	**Pn**	**20 46 27.4**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=8.4,slow=12,SNR=26						
PETK	**Petropavlovsk-**	**12.03**	**46**	P	**Pn**	**20 46 53.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=223,slow=7.4,SNR=3.0						
CN2	**Changchun**	**12.75**	**268**	*e*P	**Pn**	**20 47 02.0**	**-0.1**
CN2				AMB	AMB		
	comp=Z,30nm,0.6s						
KSRS	**Korea Array**	**14.05**	**240**	P	**P**	**20 47 18.1**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=52,slow=11,SNR=10						
HIA	**Hailar**	**16.24**	**291**	*e*P	**P**	**20 47 39.7**	**-0.8**
HIA				pmax	pmax		
	comp=Z,21nm,0.6s						
HIA	**Hailar**	**16.24**	**291**	*e*P	**P**	**20 47 39.6**	**-0.9**
	comp=Z,21nm,0.6s						
YAK	**Yakutsk**	**18.16**	**339**	*i

YBH Yreka Blue Hor 64.20 56 P **P** 20 54 13.8 +1.3
comp=Z,0.9nm,0.5s,mb3.7,baz=309,slow=4.6,SNR=2.8
FITZ Fitzroy Crossi 65.43 198 P **P** 20 54 21.2 +0.7
comp=Z,3.4nm,0.8s,mb4.0,baz=17,slow=5.9,SNR=7.3
CTA Charters Tower 65.49 177 P **P** 20 54 20.6 -0.3
comp=Z,3.9nm,1.0s,mb4.0,baz=31,slow=12,SNR=2.5
WRA Warramunga Arr 65.78 189 P **P** 20 54 22.7 0.0
comp=Z,2.2nm,0.5s,mb4.2,baz=5.4,slow=6.8,SNR=74
WRA PcP PcP 20 54 51.7 +0.6
comp=Z,0.7nm,0.4s,baz=3.7,slow=4.7,SNR=9.2
NB2 NORSAR Subarra 66.77 337 P **P** 20 54 27.6 -0.8
comp=Z,2.0nm,0.7s,mb4.0,baz=30,slow=6.2
NOA NORSAR Array B 66.77 337 P **P** 20 54 27.2 -1.2
comp=Z,1.6nm,0.6s,mb3.9,baz=33,slow=6.3,SNR=4.6
AKASG Malin Array Be 68.34 321 P **P** 20 54 37.0 -1.4
comp=Z,0.8nm,0.3s,mb3.9,baz=40,slow=7.8,SNR=6.2
NVAR Mina Array Bea 68.92 56 P **P** 20 54 43.1 +0.9
comp=Z,1.4nm,0.7s,mb3.8,baz=292,slow=6.1,SNR=13
NVAR pP pP 20 55 59.0 +6.3
comp=Z,0.8nm,0.8s,baz=294,slow=7.1,SNR=5.4
RRI2 Red Ridge 69.46 49 *e*P **P** 20 54 46.6 +1.2
comp=Z,2.4nm,0.6s,mb4.1
ASAR Alice Springs 69.51 189 P **P** 20 54 46.7 +0.9
comp=Z,7.5nm,0.6s,mb4.6,baz=359,slow=4.9,SNR=126
PDAR Pinedale Array 70.79 48 P **P** 20 54 53.8 +0.4
comp=Z,1.5nm,0.6s,mb3.8,baz=330,slow=1.2,SNR=12
BUR08 Bucovina Ar. S 72.38 321 *e*P **P** 20 55 03.2 +0.4
CLL Collm 74.28 330 *i* P **P** 20 55 13.4 -0.3
CLL pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
CLL Collm 74.28 330 *i* P **P** 20 55 13.4 -0.3
comp=Z,5.0nm,0.6s,mb4.3
BRG Berggiesshubel 74.31 329 *e*P **P** 20 55 18.0 +4.1
BRG pmax pmax
comp=Z,5.0nm,1.4s,mb4.0
BRG Berggiesshubel 74.31 329 *e*(P) **P** 20 55 18.0 +4.1
comp=Z,8.2nm,1.4s,mb4.2
VYHS Vyhne 74.39 325 *e*P **P** 20 55 15.3 +0.9
GERES GERESS Array B 76.08 328 P **P** 20 55 24.2 +0.3
comp=Z,0.9nm,0.4s,mb3.8,baz=38,slow=5.9,SNR=11
STKA Stephens Creek 77.19 181 P **P** 20 55 31.1 +1.0
comp=Z,1.6nm,0.4s,mb4.1,baz=316,slow=2.3,SNR=7.4
TXAR Lajitas Array 83.87 54 P **P** 20 56 06.4 +0.7
comp=Z,0.9nm,0.4s,mb3.9,baz=287,slow=3.8,SNR=21
TORD Torodi Ar. Bea 111.93 319 PKiKP PKiKP 21 02 07.8 -1.1
comp=Z,0.4nm,1.0s,baz=21,slow=3.5,SNR=4.6
TORD PKKPbc PKKPbc 21 13 01.1 +1.2
comp=Z,0.7nm,1.1s,baz=213,slow=3.1,SNR=8.0
SNAA Sanae 149.34 200 *e* PKPbc 21 03 20.9 -0.3
VNA2 Neumayer--Watz 150.94 199 *e* PKPbc 21 03 25.5 +0.5
baz=61,slow=1.2
VNA3 Neumayer Olymp 151.21 198 *e* PKPbc 21 03 25.6 0.0
VNA1 Neumayer--Stat 151.34 199 *e* PKPbc 21 03 26.3 +0.4

MAN 24 21:10:35,713N×12786E,h75km,mb5.0,ML3.9,MS4.1,
1C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.60**	**264**	*e*P		Pn	21 11 03.3	+1.9
MATI				*e*S		Sn	21 11 19.4	-2.1
KCP	**Kidapawan**	**2.75**	**268**	⇑*i*P		Pn	21 11 18.1	+1.2
BUKP	**Musuan**	**2.87**	**285**	*e*P		Pn	21 11 21.9	+3.4
BUKP				*e*S		Sn	21 11 54.2	+2.1
GSPH	**General Santos**	**3.07**	**250**	*e*P		Pn	21 11 12.7	-8.6
GSPH				*e*S		Sn	21 11 33.4	-24
SCPH	**Surigao**	**3.53**	**318**	⇓*e*P		Pn	21 11 29.5	+2.0

IDC 24 21:16:42.4±1.1,3270N×8845E,h0km,mb3.5/5,mb1 3.6/8,
mb1mx3.5/24,mbtmp3.4/8,ML3.3/3,Error ellipse:
s-maj=35.4km s-min=21.0km az=48.0,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.85**	**343**	Pn		Pn	21 20 11.6	-1.9
0.1nm,0.3s,baz=144,slow=12,SNR=2.8							
CMAR	**Chiang Mai Arr**	**17.03**	**144**	P		Pn	21 20 43.3	+1.3
0.1nm,0.3s,baz=329,slow=12,SNR=3.1							
KURK	**Kurchatov**	**19.41**	**341**	P		Pn	21 21 08.8	-2.2
0.0nm,0.3s,baz=168,slow=8.3,SNR=4.1							
ZALV	**Zalesovo Beam**	**21.40**	**354**	P		P	21 21 31.2	-0.3
0.3nm,0.4s,baz=156,slow=11,SNR=3.9							
KSRS	**Korea Array**	**32.48**	**70**	P		P	21 23 15.1	+0.4
0.8nm,0.7s,baz=276,slow=9.2,SNR=5.8							
GERES	**GERESS Array B**	**56.62**	**310**	P		P	21 26 26.7	-0.3
0.4nm,0.7s,baz=70,slow=6.4,SNR=3.8							
WRA	**Warramunga Arr**	**68.29**	**133**	P		P	21 27 44.7	-0.7
0.4nm,0.9s,baz=328,slow=6.8,SNR=3.8							
TORD	**Torodi Ar. Bea**	**80.33**	**279**	P		P	21 28 56.6	+0.7
0.3nm,0.7s,baz=41,slow=4.0,SNR=3.0							

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*BJI **24** 21:25:44.6,501S×10133E,h54km,mB5.2,mb5.1,Ms4.6,*
Msz4.4
*ISCJB **24** 21:25:45.3±0.2,447S±003×101.19E±003,h28km,*
mb5.0/80,MS4.2/24,Error ellipse: s-maj=5.7km
s-min=3.8km az=41.8
*DJA **24** 21:25:46,462S×10097E,h20km,Mw5.5/6*
*MOS **24** 21:25:46.2±1.1,436S×10133E,h33km,mb5.3/22,*
MS4.3/6,Error ellipse: s-maj=10.1km s-min=6.2km
az=104.0
*IDC **24** 21:25:47.0±0.4,443S×10126E,h26km±2km,mb4.5/22,*
mb1 4.6/22,mb1mx4.5/26,mbtmp4.5/22,MS4.0/11,
Ms1 4.0/11,ms1mx3.8/28,Error ellipse: s-maj=15.2km
s-min=8.8km az=52.0
*NEIC **24** 21:25:48.1±0.2,441S×10130E,h35km,mb5.0/23,*
MS4.0/2,Error ellipse: s-maj=6.5km s-min=4.9km az=52.0
ISC 24 21:25:47.6±0.2,446S±003×10121E±003,h30km,
h30km±.8km:pP-P,n210,σ1§10/199,mb5.0/80,MS4.2/24,
18C-13D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.59**	**60**	P		**Pn**	**21 26 13.6**	**-0.1**
0.0nm,0.0s							
PPI	**Padang Panjang**	**4.06**	**348**	P		**Pn**	**21 26 47.5**	**-0.2**
0.0nm,0.0s							
RGRI	**Rengat**	**4.24**	**15**	P		**Pn**	**21 26 51.0**	**+0.9**
0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.42**	**65**	P		**Pn**	**21 27 15.2**	**+8.8**
87nm,1.2s							
DBJI	**Dramaga**	**5.89**	**111**	P		**Pn**	**21 27 13.3**	**+0.5**
408nm,0.9s							
CBJI	**Citeko**	**5.94**	**109**	P		**Pn**	**21 27 16.5**	**+3.0**
1µm,1.0s							
LEM	**Lembang**	**6.79**	**111**	P		**Pn**	**21 27 27.2**	**+1.9**
393nm,0.9s							
TRSI	**Tarutung**	**6.83**	**341**	P		**Pn**	**21 27 28.6**	**+2.9**
381nm,0.7s							
TSI	**Tuntungan**	**8.34**	**341**	P		**Pn**	**21 27 48.0**	**+1.5**
116nm,0.8s							
COCO	**West Island**	**8.81**	**209**	*e*P		**Pn**	**21 27 48.9**	**-4.1**
COCO				pmax	pmax		
comp=Z,76nm,0.6s							
COCO	**West Island**	**8.81**	**209**	*e*Pn		**Pn**	**21 27 48.9**	**-4.1**
comp=Z,76nm,0.6s							
IPM	**Ipoh**	**8.88**	**359**	⇓P		**Pn**	**21 27 56.4**	**+2.4**
BJII	**Banjamegara**	**8.92**	**109**	P		**Pn**	**21 27 56.1**	**+1.6**
comp=Z,76nm,1.1s							
PBKI	**Pangkalan Bun**	**10.58**	**81**	P		**Pn**	**21 28 21.6**	**+4.3**
comp=Z,186nm,1.0s							
SJI	**Sawahan**	**10.98**	**108**	P		**Pn**	**21 28 24.0**	**+1.2**
comp=Z,62nm,0.9s							
BSI	**Banda Aceh**	**11.52**	**329**	P		**Pn**	**21 28 29.1**	**-1.1**
comp=Z,159nm,0.8s							
SBUM	**Sibu**	**12.96**	**58**	⇓P		**Pn**	**21 28 55.0**	**+5.1**
BTM	**Bintulu**	**14.09**	**58**	⇑P		**Pn**	**21 29 10.1**	**+4.8**
KKM	**Kota Kinabalu**	**18.26**	**55**	⇓P		**Pn**	**21 30 01.3**	**+2.5**
KKM	**Kota Kinabalu**	**18.26**	**55**	*e*Pn		**Pn**	**21 29 58.2**	**-0.6**
KAPI	**Kappang**	**18.48**	**92**	*e*Pn		**Pn**	**21 30 01.7**	**0.0**
TSM	**Tawau**	**18.78**	**63**	⇑P		**Pn**	**21 30 06.9**	**+1.7**
SDKM	**Sandakan**	**18.85**	**58**	⇓P		**Pn**	**21 30 07.3**	**+1.2**
PCI	**Palu**	**18.93**	**80**	P		**Pn**	**21 30 07.9**	**+0.8**
comp=Z,175nm,1.4s							
PCI	**Palu**	**18.93**	**80**	⇓*e*P		**Pn**	**21 30 07.0**	**-0.1**
KDM	**Kudat**	**19.26**	**54**	⇑P		**Pn**	**21 30 12.6**	**+1.6**
MYLDM	**Lahad Datu**	**19.75**	**61**	⇑P		**Pn**	**21 30 09.1**	**-7.7**
UBT	**Ubonrachathani**	**19.94**	**11**	⇑P		**Pn**	**21 30 17.0**	**-2.0**
KKTK	**Khon Kaen**	**20.73**	**4**	⇑P		**P**	**21 30 25.1**	**-0.7**
comp=Z,401nm,0.8s							
KDI	**Kendari**	**21.35**	**89**	P		**P**	**21 30 35.8**	**+3.2**
comp=Z,74nm,1.1s,mb4.9							
KDI	**Kendari**	**21.35**	**89**	⇑*e*P		**P**	**21 30 31.9**	**-0.7**
KDI				*e*S		**S**	**21 34 22.8**	**-5.5**
BDT	**Bhumibol Dam**	**21.68**	**354**	P		**P**	**21 30 34.5**	**-1.5**
comp=Z,13nm,0.9s,mb4.4							
CM31	**Chiang Mai Arr**	**22.88**	**354**	*e*P		**P**	**21 30 47.0**	**-1.8**
comp=Z,46nm,1.0s,mb4.9							
CM31				*e*			21 30 57.2	
CMAR	**Chiang Mai Arr**	**22.88**	**354**	P		**P**	**21 30 47.0**	**-1.8**
comp=Z,36nm,0.9s,mb4.8,baz=186,slow=9.0,SNR=67							
CMAR				PcP	PcP		21 34 40.0	+0.8
comp=Z,1.3nm,0.8s,baz=209,slow=3.1,SNR=4.8							
CMAR				pPcP			21 34 48.1	
comp=Z,1.3nm,0.7s,baz=215,slow=3.5,SNR=4.7							
CMAR				LR	LR		21 41 29.7	
comp=Z,417nm,18.6s,MS3.9,baz=196,slow=41							
CMAR	**Chiang Mai Arr**	**22.88**	**354**	P		**P**	**21 30 47.0**	**-1.8**
CMAR							21 34 40.0	
CMAR							21 34 48.2	
BATI	**Baumata**	**22.98**	**106**	P		**P**	**21 30 48.7**	**-1.2**
comp=Z,42nm,0.8s,mb4.9							
BATI	**Baumata**	**22.98**	**106**	P		**P**	**21 30 48.3**	**-1.6**
comp=Z,19nm,0.4s,mb4.8,baz=304,slow=3.3,SNR=10							
CHG	**Chiang Mai**	**23.24**	**355**	⇑P		**P**	**21 30 52.1**	**-0.5**
comp=Z,32nm,0.9s,mb4.8							
CHTO	**Chiang Mai**	**23.24**	**355**	*e*P		**P**	**21 30 52.1**	**-0.5**
PALK	**Pallekele**	**23.56**	**300**	*e*P		**P**	**21 30 56.8**	**+1.0**
CHRT	**Chiangrai**	**24.22**	**357**	⇑P		**P**	**21 31 02.0**	**+0.2**
comp=Z,210nm,0.9s,mb5.6							
MBWA	**Marble Bar**	**24.47**	**134**	*e*P		**P**	**21 31 03.8**	**-0.3**
comp=Z,3.4nm,0.5s,mb4.0							
MBWA				*e*			21 31 13.0	
LBMI	**Labuha**	**26.53**	**83**	P		**P**	**21 31 25.4**	**+2.5**
comp=Z,66nm,0.9s,mb5.2							
FITZ	**Fitzroy Crossi**	**27.47**	**121**	*e*P		**P**	**21 31 30.6**	**-0.7**
FITZ				*e*pP		pP	21 31 38.8	-1.3
FITZ	**Fitzroy Crossi**	**27.47**	**121**	P		**P**	**21 31 30.8**	**-0.5**
comp=Z,8.6nm,0.8s,mb4.3,baz=297,slow=6.9,SNR=16							
FITZ				pP		pP	21 31 38.3	-1.7
comp=Z,24nm,0.8s,baz=284,slow=6.9,SNR=24							
DGAR	**Diego Garcia**	**28.75**	**263**	P		**P**	**21 31 43.3**	**+0.5**
KMI	**Kunming**	**29.45**	**3**	P		**P**	**21 31 49.8**	**+1.0**
KMI				PP		PP	21 32 48.0	-7.7
KMI				PPP			21 33 02.0	
KMI				S		**S**	**21 36 44.5**	**+3.3**
KMI				SS		SS	21 38 21.5	-26
KMI				SSS			21 38 42.4	
KMI				AMB		AMB		
comp=Z,26nm,0.9s,mb5.0							
KMI				LR		LR		
comp=N,451nm,15.4s,MS4.3							
KMI				LR		LR		
comp=E,461nm,15.9s,MS4.3							
KMI				LR		LR		
comp=Z,380nm,19.0s,MS4.0							
KMI	**Kunming**	**29.45**	**3**	P		**P**	**21 31 49.8**	**+1.0**
KMI				*PP		pP	21 31 57.9	+0.3
KMI							21 32 48.0	
KMI				PPP			21 33 02.0	
KMI				S		**S**	**21 36 44.5**	**+3.3**
KMI				*SS		sS	21 36 58.3	+2.6
KMI				pmax		pmax		
comp=Z,26nm,0.9s,mb5.0							
KMI				MLR		MLR		
comp=Z,380nm,19.0s,MS4.0							
KMI	**Kunming**	**29.45**	**3**	P		**P**	**21 31 49.8**	**+1.0**
comp=Z,26nm,0.9s,mb5.0							
KMI				pP		pP	21 31 57.9	+0.3
KMI				PP		PP	21 32 48.0	-7.7
KMI				PPP			21 33 02.0	
KMI				S		**S**	**21 36 44.5**	**+3.3**
KMI				sS		sS	21 36 58.3	+2.6
KMI				SS		SS	21 38 21.5	-26
KMI				SSS			21 38 42.4	
KMI				LR		LR		
comp=Z,380nm,19.0s,MS4.0							
GYA	**Guiyang**	**31.19**	**9**	P		**P**	**21 32 05.4**	**+1.2**
GYA				PP		PP	21 33 09.4	-5.6
GYA				S		**S**	**21 37 08.6**	**+0.1**
GYA				SS		SS	21 38 56.4	-26
GYA				AMB		AMB		
comp=Z,20nm,0.8s,mb5.0							
GYA				AMB		AMB		
comp=Z,140nm,5.6s							
GYA				LR		LR		
comp=N,880nm,15.6s,MS4.6							
GYA				LR		LR		
comp=E,660nm,14.9s,MS4.6							
GYA				LR		LR		
comp=Z,980nm,15.7s,MS4.6							
NWAO	**Narrogin (SRO)**	**32.03**	**154**	P		**P**	**21 32 10.1**	**-1.5**
comp=Z,18nm,1.1s,mb4.8,baz=293,slow=7.7,SNR=4.5							
NWAO				LR		LR	21 45 19.2	
comp=Z,271nm,19.6s,MS3.9,baz=92,slow=37							
NWAO	**Narrogin (SRO)**	**32.03**	**154**	P		**P**	**21 32 11.8**	**+0.3**
ODAN	**Odare**	**33.89**	**337**	*e*P		**P**	**21 32 29.4**	**+1.6**
NACB	**Ninganchiao**	**34.70**	**34**	P		**P**	**21 32 34.2**	**-0.8**
YHNB	**Yeheng**	**34.97**	**33**	*e*P		**P**	**21 32 35.0**	**-2.3**
JIRN	**Jiri**	**35.07**	**336**	*e*P		**P**	**21 32 39.9**	**+1.8**
CD2	**Chengdu**	**35.26**	**4**	*e*P		**P**	**21 32 39.3**	**-0.3**
CD2				PP		PP	21 34 00.5	+0.5
CD2				S		**S**	**21 38 10.9**	**-0.6**
CD2				SS		SS	21 40 29.8	-16
CD2				AMB		AMB		
comp=Z,30nm,1.0s,mb5.2							
CD2				AMB		AMB		
comp=Z,60nm,5.8s							
CD2				LR		LR		
comp=N,460nm,18.0s,MS4.6							
CD2				LR		LR		
comp=E,800nm,16.8s,MS4.6							
CD2				LR		LR		
comp=Z,650nm,16.8s,MS4.5							
LSA	**Lhasa**	**35.31**	**345**	P		**P**	**21 32 41.0**	**+0.9**
LSA				AMB		AMB		
comp=Z,30nm,0.8s,mb5.3							
LSA	**Lhasa**	**35.31**	**345**	*e*P		**P**	**21 32 41.1**	**+1.0**
LSA				*e**PP		pP	21 32 50.5	+1.5
LSA				pmax		pmax		
comp=Z,16nm,1.0s,mb4.9							
LSA	**Lhasa**	**35.31**	**345**	*e*P		**P**	**21 32 41.1**	**+1.0**
comp=Z,16nm,1.0s,mb4.9							
LSA				*e*pP		pP	21 32 50.5	+1.5
GUN	**Gumba**	**35.42**	**336**	*e*P		**P**	**21 32 42.7**	**+1.6**
comp=Z,56nm,0.5s,mb5.7							
DMN	**Daman**	**35.47**	**335**	*e*P		**P**	**21 32 42.7**	**+1.2**
comp=Z,23nm,0.8s,mb5.2							
KKN	**Kakani**	**35.56**	**335**	*e*P		**P**	**21 32 43.3**	**+1.0**
comp=Z,42nm,0.7s,mb5.5							
WRA	**Warramunga Arr**	**35.74**	**118**	P		**P**	**21 32 43.3**	**-0.7**
comp=Z,6.4nm,0.7s,mb4.7,baz=305,slow=9.3,SNR=43							
WRA				pP		pP	21 32 51.0	-1.9
comp=Z,17nm,0.8s,baz=301,slow=9.5,SNR=30							
WRA				PcP	PcP		21 35 11.8	+0.1
comp=Z,1.4nm,0.8s,baz=293,slow=2.8,SNR=3.3							
WRAB	**Tennant Creek**	**35.74**	**118**	P		**P**	**21 32 43.0**	**-1.0**
comp=Z,216nm,0.9s,mb6.1,SNR=9.7							
WRAB	**Tennant Creek**	**35.74**	**118**	*e*P		**P**	**21 32 43.3**	**-0.7**
WB2	**Warramunga Arr**	**35.75**	**118**	*e*P		**P**	**21 32 43.3**	**-0.7**
WB2				*e*pP		pP	21 32 51.5	-1.4
GKN	**Gorkha**	**36.02**	**335**	*e*P		**P**	**21 32 47.3**	**+1.1**
comp=Z,55nm,0.9s,mb5.5							
DANN	**Dangsing**	**36.70**	**334**	*e*P		**P**	**21 32 53.3**	**+1.3**
comp=Z,52nm,0.6s,mb5.6							
ASAR	**Alice Springs**	**36.85**	**124**	P		**P**	**21 32 53.1**	**-0.3**
comp=Z,2.6nm,0.9s,mb4.1,baz=298,slow=8.2,SNR=16							
ASAR				PcP		PcP	21 35 15.3	+0.3
comp=Z,1.7nm,0.7s,baz=308,slow=3.0,SNR=5.4							
ASAR				pPcP			21 35 23.2	
comp=Z,3.0nm,0.7s,baz=295,slow=2.4,SNR=8.1							
ASAR				S		**S**	**21 38 34.4**	**-1.8**
comp=Z,0.5nm,0.9s,baz=300,slow=16,SNR=4.7							
ASAR	**Alice Springs**	**36.85**	**124**	P		**P**	**21 32 53.2**	**-0.2**
ASAR							21 35 15.3	
ASAR				S		**S**	**21 38 34.4**	**-1.8**
XAN	**Xi'an**	**38.98**	**10**	P		**P**	**21 33 10.3**	**-0.9**
XAN				AMB		AMB		
comp=Z,38nm,1.0s,mb5.1							
XAN				AMB		AMB		
comp=Z,137nm,4.5s							
XAN				LR		LR		
comp=E,300nm,15.8s							
XAN				LR		LR		
comp=Z,305nm,15.3s,MS4.2							
NJ2	**Nanjing**	**40.00**	**24**	*e*P		**P**	**21 33 20.4**	**+0.6**
NJ2				AMB		AMB		
comp=Z,50nm,0.6s,mb5.4							
LZH	**Lanzhou**	**40.41**	**3**	*e*P		**P**	**21 33 24.0**	**+0.9**
LZH				PP		PP	21 35 02.0	+5.5
LZH				*e*S		**S**	**21 39 31.3**	**+1.8**
LZH				*e*SS		SS	21 42 26.9	-2.6
LZH				AMB		AMB		
comp=Z,33nm,1.3s,mb4.9							
LZH				AMB		AMB		
comp=Z,152nm,4.6s							
LZH				LR		LR		
comp=E,576nm,14.0s							
LZH				LR		LR		
comp=Z,893nm,17.8s,MS4.7							
LZH	**Lanzhou**	**40.41**	**3**	*e*P		**P**	**21 33 24.0**	**+0.9**
LZH				*PP		pP	21 33 33.8	+1.7
LZH				*SP		sP	21 33 38.1	+2.4
LZH							21 35 02.0	
LZH				*e*S		**S**	**21 39 31.2**	**+1.7**
LZH				*SS		sS	21 39 47.5	+3.2
LZH				*e*SS		SS	21 42 26.9	-2.6
LZH				pmax		pmax		
comp=Z,33nm,1.3s,mb4.9							
LZH				MLR		MLR		
comp=Z,890nm,17.8s,MS4.7							
LZH	**Lanzhou**	**40.41**	**3**	*e*P		**P**	**21 33 24.0**	**+0.9**
comp=Z,33nm,1.3s,mb4.9							
LZH				pP		pP	21 33 33.8	+1.7
LZH				sP		sP	21 33 38.1	+2.4
LZH				PP		PP	21 35 02.0	+5.5
LZH				*e*S		**S**	**21 39 31.2**	**+1.7**
LZH				sS		sS	21 39 47.5	+3.2
LZH				*e*SS		SS	21 42 26.9	-2.6
LZH				LR		LR		
comp=Z,890nm,17.8s,MS4.7							
DDI	**Dehra Dun**	**41.08**	**329**	*ex*		**P**	**21 33 28.2**	**-0.5**
GTA	**Gaotai**	**43.67**	**358**	⇑P		**P**	**21 33 50.3**	**+0.7**
GTA				PP		PP	21 35 34.6	+2.9
GTA				S		**S**	**21 40 18.5**	**+0.9**
GTA				SS		SS	21 43 27.0	-6.8
GTA				AMB		AMB		
comp=Z,17nm,0.8s,mb4.8							
GTA				AMB		AMB		
comp=Z,143nm,3.8s							
GTA				LR		LR		
comp=N,200nm,13.4s,MS4.5							
GTA				LR		LR		
comp=E,337nm,14.3s,MS4.5							
GTA				LR		LR		
comp=Z,235nm,12.8s,MS4.3							
PMG	**Port Moresby**	**45.84**	**99**	*e*P		**P**	**21 34 04.8**	**-2.6**
HHC	**Hu-ho-hao-te**	**46.08**	**11**	*e*P		**P**	**21 34 09.6**	**+0.8**
HHC				AP		pP	21 34 20.1	+2.2
HHC				PCP		PcP	21 35 45.4	+0.6
HHC				PP		PP	21 35 57.9	+0.6
HHC				PCS		PcS	21 39 39.0	-0.1
HHC				S		**S**	**21 40 52.6**	**+0.2**
HHC				SS		SS	21 44 10.5	-7.5
HHC				AMB		AMB		
comp=Z,19nm,0.8s,mb5.1							
HHC				AMB		AMB		
comp=Z,95nm,7.2s							
HHC				LR		LR		
comp=N,297nm,14.0s,MS4.5							
HHC				LR		LR		
comp=E,299nm,14.4s,MS4.5							
HHC				LR		LR		
comp=Z,233nm,13.8s,MS4.3							
BJT	**Baijiatuau**	**46.35**	**16**	*e*P		**P**	**21 34 09.6**	**-1.3**
BJT				*e*		pP	21 34 19.1	-0.9
BJT				pmax		pmax		
comp=Z,20nm,0.6s							
BJT	**Baijiatuau**	**46.35**	**16**	*e*P		**P**	**21 34 09.6**	**-1.4**
comp=Z,20nm,0.6s,mb5.2							
BJT				*e*		pP	21 34 19.1	-0.9
BJI	**Beijing**	**46.37**	**16**	P		**P**	**21 34 11.1**	**0.0**
BJI				S		**S**	**21 40 59.1**	**+2.4**
BJI				AMB		AMB		
comp=Z,40nm,0.8s,mb5.4							
BJI				AMB		AMB		
comp=Z,98nm,5.0s							
BJI				LR		LR		
comp=N,277nm,19.0s,MS4.4							
BJI				LR		LR		
comp=E,254nm,19.0s,MS4.4							
BJI				LR		LR		
comp=Z,163nm,21.4s,MS4.0							
BJI	**Beijing**	**46.37**	**16**	P		**P**	**21 34 11.1**	**0.0**
comp=Z,40nm,0.8s,mb5.4							
BJI				S		**S**	**21 40 59.1**	**+2.4**
BJI				LR		LR		
comp=Z,160nm,21.4s,MS3.9							
CTA	**Charters Tower**	**46.48**	**113**	*e*P		**P**	**21 34 12.5**	**+0.1**
CTA				*e*pP		pP	21 34 20.5	-1.0
CTA	**Charters Tower**	**46.48**	**113**	P		**P**	**21 34 12.3**	**-0.1**
comp=Z,10nm,0.9s,mb4.8,baz=296,slow=9.3,SNR=6.3							
CTA				pP		pP	21 34 19.9	-1.5
comp=Z,24nm,0.9s,baz=279,slow=9.4,SNR=9.9							
CTA				LR		LR	21 53 28.8	
comp=Z,192nm,18.7s,MS4.1,baz=60,slow=36							
CTAO	**Charters Tower**	**46.48**	**113**	*e*P		**P**	**21 34 12.3**	**-0.1**
CTAO				pmax		pmax		
comp=Z,27nm,0.9s,mb5.2							
CTAO	**Charters Tower**	**46.48**	**113**	*e*P		**P**	**21 34 12.3**	**-0.1**
comp=Z,27nm,0.9s,mb5.2							
STKA	**Stephens Creek**	**46.63**	**131**	*e*P		**P**	**21 34 13.4**	**+0.1**
STKA				*e*pP		pP	21 34 20.7	-1.7
STKA	**Stephens Creek**	**46.63**	**131**	P		**P**	**21 34 13.7**	**+0.3**
comp=Z,4.2nm,0.6s,mb4.5,baz=303,slow=8.1,SNR=14							
STKA				pP		pP	21 34 20.8	-1.6
comp=Z,14nm,0.7s,baz=298,slow=7.8,SNR=12							
GUMO	**Guam**	**46.89**	**67**	*e*P		**P**	**21 34 14.7**	**-0.9**
KS15	**Wonju Array Si**	**48.52**	**28**	*e*P		**P**	**21 34 28.4**	**+0.5**
KSRS	**Korea Array**	**48.55**	**29**	P		**P**	**21 34 27.9**	**-0.3**
comp=Z,18nm,0.8s,mb5.1,baz=219,slow=7.9,SNR=97							
KBL	**Kabul**	**49.23**	**325**	*e*P		**P**	**21 34 33.2**	**-0.2**
KBL				pmax		pmax		
comp=Z,4.0nm,0.6s,mb4.6		

CN2 SS SS 21 46 01.9 -3.4
CN2 AMB AMB
comp=Z,50nm,0.8s,mb5.5
CN2 AMB AMB
comp=Z,310nm,4.0s
CN2 LR LR
comp=N,230nm,12.0s,MS4.6
CN2 LR LR
comp=E,230nm,12.0s,MS4.6
CN2 LR LR
comp=Z,290nm,12.0s,MS4.5
EKS2 Erkin-Say 53.09 335 *e*P **P 21 35 03.0 +0.8**
comp=Z,24nm,0.8s,mb5.2
EKS2 *e*pP pP 21 35 11.4 0.0
MAJO Matsushiro 53.45 37 *e*P **P 21 35 03.2 -1.8**
MAJO pmax pmax
comp=Z,14nm,0.9s,mb4.9
MAJO Matsushiro 53.45 37 *e*P **P 21 35 03.2 -1.8**
comp=Z,14nm,0.9s,mb4.9
MAT Matsushiro 53.45 37 P **P 21 35 04.1 -0.9**
MJAR Matsushiro Arr 53.45 37 P **P 21 35 03.3 -1.7**
comp=Z,15nm,0.9s,mb4.9,baz=217,slow=7.4,SNR=40
MJAR PcP PcP 21 36 12.1 +0.2
comp=Z,1.9nm,0.9s,baz=200,slow=3.3,SNR=3.2
MJAR Matsushiro Arr 53.45 37 P **P 21 35 03.3 -1.7**
MJAR PcP PcP 21 36 12.1 +0.2
MK31 Makanchi Array 53.71 344 *e*P **P 21 35 06.8 +0.1**
MKAR Makanchi Array 53.71 344 P **P 21 35 06.8 +0.1**
comp=Z,18nm,0.8s,mb5.1,baz=148,slow=8.1,SNR=120
MKAR pP pP 21 35 14.6 -1.3
comp=Z,11nm,0.6s,baz=144,slow=7.6,SNR=14
MKAR LR LR 22 01 56.2
comp=Z,69nm,19.9s,MS3.7,baz=355,slow=40
MKAR Makanchi Array 53.71 344 P **P 21 35 06.8 +0.1**
MKAR *PP pP 21 35 14.6 -1.3
MKAR Makanchi Array 53.71 344 P **P 21 35 06.8 +0.1**
MKAR pP pP 21 35 14.6 -1.3
MKAR LR LR 22 01 56.2
OPO Ambohidratompo 54.55 250 P **P 21 35 13.6 +0.2**
comp=Z,3.1nm,0.7s,mb4.4,baz=87,slow=8.3,SNR=6.7
OPO pP pP 21 35 22.3 -0.3
comp=Z,3.1nm,0.7s,baz=75,slow=4.6,SNR=5.6
ZAK Zakamensk 54.65 2 *e*P **P 21 35 12.0 -1.5**
ZAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KK31 Karatay Array 54.88 333 *i* P **P 21 35 14.1 -1.2**
KK31 pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
HVS Khovu-Aksy 55.75 354⇓ *i* P **P 21 35 20.3 -1.1**
HVS pmax pmax
comp=Z,19nm,1.0s,mb5.1
HIA Hailar 55.88 15*c i*P **P 21 35 21.6 -0.8**
TLY Talaya 55.96 2 *e*P **P 21 35 23.8 +0.9**
TLY *e* 21 43 23.1
TLY pmax pmax
comp=Z,17nm,0.9s,mb5.1
TLY MLR MLR
comp=Z,158nm,15.0s,MS4.2
TLY Talaya 55.96 2 *e*P **P 21 35 23.5 +0.6**
comp=Z,9.8nm,0.9s,mb4.8
TLY *e*pP pP 21 35 33.4 +1.3
TLY *e*PcP PcP 21 36 19.8 -1.3
KURK Kurchatov 58.30 343 P **P 21 35 39.0 -0.4**
comp=Z,156nm,0.9s,mb6.0,SNR=16
KURK Kurchatov 58.30 343 P **P 21 35 39.2 -0.2**
comp=Z,12nm,0.8s,mb5.0,baz=157,slow=7.2,SNR=48
KLR Kul'dur 59.70 23 *e*P **P 21 35 45.2 -4.0**
ZAA0 Zalesovo Array 59.80 349 *e*P **P 21 35 48.9 -0.9**
ZAA0 *e*pP pP 21 36 00.0 +0.9
ZALV Zalesovo Beam 59.80 349 P **P 21 35 49.4 -0.3**
comp=Z,21nm,0.8s,mb5.2,baz=186,slow=4.7,SNR=72
ZALV pP pP 21 35 57.9 -1.2
comp=Z,13nm,0.8s,baz=184,slow=3.9,SNR=9.1
ZALV LR LR 22 05 35.2
comp=Z,80nm,18.5s,MS3.9,baz=208,slow=40
ZALV Zalesovo Beam 59.80 349 P **P 21 35 49.4 -0.4**
ZALV *PP pP 21 35 57.9 -1.2
ZALV Zalesovo Beam 59.80 349 P **P 21 35 49.4 -0.4**
ZALV pP pP 21 35 57.9 -1.2
ZALV LR LR 22 05 35.2
KRAR Krasnoyarsk 60.66 355⇑ *i*P **P 21 35 55.4 -0.2**
KRAR pmax pmax
comp=Z,40nm,1.3s,mb5.4
NVS Novosibirsk 60.95 348 *e*P **P 21 35 57.4 -0.3**
NVS pmax pmax
comp=Z,15nm,1.3s,mb5.0
NVS pmax pmax
comp=N,8.0nm,1.4s
NVS pmax pmax
comp=E,8.0nm,1.4s
NAY Al-Naaiem 61.65 307 *e*P **P 21 36 02.7 -0.1**
baz=307
NAY AMb AMB 21 36 19.9
comp=Z,13nm,0.8s,mb5.1,baz=307
MIB Mutribah 61.79 307 *e*P **P 21 36 04.1 +0.2**
baz=307
MIB AMb AMB 21 36 15.3
comp=Z,21nm,0.9s,mb5.3,baz=307
RST Umm Al-Ruwaisa 61.94 307 *e*P **P 21 36 04.7 -0.2**
baz=307
RST AMb AMB 21 36 15.6
comp=Z,16nm,1.3s,mb5.0,baz=307
CASY Casey 62.05 176 *e*P **P 21 35 56.2 -8.7**
comp=Z,36nm,0.6s,mb5.7
BVA0 Borovoye Array 62.90 340 *i* P **P 21 36 09.5 -1.3**
BVA0 pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BVAR Borovoye Array 62.90 340 P **P 21 36 10.0 -0.7**
comp=Z,9.8nm,0.7s,mb5.0,baz=144,slow=8.3,SNR=60
BVAR pP pP 21 36 18.4 -1.7
comp=Z,8.8nm,0.7s,baz=140,slow=9.4,SNR=14
BOD Bodaibo 62.93 8⇑ *i*P **P 21 36 10.8 -0.1**
BOD pmax pmax
comp=Z,16nm,1.0s,mb5.1
YSS Yuzh-Sakhalins 62.94 31 *e*P **P 21 36 10.3 -0.9**
BRVK Borovoye 62.96 340 P **P 21 36 10.3 -0.9**
comp=Z,110nm,0.9s,mb6.0,SNR=6.0
BRVK Borovoye 62.96 340 *e*P **P 21 36 10.3 -0.9**
BRVK *e**PP pP 21 36 19.2 -1.4
BRVK pmax pmax
comp=Z,14nm,0.9s,mb5.1
BRVK Borovoye 62.96 340 *e*P **P 21 36 10.2 -0.9**
comp=Z,14nm,0.9s,mb5.1
BRVK *e*pP pP 21 36 19.2 -1.4
KMBO Kilima Mbogo 63.95 271 LR LR 22 00 27.2
comp=Z,69nm,18.4s,MS3.9,baz=236,slow=32
KMBO Kilima Mbogo 63.95 271 *e*P **P 21 36 18.7 +0.1**
KMBO *e**PP pP 21 36 29.1 +1.1
CLNS Chul'man 64.07 14 *e*P **P 21 36 18.0 -0.4**
CLNS pmax pmax
comp=Z,12nm,0.9s,mb4.9
CLNS pmax pmax
comp=N,11nm,0.9s
CLNS pmax pmax
comp=E,4.0nm,0.9s
AB31 Akbulak array 64.37 331 *i* P **P 21 36 19.8 -0.7**
AB31 pmax pmax
comp=Z,15nm,0.6s,mb5.2
AKTK Aktyubinsk 66.08 331 P **P 21 36 29.9 -1.8**
AKTO Aktyubinsk 66.08 331 P **P 21 36 29.9 -1.8**
comp=Z,1.6nm,0.6s,mb4.3,baz=100,slow=16,SNR=4.4
MAW Mawson 68.22 195 *e*P **P 21 36 45.2 +0.3**
MAW Mawson 68.22 195 P **P 21 36 45.3 +0.4**
comp=Z,2.9nm,0.8s,mb4.4,baz=18,slow=7.0,SNR=12
MAW LR LR 21 59 23.4
comp=Z,135nm,20.9s,MS4.2,baz=264,slow=30
SVE Sverdlovsk 69.41 338⇓ *e*P **P 21 36 52.4 -0.1**
SVE *e* 21 37 05.4
SVE *e*S S 21 45 55.2 -2.2
SVE *e*SSS 21 53 27.4
SVE pmax pmax
comp=Z,28nm,1.0s,mb5.2
SVE MLR MLR
comp=Z,465nm,19.0s,MS4.8
YAK Yakutsk 69.81 14 *e*P **P 21 36 52.7 -2.2**
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=Z,32nm,0.9s,mb5.2
YAK pmax pmax
comp=N,13nm,1.5s
YAK MLR MLR
comp=Z,246nm,18.0s,MS4.5
YAK MLR MLR
comp=E,109nm,20.0s,MS4.4
YAK MLR MLR
comp=N,157nm,17.0s,MS4.4
YAK Yakutsk 69.81 14 *e*P **P 21 36 53.9 -1.0**
comp=N,43nm,0.8s,mb5.4
ARU Arti 69.93 336 P **P 21 36 55.2 -0.5**
comp=N,73nm,0.9s,mb5.6,SNR=6.2
ARU Arti 69.93 336*c i*P **P 21 36 55.3 -0.4**
ARU *e* 21 39 28.5
ARU *e*S S 21 46 06.2 +2.5
ARU *e*SS SS 21 50 29.5 -3.8
ARU pmax pmax
comp=Z,14nm,1.0s,mb4.8
ARU Arti 69.93 336 *e*P **P 21 36 55.2 -0.6**
comp=Z,8.0nm,0.8s,mb4.7
ARU *e*pP pP 21 37 03.5 -1.7
KIV Kislovodsk 71.19 319⇓ *i*P **P 21 37 02.0 -1.7**
KIV pmax pmax
comp=Z,24nm,1.7s,mb4.8
MALT Malatya 71.88 313 P **P 21 37 08.5 +0.5**
RPZ Rata Peaks 72.40 134 LR LR 22 08 56.7
comp=Z,148nm,21.1s,MS4.2,baz=180,slow=36
LSZ Lusaka 72.47 255 P **P 21 37 12.3 +0.3**
comp=Z,0.7nm,0.5s,mb3.9,baz=181,slow=3.4,SNR=3.9
LSZ Lusaka 72.47 255 *e*P **P 21 37 12.5 +0.6**
PETK Petropavlovsk- 74.32 31 P **P 21 37 20.6 -1.4**
comp=Z,5.2nm,0.8s,mb4.5,baz=211,slow=2.6,SNR=4.5
PETK *e*pP pP 21 37 29.5 -2.1
comp=Z,4.5nm,0.6s,baz=269,slow=3.2,SNR=3.8
PETK LR LR 22 15 14.4
comp=Z,39nm,18.6s,MS3.7,baz=60,slow=40
PETK Petropavlovsk- 74.32 31 P **P 21 37 20.6 -1.5**
PETK *PP pP 21 37 29.5 -2.1
LBTB Lobatse 75.10 245 P **P 21 37 35.5 -1.2**
comp=Z,3.5nm,0.7s,baz=132,slow=3.0,SNR=3.3
LBTB Lobatse 75.10 245 *e*P **P 21 37 28.1 +0.9**
BOSA Boshof 75.55 242 LR LR 22 03 10.1
comp=Z,115nm,19.1s,MS4.2,baz=274,slow=30
BOSA Boshof 75.55 242 *e*P **P 21 37 29.6 -0.2**
BOSA pmax pmax
comp=Z,30nm,1.5s,mb5.0
BOSA Boshof 75.55 242 *e*P **P 21 37 29.6 -0.2**
comp=Z,30nm,1.5s,mb5.0
SYO Syowa Base 75.94 199⇓ *e*X pP 21 37 40.2 -0.5
SEY Seymchan 77.45 21⇑ *e*P **P 21 37 38.6 -1.1**
OBN Obninsk 79.51 328⇑ *e*P **P 21 37 51.1 -0.2**
OBN *e* pP 21 38 00.0 -0.9
OBN pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
KLMR Klimovskoe 80.56 334 *e*P **P 21 37 56.0 -0.8**
KLMR pmax pmax
comp=Z,24nm,1.3s,mb5.0
SBA Scott Base 80.62 169 *e*P **P 21 37 57.7 +0.8**
SBA *e* 21 38 04.3
AKASG Malin Array Be 82.16 322 P **P 21 38 04.8 -0.7**
comp=Z,0.2nm,0.3s,baz=87,slow=4.7,SNR=5.0
AKASG pP pP 21 38 12.9 -2.2
comp=Z,0.7nm,0.4s,baz=79,slow=4.9,SNR=3.6
MLR Muntele Rosu 82.91 317⇓ *i*P **P 21 38 15.4 +5.8**
MLR Muntele Rosu 82.91 317 ⇓P **P 21 38 15.4 +5.8**
BURAR Bucovina Array 83.90 319⇓ *i*P **P 21 38 15.9 +1.3**
BURAR Bucovina Array 83.90 319 ⇓P **P 21 38 15.9 +1.3**
BUR08 Bucovina Ar. S 83.91 319 *e*P **P 21 38 15.6 +0.9**
BUR08 *e*pP pP 21 38 24.3 -0.1
ARCES ARCESS Array B 89.19 340 P **P 21 38 40.4 +0.4**
comp=Z,5.0nm,0.8s,mb4.9,baz=111,slow=6.6,SNR=12
ARCES pP pP 21 38 48.8 -0.9
comp=Z,5.6nm,0.7s,baz=90,slow=4.9,SNR=7.0
ARCES LR LR 22 23 00.9
comp=Z,139nm,19.7s,MS4.4,baz=352,slow=38
ARCES ARCESS Array B 89.19 340 P **P 21 38 40.4 +0.4**
ARCES *PP pP 21 38 48.8 -0.9
SNAA Sanae 90.19 198 *e*P **P 21 38 54.8 +0.4**
SNAA *e* 21 38 59.1
SNAA Sanae 90.19 198 *e*P **P 21 38 45.1 +0.4**
SNAA *e*pP pP 21 38 54.3 -0.1
GERES GERESS Array B 91.69 319 P **P 21 38 52.2 +0.2**
comp=Z,0.6nm,0.7s,mb4.1,baz=106,slow=4.7,SNR=6.3
GERES pP pP 21 39 01.2 -0.6
comp=Z,1.4nm,0.8s,baz=99,slow=5.8,SNR=6.9
BRG Berggiesshubel 91.70 321 *e*P pP 21 39 01.1 -0.7
BRG pmax pmax
comp=Z,10.0nm,1.7s,mb4.9
BRG Berggiesshubel 91.70 321 *e*P pP 21 39 01.1 -0.8
comp=Z,16nm,1.7s
VNA2 Neumayer--Watz 91.81 198 *e*P pP 21 39 02.4 +0.4
baz=65,slow=5.1
VNA2 *e* 21 39 06.9
CLL Collm 92.33 321 *e*P **P 21 38 57.0 +2.0**
CLL pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
CLL Collm 92.33 321 *e*(P) **P 21 38 57.0 +2.0**
CLL *e*pP pP 21 39 03.0 -1.7
CLL Collm 92.33 321 *e*P **P 21 38 57.0 +2.0**
comp=Z,10.0nm,1.4s,mb5.0
PMR Palmer 103.19 28 *e*P Pdif 21 39 43.0 -1.0
NVAR Mina Array Bea 130.69 41 PKP PKPdf 21 44 57.9 +1.8
comp=Z,0.2nm,0.4s,baz=288,slow=2.5,SNR=5.8
NVAR *e*PKP pPKPdf 21 45 06.5 +0.4
comp=Z,0.8nm,0.6s,baz=307,slow=2.1,SNR=5.3
NVAR SKPbc SKPbc 21 48 19.6 +1.7
comp=Z,1.1nm,0.9s,baz=252,slow=4.3,SNR=6.1
MSU Marysvale 134.51 37 *e*PKIKP PKPdf 21 45 03.7 +0.4
TMUT Trail Mountain 134.57 36 *e*PKPdf PKPdf 21 45 01.4 -2.1
WMOK Wichita Mounta 144.63 29 *e*PKIKP PKPdf 21 45 20.1 -1.7
CCM Cathedral Cave 144.68 17 *e*PKIKP PKPdf 21 45 20.1 -1.7
OLIL Olney 144.85 13 *e*PKPdf PKPdf 21 45 20.7 -1.4
MCWV Mont Chateau 144.95 1 *e*PKPdf PKPdf 21 45 21.1 -1.1
SDMD Soldier's Deli 145.17 357 *e*PKPbc PKPbc 21 45 20.6 -1.5
SIUC Southern Illin 145.56 15 *e*PKPdf PKPdf 21 45 23.1 -0.2
SIUC *ep*PKPdf pPKPdf 21 45 31.0 -2.3
WCI Wyandotte Cave 145.70 11 *e*PKPdf PKPdf 21 45 23.1 -0.4
WCI *ep*PKPdf pPKPdf 21 45 31.5 -2.1
TXAR Lajitas Array 145.84 41 PKPbc PKPbc 21 45 25.4 +0.7
comp=Z,12nm,0.8s,baz=279,slow=1.2,SNR=99
TXAR pPKPbc pPKPbc 21 45 33.6 -0.9
comp=Z,8.4nm,0.8s,baz=325,slow=1.1,SNR=18
JCT Junction City 147.40 35 *e*PKP2 PKPab 21 45 29.5 -1.5
WVT Waverly 147.40 14 *e*PKP2 PKPab 21 45 28.5 -2.3
TZTN Tazewell 147.77 7 *e*PKPbc PKPbc 21 45 29.1 -0.8
TKL Tuckaleechee C 148.62 8 *e*PKIKP PKPdf 21 45 28.1 -0.4
TKL *e* 21 45 32.0
TKL *e* 21 45 39.6
SWET Sewanee 148.69 11 *e*PKPdf PKPdf 21 45 28.2 -0.4
SWET *ep*PKPbc PKPbc 21 45 31.5 -0.9
SWET *ep*PKPdf pPKPdf 21 45 39.5 +0.9
CPCT Cooper Cave 148.71 9 *e*PKPdf PKPdf 21 45 28.9 +0.2
CPCT *e*PKPbc PKPbc 21 45 32.2 -0.2
CPCT *ep*PKPdf pPKPdf 21 45 40.0 +1.3
HKT Hockley 149.96 31 *e*PKHKP 21 45 30.8
HKT *e* 21 45 35.6
JSC Jenkinsville 150.24 4 *e*PKIKP PKPdf 21 45 31.6 +0.4
JSC *e* 21 46 36.3

IDC ***24*** *21:58:23.6±8.4, 1689S×7009W, h22km±42km, mb3.8/2, mb1 3.9/4, mb1mx3.6/19, mbtmp3.8/4, ML4.3/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/33, Error ellipse: s-maj=79.3km s-min=26.3km az=124.0*
NEIC ***24*** *21:58:24.0±3.5, 1694S×7028W, h26km±29km, mb3.8/3, Error ellipse: s-maj=13.8km s-min=9.7km az=55.0*
ISC 24 21:58:25.6±1.6, 1694S±009×702W±01, h39km±20km, n12, σ1901/15, mb3.8/3, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**1.31**	**291**	*e*P		**Pn**	**Sn**	**21 58 55.0**	**+7.6**
ARE				*e*S		**Sn**	**Sn**	**21 59 20.0**	**+16**
LPAZ	**La Paz**	**2.10**	**72**	Pg		**Pn**	**Pn**	**21 59 00.4**	**+2.0**
	25nm,0.3s,baz=237,slow=17,SNR=334								
LPAZ				Lg				21 59 26.4	
	6.9nm,0.3s,baz=233,slow=20,SNR=3.7								
LVC	**Limon Verde**	**5.78**	**168**	Pn		**Pn**	**Pn**	**21 59 48.4**	**-0.4**
	1.2nm,0.3s,baz=335,slow=9.2,SNR=10								
LVC				Sn		**Sn**	**Sn**	**22 01 02.0**	**+8.1**
	1.0nm,0.3s,baz=204,slow=18,SNR=2.5								
NNA	**Nana**	**8.09**	**307**	P		**Pn**	**Pn**	**22 00 18.6**	**-2.0**
SIV	**San Ignacio**	**8.83**	**85**	Pn		**Pn**	**Pn**	**22 00 29.6**	**-1.1**
	1.1nm,0.3s,baz=270,slow=14,SNR=15								
SIV				Sn		**Sn**	**Sn**	**22 01 59.6**	**-9.3**
	baz=186,slow=19,SNR=1.9								
SIV				Lg				22 02 54.6	
	0.3nm,0.3s,baz=166,slow=19,SNR=2.9								
OTAV	**Otavalo**	**18.90**	**334**	*e*P		**Pn**	**Pn**	**22 02 43.3**	**-0.5**
	0.9nm,0.3s								
TRQA	**Tornquist**	**22.25**	**163**	*e*P		**P**	**P**	**22 03 18.9**	**-0.2**
	4.2nm,0.8s,mb3.9								
PLCA	**Paso Flores**	**23.71**	**181**	P		**P**	**P**	**22 03 34.5**	**+0.6**
	2.7nm,1.0s,mb3.6,baz=7.7,slow=4.8,SNR=4.5								
PLCA	**Paso Flores**	**23.71**	**181**	*e*P		**P**	**P**	**22 03 34.8**	**+0.9**
	3.6nm,0.9s,mb3.8								
JTS	**JuntasAbangare**	**30.73**	**331**	*e*P		**P**	**P**	**22 04 36.9**	**-0.3**
TEIG	**Tepich**	**40.97**	**334**	P		**P**	**P**	**22 06 05.5**	**+0.7**
TORD	**Torodi Ar. Bea**	**77.06**	**72**	P		**P**	**P**	**22 10 14.8**	**-0.4**
	1.3nm,0.9s,mb3.8,baz=253,slow=6.1,SNR=9.0								

SZGRF ***24*** *22:41:24.8, 2200S×17758W, h33km, South of Fiji Islands*
ORF ***24*** *22:41:38.6, 1831S×17975E, h30km, mb5.7*
BJI ***24*** *22:42:16.7, 2107S×17762W, h494km, mB4.9, mb4.5*
BGS ***24*** *22:42:22.2±5.3, 2066S×17841W, h494km, mb4.7(NEIC)*
NEIC ***24*** *22:42:22.2±1.2, 2066S×17841W, h494km±13km, mb4.7/25, Error ellipse: s-maj=12.0km s-min=7.3km az=144.0*
IDC ***24*** *22:42:23.2±1.7, 2074S×17831W, h510km±18km, mb4.0/18, mb1 4.2/20, mb1mx4.1/24, mbtmp4.0/20, Error ellipse: s-maj=16.9km s-min=10.1km az=148.0*
DJA ***24*** *22:42:24, 2090S×17862W, h510km, mb5.0/16*
MOS ***24*** *22:42:26.6±2.3, 1973S×17877W, h505km, mb4.8/8, Error ellipse: s-maj=10.9km s-min=10.4km az=177.6*
ISCJB ***24*** *22:42:28.2±1.2, 2069S±007×17860W±006, h575km±15km, mb4.5/45, Error ellipse: s-maj=11.5km s-min=7.0km az=146.8*
ISC 24 22:42:28.5±1.2, 2068S±007×17856W±006, h565km±13km, n271, σ0679/124, mb4.5/45, 37C-28D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**8.56**	**176**	*e*P		**P**	**P**	**22 44 37.7**	**+5.7**
AFI	**Afiamalu**	**9.34**	**45**	P		**P**	**P**	**22 44 31.5**	**-8.5**
	5.4nm,0.3s,baz=315,slow=20,SNR=7.7								
AFI				S		**S**	**S**	**22 46 14.0**	**-14**
	3.0nm,0.3s,baz=162,slow=19,SNR=6.1								
AFI	**Afiamalu**	**9.34**	**45**	*e*P		**P**	**P**	**22 44 31.8**	**-8.3**
AFI				pmax	pmax				
	comp=Z,57nm,0.8s								
AFI	**Afiamalu**	**9.34**	**45**	*e*P		**P**	**P**	**22 44 31.8**	**-8.3**
	comp=Z,57nm,0.8s								
FUNA	**Funafuti**	**12.28**	**349**	P		**P**	**P**	**22 45 11.1**	**+1.0**
DZM	**Mont Dzumac**	**14.04**	**262**	*e*P		**P**	**P**	**22 45 27.5**	**-0.5**
DZM	**Mont Dzumac**	**14.04**	**262**	*e*P		**P**	**P**	**22 45 27.2**	**-0.8**
DZM				*e*S		**S**	**S**	**22 47 55.4**	**-0.3**
RAR	**Rarotonga**	**17.56**	**95**	P		**P**	**P**	**22 46 04.5**	**+2.9**
URZ	**Urewera**	**17.92**	**191**	P		**P**	**P**	**22 46 00.3**	**-4.4**
	comp=Z,6.2nm,0.3s,baz=355,slow=5.0,SNR=25								
URZ				S		**S**	**S**	**22 48 53.8**	**-6.8**
	comp=Z,1.0nm,0.3s,baz=247,slow=23,SNR=7.2								
SNZO	**South Karori**	**21.35**	**194**	*e*P		**P**	**P**	**22 46 31.7**	**-4.0**
HNR	**Honiara**	**23.54**	**295**	*e*P		**P**	**P**	**22 46 55.5**	**-0.2**
HNR				pmax	pmax				
	comp=Z,60nm,1.1s,mb5.1								
HNR	**Honiara**	**23.54**	**295**	*e*P		**P**	**P**	**22 46 55.5**	**-0.2**
	comp=Z,60nm,1.1s,mb5.1								
EIDS	**Eidsvold**	**28.30**	**255**	*e*P		**P**	**P**	**22 47 43.0**	**+5.6**
ARMA	**Armidale**	**28.52**	**244**	*e*P		**P**	**P**	**22 47 40.1**	**+0.8**
CNB	**Canberra Magne**	**31.69**	**236**⇓ *i*P			**P**	**P**	**22 48 06.9**	**+0.4**
CTA	**Charters Tower**	**32.95**	**265**⇓ *i*P			**P**	**P**	**22 48 17.7**	**+0.3**
CTA	**Charters Tower**	**32.95**	**265**	P		**P**	**P**	**22 48 18.0**	**+0.6**
	comp=Z,63nm,0.5s,mb5.4,baz=94,slow=10,SNR=79								
CTAO	**Charters Tower**	**32.95**	**265**	*e*P		**P**	**P**	**22 48 17.6**	**+0.2**
CTAO				pmax	pmax				
	comp=Z,55nm,0.5s,mb5.3								
CTAO	**Charters Tower**	**32.95**	**265**	*e*P		**P**	**P**	**22 48 17.6**	**+0.3**
	comp=Z,55nm,0.5s,mb5.3								
PMG	**Port Moresby**	**34.87**	**284***d i*P			**P**	**P**	**22 48 33.6**	**0.0**
PMG	**Port Moresby**	**34.87**	**284**	*e*P		**P**	**P**	**22 48 33.9**	**+0.4**
	comp=Z,84nm,0.8s,mb5.3								
TOO	**Toolangi**	**35.37**	**234**	*e*P		**P**	**P**	**22 48 37.3**	**0.0**
TAU	**Tasmania Unive**	**36.13**	**224**	P		**P**	**P**	**22 48 43.5**	**0.0**
COEN	**Coen**	**37.07**	**274**	*e*P		**P**	**P**	**22 48 52.1**	**+0.4**
	comp=Z,21nm,0.9s,mb4.7								
STKA	**Stephens Creek**	**37.24**	**244**⇓ *i*P			**P**	**P**	**22 48 53.1**	**+0.3**
STKA	**Stephens Creek**	**37.24**	**244**	P		**P**	**P**	**22 48 53.0**	**+0.1**
	comp=Z,24nm,0.8s,mb4.8,baz=90,slow=9.8,SNR=37								
ASAR	**Alice Springs**	**43.97**	**257**	P		**P**	**P**	**22 49 46.6**	**+0.2**
	comp=Z,65nm,0.6s,mb5.4,baz=95,slow=7.9,SNR=827								
ASAR				PcP	PcP			22 51 20.1	+0.4
	comp=Z,7.6nm,0.6s,baz=105,slow=3.8,SNR=9.5								
ASAR				ScP	ScP			22 54 22.9	+5.0
	comp=Z,1.5nm,0.8s,baz=110,slow=3.9,SNR=4.4								
ASAR				S		**S**	**S**	**22 55 39.3**	**+1.5**
	comp=Z,3.7nm,0.9s,baz=94,slow=15,SNR=16								
ASAR	**Alice Springs**	**43.97**	**257**	P		**P**	**P**	**22 49 46.7**	**+0.3**
ASAR								22 51 20.1	
ASAR				S		**S**	**S**	**22 55 39.3**	**+1.5**
WB2	**Warramunga Arr**	**44.05**	**262**	*e*P		**P**	**P**	**22 49 46.4**	**-0.7**
WRAB	**Tennant Creek**	**44.05**	**262**	*e*P		**P**	**P**	**22 49 46.4**	**-0.7**
WRAB				pmax	pmax				
	comp=Z,53nm,0.9s,mb5.1								
WRAB	**Tennant Creek**	**44.05**	**262**	*e*P		**P**	**P**	**22 49 46.4**	**-0.7**
	comp=Z,53nm,0.9s,mb5.1								
WRA	**Warramunga Arr**	**44.06**	**262**	P		**P**	**P**	**22 49 46.8**	**-0.4**
	comp=Z,25nm,0.3s,mb5.2,baz=97,slow=7.4,SNR=898								
WRA				PcP	PcP			22 51 20.6	+0.6
	comp=Z,5.3nm,1.0s,baz=92,slow=4.8,SNR=4.6								
WRA				S		**S**	**S**	**22 55 38.5**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=98,slow=13,SNR=5.1								
MIDW	**Midway**	**48.62**	**1**	*e*P		**P**	**P**	**22 50 19.8**	**-1.6**
FORT	**Forrest**	**48.74**	**247**	*e*P		**P**	**P**	**22 50 21.5**	**-0.9**
GUMO	**Guam**	**49.52**	**310**	P		**P**	**P**	**22 50 27.5**	**-0.7**
	comp=Z,26nm,0.3s,mb5.2,baz=202,slow=23,SNR=3.8								
GUMO	**Guam**	**49.52**	**310**	*e*P		**P**	**P**	**22 50 27.3**	**-0.9**
GUMO				pmax	pmax				
	comp=Z,64nm,0.7s,mb5.2								
GUMO	**Guam**	**49.52**	**310**	*e*P		**P**	**P**	**22 50 27.3**	**-0.9**
	comp=Z,64nm,0.7s,mb5.2								
FITZ	**Fitzroy Crossi**	**52.49**	**263**⇓ *i*P			**P**	**P**	**22 50 49.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**52.49**	**263**	P		**P**	**P**	**22 50 50.1**	**+0.3**
	comp=Z,9.5nm,0.5s,mb4.3,baz=121,slow=5.0,SNR=51								
BATI	**Baumata**	**56.41**	**271**	P		**P**	**P**	**22 51 18.5**	**+1.2**
	comp=Z,48nm,0.6s,mb4.9,baz=186,slow=1.5,SNR=13								
MBWA	**Marble Bar**	**57.30**	**258**	*e*P		**P**	**P**	**22 51 22.2**	**-1.1**
	comp=Z,41nm,0.8s,mb4.7								
KLBR	**Kellerberrin**	**57.51**	**245**	*e*P		**P**	**P**	**22 51 24.1**	**-0.5**
SBA	**Scott Base**	**57.66**	**184**	*e*P		**P**	**P**	**22 51 25.8**	**+1.0**
	comp=Z,30nm,2.0s,mb4.2								
NWAO	**Narrogin (SRO)**	**57.82**	**243**	P		**P**	**P**	**22 51 27.4**	**+0.7**
MUN	**Mundaring**	**58.78**	**244**	*e*P		**P**	**P**	**22 51 33.4**	**+0.2**
DAV	**Davao City (W)**	**61.41**	**291**	*e*P		**P**	**P**	**22 51 49.8**	**-1.0**
	comp=Z,0.1nm,0.4s								
CASY	**Casey**	**63.58**	**205**	P		**P**	**P**	**22 52 03.0**	**-0.9**
SDKM	**Sandakan**	**68.25**	**285**⇑ *i*P			**P**	**P**	**22 52 35.4**	**+1.5**
KKM	**Kota Kinabalu**	**69.30**	**285**⇑ P			**P**	**P**	**22 52 41.3**	**+1.1**
KKM	**Kota Kinabalu**	**69.30**	**285**	*e*P		**P**	**P**	**22 52 39.9**	**-0.3**
MJAR	**Matsushiro Arr**	**70.04**	**324**	P		**P**	**P**	**22 52 44.1**	**0.0**
	comp=Z,4.0nm,0.8s,mb4.0,baz=161,slow=5.9,SNR=9.7								
MAJO	**Matsushiro**	**70.05**	**324**	*e*P		**P**	**P**	**22 52 43.1**	**-1.0**
KSM	**Kuching**	**72.92**	**278**⇑ P			**P**	**P**	**22 53 02.9**	**+1.5**
KSM	**Kuching**	**72.92**	**278**	*e*P		**P**	**P**	**22 53 02.0**	**+0.6**
TATO	**Taipei**	**73.85**	**305**	P		**P**	**P**	**22 53 06.1**	**-0.3**
PET	**Petropavlovsk**	**76.01**	**346**⇓ *i*P			**P**	**P**	**22 53 17.2**	**-0.6**
PET				pmax	pmax				
	comp=Z,33nm,1.6s,mb4.5								
PETK	**Petropavlovsk-**	**76.31**	**346**	P		**P**	**P**	**22 53 19.2**	**-0.2**
	comp=Z,12nm,0.8s,mb4.4,baz=135,slow=7.5,SNR=10								
KSRS	**Korea Array**	**76.67**	**319**	P

comp=Z,3.5nm,0.8s,mb3.9,baz=225,slow=9.5,SNR=29
PAHR Pah Rah Range 81.56 42 *e*P **P 22 53 48.4 +0.8**
comp=Z,9.4nm,1.1s,mb4.1
TPH Tonopah 82.02 44 *e*P **P 22 53 50.1 +0.2**
TPH *e*PcP PcP 22 53 54.4 +0.6
TPNV Topopah Spring 82.04 46 *e*P **P 22 53 50.0 -0.1**
TPNV pmax pmax
comp=Z,5.0nm,0.9s,mb3.9
TPNV Topopah Spring 82.04 46 *e*P **P 22 53 50.0 -0.2**
comp=Z,5.5nm,0.9s,mb4.0
TPNV *e*PcP PcP 22 53 54.1 +0.3
CN2 Changchun 82.12 323 *e*P **P 22 53 50.6 +0.2**
CN2 AMB AMB
comp=Z,20nm,1.3s,mb4.4
CN2 AMB AMB
comp=Z,210nm,5.0s
WHN Wuhan 82.13 307 P **P 22 53 52.0 +1.3**
IPM Ipoh 82.64 278 ⇑P **P 22 53 55.0 +1.3**
WVOR Wild Horse Val 83.60 40 *e*P **P 22 53 57.7 -0.1**
WVOR pmax pmax
comp=Z,8.0nm,1.2s,mb4.1
WVOR Wild Horse Val 83.60 40 *e*P **P 22 53 57.7 -0.1**
comp=Z,8.5nm,1.2s,mb4.2
NLWA Neilton Lookou 83.67 34 *e*P **P 22 53 58.2 +0.2**
comp=Z,5.4nm,0.8s,mb4.1
SLKM Skilak Lake 84.10 14 *e*P **P 22 53 59.2 -0.6**
ELK Elko 84.77 43 P **P 22 54 03.5 -0.1**
comp=Z,0.3nm,0.3s,baz=256,slow=5.3,SNR=5.0
PMR Palmer 85.31 14 *e*P **P 22 54 05.2 -0.5**
PMR pmax pmax
comp=Z,17nm,1.2s,mb4.5
PMR Palmer 85.31 14 *e*P **P 22 54 05.2 -0.5**
comp=Z,18nm,1.2s,mb4.5
RSW Rattlesnake Hi 85.37 37 *e*P **P 22 54 06.5 +0.1**
BJT Baijiatuau 85.64 316 P **P 22 54 07.2 -0.6**
ETW Entiat 85.69 35 *e*P **P 22 54 07.9 0.0**
GYA Guiyang 86.28 300 P **P 22 54 11.6 +0.4**
GYA PP PP 22 57 45.9 +2.8
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
SEY Seymchan 86.43 347 ⇓*i*P **P 22 54 10.5 -0.5**
SYO Syowa Base 86.44 193 ⇑*e*PP PP 22 57 41.8 -0.6
MCK McKinley 87.26 13 *e*P **P 22 54 14.1 -0.8**
MCK pmax pmax
comp=Z,17nm,0.9s,mb4.7
MCK McKinley 87.26 13 *e*P **P 22 54 14.1 -0.8**
comp=Z,17nm,0.9s,mb4.7
TXAR Lajitas Array 87.59 58 P **P 22 54 17.4 +0.2**
comp=Z,2.6nm,1.0s,mb3.9,baz=206,slow=5.4,SNR=18
NEW Newport 87.82 36 *e*P **P 22 54 16.6 -1.3**
SNAA Sanae 87.85 179 P **P 22 54 16.4 -1.3**
ANMO Albuquerque 87.92 51 P **P 22 54 18.7 0.0**
comp=Z,2.3nm,1.0s,mb3.9,baz=231,slow=5.1,SNR=3.7
ANMO Albuquerque 87.92 51 ⇑*i*P **P 22 54 18.4 -0.3**
MCMT McKenzie Canyo 88.43 40 *e*P **P 22 54 21.6 +0.8**
COLA College 88.49 13 ⇓*i*P **P 22 54 19.2 -1.4**
COLA College 88.49 13 *e*P **P 22 54 19.6 -1.0**
comp=Z,22nm,0.8s,mb4.9
HIA Hailar 88.54 325 ⇑*i*P **P 22 54 21.5 +0.3**
HIA Hailar 88.54 325 *e*P **P 22 54 21.0 -0.2**
RRI2 Red Ridge 88.61 42 *e*P **P 22 54 22.1 +0.5**
comp=Z,8.0nm,1.0s,mb4.5
HHC Hu-ho-hao-te 89.10 315 *e*P **P 22 54 22.3 -1.7**
HHC PP PP 22 58 05.6 +0.6
HHC AMB AMB
comp=Z,8.0nm,0.6s,mb4.7
HHC AMB AMB
comp=Z,100nm,7.9s
IMW Indian Meadow 89.13 42 *e*P **P 22 54 24.6 +0.5**
comp=Z,5.3nm,1.0s,mb4.3
BILL Bilibino 89.16 354 *e*P **P 22 54 22.9 -0.7**
BILL pmax pmax
comp=Z,7.0nm,0.4s,mb4.8
BILL Bilibino 89.16 354 *e*P **P 22 54 22.9 -0.7**
comp=Z,6.7nm,0.4s,mb4.8
QLMT Earthquake Lak 89.29 41 *e*P **P 22 54 24.9 +0.1**
PDAR Pinedale Array 89.45 43 P **P 22 54 25.3 -0.3**
comp=Z,3.7nm,0.8s,mb4.3,baz=222,slow=2.0,SNR=18
PLCA Paso Flores 89.53 134 P **P 22 54 26.3 +0.1**
CMAR Chiang Mai Arr 89.68 290 P **P 22 54 28.7 +1.5**
comp=Z,4.8nm,0.9s,mb4.3,baz=120,slow=3.3,SNR=32
DAWY Dawson 89.77 16 *e*P **P 22 54 26.1 -0.5**
CHTO Chiang Mai 89.81 290 *e*P **P 22 54 27.1 -0.7**
CHTO pmax pmax
comp=Z,28nm,1.5s,mb4.9
CHTO Chiang Mai 89.81 290 *e*P **P 22 54 27.1 -0.7**
comp=Z,28nm,1.5s,mb4.9
SDCO Great Sand Dun 89.87 49 *e*P **P 22 54 27.3 -0.4**
WALA Waterton Lakes 90.04 36 *e*P **P 22 54 28.3 +0.2**
RLMT Red Lodge 90.77 41 *e*P **P 22 54 32.2 +0.6**
comp=Z,11nm,0.9s,mb4.8
LZH Lanzhou 92.46 308 ⇑P **P 22 54 42.5 +2.8**
LZH PP PP 22 58 38.6 +7.4
LZH AMB AMB
comp=Z,19nm,1.5s,mb4.9
LZH AMB AMB
comp=Z,68nm,5.9s
KURK Kurchatov 113.77 317 PKP PKiKP 23 00 02.1 -0.9
comp=Z,2.8nm,0.7s,baz=93,slow=1.6,SNR=9.5
BVAR Borovoye Array 118.88 320 PKP PKPdf 23 00 12.2 -0.7
comp=Z,6.2nm,0.6s,baz=136,slow=1.9,SNR=24
BRVK Borovoye 118.94 320 *e*PKIKP PKPdf 23 00 12.2 -0.7
KBL Kabul 119.52 299 *e*PKIKP PKPdf 23 00 14.9 +0.2
ARU Arti 125.05 325 *i* PKIKP PKPdf 23 00 24.1 -0.5
ARU 23 02 20.3
ARU Arti 125.05 325 *e*PKPdf PKPdf 23 00 24.3 -0.2
AKTK Aktyubinsk 126.85 318 PKP PKPdf 23 00 28.2 0.0
AKTO Aktyubinsk 126.85 318 PKP PKPdf 23 00 28.2 0.0
comp=Z,4.0nm,0.7s,baz=101,slow=3.2,SNR=12
ARCES ARCESS Array B 129.00 349 PKP PKPdf 23 00 30.9 -0.8
comp=Z,3.7nm,0.7s,baz=91,slow=1.0,SNR=28
OBN Obninsk 136.66 331 ⇑*i*PKIKP PKPdf 23 00 46.1 -0.4
OBN pmax pmax
comp=Z,8.0nm,0.8s
NOA NORSAR Array B 139.09 353 PKhKP 23 00 41.8
comp=Z,1.8nm,0.6s,baz=16,slow=4.5,SNR=4.7
NOA SKPbc SKPbc 23 03 37.1 +4.0
comp=Z,1.5nm,0.9s,baz=16,slow=4.9,SNR=3.7
MVH1 Achvaich 142.57 5 *e*P PKPdf 23 00 52.9 -4.3
KSK Scoval 142.78 7 *e*P PKPdf 23 00 54.2 -3.3
SUW Suwalki 142.82 339 *e*PKP PKPdf 23 00 55.3 -2.4
SUW Suwalki 142.82 339 *e*PKP PKPdf 23 00 55.3 -2.4
KAC Achnashellach 142.89 6 *e*P PKPdf 23 00 54.8 -2.9
AKASG Malin Array Be 142.91 331 PKhKP 23 00 55.0
comp=Z,25nm,0.5s,baz=39,slow=4.2,SNR=79
AKASG SKPbc SKPbc 23 03 46.4 +3.2
comp=Z,0.5nm,0.4s,baz=37,slow=2.0,SNR=4.6
MCD Coleburn Disti 142.98 4 *e*P PKPdf 23 00 53.6 -4.3
KPL Plockton 143.02 6 *e*P PKPdf 23 00 54.8 -3.2
MDO Dochfour 143.04 5 *e*P PKPdf 23 00 54.7 -3.2
KSB Sheil Bridge 143.17 6 *e*P PKPdf 23 00 55.4 -2.8
SIM Simferopol' 143.79 320 *d i* PKHKP PKPdf 23 00 59.0 -0.7
SIM pmax pmax
comp=Z,60nm,0.9s
EBH Black Hill 144.29 5 *e*P PKPdf 23 00 59.4 -0.8
ESY Stoneypath 144.68 4 *e*P PKPdf 23 01 00.3 -0.5
EAU Auchinoon 144.69 5 *e*P PKPdf 23 01 00.8 -0.1
EBL Broad Law 144.80 4 *e*P PKPdf 23 01 01.1 0.0
XSO Sourhope Farm 145.13 4 *e*P PKPdf 23 01 00.7 -0.9
GKP Gorka Klasztor 145.27 343 *e*PKP PKPbc 23 01 03.0 -0.1
GKP Gorka Klasztor 145.27 343 *e*PKP PKPbc 23 01 03.0 -0.1
ECK Cauldkaine Hil 145.38 5 *e*P PKPdf 23 01 02.4 +0.3
GAL1 Galloway 145.55 6 *e*P PKPdf 23 01 03.0 +0.6
KIS Kishinev 145.59 326 ⇑*i*PKIKP PKPbc 23 01 04.0 -0.2
KIS pmax pmax
comp=Z,110nm,1.0s
KIS Kishinev 145.59 326 ⇑*i*UNK PKPdf 23 01 04.0 +1.3
KIS XM 23 01 04.5
comp=Z,100nm,1.0s
LVV L'vov 145.84 334 *e*PKHKP PKPdf 23 01 03.3 +0.3
IAS Iasi 146.11 327 PKIKP PKPbc 23 01 05.7 0.0
BSEG Bad Segeberg 146.11 351 *e*PKPbc PKPbc 23 01 05.4 -0.1
ASF Jabal al Asfar 146.39 297 PKPbc PKPbc 23 01 07.7 +0.7
comp=Z,13nm,0.7s,baz=292,slow=1.2,SNR=21
KWP Kalwaria 146.52 335 *e*PKP PKPbc 23 01 06.9 +0.2
KWP *e* 23 01 10.1
KWP Kalwaria 146.52 335 ⇓*i*P PKPbc 23 01 06.9 +0.2
KWP Kalwaria 146.52 335 *e*PKP PKPbc 23 01 06.9 +0.2
KWP *e* 23 01 10.1
HPK Haverah Park 146.69 3 *e*P PKPdf 23 01 05.4 +1.1
TLCR 146.75 324 ⇑*i*P PKPbc 23 01 07.8 +0.3
TLCR 146.75 324 ⇑P PKPbc 23 01 07.8 +0.3
RUE Ruedersdorf 146.85 346 *e*PKPbc PKPbc 23 01 07.5 0.0
BUR08 Bucovina Ar. S 146.94 330 *e*PKPbc PKPbc 23 01 08.8 +0.9
BURAR Bucovina Array 146.96 330 ⇓*i*P PKPbc 23 01 08.4 +0.4
LHO Holmfirth 147.09 4 *e*P PKPbc 23 01 07.2 -0.9
ANTO Ankara 147.09 313 ⇓*i*P PKPbc 23 01 08.9 +0.3
ANTO Ankara 147.09 313 ⇓P PKPbc 23 01 08.9 +0.3
OJC Ojcow 147.13 338 *e*PKIKP PKPbc 23 01 08.2 -0.1
KOLS Kolonicke sedl 147.25 334 *e*PKP PKPbc 23 01 09.3 +0.6
KOLS *e* 23 01 12.8
STHS Stebnicka Huta 147.27 336 *e*PKP PKPbc 23 01 09.5 +0.8
STHS *e* 23 01 13.2
TIRR Tirgusor 147.42 323 ⇑*i*P PKPbc 23 01 09.4 +0.1
TIRR Tirgusor 147.42 323 ⇑P PKPbc 23 01 09.4 +0.1
VRI Vrincioaia 147.43 326 PKIKP PKPbc 23 01 09.4 +0.2
VRI Vrincioaia 147.43 326 ⇑*i*P PKPbc 23 01 09.5 +0.3
UZH Uzhgorod 147.48 334 *d i* PKIKP PKPbc 23 01 09.7 +0.4
NRDL Niedersach Rie 147.54 350 *e*PKPbc PKPbc 23 01 09.4 +0.1
HARR Harsova 147.55 324 PKIKP PKPbc 23 01 10.1 +0.5
HARR Harsova 147.55 324 ⇓*i*P PKPbc 23 01 10.0 +0.4
HARR Harsova 147.55 324 ⇓P PKPbc 23 01 10.0 +0.4
CRVS Cervenica-Dubn 147.60 335 *e*PKP PKPbc 23 01 10.2 +0.6
CRVS *e* 23 01 14.5
NIE Niedzica 147.62 337 *e*PKP PKPbc 23 01 10.5 +0.9
SBD1 Bryn Du 147.63 5 *e*P PKPbc 23 01 09.0 -0.6
KSP Ksiaz 147.70 342 *e*PKP PKPbc 23 01 10.3 +0.5
KSP Ksiaz 147.70 342 ⇓*i*PKP PKPbc 23 01 10.0 +0.2
OKC Ostrava-Krasne 148.02 339 ⇑*e*PKP PKPbc 23 01 10.6 0.0
IBBN Ibbenburen 148.05 353 *e*PKPbc PKPbc 23 01 10.5 -0.1
UPC Upice 148.09 342 ⇑*e*PKP PKPbc 23 01 11.2 +0.4
UPC *e*PKPAB PKPab 23 01 16.6 +0.9
MLR Muntele Rosu 148.09 327 ⇑*i*P PKPbc 23 01 10.8 -0.1
CLL Collm 148.12 346 *e*PKPbc PKPbc 23 01 10.8 0.0
CLL *e*PKPab PKPab 23 01 15.1 -0.7
CLL Collm 148.12 346 *i* PKPbc PKPbc 23 01 10.4 -0.4
comp=Z,41nm,0.8s
CLL *e*PKPab PKPab 23 01 15.0 -0.8
comp=Z,19nm,0.7s
CLZ Clausthal 148.12 349 *e*PKPbc PKPbc 23 01 11.1 +0.3
DPC Dobruska-Polom 148.14 342 *e*PKPDF PKPdf 23 01 07.0 +0.2
DPC ⇑*e*PKP PKPdf 23 01 11.3 +4.5
DPC *e*PKPAB PKPab 23 01 16.6 +0.7
MORC Moravsky Berou 148.27 340 ⇓*i*P PKPbc 23 01 11.3 +0.1
MORC Moravsky Berou 148.27 340 *e*PKPdf PKPdf 23 01 07.8 +0.7
MORC *e*PKPbc PKPbc 23 01 11.8 +0.5
BRG Berggiesshubel 148.30 345 *e*PKPbc PKPbc 23 01 11.2 -0.1
BRG *e*PKPab PKPab 23 01 16.5 -0.1
BRG Berggiesshubel 148.30 345 *e*PKP PKPdf 23 01 07.3 +0.2
comp=Z,5.3nm,1.1s
BRG *i* 23 01 11.3
comp=Z,22nm,0.9s
BRG *i* 23 01 16.5
comp=Z,15nm,0.8s
BRG pPKP pPKPdf 23 03 02.4 -17
comp=Z,1.8nm,0.4s
FBE Freiberg 148.40 346 *e*PKPbc PKPbc 23 01 11.8 +0.3
FBE *e*PKPab PKPab 23 01 17.1 +0.1
PVCC Panska Ves 148.46 344 ⇑*e*PKP PKPbc 23 01 12.3 +0.6
WTSB Winterswijk 148.49 354 *e*PKP PKPbc 23 01 11.3 -0.4
comp=Z,39nm,0.9s
CSS Prodhromos 148.57 304 *e*PKPbc PKPbc 23 01 12.3 -0.2
VOIR 148.58 327 ⇑*i*P PKPbc 23 01 12.6 +0.4
VOIR 148.58 327 ⇑P PKPbc 23 01 12.6 +0.4
DRGR 148.72 331 PKIKP PKPbc 23 01 12.5 +0.1
DRGR 148.72 331 ⇓*i*P PKPbc 23 01 12.6 +0.2
DRGR 148.72 331 ⇓P PKPbc 23 01 12.6 +0.1
VYHS Vyhne 148.93 337 *e*PKP PKPbc 23 01 13.3 +0.4
VYHS *e* 23 01 19.9
VYHS Vyhne 148.93 337 *e*PKP PKPbc 23 01 13.4 +0.5
VYHS *e* 23 01 20.0
PRU Pruhonice 148.96 344 ⇑*e*PKP PKPbc 23 01 12.8 -0.1
PRU *e*PKPAB PKPab 23 01 19.6 +0.3
BUG Bochum--Univer 148.96 353 *e*PKPbc PKPbc 23 01 12.5 -0.4
VRAC Vranov 148.98 341 PKHKP PKPbc 23 01 13.5 +0.5
VRAC Vranov 148.98 341 ⇑*i*P PKPbc 23 01 13.4 +0.4
VRAC Vranov 148.98 341 ⇑P PKPbc 23 01 13.3 +0.4
PSZ Piszkesteto 149.01 336 ⇓*i*P PKPbc 23 01 13.9 +0.8
PSZ Piszkesteto 149.01 336 ⇓P PKPbc 23 01 13.9 +0.8
KOLL Kolacno 149.01 338 *e*PKP PKPbc 23 01 13.7 +0.6
KOLL *e* 23 01 20.7
MOX Moxa 149.04 347 *e*PKP PKPbc 23 01 13.2 +0.1
comp=Z,25nm,1.1s
MOX Moxa 149.04 347 *e*PKPbc PKPbc 23 01 12.7 -0.4
TANN Tannenbergstha 149.07 346 *e*PKPbc PKPbc 23 01 13.0 -0.2
TANN *e*PKPab PKPab 23 01 19.4 -0.4
WERD Werda 149.08 346 *e*PKPbc PKPbc 23 01 13.3 +0.1
WERD *e*PKPab PKPab 23 01 19.8 0.0
GUNZ Gunzen 149.15 346 *e*PKPbc PKPbc 23 01 13.6 +0.2
GUNZ *e*PKPab PKPab 23 01 20.2 +0.1
WERN Wernitzgruen 149.21 346 *e*PKPbc PKPbc 23 01 13.6 +0.1
WERN *e*PKPab PKPab 23 01 20.5 +0.2
NKC Novy Kostel 149.25 346 ⇑*e*PKP PKPbc 23 01 13.8 +0.2
MANZ Manzenberg 149.55 346 *e*PKPbc PKPbc 23 01 14.5 +0.2
MANZ *e*PKPab PKPab 23 01 22.1 +0.3
MODS Modra-Piesok 149.57 339 *e*PKP PKPbc 23 01 14.2 -0.2
MODS *e* 23 01 15.3
MODS *e* 23 01 23.2
GZR Gura Zlata 149.73 329 ⇑*i*P PKPbc 23 01 14.8 -0.1
GZR Gura Zlata 149.73 329 ⇑P PKPbc 23 01 14.8 -0.2
HGN Heimansgroeve 149.77 354 *e*PKP PKPbc 23 01 14.8 0.0
comp=Z,26nm,0.7s
ZST Bratislava 149.78 339 *e*PKP PKPbc 23 01 16.0 +1.0
MEM Membach 149.91 354 PKPbc PKPbc 23 01 14.9 -0.3
KHC Kasperske Hory 150.00 344 *e*PKPDF PKPdf 23 01 09.7 -0.1
KHC ⇑*e*PKP PKPdf 23 01 15.6 +5.8
KHC *e*PKPAB PKPab 23 01 24.0 +0.3
TNS Taunus Mts 150.00 351 *e*PKPbc PKPbc 23 01 15.4 0.0
TNS *e*PKPab PKPab 23 01 23.4 -0.2
GRA1 Grafenberg Arr 150.02 347 *e*PKPbc PKPbc 23 01 15.2 -0.3
GRA1 *e*PKPab PKPab 23 01 23.8 +0.1
GRF Grafenberg Arr 150.02 347 *e*PKPbc PKPbc 23 01 15.2 -0.3
GRF *e*PKPab PKPab 23 01 23.8 +0.1
BZS Buzias 150.10 331 ⇑*i*P PKPbc 23 01 15.3 -0.5
BZS Buzias 150.10 331 ⇑P PKPbc 23 01 15.3 -0.5
SNF Seneffe 150.15 356 PKPab PKPab 23 01 23.4 -0.8
WET Wettzell 150.16 345 *e*PKPbc PKPbc 23 01 15.7 -0.1
WET *e*PKPab PKPab 23 01 24.7 +0.4
GEC2 GERESS Array S 150.23 344 *e*PKPbc PKPbc 23 01 16.0 0.0
GERES GERESS Array B 150.23 344 PKP PKPdf 23 01 10.1 -0.1
comp=Z,3.8nm,0.8s,baz=354,slow=2.7,SNR=5.5
GERES PKPbc PKPbc 23 01 16.1 +0.1
comp=Z,8.3nm,0.8s,baz=29,slow=2.2,SNR=61
GERES PKPab PKPab 23 01 24.8 +0.2
comp=Z,2.8nm,0.8s,baz=28,slow=3.2,SNR=6.1
CONA Conrad Observa 150.42 340 ⇓*i*P PKPbc 23 01 16.6 +0.2
comp=Z,14nm,0.7s
CSNA Conrad Observa 150.43 340 ⇓*i*P PKPbc 23 01 16.7 +0.2
comp=Z,13nm,0.7s
GIVF Givet 150.52 356 *e*PKP1 PKPbc 23 01 16.2 -0.4
comp=Z,18nm,0.6s
DOU Dourbes 150.54 356 PKPbc PKPbc 23 01 16.7 +0.1
BAIF Baives 150.60 356 *e*PKP1 PKPbc 23 01 16.5 -0.3
comp=Z,29nm,1.0s
WLF Walferdange 150.84 354 PKPbc PKPbc 23 01 17.9 +0.6
WLF Walferdange 150.84 354 *e*PKPbc PKPbc 23 01 17.8 +0.5
WLF *e*PKPab PKPab 23 01 26.9 -0.2
PKSM Moragy 150.90 335 ⇑*i*P PKPbc 23 01 17.2 -0.4
PKSM Moragy 150.90 335 ⇑P PKPbc 23 01 17.2 -0.4
MOA Molln 150.98 342 ⇓*i*P PKPbc 23 01 17.4 -0.3
STU Stuttgart 151.29 349 *e*PKPbc PKPbc 23 01 18.3 -0.1
FUR Furstenfeldbru 151.45 346 *e*PKPbc PKPbc 23 01 18.6 -0.2
FUR *e*PKPab PKPab 23 01 30.0 +0.2
RJOB Jochberg 151.49 344 *e*PKPbc PKPbc 23 01 18.7 -0.2
RJOB *e*PKPab PKPab 23 01 30.7 +0.7
SOKA Soboth 151.79 340 ⇓*i*P PKPbc 23 01 18.8 -0.8
comp=Z,7.9nm,0.9s
BFO Black Forest 151.86 350 *e*PKPbc PKPbc 23 01 19.6 -0.1
BFO *e*PKPab PKPab 23 01 31.2 -0.3
BFO Black Forest 151.86 350 *e*PKPbc PKPbc 23 01 18.6 -1.1
BFO *e*PKPab PKPab 23 01 30.8 -0.7
CDF Champ du Feu 151.94 352 *e*PKP1 PKPbc 23 01 19.3 -0.5
comp=Z,16nm,0.9s
FLN La Foliniere 151.94 3 *e*PKP1 PKPbc 23 01 18.7 -1.1
MEZF Maizieres J'vi 152.09 355 *e*PKP1 PKPbc 23 01 19.8 -0.4
LDF La Druitiere 152.12 2 *e*PKP1 PKPbc 23 01 19.3 -1.0
comp=Z,4.8nm,0.5s
WTTA Wattenberg 152.22 345 ⇑*i*P PKPbc 23 01 20.3 -0.2
comp=Z,17nm,1.1s
MYKA Terra Mystica 152.26 342 ⇓*i*P PKPbc 23 01 19.3 -1.4
comp=Z,7.1nm,0.7s
MOTA Moosalm 152.27 346 ⇑*i*P PKPbc 23 01 20.1 -0.6
comp=Z,11nm,1.0s
GRR Gorron 152.29 3 *e*PKP1 PKPbc 23 01 19.9 -0.7
HAU Haudompre 152.45 353 *e*PKP1 PKPbc 23 01 20.3 -0.7
ABTA Abfaltersbach 152.47 343 ⇑*i*P PKPbc 23 01 20.0 -1.1
comp=Z,14nm,0.8s
FETA Feichten 152.66 346 ⇓*i*P PKPbc 23 01 21.4 0.0
comp=Z,7.2nm,0.8s
LOR Lormes 153.40 356 *e*PKP1 PKPbc 23 01 22.5 -0.6
comp=Z,3.3nm,0.6s
SSF Saint Saulge 153.63 357 *e*PKP1 PKPbc 23 01 23.0 -0.6
ESDC Sonseca Array 160.51 13 PKPab PKPab 23 02 08.1 -1.0
comp=Z,2.4nm,0.9s,baz=347,slow=4.0,SNR=7.7
TORD Torodi Ar. Bea 172.51 182 PKP PKPdf 23 01 32.1 -1.7
comp=Z,1.4nm,0.9s,baz=348,slow=1.5,SNR=7.7
TORD PKPab PKPab 23 03 02.1 -0.5
comp=Z,0.4nm,0.7s,baz=166,slow=4.0,SNR=3.4

CSEM ***24*** *22:50:53.7±0.1, 3770N×4371E, h2km, ML4.0, Error ellipse: s-maj=2.2km s-min=1.3km az=83.0*
ISK ***24*** *22:50:53.4, 3772N×4378E, h5km, MD3.8, ML3.7*
DDA ***24*** *22:50:54.0, 3772N×4378E, h6km, Md3.9, Ml4.0*
ISCJB ***24*** *22:50:55.5±0.5, 3768N±003×4375E±004, h10km, Error ellipse: s-maj=4.9km s-min=3.4km az=137.0*
ISC 24 22:50:55.1±0.7, 3766N±003×4382E±004, h0km±5km, n43, σ1§40/55, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HKR	**Hakkari**	**0.11**	**217**	PG	**Pg**	**22 50 56.9**	**-0.3**
HAKT	**HAKKARI**	**0.14**	**221**	*i* P	**Pg**	**22 50 57.4**	**-0.4**
HAKT				*i* S	**Sg**	**22 51 01.5**	**+2.0**
VANT	**Van**	**0.85**	**336**	*e*PG	**Pg**	**22 51 10.0**	**-1.4**
VANT				*e*SG	**Sg**	**22 51 22.3**	**-0.2**
TVAN	**Van**	**0.92**	**339**	*i* P	**Pg**	**22 51 10.5**	**-2.3**
TVAN				*i* S	**Sg**	**22 51 26.5**	**+1.6**
SIRT	**Sirnak**	**1.11**	**262**	*e*PN	**Pn**	**22 51 15.4**	**-2.5**
SIRT				*e*SN	**Sn**	**22 51 31.8**	**-2.0**
CLDR	**Caldiran**	**1.48**	**3**	*e*PN	**Pn**	**22 51 20.6**	**-2.3**
CLDR				*e*SN	**Sn**	**22 51 42.2**	**-0.8**
MSL	**Mosul**	**1.49**	**203**	*i* x	x	22 51 20.0	
MSL				*i* x	x	22 51 42.0	
DYDN	**Diyadin**	**1.88**	**357**	*i* P	**Pn**	**22 51 27.7**	**-0.7**
DYDN				*i* S	**Sn**	**22 51 55.2**	**+2.3**
NAX	**Nakhchivan** SNR=21	**2.00**	**41**	P	**Pn**	**22 51 28.4**	**-1.7**
NAX				S	**Sn**	**22 51 59.6**	**+3.7**
AGRB	**Hanur-Agry**	**2.02**	**341**	*e*PN	**Pn**	**22 51 29.1**	**-1.3**
BEST	**Besiri**	**2.03**	**277**	*i* P	**Pn**	**22 51 31.7**	**+1.1**
BEST				*i* S	**Sn**	**22 52 01.9**	**+5.2**
MARD	**Mardin**	**2.44**	**263**	*i* P	**Pn**	**22 51 35.7**	**-0.6**
MARD				*i* S	**Sn**	**22 52 08.4**	**+1.6**
GNI	**Garni**	**2.58**	**16**	*e*PN	**Pn**	**22 51 38.2**	**+0.1**
DIYA	**Diyarbakir**	**2.94**	**276**	*i* P	**Pn**	**22 51 42.0**	**-1.1**
DIYA				*i* S	**Sg**	**22 52 31.4**	**+1.7**
EZM	**Erzurum**	**2.95**	**320**	*e*PN	**Pn**	**22 51 42.5**	**-0.6**
KARS	**Kars**	**3.00**	**349**	*e*PN	**Pn**	**22 51 43.6**	**-0.2**
GANJ	**Ganja** SNR=20	**3.56**	**32**	P	**Pn**	**22 51 52.2**	**+0.7**
GANJ				S	**Sg**	**22 52 47.8**	**-1.6**
SVRC	**Sivrice-ELAZID**	**3.64**	**283**	*e*PN	**Pn**	**22 51 52.1**	**-0.5**
BRDA	**Brd** SNR=11	**3.69**	**44**	P	**Pn**	**22 52 00.1**	**+6.8**
BRDA				S	**Sg**	**22 52 55.6**	**+2.1**
PTK	**Pertek**	**3.69**	**291**	*e*PN	**Pn**	**22 51 53.0**	**-0.4**
GLBA	**Clilabad** SNR=17	**3.92**	**65**	P	**Pn**	**22 51 59.6**	**+3.1**
GLBA				S	**Sg**	**22 53 09.3**	**+8.2**
DGRG	**David-gareji**	**3.97**	**17**	P	**Pn**	**22 52 00.5**	**+3.3**
URFA	**Urfa**	**3.98**	**268**	*e*PN	**Pn**	**22 51 56.8**	**-0.5**
MTA	**Mtatsminda**	**4.09**	**10**	P	**Pn**	**22 52 07.8**	**+8.9**
TBLG	**Delisi**	**4.12**	**10**	P	**Pn**	**22 52 08.5**	**+9.2**
BCA	**Borcka**	**4.14**	**336**	*e*PN	**Pn**	**22 51 59.2**	**-0.4**
MALT	**Malatya**	**4.31**	**280**	*e*PN	**Pn**	**22 52 02.4**	**+0.5**
MYA	**Malataya**	**4.31**	**280**	*e*PN	**Pn**	**22 52 01.5**	**-0.4**
GUMT	**Gumushane**	**4.38**	**311**	*e*PN	**Pn**	**22 52 02.5**	**-0.4**
SEKA	**Sheki** SNR=6.0	**4.40**	**35**	P	**Pn**	**22 52 03.9**	**+0.8**
SEKA				S	**Sg**	**22 53 13.5**	**-3.0**
BHD	**Baghdad**	**4.41**	**174**	*ex*	x	22 52 01.0	
BHD				*ex*	x	22 52 14.0	
BHD				*ex*	x	22 52 54.0	
DARE	**Darende-Malaty**	**4.90**	**287**	*e*PN	**Pn**	**22 52 13.3**	**+3.2**
SIZA	**Siyzn** SNR=2.9	**5.20**	**48**	P	**Pn**	**22 52 20.5**	**+6.3**
GAZ	**Gaziantep**	**5.28**	**267**	*e*PN	**Pn**	**22 52 16.6**	**+1.3**
KMRS	**Kahramanmaras**	**5.50**	**270**	*e*PN	**Pn**	**22 52 18.4**	**+0.2**
SVSK	**Karacayir**	**5.79**	**295**	*e*PN	**Pn**	**22 52 22.2**	**+0.1**
KOZT	**Kozan**	**6.35**	**271**	*e*PN	**Pn**	**22 52 31.6**	**+1.7**
BNN	**Bunyan**	**6.39**	**283**	*e*PN	**Pn**	**22 52 30.7**	**+0.2**
MIB	**Mutribah** baz=158	**8.37**	**159**	*e*P	**Pn**	**22 52 53.6**	**-4.0**
MIB				AML	AML	22 54 30.1	
comp=Z,8.0nm,0.3s,baz=158							
RST	**Umm Al-Ruwaisa** baz=161	**8.56**	**161**	*e*P	**Pn**	**22 52 56.7**	**-3.6**
RST				AML	AML	22 54 33.1	
comp=Z,7.0nm,0.4s,baz=161							
UMR	**Umm Al-Rimmam**	**8.72**	**157**	*e*P	**Pn**	**22 52 57.9**	**-4.5**
NAY	**Al-Naaiem** baz=160	**8.87**	**160**	*e*P	**Pn**	**22 53 00.7**	**-3.7**
NAY				AML	AML	22 54 40.4	
comp=Z,3.0nm,0.5s,baz=160							
RDF	**Al-Radifah** baz=159	**9.26**	**159**	*e*P	**Pn**	**22 53 06.8**	**-3.0**
RDF				AML	AML	22 54 48.2	
comp=Z,7.0nm,0.4s,baz=159							

BJI ***24*** *22:52:56.3, 43.19N×9628E, h5km, mB4.2, mb4.4, ML4.2*
IDC ***24*** *22:52:56.5±0.8, 43.1N×9629E, h0km, mb3.9/7, mb1 4.1/12, mb1mx3.9/28, mbtmp4.0/12, ML3.8/5, MS2.7/1, Ms1 2.7/1, ms1mx1.9/28, Error ellipse: s-maj=32.5km s-min=13.3km az=38.0*
ISCJB ***24*** *22:52:58.3±2.0, 4320N±005×9628E±005, h24km±15km, mb4.0/11, Error ellipse: s-maj=9.5km s-min=6.0km az=23.1*
MOS ***24*** *22:52:58.6±1.6, 43.1N×9617E, h29km, mb4.3/5, Error ellipse: s-maj=10.7km s-min=7.5km az=108.2*
NEIC ***24*** *22:53:01.9±0.9, 43.1N×9620E, h37km±9km, mb4.1/5, Error ellipse: s-maj=10.7km s-min=5.8km az=187.0*
ISC 24 22:53:00.9±2.0, 4315N±005×9624E±005, h29km±15km, n57, σ0§97/68, mb4.0/11, 6C-5D, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**4.61**	**143**	P	**Pn**	**22 54 08.6**	**0.0**
GTA				PG	**Pn**	**22 54 20.1**	**+12**
GTA				S	**Sn**	**22 55 00.5**	**-0.6**
GTA				SG	**Sn**	**22 55 18.3**	**+17**
GTA				Smax			
comp=N,146nm,0.7s							
GTA				Smax			
comp=E,130nm,0.7s							
WMQ	**Urumqi**	**6.25**	**279**	*e*P	**Pn**	**22 54 33.0**	**+1.8**
WMQ				S	**Sn**	**22 55 47.1**	**+5.5**
WMQ				Smax			
comp=N,163nm,1.0s							
WMQ				Smax		

MK31				*e*Sn	**Sn**	**22 57 24.9**	**-1.9**
MKAR	**Makanchi Array**	**10.53**	**295**	Pn	**Pn**	**22 55 29.7**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=102,slow=14,SNR=28						
MKAR				Sn	**Sn**	**22 57 26.4**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=102,slow=25,SNR=5.7						
MKAR				Lg		22 58 32.3	
	comp=Z,0.4nm,0.3s,baz=105,slow=22,SNR=3.4						
MKAR	**Makanchi Array**	**10.53**	**295**	P	**Pn**	**22 55 29.7**	**-0.1**
MKAR						22 57 26.4	
MKAR	**Makanchi Array**	**10.53**	**295**	Pn	**Pn**	**22 55 29.7**	**-0.1**
MKAR				Sn	**Sn**	**22 57 26.4**	**-0.3**
MKAR				Lg		22 58 32.3	
KRAR	**Krasnoyarsk**	**13.05**	**352**	⇑*i*P	**Pn**	**22 56 08.2**	**+4.0**
ZAA0	**Zalesovo Array**	**13.17**	**329**	*e*Pn	**Pn**	**22 56 06.9**	**+1.1**
ZAA0				*e*Sn	**Sn**	**22 58 31.9**	**+0.8**
ZALV	**Zalesovo Beam**	**13.17**	**329**	Pn	**Pn**	**22 56 07.2**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=140,slow=12,SNR=21						
ZALV				Lg		22 59 55.0	
	comp=Z,0.2nm,0.3s,baz=178,slow=2.6,SNR=7.4						
KURK	**Kurchatov**	**14.20**	**308**	Pn	**Pn**	**22 56 18.2**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=112,slow=14,SNR=12						
KURK				Lg		23 00 25.4	
	comp=Z,0.1nm,0.3s,baz=107,slow=32,SNR=3.4						
KURK	**Kurchatov**	**14.20**	**308**	*e*P	**Pn**	**22 56 18.8**	**-1.0**
KURK	**Kurchatov**	**14.20**	**308**	*e*Pn	**Pn**	**22 56 18.8**	**-1.0**
KURK				Lg		23 00 25.4	
NVS	**Novosibirsk**	**14.45**	**329**	*e*P	**Pn**	**22 56 22.0**	**-1.3**
NVS	**Novosibirsk**	**14.45**	**329**	*e*P	**Pn**	**22 56 22.0**	**-1.3**
UCH	**Uchtor**	**16.00**	**274**	*e*P	**Pn**	**22 56 45.4**	**+1.6**
	comp=Z,3.0nm,0.7s						
AML	**Almayashu**	**16.62**	**274**	P	**Pn**	**22 56 51.6**	**-0.1**
HIA	**Hailar**	**17.34**	**61**	⇑*i*P	**Pn**	**22 57 00.0**	**-0.6**
BVAR	**Borovoye Array**	**19.79**	**309**	P	**Pn**	**22 57 28.7**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=111,slow=9.4,SNR=20						
BRVK	**Borovoye**	**19.86**	**309**	*e*P	**Pn**	**22 57 30.5**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s						
BRVK	**Borovoye**	**19.86**	**309**	*e*P	**Pn**	**22 57 30.5**	**-0.6**
	comp=Z,12nm,0.8s						
KBL	**Kabul**	**22.79**	**257**	*e*P	**P**	**22 58 01.3**	**+0.3**
KBL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb3.9						
KBL	**Kabul**	**22.79**	**257**	*e*P	**P**	**22 58 01.3**	**+0.3**
	comp=Z,6.2nm,1.1s,mb4.0						
KSRS	**Korea Array**	**24.73**	**93**	P	**P**	**22 58 19.0**	**-0.7**
	comp=Z,0.9nm,0.7s,mb3.4,baz=285,slow=9.7,SNR=6.8						
KSRS	**Korea Array**	**24.73**	**93**	P	**P**	**22 58 19.0**	**-0.7**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
AKTK	**Aktyubinsk**	**26.93**	**299**	P	**P**	**22 58 39.7**	**+0.3**
AKTO	**Aktyubinsk**	**26.93**	**299**	P	**P**	**22 58 39.7**	**+0.3**
	comp=Z,0.4nm,0.3s,mb3.4,baz=60,slow=8.1,SNR=2.6						
YAK	**Yakutsk**	**27.26**	**35**	P	**P**	**22 58 42.3**	**0.0**
ARU	**Arti**	**27.32**	**312**	*d*iP	**P**	**22 58 46.7**	**+3.8**
ARU				*e*		22 59 28.2	
ARU				ePPP		22 59 38.7	
ARU				*e*S	**S**	**23 03 27.6**	**+7.1**
ARU				*e*SS		23 04 38.5	
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.0						
MALT	**Malatya**	**43.33**	**284**	⇓*i*P	**P**	**23 01 00.2**	**0.0**
MALT	**Malatya**	**43.33**	**284**	⇓P	**P**	**23 01 00.2**	**0.0**
MALT	**Malatya**	**43.33**	**284**	*e*P	**P**	**23 01 00.2**	**0.0**
	comp=Z,17nm,0.8s,mb4.8						
ARCES	**ARCESS Array B**	**43.71**	**331**	P	**P**	**23 01 03.2**	**+0.3**
	comp=Z,1.8nm,0.7s,mb3.9,baz=80,slow=8.8,SNR=4.6						
ARCES	**ARCESS Array B**	**43.71**	**331**	P	**P**	**23 01 03.2**	**+0.3**
TIRR	**Tirgusor**	**47.67**	**296**	P	**P**	**23 01 34.0**	**-0.5**
NOA	**NORSAR Array B**	**51.23**	**322**	P	**P**	**23 02 01.0**	**-0.4**
	comp=Z,0.7nm,0.5s,mb3.8,baz=64,slow=7.5,SNR=3.2						
PSZ	**Piszkesteto**	**51.65**	**304**	*e*P	**P**	**23 02 04.5**	**-0.2**
CLL	**Collm**	**54.23**	**310**	*e*(P)	**P**	**23 02 26.0**	**+2.3**
STU	**Stuttgart**	**57.59**	**309**	*e*P	**P**	**23 02 46.8**	**-1.0**
TIP	**Timpagrande**	**57.82**	**295**	*e*P	**P**	**23 02 49.6**	**+0.1**
WRAB	**Tennant Creek**	**71.89**	**142**	*e*P	**P**	**23 04 21.1**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
WRAB	**Tennant Creek**	**71.89**	**142**	*e*P	**P**	**23 04 21.1**	**-0.2**
	comp=Z,1.3nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**71.89**	**142**	P	**P**	**23 04 21.0**	**-0.2**
	comp=Z,1.0nm,0.7s,mb3.9,baz=340,slow=6.1,SNR=11						
WB2	**Warramunga Arr**	**71.90**	**142**	*e*P	**P**	**23 04 21.1**	**-0.1**
ASAR	**Alice Springs**	**74.98**	**145**	P	**P**	**23 04 39.5**	**+0.2**
	comp=Z,1.1nm,0.7s,mb3.9,baz=331,slow=5.7,SNR=13						
CTAO	**Charters Tower**	**77.92**	**133**	*e*P	**P**	**23 04 56.3**	**+0.2**
STKA	**Stephens Creek**	**85.45**	**143**	P	**P**	**23 05 35.3**	**-0.2**
	comp=Z,2.9nm,0.9s,mb4.4,baz=337,slow=11,SNR=3.6						
ANMO	**Albuquerque**	**99.55**	**19**	⇓*i*P	**P**	**23 06 43.1**	**+1.8**

*ISCJB **24** 23:20:56.0±0.4, 3934N±002×2056E±004, h10km, Error ellipse: s-maj=4.3km s-min=2.8km az=2.3*
*THE **24** 23:20:56.5, 3932N×2058E, h0km, ML2.9*
*ATH **24** 23:20:56.2, 3933N×2058E, h7km±3km, MD3.4/9*
*CSEM **24** 23:20:56.5±0.2, 3935N×2057E, h2km, ML2.9, Error ellipse: s-maj=3.7km s-min=2.5km az=98.0*
*NEIC **24** 23:20:56.2, 3933N×2058E, h7km, MD3.3(ATH), After ATH.*

ISC 24 23:20:56.5±0.5, 3933N±002×2056E±004, h2km±6km, n27, σ1§03/45, 6D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.26**	**319**	*e*Pg	**Pg**	**23 21 01.4**	**-0.2**
IGT				*e*Sg	**Sg**	**23 21 06.7**	**+1.6**
JAN	**Janina**	**0.40**	**35**	⇑*i*PB	**Pg**	**23 21 03.2**	**-0.9**
JAN				*e*SB	**Sg**	**23 21 09.7**	**+0.5**
JAN	**Janina**	**0.40**	**35**	*i* Pb	**Pg**	**23 21 02.9**	**-1.2**
JAN				*e*Sb	**Sg**	**23 21 09.7**	**+0.5**
LKD	**Levkas**	**0.63**	**173**	*e*Pg	**Pg**	**23 21 07.6**	**-0.9**
LKD				*e*Sg	**Sg**	**23 21 17.8**	**+1.0**
MEV	**Metsovon**	**0.69**	**49**	*e*Pg	**Pg**	**23 21 08.9**	**-0.8**
MEV				*e*Sg	**Sg**	**23 21 19.9**	**+1.3**
KEK	**Kerkira**	**0.70**	**303**	⇓*i*PB	**Pg**	**23 21 09.8**	**-0.1**
EVR	**Evrytania**	**1.06**	**113**	⇓*i*PG	**Pg**	**23 21 15.1**	**-1.7**
THL	**Klokotos Trika**	**1.15**	**78**	*e*Pg	**Pg**	**23 21 16.9**	**-1.7**
THL				*e*Sg	**Sg**	**23 21 34.5**	**+1.0**
THL	**Klokotos Trika**	**1.15**	**78**	*i* Pg	**Pg**	**23 21 17.3**	**-1.3**
THL				*e*Sg	**Sg**	**23 21 34.5**	**+1.0**
VLS	**Valsamata**	**1.16**	**179**	*e*Pg	**Pg**	**23 21 17.8**	**-0.8**
VLS				*e*Sg	**Sg**	**23 21 34.8**	**+1.2**
VLS	**Valsamata**	**1.16**	**179**	*i* Pb	**Pg**	**23 21 18.2**	**-0.4**
VLS				*e*Sb	**Sg**	**23 21 34.4**	**+0.8**
VLS				*e*Sg	**Sg**	**23 21 34.8**	**+1.2**
KFL	**Anninata**	**1.23**	**172**	*e*Pg	**Pg**	**23 21 19.6**	**-0.6**
KZN	**Kozani**	**1.35**	**43**	*e*Pb	**Pb**	**23 21 23.3**	**+0.8**
AGG	**Agios Georgios**	**1.41**	**102**	*e*Pg	**Pn**	**23 21 21.1**	**-2.2**
AGG				*e*Sg	**Sg**	**23 21 42.7**	**+0.8**
RLS	**Riolos of Patr**	**1.46**	**151**	⇓*i*PB	**Pn**	**23 21 23.8**	**-0.1**
RLS	**Riolos of Patr**	**1.46**	**151**	⇓*i*Pb	**Pn**	**23 21 24.1**	**+0.2**
FNA	**Florina**	**1.58**	**23**	*e*Pg	**Pn**	**23 21 25.5**	**0.0**
FNA				*e*Sg	**Sg**	**23 21 47.9**	**+0.7**
LIT	**Litokhoron**	**1.68**	**62**	*e*Pb	**Pn**	**23 21 27.0**	**+0.1**
LIT				*e*Sb	**Sb**	**23 21 49.8**	**+0.1**
BIA	**Bitola**	**1.78**	**19**	*e*Pb	**Pn**	**23 21 26.9**	**-1.5**
BIA	**Bitola**	**1.78**	**19**	*e*Pn	**Pb**	**23 21 28.9**	**-1.0**
BIA				*e*Sn	**Sg**	**23 21 53.8**	**0.0**
OHR	**Ohrid**	**1.79**	**6**	*e*Pn	**Pg**	**23 21 31.7**	**+0.9**
OHR				*e*Sn	**Sg**	**23 21 55.0**	**+1.1**
OHR	**Ohrid**	**1.79**	**6**	*e*Pn	**Pg**	**23 21 31.7**	**+0.9**
OHR				*e*Sn	**Sg**	**23 21 55.0**	**+1.1**
LKR	**Lokris**	**2.02**	**109**	⇓*i*PN	**Pn**	**23 21 32.6**	**+1.0**
NEO	**Neokhori**	**2.07**	**90**	⇓*i*PN	**Pn**	**23 21 33.1**	**+0.8**
KRUS	**Krusevo**	**2.10**	**14**	*e*Pn	**Pg**	**23 21 34.9**	**-1.9**
KRUS				*e*Sn	**Sg**	**23 22 03.1**	**-0.9**
KRUS	**Krusevo**	**2.10**	**14**	*e*Pn	**Pg**	**23 21 34.8**	**-2.0**
KRUS				*e*Sn	**Sg**	**23 22 03.1**	**-0.9**
ITM	**Ithomi**	**2.41**	**153**	⇑*i*PN	**Pn**	**23 21 38.4**	**+1.5**

*DDA **24** 23:21:51.1, 3975N×3542E, h5km±3km, Md3.5*

ISK 24 23:21:51.2, 3981N×3549E, h3km, MD3.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.21**	**218**	PG	Pg	23 21 56.5	+1.1
YOZ				*e*SG	Sg	23 21 60.0	+1.8
CORM	**Corum**	**0.76**	**299**	*e*PG	Pg	23 22 06.3	+0.6
CORM				*e*SG	Sg	23 22 17.7	+2.1
CDAG	**Cicekdag**	**0.88**	**258**	*i* P	Pg	23 22 07.8	-0.4
CDAG				*i* S	Sg	23 22 19.3	-0.3
TOKT	**Tokat**	**0.95**	**57**	*e*PG	Pg	23 22 10.0	+0.5
CTKT	**Corum**	**0.97**	**327**	*i* P	Pg	23 22 10.3	+0.4
CTKT				*i* S	Sg	23 22 24.1	+1.5
BNN	**Bunyan**	**0.99**	**164**	*e*PG	Pg	23 22 11.3	+1.0
BNN				*e*SG	Sg	23 22 25.7	+2.5
AVNT	**Avonos**	**1.14**	**206**	*i* P	Pg	23 22 10.7	-2.3
AVNT				*i* S	Sg	23 22 26.3	-1.5
SVSK	**Karacayir**	**1.16**	**84**	*e*PN	Pn	23 22 13.3	-1.0
SVSK				*e*SN	Sn	23 22 30.9	+0.2
PINB	**Pinarbasi**	**1.33**	**148**	*i* P	Pn	23 22 16.7	0.0
PINB				*i* S	Sg	23 22 35.1	+1.1
KVT	**Kavak**	**1.34**	**18**	*e*PN	Pn	23 22 17.2	+0.4
KAMT	**Kaman**	**1.44**	**253**	*e*PN	Pn	23 22 18.1	-0.1
RSDY	**Resadiye-TOKAT**	**1.52**	**67**	*e*PN	Pn	23 22 19.9	+0.6
CANT	**Cankiri**	**1.64**	**300**	*e*PN	Pn	23 22 21.8	+0.8
TOS	**Tosya**	**1.66**	**318**	*e*PN	Pn	23 22 22.7	+1.5
BYBT	**Boyabat**	**1.75**	**342**	*e*PN	Pn	23 22 24.1	+1.7
NIG	**Nigde**	**1.83**	**202**	*e*PN	Pn	23 22 24.4	+0.9
ILGA	**Ilgaz**	**1.84**	**313**	*i* P	Pn	23 22 25.2	+1.5
ILGA				*i* S	Sn	23 22 49.5	+2.1
DIKM	**Dikmen**	**1.85**	**355**	*e*PN	Pn	23 22 25.2	+1.4
DARE	**Darende-Malaty**	**1.99**	**115**	*e*PN	Pn	23 22 27.1	+1.5
ANTO	**Ankara**	**2.08**	**273**	*e*PN	Pn	23 22 28.9	+1.9
LOD	**Lodumlu**	**2.10**	**273**	*e*PN	Pn	23 22 28.8	+1.5
ANDN	**Andirin**	**2.32**	**163**	*i* P	Pn	23 22 32.7	+2.4
ANDN				*i* S	Sn	23 23 02.5	+3.1
KOZT	**Kozan**	**2.34**	**173**	*e*PN	Pn	23 22 31.9	+1.4
BALT	**Daday**	**2.35**	**318**	*i* P	Pn	23 22 32.3	+1.6
BALT				*i* S	Sn	23 23 00.7	+0.6
KMRS	**Kahramanmaras**	**2.55**	**154**	*e*PN	Pn	23 22 35.0	+1.6
KARA	**Karaisali**	**2.57**	**188**	*e*PN	Pn	23 22 35.5	+1.9
SAFT	**Safranbolu**	**2.57**	**305**	*e*PN	Pn	23 22 35.4	+1.7
ESPY	**Espiye-Giresun**	**2.71**	**65**	*e*PN	Pn	23 22 37.3	+1.7
MYA	**Malatya**	**2.72**	**122**	*e*PN	Pn	23 22 38.2	+2.5
LADK	**Ladik-KONYA**	**2.92**	**238**	*e*PN	Pn	23 22 40.1	+1.6
KDHN	**Kadinhani**	**2.92**	**245**	*i* P	Pn	23 22 39.3	+0.8
KDHN				*i* S	Sn	23 23 19.0	+4.8
GZT	**Gaziantep**	**2.94**	**146**	*i* P	Pg	23 22 47.1	-0.4
GZT				*i* S	Sg	23 23 26.4	+0.8
KIZT	**Kizilcal**	**2.95**	**253**	*e*PN	Pn	23 22 40.6	+1.6
KONT	**Konya--Tatoy**	**3.07**	**234**	*e*PN	Pn	23 22 42.9	+2.3
GUMT	**Gumushane**	**3.12**	**77**	*e*PN	Pn	23 22 43.4	+2.0
PTK	**Pertek**	**3.16**	**106**	*e*PN	Pn	23 22 43.3	+1.5
SVRC	**Sivrice-ELAZID**	**3.29**	**114**	*e*PN	Pn	23 22 45.7	+2.1

IDC 24 23:25:21.6±6.1, 183S×10133E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/19, mbtmp3.4/3, MS3.9/1, Ms1 3.9/1, ms1mx2.9/21, Error ellipse: s-maj=319.6km s-min=31.2km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.94**	**121**	P	P	23 32 32.7	+0.1
	0.1nm,0.3s,baz=298,slow=8.4,SNR=5.3						
ASAR	**Alice Springs**	**38.29**	**127**	P	P	23 32 43.9	-0.2
	0.3nm,0.5s,baz=301,slow=7.9,SNR=5.5						
JOW	**Kunigami**	**38.56**	**41**	LR	LR	23 47 50.0	
	comp=Z,169nm,18.7s,baz=231,slow=35						
MKAR	**Makanchi Array**	**51.23**	**343**	P	P	23 34 26.9	0.0
	0.2nm,0.4s,baz=147,slow=6.4,SNR=3.0						

IDC 24 23:30:12.3±2.0, 284N×12740E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=140.6km s-min=25.9km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.64**	**164**	P	P	23 35 25.4	-0.3
	1.3nm,0.5s,baz=344,slow=11,SNR=25						
ASAR	**Alice Springs**	**27.10**	**167**	P	P	23 35 57.3	+0.3
	0.3nm,0.4s,baz=341,slow=7.3,SNR=5.8						
MKAR	**Makanchi Array**	**58.66**	**325**	P	P	23 40 11.6	0.0
	0.3nm,0.5s,baz=120,slow=8.5,SNR=5.1						

IDC 25 00:24:06.0±10.0, 203N×9546E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.6/20, mbtmp4.0/4, ML4.2/1, Error ellipse: s-maj=219.3km s-min=116.1km az=145.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.68**	**12**	Pn	Pn	00 28 01.4	0.0
	0.3nm,0.3s,baz=203,slow=11,SNR=5.0						
MKAR	**Makanchi Array**	**46.04**	**347**	P	P	00 32 31.4	+0.1
	0.8nm,0.6s,baz=165,slow=7.5,SNR=6.8						
SONM	**Songino Array**	**46.60**	**10**	P	P	00 32 35.8	0.0
	0.4nm,0.5s,baz=183,slow=7.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**52.49**	**352**	P	P	00 33 20.5	-0.1
	1.3nm,0.5s,baz=181,slow=6.0,SNR=4.3						

*IDC **25** 00:27:17.5±1.3, 542N×12634E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.8/20, mbtmp3.8/8, MS3.0/1, Ms1 3.0/1, ms1mx2.2/34, Error ellipse: s-maj=111.8km s-min=16.3km az=69.0*
*ISCJB **25** 00:27:26.1±1.3, 553N±009×1268E±01.1, h91km±13km, mb3.8/9, Error ellipse: s-maj=25.4km s-min=10.6km az=152.7*
*NEIC **25** 00:27:26.2±1.0, 551N×12674E, h73km±10km, mb4.2/3, Error ellipse: s-maj=15.1km s-min=6.7km az=64.0*

ISC 25 00:27:26.4±1.3, 555N±009×1269E±01, h77km±13km, n21, σ0§75/21, mb3.8/9, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.99**	**319**	Pn	**Pn**	**00 27 57.2**	**-0.9**
	34nm,0.3s,baz=251,slow=14,SNR=2.4						
DAV				Sn	**Sn**	**00 28 23.7**	**+1.5**
	71nm,0.3s,baz=99,slow=14,SNR=6.4						
GSPH	**General Santos**	**1.99**	**286**	*e*P	**Pn**	**00 27 49.0**	**-9.2**
GSPH				*e*S	**Sn**	**00 28 09.6**	**-13**
GUMO	**Guam**	**19.44**	**64**	LR	LR	00 38 11.3	
	comp=Z,45nm,18.3s,baz=91,slow=33						
GUMO	**Guam**	**19.44**	**64**	P	**Pn**	**00 31 48.5**	**-0.3**
FITZ	**Fitzroy Crossi**	**23.54**	**183**	P	**P**	**00 32 28.4**	**-1.5**
	0.5nm,0.5s,mb3.1,baz=13,slow=14,SNR=3.6						
FITZ	**Fitzroy Crossi**	**23.54**	**183**	*e*P	**P**	**00 32 29.9**	**+0.1**
	7.8nm,0.9s,mb4.0						
WRAB	**Tennant Creek**	**26.37**	**164**	*e*P	**P**	**00 32 55.6**	**0.0**
	22nm,1.8s,mb4.3						
WRA	**Warramunga Arr**	**26.38**	**164**	P	**P**	**00 32 55.3**	**-0.4**
	2.1nm,0.9s,mb3.6,baz=343,slow=10,SNR=5.1						
WB2	**Warramunga Arr**	**26.38**	**164**	*e*P	**P**	**00 32 56.1**	**+0.4**
ASAR	**Alice Springs**	**29.84**	**167**	P	**P**	**00 33 25.9**	**-0.5**
	0.4nm,0.6s,mb3.2,baz=344,slow=7.1,SNR=5.9						
CTAO	**Charters Tower**	**31.81**	**144**	P	**P**	**00 33 44.3**	**+0.3**
STKA	**Stephens Creek**	**39.78**	**160**	P	**P**	**00 34 53.6**	**+1.7**
	1.6nm,0.4s,mb4.2,baz=332,slow=12,SNR=7.5						
STKA	**Stephens Creek**	**39.78**	**160**	*e*P	**P**	**00 34 53.3**	**+1.4**
	1.5nm,0.4s,mb4.2						
MKAR	**Makanchi Array**	**56.16**	**324**	P	**P**	**00 36 58.0**	**-0.2**
	0.6nm,0.4s,mb4.0,baz=118,slow=7.2,SNR=12						
KURK	**Kurchatov**	**60.30**	**327**	P	**P**	**00 37 26.6**	**-0.4**
	0.9nm,0.6s,mb4.0,baz=128,slow=6.6,SNR=6.2						
KBL	**Kabul**	**60.55**	**307**	P	**P**	**00 37 29.0**	**-0.1**
BRVK	**Borovoye**	**65.96**	**327**	*e*P	**P**	**00 38 04.2**	**-0.2**
AKTK	**Aktyubinsk**	**72.34**	**321**	P	**P**	**00 38 43.5**	**-0.5**
AKTO	**Aktyubinsk**	**72.34**	**321**	P	**P**	**00 38 43.5**	**-0.4**
	0.6nm,0.4s,mb3.7,baz=112,slow=7.6,SNR=3.7						
ARCES	**ARCESS Array B**	**88.80**	**340**	P	**P**	**00 40 12.8**	**+1.4**
	0.8nm,0.6s,mb3.9,baz=79,slow=6.4,SNR=7.4						
TORD	**Torodi Ar. Bea**	**122.48**	**289**	PKP	PKPdf	00 46 14.6	+0.6
	0.4nm,0.8s,baz=72,slow=4.7,SNR=4.0						

*MOS **25** 00:29:26.8±1.4, 4176N×4567E, h9km, mb4.6/4, Error ellipse: s-maj=32.0km s-min=9.6km az=121.8*
*CSEM **25** 00:29:26.8, 4176N×4567E, h9km, mb4.6, Error ellipse: s-maj=32.0km s-min=9.6km az=318.0, After OBN*

ISC 25 00:29:26.0±1.4, 4163N±009×4596E±008, h19km±9km, n14, σ1§05/28, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGRG	**David-gareji**	**0.48**	**248**	P	**Pg**	**00 29 37.6**	**+1.9**
DGRG				S	**Sg**	**00 29 50.2**	**+8.1**
MTA	**Mtatsminda**	**0.88**	**275**	P	**Pb**	**00 29 40.8**	**-1.9**
MTA				S	**Sb**	**00 29 55.3**	**+1.2**
TBLG	**Delisi**	**0.92**	**277**	*e*Pg	**Pg**	**00 29 41.5**	**-2.5**
TBLG				*e*Sg	**Sg**	**00 29 56.2**	**+0.1**
TBLG	**Delisi**	**0.92**	**277**	P	**Pb**	**00 29 41.5**	**-1.9**
TBLG				S	**Sb**	**00 29 56.3**	**+1.0**
GOR	**Gori**	**1.43**	**285**	P	**Pn**	**00 29 49.6**	**-1.4**
GOR				S	**Sn**	**00 30 09.0**	**-0.3**
SNJR	**Sundja**	**1.67**	**330**	*e*Pg	**Pn**	**00 29 54.3**	**0.0**
SNJR				*e*Sg	**Sn**	**00 30 14.3**	**-1.0**
VLKR	**Vladikavkaz**	**1.71**	**327**	*e*Pg	**Pn**	**00 29 55.1**	**+0.3**
VLKR				*e*Sg	**Sn**	**00 30 15.3**	**-0.8**
LACR	**Lac**	**1.72**	**315**	*e*Pg	**Pn**	**00 29 56.8**	**+1.8**
LACR				*e*Sg	**Sn**	**00 30 17.4**	**+0.9**
ZEI	**Tsey**	**1.91**	**307**	*e*Pn	**Pn**	**00 29 58.0**	**+0.4**
ZEI				*e*Sg	**Sn**	**00 30 21.0**	**-0.1**
ARNR	**Ardon**	**2.00**	**322**	*e*Pn	**Pn**	**00 29 59.3**	**+0.5**
ARNR				*e*Sg	**Sn**	**00 30 23.1**	**-0.2**
KORR	**Kora**	**2.02**	**317**	*e*Pn	**Pn**	**00 29 59.6**	**+0.5**
KORR				*e*Sg	**Sn**	**00 30 23.8**	**-0.1**
ONI	**Oni**	**2.10**	**298**	P	**Pn**	**00 29 58.5**	**-1.6**
ONI				S	**Sn**	**00 30 25.5**	**-0.2**
KMSR	**Komsomolskaya**	**2.13**	**325**	*e*Pn	**Pn**	**00 30 01.5**	**+0.8**
KMSR				*e*Sg	**Sn**	**00 30 27.0**	**+0.3**
LSNR	**Lesken**	**2.29**	**317**	*e*Pn	**Pn**	**00 30 03.6**	**+0.8**
LSNR				*e*Sg	**Sn**	**00 30 30.6**	**+0.2**

*IDC **25** 00:34:01.8±0.9, 2044N×9430E, h0km, mb3.9/12, mb1 4.0/12, mb1mx3.9/25, mbtmp3.9/12, Error ellipse: s-maj=56.6km s-min=18.1km az=58.0*
*MOS **25** 00:34:03.9±1.0, 2022N×9406E, h33km, mb4.6/4, Error ellipse: s-maj=42.9km s-min=10.1km az=116.3*
*ISCJB **25** 00:34:10.0±1.1, 205N±01×9438E±009, h83km±10km, mb4.1/18, Error ellipse: s-maj=21.7km s-min=6.1km az=38.8*
*NEIC **25** 00:34:10.8±1.1, 2047N×9435E, h73km±10km, mb4.5/5, Error ellipse: s-maj=18.2km s-min=5.0km az=49.0*

ISC 25 00:34:11.1±0.8, 205N±01×9434E±008, h73km±7km, n46, σ1§06/53, mb4.1/18, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**4.28**	**355**	*e*P	**Pn**	**00 35 17.0**	**+3.2**
IMP				*e*S	**Sn**	**00 36 16.0**	**+14**
CHG	**Chiang Mai**	**4.65**	**110**	PG	**Pn**	**00 35 17.9**	**-1.0**
CHG				SG	**Sn**	**00 36 13.7**	**+2.1**
CHTO	**Chiang Mai**	**4.65**	**110**	*e*Pn	**Pn**	**00 35 18.0**	**-0.9**
CHTO				*e*Sn	**Sn**	**00 36 09.7**	**-1.9**
CMAR	**Chiang Mai Arr**	**4.79**	**114**	Pn	**Pn**	**00 35 20.1**	**-0.7**
	4.7nm,0.3s,baz=292,slow=14,SNR=92						
CMAR				Lg		00 36 32.9	
	3.0nm,0.3s,baz=288,slow=28,SNR=5.7						
CHRT	**Chiangrai**	**5.15**	**96**	P	**Sn**	**00 36 40.0**	**+16**
	526nm,1.2s						
NANT	**Nan**	**6.23**	**105**	P	**Pn**	**00 35 40.0**	**-0.4**
LSA	**Lhasa**	**9.60**	**343**	*e*P	**Pn**	**00 36 28.2**	**+1.7**
GUN	**Gumba**	**10.68**	**315**	*e*Pn	**Pn**	**00 36 42.9**	**+1.7**
GUN				*e*Sn	**Sn**	**00 38 37.1**	**-1.9**
	65nm,0.6s						
KKN	**Kakani**	**11.00**	**313**	*e*Pn	**Pn**	**00 36 46.3**	**+0.7**
KKN				*e*Sn	**Sn**	**00 38 44.6**	**-2.3**
	19nm,0.3s						
DMN	**Daman**	**11.01**	**312**	*e*Sn	**Sn**	**00 38 44.5**	**-2.6**
	32nm,0.5s						
GKN	**Gorkha**	**11.58**	**312**	*e*Pn	**Pn**	**00 36 54.6**	**+1.1**
GKN				*e*Sn	**Sn**	**00 38 57.0**	**-4.0**
	35nm,0.3s						
DANN	**Dangsing**	**12.40**	**311**	*e*Pn	**P

NEIC ***25*** *00:44:22.3, 51.14N×179.36W, h14km, mb4.2/1, ML3.8(AEIC), After AEIC.*

ISC 25 00:44:22.9±1.0, 512N±01×17943W±007, h45km±7km, n23, σ0s89/26, mb3.9/12, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.81**	**283**	P	**Pn**	**00 44 36.5**	**-1.5**
AMKA				S	**Sn**	**00 44 48.6**	**-0.3**
ADK	**Adak**	**1.85**	**67**	P	**Pn**	**00 44 52.0**	**-0.1**
ADK				S	**Sn**	**00 45 14.3**	**+0.2**
SMY	**Shemya**	**4.28**	**293**	P	**Pn**	**00 45 27.0**	**+1.6**
FX1	**Attu Island--F**	**4.87**	**293**	P	**Pn**	**00 45 34.9**	**+1.4**
UNV	**Unalaska Valle**	**8.32**	**66**	*e*Pn	**Pn**	**00 46 21.8**	**+1.0**
KDAK	**Kodiak Island**	**16.85**	**57**	Pn	**Pn**	**00 48 14.2**	**-1.0**
	1.0nm,0.3s,baz=294,slow=20,SNR=5.3						
KTH	**Kantishna Hill**	**19.51**	**40**	*e*P	**Pn**	**00 48 46.5**	**-1.1**
	15nm,1.1s						
KTH				S	**S**	**00 52 24.5**	**+0.8**
BPAW	**Bear Paw Mtn.**	**19.74**	**38**	*e*P	**Pn**	**00 48 49.2**	**-1.0**
	2μm,0.6s						
YKA	**Yellowknife Ar**	**35.64**	**46**	P	**P**	**00 51 14.6**	**-1.4**
	1.2nm,0.5s,mb4.1,baz=281,slow=7.6,SNR=8.5						
KSRS	**Korea Array**	**39.24**	**271**	P	**P**	**00 51 45.9**	**-0.9**
	1.0nm,0.8s,mb3.6,baz=54,slow=11,SNR=5.0						
NVAR	**Mina Array Bea**	**43.97**	**82**	P	**P**	**00 52 27.1**	**+1.7**
	0.8nm,0.8s,mb3.5,baz=292,slow=9.9,SNR=5.7						
SONM	**Songino Array**	**46.37**	**296**	P	**P**	**00 52 44.2**	**-0.1**
	0.7nm,0.6s,mb3.8,baz=46,slow=8.3,SNR=2.9						
PDAR	**Pinedale Array**	**46.74**	**72**	P	**P**	**00 52 47.6**	**+0.3**
	1.6nm,0.6s,mb4.1,baz=310,slow=3.4,SNR=13						
ARCES	**ARCESS Array B**	**58.20**	**350**	P	**P**	**00 54 12.3**	**+0.6**
	1.1nm,0.8s,mb4.0,baz=27,slow=8.2,SNR=4.0						
ARCES	**ARCESS Array B**	**58.20**	**350**	P	**P**	**00 54 12.3**	**+0.6**
TXAR	**Lajitas Array**	**59.08**	**81**	P	**P**	**00 54 18.1**	**-0.3**
	0.6nm,0.6s,mb3.8,baz=305,slow=4.8,SNR=10						
MKAR	**Makanchi Array**	**59.83**	**308**	P	**P**	**00 54 23.2**	**-0.1**
	0.7nm,0.4s,mb4.1,baz=51,slow=6.0,SNR=11						
MKAR	**Makanchi Array**	**59.83**	**308**	P	**P**	**00 54 23.2**	**-0.2**
BVAR	**Borovoye Array**	**60.77**	**319**	P	**P**	**00 54 29.9**	**+0.3**
	0.7nm,0.4s,mb4.2,baz=70,slow=5.7,SNR=5.2						
NOA	**NORSAR Array B**	**67.79**	**354**	P	**P**	**00 55 15.6**	**+0.2**
	1.2nm,0.8s,mb4.0,baz=342,slow=5.0,SNR=4.8						
CMAR	**Chiang Mai Arr**	**70.64**	**276**	P	**P**	**00 55 34.1**	**+0.5**
	0.5nm,0.4s,mb3.8,baz=32,slow=7.5,SNR=4.1						
CMAR	**Chiang Mai Arr**	**70.64**	**276**	P	**P**	**00 55 34.1**	**+0.5**
AKASG	**Malin Array Be**	**75.59**	**342**	P	**P**	**00 56 01.8**	**-0.7**
	0.6nm,0.3s,mb4.0,baz=21,slow=6.3,SNR=2.9						

JMA ***25*** *01:04:01.6±0.6, 46.86N×141.72E, h5km, M3.1*

SKHL 25 01:04:02.7±0.9, 4672N×14174E, h10km, mb3.6/1, 1C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**0.73**	**71⇑**	*e*Pg	Pg	01 04 17.0	+0.1
YSS				AMB	AMB	01 04 20.0	
	61nm,0.5s						
YSS				*e*Sg	Sg	01 04 27.9	+1.4
YSS				A		01 04 29.0	
	700nm,0.3s						
YSS				A		01 04 29.0	
	570nm,0.3s						
JWK2	**Keihoku**	**1.41**	**175**	P	Pn	01 04 29.7	+1.3
JWK2				*e*S	Sn	01 04 49.7	+2.8
JSE	**Soyaes**	**1.86**	**161**	P	Pn	01 04 35.6	+1.1

NEIC ***25*** *01:10:44.8, 19.47N×68.34W, h31km, MD3.5(RSPR), After RSPR.*

RSPR 25 01:10:44.8, 1947N×6834W, h31km±31km, MD3.5/13, MD3.5/13, 14C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**1.53**	**131⇑**	*e*P	Pn	01 11 07.7	-2.3
AGPR				*e*S	Sn	01 11 26.7	-2.1
LSP	**Las Mesas**	**1.75**	**137⇑**	*e*P	Pn	01 11 10.5	-2.5
LSP				*e*S	Sn	01 11 32.5	-1.7
STDO	**Santo Domingo**	**1.82**	**236⇑**	*e*P	Pn	01 11 12.6	-1.3
STDO				*e*S	Sn	01 11 33.4	-2.5
LRS	**Lares**	**1.84**	**130⇑**	*e*P	Pn	01 11 13.3	-0.9
LRS				*e*S	Sn	01 11 35.0	-1.3
CRPR	**Cabo Rojo, PR**	**1.87**	**141⇑**	*e*P	Pn	01 11 12.2	-2.4
CRPR				*e*S	Sn	01 11 35.4	-1.7
AOPR	**Arecibo Observ**	**1.87**	**127⇑**	*e*P	Pn	01 11 13.7	-1.0
AOPR				*e*S	Sn	01 11 35.3	-1.9
GBPR	**Guanica, Bosqu**	**2.03**	**137**	*e*S	Sn	01 11 40.0	-1.2
CELP	**Cerrillos**	**2.17**	**130⇑**	*e*P	Pn	01 11 17.7	-1.1
CELP				*e*S	Sn	01 11 42.4	-2.2
OBIP	**Obispado Ponce**	**2.17**	**131⇑**	*e*P	Pn	01 11 18.4	-0.4
OBIP				*e*S	Sn	01 11 43.3	-1.3
ICM	**Isla Caja Muer**	**2.33**	**132⇑**	*e*P	Pn	01 11 20.4	-0.6
ICM				*e*S	Sn	01 11 47.2	-1.3
SJG	**San Juan**	**2.48**	**123⇑**	*e*P	Pn	01 11 21.9	-1.0
SJG				*e*S	Sn	01 11 50.3	-1.8
SJG	**San Juan**	**2.48**	**123⇑**	*e*P	Pn	01 11 21.7	-1.2
SJG				*e*S	Sn	01 11 49.9	-2.2
CBYP	**Canovanas**	**2.63**	**117⇑**	*e*P	Pn	01 11 24.4	-0.8
CBYP				*e*S	Sn	01 11 54.7	-1.4
HUMP	**Col San Antoni**	**2.70**	**119⇑**	*e*P	Pn	01 11 25.2	-0.9
HUMP				*e*S	Sn	01 11 55.7	-2.0
MTP	**Monte Pirata**	**2.97**	**117⇑**	*e*P	Pn	01 11 28.5	-1.3
MTP				*e*S	Sn	01 12 03.5	-0.9

MOS 25 01:28:55.9±0.9, 4400N×4858E, h6km, mb3.7/1, Error ellipse: s-maj=53.4km s-min=18.7km az=151.0, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAK	**Makhachkala**	**1.30**	**217**	*e*PG	Pg	01 29 20.2	-0.6
MAK				pmax	pmax		
	comp=Z,139nm,1.0s						
BTKR	**Batakoyurt**	**3.00**	**259**	*e*PN	Pn	01 29 45.8	+1.9
KMSR	**Komsomolskaya**	**3.17**	**260**	*e*PN	Pn	01 29 48.7	+2.4
ARNR	**Ardon**	**3.23**	**257**	*e*PN	Pn	01 29 47.7	+0.6
LACR	**Lac**	**3.33**	**251**	*e*PN	Pn	01 29 50.9	+2.4
KORR	**Kora**	**3.41**	**256**	*e*PN	Pn	01 29 50.8	+1.3

IDC 25 02:05:46.7±3.3, 525S×15254E, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.8/16, mbtmp4.0/3, MS2.8/1, Ms1 2.8/1, ms1mx2.5/26, Error ellipse: s-maj=118.9km s-min=39.9km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**8.44**	**120**	LR	LR	02 10 46.4	
	comp=Z,63nm,21.0s,baz=312,slow=36						
WB2	**Warramunga Arr**	**22.95**	**229**	*e*P	P	02 10 52.8	+0.1
WRA	**Warramunga Arr**	**22.96**	**229**	P	P	02 10 52.8	-0.1
	2.3nm,0.6s,baz=53,slow=9.9,SNR=16						
ASAR	**Alice Springs**	**25.65**	**223**	P	P	02 11 19.1	+0.8
	2.0nm,0.6s,baz=60,slow=8.9,SNR=29						
FITZ	**Fitzroy Crossi**	**29.22**	**242**	*e*P	P	02 11 48.7	-1.7
	3.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**29.22**	**242**	P	P	02 11 49.1	-1.3
	1.7nm,0.7s,baz=74,slow=11,SNR=5.4						
TORD	**Torodi Ar. Bea**	**150.20**	**287**	PKPbc	PKPbc	02 25 40.5	-0.3
	0.4nm,0.6s,baz=87,slow=2.8,SNR=5.2						
TORD				PKPab	PKPab	02 25 46.6	-0.1
	1.2nm,0.8s,baz=87,slow=3.2,SNR=10						

IDC ***25*** *02:09:30.0±0.9, 127N×97.02E, h0km, mb4.3/15, mb1 4.3/16, mb1mx4.2/25, mbtmp4.3/16, ML4.2/1, MS4.0/12, Ms1 4.1/12, ms1mx3.8/36, Error ellipse: s-maj=32.8km s-min=14.1km az=54.0*

BJI ***25*** *02:09:32.7, 104N×97.36E, h43km, mB5.1, mb4.7, Ms4.7, Msz4.5*

MOS ***25*** *02:09:33.4±0.8, 142N×97.18E, h33km, mb5.0/8, Error ellipse: s-maj=26.1km s-min=9.0km az=101.5*

ISCJB ***25*** *02:09:33.7±1.7, 136N±009×97.1E±0.1, h36km±13km, mb4.5/31, MS4.2/16, Error ellipse: s-maj=22.1km s-min=9.5km az=144.8*

NEIC ***25*** *02:09:34.4±0.5, 136N×97.14E, mb4.7/9, Error ellipse: s-maj=15.5km s-min=7.3km az=58.0*

DJA ***25*** *02:09:45, 198N×97.63E, h10km, MLv4.4/4*

ISC 25 02:09:34.9±4.1, 137N±009×971E±01, h28km±27km, n58, σ0s97/52, mb4.5/31, MS4.2/16, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRSI	**Tarutung**	**1.98**	**71**	P	**Pn**	**02 10 11.0**	**+4.5**
	0.0nm,0.0s						
TSI	**Tuntungan**	**2.58**	**35**	P	**Pn**	**02 10 16.0**	**+1.3**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.77**	**119**	P	**Pn**	**02 10 32.4**	**+1.2**
	0.0nm,0.0s						
BSI	**Banda Aceh**	**4.47**	**336**	P	**Pn**	**02 10 38.8**	**-2.0**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**17.07**	**6**	P	**Pn**	**02 13 30.6**	**-1.0**
	0.3nm,0.3s,baz=197,slow=12,SNR=15						
CMAR				LR	LR	02 20 38.3	
	comp=Z,723nm,18.8s,baz=187,slow=39						
CHTO	**Chiang Mai**	**17.43**	**6**	*e*P	**Pn**	**02 13 34.8**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CHTO	**Chiang Mai**	**17.43**	**6**	*e*Pn	**Pn**	**02 13 34.8**	**-1.2**
	comp=Z,10nm,1.1s						
KMI	**Kunming**	**24.23**	**13**	P	**P**	**02 14 51.0**	**+1.6**
KMI				AP		02 14 59.6	
KMI				PPP		02 15 41.8	
KMI				XS	sS	02 19 29.0	+9.0
KMI				SSS		02 20 35.1	
KMI				AMB	AMB		
	comp=Z,41nm,1.5s,mb4.6						
KMI				AMB	AMB		
	comp=Z,294nm,3.6s						
KMI				LR	LR		
	comp=N,2μm,15.3s,MS4.7						
KMI				LR	LR		
	comp=E,1μm,14.4s,MS4.7						
KMI				LR	LR		
	comp=Z,2μm,14.2s,MS4.7						
KMI	**Kunming**	**24.23**	**13**	P	**P**	**02 14 51.0**	**+1.6**
	comp=Z,41nm,1.5s,mb4.6						
KMI				pP		02 14 59.6	
KMI				sP	sP	02 15 03.1	+1.9
KMI				PPP		02 15 41.8	
KMI				S	**S**	**02 19 14.6**	**+8.2**
KMI				sS	sS	02 19 29.0	+9.0
KMI				SS		02 20 18.0	
KMI				SSS		02 20 35.1	
KMI				LR	LR		
	comp=Z,2μm,14.2s,MS4.7						
FITZ	**Fitzroy Crossi**	**34.12**	**126**	P	**P**	**02 16 16.6**	**-0.9**
	comp=Z,1.0nm,0.6s,mb3.9,baz=323,slow=16,SNR=3.4						
XAN	**Xi'an**	**34.33**	**18**	P	**P**	**02 16 17.9**	**-1.2**
XAN				AMB	AMB		
	comp=Z,17nm,1.1s,mb4.9						
XAN				AMB	AMB		
	comp=Z,55nm,6.2s						
XAN				LR	LR		
	comp=N,516nm,14.9s,MS4.5						
XAN				LR	LR		
	comp=E,257nm,14.2s,MS4.5						
XAN				LR	LR		
	comp=Z,651nm,14.2s,MS4.5						
LZH	**Lanzhou**	**35.10**	**10**	*e*P	**P**	**02 16 26.0**	**+0.3**
LZH				AMB	AMB		
	comp=Z,43nm,1.6s,mb5.1						
LZH				AMB	AMB		
	comp=Z,170nm,4.0s						
LZH	**Lanzhou**	**35.10**	**10**	*e*P	**P**	**02 16 26.0**	**+0.3**
	comp=Z,43nm,1.6s,mb5.1						
LZH				pP	pP	02 16 32.2	-2.0
LZH				sP	sP	02 16 35.0	-2.6
GTA	**Gaotai**	**37.94**	**3**	⇑P	**P**	**02 16 50.1**	**+0.2**
GTA				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.3						
GTA				AMB	AMB		
	comp=Z,136nm,4.2s						
GTA				LR	LR		
	comp=N,472nm,14.1s,MS4.5						
GTA				LR	LR		
	comp=E,308nm,14.1s,MS4.5						
GTA				LR	LR		
	comp=Z,481nm,13.8s,MS4.5						
JOW	**Kunigami**	**39.20**	**47**	P	**P**	**02 17 01.1**	**+0.4**
	comp=Z,8.9nm,0.6s,mb4.7,baz=104,slow=21,SNR=4.1						
WRA	**Warramunga Arr**	**42.22**	**122**	P	**P**	**02 17 24.7**	**-1.0**
	comp=Z,1.8nm,0.7s,mb3.8,baz=301,slow=9.2,SNR=9.7						
WRA				LR	LR	02 34 40.3	
	comp=Z,243nm,21.8s,MS4.0,baz=290,slow=36						
WMQ	**Urumqi**	**43.09**	**350**	P	**P**	**02 17 33.9**	**+1.5**
WMQ				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,102nm,4.0s						
WMQ				LR	LR		
	comp=N,194nm,24.0s,MS4.3						
WMQ				LR	LR		
	comp=E,423nm,23.2s,MS4.3						
WMQ				LR	LR		
	comp=Z,252nm,21.0s,MS4.1						
ASAR	**Alice Springs**	**43.59**	**127**	P	**P**	**02 17 36.4**	**-0.4**
	comp=Z,1.1nm,0.7s,mb3.7,baz=290,slow=7.9,SNR=9.3						
UCH	**Uchtor**	**45.45**	**336**	*e*P	**P**	**02 17 53.4**	**+2.0**
	comp=Z,6.9nm,1.0s,mb4.4						
TKM2	**Tokmak 2**	**45.62**	**338**	*e*P	**P**	**02 17 54.0**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
TKM2	**Tokmak 2**	**45.62**	**338**	*e*P	**P**	**02 17 54.0**	**+1.4**
	comp=Z,8.0nm,1.0s,mb4.6						
AML	**Almayashu**	**45.70**	**336**	*e*P	**P**	**02 17 54.5**	**+1.2**
	comp=Z,12nm,1.1s,mb4.7						
KSRS	**Korea Array**	**45.77**	**35**	P	**P**	**02 17 53.9**	**-0.1**
	comp=Z,11nm,1.1s,mb4.7,baz=221,slow=8.9,SNR=29						
KSRS				LR	LR	02 38 38.0	
	comp=Z,150nm,18.4s,MS4.0,baz=225,slow=38						
EKS2	**Erkin-Say**	**46.11**	**336**	*e*P	**P**	**02 17 56.3**	**-0.3**
	comp=Z,21nm,1.5s,mb4.8						
SONM	**Songino Array**	**46.98**	**9**	P	**P**	**02 18 03.8**	**+0.6**
	comp=Z,9.9nm,0.9s,mb4.7,baz=191,slow=8.3,SNR=12						
MK31	**Makanchi Array**	**47.05**	**346**	*i* P	**P**	**02 18 04.2**	**+0.4**
MK31				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
MK31	**Makanchi Array**	**47.05**	**346**	*e*P	**P**	**02 18 04.7**	**+0.9**
MKAR	**Makanchi Array**	**47.05**	**346**	P	**P**	**02 18 04.8**	**+0.9**
	comp=Z,7.4nm,0.8s,mb4.6,baz=160,slow=8.1,SNR=30						
MKAR				LR	LR	02 41 37.7	
	comp=Z,127nm,21.4s,MS3.9,baz=174,slow=41						
KURK	**Kurchatov**	**51.60**	**345**	P	**P**	**02 18 38.5**	**0.0**
	comp=Z,2.1nm,0.5s,mb4.3,baz=167,slow=6.7,SNR=18						
ZAA0	**Zalesovo Array**	**53.37**	**351**	*e*P	**P**	**02 18 51.9**	**+0.3**
ZALV	**Zalesovo Beam**	**53.37**	**351**	P	**P**	**02 18 51.9**	**+0.3**
	comp=Z,5.6nm,0.5s,mb4.8,baz=183,slow=6.2,SNR=20						
ZALV				LR	LR	02 47 30.3	
	comp=Z,101nm,19.3s,MS3.9,baz=154,slow=43						
ZALV	**Zalesovo Beam**	**53.37**	**351**	P	**P**	**02 18 51.9**	**+0.3**
ZALV				LR	LR	02 47 30.3	
STKA	**Stephens Creek**	**53.55**	**132**	P	**P**	**02 18 53.4**	**+0.1**
	comp=Z,0.9nm,0.4s,mb4.0,baz=325,slow=12,SNR=3.2						
STKA				LR	LR	02 43 50.5	
	comp=Z,256nm,20.9s,MS4.3,baz=24,slow=38						
STKA	**Stephens Creek**	**53.55**	**132**	P	**P**	**02 18 53.4**	**+0.1**
STKA				LR	LR	02 43 50.5	
NVS	**Novosibirsk**	**54.49**	**350**	*e*P	**P**	**02 18 58.4**	**-1.4**
NVS				*e*		02 19 16.6	
BVA0	**Borovoye Array**	**56.05**	**341**	*i* P	**P**	**02 19 10.8**	**-0.3**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**56.05**	**341**	P	**P**	**02 19 11.2**	**+0.1**
	comp=Z,3.6nm,0.7s,mb4.5,baz=146,slow=8.2,SNR=18						
BVAR				LR	LR	02 46 09.8	
	comp=Z,186nm,20.1s,MS4.2,baz=19,slow=39						
BRVK	**Borovoye**	**56.11**	**341**	P	**P**	**02 19 11.3**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
BRVK	**Borovoye**	**56.11**	**341**	*e*P	**P**	**02 19 11.1**	**-0.4**
	comp=Z,4.3nm,0.6s,mb4.7						
KLR	**Kul'dur**	**56.15**	**27**	*e*P	**P**	**02 19 08.8**	**-3.0**
AB31	**Akbulak array**	**57.31**	**332**	*i* P	**P**	**02 19 19.8**	**-0.3**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
BOD	**Bodaibo**	**57.86**	**11**	*e*P	**P**	**02 19 22.9**	**-0.9**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
AKTK	**Aktyubinsk**	**59.03**	**332**	P	**P**	**02 19 31.4**	**-0.6**
AKTO	**Aktyubinsk**	**59.03**	**332**	P	**P**	**02 19 31.4**	**-0.6**
	comp=Z,2.5nm,0.9s,mb4.3,baz=129,slow=9.8,SNR=9.5						
ARU	**Arti**	**62.98**	**337**	*e*P	**P**	**02 19 58.5**	**-0.3**
ARU				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
ARU	**Arti**	**62.98**	**337**	*e*P	**P**	**02 19 58.5**	**-0.3**
	comp=Z,10nm,1.1s,mb4.9						
YAK	**Yakutsk**	**65.28**	**16**	*e*P	**P**	**02 20 12.6**	**-1.2**
YAK				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.3						
YAK				pmax	pmax		
	comp=N,8.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.5s						
YAK				MLR	MLR		
	comp=Z,452nm,19.0s,MS4.7						
YAK				MLR	MLR		
	comp=N,196nm,19.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,250nm,20.0s,MS4.5						
PETK	**Petropavlovsk-**	**71.65**	**34**	LR	LR	02 52 29.0	
	comp=E,63nm,18.7s,MS3.9,baz=80,slow=36						
MAW	**Mawson**	**72.85**	**193**	LR	LR	02 49 02.2	
	comp=E,94nm,18.6s,MS4.1,baz=249,slow=33						
BOSA	**Boshof**	**74.77**	**240**	LR	LR	02 50 24.8	
	comp=E,91nm,18.2s,MS4.1,baz=356,slow=33						
AKASG	**Malin Array Be**	**75.06**	**322**	P	**P**	**02 21 12.8**	**-1.1**
	comp=E,1.2nm,0.7s,mb3.9,baz=89,slow=3.8,SNR=4.1						
BUR08	**Bucovina Ar. S**	**76.84**	**319**	*e*P	**P**	**02 21 25.2**	**+1.0**
RPZ	**Rata Peaks**	**79.41**	**135**	LR	LR	02 56 29.5	
	comp=E,216nm,21.0s,MS4.5,baz=189,slow=36						
ARCES	**ARCESS Array B**	**82.34**	**340**	P	**P**	**02 21 54.0**	**+0.4**
	comp=E,1.0nm,0.4s,mb4.1,baz=100,slow=5.0,SNR=22						
GERES	**GERESS Array B**	**84.61**	**319**	P	**P**	**02 22 06.4**	**+0.6**
	comp=E,1.1nm,0.9s,mb4.0,baz=86,slow=4.1,SNR=9.1						
NOA	**NORSAR Array B**	**86.80**	**331**	LR	LR	03 06 51.8	
	comp=E,79nm,20.1s,MS4.1,baz=105,slow=40						
TXAR	**Lajitas Array**	**143.58**	**31**	PKP	PKPdf	02 29 05.0	-2.7
	comp=E,0.2nm,0.5s,baz=349,slow=0.7,SNR=7.2						
CPUP	**Villa Florida**	**145.06**	**223**	PKP	PKPdf	02 29 09.6	-0.8
	comp=E,2.5nm,0.8s,baz=109,slow=5.6,SNR=4.4						

NIED ***25*** *02:28:00, 37.40N×141.80E, h35km, Mw3.7 Best double couple: M0=4.08000×10^14 NP1:φs=72.00000°, δ=47.00000°, λ=96.00000°. NP2:φs=243.00000°, δ=43.00000°, λ=84.00000°.*

JMA 25 02:28:17.9±0.2, 3741N×14182E, h41km±3km, M3.5, 1C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.75**	**267**	⇓P	Pn	02 28 32.2	+0.1
JFK				S	Sn	02 28 41.9	-0.4
ONAJ	**Iwakimizuishiy**	**0.87**	**250**	P	Pn	02 28 33.7	0.0
ONAJ				S	Sn	02 28 44.9	-0.3
JMM	**Marumori**	**0.93**	**299**	⇓P	Pn	02 28 34.8	+0.3
JMM				S	Sn	02 28 46.8	+0.1
JIO	**Ouri**	**1.11**	**340**	⇓P	Pn	02 28 37.2	+0.3
JIO				S	Sn	02 28 50.5	-0.5
JFT	**Otama**	**1.19**	**276**	⇑P	Pn	02 28 39.3	+1.3
JFT				S	Sn	02 28 54.0	+1.1
JOU	**Okura**	**1.32**	**317**	P	Pn	02 28 40.8	+1.0
JOU				*e*S	Sn	02 28 57.2	+1.0
JYS	**Shirataka**	**1.61**	**301**	P	Pn	02 28 46.0	+2.2
JYS				S	Sn	02 29 06.1	+2.8
JMK	**Ichinoseki**	**1.61**	**343**	P	Pn	02 28 44.8	+1.0
JYK	**Kaneyama**	**1.90**	**323**	P	Pn	02 28 48.9	+1.2
MAT	**Matsushiro**	**3.02**	**254**	P	Pn	02 29 05.3	+2.1
MAT				S	Sn	02 29 40.1	+2.0

ISCJB ***25*** *02:43:23.2±1.3, 226N±0.1×9392E±008, h113km±14km, mb4.0/5, Error ellipse: s-maj=21.0km s-min=7.8km az=25.8*

IDC ***25*** *02:43:24.9±3.8, 23.10N×94.94E, h93km±36km, mb3.6/5, mb1 3.7/6, mb1mx3.4/22, mbtmp3.5/6, Error ellipse: s-maj=42.3km s-min=17.7km az=56.0*

ISC 25 02:43:23.8±1.0, 2257N±009×9395E±007, h97km±12km, n14, σ1s20/23, mb4.0/5, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**2.21**	**360**	*e*P	**Pn**	**02 43 58.0**	**-0.9**
IMP				*e*S	**Sn**	**02 44 26.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**6.21**	**130**	P	**Pn**	**02 44 50.2**	**-2.7**
	0.9nm,0.3s,baz=309,slow=13,SNR=11						
CMAR				S	**Sn**	**02 45 54.0**	**-8.4**
	0.5nm,0.3s,baz=312,slow=17,SNR=5.0						
ODAN	**Odare**	**7.34**	**307**	*e*Pn	**Pn**	**02 45 09.8**	**+1.5**
ODAN				*e*Sn	**Sn**	**02 46 30.4**	**+0.4**
	92nm,0.3s						
JIRN	**Jiri**	**8.67**	**307**	*e*Pn	**Pn**	**02 45 27.6**	**+1.2**
JIRN				*e*Sn	**Sn**	**02 47 01.4**	**-1.0**
	81nm,0.3s						
GUN	**Gumba**	**9.04**	**308**	*e*Pn	**Pn**	**02 45 33.0**	**+1.6**
GUN				*e*Sn	**Sn**	**02 47 10.9**	**-0.5**
	94nm,0.4s						
KKN	**Kakani**	**9.42**	**305**	*e*Pn	**Pn**	**02 45 37.9**	**+1.3**
KKN				*e*Sn	**Sn**	**02 47 19.6**	**-1.1**
	24nm,0.2s						
DMN	**Daman**	**9.46**	**304**	*e*Pn	**Pn**	**02 45 38.3**	**+1.2**
DMN				*e*Sn	**Sn**	**02 47 19.4**	**-2.2**
	33nm,0.5s						
GKN	**Gorkha**	**10.02**	**305**	*e*Pn	**Pn**	**02 45 45.3**	**+0.6**
GKN				*e*Sn	**Sn**	**02 47 34.4**	**-0.8**
	66nm,0.3s						
DANN	**Dangsing**	**10.86**	**304**	*e*Pn	**Pn**	**02 45 57.7**	**+1.5**
DANN				*e*Sn	**Sn**	**02 47 53.4**	**-2.3**
	37nm,0.5s						
MKAR	**Makanchi Array**	**25.95**	**341**	P	**P**	**02 48 47.4**	**+0.4**
	1.0nm,0.5s,mb3.5,baz=144,slow=11,SNR=9.8						
WRA	**Warramunga Arr**	**57.79**	**134**	P	**P**	**02 53 04.9**	**-0.3**

HARP	**HAARP**	**4.88**	**51**	P		Pn	02 50 58.2	-1.3
MENT	**Mentasta**	**5.72**	**50**	*e*P		Pn	02 51 09.9	-0.9
COLA	**College**	**5.88**	**24**	P		Pn	02 51 10.8	-2.1
IL1	**Eielson Array**	**6.00**	**28**	P		Pn	02 51 12.2	-2.3
ILB	**Eielson Array**	**6.00**	**28**	P		Pn	02 51 12.2	-2.3
DOT	**Dot Lake**	**6.00**	**44**	P		Pn	02 51 13.1	-1.5
IM3	**Indian Mountai**	**6.40**	**359**	P		Pn	02 51 19.1	-0.8
BCA3	**Beaver Creek A**	**6.56**	**53**	P		Pn	02 51 20.6	-1.5
PCA	**Pinnacle**	**6.62**	**80**	P		Pn	02 51 22.4	-0.6
PNL	**Peninsula**	**7.08**	**83**	P		Pn	02 51 27.7	-1.4
COLD	**Coldfoot**	**7.78**	**9**	P		Pn	02 51 36.2	-2.4
DAWY	**Dawson**	**7.97**	**50**	P		Pn	02 51 39.1	-2.0
HYT	**Haines Junctio**	**7.99**	**74**	*e*Pn		Pn	02 51 41.2	-0.2
BM3	**Burnt Mountain**	**8.75**	**23**	P		Pn	02 51 49.6	-2.1
SIT	**Sitka**	**9.82**	**97**	*e*P		Pn	02 52 04.0	-2.2
	22nm,0.8s							

*IDC **25** 02:55:12.5±2.3, 550S×1529E, h0km, mb4.2/7, mb1 4.3/7, mb1mx4.1/17, mbtmp4.2/7, Error ellipse: s-maj=75.4km s-min=22.1km az=105.0*
*NEIC **25** 02:55:17.0±1.2, 557S×1527E, h35km, mb4.3/3, Error ellipse: s-maj=37.7km s-min=12.9km az=114.0*
*ISCJB **25** 02:55:21.3±4.4, 54S±02×1523E±02, h69km±34km, mb4.0/8, Error ellipse: s-maj=38.6km s-min=25.3km az=18.0*

ISC 25 02:55:22.9±4.1, 55S±02×1524E±02, h75km±31km, n15, σ0§95/14, mb4.0/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.45**	**233**	*e*Pn	**Pn**	**02 56 54.4**	**-0.9**
	20nm,0.6s						
PMG				*e*Sn	**Sn**	**02 58 07.9**	**+0.4**
CTA	**Charters Tower**	**15.65**	**202**	Pn	**Pn**	**02 59 01.6**	**+2.6**
	0.2nm,0.3s,baz=16,slow=13,SNR=5.3						
WRAB	**Tennant Creek**	**22.64**	**229**	*e*P	**P**	**03 00 18.2**	**+0.4**
	6.9nm,0.6s,mb4.2						
WB2	**Warramunga Arr**	**22.64**	**229**	*e*P	**P**	**03 00 17.1**	**-0.7**
WRA	**Warramunga Arr**	**22.65**	**229**	P	**P**	**03 00 17.8**	**-0.2**
	6.5nm,0.5s,mb4.2,baz=53,slow=9.9,SNR=38						
ASAR	**Alice Springs**	**25.33**	**223**	P	**P**	**03 00 43.1**	**+0.3**
	5.3nm,0.5s,mb4.2,baz=59,slow=8.9,SNR=86						
STKA	**Stephens Creek**	**28.09**	**200**	*e*P	**P**	**03 01 06.4**	**-1.2**
	1.4nm,0.5s,mb3.8						
STKA	**Stephens Creek**	**28.09**	**200**	P	**P**	**03 01 06.4**	**-1.2**
	2.5nm,0.8s,mb3.8,baz=16,slow=18,SNR=4.7						
FITZ	**Fitzroy Crossi**	**28.95**	**242**	*e*P	**P**	**03 01 15.0**	**-0.3**
	15nm,1.3s,mb4.5						
FITZ	**Fitzroy Crossi**	**28.95**	**242**	P	**P**	**03 01 14.9**	**-0.4**
	2.3nm,0.5s,mb4.0,baz=64,slow=11,SNR=12						
SONM	**Songino Array**	**66.71**	**328**	P	**P**	**03 06 05.5**	**-0.4**
	0.8nm,0.5s,mb3.8,baz=103,slow=6.5,SNR=3.1						
MKAR	**Makanchi Array**	**80.59**	**319**	P	**P**	**03 07 28.9**	**+1.6**
	0.4nm,0.6s,mb3.4,baz=104,slow=11,SNR=3.1						
BVAR	**Borovoye Array**	**89.56**	**323**	P	**P**	**03 08 11.7**	**-0.3**
	0.9nm,0.7s,mb4.0,baz=114,slow=1.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.12**	**287**	PKPbc	PKPbc	03 15 06.7	+0.5
	0.6nm,0.6s,baz=79,slow=2.5,SNR=11						
TORD				PKPab	PKPab	03 15 12.7	+0.4
	1.3nm,0.6s,baz=75,slow=3.7,SNR=17						
TORD	**Torodi Ar. Bea**	**150.12**	**287**	PKPbc	PKPbc	03 15 06.7	+0.5
TORD				PKPab	PKPab	03 15 12.7	+0.4

*IDC **25** 02:58:03.8±1.0, 533S×152.18E, h0km, mb4.3/10, mb1 4.5/10, mb1mx4.3/17, mbtmp4.3/10, MS3.7/8, Ms1 3.7/8, ms1mx3.3/30, Error ellipse: s-maj=33.8km s-min=19.6km az=109.0*
*ISCJB **25** 02:58:07.0±0.6, 531S±008×1522E±01, h33km, mb4.4/15, MS3.7/7, Error ellipse: s-maj=20.8km s-min=7.2km az=25.1*
*NEIC **25** 02:58:08.9±0.5, 530S×152.18E, mb4.7/8, Error ellipse: s-maj=20.0km s-min=7.9km az=120.0*

ISC 25 02:58:08.9±0.5, 532S±007×1522E±01, h35km, n37, σ0§91/28, mb4.4/15, MS3.7/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.41**	**230**	*e*Pn	**Pn**	**02 59 40.6**	**-0.3**
	53nm,0.6s						
PMG				*e*Sn	**Sn**	**03 00 50.9**	**-2.1**
HNR	**Honiara**	**8.73**	**118**	LR	LR	03 02 37.3	
	comp=Z,142nm,19.1s,baz=320,slow=31						
CTA	**Charters Tower**	**15.77**	**201**	*e*P	**Pn**	**03 01 50.2**	**+1.8**
	4.3nm,0.8s						
CTA	**Charters Tower**	**15.77**	**201**	Pn	**Pn**	**03 01 50.6**	**+2.2**
	0.2nm,0.3s,baz=23,slow=12,SNR=6.0						
CTAO	**Charters Tower**	**15.77**	**201**	*e*Pn	**Pn**	**03 01 47.9**	**-0.6**
	23nm,1.7s						
CTAO				*e*Sn	**Sn**	**03 04 43.1**	**+0.9**
GUMO	**Guam**	**20.13**	**339**	LR	LR	03 08 55.6	
	comp=Z,69nm,20.0s,MS3.0,baz=130,slow=32						
WRAB	**Tennant Creek**	**22.61**	**228**	*e*P	**P**	**03 03 06.8**	**0.0**
	14nm,0.7s,mb4.5						
WB2	**Warramunga Arr**	**22.62**	**228**	*e*P	**P**	**03 03 07.5**	**+0.7**
WRA	**Warramunga Arr**	**22.63**	**228**	P	**P**	**03 03 07.2**	**+0.2**
	9.0nm,0.6s,mb4.3,baz=53,slow=10.0,SNR=14						
ASAR	**Alice Springs**	**25.34**	**222**	P	**P**	**03 03 33.5**	**+0.8**
	5.0nm,0.6s,mb4.2,baz=59,slow=8.9,SNR=33						
STKA	**Stephens Creek**	**28.21**	**199**	*e*P	**P**	**03 03 57.3**	**-1.2**
	3.2nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**28.21**	**199**	P	**P**	**03 03 57.6**	**-0.9**
	3.9nm,0.8s,mb4.1,baz=19,slow=16,SNR=3.3						
FITZ	**Fitzroy Crossi**	**28.86**	**242**	*e*P	**P**	**03 04 03.9**	**-0.5**
	7.7nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	**28.86**	**242**	P	**P**	**03 04 03.7**	**-0.8**
	2.7nm,0.5s,mb4.2,baz=115,slow=9.4,SNR=6.8						
JOW	**Kunigami**	**39.45**	**325**	LR	LR	03 20 26.4	
	comp=Z,75nm,18.4s,MS3.6,baz=145,slow=34						
RPZ	**Rata Peaks**	**41.71**	**159**	LR	LR	03 18 33.5	
	comp=Z,103nm,20.2s,MS3.7,baz=277,slow=30						
NWAO	**Narrogin (SRO)**	**42.58**	**225**	LR	LR	03 22 51.9	
	comp=Z,229nm,20.0s,MS4.1,baz=279,slow=35						
KSRS	**Korea Array**	**48.18**	**334**	P	**P**	**03 06 47.5**	**+1.6**
	1.7nm,0.8s,mb4.1,baz=152,slow=8.7,SNR=7.9						
CMAR	**Chiang Mai Arr**	**57.53**	**296**	P	**P**	**03 07 56.2**	**+0.9**
	1.6nm,0.4s,mb4.4,baz=112,slow=5.1,SNR=6.1						
SONM	**Songino Array**	**66.43**	**328**	P	**P**	**03 08 55.8**	**+1.3**
	1.5nm,0.8s,mb4.1,baz=146,slow=11,SNR=3.9						
SONM				LR	LR	03 37 48.5	
	comp=Z,43nm,18.4s,MS3.7,baz=56,slow=36						
SLKM	**Skilak Lake**	**79.40**	**25**	*e*P	**P**	**03 10 10.6**	**-0.6**
MKAR	**Makanchi Array**	**80.30**	**319**	P	**P**	**03 10 16.0**	**-0.3**
	2.4nm,1.0s,mb4.1,baz=130,slow=4.9,SNR=5.4						
MKAR	**Makanchi Array**	**80.30**	**319**	P	**P**	**03 10 16.0**	**-0.3**
CHUM	**Lake Minchumin**	**80.39**	**22**	*e*P	**P**	**03 10 16.4**	**0.0**
	14nm,0.9s,mb4.9						
CHUM				*ep*P	pP	03 10 28.2	+0.7
MCK	**McKinley**	**81.58**	**23**	*e*P	**P**	**03 10 21.7**	**-1.1**
	20nm,1.0s,mb5.0						
COLA	**College**	**82.56**	**22**	*e*P	**P**	**03 10 26.6**	**-1.3**
	8.7nm,0.9s,mb4.8						
COLD	**Coldfoot**	**82.95**	**19**	*e*P	**P**	**03 10 30.0**	**+0.1**
	10nm,1.3s,mb4.7						
AML	**Almayashu**	**85.04**	**313**	*e*P	**P**	**03 10 41.7**	**+0.6**
	455nm,1.3s						
DAWY	**Dawson**	**85.52**	**24**	*e*P	**P**	**03 10 43.0**	**0.0**
DAWY				*ep*P	pP	03 10 53.6	-0.5
BVAR	**Borovoye Array**	**89.28**	**323**	P	**P**	**03 11 00.5**	**-0.9**
	1.8nm,0.7s,mb4.5,baz=96,slow=7.6,SNR=7.1						
YBH	**Yreka Blue Hor**	**89.87**	**48**	LR	LR	03 42 23.3	
	comp=Z,68nm,20.9s,MS4.0,baz=196,slow=30						
NVAR	**Mina Array Bea**	**92.90**	**52**	P	**P**	**03 11 18.6**	**0.0**
	0.9nm,0.8s,mb4.3,baz=257,slow=6.6,SNR=6.9						
LPIG	**La Paz**	**99.01**	**67**	LR	LR	03 46 40.5	
	comp=Z,64nm,19.2s,MS4.1,baz=181,slow=30						
GERES	**GERESS Array B**	**124.16**	**328**	PKP	PKPdf	03 17 06.7	+2.8
	0.4nm,0.6s,baz=312,slow=6.5,SNR=4.0						
MDT	**Midelt**	**145.11**	**325**	PKPbc	PKPbc	03 17 42.5	-0.3
	1.6nm,0.5s,baz=32,slow=3.9,SNR=8.4						
TORD	**Torodi Ar. Bea**	**149.86**	**287**	PKPbc	PKPbc	03 17 54.9	-1.6
	1.6nm,0.8s,baz=70,slow=1.8,SNR=18						
TORD				PKPab	PKPab	03 18 01.3	-0.7
	4.7nm,0.7s,baz=72,slow=3.0,SNR=22						
BDFB	**Brasilia**	**151.14**	**136**	PKPbc	PKPbc	03 18 01.2	+1.8
	5.6nm,0.8s,baz=176,slow=4.3,SNR=3.9						

*IDC **25** 03:02:15.1±2.2, 2754N×94.19E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.7/23, mbtmp4.0/4, ML4.1/1, Error ellipse: s-maj=169.1km s-min=26.4km az=62.0*
*ISCJB **25** 03:02:42.8±1.9, 258N±02×953E±02, h142km±18km, mb4.2/2, Error ellipse: s-maj=41.3km s-min=7.2km az=31.3*

ISC 25 03:02:43.0±2.1, 259N±02×953E±02, h124km±22km, n11, σ0§87/19, mb4.4/2, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**1.70**	**228**	*i* P	**Pn**	**03 03 12.0**	**-1.0**
IMP				*i* S	**Sn**	**03 03 36.0**	**+0.2**
ODAN	**Odare**	**7.18**	**279**	*e*Pn	**Pn**	**03 04 26.2**	**+0.9**
ODAN				*e*Sn	**Sn**	**03 05 47.8**	**+2.5**
	133nm,0.4s						
CMAR	**Chiang Mai Arr**	**8.15**	**155**	Pn	**Pn**	**03 04 38.6**	**0.0**
	0.5nm,0.3s,baz=334,slow=13,SNR=13						
CMAR				Lg		03 07 40.1	
	0.7nm,0.3s,baz=217,slow=30,SNR=7.2						
JIRN	**Jiri**	**8.34**	**284**	*e*Pn	**Pn**	**03 04 40.8**	**-0.3**
JIRN				*e*Sn	**Sn**	**03 06 14.7**	**+1.1**
	91nm,0.4s						
GUN	**Gumba**	**8.66**	**285**	*e*Pn	**Pn**	**03 04 45.9**	**+0.5**
GUN				*e*Sn	**Sn**	**03 06 20.9**	**-0.3**
	172nm,0.7s						
KKN	**Kakani**	**9.16**	**284**	*e*Pn	**Pn**	**03 04 52.6**	**+0.5**
KKN				*e*Sn	**Sn**	**03 06 33.3**	**-0.1**
	89nm,0.6s						
DMN	**Daman**	**9.29**	**283**	*e*Pn	**Pn**	**03 04 54.2**	**+0.4**
DMN				*e*Sn	**Sn**	**03 06 35.9**	**-0.5**
	29nm,0.4s						
GKN	**Gorkha**	**9.76**	**285**	*e*Pn	**Pn**	**03 05 00.3**	**+0.2**
GKN				*e*Sn	**Sn**	**03 06 47.1**	**-0.8**
	48nm,0.4s						
DANN	**Dangsing**	**10.58**	**286**	*e*Pn	**Pn**	**03 05 10.4**	**-0.8**
DANN				*e*Sn	**Sn**	**03 07 05.2**	**-2.6**
	29nm,0.3s						
WRA	**Warramunga Arr**	**59.28**	**136**	P	**P**	**03 12 31.7**	**-0.1**
	2.8nm,0.4s,mb4.6,baz=324,slow=7.4,SNR=26						
ASAR	**Alice Springs**	**61.84**	**140**	P	**P**	**03 12 49.3**	**+0.2**
	1.3nm,0.5s,mb4.3,baz=324,slow=6.5,SNR=15						

*DJA **25** 03:09:53, 301N×97.14E, h51km, MLv4.7/3*
IDC 25 03:09:42.0±3.5, 210N×9586E, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.6/20, mbtmp3.7/4, ML4.8/1, Error ellipse: s-maj=130.9km s-min=27.9km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.54**	**10**	Pn	Pn	03 13 36.9	+1.4
	1.3nm,0.3s,baz=197,slow=12,SNR=7.7						
WRA	**Warramunga Arr**	**43.65**	**122**	P	P	03 17 48.0	-0.7
	1.1nm,0.5s,baz=301,slow=9.2,SNR=8.3						
ASAR	**Alice Springs**	**45.00**	**127**	P	P	03 18 00.5	+0.9
	0.4nm,0.6s,baz=298,slow=8.3,SNR=3.7						
MKAR	**Makanchi Array**	**46.06**	**347**	P	P	03 18 07.1	-0.4
	0.3nm,0.5s,baz=155,slow=9.4,SNR=3.7						

*ISCJB **25** 03:09:55.4±0.4, 1069N±003×6197W±002, h63km±5km, Error ellipse: s-maj=5.0km s-min=3.5km az=148.7*
*FUNV **25** 03:09:57.4, 1072N×6194W, h48km, MW3.2*
*TRN **25** 03:09:57.2, 1071N×6191W, h53km, MD3.4*
*NEIC **25** 03:09:57.3, 1071N×6190W, h52km, MD3.4(TRN), After TRN.*

ISC 25 03:09:56.4±0.4, 1069N±003×6197W±002, h55km±6km, n28, σ0§67/47, 1C-5D, Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TCE	**Chacachacare**	**0.21**	**89**	*i*P	**Pn**	**03 10 05.7**	**+0.3**
TCE				*e*S	**Sn**	**03 10 11.9**	**+0.1**
GUIV	**Guiria**	**0.26**	**259**	*e*P	**Pn**	**03 10 06.3**	**+0.6**
GUIV				*e*S	**Sn**	**03 10 12.5**	**+0.1**
TRN	**Trinidad (W)**	**0.56**	**95**	*e*P	**Pn**	**03 10 08.7**	**0.0**
TRN				*e*S	**Sn**	**03 10 16.4**	**-1.2**
TPP	**Pointe-a-Pierr**	**0.63**	**126**	*e*P	**Pn**	**03 10 10.3**	**+0.7**
TPP				*e*S	**Sn**	**03 10 19.6**	**+0.5**
TBH	**Brigand Hill**	**0.91**	**103**	*e*P	**Pn**	**03 10 13.1**	**0.0**
TBH				*e*S	**Sn**	**03 10 24.9**	**-0.5**
GUNV	**Guanoco**	**1.10**	**241**	*e*P	**Pn**	**03 10 16.1**	**+0.5**
GUNV				*e*S	**Sn**	**03 10 30.3**	**+0.5**
CRUV	**Carupano**	**1.25**	**269**	*e*P	**Pn**	**03 10 17.8**	**+0.1**
CRUV				*e*S	**Sn**	**03 10 32.7**	**-0.7**
TPR	**Prospect**	**1.27**	**67**	*e*P	**Pn**	**03 10 18.0**	**+0.1**
TPR				*e*S	**Sn**	**03 10 33.4**	**-0.6**
BOT	**Bacolet**	**1.31**	**69**	*e*P	**Pn**	**03 10 18.8**	**+0.3**
BOT				*e*S	**Sn**	**03 10 34.3**	**-0.7**
ITEV	**Isla Los Testi**	**1.32**	**300**	*e*P	**Pn**	**03 10 18.8**	**+0.2**
ITEV				*e*S	**Sn**	**03 10 35.0**	**-0.2**
GRW	**Mount Saint Ca**	**1.49**	**12**	*e*P	**Pn**	**03 10 20.7**	**-0.2**
GRW				*e*S	**Sn**	**03 10 39.3**	**0.0**
TOSP	**Speyside**	**1.53**	**67**	*e*P	**Pn**	**03 10 21.2**	**-0.2**
TOSP				*e*S	**Sn**	**03 10 39.9**	**-0.3**
GRHS	**Sauteurs**	**1.55**	**12**	*e*P	**Pn**	**03 10 20.8**	**-1.0**
GRHS				*e*S	**Sn**	**03 10 40.4**	**-0.4**
GRIC	**Isle de Caille**	**1.62**	**13**	*e*P	**Pn**	**03 10 23.0**	**+0.2**
GRIC				*e*S	**Sn**	**03 10 42.8**	**+0.2**
GRSS	**Sisters**	**1.63**	**12**	*e*P	**Pn**	**03 10 23.8**	**+0.9**
GRSS				*e*S	**Sn**	**03 10 43.6**	**+0.8**
ORIV	**Oritupano**	**2.15**	**221**	*e*S	**Sn**	**03 10 55.3**	**-0.1**
RIOV	**Rio Grande**	**2.61**	**177**	*e*P	**Pn**	**03 10 36.7**	**+0.4**
SVB	**Belmont**	**2.66**	**15**	*e*P	**Pn**	**03 10 37.6**	**+0.7**
SVB				*e*S	**Sn**	**03 11 08.4**	**+0.6**
PCRV	**Puerto La Cruz**	**2.67**	**259**	*e*P	**Pn**	**03 10 37.9**	**+0.8**
IBAV	**Isla La Blanqu**	**2.79**	**294**	*e*P	**Pn**	**03 10 38.7**	**0.0**
IBAV				*e*S	**Sn**	**03 11 08.9**	**-2.3**
GURV	**El Guri**	**3.12**	**201**	*e*P	**Pn**	**03 10 42.7**	**-0.4**
PRGV	**PARIAGUAN**	**3.27**	**234**	*e*P	**Pn**	**03 10 45.9**	**+0.7**
CUPV	**Cœpira**	**3.81**	**261**	*e*P	**Pn**	**03 10 53.6**	**+1.0**
CUPV				*e*S	**Sn**	**03 11 34.2**	**-2.1**
MERV	**Las Mercedes**	**4.50**	**252**	*e*P	**Pn**	**03 11 02.9**	**+0.8**
LUEV	**Luepa**	**4.85**	**174**	*e*P	**Pn**	**03 11 06.1**	**-0.8**
CAOV	**Caicara del Or**	**5.45**	**232**	*e*P	**Pn**	**03 11 14.8**	**-0.3**
CAOV				*e*S	**Sn**	**03 12 11.8**	**-4.8**
TURV	**Turiamo**	**5.78**	**268**	*e*P	**Pn**	**03 11 19.8**	**+0.1**
BAUV	**El Baul**	**6.23**	**254**	*e*P	**Pn**	**03 11 25.9**	**0.0**

*THE **25** 03:27:28.9, 3877N×2103E, h0km, ML3.8*
*ATH **25** 03:27:28.1, 3874N×2110E, h4km±4km, MD3.8/12, ML3.8*
*NEIC **25** 03:27:28.2, 3874N×2109E, h10km, ML3.8(ATH), After ATH.*
*ISCJB **25** 03:27:29.1±0.3, 3877N±002×2102E±003, h10km, Error ellipse: s-maj=2.9km s-min=2.4km az=169.9*
*CSEM **25** 03:27:29.0±0.1, 3881N×2104E, h2km, MD3.8, Error ellipse: s-maj=1.8km s-min=1.2km az=75.0*

ISC 25 03:27:29.6±0.3, 3875N±002×2103E±002, h10km, n47, σ1§21/73, 6D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKD	**Levkas**	**0.30**	**263**	*e*Pg	**Pg**	**03 27 34.4**	**-1.3**
LKD				*e*Sg	**Sg**	**03 27 39.8**	**0.0**
EVR	**Evrytania**	**0.63**	**74**	*i*Pb	**Pg**	**03 27 39.1**	**-2.7**
EVR				*e*Sb	**Sg**	**03 27 48.9**	**-1.2**
KFL	**Anninata**	**0.66**	**197**	*e*Pg	**Pg**	**03 27 41.1**	**-1.4**
VLS	**Valsamata**	**0.67**	**212**	*e*Pg	**Pg**	**03 27 40.8**	**-1.8**
VLS				*e*Sg	**Sg**	**03 27 51.7**	**+0.4**
VLS	**Valsamata**	**0.67**	**212**	*i*PG	**Pg**	**03 27 40.8**	**-1.7**
VLS				*e*SG	**Sg**	**03 27 51.7**	**+0.5**
RLS	**Riolos of Patr**	**0.77**	**154**	*i*PB	**Pg**	**03 27 42.7**	**-1.7**
RLS				*e*SG	**Sg**	**03 27 52.9**	**-1.5**
JAN	**Janina**	**0.92**	**351**	*i*PG	**Pg**	**03 27 45.2**	**-2.2**
IGT	**Igoumenitsa**	**0.96**	**325**	*e*Pg	**Pg**	**03 27 45.9**	**-2.1**
IGT				*e*Sg	**Sg**	**03 28 00.6**	**+0.1**
AGG	**Agios Georgios**	**1.05**	**74**	*e*Pg	**Pg**	**03 27 47.4**	**-2.4**
AGG				*e*Sg	**Sg**	**03 28 03.6**	**+0.1**
MEV	**Metsovon**	**1.05**	**8**	*e*Pg	**Pg**	**03 27 47.7**	**-2.1**
THL	**Klokotos Trika**	**1.12**	**43**	*e*Pg	**Pg**	**03 27 49.0**	**-2.1**
THL				*e*Sg	**Sg**	**03 28 06.6**	**+0.9**
THL	**Klokotos Trika**	**1.12**	**43**	*i*Pg	**Pg**	**03 27 48.8**	**-2.3**
KEK	**Kerkira**	**1.36**	**316**	*i*PB	**Pn**	**03 27 54.6**	**-0.1**
KEK				*e*SB	**Sn**	**03 28 14.4**	**+1.6**
SRN	**Sarande**	**1.39**	**325**	*e*PN	**Pn**	**03 27 54.9**	**-0.1**
LKR	**Lokris**	**1.54**	**93**	*e*Pg	**Pn**	**03 27 56.8**	**-0.3**
LKR				*e*Sg	**Sg**	**03 28 17.6**	**-1.6**
LKR	**Lokris**	**1.54**	**93**	*i*PB	**Pn**	**03 27 56.7**	**-0.4**
KZN	**Kozani**	**1.66**	**20**	*i*PB	**Pn**	**03 27 59.1**	**+0.3**
LTK	**Loutraki**	**1.68**	**115**	*e*Pb	**Pn**	**03 27 59.3**	**+0.2**
LTK				*e*Sb	**Sb**	**03 28 23.6**	**+1.7**
ITM	**Ithomi**	**1.72**	**155**	*e*PB	**Pn**	**03 27 59.7**	**+0.2**
ITM				*e*SB	**Sb**	**03 28 23.1**	**+0.3**
VLX	**Vlachokerasia**	**1.74**	**142**	*e*Pb	**Pn**	**03 28 00.7**	**+0.8**
VLX				*e*Sb	**Sb**	**03 28 23.9**	**+0.4**
VLX	**Vlachokerasia**	**1.74**	**142**	*e*Pb	**Pn**	**03 28 00.6**	**+0.8**
VLX				*e*Sb	**Sb**	**03 28 23.9**	**+0.5**
LIT	**Litokhoron**	**1.76**	**39**	*e*Pb	**Pn**	**03 28 00.4**	**+0.2**
LIT				*e*Sb	**Sb**	**03 28 23.2**	**-0.9**
XOR	**Xorichti**	**1.79**	**69**	*e*Pb	**Pn**	**03 28 00.3**	**-0.3**
NEO	**Neokhori**	**1.79**	**71**	*i*PG	**Pn**	**03 28 00.6**	**0.0**
KBN	**Korca**	**1.89**	**354**	*e*PN	**Pg**	**03 28 06.0**	**+0.2**
PYL	**PYLOS**	**1.93**	**163**	*e*Pb	**Pn**	**03 28 04.2**	**+1.7**
FNA	**Florina**	**2.05**	**7**	*e*Pn	**Pn**	**03 28 04.9**	**+0.7**
FNA				*e*Sn	**Sn**	**03 28 31.8**	**+1.9**
DID	**Didima**	**2.13**	**125**	*e*Pn	**Pn**	**03 28 06.2**	**+0.9**
DID				*e*Sn	**Sn**	**03 28 34.5**	**+2.7**
ATH	**Athens Observa**	**2.25**	**109**	*e*PN	**Pn**	**03 28 07.6**	**+0.8**
AOS	**Alonnisos**	**2.26**	**78**	*e*Pn	**Pn**	**03 28 06.2**	**-0.8**
BIA	**Bitola**	**2.28**	**6**	*e*Pn	**Pn**	**03 28 08.3**	**+0.9**
BIA				*e*Sn	**Sn**	**03 28 36.2**	**+0.8**
BIA	**Bitola**	**2.28**	**6**	*e*Pn	**Pn**	**03 28 09.3**	**+2.0**
BIA				*e*Sn	**Sg**	**03 28 40.7**	**-2.2**
BIA	**Bitola**	**2.28**	**6**	*e*Pn	**Pn**	**03 28 08.3**	**+1.0**
BIA				*e*Sn	**Sg**	**03 28 40.7**	**-2.3**
OHR	**Ohrid**	**2.37**	**356**	*e*Pn	**Pn**	**03 28 11.9**	**+3.4**
OHR				*e*Sn	**Sg**	**03 28 45.9**	**+0.1**
PLG	**Polygyros**	**2.47**	**48**	*e*Pn	**Pn**	**03 28 08.9**	**-1.1**
PLG				*e*Sn	**Sn**	**03 28 40.8**	**+0.6**
PLG	**Polygyros**	**2.47**	**48**	*i*Pn	**Pn**	**03 28 09.9**	**-0.1**
PLG				*e*Sn	**Sn**	**03 28 40.8**	**+0.6**
VLI	**Veliai**	**2.52**	**143**	*i*PN	**Pn**	**03 28 12.4**	**+1.7**
KRUS	**Krusevo**	**2.62**	**4**	*e*Pn	**Pn**	**03 28 14.7**	**+2.7**
KRUS				*e*Sn	**Sg**	**03 28 53.3**	**-0.7**
SOH	**Sokhos**	**2.74**	**40**	*e*Pn	**Pn**	**03 28 14.5**	**+0.9**
SOH				*e*Sn	**Sn**	**03 28 48.0**	**+1.3**
TIR	**Tirane**	**2.75**	**341**	*e*PN	**Pn**	**03 28 14.4**	**+0.6**
TIR	**Tirane**	**2.75**	**341**	*e*Pn	**Pn**	**03 28 14.0**	**+0.2**
TIR	**Tirane**	**2.75**	**341**	*e*Pn	**Pn**	**03 28 14.0**	**+0.3**
OUR	**Ouranopolis**	**2.78**	**54**	*e*Pn	**Pn**	**03 28 14.8**	**+0.6**
VAY	**Valandovo**	**2.83**	**24**	*e*Pn	**Pb**	**03 28 19.9**	**-0.4**
VAY				*e*Sn	**Sn**	**03 28 50.3**	**+1.3**
TIP	**Timpagrande**	**3.36**	**279**	P	**Pn**	**03 28 22.4**	**+0.2**
PUK	**Puka**	**3.41**	**346**	*e*PN	**Pn**	**03 28 23.0**	**+0.2**
BCI	**Bajram Curri**	**3.69**	**349**	*e*PN	**Pn**	**03 28 27.0**	**+0.3**

IDC 25 03:36:29.1±0.9, 211N×2662W, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/23, mbtmp3.9/5, MS3.8/12, Ms1 3.7/12, ms1mx3.5/28, Error ellipse: s-maj=42.0km s-min=26.3km az=152.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**22.17**	**78**	LR	LR	03 47 51.6	
	comp=Z,108nm,19.2s,baz=245,slow=31						
TORD	**Torodi Ar. Bea**	**30.09**	**67**	P	P	03 42 38.8	-1.8
	1.5nm,0.9s,baz=253,slow=9.5,SNR=6.0						
CPUP	**Villa Florida**	**40.98**	**224**	LR	LR	04 00 10.2	
	comp=Z,126nm,18.9s,baz=39,slow=35						
LPAZ	**La Paz**	**44.89**	**244**	P	P	03 44 46.5	+0.7
	1.3nm,0.7s,baz=63,slow=3.3,SNR=4.8						
LPAZ				LR	LR	04 02 35.9	
	comp=Z,77nm,19.8s,baz=91,slow=35						
KEST

YER				*e*SG	**Sg**	**04 44 07.3**	**+1.1**
YER	**Yerkesik**	**1.06**	**216**	*e*Pg	**Pg**	**04 43 51.6**	**-0.8**
YER				*e*Sg	**Sg**	**04 44 07.3**	**+1.1**
DEMI	**Demirci**	**1.07**	**346**	*i* P	**Pg**	**04 43 52.1**	**-0.4**
DEMI				*i* S	**Sg**	**04 44 04.0**	**-2.4**
GDZ	**Gediz**	**1.13**	**17**	*i* P	**Pg**	**04 43 52.7**	**-1.0**
GDZ				*i* S	**Sg**	**04 44 07.6**	**-0.8**
ISP	**Isparta**	**1.16**	**98**	*e*PN	**Pn**	**04 43 53.1**	**-2.0**
ISP				*e*SN	**Sn**	**04 44 10.8**	**-0.5**
TURN	**Turunc**	**1.19**	**198**	*i* P	**Pg**	**04 43 57.7**	**+2.9**
TURN				*i* S	**Sg**	**04 44 16.2**	**+6.0**
MLSB	**Milas**	**1.24**	**235**	*e*PN	**Pn**	**04 43 55.2**	**-0.9**
SHUT	**Suhut-Afyon**	**1.30**	**65**	*e*PN	**Pn**	**04 43 56.1**	**-0.8**
AKS	**Akhisar**	**1.31**	**312**	*e*PN	**Pn**	**04 43 56.3**	**-0.8**
BCK	**Bucak**	**1.33**	**114**	*e*PN	**Pn**	**04 43 57.4**	**0.0**
ALT	**Altintas**	**1.33**	**38**	*e*PN	**Pn**	**04 43 56.5**	**-0.9**
ELL	**Elmali**	**1.43**	**151**	*e*PN	**Pn**	**04 43 58.3**	**-0.4**
KDAG	**Bornova**	**1.47**	**286**	*i* P	**Pn**	**04 43 58.5**	**-0.8**
KDAG				*i* S	**Sb**	**04 44 19.5**	**+0.6**
GCAM	**G?zelcaml?**	**1.48**	**259**	*i* P	**Pn**	**04 43 58.0**	**-1.4**
GCAM				*i* S	**Sb**	**04 44 20.0**	**+0.9**
BDRM	**Kayabasi**	**1.59**	**234**	*i* P	**Pn**	**04 43 58.7**	**-2.3**
BDRM				*i* S	**Sn**	**04 44 20.8**	**-1.1**
BLCB	**Balcova**	**1.63**	**284**	*e*PN	**Pn**	**04 44 02.4**	**+0.8**
DST	**Dursunbey**	**1.63**	**348**	*e*PN	**Pn**	**04 44 00.8**	**-0.8**
DURS	**Dursunbey**	**1.66**	**344**	*i* P	**Pn**	**04 44 01.4**	**-0.5**
BODT	**Bodrum**	**1.68**	**236**	*e*PN	**Pn**	**04 44 01.2**	**-1.0**
SMG	**Samos**	**1.78**	**261**	*e*P	**Pn**	**04 44 00.6**	**-3.0**
SMG				*e*S	**Sn**	**04 44 15.6**	**-11**
AKAS	**Kas**	**1.82**	**166**	*i* P	**Pn**	**04 44 06.2**	**+2.0**
BALB	**Balikesir**	**1.87**	**331**	*e*PN	**Pn**	**04 44 05.7**	**+0.8**
KSL	**Kastellorizon**	**1.90**	**167**	*e*P	**Pn**	**04 44 12.0**	**+6.8**
ARG	**Arkhangelos**	**1.94**	**203**	*e*P	**Pn**	**04 44 07.9**	**+2.2**
ARG				*e*S	**Sn**	**04 44 27.8**	**-2.7**
URLA	**Izmir**	**1.97**	**281**	*i* P	**Pn**	**04 44 02.7**	**-3.5**
BALY	**Balya**	**2.06**	**328**	*i* P	**Pn**	**04 44 07.2**	**-0.3**
ULDT	**Uludag**	**2.13**	**2**	*i* P	**Pn**	**04 44 12.0**	**+3.5**
ULDT				*i* S	**Sn**	**04 44 41.9**	**+6.5**
BORA	**Eskisehir**	**2.17**	**30**	*i* P	**Pn**	**04 44 08.2**	**-0.7**
KCT	**Karacabey**	**2.32**	**347**	*e*PN	**Pn**	**04 44 11.2**	**+0.2**
KIZT	**Kizilcal**	**2.38**	**68**	*e*PN	**Pn**	**04 44 11.9**	**0.0**
GEMT	**Gemlik**	**2.43**	**2**	*e*PN	**Pn**	**04 44 12.7**	**+0.2**
GPA	**Golpazari**	**2.48**	**23**	*e*PN	**Pn**	**04 44 13.9**	**+0.7**
ADVT	**Abdulvahap**	**2.48**	**12**	*e*PN	**Pn**	**04 44 14.0**	**+0.8**
BNT	**Bandirma**	**2.51**	**340**	*e*PN	**Pn**	**04 44 14.1**	**+0.5**
PRK	**Paraskevi**	**2.51**	**300**	*e*P	**Pn**	**04 44 13.9**	**+0.3**
EDC	**Edincik**	**2.52**	**339**	*e*PN	**Pn**	**04 44 14.0**	**+0.3**
YLV	**Yalova**	**2.57**	**5**	*e*PN	**Pn**	**04 44 14.9**	**+0.5**
KONT	**Konya--Tatoy**	**2.61**	**90**	*e*PN	**Pn**	**04 44 15.1**	**+0.1**
LADK	**Ladik-KONYA**	**2.62**	**85**	*e*PN	**Pn**	**04 44 15.2**	**+0.1**
GULT	**Gulveren**	**2.67**	**25**	*e*PN	**Pn**	**04 44 16.1**	**+0.2**
MRMT	**Marmara Adasi**	**2.83**	**337**	*e*PN	**Pn**	**04 44 19.0**	**+1.0**
HRT	**Hereke**	**2.85**	**9**	*e*PN	**Pn**	**04 44 18.7**	**+0.3**
KARP	**Karpathos**	**2.89**	**212**	*e*P	**Pn**	**04 44 19.4**	**+0.6**
HDMB	**Hadim**	**2.92**	**110**	*e*PN	**Pn**	**04 44 19.8**	**+0.5**
MDU	**Mudurnu**	**2.97**	**34**	*e*PN	**Pn**	**04 44 20.3**	**+0.3**
RKY	**Sarkoy-Tekirda**	**3.05**	**332**	*e*PN	**Pn**	**04 44 21.6**	**+0.6**
ISK	**Istanbul-Kandi**	**3.06**	**0**	*e*PN	**Pn**	**04 44 22.2**	**+1.1**
CTT	**Catalca**	**3.17**	**351**	*e*PN	**Pn**	**04 44 23.6**	**+0.9**
BGKT	**Bogazkoy**	**3.18**	**356**	*e*PN	**Pn**	**04 44 24.2**	**+1.4**
KLYT	**Kilyos**	**3.24**	**360**	*e*PN	**Pn**	**04 44 23.9**	**+0.2**
SLVT	**Silivri**	**3.29**	**349**	*e*PN	**Pn**	**04 44 25.2**	**+0.9**
ENEZ	**Enez**	**3.54**	**321**	*e*PN	**Pn**	**04 44 28.5**	**+0.8**

NNC ***25*** *04:47:21.5±2.5, 3882N×7087E, h146km±39km, mb3.1, mpv3.9, Error ellipse: s-maj=24.5km s-min=10.0km az=11.0*

ISC 25 04:47:22.5±2.5, 388N±02×708E±02, h137km±48km, n14, σ0.66/17, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=16	**3.96**	**33**	P		**Pn**	**Pn**	**04 48 20.7**	**-1.0**
KK31	**Karatay Array** 3.3nm,0.3s,baz=178,slow=13,SNR=98	**4.26**	**357**	⇓Pn		**Pn**	**Pn**	**04 48 25.0**	**-0.7**
KK31	15nm,0.5s,baz=176,slow=28,SNR=5.7			⇑Sn			**Sn**	**04 49 16.0**	**+1.0**
UCH	**Uchtor** SNR=57	**4.41**	**39**	P		**Pn**	**Pn**	**04 48 27.6**	**-0.1**
EKS2	**Erkin-Say** SNR=26	**4.43**	**30**	P		**Pn**	**Pn**	**04 48 27.4**	**-0.7**
KZA	**Kyzart** SNR=57	**4.69**	**45**	P		**Pn**	**Pn**	**04 48 32.0**	**+0.6**
AAK	**Ala-Archa** SNR=21	**4.71**	**35**	P		**Pn**	**Pn**	**04 48 31.7**	**0.0**
KBK	**Karagaybulak** SNR=5.5	**4.94**	**38**	P		**Pn**	**Pn**	**04 48 35.9**	**+1.1**
CHMS	**Chumysh** SNR=16	**5.12**	**35**	P		**Pn**	**Pn**	**04 48 37.0**	**-0.2**
USP	**Ospenovka** SNR=29	**5.23**	**31**	P		**Pn**	**Pn**	**04 48 38.1**	**-0.5**
ULHL	**Ulahol** SNR=20	**5.36**	**49**	P		**Pn**	**Pn**	**04 48 41.5**	**+1.2**
TKM2	**Tokmak 2** 21nm,0.6s	**5.46**	**40**	⇑Pn		**Pn**	**Pn**	**04 48 41.2**	**-0.5**
TKM2	19nm,1.1s			⇓Sn			**Sn**	**04 49 42.9**	**-0.6**
TKM2	**Tokmak 2** SNR=6.8	**5.46**	**40**	P		**Pn**	**Pn**	**04 48 42.5**	**+0.7**
AB31	**Akbulak array** 1.1nm,0.5s,baz=1.9,slow=27,SNR=25	**13.00**	**327**	⇑Pn		**Pn**	**Pn**	**04 50 21.9**	**+0.1**
AB31	13nm,1.1s,baz=147,slow=22,SNR=15			⇓Sn			**Sn**	**04 52 45.2**	**0.0**
AKTO	**Aktyubinsk** 2.6nm,1.6s	**14.71**	**326**	⇑Sn		**Sn**	**Sn**	**04 53 26.3**	**-0.1**

IDC 25 05:00:01.3±3.3, 493S×15222E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.3/15, mbtmp3.3/2, Error ellipse: s-maj=146.5km s-min=44.6km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.6nm,0.6s,baz=54,slow=10.0,SNR=7.7	**22.93**	**228**	P		P	P	05 05 07.0	-0.2
ASAR	**Alice Springs** 0.4nm,0.6s,baz=59,slow=9.5,SNR=8.2	**25.67**	**222**	P		P	P	05 05 33.3	+0.2
TORD	**Torodi Ar. Bea** 0.1nm,0.6s,baz=66,slow=2.5,SNR=3.6	**149.80**	**288**	PKPbc		PKPbc	PKPbc	05 19 54.1	-0.3

ISCJB ***25*** *05:15:54.0±0.8, 3636N±004×2662E±004, h121km±9km, Error ellipse: s-maj=7.4km s-min=4.3km az=152.1*
CSEM ***25*** *05:15:54.4±0.1, 3636N×2659E, h100km, MD3.5, Error ellipse: s-maj=2.2km s-min=1.3km az=165.0*
THE ***25*** *05:15:55.4, 3638N×2653E, h151km*
NEIC ***25*** *05:15:55.6, 3648N×2649E, h34km, MD3.5(ATH), After ATH.*
ATH ***25*** *05:15:55.6, 3647N×2648E, h34km±2km, MD3.4/7*

ISC 25 05:15:54.8±0.8, 3636N±004×2661E±004, h119km±9km, n27, σ0.82/41, 1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.92**	**151**	⇓*i*PN		**Pn**	**Pn**	**05 16 16.2**	**+0.3**
KARP				*e*SN		**Sn**	**Sn**	**05 16 30.5**	**-1.4**
THR1	**Thera Island**	**0.93**	**271**	*e*Pg		**Pn**	**Pn**	**05 16 15.9**	**0.0**
BDRM	**Kayabasi**	**0.97**	**43**	*i* P		**Pn**	**Pn**	**05 16 16.5**	**+0.1**
BDRM				*i* S		**Sn**	**Sn**	**05 16 33.6**	**+0.9**
THR3	**Thira Island,**	**0.98**	**273**	*e*Pg		**Pn**	**Pn**	**05 16 16.4**	**0.0**
THR6	**Thira Island,**	**0.98**	**270**	*e*Pg		**Pn**	**Pn**	**05 16 16.5**	**+0.1**
THR5	**Thira Island,**	**1.02**	**274**	*e*Pg		**Pn**	**Pn**	**05 16 16.9**	**+0.1**
APE	**Apeiranthos**	**1.12**	**310**	*e*Pg		**Pn**	**Pn**	**05 16 17.6**	**-0.3**
APE				*e*Sg		**Sn**	**Sn**	**05 16 35.1**	**-0.3**
APE	**Apeiranthos**	**1.12**	**310**	*e*Pn		**Pn**	**Pn**	**05 16 14.3**	**-3.6**
APE	**Apeiranthos**	**1.12**	**310**	*e*Pg		**Pn**	**Pn**	**05 16 17.6**	**-0.3**
APE				*e*Sg		**Sn**	**Sn**	**05 16 35.1**	**-0.3**
ARG	**Arkhangelos**	**1.23**	**96**	*e*PB		**Pn**	**Pn**	**05 16 19.5**	**+0.5**
ARG				*e*SN		**Sn**	**Sn**	**05 16 38.2**	**+0.8**
ZKR	**Zakros**	**1.28**	**195**	*e*Pg		**Pn**	**Pn**	**05 16 20.1**	**+0.5**
ZKR				*e*Sg		**Sn**	**Sn**	**05 16 39.9**	**+1.4**
NPS	**Neapolis**	**1.36**	**217**	*e*PN		**Pn**	**Pn**	**05 16 20.6**	**+0.1**
NPS				*e*SN		**Sn**	**Sn**	**05 16 38.2**	**-1.9**
LAST	**Lasithi**	**1.51**	**218**	*e*Pg		**Pn**	**Pn**	**05 16 22.2**	**0.0**
LAST				*e*Sg		**Sn**	**Sn**	**05 16 42.5**	**-0.5**
LAST	**Lasithi**	**1.51**	**218**	*e*Pg		**Pn**	**Pn**	**05 16 22.2**	**0.0**
LAST				*e*Sg		**Sn**	**Sn**	**05 16 42.5**	**-0.6**
AYDN	**Tasoluk**	**1.65**	**38**	*i* P		**Pn**	**Pn**	**05 16 23.6**	**-0.2**
AYDN	**Tasoluk**	**1.65**	**38**	*i* P		**Pn**	**Pn**	**05 16 23.6**	**-0.2**
AYDN				*i* S		**Sn**	**Sn**	**05 16 46.6**	**+0.6**
TURN	**Turunc**	**1.68**	**72**	*i* P		**Pn**	**Pn**	**05 16 20.7**	**-3.5**
SIVA	**Sivas**	**1.99**	**228**	*e*Pb		**Pn**	**Pn**	**05 16 28.3**	**+0.3**
SIVA				*e*Sb		**Sn**	**Sn**	**05 16 53.8**	**+0.5**
DNZL	**Cakiroluk**	**2.36**	**55**	*i* P		**Pn**	**Pn**	**05 16 31.5**	**-1.1**
DNZL				*i* S		**Sn**	**Sn**	**05 17 01.7**	**0.0**
AKAS	**Kas**	**2.42**	**92**	*i* P		**Pn**	**Pn**	**05 16 33.8**	**+0.4**
AKAS				*i* S		**Sn**	**Sn**	**05 17 02.3**	**-0.8**
GOLH	**Golhisar**	**2.52**	**69**	*i* P		**Pn**	**Pn**	**05 16 35.0**	**+0.3**
GOLH	**Golhisar**	**2.52**	**69**	*i* P		**Pn**	**Pn**	**05 16 35.0**	**+0.2**
GOLH				*i* S		**Sn**	**Sn**	**05 17 05.2**	**-0.3**
GVD	**Gavdhos**	**2.56**	**234**	*e*PN		**Pn**	**Pn**	**05 16 36.5**	**+1.3**
KYTH	**Kithira**	**2.89**	**270**	*e*PN		**Pn**	**Pn**	**05 16 40.0**	**+0.5**
VLI	**Velia**	**2.98**	**278**	*e*PN		**Pn**	**Pn**	**05 16 41.7**	**+1.0**
ITM	**Ithomi**	**3.85**	**284**	*e*Pn		**Pn**	**Pn**	**05 16 52.0**	**-0.2**
PYL	**PYLOS**	**3.96**	**279**	*e*Pn		**Pn**	**Pn**	**05 16 51.2**	**-2.4**

DJA ***25*** *05:15:23, 31.14S×179.85W, h56km, Mw5.7/4*
BJI ***25*** *05:15:59.0, 3100S×18000E, h416km, mB5.7, mb5.2*
ISCJB ***25*** *05:15:59.9±0.1, 3102S±002×17998E±004, h415km, mb5.2/107, Error ellipse: s-maj=4.4km s-min=2.5km az=26.2*
MOS ***25*** *05:16:00.1±2.0, 3066S×17997E, h412km, mb5.3/30, MS5.0/6, Error ellipse: s-maj=14.1km s-min=9.2km az=85.1*
GCMT ***25*** *05:16:01.1±0.1, 3069S×17985W, h421km, MW6.2/113, Moment Tensor Solution. s113,c277; s99,c153; Duration: 3s0 Moment tensor: Scale 1018Nm; Mrr-0.64±.01; Mθθ-1.36±.01; Mϕϕ 1.99±.01; Mrθ-1.10±.01; Mθϕ-0.11±.01; Mϕr-0.91±.01; Best double couple: M○2.27100×1018 NP1:ϕs138.00000°, δ49.00000°, λ-164.00000°. NP2:ϕs38.00000°, δ78.00000°, λ-42.00000°. Principal axes: T 2.2900, Plg19.0000°, Azm94.0000°; N -0.0440, Plg46.0000°, Azm225.0000°; P -2.2520, Plg38.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s.*
BGS ***25*** *05:16:01.1±9.7, 3097S×18000E, h417km, mb5.2(NEIC)*
IDC ***25*** *05:16:01.1±0.4, 3074S×17999E, h420km±3km, mb4.8/36, mb1 4.8/38, mb1mx4.8/38, mbtmp4.8/38, Error ellipse: s-maj=7.4km s-min=5.6km az=177.0*
NEIC ***25*** *05:16:01.1±0.5, 3097S×18000E, h417km±5km, mb5.2/60, MW6.2, Error ellipse: s-maj=7.2km s-min=5.3km az=142.0, Moment Tensor Solution. s42 Moment tensor: Scale 1018Nm; Mrr-0.93; Mθθ-0.42; Mϕϕ 1.35; Mrθ-1.38; Mθϕ-0.14; Mϕr-1.22; Best double couple: M○2.20000×1018 NP1:ϕs149.00000°, δ29.00000°, λ-153.00000°. NP2: ϕs35.00000°, δ77.00000°, λ-64.00000°. Principal axes: T 1.9700, Plg27.0000°, Azm104.0000°; N 0.4000, Plg25.0000°, Azm208.0000°; P -2.3700, Plg50.0000°, Azm334.0000°;*

ISC 25 05:16:01.3±0.1, 3101S±002×17997W±003, h418km, h418km±2.0km: pP-P, n684, σ1§28/354, mb5.2/105, 44C-31D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island** 5µm,0.3s,baz=101,slow=3.8,SNR=77	**2.50**	**46**	P		**P**	**P**	**05 16 60.0**	**-2.2**
RAO	8µm,0.3s,baz=67,slow=22,SNR=6.4			S			**S**	**05 17 34.6**	**-17**
RAO	**Raoul Island**	**2.50**	**46**	*e*Pn		**P**	**P**	**05 16 59.6**	**-2.6**
MXZ	**Matakaoa Point**	**6.69**	**192**	*e*P		**P**	**P**	**05 17 40.9**	**-0.9**
MXZ				S			**S**	**05 19 00.0**	**-4.0**
KUZ	**Kuaotunu**	**6.75**	**211**	*e*P		**P**	**P**	**05 17 45.9**	**+3.4**
WCZ	**Waipu Caves**	**6.83**	**222**	*e*P		**P**	**P**	**05 17 47.4**	**+4.0**
OUZ	**Omahuta**	**6.83**	**230**	P		**P**	**P**	**05 17 47.2**	**+3.7**
WIZ	**White Island**	**6.91**	**199**	*e*P		**P**	**P**	**05 17 46.5**	**+2.2**
PUZ	**Puketiti**	**7.20**	**191**	*e*P		**P**	**P**	**05 17 46.8**	**-0.6**
OTAZ	**Otara**	**7.28**	**214**	P		**P**	**P**	**05 17 53.2**	**+4.9**
KAAZ	**Kauri Point**	**7.29**	**216**	P		**P**	**P**	**05 17 54.0**	**+5.6**
MKAZ	**Moumakai**	**7.30**	**212**	*e*P		**P**	**P**	**05 17 52.1**	**+3.6**
TGRZ	**Tauranga**	**7.39**	**204**	P		**P**	**P**	**05 17 52.3**	**+2.8**
MARZ	**Manawahe**	**7.49**	**201**	P		**P**	**P**	**05 17 52.4**	**+1.8**
EDRZ	**Edgecumbe**	**7.58**	**200**	P		**P**	**P**	**05 17 54.4**	**+2.8**
MWZ	**Matawai**	**7.59**	**195**	*e*P		**P**	**P**	**05 17 51.2**	**-0.5**
MWZ				S			**S**	**05 19 18.4**	**-3.8**
LIRZ	**Lichensteins R**	**7.60**	**202**	P		**P**	**P**	**05 17 56.0**	**+4.2**
URZ	**Urewera** 149nm,0.3s,baz=14,slow=3.9,SNR=178	**7.62**	**198**	P		**P**	**P**	**05 17 53.2**	**+1.1**
URZ	1µm,0.3s,baz=42,slow=23,SNR=20			S			**S**	**05 19 23.6**	**+0.7**
URZ	**Urewera**	**7.62**	**198**	*e*P		**P**	**P**	**05 17 51.4**	**-0.6**
KARZ	**Kaharoa**	**7.66**	**203**	P		**P**	**P**	**05 17 54.9**	**+2.4**
TOZ	**Tahuroa Road**	**7.67**	**208**	*e*P		**P**	**P**	**05 17 55.7**	**+3.0**
MKRZ	**Makatiti**	**7.69**	**201**	*e*P		**P**	**P**	**05 17 55.7**	**+2.8**
TAZ	**Tarawera**	**7.77**	**201**	P		**P**	**P**	**05 17 55.7**	**+2.0**
UTU	**Utuhina**	**7.82**	**203**	P		**P**	**P**	**05 17 58.7**	**+4.5**
KNZ	**Kokohu**	**8.22**	**193**	*e*P		**P**	**P**	**05 17 58.4**	**-0.3**
WATZ	**Wairara**	**8.45**	**203**	P		**P**	**P**	**05 18 02.6**	**+1.4**
HATZ	**Hinemaiaia**	**8.50**	**201**	P		**P**	**P**	**05 18 02.0**	**+0.2**
RATZ	**Rangitukua**	**8.58**	**203**	P		**P**	**P**	**05 18 03.8**	**+1.1**
HIZ	**Hauiti**	**8.61**	**208**	*e*P		**P**	**P**	**05 18 05.0**	**+2.0**
BKZ	**Black Stump Fm**	**8.64**	**199**	*e*P		**P**	**P**	**05 18 01.6**	**-1.7**
RITZ	**Rihia Road**	**8.65**	**202**	P		**P**	**P**	**05 18 03.8**	**+0.3**
KATZ	**Kakaramea**	**8.70**	**203**	P		**P**	**P**	**05 18 05.2**	**+1.2**
WTVZ	**West Tongariro**	**8.87**	**203**	P		**P**	**P**	**05 18 06.5**	**+1.2**
NGZ	**Ngauruhoe**	**8.92**	**203**	P		**P**	**P**	**05 18 05.5**	**-0.9**
WPVZ	**Whakapapa**	**8.96**	**203**	*e*P		**P**	**P**	**05 18 07.2**	**+0.3**
TUVZ	**Tukino**	**8.98**	**202**	P		**P**	**P**	**05 18 06.2**	**-0.9**
FWVZ	**Far West T-bar**	**9.00**	**203**	*e*P		**P**	**P**	**05 18 06.7**	**-0.7**
DRZ	**Dome Shelter**	**9.02**	**203**	P		**P**	**P**	**05 18 08.3**	**+0.8**
WNVZ	**Wahianoa**	**9.05**	**202**	P		**P**	**P**	**05 18 06.3**	**-1.6**
MOVZ	**Moawhango**	**9.08**	**201**	P		**P**	**P**	**05 18 07.2**	**-1.0**
VRZ	**Vera Road**	**9.17**	**207**	P		**P**	**P**	**05 18 11.0**	**+1.8**
PKE	**Pukeiti**	**9.54**	**210**	P		**P**	**P**	**05 18 16.6**	**+3.3**
TSZ	**Takapari Road**	**9.62**	**199**	P		**P**	**P**	**05 18 12.3**	**-1.8**
WAZ	**Wanganui**	**9.64**	**204**	P		**P**	**P**	**05 18 15.1**	**+0.7**
MRZ	**Mangatainoka R**	**10.28**	**199**	P		**P**	**P**	**05 18 19.0**	**-2.5**
KIW	**Kapiti Island**	**10.67**	**201**	P		**P**	**P**	**05 18 24.1**	**-1.6**
MTW	**Mount Morrison**	**10.77**	**199**	P		**P**	**P**	**05 18 25.3**	**-1.5**
CAW	**Cannon Point**	**10.84**	**200**	P		**P**	**P**	**05 18 25.8**	**-1.9**
PAWZ	**Paruwai Farm**	**10.99**	**198**	P		**P**	**P**	**05 18 28.4**	**-0.9**
MRW	**Makara Radio**	**11.07**	**201**	P		**P**	**P**	**05 18 29.0**	**-1.1**
MSWZ	**Moikau Station**	**11.07**	**199**	P		**P**	**P**	**05 18 28.4**	**-1.8**
SNZO	**South Karori** 477nm,0.4s	**11.14**	**201**	*e*Pn		**P**	**P**	**05 18 29.5**	**-1.4**
BHW	**Baring Head**	**11.18**	**200**	P		**P**	**P**	**05 18 30.0**	**-1.3**
NNZ	**Nelson**	**11.51**	**206**	*e*P		**P**	**P**	**05 18 32.9**	**-2.1**
QRZ	**Quartz Range**	**11.52**	**210**	*e*P		**P**	**P**	**05 18 34.5**	**-0.6**
BSWZ	**Blackbirch Sta**	**11.77**	**203**	P		**P**	**P**	**05 18 37.0**	**-0.9**
THZ	**Tophouse**	**12.16**	**206**	*e*P		**P**	**P**	**05 18 40.9**	**-1.3**
KHZ	**Kahutara**	**12.51**	**203**	*e*P		**P**	**P**	**05 18 44.7**	**-1.3**
DSZ	**Denniston Nort**	**12.59**	**209**	*e*P		**P**	**P**	**05 18 45.6**	**-1.2**
LTZ	**Lake Taylor**	**13.28**	**206**	*e*P		**P**	**P**	**05 18 53.2**	**-1.2**
CRLZ	**Canterbury Las**	**13.85**	**203**	*e*P		**P**	**P**	**05 19 00.2**	**-0.4**
MQZ	**McQueen's Vall**	**13.96**	**203**	*e*P		**P**	**P**	**05 19 01.5**	**-0.2**
WVZ	**Waitaha Valley**	**14.13**	**209**	*e*P		**P**	**P**	**05 19 02.6**	**-1.0**
RPZ	**Rata Peaks** 16nm,0.3s,baz=332,slow=0.9,SNR=33	**14.54**	**207**	P		**P**	**P**	**05 19 08.4**	**+0.4**
RPZ	15nm,0.3s,baz=145,slow=7.1,SNR=5.2			S			**S**	**05 21 43.0**	**+0.6**
FOZ	**Fox Glacier**	**14.97**	**210**	*e*P		**P**	**P**	**05 19 10.7**	**-2.0**
DZM	**Mont Dzumac**	**15.05**	**303**	*e*P		**P**	**P**	**05 19 14.0**	**+0.1**
DZM				*e*S			**S**	**05 21 54.8**	**+1.6**
DZM	**Mont Dzumac**	**15.05**	**303**	*e*Pn		**P**	**P**	**05 19 14.2**	**+0.3**
LBZ	**Lake Benmore**	**15.44**	**207**	*e*P		**P**	**P**	**05 19 16.1**	**-1.7**
ODZ	**Otahua Downs**	**15.82**	**205**	P		**P**	**P**	**05 19 21.2**	**-0.6**
AFI	**Afiamalu** 85nm,0.3s,baz=215,slow=12,SNR=47	**18.61**	**26**	P		**P**	**P**	**05 19 47.5**	**-4.2**
AFI	28nm,0.3s,baz=180,slow=20,SNR=3.6			S			**S**	**05 22 58.6**	**-2.2**
AFI	**Afiamalu**	**18.61**	**26**	*e*P		**P**	**P**	**05 19 47.3**	**-4.4**
AFI				*e*S			**S**	**05 23 00.4**	**-0.5**
AFI	comp=Z,734nm,0.6s				pmax	pmax			
AFI	**Afiamalu** comp=Z,734nm,0.6s	**18.61**	**26**	*e*P		**P**	**P**	**05 19 47.3**	**-4.4**
AFI				*e*S			**S**	**05 23 00.4**	**-0.4**
RAR	**Rarotonga** comp=Z,96nm,0.9s,baz=238,slow=7.8,SNR=12	**20.57**	**67**	P		**P**	**P**	**05 20 09.0**	**-0.9**
RAR	**Rarotonga**	**20.57**	**67**	*e*P		**P**	**P**	**05 20 10.5**	**+0.6**
FUNA	**Funafuti** comp=Z,1µm,1.4s,mb6.1	**22.38**	**358**	*e*P		**P**	**P**	**05 20 24.9**	**-1.5**
ARMA	**Armidale**	**24.40**	**264**	*e*P		**P**	**P**	**05 20 47.2**	**+2.8**
ARMA				*e*				05 21 56.4	
ARMA				*e*PP				05 22 46.4	
ARMA				*e*S			**S**	**05 24 39.7**	**+6.5**
ARMA				*e*SCP		ScP		05 27 10.8	+2.2
CNB	**Canberra Magne**	**25.97**	**252**	*e*P		**P**	**P**	**05 21 02.1**	**+3.8**
CNB				*e*PP				05 22 15.8	
CNB				*e*S			**S**	**05 25 03.3**	**+5.4**
CNB				*e*SCP		ScP		05 27 27.9	+15
CAN	**Canberra**	**26.27**	**252**	*e*P		**P**	**P**	**05 21 04.3**	**+3.3**
TBI	**Tubuai** comp=Z,454nm,0.7s,mb5.9	**28.13**	**82**	*e*P		**P**	**P**	**05 21 16.2**	**-1.4**
TBI	comp=Z,710nm,1.3s			*e*pP				05 22 28.9	
HNR	**Honiara** comp=Z,693nm,0.8s,mb6.0,baz=181,slow=3.0,SNR=30	**28.46**	**315**	P		**P**	**P**	**05 21 18.3**	**-2.3**
HNR	comp=Z,54nm,0.5s,baz=160,slow=12,SNR=1.0			pP				05 22 34.1	
HNR	comp=Z,57nm,0.6s,baz=218,slow=17,SNR=4.7			S			**S**	**05 25 33.2**	**-4.1**
HNR	**Honiara**	**28.46**	**315**	*e*P		**P**	**P**	**05 21 18.0**	**-2.6**
HNR	comp=Z,589nm,0.8s,mb6.0			pmax	pmax				
HNR	**Honiara** comp=Z,589nm,0.8s,mb6.0	**28.46**	**315**	*e*P		**P**	**P**	**05 21 18.0**	**-2.6**
TAU	**Tasmania Unive**	**28.53**	**236**	*e*P		**P**	**P**	**05 21 23.2**	**+2.4**
TAU	comp=Z,139nm,1.0s,mb5.2			pmax	pmax				
TAU	**Tasmania Unive** comp=Z,139nm,1.0s,mb5.2	**28.53**	**236**	*e*P		**P**	**P**	**05 21 23.2**	**+2.4**
TOO	**Toolangi**	**29.16**	**248**	*e*P		**P**	**P**	**05 21 29.2**	**+2.8**
TOO				*e*PP		PP		05 22 46.4	+3.0
TOO				*e*S		**S**	**S**	**05 25 41.1**	**-6.6**
PAE	**Paea** comp=Z,814nm,0.8s,mb6.1	**30.60**	**71**	*e*P		**P**	**P**	**05 21 37.3**	**-1.9**
PAE	comp=Z,2µm,1.4s			*e*pP		pP		05 22 53.7	-1.0
PAE	**Paea**	**30.60**	**71**	*e*P		**P**	**P**	**05 21 37.3**	**-1.9**
PAE				*e**PP		pP		05 22 53.7	-1.0
PAE	comp=Z,814nm,0.8s,mb6.1			pmax	pmax				
PPT	**Papeete** comp=Z,123nm,1.0s,mb5.2	**30.66**	**71**	*e*P		**P**	**P**	**05 21 37.9**	**-1.8**
PPT	comp=Z,276nm,1.5s			*e*pP		pP		05 22 54.4	-0.7
PPT	**Papeete** comp=Z,111nm,0.6s,mb5.3,baz=206,slow=6.6,SNR=15	**30.66**	**71**	P		**P**	**P**	**05 21 39.5**	**-0.2**
PPT	comp=Z,82nm,1.0s,baz=185,slow=7.9,SNR=2.4			pP		pP		05 22 53.7	-1.5
TVO	**Taravao** comp=Z,1µm,0.7s	**30.81**	**72**	*e*P		**P**	**P**	**05 21 39.2**	**-1.8**
TVO	comp=Z,3µ

POHA	**Pohakuloa**	**55.67**	**28**	*e*P		**P**	**05 24 56.8**	**+0.4**
	comp=Z,115nm,0.7s,mb5.3								
GUMO	**Guam**	**55.74**	**317**	P		**P**	**05 24 54.0**	**-3.0**
	comp=Z,137nm,0.6s,mb5.5,baz=176,slow=12,SNR=8.5								
GUMO	**Guam**	**55.74**	**317**	*e*P		**P**	**05 24 55.8**	**-1.2**
GUMO				pmax	pmax				
	comp=Z,170nm,0.9s,mb5.4								
BATI	**Baumata**	**56.05**	**279**	P		**P**	**05 25 00.1**	**+0.8**
	comp=Z,92nm,0.8s,mb5.2,baz=114,slow=12,SNR=6.8								
BATI				pP	pP		05 26 25.0	-0.1	
	comp=Z,34nm,0.6s,baz=83,slow=20,SNR=1.0								
HON	**Honolulu**	**56.15**	**25**	*e*P		**P**	**05 25 00.4**	**+0.7**
KIP	**Kipapa**	**56.23**	**25**	*e*P		**P**	**05 25 00.8**	**+0.5**
KIP				pmax	pmax				
	comp=Z,57nm,0.8s,mb5.0								
KIP	**Kipapa**	**56.23**	**25**	*e*P		**P**	**05 25 00.8**	**+0.5**
	comp=Z,57nm,0.8s,mb5.0								
HKL	**Haleakala**	**56.24**	**27**	*e*P		**P**	**05 25 00.8**	**+0.4**
QSPA	**South Pole Qui**	**59.10**	**180**	P		**P**	**05 25 20.5**	**+1.3**
	comp=Z,122nm,0.9s,mb5.2,baz=20,slow=1.6,SNR=105								
QSPA				pP	pP		05 26 49.0	+2.9	
	comp=Z,61nm,0.9s,baz=293,slow=2.4,SNR=2.8								
QSPA				S		**S**	**05 32 58.1**	**+5.6**	
	comp=Z,3.4nm,1.0s,baz=14,slow=22,SNR=6.0								
KDI	**Kendari**	**60.23**	**284**⇓	*e*P		**P**	**05 25 27.2**	**-0.6**
KDI				*e*S		pP	05 26 56.5	+1.4	
MIR	**Mirnyy**	**60.81**	**207**⇓	*i*P		**P**	**05 25 33.0**	**+2.2**
MIR				pmax	pmax				
	comp=Z,100nm,0.8s,mb5.3								
KAPI	**Kappang**	**62.05**	**282**	P		**P**	**05 25 36.0**	**-3.9**
	comp=Z,211nm,1.0s,mb5.6,SNR=5.7								
KAPI	**Kappang**	**62.05**	**282**	P		**P**	**05 25 38.0**	**-1.9**
	comp=Z,10nm,0.3s,mb4.8,baz=146,slow=6.1,SNR=7.1								
KAPI				pP	pP		05 27 07.8	0.0	
	comp=Z,15nm,0.9s,baz=161,slow=16,SNR=2.0								
KAPI				S		**S**	**05 33 28.4**	**-3.1**	
	comp=Z,3.2nm,0.4s,baz=222,slow=16,SNR=3.0								
KAPI	**Kappang**	**62.05**	**282**	*e*P		**P**	**05 25 40.0**	**0.0**
PCI	**Palu**	**64.22**	**286**⇓	*e*P		**P**	**05 25 56.0**	**+2.0**
	comp=Z,5.0nm,1.0s,mb4.0								
DAV	**Davao City (W)**	**64.35**	**296**	P		**P**	**05 25 54.1**	**-0.7**
	comp=Z,177nm,0.4s,mb6.0,baz=238,slow=23,SNR=3.6								
DAV	**Davao City (W)**	**64.35**	**296**⇑	*i*P		**P**	**05 25 52.8**	**-2.0**
CBIJ	**Chichi jima**	**68.15**	**324**	P		**P**	**05 26 17.2**	**-1.0**
	comp=Z,251nm,0.7s,mb6.0,baz=146,slow=9.9,SNR=17								
TSM	**Tawau**	**68.79**	**289**	⇑P		**P**	**05 26 23.6**	**+1.1**
MYLDM	**Lahad Datu**	**68.79**	**290**	⇑P		**P**	**05 26 24.1**	**+1.6**
SDKM	**Sandakan**	**70.12**	**290**	⇑P		**P**	**05 26 31.2**	**+0.7**
MAW	**Mawson**	**71.14**	**201**	*e*P		**P**	**05 26 37.4**	**+1.7**
	comp=Z,9.0nm,1.2s,mb4.2								
MAW				*e*PP	pP		05 28 08.2	+1.8	
MAW				*e*S	S		05 35 16.0	-1.5	
MAW	**Mawson**	**71.14**	**201**	P		**P**	**05 26 36.2**	**+0.5**	
	comp=Z,8.0nm,1.0s,mb4.2,baz=130,slow=6.9,SNR=4.3								
MAW				pP	pP		05 28 06.9	+0.5	
	comp=Z,13nm,0.9s,baz=147,slow=5.8,SNR=3.6								
MAW	**Mawson**	**71.14**	**201**	*e*P		**P**	**05 26 37.4**	**+1.7**
MAW				*e*	pP		05 28 08.2	+1.8	
MAW				*e*S	S		05 35 16.0	-1.5	
MAW				pmax	pmax				
	comp=Z,9.0nm,1.2s								
KKM	**Kota Kinabalu**	**71.14**	**289**	⇑P		**P**	**05 26 37.5**	**+0.9**
KKM	**Kota Kinabalu**	**71.14**	**289**	*e*P		**P**	**05 26 36.0**	**-0.6**
BTM	**Bintulu**	**72.10**	**285**	⇑P		**P**	**05 26 44.3**	**+2.0**
PMSA	**Palmer Station**	**72.40**	**156**	P		**P**	**05 26 44.0**	**+0.9**
	comp=Z,35nm,0.9s,mb4.9,baz=177,slow=6.1,SNR=9.5								
PMSA	**Palmer Station**	**72.40**	**156**	*e*P		**P**	**05 26 44.1**	**+0.9**
	comp=Z,314nm,2.0s,mb5.5								
SBUM	**Sibu**	**72.41**	**284**	⇓P		**P**	**05 26 45.1**	**+1.1**
KSM	**Kuching**	**73.47**	**282**	⇓P		**P**	**05 26 50.3**	**+0.1**
KSM	**Kuching**	**73.47**	**282**	*e*P		**P**	**05 26 49.5**	**-0.7**
JOW	**Kunigami**	**75.83**	**314**	P		**P**	**05 27 01.6**	**-1.6**
	comp=Z,97nm,0.8s,mb5.5,baz=131,slow=6.4,SNR=7.7								
SYO	**Syowa Base**	**76.13**	**194**⇓	*e*P		**P**	**05 27 01.6**	**-2.7**
USHA	**Ushuaia**	**76.36**	**146**	P		**P**	**05 27 06.8**	**+1.0**
	comp=Z,17nm,0.9s,mb4.7,baz=243,slow=4.5,SNR=5.3								
SNAA	**Sanae**	**77.58**	**179**	*e*P		**P**	**05 27 11.5**	**-0.8**
SNAA				*e*			05 27 13.9		
SNAA				*e*	pP		05 28 45.9	+1.0	
SNAA				*e*S	S		05 36 29.0	+0.9	
SNAA	**Sanae**	**77.58**	**179**	*e*P		**P**	**05 27 12.5**	**+0.2**
SNAA				*e**PP	pP		05 28 46.1	+1.2	
SNAA				*e*S	S		05 36 29.2	+1.1	
SNAA				pmax	pmax				
	comp=Z,115nm,1.3s								
SNAA	**Sanae**	**77.58**	**179**	*e*P		**P**	**05 27 12.5**	**+0.2**
	comp=Z,115nm,1.3s,mb5.3								
SNAA				*e*pP	pP		05 28 46.1	+1.2	
SNAA				*e*S	S		05 36 29.2	+1.0	
MJAR	**Matsushiro Arr**	**77.79**	**327**	P		**P**	**05 27 11.2**	**-2.6**
	comp=Z,47nm,1.0s,mb5.1,baz=165,slow=5.4,SNR=36								
MJAR				pP	pP		05 28 43.8	-2.8	
	comp=Z,1.0nm,0.2s,baz=273,slow=38,SNR=1.1								
MJAR				PP	PP		05 30 04.6	-12	
	comp=Z,8.8nm,0.9s,baz=154,slow=5.4,SNR=3.5								
MJAR	**Matsushiro Arr**	**77.79**	**327**	P		**P**	**05 27 11.2**	**-2.6**
MJAR				*PP	pP		05 28 43.8	-2.8	
MAJO	**Matsushiro**	**77.80**	**327**	*e*P		**P**	**05 27 12.6**	**-1.3**
MAJO				pmax	pmax				
	comp=Z,76nm,0.9s,mb5.3								
MAJO	**Matsushiro**	**77.80**	**327**	*e*P		**P**	**05 27 12.6**	**-1.3**
	comp=Z,76nm,0.9s,mb5.3								
MAT	**Matsushiro**	**77.80**	**327**	P		**P**	**05 27 11.3**	**-2.6**
MAT				S	S		05 36 22.0	-9.2	
VNA3	**Neumayer Olymp**	**77.80**	**177**	*e*P		**P**	**05 27 12.9**	**-0.6**
VNA3				*e*			05 27 15.5		
VNA3				*e*			05 27 25.6		
VNA3				*e*	pP		05 28 47.5	+1.4	
VNA3				*e*S	S		05 36 34.4	+3.9	
NVL	**N'lazarevskaya**	**78.16**	**184***c*	*i*P		**P**	**05 27 17.2**	**+1.8**
NVL				*e**PP	PcP		05 27 27.5	+4.3	
NVL				*e*S	S		05 36 34.7	+0.4	
NVL				pmax	pmax				
	comp=Z,67nm,1.2s,mb5.2								
NVL				MLR	MLR				
	comp=N,354nm,16.0s								
NVL				MLR	MLR				
	comp=E,225nm,16.0s								
NVL				MLR	MLR				
	comp=Z,646nm,16.0s								
VNA2	**Neumayer--Watz**	**78.22**	**178**	*e*P		**P**	**05 27 15.3**	**-0.4**
	baz=185,slow=4.9								
VNA2				*e*			05 27 18.2		
VNA2				*e*			05 27 28.3		
VNA2				*e*	pP		05 28 50.3	+1.8	
VNA2				*e*S	S		05 36 35.1	+0.3	
VNA1	**Neumayer--Stat**	**78.46**	**177**	*e*P		**P**	**05 27 17.1**	**+0.1**
VNA1				*e*			05 27 19.7		
VNA1				*e*			05 27 30.0		
MYKOM	**Kota Tinggi**	**79.10**	**279**	⇓P		**P**	**05 27 21.2**	**-0.2**
KGM	**Kluang**	**79.67**	**279**	⇓P		**P**	**05 27 25.5**	**+1.0**
ERM	**Erimo**	**80.21**	**333**⇓	*i*P		**P**	**05 27 27.3**	**+0.7**
ERM	**Erimo**	**80.21**	**333**	*e*P		**P**	**05 27 26.5**	**-0.1**
	comp=Z,112nm,0.8s,mb5.5								
QZH	**Quanzhou**	**80.93**	**306**	P		**P**	**05 27 30.3**	**-0.5**
QZH				AP	pP		05 29 02.0	-2.4	
QZH				XP	sP		05 29 47.8	-0.2	
QZH				S	S		05 37 01.8	-2.5	
KTGM	**Kuala Trenggan**	**81.57**	**281**	⇑P		**P**	**05 27 36.6**	**+2.1**
FRIM	**Kepong**	**81.74**	**279**	⇑P		**P**	**05 27 36.9**	**+1.5**
ADK	**Adak**	**82.59**	**2**	*e*P		**P**	**05 27 36.3**	**-2.4**
IPM	**Ipoh**	**82.90**	**280**	⇓P		**P**	**05 27 43.0**	**+1.7**
SSE	**Sheshan**	**83.24**	**312**	P		**P**	**05 27 43.1**	**+0.6**
SSE				AP	pP		05 29 14.8	-2.0	
SSE				XP	sP		05 29 55.6	-4.5	
SSE				S	S		05 37 29.4	+2.1	
SSE				XS	sS		05 40 10.6	-4.4	
SSE				AMB	AMB				
	comp=Z,34nm,1.0s,mb5.0								
SSE				AMB	AMB				
	comp=Z,867nm,6.4s								
SSE	**Sheshan**	**83.24**	**312**	P		**P**	**05 27 43.1**	**+0.6**
	comp=Z,34nm,1.0s,mb5.0								
SSE				pP	pP		05 29 14.7	-2.1	
SSE				sP	sP		05 29 55.6	-4.5	
SSE				S	S		05 37 29.4	+2.1	
SSE				sS	sS		05 40 10.6	-4.4	
SSE				LR	LR				
	comp=Z,740nm,16.2s								
PLCA	**Paso Flores**	**83.33**	**134**	P		**P**	**05 27 43.2**	**+0.3**
	comp=Z,34nm,1.0s,mb5.0,baz=228,slow=4.6,SNR=31								
PLCA				pP			05 29 18.7	+1.6	
	comp=Z,13nm,0.9s,baz=212,slow=6.2,SNR=3.5								
PLCA				PKPPKP			05 54 05.5		

	comp=Z,1.8nm,0.9s,baz=38,slow=1.9,SNR=3.5								
PLCA	**Paso Flores**	**83.33**	**134**	*e*P		**P**	**05 27 43.5**	**+0.5**	
PLCA				*e*SP			05 29 20.0		
PLCA				pmax	pmax				
	comp=Z,47nm,1.1s								
PLCA	**Paso Flores**	**83.33**	**134**	*e*P		**P**	**05 27 43.5**	**+0.5**	
	comp=Z,47nm,1.1s,mb5.1								
PLCA				*e*SP			05 29 20.0		
SMY	**Shemya**	**83.54**	**356**	*e*P		**P**	**05 27 43.6**	**+0.1**	
KSRS	**Korea Array**	**83.73**	**321**	P		**P**	**05 27 43.7**	**-1.1**	
	comp=Z,38nm,0.9s,mb5.1,baz=140,slow=5.7,SNR=59								
QIZ	**Qiongzhong**	**83.73**	**296**	P		**P**	**05 27 47.0**	**+1.8**	
QIZ				AP	pP		05 29 20.9	+1.3	
QIZ				XP	sP		05 30 02.8	-0.1	
QIZ				S	S		05 37 28.3	-4.3	
QIZ				AMB	AMB				
	comp=Z,107nm,2.5s,mb5.1								
QIZ				AMB	AMB				
	comp=Z,1μm,4.8s								
SKR	**Severo-Kuril's**	**84.04**	**345**	*e*P		**P**	**05 27 43.5**	**-2.5**	
SKR				S	S		05 37 22.0	-12	
SKR				pmax	pmax				
	comp=Z,160nm,0.9s,mb5.8								
SKR				pmax	pmax				
	comp=Z,2μm,6.0s								
SKR				smax					
	comp=N,3μm,14.0s								
SKR				smax					
	comp=E,3μm,14.0s								
INCN	**Inchon**	**84.45**	**320**	*e*P		**P**	**05 27 48.5**	**+0.1**	
YSS	**Yuzh-Sakhalins**	**84.57**	**335***k*	*i*P		**P**	**05 27 47.5**	**-1.3**	
YSS				*e**SP	sP		05 30 08.0	+1.4	
YSS				*e*			05 37 26.0		
YSS				*e*S	S		05 37 35.0	-4.6	
YSS				pmax	pmax				
	comp=Z,400nm,1.0s,mb6.1								
YSS				pmax	pmax				
	comp=Z,2μm,5.0s								
YSS				MLR	MLR				
	comp=Z,500nm,18.0s								
YSS	**Yuzh-Sakhalins**	**84.57**	**335**	*e*P		**P**	**05 27 48.2**	**-0.5**	
	comp=Z,290nm,0.8s,mb6.1								
NJ2	**Nanjing**	**85.36**	**312**	*e*P		**P**	**05 27 54.6**	**+1.6**	
NJ2				AP	pP		05 29 26.8	-1.0	
NJ2				XP	sP		05 30 08.4	-2.6	
NJ2				SKS			05 37 34.0		
NJ2				S	S		05 37 47.5	-0.5	
NJ2				XS	sS		05 40 34.5	-2.2	
NJ2				SS	SS		05 43 35.0	0.0	
NJ2				AMB	AMB				
	comp=Z,50nm,0.8s,mb5.3								
NJ2				AMB	AMB				
	comp=Z,810nm,7.7s								
UBT	**Ubonrachathani**	**85.39**	**291**	P		**P**	**05 27 54.8**	**+1.3**	
PET	**Petropavlovsk**	**85.73**	**347***d*	*i*P		**P**	**05 27 52.8**	**-1.5**	
PET				*e*			05 31 20.7		
PET				*e*S	SKSac		05 37 31.9	-6.7	
PET				*e*			05 37 49.9		
PET				*e*SPP			05 38 50.5		
PET				*e**SS	PS		05 39 54.0	+5.2	
PET				pmax	pmax				
	comp=Z,2μm,5.4s								
PET				pmax	pmax				
	comp=Z,1μm,8.3s								
VLA	**Vladivostok**	**85.96**	**327**	*i*P		**P**	**05 27 54.8**	**-0.8**	
PEA0B	**Petropavlovsk-**	**86.00**	**347**	*e*P		**P**	**05 27 53.7**	**-1.9**	
PETK	**Petropavlovsk-**	**86.00**	**347**	P		**P**	**05 27 53.3**	**-2.2**	
	comp=Z,107nm,1.0s,mb5.5,baz=119,slow=7.4,SNR=48								
LPIG	**La Paz**	**86.30**	**59**	P		**P**	**05 27 57.9**	**+0.2**	
	comp=Z,8.5nm,0.4s,mb4.8,baz=338,slow=5.4,SNR=4.4								
PTRM	**Twissleman Ran**	**86.87**	**45**	*e*P		**P**	**05 28 01.8**	**+1.6**	
BAR	**Barrett**	**87.14**	**49**	*e*P		**P**	**05 28 02.8**	**+1.2**	
MWC	**Mount Wilson**	**87.25**	**47**	*e*P		**P**	**05 28 03.2**	**+1.2**	
MWC				pmax	pmax				
	comp=Z,9.0nm,0.6s,mb4.7								
MWC	**Mount Wilson**	**87.25**	**47**	*e*P		**P**	**05 28 03.2**	**+1.2**	
	comp=Z,9.2nm,0.6s,mb4.7								
WHN	**Wuhan**	**87.37**	**308**	⇑P		**P**	**05 28 03.5**	**+0.8**	
WHN				AP	pP		05 29 39.6	+1.6	
WHN				XP	sP		05 30 20.3	-0.8	
WHN				AMB	AMB				
	comp=Z,47nm,1.0s,mb5.2								
WHN				AMB	AMB				
	comp=Z,3μm,5.6s								
SDPT	**Sand Point**	**87.62**	**11**	*e*P		**P**	**05 28 02.8**	**-0.4**	
KKTK	**Khon Kaen**	**87.75**	**290**	⇑P		**P**	**05 28 06.0**	**+1.3**	
	comp=Z,309nm,0.5s,mb6.3								
PFO	**Pinyon Flat Ob**	**87.88**	**48**	P		**P**	**05 28 06.0**	**+1.0**	
	comp=Z,164nm,1.0s,mb5.7,SNR=6.9								
PFO	**Pinyon Flat Ob**	**87.88**	**48**	P		**P**	**05 28 03.6**	**-1.4**	
	comp=Z,22nm,0.8s,mb4.9,baz=245,slow=3.6,SNR=25								
PFO	**Pinyon Flat Ob**	**87.88**	**48**	*e*P		**P**	**05 28 03.4**	**-1.6**	
PFO				pmax	pmax				
	comp=Z,27nm,0.9s,mb5.0								
PFO	**Pinyon Flat Ob**	**87.88**	**48**	*e*P		**P**	**05 28 03.4**	**-1.6**	
	comp=Z,26nm,0.9s,mb5.0								
ISA	**Isabella**	**87.93**	**46**	*e*P		**P**	**05 28 04.9**	**-0.3**	
MDJ	**Mudanjiang**	**88.18**	**327**	P		**P**	**05 28 06.9**	**+0.8**	
MDJ				PP	PP		05 31 38.1	-2.7	
MDJ				SKS			05 37 50.0		
MDJ				S	S		05 38 16.6	+2.5	
MDJ				AMB	AMB				
	comp=Z,65nm,0.9s,mb5.4								
MDJ				AMB	AMB				
	comp=Z,1μm,5.7s								
MDJ	**Mudanjiang**	**88.18**	**327**	*e*P		**P**	**05 28 05.1**	**-1.0**	
	comp=Z,56nm,0.9s,mb5.3								
DL2	**Dalian**	**88.26**	**318**	*i*P		**P**	**05 28 06.1**	**-0.5**	
DL2				AP	pP		05 29 38.4	-3.8	
DL2				SKS			05 37 52.5		
DL2				S	S		05 38 13.9	-1.2	
DL2				SS	SS		05 44 14.8	-2.0	
DL2				AMB	AMB				
	comp=Z,50nm,0.8s,mb5.3								
DL2				AMB	AMB				
	comp=Z,580nm,6.7s								
CMB	**Columbia Colle**	**88.36**	**43**	*e*P		**P**	**05 28 08.2**	**+1.1**	
CMB				pmax	pmax				
	comp=Z,26nm,0.9s,mb5.0								
CMB	**Columbia Colle**	**88.36**	**43**	*e*P		**P**	**05 28 08.2**	**+1.1**	
	comp=Z,26nm,0.9s,mb5.0								
KHMM	**Horse Mountain**	**88.42**	**39**	*e*P		**P**	**05 28 09.5**	**+2.2**	
GLA	**Glamis**	**88.58**	**50**	*e*P		**P**	**05 28 08.8**	**+0.5**	
GSC	**Goldstone**	**88.73**	**47**	*e*P		**P**	**05 28 08.5**	**-0.4**	
HABR	**Khabarovsk**	**88.77**	**332**	*e*P		**P**	**05 28 07.9**	**-0.8**	
HABR				*e*			05 31 44.2		
HABR				*e*			05 38 19.9		
HABR				*e*			05 44 18.5		
WDC	**Whiskeytown Da**	**88.86**	**40**	*e*P		**P**	**05 28 10.3**	**+0.9**	
WDC				pmax	pmax				
	comp=Z,31nm,1.0s,mb5.0								
WDC	**Whiskeytown Da**	**88.86**	**40**	*e*P		**P**	**05 28 10.3**	**+0.9**	
	comp=Z,31nm,1.0s,mb5.0								
TIA	**Tai'an**	**89.15**	**314**	⇓P		**P**	**05 28 09.8**	**-1.1**	
TIA				AMB	AMB				
	comp=Z,36nm,0.8s,mb5.2								
SNY	**Shenyang**	**89.19**	**321**	P		**P**	**05 28 08.8**	**-2.1**	
SNY				AP	pP		05 29 43.8	-2.8	
SNY				XP	sP		05 30 29.3	-0.3	
SNY				AMB	AMB				
	comp=Z,38nm,1.0s,mb5.1								
SNY				AMB	AMB				
	comp=Z,771nm,12.0s								
WAKR	**Walker**	**89.23**	**43**	*e*P		**P**	**05 28 12.4**	**+1.2**	
KEBM	**Edson Butte**	**89.50**	**37**	*e*P		**P**	**05 28 14.4**	**+2.1**	
YBH	**Yreka Blue Hor**	**89.57**	**39**	P		**P**	**05 28 12.0**	**-0.6**	
	comp=Z,20nm,0.9s,mb4.9,baz=228,slow=3.1,SNR=24								
YBH	**Yreka Blue Hor**	**89.57**	**39**	*e*P		**P**	**05 28 13.9**	**+1.3**	
YBH				pmax	pmax				
	comp=Z,22nm,0.9s								
YBH	**Yreka Blue Hor**	**89.57**	**39**	*e*P		**P**	**05 28 13.9**	**+1.3**	
	comp=Z,22nm,0.9s,mb5.0								
NST	**Nakhon Sawan**	**89.57**	**288**	P		**P**	**05 28 12.5**	**-0.8**	
	comp=Z,62nm,1.4s,mb5.2								
CN2	**Changchun**	**89.61**	**324**	⇑P		**P**	**05 28 11.3**	**-1.5**	
CN2				*e*AP	pP		05 29 46.3	-2.3	
CN2				*e*XP	sP		05 30 30.9	-0.6	
CN2				PPP			05 33 52.6		
CN2				SKS			05 38 00.3		
CN2				*e*S	S		05 38 27.1	-0.3	
CN2				AMB	AMB				
	comp=Z,140nm,0.9s,mb5.8								
CN2				AMB	AMB				
	comp=Z,1μm,6.0s								

LDFC	**Landfair**	**89.67**	**48**	*e*P		**P**	**05 28 15.2**	**+1.9**	
	comp=Z,60nm,0.8s,mb5.5								
NVAR	**Mina Array Bea**	**89.85**	**44**	P		**P**	**05 28 13.2**	**-0.8**	
	comp=Z,18nm,0.9s,mb4.9,baz=219,slow=8.0,SNR=70								
NVAR				sP	sP		05 30 31.5	-1.2	
	comp=Z,9.2nm,0.7s,baz=227,slow=4.4,SNR=2.6								
NVAR	**Mina Array Bea**	**89.85**	**44**	P		**P**	**05 28 13.2**	**-0.8**	
NVAR				sP	sP		05 30 31.5	-1.2	
LTIM	**Timbered Crate**	**89.85**	**40**	P		**P**	**05 28 13.2**	**-0.8**	
HUMO	**Hull Mountain**	**90.04**	**38**	*e*P		**P**	**05 28 15.3**	**+0.5**	
	comp=Z,20nm,0.8s,mb5.0								
LCO	**Las Campanas**	**90.05**	**124**	*e*P		**P**	**05 28 16.8**	**+1.4**	
	comp=Z,105nm,1.1s,mb5.6								
PAHR	**Pah Rah Range**	**90.05**	**42**	*e*P		**P**	**05 28 15.8**	**+0.9**	
TPNV	**Topopah Spring**	**90.13**	**46**	*e*P		**P**	**05 28 14.6**	**-0.8**	
TPNV				pmax	pmax				
	comp=Z,20nm,0.9s,mb5.0								
TPNV	**Topopah Spring**	**90.13**	**46**	*e*P		**P**	**05 28 14.6**	**-0.8**	
	comp=Z,20nm,0.9s,mb4.9								
TRQA	**Tornquist**	**90.20**	**136**	*e*P		**P**	**05 28 17.3**	**+1.4**	
	comp=Z,4.8nm,0.6s,mb4.5								
CFAA	**Coronel Fontan**	**90.23**	**128**	P		**P**	**05 28 15.8**	**-0.4**	
	comp=Z,4.0nm,1.0s,mb4.2,baz=227,slow=4.0,SNR=31								
CFAA	**Coronel Fontan**	**90.23**	**128**	P		**P**	**05 28 15.8**	**-0.4**	
TPH	**Tonopah**	**90.26**	**45**	*e*P		**P**	**05 28 16.7**	**+0.7**	
TPH				pmax	pmax				
	comp=Z,34nm,1.0s,mb5.1								
TPH	**Tonopah**	**90.26**	**45**	*e*P		**P**	**05 28 16.7**	**+0.8**	
	comp=Z,34nm,1.0s,mb5.1								
GYA	**Guiyang**	**90.39**	**301**⇑	*i*P		**P**	**05 28 18.3**	**+1.5**	
GYA				AP	pP		05 29 51.4	-1.3	
GYA				XP	sP		05 30 31.8	-3.8	
GYA				PP	PP		05 32 01.8	+3.3	
GYA				PPP			05 34 03.6		
GYA				SKS			05 38 09.4		
GYA				S	S		05 38 36.9	+1.7	
GYA				PS	PS		05 40 42.3	+2.2	
GYA				XS	sS		05 41 20.0	-6.1	
GYA				AMB	AMB				
	comp=Z,90nm,1.0s,mb5.5								
GYA				AMB	AMB				
	comp=Z,8μm,9.4s								
HOG	**Hogback Mounta**	**90.46**	**39**	P		**P**	**05 28 18.3**	**+1.5**	
SHPR	**Sheep Range**	**90.53**	**47**	*e*P		**P**	**05 28 18.8**	**+1.5**	
KLR	**Kul'dur**	**90.72**	**331**	*e*P		**P**	**05 28 12.9**	**-4.9**	
KLR				*e*			05 30 26.0		
KLR				*e*S	SKSac		05 38 00.0	-8.3	
KLR				*e*PS	S		05 38 36.5	-0.6	
KLR				*e*			05 40 48.5		
KLR				pmax	pmax				
	comp=Z,170nm,2.2s,mb5.5								
KLR				smax					
	comp=N,2μm,11.5s								
KLR				smax					
	comp=E,1μm,11.5s								
NANT	**Nan**	**90.78**	**291**	⇑P		**P**	**05 28 20.2**	**+1.4**	
	comp=E,262nm,0.9s,mb6.1								
TUC	**Tucson**	**90.82**	**52**	*e*P		**P**	**05 28 18.5**	**-0.2**	
TUC				*e**PP	pP		05 29 58.6	+4.0	
TUC				*e**SP	sP		05 30 40.0	+2.5	
TUC				pmax	pmax				
	comp=Z,23nm,1.0s,mb5.0								
TUC	**Tucson**	**90.82**	**52**	*e*P		**P**	**05 28 18.5**	**-0.2**	
	comp=Z,23nm,1.0s,mb5.0								
TUC				*e*pP	pP		05 29 58.6	+4.1	
TUC				*e*SP	sP		05 30 40.0	+2.5	
MOD	**Modoc**	**91.00**	**40**	*e*P		**P**	**05 28 18.0**	**-1.3**	
	comp=Z,947nm,1.1s								
IRO	**Indian Ridge**	**91.38**	**38**	P		**P**	**05 28 21.8**	**+0.9**	
KDAK	**Kodiak Island**	**91.40**	**14**	P		**P**	**05 28 18.5**	**-2.2**	
	comp=Z,21nm,0.8s,mb5.0,baz=189,slow=5.8,SNR=8.5								
KDAK	**Kodiak Island**	**91.40**	**14**	P		**P**	**05 28 18.5**	**-2.2**	
FRIS	**Frissel Point**	**91.60**	**38**	P		**P**	**05 28 22.9**	**+0.9**	
BMN	**Battle Mountai**	**91.78**	**43**	*e*P		**P**	**05 28 23.7**	**+0.8**	
BMN				pmax	pmax				
	comp=Z,23nm,1.0s,mb5.1								
BMN	**Battle Mountai**	**91.78**	**43**	*e*P		**P**	**05 28 23.7**	**+0.8**	
	comp=Z,24nm,1.0s,mb5.1								
CMAR	**Chiang Mai Arr**	**92.01**	**290**	P		**P**	**05 28 23.2**	**-1.2**	
	comp=Z,4.0nm,0.7s,mb4.5,baz=145,slow=4.

KMI PP PP 05 32 19.5 +3.8
KMI PPP 05 34 24.4
KMI SKS 05 38 22.4
KMI S S 05 38 56.7 +2.0
KMI PS PS 05 40 59.6 -4.6
KMI sS sS 05 41 41.1 -5.5
KMI SS SS 05 45 25.8 +6.6
KMI SSS 05 49 09.2
KMI LR LR
comp=Z,790nm,22.3s
LVP Lakeview Peak 92.72 36 P **P 05 28 27.8 +0.7**
NLWA Neilton Lookou 92.91 34 *eP* **P 05 28 28.1 +0.2**
comp=Z,9.4nm,1.0s,mb4.7
XAN Xi'an 93.14 308 P **P 05 28 30.4 +1.1**
XAN AP pP 05 30 05.6 +0.3
XAN XP sP 05 30 48.8 +0.6
XAN AMB AMB
comp=Z,13nm,0.9s,mb4.9
XAN AMB AMB
comp=Z,337nm,8.4s
ELK Elko 93.14 43 P **P 05 28 28.3 -0.9**
comp=Z,8.6nm,0.9s,mb4.7,baz=227,slow=4.8,SNR=32
ELK Elko 93.14 43 *eP* **P 05 28 28.7 -0.5**
ELK *e**PP pP 05 30 04.9 -0.3
ELK pmax pmax
comp=Z,12nm,0.9s
ELK Elko 93.14 43 *eP* **P 05 28 28.7 -0.5**
comp=Z,12nm,0.9s,mb4.8
ELK *e*pP pP 05 30 04.9 -0.3
LON Longmire 93.48 36 P **P 05 28 31.2 +0.6**
LON pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
LON Longmire 93.48 36 *eP* **P 05 28 30.4 -0.2**
comp=Z,5.1nm,0.9s,mb4.5
GNW Green Mountain 93.54 35 *eP* **P 05 28 30.7 -0.2**
comp=Z,7.6nm,0.8s,mb4.8
MSU Marysvale 93.63 47 P **P 05 28 32.7 +1.2**
MSU Marysvale 93.63 47 *eP* **P 05 28 33.0 +1.5**
RMW Rattlesnake Mo 93.97 35 P **P 05 28 33.2 +0.4**
PGC Sidney 93.99 34 *eP* **P 05 28 33.7 +0.8**
comp=Z,166nm,1.7s,mb5.8
TXAR Lajitas Array 94.15 58 P **P 05 28 32.9 -1.2**
comp=Z,2.3nm,0.9s,mb4.2,baz=210,slow=6.6,SNR=20
TXAR pP pP 05 30 09.3 -0.8
comp=Z,3.5nm,1.1s,baz=156,slow=3.4,SNR=2.3
TXAR Lajitas Array 94.15 58 P **P 05 28 32.9 -1.2**
TXAR pP pP 05 30 09.3 -0.8
EBG Ellensburg 94.22 36 P **P 05 28 35.0 +1.0**
DUG Dugway 94.26 45 *eP* **P 05 28 34.9 +0.6**
DUG pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
DUG Dugway 94.26 45 *eP* **P 05 28 34.9 +0.6**
comp=Z,3.0nm,1.1s,mb4.2
RSW Rattlesnake Hi 94.38 37 *eP* **P 05 28 35.8 +1.2**
SLKM Skilak Lake 94.39 14 P **P 05 28 34.0 -0.4**
SLKM Skilak Lake 94.39 14 *eP* **P 05 28 33.9 -0.5**
HAWA Hanford 94.41 37 *eP* **P 05 28 35.8 +1.0**
comp=Z,10nm,0.8s,mb4.9
HAWA *e*pP pP 05 30 12.1 +1.2
HAWA *e*sP sP 05 30 55.5 +1.8
JCW Jim Creek 94.41 35 *eP* **P 05 28 35.7 +0.9**
LAZ Ladron 94.52 52 *eP* **P 05 28 36.6 +1.0**
LNOR Lincton Mounta 94.72 38 P **P 05 28 37.2 +1.0**
LNOR Lincton Mounta 94.72 38 *eP* **P 05 28 36.5 +0.3**
RPW Rockport 94.79 35 *eP* **P 05 28 36.3 -0.2**
ETW Entiat 94.81 36 *eP* **P 05 28 37.0 +0.4**
CD2 Chengdu 94.98 303 P **P 05 28 37.9 +0.1**
CD2 PP PP 05 32 33.5 -0.6
CD2 SKS 05 38 30.8
CD2 S S 05 39 16.3 +1.0
CD2 SS SS 05 45 51.6 -1.4
CD2 AMB AMB
comp=Z,30nm,1.2s,mb5.2
CD2 AMB AMB
comp=Z,540nm,6.8s
LVC Limon Verde 95.11 120 P **P 05 28 39.9 +1.1**
comp=Z,8.8nm,1.1s,mb4.7,baz=275,slow=4.7,SNR=5.2
LVC Limon Verde 95.11 120 P **P 05 28 39.9 +1.1**
SPUT South Promonto 95.15 44 *eP* **P 05 28 39.1 +0.7**
HVU Hansel Valley 95.25 44 *eP* **P 05 28 39.7 +0.9**
HVU *e* 05 32 35.6
HVU pmax pmax
comp=Z,18nm,0.9s,mb5.1
HVU Hansel Valley 95.25 44 *eP* **P 05 28 39.7 +1.0**
comp=Z,18nm,0.9s,mb5.1
HVU *e*PP PP 05 32 35.6 -0.3
ANMO Albuquerque 95.29 52 P **P 05 28 39.5 +0.3**
comp=Z,2.9nm,0.8s,mb4.4,baz=213,slow=4.3,SNR=15
ANMO Albuquerque 95.29 52⇑ *eP* **P 05 28 39.9 +0.8**
ANMO Albuquerque 95.29 52 *eP* **P 05 28 39.4 +0.2**
comp=Z,4.6nm,1.0s,mb4.5
ANMO *e*pP pP 05 30 17.5 +2.3
ANMO *e*PP PP 05 32 36.9 +0.4
DAU Daniels Canyon 95.34 46 *eP* **P 05 28 40.5 +1.3**
HLID Hailey 95.38 42 *eP* **P 05 28 40.3 +1.0**
comp=Z,5.8nm,0.9s,mb4.6
HHC Hu-ho-hao-te 95.44 315 *eP* **P 05 28 37.9 -1.8**
HHC AMB AMB
comp=Z,6.0nm,0.6s,mb4.8
HHC AMB AMB
comp=Z,540nm,6.6s
OD2 Odessa Site #2 95.49 37 *eP* **P 05 28 39.9 +0.2**
PMR Palmer 95.61 14 P **P 05 28 46.7 +6.8**
PMR pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
SEY Seymchan 96.19 348⇑ *eP* **P 05 28 42.2 -0.3**
KTH Kantishna Hill 97.02 13 *eP* **P 05 28 45.4 -0.8**
comp=Z,10nm,0.8s,mb5.0
TRF Thorofare Moun 97.05 13 *eP* **P 05 28 45.6 -0.8**
comp=Z,2µm,0.6s
SNOW Snow King Moun 97.44 43 *eP* **P 05 28 49.3 +0.7**
comp=Z,6.2nm,0.9s,mb4.7
SNOW *e*pP pP 05 30 29.7 +4.8
MCK McKinley 97.57 13 P **P 05 28 50.7 +2.0**
MCK pmax pmax
comp=Z,18nm,1.0s,mb5.3
LZH Lanzhou 97.73 307 *eP* **P 05 28 49.0 -1.1**
LZH AP pP 05 30 28.3 +1.9
LZH XP sP 05 31 09.0 -0.2
LZH SKS 05 38 44.0
LZH S S 05 39 42.1 +3.6
LZH AMB AMB
comp=Z,62nm,1.7s,mb5.6
LZH AMB AMB
comp=Z,328nm,5.3s
LZH Lanzhou 97.73 307 *eP* **P 05 28 49.0 -1.1**
LZH *PP pP 05 30 28.2 +1.8
LZH *SP sP 05 31 09.0 -0.2
LZH 05 32 52.0
LZH 05 38 44.0
LZH S S 05 39 42.1 +3.6
LZH SS SS 05 46 42.0 +11
LZH pmax pmax
comp=Z,62nm,1.7s,mb5.6
LZH Lanzhou 97.73 307 *eP* **P 05 28 49.0 -1.1**
comp=Z,62nm,1.7s,mb5.6
LZH pP pP 05 30 28.2 +1.8
LZH sP sP 05 31 09.0 -0.2
LZH PP PP 05 32 52.0 -3.0
LZH SKS 05 38 44.0
LZH S S 05 39 42.1 +3.6
LZH sS sS 05 42 36.0 +4.5
LZH SS SS 05 46 42.0 +11
PDAR Pinedale Array 97.75 44 P **P 05 28 48.4 -1.6**
comp=Z,3.6nm,0.9s,mb4.6,baz=201,slow=3.1,SNR=21
PDAR PKKPbc PKKPbc 05 45 22.6 -1.4
comp=Z,0.6nm,0.6s,baz=106,slow=4.8,SNR=5.0
BOZ Bozeman (W) 98.23 41 P 05 28 53.2
BOZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
COLA College 98.81 13⇓ *iP* Pdif 05 28 53.5 -1.4
COLA College 98.81 13 *e*Pdif Pdif 05 28 53.1 -1.8
comp=Z,5.9nm,0.8s
BILL Bilibino 99.28 355⇖ *eP* Pdif 05 28 57.9 +0.9
BILL *PP pP 05 30 31.0 -1.6
BILL *e* 05 33 04.8
BILL *e*PPP 05 35 14.8
BILL *e* 05 38 52.9
BILL *e* 05 39 55.4
BILL *i* 05 41 27.2
BILL *e* 05 42 07.1
BILL pmax pmax
comp=Z,17nm,1.0s,mb5.3
BILL MLR MLR
comp=Z,400nm,18.0s
BILL Bilibino 99.28 355⇑ *iP* Pdif 05 28 56.6 -0.4
LPAZ La Paz 99.43 115 P Pdif 05 29 00.5 +2.8
comp=Z,0.7nm,0.4s,baz=278,slow=4.0,SNR=5.6
CPUP Villa Florida 100.92 130 PKKPbc PKKPbc 05 45 12.6 -1.9
comp=Z,3.1nm,0.8s,baz=38,slow=4.3,SNR=6.2
YAK Yakutsk 101.17 338 *eP* Pdif 05 29 03.3 -2.1
YAK *e* 05 33 13.8
YAK *e*S SKSac 05 38 58.2 -3.8
YAK pmax pmax
comp=Z,17nm,1.0s
YAK pmax pmax
comp=N,6,0nm,1.1s
YAK pmax pmax
comp=Z,135nm,1.7s
YAK pmax pmax
comp=N,119nm,2.1s
YAK pmax pmax
comp=E,48nm,2.2s
YAK Yakutsk 101.17 338⇓ *iP* Pdif 05 29 03.3 -2.1
ULN Ulaanbaatar 102.11 319⇑ *iP* Pdif 05 29 09.4 -0.2
GTA Gaotai 102.19 309 *eP* Pdif 05 29 11.3 +1.4
GTA PPP 05 35 05.6
GTA S Sdif 05 40 17.5 +1.8
GTA AMB AMB
comp=Z,4.0nm,1.0s
GTA AMB AMB
comp=Z,221nm,6.9s
SONM Songino Array 102.46 319 P Pdif 05 29 10.8 -0.3
comp=Z,1.6nm,0.8s,baz=150,slow=6.3,SNR=4.6
SONM PKiKP PKiKP 05 33 29.4 -0.3
comp=Z,2.1nm,0.8s,baz=134,slow=4.2,SNR=3.5
SONM PKKPbc PKKPbc 05 45 11.2 +0.3
comp=Z,1.1nm,0.5s,baz=279,slow=3.2,SNR=6.6
SIV San Ignacio 105.00 119 PP PP 05 33 48.6 -0.1
comp=Z,1.4nm,0.9s,baz=238,slow=5.7,SNR=4.3
SIV PKKPbc PKKPbc 05 45 01.2 -1.2
comp=Z,1.4nm,0.5s,baz=61,slow=3.3,SNR=9.5
YKA Yellowknife Ar 106.73 26 Pdiff Pdif 05 29 31.4 +1.3
comp=Z,0.9nm,0.9s,baz=234,slow=4.6,SNR=3.7
YKA PKiKP PKiKP 05 33 35.3 -1.7
comp=Z,1.2nm,0.5s,baz=237,slow=1.6,SNR=22
YKA PKKPab PKKPab 05 45 13.2 +1.7
comp=Z,0.6nm,0.6s,baz=50,slow=2.9,SNR=3.8
YKA Yellowknife Ar 106.73 26 Pdif Pdif 05 29 31.4 +1.3
YKA PKPdf PKiKP 05 33 35.4 -1.7
YKA PKKPab PKKPab 05 45 13.2 +1.7
ULM Lac du Bonnet 109.66 43 PKiKP PKiKP 05 33 41.8 -1.1
comp=Z,2.8nm,0.8s,baz=207,slow=2.3,SNR=3.6
TKL Tuckaleechee C 111.90 61 PKiKP PKiKP 05 33 46.4 -1.3
comp=Z,2.1nm,0.6s,baz=225,slow=5.7,SNR=4.8
TKL Tuckaleechee C 111.90 61 PKPdf PKiKP 05 33 46.4 -1.3
WMQ Urumqi 112.27 309 *e*PKP PKiKP 05 33 45.5 -2.6
WMQ PP PP 05 34 41.5 +0.2
WMQ XPKP 05 36 07.0
WMQ PKS 05 37 21.0
WMQ SKS SKSdf 05 40 17.0 -2.7
WMQ SKKS SKKSac 05 40 52.0 -6.7
WMQ SS SS 05 49 46.0 -2.0
BDFB Brasilia 114.56 128 PKiKP PKiKP 05 33 51.0 -2.5
comp=Z,6.7nm,0.9s,baz=150,slow=1.9,SNR=3.0
BOSA Boshof 116.02 205 PKP PKPdf 05 33 56.1 +0.1
comp=Z,2.7nm,0.5s,baz=195,slow=5.4,SNR=7.2
BOSA PKKPbc PKKPbc 05 44 27.2 -0.5
comp=Z,1.7nm,0.6s,baz=348,slow=8.2,SNR=4.5
BOSA PKKPab PKKPab 05 44 32.9 -3.7
comp=Z,4.9nm,0.8s,baz=346,slow=4.2,SNR=6.9
MK31 Makanchi Array 116.86 310 PKiKP PKPdf 05 33 54.5 -2.4
MK31 Makanchi Array 116.86 310 *e*PKPdf PKPdf 05 33 54.1 -2.7
MKAR Makanchi Array 116.86 310 PKP PKPdf 05 33 54.6 -2.2
comp=Z,18nm,0.8s,baz=84,slow=0.9,SNR=38
MKAR PP PP 05 35 09.2 -4.1
comp=Z,5.7nm,1.0s,baz=97,slow=8.9,SNR=4.7
MKAR PKKPbc PKKPbc 05 44 23.9 -0.7
comp=Z,2.2nm,0.4s,baz=267,slow=3.5,SNR=44
MKAR Makanchi Array 116.86 310 PKiKP PKPdf 05 33 54.7 -2.2
MKAR 05 35 09.2
ZALV Zalesovo Beam 117.36 318 PKP PKPdf 05 33 56.7 -0.9
comp=Z,6.6nm,0.6s,baz=127,slow=1.3,SNR=13
ZALV Zalesovo Beam 117.36 318 PKP PKPdf 05 33 56.7 -0.9
SSPA Standing Stone 117.99 57 *e*PKPdf PKPdf 05 33 58.8 -0.5
NVS Novosibirsk 118.48 319 *e*PKiKP PKPdf 05 33 53.2 -6.5
NVS *e* 05 40 07.4
NVS pmax pmax
comp=Z,26nm,1.4s
NVS pmax pmax
comp=E,13nm,1.3s
KSH Kashi 119.09 301 *e*PKP PKPdf 05 34 02.5 +1.1
KSH *e*PKS 05 37 39.5
ULHL Ulahol 119.69 304 P PKPdf 05 34 01.6 -0.8
SNR=18
KURK Kurchatov 120.24 314 PKP PKPdf 05 34 01.1 -2.1
comp=E,22nm,0.6s,baz=105,slow=1.9,SNR=61
KURK PKKPbc PKKPbc 05 44 14.8 +2.1
comp=E,1.5nm,0.8s,baz=283,slow=2.9,SNR=5.5
KURK Kurchatov 120.24 314 *e*PKPdf PKPdf 05 34 00.9 -2.3
TKM2 Tokmak 2 120.33 304 P PKPdf 05 34 01.6 -2.1
SNR=34
TKM2 Tokmak 2 120.33 304 *e*PKPdf PKPdf 05 34 01.5 -2.1
KZA Kyzart 120.35 303 P PKPdf 05 34 04.7 +1.0
SNR=18
KBK Karagaybulak 120.72 304 P PKPdf 05 34 05.0 +0.5
SNR=9.0
UCH Uchtor 120.92 303 P PKPdf 05 34 06.2 +1.4
SNR=51
UCH Uchtor 120.92 303 *e*PKPdf PKPdf 05 34 03.9 -0.9
CHMS Chumysh 120.95 304 P PKPdf 05 34 03.1 -1.8
SNR=19
FRU Bishkek 121.00 304 *e*PKiKP PKPdf 05 34 04.0 -1.0
FRU pmax pmax
comp=Z,40nm,1.4s
AAK Ala-Archa 121.04 304 P PKPdf 05 34 04.0 -1.0
SNR=8.2
USP Ospenovka 121.20 305 P PKPdf 05 34 03.5 -1.8
SNR=20
AML Almayashu 121.48 303 P PKPdf 05 34 04.8 -1.1
SNR=47
AML Almayashu 121.48 303 *e*PKPdf PKPdf 05 34 04.8 -1.1
EKS2 Erkin-Say 121.56 304 P PKPdf 05 34 04.6 -1.4
SNR=27
EKS2 Erkin-Say 121.56 304 *e*PKPdf PKPdf 05 34 03.9 -2.1
KBL Kabul 122.90 293 *e*PKiKP PKPdf 05 34 08.1 -0.8
KK31 Karatay Array 123.99 304 *i* PKiKP PKPdf 05 34 08.8 -1.9
KK31 pmax pmax
comp=Z,22nm,0.7s
PKME Peaks-Kenny Pk 125.25 54 *e*PKPdf PKPdf 05 34 12.0 -1.0
BVA0 Borovoye Array 125.65 316 *i* PKiKP PKPdf 05 34 11.9 -1.6
BVA0 pmax pmax
comp=Z,10.0nm,0.9s
BVAR Borovoye Array 125.65 316 PKP PKPdf 05 34 11.9 -1.6
comp=Z,24nm,0.6s,baz=98,slow=1.3,SNR=52
BRVK Borovoye 125.72 316 *e*PKPdf PKPdf 05 34 12.9 -0.7
LSZ Lusaka 126.61 215 PKiKP PKPdf 05 34 16.9 +0.3
LSZ Lusaka 126.61 215 *e*PKPdf PKPdf 05 34 17.1 +0.5
SCHQ Schefferville 127.83 42 PKP PKPdf 05 34 16.4 -1.2
comp=Z,24nm,1.0s,baz=300,slow=1.0,SNR=8.5
KBS Kingsbay 131.71 357 *eP* PKPdf 05 34 25.1 +0.6
KBS *e*PP PP 05 36 49.7 -1.0
KBS Kingsbay 131.71 357⇑ *i*PKiKP PKPdf 05 34 25.0 +0.6
KBS Kingsbay 131.71 357 *e*PKPdf PKPdf 05 34 25.2 +0.8
AB31 Akbulak array 132.01 310 *i* PKiKP PKPdf 05 34 26.0 +0.3
AB31 pmax pmax
comp=Z,15nm,0.8s
AB31 Akbulak array 132.01 310⇑ *e*PKP PKPdf 05 34 26.1 +0.4
KMBO Kilima Mbogo 132.34 235 PKP PKPdf 05 34 26.9 -0.7
comp=Z,3.0nm,0.8s,baz=19,slow=2.7,SNR=6.8
KMBO SKPbc SKPbc 05 37 14.6 +0.1
comp=Z,30nm,1.2s,baz=157,slow=4.8,SNR=11
KMBO Kilima Mbogo 132.34 235 *e*PKPdf PKPdf 05 34 28.2 +0.6
ARU Arti 132.47 320 *i* PKiKP PKPdf 05 34 25.7 -0.7
ARU 05 36 51.9
ARU Arti 132.47 320 *e*PKPdf PKPdf 05 34 25.8 -0.6
ARU *e*SKPbc SKPbc 05 37 15.0 +1.5
DAG Danmarks Havn 133.33 6⇑ *i*PKiKP PKPdf 05 34 26.3 -1.2
DAG pmax pmax
comp=Z,10.0nm,0.9s
DAG Danmarks Havn 133.33 6⇑ *iP* PKPdf 05 34 26.3 -1.2
comp=Z,10.0nm,0.9s
SUMG Summit 133.74 15 *e*PKPdf PKPdf 05 34 29.1 +0.8
KEV Kevo 138.32 346 PKHKP 05 34 28.8
APA Apatity 138.46 341⇑ *i*PKiKP PKPdf 05 34 34.0 -3.2
APA pmax pmax
comp=Z,26nm,1.0s
ARCES ARCESS Array B 138.81 347 PKhKP 05 34 28.8
comp=Z,11nm,0.5s,baz=61,slow=2.5,SNR=38
ARCES PKP PKPdf 05 34 37.8 0.0
comp=Z,40nm,0.8s,baz=47,slow=1.8,SNR=23
ARCES SKPbc SKPbc 05 37 31.2 -1.3
comp=Z,36nm,1.0s,baz=36,slow=1.7,SNR=7.6
ARCES ARCESS Array B 138.81 347 PKP PKPdf 05 34 37.8 0.0
ARCES SKPbc SKPbc 05 37 31.2 -1.3
ARE0 ARCESS Array S 138.81 347 *e*PKPdf 05 34 29.3
RDF Al-Radifah 139.02 280 *eP* PKPdf 05 34 32.9 -6.5
baz=280
RDF AMb AMB 05 34 43.5
comp=Z,91nm,1.0s,baz=280
NAY Al-Naaiem 139.36 280 *eP* PKPdf 05 34 33.3 -6.8
baz=280
NAY AMb AMB 05 34 45.8
comp=Z,17nm,1.4s,baz=280
MIB Mutribah 139.42 281 *eP* PKPdf 05 34 33.0 -7.2
baz=281
MIB AMb AMB 05 34 46.1
comp=Z,36nm,1.0s,baz=281
TRO Tromso 139.87 350 *eP* PKPdf 05 34 32.8 -6.9
KLMR Klimovskoe 140.48 331 *e*PKHKP PKPdf 05 34 34.3 -6.7
LOF Lofoten 142.01 352 *eP* PKPdf 05 34 41.2 -2.3
DGRG David-gareji 142.34 299 P PKPdf 05 34 40.7 -4.3
BHD Baghdad 142.58 285 *ex* x 05 34 40.0
MTA Mtatsminda 142.77 299 P PKPdf 05 34 43.0 -2.8
TBLG Delisi 142.81 299 *e*PKiKP PKPdf 05 34 43.0 -2.8
TBLG Delisi 142.81 299 P PKPdf 05 34 43.1 -2.7
GNI Garni 142.84 297 *eP* PKPdf 05 34 43.0 -2.9
GNI Garni 142.84 297 PKiKP PKPdf 05 34 44.7 -1.2
GNI Garni 142.84 297 *e*PKPdf PKPdf 05 34 44.6 -1.3
GOR Gori 143.27 300 P PKPdf 05 34 45.3 -1.4
CLDR Caldiran 143.46 295 *eP* PKPdf 05 34 45.7 -1.4
KONS Konsvik 143.61 351 *eP* PKPdf 05 34 42.6 -3.9
KONS AMb AMB 05 34 46.4
comp=Z,281nm,1.0s
ONI Oni 143.72 301 P PKPdf 05 34 44.5 -2.9
FLOS Flostrand 143.73 351 *eP* PKPdf 05 34 42.5 -4.2
MOR8 Moi Rana 143.73 350 *eP* PKPdf 05 34 42.4 -4.3
MOR8 AMb AMB 05 34 45.9
comp=Z,116nm,1.1s
GOF Gofitskoye 143.77 305⇑ *i*PKiKP PKiKP 05 35 05.3 +14
GOF pmax pmax
comp=Z,257nm,1.1s
STOK Stokkvaagen 143.78 351 *eP* PKPdf 05 34 43.0 -3.8
STOK AMb AMB 05 34 46.8
comp=Z,406nm,0.8s
MOS Moscow 143.85 324 *e*PKHKP PKPdf 05 34 43.1 -4.1
MOS *e* 05 37 59.4
MOS pmax pmax
comp=Z,143nm,1.0s
VANB Van 143.86 294 *eP* PKPdf 05 34 47.0 -0.8
KIV Kislovodsk 144.15 303 *e*PKiKP PKPdf 05 34 46.7 -1.4
KIV *e**SP 05 37 11.4
KIV *e* 05 38 04.4
KIV *e*SS SS 05 56 15.5 -3.5
KIV *e*SSS 06 01 46.2
KIV pmax pmax
comp=Z,110nm,1.1s
KIV Kislovodsk 144.15 303⇑ *iP* PKPdf 05 34 47.0 -1.1
KIV Kislovodsk 144.15 303 *e*PKPdf PKPdf 05 34 47.9 -0.3
AGRB Hanur-Agry 144.18 296 *eP* PKPdf 05 34 46.3 -2.0
SIRT Sirnak 144.58 292 *eP* PKPdf 05 34 50.2 +1.2
VOR Voronezh 144.63 317 PKiKP PKPdf 05 34 48.0 -0.7
VOR pmax pmax
comp=Z,320nm,1.4s
OBN Obninsk 144.68 324*d* *i*PKiKP PKPdf 05 34 46.5 -2.1
OBN *e* 05 38 05.0
OBN *e*SS SS 05 56 18.5 -5.3
OBN pmax pmax
comp=Z,60nm,0.5s
OBN MLR MLR
comp=Z,300nm,20.0s
OBN Obninsk 144.68 324 *e*PKPdf PKPdf 05 34 46.6 -2.1
VSR Storozhevoye 144.82 316 *e*PKiKP PKPdf 05 34 47.1 -1.9
VSR pmax pmax
comp=Z,80nm,0.7s
VSR pmax pmax
comp=N,70nm,0.8s
VSR pmax pmax
comp=E,200nm,1.0s
BCA Borcka 145.16 299 *eP* PKPdf 05 34 48.9 -1.1
NSS Namsos 145.64 351 *eP* PKPdf 05 34 47.9 -2.1
NSS AMb AMB 05 34 51.5
comp=Z,327nm,0.9s
SOC Sochi 146.34 303*d* *i*PKP2 PKPab 05 34 54.2 -1.6
SOC *e* 05 38 17.4
SOC *e*PPP 05 41 38.0
SOC pmax pmax
comp=Z,74nm,0.7s
KTUT Trabzon 146.59 298 *eP* PKPdf 05 34 53.3 +1.0
GUMT Gumushane 146.85 298 *eP* PKPdf 05 34 54.5 +1.7
PTK Pertek 146.99 295 *eP* PKPdf 05 34 52.2 -0.9
URFA Urfa 147.46 292 *eP* PKPdf 05 34 55.6 +1.7
ANN Anapa 147.73 306 *i* PKP2 PKPab 05 34 57.4 -4.0
ANN *e* 05 38 25.9
ANN pmax pmax
comp=Z,215nm,0.9s
MALT Malatya 147.76 294⇓ *iP* PKPdf 05 34 56.3 +1.9
MALT Malatya 147.76 294 *e*PKPdf PKPdf 05 34 55.9 +1.5
MOL Molde 148.06 353 *eP* PKPdf 05 34 56.2 +2.1
DARE Darende-Malaty 148.22 295 *eP* PKPdf 05 34 56.8 +1.7
DOMB Dombas 148.40 352 *eP* PKPdf 05 34 56.3 +1.6
DOMB AMb AMB 05 35 04.8
comp=Z,132nm,0.9s
RSDY Resadiye-TOKAT 148.49 298 *eP* PKPdf 05 34 57.1 +1.6
SVSK Karacayir 148.78 297 *eP* PKPdf 05 34 57.3 +1.3
KMRS Kahramanmaras 148.98 292 *eP* PKPdf 05 34 58.1 +1.7
NB2 NORSAR Subarra 149.07 349 PKP PKPdf 05 34 57.9 +2.1
comp=Z,137nm,1.1s,baz=17,slow=2.6
NB2 NORSAR Subarra 149.07 349 PKP PKPdf 05 34 57.9 +2.1
baz=17,slow=2.6
NOA NORSAR Array B 149.07 349 PKPbc PKPbc 05 34 58.0 -2.4
comp=Z,74nm,0.8s,baz=18,slow=4.1,SNR=62
NAO01 NORSAR Array S 149.30 350 *e*PKPdf PKPdf 05 34 56.5 +0.3
KVT Kavak 149.38 299 *eP* PKPdf 05 34 59.4 +2.5
HFS Hagfors 149.47 347 PKPbc PKPbc 05 34 58.8 -2.6
comp=Z,75nm,0.5s,baz=123,slow=2.5,SNR=52
BNN Bunyan 149.76 295 *eP* PKPbc 05 35 02.2 -0.6
SIM Simferopol' 149.98 307 *i* PKP2 PKPbc 05 35 03.4 +0.3
SIM pmax pmax
comp=Z,109nm,0.9s
BER Bergen 150.41 355 *eP* PKPbc 05 35 02.9 -0.8
KARA Karaisali 150.46 292 *eP* PKPbc 05 35 03.4 -1.1
CORM Corum 150.56 298 *eP* PKPbc 05 35 03.5 -1.2
KONO Kongsberg 150.64 350 *eP* PKPbc 05 35 02.2 -2.0
AKASG Malin Array Be 150.72 321 PKPbc PKPbc 05 35 02.5 -2.2
comp=Z,66nm,0.6s,baz=56,slow=2.4,SNR=24
AKASG PKPab PKPab 05 35 12.3 -1.2
comp=Z,9.2nm,0.3s,baz=56,slow=4.9,SNR=20
AKASG pPKPbc pPKPbc 05 36 45.2 -0.3
comp=Z,7.4nm,0.7s,baz=43,slow=3.4,SNR=1.8
AKASG SKP 05 37 52.8
comp=Z,14nm,0.6s,baz=47,slow=3.1,SNR=4.4
AKBB Malin Array Si 150.72 321 *e*PKIKP PKPbc 05 35 02.8 -1.9
KIEV Kiev 150.73 321 PKIKP PKPbc 05 35 02.6 -2.1
KIEV Kiev 150.73 321 *e*PKPbc PKPbc 05 35 02.8 -1.9
MERS Mersin 150.90 291 *eP* PKPbc 05 35 04.1 -1.4
TOS Tosya 150.90 300 *eP* PKPbc 05 35 04.3 -1.1
BLS5 Blasjo 151.26 353 *eP* PKPbc 05 35 05.4 -0.2
BLS5 AMb AMB 05 35 12.7
comp=Z,64nm,1.5s
KAMT Kaman 151.36 296 *eP* PKPbc 05 35 05.2 -1.3
IKL Isikli 151.58 290 *eP* PKPbc 05 35 06.0 -1.1
SUW Suwalki 151.61 331 *e*PKP PKPbc 05 35 06.7 +0.2
SUW *e* 05 35 16.5
SUW Suwalki 151.61 331 *e*PKP PKPbc 05 35 06.7 +0.1
SUW *e* 05 35 16.5
SAFT Safranbolu 151.86 300 *eP* PKPbc 05 35 05.9 -1.7
ANTO Ankara 152.00 297 PKIKP PKPbc 05 35 06.2 -1.7
ANTO Ankara 152.00 297 *e*PKPbc PKPbc 05 35 07.2 -0.8
LEF Lefka 152.23 287 *eP* PKPbc 05 35 06.3 -2.3
KIS Kishinev 152.72 314 *e*PKIKP PKPdf 05 35 02.0 +0.2
KIS *e* 05 35 07.0
KIS *e* 05 38 56.0
KIS Kishinev 152.72 314 *e*UNK PKPdf 05 35 02.0 +0.2
MDU Mudurnu 153.10 299 *eP* PKPbc 05 35 07.9 -2.5
KSB Sheil Bridge 153.53 7 *eP* PKPab 05 35 24.9 -0.2
MUD Monsted U'grnd 153.77 348 *i* PKP2 PKPab 05 35 25.9 -0.2
MUD pmax pmax
comp=Z,49nm,0.9s
MUD MLR MLR
comp=Z,300nm,21.0s
MUD Monsted U'grnd 153.77 348 *i* P PKPab 05 35 25.9 -0.2

comp=Z,49nm,0.9s
MUD i 05 37 49.8
MUD
comp=Z,300nm,21.0s
KAR1 Arisaig 153.78 7 eP PKPab 05 35 25.4 -0.7
COP Copenhagen 153.82 344 i P PKPab 05 35 21.5 -4.9
comp=Z,58nm,0.9s
COP e 05 37 54.8
COP
comp=Z,140nm,18.0s
LVV L'vov 153.98 323 ePKP2 PKPab 05 35 25.7 -1.6
TIRR Tirgusor 153.99 309⇓iP PKPdf 05 35 04.5 +0.8
VRI Vrincioaia 154.51 313⇓iP PKPbc 05 35 14.3 +1.2
PLOR Plostina 154.57 313⇑iP PKPbc 05 35 14.6 +1.3
BUR08 Bucovina Ar. S 154.57 318 ePKPbc PKPbc 05 35 13.3 +0.1
BURAR Bucovina Array 154.58 318⇓iP PKPbc 05 35 13.1 -0.1
EAB Aberfoyle 154.64 6 eP PKPab 05 35 27.5 -2.4
KWP Kalwaria 154.77 324 ePKP PKPbc 05 35 15.1 +1.5
KWP e 05 35 30.9
KWP Kalwaria 154.77 324⇓iP PKPbc 05 35 11.8 -1.7
KWP Kalwaria 154.77 324 ePKP PKPbc 05 35 15.1 +1.6
KWP e 05 35 30.9
LIC Lamto 154.89 168 ePKIKP PKPdf 05 35 07.2 +1.3
comp=Z,105nm,1.3s
KIC Kosan Boka 155.07 169 ePKIKP PKPdf 05 35 07.5 +1.4
comp=Z,101nm,0.9s
PRD Provadia 155.12 307 P PKPab 05 35 33.1 +0.6
MLR Muntele Rosu 155.17 313⇑iP PKPdf 05 35 07.5 +2.2
TIC Toumodi 155.30 168 ePKIKP PKPdf 05 35 07.9 +1.5
comp=Z,65nm,0.7s
DBIC Dimbokro 155.36 168 PKP PKPdf 05 35 05.6 -0.9
comp=Z,14nm,1.0s,baz=118,slow=1.6,SNR=9.3
DBIC pPKP pPKPdf 05 36 48.0 -0.5
comp=Z,5.1nm,0.6s,baz=311,slow=2.2,SNR=2.0
KOLS Kolonicke sedl 155.43 323 ePKIKP PKPdf 05 35 06.6 +1.1
KOLS e 05 35 15.9
KOLS e 05 35 33.7
KOLS Kolonicke sedl 155.43 323 ePKP PKPdf 05 35 06.6 +1.1
KOLS e 05 35 15.9
KOLS e 05 35 33.7
KOLS Kolonicke sedl 155.43 323 ePKP PKPdf 05 35 06.6 +1.1
KOLS e 05 35 15.9
KOLS e 05 35 33.7
XSO Sourhope Farm 155.47 3 eP PKPab 05 35 31.2 -2.3
EKA Eskdalemuir Ar 155.58 4 SKP SKPdf 05 37 54.1 -3.8
comp=Z,10nm,0.8s,baz=333,slow=2.8,SNR=4.5
ESK Eskdalemuir 155.60 4 eP PKPab 05 35 31.1 -2.9
UZH Uzhgorod 155.60 323 d iPKIKP PKPdf 05 35 15.6 +10
UZH i 05 35 32.2
UZH i 05 41 27.0
UZH ePS 05 51 46.0
STHS Stebnicka Huta 155.64 325 ePKP PKPab 05 35 35.6 +1.2
ECK Cauldkaine Hil 155.74 4 eP PKPab 05 35 33.4 -1.2
VOIR 155.76 314⇓iP PKPdf 05 35 16.9 +11
OJC Ojcow 155.77 328 ePKP2 PKPab 05 35 34.8 -0.2
CRVS Cervenica-Dubn 155.86 324 ePKP PKPdf 05 35 06.1 0.0
CRVS e 05 35 17.4
CRVS e 05 35 35.4
CRVS Cervenica-Dubn 155.86 324 ePKP PKPdf 05 35 06.2 +0.1
CRVS e 05 35 17.4
CRVS e 05 35 35.4
BSEG Bad Segeberg 155.91 345 ePKPab PKPab 05 35 34.9 -0.5
NIE Niedzica 156.09 326 ePKPdf PKPdf 05 35 17.3 +11
NIE ePKPab PKPab 05 35 37.1 +0.7
NIE Niedzica 156.09 326 ePKP2 PKPab 05 35 37.1 +0.7
XAL Allendale 156.11 3 eP PKPab 05 35 35.2 -1.0
DRGR 156.46 318⇑iP PKPdf 05 35 19.1 +12
KSP Ksiaz 156.78 333 ePKP PKPab 05 35 37.6 -1.7
KSP e 05 35 39.5
KSP Ksiaz 156.78 333 ePKP2 PKPab 05 35 37.5 -1.8
KSP e 05 41 35.0
KSP Ksiaz 156.78 333 ePKPdf PKPdf 05 35 08.5 +1.3
KSP ePKPab PKPab 05 35 37.5 -1.8
KSP eSKS SKSdf 05 41 35.0 +2.3
KSP e 05 51 44.5
OKC Ostrava-Krasne 156.78 329 ePKPAB PKPab 05 35 37.6 -1.8
HPK Haverah Park 157.03 2 eP PKPab 05 35 38.0 -2.2
MORC Moravsky Berou 157.09 330 PKP2 PKPab 05 35 37.7 -3.0
MORC Moravsky Berou 157.09 330⇑iP PKPdf 05 35 08.5 +0.9
MORC Moravsky Berou 157.09 330 ⇑P PKPdf 05 35 08.5 +0.9
MORC ePKPab PKPab 05 35 40.5 -0.2
UPC Upice 157.16 333 ePKIKP PKPdf 05 35 09.9 +2.2
UPC e 05 35 38.4
UPC Upice 157.16 333 ePKPDF PKPdf 05 35 09.9 +2.2
UPC ePKPAB PKPab 05 35 38.4 -2.5
UPC ex x 05 38 22.2
DPC Dobruska-Polom 157.16 332 ePKPDF PKPdf 05 35 09.3 +1.6
DPC ePKPAB PKPab 05 35 39.3 -1.7
GZR Gura Zlata 157.17 315⇓iP PKPdf 05 35 09.8 +1.9
GZR Gura Zlata 157.17 315 ⇓P PKPdf 05 35 09.8 +2.0
PSZ Piszkesteto 157.29 324⇑iP PKPdf 05 35 15.7 +7.8
NRDL Niedersach Rie 157.30 344 ePKPab PKPab 05 35 40.9 -0.6
VYHS Vyhne 157.43 326 ePKP PKPdf 05 35 08.3 +0.2
VYHS e 05 35 20.2
VYHS e 05 35 40.7
LHO Holmfirth 157.44 3 eP PKPab 05 35 41.2 -0.8
CLL Collm 157.56 338 ePKIKP PKPdf 05 35 08.0 -0.1
CLL pmax pmax
comp=Z,75nm,1.0s
CLL Collm 157.56 338 ePKPdf PKPdf 05 35 08.0 -0.1
CLL i PKPdif 05 35 19.6
comp=Z,15nm,1.1s
CLL i PKPab PKPab 05 35 42.3 -0.3
comp=Z,75nm,1.0s
CLL epPKPdf pPKPdf 05 36 51.0 +0.8
CLL epPKPab pPKPab 05 37 21.0 +1.5
CLL esPKPab 05 38 02.0
CLL ePP PP 05 39 22.0 -1.3
CLL esPP 05 41 40.0
CLL ePPP 05 43 01.0
CLL eSKKSac SKKSac 05 45 30.0 0.0
CLL ex x 05 46 06.0
CLL esSKKSac 05 48 35.0
CLL eSKSP 05 49 03.0
CLL esPSKS 05 52 00.0
CLL ePPS 05 52 48.0
CLL epPSKSrev 05 55 00.0
CLL eSS SS 05 58 54.0 +10
CLL ex x 06 07 06.0
CLL eSSSS 06 09 12.0
BRG Berggiesshubel 157.62 336 ePKIKP PKPdf 05 35 09.1 +0.9
BRG 05 37 27.5
BRG pmax pmax
comp=Z,11nm,1.4s
BRG Berggiesshubel 157.62 336 ePKPab PKPab 05 35 42.9 0.0
BRG Berggiesshubel 157.62 336 ePKP PKPdf 05 35 09.1 +0.8
comp=Z,18nm,1.4s
BRG i 05 35 42.1
comp=Z,47nm,0.9s
BRG sPKP 05 37 27.5
comp=Z,14nm,1.2s
BRG PP PP 05 39 15.0 -8.6
BRG e 05 41 22.6
comp=Z,22nm,1.6s
PVCC Panska Ves 157.68 335 ePKPAB PKPab 05 35 41.5 -1.7
KBI1 Birley Grange 157.74 2 eP PKPab 05 35 41.9 -1.4
CLZ Clausthal 157.83 343 ePKPab PKPab 05 35 43.7 -0.1
KWE Weaver Farm 157.97 3 eP PKPab 05 35 43.3 -1.0
IBBN Ibbenburen 157.98 347 ePKPab PKPab 05 35 44.1 -0.3
PRU Pruhonice 158.13 334 ePKIKP PKPdf 05 35 08.2 -0.7
PRU e 05 35 41.6
PRU Pruhonice 158.13 334 ePKPDF PKPdf 05 35 08.2 -0.7
PRU ePKPAB PKPab 05 35 41.6 -3.6
PRU ex x 05 38 27.9
VTS Vitosha 158.21 308 P PKPab 05 35 46.9 +1.1
MMB Musomiste 158.24 306 P PKPab 05 35 45.9 -0.1
MODS Modra-Piesok 158.25 328 ePKP PKPdf 05 35 09.0 -0.1
MODS e 05 35 45.4
ZST Bratislava 158.46 328 ePKP PKPdf 05 35 09.8 +0.5
ZST e 05 35 47.4
TANN Tannenbergstha 158.50 338 ePKPab PKPab 05 35 46.9 +0.1
MOX Moxa 158.56 340 ePKP PKPab 05 35 45.1 -1.9
comp=Z,40nm,1.0s
MOX Moxa 158.56 340 ePKPab PKPab 05 35 46.4 -0.6
UBBA Unterbreizbach 158.86 342 ePKPab PKPab 05 35 47.5 -0.8
BUG Bochum--Univer 158.90 347 ePKPab PKPab 05 35 47.1 -1.3
MCH1 Michaelchurch 158.91 5 eP PKPab 05 35 41.0 -7.4
MANZ Manzenberg 158.99 338 ePKPab PKPab 05 35 48.6 -0.3
PKSM Moragy 159.05 322⇑iP PKPdf 05 35 10.5 +0.4
PKSM Moragy 159.05 322 ⇑P PKPdf 05 35 10.5 +0.4
VAY Valandovo 159.15 306 ePKP PKPab 05 35 47.1 -2.9
KHC Kasperske Hory 159.20 334 ePKIKP PKPdf 05 35 10.2 0.0
KHC e 05 35 47.8
KHC Kasperske Hory 159.20 334 ePKPDF PKPdf 05 35 10.2 0.0
KHC ePKPAB PKPab 05 35 47.8 -2.0
KHC ex x 05 38 28.1
GEC2 GERESS Array S 159.39 334 ePKPab PKPab 05 35 50.7 0.0
GERES GERESS Array B 159.39 334 PKP PKPdf 05 35 10.2 -0.2
comp=Z,0.4nm,0.3s,baz=40,slow=2.3,SNR=8.1
GERES PKPab PKPab 05 35 48.4 -2.3
comp=Z,19nm,0.8s,baz=42,slow=4.6,SNR=28
WET Wettzell 159.44 335 ePKPab PKPab 05 35 51.1 +0.2
GRA1 Grafenberg Arr 159.52 339 ePKPdf PKPdf 05 35 09.4 -1.1
GRA1 ePKPab PKPab 05 35 51.5 +0.3
GRA1 epPKPab pPKPab 05 37 30.6 +2.6
GRA1 ePP PP 05 39 28.5 -5.4
GRF Grafenberg Arr 159.52 339 ePKPdf PKPdf 05 35 09.4 -1.1
GRF ePKPab PKPab 05 35 51.5 +0.3
GRF epPKPab pPKPab 05 37 30.6 +2.6
GRF ePP PP 05 39 28.5 -5.4
SKO Skopje 159.66 308 ePKP PKPab 05 35 51.9 -0.3
BEBN Eben Emael 159.79 350 PKPab PKPab 05 35 52.0 -0.4
TNS Taunus Mts 159.80 344 ePKPab PKPab 05 35 52.3 -0.1
ARSA Arzberg 159.87 328⇑iP PKPdf 05 35 08.2 -2.8
comp=Z,6.7nm,1.3s
ARSA ⇑iP 05 35 52.3
comp=Z,30nm,1.2s,SNR=6.9
MEM Membach 159.92 349 PKPab PKPab 05 35 51.5 -1.4
MOA Molln 159.96 331⇑iP PKPdf 05 35 10.9 -0.1
comp=Z,5.1nm,1.1s
MOA ⇑iP 05 35 52.1
comp=Z,30nm,1.0s,SNR=6.5
UCC Uccle 159.97 352 PKPab PKPab 05 35 52.3 -0.8
KRUS Krusevo 160.04 307 ePKP PKPab 05 35 51.5 -2.4
BCLA Clavier 160.21 350 PKPab PKPab 05 35 51.5 -2.7
SNF Seneffe 160.26 352 PKPab PKPab 05 35 53.9 -0.5
TOD Tromm 160.28 343 PKIKP PKPdf 05 35 11.8 +0.5
ABH Alteburg 160.32 345 PKP PKPdf 05 35 11.8 +0.4
PERS Pernice 160.52 327 ePKPdf PKPdf 05 35 11.2 -0.5
PERS epPKPdf PKPab 05 35 55.1 -0.6
PERS e 05 41 57.6
SOKA Soboth 160.53 328⇑iP PKPdf 05 35 10.7 -1.0
comp=Z,10.0nm,1.1s
SOKA ⇑iP PKPab 05 35 54.7 -1.0
comp=Z,26nm,1.3s
GIVF Givet 160.59 351 ePKP2 PKPab 05 35 53.1 -2.8
comp=Z,39nm,0.9s
RUP Ruppelstein 160.59 346 PKIKP PKPdf 05 35 12.3 +0.6
DOU Dourbes 160.63 351 PKPab PKPab 05 35 53.9 -2.1
BAIF Baives 160.71 352 ePKP2 PKPab 05 35 53.9 -2.5
comp=Z,71nm,0.8s
WLF Walferdange 160.80 348 PKPab PKPab 05 35 55.1 -1.7
WLF Walferdange 160.80 348 ePKPab PKPab 05 35 55.6 -1.2
FUR Furstenfeldbru 160.84 337 ePKPab PKPab 05 35 57.2 +0.2
STU Stuttgart 160.94 341 ePKPab PKPab 05 35 57.8 +0.3
LANF Langenberg 161.11 344 PKP PKPdf 05 35 11.8 -0.5
MYKA Terra Mystica 161.18 330⇑iP PKPdf 05 35 12.3 -0.1
comp=Z,2.0nm,0.5s
MYKA ⇓iP PKPab 05 35 55.6 -3.0
comp=Z,30nm,0.9s
LJU Ljubljana 161.23 327 ePKIKP PKPdf 05 35 11.7 -0.8
LJU e PKPab 05 35 58.3 -0.6
LJU e 05 39 42.8
LJU Ljubljana 161.23 327 ePKPdf PKPdf 05 35 11.7 -0.8
LJU epPKPdf PKPab 05 35 58.3 -0.5
LJU ePP PP 05 39 42.8 -0.4
LJU e 05 50 01.9
BOJS Bojanci 161.28 325 ePKPdf PKPdf 05 35 12.7 +0.2
BOJS ePP PP 05 39 41.9 -1.7
BOJS e 05 42 02.1
CEY Cerknica 161.50 327 ePKPdf PKPdf 05 35 12.6 -0.2
CEY epPKPdf PKPab 05 35 58.6 -1.5
CEY e 05 45 49.9
CEY e 05 49 59.0
ABTA Abfaltersbach 161.56 332⇑iP PKPdf 05 35 12.7 -0.1
comp=Z,11nm,1.0s
ABTA i P PKPab 05 35 59.7 -0.5
comp=Z,43nm,1.0s,SNR=8.6
BFO Black Forest 161.58 342 ePKPab PKPab 05 35 59.8 -0.5
CDF Champ du Feu 161.76 344 ePKP2 PKPab 05 35 58.7 -2.4
comp=Z,51nm,0.8s
LIBD Limburg 161.93 343 PKIKP PKPdf 05 35 15.3 +2.2
ECH Echery 161.97 344 PKP PKPdf 05 35 12.8 -0.4
FETA Feichten 162.01 336⇓iP PKPdf 05 35 13.3 0.0
comp=Z,13nm,1.1s
FETA i P PKPab 05 36 02.6 +0.4
comp=Z,51nm,1.0s,SNR=12
FELD Feldberg im Sc 162.08 342 PKP PKPdf 05 35 13.5 +0.2
MEZF Maizieres J'vi 162.12 349 ePKP2 PKPab 05 36 00.3 -2.3
comp=Z,76nm,1.0s
TORD Torodi Ar. Bea 162.16 185 PKP PKPdf 05 35 13.6 -0.8
comp=Z,11nm,1.0s,baz=154,slow=0.1,SNR=37
TORD PKPab PKPab 05 36 03.8 +0.3
comp=Z,12nm,0.8s,baz=176,slow=3.5,SNR=12
TORD pPKP pPKPdf 05 36 58.0 +1.4
comp=Z,3.3nm,0.8s,baz=186,slow=4.9,SNR=1.0
TORD pPKPab pPKPab 05 37 38.7 -1.3
comp=Z,12nm,0.8s,baz=179,slow=3.3,SNR=4.7
TORD Torodi Ar. Bea 162.16 185 PKP PKPdf 05 35 13.6 -0.8
TORD PKPab PKPab 05 36 03.8 +0.3
TORD pPKP pPKPdf 05 36 58.0 +1.4
TORD pPKPab pPKPab 05 37 38.7 -1.3
THEF They Montfort 162.21 347 PKP PKPdf 05 35 12.8 -0.6
MOF Molkenrain 162.32 344 PKP PKPdf 05 35 12.3 -1.2
HAU Haudompre 162.35 346 ePKP2 PKPab 05 36 01.1 -2.5
comp=Z,56nm,0.8s
HAU eMLR MLR
comp=Z,507nm,22.0s
HINF Hinteralfeld 162.42 345 ePKP2 PKPab 05 36 01.3 -2.7
comp=Z,17nm,0.8s
ROSF Rostrenen 162.51 7 ePKP2 PKPab 05 36 01.6 -2.7
comp=Z,78nm,0.9s
BBS Basel-Blauen 162.59 343 PKIKP PKPdf 05 35 16.5 +2.7
SGMF Saint Gilles 162.66 6 ePKP2 PKPab 05 36 02.6 -2.4
comp=Z,44nm,1.0s
QUIF Quistinic 162.94 7 ePKP2 PKPab 05 36 03.3 -2.9
comp=Z,82nm,0.9s
TUE Stuetta 162.96 338 ePKPdf PKPdf 05 35 13.9 -0.3
TUE ePKPab PKPab 05 36 06.1 -0.2
LOR Lormes 163.50 351 ePKP2 PKPab 05 36 06.1 -2.6
comp=Z,53nm,0.9s
LOR eMLR MLR
comp=Z,386nm,22.5s
CABF La Chapelle 163.73 345 ePKP2 PKPab 05 36 07.6 -2.2
comp=Z,42nm,0.9s
SSF Saint Saulge 163.75 351 ePKP2 PKPab 05 36 07.4 -2.4
comp=Z,132nm,0.8s
AVF Avril sur Loir 164.03 352 ePKP2 PKPab 05 36 08.4 -2.7
comp=Z,90nm,0.8s
SMF Signal de Mont 164.11 350 ePKP2 PKPab 05 36 09.0 -2.4
comp=Z,198nm,0.9s
BGF Bois d'Agland 164.32 353 ePKP2 PKPab 05 36 09.7 -2.6
comp=Z,42nm,0.9s
MFF Saint Martin d 164.43 0 ePKP2 PKPab 05 36 10.6 -2.2
comp=Z,29nm,0.8s
LPL La Plagne 164.60 342 ePKP2 PKPab 05 36 12.3 -1.3
comp=Z,104nm,0.9s
LPG La Plagne 164.61 342 ePKP2 PKPab 05 36 12.5 -1.2
comp=Z,114nm,0.9s
TCF Toulx Ste Croi 164.65 354 ePKP2 PKPab 05 36 11.2 -2.6
comp=Z,53nm,0.9s
AGO Saint Agoulin 164.79 352 PKP PKPdf 05 35 18.1 +2.2
PLDF La Plantade 164.80 350 PKP PKPdf 05 35 19.3 +3.4
PYM Petit Puy Mans 165.10 352 PKP PKPdf 05 35 18.6 +2.5
ORIF Oris-en-Rattie 165.38 343 ePKP2 PKPab 05 36 15.4 -1.6
comp=Z,90nm,0.8s
ORIF eMLR MLR
comp=Z,576nm,21.0s
LBL Lubilhac 165.58 351 PKP PKPdf 05 35 18.1 +1.6
RJF Les Rejaudoux 165.68 356 ePKP2 PKPab 05 36 15.5 -2.9
comp=Z,45nm,1.3s
RJF eMLR MLR
comp=Z,512nm,21.0s
VIVF Saint-Julien-l 165.70 347 ePKP2 PKPab 05 36 16.7 -1.8
SBF Sospel 165.89 337 ePKP2 PKPab 05 36 16.9 -2.5
comp=Z,102nm,1.0s
CAF Calviac 166.02 354 ePKP2 PKPab 05 36 17.6 -2.3
comp=Z,33nm,0.9s
LFF La Frestale 166.08 358 ePKP2 PKPab 05 36 17.3 -2.8
comp=Z,64nm,1.0s
SMRF Simiane la Rot 166.33 343 ePKP2 PKPab 05 36 19.8 -1.5
comp=Z,131nm,1.2s
FRF La Foret Royal 166.42 339 ePKP2 PKPab 05 36 19.3 -2.4
comp=Z,63nm,1.0s
PGF Pioggiola 166.44 331 ePKP2 PKPab 05 36 19.3 -2.6
comp=Z,54nm,1.0s
LASF Ste Croix 166.61 348 ePKP2 PKPab 05 36 20.4 -2.1
comp=Z,34nm,1.1s
LMR La Mourre 166.66 339 ePKP2 PKPab 05 36 20.6 -2.2
comp=Z,96nm,0.9s
CFTV Fuerteventura 167.47 98 PKP PKPdf 05 35 19.5 +1.0
MTLF Montolieu 167.57 353 ePKP2 PKPab 05 36 24.5 -2.3
comp=Z,31nm,0.9s
PBRG Braganca 167.93 25 i PKPab PKPab 05 36 28.4 -0.1
PVRL Vila Real 168.00 29 ePKPdf PKPdf 05 35 20.2 +1.7
PVRL Vila Real 168.00 29 i PKPab PKPab 05 36 28.5 -0.3
ETSF Etsaut 168.12 2 ePKP2 PKPab 05 36 26.8 -2.4
comp=Z,32nm,0.9s
MVO Moncorvo 168.38 27 ePKPdf PKPdf 05 35 19.8 +1.1
MVO Moncorvo 168.38 27 i PKPab PKPab 05 36 29.4 -1.1
PVIS Viseu 168.38 31 i PKPab PKPab 05 36 30.3 -0.2
MTE Manteigas 168.80 31 ePKPdf PKPdf 05 35 20.0 +1.0
PTOM Tomar 169.00 36 ePKPdf PKPdf 05 35 21.5 +2.3
PTOM Tomar 169.00 36 i PKPab PKPab 05 36 31.8 -1.5
PCBR Castelo Branco 169.28 33 ePKPdf PKPdf 05 35 19.6 +0.2
PMRV Marv??o 169.64 34 i PKPab PKPab 05 36 35.8 -0.4
GUD Guadarrama 169.81 18 PKIKP PKPdf 05 35 19.6 0.0
PESTR Estremoz 169.98 36 i PKPab PKPab 05 36 37.4 -0.3
EVO Evora 170.00 39 ePKIKP PKPdf 05 35 19.6 -0.2
comp=Z,47nm,1.1s
EVO eMLR MLR
comp=Z,551nm,22.2s
EVO Evora 170.00 39 ePKPdf PKPdf 05 35 20.4 +0.6
PTEO Sao Teotonio 170.26 46 ePKPdf PKPdf 05 35 21.8 +1.8
PBEJ Beja 170.44 41 ePKPdf PKPdf 05 35 21.4 +1.3
MORF Marmelete 170.46 47 ePKPdf PKPdf 05 35 22.4 +2.3
TAM Tamanrasset 170.46 212 ePKIKP PKPdf 05 35 18.6 -2.0
ESDC Sonseca Array 170.76 20 PKP PKPdf 05 35 19.9 -0.3
comp=Z,5.8nm,0.8s,baz=355,slow=2.4,SNR=24
ESDC PKPab PKPab 05 36 39.3 -1.7
comp=Z,7.6nm,0.9s,baz=335,slow=3.9,SNR=14
ESDC Sonseca Array 170.76 20 PKP PKPdf 05 35 19.8 -0.4
PAB San Pablo 170.77 22 ePKIKP PKPdf 05 35 21.6 +1.4
PBAR Barrancos 170.78 37 ePKPdf PKPdf 05 35 17.8 -2.5
KEST Kesra 170.90 304 PKP PKPdf 05 35 20.1 -0.3
comp=Z,4.0nm,1.0s,baz=90,slow=16,SNR=3.0
KEST PKPab PKPab 05 36 42.0 +0.1
comp=Z,7.7nm,1.0s,baz=342,slow=3.2,SNR=8.6
PBDV Barranco-do-Ve 170.94 45 ePKPdf PKPdf 05 35 21.9 +1.5
EMIN Mina Concepcio 171.28 38 PKP PKPdf 05 35 20.3 -0.2
EADA Adamuz 171.92 27 PKP PKPdf 05 35 21.4 +0.6
EVIA Vianos 172.11 15 PKIKP PKPdf 05 35 21.2 +0.3
EBAN Banos Encina 172.20 23 PKIKP PKPdf 05 35 20.6 -0.3
ETOB Tobarra 172.28 9 PKP PKPdf 05 35 20.1 -0.8
ESPR Espera 172.38 38 PKP PKPdf 05 35 18.3 -2.8
EQES Quesada 172.76 20 PKP PKPdf 05 35 21.0 -0.2
EHUE Huescar 172.88 17 PKIKP PKPdf 05 35 21.3 +0.1
EJIF Jimena Fronter 172.90 39 PKIKP PKPdf 05 35 24.0 +2.7
ELOJ Sierra Loja 172.97 28 PKIKP PKPdf 05 35 16.7 -4.6
ECOG Cogollos-Vega 173.08 24 PKIKP PKPdf 05 35 21.3 0.0
EMIJ Mijas 173.17 35 PKP PKPdf 05 35 13.5 -7.9
EGUA Guajares 173.47 26 PKIKP PKPdf 05 35 20.0 -1.5
EBER Berja 173.65 22 PKP PKPdf 05 35 21.3 -0.3
ENIJ Nijar 173.77 17 PKIKP PKPdf 05 35 22.2 +0.6
EALB Alboran 174.46 27 PKP PKPdf 05 35 21.8 0.0

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*ISCJB **25** 05:27:58.3±1.3, 175S±0.1×1789W±0.1, h543km±18km, mb4.0/18, Error ellipse: s-maj=25.1km s-min=11.4km az=146.2*
*NEIC **25** 05:27:59.2±0.9, 1747S×17885W, h545km±11km, mb4.6/6, Error ellipse: s-maj=17.3km s-min=7.5km az=146.0*
*IDC **25** 05:27:59.6±1.6, 1754S×17882W, h547km±18km, mb3.4/14, mb1 3.6/15, mb1mx3.6/20, mbtmp3.4/15, Error ellipse: s-maj=21.8km s-min=12.5km az=148.0*
ISC 25 05:27:59.3±1.3**, 175S**±0.1×**1789W**±0.1**, h542**km±17km**, n34, σ0.69**/32**, mb4.0**/18**, 3D, Fiji Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
AFI Afiamalu 7.69 63 P P 05 29 53.4 -0.4
5.5nm,0.3s,baz=225,slow=13,SNR=4.2
ARMA Armidale 29.79 239⇓iP P 05 33 23.5 +1.2
CTA Charters Tower 33.10 260⇓iP P 05 33 51.2 +0.5
5.0nm,0.4s,mb4.4
CTA Charters Tower 33.10 260 P P 05 33 51.2 +0.5
8.9nm,0.6s,mb4.5,baz=87,slow=10.0,SNR=10
CNB Canberra Magne 33.35 232 eP P 05 33 53.4 +0.7
TOO Toolangi 37.11 230 eP P 05 34 24.4 +0.5
STKA Stephens Creek 38.46 241⇓iP P 05 34 35.9 +0.9
11nm,0.6s,mb4.6
STKA Stephens Creek 38.46 241 P P 05 34 35.6 +0.6
12nm,0.5s,mb4.7,baz=91,slow=10,SNR=34
STKA Stephens Creek 38.46 241 eP P 05 34 35.8 +0.8
WB2 Warramunga Arr 44.28 259 eP P 05 35 21.2 0.0
WB2 Warramunga Arr 44.28 259 eP P 05 35 20.6 -0.6
WRAB Tennant Creek 44.28 259 eP P 05 35 20.7 -0.6
WRA Warramunga Arr 44.29 259 P P 05 35 20.8 -0.5
8.1nm,0.5s,mb4.5,baz=93,slow=6.9,SNR=35
WRA ScP ScP 05 39 53.0 -1.3
0.9nm,0.9s,baz=90,slow=4.3,SNR=4.9
ASAR Alice Springs 44.50 254 P P 05 35 23.1 +0.3
54nm,0.4s,baz=90,slow=7.7,SNR=622
ASAR ScP ScP 05 39 53.9 -1.2
0.7nm,0.8s,baz=101,slow=4.8,SNR=4.4
FORT Forrest 49.80 244 eP P 05 36 02.1 -0.6
30nm,0.6s,mb4.9
FITZ Fitzroy Crossi 52.68 260 eP P 05 36 23.6 -0.1
6.1nm,0.6s,mb4.1
FITZ Fitzroy Crossi 52.68 260 P P 05 36 23.9 +0.3
2.2nm,0.4s,mb3.9,baz=87,slow=4.1,SNR=22
MBWA Marble Bar 57.77 256 eP P 05 36 58.6 -0.5
50nm,1.8s,mb4.4
KLBR Kellerberrin 58.64 243 eP P 05 37 03.9 -0.9
14nm,0.6s,mb4.4
NWAO Narrogin (SRO) 59.03 242 P P 05 37 06.8 -0.7
10nm,0.9s,mb4.0,baz=102,slow=9.3,SNR=4.4
MJAR Matsushiro Arr 67.31 324 P P 05 37 58.9 -1.5
1.4nm,0.6s,mb3.7,baz=145,slow=6.6,SNR=3.5
QSPA South Pole Qui 72.57 180 P P 05 38 30.5 -0.4
0.7nm,0.5s,mb3.4,baz=93,slow=3.6,SNR=6.7
PETK Petropavlovsk- 73.16 345 P P 05 38 35.4 +0.8
2.8nm,0.9s,mb3.7,baz=141,slow=7.1,SNR=4.1
KSRS Korea Array 74.10 318 P P 05 38 41.0 +0.7
0.3nm,0.5s,mb3.0,baz=135,slow=6.1,SNR=4.5
NVAR Mina Array Bea 79.42 44 P P 05 39 10.1 +0.7
0.8nm,0.7s,mb3.1,baz=234,slow=7.3,SNR=4.5
NVAR Mina Array Bea 79.42 44 P P 05 39 10.1 +0.7
HEBO Mount Hebo 79.94 36 eP P 05 39 11.2 -0.8
86nm,1.2s,mb5.0
MAW Mawson 84.11 200 P P 05 39 32.1 -0.7
0.7nm,0.6s,mb3.4,baz=126,slow=13,SNR=4.0
TXAR Lajitas Array 86.13 58 P P 05 39 44.3 +1.0
1.2nm,0.8s,mb3.6,baz=212,slow=6.5,SNR=10
PDAR Pinedale Array 87.34 44 P P 05 39 48.8 +0.1
0.4nm,0.5s,mb3.3,baz=228,slow=4.7,SNR=3.0
CMAR Chiang Mai Arr 88.34 290 P P 05 39 54.1 +0.2
0.5nm,0.3s,mb3.7,baz=129,slow=3.5,SNR=4.4
CMAR Chiang Mai Arr 88.34 290 P P 05 39 54.1 +0.2
CLL Collm 144.96 347 ePKPbc PKPdf 05 46 35.0 +0.4
comp=Z,6.0nm,0.7s
GERES GERESS Array B 147.09 345 PKPbc PKPbc 05 46 40.9 -0.4
comp=Z,0.9nm,0.4s,baz=26,slow=2.5,SNR=4.8

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*ISK **25** 05:31:08.1, 3456N×3284E, h20km, MD3.4*
*CSEM **25** 05:31:10.6±0.3, 3471N×3288E, h20km, Mw3.1, Error ellipse: s-maj=6.3km s-min=4.9km az=23.0*
*GRAL **25** 05:31:10.7±4.4, 3460N×3280E, h2km±46km, MD3.6*
*ISCJB **25** 05:31:11.3±0.5, 3469N±0.02×3286E±0.05, h20km±5km, Error ellipse: s-maj=6.5km s-min=4.0km az=172.6*
*NIC **25** 05:31:12.2±0.3, 3485N×3289E, h10km, ML3.5, MW3.1*
NIC Felt earthquake; Maximum Intensity 4; Felt I=IV MM at Lania and I=III MM at Limassol.
*GII **25** 05:31:15.3±1.6, 3472N×3285E, h32km±4km, ML2.9/6, Mw2.6/7*
*DDA **25** 05:31:36.7, 3687N×3355E, h28km±9km, Md2.7*
ISC 25 05:31:12.0±0.5**, 3473N**±0.02×**3289E**±0.04**, h15**km±4km**, n49, σ0.91**/74**, Cyprus region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
SZAC Souni-Zanaja 0.03 345 eP Pg 05 31 15.0 +0.4
LEF Lefka 0.39 360 ePG Pg 05 31 19.2 -0.7
LEF eSG Sg 05 31 28.2 +2.9
LEF Lefka 0.39 360 eP Pg 05 31 18.8 -1.1
LEF Lefka 0.39 360 ePg Pg 05 31 19.3 -0.6
LEF eSg Sg 05 31 27.8 +2.5

CSS	**Prodhromos**	**0.43**	**57**	P		**Pg**	**05 31 19.4**	**-1.2**
	32nm,0.3s							
CSS				S		**Sg**	**05 31 26.3**	**-0.1**
CSS	**Prodhromos**	**0.43**	**57**	*e*P		**Pg**	**05 31 19.4**	**-1.2**
PPCY	**Paphos**	**0.48**	**290**	*e*P		**Pg**	**05 31 21.5**	**+0.1**
ALFC	**Alevga**	**0.49**	**331**	P		**Pg**	**05 31 20.4**	**-1.4**
ALFC				S		**Sg**	**05 31 26.0**	**-2.4**
ALFC	**Alevga**	**0.49**	**331**	*e*P		**Pg**	**05 31 20.4**	**-1.4**
MAMC	**Mammari**	**0.52**	**31**	*e*P		**Pg**	**05 31 21.0**	**-1.2**
LFK	**Lefkose**	**0.76**	**43**	*e*PG		**Pg**	**05 31 26.3**	**-0.5**
LFK				*e*SG		**Sg**	**05 31 39.9**	**+3.1**
LFK	**Lefkose**	**0.76**	**43**	*e*P		**Pg**	**05 31 25.8**	**-1.0**
LFK				*e*S		**Sg**	**05 31 38.8**	**+2.0**
LFK	**Lefkose**	**0.76**	**43**	*e*Pg		**Pg**	**05 31 26.3**	**-0.5**
LFK				*e*S		**Sg**	**05 31 38.8**	**+2.0**
PHNC	**Paralimni**	**0.98**	**73**	*e*P		**Pb**	**05 31 32.1**	**+1.5**
PHNC				*e*S		**Sb**	**05 31 48.7**	**+5.4**
EREN	**Erenkoy**	**1.32**	**52**	*e*PN		**Pn**	**05 31 35.7**	**-0.2**
IKL	**Isikli**	**1.64**	**23**	*e*PN		**Pn**	**05 31 39.2**	**-1.1**
IKL	**Isikli**	**1.64**	**23**	*e*Pn		**Pn**	**05 31 38.9**	**-1.4**
IKL				*e*Sn		**Sn**	**05 32 01.6**	**+0.4**
ERMK	**Ermenek**	**1.91**	**0**	*i* P		**Pn**	**05 31 45.5**	**+1.5**
ERMK				*i* S		**Sn**	**05 31 59.1**	**-8.8**
ERMK	**Ermenek**	**1.91**	**0**	*i* P		**Pn**	**05 31 45.5**	**+1.5**
MEST	**Erdemli**	**2.12**	**28**	*i* P		**Pn**	**05 31 47.7**	**+0.8**
MEST				*i* S		**Sn**	**05 31 57.0**	**-16**
HDMB	**Hadim**	**2.26**	**352**	*e*PN		**Pn**	**05 31 48.0**	**-0.8**
BHL	**Bhannes**	**2.43**	**109**	*e*P		**Pn**	**05 31 49.2**	**-1.9**
HNTI	**Hanita**	**2.51**	**130**	Pn		**Pn**	**05 31 52.5**	**+0.3**
HNTI				Sn		**Sn**	**05 32 21.6**	**+0.9**
MERS	**Mersin**	**2.52**	**31**	*e*PN		**Pn**	**05 31 52.8**	**+0.5**
MERS	**Mersin**	**2.52**	**31**	*e*Pn		**Pn**	**05 31 52.4**	**+0.1**
HWQ	**Hawqa**	**2.56**	**99**	*e*P		**Pn**	**05 31 53.3**	**+0.4**
HWQ				*e*S		**Sn**	**05 32 22.7**	**-1.1**
MMC6	**Mount Meron ar**	**2.69**	**129**	Pn		**Pn**	**05 31 54.5**	**-0.3**
MMA0	**Mount Meron ar**	**2.70**	**129**	Pn		**Pn**	**05 31 54.7**	**-0.1**
MMA0				Sn		**Sn**	**05 32 26.8**	**-0.4**
MMB1	**Mount Meron ar**	**2.70**	**128**	Pn		**Pn**	**05 31 54.7**	**-0.2**
RCY	**Rachaya**	**2.73**	**116**	*e*P		**Pn**	**05 31 54.9**	**-0.3**
OFRI	**'Ofer**	**2.73**	**140**	Pn		**Pn**	**05 31 55.5**	**+0.2**
OFRI				Sn		**Sn**	**05 32 27.4**	**-0.7**
KSDI	**Kefar Szold**	**2.76**	**123**	Pn		**Pn**	**05 31 56.3**	**+0.6**
KSDI				Sn		**Sn**	**05 32 28.4**	**-0.4**
HRI	**Mount Hermon**	**2.77**	**121**	Pn		**Pn**	**05 31 57.5**	**+1.6**
KSHT	**Keshet**	**2.99**	**125**	Pn		**Pn**	**05 31 59.4**	**+0.6**
SLTI	**Sal'it**	**3.06**	**143**	Sn		**Sn**	**05 32 34.9**	**-1.2**
KARA	**Karaisali**	**3.08**	**34**	*e*PN		**Pn**	**05 32 00.7**	**+0.6**
KARA	**Karaisali**	**3.08**	**34**	*e*Pn		**Pn**	**05 31 59.5**	**-0.6**
MMLI	**Mount Malkishu**	**3.11**	**137**	Pn		**Pn**	**05 32 01.1**	**+0.6**
MMLI				Sn		**Sn**	**05 32 37.2**	**-0.2**
HMDT	**Nahal Hemdat**	**3.30**	**138**	Pn		**Pn**	**05 32 04.3**	**+1.1**
HMDT				Sn		**Sn**	**05 32 41.8**	**-0.4**
NIG	**Nigde**	**3.65**	**22**	*e*PN		**Pn**	**05 32 08.9**	**+1.0**
NIG	**Nigde**	**3.65**	**22**	*e*Pn		**Pn**	**05 32 07.3**	**-0.6**
DSI	**Dead Sea**	**3.77**	**146**	Pn		**Pn**	**05 32 10.4**	**+0.7**
RTMI	**Retamim**	**3.96**	**157**	Pn		**Pn**	**05 32 12.6**	**+0.4**
RTMI				Sn		**Sn**	**05 32 58.2**	**-0.2**
MZDA	**Masada**	**3.99**	**148**	Pn		**Pn**	**05 32 13.7**	**+1.1**
MZDA				Sn		**Sn**	**05 32 58.7**	**-0.4**
PRNI	**Paran**	**4.71**	**157**	Pn		**Pn**	**05 32 23.2**	**+0.7**
PRNI				Sn		**Sn**	**05 33 17.1**	**+0.2**
KRMI	**Paran Flat**	**4.85**	**161**	Pn		**Pn**	**05 32 24.3**	**-0.1**
KRMI				Sn		**Sn**	**05 33 20.1**	**-0.2**
HRFI	**Mount Harif**	**5.01**	**158**	Pn		**Pn**	**05 32 27.4**	**+0.7**
HRFI				Sn		**Sn**	**05 33 23.6**	**-0.8**
MBRI	**Mt Berech**	**5.21**	**160**	Pn		**Pn**	**05 32 30.6**	**+1.2**
MBRI				Sn		**Sn**	**05 33 29.3**	**+0.2**
EIL	**Elat**	**5.33**	**160**	Pn		**Pn**	**05 32 32.0**	**+1.0**
EIL				Sn		**Sn**	**05 33 31.6**	**-0.7**

*BJI **25** 05:44:19.8, 028N× 12883E, h39km, mb4.6*
*ISCJB **25** 05:44:27.7±2.3, 103N±009× 127.9E±02, h52km±21km, mb4.4/17, Error ellipse: s-maj=28.5km s-min=10.8km az=159.1*
*DJA **25** 05:44:27, 093N× 12787E, h60km, MLv4.4/3*
*NEIC **25** 05:44:28.3±2.3, 105N× 12793E, h40km±22km, mb4.4/3, Error ellipse: s-maj=20.2km s-min=8.3km az=64.0*
*IDC **25** 05:44:29.0±3.9, 106N× 12790E, h43km±38km, mb4.2/14, mb1 4.3/16, mb1mx4.2/21, mbtmp4.2/16, ML3.8/2, Error ellipse: s-maj=30.0km s-min=14.2km az=75.0*

ISC 25 05:44:28.4±2.9, 10N±01× 1280E±01, h40km±28km, n28, σ0°69/26, mb4.4/17, 1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNE	**Ternate**	**0.63**	**246**	*e*P	**Pn**	**05 44 34.0**	**-6.9**
TNE				*e*S	**Sn**	**05 44 50.0**	**+0.2**
KAPI	**Kappang**	**10.16**	**234**	P	**Pn**	**05 46 51.8**	**0.0**
	2.3nm,0.3s,baz=70,slow=18,SNR=4.5						
FITZ	**Fitzroy Crossi**	**19.16**	**187**	*e*P	**Pn**	**05 48 47.9**	**-1.8**
	3.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.16**	**187**	P	**Pn**	**05 48 49.4**	**-0.4**
	0.1nm,0.3s,baz=17,slow=11,SNR=2.9						
WRAB	**Tennant Creek**	**21.77**	**164**	*e*P	**P**	**05 49 16.6**	**-0.2**
	18nm,1.0s,mb4.5						
WRA	**Warramunga Arr**	**21.77**	**164**	P	**P**	**05 49 17.1**	**+0.1**
	6.0nm,0.6s,mb4.2,baz=340,slow=10,SNR=18						
WB2	**Warramunga Arr**	**21.78**	**164**	*e*P	**P**	**05 49 17.0**	**0.0**
ASAR	**Alice Springs**	**25.23**	**167**	P	**P**	**05 49 51.3**	**+0.5**
	6.7nm,0.7s,mb4.3,baz=355,slow=10,SNR=44						
STKA	**Stephens Creek**	**35.20**	**160**	P	**P**	**05 51 19.8**	**+0.9**
	3.4nm,0.5s,mb4.5,baz=352,slow=6.6,SNR=7.2						
KSRS	**Korea Array**	**36.23**	**360**	P	**P**	**05 51 28.4**	**+0.8**
	2.6nm,0.7s,mb4.3,baz=174,slow=9.2,SNR=14						
MJAR	**Matsushiro Arr**	**36.58**	**14**	P	**P**	**05 51 29.2**	**-1.5**
	3.0nm,0.8s,mb4.2,baz=189,slow=10,SNR=7.7						
LZH	**Lanzhou**	**41.42**	**330**	*e*P	**P**	**05 52 20.1**	**+8.9**
	19nm,1.5s,mb4.5						
LZH				pP	pP	05 52 26.5	+4.1
LZH				sP	sP	05 52 29.0	+1.9
GTA	**Gaotai**	**46.01**	**329**	*e*P	**P**	**05 52 54.4**	**+6.3**
GTA				AP	pP	05 53 00.0	+0.6
GTA				XP	sP	05 53 02.8	-1.3
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.3						
SONM	**Songino Array**	**50.22**	**341**	P	**P**	**05 53 21.2**	**+0.9**
	comp=Z,1.7nm,0.6s,mb4.3,baz=157,slow=8.0,SNR=8.7						
PETK	**Petropavlovsk-**	**57.47**	**21**	P	**P**	**05 54 14.0**	**+0.7**
	comp=Z,1.2nm,0.5s,mb4.2,baz=200,slow=3.9,SNR=2.5						
MKAR	**Makanchi Array**	**60.44**	**326**	P	**P**	**05 54 34.7**	**+0.7**
	comp=Z,3.8nm,0.4s,mb4.8,baz=114,slow=7.7,SNR=52						
MKAR	**Makanchi Array**	**60.44**	**326**	P	**P**	**05 54 34.7**	**+0.7**
ZALV	**Zalesovo Beam**	**63.52**	**333**	P	**P**	**05 54 53.8**	**-0.7**
	comp=Z,0.8nm,0.3s,mb4.2,baz=141,slow=9.3,SNR=2.8						
KURK	**Kurchatov**	**64.65**	**328**	P	**P**	**05 55 02.2**	**+0.2**
	comp=Z,6.4nm,0.5s,mb4.9,baz=129,slow=6.3,SNR=29						
BVAR	**Borovoye Array**	**70.22**	**327**	P	**P**	**05 55 37.3**	**0.0**
	comp=Z,2.9nm,0.6s,mb4.4,baz=133,slow=8.2,SNR=14						
AKTK	**Aktyubinsk**	**76.51**	**322**	P	**P**	**05 56 14.2**	**-0.1**
AKTO	**Aktyubinsk**	**76.51**	**322**	P	**P**	**05 56 14.2**	**-0.1**
	comp=Z,2.7nm,0.7s,mb4.3,baz=108,slow=7.3,SNR=10						
ARCES	**ARCESS Array B**	**93.37**	**340**	P	**P**	**05 57 37.7**	**-1.3**
	comp=Z,1.4nm,0.7s,mb4.5,baz=76,slow=6.4,SNR=8.1						
ARCES	**ARCESS Array B**	**93.37**	**340**	P	**P**	**05 57 37.7**	**-1.3**
MLR	**Muntele Rosu**	**97.67**	**316**	P	**P**	**05 57 59.1**	**0.0**
	comp=Z,1.3nm,0.6s,mb4.6,baz=135,slow=5.7,SNR=3.9						
TXAR	**Lajitas Array**	**122.23**	**54**	PKP	PKPdf	06 03 20.7	+0.9
	comp=Z,0.4nm,1.0s,baz=346,slow=1.9,SNR=3.4						
TORD	**Torodi Ar. Bea**	**124.88**	**287**	PKP	PKPdf	06 03 24.4	-0.8
	comp=Z,0.5nm,0.7s,baz=53,slow=2.1,SNR=5.3						
BDFB	**Brasilia**	**164.96**	**195**	SKP	SKPdf	06 07 52.2	-5.9
	comp=Z,6.8nm,0.8s,baz=135,slow=1.4,SNR=5.4						

IDC 25 06:14:59.2±3.2, 2994S× 13854E, h0km, mb1 3.0/3, mb1mx3.0/14, mbtmp2.8/3, ML3.0/2, Error ellipse: s-maj=90.3km s-min=21.3km az=49.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**3.26**	**127**	Pn	Pn	06 15 51.9	+0.3
	0.5nm,0.3s,baz=301,slow=12,SNR=4.6						
STKA				Sn	Sn	06 16 32.1	+1.1
	1.1nm,0.3s,baz=299,slow=19,SNR=4.4						
ASAR	**Alice Springs**	**7.49**	**325**	Pn	Pn	06 16 47.9	-1.8
	baz=147,slow=12,SNR=3.7						
ASAR				Sn	Sn	06 18 18.2	+2.7
	0.1nm,0.3s,baz=148,slow=21,SNR=3.7						
WRA	**Warramunga Arr**	**10.65**	**338**	Pn	Pn	06 17 34.2	+1.1
	0.2nm,0.3s,baz=163,slow=14,SNR=4.2						
WRA				Sn	Sn	06 19 36.1	+2.9
	0.2nm,0.3s,baz=156,slow=25,SNR=3.2						

IDC 25 06:15:34.4±25.0, 1915S× 17201E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.8/17, mbtmp3.9/5, MS3.4/1, Ms1 3.4/1, ms1mx2.9/21, Error ellipse: s-maj=432.4km s-min=115.2km az=76.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.97**	**240**	*e*P	Pn	06 16 39.1	-25
DZM				*e*S	Sn	06 17 04.6	-68
HNR	**Honiara**	**15.15**	**308**	LR	LR	06 23 43.7	
	comp=Z,133nm,18.1s,baz=258,slow=32						
CTA	**Charters Tower**	**24.27**	**263**	P	P	06 20 54.3	+0.9
	4.2nm,0.7s,baz=83,slow=8.1,SNR=4.0						
STKA	**Stephens Creek**	**30.12**	**239**	P	P	06 21 46.4	+0.5
	2.2nm,0.8s,baz=49,slow=9.3,SNR=4.1						
WRA	**Warramunga Arr**	**35.46**	**262**	P	P	06 22 31.9	-0.9
	0.8nm,0.9s,baz=92,slow=8.2,SNR=2.6						
ASAR	**Alice Springs**	**35.69**	**256**	P	P	06 22 33.2	-1.4
	1.2nm,0.8s,baz=90,slow=9.0,SNR=9.9						
FITZ	**Fitzroy Crossi**	**43.85**	**264**	P	P	06 23 43.9	+1.2
	1.8nm,0.8s,baz=126,slow=8.7,SNR=3.2						

*NEIC **25** 06:16:46.0, 3547N× 2687E, h11km, MD3.5(ATH), After ATH.*
*CSEM **25** 06:16:46.0, 3547N× 2687E, h11km, MD3.5/6, After ATH*

ATH 25 06:16:46.0, 3547N× 2687E, h11km±4km, MD3.5/6, 1D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.25**	**72**	*i*Pg	Pg	06 16 50.5	-0.7
KARP				*e*SG	Sg	06 16 55.1	+0.5
NPS	**Neapolis**	**1.05**	**259**	*e*Pg	Pg	06 17 05.6	-0.6
ARG	**Arkhangelos**	**1.26**	**54**	*e*PB	Pb	06 17 10.1	+0.3
ARG				*e*SB	Sb	06 17 27.8	+1.7
SANT	**Santorini**	**1.46**	**309**	*e*Pn	Pn	06 17 13.6	+1.3
APE	**Apeiranthos**	**1.93**	**326**	*e*PN	Pn	06 17 20.4	+1.7
VAM	**Vamos**	**2.18**	**269**	*e*PN	Pn	06 17 24.9	+2.7
GVD	**Gavdhos**	**2.37**	**255**	*e*PN	Pn	06 17 27.0	+2.3

*ISCJB **25** 06:22:20.1±0.5, 3831N±003× 2178E±003, h9km±7km, Error ellipse: s-maj=5.2km s-min=4.3km az=5.1*
*THE **25** 06:22:21.0, 3831N× 2177E, h2km, ML2.8*
*ATH **25** 06:22:20.3, 3832N× 2181E, h11km±2km, MD3.3/6*
*NEIC **25** 06:22:20.3, 3832N× 2181E, h11km, MD3.3(ATH), After ATH.*
*CSEM **25** 06:22:21.0±0.2, 3832N× 2176E, h10km, MD3.3, Error ellipse: s-maj=4.6km s-min=3.7km az=172.0*

ISC 25 06:22:20.8±0.5, 3833N±003× 2177E±003, h18km±7km, n14, σ0°98/23, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.36**	**222**	*e*PB	**Pg**	**06 22 27.7**	**-0.6**
RLS				*e*SB	**Sg**	**06 22 33.6**	**+0.2**
EVR	**Evrytania**	**0.59**	**3**	*e*PB	**Pb**	**06 22 31.8**	**-0.9**
EVR				*e*SB	**Sb**	**06 22 40.2**	**-0.5**
KFL	**Anninata**	**0.80**	**255**	*e*Pg	**Pg**	**06 22 36.0**	**-0.5**
KFL	**Anninata**	**0.80**	**255**	*e*Pg	**Pg**	**06 22 36.0**	**-0.5**
AGG	**Agios Georgios**	**0.82**	**32**	*e*Pg	**Pg**	**06 22 35.8**	**-1.1**
AGG				*e*Sg	**Sg**	**06 22 49.5**	**+1.7**
VLS	**Valsamata**	**0.94**	**261**	*e*Pg	**Pg**	**06 22 37.7**	**-1.4**
VLS				*e*Sg	**Sg**	**06 22 52.8**	**+1.2**
VLS	**Valsamata**	**0.94**	**261**	*e*Pg	**Pg**	**06 22 38.5**	**-0.6**
VLS				*e*Sg	**Sg**	**06 22 52.8**	**+1.3**
LKD	**Levkas**	**0.96**	**294**	*e*Pg	**Pg**	**06 22 38.4**	**-1.1**
LKD				*e*Sg	**Sg**	**06 22 53.4**	**+1.3**
LKD	**Levkas**	**0.96**	**294**	*e*Pg	**Pg**	**06 22 38.3**	**-1.1**
LKD				*e*Sg	**Sg**	**06 22 53.4**	**+1.4**
LTK	**Loutraki**	**0.99**	**107**	*e*Pg	**Pg**	**06 22 39.6**	**-0.5**
LTK				*e*Sg	**Sg**	**06 22 53.9**	**+0.8**
ITM	**Ithomi**	**1.15**	**174**	*e*PN	**Pn**	**06 22 41.8**	**-0.2**
THL	**Klokotos Trika**	**1.25**	**9**	*e*PB	**Pb**	**06 22 44.2**	**+0.3**
DID	**Didima**	**1.42**	**125**	*e*Pg	**Pg**	**06 22 47.8**	**-0.4**
DID				*e*Sg	**Sg**	**06 23 06.3**	**-0.4**
VLI	**Veliai**	**1.85**	**150**	*e*PN	**Pn**	**06 22 54.0**	**+2.3**

*ISCJB **25** 07:01:08.3±1.0, 3635N±004× 2741E±006, h95km±10km, Error ellipse: s-maj=8.6km s-min=7.0km az=5.4*
*CSEM **25** 07:01:08.9±0.1, 3636N× 2743E, h80km, MD2.8, Error ellipse: s-maj=2.8km s-min=2.4km az=105.0*
*DDA **25** 07:01:09.1, 3640N× 2769E, h6km±4km, Md2.8*
*ATH **25** 07:01:10.3, 3638N× 2724E, h58km±11km, MD3.2/4*
*NEIC **25** 07:01:10.3, 3638N× 2724E, h58km, MG3.2(ATH), After ATH.*

ISC 25 07:01:09.2±1.1, 3634N±004× 2742E±006, h90km±10km, n16, σ0°96/25, 1C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.58**	**102**	*i*P	**Pn**	**07 01 25.3**	**+0.7**
ARG				*e*S	**Sn**	**07 01 37.2**	**+1.1**
BDRM	**Kayabasi**	**0.72**	**1**	*i* P	**Pn**	**07 01 26.4**	**+0.5**
BDRM				*i* S	**Sn**	**07 01 39.2**	**+0.8**
KARP	**Karpathos**	**0.82**	**195**	*e*P	**Pn**	**07 01 27.4**	**+0.5**
KARP				*e*S	**Sn**	**07 01 38.8**	**-1.4**
TURN	**Turunc**	**1.09**	**60**	*i* P	**Pn**	**07 01 26.6**	**-3.3**
TURN				*i* S	**Sn**	**07 01 39.1**	**-6.3**
AYDN	**Tasoluk**	**1.37**	**15**	*i* P	**Pn**	**07 01 33.4**	**+0.2**
AYDN				*i* S	**Sn**	**07 01 50.4**	**-1.0**
SMG	**Samos**	**1.44**	**341**	*e*P	**Pn**	**07 01 34.0**	**-0.2**
SMG				*e*S	**Sn**	**07 01 51.5**	**-1.6**
AKAS	**Kas**	**1.77**	**93**	*i* P	**Pn**	**07 01 38.5**	**+0.1**
AKAS				*i* S	**Sn**	**07 01 59.7**	**-0.8**
GOLH	**Golhisar**	**1.94**	**62**	*i* P	**Pn**	**07 01 41.0**	**+0.5**
GOLH				*i* S	**Sn**	**07 02 04.5**	**+0.1**
GOLH	**Golhisar**	**1.94**	**62**	*i* P	**Pn**	**07 01 41.0**	**+0.5**
GOLH				*i* S	**Sn**	**07 02 04.5**	**+0.1**
DEMI	**Demirci**	**2.88**	**20**	*i* S	**Sn**	**07 02 27.3**	**+0.3**
GVD	**Gavdhos**	**3.10**	**242**	*e*P	**Pn**	**07 01 57.0**	**+0.9**
GDZ	**Gediz**	**3.19**	**30**	*i* P	**Pn**	**07 02 05.4**	**+8.1**
DURS	**Dursunbey**	**3.36**	**14**	*i* P	**Pn**	**07 02 08.5**	**+9.0**
BALY	**Balya**	**3.40**	**3**	*i* S	**Sn**	**07 02 40.8**	**+1.5**
ESKT	**Eskisehir**	**4.17**	**39**	*i* P	**Pn**	**07 02 15.5**	**+5.0**
BORA	**Eskisehir**	**4.26**	**33**	*i* P	**Pn**	**07 02 10.3**	**-1.5**

*ISCJB **25** 07:40:27.4±1.0, 2987N±004× 3624E±005, h0km, Error ellipse: s-maj=6.9km s-min=4.9km az=155.3*
*SGS **25** 07:40:28.2, 3006N× 3626E, h14km*
*GII **25** 07:40:29.1±0.8, 2991N× 3609E, h0km, ML2.5/2, EXPLOSION*

ISC 25 07:40:27.5±1.0, 2986N±004× 3629E±005, h0km, n13, σ0°46/20, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HRFI	**Mount Harif**	**1.10**	**279**	Pg	**Pg**	**07 40 48.4**	**-0.2**
HRFI				Sg	**Sg**	**07 41 02.9**	**+0.1**
EIL	**Elat**	**1.18**	**261**	Pg	**Pg**	**07 40 49.8**	**-0.2**
EIL				Sg	**Sg**	**07 41 05.8**	**+0.5**
ZFRI	**Zfri**	**1.18**	**306**	Pg	**Pg**	**07 40 49.9**	**-0.3**
ZFRI				Sg	**Sg**	**07 41 05.7**	**+0.2**
MBRI	**Mt Berech**	**1.20**	**267**	Pg	**Pg**	**07 40 50.8**	**+0.4**
MBRI				Sg	**Sg**	**07 41 06.2**	**+0.3**
HQLS		**1.20**	**243**	S	**Sg**	**07 41 06.2**	**0.0**
HQLS		**1.20**	**243**	P	**Pg**	**07 40 49.9**	**-0.7**
PRNI	**Paran**	**1.21**	**294**	Pg	**Pg**	**07 40 50.8**	**0.0**
PRNI				Sg	**Sg**	**07 41 06.7**	**+0.1**
JLOS		**1.32**	**212**	S	**Sg**	**07 41 10.7**	**+0.9**
JLOS		**1.32**	**212**	P	**Pg**	**07 40 52.5**	**-0.2**
KRMI	**Paran Flat**	**1.38**	**281**	Pg	**Pg**	**07 40 53.3**	**-0.6**
KRMI				Sg	**Sg**	**07 41 10.8**	**-1.0**
MZDA	**Masada**	**1.65**	**331**	Pn	**Pn**	**07 40 57.9**	**+0.2**
MZDA				Sn	**Sn**	**07 41 20.5**	**+0.9**
TBKS	**Tabuk**	**1.65**	**172**	P	**Pn**	**07 40 57.6**	**-0.1**
BDAS	**Al Bad'**	**1.76**	**216**	P	**Pn**	**07 40 59.1**	**-0.1**

MAN 25 07:42:58, 1027N× 12499E, h44km, mb3.9, ML2.7, MS2.3, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.18**	**225**	*e*P	Pn	07 43 07.4	+1.8
MSLP				*e*S	Sn	07 43 14.0	+3.1
SCPH	**Surigao**	**0.69**	**134**	*e*P	Pn	07 43 12.8	+1.4
SCPH				*e*S	Sn	07 43 23.7	+2.7
PLP	**Palo**	**0.89**	**359**	*e*P	Pn	07 43 15.0	+0.9
PLP				*e*S	Sn	07 43 27.8	+1.9

*DJA **25** 07:53:10, 239S× 10200E, h15km, MLv4.1/4*

IDC 25 07:53:07.3±5.8, 225S× 10202E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.3/18, mbtmp3.3/2, 1C, Error ellipse: s-maj=293.8km s-min=82.5km az=47.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPI	**Tanjungpandan**	**5.65**	**95**	*e*P	Pn	07 54 35.0	+2.4
TPI				*e*S	Sn	07 56 17.0	+39
WRA	**Warramunga Arr**	**36.14**	**121**	P	P	08 00 11.7	+0.2
	0.3nm,0.6s,baz=300,slow=9.2,SNR=4.5						
ASAR	**Alice Springs**	**37.49**	**127**	P	P	08 00 22.7	-0.3
	0.3nm,0.5s,baz=299,slow=8.1,SNR=6.2						
TXAR	**Lajitas Array**	**143.64**	**40**	PKP	PKPdf	08 12 44.7	-0.2
	0.2nm,0.5s,baz=229,slow=0.9,SNR=5.2						

IDC 25 08:09:47.8±2.1, 087N× 12750E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, 1D, Error ellipse: s-maj=172.2km s-min=25.2km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNE	**Ternate**	**0.16**	**237**	*e*P	Pg	08 09 58.5	+7.7
WRA	**Warramunga Arr**	**21.75**	**162**	P	P	08 14 40.6	-0.4
	1.3nm,0.7s,baz=341,slow=10,SNR=13						
ASAR	**Alice Springs**	**25.17**	**166**	P	P	08 15 15.5	+0.4
	1.0nm,0.6s,baz=348,slow=9.2,SNR=8.3						
MKAR	**Makanchi Array**	**60.33**	**326**	P	P	08 19 58.5	0.0
	0.4nm,0.3s,baz=111,slow=6.2,SNR=7.3						

*ISCJB **25** 08:16:52.9±0.6, 41.12N±003× 3457E±004, h1km±8km, Error ellipse: s-maj=5.2km s-min=4.3km az=136.7*
*ISK **25** 08:16:52.6, 41.15N× 3454E, h5km, MD2.8*
*DDA **25** 08:16:52.6, 41.09N× 3459E, h7km±2km, Md3.2*
*CSEM **25** 08:16:52.1±0.1, 41.16N× 3452E, h2km, MD2.8, Error ellipse: s-maj=2.6km s-min=1.8km az=132.0*

ISC 25 08:16:53.3±0.5, 4112N±003× 3458E±004, h2km±7km, n13, σ0°65/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BYBT	**Boyabat**	**0.38**	**22**	*e*PG	**Pg**	**08 17 00.3**	**-0.4**
BYBT				*e*SG	**Sg**	**08 17 05.3**	**-0.2**
BOYT	**Boyabat**	**0.39**	**39**	*i* P	**Pg**	**08 17 00.9**	**0.0**
BOYT				*i* S	**Sg**	**08 17 07.0**	**+1.1**
TOS	**Tosya**	**0.43**	**259**	*e*PG	**Pg**	**08 17 01.3**	**-0.2**
TOS				*e*SG	**Sg**	**08 17 07.4**	**+0.3**
CTKT	**Corum**	**0.52**	**162**	*i* P	**Pg**	**08 17 02.9**	**-0.3**
CTKT				*i* S	**Sg**	**08 17 09.6**	**-0.3**
ILGA	**Ilgaz**	**0.66**	**265**	*i* P	**Pg**	**08 17 05.3**	**-0.6**
ILGA				*i* S	**Sg**	**08 17 15.8**	**+1.4**
CANT	**Cankiri**	**0.89**	**235**	*e*PG	**Pg**	**08 17 10.0**	**-0.4**
CANT				*e*SG	**Sg**	**08 17 22.4**	**+0.5**
CORM	**Corum**	**0.94**	**178**	*e*PG	**Pg**	**08 17 11.4**	**+0.2**
BALT	**Daday**	**0.99**	**295**	*i* P	**Pg**	**08 17 11.5**	**-0.8**
BALT				*i* S	**Sg**	**08 17 25.1**	**-0.1**
SAFT	**Safranbolu**	**1.43**	**276**	*e*PN	**Pn**	**08 17 19.2**	**-1.1**
CDAG	**Cicekdag**	**1.50**	**186**	*i* P	**Pn**	**08 17 20.4**	**-0.7**
CDAG				*i* S	**Sn**	**08 17 41.3**	**0.0**
YOZ	**Yozgat**	**1.58**	**159**	*e*PN	**Pn**	**08 17 23.0**	**+0.7**
KAMT	**Kaman**	**1.87**	**201**	*e*PN	**Pn**	**08 17 26.8**	**+0.6**
AVNT	**Avonos**	**2.34**	**175**	*i* P	**Pn**	**08 17 33.3**	**+0.5**
AVNT

393nm,0.8s
BSI Banda Aceh 8.83 325 P **Pn** **08 29 12.3 +0.2**
228nm,1.4s
SNG Songkhla 8.89 1 P **Pn** **08 29 13.0 +0.2**
1μm,1.0s
KSM Kuching 10.42 72 *e*Pn **Pn** **08 29 34.7 +0.9**
BJII Banjamegara 10.80 121 P **Pn** **08 29 39.9 +0.9**
172nm,1.4s
COCO West Island 10.94 199 *e*Pn **Pn** **08 29 38.7 -2.2**
STKI Sintang 11.23 81 P **Pn** **08 29 50.6 +5.7**
171nm,1.4s
SBUM Sibu 12.54 71 ⇓P **Pn** **08 30 06.9 +4.1**
SJI Sawahan 12.78 118 P **Pn** **08 30 05.4 -0.7**
222nm,1.0s
TRT Tretes 13.54 116 ⇓*e*P **Pn** **08 30 16.6 +0.1**
PLKI Palangkaraya 13.55 92 P **Pn** **08 30 17.4 +0.8**
737nm,0.9s
BTM Bintulu 13.61 69 ⇓P **Pn** **08 30 21.1 +3.7**
NNT Nongpiab 14.28 357 P **Pn** **08 30 32.5 +6.2**
BBKI Banjar Baru 14.53 97 P **Pn** **08 30 34.1 +4.5**
323nm,1.0s
KHKI Kahang-Kahang 16.50 114 P **Pn** **08 30 54.9 -0.1**
210nm,0.9s
SMKI Samarinda 16.86 86 P **Pn** **08 31 03.9 +4.4**
287nm,1.5s
MTNI Mataram 17.12 114 P **Pn** **08 31 03.0 +0.3**
124nm,0.9s
NST Nakhon Sawan 17.33 359 P **Pn** **08 31 00.3 -4.9**
42nm,0.7s
UBT Ubonrachathani 17.51 15 ⇓P **Pn** **08 31 08.5 +1.0**
312nm,1.0s
KKM Kota Kinabalu 17.60 64 ⇓P **Pn** **08 31 09.7 +1.1**
KKM Kota Kinabalu 17.60 64 *e*Pn **Pn** **08 31 09.3 +0.7**
SDKM Sandakan 18.32 66 ⇑P **Pn** **08 31 18.2 +0.8**
TSM Tawau 18.47 71 ⇓P **Pn** **08 31 20.2 +0.9**
KDM Kudat 18.53 62 ⇑P **Pn** **08 31 20.9 +0.9**
BDT Bhumibol Dam 18.94 356 ⇓P **Pn** **08 31 25.0 +0.2**
22nm,1.2s
MKS Makassar 19.34 101 ⇑*e*P **Pn** **08 31 28.5 -1.2**
MKS *e*S **S** **08 35 07.4 +3.0**
MYLDM Lahad Datu 19.36 69 ⇑P **Pn** **08 31 30.3 +0.5**
PCI Palu 19.45 88 P **Pn** **08 31 34.0 +3.0**
361nm,1.4s
KAPI Kappang 19.59 100 P **Pn** **08 31 29.9 -2.7**
2μm,1.0s,SNR=12
KAPI Kappang 19.59 100 P **Pn** **08 31 32.0 -0.6**
SNR=21
KAPI Kappang 19.59 100 *e*P **Pn** **08 31 28.7 -3.9**
CMAR Chiang Mai Arr 20.15 356 P **P** **08 31 35.6 -1.2**
106nm,0.9s,baz=186,slow=9.5,SNR=102
CMAR PcP PcP 08 35 50.9 +0.6
12nm,0.9s,baz=220,slow=3.1,SNR=9.1
CMAR LR LR 08 40 07.1
comp=Z,3μm,18.7s,MS4.6,baz=178,slow=39
CMAR Chiang Mai Arr 20.15 356 P **P** **08 31 35.7 -1.2**
CMAR 08 35 50.9
NANT Nan 20.44 1 PN **P** **08 31 39.0 -1.0**
CHG Chiang Mai 20.50 356 ⇓P **P** **08 31 40.5 -0.2**
47nm,1.0s
CHTO Chiang Mai 20.50 356 P **P** **08 31 40.5 -0.2**
SNR=8.6
CHTO Chiang Mai 20.50 356 *e*P **P** **08 31 39.9 -0.8**
CHTO LR LR
comp=Z,2μm,20.0s,MS4.5
CHRT Chiangrai 21.51 358 P **P** **08 31 50.0 -1.6**
comp=Z,526nm,0.6s,mb6.1
PALK Pallekele 21.61 295 P **P** **08 31 55.0 +2.3**
comp=Z,253nm,1.4s,mb5.5,SNR=5.3
PALK Pallekele 21.61 295 *e*P **P** **08 31 55.1 +2.4**
PALK LR LR
comp=Z,2μm,20.0s,MS4.4
KDI Kendari 22.30 96 P **P** **08 32 00.8 +0.7**
comp=Z,116nm,1.4s,mb5.1
KDI Kendari 22.30 96 ⇑*e*P **P** **08 31 59.5 -0.6**
KDI *e*S **S** **08 35 56.6 -6.1**
BBSI Bau Bau 22.43 100 P **P** **08 32 07.2 +5.7**
comp=Z,268nm,0.9s,mb5.7
QIZ Qiongzhong 22.66 24 P **P** **08 32 04.8 +1.0**
QIZ XP sP 08 32 16.8 -6.0
QIZ S **S** **08 36 10.5 +2.1**
QIZ XS sS 08 36 22.8 -6.8
QIZ AMB AMB
comp=Z,83nm,1.1s,mb5.1
QIZ AMB AMB
comp=Z,666nm,3.0s
QIZ LR LR
comp=N,2μm,14.0s
QIZ LR LR
comp=Z,2μm,19.0s,MS4.5
QIZ Qiongzhong 22.66 24 PFAKE 08 32 10.0 +6.2
QIZ LR LR
comp=Z,2μm,21.0s,MS4.5
BATI Baumata 24.59 111 P **P** **08 32 21.2 -1.1**
comp=Z,88nm,1.3s,mb5.1
BATI Baumata 24.59 111 P **P** **08 32 18.4 -3.9**
comp=Z,101nm,0.7s,mb5.4,baz=300,slow=4.6,SNR=7.7
MNI Manado 24.65 83 P **P** **08 32 24.1 +1.2**
comp=Z,2μm,1.0s,mb6.6
MNI Manado 24.65 83 ⇓*e*P **P** **08 32 24.0 +1.1**
MNI *e*S 08 32 39.0
VIS Vishakhapatnam 25.65 320 *e*P **P** **08 32 32.1 +0.3**
VIS AMb AMB 08 32 34.4
comp=Z,112nm,0.8s,mb5.5
KOD Kodaikanal 25.75 298 *e*P **P** **08 32 34.2 +1.4**
KOD AMb AMB 08 32 36.1
comp=Z,54nm,1.1s,mb5.0
TBP Tagbilaran 25.99 64 ⇓*e*P **P** **08 32 35.2 +0.1**
BWNR Bhubaneshwar 26.18 328 *e*P **P** **08 32 32.0 -4.6**
DAV Davao City (W) 26.62 70 P **P** **08 32 41.9 +1.2**
comp=Z,202nm,0.4s,mb6.0,baz=130,slow=4.5,SNR=12
DAV LR LR 08 44 32.0
comp=Z,1μm,21.9s,MS4.4,baz=159,slow=40
DAV Davao City (W) 26.62 70 ⇑*e*P **P** **08 32 39.3 -1.4**
KMI Kunming 26.83 5 P **P** **08 32 42.5 +0.1**
KMI AP pP 08 32 52.0 -4.0
KMI XP sP 08 32 56.0 -6.4
KMI PP 08 33 27.8
KMI PPP 08 33 39.8
KMI S **S** **08 37 14.3 -0.7**
KMI AMB AMB
comp=Z,44nm,1.1s,mb4.9
KMI AMB AMB
comp=Z,182nm,6.4s
KMI LR LR
comp=N,2μm,19.8s,MS4.8
KMI LR LR
comp=E,932nm,17.5s,MS4.8
KMI LR LR
comp=Z,2μm,22.3s,MS4.7
KMI Kunming 26.83 5 P **P** **08 32 42.6 +0.2**
KMI *PP pP 08 32 52.1 -3.9
KMI *SP sP 08 32 56.1 -6.3
KMI 08 33 27.8
KMI PPP 08 33 39.8
KMI S **S** **08 37 14.3 -0.7**
KMI *SS sS 08 37 30.6 -7.5
KMI SS 08 38 26.7
KMI SSS 08 38 44.8
KMI pmax pmax
comp=Z,44nm,1.1s,mb4.9
KMI MLR MLR
comp=Z,2μm,22.3s,MS4.7
KMI Kunming 26.83 5 P **P** **08 32 42.6 +0.2**
comp=Z,44nm,1.1s,mb4.9
KMI pP pP 08 32 52.1 -3.9
KMI sP sP 08 32 56.1 -6.3
KMI PP 08 33 27.8
KMI PPP 08 33 39.8
KMI S **S** **08 37 14.3 -0.7**
KMI sS sS 08 37 30.6 -7.5
KMI SS 08 38 26.7
KMI SSS 08 38 44.8
KMI LR LR
comp=Z,2μm,22.3s,MS4.7
CAL Calcutta 26.87 335 *e*P **P** **08 32 42.8 0.0**
CAL *ex* x 08 37 35.8
MBWA Marble Bar 26.96 137 *e*P **P** **08 32 43.0 -0.7**
comp=Z,42nm,1.0s,mb4.9
MBWA LR LR
comp=Z,2μm,19.0s,MS4.7
IMP Imphal 27.13 347 *e*P **P** **08 32 43.0 -2.1**
IMP *ex* x 08 33 00.0
GYA Guiyang 28.70 12 P **P** **08 33 00.5 +1.3**
GYA AP pP 08 33 10.5 -2.3
GYA XP sP 08 33 16.5 -2.7
GYA PP PP 08 33 56.3 -8.6
GYA S **S** **08 37 49.5 +4.9**
GYA XS sS 08 38 06.5 -1.2
GYA SS SS 08 39 18.0 -30
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,290nm,5.0s
GYA LR LR
comp=N,4μm,14.9s,MS5.2
GYA LR LR
comp=E,3μm,13.5s,MS5.2
GYA LR LR
comp=Z,4μm,14.8s,MS5.2
HYB Hyderabad 28.76 312 *i*P **P** **08 33 03.0 +3.2**
HYB *e*S **S** **08 37 49.5 +3.8**
HYB Hyderabad 28.76 312 *e*P **P** **08 33 03.0 +3.2**
HYB *e*S **S** **08 37 48.0 +2.3**
BOK Bokaro 29.06 332 *e*P **P** **08 33 03.7 +1.3**
FITZ Fitzroy Crossi 29.62 125 ⇑*i*P **P** **08 33 05.4 -2.0**
comp=Z,62nm,0.7s,mb5.5
FITZ *e*PCP PcP 08 36 10.8 -0.4
FITZ Fitzroy Crossi 29.62 125 P **P** **08 33 05.4 -2.0**
comp=Z,34nm,0.7s,mb5.2,baz=306,slow=6.6,SNR=88
FITZ LR LR 08 45 01.4
comp=Z,772nm,21.6s,MS4.3,baz=300,slow=36
SWI Sorong 30.87 89 P **P** **08 33 17.8 -0.8**
comp=Z,214nm,1.1s,mb5.9
NGP Nagpur 30.91 319 *e*P **P** **08 33 17.3 -1.4**
NGP AMb AMB 08 33 18.4
comp=Z,68nm,2.2s,mb5.1
ODAN Odare 31.10 337 *e*P **P** **08 33 21.1 +0.7**
RAMN Ramite 31.50 336 *e*P **P** **08 33 24.9 +1.0**
comp=Z,232nm,1.0s,mb6.0
QZH Quanzhou 31.88 32 ⇑*i*P **P** **08 33 27.3 0.0**
QZH *e*S **S** **08 38 36.3 +1.9**
QZH AMB AMB
comp=Z,200nm,0.9s,mb6.0
QZH LR LR
comp=N,5μm,19.8s,MS5.3
QZH LR LR
comp=E,2μm,15.1s,MS5.3
QZH LR LR
comp=Z,4μm,14.2s,MS5.2
AKL Akola 31.99 315 *e*P **P** **08 33 28.3 +0.1**
AKL AMb AMB 08 34 06.7
comp=Z,340nm,2.1s,mb5.8
JIRN Jiri 32.29 336 *e*P **P** **08 33 32.0 +1.1**
comp=Z,570nm,0.9s,mb6.4
ALBI Allahabad 32.38 327 *ex* x 08 37 43.0
LSA Lhasa 32.51 345 P **P** **08 33 33.3 +0.5**
LSA AP pP 08 33 44.8 -1.7
LSA XP sP 08 33 50.0 -2.9
LSA S **S** **08 38 42.5 -1.7**
LSA AMB AMB
comp=Z,120nm,1.0s
LSA AMB AMB
comp=Z,330nm,4.0s
LSA LR LR
comp=N,380nm,30.0s
LSA LR LR
comp=E,510nm,26.0s
LSA LR LR
comp=Z,770nm,26.0s
LSA Lhasa 32.51 345 ⇑*i*P **P** **08 33 33.6 +0.8**
LSA pmax pmax
comp=Z,254nm,1.0s,mb6.1
LSA MLR MLR
comp=Z,912nm,22.0s,MS4.4
LSA Lhasa 32.51 345 ⇑*i*P **P** **08 33 33.6 +0.9**
comp=Z,254nm,1.0s,mb6.1
LSA LR LR
comp=Z,912nm,22.0s,MS4.4
PKIN Phulchoki 32.55 335 *e*P **P** **08 33 33.6 +0.5**
GUN Gumba 32.64 336 *e*P **P** **08 33 35.1 +1.2**
CD2 Chengdu 32.65 5 P **P** **08 33 32.3 -1.6**
CD2 AP pP 08 33 41.8 -5.9
CD2 XP sP 08 33 46.0 -8.0
CD2 PP PP 08 34 42.0 -6.7
CD2 PCP PcP 08 36 16.8 -2.2
CD2 S **S** **08 38 45.8 -0.5**
CD2 PCS PcS 08 40 01.0 -3.3
CD2 SS SS 08 40 45.0 -24
CD2 SCS ScS 08 43 55.5 -2.9
CD2 AMB AMB
comp=Z,70nm,0.8s,mb5.6
CD2 AMB AMB
comp=Z,180nm,5.4s
CD2 LR LR
comp=N,3μm,17.9s
CD2 LR LR
comp=E,3μm,24.6s
CD2 LR LR
comp=Z,3μm,20.4s,MS5.0
DMN Daman 32.70 334 *e*P **P** **08 33 35.1 +0.7**
comp=Z,159nm,0.9s,mb5.9
KKN Kakani 32.79 335 *e*P **P** **08 33 35.8 +0.6**
comp=Z,282nm,1.0s,mb6.2
NACB Ninganchiao 33.00 37 *e*P **P** **08 33 36.4 -0.8**
comp=Z,416nm,1.0s,mb6.3
YHNB Yeheng 33.24 36 *e*P **P** **08 33 39.1 -0.1**
comp=Z,101nm,1.1s,mb5.7
YHNB LR LR
comp=Z,2μm,20.0s,MS4.7
GKN Gorkha 33.25 334 *e*P **P** **08 33 39.9 +0.7**
TATO Taipei 33.54 36 *e*P **P** **08 33 42.4 +0.6**
TATO LR LR
comp=Z,1μm,19.0s,MS4.7
MUN Mundaring 33.55 155 *e*P **P** **08 33 42.6 +0.8**
KLBR Kellerberrin 33.89 153 *e*P **P** **08 33 45.2 +0.4**
comp=Z,108nm,1.5s,mb5.6
KLBR *e*PCP PcP 08 36 22.2 -0.3
DANN Dangsing 33.94 333 *e*P **P** **08 33 46.0 +0.8**
comp=Z,365nm,0.8s,mb6.4
WHN Wuhan 34.77 21 ⇑P **P** **08 33 52.3 -0.1**
WHN S **S** **08 39 14.5 -4.7**
WHN AMB AMB
comp=Z,134nm,1.1s,mb5.8
WHN LR LR
comp=N,4μm,18.4s,MS5.2
WHN LR LR
comp=E,3μm,21.4s,MS5.2
WHN LR LR
comp=Z,6μm,17.1s,MS5.4
NWAO Narrogin (SRO) 34.80 155 P **P** **08 33 52.3 -0.3**
comp=Z,27nm,0.8s,mb5.2,baz=322,slow=9.5,SNR=9.9
NWAO LR LR 08 46 03.2
comp=Z,2μm,21.6s,MS4.7,baz=330,slow=33
NWAO Narrogin (SRO) 34.80 155 *e*P **P** **08 33 52.0 -0.6**
comp=Z,150nm,1.7s,mb5.6
NWAO LR LR
comp=Z,2μm,19.0s,MS4.8
XAN Xi'an 36.51 12 P **P** **08 34 05.5 -1.7**
XAN PP PP 08 35 29.5 -1.7
XAN PPP 08 35 49.8
XAN AMB AMB
comp=Z,94nm,0.9s,mb5.6
XAN AMB AMB
comp=Z,337nm,8.4s
XAN LR LR
comp=N,1μm,21.0s
XAN LR LR
comp=E,380nm,13.8s
XAN LR LR
comp=Z,1μm,17.4s,MS4.8
PTH Pithoragarh 36.63 330 *e*P **P** **08 34 09.1 +0.7**
AJM Ajmer 37.50 320 *e*P **P** **08 34 15.9 +0.1**
AJM AMb AMB 08 34 17.4
comp=Z,90nm,1.0s,mb5.5
NDI New Delhi 37.56 325 *e*P **P** **08 34 14.5 -1.8**
NDI *e*S **S** **08 40 04.0 +2.1**
WRA Warramunga Arr 37.77 121 P **P** **08 34 15.7 -2.5**
comp=Z,58nm,0.8s,mb5.4,baz=301,slow=9.2,SNR=282
WRA PcP PcP 08 36 33.5 -0.8
comp=Z,13nm,0.7s,baz=307,slow=2.7,SNR=7.5
WRA S **S** **08 39 58.9 -6.4**
comp=Z,8.6nm,1.0s,baz=297,slow=16,SNR=6.9
WRA LR LR 08 53 21.8
comp=Z,555nm,18.5s,MS4.4,baz=300,slow=42
WRA Warramunga Arr 37.77 121 P **P** **08 34 15.7 -2.5**
WRA 08 36 33.5
WRA S **S** **08 39 58.9 -6.4**
WRAB Tennant Creek 37.78 121 P **P** **08 34 15.0 -3.2**
comp=Z,605nm,0.7s,mb6.4,SNR=50
WRAB Tennant Creek 37.78 121 *e*P **P** **08 34 15.4 -2.8**
WRAB pmax pmax
comp=Z,61nm,0.7s,mb5.4
WRAB MLR MLR
comp=Z,927nm,20.0s,MS4.6
WRAB Tennant Creek 37.78 121 *e*P **P** **08 34 15.4 -2.8**
comp=Z,61nm,0.7s,mb5.4
WRAB LR LR
comp=Z,927nm,20.0s,MS4.6
WB2 Warramunga Arr 37.78 121 ⇑*i*P **P** **08 34 15.7 -2.6**
WB2 *e*PCP PcP 08 36 33.2 -1.1
LZH Lanzhou 37.80 5 ⇓P **P** **08 34 17.5 -0.6**
LZH AP pP 08 34 26.3 -5.7
LZH XP sP 08 34 30.3 -8.1
LZH PP PP 08 35 48.3 +2.9
LZH *e*S **S** **08 40 05.5 +0.3**
LZH XS sS 08 40 22.5 -6.2
LZH AMB AMB
comp=Z,154nm,1.4s,mb5.5
LZH AMB AMB
comp=Z,240nm,4.0s
LZH LR LR
comp=N,2μm,15.8s
LZH LR LR
comp=Z,3μm,18.4s,MS5.1
LZH Lanzhou 37.80 5 ⇓P **P** **08 34 17.4 -0.7**
LZH *PP pP 08 34 26.2 -5.8
LZH *SP sP 08 34 30.2 -8.2
LZH 08 35 48.2
LZH *e*S **S** **08 40 05.6 +0.4**
LZH *SS sS 08 40 22.6 -6.1
LZH SS SS 08 42 41.4 -11
LZH pmax pmax
comp=Z,154nm,1.4s,mb5.5
LZH MLR MLR
comp=Z,3μm,18.4s,MS5.1
LZH Lanzhou 37.80 5 ⇓P **P** **08 34 17.4 -0.7**
comp=Z,154nm,1.4s,mb5.5
LZH pP pP 08 34 26.2 -5.8
LZH sP sP 08 34 30.2 -8.2
LZH PP PP 08 35 48.2 +2.8
LZH *e*S **S** **08 40 05.6 +0.4**
LZH SS SS 08 40 22.6 -6.1
LZH SS SS 08 42 41.4 -11
LZH LR LR
comp=Z,3μm,18.4s,MS5.1
NJ2 Nanjing 37.91 26 *e*P **P** **08 34 19.5 +0.3**
NJ2 AP pP 08 34 28.5 -4.6
NJ2 XP sP 08 34 32.5 -6.9
NJ2 PP PP 08 35 50.0 +3.3
NJ2 S **S** **08 40 13.0 +5.9**
NJ2 XS sS 08 40 23.5 -7.1
NJ2 AMB AMB
comp=Z,30nm,1.1s,mb4.9
NJ2 AMB AMB
comp=Z,200nm,6.9s
NJ2 LR LR
comp=N,550nm,26.0s,MS4.5
NJ2 LR LR
comp=E,800nm,22.9s,MS4.5
NJ2 LR LR
comp=Z,790nm,24.9s,MS4.4
SSE Sheshan 38.20 29 P **P** **08 34 22.5 +0.9**
SSE XP sP 08 34 39.0 -2.9
SSE S **S** **08 40 14.3 +2.8**
SSE XS sS 08 40 33.3 -1.7
SSE AMB AMB
comp=Z,83nm,0.9s,mb5.5
SSE AMB AMB
comp=Z,145nm,4.7s
SSE LR LR
comp=N,1μm,16.4s,MS4.8
SSE LR LR
comp=E,149nm,16.4s,MS4.8
SSE LR LR
comp=Z,1μm,16.7s,MS4.8
SSE Sheshan 38.20 29 P **P** **08 34 22.6 +1.0**
comp=Z,83nm,0.9s,mb5.5
SSE sP sP 08 34 38.9 -3.0
SSE S **S** **08 40 14.3 +2.8**
SSE sS sS 08 40 33.3 -1.7
SSE LR LR
comp=Z,1μm,16.7s,MS4.8
DDI Dehra Dun 38.37 328 *e*P **P** **08 34 21.8 -1.3**
DDI *ex* x 08 40 26.2
BHJ Bhuj 38.91 312 *e*P **P** **08 34 26.9 -0.8**
BHJ AMb AMB 08 34 33.2
comp=Z,48nm,1.0s,mb5.2
FORT Forrest 38.97 141 *e*P **P** **08 34 28.3 +0.2**
comp=Z,72nm,0.8s,mb5.5
FORT *e*PCP PcP 08 36 38.1 +0.3
ASAR Alice Springs 39.07 127 P **P** **08 34 27.6 -1.4**
comp=Z,136nm,0.8s,mb5.7,baz=298,slow=7.9,SNR=956
ASAR PcP PcP 08 36 37.9 -0.3
comp=Z,24nm,0.8s,baz=309,slow=2.8,SNR=12
ASAR S **S** **08 40 19.9 -4.9**
comp=Z,2.8nm,0.8s,baz=294,slow=17,SNR=5.0
JOW Kunigami 39.13 41 LR LR 08 49 06.2
comp=Z,521nm,21.9s,MS4.3,baz=313,slow=34
SMLA Simla 39.48 328 *i* P **P** **08 34 32.4 +0.1**
SMLA *ex* x 08 34 37.1
comp=Z,77nm,0.3s
SMLA *i* S **S** **08 40 32.0 +1.3**
SDNR Sundarnagar 39.87 328 *e*P **P** **08 34 35.0 -0.6**
TIA Tai'an 40.88 21 ⇑P **P** **08 34 42.8 -1.0**
TIA AMB AMB
comp=Z,27nm,1.0s,mb4.8
GTA Gaotai 40.98 359 ⇑P **P** **08 34 44.0 -0.6**
GTA AP pP 08 34 54.3 -4.3
GTA XP sP 08 34 58.3 -6.6
GTA PCP PcP 08 36 44.0 0.0
GTA SCP ScP 08 40 30.0 +0.6
GTA S **S** **08 40 53.5 +0.6**
GTA XS sS 08 41 10.8 -5.8
GTA SS SS 08 43 52.0 -4.7
GTA AMB AMB
comp=Z,36nm,1.1s,mb4.9
GTA AMB AMB
comp=Z,245nm,6.3s
GTA LR LR
comp=N,735nm,20.4s,MS4.7
GTA LR LR
comp=E,816nm,17.4s,MS4.7
GTA LR LR
comp=Z,1μm,22.8s
DLH Dalhousie 41.21 328 *e*P **P** **08 34 46.0 -0.6**
THN Thein Dam 41.26 328 *e*P **P** **08 34 46.5 -0.6**
BTO Baotou 43.08 11 *e*P **P** **08 35 00.5 -1.2**
HHC Hu-ho-hao-te 43.62 12 *e*P **P** **08 35 06.5 +0.5**
HHC AP pP 08 35 16.5 -3.7
HHC PP PP 08 36 50.0 +1.5
HHC PCS PcS 08 40 44.5 -0.9
HHC S **S** **08 41 34.3 +2.6**
HHC AMB AMB
comp=Z,30nm,0.8s,mb5.1
HHC AMB AMB
comp=Z,293nm,6.8s
HHC LR LR
comp=N,1μm,13.9s,MS5.0
HHC LR LR
comp=E,710nm,14.7s,MS5.0
HHC LR LR
comp=Z,1μm,14.6s,MS5.0
BJT Baijiatuau 44.02 17 ⇑*i*P **P** **08 35 09.2 -0.1**
BJT pmax pmax
comp=Z,100nm,0.9s
BJT MLR MLR
comp=Z,1μm,19.0s
BJT Baijiatuau 44.02 17 ⇑*i*P **P** **08 35 09.2 -0.1**
comp=Z,100nm,0.9s,mb5.5
BJT LR LR
comp=Z,1μm,19.0s,MS4.9
BJI Beijing 44.04 17 P **P** **08 35 09.0 -0.5**
BJI S **S** **08 41 30.0 -8.0**
BJI AMB AMB
comp=Z,116nm,0.9s,mb5.6
BJI LR LR
comp=N,1μm,20.8s,MS4.9
BJI LR LR
comp=E,700nm,20.8s,MS4.9
BJI LR LR
comp=Z,1μm,17.2s,MS4.8
BJI Beijing 44.04 17 P **P** **08 35 09.1 -0.4**
comp=Z,116nm,0.9s,mb5.6
BJI S **S** **08 41 30.1 -7.9**
BJI SS SS 08 45 03.2 +6.3
BJI LR LR

comp=Z,1μm,17.2s,MS4.8
MSEY Mahe Island 44.93 265 PFAKE 08 35 30.0 +13
MSEY LR LR
comp=Z,666nm,20.0s,MS4.6
DL2 Dalian 44.95 24 ⇑P **P** **08 35 16.5 -0.2**
DL2 XP sP 08 35 32.8 -4.4
DL2 S **S** **08 41 51.0 -0.1**
DL2 AMB AMB
comp=Z,50nm,0.9s,mb5.3
DL2 AMB AMB
comp=Z,110nm,4.5s
DL2 LR LR
comp=N,310nm,18.1s,MS4.5
DL2 LR LR
comp=E,480nm,17.2s,MS4.5
DL2 LR LR
comp=Z,340nm,18.8s,MS4.3
INCN Inchon 46.00 29 *eP* **P** **08 35 23.8 -1.2**
comp=Z,24nm,0.8s,mb5.2
INCN LR LR
comp=Z,876nm,19.0s,MS4.7
KBL Kabul 46.58 324⇑*iP* **P** **08 35 29.4 -0.3**
KBL pmax pmax
comp=Z,35nm,0.8s,mb5.3
KBL Kabul 46.58 324⇑*iP* **P** **08 35 29.4 -0.3**
comp=Z,35nm,0.8s,mb5.3
KS15 Wonju Array Si 46.59 30 *eP* **P** **08 35 29.5 -0.2**
KSRS Korea Array 46.62 30 P **P** **08 35 29.1 -0.9**
comp=Z,36nm,0.9s,mb5.3,baz=225,slow=8.4,SNR=104
KSRS PcP PcP 08 37 01.9 -1.3
comp=Z,10nm,0.9s,baz=218,slow=3.3,SNR=7.1
KSRS LR LR 08 55 33.5
comp=Z,649nm,19.5s,MS4.6,baz=224,slow=37
KSRS Korea Array 46.62 30 P **P** **08 35 29.1 -0.8**
KSRS 08 37 01.9
KSRS pmax pmax
comp=Z,36nm,0.9s,mb5.3
KSRS MLR MLR
comp=Z,649nm,19.5s,MS4.6
GUMO Guam 46.65 70 P **P** **08 35 26.7 -3.9**
comp=Z,26nm,0.5s,mb5.4,baz=14,slow=4.2,SNR=4.5
GUMO LR LR 08 54 34.9
comp=Z,327nm,21.6s,baz=249,slow=36
WMQ Urumqi 46.79 347⇑*iP* **P** **08 35 31.5 +0.3**
WMQ AP pP 08 35 41.5 -3.9
WMQ XP sP 08 35 45.5 -6.2
WMQ PCP PcP 08 37 05.0 +1.4
WMQ PP PP 08 37 22.0 0.0
WMQ PPP 08 38 08.0
WMQ PCS PcS 08 40 58.0 -0.4
WMQ S **S** **08 42 19.0 +1.5**
WMQ XS sS 08 42 35.0 -6.5
WMQ SCS ScS 08 45 21.0 0.0
WMQ SS SS 08 45 38.0 -6.7
WMQ AMB AMB
comp=Z,415nm,1.1s,mb6.3
WMQ AMB AMB
comp=Z,1μm,3.6s
WMQ LR LR
comp=N,1μm,28.8s,MS4.8
WMQ LR LR
comp=E,792nm,26.4s,MS4.8
WMQ LR LR
comp=Z,1μm,24.6s,MS4.7
KSH Kashi 46.80 334⇑*iP* **P** **08 35 32.0 +0.7**
KSH *e*AP pP 08 35 41.0 -4.6
KSH *e*XP sP 08 35 45.0 -6.8
KSH *e*PCP PcP 08 37 06.0 +2.2
KSH *e*PP PP 08 37 21.0 -1.2
KSH *e*PPP 08 38 07.0
KSH *e*SCP ScP 08 40 55.3 +2.2
KSH *e*PCS PcS 08 40 59.3 +0.7
KSH *e*S **S** **08 42 17.0 -0.7**
KSH *e*SCS ScS 08 45 21.0 -0.2
KSH *e*SS SS 08 45 36.0 -9.0
KSH AMB AMB
comp=Z,1μm,2.1s,mb6.4
KSH LR LR
comp=N,1μm,5.4s
KSH LR LR
comp=E,1μm,4.4s
KSH LR LR
comp=Z,648nm,9.2s
WBK Wadi Bani Khal 47.09 303 ⇓P **P** **08 35 34.6 +0.7**
SNR=6.5
PMG Port Moresby 47.11 101 PFAKE 08 35 50.0 +16
PMG LR LR
comp=Z,623nm,22.0s,MS4.5
JMDO Jabal Madar 47.72 303 P **P** **08 35 39.8 +1.1**
SNR=5.1
SMDO Samad 48.05 303 P **P** **08 35 42.6 +1.3**
SNR=9.5
BIDO Bidbid 48.18 304 P **P** **08 35 43.5 +1.2**
SNR=13
SNY Shenyang 48.21 23 ⇑P **P** **08 35 40.3 -1.9**
SNY AMB AMB
comp=Z,26nm,1.2s,mb5.1
SNY AMB AMB
comp=Z,262nm,7.7s
SNY LR LR
comp=N,412nm,15.2s,MS4.8
SNY LR LR
comp=E,733nm,15.8s,MS4.8
SNY LR LR
comp=Z,899nm,15.7s,MS4.8
CTA Charters Tower 48.34 115⇑*iP* **P** **08 35 41.4 -2.2**
comp=Z,34nm,0.8s,mb5.4
CTA Charters Tower 48.34 115 P **P** **08 35 41.4 -2.2**
comp=Z,43nm,0.8s,mb5.5,baz=286,slow=9.3,SNR=64
CTA LR LR 08 56 31.6
comp=Z,695nm,21.6s,MS4.6,baz=104,slow=37
CTA Charters Tower 48.34 115⇑*iP* **P** **08 35 41.4 -2.2**
CTA pmax pmax
comp=Z,34nm,0.8s
CTAO Charters Tower 48.34 115 *eP* **P** **08 35 41.5 -2.1**
CTAO pmax pmax
comp=Z,44nm,0.8s,mb5.5
CTAO MLR MLR
comp=Z,834nm,20.0s,MS4.7
CTAO Charters Tower 48.34 115 *eP* **P** **08 35 41.5 -2.1**
comp=Z,44nm,0.8s,mb5.5
CTAO LR LR
comp=Z,834nm,20.0s,MS4.7
BSY Bisya 48.63 303 P **P** **08 35 46.9 +1.1**
SNR=10
HOQ Hoqain 48.89 304 ⇑P **P** **08 35 48.4 +0.7**
SNR=9.6
ULHL Ulahol 48.95 336 P **P** **08 35 48.8 +0.9**
SNR=108
STKA Stephens Creek 49.01 132⇑*iP* **P** **08 35 47.8 -0.8**
comp=Z,51nm,0.9s,mb5.5
STKA *e*S **S** **08 42 44.2 -5.1**
STKA Stephens Creek 49.01 132 P **P** **08 35 47.8 -0.8**
comp=Z,60nm,0.8s,mb5.7,baz=305,slow=7.1,SNR=76
STKA LR LR 08 55 44.4
comp=Z,936nm,21.8s,MS4.7,baz=299,slow=35
KZA Kyzart 49.22 335 P **P** **08 35 51.4 +1.4**
SNR=51
UCH Uchtor 49.65 335 P **P** **08 35 54.7 +1.4**
SNR=160
UCH Uchtor 49.65 335⇑*iP* **P** **08 35 54.5 +1.2**
comp=Z,482nm,0.6s,mb6.7
UCH *e*PcP PcP 08 37 15.8 +1.8
UCH LR LR
comp=Z,371nm,20.0s,MS4.4
SONM Songino Array 49.67 5 P **P** **08 35 53.4 +0.1**
comp=Z,76nm,0.9s,mb5.7,baz=186,slow=8.7,SNR=275
SONM pP pP 08 36 09.8 +2.1
comp=Z,78nm,0.8s,baz=185,slow=8.7,SNR=16
SONM PcP PcP 08 37 13.7 -0.2
comp=Z,22nm,0.8s,baz=187,slow=4.4,SNR=6.8
SONM LR LR 08 59 36.4
comp=Z,944nm,18.2s,MS4.8,baz=183,slow=39
SONM PKP2bc 09 07 08.7
comp=Z,0.2nm,0.3s,baz=325,slow=2.3,SNR=3.6
SONM Songino Array 49.67 5 P **P** **08 35 53.4 +0.1**
SONM *PP pP 08 36 09.8 +2.1
SONM 08 37 13.7
SONM Songino Array 49.67 5 P **P** **08 35 53.4 +0.1**
SONM pP pP 08 36 09.8 +2.1
SONM PcP PcP 08 37 13.7 -0.2
SONM LR LR 08 59 36.4
SONM ⇑*e* 09 07 08.7
ULN Ulaanbaatar 49.77 6 P **P** **08 35 54.2 +0.2**
SNR=19
ULN Ulaanbaatar 49.77 6 *eP* **P** **08 35 54.3 +0.3**
ULN pmax pmax
comp=Z,81nm,1.1s,mb5.7
ULN MLR MLR
comp=Z,883nm,20.0s,MS4.8
ULN Ulaanbaatar 49.77 6 *eP* **P** **08 35 54.3 +0.3**
comp=Z,81nm,1.1s,mb5.7
ULN LR LR
comp=Z,883nm,20.0s,MS4.8
TKM2 Tokmak 2 49.78 336⇑*iP* **P** **08 35 55.1 +0.9**
TKM2 pmax pmax
comp=Z,323nm,0.9s,mb6.3
TKM2 MLR MLR
comp=Z,368nm,22.0s,MS4.3
TKM2 Tokmak 2 49.78 336 P **P** **08 35 55.2 +1.1**
SNR=331
TKM2 Tokmak 2 49.78 336⇑*iP* **P** **08 35 55.1 +0.9**
comp=Z,323nm,0.9s,mb6.3
TKM2 LR LR
comp=Z,368nm,22.0s,MS4.3
KBK Karagaybulak 49.82 335 P **P** **08 35 56.2 +1.6**
SNR=93
AML Almayashu 49.93 334 P **P** **08 35 56.7 +1.4**
SNR=45
AML Almayashu 49.93 334⇑*iP* **P** **08 35 56.6 +1.2**
comp=Z,128nm,0.8s,mb6.0
AML LR LR
comp=Z,379nm,20.0s,MS4.4
AAK Ala-Archa 49.99 335 P **P** **08 35 57.1 +1.3**
SNR=56
FRU Bishkek 50.11 335⇑*iP* **P** **08 35 57.0 +0.3**
FRU *i* pP 08 36 13.6 +2.5
FRU *e* 08 43 06.0
FRU pmax pmax
comp=Z,450nm,2.0s,mb6.2
CHMS Chumysh 50.19 336 P **P** **08 35 57.5 +0.2**
SNR=56
EKS2 Erkin-Say 50.32 335 P **P** **08 35 59.4 +1.1**
SNR=410
EKS2 Erkin-Say 50.32 335⇑*iP* **P** **08 35 59.5 +1.2**
comp=Z,356nm,0.9s,mb6.4
EKS2 LR LR
comp=Z,417nm,22.0s,MS4.4
USP Ospenovka 50.51 336 P **P** **08 36 00.4 +0.6**
SNR=10
CN2 Changchun 50.62 23 *eP* **P** **08 35 59.5 -1.0**
CN2 *e*AP pP 08 36 09.5 -5.4
CN2 PCP PcP 08 37 17.0 -0.5
CN2 *e*S **S** **08 43 11.3 0.0**
CN2 SS SS 08 46 43.8 -2.5
CN2 AMB AMB
comp=Z,60nm,0.7s,mb5.6
CN2 AMB AMB
comp=Z,400nm,3.0s
CN2 LR LR
comp=N,1μm,16.0s,MS5.0
CN2 LR LR
comp=E,800nm,16.0s,MS5.0
CN2 LR LR
comp=Z,800nm,17.0s,MS4.8
MK31 Makanchi Array 50.91 344 P **P** **08 36 02.8 +0.1**
MK31 Makanchi Array 50.91 344⇑*iP* **P** **08 36 02.6 0.0**
MKAR Makanchi Array 50.91 344 P **P** **08 36 02.6 0.0**
comp=Z,166nm,0.8s,mb6.0,baz=148,slow=7.7,SNR=631
MKAR LR LR 09 01 48.1
comp=Z,426nm,21.3s,MS4.4,baz=158,slow=41
MAJO Matsushiro 51.84 39 *eP* **P** **08 36 08.6 -1.3**
MAJO pmax pmax
comp=Z,37nm,1.1s,mb5.2
MAJO MLR MLR
comp=Z,608nm,20.0s,MS4.6
MAJO Matsushiro 51.84 39 *eP* **P** **08 36 08.6 -1.3**
comp=Z,37nm,1.1s,mb5.2
MAJO LR LR
comp=Z,608nm,20.0s,MS4.6
MAT Matsushiro 51.84 39 P **P** **08 36 08.1 -1.8**
MAT S **S** **08 43 45.0 +16**
MJAR Matsushiro Arr 51.84 39 P **P** **08 36 08.8 -1.1**
comp=Z,25nm,1.0s,mb5.1,baz=220,slow=7.5,SNR=45
MJAR pP pP 08 36 24.1 -0.2
comp=Z,26nm,1.0s,baz=222,slow=7.1,SNR=7.9
MJAR PcP PcP 08 37 21.9 -0.4
comp=Z,11nm,0.9s,baz=227,slow=4.7,SNR=5.7
MJAR LR LR 08 59 34.9
comp=Z,484nm,19.6s,MS4.5,baz=235,slow=38
MJAR Matsushiro Arr 51.84 39 P **P** **08 36 08.8 -1.1**
MJAR *PP pP 08 36 24.1 -0.3
MJAR 08 37 21.9
MJAR Matsushiro Arr 51.84 39 P **P** **08 36 08.8 -1.1**
MJAR pP pP 08 36 24.1 -0.2
MJAR PcP PcP 08 37 21.9 -0.4
MJAR LR LR 08 59 34.9
ZAK Zakamensk 52.01 2 *eP* **P** **08 36 10.1 -0.7**
ZAK pmax pmax
comp=Z,19nm,1.0s,mb5.0
KK31 Karatay Array 52.13 332 *i* P **P** **08 36 11.0 -0.9**
MDJ Mudanjiang 53.01 26 P **P** **08 36 17.8 -0.5**
MDJ AP pP 08 36 27.5 -5.3
MDJ XP sP 08 36 31.3 -7.7
MDJ PCP PcP 08 37 27.0 +0.6
MDJ PP PP 08 38 19.8 +1.2
MDJ SCP ScP 08 41 21.3 +1.7
MDJ PCS PcS 08 41 26.3 +1.3
MDJ S **S** **08 43 48.8 +4.7**
MDJ SS SS 08 47 25.8 +1.7
MDJ AMB AMB
comp=Z,30nm,0.7s,mb5.3
MDJ AMB AMB
comp=Z,243nm,7.8s
MDJ LR LR
comp=N,448nm,24.4s,MS4.7
MDJ LR LR
comp=E,670nm,27.0s,MS4.7
MDJ LR LR
comp=Z,1μm,20.2s
MDJ Mudanjiang 53.01 26 *eP* **P** **08 36 17.9 -0.4**
comp=Z,26nm,0.8s,mb5.2
MDJ LR LR
comp=Z,1μm,20.0s,MS5.0
HVS Khovu-Aksy 53.01 355⇓*iP* **P** **08 36 17.0 -1.2**
MOY Mondy 53.24 0 *eP* **P** **08 36 20.1 +0.2**
TLY Talaya 53.32 3 P **P** **08 36 20.0 -0.5**
comp=Z,212nm,1.0s,mb6.0,SNR=12
TLY Talaya 53.32 3 P **P** **08 36 21.4 +1.0**
SNR=7.4
TLY Talaya 53.32 3 *eP* **P** **08 36 19.4 -1.1**
TLY *e*S **S** **08 43 40.0 -8.1**
TLY *e*SS SS 08 47 36.7 +7.9
TLY pmax pmax
comp=Z,41nm,1.0s,mb5.3
TLY MLR MLR
comp=Z,1μm,17.0s,MS5.0
TLY Talaya 53.32 3⇑*iP* **P** **08 36 20.7 +0.2**
TLY LR LR
comp=Z,797nm,22.0s,MS4.7
HIA Hailar 53.51 16 *eP* **P** **08 36 20.8 -1.1**
HIA pmax pmax
comp=Z,29nm,1.0s
HIA MLR MLR
comp=Z,2μm,20.0s
HIA Hailar 53.51 16 *eP* **P** **08 36 20.8 -1.2**
comp=Z,29nm,1.0s,mb5.2
HIA LR LR
comp=Z,2μm,20.0s,MS5.1
TOO Toolangi 54.60 136 *eP* **P** **08 36 30.8 +0.6**
OPO Ambohidratompo 54.72 249 P **P** **08 36 33.2 +1.9**
comp=Z,5.4nm,0.7s,mb4.7,baz=65,slow=4.8,SNR=12
CIT Chita 54.73 10 *eP* **P** **08 36 31.0 +0.2**
ABPO Ambohimpanom 54.77 248 PFAKE 08 36 40.0 +8.3
ABPO LR LR
comp=Z,1μm,20.0s,MS5.0
KURK Kurchatov 55.50 343 P **P** **08 36 36.3 0.0**
comp=Z,2μm,1.0s,mb7.0
KURK Kurchatov 55.50 343 P **P** **08 36 36.4 +0.1**
SNR=92
KURK Kurchatov 55.50 343 P **P** **08 36 35.5 -0.8**
comp=Z,116nm,0.8s,mb5.9,baz=162,slow=6.2,SNR=188
KURK pP pP 08 36 51.1 +0.2
comp=Z,94nm,0.7s,baz=164,slow=6.7,SNR=18
KURK Kurchatov 55.50 343⇑*iP* **P** **08 36 36.2 -0.1**
KURK Kurchatov 55.50 343 P **P** **08 36 35.5 -0.8**
KURK pP pP 08 36 51.1 +0.2
KURK LR LR
comp=Z,505nm,21.0s,MS4.6
ABKT Ailbek 55.52 320 P **P** **08 36 36.6 -0.2**
comp=Z,544nm,1.0s,mb6.5,SNR=6.6
CAN Canberra 56.07 132 *eP* **P** **08 36 40.8 0.0**
ARMA Armidale 56.22 126⇑*iP* **P** **08 36 42.2 +0.3**
CNB Canberra Magne 56.34 132 *eP* **P** **08 36 41.4 -1.3**
ZALV Zalesovo Beam 57.01 349 P **P** **08 36 46.5 -0.5**
comp=Z,445nm,0.9s,mb6.5,baz=163,slow=5.6,SNR=361
KLR Kul'dur 57.56 24⇓*iP* **P** **08 36 46.3 -4.7**
KLR *e*S **S** **08 45 00.0 +15**
KLR pmax pmax
comp=E,70nm,1.8s
KLR pmax pmax
comp=Z,190nm,1.8s,mb5.8
KLR MLR MLR
comp=E,600nm,14.0s
KLR MLR MLR
comp=Z,1μm,14.0s,MS5.1
KRAR Krasnoyarsk 57.91 355⇑*iP* **P** **08 36 52.7 -0.7**
KRAR pmax pmax
comp=Z,277nm,1.1s,mb6.2
NVS Novosibirsk 58.17 348⇑*iP* **P** **08 36 53.3 -1.8**
NVS *i* pP 08 37 09.6 -0.2
NVS *e*S **S** **08 44 49.3 -3.3**
NVS *e*PS 08 45 13.1
NVS pmax pmax
comp=Z,160nm,1.0s,mb6.0
NVS pmax pmax
comp=N,124nm,1.4s
NVS pmax pmax
comp=E,86nm,1.2s
NVS smax
comp=N,47nm,1.7s
NVS smax
comp=E,36nm,1.8s
ERM Erimo 58.23 37 PFAKE 08 37 10.0 +14
ERM LR LR
comp=Z,376nm,21.0s,MS4.5
HABR Khabarovsk 58.38 26 *eP* **P** **08 36 55.5 -1.3**
HABR *e* 08 37 45.4
HABR *e*S **S** **08 44 55.6 0.0**
HABR *e* 08 45 12.8
HABR *e* 08 46 40.0
KBD Kabd 59.02 306 *eP* **P** **08 37 01.3 -0.3**
baz=306
KBD AMb AMB 08 37 02.8
comp=Z,93nm,1.0s,mb5.8,baz=306
UMR Umm Al-Rimmam 59.14 306 *eP* **P** **08 37 02.2 -0.2**
baz=306
UMR AMb AMB 08 37 03.6
comp=Z,205nm,1.0s,mb6.1,baz=306
HNR Honiara 59.68 100 P **P** **08 37 04.9 -1.6**
HNR pmax pmax
comp=Z,66nm,0.9s,mb5.7
HNR Honiara 59.68 100 *eP* **P** **08 37 04.5 -2.0**
comp=Z,66nm,0.8s,mb5.7
HNR LR LR
comp=Z,513nm,20.0s,MS4.7
RST Umm Al-Ruwaisa 59.70 306 *eP* **P** **08 37 05.8 -0.5**
baz=306
RST AMb AMB 08 37 07.0
comp=Z,127nm,1.0s,mb5.9,baz=306
BVA0 Borovoye Array 60.10 340 *i* P **P** **08 37 07.4 -1.2**
BVA0 pmax pmax
comp=Z,24nm,1.2s,mb5.1
BVAR Borovoye Array 60.10 340 P **P** **08 37 07.7 -0.9**
comp=Z,56nm,0.8s,mb5.7,baz=142,slow=7.5,SNR=216
BVAR pP pP 08 37 25.9 +2.5
comp=Z,110nm,0.7s,baz=143,slow=7.4,SNR=16
BRVK Borovoye 60.17 340 P **P** **08 37 08.6 -0.4**
comp=Z,692nm,1.1s,mb6.6,SNR=36
BRVK Borovoye 60.17 340 ⇑P **P** **08 37 09.0 0.0**
SNR=30
BRVK Borovoye 60.17 340⇑*iP* **P** **08 37 08.3 -0.7**
BRVK LR LR
comp=Z,683nm,20.0s,MS4.8
BOD Bodaibo 60.39 8 *eP* **P** **08 37 09.7 -0.8**
BOD pmax pmax
comp=Z,92nm,1.1s,mb5.7
YSS Yuzh-Sakhalins 61.08 32⇑*iP* **P** **08 37 14.1 -1.2**
YSS *e* pP 08 37 27.8 -2.3
YSS *e* 08 37 52.0
YSS pmax pmax
comp=Z,100nm,1.0s,mb5.9
YSS Yuzh-Sakhalins 61.08 32⇑*eP* **P** **08 37 15.1 -0.2**
AB31 Akbulak array 61.63 331 *iP* **P** **08 37 17.8 -1.2**
AB31 pmax pmax
comp=Z,189nm,0.8s,mb6.3
AB31 Akbulak array 61.63 331⇑*eP* **P** **08 37 17.8 -1.2**
CLNS Chul'man 61.69 15 *eP* **P** **08 37 18.5 -0.8**
CLNS *e**PP pP 08 37 27.9 -6.2
CLNS *e* 08 37 57.1
CLNS *e* 08 39 38.6
CLNS *e*PPP 08 41 04.1
CLNS *e*S **S** **08 45 47.6 +10**
CLNS *e* 08 47 05.2
CLNS *e*SSS 08 52 17.1
CLNS pmax pmax
comp=Z,81nm,0.9s,mb5.8
CLNS pmax pmax
comp=E,39nm,0.9s
CLNS pmax pmax
comp=N,52nm,1.0s
CLNS smax
comp=E,77μm,10.3s
CLNS smax
comp=N,104μm,13.8s
CLNS MLR MLR
comp=E,334nm,14.0s,MS4.9
CLNS MLR MLR
comp=Z,714nm,16.0s,MS4.9
CLNS MLR MLR
comp=N,529nm,17.0s,MS4.9
KMBO Kilima Mbogo 63.12 270 P **P** **08 37 31.4 +1.7**
comp=N,4.6nm,0.8s,mb4.7,baz=59,slow=9.6,SNR=14
KMBO LR LR 08 59 39.1
comp=N,514nm,20.5s,MS4.7,baz=95,slow=31
KMBO Kilima Mbogo 63.12 270 P **P** **08 37 31.5 +1.7**
KMBO pmax pmax
comp=Z,6.0nm,0.9s
KMBO Kilima Mbogo 63.12 270 P **P** **08 37 31.4 +1.7**
KMBO LR LR 08 59 39.1
AKTK Aktyubinsk 63.34 331 P **P** **08 37 29.6 -0.9**
AKTO Aktyubinsk 63.34 331 P **P** **08 37 29.6 -0.9**
comp=Z,61nm,1.0s,mb5.7,baz=130,slow=7.1,SNR=108
CASY Casey 64.78 175 *eP* **P** **08 37 42.8 +3.2**
CASY LR LR
comp=Z,765nm,22.0s,MS4.8
MIR Mirnyy 64.86 183 *eP* **P** **08 37 44.0 +3.9**
MIR *i* pP 08 37 56.0 +0.9
MIR *i* pP 08 37 58.5 +3.4
MIR pmax pmax
comp=Z,100nm,0.5s,mb6.1
MAK Makhachkala 65.05 320 *i* P **P** **08 37 40.6 -1.2**
HKR Hakkari 65.30 313 *eP* **P** **08 37 43.3 -0.2**
HAKT HAKKARI 65.31 313 *i* P **P** **08 37 43.5 -0.2**
GNI Garni 65.63 316 *eP* **P** **08 37 45.7 0.0**
GNI Garni 65.63 316 P **P** **08 37 46.8 +1.1**
SNR=7.4
GNI Garni 65.63 316 P **P** **08 37 46.3 +0.6**
comp=Z,41nm,0.9s,mb5.4,baz=40,slow=2.7,SNR=17
GNI Garni 65.63 316 P **P** **08 37 46.5 +0.9**
GNI pmax pmax
comp=Z,79nm,1.0s
GNI Garni 65.63 316 P **P** **08 37 46.3 +0.6**
GNI LR LR
comp=Z,233nm,22.0s,MS4.3
DGRG David-gareji 65.76 318 P **P** **08 37 47.4 +1.0**
CLDR Caldiran 65.80 315 *eP* **P** **08 37 47.0 +0.3**
DYDN Diyadin 66.12 315 *iP* **P** **08 37 49.5 +0.7**
MTA Mtatsminda 66.26 318 P **P** **08 37 49.9 +0.2**
TBLG Delisi 66.31 318 *eP* **P** **08 37 50.2 +0.2**
TBLG Delisi 66.31 318 P **P** **08 37 50.2 +0.2**
SVE Sverdlovsk 66.62 337⇓*eP* **P** **08 37 51.1 -0.5**
SVE pmax pmax
comp=Z,289nm,1.2s,mb6.2
AGRB Hanur-Agry 66.63 315 *eP* **P** **08 37 53.0 +0.9**
GOR Gori 66.85 318 P **P** **08 37 53.8 +0.5**
KARS Kars 66.97 316 *eP* **P** **08 37 55.1 +0.9**
ARU Arti 67.15 336*c* *iP* **P** **08 37 54.1 -0.9**
ARU *e*S S 08 46 48.5 +3.3
ARU pmax pmax
comp=Z,132nm,1.0s,mb5.9
ARU Arti 67.15 336⇑*iP* **P** **08 37 54.2 -0.8**
ARU LR LR
comp=Z,449nm,22.0s,MS4.6
MARD Mardin 67.38 312 *iP* **P** **08 37 57.1 +0.3**
YAK Yakutsk 67.42 14*c* *iP* **P** **08 37 55.1 -1.5**
YAK *e**PP pP 08 38 03.5 -8.1

YAK *e* 08 38 21.8
YAK *e* 08 40 22.8
YAK *eS* S 08 46 45.1 -3.1
YAK pmax pmax
comp=Z,277nm,0.9s,mb6.3
YAK pmax pmax
comp=E,65nm,1.1s
YAK pmax pmax
comp=N,74nm,1.0s
YAK pmax pmax
comp=Z,21nm,0.8s,mb5.2
YAK pmax pmax
comp=N,18nm,1.1s
YAK pmax pmax
comp=E,11nm,1.2s
YAK smax
comp=N,94μm,2.6s
YAK smax
comp=E,30μm,2.5s
YAK MLR MLR
comp=Z,808nm,20.0s,MS4.9
YAK MLR MLR
comp=N,428nm,20.0s,MS4.8
YAK MLR MLR
comp=E,437nm,18.0s,MS4.8
YAK Yakutsk 67.42 14⇑ *iP* **P 08 37 55.2 -1.4**
YAK LR LR
comp=Z,634nm,20.0s,MS4.8
ONI Oni 67.54 318 P **P 08 37 58.1 +0.3**
HOMI Horasan 67.58 315 *i* P **P 08 37 58.8 +0.8**
ERZM Erzurum 67.91 315 *i* P **P 08 38 01.5 +1.4**
EZM Erzurum 67.91 315 *eP* **P 08 38 00.1 -0.1**
KIV Kislovodsk 68.63 319 P **P 08 38 04.6 +0.1**
comp=Z,595nm,1.1s,mb6.4,SNR=7.5
KIV Kislovodsk 68.63 319 P **P 08 38 05.0 +0.5**
SNR=12
KIV Kislovodsk 68.63 319⇑ *iP* **P 08 38 04.7 +0.2**
KIV MLR MLR
comp=Z,212nm,22.0s,MS4.3
GOF Gofitskoye 68.87 320 *eP* pP 08 38 24.3 +3.2
GOF pmax pmax
comp=Z,79nm,0.8s,mb5.7
URFA Urfa 68.89 311 *eP* **P 08 38 06.9 +0.6**
PTK Pertek 68.96 313 *eP* **P 08 38 05.2 -1.6**
ELZG Elazig 69.13 312 *i* P **P 08 38 08.2 +0.4**
GUMT Gumushane 69.46 315 *eP* **P 08 38 10.2 +0.4**
MALT Malatya 69.47 312 *eP* **P 08 38 11.2 +1.3**
MALT Malatya 69.47 312 P **P 08 38 11.2 +1.3**
MALT pmax pmax
comp=Z,60nm,1.1s,mb5.4
MALT Malatya 69.47 312 *eP* **P 08 38 10.8 +0.9**
comp=Z,60nm,1.1s,mb5.4
MALT LR LR
comp=Z,132nm,20.0s
EIL Elat 69.73 302 LR LR 09 08 50.1
comp=Z,399nm,19.1s,MS4.7,baz=270,slow=36
GZT Gaziantep 69.81 311 *i* P **P 08 38 12.7 +0.7**
GAZ Gaziantep 70.02 311 *eP* **P 08 38 14.1 +0.8**
ESPY Espiye-Giresun 70.15 315 *eP* **P 08 38 13.5 -0.6**
MMAI Mount Meron Ar 70.22 306 P **P 08 38 16.0 +1.4**
comp=Z,47nm,0.8s,mb5.4,baz=100,slow=8.5,SNR=30
DRV Dumont d'Urvil 70.44 164 P pP 08 38 30.0 -0.3
DRV S S 08 47 25.0 +1.2
DRV SS SS 08 51 56.0 +0.4
DRV R 08 59 00.0
SOC Sochi 70.45 318*c* *iP* **P 08 38 14.4 -1.4**
SOC *e**PP pP 08 38 24.2 -6.7
SOC *e**SP sP 08 38 27.7 -9.2
SOC *e* 08 38 34.6
SOC *eS* S 08 47 27.0 +2.2
SOC *e* 08 48 12.7
SOC pmax pmax
comp=Z,94nm,0.7s,mb5.8
SKR Severo-Kuril's 70.46 34 *eP* **P 08 38 14.0 -1.7**
SKR *e* pP 08 38 33.0 +2.2
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.0
COBT Iskenderun 70.55 310 *i* P **P 08 38 17.4 +0.9**
MAW Mawson 70.61 194⇑ *iP* **P 08 38 17.4 +1.1**
comp=Z,13nm,0.8s,mb4.9
MAW *eS*P sP 08 38 32.8 -4.6
MAW Mawson 70.61 194 P **P 08 38 17.7 +1.4**
comp=Z,20nm,0.8s,mb5.1,baz=26,slow=7.7,SNR=33
MAW pP pP 08 38 32.9 +1.5
comp=Z,46nm,0.9s,baz=40,slow=6.8,SNR=20
MAW LR LR 09 02 43.1
comp=Z,861nm,21.3s,MS5.0,baz=38,slow=30
MAW PKP2bc 09 06 10.3
comp=Z,2.0nm,0.9s,baz=237,slow=3.6,SNR=7.9
MAW Mawson 70.61 194 P **P 08 38 17.7 +1.4**
MAW *PP pP 08 38 32.9 +1.5
MAW pmax pmax
comp=Z,20nm,0.9s
ANDN Andirin 70.80 311 *i* P **P 08 38 18.4 +0.4**
PINB Pinarbasi 71.10 312 *i* P **P 08 38 19.8 0.0**
MEST Erdemli 72.19 309 *i* P **P 08 38 25.3 -1.2**
AVNT Avonos 72.28 312 *i* P **P 08 38 24.1 -2.9**
LFK Lefkose 72.32 308 *eP* **P 08 38 20.0 -7.3**
LSZ Lusaka 72.38 255 LR LR 09 05 59.2
comp=Z,471nm,20.0s,MS4.8,baz=118,slow=32
LSZ Lusaka 72.38 255 PFAKE 08 38 40.0 +12
LSZ LR LR
comp=Z,461nm,20.0s,MS4.8
CSS Prodhromos 72.40 307 *eP* **P 08 38 27.6 -0.1**
CSS Prodhromos 72.40 307 *eP* **P 08 38 27.9 +0.2**
comp=Z,132nm,1.3s,mb5.7
ANN Anapa 72.42 318 *eP* **P 08 38 26.7 -1.0**
ANN *eS* S 08 47 48.2 +0.7
ANN pmax pmax
comp=Z,60nm,1.8s,mb5.2
PEA0B Petropavlovsk- 72.48 32 *eP* **P 08 38 27.3 -0.5**
PETK Petropavlovsk- 72.48 32 P **P 08 38 27.2 -0.6**
comp=Z,19nm,0.8s,mb5.1,baz=204,slow=4.4,SNR=22
PETK LR LR 09 12 42.4
comp=Z,190nm,18.5s,MS4.4,baz=245,slow=38
LEF Lefka 72.79 308 *eP* **P 08 38 29.6 -0.5**
CTKT Corum 72.88 314 *i* P **P 08 38 30.0 -0.5**
CDAG Cicekdag 72.89 312 *i* P **P 08 38 29.7 -0.8**
PET Petropavlovsk 72.95 33 *eP* **P 08 38 29.2 -1.4**
PET *e* 08 41 13.6
PET *eS* S 08 47 53.5 +0.3
PET *eSS* SS 08 52 39.6 +4.9
PET *eSSS* 08 55 49.7
PET pmax pmax
comp=Z,103nm,0.9s,mb5.8
PET MLR MLR
comp=Z,400nm,20.0s,MS4.7
PET Petropavlovsk 72.95 33⇑ *iP* **P 08 38 29.9 -0.7**
PET LR LR
comp=Z,415nm,21.0s,MS4.7
KAMT Kaman 73.30 312 *eP* **P 08 38 31.8 -1.2**
TOS Tosya 73.56 314 *eP* **P 08 38 34.1 -0.4**
HDMB Hadim 73.58 309 *eP* **P 08 38 34.5 -0.2**
CANT Cankiri 73.73 313 *eP* **P 08 38 34.8 -0.7**
ILGA Ilgaz 73.79 314 *i* P **P 08 38 35.5 -0.3**
VSR Storozhevoye 73.81 325 *eP* **P 08 38 34.5 -1.2**
VSR pmax pmax
comp=Z,50nm,0.9s,mb5.4
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,100nm,0.9s
LADK Ladik-KONYA 73.99 311 *eP* **P 08 38 33.9 -3.2**
VOR Voronezh 74.01 325 P **P 08 38 36.0 -0.9**
VOR pmax pmax
comp=Z,400nm,1.4s,mb6.2
ANTO Ankara 74.12 312 *eP* **P 08 38 36.8 -1.1**
ANTO Ankara 74.12 312 ⇓P **P 08 38 37.7 -0.1**
SNR=9.2
ANTO Ankara 74.12 312 P **P 08 38 36.4 -1.4**
ANTO pmax pmax
comp=Z,92nm,1.4s,mb5.5
ANTO Ankara 74.12 312 *eP* **P 08 38 36.3 -1.5**
comp=Z,92nm,1.4s,mb5.5
ANTO LR LR
comp=Z,181nm,20.0s,MS4.4
KDHN Kadinhani 74.27 311 *i* P **P 08 38 37.5 -1.2**
KIZT Kizilcal 74.54 311 *eP* **P 08 38 38.6 -1.6**
SAFT Safranbolu 74.58 314 *eP* **P 08 38 39.6 -0.9**
SIM Simferopol' 74.69 318 *eP* **P 08 38 41.0 0.0**
SIM pmax pmax
comp=Z,61nm,0.9s,mb5.5
RPZ Rata Peaks 74.86 135 P **P 08 38 41.7 -0.3**
comp=Z,32nm,0.6s,mb5.4,baz=271,slow=3.0,SNR=28

SEY Seymchan 75.26 22⇑ *iP* **P 08 38 43.7 -0.2**
ISP Isparta 75.32 310 PFAKE 08 39 00.0 +15
ISP LR LR
comp=Z,240nm,22.0s,MS4.5
ESKT Eskisehir 75.48 312 *i* P **P 08 38 45.7 0.0**
LBTB Lobatse 75.48 245 P **P 08 38 46.6 +0.6**
comp=Z,9.4nm,0.9s,mb4.7,baz=103,slow=6.4,SNR=4.8
LBTB LR LR 09 07 28.6
comp=Z,1μm,19.6s,MS5.1,baz=98,slow=32
TIXI Tiksi 75.56 9 PFAKE 08 39 00.0 +15
TIXI LR LR
comp=Z,1μm,20.0s,MS5.2
GOLH Golhisar 75.91 309 *i* P **P 08 38 47.5 -0.7**
BOSA Boshof 76.12 241 P **P 08 38 50.2 +0.6**
comp=Z,11nm,0.8s,mb4.8,baz=91,slow=5.7,SNR=7.8
BOSA LR LR 09 07 21.1
comp=Z,666nm,19.7s,MS5.0,baz=259,slow=32
BOSA Boshof 76.12 241 P **P 08 38 50.5 +1.0**
BOSA pmax pmax
comp=Z,37nm,1.3s,mb5.2
BOSA Boshof 76.12 241 P **P 08 38 50.2 +0.6**
BOSA LR LR 09 07 21.1
MOS Moscow 76.50 329⇓ *iP* **P 08 38 49.6 -1.5**
MOS *e* pP 08 39 04.1 -2.3
MOS *eS* S 08 48 35.2 +2.5
MOS pmax pmax
comp=Z,230nm,0.9s,mb6.1
TURN Turunc 76.58 308 *i* P **P 08 38 53.8 +1.8**
OBN Obninsk 76.81 328*c* *iP* **P 08 38 52.5 -0.3**
OBN *e* 08 39 01.6
OBN *e**SP sP 08 39 06.7 -7.4
OBN *e* pP 08 39 11.5 +3.4
OBN 08 41 46.0
OBN *eS* S 08 48 35.1 -1.0
OBN *eSS* SS 08 53 29.5 -3.7
OBN pmax pmax
comp=Z,271nm,1.4s,mb6.0
ULDT Uludag 76.91 312 *i* P **P 08 38 53.4 -0.3**
SNZO South Karori 77.07 132 PFAKE 08 39 10.0 +15
SNZO LR LR
comp=Z,1μm,19.0s,MS5.2
DURS Dursunbey 77.28 311 *i* P **P 08 38 55.2 -0.6**
AYDN Tasoluk 77.31 309 *i* P **P 08 38 56.1 0.0**
BDRM Kayabasi 77.53 308 *i* P **P 08 38 56.8 -0.5**
KLMR Klimovskoe 77.79 334 *i* P **P 08 38 57.7 -0.5**
KLMR pmax pmax
comp=Z,112nm,1.1s,mb5.7
KDAG Bornova 77.94 310 *i* P **P 08 38 59.1 -0.4**
BALY Balya 77.95 311 *i* P **P 08 38 58.8 -0.8**
SYO Syowa Base 78.21 199⇓ *eP* **P 08 39 00.0 -0.5**
SYO Syowa Base 78.21 199⇑ *e*PcP PcP 08 39 07.7 -2.0
TLCR 78.36 317⇑ *iP* **P 08 39 02.3 +0.5**
TLCR 78.36 317⇑ P **P 08 39 02.2 +0.5**
TIRR Tirgusor 78.46 316 P **P 08 39 02.1 -0.2**
TIRR Tirgusor 78.46 316 ⇓*iP* **P 08 39 01.9 -0.4**
URZ Urewera 78.48 129 P **P 08 39 01.2 -1.4**
comp=Z,8.6nm,0.6s,mb4.8,baz=298,slow=6.9,SNR=8.7
FUNA Funafuti 78.67 98 PFAKE 08 39 10.0 +5.9
FUNA LR LR
comp=Z,4μm,20.0s,MS5.7
HARR Harsova 78.85 316 P **P 08 39 04.9 +0.4**
HARR Harsova 78.85 316 ⇓*iP* **P 08 39 04.5 0.0**
HARR Harsova 78.85 316 ⇓P **P 08 39 04.5 0.0**
SANT Santorini 78.96 307 PFAKE 08 39 20.0 +15
SANT LR LR
comp=Z,180nm,22.0s,MS4.4
IDI Anoyia 79.22 306 P **P 08 39 07.3 +0.6**
comp=Z,37nm,0.8s,mb5.4,baz=83,slow=6.5,SNR=14
ALN Alexandroupoli 79.37 312 *eP* **P 08 39 06.9 -0.5**
AKASG Malin Array Be 79.54 322 P **P 08 39 07.1 -1.0**
comp=Z,13nm,0.8s,mb4.9,baz=86,slow=4.3,SNR=43
AKASG pP pP 08 39 24.3 +0.9
comp=Z,9.6nm,0.8s,baz=79,slow=4.5,SNR=5.2
AKASG PP PP 08 42 08.2 -1.0
comp=Z,9.2nm,0.9s,baz=95,slow=7.2,SNR=6.4
AKASG Malin Array Be 79.54 322 P **P 08 39 07.1 -1.0**
AKASG pP pP 08 39 24.3 +0.9
AKASG PP PP 08 42 08.2 -1.0
AKBB Malin Array Si 79.54 322 *eP* **P 08 39 07.0 -1.1**
KIEV Kiev 79.55 322 P **P 08 39 07.1 -1.0**
KIEV pmax pmax
comp=Z,11nm,0.8s,mb4.8
KIEV Kiev 79.55 322 *eP* **P 08 39 07.0 -1.1**
comp=Z,11nm,0.8s,mb4.8
KIEV LR LR
comp=Z,395nm,20.0s,MS4.8
VRI Vrincioaia 79.95 317⇓ *iP* **P 08 39 11.1 +0.7**
VRI Vrincioaia 79.95 317 P **P 08 39 11.1 +0.6**
PLOR Plostina 80.00 317 ⇓P **P 08 39 11.7 +1.0**
PLOR Plostina 80.00 317 ⇓*iP* **P 08 39 11.6 +0.9**
SUR Sutherland 80.26 238 LR LR 09 08 21.0
comp=Z,1μm,20.3s,MS5.2,baz=41,slow=31
SUR Sutherland 80.26 238 PFAKE 08 39 20.0 +7.6
SUR LR LR
comp=Z,2μm,20.0s,MS5.3
MLR Muntele Rosu 80.40 317 P **P 08 39 13.2 +0.3**
comp=Z,51nm,0.9s,mb5.4,baz=115,slow=1.9,SNR=53
MLR Muntele Rosu 80.40 317 ⇓*iP* **P 08 39 13.3 +0.4**
MLR Muntele Rosu 80.40 317 ⇓*iP* **P 08 39 12.9 0.0**
MLR Muntele Rosu 80.40 317 ⇓P **P 08 39 12.9 +0.1**
ZIMR 80.43 315 P **P 08 39 13.6 +0.6**
RZN Rozhen 80.51 313 P **P 08 39 12.8 -0.7**
MMB Musomiste 81.22 312 P **P 08 39 16.4 -0.9**
BURAR Bucovina Array 81.35 319⇑ *iP* **P 08 39 19.1 +1.3**
BURAR Bucovina Array 81.35 319⇑ P **P 08 39 19.1 +1.3**
VLX Vlachokerasia 81.56 308 *eP* **P 08 39 18.6 -0.6**
VLX *eS* sP 08 39 38.0 -2.5
PUL Pulkovo 81.61 331⇑ *eP* **P 08 39 19.3 +0.4**
KKB Krupnik 81.74 313 P **P 08 39 19.5 -0.6**
VTS Vitosha 81.78 313 P **P 08 39 19.6 -0.6**
LIT Litokhoron 81.89 311 *eP* **P 08 39 19.9 -1.0**
PYL PYLOS 81.99 307 *eP* **P 08 39 20.6 -0.9**
VAY Valandovo 82.03 312 *eP* **P 08 39 20.0 -1.6**
JOF Joensuu 82.18 334 *ep* **P 08 39 20.7 -1.2**
comp=Z,27nm,0.8s,mb5.2
BMR Baia Mare 82.50 318 ⇓*iP* **P 08 39 25.1 +1.2**
BMR Baia Mare 82.50 318 ⇓P **P 08 39 25.1 +1.2**
LVV L'vov 82.57 321 *iP* **P 08 39 23.5 -0.7**
GZR Gura Zlata 82.57 316 P **P 08 39 24.8 +0.5**
GZR Gura Zlata 82.57 316 ⇑*iP* **P 08 39 24.7 +0.4**
GZR Gura Zlata 82.57 316 ⇑P **P 08 39 24.7 +0.4**
TSUM Tsumeb 82.64 251 P **P 08 39 26.3 +1.1**
comp=Z,9.6nm,1.0s,mb4.8,baz=104,slow=3.9,SNR=5.2
TSUM Tsumeb 82.64 251 P **P 08 39 26.3 +1.1**
TSUM LR LR
comp=Z,840nm,20.0s,MS5.1
LVZ Lovozero 82.70 340 PFAKE 08 39 40.0 +15
LVZ LR LR
comp=Z,619nm,22.0s,MS4.9
BILL Bilibino 82.80 20⇓ *eP* **P 08 39 24.6 -0.4**
BILL *e**PP pP 08 39 35.4 -5.0
BILL *SP sP 08 39 39.0 -7.4
BILL pmax pmax
comp=Z,39nm,1.6s,mb5.2
BILL MLR MLR
comp=Z,800nm,20.0s,MS5.1
BILL Bilibino 82.80 20⇑ *eP* **P 08 39 24.1 -0.9**
BILL LR LR
comp=Z,872nm,22.0s,MS5.1
DRGR 82.86 317⇑ *iP* **P 08 39 26.3 +0.5**
DRGR 82.86 317⇑ P **P 08 39 26.3 +0.5**
VSU Vasula 83.01 329⇑ *iP* **P 08 39 26.1 -0.2**
APA Apatity 83.01 339⇑ *iP* **P 08 39 26.6 +0.5**
APA *i* pP 08 39 44.4 +2.9
APA pmax pmax
comp=Z,50nm,1.2s,mb5.4
APA MLR MLR
comp=Z,1μm,16.0s,MS5.3
KRUS Krusevo 83.02 312 *eP* **P 08 39 26.0 -0.8**
OHR Ohrid 83.32 312 *eP* **P 08 39 25.8 -2.5**
KWP Kalwaria 83.38 320 *eP* **P 08 39 28.5 +0.1**
KWP Kalwaria 83.38 320⇑ *iP* **P 08 39 29.4 +1.0**
KWP Kalwaria 83.38 320 *eP* **P 08 39 28.5 +0.1**
SBA Scott Base 83.41 169 P **P 08 39 29.3 +1.3**
SBA pmax pmax
comp=Z,19nm,0.8s,mb5.2
SBA Scott Base 83.41 169 *eP* **P 08 39 29.5 +1.4**
comp=Z,19nm,0.8s,mb5.2
SBA LR LR
comp=Z,427nm,22.0s,MS4.8
BZS Buzias 83.41 316 ⇓*iP* **P 08 39 29.0 +0.3**
BZS Buzias 83.41 316 ⇓P **P 08 39 29.0 +0.3**
UZH Uzhgorod 83.47 319*d* *iP* **P 08 39 28.6 -0.3**

UZH *i* pP 08 39 45.2 +0.9
KOLS Kolonicke sedl 83.53 319 *eP* **P 08 39 30.2 +1.0**
KOLS *ep*P pP 08 39 46.5 +1.9
SUW Suwalki 83.93 325 *eP* **P 08 39 30.8 -0.3**
SUW *ep*P pP 08 39 47.1 +0.6
SUW Suwalki 83.93 325 *eP* **P 08 39 30.8 -0.3**
SUW *ep*P pP 08 39 47.2 +0.7
TIR Tirane 84.05 312 PFAKE 08 39 40.0 +8.0
TIR LR LR
comp=Z,201nm,20.0s,MS4.5
CRVS Cervenica-Dubn 84.06 319 *eP* **P 08 39 32.3 +0.4**
CRVS *e* pP 08 39 52.0 +4.7
KAF Kangasniemi 84.16 333 *ep* **P 08 39 31.1 -1.0**
comp=Z,42nm,0.6s,mb5.8,baz=99,slow=4.6
KAF Kangasniemi 84.16 333 *eP* **P 08 39 31.1 -1.0**
KAF pmax pmax
comp=Z,42nm,0.6s,mb5.8
STHS Stebnicka Huta 84.28 320 *eP* **P 08 39 33.9 +0.9**
STHS *e* pP 08 39 50.5 +2.0
STHS pmax pmax
comp=Z,34nm,0.9s,mb5.5
STHS Stebnicka Huta 84.28 320 *eP* **P 08 39 33.9 +0.9**
STHS *ep*P pP 08 39 50.5 +2.0
STHS *e* 10 00 15.1
STHS Stebnicka Huta 84.28 320 *eP* **P 08 39 33.9 +0.9**
comp=Z,34nm,0.9s,mb5.5
STHS *e* pP 08 39 50.5 +2.0
DIVS Divibare 84.33 314 *eP* **P 08 39 33.4 0.0**
NIE Niedzica 84.88 320 *eP* **P 08 39 37.1 +1.1**
PSZ Piszkesteto 84.94 318 P **P 08 39 36.6 +0.3**
PSZ Piszkesteto 84.94 318⇑ *eP* **P 08 39 36.4 +0.1**
PSZ Piszkesteto 84.94 318⇓ *iP* **P 08 39 36.4 +0.1**
PSZ Piszkesteto 84.94 318⇓ P **P 08 39 36.4 0.0**
OJC Ojcow 85.33 321 *eP* **P 08 39 38.4 +0.1**
BUD Budapest 85.46 318⇑ *eP* **P 08 39 39.0 0.0**
PKSM Moragy 85.56 316 P **P 08 39 39.5 0.0**
PKSM Moragy 85.56 316⇑ *iP* **P 08 39 39.2 -0.3**
PKSM Moragy 85.56 316⇑ P **P 08 39 39.2 -0.3**
VYHS Vyhne 85.72 319 *eP* **P 08 39 40.3 +0.1**
KEV Kevo 85.94 340 *ep* **P 08 39 39.9 -1.0**
comp=Z,27nm,0.8s,mb5.5
KEV Kevo 85.94 340 P **P 08 39 40.1 -0.8**
KEV *e* pP 08 39 53.4 -3.0
KEV pmax pmax
comp=Z,50nm,1.0s,mb5.7
KOLL Kolacno 86.01 319 *eP* **P 08 39 41.9 +0.2**
TIP Timpagrande 86.17 309 *eP* **P 08 39 43.4 +0.7**
comp=Z,25nm,1.0s,mb5.4
TIP LR LR
comp=Z,157nm,19.0s,MS4.4
OKC Ostrava-Krasne 86.33 320 *eP* **P 08 39 43.5 +0.2**
OKC *ep*P pP 08 39 58.4 -0.3
ARCES ARCESS Array B 86.39 340 P **P 08 39 43.0 -0.2**
comp=Z,30nm,0.8s,mb5.6,baz=96,slow=5.4,SNR=63
ARCES LR LR 09 24 12.2
comp=Z,284nm,19.0s,MS4.7,baz=274,slow=40
MORC Moravsky Berou 86.72 320 ⇑*iP* **P 08 39 45.8 +0.7**
MORC Moravsky Berou 86.72 320 ⇑P **P 08 39 45.8 +0.7**
MODS Modra-Piesok 86.73 318 *eP* **P 08 39 45.7 +0.5**
MODS *e* pP 08 40 01.6 +0.9
MODS pmax pmax
comp=Z,31nm,1.5s,mb5.3
MODS Modra-Piesok 86.73 318 *eP* **P 08 39 45.7 +0.5**
comp=Z,31nm,1.5s,mb5.3
MODS *e* pP 08 40 01.6 +0.9
CEL Celeste 86.76 308 PFAKE 08 40 00.0 +14
CEL LR LR
comp=Z,14μm,19.0s,MS6.4
ZST Bratislava 86.83 318 *eP* **P 08 39 46.1 +0.4**
ZST *e* pP 08 40 02.3 +1.1
ZST pmax pmax
comp=Z,38nm,1.1s,mb5.5
ZST Bratislava 86.83 318 *eP* **P 08 39 46.1 +0.4**
comp=Z,38nm,1.1s,mb5.5
ZST *e* pP 08 40 02.3 +1.1
CUC Castrocucco 86.97 310 *eP* **P 08 39 46.5 -0.1**
comp=Z,26nm,0.8s,mb5.5
CUC LR LR
comp=Z,331nm,21.0s,MS4.7
SOP Sopron 87.14 318⇑ *eP* **P 08 39 47.2 0.0**
KOGS Kog 87.23 316 *eP* **P 08 39 48.0 +0.3**
KOGS *e* pP 08 40 03.8 +0.6
VRAC Vranov 87.28 319 P **P 08 39 48.3 +0.4**
comp=Z,1.7nm,0.4s,mb4.7,baz=131,slow=6.4,SNR=7.4
DPC Dobruska-Polom 87.56 320 *eP* **P 08 39 50.1 +0.9**
DPC *ex* x 08 40 05.6
KSP Ksiaz 87.63 321 *eP* **P 08 39 50.5 +1.0**
KSP *ep*P pP 08 40 03.5 -1.5
KSP Ksiaz 87.63 321⇑ *eP* **P 08 39 50.2 +0.7**
KSP *ep*P pP 08 40 05.7 +0.7
CONA Conrad Observa 87.63 318⇑ *iP* **P 08 39 49.6 0.0**
comp=Z,13nm,1.0s,mb5.1
UPC Upice 87.77 321 *eP* **P 08 39 50.8 +0.6**
ARSA Arzberg 87.80 317⇑ *iP* **P 08 39 50.9 +0.5**
comp=Z,45nm,1.9s,mb5.4,SNR=11
LEGS Legarje 87.83 316 *i* P **P 08 39 51.0 +0.4**
BOJS Bojanci 87.84 315 *eP* **P 08 39 50.8 +0.2**
NVL N'lazarevskaya 87.87 199 *eP* **P 08 39 52.5 +2.2**
NVL pmax pmax
comp=Z,25nm,1.2s,mb5.3
VAE Valguarnera 87.87 307 P **P 08 39 52.1 +1.1**
comp=Z,23nm,0.7s,mb5.5,baz=285,slow=9.4,SNR=4.2
VAE Valguarnera 87.87 307 P **P 08 39 52.1 +1.1**
MAIT Maitri 87.90 199 *eP* **P 08 39 53.6 +3.2**
PERS Pernice 88.02 317 *i* P **P 08 39 51.8 +0.3**
SOKA Soboth 88.08 317⇑ *iP* **P 08 39 52.3 +0.5**
QSPA South Pole Qui 88.19 180 LR LR 09 13 57.7
comp=Z,473nm,21.6s,MS4.9,baz=313,slow=32
LJU Ljubljana 88.39 316 *eP* **P 08 39 53.8 +0.6**
OBKA Obir 88.40 316⇑ *iP* **P 08 39 53.9 +0.6**
comp=Z,27nm,1.6s,mb5.2
OBKA Obir 88.40 316⇑ *i*PcP **P 08 39 53.9 +0.6**
comp=Z,27nm,1.6s,mb5.2
CEY Cerknica 88.43 316 *eP* **P 08 39 53.4 0.0**
PRU Pruhonice 88.67 320 *eP* **P 08 39 54.9 +0.4**
PRU *ep*P pP 08 40 09.9 -0.1
TRO Tromso 88.67 340 *eP* **P 08 39 51.9 -2.1**
TRO AMb AMB 08 40 02.3
comp=Z,71nm,6.2s
PVCC Panska Ves 88.69 320 *eP* **P 08 39 55.1 +0.5**
PVCC *ep*P pP 08 40 10.1 0.0
MOA Molln 88.69 318⇑ *eP* **P 08 39 54.3 -0.3**
VOJS Vojsko 88.83 316 *eP* **P 08 39 55.2 -0.2**
CADS Cadrg 88.95 316 *iP* **P 08 39 55.8 -0.1**
MYKA Terra Mystica 89.04 317⇑ *iP* **P 08 39 56.6 +0.3**
comp=Z,122nm,1.6s,mb6.0
BRG Berggiesshubel 89.11 321 *i* P **P 08 39 57.1 +0.6**
BRG *i* pP 08 40 12.5 +0.4
BRG 08 43 27.7
BRG pmax pmax
comp=Z,27nm,1.0s,mb5.5
BRG Berggiesshubel 89.11 321 *eP* **P 08 39 57.1 +0.6**
comp=Z,141nm,1.8s,mb6.0
BRG Berggiesshubel 89.11 321 *i* P **P 08 39 57.1 +0.5**
comp=Z,45nm,1.0s,mb5.7
BRG *i* pP 08 40 12.5 +0.4
BRG comp=Z,30nm,1.1s
BRG PP PP 08 43 27.7 +0.5
comp=Z,11nm,0.6s
BRG S S 08 51 02.0 +21
GEC2 GERESS Array S 89.14 319 P **P 08 39 57.1 +0.4**
GEC2 GERESS Array S 89.14 319 *eP* **P 08 39 57.0 +0.3**
comp=Z,123nm,1.7s,mb6.0
GEC2 *ep*P pP 08 40 12.7 +0.4
GERES GERESS Array B 89.14 319 P **P 08 39 57.2 +0.5**
comp=Z,10nm,0.8s,mb5.2,baz=92,slow=4.0,SNR=52
KHC Kasperske Hory 89.23 319 *eP* **P 08 39 57.3 +0.2**
KHC *ep*P pP 08 40 10.4 -2.3
KBA Koelnbreinsper 89.27 317 *iP* **P 08 39 56.7 -0.6**
comp=Z,25nm,1.5s,mb5.3,SNR=6.5
RUE Ruedersdorf 89.32 322 *eP* **P 08 39 58.2 +0.7**
comp=Z,221nm,1.2s,mb6.4
FBE Freiberg 89.49 321 *eP* **P 08 39 58.8 +0.5**
comp=Z,124nm,1.7s,mb6.0
RJOB Jochberg 89.68 318 *eP* **P 08 39 59.0 -0.2**
comp=Z,23nm,1.0s,mb5.5
WET Wettzell 89.69 319 *eP* **P 08 39 59.7 +0.4**
WET *e**PP pP 08 40 15.2 +0.3
WET pmax pmax
comp=Z,114nm,1.8s,mb5.9
WET Wettzell 89.69 319 *eP* **P 08 39 59.7 +0.4**
comp=Z,114nm,1.8s,mb5.9
WET *ep*P pP 08 40 15.2 +0.3
WET *es*P sP 08 40 20.8 0.0

CLL Collm 89.73 321 *e*P P **08 39 59.5 +0.1**
comp=Z,39nm,1.2s,mb5.6
CLL Collm 89.73 321⇑*i*P P **08 40 00.0 +0.6**
comp=Z,39nm,1.2s,mb5.6
CLL *i* (pP) pP 08 40 07.3 -7.7
CLL *e*sP sP 08 40 15.0 -5.9
CLL *e*x x 08 40 21.0
CLL *e*S S 08 50 54.0 +7.1
CLL LmV 09 24 00.0
comp=Z,200nm,21.1s
ABTA Abfaltersbach 89.82 317⇑*i*P P **08 39 59.6 -0.3**
comp=Z,17nm,1.0s,mb5.3
HFS Hagfors 89.87 330 P P **08 40 00.1 +0.2**
comp=Z,25nm,0.8s,mb5.6,baz=127,slow=3.9,SNR=21
NKC Novy Kostel 90.03 320 *e*P P **08 40 01.4 +0.6**
TANN Tannenbergstha 90.03 320 *e*P P **08 40 01.2 +0.4**
comp=Z,62nm,1.8s,mb5.6
WERN Wernitzgruen 90.08 320 *e*P P **08 40 01.7 +0.6**
comp=Z,36nm,1.4s,mb5.5
GUNZ Gunzen 90.11 320 *e*P P **08 40 01.5 +0.3**
comp=Z,38nm,1.2s,mb5.6
WERD Werda 90.13 320 *e*P P **08 40 01.6 +0.3**
comp=Z,54nm,1.7s,mb5.6
WERD *e*pP pP 08 40 17.1 +0.2
MANZ Manzenberg 90.24 320 *e*P P **08 40 02.5 +0.7**
comp=Z,87nm,1.5s,mb5.9
MANZ *e*pP pP 08 40 17.9 +0.5
WTTA Wattenberg 90.44 317 *i*P P **08 40 02.8 0.0**
comp=Z,36nm,0.9s,mb5.7,SNR=11
MOX Moxa 90.58 320 *e*P P **08 40 03.8 +0.4**
comp=Z,42nm,1.5s,mb5.5
MOX *e* pP 08 40 19.7 +0.7
MOX Moxa 90.58 320 *e*P P **08 40 03.8 +0.4**
MOX *e* pP 08 40 19.7 +0.7
MOX pmax pmax
comp=Z,42nm,1.5s,mb5.5
MOX Moxa 90.58 320 *e*P P **08 40 03.7 +0.3**
comp=Z,47nm,1.5s,mb5.6
FUR Furstenfeldbru 90.72 318 *e*P P **08 40 04.0 -0.1**
FUR pmax pmax
comp=Z,32nm,0.8s,mb5.7
FUR Furstenfeldbru 90.72 318 *e*P P **08 40 04.0 -0.1**
comp=Z,32nm,0.8s,mb5.7
SQTA Sankt Quirin 90.73 317⇑*i*P P **08 40 04.2 +0.1**
comp=Z,18nm,0.8s,mb5.5
GRA1 Grafenberg Arr 90.80 320 *e*P P **08 40 05.0 +0.6**
comp=Z,61nm,1.3s,mb5.8
GRA1 *e*pP pP 08 40 20.4 +0.4
GRA1 *e*S S 08 51 15.2 +18
GRF Grafenberg Arr 90.80 320 *e*P P **08 40 05.0 +0.6**
GRF *e**PP pP 08 40 20.4 +0.4
GRF pmax pmax
comp=Z,61nm,1.3s,mb5.8
GRF Grafenberg Arr 90.80 320 *e*P P **08 40 05.0 +0.6**
GRF *e**PP pP 08 40 20.4 +0.4
GRF pmax pmax
comp=Z,61nm,1.3s,mb5.8
GRF Grafenberg Arr 90.80 320 *e*P P **08 40 05.0 +0.6**
comp=Z,61nm,1.3s,mb5.8
GRF *e*pP pP 08 40 20.4 +0.4
GRF *e*S S 08 51 15.2 +18
MOTA Moosalm 90.81 317⇑*i*P P **08 40 04.5 -0.1**
comp=Z,35nm,0.9s,mb5.7,SNR=11
NSS Namsos 90.90 334 *e*P P **08 40 03.5 -1.0**
RETA Reutte 91.04 317⇑*i*P P **08 40 05.8 +0.1**
comp=Z,34nm,0.9s,mb5.7,SNR=7.8
FETA Feichten 91.05 317⇑*i*P P **08 40 06.0 +0.4**
comp=Z,24nm,0.9s,mb5.5,SNR=16
FETA ⇑*i*P pP 08 40 21.3 0.0
comp=Z,26nm,1.1s
FETA Feichten 91.05 317⇑*i*PcP PcP 08 40 06.0 -0.6
comp=Z,24nm,0.9s,SNR=16
NB2 NORSAR Subarra 91.14 331 P P **08 40 05.3 -0.4**
comp=Z,25nm,0.9s,mb5.5,baz=96,slow=4.6
NOA NORSAR Array B 91.14 331 P P **08 40 05.3 -0.5**
comp=Z,14nm,0.8s,mb5.3,baz=93,slow=4.8,SNR=27
NOA LR LR 09 25 40.6
comp=Z,330nm,20.9s,MS4.8,baz=90,slow=38
VLC Villacollemand 91.22 314 PFAKE 08 40 20.0 +13
VLC LR LR
comp=Z,166nm,19.0s,MS4.5
CLZ Clausthal 91.39 322 *e*P P **08 40 07.5 +0.4**
CLZ *e**PP pP 08 40 23.0 +0.3
CLZ pmax pmax
comp=Z,69nm,1.6s,mb5.7
CLZ Clausthal 91.39 322 *e*P P **08 40 07.5 +0.4**
comp=Z,69nm,1.6s,mb5.7
CLZ *e*pP pP 08 40 23.0 +0.3
KBS Kingsbay 91.42 349 PFAKE 08 40 20.0 +13
KBS LR LR
comp=Z,436nm,20.0s,MS4.9
BSEG Bad Segeberg 91.46 324 *e*P P **08 40 07.8 +0.4**
BSEG *e**PP pP 08 40 23.4 +0.4
BSEG pmax pmax
comp=Z,42nm,1.1s,mb5.7
BSEG Bad Segeberg 91.46 324 *e*P P **08 40 07.8 +0.4**
comp=Z,42nm,1.1s,mb5.7
BSEG *e*pP pP 08 40 23.4 +0.4
NRDL Niedersach Rie 91.56 322 *e*P P **08 40 08.3 +0.4**
comp=Z,57nm,1.5s,mb5.7
DAVOX Davos/Dischmat 91.63 317 P P **08 40 09.1 +0.7**
comp=Z,31nm,0.8s,mb5.7,baz=120,slow=5.4,SNR=25
DAVA Damuels 91.64 317⇑*i*P P **08 40 09.0 +0.6**
comp=Z,56nm,0.9s,mb5.9,SNR=14
DAVA Damuels 91.64 317⇑*i*PcP P **08 40 09.0 +0.6**
comp=Z,56nm,0.9s,mb5.9,SNR=14
DAVOS Davos 91.69 317 P P **08 40 09.1 +0.5**
KEST Kesra 91.88 306 P P **08 40 11.4 +1.7**
comp=Z,22nm,0.8s,mb5.5,baz=281,slow=0.7,SNR=31
KEST LR LR 09 20 23.3
comp=Z,88nm,21.4s,baz=330,slow=35
KONO Kongsberg 91.92 329 *e*P P **08 40 09.5 +0.1**
KONO Kongsberg 91.92 329⇑*e*P P **08 40 10.2 +0.8**
TUE Stuetta 91.99 316 *e*P P **08 40 09.7 -0.3**
comp=Z,36nm,1.6s,mb5.5
STU Stuttgart 92.11 319 *e*P P **08 40 10.6 +0.1**
comp=Z,27nm,0.9s,mb5.6
PGF Pioggiola 92.21 312 *e*P P **08 40 11.1 -0.1**
comp=Z,40nm,1.0s,mb5.4
PGF Pioggiola 92.21 312 *e*P P **08 40 11.1 -0.1**
PGF pmax pmax
comp=Z,20nm,1.0s,mb5.4
PGF Pioggiola 92.21 312 *e*P P **08 40 11.1 -0.1**
comp=Z,20nm,1.0s,mb5.4
TOD Tromm 92.37 319 *e*P P **08 40 11.3 -0.4**
SPAK Spaichingen-Ko 92.38 318 *e*P P **08 40 11.8 0.0**
SNAA Sanae 92.48 198 *e*P P **08 40 12.9 +1.1**
SNAA *e* 08 40 15.9
SNAA *e* pP 08 40 28.7 +1.3
SNAA Sanae 92.48 198⇑*e*P P **08 40 13.3 +1.5**
TNS Taunus Mts 92.60 320 *e*P P **08 40 13.2 +0.5**
TNS pmax pmax
comp=Z,37nm,1.1s,mb5.7
TNS Taunus Mts 92.60 320 *e*P P **08 40 13.2 +0.5**
comp=Z,37nm,1.1s,mb5.7
BFO Black Forest 92.69 318 *e*P P **08 40 12.9 -0.3**
BFO *e**PP pP 08 40 28.3 -0.5
BFO pmax pmax
comp=Z,17nm,1.0s,mb5.4
BFO Black Forest 92.69 318 *e*P P **08 40 12.9 -0.3**
comp=Z,17nm,1.0s,mb5.4
BFO *e*pP pP 08 40 28.3 -0.5
BFO *e*sP sP 08 40 33.7 -1.0
FELD Feldberg im Sc 92.91 318 *e*P P **08 40 12.5 -1.7**
LANF Langenberg 93.03 319 *e*P P **08 40 14.7 -0.1**
ABH Alteburg 93.18 320 *e*P P **08 40 13.2 -2.3**
BBS Basel-Blauen 93.25 317 *e*P P **08 40 14.6 -1.2**
BUG Bochum--Univer 93.33 321 *e*P P **08 40 16.1 0.0**
comp=Z,23nm,1.2s,mb5.5
SBF Sospel 93.35 314 *e*P P **08 40 16.1 -0.3**
comp=Z,36nm,0.8s,mb5.5
SBF Sospel 93.35 314 *e*P P **08 40 16.1 -0.3**
SBF pmax pmax
comp=Z,18nm,0.8s,mb5.5
SBF Sospel 93.35 314 *e*P P **08 40 16.1 -0.3**
comp=Z,18nm,0.8s,mb5.5
CDF Champ du Feu 93.39 318 *e*P P **08 40 15.9 -0.5**
comp=Z,43nm,1.2s,mb5.4
CDF Champ du Feu 93.39 318 *e*P P **08 40 15.9 -0.5**
CDF pmax pmax
comp=Z,22nm,1.2s,mb5.5
CDF Champ du Feu 93.39 318 *e*P P **08 40 15.9 -0.5**
comp=Z,22nm,1.2s,mb5.5
ECH Echery 93.47 318 *e*P P **08 40 16.3 -0.5**
ECH Echery 93.47 318 *e*P P **08 40 14.7 -2.1**

MOF Molkenrain 93.50 318 *e*P P **08 40 14.2 -2.7**
LPG La Plagne 93.81 315 *e*P P **08 40 18.5 0.0**
comp=Z,25nm,0.8s,mb5.4
LPG La Plagne 93.81 315 *e*P P **08 40 18.5 0.0**
LPG pmax pmax
comp=Z,12nm,0.8s,mb5.4
LPG La Plagne 93.81 315 *e*P P **08 40 18.5 0.0**
comp=Z,12nm,0.8s,mb5.4
MBDF Montbardon 93.81 315 *e*P P **08 40 17.6 -0.9**
LPL La Plagne 93.82 315 *e*P P **08 40 18.5 0.0**
comp=Z,23nm,0.8s,mb5.3
LPL La Plagne 93.82 315 *e*P P **08 40 18.5 0.0**
LPL pmax pmax
comp=Z,12nm,0.8s,mb5.4
LPL La Plagne 93.82 315 *e*P P **08 40 18.5 0.0**
comp=Z,12nm,0.8s,mb5.4
FRF La Foret Royal 93.93 313 *e*P P **08 40 18.8 -0.3**
comp=Z,19nm,0.9s,mb5.2
FRF La Foret Royal 93.93 313 *e*P P **08 40 18.8 -0.3**
FRF pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
FRF La Foret Royal 93.93 313 *e*P P **08 40 18.8 -0.3**
comp=Z,9.4nm,0.9s,mb5.2
LMR La Mourre 94.04 313 *e*P P **08 40 18.4 -1.2**
VNA2 Neumayer--Watz 94.10 198 *e*P P **08 40 20.5 +1.2**
VNA2 *e* 08 40 23.8
VNA2 *e* pP 08 40 38.3 +3.4
VNA2 *e* 08 45 03.8
VNA2 *e* 08 45 13.9
VNA2 *e* 08 45 17.9
CABF La Chapelle 94.24 316 *e*P P **08 40 20.3 -0.1**
THEF They Montfort 94.25 318 *e*P P **08 40 19.8 -0.6**
ORIF Oris-en-Rattie 94.44 315 *e*P P **08 40 21.1 -0.3**
ORIF *e*MLR MLR
comp=Z,228nm,18.8s,MS4.4
VNA1 Neumayer--Stat 94.46 198 *e*P P **08 40 22.5 +1.6**
VNA1 *e* 08 40 25.8
VNA1 *e* pP 08 40 38.6 +2.1
SMRF Simiane la Rot 94.69 314 *e*P P **08 40 22.8 +0.2**
comp=Z,22nm,1.1s,mb5.2
SMRF Simiane la Rot 94.69 314 *e*P P **08 40 22.8 +0.2**
comp=Z,22nm,1.1s,mb5.5
VNA3 Neumayer Olymp 94.70 198 *e*P P **08 40 23.0 +1.0**
VNA3 *e* 08 40 25.4
VNA3 *e* pP 08 40 40.0 +2.4
VNA3 *e* 08 45 04.5
VNA3 *e* 08 45 16.1
VNA3 *e* 08 45 20.9
VIVF Saint-Julien-l 95.30 315 *e*P P **08 40 25.0 -0.3**
LOR Lormes 95.73 317 *e*P P **08 40 26.8 -0.4**
comp=Z,29nm,0.9s,mb5.4
LOR *e*MLR MLR
comp=Z,116nm,18.8s,MS4.1
LOR Lormes 95.73 317 *e*P P **08 40 26.8 -0.4**
LOR pmax pmax
comp=Z,15nm,0.9s,mb5.4
LOR MLR MLR
comp=Z,120nm,18.8s,MS4.4
LOR Lormes 95.73 317 *e*P P **08 40 26.8 -0.4**
comp=Z,14nm,0.9s,mb5.4
LOR LR LR
comp=Z,120nm,18.8s,MS4.4
SMF Signal de Mont 95.79 317 *e*P P **08 40 26.9 -0.6**
comp=Z,26nm,1.0s,mb5.3
SMF Signal de Mont 95.79 317 *e*P P **08 40 26.9 -0.6**
SMF pmax pmax
comp=Z,13nm,1.0s,mb5.3
SMF Signal de Mont 95.79 317 *e*P P **08 40 26.9 -0.6**
comp=Z,13nm,1.0s,mb5.3
LASF Ste Croix 95.93 314 *e*P P **08 40 27.9 -0.3**
comp=Z,41nm,1.2s,mb5.4
TCF Toulx Ste Croi 96.94 316 *e*P P **08 40 31.6 -1.1**
DAG Danmarks Havn 98.14 348⇑*i*P P **08 40 36.1 -1.4**
DAG pmax pmax
comp=Z,2.0nm,0.7s,mb4.8
DAG Danmarks Havn 98.14 348⇑*i*P P **08 40 36.1 -1.4**
comp=Z,2.1nm,0.7s,mb4.8
TORD Torodi Ar. Bea 98.87 283 P P **08 40 41.9 -0.2**
comp=Z,2.6nm,0.8s,mb4.8,baz=76,slow=4.4,SNR=16
TORD LR LR 09 25 50.8
comp=Z,205nm,19.8s,MS4.6,baz=80,slow=36
TORD Torodi Ar. Bea 98.87 283 P P **08 40 41.9 -0.2**
TORD LR LR 09 25 50.8
EKA Eskdalemuir Ar 99.15 326 P P **08 40 42.1 -0.3**
comp=Z,4.5nm,1.0s,mb5.0,baz=120,slow=4.9,SNR=4.9
COLA College 100.71 24 PFAKE 08 41 00.0 +11
COLA LR LR
comp=Z,255nm,20.0s,MS4.7
PMR Palmer 101.19 27 PFAKE 08 41 00.0 +8.5
PMR LR LR
comp=Z,316nm,19.0s,MS4.8
SFS San Fernando 104.38 307 PFAKE 08 41 20.0 +14
SFS LR LR
comp=Z,561nm,22.0s,MS5.1
TBI Tubuai 107.72 115 *e*LR LR 09 17 03.8
comp=Z,606nm,32.8s
PPT Papeete 108.50 109 *e*LR LR 09 17 29.6
comp=Z,185nm,22.2s
YKA Yellowknife Ar 114.03 17 PKiKP PKiKP 08 45 37.9 -1.9
comp=Z,2.8nm,0.8s,baz=319,slow=2.4,SNR=9.7
YKA PKKPbc PKKPbc 08 56 21.0 -2.7
comp=Z,1.0nm,0.8s,baz=149,slow=3.2,SNR=3.5
YKA Yellowknife Ar 114.03 17 PKPdf PKiKP 08 45 37.9 -1.9
YKA PKKPbc PKKPbc 08 56 21.0 -2.7
ASCN Ascension 114.23 261 PFAKE 08 45 50.0 +8.4
ASCN LR LR
comp=Z,653nm,19.0s,MS5.2
GNW Green Mountain 121.05 33 *e*Pg PKPdf 08 45 53.4 -0.3
JCW Jim Creek 121.14 32 *e*Pg PKPdf 08 45 51.5 -2.4
FMW Mount Fremont 122.06 33 P PKPdf 08 45 55.0 -0.7
ETW Entiat 122.35 32 *e*Pg PKPdf 08 45 55.2 -1.1
TBM Table Mountain 122.49 32 P PKPdf 08 45 56.1 -0.4
WTV Waterville 122.49 31 P PKPdf 08 45 55.6 -0.9
EPH Ephrata 122.90 31 P PKPdf 08 45 56.6 -0.7
VFP Flag Point 123.16 34 P PKPdf 08 45 57.9 0.0
OD2 Odessa Site #2 123.33 31 P PKPdf 08 45 57.5 -0.6
RSW Rattlesnake Hi 123.51 32 *e*Pn PKPdf 08 45 58.3 -0.3
HAWA Hanford 123.55 32⇑*i*Pn PKPdf 08 45 58.0 -0.6
HUMO Hull Mountain 123.86 38 PFAKE 08 46 10.0 +11
HUMO LR LR
comp=Z,210nm,20.0s,MS4.8
YBH Yreka Blue Hor 124.51 38 PFAKE 08 46 10.0 +9.4
YBH LR LR
comp=Z,171nm,19.0s,MS4.7
LNOR Lincton Mounta 124.55 32 *e*PKIKP PKPdf 08 45 59.5 -1.0
LHEM Herd Peak 124.87 38 P PKPdf 08 46 01.1 -0.2
WDC Whiskeytown Da 125.25 39 PFAKE 08 46 10.0 +8.0
WDC LR LR
comp=Z,254nm,19.0s,MS4.9
BMO Blue Mountains 125.73 32 PFAKE 08 46 10.0 +7.2
BMO LR LR
comp=Z,262nm,22.0s,MS4.9
MOD Modoc 125.88 37 PFAKE 08 46 10.0 +6.8
MOD LR LR
comp=Z,234nm,20.0s,MS4.8
MSO Missoula 126.08 29 *e*Pg PKPdf 08 46 02.5 -0.9
MSO LR LR
comp=Z,280nm,19.0s,MS5.0
SCHQ Schefferville 126.08 351 PKP PKPdf 08 46 02.5 -0.7
comp=Z,10nm,0.8s,baz=10,slow=6.2,SNR=5.8
SCHQ Schefferville 126.08 351 PKP PKPdf 08 46 02.5 -0.7
SCHQ LR LR
comp=Z,1μm,20.0s,MS5.6
MCCM Marconi Confer 126.34 42 PFAKE 08 46 20.0 +16
MCCM LR LR
comp=Z,219nm,19.0s,MS4.8
CHMT Chamberlain Mo 126.35 28 *e*Pg PKPdf 08 46 03.1 -0.8
LCCM Lewis and Clar 127.79 28 P PKPdf 08 46 06.5 -0.2
DLMT Dillon 127.79 29 *e*Pg PKPdf 08 46 06.7 -0.1
BOZ Bozeman (W) 128.04 28 *e*PKIKP PKPdf 08 46 06.8 -0.4
BOZ MLR MLR
comp=Z,401nm,22.0s,MS5.1
CMB Columbia Colle 128.06 41 PFAKE 08 46 20.0 +13
CMB LR LR
comp=Z,262nm,22.0s,MS4.9
HLID Hailey 128.14 32 *e*Pn PKPdf 08 46 07.7 +0.2
BMN Battle Mountai 128.62 37 PFAKE 08 46 20.0 +12
BMN LR LR
comp=Z,212nm,22.0s,MS4.8
YMR Madison River 129.09 29 PFAKE 08 46 20.0 +11
YMR LR LR
comp=Z,2μm,19.0s,MS5.7
NVAR Mina Array Bea 129.17 39 PKhKP 08 46 02.4
comp=Z,0.7nm,0.8s,baz=183,slow=1.6,SNR=4.0
NVAR PKP PKPdf 08 46 10.2 +0.6
comp=Z,4.8nm,0.8s,baz=250,slow=1.8,SNR=26
NVAR Mina Array Bea 129.17 39 PKP PKPdf 08 46 10.2 +0.6
LKWY Lake 129.43 28 PFAKE 08 46 20.0 +10
LKWY LR LR
comp=Z,478nm,20.0s,MS5.2
RLMT Red Lodge 129.53 27 PFAKE 08 46 20.0 +10
RLMT LR LR
comp=Z,273nm,19.0s,MS5.0
ELK Elko 129.58 35 PFAKE 08 46 20.0 +10
ELK LR LR
comp=Z,386nm,20.0s,MS5.1
LAO LASA Array 129.59 24 PFAKE 08 46 20.0 +10
LAO LR LR
comp=Z,263nm,19.0s,MS5.0
ULM Lac du Bonnet 129.75 14 PKP PKPdf 08 46 09.3 -1.0
comp=Z,16nm,0.8s,baz=347,slow=3.1,SNR=14
ULM Lac du Bonnet 129.75 14 PKP PKPdf 08 46 09.3 -1.0
ULM LR LR
comp=Z,665nm,21.0s,MS5.3
TPH Tonopah 130.06 39 PFAKE 08 46 20.0 +8.7
TPH LR LR
comp=Z,254nm,19.0s,MS4.9
AHID Auburn Hatcher 130.42 30 PFAKE 08 46 20.0 +8.2
AHID LR LR
comp=Z,341nm,20.0s,MS5.0
ISA Isabella 130.65 42 PFAKE 08 46 20.0 +7.5
ISA LR LR
comp=Z,368nm,22.0s,MS5.0
DAC Darwin (Calif) 130.89 41 PFAKE 08 46 20.0 +7.1
DAC LR LR
comp=Z,364nm,21.0s,MS5.0
BW06 Boulder Array 131.18 29 PFAKE 08 46 30.0 +17
BW06 LR LR
comp=Z,229nm,21.0s,MS4.8
PDAR Pinedale Array 131.18 29 PKhKP 08 46 06.3
comp=Z,1.2nm,0.9s,baz=48,slow=2.2,SNR=6.7
PDAR PKP PKPdf 08 46 11.5 -1.8
comp=Z,2.5nm,0.7s,baz=101,slow=2.7,SNR=13
PDAR SKPbc SKPbc 08 49 31.6 -2.1
comp=Z,2.1nm,0.9s,baz=307,slow=0.7,SNR=4.1
PDAR Pinedale Array 131.18 29 PKP PKPdf 08 46 11.5 -1.8
PDAR SKPbc SKPbc 08 49 31.6 -2.1
TPNV Topopah Spring 131.36 40 PFAKE 08 46 30.0 +16
TPNV LR LR
comp=Z,439nm,22.0s,MS5.1
AGMN Agassiz Refuge 131.57 14 PFAKE 08 46 30.0 +16
AGMN LR LR
comp=Z,590nm,21.0s,MS5.3
MWC Mount Wilson 131.74 44 PFAKE 08 46 30.0 +15
MWC LR LR
comp=Z,419nm,20.0s,MS5.1
MPU Maple Canyon 132.10 33 PFAKE 08 46 30.0 +15
MPU LR LR
comp=Z,2μm,22.0s,MS5.7
MVU Marysvale 132.81 35 PFAKE 08 46 30.0 +14
MVU LR LR
comp=Z,274nm,20.0s,MS5.0
PFO Pinyon Flat Ob 133.19 43 PFAKE 08 46 30.0 +13
PFO LR LR
comp=Z,201nm,19.0s,MS4.8
BAR Barrett 133.56 45 PFAKE 08 46 30.0 +12
BAR LR LR
comp=Z,403nm,19.0s,MS5.2
ECSD EROS,Sioux Fal 135.56 18 PFAKE 08 46 30.0 +8.5
ECSD LR LR
comp=Z,461nm,19.0s,MS5.2
MVCO Mesa Verde 135.81 34 PFAKE 08 46 30.0 +7.8
MVCO LR LR
comp=Z,258nm,20.0s,MS5.0
OGNE Ogallala 136.04 25 PFAKE 08 46 30.0 +7.5
OGNE LR LR
comp=Z,476nm,19.0s,MS5.2
PLCA Paso Flores 136.90 190 PKhKP 08 46 14.9
comp=Z,2.7nm,0.9s,baz=241,slow=1.2,SNR=4.3
PLCA PKP PKPdf 08 46 24.6 +0.5
comp=Z,4.1nm,0.8s,baz=265,slow=2.2,SNR=8.7
PLCA Paso Flores 136.90 190 PKIKP PKPdf 08 46 24.6 +0.5
PLCA MLR MLR
comp=Z,428nm,20.0s
SDCO Great Sand Dun 137.01 31 PFAKE 08 46 40.0 +16
SDCO LR LR
comp=Z,344nm,22.0s,MS5.0
TUC Tucson 137.77 41 PFAKE 08 46 40.0 +14
TUC LR LR
comp=Z,251nm,21.0s,MS4.9
JFWS Jewell Farm 137.94 12 PFAKE 08 46 40.0 +14
JFWS LR LR
comp=Z,649nm,19.0s,MS5.4
SCIA State Center 138.21 15 PFAKE 08 46 40.0 +14
SCIA LR LR
comp=Z,466nm,19.0s,MS5.2
ANMO Albuquerque 138.59 34⇑*i*PKIKP PKPdf 08 46 28.5 +1.1
ANMO Albuquerque 138.59 34 PFAKE 08 46 40.0 +13
ANMO LR LR
comp=Z,401nm,21.0s,MS5.1
CBKS Cedar Bluff 138.79 24 PFAKE 08 46 40.0 +12
CBKS LR LR
comp=Z,429nm,20.0s,MS5.2
HRV Adam Dziewonsk 138.80 351 PFAKE 08 46 40.0 +12
HRV LR LR
comp=Z,355nm,19.0s,MS5.1
WES Weston 138.88 351 PFAKE 08 46 40.0 +12
WES LR LR
comp=Z,920nm,20.0s,MS5.5
KSU1 Kansas State U 139.73 21 PFAKE 08 46 40.0 +11
KSU1 LR LR
comp=Z,570nm,21.0s,MS5.3
AMTX Amarillo 141.16 30 PFAKE 08 46 40.0 +8.0
AMTX LR LR
comp=Z,369nm,19.0s,MS5.2
CCM Cathedral Cave 142.34 15 PFAKE 08 46 50.0 +16
CCM LR LR
comp=Z,580nm,20.0s,MS5.3
WCI Wyandotte Cave 143.20 9 PFAKE 08 46 50.0 +14
WCI LR LR
comp=Z,403nm,20.0s,MS5.2
CBN Corbin 143.68 357 PFAKE 08 46 50.0 +14
CBN LR LR
comp=Z,450nm,19.0s,MS5.3
TXAR Lajitas Array 144.28 38 PKP PKPdf 08 46 35.8 -1.9
comp=Z,90nm,0.8s,baz=271,slow=1.4,SNR=809
TXAR pPKP pPKPdf 08 46 55.6 +1.8
comp=Z,82nm,0.9s,baz=306,slow=1.3,SNR=8.4
TXAR SKPbc SKPbc 08 50 11.6 -0.8
comp=Z,1.2nm,0.8s,baz=200,slow=4.8,SNR=3.4
TXAR Lajitas Array 144.28 38 PKP PKPdf 08 46 35.8 -1.9
TXAR pPKP pPKPdf 08 46 55.6 +1.8
TXAR SKPbc SKPbc 08 50 11.6 -0.9
BDFB Brasilia 144.30 240 PKP PKPdf 08 46 36.6 -1.5
comp=Z,11nm,0.7s,baz=98,slow=2.0,SNR=7.8
BDFB Brasilia 144.30 240 PKP PKPdf 08 46 36.6 -1.5
BDFB LR LR
comp=Z,957nm,22.0s,MS5.5
CPUP Villa Florida 144.74 216 PKP PKPdf 08 46 37.9 -0.8
comp=Z,52nm,0.7s,baz=113,slow=2.2,SNR=124
WVT Waverly 144.97 12 PFAKE 08 46 50.0 +11
WVT LR LR
comp=Z,369nm,19.0s,MS5.2
CFAA Coronel Fontan 145.10 197 PKPbc PKPbc 08 46 39.0 +0.4
baz=189,slow=2.8
TZTN Tazewell 145.20 6 PFAKE 08 46 50.0 +11
TZTN LR LR
comp=Z,521nm,21.0s,MS5.3
OXF Oxford 146.16 15 PFAKE 08 46 50.0 +9.2
OXF LR LR
comp=Z,838nm,22.0s,MS5.5
BBSR BB Station 146.48 337 PFAKE 08 46 50.0 +8.6
BBSR LR LR
comp=Z,238nm,20.0s,MS5.0
CNNC Cliffs of the 146.66 357 PFAKE 08 46 50.0 +8.4
CNNC LR LR
comp=Z,339nm,20.0s,MS5.1
NATX Nacogdoches 146.96 24 PFAKE 08 46 50.0 +7.8
NATX LR LR
comp=Z,281nm,19.0s,MS5.1
TLL Tololo Astrono 147.15 194⇑*i*P PKPdf 08 46 45.1 +2.5
HKT Hockley 148.01 27 PFAKE 08 47 00.0 +16
HKT LR LR
comp=Z,367nm,21.0s,MS5.2
LCO Las Campanas 148.23 195⇑*i*P PKPdf 08 46 48.3 +3.8
GOGA Godfrey 148.31 6 PFAKE 08 47 00.0 +16
GOGA LR LR
comp=Z,582nm,20.0s,MS5.4
NHSC New Hope 148.82 1 PFAKE 08 47 00.0 +15
NHSC LR LR

comp=Z,266nm,19.0s,MS5.0
LVC Limon Verde 153.62 203 PKP PKPdf 08 46 54.4 +1.5
comp=Z,5.7nm,0.8s,baz=157,slow=2.9,SNR=4.1
LVC PKPbc PKPbc 08 47 01.7 +1.1
comp=Z,27nm,0.8s,baz=287,slow=1.8,SNR=24
LVC PKPab PKPab 08 47 14.0 +0.8
comp=Z,22nm,0.7s,baz=64,slow=3.8,SNR=3.9
DWPF Disney 153.75 4 PFAKE 08 47 00.0 +7.1
DWPF LR LR
comp=Z,464nm,21.0s,MS5.3
SIV San Ignacio 154.57 225 PKP PKPdf 08 46 54.1 -0.3
comp=Z,4.6nm,0.8s,baz=103,slow=3.9,SNR=16
SIV PKPbc PKPbc 08 47 02.8 -0.1
comp=Z,4.7nm,0.7s,baz=121,slow=3.6,SNR=10
LPAZ La Paz 158.78 212 PKP PKPdf 08 47 00.8 +1.0
comp=Z,8.5nm,0.8s,baz=81,slow=0.8,SNR=46
LPAZ PKPab PKPab 08 47 37.9 +2.5
comp=Z,3.8nm,0.8s,baz=153,slow=2.3,SNR=4.1
LPAZ La Paz 158.78 212 PKP PKPdf 08 47 00.8 +1.0
LPAZ PKPab PKPab 08 47 37.9 +2.5
LPAZ LR LR
comp=Z,387nm,20.0s,MS5.2
SJG San Juan 159.07 322 PFAKE 08 47 10.0 +10
SJG LR LR
comp=Z,280nm,19.0s,MS5.1
GRGR Grenville 159.44 301 PFAKE 08 47 10.0 +9.4
GRGR LR LR
comp=Z,266nm,20.0s,MS5.1
TEIG Tepich 159.79 24 PFAKE 08 47 10.0 +9.1
TEIG LR LR
comp=Z,409nm,22.0s,MS5.2
TGUH Tegucigalpa,Un 165.63 31 PFAKE 08 47 20.0 +13
TGUH LR LR
comp=Z,299nm,21.0s
SDV Santo Domingo 168.61 309 PFAKE 08 47 20.0 +11
SDV LR LR
comp=Z,128nm,20.0s
JTS JuntasAbangare 170.00 32 PFAKE 08 47 20.0 +10
JTS LR LR
comp=Z,274nm,22.0s
BCIP Isla Barro Col 172.65 2 PFAKE 08 47 20.0 +8.9
BCIP LR LR
comp=Z,355nm,20.0s
ROSC El Rosal 173.91 300 PKP PKPdf 08 47 11.1 -0.5
comp=Z,8.9nm,0.7s,baz=112,slow=5.7,SNR=10.0
OTAV Otavalo 178.09 217 PFAKE 08 47 20.0 +7.4
OTAV LR LR
comp=Z,458nm,22.0s

*IDC **25** 08:44:15.9±1.8,322S×10064E,h0km,mb4.1/9,mb1 4.2/9, mb1mx3.9/21,mbtmp4.1/9,Error ellipse: s-maj=93.4km s-min=16.0km az=56.0*
*ISCJB **25** 08:44:19.0±1.7,31S±04×1008E±05,h33km,mb4.3/11, Error ellipse: s-maj=85.2km s-min=10.8km az=142.5*
*NEIC **25** 08:44:20.6±8.8,323S×10068E,h33km±60km,mb4.6/4, Error ellipse: s-maj=56.1km s-min=8.2km az=53.0*

ISC 25 08:44:21.0±1.7,32S±04×1007E±05,h35km,n20,σ0§38/17, mb4.3/11,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**28.57**	**123**	*e*P		**P**	**08 50 14.2**	**+0.3**
	3.3nm,0.6s,mb4.2							
FITZ	**Fitzroy Crossi**	**28.57**	**123**	P		**P**	**08 50 14.1**	**+0.2**
	1.9nm,0.8s,mb3.9,baz=339,slow=8.6,SNR=3.5							
WRA	**Warramunga Arr**	**36.79**	**119**	P		**P**	**08 51 25.8**	**0.0**
	2.2nm,0.4s,mb4.3,baz=303,slow=8.9,SNR=52							
WRA				PcP		PcP	08 53 48.0	+0.4
	0.5nm,0.6s,baz=308,slow=2.6,SNR=5.0							
WRAB	**Tennant Creek**	**36.79**	**119**	*e*P		**P**	**08 51 25.3**	**-0.5**
	2.4nm,0.6s,mb4.2							
WB2	**Warramunga Arr**	**36.80**	**119**	*e*P		**P**	**08 51 25.4**	**-0.4**
ASAR	**Alice Springs**	**37.98**	**125**	P		**P**	**08 51 36.0**	**+0.1**
	1.4nm,0.7s,mb3.8,baz=300,slow=7.6,SNR=21							
ASAR				PcP		PcP	08 53 52.1	+1.0
	0.7nm,0.5s,baz=299,slow=2.3,SNR=7.3							
STKA	**Stephens Creek**	**47.83**	**131**	*e*P		**P**	**08 52 56.1**	**+0.6**
	3.1nm,0.6s,mb4.5							
STKA	**Stephens Creek**	**47.83**	**131**	P		**P**	**08 52 56.1**	**+0.6**
	2.5nm,0.5s,mb4.5,baz=313,slow=8.7,SNR=10.0							
STKA	**Stephens Creek**	**47.83**	**131**	*e*P		**P**	**08 52 55.8**	**+0.3**
	25nm,1.7s,mb5.0							
STKA				*e*pP		pP	08 53 05.2	-0.7
SONM	**Songino Array**	**51.08**	**5**	P		**P**	**08 53 20.3**	**+0.3**
	2.3nm,0.7s,mb4.2,baz=179,slow=8.9,SNR=9.4							
TKM2	**Tokmak 2**	**51.22**	**336**	*e*P		**P**	**08 53 21.5**	**+0.4**
	31nm,0.7s,mb5.3							
MK31	**Makanchi Array**	**52.38**	**344**	*e*P		**P**	**08 53 29.4**	**-0.3**
MKAR	**Makanchi Array**	**52.38**	**344**	P		**P**	**08 53 29.3**	**-0.4**
	1.2nm,0.5s,mb4.1,baz=160,slow=9.0,SNR=13							
KURK	**Kurchatov**	**56.96**	**343**	P		**P**	**08 54 02.4**	**-0.4**
	0.3nm,0.3s,mb3.8,baz=160,slow=6.6,SNR=2.5							
ZALV	**Zalesovo Beam**	**58.48**	**349**	P		**P**	**08 54 14.1**	**+0.6**
	1.1nm,0.3s,mb4.3,baz=179,slow=8.9,SNR=4.1							
ZALV	**Zalesovo Beam**	**58.48**	**349**	P		**P**	**08 54 14.1**	**+0.6**
ARCES	**ARCESS Array B**	**87.85**	**340**	P		**P**	**08 57 06.0**	**-0.3**
	1.2nm,0.9s,mb4.1,baz=97,slow=7.4,SNR=3.7							
TXAR	**Lajitas Array**	**145.22**	**39**	PKPbc	PKPbc		09 03 55.6	+0.3
	0.6nm,0.4s,baz=242,slow=0.7,SNR=36							
JCT	**Junction City**	**146.67**	**33**	*e*PKPbc	PKPbc		09 03 59.7	0.0
BRAL	**Brewton**	**151.40**	**14**	*e*PKPbc	PKPbc		09 04 07.6	-4.2

*ISCJB **25** 08:49:57.6±0.8, 1997S±005×686W±0.1,h134km±9km, mb4.0/2,Error ellipse: s-maj=19.8km s-min=8.2km az=5.2*
*IDC **25** 08:49:57.7±1.1, 1996S×6867W,h125km±10km,mb3.8/4, mb1 3.8/8,mb1mx3.5/21,mbtmp3.7/8, Error ellipse: s-maj=28.9km s-min=8.5km az=100.0*
*NEIC **25** 08:49:58.4±0.8, 1990S×6869W,h133km±8km,mb4.1/1, Error ellipse: s-maj=13.2km s-min=9.4km az=97.0*

ISC 25 08:49:58.5±0.8,1996S±005×687W±01,h130km±9km,n15, σ0§83/17,mb4.0/2,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.65**	**185**	P		**Pn**	**08 50 40.8**	**+0.2**
	14nm,0.3s,baz=16,slow=11,SNR=8.6							
LVC				S		**Sn**	**08 51 12.0**	**-1.0**
	91nm,0.3s,baz=221,slow=22,SNR=17							
LVC	**Limon Verde**	**2.65**	**185**	P		**Pn**	**08 50 40.8**	**+0.2**
LVC				S		**Sn**	**08 51 12.0**	**-1.0**
LPAZ	**La Paz**	**3.69**	**8**	P		**Pn**	**08 50 55.5**	**+1.2**
	5.6nm,0.3s,baz=207,slow=7.0,SNR=156							
LPAZ				S		**Sn**	**08 51 37.2**	**-0.1**
	1.3nm,0.3s,baz=356,slow=18,SNR=6.2							
LPAZ	**La Paz**	**3.69**	**8**	*e*Pn		**Pn**	**08 50 54.8**	**+0.6**
LPAZ				*e*Sn		**Sn**	**08 51 37.8**	**+0.4**
SIV	**San Ignacio**	**8.24**	**63**	P		**Pn**	**08 51 54.4**	**-0.9**
	6.1nm,0.3s,baz=253,slow=12,SNR=94							
CPUP	**Villa Florida**	**12.20**	**123**	P		**Pn**	**08 52 48.5**	**+0.5**
	0.3nm,0.3s,baz=291,slow=13,SNR=5.0							
BDFB	**Brasilia**	**20.13**	**81**	P		**P**	**08 54 23.0**	**+0.6**
	8.3nm,0.6s,baz=258,slow=4.7,SNR=4.7							
PLCA	**Paso Flores**	**20.76**	**184**	P		**P**	**08 54 30.7**	**+1.7**
	2.1nm,0.8s,baz=5.4,slow=10,SNR=7.8							
PLCA	**Paso Flores**	**20.76**	**184**	P		**P**	**08 54 30.7**	**+1.7**
OTAV	**Otavalo**	**22.25**	**333**	*e*P		**P**	**08 54 44.2**	**-0.7**
	17nm,2.0s,mb4.1							
DBIC	**Dimbokro**	**68.09**	**74**	P		**P**	**09 00 44.0**	**-0.7**
	4.0nm,0.5s,baz=225,slow=8.1,SNR=8.8							
TORD	**Torodi Ar. Bea**	**76.63**	**71**	P		**P**	**09 01 34.7**	**-0.7**
	1.4nm,0.4s,mb4.0,baz=254,slow=5.4,SNR=52							
TORD	**Torodi Ar. Bea**	**76.63**	**71**	P		**P**	**09 01 34.7**	**-0.7**
ASAR	**Alice Springs**	**131.37**	**208**	PKP		PKPdf	09 08 55.3	-0.8
	0.1nm,0.5s,baz=121,slow=1.5,SNR=3.8							
WRA	**Warramunga Arr**	**134.38**	**211**	PKP		PKPdf	09 09 01.7	-0.2
	0.2nm,0.4s,baz=139,slow=1.5,SNR=6.2							

IDC 25 09:00:41.9±1.1,3855S×4700E,h0km,mb3.8/5,mb1 4.0/5, mb1mx3.8/20,mbtmp3.9/5,Error ellipse: s-maj=137.6km s-min=21.3km az=24.0,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**20.60**	**292**	P		P	09 05 24.4	+1.7
	5.0nm,0.9s,baz=133,slow=8.5,SNR=6.6							
LBTB	**Lobatse**	**22.58**	**300**	P		P	09 05 43.0	-0.9
	9.0nm,1.0s,baz=141,slow=8.9,SNR=5.8							
TORD	**Torodi Ar. Bea**	**66.61**	**311**	P		P	09 11 34.4	+0.2
	0.3nm,0.6s,baz=142,slow=6.9,SNR=4.4							
ASAR	**Alice Springs**	**73.35**	**107**	P		P	09 12 15.8	+0.1
	0.6nm,0.8s,baz=240,slow=5.1,SNR=3.5							
WRA	**Warramunga Arr**	**75.84**	**104**	P		P	09 12 30.6	+0.4
	0.5nm,0.8s,baz=228,slow=4.6,SNR=2.9							
TXAR	**Lajitas Array**	**154.08**	**258**	PKPbc	PKPbc		09 20 43.4	-0.3
	0.6nm,0.7s,baz=129,slow=4.9,SNR=8.2							

*ISCJB **25** 09:09:24.1±0.7,2467N±004×12246E±002,h91km±6km, Error ellipse: s-maj=7.4km s-min=3.5km az=175.0*
*TAP **25** 09:09:24.4,2467N×12244E,h88km±1km,ML3.1,D*
*JMA **25** 09:09:24.2±0.2,2477N×12249E,h90km±3km,M2.4*

ISC 25 09:09:24.5±0.7,2468N±004×12246E±002,h90km±6km, n31,σ0§47/58,3C-2D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
EGS		**0.51**	**290**	*e*P		**Pn**	**09 09 39.4**	**+0.1**
	baz=291							
EGS				*e*S		**Sn**	**09 09 53.1**	**+2.8**
	baz=291							
TWB1	**Santiao Chiao**	**0.54**	**308**	P		**Pn**	**09 09 39.6**	**0.0**
	baz=309							
TWB1				*e*S		**Sn**	**09 09 50.7**	**-0.1**
	baz=309							
YOJ	**Yonaguni jima**	**0.55**	**113**	P		**Pn**	**09 09 39.6**	**-0.1**
YOJ				*e*S		**Sn**	**09 09 51.0**	**+0.1**
TWC	**Suao**	**0.56**	**263**	⇑*i*P		**Pn**	**09 09 39.4**	**-0.3**
	baz=264							
TWC				*e*S		**Sn**	**09 09 50.4**	**-0.7**
	baz=264							
ENA	**Nanau**	**0.70**	**250**	*i* P		**Pn**	**09 09 41.0**	**0.0**
	baz=249							
ENA				*e*S		**Sn**	**09 09 53.4**	**+0.1**
	baz=249							
TWE	**Neicheng**	**0.72**	**274**	⇓*i*P		**Pn**	**09 09 41.2**	**0.0**
	baz=274							
TWE				S		**Sn**	**09 09 53.3**	**-0.4**
	baz=274							
NWF	**Wu-fen Shan**	**0.73**	**303**	P		**Pn**	**09 09 41.2**	**-0.1**
	baz=304							
NWF				S		**Sn**	**09 09 53.7**	**-0.2**
	baz=304							
ENTT	**Nioudou**	**0.81**	**268**	⇑*i*P		**Pn**	**09 09 42.5**	**+0.3**
	baz=268							
ENTT				*e*S		**Sn**	**09 09 56.0**	**+0.7**
	baz=268							
TWA	**Mucha**	**0.85**	**291**	*e*P		**Pn**	**09 09 41.7**	**-0.9**
	baz=291							
TWA				*e*S		**Sn**	**09 09 56.0**	**-0.1**
	baz=291							
TWD	**Chiawan**	**0.98**	**233**	*e*P		**Pn**	**09 09 44.3**	**+0.2**
	baz=232							
TWD				*e*S		**Sn**	**09 09 58.1**	**-0.5**
	baz=232							
NSK	**Sanguang**	**1.00**	**270**	⇓*i*P		**Pn**	**09 09 44.3**	**+0.1**
	baz=270							
NSK				S		**Sn**	**09 09 59.0**	**0.0**
	baz=270							
NNS	**Nan Shan**	**1.01**	**257**	P		**Pn**	**09 09 44.5**	**+0.2**
	baz=256							
NNS				*e*S		**Sn**	**09 09 59.3**	**0.0**
	baz=256							
TWS1	**Kuangyinshan**	**1.03**	**294**	*e*P		**Pn**	**09 09 44.1**	**-0.5**
	baz=295							
TWS1				*e*S		**Sn**	**09 09 59.6**	**-0.1**
	baz=295							
HWA	**Hwalien**	**1.04**	**228**	*e*P		**Pn**	**09 09 44.5**	**-0.2**
	baz=227							
HWA				*e*S		**Sn**	**09 10 00.1**	**+0.2**
	baz=227							
WHF	**Hehuan Shan**	**1.21**	**244**	*i* P		**Pn**	**09 09 46.7**	**+0.1**
	baz=244							
WHF				S		**Sn**	**09 10 03.2**	**-0.2**
	baz=244							
IRIF	**Iriomote-Funau**	**1.21**	**106**	*e*S		**Sn**	**09 10 03.5**	**+0.2**
TWT	**Tachien**	**1.24**	**251**	*e*P		**Pn**	**09 09 47.9**	**+0.8**
	baz=250							
TWT				*e*S		**Sn**	**09 10 04.0**	**0.0**
	baz=250							
ESL	**Shilin**	**1.27**	**228**	*e*P		**Pn**	**09 09 47.1**	**-0.3**
	baz=227							
NSTT	**Nanjuang**	**1.32**	**268**	*e*P		**Pn**	**09 09 47.9**	**-0.2**
	baz=268							
NSTT				*e*S		**Sn**	**09 10 05.4**	**-0.5**
	baz=268							
HATJ	**Hateruma jima**	**1.38**	**116**	*e*S		**Sn**	**09 10 07.4**	**+0.4**
JKRS	**Kuro-shima**	**1.48**	**107**	P		**Pn**	**09 09 50.2**	**+0.2**
JKRS				*e*S		**Sn**	**09 10 09.6**	**+0.3**
EHY	**Hungye**	**1.56**	**222**	*e*P		**Pn**	**09 09 51.1**	**+0.1**
	baz=221							
EHY				*e*S		**Sn**	**09 10 10.1**	**-1.0**
	baz=221							
JIJ	**Ishigaki jima**	**1.57**	**101**	P		**Pn**	**09 09 50.7**	**-0.4**
JIJ				*e*S		**Sn**	**09 10 10.5**	**-0.8**
SMLT	**Sun Moon Lake**	**1.62**	**241**	*e*P		**Pn**	**09 09 52.5**	**+0.7**
	baz=240							
SMLT				*e*S		**Sn**	**09 10 13.2**	**+0.6**
	baz=240							
TYC	**Yuchr**	**1.65**	**243**	⇑P		**Pn**	**09 09 52.4**	**+0.2**
	baz=242							
TYC				S		**Sn**	**09 10 13.0**	**-0.1**
	baz=242							
TWF1	**Yuli**	**1.69**	**219**	*e*P		**Pn**	**09 09 52.7**	**0.0**
	baz=218							
YUS	**Yu-Shan**	**1.81**	**230**	*i* P		**Pn**	**09 09 54.5**	**+0.2**
	baz=229							
YUS				*e*S		**Sn**	**09 10 16.2**	**-0.8**
	baz=229							
ALS	**Alishan**	**1.90**	**233**	P		**Pn**	**09 09 56.1**	**+0.6**
	baz=232							
ALS				*e*S		**Sn**	**09 10 19.4**	**+0.4**
	baz=232							
CHN5	**Tsauling**	**1.95**	**237**	*e*P		**Pn**	**09 09 56.3**	**+0.3**
	baz=236							
CHN5				*e*S		**Sn**	**09 10 20.3**	**+0.2**
	baz=236							
JTJ	**Tarama**	**2.04**	**90**	P		**Pn**	**09 09 57.3**	**0.0**
JTJ				*e*S		**Sn**	**09 10 22.2**	**-0.1**
CHN1	**Nanshi**	**2.31**	**230**	*e*P		**Pn**	**09 10 00.8**	**0.0**
	baz=229							
CHN1				*e*S		**Sn**	**09 10 28.2**	**-0.3**
	baz=229							

*ISCJB **25** 09:11:10.0±0.9,3733N±005×2806E±008,h5km±23km, Error ellipse: s-maj=10.1km s-min=8.0km az=13.3*
*CSEM **25** 09:11:09.0±0.1,3733N×2804E,h2km,MD3.0,Error ellipse: s-maj=3.0km s-min=2.0km az=2.0*
*DDA **25** 09:11:10.2,3735N×2802E,h7km±2km,Md3.0*

ISC 25 09:11:10.1±1.3,3734N±005×2805E±006,h13km±19km,n7, σ0§35/11,Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.22**	**258**	*e*PG		**Pg**	**09 11 14.6**	**-0.3**
MLSB				*e*SG		**Sg**	**09 11 18.1**	**+0.1**
YER	**Yerkesik**	**0.28**	**137**	*e*PG		**Pg**	**09 11 15.8**	**-0.1**
AYDN	**Tasoluk**	**0.35**	**338**	*i* P		**Pg**	**09 11 17.0**	**-0.2**
AYDN				*i* S		**Sg**	**09 11 21.8**	**0.0**
BDRM	**Kayabasi**	**0.55**	**240**	*i* P		**Pg**	**09 11 20.6**	**-0.3**
BDRM				*i* S		**Sg**	**09 11 28.9**	**+0.7**
BODT	**Bodrum**	**0.65**	**245**	*e*PG		**Pg**	**09 11 22.3**	**-0.4**
GCAM	**G?zelcaml?**	**0.74**	**299**	*i* P		**Pg**	**09 11 24.6**	**+0.2**
GCAM				*i* S		**Sg**	**09 11 38.6**	**+4.5**
DNZL	**Cakiroluk**	**0.87**	**66**	*i* P		**Pg**	**09 11 27.3**	**+0.4**

*THE **25** 09:18:34.0,4100N×2100E,h23km,ML3.1*
*ISCJB **25** 09:18:34.6±2.0,4094N±007×210E±0.1,h15km±35km, Error ellipse: s-maj=15.1km s-min=8.7km az=142.9*
*SKO **25** 09:18:34.4,4090N×2096E,h7km,M1.1,ML1.6*
*CSEM **25** 09:18:35.2±0.1,4100N×2101E,h2km,ML3.1,Error ellipse: s-maj=3.6km s-min=1.7km az=22.0*

ISC 25 09:18:34.2±2.6,4095N±007×2096E±008,h20km±18km,n9, σ0§40/18,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.20**	**324**	*e*Pg		**Pg**	**09 18 38.8**	**-0.6**
OHR				*e*Sg		**Sg**	**09 18 43.4**	**+0.4**
OHR	**Ohrid**	**0.20**	**324**	*e*Pg		**Pg**	**09 18 39.2**	**-0.2**
OHR				*e*Sg		**Sg**	**09 18 43.2**	**+0.2**
OHR				*e*Lg			09 18 43.5	
	comp=N,97nm,0.3s							
OHR				*e*Lg			09 18 43.6	
	comp=E,103nm,0.4s							
OHR	**Ohrid**	**0.20**	**324**	*e*Pg		**Pg**	**09 18 39.2**	**-0.3**
OHR				*e*Sg		**Sg**	**09 18 43.1**	**+0.1**
BIA	**Bitola**	**0.29**	**75**	*e*Pg		**Pg**	**09 18 40.0**	**-0.7**
BIA				*e*Sg		**Sg**	**09 18 44.6**	**-0.5**
BIA	**Bitola**	**0.29**	**75**	*e*Pg		**Pg**	**09 18 40.2**	**-0.5**
BIA				*e*Sg		**Sg**	**09 18 44.7**	**-0.4**
BIA				*e*Lg			09 18 44.7	
	comp=N,109nm,0.3s							
BIA				*e*Lg			09 18 44.9	
	comp=E,220nm,0.3s							
BIA	**Bitola**	**0.29**	**75**	*e*Pg		**Pg**	**09 18 40.1**	**-0.6**
BIA				*e*Sg		**Sg**	**09 18 44.6**	**-0.5**
FNA	**Florina**	**0.36**	**117**	*e*Pg		**Pg**	**09 18 42.0**	**+0.1**
FNA				*e*Sg		**Sg**	**09 18 47.5**	**+0.5**
KRUS	**Krusevo**	**0.48**	**27**	*e*Pg		**Pg**	**09 18 44.3**	**+0.3**
KRUS				*e*Sg		**Sg**	**09 18 51.0**	**+0.4**
KRUS				*e*Lg			09 18 51.3	
	comp=E,11nm,0.3s							
KRUS				*e*Lg			09 18 51.5	
	comp=N,15nm,0.2s							
KRUS	**Krusevo**	**0.48**	**27**	*e*Pg		**Pg**	**09 18 44.2**	**+0.2**
KRUS				*e*Sg		**Sg**	**09 18 50.9**	**+0.3**

*ISCJB **25** 09:27:42.9±4.3,4532N±006×7237E±0.10,h19km±44km, Error ellipse: s-maj=12.0km s-min=9.5km az=144.6*
*NNC **25** 09:27:42.1±0.6,4524N×7239E,h0km,mb3.7,mpv3.5, Error ellipse: s-maj=6.9km s-min=5.9km az=70.0*

ISC 25 09:27:44.4±4.0,4524N±006×7240E±009,h12km±29km, n17,σ0§43/18,11C-3D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
USP	**Ospenovka**	**2.48**	**142**	P		**Pn**	**09 28 24.2**	**-0.3**
	SNR=103							
KK31	**Karatay Array**	**2.53**	**213**	⇑Pn		**Pn**	**09 28 24.9**	**-0.4**
	4.5nm,0.2s,baz=34,slow=15,SNR=8.7							
KK31				⇑Lg			09 29 00.6	
	97nm,0.3s,baz=31,slow=28,SNR=28							
EKS2	**Erkin-Say**	**2.77**	**158**	P		**Pn**	**09 28 28.3**	**-0.1**
	SNR=42							
CHMS	**Chumysh**	**2.81**	**142**	P		**Pn**	**09 28 28.6**	**-0.4**
	SNR=13							
AAK	**Ala-Archa**	**3.02**	**149**	P		**Pn**	**09 28 31.6**	**-0.2**
	SNR=17							
KBK	**Karagaybulak**	**3.17**	**144**	P		**Pn**	**09 28 33.8**	**-0.3**
	SNR=12							
AML	**Almayashu**	**3.25**	**163**	P		**Pn**	**09 28 35.6**	**+0.5**
	SNR=6.1							
TKM2	**Tokmak 2**	**3.27**	**134**	⇓Pn		**Pn**	**09 28 35.0**	**-0.3**
	16nm,0.5s							
TKM2				⇓Lg			09 29 23.7	
	95nm,0.7s							
TKM2	**Tokmak 2**	**3.27**	**134**	P		**Pn**	**09 28 35.2**	**-0.1**
	SNR=38							
UCH	**Uchtor**	**3.38**	**152**	P		**Pn**	**09 28 37.2**	**+0.3**
	SNR=55							
ULHL	**Ulahol**	**4.09**	**136**	P		**Pn**	**09 28 47.5**	**+0.9**
	SNR=8.9							
KURBB	**Kurchatov Arra**	**6.78**	**35**	⇑Lg			09 31 15.9	
	8.1nm,0.6s							
KURK	**Kurchatov**	**6.88**	**35**	⇑Lg			09 31 18.6	
	47nm,0.6s							
MK31	**Makanchi Array**	**7.06**	**74**	⇑Pn		**Pn**	**09 29 27.5**	**+0.1**
	2.8nm,0.5s,baz=250,slow=14,SNR=102							
MK31				⇑Lg			09 31 26.5	
	8.7nm,0.5s,baz=261,slow=25,SNR=5.7							
BVA0	**Borovoye Array**	**7.90**	**351**	⇑Pn		**Pn**	**09 29 39.6**	**+0.7**
	0.4nm,0.6s,baz=149,slow=12,SNR=7.2							
BVA0				⇑Sn		**Sn**	**09 31 07.6**	**-0.6**
	0.6nm,0.5s,baz=169,slow=25,SNR=4.5							
BVA0				⇑Lg			09 31 51.7	
	2.1nm,0.7s,baz=161,slow=36,SNR=4.9							
AB31	**Akbulak array**	**9.37**	**300**	Pn		**Pn**	**09 29 58.5**	**-0.6**
	1.3nm,0.5s,baz=104,slow=15,SNR=28							
AB31				⇑Sn		**Sn**	**09 31 44.6**	**+0.2**
	0.8nm,0.3s,baz=107,slow=23,SNR=5.4							
AKTO	**Aktyubinsk**	**10.97**	**303**	⇑Pn		**Pn**	**09 30 21.0**	**0.0**
	0.9nm,1.2s							
AKTO				⇓Sn		**Sn**	**09 32 23.9**	**+0.4**
	0.4nm,0.5s							

CASC 25 09:32:49.3±1.9,1233N×8692W,h175km±8km,MD4.0, ML2.3,14C-3D,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LEON	**Leon**	**0.09**	**14**	⇑*i*P		Pn	09 33 12.4	0.0
LEON				*e*S		Sn	09 33 32.4	+2.1
MIRN	**Miramar**	**0.23**	**60**	*e*P		Pn	09 33 12.8	+0.2
TEL3	**Telica 3**	**0.25**	**16**	*e*P		Pn	09 33 12.8	+0.2
CNGN	**Cerro Negro**	**0.27**	**51**	*e*P		Pn	09 33 12.6	-0.2
COPN	**Copaltepe**	**0.35**	**115**	⇓*e*P		Pn	09 33 13.0	+0.1
COPN				*e*S		Sn	09 33 31.8	+0.9
MOMN	**Momotombo**	**0.38**	**77**	*e*P		Pn	09 33 13.2	+0.3
CSAN		**0.50**	**106**	⇓*e*P		Pn	09 33 13.9	+0.4
APYN	**Apoyeque**	**0.56**	**99**	*e*P		Pn	09 33 13.7	0.0
XAVN	**Gruta Xavier**	**0.60**	**107**	*e*P		Pn	09 33 14.1	+0.1
TISN	**Laguna Tiscapa**	**0.66**	**106**	*e*P		Pn	09 33 14.1	-0.1
MGAN	**Managua**	**0.68**	**105**	*e*P		Pn	09 33 14.2	-0.2
MGAN				⇑*e*P			09 33 14.4	
HUEN		**0.73**	**89**	⇑*e*P		Pn	09 33 14.6	0.0
TICN	**Ticuantepe**	**0.73**	**113**	⇑*e*P		Pn	09 33 15.1	+0.4
WILN	**Americas 2**	**0.73**	**103**	⇑*e*P		Pn	09 33 14.7	0.0
APON	**Apoyo**	**0.92**	**116**	⇑*e*P		Pn	09 33 16.5	+0.6
CNCH	**Conchagua**	**1.30**	**317**	*e*P		x	09 33 19.3	
CNCH				*e*S		x	09 33 43.5	
CONN	**Concepcion**	**1.47**	**121**	⇑*e*P		Pn	09 33 21.4	+0.9
BLLM	**Bellamira**	**1.70**	**311**	⇑*e*P		x	09 33 23.9	
BLLM				*e*S		x	09 33 50.0	
VSM	**San Miguel**	**1.72**	**310**	⇓*e*P		x	09 33 24.5	
TGUH	**Tegucigalpa,Un**	**1.76**	**349**	⇑*e*P		Pn	09 33 23.6	+0.2
SNVI	**San Vicente**	**2.27**	**304**	*e*P		x	09 33 30.1	
SNVI				*e*S		x	09 34 01.4	
CUI		**2.37**	**134**	*i* P		Pn	09 33 32.3	+2.1
LFRS	**El Faro**	**2.46**	**302**	⇑*e*P		x	09 33

PLP					*e*S		**Sn**	**09 46 17.6**	**+4.0**
TBP	**Tagbilaran**	**3.01**	**279**	⇓	*e*P		**Pn**	**09 45 46.9**	**+0.8**
TBP					*e*S		**Sn**	**09 46 16.7**	**-4.9**
DCPH	**Dipolog City**	**3.54**	**260**	⇓	*e*P		**Pn**	**09 45 54.6**	**+1.2**
DCPH					*e*S		**Sn**	**09 46 33.5**	**-1.3**
RCP	**Roxas**	**4.68**	**300**	⇑	*e*P		**Pn**	**09 46 10.6**	**+1.7**
GUMO	**Guam**	**18.15**	**75**		LR	LR		09 54 48.6	
	comp=Z,43nm,20.4s,baz=276,slow=32								
WRA	**Warramunga Arr**	**29.90**	**166**		P		**P**	**09 51 06.5**	**+0.4**
	0.4nm,0.6s,mb3.3,baz=348,slow=9.3,SNR=3.2								
ASAR	**Alice Springs**	**33.41**	**164**		P		**P**	**09 51 37.6**	**+0.8**
	0.2nm,0.4s,mb3.4,baz=350,slow=6.6,SNR=6.2								
MKAR	**Makanchi Array**	**53.22**	**323**		P		**P**	**09 54 15.8**	**-0.6**
	1.5nm,0.8s,mb4.0,baz=123,slow=8.8,SNR=7.6								
MKAR					LR	LR		10 18 23.8	
	comp=Z,42nm,18.2s,baz=170,slow=38								
KURK	**Kurchatov**	**57.26**	**326**		P		**P**	**09 54 44.4**	**-1.1**
	1.7nm,0.9s,mb4.1,baz=124,slow=6.7,SNR=7.2								
ARCES	**ARCESS Array B**	**85.37**	**340**		P		**P**	**09 57 33.5**	**-1.5**
	2.4nm,0.9s,mb4.3,baz=68,slow=5.9,SNR=2.7								

*ISCJB **25** 10:11:17.0±1.0, 69S±0.1×1253E±0.2, h538km±17km, mb3.7/5, Error ellipse: s-maj=37.0km s-min=14.0km az=157.5*
*NEIC **25** 10:11:17.2±1.9, 688S×12528E, h522km±26km, mb4.1/2, Error ellipse: s-maj=31.3km s-min=17.4km az=57.0*
*IDC **25** 10:11:18.0±1.1, 693S×12520E, h533km±15km, mb3.2/5, mb1 3.4/9, mb1mx3.2/19, mbtmp3.3/9, Error ellipse: s-maj=32.5km s-min=13.9km az=59.0*
ISC 25 10:11:18.2±1.0, 70S±0.1×1253E±0.2, h536km±17km, n13, σ0§66/14, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.57**	**206**	P		**P**	**10 12 36.6**	**+0.8**
	40nm,0.3s,baz=43,slow=1.7,SNR=20							
BATI				S		**S**	**10 13 38.8**	**-0.3**
	20nm,0.3s,baz=124,slow=22,SNR=5.5							
FITZ	**Fitzroy Crossi**	**11.06**	**178**	*e*P		**P**	**10 13 47.5**	**+0.6**
	2.2nm,0.2s							
FITZ	**Fitzroy Crossi**	**11.06**	**178**	P		**P**	**10 13 47.6**	**+0.7**
	0.5nm,0.3s,baz=24,slow=12,SNR=25							
FITZ				S		**S**	**10 15 48.6**	**-0.7**
	0.3nm,0.3s,baz=26,slow=20,SNR=5.4							
WRA	**Warramunga Arr**	**15.62**	**146**	P		**P**	**10 14 33.4**	**-0.9**
	2.2nm,0.3s,baz=332,slow=7.9,SNR=153							
WB2	**Warramunga Arr**	**15.62**	**146**	*e*P		**P**	**10 14 33.4**	**-0.9**
ASAR	**Alice Springs**	**18.56**	**154**	P		**P**	**10 15 02.8**	**+0.9**
	2.8nm,0.3s,baz=347,slow=15,SNR=185							
ASAR					ScP	ScP	10 21 47.8	-0.9
	0.1nm,0.3s,baz=357,slow=2.1,SNR=6.7							
CTA	**Charters Tower**	**24.19**	**125**	P		**P**	**10 15 52.8**	**+0.2**
	2.6nm,0.7s,mb4.0,baz=322,slow=12,SNR=3.3							
STKA	**Stephens Creek**	**29.09**	**150**	*e*P		**P**	**10 16 36.5**	**+1.0**
	4.5nm,0.8s,mb4.2							
STKA	**Stephens Creek**	**29.09**	**150**	P		**P**	**10 16 36.5**	**+1.0**
	3.4nm,0.5s,mb4.3,baz=332,slow=8.3,SNR=8.8							
SONM	**Songino Array**	**57.06**	**345**	P		**P**	**10 20 12.9**	**-0.2**
	0.3nm,0.4s,mb2.9,baz=160,slow=11,SNR=3.7							
MKAR	**Makanchi Array**	**65.70**	**329**	P		**P**	**10 21 09.2**	**-0.5**
	0.5nm,0.4s,mb3.4,baz=121,slow=6.4,SNR=11							
PETK	**Petropavlovsk-**	**65.88**	**21**	P		**P**	**10 21 10.6**	**0.0**
	3.2nm,1.0s,mb3.8,baz=156,slow=3.9,SNR=5.1							
TORD	**Torodi Ar. Bea**	**124.17**	**281**	PKP		PKPdf	10 29 17.0	0.0
	0.1nm,0.5s,baz=56,slow=3.6,SNR=3.1							

*ISCJB **25** 10:15:57.5±2.3, 234S±0.1×1773W±0.1, h79km±24km, mb4.0/9, Error ellipse: s-maj=23.0km s-min=13.6km az=144.2*
*NEIC **25** 10:16:00.1±1.5, 2345S×17721W, h94km±15km, mb4.1/2, Error ellipse: s-maj=17.6km s-min=10.2km az=148.0*
*IDC **25** 10:16:02.7±3.1, 2362S×17720W, h116km±27km, mb3.7/8, mb1 3.9/10, mb1mx3.8/19, mbtmp3.8/10, Error ellipse: s-maj=29.1km s-min=16.6km az=164.0*
ISC 25 10:15:59.2±1.8, 235S±01×1773W±01, h80km±19km, n22, σ0§83/17, mb4.0/9, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**10.83**	**30**	P		**Pn**	**10 18 31.1**	**-0.2**
	2.4nm,0.3s,baz=320,slow=24,SNR=4.9							
AFI				S		**Sn**	**10 20 22.0**	**-8.8**
	2.0nm,0.3s,baz=26,slow=23,SNR=4.6							
URZ	**Urewera**	**15.52**	**197**	P		**Pn**	**10 19 33.7**	**+0.5**
	0.8nm,0.3s,baz=336,slow=20,SNR=6.0							
URZ				S		S	10 22 07.7	-28
	0.5nm,0.3s,baz=166,slow=17,SNR=5.6							
RAR	**Rarotonga**	**16.34**	**86**	P		**Pn**	**10 19 43.6**	**-0.2**
	0.7nm,0.3s,baz=326,slow=17,SNR=2.6							
RAR				S		**S**	**10 22 33.0**	**-19**
	0.8nm,0.3s,baz=236,slow=20,SNR=3.1							
CTA	**Charters Tower**	**33.98**	**269**	P		**P**	**10 22 37.0**	**+1.7**
	5.2nm,0.4s,mb4.7,baz=93,slow=10,SNR=14							
CTAO	**Charters Tower**	**33.98**	**269**	*e*P		**P**	**10 22 37.1**	**+1.7**
STKA	**Stephens Creek**	**37.20**	**248**	*e*P		**P**	**10 23 03.9**	**+1.1**
	3.5nm,1.5s,mb4.1							
STKA	**Stephens Creek**	**37.20**	**248**	P		**P**	**10 23 03.8**	**+1.0**
	0.9nm,0.5s,mb4.0,baz=93,slow=10,SNR=5.6							
ASAR	**Alice Springs**	**44.58**	**260**	P		**P**	**10 24 03.1**	**-0.4**
	2.1nm,1.0s,mb3.8,baz=93,slow=7.7,SNR=19							
ASAR					PcP	PcP	10 25 44.0	-1.3
	0.7nm,0.7s,baz=111,slow=3.5,SNR=5.1							
WB2	**Warramunga Arr**	**44.92**	**265**	*e*P		**P**	**10 24 05.5**	**-0.8**
WRAB	**Tennant Creek**	**44.93**	**265**	*e*P		**P**	**10 24 05.4**	**-0.9**
	2.6nm,0.7s,mb4.1							
WRA	**Warramunga Arr**	**44.94**	**265**	P		**P**	**10 24 05.5**	**-0.9**
	1.6nm,0.4s,mb4.1,baz=95,slow=8.2,SNR=59							
WRA					ScP	ScP	10 29 27.7	-4.3
	0.5nm,0.6s,baz=98,slow=3.7,SNR=7.6							
FITZ	**Fitzroy Crossi**	**53.36**	**264**	P		**P**	**10 25 11.1**	**+0.3**
	1.3nm,0.7s,mb4.1,baz=124,slow=22,SNR=3.3							
MAW	**Mawson**	**79.02**	**200**	P		**P**	**10 27 52.9**	**-1.1**
	1.1nm,0.5s,mb4.0,baz=123,slow=3.9,SNR=13							
NVAR	**Mina Array Bea**	**82.72**	**43**	P		**P**	**10 28 15.0**	**+0.9**
	0.2nm,0.5s,mb3.2,baz=204,slow=5.8,SNR=3.1							
TXAR	**Lajitas Array**	**88.09**	**57**	P		**P**	**10 28 41.3**	**+0.3**
	0.5nm,0.8s,mb3.6,baz=211,slow=9.4,SNR=6.1							
MKAR	**Makanchi Array**	**113.70**	**312**	PKiKP		PKiKP	10 34 26.1	-2.1
	0.4nm,0.6s,baz=67,slow=1.3,SNR=2.8							
ARCES	**ARCESS Array B**	**131.94**	**349**	PKP		PKPdf	10 35 01.6	-0.9
	2.7nm,1.0s,baz=0.0,slow=3.6,SNR=5.3							
AKASG	**Malin Array Be**	**145.91**	**330**	PKPbc		PKPbc	10 35 27.6	-1.7
	2.3nm,0.4s,baz=39,slow=4.1,SNR=11							
KIEV	**Kiev**	**145.92**	**330**	*e*P		PKPdf	10 35 27.4	-1.1
CLL	**Collm**	**151.09**	**347**	*e*PKPbc		PKPbc	10 35 42.0	-0.7
	comp=Z,6.0nm,0.6s							
CLL				*e*PKPab		PKPab	10 35 48.0	-2.6
BRG	**Berggiesshubel**	**151.28**	**345**	*e*P		PKPab	10 35 42.3	-9.1
	comp=Z,5.0nm,0.5s							
BRG				*e*			10 35 48.3	
	comp=Z,6.5nm,0.9s							
TORD	**Torodi Ar. Bea**	**169.70**	**174**	PKPab		PKPab	10 37 10.1	-2.0
	comp=Z,0.5nm,0.9s,baz=196,slow=3.2,SNR=2.8							

MEX 25 10:18:32.7±0.5, 1388N×9288W, h16km±68km, MD4.3, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
THIG		**1.19**	**30**	*i* P		Pn	10 18 50.6	-4.0
THIG				*i* S		Sb	10 19 04.5	-5.4
CCIG	**Comitan**	**2.50**	**17**	*e*P		Pn	10 19 10.2	-2.5
CCIG				*i* S		Sn	10 19 39.0	-3.8
SCX	**San Cristobal**	**2.85**	**5**	*i* P		Pn	10 19 17.2	-0.4
TGIG		**2.90**	**355**	*i* P		Pn	10 19 15.2	-3.0
TGIG				*i* S		Sn	10 19 48.8	-3.9
VHO	**Vista Hermosa**	**4.89**	**311**	*i* P		Pn	10 19 43.2	-2.4
VHO				*i* S		Sn	10 20 38.0	-3.9

*TRN **25** 10:24:11.7, 1874N×6441W, h29km, MD3.6, MD3.6(RSPR)*
*ISCJB **25** 10:24:12.1±1.1, 189N±0.1×6441W±0.04, h29km±7km, Error ellipse: s-maj=17.6km s-min=6.2km az=3.2*
*RSPR **25** 10:24:12.9, 1881N×6429W, h32km±1km, MD3.6/17, MD3.6/17*
*NEIC **25** 10:24:12.9, 1881N×6429W, h32km, MD3.6(RSPR), After RSPR.*
ISC 25 10:24:12.8±1.0, 188N±01×6440W±004, h26km±7km, n26, σ0§54/47, 20C-3D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.10**	**140**	⇑ *i*P		**Pb**	**10 24 17.9**	**+0.4**
TBVI	**Tortola**	**0.44**	**208**	⇑ *i*P		**Pb**	**10 24 22.2**	**+0.2**
MTP	**Monte Pirata**	**1.30**	**237**	⇑ *e*P		**Pn**	**10 24 34.5**	**-0.7**
MTP				*e*S		**Sn**	**10 24 51.2**	**-0.6**
STMA	**St. Maarten, A**	**1.45**	**122**	⇑ *e*P		**Pn**	**10 24 37.1**	**-0.2**
STMA				*e*S		**Sn**	**10 24 56.0**	**+0.7**
CBYP	**Canovanas**	**1.48**	**249**	⇑ *e*P		**Pn**	**10 24 37.0**	**-0.7**
CBYP	**Canovanas**	**1.48**	**249**	⇑ *e*P		**Pn**	**10 24 37.2**	**-0.5**
CBYP				*e*S		**Sn**	**10 24 56.5**	**+0.3**
CBYP	**Canovanas**	**1.48**	**249**	⇑ *e*P		**Pn**	**10 24 37.0**	**-0.7**
CBYP				*e*S		**Sn**	**10 24 56.5**	**+0.3**
HUMP	**Col San Antoni**	**1.53**	**244**	⇑ *e*P		**Pn**	**10 24 37.6**	**-0.8**
HUMP				*e*S		**Sn**	**10 24 56.6**	**-0.8**
CPD	**Cerro la Pandu**	**1.63**	**242**	⇓ *i*P		**Pn**	**10 24 39.5**	**-0.3**
CPD				*e*S		**Sn**	**10 25 00.5**	**+0.5**
SJG	**San Juan**	**1.80**	**248**	*e*S		**Sn**	**10 25 04.6**	**+0.4**
SJG	**San Juan**	**1.80**	**248**	⇑ *e*P		**Pn**	**10 24 41.2**	**-0.9**
SJG				*e*S		**Sn**	**10 25 03.9**	**-0.2**
SJG	**San Juan**	**1.80**	**248**	⇓ *e*P		**Pn**	**10 24 41.2**	**-0.9**
SJG				*e*S		**Sn**	**10 25 03.9**	**-0.2**
SJG	**San Juan**	**1.80**	**248**	⇓ *e*P		**Pn**	**10 24 41.2**	**-0.9**
SJG				*e*S		**Sn**	**10 25 04.6**	**+0.4**
CELP	**Cerrillos**	**2.19**	**251**	⇑ *e*P		**Pn**	**10 24 47.2**	**-0.3**
CELP				*e*S		**Sn**	**10 25 13.2**	**-0.7**
ICM	**Isla Caja Muer**	**2.21**	**246**	⇑ *e*P		**Pn**	**10 24 48.0**	**+0.2**
ICM				*e*S		**Sn**	**10 25 13.8**	**-0.5**
ICM	**Isla Caja Muer**	**2.21**	**246**	⇑ *e*P		**Pn**	**10 24 48.0**	**+0.2**
ICM				*e*S		**Sn**	**10 25 13.8**	**-0.5**
OBIP	**Obispado Ponce**	**2.23**	**250**	⇑ *e*P		**Pn**	**10 24 48.1**	**+0.1**
OBIP	**Obispado Ponce**	**2.23**	**250**	⇑ *e*P		**Pn**	**10 24 48.9**	**+0.9**
OBIP				*e*S		**Sn**	**10 25 14.9**	**+0.2**
OBIP	**Obispado Ponce**	**2.23**	**250**	⇑ *e*P		**Pn**	**10 24 48.1**	**+0.1**
OBIP				*e*S		**Sn**	**10 25 14.9**	**+0.2**
AOPR	**Arecibo Observ**	**2.28**	**259**	⇑ *e*P		**Pn**	**10 24 48.1**	**-0.6**
AOPR				*e*S		**Sn**	**10 25 16.3**	**+0.4**
LRS	**Lares**	**2.37**	**258**	⇑ *e*P		**Pn**	**10 24 50.1**	**+0.1**
LRS				*e*S		**Sn**	**10 25 19.0**	**+0.7**
LRS	**Lares**	**2.37**	**258**	⇑ *e*P		**Pn**	**10 24 50.1**	**+0.1**
LRS				*e*S		**Sn**	**10 25 19.2**	**+0.9**
GBPR	**Guanica, Bosqu**	**2.49**	**251**	⇑ *e*P		**Pn**	**10 24 52.2**	**+0.5**
GBPR				*e*S		**Sn**	**10 25 21.8**	**+0.5**
AGPR	**Aguadilla, PR**	**2.59**	**263**	⇑ *e*P		**Pn**	**10 24 52.2**	**-0.9**
AGPR				*e*S		**Sn**	**10 25 24.4**	**+0.7**
LSP	**Las Mesas**	**2.62**	**257**	⇑ *e*P		**Pn**	**10 24 54.0**	**+0.5**
LSP				*e*S		**Sn**	**10 25 25.2**	**+0.7**
CRPR	**Cabo Rojo, PR**	**2.69**	**253**	⇑ *e*P		**Pn**	**10 24 54.8**	**+0.3**
CRPR				*e*S		**Sn**	**10 25 26.6**	**+0.4**

*ISCJB **25** 10:31:08.9±0.8, 2765S±0.05×674W±0.1, h136km±14km, mb3.5/2, Error ellipse: s-maj=18.5km s-min=8.7km az=177.2*
*NEIC **25** 10:31:09.9±0.8, 2763S×6737W, h135km±9km, mb4.1/2, Error ellipse: s-maj=14.1km s-min=10.9km az=102.0*
*IDC **25** 10:31:09.6±1.2, 2765S×6739W, h128km±13km, mb3.5/2, mb1 3.4/6, mb1mx3.2/19, mbtmp3.2/6, Error ellipse: s-maj=27.7km s-min=10.6km az=88.0*
ISC 25 10:31:09.9±0.8, 2765S±005×674W±01, h132km±13km, n12, σ0§69/11, mb3.5/2, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**3.25**	**245**	*e*P		**Pn**	**10 31 59.5**	**-0.4**
CFAA	**Coronel Fontan**	**4.02**	**191**	P		**Pn**	**10 32 10.9**	**+1.0**
	0.7nm,0.3s,baz=6.8,slow=10.0,SNR=77							
CFAA				S		**Sn**	**10 32 56.0**	**-0.5**
	6.8nm,0.3s,baz=41,slow=12,SNR=8.2							
LVC	**Limon Verde**	**5.21**	**344**	P		**Pn**	**10 32 27.2**	**+1.3**
	4.5nm,0.3s,baz=161,slow=6.9,SNR=37							
LVC				S		**Sn**	**10 33 24.8**	**-0.3**
	1.3nm,0.3s,baz=299,slow=19,SNR=13							
CPUP	**Villa Florida**	**9.03**	**84**	P		**Pn**	**10 33 16.8**	**-0.5**
	0.4nm,0.3s,baz=192,slow=1.6,SNR=3.4							
CPUP	**Villa Florida**	**9.03**	**84**	*e*P		**Pn**	**10 33 17.2**	**-0.1**
	17nm,0.8s							
LPAZ	**La Paz**	**11.33**	**356**	P		**Pn**	**10 33 47.0**	**-0.9**
	0.1nm,0.3s,baz=152,slow=10,SNR=5.4							
LPAZ	**La Paz**	**11.33**	**356**	*e*P		**Pn**	**10 33 46.9**	**-1.1**
	0.7nm,0.6s							
TORD	**Torodi Ar. Bea**	**78.18**	**68**	P		**P**	**10 42 55.4**	**+0.2**
	1.4nm,0.6s,mb3.7,baz=262,slow=5.2,SNR=15							
PDAR	**Pinedale Array**	**80.12**	**330**	P		**P**	**10 43 05.0**	**0.0**
	0.4nm,0.6s,mb3.3,baz=128,slow=8.8,SNR=4.1							
WRA	**Warramunga Arr**	**128.24**	**206**	PKP		PKPdf	10 50 00.4	-0.9
	0.4nm,0.8s,baz=167,slow=2.1,SNR=5.2							
ZALV	**Zelesovo Beam**	**146.72**	**30**	PKPbc		PKPbc	10 50 36.1	+0.3
	3.2nm,0.4s,baz=290,slow=3.4,SNR=6.9							
MKAR	**Makanchi Array**	**149.46**	**43**	PKPbc		PKPbc	10 50 43.4	0.0
	1.0nm,0.5s,baz=270,slow=3.4,SNR=8.7							

*IDC **25** 10:37:01.7±2.7, 349S×15170E, h386km±28km, mb3.4/3, mb1 3.4/4, mb1mx3.0/16, mbtmp3.3/4, Error ellipse: s-maj=57.8km s-min=17.7km az=122.0*
*NEIC **25** 10:37:01.4±1.8, 351S×15197E, h400km, mb4.2/1, Error ellipse: s-maj=47.2km s-min=24.6km az=94.0*
ISC 25 10:37:00.9±3.2, 34S±04×1523E±06, h428km±63km, n10, σ0§38/11, mb3.8/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**17.57**	**199**	P		**P**	**10 40 40.3**	**+0.4**
	0.2nm,0.3s,baz=33,slow=10,SNR=3.5							
CTAO	**Charters Tower**	**17.57**	**199**	*e*P		**P**	**10 40 39.8**	**-0.1**
WRAB	**Tennant Creek**	**24.00**	**226**	*e*P		**P**	**10 41 39.2**	**-0.7**
	4.5nm,0.5s,mb4.2							
WB2	**Warramunga Arr**	**24.01**	**226**	*e*P		**P**	**10 41 40.1**	**+0.2**
WRA	**Warramunga Arr**	**24.02**	**226**	P		**P**	**10 41 39.9**	**-0.1**
	3.8nm,0.4s,mb4.2,baz=47,slow=9.1,SNR=94							
WRA					PcP	PcP	10 45 12.5	+4.3
	0.6nm,0.3s,baz=50,slow=2.3,SNR=11							
WRA				S		**S**	**10 45 26.3**	**+0.6**
	0.5nm,0.9s,baz=41,slow=16,SNR=3.0							
ASAR	**Alice Springs**	**26.85**	**220**	P		**P**	**10 42 05.0**	**-0.1**
	1.0nm,0.4s,mb3.6,baz=50,slow=8.4,SNR=40							
ASAR					PcP	PcP	10 45 18.9	+4.2
	0.6nm,0.9s,baz=32,slow=2.4,SNR=3.9							
ASAR				S		**S**	**10 46 09.7**	**-0.5**
	0.8nm,1.0s,baz=42,slow=16,SNR=4.6							
FITZ	**Fitzroy Crossi**	**29.92**	**239**	*e*P		**P**	**10 42 32.6**	**+0.4**
	2.3nm,0.4s,mb3.9							
STKA	**Stephens Creek**	**30.03**	**198**	P		**P**	**10 42 33.2**	**+0.2**
	1.1nm,0.5s,mb3.4,baz=20,slow=12,SNR=4.1							
STKA	**Stephens Creek**	**30.03**	**198**	P		**P**	**10 42 33.2**	**+0.2**
TORD	**Torodi Ar. Bea**	**149.41**	**290**	PKPbc		PKPbc	10 56 04.9	+3.3
	1.0nm,0.3s,baz=80,slow=2.2,SNR=34							

*ISCJB **25** 10:47:53.7±0.6, 3067N±004×4992E±007, h10km, Error ellipse: s-maj=8.6km s-min=6.0km az=173.3*
*CSEM **25** 10:47:54.7±0.1, 3069N×4996E, h18km, ML3.0, Error ellipse: s-maj=3.0km s-min=2.2km az=137.0*
*THR **25** 10:47:55.7±0.7, 3066N×4986E, h40km±8km, ML3.0*
*SGS **25** 10:47:56.8, 3066N×4982E, h17km*
ISC 25 10:47:55.1±0.6, 3068N±004×4989E±007, h10km, n17, σ0§73/18, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.70**	**327**	*e*Pn		**Pn**	**10 48 24.3**	**-0.5**
SHGR				*e*Sg		**Sg**	**10 48 48.9**	**-0.9**
UMR	**Umm Al-Rimmam**	**2.19**	**240**	*e*P		**Pn**	**10 48 32.6**	**+1.1**
	baz=241							
UMR					AML	AML	10 49 07.2	
	comp=Z,78nm,0.4s,baz=241							
MIB	**Mutribah**	**2.37**	**249**	*e*P		**Pn**	**10 48 34.1**	**+0.1**
	baz=250							
MIB					AML	AML	10 49 13.4	
	comp=Z,36nm,0.5s,baz=250							
KBD	**Kabd**	**2.42**	**232**	*e*P		**Pn**	**10 48 35.1**	**+0.4**
	baz=234							
KBD					AML	AML	10 49 12.3	
	comp=Z,21nm,0.3s,baz=234							
RDF	**Al-Radifah**	**2.68**	**230**	*e*P		**Pn**	**10 48 39.1**	**+0.8**
	baz=232							
RDF					AML	AML	10 49 18.9	
	comp=Z,34nm,0.3s,baz=232							
NAY	**Al-Naaiem**	**2.70**	**239**	*e*P		**Pn**	**10 48 39.4**	**+0.8**
	baz=240							
NAY					AML	AML	10 49 19.1	
	comp=Z,12nm,0.3s,baz=240							
RST	**Umm Al-Ruwaisa**	**2.77**	**246**	*e*P		**Pn**	**10 48 39.9**	**+0.4**
	baz=246							
RST					AML	AML	10 49 20.6	
	comp=Z,32nm,0.6s,baz=246							
NASN	**Na'in**	**3.26**	**49**	*e*Pn		**Pn**	**10 48 46.6**	**+0.3**
GHIR	**Ghir-Karzin**	**3.60**	**131**	*e*Pn		**Pn**	**10 48 51.1**	**+0.1**
GHIR					AML	AML	10 50 11.0	
	comp=N,20nm,0.5s							
ASAO	**Ashtian**	**3.86**	**2**	*e*Pn		**Pn**	**10 48 55.3**	**+0.8**
ASAO					AML	AML	10 50 03.2	
	comp=N,19nm,0.6s							
SNGE	**Sanandaj**	**4.89**	**335**	*e*Pn		**Pn**	**10 49 08.9**	**+0.2**
SNGE					AML	AML	10 50 10.7	
	comp=N,13nm,0.6s							
SNGE	**Sanandaj**	**4.89**	**335**	*e*Pn		**Pn**	**10 49 08.9**	**+0.2**
	SNR=54							
ASYS		**5.79**	**238**	P		**Pn**	**10 49 19.6**	**-1.5**
BTHS		**6.66**	**172**	P		**Pn**	**10 49 32.4**	**-0.7**
BTHS		**6.66**	**172**	P		**Pn**	**10 49 32.3**	**-0.7**
HRDDS		**7.73**	**183**	P		**Pn**	**10 49 47.0**	**-0.7**
LYLS		**8.93**	**196**	P		**Pn**	**10 50 03.3**	**-0.8**

*NIED **25** 11:08:00, 2760N×12720E, h155km, Mw4.4 Best double couple: M0 5.08000×10^15 NP1:ϕs347.00000°, δ62.00000°, λ-40.00000°. NP2:ϕs98.00000°, δ56.00000°, λ-146.00000°.*
*BJI **25** 11:08:46.8, 2707N×12779E, h151km, mB4.6, mb4.7*
*ISCJB **25** 11:08:52.9±0.2, 2754N±004×12721E±004, h146km±3km, mb4.0/24, Error ellipse: s-maj=7.9km s-min=3.4km az=139.4*
*IDC **25** 11:08:53.5±0.7, 2769N×12731E, h138km±7km, mb3.8/19, mb1 3.9/20, mb1mx3.9/24, mbtmp3.7/20, MS2.8/4, Ms1 2.9/4, ms1mx2.4/38, Error ellipse: s-maj=15.8km s-min=10.6km az=78.0*
*MOS **25** 11:08:53.3±1.0, 2769N×12729E, h154km, mb4.3/5, Error ellipse: s-maj=14.9km s-min=12.0km az=106.9*
*JMA **25** 11:08:54.1±0.3, 2762N×12720E, h140km±5km, M4.5*
*NEIC **25** 11:08:54.8±0.3, 2766N×12725E, mb4.4/8, Error ellipse: s-maj=9.0km s-min=7.8km az=145.0*
ISC 25 11:08:53.8±0.2, 2757N±004×12720E±004, h141km±3km, h154km±3.5km: pP-P, n77, σ1§13/94, mb4.0/24, 1D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.86**	**128**	P		**Pn**	**11 09 17.3**	**+0.7**
JIH				S		**Sn**	**11 09 35.2**	**+1.4**
JAGN	**Aguni-jima**	**0.98**	**178**	P		**Pn**	**11 09 18.4**	**+0.9**
JAGN				S		**Sn**	**11 09 36.2**	**+0.7**
JOW	**Kunigami**	**1.21**	**127**	P		**Pn**	**11 09 20.2**	**+0.6**
	3µm,0.3s,baz=110,slow=21,SNR=6464							
JOW				S		**Sn**	**11 09 38.5**	**-0.7**
	440nm,0.3s,baz=123,slow=30,SNR=9.4							
JOW	**Kunigami**	**1.21**	**127**	P		**Pn**	**11 09 20.2**	**+0.6**
JOW				eS		**Sn**	**11 09 39.8**	**+0.6**
JKE	**Kume jima 2**	**1.29**	**197**	P		**Pn**	**11 09 21.4**	**+0.9**
JKE				S		**Sn**	**11 09 40.9**	**+0.1**
NAH1	**Naha**	**1.43**	**162**	P		**Pn**	**11 09 23.0**	**+1.1**
NAH1				S		**Sn**	**11 09 43.3**	**-0.1**
JJT2	**Tamagusuku 2**	**1.51**	**161**	P		**Pn**	**11 09 24.2**	**+1.4**
JJT2				S		**Sn**	**11 09 45.5**	**+0.7**
JTK	**Tokunoshima**	**1.57**	**82**	P		**Pn**	**11 09 23.5**	**+0.1**
JTK				S		**Sn**	**11 09 44.8**	**-1.2**
JAM	**Amami Oshima**	**2.29**	**68**	P		**Pn**	**11 09 31.7**	**-0.1**
JAM				S		**Sn**	**11 09 59.4**	**-1.6**
JZK	**Kikaishima**	**2.56**	**72**	P		**Pn**	**11 09 36.0**	**+0.8**
JZK				S		**Sn**	**11 10 07.1**	**0.0**
JOGS	**Gusukube**	**3.23**	**210**	P		**Pn**	**11 09 44.1**	**+0.3**
JOGS				S		**Sn**	**11 10 22.2**	**-0.2**
JMJ	**Miyako jima 2**	**3.23**	**212**	P		**Pn**	**11 09 43.9**	**0.0**
JMJ				S		**Sn**	**11 10 22.2**	**-0.3**
JNN	**Nakanoshima**	**3.26**	**45**	P		**Pn**	**11 09 44.6**	**+0.4**
JNN				eS		**Sn**	**11 10 23.2**	**0.0**
JTJ	**Tarama**	**3.68**	**218**	P		**Pn**	**11 09 49.1**	**-0

CMAR	**Chiang Mai Arr**	**27.49**	**257**	P	**P**	**11 14 28.6**	**+1.5**
CMAR				11 17 43.2			
PETK	**Petropavlovsk-**	**34.06**	**33**	P	**P**	**11 15 21.8**	**-2.6**
	comp=Z,1.6nm,0.7s,mb3.8,baz=248,slow=12,SNR=3.0						
MK31	**Makanchi Array**	**39.96**	**311**	*e*P	**P**	**11 16 13.9**	**-0.5**
MKAR	**Makanchi Array**	**39.96**	**311**	P	**P**	**11 16 13.8**	**-0.6**
	comp=Z,3.8nm,0.7s,mb4.2,baz=91,slow=10,SNR=24						
MKAR				PcP	PcP	11 18 17.1	+0.2
	comp=Z,4.3nm,0.6s,baz=76,slow=3.5,SNR=18						
MKAR				ScP	ScP	11 21 51.1	-1.7
	comp=Z,0.8nm,0.8s,baz=103,slow=3.1,SNR=4.4						
MKAR	**Makanchi Array**	**39.96**	**311**	P	**P**	**11 16 13.8**	**-0.6**
MKAR						11 18 17.1	
ZALV	**Zalesovo Beam**	**40.63**	**322**	P	**P**	**11 16 19.5**	**-0.2**
	comp=Z,4.3nm,0.5s,mb4.3,baz=112,slow=8.7,SNR=9.6						
ZALV				PcP	PcP	11 18 18.1	-0.7
	comp=Z,2.4nm,0.3s,baz=111,slow=3.3,SNR=6.5						
ZALV				ScP	ScP	11 21 52.9	-2.3
	comp=Z,0.8nm,0.4s,baz=134,slow=4.2,SNR=2.8						
ZALV	**Zalesovo Beam**	**40.63**	**322**	P	**P**	**11 16 19.5**	**-0.2**
ZALV						11 18 18.1	
KURK	**Kurchatov**	**43.22**	**316**	*e*P	**P**	**11 16 40.0**	**-0.8**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
KURK	**Kurchatov**	**43.22**	**316**	*e*P	**P**	**11 16 40.0**	**-0.8**
	comp=Z,2.6nm,0.7s,mb4.0						
TKM2	**Tokmak 2**	**44.16**	**304**	*e*P	**P**	**11 16 49.3**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**44.16**	**304**	*e*P	**P**	**11 16 49.3**	**+0.8**
	comp=Z,5.8nm,0.8s,mb4.3						
UCH	**Uchtor**	**44.93**	**303**	*e*P	**P**	**11 16 55.5**	**+0.8**
	comp=Z,7.8nm,1.1s,mb4.2						
UCH				*e*pP	pP	11 17 31.1	+4.8
FITZ	**Fitzroy Crossi**	**45.42**	**182**	P	**P**	**11 16 59.4**	**+0.8**
	comp=Z,1.2nm,0.5s,mb3.8,baz=3.8,slow=14,SNR=8.5						
WRA	**Warramunga Arr**	**47.73**	**171**	P	**P**	**11 17 17.1**	**+0.5**
	comp=Z,1.3nm,0.8s,mb3.6,baz=353,slow=8.1,SNR=7.0						
WRA				pP	pP	11 17 50.4	+1.8
	comp=Z,1.4nm,0.7s,baz=353,slow=8.5,SNR=6.0						
ASAR	**Alice Springs**	**51.34**	**172**	P	**P**	**11 17 44.6**	**+0.8**
	comp=Z,0.6nm,0.5s,mb3.5,baz=360,slow=14,SNR=17						
ASAR				pP	pP	11 18 18.9	+2.6
	comp=Z,1.2nm,0.8s,baz=356,slow=9.1,SNR=6.4						
ASAR				PcP	PcP	11 18 56.8	+0.1
	comp=Z,0.7nm,0.9s,baz=350,slow=4.1,SNR=2.9						
AKTK	**Aktyubinsk**	**56.24**	**314**	P	**P**	**11 18 20.1**	**+0.8**
AKTO	**Aktyubinsk**	**56.24**	**314**	P	**P**	**11 18 20.1**	**+0.8**
	comp=Z,1.2nm,0.6s,mb3.9,baz=98,slow=12,SNR=5.6						
STKA	**Stephens Creek**	**60.68**	**166**	P	**P**	**11 18 50.5**	**+0.4**
	comp=Z,1.4nm,0.7s,mb3.9,baz=0.7,slow=10,SNR=3.9						
ARCES	**ARCESS Array B**	**68.43**	**338**	PcP	PcP	11 20 04.6	+0.2
	comp=Z,2.2nm,0.7s,baz=79,slow=6.3,SNR=5.4						
AKASG	**Malin Array Be**	**73.92**	**319**	P	**P**	**11 20 11.8**	**-1.6**
	comp=Z,0.8nm,0.4s,mb3.8,baz=63,slow=6.6,SNR=4.0						
YKA	**Yellowknife Ar**	**77.70**	**25**	P	**P**	**11 20 34.5**	**-0.1**
	comp=Z,2.8nm,0.6s,mb4.1,baz=307,slow=5.7,SNR=19						
YKA	**Yellowknife Ar**	**77.70**	**25**	P	**P**	**11 20 34.5**	**-0.1**
NOA	**NORSAR Array B**	**77.71**	**333**	P	**P**	**11 20 33.2**	**-1.5**
	comp=Z,1.3nm,0.8s,mb3.6,baz=51,slow=5.7,SNR=3.1						
GERES	**GERESS Array B**	**83.58**	**322**	P	**P**	**11 21 05.7**	**-0.5**
	comp=Z,0.4nm,0.2s,mb3.8,baz=39,slow=8.9,SNR=2.6						
ETW	**Entiat**	**83.72**	**39**	*e*P	**P**	**11 21 07.6**	**+0.7**
NVAR	**Mina Array Bea**	**90.24**	**46**	P	**P**	**11 21 39.9**	**+1.2**
	comp=Z,0.3nm,0.8s,mb3.3,baz=330,slow=5.3,SNR=2.3						
KMBO	**Kilima Mbogo**	**90.47**	**269**	P	**P**	**11 21 40.6**	**+0.4**
	comp=Z,0.9nm,0.4s,mb4.1,baz=218,slow=23,SNR=3.3						
RLMT	**Red Lodge**	**91.27**	**36**	*e*P	**P**	**11 21 44.8**	**+1.5**
PDAR	**Pinedale Array**	**92.69**	**38**	P	**P**	**11 21 50.1**	**+0.2**
	comp=Z,1.1nm,0.8s,mb4.0,baz=66,slow=1.6,SNR=11						
PDAR	**Pinedale Array**	**92.69**	**38**	P	**P**	**11 21 50.1**	**+0.2**
ULM	**Lac du Bonnet**	**93.63**	**26**	P	**P**	**11 21 53.5**	**-0.5**
	comp=Z,2.4nm,0.7s,mb4.4,baz=323,slow=5.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**113.47**	**300**	PKiKP	PKiKP	11 27 15.2	-0.7
	comp=Z,0.3nm,0.5s,baz=47,slow=1.3,SNR=5.3						

SGS ***25*** *11:15:38.5,3002N×3639E,h7km*
CSEM ***25*** *11:15:38.5,3002N×3639E,h7km,ML2.6,After SNSN*
GII ***25*** *11:15:40.3±1.2,2989N×3612E,h0km,ML2.0/2, EXPLOSION*

ISC 25 11:15:38.8±1.3,2987N±004×3632E±007,h0km,n11, σ0s78/19,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HRFI	**Mount Harif**	**1.13**	**279**	Pg	**Pg**	**11 15 59.5**	**-0.8**
HRFI				Sg	**Sg**	**11 16 14.5**	**-0.5**
EIL	**Elat**	**1.21**	**261**	Pg	**Pg**	**11 16 01.2**	**-0.7**
EIL				Sg	**Sg**	**11 16 18.2**	**+0.6**
MBRI	**Mt Berech**	**1.23**	**267**	Pg	**Pg**	**11 16 02.0**	**-0.2**
MBRI				Sg	**Sg**	**11 16 18.5**	**+0.4**
HQLS		**1.24**	**243**	P	**Pg**	**11 16 02.0**	**-0.4**
HQLS		**1.24**	**243**	P	**Pg**	**11 16 02.0**	**-0.5**
HQLS				S	**Sg**	**11 16 19.7**	**+1.2**
PRNI	**Paran**	**1.24**	**293**	Pg	**Pg**	**11 16 02.2**	**-0.3**
PRNI				Sg	**Sg**	**11 16 18.9**	**+0.3**
JLOS		**1.34**	**213**	P	**Pg**	**11 16 04.0**	**-0.6**
JLOS		**1.34**	**213**	P	**Pg**	**11 16 04.0**	**-0.5**
JLOS				S	**Sg**	**11 16 23.1**	**+1.2**
KRMI	**Paran Flat**	**1.41**	**280**	Pg	**Pg**	**11 16 05.0**	**-0.8**
KRMI				Sg	**Sg**	**11 16 23.2**	**-0.8**
MZDA	**Masada**	**1.66**	**330**	Pn	**Pn**	**11 16 10.3**	**+1.2**
MZDA				Sn	**Sn**	**11 16 32.2**	**+1.2**
BDAS	**Al Bad'**	**1.79**	**217**	P	**Pn**	**11 16 10.1**	**-0.8**

ISK ***25*** *11:42:06.8,3849N×2757E,h15km,MD2.5*
DDA ***25*** *11:42:06.8,3851N×2759E,h7km±4km, Md2.8*
CSEM ***25*** *11:42:06.8±0.2,3848N×2755E,h20km, MD2.5, Error ellipse: s-maj=6.6km s-min=2.9km az=153.0*
ISCJB ***25*** *11:42:07.7±0.6,3849N±005×2758E±005,h19km±11km, Error ellipse: s-maj=8.7km s-min=5.2km az=144.9*

ISC 25 11:42:07.4±0.7,3848N±005×2758E±005,h16km±6km,n12, σ0s49/17,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKS	**Akhisar**	**0.43**	**24**	*e*PG	**Pg**	**11 42 15.9**	**-0.2**
AKS				*e*SG	**Sg**	**11 42 22.7**	**+0.6**
BLCB	**Balcova**	**0.44**	**257**	*e*PG	**Pg**	**11 42 15.6**	**-0.6**
BLCB				*e*SG	**Sg**	**11 42 22.4**	**+0.3**
MANT	**Manisa**	**0.76**	**89**	*i*P	**Pb**	**11 42 21.1**	**-1.1**
MANT	**Manisa**	**0.76**	**89**	*i*P	**Pb**	**11 42 21.1**	**-1.2**
URLA	**Izmir**	**0.79**	**261**	*i*P	**Pb**	**11 42 22.6**	**-0.1**
URLA				*i*S	**Sb**	**11 42 33.2**	**+0.2**
KULA	**Kula-Manisa**	**0.84**	**88**	*e*PG	**Pg**	**11 42 24.1**	**+0.2**
AYDN	**Tasoluk**	**0.85**	**164**	*i*P	**Pb**	**11 42 24.4**	**+0.6**
DEMI	**Demirci**	**1.05**	**57**	*i*P	**Pb**	**11 42 26.8**	**-0.3**
BALB	**Balikesir**	**1.18**	**11**	*e*PN	**Pn**	**11 42 28.7**	**-0.4**
BALY	**Balya**	**1.26**	**1**	*i*P	**Pn**	**11 42 30.5**	**+0.2**
BALY				*i*S	**Sb**	**11 42 46.0**	**-0.6**
DURS	**Dursunbey**	**1.31**	**32**	*i*P	**Pn**	**11 42 31.3**	**+0.3**
DURS				*i*S	**Sn**	**11 42 48.9**	**+0.6**
DST	**Dursunbey**	**1.38**	**36**	*e*PN	**Pn**	**11 42 32.4**	**+0.3**

ISCJB ***25*** *11:56:44.7±0.6,3774S±005×17680E±005,h19km±6km, Error ellipse: s-maj=7.8km s-min=6.6km az=21.0*
NEIC ***25*** *11:56:45.0,3779S×17680E,h5km,ML4.2(WEL),After WEL.*
NEIC Felt at Edgecumbe.

ISC 25 11:56:44.7±0.7,3773S±005×17681E±005,h12km±4km, n30,σ0s89/30,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.28**	**202**	P	**Pg**	**11 56 50.0**	**-0.4**
WIZ	**White Island**	**0.36**	**57**	P	**Pg**	**11 56 53.1**	**+1.2**
EDRZ	**Edgecumbe**	**0.38**	**188**	P	**Pg**	**11 56 51.8**	**-0.5**
LIRZ	**Lichensteins R**	**0.43**	**231**	P	**Pg**	**11 56 53.4**	**+0.1**
TGRZ	**Tauranga**	**0.43**	**270**	P	**Pg**	**11 56 53.9**	**+0.6**
MKRZ	**Makatiti**	**0.49**	**213**	P	**Pg**	**11 56 54.6**	**+0.2**
KARZ	**Kaharoa**	**0.53**	**237**	P	**Pg**	**11 56 55.3**	**+0.2**
TAZ	**Tarawera**	**0.56**	**205**	P	**Pg**	**11 56 55.7**	**+0.1**
URZ	**Urewera**	**0.58**	**156**	P	**Pg**	**11 56 55.3**	**-0.7**
UTU	**Utuhina**	**0.66**	**227**	P	**Pg**	**11 56 58.0**	**+0.4**
MWZ	**Matawai**	**0.83**	**137**	P	**Pg**	**11 57 00.1**	**-0.6**
TOZ	**Tahuroa Road**	**1.04**	**269**	P	**Pb**	**11 57 03.6**	**-0.9**
PUZ	**Puketiti**	**1.20**	**107**	P	**Pn**	**11 57 07.3**	**+0.1**
MXZ	**Matakaoa Point**	**1.20**	**83**	*e*P	**Pn**	**11 57 06.9**	**-0.3**
KUZ	**Kuaotunu**	**1.31**	**318**	*e*P	**Pn**	**11 57 07.1**	**-1.6**
MKAZ	**Moumakai**	**1.45**	**295**	*e*P	**Pn**	**11 57 09.5**	**-1.1**
BKZ	**Black Stump Fm**	**1.46**	**190**	*e*P	**Pn**	**11 57 09.3**	**-1.5**
KNZ	**Kokohu**	**1.46**	**152**	*e*P	**Pn**	**11 57 11.0**	**+0.2**
WTVZ	**West Tongariro**	**1.69**	**214**	P	**Pn**	**11 57 15.5**	**+1.6**
OTAZ	**Otara**	**1.69**	**297**	P	**Pn**	**11 57 15.7**	**+1.7**
HIZ	**Hauiti**	**1.73**	**242**	*e*P	**Pn**	**11 57 13.6**	**-0.9**
WNVZ	**Wahianoa**	**1.86**	**210**	P	**Pn**	**11 57 19.4**	**+3.1**
MOVZ	**Moawhango**	**1.87**	**206**	P	**Pn**	**11 57 17.3**	**+0.8**
WTAZ	**Waiatarua**	**1.95**	**293**	P	**Pn**	**11 57 21.9**	**+4.4**
TSZ	**Takapari Road**	**2.42**	**196**	P	**Pn**	**11 57 24.1**	**+0.1**
WCZ	**Waipu Caves**	**2.66**	**311**	*e*P	**Pn**	**11 57 26.8**	**-0.6**
MRZ	**Mangatainoka R**	**3.08**	**198**	*e*P	**Pn**	**11 57 32.4**	**-0.7**
SNAA	**Sanae**	**70.90**	**180**	*e*	P	**12 08 01.3**	**+0.3**
SNAA					pP	12 08 06.5	+1.5
SNAA				*e*		12 08 09.6	
VNA3	**Neumayer Olymp**	**71.23**	**178**	*e*	**P**	**12 08 03.3**	**+0.2**
VNA3				*e*		12 08 09.2	
VNA3				*e*		12 08 12.7	
VNA2	**Neumayer--Watz**	**71.61**	**179**	*e*	**P**	**12 08 06.1**	**+0.8**
	baz=175,slow=3.8						
VNA2				*e*	pP	12 08 11.4	+2.1
VNA2				*e*		12 08 14.6	

IDC 25 11:58:26.5±2.2,669S×12882E,h0km,mb3.5/1,mb1 3.7/3, mb1mx3.5/14,mbtmp3.5/3,ML3.5/1,Error ellipse: s-maj=150.1km s-min=32.0km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.22**	**158**	Pn	Pn	12 01 48.4	-1.0
	0.4nm,0.3s,baz=340,slow=12,SNR=13						
WRA				Sn	Sn	12 04 12.8	-15
	0.6nm,0.3s,baz=332,slow=23,SNR=10						
ASAR	**Alice Springs**	**17.57**	**164**	P	Pn	12 02 33.6	+0.7
	0.2nm,0.3s,baz=346,slow=11,SNR=13						
ASAR				S	Sn	12 05 34.4	-15
	0.1nm,0.3s,baz=340,slow=26,SNR=5.3						
MKAR	**Makanchi Array**	**67.33**	**327**	P	P	12 09 23.4	+0.1
	0.3nm,0.7s,baz=112,slow=7.8,SNR=4.2						

GII 25 13:18:06.0±0.7,3115N×3527E,h0km,ML2.6/6, EXPLOSION,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MZDA	**Masada**	**0.18**	**26**	T		13 19 02.7	
MZDA	**Masada**	**0.18**	**26**	Pg	Pg	13 18 10.8	+1.4
MZDA				Sg	Sg	13 18 14.1	+2.3
YTIR	**Yattir**	**0.25**	**329**	Pg	Pg	13 18 12.6	+1.8
DSI	**Dead Sea**	**0.43**	**13**	Pg	Pg	13 18 16.5	+2.2
DSI				Sg	Sg	13 18 24.1	+4.3
RTMI	**Retamim**	**0.50**	**259**	Pg	Pg	13 18 17.6	+2.0
ZFRI	**Zfri**	**0.60**	**188**	Pg	Pg	13 18 19.1	+1.6
ZFRI				Sg	Sg	13 18 29.8	+4.6
KZIT	**Kziot**	**0.79**	**252**	Pg	Pg	13 18 22.8	+1.7
KZIT				Sg	Sg	13 18 35.2	+3.9
PRNI	**Paran**	**0.83**	**196**	Pg	Pg	13 18 23.4	+1.6
PRNI				Sg	Sg	13 18 37.2	+4.7
SLTI	**Sal'it**	**1.11**	**350**	Sg	Sg	13 18 44.8	+3.2
HMDT	**Nahal Hemdat**	**1.12**	**11**	Pg	Pg	13 18 28.7	+1.2
HMDT				Sg	Sg	13 18 45.2	+3.1
HRFI	**Mount Harif**	**1.13**	**190**	Pg	Pg	13 18 28.8	+1.2
HRFI				Sg	Sg	13 18 46.5	+4.3
KRMI	**Paran Flat**	**1.13**	**205**	Pg	Pg	13 18 29.2	+1.6
KRMI				Sg	Sg	13 18 45.4	+3.1
MMLI	**Mount Malkishu**	**1.29**	**6**	Pg	Pg	13 18 32.0	+1.2
MMLI				Sg	Sg	13 18 51.5	+3.9
MBRI	**Mt Berech**	**1.38**	**193**	Pn	Pn	13 18 33.1	+0.5
MBRI				Sn	Sn	13 18 53.8	+2.2
OFRI	**'Ofer**	**1.49**	**351**	Pn	Pn	13 18 34.6	+0.6
EIL	**Elat**	**1.50**	**191**	Pn	Pn	13 18 34.8	+0.7
EIL				Sn	Sn	13 18 56.5	+2.2
MMA0B	**Mount Meron ar**	**1.86**	**3**	Pn	Pn	13 18 40.9	+1.7
MMA0B				Sn	Sn	13 19 06.9	+3.4

ISCJB ***25*** *13:18:53.9±1.0,105N±005×12633E±006,h48km±10km, mb4.4/14,Error ellipse: s-maj=10.4km s-min=8.4km az=153.7*
IDC ***25*** *13:18:56.9±4.2,100N×12630E,h56km±38km,mb3.9/10, mb1 4.0/11,mb1mx3.9/17,mbtmp3.9/11,ML3.8/1,Error ellipse: s-maj=36.9km s-min=10.5km az=77.0*
NEIC ***25*** *13:18:57.6±3.2,101N×12644E,h67km±33km,mb4.3/4, Error ellipse: s-maj=26.2km s-min=9.9km az=62.0*

ISC 25 13:18:54.9±1.1,106N±005×12637E±006,h40km±11km, n28,σ0s99/29,mb4.4/14,1C-2D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNE	**Ternate**	**1.03**	**105**	*e*P	**Pn**	**13 19 11.7**	**-1.2**
MNI	**Manado**	**1.58**	**284**	*e*P	**Pn**	**13 19 20.0**	**-0.4**
MNI				*e*S	**Sn**	**13 19 38.5**	**-1.1**
KDI	**Kendari**	**6.24**	**217**	*e*P	**Pn**	**13 20 25.9**	**+1.4**
KDI				*e*S	**Sn**	**13 21 34.5**	**-0.1**
KAPI	**Kappang**	**8.96**	**228**	*e*P	**Pn**	**13 21 03.7**	**+1.9**
KSM	**Kuching**	**16.07**	**272**	*e*P	**Pn**	**13 22 42.4**	**+4.3**
FITZ	**Fitzroy Crossi**	**19.06**	**182**	*e*P	**Pn**	**13 23 12.1**	**-2.9**
	4.8nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.06**	**182**	P	**Pn**	**13 23 14.3**	**-0.7**
	0.2nm,0.3s,baz=53,slow=17,SNR=5.1						
WRAB	**Tennant Creek**	**22.28**	**160**	*e*P	**P**	**13 23 48.9**	**+0.1**
	7.4nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**22.29**	**160**	P	**P**	**13 23 48.7**	**-0.2**
	5.8nm,0.4s,mb4.3,baz=337,slow=11,SNR=98						
WRA				S	**S**	**13 27 50.6**	**-1.5**
	0.7nm,0.8s,baz=346,slow=17,SNR=4.8						
WB2	**Warramunga Arr**	**22.29**	**160**	*e*P	**P**	**13 23 48.7**	**-0.2**
WB2	**Warramunga Arr**	**22.29**	**160**	*e*P	**P**	**13 23 48.8**	**-0.1**
ASAR	**Alice Springs**	**25.65**	**164**	P	**P**	**13 24 21.1**	**+0.2**
	1.9nm,0.4s,mb4.0,baz=346,slow=10.0,SNR=41						
ASAR				PcP	PcP	13 27 52.2	+1.1
	0.4nm,0.5s,baz=352,slow=2.4,SNR=5.1						
NWAO	**Narrogin (SRO)**	**34.89**	**194**	P	**P**	**13 25 43.5**	**+0.9**
	17nm,1.0s,mb4.9,baz=38,slow=10,SNR=6.1						
STKA	**Stephens Creek**	**35.80**	**158**	*e*P	**P**	**13 25 50.3**	**-0.2**
	6.1nm,2.0s,mb4.2						
STKA	**Stephens Creek**	**35.80**	**158**	P	**P**	**13 25 51.1**	**+0.6**
	2.3nm,0.5s,mb4.3,baz=15,slow=7.4,SNR=11						
KSRS	**Korea Array**	**36.24**	**2**	P	**P**	**13 25 56.0**	**+1.8**
	1.1nm,0.7s,mb3.9,baz=180,slow=9.3,SNR=6.4						
MJAR	**Matsushiro Arr**	**36.96**	**16**	P	**P**	**13 26 00.1**	**-0.2**
	1.0nm,0.5s,mb3.9,baz=181,slow=10.0,SNR=4.5						
SONM	**Songino Array**	**49.70**	**342**	P	**P**	**13 27 43.4**	**+0.5**
	1.9nm,0.8s,mb4.2,baz=163,slow=10,SNR=12						
PETK	**Petropavlovsk-**	**58.02**	**22**	P	**P**	**13 28 45.8**	**+2.2**
	2.4nm,0.9s,mb4.2,baz=183,slow=4.7,SNR=3.9						
MK31	**Makanchi Array**	**59.55**	**326**	*e*P	**P**	**13 28 53.9**	**-0.4**
MKAR	**Makanchi Array**	**59.55**	**326**	P	**P**	**13 28 54.2**	**-0.1**
	1.5nm,0.5s,mb4.3,baz=123,slow=7.6,SNR=20						
MKAR				PcP	PcP	13 29 41.9	+0.5
	0.9nm,0.5s,baz=113,slow=4.2,SNR=4.2						
MKAR	**Makanchi Array**	**59.55**	**326**	P	**P**	**13 28 54.2**	**-0.1**
MKAR				PcP	PcP	13 29 41.9	+0.5
ZALV	**Zalesovo Beam**	**62.80**	**334**	P	**P**	**13 29 15.4**	**-0.8**
	0.9nm,0.4s,mb4.2,baz=117,slow=5.5,SNR=4.3						
KURK	**Kurchatov**	**63.80**	**328**	*e*P	**P**	**13 29 22.7**	**-0.2**
	4.4nm,0.4s,mb4.8						
NAY	**Al-Naaiem**	**80.00**	**299**	*e*P	**P**	**13 30 59.7**	**-0.8**
NAY				AMb	AMB	13 31 01.5	
	comp=Z,7.0nm,1.3s,mb4.4						
RST	**Umm Al-Ruwaisa**	**80.23**	**300**	*e*P	**P**	**13 31 00.9**	**-0.9**
RST				AMb	AMB	13 31 02.1	
	comp=Z,15nm,0.4s,mb5.3						
TORD	**Torodi Ar. Bea**	**123.37**	**286**	PKP	PKPdf	13 37 48.5	-0.2
	comp=Z,0.2nm,0.4s,baz=76,slow=1.8,SNR=3.0						
TXAR	**Lajitas Array**	**123.48**	**53**	PKP	PKPdf	13 37 49.8	+1.1
	comp=Z,0.2nm,0.7s,baz=207,slow=0.8,SNR=2.1						

IDC 25 13:46:35.2±4.1,303S×10076E,h0km,mb3.5/5,mb1 3.6/5, mb1mx3.5/19,mbtmp3.5/5,Error ellipse: s-maj=177.0km s-min=21.2km az=55.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.83**	**120**	P	P	13 53 45.2	-0.2
	0.2nm,0.4s,baz=311,slow=8.7,SNR=9.8						
ASAR	**Alice Springs**	**38.04**	**126**	P	P	13 53 55.7	0.0
	0.2nm,0.4s,baz=300,slow=8.0,SNR=3.5						
SONM	**Songino Array**	**50.89**	**5**	P	P	13 55 37.9	0.0
	0.8nm,0.7s,baz=190,slow=9.3,SNR=5.8						
MKAR	**Makanchi Array**	**52.22**	**344**	P	P	13 55 48.2	+0.3
	0.3nm,0.5s,baz=151,slow=8.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**58.31**	**349**	P	P	13 56 31.4	-0.4
	0.3nm,0.3s,baz=151,slow=3.3,SNR=2.7						
TXAR	**Lajitas Array**	**145.04**	**39**	PKPbc	PKPbc	14 06 14.4	-0.3
	0.2nm,0.5s,baz=128,slow=38,SNR=3.5						

ISCJB ***25*** *14:09:52.3±1.0,2858N±004×3432E±007,h10km,Error ellipse: s-maj=9.0km s-min=5.7km az=174.4*
GII ***25*** *14:09:52.9±0.6,2864N×3437E,h4km±2km,ML3.5/2, Mw2.7/3*
SGS ***25*** *14:09:53.5,2860N×3433E,h10km*

ISC 25 14:09:51.5±1.5,2856N±004×3427E±009,h1km±7km,n18, σ0s61/24,Egypt

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSHS		**0.53**	**119**	P	**Pg**	**14 10 03.7**	**+2.1**
HQLS		**1.01**	**43**	S	**Sg**	**14 10 24.0**	**-0.1**
HQLS		**1.01**	**43**	P	**Pg**	**14 10 10.8**	**-0.1**
JLOS		**1.08**	**80**	S	**Sg**	**14 10 25.8**	**-0.5**
JLOS		**1.08**	**80**	P	**Pg**	**14 10 12.0**	**-0.3**
GLFJ		**1.15**	**34**	*e*Pg	**Pg**	**14 10 13.8**	**+0.3**
	SNR=91						
GLFJ				*e*Sg	**Sg**	**14 10 29.5**	**+1.2**
	SNR=91						
EIL	**Elat**	**1.26**	**28**	Pg	**Pg**	**14 10 15.2**	**-0.5**
EIL				Sg	**Sg**	**14 10 31.5**	**-0.4**
AQBJ	**Aqaba**	**1.35**	**30**	Pg	**Pg**	**14 10 16.9**	**-0.5**
MBRI	**Mt Berech**	**1.35**	**24**	Pg	**Pg**	**14 10 16.9**	**-0.6**
MBRI				Sg	**Sg**	**14 10 35.1**	**0.0**
KRMI	**Paran Flat**	**1.60**	**14**	Pn	**Pn**	**14 10 21.1**	**+0.1**
KRMI				Sn	**Sn**	**14 10 42.5**	**+0.2**
HRFI	**Mount Harif**	**1.62**	**24**	Pn	**Pn**	**14 10 20.6**	**-0.6**
HRFI				Sn	**Sn**	**14 10 42.6**	**0.0**
PRNI	**Paran**	**1.90**	**19**	Pn	**Pn**	**14 10 25.2**	**+0.2**
PRNI				Sn	**Sn**	**14 10 49.7**	**+0.2**
DBAS	**Duba**	**2.01**	**131**	P	**Pn**	**14 10 25.5**	**-1.0**
RMNI	**Mount Ramon**	**2.08**	**12**	Pn	**Pn**	**14 10 28.3**	**+0.9**
ZFRI	**Zfri**	**2.14**	**21**	Pn	**Pn**	**14 10 28.4**	**+0.1**
KZIT	**Kziot**	**2.34**	**3**	Pn	**Pn**	**14 10 30.9**	**-0.2**
MZDA	**Masada**	**2.90**	**19**	Pn	**Pn**	**14 10 38.6**	**-0.2**
DSI	**Dead Sea**	**3.15**	**17**	Pn	**Pn**	**14 10 42.4**	**+0.2**

MAN 25 14:15:20,1178N×12598E,h15km,mb4.1,ML2.8,MS2.5, 2D,Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.56**	**252**	*e*P	Pg	14 15 31.6	+0.6
PLP	**Palo**	**1.15**	**238**	⇓*e*P	Pn	14 15 39.9	-1.6
PLP				*e*S	Sb	14 15 52.2	-4.2
MSLP	**Maasin**	**1.97**	**214**	*e*P	Pn	14 15 54.6	+1.8
MSLP				*e*S	Sn	14 16 19.3	+2.0
SCPH	**Surigao**	**2.04**	**194**	⇓*e*P	Pn	14 15 54.2	+0.4

IDC 25 14:26:15.5±3.5,118S×10037E,h0km,mb3.6/4,mb1 3.7/5, mb1mx3.5/19,mbtmp3.6/5,ML4.1/1,Error ellipse: s-maj=156.2km s-min=21.0km az=57.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.56**	**356**	P	Pn	14 30 45.8	-0.4
	0.2nm,0.3s,baz=142,slow=24,SNR=3.3						
WRA	**Warramunga Arr**	**38.10**	**122**	P	P	14 33 37.7	+1.3
	0.4nm,0.5s,baz=302,slow=9.2,SNR=6.8						
ASAR

OGRR				pmax	pmax			
	comp=Z,144nm,0.5s							
OGRR				smax				
	comp=N,1μm,0.8s							
OGRR	**Ongureny**	**2.10**	**233**	*e*Pn	Pn	14 41 02.3	+0.3	
OGRR			⇑	*i*Pg	Pg	14 41 04.0	-2.5	
OGRR				*e*		14 41 09.6		
OGRR				*e*Sn	Sn	14 41 30.0	+1.7	
OGRR				*e*Sg	Sg	14 41 32.5	-1.1	
OGRR				max				
	comp=N,142nm,0.5s							
OGRR				Smax				
	comp=N,1μm,0.7s							
SVKR	**Severomuysk**	**2.15**	**55**	*e*PN	Pn	14 41 03.4	+0.7	
SVKR				*e*		14 41 04.6		
SVKR				*e*S	Sn	14 41 31.0	+1.4	
SVKR				*e*		14 41 33.0		
SVKR				pmax	pmax			
	comp=Z,387nm,1.4s							
SVKR				smax				
	comp=N,3μm,2.4s							
SVKR	**Severomuysk**	**2.15**	**55**	⇑*i*Pn	Pn	14 41 03.6	+0.9	
SVKR			⇑	*i*Pg	Pg	14 41 05.0	-2.5	
SVKR				*e*Sg	Sg	14 41 33.9	-1.5	
SVKR				Pmax				
	comp=N,264nm,0.6s							
SVKR				Smax				
	comp=N,3μm,0.8s							
TRG	**Tyrgan**	**3.25**	**229**	*e*PN	Pn	14 41 18.6	+0.8	
TRG				*e*		14 41 25.2		
TRG				*e*S	Sn	14 41 56.3	-0.4	
TRG				*e*		14 42 06.9		
TRG				pmax	pmax			
	comp=Z,14nm,0.3s							
TRG				smax				
	comp=E,171nm,0.3s							
TRG	**Tyrgan**	**3.25**	**229**	*e*Pn	Pn	14 41 18.6	+0.8	
TRG				*e*Pg	Pg	14 41 23.4	-5.1	
TRG				*e*Sn	Sn	14 41 54.7	-2.0	
TRG				*e*Sg	Sg	14 42 05.9	-4.6	
TRG				Pmax				
	comp=E,10.0nm,0.2s							
TRG				Smax				
	comp=E,238nm,1.1s							
NLYR	**Nelyaty**	**3.38**	**60**	*e*PN	Pn	14 41 19.3	-0.3	
NLYR				*e*		14 41 25.6		
NLYR	**Nelyaty**	**3.38**	**60**	*e*Pn	Pn	14 41 20.0	+0.4	
NLYR				*e*Pg	Pg	14 41 25.7	-5.4	
NLYR				*e*Sg	Sg	14 42 10.6	-4.2	
NLYR				Pmax				
	comp=E,59nm,0.8s							
NLYR				Smax				
	comp=E,439nm,1.0s							
CIT	**Chita**	**3.48**	**146**	*e*PN	Pn	14 41 21.3	+0.3	
CIT				*e*		14 41 28.6		
CIT				*e*		14 42 12.8		
CIT				pmax	pmax			
	comp=Z,63nm,0.6s							
CIT				smax				
	comp=E,445nm,0.7s							
CIT	**Chita**	**3.48**	**146**	*e*Pg	Pg	14 41 28.1	-4.9	
CIT				*e*Sg	Sg	14 42 14.6	-3.4	
CIT				Pmax				
	comp=E,47nm,0.3s							
CIT				Smax				
	comp=E,445nm,0.7s							
UUDB	**Ulan-Yde**	**3.49**	**209**	*e*Pg	Pg	14 41 29.4	-3.8	
UUDB				*e*		14 41 33.5		
UUDB				*e*Sg	Sg	14 42 14.6	-3.7	
UUDB				max				
	comp=E,29nm,0.7s							
UUDB				Smax				
	comp=E,124nm,0.6s							
BOD	**Bodaibo**	**3.51**	**33**	*e*Pn	Pn	14 41 21.5	+0.1	
BOD				*e*Pg	Pg	14 41 29.1	-4.5	
BOD				*e*		14 41 34.8		
BOD				*e*Sn	Sn	14 42 02.7	-0.6	
BOD				*e*Sg	Sg	14 42 14.4	-4.7	
BOD				max				
	comp=E,23nm,0.6s							
BOD				Smax				
	comp=E,122nm,0.9s							
HRMR	**Khuramsha**	**3.91**	**213**	⇑*i*Pg	Pg	14 41 36.5	-4.7	
HRMR				*e*Sg	Sg	14 42 27.7	-4.1	
HRMR				Pmax				
	comp=E,62nm,0.6s							
HRMR				Smax				
	comp=E,510nm,0.7s							
LSTR	**Listvyanka**	**4.54**	**230**	*e*Pg	Pg	14 41 46.3	-6.9	
LSTR				*e*Sn	Sn	14 42 26.2	-2.3	
LSTR				*e*Sg	Sg	14 42 45.0	-6.9	
LSTR				Pmax				
	comp=E,3.0nm,0.2s							
LSTR				Smax				
	comp=E,119nm,1.8s							
IRK	**Irkutsk**	**4.54**	**236**	*e*Sg	Sg	14 42 46.3	-5.8	
IRK				Smax				
	comp=E,409nm,0.8s							
CRS	**Chara**	**4.84**	**63**	*e*PN	Pn	14 41 41.9	+2.2	
CRS				*e*		14 41 53.6		
CRS				*e*		14 42 54.9		
CRS				pmax	pmax			
	comp=Z,45nm,0.9s							
CRS				smax				
	comp=E,238nm,1.8s							
CRS	**Chara**	**4.84**	**63**	*e*Pn	Pn	14 41 41.0	+1.3	
CRS				*e*Pg	Pg	14 41 54.0	-5.1	
CRS				*e*Sg	Sg	14 42 55.8	-5.9	
CRS				Pmax				
	comp=E,45nm,1.1s							
CRS				Smax				
	comp=E,231nm,1.5s							
TLY	**Talaya**	**5.20**	**234**	*e*PN	Pn	14 41 46.0	+1.4	
TLY				*e*		14 42 00.0		
TLY				*e*S	Sn	14 42 43.2	-1.7	
TLY				*e*		14 43 05.0		
TLY				pmax	pmax			
	comp=Z,13nm,0.8s							
TLY				smax				
	comp=E,83nm,1.1s							
TLY	**Talaya**	**5.20**	**234**	⇑*i*Pg	Pg	14 42 00.8	-5.2	
TLY				*e*Sg	Sg	14 43 06.6	-6.7	
TLY				Pmax				
	comp=E,8.0nm,0.5s							
TLY				Smax				
	comp=E,91nm,1.0s							
KPC	**Khapcheranga**	**5.38**	**166**	*e*Pn	Pn	14 41 46.1	-1.0	
KPC				*e*Sg	Sg	14 43 12.5	-6.6	
KPC				max				
	comp=E,7.0nm,0.7s							
KPC				Smax				
	comp=E,125nm,1.6s							
ARS	**Arshan**	**5.65**	**241**	*e*PN	Pn	14 42 07.6	+17	
ARS				*e*S	Sn	14 42 55.6	-0.2	
ARS				*e*		14 43 19.3		
ARS				pmax	pmax			
	comp=Z,29nm,0.4s							
ARS				smax				
	comp=E,259nm,0.6s							
ARS	**Arshan**	**5.65**	**241**	*e*Pn	Pn	14 41 50.5	-0.2	
ARS				*e*Pg	Pg	14 42 06.8	-7.7	
ARS				*e*Sn	Sn	14 42 54.7	-1.1	
ARS				*e*Sg	Sg	14 43 19.0	-8.5	
ARS				Pmax				
	comp=E,26nm,0.8s							
ARS				Smax				
	comp=E,262nm,0.8s							
ZAK	**Zakamensk**	**6.29**	**226**	*e*PN	Pn	14 42 03.2	+3.6	
ZAK				*e*		14 42 19.9		
ZAK				*e*		14 43 40.6		
ZAK				pmax	pmax			
	comp=Z,5.0nm,0.6s							
ZAK				smax				
	comp=E,41nm,1.1s							
ZAK	**Zakamensk**	**6.29**	**226**	*e*Pg	Pg	14 42 19.9	-6.9	
ZAK				*e*Sg	Sg	14 43 41.1	-7.1	
ZAK				Pmax				
	comp=E,1.0nm,0.2s							
ZAK				Smax				
	comp=E,41nm,1.4s							
MOY	**Mondy**	**6.52**	**244**	*e*PN	Pn	14 42 04.6	+1.8	
MOY				*e*		14 42 22.6		
MOY				*e*		14 43 45.6		
MOY				pmax	pmax			
	comp=Z,2.0nm,0.1s							
MOY				smax				
	comp=E,131nm,1.3s							
MOY	**Mondy**	**6.52**	**244**	*e*Pn	Pn	14 42 04.1	+1.3	
MOY				*e*Sn	Sn	14 43 15.6	-1.8	
MOY				*e*Sg	Sg	14 43 47.9	-7.7	
MOY				max				
	comp=E,12nm,0.8s							
MOY				Smax				
	comp=E,133nm,1.7s							
ORL	**Orlik**	**6.73**	**253**	*e*PN	Pn	14 42 07.5	+1.9	
ORL				*e*		14 42 29.1		
ORL				*e*		14 43 55.6		
ORL				pmax	pmax			
	comp=Z,11nm,0.7s							
ORL				smax				
	comp=N,131nm,1.1s							
ORL	**Orlik**	**6.73**	**253**	*e*Pn	Pn	14 42 06.9	+1.3	
ORL				*e*Sg	Sg	14 43 55.8	-6.4	
ORL				max				
	comp=N,19nm,1.5s							
ORL				Smax				
	comp=N,130nm,1.5s							
ULN	**Ulaanbaatar**	**7.39**	**198**	*e*Sg	Sg	14 44 15.4	-7.9	
HIA	**Hailar**	**8.08**	**131**	*e*Sg	Sg	14 44 36.1	-9.4	
TNDR	**Tynda**	**8.23**	**83**	*e*Sg	Sg	14 44 40.7	-10	
IENR	**Iengra**	**8.30**	**75**	*e*Pg	Pg	14 42 55.2	-10	
IENR				*e*Sg	Sg	14 44 42.7	-10	
CLNS	**Chul'man**	**8.37**	**71**	*e*Sg	Sn	14 44 46.6	+44	
TDJR	**Todzha**	**8.86**	**259**	*e*Sg	Sn	14 45 00.9	+46	

BJI ***25*** *14:44:18.2, 745S×130.46E, h137km, mB4.9, mb4.9*
MOS ***25*** *14:44:23.1±1.1, 671S×129.76E, h113km, mb4.9/14, Error ellipse: s-maj=13.8km s-min=7.6km az=111.1*
ISCJB ***25*** *14:44:23.9±0.5, 687S±003×130.07E±0.03, h133km±4km, mb4.8/49, Error ellipse: s-maj=5.4km s-min=4.5km az=167.0*
NEIC ***25*** *14:44:26.9±1.1, 679S×129.85E, h138km±10km, mb4.8/23, Error ellipse: s-maj=7.9km s-min=5.3km az=58.0*
IDC ***25*** *14:44:26.4±1.6, 681S×129.75E, h135km±15km, mb4.5/15, mb1 4.5/18, mb1mx4.5/20, mbtmp4.5/18, MS3.4/4, Ms1 3.4/4, ms1mx3.0/24, Error ellipse: s-maj=15.0km s-min=9.6km az=91.0*
DJA ***25*** *14:44:28, 690S×129.98E, h128km, Mw5.4/12*
ISC 25 14:44:25.1±0.4, 688S±003×130.05E±003, h126km±4km, h114km±1.5km:pP-P, n159, σ1.917/168, mb4.9/49, 12C-6D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.94**	**65**	P		**Pn**		**14 45 09.3**	**-1.6**
	0.0nm,0.0s								
TLE	**Tual**	**2.94**	**65**	⇑*e*P		**Pn**		**14 45 13.0**	**+2.1**
TLE				*e*S		**Sn**		**14 45 45.0**	**-1.2**
AAI	**Ambon**	**3.67**	**330**	P		**Pn**		**14 45 22.6**	**+2.2**
	0.0nm,0.0s								
AAI	**Ambon**	**3.67**	**330**	P		**Pn**		**14 45 22.7**	**+2.3**
	0.0nm,0.0s								
AAI	**Ambon**	**3.67**	**330**	⇓*e*P		**Pn**		**14 45 20.3**	**-0.1**
MSAI	**Masohi**	**3.68**	**342**	P		**Pn**		**14 45 24.7**	**+4.1**
	0.0nm,0.0s								
SWI	**Sorong**	**6.10**	**12**	P		**Pn**		**14 45 52.8**	**-0.1**
	409nm,1.0s								
LBMI	**Labuha**	**6.70**	**338**	P		**Pn**		**14 46 03.0**	**+1.9**
	4μm,1.0s								
BATI	**Baumata**	**7.13**	**242**	P		**Pn**		**14 46 07.1**	**+0.3**
	500nm,0.7s								
BATI	**Baumata**	**7.13**	**242**	P		**Pn**		**14 46 06.5**	**-0.3**
	113nm,0.3s,baz=136,slow=3.9,SNR=105								
BATI				S		**Sn**		**14 47 19.8**	**-6.6**
	115nm,0.3s,baz=143,slow=3.1,SNR=14								
KDI	**Kendari**	**7.94**	**291**	P		**Pn**		**14 46 20.3**	**+2.4**
	102nm,1.2s								
KDI	**Kendari**	**7.94**	**291**	⇑*e*P		**Pn**		**14 46 18.9**	**+1.0**
KDI				*e*S		**Sn**		**14 47 44.8**	**-1.3**
TNE	**Ternate**	**8.07**	**341**	⇑*e*P		**Pn**		**14 46 19.0**	**-0.6**
MNI	**Manado**	**9.76**	**328**	P		**Pn**		**14 46 43.8**	**+1.4**
	557nm,1.3s								
WSI	**Waingapu**	**10.04**	**253**	⇑*e*P		**Pn**		**14 46 44.0**	**-2.1**
WSI				*e*S		**Sn**		**14 48 29.5**	**-7.4**
KAPI	**Kappang**	**10.40**	**280**	LR		LR		14 50 37.8	
	comp=Z,98nm,19.3s,baz=107,slow=37								
KAPI	**Kappang**	**10.40**	**280**	*e*Pn		**Pn**		**14 46 50.8**	**-0.2**
	60nm,1.1s								
JAY	**Jayapura**	**11.47**	**68**	P		**Pn**		**14 47 01.9**	**-3.2**
	85nm,0.7s								
PCI	**Palu**	**11.78**	**300**	P		**Pn**		**14 47 15.3**	**+6.0**
	105nm,0.8s								
FITZ	**Fitzroy Crossi**	**11.96**	**201**	*e*P		**Pn**		**14 47 09.4**	**-2.1**
	144nm,0.4s								
FITZ				*e*S		**Sn**		**14 49 13.4**	**-10**
FITZ	**Fitzroy Crossi**	**11.96**	**201**	P		**Pn**		**14 47 10.5**	**-1.0**
	8.7nm,0.3s,baz=33,slow=13,SNR=119								
FITZ				S		**Sn**		**14 49 13.2**	**-10**
	24nm,0.3s,baz=69,slow=18,SNR=11								
WRAB	**Tennant Creek**	**13.63**	**163**	*e*P		**Pn**		**14 47 32.1**	**-1.2**
WRAB				pmax		pmax			
	comp=Z,139nm,0.7s								
WRAB	**Tennant Creek**	**13.63**	**163**	*e*Pn		**Pn**		**14 47 32.1**	**-1.2**
	comp=Z,139nm,0.7s								
WRAB				*e*Sn		**Sn**		**14 49 56.4**	**-7.4**
WRA	**Warramunga Arr**	**13.64**	**163**	P		**Pn**		**14 47 32.0**	**-1.4**
	comp=Z,16nm,0.3s,baz=337,slow=13,SNR=266								
WRA				S		**Sn**		**14 49 57.0**	**-7.0**
	comp=Z,21nm,0.3s,baz=334,slow=22,SNR=9.6								
WB2	**Warramunga Arr**	**13.64**	**163**	*e*P		**Pn**		**14 47 32.0**	**-1.4**
WB2				*e*S		**Sn**		**14 49 57.7**	**-6.4**
MTNI	**Mataram**	**13.86**	**262**	P		**Pn**		**14 47 38.2**	**+1.9**
	comp=Z,141nm,0.8s								
SMKI	**Samarinda**	**14.31**	**296**	P		**Pn**		**14 47 45.9**	**+3.9**
	comp=Z,144nm,1.0s								
COEN	**Coen**	**14.70**	**120**	*e*Pn		**Pn**		**14 47 48.3**	**+1.5**
	comp=Z,77nm,1.0s								
COEN				*e*Sn		**Sn**		**14 50 22.5**	**-7.1**
BUKP	**Musuan**	**15.48**	**341**	*e*P		**Pn**		**14 47 56.7**	**0.0**
BBKI	**Banjar Baru**	**15.52**	**282**	P		**Pn**		**14 47 59.6**	**+2.5**
	comp=Z,842nm,1.3s								
PLKI	**Palangkaraya**	**16.70**	**285**	P		**Pn**		**14 48 11.8**	**+0.1**
	comp=Z,474nm,1.1s								
ASAR	**Alice Springs**	**17.10**	**168**	P		**Pn**		**14 48 17.5**	**+1.0**
	comp=Z,8.3nm,0.3s,baz=333,slow=8.4,SNR=466								
ASAR				S		**Sn**		**14 51 21.4**	**-5.7**
	comp=Z,4.6nm,0.3s,baz=355,slow=26,SNR=7.2								
ASAR				ScP		ScP		14 56 14.4	-2.9
	baz=336,slow=1.4,SNR=5.0								
ASAR	**Alice Springs**	**17.10**	**168**	P		**Pn**		**14 48 17.5**	**+1.0**
ASAR				S		**S**		**14 51 21.4**	**-5.6**
PMG	**Port Moresby**	**17.12**	**100**	⇑*e*P		**Pn**		**14 48 21.7**	**+4.8**
PMG	**Port Moresby**	**17.12**	**100**	*e*P		**Pn**		**14 48 22.0**	**+5.2**
	comp=Z,82nm,0.9s								
SCPH	**Surigao**	**17.16**	**345**	⇓*e*P		**Pn**		**14 48 17.6**	**+0.3**
TRT	**Tretes**	**17.29**	**266**	⇑*e*P		**Pn**		**14 48 17.7**	**-1.2**
MBWA	**Marble Bar**	**17.36**	**214**	*e*Pn		**Pn**		**14 48 19.3**	**-0.3**
	comp=Z,80nm,1.1s								
MBWA				*e*Sn		**Sn**		**14 51 16.0**	**-17**
TBP	**Tagbilaran**	**17.57**	**339**	*e*P		**Pn**		**14 48 22.1**	**-0.1**
MSLP	**Maasin**	**17.67**	**343**	*e*P		**Pn**		**14 48 24.6**	**+1.2**
SJI	**Sawahan**	**18.15**	**266**	P		**P**		**14 48 27.6**	**-0.2**
	comp=Z,168nm,1.2s								
PBKI	**Pangkalan Bun**	**18.77**	**282**	P		**P**		**14 48 35.3**	**+0.7**
	comp=Z,912nm,1.0s								
KKM	**Kota Kinabalu**	**18.85**	**313**	*e*P		**P**		**14 48 34.7**	**-0.7**
STKI	**Sintang**	**19.77**	**290**	P		**P**		**14 48 46.1**	**+0.7**
	comp=Z,74nm,1.2s								
CUYO	**Cuyo Island**	**19.77**	**333**	*e*P		**P**		**14 48 45.4**	**0.0**
BJII	**Banjamegara**	**20.19**	**267**	P		**P**		**14 48 53.2**	**+3.3**
	comp=Z,82nm,1.5s								
CTA	**Charters Tower**	**20.49**	**131**	*e*P		**P**		**14 48 58.0**	**+4.9**
	comp=Z,8.2nm,0.8s								
CTA				*e*S		**S**		**14 52 42.8**	**+7.3**
CTA	**Charters Tower**	**20.49**	**131**	P		**P**		**14 48 57.6**	**+4.5**
	comp=Z,9.2nm,0.7s,baz=308,slow=11,SNR=12								
CTA				LR		LR		14 56 26.7	
	comp=Z,89nm,20.6s,baz=130,slow=35								
CTAO	**Charters Tower**	**20.49**	**131**	*e*P		**P**		**14 48 57.1**	**+4.0**
CTAO				*e*S		**S**		**14 52 38.9**	**+3.4**
CTAO				pmax		pmax			
	comp=Z,23nm,1.1s								
CTAO	**Charters Tower**	**20.49**	**131**	*e*P		**P**		**14 48 57.1**	**+4.0**
	comp=Z,23nm,1.1s								
CTAO				*e*S		**S**		**14 52 38.9**	**+3.4**
PVCP	**Virac**	**21.16**	**344**	*e*P		**P**		**14 49 00.9**	**+0.6**
AUQP	**San Andres**	**21.36**	**340**	*e*P		**P**		**14 49 04.4**	**+2.0**
KSM	**Kuching**	**21.37**	**292**	*e*P		**P**		**14 49 00.2**	**-2.4**
LEM	**Lembang**	**22.27**	**269**	P		**P**		**14 49 11.1**	**-1.0**
	comp=Z,237nm,0.9s,mb5.5								
LUBP	**Lubang**	**22.67**	**335**	*e*P		**P**		**14 49 15.4**	**-0.6**
TPI	**Tanjungpandan**	**22.68**	**279**	⇑*e*P		**P**		**14 49 18.0**	**+1.8**
CBJI	**Citeko**	**23.05**	**270**	P		**P**		**14 49 16.3**	**-3.3**
	comp=Z,502nm,0.9s,mb5.8								
FORT	**Forrest**	**23.85**	**184**	*e*P		**P**		**14 49 29.1**	**+2.4**
	comp=Z,41nm,0.6s,mb4.9								
FORT				*e*S		S		14 53 53.5	+20
PPBI	**Pangkal Pinang**	**24.29**	**280**	P		**P**		**14 49 30.5**	**-0.4**
	comp=Z,79nm,0.8s,mb5.1								
GUMO	**Guam**	**25.10**	**36**	P		**P**		**14 49 39.5**	**+1.3**
	comp=Z,39nm,0.5s,mb5.1,baz=166,slow=12,SNR=5.4								
APYP	**Conner**	**26.07**	**341**	*e*P		**P**		**14 49 43.4**	**-3.6**
STKA	**Stephens Creek**	**27.11**	**158**	*e*P		**P**		**14 49 58.5**	**+2.4**
	comp=Z,9.5nm,1.0s,mb4.3								
STKA	**Stephens Creek**	**27.11**	**158**	P		**P**		**14 49 58.1**	**+2.0**
	comp=Z,4.0nm,0.5s,mb4.2,baz=325,slow=12,SNR=11								
STKA				LR		LR		15 02 54.0	
	comp=Z,107nm,18.7s,baz=200,slow=41								
KLBR	**Kellerberrin**	**27.14**	**203**	*e*P		**P**		**14 49 57.0**	**+0.6**
	comp=Z,48nm,1.3s,mb4.9								
KLBR				*e*S		S		14 55 08.8	+43
MUN	**Mundaring**	**28.11**	**206**	*e*P		**P**		**14 50 05.7**	**+0.6**
MUN				*e*S		S		14 55 27.9	+47
NWAO	**Narrogin (SRO)**	**28.52**	**203**	P		**P**		**14 50 08.8**	**+0.1**
	comp=Z,12nm,0.9s,mb4.5,baz=28,slow=12,SNR=9.8								
NWAO	**Narrogin (SRO)**	**28.52**	**203**	*e*P		**P**		**14 50 09.8**	**+1.0**
HNR	**Honiara**	**29.70**	**97**	LR		LR		15 01 43.3	
	comp=Z,115nm,18.1s,baz=334,slow=35								
PPI	**Padang Panjang**	**30.25**	**281**	P		**P**		**14 50 24.6**	**+0.3**
	comp=Z,52nm,1.1s,mb5.1								
CAN	**Canberra**	**33.24**	**151**	*e*P		**P**		**14 50 53.0**	**+2.8**
JOW	**Kunigami**	**33.55**	**357**	P		**P**		**14 50 53.0**	**+0.1**
	comp=Z,32nm,0.8s,mb5.2,baz=196,slow=8.9,SNR=7.7								
CBIJ	**Chichi jima**	**35.76**	**19**	P		**P**		**14 51 11.8**	**-0.1**
	comp=Z,58nm,0.8s,mb5.5,baz=296,slow=18,SNR=5.6								
CMAR	**Chiang Mai Arr**	**39.69**	**310**	P		**P**		**14 51 44.5**	**-0.7**
	comp=Z,2.8nm,0.6s,mb4.3,baz=139,slow=7.4,SNR=17								
CMAR				ScP		ScP		14 57 23.6	-3.2
	comp=Z,1.1nm,0.7s,baz=154,slow=3.4,SNR=6.8								
CHTO	**Chiang Mai**	**39.90**	**310**	*e*P		**P**		**14 51 46.3**	**-0.6**
WHN	**Wuhan**	**40.14**	**339**	P		**P**		**14 51 48.0**	**-0.6**
NJ2	**Nanjing**	**40.16**	**345**	*e*P		**P**		**14 51 48.8**	**0.0**
NJ2				AMB		AMB			
	comp=Z,20nm,0.5s,mb5.2								
GYA	**Guiyang**	**40.16**	**327**	⇑*i*P		**P**		**14 51 50.0**	**+1.1**
GYA				AP		pP		14 52 17.5	+0.3
GYA				XP		sP		14 52 30.8	-0.8
GYA				PP		PP		14 53 28.5	+4.6
GYA				S		**S**		**14 57 49.3**	**+3.1**
GYA				AMB		AMB			
	comp=Z,10.0nm,1.0s,mb4.6								
GYA				AMB		AMB			
	comp=Z,90nm,4.9s								
MJAR	**Matsushiro Arr**	**43.86**	**9**	P		**P**		**14 52 17.8**	**-1.0**
	comp=Z,19nm,0.8s,mb4.9,baz=188,slow=9.8,SNR=43								
MJAR	**Matsushiro Arr**	**43.86**	**9**	P		**P**		**14 52 17.8**	**-1.0**
MAT	**Matsushiro**	**43.86**	**9**	P		**P**		**14 52 17.4**	**-1.4**
MAT				*e*S		**S**		**14 58 34.8**	**-5.7**
KSRS	**Korea Array**	**44.14**	**358**	P		**P**		**14 52 20.9**	**-0.1**
	comp=Z,5.3nm,0.6s,mb4.4,baz=173,slow=8.8,SNR=39								
CD2	**Chengdu**	**45.22**	**328**	P		**P**		**14 52 31.3**	**+1.6**
CD2				AP		pP		14 52 56.8	-1.8
CD2				PP		PP		14 54 19.5	+1.4
CD2				S		**S**		**14 59 03.0**	**+2.6**
CD2				SS		SS		15 02 20.3	-5.3
CD2				AMB		AMB			
	comp=Z,10.0nm,0.7s,mb4.7								
CD2				AMB		AMB			
	comp=Z,30nm,5.2s								
CD2				LR		LR			
	comp=E,250nm,12.0s								
CD2				LR		LR			
	comp=Z,160nm,12.0s								
XAN	**Xi'an**	**45.35**	**335**	P		**P**		**14 52 29.0**	**-1.6**
XAN				AMB		AMB			
	comp=Z,20nm,1.0s,mb4.8								
XAN				AMB		AMB			
	comp=Z,77nm,5.4s								
XAN				LR		LR			
	comp=E,123nm,14.8s								
XAN				LR		LR			
	comp=Z,205nm,17.7s								
BJT	**Baijiatuau**	**48.39**	**346**	*e*P		**P**		**14 52 53.7**	**-0.5**
BJT				pmax		pmax			
	comp=Z,20nm,0.5s								
BJT	**Baijiatuau**	**48.39**	**346**	*e*P		**P**		**14 52 53.7**	**-0.5**
	comp=Z,20nm,0.5s,mb5.2								
BJI	**Beijing**	**48.41**	**346**	P		**P**		**14 52 53.5**	**-0.8**
BJI				AMB		AMB			
	comp=Z,41nm,0.6s,mb5.4								
BJI	**Beijing**	**48.41**	**346**	P		**P**		**14 52 53.6**	**-0.7**
BJI				pmax		pmax			
	comp=Z,41nm,0.6s,mb5.4								
BJI	**Beijing**	**48.41**	**346**	P		**P**		**14 52 53.6**	**-0.7**
	comp=Z,41nm,0.6s,mb5.4								
LZH	**Lanzhou**	**49.32**	**332**	*e*P		**P**		**14 53 01.0**	**-0.4**
LZH				PP		PP		14 54 58.5	+1.9
LZH				S		**S**		**14 59 50.5**	**-7.7**
LZH				AMB		AMB			
	comp=Z,41nm,1.4s,mb5.2								
LZH				AMB		AMB			
	comp=Z,130nm,6.3s								
LZH				LR		LR			
	comp=E,213nm,14.0s								
LZH				LR		LR			
	comp=Z,283nm,15.0s								
LZH	**Lanzhou**	**49.32**	**332**	*e*P		**P**		**14 53 01.0**	**-0.4**
LZH				*PP		pP		14 53 27.0	-3.7
LZH				*SP		sP		14 53 39.5	-5.3
LZH								14 54 58.5	
LZH				S		**S**		**14 59 50.4**	**-7.8**
LZH				*eSS		SS		15 03 23.0	-8.7
LZH				pmax		pmax			
	comp=Z,41nm,1.4s,mb5.2								
LZH				MLR		MLR			
	comp=Z,280nm,15.0s								
LZH	**Lanzhou**	**49.32**	**332**	*e*P		**P**		**14 53 01.0**	**-0.4**
	comp=Z,41nm,1.4s,mb5.2								
LZH				pP		pP

MDJ					SS	SS	15 04 04.5	+2.3	
MDJ					AMB	AMB			
	comp=Z,17nm,0.8s,mb5.1								
MDJ					AMB	AMB			
	comp=Z,89nm,5.4s								
MDJ					LR	LR			
	comp=N,332nm,16.2s								
MDJ					LR	LR			
	comp=E,234nm,25.0s								
MDJ					LR	LR			
	comp=Z,652nm,14.7s								
MDJ	**Mudanjiang**	**51.26**	**360**	*e*P	**P**		**14 53 15.7**	**0.0**	
	comp=Z,8.1nm,0.6s,mb4.9								
GTA	**Gaotai**	**53.89**	**331**	*e*P	**P**		**14 53 35.3**	**0.0**	
GTA				AP	pP		14 54 01.8	-3.3	
GTA				S	**S**		**15 01 02.3**	**+1.5**	
GTA				AMB	AMB				
	comp=Z,12nm,0.9s,mb4.9								
GTA				AMB	AMB				
	comp=Z,111nm,4.5s								
GTA				LR	LR				
	comp=N,92nm,12.6s								
GTA				LR	LR				
	comp=E,106nm,13.5s								
GTA				LR	LR				
	comp=Z,84nm,14.7s								
HABR	**Khabarovsk**	**55.29**	**4**	*e*P	**P**		**14 53 44.7**	**-0.5**	
HABR				*e*			14 54 45.6		
HABR				*e*S	**S**		**15 01 16.5**	**-2.7**	
KLR	**Kul'dur**	**55.89**	**1**	*e*P	**P**		**14 53 44.7**	**-4.8**	
KLR				pmax	pmax				
	comp=Z,50nm,1.8s,mb5.2								
HYB	**Hyderabad**	**56.30**	**296**	*i* P	**P**		**14 53 54.0**	**+1.0**	
HYB	**Hyderabad**	**56.30**	**296**	*e*P	**P**		**14 53 55.0**	**+2.0**	
ULN	**Ulaanbaatar**	**58.16**	**342**	*e*P	**P**		**14 54 05.8**	**+0.3**	
ULN				pmax	pmax				
	comp=Z,20nm,0.7s,mb5.3								
ULN	**Ulaanbaatar**	**58.16**	**342**	*e*P	**P**		**14 54 05.8**	**+0.3**	
	comp=Z,20nm,0.7s,mb5.2								
SONM	**Songino Array**	**58.34**	**341**	P	**P**		**14 54 06.9**	**+0.1**	
	comp=Z,4.1nm,0.4s,mb4.8,baz=160,slow=7.1,SNR=48								
ZAK	**Zakamensk**	**61.56**	**341**	*e*P	**P**		**14 54 27.5**	**-1.2**	
ZAK				pmax	pmax				
	comp=Z,4.0nm,1.1s,mb4.4								
WMQ	**Urumqi**	**63.32**	**327**	P	**P**		**14 54 40.5**	**0.0**	
WMQ				AP	pP		14 55 08.0	-3.2	
WMQ				PCP	PcP		14 55 17.0	+0.4	
WMQ				PP	PP		14 57 02.0	+0.5	
WMQ				S	**S**		**15 03 01.0**	**-1.8**	
WMQ				AMB	AMB				
	comp=Z,13nm,0.8s,mb4.9								
WMQ				AMB	AMB				
	comp=Z,153nm,5.6s								
WMQ				LR	LR				
	comp=N,293nm,18.7s								
WMQ				LR	LR				
	comp=E,239nm,17.8s								
WMQ				LR	LR				
	comp=Z,345nm,20.6s								
MOY	**Mondy**	**63.42**	**340**	*e*P	**P**		**14 54 41.7**	**+0.7**	
PEA0B	**Petropavlovsk-**	**64.19**	**18**	*e*P	**P**		**14 54 46.9**	**+0.8**	
PETK	**Petropavlovsk-**	**64.19**	**18**	P	**P**		**14 54 46.9**	**+0.8**	
	comp=Z,1.1nm,0.6s,mb4.9,baz=173,slow=4.5,SNR=80								
HVS	**Khovu-Aksy**	**65.70**	**336**	*c* /P	**P**		**14 54 55.8**	**-0.1**	
BOD	**Bodaibo**	**65.78**	**351**	*e*P	**P**		**14 54 55.4**	**-0.9**	
BOD				pmax	pmax				
	comp=Z,14nm,0.9s,mb4.8								
MK31	**Makanchi Array**	**68.15**	**327**	*e*P	**P**		**14 55 11.4**	**-0.1**	
MKAR	**Makanchi Array**	**68.15**	**327**	P	**P**		**14 55 11.2**	**-0.2**	
	comp=Z,28nm,0.6s,mb5.3,baz=115,slow=8.2,SNR=193								
YAK	**Yakutsk**	**68.70**	**360**	*e*P	**P**		**14 55 14.2**	**-0.4**	
YAK				pmax	pmax				
	comp=Z,55nm,0.8s,mb5.4								
YAK	**Yakutsk**	**68.70**	**360**	*e*P	**P**		**14 55 14.2**	**-0.5**	
	comp=Z,55nm,0.8s,mb5.4								
TKM2	**Tokmak 2**	**69.92**	**320**	*e*P	**P**		**14 55 22.6**	**+0.1**	
TKM2				pmax	pmax				
	comp=Z,6.0nm,0.7s,mb4.5								
TKM2	**Tokmak 2**	**69.92**	**320**	*e*P	**P**		**14 55 22.6**	**+0.1**	
	comp=Z,6.5nm,0.7s,mb4.6								
UCH	**Uchtor**	**70.26**	**319**	*e*P	**P**		**14 55 25.7**	**+1.1**	
	comp=Z,3.9nm,0.8s,mb4.3								
AML	**Almayashu**	**70.75**	**319**	*e*P	**P**		**14 55 28.3**	**+0.7**	
	comp=Z,7.1nm,0.8s,mb4.5								
EKS2	**Erkin-Say**	**70.95**	**320**	*e*P	**P**		**14 55 29.1**	**+0.3**	
	comp=Z,5.9nm,0.8s,mb4.5								
ZAA0	**Zalesovo Array**	**71.49**	**334**	*e*P	**P**		**14 55 30.4**	**-1.4**	
ZALV	**Zalesovo Beam**	**71.49**	**334**	P	**P**		**14 55 30.5**	**-1.3**	
	comp=Z,11nm,0.7s,mb4.8,baz=121,slow=5.0,SNR=40								
ZALV	**Zalesovo Beam**	**71.49**	**334**	P	**P**		**14 55 30.5**	**-1.3**	
SEY	**Seymchan**	**71.68**	**11**⇑	*e*P	**P**		**14 55 33.1**	**+0.4**	
KURK	**Kurchatov**	**72.44**	**329**⇑	*e*P	**P**		**14 55 37.0**	**-0.5**	
KURK				pmax	pmax				
	comp=Z,18nm,1.2s,mb4.8								
KURK	**Kurchatov**	**72.44**	**329**	*e*P	**P**		**14 55 36.8**	**-0.7**	
	comp=Z,7.2nm,0.8s,mb4.5								
NVS	**Novosibirsk**	**72.78**	**334**	*e*P	**P**		**14 55 37.1**	**-2.3**	
NVS				*e**PP	pP		14 56 16.5	+5.6	
NVS				*i* S	S		15 04 47.3	-7.5	
NVS				*e*			15 05 40.0		
NVS				pmax	pmax				
	comp=Z,9.0nm,0.9s,mb4.6								
NVS				pmax	pmax				
	comp=N,7.0nm,0.9s								
NVS				pmax	pmax				
	comp=E,9.0nm,0.9s								
NVS				smax					
	comp=E,42nm,1.5s								
MAW	**Mawson**	**75.08**	**201**	P	**P**		**14 55 53.8**	**+1.2**	
	comp=E,13nm,0.7s,mb4.8,baz=81,slow=5.9,SNR=17								
MAW	**Mawson**	**75.08**	**201**	*e*P	**P**		**14 55 53.6**	**+0.9**	
MAW				pmax	pmax				
	comp=Z,26nm,1.1s								
MAW	**Mawson**	**75.08**	**201**	*e*P	**P**		**14 55 53.6**	**+0.9**	
	comp=Z,26nm,1.1s,mb4.9								
BILL	**Bilibino**	**78.98**	**13**⇓	*e*P	**P**		**14 56 16.9**	**+2.5**	
BILL				pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.4								
SYO	**Syowa Base**	**83.79**	**201**⇓	*e*P	**P**		**14 56 39.0**	**-0.9**	
SYO	**Syowa Base**	**83.79**	**201**⇓	*e*PcP	PcP		14 56 46.0	+2.3	
SVE	**Sverdlovsk**	**84.69**	**329**	*e*P	**P**		**14 56 44.4**	**-0.1**	
SVE				pmax	pmax				
	comp=Z,11nm,1.2s,mb4.7								
ARU	**Arti**	**85.63**	**328**	*d* /P	**P**		**14 56 48.1**	**-1.1**	
ARU				*e*			15 00 10.8		
ARU				S	S		15 06 55.9	-15	
ARU				pmax	pmax				
	comp=Z,9.0nm,0.8s,mb4.8								
ARU	**Arti**	**85.63**	**328**	*e*P	**P**		**14 56 48.0**	**-1.2**	
	comp=Z,5.3nm,0.8s,mb4.5								
NAY	**Al-Naaiem**	**87.08**	**300**	*e*P	**P**		**14 56 55.8**	**-1.2**	
	baz=300								
NAY				AMb	AMB		14 56 56.8		
	comp=Z,17nm,0.8s,mb5.0,baz=300								
MIB	**Mutribah**	**87.09**	**300**	*e*P	**P**		**14 56 56.1**	**-1.0**	
	baz=300								
MIB				AMb	AMB		14 56 56.9		
	comp=Z,21nm,1.2s,mb4.9,baz=300								
RST	**Umm Al-Ruwaisa**	**87.34**	**300**	*e*P	**P**		**14 56 56.8**	**-1.4**	
	baz=300								
RST				AMb	AMB		14 56 57.8		
	comp=Z,26nm,0.8s,mb5.2,baz=300								
KMBO	**Kilima Mbogo**	**92.64**	**269**	P	**P**		**14 57 22.4**	**-1.0**	
	comp=Z,0.7nm,0.3s,mb4.4,baz=32,slow=23,SNR=3.1								
KMBO	**Kilima Mbogo**	**92.64**	**269**	*i* P	**P**		**14 57 24.7**	**+1.4**	
KMBO				pmax	pmax				
	comp=Z,1.0nm,0.3s								
SNAA	**Sanae**	**95.79**	**193**	*e*P	**P**		**14 57 37.6**	**+1.0**	
SNAA	**Sanae**	**95.79**	**193**⇑	*e*P	**P**		**14 57 33.5**	**-3.1**	
DAWY	**Dawson**	**96.38**	**26**	*e*P	**P**		**14 57 39.6**	**+0.3**	
VNA2	**Neumayer--Watz**	**97.36**	**193**	*e*P	**P**		**14 57 44.7**	**+1.0**	
VNA2				*e*			15 02 19.9		
PDAR	**Pinedale Array**	**116.77**	**45**	PKP		PKPdf	15 02 55.6	+0.9	
	comp=Z,1.1nm,0.6s,baz=121,slow=0.6,SNR=6.2								
RSSD	**Black Hills**	**120.13**	**42**	*e*PKIKP		PKPdf	15 03 01.5	+0.3	
ULM	**Lac du Bonnet**	**122.32**	**33**	PKP		PKPdf	15 03 03.8	-1.4	
	comp=Z,3.3nm,0.5s,baz=306,slow=2.0,SNR=6.9								
TXAR	**Lajitas Array**	**124.83**	**59**	PKP		PKPdf	15 03 11.8	+1.1	
	comp=Z,0.8nm,0.8s,baz=302,slow=1.0,SNR=7.3								
TXAR	**Lajitas Array**	**124.83**	**59**	PKP		PKPdf	15 03 11.8	+1.1	
ESDC	**Sonseca Array**	**127.45**	**316**	PKP		PKPdf	15 03 15.8	+0.5	
	comp=Z,0.3nm,0.3s,baz=186,slow=20,SNR=4.7								
JCT	**Junction City**	**127.79**	**57**	*e*PKIKP		PKPdf	15 03 17.5	+1.2	
TORD	**Torodi Ar. Bea**	**128.83**	**281**	PKP		PKPdf	15 03 19.1	+0.4	
	comp=Z,0.6nm,0.7s,baz=132,slow=4.3,SNR=4.7								
JTS	**JuntasAbangare**	**145.24**	**82**	PKPbc		PKPbc	15 03 50.8	+2.0	
	baz=264,slow=9.2								
LVC	**Limon Verde**	**145.31**	**148**	PKPbc		PKPbc	15 03 50.6	+1.8	
	comp=Z,1.0nm,0.4s,baz=112,slow=19,SNR=2.6								
LVC	**Limon Verde**	**145.31**	**148**	PKPbc		PKPbc	15 03 50.6	+1.8	
CPUP	**Villa Florida**	**146.22**	**168**	PKPbc		PKPbc	15 03 51.9	+0.5	
	comp=Z,4.2nm,0.9s,baz=188,slow=3.7,SNR=6.6								
CPUP	**Villa Florida**	**146.22**	**168**	PKPbc		PKPbc	15 03 51.9	+0.5	
LPAZ	**La Paz**	**150.79**	**142**	PKPbc		PKPbc	15 04 02.9	-0.7	
	comp=Z,1.5nm,0.8s,baz=31,slow=4.3,SNR=5.6								
LPAZ	**La Paz**	**150.79**	**142**	*e*PKPbc		PKPbc	15 04 05.5	+2.0	

NIED ***25*** *15:01:00,45.20N×150.50E,h26km,Mw4.5 Best double couple: M0 7.38000×10^15 NP1:φ=338.00000°,δ=85.00000°, λ=56.00000°. NP2:φ=240.00000°,δ=34.00000°,λ=171.00000°.*
JMA ***25*** *15:01:21.6±0.7, 45.20N×150.49E, h30km, M5.2*
ISCJB ***25*** *15:01:22.2±0.5, 45.11N±0.04×150.31E±0.04, h42km±4km, mb4.8/89, MS3.9/22, Error ellipse: s-maj=6.5km s-min=3.5km az=152.7*
BJI ***25*** *15:01:22.7, 45.11N×150.36E, h55km, mB4.8, mb4.7, Ms4.2, Msz4.1*
MOS ***25*** *15:01:22.7±0.7, 45.16N×150.34E, h46km, mb5.0/39, Error ellipse: s-maj=8.3km s-min=5.7km az=111.0*
NEIC ***25*** *15:01:24.8±0.7, 45.18N×150.31E, h50km±5km, mb4.8/54, MS4.2/4, Error ellipse: s-maj=6.2km s-min=3.6km az=160.0*
SKHL ***25*** *15:01:24.7±0.3, 45.36N×150.00E, h52km±21km, mb5.1/4, Ms4.2/4*
IDC ***25*** *15:01:25.1±2.8, 45.23N×150.33E, h53km±25km, mb4.2/18, mb1 4.3/20, mb1mx4.3/25, mbtmp4.2/20, ML4.3/2, MS3.7/11, Ms1 3.7/11, ms1mx3.4/37, Error ellipse: s-maj=16.2km s-min=11.3km az=139.0*
SZGRF ***25*** *15:01:34.2, 47.53N×150.09E, h33km, mb4.9, Kuril Islands, Russia*
ISC 25 15:01:24.5±0.4, 45.10N±0.04×150.31E±0.04, h48km±3km, h53km±2.0km:pP-P, n287, σ0.98/299, mb4.8/89, MS3.9/22, 22C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
KUR	**Kuril'sk**	**1.73**	**275**	*e*P		**Pn**	**15 01 47.0**	**-5.2**	
KUR					AMB	AMB	15 01 50.0		
	571nm,0.4s								
KUR					AMB	AMB	15 01 50.0		
	261nm,0.4s								
KUR					AMB	AMB	15 01 50.0		
	1μm,0.4s								
KUR					AMB	AMB	15 01 56.0		
	2μm,1.0s								
KUR				*i* S		**Sn**	**15 02 04.0**	**-9.1**	
KUR				A			15 02 14.0		
	4μm,0.5s								
KUR				A			15 02 14.0		
	5μm,0.5s								
KUR				A			15 02 25.0		
	10μm,1.0s								
KUR				A			15 02 25.0		
	12μm,1.0s								
YUK	**Yuzh-Kuril'sk**	**3.35**	**253**	*e*PN		**Pn**	**15 02 15.0**	**+0.6**	
YUK				*e*S		**Sn**	**15 02 52.5**	**-0.4**	
YUK				pmax	pmax				
	comp=N,710nm,0.4s								
YUK				pmax	pmax				
	comp=Z,840nm,0.4s								
YUK				pmax	pmax				
	comp=E,880nm,0.5s								
YUK				smax					
	comp=N,15μm,1.1s								
YUK				smax					
	comp=E,6μm,0.7s								
YUK				smax					
	comp=N,4μm,0.5s								
YUK				smax					
	comp=E,1μm,0.4s								
YUK	**Yuzh-Kuril'sk**	**3.35**	**253**	*e*P		**Pn**	**15 02 15.0**	**+0.6**	
YUK				AMB		AMB	15 02 20.5		
	comp=E,710nm,0.4s								
YUK				AMB		AMB	15 02 20.5		
	comp=E,840nm,0.4s								
YUK				AMB		AMB	15 02 20.5		
	comp=E,880nm,0.5s								
YUK				*e*S		**Sn**	**15 02 52.5**	**-0.4**	
YUK				A			15 03 10.0		
	comp=E,6μm,0.7s								
YUK				A			15 03 10.0		
	comp=E,15μm,1.1s								
YUK				A			15 03 11.5		
	comp=E,1μm,0.4s								
YUK				A			15 03 11.5		
	comp=E,4μm,0.5s								
NEM2	**Nemuro 2**	**3.71**	**244**	P		**Pn**	**15 02 18.2**	**-1.1**	
NEM2				*e*S		**Sn**	**15 03 00.4**	**-1.4**	
JRA	**Rausu**	**3.89**	**254**	P		**Pn**	**15 02 22.7**	**+1.0**	
JNK	**Nakash**	**4.29**	**251**	P		**Pn**	**15 02 28.0**	**+0.8**	
JNK				*e*S		**Sn**	**15 03 16.5**	**+0.6**	
JAK	**Akkeshi**	**4.56**	**244**	P		**Pn**	**15 02 30.0**	**-0.9**	
JAK				*e*S		**Sn**	**15 03 20.5**	**-2.1**	
JTKR	**Abashiri--Toko**	**4.72**	**258**	P		**Pn**	**15 02 34.2**	**+1.2**	
JAR	**Ashorobuto**	**5.04**	**251**	P		**Pn**	**15 02 38.4**	**+0.9**	
JMP	**Maruseppu**	**5.09**	**260**	P		**Pn**	**15 02 39.7**	**+1.6**	
JOB	**Onbets**	**5.16**	**247**	P		**Pn**	**15 02 39.2**	**0.0**	
JKK2	**Kamakawa 2**	**5.55**	**260**	P		**Pn**	**15 02 46.3**	**+1.8**	
YSS	**Yuzh-Sakhalins**	**5.58**	**292**⇑	*i* PN		**Pn**	**15 02 45.0**	**+0.1**	
YSS				pmax	pmax				
	comp=Z,30nm,0.6s								
YSS				MLR	MLR				
	comp=E,2μm,15.0s								
YSS				MLR	MLR				
	comp=Z,2μm,15.0s								
YSS	**Yuzh-Sakhalins**	**5.58**	**292**⇑	*i* P		**Pn**	**15 02 45.0**	**+0.1**	
YSS				AMB	AMB		15 02 47.0		
	comp=Z,30nm,0.6s								
YSS				*e*S		**Sn**	**15 03 46.0**	**-1.6**	
YSS				A			15 03 51.0		
	comp=Z,70nm,0.7s								
YSS				*e*LQ			15 04 16.0		
YSS				AMS	AMS		15 04 58.0		
	comp=Z,2μm,15.0s								
YSS				AMS	AMS		15 04 58.0		
	comp=Z,2μm,15.0s								
YSS	**Yuzh-Sakhalins**	**5.58**	**292**	*e*Pn		**Pn**	**15 02 45.5**	**+0.7**	
	comp=Z,52nm,0.4s								
ASAJ	**Asahikawa**	**5.60**	**263**	P		**Pn**	**15 02 46.2**	**+1.1**	
	comp=Z,14nm,0.3s,baz=82,slow=19,SNR=57								
ASAJ					LR	LR	15 05 05.0		
	comp=Z,1μm,20.3s,baz=103,slow=39								
ASAJ	**Asahikawa**	**5.60**	**263**	P		**Pn**	**15 02 46.8**	**+1.7**	
ASAJ	**Asahikawa**	**5.60**	**263**	PN		**Pn**	**15 02 46.3**	**+1.2**	
ASAJ				pmax	pmax				
	comp=Z,14nm,0.3s								
ASAJ				MLR	MLR				
	comp=Z,1μm,20.3s								
JCH	**Churui**	**5.61**	**246**	P		**Pn**	**15 02 44.8**	**-0.5**	
JCH				*e*S		**Sn**	**15 03 46.5**	**-1.8**	
JFR	**Furan**	**5.88**	**253**	P		**Pn**	**15 02 50.7**	**+1.7**	
JWK2	**Keihoku**	**5.95**	**275**	P		**Pn**	**15 02 53.4**	**+3.5**	
JAB	**Ashibetsu**	**6.02**	**257**	P		**Pn**	**15 02 53.7**	**+2.8**	
JEM	**Erimo**	**6.04**	**242**	P		**Pn**	**15 02 52.0**	**+0.7**	
JEM				*e*S		**Sn**	**15 03 57.4**	**-1.7**	
ERM	**Erimo**	**6.04**	**242**	*i* PN		**Pn**	**15 02 53.0**	**+1.7**	
ERM	**Erimo**	**6.04**	**242**	*e*Pn		**Pn**	**15 02 52.0**	**+0.7**	
	comp=Z,785nm,0.6s								
JNBK	**Urakawa-nobuka**	**6.16**	**245**	P		**Pn**	**15 02 52.0**	**-0.9**	
JBT2	**Biratori 2**	**6.19**	**251**	P		**Pn**	**15 02 53.3**	**0.0**	
JEW	**Eniwo**	**6.78**	**254**	P		**Pn**	**15 03 03.1**	**+1.7**	
SKR	**Severo-Kuril's**	**6.81**	**33**	*e*P		**Pn**	**15 03 01.2**	**-0.5**	
SKR				AMB		AMB	15 03 04.0		
	comp=Z,60nm,0.5s								
SKR				AMB		AMB	15 03 04.0		
	comp=Z,80nm,0.5s								
SKR				AMB		AMB	15 03 04.0		
	comp=Z,90nm,0.5s								
SKR				*e*S		**Sn**	**15 04 15.0**	**-2.8**	
SKR				A			15 04 22.0		
	comp=Z,160nm,0.6s								
SKR				A			15 04 22.0		
	comp=Z,140nm,0.6s								
SKR				A			15 04 22.0		
	comp=Z,80nm,0.6s								
SKR				AMS		AMS	15 05 44.0		
	comp=Z,3μm,16.0s								
SKR				AMS		AMS	15 05 44.0		
	comp=Z,2μm,16.0s								
UGL	**Uglegorsk**	**6.89**	**308**	*e*PN		**Pn**	**15 03 05.0**	**+2.2**	
UGL				S		**Sn**	**15 04 22.0**	**+2.2**	
UGL				pmax	pmax				
	comp=Z,59nm,0.6s								
UGL				smax					
	comp=N,64nm,0.6s								
UGL				smax					
	comp=E,95nm,0.6s								
UGL				MLR	MLR				
	comp=N,1μm,15.0s								
UGL				MLR	MLR				
	comp=E,1μm,15.0s								
UGL				MLR	MLR				
	comp=Z,2μm,15.0s								
UGL	**Uglegorsk**	**6.89**	**308**	*e*rx		rx	15 03 14.0		
UGL				*e*S		**Sn**	**15 04 22.0**	**+2.2**	
UGL				A			15 04 24.0		
	comp=Z,64nm,0.6s								
UGL				A			15 04 24.0		
	comp=Z,95nm,0.6s								
UGL				AMS	AMS		15 06 00.0		
	comp=Z,1μm,15.0s								
UGL				AMS	AMS		15 06 00.0		
	comp=Z,1μm,15.0s								
UGL				AMS	AMS		15 06 00.0		
	comp=Z,2μm,15.0s								
JNB	**Noboribetsu**	**7.21**	**252**	P		**Pn**	**15 03 07.1**	**-0.1**	
JKB	**Kayabe**	**7.47**	**248**	P		**Pn**	**15 03 10.3**	**-0.5**	
JKB				*e*S		**Sn**	**15 04 29.8**	**-4.4**	
TYV	**Tymovskoe**	**7.72**	**321**	*e*P		**Pn**	**15 03 15.0**	**+0.9**	
TYV				*e*LQ			15 05 36.0		
TYV				AMS	AMS		15 06 32.0		
	comp=Z,2μm,16.0s								
JYM2	**Yakumo 2**	**7.81**	**251**	P		**Pn**	**15 03 15.4**	**0.0**	
JSH	**Shimam**	**7.81**	**255**	P		**Pn**	**15 03 18.0**	**+2.5**	
JANG	**Nango**	**8.01**	**237**	P		**Pn**	**15 03 15.3**	**-3.0**	
JANG				*e*S		**Sn**	**15 04 37.9**	**-10**	
JTM	**Tenmabayashi**	**8.04**	**241**	P		**Pn**	**15 03 17.1**	**-1.4**	
JTM				*e*S		**Sn**	**15 04 41.3**	**-6.7**	
JSR	**Shiriuchi**	**8.05**	**247**	P		**Pn**	**15 03 17.8**	**-0.9**	
JTH	**Tanohata**	**8.09**	**233**	P		**Pn**	**15 03 16.4**	**-3.0**	
JTH				*e*S		**Sn**	**15 04 38.0**	**-11**	
JOSM	**Okushiri--Mats**	**8.42**	**253**	P		**Pn**	**15 03 23.5**	**-0.4**	
OFUJ	**Ofunato**	**8.80**	**230**	P		**Pn**	**15 03 26.1**	**-2.9**	
OFUJ				*e*S		**Sn**	**15 04 56.6**	**-10**	
JRG	**Rokugo**	**9.16**	**235**	P		**Pn**	**15 03 31.5**	**-2.5**	
PEA0B	**Petropavlovsk-**	**9.36**	**28**	*e*Pn		**Pn**	**15 03 35.4**	**-1.2**	
PETK	**Petropavlovsk-**	**9.36**	**28**	P		**Pn**	**15 03 35.5**	**-1.0**	
	comp=Z,0.8nm,0.3s,baz=180,slow=10,SNR=22								
PETK					LR	LR	15 07 07.0		
	comp=Z,180nm,20.6s,baz=61,slow=37								
JIO	**Ouri**	**9.43**	**228**	*e*S		**Sn**	**15 05 12.6**	**-10**	
PET	**Petropavlovsk**	**9.63**	**32**	*e*PN		**Pn**	**15 03 40.2**	**-0.1**	
PET				pmax	pmax				
	comp=Z,16nm,1.1s								
PET				MLR	MLR				
	comp=Z,300nm,20.0s								
NKL	**Nikolayevsk**	**10.22**	**325**	*e*L			15 06 45.0		
NKL				AMS	AMS		15 07 56.0		
	comp=Z,600nm,18.0s								
NKL				AMS	AMS		15 07 56.0		
	comp=Z,800nm,18.0s								
JFK	**Kawauchi**	**10.49**	**226**	*e*S		**Sn**	**15 05 37.4**	**-11**	
HABR	**Khabarovsk**	**10.99**	**293**⇓	*e*PN		**Pn**	**15 04 01.7**	**+2.7**	
HABR				pmax	pmax				
	comp=Z,83nm,1.7s								
MAT	**Matsushiro**	**12.53**	**231**	P		**Pn**	**15 04 21.7**	**+1.7**	
MAT				S		**Sn**	**15 06 41.2**	**+3.3**	
KLR	**Kul'dur**	**13.28**	**295**	*e*PN		**Pn**	**15 04 30.4**	**+0.2**	
KLR				*e*			15 07 09.0		
KLR				pmax	pmax				
	comp=E,70nm,1.4s								
KLR				pmax	pmax				
	comp=Z,48nm,1.4s								
KLR				MLR	MLR				
	comp=E,700nm,15.0s								
KLR				MLR	MLR				
	comp=Z,900nm,15.0s								
MDJ	**Mudanjiang**	**14.71**	**275**	P		**Pn**	**15 04 48.0**	**-1.4**	
MDJ				S		**Sn**	**15 07 30.5**	**-0.4**	
MDJ				PCP	PcP		15 09 58.0	-0.8	
MDJ				SCP	ScP		15 13 28.3	-0.2	
MDJ				PCS	PcS		15 13 33.5	-0.2	
MDJ				SCS	ScS		15 17 04.0	-2.1	
MDJ				AMB	AMB				
	comp=Z,3.0nm,0.7s								
MDJ				AMB	AMB				
	comp=Z,21nm,4.3s								
MDJ				LR	LR				
	comp=N,349nm,19.1s								
MDJ				LR	LR				
	comp=E,234nm,24.4s								
MDJ				LR	LR				
	comp=Z,372nm,24.1s								
MDJ	**Mudanjiang**	**14.71**	**275**	*e*Pn		**Pn**	**15 04 50.3**	**+1.0**	
	comp=Z,15nm,0.8s								
CN2	**Changchun**	**17.79**	**275**	*e*P		**Pn**	**15 05 28.0**	**-0.4**	
CN2				*e*AP		pP	15 05 37.3	-2.4	
CN2				*e*XP		sP	15 05 43.8	-1.9	
CN2				*e*S		**S**	**15 08 41.5**	**-9.0**	
CN2				AMB	AMB				
	comp=Z,20nm,1.0s								
CN2				LR	LR				
	comp=N,400nm,16.0s								
CN2				LR	LR				
	comp=E,500nm,16.0s								
CN2				LR	LR				
	comp=Z,500nm,16.0s								
KSRS	**Korea Array**	**18.44**	**253**	P		**Pn**	**15 05 34.5**	**-2.0**	
	comp=Z,0.6nm,0.3s,baz=58,slow=11,SNR=21		

BILL MLR MLR
comp=Z,100nnm,16.0s,MS3.4
JOW Kunigami 25.37 231 P **P** **15 06 48.4 +1.2**
comp=Z,12nnm,0.8s,mb4.5,baz=125,slow=9.9,SNR=3.8
BJI Beijing 25.52 271 P **P** **15 06 49.0 +0.6**
BJI S **S** **15 11 08.8 -3.7**
BJI AMB AMB
comp=Z,15nnm,0.8s,mb4.6
BJI AMB AMB
comp=Z,121nnm,4.5s
BJI LR LR
comp=N,138nnm,14.7s,MS4.0
BJI LR LR
comp=E,382nnm,17.2s,MS4.0
BJI LR LR
comp=Z,234nnm,29.1s
BJI Beijing 25.52 271 P **P** **15 06 49.1 +0.7**
comp=Z,15nnm,0.8s,mb4.6
BJI S **S** **15 11 08.7 -3.8**
BJI LR LR
comp=Z,230nnm,29.1s,MS3.5
BOD Bodaibo 25.60 313 *eP* **P** **15 06 48.2 -0.8**
TIA Tai'an 26.55 262 *eP* **P** **15 06 58.0 +0.3**
HHC Hu-ho-hao-te 28.48 275 *eP* **P** **15 07 13.0 -1.9**
HHC AP pP 15 07 26.3 -1.1
HHC PP PP 15 08 04.5 -15
HHC PCP PcP 15 10 25.5 -0.2
HHC S **S** **15 11 54.5 -4.6**
HHC SS SS 15 13 23.5 -37
HHC SCP ScP 15 14 02.0 -0.8
HHC PCS PcS 15 14 07.0 -1.1
HHC AMB AMB
comp=Z,7.0nm,0.5s,mb4.5
HHC AMB AMB
comp=Z,99nm,5.7s
HHC LR LR
comp=N,308nm,12.4s,MS4.3
HHC LR LR
comp=E,434nm,12.2s,MS4.3
HHC LR LR
comp=Z,478nm,12.5s,MS4.3
ULN Ulaanbaatar 29.63 291 *eP* **P** **15 07 24.2 -0.9**
ULN pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
ULN Ulaanbaatar 29.63 291 *eP* **P** **15 07 24.2 -0.9**
comp=Z,2.3nm,0.6s,mb4.1
SONM Songino Array 30.07 291 P **P** **15 07 29.2 +0.2**
comp=Z,2.9nm,0.9s,mb4.0,baz=81,slow=7.7,SNR=15
WHN Wuhan 31.62 255 P **P** **15 07 41.8 -1.0**
WHN S **S** **15 12 49.3 +0.8**
WHN LR LR
comp=Z,482nm,18.0s,MS4.2
GUMO Guam 31.75 190 LR LR 15 22 11.6
comp=Z,61nm,18.2s,MS3.3,baz=335,slow=39
XAN Xi'an 33.43 265 P **P** **15 07 58.5 -0.1**
XAN AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
XAN AMB AMB
comp=Z,54nm,6.3s
LZH Lanzhou 35.99 272 *eP* **P** **15 08 21.0 +0.3**
LZH AP pP 15 08 32.5 -0.8
LZH XP sP 15 08 41.3 +2.4
LZH PP PP 15 09 47.0 +4.0
LZH AMB AMB
comp=Z,53nm,1.3s,mb5.3
LZH AMB AMB
comp=Z,160nm,4.1s
LZH LR LR
comp=E,157nm,15.2s
LZH LR LR
comp=Z,274nm,16.4s,MS4.1
LZH Lanzhou 35.99 272 *eP* **P** **15 08 21.1 +0.4**
LZH *PP pP 15 08 32.6 -0.7
LZH *SP sP 15 08 41.2 +2.3
LZH 15 09 47.0
LZH pmax pmax
comp=Z,53nm,1.3s,mb5.3
LZH MLR MLR
comp=Z,270nm,16.4s,MS4.1
LZH Lanzhou 35.99 272 *eP* **P** **15 08 21.1 +0.4**
comp=Z,53nm,1.3s,mb5.3
LZH pP pP 15 08 32.6 -0.7
LZH sP sP 15 08 41.2 +2.3
LZH PP PP 15 09 47.0 +4.0
LZH LR LR
comp=Z,270nm,16.4s,MS4.1
KDAK Kodiak Island 36.66 49 P **P** **15 08 24.7 -1.4**
comp=Z,22nm,0.7s,mb5.1,baz=297,slow=5.1,SNR=16
KDAK PcP PcP 15 10 47.2 -0.7
comp=Z,3.7nm,0.4s,baz=158,slow=11,SNR=4.0
PPLA Purkeypile 36.69 40 *eP* **P** **15 08 26.4 +0.1**
BPAW Bear Paw Mtn. 37.27 38 *eP* **P** **15 08 31.2 0.0**
comp=Z,5.4nm,0.9s,mb4.4
KTH Kantishna Hill 37.28 39 *eP* **P** **15 08 31.9 +0.6**
comp=Z,10nm,0.9s,mb4.7
GTA Gaotai 37.30 279 ⇑P **P** **15 08 32.5 +0.6**
GTA AP pP 15 08 45.3 +0.8
GTA XP sP 15 08 50.3 +0.2
GTA S **S** **15 14 15.8 -0.1**
GTA XS sS 15 14 37.0 -0.1
GTA SS SS 15 16 48.3 -12
GTA AMB AMB
comp=Z,24nm,0.6s,mb5.2
GTA AMB AMB
comp=Z,73nm,5.1s
GTA LR LR
comp=N,154nm,18.0s,MS4.0
GTA LR LR
comp=E,140nm,17.4s,MS4.0
GTA LR LR
comp=Z,224nm,15.6s,MS4.1
COLA College 38.64 37 *i* P **P** **15 08 42.9 +0.2**
CD2 Chengdu 38.79 265 *eP* **P** **15 08 44.8 +0.4**
CD2 AP pP 15 08 58.8 +1.7
CD2 XP sP 15 09 04.5 +1.8
CD2 PP PP 15 10 19.3 +5.5
CD2 S **S** **15 14 39.3 +0.8**
CD2 XS sS 15 15 01.0 +1.2
CD2 SS SS 15 17 23.3 -7.4
CD2 AMB AMB
comp=Z,30nm,0.5s,mb5.3
CD2 AMB AMB
comp=Z,60nm,4.2s
CD2 LR LR
comp=N,140nm,12.0s,MS4.2
CD2 LR LR
comp=E,180nm,10.8s,MS4.2
CD2 LR LR
comp=Z,180nm,10.8s,MS4.2
GYA Guiyang 39.44 257 ⇑*iP* **P** **15 08 51.5 +1.6**
GYA AP pP 15 09 04.3 +1.6
GYA XP sP 15 09 10.5 +2.3
GYA PP PP 15 10 26.8 +5.8
GYA PCP PcP 15 10 59.3 +2.1
GYA SCP ScP 15 14 42.5 +0.8
GYA S **S** **15 14 48.3 -0.1**
GYA XS sS 15 15 10.8 +1.1
GYA SCS ScS 15 18 52.5 -1.5
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
GYA AMB AMB
comp=Z,90nm,4.8s
ZALV Zalesovo Beam 42.01 307 P **P** **15 09 08.5 -2.2**
comp=Z,0.8nm,0.5s,baz=78,slow=8.4,SNR=3.6
ZALV PcP PcP 15 11 05.0 0.0
comp=Z,1.5nm,0.5s,baz=75,slow=3.6,SNR=5.0
KMI Kunming 43.01 259 P **P** **15 09 20.0 +0.8**
KMI XP sP 15 09 42.8 +5.2
KMI AMB AMB
comp=Z,12nm,1.2s,mb4.5
KMI LR LR
comp=Z,102nm,19.9s,MS3.7
KMI Kunming 43.01 259 P **P** **15 09 19.9 +0.7**
KMI *SP sP 15 09 42.7 +5.1
KMI pmax pmax
comp=Z,12nm,1.2s,mb4.5
KMI MLR MLR
comp=Z,100nm,19.9s,MS3.7
KMI Kunming 43.01 259 P **P** **15 09 19.9 +0.7**
comp=Z,12nm,1.2s,mb4.5
KMI sP sP 15 09 42.7 +5.1
KMI LR LR
comp=Z,100nm,19.9s,MS3.7
WMQ Urumqi 43.71 292 *eP* **P** **15 09 25.3 +0.7**

WMQ AP pP 15 09 39.0 +1.5
WMQ XP sP 15 09 45.0 +1.9
WMQ PP PP 15 11 08.0 +1.2
WMQ *eS* **S** **15 15 50.0 -1.2**
WMQ XS sS 15 16 15.0 +2.3
WMQ AMB AMB
comp=Z,7.0nm,1.0s,mb4.3
WMQ AMB AMB
comp=Z,115nm,5.2s
WMQ LR LR
comp=N,282nm,19.4s,MS4.3
WMQ LR LR
comp=E,206nm,17.4s,MS4.3
WMQ LR LR
comp=Z,344nm,19.2s,MS4.3
HYT Haines Junctio 43.81 42 *eP* **P** **15 09 26.5 +1.2**
MK31 Makanchi Array 45.97 298 *eP* **P** **15 09 42.9 +0.3**
MKAR Makanchi Array 45.97 298 P **P** **15 09 42.8 +0.2**
comp=Z,3.5nm,0.6s,mb4.5,baz=75,slow=7.7,SNR=26
MKAR PcP PcP 15 11 19.0 +0.4
comp=Z,1.6nm,0.6s,baz=107,slow=0.8,SNR=5.8
MKAR LR LR 15 30 05.4
comp=Z,339nm,19.6s,MS4.3,baz=83,slow=38
MKAR Makanchi Array 45.97 298 P **P** **15 09 42.8 +0.2**
MKAR 15 11 19.0
MKAR Makanchi Array 45.97 298 P **P** **15 09 42.8 +0.2**
MKAR PcP PcP 15 11 19.0 +0.4
MKAR LR LR 15 30 05.4
KURK Kurchatov 46.66 304⇑ *eP* **P** **15 09 47.6 -0.3**
KURK pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
KURK Kurchatov 46.66 304 *eP* **P** **15 09 45.8 -2.1**
comp=Z,3.9nm,0.5s,mb4.6
DLBC Dease Lake 48.14 44 P **P** **15 09 57.9 -1.5**
LSA Lhasa 48.40 273 *eP* **P** **15 10 01.8 0.0**
LSA pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
LSA Lhasa 48.40 273 *eP* **P** **15 10 01.8 0.0**
comp=Z,8.9nm,0.9s,mb4.8
CHTO Chiang Mai 49.83 256 *eP* **P** **15 10 13.0 +0.3**
CHTO pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
CHTO Chiang Mai 49.83 256 *eP* **P** **15 10 13.0 +0.3**
comp=Z,3.6nm,1.0s,mb4.7
CMAR Chiang Mai Arr 50.07 255 P **P** **15 10 15.2 +0.7**
comp=Z,2.2nm,0.6s,mb4.3,baz=44,slow=7.4,SNR=23
CMAR LR LR 15 30 04.5
comp=Z,98nm,19.9s,MS3.8,baz=180,slow=34
TKM2 Tokmak 2 51.96 296 *eP* **P** **15 10 29.1 +0.6**
TKM2 pmax pmax
comp=Z,35nm,0.8s,mb5.3
TKM2 Tokmak 2 51.96 296 *eP* **P** **15 10 29.1 +0.5**
comp=Z,35nm,0.8s,mb5.3
ODAN Odre 52.75 272 *eP* **P** **15 10 35.1 +0.5**
comp=Z,11nm,0.5s,mb5.1
JIRN Jiri 53.12 274 *eP* **P** **15 10 38.3 +1.0**
comp=Z,41nm,0.5s,mb5.6
GUN Gumba 53.19 274 *eP* **P** **15 10 38.4 +0.6**
comp=Z,40nm,0.5s,mb5.6
EKS2 Erkin-Say 53.25 296 *eP* **P** **15 10 38.4 +0.3**
comp=Z,3.9nm,0.6s,mb4.5
RAMN Ramite 53.26 273 *eP* **P** **15 10 39.2 +0.9**
YKA Yellowknife Ar 53.41 35 P **P** **15 10 38.8 -0.1**
comp=Z,3.3nm,0.7s,mb4.4,baz=296,slow=6.9,SNR=10
YKA LR LR 15 36 02.1
comp=Z,28nm,18.2s,MS3.4,baz=200,slow=39
YKA Yellowknife Ar 53.41 35 P **P** **15 10 38.8 -0.1**
YKA LR LR 15 36 02.1
KKN Kakani 53.68 275 *eP* **P** **15 10 42.6 +1.2**
comp=Z,20nm,0.5s,mb5.3
PKIN Phulchoki 53.73 274 *eP* **P** **15 10 42.3 +0.5**
DMN Daman 53.91 275 *eP* **P** **15 10 43.9 +0.8**
comp=Z,33nm,0.5s,mb5.5
GKN Gorkha 54.01 275 *eP* **P** **15 10 44.3 +0.5**
comp=Z,22nm,0.6s,mb5.3
DANN Dangsing 54.42 276 *eP* **P** **15 10 47.6 +0.8**
comp=Z,57nm,0.7s,mb5.6
ARU Arti 54.90 317 *c iP* **P** **15 10 50.1 +0.2**
ARU *e* 15 12 51.2
ARU *eS* **S** **15 18 26.1 -1.4**
ARU *eSS* SS 15 22 10.9 +0.2
ARU pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
ARU Arti 54.90 317 *eP* **P** **15 10 48.2 -1.6**
comp=Z,8.1nm,0.6s,mb4.9
EDM Edmonton 58.86 44 *eP* **P** **15 11 17.8 -0.2**
KBL Kabul 60.84 291 *eP* **P** **15 11 31.2 -0.7**
KBL pmax pmax
comp=Z,28nm,0.9s,mb5.4
KBL Kabul 60.84 291 *eP* **P** **15 11 31.1 -0.7**
comp=Z,28nm,0.9s,mb5.4
MOD Modoc 61.61 58 *eP* **P** **15 11 36.7 -0.3**
comp=Z,12nm,1.2s,mb4.9
BMO Blue Mountains 61.62 54 *eP* **P** **15 11 37.5 +0.5**
comp=Z,16nm,0.6s,mb4.3
JOF Joensuu 61.93 333 *ep* **P** **15 11 37.2 -1.5**
comp=Z,1.5nm,0.4s,mb4.5
SUMG Summit 62.47 3 *eP* **P** **15 11 42.2 +0.1**
comp=Z,4.7nm,0.7s,mb4.7
HLID Hailey 64.06 54 *eP* **P** **15 11 53.6 +0.4**
comp=Z,2.8nm,0.8s,mb4.3
MCMT McKenzie Canyo 64.15 52 *eP* **P** **15 11 53.5 -0.2**
QLMT Earthquake Lak 64.94 51 *eP* **P** **15 11 59.3 +0.4**
NVAR Mina Array Bea 64.94 60 P **P** **15 11 59.6 +0.6**
comp=Z,6.0nm,0.8s,mb4.7,baz=291,slow=6.9,SNR=48
CTA Charters Tower 64.98 184 P **P** **15 11 59.1 -0.2**
comp=Z,1.3nm,0.4s,mb4.3,baz=12,slow=14,SNR=3.1
IMW Indian Meadow 65.80 52 *eP* **P** **15 12 05.4 +0.9**
comp=Z,6.3nm,1.1s,mb4.6
RLMT Red Lodge 65.93 50 *eP* **P** **15 12 06.7 +1.4**
comp=Z,16nm,1.4s,mb4.9
RRI2 Red Ridge 65.94 52 *eP* **P** **15 12 06.6 +1.2**
comp=Z,19nm,0.8s,mb5.0
TPAW Teton Pass 66.06 52 *eP* **P** **15 12 07.6 +1.5**
comp=Z,10nm,0.8s,mb4.9
WB2 Warramunga Arr 66.34 196 *eP* **P** **15 12 07.9 -0.2**
WRA Warramunga Arr 66.35 196 P **P** **15 12 08.4 +0.3**
comp=Z,1.5nm,0.8s,mb4.1,baz=14,slow=6.6,SNR=19
DUG Dugway 67.11 56 *eP* **P** **15 12 13.6 +0.7**
DUG pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
DUG Dugway 67.11 56 *eP* **P** **15 12 13.6 +0.7**
comp=Z,6.6nm,1.0s,mb4.6
TPNV Topopah Spring 67.14 60 *eP* **P** **15 12 13.1 -0.1**
TPNV pmax pmax
comp=Z,15nm,1.4s,mb4.8
TPNV Topopah Spring 67.14 60 *eP* **P** **15 12 13.1 0.0**
comp=Z,15nm,1.4s,mb4.8
PDAR Pinedale Array 67.30 52 P **P** **15 12 14.2 +0.2**
comp=Z,4.5nm,0.7s,mb4.6,baz=277,slow=1.7,SNR=26
ARUT Antelope Range 68.30 58 *eP* **P** **15 12 20.9 +0.4**
ULM Lac du Bonnet 69.04 39 P **P** **15 12 23.9 -1.0**
comp=Z,1.9nm,0.7s,mb4.2,baz=337,slow=7.7,SNR=2.8
NB2 NORSAR Subarra 69.13 340 P **P** **15 12 24.1 -1.1**
comp=Z,1.6nm,0.5s,mb4.2,baz=28,slow=6.9
NOA NORSAR Array B 69.13 340 P **P** **15 12 24.2 -1.1**
comp=Z,1.9nm,0.4s,mb4.3,baz=29,slow=6.4,SNR=15
NOA LR LR 15 46 57.9
comp=Z,62nm,21.4s,MS3.8,baz=300,slow=40
NOA NORSAR Array B 69.13 340 P **P** **15 12 24.2 -1.1**
NOA LR LR 15 46 57.9
SRU San Rafael 69.16 55 *eP* **P** **15 12 26.0 +0.2**
SRU pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SRU San Rafael 69.16 55 *eP* **P** **15 12 26.0 +0.2**
comp=Z,5.4nm,0.8s,mb4.5
ASAR Alice Springs 70.05 196 P **P** **15 12 32.5 +1.2**
comp=Z,1.5nm,0.7s,mb4.0,baz=10,slow=5.0,SNR=22
KIV Kislovodsk 70.52 313⇑ *iP* **P** **15 12 35.5 +1.4**
KIV Kislovodsk 70.52 313 *eP* **P** **15 12 35.0 +0.9**
comp=Z,29nm,0.7s,mb5.3
AKASG Malin Array Be 71.80 325 P **P** **15 12 40.9 -0.8**
comp=Z,4.0nm,0.5s,mb4.7,baz=39,slow=6.1,SNR=9.5
AKASG LR LR 15 45 35.0
comp=Z,68nm,20.9s,MS3.9,baz=280,slow=37
ANN Anapa 72.56 317 *eP* **P** **15 12 45.4 -0.9**
ANN *e*PP pP 15 13 01.9 +1.9
ANN *e*S S 15 22 06.5 -0.6
ANN pmax pmax
comp=Z,16nm,0.7s,mb5.1
ANMO Albuquerque 74.37 56⇑ *eP* **P** **15 12 57.5 +0.4**
LVV L'vov 74.55 327 *eP* **P** **15 12 57.5 -0.4**
SCHQ Schefferville 75.57 21 P **P** **15 13 01.1 -2.6**
comp=Z,2.8nm,0.7s,mb4.3,baz=319,slow=9.3,SNR=2.1
OJC Ojcow 75.79 330 *eP* **P** **15 13 05.1 +0.1**
BUR08 Bucovina Ar. S 75.84 325 *eP* **P** **15 13 05.3 -0.1**

BURAR Bucovina Array 75.86 325⇑ *iP* **P** **15 13 05.2 -0.3**
BURAR Bucovina Array 75.86 325 ⇑P **P** **15 13 05.2 -0.2**
STHS Stebnicka Huta 75.93 328 *eP* **P** **15 13 06.9 +1.1**
STHS *e* pP 15 13 20.7 +1.1
STHS pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
STHS Stebnicka Huta 75.93 328 *eP* **P** **15 13 06.8 +1.0**
STHS *epP* pP 15 13 20.7 +1.1
STHS Stebnicka Huta 75.93 328 *eP* **P** **15 13 06.9 +1.1**
comp=Z,7.8nm,0.7s,mb4.8
STHS *e* pP 15 13 20.7 +1.1
KOLS Kolonicke sedl 75.94 328 *eP* **P** **15 13 06.4 +0.5**
TLCR 76.26 322⇑ *iP* **P** **15 13 08.0 +0.2**
TLCR 76.26 322 ⇑P **P** **15 13 08.0 +0.2**
NIE Niedzica 76.27 329 *eP* **P** **15 13 08.4 +0.6**
CRVS Cervenica-Dubn 76.27 328 *eP* **P** **15 13 07.8 0.0**
CRVS *epP* pP 15 13 22.5 +0.9
CRVS Cervenica-Dubn 76.27 328 *eP* **P** **15 13 07.9 +0.1**
CRVS *e* pP 15 13 22.5 +0.9
MALT Malatya 76.81 311 *eP* **P** **15 13 12.2 +1.2**
MALT pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
MALT Malatya 76.81 311⇑ *iP* **P** **15 13 13.1 +2.1**
MALT Malatya 76.81 311 *eP* **P** **15 13 12.2 +1.2**
comp=Z,2.4nm,0.7s,mb4.2
UPC Upice 76.85 332 *eP* **P** **15 13 10.8 -0.2**
DPC Dobruska-Polom 76.88 332 *eP* **P** **15 13 11.2 0.0**
MORC Moravsky Berou 76.95 331 *eP* **P** **15 13 11.4 -0.2**
MORC pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MORC Moravsky Berou 76.95 331⇑ *iP* **P** **15 13 12.2 +0.6**
MORC Moravsky Berou 76.95 331 *eP* **P** **15 13 11.4 -0.2**
comp=Z,8.9nm,0.8s,mb4.8
HARR Harsova 77.04 322 *iP* **P** **15 13 12.7 +0.5**
CLL Collm 77.13 334 *eP* **P** **15 13 11.8 -0.8**
comp=Z,16nm,0.6s,mb5.1
CLL Collm 77.13 334 *i* P **P** **15 13 11.9 -0.7**
comp=Z,10.0nm,0.6s,mb4.9
CLL *i* P(2) 15 13 13.3
comp=Z,16nm,0.6s
CLL Collm 77.13 334 *i* P **P** **15 13 11.9 -0.7**
comp=Z,10.0nm,0.6s,mb4.9
CLL *e* 15 13 13.0
BRG Berggiesshubel 77.21 333 *eP* **P** **15 13 12.4 -0.6**
BRG pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BRG Berggiesshubel 77.21 333 *eP* **P** **15 13 12.4 -0.6**
comp=Z,6.0nm,0.6s,mb4.7
PVCC Panska Ves 77.31 333 *eP* **P** **15 13 13.5 -0.1**
CLZ Clausthal 77.44 336 *eP* **P** **15 13 14.3 0.0**
CLZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CLZ Clausthal 77.44 336 *eP* **P** **15 13 14.3 0.0**
comp=Z,8.0nm,0.9s,mb4.7
DRGR 77.53 326⇑ *iP* **P** **15 13 14.6 -0.3**
DRGR 77.53 326 ⇑P **P** **15 13 14.6 -0.3**
VYHS Vyhne 77.58 329 *eP* **P** **15 13 15.4 +0.2**
VOIR 77.68 324⇓ *iP* **P** **15 13 16.6 +0.8**
VRAC Vranov 77.68 331 ⇓*iP* **P** **15 13 16.3 +0.6**
VRAC Vranov 77.68 331 ⇓P **P** **15 13 16.3 +0.6**
IBBN Ibbenburen 77.76 338 *eP* **P** **15 13 15.0 -1.1**
comp=Z,17nm,0.9s,mb5.0
UMR Umm Al-Rimmam 77.77 300 *eP* **P** **15 13 16.5 0.0**
baz=300
UMR AMb AMB 15 13 17.6
comp=Z,41nm,0.3s,mb5.8,baz=300
PRU Pruhonice 77.78 333 *eP* **P** **15 13 16.2 -0.1**
MIB Mutribah 77.83 300 *eP* **P** **15 13 16.8 0.0**
baz=300
MIB AMb AMB 15 13 19.7
comp=Z,35nm,0.6s,mb5.5,baz=300
MOX Moxa 78.13 335 *eP* **P** **15 13 18.0 -0.2**
comp=Z,22nm,1.8s,mb4.8
MOX Moxa 78.13 335 *eP* **P** **15 13 18.0 -0.2**
MOX pmax pmax
comp=Z,22nm,1.8s,mb4.8
MOX Moxa 78.13 335 *eP* **P** **15 13 17.9 -0.3**
comp=Z,9.0nm,1.2s,mb4.6
BR131 Keskin Array S 78.22 315 *eP* **P** **15 13 19.3 +0.5**
comp=Z,6.0nm,0.9s,mb4.2
MODS Modra-Piesok 78.24 330 *eP* **P** **15 13 19.2 +0.4**
MODS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
MODS Modra-Piesok 78.24 330 *eP* **P** **15 13 19.2 +0.4**
comp=Z,6.1nm,1.2s,mb4.4
NKC Novy Kostel 78.24 334 *eP* **P** **15 13 19.6 +0.8**
RST Umm Al-Ruwaisa 78.25 300 *eP* **P** **15 13 18.9 -0.3**
baz=300
RST AMb AMB 15 13 20.6
comp=Z,38nm,0.5s,mb5.6,baz=300
NAY Al-Naaiem 78.28 300 *eP* **P** **15 13 19.3 0.0**
baz=300
NAY AMb AMB 15 13 22.2
comp=Z,16nm,0.8s,mb5.0,baz=300
RDF Al-Radifah 78.31 299 *eP* **P** **15 13 19.9 +0.3**
baz=299
RDF AMb AMB 15 13 21.4
comp=Z,79nm,0.4s,baz=299
ZST Bratislava 78.45 330 *eP* **P** **15 13 22.0 +2.0**
ZST *e* pP 15 13 36.7 +2.9
ZST pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ZST Bratislava 78.45 330 *eP* **P** **15 13 22.0 +2.0**
comp=Z,8.3nm,0.7s,mb4.8
ZST *e* pP 15 13 36.7 +2.9
GZR Gura Zlata 78.64 325⇑ *iP* **P** **15 13 20.9 -0.2**
GZR Gura Zlata 78.64 325 ⇑P **P** **15 13 20.9 -0.3**
KHC Kasperske Hory 78.84 333⇑ *iP* **P** **15 13 22.1 0.0**
KHC Kasperske Hory 78.84 333 *eP* **P** **15 13 22.2 +0.1**
BZS Buzias 78.92 326⇑ *iP* **P** **15 13 22.7 0.0**
GEC2 GERESS Array S 79.05 332 *eP* **P** **15 13 23.0 -0.3**
GEC2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
GEC2 GERESS Array S 79.05 332 *eP* **P** **15 13 23.0 -0.3**
comp=Z,4.0nm,0.8s,mb4.4
GERES GERESS Array B 79.05 332 P **P** **15 13 23.1 -0.1**
comp=Z,2.5nm,0.5s,mb4.4,baz=33,slow=5.8,SNR=21
WET Wettzell 79.05 333 *eP* **P** **15 13 23.4 +0.1**
WET pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
WET Wettzell 79.05 333 *eP* **P** **15 13 23.4 +0.1**
comp=Z,9.0nm,0.9s,mb4.7
GRA1 Grafenberg Arr 79.09 334 *eP* **P** **15 13 23.6 +0.1**
comp=Z,12nm,0.8s,mb4.9
GRF Grafenberg Arr 79.09 334 *eP* **P** **15 13 23.6 +0.1**
GRF pmax pmax
comp=Z,12nm,0.8s,mb4.9
GRF Grafenberg Arr 79.09 334 *eP* **P** **15 13 23.6 +0.1**
GRF pmax pmax
comp=Z,12nm,0.8s,mb4.9
GRF Grafenberg Arr 79.09 334 *eP* **P** **15 13 23.6 +0.1**
comp=Z,12nm,0.8s,mb4.9
TXAR Lajitas Array 80.01 58 P **P** **15 13 28.8 -0.1**
comp=Z,5.4nm,0.6s,mb4.7,baz=306,slow=4.2,SNR=88
STU Stuttgart 80.52 335 *eP* **P** **15 13 30.9 -0.3**
comp=Z,16nm,1.0s,mb4.9
GIVF Givet 80.54 338 *eP* **P** **15 13 31.0 -0.3**
BAIF Baives 80.74 339 *eP* **P** **15 13 31.7 -0.7**
BFO Black Forest 81.17 335 *eP* **P** **15 13 34.8 +0.1**
BFO pmax pmax
comp=Z,12nm,1.2s,mb4.7
BFO Black Forest 81.17 335 *eP* **P** **15 13 34.8 +0.1**
comp=Z,12nm,1.2s,mb4.7
CDF Champ du Feu 81.41 336 *eP* **P** **15 13 35.3 -0.7**
JCT Junction City 81.47 55 *eP* **P** **15 13 36.2 -0.4**
JCT pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
JCT Junction City 81.47 55 *eP* **P** **15 13 36.2 -0.4**
comp=Z,9.6nm,0.9s,mb4.7
PMOR Pomariorio Ree 81.84 121 *eT* 16 43 45.8
comp=Z,11nm,0.2s
PPT Papeete 82.83 124 *e*LR LR 15 40 00.8
comp=Z,160nm,24.8s
PPT Papeete 82.83 124 LR LR 15 43 10.4
comp=Z,18nm,21.7s,MS3.4,baz=310,slow=30
FLN La Foliniere 83.09 341 *eP* **P** **15 13 44.1 -0.7**
FLN *e*MLR MLR
comp=Z,96nm,19.2s,MS3.9
FLN La Foliniere 83.09 341 *eP* **P** **15 13 44.1 -0.7**
FLN LR LR
comp=Z,100nm,19.3s,MS4.2
CABF La Chapelle 83.38 336 *eP* **P** **15 13 45.6 -0.7**
LOR Lormes 83.40 338 *eP* **P** **15 13 45.7 -0.7**
comp=Z,14nm,0.9s,mb4.7
LOR *e*MLR MLR

	comp=Z,121nm,21.2s,MS3.9							
LOR	**Lormes**	**83.40**	**338**	*e*P	**P**		15 13 45.7	**-0.7**
LOR				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.7							
LOR				MLR	MLR			
	comp=Z,120nm,21.3s,MS4.2							
LOR	**Lormes**	**83.40**	**338**	*e*P	**P**		15 13 45.7	**-0.7**
	comp=Z,7.1nm,0.9s,mb4.7							
LOR				LR	LR			
	comp=Z,120nm,21.3s,MS4.2							
GRR	**Gorron**	**83.53**	**341**	*e*P	**P**		15 13 46.7	**-0.3**
	comp=Z,39nm,0.9s,mb5.2							
GRR	**Gorron**	**83.53**	**341**	*e*P	**P**		15 13 46.7	**-0.3**
GRR				pmax	pmax			
	comp=Z,19nm,0.9s,mb5.2							
GRR	**Gorron**	**83.53**	**341**	*e*P	**P**		15 13 46.7	**-0.3**
	comp=Z,20nm,0.9s,mb5.2							
AVF	**Avril sur Loir**	**83.97**	**338**	*e*P	**P**		15 13 48.9	**-0.4**
	comp=Z,13nm,0.9s,mb4.8							
AVF	**Avril sur Loir**	**83.97**	**338**	*e*P	**P**		15 13 48.9	**-0.4**
AVF				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.8							
AVF	**Avril sur Loir**	**83.97**	**338**	*e*P	**P**		15 13 48.9	**-0.4**
	comp=Z,6.5nm,0.9s,mb4.8							
SMF	**Signal de Mont**	**83.98**	**338**	*e*P	**P**		15 13 49.0	**-0.3**
	comp=Z,36nm,1.1s,mb5.1							
SMF	**Signal de Mont**	**83.98**	**338**	*e*P	**P**		15 13 49.0	**-0.3**
SMF				pmax	pmax			
	comp=Z,18nm,1.1s,mb5.1							
SMF	**Signal de Mont**	**83.98**	**338**	*e*P	**P**		15 13 49.0	**-0.3**
	comp=Z,18nm,1.1s,mb5.1							
LPL	**La Plagne**	**84.19**	**335**	*e*P	**P**		15 13 49.9	**-0.5**
TCF	**Toulx Ste Croi**	**84.74**	**338**	*e*P	**P**		15 13 53.2	**0.0**
MBDF	**Montbardon**	**84.89**	**335**	*e*P	**P**		15 13 53.6	**-0.4**
	comp=Z,11nm,0.8s,mb4.7							
MBDF	**Montbardon**	**84.89**	**335**	*e*P	**P**		15 13 53.6	**-0.4**
MBDF				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.7							
MBDF	**Montbardon**	**84.89**	**335**	*e*P	**P**		15 13 53.6	**-0.4**
	comp=Z,5.3nm,0.8s,mb4.7							
ORIF	**Oris-en-Rattie**	**84.98**	**335**	*e*P	**P**		15 13 54.0	**-0.5**
	comp=Z,10.0nm,0.7s,mb4.8							
ORIF				*e*MLR	MLR			
	comp=Z,94nm,17.0s,MS3.9							
ORIF	**Oris-en-Rattie**	**84.98**	**335**	*e*P	**P**		15 13 54.0	**-0.5**
ORIF				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.8							
ORIF	**Oris-en-Rattie**	**84.98**	**335**	*e*P	**P**		15 13 54.0	**-0.5**
	comp=Z,5.0nm,0.7s,mb4.8							
MFF	**Saint Martin d**	**85.04**	**340**	*e*P	**P**		15 13 54.5	**-0.2**
	comp=Z,10nm,0.7s,mb4.8							
MFF	**Saint Martin d**	**85.04**	**340**	*e*P	**P**		15 13 54.5	**-0.2**
MFF				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.8							
MFF	**Saint Martin d**	**85.04**	**340**	*e*P	**P**		15 13 54.5	**-0.2**
	comp=Z,5.1nm,0.7s,mb4.8							
RJF	**Les Rejaudoux**	**85.83**	**338**	*e*P	**P**		15 13 57.6	**-1.1**
RJF				*e*MLR	MLR			
	comp=Z,141nm,18.8s,MS4.1							
RJF	**Les Rejaudoux**	**85.83**	**338**	*e*P	**P**		15 13 57.6	**-1.1**
RJF				LR	LR			
	comp=Z,140nm,18.8s,MS4.4							
FRF	**La Foret Royal**	**85.98**	**334**	*e*P	**P**		15 13 58.8	**-0.7**
	comp=Z,44nm,1.2s,mb5.3							
FRF	**La Foret Royal**	**85.98**	**334**	*e*P	**P**		15 13 58.8	**-0.7**
FRF				pmax	pmax			
	comp=Z,22nm,1.2s,mb5.3							
FRF	**La Foret Royal**	**85.98**	**334**	*e*P	**P**		15 13 58.8	**-0.7**
	comp=Z,22nm,1.2s,mb5.3							
CAF	**Calviac**	**86.04**	**338**	*e*P	**P**		15 14 00.2	**+0.5**
	comp=Z,15nm,0.8s,mb5.0							
CAF	**Calviac**	**86.04**	**338**	*e*P	**P**		15 14 00.2	**+0.5**
CAF				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.9							
CAF	**Calviac**	**86.04**	**338**	*e*P	**P**		15 14 00.2	**+0.5**
	comp=Z,7.3nm,0.8s,mb5.0							
LMR	**La Mourre**	**86.23**	**334**	*e*P	**P**		15 14 00.2	**-0.5**
	comp=Z,63nm,1.4s,mb5.3							
LMR	**La Mourre**	**86.23**	**334**	*e*P	**P**		15 14 00.2	**-0.5**
LMR				pmax	pmax			
	comp=Z,32nm,1.4s,mb5.4							
LMR	**La Mourre**	**86.23**	**334**	*e*P	**P**		15 14 00.2	**-0.5**
	comp=Z,32nm,1.4s,mb5.3							
TBI	**Tubuai**	**87.42**	**127**	*e*LR	LR		15 42 12.9	
	comp=Z,268nm,30.8s							
TBI	**Tubuai**	**87.42**	**127**	*e*T			16 50 55.3	
	comp=Z,6.3nm,0.3s							
KEST	**Kesra**	**92.13**	**329**	LR	LR		15 58 33.8	
	comp=Z,36nm,20.4s,MS3.8,baz=314,slow=37							
TORD	**Torodi Ar. Bea**	**115.43**	**326**	PKP	PKPdf		15 20 00.1	-1.2
	comp=Z,0.3nm,0.4s,baz=16,slow=2.3,SNR=5.8							
BDFB	**Brasilia**	**146.81**	**34**	PKPbc	PKPbc		15 20 59.8	-1.7
	comp=Z,3.7nm,0.9s,baz=313,slow=18,SNR=2.8							
CFAA	**Coronel Fontan**	**147.22**	**79**	PKPbc	PKPbc		15 21 01.5	-0.8
	comp=Z,0.5nm,0.6s,baz=288,slow=4.4,SNR=8.7							
PLCA	**Paso Flores**	**149.99**	**96**	PKPbc	PKPbc		15 21 09.3	+0.2
	comp=Z,3.8nm,0.7s,baz=270,slow=0.5,SNR=11							
PLCA	**Paso Flores**	**149.99**	**96**	PKPbc	PKPbc		15 21 09.3	+0.2
SNAA	**Sanae**	**150.42**	**197**	*e*PKPdf	PKPbc		15 21 09.4	+0.2
SNAA				*e*			15 21 16.6	
SNAA				*e*			15 21 19.3	
SNAA				*e*			15 21 21.7	
SNAA				*e*			15 21 30.7	
CPUP	**Villa Florida**	**150.99**	**59**	PKPbc	PKPbc		15 21 11.8	-0.2
	comp=Z,2.2nm,0.6s,baz=299,slow=3.1,SNR=7.2							
VNA2	**Neumayer--Watz**	**151.91**	**195**	*e*PKPdf	PKPbc		15 21 13.4	+0.7
	baz=358,slow=1.2							
VNA2				*e*			15 21 21.3	
VNA2				*e*			15 21 25.0	
VNA2				*e*			15 21 27.0	
VNA2				*e*			15 21 36.8	
VNA3	**Neumayer Olymp**	**152.04**	**194**	*e*PKPdf	PKPbc		15 21 13.3	+0.3
VNA3				*e*			15 21 20.9	
VNA3				*e*			15 21 24.7	
VNA3				*e*			15 21 27.1	
VNA3				*e*			15 21 36.1	

*IDC **25** 15:09:45.5±2.2, 1559S×168.15E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.9/17, mbtmp4.0/7, Error ellipse: s-maj=76.0km s-min=28.4km az=136.0*
*LDG **25** 15:09:51.7±0.4, 1475S×167.17E, h10km, Mb4.3/2, Error ellipse: s-maj=63.6km s-min=9.5km az=87.0*
*NEIC **25** 15:10:03.1±3.9, 1556S×167.57E, h121km±36km, Error ellipse: s-maj=41.6km s-min=20.8km az=174.0*
*ISCJB **25** 15:10:05.1±3.7, 158S±02×167.6E±02, h156km±29km, mb3.8/6, Error ellipse: s-maj=35.2km s-min=22.9km az=143.7*

ISC 25 15:10:05.4±3.6,**158S**±02×**1677E**±02,**h150**km±28km,**n28,** σ0§**77**/15,**mb3.8/6,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.34**	**191**	*e*P		**Pn**	**15 11 37.6**	**+1.0**
DZM				*e*S		**Sn**	**15 12 47.6**	**-0.5**
DZM	**Mont Dzumac**	**6.34**	**191**	*e*Pn		**Pn**	**15 11 37.3**	**+0.7**
DZM				*e*S		**Sn**	**15 12 46.9**	**-1.2**
CTA	**Charters Tower**	**20.83**	**255**	P		**P**	**15 14 35.9**	**+0.5**
	3.0nm,0.7s,baz=90,slow=11,SNR=4.0							
STKA	**Stephens Creek**	**28.63**	**231**	P		**P**	**15 15 48.9**	**+1.1**
	1.7nm,0.7s,mb3.9,baz=113,slow=22,SNR=3.6							
STKA	**Stephens Creek**	**28.63**	**231**	P		**P**	**15 15 48.9**	**+1.1**
WRA	**Warramunga Arr**	**31.98**	**258**	P		**P**	**15 16 16.3**	**-1.2**
	0.3nm,0.4s,mb3.4,baz=81,slow=6.0,SNR=14							
ASAR	**Alice Springs**	**32.69**	**251**	P		**P**	**15 16 23.4**	**-0.3**
	0.8nm,0.3s,mb3.9,baz=80,slow=8.8,SNR=54							
CMAR	**Chiang Mai Arr**	**75.76**	**294**	P		**P**	**15 21 36.1**	**+1.0**
	0.8nm,0.7s,mb3.5,baz=131,slow=4.8,SNR=7.5							
SONM	**Songino Array**	**83.60**	**324**	P		**P**	**15 22 16.4**	**-0.3**
	1.1nm,0.5s,mb3.9,baz=155,slow=10,SNR=11							
SNAA	**Sanae**	**92.50**	**183**	*e*PKPdf		**P**	**15 22 59.1**	**0.0**
SNAA				*e*			15 23 03.0	
VNA3	**Neumayer Olymp**	**93.15**	**181**	*e*PKPdf		**P**	**15 23 02.0**	**-0.1**
VNA3				*e*			15 23 06.5	
VNA2	**Neumayer--Watz**	**93.42**	**182**	*e*PKPdf		**P**	**15 23 03.7**	**+0.4**
VNA2				*e*			15 23 07.9	
ZALV	**Zalesovo Beam**	**98.50**	**324**	P		**P**	**15 23 25.4**	**-1.2**
	0.4nm,0.5s,mb4.1,baz=46,slow=4.2,SNR=2.6							
ARCES	**ARCESS Array B**	**121.39**	**345**	PKP		PKPdf	15 28 39.6	-0.6
	0.9nm,0.5s,baz=90,slow=2.4,SNR=9.8							
CABF	**La Chapelle**	**145.67**	**337**	*e*PKP1		PKPbc	15 29 26.4	-0.2
	30nm,1.0s							
LOR	**Lormes**	**145.88**	**340**	*e*PKP1		PKPbc	15 29 28.2	+1.0
SSF	**Saint Saulge**	**146.18**	**340**	*e*PKP1		PKPbc	15 29 28.3	+0.2
	13nm,0.7s							
LPL	**La Plagne**	**146.34**	**336**	*e*PKP1		PKPbc	15 29 30.0	+1.4
	7.3nm,0.7s							
LPG	**La Plagne**	**146.34**	**336**	*e*PKP1		PKPbc	15 29 30.2	+1.6
	10nm,0.7s							
SMF	**Signal de Mont**	**146.44**	**340**	*e*PKP1		PKPbc	15 29 28.7	-0.1
AVF	**Avril sur Loir**	**146.47**	**340**	*e*PKP1		PKPbc	15 29 28.7	-0.2
	8.4nm,0.7s							
BGF	**Bois d'Agland**	**146.84**	**341**	*e*PKP1		PKPbc	15 29 30.0	0.0
	11nm,0.6s							
ORIF	**Oris-en-Rattie**	**147.17**	**336**	*e*PKP1		PKPbc	15 29 32.1	+1.1
	15nm,1.1s							
TCF	**Toulx Ste Croi**	**147.28**	**341**	*e*PKP1		PKPbc	15 29 31.2	0.0
MFF	**Saint Martin d**	**147.66**	**344**	*e*PKP1		PKPbc	15 29 32.2	-0.1
LASF	**Ste Croix**	**148.66**	**337**	*e*PKP1		PKPbc	15 29 35.2	+0.3
	13nm,0.9s							
MTLF	**Montolieu**	**149.88**	**339**	*e*PKP1		PKPbc	15 29 38.1	+0.1
	11nm,0.9s							
KEST	**Kesra**	**152.29**	**320**	PKPbc		PKPbc	15 29 44.0	+0.2
	1.2nm,0.6s,baz=137,slow=7.6,SNR=6.9							

*ISCJB **25** 15:14:48.7±0.8, 2985N±003×3627E±005, h0km, Error ellipse: s-maj=5.9km s-min=4.4km az=173.2*
*SGS **25** 15:14:49.5, 3000N×3627E, h6km*
*GII **25** 15:14:49.4±0.7, 2990N×3617E, h0km, ML2.5/4, EXPLOSION*

ISC 25 15:14:48.8±0.8,**2984N**±003×**3631E**±005,**h0**km,**n17,** σ0§**72**/26,**Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AQBJ	**Aqaba**	**1.10**	**264**	Pg		**Pg**	**15 15 09.9**	**0.0**
HRFI	**Mount Harif**	**1.12**	**280**	Pg		**Pg**	**15 15 09.9**	**-0.5**
HRFI				Sg		**Sg**	**15 15 25.6**	**+0.6**
EIL	**Elat**	**1.20**	**262**	Pg		**Pg**	**15 15 11.8**	**0.0**
EIL				Sg		**Sg**	**15 15 28.4**	**+1.1**
ZFRI	**Zfri**	**1.21**	**306**	Pg		**Pg**	**15 15 11.1**	**-0.9**
ZFRI				Sg		**Sg**	**15 15 27.6**	**-0.1**
HQLS		**1.22**	**244**	P		**Pg**	**15 15 11.7**	**-0.5**
MBRI	**Mt Berech**	**1.22**	**268**	Pg		**Pg**	**15 15 11.4**	**-0.7**
MBRI				Sg		**Sg**	**15 15 28.5**	**+0.6**
PRNI	**Paran**	**1.24**	**294**	Pg		**Pg**	**15 15 11.3**	**-1.3**
PRNI				Sg		**Sg**	**15 15 28.5**	**-0.2**
JLOS		**1.32**	**213**	S		**Sg**	**15 15 32.4**	**+1.3**
JLOS		**1.32**	**213**	P		**Pg**	**15 15 14.0**	**-0.1**
KRMI	**Paran Flat**	**1.41**	**282**	Pg		**Pg**	**15 15 14.4**	**-1.3**
KRMI				Sg		**Sg**	**15 15 33.6**	**-0.4**
TBKS	**Tabuk**	**1.63**	**173**	P		**Pn**	**15 15 19.0**	**+0.3**
MZDA	**Masada**	**1.68**	**331**	Pn		**Pn**	**15 15 18.9**	**-0.4**
MZDA				Sn		**Sn**	**15 15 42.1**	**+0.6**
BDAS	**Al Bad'**	**1.76**	**217**	P		**Pn**	**15 15 20.1**	**-0.5**
RTMI	**Retamim**	**1.85**	**311**	Sn		**Sn**	**15 15 45.5**	**-0.3**
DSI	**Dead Sea**	**1.90**	**335**	Pn		**Pn**	**15 15 22.6**	**+0.2**
DSI				Sn		**Sn**	**15 15 47.9**	**+0.8**
KZIT	**Kziot**	**1.97**	**303**	Pn		**Pn**	**15 15 23.2**	**-0.1**
KZIT				Sn		**Sn**	**15 15 48.9**	**+0.2**
HMDT	**Nahal Hemdat**	**2.49**	**344**	Sn		**Sn**	**15 16 03.5**	**+1.7**

*IDC **25** 15:18:00.3±3.3, 944N×12722E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/18, mbtmp3.4/3, Error ellipse: s-maj=245.4km s-min=28.1km az=66.0*
*MAN **25** 15:18:03, 929N×12679E, h1km, mb4.5, ML3.3, MS3.2*
*ISCJB **25** 15:18:09.3±0.8, 899N±007×126.19E±008, h81km±8km, mb3.4/3, Error ellipse: s-maj=15.2km s-min=8.1km az=143.0*

ISC 25 15:18:10.4±0.9,**901N**±007×**12619E**±008,**h70**km±9km,**n8,** σ1§**09**/13,**mb3.4/3,1C-3D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BIPH	**Bislig**	**0.84**	**169**↑	*e*P		**Pn**	**15 18 25.5**	**-1.4**
BIPH				*e*S		**Sn**	**15 18 40.5**	**+1.4**
SCPH	**Surigao**	**1.03**	**318**↓	*e*P		**Pn**	**15 18 28.8**	**-0.5**
SCPH				*e*S		**Sn**	**15 18 48.5**	**+5.1**
TBP	**Tagbilaran**	**2.40**	**287**	*e*P		**Pn**	**15 18 52.0**	**+4.6**
TBP				*e*S		**Sn**	**15 19 15.2**	**-0.6**
PLP	**Palo**	**2.45**	**331**↓	*e*P		**Pn**	**15 18 45.9**	**-2.2**
PLP				*e*S		**Sn**	**15 19 18.6**	**+1.5**
DCPH	**Dipolog City**	**2.84**	**262**↓	*e*P		**Pn**	**15 18 58.7**	**+5.3**
DCPH				*e*S		**Sn**	**15 19 26.8**	**+0.2**
WRA	**Warramunga Arr**	**29.87**	**164**	P		**P**	**15 24 11.1**	**-0.4**
	0.4nm,0.7s,mb3.2,baz=348,slow=9.4,SNR=3.9							
ASAR	**Alice Springs**	**33.34**	**167**	P		**P**	**15 24 42.0**	**+0.2**
	0.2nm,0.5s,mb3.2,baz=350,slow=7.0,SNR=7.9							
MKAR	**Makanchi Array**	**52.98**	**323**	P		**P**	**15 27 20.7**	**+0.8**
	0.6nm,0.6s,mb3.6,baz=122,slow=8.7,SNR=4.3							

MAN 25 15:21:11,940N×12674E,h17km,mb4.1,ML2.9,MS2.6, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SCPH	**Surigao**	**1.29**	**287**↓	*e*P		Pn	15 21 34.5	+0.3

*ISCJB **25** 15:35:36.3±0.9, 24S±01×102.15E±007, h10km, mb4.0/7, MS3.4/4, Error ellipse: s-maj=20.1km s-min=8.0km az=22.0*
*IDC **25** 15:35:36.6±1.3, 255S×102.05E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/18, mbtmp3.8/7, MS3.4/5, Ms1 3.4/5, ms1mx3.1/30, Error ellipse: s-maj=59.1km s-min=17.4km az=60.0*
*DJA **25** 15:35:39, 263S×10179E, h10km, MLv4.3/6*
*NEIC **25** 15:35:41.1±0.8, 264S×10189E, h35km, mb4.3/1, Error ellipse: s-maj=39.0km s-min=10.1km az=59.0*

ISC 25 15:35:37.9±0.9,**26S**±01×**10198E**±007,**h10**km,**n13,** σ0§**93**/11,**mb3.9**/8,**MS3.4**/4,**1D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
TPI	**Tanjungpandan**	**5.67**	**92**↓	*e*P		**Pn**	**15 37 04.0**	**+1.8**
TPI				*e*S		**Sg**	**15 38 39.0**	**-1.0**
KAPI	**Kappang**	**17.89**	**98**	LR		LR	15 48 02.5	
	comp=Z,91nm,18.3s,baz=96,slow=42							
CMAR	**Chiang Mai Arr**	**21.11**	**352**	P		**P**	**15 40 24.0**	**+1.3**
	0.7nm,0.7s,mb3.1,baz=185,slow=9.2,SNR=8.6							
CMAR				LR		LR	15 49 53.8	
	comp=Z,54nm,21.4s,MS2.9,baz=150,slow=41							
WRA	**Warramunga Arr**	**36.00**	**121**	P		**P**	**15 42 39.2**	**-0.2**
	0.3nm,0.3s,mb3.6,baz=306,slow=9.3,SNR=13							
WRA				LR		LR	15 57 11.5	
	comp=Z,64nm,20.9s,MS3.4,baz=295,slow=36							
ASAR	**Alice Springs**	**37.32**	**127**	P		**P**	**15 42 50.1**	**-0.5**
	1.2nm,0.8s,mb3.8,baz=299,slow=8.2,SNR=13							
NDI	**New Delhi**	**39.12**	**324**	*e*P		**P**	**15 43 04.0**	**-1.7**
STKA	**Stephens Creek**	**47.30**	**132**	P		**P**	**15 44 12.5**	**+0.7**
	3.2nm,0.8s,mb4.3,baz=343,slow=6.5,SNR=4.2							
STKA				LR		LR	16 04 18.0	
	comp=Z,92nm,21.1s,MS3.7,baz=207,slow=36							
SONM	**Songino Array**	**50.34**	**4**	P		**P**	**15 44 35.3**	**+0.5**
	1.5nm,0.9s,mb4.0,baz=180,slow=9.1,SNR=9.0							
TKM2	**Tokmak 2**	**51.16**	**335**	*e*P		**P**	**15 44 40.5**	**-0.6**
	2.8nm,0.8s,mb4.2							
MKAR	**Makanchi Array**	**52.13**	**343**	P		**P**	**15 44 48.1**	**-0.1**
	0.6nm,0.5s,mb3.8,baz=156,slow=8.6,SNR=8.6							
ZALV	**Zalesovo Beam**	**58.11**	**348**	P		**P**	**15 45 31.3**	**-0.1**
	1.5nm,0.6s,mb4.2,baz=160,slow=4.7,SNR=7.0							
ZALV				LR		LR	16 11 19.0	
	comp=Z,29nm,18.3s,MS3.4,baz=242,slow=37							
TXAR	**Lajitas Array**	**143.91**	**40**	PKP		PKPdf	15 55 13.7	-0.6
	0.1nm,0.4s,baz=343,slow=0.9,SNR=5.9							
CPUP	**Villa Florida**	**145.00**	**214**	PKPbc		PKPdf	15 55 15.7	-0.6
	2.9nm,0.7s,baz=92,slow=4.4,SNR=6.0							

*IDC **25** 15:40:41.4±36.0, 1498S×16884E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/17, mbtmp3.9/4, Error ellipse: s-maj=631.2km s-min=107.8km az=71.0*

ISC 25 15:41:06.5±5.5,**154S**±03×**1664E**±06,**h35**km,**n5,** σ1§**14**/6,**mb3.8**/4,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.63**	**180**	*e*P		**Pn**	**15 42 41.6**	**+0.1**
DZM				*e*S		**Sn**	**15 43 56.1**	**+0.2**
STKA	**Stephens Creek**	**27.92**	**230**	P		**P**	**15 46 51.7**	**-1.8**
	0.6nm,0.3s,mb3.8,baz=36,slow=11,SNR=4.2							
WRA	**Warramunga Arr**	**30.85**	**257**	P		**P**	**15 47 19.9**	**+0.3**
	0.2nm,0.3s,mb3.4,baz=87,slow=9.0,SNR=6.9							
ASAR	**Alice Springs**	**31.65**	**250**	P		**P**	**15 47 27.6**	**+0.9**
	1.0nm,0.4s,mb4.0,baz=80,slow=8.8,SNR=40							
FITZ	**Fitzroy Crossi**	**39.07**	**260**	P		**P**	**15 48 30.7**	**+0.2**
	1.5nm,0.7s,mb3.9,baz=106,slow=14,SNR=6.0							

MAN 25 15:45:41,909N×12601E,h60km,mb4.1,ML2.9,MS2.7, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SCPH	**Surigao**	**0.85**	**323**↓	*e*P		Pn	15 45 59.2	+2.0
BIPH	**Bislig**	**0.97**	**159**↑	*i*P		Pn	15 45 55.2	-3.5
BIPH				*i* S		Sn	15 46 05.6	-6.1

BJI 25 15:52:49.8,4256N×12357E,h17km,ML3.8,1D, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SNY	**Shenyang**	**0.73**	**180**	↓P		Pg	15 52 59.3	-4.8
SNY				SG		Sg	15 53 07.3	-6.5
SNY				Smax				
	comp=N,536nm,0.8s							
SNY				Smax				
	comp=E,655nm,1.2s							
CN2	**Changchun**	**1.85**	**47**	*e*P		Pn	15 53 21.0	+0.3
CN2				*e*PG		Pg	15 53 23.3	-2.1
CN2				*e*S		Sn	15 53 47.5	+3.8
CN2				*e*SG		Sg	15 53 49.8	+0.4
CN2				Smax				
	comp=N,1μm,0.7s							
CN2				Smax				
	comp=E,650nm,0.7s							
DL2	**Dalian**	**3.94**	**203**	PG		Pg	15 53 59.8	-5.4
DL2				SG		Sg	15 54 49.5	-6.7
DL2				Smax				
	comp=N,50nm,0.7s							
DL2				Smax				
	comp=E,70nm,0.7s							

*ISCJB **25** 16:08:39.9±0.2, 4934N±001×679E±002, h0km, Error ellipse: s-maj=1.6km s-min=1.5km az=179.2*
*PRU **25** 16:08:40.9, 4939N×682E, h0km*
*STR **25** 16:08:41.1±0.3, 4936N×677E, h1km, Ml3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BNS **25** 16:08:41.9±0.6, 4935N×679E, h0km±6km, ML2.4*
*NEIC **25** 16:08:41.1, 4936N×677E, h1km, ML2.9(SZGRF), ML3.1(STR), ML3.5(LDG), After STR.*
*BGR **25** 16:08:41.6±0.4, 4937N×685E, h1km, ML2.9/7, Error ellipse: s-maj=5.6km s-min=3.3km az=22.0*
*LEDBW **25** 16:08:42.1±0.2, 49370N±0009×684E±002, h1km, ML2.8, Error ellipse: s-maj=4.0km s-min=2.0km az=84.0*
*LDG **25** 16:08:42.0±0.1, 4938N×684E, h1km, Md3.5/2, Ml3.5/31, Error ellipse: s-maj=1.4km s-min=1.2km az=171.0, Suspected Mining induced.*
*CSEM **25** 16:08:42.0±0.0, 4937N×685E, h1km, ML3.6/28, Error ellipse: s-maj=0.9km s-min=0.7km az=110.0*

ISC 25 16:08:40.8±0.2,**4935N**±0010×**680E**±001,**h0**km,**n162,** σ1§**30**/285,**6C-11D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
RUP	**Ruppelstein**	**0.39**	**26**↓	*e*P*		**Pg**	**16 08 49.0**	**+0.8**
RUP	**Ruppelstein**	**0.39**	**26**	Pg		**Pg**	**16 08 48.9**	**+0.7**
RUP				Sg		**Sg**	**16 08 54.4**	**+1.2**
WLF	**Walferdange**	**0.53**	**307**	*e*Pg		**Pg**	**16 08 52.7**	**+1.9**
	SNR=27							
WLF				*e*Sg		**Sg**	**16 08 58.2**	**+0.6**
	SNR=4.4							
WLF	**Walferdange**	**0.53**	**307**	P		**Pg**	**16 08 53.0**	**+2.1**
WLF	**Walferdange**	**0.53**	**307**	*e*Pg		**Pg**	**16 08 52.5**	**+1.7**
ABH	**Alteburg**	**0.72**	**42**	*e*P*		**Pb**	**16 08 54.9**	**-1.2**
ABH	**Alteburg**	**0.72**	**42**	Pg		**Pg**	**16 08 54.7**	**+0.2**
ABH				Sg		**Sg**	**16 09 03.8**	**0.0**
LANF	**Langenberg**	**0.76**	**119**	Pg		**Pg**	**16 08 55.9**	**+0.7**
LANF				Sg		**Sg**	**16 09 07.2**	**+2.2**
LANF	**Langenberg**	**0.76**	**119**	↓*i*Pg		**Pg**	**16 08 56.1**	**+0.9**
KTD	**Kalmit**	**0.84**	**92**	Pg		**Pg**	**16 08 58.1**	**+1.3**
KTD	**Kalmit**	**0.84**	**92**	Px		Px	16 08 58.1	
KTD	**Kalmit**	**0.84**	**92**	Pg		**Pg**	**16 08 57.9**	**+1.1**
KTD				Sg		**Sg**	**16 09 10.2**	**+2.5**
BGG	**Burgeitz**	**0.92**	**22**	*e*Pg		**Pg**	**16 08 59.8**	**+1.3**
HILG	**Hillesheim**	**0.94**	**355**	*e*Pg		**Pg**	**16 08 59.7**	**+0.8**
CDF	**Champ du Feu**	**0.99**	**161**	*e*Pn		**Pn**	**16 09 01.4**	**-0.5**
	SNR=1.0							
CDF				*e*Sg		**Sg**	**16 09 13.9**	**+1.3

BFO				S	Sg	16 09 28.1	+1.2	
BFO	**Black Forest**	**1.44**	**135**	Pg	Pg	16 09 09.1	+0.8	
	SNR=24							
BFO				*e*S	Sg	16 09 25.7	-1.2	
BFO				Sg	Sg	16 09 28.1	+1.2	
BFO	**Black Forest**	**1.44**	**135**	*e*Pn	Pn	16 09 07.5	-0.5	
BFO				*e*S	Sg	16 09 25.7	-1.2	
BCLA	**Clavier**	**1.44**	**318**	P	Pn	16 09 09.5	+1.4	
BCLA	**Clavier**	**1.44**	**318**	P	Pn	16 09 09.4	+1.3	
LBG	**Lerchenberg**	**1.48**	**117**	Pg	Pg	16 09 09.8	+0.7	
GIVF	**Givet**	**1.49**	**301**	*e*Pg	Pg	16 09 09.3	0.0	
GIVF				*e*Sn	Sn	16 09 26.7	-2.1	
	SNR=1.0							
GIVF				*e*Sg	Sg	16 09 29.5	+1.0	
	144nm,0.4s,SNR=1.0							
GIVF	**Givet**	**1.49**	**301**	*e*Pg	Pg	16 09 09.3	0.0	
GIVF				*e*Sn	Sn	16 09 26.7	-2.1	
	SNR=1.0							
GIVF				*e*Sg	Sg	16 09 29.5	+1.0	
	72nm,0.4s,SNR=1.0							
GIVF	**Givet**	**1.49**	**301**	*e*Pn	Pn	16 09 08.3	-0.4	
GIVF				*e*Pg	Pg	16 09 09.3	0.0	
GIVF				*e*Sn	Sn	16 09 26.7	-2.1	
GIVF				*e*Sg	Sg	16 09 29.5	+1.0	
MOF	**Molkenrain**	**1.52**	**172**	Pg	Pg	16 09 10.7	+0.9	
MOF				Sg	Sg	16 09 30.2	+0.7	
MOF	**Molkenrain**	**1.52**	**172**	⇑*i*P	Pn	16 09 11.1	+2.0	
HGN	**Heimansgroeve**	**1.52**	**339**	*e*Pn	Pn	16 09 09.6	+0.4	
	5.5nm,0.1s							
HGN	**Heimansgroeve**	**1.52**	**339**	*e*Pg	Pg	16 09 11.3	+1.4	
	56nm,0.7s							
HGN				*e*Sn	Sn	16 09 29.9	+0.2	
HGN				*e*Sg	Sg	16 09 31.5	+1.9	
HGN	**Heimansgroeve**	**1.52**	**339**	*e*Pg	Pg	16 09 11.3	+1.4	
	56nm,0.7s							
HGN	**Heimansgroeve**	**1.52**	**339**	*e*Rg		16 09 47.2		
HINF	**Hinteralfeld**	**1.54**	**179**	*e*Pg	Pg	16 09 11.0	+0.8	
HINF				*e*Sg	Sg	16 09 31.5	+1.4	
	282nm,0.4s,SNR=1.0							
HINF	**Hinteralfeld**	**1.54**	**179**	*e*Pg	Pg	16 09 11.0	+0.8	
HINF				*e*Sg	Sg	16 09 31.5	+1.4	
	141nm,0.4s,SNR=1.0							
HINF	**Hinteralfeld**	**1.54**	**179**	*e*Pn	Pn	16 09 09.2	-0.2	
HINF				*e*Pg	Pg	16 09 11.0	+0.8	
HINF				*e*Sg	Sg	16 09 31.5	+1.4	
KIZ	**Kirchzarten**	**1.58**	**152**	Pg	Pg	16 09 11.8	+0.7	
KIZ				Sg	Sg	16 09 33.2	+1.7	
KIZ	**Kirchzarten**	**1.58**	**152**	Px	Px	16 09 11.8		
KIZ				S	Sg	16 09 33.2	+1.7	
DOU	**Dourbes**	**1.61**	**298**	P	Pn	16 09 11.2	+0.7	
DOU	**Dourbes**	**1.61**	**298**	P	Pn	16 09 11.1	+0.6	
SFTF	**Sexfontaines**	**1.64**	**226**	*e*Pn	Pn	16 09 11.1	+0.3	
	baz=53							
SFTF	**Sexfontaines**	**1.64**	**226**	*e*Pg	Pg	16 09 13.2	+1.1	
SFTF				*e*Sg	Sg	16 09 35.1	+1.8	
	70nm,0.3s,baz=42							
SFTF	**Sexfontaines**	**1.64**	**226**	*e*Pg	Pg	16 09 13.2	+1.1	
SFTF				*e*Sg	Sg	16 09 35.1	+1.8	
	35nm,0.3s							
SFTF	**Sexfontaines**	**1.64**	**226**	*e*Pn	Pn	16 09 11.1	+0.3	
SFTF				*e*Pg	Pg	16 09 13.2	+1.1	
SFTF				*e*Sg	Sg	16 09 35.1	+1.8	
STU	**Stuttgart**	**1.68**	**109**	*e*Sg	Sg	16 09 33.2	-1.5	
	SNR=1.7							
FELD	**Feldberg im Sc**	**1.68**	**151**	Pg	Pg	16 09 13.9	+1.0	
FELD				Sg	Sg	16 09 35.4	+0.8	
FELD	**Feldberg im Sc**	**1.68**	**151**	Pg	Pg	16 09 11.9	-1.0	
FELD				Sg	Sg	16 09 35.4	+0.8	
SPAK	**Spaichingen-Ko**	**1.81**	**133**	Pg	Pg	16 09 16.2	+0.8	
SPAK	**Spaichingen-Ko**	**1.81**	**133**	Pg	Pg	16 09 16.2	+0.7	
SPAK				Sg	Sg	16 09 41.1	+2.1	
SPAK	**Spaichingen-Ko**	**1.81**	**133**	Pg	Pg	16 09 15.6	+0.1	
SPAK				Sg	Sg	16 09 41.1	+2.1	
BAIF	**Baives**	**1.83**	**294**	*e*Pg	Pg	16 09 16.4	+0.6	
	SNR=1.0							
BAIF				*e*Sn	Sn	16 09 35.9	-1.3	
	SNR=1.0							
BAIF				*e*Sg	Sg	16 09 40.5	+1.1	
	95nm,0.4s,SNR=1.0							
BAIF	**Baives**	**1.83**	**294**	*e*Pg	Pg	16 09 16.4	+0.6	
	SNR=1.0							
BAIF				*e*Sn	Sn	16 09 35.9	-1.3	
	SNR=1.0							
BAIF				*e*Sg	Sg	16 09 40.5	+1.1	
	48nm,0.4s,SNR=1.0							
BAIF	**Baives**	**1.83**	**294**	*e*Pn	Pn	16 09 13.7	+0.3	
BAIF				*e*Pg	Pg	16 09 16.4	+0.6	
BAIF				*e*Sn	Sn	16 09 35.9	-1.3	
BAIF				*e*Sg	Sg	16 09 40.5	+1.1	
SIND	**Sindeldorf**	**1.83**	**89**	Pg	Pg	16 09 12.4	-3.4	
BUCH	**Bad Urach**	**1.91**	**117**	Pg	Pg	16 09 15.5	-1.9	
SNF	**Seneffe**	**2.00**	**306**	P	Pn	16 09 17.1	+1.3	
SNF	**Seneffe**	**2.00**	**306**	P	Pn	16 09 17.0	+1.3	
GUT	**Gutenstein**	**2.00**	**129**	Pg	Pg	16 09 19.6	+0.6	
LOMF	**Lomont**	**2.00**	**179**	Pg	Pg	16 09 17.9	-1.2	
LOMF				Sg	Sg	16 09 46.3	+1.2	
LOMF	**Lomont**	**2.00**	**179**	P	Pn	16 09 19.9	+4.1	
LOMF	**Lomont**	**2.00**	**179**	Pg	Pg	16 09 19.9	+0.8	
LOMF				Sg	Sg	16 09 46.3	+1.2	
UBBA	**Unterbreizbach**	**2.53**	**53**	*e*Sg	Sg	16 10 03.0	+1.0	
UBR	**Ueberruh**	**2.76**	**126**	P*	Pb	16 09 27.4	-3.5	
CABF	**La Chapelle**	**2.78**	**190**	*e*Pg	Pg	16 09 34.6	+0.5	
	SNR=1.0							
CABF				*e*Sg	Sg	16 10 10.0	-0.2	
	97nm,0.6s,SNR=1.0							
CABF	**La Chapelle**	**2.78**	**190**	*e*Pg	Pg	16 09 34.6	+0.5	
	SNR=1.0							
CABF				*e*Sg	Sg	16 10 10.0	-0.2	
	48nm,0.6s,SNR=1.0							
CABF	**La Chapelle**	**2.78**	**190**	*e*Pn	Pn	16 09 26.6	+0.1	
CABF				*e*Pg	Pg	16 09 34.6	+0.5	
CABF				*e*Sg	Sg	16 10 10.0	-0.2	
LOR	**Lormes**	**2.86**	**224**	*e*Pn	Pn	16 09 27.2	-0.4	
	baz=49,SNR=1.0							
LOR				*e*Sn	Sn	16 10 01.0	-1.8	
	baz=44,SNR=1.0							
LOR				*e*Sg	Sg	16 10 12.6	-0.1	
	39nm,0.3s,baz=43,SNR=1.0							
LOR	**Lormes**	**2.86**	**224**	*e*Pn	Pn	16 09 27.2	-0.4	
	SNR=1.0							
LOR				*e*Sn	Sn	16 10 01.0	-1.8	
	SNR=1.0							
LOR				*e*Sg	Sg	16 10 12.6	-0.1	
	20nm,0.3s,SNR=1.0							
GRA1	**Grafenberg Arr**	**2.90**	**82**	Sg	Sg	16 10 12.4	-1.5	
GRF	**Grafenberg Arr**	**2.90**	**82**	*e*Sg	Sg	16 10 12.4	-1.5	
SSF	**Saint Saulge**	**3.18**	**225**	*e*Pg	Pg	16 09 43.4	+1.7	
	SNR=1.0							
SSF				*e*Sn	Sn	16 10 08.7	-1.8	
	SNR=1.0							
SSF				*e*Sg	Sg	16 10 22.0	-0.9	
	55nm,0.4s,SNR=1.0							
SSF	**Saint Saulge**	**3.18**	**225**	*e*Pg	Pg	16 09 43.4	+1.7	
	SNR=1.0							
SSF				*e*Sn	Sn	16 10 08.7	-1.8	
	SNR=1.0							
SSF				*e*Sg	Sg	16 10 22.0	-0.9	
	28nm,0.4s,SNR=1.0							
SSF	**Saint Saulge**	**3.18**	**225**	*e*Pn	Pn	16 09 31.5	-0.5	
SSF				*e*Pg	Pg	16 09 43.4	+1.7	
SSF				*e*Sn	Sn	16 10 08.7	-1.8	
SSF				*e*Sg	Sg	16 10 22.0	-0.9	
TUE	**Stuetta**	**3.35**	**148**	*e*Pn	Pn	16 09 36.5	+2.2	
TUE	**Stuetta**	**3.35**	**148**	*e*Pn	Pn	16 09 36.5	+2.1	
SMF	**Signal de Mont**	**3.36**	**217**	*e*Pn	Pn	16 09 33.4	-1.0	
	SNR=1.0							
SMF				*e*Sn	Sn	16 10 11.9	-3.1	
	SNR=1.0							
SMF				*e*Sg	Sg	16 10 27.5	-1.1	
	46nm,0.5s,SNR=1.0							
SMF	**Signal de Mont**	**3.36**	**217**	*e*Pn	Pn	16 09 33.4	-1.0	
	SNR=1.0							
SMF				*e*Sn	Sn	16 10 11.9	-3.1	
	SNR=1.0							
SMF				*e*Sg	Sg	16 10 27.5	-1.1	
	23nm,0.5s,SNR=1.0							
MOX	**Moxa**	**3.37**	**66**	*e*Pg	Pg	16 09 43.1	-2.1	
MOX				*e*Sg	Sg	16 10 28.1	-0.7	
MOX	**Moxa**	**3.37**	**66**	*e*PG	Pg	16 09 43.1	-2.1	
MOX				*e*SG	Sg	16 10 28.1	-0.7	
AVF	**Avril sur Loir**	**3.45**	**223**	*e*Pn	Pn	16 09 35.0	-0.7	
	SNR=1.0							
AVF				*e*Sn	Sn	16 10 15.1	-2.2	
	SNR=1.0							
AVF				*e*Sg	Sg	16 10 34.2	+2.6	
	28nm,0.5s,SNR=1.0							
AVF	**Avril sur Loir**	**3.45**	**223**	*e*Pn	Pn	16 09 35.0	-0.7	
	SNR=1.0							
AVF				*e*Sn	Sn	16 10 15.1	-2.2	
	SNR=1.0							
AVF				*e*Sg	Sg	16 10 34.2	+2.6	
	14nm,0.5s,SNR=1.0							
HYF	**Humbligny**	**3.47**	**235**	*e*Sg	Sg	16 10 32.5	+0.2	
MOTA	**Moosalm**	**3.50**	**123**	⇑*i*Pn	Pn	16 09 38.2	+1.8	
MOTA				⇓*i*Sn	Sn	16 10 17.3	-1.2	
FETA	**Feichten**	**3.51**	**130**	⇑*i*Pn	Pn	16 09 38.8	+2.2	
FETA				⇑*i*Sn	Sn	16 10 17.8	-1.0	
GUNZ	**Gunzen**	**3.72**	**72**	*e*Pg	Pg	16 09 51.0	-1.0	
	SNR=2.7							
WERD	**Werda**	**3.72**	**71**	*e*Pg	Pg	16 09 51.0	-1.1	
	SNR=2.3							
WERD				*e*Sg	Sg	16 10 39.3	-1.0	
	SNR=3.8							
NKC	**Novy Kostel**	**3.76**	**74**	*e*PG	Pg	16 09 49.6	-3.2	
NKC				*e*SG	Sg	16 10 39.6	-2.0	
	comp=Z,27nm,0.7s							
TANN	**Tannenbergstha**	**3.81**	**72**	*e*Pg	Pg	16 09 52.3	-1.4	
	SNR=2.0							
TANN				*e*Sg	Sg	16 10 41.1	-2.1	
	SNR=2.6							
TANN	**Tannenbergstha**	**3.81**	**72**	Pg	Pg	16 09 52.3	-1.5	
	SNR=2.0							
TANN				Sg	Sg	16 10 41.1	-2.0	
	SNR=2.6							
LPL	**La Plagne**	**3.84**	**181**	*e*Sg	Sg	16 10 43.7	-0.3	
	comp=Z,11nm,0.5s							
LPL	**La Plagne**	**3.84**	**181**	*e*Sg	Sg	16 10 43.7	-0.3	
	comp=Z,5.6nm,0.5s							
WTTA	**Wattenberg**	**3.84**	**121**	⇓*i*Pn	Pn	16 09 43.1	+2.0	
BGF	**Bois d'Agland**	**3.86**	**225**	*e*Pn	Pn	16 09 41.1	-0.2	
	SNR=1.0							
BGF				*e*Sn	Sn	16 10 25.1	-2.2	
	SNR=1.0							
BGF				*e*Sg	Sg	16 10 44.7	+0.1	
	comp=Z,144nm,0.5s,SNR=1.0							
BGF	**Bois d'Agland**	**3.86**	**225**	*e*Pn	Pn	16 09 41.1	-0.2	
	SNR=1.0							
BGF				*e*Sn	Sn	16 10 25.1	-2.2	
	SNR=1.0							
BGF				*e*Sg	Sg	16 10 44.7	+0.1	
	comp=Z,72nm,0.5s,SNR=1.0							
LPG	**La Plagne**	**3.86**	**181**	*e*Sg	Sg	16 10 43.3	-1.3	
	comp=Z,15nm,0.4s							
LPG	**La Plagne**	**3.86**	**181**	*e*Sg	Sg	16 10 43.3	-1.3	
	comp=Z,7.3nm,0.4s							
WET	**Wettzell**	**3.99**	**91**	*e*Pn	Pn	16 09 43.5	+0.4	
	SNR=5.4							
TCF	**Toulx Ste Croi**	**4.36**	**227**	*e*Sg	Sg	16 11 00.3	-0.3	
	comp=Z,46nm,0.7s							
TCF	**Toulx Ste Croi**	**4.36**	**227**	*e*Sg	Sg	16 11 00.3	-0.3	
	comp=Z,23nm,0.7s							
CLL	**Collm**	**4.43**	**61**	*e*Sg	Sg	16 11 05.0	+2.1	
KHC	**Kasperske Hory**	**4.45**	**90**	*e*PN	Pn	16 09 49.7	+0.3	
KHC				*e*PG	Pg	16 10 03.0	-2.9	
KHC				*e*SN	Sn	16 10 39.3	-2.4	
KHC				*e*SG	Sg	16 11 02.9	-0.6	
	comp=Z,6.1nm,0.7s							
ORIF	**Oris-en-Rattie**	**4.48**	**188**	*e*Sg	Sg	16 11 04.8	+0.2	
	comp=Z,24nm,0.6s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**4.48**	**188**	*e*Sg	Sg	16 11 04.8	+0.2	
	comp=Z,12nm,0.6s,SNR=1.0							
GEC2	**GERESS Array S**	**4.56**	**94**	*e*Pn	Pn	16 09 51.7	+0.7	
	SNR=12							
GEC2	**GERESS Array S**	**4.56**	**94**	*e*Pn	Pn	16 09 51.3	+0.3	
GEC2	**GERESS Array S**	**4.56**	**94**	*e*Pn	Pn	16 09 51.3	+0.4	
LDF	**La Druitiere**	**4.62**	**263**	*e*Pn	Pn	16 09 51.6	-0.2	
LDF				*e*Sg	Sg	16 11 06.4	-2.8	
	comp=Z,19nm,0.4s							
LDF	**La Druitiere**	**4.62**	**263**	*e*Pn	Pn	16 09 51.6	-0.2	
LDF				*e*Sg	Sg	16 11 06.4	-2.8	
	comp=Z,9.6nm,0.4s							
MBDF	**Montbardon**	**4.63**	**180**	*e*Pn	Pn	16 09 50.5	-1.4	
	SNR=1.0							
MBDF				*e*Sn	Sn	16 10 43.3	-2.9	
	SNR=1.0							
MBDF				*e*Sg	Sg	16 11 08.4	-0.9	
	comp=Z,7.3nm,0.5s							
MBDF	**Montbardon**	**4.63**	**180**	*e*Pn	Pn	16 09 50.5	-1.4	
	SNR=1.0							
MBDF				*e*Sn	Sn	16 10 43.3	-2.9	
	SNR=1.0							
MBDF				*e*Sg	Sg	16 11 08.4	-0.9	
	comp=Z,3.7nm,0.5s							
VIVF	**Saint-Julien-l**	**4.73**	**199**	*e*Sn	Sn	16 10 45.1	-3.6	
	SNR=1.0							
VIVF				*e*Sg	Sg	16 11 12.3	-0.2	
	comp=Z,16nm,0.5s,SNR=1.0							
VIVF	**Saint-Julien-l**	**4.73**	**199**	*e*Sn	Sn	16 10 45.1	-3.6	
	SNR=1.0							
VIVF				*e*Sg	Sg	16 11 12.3	-0.2	
	comp=Z,7.8nm,0.5s,SNR=1.0							
FLN	**La Foliniere**	**4.83**	**266**	*e*Pn	Pn	16 09 54.0	-0.6	
	baz=91							
FLN				*e*Sn	Sn	16 10 46.5	-4.6	
FLN				*e*Sg	Sg	16 11 13.8	-1.9	
	comp=Z,24nm,0.4s,baz=90,SNR=1.0							
FLN	**La Foliniere**	**4.83**	**266**	*e*Pn	Pn	16 09 54.0	-0.6	
FLN				*e*Sn	Sn	16 10 46.5	-4.6	
FLN				*e*Sg	Sg	16 11 13.8	-1.9	
	comp=Z,12nm,0.4s,SNR=1.0							
BRG	**Berggiesshubel**	**4.84**	**69**	PG	Pg	16 10 10.5	-3.0	
BRG				SG	Sg	16 11 14.3	-1.9	
	comp=Z,4.3nm,0.7s							
KBA	**Koelnbreinsper**	**4.93**	**115**	⇑*i*Pn	Pn	16 09 58.3	+2.3	
KBA				⇑*i*Sn	Sn	16 10 52.2	-1.5	
KBA	**Koelnbreinsper**	**4.93**	**115**	Pn	Pn	16 09 58.3	+2.3	
KBA				Sn	Sn	16 10 52.2	-1.5	
PRU	**Pruhonice**	**5.07**	**80**	*e*SG	Sg	16 11 22.2	-1.2	
GRR	**Gorron**	**5.15**	**262**	*e*Sn	Sn	16 10 53.2	-5.8	
	comp=Z,17nm,0.3s,SNR=1.0							
GRR	**Gorron**	**5.15**	**262**	*e*Sn	Sn	16 10 53.2	-5.8	
	comp=Z,8.3nm,0.3s,SNR=1.0							
MOA	**Molln**	**5.17**	**104**	⇑*i*Pn	Pn	16 10 00.5	+1.1	
MOA				⇓*i*Sn	Sn	16 10 57.9	-1.9	
RJF	**Les Rejaudoux**	**5.41**	**224**	*e*Sg	Sg	16 11 32.5	-2.0	
	comp=Z,16nm,0.5s							
RJF	**Les Rejaudoux**	**5.41**	**224**	*e*Sg	Sg	16 11 32.5	-2.0	
	comp=Z,8.1nm,0.5s							
MFF	**Saint Martin d**	**5.42**	**242**	*e*Sg	Sg	16 11 33.3	-1.3	
	comp=Z,22nm,0.6s							
MFF	**Saint Martin d**	**5.42**	**242**	*e*Sg	Sg	16 11 33.3	-1.3	
	comp=Z,11nm,0.6s							
CAF	**Calviac**	**5.48**	**218**	*e*Pn	Pn	16 10 02.8	-0.8	
CAF				*e*Sg	Sg	16 11 35.4	-1.3	
	comp=Z,12nm,0.4s,SNR=1.0							
CAF	**Calviac**	**5.48**	**218**	*e*Pn	Pn	16 10 02.8	-0.8	
CAF				*e*Sg	Sg	16 11 35.4	-1.3	
	comp=Z,5.8nm,0.4s,SNR=1.0							
LASF	**Ste Croix**	**5.65**	**202**	*e*Sg	Sg	16 11 40.3	-1.9	
	comp=Z,24nm,0.6s							
LASF	**Ste Croix**	**5.65**	**202**	*e*Sg	Sg	16 11 40.3	-1.9	
	comp=Z,12nm,0.6s							
LFF	**La Frestale**	**6.05**	**225**	*e*Sg	Sg	16 11 52.6	-2.3	
	comp=Z,10nm,0.3s							
LFF	**La Frestale**	**6.05**	**225**	*e*Sg	Sg	16 11 52.6	-2.3	
	comp=Z,5.1nm,0.3s							
CONA	**Conrad Observa**	**6.17**	**100**	⇓*i*Pn	Pn	16 10 14.5	+1.5	
CONA				⇓*i*Sn	Sn	16 11 22.0	-2.3	
SGMF	**Saint Gilles**	**6.28**	**263**	*e*Pn	Pn	16 10 14.0	-0.5	
SGMF				*e*Sn	Sn	16 11 21.2	-5.7	
MTLF	**Montolieu**	**6.80**	**210**	*e*Sg	Sg	16 12 16.2	-2.7	
	comp=Z,7.9nm,0.6s							
MTLF	**Montolieu**	**6.80**	**210**	*e*Sg	Sg	16 12 16.2	-2.7	
	comp=Z,4.0nm,0.6s							

NIED ***25*** *16:17:00,3650N×14260E,h5km,Mw4.5 Best double couple: M0 5.43000×10^15 NP1:φ=201.00000°,δ=55.00000°, λ=-93.00000°. NP2:φ=26.00000°,δ=36.00000°,λ=-86.00000°.*

IDC ***25*** *16:17:42.0±0.6,3638N×14271E,h0km,mb4.1/15, mb1 4.2/20,mb1mx4.2/28,mbtmp4.1/20,ML3.6/5,MS3.6/13, Ms1 3.7/13,ms1mx3.4/41,Error ellipse: s-maj=16.6km s-min=15.0km az=169.0*

NEIC ***25*** *16:17:44.2±4.9,3640N×14273E,h12km±29km,mb4.7/10, MW4.4(NIED),Error ellipse: s-maj=12.1km s-min=10.0km az=154.0*

JMA ***25*** *16:17:45.6±0.2,3651N×14263E,h81km,M4.0*

MOS ***25*** *16:17:45.9±1.5,3653N×14269E,h33km,mb5.0/15,Error ellipse: s-maj=11.3km s-min=6.7km az=116.8*

ISCJB ***25*** *16:17:45.5±0.4,3651N±0.03×14266E±0.03,h29km, mb4.4/36,MS3.8/18,Error ellipse: s-maj=4.7km s-min=3.4km az=141.6*

BJI ***25*** *16:17:46.3,3665N×142.19E,h12km,mB4.7,mb4.4,Ms4.2, Ms2.4.0*

ISC 25 16:17:44.5±1.3,3652N±0.03×14264E±0.04,h9km±8km, h30km±7.0km:pP-P,n100,σ1º07/112,mb4.4/36,MS3.8/18, 5C-3D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
ONAJ	**Iwakimizuishiy**	**1.59**	**292**	P	P	**Pn**	**16 18 12.8**	**+0.2**
ONAJ				*e*S	S	**Sn**	**16 18 33.3**	**+0.1**
JFK	**Kawauchi**	**1.65**	**302**	P	P	**Pn**	**16 18 13.0**	**-0.5**
JFK				*e*S	S	**Sn**	**16 18 34.2**	**-0.5**
CHOJ	**Chosi**	**1.65**	**241**	P	P	**Pn**	**16 18 13.4**	**-0.2**
CHOJ				*e*S	S	**Sn**	**16 18 34.5**	**-0.4**
JHO	**Hitachi**	**1.67**	**274**	⇑P	P	**Pn**	**16 18 13.3**	**-0.5**
JHO				*e*S	S	**Sn**	**16 18 34.5**	**-0.7**
JMM	**Marumori**	**1.99**	**313**	P	P	**Pn**	**16 18 17.8**	**-0.5**
JMM				*e*S	S	**Sn**	**16 18 42.6**	**-0.7**
BSO1	**Boso 1**	**2.30**	**216**	P	P	**Pn**	**16 18 21.3**	**-1.1**
BSO1				*e*S	S	**Sn**	**16 18 50.0**	**-0.8**
JAG	**Ashikaga**	**2.57**	**269**	P	P	**Pn**	**16 18 26.0**	**-0.1**
JAG				*e*S	S	**Sn**	**16 18 57.0**	**-0.4**
JMK	**Ichinoseki**	**2.68**	**336**	P	P	**Pn**	**16 18 26.6**	**-1.1**
JMK				*e*S	S	**Sn**	**16 18 59.0**	**-1.2**
JYK	**Kaneyama**	**3.00**	**324**	P	P	**Pn**	**16 18 31.8**	**-0.3**
JRY	**Ryogami san**	**3.06**	**262**	P	P	**Pn**	**16 18 32.5**	**-0.4**
JRY				*e*S	S	**Sn**	**16 19 08.5**	**-1.1**
JOM	**Ohasama**	**3.14**	**341**	P	P	**Pn**	**16 18 33.4**	**-0.6**
JOM				*e*S	S	**Sn**	**16 19 10.3**	**-1.2**
JOD2	**Odawara 2**	**3.14**	**248**	P	P	**Pn**	**16 18 34.1**	**+0.1**
JOD2				*e*S	S	**Sn**	**16 19 10.3**	**-1.3**
JYN	**Shimob**	**3.47**	**254**	P	P	**Pn**	**16 18 39.3**	**+0.8**
JYN				*e*S	S	**Sn**	**16 19 20.2**	**+0.5**
MJAR	**Matsushiro Arr**	**3.56**	**272**	Pn	P	**Pn**	**16 18 40.4**	**+0.5**
	4.1nm,0.3s,baz=183,slow=21,SNR=32							
MJAR				Sn	S	**Sn**	**16 19 22.7**	**+0.7**
	6.4nm,0.3s,baz=47,slow=33,SNR=5.1							
MAJO	**Matsushiro**	**3.57**	**272**	*e*P	P	**Pn**	**16 18 41.2**	**+1.3**
MAT	**Matsushiro**	**3.57**	**272**	P	P	**Pn**	**16 18 41.1**	**+1.2**
MAT				S	S	**Sn**	**16 19 23.2**	**+1.1**
MAT	**Matsushiro**	**3.57**	**272**	P	P	**Pn**	**16 18 40.9**	**+1.0**
MAT				*e*S	S	**Sn**	**16 19 22.7**	**+0.6**
JSD	**Sado**	**3.81**	**295**	P	P	**Pn**	**16 18 44.9**	**+1.7**
JANG	**Nango**	**3.95**	**347**	P	P	**Pn**	**16 18 44.7**	**-0.4**
JANG				*e*S	S	**Sn**	**16 19 29.5**	**-2.0**
JHJ2	**Mitsune**	**4.11**	**215**	P	P	**Pn**	**16 18 45.3**	**-2.1**
JHJ2				*e*S	S	**Sn**	**16 19 30.2**	**-5.4**
JHJ	**Hachijo jima 2**	**4.12**	**216**	Pn	P	**Pn**	**16 18 44.8**	**-2.7**
	42nm,0.3s,baz=65,slow=19,SNR=21							
JHJ				Sn	S	**Sn**	**16 19 29.8**	**-6.1**
	136nm,0.3s,baz=60,slow=23,SNR=12							
ERM	**Erimo**	**5.50**	**4**	*e*P	P	**Pn**	**16 19 04.5**	**-2.0**
ASAJ	**Asahikawa**	**7.59**	**360**	Pn	P	**Pn**	**16 19 34.4**	**-0.8**
	2.4nm,0.3s,baz=16,slow=22,SNR=26							
ASAJ				LR	LR		16 23 22.4	
	comp=Z,408nm,19.7s,baz=13,slow=44							
ASAJ	**Asahikawa**	**7.59**	**360**	P	P	**Pn**	**16 19 34.4**	**-0.7**
ASAJ				pmax	pmax			
	comp=Z,2.0nm,0.3s							
ASAJ				MLR	MLR			
	comp=Z,409nm,19.7s							
CBIJ	**Chichi jima**	**9.40**	**182**	Pn	P	**Pn**	**16 19 54.1**	**-5.9**
	comp=Z,10nm,0.3s,baz=186,slow=14,SNR=19							
CBIJ				Sn	S	**Sn**	**16 21 32.9**	**-13**
	comp=Z,20nm,0.3s,baz=299,slow=22,SNR=7.4							
YSS	**Yuzh-Sakhalins**	**10.43**	**0**	*e*P	P	**Pn**	**16 20 12.8**	**-1.2**
YSS				pmax	pmax			
	comp=Z,80nm,1.2s							
YSS				MLR	MLR			
	comp=Z,500nm,14.0s							
KSRS	**Korea Array**	**11.81**	**279**	Pn	P	**Pn**	**16 20 32.8**	**-0.1**
	comp=Z

comp=Z,3.6nm,0.9s,mb4.1,baz=110,slow=8.5,SNR=17
SONM LR LR 16 35 42.5
comp=Z,95nm,18.4s,MS3.4,baz=190,slow=37
LZH Lanzhou 31.12 281 *e*P **P 16 24 04.5 +1.3**
LZH AP pP 16 24 10.3 +4.2
LZH XP sP 16 24 12.0 +4.7
LZH AMB AMB
comp=Z,42nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,125nm,4.0s
LZH LR LR
comp=E,244nm,13.0s
LZH LR LR
comp=Z,384nm,14.2s,MS4.2
LZH Lanzhou 31.12 281 *e*P **P 16 24 04.4 +1.2**
LZH *SP sP 16 24 12.1 +4.8
LZH pmax pmax
comp=Z,42nm,1.5s,mb5.0
LZH MLR MLR
comp=Z,380nm,14.2s,MS4.2
LZH Lanzhou 31.12 281 *e*P **P 16 24 04.4 +1.2**
comp=Z,42nm,1.5s,mb5.0
LZH pP pP 16 24 10.2 +4.1
LZH sP sP 16 24 12.1 +4.8
LZH LR LR
comp=Z,380nm,14.2s,MS4.2
ZAK Zakamensk 31.36 309 *e*P **P 16 24 05.4 +0.3**
ZAK pmax pmax
comp=Z,6.0nm,1.6s,mb4.2
TLY Talaya 31.41 311 *e*P **P 16 24 07.4 +1.8**
TLY *e* 16 24 19.3
TLY pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
TLY MLR MLR
comp=Z,180nm,17.0s,MS3.8
GTA Gaotai 33.65 288 *e*P **P 16 24 26.5 +1.1**
GTA PCP PcP 16 27 06.5 +1.2
GTA S **S 16 29 45.5 -2.7**
GTA SS SS 16 31 51.5 -22
GTA AMB AMB
comp=Z,6.0nm,1.4s,mb4.3
GTA AMB AMB
comp=Z,109nm,6.6s
GTA LR LR
comp=N,194nm,16.2s,MS4.1
GTA LR LR
comp=E,241nm,15.9s,MS4.1
GTA LR LR
comp=Z,160nm,13.2s,MS3.9
BILL Bilibino 34.25 16*c**e*P **P 16 24 30.0 -0.2**
BILL *e* 16 25 47.4
BILL pmax pmax
comp=Z,38nm,1.6s,mb5.1
BILL MLR MLR
comp=Z,100nm,14.0s,MS3.7
HVS Khovu-Aksy 37.48 309 *i*P **P 16 24 59.8 +1.7**
CMAR Chiang Mai Arr 42.33 257 P **P 16 25 37.2 -1.6**
comp=Z,0.3nm,0.5s,mb3.2,baz=129,slow=15,SNR=5.1
CMAR LR LR 16 44 42.7
comp=Z,60nm,20.5s,MS3.5,baz=250,slow=38
ZAA0 Zalesovo Array 42.99 313 *e*P **P 16 25 44.1 +0.5**
ZALV Zalesovo Beam 42.99 313 P **P 16 25 44.4 +0.7**
comp=Z,4.1nm,0.8s,mb4.2,baz=90,slow=7.4,SNR=16
ZALV PcP PcP 16 27 33.5 -0.4
comp=Z,3.4nm,0.8s,baz=100,slow=4.5,SNR=5.6
ZALV LR LR 16 44 21.8
comp=Z,67nm,18.7s,MS3.6,baz=81,slow=37
ZALV Zalesovo Beam 42.99 313 P **P 16 25 44.4 +0.7**
ZALV 16 27 33.6
NVS Novosibirsk 43.91 314 *e*P **P 16 25 50.4 -0.7**
NVS pmax pmax
comp=Z,22nm,2.0s,mb4.5
NVS pmax pmax
comp=E,12nm,1.6s
MKAR Makanchi Array 45.22 303 P **P 16 26 01.6 -0.1**
comp=E,2.3nm,0.7s,mb4.1,baz=83,slow=9.5,SNR=9.4
MKAR PcP PcP 16 27 41.3 -0.4
comp=E,1.4nm,0.9s,baz=98,slow=6.0,SNR=2.4
MKAR LR LR 16 45 23.8
comp=E,60nm,18.1s,MS3.6,baz=260,slow=37
MKAR Makanchi Array 45.22 303 P **P 16 26 01.6 -0.1**
MKAR 16 27 41.3
KURK Kurchatov 47.02 309 P **P 16 26 16.4 +0.5**
comp=E,7.6nm,0.8s,mb4.7,baz=84,slow=7.7,SNR=36
KURK Kurchatov 47.02 309 *e*P **P 16 26 15.4 -0.4**
KURK pmax pmax
comp=Z,11nm,0.8s,mb4.8
KURK Kurchatov 47.02 309 *e*P **P 16 26 15.4 -0.5**
comp=Z,11nm,0.8s,mb4.8
HNR Honiara 48.52 157 LR LR 16 45 19.7
comp=Z,60nm,19.5s,MS3.6,baz=243,slow=34
TKM2 Tokmak 2 50.74 299 *e*P **P 16 26 46.1 +1.6**
TKM2 pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
TKM2 Tokmak 2 50.74 299 *e*P **P 16 26 46.1 +1.7**
comp=Z,4.7nm,1.0s,mb4.4
BVAR Borovoye Array 51.64 313 P **P 16 26 51.1 0.0**
comp=Z,1.0nm,0.6s,mb3.9,baz=64,slow=6.9,SNR=7.4
BVAR PcP PcP 16 28 05.2 +0.5
comp=Z,1.6nm,0.7s,baz=72,slow=2.3,SNR=5.7
SVE Sverdlovsk 56.18 319‖ *e*P **P 16 27 25.5 +1.3**
SVE pmax pmax
comp=Z,15nm,0.9s,mb5.0
WRA Warramunga Arr 56.70 189 P **P 16 27 26.6 -1.7**
comp=Z,3.1nm,1.1s,mb4.3,baz=8.8,slow=7.5,SNR=9.5
ARU Arti 57.40 319*d**i*P **P 16 27 33.9 +1.1**
ARU *e* 16 29 38.6
ARU *e*S **S 16 35 29.7 +0.3**
ARU *e*SS SS 16 39 15.9 -2.5
ARU pmax pmax
comp=Z,28nm,1.7s,mb5.0
ARU Arti 57.40 319 *e*P **P 16 27 32.9 0.0**
comp=Z,23nm,1.3s,mb5.0
ARU *e* 16 27 44.7
AKTK Aktyubinsk 59.75 313 P **P 16 27 49.0 -0.4**
AKTO Aktyubinsk 59.75 313 P **P 16 27 49.0 -0.4**
comp=Z,3.7nm,0.8s,mb4.4,baz=64,slow=10,SNR=12
ASAR Alice Springs 60.42 189 P **P 16 27 52.6 -1.6**
comp=Z,1.1nm,0.9s,mb3.9,baz=8.8,slow=4.8,SNR=7.3
YKA Yellowknife Ar 63.76 30 P **P 16 28 15.8 -0.3**
comp=Z,2.6nm,0.9s,mb4.3,baz=291,slow=6.5,SNR=7.1
YKA Yellowknife Ar 63.76 30 P **P 16 28 15.8 -0.4**
YKA pmax pmax
comp=Z,3.0nm,0.9s
KLMR Klimovskoe 64.72 328 P **P 16 28 16.0 -6.5**
KLMR pmax pmax
comp=Z,20nm,1.4s,mb5.0
ARCES ARCESS Array B 64.82 340 LR LR 16 58 19.1
comp=Z,95nm,18.3s,MS4.0,baz=281,slow=38
OBN Obninsk 69.09 324‖ *e*P **P 16 28 51.4 +1.0**
OBN pmax pmax
comp=Z,58nm,2.4s,mb5.1
OBN MLR MLR
comp=Z,100nm,14.0s,MS4.2
KIV Kislovodsk 71.98 312 *e*P **P 16 29 09.9 +1.6**
KIV pmax pmax
comp=Z,18nm,1.1s,mb4.9
KIV Kislovodsk 71.98 312 *e*P **P 16 29 10.1 +1.8**
comp=Z,10.0nm,0.9s,mb4.8
NVAR Mina Array Bea 74.51 54 P **P 16 29 23.9 +0.6**
comp=Z,1.8nm,0.9s,mb4.0,baz=278,slow=6.5,SNR=12
NB2 NORSAR Subarra 75.04 338 P **P 16 29 26.5 +0.6**
comp=Z,1.3nm,0.7s,mb4.0,baz=40,slow=5.9
NOA NORSAR Array B 75.04 338 P **P 16 29 26.6 +0.6**
comp=Z,5.1nm,1.0s,mb4.4,baz=40,slow=5.7,SNR=4.7
NOA LR LR 17 03 47.3
comp=Z,72nm,21.0s,MS3.9,baz=275,slow=37
AKASG Malin Array Be 75.30 323 P **P 16 29 28.0 +0.4**
comp=Z,1.3nm,0.5s,mb4.1,baz=42,slow=5.2,SNR=12
AKASG LR LR 17 05 50.7
comp=Z,67nm,18.5s,MS4.0,baz=50,slow=38
AKASG Malin Array Be 75.30 323 P **P 16 29 28.0 +0.4**
AKASG LR LR 17 05 50.7
PDAR Pinedale Array 77.33 46 P **P 16 29 38.7 -0.6**
comp=Z,0.8nm,0.8s,mb3.7,baz=132,slow=2.2,SNR=3.6
MALT Malatya 77.86 309 *e*P **P 16 29 44.2 +1.8**
MALT pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
MALT Malatya 77.86 309 *e*P **P 16 29 44.2 +1.8**
comp=Z,5.1nm,1.1s,mb4.4
SRU San Rafael 79.01 49 *e*P **P 16 29 48.8 +0.1**
SRU pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
SRU San Rafael 79.01 49 *e*P **P 16 29 48.8 +0.1**
comp=Z,1.7nm,0.8s,mb4.0
BR131 Keskin Array S 79.93 312 *e*P **P 16 29 55.0 +1.3**
comp=Z,1.8nm,0.9s,mb4.0
PV10 Paradox Valley 80.37 49 *e*P **P 16 29 57.0 +0.9**
KHC Kasperske Hory 83.49 329⇑ *e*P **P 16 30 12.3 0.0**
GERES GERESS Array B 83.66 329 P **P 16 30 12.8 -0.5**
comp=Z,1.8nm,0.9s,mb4.2,baz=25,slow=7.3,SNR=7.5
ANMO Albuquerque 84.16 50⇑ *e*P **P 16 30 16.7 +0.7**
ESDC Sonseca Array 98.18 335 LR LR 17 19 58.4
comp=Z,92nm,19.2s,MS4.3,baz=140,slow=38
TORD Torodi Ar. Bea 118.39 316 PKP PKPdf 16 36 31.7 -1.2
comp=Z,0.7nm,0.9s,baz=11,slow=3.1,SNR=3.4
VNA2 Neumayer--Watz 142.09 196 *e*PKPdf PKPdf 16 37 11.0 -4.7
baz=114,slow=2.1
VNA2 *e* 16 37 14.6
VNA2 *e* 16 37 24.2
VNA2 *e* 16 37 59.4
VNA2 *e* 16 38 10.1
VNA2 *e* 16 38 19.6
VNA3 Neumayer Olymp 142.31 194 *e*PKPdf PKPdf 16 37 11.4 -4.7
VNA3 *e* 16 37 59.5
VNA3 *e* 16 38 09.4
VNA3 *e* 16 38 19.3
VNA1 Neumayer--Stat 142.49 195 *e*PKPdf PKPdf 16 37 11.4 -5.1
LPAZ La Paz 146.09 62 PKPbc PKPbc 16 37 24.4 -0.9
comp=Z,3.4nm,1.1s,baz=350,slow=6.3,SNR=9.2
SIV San Ignacio 150.65 52 PKP PKPdf 16 37 31.3 -0.5
comp=Z,0.6nm,0.7s,baz=241,slow=19,SNR=3.2
SIV PKPbc PKPbc 16 37 35.2 -2.1
comp=Z,3.3nm,1.0s,baz=318,slow=0.7,SNR=12
SIV PKPab PKPab 16 37 42.6 -1.5
comp=Z,2.3nm,0.9s,baz=311,slow=4.7,SNR=6.0

*IDC **25** 16:25:45.0±0.9,2847S×17684W,h0km,mb4.3/9, mb1 4.5/10,mb1mx4.4/16,mbtmp4.3/10,ML4.4/1,MS3.9/6, Ms1 3.9/6,ms1mx3.6/24,Error ellipse: s-maj=30.3km s-min=16.5km az=138.0*
*NEIC **25** 16:25:46.3±6.3,2853S×17677W,h11km±40km,mb4.5/3, Error ellipse: s-maj=25.2km s-min=11.9km az=149.0*
*ISCJB **25** 16:25:47.7±0.7,286S±0.1×1767W±0.1,h33km,mb4.3/10, MS3.9/6,Error ellipse: s-maj=20.9km s-min=10.6km az=146.2*

ISC 25 16:25:49.0±0.6,2886S±009×17656W±010,h35km,n26, σ1$28/22,mb4.3/10,MS3.9/6,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.25**	**252**	Pn	**Pn**	**16 26 09.4**	**-0.6**
	254nm,0.3s,baz=58,slow=22,SNR=14						
RAO				Sn	**Sn**	**16 26 27.6**	**+2.1**
	777nm,0.3s,baz=100,slow=21,SNR=6.8						
RAO	**Raoul Island**	**1.25**	**252**	*e*Pn	**Pn**	**16 26 11.2**	**+1.3**
RAO				Sn	**Sn**	**16 26 27.6**	**+2.1**
URZ	**Urewera**	**10.75**	**208**	Pn	**Pn**	**16 28 19.4**	**-1.0**
	0.4nm,0.3s,baz=329,slow=5.9,SNR=4.1						
URZ				Sn	**Sn**	**16 30 17.4**	**-2.1**
	1.8nm,0.3s,baz=164,slow=16,SNR=11						
RAR	**Rarotonga**	**17.00**	**67**	P	**Pn**	**16 29 44.2**	**+0.1**
	1.2nm,0.3s,baz=45,slow=5.7,SNR=4.8						
RPZ	**Rata Peaks**	**17.84**	**211**	P	**Pn**	**16 29 55.2**	**+0.9**
	0.6nm,0.3s,baz=298,slow=12,SNR=3.0						
TBI	**Tubuai**	**24.92**	**84**	*e*LR	LR	16 37 15.7	
	215nm,29.8s						
PPT	**Papeete**	**27.17**	**71**	*e*LR	LR	16 38 28.4	
	190nm,25.0s						
PPT	**Papeete**	**27.17**	**71**	LR	LR	16 38 45.6	
	comp=Z,154nm,20.8s,MS3.5,baz=303,slow=29						
STKA	**Stephens Creek**	**36.07**	**255**	*e*P	**P**	**16 32 48.7**	**+1.4**
	3.3nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**36.07**	**255**	P	**P**	**16 32 47.6**	**+0.4**
	3.3nm,0.7s,mb4.3,baz=38,slow=9.3,SNR=3.6						
STKA				LR	LR	16 45 04.2	
	comp=Z,142nm,19.4s,MS3.8,baz=25,slow=32						
ASAR	**Alice Springs**	**44.47**	**265**	P	**P**	**16 33 56.8**	**-0.2**
	2.3nm,0.7s,mb4.0,baz=95,slow=7.0,SNR=40						
WB2	**Warramunga Arr**	**45.31**	**270**	*e*P	**P**	**16 34 03.2**	**-0.5**
WRA	**Warramunga Arr**	**45.32**	**270**	P	**P**	**16 34 02.6**	**-1.2**
	4.6nm,1.0s,mb4.3,baz=107,slow=7.6,SNR=18						
WRA				LR	LR	16 52 50.6	
	comp=Z,64nm,20.6s,MS3.5,baz=220,slow=36						
FORT	**Forrest**	**47.67**	**253**	*e*P	**P**	**16 34 20.7**	**-1.4**
	19nm,0.7s,mb5.2						
FITZ	**Fitzroy Crossi**	**53.64**	**268**	P	**P**	**16 35 05.6**	**-1.7**
	2.6nm,0.9s,mb4.2,baz=109,slow=23,SNR=2.8						
FITZ				LR	LR	16 57 17.4	
	comp=Z,144nm,19.1s,MS4.0,baz=265,slow=35						
CASY	**Casey**	**57.08**	**207**	*e*P	**P**	**16 35 34.1**	**+2.8**
CASY				*e*		16 38 07.7	
BATI	**Baumata**	**58.72**	**276**	LR	LR	17 00 24.4	
	comp=Z,321nm,19.0s,MS4.5,baz=73,slow=36						
MAW	**Mawson**	**74.18**	**200**	*e*P	**P**	**16 37 25.4**	**+3.8**
	1.6nm,0.6s,mb4.1						
MAW	**Mawson**	**74.18**	**200**	P	**P**	**16 37 25.3**	**+3.7**
	3.2nm,0.9s,mb4.2,baz=153,slow=7.7,SNR=10						
MAW				LR	LR	17 09 22.6	
	comp=Z,136nm,18.8s,MS4.3,baz=241,slow=35						
MJAR	**Matsushiro Arr**	**77.71**	**324**	P	**P**	**16 37 40.8**	**-1.3**
	2.9nm,1.0s,mb4.2,baz=172,slow=6.1,SNR=4.9						
KSRS	**Korea Array**	**84.00**	**319**	P	**P**	**16 38 15.7**	**0.0**
	2.5nm,1.1s,mb4.3,baz=134,slow=5.4,SNR=5.7						
PETK	**Petropavlovsk-**	**84.65**	**345**	P	**P**	**16 38 18.8**	**+0.3**
	5.0nm,0.9s,mb4.7,baz=124,slow=6.9,SNR=6.9						
NVAR	**Mina Array Bea**	**86.26**	**42**	P	**P**	**16 38 28.5**	**+1.5**
	0.5nm,0.6s,mb4.0,baz=207,slow=6.1,SNR=6.8						
NOA	**NORSAR Array B**	**147.41**	**353**	PKPbc	PKPbc	16 45 28.6	+0.3
	2.5nm,0.8s,baz=12,slow=4.5,SNR=5.9						
AKASG	**Malin Array Be**	**150.79**	**325**	PKPbc	PKPbc	16 45 36.3	-1.0
	5.1nm,0.8s,baz=50,slow=2.3,SNR=13						
TORD	**Torodi Ar. Bea**	**164.28**	**174**	PKPab	PKPab	16 46 45.8	+2.5
	0.6nm,0.9s,baz=195,slow=2.0,SNR=3.8						

*ISCJB **25** 16:41:06.1±1.0, 189S±0.1×1777W±0.1,h593km±20km, mb4.0/6, Error ellipse: s-maj=23.3km s-min=18.5km az=161.6*
*NEIC **25** 16:41:07.0±1.0,1891S×17748W,h601km±23km,mb4.1/3, Error ellipse: s-maj=27.7km s-min=18.6km az=111.0*
*IDC **25** 16:41:07.3±1.3,1892S×17749W,h617km±32km,mb3.2/5, mb1 3.4/7,mb1mx3.1/19,mbtmp3.3/7, Error ellipse: s-maj=32.6km s-min=16.9km az=117.0*

ISC 25 16:41:06.6±1.0,188S±02×1776W±01,h588km±20km,n15, σ0$79/19,mb4.0/6,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.45**	**50**	P	**P**	**16 43 00.6**	**+0.2**
	6.1nm,0.3s,baz=289,slow=7.4,SNR=12						
AFI				S	**S**	**16 44 32.9**	**-0.5**
	1.4nm,0.3s,baz=57,slow=21,SNR=2.8						
AFI	**Afiamalu**	**7.45**	**50**	*e*P	**P**	**16 43 01.0**	**+0.6**
AFI				S	**S**	**16 44 32.9**	**-0.5**
URZ	**Urewera**	**19.88**	**192**	P	**P**	**16 44 58.3**	**-1.4**
	3.2nm,0.3s,baz=76,slow=1.1,SNR=17						
CTA	**Charters Tower**	**34.05**	**262**	*e*P	**P**	**16 47 04.0**	**+0.6**
	3.1nm,0.7s,mb4.0						
CTA	**Charters Tower**	**34.05**	**262**	P	**P**	**16 47 03.9**	**+0.4**
	2.6nm,0.4s,mb4.2,baz=96,slow=14,SNR=7.1						
STKA	**Stephens Creek**	**38.85**	**242**	*e*P	**P**	**16 47 44.0**	**+1.3**
	2.9nm,0.9s,mb3.8						
STKA	**Stephens Creek**	**38.85**	**242**	P	**P**	**16 47 43.4**	**+0.7**
	1.7nm,0.5s,mb3.9,baz=99,slow=9.2,SNR=4.7						
WB2	**Warramunga Arr**	**45.20**	**260**	*e*P	**P**	**16 48 32.6**	**0.0**
WRA	**Warramunga Arr**	**45.21**	**260**	P	**P**	**16 48 32.7**	**0.0**
	1.3nm,0.4s,mb3.8,baz=98,slow=6.1,SNR=84						
WRA				S	**S**	**16 54 27.4**	**-3.4**
	0.8nm,0.8s,baz=94,slow=15,SNR=6.4						
ASAR	**Alice Springs**	**45.27**	**255**	P	**P**	**16 48 33.7**	**+0.6**
	1.0nm,0.3s,mb3.8,baz=85,slow=8.7,SNR=43						
ASAR				S	**S**	**16 54 29.3**	**-2.3**
	3.8nm,0.8s,baz=92,slow=16,SNR=29						
CASY	**Casey**	**65.61**	**205**	*e*P	**P**	**16 50 53.0**	**0.0**
	26nm,0.7s,mb4.8						
PETK	**Petropavlovsk-**	**74.77**	**345**	P	**P**	**16 51 46.8**	**-0.4**
	3.2nm,1.1s,mb3.8,baz=117,slow=6.6,SNR=6.9						
SNAA	**Sanae**	**89.65**	**178**	*e*	**P**	**16 53 02.1**	**-0.1**
VNA3	**Neumayer Olymp**	**89.76**	**176**	*e*	**P**	**16 53 03.1**	**+0.3**
VNA2	**Neumayer--Watz**	**90.21**	**177**	*e*	**P**	**16 53 05.7**	**+0.8**
	baz=200,slow=5.1						

*ISCJB **25** 16:54:60.0±0.4,2387N±002×12203E±002,h31km±3km, Error ellipse: s-maj=3.5km s-min=2.5km az=144.3*
*TAP **25** 16:55:00.2,2391N×12198E,h42km,ML3.1,C*
*JMA **25** 16:55:00.1±0.3,2395N×12203E,h76km,M2.7*

ISC 25 16:55:00.2±0.4,2388N±002×12202E±002,h29km±3km, n49,σ0$63/88,5C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.39**	**285**	*e*P	**Pb**	**16 55 09.4**	**+0.5**
	baz=278						
HWA				*e*S	**Sb**	**16 55 16.0**	**+1.1**
	baz=278						
TWD	**Chiawan**	**0.44**	**298**⇑	*i*P	**Pb**	**16 55 09.7**	**+0.1**
	baz=296						
TWD				*i* S	**Sb**	**16 55 16.4**	**+0.4**
	baz=296						
TEGC	**Jichi Village**	**0.47**	**249**	*e*P	**Pb**	**16 55 10.6**	**+0.5**
	baz=238						
ESL	**Shilin**	**0.54**	**264**	P	**Pb**	**16 55 10.9**	**-0.3**
	baz=254						
ESL				*e*S	**Sb**	**16 55 19.0**	**+0.2**
	baz=254						
ENA	**Nanau**	**0.61**	**335**	P	**Pb**	**16 55 12.2**	**-0.2**
	baz=328						
ENA				S	**Sb**	**16 55 20.9**	**+0.3**
	baz=328						
EHY	**Hungye**	**0.74**	**240**	*e*P	**Pb**	**16 55 13.7**	**-0.8**
	baz=247						
EHY				*e*S	**Sb**	**16 55 24.1**	**-0.1**
	baz=247						
WHF	**Hehuan Shan**	**0.74**	**291**⇑	*i*P	**Pb**	**16 55 14.1**	**-0.5**
	baz=281						
WHF				S	**Sb**	**16 55 23.9**	**-0.5**
	baz=281						
TWC	**Suao**	**0.75**	**348**	*e*P	**Pb**	**16 55 14.6**	**-0.1**
	baz=360						
TWC				S	**Sb**	**16 55 24.6**	**0.0**
	baz=360						
NNS	**Nan Shan**	**0.81**	**314**	P	**Pn**	**16 55 15.1**	**-0.6**
	baz=314						
NNS				*e*S	**Sb**	**16 55 25.7**	**-0.8**
	baz=314						
TWF1	**Yuli**	**0.84**	**232**⇑	*i*P	**Pn**	**16 55 15.6**	**-0.5**
	baz=242						
TWF1				*e*S	**Sb**	**16 55 26.6**	**-0.6**
	baz=242						
TWT	**Tachien**	**0.86**	**296**	*e*P	**Pn**	**16 55 16.1**	**-0.2**
	baz=287						
TWT				*e*S	**Sb**	**16 55 27.4**	**-0.3**
	baz=287						
ENTT	**Nioudou**	**0.87**	**332**	P	**Pn**	**16 55 16.1**	**-0.3**
	baz=333						
ENTT				S	**Sb**	**16 55 27.4**	**-0.6**
	baz=333						
TWE	**Neicheng**	**0.90**	**339**	P	**Pn**	**16 55 16.7**	**-0.3**
	baz=341						
TWE				*e*S	**Sb**	**16 55 28.4**	**-0.5**
	baz=341						
EGS		**0.97**	**355**	*e*P	**Pn**	**16 55 17.7**	**-0.2**
	baz=7.0						
CHKT	**Chengkung**	**0.98**	**218**	*e*P	**Pn**	**16 55 16.8**	**-1.2**
	baz=206						
CHKT				*e*S	**Sn**	**16 55 28.9**	**-1.9**
	baz=206						
NSK	**Sanguang**	**1.00**	**323**	P	**Pn**	**16 55 17.9**	**-0.3**
	baz=314						
NSK				*e*S	**Sn**	**16 55 30.0**	**-1.4**
	baz=314						
SMLT	**Sun Moon Lake**	**1.02**	**271**⇑	*i*P	**Pn**	**16 55 18.7**	**+0.1**
	baz=268						
SMLT				S	**Sn**	**16 55 31.5**	**-0.5**
	baz=268						
YUS	**Yu-Shan**	**1.05**	**249**⇑	*i*P	**Pn**	**16 55 19.5**	**+0.5**
	baz=245						
YUS				S	**Sn**	**16 55 32.3**	**-0.3**
	baz=245						
TYC	**Yuchr**	**1.06**	**272**	*e*P	**Pn**	**16 55 19.0**	**-0.2**
	baz=270						
TYC				*e*S	**Sn**	**16 55 32.2**	**-0.8**
	baz=270						
YOJ	**Yonaguni jima**	**1.08**	**57**	P	**Pn**	**16 55 19.5**	**+0.1**
YOJ				S	**Sn**	**16 55 34.1**	**+0.7**
TWB1	**Santiao Chiao**	**1.13**	**359**	*e*P	**Pn**	**16 55 20.1**	**0.0**
	baz=1.0						
ELDTW	**Lidau**	**1.15**	**234**	P	**Pn**	**16 55 19.6**	**-0.6**
	baz=231						
ELDTW				S	**Sn**	**16 55 34.4**	**-0.6**
	baz=231						
TWA	**Mucha**	**1.17**	**340**	*e*P	**Pn**	**16 55 20.8**	**+0.2**
	baz=331						
TWA				*e*S	**Sn**	**16 55 35.6**	**0.0**
	baz=331						
ALS	**Alishan**	**1.17**	**252**	*e*P	**Pn**	**16 55 21.3**	**+0.7**
	baz=249						
ALS				*e*S	**Sn**	**16 55 35.3**	**-0.3**
	baz=249						
NSTT	**Nanjuang**	**1.20**	**309**	*e*P	**Pn**	**16 55 21.6**	**+0.7**
	baz=309						
NSTT				*e*S	**Sn**	**16 55 35.8**	**-0.4**
	baz=309						
NWF	**Wu-fen Shan**	**1.21**	**350**	*e*P	**Pn**	**16 55 21.7**	**+0.5**
	baz=351						
NWF				*e*S	**Sn**	**16 55 37.0**	**+0.4**
	baz=351						
WNT	**Mingjian**	**1.22**	**270**	*e*P	**Pn**	**16 55 21.9**	**+0.5**
	baz=269						
TWQ1	**Liyutan**	**1.23**	**293**	*e*P	**Pn**	**16 55 21.9**	**+0.4**
	baz=291						
TWQ1				*e*S	**Sn**	**16 55 37.6**	**+0.5**
	baz=291						
TCU	**Taichung**	**1.26**	**283**	*e*P	**Pn**	**16 55 22.8**	**+1.0**
	baz=281						
CHN5	**Tsauling**	**1.26**	**258**	*e*P	**Pn**	**16 55 22.2**	**+0.4**
	baz=255						
CHN5				*e*S	**Sn**	**16 55 38.6**	**+0.8**
	baz=255						
NSY	**Sanyi**	**1.27**	**295**	*e*P	**Pn**	**16 55 22.5**	**+0.5**
	baz=294						
NSY				*e*S	**Sn**	**16 55 37.4**	**-0.6**
	baz=294						
TWS1	**Kuangyinshan**	**1.34**	**336**	*e*P	**Pn**	**16 55 23.0**	**0.0**
	baz=337						
TWS1				*e*S	**Sn**	**16 55 39.8**	**0.0**
	baz=337						
WGK	**Gukeng**	**1.35**	**262**	*e*P	**Pn**	**16 55 23.4**	**+0.4**
	baz=260						
STYT	**Tauyuan**	**1.36**	**239**	*e*P	**Pn**	**16 55 23.3**	**+0.1**
	baz=236						
STYT				*e*S	**Sn**	**16 55 40.4**	**+0.1**
	baz=236						
TWG	**Pinlang**	**1.36**	**220**	*e*P	**Pn**	**16 55 22.1**	**-1.2**
	baz=217						
TWG				*e*S	**Sn**	**16 55 38.6**	**-1.8**
	baz=217						
CHN4	**Tsaushan**	**1.41**	**249**	*e*P	**Pn**	**16 55 24.2**	**+0.3**
	baz=246						
CHN4				*e*S	**Sn**	**16 55 42.8**	**+1.3**
	baz=246						
WTP	**Ta-pu**	**1.43**	**244**	*e*P	**Pn**	**16 55 25.2**	**+0.9**
	baz=242						
WTP				*e*S	**Sn**	**16 55 42.9**	**+0.8**
	baz=242						
TWK	**Hsinying**	**1.53**	**247**	*e*P	**Pn**	**16 55 26.4**	**+0.8**
	baz=245						
CHN1	**Nanshi**	**1.53**	**244**	*e*P	**Pn**	**16 55 26.1**	**+0.5**
	baz=241						
CHN1				*e*S	**Sn**	**16 55 45.9**	**+1.4**
	baz=241						
SGST	**Jiashian**	**1.54**	**239**	*e*P	**Pn**	**16 55 26.3**	**+0.7**
	baz=237						
SGST				*e*S	**Sn**	**16 55 44.9**	**+0.2**
	baz=237						
IRIF	**Iriomote-Funau**	**1.63**	**73**	P	**Pn**	**16 55 27.0**	**0.0**
IRIF				*e*S	**Sn**	**16 55 46.9**	**-0.1**
HATJ	**Hateruma jima**	**1.64**	**83**	P	**Pn**	**16 55 27.2**	**0.0**
HATJ				*e*S	**Sn**	**16 55 47.4**	**-0.2**
WSF	**Szhu**	**1.66**	**262**	*e*P	**Pn**	**16 55 28.2**	**+0.7**
	baz=260						
SSD	**Sandimen**	**1.70**	**229**	*e*P	**Pn**	**16 55 28.0**	**+0.1**
	baz=226						
SSD				*e*S	**Sn**	**16 55 48.8**	**+0.1**
	baz=226						
EAST	**Anshuo**	**1.83**	**216**	*e*P	**Pn**	**16 55 29.9**	**+0.1**
	baz=206						
JKRS	**Kuro-shima**	**1.85**	**78**	P	**Pn**	**16 55 30.8**	**+0.7**
JKRS				*e*S	**Sn**	**16 55 53.6**	**+1.1**
LAY	**Lan-yu**	**1.88**	**193**	*e*P	**Pn**	**16 55 30.3**	**-0.1**
	baz=184						
JIJ	**Ishigaki jima**	**2.00**	**76**	P	**Pn**	**16 55 31.8**	**-0.3**
JIJ				S	**Sn**	**16 55 55.2**	**-0.9**
JTJ	**Tarama**	**2.56**	**72**	P	**Pn**	**16 55 39.7**	**-0.1**

JTJ *e*S **Sn 16 56 09.5 -0.6**

IDC 25 16:55:46.8±5.8, 148S×10419E, h0km, mb3.0/3, mb1 3.3/3, mb1mx3.2/18, mbtmp3.1/3, Error ellipse: s-maj=255.4km s-min=30.2km az=59.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.48**	**346**	P	P	17 00 26.6	+0.2
	0.2nm,0.3s,baz=186,slow=8.8,SNR=4.5						
WRA	**Warramunga Arr**	**34.72**	**124**	P	P	17 02 39.2	+0.4
	0.2nm,0.6s,baz=318,slow=10,SNR=3.4						
ASAR	**Alice Springs**	**36.27**	**130**	P	P	17 02 51.7	-0.4
	0.3nm,0.5s,baz=302,slow=7.9,SNR=15						

*ISCJB **25** 17:00:06.4±0.7, 3541N±003×2563E±005, h10km±6km, Error ellipse: s-maj=7.0km s-min=4.8km az=145.6*
*ATH **25** 17:00:06.2, 3543N×2562E, h21km±3km, MD3.6/9*
*NEIC **25** 17:00:06.2, 3543N×2562E, h21km, MD3.6(ATH), After ATH.*
*THE **25** 17:00:07.0, 3538N×2565E, h2km, ML3.7*
*CSEM **25** 17:00:07.2±0.1, 3540N×2563E, h15km, MD3.6, Error ellipse: s-maj=2.6km s-min=1.7km az=55.0*

ISC 25 17:00:07.2±0.5, 3540N±003×2564E±005, h13km±4km, n22, σ0$=77/28, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.14**	**189**	*e*PB	**Pg**	**17 00 11.1**	**+0.4**
NPS				*e*SB	**Sg**	**17 00 13.3**	**+0.1**
ZKR	**Zakros**	**0.55**	**121**	*e*Pg	**Pg**	**17 00 17.7**	**-0.3**
ZKR				*e*Sg	**Sg**	**17 00 25.5**	**+0.1**
THR6	**Thira Island,**	**0.97**	**348**	*e*Pg	**Pg**	**17 00 25.9**	**0.0**
THR1	**Thera Island**	**0.97**	**351**	*e*Pg	**Pg**	**17 00 25.7**	**-0.3**
SANT	**Santorini**	**0.98**	**351**	*e*Pg	**Pg**	**17 00 25.7**	**-0.3**
SANT				*e*Sg	**Sg**	**17 00 40.8**	**+2.0**
SANT	**Santorini**	**0.98**	**351**	*e*Pg	**Pg**	**17 00 25.7**	**-0.3**
SANT				*e*Sg	**Sg**	**17 00 40.6**	**+1.8**
SANT	**Santorini**	**0.98**	**351**	*e*Pg	**Pg**	**17 00 26.3**	**+0.2**
SANT				*e*Sg	**Sg**	**17 00 40.6**	**+1.8**
THR3	**Thira Island,**	**1.02**	**349**	*e*Pg	**Pg**	**17 00 26.2**	**-0.6**
THR5	**Thira Island,**	**1.04**	**347**	*e*Pg	**Pg**	**17 00 26.5**	**-0.7**
THR4	**Thira Island,**	**1.07**	**349**	*e*Pg	**Pg**	**17 00 28.2**	**+0.4**
VAM	**Vamos**	**1.18**	**271**	*e*PN	**Pn**	**17 00 29.0**	**-0.4**
KARP	**Karpathos**	**1.25**	**83**	*e*Pn	**Pn**	**17 00 30.2**	**-0.2**
KARP				*e*SN	**Sn**	**17 00 48.1**	**+1.0**
GVD	**Gavdhos**	**1.39**	**247**	*e*PN	**Pn**	**17 00 33.0**	**+0.7**
APE	**Apeiranthos**	**1.66**	**357**	*e*Pb	**Pb**	**17 00 36.3**	**-1.4**
ARG	**Arkhangelos**	**2.18**	**67**	*e*PB	**Pb**	**17 00 43.4**	**-3.0**
KYTH	**Kithira**	**2.29**	**293**	*e*PN	**Pn**	**17 00 44.0**	**-0.7**
SMG	**Samos**	**2.49**	**22**	*e*PN	**Pn**	**17 00 47.4**	**-0.1**
VLI	**Veliai**	**2.55**	**302**	*e*PN	**Pn**	**17 00 47.8**	**-0.5**
DID	**Didima**	**2.85**	**318**	*e*Pn	**Pn**	**17 00 52.8**	**+0.3**
CHOS	**Chios island**	**3.00**	**6**	*e*Pn	**Pn**	**17 00 55.0**	**+0.7**
VLX	**Vlachokerasia**	**3.28**	**308**	*e*Pn	**Pn**	**17 00 58.4**	**+0.1**
LTK	**Loutraki**	**3.38**	**321**	*e*Pn	**Pn**	**17 01 00.6**	**+0.9**

*ISCJB **25** 17:01:07.7±0.5, 3868N±002×2064E±005, h6km±3km, Error ellipse: s-maj=7.1km s-min=3.9km az=5.6*
*NEIC **25** 17:01:07.8, 3865N×2056E, h29km, MD3.6(ATH), After ATH.*
*THE **25** 17:01:08.0, 3869N×2058E, h0km, ML3.9*
*CSEM **25** 17:01:07.7±0.1, 3870N×2055E, h8km, ML3.9, Error ellipse: s-maj=3.1km s-min=2.1km az=79.0*
*ATH **25** 17:01:07.8, 3865N×2056E, h29km±2km, MD3.6/10*

ISC 25 17:01:08.0±0.6, 3866N±003×2061E±006, h6km±4km, n23, σ0$=99/34, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD	**Levkas**	**0.06**	**39**	*e*Pg	**Pg**	**17 01 09.5**	**-0.2**
LKD				*e*Sg	**Sg**	**17 01 10.6**	**-0.1**
VLS	**Valsamata**	**0.48**	**181**	*e*Pg	**Pg**	**17 01 17.3**	**-0.1**
VLS				*e*Sg	**Sg**	**17 01 26.0**	**+2.3**
VLS	**Valsamata**	**0.48**	**181**	*e*PB	**Pg**	**17 01 18.0**	**+0.6**
VLS				*e*SB	**Sg**	**17 01 26.1**	**+2.4**
KFL	**Anninata**	**0.57**	**165**	*e*Pg	**Pg**	**17 01 19.4**	**+0.4**
IGT	**Igoumenitsa**	**0.89**	**346**	*e*Pg	**Pg**	**17 01 23.4**	**-1.9**
IGT				*e*Sg	**Sg**	**17 01 38.1**	**+1.2**
RLS	**Riolos of Patr**	**0.91**	**131**	*e*PN	**Pn**	**17 01 25.6**	**-1.7**
EVR	**Evrytania**	**0.97**	**75**	*e*PN	**Pn**	**17 01 27.3**	**-0.9**
JAN	**Janina**	**1.01**	**11**	*e*PN	**Pn**	**17 01 27.8**	**-0.9**
MEV	**Metsovon**	**1.22**	**23**	*e*Pg	**Pg**	**17 01 30.9**	**-0.6**
KEK	**Kerkira**	**1.22**	**329**	*e*PN	**Pn**	**17 01 30.5**	**-1.1**
AGG	**Agios Georgios**	**1.39**	**75**	*e*Pg	**Pg**	**17 01 33.9**	**-0.9**
AGG				*e*Sg	**Sg**	**17 01 53.8**	**+0.9**
THL	**Klokotos Trika**	**1.42**	**50**	*e*Pg	**Pg**	**17 01 33.6**	**-1.6**
THL				*e*Sg	**Sg**	**17 01 54.9**	**+1.2**
THL	**Klokotos Trika**	**1.42**	**50**	*e*PN	**Pn**	**17 01 33.7**	**-0.6**
ITM	**Ithomi**	**1.81**	**144**	*e*PN	**Pn**	**17 01 39.2**	**-0.5**
KZN	**Kozani**	**1.87**	**28**	*e*PN	**Pn**	**17 01 40.8**	**+0.2**
NEO	**Neokhori**	**2.14**	**72**	*e*PN	**Pn**	**17 01 44.6**	**+0.4**
FNA	**Florina**	**2.20**	**15**	*e*Pn	**Pn**	**17 01 45.0**	**-0.1**
BIA	**Bitola**	**2.42**	**13**	*e*Pn	**Pn**	**17 01 54.9**	**+6.8**
BIA				*e*Sn	**Sn**	**17 02 19.3**	**+1.4**
OHR	**Ohrid**	**2.45**	**3**	*e*Pn	**Pn**	**17 01 48.6**	**+0.2**
OHR				*e*Sn	**Sn**	**17 02 19.5**	**+0.8**
OHR	**Ohrid**	**2.45**	**3**	*e*Pn	**Pn**	**17 01 48.6**	**+0.1**
OHR				*e*Sn	**Sn**	**17 02 19.4**	**+0.7**
KRUS	**Krusevo**	**2.75**	**10**	*e*Pn	**Pn**	**17 01 53.6**	**+1.1**
KRUS				*e*Sn	**Sn**	**17 02 16.1**	**-10**
PLG	**Polygyros**	**2.78**	**51**	*e*PN	**Pn**	**17 01 52.9**	**-0.2**
VAY	**Valandovo**	**3.05**	**29**	*e*Pn	**Pn**	**17 01 57.9**	**+1.1**
VAY				*e*Sn	**Sn**	**17 02 22.8**	**-11**

IDC 25 17:02:00.6±13.0, 540N×9451E, h133km±115km, mb3.1/5, mb1 3.2/6, mb1mx3.1/21, mbtmp3.0/6, ML3.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/13, Error ellipse: s-maj=123.9km s-min=17.0km az=61.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.68**	**18**	P	Pn	17 05 09.3	+0.1
	0.1nm,0.3s,baz=216,slow=14,SNR=5.5						
MKAR	**Makanchi Array**	**42.57**	**348**	P	P	17 09 42.8	-0.3
	0.3nm,0.5s,baz=157,slow=8.7,SNR=4.1						
SONM	**Songino Array**	**43.49**	**12**	P	P	17 09 50.6	0.0
	0.3nm,0.5s,baz=176,slow=5.8,SNR=2.8						
WRA	**Warramunga Arr**	**46.55**	**124**	P	P	17 10 15.1	-0.1
	0.6nm,0.5s,baz=301,slow=10.0,SNR=17						
KURK	**Kurchatov**	**47.09**	**346**	LR	LR	17 32 18.4	
	comp=Z,22nm,19.7s,baz=160,slow=39						
ASAR	**Alice Springs**	**48.07**	**129**	P	P	17 10 26.9	+0.1
	0.4nm,0.5s,baz=300,slow=7.7,SNR=13						
ZALV	**Zalesovo Beam**	**49.04**	**352**	P	P	17 10 34.1	+0.3
	0.4nm,0.3s,baz=172,slow=4.1,SNR=3.2						

*IDC **25** 17:12:48.3±0.8, 3062S×177.17W, h0km, mb4.5/7, mb1 4.7/7, mb1mx4.4/16, mbtmp4.5/7, MS4.1/9, Ms1 4.1/9, ms1mx3.6/24, Error ellipse: s-maj=26.6km s-min=17.7km az=58.0*
*BJI **25** 17:12:51.9, 3019S×17647W, h41km, mB5.2, mb5.3, Ms5.0, Msz4.5*
*ISCJB **25** 17:12:52.1±0.4, 3076S±005×177.31W±0.10, h33km, mb4.8/23, MS4.4/13, Error ellipse: s-maj=12.6km s-min=7.4km az=164.2*
*NEIC **25** 17:12:53.0±0.4, 3062S×17709W, h35km, mb4.8/16, Error ellipse: s-maj=11.5km s-min=10.4km az=171.0*

ISC 25 17:12:53.8±0.4, 3071S±006×17726W±010, h35km, (h36km±1.5km:pP-P), n63, σ0$=96/48, mb4.8/23, MS4.4/13, 1C, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.56**	**338**	Pn	**Pn**	**17 13 17.5**	**-1.6**
	533nm,0.3s,baz=140,slow=14,SNR=20						
RAO				Sn	**Sn**	**17 13 38.2**	**+0.2**
	540nm,0.3s,baz=87,slow=23,SNR=6.0						
RAO	**Raoul Island**	**1.56**	**338**	*e*Pn	**Pn**	**17 13 17.5**	**-1.6**
URZ	**Urewera**	**8.85**	**210**	Pn	**Pn**	**17 14 51.8**	**-7.3**
	0.9nm,0.3s,baz=335,slow=4.8,SNR=7.5						
URZ				Sn	**Sn**	**17 16 31.4**	**-6.1**
	5.6nm,0.3s,baz=62,slow=22,SNR=8.9						
RPZ	**Rata Peaks**	**15.95**	**212**	Pn	**Pn**	**17 16 27.4**	**-8.1**
	1.3nm,0.3s,baz=94,slow=7.9,SNR=9.5						
RPZ				Sn	**Sn**	**17 19 12.1**	**-19**
	0.5nm,0.3s,baz=39,slow=16,SNR=3.0						
DZM	**Mont Dzumac**	**16.93**	**297**	*e*P	**Pn**	**17 16 51.6**	**+3.6**
RAR	**Rarotonga**	**18.33**	**63**	*e*P	**Pn**	**17 17 00.4**	**-4.8**
	20nm,0.9s						
TBI	**Tubuai**	**25.78**	**80**	*e*LR	LR	17 24 34.9	
	242nm,28.2s						
PPT	**Papeete**	**28.36**	**69**	*e*LR	LR	17 25 40.8	
	110nm,20.8s						
CTA	**Charters Tower**	**34.48**	**279**	*e*P	**P**	**17 19 39.9**	**+1.4**
	4.3nm,0.6s,mb4.6						
CTA	**Charters Tower**	**34.48**	**279**	P	**P**	**17 19 40.0**	**+1.5**
	5.3nm,0.6s,mb4.7,baz=105,slow=12,SNR=14						
CTA				LR	LR	17 32 48.2	
	comp=Z,437nm,18.0s,MS4.2,baz=130,slow=35						
CTAO	**Charters Tower**	**34.48**	**279**	*e*P	**P**	**17 19 39.3**	**+0.8**
	18nm,1.2s,mb4.9						
STKA	**Stephens Creek**	**35.03**	**257**	*e*P	**P**	**17 19 45.0**	**+1.8**
	13nm,0.9s,mb4.9						
STKA	**Stephens Creek**	**35.03**	**257**	P	**P**	**17 19 43.9**	**+0.7**
	18nm,1.0s,mb5.0,baz=91,slow=12,SNR=15						
STKA				LR	LR	17 33 24.1	
	comp=Z,256nm,19.4s,MS4.0,baz=85,slow=35						
PMG	**Port Moresby**	**39.31**	**295**	P	**P**	**17 20 19.9**	**+0.2**
	25nm,1.0s,mb4.9						
ASAR	**Alice Springs**	**43.73**	**267**	P	**P**	**17 20 55.3**	**-0.5**
	1.7nm,0.6s,mb3.9,baz=105,slow=7.3,SNR=31						
WB2	**Warramunga Arr**	**44.73**	**272**	*e*P	**P**	**17 21 03.6**	**-0.3**
WRAB	**Tennant Creek**	**44.74**	**272**	*e*P	**P**	**17 21 03.1**	**-0.8**
	9.6nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**44.75**	**272**	P	**P**	**17 21 03.7**	**-0.2**
	6.1nm,0.7s,mb4.6,baz=111,slow=8.0,SNR=50						
WRA				LR	LR	17 40 03.4	
	comp=Z,296nm,18.7s,MS4.2,baz=105,slow=36						
FORT	**Forrest**	**46.58**	**255**	*e*P	**P**	**17 21 18.4**	**0.0**
	28nm,1.0s,mb5.1						
SBA	**Scott Base**	**47.78**	**185**	*e*P	**P**	**17 21 27.3**	**+0.3**
	10nm,1.2s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.00**	**270**	LR	LR	17 45 57.2	
	comp=Z,128nm,20.1s,MS4.0,baz=263,slow=38						
CASY	**Casey**	**55.17**	**208**	*e*P	**P**	**17 22 21.6**	**-0.8**
BATI	**Baumata**	**58.32**	**277**	LR	LR	17 48 47.3	
	comp=Z,595nm,18.1s,MS4.8,baz=33,slow=37						
QSPA	**South Pole Qui**	**59.40**	**180**	P	**P**	**17 22 53.4**	**+1.3**
	19nm,1.1s,mb5.0,baz=47,slow=3.1,SNR=24						
QSPA	**South Pole Qui**	**59.40**	**180**	P	**P**	**17 22 53.4**	**+1.2**
MAW	**Mawson**	**72.24**	**200**	*e*P	**P**	**17 24 15.2**	**+0.3**
	2.5nm,0.9s,mb4.1						
SYO	**Syowa Base**	**76.96**	**193**	*e*P	**P**	**17 24 40.6**	**-1.7**
SNAA	**Sanae**	**77.83**	**178**	*e*P	**P**	**17 24 46.6**	**-0.5**
SNAA				*e*		17 24 49.2	
SNAA				*e*	pP	17 24 57.8	-0.3
SNAA				*e*		17 25 03.1	
SNAA	**Sanae**	**77.83**	**178**	*e*P	**P**	**17 24 46.5**	**-0.6**
	11nm,1.4s,mb4.6						
VNA3	**Neumayer Olymp**	**77.95**	**176**	*e*P	**P**	**17 24 47.4**	**-0.4**
VNA3				*e*		17 24 50.0	
VNA3				*e*		17 25 02.6	
VNA2	**Neumayer--Watz**	**78.40**	**177**	*e*P	**P**	**17 24 50.2**	**-0.1**
VNA2				*e*		17 24 53.0	
VNA2				*e*	pP	17 25 00.2	-1.0
VNA2				*e*		17 25 05.4	
VNA1	**Neumayer--Stat**	**78.62**	**176**	*e*P	**P**	**17 24 51.7**	**+0.2**
VNA1				*e*		17 24 54.5	
VNA1				*e*		17 25 07.0	
PLCA	**Paso Flores**	**81.83**	**133**	P	**P**	**17 25 10.1**	**+0.7**
	3.9nm,1.1s,mb4.3,baz=201,slow=8.4,SNR=5.2						
PLCA				LR	LR	17 53 42.6	
	comp=Z,136nm,20.2s,MS4.3,baz=0.3,slow=30						
PLCA	**Paso Flores**	**81.83**	**133**	*e*P	**P**	**17 25 07.5**	**-1.8**
	12nm,1.3s,mb4.7						
NIKO	**Nikolski**	**83.65**	**5**	*e*P	**P**	**17 25 15.9**	**-2.3**
KSRS	**Korea Array**	**85.00**	**319**	P	**P**	**17 25 24.9**	**-0.5**
	1.0nm,0.8s,mb4.0,baz=150,slow=5.1,SNR=4.9						
KSRS				LR	LR	17 57 52.1	
	comp=Z,24nm,20.7s,MS3.6,baz=225,slow=32						
ISA	**Isabella**	**86.07**	**44**	*e*P	**P**	**17 25 32.3**	**+1.5**
	5.0nm,1.1s,mb4.7						
CMB	**Columbia Colle**	**86.57**	**41**	P	**P**	**17 25 33.4**	**+0.2**
	8.1nm,1.1s,mb4.9						
NJ2	**Nanjing**	**86.93**	**310**	*e*P	**P**	**17 25 36.0**	**+0.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.1						
TPNV	**Topopah Spring**	**88.27**	**45**	P	**P**	**17 25 42.2**	**+0.8**
	comp=Z,11nm,1.6s,mb4.8						
TPH	**Tonopah**	**88.43**	**43**	P	**P**	**17 25 42.7**	**+0.6**
	comp=Z,16nm,1.3s,mb5.1						
CN2	**Changchun**	**90.77**	**322**	*e*P	**P**	**17 25 53.3**	**+0.3**
CN2				*e*AP	pP	17 26 04.0	-0.1
CN2				*e*XP	sP	17 26 07.8	-0.3
CN2				*e*S	S	17 36 46.8	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
GYA	**Guiyang**	**92.26**	**299**	P	**P**	**17 26 01.5**	**+1.2**
GYA				AP	pP	17 26 13.5	+2.1
GYA				XP	sP	17 26 18.3	+2.9
GYA				PP	PP	17 29 45.5	+4.1
GYA				SKS		17 36 31.0	
GYA				S	S	17 37 01.8	+0.9
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,90nm,6.2s						
GYA				LR	LR		
	comp=N,380nm,20.9s,MS4.9						
GYA				LR	LR		
	comp=E,220nm,21.5s,MS4.9						
GYA				LR	LR		
	comp=Z,230nm,20.8s,MS4.6						
BJI	**Beijing**	**93.59**	**315**	P	**P**	**17 26 07.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**94.10**	**289**	LR	LR	18 09 31.6	
	comp=Z,36nm,18.8s,MS3.9,baz=255,slow=36						
MCMT	**McKenzie Canyo**	**95.30**	**40**	P	**P**	**17 26 06.3**	**-7.5**
CD2	**Chengdu**	**96.79**	**302**	*e*P	**P**	**17 26 20.8**	**-0.2**
CD2				AP	pP	17 26 31.5	-0.6
CD2				XP	sP	17 26 35.8	-0.3
CD2				PP	PP	17 30 19.5	+2.8
CD2				SKS		17 36 54.0	
CD2				S	S	17 37 37.5	-2.9
CD2				XS	sS	17 37 55.3	-3.7
CD2				SS	SS	17 44 18.3	+1.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.3						
CD2				AMB	AMB		
	comp=Z,30nm,5.8s						
CD2				LR	LR		
	comp=N,180nm,16.2s,MS4.8						
CD2				LR	LR		
	comp=E,190nm,18.2s,MS4.8						
CD2				LR	LR		
	comp=Z,130nm,14.8s,MS4.5						
HHC	**Hu-ho-hao-te**	**96.91**	**314**	*e*P	**P**	**17 26 20.0**	**-1.2**
HHC				AP	pP	17 26 31.3	-1.1
HHC				XP	sP	17 26 35.3	-1.1
HHC				PP	PP	17 30 19.5	+2.1
HHC				SKS		17 36 53.5	
HHC				S	S	17 37 37.8	-3.1
HHC				XS	sS	17 37 56.0	-3.5
HHC				SS	SS	17 44 20.0	+1.9
HHC				AMB	AMB		
	comp=Z,11nm,0.8s,mb5.3						
HHC				AMB	AMB		
	comp=Z,133nm,6.8s						
HHC				LR	LR		
	comp=N,98nm,17.9s,MS4.8						
HHC				LR	LR		
	comp=E,299nm,18.0s,MS4.8						
HHC				LR	LR		
	comp=Z,123nm,18.6s,MS4.4						
CPUP	**Villa Florida**	**99.30**	**128**	LR	LR	18 06 39.5	
	comp=Z,120nm,19.3s,MS4.4,baz=15,slow=32						
LZH	**Lanzhou**	**99.42**	**306**	*e*P	**P**	**17 26 31.5**	**-1.1**
LZH				AP	pP	17 26 41.0	-2.8
LZH				XP	sP	17 26 47.0	-0.8
LZH				PP	PP	17 30 35.3	-1.4
LZH				SKS		17 37 06.0	
LZH				*e*S	S	17 37 57.3	-5.1
LZH				XS	sS	17 38 17.0	-4.1
LZH				AMB	AMB		
	comp=Z,14nm,1.5s,mb5.3						
LZH				AMB	AMB		
	comp=Z,90nm,6.6s						
LZH				LR	LR		
	comp=N,1μm,17.0s						
LZH				LR	LR		
	comp=Z,1μm,18.5s,MS5.5						
LZH	**Lanzhou**	**99.42**	**306**	*e*P	**P**	**17 26 31.5**	**-1.1**
	comp=Z,14nm,1.5s,mb5.3						
LZH				pP	pP	17 26 41.0	-2.8
LZH				sP	sP	17 26 47.0	-0.8
LZH				PP	PP	17 30 35.3	-1.4
LZH				SKS		17 37 06.1	
LZH				*e*S	S	17 37 57.2	-5.2
LZH				sS	sS	17 38 17.0	-4.1
WMQ	**Urumqi**	**113.92**	**308**	*e*PKP	PKiKP	17 31 28.0	-0.7
MKAR	**Makanchi Array**	**118.46**	**310**	PKiKP	PKiKP	17 31 39.6	+2.3
	comp=Z,0.3nm,0.5s,baz=234,slow=1.9,SNR=5.1						
KURK	**Kurchatov**	**121.72**	**314**	PKP	PKPdf	17 31 42.9	-0.6
	comp=Z,1.1nm,1.0s,baz=97,slow=2.3,SNR=4.5						
ARCES	**ARCESS Array B**	**139.02**	**348**	PKP	PKPdf	17 32 17.1	+1.4
	comp=Z,1.1nm,0.6s,baz=9.9,slow=2.8,SNR=3.8						
JOF	**Joensuu**	**142.94**	**339**	*e*pkp	PKPdf	17 32 22.6	-0.3
	comp=Z,0.4nm,0.3s						
KAF	**Kangasniemi**	**145.05**	**341**	*e*pkp	PKPdf	17 32 25.5	-1.1
	comp=Z,2.0nm,0.4s,baz=38,slow=3.1						
NB2	**NORSAR Subarra**	**149.15**	**352**	PKP	PKPdf	17 32 37.3	+3.8
	comp=Z,1.2nm,0.6s,baz=13,slow=2.9						
NOA	**NORSAR Array B**	**149.15**	**352**	PKPbc	PKPbc	17 32 37.7	0.0
	comp=Z,5.5nm,1.0s,baz=13,slow=4.2,SNR=5.1						
NOA	**NORSAR Array B**	**149.15**	**352**	PKPbc	PKPbc	17 32 37.7	0.0
AKASG	**Malin Array Be**	**151.93**	**323**	PKPbc	PKPbc	17 32 43.5	-1.2
	comp=Z,5.3nm,1.0s,baz=56,slow=2.1,SNR=8.6						
GERES	**GERESS Array B**	**160.06**	**338**	PKPab	PKPab	17 33 27.8	-1.0
	comp=Z,0.7nm,0.8s,baz=21,slow=1.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**162.50**	**177**	PKPab	PKPab	17 33 40.2	0.0
	comp=Z,1.3nm,0.7s,baz=172,slow=3.1,SNR=5.3						

*NIED **25** 17:14:00, 4150N×14200E, h47km, Mw3.8 Best double couple: M0 6.15000×10^14 NP1:φ=15.00000°, δ65.00000°, λ92.00000°. NP2:φ=191.00000°, δ25.00000°, λ86.00000°.*
*MOS **25** 17:14:37.5±1.1, 4145N×14221E, h80km, mb4.4/4, Error ellipse: s-maj=16.2km s-min=9.9km az=74.7*
*ISCJB **25** 17:14:37.6±0.3, 4147N±003×14204E±005, h70km±3km, mb4.0/13, Error ellipse: s-maj=6.9km s-min=4.0km az=36.6*
*NEIC **25** 17:14:38.1±0.8, 4135N×14220E, h71km±8km, mb4.1/4, Error ellipse: s-maj=13.1km s-min=9.8km az=116.0*
NEIC Recorded [1 JMA] in Aomori Prefecture, Honshu.
*JMA **25** 17:14:38.2±0.1, 4147N×14202E, h64km±2km, M3.7*
JMA Felt I J1.
*IDC **25** 17:14:40.2±1.9, 4151N×14231E, h88km±15km, mb3.7/7, mb1 3.7/10, mb1mx3.6/23, mbtmp3.7/10, MS3.2/1, Ms1 3.2/1, ms1mx2.4/33, Error ellipse: s-maj=28.1km s-min=13.5km az=108.0*

ISC 25 17:14:38.4±0.3, 4146N±003×14205E±005, h63km±4km, n44, σ0$=88/59, mb4.1/13, 1C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.76**	**265**	⇓P	**Pn**	**17 14 53.2**	**-0.3**
JOT				*e*S	**Sn**	**17 15 04.3**	**-0.3**
JKB	**Kayabe**	**0.88**	**300**	⇓P	**Pn**	**17 14 54.2**	**-0.8**
JKB				*e*S	**Sn**	**17 15 06.5**	**-0.7**
JNBK	**Urakawa-nobuka**	**0.97**	**32**	⇓P	**Pn**	**17 14 55.7**	**-0.5**
JNBK				*e*S	**Sn**	**17 15 09.1**	**-0.3**
ERM	**Erimo**	**1.00**	**56**	*e*Pn	**Pn**	**17 14 56.1**	**-0.4**
ERM				*e*Sn	**Sn**	**17 15 09.0**	**-0.9**
JEM	**Erimo**	**1.00**	**56**	⇑P	**Pn**	**17 14 56.5**	**0.0**
JEM				S	**Sn**	**17 15 10.2**	**+0.2**
JTM	**Tenmabayashi**	**1.00**	**228**	⇓P	**Pn**	**17 14 56.8**	**+0.3**
JTM				S	**Sn**	**17 15 10.3**	**+0.3**
JANG	**Nango**	**1.16**	**201**	P	**Pn**	**17 14 58.6**	**0.0**
JANG				S	**Sn**	**17 15 13.5**	**-0.1**
JEW	**Eniwo**	**1.45**	**342**	P	**Pn**	**17 15 02.4**	**-0.1**
JEW				S	**Sn**	**17 15 20.3**	**-0.3**
JCH	**Churui**	**1.51**	**40**	⇓P	**Pn**	**17 15 04.0**	**+0.7**
JCH				S	**Sn**	**17 15 23.9**	**+1.8**
JFR	**Furan**	**1.75**	**13**	P	**Pn**	**17 15 06.6**	**+0.1**
JOSM	**Okushiri--Mats**	**2.03**	**289**	P	**Pn**	**17 15 09.6**	**-0.6**
JOM	**Ohasama**	**2.06**	**197**	P	**Pn**	**17 15 11.5**	**+0.7**
JOM				S	**Sn**	**17 15 36.3**	**+0.9**
ASAJ	**Asahikawa**	**2.69**	**8**	P	**Pn**	**17 15 19.8**	**+0.6**
	15nm,0.3s,baz=215,slow=12,SNR=72						
ASAJ				S	**Sn**	**17 15 52.1**	**+1.5**
	14nm,0.3s,baz=332,slow=29,SNR=10						
ASAJ	**Asahikawa**	**2.69**	**8**	P	**Pn**	**17 15 19.8**	**+0.6**
ASAJ				S	**Sn**	**17 15 52.1**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,15nm,0.3s						
ASAJ				smax			
	comp=N,14nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.81**	**46**	P	**Pn**	**17 15 34.1**	**-0.4**
YUK				*e*S	**Sn**	**17 16 15.4**	**-2.6**
YUK				smax			
	comp=N,840nm,0.6s						
YUK				smax			
	comp=E,840nm,0.6s						
YSS	**Yuzh-Sakhalins**	**5.52**	**5**	*e*Pn	**Pn**	**17 15 59.5**	**+1.6**
YSS				*e*Sn	**Sn**	**17 16 40.5**	**-19**
MAJO	**Matsushiro**	**5.75**	**213**	*e*P	**Pn**	**17 15 59.4**	**-1.7**
MJAR	**Matsushiro Arr**	**5.75**	**213**	P	**Pn**	**17 16 04.6**	**+3.5**
	comp=E,0.7nm,0.3

*IDC **25** 17:15:46.0±1.0, 946N×12665E, h0km, mb4.0/10, mb1 4.2/11, mb1mx4.0/21, mbtmp4.0/11, ML5.0/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/26, Error ellipse: s-maj=54.1km s-min=14.1km az=70.0*
*MOS **25** 17:15:48.6±1.0, 936N×12656E, h33km, mb4.3/5, Error ellipse: s-maj=47.2km s-min=14.3km az=118.4*
*MAN **25** 17:15:48, 934N×12685E, h12km, mb5.1, ML4.0, MS4.2*
*ISCJB **25** 17:15:49.0±1.0, 937N±004×12691E±007, h42km±8km, mb4.1/14, Error ellipse: s-maj=11.3km s-min=5.6km az=167.5*
*NEIC **25** 17:15:50.5±0.6, 947N×12684E, h35km, mb4.5/5, Error ellipse: s-maj=21.7km s-min=8.2km az=74.0*

ISC 25 17:15:50.7±1.0, 936N±004×12688E±007, h38km±9km, n53, σ1♀19/59, mb4.1/14, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.28**	**204**	*e*P		**Pn**		**17 16 09.8**	**-2.2**
BIPH				*e*S		**Sn**		**17 16 24.8**	**-3.2**
BUTP	**Butuan**	**1.30**	**253**	*e*P		**Pn**		**17 16 09.8**	**-2.6**
BUTP				*e*S		**Sn**		**17 16 27.3**	**-1.3**
SCPH	**Surigao**	**1.43**	**287**	*e*P		**Pn**		**17 16 12.2**	**-2.0**
SCPH				*e*S		**Sn**		**17 16 31.8**	**-0.1**
MSLP	**Maasin**	**2.13**	**291**	*e*P		**Pn**		**17 16 23.6**	**-0.2**
MSLP				*e*S		**Sn**		**17 16 50.3**	**+1.1**
BUKP	**Musuan**	**2.32**	**231**	*e*P		**Pn**		**17 16 26.7**	**+0.3**
BUKP				*e*S		**Sn**		**17 16 54.8**	**+1.0**
MATI	**Mati**	**2.48**	**194**	*e*P		**Pn**		**17 16 28.2**	**-0.4**
PLP	**Palo**	**2.59**	**314**	*e*P		**Pn**		**17 16 29.0**	**-1.2**
PLP				*e*S		**Sn**		**17 16 55.3**	**-5.1**
DAV	**Davao City (W)**	**2.62**	**210**	LR		LR		17 17 39.2	
	comp=Z,1μm,19.8s,baz=40,slow=44								
BESP	**Borongan**	**2.64**	**328**	*e*P		**Pn**		**17 16 31.7**	**+0.9**
TBP	**Tagbilaran**	**2.99**	**277**	*e*P		**Pn**		**17 16 35.3**	**-0.4**
TBP				*e*S		**Sn**		**17 17 00.4**	**-10**
LLP	**Lapu-Lapu**	**3.02**	**289**	*e*P		**Pn**		**17 16 36.2**	**+0.1**
LLP				*e*S		**Sn**		**17 17 12.8**	**+1.6**
DCPH	**Dipolog City**	**3.57**	**258**	*e*P		**Pn**		**17 16 43.3**	**-0.3**
DCPH				*e*S		**Sn**		**17 17 19.3**	**-5.2**
PAGZ	**Pagadian**	**3.77**	**247**	*e*P		**Pn**		**17 16 47.6**	**+1.2**
CNP	**Catarman**	**3.81**	**325**	*e*P		**Pn**		**17 16 47.2**	**+0.2**
CNP				*e*S		**Sn**		**17 17 29.1**	**-1.4**
GUIM	**Jordan**	**4.41**	**287**	*e*P		**Pn**		**17 16 56.5**	**+1.4**
RCP	**Roxas**	**4.62**	**299**	*e*P		**Pn**		**17 16 58.9**	**+0.9**
PVCP	**Virac**	**4.98**	**328**	*e*P		**Pn**		**17 17 04.4**	**+1.3**
OTRP	**Odiongan**	**5.63**	**302**	*e*P		**Pn**		**17 17 14.9**	**+3.0**
KAPI	**Kappang**	**15.95**	**207**	LR		LR		17 25 55.1	
	comp=Z,108nm,19.4s,baz=98,slow=38								
GUMO	**Guam**	**18.12**	**75**	LR		LR		17 27 11.9	
	comp=Z,109nm,18.1s,baz=249,slow=37								
KSM	**Kuching**	**18.25**	**246**	*e*P		**Pn**		**17 20 02.9**	**+1.7**
BATI	**Baumata**	**19.70**	**189**	P		**Pn**		**17 20 18.0**	**-0.6**
	4.7nm,0.3s,baz=25,slow=3.4,SNR=9.5								
JHJ	**Hachijo jima 2**	**26.47**	**25**	LR		LR		17 30 54.3	
	comp=Z,77nm,20.6s,baz=86,slow=34								
FITZ	**Fitzroy Crossi**	**27.32**	**183**	*e*P		**P**		**17 21 33.3**	**+1.3**
	5.5nm,0.6s,mb4.3								
FITZ	**Fitzroy Crossi**	**27.32**	**183**	P		**P**		**17 21 33.0**	**+1.0**
	4.0nm,0.9s,mb3.9,baz=21,slow=11,SNR=5.6								
CMAR	**Chiang Mai Arr**	**28.55**	**291**	P		**P**		**17 21 42.0**	**-1.1**
	0.3nm,0.4s,mb3.4,baz=83,slow=7.4,SNR=4.8								
WRA	**Warramunga Arr**	**30.03**	**166**	P		**P**		**17 21 56.7**	**+0.5**
	1.5nm,0.7s,mb3.9,baz=348,slow=9.5,SNR=5.4								
WRA	**Warramunga Arr**	**30.03**	**166**	P		**P**		**17 21 56.7**	**+0.5**
WRA				pmax		pmax			
	comp=Z,2.0nm,0.7s								
MBWA	**Marble Bar**	**31.13**	**193**	P		**P**		**17 22 05.0**	**-0.9**
	comp=Z,54nm,1.4s,mb5.2								
ASAR	**Alice Springs**	**33.54**	**168**	P		**P**		**17 22 29.0**	**+2.0**
	comp=Z,0.7nm,0.5s,mb3.8,baz=353,slow=7.9,SNR=8.2								
ASAR	**Alice Springs**	**33.54**	**168**	P		**P**		**17 22 29.0**	**+2.0**
ASAR				pmax		pmax			
	comp=Z,1.0nm,0.5s								
CTAO	**Charters Tower**	**34.93**	**147**	P		**P**		**17 22 44.4**	**+5.3**
ULN	**Ulaanbaatar**	**41.88**	**340**	P		**P**		**17 23 37.5**	**+0.4**
	comp=Z,0.9nm,0.5s,mb3.7								
SONM	**Songino Array**	**42.07**	**339**	P		**P**		**17 23 39.0**	**+0.2**
	comp=Z,0.4nm,0.6s,mb3.2,baz=153,slow=7.5,SNR=3.7								
NWAO	**Narrogin (SRO)**	**43.05**	**192**	*e*P		**P**		**17 23 47.7**	**+0.9**
STKA	**Stephens Creek**	**43.35**	**162**	P		**P**		**17 23 52.6**	**+3.3**
	comp=Z,1.6nm,0.7s,mb3.9,baz=337,slow=5.2,SNR=3.2								
STKA	**Stephens Creek**	**43.35**	**162**	P		**P**		**17 23 51.5**	**+2.1**
	comp=Z,9.4nm,1.0s,mb4.5								
BOD	**Bodaibo**	**49.35**	**351**	*e*P		**P**		**17 24 36.9**	**+0.8**
MKAR	**Makanchi Array**	**53.11**	**323**	P		**P**		**17 25 04.5**	**0.0**
	comp=Z,2.1nm,0.8s,mb4.1,baz=119,slow=7.5,SNR=8.7								
MKAR	**Makanchi Array**	**53.11**	**323**	P		**P**		**17 25 04.5**	**0.0**
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.8s								
ZALV	**Zalesovo Beam**	**55.71**	**331**	P		**P**		**17 25 21.9**	**-1.3**
	comp=Z,0.4nm,0.3s,mb3.9,baz=90,slow=4.3,SNR=3.3								
TKM2	**Tokmak 2**	**55.73**	**316**	*e*P		**P**		**17 25 23.2**	**-0.4**
UCH	**Uchtor**	**56.24**	**315**	*e*P		**P**		**17 25 27.1**	**-0.1**
	comp=Z,4.2nm,0.8s,mb4.5								
EKS2	**Erkin-Say**	**56.90**	**315**	*e*P		**P**		**17 25 31.0**	**-0.9**
	comp=Z,3.4nm,0.9s,mb4.4								
KURK	**Kurchatov**	**57.15**	**326**	P		**P**		**17 25 32.2**	**-1.3**
	comp=Z,2.2nm,0.9s,mb4.2,baz=126,slow=6.3,SNR=8.2								
KURK	**Kurchatov**	**57.15**	**326**	P		**P**		**17 25 32.2**	**-1.4**
KURK				pmax		pmax			
	comp=Z,2.0nm,0.9s,mb4.2								
KURK	**Kurchatov**	**57.15**	**326**	P		**P**		**17 25 32.2**	**-1.3**
KURK				*e*P				17 25 32.5	
BRVK	**Borovoye**	**62.82**	**325**	P		**P**		**17 26 11.4**	**-1.0**
ARU	**Arti**	**70.31**	**327**	*e*P		**P**		**17 26 58.6**	**-1.6**
ARU	**Arti**	**70.31**	**327**	*e*P		**P**		**17 26 58.6**	**-1.6**
GOF	**Gofitskoye**	**79.11**	**314**	*e*P		**P**		**17 27 46.0**	**-5.4**
ARCES	**ARCESS Array B**	**85.25**	**340**	P		**P**		**17 28 23.8**	**+0.7**
	comp=Z,3.0nm,0.8s,mb4.5,baz=82,slow=5.7,SNR=8.1								
ARCES	**ARCESS Array B**	**85.25**	**340**	P		**P**		**17 28 23.8**	**+0.7**
ARCES				pmax		pmax			
	comp=Z,3.0nm,0.8s								

IDC 25 17:28:16.8±3.4, 164S×9957E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/19, mbtmp3.4/5, ML3.7/1, Error ellipse: s-maj=149.8km s-min=22.2km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.98**	**358**	P		P	Pn	17 32 51.1	-1.4
	0.1nm,0.3s,baz=157,slow=11,SNR=4.4								
WRA	**Warramunga Arr**	**38.54**	**121**	P		P		17 35 40.8	-0.7
	0.4nm,0.4s,baz=302,slow=9.3,SNR=5.3								
ASAR	**Alice Springs**	**39.81**	**126**	P		P		17 35 52.6	+0.6
	0.2nm,0.5s,baz=299,slow=7.6,SNR=7.2								
MKAR	**Makanchi Array**	**50.57**	**345**	P		P		17 37 17.2	0.0
	0.4nm,0.5s,baz=152,slow=9.3,SNR=4.7								
ZALV	**Zalesovo Beam**	**56.74**	**350**	P		P		17 38 02.2	-0.1
	0.7nm,0.4s,baz=160,slow=6.7,SNR=4.4								
TXAR	**Lajitas Array**	**144.67**	**37**	PKP		PKPdf		17 47 55.5	-0.8
	0.3nm,0.5s,baz=207,slow=1.0,SNR=6.8								

*ISCJB **25** 17:38:08.9±0.4, 3976N±001×2774E±002, h5km±3km, Error ellipse: s-maj=2.6km s-min=2.2km az=37.5*
*ISK **25** 17:38:08.8, 3976N×2778E, h6km, ML3.6*
*NEIC **25** 17:38:08.0, 3976N×2777E, h3km, MD3.9(ATH), ML3.7(ISK), After ISK.*
*CSEM **25** 17:38:08.6±0.0, 3976N×2778E, h5km, ML3.9, Error ellipse: s-maj=1.0km s-min=0.8km az=61.0*
*DDA **25** 17:38:09.2, 3976N×2780E, h12km±3km, Md3.5, Ml3.9*
*ATH **25** 17:38:11.7, 3980N×2754E, h21km±2km, MD3.9/6*
*BEO **25** 17:38:11.2±1.0, 4036N×2830E, h3km±5km, ML3.8/3*
*THE **25** 17:38:12.1, 3969N×2764E, h9km, ML4.3*
*SOF **25** 17:38:19.2, 4024N×2717E, h20km, MD3.2*

ISC 25 17:38:09.5±0.3, 3975N±001×2776E±002, h3km±2km, n118, σ0♀96/153, 11C-14D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.14**	**139**	PG		**Pg**		**17 38 12.3**	**0.0**
BALB				*e*SG		**Sg**		**17 38 14.8**	**+0.5**
DURS	**Dursunbey**	**0.57**	**105**	*i* P		**Pg**		**17 38 20.0**	**-0.5**
DURS				*i* S		**Sg**		**17 38 27.7**	**-0.2**
EDC	**Edincik**	**0.60**	**8**	*e*PG		**Pg**		**17 38 20.9**	**-0.2**
EDC				*e*SG		**Sg**		**17 38 29.1**	**+0.3**
BNT	**Bandirma**	**0.62**	**12**	*e*PG		**Pg**		**17 38 21.0**	**-0.3**
BNT				*e*SG		**Sg**		**17 38 29.4**	**0.0**
DST	**Dursunbey**	**0.69**	**102**	*e*PG		**Pg**		**17 38 22.0**	**-0.7**
MRMT	**Marmara Adasi**	**0.86**	**352**	*e*PG		**Pg**		**17 38 25.7**	**-0.3**
AKS	**Akhisar**	**0.87**	**177**	*e*PG		**Pg**		**17 38 26.3**	**+0.1**
AYVA	**Ayvalik**	**0.94**	**242**	*i* P		**Pg**		**17 38 28.2**	**+0.7**
AYVA				*i* S		**Sg**		**17 38 41.5**	**+1.9**
LPK	**Lapseki**	**0.99**	**309**	*e*PG		**Pg**		**17 38 27.9**	**-0.6**
DEMI	**Demirci**	**1.02**	**133**	*i* P		**Pg**		**17 38 28.7**	**-0.5**
DEMI				*i* S		**Sg**		**17 38 41.5**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.04**	**335**	*e*PG		**Pg**		**17 38 28.8**	**-0.6**
RKY				*e*SG		**Sg**		**17 38 44.1**	**+1.2**
SART	**Tekirdag**	**1.04**	**335**	*i* P		**Pg**		**17 38 29.1**	**-0.3**
SART				*i* S		**Sg**		**17 38 43.6**	**+0.8**
EZN	**Ezine**	**1.11**	**274**	*e*PN		**Pn**		**17 38 30.4**	**-1.5**
ULDT	**Uludag**	**1.13**	**69**	*i* P		**Pg**		**17 38 30.6**	**-0.5**
ULDT				*i* S		**Sg**		**17 38 45.8**	**0.0**
TKR	**Tekirdag**	**1.25**	**352**	*e*PN		**Pn**		**17 38 33.2**	**-0.7**
PRK	**Paraskevi**	**1.25**	**247**	*e*Pg		**Pg**		**17 38 33.2**	**-0.4**
PRK				*e*Sg		**Sg**		**17 38 50.0**	**+0.2**
PRK	**Paraskevi**	**1.25**	**247**	*i*↑Pn		**Pn**		**17 38 33.1**	**-0.8**
PRK				*e*Sn		**Sn**		**17 38 49.0**	**-2.2**
GEMT	**Gemlik**	**1.29**	**58**	*e*PN		**Pn**		**17 38 33.5**	**-0.9**
CRLT	**Corlu**	**1.38**	**359**	*e*PN		**Pn**		**17 38 35.1**	**-0.5**
KDAG	**Bornova**	**1.40**	**196**	*i* P		**Pn**		**17 38 35.1**	**-0.7**
MANT	**Manisa**	**1.40**	**153**	*i* P		**Pn**		**17 38 35.9**	**0.0**
KULA	**Kula-Manisa**	**1.42**	**150**	*e*PN		**Pn**		**17 38 36.2**	**+0.1**
BLCB	**Balcova**	**1.47**	**202**	*e*PN		**Pn**		**17 38 36.8**	**-0.1**
YLV	**Yalova**	**1.48**	**56**	*e*PN		**Pn**		**17 38 35.9**	**-1.2**
CTT	**Catalca**	**1.49**	**20**	*e*PN		**Pn**		**17 38 36.2**	**-0.9**
ELBA	**Catalca**	**1.49**	**20**	*i* P		**Pn**		**17 38 36.0**	**-1.1**
ELBA				*i* S		**Sn**		**17 38 55.4**	**-1.6**
GDZ	**Gediz**	**1.49**	**116**	*i* P		**Pn**		**17 38 37.1**	**0.0**
GDZ				*i* S		**Sn**		**17 38 57.0**	**0.0**
SLVT	**Silivri**	**1.52**	**13**	*e*PN		**Pn**		**17 38 37.0**	**-0.6**
ENEZ	**Enez**	**1.57**	**309**	*e*PN		**Pn**		**17 38 38.2**	**-0.1**
BGKT	**Bogazkoy**	**1.63**	**28**	*e*PN		**Pn**		**17 38 38.4**	**-0.6**
URLA	**Izmir**	**1.66**	**213**	*i* P		**Pn**		**17 38 38.7**	**-0.7**
URLA				*i* S		**Sn**		**17 38 59.9**	**-1.3**
URLA	**Izmir**	**1.66**	**213**	*i* P		**Pn**		**17 38 38.7**	**-0.7**
URLA				*i* S		**Sn**		**17 38 59.8**	**-1.3**
ADVT	**Abdulvahap**	**1.67**	**65**	*e*PN		**Pn**		**17 38 39.0**	**-0.6**
ALN	**Alexandroupoli**	**1.74**	**312**	*e*Pb		**Pn**		**17 38 40.5**	**-0.1**
ALN				*e*Sb		**Sn**		**17 39 02.7**	**-0.5**
KLYT	**Kilyos**	**1.79**	**33**	*e*PN		**Pn**		**17 38 40.4**	**-0.9**
HRT	**Hereke**	**1.81**	**53**	*e*PN		**Pn**		**17 38 40.6**	**-1.0**
CHOS	**Chios island**	**1.90**	**225**	*e*Pb		**Pn**		**17 38 42.5**	**-0.3**
CHOS				*e*Sb		**Sn**		**17 39 06.0**	**-1.2**
ALT	**Altintas**	**1.95**	**110**	*e*PN		**Pn**		**17 38 43.8**	**+0.3**
KHL	**Karahalli**	**1.98**	**135**	*e*PN		**Pn**		**17 38 43.7**	**-0.2**
LIA	**Limnos Island**	**1.99**	**275**	*e*Pb		**Pn**		**17 38 43.8**	**-0.1**
LIA				*e*Sb		**Sn**		**17 39 07.7**	**-1.6**
SILT	**Sile**	**2.01**	**45**	*e*PN		**Pn**		**17 38 43.9**	**-0.3**
GPA	**Golpazari**	**2.03**	**74**	*e*PN		**Pn**		**17 38 43.5**	**-0.1**
LOS	**Limnos**	**2.07**	**276**	*e*Pn		**Pn**		**17 38 45.2**	**+0.2**
BORA	**Eskisehir**	**2.08**	**86**	*i* P		**Pn**		**17 38 45.8**	**+0.5**
BORA				*i* S		**Sn**		**17 39 10.4**	**-1.2**
AYDN	**Tasoluk**	**2.09**	**177**	*i* P		**Pn**		**17 38 44.7**	**-0.6**
SMG	**Samos**	**2.16**	**200**	*e*PN		**Pn**		**17 38 48.8**	**+2.5**
RDO	**Rodhopi**	**2.19**	**310**	*e*PN		**Pn**		**17 38 47.1**	**+0.3**
GULT	**Gulveren**	**2.22**	**71**	*e*PN		**Pn**		**17 38 47.2**	**0.0**
EDRB	**Edirne**	**2.23**	**340**	*e*PN		**Pn**		**17 38 46.8**	**-0.5**
ESKT	**Eskisehir**	**2.40**	**94**	*i* P		**Pn**		**17 38 49.8**	**+0.2**
SEYT	**Eskypehyr**	**2.40**	**94**	*i* P		**Pn**		**17 38 49.8**	**+0.2**
MLSB	**Milas**	**2.45**	**180**	*e*PN		**Pn**		**17 38 50.7**	**+0.4**
SHUT	**Suhut-Afyon**	**2.48**	**118**	*e*PN		**Pn**		**17 38 51.1**	**+0.4**
KDZ	**Kurdzhali**	**2.60**	**318**	P		**Pn**		**17 38 52.9**	**+0.5**
YER	**Yerkesik**	**2.64**	**171**	*e*PN		**Pn**		**17 38 53.0**	**0.0**
BODT	**Bodrum**	**2.71**	**188**	*e*PN		**Pn**		**17 38 54.6**	**+0.7**
MDU	**Mudurnu**	**2.75**	**74**	*e*PN		**Pn**		**17 38 55.0**	**+0.6**
DIM	**Dimitrovgrad**	**2.85**	**324**	P		**Pn**		**17 38 55.7**	**-0.1**
DIM				Pg		**Pg**		**17 39 02.6**	**-1.5**
JMB	**Yambol**	**2.86**	**342**	*e*Pn		**Pn**		**17 38 57.7**	**+1.8**
JMB				*e*Sn		**Sn**		**17 39 33.5**	**+2.7**
ISP	**Isparta**	**2.87**	**131**	*e*PN		**Pn**		**17 38 57.0**	**+0.9**
OUR	**Ouranopolis**	**2.96**	**283**	*e*Pn		**Pn**		**17 38 57.0**	**-0.3**
RZN	**Rozhen**	**3.02**	**311**	P		**Pn**		**17 38 58.6**	**+0.5**
PAIG	**Paliouri**	**3.14**	**275**	*e*Pn		**Pn**		**17 38 59.3**	**-0.5**
PAIG				*e*Sn		**Sn**		**17 39 36.5**	**-1.4**
BCK	**Bucak**	**3.19**	**135**	*e*PN		**Pn**		**17 39 01.2**	**+0.8**
PLD	**Plovdiv**	**3.30**	**316**	*e*Pn		**Pn**		**17 39 02.4**	**+0.4**
PLD	**Plovdiv**	**3.30**	**316**	*i*↑Pn		**Pn**		**17 39 02.5**	**+0.5**
PLD				*e*Sn		**Sn**		**17 39 41.0**	**-0.7**
PLD				*e*Sg		**Sg**		**17 39 53.6**	**-1.9**
KIZT	**Kizilcal**	**3.31**	**104**	*e*PN		**Pn**		**17 39 03.2**	**+1.0**
PLG	**Polygyros**	**3.37**	**282**	*e*PN		**Pn**		**17 39 03.2**	**+0.3**
NVR	**Nevrokopi**	**3.37**	**300**	*e*PN		**Pn**		**17 39 03.2**	**+0.2**
ELL	**Elmali**	**3.44**	**155**	*e*PN		**Pn**		**17 39 04.0**	**+0.8**
MMB	**Musomiste**	**3.57**	**302**	P		**Pn**		**17 39 05.8**	**0.0**
LOD	**Lodumlu**	**3.86**	**86**	*e*PN		**Pn**		**17 39 10.9**	**+1.3**
ANTO	**Ankara**	**3.88**	**87**	*i*↓P		**Pg**		**17 39 22.6**	**-1.3**
ANTO	**Ankara**	**3.88**	**87**	*e*Pg		**Pg**		**17 39 21.5**	**-2.4**
ANTO				*e*Sg		**Sg**		**17 40 08.4**	**-5.7**
ANTO	**Ankara**	**3.88**	**87**	*e*Pg		**Pg**		**17 39 21.6**	**-2.3**
ANTO				*e*Sg		**Sg**		**17 40 08.4**	**-5.7**
LADK	**Ladik-KONYA**	**3.91**	**112**	*e*PN		**Pn**		**17 39 10.9**	**+0.6**
KNT	**Kendrikon**	**3.97**	**292**	*e*Pn		**Pn**		**17 39 11.8**	**+0.6**
KONT	**Konya--Tatoy**	**4.02**	**115**	*e*PN		**Pn**		**17 39 12.6**	**+0.7**
SAFT	**Safranbolu**	**4.04**	**67**	*e*PN		**Pn**		**17 39 12.5**	**+0.3**
KKB	**Krupnik**	**4.13**	**302**	P		**Pn**		**17 39 13.8**	**+0.4**
VAY	**Valandovo**	**4.25**	**293**	*e*Pn		**Pn**		**17 39 16.3**	**+1.2**
VAY				*e*Sn		**Sn**		**17 39 57.9**	**-7.3**
VTS	**Vitosha**	**4.46**	**311**	P		**Pn**		**17 39 18.9**	**+1.0**
VTS	**Vitosha**	**4.46**	**311**	*e*Pn		**Pn**		**17 39 19.0**	**+1.1**
VTS				*e*Sn		**Sn**		**17 40 08.9**	**-1.3**
BR131	**Keskin Array S**	**4.54**	**88**	*e*Pn		**Pn**		**17 39 19.2**	**+0.2**
BR131	**Keskin Array S**	**4.54**	**88**	*e*Pg		**Pg**		**17 39 34.5**	**-1.9**
BR131	**Keskin Array S**	**4.54**	**88**	*e*Pn		**Pn**		**17 39 19.2**	**+0.2**
BR131				*e*Pg		**Pg**		**17 39 34.5**	**-1.8**
BR131				*e*Sg		**Sg**		**17 40 35.7**	**+0.5**
KAMT	**Kaman**	**4.62**	**93**	*e*PN		**Pn**		**17 39 20.9**	**+0.8**
HDMB	**Hadim**	**4.64**	**125**	*e*PN		**Pn**		**17 39 21.5**	**+1.0**
STIP	**Stip**	**4.66**	**296**	*e*Pn		**Pg**		**17 39 34.8**	**-3.9**
STIP				*e*Sn		**Sn**		**17 40 17.4**	**+2.2**
TIRR	**Tirgusor**	**4.73**	**6**	*i*↓P		**Pn**		**17 39 21.5**	**-0.2**
TIRR	**Tirgusor**	**4.73**	**6**	↓P		**Pn**		**17 39 21.5**	**-0.2**
HARR	**Harsova**	**4.94**	**1**	*i*↓P		**Pn**		**17 39 24.9**	**+0.4**
HARR	**Harsova**	**4.94**	**1**	↓P		**Pn**		**17 39 24.9**	**+0.3**
KRUS	**Krusevo**	**5.21**	**290**	*e*Pn		**Pn**		**17 39 29.7**	**+1.4**
KRUS				*e*Sn		**Sn**		**17 40 14.2**	**-15**
BARS	**Barje**	**5.42**	**306**	*e*Pn		**Pn**		**17 39 31.8**	**+0.6**
BARS				*e*Sn		**Sn**		**17 40 34.6**	**+0.5**
TLCR		**5.49**	**8**	*i*↓P		**Pn**		**17 39 33.0**	**+0.9**
TLCR		**5.49**	**8**	↓P		**Pn**		**17 39 33.0**	**+1.0**
BOLS	**Boljevac**	**5.95**	**315**	*e*Pn		**Pn**		**17 39 38.8**	**+0.4**
ODB	**Odobesti**	**6.04**	**355**	*i*↓P		**Pn**		**17 39 41.6**	**+1.9**
ODB	**Odobesti**	**6.04**	**355**	↓P		**Pn**		**17 39 41.6**	**+1.9**
PLOR	**Plostina**	**6.15**	**353**	*i*↑P		**Pn**		**17 39 44.3**	**+3.1**
VRI	**Vrincioaia**	**6.16**	**353**	*i*↑P		**Pn**		**17 39 43.0**	**+1.7**
VRI	**Vrincioaia**	**6.16**	**353**	↑P		**Pn**		**17 39 43.0**	**+1.7**
GRUS	**Gruza**	**6.69**	**310**	*e*Pn		**Pn**		**17 39 48.4**	**-0.2**
GRUS				*e*Sn		**Sn**		**17 41 02.6**	**-2.6**
GZR	**Gura Zlata**	**6.73**	**329**	*i*↑P		**Pn**		**17 39 50.1**	**+1.0**
GZR	**Gura Zlata**	**6.73**	**329**	↑P		**Pn**		**17 39 50.1**	**+0.9**
DIVS	**Divibare**	**7.24**	**309**	*e*Pn		**Pn**		**17 39 56.3**	**+0.2**
DIVS				*e*Sn		**Sn**		**17 41 15.8**	**-2.9**
BZS	**Buzias**	**7.40**	**324**	*i*↓P		**Pn**		**17 39 57.8**	**-0.6**
BZS	**Buzias**	**7.40**	**324**	↓P		**Pn**		**17 39 57.8**	**-0.6**
BBLS	**Lazići**	**7.47**	**306**	*e*Pn		**Pn**		**17 40 00.7**	**+1.4**
DRGR		**7.94**	**334**	*i*↑P		**Pn**		**17 40 08.6**	**+2.9**
DRGR		**7.94**	**334**	↑P		**Pn**		**17 40 08.6**	**+2.9**
BURAR	**Bucovina Array**	**8.07**	**348**	*i*↑P		**Pn**		**17 40 10.1**	**+2.5**
BURAR	**Bucovina Array**	**8.07**	**348**	↑P		**Pn**		**17 40 10.1**	**+2.6**
BUR08	**Bucovina Ar. S**	**8.11**	**348**	*e*Pn		**Pn**		**17 40 08.4**	**+0.4**
BUR08	**Bucovina Ar. S**	**8.11**	**348**	*e*Pn		**Pn**		**17 40 08.4**	**+0.5**
PKSM	**Moragy**	**9.29**	**317**	*i*↓P		**Pn**		**17 40 24.3**	**+0.1**
PKSM	**Moragy**	**9.29**	**317**	↓P		**Pn**		**17 40 24.3**	**+0.1**

*ISCJB **25** 17:52:05.9±0.6, 3976N±002×2776E±003, h3km±4km, Error ellipse: s-maj=4.8km s-min=3.2km az=154.7*
*ISK **25** 17:52:05.5, 3975N×2776E, h7km, MD2.9*
*CSEM **25** 17:52:05.1±0.1, 3975N×2775E, h5km, MD2.9, Error ellipse: s-maj=2.1km s-min=1.4km az=73.0*
*DDA **25** 17:52:06.0, 3976N×2778E, h9km±3km, Md2.9*

ISC 25 17:52:06.4±0.4, 3976N±002×2777E±003, h7km±3km, n33, σ0♀73/46, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.15**	**145**	PG		**Pg**		**17 52 09.2**	**-0.3**
BALB				SG		**Sg**		**17 52 11.6**	**+0.1**
DURS	**Dursunbey**	**0.56**	**106**	*i* P		**Pg**		**17 52 16.9**	**-0.4**
DURS				*i* S		**Sg**		**17 52 25.3**	**+0.6**
EDC	**Edincik**	**0.59**	**7**	*e*PG		**Pg**		**17 52 17.7**	**-0.1**
EDC				*e*SG		**Sg**		**17 52 25.8**	**+0.3**
BNT	**Bandirma**	**0.61**	**11**	*e*PG		**Pg**		**17 52 18.0**	**-0.2**
BNT				*e*SG		**Sg**		**17 52 26.7**	**+0.7**
DST	**Dursunbey**	**0.68**	**103**	*e*PG		**Pg**		**17 52 18.6**	**-0.8**
MRMT	**Marmara Adasi**	**0.85**	**351**	*e*PG		**Pg**		**17 52 22.5**	**-0.3**
AYVA	**Ayvalik**	**0.95**	**242**	*i* P		**Pg**		**17 52 24.4**	**-0.3**
AYVA				*i* S		**Sg**		**17 52 38.8**	**+1.8**
DEMI	**Demirci**	**1.02**	**134**	*i* P		**Pg**		**17 52 25.8**	**-0.3**
DEMI				*i* S		**Sg**		**17 52 38.2**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.03**	**334**	*e*PG		**Pg**		**17 52 25.8**	**-0.4**
SART	**Tekirdag**	**1.03**	**334**	*i* P		**Pg**		**17 52 26.1**	**-0.2**
SART				*i* S		**Sg**		**17 52 41.0**	**+1.4**
SART	**Tekirdag**	**1.03**	**334**	*i* P		**Pg**		**17 52 26.1**	**-0.2**
SART				*i* S		**Sg**		**17 52 41.0**	**+1.3**
MFT	**Murefte**	**1.09**	**340**	*e*PN		**Pn**		**17 52 27.6**	**-0.5**
ULDT	**Uludag**	**1.12**	**70**	*i* P		**Pg**		**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.21**	**188**	*e*Pg	**Pg**	**19 00 02.5**	**-2.8**
DBC				pmax	pmax		
	comp=Z,69nm,0.1s						
DBC	**Dubki**	**0.21**	**188**	*e*Pg	**Pg**	**19 00 02.5**	**-2.8**
	comp=Z,69nm,0.1s						
DLMR	**Dylym**	**0.24**	**228**	⇓*i*PG	**Pg**	**19 00 00.0**	**-5.8**
DLMR				pmax	pmax		
	comp=Z,806nm,0.2s						
DLMR	**Dylym**	**0.24**	**228**	*i* Pg	**Pg**	**19 00 00.0**	**-5.8**
	comp=Z,806nm,0.2s						
KRNR	**Karanay**	**0.40**	**176**	*i* PG	**Pg**	**19 00 05.8**	**-3.0**
KRNR				*i* S	**Sg**	**19 00 11.8**	**-2.3**
KRNR				pmax	pmax		
	comp=Z,57nm,0.2s						
KRNR	**Karanay**	**0.40**	**176**	*i* Pg	**Pg**	**19 00 05.8**	**-3.0**
	comp=Z,57nm,0.2s						
KRNR				*i* Sg	**Sg**	**19 00 11.8**	**-2.3**
XNZR	**Khunzakh**	**0.70**	**190**	*e*PG	**Pg**	**19 00 13.5**	**-0.9**
XNZR				pmax	pmax		
	comp=Z,59nm,0.4s						
XNZR	**Khunzakh**	**0.70**	**190**	*e*Pg	**Pg**	**19 00 13.5**	**-0.9**
	comp=Z,59nm,0.4s						
SNJR	**Sundja**	**1.52**	**265**	*i* Pg	**Pg**	**19 00 28.2**	**-1.8**
SNJR				*i* Sg	**Sg**	**19 00 49.1**	**-0.6**
VLKR	**Vladikavkaz**	**1.62**	**264**	*e*Pn	**Pn**	**19 00 29.3**	**-0.2**
VLKR				*e*Sg	**Sg**	**19 00 51.3**	**-1.6**
BTKR	**Batakoyurt**	**1.71**	**276**	*e*Pn	**Pn**	**19 00 31.2**	**+0.5**
BTKR				*i* Sg	**Sg**	**19 00 55.1**	**-0.7**
KMSR	**Komsomolskaya**	**1.89**	**275**	*i* Pn	**Pn**	**19 00 34.0**	**+0.8**
ARNR	**Ardon**	**1.90**	**270**	*e*Pn	**Pn**	**19 00 32.8**	**-0.5**
LACR	**Lac**	**1.93**	**259**	*i* Pn	**Pn**	**19 00 32.4**	**-1.4**
KORR	**Kora**	**2.06**	**267**	*e*Pn	**Pn**	**19 00 35.0**	**-0.5**
KORR				*e*Sb	**Sb**	**19 01 00.9**	**-3.0**
DGRG	**David-gareji**	**2.10**	**213**	P	**Pn**	**19 00 38.4**	**+2.3**
DGRG				S	**Sn**	**19 01 06.2**	**+4.0**
MTA	**Mtatsminda**	**2.17**	**226**	P	**Pn**	**19 00 37.9**	**+0.8**
MTA				S	**Sn**	**19 01 05.9**	**+1.9**
TBLG	**Delisi**	**2.17**	**227**	*e*Pn	**Pn**	**19 00 38.1**	**+1.0**
TBLG	**Delisi**	**2.17**	**227**	P	**Pn**	**19 00 38.2**	**+1.0**
TBLG				S	**Sn**	**19 01 05.8**	**+1.7**
ZEI	**Tsey**	**2.23**	**259**	*e*Pn	**Pn**	**19 00 36.0**	**-1.9**
ZEI				*e*Sn	**Sn**	**19 01 04.3**	**-1.1**
LSNR	**Lesken**	**2.23**	**272**	*e*Pn	**Pn**	**19 00 38.7**	**+0.8**
LSNR				*e*Sn	**Sn**	**19 01 07.5**	**+1.9**
GOR	**Gori**	**2.39**	**240**	P	**Pn**	**19 00 41.5**	**+1.4**
GOR				S	**Sn**	**19 01 10.7**	**+1.3**
ONI	**Oni**	**2.60**	**257**	P	**Pn**	**19 00 45.2**	**+2.3**
ONI				S	**Sn**	**19 01 17.6**	**+3.1**

IDC ***25*** *19:46:33.7±0.9, 41.93N×80.20E, h0km, mb3.7/5, mb1 3.8/10, mb1mx3.6/27, mbtmp3.7/10, ML3.8/5, MS3.0/2, Ms1 3.0/2, ms1mx2.7/29, Error ellipse: s-maj=22.3km s-min=13.5km az=80.0*
ISCJB ***25*** *19:46:34.6±0.6, 42.21N±0.005×80.14E±0.007, h10km, mb3.6/5, Error ellipse: s-maj=7.7km s-min=7.1km az=33.1*
BJI ***25*** *19:46:35.9, 42.02N×80.16E, h14km, mB4.5, mb4.0, ML3.8*
NEIC ***25*** *19:46:36.3±0.8, 42.07N×80.31E, h10km, mb3.6/2, Error ellipse: s-maj=14.9km s-min=10.3km az=164.0*
NNC ***25*** *19:46:41.6±1.8, 42.37N×79.98E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=18.5km s-min=6.8km az=149.0*

ISC 25 19:46:36.9±0.6, 42.13N±0.005×80.28E±0.007, h10km, n33, σ1°45/45, mb3.6/5, 8C-1D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**2.68**	**295**	⇑Pn	**Pg**	**19 47 23.6**	**-4.6**
	86nm,0.3s						
KNDC				⇑Lg		19 47 57.1	
	431nm,0.8s						
TKM2	**Tokmak 2**	**3.55**	**284**	⇑Pn	**Pn**	**19 47 33.9**	**+1.8**
	22nm,0.4s						
TKM2				⇑Lg		19 48 25.0	
	140nm,0.5s						
TKM2	**Tokmak 2**	**3.55**	**284**	*e*Pn	**Pn**	**19 47 34.0**	**+1.9**
TKM2				*e*S	**Sn**	**19 48 22.4**	**+8.3**
KSH	**Kashi**	**4.18**	**233**	*e*PG	**Pn**	**19 47 47.0**	**+6.3**
KSH				S	**Sn**	**19 48 35.5**	**+5.9**
KSH				Smax			
	comp=N,449nm,1.0s						
KSH				Smax			
	comp=E,562nm,0.8s						
UCH	**Uchtor**	**4.29**	**273**	*e*Pn	**Pn**	**19 47 44.1**	**+1.9**
UCH				*e*S	**Sg**	**19 48 45.0**	**-10**
EKS2	**Erkin-Say**	**4.85**	**278**	*e*Pn	**Pn**	**19 47 51.0**	**+1.2**
EKS2				*e*S	**Sg**	**19 49 04.6**	**-7.9**
MK31	**Makanchi Array**	**4.88**	**16**	Pn	**Pn**	**19 47 52.9**	**+2.6**
	comp=E,19nm,0.5s,baz=200,slow=13,SNR=942						
MK31				Sn	**Sn**	**19 48 51.4**	**+4.6**
	comp=E,14nm,0.4s,baz=204,slow=22,SNR=6.1						
MK31				⇑Lg		19 49 10.3	
	comp=E,18nm,0.5s,baz=202,slow=26,SNR=4.3						
MK31	**Makanchi Array**	**4.88**	**16**	*e*Pn	**Pn**	**19 47 52.6**	**+2.3**
MK31				*e*Sn	**Sn**	**19 48 40.8**	**-6.0**
MKAR	**Makanchi Array**	**4.88**	**16**	Pn	**Pn**	**19 47 53.0**	**+2.7**
	comp=E,15nm,0.3s,baz=199,slow=13,SNR=365						
MKAR				Sn	**Sn**	**19 48 51.5**	**+4.7**
	comp=E,13nm,0.3s,baz=204,slow=25,SNR=8.2						
MKAR				Lg		19 49 10.0	
	comp=E,14nm,0.3s,baz=192,slow=28,SNR=7.7						
MKAR	**Makanchi Array**	**4.88**	**16**	Pn	**Pn**	**19 47 53.0**	**+2.7**
MKAR				Sn	**Sn**	**19 48 51.5**	**+4.7**
MKAR				Lg		19 49 10.0	
AML	**Almayashu**	**4.90**	**272**	*e*Pn	**Pn**	**19 47 50.5**	**0.0**
AML				*e*Sg	**Sg**	**19 49 04.5**	**-10**
WMQ	**Urumqi**	**5.69**	**70**	P	**Pn**	**19 48 05.0**	**+3.6**
WMQ				Smax			
	comp=N,65nm,0.8s						
WMQ				Smax			
	comp=E,90nm,0.8s						
KK31	**Karatay Array**	**7.28**	**281**	Pg	**Pg**	**19 48 48.0**	**-8.2**
	comp=E,2.5nm,0.4s,baz=91,slow=16,SNR=18						
KK31				⇓Lg		19 50 24.5	
	comp=E,12nm,0.7s,baz=92,slow=27,SNR=7.3						
KURBB	**Kurchatov Arra**	**8.58**	**352**	⇑Lg		19 51 06.0	
	comp=E,5.0nm,0.6s						
KURK	**Kurchatov**	**8.67**	**353**	⇑Lg		19 51 07.4	
	comp=E,33nm,0.7s						
KURK	**Kurchatov**	**8.67**	**353**	Pn	**Pn**	**19 48 41.7**	**-0.5**
	comp=E,0.1nm,0.3s,baz=179,slow=13,SNR=3.7						
KURK				Sn	**Sn**	**19 50 17.9**	**-2.0**
	comp=E,0.2nm,0.3s,baz=176,slow=16,SNR=3.8						
KURK				Lg		19 51 04.5	
	comp=E,0.4nm,0.3s,baz=44,slow=14,SNR=5.2						
KURK	**Kurchatov**	**8.67**	**353**	Pn	**Pn**	**19 48 40.9**	**-1.3**
KURK				Pn	**Pn**	**19 48 41.7**	**-0.5**
KURK				Sn	**Sn**	**19 50 17.9**	**-2.0**
KURK				Lg		19 51 04.5	
KURK				*e*Sg	Sn	19 51 09.6	+50
CEP	**Cherat**	**10.60**	**221**	P	**Pn**	**19 49 09.8**	**+1.1**
ZAA0	**Zalesovo Array**	**12.21**	**13**	*e*Pn	**Pn**	**19 49 30.0**	**-0.6**
ZAA0				*e*Sn	**Sn**	**19 51 42.5**	**-4.2**
ZALV	**Zalesovo Beam**	**12.21**	**13**	Pn	**Pn**	**19 49 31.1**	**+0.5**
	comp=E,0.8nm,0.3s,baz=197,slow=13,SNR=12						
ZALV				Sn	**Sn**	**19 51 47.8**	**+1.2**
	comp=E,1.1nm,0.3s,baz=209,slow=24,SNR=6.5						
ZALV				Lg		19 53 07.9	
	comp=E,0.1nm,0.3s,baz=205,slow=26,SNR=3.7						
ZALV				LR	LR	19 54 40.0	
	comp=E,48nm,18.6s,baz=233,slow=39						
ZALV	**Zalesovo Beam**	**12.21**	**13**	Pn	**Pn**	**19 49 31.1**	**+0.5**
ZALV				Sn	**Sn**	**19 51 47.8**	**+1.2**
ZALV				Lg		19 53 07.9	
ZALV				LR	LR	19 54 40.0	
BVA0	**Borovoye Array**	**12.77**	**332**	⇑Lg		19 53 16.1	
	comp=E,2.6nm,1.5s,baz=133,slow=27,SNR=5.1						
BVAR	**Borovoye Array**	**12.77**	**332**	Pn	**Pn**	**19 49 38.4**	**+0.1**
	comp=E,0.3nm,0.3s,baz=148,slow=13,SNR=7.3						
BVAR				Lg		19 53 14.3	
	comp=E,0.2nm,0.3s,baz=123,slow=24,SNR=3.7						
GTA	**Gaotai**	**15.04**	**94**	*e*P	**Pn**	**19 50 09.5**	**+0.1**
GTA				AP	pP	19 50 14.0	-3.6
GTA				XP	sP	19 50 16.5	-2.4
GTA				LG2		19 54 26.8	
GTA				AMB	AMB		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**19.28**	**64**	P	**Pn**	**19 51 02.0**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=259,slow=11,SNR=13						
SONM				LR	LR	19 58 22.6	
	comp=Z,53nm,18.8s,baz=68,slow=36						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULN	**Ulaanbaatar**	**19.73**	**64**	*e*P	**Pn**	**19 51 08.2**	**+0.3**
	comp=Z,2.2nm,0.7s						
ARU	**Arti**	**20.02**	**323**	P	**Pn**	**19 51 08.4**	**-2.8**
	comp=Z,3.0nm,0.8s						
ARCES	**ARCESS Array B**	**39.06**	**333**	P	**P**	**19 54 03.0**	**-0.4**
	comp=Z,2.4nm,0.8s,mb4.0,baz=113,slow=8.9,SNR=3.2						
NOA	**NORSAR Array B**	**44.51**	**320**	P	**P**	**19 54 46.6**	**-1.5**
	comp=Z,1.7nm,1.0s,mb3.8,baz=83,slow=8.0,SNR=2.9						
TOA0	**Torodi Ar. Sit**	**72.88**	**272**	P	**P**	**19 58 01.4**	**-4.9**
TORD	**Torodi Ar. Bea**	**72.88**	**272**	P	**P**	**19 58 03.7**	**-2.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=45,slow=5.3,SNR=12						
WRA	**Warramunga Arr**	**79.38**	**129**	P	**P**	**19 58 40.9**	**-2.1**
	comp=Z,0.2nm,0.7s,mb3.1,baz=331,slow=5.0,SNR=2.6						
ASAR	**Alice Springs**	**82.08**	**132**	P	**P**	**19 58 56.7**	**-0.7**
	comp=Z,0.4nm,1.0s,mb3.3,baz=326,slow=4.8,SNR=3.3						

NEIC ***25*** *19:49:51.3, 3297S×7209W, h15km, ML3.2(GUC), After GUC.*

GUC 25 19:49:51.3±0.7, 3297S×7209W, h15km±5km, MD3.8, ML3.2, 10C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCH	**Las Cruces**	**0.67**	**139**	⇑*i*P	Pg	19 50 03.6	-0.8
LCCH				*i* S	Sg	19 50 13.1	-0.2
PACH	**Papudo**	**0.70**	**52**	⇑*i*P	Pg	19 50 04.5	-0.5
PACH				*i* S	Sg	19 50 13.7	-0.4
ROCH	**El Roble**	**0.91**	**91**	*e*P	Pb	19 50 07.7	-1.0
LNV	**Longovilo**	**1.14**	**150**	⇑*i*P	Pn	19 50 11.2	-1.5
LNV				*i* S	Sb	19 50 26.0	-1.3
TACH	**Talagante**	**1.18**	**126**	⇑*i*P	Pn	19 50 12.0	-1.3
TACH				*i* S	Sb	19 50 27.3	-1.3
CHNG	**Los Chungos**	**1.19**	**25**	⇑*i*P	Pn	19 50 12.1	-1.2
CHNG				*i* S	Sb	19 50 27.4	-1.3
PEL	**Peldehue**	**1.19**	**99**	⇑*i*P	Pn	19 50 12.5	-0.9
PEL				*i* S	Sb	19 50 28.4	-0.5
PEL				AML	AML	19 50 34.8	
	comp=N,1μm,0.4s						
RCDM	**Rinconada Maip**	**1.20**	**116**	*e*P	Pn	19 50 11.9	-1.5
RCDM				*i* S	Sb	19 50 27.5	-1.4
RCDM				AML	AML	19 50 34.3	
	comp=E,589nm,0.6s						
RCDM	**Rinconada Maip**	**1.20**	**116**	*e*P	Pn	19 50 11.9	-1.5
RCDM				*i* S	Sb	19 50 27.5	-1.4
JACH	**Jahuel**	**1.29**	**78**	⇑*i*P	Pn	19 50 13.7	-1.1
JACH				*i* S	Sb	19 50 30.7	-1.0
ANTU	**Antumapu**	**1.36**	**117**	*e*P	Pn	19 50 15.3	-0.4
ANTU				*i* S	Sn	19 50 33.1	-0.3
ANTU				AML	AML	19 50 34.6	
	comp=E,676nm,0.4s						
ANTU	**Antumapu**	**1.36**	**117**	*e*P	Pn	19 50 15.3	-0.4
ANTU				*i* S	Sn	19 50 33.1	-0.3
CLCH	**Cerro Calan**	**1.37**	**109**	⇓*i*P	Pn	19 50 15.3	-0.5
CLCH				*i* S	Sn	19 50 33.2	-0.5
CLCH				AML	AML	19 50 39.1	
	comp=E,609nm,0.4s						
PCH	**Pirque**	**1.47**	**117**	⇑*i*P	Pn	19 50 16.7	-0.5
PCH				*i* S	Sn	19 50 37.3	+1.0
CHCH	**Chadas Angostu**	**1.54**	**129**	*e*P	Pn	19 50 17.7	-0.5
FCH	**Farellones**	**1.55**	**104**	⇓*i*P	Pn	19 50 18.0	-0.4
FCH				*i* S	Sn	19 50 39.0	+0.8
FCH				AML	AML	19 50 46.1	
	comp=N,376nm,0.3s						
SJCH	**San Jose de Ma**	**1.60**	**115**	*e*P	Pn	19 50 18.8	-0.3
SJCH				*i* S	Sn	19 50 39.7	+0.3
SJCH				AML	AML	19 50 42.8	
	comp=N,327nm,0.5s						
SJCH	**San Jose de Ma**	**1.60**	**115**	*e*P	Pn	19 50 18.8	-0.3
SJCH				*i* S	Sn	19 50 39.7	+0.3
CACH	**El Canelo**	**1.69**	**133**	⇑*i*P	Pn	19 50 20.6	+0.4
LMEL	**Las Melosas**	**1.81**	**120**	⇓*i*P	Pn	19 50 22.1	+0.3
LMEL				*i* S	Sn	19 50 45.4	+0.9
LMEL				AML	AML	19 50 50.2	
	comp=N,763nm,0.3s						
LMEL	**Las Melosas**	**1.81**	**120**	⇓*i*P	Pn	19 50 22.1	+0.3
LMEL				*i* S	Sn	19 50 45.4	+0.9
YECH	**El Yeso**	**1.82**	**113**	*e*P	Pn	19 50 22.9	+0.9
YECH				*i* S	Sn	19 50 46.5	+1.7
YECH				AML	AML	19 50 53.4	
	comp=N,354nm,0.3s						
SFDO	**San Fernando**	**1.87**	**152**	*e*P	Pn	19 50 22.8	0.0
CICH	**Cipreses**	**1.94**	**135**	⇑*i*P	Pn	19 50 23.8	+0.2
TLL	**Tololo Astrono**	**3.00**	**22**	*e*P	Pn	19 50 38.1	-0.1
TLL				AML	AML	19 51 33.3	
	comp=E,124nm,0.4s						

DDA ***25*** *20:06:35.8, 3752N×3545E, h12km±2km, Md3.7, Ml3.9*
CSEM ***25*** *20:06:36.3±0.1, 3749N×3543E, h2km, MD3.6, Error ellipse: s-maj=1.7km s-min=1.3km az=149.0*
ISCJB ***25*** *20:06:37.0±0.5, 3751N±0.002×3542E±0.002, h3km±4km, Error ellipse: s-maj=3.5km s-min=3.0km az=149.9*
ISK ***25*** *20:06:37.0, 3750N×3541E, h7km, MD3.6*

ISC 25 20:06:37.5±0.5, 3748N±0.002×3544E±0.002, h1km±4km, n53, σ1°11/67, 3C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.31**	**90**	PG	**Pg**	**20 06 44.2**	**+0.7**
KOZT				SG	**Sg**	**20 06 49.6**	**+2.1**
KARA	**Karaisali**	**0.38**	**234**	PG	**Pg**	**20 06 44.2**	**-0.5**
KARA				SG	**Sg**	**20 06 50.6**	**+1.0**
CEYT	**Ceyhan**	**0.53**	**152**	*e*PG	**Pg**	**20 06 48.7**	**+1.0**
CEYT				*e*SG	**Sg**	**20 06 57.5**	**+2.2**
YURE	**YUREGIR**	**0.68**	**166**	⇓*i*P	**Pg**	**20 06 50.9**	**+0.4**
YURE				*i* S	**Sg**	**20 07 03.1**	**+4.0**
ANDN	**Andirin**	**0.73**	**82**	⇑*i*P	**Pg**	**20 06 50.5**	**-1.0**
ANDN				*i* S	**Sg**	**20 07 01.5**	**+0.5**
NIG	**Nigde**	**0.91**	**314**	*e*PG	**Pg**	**20 06 53.9**	**-1.0**
MERS	**Mersin**	**0.95**	**230**	*e*PG	**Pg**	**20 06 54.9**	**-0.9**
COBT	**Iskenderun**	**1.17**	**145**	*i* P	**Pg**	**20 06 58.3**	**-1.5**
COBT				*i* S	**Sg**	**20 07 13.5**	**-1.4**
KMRS	**Kahramanmaras**	**1.17**	**88**	*e*PN	**Pn**	**20 06 59.5**	**-1.4**
MEST	**Erdemli**	**1.37**	**229**	⇓*i*P	**Pn**	**20 07 01.4**	**-2.3**
MEST				*i* S	**Sg**	**20 07 21.8**	**+0.4**
AVNT	**Avonos**	**1.37**	**341**	⇓*i*P	**Pn**	**20 06 59.9**	**-3.9**
AVNT				*i* S	**Sg**	**20 07 19.5**	**-2.2**
BNN	**Bunyan**	**1.40**	**13**	*e*PN	**Pn**	**20 07 02.9**	**-1.3**
PINB	**Pinarbasi**	**1.42**	**32**	⇑*i*P	**Pn**	**20 07 02.5**	**-1.9**
PINB				*i* S	**Sb**	**20 07 22.1**	**-1.1**
GAZ	**Gaziantep**	**1.45**	**102**	*e*PN	**Pn**	**20 07 03.5**	**-1.0**
HTY	**Hatay**	**1.47**	**157**	*e*PN	**Pn**	**20 07 04.0**	**-1.1**
GZT	**Gaziantep**	**1.70**	**94**	⇑*i*P	**Pn**	**20 07 07.2**	**-1.1**
GZT				*i* S	**Sn**	**20 07 31.4**	**+0.7**
IKL	**Isikli**	**1.87**	**229**	*e*PN	**Pn**	**20 07 10.4**	**-0.3**
AKCD	**Akcadag**	**2.13**	**67**	*i* P	**Pn**	**20 07 13.9**	**-0.3**
AKCD				*i* S	**Sn**	**20 07 41.2**	**-0.1**
YOZ	**Yozgat**	**2.15**	**358**	*e*PN	**Pn**	**20 07 14.4**	**-0.1**
ERMK	**Ermenek**	**2.19**	**248**	*i* P	**Pn**	**20 07 16.5**	**+1.5**
ERMK				*i* S	**Sn**	**20 07 48.0**	**+5.4**
EREN	**Erenkoy**	**2.20**	**208**	*e*PN	**Pn**	**20 07 14.8**	**-0.4**
CDAG	**Cicekdag**	**2.29**	**339**	*i* P	**Pn**	**20 07 15.3**	**-1.1**
CDAG				*i* S	**Sn**	**20 07 48.3**	**+2.9**
KAMT	**Kaman**	**2.32**	**325**	*e*PN	**Pn**	**20 07 16.7**	**-0.1**
DARE	**Darende-Malaty**	**2.37**	**51**	*e*PN	**Pn**	**20 07 11.9**	**-5.6**
HDMB	**Hadim**	**2.41**	**258**	*e*PN	**Pn**	**20 07 18.1**	**0.0**
KONT	**Konya--Tatoy**	**2.48**	**282**	*e*PN	**Pn**	**20 07 19.6**	**+0.5**
MALT	**Malatya**	**2.51**	**70**	*e*PN	**Pn**	**20 07 19.6**	**+0.1**
MYA	**Malataya**	**2.51**	**70**	*e*PN	**Pn**	**20 07 19.6**	**+0.1**
LADK	**Ladik-KONYA**	**2.53**	**287**	*e*PN	**Pn**	**20 07 20.0**	**+0.3**
LFK	**Lefkose**	**2.68**	**215**	*e*PN	**Pn**	**20 07 21.0**	**-0.8**
URFA	**Urfa**	**2.69**	**90**	*e*PN	**Pn**	**20 07 22.0**	**0.0**
SVSK	**Karacayir**	**2.72**	**26**	*e*PN	**Pn**	**20 07 22.6**	**+0.3**
PHNC	**Paralimni**	**2.72**	**205**	P	**Pn**	**20 07 22.3**	**0.0**
CORM	**Corum**	**2.76**	**347**	*e*PN	**Pn**	**20 07 23.2**	**+0.2**
KDHN	**Kadinhani**	**2.82**	**293**	*i* P	**Pn**	**20 07 23.9**	**+0.2**
MAMC	**Mammari**	**2.92**	**218**	P	**Pn**	**20 07 23.8**	**-1.3**
CSS	**Prodhromos**	**3.04**	**215**	P	**Pn**	**20 07 24.5**	**-2.2**
	0.9nm,0.4s						
KIZT	**Kizilcal**	**3.13**	**298**	*e*PN	**Pn**	**20 07 28.6**	**+0.6**
LEF	**Lefka**	**3.13**	**222**	*e*PN	**Pn**	**20 07 29.1**	**+1.2**
ANTO	**Ankara**	**3.15**	**320**	*e*PN	**Pn**	**20 07 28.5**	**+0.2**
CTKT	**Corum**	**3.17**	**351**	*i* P	**Pn**	**20 07 29.9**	**+1.3**
CTKT				*i* S	**Sg**	**20 08 19.5**	**-0.1**
LOD	**Lodumlu**	**3.18**	**320**	*e*PN	**Pn**	**20 07 29.3**	**+0.6**
SVRC	**Sivrice-ELAZID**	**3.19**	**73**	*e*PN	**Pn**	**20 07 29.1**	**+0.4**
ALFC	**Alevga**	**3.26**	**225**	P	**Pn**	**20 07 27.6**	**-2.2**
	2.9nm,0.2s						
RSDY	**Resadiye-TOKAT**	**3.26**	**26**	*e*PN	**Pn**	**20 07 30.6**	**+0.8**
PTK	**Pertek**	**3.42**	**65**	*e*PN	**Pn**	**20 07 32.5**	**+0.6**
AKMC	**Akamas**	**3.51**	**227**	⇓P	**Pn**	**20 07 35.2**	**+2.0**
PPCY	**Paphos**	**3.60**	**225**	P	**Pn**	**20 07 36.3**	**+1.9**
KVT	**Kavak**	**3.62**	**7**	*e*PN	**Pn**	**20 07 35.9**	**+1.1**
DIKM	**Dikmen**	**4.16**	**358**	*e*PN	**Pn**	**20 07 43.4**	**+1.2**
ESPY	**Espiye-Giresun**	**4.28**	**36**	*e*PN	**Pn**	**20 07 44.5**	**+0.8**
SAFT	**Safranbolu**	**4.31**	**331**	*e*PN	**Pn**	**20 07 45.0**	**+0.8**
ELL	**Elmali**	**4.48**	**262**	*e*PN	**Pn**	**20 07 47.4**	**+0.9**

NIED ***25*** *20:22:00, 3770N×137.40E, h5km, Mw3.3 Best double couple: M0 1.11000×10^14 NP1:φs330.00000°, δ66.00000°, λ60.00000°. NP2:φs204.00000°, δ38.00000°, λ138.00000°.*
ISCJB ***25*** *20:22:23.7±0.7, 3769N±0.004×13737E±0.004, h18km±14km, Error ellipse: s-maj=6.4km s-min=5.8km az=166.9*
JMA ***25*** *20:22:23.5, 3768N×13738E, h14km±1km, M3.5*

ISC 25 20:22:23.5±0.7, 3769N±0.004×13739E±0.004, h17km±5km, n8, σ0°63/16, 1C-2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSZ	**Suzu**	**0.24**	**185**	⇑P	**Pg**	**20 22 28.5**	**-0.4**
JSZ				S	**Sg**	**20 22 32.2**	**-0.4**
JHG	**Hegura jima**	**0.40**	**293**	⇓P	**Pg**	**20 22 31.7**	**0.0**
JHG				S	**Sg**	**20 22 37.9**	**+0.7**
JSD	**Sado**	**0.77**	**63**	⇓P	**Pg**	**20 22 38.0**	**-0.5**
JSD				S	**Sg**	**20 22 48.6**	**-0.1**
JJN	**Nakama**	**0.85**	**133**	P	**Pg**	**20 22 40.1**	**+0.1**
JJN				S	**Sg**	**20 22 52.5**	**+1.3**
JJH	**Hakui**	**0.90**	**213**	P	**Pb**	**20 22 40.4**	**-0.3**
JJH				S	**Sb**	**20 22 52.8**	**+0.3**
JIZZ	**Izumozaki**	**1.06**	**98**	P	**Pb**	**20 22 43.0**	**-0.4**
JIZZ				S	**Sb**	**20 22 58.0**	**+1.0**
JTT	**Ttatey**	**1.08**	**182**	P	**Pb**	**20 22 43.3**	**-0.5**
JTT				S	**Sb**	**20 22 58.5**	**+0.9**
MAT	**Matsushiro**	**1.32**	**150**	P	**Pn**	**20 22 46.4**	**-0.7**
MAT				S	**Sb**	**20 23 03.5**	**-0.9**

ISCJB ***25*** *20:23:01.8±1.0, 39.30N±0.003×20.10E±0.006, h2km±7km, Error ellipse: s-maj=8.3km s-min=5.2km az=178.2*
THE ***25*** *20:23:02.1, 3929N×2008E, h0km, ML2.7*
ATH ***25*** *20:23:04.3, 3928N×2027E, h22km±3km, MD3.3/5*
CSEM ***25*** *20:23:04.2±0.2, 3926N×2027E, h8km, ML2.7, Error ellipse: s-maj=4.8km s-min=3.2km az=77.0*
NEIC ***25*** *20:23:04.3, 3928N×2027E, h22km, MD3.3(ATH), After ATH.*

ISC 25 20:23:04.3±0.7, 3928N±0.003×2024E±0.005, h7km±6km, n14, σ1°24/24, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.26**	**16**	*e*Pg	**Pg**	**20 23 08.8**	**-0.6**
IGT				*e*Sg	**Sg**	**20 23 12.4**	**-0.6**
KEK	**Kerkira**	**0.55**	**322**	*e*PN	**Pg**	**20 23 15.3**	**+0.4**
KEK				*e*SN	**Sg**	**20 23 24.3**	**+2.2**
JAN	**Janina**	**0.60**	**51**	*e*PN	**Pg**	**20 23 15.4**	**-0.6**
JAN				*e*SN	**Sg**	**20 23 24.3**	**+0.5**
LKD	**Levkas**	**0.66**	**151**	*e*Pg	**Pg**	**20 23 15.7**	**-1.2**
LKD				*e*Sg	**Sg**	**20 23 26.9**	**+1.5**
MEV	**Metsovon**	**0.92**	**56**	*e*Pg	**Pg**	**20 23 21.1**	**-0.7**
MEV	**Metsovon**	**0.92**	**56**	*e*Pg	**Pg**	**20 23 21.1**	**-0.8**
VLS	**Valsamata**	**1.14**	**166**	*e*Pg	**Pg**	**20 23 24.2**	**-1.9**
VLS				*e*Sg	**Sg**	**20 23 41.3**	**+0.5**
VLS	**Valsamata**	**1.14**	**166**	*e*Pn	**Pn**	**20 23 26.2**	**-0.4**
VLS				*e*Sn	**Sg**	**20 23 41.3**	**+0.5**
EVR	**Evrytania**	**1.27**	**106**	*e*PN	**Pn**	**20 23 28.8**	**+0.3**
THL	**Klokotos Trika**	**1.40**	**78**	*e*Pg	**Pg**	**20 23 29.4**	**-1.9**
THL				*e*Sg	**Sg**	**20 23 51.9**	**+2.4**
THL	**Klokotos Trika**	**1.

GQP Guinayangan 3.73 300 ⇓ *eP* **Pn 21 20 02.2 -1.9**
GQP *eS* **Sn 21 20 54.5 +7.6**
BIPH Bislig 3.86 171 ⇓ *eP* **Pn 21 20 02.8 -3.1**
BIPH *eS* **Sn 21 21 04.2 +14**
DCPH Dipolog City 4.16 215 ⇑ *eP* **Pn 21 20 10.1 +0.1**
BUKP Musuan 4.17 190 *eP* **Pn 21 20 11.8 +1.6**
SJMP San Jose 4.56 276 *eP* **Pn 21 20 16.1 +0.6**
POLP Polilio Island 4.59 306 *eP* **Pn 21 20 18.3 +2.4**
PAGZ Pagadian 4.76 210 *eP* **Pn 21 20 19.4 +1.2**
BUSP Coron 5.44 270 *eP* **Pn 21 20 27.4 -0.2**
BALP Baler 5.49 313 *eP* **Pn 21 20 27.3 -1.0**
BALP *eS* **Sn 21 21 21.3 -8.9**
LUBP Lubang 5.64 288 *eP* **Pn 21 20 29.6 -0.7**
PALP Palanan 5.96 328 *eP* **Pn 21 20 31.6 -3.1**
CAUP Cauayan 6.20 323 *eP* **Pn 21 20 36.2 -1.8**
ENPP El Nido 6.26 263 *eP* **Pn 21 20 39.2 +0.4**
BCPH Baguio City Da 6.63 311 ⇓ *eP* **Pn 21 20 42.3 -1.6**
SCZP Santa Cruz 6.80 304 *eP* **Pn 21 20 47.7 +1.5**
BOLP Bolinao 7.14 308 *eP* **Pn 21 20 50.0 -0.9**
BATP Bataraza 8.46 248 *eP* **Pn 21 21 11.7 +2.7**
MYLDM Lahad Datu 9.88 227 ⇓ *P* **Sn 21 23 24.6 +6.5**
KKM Kota Kinabalu 11.14 239 *Pn* **Pn 21 21 48.6 +2.9**
NACB Ninganchiao 12.72 342 *Pn* **Pn 21 22 11.5 +4.3**
YHNB Yeheng 13.25 342 *ePn* **Pn 21 22 16.0 +1.5**
TATO Taipei 13.50 343 *ePn* **Pn 21 22 20.9 +3.0**
JOW Kunigami 14.92 9 *Pn* **Pn 21 22 37.1 +0.3**
2.5nm,0.3s,baz=148,slow=21,SNR=12
JOW LR LR 21 26 51.4
comp=Z,440nm,19.7s,baz=149,slow=31
QIZ Qiongzhong 16.84 296 *P* **Pn 21 23 02.3 +0.9**
QIZ S **S 21 26 11.0 -5.1**
QIZ AMB AMB
comp=Z,276nm,3.4s
QIZ LR LR
comp=E,1μm,16.7s
QIZ LR LR
comp=Z,1μm,19.4s
KAPI Kappang 17.95 200 *ePn* **Pn 21 23 16.9 +1.8**
KSM Kuching 18.57 237 ⇓ *P* **Pn 21 23 24.6 +2.0**
KSM Kuching 18.57 237 *eP* **Pn 21 23 23.8 +1.2**
GUMO Guam 18.70 83 LR LR 21 29 09.6
comp=Z,419nm,18.2s,baz=276,slow=32
GUMO Guam 18.70 83 *eP* **Pn 21 23 24.7 +0.5**
GUMO pmax pmax
comp=Z,144nm,1.2s
GUMO Guam 18.70 83 *eP* **Pn 21 23 24.7 +0.5**
comp=Z,144nm,1.2s
SSE Sheshan 19.45 348 P **Pn 21 23 33.5 +0.5**
SSE XP sP 21 24 00.5 +11
SSE S **S 21 27 04.5 -4.2**
SSE XS sS 21 27 32.0 +4.9
SSE AMB AMB
comp=Z,25nm,0.9s
SSE AMB AMB
comp=Z,78nm,5.5s
SSE LR LR
comp=N,48nm,12.3s
SSE LR LR
comp=E,349nm,12.3s
SSE LR LR
comp=Z,236nm,15.0s
SSE Sheshan 19.45 348 P **Pn 21 23 33.6 +0.6**
comp=Z,25nm,0.9s
SSE sP sP 21 24 00.4 +11
SSE S **S 21 27 04.5 -4.2**
SSE sS sS 21 27 32.1 +5.0
NJ2 Nanjing 20.93 343 *eP* **P 21 23 51.0 +3.5**
NJ2 AP 21 24 07.8
NJ2 PP 21 24 17.0
NJ2 S **S 21 27 36.0 -2.1**
NJ2 XS sS 21 28 02.5 +5.8
NJ2 AMB AMB
comp=Z,20nm,0.9s
NJ2 AMB AMB
comp=Z,120nm,4.8s
NJ2 LR LR
comp=N,270nm,22.8s,MS3.9
NJ2 LR LR
comp=E,520nm,23.4s,MS3.9
NJ2 LR LR
comp=Z,500nm,22.2s,MS3.8
WHN Wuhan 21.25 332 ⇓ *P* **P 21 23 51.5 +0.5**
WHN S **S 21 27 45.5 +1.0**
WHN AMB AMB
comp=Z,88nm,1.2s,mb5.0
WHN LR LR
comp=N,982nm,25.4s,MS4.4
WHN LR LR
comp=E,2μm,28.4s,MS4.4
WHN LR LR
comp=Z,1μm,13.0s
CBIJ Chichi jima 21.51 43 LR LR 21 31 09.2
comp=Z,428nm,19.1s,MS3.9,baz=224,slow=34
BATI Baumata 22.18 185 P **P 21 24 01.1 +0.1**
comp=Z,81nm,0.5s,mb5.4,baz=297,slow=0.2,SNR=28
GYA Guiyang 23.00 311 P **P 21 24 10.3 +0.6**
GYA AP 21 24 28.0
GYA XP sP 21 24 36.8 +9.2
GYA PP 21 24 43.5
GYA PCP PcP 21 27 58.5 +0.3
GYA S **S 21 28 11.5 -5.2**
GYA XS sS 21 28 41.0 +3.4
GYA SS 21 29 01.5
GYA AMB AMB
comp=Z,20nm,0.8s,mb4.6
GYA AMB AMB
comp=Z,120nm,5.2s
GYA LR LR
comp=N,580nm,13.9s,MS4.3
GYA LR LR
comp=E,460nm,14.5s,MS4.3
GYA LR LR
comp=Z,480nm,15.8s,MS4.0
TPI Tanjungpandan 23.23 232 ⇓ *eP* **P 21 24 12.0 -0.2**
JHJ Hachijo jima 2 24.62 29 LR LR 21 32 10.7
comp=Z,361nm,18.3s,MS3.9,baz=245,slow=32
NANT Nan 25.06 289 ⇑ *P* **P 21 24 28.0 -1.0**
comp=Z,325nm,1.0s,mb5.8
KMI Kunming 25.36 304 P **P 21 24 31.5 -0.1**
KMI PP 21 25 11.8
KMI PPP 21 25 23.0
KMI PCP PcP 21 28 04.5 +1.1
KMI S **S 21 28 51.3 -3.4**
KMI SS 21 29 54.5
KMI SSS 21 30 11.8
KMI PCS PcS 21 31 43.5 -0.5
KMI AMB AMB
comp=Z,17nm,1.3s,mb4.4
KMI AMB AMB
comp=Z,186nm,5.7s
KMI LR LR
comp=N,464nm,14.6s,MS4.3
KMI LR LR
comp=E,509nm,17.3s,MS4.3
KMI LR LR
comp=Z,575nm,18.2s,MS4.1
KMI Kunming 25.36 304 P **P 21 24 31.5 -0.1**
KMI *PP pP 21 24 44.2 -0.1
KMI 21 25 11.7
KMI PPP 21 25 23.0
KMI 21 28 04.6
KMI S **S 21 28 51.3 -3.4**
KMI SS 21 29 54.5
KMI SSS 21 30 11.8
KMI pmax pmax
comp=Z,17nm,1.3s,mb4.4
KMI MLR MLR
comp=Z,580nm,18.2s,MS4.1
KMI Kunming 25.36 304 P **P 21 24 31.5 -0.1**
comp=Z,17nm,1.3s,mb4.4
KMI pP pP 21 24 44.2 -0.1
KMI PP 21 25 11.7
KMI PPP 21 25 23.0
KMI PcP PcP 21 28 04.6 +1.2
KMI S **S 21 28 51.3 -3.4**
KMI sS sS 21 29 13.1 -3.1
KMI SS 21 29 54.5
KMI SSS 21 30 11.8
KMI ScP ScP 21 31 38.1 -0.6
KMI PcS PcS 21 31 43.5 -0.5
KMI LR LR
comp=Z,580nm,18.2s,MS4.1
INCN Inchon 25.37 2 *eP* **P 21 24 32.5 +1.1**
comp=Z,12nm,1.1s,mb4.3

KSRS Korea Array 25.40 4 P **P 21 24 31.1 -0.7**
comp=Z,4.7nm,1.0s,mb4.0,baz=183,slow=11,SNR=12
KSRS LR LR 21 34 18.0
comp=Z,217nm,18.3s,MS3.7,baz=175,slow=36
CHRT Chiangrai 26.14 291 P **P 21 24 39.0 +0.3**
comp=Z,110nm,1.0s,mb5.3
CM31 Chiang Mai Arr 26.63 287 *eP* **P 21 24 43.0 -0.2**
CMAR Chiang Mai Arr 26.63 287 P **P 21 24 42.5 -0.6**
comp=Z,10nm,0.9s,mb4.4,baz=99,slow=6.4,SNR=53
CMAR PcP PcP 21 28 07.5 +1.1
comp=Z,1.0nm,0.6s,baz=82,slow=1.5,SNR=4.4
CMAR LR LR 21 36 01.1
comp=Z,389nm,18.9s,MS4.0,baz=121,slow=38
CMAR Chiang Mai Arr 26.63 287 P **P 21 24 42.6 -0.6**
CMAR 21 28 07.5
CHG Chiang Mai 26.70 288 P **P 21 24 42.9 -0.9**
CHTO Chiang Mai 26.70 288 *eP* **P 21 24 42.7 -1.1**
CHTO pmax pmax
comp=Z,7.0nm,0.9s,mb4.2
CHTO Chiang Mai 26.70 288 *eP* **P 21 24 42.7 -1.0**
comp=Z,7.3nm,0.9s,mb4.2
XAN Xi'an 26.76 328 P **P 21 24 43.0 -1.2**
XAN S **S 21 29 18.3 +1.6**
XAN AMB AMB
comp=Z,20nm,1.3s,mb4.5
XAN AMB AMB
comp=Z,55nm,5.3s
XAN LR LR
comp=N,246nm,15.7s,MS4.3
XAN LR LR
comp=E,567nm,12.9s,MS4.3
XAN LR LR
comp=Z,871nm,15.2s,MS4.4
MAJO Matsushiro 26.87 23 *eP* **P 21 24 45.8 +0.7**
MAJO pmax pmax
comp=Z,17nm,1.4s,mb4.4
MAJO Matsushiro 26.87 23 *eP* **P 21 24 45.8 +0.8**
comp=Z,17nm,1.4s,mb4.4
MJAR Matsushiro Arr 26.87 23 LR LR 21 34 45.1
comp=Z,331nm,18.0s,MS3.9,baz=210,slow=35
CD2 Chengdu 27.70 316 P **P 21 24 51.3 -1.3**
CD2 AP pP 21 25 08.8 +3.4
CD2 PP 21 25 41.3
CD2 S **S 21 29 23.0 -8.5**
CD2 AMB AMB
comp=Z,30nm,0.5s,mb5.2
CD2 AMB AMB
comp=Z,120nm,3.3s
CD2 LR LR
comp=N,1μm,18.0s,MS4.7
CD2 LR LR
comp=E,1μm,18.0s,MS4.7
CD2 LR LR
comp=Z,1μm,15.6s,MS4.5
BJT Baijiatuao 29.15 345 *eP* **P 21 25 05.1 -0.3**
BJT pmax pmax
comp=Z,20nm,1.3s
BJT Baijiatuao 29.15 345 *eP* **P 21 25 05.1 -0.2**
comp=Z,20nm,1.3s,mb4.7
BJI Beijing 29.16 345 P **P 21 25 04.8 -0.7**
BJI S **S 21 29 55.0 +0.6**
BJI AMB AMB
comp=Z,7.0nm,0.5s,mb4.7
BJI AMB AMB
comp=Z,193nm,4.6s
BJI LR LR
comp=N,257nm,15.0s,MS4.1
BJI LR LR
comp=E,264nm,16.8s,MS4.1
BJI LR LR
comp=Z,236nm,21.8s,MS3.8
BJI Beijing 29.16 345 P **P 21 25 04.8 -0.7**
comp=Z,7.0nm,0.5s,mb4.7
BJI S **S 21 29 54.9 +0.5**
BJI LR LR
comp=Z,240nm,21.8s,MS3.8
FITZ Fitzroy Crossi 29.93 180 *eP* **P 21 25 12.3 -0.2**
comp=Z,11nm,0.6s,mb4.8
FITZ Fitzroy Crossi 29.93 180 P **P 21 25 12.3 -0.2**
comp=Z,3.6nm,0.5s,mb4.4,baz=30,slow=8.7,SNR=14
PMG Port Moresby 30.09 134 *eP* **P 21 25 14.8 +0.8**
PMG pmax pmax
comp=Z,7.0nm,0.7s
PMG Port Moresby 30.09 134 *eP* **P 21 25 14.8 +0.8**
comp=Z,7.1nm,0.7s,mb4.5
LZH Lanzhou 31.07 324 *eP* **P 21 25 23.3 +0.9**
LZH AP pP 21 25 42.0 +6.7
LZH PP PP 21 26 28.3 -5.0
LZH *eS* **S 21 30 11.0 -13**
LZH AMB AMB
comp=Z,42nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,178nm,6.5s
LZH LR LR
comp=N,1μm,15.3s
LZH LR LR
comp=Z,2μm,16.4s,MS4.8
LZH Lanzhou 31.07 324 *eP* **P 21 25 23.2 +0.8**
LZH *PP pP 21 25 42.0 +6.7
LZH 21 26 28.2
LZH pmax pmax
comp=Z,42nm,1.5s,mb5.0
LZH MLR MLR
comp=Z,2μm,16.4s,MS4.8
LZH Lanzhou 31.07 324 *eP* **P 21 25 23.2 +0.8**
comp=Z,42nm,1.5s,mb5.0
LZH pP pP 21 25 42.0 +6.7
LZH sP sP 21 25 48.5 +7.4
LZH PP PP 21 26 28.2 -5.1
LZH *eS* **S 21 30 11.0 -13**
LZH sS sS 21 30 50.1 +4.1
LZH LR LR
comp=Z,2μm,16.4s,MS4.8
HHC Hu-ho-hao-te 31.31 339 *eP* **P 21 25 24.0 -0.5**
HHC AP pP 21 25 42.5 +5.2
HHC PP PP 21 26 30.5 -5.4
HHC PCP PcP 21 28 16.3 -1.4
HHC S **S 21 30 24.3 -3.7**
HHC SCP ScP 21 31 51.3 -5.6
HHC PCS PcS 21 31 59.8 -2.1
HHC SS SS 21 32 16.8 -27
HHC SCS ScS 21 35 48.0 -6.2
HHC AMB AMB
comp=Z,9.0nm,0.6s,mb4.8
HHC AMB AMB
comp=Z,126nm,4.8s
HHC LR LR
comp=N,343nm,12.6s,MS4.4
HHC LR LR
comp=E,474nm,12.9s,MS4.4
HHC LR LR
comp=Z,311nm,12.5s,MS4.2
CN2 Changchun 31.67 360 *eP* **P 21 25 30.5 +2.9**
CN2 *eS* **S 21 30 35.0 +1.5**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
CN2 AMB AMB
comp=Z,300nm,4.0s
CN2 LR LR
comp=N,200nm,10.0s,MS4.2
CN2 LR LR
comp=E,200nm,10.0s,MS4.2
CN2 LR LR
comp=Z,200nm,12.0s,MS4.0
WRAB Tennant Creek 32.86 165 *eP* **P 21 25 37.2 -1.1**
WRAB pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
WRAB Tennant Creek 32.86 165 *eP* **P 21 25 37.2 -1.1**
comp=Z,5.2nm,0.9s,mb4.5
WRA Warramunga Arr 32.87 165 P **P 21 25 37.0 -1.3**
comp=Z,1.2nm,0.7s,mb3.9,baz=348,slow=9.4,SNR=11
WRA PcP PcP 21 28 22.9 +0.6
comp=Z,3.7nm,0.9s,baz=342,slow=3.3,SNR=11
WB2 Warramunga Arr 32.87 165 *eP* **P 21 25 37.5 -0.8**
ASAJ Asahikawa 35.11 21 LR LR 21 38 35.3
comp=Z,192nm,19.8s,MS3.9,baz=194,slow=33
GTA Gaotai 35.67 324 P **P 21 26 02.8 +0.4**
GTA AP pP 21 26 21.0 +5.6
GTA S **S 21 31 33.0 -2.6**
GTA AMB AMB
comp=Z,9.0nm,1.5s,mb4.5
GTA AMB AMB
comp=Z,122nm,4.8s
GTA LR LR
comp=N,352nm,16.8s,MS4.3
GTA LR LR
comp=E,347nm,16.8s,MS4.3
GTA LR LR
comp=Z,398nm,18.0s,MS4.2
ASAR Alice Springs 36.35 167 P **P 21 26 08.0 -0.4**
comp=Z,3.0nm,0.5s,mb4.5,baz=344,slow=7.5,SNR=55
ASAR PcP PcP 21 28 32.8 +0.5
comp=Z,2.3nm,0.5s,baz=341,slow=2.8,SNR=7.5
ASAR ScP ScP 21 32 17.1 +2.3
comp=Z,3.1nm,1.0s,baz=358,slow=3.3,SNR=11
ASAR Alice Springs 36.35 167 P **P 21 26 08.0 -0.4**
ASAR 21 28 32.8
LSA Lhasa 36.62 304 *eP* **P 21 26 11.7 +1.0**
LSA *e* 21 28 34.3
LSA pmax pmax
comp=Z,27nm,1.0s,mb5.0
LSA Lhasa 36.62 304 *eP* **P 21 26 11.7 +1.0**
comp=Z,27nm,1.0s,mb5.0
LSA *e* PcP PcP 21 28 34.3 +1.2
KLR Kul'dur 37.43 6 *eP* **P 21 26 14.2 -3.1**
YSS Yuzh-Sakhalins 37.66 19 *eP* **P 21 26 20.0 +0.8**
YSS pmax pmax
comp=Z,26nm,1.1s,mb4.9
YSS Yuzh-Sakhalins 37.66 19 *eP* **P 21 26 19.9 +0.7**
comp=Z,26nm,1.1s,mb4.9
ODAN Odare 38.90 298 *eP* **P 21 26 29.7 -0.3**
ODAN Odare 38.90 298 *eP* **P 21 26 29.8 -0.2**
comp=Z,90nm,0.8s,mb5.5
ULN Ulaanbaatar 39.02 340 *eP* **P 21 26 31.2 +0.5**
SONM Songino Array 39.21 339 P **P 21 26 32.7 +0.4**
comp=Z,3.9nm,0.8s,mb4.2,baz=152,slow=9.0,SNR=28
SONM LR LR 21 43 31.6
comp=Z,208nm,19.7s,MS4.0,baz=154,slow=38
HNR Honiara 40.11 121 LR LR 21 41 00.4
comp=Z,380nm,18.3s,MS4.3,baz=294,slow=33
JIRN Jiri 40.14 299 *eP* **P 21 26 40.1 -0.2**
JIRN Jiri 40.14 299 *eP* **P 21 26 40.4 +0.1**
GUN Gumba 40.47 299 *eP* **P 21 26 42.7 -0.4**
GUN Gumba 40.47 299 *eP* **P 21 26 42.9 -0.2**
PKIN Phulchoki 40.80 298 *eP* **P 21 26 44.8 -1.0**
KKN Kakani 40.95 299 *eP* **P 21 26 46.3 -0.7**
KKN Kakani 40.95 299 *eP* **P 21 26 46.9 -0.1**
comp=Z,109nm,1.2s,mb5.4
DMN Daman 41.06 298 *eP* **P 21 26 47.5 -0.4**
DMN Daman 41.06 298 *eP* **P 21 26 47.5 -0.4**
comp=Z,104nm,1.2s,mb5.3
GKN Gorkha 41.56 299 *eP* **P 21 26 51.2 -0.8**
GKN Gorkha 41.56 299 *eP* **P 21 26 51.4 -0.6**
comp=Z,75nm,0.9s,mb5.3
DANN Dangsing 42.39 299 *eP* **P 21 26 58.3 -0.5**
DANN Dangsing 42.39 299 *eP* **P 21 26 58.9 +0.1**
comp=Z,106nm,0.9s,mb5.5
KOLN Koldanda 42.39 298 *eP* **P 21 26 58.8 0.0**
ZAK Zakamensk 42.46 339 *eP* **P 21 26 58.8 -0.2**
ZAK pmax pmax
comp=Z,3.0nm,1.6s
FORT Forrest 42.61 177 *eP* **P 21 27 01.0 +0.6**
comp=Z,22nm,0.6s,mb5.1
TLY Talaya 43.43 340 *eP* **P 21 27 08.1 +1.3**
TLY *e* 21 37 37.6
TLY pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
TLY MLR MLR
comp=Z,97nm,16.0s,MS3.8
TLY Talaya 43.43 340 *eP* **P 21 27 07.4 +0.6**
KLBR Kellerberrin 44.04 190 *eP* **P 21 27 12.0 +0.1**
comp=Z,43nm,1.3s,mb5.0
WMQ Urumqi 45.55 321 P **P 21 27 25.0 +1.1**
WMQ AP pP 21 27 43.0 +5.8
WMQ XP sP 21 27 52.0 +9.0
WMQ AMB AMB
comp=Z,12nm,1.2s,mb4.7
WMQ AMB AMB
comp=Z,158nm,3.6s
WMQ LR LR
comp=N,1μm,16.3s,MS5.1
WMQ LR LR
comp=E,2μm,16.3s,MS5.1
WMQ LR LR
comp=Z,668nm,15.8s,MS4.7
STKA Stephens Creek 46.21 161 *eP* **P 21 27 30.5 +1.3**
comp=Z,11nm,0.7s,mb4.9
STKA Stephens Creek 46.21 161 P **P 21 27 30.3 +1.2**
comp=Z,16nm,0.8s,mb5.0,baz=339,slow=7.8,SNR=13
HVS Khovu-Aksy 46.91 333 *c iP* **P 21 27 35.5 +1.0**
DDI Dehra Dun 47.68 300 *ex* **P 21 27 42.8 +2.0**
PETK Petropavlovsk- 48.27 25 P **P 21 27 46.4 +1.5**
comp=Z,2.7nm,0.8s,mb4.3,baz=253,slow=1.5,SNR=3.3
PETK LR LR 21 46 19.9
comp=Z,130nm,21.0s,MS3.9,baz=219,slow=34
YAK Yakutsk 50.01 2 *eP* **P 21 27 57.1 -1.0**
YAK pmax pmax
comp=Z,14nm,0.9s,mb5.0
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK Yakutsk 50.01 2 *eP* **P 21 27 58.0 -0.1**
comp=E,22nm,0.7s,mb5.3
MK31 Makanchi Array 50.34 322 *i P* **P 21 28 01.2 +0.3**
MK31 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
MKAR Makanchi Array 50.34 322 P **P 21 28 01.3 +0.4**
comp=Z,18nm,0.8s,mb5.2,baz=116,slow=7.9,SNR=90
MKAR LR LR 21 50 54.2
comp=Z,187nm,20.4s,MS4.1,baz=141,slow=38
ULHL Ulahol 52.40 315 P **P 21 28 17.3 +1.0**
SNR=7.6
ZAA0 Zalesovo Array 52.86 331 *eP* **P 21 28 19.5 -0.1**
ZALV Zalesovo Beam 52.86 331 P **P 21 28 19.5 -0.1**
comp=Z,3.0nm,0.6s,mb4.4,baz=117,slow=7.0,SNR=21
ZALV LR LR 21 52 35.6
comp=Z,157nm,18.1s,MS4.1,baz=260,slow=38
KZA Kyzart 53.03 314 P **P 21 28 23.2 +2.1**
SNR=9.6
TKM2 Tokmak 2 53.07 315 *eP* **P 21 28 22.3 +0.9**
TKM2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TKM2 Tokmak 2 53.07 315 P **P 21 28 22.6 +1.3**
SNR=10
TKM2 Tokmak 2 53.07 315 *eP* **P 21 28 22.2 +0.9**
comp=Z,5.9nm,0.8s,mb4.6
KBK Karagaybulak 53.44 315 P **P 21 28 25.1 +1.1**
SNR=10
UCH Uchtor 53.60 314 P **P 21 28 27.4 +2.2**
SNR=33
UCH Uchtor 53.60 314 *eP* **P 21 28 27.0 +1.7**
comp=Z,35nm,1.0s,mb5.2
CHMS Chumysh 53.68 315 P **P 21 28 26.2 +0.3**
SNR=11
FRU Bishkek 53.72 315 *eP* **P 21 28 26.0 -0.1**
USP Ospenovka 53.95 315 P **P 21 28 28.6 +0.8**
SNR=12
NVS Novosibirsk 54.13 331 *eP* **P 21 28 27.0 -1.9**
NVS *e* 21 29 39.7
NVS pmax pmax
comp=Z,44nm,2.0s,mb5.0
NVS pmax pmax
comp=N,33nm,2.2s
AML Almayashu 54.15 314 P **P 21 28 31.1 +1.8**
SNR=11
AML Almayashu 54.15 314 *eP* **P 21 28 29.9 +0.6**
comp=N,24nm,1.0s,mb5.1
EKS2 Erkin-Say 54.25 314 P **P 21 28 31.0 +1.0**
SNR=16
EKS2 Erkin-Say 54.25 314 *eP* **P 21 28 30.8 +0.8**
comp=N,18nm,1.0s,mb5.0
KURK Kurchatov 54.35 325 P **P 21 28 31.1 +0.5**
comp=N,24nm,0.6s,mb5.3,baz=124,slow=7.3,SNR=89
KURK Kurchatov 54.35 325 *c iP* **P 21 28 31.0 +0.4**
KURK pmax pmax
comp=Z,88nm,1.2s,mb5.6
KURK Kurchatov 54.35 325 *eP* **P 21 28 30.1 -0.5**
KBL Kabul 55.95 304 *eP* **P 21 28 42.4 0.0**
KBL pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KBL Kabul 55.95 304 *eP* **P 21 28 42.4 0.0**
comp=Z,6.5nm,0.7s,mb4.8
KK31 Karatay Array 56.68 314 *i P* **P 21 28 47.1 -0.3**
TAU Tasmania Unive 58.12 161 P **P 21 28 57.6 +0.2**
BVA0 Borovoye Array 59.95 325 *i P* **P 21 29 10.3 +0.2**
BVA0 pmax pmax
comp=Z,31nm,2.7s,mb4.9
BVAR Borovoye Array 59.95 325 P **P 21 29 10.6 +0.5**
comp=Z,16nm,0.9s,mb5.0,baz=116,slow=9.1,SNR=48
BRVK Borovoye 60.02 325 *eP* **P 21 29 10.3 -0.3**
BILL Bilibino 61.87 16 P **P 21 29 23.0 +0.2**

BILL 21 31 39.0
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.0
BILL Bilibino 61.87 16 *e*P **P** **21 29 23.7 +0.9**
comp=Z,8.1nm,0.4s,mb5.2
AB31 Akbulak array 65.23 319 *i* P **P** **21 29 44.9 -0.5**
NiKO Nikolski 65.72 37 *e*P **P** **21 29 46.6 -1.9**
comp=Z,234nm,1.4s
SVE Sverdlovsk 66.48 327⇑*e*P **P** **21 29 53.2 0.0**
SVE *e* 21 39 24.3
SVE pmax pmax
comp=Z,33nm,1.1s,mb5.3
AKTK Aktyubinsk 66.67 320 P **P** **21 29 53.9 -0.7**
AKTO Aktyubinsk 66.67 320 P **P** **21 29 53.9 -0.7**
comp=Z,4.5nm,0.8s,mb4.5,baz=95,slow=8.0,SNR=14
UNV Unalaska Valle 67.27 36 *e*P **P** **21 29 58.7 +0.3**
comp=Z,36nm,0.9s,mb5.4
ARU Arti 67.50 326*c i*P **P** **21 29 59.4 -0.3**
ARU *e*S S 21 38 55.8 +3.5
ARU *e*SS SS 21 43 20.7 +7.5
ARU pmax pmax
comp=Z,32nm,1.7s,mb5.1
ARU Arti 67.50 326 *e*P **P** **21 29 59.3 -0.4**
comp=Z,14nm,0.7s,mb5.1
MAK Makhachkala 73.34 311 *e*P **P** **21 30 33.0 -2.7**
MAK *e*S S 21 40 03.3 +2.4
MAK *e*SS SS 21 44 42.5 -1.0
MAK pmax pmax
comp=Z,476nm,2.0s
RDF Al-Radifah 74.05 297 *e*P **P** **21 30 39.3 -0.8**
baz=297
RDF AMb AMB 21 30 42.9
comp=Z,49nm,1.4s,mb5.2,baz=297
MIB Mutribah 74.16 298 *e*P **P** **21 30 39.5 -1.3**
baz=298
MIB AMb AMB 21 30 40.8
comp=Z,30nm,0.9s,mb5.2,baz=298
NAY Al-Naaiem 74.29 297 *e*P **P** **21 30 40.1 -1.4**
baz=297
NAY AMb AMB 21 30 42.2
comp=Z,14nm,1.0s,mb4.8,baz=297
RST Umm Al-Ruwaisa 74.48 297 *e*P **P** **21 30 41.3 -1.4**
baz=297
RST AMb AMB 21 30 43.1
comp=Z,31nm,1.3s,mb5.1,baz=297
KDAK Kodiak Island 75.47 33 LR LR 22 03 16.2
comp=Z,111nm,18.7s,MS4.2,baz=107,slow=35
POHA Pohakuloa 75.52 73 *e*P **P** **21 30 49.3 +0.5**
comp=Z,167nm,1.6s,mb5.7
BPAW Bear Paw Mtn. 76.33 27 *e*P **P** **21 30 52.5 +0.1**
comp=Z,28nm,1.4s,mb5.0
COLD Coldfoot 76.69 23 *e*P **P** **21 30 54.9 +0.4**
comp=Z,4.6nm,0.9s,mb4.4
KIV Kislovodsk 76.80 313*ce*P **P** **21 30 55.7 +0.1**
KIV pmax pmax
comp=Z,14nm,1.1s,mb4.8
KIV Kislovodsk 76.80 313 *e*P **P** **21 30 55.8 +0.2**
comp=Z,17nm,1.0s,mb4.9
PMR Palmer 77.19 29 *e*P **P** **21 30 56.6 -0.8**
PMR *e* pP 21 31 08.6 -3.1
PMR pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
PMR Palmer 77.19 29 *e*P **P** **21 30 56.5 -0.9**
comp=Z,3.2nm,0.4s,mb4.6
PMR *e*PcP PcP 21 31 08.6 +0.6
MCK McKinley 77.23 27 *e*P **P** **21 30 57.8 +0.2**
MCK pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
MCK McKinley 77.23 27 *e*P **P** **21 30 57.8 +0.2**
comp=Z,7.9nm,1.1s,mb4.6
COLA College 77.68 26 *e*P **P** **21 31 00.0 -0.1**
COLA pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
COLA College 77.68 26 *e*P **P** **21 31 00.0 0.0**
comp=Z,3.6nm,0.6s,mb4.5
KLMR Klimovskoe 77.77 330 *e*P **P** **21 30 59.8 -0.9**
KLMR pmax pmax
comp=Z,50nm,1.5s,mb5.2
CASY Casey 78.89 186 *e*P **P** **21 31 06.4 -0.2**
comp=Z,6.5nm,1.0s,mb4.5
OBN Obninsk 79.79 324⇑*e*P **P** **21 31 11.3 -0.6**
OBN *e* pP 21 31 20.2 -6.0
OBN *e* pP 21 31 22.6 -3.6
OBN pmax pmax
comp=Z,25nm,1.1s,mb5.1
OBN MLR MLR
comp=Z,200nm,15.0s,MS4.6
OBN Obninsk 79.79 324 *e*P **P** **21 31 11.7 -0.1**
comp=Z,10.0nm,0.6s,mb4.9
APA Apatity 79.88 337⇑*i*P **P** **21 31 12.4 +0.3**
APA pmax pmax
comp=Z,26nm,1.0s,mb5.1
ANN Anapa 80.47 314 *e*P **P** **21 31 13.4 -2.3**
ANN pmax pmax
comp=Z,20nm,0.9s,mb5.0
MALT Malatya 80.59 307 *e*P **P** **21 31 17.5 +1.0**
MALT pmax pmax
comp=Z,12nm,1.0s,mb4.8
MALT Malatya 80.59 307 *e*P **P** **21 31 17.5 +1.0**
comp=Z,12nm,1.0s,mb4.8
JOF Joensuu 81.42 333 *e*p **P** **21 31 19.9 -0.5**
comp=Z,3.1nm,0.4s,mb4.6
SPITS Spitsbergen Ar 82.21 349 LR LR 22 14 10.7
comp=Z,106nm,18.8s,MS4.2,baz=25,slow=40
ARCES ARCESS Array B 82.39 340 P **P** **21 31 25.9 +0.5**
comp=Z,20nm,0.8s,mb5.1,baz=80,slow=6.2,SNR=34
ARCES LR LR 22 14 47.1
comp=Z,100nm,18.8s,MS4.2,baz=126,slow=41
ARE0 ARCESS Array S 82.39 340 *e*P **P** **21 31 25.8 +0.4**
SIM Simferopol' 82.78 314 *e*P **P** **21 31 28.4 +0.5**
SIM pmax pmax
comp=Z,11nm,1.0s,mb4.8
KAF Kangasniemi 83.85 332 *e*p **P** **21 31 32.9 -0.2**
comp=Z,2.0nm,0.4s,mb4.6,baz=74,slow=4.7
KAF Kangasniemi 83.85 332 *e*P **P** **21 31 32.9 -0.2**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
BR131 Keskin Array S 84.04 309 *e*P **P** **21 31 34.2 -0.4**
MNK Minsk 84.87 325 *e*P **P** **21 31 35.0 -3.4**
AKASG Malin Array Be 84.90 321 P **P** **21 31 38.4 -0.3**
comp=Z,4.7nm,0.7s,mb4.7,baz=61,slow=4.2,SNR=25
KIEV Kiev 84.91 321 *e*P **P** **21 31 38.2 -0.5**
KIEV pmax pmax
comp=Z,34nm,1.5s,mb5.3
KIEV Kiev 84.91 321 *e*P **P** **21 31 38.2 -0.5**
comp=Z,34nm,1.5s,mb5.2
CSS Prodhromos 85.18 305 *e*P **P** **21 31 40.0 -0.4**
comp=Z,39nm,0.8s,mb5.6
KIS Kishinev 85.99 317 *e*P **P** **21 31 43.0 -1.2**
KIS *e* 21 31 50.0
KIS Kishinev 85.99 317 *e*UNK **P** **21 31 43.0 -1.2**
SUW Suwalki 87.63 325 *e*P **P** **21 31 52.0 0.0**
BUR08 Bucovina Ar. S 88.21 318 *e*P **P** **21 31 55.2 +0.3**
PPT Papeete 88.58 108 *e*S S 21 42 52.7 +12
comp=Z,113nm,24.2s
PPT Papeete 88.58 108 *e*LR LR 22 00 09.3
comp=Z,140nm,22.0s
KWP Kalwaria 89.22 321 *e*P **P** **21 31 59.6 0.0**
KWP pmax pmax
comp=Z,27nm,1.3s,mb5.4
KWP Kalwaria 89.22 321 *e*P **P** **21 31 59.6 -0.1**
comp=Z,27nm,1.3s,mb5.4
UZH Uzhgorod 89.79 320*d i*P **P** **21 32 02.0 -0.3**
UZH *e* 21 32 10.0
TBI Tubuai 89.98 114 *e*LR LR 22 00 51.5
comp=Z,159nm,34.0s
NB2 NORSAR Subarra 90.98 334 P **P** **21 32 05.7 -1.8**
comp=Z,4.1nm,0.9s,mb4.8,baz=68,slow=4.6
NOA NORSAR Array B 90.98 334 P **P** **21 32 06.5 -1.0**
comp=Z,2.3nm,0.9s,mb4.5,baz=64,slow=4.5,SNR=5.3
NOA LR LR 22 15 08.1
comp=Z,158nm,18.8s,MS4.5,baz=55,slow=37
MORC Moravsky Berou 92.33 322 *e*P **P** **21 32 14.0 -0.1**
MORC pmax pmax
comp=Z,69nm,3.0s
MORC Moravsky Berou 92.33 322 *e*P **P** **21 32 14.0 -0.1**
comp=Z,68nm,3.0s
CLL Collm 94.39 325 *e*P **P** **21 32 23.0 -0.5**
GERES GERESS Array B 95.01 322 P **P** **21 32 28.7 +2.2**
comp=Z,0.2nm,0.3s,mb4.1,baz=76,slow=6.2,SNR=5.7
GERES LR LR 22 20 03.5
comp=Z,94nm,18.6s,MS4.3,baz=281,slow=39
SDCO Great Sand Dun 111.05 41 *e*PKP PKiKP 21 37 36.8 -0.6
TORD Torodi Ar. Bea 119.15 292 PKP PKPdf 21 37 53.0 -0.5
comp=Z,0.4nm,0.4s,baz=26,slow=1.2,SNR=11
TORD Torodi Ar. Bea 119.15 292 PKP PKPdf 21 37 53.0 -0.5
CCM Cathedral Cave 119.32 33 *e*PKIKP PKPdf 21 37 48.9 -4.4
ALLY Alegheny Colle 121.50 23 *e*PKPdf PKPdf 21 37 58.1 +0.8
ACSO Alum Creek Sta 121.57 26 PKPdf PKPdf 21 37 54.6 -2.9
PLCA Paso Flores 148.00 156 PKPbc PKPbc 21 38 51.0 +1.8
comp=Z,3.9nm,0.9s,baz=192,slow=2.8,SNR=6.6
NNA Nana 157.89 92 *e*PKPdf PKPdf 21 38 59.7 -1.5
LPAZ La Paz 165.88 109 *e*PKIKP PKPdf 21 39 10.1 +0.8

MOS ***25*** *21:54:51.4± 1.0, 802N× 12656E, h33km, mb5.4/33, Error ellipse: s-maj=11.2km s-min=4.7km az=115.4*
BJI ***25*** *21:54:55.4, 792N× 12666E, h82km, mB5.1, mb4.9, Ms4.3, Msz4.2*
MAN ***25*** *21:54:55, 783N× 12644E, h19km, mb5.6, ML4.6, MS5.0*
MAN INTENSITY IV - BISLIG, SURIGAO DEL SUR.
ISCJB ***25*** *21:54:56.9± 0.4, 797N× 002× 12661E± 003, h82km± 3km, mb5.1/114, Error ellipse: s-maj=5.2km s-min=3.7km az=165.8*
DJA ***25*** *21:54:57, 830N× 12687E, h63km, Mw5.3/10*
IDC ***25*** *21:54:57.1± 1.1, 797N× 12650E, h68km± 8km, mb4.9/28, mb1 4.9/29, mb1mx4.9/30, mbtmp4.9/29, MS4.0/24, Ms1 4.0/24, ms1mx3.9/33, Error ellipse: s-maj=14.4km s-min=7.0km az=88.0*
GCMT ***25*** *21:54:58.1± 0.3, 789N× 12682E, h57km± 1km, MW5.0/57, Moment Tensor Solution. s45,c56; s57,c90; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 3.40± .16; Mθθ 1.02± .12; Mφφ -4.42± .13; Mrθ 1.06± .09; Mθφ -0.93± .14; Mφr 0.20± .16; Best double couple: M 4.20000×10^16 NP1: ϕs 169.00000°, δ 46.00000°, λ 60.00000°. NP2: ϕs 29.00000°, δ 51.00000°, λ 117.00000°. Principal axes: T 3.8060, Plg 69.0000°, Azm 3.0000°; N 0.7860, Plg 21.0000°, Azm 191.0000°; P -4.5930, Plg 3.0000°, Azm 100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***25*** *21:54:58.1± 0.1, 794N× 12654E, mb5.1/46 Error ellipse: s-maj=5.0km s-min=3.4km az=79.0*
NEIC Felt [IV PIVS] at Bislig.
ISC 25 21:54:58.5± 0.4, 795N± 002× 12658E± 003, h82km± 3km, h81km± 2.5km: pP-P, n408, σ1§03/395, mb5.1/114, 43C-42D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.32**	**316**	⇓	*e*	P	**Pn**	**21 55 05.1**	**-6.0**
BIPH					*e*	S	**Sn**	**21 55 11.2**	**-9.2**
MATI	**Mati**	**1.05**	**198**		*e*	P	**Pn**	**21 55 13.2**	**-5.1**
MATI					*e*	S	**Sn**	**21 55 25.7**	**-7.4**
DAV	**Davao City (W)**	**1.33**	**229**		P		**Pn**	**21 55 20.1**	**-1.6**
	1μm,0.3s,baz=14,slow=1.4,SNR=287								
DAV					S		**Sn**	**21 55 39.0**	**-0.2**
	3μm,0.3s,baz=255,slow=20,SNR=22								
DMPH	**Davao City--Mi**	**1.37**	**231**	⇑	*e*	P	**Pn**	**21 55 20.8**	**-1.4**
DMPH					*e*	S	**Sn**	**21 55 40.1**	**-0.1**
BUTP	**Butuan**	**1.39**	**317**		*e*	P	**Pn**	**21 55 21.3**	**-1.1**
BUTP					*e*	S	**Sn**	**21 55 42.5**	**+2.0**
BUKP	**Musuan**	**1.51**	**267**		*e*	P	**Pn**	**21 55 22.8**	**-1.2**
BUKP					*e*	S	**Sn**	**21 55 42.4**	**-0.9**
KCP	**Kidapawan**	**1.75**	**238**	⇓	*e*	P	**Pn**	**21 55 27.7**	**+0.5**
KCP					*i*	S	**Sn**	**21 55 49.7**	**+0.8**
SCPH	**Surigao**	**2.12**	**329**	⇑	*e*	P	**Pn**	**21 55 32.2**	**+0.2**
SCPH					*e*	S	**Sn**	**21 56 00.9**	**+3.3**
CTBH	**Cotabato--PC H**	**2.43**	**253**	⇓	*i*	P	**Pn**	**21 55 34.5**	**-1.7**
CTBH					*i*	S	**Sn**	**21 56 03.1**	**-2.0**
PAGZ	**Pagadian**	**3.17**	**268**		*e*	P	**Pn**	**21 55 45.3**	**-0.9**
TBP	**Tagbilaran**	**3.20**	**303**		*e*	P	**Pn**	**21 55 46.0**	**-0.5**
TBP					*e*	S	**Sn**	**21 56 22.0**	**-1.7**
DCPH	**Dipolog City**	**3.26**	**281**	⇓	*e*	P	**Pn**	**21 55 47.3**	**-0.1**
DCPH					*e*	S	**Sn**	**21 56 27.1**	**+1.9**
LLP	**Lapu-Lapu**	**3.49**	**312**	⇑	*e*	P	**Pn**	**21 55 50.9**	**+0.3**
LLP					*e*	S	**Sn**	**21 56 31.5**	**+0.7**
IPIL	**Ipil**	**3.98**	**268**		*e*	P	**Pn**	**21 55 56.4**	**-0.8**
GUIM	**Jordan**	**4.75**	**304**		*e*	P	**Pn**	**21 56 07.2**	**-0.6**
RCP	**Roxas**	**5.21**	**314**	⇓	*e*	P	**Pn**	**21 56 14.7**	**+0.7**
CUYO	**Cuyo Island**	**6.20**	**298**		*e*	P	**Pn**	**21 56 26.9**	**-0.5**
OTRP	**Odiongan**	**6.28**	**315**		*e*	P	**Pn**	**21 56 29.4**	**+1.0**
TNE	**Ternate**	**7.16**	**174**	⇓	*e*	P	**Pn**	**21 56 41.0**	**+0.4**
GQP	**Guinayangan**	**7.18**	**326**	⇓	*e*	P	**Pn**	**21 56 41.9**	**+1.1**
BUSP	**Coron**	**7.47**	**303**		*e*	P	**Pn**	**21 56 44.7**	**-0.1**
ENPP	**El Nido**	**7.76**	**295**		*e*	P	**Pn**	**21 56 48.4**	**-0.4**
LUBP	**Lubang**	**8.47**	**313**		*e*	P	**Pn**	**21 57 00.5**	**+2.0**
BATP	**Bataraza**	**8.73**	**276**		*e*	P	**Pn**	**21 57 00.0**	**-2.0**
TSM	**Tawau**	**9.39**	**248**	⇑	P		**Pn**	**21 57 13.8**	**+2.7**
SDKM	**Sandakan**	**9.60**	**257**	⇑	P		**Pn**	**21 57 16.1**	**+2.2**
KDM	**Kudat**	**9.72**	**265**	⇓	P		**Pn**	**21 57 20.2**	**+4.6**
KKM	**Kota Kinabalu**	**10.46**	**260**	⇓	P		**Pn**	**21 57 30.3**	**+4.6**
KKM	**Kota Kinabalu**	**10.46**	**260**		*e*	Pn	**Pn**	**21 57 28.2**	**+2.5**
PCI	**Palu**	**11.08**	**218**	⇓	*e*	P	**Pn**	**21 57 37.0**	**+3.0**
KDI	**Kendari**	**12.47**	**199**	⇓	*e*	P	**Pn**	**21 57 53.7**	**+0.7**
KDI					*e*	S	**Sn**	**22 00 02.8**	**-7.4**
KAPI	**Kappang**	**14.57**	**208**		*e*	Pn	**Pn**	**21 58 18.7**	**-1.9**
SBUM	**Sibu**	**15.31**	**250**	⇑	P		**Pn**	**21 58 32.7**	**+2.6**
YHNB	**Yeheng**	**17.35**	**344**		*e*	Pn	**Pn**	**21 58 55.4**	**0.0**
	20nm,0.6s								
KSM	**Kuching**	**17.44**	**249**	⇓	P		**Pn**	**21 58 58.9**	**+2.3**
KSM	**Kuching**	**17.44**	**249**		*e*	Pn	**Pn**	**21 58 57.7**	**+1.1**
BATI	**Baumata**	**18.27**	**189**		P		**Pn**	**21 59 06.7**	**0.0**
	12nm,0.3s,baz=325,slow=1.3,SNR=22								
BATI					S		**S**	**22 02 31.9**	**+1.2**
	3.4nm,0.3s,baz=68,slow=21,SNR=6.7								
GUMO	**Guam**	**18.81**	**71**		LR		LR	22 04 39.2	
	comp=Z,658nm,21.6s,baz=247,slow=31								
JOW	**Kunigami**	**18.85**	**5**		P		**Pn**	**21 59 13.9**	**+0.5**
	21nm,0.3s,baz=199,slow=8.7,SNR=81								
JOW					LR		LR	22 05 24.1	
	comp=Z,496nm,22.0s,baz=146,slow=33								
QIZ	**Qiongzhong**	**19.63**	**306**		P		**Pn**	**21 59 21.3**	**-1.4**
QIZ					AP	pP		21 59 37.5	+0.6
QIZ					S		**S**	**22 02 59.3**	**+1.5**
QIZ					AMB	AMB			
	comp=Z,67nm,1.1s								
QIZ					AMB	AMB			
	comp=Z,241nm,6.0s								
QIZ					LR	LR			
	comp=E,555nm,16.2s								
QIZ					LR	LR			
	comp=Z,855nm,18.1s								
QIZ	**Qiongzhong**	**19.63**	**306**	*e*	P		**Pn**	**21 59 21.5**	**-1.2**
	comp=Z,94nm,1.1s								
TPI	**Tanjungpandan**	**21.67**	**241**	⇓	*e*	P	**P**	**21 59 44.0**	**+1.3**
UBT	**Ubonrachathani**	**22.32**	**291**	⇓	P		**P**	**21 59 50.5**	**+1.0**
KTGM	**Kuala Trenggan**	**23.44**	**265**	⇑	P		**P**	**22 00 02.9**	**+2.2**
MYKOM	**Kota Tinggi**	**23.45**	**256**	⇑	P		**P**	**22 00 02.8**	**+2.0**
KGM	**Kluang**	**23.91**	**257**	⇓	P		**P**	**22 00 06.5**	**+1.6**
CBIJ	**Chichi jima**	**24.11**	**36**		P		**P**	**22 00 06.0**	**-0.6**
	comp=Z,238nm,0.6s,mb5.7,baz=252,slow=2.9,SNR=26								
CBIJ					LR		LR	22 07 31.5	
	comp=Z,204nm,20.1s,baz=208,slow=31								
KKTK	**Khon Kaen**	**24.66**	**292**		P		**P**	**22 00 12.0**	**+0.3**
	comp=Z,4μm,0.5s								
NJ2	**Nanjing**	**25.03**	**344**		*e*	P	**P**	**22 00 16.3**	**+1.3**
NJ2					AMB	AMB			
	comp=Z,10.0nm,0.7s,mb4.3								
FRIM	**Kepong**	**25.27**	**261**	⇑	P		**P**	**22 00 19.5**	**+2.1**
IPM	**Ipoh**	**25.64**	**264**	⇑	P		**P**	**22 00 23.7**	**+3.0**
FITZ	**Fitzroy Crossi**	**25.91**	**182**		*e*	P	**P**	**22 00 22.3**	**-0.7**
	comp=Z,27nm,0.8s,mb4.7								
FITZ					*e*			22 00 25.1	
FITZ					*e*	PCP	PcP	22 03 50.4	+0.3
FITZ					*e*	S	**S**	**22 04 55.8**	**+8.6**
FITZ					*e*	SCP	ScP	22 07 23.5	+1.0
FITZ	**Fitzroy Crossi**	**25.91**	**182**		P		**P**	**22 00 21.7**	**-1.2**
	comp=Z,16nm,0.7s,mb4.6,baz=10.0,slow=7.5,SNR=22								
FITZ					PcP		PcP	22 03 50.6	+0.5
	comp=Z,6.8nm,0.5s,baz=47,slow=3.1,SNR=6.2								
FITZ					ScP		ScP	22 07 23.4	+0.9
	comp=Z,3.8nm,0.6s,baz=199,slow=2.9,SNR=5.3								
GYA	**Guiyang**	**26.40**	**317**		P		**P**	**22 00 28.5**	**+1.1**
GYA					AP	pP		22 00 48.0	+1.7
GYA					XP	sP		22 00 59.0	+3.1
GYA					PP			22 01 14.8	
GYA					PCP	PcP		22 03 52.8	+1.6
GYA					S		**S**	**22 04 53.5**	**-1.5**
GYA					XS	sS		22 05 28.3	+0.6
GYA					SS			22 06 11.5	
GYA					SCP	ScP		22 07 23.5	-0.4
GYA					AMB	AMB			
	comp=Z,20nm,0.8s,mb4.6								
GYA					AMB	AMB			
	comp=Z,140nm,5.2s								
GYA					LR	LR			
	comp=N,680nm,13.5s								
GYA					LR	LR			
	comp=E,560nm,14.3s								
GYA					LR	LR			
	comp=Z,680nm,15.5s								
NST	**Nakhon Sawan 26.98 289**				P		**P**	**22 00 30.0**	**-2.7**
	comp=Z,100nm,0.6s,mb5.5								
COEN	**Coen 27.29 143**			*e*	P		**P**	**22 00 34.9**	**-0.6**
	comp=Z,24nm,1.0s,mb4.7								
NANT	**Nan 27.35 296**			⇑	P		**P**	**22 00 36.0**	**0.0**
	comp=Z,662nm,1.0s,mb6.1								
JHJ	**Hachijo jima 2 27.87 24**				P		**P**	**22 00 41.1**	**+0.7**
	comp=Z,27nm,0.4s,mb5.2,baz=90,slow=20,SNR=3.5								
JHJ					LR		LR	22 09 47.6	
	comp=Z,231nm,21.5s,baz=229,slow=32								
BDT	**Bhumibol Dam 28.42 292**			⇑	P		**P**	**22 00 47.0**	**+1.4**
	comp=Z,22nm,1.1s,mb4.6								
KMI	**Kunming 28.44 310**				P		**P**	**22 00 46.0**	**+0.3**
KMI					AP	pP		22 01 04.8	+0.1
KMI					XP	sP		22 01 15.0	+0.7
KMI					PP	PP		22 01 40.5	-11
KMI					PPP			22 01 54.8	
KMI					PCP	PcP		22 03 56.8	+0.7
KMI					S		**S**	**22 05 26.5**	**-0.7**
KMI					XS	sS		22 05 59.8	-0.3
KMI					SS	SS		22 06 57.8	-33
KMI					SSS			22 07 19.0	
KMI					AMB	AMB			
	comp=Z,25nm,0.7s,mb4.8								
KMI					AMB	AMB			
	comp=Z,149nm,7.3s								
KMI					LR	LR			
	comp=N,216nm,15.6s								
KMI					LR	LR			
	comp=E,359nm,21.3s								
KMI					LR	LR			
	comp=Z,407nm,18.8s								
KMI	**Kunming 28.44 310**				P		**P**	**22 00 45.9**	**+0.2**
KMI								22 01 40.6	
KMI					PPP			22 01 54.7	
KMI								22 03 56.7	
KMI					S		**S**	**22 05 26.4**	**-0.8**
KMI					SS	SS		22 06 57.7	-33
KMI					SSS			22 07 19.0	
KMI					pmax	pmax			
	comp=Z,25nm,0.7s,mb4.8								
KMI					MLR	MLR			
	comp=Z,410nm,18.8s								
KMI	**Kunming 28.44 310**				P		**P**	**22 00 45.9**	**+0.2**
	comp=Z,25nm,0.7s,mb4.8								
KMI					pP	pP		22 01 04.8	+0.1
KMI					sP	sP		22 01 14.9	+0.6
KMI					PP	PP		22 01 40.6	-11
KMI					PPP			22 01 54.7	
KMI					PcP	PcP		22 03 56.7	+0.6
KMI					S		**S**	**22 05 26.4**	**-0.8**
KMI					sS	sS		22 05 59.8	-0.3
KMI					SS	SS		22 06 57.7	-33
KMI					SSS			22 07 19.0	
KMI					LR	LR			
	comp=Z,410nm,18.8s								
WRAB	**Tennant Creek 28.75 165**			*e*	P		**P**	**22 00 47.6**	**-0.8**
WRA	**Warramunga Arr 28.75 165**				P		**P**	**22 00 47.0**	**-1.4**
	comp=Z,2.2nm,0.5s,mb4.0,baz=342,slow=9.1,SNR=20								
WRA					PcP		PcP	22 03 57.5	+0.6
	comp=Z,9.2nm,0.7s,baz=337,slow=2.7,SNR=15								
WRA					ScP		ScP	22 07 31.7	+0.6
	comp=Z,5.1nm,0.8s,baz=340,slow=3.3,SNR=8.9								
WRA	**Warramunga Arr 28.75 165**				P		**P**	**22 00 47.0**	**-1.4**
WRA								22 03 57.5	
WRA	**Warramunga Arr 28.75 165**				P		**P**	**22 00 47.0**	**-1.4**
WRA					PcP		PcP	22 03 57.5	+0.6
WRA					ScP		ScP	22 07 31.7	+0.6
WB2	**Warramunga Arr 28.75 165**			*e*	P		**P**	**22 00 46.9**	**-1.5**
WB2				*e*				22 00 52.3	
WB2				*e*	PCP		PcP	22 03 57.5	+0.6
WB2				*e*	S		**S**	**22 05 26.6**	**-5.5**
WB2				*e*	SCP		ScP	22 07 31.9	+0.8
CM31	**Chiang Mai Arr 28.82 294**			*e*	P		**P**	**22 00 48.7**	**-0.4**
CMAR	**Chiang Mai Arr 28.82 294**				P		**P**	**22 00 50.2**	**+1.1**
	comp=Z,19nm,0.9s,mb4.7,baz=120,slow=7.1,SNR=107								
CMAR					PcP		PcP	22 03 58.7	+1.5
	comp=Z,11nm,0.7s,baz=89,slow=1.3,SNR=29								
CMAR					ScP		ScP	22 07 34.2	+2.7
	comp=Z,0.7nm,0.7s,baz=71,slow=2.1,SNR=4.2								
CMAR					LR		LR	22 12 54.0	
	comp=Z,422nm,18.4s,baz=137,slow=38								
CMAR	**Chiang Mai Arr 28.82 294**				P		**P**	**22 00 50.2**	**+1.1**
CMAR								22 03 58.7	
CMAR	**Chiang Mai Arr 28.82 294**				P		**P**	**22 00 50.2**	**+1.1**
CMAR					PcP		PcP	22 03 58.7	+1.5
CMAR					ScP		ScP	22 07 34.2	+2.7
CMAR					LR		LR	22 12 54.0	
CHG	**Chiang Mai 28.93 295**			⇑	P		**P**	**22 00 50.6**	**+0.5**
	comp=Z,25nm,0.8s,mb4.9								
CHTO	**Chiang Mai 28.93 295**				P		**P**	**22 00 51.1**	**+1.1**
	SNR=7.3								
CHTO	**Chiang Mai 28.93 295**			*e*	P		**P**	**22 00 50.0**	**-0.1**
KS15	**Wonju Array Si 29.38 2**			*e*	P		**P**	**22 00 53.4**	**-0.5**
KSRS	**Korea Array 29.39 2**				P		**P**	**22 00 53.6**	**-0.4**
	comp=Z,13nm,0.9s,mb4.6,baz=182,slow=11,SNR=32								
KSRS					PcP		PcP	22 03 58.6	+0.4
	comp=Z,3.1nm,0.9s,baz=178,slow=3.1,SNR=5.4								
KSRS					LR		LR	22 12 32.7	
	comp=Z,144nm,20.9s,baz=183,slow=36								
MBWA	**Marble Bar 29.70 193**			*e*	P		**P**	**22 00 56.9**	**+0.1**
MAJO	**Matsushiro 30.37 19**			*e*	P		**P**	**22 01 01.6**	**-1.0**
MAJO					pmax	pmax			
	comp=Z,26nm,0.8s,mb4.9								
MAJO	**Matsushiro 30.37 19**			*e*	P		**P**	**22 01 01.6**	**-1.0**
	comp=Z,26nm,0.8s,mb4.9								
MAT	**Matsushiro 30.37 19**				P		**P**	**22 01 01.5**	**-1.1**
MAT					*e*	S	**S**	**22 05 52.0**	**-5.2**
MJAR	**Matsushiro Arr 30.37 19**				P		**P**	**22 01 01.7**	**-0.9**
	comp=Z,18nm,0.8s,mb4.8,baz=196,slow=9.5,SNR=51								
MJAR					PcP		PcP	22 04 01.3	+0.5
	comp=Z,6.0nm,0.9s,baz=184,slow=2.8,SNR=8.8								
MJAR					LR		LR	22 11 19.1	
	comp=Z,159nm,19.7s,baz=195,slow=32								
MJAR	**Matsushiro Arr 30.37 19**				P		**P**	**22 01 01.7**	**-0.9**
MJAR								22 04 01.3	
XAN	**Xi'an 30.65 330**				P		**P**	**22 01 02.8**	**-2.3**
XAN					AMB	AMB			
	comp=Z,11nm,1.0s,mb4.5								
XAN					AMB	AMB			
	comp=Z,83nm,6.0s								
XAN					LR	LR			
	comp=N,246nm,15.7s								
XAN					LR	LR			
	comp=E,246nm,25.9s								
XAN					LR	LR			
	com

BJT comp=Z,18nm,0.6s,mb5.1 *e*PcP PcP 22 04 09.7 +1.1
BJI Beijing 33.28 345 P **P** **22 01 26.0 -2.1**
BJI S **S** **22 06 33.3 -9.2**
BJI AMB AMB
comp=Z,16nm,0.9s,mb4.8
BJI AMB AMB
comp=Z,228nm,4.0s
BJI LR LR
comp=N,188nm,13.4s
BJI LR LR
comp=E,217nm,13.2s
BJI LR LR
comp=Z,144nm,25.2s
BJI Beijing 33.28 345 P **P** **22 01 26.1 -2.0**
comp=Z,16nm,0.9s,mb4.8
BJI S **S** **22 06 33.3 -9.2**
BJI LR LR
comp=Z,140nm,25.2s
SNY Shenyang 33.84 356 ⇑P **P** **22 01 32.8 -0.1**
SNY AMB AMB
comp=Z,28nm,1.0s,mb5.0
SNY AMB AMB
comp=Z,207nm,7.3s
SNY LR LR
comp=N,260nm,20.0s
SNY LR LR
comp=Z,298nm,24.1s
CTA Charters Tower 33.93 145 *e*P **P** **22 01 34.6 +0.7**
comp=Z,3.1nm,0.5s,mb4.4
CTA *e*PCP PcP 22 04 12.7 +1.9
CTA *e*SCP ScP 22 07 50.8 +2.3
CTA Charters Tower 33.93 145 P **P** **22 01 34.3 +0.4**
comp=Z,6.2nm,0.8s,mb4.5,baz=336,slow=12,SNR=7.3
CTA PcP PcP 22 04 11.9 +1.1
comp=Z,7.7nm,0.9s,baz=348,slow=3.5,SNR=5.0
CTA ScP ScP 22 07 50.9 +2.4
comp=Z,7.4nm,0.8s,baz=328,slow=3.4,SNR=9.0
CTA LR LR 22 15 46.2
comp=Z,229nm,18.6s,baz=135,slow=37
CTA Charters Tower 33.93 145 *e*P **P** **22 01 34.6 +0.7**
CTA *e* 22 04 12.7
CTA pmax pmax
comp=Z,3.0nm,0.5s
CTAO Charters Tower 33.93 145 *e*P **P** **22 01 33.5 -0.4**
CTAO pmax pmax
comp=Z,72nm,2.1s,mb5.1
CTAO Charters Tower 33.93 145 *e*P **P** **22 01 33.5 -0.4**
comp=Z,72nm,2.1s,mb5.1
LZH Lanzhou 34.86 327 *e*P **P** **22 01 41.5 -0.3**
LZH AP pP 22 01 59.5 -1.6
LZH XP sP 22 02 09.0 -1.7
LZH PP PP 22 03 01.5 -0.9
LZH *e*S **S** **22 07 06.5 -0.5**
LZH XS sS 22 07 39.3 -0.9
LZH SS SS 22 09 20.3 -21
LZH AMB AMB
comp=Z,19nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,140nm,4.1s
LZH LR LR
comp=N,803nm,14.6s
LZH LR LR
comp=Z,2µm,15.9s
LZH Lanzhou 34.86 327 *e*P **P** **22 01 41.5 -0.3**
LZH *PP pP 22 01 59.5 -1.6
LZH 22 03 01.6
LZH *e*S **S** **22 07 06.4 -0.6**
LZH SS sS 22 09 20.2 -21
LZH pmax pmax
comp=Z,19nm,1.0s,mb4.9
LZH MLR MLR
comp=Z,2µm,15.9s
LZH Lanzhou 34.86 327 *e*P **P** **22 01 41.5 -0.3**
comp=Z,19nm,1.0s,mb4.9
LZH pP pP 22 01 59.5 -1.6
LZH sP sP 22 02 09.0 -1.7
LZH PP PP 22 03 01.6 -0.8
LZH *e*S **S** **22 07 06.4 -0.6**
LZH sS sS 22 07 39.2 -1.0
LZH SS SS 22 09 20.2 -21
LZH LR LR
comp=Z,2µm,15.9s
IMP Imphal 35.38 302 *e*P **P** **22 01 46.0 -0.5**
IMP *ex* x 22 04 15.0
HHC Hu-ho-hao-te 35.38 340 ⇓P **P** **22 01 46.0 -0.3**
HHC AP pP 22 02 05.5 -0.1
HHC XP sP 22 02 15.0 -0.1
HHC PP PP 22 03 08.0 -0.1
HHC PCP PcP 22 04 14.0 -0.7
HHC S **S** **22 07 14.8 -0.1**
HHC XS sS 22 07 47.5 -0.6
HHC SCP ScP 22 07 52.0 -1.3
HHC PCS PcS 22 08 00.0 -1.7
HHC SS SS 22 09 38.5 -14
HHC SCS ScS 22 11 55.3 -2.5
HHC AMB AMB
comp=Z,13nm,0.6s,mb4.9
HHC AMB AMB
comp=Z,83nm,5.3s
HHC LR LR
comp=N,220nm,12.6s
HHC LR LR
comp=E,325nm,12.6s
HHC LR LR
comp=Z,290nm,12.5s
CN2 Changchun 35.72 359 *e*P **P** **22 01 45.8 -3.3**
CN2 *e*AP pP 22 02 13.0 +4.5
CN2 PCP PcP 22 04 12.5 -3.1
CN2 *e*S **S** **22 07 16.3 -3.7**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
CN2 AMB AMB
comp=Z,200nm,3.0s
MDJ Mudanjiang 36.62 4 P **P** **22 01 57.3 +0.6**
MDJ AP pP 22 02 16.5 +0.4
MDJ XP sP 22 02 24.8 -0.9
MDJ PP PP 22 03 25.5 +3.9
MDJ PCP PcP 22 04 18.5 +0.2
MDJ S **S** **22 07 35.5 +1.9**
MDJ SCP ScP 22 07 58.5 +0.7
MDJ PCS PcS 22 08 05.5 -0.6
MDJ SCS ScS 22 12 04.3 -0.1
MDJ AMB AMB
comp=Z,70nm,0.9s,mb5.6
MDJ AMB AMB
comp=Z,108nm,4.3s
MDJ LR LR
comp=N,146nm,37.5s
MDJ LR LR
comp=E,79nm,27.6s
MDJ LR LR
comp=Z,224nm,29.4s
MDJ Mudanjiang 36.62 4 *e*P **P** **22 01 57.6 +0.9**
comp=Z,78nm,1.0s,mb5.6
HNR Honiara 37.45 117 LR LR 22 14 59.0
comp=Z,140nm,18.8s,baz=311,slow=32
FORT Forrest 38.53 178 *e*P **P** **22 02 13.1 0.0**
comp=Z,75nm,0.6s,mb5.7
FORT *e*PCP PcP 22 04 24.9 +0.5
FORT *e*SCP ScP 22 08 06.5 +1.3
ASAJ Asahikawa 38.64 19 P **P** **22 02 15.7 +1.9**
comp=Z,98nm,0.7s,mb5.7,baz=240,slow=13,SNR=73
ASAJ LR LR 22 16 40.3
comp=Z,269nm,19.2s,baz=234,slow=34
GTA Gaotai 39.46 327 P **P** **22 02 20.3 -0.5**
GTA AP pP 22 02 39.0 -1.4
GTA XP sP 22 02 48.0 -1.8
GTA S **S** **22 08 15.3 -1.5**
GTA XS sS 22 08 46.5 -3.9
GTA AMB AMB
comp=Z,6.0nm,0.9s,mb4.4
GTA AMB AMB
comp=Z,150nm,5.4s
GTA LR LR
comp=N,267nm,21.0s
GTA LR LR
comp=E,268nm,21.0s
GTA LR LR
comp=Z,471nm,22.8s
LSA Lhasa 39.65 308 P **P** **22 02 23.8 +1.3**
LSA AMB AMB
comp=Z,20nm,1.0s,mb4.9
LSA Lhasa 39.65 308 *e*P **P** **22 02 24.1 +1.6**
LSA pmax pmax
comp=Z,37nm,0.6s,mb5.4
LSA Lhasa 39.65 308 *e*P **P** **22 02 24.1 +1.6**
comp=Z,37nm,0.6s,mb5.4
KLBR Kellerberrin 40.22 192 *e*P **P** **22 02 27.2 +0.1**
comp=Z,18nm,0.8s,mb5.0
KLBR *e*PCP PcP 22 04 30.1 +0.4
MUN Mundaring 40.92 194 *e*P **P** **22 02 33.6 +0.7**
HABR Khabarovsk 41.01 9 *e*P **P** **22 02 31.9 -1.5**
HABR *e* 22 04 34.0
HABR *e*S **S** **22 08 42.5 +2.9**
HABR *e* 22 09 00.6
HABR *e* 22 12 33.0
YSS Yuzh-Sakhalins 41.25 17⇓*e*P **P** **22 02 35.9 +0.5**
KLR Kul'dur 41.37 5 *e*P **P** **22 02 33.3 -3.0**
KLR pmax pmax
comp=Z,47nm,1.2s,mb5.2
HIA Hailar 41.58 353 *e*P **P** **22 02 37.4 -0.6**
NWAO Narrogin (SRO) 41.62 192 P **P** **22 02 39.2 +0.7**
comp=Z,26nm,0.5s,mb5.2,baz=17,slow=7.2,SNR=22
ODAN Odare 41.62 302 *e*P **P** **22 02 39.5 +0.7**
comp=Z,106nm,0.6s,mb5.7
STKA Stephens Creek 42.12 161 *e*P **P** **22 02 42.1 -0.6**
comp=Z,19nm,0.7s,mb4.9
STKA *e*PCP PcP 22 04 33.9 -2.0
STKA *e*SCP ScP 22 08 20.3 +1.0
STKA Stephens Creek 42.12 161 P **P** **22 02 42.3 -0.4**
comp=Z,33nm,0.9s,mb5.0,baz=343,slow=8.2,SNR=23
STKA PcP PcP 22 04 34.0 -1.9
comp=Z,7.2nm,0.5s,baz=338,slow=5.6,SNR=5.8
STKA ScP ScP 22 08 20.2 +0.9
comp=Z,3.1nm,0.7s,baz=286,slow=2.4,SNR=4.0
STKA LR LR 22 21 31.7
comp=Z,164nm,18.8s,baz=113,slow=38
JIRN Jiri 42.90 302 *e*P **P** **22 02 50.0 +0.9**
comp=Z,63nm,0.3s,mb5.8
ULN Ulaanbaatar 43.10 341 *c i*P **P** **22 02 49.8 -0.6**
ULN Ulaanbaatar 43.10 341 P **P** **22 02 49.7 -0.7**
comp=Z,11nm,0.6s,mb4.8
GUN Gumba 43.24 303 *e*P **P** **22 02 52.6 +0.7**
comp=Z,68nm,0.5s,mb5.7
SONM Songino Array 43.29 340 P **P** **22 02 51.0 -0.9**
comp=Z,3.5nm,0.5s,mb4.4,baz=152,slow=9.0,SNR=30
SONM PcP PcP 22 04 39.9 +0.3
comp=Z,6.0nm,0.7s,baz=158,slow=3.8,SNR=8.9
SONM ScP ScP 22 08 25.8 +2.1
comp=Z,0.6nm,0.8s,baz=148,slow=5.0,SNR=3.9
SONM LR LR 22 23 10.1
comp=Z,201nm,19.7s,baz=151,slow=39
SONM Songino Array 43.29 340 P **P** **22 02 51.0 -0.9**
SONM 22 04 39.9
KKN Kakani 43.70 302 *e*P **P** **22 02 55.8 +0.2**
comp=Z,65nm,0.9s,mb5.4
DMN Daman 43.79 302 *e*P **P** **22 02 56.5 +0.2**
comp=Z,31nm,0.5s,mb5.2
GKN Gorkha 44.31 302 *e*P **P** **22 03 00.2 -0.2**
comp=Z,22nm,0.4s,mb5.2
ARMA Armidale 45.09 149 *e*P **P** **22 03 07.0 +0.4**
KOLN Koldanda 45.11 301 *e*P **P** **22 03 07.2 +0.4**
comp=Z,101nm,0.6s,mb5.7
DANN Dangsing 45.15 302 *e*P **P** **22 03 07.5 +0.3**
comp=Z,73nm,0.4s,mb5.8
ZAK Zakamensk 46.53 340 *e*P **P** **22 03 16.9 -0.7**
ZAK *e* 22 04 50.2
ZAK pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
TLY Talaya 47.51 341 *e*P **P** **22 03 24.8 -0.4**
TLY pmax pmax
comp=Z,15nm,0.8s,mb4.9
TLY Talaya 47.51 341 *e*P **P** **22 03 24.8 -0.4**
comp=Z,15nm,0.8s,mb4.9
HYB Hyderabad 47.68 286 *i*P **P** **22 03 28.0 +0.9**
HYB Hyderabad 47.68 286 *e*P **P** **22 03 27.5 +0.4**
CAN Canberra 47.96 155 *e*P **P** **22 03 29.3 +0.4**
CNB Canberra Magne 48.10 155 *e*P **P** **22 03 30.9 +0.9**
TOO Toolangi 48.61 160 *e*P **P** **22 03 35.0 +1.1**
TOO *e*PCP pP 22 03 50.1 -4.0
CLNS Chul'man 48.78 359 *e*P **P** **22 03 35.5 +0.6**
CLNS pmax pmax
comp=Z,45nm,0.7s,mb5.5
CLNS pmax pmax
comp=E,9.0nm,0.7s
CLNS pmax pmax
comp=N,22nm,0.6s
WMQ Urumqi 49.24 323⇓*i*P **P** **22 03 39.5 +0.8**
WMQ AP pP 22 03 59.0 +0.1
WMQ XP sP 22 04 10.0 +1.8
WMQ PP PP 22 05 36.0 +2.8
WMQ S **S** **22 10 40.0 +1.5**
WMQ XS sS 22 11 12.0 -1.0
WMQ AMB AMB
comp=Z,27nm,0.6s,mb5.3
WMQ AMB AMB
comp=Z,221nm,5.8s
WMQ LR LR
comp=N,708nm,29.7s
WMQ LR LR
comp=E,513nm,24.3s
WMQ LR LR
comp=Z,763nm,24.3s
BOD Bodaibo 50.69 351 *e*P **P** **22 03 48.7 -0.7**
BOD pmax pmax
comp=Z,20nm,0.9s,mb5.2
HVS Khovu-Aksy 50.89 334 *d i*P **P** **22 03 51.1 +0.1**
SMLA Simla 51.44 304 *i*P **P** **22 03 55.6 +0.1**
SMLA *ex* x 22 03 56.5
comp=Z,268nm,0.5s
SMLA *i*S **S** **22 11 12.4 +2.9**
PEA0B Petropavlovsk- 51.62 23 *e*P **P** **22 03 58.3 +1.9**
PETK Petropavlovsk- 51.62 23 P **P** **22 03 57.7 +1.3**
comp=Z,27nm,0.9s,mb5.3,baz=198,slow=3.4,SNR=33
PETK PcP PcP 22 05 09.5 +0.3
comp=Z,8.5nm,0.6s,baz=210,slow=0.9,SNR=5.8
PETK LR LR 22 26 40.8
comp=Z,69nm,18.9s,baz=216,slow=37
YAK Yakutsk 54.02 2 *c i*P **P** **22 04 13.9 -0.1**
YAK *e* 22 05 17.6
YAK *e*S **S** **22 11 45.0 +1.4**
YAK *e* 22 13 50.6
YAK pmax pmax
comp=Z,105nm,1.0s,mb5.8
YAK pmax pmax
comp=N,38nm,1.0s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK smax
comp=E,38µm,1.7s
YAK smax
comp=N,59µm,1.8s
YAK Yakutsk 54.02 2 *e*P **P** **22 04 13.8 -0.1**
comp=N,94nm,0.8s,mb5.9
MK31 Makanchi Array 54.06 324 *i*P **P** **22 04 14.6 +0.1**
MKAR Makanchi Array 54.06 324 P **P** **22 04 14.7 +0.2**
comp=N,69nm,0.5s,mb6.0,baz=122,slow=7.7,SNR=415
MKAR PcP PcP 22 05 18.9 +0.3
comp=N,15nm,0.6s,baz=108,slow=3.6,SNR=7.9
MKAR LR LR 22 28 24.5
comp=N,170nm,21.3s,baz=221,slow=37
MKAR Makanchi Array 54.06 324 P **P** **22 04 14.7 +0.2**
MKAR 22 05 18.9
KRAR Krasnoyarsk 54.80 338⇓*i*P **P** **22 04 18.9 -0.8**
KRAR pmax pmax
comp=Z,15nm,0.8s,mb5.1
KSH Kashi 55.02 313 *e*P **P** **22 04 23.0 +1.4**
KSH *e*PCP PcP 22 05 26.0 +3.6
KSH *e*PP PP 22 06 26.0 +0.5
KSH *e*PPP 22 07 38.0
KSH *e*PCS PcS 22 09 24.0 +1.7
KSH *e*S **S** **22 11 55.5 -2.2**
KSH *e*SCS ScS 22 14 04.0 +0.7
KSH *e*SS SS 22 15 38.0 -4.6
KSH LR LR
comp=Z,621nm,5.8s
ULHL Ulahol 55.84 316 P **P** **22 04 28.1 +0.6**
SNR=7.3
KZA Kyzart 56.46 316 P **P** **22 04 33.1 +1.2**
SNR=11
TKM2 Tokmak 2 56.55 317 *e*P **P** **22 04 32.7 +0.2**
TKM2 *e* 22 05 28.6
TKM2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
TKM2 Tokmak 2 56.55 317 P **P** **22 04 32.9 +0.4**
SNR=20
TKM2 Tokmak 2 56.55 317 *e*P **P** **22 04 32.7 +0.2**
comp=Z,10nm,0.7s,mb5.0
TKM2 *e*PcP PcP 22 05 28.6 +0.3
ZAA0 Zalesovo Array 56.80 332 *e*P **P** **22 04 32.7 -1.4**
ZAA0 *e*PcP PcP 22 05 29.2 +0.2
ZALV Zalesovo Beam 56.80 332 P **P** **22 04 32.9 -1.2**
comp=Z,23nm,0.6s,mb5.4,baz=116,slow=7.0,SNR=96
ZALV PcP PcP 22 05 29.1 +0.2
comp=Z,7.8nm,0.4s,baz=116,slow=6.3,SNR=7.6
ZALV LR LR 22 30 59.3
comp=Z,96nm,18.5s,baz=256,slow=38
ZALV Zalesovo Beam 56.80 332 P **P** **22 04 32.9 -1.2**
ZALV 22 05 29.2
KBK Karagaybulak 56.89 316 P **P** **22 04 35.5 +0.6**
SNR=17
UCH Uchtor 57.03 316 P **P** **22 04 37.2 +1.3**
SNR=40
UCH Uchtor 57.03 316 *e*P **P** **22 04 37.1 +1.2**
comp=Z,21nm,0.6s,mb5.3
CHMS Chumysh 57.15 317 P **P** **22 04 36.7 -0.1**
SNR=9.2
AAK Ala-Archa 57.19 316 P **P** **22 04 38.6 +1.5**
SNR=9.4
USP Ospenovka 57.42 317 P **P** **22 04 38.6 0.0**
SNR=27
AML Almayashu 57.56 315 P **P** **22 04 40.6 +1.0**
SNR=15
AML Almayashu 57.56 315 *e*PcP PcP 22 05 32.3 +0.1
EKS2 Erkin-Say 57.69 316 P **P** **22 04 41.1 +0.5**
SNR=21
EKS2 Erkin-Say 57.69 316 *e*P **P** **22 04 41.2 +0.6**
comp=Z,22nm,0.7s,mb5.3
SEY Semynchan 57.98 14⇑*i*P **P** **22 04 44.4 +2.2**
NVS Novosibirsk 58.08 332⇑*i*P **P** **22 04 41.1 -1.9**
NVS *e*S **S** **22 12 41.3 +3.7**
NVS pmax pmax
comp=Z,33nm,0.8s,mb5.4
NVS pmax pmax
comp=N,11nm,0.7s
NVS pmax pmax
comp=E,23nm,0.8s
NVS smax
comp=N,19nm,1.7s
NVS smax
comp=E,12nm,1.3s
KURK Kurchatov 58.15 326 P **P** **22 04 43.7 +0.1**
comp=E,845nm,0.5s,SNR=21
KURK Kurchatov 58.15 326 P **P** **22 04 43.4 -0.2**
SNR=37
KURK Kurchatov 58.15 326 P **P** **22 04 42.8 -0.8**
comp=E,33nm,0.7s,mb5.5,baz=126,slow=6.8,SNR=218
KURK Kurchatov 58.15 326 P **P** **22 04 43.2 -0.4**
KURK pmax pmax
comp=Z,41nm,0.5s,mb5.7
KURK Kurchatov 58.15 326 *e*P **P** **22 04 43.2 -0.4**
comp=Z,68nm,0.6s,mb5.9
KBL Kabul 58.91 306 P **P** **22 04 49.0 -0.2**
KBL pmax pmax
comp=Z,19nm,0.6s,mb5.3
KBL Kabul 58.91 306 P **P** **22 04 49.0 -0.2**
comp=Z,19nm,0.6s,mb5.3
KK31 Karatay Array 60.10 315 *i*P **P** **22 04 56.6 -0.6**
KK31 pmax pmax
comp=Z,20nm,0.4s,mb5.5
BVA0 Borovoye Array 63.74 326 *i*P **P** **22 05 20.6 -0.9**
BVA0 pmax pmax
comp=Z,12nm,1.1s,mb4.6
BVAR Borovoye Array 63.74 326 P **P** **22 05 20.8 -0.7**
comp=Z,16nm,0.4s,mb5.2,baz=128,slow=7.8,SNR=84
BRVK Borovoye 63.81 326 P **P** **22 05 21.0 -0.9**
comp=Z,543nm,0.6s,SNR=18
BRVK Borovoye 63.81 326 P **P** **22 05 21.7 -0.3**
SNR=17
BRVK Borovoye 63.81 326⇑*i*P **P** **22 05 21.4 -0.5**
RPZ Rata Peaks 65.30 146 LR LR 22 31 13.1
comp=Z,115nm,20.2s,baz=109,slow=33
BILL Bilibino 65.54 15*ce*P **P** **22 05 33.5 +0.6**
BILL pmax pmax
comp=Z,30nm,1.3s,mb5.0
BILL Bilibino 65.54 15 *e*P **P** **22 05 33.1 +0.2**
comp=Z,13nm,0.6s,mb5.0
BIDO Bidbid 67.15 292 P **P** **22 05 43.8 -0.2**
SNR=20
JMDO Jabal Madar 67.15 291 P **P** **22 05 43.4 -0.7**
SNR=7.5
SMDO Samad 67.21 292 P **P** **22 05 44.0 -0.5**
SNR=6.7
HOQ Hoqain 67.89 292 P **P** **22 05 48.5 -0.3**
SNR=14
BSY Bisya 67.99 291 P **P** **22 05 48.8 -0.6**
SNR=5.5
ABKT Ailbek 68.18 308 P **P** **22 05 50.8 +0.5**
comp=Z,170nm,0.8s,mb5.9,SNR=14
AB31 Akbulak array 68.83 320 *i*P **P** **22 05 53.0 -1.1**
AB31 pmax pmax
comp=Z,15nm,0.4s,mb5.2
BANOM Banah 68.86 295 P **P** **22 05 55.2 +0.5**
SNR=6.4
ASHO Ashiyiah 69.06 293 P **P** **22 05 55.9 0.0**
SNR=6.7
UNV Unalaska Valle 70.07 35 *e*P **P** **22 06 01.9 +0.3**
comp=Z,23nm,0.6s,mb5.2
AKTK Aktyubinsk 70.30 321 P **P** **22 06 02.4 -0.7**
AKTO Aktyubinsk 70.30 321 P **P** **22 06 02.4 -0.7**
comp=Z,30nm,0.7s,mb5.3,baz=102,slow=7.8,SNR=63
SVE Sverdlovsk 70.32 328⇓*e*P **P** **22 06 02.2 -0.9**
SVE pmax pmax
comp=Z,34nm,0.6s,mb5.3
RBK Rabkut 70.90 286 P **P** **22 06 07.5 +0.1**
SNR=5.8
WHFO Wadi Hawf 71.30 286 P **P** **22 06 09.1 -0.6**
SNR=7.7
ARU Arti 71.32 327 P **P** **22 06 07.3 -1.9**
comp=Z,361nm,0.5s,SNR=22
ARU Arti 71.32 327*c i*P **P** **22 06 07.8 -1.4**
ARU *e* pP 22 06 27.1 -3.5
ARU *e*S S 22 15 24.9 +4.5
ARU pmax pmax
comp=Z,31nm,0.7s,mb5.2
ARU Arti 71.32 327⇑*i*P **P** **22 06 07.9 -1.3**
ABTO Aybut 71.77 286 P **P** **22 06 12.9 +0.2**
SNR=5.8
CASY Casey 74.97 187 *e*P **P** **22 06 30.8 +0.5**
UMR Umm Al-Rimmam 76.46 298 *e*P **P** **22 06 38.6 -1.2**
baz=298
UMR AMb AMB 22 06 39.1
comp=Z,53nm,0.9s,mb5.3,baz=298
RDF Al-Radifah 76.63 298 *e*P **P** **22 06 39.6 -1.1**
baz=298
RDF AMb AMB 22 06 42.3
comp=Z,51nm,0.8s,mb5.3,baz=298
MIB Mutribah 76.78 299 *e*P **P** **22 06 40.4 -1.1**
baz=299
MIB AMb AMB 22 06 41.2
comp=Z,76nm,0.7s,mb5.5,baz=299
NAY Al-Naaiem 76.89 298 *e*P **P** **22 06 40.6 -1.6**
baz=298
NAY AMb AMB 22 06 41.7
comp=Z,29nm,0.7s,mb5.1,baz=298
RST Umm Al-Ruwaisa 77.09 298 *e*P **P** **22 06 41.8 -1.5**
baz=298
RST AMb AMB 22 06 43.7
comp=Z,86nm,1.1s,mb5.4,baz=298
SVW2 Sparrevohn 77.20 29 *e*P **P** **22 06 44.6 +1.4**
OHAK Old Harbor 78.01 33 *e*P **P** **22 06 48.7 +0.9**
comp=Z,37nm,0.8s,mb5.2
DGRG David-gareji 78.20 311 P **P** **22 06 50.0 +0.7**
MIR Mirnyy 78.21 193⇑*i*P **P** **22 06 49.0 +0.4**
MIR pmax pmax
comp=Z,200nm,0.8s,mb5.9
KDAK Kodiak Island 78.43 33 P **P** **22 06 51.0 +0.9**
comp=Z,356nm,0.7s,mb6.2,SNR=14
KDAK Kodiak Island 78.43 33 P **P** **22 06 51.4 +1.3**
comp=Z,33nm,0.6s,mb5.2,baz=279,slow=3.0,SNR=23
KDAK LR LR 22 37 32.8
comp=Z,150nm,21.2s,baz=278,slow=33
KDAK Kodiak Island 78.43 33 P **P** **22 06 51.4 +1.3**
KDAK LR LR 22 37 32.8
IMA2 Indian Mountai 78.61 24 *e*P **P** **22 06 52.3 +1.4**
MTA Mtatsminda 78.64 311 P **P** **22 06 51.5 -0.1**
TBLG Delisi 78.68 311 *e*P **P** **22 06 51.8 -0.1**
TBLG Delisi 78.68 311 P **P** **22 06 51.8 0.0**
GNI Garni 78.70 309 *e*P **P** **22 06 52.7 +0.7**
GNI Garni 78.70 309 *e*P **P** **22 06 52.7 +0.7**
PPLA Purkeypile 78.97 27 *e*P **P** **22 06 54.3 +1.3**
comp=Z,9.1nm,0.8s,mb4.7
CHUM Lake Minchumin 78.98 26 *e*P **P** **22 06 53.9 +0.8**
comp=Z,15nm,0.9s,mb4.8
KTH Kantishna Hill 79.58 27 *e*P **P** **22 06 57.1 +0.8**
comp=Z,23nm,1.0s,mb5.0

BPAW	**Bear Paw Mtn.**	**79.58**	**26**	*e*P		**P**	**22 06 57.5**	**+1.2**
	comp=Z,3µm,0.9s							
SLKM	**Skilak Lake**	**79.78**	**30**	*e*P		**P**	**22 06 58.1**	**+0.7**
TRF	**Thorofare Moun**	**79.86**	**27**	*e*P		**P**	**22 06 58.7**	**+0.9**
	comp=Z,3µm,0.9s							
RC01	**Rabbit Creek A**	**80.03**	**29**	*e*P		**P**	**22 06 59.2**	**+0.5**
	comp=Z,30nm,0.8s,mb5.2							
KIV	**Kislovodsk**	**80.15**	**313**	P		**P**	**22 07 00.1**	**+0.3**
	comp=Z,165nm,0.6s,mb6.0,SNR=5.8							
KIV	**Kislovodsk**	**80.15**	**313**	*e*P		**P**	**22 07 00.0**	**+0.2**
KIV				pmax	pmax			
	comp=Z,20nm,0.9s,mb5.0							
KIV				MLR	MLR			
	comp=Z,81nm,20.0s							
KIV	**Kislovodsk**	**80.15**	**313**	⇑*i*P		**P**	**22 07 00.2**	**+0.4**
KIV	**Kislovodsk**	**80.15**	**313**	*i* P		**P**	**22 07 00.3**	**+0.5**
SEW	**Seward**	**80.15**	**30**	*e*P		**P**	**22 06 59.5**	**+0.1**
PMR	**Palmer**	**80.34**	**29**	*e*P		**P**	**22 07 00.4**	**0.0**
PMR				pmax	pmax			
	comp=Z,19nm,0.9s,mb4.9							
PMR	**Palmer**	**80.34**	**29**	*e*P		**P**	**22 07 00.4**	**0.0**
	comp=Z,19nm,0.9s,mb4.9							
MCK	**McKinley**	**80.48**	**27**	*e*P		**P**	**22 07 01.7**	**+0.6**
MCK				pmax	pmax			
	comp=Z,66nm,0.9s,mb5.5							
MCK	**McKinley**	**80.48**	**27**	*e*P		**P**	**22 07 01.7**	**+0.5**
	comp=Z,66nm,0.9s,mb5.5							
COLA	**College**	**80.97**	**26**⇓	*e*P		**P**	**22 07 04.3**	**+0.6**
BEST	**Besiri**	**81.48**	**307**	*i* P		**P**	**22 07 08.2**	**+1.1**
KLMR	**Klimovskoe**	**81.68**	**330**	*i* P		**P**	**22 07 06.6**	**-1.0**
KLMR				pmax	pmax			
	comp=Z,70nm,0.9s,mb5.5							
VSR	**Storozhevoye**	**82.25**	**321**	*e*P		**P**	**22 07 08.6**	**-2.1**
VSR				pmax	pmax			
	comp=Z,8.0nm,0.5s,mb4.8							
VSR				pmax	pmax			
	comp=N,3.0nm,0.9s							
VSR				pmax	pmax			
	comp=E,20nm,0.9s							
SOC	**Sochi**	**82.31**	**313**	*e*P		**P**	**22 07 09.7**	**-1.6**
SOC				*e*			22 10 15.0	
SOC				*e*PPP			22 12 10.0	
SOC				*e*S	S		22 17 19.8	-0.8
SOC				*e*SS	SS		22 22 50.1	+7.7
SOC				pmax	pmax			
	comp=Z,24nm,0.7s,mb5.1							
MOS	**Moscow**	**82.90**	**325**	*e*P		**P**	**22 07 12.9**	**-1.2**
MOS				pmax	pmax			
	comp=Z,75nm,0.7s,mb5.6							
OBN	**Obninsk**	**83.55**	**325**	P		**P**	**22 07 17.0**	**-0.4**
OBN				*e*			22 07 26.4	
OBN				pmax	pmax			
	comp=Z,35nm,0.6s,mb5.4							
OBN				MLR	MLR			
	comp=Z,100nm,17.0s							
OBN	**Obninsk**	**83.55**	**325**⇓	*e*P		**P**	**22 07 17.1**	**-0.3**
MALT	**Malatya**	**83.69**	**308**	*e*P		**P**	**22 07 19.2**	**+0.7**
MALT				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.6							
MALT	**Malatya**	**83.69**	**308**⇑	*i*P		**P**	**22 07 20.0**	**+1.5**
MALT	**Malatya**	**83.69**	**308**	*e*P		**P**	**22 07 19.2**	**+0.7**
	comp=Z,5.8nm,0.6s,mb4.6							
ANN	**Anapa**	**83.86**	**314**	*e*P		**P**	**22 07 17.3**	**-1.9**
ANN				pmax	pmax			
	comp=Z,42nm,0.6s,mb5.5							
APA	**Apatity**	**83.92**	**337**⇑	*i*P		**P**	**22 07 19.2**	**+0.1**
APA				pmax	pmax			
	comp=Z,36nm,1.2s,mb5.1							
AKCD	**Akcadag**	**84.09**	**308**	*i* P		**P**	**22 07 21.1**	**+0.6**
GZT	**Gaziantep**	**84.46**	**307**	*i* P		**P**	**22 07 22.5**	**+0.1**
DAWY	**Dawson**	**84.67**	**26**	*e*P		**P**	**22 07 24.4**	**+1.5**
PINB	**Pinarbasi**	**85.23**	**308**	*i* P		**P**	**22 07 26.6**	**+0.3**
JOF	**Joensuu**	**85.38**	**333**	*e*p		**P**	**22 07 25.6**	**-0.9**
	comp=Z,41nm,0.4s,mb5.7							
ANDN	**Andirin**	**85.40**	**307**	*i* P		**P**	**22 07 27.6**	**+0.5**
KEV	**Kevo**	**85.90**	**340**	*e*p		**P**	**22 07 30.2**	**+1.3**
	comp=Z,2.1nm,0.4s,mb4.4							
KEV	**Kevo**	**85.90**	**340**	*e*P		**P**	**22 07 30.2**	**+1.3**
KEV				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.4							
HYT	**Haines Junctio**	**86.00**	**29**	*e*P		**P**	**22 07 29.9**	**+0.4**
SIM	**Simferopol'**	**86.19**	**315**⇑	*e*P		**P**	**22 07 30.6**	**-0.3**
SIM				pmax	pmax			
	comp=Z,47nm,0.6s,mb5.6							
CTKT	**Corum**	**86.24**	**310**	*i* P		**P**	**22 07 31.3**	**+0.1**
SPITS	**Spitsbergen Ar**	**86.34**	**349**	P		**P**	**22 07 30.3**	**-0.7**
	comp=Z,16nm,0.9s,mb5.0,baz=48,slow=5.8,SNR=16							
AVNT	**Avonos**	**86.42**	**308**	*i* P		**P**	**22 07 29.7**	**-2.5**
ARCES	**ARCESS Array B**	**86.46**	**340**	P		**P**	**22 07 30.8**	**-0.9**
	comp=Z,16nm,0.7s,mb5.0,baz=63,slow=5.9,SNR=63							
ARCES				PKiKP	PKiKP		22 12 38.0	-0.2
	comp=Z,3.7nm,1.1s,baz=11,slow=1.2,SNR=4.3							
ARCES				PKKPbc	PKKPbc		22 25 27.3	-3.5
	comp=Z,1.1nm,0.6s,baz=264,slow=2.3,SNR=8.4							
ARCES				LR	LR		22 47 20.1	
	comp=Z,104nm,19.0s,baz=270,slow=36							
ARE0	**ARCESS Array S**	**86.46**	**340**	*e*P		**P**	**22 07 30.7**	**-1.0**
PPT	**Papeete**	**86.55**	**108**	*e*LR		LR	22 35 16.0	
	comp=Z,155nm,27.0s							
CDAG	**Cicekdag**	**86.69**	**309**	*i* P		**P**	**22 07 32.3**	**-1.1**
BALT	**Daday**	**87.17**	**311**	*i* P		**P**	**22 07 32.8**	**-2.9**
BR131	**Keskin Array S**	**87.23**	**310**	*e*P		**P**	**22 07 34.7**	**-1.4**
	comp=Z,3.1nm,0.5s,mb4.5							
MEST	**Erdemli**	**87.27**	**306**	*i* P		**P**	**22 07 37.4**	**+1.0**
TBI	**Tubuai**	**87.61**	**114**	*e*LR		LR	22 35 59.1	
	comp=Z,216nm,25.8s							
MAW	**Mawson**	**87.64**	**200**	*e*P		**P**	**22 07 37.7**	**+0.4**
	comp=Z,2.1nm,0.6s,mb4.3							
MAW	**Mawson**	**87.64**	**200**	P		**P**	**22 07 36.6**	**-0.7**
	comp=Z,3.4nm,0.9s,mb4.4,baz=36,slow=6.8,SNR=8.1							
MAW				LR	LR		22 46 47.2	
	comp=Z,73nm,19.4s,baz=236,slow=36							
MAW	**Mawson**	**87.64**	**200**	*e*P		**P**	**22 07 37.7**	**+0.4**
MAW				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KAF	**Kangasniemi**	**87.81**	**332**	*e*p		**P**	**22 07 37.3**	**-1.0**
	comp=Z,12nm,0.4s,mb5.3,baz=73,slow=4.3							
KAF	**Kangasniemi**	**87.81**	**332**	*e*P		**P**	**22 07 37.3**	**-1.0**
KAF				pmax	pmax			
	comp=Z,12nm,0.4s,mb5.3							
CSS	**Prodhromos**	**88.15**	**305**	*e*P		**P**	**22 07 40.0**	**-0.6**
	comp=Z,16nm,0.6s,mb5.2							
SBA	**Scott Base**	**88.51**	**172**	*e*P		**P**	**22 07 41.8**	**+0.5**
SBA				pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.8							
SBA	**Scott Base**	**88.51**	**172**	*e*P		**P**	**22 07 41.8**	**+0.5**
	comp=Z,9.3nm,0.9s,mb4.8							
AKASG	**Malin Array Be**	**88.55**	**321**	P		**P**	**22 07 40.3**	**-1.7**
	comp=Z,22nm,0.6s,mb5.4,baz=57,slow=5.2,SNR=63							
AKBB	**Malin Array Si**	**88.55**	**321**	*e*P		**P**	**22 07 40.9**	**-1.2**
KIEV	**Kiev**	**88.56**	**321**	*e*P		**P**	**22 07 40.6**	**-1.5**
KIEV				pmax	pmax			
	comp=Z,21nm,0.8s,mb5.2							
KIEV	**Kiev**	**88.56**	**321**	*e*P		**P**	**22 07 40.6**	**-1.6**
	comp=Z,21nm,0.8s,mb5.2							
KIEV				*e*		pP	22 08 05.0	+0.7
KMBO	**Kilima Mbogo**	**89.49**	**269**	P		**P**	**22 07 47.6**	**+0.3**
	comp=Z,4.3nm,0.8s,mb4.5,baz=70,slow=7.2,SNR=7.4							
KMBO				LR	LR		22 46 22.2	
	comp=Z,78nm,18.7s,baz=196,slow=34							
KMBO	**Kilima Mbogo**	**89.49**	**269**	*e*P		**P**	**22 07 47.0**	**-0.3**
KMBO				pmax	pmax			
	comp=Z,7.0nm,1.3s							
KMBO	**Kilima Mbogo**	**89.49**	**269**	*e*P		**P**	**22 07 47.0**	**-0.3**
	comp=Z,6.8nm,1.3s,mb4.5							
BORA	**Eskisehir**	**89.64**	**310**	*i* P		**P**	**22 07 46.1**	**-1.3**
TLCR		**89.86**	**316**⇑	*i*P		**P**	**22 07 48.0**	**-0.4**
TLCR		**89.86**	**316**⇑	P		**P**	**22 07 48.0**	**-0.4**
TIRR	**Tirgusor**	**90.28**	**315**⇓	*i* P		**P**	**22 07 49.6**	**-0.7**
TIRR	**Tirgusor**	**90.28**	**315**⇓	P		**P**	**22 07 49.6**	**-0.7**
HARR	**Harsova**	**90.57**	**315**⇓	*i*P		**P**	**22 07 51.4**	**-0.3**
HARR	**Harsova**	**90.57**	**315**⇓	P		**P**	**22 07 51.4**	**-0.3**
GOLH	**Golhisar**	**90.79**	**308**	*i* P		**P**	**22 07 51.6**	**-1.3**
DEMI	**Demirci**	**91.11**	**310**	*i* P		**P**	**22 07 53.2**	**-1.1**
VRI	**Vrincioaia**	**91.16**	**316**⇑	*i*P		**P**	**22 07 55.6**	**+1.2**
VRI	**Vrincioaia**	**91.16**	**316**⇑	P		**P**	**22 07 55.6**	**+1.2**
PLOR	**Plostina**	**91.21**	**316**⇑	*i*P		**P**	**22 07 55.6**	**+1.0**
MANT	**Manisa**	**91.34**	**309**	*i* P		**P**	**22 07 54.3**	**-1.1**
SUW	**Suwalki**	**91.41**	**325**	*e*P		**P**	**22 07 54.8**	**-0.6**
SUW	**Suwalki**	**91.41**	**325**	*e*P		**P**	**22 07 54.7**	**-0.6**
BURAR	**Bucovina Array**	**91.77**	**318**⇓	*i*P		**P**	**22 07 57.1**	**-0.1**
BURAR	**Bucovina Array**	**91.77**	**318**	⇓P		**P**	**22 07 57.1**	**-0.1**
BUR08	**Bucovina Ar. S**	**91.77**	**318**	*e*P		**P**	**22 07 56.8**	**-0.4**
LVV	**L'vov**	**91.99**	**321**	*e*P		**P**	**22 07 59.6**	**+1.5**
KWP	**Kalwaria**	**92.87**	**321**	*e*P		**P**	**22 08 02.7**	**+0.5**
KWP	**Kalwaria**	**92.87**	**321**	⇓*i*P		**P**	**22 08 02.3**	**+0.1**
KWP	**Kalwaria**	**92.87**	**321**	*e*P		**P**	**22 08 02.7**	**+0.5**
BBB	**Bella Bella**	**93.02**	**36**	LR		LR	22 46 57.7	
	comp=Z,71nm,19.1s,baz=307,slow=34							
DAG	**Danmarks Havn**	**93.08**	**352**⇑	*e*P		**P**	**22 08 02.0**	**-0.6**
DAG				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb5.2							
DAG	**Danmarks Havn**	**93.08**	**352**⇑	*i*P		**P**	**22 08 02.0**	**-0.6**
	comp=Z,9.7nm,0.8s,mb5.2							
DAG	**Danmarks Havn**	**93.08**	**352**⇑	*e*P		**P**	**22 08 02.0**	**-0.6**
	comp=Z,9.7nm,0.8s,mb5.2							
KOLS	**Kolonicke sedl**	**93.33**	**320**	*e*P		**P**	**22 08 04.1**	**-0.3**
UZH	**Uzhgorod**	**93.40**	**320***d*	*e*P		**P**	**22 08 03.8**	**-0.9**
DRGR		**93.63**	**318**⇓	*i*P		**P**	**22 08 05.3**	**-0.5**
DRGR		**93.63**	**318**	⇓P		**P**	**22 08 05.3**	**-0.5**
STHS	**Stebnicka Huta**	**93.84**	**321**	*e*P		**P**	**22 08 08.2**	**+1.5**
STHS				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb5.0							
STHS	**Stebnicka Huta**	**93.84**	**321**	*e*P		**P**	**22 08 08.2**	**+1.5**
	comp=Z,6.1nm,0.7s,mb5.0							
CRVS	**Cervinica-Dubn**	**93.86**	**320**	*e*P		**P**	**22 08 07.4**	**+0.6**
NIE	**Niedzica**	**94.42**	**321**	*e*P		**P**	**22 08 09.8**	**+0.4**
OJC	**Ojcow**	**94.50**	**322**	*e*P		**P**	**22 08 09.9**	**+0.2**
BZS	**Buzias**	**94.68**	**317**⇑	*i*P		**P**	**22 08 10.8**	**+0.2**
BZS	**Buzias**	**94.68**	**317**	⇑P		**P**	**22 08 10.8**	**+0.2**
NOA	**NORSAR Array B**	**94.96**	**334**	P		**P**	**22 08 10.4**	**-1.2**
	comp=Z,6.0nm,0.6s,mb5.2,baz=64,slow=4.6,SNR=22							
NOA				LR	LR		22 57 47.8	
	comp=Z,92nm,18.3s,baz=30,slow=40							
PSZ	**Piszkesteto**	**95.14**	**320**⇓	*i*P		**P**	**22 08 13.1**	**+0.4**
PSZ	**Piszkesteto**	**95.14**	**320**	⇓P		**P**	**22 08 13.1**	**+0.4**
VYHS	**Vyhne**	**95.64**	**320**	*e*P		**P**	**22 08 15.2**	**+0.3**
YKA	**Yellowknife Ar**	**95.73**	**24**	P		**P**	**22 08 15.4**	**+0.4**
	comp=Z,13nm,0.7s,mb5.5,baz=301,slow=4.7,SNR=62							
YKA				PKKPbc	PKKPbc		22 25 03.9	-3.2
	comp=Z,0.9nm,0.5s,baz=122,slow=2.6,SNR=6.6							
YKA	**Yellowknife Ar**	**95.73**	**24**⇑	*e*P		**P**	**22 08 15.6**	**+0.5**
YKA	**Yellowknife Ar**	**95.73**	**24**	P		**P**	**22 08 15.4**	**+0.4**
YKA				PKKPbc	PKKPbc		22 25 03.9	-3.2
MORC	**Moravsky Berou**	**96.02**	**322**⇓	*i*P		**P**	**22 08 16.7**	**+0.1**
MORC	**Moravsky Berou**	**96.02**	**322**	⇓P		**P**	**22 08 16.7**	**0.0**
SYO	**Syowa Base**	**96.28**	**201**⇓	*e*P		**P**	**22 08 16.0**	**-1.3**
SYO	**Syowa Base**	**96.28**	**201**⇓	*e*pP		pP	22 08 44.9	+5.3
PKSM	**Moragy**	**96.49**	**318**⇑	*i*P		**P**	**22 08 19.6**	**+0.7**
PKSM	**Moragy**	**96.49**	**318**	⇑P		**P**	**22 08 19.6**	**+0.8**
DPC	**Dobruska-Polom**	**96.56**	**323**	*e*P		**P**	**22 08 19.1**	**0.0**
UPC	**Upice**	**96.69**	**323**	*e*P		**P**	**22 08 19.5**	**-0.2**
VRAC	**Vranov**	**96.76**	**322**	⇓*i*P		**P**	**22 08 20.5**	**+0.5**
VRAC	**Vranov**	**96.76**	**322**	⇓P		**P**	**22 08 20.5**	**+0.5**
TREC	**Trest**	**97.44**	**322**	*e*P		**P**	**22 08 23.1**	**0.0**
PVCC	**Panska Ves**	**97.54**	**323**	*e*P		**P**	**22 08 24.1**	**+0.6**
PRU	**Pruhonice**	**97.76**	**323**	*e*P		**P**	**22 08 24.2**	**-0.3**
BRG	**Berggiesshubel**	**97.77**	**324**	*e*P		**P**	**22 08 23.9**	**-0.6**
BRG				pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.8							
BRG	**Berggiesshubel**	**97.77**	**324**	*e*P		**P**	**22 08 23.9**	**-0.7**
	comp=Z,5.5nm,1.0s,mb5.0							
JCW	**Jim Creek**	**98.08**	**39**	*e*P		**P**	**22 08 25.5**	**-0.5**
FBE	**Freiberg**	**98.10**	**324**	*e*Pdiff		**P**	**22 08 27.4**	**+1.4**
CLL	**Collm**	**98.15**	**324**	*e*P		**P**	**22 08 26.0**	**-0.2**
CLL				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb5.0							
CLL	**Collm**	**98.15**	**324**	*e*Pdiff		**P**	**22 08 26.8**	**+0.6**
CLL	**Collm**	**98.15**	**324**	*e*P		**P**	**22 08 26.0**	**-0.2**
	comp=Z,3.0nm,0.6s,mb5.0							
KHC	**Kasperske Hory**	**98.66**	**322**	*e*P		**P**	**22 08 28.4**	**-0.2**
GEC2	**GERESS Array S**	**98.70**	**322**	*e*Pdiff		**P**	**22 08 28.1**	**-0.6**
GERES	**GERESS Array B**	**98.70**	**322**	P		**P**	**22 08 28.5**	**-0.2**
	comp=Z,4.8nm,0.8s,mb5.1,baz=61,slow=4.0,SNR=37							
GERES				PP	PP		22 12 30.4	+0.1
	comp=Z,0.5nm,0.7s,baz=65,slow=6.3,SNR=3.8							
GERES				LR	LR		22 56 02.8	
	comp=Z,123nm,18.3s,baz=215,slow=37							
GERES	**GERESS Array B**	**98.70**	**322**	P		**P**	**22 08 28.5**	**-0.2**
GERES							22 12 30.4	
TANN	**Tannenbergstha**	**98.82**	**324**	*e*Pdiff		**P**	**22 08 29.0**	**-0.2**
WERD	**Werda**	**98.90**	**324**	*e*Pdiff		**P**	**22 08 30.5**	**+0.9**
GUNZ	**Gunzen**	**98.92**	**324**	*e*Pdiff		**P**	**22 08 30.0**	**+0.3**
YBH	**Yreka Blue Hor**	**99.84**	**45**	LR		LR	22 55 12.3	
	comp=Z,64nm,18.6s,baz=349,slow=36							
GRA1	**Grafenberg Arr**	**99.85**	**323**	*e*Pdif		Pdif	22 08 34.4	+0.7
GRF	**Grafenberg Arr**	**99.85**	**323**	*e*Pdiff		Pdif	22 08 34.4	+0.7
NVAR	**Mina Array Bea**	**104.19**	**47**	Pdiff		Pdif	22 08 53.5	+0.5
	comp=Z,1.4nm,0.9s,baz=268,slow=4.8,SNR=7.2							
NVAR				PKiKP		PKiKP	22 13 08.6	-1.4
	comp=Z,1.0nm,0.9s,baz=267,slow=4.5,SNR=5.1							
NVAR				PKKPbc	PKKPbc		22 24 41.9	-0.5
	comp=Z,0.7nm,0.6s,baz=123,slow=3.4,SNR=5.6							
BOZ	**Bozeman (W)**	**105.55**	**38**	*e*PKP	PKiKP		22 13 03.6	-8.7
PDAR	**Pinedale Array**	**108.26**	**40**	PKiKP	PKiKP		22 13 18.4	+0.9
	comp=Z,0.3nm,0.3s,baz=115,slow=3.2,SNR=4.1							
PV10	**Paradox Valley**	**110.77**	**44**	*e*PKP	PKiKP		22 13 23.9	+1.6
PV01	**Paradox Valley**	**111.21**	**44**	*e*PKP	PKiKP		22 13 23.4	+0.3
ULM	**Lac du Bonnet**	**111.33**	**28**	PKiKP	PKiKP		22 13 22.4	-0.7
	comp=Z,2.0nm,0.6s,baz=298,slow=6.0,SNR=2.9							
SDCO	**Great Sand Dun**	**113.50**	**44**	PKP	PKiKP		22 13 29.1	+1.6
ANMO	**Albuquerque**	**114.25**	**46**⇑	*e*PKiKP	PKiKP		22 13 31.5	+2.4
SCHQ	**Schefferville**	**116.44**	**9**	PKP	PKPdf		22 13 33.1	+0.4
	comp=Z,2.5nm,0.5s,baz=50,slow=18,SNR=7.1							
TXAR	**Lajitas Array**	**119.08**	**50**	PKP	PKPdf		22 13 39.4	+0.9
	comp=Z,2.9nm,0.6s,baz=343,slow=1.1,SNR=34							
TXAR				PKKPbc	PKKPbc		22 23 53.6	+0.7
	comp=Z,0.8nm,0.7s,baz=138,slow=5.5,SNR=7.2							
JCT	**Junction City**	**121.36**	**47**	*e*PKiKP	PKPdf		22 13 44.3	+1.4
TOA0	**Torodi Ar. Sit**	**121.39**	**291**	*e*PKPdf	PKPdf		22 13 42.7	-0.6
TORD	**Torodi Ar. Bea**	**121.39**	**291**	PKP	PKPdf		22 13 42.9	-0.4
	comp=Z,9.8nm,0.5s,baz=66,slow=1.9,SNR=180							
TORD	**Torodi Ar. Bea**	**121.39**	**291**	PKP	PKPdf		22 13 42.9	-0.4
SADO	**Sadowa**	**122.63**	**22**	PKP	PKPdf		22 13 44.9	0.0
OLIL	**Olney**	**123.46**	**32**	*e*PKPdf	PKPdf		22 13 47.2	+0.6
ACSO	**Alum Creek Sta**	**124.83**	**27**	*e*PKPdf	PKPdf		22 13 49.2	0.0
WVT	**Waverly**	**125.51**	**34**	*e*PKiKP	PKPdf		22 13 50.6	-0.1
TKL	**Tuckaleechee C**	**128.04**	**32**	PKP	PKPdf		22 13 55.2	-0.4
	comp=Z,17nm,1.0s,baz=183,slow=1.7,SNR=13							
TKL	**Tuckaleechee C**	**128.04**	**32**	PKP	PKPdf		22 13 55.2	-0.4
LRAL	**Lakeview Retre**	**128.21**	**36**	*e*PKPdf	PKPdf		22 13 56.5	+0.6
KIC	**Kosan Boka**	**129.42**	**285**	*e*PKiKP	PKPdf		22 13 59.3	+0.6
	comp=Z,64nm,0.7s							
DBIC	**Dimbokro**	**129.44**	**285**	PKP	PKPdf		22 13 58.8	0.0
	comp=Z,6.2nm,0.5s,baz=59,slow=3.5,SNR=15							
DBIC				SKPbc			22 17 14.4	
	comp=Z,4.9nm,0.8s,baz=57,slow=5.2,SNR=4.9							
TIC	**Toumodi**	**129.61**	**285**	*e*PKiKP	PKPdf		22 13 59.2	+0.1
	comp=Z,35nm,0.6s							
LIC	**Lamto**	**129.73**	**285**	*e*PKiKP	PKPdf		22 13 59.7	+0.4
	comp=Z,54nm,0.8s							
CMIG	**Matias Romero**	**132.04**	**59**	PKP	PKPdf		22 14 04.9	+1.4
	comp=Z,3.2nm,0.5s,baz=338,slow=1.6,SNR=7.6							
CMIG				SKPbc	SKPbc		22 17 25.8	+3.1
	comp=Z,5.4nm,0.9s,baz=258,slow=6.0,SNR=8.3							
PLCA	**Paso Flores**	**143.96**	**158**	PKP	PKPdf		22 14 24.1	-0.7
	comp=Z,6.7nm,0.5s,baz=178,slow=3.5,SNR=31							
PLCA				SKPbc	SKPbc		22 17 56.5	+0.1
	comp=Z,2.3nm,0.8s,baz=143,slow=2.7,SNR=3.7							
PLCA	**Paso Flores**	**143.96**	**158**	*e*PKPdf	PKPdf		22 14 24.0	-0.7
BCIP	**Isla Barro Col**	**148.66**	**58**	*e*PKPdf	PKPdf		22 14 34.5	+1.0
TRQA	**Tornquist**	**149.04**	**167**	*e*PKPbc	PKPbc		22 14 37.7	+0.1
LMEL	**Las Melosas**	**149.93**	**151**⇓	*e*P	PKPbc		22 14 41.2	+1.3
FCH	**Farellones**	**150.31**	**151**⇓	*i*P	PKPbc		22 14 42.6	+1.8
SJG	**San Juan**	**151.21**	**26**	*e*PKiKP	PKPbc		22 14 43.6	+0.3
CFAA	**Coronel Fontan**	**152.71**	**152**	PKP	PKPdf		22 14 40.0	+0.8
	comp=Z,0.6nm,0.8s,baz=278,slow=3.9,SNR=8.9							
CFAA				PKPbc	PKPbc		22 14 46.8	+0.4
	comp=Z,3.0nm,0.7s,baz=231,slow=2.7,SNR=42							
LCO	**Las Campanas**	**153.47**	**144**	*e*PKPdf	PKPdf		22 14 39.9	-0.6
LCO				*e*PKPbc	PKPbc		22 14 48.5	+0.4
LCO				*e*PKPab	PKPab		22 15 01.3	+0.8
OTAV	**Otavalo**	**153.75**	**73**	*e*PKPdf	PKPdf		22 14 42.5	+1.2
OTAV				*e*PKPbc	PKPbc		22 14 50.1	+0.9
SDV	**Santo Domingo**	**156.04**	**46**	*e*PKPdf	PKPdf		22 14 46.3	+1.9
SDV				*e*PKPdif			22 14 54.9	
CPUP	**Villa Florida**	**161.35**	**169**	PKP	PKPdf		22 14 50.2	-0.1
	comp=Z,0.5nm,0.4s,baz=177,slow=2.5,SNR=5.5							
CPUP				PKPab	PKPab		22 15 35.0	+0.5
	comp=Z,2.0nm,0.6s,baz=168,slow=5.4,SNR=6.3							
LPAZ	**La Paz**	**163.41**	**121**	PKP	PKPdf		22 14 54.9	+2.2
	comp=Z,7.0nm,0.9s,baz=60,slow=0.6,SNR=23							
LPAZ				PKPab	PKPab		22 15 47.1	+3.2
	comp=Z,3.7nm,0.8s,baz=231,slow=1.6,SNR=6.9							
LPAZ	**La Paz**	**163.41**	**121**	*e*PKPdf	PKPdf		22 14 53.8	+1.2
LPAZ				*e*PKPab	PKPab		22 15 45.6	+1.7

MAN 25 22:08:13,1202N×12535E,h6km,mb4.3,ML3.2,MS3.0,

2D,Samar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BESP	**Borongan**	**0.42**	**169**	*e*P		Pg	22 08 22.0	+0.8
BESP				*e*S		Sg	22 08 32.6	+5.9
PLP	**Palo**	**0.92**	**203**⇓	*e*P		Pg	22 08 30.4	-0.3
PLP				*e*S		Sg	22 08 47.2	+4.4
MSLP	**Maasin**	**1.93**	**195**	*e*P		Pn	22 08 47.6	+1.2
MSLP				*e*S		Sn	22 09 12.7	+1.6
SCPH	**Surigao**	**2.23**	**177**⇓	*e*P		Pn	22 09 00.0	+10

*CSEM **25** 22:20:49.9±0.1,3975N×2780E,h5km,MD2.9, Error ellipse: s-maj=2.7km s-min=1.6km az=60.0*
*ISCJB **25** 22:20:50.5±0.5,3976N±003×2779E±004,h2km±6km, Error ellipse: s-maj=5.6km s-min=3.9km az=142.6*
*DDA **25** 22:20:50.6,3972N×2776E,h7km±4km, Md2.9*
*ISK **25** 22:20:50.2,3977N×2784E,h8km, MD2.8*

ISC 25 22:20:50.8±0.5,3974N±003×2777E±004,h10km±4km,n17, σ0s83/26,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BALY	**Balya**	**0.12**	**269**	*i* P		**Pg**	**22 20 53.1**	**-0.5**
BALY				*i* S		**Sg**	**22 20 55.6**	**+0.1**
BALB	**Balikesir**	**0.13**	**140**	PG		**Pg**	**22 20 53.4**	**-0.4**
BALB				SG		**Sg**	**22 20 55.7**	**-0.2**
DURS	**Dursunbey**	**0.56**	**104**	*i* P		**Pg**	**22 21 01.2**	**-0.5**
DURS				*i* S		**Sg**

comp=Z,7.3nm,0.3s,baz=289,slow=21,SNR=10
PEA0B Petropavlovsk- 15.09 34 *e*Pn **Pn 22 38 29.7 -1.1**
PETK Petropavlovsk- 15.09 34 P **Pn 22 38 29.5 -1.3**
comp=Z,0.7nm,0.3s,baz=200,slow=10,SNR=14
PETK LR LR 22 44 16.1
comp=Z,25nm,20.6s,baz=223,slow=37
JOW Kunigami 19.25 226 LR LR 22 46 51.2
comp=Z,73nm,19.0s,baz=172,slow=37
SEY Seymchan 22.19 11 *i* P **P 22 39 50.3 -2.6**
YAK Yakutsk 22.30 343 *e*P **P 22 39 49.0 -5.1**
YAK pmax pmax
comp=Z,22nm,1.0s,mb4.5
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.0s
BOD Bodaibo 24.96 321 *e*P **P 22 40 18.2 -1.7**
BOD pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
SONM Songino Array 27.06 296 P **P 22 40 39.9 +0.9**
comp=Z,0.9nm,0.4s,mb3.6,baz=82,slow=8.2,SNR=8.7
SONM LR LR 22 51 44.4
comp=Z,71nm,20.7s,MS3.2,baz=251,slow=37
SONM Songino Array 27.06 296 *e*P **P 22 40 43.7 +4.7**
SONM pmax pmax
comp=Z,1.0nm,0.4s
GUMO Guam 27.73 177 LR LR 22 49 16.6
comp=Z,75nm,20.7s,MS3.2,baz=28,slow=31
ZAK Zakamensk 29.16 302 *e*P **P 22 41 04.1 +6.5**
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb3.8
ZAA0 Zalesovo Array 40.38 309 *e*P **P 22 42 33.7 -0.4**
ZALV Zalesovo Beam 40.38 309 P **P 22 42 34.2 +0.1**
comp=Z,7.0nm,0.6s,mb4.5,baz=86,slow=8.6,SNR=28
ZALV PcP PcP 22 44 37.3 +0.7
comp=Z,0.9nm,0.6s,baz=90,slow=4.3,SNR=3.8
NVS Novosibirsk 41.19 310 *e*P **P 22 42 43.2 +2.3**
IMA2 Indian Mountai 42.08 33 *e*P **P 22 42 49.1 +1.1**
BPAW Bear Paw Mtn. 43.17 36 P **P 22 42 58.5 +1.7**
comp=Z,4μm,1.2s
MKAR Makanchi Array 43.38 299 P **P 22 42 58.8 0.0**
comp=Z,0.4nm,0.6s,mb3.4,baz=88,slow=12,SNR=4.8
MKAR Makanchi Array 43.38 299 *e*P **P 22 43 06.7 +7.9**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 44.34 253 LR LR 23 01 56.2
comp=Z,71nm,18.2s,MS3.6,baz=54,slow=36
KURK Kurchatov 44.70 305 P **P 22 43 09.7 +0.4**
comp=Z,12nm,0.6s,mb4.9,baz=75,slow=9.3,SNR=16
KURK Kurchatov 44.70 305 *e*P **P 22 43 13.7 +4.4**
KURK Kurchatov 44.70 305 *e*P **P 22 43 09.2 -0.1**
comp=Z,10.0nm,0.6s,mb4.8
BRVK Borovoye 49.04 310 *e*P **P 22 43 43.7 +0.6**
BRVK pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
BRVK Borovoye 49.04 310 *e*P **P 22 43 43.7 +0.5**
comp=Z,3.6nm,0.6s,mb4.6
TKM2 Tokmak 2 49.16 296 *e*P **P 22 43 43.9 -0.3**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
TKM2 Tokmak 2 49.16 296 *e*P **P 22 43 43.9 -0.3**
comp=Z,3.6nm,0.8s,mb4.5
HYT Haines Junctio 49.81 39 *e*P **P 22 43 48.6 -0.3**
ARU Arti 54.28 317 P **P 22 44 26.7 +4.5**
ARU Arti 54.28 317 *e*P **P 22 44 22.2 0.0**
comp=Z,8.2nm,0.8s,mb4.7
KBL Kabul 57.51 289 *e*P **P 22 44 45.0 -0.7**
YKA Yellowknife Ar 59.20 32 P **P 22 44 55.8 -1.2**
comp=Z,0.5nm,0.8s,mb3.6,baz=303,slow=7.6,SNR=3.1
YKA Yellowknife Ar 59.20 32 P **P 22 44 55.8 -1.2**
KEV Kevo 59.98 339 *e*p **P 22 45 03.3 +1.0**
comp=Z,0.6nm,0.3s,mb4.1
KEV Kevo 59.98 339 *e*P **P 22 45 03.3 +1.0**
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
ARCES ARCESS Array B 60.53 339 P **P 22 45 04.9 -1.1**
comp=Z,1.4nm,0.5s,mb4.3,baz=52,slow=7.9,SNR=9.2
WRA Warramunga Arr 61.63 190 P **P 22 45 13.7 -0.3**
comp=Z,5.5nm,1.0s,mb4.7,baz=8.1,slow=7.1,SNR=16
WRA pP pP 22 45 30.8 +4.5
comp=Z,4.2nm,0.9s,baz=7.6,slow=7.3,SNR=6.8
WRA Warramunga Arr 61.63 190 *e*P **P 22 45 14.2 +0.2**
WRA pmax pmax
comp=Z,6.0nm,1.0s
JOF Joensuu 62.93 332 *e*p **P 22 45 21.9 -0.4**
comp=Z,1.7nm,0.4s,mb4.5
KAF Kangasniemi 65.22 333 *e*p **P 22 45 37.6 +0.3**
comp=Z,0.8nm,0.4s,mb4.1
KAF Kangasniemi 65.22 333 *e*P **P 22 45 37.6 +0.3**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ASAR Alice Springs 65.35 190 P **P 22 45 39.1 +0.6**
comp=Z,2.2nm,0.7s,mb4.3,baz=11,slow=6.4,SNR=16
ASAR pP pP 22 45 56.1 +5.2
comp=Z,2.1nm,0.8s,baz=5.4,slow=6.1,SNR=6.3
ASAR Alice Springs 65.35 190 *e*P **P 22 45 39.5 +1.0**
NB2 NORSAR Subarra 70.82 338 P **P 22 46 14.3 +1.9**
comp=Z,1.8nm,0.5s,mb4.3,baz=42,slow=6.2
NOA NORSAR Array B 70.82 338 P **P 22 46 13.0 +0.5**
comp=Z,1.5nm,0.5s,mb4.2,baz=34,slow=6.3,SNR=6.1
NOA LR LR 23 19 33.9
comp=Z,86nm,20.4s,MS4.0,baz=275,slow=38
AKASG Malin Array Be 71.89 322 P **P 22 46 18.5 -0.6**
comp=Z,0.4nm,0.3s,mb3.8,baz=43,slow=6.6,SNR=3.3
AKASG Malin Array Be 71.89 322 *e*P **P 22 46 24.8 +5.7**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 71.89 322 P **P 22 46 18.5 -0.6**
PDAR Pinedale Array 73.43 47 P **P 22 46 29.2 +0.8**
comp=Z,0.4nm,0.5s,mb3.6,baz=321,slow=1.9,SNR=4.1
PDAR pP pP 22 46 44.1 +3.2
comp=Z,1.0nm,0.6s,baz=316,slow=2.6,SNR=6.0
BUR08 Bucovina Ar. S 75.92 322 *e*P **P 22 46 40.9 -1.8**
CLL Collm 78.14 331 *e*P **P 22 46 56.0 +0.9**
CLL *ex* x 22 47 02.0
CLL *i* PcP PcP 22 47 03.3 -1.3
comp=Z,6.0nm,0.7s
KHC Kasperske Hory 79.69 329 *e*P **P 22 47 10.0 +6.3**
GERES GERESS Array B 79.88 329 P **P 22 47 04.3 -0.4**
comp=Z,0.2nm,0.4s,mb4.4,baz=15,slow=4.1,SNR=3.6
TXAR Lajitas Array 86.14 54 P **P 22 47 38.2 +0.7**
comp=Z,0.2nm,0.6s,mb3.5,baz=304,slow=5.0,SNR=3.3
SNAA Sanae 145.41 198 *e* PKPdf 22 54 33.0 +0.3
SNAA *e* 22 54 35.1
SNAA *e* 22 54 54.3
SNAA Sanae 145.41 198 *e*PKPdf PKPdf 22 54 33.3 +0.6
SIV San Ignacio 146.92 47 PKPbc PKPbc 22 54 37.8 -1.0
comp=Z,0.4nm,0.4s,baz=146,slow=1.2,SNR=4.4
VNA2 Neumayer--Watz 146.98 197 *e* PKPbc 22 54 38.0 +0.6
VNA2 *e* 22 54 40.5
VNA3 Neumayer Olymp 147.22 196 *e* PKPbc 22 54 39.0 +0.9
VNA3 *e* 22 54 40.9

IDC 25 22:37:33.0±2.1, 715S×13081E, h0km, mb3.9/1, mb1 3.9/3, mb1mx3.6/13, mbtmp3.8/3, ML3.7/2, Error ellipse: s-maj=108.0km s-min=31.3km az=70.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.17**	**165**	Pn	Pn	22 40 41.1	-0.3
	0.4nm,0.3s,baz=347,slow=14,SNR=15						
WRA				Sn	Sn	22 43 05.5	-3.3
	0.2nm,0.3s,baz=350,slow=23,SNR=4.6						
ASAR	**Alice Springs**	**16.69**	**170**	Pn	Pn	22 41 28.9	+0.5
	0.3nm,0.3s,baz=358,slow=14,SNR=11						
MKAR	**Makanchi Array**	**68.79**	**326**	P	P	22 48 39.1	+0.1
	0.8nm,0.6s,baz=120,slow=7.9,SNR=12						

*ISCJB **25** 22:38:22.6±0.3, 3379N×002×11746W±002, h10km, Error ellipse: s-maj=3.5km s-min=2.5km az=29.3*
*NEIC **25** 22:38:24.0, 3374N×117.47W, h10km, mb4.6/1, ML3.9(PAS), After PAS.*
NEIC Felt [IV] at Corona, Lake Elsinore and Perris; [III] at Alhambra, Aliso Viejo, Anaheim, Azusa, Bloomington, Bonsall, Brea, Burbank, Chino, Chino Hills, Colton, Covina, Dana Point, Diamond Bar, Escondido, Fallbrook, Fontana, Foothill Ranch, Fountain Valley, Fullerton, Garden Grove, Glendora, Grand Terrace, Irvine, Ladera Ranch, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, La Habra, Lake Forest, Lakeside, Loma Linda, March Air Reserve Base, Menifee, Mira Loma, Mission Viejo, Moreno Valley, Murrieta, Newport Beach, Norco, Nuevo, Oceanside, Ontario, Pasadena, Pomona, Ramona, Rancho Cucamonga, Rancho Santa Margarita, Redlands, Rialto, Riverside, San Bernardino, San Clemente, San Dimas, San Jacinto, San Juan Capistrano, Santa Ana, Silverado, Spring Valley, Sun City, Temecula, Trabuco Canyon, Tustin, Upland, Valley Center, Walnut, Whittier, Wildomar, Winchester and Yorba Linda; [II] at Alpine, Carlsbad, Claremont, Costa Mesa, Culver City, Glendale, Hemet, Homeland, Huntington Beach, La Mirada, La Verne, Los Alamitos, Los Angeles, Orange, Placentia, Poway, San Diego, San Marcos, Santa Monica, Studio City, Vista, Westminster and Woodland Hills. Felt from Chatsworth and San Bernandino south to Alpine.
*IDC **25** 22:38:23.0±2.3, 3368N×117.44W, h0km, mb1 3.5/4, mb1mx3.4/25, mbtmp3.1/4, ML3.6/4, Error ellipse: s-maj=25.7km s-min=8.8km az=42.0*

ISC 25 22:38:23.9±0.4, 3376N±002×11747W±002, h10km, n32, σ1@21/73, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MWC	**Mount Wilson**	**0.67**	**313**	*e*P	**Pg**	**22 38 36.4**	**-0.5**
MWC				*e*S	**Sg**	**22 38 45.5**	**-0.3**
PFO	**Pinyon Flat Ob**	**0.86**	**100**	Pg	**Pg**	**22 38 39.5**	**-0.9**
	196nm,0.3s,baz=280,slow=15,SNR=1329						
PFO				Lg		22 38 50.4	
	894nm,0.3s,baz=37,slow=5.1,SNR=88						
PFO	**Pinyon Flat Ob**	**0.86**	**100**	*e*P	**Pg**	**22 38 39.6**	**-0.8**
PFO				*e*S	**Sg**	**22 38 50.8**	**-0.8**
BAR	**Barrett**	**1.27**	**148**	*e*Pn	**Pn**	**22 38 45.3**	**-2.3**
BAR				*e*S	**Sb**	**22 39 01.4**	**-2.8**
OSI	**Osito Adit**	**1.35**	**310**	*e*Pn	**Pn**	**22 38 47.5**	**-1.3**
OSI				*e*Sg	**Sg**	**22 39 07.0**	**-0.2**
GSC	**Goldstone**	**1.63**	**19**	*e*Pn	**Pn**	**22 38 52.7**	**+0.1**
GSC				*e*Sg	**Sg**	**22 39 16.0**	**-0.3**
SNCC	**San Nicolas Is**	**1.79**	**254**	*e*Pn	**Pn**	**22 38 52.7**	**-2.2**
SNCC				*e*Sn	**Sn**	**22 39 18.7**	**+0.9**
SNCC				*e*Sg	**Sg**	**22 39 21.4**	**-0.1**
ISA	**Isabella**	**2.07**	**337**	*e*Pn	**Pn**	**22 38 58.3**	**-0.4**
ISA				*e*Pg	**Pg**	**22 39 02.0**	**-1.6**
ISA				*e*Sn	**Sn**	**22 39 25.1**	**+0.6**
ISA				*e*Sg	**Sg**	**22 39 28.9**	**-1.6**
GLA	**Glamis**	**2.32**	**107**	*e*Pn	**Pn**	**22 39 02.0**	**-0.1**
GLA				*e*Pg	**Pg**	**22 39 08.4**	**0.0**
GLA				*e*Sn	**Sn**	**22 39 31.2**	**+0.5**
GLA				*e*Sg	**Sg**	**22 39 38.1**	**-0.3**
LDFC	**Landfair**	**2.35**	**55**	*e*Pn	**Pn**	**22 39 02.4**	**-0.2**
LDFC				*e*Pg	**Pg**	**22 39 07.2**	**-1.8**
LDFC				*e*Sn	**Sn**	**22 39 32.7**	**+1.3**
LDFC				*e*Sg	**Sg**	**22 39 38.4**	**-0.9**
SHPR	**Sheep Range**	**3.33**	**34**	*e*Pn	**Pn**	**22 39 16.8**	**+0.8**
SHPR				*e*Pg	**Pg**	**22 39 27.4**	**-0.2**
TPNV	**Topopah Spring**	**3.33**	**17**	*e*Pn	**Pn**	**22 39 16.6**	**+0.5**
TPNV				*e*Pg	**Pg**	**22 39 27.9**	**+0.1**
TPNV				*e*Sn	**Sn**	**22 40 00.0**	**+4.4**
TPNV				*e*Sg	**Sg**	**22 40 09.3**	**-1.6**
MTUM	**Tungsten Hills**	**3.69**	**346**	*e*Pn	**Pn**	**22 39 21.4**	**+0.4**
MTUM				*e*Pg	**Pg**	**22 39 30.7**	**-4.0**
MTUM				*e*Sn	**Sn**	**22 40 07.0**	**+2.4**
MTUM				*e*Sg	**Sg**	**22 40 22.3**	**-0.2**
TPH	**Tonopah**	**4.31**	**3**	*e*Pn	**Pn**	**22 39 30.5**	**+1.1**
TPH				*e*Pg	**Pg**	**22 39 43.6**	**-2.8**
TPH				*e*Sn	**Sn**	**22 40 22.5**	**+2.8**
TPH				*e*Sg	**Sg**	**22 40 42.4**	**+0.2**
SAO	**San Andreas Ge**	**4.42**	**314**	*e*Pn	**Pn**	**22 39 31.2**	**+0.1**
SAO				*e*Pg	**Pg**	**22 39 49.9**	**+1.3**
SAO				*e*Sn	**Sn**	**22 40 22.8**	**+0.1**
NVAR	**Mina Array Bea**	**4.71**	**352**	Pn	**Pn**	**22 39 36.6**	**+1.6**
	0.7nm,0.3s,baz=175,slow=14,SNR=16						
NVAR				Pg	**Pg**	**22 39 50.2**	**-3.8**
	2.6nm,0.3s,baz=177,slow=17,SNR=35						
NVAR				Lg		22 40 56.5	
	3.3nm,0.3s,baz=174,slow=28,SNR=5.3						
CMB	**Columbia Colle**	**4.88**	**332**	*e*Pn	**Pn**	**22 39 37.5**	**+0.2**
CMB				*e*Pg	**Pg**	**22 39 56.7**	**-0.6**
CMB				*e*Sn	**Sn**	**22 40 33.5**	**-0.3**
CMB				*e*Sg	**Sg**	**22 40 50.5**	**-1.0**
WAKR	**Walker**	**4.99**	**342**	*e*Pn	**Pn**	**22 39 43.5**	**+4.6**
CCUT	**Cedar City**	**5.04**	**40**	*e*Pn	**Pn**	**22 39 40.9**	**+1.3**
CCUT				*e*Pg	**Pg**	**22 40 01.1**	**+0.6**
CCUT				*e*Sn	**Sn**	**22 40 40.8**	**+2.9**
ARUT	**Antelope Range**	**5.18**	**38**	*e*Pn	**Pn**	**22 39 43.2**	**+1.7**
ARUT				*e*Pg	**Pg**	**22 40 02.0**	**-1.1**
ARUT				*e*Sg	**Sg**	**22 41 09.6**	**-0.7**
WUAZ	**Wupatki**	**5.32**	**69**	*e*Pn	**Pn**	**22 39 44.6**	**+1.2**
PAHR	**Pah Rah Range**	**6.13**	**346**	*e*Pn	**Pn**	**22 39 55.2**	**+0.7**
PAHR				*e*Sg	**Sg**	**22 41 40.9**	**+0.3**
MSU	**Marysvale**	**6.38**	**41**	*e*Pn	**Pn**	**22 39 59.2**	**+1.2**
ELK	**Elko**	**7.19**	**14**	Pn	**Pn**	**22 40 11.3**	**+2.2**
	0.4nm,0.3s,baz=204,slow=7.9,SNR=10						
ELK				Pg	**Pg**	**22 40 39.4**	**-2.2**
	0.7nm,0.3s,baz=210,slow=14,SNR=12						
ELK				Lg		22 42 13.1	
	0.6nm,0.3s,baz=195,slow=6.3,SNR=5.6						
ELK	**Elko**	**7.19**	**14**	*e*Pn	**Pn**	**22 40 10.7**	**+1.6**
ELK				*e*Pg	**Pg**	**22 40 39.3**	**-2.3**
ELK				*e*Sg	**Sg**	**22 42 13.4**	**-1.3**
DUG	**Dugway**	**7.42**	**29**	*e*Pg	**Pg**	**22 40 42.0**	**-3.9**
DUG				*e*Sg	**Sg**	**22 42 21.2**	**-0.8**
SRU	**San Rafael**	**7.73**	**44**	*e*Pn	**Pn**	**22 40 17.9**	**+1.4**
	2.7nm,0.8s						
HWUT	**Hardware Ranch**	**9.12**	**29**	*e*Pn	**Pn**	**22 40 38.8**	**+3.3**
PDAR	**Pinedale Array**	**10.92**	**32**	Pn	**Pn**	**22 41 04.0**	**+3.8**
	0.1nm,0.3s,baz=202,slow=12,SNR=2.6						
TXAR	**Lajitas Array**	**12.57**	**107**	Pn	**Pn**	**22 41 25.1**	**+2.3**
	0.1nm,0.3s,baz=289,slow=13,SNR=2.8						
EGMT	**Eagleton**	**15.38**	**20**	*e*Pn	**Pn**	**22 42 00.1**	**-0.8**
CHUM	**Lake Minchumin**	**37.00**	**335**	*e*P	**P**	**22 45 33.4**	**+0.1**
	4.9nm,0.5s						

*ISK **25** 22:51:08.4, 3844N×3928E, h5km, MD3.0*
*DDA **25** 22:51:08.8, 3841N×3936E, h7km±6km, Md3.0*
*CSEM **25** 22:51:08.5±0.1, 3843N×3930E, h2km, MD3.0, Error ellipse: s-maj=3.1km s-min=2.0km az=110.0*
*ISCJB **25** 22:51:09.5±0.4, 3841N±003×3933E±003, h10km, Error ellipse: s-maj=4.4km s-min=3.6km az=7.8*

ISC 25 22:51:09.6±0.6, 3841N±003×3935E±003, h2km±5km, n19, σ0@85/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.05**	**226**	PG	**Pg**	**22 51 10.1**	**-0.4**
SVRC				SG	**Sg**	**22 51 11.5**	**+0.3**
ELZG	**Elazig**	**0.30**	**287**	*i* P	**Pg**	**22 51 14.4**	**-0.9**
ELZG				*i* S	**Sg**	**22 51 20.1**	**+0.9**
PTK	**Pertek**	**0.48**	**4**	*e*PG	**Pg**	**22 51 17.9**	**-0.9**
PTK				*e*SG	**Sg**	**22 51 26.0**	**+1.0**
MALT	**Malatya**	**0.73**	**263**	*e*PG	**Pg**	**22 51 22.5**	**-1.1**
MALT				*e*SG	**Sg**	**22 51 34.0**	**+0.9**
MYA	**Malatya**	**0.73**	**264**	*e*PG	**Pg**	**22 51 22.2**	**-1.4**
MYA				*e*SG	**Sg**	**22 51 33.2**	**+0.1**
DIYA	**Diyarbakir**	**0.78**	**129**	*i* P	**Pg**	**22 51 24.6**	**+0.1**
DIYA				*i* S	**Sg**	**22 51 35.6**	**+1.0**
URFA	**Urfa**	**1.06**	**204**	*e*PG	**Pg**	**22 51 29.5**	**-0.2**
AKCD	**Akcadag**	**1.13**	**265**	*i* P	**Pg**	**22 51 29.2**	**-2.0**
AKCD				*i* S	**Sg**	**22 51 47.0**	**+1.1**
ATAB	**Bozova**	**1.26**	**222**	*i* P	**Pg**	**22 51 33.6**	**0.0**
ATAB				*i* S	**Sg**	**22 51 51.2**	**+1.2**
DARE	**Darende-Malaty**	**1.32**	**295**	*e*PN	**Pn**	**22 51 36.3**	**+1.2**
EZC	**Erzincan**	**1.38**	**15**	*e*PN	**Pn**	**22 51 35.0**	**-0.8**
MARD	**Mardin**	**1.57**	**134**	*i* P	**Pn**	**22 51 38.1**	**-0.4**
MARD				*i* S	**Sn**	**22 51 58.8**	**-0.5**
GUMT	**Gumushane**	**2.05**	**3**	*e*PN	**Pn**	**22 51 45.1**	**+0.2**
GAZ	**Gaziantep**	**2.10**	**235**	*e*PN	**Pn**	**22 51 46.0**	**+0.3**
KMRS	**Kahramanmaras**	**2.14**	**246**	*e*PN	**Pn**	**22 51 45.5**	**-0.7**
EZM	**Erzurum**	**2.16**	**46**	*e*PN	**Pn**	**22 51 47.9**	**+1.4**
SVSK	**Karacayir**	**2.37**	**310**	*e*PN	**Pn**	**22 51 49.4**	**0.0**
ANDN	**Andirin**	**2.52**	**252**	*i* P	**Pg**	**22 51 57.5**	**-0.3**
ANDN				*i* S	**Sg**	**22 52 37.8**	**+7.5**
KOZT	**Kozan**	**2.94**	**253**	*e*PN	**Pn**	**22 51 57.0**	**-0.2**

MAN 25 23:23:59, 1123N×12446E, h1km, mb4.5, ML3.4, MS3.3, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.23**	**140**	*e*P	Pg	23 24 03.9	+0.4
LLP	**Lapu-Lapu**	**1.03**	**208**	*e*P	Pg	23 24 19.6	+0.9
LLP				*e*S	Sg	23 24 36.4	+4.4
CNP	**Catarman**	**1.29**	**9**	*e*P	Pg	23 24 24.1	+0.3
TBP	**Tagbilaran**	**1.64**	**201**	*e*P	Pn	23 24 30.5	+1.6
TBP				*e*S	Sn	23 24 54.4	+3.7
SCPH	**Surigao**	**1.76**	**145↑**	*e*P	Pn	23 24 31.4	+0.7

*NEIC **25** 23:26:33.3±3.9, 7.12S×129.48E, h120km±37km, mb4.2/1, Error ellipse: s-maj=42.9km s-min=20.7km az=49.0*
*ISCJB **25** 23:26:35.3±1.1, 721S±007×12951E±007, h156km±14km, mb3.8/3, Error ellipse: s-maj=11.8km s-min=11.7km az=6.6*
*IDC **25** 23:26:37.4±6.0, 726S×129.45E, h157km±57km, mb3.6/3, mb1 3.7/7, mb1mx3.5/16, mbtmp3.6/7, Error ellipse: s-maj=55.5km s-min=19.4km az=47.0*

ISC 25 23:26:36.4±1.1, 725S±009×12953E±007, h148km±14km, n11, σ0@94/15, mb3.8/3, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLE	**Tual**	**3.57**	**64↑**	*e*P	**Pn**	**23 27 31.0**	**0.0**
TLE				*e*S	**Sn**	**23 28 07.0**	**-6.4**
BATI	**Baumata**	**6.50**	**243**	P	**Pn**	**23 28 11.8**	**+2.0**
	7.7nm,0.3s,baz=59,slow=6.0,SNR=6.4						
BATI				S	**Sn**	**23 29 22.2**	**-0.7**
	15nm,0.3s,baz=249,slow=21,SNR=11						
FITZ	**Fitzroy Crossi**	**11.43**	**199**	P	**Pn**	**23 29 14.4**	**-1.0**
	0.6nm,0.3s,baz=44,slow=11,SNR=12						
FITZ				S	**Sn**	**23 31 14.8**	**-7.0**
	0.7nm,0.3s,baz=72,slow=23,SNR=6.5						
WRAB	**Tennant Creek**	**13.45**	**160**	*e*Pn	**Pn**	**23 29 41.2**	**-0.3**
	6.2nm,0.6s						
WRA	**Warramunga Arr**	**13.45**	**160**	P	**Pn**	**23 29 40.5**	**-1.0**
	0.8nm,0.3s,baz=332,slow=14,SNR=34						
WRA				S	**Sn**	**23 32 04.0**	**-6.5**
	1.4nm,0.3s,baz=334,slow=22,SNR=9.2						
WB2	**Warramunga Arr**	**13.46**	**160**	*e*Pn	**Pn**	**23 29 41.4**	**-0.2**
ASAR	**Alice Springs**	**16.86**	**166**	P	**Pn**	**23 30 24.9**	**+1.3**
	1.3nm,0.3s,baz=342,slow=9.5,SNR=60						
ASAR				S	**S**	**23 33 25.7**	**-5.5**
	0.5nm,0.3s,baz=323,slow=22,SNR=6.7						
STKA	**Stephens Creek**	**26.96**	**157**	P	**P**	**23 32 05.3**	**+1.1**
	3.8nm,0.9s,mb4.0,baz=349,slow=4.3,SNR=3.8						
MKAR	**Makanchi Array**	**68.18**	**327**	P	**P**	**23 37 20.9**	**+0.2**
	0.7nm,0.4s,mb3.7,baz=118,slow=8.1,SNR=11						
ZALV	**Zalesovo Beam**	**71.60**	**334**	P	**P**	**23 37 40.4**	**-1.0**
	1.0nm,0.7s,mb3.7,baz=113,slow=3.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	**128.40**	**281**	PKP	PKPdf	23 45 25.8	-0.8
	0.4nm,0.6s,baz=72,slow=2.0,SNR=5.4						

*ISCJB **25** 23:32:20.0±2.0, 34S±03×1005E±04, h33km, mb3.9/7, Error ellipse: s-maj=69.5km s-min=16.5km az=147.4*
*IDC **25** 23:32:21.3±2.0, 340S×100.49E, h26km±5km, mb3.8/7, mb1 3.9/7, mb1mx3.7/19, mbtmp3.8/7, Error ellipse: s-maj=72.4km s-min=17.9km az=58.0*
*NEIC **25** 23:32:22.6±2.1, 333S×10057E, h35km, Error ellipse: s-maj=85.4km s-min=13.3km az=57.0*

ISC 25 23:32:22.6±2.0, 33S±03×1006E±04, h35km, n9, σ0@63/8, mb3.9/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.72**	**356**	P	**P**	**23 37 10.3**	**-0.6**
	1.2nm,0.4s,mb3.6,baz=186,slow=8.8,SNR=12						
WRA	**Warramunga Arr**	**36.85**	**119**	P	**P**	**23 39 27.0**	**-0.9**
	0.5nm,0.5s,mb3.6,baz=277,slow=7.6,SNR=9.0						
ASAR	**Alice Springs**	**38.03**	**125**	P	**P**	**23 39 38.5**	**+0.7**
	0.7nm,0.4s,mb3.8,baz=300,slow=7.9,SNR=9.6						
KSRS	**Korea Array**	**47.90**	**30**	P	**P**	**23 40 57.5**	**0.0**
	1.0nm,0.8s,mb3.9,baz=242,slow=8.1,SNR=4.3						
SONM	**Songino Array**	**51.22**	**5**	P	**P**	**23 41 23.8**	**+1.2**
	3.1nm,0.9s,mb4.2,baz=186,slow=9.8,SNR=17						
SONM				pP	pP	23 41 31.5	-1.6
	2.3nm,0.7s,baz=186,slow=8.8,SNR=10						
MKAR	**Makanchi Array**	**52.46**	**344**	P	**P**	**23 41 32.0**	**+0.1**
	1.3nm,0.7s,mb4.0,baz=150,slow=8.1,SNR=11						
MKAR				pP	pP	23 41 39.5	-2.8
	0.8nm,0.7s,baz=155,slow=7.8,SNR=4.1						
ZAA0	**Zalesovo Array**	**58.58**	**349**	*e*P	**P**	**23 42 15.3**	**-0.5**
ZALV	**Zalesovo Beam**	**58.58**	**349**	P	**P**	**23 42 15.7**	**0.0**
	2.4nm,0.9s,mb4.2,baz=164,slow=5.9,SNR=12						
TXAR	**Lajitas Array**	**145.41**	**39**	PKPbc	PKPbc	23 51 57.6	0.0
	1.4nm,0.7s,baz=324,slow=1.6,SNR=13						
TXAR				pPKPbc	pPKPbc	23 52 05.7	-3.2
	0.6nm,0.7s,baz=48,slow=1.9,SNR=4.2						

IDC 25 23:37:20.7±2.0, 356S×10041E, h26km±5km, mb3.8/7, mb1 4.0/7, mb1mx3.7/19, mbtmp3.8/7, Error ellipse: s-maj=73.0km s-min=17.5km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**21.93**	**356**	P	P	23 42 13.4	+1.2
	1.1nm,0.4s,baz=188,slow=9.1,SNR=8.7						
WRA	**Warramunga Arr**	**36.87**	**119**	P	P	23 44 25.9	-1.4
	0.6nm,0.4s,baz=301,slow=8.4,SNR=16						
ASAR	**Alice Springs**	**38.02**	**125**	P	P	23 44 38.1	+1.1
	1.0nm,0.4s,baz=301,slow=7.8,SNR=12						
KSRS	**Korea Array**	**48.16**	**30**	P	P	23 45 57.9	-0.9
	1.6nm,1.0s,baz=213,slow=8.7,SNR=4.0						
SONM	**Songino Array**	**51.45**	**5**	P	P	23 46 24.3	+0.7
	2.3nm,0.8s,baz=186,slow=9.8,SNR=13						
SONM				pP	pP	23 46 31.7	+0.1
	1.8nm,0.6s,baz=186,slow=9.4,SNR=6.8						
MKAR	**Makanchi Array**	**52.63**	**344**	P	P	23 46 32.4	-0.1
	0.7nm,0.4s,baz=159,slow=9.2,SNR=8.5						
MKAR				pP	pP	23 46 40.5	0.0
	0.7nm,0.5s,baz=158,slow=8.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**58.77**	**349**	P	P	23 47 15.0	-1.3
	1.5nm,0.7s,baz=172,slow=4.5,SNR=9.3						
TXAR	**Lajitas Array**	**145.67**	**39**	PKPbc	PKPbc	23 56 58.0	+0.2
	1.7nm,0.7s,baz=312,slow=1.7,SNR=13						
TXAR			

SNZO				*e*Sn	Sn	00 16 24.3	-4.5
BHW	**Baring Head**	**3.35**	**200**	P	Pn	00 15 46.9	-3.0
TCW	**Tory Channel**	**3.37**	**208**	P	Pn	00 15 47.1	-3.0
NNZ	**Nelson**	**3.75**	**217**	P	Pn	00 15 51.9	-3.2
QRZ	**Quartz Range**	**3.93**	**228**	P	Pn	00 15 54.1	-3.4
BSWZ	**Blackbirch Sta**	**3.95**	**208**	P	Pn	00 15 54.5	-3.2
THZ	**Tophouse**	**4.40**	**216**	P	Pn	00 16 00.3	-3.4
KHZ	**Kahutara**	**4.69**	**207**	P	Pn	00 16 03.7	-3.8
LTZ	**Lake Taylor**	**5.50**	**213**	P	Pn	00 16 13.5	-4.8
CRLZ	**Canterbury Las**	**6.03**	**207**	P	Pn	00 16 20.1	-5.2
MQZ	**McQueen's Vall**	**6.13**	**206**	*e*P	Pn	00 16 21.1	-5.6
WVZ	**Waitaha Valley**	**6.45**	**220**	*e*P	Pn	00 16 25.6	-5.4
RPZ	**Rata Peaks**	**6.78**	**215**	*e*P	Pn	00 16 31.1	-4.3
LBZ	**Lake Benmore**	**7.69**	**215**	*e*P	Pn	00 16 42.9	-4.8
ODZ	**Otahua Downs**	**8.02**	**211**	*e*P	Pn	00 16 46.7	-5.4
JCZ	**Jackson Bay**	**8.17**	**222**	*e*P	Pn	00 16 47.0	-7.1
EAZ	**Earnscleugh**	**8.74**	**215**	*e*P	Pn	00 16 57.5	-4.2
TUZ	**Tuapeka**	**9.18**	**211**	*e*P	Pn	00 17 03.2	-4.3

*DDA **26** 00:26:16.6, 3667N×2750E, h7km±5km, Md2.9*
CSEM 26 00:26:16.1±0.9, 3671N×2750E, h13km±4km, MD2.9, Error ellipse: s-maj=28.1km s-min=8.8km az=36.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.35**	**353**	*i* P	Pg	00 26 24.5	+1.3
BDRM				*i* S	Sg	00 26 29.7	+1.6
BODT	**Bodrum**	**0.38**	**336**	PG	Pg	00 26 24.2	+0.4
BODT				SG	Sg	00 26 28.2	-0.7
MLSB	**Milas**	**0.62**	**21**	*e*PG	Pg	00 26 32.9	+4.6
YER	**Yerkesik**	**0.75**	**56**	*e*PG	Pg	00 26 37.1	+6.4
TURN	**Turunc**	**0.90**	**80**	*i* P	Pg	00 26 34.1	+0.7
TURN				*i* S	Sg	00 26 46.9	+1.7
AYDN	**Tasoluk**	**0.99**	**18**	*i* P	Pb	00 26 37.6	+2.5
AYDN				*i* S	Sb	00 26 51.1	+3.0
GCAM	**G?zelcaml?**	**1.01**	**348**	*i* P	Pb	00 26 36.2	+0.8
GCAM				*i* S	Sb	00 26 48.9	+0.4

*GII **26** 00:26:33.9±0.0, 2798N×3385E, h0km±1km, ML3.6/5, Mw3.1/4*
*CSEM **26** 00:26:37.5±0.2, 2819N×3399E, h10km, ML3.4, Error ellipse: s-maj=5.6km s-min=3.0km az=67.0*
*SGS **26** 00:26:38.4, 2819N×3395E, h2km*
ISC 26 00:26:35.5±1.3, 2806N±005×3382E±006, h4km±7km, n30, σ0s87/39, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSHS		**0.90**	**74**	P	**Pg**	**00 26 53.4**	**+0.6**
RSHS		**0.90**	**74**	P	**Pg**	**00 26 53.4**	**+0.7**
RSHS				S	**Sg**	**00 27 04.9**	**+0.5**
BDAS	**Al Bad'**	**1.19**	**72**	S	**Sg**	**00 27 13.4**	**-0.4**
BDAS	**Al Bad'**	**1.19**	**72**	P	**Pg**	**00 26 58.0**	**-0.4**
JLOS		**1.62**	**65**	P	**Pn**	**00 27 04.1**	**-0.8**
JLOS		**1.62**	**65**	P	**Pn**	**00 27 04.1**	**-0.8**
JLOS				S	**Sn**	**00 27 23.0**	**-3.3**
HQLS		**1.65**	**41**	P	**Pn**	**00 27 03.9**	**-1.4**
HQLS		**1.65**	**41**	P	**Pn**	**00 27 03.9**	**-1.4**
HQLS				S	**Sn**	**00 27 25.6**	**-1.4**
GLFJ		**1.78**	**36**	*e*P	**Pn**	**00 27 07.7**	**+0.6**
	SNR=124						
EIL	**Elat**	**1.89**	**32**	Pn	**Pn**	**00 27 07.9**	**-0.7**
EIL					**Sn**	**00 27 33.0**	**+0.1**
MBRI	**Mt Berech**	**1.98**	**29**	Pn	**Pn**	**00 27 09.3**	**-0.5**
MBRI					**Sn**	**00 27 35.5**	**+0.4**
AQBJ	**Aqaba**	**1.98**	**33**	Pn	**Pn**	**00 27 10.3**	**+0.4**
DBAS	**Duba**	**2.09**	**113**	S	**Sn**	**00 27 36.6**	**-1.3**
DBAS	**Duba**	**2.09**	**113**	P	**Pn**	**00 27 11.9**	**+0.5**
KRMI	**Paran Flat**	**2.20**	**21**	Pn	**Pn**	**00 27 12.1**	**-0.7**
KRMI					**Sn**	**00 27 41.1**	**+0.6**
HRFI	**Mount Harif**	**2.24**	**28**	Pn	**Pn**	**00 27 12.8**	**-0.7**
HRFI					**Sn**	**00 27 43.4**	**+1.9**
TBKS	**Tabuk**	**2.41**	**86**	P	**Pn**	**00 27 16.7**	**+1.0**
PRNI	**Paran**	**2.51**	**24**	Pn	**Pn**	**00 27 16.5**	**-0.6**
PRNI					**Sn**	**00 27 51.0**	**+2.9**
WJHS		**2.65**	**119**	P	**Pn**	**00 27 20.2**	**+1.1**
ZFRI	**Zfri**	**2.75**	**25**	Pn	**Pn**	**00 27 20.7**	**+0.2**
ZFRI					**Sn**	**00 27 59.1**	**+4.9**
KZIT	**Kziot**	**2.88**	**10**	Pn	**Pn**	**00 27 21.7**	**-0.6**
BIDS	**Bi'r al Bayda'**	**3.03**	**112**	P	**Pn**	**00 27 25.8**	**+1.5**
RTMI	**Retamim**	**3.08**	**14**	Pn	**Pn**	**00 27 24.4**	**-0.5**
MZDA	**Masada**	**3.50**	**22**	Pn	**Pn**	**00 27 30.5**	**-0.4**
DSI	**Dead Sea**	**3.75**	**21**	Pn	**Pn**	**00 27 34.2**	**-0.1**
SLTI	**Sal'it**	**4.30**	**14**	Pn	**Pn**	**00 27 41.8**	**0.0**
HMDT	**Nahal Hemdat**	**4.43**	**19**	Pn	**Pn**	**00 27 43.8**	**+0.2**
MMLI	**Mount Malkishu**	**4.58**	**17**	Pn	**Pn**	**00 27 45.9**	**+0.3**
OFRI	**'Ofer**	**4.66**	**12**	Pn	**Pn**	**00 27 46.9**	**+0.2**
MMA1	**Mount Meron ar**	**5.13**	**15**	Pn	**Pn**	**00 27 53.2**	**+0.1**

NEIC 26 00:31:13.9, 4626S×16895E, h12km, ML3.9(WEL), 3C-2D, After WEL., South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUZ	**Tuapeka**	**0.56**	**58**	⇑P	Pg	00 31 24.6	-0.3
TUZ				S	Sg	00 31 32.2	-0.1
WHZ	**Wether Hill Ro**	**0.79**	**297**	⇓P	Pg	00 31 28.4	-0.7
EAZ	**Earnscleugh**	**1.06**	**14**	⇑P	Pb	00 31 32.7	-1.4
MLZ	**Mavora Lakes**	**1.06**	**329**	P	Pb	00 31 33.1	-1.1
WKZ	**Wanaka**	**1.43**	**2**	P	Pn	00 31 39.6	-0.1
DCZ	**Deep Cove**	**1.48**	**301**	⇓P	Pn	00 31 40.0	-0.3
ODZ	**Otahua Downs**	**1.70**	**45**	*e*P	Pn	00 31 41.8	-1.5
MSZ	**Milford Sound**	**1.74**	**335**	⇑P	Pn	00 31 43.9	0.0
LBZ	**Lake Benmore**	**2.06**	**25**	P	Pn	00 31 46.8	-1.6
JCZ	**Jackson Bay**	**2.19**	**356**	*e*P	Pn	00 31 49.9	-0.2
FOZ	**Fox Glacier**	**2.75**	**11**	*e*P	Pn	00 31 58.2	+0.5
RPZ	**Rata Peaks**	**2.95**	**31**	*e*P	Pn	00 31 58.6	-1.9
WVZ	**Waitaha Valley**	**3.43**	**22**	P	Pn	00 32 05.6	-1.5
MQZ	**McQueen's Vall**	**3.66**	**47**	*e*P	Pn	00 32 09.1	-1.2
LTZ	**Lake Taylor**	**4.21**	**36**	*e*P	Pn	00 32 16.3	-1.5

CASC 26 00:34:02.3±1.4, 1178N×8714W, h58km±17km, MD4.1, ML4.4, 7C-5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.67**	**54**	⇑*i* P	Pn	00 34 16.0	0.0
COPN				*e*S	Sn	00 34 26.9	+0.8
LEON	**Leon**	**0.68**	**21**	⇓*i* P	Pn	00 34 15.9	-0.2
MIRN	**Miramar**	**0.78**	**33**	⇑*e*P	Pn	00 34 17.3	-0.1
CSAN		**0.81**	**60**	⇑*e*P	Pn	00 34 17.7	-0.1
CNGN	**Cerro Negro**	**0.83**	**31**	⇓*i* P	Pn	00 34 18.0	-0.2
CNGN				*e*S	Sn	00 34 28.9	-0.8
TEL3	**Telica 3**	**0.84**	**20**	*e*P	Pn	00 34 18.6	-0.2
CRUN	**El Crucero**	**0.85**	**76**	*e*P	Pn	00 34 18.8	+0.5
MOMN	**Momotombo**	**0.86**	**43**	*e*P	Pn	00 34 18.7	+0.3
TELN	**Telica**	**0.87**	**20**	*e*P	Pn	00 34 19.3	+0.7
XAVN	**Gruta Xavier**	**0.88**	**65**	*e*P	Pn	00 34 18.8	+0.1
APYN	**Apoyeque**	**0.90**	**60**	*e*P	Pn	00 34 19.0	+0.1
CRIN	**San Cristobal**	**0.92**	**6**	*e*P	Pn	00 34 19.7	+0.5
TICN	**Ticuantepe**	**0.93**	**74**	*e*P	Pn	00 34 19.5	+0.2
TISN	**Laguna Tiscapa**	**0.93**	**67**	*e*P	Pn	00 34 19.4	0.0
MGAN	**Managua**	**0.95**	**67**	⇓*e*P	Pn	00 34 19.6	0.0
MGAN				*e*S	Sn	00 34 33.2	+0.9
MGAN				AML	AML	00 34 33.7	
	comp=N,9μm,0.2s						
MASN	**Masaya**	**0.99**	**78**	*e*P	Pn	00 34 20.6	+0.5
WILN	**Americas 2**	**1.01**	**68**	*e*P	Pn	00 34 20.2	-0.1
WILN				*e*S	Sn	00 34 34.6	+0.8
APON	**Apoyo**	**1.06**	**83**	⇑*i* P	Pn	00 34 21.2	+0.1
HUEN		**1.10**	**60**	⇓*e*P	Pn	00 34 21.8	+0.2
HUEN				*e*S	Sn	00 34 36.6	+0.7
SSN	**San Juan del S**	**1.35**	**111**	*e*P	Pn	00 34 24.5	-0.4
CONN	**Concepcion**	**1.50**	**98**	⇑*i* P	Pn	00 34 27.0	0.0
CNCH	**Conchagua**	**1.63**	**336**	⇑*e*P	x	00 34 28.6	
CNCH				*e*S	x	00 34 50.0	
BLLM	**Bellamira**	**1.96**	**327**	*e*P	x	00 34 33.4	
VSM	**San Miguel**	**1.97**	**326**	*e*P	x	00 34 33.4	
CAHU	**Cacacuatique**	**2.23**	**332**	*e*P	x	00 34 37.5	
TGUH	**Tegucigalpa,Un**	**2.26**	**357**	*e*P	Pn	00 34 38.4	+1.0
SNVI	**San Vicente**	**2.46**	**318**	*e*P	x	00 34 39.9	
SNVI				*e*S	x	00 35 10.0	
LFRS	**El Faro**	**2.62**	**315**	*e*P	x	00 34 42.0	
LFRS				*e*S	x	00 35 13.5	
JCR	**Jicaral**	**2.77**	**134**	*e*P	Pn	00 34 44.0	-0.3
BOQS	**Boqueron**	**2.85**	**313**	⇑*e*P	x	00 34 45.7	
BOQS				*e*S	x	00 35 21.3	
CGA2	**Cerro Gallo 2**	**3.16**	**123**	*e*P	Pn	00 34 50.7	+1.1
SBLS	**San Blas**	**3.17**	**310**	⇓*e*P	x	00 34 49.8	
SBLS				*e*S	x	00 35 29.3	
SNJE	**San Jose**	**3.17**	**311**	*e*P	x	00 34 50.7	
RTR	**El Retiro**	**3.22**	**311**	*e*P	x	00 34 51.2	
RTR				*e*S	x	00 35 28.8	
PRS1	**Puriscal**	**3.31**	**122**	*e*P	Pn	00 34 53.8	+2.1
RBDL	**Robledal**	**3.39**	**313**	*e*P	x	00 34 53.9	
BUS	**Buena Vista**	**4.00**	**123**	*e*P	Pn	00 35 03.3	+2.2
ACR	**Cerro Adams**	**5.00**	**128**	*e*P	Pn	00 35 16.1	+1.3
ACR				*e*S	Sn	00 36 12.0	+0.7
CHI2		**15.04**	**117**	*e*P	Px	00 34 18.3	
CHI2				*e*S	Sx	00 34 31.6	

*IDC **26** 01:54:05.0±1.5, 2815×10102E, h0km, mb4.3/10, mb1 4.4/10, mb1mx4.2/20, mbtmp4.3/10, MS3.2/1, Ms1 3.4/1, ms1mx2.8/29, Error ellipse: s-maj=65.1km s-min=15.2km az=57.0*
*ISCJB **26** 01:54:09.2±0.7, 27S×1012E±02, h33km, mb4.6/23, Error ellipse: s-maj=30.8km s-min=7.9km az=138.5*
*MOS **26** 01:54:09.8±1.1, 253S×10134E, h33km, mb4.6/6, Error ellipse: s-maj=31.1km s-min=12.9km az=112.1*
*NEIC **26** 01:54:10.7±0.7, 274S×10118E, h35km, mb4.5/9, Error ellipse: s-maj=35.2km s-min=7.6km az=53.0*
*DJA **26** 01:54:12, 294S×10089E, h35km, MLv4.3/4*
ISC 26 01:54:11.3±0.7, 28S±01×1012E±02, h35km, n41, σ0s91/36, mb4.6/23, 1C-1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**18.64**	**97**	*e*P	**Pn**	**01 58 28.9**	**+2.2**
	9.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**21.20**	**354**	P	**P**	**01 58 51.5**	**-2.6**
	1.4nm,0.4s,mb3.7,baz=185,slow=9.0,SNR=9.9						
CMAR				LR	LR	02 08 15.7	
	comp=Z,56nm,18.9s,baz=175,slow=40						
FITZ	**Fitzroy Crossi**	**28.39**	**124**	P	**P**	**02 00 02.2**	**-0.4**
	2.5nm,1.0s,mb3.8,baz=83,slow=19,SNR=2.4						
ODAN	**Odare**	**32.33**	**336**	*e*P	**P**	**02 00 37.8**	**+0.5**
	29nm,0.7s,mb5.2						
JIRN	**Jiri**	**33.53**	**335**	*e*P	**P**	**02 00 48.6**	**+0.8**
PKIN	**Phulchoki**	**33.79**	**334**	*e*P	**P**	**02 00 50.9**	**+0.8**
GUN	**Gumba**	**33.88**	**335**	*e*P	**P**	**02 00 51.7**	**+0.9**
	32nm,0.4s,mb5.6						
DMN	**Daman**	**33.95**	**334**	*e*P	**P**	**02 00 52.5**	**+1.0**
	12nm,0.9s,mb4.8						
KKN	**Kakani**	**34.03**	**334**	*e*P	**P**	**02 00 52.5**	**+0.3**
	17nm,0.6s,mb5.2						
GKN	**Gorkha**	**34.49**	**334**	*e*P	**P**	**02 00 57.3**	**+1.1**
	10nm,0.5s,mb5.0						
DANN	**Dangsing**	**35.19**	**333**	*e*P	**P**	**02 01 03.1**	**+0.9**
	18nm,0.4s,mb5.4						
WRA	**Warramunga Arr**	**36.57**	**120**	P	**P**	**02 01 13.9**	**-0.3**
	3.0nm,0.4s,mb4.5,baz=297,slow=9.3,SNR=57						
WRAB	**Tennant Creek**	**36.58**	**120**	*e*P	**P**	**02 01 14.0**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.6						
WRAB	**Tennant Creek**	**36.58**	**120**	*e*P	**P**	**02 01 14.0**	**-0.3**
	comp=Z,4.0nm,0.4s,mb4.6						
WB2	**Warramunga Arr**	**36.58**	**120**	*e*P	**P**	**02 01 13.8**	**-0.5**
ASAR	**Alice Springs**	**37.83**	**126**	P	**P**	**02 01 25.2**	**+0.4**
	comp=Z,1.3nm,0.7s,mb3.8,baz=301,slow=8.1,SNR=16						
KSRS	**Korea Array**	**47.07**	**29**	P	**P**	**02 02 39.0**	**-0.7**
	comp=Z,0.8nm,0.7s,mb3.7,baz=216,slow=7.7,SNR=4.4						
STKA	**Stephens Creek**	**47.75**	**132**	*e*P	**P**	**02 02 45.3**	**+0.2**
	comp=Z,3.4nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**47.75**	**132**	P	**P**	**02 02 45.5**	**+0.4**
	comp=Z,2.8nm,0.8s,mb4.4,baz=302,slow=8.7,SNR=4.4						
SONM	**Songino Array**	**50.59**	**5**	P	**P**	**02 03 06.8**	**+0.2**
	comp=Z,11nm,1.1s,mb4.7,baz=183,slow=9.2,SNR=30						
SONM				PcP	PcP	02 04 23.4	-0.5
	comp=Z,0.6nm,0.5s,baz=193,slow=4.3,SNR=2.7						
ULN	**Ulaanbaatar**	**50.68**	**5**	⇓*e*P	**P**	**02 03 08.2**	**+1.0**
ULN	**Ulaanbaatar**	**50.68**	**5**	*e*P	**P**	**02 03 08.0**	**+0.8**
	comp=Z,5.1nm,1.1s,mb4.4						
TKM2	**Tokmak 2**	**51.01**	**336**	*e*P	**P**	**02 03 10.0**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
TKM2	**Tokmak 2**	**51.01**	**336**	*e*P	**P**	**02 03 10.0**	**+0.1**
	comp=Z,3.1nm,0.5s,mb4.5						
EKS2	**Erkin-Say**	**51.56**	**334**	*e*P	**P**	**02 03 14.3**	**+0.4**
	comp=Z,9.6nm,0.8s,mb4.8						
MKAR	**Makanchi Array**	**52.09**	**344**	P	**P**	**02 03 17.8**	**-0.1**
	comp=Z,6.7nm,0.8s,mb4.7,baz=148,slow=8.4,SNR=26						
KURK	**Kurchatov**	**56.68**	**343**	⇓*e*P	**P**	**02 03 50.5**	**-0.6**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.4						
KURK	**Kurchatov**	**56.68**	**343**	*e*P	**P**	**02 03 50.3**	**-0.8**
	comp=Z,2.5nm,0.8s,mb4.3						
ZAA0	**Zalesovo Array**	**58.14**	**349**	*e*P	**P**	**02 04 00.4**	**-0.9**
ZALV	**Zalesovo Beam**	**58.14**	**349**	P	**P**	**02 04 00.9**	**-0.5**
	comp=Z,6.2nm,0.5s,mb4.9,baz=170,slow=4.5,SNR=42						
BRVK	**Borovoye**	**61.38**	**339**	*e*P	**P**	**02 04 22.3**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
BRVK	**Borovoye**	**61.38**	**339**	*e*P	**P**	**02 04 22.3**	**-1.4**
	comp=Z,4.0nm,0.8s,mb4.6						
ARU	**Arti**	**68.38**	**336**	*e*P	**P**	**02 05 07.9**	**-1.3**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
ARU	**Arti**	**68.38**	**336**	*e*P	**P**	**02 05 07.8**	**-1.3**
	comp=Z,3.7nm,0.8s,mb4.5						
BUR08	**Bucovina Ar. S**	**82.64**	**319**	*e*P	**P**	**02 06 31.3**	**+0.1**
ARCES	**ARCESS Array B**	**87.59**	**340**	P	**P**	**02 06 53.9**	**-1.6**
	comp=Z,8.6nm,1.1s,mb4.9,baz=64,slow=5.5,SNR=5.6						
ELK	**Elko**	**129.91**	**36**	*e*PKIKP	PKPdf	02 13 17.2	-0.4
TXAR	**Lajitas Array**	**144.55**	**39**	PKP	PKPdf	02 13 42.6	-2.2
	comp=Z,1.8nm,0.7s,baz=255,slow=0.5,SNR=31						
WVT	**Waverly**	**145.76**	**13**	*e*PKP2	PKPab	02 13 46.4	-1.1
JCT	**Junction City**	**146.01**	**34**	*e*PKP2	PKPab	02 13 47.7	-1.0
TKL	**Tuckaleechee C**	**146.94**	**7**	PKPbc	PKPbc	02 13 48.6	-2.1
	comp=Z,3.0nm,0.9s,baz=326,slow=7.9,SNR=2.8						

CASC 26 02:11:27.6±2.1, 1160N×8729W, h50km±73km, MD4.0, ML3.4, 7C-10D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.89**	**50**	⇓*e*P	Pn	02 11 44.1	+0.2
LEON	**Leon**	**0.90**	**26**	⇑*e*P	Pn	02 11 43.9	-0.1
MIRN	**Miramar**	**1.01**	**34**	⇓*e*P	Pn	02 11 45.5	+0.1
CSAN		**1.03**	**56**	⇓*e*P	Pn	02 11 45.9	+0.2
CRUN	**El Crucero**	**1.04**	**68**	*e*P	Pn	02 11 48.2	+2.3
TEL3	**Telica 3**	**1.06**	**24**	⇓*e*P	Pn	02 11 46.2	0.0
CNGN	**Cerro Negro**	**1.06**	**33**	⇑*e*P	Pn	02 11 46.1	-0.1
MOMN	**Momotombo**	**1.09**	**42**	⇑*e*P	Pn	02 11 47.0	+0.5
XAVN	**Gruta Xavier**	**1.09**	**60**	⇑*e*P	Pn	02 11 46.7	+0.2
TELN	**Telica**	**1.09**	**24**	⇓*e*P	Pn	02 11 47.3	+0.7
APYN	**Apoyeque**	**1.11**	**55**	⇓*e*P	Pn	02 11 47.1	+0.2
CRIN	**San Cristobal**	**1.12**	**12**	*e*P	Pn	02 11 46.7	-0.2
TICN	**Ticuantepe**	**1.12**	**67**	*e*P	Pn	02 11 47.1	+0.2
TISN	**Laguna Tiscapa**	**1.13**	**62**	⇓*e*P	Pn	02 11 47.1	-0.1
MGAN	**Managua**	**1.16**	**62**	⇓*e*P	Pn	02 11 47.5	+0.1
MGAN				⇓*e*P		02 11 47.6	
MGAN				AML	AML	02 12 10.7	
	comp=N,642nm,0.4s						
WILN	**Americas 2**	**1.21**	**63**	*e*P	Pn	02 11 48.6	+0.4
APON	**Apoyo**	**1.24**	**75**	*e*P	Pn	02 11 48.2	-0.4
HUEN		**1.32**	**56**	⇑*e*P	Pn	02 11 49.7	+0.1
SSN	**San Juan del S**	**1.44**	**102**	*e*P	Pn	02 11 50.6	-0.7
CONN	**Concepcion**	**1.63**	**91**	*e*P	Pn	02 11 53.8	-0.1
CNCH	**Conchagua**	**1.75**	**342**	⇓*e*P	x	02 11 54.5	
VSM	**San Miguel**	**2.06**	**332**	*e*P	x	02 11 59.1	
CUI		**2.27**	**114**	⇑*i* P	Pn	02 12 02.9	+0.2
CUI				*i* S	Sn	02 12 30.0	+0.5
TGUH	**Tegucigalpa,Un**	**2.44**	**0**	⇑*e*P	Pn	02 12 05.2	+0.2
JCR	**Jicaral**	**2.76**	**129**	*e*P	Pn	02 12 11.9	+2.5
CGA2	**Cerro Gallo 2**	**3.19**	**119**	*e*P	Pn	02 12 16.9	+1.6
CGA2				*e*S	Sn	02 12 52.0	-0.1
PRS1	**Puriscal**	**3.34**	**118**	*e*P	Pn	02 12 20.0	+2.7
BUS	**Buena Vista**	**4.02**	**120**	⇓*e*P	Pn	02 12 28.8	+2.1
BUS				*e*S	Sn	02 13 13.6	+1.0

*IDC **26** 02:26:50.2±1.0, 3995×10151E, h0km, mb4.3/13, mb1 4.4/13, mb1mx4.2/21, mbtmp4.3/13, MS3.4/3, Ms1 3.5/3, ms1mx3.0/34, Error ellipse: s-maj=36.8km s-min=13.8km az=54.0*
*ISCJB **26** 02:26:53.7±0.6, 39S±0.1×1017E±0.1, h33km, mb4.4/26, MS3.2/2, Error ellipse: s-maj=19.3km s-min=7.6km az=135.9*
*BJI **26** 02:26:53.4, 400S×10160E, h27km, mB5.2, mb4.8*
*MOS **26** 02:26:54.9±1.7, 381S×10177E, h33km, mb4.6/11, Error ellipse: s-maj=30.0km s-min=15.5km az=39.6*
*NEIC **26** 02:26:54.4±4.8, 396S±01158E, h28km±32km, mb4.5/16, Error ellipse: s-maj=21.0km s-min=6.0km az=50.0*
ISC 26 02:26:55.8±0.6, 39S±01×1016E±01, h35km, (h33km±7km:pP-P), n61, σ0s73/52, mb4.4/26, MS3.2/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RGRI	**Rengat**	**3.62**	**11**	P	**Pn**	**02 27 56.4**	**+7.0**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.51**	**41**	P	**Pn**	**02 28 08.4**	**+6.8**
	0.0nm,0.0s						
KAPI	**Kappang**	**18.08**	**94**	LR	LR	02 38 59.9	
	comp=Z,142nm,19.4s,baz=114,slow=40						
KAPI	**Kappang**	**18.08**	**94**	*e*P	**Pn**	**02 31 03.6**	**-0.9**
	8.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**22.40**	**353**	P	**P**	**02 31 49.8**	**-1.6**
	1.4nm,0.4s,mb3.8,baz=181,slow=8.1,SNR=11						
CMAR				LR	LR	02 40 22.1	
	comp=Z,95nm,19.1s,MS3.2,baz=180,slow=36						
CHTO	**Chiang Mai**	**22.75**	**353**	*e*P	**P**	**02 31 54.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**27.39**	**123**	*e*P	**P**	**02 32 38.4**	**+0.2**
	5.7nm,0.8s,mb4.2						
FITZ	**Fitzroy Crossi**	**27.39**	**123**	P	**P**	**02 32 37.8**	**-0.4**
	2.7nm,0.7s,mb3.9,baz=331,slow=10,SNR=6.8						
WRA	**Warramunga Arr**	**35.62**	**119**	P	**P**	**02 33 50.3**	**-0.2**
	1.5nm,0.5s,mb4.2,baz=308,slow=9.6,SNR=25						
WRA				LR	LR	02 49 07.1	
	comp=Z,49nm,19.9s,MS3.3,baz=90,slow=37						
WRAB	**Tennant Creek**	**35.62**	**119**	*e*P	**P**	**02 33 50.3**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
WRAB	**Tennant Creek**	**35.62**	**119**	*e*P	**P**	**02 33 50.3**	**-0.3**
	comp=Z,4.4nm,0.7s,mb4.5						
WB2	**Warramunga Arr**	**35.62**	**119**	*e*P	**P**	**02 33 50.5**	**-0.1**
ASAR	**Alice Springs**	**36.80**	**125**	P	**P**	**02 34 00.8**	**+0.2**
	comp=Z,3.4nm,0.7s,mb4.3,baz=295,slow=7.9,SNR=32						
ASAR				PcP	PcP	02 36 21.6	-0.7
	comp=Z,0.9nm,1.1s,baz=273,slow=2.4,SNR=4.2						
LZH	**Lanzhou**	**39.86**	**3**	*e*P	**P**	**02 34 28.0**	**+1.9**
LZH				AP	pP	02 34 37.3	+1.0
LZH				XP	sP	02 34 41.0	+0.5
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb4.6						
LZH				AMB	AMB		
	comp=Z,75nm,4.2s						
LZH	**Lanzhou**	**39.86**	**3**	*e*P	**P**	**02 34 28.0**	**+1.9**
LZH				*PP	pP	02 34 37.2	+0.9
LZH				*SP	sP	02 34 41.0	+0.5
LZH				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.6						
LZH	**Lanzhou**	**39.86**	**3**	*e*P	**P**	**02 34 28.0**	**+1.9**
	comp=Z,18nm,1.3s,mb4.6						
LZH				pP	pP	02 34 37.2	+0.9
LZH				sP	sP	02 34 41.0	+0.5
GTA	**Gaotai**	**43.16**	**358**	*e*P	**P**	**02 34 54.0**	**+0.9**
GTA				AP	pP	02 35 03.5	+0.1
GTA				XP	sP	02 35 07.3	-0.3
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.1						
CTA	**Charters Tower**	**46.31**	**114**	*e*P	**P**	**02 35 19.3**	**+0.7**
	comp=Z,4.4nm,1.0s,mb4.3						
CTA	**Charters Tower**	**46.31**	**114

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SART	**Tekirdag**	**0.19**	**237**	*i* P	**Pg**	**02 45 07.7**	**+0.4**
SART				*i* S	**Sg**	**02 45 11.0**	**+0.7**
RKY	**Sarkoy-Tekirda**	**0.19**	**237**	*e*PG	**Pg**	**02 45 07.2**	**-0.2**
RKY				*e*SG	**Sg**	**02 45 10.6**	**+0.3**
TKR	**Tekirdag**	**0.23**	**30**	*e*PG	**Pg**	**02 45 07.9**	**-0.1**
TKR				*e*SG	**Sg**	**02 45 12.6**	**+1.2**
MRMT	**Marmara Adasi**	**0.25**	**140**	*e*PG	**Pg**	**02 45 07.3**	**-0.9**
MRMT				*e*SG	**Sg**	**02 45 11.3**	**-0.6**
EDC	**Edincik**	**0.57**	**141**	*e*PG	**Pg**	**02 45 13.1**	**-1.0**
ELBA	**Catalca**	**0.87**	**65**	*i* P	**Pb**	**02 45 19.5**	**-0.1**
ELBA				*i* S	**Sb**	**02 45 31.6**	**+0.6**
ENEZ	**Enez**	**0.94**	**267**	*e*PG	**Pg**	**02 45 20.5**	**-0.5**
BALY	**Balya**	**1.06**	**170**	*i* P	**Pb**	**02 45 22.9**	**-0.1**
BALY				*i* S	**Sb**	**02 45 37.7**	**+1.1**
EDRB	**Edirne**	**1.16**	**336**	*e*PN	**Pn**	**02 45 24.4**	**-0.2**
EZN	**Ezine**	**1.26**	**220**	*e*PN	**Pn**	**02 45 24.7**	**-1.2**
KLYT	**Kilyos**	**1.33**	**69**	*e*PN	**Pn**	**02 45 25.5**	**-1.4**
DURS	**Dursunbey**	**1.45**	**145**	*i* P	**Pn**	**02 45 30.1**	**+1.5**
DURS				*i* S	**Sn**	**02 45 47.9**	**+0.7**

MAN 26 02:46:19, 1742N×11963E, h29km, mb4.6, ML3.4, MS3.4, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.93**	**57**	*e*P	Pn	02 46 43.1	+7.0
SIPP				*e*S	Sn	02 46 47.1	-1.5
ABRA	**Dolores**	**1.05**	**77**	*e*P	Pn	02 46 38.0	+0.1
ABRA				*e*S	Sn	02 46 50.2	-1.4
BOLP	**Bolinao**	**1.06**	**165**	*e*P	Pn	02 46 37.9	0.0
BCPH	**Baguio City Da**	**1.37**	**138**	*e*P	Pn	02 46 43.1	+0.9
BCPH				*e*S	Sn	02 46 46.8	-13
APYP	**Conner**	**1.60**	**74**	*e*P	Pn	02 46 46.1	+0.8
APYP				*e*S	Sn	02 47 04.4	-0.5
SCZP	**Santa Cruz**	**1.65**	**171**	*e*P	Pn	02 46 46.2	+0.1
CVP	**Callao Caves**	**2.11**	**82**	*e*P	Pn	02 46 52.8	+0.5
CVP				*e*S	Sn	02 47 17.0	-0.5
CAUP	**Cauayan**	**2.15**	**102**	*e*P	Pn	02 46 55.9	+3.0
BALP	**Baler**	**2.50**	**132**	*e*P	Pn	02 46 58.9	+1.2
LUBP	**Lubang**	**3.71**	**171**	*e*P	Pn	02 47 21.0	+6.6

*IDC **26** 02:47:07.9±0.6, 921N×12651E, h0km, mb4.2/12, mb1 4.3/12, mb1mx4.2/21, mbtmp4.2/12, MS3.4/1, Ms1 3.4/1, ms1mx2.8/27, Error ellipse: s-maj=44.1km s-min=12.8km az=64.0*
*MAN **26** 02:47:10, 933N×12679E, h6km, mb4.7, ML3.5, MS3.5*
*ISCJB **26** 02:47:12.1±1.1, 930N±004×12687E±008, h47km±9km, mb4.2/24, Error ellipse: s-maj=14.0km s-min=6.0km az=162.7*
*MOS **26** 02:47:15.7±1.3, 963N×12560E, h33km, mb4.6/8, Error ellipse: s-maj=56.7km s-min=14.7km az=115.6*
*NEIC **26** 02:47:15.8±3.0, 941N×12686E, h64km±26km, mb4.4/10, Error ellipse: s-maj=36.4km s-min=8.6km az=63.0*

ISC 26 02:47:13.9±1.1, 930N±004×12682E±008, h44km±10km, n53, σ1$11/57, mb4.2/24, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.19**	**202**	*e*P	**Pn**	**02 47 32.1**	**-2.0**
BIPH				*e*S	**Sn**	**02 47 46.8**	**-2.5**
BUTP	**Butuan**	**1.22**	**255**	*e*P	**Pn**	**02 47 32.5**	**-2.1**
BUTP				*e*S	**Sn**	**02 47 51.1**	**+1.2**
SCPH	**Surigao**	**1.39**	**290**	*e*P	**Pn**	**02 47 35.2**	**-1.7**
SCPH				*e*S	**Sn**	**02 47 54.4**	**+0.3**
MSLP	**Maasin**	**2.10**	**293**	*e*P	**Pn**	**02 47 47.4**	**+0.8**
BUKP	**Musuan**	**2.23**	**231**	*e*P	**Pn**	**02 47 49.1**	**+0.7**
DAV	**Davao City (W)**	**2.53**	**209**	Pn	**Pn**	**02 47 56.9**	**+4.4**
	72nm,0.3s,baz=45,slow=5.7,SNR=3.3						
DAV				Sn	**Sn**	**02 48 26.6**	**+4.5**
	98nm,0.3s,baz=80,slow=18,SNR=3.6						
PLP	**Palo**	**2.59**	**316**	*e*P	**Pn**	**02 47 53.2**	**-0.1**
PLP				*e*S	**Sn**	**02 48 24.0**	**+0.4**
BESP	**Borongan**	**2.66**	**330**	*e*P	**Pn**	**02 47 55.0**	**+0.7**
TBP	**Tagbilaran**	**2.94**	**278**	*e*P	**Pn**	**02 47 58.2**	**+0.1**
TBP				*e*S	**Sn**	**02 48 28.7**	**-3.5**
LLP	**Lapu-Lapu**	**2.98**	**290**	*e*P	**Pn**	**02 47 59.5**	**+0.8**
LLP				*e*S	**Sn**	**02 48 36.6**	**+3.3**
DCPH	**Dipolog City**	**3.49**	**259**	*e*P	**Pn**	**02 48 05.7**	**-0.1**
CNP	**Catarman**	**3.83**	**327**	*e*P	**Pn**	**02 48 10.0**	**-0.4**
GUIM	**Jordan**	**4.37**	**288**	*e*P	**Pn**	**02 48 17.3**	**-0.5**
RCP	**Roxas**	**4.59**	**300**	*e*P	**Pn**	**02 48 21.7**	**+0.9**
FITZ	**Fitzroy Crossi**	**27.25**	**182**	*e*P	**P**	**02 52 56.5**	**+2.5**
	5.6nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**27.25**	**182**	P	**P**	**02 52 55.9**	**+1.9**
	3.9nm,0.7s,mb4.0,baz=29,slow=11,SNR=9.2						
KSRS	**Korea Array**	**28.05**	**2**	P	**P**	**02 53 02.5**	**+1.5**
	0.8nm,0.6s,mb3.5,baz=181,slow=9.4,SNR=5.9						
CMAR	**Chiang Mai Arr**	**28.51**	**292**	P	**P**	**02 53 04.9**	**-0.5**
	0.8nm,0.3s,mb3.9,baz=106,slow=6.7,SNR=3.5						
WRAB	**Tennant Creek**	**29.98**	**166**	*e*P	**P**	**02 53 18.8**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
WRAB	**Tennant Creek**	**29.98**	**166**	*e*P	**P**	**02 53 18.8**	**+0.5**
	comp=Z,2.2nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**29.98**	**166**	P	**P**	**02 53 17.3**	**-1.1**
	comp=Z,0.6nm,0.3s,mb3.8,baz=346,slow=9.5,SNR=5.9						
WB2	**Warramunga Arr**	**29.99**	**166**	*e*P	**P**	**02 53 18.1**	**-0.3**
ASAR	**Alice Springs**	**33.49**	**168**	P	**P**	**02 53 48.5**	**-0.6**
	comp=Z,0.8nm,0.4s,mb4.0,baz=350,slow=7.8,SNR=13						
CTA	**Charters Tower**	**34.91**	**147**	P	**P**	**02 54 03.2**	**+1.7**
	comp=Z,2.3nm,0.6s,mb4.3,baz=304,slow=7.7,SNR=2.2						
ULN	**Ulaanbaatar**	**41.91**	**340**	*e*P	**P**	**02 55 00.0**	**0.0**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	**41.91**	**340**	*e*P	**P**	**02 55 00.0**	**0.0**
	comp=Z,1.9nm,0.6s,mb3.9						
SONM	**Songino Array**	**42.11**	**339**	P	**P**	**02 55 01.0**	**-0.7**
	comp=Z,0.6nm,0.5s,mb3.5,baz=162,slow=9.8,SNR=4.7						
STKA	**Stephens Creek**	**43.31**	**162**	P	**P**	**02 55 11.2**	**-0.3**
	comp=Z,1.9nm,0.7s,mb4.0,baz=164,slow=15,SNR=2.7						
BOD	**Bodaibo**	**49.41**	**351**	*e*P	**P**	**02 55 59.0**	**0.0**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
MK31	**Makanchi Array**	**53.12**	**323**	*e*P	**P**	**02 56 26.8**	**-0.3**
MKAR	**Makanchi Array**	**53.12**	**323**	P	**P**	**02 56 26.6**	**-0.5**
	comp=Z,3.7nm,0.7s,mb4.4,baz=123,slow=8.2,SNR=23						
ZALV	**Zalesovo Beam**	**55.73**	**331**	P	**P**	**02 56 42.8**	**-3.1**
	comp=Z,1.3nm,0.6s,mb4.2,baz=133,slow=6.5,SNR=4.6						
UCH	**Uchtor**	**56.24**	**315**	*e*P	**P**	**02 56 50.5**	**+0.7**
	comp=Z,6.0nm,0.7s,mb4.7						
EKS2	**Erkin-Say**	**56.90**	**315**	*e*P	**P**	**02 56 54.3**	**-0.1**
	comp=Z,4.1nm,0.8s,mb4.5						
KURK	**Kurchatov**	**57.17**	**326**	P	**P**	**02 56 55.3**	**-0.9**
	comp=Z,2.8nm,0.6s,mb4.5,baz=127,slow=6.7,SNR=12						
KURK	**Kurchatov**	**57.17**	**326**	*e*P	**P**	**02 56 55.1**	**-1.1**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KURK	**Kurchatov**	**57.17**	**326**	*e*P	**P**	**02 56 55.1**	**-1.1**
	comp=Z,5.5nm,0.8s,mb4.6						
BVAR	**Borovoye Array**	**62.77**	**326**	P	**P**	**02 57 33.9**	**-0.7**
	comp=Z,2.3nm,0.6s,mb4.5,baz=142,slow=10,SNR=12						
BILL	**Bilibino**	**64.19**	**15**	*e*P	**P**	**02 57 50.4**	**+6.7**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
RPZ	**Rata Peaks**	**66.28**	**146**	P	**P**	**02 57 59.5**	**+1.9**
	comp=Z,9.2nm,0.8s,mb4.9,baz=288,slow=6.4,SNR=3.4						
ARU	**Arti**	**70.33**	**327**	*e*P	**P**	**02 58 21.6**	**-1.2**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ARU	**Arti**	**70.33**	**327**	*e*P	**P**	**02 58 21.6**	**-1.2**
	comp=Z,4.4nm,0.6s,mb4.6						
CASY	**Casey**	**76.32**	**187**	*e*P	**P**	**02 58 58.8**	**+1.0**
	comp=Z,4.1nm,0.9s,mb4.4						
MALT	**Malatya**	**83.05**	**308**	*e*P	**P**	**02 59 35.1**	**+0.1**
MALT				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
MALT	**Malatya**	**83.05**	**308**	*e*P	**P**	**02 59 35.1**	**+0.1**
	comp=Z,1.0nm,0.6s,mb4.0						
ARCES	**ARCESS Array B**	**85.29**	**340**	P	**P**	**02 59 46.0**	**+0.3**
	comp=Z,2.6nm,0.6s,mb4.5,baz=80,slow=6.8,SNR=9.3						
ARCES	**ARCESS Array B**	**85.29**	**340**	P	**P**	**02 59 46.0**	**+0.3**
KIEV	**Kiev**	**87.66**	**321**	*e*P	**P**	**02 59 55.9**	**-1.9**
KIEV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.4						
KIEV	**Kiev**	**87.66**	**321**	*e*P	**P**	**02 59 55.9**	**-1.8**
	comp=Z,1.3nm,0.4s,mb4.5						
BUR08	**Bucovina Ar. S**	**90.92**	**319**	*e*P	**P**	**03 00 14.3**	**+1.1**
TORD	**Torodi Ar. Bea**	**121.12**	**291**	PKP	PKPdf	03 06 02.0	-0.9
	comp=Z,0.5nm,0.8s,baz=73,slow=1.0,SNR=4.8						
PLCA	**Paso Flores**	**145.11**	**157**	PKPbc	PKPbc	03 06 48.2	+1.9
	comp=Z,1.7nm,0.9s,baz=243,slow=3.5,SNR=4.4						
PLCA	**Paso Flores**	**145.11**	**157**	PKPbc	PKPbc	03 06 48.2	+1.9

*IDC **26** 02:49:44.0±0.5, 931N×12652E, h0km, mb4.5/23, mb1 4.6/25, mb1mx4.6/26, mbtmp4.5/25, ML3.9/2, MS3.9/11, Ms1 3.9/11, ms1mx3.6/29, Error ellipse: s-maj=23.3km s-min=10.6km az=74.0*
*MAN **26** 02:49:47, 935N×12682E, h15km, mb5.4, ML4.3, MS4.6*
*BJI **26** 02:49:47.5, 950N×12639E, h21km, mB5.0, mb4.7, Ms4.3, Msz4.2*
*MOS **26** 02:49:47.3±1.3, 930N×12650E, h33km, mb5.1/22, Error ellipse: s-maj=16.7km s-min=7.3km az=113.4*
*ISCJB **26** 02:49:49.1±0.8, 936N±003×12676E±005, h54km±6km, mb4.7/59, MS3.9/10, Error ellipse: s-maj=8.5km s-min=4.9km az=163.5*
*NEIC **26** 02:49:51.2±1.2, 934N×12662E, h53km±10km, mb4.9/29, Error ellipse: s-maj=10.0km s-min=5.4km az=75.0*

ISC 26 02:49:50.9±0.8, 935N±003×12674E±005, h53km±6km, h43km±3.1km: pP-P, n138, σ1$06/132, mb4.7/59, MS3.9/10, 4C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.17**	**251**	*e*P	**Pn**	**02 50 08.4**	**-2.5**
BUTP				*e*S	**Sn**	**02 50 27.4**	**+1.6**
BIPH	**Bislig**	**1.22**	**198**	*e*P	**Pn**	**02 50 08.1**	**-3.6**
BIPH				*e*S	**Sn**	**02 50 19.4**	**-7.7**
SCPH	**Surigao**	**1.31**	**289**	*e*P	**Pn**	**02 50 10.9**	**-1.9**
SCPH				*e*S	**Sn**	**02 50 26.2**	**-2.9**
BUKP	**Musuan**	**2.21**	**229**	*e*P	**Pn**	**02 50 25.1**	**-0.1**
BUKP				*e*S	**Sn**	**02 50 53.6**	**+2.3**
MATI	**Mati**	**2.44**	**191**	*e*P	**Pn**	**02 50 26.8**	**-1.5**
PLP	**Palo**	**2.50**	**316**	*e*P	**Pn**	**02 50 28.5**	**-0.6**
PLP				*e*S	**Sn**	**02 50 58.1**	**-0.3**
DAV	**Davao City (W)**	**2.54**	**207**	Pn	**Pn**	**02 50 29.1**	**-0.6**
	104nm,0.3s,baz=264,slow=11,SNR=2.2						
DAV				Sn	**Sn**	**02 51 02.4**	**+2.9**
	78nm,0.3s,baz=249,slow=16,SNR=3.6						
DAV				LR	LR	02 51 36.9	
	comp=Z,6μm,19.3s,baz=41,slow=47						
KCP	**Kidapawan**	**2.84**	**215**	*e*P	**Pn**	**02 50 36.6**	**+2.8**
KCP				*i* S	**Sn**	**02 51 13.6**	**+6.7**
TBP	**Tagbilaran**	**2.86**	**277**	*e*P	**Pn**	**02 50 33.9**	**-0.1**
TBP				*e*S	**Sn**	**02 51 08.8**	**+1.6**
LLP	**Lapu-Lapu**	**2.90**	**290**	*e*P	**Pn**	**02 50 35.1**	**+0.5**
LLP				*e*S	**Sn**	**02 51 08.4**	**+0.2**
CTBH	**Cotabato--PC H**	**3.25**	**230**	*i*P	**Pn**	**02 50 39.0**	**-0.4**
DCPH	**Dipolog City**	**3.43**	**257**	*i*P	**Pn**	**02 50 42.0**	**+0.1**
DCPH				*e*S	**Sn**	**02 51 22.4**	**+1.0**
PAGZ	**Pagadian**	**3.64**	**246**	*e*P	**Pn**	**02 50 46.0**	**+1.2**
GUIM	**Jordan**	**4.28**	**288**	*e*P	**Pn**	**02 50 53.3**	**-0.2**
RCP	**Roxas**	**4.50**	**300**	*e*P	**Pn**	**02 50 57.0**	**+0.5**
PVCP	**Virac**	**4.92**	**329**	*e*P	**Pn**	**02 51 02.6**	**+0.3**
KKM	**Kota Kinabalu**	**10.94**	**253**	*e*Pn	**Pn**	**02 52 23.7**	**-1.0**
KAPI	**Kappang**	**15.88**	**206**	Pn	**Pn**	**02 53 30.3**	**-0.8**
	27nm,1.0s,baz=189,slow=22,SNR=1.0						
KAPI	**Kappang**	**15.88**	**206**	*e*P	**Pn**	**02 53 32.0**	**+0.9**
	27nm,1.0s						
JOW	**Kunigami**	**17.45**	**5**	P	**Pn**	**02 53 51.4**	**+0.8**
	0.2nm,0.3s,baz=144,slow=19,SNR=2.1						
KSM	**Kuching**	**18.12**	**245**	*e*P	**Pn**	**02 53 59.6**	**+0.6**
GUMO	**Guam**	**18.26**	**75**	LR	LR	03 01 28.7	
	comp=Z,392nm,18.4s,baz=238,slow=38						
BATI	**Baumata**	**19.67**	**189**	P	**Pn**	**02 54 15.1**	**-2.4**
	3.9nm,0.3s,baz=285,slow=0.7,SNR=7.8						
CBIJ	**Chichi jima**	**22.90**	**38**	LR	LR	03 01 34.5	
	comp=Z,200nm,21.4s,MS3.5,baz=176,slow=31						
FITZ	**Fitzroy Crossi**	**27.30**	**182**	*e*P	**P**	**02 55 33.3**	**+2.6**
	23nm,0.9s,mb4.7						
FITZ	**Fitzroy Crossi**	**27.30**	**182**	P	**P**	**02 55 30.6**	**-0.1**
	14nm,0.9s,mb4.5,baz=17,slow=16,SNR=11						
KSRS	**Korea Array**	**28.00**	**2**	P	**P**	**02 55 37.7**	**+0.9**
	4.0nm,0.8s,mb4.1,baz=178,slow=9.8,SNR=16						
CMAR	**Chiang Mai Arr**	**28.42**	**292**	P	**P**	**02 55 39.2**	**-1.6**
	1.3nm,0.3s,mb4.0,baz=106,slow=7.0,SNR=10						
CHTO	**Chiang Mai**	**28.52**	**292**	*e*P	**P**	**02 55 40.6**	**-1.0**
MJAR	**Matsushiro Arr**	**29.00**	**19**	P	**P**	**02 55 46.8**	**+1.1**
	1.7nm,1.0s,mb3.8,baz=193,slow=7.4,SNR=4.3						
XAN	**Xi'an**	**29.52**	**329**	P	**P**	**02 55 49.8**	**-0.6**
XAN				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.4						
WRAB	**Tennant Creek**	**30.05**	**166**	*e*P	**P**	**02 55 53.9**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
WRAB	**Tennant Creek**	**30.05**	**166**	*e*P	**P**	**02 55 53.9**	**-1.2**
	comp=Z,9.4nm,1.1s,mb4.4						
WRA	**Warramunga Arr**	**30.06**	**166**	P	**P**	**02 55 53.5**	**-1.6**
	comp=Z,4.6nm,0.7s,mb4.3,baz=343,slow=9.7,SNR=12						
WB2	**Warramunga Arr**	**30.06**	**166**	*e*P	**P**	**02 55 54.2**	**-1.0**
MBWA	**Marble Bar**	**31.09**	**193**	*e*P	**P**	**02 56 03.7**	**-0.6**
	comp=Z,10nm,0.6s,mb4.8						
BJT	**Baijiatuao**	**31.96**	**345**	*e*P	**P**	**02 56 12.9**	**+1.1**
BJT				pmax	pmax		
	comp=Z,46nm,1.3s						
BJT	**Baijiatuao**	**31.96**	**345**	*e*P	**P**	**02 56 12.9**	**+1.1**
	comp=Z,46nm,1.3s,mb5.2						
BJI	**Beijing**	**31.98**	**345**	P	**P**	**02 56 12.5**	**+0.6**
BJI				AMB	AMB		
	comp=Z,29nm,1.2s,mb5.0						
BJI				AMB	AMB		
	comp=Z,214nm,4.2s						
BJI				LR	LR		
	comp=N,157nm,14.3s,MS4.1						
BJI				LR	LR		
	comp=E,244nm,16.5s,MS4.1						
BJI				LR	LR		
	comp=Z,143nm,20.5s,MS3.6						
BJI	**Beijing**	**31.98**	**345**	P	**P**	**02 56 12.6**	**+0.7**
BJI				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.0						
BJI				MLR	MLR		
	comp=Z,140nm,20.5s,MS3.6						
ASAR	**Alice Springs**	**33.55**	**168**	P	**P**	**02 56 24.9**	**-1.0**
	comp=Z,1.9nm,0.7s,mb4.1,baz=330,slow=5.4,SNR=5.9						
ASAR				PcP	PcP	02 59 06.3	+0.7
	comp=Z,0.8nm,0.6s,baz=350,slow=2.7,SNR=4.5						
CTA	**Charters Tower**	**35.00**	**147**	P	**P**	**02 56 39.1**	**+0.6**
	comp=Z,4.0nm,0.7s,mb4.5,baz=339,slow=11,SNR=5.4						
CTAO	**Charters Tower**	**35.00**	**147**	*e*P	**P**	**02 56 43.7**	**+5.3**
CTAO				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
CTAO	**Charters Tower**	**35.00**	**147**	*e*P	**P**	**02 56 43.7**	**+5.3**
	comp=Z,9.6nm,1.2s,mb4.6						
LSA	**Lhasa**	**38.94**	**306**	P	**P**	**02 57 12.5**	**+0.6**
FORT	**Forrest**	**39.92**	**178**	*e*P	**P**	**02 57 20.3**	**+0.4**
	comp=Z,2.7nm,0.6s,mb4.2						
KLR	**Kul'dur**	**39.97**	**5**	*e*P	**P**	**02 57 20.8**	**+0.7**
ODAN	**Odare**	**41.04**	**300**	*e*P	**P**	**02 57 28.6**	**-0.7**
	comp=Z,55nm,0.7s,mb5.3						
ULN	**Ulaanbaatar**	**41.84**	**340**	*e*P	**P**	**02 57 36.2**	**+0.7**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
ULN	**Ulaanbaatar**	**41.84**	**340**	*e*P	**P**	**02 57 36.2**	**+0.7**
	comp=Z,4.2nm,0.6s,mb4.2						
SONM	**Songino Array**	**42.03**	**340**	P	**P**	**02 57 37.2**	**+0.1**
	comp=Z,1.8nm,0.6s,mb3.9,baz=160,slow=9.9,SNR=9.6						
SONM				LR	LR	03 16 49.7	
	comp=Z,201nm,18.4s,MS4.0,baz=129,slow=39						
JIRN	**Jiri**	**42.30**	**301**	*e*P	**P**	**02 57 38.9**	**-0.7**
	comp=Z,46nm,0.7s,mb5.2						
GUN	**Gumba**	**42.63**	**301**	*e*P	**P**	**02 57 42.2**	**-0.2**
	comp=Z,64nm,0.8s,mb5.4						
KKN	**Kakani**	**43.10**	**301**	*e*P	**P**	**02 57 44.9**	**-1.3**
	comp=Z,26nm,0.9s,mb5.0						
DMN	**Daman**	**43.20**	**301**	*e*P	**P**	**02 57 45.6**	**-1.3**
	comp=Z,32nm,1.0s,mb5.0						
STKA	**Stephens Creek**	**43.39**	**161**	P	**P**	**02 57 48.2**	**-0.1**
	comp=Z,3.5nm,0.6s,mb4.3,baz=331,slow=8.6,SNR=3.6						
STKA	**Stephens Creek**	**43.39**	**161**	*e*P	**P**	**02 57 48.4**	**+0.1**
GKN	**Gorkha**	**43.71**	**301**	*e*P	**P**	**02 57 49.6**	**-1.5**
	comp=Z,16nm,0.7s,mb4.9						
DANN	**Dangsing**	**44.55**	**301**	*e*P	**P**	**02 57 56.7**	**-1.1**
	comp=Z,44nm,0.7s,mb5.4						
BOD	**Bodaibo**	**49.34**	**351**	*e*P	**P**	**02 58 35.7**	**+1.0**
BOD				*e*	pP	02 58 47.6	-1.2
BOD				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
BOD				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
PETK	**Petropavlovsk-**	**50.28**	**24**	P	**P**	**02 58 41.1**	**-0.7**
	comp=Z,2.8nm,0.8s,mb4.3,baz=321,slow=1.9,SNR=3.5						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**53.03**	**323**	*e*P	**P**	**02 59 02.2**	**-0.3**
MKAR	**Makanchi Array**	**53.03**	**323**	P	**P**	**02 59 01.9**	**-0.6**
	comp=Z,9.8nm,0.8s,mb4.8,baz=120,slow=8.5,SNR=32						
MKAR				LR	LR	03 24 43.8	
	comp=Z,102nm,18.6s,MS3.9,baz=165,slow=40						
MKAR	**Makanchi Array**	**53.03**	**323**	P	**P**	**02 59 01.9**	**-0.6**
MKAR				LR	LR	03 24 43.8	
TKM2	**Tokmak 2**	**55.64**	**316**	*e*P	**P**	**02 59 21.4**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
TKM2	**Tokmak 2**	**55.64**	**316**	P	**P**	**02 59 21.6**	**+0.1**
	SNR=9.2						
TKM2	**Tokmak 2**	**55.64**	**316**	*e*P	**P**	**02 59 21.4**	**-0.2**
	comp=Z,7.5nm,0.8s,mb4.8						
ZALV	**Zalesovo Beam**	**55.65**	**331**	P	**P**	**02 59 20.7**	**-0.7**
	comp=Z,2.6nm,0.6s,mb4.5,baz=127,slow=5.7,SNR=8.2						
ZALV				LR	LR	03 27 02.0	
	comp=Z,61nm,18.3s,MS3.7,baz=244,slow=40						
KBK	**Karagaybulak**	**55.99**	**316**	P	**P**	**02 59 24.5**	**+0.4**
	SNR=6.2						
UCH	**Uchtor**	**56.15**	**315**	P	**P**	**02 59 26.2**	**+1.0**
	SNR=31						
UCH	**Uchtor**	**56.15**	**315**	*e*P	**P**	**02 59 25.8**	**+0.6**
	comp=Z,24nm,0.9s,mb5.2						
USP	**Ospenovka**	**56.52**	**316**	P	**P**	**02 59 27.6**	**-0.2**
	SNR=9.8						
AML	**Almayashu**	**56.69**	**315**	P	**P**	**02 59 30.1**	**+1.0**
	SNR=5.3						
AML	**Almayashu**	**56.69**	**315**	*e*P	**P**	**02 59 29.8**	**+0.7**
	comp=Z,25nm,0.9s,mb5.2						
EKS2	**Erkin-Say**	**56.81**	**315**	P	**P**	**02 59 30.1**	**+0.2**
	SNR=9.3						
EKS2	**Erkin-Say**	**56.81**	**315**	*e*P	**P**	**02 59 29.4**	**-0.4**
	comp=Z,16nm,1.0s,mb5.0						
NVS	**Novosibirsk**	**56.92**	**332**	*e*P	**P**	**02 59 29.0**	**-1.5**
NVS				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
NVS				pmax	pmax		
	comp=N,9.0nm,1.3s						
KURK	**Kurchatov**	**57.08**	**326**	P	**P**	**02 59 30.8**	**-0.9**
	comp=N,11nm,0.9s,mb4.9,baz=126,slow=6.5,SNR=14						
KURK	**Kurchatov**	**57.08**	**326**	*e*P	**P**	**02 59 30.9**	**-0.8**
KURK				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.4						
KURK	**Kurchatov**	**57.08**	**326**	*e*P	**P**	**02 59 30.9**	**-0.8**
	comp=Z,42nm,1.1s,mb5.4						
KBL	**Kabul**	**58.23**	**305**	*e*P	**P**	**02 59 39.4**	**-0.7**
KBL				*e**PP	pP	02 59 50.8	-3.7
KBL				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
KBL	**Kabul**	**58.23**	**305**	*e*P	**P**	**02 59 39.4**	**-0.7**
	comp=Z,16nm,0.9s,mb5.0						
KBL				*e*pP	pP	02 59 50.8	-3.7
TIXI	**Tiksi**	**62.26**	**1**	*e*P	**P**	**03 00 06.0**	**-0.9**
TIXI				*e**PP	pP	03 00 20.3	-1.2
TIXI				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.1						
TIXI	**Tiksi**	**62.26**	**1**	*e*P	**P**	**03 00 06.0**	**-0.9**
	comp=Z,16nm,1.0s,mb5.1						
TIXI				*e*pP	pP	03 00 20.3	-1.2
BVAR	**Borovoye Array**	**62.68**	**326**	P	**P**	**03 00 09.4**	**-0.6**
	comp=Z,7.4nm,0.8s,mb4.9,baz=111,slow=8.1,SNR=20						
BRVK	**Borovoye**	**62.75**	**326**	*e*P	**P**	**03 00 10.3**	**-0

TORD	**Torodi Ar. Bea**	**121.03**	**291**	PKP	PKPdf	03 08 37.6	-1.0
	comp=Z,1.0nm,0.8s,baz=48,slow=1.6,SNR=5.2						
WCI	**Wyandotte Cave**	**123.51**	**31**	*e*PKIKP	PKPdf	03 08 43.7	+0.9
WVT	**Waverly**	**124.27**	**34**	*e*PKIKP	PKPdf	03 08 45.1	+0.8
DBIC	**Dimbokro**	**129.21**	**287**	PKP	PKPdf	03 08 53.9	-0.4
	comp=Z,5.8nm,1.2s,baz=166,slow=4.2,SNR=2.3						
DBIC	**Dimbokro**	**129.21**	**287**	PKP	PKPdf	03 08 53.9	-0.4
DBIC				*e*PKPdf	PKPdf	03 08 54.9	+0.5
PLCA	**Paso Flores**	**145.19**	**157**	PKPbc	PKPbc	03 09 23.8	+1.2
	comp=Z,3.4nm,0.8s,baz=219,slow=4.2,SNR=7.0						
PLCA	**Paso Flores**	**145.19**	**157**	*e*PKPbc	PKPbc	03 09 24.4	+1.8
TRQA	**Tornquist**	**150.36**	**166**	*e*PKPbc	PKPbc	03 09 37.3	+0.5

*NEIC **26** 02:54:31.1±1.0, 1203S×16676E, h35km, mb4.2/1, Error ellipse: s-maj=22.5km s-min=17.2km az=88.0*
*IDC **26** 02:54:33.5±8.9, 1196S×16650E, h43km±64km, mb3.8/7, mb1 4.0/8, mb1mx3.8/18, mbtmp3.9/8, ML5.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/28, Error ellipse: s-maj=63.8km s-min=28.8km az=96.0*
*ISCJB **26** 02:54:34.4±5.1, 120S±02×1663E±02, h61km±37km, mb4.0/8, Error ellipse: s-maj=39.2km s-min=24.1km az=166.3*

ISC 26 02:54:36.1±4.7, 120S±02×1664E±02, h64km±34km, n11, σ0§67/11, mb4.0/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.81**	**291**	P	**Pn**	**02 56 13.8**	**+0.5**
	29nm,0.3s,baz=146,slow=8.3,SNR=8.1						
HNR				S	**Sn**	**02 57 28.9**	**-0.6**
	15nm,0.3s,baz=191,slow=22,SNR=2.2						
HNR				LR	LR	02 58 36.7	
	comp=Z,172nm,19.9s,baz=12,slow=35						
STKA	**Stephens Creek**	**30.22**	**225**	P	**P**	**03 00 40.2**	**-0.5**
	3.7nm,0.8s,mb4.2,baz=34,slow=5.5,SNR=3.6						
WRA	**Warramunga Arr**	**31.77**	**251**	P	**P**	**03 00 55.1**	**+0.6**
	0.4nm,0.5s,mb3.5,baz=85,slow=9.3,SNR=5.0						
ASAR	**Alice Springs**	**32.95**	**245**	P	**P**	**03 01 04.2**	**-0.7**
	1.0nm,0.7s,mb3.9,baz=70,slow=10.0,SNR=6.2						
FITZ	**Fitzroy Crossi**	**39.76**	**256**	P	**P**	**03 02 04.3**	**+1.4**
	3.1nm,1.0s,mb4.0,baz=54,slow=19,SNR=3.3						
JHJ	**Hachijo jima 2**	**51.52**	**331**	LR	LR	03 23 51.0	
	comp=Z,79nm,18.2s,baz=318,slow=34						
CASY	**Casey**	**65.76**	**202**	*e*P	**P**	**03 05 13.4**	**-0.5**
	1.2nm,0.6s,mb4.1						
CMAR	**Chiang Mai Arr**	**73.05**	**294**	P	**P**	**03 06 00.8**	**+0.9**
	1.8nm,0.7s,mb4.1,baz=127,slow=4.9,SNR=8.9						
SONM	**Songino Array**	**79.77**	**324**	P	**P**	**03 06 37.1**	**-0.1**
	0.3nm,0.5s,mb3.5,baz=134,slow=6.2,SNR=3.5						
MK31	**Makanchi Array**	**94.61**	**317**	*e*P	**P**	**03 07 49.5**	**-0.5**
MKAR	**Makanchi Array**	**94.61**	**317**	P	**P**	**03 07 49.5**	**-0.4**
	0.9nm,0.4s,mb4.5,baz=82,slow=8.7,SNR=5.7						

*ISCJB **26** 03:26:15.5±1.0, 41.39N±005×1446E±008, h40km±8km, mb4.0/23, Error ellipse: s-maj=10.7km s-min=8.0km az=22.0*
*JMA **26** 03:26:15.4±0.2, 4144N×1445.3E, h40km±1km, M3.9*
*MOS **26** 03:26:16.3±0.9, 4136N×1443.5E, h49km, mb4.5/8, Error ellipse: s-maj=15.1km s-min=10.7km az=112.5*
*NEIC **26** 03:26:17.9±1.1, 4140N×1444.0E, h46km±11km, mb4.2/11, Error ellipse: s-maj=11.3km s-min=9.4km az=203.0*
*IDC **26** 03:26:18.1±2.6, 4140N×1444.2E, h47km±21km, mb3.6/11, mb1 3.8/13, mb1mx3.8/23, mbtmp3.6/13, ML3.4/2, MS2.9/4, Ms1 2.9/4, ms1mx2.7/26, Error ellipse: s-maj=21.2km s-min=17.8km az=86.0*

ISC 26 03:26:15.9±2.2, 4144N±004×14448E±008, h27km±15km, n60, σ0§73/61, mb4.0/23, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERM	**Erimo**	**1.15**	**301**	*e*Pn	**Pn**	**03 26 36.6**	**+0.4**
ERM				*e*Sn	**Sn**	**03 26 44.9**	**-6.1**
JEM	**Erimo**	**1.15**	**301**	P	**Pn**	**03 26 36.0**	**-0.2**
JCH	**Churui**	**1.44**	**325**	P	**Pn**	**03 26 39.6**	**-0.7**
JCH				*e*S	**Sn**	**03 26 57.8**	**-0.5**
JNBK	**Urakawa-nobuka**	**1.54**	**304**	P	**Pn**	**03 26 42.1**	**+0.5**
JNBK				*e*S	**Sn**	**03 27 01.4**	**+0.7**
JOB	**Onbets**	**1.54**	**342**	P	**Pn**	**03 26 41.6**	**0.0**
JAK	**Akkeshi**	**1.56**	**6**	P	**Pn**	**03 26 41.3**	**-0.7**
JAK				*e*S	**Sn**	**03 27 00.8**	**-0.6**
JAR	**Ashorobuto**	**1.93**	**344**	P	**Pn**	**03 26 46.3**	**-0.7**
JAR				*e*S	**Sn**	**03 27 10.1**	**-0.3**
ASAJ	**Asahikawa**	**3.01**	**333**	P	**Pn**	**03 27 02.7**	**+0.8**
	4.1nm,0.3s,baz=187,slow=9.8,SNR=8.7						
ASAJ				S	**Sn**	**03 27 39.1**	**+2.0**
	5.4nm,0.3s,baz=124,slow=22,SNR=5.1						
ASAJ	**Asahikawa**	**3.01**	**333**	P	**Pn**	**03 27 02.7**	**+0.8**
ASAJ				S	**Sn**	**03 27 39.1**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,5.0nm,0.3s						
MAJO	**Matsushiro**	**6.91**	**227**	*e*P	**Pn**	**03 27 54.8**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MAJO	**Matsushiro**	**6.91**	**227**	*e*Pn	**Pn**	**03 27 54.8**	**-0.6**
	comp=Z,9.2nm,0.6s						
MJAR	**Matsushiro Arr**	**6.91**	**227**	P	**Pn**	**03 27 56.8**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=221,slow=26,SNR=4.6						
MJAR				S	**Sn**	**03 29 19.4**	**+6.3**
	comp=Z,0.8nm,0.3s,baz=50,slow=35,SNR=3.5						
MJAR				LR	LR	03 31 07.7	
	comp=Z,65nm,20.1s,baz=30,slow=42						
MJAR	**Matsushiro Arr**	**6.91**	**227**	P	**Pn**	**03 27 56.8**	**+1.4**
MJAR				S	**Sn**	**03 29 19.4**	**+6.3**
JHJ	**Hachijo jima 2**	**9.11**	**206**	LR	LR	03 32 16.8	
	comp=Z,71nm,19.6s,baz=58,slow=40						
KSRS	**Korea Array**	**13.40**	**258**	LR	LR	03 34 17.7	
	comp=Z,50nm,18.3s,baz=342,slow=36						
PETK	**Petropavlovsk-**	**14.69**	**33**	LR	LR	03 34 37.2	
	comp=Z,59nm,19.8s,baz=92,slow=34						
BOD	**Bodaibo**	**25.35**	**321**	*e*P	**P**	**03 31 35.4**	**-5.0**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.8s,mb3.6						
ULN	**Ulaanbaatar**	**27.19**	**296**	*e*P	**P**	**03 31 57.2**	**+0.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
ULN	**Ulaanbaatar**	**27.19**	**296**	*e*P	**P**	**03 31 57.2**	**+0.1**
	comp=Z,1.9nm,0.6s,mb3.8						
SONM	**Songino Array**	**27.63**	**296**	P	**P**	**03 32 00.8**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.5,baz=98,slow=10,SNR=4.7						
ZALV	**Zalesovo Beam**	**40.86**	**309**	P	**P**	**03 33 54.7**	**-0.5**
	comp=Z,1.7nm,0.5s,mb3.9,baz=90,slow=8.0,SNR=6.3						
ZALV	**Zalesovo Beam**	**40.86**	**309**	P	**P**	**03 33 54.7**	**-0.5**
MK31	**Makanchi Array**	**43.94**	**299**	*e*P	**P**	**03 34 20.1**	**-0.3**
MKAR	**Makanchi Array**	**43.94**	**299**	P	**P**	**03 34 19.6**	**-0.7**
	comp=Z,1.9nm,0.8s,mb3.9,baz=72,slow=12,SNR=7.9						
KURK	**Kurchatov**	**45.22**	**305**	P	**P**	**03 34 30.8**	**+0.3**
	comp=Z,2.0nm,0.6s,mb4.1,baz=75,slow=8.8,SNR=10						
KURK	**Kurchatov**	**45.22**	**305**	P	**P**	**03 34 30.8**	**+0.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
KURK	**Kurchatov**	**45.22**	**305**	*e*P	**P**	**03 34 30.3**	**-0.2**
	comp=Z,2.3nm,0.7s,mb4.1						
BRVK	**Borovoye**	**49.51**	**310**	*e*P	**P**	**03 35 03.8**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
BRVK	**Borovoye**	**49.51**	**310**	*e*P	**P**	**03 35 03.8**	**-0.1**
	comp=Z,2.1nm,0.4s,mb4.5						
KBL	**Kabul**	**58.12**	**290**	*e*P	**P**	**03 36 06.6**	**-0.5**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KBL	**Kabul**	**58.12**	**290**	*e*P	**P**	**03 36 06.6**	**-0.5**
	comp=Z,3.3nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	**61.79**	**191**	P	**P**	**03 36 31.5**	**-0.7**
	comp=Z,0.5nm,0.3s,mb4.1,baz=7,8,slow=7.0,SNR=6.5						
JOF	**Joensuu**	**63.20**	**332**	*e*p	**P**	**03 36 41.0**	**-0.3**
	comp=Z,1.6nm,0.5s,mb4.4						
KAF	**Kangasniemi**	**65.48**	**333**	*e*p	**P**	**03 36 55.1**	**-1.1**
	comp=Z,6.4nm,0.8s,mb4.7						
KAF	**Kangasniemi**	**65.48**	**333**	*e*P	**P**	**03 36 55.1**	**-1.1**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
BOZ	**Bozeman (W)**	**69.92**	**46**	*e*P	**P**	**03 37 25.4**	**+0.9**
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
BOZ	**Bozeman (W)**	**69.92**	**46**	*e*P	**P**	**03 37 25.4**	**+0.9**
	comp=Z,1.3nm,0.6s,mb4.0						
NVAR	**Mina Array Bea**	**70.49**	**56**	P	**P**	**03 37 28.6**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.5,baz=290,slow=6.6,SNR=3.4						
NB2	**NORSAR Subarra**	**71.03**	**338**	P	**P**	**03 37 30.9**	**0.0**
	comp=Z,0.2nm,0.8s,mb3.1,baz=43,slow=6.2						
NOA	**NORSAR Array B**	**71.03**	**338**	P	**P**	**03 37 31.2**	**+0.3**
	comp=Z,2.0nm,0.8s,mb4.1,baz=37,slow=6.0,SNR=4.6						
MOOW	**Moose Ponds**	**71.62**	**48**	*e*P	**P**	**03 37 36.2**	**+1.4**
	comp=Z,0.8nm,0.8s,mb3.7						
AKASG	**Malin Array Be**	**72.25**	**323**	P	**P**	**03 37 38.5**	**0.0**
	comp=Z,1.2nm,0.4s,mb4.2,baz=44,slow=6.4,SNR=7.7						
AKASG	**Malin Array Be**	**72.25**	**323**	P	**P**	**03 37 38.5**	**0.0**
AKBB	**Malin Array Si**	**72.25**	**323**	*e*P	**P**	**03 37 37.7**	**-0.8**
TPNV	**Topopah Spring**	**72.69**	**56**	*e*P	**P**	**03 37 41.8**	**+0.4**
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.3						
TPNV	**Topopah Spring**	**72.69**	**56**	*e*P	**P**	**03 37 41.8**	**+0.4**
	comp=Z,6.1nm,1.6s,mb4.3						
DUG	**Dugway**	**72.71**	**51**	*e*P	**P**	**03 37 42.2**	**+0.8**
DUG				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
DUG	**Dugway**	**72.71**	**51**	*e*P	**P**	**03 37 42.2**	**+0.7**
	comp=Z,0.8nm,0.6s,mb3.8						
BW06	**Boulder Array**	**72.92**	**48**	*e*P	**P**	**03 37 43.0**	**+0.5**
	comp=Z,0.8nm,0.5s,mb3.9						
PDAR	**Pinedale Array**	**72.92**	**48**	P	**P**	**03 37 42.5**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.8,baz=214,slow=0.2,SNR=6.2						
GERES	**GERESS Array B**	**80.18**	**329**	P	**P**	**03 38 23.9**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=82,slow=7.0,SNR=2.8						
TXAR	**Lajitas Array**	**85.59**	**54**	P	**P**	**03 38 52.2**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.8,baz=292,slow=3.2,SNR=6.4						
TXAR	**Lajitas Array**	**85.59**	**54**	P	**P**	**03 38 52.2**	**+0.2**
WCI	**Wyandotte Cave**	**88.18**	**38**	*e*P	**P**	**03 39 01.4**	**-3.0**
WCI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.8						
WCI	**Wyandotte Cave**	**88.18**	**38**	*e*P	**P**	**03 39 01.4**	**-3.0**
	comp=Z,3.9nm,0.6s,mb4.8						
TORD	**Torodi Ar. Bea**	**115.74**	**319**	PKP	PKPdf	03 44 55.1	-1.2
	comp=Z,0.8nm,1.3s,baz=29,slow=3.3,SNR=3.0						
SNAA	**Sanae**	**145.66**	**198**	*e*	PKPdf	03 45 49.1	-1.4
SNAA				*e*		03 45 52.8	
SIV	**San Ignacio**	**146.40**	**49**	PKPbc	PKPbc	03 45 53.7	-1.0
	comp=Z,1.3nm,0.6s,baz=274,slow=3.1,SNR=8.3						
VNA2	**Neumayer--Watz**	**147.21**	**197**	*e*	PKPdf	03 45 55.0	+1.9
	baz=101,slow=3.2						
VNA2				*e*		03 45 59.0	
VNA3	**Neumayer Olymp**	**147.43**	**195**	*e*	PKPdf	03 45 55.0	+1.5
VNA3				*e*		03 45 58.2	

*ISCJB **26** 03:29:46.9±0.7, 3903N±003×2582E±005, h16km±8km, Error ellipse: s-maj=6.3km s-min=5.0km az=5.5*
*THE **26** 03:29:46.6, 3904N×2587E, h10km, ML3.0*
*ATH **26** 03:29:46.4, 3925N×2624E, h48km±3km, MD3.1/3*
*DDA **26** 03:29:47.4, 3918N×2582E, h7km±2km, Md2.6*
*CSEM **26** 03:29:47.0±0.1, 3904N×2591E, h20km, ML3.0, Error ellipse: s-maj=3.1km s-min=1.8km az=81.0*

ISC 26 03:29:46.2±0.6, 3903N±003×2577E±004, h8km±5km, n13, σ1§15/23, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.45**	**60**	*e*Pg	**Pg**	**03 29 54.1**	**-0.7**
PRK				*e*Sg	**Sg**	**03 29 59.7**	**-1.0**
PRK	**Paraskevi**	**0.45**	**60**	*i*P	**Pg**	**03 29 54.1**	**-0.7**
PRK				*e*S	**Sg**	**03 29 59.9**	**-0.8**
CHOS	**Chios island**	**0.68**	**161**	*e*Pg	**Pg**	**03 29 59.7**	**+0.5**
CHOS				*e*Sg	**Sg**	**03 30 09.0**	**+1.0**
AYVA	**Ayvalik**	**0.77**	**68**	*i* P	**Pg**	**03 30 00.6**	**-0.3**
AYVA				*i* S	**Sg**	**03 30 10.8**	**-0.1**
LIA	**Limnos Island**	**0.98**	**332**	*e*Pg	**Pg**	**03 30 05.3**	**+0.2**
LIA				*e*Sg	**Sg**	**03 30 19.9**	**+2.0**
LOS	**Limnos**	**1.05**	**330**	*e*Pg	**Pg**	**03 30 07.0**	**+0.6**
AOS	**Alonnisos**	**1.48**	**276**	*e*Pg	**Pg**	**03 30 13.0**	**-1.5**
SMG	**Samos**	**1.56**	**147**	*e*P	**Pn**	**03 30 13.6**	**-0.5**
BALY	**Balya**	**1.60**	**63**	*e*P	**Pn**	**03 30 14.8**	**+0.2**
BALY				*i* S	**Sn**	**03 30 37.5**	**+2.0**
ALN	**Alexandroupoli**	**1.88**	**6**	*e*Pb	**Pn**	**03 30 17.3**	**-1.2**
ALN				*e*Sb	**Sn**	**03 30 41.5**	**-0.9**
APE	**Apeiranthos**	**1.96**	**186**	*e*Pn	**Pn**	**03 30 19.4**	**-0.3**
APE				*e*Sn	**Sn**	**03 30 44.5**	**0.0**
SART	**Tekirdag**	**1.98**	**33**	*i* P	**Pn**	**03 30 17.9**	**-2.1**
SART				*i* S	**Sn**	**03 30 47.4**	**+2.5**
DURS	**Dursunbey**	**2.17**	**74**	*i* P	**Pn**	**03 30 24.3**	**+1.8**
DURS				*i* S	**Sn**	**03 30 48.7**	**-0.9**

*ISCJB **26** 03:40:55.5±1.3, 3758N±006×2269E±008, h61km±12km, Error ellipse: s-maj=13.4km s-min=6.1km az=38.2*
*CSEM **26** 03:40:55.0±0.1, 3759N×2268E, h60km, ML2.7, Error ellipse: s-maj=2.3km s-min=1.5km az=127.0*
*THE **26** 03:40:56.0, 3758N×2267E, h57km, ML2.7*
*NEIC **26** 03:40:56.5, 3770N×2257E, h38km, MD3.0(ATH), After ATH.*
*ATH **26** 03:40:56.7, 3771N×2259E, h21km±13km, MD3.1/4*

ISC 26 03:40:55.9±1.3, 3757N±006×2270E±008, h61km±12km, n12, σ0§38/21, 1D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLX	**Vlachokerasia**	**0.33**	**231**	*e*Pg	**Pn**	**03 41 05.9**	**-0.3**
VLX				*e*Sg	**Sn**	**03 41 13.2**	**-0.5**
DID	**Didima**	**0.43**	**99**	*e*Pg	**Pn**	**03 41 07.2**	**0.0**
DID				*e*Sg	**Sn**	**03 41 15.8**	**+0.3**
LTK	**Loutraki**	**0.50**	**25**	*e*Pg	**Pn**	**03 41 07.6**	**-0.3**
LTK				*e*Sg	**Sn**	**03 41 16.6**	**0.0**
ITM	**Ithomi**	**0.73**	**238**	*e*PN	**Pn**	**03 41 11.0**	**+0.5**
ITM				*e*SN	**Sn**	**03 41 21.8**	**+0.6**
ITM	**Ithomi**	**0.73**	**238**	*e*Pn	**Pn**	**03 41 10.6**	**+0.1**
ITM				*e*Sn	**Sn**	**03 41 21.8**	**+0.6**
VLI	**Veliai**	**0.88**	**167**	*i*PN	**Pn**	**03 41 16.4**	**+4.1**
PYL	**PYLOS**	**1.02**	**229**	*e*Pg	**Pn**	**03 41 13.5**	**-0.7**
PYL				*e*Sg	**Sn**	**03 41 27.9**	**+0.2**
RLS	**Riolos of Patr**	**1.09**	**297**	*e*PN	**Pn**	**03 41 15.1**	**0.0**
LKR	**Lokris**	**1.10**	**12**	*e*Pg	**Pn**	**03 41 15.1**	**-0.1**
LKR				*e*Sg	**Sn**	**03 41 29.7**	**0.0**
LKR	**Lokris**	**1.10**	**12**	*e*PB	**Pn**	**03 41 15.0**	**-0.2**
LKR				*e*SN	**Sn**	**03 41 29.8**	**+0.2**
AGG	**Agios Georgios**	**1.48**	**349**	*e*Pg	**Pn**	**03 41 20.0**	**-0.3**
AGG				*e*Sg	**Sn**	**03 41 38.9**	**+0.3**
NEO	**Neokhori**	**1.78**	**13**	*e*Pn	**Pn**	**03 41 24.4**	**+0.1**

*CSEM **26** 04:19:10.9±0.2, 3748N×16.12E, h40km, ML4.0/3, Error ellipse: s-maj=6.0km s-min=2.2km az=117.0*

ROM 26 04:19:10.7±0.3, 3744N×1616E, h10km, Md2.5/10, MI2.8/7, Error ellipse: s-maj=3.4km s-min=1.5km az=116.0, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOI	**Samo**	**0.64**	**352**	Pg	Pg	04 19 23.5	+0.5
	152nm,0.4s						
MTTG	**Motta San Giov**	**0.67**	**327**	Pg	Pg	04 19 24.4	+0.7
MTTG				Sg	Sg	04 19 33.9	+1.4
	285nm,0.6s						
AGST	**Augusta-Monte**	**0.77**	**256**	Pg	Pg	04 19 25.6	+0.1
AGST				Sg	Sg	04 19 36.1	+0.6
	399nm,0.3s						
HAGA	**Augusta**	**0.82**	**259**	Pg	Pg	04 19 26.4	-0.1
CEL	**Celeste**	**0.84**	**346**	Pg	Pg	04 19 26.5	-0.5
CEL				Sg	Sg	04 19 38.0	0.0
	345nm,0.5s						
MMME	**Mongiuffi-Meli**	**0.87**	**305**	Pg	Pg	04 19 27.4	-0.1
MMME				Sg	Sg	04 19 39.1	+0.2
SCLL	**Scilla**	**0.89**	**337**	Pg	Pg	04 19 27.1	-0.7
	72nm,0.2s						
SSY	**Sortino**	**0.92**	**252**	Pg	Pg	04 19 27.7	-0.6
SSY				Sg	Sg	04 19 40.2	0.0
	708nm,0.2s						
HAVL	**Avola**	**0.96**	**240**	Pg	Pg	04 19 28.7	-0.4
	439nm,0.2s						
MSRU	**Castanea**	**0.97**	**328**	Pg	Pg	04 19 28.8	-0.6
	147nm,0.7s						
SG1	**Sgolgore (BA)**	**3.42**	**7**	*e*Pn	Pn	04 20 01.4	-2.6
PE1	**Pezze di Greco**	**3.50**	**16**	*e*Pn	Pn	04 20 01.3	-3.8

*ISCJB **26** 04:24:04.9±0.4, 4244N±006×13721E±008, h279km±6km, mb3.7/15, Error ellipse: s-maj=10.2km s-min=7.9km az=41.3*
*MOS **26** 04:24:05.0±0.8, 4260N×137.17E, h276km, mb3.9/6, Error ellipse: s-maj=14.2km s-min=12.8km az=86.7*
*NEIC **26** 04:24:05.5±0.6, 4254N×137.13E, h268km±7km, mb3.8/8, Error ellipse: s-maj=10.9km s-min=6.4km az=168.0*
*IDC **26** 04:24:05.9±1.2, 4258N×137.16E, h271km±14km, mb3.4/7, mb1 3.4/11, mb1mx3.3/26, mbtmp3.3/11, Error ellipse: s-maj=25.3km s-min=12.0km az=166.0*

ISC 26 04:24:05.6±0.5, 4241N±006×13720E±008, h273km±6km, n45, σ1§03/51, mb3.7/15, 2C, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	**Okushiri--Mats**	**1.72**	**100**	P	**Pn**	**04 24 48.5**	**+0.8**
JSH	**Shimam**	**2.11**	**83**	P	**Pn**	**04 24 51.9**	**+1.0**
JKB	**Kayabe**	**2.89**	**99**	P	**Pn**	**04 24 58.7**	**+0.3**
JOT	**Ohata**	**3.05**	**108**	P	**Pn**	**04 25 00.0**	**0.0**
JHR	**Hokuryu**	**3.57**	**67**	P	**Pn**	**04 25 06.8**	**+1.2**
ASAJ	**Asahikawa**	**4.29**	**65**	P	**Pn**	**04 25 14.2**	**+0.4**
	4.9nm,0.3s,baz=306,slow=18,SNR=5.3						
ASAJ				S	**S**	**04 26 07.5**	**-0.6**
	1.5nm,0.3s,baz=98,slow=31,SNR=8.3						
ASAJ	**Asahikawa**	**4.29**	**65**	P	**Pn**	**04 25 14.2**	**+0.5**
ASAJ				S	**S**	**04 26 07.6**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ERM	**Erimo**	**4.44**	**93**	*e*P	**Pn**	**04 25 14.9**	**-0.6**
ERM				*e*S	**S**	**04 26 03.6**	**-7.7**
JWK2	**Keihoku**	**4.47**	**48**	P	**Pn**	**04 25 17.6**	**+1.9**
JCH	**Churui**	**4.56**	**85**	P	**Pn**	**04 25 15.5**	**-1.3**
JCH				*e*S	**S**	**04 26 08.5**	**-5.2**
JMK	**Ichinoseki**	**4.61**	**137**	P	**Pn**	**04 25 16.0**	**-1.5**
MJAR	**Matsushiro Arr**	**5.91**	**172**	P	**Pn**	**04 25 35.3**	**+2.2**
	comp=N,0.6nm,0.3s,baz=353,slow=11,SNR=5.5						
MJAR	**Matsushiro Arr**	**5.91**	**172**	P	**Pn**	**04 25 35.3**	**+2.2**
YSS	**Yuzh-Sakhalins**	**6.03**	**39**	*e*P	**Pn**	**04 25 33.9**	**-0.5**
NEM2	**Nemuro 2**	**6.35**	**78**	P	**Pn**	**04 25 36.1**	**-2.3**
NEM2				S	**S**	**04 26 43.9**	**-9.0**
JRY	**Ryogami san**	**6.52**	**168**	P	**Pn**	**04 25 41.0**	**+0.4**
JRY				*e*S	**S**	**04 26 55.1**	**-1.9**
JOD2	**Odawara 2**	**7.28**	**168**	*e*S	**S**	**04 27 08.4**	**-5.9**
KLR	**Kul'dur**	**7.81**	**333**	*e*P	**Pn**	**04 25 54.0**	**-2.4**
KSRS	**Korea Array**	**8.68**	**238**	P	**Pn**	**04 26 09.9**	**+2.5**
	comp=N,0.1nm,0.3s,baz=57,slow=13,SNR=6.9						
PETK	**Petropavlovsk-**	**17.38**	**45**	P	**P**	**04 27 49.5**	**-0.3**
	comp=N,0.3nm,0.3s,baz=224,slow=6.2,SNR=4.2						
ULN	**Ulaanbaatar**	**21.88**	**295**	*e*P	**P**	**04 28 35.7**	**-0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
ULN	**Ulaanbaatar**	**21.88**	**295**	*e*P	**P**	**04 28 35.7**	**-0.6**
	comp=Z,1.9nm,0.6s,mb3.6						
SONM	**Songino Array**	**22.32**	**295**	P	**P**	**04 28 39.4**	**-0.9**
	comp=Z,1.3nm,0.5s,mb3.5,baz=99,slow=9.3,SNR=9.4						
ZALV	**Zalesovo Beam**	**35.99**	**307**	P	**P**	**04 30 40.3**	**-0.1**
	comp=Z,2.1nm,0.4s,mb4.0,baz=84,slow=7.2,SNR=8.2						
MK31	**Makanchi Array**	**38.67**	**296**	*e*P	**P**	**04 31 02.4**	**-0.6**
MKAR	**Makanchi Array**	**38.67**	**296**	P	**P**	**04 31 02.3**	**-0.7**
	comp=Z,1.3nm,0.4s,mb3.7,baz=86,slow=9.3,SNR=6.5						
NANT	**Nan**	**38.81**	**244**	⇑P	**P**	**04 31 10.0**	**+5.5**
	comp=Z,150nm,1.0s						
CHG	**Chiang Mai**	**39.98**	**246**	⇑P	**P**	**04 31 22.2**	**+8.1**
	comp=Z,12nm,0.7s,mb4.3						
KURK	**Kurchatov**	**40.17**	**303**	P	**P**	**04 31 15.6**	**+0.3**
	comp=Z,5.3nm,0.5s,mb4.1,baz=80,slow=9.1,SNR=27						
KURK	**Kurchatov**	**40.17**	**303**	P	**P**	**04 31 15.6**	**+0.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.1						
KURK	**Kurchatov**	**40.17**	**303**	*e*P	**P**	**04 31 14.6**	**-0.7**
	comp=Z,4.8nm,0.6s,mb4.0						
TKM2	**Tokmak 2**	**44.39**	**293**	*e*P	**P**	**04 31 49.5**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb3.9						
TKM2	**Tokmak 2**	**44.39**	**293**	*e*P	**P**	**04 31 49.5**	**+0.2**
	comp=Z,5.4nm,0.7s,mb3.9						
EKS2	**Erkin-Say**	**45.73**	**293**	*e*P

Scale 10^{17}Nm; M_{rr}-7.52; $M_{\theta\theta}$0.48; $M_{\phi\phi}$7.04; $M_{r\theta}$-3.70; $M_{\theta\phi}$-2.07; $M_{r\phi}$1.31; Best double couple: M_o8.50000×10^{17} NP1:ϕ_s144.00000°,δ57.00000°,λ-113.00000°. NP2: ϕ_s2.00000°,δ40.00000°,λ-59.00000°. Principal axes: T 8.0000, Plg9.0000°, Azm250.0000°; N 0.9700, Plg18.0000°, Azm157.0000°; P -8.9800, Plg68.0000°, Azm4.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.

NEIC Felt [V] at Loja, [IV] at Cuenca, [III] at Guayaquil and [II] at Quito. Felt at Canar, Gualaquiza, Riobamba and Samborondon. Also felt [IV] at Tumbes, Peru. Felt at Ayabaca, Chiclayo, Mancora, Piura and Talara.

CASC ***26*** *04:43:17.5, 396S×7902W, h90km, ML5.1, MS5.2, mb6.1(NEIC)*

IDC ***26*** *04:43:17.8±0.3, 393S×7929W, h100km±2km, mb5.3/30, mb1 5.3/34, mb1mx5.3/34, mbtmp5.3/34, MS4.8/15, Ms1 4.8/15, ms1mx4.6/30, Error ellipse: s-maj=12.4km s-min=6.6km az=66.0*

BGS ***26*** *04:43:18.9±1.2, 324S×7969W, h100km, mb6.0*

SZGRF ***26*** *04:43:18.4, 468S×7854W, h104km, mb6.0, Peru-Ecuador border region*

MOS ***26*** *04:43:19.0±1.8, 387S×7913W, h129km, mb5.9/118, MS4.9/9, Error ellipse: s-maj=9.7km s-min=5.2km az=55.0*

IGQ ***26*** *04:43:23.5, 344S×7941W, h86km±21km, Mb5.7, Ms5.7, Mw5.9, Error ellipse: s-maj=10.0km s-min=3.8km az=106.1*

ISC 26 04:43:18.0±0.1, 396S±002×7922W±002, h102km, h102km±.4km: pP-P, n1193, σ0=89/950, mb6.0/350, 47C-427D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IGUA	**Igualata**	**2.52**	**13**	⇑P		**Pn**		**04 43 58.5**	**+1.1**
ARRY	**Arrayan**	**2.55**	**17**	⇑P		**Pn**		**04 43 58.3**	**+0.4**
PATA	**Patacocha**	**2.56**	**18**	⇑P		**Pn**		**04 43 58.9**	**+0.8**
RETU	**Refugio**	**2.61**	**17**	⇑P		**Pn**		**04 43 59.6**	**+1.0**
ULBA	**Ulba**	**2.62**	**18**	⇑P		**Pn**		**04 43 59.7**	**+0.9**
JUI6	**Juive**	**2.62**	**17**	⇑P		**Pn**		**04 43 59.6**	**+0.7**
RUN5	**Runtun**	**2.65**	**17**	⇑P		**Pn**		**04 43 59.8**	**+0.6**
QIL2	**Quilotoa**	**3.08**	**6**	P		**Pn**		**04 44 06.4**	**+1.4**
ATAH	**Atahualpa**	**3.13**	**165**	P		**Pn**		**04 44 08.6**	**+3.0**
	478nm,0.3s,baz=7.6,slow=8.4,SNR=758								
ATAH				S		**Sn**		**04 44 36.1**	**-6.1**
	668nm,0.3s,baz=3.5,slow=10,SNR=6.1								
CHIS	**Cerro-Chispas-**	**3.26**	**332**	P		**Pn**		**04 44 05.4**	**-1.9**
CAMI	**Rancho Maria**	**3.34**	**12**	⇑P		**Pn**		**04 44 09.6**	**+1.2**
TAMB	**Tambo**	**3.35**	**15**	⇑P		**Pn**		**04 44 09.8**	**+1.2**
VC1	**Cotopaxi 1**	**3.39**	**14**	⇑P		**Pn**		**04 44 10.3**	**+1.2**
ANTI	**Antisana**	**3.64**	**17**	⇑P		**Pn**		**04 44 13.5**	**+1.0**
JAMA	**Jama**	**3.80**	**345**	⇓P		**Pn**		**04 44 12.4**	**-2.2**
JAMA	**Jama**	**3.80**	**345**	⇓S		**Sn**		**04 44 47.6**	**-11**
TERV	**Terraza Guagua**	**3.81**	**9**	⇑P		**Pn**		**04 44 16.0**	**+1.3**
GGP	**Refugio Guagua**	**3.81**	**9**	⇑P		**Pn**		**04 44 15.8**	**+1.1**
PINO	**Pino**	**3.82**	**9**	⇓P		**Pn**		**04 44 16.5**	**+1.6**
YANA	**Yana**	**3.87**	**10**	⇓P		**Pn**		**04 44 16.4**	**+0.8**
MAG1	**Magdalena**	**3.90**	**352**	⇓P		**Pn**		**04 44 14.7**	**-1.3**
LAV3	**Lava3-Reventad**	**4.15**	**22**	⇑P		**Pn**		**04 44 19.3**	**0.0**
CONE	**Cono NE Rev Vo**	**4.17**	**22**	⇑P		**Pn**		**04 44 20.0**	**+0.4**
CAYA	**Cayambe**	**4.19**	**17**	⇑P		**Pn**		**04 44 21.1**	**+1.3**
OTAV	**Otavalo**	**4.24**	**10**	*e*P		**Pn**		**04 44 21.1**	**+0.6**
OTAV					AML	AML		04 45 18.0	
	comp=E,8μm,1.2s								
OTAV	**Otavalo**	**4.24**	**10**	*e*Pn		**Pn**		**04 44 20.7**	**+0.2**
OTAV				*e*Sn		**Sn**		**04 45 07.5**	**-1.4**
COTA	**Cotacachi**	**4.35**	**12**	⇑P		**Pn**		**04 44 22.9**	**+0.9**
NNA	**Nana**	**8.32**	**164**	Pn		**Pn**		**04 45 14.0**	**-1.9**
	comp=E,8μm,0.4s								
NNA	**Nana**	**8.32**	**164**	P		**Pn**		**04 45 14.9**	**-1.0**
	comp=Z,238nm,0.3s,baz=332,slow=11,SNR=293								
NNA				S		**Sn**		**04 46 45.3**	**-2.9**
	comp=Z,762nm,0.3s,baz=200,slow=16,SNR=22								
NNA	**Nana**	**8.32**	**164**	*e*Pn		**Pn**		**04 45 14.6**	**-1.3**
	comp=Z,575nm,0.4s								
NNA				*e*Sn		**Sn**		**04 46 45.6**	**-2.6**
ROSC	**El Rosal**	**10.03**	**29**	P		**Pn**		**04 45 38.3**	**-0.9**
	comp=Z,4.8nm,0.3s,baz=207,slow=11,SNR=23								
ROSC	**El Rosal**	**10.03**	**29**	*e*Pn		**Pn**		**04 45 37.2**	**-1.9**
PAYG	**Puerto Ayora**	**11.53**	**286**	*e*Pn		**Pn**		**04 45 57.7**	**-1.8**
	comp=Z,2μm,1.4s								
PAYG				*e*Sn		**Sn**		**04 48 03.9**	**-2.4**
ICCO	**Coco Island**	**12.26**	**320**	*e*P		**Pn**		**04 46 10.2**	**+1.0**
UPD1	**Univ de Panama**	**12.48**	**6**	*e*P		**Pn**		**04 46 12.7**	**+0.6**
BCIP	**Isla Barro Col**	**13.05**	**357**	*e*P		**Pn**		**04 46 19.0**	**-0.6**
BCIP	**Isla Barro Col**	**13.05**	**357**	⇓*i*Pn		**Pn**		**04 46 19.0**	**-0.6**
	comp=Z,197nm,0.8s								
ACR	**Cerro Adams**	**13.13**	**343**	*e*P		**Pn**		**04 46 20.6**	**-0.1**
BRU2	**Volcan**	**13.13**	**345**	*e*P		**Pn**		**04 46 21.7**	**+1.1**
PINA	**Piqa, Costa Ab**	**13.15**	**356**	*e*P		**Pn**		**04 46 20.9**	**0.0**
ACLA	**Agua Clara, Si**	**13.24**	**358**	*e*P		**Pn**		**04 46 21.5**	**-0.6**
CTCR	**Cotoan**	**13.25**	**345**	*e*P		**Pn**		**04 46 23.4**	**+1.2**
CNI	**Changuinola**	**13.69**	**346**	*e*P		**Pn**		**04 46 28.3**	**+0.4**
BAR1		**13.73**	**343**	*e*P		**Pn**		**04 46 29.8**	**+1.3**
BUS	**Buena Vista**	**14.17**	**341**	*e*P		**Pn**		**04 46 34.9**	**+0.8**
LIO	**Limon**	**14.38**	**345**	*e*P		**Pn**		**04 46 39.0**	**+2.1**
ARE	**Arequipa**	**14.56**	**149**	*e*P		**Pn**		**04 46 43.0**	**+3.9**
SJS	**Escuela Geolog**	**14.62**	**341**	*e*P		**Pn**		**04 46 41.7**	**+1.8**
PRS1	**Puriscal**	**14.75**	**340**	*e*P		**Pn**		**04 46 41.3**	**-0.3**
CGA2	**Cerro Gallo 2**	**14.83**	**339**	*e*P		**Pn**		**04 46 44.1**	**+1.4**
JCR	**Jicaral**	**14.92**	**337**	*e*P		**Pn**		**04 46 45.1**	**+1.4**
JTS	**JuntasAbangare**	**15.26**	**338**	P		**Pn**		**04 46 49.5**	**+1.4**
	comp=Z,5μm,1.4s,SNR=95								
SDV	**Santo Domingo**	**15.36**	**34**	P		**Pn**		**04 46 47.1**	**-2.3**
	comp=Z,3.3nm,0.3s,baz=227,slow=14,SNR=60								
SDV	**Santo Domingo**	**15.36**	**34**	*e*Pn		**Pn**		**04 46 46.4**	**-2.9**
	comp=Z,862nm,1.1s								
VCR	**Vista de Mar**	**15.38**	**336**	*e*P		**Pn**		**04 46 51.0**	**+1.4**
LPAZ	**La Paz**	**16.39**	**139**	P		**Pn**		**04 47 02.2**	**0.0**
	comp=Z,1.4nm,0.3s,baz=315,slow=14,SNR=38								
LPAZ	**La Paz**	**16.39**	**139**	P		**Pn**		**04 47 02.2**	**0.0**
LPAZ					pmax	pmax			
	comp=Z,1.0nm,0.3s								
LPAZ	**La Paz**	**16.39**	**139**	*e*Pn		**Pn**		**04 47 02.0**	**-0.1**
	comp=Z,744nm,1.4s								
CONN	**Concepcion**	**16.69**	**338**	*e*P		**Pn**		**04 47 08.1**	**+2.3**
MASN	**Masaya**	**17.28**	**337**	*e*P		**Pn**		**04 47 13.4**	**+0.5**
CRUN	**El Crucero**	**17.33**	**336**	*e*P		**Pn**		**04 47 16.1**	**+2.5**
WILN	**Americas 2**	**17.45**	**337**	*e*P		**Pn**		**04 47 16.0**	**+0.9**
MGAN	**Managua**	**17.46**	**336**	*e*P		**Pn**		**04 47 16.2**	**+1.0**
MGAN					AMb	AMB		04 47 21.3	
	comp=Z,315nm,1.6s								
TISN	**Laguna Tiscapa**	**17.46**	**336**	*e*P		**Pn**		**04 47 16.2**	**+0.9**
XAVN	**Gruta Xavier**	**17.49**	**336**	*e*P		**Pn**		**04 47 17.0**	**+1.4**
CSAN		**17.56**	**336**	*e*P		**Pn**		**04 47 17.5**	**+1.0**
APYN	**Apoyeque**	**17.58**	**336**	*e*P		**Pn**		**04 47 18.1**	**+1.4**
HUEN		**17.60**	**337**	*e*P		**Pn**		**04 47 17.9**	**+0.9**
COPN	**Copaltepe**	**17.63**	**336**	*e*P		**Pn**		**04 47 18.3**	**+1.1**
MOMN	**Momotombo**	**17.81**	**336**	*e*P		**Pn**		**04 47 20.2**	**+0.8**
MIRN	**Miramar**	**17.91**	**336**	*e*P		**Pn**		**04 47 21.1**	**+0.4**
CNGN	**Cerro Negro**	**17.96**	**336**	*e*P		**Pn**		**04 47 21.3**	**+0.1**
LEON	**Leon**	**17.97**	**335**	*e*P		**Pn**		**04 47 21.8**	**+0.5**
TEL3	**Telica 3**	**18.09**	**335**	*e*P		**P**		**04 47 23.1**	**+1.3**
TELN	**Telica**	**18.11**	**335**	*e*P		**P**		**04 47 23.7**	**+1.7**
CRIN	**San Cristobal**	**18.29**	**335**	*e*P		**P**		**04 47 25.0**	**+1.0**
CNCH	**Conchagua**	**19.14**	**334**	*e*P		x		04 47 34.6	
VSM	**San Miguel**	**19.47**	**333**	*e*P		x		04 47 37.9	
TGUH	**Tegucigalpa,Un**	**19.60**	**336**	*e*P		**P**		**04 47 39.1**	**+0.7**
TGUH					AMS	AMS		04 53 26.4	
	comp=E,16μm,26.0s								
TGUH	**Tegucigalpa,Un**	**19.60**	**336**	⇓*i*P		**P**		**04 47 39.2**	**+0.9**
	comp=E,2μm,1.1s								
CAHU	**Cacacuatique**	**19.75**	**333**	*e*P		x		04 47 41.5	
SNVI	**San Vicente**	**19.90**	**331**	*e*P		x		04 47 42.8	
PCRV	**Puerto La Cruz**	**20.20**	**46**	P		**P**		**04 47 46.8**	**+2.0**
	comp=E,932nm,0.6s,baz=215,slow=5.3,SNR=594								
BOQS	**Boqueron**	**20.22**	**331**	*e*P		x		04 47 46.7	
SBLS	**San Blas**	**20.48**	**330**	*e*P		x		04 47 48.7	
LVC	**Limon Verde**	**21.06**	**153**	P		**P**		**04 47 56.5**	**+2.5**
	comp=E,71nm,0.7s,mb5.1,baz=314,slow=7.8,SNR=45								
LVC				pP				04 48 15.3	
	comp=E,84nm,0.6s,baz=341,slow=6.7,SNR=5.1								
LVC	**Limon Verde**	**21.06**	**153**	⇓*i*P		**P**		**04 47 56.4**	**+2.3**
	comp=E,338nm,1.2s,mb5.5								
SIV	**San Ignacio**	**21.47**	**125**	P		**P**		**04 48 00.3**	**+1.8**
	comp=E,59nm,0.8s,mb5.0,baz=304,slow=11,SNR=147								
SIV				pP				04 48 19.0	
	comp=E,80nm,0.8s,baz=308,slow=10.0,SNR=7.2								
PCJ	**Portland Cotta**	**21.66**	**5**	⇓*e*P		**P**		**04 48 00.7**	**+0.3**
MCJ	**Malvern**	**21.80**	**4**	⇓*e*P		**P**		**04 48 02.5**	**+0.6**
STH	**Stony Hill**	**22.02**	**6**	⇓*e*P		**P**		**04 48 04.4**	**+0.1**
CVJ	**Coleyville**	**22.11**	**4**	⇓*e*P		**P**		**04 48 06.0**	**+0.8**
TPP	**Pointe-a-Pierr**	**22.68**	**51**	*e*P		**P**		**04 48 13.1**	**+1.9**
TCE	**Chacachacare**	**22.68**	**50**	*e*P		**P**		**04 48 12.0**	**+0.8**
TRN	**Trinidad (W)**	**22.91**	**51**	*e*P		**P**		**04 48 13.2**	**-0.3**
TRN	**Trinidad (W)**	**22.91**	**51**	*e*		**P**		**04 48 18.6**	**+5.1**
TBH	**Brigand Hill**	**23.07**	**51**	*e*P		**P**		**04 48 09.1**	**-5.9**
TBH	**Brigand Hill**	**23.07**	**51**	*e*		**P**		**04 48 17.3**	**+2.3**
TBH	**Brigand Hill**	**23.07**	**51**	*e*P		**P**		**04 48 17.3**	**+2.3**
GRGR	**Grenville**	**23.67**	**47**	*e*P		**P**		**04 48 18.5**	**-2.0**
	comp=E,2μm,1.1s,mb6.3								
GRW	**Mount Saint Ca**	**23.69**	**47**	*e*P		**P**		**04 48 22.4**	**+1.8**
TPR	**Prospect**	**23.73**	**50**	*e*P		**P**		**04 48 21.7**	**+0.7**
TPR	**Prospect**	**23.73**	**50**	*e*		sP		04 48 57.4	+2.4
BOT	**Bacolet**	**23.76**	**51**	*e*P		**P**		**04 48 22.7**	**+1.4**
CCIG	**Comitan**	**23.82**	**328**	*i*P		**P**		**04 48 21.3**	**-0.5**
SVV	**Soufriere Volc**	**24.78**	**46**	*e*		**P**		**04 48 32.6**	**+2.1**
SSV	**Crater Summit**	**24.80**	**46**	*e*		**P**		**04 48 31.6**	**+0.9**
BHS	**Barnard House**	**24.83**	**46**	*e*		**P**		**04 48 31.6**	**+0.6**
SLB	**Belfond**	**25.25**	**45**	*e*		**P**		**04 48 34.9**	**+0.1**
AGPR	**Aguadilla, PR**	**25.28**	**28**	⇓*i*P		**P**		**04 48 35.3**	**+0.3**
SJG	**San Juan**	**25.43**	**30**	P		**P**		**04 48 36.9**	**+0.5**
SJG					pmax	pmax			
	comp=Z,740nm,1.0s								
SJG	**San Juan**	**25.43**	**30**	*e*P		**P**		**04 48 36.8**	**+0.3**
SJG	**San Juan**	**25.43**	**30**	⇓*i*P		**P**		**04 48 36.7**	**+0.3**
	comp=Z,742nm,1.0s,mb6.1								
TEIG	**Tepich**	**25.63**	**340**	P		**P**		**04 48 37.8**	**-0.3**
	comp=Z,110nm,0.9s,mb5.3,baz=162,slow=8.1,SNR=49								
TEIG					pP	pP		04 49 00.3	-0.3
	comp=Z,134nm,1.1s,baz=176,slow=8.0,SNR=6.2								
TEIG					LR	LR		04 57 54.7	
	comp=Z,1μm,18.2s,baz=151,slow=34								
TEIG	**Tepich**	**25.63**	**340**	*e*P		**P**		**04 48 37.8**	**-0.3**
TEIG	**Tepich**	**25.63**	**340**	*i*P		**P**		**04 48 37.6**	**-0.6**
HUIG	**Huatulco**	**25.76**	**320**	*i*P		**P**		**04 48 40.1**	**+0.7**
FDF	**Fort de France**	**25.80**	**44**	P		**P**		**04 48 38.2**	**-1.5**
FDF	**Fort de France**	**25.80**	**44**	⇓*e*P		**P**		**04 48 38.3**	**-1.5**
FDF	**Fort de France**	**25.80**	**44**	*e*P		**P**		**04 48 37.7**	**-2.0**
BBGH	**Gun Hill**	**25.88**	**49**	*e*P		**P**		**04 48 43.5**	**+3.0**
BBGH					*e*P			04 48 43.5	
BBGH	**Gun Hill**	**25.88**	**49**	*e*P		**P**		**04 48 43.0**	**+2.5**
	comp=Z,3μm,1.3s,mb6.5								
DSHT	**Scott's Head**	**25.98**	**42**	*e*		**P**		**04 48 42.5**	**+1.0**
CMIG	**Matias Romero**	**26.02**	**324**	P		**P**		**04 48 41.8**	**+0.1**
	comp=Z,135nm,1.1s,mb5.3,baz=131,slow=6.2,SNR=113								
CMIG					pP	pP		04 49 03.5	-0.8
	comp=Z,35nm,0.9s,baz=179,slow=17,SNR=2.2								
CMIG					PcP	PcP		04 52 07.2	-0.4
	comp=Z,16nm,0.8s,baz=67,slow=2.1,SNR=5.8								
CMIG					LR	LR		04 57 44.2	
	comp=Z,1μm,19.5s,baz=16,slow=33								
CMIG	**Matias Romero**	**26.02**	**324**	pP		pP		04 49 03.5	-0.8
CMIG					PcP	PcP		04 52 07.2	-0.4
CMIG					LR	LR		04 57 44.2	
DBCT	**Belle View Cho**	**26.04**	**42**	*e*		**P**		**04 48 43.0**	**+1.1**
MDN	**Morne-Daniel**	**26.05**	**42**	*e*		sP		04 49 15.5	-1.0
LCO	**Las Campanas**	**26.20**	**163**	*e*P		**P**		**04 48 44.3**	**+1.1**
	comp=Z,137nm,1.0s,mb5.3								
TBG	**Guadaloupe-3**	**26.26**	**41**	*e*P		**P**		**04 48 43.2**	**-0.7**
DWS	**Wesley**	**26.28**	**42**	*e*		sP		04 49 17.7	-0.9
SCG	**Saint Claude**	**26.37**	**41**	*e*P		**P**		**04 48 44.8**	**-0.1**
LZG	**Guadaloupe-1**	**26.39**	**40**	*e*P		**P**		**04 48 44.2**	**-0.8**
TUIG	**Tuzandepetl**	**26.50**	**326**	*i*P		**P**		**04 48 45.8**	**-0.2**
MGG	**Marie-Galante**	**26.53**	**41**	*e*P		**P**		**04 48 44.5**	**-1.8**
DEG	**La Desirade**	**26.98**	**41**	*e*P		**P**		**04 48 50.5**	**+0.1**
BPA	**Boggy Peak**	**27.01**	**39**	*e*P		**P**		**04 48 50.3**	**-0.3**
BPA	**Boggy Peak**	**27.01**	**39**	*e*		sP		04 49 24.1	-1.0
VHO	**Vista Hermosa**	**27.13**	**321**	*i*P		**P**		**04 48 52.5**	**+0.8**
TLL	**Tololo Astrono**	**27.25**	**164**	*e*P		**P**		**04 48 54.3**	**+1.6**
ANWB	**Willy Bob**	**27.52**	**38**	⇓*i*P		**P**		**04 48 54.0**	**-1.3**
ANWB				*e*				04 49 27.0	
PNIG	**Pinotepa**	**27.54**	**318**	*i*P		**P**		**04 48 55.3**	**-0.1**
LVIG	**Laguna Verde**	**28.98**	**325**	*i*P		**P**		**04 49 08.1**	**-0.1**
CFAA	**Coronel Fontan**	**29.38**	**161**	P		**P**		**04 49 12.4**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=344,slow=8.5,SNR=19								
CFAA					pP	pP		04 49 35.3	+1.0
	comp=Z,4.4nm,0.8s,baz=345,slow=9.0,SNR=16								
CAIG	**El Cayaco**	**29.46**	**316**	*i*P		**P**		**04 49 12.7**	**+0.2**
PPM	**Popocatepetl**	**29.81**	**321**	*i*P		**P**		**04 49 18.0**	**+2.5**
PLIG	**Plataniillo**	**29.88**	**319**	*i*P		**P**		**04 49 17.6**	**+1.4**
IIO	**Organos**	**30.26**	**321**	*i*P		**P**		**04 49 20.9**	**+1.5**
UNM	**Universidad Na**	**30.35**	**320**	*i*P		**P**		**04 49 22.5**	**+2.2**
PBVM	**Pinon**	**30.37**	**321**	*i*P		**P**		**04 49 21.4**	**+0.9**
FCH	**Farellones**	**30.39**	**165**	⇓*i*P		**P**		**04 49 22.4**	**+2.0**
CLCH	**Cerro Calan**	**30.39**	**166**	*e*P		**P**		**04 49 22.1**	**+1.6**
PTVM	**Pico Tres Padr**	**30.50**	**321**	*i*P		**P**		**04 49 22.3**	**+0.7**
CPUP	**Villa Florida**	**30.57**	**139**	P		**P**		**04 49 21.7**	**-0.4**
	comp=Z,10.0nm,0.8s,mb4.6,baz=300,slow=9.3,SNR=30								
CPUP					pP	pP		04 49 44.0	-1.0
	comp=Z,24nm,0.7s,baz=307,slow=9.3,SNR=9.8								
CPUP	**Villa Florida**	**30.57**	**139**	P		**P**		**04 49 22.4**	**+0.2**
CPUP					pmax	pmax			
	comp=Z,160nm,0.8s								
CPUP	**Villa Florida**	**30.57**	**139**	⇓*i*P		**P**		**04 49 21.7**	**-0.5**
	comp=Z,157nm,0.8s,mb5.8								
ZIIG	**Zihuatanejo**	**30.68**	**315**	*i*P		**P**		**04 49 23.5**	**+0.3**
LMEL	**Las Melosas**	**30.90**	**165**	*i*P		**P**		**04 49 26.9**	**+1.9**
DWPF	**Disney**	**31.95**	**356**	⇓*i*P		**P**		**04 49 33.7**	**-0.5**
	comp=Z,998nm,1.6s,mb6.3								
BDFB	**Brasilia**	**32.81**	**113**	P		**P**		**04 49 42.4**	**+0.5**
	comp=Z,17nm,0.7s,mb5.0,baz=250,slow=8.3,SNR=26								
BDFB					LR	LR		05 05 34.9	
	comp=Z,3μm,18.7s,baz=80,slow=41								
CCHI	**Chillan**	**33.14**	**169**	*e*P		**P**		**04 49 44.9**	**+0.3**
BRAL	**Brewton**	**35.57**	**348**	⇓*i*P		**P**		**04 50 06.4**	**+0.8**
	comp=Z,952nm,1.2s,mb6.6								
BRAL				*e*PcP		PcP		04 52 32.9	+0.4
KVTX	**Kingsville**	**36.13**	**331**	⇓*i*P		**P**		**04 50 11.7**	**+1.3**
	comp=Z,976nm,1.3s,mb6.6								
SPB	**Sao Paulo**	**36.36**	**125**	*e*P		**P**		**04 50 11.8**	**-0.7**
SPB				*e*pP		pP		04 50 34.4	-1.4
LPA	**La Plata**	**36.58**	**150**	*ce*P		**P**		**04 50 15.0**	**+0.8**
LPA				*e*pP		pP		04 50 38.0	+0.6
LPA				*e*sP		sP		04 50 46.0	-3.1
LPA				*e*PP		PP		04 51 56.0	+17
LPA				*e*S		**S**		**04 55 48.0**	**-1.4**
LPA				*e*pS				04 56 30.0	
LPA				*e*SCS		ScS		05 00 18.0	-1.8
NHSC	**New Hope**	**36.87**	**359**	⇓*i*P		**P**		**04 50 15.9**	**-0.8**
	comp=Z,661nm,1.1s,mb6.5								
NHSC				*e*PcP		PcP		04 52 35.7	-0.7
COW	**Cow Castle Cre**	**37.16**	**358**	*e*P		**P**		**04 50 18.9**	**-0.2**
HKT	**Hockley**	**37.28**	**336**	P		**P**		**04 50 20.3**	**+0.1**
HKT					pmax	pmax			
	comp=Z,680nm,1.8s,mb6.3								
HKT	**Hockley**	**37.28**	**336**	⇓*i*P		**P**		**04 50 20.1**	**-0.1**
	comp=Z,678nm,1.8s,mb6.3								
HKT				*e*PcP		PcP		04 52 37.9	+0.2
GOGA	**Godfrey**	**37.38**	**354**	⇓*i*P		**P**		**04 50 19.7**	**-1.3**
GOGA				*e*				04 52 37.0	
GOGA					pmax	pmax			
	comp=Z,403nm,1.3s,mb6.2								
GOGA	**Godfrey**	**37.38**	**354**	⇓*i*P		**P**		**04 50 19.7**	**-1.2**
	comp=Z,403nm,1.3s,mb6.2								
GOGA				*e*PcP		PcP		04 52 37.0	-0.9
TRQA	**Tornquist**	**37.41**	**157**	⇓*i*P		**P**		**04 50 20.7**	**-0.5**
	comp=Z,99nm,1.3s,mb5.6								
PLCA	**Paso Flores**	**37.43**	**169**	P		**P**		**04 50 22.0**	**+0.7**
	comp=Z,19nm,0.8s,mb5.1,baz=341,slow=9.5,SNR=88								
PLCA					pP	pP		04 50 44.9	+0.3
	comp=Z,41nm,1.0s,baz=338,slow=9.5,SNR=7.0								
PLCA					LR	LR		05 03 18.4	
	comp=Z,1μm,19.7s,baz=13,slow=32								
PLCA	**Paso Flores**	**37.43**	**169**	P		**P**		**04 50 22.1**	**+0.8**
PLCA					pmax	pmax			
	comp=Z,560nm,1.8s								
PLCA	**Paso Flores**	**37.43**	**169**	*e*P		**P**		**04 50 22.0**	**+0.7**
	comp=Z,47nm,0.9s,mb5.4								
LRAL	**Lakeview Retre**	**37.52**	**349**	⇓*i*P		**P**		**04 50 20.9**	**-1.2**
	comp=Z,456nm,1.1s,mb6.2								
LRAL				*e*PcP		PcP		04 52 37.6	-0.8
VBMS	**Vicksburg**	**37.55**	**344**	⇓*i*P		**P**		**04 50 21.8**	**-0.6**
	comp=Z,902nm,1.7s,mb6.3								
JSC	**Jenkinsville**	**38.08**	**357**	P		**P**		**04 50 26.4**	**-0.4**
JSC	**Jenkinsville**	**38.08**	**357**	*e*P		**P**		**04 50 26.0**	**-0.8**
NATX	**Nacogdoches**	**38.44**	**339**	⇓*i*P		**P**		**04 50 29.9**	**0.0**
	comp=Z,670nm,1.2s,mb6.3								
BBSR	**BB Station**	**38.67**	**20**	⇓*i*P		**P**		**04 50 31.3**	**-0.5**
	comp=Z,70nm,0.9s,mb5.5								
BBSR				*e*sP		sP		04 51 05.7	-1.2
CNNC	**Cliffs of the**	**39.01**	**2**	⇓*i*P		**P**		**04 50 33.8**	**-0.8**
	comp=Z,503nm,1.5s,mb6.1								
OXF	**Oxford**	**39.45**	**347**	P		**P**		**04 50 36.3**	**-2.0**
OXF					pmax	pmax			
	comp=Z,470nm,1.1s,mb6.2								
OXF	**Oxford**	**39.45**	**347**	⇓*i*P		**P**		**04 50 36.1**	**-2.1**
	comp=Z,474nm,1.1s,mb6.2								
OXF				*e*PcP		PcP		04 52 43.7	-0.6
SWET	**Sewanee**	**39.47**	**351**	⇓*i*P		**P**		**04 50 36.9**	**-1.5**
SWET				*e*PcP		PcP		04 52 43.6	-0.8
JCT	**Junction City**	**39.49**	**331**	P		**P**		**04 50 39.2**	**+0.5**
JCT					pmax	pmax			
	comp=Z,630nm,1.3s,mb6.3								
JCT	**Junction City**	**39.49**	**331**	⇓*i*P		**P**		**04 50 39.0**	**+0.2**
	comp=Z,627nm,1.3s,mb6.3								
CPCT	**Cooper Cave**	**39.51**	**353**	⇓*i*P		**P**		**04 50 38.0**	**-0.8**
CPCT				*e*PcP		PcP		04 52 43.9	-0.6
TKL	**Tuckaleechee C**	**39.64**	**354**	P		**P**		**04 50 38.6**	**-1.2**
	comp=Z,226nm,1.0s,mb5.9,baz=166,slow=9.5,SNR=114								
TKL					LR	LR		05 06 48.1	
	comp=Z,2μm,19.7s,baz=40,slow=36								
TKL	**Tuckaleechee C**	**39.64**	**354**	P		**P**		**04 50 38.6**	**-1.2**
TKL					pmax	pmax			
	comp=Z,226nm,1.0s,mb6.0								
TKL					MLR	MLR			
	comp=Z,2μm,19.7s								
TKL	**

KSU1 esP sP 04 52 03.2 -1.5
ERPA Erie 45.86 359⇓*iP* **P 04 51 28.0 -2.0**
comp=Z,374nm,1.4s,mb5.9
ERPA *e*PcP PcP 04 53 05.0 -0.6
BNM Barren Site 45.88 328 *eP* **P 04 51 30.9 +0.6**
BNM *e*PcP PcP 04 53 06.0 +0.2
LPM Los Pinos Moun 46.01 328 *eP* **P 04 51 31.6 +0.4**
LPM *e*PcP PcP 04 53 06.7 +0.3
BINY Binghamton 46.03 3⇓*iP* **P 04 51 30.9 -0.4**
comp=Z,362nm,0.9s,mb6.1
BINY *e*PcP PcP 04 53 06.0 -0.2
LENM Lemitar 46.08 328 *eP* **P 04 51 32.2 +0.4**
LENM *e*PcP PcP 04 53 06.7 +0.1
BRYW Bryant College 46.19 8⇓*iP* **P 04 51 32.9 +0.3**
comp=Z,2µm,1.2s,mb6.7
BRYW esP sP 04 52 08.0 -0.2
BRYW *e*PcP PcP 04 53 06.7 0.0
LAZ Ladron 46.34 328 *eP* **P 04 51 34.9 +1.0**
LAZ *e*PcP PcP 04 53 07.5 0.0
ANMO Albuquerque 46.41 329 P **P 04 51 35.4 +1.0**
comp=Z,538nm,0.9s,mb6.2,baz=151,slow=11,SNR=1214
ANMO sP sP 04 52 11.0 +1.0
comp=Z,132nm,1.0s,baz=148,slow=11,SNR=2.9
ANMO Albuquerque 46.41 329⇓*iP* **P 04 51 34.9 +0.5**
ANMO pmax pmax
comp=Z,578nm,0.9s
ANMO Albuquerque 46.41 329⇓*iP* **P 04 51 34.9 +0.5**
comp=Z,578nm,0.9s,mb6.3
ANMO *e*pP pP 04 51 58.8 +0.3
ANMO *es*P sP 04 52 10.7 +0.7
QUA2 Belchertown 46.44 7⇓*iP* **P 04 51 34.4 -0.2**
comp=Z,540nm,1.0s,mb6.2
QUA2 *e*PcP PcP 04 53 07.1 -0.6
CBKS Cedar Bluff 46.59 338⇓*iP* **P 04 51 36.1 +0.3**
CBKS *e**SP sP 04 52 10.7 -0.7
CBKS *e* 04 53 08.5
CBKS pmax pmax
comp=Z,797nm,1.1s,mb6.4
CBKS Cedar Bluff 46.59 338⇓*iP* **P 04 51 36.0 +0.2**
comp=Z,797nm,1.1s,mb6.4
CBKS *es*P sP 04 52 10.7 -0.7
CBKS *e*PcP PcP 04 53 08.5 +0.2
WES Weston 46.68 8⇓*iP* **P 04 51 36.4 0.0**
WES *e**SP sP 04 52 10.6 -1.4
WES *e* 04 53 08.3
WES pmax pmax
comp=Z,554nm,1.1s,mb6.2
WES Weston 46.68 8⇓*iP* **P 04 51 36.4 0.0**
comp=Z,554nm,1.1s,mb6.2
WES *es*P sP 04 52 10.6 -1.4
WES *e*PcP PcP 04 53 08.3 -0.2
HRV Adam Dziewonsk 46.77 8⇓*iP* **P 04 51 37.2 +0.1**
HRV *e* 04 53 08.5
HRV pmax pmax
comp=Z,530nm,1.3s,mb6.1
HRV Adam Dziewonsk 46.77 8⇓*iP* **P 04 51 37.2 +0.1**
comp=Z,530nm,1.3s,mb6.1
HRV *e*PcP PcP 04 53 08.5 -0.3
TUC Tucson 46.90 323⇓*iP* **P 04 51 38.6 +0.3**
TUC *e* 04 53 08.9
TUC pmax pmax
comp=Z,174nm,1.0s,mb5.7
TUC Tucson 46.90 323⇓*iP* **P 04 51 38.6 +0.3**
comp=Z,174nm,1.0s,mb5.7
TUC *e*PcP PcP 04 53 08.9 -0.6
ACCN Adirondack Com 47.39 5⇓*iP* **P 04 51 41.8 -0.1**
comp=Z,576nm,1.3s,mb6.2
ACCN *e*PcP PcP 04 53 10.7 -0.3
SCIA State Center 47.39 346⇓*iP* **P 04 51 40.5 -1.4**
comp=Z,835nm,1.1s,mb6.4
SCIA *ep*P pP 04 52 04.6 -1.5
SCIA *es*P sP 04 52 16.0 -1.6
SCIA *e*PcP PcP 04 53 10.9 -0.1
FFD Franklin Falls 47.70 7⇓*iP* **P 04 51 44.7 +0.4**
comp=Z,1µm,1.1s,mb6.6
FFD *e*PcP PcP 04 53 12.2 +0.1
JFWS Jewell Farm 47.71 349⇓*iP* **P 04 51 42.3 -2.1**
JFWS *e* 04 53 11.7
JFWS pmax pmax
comp=Z,221nm,0.7s,mb6.1
JFWS Jewell Farm 47.71 349⇓*iP* **P 04 51 42.3 -2.1**
comp=Z,221nm,0.7s,mb6.1
JFWS *ep*P pP 04 52 06.6 -2.0
JFWS *es*P sP 04 52 17.8 -2.2
JFWS *e*PcP PcP 04 53 11.7 -0.5
HNH Hanover 47.85 7⇓*iP* **P 04 51 45.8 +0.3**
comp=Z,698nm,1.2s,mb6.4
NCB Newcomb 47.92 5⇓*iP* **P 04 51 45.3 -0.7**
comp=Z,359nm,1.5s,mb6.0
NCB *e*PcP PcP 04 53 12.6 -0.3
MDV Middlebury 48.05 6 *eP* **P 04 51 46.4 -0.5**
MDV *e*PcP PcP 04 53 12.9 -0.4
SDCO Great Sand Dun 48.14 332⇓*iP* **P 04 51 48.4 +0.6**
comp=Z,496nm,1.1s,mb6.2
LBNH Lisbon 48.42 7 P **P 04 51 50.3 +0.4**
LBNH pmax pmax
comp=Z,470nm,1.0s,mb6.3
LBNH Lisbon 48.42 7⇓*iP* **P 04 51 50.1 +0.3**
comp=Z,467nm,1.0s,mb6.3
LBNH *e*PcP PcP 04 53 14.3 -0.4
LONY Lake Ozonia 48.54 4⇓*iP* **P 04 51 49.8 -0.9**
comp=Z,379nm,1.4s,mb6.1
GLMI Grayling 48.80 355⇓*iP* **P 04 51 50.2 -2.5**
comp=Z,400nm,1.3s,mb6.2
GLMI *e*PcP PcP 04 53 16.2 +0.2
FRNY Flat Rock 48.83 5⇓*iP* **P 04 51 52.5 -0.5**
comp=Z,685nm,1.4s,mb6.4
FRNY *ep*P pP 04 52 15.6 -1.7
FRNY *ep*P pP 04 52 16.7 -0.6
FRNY *es*P sP 04 52 28.7 0.0
MVCO Mesa Verde 49.20 329⇓*iP* **P 04 51 56.1 +0.2**
comp=Z,248nm,0.9s,mb6.1
MVCO *e*PcP PcP 04 53 18.1 +0.4
OGNE Ogallala 49.32 337⇓*iP* **P 04 51 56.9 +0.1**
comp=Z,781nm,1.3s,mb6.5
WUAZ Wupatki 49.51 325⇓*iP* **P 04 51 59.3 +1.0**
comp=Z,1µm,1.1s,mb6.7
PKME Peaks-Kenny Pk 49.80 9⇓*iP* **P 04 52 00.7 +0.4**
comp=Z,733nm,1.1s,mb6.5
PKME *es*P sP 04 52 34.7 -1.4
ISCO Idaho Springs 49.85 333⇓*iP* **P 04 52 01.1 +0.3**
comp=Z,7.2nm,0.4s,mb5.0
ISCO *e*PcP PcP 04 53 20.3 +0.3
GLA Glamis 49.91 320 P **P 04 52 01.8 +0.4**
GLA pmax pmax
comp=Z,290nm,1.3s,mb6.0
GLA Glamis 49.91 320⇓*iP* **P 04 52 01.7 +0.3**
comp=Z,294nm,1.3s,mb6.0
PV01 Paradox Valley 49.94 330 *eP* **P 04 52 02.0 +0.4**
ECSD EROS,Sioux Fal 49.99 344⇓*iP* **P 04 52 00.6 -1.3**
comp=Z,794nm,1.1s,mb6.6
PV10 Paradox Valley 50.36 329 *eP* **P 04 52 04.5 -0.3**
COWI Conover 50.61 351⇓*iP* **P 04 52 04.6 -1.8**
comp=Z,126nm,0.8s,mb6.0
COWI *e*PcP PcP 04 53 22.6 0.0
BAR Barrett 50.87 319⇓*iP* **P 04 52 08.7 0.0**
comp=Z,128nm,1.2s,mb5.8
BAR *e*PcP PcP 04 53 23.4 -0.6
PHWY Pilot Hill 51.01 335⇓*iP* **P 04 52 09.6 0.0**
comp=Z,226nm,1.1s,mb6.1
PHWY *e*PcP PcP 04 53 24.2 0.0
PFO Pinyon Flat Ob 51.31 320 P **P 04 52 12.5 +0.6**
comp=Z,540nm,1.4s,mb6.4,SNR=40
PFO Pinyon Flat Ob 51.31 320⇓*iP* **P 04 52 12.3 +0.4**
PFO pmax pmax
comp=Z,183nm,1.4s,mb5.9
PFO Pinyon Flat Ob 51.31 320⇓*iP* **P 04 52 12.3 +0.3**
comp=Z,183nm,1.4s,mb5.9
LDFC Landfair 51.42 322⇓*iP* **P 04 52 13.9 +1.2**
comp=Z,481nm,1.5s,mb6.3
USHA Ushuaia 51.47 172 P **P 04 52 13.7 +0.9**
comp=Z,33nm,0.8s,mb5.4,baz=320,slow=6.3,SNR=18
USHA sP sP 04 52 49.4 +0.8
comp=Z,31nm,0.9s,baz=336,slow=6.7,SNR=3.7
SRU San Rafael 51.68 329⇓*iP* **P 04 52 14.7 +0.1**
SRU pmax pmax
comp=Z,454nm,1.3s,mb6.3
SRU San Rafael 51.68 329⇓*iP* **P 04 52 14.7 +0.1**
comp=Z,454nm,1.3s,mb6.3
CCUT Cedar City 52.08 326⇓*iP* **P 04 52 18.6 +1.1**
CCUT *e*PcP PcP 04 53 28.7 +0.4
RWWY Rawlins 52.09 334⇓*iP* **P 04 52 17.8 +0.2**
comp=Z,482nm,1.1s,mb6.4
RWWY *e*PcP PcP 04 53 28.0 -0.3
MSU Marysvale 52.11 327 *eP* **P 04 52 18.4 +0.6**
MSU *e* 04 53 28.8
TMUT Trail Mountain 52.17 329⇓*iP* **P 04 52 18.4 +0.2**
ARUT Antelope Range 52.29 326 *eP* **P 04 52 20.3 +1.2**
GSC Goldstone 52.61 321 P **P 04 52 22.3 +0.7**
GSC pmax pmax
comp=Z,540nm,1.3s,mb6.4
GSC Goldstone 52.61 321⇑*iP* **P 04 52 22.2 +0.6**
comp=Z,537nm,1.3s,mb6.4
MWC Mount Wilson 52.74 319⇓*iP* **P 04 52 22.8 +0.3**
MWC pmax pmax
comp=Z,297nm,1.5s,mb6.1
MWC Mount Wilson 52.74 319⇓*iP* **P 04 52 22.8 +0.3**
comp=Z,297nm,1.5s,mb6.1
EYMN Ely 52.80 350⇓*iP* **P 04 52 21.0 -1.7**
comp=Z,561nm,1.1s,mb6.5
EYMN *ep*P pP 04 52 45.2 -2.1
EYMN *es*P sP 04 52 56.8 -1.9
EYMN *e*PcP PcP 04 53 30.1 -0.7
RSSD Black Hills 52.80 338⇓*iP* **P 04 52 23.1 +0.3**
RSSD pmax pmax
comp=Z,462nm,1.3s,mb6.3
RSSD Black Hills 52.80 338⇓*iP* **P 04 52 23.1 +0.3**
WDC comp=Z,462nm,1.3s,mb6.3
MPU Maple Canyon 52.92 329⇓*iP* **P 04 52 23.9 +0.2**
comp=Z,240nm,1.1s,mb6.1
MPU *e*PcP PcP 04 53 31.3 -0.2
DAU Daniels Canyon 53.03 330 *eP* **P 04 52 25.1 +0.6**
NLU North Lily Min 53.11 329⇓*iP* **P 04 52 25.4 +0.3**
SNCC San Nicolas Is 53.12 317⇓*iP* **P 04 52 25.2 -0.2**
comp=Z,165nm,1.0s,mb6.0
JLU Jordanelle 53.27 330⇓*iP* **P 04 52 26.7 +0.4**
TPNV Topopah Spring 53.34 323⇓*iP* **P 04 52 27.9 +1.0**
TPNV pmax pmax
comp=Z,224nm,1.1s,mb6.1
TPNV Topopah Spring 53.34 323⇓*iP* **P 04 52 27.9 +0.9**
comp=Z,224nm,1.1s,mb6.1
CTU Camp Tracy 53.48 329⇓*iP* **P 04 52 28.1 +0.2**
comp=Z,321nm,1.3s,mb6.2
NOQ North Oquirrh 53.64 329⇓*iP* **P 04 52 29.1 +0.1**
comp=Z,778nm,1.4s,mb6.5
DUG Dugway 53.67 328⇓*iP* **P 04 52 29.8 +0.6**
DUG pmax pmax
comp=Z,679nm,1.3s,mb6.5
DUG Dugway 53.67 328⇓*iP* **P 04 52 29.8 +0.5**
comp=Z,679nm,1.3s,mb6.5
ISA Isabella 53.90 320⇓*iP* **P 04 52 31.4 +0.4**
ISA pmax pmax
comp=Z,387nm,1.5s,mb6.2
ISA Isabella 53.90 320⇓*iP* **P 04 52 31.4 +0.4**
comp=Z,387nm,1.5s,mb6.2
BW06 Boulder Array 54.01 333⇓*iP* **P 04 52 31.3 -0.4**
comp=Z,73µm,1.1s
PDAR Pinedale Array 54.01 333 P **P 04 52 31.1 -0.5**
comp=Z,141nm,0.8s,mb6.0,baz=128,slow=8.4,SNR=853
PDAR sP sP 04 53 06.3 -1.3
comp=Z,26nm,0.9s,baz=127,slow=9.4,SNR=2.1
PDAR PcP PcP 04 53 35.1 -0.4
comp=Z,22nm,0.7s,baz=134,slow=5.8,SNR=4.3
PDAR LR LR 05 15 43.9
comp=Z,835nm,18.0s,baz=146,slow=36
AGMN Agassiz Refuge 54.04 346⇓*iP* **P 04 52 30.8 -0.9**
comp=Z,619nm,1.8s,mb6.7
HWUT Hardware Ranch 54.08 330⇓*iP* **P 04 52 32.0 -0.2**
comp=Z,623nm,1.0s,mb6.6
SPUT South Promonto 54.30 329⇓*iP* **P 04 52 33.8 0.0**
BGU Big Grassy Mou 54.31 329⇓*iP* **P 04 52 34.0 +0.1**
TPH Tonopah 54.67 323⇓*iP* **P 04 52 37.1 +0.6**
TPH pmax pmax
comp=Z,243nm,1.2s,mb6.1
TPH Tonopah 54.67 323⇓*iP* **P 04 52 37.0 +0.5**
comp=Z,242nm,1.2s,mb6.1
AHID Auburn Hather 54.73 332⇓*iP* **P 04 52 36.2 -0.6**
comp=Z,443nm,1.4s,mb6.3
HVU Hansel Valley 54.81 330⇓*iP* **P 04 52 37.2 -0.3**
HVU pmax pmax
comp=Z,301nm,1.2s,mb6.2
HVU Hansel Valley 54.81 330⇓*iP* **P 04 52 37.2 -0.2**
comp=Z,300nm,1.2s,mb6.2
PTRM Twissleman Ran 55.01 319 *eP* **P 04 52 39.6 +0.5**
MTUM Tungsten Hills 55.01 322 *eP* **P 04 52 39.7 +0.6**
REDW Red Top Meadow 55.07 332⇓*iP* **P 04 52 39.1 -0.2**
comp=Z,808nm,1.5s,mb6.5
SNOW Snow King Moun 55.10 332⇓*iP* **P 04 52 39.5 0.0**
comp=Z,293nm,1.2s,mb6.2
LOHW Long Hollow 55.15 333⇓*iP* **P 04 52 39.7 -0.2**
comp=Z,13nm,0.9s,mb5.0
TPAW Teton Pass 55.21 332 *eP* **P 04 52 40.2 -0.2**
comp=Z,335nm,1.3s,mb6.2
RRI2 Red Ridge 55.28 332⇓*iP* **P 04 52 41.0 +0.2**
comp=Z,542nm,1.3s,mb6.4
MOOW Moose Ponds 55.32 333⇓*iP* **P 04 52 40.6 -0.5**
comp=Z,108nm,1.1s,mb5.8
ELK Elko 55.35 327⇓*iP* **P 04 52 41.8 +0.4**
ELK pmax pmax
comp=Z,309nm,1.3s
ELK Elko 55.35 327⇓*iP* **P 04 52 41.8 +0.4**
comp=Z,309nm,1.3s,mb6.2
DCID1 Drake Creek 55.40 332⇓*iP* **P 04 52 41.7 0.0**
comp=Z,452nm,1.4s,mb6.3
IMW Indian Meadow 55.52 333⇓*iP* **P 04 52 42.4 -0.2**
comp=Z,213nm,1.2s,mb6.0
NVAR Mina Array Bea 55.55 323 P **P 04 52 43.5 +0.7**
comp=Z,127nm,0.8s,mb6.0,baz=142,slow=7.2,SNR=632
NVAR sP sP 04 53 19.4 +0.4
comp=Z,31nm,0.9s,baz=134,slow=7.8,SNR=3.5
NVAR PKP2bc 05 22 55.2
comp=Z,0.3nm,0.4s,baz=270,slow=4.4,SNR=3.6
NVAR Mina Array Bea 55.55 323 P **P 04 52 43.5 +0.7**
NVAR sP sP 04 53 19.4 +0.4
NVAR ⇑*e* 05 22 55.2
LAO LASA Array 55.79 338⇓*iP* **P 04 52 43.9 -0.5**
comp=Z,795nm,1.4s,mb6.5
LKWY Lake 55.80 333⇓*iP* **P 04 52 45.4 +0.9**
LKWY pmax pmax
comp=Z,124nm,1.0s,mb5.9
LKWY Lake 55.80 333⇓*iP* **P 04 52 45.4 +0.9**
comp=Z,124nm,1.0s,mb5.9
ULM Lac du Bonnet 55.87 347 P **P 04 52 43.6 -1.3**
comp=Z,305nm,0.8s,mb6.3,baz=160,slow=7.3,SNR=327
ULM pP pP 04 53 08.2 -1.5
comp=Z,125nm,1.1s,baz=200,slow=5.8,SNR=3.2
ULM sP sP 04 53 19.1 -2.0
comp=Z,104nm,0.9s,baz=171,slow=6.4,SNR=3.4
ULM LR LR 05 19 09.8
comp=Z,1µm,19.2s,baz=320,slow=38
ULM Lac du Bonnet 55.87 347⇓*iP* **P 04 52 43.6 -1.3**
comp=Z,682nm,1.2s,mb6.5
ULM *ep*P pP 04 53 07.8 -2.0
ULM *es*P sP 04 53 18.9 -2.2
YNR Norris Junctio 56.04 333⇓*iP* **P 04 52 46.6 +0.4**
YMR Madison River 56.13 333⇓*iP* **P 04 52 47.6 +0.8**
comp=Z,946nm,1.6s,mb6.6
BMN Battle Mountai 56.24 326⇓*iP* **P 04 52 47.8 +0.1**
BMN pmax pmax
comp=Z,341nm,1.0s,mb6.3
BMN Battle Mountai 56.24 326⇓*iP* **P 04 52 47.8 0.0**
comp=Z,341nm,1.0s,mb6.3
GCMT Greycliff 56.44 335 *eP* **P 04 52 48.8 -0.2**
QLMT Earthquake Lak 56.47 333 *eP* **P 04 52 50.3 +1.0**
SAO San Andreas Ge 56.47 320⇓*iP* **P 04 52 49.3 -0.2**
SAO pmax pmax
comp=Z,380nm,1.9s,mb6.1
SAO San Andreas Ge 56.47 320⇓*iP* **P 04 52 49.3 -0.1**
comp=Z,380nm,1.9s,mb6.1
CMB Columbia Colle 56.57 321⇓*iP* **P 04 52 49.8 -0.3**
CMB pmax pmax
comp=Z,96nm,1.2s,mb5.7
CMB Columbia Colle 56.57 321⇓*iP* **P 04 52 49.8 -0.3**
comp=Z,96nm,1.2s,mb5.7
DGMT Dagmar 56.59 340⇓*iP* **P 04 52 50.0 -0.1**
comp=Z,511nm,1.0s,mb6.5
HLID Hailey 56.94 330⇓*iP* **P 04 52 52.9 +0.2**
comp=Z,277nm,1.0s,mb6.2
PAHR Pah Rah Range 57.01 324⇓*iP* **P 04 52 53.7 +0.5**
comp=Z,423nm,1.4s,mb6.3
RKT Rikitea 57.07 245 *eS* **S 05 00 39.4 -1.9**
comp=Z,3µm,27.7s
RKT *e*LQ 05 07 24.7
comp=Z,5µm,39.8s
RKT *e*LR LR 05 09 52.9
comp=Z,4µm,29.0s,baz=76
MCMT McKenzie Canyo 57.12 332 *eP* **P 04 52 54.3 +0.5**
BOZ Bozeman (W) 57.18 333⇓*iP* **P 04 52 53.9 -0.4**
BOZ pmax pmax
comp=Z,293nm,1.0s,mb6.3
BOZ Bozeman (W) 57.18 333⇓*iP* **P 04 52 53.9 -0.4**
comp=Z,293nm,1.0s,mb6.3
DLMT Dillon 57.40 333⇓*iP* **P 04 52 56.0 +0.1**
comp=Z,246nm,1.1s,mb6.2
OHCM Honcut 58.04 322 *eP* **P 04 53 00.6 +0.1**
MCCM Marconi Confer 58.20 320⇓*iP* **P 04 53 01.8 +0.1**
comp=Z,344nm,1.3s,mb6.2
NSHM Saint Helena R 58.25 321 *eP* **P 04 53 02.3 +0.3**
EGMT Eagleton 58.26 336⇓*iP* **P 04 53 01.5 -0.3**
comp=Z,502nm,1.1s,mb6.5
WVOR Wild Horse Val 58.37 326⇓*iP* **P 04 53 02.5 -0.2**
WVOR pmax pmax
comp=Z,735nm,1.3s,mb6.5
WVOR Wild Horse Val 58.37 326⇓*iP* **P 04 53 02.5 -0.2**
comp=Z,735nm,1.3s,mb6.5
HOPS Hopland 58.83 321⇓*iP* **P 04 53 06.2 +0.3**
comp=Z,687nm,1.9s,mb6.4
CHMT Chamberlain Mo 58.88 333 *eP* **P 04 53 05.8 -0.3**
MOD Modoc 58.95 325⇑*iP* **P 04 53 06.6 -0.1**
comp=Z,424nm,1.3s,mb6.3
MSO Missoula 59.12 333⇓*iP* **P 04 53 08.0 +0.1**
comp=Z,452nm,1.3s,mb6.3
WDC Whiskeytown Da 59.45 323⇓*iP* **P 04 53 08.2 -2.0**
WDC pmax pmax
comp=Z,150nm,1.2s,mb5.9
WDC Whiskeytown Da 59.45 323⇓*iP* **P 04 53 08.2 -2.0**
comp=Z,150nm,1.2s,mb5.9
SCHQ Schefferville 59.48 8 P **P 04 53 09.2 -0.8**
comp=Z,112nm,0.8s,mb5.9,baz=199,slow=5.4,SNR=78
SCHQ Schefferville 59.48 8⇓*iP* **P 04 53 09.0 -1.1**
comp=Z,344nm,1.3s,mb6.2
KCPM Cahto Peak 59.55 321⇓*iP* **P 04 53 11.8 +0.9**
KIPM Iron Peak 59.56 321 *eP* **P 04 53 11.6 +0.6**
YBH Yreka Blue Hor 60.25 324⇓*iP* **P 04 53 14.3 -1.3**
YBH pmax pmax
comp=Z,172nm,1.0s
YBH Yreka Blue Hor 60.25 324⇓*iP* **P 04 53 14.2 -1.4**
comp=Z,172nm,1.0s,mb6.0
LNOR Lincton Mounta 60.52 330 *eP* **P 04 53 16.8 -0.6**
WALA Waterton Lakes 60.80 335⇓*iP* **P 04 53 19.1 -0.1**
comp=Z,314nm,1.0s,mb6.3
KRMB Red Mountain 60.84 323⇓*iP* **P 04 53 20.2 +0.6**
HUMO Hull Mountain 60.93 324⇓*iP* **P 04 53 18.9 -1.3**
comp=Z,62nm,1.2s,mb5.5
KBO Bosley Butte 61.44 323⇓*iP* **P 04 53 24.4 +0.7**
FFC Flin Flon 61.46 345 P **P 04 53 22.5 -1.0**
comp=Z,1µm,1.4s,mb6.7,SNR=48
FFC Flin Flon 61.46 345⇓*iP* **P 04 53 22.6 -0.9**
FFC pmax pmax
comp=Z,355nm,1.3s,mb6.2
FFC Flin Flon 61.46 345⇓*iP* **P 04 53 22.6 -1.0**
comp=Z,355nm,1.3s,mb6.2
HAWA Hanford 61.51 329⇓*iP* **P 04 53 23.8 -0.2**
comp=Z,113nm,1.0s,mb5.8
RSW Rattlesnake Hi 61.54 329 *eP* **P 04 53 24.2 -0.1**
NEW Newport 61.64 332⇓*iP* **P 04 53 24.6 -0.3**
NEW pmax pmax
comp=Z,340nm,1.2s
NEW Newport 61.64 332⇓*iP* **P 04 53 24.6 -0.4**
comp=Z,340nm,1.2s,mb6.2
PMSA Palmer Station 61.67 173 LR LR 05 16 35.9
comp=Z,910nm,18.8s,baz=337,slow=32
OD2 Odessa Site #2 61.78 331 P **P 04 53 25.9 0.0**
KEBM Edson Butte 61.90 324⇓*iP* **P 04 53 27.4 +0.7**
KEBM *e* 04 54 04.7
COR Corvallis 62.35 326⇓*iP* **P 04 53 30.1 +0.4**
COR pmax pmax
comp=Z,1µm,1.4s,mb6.7
COR Corvallis 62.35 326⇓*iP* **P 04 53 30.1 +0.4**
comp=Z,1µm,1.4s,mb6.7
ETW Entiat 62.73 330 *eP* **P 04 53 32.6 +0.4**
LON Longmire 62.92 328 P **P 04 53 33.2 -0.3**
HEBO Mount Hebo 62.99 326⇓*iP* **P 04 53 34.5 +0.5**
comp=Z,787nm,1.4s,mb6.5
HEBO *e*PcP PcP 04 54 11.3 +0.2
BMW Boistfort Moun 63.49 328 *eP* **P 04 53 37.3 0.0**
FCC Fort Churchill 63.64 351⇓*iP* **P 04 53 36.4 -1.6**
FCC *e* 04 54 12.6
FCC pmax pmax
comp=Z,429nm,1.3s,mb6.1
FCC Fort Churchill 63.64 351⇓*iP* **P 04 53 36.4 -1.6**
comp=Z,429nm,1.3s,mb6.1
FCC *e*PcP PcP 04 54 12.6 -0.8
EDM Edmonton 63.78 338⇓*iP* **P 04 53 38.0 -1.0**
RPW Rockport 63.89 330 *eP* **P 04 53 39.1 -0.7**
JCW Jim Creek 63.93 330 *eP* **P 04 53 39.4 -0.7**
GNW Green Mountain 63.97 329 P **P 04 53 39.9 -0.5**
NLWA Neilton Lookou 64.41 328⇓*iP* **P 04 53 43.8 +0.6**
comp=Z,328nm,1.3s,mb6.0
ASCN Ascension 64.58 97 *eP* **P 04 53 45.3 +0.3**
OSD Olympics--Snow 64.59 328 P **P 04 53 45.4 +0.9**
PGC Sidney 64.99 329⇓*iP* **P 04 53 47.2 +0.2**
comp=Z,634nm,1.4s,mb6.3
CHIE El Hierro 66.82 58 P **P 04 53 58.7 -0.5**
comp=Z,52nm,0.8s,mb5.4
CHIE pP pP 04 54 24.0 -0.8
EHIG Higuera 67.21 57 P **P 04 54 00.9 -0.8**
comp=Z,693nm,2.3s,mb6.1
EHIG pP pP 04 54 24.3 -2.9
EGOM La Gomera 67.59 57 P **P 04 54 03.0 -1.1**
comp=Z,386nm,1.8s,mb5.9
EGOM pP pP 04 54 27.6 -2.1
CCAN Las Canadas 68.12 58 P **P 04 54 07.1 -0.2**
comp=Z,225nm,2.9s,mb5.5
CCAN pP pP 04 54 33.0 -0.1
VAH Vaihoa 68.14 255 *es*P sP 04 54 42.6 -2.0
comp=Z,383nm,1.4s
PMOR Pomariorio Ree 68.39 256 *eP* **P 04 54 10.0 +0.7**
comp=Z,202nm,1.4s,mb5.8
PMOR *es*P sP 04 54 44.2 -1.9
comp=Z,608nm,1.3s
EBAJ Bajamar 68.43 57 P **P 04 54 06.5 -2.8**
comp=Z,179nm,1.4s,mb5.7
EBAJ pP pP 04 54 29.8 -5.2
MEH Mehetia 68.67 252 *eP* **P 04 54 11.6 +0.6**
comp=Z,3µm,1.1s,mb7.0
MEH *es*P sP 04 54 45.7 -2.1
comp=Z,4µm,1.2s
EOSO Osorio 68.96 58 P **P 04 54 10.9 -1.7**
comp=Z,404nm,1.9s,mb5.9
EOSO pP pP 04 54 34.6 -3.7
TVO Taravao 69.79 253 *es*P sP 04 54 53.2 -1.6
comp=Z,2µm,1.3s
TIAR Tiarei 69.88 253 *es*P sP 04 54 53.2 -2.1
comp=Z,1µm,1.5s
PPT Papeete 70.09 253 *eP* **P 04 54 20.3 +0.5**
comp=Z,61nm,1.5s,mb5.2
PPT *es*P sP 04 54 55.0 -1.7
comp=Z,158nm,1.5s
PPT *e*S S 05 03 22.7 -0.5
comp=Z,1µm,26.8s
PPT Papeete 70.09 253 *e*LR LR 05 15 49.3
comp=Z,6µm,34.2s,baz=91
PPT Papeete 70.09 253 sP sP 04 54 54.5 -2.2
comp=Z,54nm,0.9s,baz=58,slow=8.1,SNR=3.9
PPT LR LR 05 16 18.2
comp=Z,915nm,21.1s,baz=88,slow=28
PPT Papeete 70.09 253 *eP* **P 04 54 20.3 +0.5**
PPT *e**SP sP 04 54 55.0 -1.7
PPT *e*S S 05 03 22.7 -0.5
PPT pmax pmax
comp=Z,61nm,1.5s
PAE Paea 70.10 253 *eP* **P 04 54 20.4 +0.6**
comp=Z,557nm,1.3s,mb6.2
PAE *es*P sP 04 54 54.9 -1.8
comp=Z,2µm,1.3s
PAE Paea 70.10 253 *eP* **P 04 54 20.4 +0.6**
PAE *e**SP sP 04 54 54.9 -1.8
PAE pmax pmax
comp=Z,557nm,1.3s,mb6.2
CFTV Fuerteventura 70.30 58 P **P 04 54 18.8 -2.0**
comp=Z,32nm,1.0s,mb5.1
TBI Tubuai 70.31 247 *eS* S 05 03 24.8 -0.7
comp=Z,2µm,27.2s
TBI Tubuai 70.31 247 *e*LR LR 05 15 58.1
comp=Z,2µm,33.1s,baz=82
EFAM Famara 70.96 58 P **P 04 54 24.4 -0.5**
comp=Z,2µm,3.1s
EFAM pP pP 04 54 46.5 -4.2
YKA Yellowknife Ar 71.52 344 P **P 04 54 26.4 -1.1**
comp=Z,47nm,0.7s,mb5.4,baz=137,slow=5.8,SNR=138
YKA sP sP 04 55 02.9 -1.6
comp=Z,28nm,1.1s,baz=140,slow=5.8,SNR=1.8
YKA LR LR 05 28 36.6
comp=Z,577nm,19.1s,baz=160,slow=38
YKA Yellowknife Ar 71.52 344 P **P 04 54 26.4 -1.1**
YKA *SP sP 04 55 02.9 -1.6

YKA Yellowknife Ar 71.52 344 P **P** 04 54 26.4 -1.1
YKA sP sP 04 55 02.9 -1.6
YKA LR 6 05 28 36.6
SFJD Kangerlussuaq 73.67 11 P **P** **04 54 39.4 -0.7**
comp=Z,105nm,0.9s,mb5.6,baz=185,slow=6.2,SNR=25
SFJD Kangerlussuaq 73.67 11 P **P** **04 54 39.4 -0.7**
SFJD pmax pmax
comp=Z,105nm,0.9s,mb5.6
SFJD Kangerlussuaq 73.67 11⇓*iP* **P** **04 54 39.1 -1.0**
SFJD *i* 04 55 17.4
WRAK Wrangell Islan 74.00 332 *eP* **P** **04 54 42.2 0.0**
comp=Z,538nm,1.9s,mb6.0
WRAK *e* pP 04 55 07.4 -1.0
DLBC Dease Lake 74.14 335⇓*iP* **P** **04 54 43.2 +0.2**
DLBC *ep*P pP 04 55 08.5 -0.6
DLBC *es*P sP 04 55 20.3 +0.1
LIC Lamto 74.76 82⇓*iP* **P** **04 54 47.8 +0.2**
comp=Z,329nm,1.2s,mb5.6
LIC *e*MLR MLR
comp=Z,1μm,21.0s
LIC Lamto 74.76 82⇓*iP* **P** **04 54 47.8 +0.2**
comp=Z,165nm,1.2s,mb5.6
LIC LR LR
comp=Z,650nm,21.0s
DBIC Dimbokro 74.97 82 P **P** **04 54 49.3 +0.4**
comp=Z,75nm,0.8s,mb5.5,baz=247,slow=5.6,SNR=128
DBIC LR LR 05 26 20.2
comp=Z,1μm,18.2s,baz=203,slow=34
DBIC Dimbokro 74.97 82⇓*iP* **P** **04 54 49.2 +0.3**
DBIC *e**SP sP 04 55 24.7 -1.3
DBIC pmax pmax
comp=Z,750nm,1.4s
DBIC Dimbokro 74.97 82⇓*iP* **P** **04 54 49.2 +0.3**
comp=Z,750nm,1.4s,mb6.2
DBIC *ep*P pP 04 55 14.4 -0.5
DBIC *es*P sP 04 55 24.6 -1.3
PFVI Vila Bisbo 76.92 51 *eP* **P** **04 55 00.1 +0.7**
comp=Z,536nm,1.9s,mb6.0
PFVI *ep*P pP 04 55 27.3 +1.7
SKAG Skagway 76.99 334 *eP* **P** **04 54 58.6 -0.7**
comp=Z,198nm,0.9s,mb5.8
PMAFR Mafra 77.06 49 *eP* **P** **04 55 00.6 +0.4**
comp=Z,279nm,1.6s,mb5.7
LIS Lisbon 77.09 49 *eP* **P** **04 55 00.4 0.0**
LIS *e*S S 05 04 42.0 +0.8
LIS *e*S S 05 04 42.0 +0.8
LIS AMS AMS 05 21 41.9
comp=Z,684nm,18.1s
MORF Marmelete 77.10 50 *iP* **P** **04 55 01.9 +1.5**
comp=Z,654nm,1.6s,mb6.1
MORF *i* pP pP 04 55 27.9 +1.3
PTEO Sao Teotonio 77.10 50 *eP* **P** **04 55 01.4 +0.9**
PTEO *ep*P pP 04 55 28.1 +1.4
PBDV Barranco-do-Ve 77.64 51 *eP* **P** **04 55 04.2 +0.8**
comp=Z,218nm,1.8s,mb5.6
PBDV *ep*P pP 04 55 31.3 +1.6
ALMR Almeirim 77.64 49 *eP* **P** **04 55 03.0 -0.4**
PVAQ Vaqueiros 77.84 51 *eP* **P** **04 55 05.3 +0.7**
comp=Z,156nm,1.8s,mb5.4
PVAQ *i* pP pP 04 55 32.0 +1.2
PBEJ Beja 77.89 50 *eP* **P** **04 55 05.6 +0.8**
comp=Z,231nm,1.6s,mb5.7
PBEJ *i* pP pP 04 55 32.4 +1.4
PTOM Tomar 77.89 48 *eP* **P** **04 55 04.7 -0.1**
PTOM *ep*P pP 04 55 31.6 +0.6
EVO Evora 77.90 49⇓*iP* **P** **04 55 05.0 +0.1**
comp=Z,352nm,1.0s,mb5.7
EVO *ep*P pP 04 55 31.9 +0.8
EVO *e*MLR MLR
comp=Z,415nm,22.8s
EVO Evora 77.90 49 *eP* **P** **04 55 05.0 +0.1**
comp=Z,224nm,1.6s,mb5.7
EVO *i* P pP 04 55 32.4 +1.3
EGRO El Granado 78.05 50 P **P** **04 55 06.8 +1.1**
comp=Z,64nm,0.8s,mb5.4
EGRO pP pP 04 55 30.0 -2.0
STCH Steam Cracks 78.08 291 *eP* **P** **04 55 06.4 +0.2**
PTO Porto 78.16 47 *eP* **P** **04 55 07.1 +0.9**
PESTR Estremoz 78.31 49 *eP* **P** **04 55 07.6 +0.5**
comp=Z,419nm,1.5s,mb6.0
PESTR *i* pP pP 04 55 34.1 +0.7
EMAZ Mazaricos 78.40 45 P **P** **04 55 06.8 -0.7**
comp=Z,576nm,1.8s,mb6.0
EMAZ pP pP 04 55 30.9 -2.9
PBAR Barrancos 78.55 50 *eP* **P** **04 55 09.1 +0.6**
comp=Z,190nm,1.4s,mb5.7
PBAR *i* pP pP 04 55 35.9 +1.1
PVIS Viseu 78.56 47 *eP* **P** **04 55 09.1 +0.6**
PVIS *i* pP pP 04 55 35.3 +0.5
PMRV Marv??o 78.60 49 *eP* **P** **04 55 07.9 -0.8**
comp=Z,180nm,1.5s,mb5.7
PMRV *ep*P pP 04 55 35.4 +0.4
HYT Haines Junctio 78.63 335 *eP* **P** **04 55 08.6 +0.3**
HYT *ep*P pP 04 55 34.0 -0.6
HYT *es*P sP 04 55 43.9 -1.7
PCBR Castelo Branco 78.64 48 *eP* **P** **04 55 09.4 +0.5**
PCBR *i* pP pP 04 55 35.9 +0.7
STS Santiago 78.68 45 P **P** **04 55 08.8 -0.3**
STS pmax pmax
comp=Z,266nm,1.4s,mb5.9
STS Santiago 78.68 45 P **P** **04 55 08.8 -0.3**
comp=Z,266nm,1.4s,mb5.9
STS pP pP 04 55 34.3 -1.1
EBAD Badajoz 78.72 49 P **P** **04 55 08.0 -1.3**
comp=Z,870nm,3.2s
EBAD pP pP 04 55 34.1 -1.6
PCAB Cabril 78.73 46 *eP* **P** **04 55 10.0 +0.6**
EMIN Mina Concepcio 78.73 50 P **P** **04 55 08.3 -1.2**
comp=Z,406nm,2.2s,mb5.9
EMIN pP pP 04 55 33.5 -2.3
MTE Manteigas 78.74 48 *eP* **P** **04 55 09.8 +0.4**
comp=Z,160nm,0.9s,mb5.8
MTE *i* P 04 55 55.9
MTE Manteigas 78.74 48⇓*iP* **P** **04 55 09.5 +0.1**
comp=Z,54nm,0.8s,mb5.4
MTE *ep*P pP 04 55 36.0 +0.2
MTE *es*P sP 04 55 47.5 +0.8
ELOB Lobios 78.75 46 P **P** **04 55 09.8 +0.3**
comp=Z,44nm,1.1s,mb5.2
ELOB pP pP 04 55 31.1 -4.7
PVRL Vila Real 78.84 47 *eP* **P** **04 55 10.2 +0.2**
PNL Peninsula 78.89 333⇓*iP* **P** **04 55 09.8 0.0**
comp=Z,223nm,1.2s,mb5.9
PNL *ep*P pP 04 55 35.7 -0.5
ESPR Espera 79.16 51 P **P** **04 55 12.0 +0.1**
comp=Z,949nm,2.7s,mb6.2
ESPR pP pP 04 55 38.0 -0.1
MVO Moncorvo 79.31 47 *eP* **P** **04 55 12.7 +0.1**
comp=Z,282nm,1.6s,mb5.8
MVO *ep*P pP 04 55 39.7 +0.8
EJIF Jimena Fronter 79.36 52 P **P** **04 55 13.1 +0.1**
EJIF pmax pmax
comp=Z,589nm,1.8s,mb6.1
EJIF Jimena Fronter 79.36 52 P **P** **04 55 13.1 +0.1**
comp=Z,589nm,1.8s,mb6.1
EJIF pP pP 04 55 35.1 -4.2
ERUA La Rua 79.55 46 P **P** **04 55 13.1 -0.7**
ERUA pmax pmax
comp=Z,92nm,1.0s,mb5.6
ERUA La Rua 79.55 46 P **P** **04 55 13.1 -0.7**
comp=Z,92nm,1.0s,mb5.6
ERUA pP pP 04 55 40.5 +0.4
PBRG Braganca 79.69 46 *iP* **P** **04 55 15.1 +0.5**
PBRG *i* pP pP 04 55 41.7 +0.8
ECAL Calabor 79.72 46 P **P** **04 55 14.2 -0.5**
comp=Z,896nm,1.7s,mb6.3
ECAL pP pP 04 55 38.9 -2.2
VNA3 Neumayer Olymp 79.77 162 *eP* **P** **04 55 15.0 +0.6**
VNA3 *e* 04 55 20.5
VNA3 *e* pP 04 55 40.3 -0.5
VNA3 *e* 04 55 53.8
ECAB El Cabril 79.77 50 P **P** **04 55 14.3 -0.9**
comp=Z,454nm,1.4s,mb6.1
ECAB pP pP 04 55 41.5 0.0
EPON Pontenova 79.79 45 P **P** **04 55 14.4 -0.7**
comp=Z,369nm,1.2s,mb6.1
EPON pP pP 04 55 41.5 +0.1
EMIJ Mijas 79.94 52 P **P** **04 55 15.2 -0.9**
comp=Z,259nm,1.3s,mb5.9
EMIJ pP pP 04 55 39.5 -2.9
VNA1 Neumayer--Stat 80.03 161 *eP* **P** **04 55 16.9 +1.0**
VNA1 *e* 04 55 22.5
VNA1 *e* pP 04 55 42.6 +0.4
VNA1 *e* 04 55 56.5

VNA2 Neumayer--Watz 80.38 162 *eP* **P** **04 55 18.4 +0.6**
VNA2 *e* 04 55 23.4
VNA2 *e* pP 04 55 43.7 -0.4
VNA2 *e* 04 55 58.6
EADA Adamuz 80.44 50 P **P** **04 55 17.8 -0.9**
comp=Z,246nm,1.5s,mb5.8
EADA pP pP 04 55 43.5 -1.5
BORG Borgarnes 80.47 22 P **P** **04 55 19.9 +1.6**
comp=Z,2μm,1.1s,mb6.8,SNR=6.1
BORG Borgarnes 80.47 22 P **P** **04 55 19.7 +1.4**
comp=Z,166nm,1.0s,mb5.8,baz=232,slow=4.5,SNR=16
BORG sP sP 04 55 56.0 +0.4
comp=Z,120nm,1.0s,baz=217,slow=4.5,SNR=4.5
BORG Borgarnes 80.47 22 *eP* **P** **04 55 20.0 +1.7**
comp=Z,1μm,1.8s,mb6.4
ELUQ Luque 80.55 51 P **P** **04 55 19.5 +0.2**
ELUQ pmax pmax
comp=Z,65nm,1.0s,mb5.4
ELUQ Luque 80.55 51 P **P** **04 55 19.5 +0.2**
comp=Z,64nm,1.0s,mb5.4
ELUQ pP pP 04 55 41.1 -4.6
ELOJ Sierra Loja 80.55 52 P **P** **04 55 20.7 +1.4**
ELOJ pmax pmax
comp=Z,648nm,2.0s,mb6.1
ELOJ Sierra Loja 80.55 52 P **P** **04 55 20.7 +1.4**
comp=Z,648nm,2.0s,mb6.1
ELOJ pP pP 04 55 45.4 -0.3
SUMG Summit 80.66 11⇓*iP* **P** **04 55 19.6 +0.4**
comp=Z,160nm,0.9s,mb5.8
ERON Agron 80.79 52 P **P** **04 55 21.5 +0.9**
comp=Z,82nm,0.6s,mb5.7
ERON pP pP 04 55 47.4 +0.3
PAB San Pablo 80.92 49⇓*iP* **P** **04 55 21.8 +0.6**
PAB pmax pmax
comp=Z,448nm,1.4s,mb6.1
PAB San Pablo 80.92 49⇓*iP* **P** **04 55 21.8 +0.6**
comp=Z,448nm,1.4s,mb6.1
PAB *ep*P pP 04 55 48.9 +1.3
PAB *es*P sP 04 55 59.6 +1.0
EGUA Guajares 80.94 52 P **P** **04 55 20.8 -0.6**
EGUA pmax pmax
comp=Z,114nm,0.8s,mb5.8
EGUA Guajares 80.94 52 P **P** **04 55 20.8 -0.6**
comp=Z,114nm,0.8s,mb5.8
EGUA pP pP 04 55 46.3 -1.5
DAWY Dawson 80.99 337⇓*iP* **P** **04 55 20.2 -0.8**
DAWY *ep*P pP 04 55 46.8 -0.7
DAWY *es*P sP 04 55 57.8 -0.6
ECOG Cogollos-Vega 81.03 51 P **P** **04 55 21.9 0.0**
ECOG pmax pmax
comp=Z,110nm,0.9s,mb5.7
ECOG Cogollos-Vega 81.03 51 P **P** **04 55 21.9 0.0**
comp=Z,110nm,0.9s,mb5.7
ECOG pP pP 04 55 48.4 +0.1
EBAN Banos Encina 81.05 51 P **P** **04 55 22.3 +0.3**
EBAN pmax pmax
comp=Z,73nm,1.1s,mb5.4
EBAN Banos Encina 81.05 51 P **P** **04 55 22.3 +0.3**
comp=Z,73nm,1.1s,mb5.4
EBAN pP pP 04 55 46.3 -2.1
EARI Arriondas 81.15 45 P **P** **04 55 22.3 0.0**
comp=Z,1μm,3.1s
EARI pP pP 04 55 45.7 -3.1
EALB Alboran 81.18 53 P **P** **04 55 20.9 -1.9**
comp=Z,1μm,2.9s,mb6.2
EALB pP pP 04 55 48.9 -0.2
ESDC Sonseca Array 81.23 49 P **P** **04 55 23.6 +0.7**
comp=Z,52nm,0.9s,mb5.3,baz=268,slow=5.0,SNR=99
ESDC pP pP 04 55 49.9 +0.5
comp=Z,107nm,1.1s,baz=264,slow=4.9,SNR=13
ESDC sP sP 04 56 00.4 +0.1
comp=Z,96nm,1.1s,baz=286,slow=4.3,SNR=8.4
ESDC Sonseca Array 81.23 49 P **P** **04 55 22.1 -0.8**
comp=Z,145nm,1.3s,mb5.7
ESDC pP pP 04 55 49.2 -0.1
ESLA Sonseca Array 81.23 49⇓*iP* **P** **04 55 23.5 +0.6**
comp=Z,269nm,1.6s,mb5.8
ESLA *ep*P pP 04 55 50.0 +0.7
ESLA *es*P sP 04 56 01.8 +1.5
ESBB Sonseca Array 81.24 49 P **P** **04 55 22.4 -0.6**
comp=Z,767nm,2.9s,mb6.0
ESBB pP pP 04 55 48.4 -1.0
GUD Guadarrama 81.30 48 P **P** **04 55 23.1 -0.2**
GUD pmax pmax
comp=Z,59nm,0.9s,mb5.4
GUD Guadarrama 81.30 48 P **P** **04 55 23.1 -0.2**
comp=Z,59nm,0.9s,mb5.4
GUD pP pP 04 55 49.6 -0.1
EBER Berja 81.49 52 P **P** **04 55 23.6 -0.7**
comp=Z,482nm,1.7s,mb6.0
EBER pP pP 04 55 50.5 -0.2
EQES Quesada 81.53 51 P **P** **04 55 23.5 -1.0**
comp=Z,2μm,2.9s,mb6.4
EQES pP pP 04 55 50.4 -0.6
EHUE Huescar 81.90 51 P **P** **04 55 26.3 -0.2**
EHUE pmax pmax
comp=Z,101nm,0.9s,mb5.7
EHUE Huescar 81.90 51 P **P** **04 55 26.3 -0.1**
comp=Z,101nm,0.9s,mb5.7
EHUE pP pP 04 55 52.7 -0.2
SNAA Sanae 81.99 162 *eP* **P** **04 55 26.2 0.0**
SNAA *e* 04 55 31.7
SNAA *e* pP 04 55 51.8 -0.9
SNAA *e* 04 56 06.6
SNAA *e* 05 13 53.9
SNAA Sanae 81.99 162⇓*iP* **P** **04 55 26.4 +0.2**
SNAA pmax pmax
comp=Z,357nm,1.4s
SNAA Sanae 81.99 162⇓*iP* **P** **04 55 26.4 +0.2**
comp=Z,357nm,1.4s,mb6.0
SNAA *ep*P pP 04 55 52.2 -0.5
ENIJ Nijar 82.04 52 P **P** **04 55 26.6 -0.6**
ENIJ pmax pmax
comp=Z,40nm,0.7s,mb5.4
ENIJ Nijar 82.04 52 P **P** **04 55 26.6 -0.6**
comp=Z,40nm,0.7s,mb5.3
ENIJ pP pP 04 55 53.0 -0.7
TOA0 Torodi Ar. Sit 82.07 76⇓*iP* **P** **04 55 27.6 -0.2**
TOA0 *ep*P pP 04 55 54.9 +0.7
TOA0 *es*P sP 04 56 05.5 +0.3
TORD Torodi Ar. Bea 82.07 76 P **P** **04 55 27.6 -0.2**
comp=Z,81nm,1.0s,mb5.5,baz=275,slow=5.5,SNR=351
TORD pP pP 04 55 54.0 -0.2
comp=Z,88nm,1.1s,baz=275,slow=5.1,SNR=8.1
TORD sP sP 04 56 05.0 -0.2
comp=Z,255nm,1.2s,baz=273,slow=3.2,SNR=13
TORD PKKPbc PKKPbc 05 13 56.3 -0.2
comp=Z,1.8nm,0.7s,baz=66,slow=2.3,SNR=18
TORD PKPPKP 05 22 04.2
comp=Z,1.2nm,1.1s,baz=89,slow=0.7,SNR=3.7
TORD LR LR 05 28 52.3
comp=Z,1μm,21.4s,baz=260,slow=33
EVIA Vianos 82.13 50 P **P** **04 55 27.1 -0.6**
EVIA pmax pmax
comp=Z,279nm,1.6s,mb5.8
EVIA Vianos 82.13 50 P **P** **04 55 27.1 -0.6**
comp=Z,279nm,1.6s,mb5.8
EVIA pP pP 04 55 53.6 -0.5
ELAN Lanestosa 82.40 46 P **P** **04 55 27.6 -1.3**
comp=Z,1μm,2.7s,mb6.3
ELAN pP pP 04 55 55.1 -0.3
DCN Croghan 82.50 35 *eP* **P** **04 55 27.9 -1.3**
ODZI Dziouia 82.51 54 P **P** **04 55 32.0 +2.3**
CCA1 Carnmenellis 82.86 39⇓*eP* **P** **04 55 31.1 0.0**
ETOB Tobarra 82.87 50 P **P** **04 55 31.9 +0.4**
comp=Z,2μm,2.6s,mb6.4
ETOB pP pP 04 55 58.4 +0.4
DMUB Kingscourt 82.87 35 *eP* **P** **04 55 29.9 -1.2**
CMA1 Manaccan 82.89 39⇓*eP* **P** **04 55 31.8 +0.5**
ETOR Torete 82.90 48 P **P** **04 55 31.8 +0.2**
ETOR pmax pmax
comp=Z,207nm,0.9s,mb6.0
ETOR Torete 82.90 48 P **P** **04 55 31.8 +0.2**
comp=Z,207nm,0.9s,mb6.0
ETOR pP pP 04 55 58.7 +0.5
DLF Lyons Farm 82.91 35 *eP* **P** **04 55 29.9 -1.5**
ECRI Cripan 82.93 46 P **P** **04 55 31.7 0.0**
ECRI pmax pmax
comp=Z,68nm,0.9s,mb5.5
ECRI Cripan 82.93 46 P **P** **04 55 31.7 0.0**
comp=Z,68nm,0.9s,mb5.5
ECRI pP pP 04 55 58.2 0.0
EMUR La Murta 82.95 51 P **P** **04 55 31.1 -0.9**
comp=Z,821nm,3.1s
EMUR pP pP 04 55 56.9 -1.6

CART Cartagena 83.10 52⇓*iP* **P** **04 55 31.4 -1.3**
comp=Z,112nm,1.5s,mb5.5
CSA1 St Austell 83.11 38⇓*eP* **P** **04 55 32.6 +0.2**
USTO Oran 83.13 53 P **P** **04 55 35.0 +2.1**
GMM Mts of Mourne 83.51 34⇓*iP* **P** **04 55 34.4 0.0**
QUIF Quistinic 83.62 41⇓*iP* **P** **04 55 35.4 +0.3**
comp=Z,397nm,1.2s,mb5.8
QUIF Quistinic 83.62 41⇓*iP* **P** **04 55 35.4 +0.3**
QUIF pmax pmax
comp=Z,198nm,1.2s,mb5.8
QUIF Quistinic 83.62 41⇓*iP* **P** **04 55 35.4 +0.3**
comp=Z,198nm,1.2s,mb5.8
ROSF Rostrenen 83.65 41⇓*iP* **P** **04 55 35.5 +0.2**
comp=Z,386nm,1.2s,mb5.8
ROSF *ep*P pP 04 56 02.3 +0.5
ROSF Rostrenen 83.65 41⇓*iP* **P** **04 55 35.5 +0.2**
ROSF pmax pmax
comp=Z,193nm,1.2s,mb5.8
ROSF Rostrenen 83.65 41⇓*iP* **P** **04 55 35.5 +0.2**
comp=Z,193nm,1.2s,mb5.8
ROSF *ep*P pP 04 56 02.3 +0.5
SEW Seward 83.70 332⇓*iP* **P** **04 55 33.9 -1.4**
SEW *ep*P pP 04 55 59.4 -2.4
SEW *es*P sP 04 56 09.7 -3.0
ELIZ Elizondo 83.75 46 P **P** **04 55 35.7 -0.2**
ELIZ pmax pmax
comp=Z,78nm,1.2s,mb5.4
ELIZ Elizondo 83.75 46 P **P** **04 55 35.7 -0.2**
comp=Z,78nm,1.2s,mb5.4
ELIZ pP pP 04 56 02.1 -0.4
EALK Alkurruntz 83.77 46 P **P** **04 55 35.3 -0.7**
comp=Z,620nm,1.7s,mb6.2
EALK pP pP 04 56 02.3 -0.2
OJBR Djebel Berber 83.82 54 P **P** **04 55 39.0 +2.5**
EBEN Beniarda 83.89 51 P **P** **04 55 36.7 0.0**
comp=Z,1μm,2.2s,mb6.4
EBEN pP pP 04 56 02.8 -0.5
SJPF Ste Jean 83.96 46⇓*iP* **P** **04 55 37.8 +0.8**
comp=Z,505nm,1.1s,mb6.0
SJPF *ep*P pP 04 56 04.6 +1.1
SJPF Ste Jean 83.96 46⇓*iP* **P** **04 55 37.8 +0.8**
SJPF pmax pmax
comp=Z,252nm,1.1s,mb6.0
SJPF Ste Jean 83.96 46⇓*iP* **P** **04 55 37.8 +0.8**
comp=Z,252nm,1.1s,mb6.0
SJPF *ep*P pP 04 56 04.6 +1.1
OSSF Osses 83.96 46 *eP* **P** **04 55 35.1 -1.9**
EMOS Mosqueruela 84.00 49 P **P** **04 55 37.4 +0.2**
comp=Z,334nm,0.9s,mb6.2
EMOS pP pP 04 56 02.3 -1.5
YRC Rhoscolyn 84.03 36⇓*eP* **P** **04 55 37.0 -0.1**
PMR Palmer 84.05 333⇓*iP* **P** **04 55 35.6 -1.4**
PMR *e**SP sP 04 56 12.8 -1.7
PMR pmax pmax
comp=Z,145nm,1.7s,mb5.5
PMR Palmer 84.05 333⇓*iP* **P** **04 55 35.6 -1.4**
comp=Z,145nm,1.7s,mb5.5
PMR *es*P sP 04 56 12.8 -1.8
YRE Yr Eifl 84.05 36⇓*iP* **P** **04 55 36.5 -0.7**
SGMF Saint Gilles 84.10 41⇓*iP* **P** **04 55 37.6 +0.1**
comp=Z,578nm,1.3s,mb5.9
SGMF Saint Gilles 84.10 41⇓*iP* **P** **04 55 37.6 +0.1**
SGMF pmax pmax
comp=Z,289nm,1.3s,mb6.0
SGMF Saint Gilles 84.10 41⇓*iP* **P** **04 55 37.6 +0.1**
comp=Z,289nm,1.3s,mb6.0
LARF Larrau 84.11 46 *eP* **P** **04 55 36.6 -1.1**
OKGL Djebel Kef Gue 84.14 53 P **P** **04 55 40.0 +2.0**
OJGS Djebel Guires 84.14 54 P **P** **04 55 42.0 +4.0**
RRH Rhenigidale 84.15 31⇓*eP* **P** **04 55 37.1 -0.5**
RC01 Rabbit Creek A 84.16 333⇓*iP* **P** **04 55 36.5 -1.1**
comp=Z,306nm,1.3s,mb6.0
SLKM Skilak Lake 84.20 332 *eP* **P** **04 55 37.1 -0.7**
SLKM *ep*P pP 04 56 03.4 -0.9
SLKM *es*P sP 04 56 14.6 -0.6
WIM Isle of Man 84.20 35⇓*iP* **P** **04 55 37.5 -0.4**
ESAC San Caprasio 84.25 48 P **P** **04 55 38.7 +0.2**
comp=Z,2μm,1.8s,mb6.5
ESAC pP pP 04 56 02.7 -2.3
ATE Arette 84.33 46 *eP* **P** **04 55 38.9 +0.1**
GIM North Isle of 84.36 35⇓*eP* **P** **04 55 39.0 +0.3**
GAL1 Galloway 84.37 34⇓*eP* **P** **04 55 38.4 -0.4**
GAL1 AMb AMB 04 55 41.1
comp=Z,312nm,1.5s,mb5.9
ETSF Etsaut 84.39 46⇓*iP* **P** **04 55 39.9 +0.7**
comp=Z,222nm,1.2s,mb5.6
ETSF Etsaut 84.39 46⇓*iP* **P** **04 55 39.9 +0.7**
ETSF pmax pmax
comp=Z,111nm,1.2s,mb5.6
ETSF Etsaut 84.39 46⇓*iP* **P** **04 55 39.9 +0.7**
comp=Z,111nm,1.2s,mb5.6
WPM1 Penmaenmawr 84.42 36⇓*iP* **P** **04 55 38.7 -0.4**
EANR 'Ain N'Sour 84.49 53 P **P** **04 55 40.7 +0.9**
HTR Trewern Hill 84.52 37⇓*iP* **P** **04 55 39.4 -0.2**
KPL Plockton 84.52 31⇓*eP* **P** **04 55 39.0 -0.4**
KPL AMb AMB 04 55 40.7
comp=Z,295nm,1.7s,mb5.9
RTO Tolsta 84.53 30⇓*eP* **P** **04 55 39.1 -0.4**
JVM Valle D.L. Mar 84.53 40⇓*eP* **P** **04 55 40.0 +0.3**
REYF Montagne du Re 84.55 46 *eP* **P** **04 55 38.3 -1.6**
JSA Saint Aubin 84.55 40⇓*eP* **P** **04 55 39.6 -0.2**
ETRT Tiaret 84.56 54 P **P** **04 55 41.3 +1.1**
RRR Rubha Reidh 84.59 31 *eP* **P** **04 55 39.5 -0.3**
JRS Jersey 84.60 40⇓*eP* **P** **04 55 39.9 -0.2**
JLP Les Platons 84.60 40⇓*eP* **P** **04 55 39.7 -0.4**
KSB Sheil Bridge 84.61 32⇓*eP* **P** **04 55 38.7 -1.2**
JQE Queens East 84.64 40⇓*iP* **P** **04 55 40.2 0.0**
COLA College 84.65 336 *iP* **P** **04 55 39.0 -1.0**
COLA College 84.65 336⇓*iP* **P** **04 55 38.7 -1.3**
comp=Z,131nm,1.2s,mb5.7
COLA *e*PP PP 04 58 57.2 +0.1
MCH1 Michaelchurch 84.66 37⇓*eP* **P** **04 55 40.8 +0.5**
MCH1 AMb AMB 04 55 42.5
comp=Z,297nm,1.7s,mb5.9
MCK McKinley 84.69 335⇓*iP* **P** **04 55 39.4 -0.8**
MCK pmax pmax
comp=Z,136nm,1.2s,mb5.8
MCK McKinley 84.69 335⇓*iP* **P** **04 55 39.4 -0.9**
comp=Z,136nm,1.2s,mb5.8
HGH Gray Hill 84.69 37⇓*iP* **P** **04 55 40.4 -0.1**
ERTA Horta de San J 84.71 48 P **P** **04 55 40.3 -0.5**
comp=Z,426nm,1.0s,mb6.3
ERTA pP pP 04 56 07.1 -0.3
SBD1 Bryn Du 84.72 36⇓*eP* **P** **04 55 40.2 -0.3**
ECHA Ech Chlef 84.73 53 P **P** **04 55 42.0 +1.0**
PGBU Glenifferbraes 84.74 33 *eP* **P** **04 55 40.5 -0.1**
PGBU AMb AMB 04 55 42.3
comp=Z,389nm,1.5s,mb6.1
KAC Achnashellach 84.75 31⇓*eP* **P** **04 55 40.4 -0.2**
OHAK Old Harbor 84.75 328 *eP* **P** **04 55 39.1 -1.6**
comp=Z,210nm,0.8s,mb6.1
OHAK *ep*P pP 04 56 05.5 -1.8
OHAK *es*P sP 04 56 17.9 -0.3
GCD Castle Douglas 84.80 34⇓*iP* **P** **04 55 40.5 -0.4**
VIEF Viey 84.81 46 *eP* **P** **04 55 40.6 -0.7**
HLM1 Long Mynd 84.85 37⇓*eP* **P** **04 55 41.1 -0.2**
EBIE Bielsa 84.86 47 P **P** **04 55 39.5 -2.0**
comp=Z,693nm,2.0s,mb6.2
EBIE P 04 55 43.1
EBIE pP pP 04 56 08.3 +0.1
LABF Labassere 84.88 46 *eP* **P** **04 55 41.9 +0.3**
EBNR Beni Rached 84.88 53 P **P** **04 55 42.3 +0.5**
EAB Aberfoyle 84.91 33⇓*iP* **P** **04 55 40.8 -0.7**
RESF Ens 85.03 47 *eP* **P** **04 55 42.4 0.0**
EPF Esparros 85.07 46⇓*iP* **P** **04 55 43.0 +0.4**
comp=Z,412nm,1.4s,mb5.8
EPF *ep*P pP 04 56 10.1 +0.9
EPF Esparros 85.07 46⇓*iP* **P** **04 55 43.0 +0.4**
EPF pmax pmax
comp=Z,206nm,1.4s,mb5.9
EPF Esparros 85.07 46⇓*iP* **P** **04 55 43.0 +0.4**
comp=Z,206nm,1.4s,mb5.9
EPF *ep*P pP 04 56 10.1 +0.9
EIBI Ibiza 85.16 50 P **P** **04 55 35.6 -7.5**
comp=Z,259nm,1.5s,mb5.9
EIBI pP pP 04 56 09.6 -0.1
TRF Thorofare Moun 85.17 335 *eP* **P** **04 55 41.8 -0.8**
comp=Z,361nm,1.5s,mb6.1
TRF *ep*P pP 04 56 07.7 -1.5
TRF *es*P sP 04 56 17.9 -2.2
MDO Dochfour 85.22 32⇓*eP* **P** **04 55 42.4 -0.6**
GRR Gorron 85.23 41⇓*iP* **P** **04 55 43.3 0.0**
comp=Z,443nm,1.2s,mb6.0
GRR Gorron 85.23 41⇓*iP* **P** **04 55 43.3 0.0**

GRR pmax pmax
comp=Z,222nm,1.2s,mb6.0
GRR Gorron 85.23 41 ⇓*iP* P 04 55 43.3 0.0
comp=Z,222nm,1.2s,mb6.0
SWN1 Swindon 85.28 38 *eP* P 04 55 43.5 +0.1
SWN1 AMb AMB 04 55 45.1
comp=Z,647nm,1.6s,mb6.3
EAU Auchinoon 85.31 33⇓*iP* P 04 55 43.2 -0.3
ESK Eskdalemuir 85.32 34 P P 04 55 43.8 +0.3
comp=Z,544nm,1.7s,mb6.2,SNR=5.6
ESK Eskdalemuir 85.32 34⇓*iP* P 04 55 43.2 -0.4
ESK AMb AMB 04 55 46.0
comp=Z,304nm,1.8s,mb5.9
ESK Eskdalemuir 85.32 34⇓*iP* P 04 55 42.9 -0.6
ESK pmax pmax
comp=Z,816nm,2.0s,mb6.3
ESK Eskdalemuir 85.32 34⇓*iP* P 04 55 42.9 -0.6
comp=Z,816nm,2.0s,mb6.3
EPOB Poblet 85.33 48 P P 04 55 42.3 -1.6
comp=Z,425nm,2.7s,mb5.9
EPOB pP pP 04 56 09.3 -1.3
ECK Cauldkaine Hil 85.33 34⇓*iP* P 04 55 43.1 -0.4
MELF Melles 85.34 47 *eP* P 04 55 42.5 -1.4
MFF Saint Martin d 85.37 43⇓*iP* P 04 55 44.0 0.0
comp=Z,464nm,1.3s,mb5.9
MFF *ep*P pP 04 56 10.9 +0.3
MFF Saint Martin d 85.37 43⇓*iP* P 04 55 44.0 0.0
MFF pmax pmax
comp=Z,232nm,1.3s,mb6.0
MFF Saint Martin d 85.37 43⇓*iP* P 04 55 44.0 0.0
comp=Z,232nm,1.3s,mb6.0
MFF *ep*P pP 04 56 10.9 +0.3
EBH Black Hill 85.38 33⇓*iP* P 04 55 43.2 -0.6
MVH1 Achvaich 85.44 31⇓*eP* P 04 55 43.7 -0.3
KTH Kantishna Hill 85.47 335⇓*iP* P 04 55 43.2 -0.9
comp=Z,150nm,1.2s,mb5.8
EDI Edinburgh 85.47 33 *eP* P 04 55 44.1 -0.2
EDI AMb AMB 04 55 46.6
comp=Z,356nm,1.8s,mb6.0
EBL Broad Law 85.52 33⇓*eP* P 04 55 44.3 -0.2
FLN La Foliniere 85.55 41⇓*iP* P 04 55 45.1 +0.3
comp=Z,530nm,1.2s,mb6.0
FLN *ep*P pP 04 56 11.9 +0.4
FLN *es*P sP 04 56 23.3 +0.9
FLN *e*MLR MLR
comp=Z,849nm,21.5s
FLN La Foliniere 85.55 41⇓*iP* P 04 55 45.1 +0.3
FLN *e**SP sP 04 56 23.3 +0.9
FLN pmax pmax
comp=Z,265nm,1.2s,mb6.0
FLN MLR MLR
comp=Z,850nm,21.5s
FLN La Foliniere 85.55 41⇓*iP* P 04 55 45.1 +0.3
comp=Z,265nm,1.2s,mb6.0
FLN *ep*P pP 04 56 11.9 +0.4
FLN *es*P sP 04 56 23.3 +0.9
FLN LR LR
comp=Z,850nm,21.5s
KWE Weaver Farm 85.58 36⇓*iP* P 04 55 45.1 +0.2
MLS Moulis 85.60 47 *eP* P 04 55 42.5 -2.7
BPAW Bear Paw Mtn. 85.67 335⇓*iP* P 04 55 44.1 -1.0
comp=Z,347nm,1.3s,mb6.1
BPAW *ep*P pP 04 56 09.0 -2.7
BPAW *es*P sP 04 56 20.6 -2.1
LFF La Frestale 85.68 45⇓*iP* P 04 55 45.4 -0.2
comp=Z,142nm,0.8s,mb5.6
LFF La Frestale 85.68 45⇓*iP* P 04 55 45.4 -0.2
LFF pmax pmax
comp=Z,71nm,0.8s,mb5.7
LFF La Frestale 85.68 45⇓*iP* P 04 55 45.4 -0.2
comp=Z,71nm,0.8s,mb5.7
LHO Holmfirth 85.69 36⇓*iP* P 04 55 45.5 +0.2
EMIR Miracle 85.75 48 P P 04 55 44.5 -1.4
comp=Z,452nm,2.0s,mb6.0
EMIR pP pP 04 56 08.1 -4.6
LDF La Druitiere 85.75 41⇓*iP* P 04 55 45.9 +0.1
comp=Z,491nm,1.2s,mb6.0
LDF La Druitiere 85.75 41⇓*iP* P 04 55 45.9 +0.1
LDF pmax pmax
comp=Z,245nm,1.2s,mb6.0
LDF La Druitiere 85.75 41⇓*iP* P 04 55 45.9 +0.1
comp=Z,245nm,1.2s,mb6.0
XAL Allendale 85.77 34⇓*iP* P 04 55 45.4 -0.3
ESY Stoneypath 85.79 33⇓*eP* P 04 55 45.8 0.0
KBI1 Birley Grange 85.81 36⇓*iP* P 04 55 46.0 0.0
PPLA Purkeypile 85.82 334⇓*iP* P 04 55 45.0 -0.8
comp=Z,621nm,1.5s,mb6.3
PPLA *ep*P pP 04 56 09.8 -2.7
PPLA *es*P sP 04 56 21.3 -2.1
CWF Charnwood Fore 85.84 37 *eP* P 04 55 46.0 -0.1
CWF AMb AMB 04 55 49.7
comp=Z,370nm,1.9s,mb6.0
MCD Coleburn Disti 85.84 32⇓*eP* P 04 55 44.5 -1.6
XSO Sourhope Farm 85.89 34⇓*eP* P 04 55 45.9 -0.4
HPK Haverah Park 85.91 35⇓*eP* P 04 55 46.4 0.0
HPK AMb AMB 04 55 49.2
comp=Z,422nm,1.6s,mb6.1
MME1 Meikle Cairn 85.93 32⇓*eP* P 04 55 45.8 -0.7
EMHD Djebel Mahouad 86.01 53 P P 04 55 47.8 +0.4
ABA Alger-Bouzarea 86.16 53 P P 04 55 48.0 -0.1
CHUM Lake Minchumin 86.16 335⇓*iP* P 04 55 46.2 -1.3
comp=Z,236nm,1.5s,mb5.9
CHUM *ep*P pP 04 56 11.5 -2.7
CHUM *es*P sP 04 56 22.4 -2.7
VALF Valcebollere 86.19 47 *eP* P 04 55 45.6 -2.5
RJF Les Rejaudoux 86.28 44⇓*iP* P 04 55 48.1 -0.4
comp=Z,77nm,0.8s,mb5.4
RJF *e*MLR MLR
comp=Z,822nm,21.5s
RJF Les Rejaudoux 86.28 44⇓*iP* P 04 55 48.1 -0.4
RJF pmax pmax
comp=Z,38nm,0.8s,mb5.4
RJF MLR MLR
comp=Z,820nm,21.5s
RJF Les Rejaudoux 86.28 44⇓*iP* P 04 55 48.1 -0.4
comp=Z,38nm,0.8s,mb5.4
RJF LR LR
comp=Z,820nm,21.5s
COLD Coldfoot 86.36 338⇓*iP* P 04 55 48.9 +0.4
comp=Z,224nm,1.2s,mb6.0
ADJB Djebel Djouab 86.39 54 P P 04 55 50.1 +0.8
ETOS Mallorca 86.39 50 P P 04 55 46.1 -3.1
comp=Z,448nm,2.0s,mb6.0
ETOS pP pP 04 56 09.2 -6.7
MTLF Montolieu 86.47 46⇓*iP* P 04 55 49.0 -0.5
comp=Z,76nm,1.1s,mb5.2
MTLF Montolieu 86.47 46⇓*iP* P 04 55 49.0 -0.5
MTLF pmax pmax
comp=Z,38nm,1.1s,mb5.2
MTLF Montolieu 86.47 46⇓*iP* P 04 55 49.0 -0.5
comp=Z,38nm,1.1s,mb5.2
FILF Fillols 86.61 47 *eP* P 04 55 46.3 -3.9
MAIT Maitri 86.61 161⇓*iP* P 04 55 51.2 +1.6
MAIT *e*E pP 04 56 17.7 +1.4
CAF Calviac 86.61 45⇓*iP* P 04 55 49.8 -0.3
comp=Z,69nm,1.0s,mb5.2
CAF *ep*P pP 04 56 16.9 +0.1
CAF Calviac 86.61 45⇓*iP* P 04 55 49.8 -0.3
CAF pmax pmax
comp=Z,35nm,1.0s,mb5.2
CAF Calviac 86.61 45⇓*iP* P 04 55 49.8 -0.3
comp=Z,35nm,1.0s,mb5.2
CAF *ep*P pP 04 56 16.9 +0.1
TAM Tamanrasset 86.68 67⇓*iP* P 04 55 51.5 +0.6
TAM *ep*P pP 04 56 16.7 -1.0
TAM *es*P sP 04 56 29.6 +1.0
ALE Alert 86.71 2 P P 04 55 49.0 -0.9
comp=Z,1μm,1.1s,mb6.8,SNR=88
AKET Djebel Ketaf 86.73 54 P P 04 55 51.9 +0.9
EJON La Jonquera 86.83 47 P P 04 55 48.1 -3.2
comp=Z,300nm,2.9s,mb5.7
EJON pP pP 04 56 15.3 -2.7
SVW2 Sparrevohn 86.89 332⇓*iP* P 04 55 49.3 -1.8
SVW2 *ep*P pP 04 56 15.3 -2.5
SVW2 *es*P sP 04 56 25.6 -3.1
TCF Toulx Ste Croi 86.92 43⇓*iP* P 04 55 51.1 -0.5
comp=Z,34nm,0.8s,mb5.0
TCF Toulx Ste Croi 86.92 43⇓*iP* P 04 55 51.1 -0.5
TCF pmax pmax
comp=Z,17nm,0.8s,mb5.0
TCF Toulx Ste Croi 86.92 43⇓*iP* P 04 55 51.1 -0.5
comp=Z,17nm,0.8s,mb5.0
TFO1 Folkestone 87.01 38⇓*eP* P 04 55 51.9 -0.1
TFO1 AMb AMB 04 55 53.9
comp=Z,852nm,1.2s,mb6.5

FRNF Fournols 87.03 44 *eP* P 04 55 50.8 -1.3
ATAF Djebel Tarf 87.03 54 P P 04 55 52.1 -0.3
WAL1 Walls 87.28 29⇓*eP* P 04 55 53.0 0.0
AEU East Anglia Un 87.33 37⇓*eP* P 04 55 53.2 -0.2
IMA2 Indian Mountai 87.34 337 *eP* P 04 55 52.4 -0.8
IMA2 *es*P sP 04 56 28.1 -2.7
IMA2 *ep*PP PP 04 59 17.7 -1.1
DAG Danmarks Havn 87.35 12⇑*iP* P 04 55 52.7 -0.4
DAG pmax pmax
comp=Z,330nm,1.2s,mb6.1
DAG Danmarks Havn 87.35 12⇑*iP* P 04 55 52.7 -0.4
comp=Z,329nm,1.2s,mb6.1
AKF Akfadou 87.35 53 P P 04 55 54.7 +0.8
HYF Humbligny 87.36 42⇓*iP* P 04 55 53.6 -0.1
BGF Bois d'Agland 87.40 43⇓*iP* P 04 55 53.5 -0.4
comp=Z,248nm,1.2s,mb5.7
BGF *ep*P pP 04 56 20.6 -0.1
BGF Bois d'Agland 87.40 43⇓*iP* P 04 55 53.5 -0.4
BGF pmax pmax
comp=Z,124nm,1.2s,mb5.7
BGF Bois d'Agland 87.40 43⇓*iP* P 04 55 53.5 -0.4
comp=Z,124nm,1.2s,mb5.7
BGF *ep*P pP 04 56 20.6 -0.1
LRW Lerwick 87.47 29⇓*eP* P 04 55 54.4 +0.5
LRW AMb AMB 04 56 00.2
comp=Z,301nm,1.8s,mb5.9
TTA Tatalina 87.52 334 *eP* P 04 55 53.1 -1.0
TTA pmax pmax
comp=Z,349nm,2.0s,mb6.0
TTA Tatalina 87.52 334 *eP* P 04 55 53.1 -1.0
comp=Z,349nm,2.0s,mb6.0
JMIC Jan Mayen 87.52 18 P P 04 55 54.9 +0.9
comp=Z,175nm,1.2s,mb6.0,baz=139,slow=11,SNR=5.6
JMIC *ep*P pP 04 56 20.8 0.0
comp=Z,52nm,0.7s,baz=141,slow=6.5,SNR=2.4
JMIC Jan Mayen 87.52 18 *eP* P 04 55 55.9 +1.9
JMIC *e* 05 06 22.8
MENF Mencas 87.56 39 *eP* P 04 55 53.6 -1.0
LASF Ste Croix 87.75 46⇓*iP* P 04 55 55.7 0.0
comp=Z,102nm,1.1s,mb5.5
AVF Avril sur Loir 87.78 43⇓*iP* P 04 55 54.9 -0.8
comp=Z,147nm,1.3s,mb5.6
AVF Avril sur Loir 87.78 43⇓*iP* P 04 55 54.9 -0.8
AVF pmax pmax
comp=Z,74nm,1.3s,mb5.6
AVF Avril sur Loir 87.78 43⇓*iP* P 04 55 54.9 -0.8
comp=Z,74nm,1.3s,mb5.5
SSF Saint Saulge 87.92 43⇓*iP* P 04 55 55.6 -0.8
comp=Z,82nm,1.2s,mb5.3
SSF *ep*P pP 04 56 22.6 -0.6
SSF Saint Saulge 87.92 43⇓*iP* P 04 55 55.6 -0.8
SSF pmax pmax
comp=Z,41nm,1.2s,mb5.3
SSF Saint Saulge 87.92 43⇓*iP* P 04 55 55.6 -0.8
comp=Z,41nm,1.2s,mb5.3
SSF *ep*P pP 04 56 22.6 -0.6
SET Setif 87.97 54 P P 04 55 58.0 +1.1
SMF Signal de Mont 88.09 43⇓*iP* P 04 55 56.6 -0.6
comp=Z,212nm,1.3s,mb5.7
SMF *ep*P pP 04 56 23.6 -0.4
SMF Signal de Mont 88.09 43⇓*iP* P 04 55 56.6 -0.6
SMF pmax pmax
comp=Z,106nm,1.3s,mb5.7
SMF Signal de Mont 88.09 43⇓*iP* P 04 55 56.6 -0.6
comp=Z,106nm,1.3s,mb5.7
SMF *ep*P pP 04 56 23.6 -0.4
LOR Lormes 88.18 43⇓*iP* P 04 55 57.0 -0.6
comp=Z,120nm,1.3s,mb5.5
LOR *e*MLR MLR
comp=Z,455nm,19.5s
LOR Lormes 88.18 43⇓*iP* P 04 55 57.0 -0.6
LOR pmax pmax
comp=Z,60nm,1.3s,mb5.5
LOR MLR MLR
comp=Z,460nm,19.5s
LOR Lormes 88.18 43⇓*iP* P 04 55 57.0 -0.6
comp=Z,60nm,1.3s,mb5.5
LOR LR LR
comp=Z,460nm,19.5s
DFRA Djebel Bou Aff 88.39 53 P P 04 56 00.0 +1.1
SSB Saint Sauveur 88.39 45 *eP* P 04 55 58.1 -0.6
SSB Saint Sauveur 88.39 45 *eP* P 04 55 58.2 -0.5
SSB *ep*P pP 04 56 25.4 -0.1
VIVF Saint-Julien-l 88.43 45⇓*iP* P 04 55 58.9 0.0
comp=Z,172nm,1.3s,mb5.6
VIVF *ep*P pP 04 56 26.0 +0.3
VIVF Saint-Julien-l 88.43 45⇓*iP* P 04 55 58.9 0.0
VIVF pmax pmax
comp=Z,86nm,1.3s,mb5.6
VIVF Saint-Julien-l 88.43 45⇓*iP* P 04 55 58.9 0.0
comp=Z,86nm,1.3s,mb5.6
VIVF *ep*P pP 04 56 26.0 +0.3
CTEI Djebel Teioual 88.77 54 P P 04 56 01.0 +0.4
BAIF Baives 88.78 40⇓*iP* P 04 56 00.3 -0.1
comp=Z,241nm,1.6s,mb5.7
BAIF Baives 88.78 40⇓*iP* P 04 56 00.3 -0.1
BAIF pmax pmax
comp=Z,120nm,1.6s,mb5.7
BAIF Baives 88.78 40⇓*iP* P 04 56 00.3 -0.1
comp=Z,120nm,1.6s,mb5.7
CASM Ain Smara 88.86 54 P P 04 56 02.0 +0.9
SNF Seneffe 88.89 39 P P 04 56 00.5 -0.4
comp=Z,74nm,2.3s,mb5.3
SNF AP pP 04 56 28.7 +1.0
SNF XP sP 04 56 39.1 +0.5
SMRF Simiane la Rot 88.97 46⇓*iP* P 04 56 01.7 +0.3
comp=Z,122nm,1.1s,mb5.5
SMRF *ep*P pP 04 56 28.7 +0.5
SMRF Simiane la Rot 88.97 46⇓*iP* P 04 56 01.7 +0.3
comp=Z,122nm,1.1s,mb5.8
SMRF *ep*P pP 04 56 28.7 +0.5
UCC Uccle 88.98 39 P P 04 56 01.4 +0.2
comp=Z,193nm,1.9s,mb5.8
UCC AP pP 04 56 28.5 +0.4
UCC XP sP 04 56 40.0 +1.0
DOU Dourbes 89.04 40 P P 04 56 01.7 +0.2
comp=Z,81nm,1.6s,mb5.5
DOU AP pP 04 56 28.9 +0.5
CKFL Kef-Lekhel 89.05 54 P P 04 56 03.0 +1.0
MEZF Maizieres J'vi 89.14 41⇓*iP* P 04 56 01.9 -0.2
comp=Z,218nm,1.1s,mb5.8
MEZF Maizieres J'vi 89.14 41⇓*iP* P 04 56 01.9 -0.2
comp=Z,218nm,1.1s,mb6.1
GIVF Givet 89.18 40⇓*iP* P 04 56 02.5 +0.2
comp=Z,858nm,1.7s,mb6.2
GIVF *ep*P pP 04 56 29.5 +0.4
GIVF Givet 89.18 40⇓*iP* P 04 56 02.5 +0.2
GIVF pmax pmax
comp=Z,429nm,1.7s,mb6.2
GIVF Givet 89.18 40⇓*iP* P 04 56 02.5 +0.2
comp=Z,429nm,1.7s,mb6.2
GIVF *ep*P pP 04 56 29.5 +0.4
CAEH 'Ain El Ouahch 89.19 53 P P 04 56 04.0 +1.4
ORIF Oris-en-Rattie 89.29 45⇓*iP* P 04 56 03.3 +0.4
comp=Z,205nm,1.1s,mb5.8
ORIF *e*MLR MLR
comp=Z,949nm,21.2s
ORIF Oris-en-Rattie 89.29 45⇓*iP* P 04 56 03.3 +0.4
ORIF pmax pmax
comp=Z,103nm,1.1s,mb5.8
ORIF Oris-en-Rattie 89.29 45⇓*iP* P 04 56 03.3 +0.4
comp=Z,103nm,1.1s,mb5.8
OG25 Le Caire 89.37 46 *eP* P 04 56 03.2 -0.1
BCLA Clavier 89.53 40 P P 04 56 04.4 +0.6
comp=Z,79nm,2.3s,mb5.4
BCLA AP pP 04 56 31.4 +0.7
BCLA XP sP 04 56 43.2 +1.7
LMR La Mourre 89.58 47⇓*iP* P 04 56 03.9 -0.4
comp=Z,249nm,1.3s,mb5.9
LMR *ep*P pP 04 56 31.0 -0.1
LMR La Mourre 89.58 47⇓*iP* P 04 56 03.9 -0.4
LMR pmax pmax
comp=Z,124nm,1.3s,mb5.9
LMR La Mourre 89.58 47⇓*iP* P 04 56 03.9 -0.4
comp=Z,124nm,1.3s,mb5.9
LMR *ep*P pP 04 56 31.0 -0.1
CABF La Chapelle 89.62 43⇓*iP* P 04 56 04.4 0.0
comp=Z,254nm,1.2s,mb5.9
CABF *ep*P pP 04 56 31.4 +0.2
CABF La Chapelle 89.62 43⇓*iP* P 04 56 04.4 0.0
CABF pmax pmax
comp=Z,127nm,1.2s,mb5.9
CABF La Chapelle 89.62 43⇓*iP* P 04 56 04.4 0.0
comp=Z,127nm,1.2s,mb5.9
CABF *ep*P pP 04 56 31.4 +0.2

CMAH Djebel Manchou 89.64 53 P P 04 56 05.0 +0.3
ABSA Djebel Ababsia 89.65 54 P P 04 56 05.5 +0.7
FRF La Foret Royal 89.70 46⇓*iP* P 04 56 04.5 -0.3
comp=Z,248nm,0.9s,mb6.0
FRF La Foret Royal 89.70 46⇓*iP* P 04 56 04.5 -0.3
FRF pmax pmax
comp=Z,124nm,0.9s,mb6.0
FRF La Foret Royal 89.70 46⇓*iP* P 04 56 04.5 -0.3
comp=Z,124nm,0.9s,mb6.0
THEF They Montfort 89.72 42 *eP* P 04 56 04.8 0.0
BEBN Eben Emael 89.81 39 P P 04 56 05.4 +0.3
comp=Z,43nm,2.1s,mb5.2
BEBN AP pP 04 56 33.0 +1.0
BNI Bardonecchia 89.87 45 *eP* P 04 56 05.9 +0.3
BNI pmax pmax
comp=Z,89nm,1.4s,mb5.7
BNI Bardonecchia 89.87 45 *eP* P 04 56 05.9 +0.3
comp=Z,90nm,1.4s,mb5.7
CALN Calern 89.89 46 *eP* P 04 56 05.7 0.0
RSL Roselend 89.90 44 *eP* P 04 56 05.6 -0.1
MBDF Montbardon 89.91 45⇓*iP* P 04 56 06.0 +0.2
comp=Z,202nm,1.5s,mb5.7
MBDF Montbardon 89.91 45⇓*iP* P 04 56 06.0 +0.2
MBDF pmax pmax
comp=Z,101nm,1.5s,mb5.7
MBDF Montbardon 89.91 45⇓*iP* P 04 56 06.0 +0.2
comp=Z,101nm,1.5s,mb5.7
LPL La Plagne 89.95 45⇓*iP* P 04 56 06.6 +0.6
comp=Z,140nm,1.2s,mb5.7
LPL *ep*P pP 04 56 33.7 +0.9
LPL La Plagne 89.95 45⇓*iP* P 04 56 06.6 +0.6
LPL pmax pmax
comp=Z,70nm,1.2s,mb5.7
LPL La Plagne 89.95 45⇓*iP* P 04 56 06.6 +0.6
comp=Z,70nm,1.2s,mb5.7
LPL *ep*P pP 04 56 33.7 +0.9
HGN Heimansgroeve 89.97 39⇓*iP* P 04 56 06.2 +0.3
comp=Z,136nm,1.2s,mb5.9
HGN Heimansgroeve 89.97 39 *i* pP pP 04 56 32.9 +0.2
comp=Z,132nm,1.6s
HGN Heimansgroeve 89.97 39⇑*ex* x 04 56 44.1
comp=Z,148nm,1.9s
HGN Heimansgroeve 89.97 39 *e*PP PP 05 00 13.2 +33
HGN Heimansgroeve 89.97 39 *e*S S 05 06 59.2 +9.1
HGN Heimansgroeve 89.97 39 *e*SS SS 05 12 37.4 -13
LPG La Plagne 89.97 45⇓*iP* P 04 56 06.8 +0.8
comp=Z,258nm,1.4s,mb5.8
LPG La Plagne 89.97 45⇓*iP* P 04 56 06.8 +0.8
LPG pmax pmax
comp=Z,129nm,1.4s,mb5.9
LPG La Plagne 89.97 45⇓*iP* P 04 56 06.8 +0.8
comp=Z,129nm,1.4s,mb5.9
WLF Walferdange 89.99 40 P P 04 56 06.6 +0.6
comp=Z,128nm,1.6s,mb5.8
WLF AP pP 04 56 34.0 +1.1
WLF Walferdange 89.99 40⇓*iP* P 04 56 06.2 +0.2
WLF pmax pmax
comp=Z,189nm,1.2s,mb6.1
WLF Walferdange 89.99 40 *eP* P 04 56 06.5 +0.5
comp=Z,153nm,1.1s,mb6.0
WLF *ep*P pP 04 56 34.0 +1.1
WLF Walferdange 89.99 40⇓*iP* P 04 56 06.2 +0.2
comp=Z,189nm,1.2s,mb6.1
WLF *ep*P pP 04 56 31.6 -1.3
MEM Membach 90.00 39 P P 04 56 06.5 +0.5
comp=Z,72nm,1.7s,mb5.5
MEM AP pP 04 56 33.9 +1.0
MEM XP sP 04 56 44.7 +1.0
OG01 Vacheresse 90.00 44 *eP* P 04 56 05.4 -0.8
MVIF Mont Vial 90.10 46 *eP* P 04 56 06.3 -0.4
TOUF Mont Tournerai 90.18 46 *eP* P 04 56 06.5 -0.5
LOMF Lomont 90.20 43 *eP* P 04 56 06.7 -0.4
LUCF Luceram 90.24 46 *eP* P 04 56 06.5 -0.8
REVF Revere 90.24 46 *eP* P 04 56 07.4 +0.1
HINF Hinteralfeld 90.26 42⇓*iP* P 04 56 06.7 -0.6
comp=Z,145nm,1.4s,mb5.6
HINF Hinteralfeld 90.26 42⇓*iP* P 04 56 06.7 -0.6
HINF pmax pmax
comp=Z,73nm,1.4s,mb5.6
HINF Hinteralfeld 90.26 42⇓*iP* P 04 56 06.7 -0.6
comp=Z,73nm,1.4s,mb5.6
SBF Sospel 90.30 46⇓*iP* P 04 56 07.3 -0.3
comp=Z,320nm,1.2s,mb6.0
SBF Sospel 90.30 46⇓*iP* P 04 56 07.3 -0.3
SBF pmax pmax
comp=Z,160nm,1.2s,mb6.0
SBF Sospel 90.30 46⇓*iP* P 04 56 07.3 -0.3
comp=Z,160nm,1.2s,mb6.0
AUTN L'Aution 90.31 46 *eP* P 04 56 07.1 -0.5
SAOF Saorge 90.40 46 *eP* P 04 56 07.7 -0.4
MOF Molkenrain 90.45 42 *eP* P 04 56 07.4 -0.8
ECH Echery 90.50 42 *eP* P 04 56 07.8 -0.7
ECH Echery 90.50 42⇓*iP* P 04 56 07.8 -0.7
ECH *ep*P pP 04 56 34.6 -0.7
RUP Ruppelstein 90.58 40 *eP* P 04 56 09.2 +0.4
CDF Champ du Feu 90.60 42⇓*iP* P 04 56 08.7 -0.2
comp=Z,182nm,1.2s,mb5.8
CDF *ep*P pP 04 56 35.7 -0.1
CDF Champ du Feu 90.60 42⇓*iP* P 04 56 08.7 -0.2
CDF pmax pmax
comp=Z,91nm,1.2s,mb5.8
CDF Champ du Feu 90.60 42⇓*iP* P 04 56 08.7 -0.2
comp=Z,91nm,1.2s,mb5.8
CDF *ep*P pP 04 56 35.7 -0.1
WTSB Winterswijk 90.63 38⇓*iP* P 04 56 09.3 +0.3
comp=Z,215nm,1.9s,mb6.0
WTSB Winterswijk 90.63 38 *ep*P pP 04 56 36.2 +0.4
comp=Z,143nm,1.9s
WTSB Winterswijk 90.63 38⇑*ex* x 04 56 47.4
comp=Z,226nm,1.6s
BBS Basel-Blauen 90.67 43 *eP* P 04 56 08.5 -0.8
LIBD Limburg 90.79 42 *eP* P 04 56 08.7 -1.1
BUG Bochum-Univer 90.87 39 *eP* P 04 56 10.6 +0.5
comp=Z,350nm,1.9s,mb6.2
ABH Alteburg 90.91 40 *eP* P 04 56 09.9 -0.4
LANF Langenberg 91.00 41 *eP* P 04 56 10.4 -0.3
FELD Feldberg im Sc 91.04 42 *eP* P 04 56 09.9 -1.1
SBA Scott Base 91.09 191⇓*iP* P 04 56 11.1 +0.4
SBA pmax pmax
comp=Z,112nm,1.4s,mb5.8
SBA Scott Base 91.09 191⇓*iP* P 04 56 11.1 +0.5
comp=Z,112nm,1.4s,mb5.8
SBA *ep*P pP 04 56 36.6 -0.9
KEST Kesra 91.12 54 P P 04 56 12.0 +0.4
comp=Z,9.5nm,0.8s,mb5.0,baz=285,slow=2.3,SNR=14
KEST pP pP 04 56 38.6 +0.1
comp=Z,15nm,0.9s,baz=214,slow=5.2,SNR=2.9
KEST LR LR 05 33 48.4
comp=Z,182nm,21.3s,baz=90,slow=33
KTD Kalmit 91.21 41 *eP* P 04 56 11.4 -0.3
IBBN Ibbenburen 91.25 38 *eP* P 04 56 12.4 +0.6
comp=Z,166nm,1.5s,mb5.9
BFO Black Forest 91.29 42 P P 04 56 11.9 -0.2
comp=Z,109nm,1.4s,mb5.8,SNR=5.9
BFO Black Forest 91.29 42 *eP* P 04 56 11.2 -0.9
BFO pmax pmax
comp=Z,35nm,1.2s,mb5.4
BFO Black Forest 91.29 42 *eP* P 04 56 11.2 -0.9
comp=Z,35nm,1.2s,mb5.4
BFO *ep*PP 05 00 13.7
BFO *es*PP 05 00 25.4
VSL Villasalto 91.40 51⇓*iP* P 04 56 12.3 -0.6
comp=Z,335nm,1.8s,mb6.2
VSL *ep*P pP 04 56 39.8 +0.1
TNS Taunus Mts 91.52 40 *eP* P 04 56 13.4 +0.3
TNS pmax pmax
comp=Z,94nm,1.2s,mb5.9
TNS Taunus Mts 91.52 40 *eP* P 04 56 13.4 +0.3
comp=Z,94nm,1.2s,mb5.9
TNS *ep*P pP 04 56 40.9 +0.9
SPAK Spaichingen-Ko 91.58 42 *eP* P 04 56 12.5 -1.0
TOD Tromm 91.70 41 *eP* P 04 56 11.8 -2.2
TUE Stuetta 91.85 44⇓*iP* P 04 56 14.8 +0.1
comp=Z,87nm,1.2s,mb5.9
TUE *ep*P pP 04 56 41.7 +0.1
STU Stuttgart 91.90 41 *eP* P 04 56 14.5 -0.4
STU pmax pmax
comp=Z,273nm,1.8s,mb6.2
STU Stuttgart 91.90 41 *eP* P 04 56 15.1 +0.2
comp=Z,222nm,1.9s,mb6.1
STU Stuttgart 91.90 41 *eP* P 04 56 14.5 -0.4
comp=Z,273nm,1.8s,mb6.2
DAVA Damuels 92.27 43 *i* P P 04 56 17.2 +0.5
comp=Z,285nm,1.8s,mb6.2,SNR=15
DAVA Damuels 92.27 43 *i* PcP P 04 56 17.2 +0.5

comp=Z,285nm,1.8s,mb6.2,SNR=15
MUD Monsted U'grnd 92.38 34 *i* P **P 04 56 17.6 +0.7**
MUD *e* pP 04 56 46.0 +2.2
UBBA Unterbreizbach 92.54 39 *e*P **P 04 56 17.8 0.0**
comp=Z,86nm,1.8s,mb5.8
NRDL Niedersach Rie 92.70 38 *e*P **P 04 56 19.5 +1.0**
comp=Z,205nm,1.9s,mb6.1
NRDL *e*pP pP 04 56 46.6 +1.2
NRDL *e*SPP 05 00 36.1
CLZ Clausthal 92.83 38 *e*P **P 04 56 20.1 +1.0**
CLZ pmax pmax
comp=Z,121nm,1.3s,mb6.1
CLZ Clausthal 92.83 38 *e*P **P 04 56 20.1 +1.0**
comp=Z,121nm,1.3s,mb6.1
FETA Feichten 92.83 43 *i* P **P 04 56 19.6 +0.3**
comp=Z,213nm,1.8s,mb6.2,SNR=26
FETA Feichten 92.83 43 *i* PcP **P 04 56 19.6 +0.3**
comp=Z,213nm,1.8s,mb6.2,SNR=26
RETA Reutte 92.87 43 *i* P **P 04 56 19.6 +0.2**
comp=Z,163nm,2.2s,mb6.0,SNR=8.3
RETA Reutte 92.87 43 *i* PcP **P 04 56 19.6 +0.2**
comp=Z,163nm,2.2s,mb6.0,SNR=8.3
BSEG Bad Segeberg 92.89 36 *e*P **P 04 56 20.1 +0.7**
BSEG pmax pmax
comp=Z,195nm,1.6s,mb6.2
BSEG Bad Segeberg 92.89 36 *e*P **P 04 56 20.1 +0.7**
comp=Z,195nm,1.6s,mb6.2
MOTA Moosalm 93.10 43⇓*i*P **P 04 56 20.6 +0.1**
comp=Z,38nm,1.0s,mb5.7,SNR=17
MOTA Moosalm 93.10 43⇓*i*PcP **P 04 56 20.6 +0.1**
comp=Z,38nm,1.0s,mb5.7,SNR=17
FUR Furstenfeldbru 93.25 42 *e*P **P 04 56 21.6 +0.4**
FUR pmax pmax
comp=Z,82nm,1.1s,mb6.0
FUR Furstenfeldbru 93.25 42 *e*P **P 04 56 21.6 +0.4**
comp=Z,82nm,1.1s,mb6.0
GRA1 Grafenberg Arr 93.27 41 *e*P **P 04 56 21.7 +0.5**
comp=Z,106nm,1.6s,mb5.9
GRA1 *e*pP pP 04 56 48.3 +0.2
GRA1 *e*sP sP 04 57 00.5 +1.5
GRA1 *e*S S 05 07 24.0 +4.0
GRF Grafenberg Arr 93.27 41 *e*P **P 04 56 21.7 +0.5**
GRF pmax pmax
comp=Z,106nm,1.6s,mb5.9
GRF Grafenberg Arr 93.27 41 *e*P **P 04 56 21.7 +0.5**
GRF pmax pmax
comp=Z,106nm,1.6s,mb5.9
GRF Grafenberg Arr 93.27 41 *e*P **P 04 56 21.7 +0.5**
comp=Z,106nm,1.6s,mb5.9
GRF *e*pP pP 04 56 48.3 +0.2
GRF *e*sP sP 04 57 00.5 +1.5
GRF *e*S S 05 07 24.0 +4.0
WATA Walderalm 93.42 43⇓*i*P **P 04 56 22.0 0.0**
comp=Z,173nm,2.1s,mb6.0
WATA Walderalm 93.42 43⇓*i*PcP **P 04 56 22.0 0.0**
comp=Z,173nm,2.1s,mb6.0
WTTA Wattenberg 93.46 43 *i* P **P 04 56 22.6 +0.4**
comp=Z,353nm,2.2s,mb6.3,SNR=19
WTTA Wattenberg 93.46 43 *i* PcP **P 04 56 22.6 +0.4**
comp=Z,353nm,2.2s,mb6.3,SNR=19
MOX Moxa 93.56 40 *e*P **P 04 56 23.3 +0.8**
comp=Z,113nm,1.8s,mb5.9
MOX *e* pP 04 56 50.5 +1.1
MOX
comp=Z,400nm,19.0s
MOX Moxa 93.56 40 *e*P **P 04 56 23.3 +0.8**
MOX pmax pmax
comp=Z,113nm,1.8s,mb5.9
MOX MLR MLR
comp=Z,400nm,19.0s
MOX Moxa 93.56 40 *e*P **P 04 56 23.0 +0.5**
comp=Z,123nm,1.7s,mb6.0
NB2 NORSAR Subarra 93.64 29 P **P 04 56 22.2 -0.5**
comp=Z,39nm,1.2s,mb5.6,baz=266,slow=4.6
NOA NORSAR Array B 93.64 29 P **P 04 56 22.7 0.0**
comp=Z,8.7nm,0.9s,mb5.1,baz=268,slow=4.7,SNR=13
NOA pP pP 04 56 49.7 +0.1
comp=Z,11nm,1.0s,baz=269,slow=4.8,SNR=6.6
NOA sP sP 04 57 01.4 +0.9
comp=Z,5.5nm,0.9s,baz=269,slow=4.6,SNR=3.7
NOA LR LR 05 32 05.4
comp=Z,336nm,19.7s,baz=260,slow=31
NOA NORSAR Array B 93.64 29 P **P 04 56 22.7 0.0**
NOA *SP sP 04 57 01.4 +1.0
NOA NORSAR Array B 93.64 29 P **P 04 56 22.7 0.0**
NOA pP pP 04 56 49.7 +0.1
NOA sP sP 04 57 01.4 +0.9
NOA LR LR 05 32 05.4
MANZ Manzenberg 93.86 40 *e*P **P 04 56 24.6 +0.7**
comp=Z,93nm,1.5s,mb5.9
WERD Werda 94.00 40 *e*P **P 04 56 25.0 +0.5**
comp=Z,131nm,1.6s,mb6.0
WERD *e*pP pP 04 56 52.6 +1.2
GUNZ Gunzen 94.01 40 *e*P **P 04 56 25.4 +0.8**
comp=Z,137nm,1.6s,mb6.0
WERN Wernitzgruen 94.04 40 *e*P **P 04 56 25.5 +0.8**
comp=Z,131nm,1.5s,mb6.0
ABTA Abfaltersbach 94.04 44 *i* P **P 04 56 25.1 +0.3**
comp=Z,230nm,2.1s,mb6.1,SNR=13
ABTA Abfaltersbach 94.04 44 *i* PcP **P 04 56 25.1 +0.3**
comp=Z,230nm,2.1s,mb6.1,SNR=13
KBS Kingsbay 94.08 11 *e*P **P 04 56 25.6 +1.1**
KBS *e*PP PP 05 00 12.8 +1.0
KBS *e*SKS 05 06 57.5
KBS AMS AMS 05 36 36.8
comp=Z,810nm,21.3s
KBS Kingsbay 94.08 11⇑*e*P **P 04 56 23.3 -1.1**
KBS Kingsbay 94.08 11 *e*P **P 04 56 22.7 -1.7**
comp=Z,94nm,1.4s,mb5.9
KBS *e*pP pP 04 56 52.1 +0.8
NKC Novy Kostel 94.08 40 *e*P **P 04 56 25.6 +0.7**
NKC *e*pP pP 04 56 52.9 +1.1
NKC *e*x x 04 57 03.7
NKC *e*S S 05 07 27.7 +0.6
TANN Tannenbergstha 94.09 40 *e*P **P 04 56 25.9 +0.9**
comp=Z,137nm,1.5s,mb6.1
RJOB Jochberg 94.26 43 *e*pP pP 04 56 53.3 +0.6
WET Wettzell 94.34 41 *e*P **P 04 56 26.8 +0.6**
WET *e* 05 00 12.9
WET pmax pmax
comp=Z,145nm,1.8s,mb6.0
WET Wettzell 94.34 41 *e*P **P 04 56 26.8 +0.6**
comp=Z,145nm,1.8s,mb6.0
WET *e*PP PP 05 00 12.9 -1.7
WET *e*pPP 05 00 37.2
WET *e*sPP 05 00 48.1
CLL Collm 94.45 39 *e*P **P 04 56 27.3 +0.7**
comp=Z,110nm,1.6s,mb5.9
CLL *e*PP PP 05 00 13.9 -1.5
CLL *e*pPP 05 00 37.9
CLL Collm 94.45 39⇓*i*P **P 04 56 27.3 +0.7**
comp=Z,110nm,1.6s,mb5.9
CLL *i* pP pP 04 56 54.2 +0.7
comp=Z,82nm,1.3s
CLL *e*x x 04 57 00.0
CLL *e*sP sP 04 57 05.0 +0.6
comp=Z,86nm,1.4s
CLL *e*PP PP 05 00 13.0 -2.4
CLL *e*pPP 05 00 38.0
CLL *e*sPP 05 00 49.0
CLL *e*S S 05 07 37.0 +6.8
CLL *e*sS sS 05 08 11.0 -5.8
CLL *e*SP SP 05 08 47.0 +1.1
CLL *e*SS SS 05 14 00.0 +5.3
CLL *e*sSS 05 14 54.0
CLL L 05 34 00.0
comp=Z,400nm,21.1s
CLL Collm 94.45 39⇓*i*P **P 04 56 27.3 +0.7**
comp=Z,110nm,1.6s,mb5.9
CLL *i* pP pP 04 56 54.2 +0.7
CLL *e*S S 05 07 37.0 +6.8
KBA Koelnbreinsper 94.62 43 *i* P **P 04 56 27.7 +0.2**
comp=Z,170nm,2.5s,mb6.0,SNR=8.6
KBA Koelnbreinsper 94.62 43 *i* PcP **P 04 56 27.7 +0.2**
comp=Z,170nm,2.5s,mb6.0,SNR=8.6
FBE Freiberg 94.67 39 *e*pP pP 04 56 55.6 +1.1
FBE *e*sPP 05 00 51.4
RGN Rugen 94.67 36 *e*P **P 04 56 28.7 +1.1**
comp=Z,553nm,1.8s,mb6.7
KHC Kasperske Hory 94.80 41 *e*P **P 04 56 28.8 +0.5**
KHC *e* 04 57 06.8
KHC *e* 05 14 07.2
KHC Kasperske Hory 94.80 41 *e*P **P 04 56 28.8 +0.5**
KHC *e*pP pP 04 56 55.2 0.0
KHC *e*x x 04 57 06.8
KHC *e*x x 05 00 35.9
KHC *e*x x 05 00 49.8
KHC *e*S S 05 07 36.1 +2.7
KHC *e*SS SS 05 14 07.2 +7.4
KHC Kasperske Hory 94.80 41 *e*P **P 04 56 28.8 +0.5**
KHC *e*pP pP 04 56 55.2 0.0
KHC *e* 04 57 06.8
KHC *e* 05 07 36.1
KHC *e* 05 14 07.2
MYKA Terra Mystica 94.82 44⇓*i*P **P 04 56 28.4 0.0**
comp=Z,17µm,5.2s
MYKA Terra Mystica 94.82 44⇓*i*PcP **P 04 56 28.4 0.0**
comp=Z,17µm,5.2s
HFS Hagfors 94.86 30 P **P 04 56 27.6 -0.7**
comp=Z,3.6nm,0.7s,mb4.9,baz=273,slow=2.8,SNR=7.9
HFS *e*pP pP 04 56 55.4 +0.2
comp=Z,11nm,1.0s,baz=246,slow=5.8,SNR=4.9
GEC2 GERESS Array S 94.88 41 *e*P **P 04 56 28.7 +0.1**
GEC2 *e* 05 00 19.6
GEC2 pmax pmax
comp=Z,27nm,1.2s,mb5.5
GEC2 GERESS Array S 94.88 41 *e*P **P 04 56 28.7 +0.1**
comp=Z,27nm,1.2s,mb5.5
GEC2 *e*PP PP 05 00 19.6 +0.8
GEC2 *e*pPP 05 00 41.5
GEC2 *e*sPP 05 00 52.6
GERES GERESS Array B 94.88 41 P **P 04 56 29.1 +0.5**
comp=Z,10nm,0.9s,mb5.2,baz=250,slow=3.5,SNR=46
GERES pP pP 04 56 55.9 +0.4
comp=Z,12nm,1.0s,baz=242,slow=2.9,SNR=8.2
GERES sP sP 04 57 06.4 0.0
comp=Z,6.7nm,0.9s,baz=255,slow=3.6,SNR=4.1
GERES PP PP 05 00 20.2 +1.4
comp=Z,2.1nm,1.0s,baz=201,slow=5.7,SNR=3.5
RUE Ruedersdorf 94.94 38 *e*P **P 04 56 29.7 +0.9**
comp=Z,323nm,2.1s,mb6.4
VOY Vojsko 94.99 44 *e*P **P 04 56 29.4 +0.2**
VOY *e* pP 04 56 57.0 +0.9
VOY *e* 04 57 08.3
VOY *e* 04 57 22.1
VOY Vojsko 94.99 44 *e*P **P 04 56 29.4 +0.2**
VOY *e* pP 04 56 57.0 +0.9
VOY *e* 04 57 08.3
VOY *e* 04 57 22.1
VOY *e* 05 00 57.5
SPITS Spitsbergen Ar 95.00 12 P **P 04 56 28.5 -0.1**
comp=Z,11nm,0.7s,mb5.4,baz=285,slow=7.6,SNR=9.7
BRG Berggiesshubel 95.04 39 *i* P **P 04 56 30.1 +0.8**
BRG 05 00 21.0
BRG SP SP 05 09 22.0 +30
BRG pmax pmax
comp=Z,73nm,1.7s,mb5.8
BRG Berggiesshubel 95.04 39 *e*P **P 04 56 30.1 +0.8**
comp=Z,123nm,1.7s,mb6.1
BRG *e*pP pP 04 56 57.2 +1.0
BRG Berggiesshubel 95.04 39 *i* P **P 04 56 30.1 +0.8**
comp=Z,123nm,1.7s,mb6.0
BRG pP pP 04 56 58.0 +1.8
BRG sP sP 04 57 08.9 +1.8
comp=Z,90nm,1.2s
BRG PP PP 05 00 21.0 +1.0
BRG S S 05 07 43.0 +7.6
BRG SP SP 05 09 22.0 +30
BRG SS SS 05 14 14.0 +11
BRG *e* 05 16 47.0
comp=Z,19nm,1.7s
BRG *e*PKPPKP 05 21 43.8
comp=Z,1.7nm,0.5s
GORS Gorjuse 95.06 44 *i* P **P 04 56 29.6 +0.1**
JAVS Javornik 95.10 44 *e*P **P 04 56 30.0 +0.2**
JAVS *i* pP pP 04 56 57.1 +0.5
JAVS *i* 04 57 07.1
JAVS *i* PKiKP PKiKP 05 00 55.2 -15
JAVS Javornik 95.10 44 *e*P **P 04 56 30.0 +0.2**
JAVS *i* pP pP 04 56 57.1 +0.5
JAVS *i* 04 57 07.1
TSUM Tsumeb 95.12 110⇓*i*P **P 04 56 31.1 +0.7**
comp=Z,85nm,1.0s,mb6.1
TSUM *e*pP pP 04 56 57.6 +0.2
MOA Molln 95.25 42 *i* P **P 04 56 30.5 +0.2**
comp=Z,81nm,1.4s,mb6.0,SNR=20
MOA Molln 95.25 42 *i* PcP **P 04 56 30.5 +0.2**
comp=Z,81nm,1.4s,mb6.0,SNR=20
LJU Ljubljana 95.43 44 *i* P **P 04 56 31.4 +0.2**
LJU *i* pP pP 04 56 58.4 +0.3
LJU *e*PKiKP PKiKP 05 00 57.4 -14
LJU *e*S S 05 07 46.0 +7.1
LJU Ljubljana 95.43 44 *i* P **P 04 56 31.4 +0.2**
LJU *i* pP pP 04 56 58.4 +0.3
PRU Pruhonice 95.43 40 *e*P **P 04 56 31.5 +0.4**
PRU *e*pP pP 04 56 58.9 +0.9
PRU *e*x x 04 57 09.9
PRU *e*P 05 00 45.2
PRU *e*x x 05 00 54.9
PRU *e*x x 05 07 36.4
PRU *e*SS SS 05 14 10.5 +1.9
PRU Pruhonice 95.43 40 *e*P **P 04 56 31.5 +0.4**
PRU *e*pP pP 04 56 58.9 +0.9
PRU *e* 04 57 09.9
PRU *e* 05 07 36.4
PRU *e* 05 14 10.5
PVCC Panska Ves 95.44 40 *e*P **P 04 56 31.8 +0.6**
PVCC *e* 04 57 10.3
PVCC Panska Ves 95.44 40 *e*P **P 04 56 31.8 +0.6**
PVCC *e*pP pP 04 56 59.1 +1.0
PVCC *e*x x 04 57 10.3
PVCC *e*x x 05 00 37.3
PVCC *e*x x 05 00 55.8
PVCC *e*S S 05 07 45.5 +6.6
PVCC Panska Ves 95.44 40 *e*P **P 04 56 31.8 +0.6**
PVCC *e*pP pP 04 56 59.1 +1.0
PVCC *e* 04 57 10.3
PVCC *e* 05 07 45.5
PDKS Podkum 95.75 44 *i* P **P 04 56 33.1 +0.4**
SOKA Soboth 95.78 44⇓*i*P **P 04 56 32.3 -0.5**
BOJS Bojanci 95.94 45 *i* P **P 04 56 33.4 -0.2**
BOJS *i* pP pP 04 57 00.7 +0.3
BOJS *i* PKiKP PKiKP 05 01 01.5 -11
BOJS Bojanci 95.94 45 *i* P **P 04 56 33.4 -0.2**
BOJS *i* pP pP 04 57 00.7 +0.3
TREC Trest 96.05 41 *e*P **P 04 56 34.2 +0.2**
TREC *e*pP pP 04 57 01.9 +1.0
TREC *e*x x 04 57 13.0
GROS Grobnik 96.10 44 *i* P **P 04 56 34.4 +0.1**
ARSA Arzberg 96.11 43⇑*i*P **P 04 56 34.1 -0.2**
comp=Z,107nm,2.1s,mb5.9
ARSA Arzberg 96.11 43⇑*i*PcP **P 04 56 34.1 -0.2**
comp=Z,107nm,2.1s,mb5.9
SYO Syowa Base 96.27 161⇑*e*P **P 04 56 33.0 -1.6**
SYO Syowa Base 96.27 161⇓*e*PcP PcP 04 56 34.0 -0.7
CSNA Conrad Observa 96.32 42⇓*i*P **P 04 56 35.7 +0.5**
comp=Z,222nm,2.2s,mb6.2
CSNA Conrad Observa 96.32 42⇓*i*PcP **P 04 56 35.7 +0.5**
comp=Z,222nm,2.2s,mb6.2
CONA Conrad Observa 96.32 42 *i* P **P 04 56 35.7 +0.4**
comp=Z,232nm,2.2s,mb6.2,SNR=17
CONA Conrad Observa 96.32 42 *i* PcP **P 04 56 35.7 +0.4**
comp=Z,232nm,2.2s,mb6.2,SNR=17
UPC Upice 96.36 40 *e*P **P 04 56 35.9 +0.6**
UPC *e*pP pP 04 57 03.4 +1.1
UPC *e*x x 04 57 15.1
UPC *e*x x 05 00 46.6
UPC *e*x x 05 01 04.4
UPC Upice 96.36 40 *e*P **P 04 56 35.9 +0.6**
UPC *e*pP pP 04 57 03.4 +1.1
UPC *e* 04 57 15.1
KSP Ksiaz 96.53 39 *e*P **P 04 56 37.0 +0.9**
KSP *e* pP 04 57 04.9 +1.8
KSP *e* 04 57 15.9
KSP Ksiaz 96.53 39 *e*P **P 04 56 36.4 +0.3**
KSP *e*pP pP 04 57 03.5 +0.5
KSP *e*S S 05 07 51.0 +2.7
KSP *e*SP SP 05 09 06.0 -2.6
KSP *e*SS SS 05 14 19.0 -5.2
DPC Dobruska-Polom 96.57 40 *e*P **P 04 56 36.8 +0.5**
DPC *e*pP pP 04 57 04.7 +1.5
DPC *e*x x 04 57 15.9
DPC *e*x x 05 00 52.4
DPC *e*x x 05 01 05.8
DPC *e*S S 05 07 51.5 +2.9
DPC *e*SS SS 05 14 18.6 -6.1
DPC Dobruska-Polom 96.57 40 *e*P **P 04 56 36.8 +0.5**
DPC *e*pP pP 04 57 04.7 +1.5
DPC *e* 04 57 15.9
DPC *e* 05 07 51.5
DPC *e* 05 14 18.6
VRAC Vranov 96.77 41⇑*i*P **P 04 56 37.5 +0.3**
VRAC Vranov 96.77 41 ⇑P **P 04 56 37.5 +0.3**
SOP Sopron 96.80 43⇓*e*P **P 04 56 37.6 +0.2**
GKP Gorka Klasztor 97.02 37 *e*P **P 04 56 39.5 +1.2**
GKP *e* pP 04 57 07.0 +1.8
GKP *e* 04 57 18.4
GKP Gorka Klasztor 97.02 37 *e*P **P 04 56 39.5 +1.3**
GKP *e* pP 04 57 07.0 +1.8
GKP *e* 04 57 18.3
TIP Timpagrande 97.11 51 *e*P **P 04 56 37.8 -1.2**
comp=Z,13nm,0.6s,mb5.5
ZST Bratislava 97.15 42 *e*P **P 04 56 39.4 +0.4**
ZST pmax pmax
comp=Z,46nm,1.1s,mb5.8
ZST Bratislava 97.15 42 *e*P **P 04 56 39.4 +0.4**
ZST *e*pP pP 04 57 06.9 +1.0
ZST Bratislava 97.15 42 *e*P **P 04 56 39.4 +0.4**
comp=Z,46nm,1.1s,mb5.8
ZST *e* pP 04 57 06.9 +1.0
MODS Modra-Piesok 97.26 42 *e*P **P 04 56 40.0 +0.5**
MODS pmax pmax
comp=Z,36nm,1.3s,mb5.6
MODS Modra-Piesok 97.26 42 *e*P **P 04 56 40.0 +0.5**
comp=Z,36nm,1.3s,mb5.6
MODS *e* pP 04 57 07.5 +1.1
MORC Moravsky Berou 97.37 40⇓*i*P **P 04 56 40.9 +1.0**
OKC Ostrava-Krasne 97.76 40 *e*P **P 04 56 42.3 +0.6**
OKC *e*pP pP 04 57 09.3 +0.7
PKSM Moragy 98.28 44⇓*i*P **P 04 56 44.3 +0.2**
PKSM Moragy 98.28 44 ⇓P **P 04 56 44.3 +0.2**
VYHS Vyhne 98.29 42 PDIF **P 04 56 44.5 +0.4**
VYHS *e*pP pP 04 57 11.8 +0.7
VYHS Vyhne 98.29 42 *e*P **P 04 56 44.5 +0.4**
VYHS *e* pP 04 57 11.8 +0.7
BUD Budapest 98.47 43⇑*e*P **P 04 56 45.7 +0.8**
OJC Ojcow 98.80 40 *e*P **P 04 56 46.7 +0.4**
OJC *e* 05 00 48.3
OJC *e*S S 05 08 08.4 +0.8
OJC Ojcow 98.80 40 *e*P **P 04 56 46.7 +0.4**
OJC *e*PP PP 05 00 48.3 -0.6
OJC *e*S S 05 08 08.4 +0.8
OJC LR LR
comp=Z,800nm,21.7s
ARCES ARCESS Array B 98.82 20 P **P 04 56 44.9 -1.1**
comp=Z,8.7nm,0.7s,mb5.4,baz=273,slow=4.0,SNR=32
ARCES PP PP 05 00 45.4 -3.0
comp=Z,6.8nm,0.8s,baz=274,slow=6.0,SNR=4.6
ARCES PKKPbc PKKPbc 05 13 12.7 -3.6
comp=Z,3.7nm,0.9s,baz=106,slow=3.9,SNR=6.9
ARCES LR LR 05 35 37.2
comp=Z,382nm,20.8s,baz=153,slow=32
ARCES ARCESS Array B 98.82 20 P **P 04 56 44.9 -1.1**
ARCES 05 00 45.4
PSZ Piszkesteto 99.03 42 *e*P **P 04 56 48.2 +0.8**
PSZ pmax pmax
comp=Z,16nm,1.2s,mb5.4
PSZ Piszkesteto 99.03 42⇑*e*P **P 04 56 48.7 +1.3**
PSZ Piszkesteto 99.03 42⇓*i*P **P 04 56 48.2 +0.8**
PSZ Piszkesteto 99.03 42 *e*P **P 04 56 48.2 +0.8**
comp=Z,16nm,1.2s,mb5.4
NIE Niedzica 99.19 41 *e*P **P 04 56 49.8 +1.7**
NIE *e* pP 04 57 17.3 +2.2
NIE *e*PP PP 05 00 52.8 +0.9
NIE Niedzica 99.19 41 *e*P **P 04 56 49.8 +1.7**
NIE *e* pP 04 57 17.3 +2.2
NIE *e*PP PP 05 00 52.8 +0.9
KEV Kevo 99.28 20 *e*p **P 04 56 46.8 -1.2**
KEV Kevo 99.28 20 *e*p PP 05 00 51.1 -0.8
STHS Stebnicka Huta 99.80 41 *e*P Pdif 04 56 52.8 +2.1
STHS pmax pmax
comp=Z,9.0nm,1.4s,mb5.2
STHS Stebnicka Huta 99.80 41 PDIF Pdif 04 56 52.8 +2.1
STHS pPDIF 04 57 18.4
STHS Stebnicka Huta 99.80 41 *e*P Pdif 04 56 52.8 +2.1
comp=Z,8.5nm,1.4s
STHS *e* 04 57 18.4
CRVS Cervenica-Dubn 99.99 41 PDIF Pdif 04 56 53.0 +1.4
CRVS pPDIF 04 57 19.9
CRVS Cervenica-Dubn 99.99 41 *e*P Pdif 04 56 53.0 +1.4
CRVS *e* 04 57 19.9
OHR Ohrid 100.14 49 *e*P Pdif 04 56 52.3 +0.1
BZS Buzias 100.40 44⇓*i*P Pdif 04 56 54.1 +0.8
BZS Buzias 100.40 44 ⇓P Pdif 04 56 54.1 +0.7
BIA Bitola 100.54 49 *e*P Pdif 04 56 54.2 +0.2
SKO Skopje 100.56 48 *e*P Pdif 04 56 53.9 -0.2
UZH Uzhgorod 100.57 41 *e*P Pdif 04 56 54.4 +0.3
KAF Kangasniemi 100.72 27 *e*p Pdif 04 56 52.2 -2.6
comp=Z,5.2nm,0.8s
KAF Kangasniemi 100.72 27 *e*p PP 05 00 49.5 -14
KAF Kangasniemi 100.72 27 *e*P Pdif 04 56 52.2 -2.6
KAF pmax pmax
comp=Z,5.0nm,0.8s
BOSA Boshof 100.75 120 P Pdif 04 56 55.3 +0.4
comp=Z,4.6nm,1.0s,baz=308,slow=7.8,SNR=2.6
BOSA PKKPbc PKKPbc 05 13 08.1 -1.2
comp=Z,3.2nm,0.8s,baz=89,slow=2.5,SNR=5.4
DRGR 101.04 43⇓*i*P Pdif 04 56 56.9 +0.7
DRGR 101.04 43 ⇓P Pdif 04 56 56.9 +0.6
GZR Gura Zlata 101.23 45⇓*i*P Pdif 04 56 57.2 +0.1
GZR Gura Zlata 101.23 45 ⇓P Pdif 04 56 57.2 +0.1
LBTB Lobatse 101.69 116 P Pdif 04 56 59.9 +0.8
comp=Z,3.7nm,0.8s,baz=249,slow=6.8,SNR=3.7
LBTB Lobatse 101.69 116 *e*Pdif Pdif 04 57 00.1 +1.0
BUR08 Bucovina Ar. S 102.62 42 *e*Pdif Pdif 04 57 04.1 +0.9
BURAR Bucovina Array 102.64 42⇑*i*P Pdif 04 57 04.9 +1.6
BURAR Bucovina Array 102.64 42 ⇑P Pdif 04 57 05.0 +1.6
BILL Bilibino 102.66 339*d i*P Pdif 04 57 02.3 -1.1
BILL *i* 05 01 13.9
BILL pmax pmax
comp=Z,42nm,1.6s
BILL Bilibino 102.66 339 *i* P Pdif 04 57 02.4 -1.0
JOF Joensuu 102.77 26 *e*p Pdif 04 57 02.2 -1.7
comp=Z,3.1nm,0.7s
JOF Joensuu 102.77 26 *e*p PKiKP 05 01 16.8 -7.0
MAW Mawson 103.79 166 Pdiff Pdif 04 57 07.7 -0.8
comp=Z,0.6nm,0.3s,baz=204,slow=8.8,SNR=2.4
MAW PKKPbc PKKPbc 05 12 56.8 -4.9
comp=Z,3.5nm,0.7s,baz=55,slow=5.9,SNR=9.9
DRV Dumont d'Urvil 104.18 195 Pdif 04 57 46.0
DRV SKKS SKSac 05 07 40.0 -0.3
DRV SP SP 05 10 25.0 -4.2
DRV SS SS 05 16 16.0 +7.0
DRV L 05 26 00.0
DRV R 05 32 00.0
AKASG Malin Array Be 104.69 39 PKiKP PKiKP 05 01 26.3 -1.4
comp=Z,0.3nm,0.3s,baz=276,slow=2.4,SNR=4.1
KIS Kishinev 105.15 42 *e* PKiKP 05 01 20.0 -8.6
KIS *e*L 05 33 36.0
KIS LRM 05 41 48.0
comp=Z,500nm,20.0s
LSZ Lusaka 105.67 107 *e*PKP PKiKP 05 01 30.6 +0.2
KLMR Klimovskoe 107.13 27 *e*P Pdif 04 57 23.3 0.0
KLMR *e* 05 01 53.7
KLMR pmax pmax
comp=Z,23nm,1.6s
OBN Obninsk 107.79 33 *i* P Pdif 04 57 26.1 -0.1
OBN *i* 05 01 57.1
OBN *e*PS PS 05 11 23.9 +3.6
OBN pmax pmax
comp=Z,4.0nm,0.9s
BR131 Keskin Array S 110.03 49 *e*PKP PKiKP 05 01 37.8 -0.2
SEY Seymchan 110.15 338⇑*i*PKiKP PKiKP 05 01 36.9 -0.6
PET Petropavlovsk 112.03 327 *e*P Pdif 04 57 43.6 -1.5
PET *e* 05 02 24.2
PET *e*PPS 05 12 55.7
PET *e*SS SS 05 17 54.6 -1.4
PET pmax pmax
comp=Z,400nm,6.9s
PET MLR MLR
comp=Z,300nm,21.0s
PETK Petropavlovsk- 112.52 327 PKiKP PKiKP 05 01 41.0 -1.2
comp=Z,3.2nm,0.8s,baz=57,slow=6.0,SNR=3.7
SOC Sochi 113.44 44 *i* PKiKP PKiKP 05 01 43.8 -0.5
SOC *e* 05 02 33.7
SOC *e*PPP 05 05 08.4
SOC *e* 05 08 15.7
SOC *e*PS PS 05 11 59.9 -14
MALT Malatya 113.98 50 *e*PKiKP PKiKP 05 01 46.1 +0.6

KIV Kislovodsk 115.35 43 *i* PKIKP PKPdf 05 01 47.5 -0.5
KIV *e* 05 02 49.4
KIV *e* 05 08 26.4
KIV *e*PS PS 05 12 32.0 +0.2
KIV *e*SS SS 05 18 39.2 -1.2
KIV pmax pmax
comp=Z,11nm,1.2s
KIV MLR MLR
comp=Z,227nm,20.0s
KMBO Kilima Mbogo 116.31 93 PKP PKPdf 05 01 51.9 +1.1
comp=Z,2.5nm,0.8s,baz=154,slow=4.4,SNR=6.2
KMBO Kilima Mbogo 116.31 93 *e*PKPdf PKPdf 05 01 50.4 -0.3
ARU Arti 117.87 25 *i* PKIKP PKPdf 05 01 52.1 -0.3
ARU 05 03 03.4
ARU 05 08 35.1
ARU SP SP 05 12 42.4 +1.4
ARU PS PS 05 12 53.7 -0.2
ARU SS SS 05 19 04.2 -7.8
ARU Arti 117.87 25 *e*PKPdf PKPdf 05 01 51.6 -0.8
ARU *e*PP PP 05 03 05.5 -1.5
GNI Garni 118.11 46 *e*PKIKP PKPdf 05 01 53.5 +0.1
YAK Yakutsk 118.18 345⇑ *i* PKIKP PKPdf 05 01 52.0 -0.9
YAK MLR MLR
comp=Z,200nm,17.0s
YAK Yakutsk 118.18 345⇑ *e*PKP PKPdf 05 01 52.1 -0.8
AKTK Aktyubinsk 121.41 31 PKP PKPdf 05 01 59.6 +0.2
AKTK pPKP pPKPdf 05 02 27.2 -0.2
AKTO Aktyubinsk 121.41 31 PKP PKPdf 05 01 59.6 +0.2
comp=Z,14nm,0.8s,baz=328,slow=1.5,SNR=42
AKTO pPKP pPKPdf 05 02 27.2 -0.2
comp=Z,9.9nm,1.1s,baz=327,slow=2.3,SNR=4.2
OPO Ambohidratompo 122.68 115 PKP PKPdf 05 02 03.1 +0.3
comp=Z,3.1nm,0.8s,baz=221,slow=2.5,SNR=4.0
AB31 Akbulak array 123.11 31 *i* PKIKP PKPdf 05 02 02.6 -0.1
AB31 pmax pmax
comp=Z,63nm,0.9s
RST Umm Al-Ruwaisa 123.19 57 *e*P PKPdf 05 02 03.2 -0.3
baz=57
RST AMb AMB 05 02 03.9
comp=Z,85nm,0.8s,baz=57
MIB Mutribah 123.39 57 *e*P PKPdf 05 02 03.6 -0.2
baz=57
MIB AMb AMB 05 02 04.8
comp=Z,92nm,0.7s,baz=57
NAY Al-Naaiem 123.47 57 *e*P PKPdf 05 02 03.8 -0.3
baz=57
NAY AMb AMB 05 02 04.4
comp=Z,37nm,0.8s,baz=57
UMR Umm Al-Rimmam 123.78 57 *e*P PKPdf 05 02 04.7 +0.1
baz=57
UMR AMb AMB 05 02 05.7
comp=Z,144nm,0.6s,baz=57
YSS Yuzh-Sakhalins 123.92 326⇑ *i* PKIKP PKPdf 05 02 03.4 -1.0
YSS Yuzh-Sakhalins 123.92 326 *e*PKPdf PKPdf 05 02 03.5 -0.9
BRVK Borovoye 125.00 22 P PKPdf 05 02 06.4 +0.2
SNR=12
BRVK Borovoye 125.00 22 *e*PKPdf PKPdf 05 02 05.9 -0.4
BVA0 Borovoye Array 125.06 22 *i* PKIKP PKPdf 05 02 06.1 -0.2
BVA0 pmax pmax
comp=Z,7.0nm,1.0s
BVAR Borovoye Array 125.06 22 PKP PKPdf 05 02 06.2 -0.1
comp=Z,17nm,0.7s,baz=262,slow=1.8,SNR=63
BVAR pPKP pPKPdf 05 02 34.0 -0.3
comp=Z,5.0nm,0.7s,baz=270,slow=1.5,SNR=3.4
BVAR PP PP 05 03 52.0 -3.8
comp=Z,5.5nm,0.8s,baz=293,slow=5.6,SNR=4.9
BOD Bodaibo 125.29 351 *e*PKIKP PKPdf 05 02 03.8 -2.8
BOD pmax pmax
comp=Z,28nm,1.6s
ASAJ Asahikawa 125.67 324 PKP PKPdf 05 02 06.9 -0.9
baz=0.0,slow=2.0
ASAJ pPKP pPKPdf 05 02 33.9 -1.9
comp=Z,28nm,1.1s,baz=42,slow=1.8,SNR=2.2
HABR Khabarovsk 126.86 332 *e*P Pdif 04 58 48.1 -2.9
HABR *e* 05 02 08.8
HABR *e* 05 04 05.6
HABR *e* 05 09 10.2
HABR *e* 05 21 08.4
NVS Novosibirsk 127.31 13⇓ *i* PKIKP PKPdf 05 02 09.2 -1.4
NVS pmax pmax
comp=Z,137nm,1.5s
NVS pmax pmax
comp=E,52nm,1.4s
STKA Stephens Creek 127.33 224 *e*PKP PKPdf 05 02 10.3 -1.1
comp=E,16nm,0.9s
STKA *e*pPKP pPKPdf 05 02 38.0 -1.4
STKA Stephens Creek 127.33 224 PKP PKPdf 05 02 11.2 -0.2
comp=E,17nm,0.8s,baz=99,slow=2.0,SNR=17
STKA pPKP pPKPdf 05 02 38.2 -1.1
comp=E,11nm,0.7s,baz=129,slow=1.7,SNR=4.9
STKA sPKP 05 02 50.0
comp=E,13nm,0.8s,baz=135,slow=1.4,SNR=2.9
KLR Kul'dur 127.78 335⇑ *i* PKIKP PKPdf 05 02 07.0 -4.7
KLR *e* 05 04 10.3
KLR pmax pmax
comp=Z,120nm,1.8s
ZAA0 Zalesovo Array 128.48 12 *e*PKPdf PKPdf 05 02 12.2 -0.6
ZALV Zalesovo Beam 128.48 12 PKP PKPdf 05 02 12.5 -0.3
comp=Z,117nm,0.9s,baz=270,slow=1.5,SNR=168
ZALV pPKP pPKPdf 05 02 40.0 -0.9
comp=Z,65nm,1.1s,baz=318,slow=2.0,SNR=4.4
ZALV Zalesovo Beam 128.48 12 PKP PKPdf 05 02 12.5 -0.3
ZALV pPKP pPKPdf 05 02 40.0 -0.9
CTA Charters Tower 129.36 240 *e*PKP PKPdf 05 02 14.7 -0.8
comp=Z,27nm,1.3s
CTA *e*pPKP pPKPdf 05 02 41.4 -2.1
CTA *e* 05 02 55.0
CTA *e*PKS 05 05 38.2
CTA Charters Tower 129.36 240 PKP PKPdf 05 02 15.0 -0.5
comp=Z,22nm,0.9s,baz=200,slow=0.2,SNR=20
CTA pPKP pPKPdf 05 02 42.0 -1.5
comp=Z,35nm,1.0s,baz=173,slow=1.6,SNR=8.6
CTA sPKP 05 02 53.5
comp=Z,47nm,1.2s,baz=281,slow=1.6,SNR=6.3
CTAO Charters Tower 129.36 240 *e*PKPdf PKPdf 05 02 14.8 -0.7
CTAO *e*pPKPdf pPKPdf 05 02 41.7 -1.8
KURK Kurchatov 129.81 18 P PKPdf 05 02 15.1 -0.4
SNR=49
KURK Kurchatov 129.81 18 PKP PKPdf 05 02 15.8 +0.3
comp=Z,68nm,0.8s,baz=331,slow=2.3,SNR=56
KURK pPKP pPKPdf 05 02 42.7 -0.8
comp=Z,36nm,1.1s,baz=318,slow=2.4,SNR=5.7
KURK sPKP 05 02 53.1
comp=Z,28nm,1.0s,baz=314,slow=2.7,SNR=4.7
KURK PP PP 05 04 31.2 +4.3
comp=Z,11nm,1.1s,baz=341,slow=5.9,SNR=3.9
KURK Kurchatov 129.81 18 PKIKP PKPdf 05 02 15.8 +0.3
KURK 05 02 53.1
KURK 05 04 31.2
KURK pmax pmax
comp=Z,68nm,0.8s
KURK Kurchatov 129.81 18 *e*PKPdf PKPdf 05 02 15.2 -0.3
IRK Irkutsk 131.79 357⇓ *i* PKIKP PKPdf 05 02 18.4 -0.8
IRK *e* 05 04 36.8
IRK pmax pmax
comp=Z,210nm,1.8s
PMG Port Moresby 131.91 254 *e*PKIKP PKPdf 05 02 20.5 0.0
HIA Hailar 132.06 343 *e*PKIKP PKPdf 05 02 18.7 -1.1
BANOM Banah 132.13 58 P PKPdf 05 02 20.6 -0.1
SNR=7.5
MDJ Mudanjiang 132.25 332 PKP PKPdf 05 02 18.8 -1.5
MDJ SS SS 05 22 07.3 -5.2
MDJ PP PP
comp=Z,301nm,9.8s
MDJ LR LR
comp=N,173nm,37.1s
MDJ LR LR
comp=E,301nm,29.5s
MDJ LR LR
comp=Z,403nm,38.6s
MDJ Mudanjiang 132.25 332 *e*PKPdf PKPdf 05 02 19.3 -1.0
ASHO Ashiyiah 132.32 60 P PKPdf 05 02 20.7 -0.4
SNR=11
HATD Hatta, Dubai 132.34 60 P PKPdf 05 02 20.8 -0.3
SNR=16
TLY Talaya 132.38 358 P PKPdf 05 02 20.9 +0.6
SNR=16
TLY Talaya 132.38 358 *i* PKIKP PKPdf 05 02 20.4 +0.1
TLY *e* 05 04 43.8
TLY *e*PS PS 05 14 51.4 -10
TLY pmax pmax
comp=Z,80nm,1.6s
TLY MLR MLR
comp=Z,536nm,20.0s
TLY Talaya 132.38 358 *e*PKPdf PKPdf 05 02 20.3 0.0
TLY *e*PP PP 05 04 39.7 -3.6
MOY Mondy 132.45 360 *e*PKIKP PKPdf 05 02 20.6 +0.1
MOY pmax pmax
comp=Z,267nm,2.5s
HVS Khovu-Aksy 132.61 6 *i* PKIKP PKPdf 05 02 20.4 -0.4
KK31 Karatay Array 132.67 30 *i* PKIKP PKPdf 05 02 21.3 +0.2
KK31 pmax pmax
comp=Z,51nm,1.3s
MJAR Matsushiro Arr 132.74 318 PKP PKPdf 05 02 20.8 -0.7
comp=Z,11nm,0.7s,baz=100,slow=1.1,SNR=28
MJAR pPKP pPKPdf 05 02 47.6 -1.9
comp=Z,5.1nm,0.7s,baz=103,slow=0.9,SNR=4.4
MJAR sPKP 05 02 59.5
comp=Z,4.8nm,0.8s,baz=113,slow=1.0,SNR=4.1
MAJO Matsushiro 132.74 318 *e*PKPdf PKPdf 05 02 20.2 -1.2
MAJO *e*pPKPdf pPKPdf 05 02 47.6 -1.9
MAT Matsushiro 132.74 318 PKP PKPdf 05 02 20.3 -1.2
ZAK Zakamensk 133.69 358 *e*PKIKP PKPdf 05 02 18.8 -4.0
ZAK pmax pmax
comp=Z,42nm,1.8s
HOQ Hoqain 133.75 61⇑ P PKPdf 05 02 23.3 -0.5
SNR=8.2
BSY Bisya 133.91 62 P PKPdf 05 02 23.5 -0.6
SNR=13
COEN Coen 134.34 246 *e*PKPdf PKPdf 05 02 24.2 -0.9
MK31 Makanchi Array 134.42 18 *i* PKIKP PKPdf 05 02 23.7 -0.6
MK31 pmax pmax
comp=Z,25nm,0.8s
MK31 Makanchi Array 134.42 18 *e*PKPdf PKPdf 05 02 23.4 -0.9
MKAR Makanchi Array 134.42 18 PKhKP 05 02 11.8
comp=Z,1.2nm,0.7s,baz=346,slow=3.2,SNR=6.1
MKAR PKP PKPdf 05 02 23.9 -0.4
comp=Z,16nm,0.6s,baz=327,slow=2.4,SNR=79
MKAR pPKP pPKPdf 05 02 51.5 -0.8
comp=Z,5.5nm,0.7s,baz=357,slow=2.6,SNR=2.9
MKAR Makanchi Array 134.42 18 PKHKP 05 02 11.8
MKAR 05 02 24.0
USP Ospenovka 134.45 27 P PKPdf 05 02 25.4 +0.9
SNR=18
BIDO Bidbid 134.48 61 P PKPdf 05 02 25.2 +0.1
SNR=7.0
SMDO Samad 134.56 61 P PKPdf 05 02 25.0 -0.2
SNR=20
EKS2 Erkin-Say 134.59 28 P PKPdf 05 02 26.0 +1.2
SNR=15
EKS2 Erkin-Say 134.59 28 *e*PKPdf PKPdf 05 02 25.8 +1.0
CN2 Changchun 134.73 335 *e*PKP PKPdf 05 02 23.3 -1.7
CN2 XPKP 05 03 00.8
CN2 PP PP 05 04 57.5 -1.2
CN2 SS SS 05 22 41.5 -0.9
CN2 PP PP
comp=Z,200nm,4.0s
CHMS Chumysh 134.77 27 P PKPdf 05 02 26.0 +0.9
SNR=10
FRU Bishkek 134.84 27⇓ *i* PKIKP PKPdf 05 02 26.5 +1.3
FRU pmax pmax
comp=Z,270nm,2.1s
AAK Ala-Archa 134.94 27 P PKPdf 05 02 26.2 +0.8
SNR=18
AML Almayashu 134.95 29 P PKPdf 05 02 27.1 +1.7
SNR=9.0
AML Almayashu 134.95 29 *e*PKPdf PKPdf 05 02 26.9 +1.5
KBK Karagaybulak 135.13 27 P PKPdf 05 02 22.9 -2.9
SNR=11
TKM2 Tokmak 2 135.21 26 P PKPdf 05 02 26.8 +0.9
SNR=11
TKM2 Tokmak 2 135.21 26 *e*PKPpre 05 02 20.9
TKM2 *e*pPKPdf pPKPdf 05 02 51.3 -2.6
UCH Uchtor 135.26 28 P PKPdf 05 02 28.5 +2.4
SNR=19
UCH Uchtor 135.26 28 *e*PKPdf PKPdf 05 02 26.9 +0.8
WBK Wadi Bani Khal 135.50 62 P PKPdf 05 02 27.6 +0.6
SNR=5.8
KZA Kyzart 135.72 27 P PKPdf 05 02 29.2 +2.3
SNR=7.4
ULN Ulaanbaatar 135.93 354 P PKPdf 05 02 27.0 -0.1
SNR=10
ULN Ulaanbaatar 135.93 354 *e*PKPdf PKPdf 05 02 26.6 -0.5
SONM Songino Array 136.02 355 PKhKP 05 02 12.9
comp=Z,2.4nm,0.7s,baz=357,slow=2.7,SNR=8.6
SONM PKP PKPdf 05 02 27.5 +0.2
comp=Z,32nm,0.9s,baz=347,slow=1.4,SNR=41
SONM pPKP pPKPdf 05 02 54.5 -0.8
comp=Z,20nm,1.0s,baz=44,slow=0.5,SNR=4.2
SONM sPKP 05 03 05.4
comp=Z,22nm,1.0s,baz=23,slow=0.6,SNR=5.6
SONM PP PP 05 05 02.2 -4.2
comp=Z,13nm,1.2s,baz=10,slow=4.3,SNR=4.9
SONM Songino Array 136.02 355 PKHKP 05 02 12.9
SONM 05 02 27.5
SONM 05 03 05.4
SONM 05 05 02.2
ULHL Ulahol 136.04 26 P PKPdf 05 02 28.9 +1.5
SNR=9.8
SNY Shenyang 137.13 335 PKPR 05 02 25.5
SNY SS SS 05 23 09.5 -1.6
SNY PP PP
comp=Z,533nm,7.6s
SNY LR LR
comp=N,316nm,24.0s
SNY LR LR
comp=E,307nm,14.0s
SNY LR LR
comp=Z,410nm,22.3s
ASAR Alice Springs 137.62 228 PKhKP 05 02 21.9
comp=Z,3.1nm,0.8s,baz=127,slow=3.3,SNR=18
ASAR PKP PKPdf 05 02 30.4 -0.5
comp=Z,18nm,0.9s,baz=135,slow=2.3,SNR=39
ASAR pPKP pPKPdf 05 02 57.1 -1.9
comp=Z,15nm,0.9s,baz=119,slow=2.1,SNR=5.9
ASAR sPKP 05 03 09.2
comp=Z,24nm,1.1s,baz=130,slow=1.9,SNR=5.7
ASAR Alice Springs 137.62 228 PKHKP 05 02 22.0
ASAR 05 02 30.5
ASAR 05 03 09.3
KBL Kabul 137.65 40 *e*PKIKP PKPdf 05 02 30.8 +0.1
KSH Kashi 138.07 29 PKP PKPdf 05 02 32.3 +1.0
KSH *e*XPKP 05 03 09.0
KSH *e*PKS 05 06 06.0
KSH *e*SKS SKSdf 05 09 30.3 -2.6
KSH LR LR
comp=N,766nm,5.6s
KSH LR LR
comp=E,997nm,6.0s
KSH LR LR
comp=Z,474nm,5.2s
KSRS Korea Array 138.42 327 PKhKP 05 02 19.9
comp=Z,5.2nm,1.0s,baz=31,slow=2.7,SNR=13
KSRS PKP PKPdf 05 02 31.8 -0.3
comp=Z,47nm,0.8s,baz=12,slow=1.3,SNR=80
KSRS pPKP pPKPdf 05 02 58.8 -1.3
comp=Z,49nm,1.1s,baz=21,slow=1.0,SNR=6.3
KSRS sPKP 05 03 10.8
comp=Z,22nm,1.1s,baz=46,slow=1.5,SNR=4.3
KSRS Korea Array 138.42 327 PKHKP 05 02 20.0
KSRS 05 02 31.8
KSRS 05 03 10.8
KSRS pmax pmax
comp=Z,5.0nm,1.0s
WMQ Urumqi 138.65 14 PKP PKPdf 05 02 31.0 -1.3
WMQ PKS 05 06 06.0
WMQ SKS SKSdf 05 09 30.0 -3.7
WMQ SKKS SKKSac 05 12 02.0 -6.5
WMQ PP PP
comp=Z,312nm,5.2s
WMQ LR LR
comp=N,1μm,32.0s
WMQ LR LR
comp=E,2μm,28.4s
WMQ LR LR
comp=Z,1μm,30.2s
INCN Inchon 139.09 328 P PKPdf 05 02 32.7 -0.6
SNR=5.1
WB2 Warramunga Arr 139.36 233 *e*PKP PKPdf 05 02 27.0 -7.2
WB2 *e*pPKP pPKPdf 05 03 00.2 -2.1
WRAB Tennant Creek 139.36 233 *e*P Pdif 04 59 47.4 +0.8
WRAB *e* 05 02 33.5
WRAB Tennant Creek 139.36 233 *e*Pdif Pdif 04 59 47.4 +0.8
WRAB *e*PKPpre 05 02 27.2
WRAB *e*PKPdf PKPdf 05 02 33.5 -0.8
WRAB *e*pPKPdf pPKPdf 05 03 00.5 -1.8
WRA Warramunga Arr 139.37 233 PKHKP 05 02 24.8
comp=Z,2.7nm,0.6s,baz=124,slow=2.7,SNR=22
WRA PKP PKPdf 05 02 33.3 -0.9
comp=Z,24nm,0.9s,baz=116,slow=1.9,SNR=45
WRA pPKP pPKPdf 05 03 00.1 -2.2
comp=Z,37nm,1.1s,baz=119,slow=1.6,SNR=7.6
WRA PKKP 05 12 00.7
comp=Z,0.7nm,0.7s,baz=316,slow=1.4,SNR=4.5
WRA Warramunga Arr 139.37 233 PKHKP 05 02 24.8
WRA 05 02 33.3
NWAO Narrogin (SRO) 140.14 202 PKhKP 05 02 27.1
comp=Z,12nm,1.0s,baz=205,slow=1.6,SNR=4.8
NWAO PKP PKPdf 05 02 34.9 -0.4
comp=Z,14nm,0.8s,baz=193,slow=1.4,SNR=4.5
NWAO pPKP pPKPdf 05 03 01.3 -2.1
comp=Z,22nm,1.0s,baz=120,slow=0.9,SNR=3.0
NWAO Narrogin (SRO) 140.14 202 PKHKP 05 02 27.1
NWAO 05 02 34.9
NWAO Narrogin (SRO) 140.14 202 PKP PKPdf 05 02 27.1 -8.3
NWAO PKP PKPdf 05 02 34.9 -0.4
NWAO pPKP pPKPdf 05 03 01.3 -2.1
DL2 Dalian 140.38 334 PKP PKPdf 05 02 33.8 -1.8
DL2 XPKP 05 03 11.3
DL2 *e*SS SS 05 23 46.3 -3.1
DL2 PP PP
comp=Z,290nm,7.9s
DL2 LR LR
comp=N,120nm,15.7s
DL2 LR LR
comp=E,130nm,18.2s
DL2 LR LR
comp=Z,220nm,18.3s
MUN Mundaring 141.37 201 *e*PKP PKPdf 05 02 32.1 -5.5
BJI Beijing 141.48 341 PKP PKPdf 05 02 30.8 -6.7
BJI XPKP 05 03 11.5
BJI PP PP
comp=Z,659nm,6.9s
BJI LR LR
comp=N,412nm,22.4s
BJI LR LR
comp=E,329nm,23.5s
BJI LR LR
comp=Z,472nm,33.4s
BJI Beijing 141.48 341 PKP PKPdf 05 02 30.7 -6.8
BJI pPKP pPKPdf 05 03 00.8 -4.8
BJI sPKP 05 03 11.6
BJI PP PP 05 05 32.4 -7.9
BJI SKKS 05 18 22.5
BJI SS SS 05 24 31.1 +29
BJI LR LR
comp=Z,470nm,33.4s
BJT Baijiatuau 141.50 341 *e*PKHKP 05 02 30.3
HHC Hu-ho-hao-te 142.01 347 *e*PKP PKPdf 05 02 32.8 -5.6
HHC PP PP 05 05 42.5 -0.9
HHC PKS 05 06 07.5
HHC SKS SKSdf 05 09 31.5 -7.8
HHC SKKS SKKSac 05 12 21.3 -6.9
HHC SS SS 05 24 04.5 -3.2
HHC PP PP
comp=Z,609nm,7.5s
HHC LR LR
comp=N,334nm,21.5s
HHC LR LR
comp=E,312nm,21.3s
HHC LR LR
comp=Z,498nm,21.6s
BTO Baotou 142.58 348 *e*PKP PKPdf 05 02 34.0 -5.5
THN Thein Dam 143.21 37 *e*P PKPdf 05 02 36.9 -3.9
BHJ Bhuj 144.33 55 *e*P PKPdf 05 02 39.9 -3.1
SDNR Sundarnagar 144.62 37 *e*P PKPdf 05 02 39.0 -4.3
GTA Gaotai 144.70 1⇓ PKP PKPdf 05 02 40.8 -2.4
GTA APKP 05 03 07.0
GTA XPKP 05 03 18.3
GTA PP PP 05 06 04.0 +4.6
GTA SKS SKSdf 05 09 38.3 -5.2
GTA PP PP
comp=Z,618nm,7.2s
GTA LR LR
comp=N,427nm,23.4s
GTA LR LR
comp=E,256nm,22.2s
GTA LR LR
comp=Z,523nm,23.4s
SMLA Simla 145.00 37 *i* P PKPdf 05 02 43.6 -0.3
KKR Kurukshetra 145.61 39 *e*P PKPdf 05 02 45.2 +0.1
RTK Rohtak 145.99 40 *ex* x 05 02 30.5
AJM Ajmer 146.42 46 *i* P PKPdf 05 02 44.0 -2.5
AJM *e*P 05 02 44.4
NDI New Delhi 146.74 40⇓ *i* P PKPdf 05 02 45.5 -1.5
comp=Z,17nm,1.5s
JOSI Joshimath 146.81 35 *e*P PKPdf 05 02 46.9 -0.2
AYAN Aya Nagar 146.82 40 *e*P PKPdf 05 02 46.2 -0.9
SSE Sheshan 146.86 327 PKP PKPdf 05 02 47.0 -0.2
SSE APKP 05 03 14.3
SSE PP PP 05 06 10.8 -2.2
SSE SS SS 05 25 07.3 +2.9
SSE LR LR
comp=N,173nm,26.9s
SSE LR LR
comp=E,231nm,26.2s
SSE LR LR
comp=Z,315nm,30.3s
SSE Sheshan 146.86 327 PKP PKPdf 05 02 47.1 -0.1
SSE pPKP pPKPdf 05 03 14.3 -0.9
SSE PP PP 05 06 10.8 -2.2
SSE SS SS 05 25 07.3 +2.9
SSE LR LR
comp=Z,320nm,30.3s
SONA Sohna 146.95 41 *e*P PKPdf 05 02 46.5 -0.9
KALG Kalgarh 147.12 37 *e*P PKPdf 05 02 46.7 -0.9
FITZ Fitzroy Crossi 147.12 227 *e*PKP PKPdf 05 02 47.1 -0.8
comp=Z,110nm,1.1s
FITZ *e*pPKP pPKPdf 05 03 14.9 -1.1
FITZ Fitzroy Crossi 147.12 227 PKPbc PKPbc 05 02 47.4 -2.8
comp=Z,68nm,1.1s,baz=154,slow=0.9,SNR=29
FITZ pPKPbc pPKPbc 05 03 16.6 -1.3
comp=Z,79nm,1.0s,baz=176,slow=3.4,SNR=7.7
NJ2 Nanjing 147.31 331 *e*PKP PKPdf 05 02 47.0 -0.9
NJ2 PKP2 PKPab 05 02 53.3 +1.0
NJ2 APKP 05 03 12.0
NJ2 XPKP 05 03 24.3
NJ2 PP PP 05 06 20.5 +5.0
NJ2 SKS SKSdf 05 09 39.5 -8.0
NJ2 PP PP
comp=Z,230nm,10.5s
NJ2 LR LR
comp=N,1μm,31.7s
NJ2 LR LR
comp=E,1μm,27.6s
NJ2 LR LR
comp=Z,1μm,27.4s
LZH Lanzhou 147.90 355⇑ PKP PKPdf 05 02 49.3 +0.6
LZH XPKP 05 03 27.0
LZH PP PP 05 06 21.0 +2.6
LZH SS SS 05 25 17.0 +2.2
LZH PP PP
comp=Z,710nm,6.3s
LZH LR LR
comp=N,235nm,18.2s
LZH LR LR
comp=Z,390nm,20.0s
LZH Lanzhou 147.90 355⇑ PKP2 PKPab 05 02 49.2 -5.3
LZH 05 06 21.0
LZH SS SS 05 25 17.0 +2.2
LZH MLR MLR
comp=Z,390nm,20.0s
LZH Lanzhou 147.90 355⇑ PKP PKPdf 05 02 49.2 +0.5
LZH PKP PKPdf 05 02 55.0 +6.3
LZH pPKP pPKPdf 05 03 19.2 +2.4
LZH sPKP 05 03 27.0
LZH PP PP 05 06 21.0 +2.6
LZH *e*SKKS SKKSac 05 13 05.0 +3.2
LZH SS SS 05 25 17.0 +2.2
LZH LR LR
comp=Z,390nm,20.0s
PTH Pithoragarh 147.94 35 *e*P PKPdf 05 02 49.9 +0.9
MBWA Marble Bar 148.88 216 P PKPdf 05 02 54.3 +3.5
SNR=6.7
MBWA Marble Bar 148.88 216 *e*PKPdf PKPdf 05 02 49.9 -0.9
MBWA *e*PKPbc PKPbc 05 02 53.8 -1.0
XAN Xi'an 149.13 347 PKP PKPdf 05 02 50.0 -0.8
XAN PP PP 05 06 22.3 -3.3
XAN PP PP
comp=Z,328nm,4.3s
POO Poona 149.95 59 *e*P PKPdf 05 02 52.3 -0.2
WHN Wuhan 150.62 336 *i* P PKPdf 05 02 52.5 -0.7
WHN LR LR
comp=Z,713nm,22.6s

KAD	**Karad**	**150.74**	**61**	*e*P		PKPdf	05 02 53.3	-0.4
DANN	**Dangsing**	**150.83**	**32**	*e*P		PKPdf	05 02 54.3	+0.7
	comp=Z,1μm,0.9s							
YHNB	**Yeheng**	**151.41**	**318**	*e*PKPbc		PKPbc	05 02 58.8	-2.0
AKL	**Akola**	**151.51**	**52**	*ex*		PKPbc	05 03 00.6	-0.5
GKN	**Gorkha**	**151.57**	**31**	*e*P		PKPdf	05 02 54.7	-0.1
	comp=Z,1μm,1.1s							
AAI	**Ambon**	**151.57**	**255**⇓	*e*P		PKPdf	05 02 58.0	+2.8
NACB	**Ninganchiao**	**151.60**	**317**	*e*PKPdf		PKPdf	05 02 54.9	-0.1
NACB				*e*PKPbc		PKPbc	05 02 59.8	-1.4
KKN	**Kakani**	**152.07**	**30**	*e*P		PKPdf	05 02 55.6	+0.1
	comp=Z,431nm,1.0s							
DMN	**Daman**	**152.13**	**31**	*e*P		PKPdf	05 02 55.6	0.0
	comp=Z,450nm,1.2s							
GUN	**Gumba**	**152.27**	**29**	*e*P		PKPdf	05 02 55.9	+0.1
	comp=Z,754nm,1.3s							
LATR	**Latur**	**152.29**	**57**	*ex*		PKPbc	05 03 02.0	-0.9
PKIN	**Phulchoki**	**152.30**	**30**	*e*P		PKPdf	05 02 55.4	-0.5
	comp=Z,263nm,1.1s							
JIRN	**Jiri**	**152.63**	**29**	*e*P		PKPdf	05 02 56.0	-0.4
	comp=Z,578nm,1.5s							
LSA	**Lhasa**	**152.82**	**19**	PKP		PKPdf	05 02 57.0	+0.4
LSA	**Lhasa**	**152.82**	**19**	*e*PKPdf		PKPdf	05 02 57.8	+1.2
LSA				*e*PKPbc		PKPbc	05 03 04.6	+0.8
LSA				*e*PP		PP	05 06 46.9	0.0
NGP	**Nagpur**	**152.83**	**49**	*e*P		PKPdf	05 02 54.0	-2.9
QZH	**Quanzhou**	**153.00**	**322**	PKP		PKPdf	05 02 54.5	-2.5
QZH				PKP2		PKPab	05 03 14.5	-1.4
QZH				PP		PP	05 06 49.8	+1.2
CD2	**Chengdu**	**153.04**	**354**	PKP		PKPdf	05 02 56.8	-0.1
CD2				PKP2		PKPab	05 03 14.5	-1.3
CD2				APKP			05 03 20.8	
CD2				XPKP			05 03 31.0	
CD2				PP		PP	05 06 45.8	-2.1
CD2				SKS		SKSdf	05 09 49.0	-6.0
CD2				SKKS		SKKSac	05 13 25.3	-4.9
CD2				PP		PP		
	comp=Z,1μm,6.6s							
CD2				LR		LR		
	comp=N,360nm,19.2s							
CD2				LR		LR		
	comp=E,300nm,11.4s							
CD2				LR		LR		
	comp=Z,350nm,15.6s							
RAMN	**Ramite**	**153.42**	**29**	*e*P		PKPdf	05 02 57.3	-0.2
	comp=Z,449nm,1.1s							
ODAN	**Odare**	**153.87**	**28**	*e*P		PKPdf	05 02 57.9	-0.3
	comp=Z,344nm,1.3s							
HYB	**Hyderabad**	**154.43**	**57**	*i* PKP		PKPdf	05 02 57.0	-2.2
HYB				*e*PKPAB		PKPab	05 03 22.0	-0.2
HYB	**Hyderabad**	**154.43**	**57**	*e*PKP		PKPdf	05 02 58.5	-0.7
HYB				*e*			05 03 22.0	
HYB				*e*			05 03 49.5	
BOK	**Bokaro**	**155.59**	**35**	*e*P		PKPdf	05 02 59.8	-0.9
KOD	**Kodaikanal**	**156.05**	**74**	*e*P		PKPdf	05 03 00.8	-0.7
GYA	**Guiyang**	**156.93**	**346**⇑	*i* PKP		PKPdf	05 03 01.3	-1.0
GYA				APKP			05 03 26.8	
GYA				XPKP			05 03 36.3	
GYA				PKS			05 06 33.8	
GYA				PP		PP	05 07 12.5	+2.8
GYA				SKS		SKSdf	05 09 56.8	-2.7
GYA				SKKS		SKKSac	05 13 50.5	-0.7
GYA				SS		SS	05 26 54.8	+0.8
GYA				PP		PP		
	comp=Z,840nm,8.6s							
GYA				LR		LR		
	comp=N,2μm,24.8s							
GYA				LR		LR		
	comp=E,2μm,25.7s							
GYA				LR		LR		
	comp=Z,2μm,25.0s							
MDRS	**Chennai**	**157.78**	**65**	*e*P		PKPdf	05 03 01.6	-2.1
VIS	**Vishakhapatnam**	**158.10**	**50**	*e*P		PKPdf	05 03 02.0	-2.0
VIS				AMb		AMB	05 03 06.1	
	comp=Z,108nm,0.8s							
KMI	**Kunming**	**158.87**	**355**	PKP		PKPdf	05 03 04.5	-0.2
KMI				APKP			05 03 30.3	
KMI				PKP2		PKPab	05 03 36.8	-4.1
KMI				XPKP			05 03 40.3	
KMI				PKS			05 06 37.0	
KMI				PP		PP	05 07 16.3	-3.9
KMI				SKS		SKSdf	05 09 59.5	-1.9
KMI				SKKS		SKKSac	05 13 53.5	-7.9
KMI				PP		PP		
	comp=Z,744nm,9.8s							
KMI				LR		LR		
	comp=N,333nm,21.8s							
KMI				LR		LR		
	comp=E,303nm,20.3s							
KMI				LR		LR		
	comp=Z,551nm,29.0s							
KAPI	**Kappang**	**159.06**	**245**	PKP		PKPdf	05 03 03.3	-1.9
	comp=Z,10nm,0.9s,baz=250,slow=1.5,SNR=4.4							
QIZ	**Qiongzhong**	**162.60**	**330**	PKP		PKPdf	05 03 09.3	+0.4
QIZ				PP		PP	05 07 40.8	-0.1
QIZ				LR		LR		
	comp=E,334nm,15.9s							
QIZ				LR		LR		
	comp=Z,492nm,39.4s							
CHRT	**Chiangrai**	**164.15**	**3**	P		PKPdf	05 03 10.0	-0.4
	comp=Z,210nm,1.1s							
KKM	**Kota Kinabalu**	**164.49**	**278**	*e*PKPdf		PKPdf	05 03 09.8	-1.1
KKM				*ep*PKPdf		pPKPdf	05 03 37.6	-1.4
CHG	**Chiang Mai**	**165.13**	**7**	⇓P		PKPdf	05 03 10.4	-0.8
	comp=Z,43nm,1.0s							
CHTO	**Chiang Mai**	**165.13**	**7**	P		PKPdf	05 03 10.8	-0.4
	SNR=20							
CHTO	**Chiang Mai**	**165.13**	**7**	*e*PKPdf		PKPdf	05 03 09.9	-1.3
CHTO				*ep*PKPdf		pPKPdf	05 03 37.1	-2.3
CHTO				*e*PKPab		PKPab	05 04 07.0	-1.3
NANT	**Nan**	**165.25**	**0**	⇓P		PKPdf	05 03 08.5	-2.8
	comp=Z,748nm,1.0s							
CMAR	**Chiang Mai Arr**	**165.48**	**7**	PKP		PKPdf	05 03 11.1	-0.5
	comp=Z,17nm,0.9s,baz=295,slow=1.8,SNR=67							
CMAR				pPKP		pPKPdf	05 03 38.9	-0.9
	comp=Z,24nm,1.0s,baz=297,slow=1.9,SNR=6.6							
CMAR				sPKP			05 03 48.8	
	comp=Z,25nm,1.2s,baz=296,slow=1.4,SNR=6.5							
CMAR				PKPab		PKPab	05 04 09.2	-0.7
	comp=Z,45nm,0.8s,baz=331,slow=5.2,SNR=23							
CMAR				pPKPab		pPKPab	05 04 35.9	-1.1
	comp=Z,20nm,0.9s,baz=339,slow=5.0,SNR=3.3							
CMAR				sPKPab			05 04 48.2	
	comp=Z,12nm,0.9s,baz=328,slow=4.8,SNR=5.6							
CMAR				PP		PP	05 07 54.0	-1.4
	comp=Z,10nm,1.1s,baz=338,slow=6.0,SNR=7.1							
CMAR	**Chiang Mai Arr**	**165.48**	**7**	PKIKP		PKPdf	05 03 11.1	-0.4
CMAR							05 03 48.8	
CMAR							05 04 09.3	
CMAR							05 07 54.0	
NST	**Nakhon Sawan**	**168.34**	**3**	P		PKPdf	05 03 13.2	-0.5
KSM	**Kuching**	**170.17**	**256**	*e*PKPdf		PKPdf	05 03 13.9	-1.1

ISCJB ***26*** *04:50:35.4±2.6, 53S×0.1×1458E±0.2, h86km±31km, mb4.5/6, Error ellipse: s-maj=42.6km s-min=16.7km az=21.1*

IDC ***26*** *04:50:42.4±2.8, 550S×14657E, h206km±37km, mb3.5/3, mb1 3.7/5, mb1mx3.4/16, mbtmp3.5/5, MS4.0/1, Ms1 4.0/1, ms1mx2.7/23, Error ellipse: s-maj=44.0km s-min=38.4km az=138.0*

NEIC ***26*** *04:50:43.8±1.8, 589S×14664E, h190km±21km, mb4.0/2, Error ellipse: s-maj=34.7km s-min=15.8km az=114.0*

ISC 26 04:50:42.6±1.7, 58S±01×1466E±03, h176km±22km, n14, σ0s54/15, mb4.5/6, 1D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**3.62**	**171**	*e*Pn		**Pn**	**04 51 39.3**	**+0.5**
CTA	**Charters Tower**	**14.20**	**181**	P		**Pn**	**04 54 00.3**	**+4.3**
	0.5nm,0.3s,baz=354,slow=13,SNR=6.6							
CTAO	**Charters Tower**	**14.20**	**181**	*e*P		**Pn**	**04 54 01.1**	**+5.1**
	3.4nm,0.8s							
WRAB	**Tennant Creek**	**18.41**	**219**	*e*P		**P**	**04 54 44.4**	**-0.3**
	5.1nm,0.6s							
WB2	**Warramunga Arr**	**18.42**	**219**⇓	*i* P		**P**	**04 54 44.6**	**-0.1**
WRA	**Warramunga Arr**	**18.43**	**219**	P		**P**	**04 54 44.9**	**+0.1**
	1.0nm,0.3s,baz=42,slow=12,SNR=99							
WRA				S			04 58 06.4	+0.4
	0.2nm,0.3s,baz=39,slow=21,SNR=16							
ASAR	**Alice Springs**	**21.56**	**213**	P		**P**	**04 55 18.2**	**0.0**
	3.4nm,0.5s,mb4.1,baz=46,slow=8.1,SNR=66							
ASAR				S		**S**	**04 59 06.6**	**+0.8**
	0.9nm,0.9s,baz=34,slow=21,SNR=5.6							
FITZ	**Fitzroy Crossi**	**23.83**	**237**	P		**P**	**04 55 38.9**	**-0.9**
	1.5nm,0.4s,mb3.8,baz=51,slow=13,SNR=8.8							
STKA	**Stephens Creek**	**26.36**	**190**	P		**P**	**04 56 01.4**	**-1.0**
	1.1nm,0.5s,mb3.8,baz=3.1,slow=7.9,SNR=5.4							
STKA	**Stephens Creek**	**26.36**	**190**	*e*P		**P**	**04 56 01.4**	**-1.0**
ASAJ	**Asahikawa**	**49.82**	**356**	LR		LR	05 16 34.7	
	comp=Z,180nm,21.0s,baz=310,slow=31							
KURK	**Kurchatov**	**80.81**	**323**	*e*P		**P**	**05 02 37.3**	**+0.7**
	84nm,1.1s,mb5.3							
EKS2	**Erkin-Say**	**81.43**	**315**	*e*P		**P**	**05 02 40.4**	**+0.3**
	47nm,1.2s,mb5.0							
EKS2				*ep*P		PcP	05 02 53.6	+8.0
KBL	**Kabul**	**83.09**	**306**	*e*P		**P**	**05 02 48.6**	**-0.3**
	16nm,0.8s,mb4.8							
KBL				*ep*P		PcP	05 02 59.2	+6.1

NEIC ***26*** *05:05:22.2±2.3, 004N×12360E, h190km±26km, mb3.9/1, Error ellipse: s-maj=31.7km s-min=8.3km az=65.0*

ISCJB ***26*** *05:05:24.9±2.3, 03S±01×1230E±02, h237km±27km, mb3.7/10, Error ellipse: s-maj=34.5km s-min=10.7km az=157.2*

IDC ***26*** *05:05:25.0±3.1, 023S×12293E, h224km±32km, mb3.3/7, mb1 3.4/9, mb1mx3.4/17, mbtmp3.3/9, Error ellipse: s-maj=34.5km s-min=12.5km az=65.0*

ISC 26 05:05:24.1±2.6, 02S±01×1231E±02, h209km±30km, n16, σ0s94/15, mb3.7/10, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAPI	**Kappang**	**5.84**	**215**	P		**Pn**	**05 06 48.7**	**-0.8**
	1.4nm,0.3s,baz=27,slow=6.8,SNR=6.3							
KAPI				S		**Sn**	**05 07 56.9**	**-0.2**
	0.3nm,0.3s,baz=51,slow=23,SNR=3.6							
KKM	**Kota Kinabalu**	**9.30**	**312**	*e*Pn		**Pn**	**05 07 35.2**	**+0.9**
FITZ	**Fitzroy Crossi**	**17.93**	**172**	P		**P**	**05 09 19.0**	**+0.3**
	0.7nm,0.3s,baz=356,slow=7.3,SNR=12							
WRAB	**Tennant Creek**	**22.45**	**151**	*e*P		**P**	**05 10 05.9**	**0.0**
	8.1nm,1.9s,mb3.9							
WRA	**Warramunga Arr**	**22.46**	**151**	P		**P**	**05 10 05.7**	**-0.2**
	3.7nm,0.5s,mb4.2,baz=332,slow=10,SNR=49							
WB2	**Warramunga Arr**	**22.46**	**151**	*e*P		**P**	**05 10 05.6**	**-0.3**
ASAR	**Alice Springs**	**25.54**	**157**	P		**P**	**05 10 34.3**	**+0.5**
	0.8nm,0.6s,mb3.5,baz=343,slow=14,SNR=6.6							
CMAR	**Chiang Mai Arr**	**30.16**	**309**	P		**P**	**05 11 16.9**	**+2.0**
	0.6nm,0.3s,mb3.7,baz=146,slow=6.8,SNR=4.4							
STKA	**Stephens Creek**	**36.00**	**153**	P		**P**	**05 12 06.4**	**+1.1**
	3.5nm,0.8s,mb3.9,baz=330,slow=8.1,SNR=3.7							
KSRS	**Korea Array**	**37.75**	**6**	P		**P**	**05 12 20.1**	**+0.1**
	1.0nm,0.8s,mb3.4,baz=185,slow=9.8,SNR=4.0							
MJAR	**Matsushiro Arr**	**39.16**	**19**	P		**P**	**05 12 27.9**	**-3.8**
	1.9nm,0.8s,mb3.7,baz=199,slow=9.9,SNR=4.8							
SONM	**Songino Array**	**50.03**	**345**	P		**P**	**05 13 56.7**	**-0.7**
	1.1nm,0.7s,mb3.3,baz=156,slow=8.2,SNR=5.1							
MKAR	**Makanchi Array**	**58.88**	**328**	P		**P**	**05 15 00.4**	**-0.6**
	0.5nm,0.5s,mb3.4,baz=125,slow=7.3,SNR=3.7							
BVAR	**Borovoye Array**	**68.74**	**329**	P		**P**	**05 16 02.2**	**-3.1**
	2.2nm,1.1s,mb3.7,baz=124,slow=8.9,SNR=2.7							
TORD	**Torodi Ar. Bea**	**120.60**	**285**	PKP		PKPdf	05 23 51.9	-0.1
	0.1nm,0.3s,baz=85,slow=2.0,SNR=7.7							
TORD	**Torodi Ar. Bea**	**120.60**	**285**	PKP		PKPdf	05 23 51.9	-0.1

IDC 26 05:27:35.4±6.1, 2252N×9395E, h48km±49km, mb3.4/4, mb1 3.6/5, mb1mx3.3/22, mbtmp3.4/5, ML3.5/1, MS4.4/1, Ms1 4.4/1, ms1mx3.3/22, Error ellipse: s-maj=145.1km s-min=19.3km az=61.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.18**	**130**	P		Pn	05 29 04.2	0.0
	0.3nm,0.3s,baz=304,slow=12,SNR=4.1							
MKAR	**Makanchi Array**	**25.99**	**342**	P		P	05 33 03.7	+0.2
	0.6nm,0.5s,baz=153,slow=9.5,SNR=7.1							
ZALV	**Zalesovo Beam**	**32.13**	**350**	P		P	05 33 57.9	-0.2
	0.7nm,0.4s,baz=167,slow=7.1,SNR=3.0							
FITZ	**Fitzroy Crossi**	**50.89**	**140**	LR		LR	06 01 47.4	
	comp=Z,342nm,18.1s,baz=303,slow=40							
WRA	**Warramunga Arr**	**57.76**	**134**	P		P	05 37 21.4	-0.4
	0.4nm,0.6s,baz=321,slow=7.5,SNR=7.0							
ASAR	**Alice Springs**	**60.14**	**137**	P		P	05 37 38.6	+0.4
	0.3nm,0.5s,baz=325,slow=8.0,SNR=3.8							

NEIC ***26*** *05:36:08.3, 1685N×10021W, h5km, MD3.9(MEX), After MEX.*

MEX 26 05:36:08.3±0.5, 1685N×10021W, h5km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAIG	**El Cayaco**	**0.20**	**344**	*i* P		Pg	05 36 11.7	-0.6
CAIG				*i* S		Sg	05 36 15.2	+0.3
ACX	**Acapulco**	**0.28**	**87**	*i* P		Pg	05 36 13.7	-0.1
ACX				*i* S		Sg	05 36 16.8	-0.7
ZIIG	**Zihuatanejo**	**1.41**	**302**	*i* P		Pn	05 36 31.9	-2.8
ZIIG				*i* S		Sb	05 36 49.5	-4.0
PLIG	**Platanillo**	**1.67**	**24**	*e*P		Pn	05 36 35.5	-2.7
PLIG				*i* S		Sn	05 36 55.8	-4.3
PNIG	**Pinotepa**	**2.05**	**103**	*i* P		Pn	05 36 39.5	-3.9
PNIG				*i* S		Sn	05 37 05.8	-3.6

NEIC ***26*** *05:43:39.3, 1683N×9967W, h10km, MD4.2(MEX), After MEX.*

MEX 26 05:43:39.6±0.5, 1682N×9969W, h15km±2km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ACX	**Acapulco**	**0.22**	**282**	*i* P		Pg	05 43 44.3	-0.2
ACX				*i* S		Sg	05 43 47.2	-0.7
CAIG	**El Cayaco**	**0.59**	**293**	*i* P		Pg	05 43 49.1	-2.2
CAIG				*i* S		Sg	05 43 57.7	-1.5
PNIG	**Pinotepa**	**1.56**	**106**	*e*P		Pn	05 44 04.1	-2.8
PNIG				*i* S		Sn	05 44 21.9	-4.9
PNIG	**Pinotepa**	**1.56**	**106**	*e*P		Pn	05 44 04.1	-2.8
PNIG				*i* S		Sn	05 44 23.2	-3.7
PLIG	**Platanillo**	**1.57**	**7**	*i* P		Pn	05 44 04.3	-2.8
PLIG				*i* S		Sn	05 44 22.5	-4.7
ZIIG	**Zihuatanejo**	**1.86**	**295**	*i* P		Pn	05 44 07.5	-3.6
ZIIG				*i* S		Sn	05 44 29.9	-4.4
ZIIG	**Zihuatanejo**	**1.86**	**295**	*i* P		Pn	05 44 06.4	-4.7
ZIIG				*i* S		Sn	05 44 32.3	-2.1
PPM	**Popocatepetl**	**2.46**	**24**	*e*P		Pn	05 44 16.1	-3.1
PPM				*i* S		Sn	05 44 45.5	-3.5
PPM	**Popocatepetl**	**2.46**	**24**	*e*P		Pn	05 44 16.1	-3.1
PPM				*i* S		Sn	05 44 47.4	-1.6
TPIG	**Tehuac#an**	**2.73**	**54**	*i* P		Pn	05 44 20.4	-2.6
TPIG				*i* S		Sn	05 44 51.3	-4.6
VHO	**Vista Hermosa**	**2.84**	**85**	*i* P		Pn	05 44 22.9	-1.6
VHO				*i* S		Sn	05 44 55.4	-3.2

BJI ***26*** *05:54:35.6, 535S×101.18E, h35km, mB5.1, mb5.0, Ms4.6, Msz4.3*

IDC ***26*** *05:54:40.0±0.7, 436S×10135E, h0km, mb4.5/15, mb1 4.6/15, mb1mx4.5/20, mbtmp4.5/15, MS3.8/1, Ms1 3.8/1, ms1mx3.2/24, Error ellipse: s-maj=25.0km s-min=13.5km az=61.0*

ISCJB ***26*** *05:54:42.7±0.9, 450S±005×10121E±005, h34km±7km, mb4.8/49, MS4.3/9, Error ellipse: s-maj=10.5km s-min=6.2km az=141.6*

MOS ***26*** *05:54:43.0±0.8, 436S×10133E, h33km, mb5.0/15, Error ellipse: s-maj=15.6km s-min=8.0km az=99.1*

DJA ***26*** *05:54:45, 446S×10122E, h25km, MLv4.9/7*

NEIC ***26*** *05:54:45.2±0.3, 436S×10136E, h35km, mb4.8/14, Error ellipse: s-maj=14.5km s-min=6.0km az=57.0*

ISC 26 05:54:45.0±0.8, 447S±005×10122E±005, h35km±6km, h29km±2.4km: pP-P, n116, σ0s97/114, mb4.8/49, MS4.3/9, 17C-6D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSI	**Kapahiang**	**1.59**	**59**	P		**Pn**	**05 55 10.2**	**-0.5**
	0.0nm,0.0s							
PPI	**Padang Panjang**	**4.07**	**348**	P		**Pn**	**05 55 43.9**	**-1.0**
	0.0nm,0.0s							
RGRI	**Rengat**	**4.24**	**15**	P		**Pn**	**05 55 52.1**	**+4.9**
	0.0nm,0.0s							
DSRI	**Dabo**	**5.19**	**40**	P		**Pn**	**05 56 00.9**	**+0.6**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**5.42**	**65**	P		**Pn**	**05 56 03.6**	**+0.2**
	0.0nm,0.0s							
DBJI	**Dramaga**	**5.88**	**111**	P		**Pn**	**05 56 09.4**	**-0.3**
	0.0nm,0.0s							
CBJI	**Citeko**	**5.93**	**109**	P		**Pn**	**05 56 13.2**	**+2.8**
	0.0nm,0.0s							
TPI	**Tanjungpandan**	**6.64**	**75**⇑	*e*P		**Pn**	**05 56 23.5**	**+3.3**
MYKOM	**Kota Tinggi**	**6.75**	**23**	⇓P		**Pn**	**05 56 23.1**	**+1.4**
LEM	**Lembang**	**6.78**	**110**	P		**Pn**	**05 56 22.9**	**+0.8**
	0.0nm,0.0s							
BJII	**Banjamegara**	**8.91**	**109**	P		**Pn**	**05 56 51.3**	**0.0**
	0.0nm,0.0s							
SJI	**Sawahan**	**10.98**	**108**	P		**Pn**	**05 57 19.3**	**-0.4**
	0.0nm,0.0s							
BSI	**Banda Aceh**	**11.54**	**329**	P		**Pn**	**05 57 25.3**	**-2.0**
	0.0nm,0.0s							
SBUM	**Sibu**	**12.96**	**58**	⇑P		**Pn**	**05 57 51.4**	**+4.6**
BTM	**Bintulu**	**14.09**	**57**	⇑P		**Pn**	**05 58 10.9**	**+8.6**
KHKI	**Kahang-Kahang**	**14.81**	**106**	P		**Pn**	**05 58 11.6**	**-0.4**
	0.0nm,0.0s							
KKM	**Kota Kinabalu**	**18.26**	**55**	⇑P		**Pn**	**05 58 53.6**	**-2.1**
TSM	**Tawau**	**18.78**	**63**	⇓P		**Pn**	**05 59 02.6**	**+0.5**
SDKM	**Sandakan**	**18.85**	**58**	⇑P		**Pn**	**05 59 02.9**	**-0.1**
PCI	**Palu**	**18.93**	**80**	P		**Pn**	**05 59 03.4**	**-0.5**
	0.0nm,0.0s							
KDM	**Kudat**	**19.26**	**54**	⇑P		**Pn**	**05 59 07.0**	**-0.8**
MYLDM	**Lahad Datu**	**19.74**	**61**	⇑P		**Pn**	**05 59 16.2**	**+2.6**
KDI	**Kendari**	**21.35**	**89**	P		**P**	**05 59 31.0**	**+1.6**
	0.0nm,0.0s							
CMAR	**Chiang Mai Arr**	**22.89**	**354**	P		**P**	**05 59 45.0**	**-0.8**
	13nm,0.7s,mb4.5,baz=183,slow=10,SNR=38							
CHG	**Chiang Mai**	**23.25**	**355**	⇑P		**P**	**05 59 48.4**	**-1.1**
	16nm,1.0s,mb4.4							
CHTO	**Chiang Mai**	**23.25**	**355**	*e*P		**P**	**05 59 48.7**	**-0.8**
CHTO				pmax		pmax		
	comp=Z,7.0nm,1.0s,mb4.0							
CHTO	**Chiang Mai**	**23.25**	**355**	*e*P		**P**	**05 59 48.7**	**-0.8**
	comp=Z,6.9nm,1.0s,mb4.0							
CHRT	**Chiangrai**	**24.23**	**357**	P		**P**	**05 59 58.0**	**-0.7**
	comp=Z,105nm,1.2s,mb5.1							
FITZ	**Fitzroy Crossi**	**27.46**	**121**	*e*P		**P**	**06 00 27.3**	**-0.7**
	comp=Z,5.7nm,0.4s,mb4.5							
FITZ				*e*		pP	06 00 35.0	-3.0
FITZ	**Fitzroy Crossi**	**27.46**	**121**	P		**P**	**06 00 27.4**	**-0.6**
	comp=Z,4.0nm,0.5s,mb4.2,baz=293,slow=8.6,SNR=23							
KMI	**Kunming**	**29.45**	**3**	P		**P**	**06 00 46.5**	**+0.9**
KMI				AMB		AMB		
	comp=Z,11nm,1.0s,mb4.5							
KMI	**Kunming**	**29.45**	**3**	P		**P**	**06 00 46.6**	**+1.0**
KMI				pmax		pmax		
	comp=Z,11nm,1.0s,mb4.5							
KMI	**Kunming**	**29.45**	**3**	P		**P**	**06 00 46.6**	**+1.0**
	comp=Z,11nm,1.0s,mb4.5							
GYA	**Guiyang**	**31.20**	**9**	P		**P**	**06 01 03.3**	**+2.3**
GYA				AP		pP	06 01 12.5	+1.3
GYA				XP		sP	06 01 18.5	+3.1
GYA				PP		PP	06 02 06.8	-5.1
GYA				S		**S**	**06 06 06.0**	**+1.1**
GYA				XS		sS	06 06 23.5	+1.8
GYA				AMB		AMB		
	comp=Z,20nm,0.8s,mb5.0							
GYA				AMB		AMB		
	comp=Z,120nm,4.3s							
GYA				LR		LR		
	comp=N,640nm,13.9s,MS4.6							
GYA				LR		LR		
	comp=E,570nm,14.2s,MS4.6							
GYA				LR		LR		
	comp=Z,580nm,14.6s,MS4.4							
ODAN	**Odare**	**33.90**	**337**	*e*P		**P**	**06 01 25.4**	**+0.7**
	comp=Z,54nm,0.6s,mb5.6							
JIRN	**Jiri**	**35.08**	**336**	*e*P		**P**	**06 01 36.1**	**+1.2**
	comp=Z,78nm,0.7s,mb5.7							
CD2	**Chengdu**	**35.27**	**4**⇑	*i* P		**P**	**06 01 36.3**	**-0.1**
CD2				AP		pP	06 01 46.0	-0.7
CD2				XP		sP	06 01 50.3	-0.6
CD2				PP		PP	06 02 56.8	-0.2
CD2				S		**S**	**06 07 08.0**	**0.0**
CD2				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb4.9							
CD2				AMB		AMB		
	comp=Z,30nm,5.2s							
CD2				LR		LR		
	comp=N,420nm,14.4s,MS4.5							
CD2				LR		LR		
	comp=E,530nm,16.8s,MS4.5							
CD2				LR		LR		
	comp=Z,460nm,19.2s,MS4.2							
PKIN	**Phulchoki**	**35.33**	**335**	*e*P		**P**	**06 01 37.4**	**+0.3**
	comp=Z,8.4nm,0.7s,mb4.8							
GUN	**Gumba**	**35.43**	**336**	*e*P		**P**	**06 01 38.9**	**+1.0**
	comp=Z,46nm,0.5s,mb5.7							
DMN	**Daman**	**35.48**	**335**	*e*P		**P**	**06 01 39.0**	**+0.6**
	comp=Z,22nm,1.0s,mb5.1							
KKN	**Kakani**	**35.57**	**335**	*e*P		**P**	**06 01 39.8**	**+0.7**
	comp=Z,40nm,1.0s,mb5.3							
WRA	**Warramunga Arr**	**35.73**	**118**	P		**P**	**06 01 39.8**	**-

HHC	**Hu-ho-hao-te**	**46.09**	**11**	*e*P	**P**	**06 03 06.3 +0.7**
HHC				AP	pP	06 03 16.5 +0.4
HHC				XP	sP	06 03 20.5 +0.2
HHC				PCP	PcP	06 04 41.3 -0.2
HHC				PP	PP	06 04 55.0 +0.8
HHC				SCP	ScP	06 08 30.5 -1.7
HHC				PCS	PcS	06 08 34.5 -1.3
HHC				S	**S**	**06 09 50.0 +1.1**
HHC				XS	sS	06 10 07.5 +1.4
HHC				SS	SS	06 13 07.5 -7.0
HHC				AMB	AMB	
	comp=Z,23nm,0.6s,mb5.3					
HHC				AMB	AMB	
	comp=Z,239nm,6.9s					
HHC				LR	LR	
	comp=N,206nm,13.9s,MS4.4					
HHC				LR	LR	
	comp=E,227nm,14.8s,MS4.4					
HHC				LR	LR	
	comp=Z,240nm,14.5s,MS4.3					
BJI	**Beijing**	**46.38**	**16**	P	**P**	**06 03 07.5 -0.4**
BJI				AMB	AMB	
	comp=Z,20nm,0.7s,mb5.2					
BJI	**Beijing**	**46.38**	**16**	P	**P**	**06 03 07.6 -0.3**
BJI				pmax	pmax	
	comp=Z,20nm,0.7s,mb5.2					
BJI	**Beijing**	**46.38**	**16**	P	**P**	**06 03 07.6 -0.3**
	comp=Z,20nm,0.7s,mb5.2					
CTA	**Charters Tower**	**46.48**	**113**	*e*P	**P**	**06 03 09.2 +0.2**
	comp=Z,4.6nm,1.0s,mb4.4					
CTA				*e*	pP	06 03 16.9 -2.6
CTA	**Charters Tower**	**46.48**	**113**	*e*P	**P**	**06 03 09.2 +0.2**
CTA				*e*	pP	06 03 16.9 -2.6
CTA				pmax	pmax	
	comp=Z,5.0nm,1.0s					
CTAO	**Charters Tower**	**46.48**	**113**	*e*P	**P**	**06 03 09.6 +0.6**
CTAO				*e**PP	pP	06 03 17.4 -2.1
CTAO				pmax	pmax	
	comp=Z,10.0nm,0.9s,mb4.8					
CTAO	**Charters Tower**	**46.48**	**113**	*e*P	**P**	**06 03 09.6 +0.5**
	comp=Z,10nm,0.9s,mb4.8					
CTAO				*e*pP	pP	06 03 17.4 -2.1
STKA	**Stephens Creek**	**46.62**	**131**	*e*P	**P**	**06 03 10.3 +0.3**
	comp=Z,4.5nm,0.6s,mb4.6					
STKA	**Stephens Creek**	**46.62**	**131**	P	**P**	**06 03 10.4 +0.5**
	comp=Z,5.7nm,0.7s,mb4.6,baz=308,slow=8.9,SNR=9.2					
KSRS	**Korea Array**	**48.55**	**28**	P	**P**	**06 03 24.2 -0.6**
	comp=Z,9.7nm,0.8s,mb4.9,baz=219,slow=7.9,SNR=36					
WMQ	**Urumqi**	**49.59**	**347**	P	**P**	**06 03 33.8 +1.1**
WMQ				AP	pP	06 03 44.0 +0.7
WMQ				XP	sP	06 03 48.0 +0.6
WMQ				PCP	PcP	06 04 55.0 +1.0
WMQ				PP	PP	06 05 29.0 +1.6
WMQ				*e*S	**S**	**06 10 38.5 0.0**
WMQ				XS	sS	06 10 55.0 -0.9
WMQ				AMB	AMB	
	comp=Z,28nm,0.9s,mb5.3					
WMQ				AMB	AMB	
	comp=Z,195nm,4.7s					
WMQ				LR	LR	
	comp=N,332nm,21.0s,MS4.4					
WMQ				LR	LR	
	comp=E,326nm,23.6s,MS4.4					
WMQ				LR	LR	
	comp=Z,239nm,18.4s					
SONM	**Songino Array**	**52.28**	**4**	P	**P**	**06 03 53.4 +0.5**
	comp=Z,22nm,0.8s,mb5.1,baz=184,slow=9.3,SNR=84					
SONM				PcP	PcP	06 05 03.9 +0.1
	comp=Z,2.3nm,0.5s,baz=184,slow=4.7,SNR=5.2					
ULN	**Ulaanbaatar**	**52.37**	**5**	*c* *i*P	**P**	**06 03 53.9 +0.4**
ULN	**Ulaanbaatar**	**52.37**	**5**	*e*P	**P**	**06 03 53.7 +0.2**
	comp=Z,12nm,0.9s,mb4.8					
ULN				*e*PcP	PcP	06 05 04.4 +0.2
TKM2	**Tokmak 2**	**52.57**	**336**	*e*P	**P**	**06 03 55.4 +0.3**
TKM2				pmax	pmax	
	comp=Z,12nm,0.8s,mb4.9					
TKM2	**Tokmak 2**	**52.57**	**336**	*e*P	**P**	**06 03 55.4 +0.3**
	comp=Z,12nm,0.8s,mb4.9					
CN2	**Changchun**	**52.78**	**22**	*e*P	**P**	**06 03 55.5 -1.1**
CN2				*e*AP	pP	06 04 05.3 -1.9
CN2				*e*S	**S**	**06 11 21.5 -1.0**
CN2				AMB	AMB	
	comp=Z,30nm,0.6s,mb5.4					
CN2				LR	LR	
	comp=N,200nm,16.0s,MS4.4					
CN2				LR	LR	
	comp=E,200nm,16.0s,MS4.4					
CN2				LR	LR	
	comp=Z,200nm,17.0s,MS4.2					
EKS2	**Erkin-Say**	**53.10**	**335**	*e*P	**P**	**06 03 59.5 +0.5**
	comp=Z,12nm,0.8s,mb4.9					
EKS2				*e*pP	pP	06 04 05.7 -4.0
MAT	**Matsushiro**	**53.46**	**37**	P	**P**	**06 03 59.7 -2.1**
MJAR	**Matsushiro Arr**	**53.46**	**37**	P	**P**	**06 04 00.0 -1.7**
	comp=Z,6.5nm,0.7s,mb4.7,baz=213,slow=7.5,SNR=14					
MK31	**Makanchi Array**	**53.72**	**344**	*e*P	**P**	**06 04 03.3 -0.2**
MKAR	**Makanchi Array**	**53.72**	**344**	P	**P**	**06 04 03.2 -0.3**
	comp=Z,11nm,0.7s,mb4.9,baz=144,slow=8.4,SNR=53					
MKAR	**Makanchi Array**	**53.72**	**344**	P	**P**	**06 04 03.2 -0.3**
ZAK	**Zakamensk**	**54.66**	**2**	*e*P	**P**	**06 04 10.0 -0.3**
ZAK				*e*		06 05 13.3
MDJ	**Mudanjiang**	**55.09**	**24**	P	**P**	**06 04 14.3 +0.8**
MDJ				AP	pP	06 04 23.3 -0.8
MDJ				XP	sP	06 04 26.8 -1.5
MDJ				PP	PP	06 06 17.5 +0.4
MDJ				PCS	PcS	06 09 14.8 +0.5
MDJ				S	**S**	**06 11 56.0 +2.3**
MDJ				XS	sS	06 12 12.5 +1.2
MDJ				SCS	ScS	06 14 00.5 +0.5
MDJ				AMB	AMB	
	comp=Z,8.0nm,1.8s,mb4.5					
MDJ				AMB	AMB	
	comp=Z,49nm,3.9s					
MDJ				LR	LR	
	comp=N,154nm,29.8s					
MDJ				LR	LR	
	comp=E,169nm,22.3s					
MDJ				LR	LR	
	comp=Z,159nm,16.1s					
HVS	**Khovu-Aksy**	**55.76**	**354**⇑	*e*P	**P**	**06 04 17.5 -0.7**
HVS				pmax	pmax	
	comp=Z,8.0nm,0.8s,mb4.8					
TLY	**Talaya**	**55.97**	**2**	*c* *i*P	**P**	**06 04 20.1 +0.4**
TLY				pmax	pmax	
	comp=Z,5.0nm,0.7s,mb4.7					
KURK	**Kurchatov**	**58.31**	**343**	*d* *i*P	**P**	**06 04 35.9 -0.3**
KURK				pmax	pmax	
	comp=Z,12nm,0.7s,mb5.0					
KURK	**Kurchatov**	**58.31**	**343**	*e*P	**P**	**06 04 35.6 -0.6**
	comp=Z,9.1nm,0.8s,mb4.9					
KLR	**Kul'dur**	**59.70**	**23**	*e*P	**P**	**06 04 41.0 -4.9**
ZAA0	**Zalesovo Array**	**59.81**	**349**	*e*P	**P**	**06 04 45.9 -0.6**
ZALV	**Zalesovo Beam**	**59.81**	**349**	P	**P**	**06 04 45.8 -0.8**
	comp=Z,15nm,0.8s,mb5.1,baz=152,slow=6.5,SNR=37					
ZALV				LR	LR	06 32 26.6
	comp=Z,82nm,19.3s,MS3.9,baz=153,slow=38					
BOD	**Bodaibo**	**62.94**	**8**	*e*P	**P**	**06 05 07.1 -0.6**
BOD				pmax	pmax	
	comp=Z,9.0nm,1.0s,mb4.8					
YSS	**Yuzh-Sakhalins**	**62.95**	**31**⇓	*e*P	**P**	**06 05 08.1 +0.2**
BRVK	**Borovoye**	**62.97**	**340**	*e*P	**P**	**06 05 06.9 -1.1**
MAW	**Mawson**	**68.21**	**195**	P	**P**	**06 05 42.5 +0.9**
	comp=Z,1.3nm,0.8s,mb4.0,baz=20,slow=7.2,SNR=3.3					
YAK	**Yakutsk**	**69.82**	**14**⇑	*e*P	**P**	**06 05 51.1 -0.5**
YAK				pmax	pmax	
	comp=Z,22nm,0.6s,mb5.3					
ARU	**Arti**	**69.94**	**336**	*d* *i*P	**P**	**06 05 52.0 -0.5**
ARU				*e*		06 06 10.2
ARU				*e*		06 08 26.6
ARU				*e*S	S	06 15 00.8 +0.8
ARU				*e*SS	SS	06 19 35.4 +5.6
ARU				pmax	pmax	
	comp=Z,11nm,1.0s,mb4.7					
ARU	**Arti**	**69.94**	**336**	*e*P	**P**	**06 05 51.8 -0.7**
	comp=Z,11nm,1.1s,mb4.7					
ASF	**Jabal al Asfar**	**71.02**	**306**	P	**P**	**06 06 01.1 +1.5**
	comp=Z,1.3nm,0.4s,mb4.2,baz=117,slow=4.5,SNR=3.1					
PETK	**Petropavlovsk-**	**74.33**	**31**	P	**P**	**06 06 17.6 -1.2**
	comp=Z,2.9nm,0.7s,mb4.3,baz=207,slow=7.6,SNR=2.8					
SEY	**Seymchan**	**77.46**	**21**⇑	*e*P	**P**	**06 06 35.8 -0.6**
TIXI	**Tiksi**	**78.10**	**9**⇑	*e*P	**P**	**06 06 38.0 -1.8**
TIXI				pmax	pmax	
	comp=Z,6.0nm,0.6s,mb4.7					
TIXI				MLR	MLR	
	comp=Z,100nm,14.0s,MS4.3					
TIXI	**Tiksi**	**78.10**	**9**	*e*P	**P**	**06 06 38.3 -1.5**
OBN	**Obninsk**	**79.52**	**328**⇑	*e*P	**P**	**06 06 48.2 +0.2**
OBN				*e*		06 09 48.4
OBN				*e*S	S	06 16 50.6 +3.6
OBN				*e*SS	SS	06 21 58.8 +3.4
OBN				pmax	pmax	
	comp=Z,9.0nm,1.0s,mb4.7					
OBN				MLR	MLR	
	comp=Z,100nm,19.0s,MS4.2					
ARCES	**ARCESS Array B**	**89.20**	**340**	P	**P**	**06 07 36.4 -0.3**
	comp=Z,3.9nm,0.7s,mb4.8,baz=90,slow=6.2,SNR=8.5					
SNAA	**Sanae**	**90.18**	**198**⇓	*e*P	**P**	**06 07 41.9 +0.6**
GERES	**GERESS Array B**	**91.70**	**319**	P	**P**	**06 07 48.3 -0.5**
	comp=Z,0.3nm,0.2s,mb4.2,baz=92,slow=5.0,SNR=3.9					
NVAR	**Mina Array Bea**	**130.69**	**41**	PKP	PKPdf	06 13 54.0 +1.2
	comp=Z,0.6nm,0.6s,baz=263,slow=2.7,SNR=5.3					
PDAR	**Pinedale Array**	**133.09**	**31**	PKP	PKPdf	06 13 57.4 +0.2
	comp=Z,0.2nm,0.4s,baz=338,slow=1.0,SNR=2.6					
ANMO	**Albuquerque**	**140.30**	**37**	*i*PKIKP	PKPdf	06 14 15.2 +4.4
BDFB	**Brasilia**	**143.57**	**236**	PKP	PKPdf	06 14 20.0 +2.9
	comp=Z,7.5nm,0.4s,baz=129,slow=0.8,SNR=4.2					
WMOK	**Wichita Mounta**	**144.64**	**29**	*e*PKIKP	PKPdf	06 14 16.9 -1.6
BLO	**Bloomington**	**144.75**	**10**	*e*PKIKP	PKPdf	06 14 16.7 -1.9
SIUC	**Southern Illin**	**145.56**	**15**	*e*PKPbc	PKPbc	06 14 20.0 -0.1
WCI	**Wyandotte Cave**	**145.71**	**11**	*e*PKP2	PKPab	06 14 20.3 -0.6
TXAR	**Lajitas Array**	**145.84**	**41**	PKPbc	PKPbc	06 14 21.8 +0.6
	comp=Z,6.8nm,0.8s,baz=291,slow=1.1,SNR=69					
JCT	**Junction City**	**147.41**	**35**	*e*PKP2	PKPab	06 14 26.2 -1.5
WVT	**Waverly**	**147.41**	**14**	*e*PKP2	PKPab	06 14 25.5 -2.0

ISCJB ***26*** *07:11:30.7±0.9, 1353N±006×120.12E±009, h46km±15km, mb4.2/2, Error ellipse: s-maj=15.7km s-min=7.8km az=21.6*
MAN ***26*** *07:11:30, 1350N×12005E, h18km, mb4.4, ML3.2, MS3.1*
IDC ***26*** *07:12:18.7±2.8, 778N×122.18E, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.8/19, mbtmp4.0/3, Error ellipse: s-maj=383.4km s-min=25.1km az=63.0*

ISC 26 07:11:31.5±0.9, 1353N±006×12012E±009, h35km±17km, n8, σ1§05/11, mb4.2/2, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NBP	**Mount Natib**	**1.23**	**14**⇑	*e*P	**Pn**		**07 11 52.4**	**+0.1**
NBP				*e*S	**Sn**		**07 12 06.0**	**-1.8**
BUSP	**Coron**	**1.52**	**177**	*e*P	**Pn**		**07 11 56.9**	**+0.7**
OTRP	**Odiongan**	**2.19**	**122**	*e*P	**Pn**		**07 12 05.8**	**+0.4**
GQP	**Guinayangan**	**2.29**	**80**	*e*P	**Pn**		**07 12 11.0**	**+4.2**
GQP				*e*S	**Sn**		**07 12 33.0**	**-0.9**
ENPP	**El Nido**	**2.41**	**196**	*e*P	**Pn**		**07 12 08.8**	**+0.4**
ENPP				*e*S	**Sn**		**07 12 35.4**	**-1.4**
BALP	**Baler**	**2.61**	**33**	*e*P	**Pn**		**07 12 13.3**	**+2.2**
WRA	**Warramunga Arr**	**36.09**	**157**	P	**P**		**07 18 29.6**	**-0.5**
	4.9nm,0.8s,mb4.5,baz=336,slow=9.6,SNR=26							
ASAR	**Alice Springs**	**39.35**	**160**	P	**P**		**07 18 58.1**	**+0.5**
	2.2nm,0.7s,mb4.0,baz=339,slow=8.1,SNR=27							

SOF ***26*** *07:15:56.2, 4184N×2270E, h7km, MD2.7*
SKO ***26*** *07:15:56.6, 4186N×2280E, h20km, M1.7, ML2.0*
ISCJB ***26*** *07:15:57.4±0.4, 4182N±002×2274E±003, h10km, Error ellipse: s-maj=3.5km s-min=2.9km az=175.3*
CSEM ***26*** *07:15:58.0±0.1, 4183N×2276E, h8km, ML2.7, Error ellipse: s-maj=1.4km s-min=1.3km az=39.0*
THE ***26*** *07:15:58.8, 4179N×2276E, h2km, ML2.7*
BEO ***26*** *07:16:01.8±1.3, 4192N×2273E, ML2.0/3*

ISC 26 07:15:58.4±0.4, 4182N±002×2276E±003, h1km±8km, n20, σ0§61/36, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.24**	**78**	*i* Pg	**Pg**		**07 16 03.0**	**-0.1**
STIP	**Stip**	**0.45**	**254**	*e*Pg	**Pg**		**07 16 06.7**	**-0.3**
STIP				*e*Sg	**Sg**		**07 16 13.5**	**+0.8**
STIP	**Stip**	**0.45**	**254**	*i* Pg	**Pg**		**07 16 06.8**	**-0.1**
STIP				*e*Sg	**Sg**		**07 16 13.2**	**+0.5**
STIP				*e*Lg			07 16 13.3	
	comp=E,58nm,0.3s							
STIP				*e*Lg			07 16 13.6	
	comp=N,62nm,0.4s							
STIP	**Stip**	**0.45**	**254**	*i* Pg	**Pg**		**07 16 06.8**	**-0.1**
STIP				*e*Sg	**Sg**		**07 16 13.5**	**+0.8**
VAY	**Valandovo**	**0.52**	**196**	*e*Pg	**Pg**		**07 16 08.4**	**+0.2**
VAY				*e*Sg	**Sg**		**07 16 15.1**	**+0.2**
VAY				*e*Lg			07 16 15.3	
	comp=N,116nm,0.6s							
VAY				*e*Lg			07 16 15.4	
	comp=E,96nm,0.3s							
VAY	**Valandovo**	**0.52**	**196**	*e*Pg	**Pg**		**07 16 08.2**	**0.0**
VAY				*e*Sg	**Sg**		**07 16 15.4**	**+0.5**
KNT	**Kendrikon**	**0.66**	**171**	*e*Pg	**Pg**		**07 16 10.8**	**-0.2**
KNT				*e*Sg	**Sg**		**07 16 20.1**	**+0.5**
MMB	**Musomiste**	**0.76**	**107**	*i* Pg	**Pg**		**07 16 13.0**	**+0.1**
VTS	**Vitosha**	**0.84**	**23**	*i* Pg	**Pg**		**07 16 13.7**	**-0.8**
VTS	**Vitosha**	**0.84**	**23**	*e*Pg	**Pg**		**07 16 15.7**	**+1.2**
VTS				*e*Sg	**Sg**		**07 16 25.9**	**+0.4**
GRG	**Griva**	**0.90**	**198**	*e*Pg	**Pg**		**07 16 15.1**	**-0.5**
GRG				*e*Sg	**Sg**		**07 16 27.9**	**+0.6**
SOH	**Sokhos**	**1.09**	**156**	*e*Pg	**Pg**		**07 16 18.8**	**-0.4**
SOH				*e*Sg	**Sg**		**07 16 33.6**	**+0.3**
KRUS	**Krusevo**	**1.22**	**249**	*e*Pg	**Pg**		**07 16 21.0**	**-0.8**
KRUS				*e*Sg	**Sg**		**07 16 37.5**	**0.0**
KRUS				*e*Lg			07 16 39.2	
	comp=N,6.6nm,0.3s							
KRUS				*e*Lg			07 16 39.5	
	comp=E,5.9nm,0.3s							
KRUS	**Krusevo**	**1.22**	**249**	*e*Pg	**Pg**		**07 16 20.9**	**-0.8**
KRUS				*e*Sg	**Sg**		**07 16 37.5**	**-0.1**
BARS	**Barje**	**1.22**	**325**	*e*Pg	**Pg**		**07 16 21.5**	**-0.3**
BARS				*e*Sg	**Sg**		**07 16 37.0**	**-0.7**
HORT	**Hortiatis**	**1.24**	**168**	*e*Pg	**Pg**		**07 16 21.8**	**-0.4**
HORT				*e*Sg	**Sg**		**07 16 38.8**	**+0.5**
RZN	**Rozhen**	**1.47**	**94**	*i* P	**Pn**		**07 16 25.5**	**-0.5**
PLD	**Plovdiv**	**1.48**	**78**	*e*Pg	**Pn**		**07 16 25.6**	**-0.5**
PLD				*e*Sg	**Sg**		**07 16 46.4**	**+0.6**
PLG	**Polygyros**	**1.53**	**160**	*e*Pg	**Pn**		**07 16 26.4**	**-0.5**
PLG				*e*Sg	**Sg**		**07 16 46.6**	**-0.9**
DIVS	**Divibare**	**3.06**	**319**	*e*Pn	**Pn**		**07 16 49.9**	**+2.1**
DIVS				*e*Sg	**Sg**		**07 17 36.4**	**-0.1**

CSEM ***26*** *07:17:14.6±0.1, 4015N×2895E, h2km, MD3.0, Error ellipse: s-maj=2.5km s-min=1.5km az=128.0*
DDA ***26*** *07:17:14.5, 4020N×2887E, h13km±1km, Md3.0*
ISCJB ***26*** *07:17:15.3±0.5, 4017N±002×2890E±003, h3km±5km, Error ellipse: s-maj=4.4km s-min=3.6km az=139.3*
ISK ***26*** *07:17:15.4, 4015N×2897E, h5km, MD2.8*

ISC 26 07:17:15.7±0.4, 4018N±002×2890E±003, h5km±5km, n30, σ0§78/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.18**	**100**	*i* P	**Pg**		**07 17 19.6**	**+0.3**
ULDT				*i* S	**Sg**		**07 17 22.8**	**+1.0**
ULDT	**Uludag**	**0.18**	**100**	*i* P	**Pg**		**07 17 19.6**	**+0.3**
GEMT	**Gemlik**	**0.34**	**40**	*e*PG	**Pg**		**07 17 22.3**	**0.0**
GEMT				*e*SG	**Sg**		**07 17 27.4**	**+0.6**
YLV	**Yalova**	**0.53**	**42**	*e*PG	**Pg**		**07 17 25.6**	**-0.3**
YLV				*e*SG	**Sg**		**07 17 33.0**	**+0.1**
DST	**Dursunbey**	**0.61**	**200**	*e*PG	**Pg**		**07 17 27.0**	**-0.4**
DURS	**Dursunbey**	**0.66**	**210**	*i* P	**Pg**		**07 17 27.6**	**-0.7**
DURS				*i* S	**Sg**		**07 17 37.4**	**+0.5**
DURS	**Dursunbey**	**0.66**	**210**	*i* P	**Pg**		**07 17 27.6**	**-0.8**
ADVT	**Abdulvahap**	**0.69**	**68**	*e*PG	**Pg**		**07 17 28.8**	**-0.2**
HRT	**Hereke**	**0.87**	**42**	*e*PG	**Pg**		**07 17 32.4**	**-0.1**
BALB	**Balikesir**	**0.95**	**236**	*e*PG	**Pg**		**07 17 34.5**	**+0.6**
BGKT	**Bogazkoy**	**1.01**	**354**	*e*PG	**Pg**		**07 17 36.1**	**+1.0**
BALY	**Balya**	**1.08**	**247**	*i* P	**Pg**		**07 17 34.9**	**-1.4**
BALY				*i* S	**Sg**		**07 17 49.8**	**-0.5**
KLYT	**Kilyos**	**1.08**	**6**	*e*PN	**Pn**		**07 17 37.0**	**-0.5**
GPA	**Golpazari**	**1.08**	**84**	*e*PG	**Pg**		**07 17 36.1**	**-0.4**
SILT	**Sile**	**1.13**	**30**	*e*PN	**Pn**		**07 17 37.5**	**-0.7**
DEMI	**Demirci**	**1.14**	**187**	*i* P	**Pg**		**07 17 37.0**	**-0.5**
DEMI				*i* S	**Sg**		**07 17 52.8**	**+0.5**
DEMI	**Demirci**	**1.14**	**187**	*i* P	**Pg**		**07 17 37.0**	**-0.6**
DEMI				*i* S	**Sg**		**07 17 52.8**	**+0.5**
GDZ	**Gediz**	**1.17**	**157**	*i* P	**Pg**		**07 17 38.7**	**+0.5**
GDZ				*i* S	**Sg**		**07 17 53.9**	**+0.5**
SLVT	**Silivri**	**1.18**	**334**	*e*PN	**Pn**		**07 17 39.3**	**+0.4**
BORA	**Eskisehir**	**1.23**	**103**	*i* P	**Pg**		**07 17 38.7**	**-0.5**
BORA				*i* S	**Sg**		**07 17 54.0**	**-1.1**
BORA	**Eskisehir**	**1.23**	**103**	*i* P	**Pg**		**07 17 38.7**	**-0.5**
BORA				*i* S	**Sg**		**07 17 54.0**	**-1.1**
GULT	**Gulveren**	**1.26**	**78**	*e*PN	**Pn**		**07 17 39.3**	**-0.7**
MFT	**Murefte**	**1.38**	**297**	*e*PN	**Pn**		**07 17 43.4**	**+1.8**
SART	**Tekirdag**	**1.41**	**292**	*i* P	**Pn**		**07 17 41.1**	**-0.9**
SART				*i* S	**Sb**		**07 17 59.4**	**-1.4**
RKY	**Sarkoy-Tekirda**	**1.41**	**292**	*e*PN	**Pn**		**07 17 43.0**	**+0.9**
ALT	**Altintas**	**1.46**	**140**	*e*PN	**Pn**		**07 17 42.1**	**-0.6**
AKS	**Akhisar**	**1.54**	**213**	*e*PN	**Pn**		**07 17 44.4**	**+0.5**
HENT	**Hendek**	**1.66**	**66**	*i* P	**Pn**		**07 17 45.2**	**-0.2**
HENT				*i* S	**Sn**		**07 18 10.9**	**+3.9**
KULA	**Kula-Manisa**	**1.67**	**187**	*e*PN	**Pn**		**07 17 45.7**	**+0.2**
EZN	**Ezine**	**2.01**	**261**	*e*PN	**Pn**		**07 17 52.2**	**+1.9**

IDC 26 07:25:22.1±27.0, 2425S×17231W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.9/18, mbtmp4.2/4, Error ellipse: s-maj=510.8km s-min=160.2km az=80.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.50**	**268**	P	P	P	07 32 46.8	+0.4
	1.8nm,0.4s,baz=84,slow=10,SNR=4.7							
STKA	**Stephens Creek**	**41.13**	**249**	P	P	P	07 33 07.7	-0.4
	2.1nm,0.8s,baz=94,slow=12,SNR=3.6							
ASAR	**Alice Springs**	**48.89**	**259**	P	P	P	07 34 10.0	0.0
	1.6nm,0.4s,baz=93,slow=7.5,SNR=51							
WRA	**Warramunga Arr**	**49.38**	**264**	P	P	P	07 34 13.7	-0.1
	1.1nm,0.4s,baz=105,slow=8.0,SNR=23							

IDC ***26*** *07:29:53.3±2.1, 221S×9898E, h0km, mb4.2/9, mb1 4.3/9, mb1mx4.1/20, mbtmp4.2/9, Error ellipse: s-maj=73.5km s-min=16.5km az=60.0*
ISCJB ***26*** *07:29:56.7±1.3, 215S±02×9911E±03, h33km, mb4.3/12, Error ellipse: s-maj=46.5km s-min=11.7km az=149.4*
MOS ***26*** *07:29:57.2±1.3, 208S×9917E, h33km, mb5.0/3, Error ellipse: s-maj=34.3km s-min=17.7km az=112.4*
NEIC ***26*** *07:29:57.7±1.2, 230S×9883E, h35km, mb4.8/1, Error ellipse: s-maj=48.7km s-min=8.7km az=59.0*
BJI ***26*** *07:29:59.7, 180S×9896E, h30km, mB4.9, mb4.7, Ms4.3, Msz4.2*

ISC 26 07:29:59.2±1.2, 21S±02×992E±03, h35km, n18, σ0§80/17, mb4.3/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.46**	**359**	P	**P**		**07 34 33.9**	**-0.1**
	8.4nm,1.0s,baz=191,slow=9.9,SNR=23							
LZH	**Lanzhou**	**38.27**	**6**	*e*P	**P**		**07 37 17.0**	**+0.8**
LZH				AP	pP		07 37 22.3	-4.1
LZH				XP	sP		07 37 25.0	-5.6
LZH				AMB	AMB			
	comp=Z,20nm,1.3s,mb4.7							
LZH				AMB	AMB			
	comp=Z,82nm,4.0s							
LZH	**Lanzhou**	**38.27**	**6**	*e*P	**P**		**07 37 17.0**	**+0.8**
	comp=Z,20nm,1.3s,mb4.7							
LZH				pP	pP		07 37 22.3	-4.1
LZH				sP	sP		07 37 25.1	-5.5
WRA	**Warramunga Arr**	**38.65**	**120**	P	**P**		**07 37 19.5**	**-0.3**
	comp=Z,0.9nm,0.8s,mb3.6,baz=299,slow=9.1,SNR=9.3							
ASAR	**Alice Springs**	**39.86**	**125**	P	**P**		**07 37 29.9**	**+0.2**
	comp=Z,2.0nm,1.0s,mb3.8,baz=303,slow=8.3,SNR=11							
GTA	**Gaotai**	**41.34**	**1**	P	**P**		**07 37 42.3**	**+0.6**
GTA				AP	pP		07 37 47.5	-4.5
GTA				XP	sP		07 37 50.5	-5.7
GTA				AMB	AMB			
	comp=Z,3.0nm,1.3s,mb3.8							
KSRS	**Korea Array**	**47.56**	**31**	P	**P**		**07 38 31.1**	**-0.4**
	comp=Z,5.0nm,1.1s,mb4.5,baz=226,slow=8.8,SNR=12							
CTA	**Charters Tower**	**49.30**	**115**	P	**P**		**07 38 45.2**	**0.0**
	comp=Z,4.2nm,0.7s,mb4.6,baz=293,slow=8.5,SNR=6.4							
CTA	**Charters Tower**	**49.30**	**115**	P	**P**		**07 38 45.2**	**0.0**
STKA	**Stephens Creek**	**49.69**	**131**	P	**P**		**07 38 47.9**	**-0.1**
	comp=Z,2.9nm,0.7s,mb4.4,baz=321,slow=8.5,SNR=5.8							
SONM	**Songino Array**	**50.16**	**6**	P	**P**		**07 38 52.4**	**+1.2**
	comp=Z,3.3nm,1.0s,mb4.3,baz=189,slow=7.9,SNR=11							
MK31	**Makanchi Array**	**50.93**	**345**	*e*P	**P**		**07 38 56.3**	**-0.8**
MKAR	**Makanchi Array**	**50.93**	**345**	P	**P**		**07 38 56.3**	**-0.8**
	comp=Z,2.1nm,0.8s,mb4.1,baz=153,slow=8.2,SNR=12							
ZAA0	**Zalesovo Array**	**57.14**	**350**	*e*P	**P**		**07 39 41.2**	**-1.0**
ZALV	**Zalesovo Beam**	**57.14**	**350**	P	**P**		**07 39 41.0**	**-1.2**
	comp=Z,8.5nm,0.9s,mb4.8,baz=180,slow=7.3,SNR=15							
BOD	**Bodaibo**	**60.94**	**9**	*e*P	**P**		**07 40 08.7**	**+0.2**
BOD				pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.4							
**OB

*IDC **26** 08:18:36.8±1.3, 237N×12826E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.9/15, mbtmp4.0/6, MS3.1/1, Ms1 3.1/1, ms1mx2.7/21, Error ellipse: s-maj=84.9km s-min=17.4km az=65.0*

*ISCJB **26** 08:18:40.2±1.1, 23N×02×1282E±04, h33km, mb4.1/7, Error ellipse: s-maj=69.4km s-min=12.7km az=155.1*

*NEIC **26** 08:18:42.3±1.0, 225N×12817E, h35km, mb4.5/2, Error ellipse: s-maj=68.1km s-min=11.9km az=66.0*

ISC 26 08:18:42.4±1.0, 22N±02×1282E±04, h35km, n10, σ0§98/9, mb4.1/7, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**5.44**	**332**	LR	LR	08 22 32.1	
	comp=Z,168nm,18.3s,baz=194,slow=44						
WRA	**Warramunga Arr**	**22.87**	**165**	P	**P**	**08 23 42.2**	**-0.7**
	2.4nm,0.9s,mb3.6,baz=342,slow=10,SNR=9.0						
WB2	**Warramunga Arr**	**22.87**	**165**	*e*P	**P**	**08 23 42.8**	**-0.2**
ASAR	**Alice Springs**	**26.35**	**168**	P	**P**	**08 24 16.9**	**+1.5**
	1.7nm,0.9s,mb3.6,baz=355,slow=8.6,SNR=11						
CMAR	**Chiang Mai Arr**	**32.85**	**301**	P	**P**	**08 25 12.6**	**-0.6**
	0.9nm,0.4s,mb4.0,baz=117,slow=7.3,SNR=7.4						
STKA	**Stephens Creek**	**36.25**	**160**	*e*P	**P**	**08 25 42.1**	**-0.3**
	3.7nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**36.25**	**160**	P	**P**	**08 25 42.0**	**-0.4**
	1.6nm,0.4s,mb4.3,baz=307,slow=8.4,SNR=7.7						
LZH	**Lanzhou**	**40.50**	**329**	*e*P	**P**	**08 26 20.0**	**+1.9**
	18nm,1.4s,mb4.6						
LZH				pP	pP	08 26 25.1	-3.2
LZH				sP	sP	08 26 28.4	-4.1
SONM	**Songino Array**	**49.16**	**341**	P	**P**	**08 27 25.8**	**-1.0**
	2.2nm,1.0s,mb4.2,baz=152,slow=5.3,SNR=7.8						
MKAR	**Makanchi Array**	**59.58**	**325**	P	**P**	**08 28 42.4**	**-0.3**
	2.2nm,0.6s,mb4.3,baz=128,slow=8.0,SNR=8.6						

*IDC **26** 08:30:58.9±0.7, 2845S×17677W, h0km, mb4.4/12, mb1 4.6/13, mb1mx4.5/17, mbtmp4.4/13, ML4.1/1, MS4.0/14, Ms1 4.0/14, ms1mx3.9/23, Error ellipse: s-maj=27.0km s-min=15.0km az=141.0*

*ISCJB **26** 08:31:00.2±3.4, 2837S±007×1768W±01, h20km±24km, mb4.4/15, MS4.1/13, Error ellipse: s-maj=17.0km s-min=8.1km az=30.7*

*MOS **26** 08:31:03.2±1.1, 2830S×17688W, h33km, mb4.8/4, Error ellipse: s-maj=21.2km s-min=14.9km az=47.2*

*NEIC **26** 08:31:04.4±0.5, 2837S×17685W, h35km, mb4.7/6, Error ellipse: s-maj=16.9km s-min=9.4km az=129.0*

ISC 26 08:31:00.4±1.9, 2840S±007×17676W±010, h10km±11km, n54, σ1§16/38, mb4.4/15, MS4.1/13, 1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.32**	**230**	Pn	**Pn**	**08 31 25.6**	**+0.7**
	348nm,0.3s,baz=155,slow=3.0,SNR=18						
RAO				Sn	**Sn**	**08 31 43.5**	**+0.9**
	941nm,0.3s,baz=270,slow=20,SNR=10.0						
RAO	**Raoul Island**	**1.32**	**230**	*e*Pg	**Pg**	**08 31 25.6**	**-0.1**
RAO				Sg	**Sg**	**08 31 50.3**	**+7.5**
URZ	**Urewera**	**11.08**	**206**	Pn	**Pn**	**08 33 39.4**	**+0.5**
	1.5nm,0.3s,baz=319,slow=20,SNR=6.1						
AFI	**Afiamalu**	**15.15**	**19**	Pn	**Pn**	**08 34 34.9**	**+0.3**
AFI				*e*Sn	**Sn**	**08 37 21.5**	**-1.0**
RAR	**Rarotonga**	**17.00**	**69**	LR	LR	08 39 26.4	
	comp=Z,456nm,18.9s,baz=257,slow=30						
RPZ	**Rata Peaks**	**18.15**	**209**	P	**Pn**	**08 35 09.5**	**-2.9**
	1.9nm,0.3s,baz=303,slow=4.9,SNR=9.0						
TBI	**Tubuai**	**25.05**	**85**	*e*LR	LR	08 42 33.3	
	537nm,28.8s,baz=258						
PPT	**Papeete**	**27.19**	**73**	*e*LR	LR	08 43 27.8	
	575nm,26.8s,baz=243						
PPT	**Papeete**	**27.19**	**73**	LR	LR	08 44 21.9	
	comp=Z,270nm,20.0s,MS3.8,baz=266,slow=30						
HNR	**Honiara**	**28.91**	**306**	LR	LR	08 47 18.3	
	comp=Z,155nm,18.8s,MS3.6,baz=132,slow=34						
CTA	**Charters Tower**	**34.62**	**276**	*e*P	**P**	**08 37 51.7**	**+1.9**
	2.3nm,0.3s,mb4.6						
CTA	**Charters Tower**	**34.62**	**276**	P	**P**	**08 37 51.7**	**+1.9**
	3.4nm,0.4s,mb4.6,baz=101,slow=11,SNR=8.9						
CTA				PcP	PcP	08 40 23.9	-0.4
	2.8nm,0.6s,baz=40,slow=23,SNR=4.4						
CTA				LR	LR	08 47 49.5	
	comp=Z,91nm,20.9s,MS3.5,baz=294,slow=29						
CTA	**Charters Tower**	**34.62**	**276**	*e*P	**P**	**08 37 51.7**	**+1.9**
CTA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CTAO	**Charters Tower**	**34.62**	**276**	*e*P	**P**	**08 37 51.7**	**+1.9**
CTAO				*e*		08 40 23.4	
CTAO				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
CTAO	**Charters Tower**	**34.62**	**276**	*e*P	**P**	**08 37 51.7**	**+1.9**
	comp=Z,10nm,1.1s,mb4.7						
CTAO				*e*PcP	PcP	08 40 23.4	-0.9
STKA	**Stephens Creek**	**36.02**	**254**	*e*P	**P**	**08 38 02.6**	**+0.7**
	comp=Z,5.5nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**36.02**	**254**	P	**P**	**08 38 01.0**	**-0.8**
	comp=Z,11nm,0.9s,mb4.8,baz=84,slow=6.2,SNR=11						
STKA				LR	LR	08 52 25.0	
	comp=Z,364nm,18.3s,MS4.2,baz=29,slow=36						
RKT	**Rikitea**	**37.87**	**92**	*e*LR	LR	08 48 28.5	
	comp=Z,387nm,29.2s						
ASAR	**Alice Springs**	**44.34**	**264**	P	**P**	**08 39 10.5**	**-0.4**
	comp=Z,4.9nm,0.9s,mb4.2,baz=95,slow=7.2,SNR=46						
ASAR				PcP	PcP	08 40 55.3	+0.3
	comp=Z,0.9nm,0.6s,baz=123,slow=3.8,SNR=5.1						
WB2	**Warramunga Arr**	**45.14**	**270**	*e*P	**P**	**08 39 17.5**	**+0.2**
WRAB	**Tennant Creek**	**45.14**	**270**	*e*P	**P**	**08 39 16.9**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**45.14**	**270**	*e*P	**P**	**08 39 16.9**	**-0.5**
	comp=Z,8.7nm,1.0s,mb4.5						
WRA	**Warramunga Arr**	**45.15**	**270**	P	**P**	**08 39 17.0**	**-0.4**
	comp=Z,6.9nm,0.8s,mb4.5,baz=106,slow=7.9,SNR=25						
WRA				PcP	PcP	08 40 58.6	+0.7
	comp=Z,3.6nm,0.9s,baz=106,slow=3.7,SNR=8.7						
WRA				LR	LR	08 58 04.1	
	comp=Z,183nm,18.6s,MS4.0,baz=100,slow=36						
WRA	**Warramunga Arr**	**45.15**	**270**	P	**P**	**08 39 17.0**	**-0.4**
WRA						08 40 58.6	
FORT	**Forrest**	**47.63**	**253**	*e*P	**P**	**08 39 35.1**	**-1.7**
	comp=Z,26nm,0.7s,mb5.4						
SBA	**Scott Base**	**50.10**	**184**	*e*P	**P**	**08 39 57.7**	**+2.6**
SBA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
SBA	**Scott Base**	**50.10**	**184**	*e*P	**P**	**08 39 57.7**	**+2.6**
	comp=Z,8.7nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.48**	**268**	P	**P**	**08 40 19.6**	**-1.6**
	comp=Z,2.6nm,1.0s,mb4.1,baz=63,slow=9.0,SNR=3.1						
FITZ				LR	LR	09 02 50.6	
	comp=Z,202nm,18.2s,MS4.2,baz=279,slow=36						
NWAO	**Narrogin (SRO)**	**56.13**	**248**	LR	LR	09 05 21.4	
	comp=Z,240nm,18.3s,MS4.3,baz=82,slow=37						
BATI	**Baumata**	**58.50**	**275**	LR	LR	09 03 35.0	
	comp=Z,614nm,19.4s,MS4.7,baz=65,slow=33						
DAV	**Davao City (W)**	**65.80**	**293**	LR	LR	09 09 52.0	
	comp=Z,62nm,19.5s,MS3.8,baz=191,slow=36						
MAW	**Mawson**	**74.55**	**200**	P	**P**	**08 42 38.5**	**-0.5**
	comp=Z,4.5nm,0.8s,mb4.5,baz=120,slow=7.8,SNR=8.3						
MJAR	**Matsushiro Arr**	**77.24**	**324**	P	**P**	**08 42 54.8**	**+0.2**
	comp=Z,2.9nm,0.8s,mb4.5,baz=158,slow=5.3,SNR=5.8						
SYO	**Syowa Base**	**79.30**	**193**	*e*P	**P**	**08 43 04.0**	**-1.7**
SNAA	**Sanae**	**80.11**	**178**	*e*	**P**	**08 43 09.9**	**-0.2**
SNAA				*e*		08 43 20.8	
VNA3	**Neumayer Olymp**	**80.22**	**176**	*e*	**P**	**08 43 10.4**	**-0.2**
VNA3				*e*		08 43 21.4	
VNA2	**Neumayer--Watz**	**80.66**	**176**	*e*	**P**	**08 43 11.5**	**-1.6**
	baz=180,slow=4.2						
VNA2				*e*		08 43 21.4	
PLCA	**Paso Flores**	**83.07**	**133**	LR	LR	09 15 39.5	
	comp=Z,131nm,18.3s,MS4.3,baz=80,slow=32						
KSRS	**Korea Array**	**83.55**	**319**	P	**P**	**08 43 30.5**	**+1.9**
	comp=Z,2.2nm,1.0s,mb4.3,baz=133,slow=5.5,SNR=5.6						
PETK	**Petropavlovsk-**	**84.16**	**345**	P	**P**	**08 43 30.9**	**-0.4**
	comp=Z,6.2nm,0.9s,mb4.7,baz=116,slow=10,SNR=4.5						
PETK				LR	LR	09 16 08.2	
	comp=Z,46nm,19.5s,MS3.9,baz=312,slow=32						
PETK	**Petropavlovsk-**	**84.16**	**345**	P	**P**	**08 43 30.9**	**-0.4**
PETK				LR	LR	09 16 08.2	
NVAR	**Mina Array Bea**	**86.04**	**42**	P	**P**	**08 43 43.2**	**+2.1**
	comp=Z,1.2nm,0.8s,mb4.2,baz=219,slow=8.5,SNR=6.4						
TXAR	**Lajitas Array**	**90.40**	**57**	P	**P**	**08 44 03.4**	**+1.2**
	comp=Z,1.0nm,1.0s,mb4.1,baz=224,slow=3.5,SNR=6.4						
PDAR	**Pinedale Array**	**93.94**	**43**	P	**P**	**08 44 18.4**	**+0.2**
	comp=Z,0.2nm,0.7s,mb3.6,baz=204,slow=3.3,SNR=4.1						
PDAR				LR	LR	09 19 31.4	
	comp=Z,85nm,18.1s,MS4.2,baz=86,slow=31						
PDAR	**Pinedale Array**	**93.94**	**43**	P	**P**	**08 44 18.4**	**+0.2**
PDAR				LR	LR	09 19 31.4	
LPAZ	**La Paz**	**97.96**	**113**	LR	LR	09 19 56.0	
	comp=Z,50nm,19.7s,MS4.0,baz=271,slow=30						
ZALV	**Zalesovo Beam**	**117.25**	**319**	PKP	PKPdf	08 49 44.5	-1.0
	comp=Z,1.3nm,0.5s,baz=22,slow=1.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**117.25**	**319**	PKP	PKPdf	08 49 44.5	-1.0
MKAR	**Makanchi Array**	**117.31**	**311**	PKP	PKPdf	08 49 45.1	-0.6
	comp=Z,1.4nm,0.9s,baz=54,slow=2.1,SNR=8.9						
NB2	**NORSAR Subarra1**	**146.93**	**353**	PKP	PKPdf	08 50 42.3	+1.8
	comp=Z,2.2nm,0.8s,baz=10,slow=3.0						
NOA	**NORSAR Array B**	**146.93**	**353**	PKPbc	PKPbc	08 50 42.2	-0.2
	comp=Z,3.3nm,0.8s,baz=14,slow=4.5,SNR=7.1						
NOA	**NORSAR Array B**	**146.93**	**353**	PKPbc	PKPbc	08 50 42.2	-0.3
AKASG	**Malin Array Be**	**150.32**	**326**	PKPbc	PKPbc	08 50 51.1	-0.5
	comp=Z,6.4nm,0.8s,baz=41,slow=2.5,SNR=14						
TORD	**Torodi Ar. Bea**	**164.75**	**174**	PKPab	PKPab	08 51 59.6	-1.0
	comp=Z,0.9nm,0.9s,baz=183,slow=4.2,SNR=5.3						

*ISCJB **26** 09:29:28.9±1.9, 353N±0.1×2694E±008, h8km±18km, Error ellipse: s-maj=20.1km s-min=6.3km az=152.8*

*ISK **26** 09:29:28.4, 3526N×2720E, h5km, MD3.4*

*CSEM **26** 09:29:29.3±0.4, 3528N×2693E, h8km±3km, MD3.5, Error ellipse: s-maj=13.4km s-min=3.7km az=140.0*

*NEIC **26** 09:29:29.8, 3538N×2694E, h23km, MD3.5(ATH), After ATH.*

*ATH **26** 09:29:30.0, 3539N×2693E, h23km±1km, MD3.5/7*

ISC 26 09:29:29.1±1.4, 3526N±008×2692E±007, h6km±8km, n15, σ0§80/21, 2D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.35**	**34**	↓*i*Pb	**Pg**	**09 29 35.5**	**-0.4**
KARP				*e*SB	**Sg**	**09 29 40.8**	**+0.2**
KARP	**Karpathos**	**0.35**	**34**	↓*i*Pb	**Pg**	**09 29 35.1**	**-0.8**
KARP				*e*Sb	**Sg**	**09 29 40.8**	**+0.2**
NPS	**Neapolis**	**1.07**	**271**	*e*PN	**Pn**	**09 29 50.6**	**0.0**
NPS				*e*SN	**Sn**	**09 30 05.2**	**-0.6**
ARG	**Arkhangelos**	**1.37**	**45**	*e*PN	**Pn**	**09 29 54.6**	**-0.1**
SANT	**Santorini**	**1.63**	**314**	*e*Pn	**Pn**	**09 29 58.1**	**-0.2**
SANT	**Santorini**	**1.63**	**314**	*e*Pn	**Pn**	**09 29 58.1**	**-0.1**
BODT	**Bodrum**	**1.83**	**10**	*e*PN	**Pn**	**09 30 02.2**	**+1.2**
BODT				*e*SN	**Sn**	**09 30 25.6**	**+1.0**
APE	**Apeiranthos**	**2.13**	**329**	*e*PN	**Pn**	**09 30 05.2**	**0.0**
APE				*e*SN	**Sn**	**09 30 30.3**	**-1.6**
MLSB	**Milas**	**2.15**	**18**	*e*PN	**Pn**	**09 30 06.1**	**+0.6**
YER	**Yerkesik**	**2.17**	**30**	*e*PN	**Pn**	**09 30 05.2**	**-0.6**
YER				*e*SN	**Sn**	**09 30 33.2**	**+0.2**
VAM	**Vamos**	**2.23**	**275**	*e*PN	**Pn**	**09 30 07.5**	**+1.0**
VAM	**Vamos**	**2.23**	**275**	*e*Pn	**Pn**	**09 30 07.0**	**+0.5**
SMG	**Samos**	**2.45**	**358**	*e*PN	**Pn**	**09 30 09.0**	**-0.6**
ELL	**Elmali**	**2.84**	**58**	*e*PN	**Pn**	**09 30 13.8**	**-1.2**
VLI	**Veliai**	**3.55**	**295**	*e*PN	**Pn**	**09 30 26.0**	**+1.4**

IDC 26 09:31:37.7±3.8, 651S×15193E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, Error ellipse: s-maj=125.6km s-min=54.3km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.68**	**230**	P	P	09 36 30.7	+0.5
	0.9nm,0.9s,baz=58,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**24.31**	**224**	P	P	09 36 57.8	+0.7
	1.2nm,0.9s,baz=56,slow=9.2,SNR=8.2						
FITZ	**Fitzroy Crossi**	**28.10**	**243**	P	P	09 37 30.4	-1.0
	1.7nm,0.9s,baz=42,slow=7.8,SNR=4.0						
TORD	**Torodi Ar. Bea**	**149.96**	**285**	PKPbc	PKPbc	09 51 30.9	-0.3
	0.2nm,0.7s,baz=85,slow=2.4,SNR=2.5						

*SGS **26** 10:06:03.3, 30.18N×3621E, h5km*

*CSEM **26** 10:06:03.3, 30.18N×3621E, h5km, ML2.8, After SNSN*

*ISCJB **26** 10:06:04.9±0.8, 2984N±003×3624E±005, h0km, Error ellipse: s-maj=5.9km s-min=4.6km az=173.0*

*GII **26** 10:06:05.0±1.1, 2987N×3614E, h0km, ML2.4/3, EXPLOSION*

ISC 26 10:06:04.9±0.9, 2983N±003×3628E±005, h0km, n16, σ0§80/24, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQBJ	**Aqaba**	**1.07**	**265**	Pg	**Pg**	**10 06 24.9**	**-0.5**
HRFI	**Mount Harif**	**1.10**	**281**	Pg	**Pg**	**10 06 24.9**	**-1.0**
HRFI				Sg	**Sg**	**10 06 40.1**	**0.0**
EIL	**Elat**	**1.16**	**262**	Pg	**Pg**	**10 06 26.6**	**-0.6**
EIL				Sg	**Sg**	**10 06 43.0**	**+0.6**
HQLS		**1.18**	**244**	P	**Pg**	**10 06 26.8**	**-0.8**
HQLS				S	**Sg**	**10 06 43.7**	**+0.7**
MBRI	**Mt Berech**	**1.19**	**269**	Pg	**Pg**	**10 06 26.9**	**-0.8**
MBRI				Sg	**Sg**	**10 06 43.8**	**+0.8**
ZFRI	**Zfri**	**1.19**	**307**	Pg	**Pg**	**10 06 26.4**	**-1.4**
ZFRI				Sg	**Sg**	**10 06 43.3**	**0.0**
PRNI	**Paran**	**1.22**	**296**	Pg	**Pg**	**10 06 27.2**	**-1.1**
PRNI				Sg	**Sg**	**10 06 44.6**	**+0.5**
JLOS		**1.29**	**212**	P	**Pg**	**10 06 29.6**	**-0.1**
KRMI	**Paran Flat**	**1.38**	**282**	Sg	**Sg**	**10 06 48.8**	**-0.4**
TBKS	**Tabuk**	**1.62**	**172**	P	**Pn**	**10 06 35.3**	**+0.6**
MZDA	**Masada**	**1.67**	**332**	Pn	**Pn**	**10 06 34.9**	**-0.5**
MZDA				Sn	**Sn**	**10 06 58.1**	**+0.5**
BDAS	**Al Bad'**	**1.73**	**217**	S	**Sn**	**10 07 00.3**	**+1.2**
BDAS	**Al Bad'**	**1.73**	**217**	P	**Pn**	**10 06 36.0**	**-0.3**
DSI	**Dead Sea**	**1.90**	**336**	Pn	**Pn**	**10 06 38.7**	**+0.2**
KZIT	**Kziot**	**1.95**	**304**	Pn	**Pn**	**10 06 39.6**	**+0.4**
KZIT				Sn	**Sn**	**10 07 04.8**	**+0.4**
HMDT	**Nahal Hemdat**	**2.50**	**345**	Sn	**Sn**	**10 07 20.6**	**+2.6**

*CSEM **26** 10:16:38.2±0.2, 3722N×2790E, h30km, MD2.6, Error ellipse: s-maj=8.3km s-min=4.4km az=175.0*

*ISCJB **26** 10:16:39.4±0.7, 37.11N±004×2799E±004, h10km, Error ellipse: s-maj=6.6km s-min=4.3km az=17.1*

*DDA **26** 10:16:39.3, 37.10N×2802E, h7km±3km, Md2.6*

*ISK **26** 10:16:40.4, 37.17N×2790E, h10km, MD2.6*

ISC 26 10:16:39.9±0.8, 3712N±005×2799E±004, h9km±12km, n9, σ0§84/15, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.23**	**85**	*e*PG	**Pg**	**10 16 46.6**	**+1.9**
YER				*e*SG	**Sg**	**10 16 52.5**	**+4.6**
MLSB	**Milas**	**0.25**	**316**	*e*PG	**Pg**	**10 16 44.0**	**-0.9**
MLSB				*e*SG	**Sg**	**10 16 47.5**	**-0.8**
BDRM	**Kayabasi**	**0.44**	**264**	*i* P	**Pg**	**10 16 48.0**	**-0.5**
BDRM				*i* S	**Sg**	**10 16 55.5**	**+1.2**
TURN	**Turunc**	**0.55**	**116**	*i* P	**Pg**	**10 16 50.1**	**-0.4**
TURN				*i* S	**Sg**	**10 16 56.9**	**-0.7**
BODT	**Bodrum**	**0.55**	**265**	*e*PG	**Pg**	**10 16 49.8**	**-0.8**
BODT				*e*SG	**Sg**	**10 16 58.2**	**+0.6**
AYDN	**Tasoluk**	**0.55**	**351**	*i* P	**Pg**	**10 16 50.8**	**+0.2**
AYDN				*i* S	**Sg**	**10 16 58.3**	**+0.4**
BLCB	**Balcova**	**1.47**	**330**	*e*PN	**Pn**	**10 17 06.7**	**+0.1**
DEMI	**Demirci**	**2.01**	**16**	*i* P	**Pn**	**10 17 08.2**	**-5.7**
DEMI	**Demirci**	**2.01**	**16**	*i* P	**Pn**	**10 17 08.2**	**-5.8**

IDC 26 10:23:22.7±1.9, 661S×12518E, h0km, mb3.7/1, mb1 3.6/3, mb1mx3.4/16, mbtmp3.4/3, ML3.0/2, 1D, Error ellipse: s-maj=440.3km s-min=29.7km az=61.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDI	**Kendari**	**3.67**	**316**	↓*e*P	Pn	10 24 23.1	+2.4
KDI				*e*S	Sn	10 25 05.6	+0.9
WRA	**Warramunga Arr**	**15.96**	**147**	Pn	Pn	10 27 08.5	-0.3
	0.0nm,0.3s,baz=314,slow=15,SNR=3.6						
ASAR	**Alice Springs**	**18.92**	**155**	P	Pn	10 27 45.5	-0.2
	0.1nm,0.3s,baz=331,slow=12,SNR=9.6						
MKAR	**Makanchi Array**	**65.35**	**329**	P	P	10 34 06.9	+0.1
	0.2nm,0.5s,baz=133,slow=7.6,SNR=5.1						

*VIE **26** 10:26:09.9±0.4, 5048N×1364E, h0km, mb2.2/1, ML2.6/3, Error ellipse: s-maj=2.8km s-min=1.3km az=27.0 64 km S of Dresden Suspected Mining explosion.*

CSEM 26 10:26:09.5±0.5, 5052N×1345E, h1km, ML2.6/3, 3C-3D, Error ellipse: s-maj=9.5km s-min=3.7km az=116.0, Suspected Mining explosion., Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**1.84**	**79**	*e*Pg	Pg	10 26 44.3	-0.5
KSP				*e*Sg	Sg	10 27 09.3	+0.7
KSP	**Ksiaz**	**1.84**	**79**	*e*Pg	Pg	10 26 44.2	-0.6
KSP				*e*Sg	Sg	10 27 08.6	0.0
MOA	**Molln**	**2.73**	**168**	↓*i*Pg	Pg	10 27 01.2	-0.5
MOA				↓*i*Sg	Sg	10 27 37.6	+0.6
	6.4nm,0.3s						
CSNA	**Conrad Observa**	**3.04**	**148**	↓*i*Pg	Pg	10 27 06.6	-1.1
CSNA				↓*i*Sg	Sg	10 27 46.6	-0.4
	5.9nm,0.3s						
CONA	**Conrad Observa**	**3.04**	**148**	↑*i*Pg	Pg	10 27 06.7	-1.0
CONA				↑*i*Sg	Sg	10 27 47.1	0.0
	8.6nm,0.4s						

MAN 26 10:44:51, 1118N×12468E, h3km, mb3.9, ML2.7, MS2.3, 3C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.14**	**210**	*e*P	Pg	10 44 54.3	+0.6
OCLP				*e*S	Sg	10 44 57.0	+1.3
PLP	**Palo**	**0.29**	**92**	↑*e*P	Pg	10 44 59.1	+2.5
PLP				*e*S	Sg	10 45 02.5	+2.0
BESP	**Borongan**	**0.85**	**60**	*e*P	Pg	10 45 08.1	+0.7
BESP				*e*S	Sg	10 45 20.7	+2.2
MSLP	**Maasin**	**1.05**	**170**	*e*P	Pg	10 45 10.4	-0.7
MSLP				*e*S	Sg	10 45 29.1	+4.4
LLP	**Lapu-Lapu**	**1.10**	**220**	↑*i*P	Pg	10 45 12.1	-0.1
LLP				*i* S	Sg	10 45 24.6	-1.9
CNP	**Catarman**	**1.33**	**359**	*e*P	Pn	10 45 15.6	-0.9
CNP				*e*S	Sg	10 45 34.1	+0.4
SCPH	**Surigao**	**1.60**	**150**	↓*e*P	Pn	10 45 21.3	+1.1
TBP	**Tagbilaran**	**1.68**	**209**	*e*P	Pn	10 45 20.7	-0.6
TBP				*e*S	Sn	10 45 41.9	-1.5
RCP	**Roxas**	**1.94**	**282**	↑*e*P	Pn	10 45 26.0	+1.2

MAN 26 10:46:27, 1116N×12469E, h5km, mb4.2, ML3.1, MS2.8, 1C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.13**	**215**	*e*P	Pg	10 46 31.3	+1.6
PLP	**Palo**	**0.29**	**89**	↓*e*P	Pg	10 46 35.6	+3.0
PLP				*e*S	Sg	10 46 40.1	+3.8
LLP	**Lapu-Lapu**	**1.10**	**220**	*e*P	Pg	10 46 47.9	-0.2
LLP				*e*S	Sg	10 47 01.7	-0.7
CNP	**Catarman**	**1.34**	**359**	*e*P	Pn	10 46 52.6	+0.2
CNP				*e*S	Sb	10 47 11.3	+1.2
SCPH	**Surigao**	**1.58**	**150**	↓*e*P	Pn	10 46 58.4	+2.7
TBP	**Tagbilaran**	**1.67**	**209**	*e*P	Pn	10 46 57.5	+0.6
RCP	**Roxas**	**1.95**	**282**	↑*e*P	Pn	10 47 02.0	+1.3
KALP	**Kalibo**	**2.36**	**283**	*e*P	Pn	10 47 16.1	+10

JSN 26 10:50:02.0±1.1, 1961N×7788W, h30km±263km, MD3.8, 2C-1D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CVJ	**Coleyville**	**1.41**	**167**	↓*i*P	Pn	10 50 24.4	-1.2
CVJ				*i* S	Sn	10 50 40.8	-2.3
MCJ	**Malvern**	**1.68**	**174**	↑*e*P	Pn	10 50 28.4	-1.0
MCJ				*e*S	Sn	10 50 48.6	-1.2
STH	**Stony Hill**	**1.82**	**146**	*e*P	Pn	10 50 30.3	-1.1
STH				*e*S	Sn	10 50 51.6	-1.9
PCJ	**Portland Cotta**	**1.98**	**160**	↑*i*P	Pn	10 50 33.2	-0.1
PCJ				*i* S	Sn	10 50 56.5	-0.7

*ISCJB **26** 10:54:16.4±0.7, 3977S±004×178.14E±009, h10km, mb4.5/12, MS4.8/12, Error ellipse: s-maj=9.5km s-min=5.1km az=5.1*

*GCMT **26** 10:54:16.0±0.3, 3947S×17850E, h12km, MW5.0/77, Moment Tensor Solution. s24,c28; s77,c111; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.76±.13; Mθθ 3.45±.12; Mφφ -2.68±.10; Mrθ -1.05±.33; Mrφ -2.03±.11; Mθφ 1.55±.33; Best double couple: Mw4.13700×10^16 NP1:φs242.00000°, δ62.00000°, λ-175.00000°. NP2: φs150.00000°, δ85.00000°, λ-28.00000°. Principal axes: T 4.4780, Plg16.0000°, Azm199.0000°; N -0.6750, Plg61.0000°, Azm321.0000°; P -3.7960, Plg23.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **26** 10:54:16.0, 3954S×17850E, h21km, mb4.8/6, ML4.9(WEL), After WEL.*

*IDC **26** 10:54:19.2±0.9, 3935S×17781E, h0km, mb4.5/8, mb1 4

RAR	**Rarotonga**	**26.47**	**52**	LR	LR	11 07 24.1			
	comp=Z,932nm,20.5s,MS4.3,baz=223,slow=30								
STKA	**Stephens Creek**	**30.41**	**273**	LR	LR	11 12 30.1			
	comp=Z,3μm,19.4s,MS4.9,baz=112,slow=36								
TBI	**Tubuai**	**31.95**	**69**	eLR	LR	11 09 02.8			
	699nm,20.8s								
CTA	**Charters Tower**	**33.54**	**296**	*e*P	**P**	**11 00 59.2**	**+0.6**		
	11nm,1.2s,mb4.7								
CTA	**Charters Tower**	**33.54**	**296**	*e*P	**P**	**11 00 59.2**	**+0.6**		
CTA				pmax	pmax				
	comp=Z,11nm,1.2s								
CTAO	**Charters Tower**	**33.54**	**296**	*e*P	**P**	**11 00 58.7**	**+0.1**		
CTAO				pmax	pmax				
	comp=Z,54nm,1.5s,mb5.3								
CTAO	**Charters Tower**	**33.54**	**296**	*e*P	**P**	**11 00 58.7**	**+0.1**		
	comp=Z,54nm,1.5s,mb5.3								
PPT	**Papeete**	**35.70**	**61**	*e*S	**S**	**11 06 54.7**	**+0.7**		
	comp=Z,376nm,23.8s								
PPT				eLR	LR	11 09 17.2			
	comp=Z,752nm,25.5s								
ASAR	**Alice Springs**	**40.40**	**280**	P	**P**	**11 01 57.0**	**+0.2**		
	comp=Z,5.3nm,0.8s,mb4.3,baz=108,slow=6.4,SNR=32								
WB2	**Warramunga Arr**	**42.23**	**285**	*e*P	**P**	**11 02 11.3**	**-0.6**		
WRAB	**Tennant Creek**	**42.23**	**285**	*e*P	**P**	**11 02 12.2**	**+0.2**		
WRAB				pmax	pmax				
	comp=Z,36nm,1.4s,mb4.8								
WRAB	**Tennant Creek**	**42.23**	**285**	*e*P	**P**	**11 02 12.2**	**+0.2**		
	comp=Z,36nm,1.4s,mb4.8								
WRA	**Warramunga Arr**	**42.24**	**285**	P	**P**	**11 02 11.7**	**-0.3**		
	comp=Z,11nm,1.0s,mb4.4,baz=124,slow=7.9,SNR=39								
WRA				LR	LR	11 20 06.2			
	comp=Z,3μm,18.8s,MS5.2,baz=130,slow=37								
WRA	**Warramunga Arr**	**42.24**	**285**	P	**P**	**11 02 11.7**	**-0.3**		
WRA				LR	LR	11 20 06.2			
RKT	**Rikitea**	**42.88**	**82**	eLR	LR	11 13 58.1			
	comp=Z,1μm,27.5s								
NWAO	**Narrogin (SRO)**	**48.63**	**258**	LR	LR	11 24 07.7			
	comp=Z,2μm,18.3s,MS5.1,baz=112,slow=37								
FITZ	**Fitzroy Crossi**	**49.90**	**280**	*e*P	**P**	**11 03 12.5**	**+0.1**		
	comp=Z,7.0nm,1.0s,mb4.7								
FITZ	**Fitzroy Crossi**	**49.90**	**280**	P	**P**	**11 03 13.0**	**+0.6**		
	comp=Z,2.5nm,0.7s,mb4.3,baz=172,slow=16,SNR=6.0								
QSPA	**South Pole Qui**	**50.38**	**180**	P	**P**	**11 03 19.5**	**+4.3**		
	comp=Z,2.5nm,0.8s,mb4.3,baz=85,slow=2.0,SNR=7.9								
QSPA	**South Pole Qui**	**50.38**	**180**	P	**P**	**11 03 19.5**	**+4.3**		
MAW	**Mawson**	**62.44**	**203**	P	**P**	**11 04 45.6**	**+4.3**		
	comp=Z,6.1nm,1.1s,mb4.6,baz=110,slow=9.0,SNR=5.6								
MAW				LR	LR	11 32 29.4			
	comp=Z,3μm,18.0s,MS5.4,baz=112,slow=36								
MAW	**Mawson**	**62.44**	**203**	*e*P	**P**	**11 04 38.8**	**-2.6**		
MAW				pmax	pmax				
	comp=Z,11nm,1.2s								
MAW	**Mawson**	**62.44**	**203**	*e*P	**P**	**11 04 38.8**	**-2.5**		
	comp=Z,11nm,1.2s,mb4.9								
MAW				LR	LR	11 32 29.4			
SNAA	**Sanae**	**68.89**	**180**	*e*	**P**	**11 05 27.9**	**+5.0**		
SNAA	**Sanae**	**68.89**	**180**	*e*P	**P**	**11 05 19.8**	**-3.1**		
SNAA				pmax	pmax				
	comp=Z,13nm,1.5s								
SNAA	**Sanae**	**68.89**	**180**	*e*P	**P**	**11 05 19.8**	**-3.0**		
	comp=Z,13nm,1.5s,mb4.6								
VNA3	**Neumayer Olymp**	**69.18**	**177**	*e*	**P**	**11 05 25.8**	**+1.1**		
VNA3				*e*	pP	11 05 29.1	+1.1		
VNA3				*e*		11 05 35.7			
VNA2	**Neumayer--Watz**	**69.57**	**178**	*e*	**P**	**11 05 28.4**	**+1.3**		
	baz=190,slow=7.6								
VNA2				*e*	pP	11 05 32.1	+1.7		
VNA2				*e*		11 05 38.4			
VNA1	**Neumayer--Stat**	**69.82**	**178**	*e*	**P**	**11 05 33.9**	**+5.2**		
VNA1				*e*		11 05 40.3			
PLCA	**Paso Flores**	**78.46**	**134**	P	**P**	**11 06 24.1**	**+4.4**		
	comp=Z,6.4nm,1.1s,mb4.5,baz=235,slow=7.5,SNR=5.1								
PLCA				LR	LR	11 32 37.4			
	comp=Z,370nm,19.8s,MS4.7,baz=225,slow=29								
KSRS	**Korea Array**	**89.55**	**322**	P	**P**	**11 07 16.4**	**+0.5**		
	comp=Z,2.1nm,0.9s,mb4.5,baz=146,slow=5.3,SNR=7.7								
KSRS				LR	LR	11 47 13.1			
	comp=Z,185nm,18.1s,MS4.5,baz=240,slow=36								
CMAR	**Chiang Mai Arr**	**93.55**	**291**	P	**P**	**11 07 35.9**	**+1.0**		
	comp=Z,0.7nm,0.3s,mb4.5,baz=139,slow=4.7,SNR=4.6								
CMAR				LR	LR	11 53 50.6			
	comp=Z,391nm,18.1s,MS4.9,baz=176,slow=38								
PETK	**Petropavlovsk-**	**94.14**	**348**	LR	LR	11 42 01.0			
	comp=Z,147nm,21.1s,MS4.4,baz=177,slow=30								
CPUP	**Villa Florida**	**96.45**	**132**	LR	LR	11 48 08.8			
	comp=Z,358nm,19.1s,MS4.9,baz=199,slow=33								
LPAZ	**La Paz**	**96.99**	**118**	LR	LR	11 42 24.1			
	comp=Z,215nm,19.0s,MS4.7,baz=35,slow=30								
TXAR	**Lajitas Array**	**100.01**	**60**	LR	LR	11 43 53.4			
	comp=Z,292nm,19.8s,MS4.8,baz=290,slow=30								
MKAR	**Makanchi Array**	**121.05**	**307**	PKP	PKPdf	11 13 11.8	+0.9		
	comp=Z,1.1nm,0.9s,baz=20,slow=1.4,SNR=7.4								
MKAR	**Makanchi Array**	**121.05**	**307**	*i* PKIKP	PKPdf	11 13 11.3	+0.5		
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.9s								
KURK	**Kurchatov**	**124.87**	**310**⇑	*e*PKIKP	PKPdf	11 13 18.2	+0.2		
KEV	**Kevo**	**146.28**	**342**	*ep*	PKPdf	11 13 58.0	+1.0		
	comp=Z,17nm,1.0s								
ARCES	**ARCESS Array B**	**146.80**	**343**	PKPbc	PKPbc	11 13 59.0	-0.7		
	comp=Z,12nm,0.7s,baz=43,slow=2.4,SNR=18								
DBIC	**Dimbokro**	**146.97**	**175**	PKPbc	PKPbc	11 14 05.5	+3.6		
	comp=Z,6.2nm,1.1s,baz=145,slow=9.4,SNR=3.1								
MALT	**Malatya**	**148.77**	**280**	*e*PKP2	PKPab	11 14 08.4	-1.4		
MOS	**Moscow**	**149.46**	**315**	*e*PKIKP	PKPdf	11 14 05.2	+2.6		
JOF	**Joensuu**	**149.46**	**330**	*ep*	PKPdf	11 14 05.2	+2.8		
	comp=Z,17nm,1.1s								
KAF	**Kangasniemi**	**151.80**	**332**	*ep*	PKPbc	11 14 11.4	-1.1		
	comp=Z,8.9nm,0.9s								
TORD	**Torodi Ar. Bea**	**153.31**	**188**	PKPbc	PKPbc	11 14 20.8	+3.6		
	comp=Z,1.7nm,1.1s,baz=180,slow=0.6,SNR=5.8								
AKASG	**Malin Array Be**	**155.63**	**307**	*i* PKIKP	PKPdf	11 14 13.8	+1.9		
ESDC	**Sonseca Array**	**178.46**	**92**	PKP	PKPdf	11 14 33.2	+4.2		
	comp=Z,2.2nm,0.6s,baz=277,slow=37,SNR=8.1								

ISCJB ***26*** *11:07:26.4±0.3, 15.13N±0.003×94.51W±0.003, h33km, mb4.2/28, MS3.7/5, Error ellipse: s-maj=5.0km s-min=3.3km az=19.9*
NEIC ***26*** *11:07:26.2±0.4, 1.510N×94.40W, mb4.5/16, MD4.7(MEX), Error ellipse: s-maj=9.8km s-min=6.1km az=219.0*
MEX ***26*** *11:07:28.3±1.2, 1.508N×94.52W, h20km±3.2km, MD4.7*
IDC ***26*** *11:07:28.3±3.2, 15.17N×94.38W, h38km±26km, mb3.9/18, mb1 4.1/19, mb1mx4.0/25, mbtmp3.9/19, ML4.5/2, MS3.7/8, Ms1 3.6/8, ms1mx3.4/30, Error ellipse: s-maj=28.6km s-min=11.7km az=55.0*
CASC ***26*** *11:07:30.5±1.3, 1655N×9350W, h20km±999km, mb4.5(NEIC)*

ISC 26 11:07:28.3±0.3, 1515N±003×9448W±003, h35km, n81, σ1°35/87, mb4.2/28, MS3.7/5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HUIG	**Huatulco**	**1.69**	**292**	*i* P		**Pn**	**11 07 53.7**	**-1.5**
HUIG				*i* S		**Sn**	**11 08 12.7**	**-3.0**
HUIG	**Huatulco**	**1.69**	**292**	*i* P		**Pn**	**11 07 53.7**	**-1.5**
HUIG				*i* S		**Sn**	**11 08 12.1**	**-3.6**
CMIG	**Matias Romero**	**1.97**	**349**	Pn		**Pn**	**11 07 58.2**	**-1.1**
	212nm,0.3s,baz=163,slow=12,SNR=3473							
CMIG				Sn		**Sn**	**11 08 21.2**	**-1.5**
	1μm,0.3s,baz=114,slow=13,SNR=46							
CMIG				LR		LR	11 09 01.0	
	comp=Z,2μm,19.9s,baz=276,slow=47							
CMIG	**Matias Romero**	**1.97**	**349**	Pn		**Pn**	**11 07 58.2**	**-1.1**
CMIG				Sn		**Sn**	**11 08 21.2**	**-1.5**
CMIG				LR		LR	11 09 01.0	
TGIG		**2.08**	**39**	*e*P		**Pn**	**11 08 00.3**	**-0.4**
TGIG				*i* S		**Sn**	**11 08 25.3**	**-0.2**
THIG		**2.15**	**96**	*i* P		**Pn**	**11 08 00.5**	**-1.3**
THIG				*i* S		**Sn**	**11 08 26.1**	**-1.2**
SCX	**San Cristobal**	**2.38**	**48**	*i* P		**Pn**	**11 08 05.3**	**+0.5**
SCX				*i* S		**Sn**	**11 08 35.2**	**+2.4**
SCX	**San Cristobal**	**2.38**	**48**	*i* P		**Pn**	**11 08 02.5**	**-2.3**
SCX				*i* S		**Sn**	**11 08 34.7**	**+1.9**
SCX				*i* S		**Sn**	**11 08 35.2**	**+2.4**
CCIG	**Comitan**	**2.52**	**63**	*e*P		**Pn**	**11 08 07.8**	**+0.9**
CCIG				*i* S		**Sn**	**11 08 37.2**	**+0.8**
CCIG	**Comitan**	**2.52**	**63**	*i* P		**Pn**	**11 08 08.0**	**+1.2**
CCIG				*i* S		**Sn**	**11 08 37.2**	**+0.8**
TUIG	**Tuzandepetl**	**2.87**	**1**	*i* P		**Pn**	**11 08 11.5**	**-0.1**
TUIG				*i* S		**Sn**	**11 08 45.2**	**+0.3**
VHO	**Vista Hermosa**	**2.89**	**312**	*e*P		**Pn**	**11 08 13.0**	**+1.1**
VHO				*i* S		**Sn**	**11 08 44.6**	**-0.8**
VHO	**Vista Hermosa**	**2.89**	**312**	*e*P		**Pn**	**11 08 13.8**	**+1.9**
VHO				*i* S		**Sn**	**11 08 44.6**	**-0.8**

PNIG	**Pinotepa**	**3.72**	**290**	*e*P		**Pn**	**11 08 23.4**	**+0.1**	
PNIG				*i* S		**Sn**	**11 09 02.9**	**-3.1**	
TPIG	**Tehuac#an**	**4.27**	**320**	*e*P		**Pn**	**11 08 31.5**	**+0.7**	
TPIG				*i* S		**Sn**	**11 09 18.4**	**-1.0**	
RTR	**El Retiro**	**4.84**	**104**	*e*P	x		11 08 39.2		
RTR				*e*S	x		11 09 32.9		
SBLS	**San Blas**	**4.88**	**105**	*e*P	x		11 08 40.6		
SBLS				*e*S	x		11 09 33.3		
SNJE	**San Jose**	**4.89**	**104**	*e*P	x		11 08 39.5		
SCIG	**Sabancuy**	**4.94**	**39**	*e*P		**Pn**	**11 08 39.8**	**-0.2**	
SCIG				*i* S		**Sn**	**11 09 36.3**	**+0.3**	
BOQS	**Boqueron**	**5.23**	**105**	*e*P	x		11 08 44.3		
LFRS	**El Faro**	**5.47**	**105**	*e*P	x		11 08 48.1		
LFRS				*e*S	x		11 09 47.7		
PPM	**Popocatepetl**	**5.56**	**315**	*i* P		**Pn**	**11 08 48.9**	**+0.3**	
PPM				*i* S		**Sn**	**11 09 50.9**	**-0.4**	
CAIG	**El Cayaco**	**5.87**	**290**	*i* P		**Pn**	**11 08 52.1**	**-0.8**	
CAIG				*i* S		**Sn**	**11 09 54.9**	**-4.1**	
CNCH	**Conchagua**	**6.71**	**105**	*e*P	x		11 09 02.9		
TGUH	**Tegucigalpa,Un**	**7.06**	**98**	*e*Pn		**Pn**	**11 09 09.8**	**+0.6**	
	72nm,0.8s								
ZIIG	**Zihuatanejo**	**7.13**	**291**	*i* P		**Pn**	**11 09 11.7**	**+1.5**	
ZIIG				*i* S		**Sn**	**11 10 27.8**	**-2.3**	
TEIG	**Tepich**	**7.78**	**49**	Pn		**Pn**	**11 09 17.0**	**-2.1**	
	29nm,0.3s,baz=259,slow=2.6,SNR=110								
TEIG				Sn		**Sn**	**11 10 43.3**	**-2.6**	
	16nm,0.3s,baz=317,slow=21,SNR=6.9								
TEIG				LR		LR	11 12 22.4		
	comp=Z,182nm,21.1s,baz=143,slow=38								
JCT	**Junction City**	**16.03**	**343**	*e*Pn		**Pn**	**11 11 12.8**	**+1.8**	
	29nm,0.8s								
TXAR	**Lajitas Array**	**16.47**	**331**	Pn		**Pn**	**11 11 19.2**	**+2.5**	
	0.1nm,0.3s,baz=154,slow=14,SNR=26								
TXAR				LR		LR	11 18 40.0		
	comp=Z,133nm,18.3s,baz=275,slow=41								
LPIG	**La Paz**	**17.35**	**303**	LR		LR	11 18 16.8		
	comp=Z,198nm,19.0s,baz=12,slow=37								
VBMS	**Vicksburg**	**17.38**	**11**	*e*Pn		**Pn**	**11 11 29.0**	**+1.0**	
	71nm,0.2s								
MIAR	**Mount Ida**	**19.34**	**2**	*e*P		**Pn**	**11 11 50.4**	**-1.5**	
	12nm,0.8s								
UALR	**University of**	**19.64**	**5**	*e*P		**Pn**	**11 11 54.6**	**-1.0**	
	9.4nm,0.6s								
WMOK	**Wichita Mounta**	**19.89**	**350**	*e*P		**Pn**	**11 11 56.4**	**-2.1**	
	12nm,0.7s								
AMTX	**Amarillo**	**20.69**	**343**	*e*P		**P**	**11 12 06.8**	**+1.4**	
	30nm,0.7s								
SWET	**Sewanee**	**21.41**	**19**	*e*P		**P**	**11 12 16.5**	**+3.4**	
OTAV	**Otavalo**	**21.69**	**132**	*e*P		**P**	**11 12 18.0**	**+1.7**	
	7.5nm,1.0s,mb4.1								
WVT	**Waverly**	**21.73**	**15**	*e*P		**P**	**11 12 16.3**	**-0.3**	
	6.6nm,0.8s,mb4.1								
BNM	**Barren Site**	**21.87**	**332**	*e*P		**P**	**11 12 21.6**	**+3.5**	
LPM	**Los Pinos Moun**	**22.01**	**332**	*e*P		**P**	**11 12 22.8**	**+3.3**	
LENM	**Lemitar**	**22.04**	**331**	*e*P		**P**	**11 12 23.2**	**+3.3**	
ROSC	**El Rosal**	**22.30**	**115**	P		**P**	**11 12 23.5**	**+0.7**	
	3.4nm,0.3s,mb4.2,baz=276,slow=2,SNR=13								
LAZ	**Ladron**	**22.31**	**331**	*e*P		**P**	**11 12 24.6**	**+1.8**	
ANMO	**Albuquerque**	**22.47**	**334**	P		**P**	**11 12 26.2**	**+1.8**	
	1.5nm,0.6s,mb3.6,baz=150,slow=15,SNR=6.1								
TKL	**Tuckaleechee C**	**22.57**	**23**	P		**P**	**11 12 24.4**	**-1.1**	
	4.3nm,0.8s,mb3.9,baz=198,slow=8.2,SNR=3.7								
TKL				LR		LR	11 23 45.4		
	comp=Z,182nm,19.4s,MS3.5,baz=94,slow=43								
TUC	**Tucson**	**22.63**	**322**	*e*P		**P**	**11 12 28.5**	**+2.3**	
	10nm,1.3s,mb4.1								
CBKS	**Cedar Bluff**	**24.03**	**350**	*e*P		**P**	**11 12 40.9**	**+0.9**	
	55nm,1.3s,mb4.8								
SDV	**Santo Domingo**	**24.13**	**102**	P		**P**	**11 12 41.6**	**+0.5**	
	7.0nm,0.3s,mb4.6,baz=16,slow=17,SNR=4.2								
WUAZ	**Wupatki**	**25.31**	**326**	*e*P		**P**	**11 12 56.3**	**+4.6**	
	15nm,1.1s,mb4.4								
PV01	**Paradox Valley**	**26.07**	**334**	*e*P		**P**	**11 13 01.1**	**+2.6**	
SCIA	**State Center**	**26.69**	**2**	*e*P		**P**	**11 13 02.8**	**-1.3**	
	16nm,0.6s,mb4.7								
PFO	**Pinyon Flat Ob**	**27.07**	**317**	LR		LR	11 24 16.7		
	comp=Z,219nm,20.4s,MS3.7,baz=285,slow=37								
ATAH	**Atahualpa**	**27.17**	**143**	LR		LR	11 22 17.1		
	comp=Z,150nm,19.0s,MS3.6,baz=186,slow=33								
ARUT	**Antelope Range**	**28.11**	**327**	*e*P		**P**	**11 13 19.9**	**+3.0**	
ARUT				*ep*P		pP	11 13 25.4	-1.6	
PCRV	**Puerto La Cruz**	**29.52**	**96**	LR		LR	11 25 02.5		
	comp=Z,154nm,20.3s,MS3.6,baz=44,slow=36								
PDAR	**Pinedale Array**	**30.42**	**338**	P		**P**	**11 13 37.8**	**+0.5**	
	0.7nm,1.1s,mb3.3,baz=98,slow=3.0,SNR=3.4								
NVAR	**Mina Array Bea**	**31.29**	**322**	P		**P**	**11 13 46.8**	**+1.8**	
	1.9nm,1.0s,mb3.9,baz=134,slow=8.7,SNR=9.9								
EYMN	**Ely**	**32.80**	**4**	*e*P		**P**	**11 13 56.8**	**-1.4**	
	14nm,1.3s,mb4.7								
AGMN	**Agassiz Refuge**	**33.08**	**358**	*e*P		**P**	**11 13 59.9**	**-0.7**	
	8.9nm,0.7s,mb4.8								
MCMT	**McKenzie Canyo**	**33.43**	**336**	*e*P		**P**	**11 14 06.5**	**+2.8**	
MCMT				*ep*P		pP	11 14 11.6	-2.2	
ULM	**Lac du Bonnet**	**35.03**	**358**	P		**P**	**11 14 16.1**	**-1.3**	
	5.1nm,0.7s,mb4.6,baz=179,slow=5.4,SNR=6.9								
BMO	**Blue Mountains**	**35.35**	**332**	*e*P		**P**	**11 14 21.1**	**+0.8**	
	6.1nm,1.5s,mb4.3								
FFC	**Flin Flon**	**39.92**	**353**	*e*P		**P**	**11 14 59.7**	**+0.9**	
	6.4nm,0.6s,mb4.5								
LPAZ	**La Paz**	**40.65**	**139**	P		**P**	**11 15 05.2**	**-0.1**	
	1.2nm,0.7s,mb3.6,baz=329,slow=11,SNR=6.2								
EDM	**Edmonton**	**40.80**	**343**	*e*P		**P**	**11 15 06.9**	**+0.7**	
SCHQ	**Schefferville**	**45.03**	**22**	LR		LR	11 37 19.3		
	comp=Z,175nm,18.1s,MS4.0,baz=249,slow=40								
SIV	**San Ignacio**	**45.23**	**132**	P		**P**	**11 15 41.6**	**-0.8**	
	6.3nm,1.0s,mb4.4,baz=317,slow=8.8,SNR=13								
YKA	**Yellowknife Ar**	**49.39**	**348**	P		**P**	**11 16 13.8**	**-0.4**	
	0.9nm,0.7s,mb3.9,baz=148,slow=8.1,SNR=4.7								
CPUP	**Villa Florida**	**54.81**	**138**	P		**P**	**11 16 52.7**	**-2.4**	
	0.4nm,0.4s,mb3.8,baz=329,slow=14,SNR=2.4								
BDFB	**Brasilia**	**55.16**	**122**	P		**P**	**11 16 56.9**	**-0.9**	
	3.2nm,1.0s,mb4.3,baz=173,slow=25,SNR=2.6								
PLCA	**Paso Flores**	**59.87**	**159**	P		**P**	**11 17 30.6**	**+0.2**	
	2.6nm,0.9s,mb4.2,baz=332,slow=8.4,SNR=4.3								
ESDC	**Sonseca Array**	**80.89**	**51**	P		**P**	**11 19 39.1**	**+0.1**	
	0.3nm,0.3s,mb3.7,baz=237,slow=25,SNR=4.5								
PMSA	**Palmer Station**	**82.98**	**167**	*e*P		**P**	**11 19 49.5**	**+0.2**	
	176nm,1.6s								
NOA	**NORSAR Array B**	**84.28**	**28**	P		**P**	**11 19 55.8**	**-0.5**	
	2.1nm,0.9s,mb4.3,baz=292,slow=5.0,SNR=2.9								
ARCES	**ARCESS Array B**	**85.80**	**18**	P		**P**	**11 20 01.8**	**-1.9**	
	2.9nm,0.9s,mb4.5,baz=305,slow=30,SNR=3.4								
DBIC	**Dimbokro**	**87.92**	**84**	P		**P**	**11 20 15.0**	**-0.2**	
	2.4nm,0.7s,mb4.5,baz=192,slow=6.1,SNR=3.0								
TORD	**Torodi Ar. Bea**	**92.44**	**76**	P		**P**	**11 20 35.2**	**-1.0**	
	0.5nm,1.1s,mb3.8,baz=348,slow=17,SNR=2.5								
WRA	**Warramunga Arr**	**133.33**	**257**	PKP		PKPdf	11 26 40.4	-1.1	
	0.3nm,0.7s,baz=352,slow=0.5,SNR=4.5								
WRA	**Warramunga Arr**	**133.33**	**257**	PKP		PKPdf	11 26 40.4	-1.1	
ASAR	**Alice Springs**	**133.76**	**252**	PKiKP		PKiKP	11 26 33.8	-10	
	1.1nm,1.1s,baz=186,slow=19,SNR=2.4								
ASAR				PKP		PKPdf	11 26 41.0	-1.2	
	0.3nm,0.7s,baz=141,slow=1.2,SNR=5.1								
CMAR	**Chiang Mai Arr**	**144.09**	**338**	PKP		PKPdf	11 26 58.5	-2.7	
	0.6nm,0.3s,baz=355,slow=2.8,SNR=8.8								

ISCJB ***26*** *11:13:26.6±0.9, 2986N×004×3628E±005, h0km, Error ellipse: s-maj=7.1km s-min=5.1km az=157.8*
HLW ***26*** *11:13:26.5, 2980N×3659E, h15km, Mb3.1*
SGS ***26*** *11:13:27.5, 3008N×3618E, h11km*
GII ***26*** *11:13:27.2±1.3, 2982N×3617E, h0km, ML1.7/3, EXPLOSION*
CSEM ***26*** *11:13:29.8±0.8, 2968N×3607E, h2km, ML2.9, Error ellipse: s-maj=19.3km s-min=9.0km az=64.0*

ISC 26 11:13:26.9±0.9, 2985N±004×3631E±005, h0km, n23, σ0°90/28, 1C, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
AQBJ	**Aqaba**	**1.10**	**264**	Pg		**Pg**	**11 13 47.9**	**-0.1**
HRFI	**Mount Harif**	**1.12**	**280**	Pg		**Pg**	**11 13 47.4**	**-1.0**
HRFI				Sg		**Sg**	**11 14 04.2**	**+1.3**
EIL	**Elat**	**1.19**	**262**	Pg		**Pg**	**11 13 48.8**	**-1.0**
EIL				Sg		**Sg**	**11 14 05.6**	**+0.3**
ZFRI	**Zfri**	**1.21**	**306**	Pg		**Pg**	**11 13 49.5**	**-0.5**
ZFRI				Sg		**Sg**	**11 14 06.6**	**+0.9**
MBRI	**Mt Berech**	**1.21**	**268**	Pg		**Pg**	**11 13 49.1**	**-1.0**
MBRI				Sg		**Sg**	**11 14 06.8**	**+0.9**
HQLS		**1.22**	**244**	P		**Pg**	**11 13 49.0**	**-1.2**
HQLS		**1.22**	**244**	P		**Pg**	**11 13 49.0**	**-1.1**
HQLS				S		**Sg**	**11 14 04.7**	**-1.2**
PRNI	**Paran**	**1.24**	**294**	Pg		**Pg**	**11 13 49.8**	**-0.8**
JLOS		**1.32**	**213**	S		**Sg**	**11 14 10.5**	**+1.3**

JLOS		**1.32**	**213**	P		**Pg**	**11 13 52.1**	**0.0**	
KRMI	**Paran Flat**	**1.40**	**282**	Pg		**Pg**	**11 13 52.3**	**-1.4**	
HBST	**Basata**	**1.51**	**246**	P		**Pn**	**11 13 55.5**	**+0.4**	
TBKS	**Tabuk**	**1.63**	**173**	P		**Pn**	**11 13 57.5**	**+0.6**	
BDAS	**Al Bad'**	**1.76**	**217**	S		**Sn**	**11 14 23.2**	**+1.4**	
BDAS	**Al Bad'**	**1.76**	**217**	P		**Pn**	**11 13 58.2**	**-0.4**	
RTMI	**Retamim**	**1.84**	**311**	Pn		**Pn**	**11 13 60.0**	**+0.2**	
DSI	**Dead Sea**	**1.90**	**335**	Pn		**Pn**	**11 14 02.4**	**+1.9**	
KZIT	**Kziot**	**1.96**	**303**	Pn		**Pn**	**11 14 01.2**	**-0.2**	
HNKL	**Nakhl**	**2.02**	**273**	P		**Pn**	**11 14 03.0**	**+0.7**	
RSHS		**2.03**	**221**	P		**Pn**	**11 14 01.3**	**-1.0**	
HKAT	**Jabal Katrina**	**2.42**	**238**	P		**Pn**	**11 14 07.5**	**-0.1**	
TR2		**2.69**	**238**⇑	P		**Pn**	**11 14 11.0**	**-0.4**	
SUZ		**3.02**	**271**	P		**Pn**	**11 14 16.3**	**+0.4**	

IDC 26 11:23:04.7±1.5, 2002S×17670W, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.6/16, mbtmp3.4/3, ML5.3/1, MS3.7/1, Ms1 3.7/1, ms1mx3.1/19, Error ellipse: s-maj=130.8km s-min=29.0km az=169.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RAR	**Rarotonga**	**15.89**	**97**	Pn		Pn	11 26 49.1	-0.7
	13nm,0.3s,baz=200,slow=20,SNR=14							
RAR				LR		LR	11 31 05.5	
	comp=Z,279nm,19.6s,baz=104,slow=30							
ASAR	**Alice Springs**	**45.82**	**256**	P		P	11 31 28.9	+0.3
	0.4nm,0.6s,baz=87,slow=8.1,SNR=7.7							
WRA	**Warramunga Arr**	**45.88**	**261**	P		P	11 31 28.7	-0.5
	0.2nm,0.6s,baz=97,slow=8.1,SNR=6.9							
TXAR	**Lajitas Array**	**85.77**	**57**	P		P	11 35 46.6	+0.5
	0.6nm,1.1s,baz=239,slow=4.8,SNR=3.6							

ISCJB ***26*** *11:47:01.3±0.5, 4181N±003×2279E±003, h10km, Error ellipse: s-maj=4.2km s-min=3.3km az=168.5*
CSEM ***26*** *11:47:01.7±0.1, 4185N×2275E, h10km, ML2.8, Error ellipse: s-maj=2.1km s-min=1.7km az=137.0*
SKO ***26*** *11:47:01.7, 4181N×2277E, h15km, M1.7, ML2.0*
SOF ***26*** *11:47:01.9, 4185N

TTN	**Taitung** baz=231	0.65	226	*e*P		**Pb**	12 33 34.6	-0.3
TTN	baz=231			*e*S		**Sb**	12 33 46.1	+2.6
TWG	**Pinlang** baz=237	0.66	234	⇑*i*P		**Pb**	12 33 34.3	-0.8
TWG	baz=237			*e*S		**Sb**	12 33 43.1	-0.8
YUS	**Yu-Shan** baz=295	0.70	294	P		**Pb**	12 33 36.0	+0.2
YUS	baz=295			S		**Sb**	12 33 45.0	-0.1
HWA	**Hwalien** baz=11	0.77	357	*e*P		**Pb**	12 33 36.4	-0.5
STYT	**Tauyuan** baz=260	0.82	267	⇑*i*P		**Pb**	12 33 37.2	-0.7
STYT	baz=260			S		**Sb**	12 33 47.5	-1.1
ALS	**Alishan** baz=289	0.83	291	⇑*i*P		**Pb**	12 33 38.0	0.0
ALS	baz=289			S		**Sb**	12 33 48.7	-0.2
TWD	**Chiawan** baz=349	0.87	357	P		**Pb**	12 33 38.0	-0.6
TWD	baz=349			S		**Sb**	12 33 49.5	-0.5
ECL	**Taimali** baz=223	0.88	227	*e*P		**Pn**	12 33 37.1	-1.8
WTP	**Ta-pu** baz=271	0.95	272	⇑P		**Pn**	12 33 39.7	-0.1
WTP	baz=271			*e*S		**Sb**	12 33 52.5	+0.2
SMLT	**Sun Moon Lake** baz=320	0.96	314	⇑*i*P		**Pn**	12 33 39.8	-0.2
SMLT	baz=320			S		**Sb**	12 33 51.6	-1.0
CHN5	**Tsauling** baz=307	0.97	294	*e*P		**Pn**	12 33 40.2	+0.1
CHN5	baz=307			*e*S		**Sb**	12 33 53.7	+0.8
CHN4	**Tsaushan** baz=273	0.98	279	⇑P		**Pn**	12 33 40.4	+0.1
CHN4	baz=273			*e*S		**Sb**	12 33 53.6	+0.5
SGST	**Jiashian** baz=261	0.99	263	*e*P		**Pn**	12 33 39.7	-0.6
SGST	baz=261			*e*S		**Sb**	12 33 53.9	+0.6
WHF	**Hehuan Shan** baz=344	1.00	339	*e*P		**Pn**	12 33 39.9	-0.5
WHF	baz=344			*e*S		**Sb**	12 33 52.1	-1.5
TYC	**Yuchr** baz=324	1.00	314	⇑*i*P		**Pn**	12 33 40.4	-0.1
TYC	baz=324			*e*S		**Sb**	12 33 53.1	-0.7
CHN1	**Nanshi** baz=268	1.03	269	*e*P		**Pn**	12 33 41.1	+0.2
CHN1	baz=268			*e*S		**Sn**	12 33 54.8	+0.3
SSD	**Sandimen** baz=241	1.04	244	*e*P		**Pn**	12 33 40.3	-0.8
TWK	**Hsinying** baz=273	1.07	273	*e*P		**Pn**	12 33 40.7	-0.8
TWK	baz=273			*e*S		**Sn**	12 33 55.6	+0.1
EHP	**Heping Village** baz=8.0	1.10	4	*e*P		**Pn**	12 33 41.1	-0.8
EAST	**Anshuo** baz=213	1.10	222	*e*P		**Pn**	12 33 41.4	-0.5
WGK	**Gukeng** baz=307	1.11	296	*e*P		**Pn**	12 33 41.9	-0.1
WGK	baz=307			*e*S		**Sn**	12 33 56.4	+0.1
WNT	**Mingjian** baz=310	1.11	307	*e*P		**Pn**	12 33 42.3	+0.3
WNT	baz=310			*e*S		**Sn**	12 33 57.0	+0.6
TWT	**Tachien** baz=347	1.13	337	*e*P		**Pn**	12 33 42.3	+0.1
TWT	baz=347			*e*S		**Sn**	12 33 55.4	-1.5
LAY	**Lan-yu** baz=173	1.17	184	*e*P		**Pn**	12 33 41.3	-1.5
TWM1	**Shoushan** baz=249	1.19	252	*e*P		**Pn**	12 33 44.0	+0.9
TWM1	baz=249			*e*S		**Sn**	12 34 02.1	+3.6
ENA	**Nanau** baz=16	1.22	4	*e*P		**Pn**	12 33 43.1	-0.4
NNS	**Nan Shan**	1.25	348	*e*P		**Pn**	12 33 44.8	+0.8
NNS				*e*S		**Sn**	12 33 58.9	-1.0
SCZT	**Fangliau** baz=219	1.26	229	*e*P		**Pn**	12 33 44.0	-0.1
SCZT	baz=219			*e*S		**Sn**	12 34 00.4	+0.2
TCU	**Taichung** baz=319	1.29	317	*e*P		**Pn**	12 33 45.1	+0.6
TWQ1	**Liyutan** baz=328	1.39	325	⇓P		**Pn**	12 33 47.0	+1.1
TWQ1	baz=328			*e*S		**Sn**	12 34 04.8	+1.4
TWC	**Suao** baz=10.0	1.41	7	P		**Pn**	12 33 46.4	+0.3
TWC	baz=10.0			*e*S		**Sn**	12 34 03.8	0.0
ENTT	**Nioudou** baz=1.0	1.43	357	*e*P		**Pn**	12 33 46.6	+0.3
NSY	**Sanyi** baz=343	1.45	326	*e*P		**Pn**	12 33 47.6	+0.9
NSY	baz=343			*e*S		**Sn**	12 34 06.9	+2.1
NSK	**Sanguang** baz=353	1.48	350	P		**Pn**	12 33 47.8	+0.6
NSK	baz=353			S		**Sn**	12 34 05.0	-0.7
TWE	**Neicheng** baz=356	1.51	1	*e*P		**Pn**	12 33 48.4	+0.9
YOJ	**Yonaguni jima**	1.76	45	P		**Pn**	12 33 51.6	+0.6
YOJ				S		**Sn**	12 34 13.5	+0.9
PNG	**Penghu** baz=270	1.96	281	*e*P		**Pn**	12 33 52.6	-1.0
HATJ	**Hateruma jima**	2.15	66	P		**Pn**	12 33 56.8	+0.5
HATJ				S		**Sn**	12 34 22.3	+0.2
IRIF	**Iriomote-Funau**	2.21	59	P		**Pn**	12 33 58.2	+1.0
IRIF				*e*S		**Sn**	12 34 24.8	+1.2
JKRS	**Kuro-shima**	2.39	64	P		**Pn**	12 33 57.5	-2.2
JKRS				S		**Sn**	12 34 28.2	+0.1
JIJ	**Ishigaki jima**	2.56	63	P		**Pn**	12 34 02.1	+0.2
JIJ				*e*S		**Sn**	12 34 31.6	-0.6

IDC ***26*** *12:36:20.7±0.3, 4.83S×153.65E, h0km, mb5.6/26, mb1 5.6/27, mb1mx5.6/27, mbtmp5.6/27, ML4.7/1, MS6.1/20, Ms1 6.1/20, ms1mx6.1/23, Error ellipse: s-maj=10.2km s-min=7.7km az=98.0*

SZGRF ***26*** *12:36:21.4, 5.61S×154.43E, h10km, mb6.2, Bougainville - Solomon Islands region*

BJI ***26*** *12:36:21.4, 4.85S×154.09E, h26km, mB6.5, mb6.0, Ms6.2, Msz6.2*

ISCJB ***26*** *12:36:22.2±0.7, 5.04S±0.02×153.41E±0.02, h13km±4km, mb6.1/154, MS6.4/262, Error ellipse: s-maj=3.3km s-min=2.7km az=16.3*

MOS ***26*** *12:36:24.9±1.5, 4.94S×153.40E, h33km, mb6.4/42, MS6.2/43, Error ellipse: s-maj=9.3km s-min=6.7km az=118.5*

GCMT ***26*** *12:36:26.9±0.1, 5.20S×153.52E, h47km, MW6.8/120, Moment Tensor Solution. s117,c290; s120,c526; Duration: 5s8 Moment tensor: Scale 10¹⁹Nm; Mrr1.58±.01; Mθθ-0.57±.01; Mφφ-1.00±.01; Mrθ0.03±.01; Mθφ0.92±.01; Mφr0.08±.01; Best double couple: Mo1.66000×10¹⁹ NP1:φs138.00000°, δ44.00000°, λ86.00000°. NP2:φs325.00000°, δ46.00000°, λ94.00000°. Principal axes: T 1.5850, Plg87.0000°, Azm307.0000°; N 0.1560, Plg3.0000°, Azm142.0000°; P -1.7350, Plg1.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***26*** *12:36:26.9±0.1, 4.99S×153.50E, h40km, mb6.2/75, ME6.1, MS6.6/201, MW6.7 Error ellipse: s-maj=4.0km s-min=3.1km az=81.0, Moment Tensor Solution. s51 Moment tensor: Scale 10¹⁹Nm; Mrr1.66; Mθθ-0.93; Mφφ-0.73; Mrθ0.07; Mθφ0.47; Mφr0.07; Best double couple: Mo1.50000×10¹⁹ NP1:φs126.00000°, δ45.00000°, λ86.00000°. NP2:φs312.00000°, δ45.00000°, λ94.00000°. Principal axes: T 1.6700, Plg87.0000°, Azm312.0000°; N -0.3500, Plg2.0000°, Azm128.0000°; P -1.3200, Plg0.0000°, Azm218.0000°; Broadband fault plane solution: P waves. NP1:φs305.00000°, δ40.00000°, λ90.00000°. NP2:φs125.00000°, δ50.00000°, λ90.00000°. Principal axes: T Plg85.0000°, Azm35.0000°; N Plg0.0000°, Azm0.0000°; P Plg5.0000°, Azm215.0000°; Complex earthquake observed on broadband displacement seismograms. A small event is followed by a larger event about 5 seconds later. Depth from synthetics of broadband displacement seismograms based on first event. Energy computed from BB mechanism.*

NEIC Felt at Kokopo. Also felt at Gizo, Solomon Islands.

DJA ***26*** *12:36:39, 5.36S×153.03E, h93km, Mw6.7/25*

ISC 26 12:36:26.7±0.7, 504S±002×15345E±002, h32km±5km, h22km±2.0km: pP-P, n1464, σ1§07/972, mb6.1/154, MS6.4/262, 286C-239D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
PMG	**Port Moresby**	**7.60**	**235**	*d*	*i*P	**Pn**	**12 38 17.9**	**+2.6**
PMG	**Port Moresby**	**7.60**	**235**	*e*	Pn	**Pn**	**12 38 15.3**	**0.0**
HNR	**Honiara**	**7.79**	**124**		Pn	**Pn**	**12 38 20.1**	**+2.2**
HNR	123nm,0.3s,baz=231,slow=2.0,SNR=25				Sn	**Sn**	**12 39 45.4**	**+0.4**
HNR	286nm,0.3s,baz=299,slow=9.2,SNR=4.2 **Honiara**	**7.79**	**124**	*e*	P	**Pn**	**12 38 19.1**	**+1.2**
HNR	comp=Z,7μm,0.8s				pmax	pmax		
HNR	**Honiara**	**7.79**	**124**	*e*	Pn	**Pn**	**12 38 19.1**	**+1.2**
MMPI	comp=Z,7μm,0.8s **Merauke**	**13.41**	**255**		P	**Pn**	**12 39 37.8**	**+2.9**
COEN	**Coen**	**13.45**	**228**	*e*	Pn	**Pn**	**12 39 37.7**	**+2.2**
COEN	comp=Z,543nm,1.1s			*e*	Sn	**Sn**	**12 42 21.2**	**+17**
CTA	**Charters Tower**	**16.52**	**204**	⇓*i*	P	**Pn**	**12 40 18.1**	**+2.0**
CTA	comp=Z,72nm,0.9s			*e*			12 40 22.6	
CTA				*e*	S	**Sn**	**12 43 28.9**	**+10**
CTA	**Charters Tower**	**16.52**	**204**		Pn	**Pn**	**12 40 17.4**	**+1.2**
CTA	comp=Z,1.6nm,0.3s,baz=27,slow=13,SNR=117				Sn	**Sn**	**12 43 25.1**	**+6.5**
CTA	baz=260,slow=12,SNR=2.2 **Charters Tower**	**16.52**	**204**	⇓*i*	P	**Pn**	**12 40 18.1**	**+2.0**
CTA				*e*	S	**Sn**	**12 43 28.9**	**+10**
CTA	comp=Z,72nm,0.9s				pmax	pmax		
CTAO	**Charters Tower**	**16.52**	**204**	*e*	P	**Pn**	**12 40 18.0**	**+1.9**
CTAO	comp=Z,4μm,1.9s				pmax	pmax		
CTAO	**Charters Tower**	**16.52**	**204**	*e*	P	**Pn**	**12 40 17.9**	**+1.8**
GUMO	comp=Z,4μm,1.9s **Guam**	**20.37**	**335**		P	**P**	**12 40 59.6**	**-1.2**
GUMO	comp=Z,1μm,1.0s,baz=155,slow=3.2,SNR=14 **Guam**	**20.37**	**335**	*e*	P	**P**	**12 41 02.2**	**+1.4**
GUMO	comp=Z,37μm,22.0s,MS5.7				LR	LR		
TARA	**Tarawa**	**20.47**	**72**		P	**P**	**12 41 04.3**	**+2.3**
DZM	**Mont Dzumac**	**21.10**	**145**	*e*	P	**P**	**12 41 07.9**	**-0.8**
DZM	**Mont Dzumac**	**21.10**	**145**	*e*	P	**P**	**12 41 07.9**	**-0.8**
WRAB	**Tennant Creek**	**23.76**	**230**	*e*	P	**P**	**12 41 36.5**	**-0.1**
WRAB	comp=Z,1μm,1.0s,mb6.3				pmax	pmax		
WRAB	comp=Z,137μm,22.0s,MS6.4				MLR	MLR		
WRAB	**Tennant Creek**	**23.76**	**230**	*e*	P	**P**	**12 41 36.5**	**-0.1**
WRAB	comp=Z,1μm,1.0s,mb6.3				LR	LR		
WB2	comp=Z,137μm,22.0s,MS6.4 **Warramunga Arr**	**23.77**	**230**	⇓*i*	P	**P**	**12 41 36.4**	**-0.2**
WB2				*e*			12 41 38.6	
WB2				*e*			12 41 41.8	
WB2				*e*	PCP	PcP	12 45 26.3	+6.4
WB2				*e*	S	**S**	**12 45 50.0**	**-0.1**
WRA	**Warramunga Arr**	**23.77**	**230**		P	**P**	**12 41 36.5**	**-0.2**
WRA	comp=Z,124nm,0.8s,mb5.4,baz=55,slow=9.7,SNR=158				PcP	PcP	12 45 20.0	+0.1
WRA	comp=Z,66nm,0.7s,baz=63,slow=2.8,SNR=4.2				S	**S**	**12 45 59.8**	**+10**
WRA	comp=Z,52nm,0.9s,baz=47,slow=17,SNR=4.0				ScP	ScP	12 48 58.8	+2.7
WRA	comp=Z,28nm,0.8s,baz=46,slow=2.5,SNR=4.6				LR	LR	12 50 54.3	
WRA	comp=Z,110μm,21.6s,MS6.3,baz=50,slow=36 **Warramunga Arr**	**23.77**	**230**		P	**P**	**12 41 36.5**	**-0.2**
WRA							12 45 20.0	
AAI	**Ambon**	**25.21**	**272**	⇓*e*	P	**P**	**12 41 49.5**	**-0.4**
AAI	**Ambon**	**25.21**	**272**	⇓*e*	P	**P**	**12 41 50.0**	**+0.1**
AAI	**Ambon**	**25.21**	**272**		P	**P**	**12 41 52.6**	**+2.7**
ARMA	**Armidale**	**25.30**	**184**	*e*	P	**P**	**12 41 51.4**	**+0.9**
ARMA				*e*			12 41 56.3	
ARMA				*e*	PCP	PcP	12 45 27.5	+4.4
ARMA				*e*	S	**S**	**12 46 15.0**	**+0.5**
FUNA	**Funafuti**	**25.80**	**99**	*e*	P	**S**	**12 41 55.2**	**0.0**
FUNA	comp=Z,2μm,1.4s,mb6.5				LR	LR		
ASAR	comp=Z,55μm,20.0s,MS6.1 **Alice Springs**	**26.41**	**224**		P	**P**	**12 42 00.6**	**-0.1**
ASAR	comp=Z,43nm,0.9s,mb5.0,baz=59,slow=8.5,SNR=219				PcP	PcP	12 45 26.3	+0.5
ASAR	comp=Z,67nm,0.7s,baz=81,slow=3.2,SNR=4.7				S	**S**	**12 46 41.5**	**+9.2**
ASAR	comp=Z,26nm,1.0s,baz=38,slow=15,SNR=2.3				ScP	ScP	12 49 06.8	+3.2
ASAR	comp=Z,30nm,0.8s,baz=40,slow=3.5,SNR=4.9				P3KPbc		13 14 50.8	
ASAR	comp=Z,0.7nm,0.7s,baz=218,slow=4.2,SNR=4.7 **Alice Springs**	**26.41**	**224**		P	**P**	**12 42 00.6**	**-0.1**
ASAR							12 45 26.3	
ASAR					S	**S**	**12 46 41.5**	**+9.2**
ASAR	**Alice Springs**	**26.41**	**224**		P	**P**	**12 42 00.6**	**-0.1**
ASAR					PcP	PcP	12 45 26.3	+0.5
ASAR					S	**S**	**12 46 41.5**	**+9.2**
ASAR					ScP	ScP	12 49 06.8	+3.2
ASAR				*e*			13 14 50.8	
TNE	**Ternate**	**26.68**	**282**	⇓*e*	P	**P**	**12 42 08.0**	**+4.8**
STKA	**Stephens Creek**	**28.92**	**201**	*e*	P	**P**	**12 42 21.9**	**-1.1**
STKA	comp=Z,100nm,0.8s,mb5.6			*e*	PCP	PcP	12 45 36.3	+4.6
STKA				*e*	S	**S**	**12 47 11.8**	**+0.2**
STKA	**Stephens Creek**	**28.92**	**201**		P	**P**	**12 42 22.3**	**-0.7**
STKA	comp=Z,49nm,0.8s,mb5.3,baz=7.7,slow=8.8,SNR=29				S	**S**	**12 47 10.8**	**-0.8**
STKA	comp=Z,24nm,0.7s,baz=275,slow=11,SNR=1.8				LR	LR	12 54 29.0	
MATI	comp=Z,109μm,18.1s,MS6.5,baz=104,slow=37 **Mati**	**29.63**	**293**	*e*	P	**P**	**12 42 27.6**	**-2.0**
BATI	**Baumata**	**29.95**	**258**		P	**P**	**12 42 33.1**	**+0.8**
BIPH	comp=Z,420nm,0.9s,mb6.2,baz=87,slow=0.4,SNR=17 **Bislig**	**30.04**	**296**	⇑*e*	P	**P**	**12 42 31.8**	**-1.3**
FITZ	**Fitzroy Crossi** comp=Z,15nm,0.5s,mb5.0	**30.11**	**242**	*e*	P	**P**	**12 42 32.9**	**-0.9**
FITZ				*e*			12 42 34.7	
FITZ				*e*			12 42 37.3	
FITZ				*e*	PCP	PcP	12 45 39.6	+4.6
FITZ				*e*	S	**S**	**12 47 28.1**	**-2.6**
FITZ	**Fitzroy Crossi**	**30.11**	**242**		P	**P**	**12 42 33.9**	**+0.1**
FITZ	comp=Z,52nm,0.5s,mb5.5,baz=72,slow=8.9,SNR=62				S	**S**	**12 47 28.7**	**-2.0**
FITZ	comp=Z,64nm,1.0s,baz=102,slow=18,SNR=1.7				LR	LR	12 55 23.1	
DAV	comp=Z,47μm,20.4s,MS6.1,baz=230,slow=38 **Davao City (W)**	**30.30**	**293**		P	**P**	**12 42 35.8**	**+0.3**
DAV	comp=Z,151nm,0.4s,mb6.1,baz=111,slow=8.6,SNR=2.2 **Davao City (W)**	**30.30**	**293**	⇑*e*	P	**P**	**12 42 35.5**	**0.0**
CNB	**Canberra Magne**	**30.36**	**187**	*e*	P	**P**	**12 42 36.7**	**+1.0**
CNB				*e*			12 42 42.2	
CNB				*e*	S	**S**	**12 47 35.8**	**+1.6**
CAN	**Canberra**	**30.41**	**187**	*e*	P	**P**	**12 42 37.6**	**+1.4**
KDI	**Kendari**	**30.75**	**271**	⇑*e*	P	**P**	**12 42 44.9**	**+5.5**
KDI				*e*	S	**S**	**12 47 41.0**	**+0.2**
BUKP	**Musuan**	**31.09**	**294**	*e*	P	**P**	**12 42 46.6**	**+4.2**
SCPH	**Surigao**	**31.50**	**298**	‖*e*	P	**P**	**12 42 51.0**	**+4.9**
CTBH	**Cotabato--PC H**	**31.58**	**292**	‖*e*	P	**P**	**12 42 47.2**	**+0.5**
MSLP	**Maasin**	**32.22**	**298**	*e*	P	**P**	**12 42 52.6**	**+0.3**
BESP	**Borongan**	**32.40**	**301**	*e*	P	**P**	**12 42 58.7**	**+4.8**
PAGZ	**Pagadian**	**32.61**	**293**	*e*	P	**P**	**12 42 56.7**	**+0.9**
TBP	**Tagbilaran**	**32.91**	**296**	*e*	P	**P**	**12 42 58.1**	**-0.3**
TOO	**Toolangi**	**33.19**	**192**	*e*	P	**P**	**12 43 00.8**	**+0.3**
TOO				*e*			12 43 06.6	
TOO				*e*	S	**S**	**12 48 19.9**	**+1.7**
KAPI	**Kappang** comp=Z,1μm,1.0s,mb6.8,SNR=16	**33.56**	**269**		P	**P**	**12 43 05.4**	**+1.3**
KAPI	**Kappang** SNR=24	**33.56**	**269**	⇑P		**P**	**12 43 08.4**	**+4.3**
KAPI	**Kappang**	**33.56**	**269**	*e*	P	**P**	**12 43 03.8**	**-0.4**
KAPI					LR	LR		
CBIJ	comp=Z,24μm,21.0s,MS5.9 **Chichi jima**	**33.75**	**342**		P	**P**	**12 43 02.6**	**-2.9**
CBIJ	comp=Z,134nm,0.5s,mb6.1,baz=218,slow=2.0,SNR=19				S	**S**	**12 48 24.2**	**-2.9**
PCI	comp=Z,23nm,0.7s,baz=359,slow=18,SNR=1.7 **Palu**	**33.80**	**276**		P	**P**	**12 43 10.1**	**+3.8**
MKS	**Makassar**	**33.84**	**268**	‖*e*	P	**P**	**12 43 12.1**	**+5.6**
MKS				*e*	S	**S**	**12 48 37.8**	**+8.9**
PVCP	**Virac**	**34.47**	**303**	*e*	P	**P**	**12 43 11.7**	**-0.2**
RCP	**Roxas**	**34.71**	**299**	⇑*e*	P	**P**	**12 43 14.5**	**+0.5**
FORT	**Forrest** comp=Z,286nm,0.8s,mb6.2	**35.01**	**220**	*e*	P	**P**	**12 43 16.2**	**-0.3**
FORT				*e*			12 43 21.4	
FORT				*e*	PCP	PcP	12 45 52.0	+3.7
KALP	**Kalibo**	**35.12**	**298**	*e*	P	**P**	**12 43 26.1**	**+8.5**
OUZ	**Omahuta**	**35.33**	**151**	*e*	P	**P**	**12 43 18.9**	**-0.3**
AFI	**Afiamalu** comp=Z,24nm,0.4s,mb5.5,baz=256,slow=8.8,SNR=16	**35.38**	**107**	P		**P**	**12 43 21.3**	**+1.5**
AFI					LR	LR	12 56 26.3	
OTRP	comp=Z,45μm,18.4s,MS6.3,baz=280,slow=34 **Odiongan**	**35.70**	**299**	*e*	P	**P**	**12 43 21.5**	**-1.1**
RAO	**Raoul Island**	**36.25**	**135**		PFAKE		12 43 40.0	+13
RAO	comp=Z,66μm,20.0s,MS6.4				LR	LR		
WCZ	**Waipu Caves**	**36.27**	**151**	*e*	P	**P**	**12 43 27.1**	**-0.1**
MYLDM	**Lahad Datu**	**36.34**	**286**	‖*e*	P	**P**	**12 43 31.2**	**+3.0**
MBWA	**Marble Bar** SNR=24	**36.41**	**241**	P		**P**	**12 43 34.1**	**+5.5**
MBWA	**Marble Bar** comp=Z,745nm,1.1s,mb6.5	**36.41**	**241**	*e*	P	**P**	**12 43 29.0**	**+0.3**
MBWA					LR	LR		
SJMP	comp=Z,74μm,21.0s,MS6.4 **San Jose**	**36.53**	**299**	*e*	P	**P**	**12 43 30.6**	**+0.9**
TSM	**Tawau**	**36.72**	**284**	⇑*e*	P	**P**	**12 43 32.4**	**+1.1**
POLP	**Polillo Island**	**36.89**	**303**	*e*	P	**P**	**12 43 38.6**	**+5.8**
BUSP	**Coron**	**37.14**	**297**	*e*	P	**P**	**12 43 34.6**	**-0.3**
WTAZ	**Waiatarua**	**37.18**	**151**	*e*	P	**P**	**12 43 35.3**	**+0.4**
PPR	**Puerto Princes**	**37.59**	**293**	‖*e*	P	**P**	**12 43 45.0**	**+6.3**
KUZ	**Kuaotunu**	**37.59**	**150**	*e*	P	**P**	**12 43 37.8**	**-0.6**
MKAZ	**Moumakai**	**37.61**	**151**	*e*	P	**P**	**12 43 38.1**	**-0.4**
BALP	**Baler**	**37.70**	**304**	*e*	P	**P**	**12 43 39.6**	**0.0**
PALP	**Palanan**	**37.70**	**306**	*e*	P	**P**	**12 43 39.8**	**+0.2**
SDKM	**Sandakan**	**37.72**	**286**	‖*e*	P	**P**	**12 43 44.3**	**+4.4**
LUBP	**Lubang**	**37.86**	**300**	*e*	P	**P**	**12 43 42.7**	**+1.7**
PCPH	**Palayan**	**38.01**	**303**	‖*e*	P	**P**	**12 43 44.4**	**+2.1**
TAU	**Tasmania Unive**	**38.10**	**187**	*e*	P	**P**	**12 43 44.2**	**+1.6**
TAU	comp=Z,64μm,22.0s,MS6.4				MLR	MLR		
BATP	**Bataraza**	**38.10**	**291**	*e*	P	**P**	**12 43 43.0**	**0.0**
CAUP	**Cauayan**	**38.13**	**306**	*e*	P	**P**	**12 43 43.1**	**-0.1**
TOZ	**Tahuroa Road**	**38.26**	**151**	*e*	P	**P**	**12 43 43.7**	**-0.4**
KDM	**Kudat**	**38.42**	**288**	⇑*e*	P	**P**	**12 43 51.1**	**+5.3**
HIZ	**Hauiti**	**38.59**	**153**	*e*	P	**P**	**12 43 46.8**	**0.0**
KKM	**Kota Kinabalu**	**38.77**	**286**	‖*e*	P	**P**	**12 43 50.0**	**+1.4**
KKM	**Kota Kinabalu**	**38.77**	**286**	*e*	P	**P**	**12 43 49.0**	**+0.3**
BCPH	**Baguio City Da**	**38.85**	**304**	‖*i*	P	**P**	**12 43 49.9**	**+0.6**
APYP	**Conner**	**39.08**	**306**	*e*	P	**P**	**12 43 50.7**	**-0.5**
SCZP	**Santa Cruz**	**39.11**	**303**	*e*	P	**P**	**12 43 51.3**	**-0.1**
ABRA	**Dolores**	**39.40**	**306**	*e*	P	**P**	**12 43 54.3**	**+0.4**
BOLP	**Bolinao**	**39.41**	**303**	*e*	P	**P**	**12 43 53.0**	**-1.0**
URZ	**Urewera** comp=Z,152nm,1.1s,mb5.7,baz=333,slow=5.4,SNR=22	**39.46**	**150**	P		**P**	**12 43 53.4**	**-0.7**
URZ	comp=Z,31nm,0.8s,baz=312,slow=2.0,SNR=4.3				S	**S**	**12 49 53.7**	**-0.4**
URZ	comp=Z,39μm,18.2s,MS6.3,baz=116,slow=34				LR	LR	12 59 06.4	
URZ	**Urewera**	**39.46**	**150**	*e*	P	**P**	**12 43 53.8**	**-0.3**
QRZ	**Quartz Range**	**39.54**	**157**	*e*	P	**P**	**12 43 54.7**	**0.0**
WNVZ	**Wahianoa**	**39.59**	**153**	*e*	P	**P**	**12 43 55.7**	**+0.6**
WAZ	**Wanganui**	**39.66**	**154**	*e*	P	**P**	**12 43 57.4**	**+1.7**
MWZ	**Matawai**	**39.73**	**150**	*e*	P	**P**	**12 43 56.2**	**-0.1**
BKZ	**Black Stump Fm**	**39.87**	**152**	*e*	P	**P**	**12 43 56.3**	**-1.2**
PUZ	**Puketiti**	**39.90**	**149**	*e*	P	**P**	**12 43 57.4**	**-0.3**
JOW	**Kunigami** comp=Z,212nm,0.4s,mb6.2,baz=141,slow=9.6,SNR=92	**39.96**	**324**	P		**P**	**12 43 59.2**	**+0.8**
DSZ	**Denniston Nort**	**40.06**	**159**	*e*	P	**P**	**12 43 58.8**	**-0.2**
JHJ	**Hachijo jima 2** comp=Z,359nm,0.7s,mb6.2,baz=180,slow=13,SNR=11	**40.10**	**342**	P		**P**	**12 44 00.9**	**+1.4**
JHJ	comp=Z,8μm,21.8s,MS5.5,baz=307,slow=34				LR	LR	12 58 39.0	
NNZ	**Nelson**	**40.20**	**157**	*e*	P	**P**	**12 43 59.9**	**-0.3**
TSZ	**Takapari Road**	**40.34**	**153**	*e*	P	**P**	**12 44 00.1**	**-1.3**
THZ	**Tophouse**	**40.48**	**157**	*e*	P	**P**	**12 44 01.1**	**-1.5**
KIW	**Kapiti Island**	**40.53**	**155**	P		**P**	**12 44 02.6**	**-0.4**
TCW	**Tory Channel**	**40.56**	**156**	P		**P**	**12 44 02.4**	**-0.8**
TRT	**Tretes**	**40.63**	**264**	⇑*e*	P	**P**	**12 44 11.5**	**+7.3**
TRT				*e*	S	**S**	**12 50 13.0**	**+0.7**
MRZ	**Mangatainoka R**	**40.66**	**154**	*e*	P	**P**	**12 44 02.2**	**-1.8**
MRW	**Makara Radio**	**40.75**	**155**	P		**P**	**12 44 03.7**	**-1.1**
MRW				S		**S**	**12 50 09.3**	**-4.0**
CAW	**Cannon Point**	**40.80**	**155**	P		**P**	**12 44 04.3**	**-0.9**
SNZO	**South Karori** comp=Z,680nm,0.8s,mb6.3	**40.82**	**155**	*e*	P	**P**	**12 44 05.0**	**-0.3**
SNZO	comp=Z,108μm,22.0s,MS6.7				LR	LR		
BSWZ	**Blackbirch Sta**	**40.82**	**156**	*e*	P	**P**	**12 44 04.3**	**-1.0**
WVZ	**Waitaha Valley**	**40.86**	**161**	*e*	P	**P**	**12 44 03.8**	**-1.8**
FOZ	**Fox Glacier**	**40.96**	**162**	*e*	P	**P**	**12 44 06.8**	**+0.3**
MTW	**Mount Morrison**	**41.03**	**154**	P		**P**	**12 44 05.3**	**-1.8**
LTZ	**Lake Taylor**	**41.13**	**159**	*e*	P	**P**	**12 44 07.2**	**-0.7**
BTM	**Bintulu**	**41.14**	**281**	‖*e*	P	**P**	**12 44 11.4**	**+3.0**
JCZ	**Jackson Bay**	**41.15**	**163**	*e*	P	**P**	**12 44 08.3**	**+0.3**
KHZ	**Kahutara**	**41.29**	**157**	*e*	P	**P**	**12 44 07.6**	**-1.6**
MSZ	**Milford Sound**	**41.47**	**164**	*e*	P	**P**	**12 44 10.7**	**+0.1**
RPZ	**Rata Peaks** comp=Z,863nm,1.0s,mb6.3,baz=275,slow=1.2,SNR=85	**41.53**	**161**	P		**P**	**12 44 11.3**	**+0.1**
RPZ	comp=Z,12nm,0.7s,baz=180,slow=14,SNR=1.8				S	**S**	**12 50 22.6**	**-2.3**
RPZ	**Rata Peaks**	**41.53**	**161**	*e*	P	**P**	**12 44 10.6**	**-0.6**
SBUM	**Sibu**	**41.85**	**279**	⇑P		**P**	**12 44 17.5**	**

MJAR LR LR 13 03 01.0
comp=Z,4µm,18.3s,MS5.4,baz=160,slow=37
MJAR Matsushiro Arr 43.75 342 P P 12 44 26.3 -2.9
MJAR ScP ScP 12 50 10.9 +5.7
MJAR LR LR 13 03 01.0
MAJO Matsushiro 43.75 342 *eP* **P 12 44 27.3 -1.9**
MAJO MLR MLR
comp=Z,7µm,21.0s,MS5.6
MAT Matsushiro 43.75 342 P P 12 44 26.4 -2.8
MAT S **S 12 50 55.4 -2.2**
QZH Quanzhou 45.13 313⇑ *iP* **P 12 44 41.0 +0.6**
QZH S **S 12 51 17.0 -1.0**
QZH AMB AMB
comp=Z,1µm,1.1s,mb6.6
QZH AMB AMB
comp=Z,11µm,11.2s
QZH LR LR
comp=N,38µm,23.4s
QZH LR LR
comp=E,16µm,15.8s
QZH LR LR
comp=Z,66µm,32.0s
TPI Tanjungpandan 45.73 271⇓ *eP* **P 12 44 46.0 +0.5**
TPI *eS* **S 12 51 20.0 -7.2**
HKC Hong Kong Obse 47.05 307⇑ *iP* **P 12 44 58.0 +2.3**
SSE Sheshan 47.33 321 P **P 12 44 57.5 -0.1**
SSE PP PP 12 46 51.5 +2.4
SSE S **S 12 51 50.5 +1.1**
SSE AMB AMB
comp=Z,129nm,1.5s,mb5.6
SSE AMB AMB
comp=Z,5µm,6.7s
SSE LR LR
comp=N,14µm,30.2s,MS5.9
SSE LR LR
comp=E,16µm,30.8s,MS5.9
SSE LR LR
comp=Z,17µm,26.9s,MS5.9
SSE Sheshan 47.33 321 P **P 12 44 57.4 -0.2**
comp=Z,129nm,1.5s,mb5.6
SSE sP sP 12 45 03.4 -7.6
SSE PP PP 12 46 51.4 +2.3
SSE S **S 12 51 50.4 +1.0**
SSE sS sS 12 51 56.1 -9.0
SSE LR LR
comp=Z,17µm,26.9s,MS5.9
XMIS Christmas Isla 47.62 260 *eP* **P 12 44 59.0 -1.3**
ERM Erimo 47.76 350 *d iP* **P 12 45 00.4 -0.4**
ERM Erimo 47.76 350 *eP* **P 12 44 59.7 -1.1**
comp=Z,102nm,0.9s,mb5.8
ERM LR LR
comp=Z,23µm,22.0s,MS6.1
RAR Rarotonga 48.10 114 P **P 12 45 01.8 -2.0**
comp=Z,56nm,0.8s,mb5.6,baz=250,slow=7.0,SNR=8.9
RAR LR LR 13 00 25.4
comp=Z,5µm,19.2s,MS5.5,baz=277,slow=30
RAR Rarotonga 48.10 114 *eP* **P 12 45 07.2 +3.4**
RAR pmax pmax
comp=Z,1µm,2.4s
GZH Guangzhou 48.11 307 P **P 12 45 05.0 +1.1**
GZH S **S 12 52 10.0 +9.2**
GZH AMB AMB
comp=Z,11µm,14.5s
GZH LR LR
comp=N,11µm,24.0s,MS5.9
GZH LR LR
comp=E,13µm,25.9s,MS5.9
GZH LR LR
comp=Z,32µm,24.4s,MS6.2
KSRS Korea Array 48.50 333 P **P 12 45 06.0 -0.7**
comp=Z,96nm,1.1s,mb5.7,baz=150,slow=7.5,SNR=96
KSRS ScP ScP 12 50 27.8 +2.7
comp=Z,4.3nm,0.8s,baz=150,slow=5.8,SNR=3.2
KSRS S **S 12 52 08.5 +2.6**
comp=Z,1.9nm,1.0s,baz=156,slow=9.3,SNR=2.9
KS15 Wonju Array Si 48.51 333 *eP* **P 12 45 06.6 -0.1**
INCN Inchon 49.12 332 P **P 12 45 11.5 +0.1**
SNR=65
INCN Inchon 49.12 332 *eP* **P 12 45 11.3 -0.1**
INCN LR LR
comp=Z,9µm,21.0s,MS5.7
QIZ Qiongzhong 49.14 300 P **P 12 45 11.5 -0.4**
QIZ S **S 12 52 15.5 +0.1**
QIZ AMB AMB
comp=Z,41nm,2.1s,mb5.1
QIZ AMB AMB
comp=Z,7µm,10.1s
QIZ LR LR
comp=N,8µm,22.9s,MS6.0
QIZ LR LR
comp=E,18µm,23.4s,MS6.0
QIZ LR LR
comp=Z,35µm,23.6s,MS6.3
QIZ Qiongzhong 49.14 300 *eP* **P 12 45 12.2 +0.4**
comp=Z,199nm,1.0s,mb6.1
QIZ LR LR
comp=Z,14µm,20.0s,MS6.0
YUK Yuzh-Kuril'sk 49.32 353 *eP* **P 12 45 11.0 -1.8**
YUK *eS* **S 12 52 16.0 -1.2**
YUK *eSS* ScS 12 55 05.0 +2.6
YUK pmax pmax
comp=Z,5µm,6.0s
YUK smax
comp=N,13µm,21.0s
YUK smax
comp=E,6µm,18.0s
NJ2 Nanjing 49.43 321 *eP* **P 12 45 14.5 +0.6**
NJ2 AP pP 12 45 18.5 -5.0
NJ2 XP sP 12 45 21.3 -6.0
NJ2 S **S 12 52 19.0 -0.2**
NJ2 AMB AMB
comp=Z,270nm,1.2s,mb6.2
NJ2 AMB AMB
comp=Z,5µm,10.3s
NJ2 LR LR
comp=N,9µm,21.5s,MS6.0
NJ2 LR LR
comp=E,15µm,21.7s,MS6.0
NJ2 LR LR
comp=Z,15µm,21.7s,MS6.0
MCQ Macquarie Isla 49.51 176 *eP* **P 12 45 15.1 +1.0**
MCQ *e* 12 45 20.6
MCQ *eS* **S 12 52 24.8 +5.2**
XMAS Kiritimati 49.56 83 *eP* **P 12 45 15.5 +0.3**
comp=Z,508nm,0.9s,mb6.5
XMAS LR LR
comp=Z,100µm,20.0s,MS6.8
ASAJ Asahikawa 49.90 350 P **P 12 45 17.2 0.0**
comp=Z,50nm,0.7s,mb5.7,baz=197,slow=8.8,SNR=33
ASAJ LR LR 13 03 39.5
comp=Z,20µm,21.9s,MS6.1,baz=172,slow=33
MYKOM Kota Tinggi 50.01 277⇓ **P P 12 45 20.3 +1.7**
KGM Kluang 50.56 277⇓ **P P 12 45 26.5 +3.6**
KTGM Kuala Trenggan 51.29 281⇓ **P P 12 45 30.3 +2.0**
UBT Ubonrachathani 52.03 294⇓ **P P 12 45 35.0 +1.3**
comp=Z,326nm,1.0s,mb6.2
FRIM Kepong 52.42 278⇑ **P P 12 45 37.6 +0.9**
YSS Yuzh-Sakhalins 52.62 351⇑ *iP* **P 12 45 36.0 -1.6**
YSS *e* pP 12 45 45.8 -1.4
YSS *e* 12 47 40.0
YSS *eS* **S 12 53 03.0 +0.2**
YSS *ePS* 12 53 20.0
YSS smax
comp=N,5µm,14.0s
YSS Yuzh-Sakhalins 52.62 351⇑ *iP* **P 12 45 36.6 -1.0**
YSS LR LR
comp=Z,8µm,22.0s,MS5.7
DL2 Dalian 52.71 329⇑ *iP* **P 12 45 38.3 -0.1**
DL2 PP PP 12 47 42.5 +4.6
DL2 S **S 12 53 05.8 +1.6**
DL2 SCS ScS 12 55 26.3 +0.4
DL2 AMB AMB
comp=Z,120nm,0.9s,mb5.8
DL2 AMB AMB
comp=Z,4µm,8.3s
DL2 LR LR
comp=N,6µm,24.4s,MS5.7
DL2 LR LR
comp=E,6µm,25.3s,MS5.7
DL2 LR LR
comp=Z,13µm,28.8s,MS5.8
IPM Ipoh 53.20 279⇓ **P P 12 45 44.1 +1.5**
TIA Tai'an 53.29 323⇑ **P P 12 45 42.0 -0.7**
TIA AP pP 12 45 50.0 -2.3
TIA AMB AMB
comp=Z,63nm,1.0s,mb5.5
TIA AMB AMB
comp=Z,2µm,10.0s
TIA LR LR
comp=N,5µm,20.0s,MS5.7
TIA LR LR
comp=E,3µm,19.0s,MS5.7
MDJ Mudanjiang 53.87 339 P **P 12 45 45.8 -1.0**
MDJ PP PP 12 47 47.0 -1.3
MDJ SCP ScP 12 50 49.5 +1.5
MDJ S **S 12 53 21.5 +1.7**
MDJ AMB AMB
comp=Z,56nm,1.6s,mb5.2
MDJ AMB AMB
comp=Z,884nm,4.9s
MDJ LR LR
comp=N,21µm,41.6s,MS6.1
MDJ LR LR
comp=E,29µm,42.2s,MS6.1
MDJ LR LR
comp=Z,12µm,29.8s
MDJ Mudanjiang 53.87 339 *eP* **P 12 45 46.4 -0.4**
comp=Z,179nm,1.0s,mb6.0
MDJ LR LR
comp=Z,7µm,21.0s,MS5.7
SNY Shenyang 54.01 333⇑ **P P 12 45 47.0 -0.9**
SNY PCP PcP 12 46 51.0 -1.7
SNY PP PP 12 47 54.0 +4.4
SNY S **S 12 53 20.8 -1.0**
SNY SS SS 12 57 01.0 -2.7
SNY AMB AMB
comp=Z,91nm,2.1s,mb5.3
SNY LR LR
comp=N,8µm,25.3s,MS6.0
SNY LR LR
comp=E,14µm,23.9s,MS6.0
SNY LR LR
comp=Z,24µm,35.3s
SNG Songkhla 54.10 283 P **P 12 45 49.0 0.0**
comp=Z,880nm,1.0s,mb6.6
KIP Kipapa 54.35 59 *i P* **P 12 45 52.8 +2.1**
KIP Kipapa 54.35 59 *eP* **P 12 45 52.3 +1.5**
comp=Z,342nm,1.1s,mb6.2
KIP LR LR
comp=Z,34µm,21.0s,MS6.4
KKTK Khon Kaen 54.38 294 P **P 12 45 51.5 +0.5**
comp=Z,5µm,0.5s
CN2 Changchun 54.78 335⇑ **P P 12 45 52.3 -1.1**
CN2 *eAP* pP 12 45 56.8 -6.3
CN2 PCP PcP 12 46 54.5 -1.1
CN2 PP PP 12 47 57.5 +1.0
CN2 *eS* **S 12 53 30.3 -1.8**
CN2 SS SS 12 57 14.3 -1.5
CN2 AMB AMB
comp=Z,50nm,1.6s,mb5.3
CN2 AMB AMB
comp=Z,5µm,10.0s
CN2 LR LR
comp=N,12µm,22.0s,MS6.1
CN2 LR LR
comp=E,11µm,22.0s,MS6.1
CN2 LR LR
comp=Z,37µm,25.0s,MS6.4
GYA Guiyang 55.05 307⇑ *iP* **P 12 45 55.3 -0.4**
GYA PCP PcP 12 46 58.5 +1.4
GYA PP PP 12 48 01.8 +2.6
GYA SCP ScP 12 50 55.5 +1.9
GYA *S* **S 12 53 36.5 +0.2**
GYA SS SS 12 57 21.5 +0.8
GYA AMB AMB
comp=Z,190nm,1.0s,mb6.1
GYA AMB AMB
comp=Z,15µm,10.8s
GYA LR LR
comp=N,10µm,20.0s,MS6.0
GYA LR LR
comp=E,10µm,21.4s,MS6.0
GYA LR LR
comp=Z,13µm,21.6s,MS6.0
SKR Severo-Kuril's 55.55 2 P **P 12 45 57.5 -1.3**
SKR *e* 12 46 04.0
SKR *eS* **S 12 53 42.0 -0.1**
SKR pmax pmax
comp=N,150nm,0.5s
SKR pmax pmax
comp=Z,110nm,0.5s,mb6.1
SKR smax
comp=N,14µm,16.0s
SKR smax
comp=E,11µm,16.0s
SKR MLR MLR
comp=N,9µm,20.0s,MS6.0
SKR MLR MLR
comp=E,9µm,20.0s,MS6.0
SKR MLR MLR
comp=Z,90µm,20.0s,MS6.8
SKR Severo-Kuril's 55.55 2 *eP* **P 12 45 58.0 -0.8**
HKL Haleakala 55.59 61 *eP* **P 12 46 06.8 +7.1**
HKL *e**PP pP 12 46 18.1 +8.7
KHU Kahuku 55.63 63 *eP* **P 12 45 59.8 -0.2**
KHU Kahuku 55.63 63 P **P 12 46 00.4 +0.4**
HABR Khabarovsk 55.67 345⇑ *iP* **P 12 45 59.0 -0.8**
HABR *e* 12 47 59.9
HABR *eS* **S 12 53 44.3 +0.4**
HABR pmax pmax
comp=Z,266nm,1.9s,mb6.0
HABR MLR MLR
comp=Z,4µm,17.9s,MS5.5
POHA Pohakuloa 55.88 62 *eP* **P 12 46 01.9 +0.1**
comp=Z,412nm,0.9s,mb6.5
POHA LR LR
comp=Z,49µm,22.0s,MS6.5
NNT Nongplab 56.17 289 P **P 12 46 05.0 +1.0**
comp=Z,1µm,0.9s,mb6.8
COCO West Island 56.34 259 *eP* **P 12 46 04.8 -0.4**
comp=Z,948nm,1.7s,mb6.5
COCO LR LR
comp=Z,6µm,20.0s,MS5.7
BJT Baijiatuan 56.44 326 *eP* **P 12 46 04.8 -0.6**
BJT pmax pmax
comp=Z,152nm,0.8s
BJT MLR MLR
comp=Z,17µm,22.0s
BJT Baijiatuan 56.44 326 *eP* **P 12 46 04.8 -0.6**
comp=Z,152nm,0.8s,mb6.1
BJT LR LR
comp=Z,17µm,22.0s,MS6.1
BJI Beijing 56.45 326 P **P 12 46 04.8 -0.7**
BJI PP PP 12 48 09.8 -1.7
BJI S **S 12 53 53.5 -1.0**
BJI SS SS 12 57 44.8 +2.6
BJI AMB AMB
comp=Z,61nm,1.3s,mb5.5
BJI AMB AMB
comp=Z,6µm,10.9s
BJI LR LR
comp=N,11µm,22.2s,MS6.0
BJI LR LR
comp=E,11µm,24.8s,MS6.0
BJI LR LR
comp=Z,37µm,34.9s
BJI Beijing 56.45 326 P **P 12 46 04.7 -0.8**
comp=Z,61nm,1.3s,mb5.5
BJI PP PP 12 48 09.8 -1.7
BJI S **S 12 53 53.6 -0.9**
BJI SS SS 12 57 44.7 +2.5
BJI LR LR
comp=Z,37µm,34.9s,MS6.2
NST Nakhon Sawan 56.64 292⇓ **P P 12 46 08.1 +0.8**
comp=Z,608nm,0.8s,mb6.7
PPT Papeete 57.04 108 *eP* **P 12 46 09.9 -0.3**
comp=Z,81nm,0.7s,mb5.8
PPT *eS* **S 12 54 00.8 -2.3**
comp=Z,31µm,25.8s
PPT *eLQ* 13 00 35.2
comp=Z,64µm,27.8s
PPT *eLR* LR 13 03 01.6
comp=Z,77µm,32.0s,baz=273
PPT Papeete 57.04 108 P **P 12 46 12.5 +2.3**
comp=Z,103nm,0.6s,mb6.0,baz=328,slow=1.9,SNR=16
PPT LR LR 13 04 45.5
comp=Z,12µm,20.5s,MS6.0,baz=92,slow=30
PAE Paea 57.05 108 *eP* **P 12 46 09.5 -0.7**
comp=Z,1µm,1.3s,mb6.8
PAE *eP'P'* 13 16 28.2
TIY Taiyuan 57.11 322⇑ **P P 12 46 12.0 +1.7**
TIY AP pP 12 46 16.5 -3.5
TIY S **S 12 54 06.0 +2.6**
TIY AMB AMB
comp=Z,4µm,9.3s
TIY LR LR
comp=N,689nm,8.4s
TIY LR LR
comp=E,5µm,15.6s
TIY LR LR
comp=Z,27µm,26.5s
XAN Xi'an 57.24 316 P **P 12 46 11.0 -0.2**
XAN AP pP 12 46 18.0 -2.9
XAN S **S 12 54 00.0 -5.2**
XAN AMB AMB
comp=Z,234nm,1.3s,mb6.1
XAN AMB AMB
comp=Z,947nm,5.4s
XAN LR LR
comp=N,3µm,31.0s,MS5.8
XAN LR LR
comp=E,10µm,33.4s,MS5.8
XAN LR LR
comp=Z,26µm,34.7s,MS6.1
KLR Kul'dur 57.25 343⇓ *iP* **P 12 46 06.6 -4.4**
KLR *eS* **S 12 53 55.5 -9.3**
KLR *e* 12 55 57.0
KLR pmax pmax
comp=N,110nm,1.8s
KLR pmax pmax
comp=E,150nm,1.8s
KLR pmax pmax
comp=Z,500nm,1.8s,mb6.2
KLR pmax pmax
comp=E,1µm,9.5s
KLR pmax pmax
comp=Z,5µm,9.5s
TIAR Tiarei 57.26 108 *eP* **P 12 46 11.4 -0.3**
comp=Z,3µm,0.7s
TVO Taravao 57.37 108 *eP* **P 12 46 11.9 -0.6**
comp=Z,1µm,0.7s,mb7.2
KMI Kunming 57.65 304 P **P 12 46 15.8 +1.5**
KMI AP pP 12 46 22.3 -1.8
KMI XP sP 12 46 24.5 -3.3
KMI PCP PcP 12 47 08.0 +0.7
KMI PP PP 12 48 26.0 +3.5
KMI SCP ScP 12 51 05.3 +0.2
KMI PCS PcS 12 51 07.8 -0.8
KMI S **S 12 54 12.0 +1.1**
KMI SCS ScS 12 56 00.3 -1.7
KMI SS SS 12 58 04.0 +2.3
KMI AMB AMB
comp=Z,264nm,1.4s,mb6.1
KMI AMB AMB
comp=Z,6µm,9.6s
KMI LR LR
comp=N,12µm,24.1s,MS6.2
KMI LR LR
comp=E,17µm,24.8s,MS6.2
KMI LR LR
comp=Z,35µm,27.9s,MS6.3
KMI Kunming 57.65 304 P **P 12 46 15.7 +1.4**
KMI *SP sP 12 46 24.6 -3.2
KMI 12 47 07.9
KMI 12 48 25.9
KMI PPP 12 49 46.4
KMI S **S 12 54 12.0 +1.1**
KMI *SS sS 12 54 22.7 -4.2
KMI 12 56 00.3
KMI SS SS 12 58 03.9 +2.2
KMI SSS 13 00 21.9
KMI pmax pmax
comp=Z,264nm,1.4s,mb6.1
KMI Kunming 57.65 304 P **P 12 46 15.7 +1.4**
comp=Z,264nm,1.4s,mb6.1
KMI pP pP 12 46 22.3 -1.8
KMI sP sP 12 46 24.6 -3.2
KMI PcP PcP 12 47 07.9 +0.6
KMI PP PP 12 48 25.9 +3.4
KMI PPP 12 49 46.4
KMI ScP ScP 12 51 05.3 +0.2
KMI PcS PcS 12 51 07.8 -0.8
KMI S **S 12 54 12.0 +1.1**
KMI sS sS 12 54 22.7 -4.2
KMI ScS ScS 12 56 00.3 -1.7
KMI SS SS 12 58 03.9 +2.2
KMI SSS 13 00 21.9
KMI LR LR
comp=Z,35µm,27.9s,MS6.3
TBI Tubuai 57.88 114 *eP* **P 12 46 14.7 -1.3**
comp=Z,374nm,1.1s,mb6.3
TBI *eS* **S 12 54 12.9 -1.1**
comp=Z,23µm,30.2s
TBI *eSS* SS 12 58 05.1 -0.1
comp=Z,13µm,29.2s
TBI *eLQ* 13 00 48.7
comp=Z,80µm,32.8s
TBI *eLR* LR 13 03 24.0
comp=Z,128µm,34.0s,baz=282
TBI Tubuai 57.88 114 *eP* **P 12 46 14.7 -1.3**
comp=Z,374nm,1.1s,mb6.3
TBI *eS* **S 12 54 12.9 -1.1**
TBI *eSS* SS 12 58 05.1 -0.1
TBI *eLQ* 13 00 48.7
PET Petropavlovsk 58.01 4*c iP* **P 12 46 15.6 -0.7**
PET *i S* **S 12 54 16.2 +1.6**
PET pmax pmax
comp=Z,175nm,0.8s,mb6.1
PET MLR MLR
comp=Z,8µm,21.0s,MS5.8
PET MLR MLR
comp=Z,7µm,20.0s
PET Petropavlovsk 58.01 4⇑ *iP* **P 12 46 15.8 -0.5**
PET LR LR
comp=Z,12µm,21.0s,MS6.0
PEA0B Petropavlovsk- 58.04 3 *eP* **P 12 46 16.5 0.0**
PETK Petropavlovsk- 58.04 3 P **P 12 46 15.6 -0.9**
comp=Z,43nm,0.7s,mb5.6,baz=161,slow=6.1,SNR=96
PETK LR LR 13 07 17.7
comp=Z,16µm,21.5s,MS6.1,baz=172,slow=32
CHRT Chiangrai 58.26 297⇑ **P P 12 46 19.0 +0.3**
comp=Z,1µm,0.7s,mb7.0
PMOR Pomariorio Ree 58.46 104 *eP* **P 12 46 19.3 -0.8**
comp=Z,730nm,1.2s,mb6.6
MEH Mehetia 58.50 108 *eP* **P 12 46 19.4 -1.0**
comp=Z,9µm,0.8s
CM31 Chiang Mai Arr 58.56 295 PFAKE 12 46 30.0 +9.2
CM31 LR LR
comp=Z,7µm,21.0s,MS5.8
CMAR Chiang Mai Arr 58.56 295 P **P 12 46 21.8 +1.0**
comp=Z,61nm,0.7s,mb5.7,baz=114,slow=5.0,SNR=62
CMAR S **S 12 54 24.6 +1.6**
comp=Z,0.9nm,0.9s,baz=119,slow=9.4,SNR=2.6
CMAR LR LR 13 11 50.5
comp=Z,6µm,19.2s,MS5.7,baz=105,slow=36
CMAR PKPPKP 13 15 53.3
comp=Z,1.4nm,0.9s,baz=305,slow=3.6,SNR=4.1
CMAR PKP2bc 13 16 13.9
comp=Z,6.1nm,0.8s,baz=290,slow=4.0,SNR=10
CMAR Chiang Mai Arr 58.56 295 *i P* **P 12 46 21.8 +1.0**
CHG Chiang Mai 58.67 295⇓ **P P 12 46 21.8 +0.3**
comp=Z,368nm,1.0s,mb6.4
CHTO Chiang Mai 58.67 295 P **P 12 46 22.5 +1.0**
SNR=132
CHTO Chiang Mai 58.67 295 *eP* **P 12 46 22.1 +0.6**
CHTO LR LR
comp=Z,7µm,22.0s,MS5.8
VAH Vaihoa 58.73 105 *eP* **P 12 46 20.8 -1.2**
comp=Z,370nm,1.3s,mb6.3
CD2 Chengdu 59.38 310⇑ *iP* **P 12 46 26.8 +0.5**
CD2 AP pP 12 46 33.5 -2.5
CD2 XP sP 12 46 38.0 -1.8
CD2 PCP PcP 12 47 14.0 0.0
CD2 PP PP 12 48 39.5 +1.8
CD2 PCS PcS 12 51 15.3 -0.8
CD2 S **S 12 54 31.3 -1.9**
CD2 SCS ScS 12 56 11.5 -3.0
CD2 SS SS 12 58 27.0 -1.7
CD2 AMB AMB
comp=Z,150nm,0.6s,mb6.2
CD2 AMB AMB
comp=Z,3µm,3.2s
CD2 LR LR
comp=N,26µm,27.6s,MS6.3
CD2 LR LR
comp=E,18µm,24.6s,MS6.3

CD2 LR LR
comp=Z,25µm,38.4s
HHC Hu-ho-hao-te 59.61 324⇑ *i*P **P 12 46 27.8 +0.1**
HHC PCP PcP 12 47 14.8 +0.1
HHC PP PP 12 48 41.5 +1.9
HHC SCP ScP 12 51 13.5 0.0
HHC PCS PcS 12 51 15.0 -1.7
HHC S **S 12 54 37.3 +1.4**
HHC SCS ScS 12 56 14.0 -1.8
HHC SS SS 12 58 32.8 +0.8
HHC AMB AMB
comp=Z,71nm,1.5s,mb5.5
HHC AMB AMB
comp=Z,7µm,7.4s
HHC LR LR
comp=N,9µm,16.9s,MS6.2
HHC LR LR
comp=E,12µm,17.3s,MS6.2
HHC LR LR
comp=Z,23µm,17.1s,MS6.4
BTO Baotou 60.38 323 *e*P **P 12 46 32.8 -0.1**
BTO S **S 12 54 47.0 +1.3**
AMKA Amchitka 60.41 18 *e*P **P 12 46 32.1 -0.7**
HIA Hailar 61.51 336 *e*P **P 12 46 39.8 -0.6**
HIA pmax pmax
comp=Z,176nm,0.9s
HIA MLR MLR
comp=Z,11µm,20.0s
HIA Hailar 61.51 336 *e*P **P 12 46 39.8 -0.6**
comp=Z,176nm,0.9s,mb6.2
HIA LR LR
comp=Z,11µm,20.0s,MS6.0
LZH Lanzhou 61.85 316 ⇑P **P 12 46 44.3 +1.3**
LZH AP pP 12 46 48.8 -4.0
LZH PP PP 12 49 02.3 +2.8
LZH S **S 12 55 06.0 +1.4**
LZH SS SS 12 59 06.0 -1.2
LZH AMB AMB
comp=Z,390nm,1.0s,mb6.5
LZH AMB AMB
comp=Z,3µm,4.0s
LZH LR LR
comp=N,11µm,15.0s
LZH LR LR
comp=Z,20µm,17.4s,MS6.3
LZH Lanzhou 61.85 316 ⇑P **P 12 46 44.2 +1.2**
LZH *SP sP 12 46 50.4 -6.1
LZH 12 49 02.3
LZH S **S 12 55 06.0 +1.4**
LZH *SS sS 12 55 13.0 -7.8
LZH SS SS 12 59 06.0 -1.2
LZH pmax pmax
comp=Z,390nm,1.0s,mb6.5
LZH MLR MLR
comp=Z,20µm,17.4s,MS6.3
LZH Lanzhou 61.85 316 ⇑P **P 12 46 44.2 +1.2**
comp=Z,390nm,1.0s,mb6.5
LZH pP pP 12 46 48.7 -4.1
LZH sP sP 12 46 50.4 -6.1
LZH PP PP 12 49 02.3 +2.8
LZH S **S 12 55 06.0 +1.4**
LZH sS sS 12 55 13.0 -7.8
LZH SS SS 12 59 06.0 -1.2
LZH LR LR
comp=Z,20µm,17.4s,MS6.3
ADK Adak 62.16 20 *e*P **P 12 46 45.0 +0.2**
ADK pmax pmax
comp=Z,301nm,0.9s,mb6.4
ADK MLR MLR
comp=Z,20µm,22.0s,MS6.2
ADK Adak 62.16 20 *e*P **P 12 46 45.0 +0.2**
comp=Z,301nm,0.9s,mb6.4
ADK LR LR
comp=Z,20µm,22.0s,MS6.2
IMP Imphal 64.97 300 *e*P **P 12 47 04.0 +0.1**
IMP *i* x x 12 47 17.0
CLNS Chul'man 65.92 343 *e*P **P 12 47 08.6 -0.7**
CLNS *e* 12 47 40.3
CLNS *e* 12 49 31.6
CLNS *e*PPP 12 51 05.9
CLNS *e*S S 12 55 52.2 -2.2
CLNS pmax pmax
comp=Z,342nm,1.3s,mb6.2
CLNS pmax pmax
comp=N,126nm,1.0s
CLNS pmax pmax
comp=E,29nm,0.8s
CLNS MLR MLR
comp=E,931nm,20.0s,MS5.4
CLNS MLR MLR
comp=Z,1µm,23.0s,MS5.1
CLNS MLR MLR
comp=N,2µm,24.0s,MS5.4
CLNS Chul'man 65.92 343 *e*P **P 12 47 08.7 -0.6**
NIKO Nikolski 65.97 24 *e*P **P 12 47 07.6 -2.2**
comp=N,590nm,1.1s,mb6.5
CIT Chita 66.19 334 *e*P **P 12 47 11.0 -0.2**
CIT *e* 12 47 38.7
CIT pmax pmax
comp=Z,750nm,1.8s,mb6.4
GTA Gaotai 66.27 317 ⇑P **P 12 47 13.0 +1.0**
GTA AP pP 12 47 17.5 -4.3
GTA XP sP 12 47 20.0 -5.6
GTA S S 12 56 04.0 +4.7
GTA XS sS 12 56 12.5 -3.1
GTA AMB AMB
comp=Z,344nm,1.8s,mb6.1
GTA AMB AMB
comp=Z,5µm,6.3s
GTA LR LR
comp=N,8µm,25.2s,MS6.0
GTA LR LR
comp=E,9µm,28.8s,MS6.0
GTA LR LR
comp=Z,19µm,29.4s,MS6.1
ULN Ulaanbaatar 66.54 328 P **P 12 47 14.1 +0.6**
SNR=126
ULN Ulaanbaatar 66.54 328⇑ *i*P **P 12 47 13.7 +0.2**
ULN LR LR
comp=Z,7µm,20.0s,MS5.9
SONM Songino Array 66.87 328 P **P 12 47 15.7 +0.1**
comp=Z,68nm,0.7s,mb5.8,baz=148,slow=4.4,SNR=13
SONM LR LR 13 16 08.8
comp=Z,11µm,20.7s,MS6.0,baz=135,slow=36
SHL Shillong 66.98 300 *e*P **P 12 47 17.0 +0.2**
SHL *ex* x 12 56 05.5
UNV Unalaska Valle 67.57 24 *e*P **P 12 47 19.0 -0.9**
comp=Z,188nm,0.8s,mb6.2
SEY Seymchan 67.78 359⇑ *e*P **P 12 47 18.9 -2.2**
CASY Casey 67.98 197⇑ *i*P **P 12 47 21.4 -0.9**
CASY *e* 12 47 27.8
CASY *e*S S 12 56 17.3 -1.7
CASY Casey 67.98 197⇑ *i*P **P 12 47 21.4 -0.9**
CASY *e* 12 47 27.8
CASY *e*S S 12 56 17.3 -1.7
CASY LR LR
comp=Z,51µm,22.0s,MS6.7
AKUT Akutan 68.08 24 *e*P **P 12 47 23.6 +0.4**
LSA Lhasa 68.90 304 P **P 12 47 29.0 +0.2**
LSA AP pP 12 47 35.8 -2.9
LSA XP sP 12 47 39.5 -3.0
LSA PP PP 12 50 04.3 +2.9
LSA S S 12 56 27.8 -3.5
LSA XS sS 12 56 52.3 +4.7
LSA AMB AMB
comp=Z,50nm,2.2s,mb5.1
LSA LR LR
comp=N,5µm,28.1s,MS6.2
LSA LR LR
comp=E,19µm,28.1s,MS6.2
LSA LR LR
comp=Z,26µm,28.1s,MS6.3
LSA Lhasa 68.90 304 *e*P **P 12 47 29.9 +1.1**
LSA pmax pmax
comp=Z,539nm,1.3s,mb6.3
LSA MLR MLR
comp=Z,18µm,22.0s,MS6.3
LSA Lhasa 68.90 304 *e*P **P 12 47 29.9 +1.1**
comp=Z,539nm,1.3s,mb6.3
LSA LR LR
comp=Z,18µm,22.0s,MS6.3
CAL Calcutta 69.25 296 *e*P **P 12 47 30.4 -0.7**
CAL *ex* x 12 56 39.9
YAK Yakutsk 69.33 348*ce*P **P 12 47 29.6 -1.2**
YAK *e**PP pP 12 47 39.1 -1.6
YAK *e* 12 47 55.8
YAK *e* 12 50 02.7
YAK *e*S S 12 56 32.5 -2.6
YAK *e* 12 57 26.3
YAK *e*SS SS 13 01 00.3 -2.4
YAK pmax pmax
comp=Z,118nm,1.0s,mb5.8
YAK pmax pmax
comp=N,41nm,1.1s
YAK pmax pmax
comp=E,14nm,1.0s
YAK pmax pmax
comp=Z,71nm,1.0s,mb5.5
YAK pmax pmax
comp=N,278nm,2.0s
YAK pmax pmax
comp=E,242nm,2.0s
YAK smax
comp=E,2997µm,6.8s
YAK smax
comp=N,796µm,4.9s
YAK Yakutsk 69.33 348⇑ *i*P **P 12 47 29.8 -1.0**
YAK LR LR
comp=Z,10µm,22.0s,MS6.0
FALS False Pass 69.57 25 *e*P **P 12 47 36.7 +4.3**
ZAK Zakamensk 70.03 328⇓ *i*P **P 12 47 34.8 -0.5**
ZAK pmax pmax
comp=Z,227nm,1.0s,mb6.1
BOD Bodaibo 70.24 339 *e*P **P 12 47 34.9 -1.6**
BOD pmax pmax
comp=Z,154nm,1.0s,mb5.9
GTK Gangtok 70.30 301 *e*P **P 12 47 38.0 +0.5**
TLY Talaya 70.61 330 P **P 12 47 38.8 0.0**
SNR=52
TLY Talaya 70.61 330*c* *i*P **P 12 47 38.3 -0.5**
TLY *e*S S 12 56 49.2 -1.2
TLY pmax pmax
comp=Z,198nm,1.4s,mb5.8
TLY Talaya 70.61 330⇑ *i*P **P 12 47 38.6 -0.2**
TLY LR LR
comp=Z,9µm,22.0s,MS6.0
IRK Irkutsk 70.63 330⇓ *i*P **P 12 47 37.5 -1.5**
IRK *e* 12 57 41.0
IRK pmax pmax
comp=Z,145nm,1.4s,mb5.7
BWNR Bhubaneshwar 70.99 293 *e*P **P 12 47 42.0 +0.1**
BWNR *e*S S 12 56 54.0 -2.2
RKT Rikitea 71.11 113 *e*PP PP 12 50 19.2 -1.3
comp=Z,4µm,28.5s
RKT *e*S S 12 56 54.3 -3.1
comp=Z,12µm,28.2s
RKT *e*SS SS 13 01 29.8 -1.6
comp=Z,17µm,35.2s
RKT *e*LQ 13 06 30.0
comp=Z,30µm,34.8s
RKT *e*LR LR 13 09 26.0
comp=Z,106µm,28.0s,baz=277
RKT Rikitea 71.11 113 *e*P **P 12 47 40.9 -1.6**
RKT *e* 12 50 19.2
RKT *e*S S 12 56 54.3 -3.1
RKT *e*SS SS 13 01 29.8 -1.6
RKT pmax pmax
comp=Z,376nm,1.3s,mb6.2
RKT Rikitea 71.11 113 *e*P **P 12 47 40.9 -1.6**
comp=Z,376nm,1.3s,mb6.2
RKT *e*PP PP 12 50 19.2 -1.3
RKT *e*S S 12 56 54.3 -3.1
RKT *e*SS SS 13 01 29.8 -1.6
RKT *e*LQ 13 06 30.0
SDPT Sand Point 71.15 26 *e*P **P 12 47 41.9 -0.2**
comp=Z,323nm,0.7s,mb6.4
SDPT LR LR
comp=Z,45µm,23.0s,MS6.7
ODAN Odare 71.22 300 *e*P **P 12 47 43.5 +0.4**
comp=Z,1µm,0.8s,mb6.9
BOK Bokaro 71.74 297 *ex* x 12 47 50.3
RAMN Ramite 71.92 300 *e*P **P 12 47 47.6 +0.3**
MOY Mondy 71.95 329 *e*P **P 12 47 46.7 -0.3**
MOY pmax pmax
comp=Z,465nm,1.7s,mb6.1
JIRN Jiri 72.46 301 *e*P **P 12 47 51.0 +0.4**
comp=Z,395nm,0.7s,mb6.5
CHGN Chignik 72.66 26 *e*P **P 12 47 48.8 -2.2**
VIS Vishakhapatnam 72.75 290 *e*P **P 12 47 51.5 -1.0**
VIS *i*S S 12 57 15.1 -1.3
GUN Gumba 72.79 301 *e*P **P 12 47 53.2 +0.7**
comp=Z,2µm,0.9s,mb6.9
SBA Scott Base 73.11 177 *e*P **P 12 47 54.0 +0.5**
SBA MLR MLR
comp=Z,12µm,19.0s,MS6.2
PKIN Phulchoki 73.12 301 *e*P **P 12 47 54.5 0.0**
comp=Z,625nm,1.0s,mb6.5
KKN Kakani 73.27 301 *e*P **P 12 47 55.5 +0.1**
comp=Z,796nm,0.8s,mb6.7
DMN Daman 73.38 301 *e*P **P 12 47 56.4 +0.4**
comp=Z,1µm,0.9s,mb6.9
BILL Bilibino 73.47 5*c* *i*P **P 12 47 54.2 -1.5**
BILL pmax pmax
comp=Z,101nm,1.8s,mb5.5
BILL MLR MLR
comp=Z,16µm,27.0s,MS6.2
BILL Bilibino 73.47 5⇑ *i*P **P 12 47 54.3 -1.4**
BILL LR LR
comp=Z,10µm,22.0s,MS6.1
PALK Pallekele 73.61 279 P **P 12 47 58.9 +1.3**
comp=Z,1µm,0.8s,mb6.9,SNR=13
PALK Pallekele 73.61 279 ⇓P **P 12 47 59.4 +1.8**
SNR=14
PALK Pallekele 73.61 279 *e*P **P 12 47 57.3 -0.4**
comp=Z,154nm,0.8s,mb6.0
PALK LR LR
comp=Z,6µm,20.0s,MS5.9
GKN Gorkha 73.88 301 *e*P **P 12 48 00.0 +1.1**
comp=Z,2µm,1.4s,mb7.0
MIR Mirnyy 73.94 201*α* *i*P **P 12 47 58.0 -0.5**
MIR *i* 12 48 19.0
MIR *i*S S 12 57 28.0 -0.2
MIR *i*PS 12 58 00.0
MIR *i*SS SS 13 02 10.0 -2.8
MIR pmax pmax
comp=Z,600nm,1.0s,mb6.5
MIR pmax pmax
comp=Z,2µm,2.0s,mb6.8
KOLN Koldanda 74.71 300 *e*P **P 12 48 03.6 -0.2**
comp=Z,449nm,0.7s,mb6.5
DANN Dangsing 74.71 301 *e*P **P 12 48 03.7 -0.1**
comp=Z,2µm,1.4s,mb6.9
MDRS Chennai 74.87 285 *e*P **P 12 48 03.4 -1.5**
OHAK Old Harbor 75.47 27 *e*P **P 12 48 05.6 -1.9**
comp=Z,78nm,1.3s,mb5.5
OHAK LR LR
comp=Z,29µm,23.0s,MS6.5
HVS Khovu-Aksy 75.61 326*d* *i*P **P 12 48 08.2 -0.2**
HVS pmax pmax
comp=Z,721nm,0.9s,mb6.6
HVS MLR MLR
comp=Z,30µm,21.0s,MS6.6
TNA Tin City 75.85 16 *e*P **P 12 48 09.0 -0.5**
comp=Z,272nm,1.4s,mb6.0
KDAK Kodiak Island 76.10 27 P **P 12 48 10.1 -1.0**
comp=Z,124nm,0.8s,mb5.9,baz=129,slow=3.4,SNR=10
KDAK S S 12 57 51.1 -1.4
comp=Z,3.6nm,0.8s,baz=235,slow=18,SNR=1.7
KDAK LR LR 13 16 03.0
comp=Z,41µm,21.9s,MS6.7,baz=240,slow=31
KDAK Kodiak Island 76.10 27 *e*P **P 12 48 10.6 -0.5**
KDAK LR LR
comp=Z,11µm,22.0s,MS6.1
WMQ Urumqi 76.35 317⇑ *i*P **P 12 48 13.0 +0.2**
WMQ AP pP 12 48 21.0 -1.9
WMQ XP sP 12 48 24.0 -2.6
WMQ PP PP 12 51 04.0 -0.7
WMQ S S 12 57 53.0 -2.8
WMQ AMB AMB
comp=Z,445nm,1.2s,mb6.3
WMQ AMB AMB
comp=Z,3µm,7.0s
WMQ LR LR
comp=N,20µm,22.8s,MS6.4
WMQ LR LR
comp=E,14µm,24.9s,MS6.4
WMQ LR LR
comp=Z,29µm,29.2s,MS6.4
SVW2 Sparrevohn 76.79 23 *e*P **P 12 48 13.9 -1.0**
JBP Jabalpur 76.89 295 *e*P **P 12 48 16.1 -0.2**
JBP *e*S S 12 58 00.4 -2.1
KOD Kodaikanal 77.16 282 *e*P **P 12 48 18.6 +0.6**
KOD AMb AMB 12 48 27.3
comp=Z,601nm,1.1s,mb6.4
HYB Hyderabad 77.18 289 *e*P **P 12 48 17.5 -0.5**
HYB *e*S S 12 58 04.0 -1.8
HYB pmax pmax
comp=Z,257nm,0.8s,mb6.2
HYB Hyderabad 77.18 289 *i* P **P 12 48 17.5 -0.5**
comp=Z,257nm,0.8s,mb6.2
HYB *e*S S 12 58 04.0 -1.8
HYB LR LR 13 18 28.0
comp=Z,11nm,28.0s
HYB Hyderabad 77.18 289 *e*P **P 12 48 17.5 -0.5**
comp=Z,257nm,0.8s,mb6.2
HYB *e*S S 12 58 04.0 -1.8
HYB *e* 13 18 28.0
NGP Nagpur 77.36 293⇑ *i*P **P 12 48 16.2 -2.8**
NGP *ex* x 12 48 25.1
comp=Z,628nm,1.5s
NGP *ex* x 12 58 03.5
TRD Trivandrum 77.44 280 *e*P **P 12 48 18.8 -0.8**
TRD AMb AMB 12 48 28.9
comp=Z,631nm,1.0s,mb6.5
PTH Pithoragarh 78.01 301 *e*P **P 12 48 23.0 +0.5**
PTH *ex* x 12 58 18.8
TIXI Tiksi 78.22 352 *i* P **P 12 48 20.8 -1.9**
TIXI pmax pmax
comp=Z,59nm,1.4s,mb5.3
TIXI MLR MLR
comp=Z,4µm,18.0s,MS5.8
KRAR Krasnoyarsk 78.31 330⇑ *e*P **P 12 48 23.4 -0.1**
KRAR MLR MLR
comp=Z,4µm,22.0s,MS5.7
SLKM Skilak Lake 78.61 25 *e*P **P 12 48 23.6 -1.5**
SLKM *e* pP 12 48 31.8 -3.4
SEW Seward 78.72 25 *e*P **P 12 48 23.7 -2.0**
RC01 Rabbit Creek A 79.12 24 *e*P **P 12 48 26.2 -1.7**
comp=Z,2µm,1.8s,mb6.7
PPLA Purkeypile 79.15 22 *e*P **P 12 48 26.9 -1.1**
comp=Z,696nm,1.7s,mb6.3
AKL Akola 79.15 292 *e*P **P 12 48 28.2 -0.7**
AKL AMb AMB 12 48 37.1
comp=Z,1µm,1.2s,mb6.6
LATR Latur 79.21 290 *e*P **P 12 48 30.0 +0.7**
PMR Palmer 79.64 24 *e*P **P 12 48 28.6 -2.1**
PMR Palmer 79.64 24 *e*P **P 12 48 27.9 -2.8**
comp=Z,67nm,1.1s,mb5.5
PMR LR LR
comp=Z,41µm,23.0s,MS6.7
CHUM Lake Minchumin 79.66 21 *e*P **P 12 48 29.4 -1.4**
comp=Z,280nm,0.9s,mb6.2
KTH Kantishna Hill 79.99 22 *e*P **P 12 48 29.6 -2.9**
comp=Z,227nm,1.0s,mb6.1
DDI Dehra Dun 80.01 302 *e*P **P 12 48 31.6 -1.8**
DDI *ex* x 12 58 37.0
MNGI Mangalore 80.08 284 *i x* x 12 49 31.0
TRF Thorofare Moun 80.17 22 *e*P **P 12 48 30.9 -2.6**
comp=Z,140nm,0.8s,mb5.9
BPAW Bear Paw Mtn. 80.27 22 *e*P **P 12 48 31.7 -2.4**
comp=Z,88nm,0.9s,mb5.7
NDI New Delhi 80.40 300 *e*P **P 12 48 35.0 -0.6**
NDI *ex* x 12 58 31.0
DGAR Diego Garcia 80.45 263 *i* P **P 12 48 37.5 +1.3**
DGAR LR LR
comp=Z,8µm,21.0s,MS6.0
IMA2 Indian Mountai 80.46 19 *e*P **P 12 48 33.3 -1.8**
SMLA Simla 80.92 302 *i* P **P 12 48 38.0 -0.3**
MK31 Makanchi Array 80.93 319 P **P 12 48 37.8 -0.2**
MK31 Makanchi Array 80.93 319 *i* P **P 12 48 37.7 -0.3**
MKAR Makanchi Array 80.93 319 P **P 12 48 37.6 -0.3**
comp=Z,69nm,0.6s,mb5.8,baz=100,slow=7.8,SNR=227
MKAR S S 12 58 41.5 -3.1
comp=Z,3.0nm,1.1s,baz=104,slow=9.1,SNR=2.6
MKAR ScS ScS 12 59 05.9 +2.7
comp=Z,4.5nm,1.0s,baz=128,slow=9.3,SNR=5.4
MKAR PKKPbc PKKPbc 13 07 18.9 +1.0
comp=Z,2.1nm,0.7s,baz=259,slow=1.1,SNR=5.6
MKAR PKPPKP 13 15 21.0
comp=Z,0.5nm,0.3s,baz=318,slow=1.6,SNR=6.1
MKAR LR LR 13 26 34.1
comp=Z,6µm,21.7s,MS5.9,baz=109,slow=37
MKAR Makanchi Array 80.93 319 *i* P **P 12 48 37.7 -0.3**
MKAR pmax pmax
comp=Z,69nm,0.6s
SDNR Sundarnagar 81.16 303 *e*P **P 12 48 38.0 -1.6**
SDNR *e*S S 12 58 45.0 -2.7
KAD Karad 81.28 288 *e*P **P 12 48 38.6 -1.9**
GOA Goa 81.38 286⇑ *i*P **P 12 48 38.3 -2.7**
GOA AMb AMB 12 48 50.2
comp=Z,570nm,2.3s,mb6.1
GOA *i*S S 12 58 47.0 -3.5
ZAA0 Zalesovo Array 81.71 326 *e*P **P 12 48 40.3 -1.6**
ZALV Zalesovo Beam 81.71 326 P **P 12 48 40.3 -1.6**
comp=Z,35nm,0.6s,mb5.5,baz=108,slow=5.3,SNR=106
ZALV S S 12 58 49.6 -2.8
comp=Z,3.3nm,0.8s,baz=113,slow=11,SNR=3.5
ZALV PKPPKP 13 15 12.9
comp=Z,0.4nm,0.4s,baz=321,slow=3.8,SNR=4.1
ZALV LR LR 13 25 57.5
comp=Z,2µm,20.4s,MS5.4,baz=113,slow=36
ZALV Zalesovo Beam 81.71 326 P **P 12 48 40.3 -1.6**
ZALV S S 12 58 49.6 -2.8
POO Poona 81.77 289 *e*P **P 12 48 40.7 -2.3**
POO AMb AMB 12 48 50.7
comp=Z,653nm,1.0s,mb6.5
POO *e*PP PP 12 51 47.5 -3.0
POO *e*SKS 12 58 56.0
PAF Port-aux-Franc 81.79 221 *e*P **P 12 48 41.5 -1.1**
COLA College 81.83 22*d* *i*P **P 12 48 39.8 -2.6**
COLA College 81.83 22 *i* P **P 12 48 39.8 -2.6**
COLA LR LR
comp=Z,16µm,20.0s,MS6.4
DLH Dalhousie 82.20 304 *e*P **P 12 48 45.0 0.0**
AJM Ajmer 82.26 297 *e*P **P 12 48 44.4 -1.1**
COLD Coldfoot 82.27 19 *e*P **P 12 48 43.0 -1.6**
comp=Z,455nm,0.9s,mb6.4
THN Thein Dam 82.39 304 *e*P **P 12 48 44.1 -1.9**
THN *e*S S 12 59 01.1 +0.8
NVS Novosibirsk 82.88 327 *i* P **P 12 48 45.9 -2.2**
NVS *e*S S 12 58 59.8 -4.6
NVS pmax pmax
comp=N,288nm,1.6s
NVS pmax pmax
comp=Z,595nm,1.6s,mb6.4
NVS pmax pmax
comp=E,391nm,1.4s
NVS smax
comp=N,286nm,1.9s
NVS smax
comp=E,176nm,1.9s
PNL Peninsula 83.04 28 *e*P **P 12 48 48.5 -0.3**
comp=E,294nm,0.9s,mb6.3
KSH Kashi 83.58 311⇑ *i*P **P 12 48 53.5 +1.5**
KSH *e*AP pP 12 48 57.5 -4.6
KSH *e*XP sP 12 49 00.0 -5.8
KSH *e*PP PP 12 52 08.0 +3.1
KSH *e*SKS 12 59 11.3
KSH *e*S S 12 59 14.5 +2.4
KSH LR LR
comp=N,12µm,19.7s,MS6.4
KSH LR LR
comp=E,11µm,19.4s,MS6.4
KSH LR LR
comp=Z,27µm,30.2s
AAA Alma-Ata 83.67 314 *i* P **P 12 48 52.3 -0.1**
AAA *e*S S 12 59 12.1 -0.8
AAA pmax pmax
comp=Z,10µm,8.6s
AAA smax
comp=E,8µm,12.3s
AAA MLR MLR
comp=Z,4µm,26.0s,MS5.7
BHV Bhavnagar 83.80 292 *e*P **P 12 48 54.5 +0.9**
ULHL Ulahol 83.95 313 P **P 12 48 54.5 +0.7**
SNR=23
SIT Sitka 84.14 31 PFAKE 12 49 00.0 +5.5
SIT LR LR
comp=Z,41µm,22.0s,MS6.8
HYT Haines Junctio 84.35 27 *e*P **P 12 48 55.0 -0.4**
KURK Kurchatov 84.35 322 P **P 12 48 55.0 -0.7**
SNR=258
KURK Kurchatov 84.35 322 P **P 12 48 53.8 -1.9**
comp=Z,18nm,0.7s,mb5.3,baz=107,slow=1.9,SNR=68
KURK S S 12 59 14.6 -4.9
baz=162,slow=0.9

KURK Kurchatov 84.35 322 *c iP* **P 12 48 54.9 -0.8**
KURK pmax pmax
comp=Z,224nm,1.2s,mb6.2
TKM2 Tokmak 2 84.56 314 P **P 12 48 57.2 +0.2**
SNR=118
TKM2 Tokmak 2 84.56 314 PFAKE 12 49 10.0 +13
TKM2 LR LR
comp=Z,4µm,21.0s,MS5.8
KZA Kyzart 84.64 313 P **P 12 48 58.9 +1.5**
SNR=75
DAWY Dawson 84.74 24 *eP* **P 12 48 56.2 -1.2**
CRAG Craig 84.83 33 *eP* **P 12 48 57.7 -0.3**
comp=Z,543nm,1.1s,mb6.6
SKAG Skagway 84.91 29 *eP* **P 12 49 01.1 +2.8**
comp=Z,58nm,1.0s,mb5.7
SKAG LR LR
comp=Z,37µm,22.0s,MS6.7
QSPA South Pole Qui 84.92 180 P **P 12 48 57.5 -0.6**
comp=Z,349nm,0.7s,mb6.6,baz=346,slow=0.9,SNR=538
QSPA S S 12 59 24.6 +0.4
comp=Z,2.7nm,0.8s,baz=204,slow=20,SNR=6.2
QSPA South Pole Qui 84.92 180 P **P 12 48 57.5 -0.6**
QSPA S S 12 59 24.6 +0.4
KBK Karagaybulak 84.97 313 P **P 12 48 59.4 +0.3**
SNR=56
CHMS Chumysh 85.18 314 P **P 12 49 00.0 0.0**
SNR=60
UCH Uchtor 85.20 313 P **P 12 49 01.2 +1.1**
SNR=202
UCH Uchtor 85.20 313 PFAKE 12 49 10.0 +10
UCH LR LR
comp=Z,6µm,20.0s,MS6.0
FRU Bishkek 85.25 314⇑ *iP* **P 12 49 00.0 -0.4**
FRU *eS* PP 12 52 25.0 +6.6
FRU *eS* S 12 59 29.0 +0.3
FRU *ePS* 13 00 28.0
FRU pmax pmax
comp=Z,7µm,9.0s
FRU smax
comp=N,6µm,10.0s
FRU MLR MLR
comp=Z,6µm,28.0s,MS5.8
AAK Ala-Archa 85.30 313 P **P 12 49 01.1 +0.4**
SNR=74
USP Ospenovka 85.41 314 P **P 12 49 01.1 -0.2**
SNR=149
WRAK Wrangell Islan 85.52 32 *eP* **P 12 49 01.6 +0.1**
comp=Z,830nm,1.8s,mb6.7
WRAK LR LR
comp=Z,16µm,22.0s,MS6.4
MAW Mawson 85.60 203⇑ *iP* **P 12 49 00.8 -0.9**
comp=Z,151nm,0.6s,mb6.4
MAW *e* 12 49 06.9
MAW Mawson 85.60 203 *eS* S 12 59 18.4 -13
MAW Mawson 85.60 203 P **P 12 49 00.9 -0.8**
comp=Z,172nm,0.6s,mb6.4,baz=94,slow=6.7,SNR=244
MAW S S 12 59 27.1 -4.2
comp=Z,1.2nm,0.5s,baz=204,slow=20,SNR=1.7
MAW LR LR 13 25 18.3
comp=Z,10µm,21.4s,MS6.2,baz=81,slow=34
MAW Mawson 85.60 203⇑ *iP* **P 12 49 00.8 -0.9**
MAW *e* 12 49 06.9
MAW *eS* S 12 59 18.4 -13
MAW pmax pmax
comp=Z,151nm,0.6s
MAW MLR MLR
comp=Z,45µm,22.0s
MAW Mawson 85.60 203⇑ *iP* **P 12 49 00.8 -0.9**
comp=Z,151nm,0.6s,mb6.4
MAW *e* 12 49 06.9
MAW *eS* S 12 59 18.4 -13
MAW LR LR
comp=Z,45µm,22.0s,MS6.8
AML Almayashu 85.78 313 P **P 12 48 59.1 -4.0**
SNR=27
AML Almayashu 85.78 313 PFAKE 12 49 10.0 +6.9
AML LR LR
comp=Z,8µm,22.0s,MS6.1
EKS2 Erkin-Say 85.82 313 P **P 12 49 03.7 +0.4**
SNR=80
EKS2 Erkin-Say 85.82 313 PFAKE 12 49 10.0 +6.7
EKS2 LR LR
comp=Z,6µm,22.0s,MS6.0
BHJ Bhuj 86.28 294 *eP* **P 12 49 05.5 -0.5**
BBB Bella Bella 86.90 37 S S 12 59 39.7 -4.7
comp=Z,10nm,1.0s,baz=78,slow=19,SNR=2.2
DLBC Dease Lake 87.26 31 S S 12 59 45.5 -2.1
baz=106,slow=19
DLBC Dease Lake 87.26 31 *eP* **P 12 49 09.0 -0.9**
K01A Sixes 87.60 47⇓ **P 12 49 12.9 +0.9**
baz=88
JCC Jacoby Creek 87.62 49⇓ **P 12 49 15.2 +3.1**
baz=88
O01C Eel River Cons 87.68 50⇓ **P 12 49 15.8 +3.4**
baz=88
M01C Crescent City 87.71 48⇓ **P 12 49 14.4 +1.9**
baz=88
KCPM Cahto Peak 87.79 50 *eP* **P 12 49 12.1 -0.8**
KIPM Iron Peak 87.89 50 *eP* **P 12 49 14.1 +0.7**
FARB Farallon Islan 87.96 52⇑ **P 12 49 15.6 +1.8**
baz=88
HOPS Hopland 88.08 51⇓ **P 12 49 16.4 +2.1**
baz=88
HOPS Hopland 88.08 51 PFAKE 12 49 20.0 +5.6
HOPS LR LR
comp=Z,70µm,22.0s,MS7.0
MCCM Marconi Confer 88.12 52⇑ **P 12 49 16.4 +1.8**
baz=88
MCCM Marconi Confer 88.12 52 PFAKE 12 49 20.0 +5.5
MCCM LR LR
comp=Z,62µm,22.0s,MS7.0
L02A Cave Junction 88.14 48⇓ **P 12 49 16.9 +2.4**
baz=88
N02C Big Bar 88.16 49⇑ **P 12 49 15.6 +0.9**
baz=88
KBL Kabul 88.22 305 *eP* **P 12 49 13.9 -1.2**
KBL pmax pmax
comp=Z,178nm,0.9s,mb6.3
KBL Kabul 88.22 305 *eP* **P 12 49 13.9 -1.3**
comp=Z,178nm,0.9s,mb6.3
H02A Toledo 88.23 45⇑ **P 12 49 16.8 +1.9**
baz=88
I02A Mapleton 88.24 46⇑ **P 12 49 15.9 +0.9**
baz=88
KK31 Karatay Array 88.26 313 *i P* **P 12 49 14.3 -0.8**
J02A Umpqua 88.33 46⇓ **P 12 49 16.6 +1.2**
baz=88
C03A Quillayute Air 88.35 42⇓ **P 12 49 16.4 +1.0**
baz=88
GASB Alder Springs 88.45 50⇑ **P 12 49 18.4 +2.3**
baz=88
O02C Red Bluff 88.46 50⇑ **P 12 49 18.2 +2.1**
baz=88
CVS Carmenet Viney 88.47 51⇑ **P 12 49 17.5 +1.3**
baz=88
JRSC Jasper Ridge 88.52 52⇑ **P 12 49 17.8 +1.3**
baz=88
MNRC McLaughlin Nat 88.56 51⇓ **P 12 49 18.2 +1.6**
baz=88
M02C Callahan 88.58 48⇓ **P 12 49 18.0 +1.4**
baz=89
I03A Eugene 88.63 46⇓ **P 12 49 18.5 +1.7**
baz=89
HUMO Hull Mountain 88.67 47⇓ **P 12 49 18.7 +1.6**
baz=89
HUMO Hull Mountain 88.67 47 *eP* **P 12 49 17.1 +0.1**
comp=Z,84nm,1.0s,mb6.0
HUMO LR LR
comp=Z,61µm,22.0s,MS7.0
OBC Olympics--Boni 88.69 42 P **P 12 49 17.3 +0.3**
COR Corvallis 88.70 45 PFAKE 12 49 30.0 +13
COR LR LR
comp=Z,27µm,20.0s,MS6.7
WDC Whiskeytown Da 88.70 49 *eP* **P 12 49 18.4 +1.1**
WDC pmax pmax
comp=Z,120nm,1.2s,mb6.1
WDC Whiskeytown Da 88.70 49⇑ **P 12 49 18.9 +1.6**
baz=89
WDC Whiskeytown Da 88.70 49 *eP* **P 12 49 16.7 -0.6**
comp=Z,120nm,1.3s,mb6.1
WDC LR LR
comp=Z,64µm,20.0s,MS7.0
F03A Seaside 88.72 44⇓ **P 12 49 19.4 +2.2**
baz=89
H03A Soap Creek Ran 88.72 45⇓ **P 12 49 19.7 +2.4**
baz=89
NLWA Neilton Lookou 88.73 42⇓ **P 12 49 18.9 +1.7**
baz=89
NLWA Neilton Lookou 88.73 42 *eP* **P 12 49 17.8 +0.6**
NLWA LR LR
comp=Z,40µm,22.0s,MS6.8
YBH Yreka Blue Hor 88.73 48⇓ **P 12 49 19.0 +1.6**
baz=89
YBH Yreka Blue Hor 88.73 48 *eP* **P 12 49 17.5 +0.2**
YBH LR LR
comp=Z,84µm,22.0s,MS7.1
D03A Wishkah Elem. 88.75 43⇑ **P 12 49 19.3 +2.0**
baz=89
E03A Lebam 88.81 43⇓ **P 12 49 20.6 +3.0**
baz=89
G03A Yamhill 88.83 44⇓ **P 12 49 20.1 +2.4**
baz=89
Q03C Winters 88.86 51⇑ **P 12 49 20.3 +2.3**
baz=89
BDM Black Diamond 88.89 52⇑ **P 12 49 20.5 +2.3**
baz=89
WENL Wente Vineyard 88.93 52⇓ **P 12 49 20.7 +2.3**
baz=89
BMW Boistfort Moun 89.03 43 P **P 12 49 26.8 +8.2**
SAO San Andreas Ge 89.07 53 PFAKE 12 49 30.0 +11
SAO LR LR
comp=Z,27µm,22.0s,MS6.6
B04A Port Angeles 89.07 42⇑ **P 12 49 21.5 +2.7**
baz=89
M03C McCloud 89.11 49⇓ **P 12 49 21.5 +2.4**
baz=89
V03C Hunter Liggett 89.15 54⇓ **P 12 49 21.5 +2.0**
baz=89
PGC Sidney 89.20 41 *eP* **P 12 49 17.1 -2.2**
comp=Z,183nm,1.1s,mb6.3
PACP Pacheco Peak 89.23 53⇑ **P 12 49 21.8 +2.0**
baz=89
I04A Tendick Farm, 89.23 46⇓ **P 12 49 20.8 +1.2**
baz=89
OHCM Honcut 89.35 51 *eP* **P 12 49 19.4 -1.0**
ORV Oroville 89.37 50⇑ **P 12 49 20.2 -0.2**
baz=89
G04A Mulino 89.37 45⇑ **P 12 49 22.7 +2.4**
baz=89
J04A Umpqua Nationa 89.38 47⇑ **P 12 49 21.2 +0.9**
baz=89
Q04C Lincoln 89.38 51⇓ **P 12 49 20.8 +0.3**
baz=89
C04A Brinnon 89.38 42⇑ **P 12 49 22.7 +2.5**
baz=89
M04C Macdoel 89.39 48⇑ **P 12 49 21.8 +1.4**
baz=89
E04A Onalaska 89.39 43⇓ **P 12 49 20.8 +0.4**
baz=89
L04A Klamath Falls 89.40 48⇑ **P 12 49 21.3 +0.9**
baz=89
D04A Dobbs Creek Ra 89.41 43⇓ **P 12 49 21.1 +0.7**
baz=89
GNW Green Mountain 89.46 42 *eP* **P 12 49 19.2 -1.4**
FRIS Frissel Point 89.51 46 P **P 12 49 20.7 -0.2**
H04A Detroit Lake 89.51 45⇓ **P 12 49 21.1 +0.2**
baz=90
F04A Amboy 89.51 44⇓ **P 12 49 20.6 -0.3**
baz=90
U04C Hernandez Rese 89.55 54⇓ **P 12 49 24.1 +2.8**
baz=90,SNR=8.8
K04A Chilquin 89.57 47⇓ **P 12 49 21.4 +0.1**
baz=90
LBCM Butte Creek Ri 89.64 49 P **P 12 49 21.1 -0.5**
R04C Big Horse Ranc 89.65 52⇑ **P 12 49 21.3 -0.5**
baz=90
A04A Legoe Bay, Lum 89.69 41⇓ **P 12 49 21.7 0.0**
baz=90
PKD Parkfield 89.70 54⇓ **P 12 49 23.1 +1.0**
baz=90,SNR=14
O04C Chester 89.77 50⇓ **P 12 49 22.4 +0.1**
baz=90
BVA0 Borovoye Array 89.81 323 *i* P **P 12 49 20.3 -1.9**
BVA0 pmax pmax
comp=Z,72nm,0.9s,mb6.0
BVAR Borovoye Array 89.81 323 P **P 12 49 20.3 -1.8**
comp=Z,76nm,0.7s,mb6.1,baz=106,slow=5.3,SNR=150
BVAR S S 12 59 50.8 -21
comp=Z,5.5nm,1.0s,baz=98,slow=7.6,SNR=4.9
M05C Lookout 89.85 49⇓ **P 12 49 23.2 +0.6**
baz=90
LAVA Lava Cap Winer 89.86 51⇑ **P 12 49 22.5 -0.2**
baz=90
O05C Quincy 89.86 50⇓ **P 12 49 23.3 +0.6**
baz=90
BRVK Borovoye 89.88 323 P **P 12 49 21.0 -1.5**
SNR=150
BRVK Borovoye 89.88 323 P **P 12 49 20.5 -2.0**
BRVK pmax pmax
comp=Z,480nm,0.9s,mb6.8
BRVK Borovoye 89.88 323⇑ *eP* **P 12 49 20.1 -2.4**
BRVK LR LR
comp=Z,15µm,22.0s,MS6.4
PTRM Twissleman Ran 89.94 54 P **P 12 49 22.6 -0.6**
D05A Enumclaw 89.97 43⇓ **P 12 49 23.5 +0.4**
baz=90
J05A Fort Rock 90.01 47⇓ **P 12 49 23.0 -0.4**
baz=90
P05C Yuba Gap, Truc 90.02 51⇑ **P 12 49 23.5 +0.1**
baz=90
S05C Merced 90.03 53⇑ **P 12 49 23.6 0.0**
baz=90
LON Longmire 90.03 43 *eP* **P 12 49 23.9 +0.6**
LON pmax pmax
comp=Z,57nm,1.3s,mb5.7
LON Longmire 90.03 43 *eP* **P 12 49 23.9 +0.5**
comp=Z,57nm,1.3s,mb5.7
B05A Bryant 90.04 42⇑ **P 12 49 25.3 +2.0**
baz=90,SNR=7.4
E05A Randle 90.04 43⇓ **P 12 49 23.1 -0.3**
baz=90
CMB Columbia Colle 90.06 52⇑ **P 12 49 24.4 +0.8**
baz=90
CMB Columbia Colle 90.06 52 *eP* **P 12 49 25.2 +1.5**
CMB LR LR
comp=Z,64µm,22.0s,MS7.0
SMMC Simmler 90.07 55⇑ **P 12 49 25.3 +1.5**
baz=90,SNR=5.9
ELFS Eagle Lake Fie 90.08 49⇓ **P 12 49 24.5 +0.8**
baz=90
U05C Westside ANR, 90.08 54⇓ **P 12 49 24.1 +0.3**
baz=90
I05A Bend 90.10 46⇑ **P 12 49 24.3 +0.6**
baz=90
JCW Jim Creek 90.14 42 *eP* **P 12 49 23.5 -0.3**
JCW *ePP* PP 12 52 57.5 -0.1
A05A Maple Falls 90.14 41⇓ **P 12 49 25.2 +1.5**
baz=90
L05A Lakeview 90.16 48⇑ **P 12 49 25.4 +1.4**
baz=90
F05A White Salmon 90.17 44⇓ **P 12 49 23.9 -0.1**
baz=90
PKM Peak Mountain 90.18 55⇑ **P 12 49 26.8 +2.5**
baz=90,SNR=7.8
H05A Madras 90.18 45⇓ **P 12 49 24.2 +0.1**
baz=90
G05A Wamic 90.19 45⇑ **P 12 49 24.8 +0.7**
baz=90
K05A Summer Lake 90.20 47⇑ **P 12 49 24.1 -0.1**
baz=90
SBC Santa Barbara 90.21 56⇑ **P 12 49 25.0 +0.5**
baz=90
C05A Tolt Reservoir 90.23 42⇑ **P 12 49 24.7 +0.4**
baz=90
BSC Santa Cruz Isl 90.24 56⇓ **P 12 49 24.6 0.0**
baz=90
SNCC San Nicolas Is 90.25 57⇓ **P 12 49 24.4 -0.3**
baz=90
SNCC San Nicolas Is 90.25 57 PFAKE 12 49 30.0 +5.3
SNCC LR LR
comp=Z,21µm,19.0s,MS6.6
M06C Likely Place G 90.33 49⇑ **P 12 49 25.2 +0.3**
baz=90
R05C Kirkwood Meado 90.37 51⇓ **P 12 49 24.4 -0.7**
baz=90
CROR Criterion Ridg 90.39 45 P **P 12 49 22.8 -2.2**
RPW Rockport 90.44 42 P **P 12 49 23.6 -1.6**
S06C San Francisco 90.46 52⇓ **P 12 49 23.8 -1.7**
baz=90
B06A Marblemount 90.47 41⇓ **P 12 49 24.0 -1.3**
baz=90
T06C Millerton Lake 90.48 53⇑ **P 12 49 24.4 -1.2**
baz=90,SNR=7.8
MOD Modoc 90.54 48⇓ **P 12 49 25.9 +0.1**
baz=90
MOD Modoc 90.54 48 *eP* **P 12 49 25.6 -0.2**
MOD LR LR
comp=Z,81µm,21.0s,MS7.1
A06A Chilliwack 90.55 41⇓ **P 12 49 25.4 -0.3**
baz=90,SNR=6.5
E06A Yakima 90.58 43⇑ **P 12 49 25.5 -0.3**
baz=90
P06A Stead Airport, 90.61 50⇑ **P 12 49 26.7 +0.6**
baz=91
F06A Goldendale 90.62 44⇓ **P 12 49 26.0 -0.1**
baz=91
G06A Carlson Farm, 90.67 45⇑ **P 12 49 26.2 -0.1**
baz=91
K06A Valley Falls 90.68 47⇓ **P 12 49 25.5 -0.9**
baz=91,SNR=11
WCN Washoe City 90.68 51⇑ **P 12 49 26.1 -0.5**
baz=91,SNR=5.4
O06A Flanigan 90.72 50⇑ **P 12 49 26.5 -0.2**
baz=91
BLG Laguna Peak 90.72 56⇓ **P 12 49 26.8 0.0**
baz=91
D06A Cle Elum 90.74 43⇓ **P 12 49 26.8 +0.2**
baz=91
N06A Buffalo Meadow 90.77 49⇑ **P 12 49 26.2 -0.7**
baz=91,SNR=9.0
RCTC Rector, Farmer 90.79 54⇑ **P 12 49 26.3 -0.8**
baz=91
C06A Tall Timber Ra 90.79 42⇓ **P 12 49 27.0 +0.2**
baz=91
J06A Christmas Vall 90.80 47⇑ **P 12 49 27.3 +0.4**
baz=91
KCC Kaiser Creek 90.82 53⇑ **P 12 49 27.3 0.0**
baz=91,SNR=9.6
H06A Lindquist Farm 90.83 45⇓ **P 12 49 26.0 -1.1**
baz=91,SNR=22
I06A Prineville 90.83 46⇓ **P 12 49 27.0 -0.1**
baz=91
R06C Coleville 90.84 52⇓ **P 12 49 27.1 -0.2**
baz=91
WAKR Walker 90.85 52 *eP* **P 12 49 27.4 +0.1**
VES Vestal, Richgr 90.87 54⇓ **P 12 49 27.5 0.0**
baz=91,SNR=6.3
EBG Ellensburg 90.90 43 P **P 12 49 25.8 -1.5**
TBM Table Mountain 90.91 43 P **P 12 49 26.6 -0.8**
HELL Mitchell Peak 91.00 53⇓ **P 12 49 28.8 +0.7**
baz=91,SNR=9.2
ARVC Arvin 91.01 55⇑ **P 12 49 28.6 +0.5**
baz=91,SNR=6.1
PAHR Pah Rah Range 91.01 50 *eP* **P 12 49 26.4 -1.7**
comp=Z,95nm,1.1s,mb6.0
SCI San Clemente I 91.04 57⇑ **P 12 49 28.6 +0.2**
baz=91
OSI Osito Adit 91.05 56⇑ **P 12 49 28.6 +0.2**
baz=91
OSI Osito Adit 91.05 56 *eP* **P 12 49 28.6 +0.3**
comp=Z,128nm,1.3s,mb6.1
R07C Lee Vining 91.11 52⇑ **P 12 49 28.6 0.0**
baz=91
ETW Entiat 91.14 42 *eP* **P 12 49 27.0 -1.4**
CIS Catalina Islan 91.20 57⇑ **P 12 49 28.2 -0.8**
baz=91
F07A Phinny Hill Vi 91.23 44⇓ **P 12 49 28.6 -0.4**
baz=91
MLAC Mammoth Lakes 91.24 53⇑ **P 12 49 27.9 -1.2**
baz=91
A07A Ashnola River, 91.26 41⇑ **P 12 49 29.2 +0.2**
baz=91,SNR=16
L07A Adell 91.27 48⇑ **P 12 49 29.8 +0.6**
baz=91,SNR=16
FMP Fort Macarthur 91.32 56⇑ **P 12 49 27.6 -2.1**
baz=91
C07A Waterville 91.33 42⇓ **P 12 49 29.5 +0.2**
baz=91,SNR=9.2
M07A Soldier Meadow 91.33 49⇑ **P 12 49 30.6 +1.1**
baz=91,SNR=9.8
D07A Quincy 91.33 43⇑ **P 12 49 28.0 -1.3**
baz=91,SNR=7.9
DECC Green Verdugo 91.34 56⇑ **P 12 49 29.6 -0.1**
baz=91
ISA Isabella 91.34 54 *eP* **P 12 49 29.5 -0.2**
ISA pmax pmax
comp=Z,474nm,2.4s,mb6.4
ISA MLR MLR
comp=Z,21µm,21.0s,MS6.5
ISA Isabella 91.34 54⇓ **P 12 49 29.7 0.0**
baz=91,SNR=7.1
ISA Isabella 91.34 54 *eP* **P 12 49 29.5 -0.2**
comp=Z,474nm,2.4s,mb6.4
ISA LR LR
comp=Z,21µm,21.0s,MS6.5
G07A Ruggs Ranch, H 91.35 45⇑ **P 12 49 28.9 -0.6**
baz=91,SNR=18
I07A Izee 91.35 46⇓ **P 12 49 29.1 -0.4**
baz=91
E07A Sunnyside 91.35 44⇓ **P 12 49 29.4 -0.1**
baz=91
H07A Lands Inn, Kim 91.36 46⇑ **P 12 49 30.2 +0.6**
baz=91
B07A Winthrop 91.37 42⇓ **P 12 49 29.7 +0.2**
baz=91
P07A Fallon 91.37 51⇑ **P 12 49 29.3 -0.5**
baz=91
Q07A Schurz 91.38 51⇑ **P 12 49 30.1 +0.3**
baz=91
WTV Waterville 91.40 42 P **P 12 49 28.8 -0.9**
K07A Rock Creek Ran 91.40 47⇑ **P 12 49 29.9 +0.1**
baz=91,SNR=9.3
J07A Hines 91.42 47⇓ **P 12 49 29.7 -0.2**
baz=91
N07B Gerlach 91.42 49⇓ **P 12 49 30.0 +0.1**
baz=91,SNR=13
O07A Toulon 91.44 50⇑ **P 12 49 29.8 -0.2**
baz=91
RSW Rattlesnake Hi 91.52 44 *eP* **P 12 49 29.9 -0.3**
HAWA Hanford 91.56 44 *eP* **P 12 49 29.1 -1.3**
HAWA LR LR
comp=Z,58µm,21.0s,MS7.0
MWC Mount Wilson 91.56 56 *eP* **P 12 49 33.2 +2.5**
MWC pmax pmax
comp=Z,270nm,1.2s,mb6.5
MWC Mount Wilson 91.56 56 *eP* **P 12 49 29.4 -1.4**
comp=Z,272nm,1.2s,mb6.5
MWC LR LR
comp=Z,19µm,22.0s,MS6.5
EPH Ephrata 91.61 43 P **P 12 49 29.0 -1.6**
TIN Tinemaha 91.67 53⇑ **P 12 49 31.1 0.0**
baz=92
EDW2 Edwards Air Fo 91.67 55⇓ **P 12 49 30.7 -0.6**
baz=92,SNR=12
NVAR Mina Array Bea 91.73 52 P **P 12 49 29.8 -1.7**
comp=Z,3.3nm,0.6s,mb4.9,baz=255,slow=6.4,SNR=32
NVAR PKKPbc PKKPbc 13 06 52.1 +0.7
comp=Z,3.8nm,0.8s,baz=68,slow=2.6,SNR=6.9
NVAR PKPPKP 13 14 57.6
comp=Z,1.2nm,0.8s,baz=96,slow=3.4,SNR=6.6
CWC Cottonwood Cre 91.73 54⇓ **P 12 49 31.0 -0.5**
baz=92
S08C White Mtn Res 91.75 53⇑ **P 12 49 31.5 0.0**
baz=92
WVOR Wild Horse Val 91.83 48 *eP* **P 12 49 30.4 -1.4**
WVOR *e* 12 53 06.6
WVOR pmax pmax
comp=Z,328nm,1.6s,mb6.4
WVOR Wild Horse Val 91.83 48 *eP* **P 12 49 30.4 -1.4**
comp=Z,328nm,1.6s,mb6.4
WVOR *ePP* PP 12 53 06.6 -4.5
G08A Pilot Rock 91.85 45⇑ **P 12 49 31.2 -0.6**
baz=92
R08A Mina 91.87 52⇓ **P 12 49 31.4 -0.7**
baz=92
B08A Colville Reser 91.88 42⇑ **P 12 49 31.3 -0.6**
baz=92,SNR=8.4
BFSC Mount Baldy St 91.89 56⇑ **P 12 49 32.2 -0.1**
baz=92
E08A Dider Farm, El 91.89 44⇓ **P 12 49 32.1 +0.1**
baz=92
K08A Mann Creek Ran 91.96 47⇓ **P 12 49 32.5 +0.1**
baz=92
LRMC Laurel Mountai 91.97 55⇓ **P 12 49 32.6 0.0**
baz=92,SNR=10.0
A08A Turner Farm, O 91.97 41⇓ **P 12 49 31.7 -0.6**
baz=92
H08A Prairie City 91.99 46⇓ **P 12 49 32.3 -0.1**
baz=92
O08A Rochester Mine 92.00 50⇓ **P 12 49 32.7 0.0**
baz=92,SNR=11
I08A Drewsey 92.00 46⇑ **P 12 49 32.7 +0.1**

	baz=92									
P08A	**Dixie Valley**	92.01	51	⇑P		P	12 49 32.2	-0.5		
	baz=92									
C08A	**Higginbotham F**	92.02	42	⇑P		P	12 49 32.4	-0.1		
	baz=92,SNR=5.8									
L08A	**Fields**	92.02	48	⇓P		P	12 49 32.5	-0.2		
	baz=92,SNR=12									
J08A	**Circle Bar Ran**	92.03	47	⇓P		P	12 49 32.3	-0.4		
	baz=92,SNR=8.1									
D08A	**Wollman Farm,**	92.04	43	⇑P		P	12 49 32.3	-0.4		
	baz=92									
Q08A	**Gabbs**	92.05	51	⇓P		P	12 49 33.2	+0.3		
	baz=92,SNR=8.6									
N08A	**GE Springer Mi**	92.06	49	⇓P		P	12 49 33.2	+0.3		
	baz=92,SNR=6.1									
DAC	**Darwin (Calif)**	92.11	54	PFAKE			12 49 40.0	+6.8		
DAC				LR		LR				
	comp=Z,29µm,21.0s,MS6.7									
MPMC	**Manual Prospec**	92.17	54	⇑P		P	12 49 33.8	+0.2		
	baz=92,SNR=10									
OD2	**Odessa Site #2**	92.21	43	P		P	12 49 31.4	-2.0		
MURC	**Murrieta**	92.22	57	⇓P		P	12 49 34.0	+0.2		
	baz=92									
109C	**Camp Elliot, M**	92.24	57	⇓P		P	12 49 32.3	-1.6		
	baz=92									
GRAC	**Grapevine Rang**	92.35	53	⇑P		P	12 49 34.5	+0.2		
	baz=92									
LNOR	**Lincton Mounta**	92.37	44	P		P	12 49 36.7	+2.5		
LNOR	**Lincton Mounta**	92.37	44	*eP*		P	12 49 33.5	-0.7		
A09A	**Danville**	92.43	41	⇑P		P	12 49 35.1	+0.7		
	baz=92,SNR=6.8									
D09A	**Jones Farm, Ri**	92.45	43	⇓P		P	12 49 34.2	-0.4		
	baz=92									
RRX	**Edison Barstow**	92.48	55	⇑P		P	12 49 34.7	-0.3		
	baz=92									
BBRC	**Big Bear Sol-O**	92.50	56	⇓P		P	12 49 36.0	+0.9		
	baz=92,SNR=5.9									
L09A	**Wilkinson Ranc**	92.51	48	⇓P		P	12 49 36.0	+1.0		
	baz=92,SNR=7.6									
S09A	**Goldfield**	92.52	53	⇑P		P	12 49 35.1	0.0		
	baz=92,SNR=28									
K09A	**Rome**	92.52	48	⇓P		P	12 49 36.0	+1.1		
	baz=92									
E09A	**Wood Farm, Sta**	92.52	44	⇑P		P	12 49 34.0	-0.9		
	baz=92,SNR=22									
N09A	**Rock Creek Ran**	92.53	49	⇓P		P	12 49 35.1	0.0		
	baz=92,SNR=9.2									
C09A	**Chrisman Ranch**	92.54	42	⇑P		P	12 49 35.6	+0.6		
	baz=92									
TPH	**Tonopah**	92.55	52	*eP*		P	12 49 35.4	+0.2		
TPH				MLR		MLR				
	comp=Z,50µm,22.0s,MS6.9									
J09A	**Fry Pan Ranch,**	92.55	47	⇓P		P	12 49 34.7	-0.4		
	baz=92									
BAR	**Barrett**	92.59	58	PFAKE			12 49 50.0	+14		
BAR				LR		LR				
	comp=Z,18µm,19.0s,MS6.5									
I09A	**Lost Marbles R**	92.61	46	⇑P		P	12 49 35.2	-0.2		
	baz=93,SNR=8.1									
F09A	**S2 Ranch, Elgi**	92.62	45	⇓P		P	12 49 34.5	-0.9		
	baz=93									
M09A	**Marrel Ranch,**	92.62	49	⇑P		P	12 49 35.5	0.0		
	baz=93									
Q09A	**Carvers**	92.64	51	⇓P		P	12 49 35.3	-0.3		
	baz=93,SNR=7.3									
B09A	**Rice**	92.67	42	⇑P		P	12 49 36.2	+0.6		
	baz=93,SNR=5.8									
GSC	**Goldstone**	92.67	55	*eP*		P	12 49 37.2	+1.3		
GSC				pmax		pmax				
	comp=Z,110nm,1.2s,mb6.2									
GSC	**Goldstone**	92.67	55	⇓P		P	12 49 35.8	-0.1		
	baz=93,SNR=6.5									
GSC	**Goldstone**	92.67	55	*eP*		P	12 49 34.4	-1.4		
	comp=Z,106nm,1.3s,mb6.1									
GSC				LR		LR				
	comp=Z,26µm,22.0s,MS6.6									
R09A	**Tonopah**	92.68	52	⇓P		P	12 49 35.5	-0.3		
	baz=93									
G09A	**Cove**	92.68	45	⇓P		P	12 49 35.0	-0.7		
	baz=93,SNR=16									
FURC	**Furnace Creek,**	92.71	54	⇑P		P	12 49 35.5	-0.6		
	baz=93,SNR=8.2									
H09A	**Durkee**	92.71	46	⇑P		P	12 49 35.4	-0.4		
	baz=93									
P09A	**Austin**	92.72	51	⇓P		P	12 49 35.5	-0.5		
	baz=93									
BMN	**Battle Mountai**	92.72	50	*eP*		P	12 49 35.6	-0.4		
BMN				MLR		MLR				
	comp=Z,53µm,21.0s,MS7.0									
O09A	**Fish Creek Ran**	92.73	50	⇓P		P	12 49 36.0	0.0		
	baz=93,SNR=13									
MONP	**Monument Peak**	92.82	57	⇓P		P	12 49 37.5	+0.9		
	baz=93,SNR=6.4									
PFO	**Pinyon Flat Ob**	92.84	57	P		P	12 49 38.6	+1.9		
PFO				pmax		pmax				
	comp=Z,150nm,1.3s,mb6.3									
PFO	**Pinyon Flat Ob**	92.84	57	⇑P		P	12 49 36.8	+0.1		
	baz=93,SNR=9.1									
PFO	**Pinyon Flat Ob**	92.84	57	*eP*		P	12 49 36.7	0.0		
PFO	comp=Z,145nm,1.4s,mb6.2			LR		LR				
	comp=Z,25µm,21.0s,MS6.6									
BMO	**Blue Mountains**	92.98	45	*eP*		P	12 49 34.6	-2.5		
BMO				MLR		MLR				
	comp=Z,18µm,21.0s,MS6.5									
HEC	**Hector,Ludlow**	93.03	55	⇑P		P	12 49 37.4	-0.1		
	baz=93,SNR=8.0									
S10A	**Tonopah Range,**	93.03	52	⇓P		P	12 49 38.4	+1.0		
	baz=93,SNR=31									
DVTC	**Desert V Tower**	93.07	58	⇓P		P	12 49 37.4	-0.4		
	baz=93									
A10A	**Northport**	93.10	41	⇑P		P	12 49 38.9	+1.4		
	baz=93,SNR=19									
F10A	**Beach Ranch, E**	93.12	44	⇓P		P	12 49 38.5	+0.8		
	baz=93,SNR=8.3									
U10A	**Ash Meadows, A**	93.14	54	⇑P		P	12 49 36.7	-1.3		
	baz=93,SNR=6.4									
SHOC	**Shoshone**	93.14	54	⇓P		P	12 49 37.7	-0.3		
	baz=93									
G10A	**Bishop Farm, J**	93.14	45	⇑P		P	12 49 36.4	-1.4		
	baz=93,SNR=26									
K10A	**MacKenzie Ranc**	93.15	48	⇓P		P	12 49 37.9	0.0		
	baz=93									
D10A	**Wagner Farm, O**	93.16	43	⇑P		P	12 49 36.9	-0.9		
	baz=93,SNR=15									
C10A	**Spilker Farm,**	93.19	42	⇓P		P	12 49 38.1	+0.1		
	baz=93									
E10A	**Myers Farm, Un**	93.23	44	⇑P		P	12 49 38.3	+0.1		
	baz=93									
TPNV	**Topopah Spring**	93.24	53	⇓P		P	12 49 36.9	-1.6		
	baz=93,SNR=21									
TPNV	**Topopah Spring**	93.24	53	*eP*		P	12 49 36.9	-1.6		
TPNV				LR		LR				
	comp=Z,20µm,22.0s,MS6.5									
Q10A	**Clear Creek Ra**	93.24	51	⇓P		P	12 49 37.1	-1.3		
	baz=93,SNR=8.9									
BELC	**Belle Mtn.**	93.25	56	⇑P		P	12 49 37.7	-0.8		
	baz=93									
P10A	**Eureka**	93.25	51	⇑P		P	12 49 36.6	-1.8		
	baz=93									
O10A	**Cortez Mining,**	93.26	50	⇓P		P	12 49 37.0	-1.5		
	baz=93									
J10A	**Berg Farm, Mel**	93.27	47	⇓P		P	12 49 36.5	-2.0		
	baz=93									
B10A	**Chitwood Farm,**	93.28	42	⇑P		P	12 49 36.7	-1.6		
	baz=93									
R10A	**Warm Springs**	93.28	52	⇓P		P	12 49 38.6	0.0		
	baz=93									
I10A	**Payette**	93.29	46	⇓P		P	12 49 37.5	-0.9		
	baz=93									
M10A	**I.L. Ranch, Tu**	93.31	49	⇑P		P	12 49 37.2	-1.5		
	baz=93									
NEW	**Newport**	93.34	42	*eP*		P	12 49 36.2	-2.4		
NEW				pmax		pmax				
	comp=Z,123nm,1.3s									
NEW				MLR		MLR				
	comp=Z,35µm,21.0s									
NEW	**Newport**	93.34	42	*eP*		P	12 49 36.2	-2.4		
	comp=Z,123nm,1.3s,mb6.2									
NEW				LR		LR				
	comp=Z,35µm,21.0s,MS6.8									
SWSC	**Sam W. Stewart**	93.34	57	⇓P		P	12 49 38.2	-0.9		
	baz=93									
H10A	**Noah's Angus R**	93.36	46	⇑P		P	12 49 38.9	+0.1		
	baz=93,SNR=10.0									
TUQ	**Turquoise Moun**	93.40	55	⇓P		P	12 49 39.1	-0.1		
	baz=93,SNR=7.6									
L10A	**Juniper Basin**	93.40	48	⇓P		P	12 49 38.6	-0.5		
	baz=93									
GMRC	**Granite Mounta**	93.58	56	⇓P		P	12 49 39.7	-0.3		
	baz=94									
BC3	**Big Chuckw Mtn**	93.68	57	⇓P		P	12 49 39.9	-0.6		
	baz=94									
S11A	**Rachel**	93.68	53	⇑P		P	12 49 39.4	-1.1		
	baz=94									
G11A	**Walters Elk Ra**	93.75	45	⇑P		P	12 49 40.1	-0.4		
	baz=94									
K11A	**Parker Ranch,**	93.77	48	⇑P		P	12 49 40.0	-0.7		
	baz=94									
P11A	**Circle Ranch,**	93.79	51	⇓P		P	12 49 40.6	-0.3		
	baz=94									
D11A	**Klaveano Farm,**	93.80	43	⇓P		P	12 49 40.4	-0.4		
	baz=94									
Q11A	**Duckwater**	93.83	51	⇓P		P	12 49 41.1	0.0		
	baz=94,SNR=28									
V11A	**Goodsprings**	93.83	55	⇑P		P	12 49 40.3	-0.8		
	baz=94									
E11A	**Bogner Ranch,**	93.85	44	⇑P		P	12 49 41.6	+0.6		
	baz=94,SNR=8.1									
R11A	**Troy Canyon, C**	93.85	52	⇑P		P	12 49 42.2	+0.9		
	baz=94,SNR=6.1									
B11A	**Sandpoint**	93.86	42	⇓P		P	12 49 42.8	+1.9		
	baz=94,SNR=5.3									
F11A	**Grangeville**	93.86	44	⇓P		P	12 49 41.9	+0.8		
	baz=94,SNR=7.2									
M11A	**Holland Ranch,**	93.87	49	⇓P		P	12 49 41.5	+0.2		
	baz=94									
N11A	**Elko Archery C**	93.88	50	⇑P		P	12 49 40.8	-0.5		
	baz=94									
A11A	**Hall Mountain,**	93.89	41	⇓P		P	12 49 40.7	-0.4		
	baz=94,SNR=16									
I11A	**Placerville**	93.89	46	⇑P		P	12 49 41.3	0.0		
	baz=94									
H11A	**Donnelly**	93.89	46	⇑P		P	12 49 40.8	-0.5		
	baz=94									
C11A	**Tepee Creek (N**	93.90	42	⇑P		P	12 49 40.5	-0.7		
	baz=94,SNR=15									
O11A	**Cowboy Ranch,**	93.90	50	⇑P		P	12 49 41.1	-0.3		
	baz=94									
U11A	**Corn Creek**	93.90	54	⇑P		P	12 49 41.4	-0.1		
	baz=94									
L11A	**Cat Creek Ranc**	93.94	48	⇓P		P	12 49 41.3	-0.2		
	baz=94									
MFID	**Camas Ranch**	93.95	47	⇓P		P	12 49 41.6	0.0		
	baz=94									
IRM	**Iron Mountain**	93.96	56	⇑P		P	12 49 41.5	-0.3		
	baz=94									
T11A	**Corn Creek, Al**	94.08	53	⇑P		P	12 49 42.0	-0.3		
	baz=94,SNR=8.5									
SHPR	**Sheep Range**	94.08	54	*eP*		P	12 49 42.6	+0.3		
RPN	**Rapa Nui**	94.13	118	PFAKE			12 49 50.0	+7.2		
RPN				LR		LR				
	comp=Z,14µm,20.0s,MS6.4									
GLA	**Glamis**	94.16	57	⇓P		P	12 49 42.1	-0.6		
	baz=94									
GLA	**Glamis**	94.16	57	PFAKE			12 49 50.0	+7.2		
GLA				LR		LR				
	comp=Z,21µm,21.0s,MS6.6									
ELK	**Elko**	94.25	50	P		P	12 49 41.5	-1.5		
	comp=Z,1.1nm,0.7s,baz=228,slow=14,SNR=5.7									
ELK	**Elko**	94.25	50	P		P	12 49 43.6	+0.6		
ELK				pmax		pmax				
	comp=Z,140nm,1.4s									
ELK	**Elko**	94.25	50	P		P	12 49 41.5	-1.5		
ELK				LR		LR				
	comp=Z,56µm,21.0s,MS7.0									
W12A	**Cal Nev Ari**	94.25	55	⇓P		P	12 49 44.0	+0.9		
	baz=94									
V12A	**Nelson**	94.29	55	⇓P		P	12 49 43.5	+0.1		
	baz=94,SNR=7.8									
E12A	**Beaver Dam Sad**	94.29	44	⇓P		P	12 49 42.9	-0.2		
	baz=94,SNR=22									
112A	**Yuma**	94.34	58	⇑P		P	12 49 43.2	-0.4		
	baz=94									
A12A	**Yaak River Ran**	94.36	41	⇓P		P	12 49 44.6	+1.3		
	baz=94,SNR=7.3									
B12A	**Libby**	94.38	42	⇓P		P	12 49 44.2	+0.8		
	baz=94									
S12A	**Delamar Landin**	94.39	53	⇑P		P	12 49 44.1	+0.4		
	baz=94,SNR=11									
N12A	**Clover Valley,**	94.41	50	⇑P		P	12 49 43.7	0.0		
	baz=94,SNR=7.2									
C12B	**Naegeli Ranch,**	94.42	43	⇓P		P	12 49 42.9	-0.7		
	baz=94									
NEE2	**Needles Airpor**	94.43	56	⇑P		P	12 49 43.1	-0.9		
	baz=94									
T12A	**Moapa**	94.45	54	⇓P		P	12 49 43.2	-0.8		
	baz=94									
Y12C	**Blythe**	94.45	57	⇑P		P	12 49 43.5	-0.6		
	baz=94,SNR=11									
D12A	**Red Ives Fores**	94.47	43	⇓P		P	12 49 42.7	-1.2		
	baz=94,SNR=22									
J12A	**Stokes Ranch,**	94.48	47	⇑P		P	12 49 43.2	-0.7		
	baz=94,SNR=7.2									
Q12A	**Willow Creek R**	94.48	51	⇑P		P	12 49 43.5	-0.6		
	baz=94,SNR=6.1									
F12A	**Elk City**	94.48	45	⇑P		P	12 49 43.7	-0.2		
	baz=94									
L12A	**House Creek Ra**	94.49	48	⇑P		P	12 49 44.8	+0.7		
	baz=94									
M12A	**Wells**	94.53	49	⇓P		P	12 49 43.2	-1.0		
	baz=94									
U12A	**Valley of Fire**	94.58	54	⇑P		P	12 49 44.5	-0.1		
	baz=94									
K12A	**Draper Farm, C**	94.59	48	⇑P		P	12 49 44.8	+0.2		
	baz=94									
O12A	**Currie**	94.60	50	⇑P		P	12 49 44.8	+0.2		
	baz=95,SNR=13									
R12A	**Pony Springs,**	94.62	52	⇑P		P	12 49 44.4	-0.3		
	baz=95									
H12A	**Diamond D Ranc**	94.71	46	⇑P		P	12 49 45.3	+0.3		
	baz=95									
PDMCI	**Parker Dam,Lak**	94.80	56	⇑P		P	12 49 45.8	+0.1		
	baz=95									
HLID	**Hailey**	94.99	47	⇑P		P	12 49 46.8	+0.5		
	baz=95,SNR=18									
HLID	**Hailey**	94.99	47	*eP*		P	12 49 45.4	-0.9		
V13A	**Grand Canyon W**	95.00	55	⇑P		P	12 49 47.2	+0.6		
	baz=95,SNR=8.8									
Y13A	**Salome**	95.04	57	⇑P		P	12 49 46.6	-0.2		
	baz=95									
113A	**Mohawk Valley,**	95.04	58	⇑P		P	12 49 47.1	+0.3		
	baz=95									
N13A	**Wendover, West**	95.04	50	⇓P		P	12 49 46.3	-0.3		
	baz=95									
U13A	**Pakoon Wash**	95.04	54	⇑P		P	12 49 46.9	+0.1		
	baz=95,SNR=6.5									
W13A	**Huapai Mount**	95.05	55	⇑P		P	12 49 45.2	-1.6		
	baz=95,SNR=7.0									
X13A	**Yucca**	95.07	56	⇓P		P	12 49 45.8	-1.1		
	baz=95									
D13A	**Huson**	95.08	43	⇑P		P	12 49 45.9	-0.7		
	baz=95									
M13A	**Montello**	95.09	49	⇓P		P	12 49 46.3	-0.6		
	baz=95									
Q13A	**Wheeler Ranch,**	95.11	51	⇑P		P	12 49 46.4	-0.6		
	baz=95									
R13A	**O'Grain Ranch,**	95.11	52	⇑P		P	12 49 47.2	+0.2		
	baz=95									
T13A	**Saint George**	95.11	53	⇓P		P	12 49 46.9	-0.1		
	baz=95,SNR=8.1									
B13A	**Whitefish**	95.12	42	⇓P		P	12 49 46.8	+0.1		
	baz=95,SNR=6.0									
F13A	**Darby**	95.13	45	⇑P		P	12 49 47.2	+0.3		
	baz=95,SNR=23									
P13A	**Bates Ranch, G**	95.13	51	⇓P		P	12 49 45.7	-1.3		
	baz=95,SNR=7.6									
H13A	**Challis**	95.14	46	⇑P		P	12 49 46.7	-0.3		
	baz=95,SNR=17									
J13A	**Cove Ranch, Pi**	95.16	47	⇓P		P	12 49 46.8	-0.3		
	baz=95									
A13A	**Flathead Natio**	95.17	41	⇑P		P	12 49 47.8	+0.8		
	baz=95									
G13A	**Cobalt**	95.17	45	⇑P		P	12 49 47.4	+0.3		
	baz=95									
S13A	**Holt Ranch, En**	95.17	53	⇑P		P	12 49 47.7	+0.4		
	baz=95,SNR=8.6									
K13A	**Stover Farm, H**	95.20	48	⇑P		P	12 49 48.0	+0.7		
	baz=95									
I13A	**Wildhorse Cree**	95.22	46	⇓P		P	12 49 48.1	+0.7		
	baz=95,SNR=6.6									
E13A	**Victor**	95.25	44	⇓P		P	12 49 46.9	-0.5		
	baz=95									
L13A	**Double Diamond**	95.28	48	⇓P		P	12 49 46.4	-1.3		
	baz=95									
YKW3	**Yellowknife Ar**	95.33	28	*eP*		P	12 49 45.2	-2.2		
YKA	**Yellowknife Ar**	95.34	28	P		P	12 49 45.2	-2.2		
	comp=Z,5.1nm,0.8s,mb5.0,baz=268,slow=4.7,SNR=17									
YKA				S		SKSac	13 00 21.3	+0.5		
	comp=Z,1.2nm,0.8s,baz=274,slow=13,SNR=2.2									
YKA				PKKPbc		PKKPbc	13 06 37.4	-5.4		
	comp=Z,9.9nm,0.7s,baz=77,slow=2.7,SNR=14									
YKA				LR		LR	13 28 03.3			
	comp=Z,15µm,21.3s,MS6.4,baz=215,slow=33									
YKA	**Yellowknife Ar**	95.34	28	P		P	12 49 45.2	-2.2		
YKA				S		SKSac	13 00 21.3	+0.5		
YKA	**Yellowknife Ar**	95.34	28	P		P	12 49 45.2	-2.2		
YKA				S		SKSac	13 00 21.3	+0.5		
YKA				PKKPbc		PKKPbc	13 06 37.4	-5.4		
YKA				LR		LR	13 28 03.3			
MSO	**Missoula**	95.43	44	PFAKE			12 50 00.0	+12		
MSO				LR		LR				
	comp=Z,26µm,21.0s,MS6.7									
WALA	**Waterton Lakes**	95.50	41	*eP*		P	12 49 47.5	-1.1		
	comp=Z,136nm,1.1s,mb6.3									
ARUT	**Antelope Range**	95.52	53	*eP*		P	12 49 47.1	-1.8		
CCUT	**Cedar City**	95.57	53	*eP*		P	12 49 47.9	-1.2		
C14A	**Swan Lake**	95.58	43	⇓P		P	12 49 49.0	0.0		
	baz=96									
J14A	**Carey**	95.63	47	⇓P		P	12 49 49.7	+0.5		
	baz=96									
U14A	**Mt Trumbull**	95.67	54	⇓P		P	12 49 49.2	-0.4		
	baz=96,SNR=5.8									
Q14A	**Sevier Lake (B**	95.69	51	⇑P		P	12 49 48.5	-1.1		
	baz=96,SNR=16									
I14A	**Mackay**	95.70	46	⇑P		P	12 49 49.5	0.0		
	baz=96,SNR=6.6									
V14A	**Boquillas Ranc**	95.71	55	⇓P		P	12 49 49.6	-0.2		
	baz=96									
M14A	**Sheep Mountain**	95.71	49	⇑P		P	12 49 48.8	-0.8		
	baz=96,SNR=8.3									
W14A	**Seligman**	95.71	55	⇓P		P	12 49 49.4	-0.4		
	baz=96									
SVE	**Sverdlovsk**	95.72	327	⇑ *eP*		P	12 49 47.5	-1.8		
SVE				*e*			12 53 48.6			
SVE				*e*PPP			12 55 49.2			
SVE				*e*S		SKSac	13 00 19.2	-3.9		
SVE				*e*SSS			13 11 12.3			
SVE				pmax		pmax				
	comp=Z,114nm,1.4s,mb6.1									
SVE				MLR		MLR				
	comp=Z,7µm,20.0s,MS6.2									
G14A	**Jackson**	95.72	45	⇑P		P	12 49 48.6	-1.0		
	baz=96									
Y14A	**Wickenburg**	95.73	57	⇓P		P	12 49 49.5	-0.4		
	baz=96									
E14A	**Clinton**	95.73	44	⇑P		P	12 49 49.6	0.0		
	baz=96									
S14A	**Cedar City**	95.73	53	⇓P		P	12 49 49.7	-0.1		
	baz=96									
D14A	**Greenough**	95.73	43	⇓P		P	12 49 49.1	-0.5		
	baz=96									
Z14A	**Wintersburg**	95.75	57	⇓P		P	12 49 49.9	-0.2		
	baz=96									
T14A	**Hurricane**	95.77	53	⇓P		P	12 49 50.7	+0.6		
	baz=96									
H14A	**Leadore**	95.78	46	⇑P		P	12 49 50.8	+1.0		
	baz=96									
F14A	**Wisdom**	95.80	45	⇑P		P	12 49 50.2	+0.2		
	baz=96									
L14A	**Malta**	95.80	48	⇓P		P	12 49 50.7	+0.7		
	baz=96									
214A	**Organ Pipe Nat**	95.81	58	⇑P		P	12 49 51.1	+0.8		
	baz=96									
N14A	**Grayback Hills**	95.81	50	⇓P		P	12 49 51.5	+1.4		
	baz=96									
A14A	**Double T Ranch**	95.83	41	⇑P		P	12 49 50.8	+0.8		
	baz=96,SNR=5.8									
X14A	**Yava**	95.84	56	⇓P		P	12 49 51.0	+0.6		
	baz=96									
R14A	**James Farms, M**	95.86	52	⇑P		P	12 49 52.1	+1.6		
	baz=96									
K14A	**Jones Ranch, D**	95.86	48	⇑P		P	12 49 50.5	+0.2		
	baz=96									
P14A	**Drum Mountains**	95.86	51	⇓P		P	12 49 51.3	+0.9		
	baz=96									
B14A	**Marquette Ranc**	95.92	42	⇑P		P	12 49 50.9	+0.5		
	baz=96									
EDM	**Edmonton**	95.92	37	*eP*		P	12 49 48.5	-1.8		
WBK	**Wadi Bani Khal**	96.04	292	P		P	12 49 51.0	-0.6		
	SNR=46									
AB31	**Akbulak array**	96.07	319	*i* P		P	12 49 48.2	-2.9		
AB31				pmax		pmax				
	comp=Z,53nm,0.8s,mb6.0									
DUG	**Dugway**	96.08	50	⇑P		P	12 49 52.0	+0.6		
	baz=96									
DUG	**Dugway**	96.08	50	*eP*		P	12 49 51.5	+0.1		
DUG				LR		LR				
	comp=Z,44µm,22.0s,MS6.9									
HVU	**Hansel Valley**	96.14	49	*eP*		P	12 49 56.2

ARU SS SS 13 07 45.3 -5.1
ARU SSS 13 11 36.3
ARU pmax pmax
comp=Z,53nm,1.7s,mb5.7
ARU Arti 96.87 326 ⇑*i*P **P 12 49 51.6 -3.0**
ARU LR LR
comp=Z,8µm,22.0s,MS6.1
SMDO Samad 96.91 293 ⇑P **P 12 49 56.0 +0.5**
SNR=20
C16A Fuhringer Ranc 96.94 43 ⇑P **P 12 49 55.3 +0.3**
baz=97
P16A Fountain Green 96.95 51 ⇓P **P 12 49 55.8 +0.5**
baz=97
216A Three Points, 96.96 58 ⇑P **P 12 49 56.9 +1.4**
baz=97
S16A Weppner Ranch, 96.97 53 ⇑P **P 12 49 56.6 +1.1**
baz=97
W16A Flagstaff 96.98 55 ⇑P **P 12 49 56.6 +1.1**
baz=97
MPU Maple Canyon 96.98 50 PFAKE 12 50 10.0 +15
MPU LR LR
comp=Z,56µm,21.0s,MS7.0
E16A East Helena 96.98 44 ⇓P **P 12 49 55.9 +0.6**
baz=97
Y16A Circle Bar Ran 96.99 57 ⇑P **P 12 49 57.7 +2.0**
baz=97
M16A Huntsville 97.00 49 ⇑P **P 12 49 56.0 +0.5**
baz=97
BOZ Bozeman (W) 97.02 45 ⇑P **P 12 49 56.4 +0.9**
baz=97,SNR=6.1
BOZ Bozeman (W) 97.02 45 *e*P **P 12 49 54.8 -0.7**
BOZ LR LR
comp=Z,31µm,22.0s,MS6.8
Z16A Peralta Trail, 97.02 57 ⇓P **P 12 49 56.5 +0.7**
baz=97
J16A Bone 97.02 47 ⇑P **P 12 49 57.1 +1.5**
baz=97
A16A West Butte Ran 97.03 41 ⇑P **P 12 49 57.4 +1.9**
baz=97
T16A Glen Canyon Da 97.03 53 ⇑P **P 12 49 56.2 +0.4**
baz=97
X16A Lo Mia Camp, P 97.04 56 ⇓P **P 12 49 58.2 +2.4**
baz=97
K16A Soda Springs 97.04 48 ⇑P **P 12 49 56.8 +1.2**
baz=97
HWUT Hardware Ranch 97.05 49 *e*P **P 12 49 56.3 +0.6**
comp=Z,18nm,0.8s,mb5.5
HWUT LR LR
comp=Z,27µm,21.0s,MS6.7
R16A Teasdale 97.07 52 ⇑P **P 12 49 57.0 +1.1**
baz=97,SNR=11
O16A Springville 97.08 50 ⇑P **P 12 49 57.4 +1.5**
baz=97
WUAZ Wupatki 97.11 55 ⇑P **P 12 49 57.6 +1.4**
baz=97
I16A Newdale 97.12 47 ⇓P **P 12 49 58.5 +2.5**
baz=97
JLU Jordanelle 97.13 50 *e*P **P 12 49 54.9 -1.2**
N16A Rees Ranch, Co 97.14 50 ⇓P **P 12 49 57.3 +1.1**
baz=97
L16A Fish Haven 97.15 48 ⇓P **P 12 49 56.0 -0.2**
baz=97
QLMT Earthquake Lak 97.16 46 *e*P **P 12 49 55.7 -0.5**
ABKT Ailbek 97.27 307 P **P 12 49 56.6 -0.2**
comp=Z,456nm,0.9s,mb6.9,SNR=15
DAU Daniels Canyon 97.27 50 *e*P **P 12 49 55.8 -1.0**
VAN Vannovskaya 97.28 307 ⇑*i*P **P 12 49 56.0 -0.9**
H16A Russell Place, 97.29 46 ⇑P **P 12 49 56.0 -0.8**
baz=97
TMUT Trail Mountain 97.30 51 *e*P **P 12 49 57.3 +0.4**
AKTK Aktyubinsk 97.31 320 *i* P **P 12 49 53.8 -2.9**
AKTO Aktyubinsk 97.31 320 P **P 12 49 53.8 -2.9**
AKTO pmax pmax
comp=Z,100nm,3.0s
U16A Tuba City 97.32 54 ⇑P **P 12 49 58.2 +1.1**
baz=97
Q16A Castle Valley 97.33 52 ⇓P **P 12 49 57.5 +0.4**
baz=97
AHID Auburn Hatcher 97.40 48 PFAKE 12 50 10.0 +13
AHID LR LR
comp=Z,68µm,21.0s,MS7.1
YMR Madison River 97.49 46 P **P 12 50 00.8 +3.1**
comp=Z,154nm,1.5s,mb6.2
YMR LR LR
comp=Z,25µm,22.0s,MS6.7
MSEY Mahe Island 97.50 265 PFAKE 12 50 10.0 +12
MSEY LR LR
comp=Z,7µm,20.0s,MS6.1
217A Green Valley 97.50 59 ⇑P **P 12 49 59.7 +1.7**
baz=98
TPAW Teton Pass 97.51 47 *e*P **P 12 50 00.3 +2.6**
IMW Indian Meadow 97.51 47 *e*P **P 12 49 58.0 +0.2**
Y17A Roosevelt 97.52 57 ⇑P **P 12 50 00.4 +2.3**
baz=98
TUC Tucson 97.54 58 *e*P **P 12 49 56.1 -2.1**
TUC pmax pmax
comp=Z,17nm,1.1s,mb5.5
TUC MLR MLR
comp=Z,21µm,22.0s,MS6.6
TUC Tucson 97.54 58 *e*P **P 12 49 56.1 -2.1**
comp=Z,17nm,1.1s,mb5.5
TUC LR LR
comp=Z,21µm,22.0s,MS6.6
E17A Martinsdale 97.55 44 ⇑P **P 12 49 57.4 -0.5**
baz=98
X17A Forest Lakes 97.56 56 ⇓P **P 12 49 58.3 0.0**
baz=98
REDW Red Top Meadow 97.58 47 *e*P **P 12 49 58.2 +0.2**
117A Oracle 97.58 58 ⇑P **P 12 49 58.7 +0.3**
baz=98
N17A Moffit Pass 97.60 50 ⇑P **P 12 49 58.4 +0.1**
baz=98
T17A Navajo Res., N 97.60 53 ⇓P **P 12 49 59.1 +0.7**
baz=98
C17A Wharram Farm, 97.60 43 ⇑P **P 12 49 57.6 -0.4**
baz=98
S17A Black Ridge (B 97.60 53 ⇓P **P 12 49 57.1 -1.2**
baz=98
HOQ Hoqain 97.61 293 P **P 12 49 57.5 -1.2**
SNR=47
W17A Winslow 97.65 55 ⇑P **P 12 49 57.7 -0.9**
baz=98
P17A Butcher Ranch, 97.66 51 ⇓P **P 12 49 58.0 -0.6**
baz=98
O17A Robinson Place 97.67 50 ⇑P **P 12 49 59.0 +0.4**
baz=98
BSY Bisya 97.68 292 P **P 12 49 58.4 -0.6**
SNR=18
R17A Hanksville Air 97.68 52 ⇑P **P 12 49 58.4 -0.2**
baz=98
U17A Shonto 97.71 54 ⇑P **P 12 49 57.6 -1.3**
baz=98
LOHW Long Hollow 97.76 47 *e*P **P 12 50 04.4 +5.5**
I17A Pilgram Creek 97.78 46 ⇓P **P 12 50 00.4 +1.5**
baz=98
Z17A San Carlos Hig 97.82 57 ⇑P **P 12 49 58.8 -0.6**
baz=98
SRU San Rafael 97.83 51 *e*P **P 12 50 01.8 +2.5**
SRU San Rafael 97.83 51 ⇓P **P 12 49 59.4 +0.1**
baz=98
SRU San Rafael 97.83 51 *e*P **P 12 49 58.4 -0.9**
LKWY Lake 97.89 46 PFAKE 12 50 10.0 +11
LKWY LR LR
comp=Z,27µm,21.0s,MS6.7
P18A Preston Nutter 98.05 51 ⇓P **P 12 50 02.7 +2.4**
baz=98
Q18A Rafter H Ranch 98.14 51 ⇓P **P 12 50 02.1 +1.4**
baz=98
218A Dragoon 98.16 59 ⇑P **P 12 50 01.6 +0.6**
baz=98
Z18A Geronimo 98.18 57 ⇑P **P 12 50 02.4 +1.3**
baz=98
Y18A Canyon Day Jun 98.19 57 ⇑P **P 12 50 00.8 -0.3**
baz=98
318A Bisbee 98.20 59 ⇓P **P 12 50 02.8 +1.6**
baz=98
E18A Harlowton 98.20 44 ⇑P **P 12 50 00.6 -0.2**
baz=98
O18A Roosevelt 98.23 50 ⇓P **P 12 50 02.1 +1.1**
baz=98
118A Homack Ranch, 98.23 58 ⇑P **P 12 50 02.6 +1.3**
baz=98
S18A Hurst Farm, BI 98.25 53 ⇑P **P 12 50 02.6 +1.4**
baz=98
X18A Snowflake 98.27 56 ⇓P **P 12 50 03.1 +1.7**
baz=98
EGMT Eagleton 98.27 42 ⇓P **P 12 50 02.3 +1.2**
baz=98
EGMT Eagleton 98.27 42 *e*P **P 12 49 59.3 -1.8**
EGMT LR LR
comp=Z,46µm,21.0s,MS7.0
V18A Ganado 98.29 55 ⇓P **P 12 50 02.8 +1.3**
baz=98
R18A Canyonlands Na 98.32 52 ⇑P **P 12 50 02.3 +0.7**
baz=98
T18A Mexican Hat 98.34 53 ⇑P **P 12 50 01.4 -0.3**
baz=98
U18A Rough Rock, Ch 98.34 54 ⇑P **P 12 50 02.4 +0.7**
baz=98
F18A Big Timber 98.35 44 ⇓P **P 12 50 03.0 +1.5**
baz=98
GCMT Greycliff 98.39 45 *e*P **P 12 50 01.7 0.0**
W18A Petrified Fore 98.45 55 ⇑P **P 12 50 03.5 +1.3**
baz=98
N18A Larsen Ranch, 98.47 49 ⇓P **P 12 50 03.6 +1.4**
baz=98
BW06 Boulder Array 98.53 48 PFAKE 12 50 10.0 +7.6
BW06 LR LR
comp=Z,54µm,21.0s,MS7.0
PDAR Pinedale Array 98.53 48 P **P 12 49 59.9 -2.5**
comp=Z,1.5nm,0.6s,baz=253,slow=2.3,SNR=8.4
PDAR PKiKP PKiKP 12 54 32.5 -1.7
comp=Z,16nm,1.2s,baz=285,slow=3.5,SNR=4.1
PDAR S SKSac 13 00 40.2 +2.0
comp=Z,0.3nm,0.4s,baz=214,slow=16,SNR=2.3
PDAR PKKPbc PKKPbc 13 06 36.5 +3.1
comp=Z,2.7nm,0.7s,baz=104,slow=6.3,SNR=7.5
PDAR PKPPKP 13 14 46.9
comp=Z,1.2nm,0.7s,baz=101,slow=3.0,SNR=4.9
PDAR LR LR 13 28 30.9
comp=Z,46µm,20.9s,MS7.0,baz=275,slow=32
BANOM Banah 98.60 295 P **P 12 50 02.0 -1.1**
SNR=59
RLMT Red Lodge 98.69 45 *e*P **P 12 50 06.4 +3.3**
comp=Z,26nm,1.1s,mb5.7
RLMT LR LR
comp=Z,31µm,22.0s,MS6.8
HATD Hatta, Dubai 98.72 294 P **P 12 50 02.8 -0.9**
SNR=31
W19A Sanders 98.73 55 ⇑P **P 12 50 05.1 +1.6**
baz=99
ASHO Ashiyiah 98.78 294 P **P 12 50 02.4 -1.6**
SNR=29
119A Ashpeak Ranch, 98.80 58 ⇑P **P 12 50 05.1 +1.3**
baz=99
319A Douglas 98.81 59 ⇑P **P 12 50 05.5 +1.6**
baz=99
Q19A Hogan Spring (98.81 52 ⇑P **P 12 50 05.4 +1.7**
baz=99
X19A St. Johns 98.81 56 ⇓P **P 12 50 04.5 +0.6**
baz=99
219A White Tail Can 98.83 59 ⇓P **P 12 50 04.9 +0.9**
baz=99
Z19A T-Link Ranch, 98.83 57 ⇓P **P 12 50 05.2 +1.3**
baz=99
Y19A Nutrioso 98.84 57 ⇑P **P 12 50 05.3 +1.3**
baz=99
N19A John Jarvie Ra 98.85 50 ⇓P **P 12 50 03.6 -0.2**
baz=99
O19A Miners Draw (B 98.90 50 ⇑P **P 12 50 05.4 +1.2**
baz=99
S19A Harvey Farm, M 98.92 53 ⇓P **P 12 50 04.3 0.0**
baz=99
V19A Window Rock 99.01 55 ⇑P **P 12 50 04.7 0.0**
baz=99
T19A Beclabito 99.02 54 ⇓P **P 12 50 04.1 -0.7**
baz=99
MVCO Mesa Verde 99.44 53 ⇓P **P 12 50 06.6 0.0**
baz=99
MVCO Mesa Verde 99.44 53 PFAKE 12 50 20.0 +13
MVCO LR LR
comp=Z,19µm,22.0s,MS6.5
MAIT Maitri 100.18 192 *e*PKPab Pdif 12 50 08.9 -0.5
RBK Rabkut 100.30 287 ⇑P Pdif 12 50 11.3 +1.3
SNR=7.6
WHFO Wadi Hawf 100.72 287 ⇓P Pdif 12 50 13.2 +1.3
SNR=6.2
LAO LASA Array 100.74 44 *e*Pdif Pdif 12 50 11.7 -0.3
LAO LR LR
comp=Z,44µm,22.0s,MS6.9
Y22C IRIS PASSCAL I 100.78 56 ⇑P Pdif 12 50 13.7 +1.6
baz=101
ANMO Albuquerque 101.14 56 PP PP 12 54 19.1 -4.1
comp=Z,3.0nm,0.8s,baz=290,slow=7.6,SNR=3.2
ANMO Albuquerque 101.14 56 P Pdif 12 50 22.7 +9.0
ANMO pmax pmax
comp=Z,68nm,1.7s
ANMO Albuquerque 101.14 56 PFAKE 12 50 20.0 +6.3
ANMO LR LR
comp=Z,16µm,21.0s,MS6.5
ISCO Idaho Springs 101.61 51 P Pdif 12 50 22.9 +7.1
ISCO pmax pmax
comp=Z,3.0nm,0.8s
ISCO Idaho Springs 101.61 51 *e*Pdif Pdif 12 50 22.5 +6.7
comp=Z,2.7nm,0.8s
ISCO LR LR
comp=Z,37µm,21.0s,MS6.9
SDCO Great Sand Dun 101.81 53 *e*Pdif Pdif 12 50 21.0 +4.3
comp=Z,46nm,1.4s
SDCO LR LR
comp=Z,25µm,22.0s,MS6.7
SNAA Sanae 101.88 187 *e*Pdiff Pdif 12 50 15.2 -1.8
SNAA *e* 12 50 18.7
SNAA *e* 12 50 21.4
SNAA *e* 12 54 38.3
SNAA *e* 12 54 42.8
SNAA *e* 12 54 50.5
SNAA Sanae 101.88 187 P Pdif 12 50 15.3 -1.7
SNAA pmax pmax
comp=Z,81nm,1.2s
SNAA Sanae 101.88 187 *e*Pdif Pdif 12 50 15.2 -1.8
comp=Z,81nm,1.2s
DGMT Dagmar 101.95 42 PFAKE 12 50 30.0 +13
DGMT LR LR
comp=Z,32µm,22.0s,MS6.8
RSSD Black Hills 102.48 46 P Pdif 12 50 21.4 +1.7
RSSD pmax pmax
comp=Z,54nm,1.3s
RSSD Black Hills 102.48 46 *e*Pdif Pdif 12 50 17.3 -2.4
comp=Z,54nm,1.3s
RSSD LR LR
comp=Z,44µm,22.0s,MS6.9
FFC Flin Flon 102.50 35 PFAKE 12 50 30.0 +10
FFC LR LR
comp=Z,20µm,22.0s,MS6.6
VNA3 Neumayer Olymp 103.05 186 *e*Pdiff Pdif 12 50 21.6 -0.6
VNA3 *e* 12 50 25.3
VNA3 *e* 12 50 27.1
VNA3 *e* 12 50 32.0
VNA3 *e* 12 54 41.5
VNA3 *e* 12 54 45.2
VNA3 *e* 12 54 51.2
VNA2 Neumayer--Watz 103.12 186 *e*Pdiff Pdif 12 50 21.2 -1.3
baz=171,slow=2.9
VNA2 *e* 12 50 25.0
VNA2 *e* 12 50 27.4
VNA2 *e* 12 50 32.6
VNA2 *e* 12 54 41.4
VNA2 *e* 12 54 44.9
VNA2 *e* 12 54 51.6
VNA1 Neumayer--Stat 103.47 186 *e*Pdiff Pdif 12 50 23.3 -0.8
VNA1 *e* 12 50 26.9
VNA1 *e* 12 50 28.9
VNA1 *e* 12 50 35.3
VNA1 *e* 12 54 44.2
VNA1 *e* 12 54 50.4
ABPO Ambohimpanom 103.59 249 PFAKE 12 50 40.0 +15
ABPO LR LR
comp=Z,7µm,20.0s,MS6.2
SPITS Spitsbergen Ar 103.64 352 Pdiff Pdif 12 50 27.4 +2.6
comp=Z,4.9nm,0.8s,baz=32,slow=7.8,SNR=4.5
KBS Kingsbay 103.67 353 *e* Pdif 12 50 20.5 -4.4
KBS *e*PP PP 12 54 34.4 -6.4
KBS *e*SS SS 13 09 33.4 +9.5
KBS AMS AMS 13 31 15.2
comp=Z,7µm,24.5s,MS6.1
KBS Kingsbay 103.67 353 *e*P Pdif 12 50 22.6 -2.4
KBS *i* 12 54 35.3
KBS LR LR
comp=Z,7µm,24.5s,MS6.1
TXAR Lajitas Array 103.68 61 Pdiff Pdif 12 50 30.4 +5.3
comp=Z,0.6nm,0.7s,baz=253,slow=3.8,SNR=8.2
TXAR PP PP 12 54 41.0 -1.5
comp=Z,3.6nm,0.9s,baz=256,slow=5.0,SNR=4.5
TXAR PKKPbc PKKPbc 13 06 17.3 -0.7
comp=Z,1.9nm,0.7s,baz=132,slow=3.8,SNR=5.1
TXAR PKKP PKKPbc 13 06 24.5 +6.5
comp=Z,11nm,0.7s,baz=112,slow=3.9,SNR=18
TXAR tx tx 13 06 40.1
comp=Z,7.4nm,0.8s,baz=110,slow=4.5,SNR=8.7
TXAR PKPPKP 13 14 42.2
comp=Z,1.6nm,1.1s,baz=112,slow=3.4,SNR=4.8
TXAR Lajitas Array 103.68 61 P Pdif 12 50 30.4 +5.4
TXAR 12 54 41.1
TXAR Lajitas Array 103.68 61 Pdif Pdif 12 50 30.4 +5.3
TXAR PP PP 12 54 41.0 -1.5
TXAR PKKPbc PKKPbc 13 06 17.3 -0.7
TXAR PKKP PKKPbc 13 06 24.5 +6.5
TXAR P'P' 13 14 42.2
OGNE Ogallala 104.25 49 PFAKE 12 50 40.0 +12
OGNE LR LR
comp=Z,13µm,20.0s,MS6.5
AMTX Amarillo 105.06 55 PFAKE 12 50 40.0 +8.8
AMTX LR LR
comp=Z,28µm,22.0s,MS6.8
PMSA Palmer Station 105.06 164 PFAKE 12 55 00.0 +15
PMSA LR LR
comp=Z,20µm,21.0s,MS6.6
MAK Makhachkala 105.07 313 *e*P Pdif 12 50 33.1 +1.9
MAK *i* 12 54 53.3
MAK *e*PPP 12 57 10.4
MAK *e* 13 01 06.2
MAK *e* 13 01 49.8
MAK *i* SP SP 13 03 58.7 -4.4
MAK *i* PS PS 13 04 10.7 +3.1
MAK *e*SS SS 13 09 51.9 +6.8
MAK pmax pmax
comp=Z,382nm,1.6s
MAK MLR MLR
comp=Z,14µm,25.0s,MS6.4
MAK MLR MLR
comp=Z,9µm,22.0s
LVZ Lovozero 105.21 340 PFAKE 12 55 00.0 +14
LVZ LR LR
comp=Z,5µm,22.0s,MS6.0
BJO Bjornoya 105.72 348 *e* Pdif 12 50 25.8 -8.3
BJO *e*PP PP 12 54 55.4 -0.7
BJO AMS AMS 13 38 06.9
comp=Z,6µm,27.8s,MS6.0
BJO1 Bjornoya 105.76 348 *e*P Pdif 12 50 33.9 -0.3
BJO1 *i* 12 55 00.3
BJO1 LR LR
comp=Z,6µm,27.8s,MS6.0
APA Apatity 105.78 340 ⇓*i*P Pdif 12 50 35.0 +0.7
APA *i* PPP 12 57 08.0
APA *i* 13 01 16.0
APA *i* PS PS 13 04 06.0 -7.9
APA pmax pmax
comp=Z,54nm,1.4s
APA pmax pmax
comp=Z,2µm,23.0s
KLMR Klimovskoe 105.89 332 *e*P Pdif 12 50 32.7 -2.2
KLMR pmax pmax
comp=Z,39nm,1.0s
CBKS Cedar Bluff 106.24 51 PFAKE 12 55 00.0 +12
CBKS LR LR
comp=Z,60µm,22.0s,MS7.1
MIB Mutribah 106.46 299 *e*P Pdif 12 50 34.9 -2.4
baz=299
MIB AMb AMB 12 50 44.3
comp=Z,141nm,1.1s,baz=299
NAY Al-Naaiem 106.58 299 *e*P Pdif 12 50 34.9 -3.0
baz=299
NAY AMb AMB 12 50 44.7
comp=Z,95nm,0.9s,baz=299
KEV Kevo 106.72 343 *e*pkp PKiKP 12 54 51.9 +3.6
KEV Kevo 106.72 343 *e*P Pdif 12 50 40.3 +1.8
KEV *e*PKP PKiKP 12 54 51.9 +3.6
KEV LR LR
comp=Z,10µm,22.0s,MS6.3
RST Umm Al-Ruwaisa 106.78 299 *e*P Pdif 12 50 35.9 -2.8
baz=299
RST AMb AMB 12 50 45.4
comp=Z,128nm,1.0s,baz=299
DGRG David-gareji 106.85 312 P Pdif 12 50 37.8 -1.3
ULM Lac du Bonnet 107.02 39 Pdiff Pdif 12 50 45.0 +5.2
comp=Z,2.2nm,0.7s,baz=330,slow=5.9,SNR=3.6
ULM PKKPbc PKKPbc 13 06 09.6 +1.0
comp=Z,5.9nm,0.7s,baz=88,slow=4.8,SNR=6.7
ULM Lac du Bonnet 107.02 39 PFAKE 12 55 00.0 +11
ULM LR LR
comp=Z,35µm,21.0s,MS6.9
MTA Mtatsminda 107.24 312 P Pdif 12 50 40.0 -0.9
TBLG Delisi 107.28 312 *e*P Pdif 12 50 40.0 -1.0
TBLG Delisi 107.28 312 P Pdif 12 50 40.1 -0.9
ARCES ARCESS Array B 107.28 343 Pdiff Pdif 12 50 44.8 +3.8
comp=Z,4.6nm,0.7s,baz=73,slow=6.8,SNR=12
ARCES PKiKP PKiKP 12 54 49.8 +0.4
comp=Z,3.4nm,0.6s,baz=91,slow=2.4,SNR=11
ARCES PP PP 12 55 05.1 -2.6
comp=Z,3.1nm,0.5s,baz=96,slow=2.5,SNR=5.7
ARCES PKKPbc PKKPbc 13 06 04.8 -3.5
comp=Z,2.4nm,0.6s,baz=243,slow=1.4,SNR=7.8
ARCES ARCESS Array B 107.28 343 P Pdif 12 50 44.8 +3.8
ARCES 12 55 05.1
WMOK Wichita Mounta 107.45 55 PFAKE 12 55 00.0 +9.3
WMOK LR LR
comp=Z,18µm,20.0s,MS6.6
GNI Garni 107.51 310 Pdiff Pdif 12 50 46.0 +4.0
comp=Z,7.1nm,0.5s,baz=249,slow=1.3,SNR=6.4
GNI Garni 107.51 310 P Pdif 12 50 49.2 +7.2
GNI pmax pmax
comp=Z,43nm,1.2s
GNI Garni 107.51 310 *e*Pdif Pdif 12 50 43.4 +1.4
comp=Z,43nm,1.3s
GNI LR LR
comp=Z,3µm,22.0s,MS5.8
VRHR Novokhopersk 107.53 322 *e*P Pdif 12 50 46.2 +4.1
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,40nm,1.1s
VRHR pmax pmax
comp=E,40nm,0.7s
ONI Oni 108.08 313 P Pdif 12 50 44.2 -0.4
DAG Danmarks Havn 108.19 358 *i* P Pdif 12 50 46.0 +0.9
DAG Danmarks Havn 108.19 358 *e*P Pdif 12 50 46.0 +0.9
CLDR Calderan 108.29 309 *e*P PP 12 55 14.4 -1.7
KIV Kislovodsk 108.38 315 *e*P Pdif 12 50 44.7 -1.2
KIV *e* 12 55 14.6
KIV *e* 13 01 21.6
KIV *e*PS PS 13 04 36.2 -5.4
KIV *e*SS SS 13 10 26.4 -3.5
KIV pmax pmax
comp=Z,20nm,1.0s
KIV MLR MLR
comp=Z,6µm,21.0s,MS6.1
KIV Kislovodsk 108.38 315 ⇑*i*P PP 12 55 23.9 +7.3
KIV Kislovodsk 108.38 315 PFAKE 12 55 00.0 +7.8
KIV LR LR
comp=Z,3µm,22.0s,MS5.8
MOS Moscow 108.50 328 *e*P Pdif 12 50 45.9 -0.5
MOS *e* 12 55 17.5
MOS *e*PS PS 13 04 39.6 -2.7
MOS *e*SS SS 13 10 46.6 +16
MOS MLR MLR
comp=Z,4µm,20.0s,MS6.0
KSU1 Kansas State U 108.62 51 PFAKE 12 55 00.0 +7.2
KSU1 LR LR
comp=Z,45µm,21.0s,MS7.0
JOF Joensuu 108.67 336 *e*p Pdif 12 50 44.2 -3.0
comp=Z,11nm,0.6s
JOF Joensuu 108.67 336 *e*pkp PKiKP 12 54 56.0 +3.9
JOF Joensuu 108.67 336 *e*P Pdif 12 50 44.2 -3.0
JOF *e*PKP PKiKP 12 54 56.0 +3.9
VANB Van 108.78 309 *e*P PP 12 55 16.2 -3.5
KVTX Kingsville 108.86 63 PFAKE 12 55 00.0 +6.4
KVTX LR LR
comp=Z,33µm,20.0s,MS6.9
VSR Storozhevoye 108.99 323 *e*P Pdif 12 50 51.9 +3.3
VSR pmax pmax
comp=Z,10.0nm,1.4s
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,6.0nm,0.5s
TRO Tromso 109.04 345 *e* Pdif 12 50 41.7 -7.2
TRO *e*PP PP 12 55 19.5 -1.0

TRO eSKS SKSac 13 01 22.9 -2.8
TRO AMS AMS 13 39 08.7
comp=Z,7µm,25.3s,MS6.1
TRO Tromso 109.04 345 eP Pdif 12 50 48.8 -0.1
TRO LR LR
comp=Z,7µm,25.3s,MS6.1
OBN Obninsk 109.28 327 ⇑iP Pdif 12 50 48.5 -1.4
OBN ePS PS 13 04 46.2 -4.0
OBN pmax pmax
comp=Z,12nm,1.3s
OBN MLR MLR
comp=Z,9µm,22.0s,MS6.3
OBN Obninsk 109.28 327 PFAKE 12 55 00.0 +6.5
OBN LR LR
comp=Z,6µm,21.0s,MS6.2
BCA Borcka 109.63 312 eP PP 12 55 20.4 -5.4
PZAR Pazar-Rize 110.22 312 eP PP 12 55 34.0 +4.0
EYMN Ely 110.38 41 PFAKE 12 55 10.0 +14
EYMN LR LR
comp=Z,32µm,22.0s,MS6.8
HKT Hockley 110.44 60 PFAKE 12 55 10.0 +14
HKT LR LR
comp=Z,79µm,21.0s,MS7.3
SOC Sochi 110.56 315 eP Pdif 12 50 51.9 -3.7
SOC i 12 54 55.6
SOC e 12 55 36.4
SOC ePS PS 13 05 05.7 +2.6
SOC eSS SS 13 10 56.5 -2.7
SCIA State Center 110.65 47 PFAKE 12 55 10.0 +13
SCIA LR LR
comp=Z,35µm,22.0s,MS6.9
KAF Kangasniemi 111.09 336 ep Pdif 12 51 00.4 +2.5
comp=Z,4.4nm,0.7s
KAF Kangasniemi 111.09 336 epkp PKiKP 12 54 49.0 -7.7
KTUT Trabzon 111.09 312 eP PP 12 55 37.2 +0.9
NATX Nacogdoches 111.23 58 PFAKE 12 55 10.0 +12
NATX LR LR
comp=Z,23µm,19.0s,MS6.8
GUMT Gumushane 111.42 312 eP PP 12 55 36.0 -2.7
PTK Pertek 111.80 310 eP PP 12 55 41.0 -0.5
ESPY Espiye-Giresun 111.88 312 eP PP 12 55 34.2 -7.8
SVRC Sivrice-ELAZID 111.97 309 eP PP 12 55 41.1 -1.6
CMIG Matias Romero 112.17 74 PKKPbc PKKPbc 13 05 50.8 -0.3
comp=Z,3.2nm,0.8s,baz=46,slow=4.6,SNR=5.8
COWI Conover 112.45 42 PFAKE 12 55 10.0 +10
COWI LR LR
comp=Z,33µm,21.0s,MS6.9
URFA Urfa 112.53 308 eP PP 12 55 42.0 -4.8
JFWS Jewell Farm 112.55 45 PFAKE 12 55 10.0 +10
JFWS LR LR
comp=Z,25µm,20.0s,MS6.8
MYA Malataya 112.66 309 eP PP 12 55 43.9 -3.8
MALT Malatya 112.66 309 P Pdif 12 51 06.0 +1.1
MALT Malatya 112.66 309 ePdif Pdif 12 51 05.9 +0.9
MALT ePKPdf PKiKP 12 54 55.6 -4.8
MALT LR LR
comp=Z,5µm,22.0s,MS6.1
CCM Cathedral Cave 112.94 51 PFAKE 12 55 10.0 +9.0
CCM LR LR
comp=Z,34µm,21.0s,MS6.9
DARE Darende-Malaty 113.00 310 eP PP 12 55 51.5 +1.4
RSDY Resadiye-TOKAT 113.03 312 eP PP 12 55 47.5 -2.7
JMIC Jan Mayen 113.13 354 ePP PP 12 55 49.1 -0.6
JMIC AMS AMS 13 34 20.6
comp=Z,3µm,23.8s,MS5.8
SVSK Karacayir 113.39 311 eP PP 12 55 48.8 -4.0
KVT Kavak 113.81 313 eP PP 12 55 52.7 -3.0
HDIL Hopedale 113.84 48 PFAKE 12 55 10.0 +7.4
HDIL LR LR
comp=Z,34µm,22.0s,MS6.9
GAZ Gaziantep 113.84 308 eP PP 12 55 52.2 -3.9
KMRS Kahramanmaras 114.01 309 eP PP 12 55 52.8 -4.5
SIM Simferopol' 114.07 317 P Pdif 12 51 18.6 +7.4
SIM 12 56 03.8
SIM PS PS 13 05 37.4 +2.0
SIM pmax pmax
comp=Z,260nm,12.0s
MNK Minsk 114.16 329 ePKIKP PKiKP 12 55 05.0 +2.2
MNK e 12 56 00.0
MNK e 13 05 36.0
MNK MLR MLR
comp=Z,23µm,22.0s,MS6.7
DIKM Dikmen 114.23 314 eP PP 12 55 50.9 -7.8
BNN Bunyan 114.51 310 eP PP 12 55 52.3 -8.5
NSS Namsos 114.56 343 ePP PP 12 55 58.5 -1.5
NSS AMS AMS 13 42 25.5
comp=Z,9µm,24.3s,MS6.3
VBMS Vicksburg 114.64 57 PFAKE 12 55 20.0 +16
VBMS LR LR
comp=Z,17µm,20.0s,MS6.7
KOZT Kozan 114.85 309 eP PP 12 55 57.2 -6.0
CEYT Ceyhan 115.02 309 eP PP 12 55 59.2 -5.2
BZK Bozkurt 115.04 314 eP PP 12 56 04.4 0.0
AKASG Malin Array Be 115.06 325 Pdiff Pdif 12 51 13.2 -2.5
comp=Z,3.1nm,0.7s,baz=53,slow=3.8,SNR=4.5
AKASG PKP PKiKP 12 55 03.4 -1.3
comp=Z,9.4nm,0.6s,baz=63,slow=1.8,SNR=18
AKASG PKKPbc PKKPbc 13 05 43.9 +1.7
comp=Z,2.2nm,0.5s,baz=259,slow=3.8,SNR=8.4
AKBB Malin Array Si 115.06 325 eP Pdif 12 51 19.6 +4.0
KIEV Kiev 115.07 325 eP Pdif 12 51 19.6 +3.9
KIEV MLR MLR
comp=Z,7µm,21.0s,MS6.2
ASF Jabal al Asfar 115.08 303 PKP PKiKP 12 55 04.7 -0.5
comp=Z,6.5nm,0.7s,baz=294,slow=8.9,SNR=3.6
CORM Corum 115.08 312 eP PP 12 55 57.0 -7.8
OXF Oxford 115.12 54 PFAKE 12 55 20.0 +15
OXF LR LR
comp=Z,20µm,20.0s,MS6.7
HWQ Hawqa 115.45 306 eP PP 12 56 12.6 +5.0
KARA Karaisali 115.50 309 eP PP 12 56 02.6 -5.2
CANT Cankiri 115.71 313 eP PP 12 56 06.1 -3.0
BHL Bhannes 115.77 305 eP PP 12 56 14.6 +4.8
GLMI Grayling 115.87 42 PFAKE 12 55 20.0 +14
GLMI LR LR
comp=Z,32µm,22.0s,MS6.9
BR131 Keskin Array S 115.94 312 ePdif Pdif 12 51 23.3 +3.8
BR131 LR LR
comp=Z,2µm,22.0s,MS5.7
SFJD Kangerlussuaq 115.96 10 PKKPbc PKKPbc 13 05 41.6 +2.1
comp=Z,14nm,0.7s,baz=133,slow=6.1,SNR=4.0
SFJD Kangerlussuaq 115.96 10 *i* P PP 12 56 15.0 +5.3
SFJD eS SP 13 05 50.2 +3.7
SFJD
comp=Z,17µm,23.0s
SFJD Kangerlussuaq 115.96 10 PFAKE 12 55 20.0 +14
SFJD LR LR
comp=Z,20µm,22.0s,MS6.7
KMBO Kilima Mbogo 115.97 266 PKP PKPdf 12 55 08.0 +0.5
comp=Z,7.3nm,0.8s,baz=40,slow=7.3,SNR=7.0
KMBO Kilima Mbogo 115.97 266 PKP PKPdf 12 55 08.0 +0.5
KMBO LR LR
comp=Z,5µm,21.0s,MS6.1
MERS Mersin 116.01 309 eP PP 12 56 02.8 -8.5
WVT Waverly 116.03 52 PFAKE 12 55 20.0 +13
WVT LR LR
comp=Z,31µm,20.0s,MS6.9
PAYG Puerto Ayora 116.09 93 PFAKE 12 55 20.0 +12
PAYG LR LR
comp=Z,10µm,20.0s,MS6.4
ANTO Ankara 116.52 312 eP PP 12 56 09.3 -5.5
ANTO Ankara 116.52 312 PFAKE 12 55 20.0 +12
ANTO LR LR
comp=Z,2µm,22.0s,MS5.8
LOD Lodumlu 116.54 312 eP PP 12 56 10.4 -4.5
EREN Erenkoy 116.60 307 eP PP 12 56 09.2 -6.3
WCI Wyandotte Cave 116.69 50 PFAKE 12 55 20.0 +12
WCI LR LR
comp=Z,28µm,20.0s,MS6.9
SUW Suwalki 116.77 330 ePKP PKPdf 12 55 13.2 +5.4
SUW ePP PP 12 56 22.7 +6.8
SUW LMZ 13 40 03.9
comp=Z,14µm,28.4s
SUW Suwalki 116.77 330 ePKIKP PKPdf 12 55 13.2 +5.4
SUW e 12 56 22.7
KIS Kishinev 116.81 321 eP Pdif 12 51 30.0 +6.6
KIS e 12 55 08.0
KIS e 12 56 14.0
KIS e 13 01 56.0
KIS ePPS 13 07 19.0
KIS eSS SS 13 12 30.0 +8.7
KIS MLR MLR
comp=N,2µm,25.0s,MS6.1
KIS MLR MLR
comp=Z,8µm,25.0s,MS6.2
KIS MLR MLR
comp=E,6µm,24.0s,MS6.1
KIS MLR MLR
comp=Z,8µm,25.0s
KIS Kishinev 116.81 321 eP Pdif 12 51 30.0 +6.6
KIS eSKS SKSac 13 01 56.0 -1.4
KIS eSKKS SKKSac 13 03 17.0 +1.6
KIS Kishinev 116.81 321 ePS PS 13 06 05.0 +4.8
IKL Isikli 116.81 308 eP PP 12 56 07.8 -9.3
HFS Hagfors 117.13 339 Pdiff Pdif 12 51 26.3 +1.5
comp=Z,1.0nm,0.5s,baz=77,slow=6.4,SNR=4.6
HFS PKP PKPdf 12 55 05.9 -2.5
comp=Z,3.7nm,0.8s,baz=14,slow=6.5,SNR=4.4
LFK Lefkose 117.17 307 eP PP 12 56 12.6 -6.9
LADK Ladik-KONYA 117.32 311 eP PP 12 56 13.7 -6.7
MOL Molde 117.34 343 e PP 12 56 05.3 -14
MOL AMS AMS 13 42 02.6
comp=Z,5µm,23.3s,MS6.0
NB2 NORSAR Subarra117.35 340 PKPdf PKPdf 12 55 07.2 -1.6
comp=Z,12nm,1.1s,baz=40,slow=1.8
NB2 NORSAR Subarra117.35 340 PKPdf PKPdf 12 55 07.2 -1.6
baz=40,slow=1.8
NOA NORSAR Array B117.35 340 PKP PKPdf 12 55 06.6 -2.2
comp=Z,3.1nm,0.6s,baz=45,slow=1.9,SNR=10
NOA PP PP 12 56 24.8 +5.2
comp=Z,5.0nm,0.9s,baz=63,slow=5.7,SNR=3.5
NOA PKKPbc PKKPbc 13 05 36.0 +1.5
comp=Z,1.6nm,0.8s,baz=50,slow=3.5,SNR=6.1
NOA PKKP PKKPbc 13 05 57.5 +23
comp=Z,1.2nm,0.7s,baz=41,slow=3.9,SNR=3.8
NOA NORSAR Array B117.35 340 PKIKP PKPdf 12 55 06.6 -2.2
NOA 12 56 24.8
NOA 13 05 57.5
NOA NORSAR Array B117.35 340 PKP PKPdf 12 55 06.6 -2.2
NOA PP PP 12 56 24.8 +5.2
NOA PKKPbc PKKPbc 13 05 36.0 +1.5
NOA PKKP PKKPbc 13 05 57.5 +23
KONT Konya--Tatoy 117.39 310 eP PP 12 56 14.4 -6.6
LRAL Lakeview Retre 117.39 55 PFAKE 12 55 20.0 +10
LRAL LR LR
comp=Z,23µm,20.0s,MS6.8
CSS Prodhromos 117.41 307 PFAKE 12 55 20.0 +10
CSS LR LR
comp=Z,4µm,20.0s,MS6.0
HDMB Hadim 117.56 309 eP PP 12 56 15.4 -6.8
BRAL Brewton 117.77 58 PFAKE 12 55 20.0 +10
BRAL LR LR
comp=Z,15µm,22.0s,MS6.6
TEIG Tepich 118.24 70 PFAKE 12 55 20.0 +8.3
TEIG LR LR
comp=Z,18µm,22.0s,MS6.7
SILT Sile 118.40 314 eP PP 12 56 29.2 +1.3
LVV L'vov 118.44 325 ePKIKP PKPdf 12 55 15.8 +4.6
LVV e 12 55 30.2
LVV e 12 56 34.0
LVV MLR MLR
comp=N,2µm,23.0s,MS6.1
LVV MLR MLR
comp=E,5µm,23.0s,MS6.1
LVV MLR MLR
comp=Z,6µm,23.0s,MS6.1
ADVT Abdulvahap 118.58 314 eP PP 12 56 26.2 -2.8
SHUT Suhut-Afyon 118.58 311 eP PP 12 56 25.6 -3.5
ALT Altintas 118.75 312 eP PP 12 56 27.4 -2.9
BURAR Bucovina Array 118.77 323 ⇑iP PKPdf 12 55 11.8 -0.1
BURAR Bucovina Array 118.77 323 ⇑P PKPdf 12 55 11.8 -0.1
KLYT Kilyos 118.80 315 eP PP 12 56 31.4 +0.9
ISP Isparta 118.82 311 eP PP 12 56 22.6 -8.3
ISP Isparta 118.82 311 PFAKE 12 55 20.0 +7.7
ISP LR LR
comp=Z,4µm,22.0s,MS6.0
BCK Bucak 118.88 310 eP PP 12 56 34.6 +3.4
KONO Kongsberg 118.92 340 ePP PP 12 56 29.9 -0.6
KONO AMS AMS 13 40 37.2
comp=Z,4µm,24.5s,MS5.9
PLCA Paso Flores 119.20 143 PKP PKPdf 12 55 11.0 -2.0
comp=Z,3.9nm,0.6s,baz=229,slow=3.7,SNR=10
PLCA PKKPbc PKKPbc 13 05 26.6 -0.7
comp=Z,13nm,0.9s,baz=32,slow=5.2,SNR=10.0
PLCA SKKP 13 09 25.4
comp=Z,18nm,1.1s,baz=76,slow=3.8,SNR=5.8
PLCA Paso Flores 119.20 143 PKP PKPdf 12 55 11.0 -2.0
PLCA PKKPbc PKKPbc 13 05 26.6 -0.7
PLCA SKKP 13 09 25.4
PLCA LR LR
comp=Z,3µm,20.0s,MS6.0
MLR Muntele Rosu 119.25 320 PKP PKPdf 12 55 11.7 -1.1
comp=Z,4.2nm,0.4s,baz=144,slow=2.8,SNR=4.4
MLR Muntele Rosu 119.25 320 ⇑iP PKPdf 12 55 16.0 +3.1
TZTN Tazewell 119.26 51 PFAKE 12 55 20.0 +6.8
TZTN LR LR
comp=Z,39µm,21.0s,MS7.0
KWP Kalwaria 119.28 326 ePKP PKPdf 12 55 11.7 -1.1
KWP ePP PP 12 56 41.9 +8.5
KWP LMZ 13 39 16.1
comp=Z,23µm,36.3s
KWP Kalwaria 119.28 326 ePKIKP PKPdf 12 55 11.6 -1.2
KWP e 12 56 41.9
KWP Kalwaria 119.28 326 ePKP PKPdf 12 55 11.6 -1.2
KWP ePP PP 12 56 41.9 +8.5
KWP LR LR
comp=Z,6µm,22.0s,MS6.2
TKL Tuckaleechee C 119.33 52 PKP PKPdf 12 55 11.2 -2.1
comp=Z,4.1nm,0.5s,baz=343,slow=4.7,SNR=4.0
SLVT Silivri 119.39 315 eP PP 12 56 35.0 +0.3
SADO Sadowa 119.50 41 PKP PKPdf 12 55 11.2 -2.2
baz=3.9,slow=7.1
TGUH Tegucigalpa,Un 119.60 77 PFAKE 12 55 20.0 +5.6
TGUH LR LR
comp=Z,32µm,19.0s,MS7.0
ELL Elmali 119.61 310 eP PP 12 56 33.0 -3.3
BER Bergen 119.73 342 ePP PP 12 56 37.0 +1.0
BER eSS SS 13 12 58.5 +0.8
BER AMS AMS 13 47 05.6
comp=Z,5µm,24.2s,MS6.0
KOLS Kolonicke sedl 119.87 325 ePKIKP PKPdf 12 55 13.4 -0.6
KOLS e 12 55 20.9
KOLS Kolonicke sedl 119.87 325 ePKP PKPdf 12 55 13.4 -0.6
KOLS e 12 55 20.9
KOLS e 12 55 47.5
KOLS ePP PP 12 56 53.0 +15
KOLS Kolonicke sedl 119.87 325 ePKP PKPdf 12 55 13.4 -0.6
KOLS e 12 55 20.9
KOLS e 12 55 47.5
KOLS e 12 56 53.1
ERPA Erie 119.99 44 PFAKE 12 55 20.0 +5.6
ERPA LR LR
comp=Z,54µm,22.0s,MS7.1
BOSA Boshof 120.00 233 PKP PKPdf 12 55 14.1 -0.7
comp=Z,32nm,0.6s,baz=94,slow=1.6,SNR=38
BOSA Boshof 120.00 233 PKP PKPdf 12 55 14.1 -0.7
BOSA LR LR
comp=Z,22µm,20.0s,MS6.8
KULA Kula-Manisa 120.00 312 eP PP 12 56 24.0 -15
UZH Uzhgorod 120.01 325 eP Pdif 12 51 36.2 -1.4
UZH *i* 12 55 15.4
UZH e 12 55 24.6
UZH e 12 56 40.4
UZH *i* PS PS 13 06 16.0 -13
UZH *i* SS SS 13 13 00.0 -2.4
UZH MLR MLR
comp=N,2µm,23.0s,MS6.2
UZH MLR MLR
comp=E,5µm,23.0s,MS6.2
UZH MLR MLR
comp=Z,3µm,23.0s,MS5.8
MRMT Marmara Adasi 120.05 315 eP PP 12 56 33.6 -5.6
GOGA Godfrey 120.18 54 PFAKE 12 55 30.0 +15
GOGA LR LR
comp=Z,31µm,22.0s,MS6.9
STHS Stebnicka Huta 120.20 326 ePKP PKPdf 12 55 14.1 -0.5
STHS e 12 55 21.1
BORG Borgarnes 120.29 357 PFAKE 12 55 20.0 +5.7
BORG LR LR
comp=Z,7µm,19.0s,MS6.3
CRVS Cervenica-Dubn 120.35 325 ePKP PKPdf 12 55 16.4 +1.5
CRVS e 12 55 20.6
CRVS eSP SP 13 06 27.9 +0.7
OJC Ojcow 120.57 327 ePKIKP PKPdf 12 55 15.0 -0.3
OJC e 12 55 22.1
OJC e 12 56 48.8
OJC e 13 02 16.9
OJC eSP SP 13 06 25.4 -3.6
OJC eSS SS 13 13 03.7 -5.7
OJC Ojcow 120.57 327 ePdif Pdif 12 51 40.3 +0.2
OJC ePKPdf PKPdf 12 55 15.0 -0.3
OJC epPKPdf pPKPdf 12 55 22.1 -3.6
OJC ePP PP 12 56 48.8 +6.6
OJC eSKSac SKSac 13 02 16.9 +6.2
OJC eSP SP 13 06 25.4 -3.6
OJC eSS SS 13 13 03.7 -5.7
OJC LR LR
comp=Z,7µm,21.5s,MS6.2
NIE Niedzica 120.72 326 ePKP PKPdf 12 55 21.4 +5.8
SCHQ Schefferville 120.72 26 PKP PKPdf 12 55 15.3 -0.1
comp=Z,5.0nm,0.6s,baz=245,slow=7.8,SNR=5.6
SCHQ PKKPbc PKKPbc 13 05 25.4 +3.4
comp=Z,25nm,0.8s,baz=134,slow=2.7,SNR=12
SCHQ Schefferville 120.72 26 PKP PKPdf 12 55 15.3 -0.1
SCHQ PKKPbc PKKPbc 13 05 25.4 +3.4
SCHQ LR LR
comp=Z,46µm,22.0s,MS7.1
YER Yerkesik 120.72 311 eP PP 12 56 38.0 -6.0
MCWV Mont Chateau 121.01 46 PFAKE 12 55 30.0 +14
MCWV LR LR
comp=Z,34µm,21.0s,MS7.0
MLSB Milas 121.06 311 eP PP 12 56 39.5 -6.7
LBTB Lobatse 121.19 237 PFAKE 12 55 30.0 +13
LBTB LR LR
comp=Z,23µm,22.0s,MS6.8
BLCB Balcova 121.23 312 eP PP 12 56 40.0 -7.3
RDO Rodhopi 121.29 316 eP PKPdf 12 55 16.5 -0.4
BLA Blacksburg 121.43 49 P Pdif 12 51 50.9 +7.0
BLA Blacksburg 121.43 49 PFAKE 12 55 30.0 +13
BLA LR LR
comp=Z,26µm,22.0s,MS6.8
BODT Bodrum 121.48 311 eP PP 12 56 40.3 -8.9
PRK Paraskevi 121.49 313 eP PKPdf 12 55 20.0 +2.6
SMG Samos 121.62 312 eP PKPdf 12 55 19.9 +2.3
SUR Sutherland 121.63 227 PFAKE 12 55 30.0 +12
SUR LR LR
comp=Z,19µm,21.0s,MS6.7
OKC Ostrava-Krasne 121.67 328 ePKP PKPdf 12 55 21.1 +3.7
OKC ePP PP 12 56 58.5 +8.8
OKC eSP SP 13 06 38.7 -0.1
OKC AMS AMS 13 41 50.0
comp=Z,8µm,29.2s
OKC Ostrava-Krasne 121.67 328 ePKP PKPdf 12 55 21.1 +3.7
OKC ePP PP 12 56 58.5 +8.8
OKC eSP SP 13 06 38.7 -0.1
PSZ Piszkesteto 121.75 325 ⇓ePKP PKPdf 12 55 16.7 -0.9
PSZ Piszkesteto 121.75 325 ⇑iP PKPdf 12 55 18.9 +1.3
PSZ Piszkesteto 121.75 325 ⇑P PKPdf 12 55 18.9 +1.3
PSZ LR LR
comp=Z,6µm,21.0s,MS6.2
BZS Buzias 121.90 322 ⇑iP PKPdf 12 55 16.2 -1.8
BZS Buzias 121.90 322 ⇑P PKPdf 12 55 16.2 -1.8
JTS JuntasAbangare 121.95 81 PFAKE 12 55 30.0 +11
JTS LR LR
comp=Z,21µm,22.0s,MS6.8
MORC Moravsky Berou 122.02 328 ⇑iP PKPdf 12 55 17.3 -0.8
MORC Moravsky Berou 122.02 328 ⇑P PKPdf 12 55 17.3 -0.7
SSPA Standing Stone 122.02 44 PFAKE 12 55 30.0 +12
SSPA LR LR
comp=Z,32µm,20.0s,MS7.0
LIA Limnos Island 122.03 315 eP PKPdf 12 55 20.6 +2.2
VYHS Vyhne 122.04 326 ePKP PKPdf 12 55 17.0 -1.1
VYHS e 12 55 43.6
VYHS ePP PP 12 56 53.8 +1.5
VYHS eSP SP 13 06 38.7 -3.5
KSP Ksiaz 122.04 329 ePKP PKPdf 12 55 18.8 +0.7
KSP ePP PP 12 57 04.2 +12
KSP LMZ 13 41 05.3
comp=Z,19µm,31.3s
KSP Ksiaz 122.04 329 ePKIKP PKPdf 12 55 18.0 -0.1
KSP e 12 56 53.0
KSP eSP SP 13 06 40.0 -2.0
KSP MLR MLR
comp=Z,40µm,25.3s,MS7.0
KSP Ksiaz 122.04 329 ePKP PKPdf 12 55 18.0 -0.1
KSP ePP PP 12 56 53.0 +0.8
KSP eSP SP 13 06 40.0 -2.0
KSP eSS SS 13 13 36.0 +7.9
KSP LR LR
comp=Z,40µm,25.3s,MS7.0
KARP Karpathos 122.09 309 eP PKPdf 12 55 18.4 -0.3
LSZ Lusaka 122.15 249 PFAKE 12 55 30.0 +11
LSZ LR LR
comp=Z,13µm,21.0s,MS6.6
KOLL Kolacno 122.23 326 ePKP PKPdf 12 55 19.0 +0.5
DPC Dobruska-Polom 122.32 329 ePKP PKPdf 12 55 19.3 +0.7
DPC ePP PP 12 57 01.6 +7.5
DPC ePS PS 13 06 49.6 +0.2
DPC AMS AMS 13 47 20.0
comp=Z,15µm,25.4s
NVR Nevrokopi 122.37 317 eP PKPdf 12 55 17.3 -1.7
UPC Upice 122.39 329 ePKP PKPdf 12 55 19.2 +0.5
BUD Budapest 122.48 325 ⇑ePKP PKPdf 12 55 22.1 +3.1
BINY Binghamton 122.67 42 PFAKE 12 55 30.0 +10
BINY LR LR
comp=Z,59µm,22.0s,MS7.2
BSEG Bad Segeberg 122.79 335 ePP PP 12 57 07.4 +10
SOR Soroa 122.80 66 eP PKPdf 12 55 18.9 -1.4
SOR Soroa 122.80 66 eP PKPdf 12 55 18.9 -1.4
VRAC Vranov 122.80 328 PKP PKPdf 12 55 19.4 -0.2
comp=Z,4.1nm,0.5s,baz=153,slow=2.3,SNR=3.5
APE Apeiranthos 122.82 311 eP PKPdf 12 55 22.9 +2.9
NHSC New Hope 122.91 54 PFAKE 12 55 30.0 +10
NHSC LR LR
comp=Z,33µm,21.0s,MS7.0
MODS Modra-Piesok 122.97 327 ePKIKP PKPdf 12 55 20.1 +0.2
MODS e 12 55 25.0
MODS e 12 57 01.9
MODS e 13 06 53.8
MODS Modra-Piesok 122.97 327 ePKP PKPdf 12 55 20.1 +0.2
MODS e 12 55 25.0
MODS e 12 55 51.5
MODS ePP PP 12 57 01.9 +3.3
MODS eSP SP 13 06 53.8 +3.4
MODS Modra-Piesok 122.97 327 ePKP PKPdf 12 55 20.1 +0.2
MODS e 12 55 25.0
MODS e 12 55 51.6
MODS e 12 57 01.9
MODS e 13 06 53.8
NCB Newcomb 123.01 40 PFAKE 12 55 30.0 +10
NCB LR LR
comp=Z,17µm,20.0s,MS6.7
PVCC Panska Ves 123.10 330 ePKP PKPdf 12 55 20.0 -0.1
PVCC ePP PP 12 57 05.5 +6.2
PVCC eSP SP 13 06 55.1 +3.7
PVCC AMS AMS 13 48 00.0
comp=Z,12µm,26.7s
SANT Santorini 123.12 311 PFAKE 12 55 30.0 +9.4
SANT LR LR
comp=Z,2µm,22.0s,MS5.8
ZST Bratislava 123.17 327 ePKIKP PKPdf 12 55 20.8 +0.5
ZST e 12 55 27.5
ZST Bratislava 123.17 327 ePKP PKPdf 12 55 20.8 +0.5
ZST e 12 55 27.5
ZST e 12 55 48.5
ZST ePP PP 12 56 48.9 -11
ZST eSP SP 13 06 56.7 +4.6
DWPF Disney 123.17 60 PFAKE 12 55 30.0 +9.0
DWPF LR LR
comp=Z,13µm,22.0s,MS6.5
BRG Berggiesshubel 123.19 331 ePKIKP PKPdf 12 55 18.7 -1.6
BRG *i* 12 55 25.3
BRG 12 57 06.0
BRG *i* 13 06 44.0
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG MLR MLR
comp=N,6µm,24.3s,MS6.2
BRG MLR MLR
comp=E,3µm,24.2s,MS6.2
BRG MLR MLR
comp=Z,6µm,24.3s,MS6.1
BRG Berggiesshubel 123.19 331 ePKPdf PKPdf 12 55 18.4 -1.9
BRG ePP PP 12 57 08.3 +8.4
BRG Berggiesshubel 123.19 331 ePKP PKPdf 12 55 18.7 -1.6
comp=Z,10.0nm,1.0s
BRG *i* 12 55 25.3
comp=Z,56nm,1.5s
BRG PP PP 12 57 06.0 +6.1
BRG *i* 12 58 33.0

BRG *i* 13 06 44.0
BRG SS SS 13 14 15.0 +32
BRG
comp=N,9µm,29.3s
BRG
comp=E,6µm,24.2s
BRG
comp=Z,9µm,29.3s
BRG Berggiesshubel 123.19 331 *e*PKP PKPdf 12 55 18.7 -1.6
BRG *i* 12 55 25.3
BRG PP PP 12 57 06.0 +6.1
BRG *i* 12 58 33.0
BRG *i* 13 06 44.0
BRG SS SS 13 14 15.0 +32
BRG LR LR
comp=Z,6µm,29.3s,MS6.0
VAY Valandovo 123.26 317 *e*PKP PKPdf 12 55 18.9 -1.8
CBN Corbin 123.34 47 PFAKE 12 55 30.0 +9.0
CBN LR LR
comp=Z,28µm,19.0s,MS6.9
CLL Collm 123.37 331 *e*PKIKP PKPdf 12 55 20.0 -0.6
CLL *e* 12 57 02.0
CLL *e*PS PS 13 06 56.0 -2.6
CLL pmax pmax
comp=Z,12nm,0.8s
CLL MLR MLR
comp=Z,6µm,21.4s,MS6.2
CLL Collm 123.37 331 *e*PKPdf PKPdf 12 55 19.6 -1.0
CLL *e*PP PP 12 57 08.4 +7.3
CLL Collm 123.37 331 *e*Pdif Pdif 12 51 53.0 +0.5
CLL *e*PKPdf PKPdf 12 55 20.0 -0.6
comp=Z,12nm,0.8s
CLL *e*PKPmax 12 55 27.0
comp=Z,28nm,0.6s
CLL *ex* x 12 55 51.0
CLL *e*PP PP 12 57 02.0 +0.9
CLL *e*PPlp 12 57 06.0
comp=Z,3µm,13.2s
CLL *ex* x 12 58 35.0
CLL *e*PPP 12 59 48.0
CLL *e*SKSac SKSac 13 02 23.0 +3.0
CLL *e*SKKSac SKKSac 13 03 58.0 -0.1
CLL *e*PS PS 13 06 56.0 -2.6
CLL *e*PPS 13 08 28.0
CLL *e*SS SS 13 13 48.0 +3.2
CLL *e*SSS 13 18 30.0
CLL L 13 57 00.0
comp=Z,6µm,21.4s
CLL Collm 123.37 331 *e*PKP PKPdf 12 55 20.0 -0.6
CLL *e*PP PP 12 57 02.0 +0.9
CLL *e*PS PS 13 06 56.0 -2.6
CLL LR LR
comp=Z,6µm,21.4s,MS6.2
NPS Neapolis 123.38 309 *e*P PKPdf 12 55 21.3 +0.2
PKSM Moragy 123.38 324 ⇑ *i*P PKPdf 12 55 20.0 -0.8
TREC Trest 123.39 328 *e*PKP PKPdf 12 55 20.1 -0.6
TREC AMS AMS 13 48 00.0
comp=Z,15µm,24.6s
PRU Pruhonice 123.45 329 *e*PKP PKPdf 12 55 20.1 -0.7
PRU *e*PP PP 12 57 07.2 +5.5
PRU *e*SP SP 13 06 56.1 +1.6
PRU AMS AMS 13 48 30.0
comp=Z,14µm,23.8s
SKO Skopje 123.73 318 *e*PKP PKPdf 12 55 21.4 -0.2
SOP Sopron 123.76 326 ⇑ *e*PKP PKPdf 12 55 27.0 +5.5
NRDL Niedersach Rie 123.89 334 *e*PKPdf PKPdf 12 55 22.3 +0.7
NRDL *e*PP PP 12 57 09.7 +5.2
IDI Anoyia 123.92 310 PKP PKPdf 12 55 21.8 -0.4
comp=Z,29nm,0.8s,baz=91,slow=7.7,SNR=6.1
CONA Conrad Observa 124.00 327 ⇑ *i*P PKPdf 12 55 21.6 -0.3
comp=Z,40nm,1.5s
CSNA Conrad Observa 124.00 327 ⇑ *i*P PKPdf 12 55 21.6 -0.3
comp=Z,13nm,0.8s
CNNC Cliffs of the 124.03 50 PFAKE 12 55 30.0 +7.6
CNNC LR LR
comp=Z,35µm,20.0s,MS7.0
LKR Lokris 124.08 314 *e*P PKPdf 12 55 24.4 +2.0
KRUS Krusevo 124.13 318 *e*PKP PKPdf 12 55 21.5 -0.9
TANN Tannenbergstha 124.21 331 *e*PKPdf PKPdf 12 55 21.7 -0.6
TANN *e*PP PP 12 57 11.4 +4.6
CLZ Clausthal 124.23 333 *e*PKPdf PKPdf 12 55 21.7 -0.5
LBNH Lisbon 124.31 38 PFAKE 12 55 30.0 +7.4
LBNH LR LR
comp=Z,24µm,22.0s,MS6.8
NKC Novy Kostel 124.33 331 *e*PKP PKPdf 12 55 24.9 +2.4
NKC *e*PS PS 13 07 07.2 0.0
NKC AMS AMS 13 45 30.0
comp=Z,13µm,27.7s
NKC Novy Kostel 124.33 331 *e*PKP PKPdf 12 55 24.9 +2.4
NKC *e*SP SP 13 07 07.2 +5.0
VAM Vamos 124.41 310 *e*P PKPdf 12 55 22.4 -0.7
MOX Moxa 124.47 331 *e*PKP PKPdf 12 55 26.6 +3.9
comp=Z,41nm,1.6s
MOX *e* 12 57 15.6
comp=Z,148nm,2.0s
MOX
comp=Z,8µm,23.0s
MOX Moxa 124.47 331 *e*PKPdf PKPdf 12 55 24.1 +1.4
MOX *e*PP PP 12 57 13.0 +4.5
KHC Kasperske Hory 124.48 329 ‖ *i*PKIKP PKPdf 12 55 22.3 -0.5
KHC Kasperske Hory 124.48 329 *e*PKP PKPdf 12 55 22.3 -0.5
KHC *ex* x 12 55 26.5
KHC *ex* x 12 55 39.0
KHC *ex* x 12 55 50.0
KHC *e*PP PP 12 57 15.7 +7.1
KHC *e*PS PS 13 07 06.3 -2.1
KHC AMS AMS 13 49 00.0
comp=Z,11µm,23.7s
OHR Ohrid 124.55 318 *e*PKP PKPdf 12 55 21.5 -1.7
GEC2 GERESS Array S 124.59 329 *e*PKPdf PKPdf 12 55 22.0 -1.0
GEC2 *e*PP PP 12 57 14.2 +4.8
GERES GERESS Array B 124.59 329 Pdiff Pdif 12 52 02.2 +4.2
comp=Z,0.7nm,0.7s,baz=59,slow=3.9,SNR=4.2
GERES PKP PKPdf 12 55 22.4 -0.6
comp=Z,8.7nm,0.7s,baz=75,slow=1.5,SNR=28
GERES PKKPbc 13 05 09.7
comp=Z,1.5nm,0.7s,baz=211,slow=2.3,SNR=3.9
GERES PKKP 13 05 44.7
comp=Z,1.2nm,0.7s,baz=205,slow=2.8,SNR=3.6
GERES GERESS Array B 124.59 329 P Pdif 12 52 02.2 +4.2
GERES 12 55 22.4
MANZ Manzenberg 124.66 331 *e*PKPdf PKPdf 12 55 24.7 +1.6
MANZ *e*PP PP 12 57 14.0 +4.2
WET Wettzell 124.82 329 *e*PKPdf PKPdf 12 55 24.1 +0.6
WET *e*PP PP 12 57 16.4 +5.5
IBBN Ibbenburen 125.03 335 *e*PP PP 12 57 16.2 +4.0
TLL Tololo Astrono 125.06 132 *i* P PKPdf 12 55 22.8 -1.7
TIR Tirane 125.06 318 PFAKE 12 55 30.0 +5.8
TIR LR LR
comp=Z,6µm,22.0s,MS6.2
UBBA Unterbreizbach 125.10 332 *e*PP PP 12 57 17.8 +5.1
PERS Pernice 125.17 326 *i* PKPdf PKPdf 12 55 23.6 -0.6
GRA1 Grafenberg Arr 125.29 331 *e*PKPdf PKPdf 12 55 23.8 -0.5
GRA1 *e*PP PP 12 57 18.3 +4.3
GRA1 *e*SP SP 13 07 16.7 +6.1
GRA1 *e*SS SS 13 14 22.9 +14
GRA1 LR LR
comp=Z,6µm,22.0s,MS6.2
GRF Grafenberg Arr 125.29 331 *e*PKIKP PKPdf 12 55 23.8 -0.5
GRF *e* 12 57 18.3
GRF *e*SP SP 13 07 16.7 +6.1
GRF *e*SS SS 13 14 22.9 +14
GRF Grafenberg Arr 125.29 331 *e*PKPdf PKPdf 12 55 23.8 -0.5
GRF *e*PP PP 12 57 18.3 +4.3
GRF *e*SP SP 13 07 16.7 +6.1
GRF *e*SS SS 13 14 22.9 +14
GRF *e*L 13 53 17.8
comp=Z,5µm,22.0s
PKME Peaks-Kenny Pk 125.34 36 PFAKE 12 55 40.0 +15
PKME LR LR
comp=Z,19µm,20.0s,MS6.8
HRV Adam Dziewonsk 125.42 40 PFAKE 12 55 40.0 +15
HRV LR LR
comp=Z,18µm,19.0s,MS6.8
WES Weston 125.63 40 PFAKE 12 55 40.0 +15
WES LR LR
comp=Z,12µm,19.0s,MS6.6
MGV Manicaragua 125.67 66 *e*P PKPdf 12 55 22.4 -3.5
MGV Manicaragua 125.67 66 *e*P PKPdf 12 55 22.4 -3.5
LCO Las Campanas 125.73 131 *i* P PKPdf 12 55 24.1 -1.7
LCO LR LR
comp=Z,14µm,21.0s,MS6.6
BOJS Bojanci 125.75 325 *i* Pdiff Pdif 12 52 10.6 +7.5
BOJS *i* PKPdf PKPdf 12 55 25.1 -0.3
LJU Ljubljana 125.85 326 *i* PKPdf PKPdf 12 55 23.6 -1.9
BUG Bochum--Univer 125.88 335 *e*PP PP 12 57 21.8 +4.0
TRQA Tornquist 125.96 146 PFAKE 12 55 40.0 +14
TRQA LR LR
comp=Z,11µm,22.0s,MS6.5
CEY Cerknica 126.08 325 *i* PKPdf PKPdf 12 55 26.2 +0.2
CFAA Coronel Fontan 126.11 135 PKP PKPdf 12 55 24.1 -2.4
comp=Z,2.7nm,0.7s,baz=254,slow=3.9
TNS Taunus Mts 126.23 333 *e*PKPdf PKPdf 12 55 25.4 -0.7
TNS *e*PP PP 12 57 24.8 +4.6
FUR Furstenfeldbru 126.27 329 *e*PP PP 12 57 24.7 +4.1
EKA Eskdalemuir Ar 126.44 344 PKP PKPdf 12 55 25.6 -0.8
comp=Z,2.7nm,0.5s,baz=28,slow=4.0,SNR=6.5
ESK Eskdalemuir 126.47 344 PFAKE 12 55 40.0 +14
ESK LR LR
comp=Z,6µm,21.0s,MS6.2
TOD Tromm 126.50 332 PKIKP PKPdf 12 55 31.4 +4.7
MOTA Moosalm 126.89 329 ⇑ *i*P PKPdf 12 55 27.0 -0.5
comp=Z,33nm,1.1s
STU Stuttgart 126.89 331 *e*PP PP 12 57 26.9 +2.3
HGN Heimansgroeve 126.94 335 *e*PKP PKPdf 12 55 17.3 -10
BCIP Isla Barro Col 127.01 82 PFAKE 12 55 40.0 +11
BCIP LR LR
comp=Z,21µm,22.0s,MS6.8
NNA Nana 127.22 109 SKKPbc 13 08 43.8
comp=Z,30nm,1.1s,baz=219,slow=4.5,SNR=3.8
NNA Nana 127.22 109 PFAKE 12 55 40.0 +11
NNA LR LR
comp=Z,8µm,21.0s,MS6.4
LANF Langenberg 127.40 332 PKP PKPdf 12 55 32.7 +4.3
BCLA Clavier 127.47 335 PKP PKPdf 12 55 34.0 +5.5
SPAK Spaichingen-Ko 127.55 331 PKP PKPdf 12 55 33.4 +4.7
DAVA Damuels 127.56 329 ⇑ *i*P PKPdf 12 55 28.1 -0.7
comp=Z,43nm,0.9s
BFO Black Forest 127.61 331 *e*PKPdf PKPdf 12 55 28.1 -0.7
BFO *e*PP PP 12 57 33.0 +3.6
BFO Black Forest 127.61 331 *e*PKPdf PKPdf 12 55 28.1 -0.7
BFO *e*PP PP 12 57 33.0 +3.6
BFO LR LR
comp=Z,6µm,22.0s,MS6.2
WLF Walferdange 127.66 334 *e*PKPdf PKPdf 12 55 30.9 +2.0
WLF *e*PP PP 12 57 32.7 +3.1
WLF Walferdange 127.66 334 PFAKE 12 55 40.0 +11
WLF LR LR
comp=Z,11µm,22.0s,MS6.5
WLF Walferdange 127.66 334 PKP PKPdf 12 55 33.9 +5.0
DAVOX Davos/Dischmat 127.89 329 PKP PKPdf 12 55 29.0 -0.4
comp=Z,11nm,0.8s,baz=97,slow=10,SNR=7.7
DAVOS Davos 127.90 329 PKIKP PKPdf 12 55 29.0 -0.4
GIVF Givet 127.91 335 *e*PKIKP PKPdf 12 55 26.0 -3.3
comp=Z,162nm,1.3s
OTAV Otavalo 127.96 94 PFAKE 12 55 40.0 +9.5
OTAV LR LR
comp=Z,14µm,19.0s,MS6.7
DOU Dourbes 128.01 335 PKP PKPdf 12 55 34.3 +4.8
CDF Champ du Feu 128.05 332 *e*PKIKP PKPdf 12 55 26.0 -3.7
comp=Z,27nm,0.9s
FELD Feldberg im Sc 128.08 331 PKP PKPdf 12 55 31.8 +2.1
LIBD Limburg 128.08 331 PKIKP PKPdf 12 55 33.7 +4.0
TIP Timpagrande 128.19 317 PFAKE 12 55 40.0 +10
TIP LR LR
comp=Z,4µm,22.0s,MS6.1
BAIF Baives 128.20 335 *e*PKIKP PKPdf 12 55 27.1 -2.8
comp=Z,54nm,1.0s
ECH Echery 128.25 332 PKP PKPdf 12 55 31.3 +1.2
TUE Stuetta 128.37 329 PFAKE 12 55 40.0 +10
TUE LR LR
comp=Z,6µm,22.0s,MS6.3
CUC Castrocucco 128.41 319 PFAKE 12 55 40.0 +9.4
CUC LR LR
comp=Z,9µm,22.0s,MS6.4
MOF Molkenrain 128.52 331 PKP PKPdf 12 55 30.5 -0.1
BBS Basel-Blauen 128.61 331 PKIKP PKPdf 12 55 35.0 +4.2
HINF Hinteralfeld 128.68 332 *e*PKIKP PKPdf 12 55 27.4 -3.5
comp=Z,94nm,1.0s
THEF They Montfort 128.79 333 PKP PKPdf 12 55 33.7 +2.6
THEF They Montfort 128.79 333 PKP PKPdf 12 55 29.6 -1.5
THEF PKP PKPdf 12 55 33.7 +2.6
LOMF Lomont 129.02 331 PKP PKPdf 12 55 30.8 -0.7
VLC Villacollemand 129.32 326 PFAKE 12 55 40.0 +7.8
VLC LR LR
comp=Z,8µm,21.0s,MS6.4
CABF La Chapelle 129.90 331 *e*PKIKP PKPdf 12 55 29.3 -4.0
comp=Z,205nm,1.2s
RCC Rio Carpintero 129.98 68 *e*P PKPdf 12 55 28.1 -6.0
RCC Rio Carpintero 129.98 68 *e*P PKPdf 12 55 28.1 -6.0
LVC Limon Verde 130.31 125 PKP PKPdf 12 55 34.0 -0.8
comp=Z,9.0nm,0.8s,baz=262,slow=5.4,SNR=5.0
LVC SKPbc SKPbc 12 58 57.5 +1.8
comp=Z,14nm,0.8s,baz=285,slow=9.1,SNR=4.1
LVC SKKPbc 13 08 34.7
comp=Z,12nm,1.0s,baz=189,slow=4.7,SNR=4.3
LVC Limon Verde 130.31 125 PKP PKPdf 12 55 34.0 -0.8
LVC SKPbc SKPbc 12 58 57.5 +1.8
LVC SKKPbc 13 08 34.7
LVC LR LR
comp=Z,8µm,20.0s,MS6.4
TSUM Tsumeb 130.32 240 PFAKE 12 55 50.0 +15
TSUM LR LR
comp=Z,17µm,20.0s,MS6.7
LPL La Plagne 130.36 330 *e*PKIKP PKPdf 12 55 28.4 -5.7
comp=Z,58nm,0.9s
LPG La Plagne 130.36 330 *e*PKIKP PKPdf 12 55 28.4 -5.8
comp=Z,36nm,0.7s
LOR Lormes 130.46 333 *e*PKIKP PKPdf 12 55 29.0 -5.3
comp=Z,80nm,1.2s
ARE Arequipa 130.70 117 *e*PKIKP PKPdf 12 55 40.0 +4.4
BNI Bardonecchia 130.71 329 PFAKE 12 55 50.0 +15
BNI LR LR
comp=Z,6µm,22.0s,MS6.3
SSF Saint Saulge 130.78 333 *e*PKIKP PKPdf 12 55 32.2 -2.7
comp=Z,85nm,1.1s
MBDF Montbardon 130.88 329 *e*PKIKP PKPdf 12 55 31.7 -3.5
comp=Z,38nm,0.8s
SMF Signal de Mont 130.94 333 *e*PKIKP PKPdf 12 55 30.9 -4.3
comp=Z,77nm,1.1s
AVF Avril sur Loir 131.05 333 *e*PKIKP PKPdf 12 55 31.6 -3.8
comp=Z,19nm,0.8s
PGF Pioggiola 131.12 325 *e*PKIKP PKPdf 12 55 31.4 -4.3
comp=Z,171nm,1.0s
SBF Sospel 131.12 328 *e*PKIKP PKPdf 12 55 31.9 -3.8
ORIF Oris-en-Rattie 131.21 330 *e*PKIKP PKPdf 12 55 30.0 -5.8
comp=Z,31nm,0.5s
BGF Bois d'Agland 131.46 333 *e*PKIKP PKPdf 12 55 31.2 -5.0
comp=Z,52nm,0.8s
PLDF La Plantade 131.54 332 PKP PKPdf 12 55 35.5 -0.9
FRF La Foret Royal 131.75 328 *e*PKIKP PKPdf 12 55 32.5 -4.4
comp=Z,90nm,1.0s
VIVF Saint-Julien-l 131.85 330 *e*PKIKP PKPdf 12 55 32.9 -4.1
comp=Z,107nm,1.3s
TCF Toulx Ste Croi 131.95 333 *e*PKIKP PKPdf 12 55 33.2 -3.9
comp=Z,53nm,0.8s
LMR La Mourre 131.98 328 *e*PKIKP PKPdf 12 55 33.1 -4.2
comp=Z,88nm,1.0s
SMRF Simiane la Rot 132.02 329 *e*PKIKP PKPdf 12 55 33.2 -4.2
comp=Z,123nm,1.2s
ROSC El Rosal 132.41 88 PKP PKPdf 12 55 39.7 +0.7
comp=Z,33nm,0.5s,baz=110,slow=3.8,SNR=10.0
ROSC SKPbc SKPbc 12 59 06.2 +2.5
comp=Z,10.0nm,0.5s,baz=250,slow=1.8,SNR=2.3
VSL Villasalto 132.80 322 PFAKE 12 55 50.0 +11
VSL LR LR
comp=Z,4µm,21.0s,MS6.1
LASF Ste Croix 132.82 330 *e*PKIKP PKPdf 12 55 35.1 -3.8
comp=Z,106nm,1.1s
RJF Les Rejaudoux 133.01 333 *e*PKIKP PKPdf 12 55 35.2 -4.0
LFF La Frestale 133.64 333 *e*PKIKP PKPdf 12 55 35.6 -4.8
LPAZ La Paz 133.74 118 PKhKP 12 55 31.4
comp=Z,2.1nm,0.5s,baz=280,slow=3.1,SNR=9.2
LPAZ PKP PKPdf 12 55 41.0 -0.4
comp=Z,6.9nm,0.6s,baz=294,slow=5.0,SNR=13
LPAZ SKP 12 59 18.0
comp=Z,40nm,1.0s,baz=247,slow=2.1,SNR=9.2
LPAZ La Paz 133.74 118 PKP PKPdf 12 55 41.0 -0.4
LPAZ SKP 12 59 18.0
LPAZ LR LR
comp=Z,7µm,21.0s,MS6.4
MTLF Montolieu 134.16 331 *e*PKIKP PKPdf 12 55 37.3 -4.1
comp=Z,31nm,0.8s
KEST Kesra 135.01 318 PKhKP 12 55 34.2
comp=Z,2.7nm,0.8s,baz=66,slow=3.4,SNR=4.5
KEST PKP PKPdf 12 55 44.5 +1.2
comp=Z,8.4nm,0.8s,baz=301,slow=5.2,SNR=7.8
BBSR BB Station 135.19 48 PFAKE 12 55 50.0 +6.3
BBSR LR LR
comp=Z,18µm,22.0s,MS6.7
EBIE Bielsa 135.66 332 PKP PKPdf 12 55 42.5 -1.7
ETSF Etsaut 135.82 332 *e*PKIKP PKPdf 12 55 41.8 -2.7
comp=Z,91nm,0.9s
TRIS Tristan da Cun 136.05 196 PFAKE 12 56 00.0 +15
TRIS LR LR
comp=Z,15µm,20.0s,MS6.7
SDV Santo Domingo 136.10 82 SKPbc SKPbc 12 59 18.2 +2.5
comp=Z,38nm,0.8s,baz=263,slow=10,SNR=6.5
SDV Santo Domingo 136.10 82 PFAKE 12 56 00.0 +14
SDV LR LR
comp=Z,5µm,20.0s,MS6.2
DFRA Djebel Bou Aff 136.79 321 P PKPdf 12 55 53.1 +6.6
ELAN Lanestosa 136.82 335 PKP PKPdf 12 55 41.6 -4.7
CPUP Villa Florida 136.86 138 PKhKP 12 55 36.5
comp=Z,2.1nm,0.5s,baz=218,slow=1.8,SNR=9.9
CPUP PKP PKPdf 12 55 47.6 +0.7
comp=Z,8.2nm,0.6s,baz=259,slow=1.8,SNR=14
CPUP SKPbc SKPbc 12 59 17.4 -0.2
comp=Z,12nm,0.9s,baz=233,slow=3.2,SNR=2.9
CPUP Villa Florida 136.86 138 PKP PKPdf 12 55 47.6 +0.7
CPUP SKPbc SKPbc 12 59 17.4 -0.2
CPUP LR LR
comp=Z,2µm,21.0s,MS5.7
ERTA Horta de San J 136.88 330 PKP PKPdf 12 55 42.1 -4.4
SET Setif 137.30 321 P PKPdf 12 55 53.0 +5.5
EARI Arriondas 137.48 337 PKP PKPdf 12 55 44.4 -3.2
EMOS Mosqueruela 137.73 330 PKP PKPdf 12 55 44.4 -3.8
ETOR Torete 138.14 332 PKIKP PKPdf 12 55 43.8 -5.1
EPON Pontenova 138.19 339 PKP PKPdf 12 55 46.4 -2.4
ECHE Chera 138.56 330 PKIKP PKPdf 12 55 45.3 -4.4
EMHD Djebel Mahouad 138.81 323 P PKPdf 12 55 44.8 -5.5
EBEN Beniarda 138.84 328 PKP PKPdf 12 55 46.7 -3.5
STS Santiago 139.07 340 PKIKP PKPdf 12 55 46.4 -4.1
EMAZ Mazaricos 139.16 340 PKP PKPdf 12 55 46.8 -3.9
SJG San Juan 139.20 68 PFAKE 12 56 00.0 +8.6
SJG LR LR
comp=Z,19µm,20.0s,MS6.8
ECAL Calabor 139.23 337 PKP PKPdf 12 55 47.5 -3.4
GUD Guadarrama 139.24 334 PKIKP PKPdf 12 55 48.0 -2.9
EBNR Beni Rached 139.59 324 P PKPdf 12 55 51.6 -0.1
EZAM Zamans 139.77 339 PKIKP PKPdf 12 55 49.6 -2.2
ECHA Ech Chlef 139.79 324 P PKPdf 12 55 53.5 +1.5
ELOB Lobios 139.79 338 PKP PKPdf 12 55 49.9 -2.0
ESDC Sonseca Array 139.94 333 PKhKP 12 55 44.3
comp=Z,1.0nm,0.5s,baz=16,slow=3.9,SNR=3.4
ESDC PKP PKPdf 12 55 51.9 -0.3
comp=Z,4.0nm,0.6s,baz=20,slow=3.0,SNR=9.3
ESDC PP PP 12 58 52.4 +4.6
comp=Z,9.7nm,0.7s,baz=25,slow=6.9,SNR=7.9
ESDC Sonseca Array 139.94 333 PKP PKPdf 12 55 50.2 -2.0
ESLA Sonseca Array 139.94 333 PFAKE 12 56 00.0 +7.8
ESLA LR LR
comp=Z,38µm,21.0s,MS7.1
SIV San Ignacio 139.96 122 PKhKP 12 55 43.0
comp=Z,2.1nm,0.4s,baz=181,slow=4.1,SNR=11
SIV PKP PKPdf 12 55 52.6 -0.3
comp=Z,18nm,0.7s,baz=250,slow=2.9,SNR=36
SIV SKPbc SKPbc 12 59 27.1 +0.4
baz=235,slow=5.9
SIV San Ignacio 139.96 122 PKP PKPdf 12 55 52.6 -0.3
SIV SKPbc SKPbc 12 59 27.1 +0.4
MVO Moncorvo 140.00 337 *e*PKPdf PKPdf 12 55 49.2 -3.1
MVO Moncorvo 140.00 337 *e*PP PP 12 58 49.6 +1.5
MVO Moncorvo 140.00 337 *e*LQ 13 36 32.2
EVIA Vianos 140.06 330 PKIKP PKPdf 12 55 47.8 -4.7
EANR 'Ain N'Sour 140.08 324 P PKPdf 12 55 47.9 -4.7
PAB San Pablo 140.22 333 PFAKE 12 56 00.0 +7.3
PAB LR LR
comp=Z,7µm,20.0s,MS6.4
OKGL Djebel Kef Gue 140.29 325 P PKPdf 12 55 57.0 +4.0
ETRT Tiaret 140.35 323 P PKPdf 12 55 45.8 -7.3
OJGS Djebel Guires 140.59 324 P PKPdf 12 55 55.0 +1.5
EHUE Huescar 140.74 329 PKIKP PKPdf 12 55 50.9 -2.8
OJBR Djebel Berber 140.78 324 P PKPdf 12 55 56.0 +2.1
MTE Manteigas 140.86 337 *e*PKPdf PKPdf 12 55 51.0 -2.9
MTE Manteigas 140.86 337 *e*PP PP 12 59 04.9 +12
MTE Manteigas 140.86 337 *e*LQ 13 36 41.2
MTE *e*LR LR 13 46 18.2
comp=Z,7µm,22.0s
MTE Manteigas 140.86 337 PFAKE 12 56 00.0 +6.1
MTE LR LR
comp=Z,9µm,22.0s,MS6.5
EQES Quesada 140.99 330 PKP PKPdf 12 55 51.7 -2.4
EBAN Banos Encina 141.05 331 PKIKP PKPdf 12 55 51.2 -3.1
PCBR Castelo Branco 141.31 336 *e*PKPdf PKPdf 12 55 53.6 -1.1
EADA Adamuz 141.43 332 PKP PKPdf 12 55 54.0 -0.9
EBER Berja 141.59 329 PKP PKPdf 12 55 51.4 -3.9
PMRV Marv??o 141.63 336 *e*PKPdf PKPdf 12 55 49.9 -5.4
PMRV Marv??o 141.63 336 *e*PP PP 12 59 09.6 +12
PMRV Marv??o 141.63 336 *e*SS SS 13 17 46.5 +20
PMRV Marv??o 141.63 336 *e*LQ 13 37 16.7
PMRV Marv??o 141.63 336 *e*LR LR 13 47 36.1
comp=Z,6µm,20.0s
ECOG Cogollos-Vega 141.64 330 PKIKP PKPdf 12 55 51.4 -4.0
ELUQ Luque 141.76 331 PKIKP PKPdf 12 55 51.8 -3.8
ODZI Dziouia 141.89 325 P PKPdf 12 56 03.0 +7.1
ECAB El Cabril 141.90 333 PKP PKPdf 12 55 52.1 -3.6
ERON Agron 141.96 330 PKP PKPdf 12 55 53.5 -2.5
EGUA Guajares 141.99 329 PKIKP PKPdf 12 55 53.2 -2.8
ELOJ Sierra Loja 142.03 330 PKIKP PKPdf 12 55 53.4 -2.7
EBAD Badajoz 142.04 335 PKP PKPdf 12 55 54.1 -1.9
PESTR Estremoz 142.19 336 *e*PKPdf PKPdf 12 55 53.8 -2.5
PESTR Estremoz 142.19 336 *e*PP PP 12 59 06.7 +5.3
PESTR Estremoz 142.19 336 *e*LQ 13 37 28.9
PESTR *e*LR LR 13 47 12.1
comp=Z,6µm,20.0s
EALB Alboran 142.39 328 PKP PKPdf 12 55 52.4 -4.3
PBAR Barrancos 142.53 334 *e*PKPdf PKPdf 12 55 54.9 -2.0
PBAR Barrancos 142.53 334 *e*PP PP 12 59 07.6 +4.0
PBAR Barrancos 142.53 334 *e*LQ 13 37 17.8
PBAR *e*LR LR 13 46 52.5
comp=Z,7µm,22.0s
EVO Evora 142.64 336 *e*PKIKP PKPdf 12 55 53.4 -3.7
comp=Z,71nm,1.0s
EVO Evora 142.64 336 *e*PKPdf PKPdf 12 55 58.6 +1.5
EMIN Mina Concepcio 142.71 334 PKP PKPdf 12 55 53.2 -4.1
PMAFR Mafra 142.78 337 *e*PKP PKPdf 12 55 56.3 -1.0
EMIJ Mijas 142.80 330 PKP PKPdf 12 55 54.0 -3.4
LIS Lisbon 142.94 337 *e*P PKPdf 12 55 53.5 -4.2
PBEJ Beja 143.01 335 *e*PKP PKPdf 12 55 53.9 -3.9
ESPR Espera 143.08 332 PKP PKPdf 12 55 55.1 -2.9
EJIF Jimena Fronter 143.23 331 PKIKP PKPdf 12 55 55.8 -2.4
EGRO El Granado 143.26 334 PKP PKPdf 12 55 55.6 -2.6
PVAQ Vaqueiros 143.47 334 *e*PKP PKPdf 12 55 56.0 -2.6
PVAQ Vaqueiros 143.47 334 *e*PP PP 12 59 20.1 +11
PVAQ Vaqueiros 143.47 334 *e*SS SS 13 18 18.9 +31
PVAQ Vaqueiros 143.47 334 *e*LQ 13 38 31.9
PVAQ Vaqueiros 143.47 334 *e*LR LR 13 48 33.4
comp=Z,8µm,18.0s
SFS San Fernando 143.57 332 PFAKE 12 56 10.0 +11
SFS LR LR
comp=Z,14µm,20.0s,MS6.7
PBDV Barranco-do-Ve 143.70 335 *e*PKP PKPdf 12 56 03.5 +4.5
PBDV Barranco-do-Ve 143.70 335 *e*PP PP 12 59 17.1 +6.5
PBDV Barranco-do-Ve 143.70 335 *e*SS 13 19 27.1
PBDV Barranco-do-Ve 143.70 335 *e*LQ 13 38 32.8
PBDV *e*LR LR 13 48 04.2
PTEO Sao Teotonio 143.78 336 *e*PKP PKPdf 12 55 57.0 -2.1
MORF Marmelete 143.95 335 *e*PKP PKPdf 12 56 02.0 +2.6
MORF Marmelete 143.95 335 *e*PP PP 12 59 18.6 +6.5
MORF Marmelete 143.95 335 *e*LQ 13 40 09.0
MORF *e*LR LR 13 46 48.9
comp=Z,8µm,20.0s
PFVI Vila Bisbo 144.17 335 *e*PKP PKPdf 12 56 01.3 +1.5
PFVI Vila Bisbo 144.17 335 *e*PP PP 12 59 19.0 +5.6
PFVI Vila Bisbo 144.17 335 *e*SS 13 19 26.9
PFVI Vila Bisbo 144.17 335 *e*LQ 13 38 45.8
PFVI *e*LR LR 13 47 45.5
comp=Z,7µm,20.0s
GRW Mount Saint Ca 144.61 76 *e*P PKPdf 12 56 00.4 -0.8
GRGR Grenville 144.62 76 PFAKE 12 56 10.0 +8.8
GRGR LR LR
comp=Z,12µm,22.0s,MS6.6
TCE Chacachacare 144.70 79 *e*P PKPdf 12 55 59.4 -2.0
TCE Chacachacare 144.70 79 *e* PKPdf 12 56 01.8 +0.5
SVV Soufriere Volc 144.85 74 *e* PKPdf 12 55 58.2 -3.4
SSV Crater Summit 144.87 74 *e* PKPdf 12 55 57.4 -4.2
SLB Belfond 144.92 73 *e* PKPdf 12 55 59.3 -2.4
TPP Pointe-a-Pierr 145.04 79 *e*P PKPbc 12 55 57.6 -1.7
TRN Trinidad (W) 145.05 79 *e*P PKPbc 12 55 57.0 -4.4

TBH	**Brigand Hill**	**145.40**	**79**	*e*P	PKPbc	12 56 00.2	-2.3
TPR	**Prospect**	**145.60**	**78**	*e*P	PKPdf	12 56 00.0	-2.9
BOT	**Bacolet**	**145.66**	**78**	*e*P	PKPdf	12 56 00.4	-2.6
BOT	**Bacolet**	**145.66**	**78**	*e*	PKPdf	12 56 04.4	+1.4
VAO	**Valinhos**	**145.73**	**145**	(P)	PKPbc	12 56 07.8	+4.5
VAO				*i*		12 56 47.0	
BBGH	**Gun Hill**	**146.47**	**74**	PFAKE		12 56 10.0	+5.6
BBGH				LR	LR		
	comp=Z,29μm,22.0s,MS7.0						
CMLA	**Cha da Macela**	**147.41**	**358**	*e*PKP	PKPdf	12 56 03.8	-1.6
CMLA	**Cha da Macela**	**147.41**	**358**	*e*PP	PP	12 59 32.5	+0.3
CMLA	**Cha da Macela**	**147.41**	**358**	*e*SS	SS	13 18 29.9	-2.1
CMLA	**Cha da Macela**	**147.41**	**358**	*e*LQ		13 37 40.4	
CMLA				eLR	LR	13 46 00.1	
CMLA	**Cha da Macela**	**147.41**	**358**	PFAKE		12 56 20.0	+15
CMLA				LR	LR		
	comp=Z,9μm,22.0s,MS6.5						
PDA	**Ponta Delgada**	**147.44**	**359**	*e*PKP	PKPdf	12 56 02.0	-3.4
PDA	**Ponta Delgada**	**147.44**	**359**	*e*PP	PP	12 59 30.0	-2.3
BDFB	**Brasilia**	**150.44**	**134**	PKP	PKPdf	12 56 09.5	-1.4
	comp=Z,27nm,0.8s,baz=224,slow=3.4,SNR=6.3						
BDFB				PKPbc	PKPbc	12 56 13.6	-2.5
	comp=Z,24nm,0.7s,baz=198,slow=7.5,SNR=22						
SHEL	**Horse Pasture**	**150.68**	**224**	PFAKE		12 56 20.0	+8.8
SHEL				LR	LR		
	comp=Z,12μm,21.0s,MS6.7						
CAM3	**Guarapari**	**150.95**	**152**	*e*P	PKPdf	12 56 10.8	-0.7
CAM3				*i*		12 56 18.4	
CAM3				*i*		12 56 21.4	
CAM3				*i*		12 56 23.2	
CAM3				*i*		12 56 35.9	
CAM3				*i*		12 56 38.4	
CAM3				*i*		12 56 47.2	
CAM3				*i*		12 56 58.3	
TORD	**Torodi Ar. Bea**	**150.99**	**288**	PKP	PKPdf	12 56 09.1	-2.6
	comp=Z,2.1nm,0.6s,baz=13,slow=0.7,SNR=9.7						
TORD				PKPbc	PKPbc	12 56 16.1	-1.4
	comp=Z,174nm,0.6s,baz=53,slow=2.2,SNR=575						
TORD				PP	PP	13 00 01.4	+6.1
	comp=Z,19nm,0.9s,baz=64,slow=6.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**150.99**	**288**	PKP	PKPdf	12 56 09.1	-2.6
TORD				PKPbc	PKPbc	12 56 16.1	-1.4
TORD				PP	PP	13 00 01.4	+6.1
PMAR	**Madeira**	**151.02**	**343**	*e*PKPbc	PKPbc	12 56 17.1	0.0
KIC	**Kosan Boka**	**158.25**	**275**	*e*P	PKPdf	12 56 21.7	-0.1
	comp=Z,574nm,0.7s						
DBIC	**Dimbokro**	**158.35**	**275**	PKP	PKPdf	12 56 21.0	-0.9
	comp=Z,8.9nm,0.7s,baz=143,slow=1.9,SNR=7.2						
DBIC				PKPab	PKPab	12 56 58.0	+1.6
	comp=Z,80nm,0.8s,baz=80,slow=4.5,SNR=9.4						
DBIC	**Dimbokro**	**158.35**	**275**	PKP	PKPdf	12 56 21.0	-0.9
DBIC				PKPab	PKPab	12 56 58.0	+1.6
DBIC				LR	LR		
	comp=Z,12μm,22.0s,MS6.7						
TIC	**Toumodi**	**158.52**	**275**	*e*P	PKPdf	12 56 16.6	-5.5
	comp=Z,2μm,1.5s						
LIC	**Lamto**	**158.54**	**274**	*e*P	PKPdf	12 56 21.9	-0.3
	comp=Z,336nm,0.8s						
LIC	**Lamto**	**158.54**	**274**	*e*PKPdf	PKPdf	12 56 22.0	-0.2
ASCN	**Ascension**	**162.28**	**223**	PFAKE		12 56 40.0	+14
ASCN				LR	LR		
	comp=Z,8μm,21.0s						
BBTS	**Babate**	**166.26**	**315**	PKP	PKPdf	12 56 29.1	-0.6
	comp=Z,6.5nm,0.4s,baz=55,slow=2.5,SNR=2.3						
BBTS				PKPab	PKPab	12 57 31.1	+0.4
	comp=Z,65nm,0.7s,baz=78,slow=1.6,SNR=4.5						
BBTS				PP	PP	13 01 23.3	+5.7
	comp=Z,54nm,1.0s,baz=323,slow=2.5,SNR=3.6						

MOS ***26*** *12:49:54.9± 1.8, 4.74S × 153.41E, h33km, mb5.4/13, Error ellipse: s-maj=22.8km s-min=9.5km az=120.7*
ISCJB ***26*** *12:49:57.0± 1.1, 5.04S ± 0.04 × 153.56E ± 0.04, h51km ± 9km, mb5.2/63, MS5.7/9, Error ellipse: s-maj=7.2km s-min=6.9km az=20.1*
NEIC ***26*** *12:49:56.6± 0.2, 5.02S × 153.63E, h35km, mb5.6/16, Error ellipse: s-maj=8.5km s-min=5.4km az=95.0*
BJI ***26*** *12:49:57.8, 4.60S × 153.92E, h57km, mB5.9, mb5.2, Ms5.8, Msz5.7*
IDC ***26*** *12:49:58.3± 1.6, 5.07S × 153.47E, h49km ± 14km, mb4.7/22, mb1 4.7/24, mb1mx4.7/25, mbtmp4.7/24, ML4.5/2, Error ellipse: s-maj=13.1km s-min=9.5km az=96.0*
DJA ***26*** *12:50:16, 5.09S × 153.55E, h21.4km, mb5.0/10*
ISC 26 12:50:00.6±0.9, 5.08S ± 0.04 × 153.56E ± 0.04, h68km ± 8km, h71km ± 2.8km; pP-P, n155, σ1 s 01/150, mb5.1/63, 8C-8D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.67**	**125**	P	**Pn**	**12 51 49.3**	**-0.3**
	26nm,0.3s,baz=157,slow=3.0,SNR=8.5						
HNR				S	**Sn**	**12 53 15.1**	**0.0**
	30nm,0.3s,baz=191,slow=5.2,SNR=4.7						
HNR	**Honiara**	**7.67**	**125**	*e*Pn	**Pn**	**12 51 51.1**	**+1.5**
PMG	**Port Moresby**	**7.67**	**236**	*e*Pn	**Pn**	**12 51 48.9**	**-0.7**
PMG				Sn	**Sn**	**12 53 15.6**	**+0.5**
CTA	**Charters Tower**	**16.53**	**205**	*e*P	**Pn**	**12 53 48.7**	**+0.6**
	7.9nm,0.6s						
CTA	**Charters Tower**	**16.53**	**205**	P	**Pn**	**12 53 48.2**	**+0.1**
	0.5nm,0.3s,baz=41,slow=12,SNR=4.4						
CTA	**Charters Tower**	**16.53**	**205**	*e*P	**Pn**	**12 53 48.7**	**+0.6**
CTA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
DZM	**Mont Dzumac**	**21.00**	**145**	*e*P	**P**	**12 54 38.5**	**0.0**
DZM	**Mont Dzumac**	**21.00**	**145**	*e*P	**P**	**12 54 38.4**	**-0.1**
WRAB	**Tennant Creek**	**23.83**	**230**	P	**P**	**12 55 06.0**	**-1.5**
	comp=Z,222nm,0.9s,mb5.5,SNR=7.4						
WRAB	**Tennant Creek**	**23.83**	**230**	*e*P	**P**	**12 55 06.8**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,657nm,2.4s,mb5.5						
WRAB	**Tennant Creek**	**23.83**	**230**	*e*Pn	**P**	**12 55 06.8**	**-0.7**
	comp=Z,657nm,2.4s,mb5.5						
WB2	**Warramunga Arr**	**23.83**	**230**	*e*P	**P**	**12 55 06.5**	**-1.0**
WRA	**Warramunga Arr**	**23.84**	**230**	P	**P**	**12 55 06.8**	**-0.8**
	comp=Z,17nm,0.6s,mb4.5,baz=56,slow=10,SNR=21						
WRA				PcP	PcP	12 58 49.7	+0.3
	comp=Z,14nm,0.6s,baz=57,slow=2.3,SNR=12						
WRA				S	**S**	**12 59 20.7**	**+1.9**
	comp=Z,1.5nm,0.9s,baz=55,slow=20,SNR=2.7						
WRA				ScP	ScP	13 02 24.4	+2.5
	comp=Z,1.0nm,0.6s,baz=59,slow=3.1,SNR=5.9						
WRA	**Warramunga Arr**	**23.84**	**230**	P	**P**	**12 55 06.8**	**-0.8**
WRA						12 58 49.7	
WRA				S	**S**	**12 59 20.7**	**+1.9**
ARMA	**Armidale**	**25.27**	**184**	*e*P	**P**	**12 55 21.4**	**+0.9**
ASAR	**Alice Springs**	**26.47**	**224**	P	**P**	**12 55 31.4**	**0.0**
	comp=Z,27nm,1.2s,mb4.5,baz=56,slow=8.7,SNR=17						
ASAR				PcP	PcP	12 58 55.5	+0.3
	comp=Z,13nm,0.7s,baz=62,slow=2.3,SNR=13						
ASAR				S	**S**	**12 59 59.6**	**-1.0**
	comp=Z,3.5nm,1.1s,baz=45,slow=18,SNR=3.6						
ASAR				ScP	ScP	13 02 32.0	+2.7
	comp=Z,1.9nm,0.9s,baz=45,slow=2.8,SNR=4.5						
ASAR	**Alice Springs**	**26.47**	**224**	P	**P**	**12 55 31.5**	**+0.1**
ASAR						12 58 55.5	
ASAR				S	**S**	**12 59 59.6**	**-1.0**
STKA	**Stephens Creek**	**28.92**	**201**	*e*P	**P**	**12 55 52.5**	**-0.8**
	comp=Z,13nm,1.5s,mb4.3						
STKA	**Stephens Creek**	**28.92**	**201**	P	**P**	**12 55 52.1**	**-1.1**
	comp=Z,13nm,1.0s,mb4.5,baz=12,slow=14,SNR=8.5						
BATI	**Baumata**	**30.06**	**258**	P	**P**	**12 56 00.7**	**-2.9**
	comp=Z,54nm,0.8s,mb5.2,baz=288,slow=9.0,SNR=2.9						
FITZ	**Fitzroy Crossi**	**30.20**	**242**	*e*P	**P**	**12 56 04.2**	**-0.6**
	comp=Z,21nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**30.20**	**242**	P	**P**	**12 56 03.7**	**-1.1**
	comp=Z,26nm,1.1s,mb4.8,baz=82,slow=8.4,SNR=4.3						
CNB	**Canberra Magne**	**30.34**	**187**	*e*P	**P**	**12 56 04.8**	**-1.0**
TOO	**Toolangi**	**33.17**	**192**	*e*P	**P**	**12 56 35.1**	**+4.5**
KAPI	**Kappang**	**33.68**	**269**	P	**P**	**12 56 34.5**	**-0.9**
	comp=Z,15nm,0.9s,mb4.8,baz=154,slow=14,SNR=5.2						
CBIJ	**Chichi jima**	**33.83**	**342**	P	**P**	**12 56 35.4**	**-1.0**
	comp=Z,26nm,0.6s,mb5.3,baz=205,slow=13,SNR=5.1						
FORT	**Forrest**	**35.06**	**220**	*e*P	**P**	**12 56 46.5**	**-0.6**
	comp=Z,49nm,0.7s,mb5.4						
URZ	**Urewera**	**39.37**	**150**	P	**P**	**12 57 23.4**	**-0.1**
	comp=Z,21nm,0.6s,mb5.1,baz=344,slow=2.5,SNR=19						
RPZ	**Rata Peaks**	**41.46**	**161**	P	**P**	**12 57 40.8**	**+0.1**
	comp=Z,34nm,0.7s,mb5.3,baz=303,slow=2.6,SNR=18						
KLBR	**Kellerberrin**	**42.67**	**227**	*e*P	**P**	**12 57 49.7**	**-1.1**
	comp=Z,11nm,0.6s,mb4.8						
KSM	**Kuching**	**43.70**	**277**	*e*P	**P**	**12 57 58.7**	**-0.5**
MJAR	**Matsushiro Arr**	**43.83**	**342**	P	**P**	**12 57 57.1**	**-2.8**
	comp=Z,2.4nm,0.6s,mb4.1,baz=175,slow=8.8,SNR=6.5						
MAT	**Matsushiro**	**43.83**	**342**	P	**P**	**12 57 55.8**	**-4.1**
MUN	**Mundaring**	**44.01**	**228**	*e*P	**P**	**12 58 01.1**	**-0.4**
SSE	**Sheshan**	**47.43**	**321**	P	**P**	**12 58 29.5**	**+1.0**
SSE				AMB	AMB		
	comp=Z,41nm,0.8s,mb5.2						
SSE	**Sheshan**	**47.43**	**321**	P	**P**	**12 58 29.5**	**+1.0**
	comp=Z,41nm,0.8s,mb5.2						
KSRS	**Korea Array**	**48.59**	**333**	P	**P**	**12 58 36.0**	**-1.3**
	comp=Z,14nm,0.9s,mb4.9,baz=149,slow=9.1,SNR=32						
KSRS				PcP	PcP	13 00 02.1	+0.1
	comp=Z,1.4nm,0.6s,baz=158,slow=3.0,SNR=4.2						
KS15	**Wonju Array Si**	**48.60**	**333**	*e*P	**P**	**12 58 37.0**	**-0.3**
INCN	**Inchon**	**49.22**	**332**	*e*P	**P**	**12 58 42.2**	**+0.2**
	comp=Z,120nm,1.2s,mb5.7						
NJ2	**Nanjing**	**49.54**	**321**	*e*P	**P**	**12 58 45.5**	**+0.8**
NJ2				AP	pP	12 59 03.3	+1.2
NJ2				PCP	PcP	13 00 04.5	-1.1
NJ2				S	**S**	**13 05 45.0**	**-2.6**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,5μm,11.0s						
NJ2				LR	LR		
	comp=N,1μm,20.0s						
NJ2				LR	LR		
	comp=E,4μm,19.0s						
NJ2				LR	LR		
	comp=Z,4μm,21.7s						
ASAJ	**Asahikawa**	**49.96**	**350**	P	**P**	**12 58 48.9**	**+1.3**
	comp=Z,6.6nm,0.8s,mb4.6,baz=226,slow=20,SNR=5.2						
WHN	**Wuhan**	**51.58**	**316**	⇓P	**P**	**12 59 01.0**	**+0.9**
DL2	**Dalian**	**52.80**	**329**	P	**P**	**12 59 08.5**	**-0.5**
DL2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
MDJ	**Mudanjiang**	**53.95**	**339**	P	**P**	**12 59 16.3**	**-1.0**
MDJ				AP	pP	12 59 31.5	-3.4
MDJ				XP	sP	12 59 39.0	-3.6
MDJ				PP	PP	13 01 17.5	-1.8
MDJ				SCP	ScP	13 04 14.0	0.0
MDJ				PCS	PcS	13 04 21.0	0.0
MDJ				S	**S**	**13 06 45.5**	**-2.2**
MDJ				XS	sS	13 07 13.3	-4.3
MDJ				SCS	ScS	13 08 59.8	-0.5
MDJ				AMB	AMB		
	comp=Z,12nm,1.7s,mb4.7						
MDJ				LR	LR		
	comp=N,3μm,21.9s						
MDJ				LR	LR		
	comp=E,2μm,33.1s						
MDJ				LR	LR		
	comp=Z,4μm,21.1s						
CN2	**Changchun**	**54.87**	**335**	⇑P	**P**	**12 59 22.8**	**-1.1**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
GYA	**Guiyang**	**55.17**	**307**	⇑*i*P	**P**	**12 59 28.8**	**+2.3**
GYA				AP	pP	12 59 47.5	+3.4
GYA				PCP	PcP	13 00 29.8	+2.9
GYA				PP	PP	13 01 34.5	+3.9
GYA				SCP	ScP	13 04 20.0	+0.2
GYA				PCS	PcS	13 04 27.5	+0.4
GYA				S	**S**	**13 07 05.0**	**+0.2**
GYA				SS	SS	13 10 50.5	+0.5
GYA				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.8						
GYA				AMB	AMB		
	comp=Z,5μm,10.8s						
GYA				LR	LR		
	comp=N,8μm,20.8s						
GYA				LR	LR		
	comp=E,7μm,21.2s						
GYA				LR	LR		
	comp=Z,7μm,21.4s						
HABR	**Khabarovsk**	**55.74**	**345**	*e*P	**P**	**12 59 28.4**	**-1.7**
HABR				*e*		13 00 26.5	
HABR				*e*		13 01 33.2	
HABR				*e*		13 02 46.0	
HABR				S	**S**	**13 07 14.2**	**+2.6**
HABR				*e*		13 09 17.0	
BJI	**Beijing**	**56.55**	**326**	P	**P**	**12 59 35.3**	**-0.8**
BJI				AMB	AMB		
	comp=Z,13nm,0.9s,mb5.0						
BJI				LR	LR		
	comp=N,5μm,20.2s						
BJI				LR	LR		
	comp=E,5μm,19.3s						
BJI				LR	LR		
	comp=Z,8μm,20.2s						
BJI	**Beijing**	**56.55**	**326**	P	**P**	**12 59 35.2**	**-0.8**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
BJI				MLR	MLR		
	comp=Z,8μm,20.2s						
BJI	**Beijing**	**56.55**	**326**	P	**P**	**12 59 35.2**	**-0.8**
	comp=Z,13nm,0.9s,mb5.0						
BJI				LR	LR		
	comp=Z,8μm,20.2s						
KLR	**Kul'dur**	**57.33**	**343**	*e*P	**P**	**12 59 36.1**	**-5.3**
XAN	**Xi'an**	**57.35**	**316**	P	**P**	**12 59 41.5**	**-0.3**
XAN				AP	pP	12 59 52.0	-7.6
XAN				AMB	AMB		
	comp=Z,62nm,0.8s,mb5.7						
XAN				AMB	AMB		
	comp=Z,2μm,14.9s						
KMI	**Kunming**	**57.77**	**304**	P	**P**	**12 59 46.3**	**+1.3**
KMI				AP	pP	13 00 07.0	+4.2
KMI				PCP	PcP	13 00 37.5	+0.4
KMI				AMB	AMB		
	comp=Z,21nm,1.4s,mb5.0						
KMI	**Kunming**	**57.77**	**304**	P	**P**	**12 59 46.2**	**+1.2**
KMI						13 00 37.6	
KMI				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
KMI	**Kunming**	**57.77**	**304**	P	**P**	**12 59 46.2**	**+1.2**
	comp=Z,21nm,1.4s,mb5.0						
KMI				pP	pP	13 00 07.1	+4.3
KMI				PcP	PcP	13 00 37.6	+0.5
PETK	**Petropavlovsk-**	**58.07**	**3**	P	**P**	**12 59 45.8**	**-0.8**
	comp=Z,5.9nm,0.6s,mb4.8,baz=159,slow=4.5,SNR=20						
CMAR	**Chiang Mai Arr**	**58.68**	**295**	P	**P**	**12 59 52.2**	**+0.7**
	comp=Z,36nm,0.9s,mb5.4,baz=113,slow=5.3,SNR=104						
CMAR	**Chiang Mai Arr**	**58.68**	**295**	*i* P	**P**	**12 59 52.2**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,36nm,0.9s						
CHTO	**Chiang Mai**	**58.79**	**295**	*e*P	**P**	**12 59 53.0**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,47nm,1.2s,mb5.4						
CHTO	**Chiang Mai**	**58.79**	**295**	*e*P	**P**	**12 59 53.0**	**+0.8**
	comp=Z,47nm,1.2s,mb5.4						
CD2	**Chengdu**	**59.49**	**310**	⇑*i*P	**P**	**12 59 57.3**	**+0.4**
CD2				AP	pP	13 00 15.0	+0.2
CD2				XP	sP	13 00 22.5	+0.1
CD2				PCP	PcP	13 00 44.3	+0.5
CD2				PP	PP	13 02 13.0	+4.0
CD2				S	**S**	**13 08 00.3**	**-1.2**
CD2				XS	sS	13 08 29.3	-2.5
CD2				SS	SS	13 11 57.0	-0.9
CD2				AMB	AMB		
	comp=Z,190nm,0.8s,mb6.2						
CD2				AMB	AMB		
	comp=Z,1μm,7.2s						
CD2				LR	LR		
	comp=N,5μm,18.0s						
CD2				LR	LR		
	comp=E,5μm,19.2s						
CD2				LR	LR		
	comp=Z,7μm,15.6s						
HHC	**Hu-ho-hao-te**	**59.72**	**324**	*e*P	**P**	**12 59 58.5**	**+0.3**
HHC				S	**S**	**13 08 03.3**	**-0.7**
HHC				AMB	AMB		
	comp=Z,23nm,0.9s,mb5.2						
HHC				AMB	AMB		
	comp=Z,1μm,6.3s						
HIA	**Hailar**	**61.60**	**336**	⇓*e*P	**P**	**13 00 10.7**	**-0.1**
LZH	**Lanzhou**	**61.96**	**316**	P	**P**	**13 00 14.8**	**+1.3**
LZH				AP	pP	13 00 34.0	+2.5
LZH				PP	PP	13 02 34.0	+3.3
LZH				S	**S**	**13 08 32.0**	**-0.7**
LZH				SS	SS	13 12 37.0	+0.6
LZH				AMB	AMB		
	comp=Z,106nm,1.0s,mb5.8						
LZH				AMB	AMB		
	comp=Z,1μm,8.0s						
LZH				LR	LR		
	comp=E,3μm,17.1s						
LZH				LR	LR		
	comp=Z,5μm,18.0s						
LZH	**Lanzhou**	**61.96**	**316**	P	**P**	**13 00 14.8**	**+1.3**
LZH						13 02 34.0	
LZH				S	**S**	**13 08 32.0**	**-0.7**
LZH				*SS	sS	13 09 05.3	+2.1
LZH				SS	SS	13 12 37.0	+0.6
LZH				pmax	pmax		
	comp=Z,106nm,1.0s,mb5.8						
LZH				MLR	MLR		
	comp=Z,5μm,18.0s						
LZH	**Lanzhou**	**61.96**	**316**	P	**P**	**13 00 14.8**	**+1.3**
	comp=Z,106nm,1.0s,mb5.8						
LZH				pP	pP	13 00 34.0	+2.5
LZH				sP	sP	13 00 42.0	+2.8
LZH				PP	PP	13 02 34.0	+3.3
LZH				S	**S**	**13 08 32.0**	**-0.7**
LZH				sS	sS	13 09 05.3	+2.1
LZH				SS	SS	13 12 37.0	+0.6
LZH				LR	LR		
	comp=Z,5μm,18.0s						
GTA	**Gaotai**	**66.38**	**317**	P	**P**	**13 00 43.8**	**+1.4**
GTA				AP	pP	13 01 03.5	+2.9
GTA				S	S	13 09 33.8	+6.6
GTA				AMB	AMB		
	comp=Z,86nm,1.0s,mb5.5						
GTA				AMB	AMB		
	comp=Z,939nm,7.5s						
GTA				LR	LR		
	comp=N,3μm,18.0s						
GTA				LR	LR		
	comp=E,2μm,17.1s						
GTA				LR	LR		
	comp=Z,3μm,18.6s						
ULN	**Ulaanbaatar**	**66.63**	**328**	*c i*P	**P**	**13 00 44.1**	**+0.3**
SONM	**Songino Array**	**66.97**	**328**	P	**P**	**13 00 46.0**	**0.0**
	comp=Z,11nm,0.7s,mb4.8,baz=149,slow=6.2,SNR=24						
CASY	**Casey**	**67.97**	**197**	*e*P	**P**	**13 00 51.7**	**-0.3**
LSA	**Lhasa**	**69.02**	**304**	*e*P	**P**	**13 01 00.4**	**+1.1**
LSA				*e*PP	pP	13 01 18.2	+0.7
LSA				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
LSA	**Lhasa**	**69.02**	**304**	*e*P	**P**	**13 01 00.4**	**+1.1**
	comp=Z,8.2nm,0.7s,mb4.7						
LSA				*e*pP	pP	13 01 18.2	+0.7
YAK	**Yakutsk**	**69.40**	**348**	⇓*e*P	**P**	**13 01 00.5**	**-0.4**
YAK				pmax	pmax		
	comp=Z,29nm,1.7s,mb4.8						
YAK	**Yakutsk**	**69.40**	**348**	⇓*e*P	**P**	**13 01 00.6**	**-0.3**
ZAK	**Zakamensk**	**70.12**	**328**	⇑*i*P	**P**	**13 01 05.5**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.0						
BOD	**Bodaibo**	**70.32**	**339**	*e*P	**P**	**13 01 03.3**	**-3.3**
BOD				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.6						
TLY	**Talaya**	**70.70**	**330**	*e*P	**P**	**13 01 09.3**	**+0.2**
TLY				*e*		13 01 17.2	
TLY				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.7						
TLY	**Talaya**	**70.70**	**330**	⇓*e*P	**P**	**13 01 09.5**	**+0.4**
ODAN	**Odare**	**71.34**	**300**	*e*P	**P**	**13 01 13.8**	**+0.3**
	comp=Z,86nm,0.8s,mb5.6						
MOY	**Mondy**	**72.05**	**329**	*e*P	**P**	**13 01 17.8**	**+0.6**
MOY				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.0						
JIRN	**Jiri**	**72.58**	**301**	*e*P	**P**	**13 01 21.0**	**+0.1**
	comp=Z,51nm,0.9s,mb5.3						
GUN	**Gumba**	**72.92**	**301**	*e*P	**P**	**13 01 23.0**	**+0.1**
	comp=Z,68nm,0.7s,mb5.6						
SBA	**Scott Base**	**73.06**	**177**	*e*P	**P**	**13 01 24.7**	**+1.9**
PKIN	**Phulchoki**	**73.24**	**301**	*e*P	**P**	**13 01 24.9**	**+0.1**
	comp=Z,34nm,1.0s,mb5.1						
KKN	**Kakani**	**73.40**	**301**	*e*P	**P**	**13 01 25.8**	**+0.1**
	comp=Z,40nm,0.7s,mb5.3						
BILL	**Bilibino**	**73.50**	**5**	⇑*e*P	**P**	**13 01 24.9**	**-0.6**
DMN	**Daman**	**73.50**	**301**	*e*P	**P**	**13 01 26.8**	**+0.5**
	comp=Z,124nm,0.9s,mb5.7						
GKN	**Gorkha**	**74.00**	**301**	*e*P	**P**	**13 01 29.3**	**0.0**
	comp=Z,77nm,1.0s,mb5.4						
KOLN	**Koldanda**	**74.83**	**300**	*e*P	**P**	**13 01 34.0**	**-0.1**
	comp=Z,38nm,0.8s,mb5.2						
DANN	**Dangsing**	**74.84**	**301**	*e*P	**P**	**13 01 34.1**	**0.0**
	comp=Z,42nm,0.7s,mb5.3						
HVS	**Khovu-Aksy**	**75.71**	**326**	⇑*e*P	**P**	**13 01 39.2**	**+0.6**
HVS				pmax	pmax		
	comp=Z,181nm,1.1s,mb5.7						
WMQ	**Urumqi**	**76.46**	**317**	P	**P**	**13 01 43.0**	**-0.1**
WMQ				PCP	PcP	13 01 55.0	+0.5
WMQ				AP	pP	13 02 03.0	+1.4
WMQ				PP	PP	13 04 37.0	+1.2
WMQ				*eS	S	13 11 21.0	-2.4
WMQ				AMB	AMB		
	comp=Z,53nm,1.5s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,1μm,7.4s						
WMQ				LR	LR		
	comp=N,2μm,21.3s						
WMQ				LR	LR		
	comp=E,3μm,25.0s						
WMQ				LR	LR		
	comp=Z,4μm,27.4s						
HYB	**Hyderabad**	**77.30**	**289**	*i* P	**P**	**13 01 49.5**	**+1.2**
HYB	**Hyderabad**	**77.30**	**289**	*e*P	**P**	**13 01 48.0**	**-0.3**
TIXI	**Tiksi**	**78.27**	**352**	*i* P	**P**	**13 01 53.9**	**+1.3**
TIXI	**Tiksi**	**78.27**	**352**	*i* P	**P**	**13 01 53.0**	**+0.4**
KRAR	**Krasnoyarsk**	**78.40**	**330**	*i* P	**P**	**13 01 55.0**	**+1.4**
KRAR				pmax	pmax		
	comp=Z,16nm,0.3s,mb5.2						
CHUM	**Lake Minchumin**	**79.66**	**21**	*e*P	**P**	**13 01 59.4**	**-0.9**
	comp=Z,26μm,0.9s						
MCK	**McKinley**	**80.83**	**22**	*e*P	**P**	**13 02 05.0**	**-1.6**
MK31	**Makanchi Array**	**81.03**	**319**	*e*P	**P**	**13 02 08.4**	**+0.3**
MKAR	**Makanchi Array**	**81.03**	**319**	P	**P**	**13 02 07.8**	**-0.3**
	comp=Z,18nm,0.9s,mb4.9,baz=104,slow=6.2,SNR=21						
ZAA0	**Zal

	SNR=21							
MAW	**Mawson**	**85.61**	**203**	*e*P	**P**	**13 02 31.2**	**0.0**
	comp=Z,35nm,0.6s,mb5.5							
MAW	**Mawson**	**85.61**	**203**	P	**P**	**13 02 31.2**	**0.0**
	comp=Z,39nm,0.6s,mb5.5,baz=93,slow=6.4,SNR=86							
MAW	**Mawson**	**85.61**	**203**	*e*P	**P**	**13 02 31.2**	**0.0**
MAW				pmax	pmax			
	comp=Z,35nm,0.6s							
AML	**Almayashu**	**85.90**	**313**	P	**P**	**13 02 35.0**	**+1.9**
	SNR=9.2							
AML	**Almayashu**	**85.90**	**313**	*e*P	**P**	**13 02 34.8**	**+1.6**
	comp=Z,76nm,1.0s,mb5.6							
EKS2	**Erkin-Say**	**85.93**	**313**	P	**P**	**13 02 34.5**	**+1.2**
	SNR=10.0							
EKS2	**Erkin-Say**	**85.93**	**313**	*e*P	**P**	**13 02 34.5**	**+1.2**
	comp=Z,53nm,1.2s,mb5.3							
BRVK	**Borovoye**	**89.99**	**323**	*i* P	**P**	**13 02 51.4**	**-1.0**
NVAR	**Mina Array Bea**	**91.66**	**52**	P	**P**	**13 03 02.0**	**+1.5**
	comp=Z,1.0nm,0.6s,mb4.2,baz=282,slow=5.8,SNR=6.2							
SYO	**Syowa Base**	**93.66**	**199**	‖ *e*X		13 03 06.4		
SYO	**Syowa Base**	**93.66**	**199**	‖ *e*PcP	PcP	13 03 09.8	+0.2	
YKA	**Yellowknife Ar**	**95.32**	**28**	P	**P**	**13 03 15.6**	**-1.2**	
	comp=Z,1.4nm,0.9s,mb4.4,baz=264,slow=4.3,SNR=3.1							
DCID1	**Drake Creek**	**97.28**	**47**	*e*P	**P**	**13 03 25.6**	**-0.6**	
PDAR	**Pinedale Array**	**98.47**	**48**	P	**P**	**13 03 33.0**	**+1.5**	
	comp=Z,0.9nm,0.8s,mb4.3,baz=123,slow=1.5,SNR=3.3							
PDAR	**Pinedale Array**	**98.47**	**48**	P	**P**	**13 03 33.0**	**+1.5**	
SNAA	**Sanae**	**101.85**	**187**	*e*Pdiff	Pdif	13 03 45.2	-1.1	
VNA3	**Neumayer Olymp**	**103.02**	**185**	*e*Pdiff	Pdif	13 03 51.9	+0.4	
VNA2	**Neumayer--Watz**	**103.09**	**186**	*e*Pdiff	Pdif	13 03 52.6	+0.7	
VNA1	**Neumayer--Stat**	**103.45**	**186**	*e*Pdiff	Pdif	13 03 53.5	+0.1	
KAF	**Kangasniemi**	**111.17**	**336**	*e*p	PKiKP	13 08 24.4	-1.7	
	comp=Z,2.6nm,0.5s							
ANTO	**Ankara**	**116.64**	**312**	P	Pdif	13 04 44.0	-8.1	
PLCA	**Paso Flores**	**119.10**	**143**	PKP	PKPdf	13 08 41.1	-1.0	
	comp=Z,2.3nm,0.9s,baz=9.9,slow=4.6,SNR=2.9							
BOSA	**Boshof**	**120.07**	**233**	PKP	PKPdf	13 08 44.0	-0.2	
	comp=Z,6.0nm,0.6s,baz=101,slow=3.6,SNR=14							
ELN	**Prospectdale**	**121.11**	**49**	*e*Pdif	Pdif	13 05 19.9	+7.9	
JSC	**Jenkinsville**	**121.63**	**53**	P	Pdif	13 05 18.2	+3.9	
JSC	**Jenkinsville**	**121.63**	**53**	*e*Pdif	Pdif	13 05 17.8	+3.5	
GERES	**GERESS Array B**	**124.69**	**329**	PKP	PKPdf	13 08 52.2	-0.3	
	comp=Z,0.8nm,0.4s,baz=54,slow=5.0,SNR=3.3							
TSUM	**Tsumeb**	**130.41**	**240**	PKP	PKPdf	13 09 04.3	+0.1	
	comp=Z,6.8nm,0.8s,baz=98,slow=4.2,SNR=11							
TAM	**Tamanrasset**	**144.47**	**303**	*e*PKIKP	PKPdf	13 09 29.5	-0.5	
MDT	**Midelt**	**145.70**	**326**	PKPbc	PKPbc	13 09 32.3	+0.1	
	comp=Z,15nm,1.0s,baz=76,slow=4.1,SNR=12							
BDFB	**Brasilia**	**150.33**	**134**	PKPbc	PKPbc	13 09 44.0	-1.1	
	comp=Z,4.5nm,0.7s,baz=308,slow=5.4,SNR=3.8							
TOA0	**Torodi Ar. Sit**	**151.12**	**288**	*e*PKPbc	PKPbc	13 09 46.3	-0.7	
TORD	**Torodi Ar. Bea**	**151.12**	**288**	PKPbc	PKPbc	13 09 45.9	-1.2	
	comp=Z,30nm,0.6s,baz=53,slow=1.8,SNR=101							

*IDC **26** 13:03:29.0±0.9, 501S×15360E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.2/18, mbtmp4.2/13, ML3.7/1, Error ellipse: s-maj=32.6km s-min=15.9km az=93.0*
*ISCJB **26** 13:03:34.4±2.1, 498S±009×15359E±009, h51km±19km, mb4.2/13, Error ellipse: s-maj=15.3km s-min=14.8km az=140.6*
*NEIC **26** 13:03:34.4±0.5, 492S×15356E, h35km, mb4.3/3, Error ellipse: s-maj=12.6km s-min=10.3km az=84.0*
ISC 26 13:03:37.4±1.7, 503S±009×15357E±009, h61km±16km, n24, σ0°70/21, mb4.2/13, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.70**	**125**	Pn	**Pn**	**13 05 26.5**	**-0.3**
	9.2nm,0.3s,baz=215,slow=13,SNR=5.6						
PMG	**Port Moresby**	**7.70**	**235**	*e*Pn	**Pn**	**13 05 27.7**	**+0.8**
	22nm,0.6s						
CTA	**Charters Tower**	**16.57**	**205**	Pn	**Pn**	**13 07 23.4**	**-2.5**
	0.2nm,0.3s,baz=28,slow=12,SNR=6.7						
CTAO	**Charters Tower**	**16.57**	**205**	*e*P	**Pn**	**13 07 26.8**	**+0.9**
	20nm,1.5s						
DZM	**Mont Dzumac**	**21.04**	**145**	*e*P	**P**	**13 08 16.5**	**+0.2**
WB2	**Warramunga Arr**	**23.86**	**230**	*e*P	**P**	**13 08 44.9**	**-0.4**
WRA	**Warramunga Arr**	**23.87**	**230**	P	**P**	**13 08 45.1**	**-0.3**
	2.3nm,0.7s,mb3.7,baz=54,slow=9.8,SNR=14						
WRA				PcP	PcP	13 12 27.4	+0.3
	2.2nm,0.7s,baz=58,slow=2.4,SNR=8.0						
ASAR	**Alice Springs**	**26.50**	**224**	P	**P**	**13 09 09.5**	**+0.3**
	0.6nm,0.4s,mb3.5,baz=57,slow=9.1,SNR=9.7						
ASAR				PcP	PcP	13 12 33.5	+0.6
	1.5nm,0.6s,baz=57,slow=2.6,SNR=7.5						
STKA	**Stephens Creek**	**28.97**	**201**	P	**P**	**13 09 31.1**	**0.0**
	1.3nm,0.7s,mb3.8,baz=50,slow=14,SNR=2.3						
FITZ	**Fitzroy Crossi**	**30.23**	**242**	*e*P	**P**	**13 09 41.7**	**-0.8**
	4.0nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**30.23**	**242**	P	**P**	**13 09 40.6**	**-1.8**
	0.8nm,0.4s,mb3.8,baz=115,slow=14,SNR=3.8						
RPZ	**Rata Peaks**	**41.51**	**161**	P	**P**	**13 11 18.1**	**-0.4**
	11nm,0.8s,mb4.6,baz=316,slow=18,SNR=4.3						
KSRS	**Korea Array**	**48.55**	**333**	P	**P**	**13 12 14.6**	**+0.1**
	2.1nm,0.9s,mb4.2,baz=152,slow=9.1,SNR=5.3						
PETK	**Petropavlovsk-**	**58.02**	**3**	P	**P**	**13 13 23.6**	**-0.2**
	1.4nm,0.5s,mb4.2,baz=161,slow=6.4,SNR=9.7						
CMAR	**Chiang Mai Arr**	**58.66**	**295**	P	**P**	**13 13 29.2**	**+0.4**
	3.8nm,0.8s,mb4.5,baz=128,slow=5.3,SNR=7.2						
ULN	**Ulaanbaatar**	**66.59**	**328**	*e*P	**P**	**13 14 20.6**	**-0.6**
SONM	**Songino Array**	**66.92**	**328**	P	**P**	**13 14 23.9**	**+0.7**
	1.4nm,0.6s,mb4.2,baz=144,slow=5.8,SNR=10						
SBA	**Scott Base**	**73.11**	**177**	P	**P**	**13 15 02.2**	**+1.5**
	3.7nm,1.0s,mb4.3						
MKAR	**Makanchi Array**	**81.00**	**319**	P	**P**	**13 15 46.0**	**+0.5**
	1.3nm,0.4s,mb4.2,baz=95,slow=8.1,SNR=6.3						
ZALV	**Zalesovo Beam**	**81.76**	**326**	P	**P**	**13 15 48.7**	**-0.7**
	1.4nm,0.4s,mb4.2,baz=113,slow=7.0,SNR=4.4						
MAW	**Mawson**	**85.65**	**203**	P	**P**	**13 16 09.3**	**+0.2**
	6.6nm,0.7s,mb5.0,baz=93,slow=5.9,SNR=16						
TAM	**Tamanrasset**	**144.44**	**303**	*e*PKP	PKPdf	13 23 06.9	-0.7
TOA0	**Torodi Ar. Sit**	**151.10**	**288**	*e*PKPbc	PKPbc	13 23 23.9	-0.8
TORD	**Torodi Ar. Bea**	**151.10**	**288**	PKPbc	PKPbc	13 23 24.2	-0.4
	4.9nm,0.4s,baz=63,slow=2.2,SNR=102						

*IDC **26** 13:31:21.4±1.2, 543S×154.04E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.7/15, mbtmp3.7/6, MS4.3/1, Ms1 4.3/1, ms1mx3.7/23, Error ellipse: s-maj=42.0km s-min=27.8km az=99.0*
*NEIC **26** 13:31:22.2±1.0, 556S×154.30E, h15km, Error ellipse: s-maj=33.3km s-min=17.1km az=107.0*
ISC 26 13:31:24.9±4.3, 56S±03×1543E±08, h35km, n11, σ0°46/8, mb3.6/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.74**	**125**	LR	LR	13 35 35.4	
	comp=Z,2µm,20.1s,baz=317,slow=36						
WRA	**Warramunga Arr**	**24.11**	**232**	P	**P**	**13 36 37.1**	**-0.6**
	0.6nm,0.8s,mb3.1,baz=54,slow=9.8,SNR=4.6						
WRA				PcP	PcP	13 40 22.2	+3.7
	0.5nm,0.7s,baz=52,slow=2.4,SNR=4.6						
ASAR	**Alice Springs**	**26.64**	**226**	P	**P**	**13 37 01.1**	**+0.5**
	0.6nm,0.8s,mb3.2,baz=53,slow=9.2,SNR=3.8						
CMAR	**Chiang Mai Arr**	**59.60**	**295**	P	**P**	**13 41 25.9**	**+0.1**
	0.9nm,0.7s,mb3.9,baz=114,slow=6.1,SNR=4.7						
SONM	**Songino Array**	**67.82**	**327**	P	**P**	**13 42 19.6**	**+0.2**
	0.4nm,0.7s,mb3.6,baz=145,slow=5.3,SNR=3.1						
SONM	**Songino Array**	**67.82**	**327**	P	**P**	**13 42 19.6**	**+0.2**
MK31	**Makanchi Array**	**81.93**	**319**	*e*P	**P**	**13 43 40.9**	**-0.2**
MKAR	**Makanchi Array**	**81.93**	**319**	P	**P**	**13 43 41.6**	**+0.6**
	0.6nm,0.5s,mb3.8,baz=96,slow=6.2,SNR=7.9						
ZALV	**Zalesovo Beam**	**82.66**	**326**	P	**P**	**13 43 44.0**	**-0.7**
	0.7nm,0.6s,mb3.9,baz=107,slow=9.2,SNR=3.4						
BDFB	**Brasilia**	**149.42**	**134**	PKP	PKPdf	13 51 07.5	+0.5
	4.0nm,0.5s,baz=242,slow=0.8,SNR=4.1						
BDFB				PKPbc	PKPbc	13 51 14.2	+2.9
	8.3nm,0.8s,baz=203,slow=1.4,SNR=5.8						
TORD	**Torodi Ar. Bea**	**152.01**	**287**	PKPbc	PKPbc	13 51 18.9	+1.4
	1.6nm,0.7s,baz=61,slow=2.2,SNR=10.0						

IDC 26 13:31:34.1±5.1, 3908N×10968E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/22, mbtmp3.3/3, ML2.9/1, Error ellipse: s-maj=111.1km s-min=23.1km az=88.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.07**	**346**	Pn	Pn	13 33 47.2	+1.0
	0.1nm,0.3s,baz=165,slow=12,SNR=10.0						
SONM				Sn	Sn	13 35 29.4	+0.4
	0.1nm,0.3s,baz=166,slow=19,SNR=4.3						

SONM				Lg		13 36 20.8		
	0.1nm,0.3s,baz=165,slow=25,SNR=3.4							
MKAR	**Makanchi Array**	**21.41**	**300**	P	P	13 36 23.8	+0.5	
	0.2nm,0.2s,baz=94,slow=13,SNR=3.7							
CMAR	**Chiang Mai Arr**	**22.56**	**207**	P	P	13 36 35.6	-0.2	
	0.9nm,0.5s,baz=16,slow=9.6,SNR=7.8							

*ISCJB **26** 13:34:58.4±0.4, 5973N±004×15356W±0.10, h134km±6km, mb3.9/4, Error ellipse: s-maj=8.5km s-min=5.5km az=17.9*
*NEIC **26** 13:35:00.9, 5974N×15357W, h128km, MG3.3(AEIC), After AEIC.*
*IDC **26** 13:35:00.6±4.1, 5958N×15354W, h140km±69km, mb3.6/4, mb1 3.6/5, mb1mx3.3/22, mbtmp3.5/5, Error ellipse: s-maj=79.1km s-min=20.2km az=160.0*
ISC 26 13:34:59.7±0.4, 5973N±003×15359W±010, h124km±6km, n38, σ0°70/45, mb4.1/4, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.36**	**167**	P	**Pn**	**13 35 18.7**	**+1.4**
SVW2	**Sparrevohn**	**1.69**	**325**	P	**Pn**	**13 35 29.5**	**0.0**
SLKM	**Skilak Lake**	**1.86**	**64**	P	**Pn**	**13 35 32.0**	**+0.5**
SLKM				S	**Sn**	**13 35 56.0**	**+0.1**
KDAK	**Kodiak Island**	**2.02**	**164**	P	**Pn**	**13 35 33.3**	**-0.2**
	43nm,0.3s,baz=2.7,slow=9.1,SNR=55						
KDAK				S	**Sn**	**13 35 58.9**	**-0.5**
	88nm,0.3s,baz=353,slow=16,SNR=14						
KDAK	**Kodiak Island**	**2.02**	**164**	P	**Pn**	**13 35 33.4**	**-0.2**
KDAK				S	**Sn**	**13 35 59.0**	**-0.5**
SEW	**Seward**	**2.12**	**78**	P	**Pn**	**13 35 34.9**	**+0.2**
SEW				S	**Sn**	**13 36 00.3**	**-1.3**
FIB	**Fire Island**	**2.22**	**48**	P	**Pn**	**13 35 37.4**	**+1.4**
FIB				S	**Sn**	**13 36 04.8**	**+0.9**
RC01	**Rabbit Creek A**	**2.35**	**53**	P	**Pn**	**13 35 38.0**	**+0.4**
RC01				S	**Sn**	**13 36 05.8**	**-0.9**
SKT	**Skwentna**	**2.48**	**23**	P	**Pn**	**13 35 39.7**	**+0.5**
OHAK	**Old Harbor**	**2.52**	**176**	P	**Pn**	**13 35 39.2**	**-0.6**
OHAK				S	**Sn**	**13 36 10.4**	**-0.2**
PMR	**Palmer**	**2.88**	**48**	*e*P	**Pn**	**13 35 44.7**	**+0.2**
KNK	**Knik Glacier**	**3.05**	**54**	P	**Pn**	**13 35 45.7**	**-0.9**
GHO	**Glory Hole Cre**	**3.08**	**46**	P	**Pn**	**13 35 46.4**	**-0.6**
PPLA	**Purkeypile**	**3.25**	**11**	P	**Pn**	**13 35 50.5**	**+1.2**
TTO1	**Tatalina**	**3.40**	**341**	P	**Pn**	**13 35 50.6**	**-0.5**
EYAK	**Cordova Ski Ar**	**4.01**	**75**	P	**Pn**	**13 35 59.3**	**0.0**
KTH	**Kantishna Hill**	**4.04**	**17**	P	**Pn**	**13 36 00.2**	**+0.4**
TRF	**Thorofare Moun**	**4.05**	**21**	P	**Pn**	**13 35 59.7**	**-0.2**
CHUM	**Lake Minchumin**	**4.21**	**8**	P	**Pn**	**13 36 02.3**	**+0.3**
RAGM	**Ragged Mountai**	**4.52**	**78**	P	**Pn**	**13 36 06.3**	**+0.2**
BPAW	**Bear Paw Mtn.**	**4.56**	**15**	P	**Pn**	**13 36 06.0**	**-0.6**
MCK	**McKinley**	**4.59**	**27**	P	**Pn**	**13 36 07.1**	**+0.1**
HARP	**HAARP**	**4.90**	**53**	P	**Pn**	**13 36 10.8**	**-0.4**
COLA	**College**	**5.81**	**25**	P	**Pn**	**13 36 22.4**	**-1.1**
IL1	**Eielson Array**	**5.95**	**29**	P	**Pn**	**13 36 24.1**	**-1.1**
ILB	**Eielson Array**	**5.95**	**29**	P	**Pn**	**13 36 24.1**	**-1.1**
IM3	**Indian Mountai**	**6.28**	**359**	P	**Pn**	**13 36 29.6**	**-0.1**
IMA2	**Indian Mountai**	**6.37**	**360**	*e*P	**Pn**	**13 36 31.1**	**+0.2**
BCA3	**Beaver Creek A**	**6.58**	**54**	P	**Pn**	**13 36 34.1**	**+0.3**
PNL	**Peninsula**	**7.18**	**84**	P	**Pn**	**13 36 42.2**	**+0.2**
COLD	**Coldfoot**	**7.68**	**10**	P	**Pn**	**13 36 48.1**	**-0.4**
DAWY	**Dawson**	**7.98**	**51**	*e*P	**Pn**	**13 36 53.1**	**+0.4**
DLBC	**Dease Lake**	**12.17**	**86**	P	**Pn**	**13 37 50.8**	**+2.1**
	baz=243,slow=9.0						
YKA	**Yellowknife Ar**	**18.84**	**65**	P	**P**	**13 39 09.6**	**+0.2**
	0.3nm,0.3s,baz=277,slow=9.8,SNR=7.0						
PETK	**Petropavlovsk-**	**27.20**	**278**	P	**P**	**13 40 31.3**	**0.0**
	3.5nm,1.0s,mb3.8,baz=70,slow=14,SNR=23						
KSRS	**Korea Array**	**52.95**	**282**	P	**P**	**13 44 03.0**	**+0.1**
	1.3nm,0.7s,mb4.1,baz=39,slow=7.1,SNR=5.9						
SONM	**Songino Array**	**54.71**	**306**	P	**P**	**13 44 16.0**	**+0.5**
	1.5nm,0.8s,mb4.1,baz=43,slow=7.4,SNR=7.6						
ZALV	**Zalesovo Beam**	**57.42**	**323**	P	**P**	**13 44 33.8**	**-0.9**
	1.4nm,0.5s,mb4.2,baz=28,slow=6.9,SNR=5.9						

*ISCJB **26** 13:59:06.2±0.4, 3953N±002×2623E±003, h9km±3km, Error ellipse: s-maj=3.8km s-min=2.7km az=174.5*
*NEIC **26** 13:59:06.5, 3948N×2625E, h24km, MD3.4(ISK), MD3.4(ATH), After ATH.*
*ISK **26** 13:59:06.0, 3953N×2624E, h12km, MD3.4*
*CSEM **26** 13:59:06.6±0.1, 3954N×2628E, h15km, MD3.4, Error ellipse: s-maj=2.1km s-min=0.9km az=98.0*
*ATH **26** 13:59:06.5, 3948N×2626E, h24km, MD3.4/5*
*THE **26** 13:59:07.7, 3950N×2624E, h12km, ML3.8*
*DDA **26** 13:59:07.7, 3952N×2630E, h6km, Md3.3*
ISC 26 13:59:06.9±0.4, 3953N±002×2624E±003, h11km±3km, n57, σ0°71/82, 3C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.28**	**175**	*e*Pg	**Pg**	**13 59 12.7**	**0.0**
PRK				*e*Sg	**Sg**	**13 59 17.3**	**+0.8**
PRK	**Paraskevi**	**0.28**	**175**	‖ *i*PB	**Pg**	**13 59 12.9**	**+0.2**
PRK				*e*SB	**Sg**	**13 59 17.0**	**+0.5**
PRK	**Paraskevi**	**0.28**	**175**	*e*Pg	**Pg**	**13 59 12.7**	**0.0**
PRK				*e*Sb	**Sg**	**13 59 17.0**	**+0.5**
PRK				*e*Sg	**Sg**	**13 59 17.3**	**+0.8**
EZN	**Ezine**	**0.30**	**13**	PG	**Pg**	**13 59 13.1**	**0.0**
EZN				*e*SG	**Sg**	**13 59 17.7**	**+0.5**
AYVA	**Ayvalik**	**0.41**	**122**	*i* P	**Pg**	**13 59 14.9**	**-0.1**
AYVA				*i* S	**Sg**	**13 59 20.9**	**+0.4**
GADA	**Gvkgeada**	**0.71**	**339**	*e*PG	**Pg**	**13 59 20.4**	**-0.3**
GADA				*e*SG	**Sg**	**13 59 30.0**	**0.0**
LIA	**Limnos Island**	**0.89**	**295**	*e*Pg	**Pg**	**13 59 24.3**	**+0.2**
LIA				*e*Sg	**Sg**	**13 59 38.2**	**+2.4**
LIA	**Limnos Island**	**0.89**	**295**	*e*PN	**Pn**	**13 59 24.6**	**-0.8**
LIA				*e*SN	**Sn**	**13 59 37.3**	**-1.0**
LIA	**Limnos Island**	**0.89**	**295**	*e*Pn	**Pn**	**13 59 24.6**	**-0.8**
LIA				*e*Sn	**Sn**	**13 59 37.3**	**-1.0**
LIA				*e*Sg	**Sg**	**13 59 38.2**	**+2.4**
LPK	**Lapseki**	**0.93**	**25**	*e*PG	**Pg**	**13 59 24.1**	**-0.8**
LPK				*e*SG	**Sg**	**13 59 37.8**	**+0.7**
LOS	**Limnos**	**0.98**	**295**	*e*Pg	**Pg**	**13 59 26.3**	**+0.5**
BALY	**Balya**	**1.09**	**78**	*i* P	**Pb**	**13 59 27.8**	**+0.1**
BALY				*i* S	**Sb**	**13 59 41.7**	**-0.2**
CHOS	**Chios island**	**1.15**	**187**	*e*Pg	**Pg**	**13 59 28.3**	**-0.8**
CHOS				*e*Sg	**Sg**	**13 59 44.1**	**+0.2**
URLA	**Izmir**	**1.20**	**166**	*i* P	**Pn**	**13 59 29.0**	**-0.6**
URLA				*i* S	**Sb**	**13 59 45.9**	**+0.8**
ENEZ	**Enez**	**1.21**	**357**	*e*PN	**Pn**	**13 59 29.5**	**-0.3**
BALB	**Balikesir**	**1.27**	**84**	*e*PN	**Pn**	**13 59 30.0**	**-0.6**
BLCB	**Balcova**	**1.30**	**151**	*e*PN	**Pn**	**13 59 30.5**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.36**	**32**	*e*PN	**Pn**	**13 59 31.2**	**-0.6**
SART	**Tekirdag**	**1.37**	**32**	*i* P	**Pn**	**13 59 30.4**	**-1.5**
SART				*i* S	**Sb**	**13 59 50.5**	**+0.6**
ALN	**Alexandroupoli**	**1.38**	**354**	*e*Pg	**Pg**	**13 59 32.4**	**-0.9**
ALN				*e*Sg	**Sg**	**13 59 50.7**	**-0.5**
AKS	**Akhisar**	**1.39**	**117**	*e*PN	**Pn**	**13 59 31.9**	**-0.3**
MFT	**Murefte**	**1.49**	**32**	*e*PN	**Pn**	**13 59 33.3**	**-0.3**
EDC	**Edincik**	**1.49**	**56**	*e*PN	**Pn**	**13 59 33.9**	**+0.2**
MRMT	**Marmara Adasi**	**1.50**	**44**	*e*PN	**Pn**	**13 59 33.7**	**0.0**
BNT	**Bandirma**	**1.54**	**57**	*e*PN	**Pn**	**13 59 33.9**	**-0.3**
RDO	**Rodhopi**	**1.70**	**342**	*e*PN	**Pn**	**13 59 37.4**	**+0.9**
DURS	**Dursunbey**	**1.73**	**87**	*i* P	**Pn**	**13 59 37.0**	**+0.1**
DURS				*i* S	**Sn**	**14 00 02.4**	**+3.5**
TKR	**Tekirdag**	**1.77**	**34**	*e*PN	**Pn**	**13 59 36.8**	**-0.6**
KCT	**Karacabey**	**1.79**	**65**	*e*PN	**Pn**	**13 59 37.3**	**-0.4**
DST	**Dursunbey**	**1.85**	**87**	*e*PN	**Pn**	**13 59 38.3**	**-0.2**
SMG	**Samos**	**1.88**	**165**	*e*PN	**Pn**	**13 59 38.5**	**-0.4**
DEMI	**Demirci**	**1.98**	**103**	*i* P	**Pn**	**13 59 41.0**	**+0.6**
DEMI				*i* S	**Sn**	**14 00 07.0**	**+1.8**
KULA	**Kula-Manisa**	**2.14**	**117**	*e*PN	**Pn**	**13 59 43.0**	**+0.5**
SLVT	**Silivri**	**2.27**	**41**	*e*PN	**Pn**	**13 59 44.5**	**+0.2**
ULDT	**Uludag**	**2.31**	**74**	*i* P	**Pn**	**13 59 45.8**	**+0.8**
ULDT				*i* S	**Sn**	**14 00 19.1**	**+5.8**
CTT	**Catalca**	**2.33**	**45**	*e*PN	**Pn**	**13 59 45.6**	**+0.4**
EDRB	**Edirne**	**2.35**	**9**	*e*PN	**Pn**	**13 59 45.3**	**-0.1**
GEMT	**Gemlik**	**2.44**	**67**	*e*PN	**Pn**	**13 59 46.1**	**-0.6**
APE	**Apeiranthos**	**2.52**	**193**	*e*Pn	**Pn**	**13 59 46.9**	**-0.8**
APE				*e*Sn	**Sn**	**14 00 17.9**	**-0.4**
APE	**Apeiranthos**	**2.52**	**193**	*e*PN	**Pn**	**13 59 47.5**	**-0.2**
APE				*e*SN	**Sn**	**14 00 18.3**	**-0.1**
APE	**Apeiranthos**	**2.52**	**193**	‖ *i*P	**Sn**	**14 00 18.5**	**+0.1**
APE	**Apeiranthos**	**2.52**	**193**	*e*Pn	**Pn**	**13 59 47.1**	**-0.6**
APE				*e*Sn	**Sn**	**14 00 17.9**	**-0.5**
APE	**Apeiranthos**	**2.52**	**193**	*e*Pn	**Pn**	**13 59 47.1**	**-0.6**
APE				*e*Sn	**Sn**	**14 00 18.3**	**-0.1**
MLSB	**Milas**	**2.54**	**151**	*e*PN	**Pn**	**13 59 48.0**	**0.0**
BGKT	**Bogazkoy**	**2.54**	**49**	*e*PN	**Pn**	**13 59 48.1**	**0.0**
GDZ	**Gediz**	**2.55**	**99**	*i* P	**Pg**	**13 59 54.9**	**-1.0**

GDZ				*i* S	**Sg**	**14 00 28.1**	**-0.9**	
BODT	**Bodrum**	**2.60**	**161**	*e*PN	**Pn**	**13 59 49.1**	**+0.2**	
YLV	**Yalova**	**2.62**	**66**	*e*PN	**Pn**	**13 59 49.0**	**-0.1**	
KLYT	**Kilyos**	**2.75**	**50**	*e*PN	**Pn**	**13 59 51.2**	**+0.3**	
KHL	**Karahalli**	**2.83**	**114**	*e*PN	**Pn**	**13 59 52.1**	**+0.1**	
ADVT	**Abdulvahap**	**2.84**	**70**	*e*PN	**Pn**	**13 59 52.0**	**-0.1**	
HRT	**Hereke**	**2.93**	**63**	*e*PN	**Pn**	**13 59 53.5**	**+0.1**	
ALT	**Altintas**	**3.04**	**98**	*e*PN	**Pn**	**13 59 55.2**	**+0.2**	
SILT	**Sile**	**3.07**	**57**	*e*PN	**Pn**	**13 59 55.4**	**+0.1**	
GULT	**Gulveren**	**3.41**	**73**	*e*PN	**Pn**	**14 00 00.0**	**0.0**	
PLOR	**Plostina**	**6.33**	**3**	‖ *i*P	**Pn**	**14 00 43.5**	**+3.5**	
VRI	**Vrincioaia**	**6.34**	**3**	‖ *i*P	**Pn**	**14 00 43.0**	**+2.7**	

*DDA **26** 14:12:05.5, 3745N×35.19E, h15km, Md2.9*
*CSEM **26** 14:12:06.5±0.1, 3760N×3557E, h19km, MD2.6, Error ellipse: s-maj=1.8km s-min=1.2km az=39.0*
*ISCJB **26** 14:12:07.6±0.7, 3760N±005×3557E±006, h22km±9km, Error ellipse: s-maj=9.1km s-min=7.8km az=31.9*
*ISK **26** 14:12:07.2, 3759N×3555E, h17km, MD2.6*
ISC 26 14:12:07.4±0.7, 3761N±005×3557E±006, h19km±6km, n8, σ0°53/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.24**	**122**	*e*PG	**Pg**	**14 12 13.8**	**+0.8**
KOZT				*e*SG	**Sg**	**14 12 17.3**	**+0.5**
KARA	**Karaisali**	**0.54**	**230**	*e*PG	**Pg**	**14 12 17.7**	**-0.5**
KARA				*e*SG	**Sg**	**14 12 25.7**	**+0.2**
CEYT	**Ceyhan**	**0.61**	**167**	*e*PG	**Pg**	**14 12 19.1**	**-0.6**
NIG	**Nigde**	**0.91**	**304**	*e*PG	**Pg**	**14 12 24.7**	**-0.5**
KMRS	**Kahramanmaras**	**1.06**	**95**	*e*PG	**Pg**	**14 12 27.5**	**-0.5**
MERS	**Mersin**	**1.12**	**229**	*e*PN	**Pn**	**14 12 28.9**	**+0.9**
COBT	**Iskenderun**	**1.22**	**153**	*i* P	**Pn**	**14 12 28.8**	**-0.6**
COBT				*i* S	**Sb**	**14 12 45.1**	**0.0**
AVNT	**Avonos**	**1.30**	**334**	*i* P	**Pn**	**14 12 30.4**	**-0.2**
AVNT				*i* S	**Sn**	**14 12 47.8**	**+0.4**

IDC 26 14:32:35.5±3.4, 543S×15410E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/15, mbtmp3.6/5, Error ellipse: s-maj=100.5km s-min=30.4km az=106.0, Bougainville - Solomon Islands region

| Code | Station Name |

STKA ePCP PcP 14 49 08.1 +0.1
STKA eS **S** **14 50 43.9 -2.9**
STKA Stephens Creek 28.80 202 P **P** **14 45 57.1 -1.3**
comp=Z,7.5nm,0.7s,mb4.5,baz=24,slow=11,SNR=15
STKA PcP PcP 14 49 08.3 +0.3
comp=Z,12nm,0.9s,baz=91,slow=4.8,SNR=4.3
STKA S **S** **14 50 44.9 -2.0**
comp=Z,1.5nm,0.7s,baz=336,slow=21,SNR=1.2
STKA LR LR 14 57 21.7
comp=Z,3μm,22.0s,MS4.9,baz=325,slow=36
BATI Baumata 30.16 259 P **P** **14 46 11.9 +1.2**
comp=Z,14nm,0.8s,mb4.7,baz=44,slow=17,SNR=2.2
CNB Canberra Magne 30.17 187 eP **P** **14 46 17.7 +7.2**
CNB ePCP PcP 14 49 19.1 +7.7
CNB eS **S** **14 51 03.1 -5.1**
FITZ Fitzroy Crossi 30.24 243 eP **P** **14 46 09.6 -1.8**
comp=Z,42nm,1.0s,mb5.1
FITZ eS **S** **14 51 10.3 +0.5**
FITZ Fitzroy Crossi 30.24 243 P **P** **14 46 10.0 -1.3**
comp=Z,5.5nm,0.5s,mb4.6,baz=56,slow=9.6,SNR=27
DAV Davao City (W) 30.63 293 LR LR 14 58 33.4
comp=Z,2μm,18.5s,MS4.9,baz=276,slow=36
FORT Forrest 35.01 220 eP **P** **14 46 49.9 -3.0**
comp=Z,36nm,0.8s,mb5.4
URZ Urewera 39.13 150 P **P** **14 47 28.5 +0.6**
comp=Z,60nm,1.0s,mb5.3,baz=28,slow=3.0,SNR=14
RPZ Rata Peaks 41.23 161 P **P** **14 47 46.3 +1.1**
comp=Z,26nm,0.9s,mb4.9,baz=60,slow=5.7,SNR=6.0
KLBR Kellerberrin 42.66 228 eP **P** **14 47 54.9 -2.1**
comp=Z,91nm,1.5s,mb5.3
NACB Ninganchiao 42.84 314 eP **P** **14 47 56.2 -2.4**
YHNB Yeheng 43.31 315 eP **P** **14 48 03.1 +0.7**
comp=Z,78nm,1.1s,mb5.3
MUN Mundaring 43.99 228 eP **P** **14 48 10.5 +2.7**
MJAR Matsushiro Arr 44.05 342 P **P** **14 48 06.2 -1.9**
comp=Z,7.2nm,1.1s,mb4.3,baz=166,slow=8.9,SNR=11
MAJO Matsushiro 44.05 342 eP **P** **14 48 06.7 -1.4**
MAJO pmax pmax
comp=Z,11nm,0.8s,mb4.6
MAJO MLR MLR
comp=Z,1μm,21.0s,MS4.8
MAJO Matsushiro 44.05 342 eP **P** **14 48 06.7 -1.4**
comp=Z,11nm,0.8s,mb4.6
MAJO LR LR
comp=Z,1μm,21.0s,MS4.8
MAT Matsushiro 44.05 342 P **P** **14 48 05.2 -2.9**
QZH Quanzhou 45.48 313 P **P** **14 48 20.0 +0.3**
SSE Sheshan 47.67 321 P **P** **14 48 37.8 +1.0**
SSE AMB AMB
comp=Z,42nm,1.3s,mb5.3
SSE Sheshan 47.67 321 P **P** **14 48 37.8 +1.0**
comp=Z,42nm,1.3s,mb5.3
KSRS Korea Array 48.83 333 P **P** **14 48 45.5 -0.1**
comp=Z,22nm,1.0s,mb5.1,baz=150,slow=9.2,SNR=62
INCN Inchon 49.45 332 P **P** **14 48 50.8 +0.4**
SNR=9.7
INCN Inchon 49.45 332 eP **P** **14 48 50.2 -0.2**
comp=Z,157nm,1.1s,mb6.0
NJ2 Nanjing 49.78 321 eP **P** **14 48 54.3 +1.3**
NJ2 AP pP 14 48 58.3 -2.4
NJ2 XP sP 14 49 02.0 -1.7
NJ2 PCP PcP 14 50 15.3 +1.6
NJ2 S **S** **14 56 03.0 +1.9**
NJ2 XS sS 14 56 09.5 -4.2
NJ2 AMB AMB
comp=Z,40nm,1.1s,mb5.4
NJ2 AMB AMB
comp=Z,180nm,7.6s
NJ2 LR LR
comp=N,470nm,27.5s
NJ2 LR LR
comp=E,590nm,21.2s
NJ2 LR LR
comp=Z,610nm,23.4s,MS4.5
WHN Wuhan 51.82 316 ⇓P **P** **14 49 09.8 +1.4**
DL2 Dalian 53.04 329 P **P** **14 49 16.5 -0.8**
DL2 eS **S** **14 56 46.0 +0.1**
DL2 AMB AMB
comp=Z,30nm,1.0s,mb5.2
DL2 AMB AMB
comp=Z,440nm,4.7s
DL2 LR LR
comp=N,410nm,15.8s,MS4.7
DL2 LR LR
comp=E,360nm,19.1s,MS4.7
DL2 LR LR
comp=Z,950nm,19.4s,MS4.8
TIA Tai'an 53.63 323 ⇑P **P** **14 49 21.5 -0.2**
TIA AMB AMB
comp=Z,26nm,1.1s,mb5.1
MDJ Mudanjiang 54.18 339 P **P** **14 49 25.0 -0.5**
MDJ AP pP 14 49 28.3 -5.0
MDJ PP PP 14 51 26.8 -0.7
MDJ SCP ScP 14 54 27.8 +1.1
MDJ S **S** **14 57 02.5 +1.4**
MDJ XS sS 14 57 08.0 -5.8
MDJ SCS ScS 14 59 14.5 +1.2
MDJ AMB AMB
comp=Z,19nm,1.7s,mb4.8
MDJ AMB AMB
comp=Z,102nm,4.0s
MDJ LR LR
comp=N,1μm,31.3s,MS4.9
MDJ LR LR
comp=E,1μm,27.6s,MS4.9
MDJ LR LR
comp=Z,2μm,25.7s,MS5.0
MDJ Mudanjiang 54.18 339 P **P** **14 49 23.7 -1.8**
comp=Z,27nm,1.4s,mb5.0
MDJ LR LR
comp=Z,938nm,20.0s,MS4.8
CN2 Changchun 55.10 335 eP **P** **14 49 32.0 -0.2**
CN2 eAP pP 14 49 36.5 -3.5
CN2 PCP PcP 14 50 32.0 -1.4
CN2 eS **S** **14 57 12.5 -1.0**
CN2 AMB AMB
comp=Z,30nm,1.1s,mb5.2
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,17.0s,MS4.9
CN2 LR LR
comp=E,700nm,17.0s,MS4.9
CN2 LR LR
comp=Z,2μm,19.0s,MS5.1
GYA Guiyang 55.40 307 ⇑*i*P **P** **14 49 35.8 +1.0**
GYA PCP PcP 14 50 36.8 +1.8
GYA PP PP 14 51 41.3 +2.5
GYA SCP ScP 14 54 34.0 +1.5
GYA S **S** **14 57 18.5 +0.3**
GYA SS SS 15 01 03.3 +0.1
GYA AMB AMB
comp=Z,90nm,1.0s,mb5.8
GYA AMB AMB
comp=Z,420nm,7.8s
GYA LR LR
comp=N,680nm,20.9s,MS4.8
GYA LR LR
comp=E,570nm,21.6s,MS4.8
GYA LR LR
comp=Z,680nm,21.4s,MS4.7
HABR Khabarovsk 55.96 345 ⇓e P **P** **14 49 37.0 -1.3**
HABR *e* pP 14 49 43.2 -2.9
HABR *e* 14 50 34.1
HABR *e* 14 51 40.5
HABR eS **S** **14 57 26.4 +1.6**
HABR *e* 14 59 25.5
HABR *e* 15 01 13.9
HABR pmax pmax
comp=Z,57nm,2.2s,mb5.2
BJI Beijing 56.78 326 P **P** **14 49 44.3 -0.1**
BJI AMB AMB
comp=Z,26nm,1.4s,mb5.1
BJI LR LR
comp=N,976nm,22.0s,MS5.1
BJI LR LR
comp=E,2μm,22.6s,MS5.1
BJI LR LR
comp=Z,3μm,24.9s,MS5.2
BJI Beijing 56.78 326 P **P** **14 49 44.2 -0.2**
BJI pmax pmax
comp=Z,26nm,1.4s,mb5.1
BJI MLR MLR
comp=Z,3μm,24.9s,MS5.2
BJI Beijing 56.78 326 P **P** **14 49 44.2 -0.2**
comp=Z,26nm,1.4s,mb5.1
BJI LR LR
comp=Z,3μm,24.9s,MS5.2
TBI Tubuai 57.54 114 e LQ 15 04 31.5
comp=Z,3μm,29.8s
TBI e LR LR 15 06 59.2
comp=Z,2μm,29.2s
KLR Kul'dur 57.55 343 eP **P** **14 49 45.7 -3.9**
KLR pmax pmax
comp=E,28nm,1.6s
KLR pmax pmax
comp=Z,80nm,1.6s,mb5.5
XAN Xi'an 57.58 316 P **P** **14 49 50.8 +0.6**
XAN AP pP 14 50 01.0 +3.0
XAN AMB AMB
comp=Z,62nm,1.0s,mb5.6
XAN AMB AMB
comp=Z,629nm,13.5s
XAN LR LR
comp=E,1μm,22.2s
KMI Kunming 58.00 304 P **P** **14 49 54.8 +1.5**
KMI PCP PcP 14 50 46.5 +1.3
KMI S **S** **14 57 50.8 -1.8**
KMI AMB AMB
comp=Z,30nm,1.5s,mb5.1
KMI LR LR
comp=N,545nm,19.6s,MS4.9
KMI LR LR
comp=E,872nm,20.8s,MS4.9
KMI LR LR
comp=Z,2μm,26.2s
KMI Kunming 58.00 304 P **P** **14 49 54.7 +1.4**
KMI 14 50 46.4
KMI S **S** **14 57 50.7 -1.9**
KMI pmax pmax
comp=Z,30nm,1.5s,mb5.1
KMI MLR MLR
comp=Z,2μm,26.2s,MS5.0
KMI Kunming 58.00 304 P **P** **14 49 54.7 +1.4**
comp=Z,30nm,1.5s,mb5.1
KMI PcP PcP 14 50 46.4 +1.2
KMI S **S** **14 57 50.7 -1.9**
KMI LR LR
comp=Z,2μm,26.2s,MS5.0
PEA0B Petropavlovsk- 58.25 3 eP **P** **14 49 54.1 -0.3**
PETK Petropavlovsk- 58.25 3 P **P** **14 49 54.6 +0.1**
comp=Z,20nm,1.1s,mb5.1,baz=141,slow=5.9,SNR=16
CHRT Chiangrai 58.60 297 ⇑P **P** **14 49 58.5 +1.0**
comp=Z,2μm,1.1s
CMAR Chiang Mai Arr 58.89 295 P **P** **14 50 00.3 +0.7**
comp=Z,36nm,0.9s,mb5.4,baz=112,slow=5.1,SNR=159
CMAR LR LR 15 15 19.3
comp=Z,660nm,20.0s,MS4.8,baz=280,slow=36
CHTO Chiang Mai 59.01 296 P **P** **14 50 01.1 +0.7**
SNR=24
CHTO Chiang Mai 59.01 296 eP **P** **14 50 00.6 +0.2**
CHTO pmax pmax
comp=Z,71nm,1.3s,mb5.5
CHTO Chiang Mai 59.01 296 eP **P** **14 50 00.6 +0.1**
comp=Z,71nm,1.3s,mb5.5
CD2 Chengdu 59.73 310 P **P** **14 50 05.8 +0.6**
CD2 AP pP 14 50 10.3 -2.7
CD2 XP sP 14 50 13.0 -2.9
CD2 PCP PcP 14 50 52.0 0.0
CD2 PP PP 14 52 19.5 +2.2
CD2 PCS PcS 14 54 52.8 -1.4
CD2 S **S** **14 58 15.0 +0.1**
CD2 SCS ScS 14 59 52.0 -2.3
CD2 SS SS 15 02 12.0 +0.8
CD2 AMB AMB
comp=Z,100nm,0.8s,mb5.9
CD2 AMB AMB
comp=Z,1μm,7.2s
CD2 LR LR
comp=N,1μm,21.6s,MS5.3
CD2 LR LR
comp=E,2μm,20.4s,MS5.3
CD2 LR LR
comp=Z,2μm,22.8s,MS5.1
HHC Hu-ho-hao-te 59.95 324 eP **P** **14 50 06.5 0.0**
HHC AP pP 14 50 09.8 -4.5
HHC PCP PcP 14 50 52.5 -0.1
HHC PP PP 14 52 20.8 +1.7
HHC SCP ScP 14 54 51.8 -0.5
HHC PCS PcS 14 54 53.5 -1.3
HHC S **S** **14 58 16.3 -1.1**
HHC SCS ScS 14 59 53.0 -2.6
HHC SS SS 15 02 14.0 -0.4
HHC AMB AMB
comp=Z,32nm,0.9s,mb5.3
HHC AMB AMB
comp=Z,1μm,7.1s
HHC LR LR
comp=N,1μm,17.1s,MS5.2
HHC LR LR
comp=E,1μm,17.6s,MS5.2
HHC LR LR
comp=Z,2μm,16.6s,MS5.3
BTO Baotou 60.72 323 eP **P** **14 50 12.0 +0.2**
HIA Hailar 61.83 335 eP **P** **14 50 18.9 -0.2**
HIA pmax pmax
comp=Z,35nm,1.0s
HIA Hailar 61.83 335 eP **P** **14 50 18.9 -0.2**
comp=Z,35nm,1.0s,mb5.5
LZH Lanzhou 62.20 316 P **P** **14 50 23.0 +1.1**
LZH AP pP 14 50 26.5 -3.2
LZH XP sP 14 50 28.8 -3.8
LZH PP PP 14 52 44.3 +5.3
LZH S **S** **14 58 46.0 -0.2**
LZH SS SS 15 02 52.0 +2.2
LZH AMB AMB
comp=Z,155nm,1.2s,mb6.0
LZH AMB AMB
comp=Z,568nm,4.0s
LZH LR LR
comp=N,3μm,16.0s
LZH LR LR
comp=Z,4μm,18.9s,MS5.6
LZH Lanzhou 62.20 316 P **P** **14 50 23.1 +1.2**
LZH *SP sP 14 50 28.7 -3.9
LZH 14 52 44.3
LZH S **S** **14 58 46.0 -0.2**
LZH *SS sS 14 58 53.0 -6.1
LZH SS SS 15 02 52.0 +2.2
LZH pmax pmax
comp=Z,155nm,1.2s,mb6.0
LZH MLR MLR
comp=Z,4μm,18.9s,MS5.6
LZH Lanzhou 62.20 316 P **P** **14 50 23.1 +1.2**
comp=Z,155nm,1.2s,mb6.0
LZH pP pP 14 50 26.6 -3.1
LZH sP sP 14 50 28.7 -3.9
LZH PP PP 14 52 44.3 +5.3
LZH S **S** **14 58 46.0 -0.2**
LZH sS sS 14 58 53.0 -6.1
LZH SS SS 15 02 52.0 +2.2
LZH LR LR
comp=Z,4μm,18.9s,MS5.6
CLNS Chul'man 66.21 343 eP **P** **14 50 48.0 +0.2**
CLNS pmax pmax
comp=N,21nm,1.2s
CLNS pmax pmax
comp=Z,23nm,1.1s,mb5.1
CLNS pmax pmax
comp=E,8.0nm,1.1s
CIT Chita 66.51 334 eP **P** **14 50 49.9 +0.1**
GTA Gaotai 66.61 317 ⇑P **P** **14 50 52.0 +1.3**
GTA AP pP 14 50 56.5 -2.1
GTA XP sP 14 50 59.0 -2.5
GTA S S 14 59 43.5 +2.8
GTA XS sS 14 59 51.0 -2.7
GTA SS SS 15 04 04.0 +5.5
GTA AMB AMB
comp=Z,98nm,1.2s,mb5.7
GTA AMB AMB
comp=Z,661nm,5.1s
GTA LR LR
comp=N,775nm,21.6s,MS5.1
GTA LR LR
comp=E,971nm,20.4s,MS5.1
GTA LR LR
comp=Z,1μm,19.8s,MS5.1
ULN Ulaanbaatar 66.87 328 P **P** **14 50 53.2 +1.0**
SNR=17
ULN Ulaanbaatar 66.87 328*c i*P **P** **14 50 52.9 +0.7**
ULN Ulaanbaatar 66.87 328 ⇑*i*P **P** **14 50 52.0 -0.2**
SONM Songino Array 67.20 328 P **P** **14 50 55.0 +0.8**
comp=Z,24nm,1.0s,mb5.2,baz=136,slow=4.9,SNR=82
SONM LR LR 15 17 19.5
comp=Z,2μm,21.7s,MS5.4,baz=332,slow=33
CASY Casey 67.84 197 eP **P** **14 50 57.2 -0.8**
comp=Z,23nm,1.4s,mb5.0
SEY Seymchan 68.02 359 ⇓eP **P** **14 50 59.1 0.0**
LSA Lhasa 69.25 304 P **P** **14 51 09.0 +1.5**
LSA Lhasa 69.25 304 P **P** **14 51 08.4 +0.9**
LSA pmax pmax
comp=Z,17nm,0.8s,mb5.0
LSA Lhasa 69.25 304 P **P** **14 51 08.4 +0.8**
comp=Z,17nm,0.8s,mb5.0
YAK Yakutsk 69.61 348*c i*P **P** **14 51 08.7 -0.4**
YAK pmax pmax
comp=Z,26nm,1.3s,mb5.0
YAK Yakutsk 69.61 348 ⇑*i*P **P** **14 51 08.8 -0.3**
ZAK Zakamensk 70.36 328 ⇑*i*P **P** **14 51 14.2 +0.3**
ZAK pmax pmax
comp=Z,49nm,1.1s,mb5.3
BOD Bodaibo 70.55 339 eP **P** **14 51 14.5 -0.4**
BOD pmax pmax
comp=Z,20nm,1.6s,mb4.8
TLY Talaya 70.94 330 P **P** **14 51 18.3 +0.9**
comp=Z,130nm,1.1s,mb5.8,SNR=6.6
TLY Talaya 70.94 330 P **P** **14 51 17.9 +0.5**
SNR=8.2
TLY Talaya 70.94 330 eP **P** **14 51 17.1 -0.3**
TLY pmax pmax
comp=Z,36nm,1.2s,mb5.2
TLY Talaya 70.94 330 ⇑*i*P **P** **14 51 17.7 +0.3**
IRK Irkutsk 70.96 330 ⇑*i*P **P** **14 51 16.9 -0.6**
IRK pmax pmax
comp=Z,57nm,1.3s,mb5.3
ODAN Odare 71.56 300 eP **P** **14 51 22.4 +0.7**
comp=Z,130nm,1.0s,mb5.8
RAMN Ramite 72.26 300 eP **P** **14 51 26.3 +0.4**
comp=Z,62nm,1.1s,mb5.4
MOY Mondy 72.28 329 eP **P** **14 51 26.0 +0.5**
MOY pmax pmax
comp=Z,68nm,1.6s,mb5.3
JIRN Jiri 72.80 301 eP **P** **14 51 30.1 +0.9**
SBA Scott Base 72.86 177 eP **P** **14 51 30.1 +1.5**
SBA pmax pmax
comp=Z,127nm,1.9s,mb5.5
SBA Scott Base 72.86 177 eP **P** **14 51 30.1 +1.5**
comp=Z,127nm,1.9s,mb5.5
GUN Gumba 73.14 301 eP **P** **14 51 32.0 +0.9**
comp=Z,173nm,1.2s,mb5.9
PKIN Phulchoki 73.46 301 eP **P** **14 51 33.2 +0.2**
comp=Z,44nm,0.9s,mb5.4
KKN Kakani 73.62 301 eP **P** **14 51 34.3 +0.3**
comp=Z,42nm,0.7s,mb5.5
BILL Bilibino 73.67 5*d i*P **P** **14 51 33.6 +0.2**
BILL pmax pmax
comp=Z,20nm,1.0s,mb5.0
BILL Bilibino 73.67 5 *i* P **P** **14 51 33.7 +0.3**
DMN Daman 73.72 301 eP **P** **14 51 35.2 +0.6**
comp=Z,164nm,1.1s,mb5.9
MIR Mirnyy 73.82 201 ⇓*i*P **P** **14 51 34.0 -0.4**
MIR *i* pP 14 51 43.0 +0.7
MIR *i* 14 51 48.0
MIR pmax pmax
comp=Z,200nm,1.2s,mb5.9
GKN Gorkha 74.22 301 eP **P** **14 51 37.8 +0.3**
comp=Z,118nm,1.1s,mb5.7
KOLN Koldanda 75.05 300 eP **P** **14 51 42.1 -0.2**
comp=Z,43nm,0.8s,mb5.4
DANN Dangsing 75.06 301 eP **P** **14 51 42.4 +0.1**
HVS Khovu-Aksy 75.95 326*d i*P **P** **14 51 47.5 +0.6**
HVS pmax pmax
comp=Z,272nm,1.1s,mb6.1
HVS MLR MLR
comp=Z,9μm,21.0s,MS6.0
WMQ Urumqi 76.70 317 P **P** **14 51 51.8 +0.4**
WMQ AP pP 14 51 56.5 -2.8
WMQ XP sP 14 51 59.0 -3.3
WMQ PCP PcP 14 52 04.0 +1.3
WMQ PP PP 14 54 45.0 +0.9
WMQ eS S 15 01 36.0 -0.8
WMQ AMB AMB
comp=Z,63nm,1.4s,mb5.3
WMQ AMB AMB
comp=Z,1μm,4.9s
WMQ LR LR
comp=N,2μm,19.8s,MS5.5
WMQ LR LR
comp=E,2μm,23.0s,MS5.5
WMQ LR LR
comp=Z,2μm,20.9s,MS5.4
TIXI Tiksi 78.48 352 ⇑eP **P** **14 52 01.4 +0.7**
TIXI pmax pmax
comp=Z,40nm,0.7s,mb5.5
TIXI Tiksi 78.48 352 ⇑eP **P** **14 52 01.5 +0.8**
CHUM Lake Minchumin 79.78 21 eP **P** **14 52 07.7 -0.3**
comp=Z,51nm,1.1s,mb5.4
KTH Kantishna Hill 80.10 22 eP **P** **14 52 08.5 -1.2**
comp=Z,34nm,1.2s,mb5.2
TRF Thorofare Moun 80.28 22 eP **P** **14 52 09.9 -0.8**
comp=Z,14nm,1.2s,mb4.8
IMA2 Indian Mountai 80.59 19 eP **P** **14 52 12.1 -0.2**
MCK McKinley 80.95 22 eP **P** **14 52 12.7 -1.5**
comp=Z,22μm,1.0s
MK31 Makanchi Array 81.27 319 *i* P **P** **14 52 16.6 +0.2**
MKAR Makanchi Array 81.27 319 P **P** **14 52 16.3 -0.1**
comp=Z,42nm,0.8s,mb5.4,baz=101,slow=6.3,SNR=234
MKAR S S 15 02 24.7 -0.7
comp=Z,0.2nm,0.2s,baz=90,slow=4.9,SNR=4.2
MKAR Makanchi Array 81.27 319 *i* P **P** **14 52 16.9 +0.5**
COLA College 81.95 22 *i* P **P** **14 52 18.2 -1.3**
COLA College 81.95 22 *i* P **P** **14 52 18.2 -1.3**
ZALV Zalesovo Beam 82.04 326 P **P** **14 52 19.1 -1.2**
comp=Z,23nm,0.8s,mb5.2,baz=108,slow=5.5,SNR=65
ZALV S S 15 02 25.0 -8.1
comp=Z,0.3nm,0.3s,baz=25,slow=27,SNR=2.1
COLD Coldfoot 82.40 19 eP **P** **14 52 21.7 -0.2**
comp=Z,7.9nm,1.2s,mb4.5
AJM Ajmer 82.60 297 eP **P** **14 52 22.0 -1.8**
THN Thein Dam 82.73 304 eP **P** **14 52 23.6 -0.8**
NVS Novosibirsk 83.22 327 *i* P **P** **14 52 24.6 -1.8**
NVS *i* S S 15 02 40.6 -4.5
NVS pmax pmax
comp=N,43nm,1.5s
NVS pmax pmax
comp=E,84nm,1.5s
NVS pmax pmax
comp=Z,120nm,1.5s,mb5.7
NVS smax
comp=N,10.0nm,2.0s
NVS smax
comp=E,49nm,2.5s
KSH Kashi 83.92 311 ⇑*i*P **P** **14 52 32.5 +2.1**
KSH eAP pP 14 52 36.5 -1.9
KSH eXP sP 14 52 39.0 -2.3
KSH ePP PP 14 55 48.5 +4.3
KSH eSKS 15 02 49.0
KSH eS S 15 02 55.0 +2.1
KSH eXS sS 15 03 03.0 -3.2
KSH eSS SS 15 08 27.3 +6.0
KSH AMB AMB
comp=Z,2μm,2.8s
KSH LR LR
comp=N,940nm,5.8s
KSH LR LR
comp=E,1μm,5.2s
KSH LR LR
comp=Z,472nm,5.3s
ULHL Ulahol 84.30 313 P **P** **14 52 33.6 +1.4**
SNR=14
HYT Haines Junctio 84.43 27 eP **P** **14 52 32.5 +0.1**
KURK Kurchatov 84.69 322 P **P** **14 52 33.4 -0.6**
comp=Z,509nm,1.1s,SNR=46
KURK Kurchatov 84.69 322 P **P** **14 52 33.6 -0.3**
SNR=48
KURK Kurchatov 84.69 322*c i*P **P** **14 52 33.7 -0.3**
KURK pmax pmax
comp=Z,166nm,1.4s,mb6.0
KURK MLR MLR
comp=Z,400nm,15.0s,MS4.9
DAWY Dawson 84.84 24 eP **P** **14 52 34.6 +0.1**
TKM2 Tokmak 2 84.91 314 eP **P** **14 52 35.6 +0.3**
TKM2 pmax pmax
comp=Z,90nm,0.9s,mb5.9
TKM2 Tokmak 2 84.91 314 P **P** **14 52 35.8 +0.6**
SNR=78
TKM2 Tokmak 2 84.91 314 eP **P** **14 52 35.6 +0.3**

	comp=Z,90nm,0.9s,mb5.9							
KZA	**Kyzart**	**84.98**	**313**	P		**P**	**14 52 37.6**	**+1.9**
	SNR=47							
KBK	**Karagaybulak**	**85.32**	**313**	P		**P**	**14 52 37.9**	**+0.6**
	SNR=48							
MAW	**Mawson**	**85.49**	**203**	*e*P		**P**	**14 52 37.8**	**+0.1**
	comp=Z,11nm,0.6s,mb5.2							
MAW	**Mawson**	**85.49**	**203**	P		**P**	**14 52 37.7**	**0.0**
	comp=Z,19nm,0.9s,mb5.2,baz=88,slow=6.1,SNR=24							
MAW				S		S	15 03 03.1	-4.4
	comp=Z,0.5nm,0.3s,baz=281,slow=15,SNR=2.3							
MAW	**Mawson**	**85.49**	**203**	*e*P		**P**	**14 52 37.8**	**+0.1**
MAW				pmax		pmax		
	comp=Z,11nm,0.6s							
CHMS	**Chumysh**	**85.53**	**314**	P		**P**	**14 52 38.7**	**+0.3**
	SNR=59							
UCH	**Uchtor**	**85.55**	**313**	P		**P**	**14 52 40.0**	**+1.5**
	SNR=87							
FRU	**Bishkek**	**85.59**	**314**	⇑*i*P		**P**	**14 52 38.0**	**-0.7**
AAK	**Ala-Archa**	**85.64**	**313**	P		**P**	**14 52 39.6**	**+0.6**
	SNR=45							
USP	**Ospenovka**	**85.76**	**314**	P		**P**	**14 52 39.8**	**+0.3**
	SNR=94							
AML	**Almayashu**	**86.13**	**313**	P		**P**	**14 52 43.2**	**+1.8**
	SNR=22							
AML	**Almayashu**	**86.13**	**313**	*e*P		**P**	**14 52 42.7**	**+1.3**
	comp=Z,146nm,1.0s,mb6.2							
EKS2	**Erkin-Say**	**86.17**	**313**	P		**P**	**14 52 42.2**	**+0.6**
	SNR=48							
EKS2	**Erkin-Say**	**86.17**	**313**	*e*P		**P**	**14 52 42.0**	**+0.4**
	comp=Z,80nm,1.1s,mb5.9							
KBL	**Kabul**	**88.57**	**305**	*e*P		**P**	**14 52 52.0**	**-1.3**
KBL				pmax		pmax		
	comp=Z,11nm,1.1s,mb5.1							
KBL	**Kabul**	**88.57**	**305**	*e*P		**P**	**14 52 52.0**	**-1.3**
	comp=Z,11nm,1.1s,mb5.1							
KK31	**Karatay Array**	**88.61**	**313**	*i* P		**P**	**14 52 52.9**	**-0.4**
KK31				pmax		pmax		
	comp=Z,38nm,1.1s,mb5.6							
KK31	**Karatay Array**	**88.61**	**313**	*i* P		**P**	**14 52 52.0**	**-1.3**
BVA0	**Borovoye Array**	**90.16**	**323**	*i* P		**P**	**14 52 59.2**	**-1.1**
BVA0				pmax		pmax		
	comp=Z,16nm,1.0s,mb5.3							
BRVK	**Borovoye**	**90.22**	**323**	P		**P**	**14 53 00.4**	**-0.2**
	comp=Z,531nm,0.9s,SNR=23							
BRVK	**Borovoye**	**90.22**	**323**	P		**P**	**14 52 59.6**	**-1.1**
	SNR=22							
BRVK	**Borovoye**	**90.22**	**323**	⇑*i*P		**P**	**14 52 59.7**	**-0.9**
NVAR	**Mina Array Bea**	**91.66**	**52**	P		**P**	**14 53 08.2**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=256,slow=5.4,SNR=6.9							
SYO	**Syowa Base**	**93.53**	**199**	⇓*e*P		**P**	**14 53 13.6**	**-2.1**
YKA	**Yellowknife Ar**	**95.41**	**28**	P		**P**	**14 53 23.8**	**-0.6**
	comp=Z,1.8nm,0.8s,mb4.5,baz=281,slow=4.7,SNR=5.9							
YKA				LR		LR	15 32 06.3	
	comp=Z,591nm,21.3s,MS5.0,baz=190,slow=33							
YKA	**Yellowknife Ar**	**95.41**	**28**	P		**P**	**14 53 23.8**	**-0.6**
YKA				LR		LR	15 32 06.3	
AB31	**Akbulak array**	**96.42**	**319**	*i* P		**P**	**14 53 27.3**	**-2.0**
ARU	**Arti**	**97.21**	**326***c*	*i* P		**P**	**14 53 30.7**	**-2.0**
ARU							14 57 28.1	
ARU				S		SKSac	15 04 07.4	-0.8
ARU				SP		SP	15 06 22.4	+6.6
ARU				SS		SS	15 11 34.3	+2.1
ARU				pmax		pmax		
	comp=Z,21nm,1.0s,mb5.5							
ARU	**Arti**	**97.21**	**326**	⇓*e*P		**P**	**14 53 30.0**	**-2.7**
PDAR	**Pinedale Array**	**98.49**	**48**	PKKPbc		PKKPbc	15 10 09.1	-1.0
	comp=Z,0.6nm,0.7s,baz=90,slow=2.7,SNR=3.9							
VNA3	**Neumayer Olymp**	**102.85**	**185**	*e*Pdiff		Pdif	14 53 57.5	-0.4
VNA3				*e*			14 54 03.7	
VNA2	**Neumayer--Watz**	**102.92**	**186**	*e*Pdiff		Pdif	14 53 58.1	-0.1
VNA2				*e*			14 54 04.1	
VNA1	**Neumayer--Stat**	**103.28**	**186**	*e*Pdiff		Pdif	14 53 58.7	-1.1
OBN	**Obninsk**	**109.61**	**327**	*i* P		Pdif	14 54 27.1	-0.9
OBN				*e*			14 59 01.7	
OBN				pmax		pmax		
	comp=Z,7.0nm,0.9s							
AKASG	**Malin Array Be**	**115.40**	**325**	PKP		PKPdf	14 58 40.0	-1.9
	comp=Z,0.7nm,0.5s,baz=51,slow=2.4,SNR=5.0							
AKASG				PP		PP	14 59 43.1	+0.1
	comp=Z,0.2nm,0.3s,baz=62,slow=5.9,SNR=7.5							
AKASG	**Malin Array Be**	**115.40**	**325**	*i* PKIKP		PKPdf	14 58 42.7	+0.8
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.5s							
BOSA	**Boshof**	**120.07**	**233**	PKP		PKPdf	14 58 51.3	-0.3
	comp=Z,7.6nm,0.8s,baz=106,slow=5.5,SNR=8.7							
UZH	**Uzhgorod**	**120.35**	**325**	*e*PKIKP		PKPdf	14 58 46.8	-4.7
BRG	**Berggiesshubel**	**123.52**	**331**	*e*PKIKP		PKPdf	14 58 57.5	0.0
BRG				pmax		pmax		
	comp=Z,5.0nm,1.3s							
BRG	**Berggiesshubel**	**123.52**	**331**	*e*P		PKPdf	14 58 57.5	-0.1
	comp=Z,8.0nm,1.3s							
CLL	**Collm**	**123.69**	**331**	*e*PKPdf		PKPdf	14 58 57.0	-0.8
KHC	**Kasperske Hory**	**124.81**	**329**	*i* PKIKP		PKPdf	14 59 00.6	+0.6
GERES	**GERESS Array B**	**124.92**	**329**	PKP		PKPdf	14 59 00.2	-0.1
	comp=Z,3.0nm,0.8s,baz=76,slow=1.7,SNR=14							
TSUM	**Tsumeb**	**130.44**	**239**	*e*PKPdf		PKPdf	14 59 11.9	+0.2
TSUM				*e*SKPbc		SKPbc	15 02 33.7	0.0
LPAZ	**La Paz**	**133.40**	**118**	PKP		PKPdf	14 59 15.6	-1.8
	comp=Z,6.0nm,0.7s,baz=239,slow=6.1,SNR=3.6							
LPAZ	**La Paz**	**133.40**	**118**	PKP		PKPdf	14 59 15.6	-1.8
TAM	**Tamanrasset**	**144.69**	**303**	*e*PKIKP		PKPdf	14 59 37.3	-0.5
TOA0	**Torodi Ar. Sit**	**151.31**	**288**	*e*PKPdf		PKPdf	14 59 47.8	-1.0
TOA0				*e*PKPbc		PKPbc	14 59 53.9	-0.9
TORD	**Torodi Ar. Bea**	**151.31**	**288**	PKP		PKPdf	14 59 47.6	-1.2
	comp=Z,3.1nm,0.9s,baz=43,slow=3.6,SNR=7.7							
TORD				PKPbc		PKPbc	14 59 54.4	-0.5
	comp=Z,48nm,0.8s,baz=62,slow=2.0,SNR=157							
TORD				PKPab		PKPab	15 00 02.7	-0.2
	comp=Z,10nm,0.6s,baz=60,slow=1.9,SNR=12							
TORD				PP		PP	15 03 31.4	-2.3
	comp=Z,1.8nm,1.1s,baz=61,slow=10,SNR=3.5							

NEIC 26 15:25:08.4, 3640S×17789E, h187km, MG4.1(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**1.70**	**170**	P	Pn	15 25 43.0	+0.2
MWZ	**Matawai**	**1.95**	**188**	*e*P	Pn	15 25 45.6	+0.2
MWZ				S	Sn	15 26 14.6	+0.3
URZ	**Urewera**	**1.96**	**198**	P	Pn	15 25 45.5	+0.1
KNZ	**Kokohu**	**2.62**	**184**	P	Pn	15 25 53.1	+0.3
BKZ	**Black Stump Fm**	**2.98**	**201**	*e*P	Pn	15 25 57.4	+0.4
WNVZ	**Wahianoa**	**3.44**	**211**	P	Pn	15 26 03.6	+0.9
MOVZ	**Moawhango**	**3.45**	**209**	P	Pn	15 26 02.7	0.0
TSZ	**Takapari Road**	**3.96**	**202**	P	Pn	15 26 08.4	-0.7
TSZ				S	Sn	15 26 57.0	+0.3
WAZ	**Wanganui**	**4.06**	**213**	*e*P	Pn	15 26 11.3	+0.9
MRZ	**Mangatainoka R**	**4.62**	**202**	*e*P	Pn	15 26 15.9	-1.7
KIW	**Kapiti Island**	**5.03**	**207**	P	Pn	15 26 21.0	-1.8
MTW	**Mount Morrison**	**5.11**	**201**	P	Pn	15 26 21.9	-1.8
CAW	**Cannon Point**	**5.19**	**204**	P	Pn	15 26 22.8	-2.1
PAWZ	**Paruwai Farm**	**5.33**	**200**	P	Pn	15 26 24.9	-1.8
MSWZ	**Moikau Station**	**5.42**	**202**	P	Pn	15 26 25.6	-2.1
MRW	**Makara Radio**	**5.43**	**206**	P	Pn	15 26 25.5	-2.4
WEL	**Wellington**	**5.45**	**206**	P	Pn	15 26 26.0	-2.2
TCW	**Tory Channel**	**5.57**	**209**	P	Pn	15 26 27.4	-2.4
QRZ	**Quartz Range**	**6.09**	**222**	*e*P	Pn	15 26 34.2	-2.4
BSWZ	**Blackbirch Sta**	**6.16**	**209**	P	Pn	15 26 35.2	-2.2
THZ	**Tophouse**	**6.61**	**214**	*e*P	Pn	15 26 41.2	-2.1
KHZ	**Kahutara**	**6.89**	**208**	P	Pn	15 26 44.2	-2.7
LTZ	**Lake Taylor**	**7.71**	**213**	*e*P	Pn	15 26 54.7	-3.0
MQZ	**McQueen's Vall**	**8.33**	**207**	*e*P	Pn	15 27 01.5	-4.3

IDC 26 15:40:37.8±1.9, 464S×15303E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.5/3, Error ellipse: s-maj=116.8km s-min=39.0km az=133.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.72**	**229**	P	P	15 45 52.2	+0.4
	0.4nm,0.5s,baz=55,slow=10.0,SNR=3.5						
WRA				PcP	PcP	15 49 35.5	-0.6
	0.8nm,0.8s,baz=55,slow=2.7,SNR=4.7						
ASAR	**Alice Springs**	**26.42**	**222**	P	P	15 46 17.0	+0.6
	0.7nm,1.0s,baz=49,slow=8.7,SNR=4.2						
ASAR				PcP	PcP	15 49 41.5	-0.6
	0.5nm,0.7s,baz=66,slow=2.4,SNR=5.7						
FITZ	**Fitzroy Crossi**	**29.94**	**241**	P	P	15 46 47.2	-0.7
	1.8nm,1.0s,baz=55,slow=12,SNR=3.6						
TORD	**Torodi Ar. Bea**	**150.47**	**289**	PKPbc	PKPbc	16 00 32.6	+0.1

1.0nm,0.5s,baz=74,slow=2.4,SNR=12

IDC ***26*** *15:42:57.2±0.3, 191S×9948E, h0km, mb5.4/28, mb1 5.4/28, mb1mx5.4/28, mbtmp5.4/28, MS5.8/27, Ms1 5.8/27, ms1mx5.6/43, Error ellipse: s-maj=8.0km s-min=7.6km az=11.0*

BJI ***26*** *15:42:59.5, 2.12S×9942E, h42km, mB6.2, mb5.4, Ms6.3, Msz6.2*

SZGRF ***26*** *15:42:59.2, 2.35S×9995E, h33km, mb5.8, MS5.8, Southern Sumatera, Indonesia*

ISCJB ***26*** *15:43:00.5±0.1, 180S±002×9942E±002, h29km, mb5.7/186, MS6.1/258, Error ellipse: s-maj=3.6km s-min=2.4km az=25.9*

GCMT ***26*** *15:43:01.4±0.1, 2.13S×9920E, h25km, MW6.1/106, Moment Tensor Solution. s104,c208; s106,c237; Duration: 2≥7 Moment tensor: Scale 10^18Nm; Mrr0.65±.01; Mθθ-0.46±.01; Mϕϕ-0.19±.01; Mrθ1.40±.03; Mθϕ0.48±.01; Mϕr-0.92±.03; Best double couple: M0 1.82900×10^18 NP1:ϕs314.00000°, δ12.00000°, λ101.00000°. NP2:ϕs123.00000°, δ78.00000°, λ88.00000°. Principal axes: T 1.7470, Plg57.0000°, Azm30.0000°; N 0.1640, Plg2.0000°, Azm124.0000°; P -1.9110, Plg33.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***26*** *15:43:01.4±0.1, 179S×9949E, h26km, mb5.6/81, ME5.9, MS6.1/191, MW6.0 Error ellipse: s-maj=5.4km s-min=3.8km az=224.0, Moment Tensor Solution. s49 Moment tensor: Scale 10^18Nm; Mrr0.00; Mθθ0.00; Mϕϕ0.00; Mrθ0.00; Mθϕ0.00; Mϕr0.00; Best double couple: M0 1.30000×10^18 NP1:ϕs142.00000°, δ72.00000°, λ70.00000°. NP2:ϕs12.00000°, δ27.00000°, λ137.00000°. Principal axes: T 1.4700, Plg58.0000°, Azm24.0000°; N -0.6300, Plg19.0000°, Azm148.0000°; P -0.8400, Plg24.0000°, Azm247.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [IV] at Padang, [III] at Mukomuko and [II] at Padangpanjang, Sumatra. Felt in Singapore.

MOS ***26*** *15:43:01.4±1.1, 168S×9949E, h33km, mb5.9/83, MS5.9/77 Error ellipse: s-maj=7.7km s-min=4.1km az=114.3*

DJA ***26*** *15:43:05, 178S×9942E, h48km, Mw6.2/43*

ISC 26 15:43:02.5±0.1, 182S±002×9940E±002, h31km, h31km±1.1km: pP-P, n850, σ1§17/670, mb5.7/185, MS6.1/258, 66C-32D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.68**	**36**	P	**Pn**	**15 43 30.2**	**+0.5**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.27**	**64**	P	**Pn**	**15 43 53.4**	**+1.7**
	0.0nm,0.0s						
KSI	**Kapahiang**	**3.67**	**120**	P	**Pn**	**15 43 57.6**	**+0.4**
	0.0nm,0.0s						
TRSI	**Tarutung**	**3.84**	**353**	P	**Pn**	**15 44 00.2**	**+0.7**
	0.0nm,0.0s						
JMBI	**JAMBI**	**4.24**	**88**	P	**Pn**	**15 44 07.0**	**+2.0**
	0.0nm,0.0s						
DSRI	**Dabo**	**5.34**	**76**	P	**Pn**	**15 44 21.7**	**+1.5**
	1μm,1.0s						
TSI	**Tuntungan**	**5.35**	**351**	P	**Pn**	**15 44 20.4**	**+0.1**
	4μm,1.3s						
KGM	**Kluang**	**5.46**	**46**	⇓P	**Pn**	**15 44 24.8**	**+3.0**
FRIM	**Kepong**	**5.49**	**24**	⇓P	**Pn**	**15 44 24.3**	**+2.1**
MYKOM	**Kota Tinggi**	**5.71**	**51**	⇓P	**Pn**	**15 44 27.9**	**+2.6**
IPM	**Ipoh**	**6.46**	**15**	⇑P	**Pn**	**15 44 37.4**	**+1.9**
PPBI	**Pangkal Pinang**	**6.74**	**93**	P	**Pn**	**15 44 41.2**	**+1.8**
	341nm,1.1s						
SBJI	**Serang**	**7.96**	**123**	P	**Pn**	**15 44 57.9**	**+1.8**
	1μm,1.1s						
KTGM	**Kuala Trenggan**	**8.02**	**28**	⇓P	**Pn**	**15 44 59.2**	**+2.3**
TPI	**Tanjungpandan**	**8.30**	**97**	P	**Pn**	**15 45 04.0**	**+3.2**
	364nm,1.2s						
TPI	**Tanjungpandan**	**8.30**	**97**	⇓*e*P	**Pn**	**15 45 01.0**	**+0.2**
TPI				*e*S	**Sn**	**15 46 40.0**	**+6.5**
BSI	**Banda Aceh**	**8.34**	**331**	P	**Pn**	**15 45 00.1**	**-1.3**
	778nm,1.1s						
DBJI	**Dramaga**	**8.71**	**123**	P	**Pn**	**15 45 06.3**	**-0.1**
	1μm,1.0s						
CBJI	**Citeko**	**8.72**	**122**	P	**Pn**	**15 45 09.7**	**+3.1**
	6μm,0.8s						
SKJI	**Sukabumi**	**8.80**	**126**	P	**Pn**	**15 45 10.9**	**+3.2**
	2μm,0.9s						
SNG	**Songkhla**	**9.02**	**8**	P	**Pn**	**15 45 09.0**	**-1.6**
	2μm,1.0s						
LEM	**Lembang**	**9.58**	**122**	P	**Pn**	**15 45 19.8**	**+1.4**
	1μm,0.9s						
JCJI	**Jatiwangi**	**9.99**	**118**	P	**Pn**	**15 45 29.5**	**+5.5**
	1μm,0.9s						
KSM	**Kuching**	**11.38**	**73**	⇓P	**Pn**	**15 45 46.8**	**+3.7**
KSM	**Kuching**	**11.38**	**73**	*e*P	**Pn**	**15 45 45.1**	**+2.0**
BJII	**Banjamegara**	**11.64**	**118**	P	**Pn**	**15 45 46.6**	**0.0**
	426nm,1.4s						
STKI	**Sintang**	**12.22**	**81**	P	**Pn**	**15 45 53.8**	**-0.7**
	522nm,1.7s						
SBUM	**Sibu**	**13.50**	**72**	⇓P	**Pn**	**15 46 15.6**	**+3.6**
SJI	**Sawahan**	**13.65**	**116**	P	**Pn**	**15 46 12.6**	**-1.5**
	394nm,1.7s						
NNT	**Nongplab**	**14.32**	**1**	P	**Pn**	**15 46 20.5**	**-2.7**
	579nm,1.0s						
TRT	**Tretes**	**14.42**	**114**	⇓*e*P	**Pn**	**15 46 22.0**	**-2.6**
PLKI	**Palangkaraya**	**14.54**	**92**	P	**Pn**	**15 46 30.2**	**+3.9**
	1μm,1.0s						
BBKI	**Banjar Baru**	**15.51**	**96**	P	**Pn**	**15 46 40.7**	**+1.6**
	652nm,2.6s						
NST	**Nakhon Sawan**	**17.39**	**2**	P	**Pn**	**15 46 59.0**	**-4.0**
KHKI	**Kahang-Kahang**	**17.39**	**113**	P	**Pn**	**15 47 05.5**	**+2.4**
	299nm,1.4s						
UBT	**Ubonrachathani**	**17.84**	**18**	P	**Pn**	**15 47 08.5**	**0.0**
SMKI	**Samarinda**	**17.85**	**86**	P	**Pn**	**15 47 10.5**	**+1.7**
	832nm,1.8s						
MTNI	**Mataram**	**18.01**	**113**	P	**Pn**	**15 47 10.3**	**-0.4**
	190nm,1.0s						
KKTK	**Khon Kaen**	**18.35**	**10**	PN	**Pn**	**15 47 11.0**	**-3.8**
KKTK				PG	pP	15 47 20.0	-2.9
KKTK				SG	sP	15 47 31.3	+4.4
KKM	**Kota Kinabalu**	**18.51**	**65**	⇓P	**Pn**	**15 47 17.1**	**+0.3**
KKM	**Kota Kinabalu**	**18.51**	**65**	*e*P	**Pn**	**15 47 16.5**	**-0.4**
SDKM	**Sandakan**	**19.25**	**67**	⇓P	**Pn**	**15 47 25.9**	**+0.2**
TSM	**Tawau**	**19.43**	**72**	⇓P	**Pn**	**15 47 27.5**	**-0.4**
KDM	**Kudat**	**19.44**	**63**	⇑P	**Pn**	**15 47 27.9**	**0.0**
CM31	**Chiang Mai Arr**	**20.15**	**359**	PFAKE		15 47 50.0	+16
CM31				LR	LR		
	comp=Z,70μm,19.0s,MS6.0						
CMAR	**Chiang Mai Arr**	**20.15**	**359**	P	**P**	**15 47 33.5**	**-0.9**
	comp=Z,38nm,0.6s,baz=188,slow=9.4,SNR=46						
CMAR				S	**S**	**15 51 19.9**	**+0.8**
	comp=Z,3.4nm,1.0s,baz=239,slow=30,SNR=2.0						
CMAR				LR	LR	15 56 21.1	
	comp=Z,84μm,18.3s,MS6.1,baz=188,slow=40						
CMAR	**Chiang Mai Arr**	**20.15**	**359**	P	**P**	**15 47 33.5**	**-0.8**
CMAR				S	**S**	**15 51 19.9**	**+0.8**
MYLDM	**Lahad Datu**	**20.30**	**70**	⇑P	**P**	**15 47 37.4**	**+1.3**
MKS	**Makassar**	**20.31**	**100**	⇓*e*P	**P**	**15 47 39.3**	**+3.1**
MKS				*e*S	**S**	**15 51 26.7**	**+4.3**
PCI	**Palu**	**20.45**	**88**	P	**P**	**15 47 37.5**	**-0.2**
	comp=Z,2μm,1.8s						
CHG	**Chiang Mai**	**20.50**	**359**	⇓P	**P**	**15 47 37.0**	**-1.2**
	comp=Z,238nm,0.9s						
CHTO	**Chiang Mai**	**20.50**	**359**	*e*P	**P**	**15 47 36.2**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,277nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,65μm,20.0s,MS6.0						
CHTO	**Chiang Mai**	**20.50**	**359**	*e*P	**P**	**15 47 36.2**	**-2.0**
	comp=Z,277nm,1.1s						
CHTO				LR	LR		
	comp=Z,65μm,20.0s,MS6.0						
NANT	**Nan**	**20.53**	**4**	⇑P	**P**	**15 47 34.0**	**-4.4**
	comp=Z,2μm,1.0s						
KAPI	**Kappang**	**20.56**	**99**	P	**P**	**15 47 36.3**	**-2.6**
	comp=Z,203nm,0.9s,baz=285,slow=8.7,SNR=17						
KAPI				S	**S**	**15 51 27.1**	**-0.3**
	comp=Z,28nm,1.1s,baz=98,slow=20,SNR=3.3						
KAPI	**Kappang**	**20.56**	**99**	*e*P	**P**	**15 47 36.0**	**-2.8**
	comp=Z,918nm,1.1s						
KAPI				LR	LR		
	comp=Z,36μm,21.0s,MS5.7						

PALK	**Pallekele**	**20.73**	**296**	*e*P		**P**	**15 47 42.8**	**+2.1**
	comp=Z,221nm,1.2s							
PALK				LR		LR		
	comp=Z,27μm,20.0s,MS5.6							
BATP	**Bataraza**	**21.15**	**60**	*e*P		**P**	**15 47 45.6**	**+0.3**
CHRT	**Chiangrai**	**21.55**	**1**	P		**P**	**15 47 47.0**	**-2.5**
	comp=Z,2μm,0.9s,mb6.6							
WSI	**Waingapu**	**22.19**	**111**	⇓*e*P		**P**	**15 48 00.2**	**+3.8**
PPR	**Puerto Princes**	**22.43**	**59**	⇓*e*P		**P**	**15 48 08.0**	**+9.1**
QIZ	**Qiongzhong**	**23.12**	**26**	P		**P**	**15 48 05.0**	**-1.1**
QIZ				S		**S**	**15 52 16.0**	**+0.6**
QIZ				AMB		AMB		
	comp=Z,141nm,1.0s,mb5.3							
QIZ				AMB		AMB		
	comp=Z,5μm,9.1s							
QIZ				LR		LR		
	comp=N,40μm,14.8s,MS6.0							
QIZ				LR		LR		
	comp=E,20μm,15.0s,MS6.0							
QIZ				LR		LR		
	comp=Z,50μm,19.4s,MS6.0							
QIZ	**Qiongzhong**	**23.12**	**26**	*e*P		**P**	**15 48 04.4**	**-1.7**
	comp=Z,407nm,1.1s,mb5.8							
QIZ				LR		LR		
	comp=Z,51μm,19.0s,MS6.0							
KDI	**Kendari**	**23.28**	**96**	P		**P**	**15 48 08.0**	**0.0**
	comp=Z,386nm,1.3s,mb5.7							
KDI	**Kendari**	**23.28**	**96**	⇑*e*P		**P**	**15 48 06.3**	**-1.7**
KDI				*e*S		**S**	**15 52 14.0**	**-4.3**
ENPP	**El Nido**	**23.75**	**57**	*e*P		**P**	**15 48 11.3**	**-1.1**
MDRS	**Chennai**	**24.08**	**308**	*e*P		**P**	**15 48 15.6**	**+0.1**
TRD	**Trivandrum**	**24.61**	**295**	*e*P		**P**	**15 48 19.4**	**-0.9**
TRD				AMb		AMB	15 48 41.2	
	comp=Z,278nm,1.9s,mb5.5							
TRD				*e*S		**S**	**15 52 40.6**	**+0.8**
BUSP	**Coron**	**24.81**	**56**	*e*P		**P**	**15 48 22.1**	**0.0**
KOD	**Kodaikanal**	**24.90**	**299**	*e*P		**P**	**15 48 23.0**	**+0.1**
KOD				AMb		AMB	15 48 40.5	
	comp=Z,160nm,0.6s,mb5.7							
VIS	**Vishakhapatnam**	**25.05**	**321**	*e*P		**P**	**15 48 24.9**	**+0.7**
VIS				AMb		AMB	15 48 44.5	
	comp=Z,263nm,1.0s,mb5.7							
VIS				*i* S		**S**	**15 52 50.5**	**+3.7**
BATI	**Baumata**	**25.50**	**110**	P		**P**	**15 48 29.1**	**+0.7**
	comp=Z,143nm,1.0s,mb5.5							
BATI	**Baumata**	**25.50**	**110**	P		**P**	**15 48 24.4**	**-4.1**
	comp=Z,83nm,0.9s,mb5.3,baz=114,slow=0.7,SNR=9.5							
BATI				S		**S**	**15 52 49.1**	**-5.0**
	comp=Z,61nm,1.0s,baz=2.8,slow=19,SNR=5.3							
MNI	**Manado**	**25.64**	**83**	P		**P**	**15 48 30.3**	**+0.6**
	comp=Z,2μm,1.4s,mb6.4							
BWNR	**Bhubaneshwar**	**25.70**	**329**	*e*P		**P**	**15 48 31.0**	**+0.9**
BWNR				*e*S		**S**	**15 53 00.0**	**+3.0**
PAGZ	**Pagadian**	**25.77**	**68**	*e*P		**P**	**15 48 31.1**	**+0.3**
SJMP	**San Jose**	**25.81**	**56**	*e*P		**P**	**15 48 31.2**	**+0.1**
GUIM	**Jordan**	**26.17**	**61**	*e*P		**P**	**15 48 33.4**	**-1.1**
CTBH	**Cotabato--PC H**	**26.36**	**70**	⇑*e*P		**P**	**15 48 35.3**	**-0.9**
KALP	**Kalibo**	**26.45**	**59**	⇑*e*P		**P**	**15 48 45.3**	**+8.4**
CAL	**Calcutta**	**26.51**	**337**	*ex*		x	15 48 34.4	
CAL				*ex*		x	15 53 33.4	
OTRP	**Odiongan**	**26.52**	**57**	*e*P		**P**	**15 48 36.7**	**-0.8**
RCP	**Roxas**	**26.74**	**60**	⇓*e*P		**P**	**15 48 39.8**	**+0.2**
SCZP	**Santa Cruz**	**26.77**	**48**	*e*P		**P**	**15 48 39.3**	**-0.5**
TBP	**Tagbilaran**	**26.91**	**64**	*e*P		**P**	**15 48 37.7**	**-3.4**
IMP	**Imphal**	**26.97**	**349**	*i* P		**P**	**15 48 44.0**	**+2.5**
KMI	**Kunming**	**26.97**	**7**	P		**P**	**15 48 42.5**	**+1.0**
KMI				AP		pP	15 48 48.8	-1.8
KMI				PP			15 49 28.5	
KMI				S		**S**	**15 53 16.8**	**-0.2**
KMI				SS			15 54 30.5	
KMI				AMB		AMB		
	comp=Z,97nm,0.9s,mb5.3							
KMI				AMB		AMB		
	comp=Z,3μm,8.8s							
KMI				LR		LR		
	comp=N,24μm,19.2s,MS6.1							
KMI				LR		LR		
	comp=E,36μm,15.4s,MS6.1							
KMI				LR		LR		
	comp=Z,32μm,23.1s							
KMI	**Kunming**	**26.97**	**7**	P		**P**	**15 48 42.5**	**+1.0**
KMI				*PP		pP	15 48 48.8	-1.8
KMI							15 49 28.6	
KMI				PPP			15 49 40.3	
KMI				S		**S**	**15 53 16.8**	**-0.2**
KMI				SS			15 54 30.5	
KMI				SSS			15 54 48.6	
KMI				pmax		pmax		
	comp=Z,97nm,0.9s,mb5.

NGP ex x 15 49 16.0
comp=Z,87nm,1.4s
NGP eS S **15 54 10.6 +1.2**
FITZ Fitzroy Crossi 30.41 124 ⇑*i*P P **15 49 10.4 -1.9**
comp=Z,83nm,0.8s,mb5.5
FITZ eS S **15 54 09.1 -2.2**
FITZ Fitzroy Crossi 30.41 124 P P **15 49 10.8 -1.4**
comp=Z,34nm,0.8s,mb5.1,baz=280,slow=6.1,SNR=33
FITZ S S **15 54 09.9 -1.3**
comp=Z,14nm,1.2s,baz=169,slow=22,SNR=3.5
FITZ LR LR 16 02 28.7
comp=Z,10μm,19.5s,MS5.5,baz=156,slow=39
GOA Goa 30.59 305⇑*ex* x 15 48 57.1
GOA eS S **15 54 18.0 +4.0**
ODAN Odare 30.77 339 *eP* P **15 49 16.5 +1.2**
comp=Z,495nm,0.9s,mb6.3
RAMN Ramite 31.15 338 *eP* P **15 49 20.0 +1.3**
comp=Z,278nm,0.8s,mb6.1
JBP Jabalpur 31.22 324 *eP* P **15 49 18.4 -0.9**
JBP eS S **15 54 27.2 +3.5**
KAD Karad 31.30 308 *eP* P **15 49 20.1 0.0**
KAD AMb AMB 15 49 29.3
comp=Z,70nm,1.5s,mb5.3
AKL Akola 31.33 317 *ex* P **15 49 26.0 +5.6**
SWI Sorong 31.86 89 P P **15 49 23.9 -1.3**
comp=Z,504nm,1.3s,mb6.2
JIRN Jiri 31.95 337 *eP* P **15 49 27.2 +1.5**
comp=Z,558nm,0.9s,mb6.4
PKIN Phulchoki 32.18 336 *eP* P **15 49 28.4 +0.7**
comp=Z,77nm,0.8s,mb5.6
POO Poona 32.26 310 *eP* P **15 49 28.2 -0.4**
POO AMb AMB 15 49 34.0
comp=Z,120nm,1.4s,mb5.5
GUN Gumba 32.29 337 *eP* P **15 49 30.0 +1.3**
comp=Z,392nm,0.7s,mb6.4
LSA Lhasa 32.32 346 P P **15 49 30.0 +1.1**
LSA AP pP 15 49 37.5 -0.5
LSA XP sP 15 49 41.5 -0.3
LSA S **S** **15 54 50.0 +9.2**
LSA AMB AMB
comp=Z,40nm,1.1s,mb5.2
LSA LR LR
comp=N,13μm,22.8s
LSA LR LR
comp=E,23μm,38.7s
LSA LR LR
comp=Z,18μm,29.6s
LSA Lhasa 32.32 346 *eP* P **15 49 30.0 +1.1**
LSA pmax pmax
comp=Z,182nm,0.9s,mb5.9
LSA MLR MLR
comp=Z,14μm,22.0s,MS5.6
LSA Lhasa 32.32 346 *eP* P **15 49 30.0 +1.1**
comp=Z,182nm,0.9s,mb5.9
LSA LR LR
comp=Z,14μm,22.0s,MS5.6
DMN Daman 32.33 336 *eP* P **15 49 30.0 +1.0**
comp=Z,220nm,1.1s,mb5.9
KKN Kakani 32.42 336 *eP* P **15 49 30.8 +1.0**
comp=Z,302nm,0.8s,mb6.2
QZH Quanzhou 32.46 34⇑*iP* P **15 49 32.3 +2.1**
QZH S **S** **15 54 46.0 +2.8**
QZH AMB AMB
comp=Z,4μm,9.4s
QZH LR LR
comp=N,87μm,16.7s,MS6.5
QZH LR LR
comp=E,21μm,15.8s,MS6.5
QZH LR LR
comp=Z,82μm,18.3s,MS6.5
CD2 Chengdu 32.81 7 P P **15 49 32.0 -1.2**
CD2 AP pP 15 49 41.5 -0.8
CD2 XP sP 15 49 45.0 -1.1
CD2 PP PP 15 50 42.3 -5.5
CD2 PCP PcP 15 52 15.5 -2.4
CD2 S **S** **15 54 47.0 -1.4**
CD2 PCS PcS 15 55 59.5 -3.7
CD2 SS SS 15 56 47.8 -23
CD2 SCS ScS 15 59 54.5 -5.3
CD2 AMB AMB
comp=Z,90nm,0.8s,mb5.8
CD2 AMB AMB
comp=Z,2μm,5.8s
CD2 LR LR
comp=N,47μm,19.2s,MS6.3
CD2 LR LR
comp=E,43μm,20.4s,MS6.3
CD2 LR LR
comp=Z,43μm,17.4s,MS6.2
GKN Gorkha 32.87 335 *eP* P **15 49 34.7 +0.9**
comp=Z,406nm,1.1s,mb6.3
KOLN Koldanda 33.11 334 *eP* P **15 49 37.1 +1.2**
comp=Z,287nm,0.7s,mb6.3
DANN Dangsing 33.54 335 *eP* P **15 49 40.6 +1.0**
comp=Z,366nm,0.9s,mb6.3
NACB Ninganchiao 33.65 39 *eP* P **15 49 40.3 -0.3**
YHNB Yeheng 33.88 38 *eP* P **15 49 42.3 -0.3**
comp=Z,291nm,1.5s,mb6.0
YHNB LR LR
comp=Z,27μm,20.0s,MS6.0
MUN Mundaring 33.93 154 *eP* P **15 49 40.0 -3.0**
TATO Taipei 34.17 37 *eP* P **15 49 44.4 -0.8**
comp=Z,256nm,1.3s,mb6.0
TATO LR LR
comp=Z,19μm,20.0s,MS5.8
KLBR Kellerberrin 34.31 152 *eP* P **15 49 45.3 -1.0**
comp=Z,27nm,0.9s,mb5.2
NWAO Narrogin (SRO) 35.19 153 P P **15 49 51.1 -2.7**
comp=Z,24nm,1.1s,mb5.0,baz=152,slow=1.8,SNR=2.7
NWAO LR LR 16 03 00.2
comp=Z,43μm,21.3s,MS6.2,baz=327,slow=34
WHN Wuhan 35.19 23 ⇓P P **15 49 55.3 +1.4**
WHN PP PP 15 51 12.5 -1.7
WHN S **S** **15 55 32.0 +6.7**
WHN LR LR
comp=N,61μm,15.1s,MS6.5
WHN LR LR
comp=E,36μm,18.2s,MS6.5
WHN LR LR
comp=Z,88μm,19.5s,MS6.5
PTH Pithoragarh 36.19 331 *eP* P **15 50 03.2 +0.7**
XAN Xi'an 36.77 13 P P **15 50 06.0 -1.4**
XAN AP pP 15 50 14.8 -1.8
XAN PP PP 15 51 38.0 +6.4
XAN S **S** **15 55 48.0 -1.4**
XAN AMB AMB
comp=Z,53nm,0.9s,mb5.4
XAN AMB AMB
comp=Z,2μm,14.5s
XAN LR LR
comp=N,6μm,16.1s,MS6.3
XAN LR LR
comp=E,41μm,19.7s,MS6.3
XAN LR LR
comp=Z,78μm,16.8s,MS6.6
AJM Ajmer 36.91 321 *eP* P **15 50 08.7 0.0**
AJM AMb AMB 15 50 13.8
comp=Z,126nm,1.7s,mb5.5
NDI New Delhi 37.05 327⇑*iP* P **15 50 08.0 -1.8**
NDI eS S **15 55 55.0 +1.3**
DDI Dehra Dun 37.90 329 *eP* P **15 50 16.2 -0.8**
LZH Lanzhou 37.93 6 P P **15 50 17.3 +0.1**
LZH AP pP 15 50 24.3 -2.1
LZH PP PP 15 51 47.0 +2.7
LZH S **S** **15 56 07.0 0.0**
LZH eSS SS 15 58 45.3 -9.3
LZH AMB AMB
comp=Z,512nm,1.2s,mb6.1
LZH AMB AMB
comp=Z,2μm,5.1s
LZH LR LR
comp=N,26μm,15.4s
LZH LR LR
comp=Z,44μm,16.8s,MS6.3
LZH Lanzhou 37.93 6 P P **15 50 17.3 +0.1**
LZH *SP sP 15 50 27.9 -2.3
LZH 15 51 47.1
LZH S **S** **15 56 07.0 0.0**
LZH *SS sS 15 56 19.0 -3.2
LZH eSS SS 15 58 45.3 -9.3
LZH pmax pmax
comp=Z,512nm,1.2s,mb6.1
LZH MLR MLR
comp=Z,44μm,16.8s,MS6.3
LZH Lanzhou 37.93 6 P P **15 50 17.3 +0.1**
comp=Z,512nm,1.2s,mb6.1
LZH pP pP 15 50 24.2 -2.2
LZH sP sP 15 50 27.9 -2.3
LZH PP PP 15 51 47.1 +2.8
LZH S **S** **15 56 07.0 0.0**
LZH sS sS 15 56 19.0 -3.2
LZH eSS SS 15 58 45.3 -9.3
LZH LR LR
comp=Z,44μm,16.8s,MS6.3
NJ2 Nanjing 38.40 27 *eP* P **15 50 21.3 +0.1**
NJ2 XP sP 15 50 31.8 -2.4
NJ2 PP PP 15 51 51.3 +1.8
NJ2 S **S** **15 56 11.0 -3.2**
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb4.8
NJ2 AMB AMB
comp=Z,950nm,8.4s
NJ2 LR LR
comp=N,9μm,19.1s,MS6.0
NJ2 LR LR
comp=E,20μm,18.0s,MS6.0
NJ2 LR LR
comp=Z,19μm,18.0s,MS6.0
WRA Warramunga Arr 38.60 120 P P **15 50 21.2 -1.9**
comp=Z,164nm,1.0s,mb5.7,baz=297,slow=9.4,SNR=146
WRA S **S** **15 56 14.2 -3.4**
comp=Z,25nm,1.1s,baz=292,slow=16,SNR=16
WRA LR LR 16 08 09.9
comp=Z,10μm,21.9s,MS5.6,baz=315,slow=39
WRA Warramunga Arr 38.60 120 P P **15 50 21.2 -1.9**
WRA S **S** **15 56 14.2 -3.4**
WRAB Tennant Creek 38.60 120 P P **15 50 21.0 -2.1**
comp=Z,1μm,1.0s,mb6.6,SNR=66
WRAB Tennant Creek 38.60 120*c iP* P **15 50 21.3 -1.8**
WRAB Tennant Creek 38.60 120 *eP* P **15 50 21.1 -2.0**
comp=Z,208nm,1.0s,mb5.8
WRAB LR LR
comp=Z,11μm,20.0s,MS5.7
WB2 Warramunga Arr 38.61 120⇑*iP* P **15 50 21.1 -2.1**
WB2 *eS* S **15 56 13.2 -4.5**
SSE Sheshan 38.74 31 P P **15 50 25.3 +1.2**
SSE XP sP 15 50 36.8 -0.3
SSE PP PP 15 51 57.3 +4.1
SSE S **S** **15 56 21.3 +2.0**
SSE XS sS 15 56 36.3 +1.8
SSE AMB AMB
comp=Z,91nm,1.0s,mb5.5
SSE AMB AMB
comp=Z,2μm,6.3s
SSE LR LR
comp=N,25μm,18.4s,MS6.1
SSE LR LR
comp=E,8μm,18.4s,MS6.1
SSE LR LR
comp=Z,34μm,18.0s,MS6.2
SSE Sheshan 38.74 31 P P **15 50 25.2 +1.1**
comp=Z,91nm,1.0s,mb5.5
SSE sP sP 15 50 36.8 -0.3
SSE PP PP 15 51 57.2 +4.0
SSE S **S** **15 56 21.2 +1.9**
SSE sS sS 15 56 36.2 +1.6
SSE LR LR
comp=Z,34μm,18.0s,MS6.2
SMLA Simla 39.00 329 *i* P P **15 50 25.5 -0.8**
SMLA AMb AMB 15 50 32.0
comp=Z,261nm,3.7s
FORT Forrest 39.57 140 *eP* P **15 50 31.6 +0.6**
comp=Z,103nm,0.7s,mb5.7
BHK Bhakra 39.61 328 *ex* x 15 50 56.8
ASAR Alice Springs 39.84 126 P P **15 50 32.4 -1.1**
comp=Z,76nm,0.9s,mb5.4,baz=302,slow=7.7,SNR=139
ASAR S **S** **15 56 34.2 -2.0**
comp=Z,17nm,1.0s,baz=291,slow=16,SNR=12
PONG Pong 40.28 328 *ex* x 15 51 35.5
DLH Dalhousie 40.74 329 *eP* P **15 50 42.0 +1.3**
THN Thein Dam 40.78 329 *eP* P **15 50 39.8 -1.2**
THN *ex* x 15 57 21.8
GTA Gaotai 41.03 0⇑⇑P P **15 50 43.3 +0.4**
GTA AP pP 15 50 50.8 -1.4
GTA XP sP 15 50 54.3 -1.7
GTA PP PP 15 52 22.0 +4.0
GTA S **S** **15 56 54.3 +0.9**
GTA SS SS 15 59 51.3 -5.1
GTA AMB AMB
comp=Z,59nm,0.9s,mb5.2
GTA AMB AMB
comp=Z,4μm,7.8s
GTA LR LR
comp=N,24μm,21.6s,MS6.1
GTA LR LR
comp=E,18μm,22.8s,MS6.1
GTA LR LR
comp=Z,29μm,21.0s,MS6.1
TIY Taiyuan 41.14 16⇑⇑*eP* P **15 50 48.5 +4.6**
TIY AP pP 15 50 57.5 +4.3
TIY PCS PcS 15 56 36.3 +2.3
TIY S **S** **15 57 01.3 +6.2**
TIY XS sS 15 57 17.8 +7.4
TIY SCS ScS 16 00 45.0 -1.2
TIY AMB AMB
comp=Z,2μm,8.8s
TIY LR LR
comp=N,12μm,12.6s,MS6.1
TIY LR LR
comp=E,9μm,12.7s,MS6.1
TIY LR LR
comp=Z,21μm,15.7s,MS6.1
JAY Jayapura 41.28 92 P P **15 50 45.0 -0.4**
comp=Z,77nm,2.2s,mb5.0
TIA Tai'an 41.28 22 *eP* P **15 50 43.5 -1.6**
TIA S **S** **15 57 00.5 +3.2**
TIA XS sS 15 57 18.3 +5.7
TIA AMB AMB
comp=Z,698nm,8.0s
TIA LR LR
comp=N,66μm,18.0s,MS6.6
TIA LR LR
comp=E,30μm,19.0s,MS6.6
BTO Baotou 43.32 12 *eP* P **15 51 02.5 +0.9**
HHC Hu-ho-hao-te 43.89 13 *eP* P **15 51 06.8 +0.6**
HHC AP pP 15 51 17.0 +1.5
HHC XP sP 15 51 21.3 +2.0
HHC PP PP 15 52 50.8 +2.0
HHC PCP PcP 15 52 52.5 +0.5
HHC SCP ScP 15 56 40.0 -1.7
HHC PCS PcS 15 56 44.3 -0.6
HHC S **S** **15 57 36.5 +1.0**
HHC XS sS 15 57 52.8 +2.0
HHC SS SS 16 00 45.0 -7.7
HHC SCS ScS 16 01 00.3 -2.7
HHC AMB AMB
comp=Z,40nm,1.0s,mb5.1
HHC AMB AMB
comp=Z,3μm,7.1s
HHC LR LR
comp=N,53μm,14.9s,MS6.6
HHC LR LR
comp=E,28μm,14.2s,MS6.6
HHC LR LR
comp=Z,50μm,14.9s,MS6.5
MSEY Mahe Island 43.94 265 PFAKE 15 51 20.0 +13
MSEY LR LR
comp=Z,14μm,21.0s,MS5.9
BJT Baijiatuan 44.37 18 *eP* P **15 51 09.5 -0.6**
BJT pmax pmax
comp=Z,159nm,1.0s
BJT MLR MLR
comp=Z,23μm,19.0s
BJT Baijiatuan 44.37 18 *eP* P **15 51 09.5 -0.6**
comp=Z,159nm,1.0s,mb5.7
BJT LR LR
comp=Z,23μm,19.0s,MS6.1
BJI Beijing 44.40 18 P P **15 51 10.0 -0.3**
BJI S **S** **15 57 46.5 +3.6**
BJI AMB AMB
comp=Z,63nm,1.0s,mb5.3
BJI AMB AMB
comp=Z,3μm,6.9s
BJI LR LR
comp=N,22μm,20.4s,MS6.1
BJI LR LR
comp=E,12μm,24.7s,MS6.1
BJI LR LR
comp=Z,16μm,19.5s
BJI Beijing 44.40 18 P P **15 51 09.9 -0.4**
BJI S **S** **15 57 46.5 +3.6**
BJI SS SS 16 01 09.3 +6.7
BJI pmax pmax
comp=Z,63nm,1.0s,mb5.3
BJI MLR MLR
comp=Z,16μm,19.5s,MS5.9
BJI Beijing 44.40 18 P P **15 51 09.9 -0.4**
comp=Z,63nm,1.0s,mb5.3
BJI S **S** **15 57 46.5 +3.6**
BJI SS SS 16 01 09.3 +6.7
BJI LR LR
comp=Z,16μm,19.5s,MS5.9
COEN Coen 44.91 108 *eP* P **15 51 11.3 -3.5**
comp=Z,13nm,1.1s,mb4.7
DL2 Dalian 45.39 24⇑*iP* P **15 51 20.8 +2.6**
DL2 XP sP 15 51 32.5 +1.1
DL2 S **S** **15 58 04.0 +6.6**
DL2 XS sS 15 58 16.5 +3.7
DL2 AMB AMB
comp=Z,60nm,1.1s,mb5.3
DL2 AMB AMB
comp=Z,1μm,5.2s
DL2 LR LR
comp=N,12μm,18.4s,MS6.0
DL2 LR LR
comp=E,10μm,17.8s,MS6.0
DL2 LR LR
comp=Z,17μm,16.2s,MS6.1
KBL Kabul 46.04 325 *eP* P **15 51 21.2 -2.2**
KBL pmax pmax
comp=Z,32nm,0.9s,mb5.2
KBL Kabul 46.04 325 *eP* P **15 51 21.2 -2.2**
comp=Z,32nm,0.9s,mb5.2
KSH Kashi 46.41 335 P P **15 51 25.5 -0.8**
KSH *e*AP pP 15 51 34.0 -1.7
KSH *e*PCP PcP 15 53 01.3 +0.5
KSH *e*PP PP 15 53 13.3 -2.4
KSH *e*SCP ScP 15 56 51.3 -0.9
KSH *e*PCS PcS 15 56 54.0 -1.4
KSH *e*S **S** **15 58 08.5 -3.6**
KSH *e*SCS ScS 16 01 16.3 -3.0
KSH AMB AMB
comp=Z,5μm,4.2s
KSH LR LR
comp=N,13μm,13.7s,MS6.2
KSH LR LR
comp=E,13μm,12.9s,MS6.2
KSH LR LR
comp=Z,7μm,13.7s,MS5.7
INCN Inchon 46.53 30 *eP* P **15 51 25.6 -1.6**
comp=Z,83nm,1.1s,mb5.6
INCN LR LR
comp=Z,16μm,20.0s,MS6.0
WMQ Urumqi 46.63 348 P P **15 51 29.3 +1.4**
WMQ AP pP 15 51 39.0 +1.7
WMQ XP sP 15 51 43.0 +2.0
WMQ PCP PcP 15 53 03.0 +1.5
WMQ PP PP 15 53 19.0 +1.1
WMQ S **S** **15 58 17.0 +2.0**
WMQ XS sS 15 58 33.0 +2.5
WMQ SCS ScS 16 01 19.0 -1.5
WMQ AMB AMB
comp=Z,509nm,1.1s,mb6.4
WMQ AMB AMB
comp=Z,4μm,5.4s
WMQ LR LR
comp=N,18μm,18.0s,MS6.2
WMQ LR LR
comp=E,18μm,17.0s,MS6.2
WMQ LR LR
comp=Z,21μm,24.0s
KSRS Korea Array 47.17 31 P P **15 51 31.4 -0.8**
comp=Z,125nm,1.2s,mb5.7,baz=224,slow=8.5,SNR=77
KSRS S **S** **15 58 26.6 +3.6**
comp=Z,1.5nm,1.1s,baz=103,slow=34,SNR=2.5
KSRS LR LR 16 11 59.4
comp=Z,10μm,18.6s,MS5.8,baz=344,slow=37
KSRS Korea Array 47.17 31 P P **15 51 31.5 -0.7**
KSRS S **S** **15 58 26.6 +3.7**
KSRS pmax pmax
comp=Z,125nm,1.2s,mb5.7
KSRS smax
comp=N,2.0nm,1.1s
KSRS MLR MLR
comp=Z,10μm,18.6s,MS5.8
GUMO Guam 47.60 70 S S **15 58 34.0 +4.2**
GUMO LR LR 16 11 59.6
comp=Z,4μm,21.9s,MS5.3,baz=20,slow=37
GUMO Guam 47.60 70 PFAKE 15 51 50.0 +14
GUMO LR LR
comp=Z,4μm,19.0s,MS5.4
PMG Port Moresby 48.08 101 P P **15 51 39.0 -0.7**
PMG pmax pmax
comp=Z,51nm,1.0s
PMG Port Moresby 48.08 101 *eP* P **15 51 35.8 -3.9**
comp=Z,51nm,1.0s,mb5.5
PMG LR LR
comp=Z,14μm,22.0s,MS5.9
ULHL Ulahol 48.60 337 P P **15 51 42.7 -0.6**
SNR=15
SNY Shenyang 48.66 24 ⇓P P **15 51 43.5 -0.2**
SNY AP pP 15 51 53.8 +0.7
SNY XP sP 15 51 57.0 +0.2
SNY PP PP 15 53 38.0 +1.1
SNY AMB AMB
comp=Z,80nm,2.5s,mb5.3
SNY AMB AMB
comp=Z,2μm,4.4s
SNY LR LR
comp=N,10μm,14.4s,MS6.4
SNY LR LR
comp=E,28μm,18.5s,MS6.4
SNY LR LR
comp=Z,31μm,16.9s,MS6.4
KZA Kyzart 48.86 336 P P **15 51 48.8 +3.6**
SNR=16
CTA Charters Tower 49.21 115⇑*iP* P **15 51 46.9 -1.4**
comp=Z,80nm,1.0s,mb5.7
CTA *eS* S **15 58 52.9 +0.5**
CTA Charters Tower 49.21 115 P P **15 51 46.8 -1.5**
comp=Z,95nm,1.0s,mb5.8,baz=291,slow=9.1,SNR=57
CTA Charters Tower 49.21 115⇑*iP* P **15 51 46.9 -1.4**
CTA *eS* S **15 58 52.9 +0.5**
CTA pmax pmax
comp=Z,81nm,1.0s
CTAO Charters Tower 49.21 115 P P **15 51 47.0 -1.3**
CTAO pmax pmax
comp=Z,150nm,1.1s,mb5.9
CTAO Charters Tower 49.21 115 *eP* P **15 51 46.8 -1.6**
comp=Z,151nm,1.1s,mb5.9
CTAO LR LR
comp=Z,22μm,21.0s,MS6.1
AAA Alma-Ata 49.22 338 *eP* P **15 51 47.4 -0.5**
AAA *eS* S **15 58 49.8 -1.9**
AAA pmax pmax
comp=Z,5μm,7.8s
AAA smax
comp=N,11μm,8.1s
AAA MLR MLR
comp=Z,8μm,20.0s,MS5.7
AAA Alma-Ata 49.22 338 *i* P P **15 51 48.0 +0.1**
UCH Uchtor 49.28 336 P P **15 51 49.7 +1.3**
SNR=63
UCH Uchtor 49.28 336 *eP* P **15 51 49.5 +1.1**
comp=Z,2.2nm,1.5s
UCH LR LR
comp=Z,19μm,21.0s
TKM2 Tokmak 2 49.43 337 P P **15 51 50.4 +0.8**
TKM2 pmax pmax
comp=Z,267nm,1.4s,mb6.1
TKM2 Tokmak 2 49.43 337 P P **15 51 50.5 +0.9**
SNR=162
TKM2 Tokmak 2 49.43 337 *i* P P **15 51 50.4 +0.8**
KBK Karagaybulak 49.46 336 P P **15 51 51.2 +1.4**
SNR=51
AML Almayashu 49.55 335 P P **15 51 51.7 +1.2**
SNR=34
AML Almayashu 49.55 335 *eP* P **15 51 51.0 +0.5**
comp=Z,291nm,1.4s,mb6.1
AML LR LR
comp=Z,13μm,21.0s,MS5.9
AAK Ala-Archa 49.63 336 P P **15 51 52.3 +1.2**
SNR=30
STKA Stephens Creek 49.72 131⇑*iP* P **15 51 51.6 -0.4**
comp=Z,100nm,0.9s,mb5.8
STKA *eS* S **15 59 00.3 +1.2**
STKA Stephens Creek 49.72 131 P P **15 51 51.7 -0.3**

comp=Z,83nm,0.8s,mb5.8,baz=305,slow=7.5,SNR=72
STKA S **S** **15 58 59.3 +0.2**
comp=Z,5.8nm,1.1s,baz=38,slow=21,SNR=2.8
STKA LR LR 16 13 25.1
comp=Z,9µm,19.3s,MS5.8,baz=298,slow=37
FRU Bishkek 49.74 336⇓ *e*P **P** **15 51 53.0 +1.0**
FRU *e*S **S** **15 59 05.6 +6.5**
FRU pmax pmax
comp=Z,400nm,2.0s,mb6.1
FRU smax
comp=E,5µm,12.0s
FRU MLR MLR
comp=E,17µm,20.0s
FRU MLR MLR
comp=Z,19µm,20.0s,MS6.1
SONM Songino Array 49.82 6 P **P** **15 51 53.1 +0.7**
comp=Z,185nm,0.9s,mb6.1,baz=189,slow=6.8,SNR=375
SONM ScP ScP 15 57 10.5 +4.1
comp=Z,3.1nm,1.0s,baz=190,slow=7.3,SNR=3.2
SONM S **S** **15 59 06.3 +6.2**
comp=Z,0.1nm,0.3s,baz=85,slow=38,SNR=2.5
CHMS Chumysh 49.83 336 P **P** **15 51 53.1 +0.5**
SNR=25
ULN Ulaanbaatar 49.93 7*c i*P **P** **15 51 53.8 +0.5**
EKS2 Erkin-Say 49.95 335 P **P** **15 51 54.5 +1.0**
SNR=124
EKS2 Erkin-Say 49.95 335 *e*P **P** **15 51 54.3 +0.8**
comp=Z,144nm,0.9s,mb6.0
EKS2 LR LR
comp=Z,17µm,21.0s,MS6.0
USP Ospenovka 50.15 336 P **P** **15 51 55.6 +0.6**
SNR=104
MK31 Makanchi Array 50.69 345 P **P** **15 51 59.5 +0.4**
MK31 Makanchi Array 50.69 345 *i* P **P** **15 51 59.1 0.0**
MKAR Makanchi Array 50.69 345 P **P** **15 51 59.4 +0.3**
comp=Z,90nm,0.8s,mb5.8,baz=151,slow=7.8,SNR=337
MKAR S **S** **15 59 15.1 +2.9**
comp=Z,1.0nm,0.8s,baz=18,slow=24,SNR=2.2
CN2 Changchun 51.06 24⇑P **P** **15 52 00.8 -1.1**
CN2 PCP PcP 15 53 16.3 -1.2
CN2 *e*S **S** **15 59 16.5 -0.9**
CN2 AMB AMB
comp=Z,90nm,1.1s,mb5.6
CN2 AMB AMB
comp=Z,3µm,9.0s
CN2 LR LR
comp=N,34µm,17.0s,MS6.5
CN2 LR LR
comp=E,11µm,17.0s,MS6.5
CN2 LR LR
comp=Z,26µm,18.0s,MS6.3
KK31 Karatay Array 51.72 333 *i* P **P** **15 52 06.4 -0.5**
KK31 pmax pmax
comp=Z,331nm,2.0s,mb5.9
ZAK Zakamensk 52.10 3 *e*P **P** **15 52 09.4 -0.2**
ZAK pmax pmax
comp=Z,63nm,1.1s,mb5.5
MAJO Matsushiro 52.51 39 P **P** **15 52 11.2 -1.7**
MAJO pmax pmax
comp=Z,120nm,1.1s,mb5.7
MAJO Matsushiro 52.51 39 *e*P **P** **15 52 10.8 -2.0**
comp=Z,116nm,1.1s,mb5.7
MAJO LR LR
comp=Z,10µm,19.0s,MS5.9
MAT Matsushiro 52.51 39 P **P** **15 52 11.4 -1.5**
MAT S **S** **15 59 42.0 +4.4**
MJAR Matsushiro Arr 52.51 39 P **P** **15 52 11.6 -1.3**
comp=Z,119nm,1.1s,mb5.7,baz=221,slow=7.2,SNR=63
MJAR S **S** **15 59 43.6 +6.0**
comp=Z,0.5nm,0.5s,baz=238,slow=23,SNR=2.8
MJAR LR LR 16 17 17.8
comp=Z,8µm,18.8s,MS5.8,baz=230,slow=39
MJAR Matsushiro Arr 52.51 39 P **P** **15 52 11.6 -1.3**
MJAR S **S** **15 59 43.6 +6.0**
HVS Khovu-Aksy 52.98 356*d i*P **P** **15 52 15.7 -0.3**
HVS pmax pmax
comp=Z,36nm,0.9s,mb5.3
HVS MLR MLR
comp=Z,46µm,17.0s,MS6.6
MOY Mondy 53.30 1 *e*P **P** **15 52 19.1 +0.7**
MOY pmax pmax
comp=Z,358nm,3.2s
TLY Talaya 53.42 3 P **P** **15 52 20.3 +1.0**
comp=Z,670nm,0.9s,mb6.6,SNR=22
TLY Talaya 53.42 3 *e*P **P** **15 52 20.0 +0.7**
TLY *e*S **S** **15 59 54.5 +5.1**
TLY pmax pmax
comp=Z,151nm,1.0s,mb5.9
TLY MLR MLR
comp=Z,15µm,15.0s,MS6.2
TLY Talaya 53.42 3⇑*i*P **P** **15 52 20.3 +1.0**
MDJ Mudanjiang 53.49 27 P **P** **15 52 19.5 -0.4**
MDJ PP PP 15 54 19.5 -1.3
MDJ SCP ScP 15 57 22.8 +0.5
MDJ PCS PcS 15 57 25.5 0.0
MDJ S **S** **15 59 57.0 +6.4**
MDJ AMB AMB
comp=Z,12nm,1.2s,mb4.7
MDJ AMB AMB
comp=Z,3µm,8.6s
MDJ LR LR
comp=N,6µm,23.1s,MS5.7
MDJ LR LR
comp=E,5µm,21.3s,MS5.7
MDJ LR LR
comp=Z,5µm,24.3s,MS5.5
MDJ Mudanjiang 53.49 27 *e*P **P** **15 52 18.7 -1.3**
comp=Z,62nm,1.0s,mb5.5
MDJ LR LR
comp=Z,29µm,19.0s,MS6.3
OPO Ambohidratompo 53.78 248 P **P** **15 52 23.8 +1.2**
comp=Z,21nm,0.8s,mb5.1,baz=71,slow=6.6,SNR=21
HIA Hailar 53.83 16 *e*P **P** **15 52 22.5 +0.1**
HIA pmax pmax
comp=Z,42nm,0.9s
HIA MLR MLR
comp=Z,19µm,19.0s
HIA Hailar 53.83 16 *e*P **P** **15 52 22.5 +0.1**
comp=Z,42nm,0.9s,mb5.4
HIA LR LR
comp=Z,19µm,19.0s,MS6.2
ABPO Ambohimpanom 53.84 248 *e*P **P** **15 52 23.7 +0.7**
comp=Z,19nm,0.8s,mb5.1
ABPO LR LR
comp=Z,23µm,20.0s,MS6.2
IRK Irkutsk 54.02 4 *i* P **P** **15 52 24.3 +0.7**
IRK *e* pP 15 52 34.3 +1.1
IRK *e* 15 53 24.8
IRK pmax pmax
comp=Z,311nm,1.9s,mb5.9
ABKT Ailbek 54.92 320 P **P** **15 52 30.0 -0.5**
comp=Z,352nm,0.9s,mb6.4,SNR=20
CIT Chita 54.96 11 *e*P **P** **15 52 31.2 +0.7**
CIT *e* pP 15 52 39.0 -1.0
CIT *e* 15 53 34.8
CIT pmax pmax
comp=Z,545nm,2.2s,mb6.2
TOO Toolangi 55.26 136 *e*P **P** **15 52 35.0 +2.0**
TOO *e*S **S** **16 00 19.4 +4.6**
KURK Kurchatov 55.27 344 P **P** **15 52 32.3 -0.4**
comp=Z,1µm,1.0s,mb6.8
KURK Kurchatov 55.27 344 S **S** **16 00 20.3 +6.0**
comp=Z,1.1nm,0.9s,baz=125,slow=45,SNR=3.2
KURK LR LR 16 19 30.9
comp=Z,9µm,21.3s,MS5.8,baz=150,slow=40
KURK Kurchatov 55.27 344 P **P** **15 52 32.8 +0.1**
KURK pmax pmax
comp=Z,292nm,1.2s,mb6.2
KURK Kurchatov 55.27 344⇑*i*P **P** **15 52 32.7 0.0**
CAN Canberra 56.78 132 P **P** **15 52 44.5 +0.6**
CAN Canberra 56.78 132 *e*P **P** **15 52 44.7 +0.8**
ZAA0 Zalesovo Array 56.88 350 *e*P **P** **15 52 44.2 0.0**
ZALV Zalesovo Beam 56.88 350 P **P** **15 52 44.3 +0.1**
comp=Z,444nm,0.9s,mb6.5,baz=175,slow=5.2,SNR=532
ZALV S **S** **16 00 35.3 -0.4**
comp=Z,2.4nm,0.6s,baz=160,slow=11,SNR=4.5
ZALV LR LR 16 19 36.1
comp=Z,3µm,18.7s,MS5.4,baz=170,slow=39
ZALV PKP2bc 16 22 45.2
comp=Z,1.4nm,0.6s,baz=290,slow=4.3,SNR=4.5
ZALV Zalesovo Beam 56.88 350 P **P** **15 52 44.3 +0.1**
ZALV S **S** **16 00 35.3 -0.4**
ZALV Zalesovo Beam 56.88 350 P **P** **15 52 44.3 +0.1**
ZALV S **S** **16 00 35.3 -0.4**
ZALV LR LR 16 19 36.1
ZALV ⇑*e* 16 22 45.2

ARMA Armidale 56.99 125 *e*P **P** **15 52 46.6 +1.1**
ARMA *e*S **S** **16 00 43.5 +5.4**
CNB Canberra Magne 57.05 132 *e*P **P** **15 52 46.6 +0.8**
CNB *e*S **S** **16 00 40.3 +1.7**
KRAR Krasnoyarsk 57.88 356*c i*P **P** **15 52 51.5 +0.3**
KRAR pmax pmax
comp=Z,61nm,0.6s,mb5.8
KRAR MLR MLR
comp=Z,17µm,29.0s,MS6.0
KLR Kul'dur 58.01 24 *e*P **P** **15 52 48.2 -4.1**
KLR *e* 15 54 55.5
KLR *e*S **S** **16 00 51.0 +0.3**
KLR pmax pmax
comp=E,170nm,1.4s
KLR pmax pmax
comp=Z,480nm,1.4s,mb6.3
KLR pmax pmax
comp=E,1µm,7.5s
KLR pmax pmax
comp=Z,3µm,7.5s
KLR smax
comp=N,7µm,9.0s
KLR smax
comp=E,2µm,9.0s
KLR MLR MLR
comp=E,10µm,15.0s
KLR MLR MLR
comp=Z,21µm,15.0s,MS6.4
RDF Al-Radifah 58.26 306 *e*P **P** **15 52 53.8 -0.6**
baz=306
RDF AMb AMB 15 53 15.3
comp=Z,261nm,1.1s,mb6.2,baz=306
UMR Umm Al-Rimmam 58.37 307 *e*P **P** **15 52 54.6 -0.6**
baz=307
UMR AMb AMB 15 53 16.0
comp=Z,197nm,1.1s,mb6.0,baz=307
NAY Al-Naaiem 58.63 306 *e*P **P** **15 52 55.8 -1.2**
baz=306
NAY AMb AMB 15 53 13.2
comp=Z,67nm,1.0s,mb5.6,baz=306
MIB Mutribah 58.77 307 *e*P **P** **15 52 57.4 -0.6**
baz=307
MIB AMb AMB 15 53 19.4
comp=Z,250nm,1.1s,mb6.2,baz=307
ERM Erimo 58.87 37 *i* P **P** **15 52 59.0 +0.6**
ERM Erimo 58.87 37 *i* P **P** **15 52 59.1 +0.7**
HABR Khabarovsk 58.87 27⇓*i*P **P** **15 52 56.6 -1.7**
HABR *e* 15 55 04.9
HABR *e*S **S** **16 01 02.6 +0.7**
HABR *e* 16 04 54.1
HABR pmax pmax
comp=Z,183nm,1.1s,mb6.0
HABR MLR MLR
comp=Z,21µm,19.6s,MS6.3
RST Umm Al-Ruwaisa 58.93 306 *e*P **P** **15 52 57.8 -1.3**
baz=306
RST AMb AMB 15 53 15.2
comp=Z,105nm,1.0s,mb5.8,baz=306
TAU Tasmania Unive 59.10 141 PFAKE 15 53 10.0 +10
TAU LR LR
comp=Z,14µm,19.0s,MS6.1
ASAJ Asahikawa 59.80 35 P **P** **15 53 05.0 +0.2**
comp=Z,115nm,1.1s,mb5.8,baz=256,slow=16,SNR=14
ASAJ S **S** **16 01 18.9 +4.8**
comp=Z,18nm,1.2s,baz=272,slow=15,SNR=2.8
ASAJ LR LR 16 19 47.3
comp=Z,6µm,19.5s,MS5.8,baz=75,slow=37
ASAJ Asahikawa 59.80 35 P **P** **15 53 05.0 +0.2**
ASAJ S **S** **16 01 19.0 +4.8**
ASAJ pmax pmax
comp=Z,115nm,1.1s
ASAJ smax
comp=N,18nm,1.2s
ASAJ MLR MLR
comp=Z,6µm,19.5s
BVA0 Borovoye Array 59.81 340 P **P** **15 53 03.7 -1.0**
BVA0 pmax pmax
comp=Z,15nm,0.9s,mb5.0
BVAR Borovoye Array 59.81 340 S **S** **16 01 16.7 +2.8**
comp=Z,1.0nm,0.7s,baz=59,slow=8.8,SNR=3.0
BRVK Borovoye 59.87 340 P **P** **15 53 04.5 -0.6**
comp=Z,738nm,0.9s,mb6.7,SNR=42
BRVK Borovoye 59.87 340 P **P** **15 53 04.5 -0.6**
SNR=35
BRVK Borovoye 59.87 340⇑*i*P **P** **15 53 04.2 -0.9**
BOD Bodaibo 60.59 9 *e*P **P** **15 53 09.3 -0.6**
BOD pmax pmax
comp=Z,182nm,1.2s,mb6.1
HNR Honiara 60.65 100 P **P** **15 53 09.6 -1.7**
comp=Z,198nm,0.9s,mb6.3,baz=219,slow=3.9,SNR=10
HNR S **S** **16 01 25.1 -1.0**
comp=Z,61nm,1.1s,baz=348,slow=4.6,SNR=2.4
HNR Honiara 60.65 100 P **P** **15 53 09.6 -1.7**
HNR S **S** **16 01 25.1 -1.1**
HNR pmax pmax
comp=Z,198nm,0.9s,mb6.2
HNR smax
comp=N,61nm,1.1s
HNR Honiara 60.65 100 *e*P **P** **15 53 09.2 -2.1**
comp=N,304nm,1.0s,mb6.4
HNR LR LR
comp=Z,5µm,22.0s,MS5.6
AB31 Akbulak array 61.20 332 *i* P **P** **15 53 13.2 -1.0**
AB31 pmax pmax
comp=Z,72nm,0.7s,mb5.9
FURI Furi 61.44 281 *e*P **P** **15 53 20.5 +3.9**
YSS Yuzh-Sakhalins 61.64 32⇑*i*P **P** **15 53 16.2 -1.1**
YSS *e* pP 15 53 25.8 -1.2
YSS *e**SP sP 15 53 31.0 +0.3
YSS *e* 15 55 36.0
YSS *e*S **S** **16 01 46.0 +8.4**
YSS *e*PS 16 02 07.0
YSS pmax pmax
comp=Z,2µm,4.0s
YSS pmax pmax
comp=Z,400nm,1.1s,mb6.5
YSS MLR MLR
comp=Z,10µm,18.0s,MS6.0
YSS MLR MLR
comp=N,5µm,16.0s,MS6.3
YSS MLR MLR
comp=E,15µm,17.0s,MS6.3
YSS Yuzh-Sakhalins 61.64 32⇑*i*P **P** **15 53 17.1 -0.2**
YUK Yuzh-Kuril'sk 61.65 36 *e*P **P** **15 53 19.0 +1.6**
YUK *e* 15 55 37.5
YUK *e*S S 16 02 04.0 +26
YUK pmax pmax
comp=Z,4µm,4.0s
YUK MLR MLR
comp=Z,8µm,20.0s,MS5.8
YUK MLR MLR
comp=N,7µm,18.0s
CLNS Chul'man 61.99 16 *e*P **P** **15 53 19.2 -0.3**
CLNS *e* 15 53 57.8
CLNS *e* 15 55 37.0
CLNS *e*PPP 15 57 04.9
CLNS *e*S **S** **16 01 49.2 +7.5**
CLNS pmax pmax
comp=Z,102nm,1.0s,mb5.9
CLNS pmax pmax
comp=E,40nm,1.0s
CLNS pmax pmax
comp=N,57nm,1.1s
CLNS MLR MLR
comp=E,5µm,14.0s,MS6.1
CLNS MLR MLR
comp=Z,8µm,17.0s,MS5.9
CLNS MLR MLR
comp=N,7µm,15.0s,MS6.1
CLNS Chul'man 61.99 16 *e*P **P** **15 53 19.3 -0.2**
KMBO Kilima Mbogo 62.13 270 P **P** **15 53 21.8 +0.5**
comp=N,4.9nm,0.8s,mb4.7,baz=48,slow=12,SNR=6.6
KMBO S **S** **16 01 49.1 +4.1**
comp=N,0.6nm,0.4s,baz=42,slow=22,SNR=2.4
KMBO LR LR 16 17 03.4
comp=N,15µm,19.6s,MS6.2,baz=90,slow=33
KMBO Kilima Mbogo 62.13 270 P **P** **15 53 21.8 +0.5**
KMBO S **S** **16 01 49.1 +4.1**
KMBO pmax pmax
comp=Z,5.0nm,0.8s
KMBO smax
comp=N,1.0nm,0.4s
KMBO Kilima Mbogo 62.13 270 *e*P **P** **15 53 21.6 +0.3**
comp=N,74nm,1.5s,mb5.6
KMBO LR LR
comp=Z,14µm,19.0s,MS6.2

BHD Baghdad 62.43 309 *ex* x 15 53 20.0
BHD *ex* x 16 01 45.0
AKTO Aktyubinsk 62.91 332 LR LR 16 24 13.9
comp=Z,8µm,20.8s,MS5.9,baz=116,slow=39
MAK Makhachkala 64.44 320*d i*P **P** **15 53 31.8 -4.2**
MAK *i* 15 54 07.5
MAK *i* 15 55 53.0
MAK *i* PPP 15 57 39.8
MAK *i* S **S** **16 02 15.2 +2.4**
MAK *e* 16 03 26.8
MAK *e*SSS 16 09 19.5
MAK pmax pmax
comp=N,274nm,1.1s
MAK pmax pmax
comp=Z,363nm,1.5s,mb6.2
MAK pmax pmax
comp=E,221nm,1.2s
MAK smax
comp=N,4282µm,6.0s
MAK smax
comp=E,5109µm,8.6s
MAK MLR MLR
comp=Z,5µm,18.0s,MS5.8
MAK MLR MLR
comp=E,6µm,19.0s,MS5.9
MAK MLR MLR
comp=N,5µm,18.0s,MS5.9
MSL Mosul 64.60 312 *ex* x 15 53 36.0
MSL *ex* x 16 02 11.0
MSL *ex* x 16 03 31.0
HAKT HAKKARI 64.62 313 *i* P **S** **16 02 10.1 -5.1**
MIR Mirnyy 64.76 183 *eP* **P** **15 53 39.0 +1.4**
MIR *i* pP 15 53 49.0 +1.7
MIR *i* 15 54 20.0
MIR *i* S **S** **16 02 22.0 +6.1**
MIR pmax pmax
comp=Z,200nm,2.5s,mb5.7
CASY Casey 64.81 175 *e*P **P** **15 53 39.4 +1.4**
GNI Garni 64.98 316 LR LR 16 23 27.8
comp=Z,3µm,20.8s,MS5.4,baz=282,slow=37
GNI Garni 64.98 316*d i*P **P** **15 53 41.0 +1.4**
GNI pmax pmax
comp=Z,135nm,2.6s
DGRG David-gareji 65.13 318 P **P** **15 53 41.0 +0.5**
DGRG S S 16 02 21.1 -0.2
DYDN Diyadin 65.45 315 *i* P S 16 02 30.9 +5.5
MTA Mtatsminda 65.63 318 P **P** **15 53 43.8 +0.1**
MTA S S 16 02 07.8 -20
TBLG Delisi 65.68 318 *e*P **P** **15 53 44.7 +0.6**
TBLG Delisi 65.68 318 P **P** **15 53 44.8 +0.7**
GOR Gori 66.22 318 P **P** **15 53 42.4 -5.1**
SVE Sverdlovsk 66.29 338⇓*e*P **P** **15 53 47.5 -0.2**
SVE *e*S S 16 02 37.4 +2.5
SVE pmax pmax
comp=Z,219nm,1.2s,mb6.1
SVE MLR MLR
comp=Z,10µm,18.0s,MS6.1
MARD Mardin 66.68 312 *i* P S 16 02 39.7 -0.7
ARU Arti 66.80 337 P **P** **15 53 50.0 -0.9**
comp=Z,466nm,1.2s,mb6.4,SNR=30
ARU Arti 66.80 337*c i*P **P** **15 53 50.0 -0.9**
ARU *e* 15 54 18.0
ARU *e* 15 56 13.5
ARU *e*PPP 15 57 57.6
ARU *e*S S 16 02 43.8 +2.7
ARU *e* 16 03 46.5
ARU *e*SS SS 16 06 53.9 -5.7
ARU pmax pmax
comp=Z,151nm,1.2s,mb5.9
ARU MLR MLR
comp=Z,10µm,19.0s,MS6.1
ARU Arti 66.80 337⇑*e*P **P** **15 53 50.1 -0.8**
ONI Oni 66.92 318 P **P** **15 53 52.4 +0.4**
ONI S S 16 02 44.1 +1.0
ARTV Artvin 67.36 316 *i* P S 16 02 44.0 -4.4
DIYA Diyarbakir 67.39 313 *i* P S 16 02 55.0 +6.1
DBAD Bademkaya 67.45 316 *i* P S 16 02 26.5 -23
DBOC Borcka 67.60 316 *i* P S 16 02 51.7 +0.3
YAK Yakutsk 67.72 15*c i*P **P** **15 53 55.3 -1.3**
YAK *e**PP pP 15 54 06.4 0.0
YAK *e* 15 54 24.9
YAK *e* 15 56 25.2
YAK *e*S S 16 02 49.9 -2.0
YAK *e*SS SS 16 07 10.8 -2.8
YAK pmax pmax
comp=Z,254nm,1.0s,mb6.2
YAK pmax pmax
comp=N,103nm,1.1s
YAK pmax pmax
comp=E,116nm,1.1s
YAK pmax pmax
comp=Z,54nm,1.8s,mb5.3
YAK pmax pmax
comp=E,13nm,0.9s
YAK pmax pmax
comp=N,47nm,1.5s
YAK smax
comp=E,172µm,2.3s
YAK smax
comp=N,407µm,3.7s
YAK MLR MLR
comp=Z,20µm,15.0s,MS6.5
YAK MLR MLR
comp=N,18µm,18.0s,MS6.4
YAK MLR MLR
comp=E,11µm,18.0s,MS6.4
YAK Yakutsk 67.72 15⇑*i*P **P** **15 53 55.4 -1.2**
KIV Kislovodsk 68.02 319 P **P** **15 53 59.6 +0.7**
comp=E,454nm,1.3s,mb6.3,SNR=14
KIV Kislovodsk 68.02 319 *e*P **P** **15 53 58.4 -0.5**
KIV *e* 15 56 28.7
KIV *e*S S 16 02 56.4 +0.2
KIV *e*SS SS 16 07 22.0 +3.1
KIV pmax pmax
comp=Z,449nm,4.9s
KIV pmax pmax
comp=Z,87nm,1.1s,mb5.7
KIV Kislovodsk 68.02 319⇑*i*P **P** **15 53 58.6 -0.3**
DZM Mont Dzumac 68.07 113 *e*P **P** **15 53 59.4 -0.3**
DZM Mont Dzumac 68.07 113 *e*P **P** **15 53 59.2 -0.5**
SLAT Slait 68.18 288 *i* P **P** **15 53 54.8 -5.7**
SLAT AMb AMB 15 54 15.2
comp=Z,57nm,1.7s,mb5.3
JAWL J.Aulia 68.28 287 *i* P **P** **15 53 53.2 -7.9**
JAWL AMb AMB 15 54 09.5
comp=Z,104nm,1.4s,mb5.7
JAWL *i* S S 16 02 53.9 -6.4
JAWL AMS AMS 16 03 40.3
comp=N,2µm,18.9s
MALT Malatya 68.77 312 *e*P **P** **15 54 03.1 -0.7**
MALT pmax pmax
comp=Z,97nm,1.6s,mb5.5
MALT MLR MLR
comp=Z,6µm,20.0s,MS5.8
MALT Malatya 68.77 312 *e*P **P** **15 54 03.1 -0.7**
comp=Z,97nm,1.6s,mb5.5
MALT LR LR
comp=Z,6µm,20.0s,MS5.8
AKCD Akcadag 69.14 312 *i* P S 16 03 07.0 -2.8
HWQ Hawqa 69.38 308 *e*P **P** **15 54 10.7 +3.1**
BHL Bhannes 69.50 307 *e*P **P** **15 54 11.6 +3.2**
SOC Sochi 69.82 318 *e*P **P** **15 54 08.2 -1.9**
SOC *e* pP 15 54 17.0 -2.9
SOC *e* 15 54 29.4
SOC *e* 15 56 41.7
SOC *e*S S 16 03 17.7 +0.1
SOC *e* 16 04 08.1
SOC *e*SS SS 16 07 44.0 -2.8
SOC pmax pmax
comp=Z,47nm,0.9s,mb5.4
SOC pmax pmax
comp=Z,194nm,4.8s
SOC Sochi 69.82 318⇑*i*P **P** **15 54 08.8 -1.3**
ANDN Andirin 70.08 311 *i* P S 16 03 11.4 -10
MAW Mawson 70.31 194 *e*P **P** **15 54 13.6 +0.9**
comp=Z,14nm,0.9s,mb4.9
MAW *e*S S 16 03 24.4 +1.9
MAW Mawson 70.31 194 P **P** **15 54 13.3 +0.6**
comp=Z,4.4nm,0.8s,mb4.4,baz=10,slow=6.3,SNR=6.3
MAW S S 16 03 26.5 +4.0
comp=Z,0.7nm,0.3s,baz=144,slow=19,SNR=1.8
MAW LR LR 16 20 19.9
comp=Z,15µm,19.3s,MS6.2,baz=39,slow=32
MAW Mawson 70.31 194 *e*P **P** **15 54 13.8 +1.1**

MAW pmax pmax
comp=Z,150nm,1.7s
YURE YUREGIR 70.39 310 *i* P S 16 03 27.8 +3.3
PINB Pinarbasi 70.39 312 *i* P S 16 03 12.5 -12
DRV Dumont d'Urvil 70.66 164 S S 16 03 31.0 +4.4
DRV L 16 11 00.0
DRV R 16 15 00.0
SKR Severo-Kuril's 71.05 34 *e*P **P 15 54 16.5 -1.0**
SKR *e* 15 54 29.0
SKR *e* 16 03 56.0
SKR pmax pmax
comp=Z,450nm,1.0s,mb6.3
SKR pmax pmax
comp=Z,4μm,2.0s,mb6.9
SKR MLR MLR
comp=E,8μm,18.0s
SKR MLR MLR
comp=Z,9μm,18.0s,MS6.1
LSZ Lusaka 71.41 255 P **P 15 54 20.9 +0.6**
LSZ pmax pmax
comp=Z,26nm,1.0s,mb5.1
LSZ Lusaka 71.41 255 *e*P **P 15 54 20.6 +0.3**
comp=Z,26nm,1.0s,mb5.1
ANN Anapa 71.80 319 *e*P **P 15 54 22.6 +0.4**
VRHR Novokhopersk 71.84 326 *e*P **P 15 54 21.4 -0.9**
VRHR pmax pmax
comp=Z,70nm,0.5s,mb5.8
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,50nm,0.6s
VRHR MLR MLR
comp=Z,7μm,19.0s,MS6.0
VRHR MLR MLR
comp=N,5μm,21.0s,MS6.0
VRHR MLR MLR
comp=E,7μm,24.0s,MS6.0
BR131 Keskin Array S 72.76 313 *e*P **P 15 54 26.4 -1.6**
comp=E,23nm,0.9s,mb5.1
BR131 LR LR
comp=Z,3μm,21.0s,MS5.5
PEA0B Petropavlovsk- 73.05 32 *e*P **P 15 54 27.9 -1.5**
PETK Petropavlovsk- 73.05 32 P **P 15 54 28.3 -1.1**
comp=Z,26nm,0.8s,mb5.2,baz=197,slow=2.0,SNR=15
ILGA Ilgaz 73.10 314 *i* P S 16 03 51.8 -3.8
VSR Storozhevoye 73.29 325 *e*P **P 15 54 29.2 -1.7**
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=Z,40nm,0.8s,mb5.4
VSR pmax pmax
comp=E,80nm,0.9s
ANTO Ankara 73.42 313 *e*P **P 15 54 29.9 -2.0**
ANTO pmax pmax
comp=Z,63nm,1.2s,mb5.4
ANTO MLR MLR
comp=Z,4μm,19.0s,MS5.8
ANTO Ankara 73.42 313 *e*P **P 15 54 29.9 -2.1**
comp=Z,63nm,1.2s,mb5.4
ANTO LR LR
comp=Z,4μm,19.0s,MS5.8
VOR Voronezh 73.49 326 *e*P **P 15 54 30.0 -2.0**
VOR pmax pmax
comp=Z,380nm,1.8s,mb6.0
PET Petropavlovsk 73.52 33*c* *i*P **P 15 54 32.3 +0.1**
PET *e* pP 15 54 43.4 +1.4
PET *e*PS 16 04 55.9
PET pmax pmax
comp=Z,173nm,1.1s,mb5.9
PET pmax pmax
comp=Z,1μm,16.0s
PET pmax pmax
comp=Z,1μm,22.5s
PET MLR MLR
comp=Z,9μm,19.0s,MS6.1
PET MLR MLR
comp=Z,7μm,18.0s
PET Petropavlovsk 73.52 33‖ *e*P **P 15 54 32.1 -0.1**
KDHN Kadinhani 73.55 311 *i* P S 16 03 56.2 -4.6
SIM Simferopol' 74.06 318*ce*P **P 15 54 35.2 -0.4**
SIM *e*S S 16 04 05.8 -0.5
SIM pmax pmax
comp=Z,37nm,1.0s,mb5.3
SIM pmax pmax
comp=Z,410nm,11.0s
SIM Simferopol' 74.06 318 *e*P **P 15 54 35.0 -0.6**
LBTB Lobatse 74.56 245 *e*P **P 15 54 40.5 +1.6**
LBTB pmax pmax
comp=Z,60nm,1.2s,mb5.4
LBTB MLR MLR
comp=Z,19μm,20.0s,MS6.4
LBTB Lobatse 74.56 245 *e*P **P 15 54 40.5 +1.6**
comp=Z,60nm,1.2s,mb5.4
LBTB LR LR
comp=Z,19μm,20.0s,MS6.4
ISP Isparta 74.59 310 *i* P **P 15 54 40.1 +1.3**
ISP Isparta 74.59 310 *i* P **P 15 54 40.2 +1.4**
ISP LR LR
comp=Z,5μm,19.0s,MS5.8
TKTP Tekketepe 74.78 310 *i* P S 16 03 48.5 -26
AKAS Kas 74.90 308 *i* P S 16 04 11.5 -4.5
GOLH Golhisar 75.17 309 *i* P S 16 04 10.4 -8.6
BOSA Boshof 75.22 241 P **P 15 54 42.6 0.0**
comp=Z,10nm,0.9s,mb4.7,baz=93,slow=10,SNR=10
BOSA S S 16 04 21.7 +1.8
comp=Z,2.2nm,0.9s,baz=242,slow=9.7,SNR=1.6
BOSA LR LR 16 22 57.9
comp=Z,12μm,19.5s,MS6.2,baz=83,slow=32
BOSA Boshof 75.22 241 P **P 15 54 44.4 +1.7**
BOSA pmax pmax
comp=Z,46nm,1.2s,mb5.3
BOSA Boshof 75.22 241 *e*P **P 15 54 43.1 +0.4**
comp=Z,46nm,1.2s,mb5.3
BOSA LR LR
comp=Z,12μm,20.0s,MS6.2
RPZ Rata Peaks 75.53 135 LR LR 16 29 07.9
comp=Z,14μm,21.3s,MS6.2,baz=282,slow=37
SEY Seymchan 75.68 22⇑ *e*P **P 15 54 43.3 -1.2**
GDZ Gediz 75.68 311 *i* P S 16 04 07.1 -17
TIXI Tiksi 75.77 9*c* *i*P **P 15 54 43.5 -1.4**
TIXI pmax pmax
comp=Z,39nm,1.0s,mb5.3
TIXI MLR MLR
comp=Z,22μm,24.0s,MS6.4
TIXI Tiksi 75.77 9⇑ *i*P **P 15 54 43.6 -1.3**
MOS Moscow 76.03 329 *e*P **P 15 54 46.1 -0.6**
MOS *i* pP 15 54 55.1 -1.4
MOS *e*S S 16 04 25.7 -2.1
MOS pmax pmax
comp=Z,223nm,1.3s,mb5.9
MOS MLR MLR
comp=Z,9μm,20.0s,MS6.1
MOS Moscow 76.03 329 *e*P **P 15 54 46.8 +0.1**
ARG Arkhangelos 76.06 308 *e*P **P 15 54 49.6 +2.4**
OBN Obninsk 76.33 328 P **P 15 54 47.3 -1.1**
comp=Z,679nm,1.3s,mb6.4,SNR=5.2
OBN Obninsk 76.33 328*c* *i*P **P 15 54 47.7 -0.7**
OBN *e* pP 15 54 57.6 -0.6
OBN *e*S S 16 04 33.6 +2.6
OBN *e*SS SS 16 09 24.1 -1.5
OBN pmax pmax
comp=Z,45nm,0.9s,mb5.4
OBN MLR MLR
comp=Z,4μm,17.0s,MS5.8
KARP Karpathos 76.68 307 *e*P **P 15 54 50.4 -0.4**
SMG Samos 77.39 309 *e*P **P 15 54 54.0 -0.8**
KLMR Klimovskoe 77.41 334 *i* P **P 15 54 53.7 -0.6**
KLMR pmax pmax
comp=Z,234nm,1.7s,mb5.8
SNZO South Karori 77.78 132 PFAKE 15 55 10.0 +13
SNZO LR LR
comp=Z,21μm,22.0s,MS6.4
TIRR Tirgusor 77.81 316 P **P 15 54 56.6 -0.3**
TIRR Tirgusor 77.81 316‖ *i*P **P 15 54 56.4 -0.5**
TIRR Tirgusor 77.81 316 *e*P **P 15 54 55.9 -1.0**
comp=Z,49nm,0.9s,mb5.4
SYO Syowa Base 77.85 199⇑ *e*P **P 15 54 56.0 -0.7**
SYO Syowa Base 77.85 199‖ *e*P **P 15 55 06.6 +10**
NPS Neapolis 77.86 307 *e*P **P 15 55 00.1 +2.6**
PRK Paraskevi 78.15 311 *e*P **P 15 54 57.9 -1.1**
SANT Santorini 78.20 308 PFAKE 15 55 10.0 +11
SANT LR LR
comp=Z,4μm,21.0s,MS5.8
HARR Harsova 78.20 316⇑ *i*P **P 15 54 58.5 -0.6**
HARR Harsova 78.20 316 P **P 15 54 58.9 -0.3**

KIS Kishinev 78.20 319 *e*P **P 15 54 57.0 -2.1**
KIS *e* 15 55 10.0
KIS *e* 15 57 52.0
KIS *e*PPP 15 59 52.0
KIS *e*S S 16 04 49.0 -2.8
KIS *e* 16 05 02.0
KIS *e*PS 16 05 28.0
KIS *e*SS SS 16 09 49.0 -5.3
KIS pmax pmax
comp=Z,1μm,9.0s
KIS pmax pmax
comp=Z,1μm,14.0s
KIS Kishinev 78.20 319 *e*P **P 15 54 57.0 -2.1**
comp=Z,1μm,9.0s
KIS Kishinev 78.20 319 *e*PP PP 15 57 52.0 -4.1
KIS Kishinev 78.20 319 *e*PPP Px 15 59 52.0
KIS *e*S S 16 04 49.0 -2.8
KIS *e*ScS ScS 16 05 02.0 -15
AKASG Malin Array Be 78.97 322 P **P**
comp=Z,10nm,0.7s,mb4.9,baz=85,slow=4.3,SNR=34
15 55 01.9 -1.3
AKASG PP PP 15 57 53.2 -9.2
comp=Z,1.2nm,0.5s,baz=93,slow=5.7,SNR=2.9
AKASG S S 16 05 00.7 +0.8
comp=Z,0.3nm,0.4s,baz=110,slow=8.5,SNR=5.1
AKASG LR LR 16 33 45.2
comp=Z,5μm,21.1s,MS5.8,baz=140,slow=38
AKASG Malin Array Be 78.97 322 *i* P **P 15 55 01.9 -1.3**
AKASG pmax pmax
comp=Z,10.0nm,0.7s
AKBB Malin Array Si 78.97 322 *e*P **P 15 55 00.8 -2.4**
KIEV Kiev 78.98 322 *e*P **P 15 55 01.1 -2.2**
KIEV pmax pmax
comp=Z,41nm,1.2s,mb5.2
KIEV MLR MLR
comp=Z,5μm,21.0s,MS5.8
KIEV Kiev 78.98 322 *e*P **P 15 55 01.1 -2.2**
comp=Z,41nm,1.2s,mb5.2
KIEV LR LR
comp=Z,5μm,21.0s,MS5.8
VAM Vamos 79.03 306 *e*P **P 15 55 05.6 +1.7**
VRI Vrincioaia 79.31 317‖ *i*P **P 15 55 05.3 +0.1**
VRI Vrincioaia 79.31 317 *i*P **P 15 55 05.5 +0.3**
PLOR Plostina 79.36 317 P **P 15 55 06.1 +0.6**
PLOR Plostina 79.36 317⇑ *i*P **P 15 55 06.0 +0.5**
SUR Sutherland 79.39 238 *e*P **P 15 55 08.2 +2.2**
comp=Z,169nm,1.4s,mb5.8
SUR LR LR
comp=Z,19μm,21.0s,MS6.4
FUNA Funafuti 79.64 98 PFAKE 15 55 20.0 +12
FUNA LR LR
comp=Z,8μm,19.0s,MS6.1
ZIMR 79.76 315 P **P 15 55 08.1 +0.4**
MLR Muntele Rosu 79.76 317⇑ *i*P **P 15 55 07.9 +0.3**
MLR Muntele Rosu 79.76 317 P **P 15 55 07.7 +0.1**
PTL Penteli 79.76 309 *e*P **P 15 55 07.7 -0.1**
VOIR 80.36 317⇑ *i*P **P 15 55 10.5 -0.4**
VOIR 80.36 317 P **P 15 55 10.3 -0.6**
NVR Nevrokopi 80.38 312 *e*P **P 15 55 09.7 -1.4**
PLG Polygyros 80.50 311 *e*P **P 15 55 13.7 +1.9**
BURAR Bucovina Array 80.73 319⇑ *i*P **P 15 55 13.6 +0.8**
BUR08 Bucovina Ar. S 80.75 319 *e*P **P 15 55 13.3 +0.4**
MNK Minsk 80.87 326 *e*P **P 15 55 11.0 -2.4**
MNK *e*S S 16 05 18.0 -1.7
PUL Pulkovo 81.18 331⇑ *e*P **P 15 55 15.6 +0.7**
VAY Valandovo 81.33 312 *e*P **P 15 55 14.3 -1.9**
ZAPS Zavoj 81.63 314 *e*P **P 15 55 17.4 -0.3**
TSUM Tsumeb 81.68 251 *e*P **P 15 55 19.5 +1.0**
comp=Z,31nm,1.3s,mb5.1
TSUM LR LR
comp=Z,14μm,20.0s,MS6.3
JOF Joensuu 81.80 335 *ep* **P 15 55 17.7 -0.4**
comp=Z,36nm,0.8s,mb5.3
GZR Gura Zlata 81.92 316⇑ *i*P **P 15 55 19.1 -0.1**
GZR Gura Zlata 81.92 316 P **P 15 55 19.2 0.0**
LVV L'vov 81.98 321 *e*P **P 15 55 19.6 +0.2**
LVV *e* 15 58 28.0
LVV *e*S S 16 05 31.0 -0.4
LVV *e*PS 16 06 35.6
BARS Barje 82.14 313 *e*P **P 15 55 19.3 -1.1**
BOLS Boljevac 82.22 315 *e*P **P 15 55 19.3 -1.5**
SMY Shemya 82.22 36 PFAKE 15 55 30.0 +9.4
SMY LR LR
comp=Z,3μm,21.0s,MS5.7
DRGR 82.23 318‖ *i*P **P 15 55 22.1 +1.3**
DRGR 82.23 318 P **P 15 55 21.6 +0.8**
SKO Skopje 82.27 313 *e*P **P 15 55 20.2 -0.9**
KRUS Krusevo 82.32 312 *e*P **P 15 55 19.8 -1.6**
LVZ Lovozero 82.40 340 PFAKE 15 55 30.0 +8.8
LVZ LR LR
comp=Z,11μm,21.0s,MS6.2
VSU Vasula 82.55 330‖ *e*P **P 15 55 22.3 +0.1**
OHR Ohrid 82.61 312 *e*P **P 15 55 17.2 -5.7**
APA Apatity 82.71 339⇑ *i*P **P 15 55 25.0 +2.2**
APA *i* S S 16 05 38.0 -0.2
APA *i* SS SS 16 11 08.0 +7.3
APA *i* SSS 16 14 23.0
APA pmax pmax
comp=Z,97nm,1.4s,mb5.6
APA pmax pmax
comp=Z,3μm,17.0s
APA MLR MLR
comp=Z,10μm,20.0s,MS6.2
RAO Raoul Island 82.73 119 LR LR 16 33 00.3
comp=Z,7μm,21.6s,MS6.0,baz=250,slow=36
RAO Raoul Island 82.73 119 PFAKE 15 55 30.0 +6.2
RAO LR LR
comp=Z,7μm,20.0s,MS6.0
BZS Buzias 82.76 316⇑ *i*P **P 15 55 23.2 -0.4**
BZS Buzias 82.76 316 P **P 15 55 23.5 -0.1**
KWP Kalwaria 82.78 320 *e*P **P 15 55 25.2 +1.6**
KWP *e*S S 16 05 41.6 +2.0
KWP *e*S S 16 05 43.6 +4.0
KWP LMZ 16 38 27.3
comp=Z,5μm,21.6s
KWP Kalwaria 82.78 320 *e*P **P 15 55 22.0 -1.6**
KWP *e*S S 16 05 41.6 +2.0
KWP LR LR
comp=Z,5μm,19.0s,MS5.9
SVIS Svilajnac 82.81 315 *e*P **P 15 55 23.2 -0.7**
UZH Uzhgorod 82.86 319 *e*P **P 15 55 25.0 +1.0**
UZH *i* pP 15 55 33.0 -1.0
UZH *e* 15 58 33.0
UZH *i*S S 16 05 48.0 +3.6
UZH *i*PS 16 06 38.0
UZH *e*SS SS 16 11 00.0 -3.8
UZH *e*SSS 16 14 35.0
KOLS Kolonicke sedl 82.93 320 *e*P **P 15 55 25.1 +0.7**
KOLS *e* 15 55 48.4
KOLS *e*S S 16 05 45.1 +4.0
GRUS Gruza 83.11 314 *e*P **P 15 55 21.4 -4.0**
BILL Bilibino 83.19 20*d* *i*P **P 15 55 25.8 +0.5**
BILL pmax pmax
comp=Z,51nm,2.4s,mb5.1
BILL MLR MLR
comp=Z,4μm,19.0s,MS5.8
BILL Bilibino 83.19 20 *i* P **P 15 55 25.8 +0.5**
BILL LR LR
comp=Z,17μm,20.0s,MS6.4
TIR Tirane 83.34 312 PFAKE 15 55 40.0 +13
TIR LR LR
comp=Z,6μm,19.0s,MS6.0
SUW Suwalki 83.39 325 *e*P **P 15 55 26.4 -0.2**
SUW *e*S S 16 05 46.0 +0.3
SUW LMZ 16 39 42.4
comp=Z,4μm,23.0s
SUW Suwalki 83.39 325 *e*P **P 15 55 26.4 -0.2**
SUW *e*S S 16 05 46.0 +0.4
CRVS Cervenica-Dubn 83.45 319 *e*P **P 15 55 27.3 +0.2**
CRVS *e* 15 55 53.1
CRVS *e*S S 16 05 48.0 +1.6
CRVS Cervenica-Dubn 83.45 319 *e*P **P 15 55 27.4 +0.3**
CRVS *e* 15 55 53.1
CRVS *e*S S 16 05 48.0 +1.6
SJES Sjenica 83.54 314 *e*P **P 15 55 17.9 -10**
SBA Scott Base 83.55 169 *e*P **P 15 55 28.2 +1.1**
SBA pmax pmax
comp=Z,370nm,2.1s,mb6.2
SBA MLR MLR
comp=Z,6μm,19.0s,MS6.0
SBA Scott Base 83.55 169 *e*P **P 15 55 28.2 +1.1**
comp=Z,370nm,2.1s,mb6.2
SBA LR LR
comp=Z,6μm,19.0s,MS6.0

DIVS Divibare 83.66 315 *e*P **P 15 55 27.9 -0.3**
STHS Stebnicka Huta 83.68 320 *e*P **P 15 55 28.9 +0.7**
STHS pmax pmax
comp=Z,23nm,0.9s,mb5.3
STHS Stebnicka Huta 83.68 320 *e*P **P 15 55 28.9 +0.7**
comp=Z,23nm,0.9s,mb5.3
KAF Kangasniemi 83.75 333 *ep* **P 15 55 27.9 -0.4**
comp=Z,77nm,0.8s,mb5.9,baz=102,slow=4.8
KAF Kangasniemi 83.75 333 *e*P **P 15 55 27.9 -0.4**
KAF pmax pmax
comp=Z,77nm,0.8s,mb5.9
BBLS Lazići 84.04 314 *e*P **P 15 55 29.9 -0.3**
NIE Niedzica 84.28 320 *e*P **P 15 55 31.9 +0.6**
PSZ Piszkesteto 84.31 318 P **P 15 55 31.7 +0.2**
PSZ Piszkesteto 84.31 318⇑ *e*PcP PcP 15 55 34.2 -1.0
PSZ Piszkesteto 84.31 318⇑ *i*P **P 15 55 31.5 0.0**
PSZ Piszkesteto 84.31 318 *e*P **P 15 55 30.8 -0.7**
comp=Z,45nm,1.1s,mb5.5
PSZ LR LR
comp=Z,3μm,20.0s,MS5.7
OJC Ojcow 84.74 321 *e*P **P 15 55 34.2 +0.6**
OJC *e**SP sP 15 55 49.4 +2.2
OJC *e* 15 58 51.0
OJC *e*S S 16 06 00.5 +1.2
OJC *e*SS SS 16 11 37.6 +6.1
OJC MLR MLR
comp=Z,3μm,23.5s,MS5.6
OJC Ojcow 84.74 321 *e*P **P 15 55 34.2 +0.6**
OJC *e*PcP PcP 15 55 36.4 -0.6
OJC *e*sP sP 15 55 49.4 +2.2
OJC *e*PP PP 15 58 51.0 +1.1
OJC *e*S S 16 06 00.5 +1.2
OJC *e*pS 16 06 13.8
OJC *e*SS SS 16 11 37.6 +6.1
OJC LR LR
comp=Z,3μm,23.5s,MS5.6
MIDW Midway 84.88 62 PFAKE 15 55 50.0 +15
MIDW LR LR
comp=Z,4μm,20.0s,MS5.8
PKSM Moragy 84.91 317 *e*P **P 15 55 33.2 -1.3**
PKSM Moragy 84.91 317 P **P 15 55 34.6 +0.1**
VYHS Vyhne 85.10 319 *e*P **P 15 55 35.2 -0.2**
VYHS *e*S S 16 06 05.3 +2.4
TIP Timpagrande 85.43 309 P **P 15 55 38.3 +1.0**
comp=Z,98nm,1.5s,mb5.7
TIP LR LR
comp=Z,4μm,21.0s,MS5.8
KEV Kevo 85.66 341 *ep* **P 15 55 36.3 -1.5**
comp=Z,19nm,0.8s,mb5.4
KEV Kevo 85.66 341 P **P 15 55 37.6 -0.2**
KEV pmax pmax
comp=Z,71nm,1.1s,mb5.8
OKC Ostrava-Krasne 85.73 320 *e*P **P 15 55 38.4 -0.2**
OKC *e*PP PP 15 59 01.8 +3.8
OKC *e*S S 16 06 12.1 +3.0
OKC AMS AMS 16 44 30.0
comp=Z,3μm,19.2s
OKC Ostrava-Krasne 85.73 320 *e*P **P 15 55 38.4 -0.2**
OKC *e*PP PP 15 59 01.8 +3.8
OKC *e*S S 16 06 12.1 +3.0
RAC Raciborz 85.74 320 *e*P **P 15 55 39.2 +0.6**
RAC MLR MLR
comp=Z,4μm,20.0s,MS5.8
ARCES ARCESS Array B 86.10 340 P **P 15 55 40.0 0.0**
comp=Z,42nm,0.8s,mb5.7,baz=102,slow=5.1,SNR=48
ARCES S S 16 06 08.2 -3.8
comp=Z,2.5nm,0.9s,baz=261,slow=31,SNR=2.5
ARCES LR LR 16 38 08.1
comp=Z,8μm,19.8s,MS6.1,baz=112,slow=38
ARCES ARCESS Array B 86.10 340 P **P 15 55 40.0 0.0**
ARCES S S 16 06 08.2 -3.8
ARCES ARCESS Array B 86.10 340 P **P 15 55 40.0 0.0**
ARCES S S 16 06 08.2 -3.8
ARCES LR LR 16 38 08.1
ARE0 ARCESS Array S 86.10 340 *e*P **P 15 55 39.9 -0.1**
MODS Modra-Piesok 86.11 319 *e*P **P 15 55 40.2 -0.3**
MODS pmax pmax
comp=Z,56nm,1.8s,mb5.5
MODS Modra-Piesok 86.11 319 *e*P **P 15 55 40.2 -0.3**
comp=Z,56nm,1.8s,mb5.5
MODS *e*S S 16 06 15.3 +2.4
MORC Moravsky Berou 86.11 320 P **P 15 55 41.0 +0.5**
MORC Moravsky Berou 86.11 320⇑ *i*P **P 15 55 40.4 -0.1**
MORC Moravsky Berou 86.11 320 *e*P **P 15 55 40.2 -0.3**
comp=Z,27nm,1.1s,mb5.4
ZST Bratislava 86.20 318 *e*P **P 15 55 42.2 +1.2**
ZST *e* 15 55 55.4
ZST pmax pmax
comp=Z,175nm,2.2s,mb5.9
ZST Bratislava 86.20 318 *e*P **P 15 55 42.2 +1.2**
comp=Z,175nm,2.2s,mb5.9
ZST *e* 15 55 55.4
ZST *e*S S 16 06 28.3 +14
GKP Gorka Klasztor 86.75 323 *e*P **P 15 55 46.9 +3.3**
GKP *e*S S 16 06 23.6 +4.6
GKP LMZ 16 41 20.1
comp=Z,4μm,20.1s
GKP Gorka Klasztor 86.75 323 *e*P **P 15 55 46.9 +3.4**
GKP *e*S S 16 06 23.6 +4.7
GKP LR LR
comp=Z,4μm,20.1s,MS5.8
DPC Dobruska-Polom 86.96 320 *e*P **P 15 55 45.2 +0.6**
DPC *ex* x 16 00 05.8
DPC *e*S S 16 06 22.3 +1.2
DPC AMS AMS 16 41 50.0
comp=Z,4μm,18.4s
KSP Ksiaz 87.04 321 *e*P **P 15 55 44.5 -0.4**
KSP *e*S S 16 06 24.0 +2.2
KSP LMZ 16 41 12.7
KSP Ksiaz 87.04 321 *e*P **P 15 55 46.1 +1.1**
KSP *e*S S 16 06 22.0 +0.2
KSP LR LR
comp=Z,12μm,20.7s,MS6.3
BOJS Bojanci 87.18 316 *i* P **P 15 55 46.0 +0.3**
UPC Upice 87.18 321 *e*P **P 15 55 46.2 +0.5**
PERS Pernice 87.38 317 *i* P **P 15 55 47.2 +0.5**
TREC Trest 87.39 319 *e*P **P 15 55 46.9 +0.2**
TREC *e*S S 16 06 26.5 +1.2
TREC MLR MLR
comp=Z,3μm,19.2s,MS5.7
TREC Trest 87.39 319 *e*P **P 15 55 46.9 +0.2**
TREC *ex* x 15 59 39.0
TREC *e*S S 16 06 26.5 +1.2
TREC *ex* x 16 18 50.8
TREC AMS AMS 16 42 40.0
comp=Z,3μm,19.2s
MAIT Maitri 87.53 199 *e*P **P 15 55 50.4 +3.5**
ADK Adak 87.65 38 *e*P **P 15 55 47.5 -0.4**
ADK pmax pmax
comp=Z,322nm,1.7s,mb6.3
ADK MLR MLR
comp=Z,3μm,22.0s,MS5.6
ADK Adak 87.65 38 *e*P **P 15 55 47.5 -0.5**
comp=Z,322nm,1.7s,mb6.3
ADK LR LR
comp=Z,3μm,22.0s,MS5.6
LJU Ljubljana 87.73 316 *i* P **P 15 55 49.1 +0.6**
JAVS Javornik 88.04 316 *i* P **P 15 55 49.7 -0.2**
PRU Pruhonice 88.07 320 *e*P **P 15 55 50.3 +0.4**
PRU *e*S S 16 06 32.7 +1.0
PRU MLR MLR
comp=Z,4μm,18.7s,MS5.9
PRU Pruhonice 88.07 320 *e*P **P 15 55 50.3 +0.4**
PRU *ex* x 15 59 30.1
PRU *e*S S 16 06 32.7 +1.0
PRU *ex* x 16 18 56.8
PRU AMS AMS 16 41 40.0
comp=Z,4μm,18.7s
PVCC Panska Ves 88.10 321 *e*P **P 15 55 50.0 -0.1**
PVCC *e*S S 16 06 35.6 +3.6
PVCC MLR MLR
comp=Z,4μm,22.2s,MS5.8
PVCC Panska Ves 88.10 321 *e*P **P 15 55 50.0 -0.1**
PVCC *e*S S 16 06 35.6 +3.6
PVCC *ex* x 16 18 51.2
PVCC AMS AMS 16 41 30.0
comp=Z,4μm,22.2s
QSPA South Pole Qui 88.14 180 S S 16 06 15.8 -16
comp=Z,1.2nm,1.1s,baz=149,slow=16,SNR=3.4
TRO Tromso 88.37 340 *e*P **P 15 55 49.2 -1.8**
TRO AMb AMB 15 56 41.0
comp=Z,120nm,2.3s,mb5.7
TRO *e*SKS 16 06 21.9

TRO eSS SS 16 12 29.4 +5.6
TRO AMS AMS 16 39 39.5
comp=Z,8µm,22.7s,MS6.1
TRO Tromso 88.37 340 eP **P** **15 55 48.6 -2.3**
TRO i 16 06 32.1
TRO LR LR
comp=Z,8µm,22.7s,MS6.1
AFI Afiamalu 88.42 104 S S 16 06 23.4 -13
comp=Z,19nm,1.1s,baz=334,slow=22,SNR=2.5
AFI Afiamalu 88.42 104 eP **P** **15 55 54.1 +1.7**
AFI pmax pmax
comp=Z,132nm,1.2s,mb6.0
AFI MLR MLR
comp=Z,3µm,21.0s,MS5.6
AFI Afiamalu 88.42 104 eP **P** **15 55 54.0 +1.7**
comp=Z,132nm,1.2s,mb6.0
AFI LR LR
comp=Z,3µm,21.0s,MS5.6
GEC2 GERESS Array S 88.52 319 eP **P** **15 55 52.5 +0.4**
GEC2 eS S 16 06 39.9 +3.9
GEC2 pmax pmax
comp=Z,191nm,1.9s,mb6.1
GEC2 GERESS Array S 88.52 319 eP **P** **15 55 52.5 +0.4**
comp=Z,191nm,1.9s,mb6.1
GEC2 eS S 16 06 39.9 +3.9
GERES GERESS Array B 88.52 319 P **P** **15 55 51.6 -0.5**
comp=Z,16nm,1.0s,mb5.3,baz=95,slow=4.3,SNR=29
GERES S S 16 06 25.4 -11
comp=Z,0.2nm,0.3s,baz=166,slow=29,SNR=2.5
BRG Berggiesshubel 88.52 321 eP **P** **15 55 52.3 +0.2**
BRG 15 59 17.9
BRG pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
BRG pmax pmax
comp=Z,58nm,1.6s,mb5.7
BRG pmax pmax
comp=Z,7.0nm,1.6s,mb4.7
BRG Berggiesshubel 88.52 321 eP **P** **15 55 52.4 +0.3**
comp=Z,96nm,1.6s,mb5.9
BRG eS S 16 06 39.7 +3.7
BRG Berggiesshubel 88.52 321 eP **P** **15 55 52.3 +0.2**
comp=Z,12nm,1.0s,mb5.2
BRG i 15 55 54.2
comp=Z,96nm,1.6s
BRG PP PP 15 59 17.9 -2.6
comp=Z,12nm,1.6s
KHC Kasperske Hory 88.62 319 eP **P** **15 55 52.7 +0.1**
KHC e 15 56 00.0
KHC eS S 16 06 40.5 +3.5
KHC MLR MLR
comp=Z,4µm,19.4s,MS5.8
KHC Kasperske Hory 88.62 319 eP **P** **15 55 52.7 +0.1**
KHC ex x 15 56 00.0
KHC ex x 15 56 37.0
KHC ex x 15 59 42.6
KHC eS S 16 06 40.5 +3.5
KHC ex x 16 19 43.0
KHC AMS AMS 16 44 10.0
comp=Z,4µm,19.4s
KHC Kasperske Hory 88.62 319⇑ eP **P** **15 55 52.6 0.0**
KHC e 15 56 00.0
KHC e 15 56 37.0
KHC ePP PP 15 59 42.6 +21
KHC eS S 16 06 40.5 +3.5
KHC e 16 19 43.0
KHC LR LR
comp=Z,4µm,19.4s,MS5.8
RUE Ruedersdorf 88.75 322 eP **P** **15 55 53.9 +0.8**
comp=Z,202nm,1.4s,mb6.3
RUE Ruedersdorf 88.75 322 eP **P** **15 55 53.2 +0.1**
comp=Z,87nm,0.9s,mb6.1
RJOB Jochberg 89.04 318 eP **P** **15 55 54.4 -0.2**
comp=Z,38nm,1.4s,mb5.5
WET Wettzell 89.08 319 eP **P** **15 55 55.0 +0.3**
WET pmax pmax
comp=Z,64nm,1.4s,mb5.8
WET Wettzell 89.08 319 eP **P** **15 55 55.0 +0.3**
comp=Z,64nm,1.4s,mb5.8
BJO Bjornoya 89.12 345 e **P** **15 55 57.8 +3.3**
BJO AMS AMS 16 42 54.2
comp=Z,7µm,18.6s,MS6.1
CLL Collm 89.15 321 i P **P** **15 55 54.7 -0.3**
CLL eS S 16 06 44.0 +2.1
CLL pmax pmax
comp=Z,35nm,1.2s,mb5.6
CLL MLR MLR
comp=Z,3µm,18.1s,MS5.8
CLL Collm 89.15 321 eP **P** **15 55 54.9 -0.1**
comp=Z,35nm,1.2s,mb5.6
CLL eS S 16 06 44.3 +2.4
CLL Collm 89.15 321 i P **P** **15 55 54.7 -0.3**
comp=Z,35nm,1.2s,mb5.6
CLL ePmax 15 55 58.0
CLL ePlp 15 55 58.0
CLL ePP PP 15 59 30.0 +4.6
CLL ePPP 16 01 26.0
CLL eS S 16 06 44.0 +2.1
CLL ePS PS 16 07 52.0 +1.7
CLL eSS SS 16 12 37.0 +1.1
CLL LmV 16 45 00.0
comp=Z,3µm,18.1s
CLL Collm 89.15 321 i P **P** **15 55 54.7 -0.3**
comp=Z,35nm,1.2s,mb5.6
CLL eS S 16 06 44.0 +2.1
CLL LR LR
comp=Z,3µm,18.1s,MS5.8
BJO1 Bjornoya 89.17 345 eP **P** **15 55 57.8 +3.1**
BJO1 LR LR
comp=Z,7µm,18.6s,MS6.1
HFS Hagfors 89.42 330 LR LR 16 41 40.1
comp=Z,6µm,21.4s,MS6.0,baz=87,slow=39
NKC Novy Kostel 89.43 320 eP **P** **15 55 56.5 +0.2**
NKC eS S 16 06 47.3 +2.8
NKC Novy Kostel 89.43 320 eP **P** **15 55 56.5 +0.2**
NKC eS S 16 06 47.3 +2.8
NKC ex x 16 19 22.2
NKC AMS AMS 16 41 30.0
comp=Z,4µm,20.5s
NKC Novy Kostel 89.43 320 eP **P** **15 55 56.5 +0.2**
NKC eS S 16 06 47.3 +2.8
NKC e 16 19 22.2
TANN Tannenbergstha 89.43 320 eP **P** **15 55 56.6 +0.2**
comp=Z,41nm,1.4s,mb5.6
TANN eS S 16 06 48.4 +3.8
MANZ Manzenberg 89.63 320 eP **P** **15 55 58.0 +0.7**
comp=Z,94nm,1.6s,mb5.9
MOX Moxa 89.98 320 eP **P** **15 55 59.4 +0.5**
comp=Z,87nm,1.8s,mb5.8
MOX
comp=Z,3µm,21.0s
MOX Moxa 89.98 320 eP **P** **15 55 59.4 +0.5**
MOX pmax pmax
comp=Z,87nm,1.8s,mb5.8
MOX MLR MLR
comp=Z,3µm,21.0s,MS5.7
MOX Moxa 89.98 320 eP **P** **15 55 59.2 +0.3**
comp=Z,62nm,1.4s,mb5.8
MOX eS S 16 06 53.4 +3.7
FUR Furstenfeldbru 90.09 318 eP **P** **15 55 59.2 -0.3**
MOTA Moosalm 90.17 317⇑ i/P **P** **15 56 00.0 +0.2**
comp=Z,35nm,1.1s,mb5.6
GRA1 Grafenberg Arr 90.19 320 eP **P** **15 56 00.5 +0.6**
comp=Z,68nm,1.3s,mb5.8
GRA1 eS S 16 06 56.2 +4.6
GRA1 LR LR
comp=Z,3µm,18.1s,MS5.8
GRF Grafenberg Arr 90.19 320 eP **P** **15 56 00.5 +0.6**
GRF eS S 16 06 56.2 +4.6
GRF pmax pmax
comp=Z,68nm,1.3s,mb5.8
GRF MLR MLR
comp=Z,3µm,18.1s,MS5.8
GRF Grafenberg Arr 90.19 320 eP **P** **15 56 00.5 +0.6**
comp=Z,68nm,1.3s,mb5.8
GRF eS S 16 06 56.2 +4.6
GRF eL 16 43 21.9
comp=Z,3µm,18.1s
SPITS Spitsbergen Ar 90.33 348 P **P** **15 55 59.3 -0.8**
comp=Z,38nm,0.9s,mb5.7,baz=336,slow=16,SNR=17
SPITS S S 16 06 32.0 -20
comp=Z,3.1nm,0.8s,baz=240,slow=31,SNR=2.2
SPITS LR LR 16 44 57.3
comp=Z,7µm,19.2s,MS6.1,baz=40,slow=41
SPITS Spitsbergen Ar 90.33 348 P **P** **15 55 59.3 -0.7**
SPITS S S 16 06 32.0 -20

SPB4 Spitsbergen Ar 90.34 348 eP **P** **15 55 58.8 -1.3**
FETA Feichten 90.41 317⇑ i/P **P** **15 56 00.9 -0.1**
comp=Z,31nm,1.2s,mb5.5,SNR=5.9
NSS Namsos 90.52 334 AMS AMS 16 43 02.4
comp=Z,5µm,18.7s,MS6.0
VLC Villacollemand 90.55 314 PFAKE 15 56 10.0 +8.3
VLC LR LR
comp=Z,4µm,22.0s,MS5.8
NB2 NORSAR Subarra 90.69 331 P **P** **15 56 01.3 -0.7**
comp=Z,54nm,1.4s,mb5.7,baz=95,slow=4.4
NOA NORSAR Array B 90.69 331 P **P** **15 56 01.4 -0.6**
comp=Z,7.4nm,1.0s,mb5.0,baz=93,slow=4.7,SNR=9.9
NOA S S 16 06 37.1 -19
comp=Z,1.9nm,1.0s,baz=2.6,slow=12,SNR=3.4
NOA LR LR 16 45 02.0
comp=Z,4µm,19.2s,MS5.9,baz=65,slow=41
NOA NORSAR Array B 90.69 331 P **P** **15 56 01.5 -0.5**
NOA S S 16 06 37.1 -19
CLZ Clausthal 90.81 322 eP **P** **15 56 03.2 +0.4**
CLZ pmax pmax
comp=Z,73nm,1.4s,mb5.8
CLZ Clausthal 90.81 322 eP **P** **15 56 03.2 +0.4**
comp=Z,73nm,1.4s,mb5.8
BSEG Bad Segeberg 90.91 324 eP **P** **15 56 03.6 +0.4**
BSEG eS S 16 07 02.4 +4.3
BSEG pmax pmax
comp=Z,42nm,1.4s,mb5.6
BSEG Bad Segeberg 90.91 324 eP **P** **15 56 03.6 +0.4**
comp=Z,42nm,1.4s,mb5.6
BSEG eS S 16 07 02.4 +4.3
DAVA Damuels 91.00 317⇑ i/P **P** **15 56 03.9 +0.1**
comp=Z,66nm,1.2s,mb5.8,SNR=16
DAVA Damuels 91.00 317⇑ i/PcP PcP 15 56 03.9 -0.9
comp=Z,66nm,1.2s,SNR=16
NRDL Niedersach Rie 91.00 322 eP **P** **15 56 04.3 +0.7**
comp=Z,82nm,1.6s,mb5.8
NRDL eS S 16 07 02.3 +3.4
UBBA Unterbreizbach 91.02 321 eP **P** **15 56 03.9 +0.2**
comp=Z,74nm,2.0s,mb5.7
KEST Kesra 91.09 306 P **P** **15 56 05.5 +1.0**
comp=Z,14nm,0.9s,mb5.3,baz=301,slow=1.9,SNR=30
KEST S S 16 06 39.8 -21
comp=Z,0.6nm,0.7s,baz=96,slow=22,SNR=1.8
KEST LR LR 16 37 50.8
comp=Z,2µm,19.8s,MS5.6,baz=222,slow=36
VSL Villasalto 91.16 309 eP **P** **15 56 04.9 +0.2**
comp=Z,40nm,1.0s,mb5.7
VSL LR LR
comp=Z,2µm,19.0s,MS5.6
KBS Kingsbay 91.28 349 eP **P** **15 56 06.2 +1.8**
KBS AMS AMS 16 42 43.0
comp=Z,7µm,21.0s,MS6.1
KBS Kingsbay 91.28 349‖ eP **P** **15 56 04.7 +0.3**
KBS LR LR
comp=Z,8µm,19.0s,MS6.2
TUE Stuetta 91.34 316 eP **P** **15 56 07.2 +1.8**
comp=Z,28nm,1.1s,mb5.5
KONO Kongsberg 91.45 329 eSKS SKSac 16 06 35.1 -0.5
KONO e 16 06 58.5
KONO AMS AMS 16 42 11.6
comp=Z,5µm,19.5s,MS6.0
KONO Kongsberg 91.45 329⇑ eP **P** **15 56 06.0 +0.4**
STU Stuttgart 91.49 319 eP **P** **15 56 06.0 0.0**
comp=Z,54nm,1.4s,mb5.7
STU eS S 16 07 08.5 +4.9
SPAK Spaichingen-Ko 91.75 318 eP **P** **15 56 06.6 -0.6**
TOD Tromm 91.76 319 eP **P** **15 56 06.4 -0.8**
TNS Taunus Mts 92.00 320 eP **P** **15 56 08.7 +0.4**
TNS eS S 16 07 12.3 +4.2
TNS pmax pmax
comp=Z,58nm,1.4s,mb5.7
TNS Taunus Mts 92.00 320 eP **P** **15 56 08.7 +0.4**
comp=Z,58nm,1.4s,mb5.7
TNS eS S 16 07 12.3 +4.2
BFO Black Forest 92.06 318 eP **P** **15 56 08.3 -0.3**
BFO pmax pmax
comp=Z,50nm,1.7s,mb5.6
BFO Black Forest 92.06 318 eP **P** **15 56 08.3 -0.3**
comp=Z,50nm,1.7s,mb5.6
SNAA Sanae 92.13 198 eP **P** **15 56 10.5 +2.0**
SNAA e pP 15 56 18.5 0.0
SNAA e pP 15 56 21.9 +3.4
SNAA Sanae 92.13 198 eP **P** **15 56 10.1 +1.6**
SNAA pmax pmax
comp=Z,46nm,1.5s
SNAA Sanae 92.13 198 eP **P** **15 56 10.1 +1.6**
comp=Z,46nm,1.5s,mb5.6
FELD Feldberg im Sc 92.28 318 eP **P** **15 56 09.7 +0.1**
LANF Langenberg 92.41 319 eP **P** **15 56 09.2 -1.0**
MOL Molde 92.46 332 AMS AMS 16 46 26.4
comp=Z,5µm,19.3s,MS5.9
LIBD Limburg 92.55 318 eP **P** **15 56 11.6 +0.7**
ABH Alteburg 92.58 320 eP **P** **15 56 06.6 -4.4**
SBF Sospel 92.67 314 eP **P** **15 56 10.0 -1.6**
comp=Z,141nm,1.2s,mb6.0
SBF Sospel 92.67 314 eP **P** **15 56 10.0 -1.6**
SBF pmax pmax
comp=Z,70nm,1.2s,mb6.0
SBF Sospel 92.67 314 eP **P** **15 56 10.0 -1.6**
comp=Z,70nm,1.2s,mb6.0
BUG Bochum--Univer 92.74 321 eP **P** **15 56 11.9 +0.2**
comp=Z,64nm,1.5s,mb5.8
BUG eS S 16 07 17.2 +2.5
CDF Champ du Feu 92.76 318 eP **P** **15 56 10.2 -1.7**
comp=Z,102nm,1.6s,mb5.7
CDF Champ du Feu 92.76 318 eP **P** **15 56 10.2 -1.7**
CDF pmax pmax
comp=Z,51nm,1.6s,mb5.7
CDF Champ du Feu 92.76 318 eP **P** **15 56 10.2 -1.7**
comp=Z,51nm,1.6s,mb5.7
ECH Echery 92.84 318 eP **P** **15 56 13.7 +1.4**
ECH Echery 92.84 318 P **P** **15 56 12.4 +0.1**
MOF Molkenrain 92.86 318 eP **P** **15 56 14.8 +2.4**
MOF Molkenrain 92.86 318 eP **P** **15 56 10.9 -1.5**
RUP Ruppelstein 92.89 319 eP **P** **15 56 08.9 -3.6**
HINF Hinteralfeld 93.05 318 eP **P** **15 56 11.7 -1.5**
MBDF Montbardon 93.14 315 eP **P** **15 56 11.4 -2.3**
comp=Z,46nm,1.2s,mb5.5
MBDF Montbardon 93.14 315 eP **P** **15 56 11.4 -2.3**
MBDF pmax pmax
comp=Z,23nm,1.2s,mb5.5
MBDF Montbardon 93.14 315 eP **P** **15 56 11.4 -2.3**
comp=Z,23nm,1.2s,mb5.5
LPG La Plagne 93.15 315 eP **P** **15 56 12.5 -1.2**
comp=Z,41nm,1.0s,mb5.5
LPG La Plagne 93.15 315 eP **P** **15 56 12.5 -1.2**
LPG pmax pmax
comp=Z,21nm,1.0s,mb5.5
LPG La Plagne 93.15 315 eP **P** **15 56 12.5 -1.2**
comp=Z,21nm,1.0s,mb5.5
LPL La Plagne 93.16 315 eP **P** **15 56 12.5 -1.3**
comp=Z,64nm,1.1s,mb5.7
LPL La Plagne 93.16 315 eP **P** **15 56 12.5 -1.3**
LPL pmax pmax
comp=Z,32nm,1.1s,mb5.7
LPL La Plagne 93.16 315 eP **P** **15 56 12.5 -1.3**
comp=Z,32nm,1.1s,mb5.7
BNI Bardonecchia 93.20 315 eP **P** **15 56 13.7 -0.3**
BNI pmax pmax
comp=Z,29nm,1.3s,mb5.5
BNI MLR MLR
comp=Z,4µm,22.0s,MS5.8
BNI Bardonecchia 93.20 315 eP **P** **15 56 13.7 -0.3**
comp=Z,29nm,1.3s,mb5.5
BNI LR LR
comp=Z,4µm,22.0s,MS5.8
WLF Walferdange 93.48 319 eS S 16 07 26.0 +4.7
WLF Walferdange 93.48 319 PFAKE 15 56 30.0 +15
WLF LR LR
comp=Z,3µm,19.0s,MS5.7
BER Bergen 93.59 330 e S 16 07 19.7 -2.1
BER AMS AMS 16 47 08.0
comp=Z,5µm,18.5s,MS6.0
CABF La Chapelle 93.59 316 eP **P** **15 56 14.6 -1.2**
comp=Z,153nm,1.7s,mb5.9
CABF La Chapelle 93.59 316 eP **P** **15 56 14.6 -1.2**
CABF pmax pmax
comp=Z,77nm,1.7s,mb5.9
CABF La Chapelle 93.59 316 eP **P** **15 56 14.6 -1.2**
comp=Z,77nm,1.7s,mb5.8
VNA2 Neumayer--Watz 93.74 198 eP **P** **15 56 17.6 +1.7**
VNA2 e pP 15 56 25.5 -0.5
VNA2 e 15 56 29.8
VNA2 e 15 56 33.5
VNA2 e 15 56 41.1

ORIF Oris-en-Rattie 93.77 315 eP **P** **15 56 15.2 -1.4**
ORIF eMLR MLR
comp=Z,6µm,21.8s,MS5.7
VNA1 Neumayer--Stat 94.10 199 eP **P** **15 56 20.7 +3.1**
VNA1 e 15 56 27.2
VNA1 e pP 15 56 30.3 +2.7
VNA1 e 15 56 44.5
TAM Tamanrasset 94.27 293 eP **P** **15 56 20.1 +0.7**
VNA3 Neumayer Olymp 94.35 198 eP **P** **15 56 26.0 +7.3**
VNA3 e 15 56 29.3
VNA3 e 15 56 33.3
VNA3 e 15 56 41.2
LOR Lormes 95.09 317 eP **P** **15 56 20.9 -1.7**
comp=Z,40nm,1.2s,mb5.4
LOR eMLR MLR
comp=Z,4µm,23.0s,MS5.5
LOR Lormes 95.09 317 eP **P** **15 56 20.9 -1.7**
LOR pmax pmax
comp=Z,20nm,1.2s,mb5.4
LOR MLR MLR
comp=Z,4µm,23.0s,MS5.8
LOR Lormes 95.09 317 eP **P** **15 56 20.9 -1.7**
comp=Z,20nm,1.2s,mb5.4
LOR LR LR
comp=Z,4µm,23.0s,MS5.8
SMF Signal de Mont 95.14 316 eP **P** **15 56 21.2 -1.6**
comp=Z,89nm,1.5s,mb5.7
SMF Signal de Mont 95.14 316 eP **P** **15 56 21.2 -1.6**
SMF pmax pmax
comp=Z,45nm,1.5s,mb5.7
SMF Signal de Mont 95.14 316 eP **P** **15 56 21.2 -1.6**
comp=Z,45nm,1.5s,mb5.7
SSF Saint Saulge 95.35 317 eP **P** **15 56 22.1 -1.7**
comp=Z,59nm,1.5s,mb5.5
SSF Saint Saulge 95.35 317 eP **P** **15 56 22.1 -1.7**
SSF pmax pmax
comp=Z,29nm,1.5s,mb5.5
SSF Saint Saulge 95.35 317 eP **P** **15 56 22.1 -1.7**
comp=Z,29nm,1.5s,mb5.5
AVF Avril sur Loir 95.47 317 eP **P** **15 56 22.7 -1.6**
comp=Z,19nm,1.0s,mb5.2
AVF Avril sur Loir 95.47 317 eP **P** **15 56 22.7 -1.6**
AVF pmax pmax
comp=Z,10.0nm,1.0s,mb5.2
AVF Avril sur Loir 95.47 317 eP **P** **15 56 22.7 -1.6**
comp=Z,9.6nm,1.0s,mb5.2
JMIC Jan Mayen 97.50 342 LR LR 16 46 07.2
comp=Z,5µm,21.4s,MS6.0,baz=62,slow=39
JMIC Jan Mayen 97.50 342 AMS AMS 16 46 45.0
comp=Z,4µm,21.6s,MS5.9
TORD Torodi Ar. Bea 97.92 283 P **P** **15 56 36.2 0.0**
comp=Z,2.9nm,1.1s,mb4.7,baz=68,slow=5.2,SNR=9.0
TORD S SKSac 16 07 14.2 +2.0
comp=Z,0.5nm,0.9s,baz=354,slow=6.0,SNR=2.2
TORD LR LR 16 40 43.5
comp=Z,4µm,20.4s,MS5.9,baz=100,slow=35
DAG Danmarks Havn 97.98 348⇑ i/P **P** **15 56 34.3 -0.8**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb5.4
DAG MLR MLR
comp=Z,15µm,23.0s,MS6.4
DAG Danmarks Havn 97.98 348⇑ i/P **P** **15 56 34.3 -0.8**
comp=Z,10nm,0.8s,mb5.4
DAG
comp=Z,15µm,23.0s
IMA2 Indian Mountai 98.47 23 eP **P** **15 56 38.0 +0.5**
ESK Eskdalemuir 98.66 326 PFAKE 15 56 50.0 +11
ESK LR LR
comp=Z,5µm,20.0s,MS6.0
RAR Rarotonga 99.43 112 PFAKE 15 56 50.0 +7.2
RAR LR LR
comp=Z,4µm,20.0s,MS5.9
CHUM Lake Minchumin 99.61 25 eP Pdif 15 56 43.1 +0.3
comp=Z,16nm,1.3s
BPAW Bear Paw Mtn. 100.11 25 ePdif Pdif 15 56 44.3 -0.7
comp=Z,4µm,1.2s
KDAK Kodiak Island 101.08 31 PFAKE 15 57 00.0 +11
KDAK LR LR
comp=Z,1µm,20.0s,MS5.5
COLA College 101.16 24 PFAKE 15 57 00.0 +10
COLA LR LR
comp=Z,5µm,19.0s,MS6.1
ESLA Sonseca Array 101.44 310 PFAKE 15 57 00.0 +9.0
ESLA LR LR
comp=Z,17µm,19.0s,MS6.6
PMR Palmer 101.69 27 PFAKE 15 57 00.0 +7.9
PMR LR LR
comp=Z,6µm,19.0s,MS6.2
PAB San Pablo 101.75 310 PFAKE 15 57 00.0 +7.7
PAB LR LR
comp=Z,3µm,21.0s,MS5.8
KIP Kipapa 102.38 69 PFAKE 15 57 10.0 +15
KIP LR LR
comp=Z,4µm,19.0s,MS5.9
XMAS Kiritimati 103.20 88 PFAKE 15 57 10.0 +11
XMAS LR LR
comp=Z,2µm,19.0s,MS5.7
SFS San Fernando 103.62 307 PFAKE 15 57 10.0 +9.4
SFS LR LR
comp=Z,5µm,19.0s,MS6.0
SHEL Horse Pasture 104.04 253 PFAKE 15 57 10.0 +7.5
SHEL LR LR
comp=Z,11µm,20.0s,MS6.4
MTE Manteigas 104.05 311 PFAKE 15 57 10.0 +7.4
MTE LR LR
comp=Z,3µm,19.0s,MS5.8
BORG Borgarnes 104.33 338 PFAKE 15 57 10.0 +6.2
BORG LR LR
comp=Z,5µm,19.0s,MS6.1
DBIC Dimbokro 104.37 276 PFAKE 15 57 20.0 +16
DBIC LR LR
comp=Z,7µm,20.0s,MS6.2
POHA Pohakuloa 104.79 70 PFAKE 15 57 20.0 +14
POHA LR LR
comp=Z,3µm,19.0s,MS5.8
TBI Tubuai 108.59 115 eSS SS 16 17 16.3 +6.5
comp=Z,4µm,26.2s
TBI Tubuai 108.59 115 eLR LR 16 33 31.2
comp=Z,8µm,22.8s
PPT Papeete 109.42 109 eLR LR 16 33 58.2
comp=Z,8µm,25.0s
SIT Sitka 109.98 28 PFAKE 16 01 40.0 +9.3
SIT LR LR
comp=Z,7µm,19.0s,MS6.2
SFJD Kangerlussuaq 111.67 348 PFAKE 16 01 40.0 +6.4
SFJD LR LR
comp=Z,8µm,22.0s,MS6.3
WRAK Wrangell Islan 111.72 28 PFAKE 16 01 50.0 +16
WRAK LR LR
comp=Z,7µm,21.0s,MS6.2
PMSA Palmer Station 112.47 188 PFAKE 16 01 50.0 +15
PMSA LR LR
comp=Z,9µm,20.0s,MS6.3
ASCN Ascension 113.24 261 PFAKE 16 01 50.0 +12
ASCN LR LR
comp=Z,7µm,19.0s,MS6.3
YKA Yellowknife Ar 114.37 17 PKP PKiKP 16 01 38.1 -0.8
comp=Z,2.1nm,0.9s,baz=330,slow=2.4,SNR=4.3
YKA Yellowknife Ar 114.37 17 PKiKP PKiKP 16 01 38.1 -0.8
YKA pmax pmax
comp=Z,2.0nm,1.0s
CMLA Cha da Macela 118.21 312 PFAKE 16 02 00.0 +13
CMLA LR LR
comp=Z,3µm,21.0s,MS5.8
NLWA Neilton Lookou 121.17 33 PFAKE 16 02 00.0 +7.6
NLWA LR LR
comp=Z,4µm,20.0s,MS6.1
RKT Rikitea 121.58 119 ePP PP 16 03 21.2 -4.9
comp=Z,850nm,26.0s
RKT eSP SP 16 13 16.0 +0.1
comp=Z,1µm,26.8s
RKT eSS SS 16 19 58.9 -1.4
comp=Z,2µm,28.5s
RKT Rikitea 121.58 119 eLR LR 16 39 32.1
comp=Z,9µm,25.5s
GNW Green Mountain 121.63 32 ePKPdf PKPdf 16 01 53.3 0.0
JCW Jim Creek 121.71 31 ePKPdf PKPdf 16 01 52.0 -1.4
EDM Edmonton 122.05 23 ePKIKP PKPdf 16 01 52.3 -1.6
TDL Tradedollar La 122.70 33 P PKPdf 16 01 56.2 +0.7
ETW Entiat 122.91 31 ePKPdf PKPdf 16 01 55.5 -0.3
COR Corvallis 123.15 35 PFAKE 16 02 10.0 +14
COR LR LR
comp=Z,3µm,22.0s,MS6.0
OD2 Odessa Site #2 123.88 30 ePKPdf PKPdf 16 01 57.3 -0.4
NEW Newport 124.06 29 ePKIKP PKPdf 16 01 58.3 +0.3
NEW MLR MLR

comp=Z,3µm,22.0s
RSW Rattlesnake Hi 124.08 32 *e*PKPdf PKPdf 16 01 58.0 0.0
HAWA Hanford 124.11 32 *e*PKPdf PKPdf 16 01 56.6 -1.6
HAWA LR LR
comp=Z,4µm,20.0s,MS6.1
CROR Criterion Ridg 124.22 34 P PKPdf 16 01 58.7 +0.3
FFC Flin Flon 124.44 15 *e*PKIKP PKPdf 16 01 57.8 -0.7
FFC MLR MLR
comp=Z,5µm,19.0s,MS6.2
HUMO Hull Mountain 124.51 37 *e*PKPdf PKPdf 16 01 58.8 -0.2
HUMO LR LR
comp=Z,4µm,21.0s,MS6.0
VIPM Ingram Point 124.73 34 PKIKP PKPdf 16 02 00.4 +1.0
LNOR Lincton Mounta 125.11 31 *e*PKIKP PKPdf 16 01 59.5 -0.6
PTCN Pitcairn Islan 125.13 123 PFAKE 16 02 10.0 +9.3
PTCN LR LR
comp=Z,10µm,22.0s,MS6.4
YBH Yreka Blue Hor 125.16 38 PKP PKPdf 16 01 59.9 -0.4
comp=Z,4.2nm,0.9s,baz=314,slow=7.8,SNR=4.8
YBH Yreka Blue Hor 125.16 38 PKP PKPdf 16 01 59.9 -0.4
YBH LR LR
comp=Z,2µm,21.0s,MS5.8
WDC Whiskeytown Da 125.92 39 PFAKE 16 02 10.0 +8.2
WDC LR LR
comp=Z,3µm,21.0s,MS6.0
LASM Arnica Sink 125.93 37 P PKPdf 16 02 02.3 +0.5
SCHQ Schefferville 125.97 350 PKP PKPdf 16 02 01.2 -0.2
comp=Z,7.5nm,0.9s,baz=117,slow=1.8,SNR=4.4
SCHQ Schefferville 125.97 350 PKP PKPdf 16 02 01.2 -0.2
SCHQ LR LR
comp=Z,6µm,19.0s,MS6.3
LTIM Timbered Crate 126.23 38 P PKPdf 16 02 02.8 +0.5
BMO Blue Mountains 126.31 32 PKIKP PKPdf 16 02 05.6 +3.2
BMO Blue Mountains 126.31 32 *e*PKPdf PKPdf 16 02 04.8 +2.4
BMO LR LR
comp=Z,4µm,20.0s,MS6.1
HOPS Hopland 126.46 41 PFAKE 16 02 10.0 +7.1
HOPS LR LR
comp=Z,3µm,20.0s,MS6.0
MOD Modoc 126.51 36 *e*PKPdf PKPdf 16 02 02.8 0.0
MOD LR LR
comp=Z,3µm,22.0s,MS6.0
MSO Missoula 126.60 28 *e*PKPdf PKPdf 16 02 01.1 -1.8
MSO LR LR
comp=Z,4µm,20.0s,MS6.1
CHMT Chamberlain Mo 126.86 28 *e*PKPdf PKPdf 16 02 02.0 -1.4
MCCM Marconi Confer 127.04 42 PFAKE 16 02 20.0 +16
MCCM LR LR
comp=Z,3µm,20.0s,MS5.9
WVOR Wild Horse Val 127.15 35 *e*PKIKP PKPdf 16 02 04.1 0.0
WVOR MLR MLR
comp=Z,2µm,20.0s,MS5.9
OHCM Honcut 127.29 40 *e*PKPdf PKPdf 16 02 04.3 -0.2
EGMT Eagleton 127.54 24 *e*PKPdf PKPdf 16 02 04.8 +0.1
EGMT LR LR
comp=Z,6µm,20.0s,MS6.3
DLMT Dillon 128.31 28 *e*PKPdf PKPdf 16 02 06.5 +0.4
DLMT *e*PP PP 16 04 10.7 +0.9
BOZ Bozeman (W) 128.55 28 *e*PKIKP PKPdf 16 02 07.1 +0.5
BOZ MLR MLR
comp=Z,3µm,19.0s,MS6.0
MCMT McKenzie Canyo 128.58 29 *e*PKPdf PKPdf 16 02 03.8 -2.9
HLID Hailey 128.70 31 PFAKE 16 02 20.0 +13
HLID LR LR
comp=Z,5µm,22.0s,MS6.2
CMB Columbia Colle 128.74 40 PFAKE 16 02 20.0 +13
CMB LR LR
comp=Z,3µm,22.0s,MS5.9
SAO San Andreas Ge 128.75 42 PFAKE 16 02 20.0 +13
SAO LR LR
comp=Z,2µm,19.0s,MS5.8
BMN Battle Mountai 129.25 36 PFAKE 16 02 20.0 +12
BMN LR LR
comp=Z,2µm,20.0s,MS5.9
QLMT Earthquake Lak 129.26 28 *e*PKPdf PKPdf 16 02 08.7 +0.7
DGMT Dagmar 129.28 20 PFAKE 16 02 20.0 +12
DGMT LR LR
comp=Z,8µm,19.0s,MS6.4
YMR Madison River 129.60 28 *e*PKPdf PKPdf 16 02 09.9 +1.3
YMR LR LR
comp=Z,4µm,20.0s,MS6.1
NVAR Mina Array Bea 129.83 39 PKP PKPdf 16 02 09.7 +0.4
comp=Z,6.2nm,0.9s,baz=254,slow=2.2,SNR=24
LKWY Lake 129.94 28 PFAKE 16 02 20.0 +11
LKWY LR LR
comp=Z,7µm,20.0s,MS6.4
RLMT Red Lodge 130.02 26 *e*PKPdf PKPdf 16 02 07.5 -1.9
RLMT LR LR
comp=Z,7µm,19.0s,MS6.3
ULM Lac du Bonnet 130.03 13 PKP PKPdf 16 02 09.2 -0.1
comp=Z,12nm,0.9s,baz=327,slow=4.5,SNR=10
ULM Lac du Bonnet 130.03 13 PKP PKPdf 16 02 09.2 -0.1
ULM LR LR
comp=Z,8µm,22.0s,MS6.4
LAO LASA Array 130.03 23 *e*PKPdf PKPdf 16 02 10.5 +1.1
LAO LR LR
comp=Z,4µm,20.0s,MS6.1
ELK Elko 130.19 34 *e*PKIKP PKPdf 16 02 10.4 +0.5
ELK MLR MLR
comp=Z,5µm,21.0s
MTUM Tungsten Hills 130.31 40 *e*PKPdf PKPdf 16 02 10.4 +0.1
RRI2 Red Bridge 130.42 29 *e*PKPdf PKPdf 16 02 10.8 +0.5
REDW Red Top Meadow 130.63 29 *e*PKPdf PKPdf 16 02 11.1 +0.4
TPH Tonopah 130.72 38 PFAKE 16 02 20.0 +9.0
TPH LR LR
comp=Z,2µm,19.0s,MS5.9
AHID Auburn Hatcher 130.96 30 PFAKE 16 02 20.0 +8.7
AHID LR LR
comp=Z,5µm,20.0s,MS6.2
ISA Isabella 131.35 42 PFAKE 16 02 20.0 +7.7
ISA LR LR
comp=Z,3µm,20.0s,MS6.0
HWUT Hardware Ranch 131.57 31 *e*PKPdf PKPdf 16 02 12.6 +0.1
HWUT LR LR
comp=Z,5µm,20.0s,MS6.2
DAC Darwin (Calif) 131.57 41 PFAKE 16 02 20.0 +7.3
DAC LR LR
comp=Z,3µm,20.0s,MS6.0
BW06 Boulder Array 131.71 29 PFAKE 16 02 20.0 +7.3
BW06 LR LR
comp=Z,5µm,20.0s,MS6.2
PDAR Pinedale Array 131.71 29 PKhKP 16 02 06.8
comp=Z,1.8nm,0.8s,baz=190,slow=0.9,SNR=4.0
PDAR PP PP 16 04 30.9 -1.1
comp=Z,2.6nm,1.0s,baz=339,slow=2.3,SNR=3.2
AGMN Agassiz Refuge 131.86 14 PFAKE 16 02 20.0 +7.2
AGMN LR LR
comp=Z,5µm,19.0s,MS6.2
DUG Dugway 131.91 33 *e*PKIKP PKPdf 16 02 15.0 +1.8
DUG MLR MLR
comp=Z,4µm,21.0s,MS6.1
SNCC San Nicolas Is 131.97 45 PFAKE 16 02 20.0 +6.5
SNCC LR LR
comp=Z,3µm,21.0s,MS6.0
TPNV Topopah Spring 132.03 39 PFAKE 16 02 20.0 +6.5
TPNV LR LR
comp=Z,2µm,20.0s,MS5.9
MWC Mount Wilson 132.46 43 PFAKE 16 02 30.0 +16
MWC LR LR
comp=Z,4µm,20.0s,MS6.1
DAU Daniels Canyon 132.60 32 *e*PKIKP PKPdf 16 02 15.2 +0.7
GSC Goldstone 132.67 41 *e*PKIKP PKPdf 16 02 15.4 +0.6
GSC MLR MLR
comp=Z,2µm,20.0s,MS5.9
MPU Maple Canyon 132.68 33 PFAKE 16 02 30.0 +15
MPU LR LR
comp=Z,4µm,19.0s,MS6.2
RSSD Black Hills 133.02 23 *e*PKIKP PKPdf 16 02 08.7 -6.5
RSSD *e* 16 02 15.9
RSSD MLR MLR
comp=Z,5µm,19.0s,MS6.2
EYMN Ely 133.09 10 *e*PKPdf PKPdf 16 02 14.0 -1.2
EYMN LR LR
comp=Z,5µm,19.0s,MS6.3
CCUT Cedar City 133.40 36 PKPdf PKPdf 16 02 16.5 +0.4
MVU Marysvale 133.42 34 PFAKE 16 02 30.0 +14
MVU LR LR
comp=Z,4µm,20.0s,MS6.1
TMUT Trail Mountain 133.42 33 *e*PKPdf PKPdf 16 02 17.1 +1.0
MSU Marysvale 133.44 34 *e*PKIKP PKPdf 16 02 17.2 +1.1
PFO Pinyon Flat Ob 133.90 43 *e*PKIKP PKPdf 16 02 14.1 -3.0
PFO MLR MLR
comp=Z,3µm,22.0s,MS6.0
BAR Barrett 134.28 44 PFAKE 16 02 30.0 +12
BAR LR LR
comp=Z,2µm,19.0s,MS5.9
PV10 Paradox Valley 135.25 32 *e*PKPdf PKPdf 16 02 19.7 +0.2
COWI Conover 135.27 8 PKPdf PKPdf 16 02 19.8 +0.4
COWI LR LR
comp=Z,5µm,21.0s,MS6.2
GLA Glamis 135.33 42 PFAKE 16 02 30.0 +10
GLA LR LR
comp=Z,2µm,20.0s,MS5.9
PKME Peaks-Kenny Pk 135.60 349 PFAKE 16 02 30.0 +10
PKME LR LR
comp=Z,5µm,20.0s,MS6.2
PV01 Paradox Valley 135.68 32 *e*PKPdf PKPdf 16 02 20.3 -0.1
ISCO Idaho Springs 135.88 28 PFAKE 16 02 30.0 +9.3
ISCO LR LR
comp=Z,6µm,21.0s,MS6.3
ECSD EROS,Sioux Fal 135.90 17 PFAKE 16 02 30.0 +9.4
ECSD LR LR
comp=Z,5µm,20.0s,MS6.2
WUAZ Wupatki 135.95 37 *e*PKPdf PKPdf 16 02 20.4 -0.5
WUAZ LR LR
comp=Z,3µm,21.0s,MS6.0
MVCO Mesa Verde 136.40 33 *e*PKPdf PKPdf 16 02 22.6 +0.9
OGNE Ogallala 136.50 24 PFAKE 16 02 30.0 +8.2
OGNE LR LR
comp=Z,7µm,20.0s,MS6.4
PLCA Paso Flores 136.67 191 PKP PKPdf 16 02 23.5 +1.4
comp=Z,9.1nm,1.3s,baz=180,slow=5.8,SNR=4.3
PLCA Paso Flores 136.67 191 PKP PKPdf 16 02 23.5 +1.4
PLCA LR LR
comp=Z,7µm,19.0s,MS6.4
TRQA Tornquist 136.75 202 PFAKE 16 02 30.0 +7.6
TRQA LR LR
comp=Z,6µm,20.0s,MS6.3
GLMI Grayling 137.03 4 PFAKE 16 02 30.0 +7.4
GLMI LR LR
comp=Z,8µm,21.0s,MS6.4
LBNH Lisbon 137.06 351 PFAKE 16 02 30.0 +7.3
LBNH LR LR
comp=Z,5µm,22.0s,MS6.2
SDCO Great Sand Dun 137.55 30 PFAKE 16 02 40.0 +16
SDCO LR LR
comp=Z,5µm,21.0s,MS6.2
NCB Newcomb 137.65 353 PFAKE 16 02 40.0 +16
NCB LR LR
comp=Z,6µm,20.0s,MS6.3
JFWS Jewell Farm 138.18 11 PFAKE 16 02 40.0 +15
JFWS LR LR
comp=Z,7µm,19.0s,MS6.4
TUC Tucson 138.45 40 PKIKP PKPdf 16 02 28.5 +2.9
TUC Tucson 138.45 40 PFAKE 16 02 40.0 +14
TUC LR LR
comp=Z,4µm,20.0s,MS6.1
SCIA State Center 138.51 14 PFAKE 16 02 40.0 +15
SCIA LR LR
comp=Z,7µm,22.0s,MS6.3
HRV Adam Dziewonsk 138.69 350 PFAKE 16 02 40.0 +14
HRV LR LR
comp=Z,5µm,19.0s,MS6.2
WES Weston 138.76 350 PFAKE 16 02 40.0 +14
WES LR LR
comp=Z,4µm,20.0s,MS6.2
ANMO Albuquerque 139.18 33 *e*PKHKP 16 02 17.9
ANMO MLR MLR
comp=Z,4µm,20.0s
LAZ Ladron 139.21 34 *e*PKPpre 16 02 23.0
CBKS Cedar Bluff 139.23 23 PFAKE 16 02 40.0 +13
CBKS LR LR
comp=Z,5µm,19.0s,MS6.3
LENM Lemitar 139.47 35 PKPdf PKPdf 16 02 28.4 +1.0
BINY Binghamton 139.58 355 PFAKE 16 02 40.0 +13
BINY LR LR
comp=Z,6µm,19.0s,MS6.4
BNM Barren Site 139.68 34 *e*PKPdf PKPdf 16 02 20.4 -7.5
ERPA Erie 139.88 359 PFAKE 16 02 40.0 +12
ERPA LR LR
comp=Z,8µm,22.0s,MS6.4
KSU1 Kansas State U 140.11 20 P PKPdf 16 02 29.0 +0.5
KSU1 LR LR
comp=Z,7µm,22.0s,MS6.3
HDIL Hopedale 140.64 10 PFAKE 16 02 40.0 +11
HDIL LR LR
comp=Z,7µm,21.0s,MS6.4
SSPA Standing Stone 141.28 357 PFAKE 16 02 40.0 +9.5
SSPA LR LR
comp=Z,7µm,20.0s,MS6.4
AMTX Amarillo 141.69 28 PFAKE 16 02 40.0 +8.6
AMTX LR LR
comp=Z,4µm,22.0s,MS6.2
ACSO Alum Creek Sta 141.70 3 PFAKE 16 02 40.0 +8.7
ACSO LR LR
comp=Z,8µm,21.0s,MS6.5
CCM Cathedral Cave 142.63 14 PFAKE 16 02 40.0 +7.0
CCM LR LR
comp=Z,4µm,20.0s,MS6.2
WMOK Wichita Mounta 143.12 25 *e*PKIKP PKPdf 16 02 29.2 -4.8
WMOK MLR MLR
comp=Z,6µm,19.0s,MS6.4
WCI Wyandotte Cave 143.39 8 *e*PKIKP PKPdf 16 02 30.8 -3.6
WCI MLR MLR
comp=Z,4µm,20.0s,MS6.2
BDFB Brasilia 143.41 241 PKP PKPdf 16 02 32.8 -2.1
comp=Z,4.7nm,0.8s,baz=35,slow=9.3,SNR=3.9
BDFB Brasilia 143.41 241 PKP PKPdf 16 02 32.8 -2.1
BDFB LR LR
comp=Z,5µm,22.0s,MS6.3
CBN Corbin 143.67 356 PFAKE 16 02 50.0 +15
CBN LR LR
comp=Z,5µm,20.0s,MS6.3
FCH Farellones 143.72 195 *e*P PKPdf 16 02 43.9 +8.8
CPUP Villa Florida 144.11 217 PKP PKPdf 16 02 34.1 -1.9
comp=Z,8.3nm,0.8s,baz=180,slow=20,SNR=18
CPUP Villa Florida 144.11 217 *e*PKP PKPdf 16 02 33.2 -2.7
CPUP LR LR
comp=Z,1µm,19.0s,MS5.7
URVA University of 144.31 356 *e*PKP PKPdf 16 02 33.8 -2.2
ELN Prospectdale 144.76 0 *e*PKPdf PKPdf 16 02 33.7 -3.1
BLA Blacksburg 144.78 360 *e*PKIKP PKPdf 16 02 34.1 -2.7
BLA MLR MLR
comp=Z,6µm,20.0s,MS6.4
GLAT Glass 144.79 12 *e*PKP PKPdf 16 02 36.0 -0.9
UTMT University of 144.80 12 *e*PKPdf PKPdf 16 02 35.8 -1.1
TXAR Lajitas Array 144.91 37 PKP PKPdf 16 02 37.0 -0.3
comp=Z,99nm,0.9s,baz=277,slow=2.1,SNR=234
GNAR Gosnell 144.92 13 *e*PKPdf PKPdf 16 02 35.8 -1.3
HALT Halls 145.12 12 *e*PKP PKPdf 16 02 36.3 -1.2
HBAR Harrisburg 145.16 14 *e*PKPbc PKPbc 16 02 37.0 0.0
WVT Waverly 145.21 10 *e*PKIKP PKPdf 16 02 36.4 -1.2
WVT MLR MLR
comp=Z,4µm,21.0s,MS6.2
TZTN Tazewell 145.34 4 *e*PKP PKPdf 16 02 36.7 -1.1
TZTN LR LR
comp=Z,10µm,20.0s,MS6.6
UALR University of 145.43 17 *e*PKP PKPdf 16 02 36.8 -1.2
BBSR BB Station 146.12 335 *e*PKPbc PKPbc 16 02 40.0 -0.2
BBSR LR LR
comp=Z,3µm,22.0s,MS6.0
JCT Junction City 146.18 31 *e*PKP2 PKPab 16 02 39.6 -1.4
JCT MLR MLR
comp=Z,6µm,21.0s,MS6.3
TKL Tuckaleechee C 146.20 5 *e*PKP2 PKPbc 16 02 38.9 -1.4
CPCT Cooper Cave 146.34 6 *e*PKPbc PKPbc 16 02 40.0 -0.8
SWET Sewanee 146.40 8 *e*PKPdf PKPdf 16 02 38.8 -0.9
OXF Oxford 146.45 13 PKP2 PKPbc 16 02 39.7 -1.4
OXF Oxford 146.45 13 *e*PKPdf PKPdf 16 02 39.2 -0.5
OXF *e*PKPbc PKPbc 16 02 40.4 -0.7
OXF LR LR
comp=Z,4µm,20.0s,MS6.2
TLL Tololo Astrono 146.85 196 *i*P PKPdf 16 02 41.5 +1.0
MAIG Mazatlaan 147.16 48 *i*P PKPbc 16 02 44.5 +1.0
NATX Nacogdoches 147.39 23 *e*PKPbc PKPbc 16 02 43.0 -0.9
NATX LR LR
comp=Z,6µm,20.0s,MS6.3
JSC Jenkinsville 147.70 1 *e*PKP2 PKPbc 16 02 43.5 -1.1
LCO Las Campanas 147.91 196 *i*P pPKPbc 16 02 55.0 -0.6
LCO Las Campanas 147.91 196 *e*PKPdf PKPdf 16 02 41.8 -0.6
LCO *i*P 16 02 55.0
LCO LR LR
comp=Z,5µm,21.0s,MS6.3
VBMS Vicksburg 148.35 16 *e*PKPbc PKPbc 16 02 46.7 +0.3
VBMS LR LR
comp=Z,7µm,19.0s,MS6.5
LRAL Lakeview Retre 148.37 10 *e*PKPbc PKPbc 16 02 45.2 -1.3
LRAL LR LR
comp=Z,7µm,21.0s,MS6.4
GOGA Godfrey 148.46 5 *e*PKP2 PKPbc 16 02 45.3 -1.3
GOGA MLR MLR
comp=Z,8µm,20.0s,MS6.5
HKT Hockley 148.50 26 PKP2 PKPbc 16 02 47.3 +0.4
HKT Hockley 148.50 26 PKPbc PKPbc 16 02 46.0 -0.8
HKT LR LR
comp=Z,5µm,20.0s,MS6.3
NHSC New Hope 148.87 359 *e*PKPbc PKPbc 16 02 47.9 +0.1
NHSC LR LR
comp=Z,8µm,22.0s,MS6.5
KVTX Kingsville 149.52 31 *e*PKPbc PKPbc 16 02 50.8 +1.3
KVTX LR LR
comp=Z,7µm,19.0s,MS6.5
BRAL Brewton 150.33 11 *e*PKPbc PKPbc 16 02 50.2 -1.1
BRAL LR LR
comp=Z,4µm,20.0s,MS6.3
LVC Limon Verde 153.18 205 PKPbc PKPbc 16 02 58.8 +0.7
LVC Limon Verde 153.18 205 PKPdf PKPdf 16 02 52.4 +1.7
LVC PKPbc PKPbc 16 02 58.8 +0.6
LVC LR LR
comp=Z,4µm,19.0s,MS6.3
SIV San Ignacio 153.82 227 PKP PKPdf 16 02 51.8 +0.1
comp=Z,3.8nm,1.0s,baz=160,slow=1.5,SNR=1.4
DWPF Disney 153.84 2 PFAKE 16 03 00.0 +8.5
DWPF LR LR
comp=Z,6µm,20.0s,MS6.4
ZIIG Zihuatanejo 154.19 51 *i* P pPKPbc 16 03 09.0 -1.7
PPM Popocatepetl 155.39 45 *i* PKIKP PKPdf 16 02 51.1 -2.8
BBGH Gun Hill 156.33 299 PFAKE 16 03 10.0 +15
BBGH LR LR
comp=Z,5µm,20.0s,MS6.4
PNIG Pinotepa 157.47 49 *i* P PKPdf 16 02 56.6 0.0
LPAZ La Paz 158.20 214 PKP PKPdf 16 02 57.4 -0.1
comp=Z,3.7nm,1.0s,baz=77,slow=5.2,SNR=3.8
LPAZ La Paz 158.20 214 *e*PKPdf PKPdf 16 02 57.3 -0.2
LPAZ LR LR
comp=Z,6µm,20.0s,MS6.4
SJG San Juan 158.48 320 PFAKE 16 03 10.0 +12
SJG LR LR
comp=Z,3µm,20.0s,MS6.1
GRGR Grenville 158.61 299 PFAKE 16 03 10.0 +12
GRGR LR LR
comp=Z,2µm,20.0s,MS6.0
CMIG Matias Romero 159.32 42 PKP PKPdf 16 02 57.9 -1.0
comp=Z,4.0nm,0.9s,baz=28,slow=8.0,SNR=2.2
TEIG Tepich 160.22 22 PFAKE 16 03 10.0 +10
TEIG LR LR
comp=Z,5µm,21.0s
NNA Nana 165.79 195 PFAKE 16 03 20.0 +15
NNA LR LR
comp=Z,6µm,19.0s
TGUH Tegucigalpa,Un 166.16 28 PFAKE 16 03 20.0 +14
TGUH LR LR
comp=Z,4µm,19.0s
SDV Santo Domingo 167.85 306 PKP PKPdf 16 03 06.7 -0.2
comp=Z,4.1nm,0.4s,baz=193,slow=21,SNR=4.7
SDV Santo Domingo 167.85 306 PKP PKPdf 16 03 06.7 -0.2
SDV LR LR
comp=Z,2µm,22.0s
PAYG Puerto Ayora 170.00 104 PFAKE 16 03 20.0 +12
PAYG LR LR
comp=Z,4µm,21.0s
JTS JuntasAbangare 170.53 27 PFAKE 16 03 20.0 +11
JTS LR LR
comp=Z,3µm,22.0s
ATAH Atahualpa 170.97 194 PKP PKPdf 16 03 09.3 +0.4
comp=Z,2.5nm,0.5s,baz=6.8,slow=16,SNR=2.2
BCIP Isla Barro Col 172.66 354 PKPdf PKPdf 16 03 08.7 -0.9
BCIP LR LR
comp=Z,4µm,22.0s
ROSC El Rosal 173.05 296 PKP PKPdf 16 03 10.1 +0.2
comp=Z,7.0nm,0.5s,baz=100,slow=19,SNR=7.1
OTAV Otavalo 177.34 234 *e*PKPdf PKPdf 16 03 11.0 0.0
OTAV LR LR
comp=Z,9µm,21.0s

IDC ***26*** *15:50:12.6±0.9, 5422N×16324W, h0km, mb3.9/11, mb1 4.1/12, mb1mx4.0/27, mbtmp3.9/12, ML3.7/1, Error ellipse: s-maj=32.8km s-min=13.9km az=6.0*
ISCJB ***26*** *15:50:16.2±0.9, 5402N±008×163.19W±007, h44km±9km, mb4.0/13, Error ellipse: s-maj=13.5km s-min=5.9km az=159.5*
NEIC ***26*** *15:50:17.1±0.8, 5401N×16327W, h36km±10km, mb4.3/1, ML3.8(AEIC), Error ellipse: s-maj=15.1km s-min=5.7km az=161.0*

ISC 26 15:50:15.7±2.0, 5397N±009×16322W±006, h22km±14km, n30, σ0s97/34, mb4.0/13, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.90**	**353**	P	**Pb**		**15 50 31.9**	**-0.7**
FALS				S	**Sb**		**15 50 44.6**	**+0.4**
AKUT	**Akutan**	**1.51**	**277**	P	**Pn**		**15 50 41.8**	**+0.4**
AKUT				S	**Sn**		**15 51 01.1**	**+0.7**
AKLV	**Akutan Long Va**	**1.62**	**278**	P	**Pn**		**15 50 43.1**	**+0.2**
AKLV				S	**Sn**		**15 51 03.3**	**+0.2**
AKGG	**Akutan Green G**	**1.65**	**279**	P	**Pn**		**15 50 44.1**	**+0.8**
UNV	**Unalaska Valle**	**1.94**	**268**	P	**Pn**		**15 50 46.8**	**-0.6**
SDPT	**Sand Point**	**2.11**	**48**	P	**Pn**		**15 50 49.7**	**0.0**
NIKO	**Nikolski**	**3.51**	**256**	*e*Pn	**Pn**		**15 51 08.7**	**-0.2**
CHGN	**Chignik**	**3.62**	**48**	P	**Pn**		**15 51 10.9**	**+0.5**
KDAK	**Kodiak Island** 1.3nm,0.3s,baz=265,slow=8.4,SNR=8.5	**7.10**	**53**	Pn	**Pn**		**15 51 55.6**	**-2.5**
KDAK				Sn	**Sn**		**15 53 11.3**	**-6.8**
SVW2	**Sparrevohn** 0.6nm,0.3s,baz=229,slow=20,SNR=3.6	**8.24**	**27**	*e*P	**Pn**		**15 52 15.1**	**+1.3**
SEW	**Seward**	**9.69**	**45**	*e*P	**Pn**		**15 52 32.4**	**-1.3**
RC01	**Rabbit Creek A**	**10.16**	**40**	*e*P	**Pn**		**15 52 40.0**	**0.0**
TRF	**Thorofare Moun** 17nm,1.2s	**11.62**	**30**	Pn	**Pn**		**15 53 00.4**	**+0.5**
BPAW	**Bear Paw Mtn.** 4.8nm,0.8s	**11.93**	**27**	*e*P	**Pn**		**15 53 06.8**	**+2.6**
PNL	**Peninsula** 4µm,1.2s	**14.20**	**57**	*e*P	**Pn**		**15 53 34.6**	**-0.5**
PETK	**Petropavlovsk-** 10.0nm,0.8s,mb4.3,baz=80,slow=13,SNR=8.6	**23.05**	**284**	P	**P**		**15 55 17.4**	**-1.7**
PETK	**Petropavlovsk-**	**23.05**	**284**	P	**P**		**15 55 17.4**	**-1.7**
YKA	**Yellowknife Ar** 0.6nm,0.4s,mb3.4,baz=269,slow=9.1,SNR=4.2	**26.38**	**52**	P	**P**		**15 55 50.3**	**+0.4**
YKA	**Yellowknife Ar**	**26.39**	**52**	P	**P**		**15 55 50.3**	**+0.4**
YBH	**Yreka Blue Hor** 2.3nm,0.7s,mb4.0,baz=273,slow=10,SNR=5.3	**29.40**	**98**	P	**P**		**15 56 18.2**	**+1.1**
NVAR	**Mina Array Bea** 3.1nm,0.7s,mb4.3,baz=296,slow=8.7,SNR=24	**34.11**	**99**	P	**P**		**15 56 59.4**	**+0.9**
ELK	**Elko** 3.6nm,0.9s,mb4.3	**34.41**	**93**	*e*P	**P**		**15 57 01.5**	**+0.4**
TPNV	**Topopah Spring** 44nm,1.9s,mb5.1	**36.31**	**98**	*e*P	**P**		**15 57 17.5**	**+0.1**
PDAR	**Pinedale Array** 0.2nm,0.3s,mb3.4,baz=334,slow=8.1,SNR=3.2	**36.52**	**85**	P	**P**		**15 57 19.0**	**-0.2**
KSRS	**Korea Array** 1.0nm,0.8s,mb3.9,baz=48,slow=7.7,SNR=3.5	**48.84**	**280**	P	**P**		**15 58 58.5**	**-0.7**
TXAR	**Lajitas Array** 2.2nm,0.7s,mb4.3,baz=298,slow=5.6,SNR=26	**49.11**	**95**	P	**P**		**15 59 01.1**	**-0.2**
BVAR	**Borovoye Array** 1.3nm,0.6s,mb4.1,baz=46,slow=6.4,SNR=4.2	**64.46**	**327**	P	**P**		**16 00 49.1**	**-0.8**
NOA	**NORSAR Array B** 1.2nm,0.9s,mb3.9,baz=358,slow=6.3,SNR=2.1	**65.26**	**3**	P	**P**		**16 00 53.7**	**-1.2**
MKAR	**Makanchi Array** 0.6nm,0.6s,mb3.8,baz=30,slow=7.5,SNR=2.0	**65.30**	**317**	P	**P**		**16 00 53.9**	**-1.6**
CMAR	**Chiang Mai Arr** 0.4nm,0.6s,mb3.5,baz=22,slow=5.8,SNR=3.6	**79.78**	**287**	P	**P**		**16 02 24.0**	**+1.9**

IDC 26 16:05:06.6±50.0, 1651S×17769W, h0km, mb4.2/3, mb1 4.3/3, mb1mx3.9/16, mbtmp4.2/3, MS4.5/2, Ms1 4.5/2, ms1mx3.7/29, Error ellipse: s-maj=927.2km s-min=158.2km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu** comp=Z,1µm,19.0s,baz=347,slow=31	**6.27**	**66**	LR	LR		16 08 21.0	
STKA	**Stephens Creek** 1.6nm,0.8s,baz=75,slow=12,SNR=4.8	**39.91**	**240**	P	P		16 12 42.6	0.0
WRA	**Warramunga Arr** 0.6nm,0.4s,baz=93,slow=7.3,SNR=23	**45.58**	**258**	P	P		16 13 28.8	+0.1
ASAR	**Alice Springs** 6.2nm,0.6s,baz=87,slow=8.7,SNR=18	**45.84**	**253**	P	P		16 13 30.6	-0.3
KAPI	**Kappang** comp=Z,1µm,18.3s,baz=195,slow=33	**62.29**	**273**	LR	LR		16 39 44.7	

MOS ***26*** *16:17:05.9±1.0, 2393N×9460E, h44km, mb4.8/6, Error ellipse: s-maj=18.3km s-min=7.3km az=113.8*
ISCJB ***26*** *16:17:07.0±1.2, 2390N±006×9466E±008, h55km±13km, mb4.4/26, Error ellipse: s-maj=13.6km s-min=8.5km az=145.3*
BJI ***26*** *16:17:07.0, 2385N×9448E, h63km, mB4.8, mb4.4, ML4.0, Ms4.4, Ms2.4*
NEIC ***26*** *16:17:08.4±0.9, 2385N×9447E, h51km±9km, mb4.5/2, Error ellipse: s-maj=14.7km s-min=6.8km az=61.0*
IDC ***26*** *16:17:08.3±3.3, 2395N×9459E, h47km±32km, mb3.9/13, mb1 4.0/14, mb1mx3.8/25, mbtmp3.9/14, ML3.9/1, Error ellipse: s-maj=26.3km s-min=13.5km az=57.0*
ISC 26 16:17:09.0±1.0, 2391N±006×9464E±008, h55km±11km, n56, σ0°84/56, mb4.4/26, 3C-1D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHTO	**Chiang Mai**	**6.46**	**141**	*e*P	**Pn**	**16 18 41.7**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,13nm,0.9s						
CHTO	**Chiang Mai**	**6.46**	**141**	*e*Pn	**Pn**	**16 18 41.7**	**+0.2**
	comp=Z,13nm,0.9s						
LSA	**Lhasa**	**6.56**	**332**	P	**Pn**	**16 18 42.0**	**-0.8**
LSA	**Lhasa**	**6.56**	**332**	*e*P	**Pn**	**16 18 41.4**	**-1.4**
LSA				pmax	pmax		
	comp=Z,15nm,0.4s						
LSA	**Lhasa**	**6.56**	**332**	*e*Pn	**Pn**	**16 18 41.4**	**-1.4**
	comp=Z,15nm,0.4s						
CM31	**Chiang Mai Arr**	**6.75**	**143**	*e*Pn	**Pn**	**16 18 45.3**	**-0.1**
	comp=Z,13nm,0.6s						
CMAR	**Chiang Mai Arr**	**6.75**	**143**	P	**Pn**	**16 18 45.4**	**0.0**
	comp=Z,0.6nm,0.3s,baz=311,slow=13,SNR=12						
CMAR				Lg		16 20 36.0	
	comp=Z,0.5nm,0.3s,baz=319,slow=30,SNR=4.1						
LZH	**Lanzhou**	**14.51**	**31**	*e*P	**Pn**	**16 20 35.0**	**+3.8**
LZH				AP		16 20 40.0	
LZH				AMB	AMB		
	comp=Z,17nm,1.2s						
LZH				AMB	AMB		
	comp=Z,68nm,4.0s						
LZH	**Lanzhou**	**14.51**	**31**	*e*P	**Pn**	**16 20 35.0**	**+3.8**
	comp=Z,17nm,1.2s						
LZH				pP		16 20 40.0	
LZH				sP	sP	16 20 43.1	-12
GTA	**Gaotai**	**16.07**	**15**	*e*P	**Pn**	**16 20 53.0**	**+1.8**
GTA				AP	pP	16 20 58.8	-7.0
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s						
WMQ	**Urumqi**	**20.67**	**346**	*e*P	**P**	**16 21 44.0**	**-0.2**
WMQ				AMB	AMB		
	comp=Z,12nm,0.8s						
NJ2	**Nanjing**	**22.84**	**64**	*e*P	**P**	**16 22 05.0**	**-2.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
TKM2	**Tokmak 2**	**24.64**	**325**	*e*P	**P**	**16 22 24.6**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.7						
TKM2	**Tokmak 2**	**24.64**	**325**	P	**P**	**16 22 24.9**	**+0.6**
	SNR=24						
TKM2	**Tokmak 2**	**24.64**	**325**	*e*P	**P**	**16 22 24.6**	**+0.2**
	comp=Z,16nm,0.7s,mb4.7						
UCH	**Uchtor**	**24.76**	**322**	P	**P**	**16 22 26.4**	**+1.0**
	SNR=9.5						
KBK	**Karagaybulak**	**24.81**	**324**	P	**P**	**16 22 27.0**	**+1.1**
	SNR=7.6						
MK31	**Makanchi Array**	**24.90**	**340**	*e*P	**P**	**16 22 26.5**	**-0.1**
MKAR	**Makanchi Array**	**24.90**	**340**	P	**P**	**16 22 26.6**	**+0.1**
	comp=Z,3.5nm,0.6s,mb4.1,baz=152,slow=10.0,SNR=31						
MKAR				PcP	PcP	16 26 01.4	+0.3
	comp=Z,0.2nm,0.3s,baz=151,slow=3.3,SNR=4.2						
AAK	**Ala-Archa**	**25.04**	**323**	P	**P**	**16 22 28.9**	**+1.0**
	SNR=6.7						
AML	**Almayashu**	**25.16**	**321**	*e*P	**P**	**16 22 29.0**	**0.0**
EKS2	**Erkin-Say**	**25.46**	**322**	P	**P**	**16 22 32.9**	**+1.2**
	SNR=5.8						
SONM	**Songino Array**	**25.65**	**18**	P	**P**	**16 22 34.3**	**+0.9**
	comp=Z,2.2nm,0.7s,mb3.8,baz=198,slow=9.8,SNR=16						
ULN	**Ulaanbaatar**	**25.87**	**19↑**	*e*P	**P**	**16 22 36.0**	**+0.6**
HVS	**Khovu-Aksy**	**27.19**	**359**	*i* P	**P**	**16 22 47.9**	**+0.6**
HVS				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.4						
ZAK	**Zakamensk**	**27.27**	**12**	*e*P	**P**	**16 22 47.9**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
KURK	**Kurchatov**	**29.51**	**339**	P	**P**	**16 23 07.2**	**-0.7**
	comp=Z,2.8nm,0.8s,mb4.0,baz=158,slow=7.6,SNR=16						
KURK				PcP	PcP	16 26 12.0	0.0
	comp=Z,0.7nm,0.6s,baz=157,slow=2.0,SNR=5.6						
KURK	**Kurchatov**	**29.51**	**339**	P	**P**	**16 23 07.2**	**-0.7**
KURK				PcP	PcP	16 26 12.0	0.0
AKTK	**Aktyubinsk**	**38.78**	**322**	P	**P**	**16 24 27.8**	**-0.3**
AKTK				PcP	PcP	16 26 38.9	+0.3
AKTO	**Aktyubinsk**	**38.78**	**322**	P	**P**	**16 24 27.8**	**-0.3**
	comp=Z,2.9nm,0.5s,mb4.3,baz=126,slow=9.2,SNR=15						
AKTO				PcP	PcP	16 26 38.9	+0.3
	comp=Z,0.8nm,0.5s,baz=141,slow=3.6,SNR=3.0						
MJAR	**Matsushiro Arr**	**39.38**	**61**	P	**P**	**16 24 32.7**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.6,baz=265,slow=6.0,SNR=4.3						
SVE	**Sverdlovsk**	**41.09**	**332**	*e*P	**P**	**16 24 47.2**	**+0.1**
SVE				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.8						
ARU	**Arti**	**41.76**	**331**	*d* iP	**P**	**16 24 52.5**	**-0.1**
ARU				*e*		16 26 28.9	
ARU				*e*S	**S**	**16 31 09.4**	**+3.7**
ARU				pmax	pmax		
	comp=Z,25nm,2.5s,mb4.4						
RDF	**Al-Radifah**	**42.26**	**287**	*e*P	**P**	**16 24 56.7**	**-0.4**
	baz=288						
RDF				AMb	AMB	16 24 57.4	
	comp=Z,31nm,0.4s,mb5.3,baz=288						
NAY	**Al-Naaiem**	**42.50**	**288**	*e*P	**P**	**16 24 58.6**	**-0.4**
	baz=288						
RST	**Umm Al-Ruwaisa**	**42.70**	**288**	*e*P	**P**	**16 24 59.9**	**-0.7**
	baz=289						
RST				AMb	AMB	16 25 00.6	
	comp=Z,23nm,0.5s,mb5.2,baz=289						
KIV	**Kislovodsk**	**46.68**	**309**	*e*P	**P**	**16 25 33.3**	**+1.1**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
OBN	**Obninsk**	**52.56**	**322**	*e*P	**P**	**16 26 16.3**	**-0.4**
OBN				*e*		16 27 25.2	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
OBN				MLR	MLR		
	comp=Z,1μm,15.0s						
PET	**Petropavlovsk**	**55.71**	**41**	*i* P	**P**	**16 26 38.6**	**-1.1**
PET				pmax	pmax		
	comp=Z,63nm,1.8s,mb5.3						
AKASG	**Malin Array Be**	**56.42**	**316**	P	**P**	**16 26 43.1**	**-1.6**
	comp=Z,2.9nm,0.7s,mb4.4,baz=78,slow=5.8,SNR=7.2						
JOF	**Joensuu**	**56.88**	**331**	*e*p	**P**	**16 26 46.9**	**-1.0**
	comp=Z,4.8nm,0.5s,mb4.8						
PLOR	**Plostina**	**58.13**	**310↑**	*i*P	**P**	**16 26 58.0**	**+1.0**
WRA	**Warramunga Arr**	**58.27**	**135**	P	**P**	**16 26 58.9**	**+0.7**
	comp=Z,1.2nm,0.7s,mb4.1,baz=323,slow=7.4,SNR=15						
MLR	**Muntele Rosu**	**58.65**	**310↑**	*i* P	**P**	**16 27 00.4**	**-0.1**
KAF	**Kangasniemi**	**59.03**	**329**	*e*p	**P**	**16 27 02.2**	**-0.7**
	comp=Z,1.0nm,0.3s,mb4.3,baz=98,slow=7.0						
KAF	**Kangasniemi**	**59.03**	**329**	*e*P	**P**	**16 27 02.2**	**-0.7**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
FINES	**FINESS Array B**	**59.06**	**329**	*e*P	**P**	**16 27 02.0**	**-1.1**
ARCES	**ARCESS Array B**	**60.54**	**338**	P	**P**	**16 27 13.0**	**-0.1**
	comp=Z,1.5nm,0.5s,mb4.4,baz=98,slow=7.9,SNR=16						
ARCES	**ARCESS Array B**	**60.54**	**338**	P	**P**	**16 27 13.0**	**-0.1**
ASAR	**Alice Springs**	**60.73**	**138**	P	**P**	**16 27 15.9**	**+0.8**
	comp=Z,1.1nm,0.6s,mb4.2,baz=321,slow=6.8,SNR=29						
NB2	**NORSAR Subarra**	**66.23**	**328**	P	**P**	**16 27 49.8**	**-1.1**
	comp=Z,1.5nm,0.5s,mb4.3,baz=83,slow=6.5						
NOA	**NORSAR Array B**	**66.23**	**328**	P	**P**	**16 27 50.0**	**-0.9**
	comp=Z,1.6nm,0.5s,mb4.3,baz=85,slow=6.3,SNR=6.5						
GERES	**GERESS Array B**	**66.56**	**315**	P	**P**	**16 27 53.1**	**-0.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=75,slow=5.8,SNR=7.4						
BOSA	**Boshof**	**84.76**	**236**	P	**P**	**16 29 38.1**	**+0.7**
	comp=Z,3.1nm,0.5s,mb4.7,baz=62,slow=3.0,SNR=11						
TORD	**Torodi Ar. Bea**	**87.41**	**283**	P	**P**	**16 29 51.2**	**+0.3**
	comp=Z,0.6nm,0.6s,mb4.0,baz=81,slow=4.2,SNR=4.9						
TXAR	**Lajitas Array**	**124.21**	**19**	PKP	PKPdf	16 36 01.4	-0.6
	comp=Z,0.4nm,0.8s,baz=57,slow=3.3,SNR=3.5						

ISCJB ***26*** *16:27:47.7±1.7, 1916N±005×1462E±0.1, h66km±15km, mb4.2/23, Error ellipse: s-maj=21.8km s-min=7.8km az=179.7*
MOS ***26*** *16:27:49.8±0.6, 1918N×146.15E, h85km, mb4.5/2, Error ellipse: s-maj=23.8km s-min=10.5km az=96.0*
IDC ***26*** *16:27:49.9±2.4, 1914N×146.18E, h68km±23km, mb3.9/18, mb1 4.0/21, mb1mx3.9/28, mbtmp3.9/21, Error ellipse: s-maj=20.9km s-min=9.9km az=89.0*
NEIC ***26*** *16:27:51.5±1.4, 1916N×14622E, h86km±13km, mb4.5/4, Error ellipse: s-maj=14.3km s-min=6.8km az=92.0*
ISC 26 16:27:49.7±1.3, 1918N±005×1462E±01, h68km±12km, n34, σ0°88/36, mb4.2/23, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.69**	**193**	P	**Pn**	**16 29 13.4**	**+1.7**
	5.8nm,0.3s,baz=33,slow=11,SNR=7.0						
GUMO				S	**Sn**	**16 30 14.8**	**-1.1**
	2.3nm,0.3s,baz=56,slow=22,SNR=2.4						
CBIJ	**Chichi jima**	**8.70**	**336**	P	**Pn**	**16 29 52.2**	**-0.6**
	1.9nm,0.3s,baz=278,slow=21,SNR=6.6						
CBIJ				S	**Sn**	**16 31 24.1**	**-5.3**
	3.0nm,0.3s,baz=286,slow=24,SNR=3.9						
JHJ	**Hachijo jima 2**	**15.02**	**339**	S	**Sn**	**16 33 54.6**	**-8.8**
	3.8nm,0.3s,baz=82,slow=23,SNR=2.6						
MJAR	**Matsushiro Arr**	**18.66**	**340**	P	**Pn**	**16 32 03.1**	**-0.2**
	0.4nm,0.3s,baz=156,slow=9.2,SNR=4.7						
KSRS	**Korea Array**	**24.21**	**323**	P	**P**	**16 32 59.9**	**-0.1**
	2.2nm,0.6s,mb3.7,baz=146,slow=9.1,SNR=15						
ASAJ	**Asahikawa**	**25.05**	**354**	P	**P**	**16 33 09.0**	**+1.4**
	8.1nm,0.9s,mb4.2,baz=219,slow=22,SNR=5.8						
KLR	**Kul'dur**	**32.15**	**342**	*e*P	**P**	**16 34 08.0**	**-2.8**
PETK	**Petropavlovsk-**	**35.03**	**12**	P	**P**	**16 34 36.5**	**+0.7**
	2.0nm,0.6s,mb4.2,baz=186,slow=6.4,SNR=12						
CTA	**Charters Tower**	**39.02**	**180**	P	**P**	**16 35 09.8**	**-0.1**
	2.3nm,0.8s,mb4.0,baz=349,slow=10,SNR=2.8						
WB2	**Warramunga Arr**	**40.57**	**197**	*e*P	**P**	**16 35 23.2**	**+0.5**
WRA	**Warramunga Arr**	**40.57**	**197**	P	**P**	**16 35 21.9**	**-0.8**
	2.8nm,0.8s,mb4.2,baz=19,slow=8.7,SNR=18						
FITZ	**Fitzroy Crossi**	**42.18**	**210**	*e*P	**P**	**16 35 36.2**	**+0.2**
	5.0nm,0.9s,mb4.2						
SONM	**Songino Array**	**43.06**	**321**	P	**P**	**16 35 43.5**	**+0.7**
	0.7nm,0.4s,mb3.7,baz=129,slow=7.0,SNR=6.8						
ASAR	**Alice Springs**	**44.23**	**196**	P	**P**	**16 35 53.0**	**+0.5**
	0.6nm,0.8s,mb3.4,baz=14,slow=14,SNR=13						
YAK	**Yakutsk**	**44.34**	**349**	P	**P**	**16 35 52.7**	**-0.2**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
YAK	**Yakutsk**	**44.34**	**349**	P	**P**	**16 35 52.7**	**-0.2**
	comp=Z,4.6nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**50.95**	**185**	P	**P**	**16 36 43.3**	**-1.1**
	comp=Z,2.0nm,0.8s,mb4.2,baz=0.0,slow=4.0,SNR=3.9						
ZALV	**Zalesovo Beam**	**57.92**	**322**	P	**P**	**16 37 33.5**	**-1.2**
	comp=Z,2.1nm,0.7s,mb4.3,baz=110,slow=8.7,SNR=7.6						
MKAR	**Makanchi Array**	**58.46**	**314**	P	**P**	**16 37 39.9**	**+1.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=89,slow=9.1,SNR=12						
KDAK	**Kodiak Island**	**58.71**	**33**	P	**P**	**16 37 40.5**	**+0.3**
	comp=Z,6.9nm,0.7s,mb4.8,baz=270,slow=6.1,SNR=5.0						
NWAO	**Narrogin (SRO)**	**58.73**	**208**	P	**P**	**16 37 41.3**	**+0.6**
	comp=Z,30nm,1.2s,mb5.2,baz=42,slow=12						
BPAW	**Bear Paw Mtn.**	**61.13**	**27**	*e*P	**P**	**16 37 55.2**	**-1.5**
	comp=Z,4.6nm,0.3s,mb5.0						
KURK	**Kurchatov**	**61.22**	**318**	P	**P**	**16 37 58.4**	**+0.8**
	comp=Z,3.6nm,0.5s,mb4.7,baz=91,slow=7.5,SNR=32						
BVAR	**Borovoye Array**	**66.40**	**320**	P	**P**	**16 38 32.1**	**+0.6**
	comp=Z,2.2nm,0.5s,mb4.3,baz=94,slow=7.2,SNR=17						
BRVK	**Borovoye**	**66.46**	**320**	*e*P	**P**	**16 38 32.1**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
BRVK	**Borovoye**	**66.46**	**320**	*e*P	**P**	**16 38 32.1**	**+0.2**
	comp=Z,3.7nm,0.7s,mb4.3						
DLBC	**Dease Lake**	**70.65**	**34**	P	**P**	**16 38 58.7**	**+0.8**
	baz=225,slow=2.9						
DLBC	**Dease Lake**	**70.65**	**34**	P	**P**	**16 38 58.7**	**+0.8**
AKTK	**Aktyubinsk**	**74.31**	**318**	P	**P**	**16 39 19.9**	**0.0**
AKTO	**Aktyubinsk**	**74.31**	**318**	P	**P**	**16 39 19.9**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.6,baz=80,slow=5.8,SNR=3.7						
YKA	**Yellowknife Ar**	**77.36**	**28**	P	**P**	**16 39 36.5**	**-0.4**
	comp=Z,0.6nm,0.6s,mb3.5,baz=288,slow=5.7,SNR=3.2						
ARCES	**ARCESS Array B**	**82.18**	**342**	P	**P**	**16 40 02.8**	**-0.1**
	comp=Z,2.7nm,0.8s,mb4.1,baz=66,slow=5.0,SNR=4.0						
NVAR	**Mina Array Bea**	**82.49**	**52**	P	**P**	**16 40 05.7**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.7,baz=260,slow=5.8,SNR=7.8						
JOF	**Joensuu**	**83.78**	**335**	*e*p	**P**	**16 40 09.8**	**-1.5**
	comp=Z,1.4nm,0.5s,mb4.0						

JMA ***26*** *16:45:29.8±0.2, 2329N×12294E, h63km±4km, M3.6*
TAP 26 16:45:30.1, 2327N×12276E, h82km±1km, ML3.9, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**1.21**	**11**	P	Pn	16 45 50.5	-1.3
YOJ				*e*S	Sn	16 46 06.0	-2.1
HATJ	**Hateruma jima**	**1.24**	**51**	P	Pn	16 45 49.5	-2.7
HATJ				S	Sn	16 46 04.0	-4.7
HWA	**Hwalien**	**1.27**	**304**	*e*P	Pn	16 45 52.0	-0.7
	baz=298						
CHKT	**Chengkung**	**1.29**	**263**	P	Pn	16 45 51.8	-1.1
	baz=260						
CHKT				S	Sn	16 46 07.4	-2.6
	baz=260						
ESL	**Shilin**	**1.33**	**294**	*e*P	Pn	16 45 52.6	-0.7
	baz=291						
ESL				*e*S	Sn	16 46 09.3	-1.6
	baz=291						
TWD	**Chiawan**	**1.34**	**307**	P	Pn	16 45 52.9	-0.6
	baz=301						
TWD				S	Sn	16 46 09.6	-1.4
	baz=301						
EHY	**Hungye**	**1.34**	**280**	*e*P	Pn	16 45 53.5	0.0
	baz=284						
EHY				*e*S	Sn	16 46 10.8	-0.3
	baz=284						
TWF1	**Yuli**	**1.35**	**274**	P	Pn	16 45 53.4	-0.2
	baz=270						
TWF1				S	Sn	16 46 11.1	-0.2
	baz=270						
IRIF	**Iriomote-Funau**	**1.38**	**40**	P	Pn	16 45 51.9	-2.1
ENA	**Nanau**	**1.48**	**321**	*e*P	Pn	16 45 55.8	+0.5
	baz=311						
ENA				*e*S	Sn	16 46 14.8	+0.5
	baz=311						
JKRS	**Kuro-shima**	**1.50**	**50**	P	Pn	16 45 53.3	-2.2
JKRS				*e*S	Sn	16 46 10.6	-4.0
TWC	**Suao**	**1.57**	**328**	*e*P	Pn	16 45 57.0	+0.5
	baz=328						
TWC				*e*S	Sn	16 46 16.1	-0.3
	baz=328						
TTN	**Taitung**	**1.57**	**251**	*e*P	Pn	16 45 56.0	-0.4
	baz=248						
TTN				*e*S	Sn	16 46 15.5	-0.9
	baz=248						
ELDTW	**Lidau**	**1.60**	**267**	P	Pn	16 45 56.8	0.0
	baz=262						
ELDTW				*e*S	Sn	16 46 16.2	-0.9
	baz=262						
TWG	**Pinlang**	**1.62**	**254**	P	Pn	16 45 57.1	+0.1
	baz=256						
TWG				S	Sn	16 46 17.3	-0.2
	baz=256						
WHF	**Hehuan Shan**	**1.62**	**303**	*e*P	Pn	16 45 57.7	+0.6
	baz=296						
WHF				*e*S	Sn	16 46 17.9	+0.4
	baz=296						
LAY	**Lan-yu**	**1.66**	**223**	P	Pn	16 45 56.5	-1.1
	baz=228						
LAY				*e*S	Sn	16 46 15.0	-3.4
	baz=228						
JIJ	**Ishigaki jima**	**1.67**	**49**	P	Pn	16 45 55.3	-2.4
JIJ				*e*S	Sn	16 46 14.1	-4.5
YUS	**Yu-Shan**	**1.68**	**278**	*e*P	Pn	16 45 59.3	+1.5
	baz=282						
YUS				*e*S	Sn	16 46 19.2	+0.4
	baz=282						
NNS	**Nan Shan**	**1.72**	**313**	*e*P	Pn	16 45 59.4	+1.0
	baz=306						
NNS				*e*S	Sn	16 46 20.3	+0.5
	baz=306						
EGS		**1.74**	**334**	*e*P	Pn	16 45 58.0	-0.7
	baz=334						
EGS				*e*S	Sn	16 46 19.5	-0.8
	baz=334						
ENTT	**Nioudou**	**1.75**	**322**	*e*P	Pn	16 45 59.7	+1.0
	baz=312						
TWT	**Tachien**	**1.75**	**304**	*e*P	Pn	16 46 00.5	+1.7
	baz=296						
TWT				*e*S	Sn	16 46 21.1	+0.6
	baz=296						
ILA	**Ilan**	**1.75**	**328**	*e*P	Pn	16 46 01.1	+2.3
	baz=319						
ILA				*e*S	Sn	16 46 21.3	+0.7
	baz=319						
TWE	**Neicheng**	**1.76**	**326**	P	Pn	16 45 59.9	+1.1
	baz=325						
TWE				*e*S	Sn	16 46 21.1	+0.5
	baz=325						
ECL	**Taimali**	**1.79**	**248**	*e*P	Pn	16 45 59.4	0.0
	baz=248						
ECL				*e*S	Sn	16 46 20.4	-1.2
	baz=248						
ALS	**Alishan**	**1.81**	**278**	*e*P	Pn	16 46 01.2	+1.6
	baz=284						
ALS				*e*S	Sn	16 46 22.2	+0.2
	baz=284						
SMLT	**Sun Moon Lake**	**1.81**	**290**	*e*P	Pn	16 46 00.7	+1.1
	baz=293						
SMLT				*e*S	Sn	16 46 23.0	+1.0
	baz=293						
STYT	**Tauyuan**	**1.85**	**267**	*e*P	Pn	16 46 00.5	+0.5
	baz=267						
STYT				*e*S	Sn	16 46 23.2	+0.4
	baz=267						
TYC	**Yuchr**	**1.86**	**290**	*e*P	Pn	16 46 01.2	+1.0
	baz=293						
TYC				*e*S	Sn	16 46 23.8	+0.8
	baz=293						
TWB1	**Santiao Chiao**	**1.87**	**338**	*e*P	Pn	16 46 00.6	+0.2
	baz=347						
TWB1				*e*S	Sn	16 46 23.1	-0.2
	baz=347						
NSK	**Sanguang**	**1.90**	**318**	*e*P	Pn	16 46 01.8	+1.1
	baz=309						
NSK				*e*S	Sn	16 46 24.2	+0.2
	baz=309						
CHN5	**Tsauling**	**1.94**	**280**	*e*P	Pn	16 46 03.0	+1.7
	baz=286						
CHN5				*e*S	Sn	16 46 26.7	+1.7
	baz=286						
EAST	**Anshuo**	**1.97**	**244**	P	Pn	16 46 02.0	+0.3
	baz=243						
EAST				*e*S	Sn	16 46 25.5	-0.3
	baz=243						
WTP	**Ta-pu**	**1.97**	**270**	*e*P	Pn	16 46 03.8	+2.1
	baz=269						
WTP				*e*S	Sn	16 46 28.8	+3.0
	baz=269						
CHN4	**Tsaushan**	**1.99**	**273**	*e*P	Pn	16 46 04.1	+2.1
	baz=268						
CHN4				*e*S	Sn	16 46 28.6	+2.4
	baz=268						
WNT	**Mingjian**	**2.00**	**288**	*e*P	Pn	16 46 03.8	+1.7
	baz=294						
WNT				*e*S	Sn	16 46 28.8	+2.5
	baz=294						
NWF	**Wu-fen Shan**	**2.00**	**334**	*e*P	Pn	16 46 02.8	+0.7
	baz=343						
NWF				*e*S	Sn	16 46 27.7	+1.2
	baz=343						
SGST	**Jiashian**	**2.01**	**265**	*e*P	Pn	16 46 04.1	+1.8
	baz=265						
SGST				*e*S	Sn	16 46 27.7	+1.0
	baz=265						
TWA	**Mucha**	**2.01**	**328**	*e*P	Pn	16 46 03.1	+0.8
	baz=318						
TWA				*e*S	Sn	16 46 28.0	+1.3
	baz=318						
SSD	**Sandimen**	**2.03**	**255**	*e*P	Pn	16 46 03.4	+0.9
	baz=252						
CHN1	**Nanshi**	**2.06**	**268**	*e*P	Pn	16 46 05.1	+2.3
	baz=268						
WGK	**Gukeng**	**2.06**	**282**	*e*P	Pn	16 46 04.0	+1.1
	baz=282						
WGK				*e*S	Sn	16 46 30.4	+2.5
	baz=282						
TWK	**Hsinying**	**2.09**	**270**	*e*P	Pn	16 46 04.5	+1.2
	baz=279						
TCU	**Taichung**	**2.10**	**295**	*e*P	Pn	16 46 05.9	+2.5
	baz=295						
NSTT	**Nanjuang**	**2.10**	**310**	*e*P	Pn	16 46 06.3	+2.9
	baz=315						
NSTT				*e*S	Sn	16 46 30.3	+1.4
	baz=315						
TWQ1	**Liyutan**	**2.11**	**301**	*e*P	Pn	16 46 06.2	+2.7
	baz=300						
TWQ1				*e*S	Sn	16 46 31.2	+2.1
	baz=300						
NSY	**Sanyi**	**2.16**	**302**	*e*P	Pn	16 46 05.7	+1.5
	baz=302						
NSY				*e*S	Sn	16 46 31.9	+1.7
	baz=302						
SCZT	**Fangliau**	**2.17**	**246**	*e*P	Pn	16 46 05.6	+1.2
	baz=253						
SCZT				*e*S	Sn	16 46 30.5	+0.1
	baz=253						
TWS1	**Kuangyinshan**	**2.20**	**326**	*e*P	Pn	16 46 05.4	+0.7
	baz=315						
TWS1				*e*S	Sn	16 46 32.2	+1.1
	baz=315						
TWM1	**Shoushan**	**2.20**	**259**	*e*P	Pn	16 46 06.7	+1.9
	baz=250						
NCU	**National Centr**	**2.22**	**320**	*e*P	Pn	16 46 06.9	+1.9
	baz=320						
NCU				*e*S	Sn	16 46 32.8	+1.1
	baz=320						
HSN	**Hsinchu**	**2.24**	**313**	*e*P	Pn	16 46 06.6	+1.3
	baz=324						
JTJ	**Tarama**	**2.24**	**52**	P	Pn	16 46 03.5	-1.8
JTJ				*e*S	Sn	16 46 29.0	-3.1
HEN	**Hengchun**	**2.25**	**236**	*e*P	Pn	16 46 06.2	+0.8
	baz=228						
HEN				*e*S	Sn	16 46 32.6	+0.1
	baz=228						
TWY	**Chenhua**	**2.26**	**332**	*e*P	Pn	16 46 06.5	+0.9
	baz=339		

mb1 3.7/15,mb1mx3.6/27,mbtmp3.6/15,ML3.4/1,MS3.7/1, Ms1 3.7/1,ms1mx3.2/27,Error ellipse: s-maj=34.2km s-min=13.7km az=61.0

ISC 26 17:33:43.2±1.1,239N±01×945E±02,h42km±10km,n25, σ0°74/26,mb3.9/16,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.00**	**327**	*eP*	**Pn**	**17 34 00.0**	**-0.8**
IMP				*eS*	**Sn**	**17 34 13.0**	**-0.7**
LSA	**Lhasa**	**6.48**	**333**	P	**Pn**	**17 35 17.0**	**+1.0**
LSA	**Lhasa**	**6.48**	**333**	*eP*	**Pn**	**17 35 16.6**	**+0.6**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
LSA	**Lhasa**	**6.48**	**333**	*eP*	**Pn**	**17 35 16.6**	**+0.5**
	comp=Z,5.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**6.83**	**142**	P	**Pn**	**17 35 21.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=313,slow=13,SNR=5.4						
CMAR				Lg		17 37 08.2	
	baz=321,slow=26,SNR=2.6						
TKM2	**Tokmak 2**	**24.56**	**325**	*eP*	**P**	**17 39 00.3**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.0						
TKM2	**Tokmak 2**	**24.56**	**325**	*eP*	**P**	**17 39 00.3**	**+1.4**
	comp=Z,27nm,0.6s,mb5.0						
MK31	**Makanchi Array**	**24.83**	**340**	*eP*	**P**	**17 39 01.8**	**+0.4**
MKAR	**Makanchi Array**	**24.83**	**340**	P	**P**	**17 39 01.9**	**+0.5**
	comp=Z,0.9nm,0.5s,mb3.6,baz=154,slow=10.0,SNR=14						
MKAR				PcP	PcP	17 42 36.7	0.0
	comp=Z,0.1nm,0.3s,baz=131,slow=4.0,SNR=2.9						
EKS2	**Erkin-Say**	**25.37**	**322**	*eP*	**P**	**17 39 08.3**	**+1.9**
	comp=Z,1.4nm,0.7s,mb3.6						
SONM	**Songino Array**	**25.65**	**19**	P	**P**	**17 39 08.8**	**0.0**
	comp=Z,1.6nm,0.8s,mb3.6,baz=196,slow=9.8,SNR=11						
KURK	**Kurchatov**	**29.44**	**339**	P	**P**	**17 39 42.0**	**-0.8**
	comp=Z,0.9nm,0.7s,mb3.6,baz=158,slow=7.3,SNR=7.8						
KURK				PcP	PcP	17 42 46.6	-1.0
	comp=Z,0.7nm,1.0s,baz=162,slow=2.4,SNR=4.3						
KURK	**Kurchatov**	**29.44**	**339**	P	**P**	**17 39 42.0**	**-0.8**
KURK				PcP	PcP	17 42 46.6	-1.0
ZALV	**Zalesovo Beam**	**30.84**	**349**	P	**P**	**17 39 55.5**	**+0.4**
	comp=Z,1.1nm,0.8s,mb3.7,baz=145,slow=5.4,SNR=3.9						
BVAR	**Borovoye Array**	**34.32**	**334**	P	**P**	**17 40 25.9**	**+0.4**
	comp=Z,0.8nm,0.5s,mb3.9,baz=134,slow=8.3,SNR=5.6						
AKTK	**Aktyubinsk**	**38.70**	**323**	P	**P**	**17 41 02.7**	**-0.2**
AKTO	**Aktyubinsk**	**38.70**	**323**	P	**P**	**17 41 02.7**	**-0.2**
	comp=Z,0.8nm,0.5s,mb3.7,baz=116,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**58.37**	**135**	P	**P**	**17 43 33.7**	**-0.8**
	comp=Z,1.2nm,0.7s,mb4.0,baz=324,slow=7.6,SNR=7.9						
ARCES	**ARCESS Array B**	**60.47**	**338**	P	**P**	**17 43 48.4**	**+0.1**
	comp=Z,2.4nm,0.9s,mb4.2,baz=90,slow=6.4,SNR=4.6						
ASAR	**Alice Springs**	**60.82**	**138**	P	**P**	**17 43 50.8**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.9,baz=320,slow=6.4,SNR=14						
HFS	**Hagfors**	**65.02**	**327**	P	**P**	**17 44 17.7**	**-1.1**
	comp=Z,1.3nm,0.5s,mb4.2,baz=115,slow=6.7,SNR=10						
NOA	**NORSAR Array B**	**66.15**	**328**	P	**P**	**17 44 24.9**	**-1.2**
	comp=Z,0.6nm,0.5s,mb3.9,baz=83,slow=6.2,SNR=3.3						
GERES	**GERESS Array B**	**66.47**	**315**	P	**P**	**17 44 27.9**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.7,baz=90,slow=7.8,SNR=3.0						
BOSA	**Boshof**	**84.70**	**236**	P	**P**	**17 46 13.0**	**+0.1**
	comp=Z,1.7nm,0.7s,mb4.3,baz=90,slow=3.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**87.30**	**283**	P	**P**	**17 46 26.6**	**+0.4**
	comp=Z,0.5nm,0.8s,mb3.8,baz=67,slow=6.1,SNR=2.1						

*ISCJB **26** 18:02:46.4±2.2,52S±0.1×1465E±0.3,h139km±32km, mb4.0/6,Error ellipse: s-maj=54.8km s-min=10.9km az=19.4*

*NEIC **26** 18:02:48.6±2.4,523S×14690E,h166km±30km,mb4.5/2, Error ellipse: s-maj=43.8km s-min=17.1km az=114.0*

*IDC **26** 18:02:54.2±2.8,538S×14682E,h216km±28km,mb3.4/5, mb1 3.6/7,mb1mx3.4/16,mbtmp3.4/7,Error ellipse: s-maj=54.8km s-min=10.5km az=108.0*

ISC 26 18:02:51.4±1.7,54S±01×1468E±03,h184km±26km,n13, σ1°04/15,mb4.0/6,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.01**	**174**	*eP*	**Pn**	**18 03 50.7**	**-2.1**
CTA	**Charters Tower**	**14.62**	**182**	P	**Pn**	**18 06 10.8**	**+1.2**
	0.2nm,0.3s,baz=10,slow=12,SNR=6.7						
WRAB	**Tennant Creek**	**18.82**	**219**	*eP*	**P**	**18 06 58.1**	**+0.7**
	6.8nm,0.6s						
WB2	**Warramunga Arr**	**18.83**	**219**	*eP*	**P**	**18 06 58.4**	**+0.9**
WB2				*eS*	**S**	**18 10 20.5**	**-1.4**
WRA	**Warramunga Arr**	**18.84**	**219**	P	**P**	**18 06 58.6**	**+1.0**
	1.3nm,0.3s,baz=37,slow=11,SNR=77						
WRA				S	**S**	**18 10 21.2**	**-0.9**
	0.1nm,0.3s,baz=40,slow=21,SNR=5.1						
ASAR	**Alice Springs**	**21.98**	**213**	P	**P**	**18 07 31.6**	**+0.6**
	1.2nm,0.5s,mb3.6,baz=47,slow=8.3,SNR=50						
ASAR				S	**S**	**18 11 20.9**	**+0.6**
	1.2nm,0.9s,baz=29,slow=19,SNR=4.8						
FITZ	**Fitzroy Crossi**	**24.18**	**237**	*eP*	**P**	**18 07 51.8**	**+0.7**
	14nm,0.5s,mb4.8						
FITZ	**Fitzroy Crossi**	**24.18**	**237**	P	**P**	**18 07 52.3**	**+1.3**
	7.6nm,0.5s,mb4.5,baz=67,slow=32,SNR=45						
CBIJ	**Chichi jima**	**32.60**	**352**	P	**P**	**18 09 06.0**	**+0.4**
	36nm,0.7s,mb5.2,baz=173,slow=17						
SONM	**Songino Array**	**63.75**	**331**	P	**P**	**18 13 03.3**	**-0.3**
	0.7nm,0.5s,mb3.8,baz=147,slow=6.2,SNR=5.9						
MKAR	**Makanchi Array**	**76.87**	**320**	P	**P**	**18 14 22.6**	**-0.5**
	0.5nm,0.7s,mb3.3,baz=98,slow=9.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**78.36**	**328**	P	**P**	**18 14 30.0**	**-1.3**
	0.5nm,0.4s,mb3.5,baz=97,slow=4.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	**144.69**	**285**	PKP	PKPdf	18 22 04.9	-2.3
	0.5nm,0.6s,baz=62,slow=3.4,SNR=5.9						

IDC 26 18:08:35.6±4.9,1962S×17490W,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.7/18,mbtmp3.8/4,Error ellipse: s-maj=159.5km s-min=95.0km az=169.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.49**	**263**	P	P	18 15 44.0	+1.2
	1.7nm,0.8s,baz=98,slow=7.1,SNR=4.1						
STKA	**Stephens Creek**	**40.79**	**244**	P	P	18 16 19.1	+0.3
	0.5nm,0.4s,baz=64,slow=9.4,SNR=2.9						
ASAR	**Alice Springs**	**47.56**	**256**	P	P	18 17 12.7	-0.6
	1.1nm,0.5s,baz=92,slow=7.0,SNR=30						
ASAR				PcP	PcP	18 18 43.2	0.0
	0.3nm,0.7s,baz=104,slow=4.0,SNR=4.3						
WRA	**Warramunga Arr**	**47.62**	**261**	P	P	18 17 12.8	-0.9
	0.6nm,0.6s,baz=98,slow=7.9,SNR=17						

*IDC **26** 18:13:09.9±1.5,3289N×13908E,h0km,mb3.7/2, mb1 3.8/4,mb1mx3.5/22,mbtmp3.7/4,ML3.3/2,Error ellipse: s-maj=32.2km s-min=15.5km az=137.0*

*ISCJB **26** 18:13:11.5±0.7,3344N±004×14052E±008,h68km±8km, mb3.6/2,Error ellipse: s-maj=10.8km s-min=5.9km az=179.0*

*JMA **26** 18:13:13.1±0.1,3352N×14047E,h57km±2km,M3.0*

ISC 26 18:13:12.9±0.7,3346N±004×14050E±008,h59km±9km, n16,σ0°96/27,mb3.6/2,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.67**	**239**	P	**Pn**	**18 13 27.1**	**+0.4**
JHJ2				S	**Sn**	**18 13 36.9**	**+0.2**
JHJ	**Hachijo jima 2**	**0.69**	**241**	Pn	**Pn**	**18 13 27.2**	**+0.3**
	223nm,0.3s,baz=232,slow=22,SNR=336						
JHJ				Sn	**Sn**	**18 13 36.9**	**-0.3**
	1µm,0.3s,baz=245,slow=20,SNR=7.5						
JMY	**Miyakejima3**	**1.02**	**307**	P	**Pn**	**18 13 30.9**	**-0.2**
BSO1	**Boso 1**	**1.25**	**18**	P	**Pn**	**18 13 33.9**	**-0.3**
BSO2	**Boso 2**	**1.30**	**9**	S	**Sn**	**18 13 50.4**	**-1.0**
BSO3	**Boso 3**	**1.34**	**0**	P	**Pn**	**18 13 35.5**	**+0.2**
BSO3				S	**Sn**	**18 13 53.1**	**+0.9**
JKO	**Kozu shima**	**1.34**	**303**	P	**Pn**	**18 13 35.4**	**0.0**
JKO				S	**Sn**	**18 13 52.1**	**-0.2**
JIM2	**Oshima 3**	**1.53**	**325**	P	**Pn**	**18 13 37.6**	**-0.4**
JIM2				S	**Sn**	**18 13 55.3**	**-1.6**
JIZS	**Izushimoda**	**1.84**	**313**	P	**Pn**	**18 13 42.3**	**+0.2**
JIZS				S	**Sn**	**18 14 04.8**	**+0.5**
KTJJ	**Kamata 2**	**1.88**	**321**	P	**Pn**	**18 13 42.6**	**-0.1**
KTJJ				S	**Sn**	**18 14 04.1**	**-1.2**
JOD2	**Odawara 2**	**2.14**	**327**	P	**Pn**	**18 13 46.2**	**0.0**
JOD2				S	**Sn**	**18 14 09.6**	**-2.1**
MJAR	**Matsushiro Arr**	**3.60**	**329**	Pn	**Pn**	**18 14 08.2**	**+2.0**
	1.3nm,0.3s,baz=161,slow=12,SNR=22						
MJAR				Sn	**Sn**	**18 14 50.0**	**+2.6**
	0.6nm,0.3s,baz=26,slow=29,SNR=3.1						
MAT	**Matsushiro**	**3.60**	**329**	P	**Pn**	**18 14 08.1**	**+1.9**
MAT				S	**Sn**	**18 14 51.8**	**+4.3**
CBIJ	**Chichi jima**	**6.51**	**167**	Pn	**Pn**	**18 14 45.6**	**-0.4**
	2.5nm,0.3s,baz=288,slow=23,SNR=5.8						
CBIJ				Sn	**Sn**	**18 15 54.1**	**-4.8**
	2.0nm,0.3s,baz=283,slow=19,SNR=3.8						
WRA	**Warramunga Arr**	**53.43**	**187**	P	**P**	**18 22 26.5**	**-0.3**
	0.2nm,0.3s,mb3.5,baz=3.8,slow=7.7,SNR=11						
ASAR	**Alice Springs**	**57.15**	**187**	P	**P**	**18 22 53.0**	**-0.5**
	0.4nm,0.5s,mb3.7,baz=0.6,slow=6.4,SNR=14						

*MOS **26** 18:33:46.3±1.0,5334N×198E,h10km,mb4.1/1,Error ellipse: s-maj=11.3km s-min=3.8km az=98.5*

*NEIC **26** 18:33:47.1±0.6,5347N×195E,h10km,ML3.7(LDG), ML3.8(STR),Error ellipse: s-maj=8.0km s-min=6.1km az=104.0*

*CSEM **26** 18:33:47.6±0.1,5352N×229E,h10km,ML3.8/28,Error ellipse: s-maj=1.8km s-min=1.0km az=65.0*

*ISCJB **26** 18:33:48.0±0.3,5318N±002×203E±003,h10km,mb3.5/4, Error ellipse: s-maj=3.0km s-min=2.1km az=135.6*

*IDC **26** 18:33:48.5±1.1,5351N×220E,h0km,mb3.5/4,mb1 3.6/10, mb1mx3.6/27,mbtmp3.5/10,ML3.7/5,Error ellipse: s-maj=20.7km s-min=18.0km az=59.0*

*BGS **26** 18:33:49.8±0.7,5345N×223E,h10km,ML3.3*

*LDG **26** 18:33:50.6±0.2,5338N×211E,h10km,Ml3.7/30,Error ellipse: s-maj=4.1km s-min=3.4km az=161.0*

*UCC **26** 18:33:50.8,5344N×223E,h0km,ML3.0*

*STR **26** 18:33:59.3±0.6,5275N×270E,h10km,Ml3.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 26 18:33:49.1±0.3,5331N±002×212E±003,h10km,n146, σ1°24/257,mb3.5/4,1C,North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AWI1	**Witton**	**0.63**	**221**	*eP*	**Pg**	**18 34 03.9**	**+2.7**
ABA1	**Baconsthorpe**	**0.72**	**235**	*eP*	**Pg**	**18 34 05.3**	**+2.2**
AEU	**East Anglia Un**	**0.88**	**218**	*eP*	**Pg**	**18 34 08.2**	**+2.3**
AEU				*eS*	**Sg**	**18 34 21.7**	**+4.4**
AEU				AML	AML	18 34 24.5	
	comp=E,604nm,0.6s						
AEU				AML	AML	18 34 24.8	
	comp=N,418nm,0.3s						
AEU	**East Anglia Un**	**0.88**	**218**	P	**Pg**	**18 34 08.2**	**+2.3**
AEU				S	**Sg**	**18 34 21.7**	**+4.4**
AEU				AML	AML	18 34 24.5	
	comp=N,604nm,0.6s						
AEU				AML	AML	18 34 24.8	
	comp=N,418nm,0.3s						
AEU	**East Anglia Un**	**0.88**	**218**	*eP*	**Pg**	**18 34 08.2**	**+2.3**
AEU				*eS*	**Sg**	**18 34 21.7**	**+4.4**
AEU				AML	AML	18 34 24.5	
	comp=E,604nm,0.6s						
AEU				AML	AML	18 34 24.8	
	comp=N,418nm,0.3s						
AEU	**East Anglia Un**	**0.88**	**218**	*eP*	**Pg**	**18 34 08.2**	**+2.3**
CWF	**Charnwood Fore**	**2.15**	**256**	*eP*	**Pn**	**18 34 25.9**	**+1.0**
CWF				AML	AML	18 35 02.6	
	comp=N,105nm,0.6s						
CWF				AML	AML	18 35 05.6	
	comp=E,86nm,0.5s						
KBI1	**Birley Grange**	**2.19**	**270**	*eP*	**Pn**	**18 34 25.5**	**-0.1**
KBI1	**Birley Grange**	**2.19**	**270**	*eP*	**Pn**	**18 34 25.5**	**-0.1**
	comp=E,406nm,0.7s						
TFO1	**Folkestone**	**2.28**	**196**	*eP*	**Pn**	**18 34 30.6**	**+3.8**
HPK	**Haverah Park**	**2.32**	**288**	*eP*	**Pn**	**18 34 28.8**	**+1.5**
HPK				*eS*	**Sn**	**18 34 55.9**	**0.0**
HPK				AML	AML	18 35 07.4	
	comp=E,428nm,0.7s						
HPK				AML	AML	18 35 15.0	
	comp=N,406nm,0.7s						
LHO	**Holmfirth**	**2.39**	**277**	*eP*	**Pn**	**18 34 28.0**	**-0.3**
KWE	**Weaver Farm**	**2.41**	**265**	*eP*	**Pn**	**18 34 29.3**	**+0.8**
UCC	**Uccle**	**2.87**	**150**	PN	**Pg**	**18 34 45.2**	**+1.2**
SNF	**Seneffe**	**3.11**	**154**	PN	**Pg**	**18 34 48.2**	**-0.4**
SNF				PG	**Pg**	**18 34 49.0**	**+0.4**
SNF	**Seneffe**	**3.11**	**154**	Pg	**Pg**	**18 34 49.0**	**+0.4**
WTSB	**Winterswijk**	**3.15**	**113**	*ePg*	**Pn**	**18 34 39.4**	**+0.7**
	comp=N,44nm,0.3s						
WTSB				*eSg*	**Sn**	**18 35 14.8**	**-1.6**
BEBN	**Eben Emael**	**3.34**	**137**	PN	**Pn**	**18 34 44.4**	**+3.1**
BEBN				PG	**Pg**	**18 34 59.1**	**+6.1**
XSO	**Sourhope Farm**	**3.36**	**312**	*eP*	**Pn**	**18 34 40.6**	**-1.0**
XSO	**Sourhope Farm**	**3.36**	**312**	*eP*	**Pn**	**18 34 40.6**	**-1.1**
	comp=N,71nm,0.4s						
MCH1	**Michaelchurch**	**3.38**	**249**	*eP*	**Pn**	**18 34 42.5**	**+0.6**
MCH1				*eS*	**Sn**	**18 35 22.6**	**+0.5**
MCH1				AML	AML	18 35 40.0	
	comp=E,94nm,0.4s						
MCH1				AML	AML	18 35 44.9	
	comp=N,71nm,0.4s						
HGN	**Heimansgroeve**	**3.47**	**136**	*eP*	**Pn**	**18 34 43.8**	**+0.7**
HGN	**Heimansgroeve**	**3.47**	**136**	*iPg*	**Pn**	**18 34 43.8**	**+0.8**
	comp=N,15nm,0.4s						
HGN	**Heimansgroeve**	**3.47**	**136**	*ex*	**Pg**	**18 34 59.8**	**+4.3**
HGN				*eSg*	**Sn**	**18 35 24.6**	**+0.4**
BCLA	**Clavier**	**3.50**	**144**	PN	**Pn**	**18 34 44.9**	**+1.3**
BCLA				PG	**Pg**	**18 35 01.4**	**+5.2**
BCLA				SN	**Sn**	**18 35 23.1**	**-1.9**
BCLA				SG	**Sg**	**18 35 40.8**	**-0.7**
	comp=E,34nm,0.5s						
BCLA	**Clavier**	**3.50**	**144**	Pn	**Pn**	**18 34 44.8**	**+1.3**
BAIF	**Baives**	**3.50**	**157**	*ePg*	**Pg**	**18 34 56.8**	**+0.6**
	SNR=1.0						
BAIF				*eSn*	**Sn**	**18 35 22.8**	**-2.2**
	SNR=1.0						
BAIF				*eSg*	**Sg**	**18 35 42.1**	**+0.5**
	comp=E,87nm,0.6s						
BAIF	**Baives**	**3.50**	**157**	*eP*	**Pn**	**18 34 44.2**	**+0.6**
BAIF				*e*		18 35 22.8	
BAIF	**Baives**	**3.50**	**157**	*ePg*	**Pg**	**18 34 56.8**	**+0.6**
	SNR=1.0						
BAIF				*eSn*	**Sn**	**18 35 22.8**	**-2.2**
	SNR=1.0						
BAIF				*eSg*	**Sg**	**18 35 42.1**	**+0.5**
	comp=E,43nm,0.6s						
BAIF	**Baives**	**3.50**	**157**	*ePn*	**Pn**	**18 34 44.2**	**+0.6**
BAIF				*ePg*	**Pg**	**18 34 56.8**	**+0.6**
BAIF				*eSn*	**Sn**	**18 35 22.8**	**-2.2**
BAIF				*eSg*	**Sg**	**18 35 42.1**	**+0.5**
DOU	**Dourbes**	**3.57**	**153**	PN	**Pn**	**18 34 45.9**	**+1.4**
DOU				PG	**Pg**	**18 34 59.6**	**+2.2**
DOU				SN	**Sn**	**18 35 29.0**	**+2.5**
DOU				SG	**Sg**	**18 35 44.6**	**+1.1**
	comp=N,42nm,0.7s						
DOU	**Dourbes**	**3.57**	**153**	Pn	**Pn**	**18 34 45.8**	**+1.4**
ECK	**Cauldkaine Hil**	**3.61**	**303**	*eP*	**Pn**	**18 34 44.7**	**-0.3**
MEM	**Membach**	**3.62**	**137**	PN	**Pn**	**18 34 46.1**	**+0.9**
MEM				SN	**Sn**	**18 35 26.2**	**-1.6**
MEM				SG	**Sg**	**18 35 46.9**	**+1.7**
	comp=N,60nm,0.5s						
MEM	**Membach**	**3.62**	**137**	Pn	**Pn**	**18 34 46.0**	**+0.9**
MEM				Sn	**Sn**	**18 35 26.2**	**-1.6**
MEM				Sg	**Sg**	**18 35 46.9**	**+1.7**
	comp=N,60nm,0.5s						
GIVF	**Givet**	**3.62**	**151**	*ePg*	**Pg**	**18 34 58.8**	**+0.3**
	SNR=1.0						
GIVF				*eSn*	**Sn**	**18 35 26.5**	**-1.5**
	SNR=1.0						
GIVF				*eSg*	**Sg**	**18 35 45.8**	**+0.4**
	comp=N,69nm,0.4s						
GIVF	**Givet**	**3.62**	**151**	*eP*	**Pn**	**18 34 45.8**	**+0.6**
GIVF				*e*		18 35 26.5	
GIVF	**Givet**	**3.62**	**151**	*ePg*	**Pg**	**18 34 58.8**	**+0.3**
	SNR=1.0						
GIVF				*eSn*	**Sn**	**18 35 26.5**	**-1.5**
	SNR=1.0						
GIVF				*eSg*	**Sg**	**18 35 45.8**	**+0.4**
	comp=N,34nm,0.4s						
GIVF	**Givet**	**3.62**	**151**	*ePn*	**Pn**	**18 34 45.8**	**+0.6**
GIVF				*ePg*	**Pg**	**18 34 58.8**	**+0.3**
GIVF				*eSn*	**Sn**	**18 35 26.5**	**-1.5**
GIVF				*eSg*	**Sg**	**18 35 45.8**	**+0.4**
EKA	**Eskdalemuir Ar**	**3.70**	**305**	Pn	**Pn**	**18 34 45.6**	**-0.6**
	comp=N,2.5nm,0.3s,baz=118,slow=13,SNR=54						
ESK	**Eskdalemuir**	**3.71**	**305**	*eP*	**Pn**	**18 34 45.9**	**-0.5**
EBL	**Broad Law**	**3.89**	**311**	*eP*	**Pn**	**18 34 48.2**	**-0.7**
EAU	**Auchinoon**	**4.12**	**310**	*eP*	**Pn**	**18 34 51.3**	**-0.7**
GAL1	**Galloway**	**4.32**	**294**	*eP*	**Pn**	**18 34 54.0**	**-0.7**
EBH	**Black Hill**	**4.39**	**314**	*eP*	**Pn**	**18 34 55.2**	**-0.5**
EBH	**Black Hill**	**4.39**	**314**	*eP*	**Pn**	**18 34 55.2**	**-0.6**
	comp=N,428nm,0.7s						
WLF	**Walferdange**	**4.43**	**144**	PN	**Pn**	**18 34 58.2**	**+1.8**
RUP	**Ruppelstein**	**4.75**	**138**	P	**Pn**	**18 35 01.6**	**+0.9**
ABH	**Alteburg**	**4.82**	**133**	P	**Pn**	**18 35 02.9**	**+1.3**
FLN	**La Foliniere**	**4.84**	**201**	*ePn*	**Pn**	**18 35 01.9**	**0.0**
	baz=16,SNR=1.0						
FLN				*eSn*	**Sn**	**18 35 56.7**	**-1.3**
FLN				*eSg*	**Sg**	**18 36 26.4**	**+2.0**
	comp=N,27nm,0.4s						
FLN	**La Foliniere**	**4.84**	**201**	*eP*	**Pn**	**18 35 01.9**	**0.0**
FLN				*e*		18 35 56.7	
FLN	**La Foliniere**	**4.84**	**201**	*ePn*	**Pn**	**18 35 01.9**	**0.0**
	SNR=1.0						
FLN				*eSn*	**Sn**	**18 35 56.7**	**-1.3**
FLN				*eSg*	**Sg**	**18 36 26.4**	**+2.0**
	comp=N,13nm,0.4s						
LDF	**La Druitiere**	**4.93**	**198**	*ePn*	**Pn**	**18 35 03.3**	**+0.1**
	SNR=1.0						
LDF				*eSn*	**Sn**	**18 35 58.0**	**-2.2**
	SNR=1.0						
LDF				*eSg*	**Sg**	**18 36 28.9**	**+1.6**
	comp=N,45nm,0.6s						
LDF	**La Druitiere**	**4.93**	**198**	*eP*	**Pn**	**18 35 03.3**	**+0.1**
LDF				*e*		18 35 58.0	
LDF	**La Druitiere**	**4.93**	**198**	*ePn*	**Pn**	**18 35 03.3**	**+0.1**
	SNR=1.0						
LDF				*eSn*	**Sn**	**18 35 58.0**	**-2.2**
	SNR=1.0						
LDF				*eSg*	**Sg**	**18 36 28.9**	**+1.6**
	comp=N,22nm,0.6s						
RFYF	**Reffroy**	**5.14**	**154**	*ePn*	**Pn**	**18 35 05.6**	**-0.5**
RFYF				*eSg*	**Sg**	**18 36 32.8**	**-1.3**
	comp=N,53nm,0.5s						
RFYF	**Reffroy**	**5.14**	**154**	*ePn*	**Pn**	**18 35 05.6**	**-0.5**
RFYF				*eSg*	**Sg**	**18 36 32.8**	**-1.3**
	comp=N,26nm,0.5s						
MEZF	**Maizieres J'vi**	**5.16**	**158**	*ePn*	**Pn**	**18 35 05.7**	**-0.6**
	baz=345						
MEZF				*eSg*	**Sg**	**18 36 34.2**	**-0.4**
	comp=N,36nm,0.5s						
MEZF	**Maizieres J'vi**	**5.16**	**158**	*ePn*	**Pn**	**18 35 05.7**	**-0.6**
MEZF				*eSg*	**Sg**	**18 36 34.2**	**-0.4**
	comp=N,18nm,0.5s						
DLF	**Lyons Farm**	**5.19**	**273**	*eP*	**Pn**	**18 35 06.9**	**+0.2**
GRR	**Gorron**	**5.28**	**202**	*ePn*	**Pn**	**18 35 07.5**	**-0.4**
	SNR=1.0						
GRR				*eSn*	**Sn**	**18 36 06.5**	**-2.2**
	comp=N,14nm,0.2s,SNR=1.0						
GRR				*eSg*	**Sg**	**18 36 39.5**	**+1.1**
	comp=N,22nm,0.4s						
GRR	**Gorron**	**5.28**	**202**	*eP*	**Pn**	**18 35 07.5**	**-0.4**
GRR				*e*		18 36 06.5	
GRR	**Gorron**	**5.28**	**202**	*ePn*	**Pn**	**18 35 07.5**	**-0.4**
	SNR=1.0						
GRR				*eSn*	**Sn**	**18 36 06.5**	**-2.2**
	comp=N,7.2nm,0.2s,SNR=1.0						
GRR				*eSg*	**Sg**	**18 36 39.5**	**+1.1**
	comp=N,11nm,0.4s						
DMUB	**Kingscourt**	**5.41**	**280**	*eP*	**Pn**	**18 35 09.1**	**-0.7**
SFTF	**Sexfontaines**	**5.43**	**159**	*ePn*	**Pn**	**18 35 10.4**	**+0.3**
	baz=340						
SFTF				*eSn*	**Sn**	**18 36 08.3**	**-4.3**
SFTF				*eSg*	**Sg**	**18 36 42.4**	**-1.1**
	comp=N,18nm,0.3s						
SFTF	**Sexfontaines**	**5.43**	**159**	*ePn*	**Pn**	**18 35 10.4**	**+0.3**
SFTF				*eSn*	**Sn**	**18 36 08.3**	**-4.3**
SFTF				*eSg*	**Sg**	**18 36 42.4**	**-1.1**
	comp=N,9.1nm,0.3s						
TOD	**Tromm**	**5.58**	**129**	P	**Pn**	**18 35 13.7**	**+1.6**
LANF	**Langenberg**	**5.62**	**138**	P	**Pn**	**18 35 14.4**	**+1.8**
DCN	**Croghan**	**5.63**	**274**	*eP*	**Pn**	**18 35 11.3**	**-1.5**
THEF	**They Montfort**	**5.65**	**153**	P	**Pn**	**18 35 13.7**	**+0.7**
THEF				S	**Sn**	**18 36 16.2**	**-1.7**
SNART	**Snartemo**	**5.80**	**28**	*eP*	**Pn**	**18 35 11.4**	**-3.7**
SNART				*eS*	**Sn**	**18 36 13.6**	**-7.9**
SNART				AML	AML	18 36 22.0	
	comp=Z,8.6nm,0.8s						
SGMF	**Saint Gilles**	**5.87**	**212**	*ePn*	**Pn**	**18 35 13.9**	**-2.1**
	SNR=1.0						
SGMF				*eSn*	**Sn**	**18 36 21.1**	**-2.1**
SGMF				*eSg*	**Sg**	**18 36 58.6**	**+1.3**
	comp=Z,25nm,0.6s						
SGMF	**Saint Gilles**	**5.87**	**212**	*eP*	**Pn**	**18 35 13.9**	**-2.1**
SGMF				*e*		18 36 21.1	
SGMF	**Saint Gilles**	**5.87**	**212**	*ePn*	**Pn**	**18 35 13.9**	**-2.1**
	SNR=1.0						
SGMF				*eSn*	**Sn**	**18 36 21.1**	**-2.1**
SGMF				*eSg*	**Sg**	**18 36 58.6**	**+1.3**
	comp=Z,13nm,0

*DJA **26** 18:36:12, 181S×99.27E, h45km, Mw5.5/5*
*SZGRF **26** 18:36:17.9, 137S×98.18E, h33km, mb5.0, Southern Sumatera, Indonesia*
ISC 26 18:36:12.1±0.2, 189S×003×9941E±003, h36km, h36km±3.1km: pP-P, n289, σ1§04/283, mb5.2/102, MS4.8/28, 44C-24D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
PPI	**Padang Panjang** 0.0nm,0.0s	**1.73**	**35**	P	**Pn**	**18 36 39.9**	**+0.2**
RGRI	**Rengat** 0.0nm,0.0s	**3.30**	**62**	P	**Pn**	**18 37 02.8**	**+1.5**
KSI	**Kapahiang** 0.0nm,0.0s	**3.62**	**119**	P	**Pn**	**18 37 06.5**	**+0.7**
TRSI	**Tarutung** 0.0nm,0.0s	**3.92**	**353**	P	**Pn**	**18 37 09.6**	**-0.2**
DSRI	**Dabo** 0.0nm,0.0s	**5.35**	**75**	P	**Pn**	**18 37 30.0**	**+0.5**
TSI	**Tuntungan** 0.0nm,0.0s	**5.42**	**351**	P	**Pn**	**18 37 29.6**	**-1.0**
KGM	**Kluang**	**5.51**	**45**	⇓P	**Pn**	**18 37 33.2**	**+1.6**
FRIM	**Kepong**	**5.55**	**23**	⇑P	**Pn**	**18 37 33.2**	**+0.9**
MYKOM	**Kota Tinggi**	**5.75**	**51**	⇓P	**Pn**	**18 37 36.7**	**+1.7**
IPM	**Ipoh**	**6.53**	**14**	⇓P	**Pn**	**18 37 47.5**	**+1.7**
KTGM	**Kuala Trenggan**	**8.08**	**27**	⇓P	**Pn**	**18 38 08.2**	**+1.2**
TPI	**Tanjungpandan** 0.0nm,0.0s	**8.28**	**96**	P	**Pn**	**18 38 11.0**	**+1.3**
TPI	**Tanjungpandan**	**8.28**	**96**	⇓*e*P	**Pn**	**18 38 11.5**	**+1.8**
TPI				*e*S	**Sn**	**18 39 41.0**	**-1.1**
BSI	**Banda Aceh** 0.0nm,0.0s	**8.41**	**331**	P	**Pn**	**18 38 09.2**	**-2.4**
DBJI	**Dramaga** 0.0nm,0.0s	**8.66**	**123**	P	**Pn**	**18 38 14.8**	**-0.1**
SKJI	**Sukabumi** 0.0nm,0.0s	**8.74**	**126**	P	**Pn**	**18 38 17.0**	**+0.9**
SNG	**Songkhla** 600nm,1.0s	**9.09**	**8**	P	**Pn**	**18 38 19.0**	**-1.9**
LEM	**Lembang** 0.0nm,0.0s	**9.53**	**121**	P	**Pn**	**18 38 27.4**	**+0.4**
KSM	**Kuching**	**11.39**	**73**	⇑P	**Pn**	**18 38 55.2**	**+2.7**
KSM	**Kuching**	**11.39**	**73**	*e*Pn	**Pn**	**18 38 53.0**	**+0.5**
BJII	**Banjamegara** 0.0nm,0.0s	**11.59**	**118**	P	**Pn**	**18 38 55.3**	**+0.1**
SBUM	**Sibu**	**13.51**	**71**	⇑P	**Pn**	**18 39 24.0**	**+2.6**
SJI	**Sawahan** 0.0nm,0.0s	**13.60**	**116**	P	**Pn**	**18 39 21.4**	**-1.3**
PLKI	**Palangkaraya** 0.0nm,0.0s	**14.53**	**92**	P	**Pn**	**18 39 36.1**	**+0.8**
BTM	**Bintulu**	**14.57**	**70**	⇓P	**Pn**	**18 39 43.3**	**+7.4**
BBKI	**Banjar Baru** 0.0nm,0.0s	**15.49**	**96**	P	**Pn**	**18 39 45.1**	**-2.9**
NST	**Nakhon Sawan**	**17.47**	**2**	P	**Pn**	**18 40 09.0**	**-4.1**
UBT	**Ubonrachathani**	**17.91**	**18**	P	**Pn**	**18 40 18.5**	**0.0**
KKTK	**Khon Kaen**	**18.42**	**10**	P	**Pn**	**18 40 21.0**	**-3.8**
KKM	**Kota Kinabalu**	**18.54**	**65**	⇑P	**Pn**	**18 40 26.7**	**+0.5**
KKM	**Kota Kinabalu**	**18.54**	**65**	*e*P	**Pn**	**18 40 25.7**	**-0.6**
SDKM	**Sandakan**	**19.27**	**67**	⇓P	**Pn**	**18 40 35.1**	**0.0**
TSM	**Tawau**	**19.44**	**72**	⇓P	**Pn**	**18 40 36.6**	**-0.5**
KDM	**Kudat**	**19.46**	**63**	⇑P	**Pn**	**18 40 37.4**	**0.0**
CMAR	**Chiang Mai Arr** 23nm,0.6s,baz=188,slow=9.8,SNR=67	**20.23**	**359**	P	**P**	**18 40 41.4**	**-2.9**
CMAR	1.1nm,1.0s,baz=183,slow=15,SNR=2.6			S	**S**	**18 44 28.8**	**-0.6**
CMAR	comp=Z,4μm,18.9s,MS4.7,baz=190,slow=39			LR	LR	18 49 15.8	
CMAR	**Chiang Mai Arr**	**20.23**	**359**	*i* P	**P**	**18 40 41.3**	**-3.0**
MKS	**Makassar**	**20.29**	**100**	⇑*e*P	**P**	**18 40 46.9**	**+1.9**
MYLDM	**Lahad Datu**	**20.32**	**70**	⇓P	**P**	**18 40 47.1**	**+1.8**
PCI	**Palu** 227nm,1.7s	**20.44**	**88**	P	**P**	**18 40 46.8**	**+0.1**
KAPI	**Kappang** 456nm,0.6s,SNR=5.4	**20.53**	**99**	P	**P**	**18 40 46.4**	**-1.3**
KAPI	**Kappang** SNR=5.2	**20.53**	**99**	P	**P**	**18 40 46.4**	**-1.3**
KAPI	**Kappang** 33nm,0.5s,baz=274,slow=9.9,SNR=7.4	**20.53**	**99**	P	**P**	**18 40 45.8**	**-1.9**
CHTO	**Chiang Mai** SNR=17	**20.58**	**359**	P	**P**	**18 40 52.5**	**+4.5**
CHTO	**Chiang Mai**	**20.58**	**359**	*e*P	**P**	**18 40 45.3**	**-2.8**
CHTO	comp=Z,91nm,1.3s			pmax	pmax		
CHTO	**Chiang Mai** comp=Z,91nm,1.3s	**20.58**	**359**	*e*P	**P**	**18 40 45.3**	**-2.8**
NANT	**Nan** comp=Z,275nm,1.0s	**20.60**	**3**	⇑P	**P**	**18 40 42.5**	**-5.8**
PALK	**Pallekele** comp=Z,31nm,1.0s	**20.77**	**296**	P	**P**	**18 40 49.7**	**-0.5**
CHRT	**Chiangrai** comp=Z,382nm,0.8s,mb5.9	**21.63**	**1**	⇓P	**P**	**18 40 58.0**	**-1.4**
QIZ	**Qiongzhong**	**23.18**	**26**	P	**P**	**18 41 15.0**	**-0.9**
QIZ	comp=Z,67nm,1.2s,mb5.0			AMB	AMB		
QIZ	comp=N,1μm,17.5s,MS4.6			LR	LR		
QIZ	comp=E,1μm,14.4s,MS4.6			LR	LR		
QIZ	comp=Z,3μm,19.6s			LR	LR		
QIZ	**Qiongzhong** comp=Z,142nm,1.4s,mb5.2	**23.18**	**26**	*e*P	**P**	**18 41 15.3**	**-0.6**
KDI	**Kendari** comp=Z,0.0nm,0.0s	**23.26**	**96**	P	**P**	**18 41 16.9**	**0.0**
KDI	**Kendari**	**23.26**	**96**	⇑*e*P	**P**	**18 41 16.6**	**-0.3**
KDI				*e*S	**S**	**18 45 23.3**	**-3.4**
BATI	**Baumata** comp=Z,15nm,0.6s,mb4.7,baz=81,slow=21,SNR=4.3	**25.47**	**110**	P	**P**	**18 41 32.9**	**-4.2**
MNI	**Manado** comp=Z,0.0nm,0.0s	**25.64**	**83**	P	**P**	**18 41 39.2**	**+0.5**
BWNR	**Bhubaneshwar**	**25.77**	**329**	*e*P	**P**	**18 41 40.0**	**+0.2**
BWNR				*e*S	**S**	**18 46 09.0**	**+2.2**
CAL	**Calcutta**	**26.58**	**337**	*ex*	x	18 42 19.3	
CAL				*ex*	x	18 46 40.2	
IMP	**Imphal**	**27.05**	**349**	*e*P	**P**	**18 41 51.0**	**-0.2**
IMP				*ex*	x	18 46 40.0	
KMI	**Kunming**	**27.05**	**7**	P	**P**	**18 41 51.3**	**+0.1**
KMI				AP	pP	18 42 01.3	-0.1
KMI				XP	sP	18 42 05.5	-0.2
KMI				PP		18 42 36.0	
KMI				S	**S**	**18 46 21.8**	**-5.0**
KMI				XS	sS	18 46 39.0	-4.6
KMI	comp=Z,20nm,1.1s,mb4.6			AMB	AMB		
KMI	comp=Z,267nm,8.6s			AMB	AMB		
KMI	comp=N,2μm,16.9s,MS4.9			LR	LR		
KMI	comp=E,2μm,14.4s,MS4.9			LR	LR		
KMI	comp=Z,2μm,22.9s			LR	LR		
KMI	**Kunming**	**27.05**	**7**	P	**P**	**18 41 51.3**	**+0.1**
KMI				*PP	pP	18 42 01.3	-0.1
KMI				*SP	sP	18 42 05.5	-0.2
KMI						18 42 36.1	
KMI				PPP		18 42 48.0	
KMI				S	**S**	**18 46 21.7**	**-5.1**
KMI				*SS	sS	18 46 39.1	-4.5
KMI				SS		18 47 33.8	
KMI				SSS		18 47 51.8	
KMI	comp=Z,20nm,1.1s,mb4.6			pmax	pmax		
KMI	comp=Z,2μm,22.9s,MS4.6			MLR	MLR		
KMI	**Kunming** comp=Z,20nm,1.1s,mb4.6	**27.05**	**7**	P	**P**	**18 41 51.3**	**+0.1**
KMI				pP	pP	18 42 01.3	-0.1
KMI				sP	sP	18 42 05.5	-0.2
KMI				PP		18 42 36.1	
KMI				PPP		18 42 48.0	
KMI				S	**S**	**18 46 21.7**	**-5.1**
KMI				sS	sS	18 46 39.1	-4.5
KMI				SS		18 47 33.8	
KMI				SSS		18 47 51.8	
KMI	comp=Z,2μm,22.9s,MS4.6			LR	LR		
DAV	**Davao City (W)** comp=Z,943nm,20.7s,MS4.3,baz=353,slow=40	**27.59**	**71**	LR	LR	18 54 18.3	
LBMI	**Labuha** comp=Z,0.0nm,0.0s	**28.11**	**88**	P	**P**	**18 42 00.3**	**-0.6**
HYB	**Hyderabad**	**28.13**	**314**	*i* P	**P**	**18 42 04.0**	**+3.0**
FITZ	**Fitzroy Crossi** comp=Z,18nm,0.6s,mb5.0	**30.36**	**124**	*e*P	**P**	**18 42 20.3**	**-0.5**
FITZ	**Fitzroy Crossi** comp=Z,6.7nm,0.7s,mb4.5,baz=288,slow=8.5,SNR=21	**30.36**	**124**	P	**P**	**18 42 20.4**	**-0.4**
FITZ	comp=Z,260nm,21.4s,MS3.8,baz=315,slow=37			LR	LR	18 55 01.9	
ODAN	**Odare** comp=Z,89nm,0.7s,mb5.7	**30.85**	**339**	*e*P	**P**	**18 42 26.0**	**+1.0**
RAMN	**Ramite** comp=Z,81nm,0.7s,mb5.7	**31.23**	**338**	*e*P	**P**	**18 42 29.9**	**+1.6**
SWI	**Sorong** comp=Z,0.0nm,0.0s	**31.85**	**89**	P	**P**	**18 42 33.0**	**-1.1**
JIRN	**Jiri** comp=Z,163nm,0.7s,mb6.0	**32.02**	**338**	*e*P	**P**	**18 42 36.7**	**+1.4**
PKIN	**Phulchoki** comp=Z,22nm,0.7s,mb5.1	**32.26**	**336**	*e*P	**P**	**18 42 38.0**	**+0.6**
GUN	**Gumba** comp=Z,142nm,0.6s,mb6.0	**32.37**	**337**	*e*P	**P**	**18 42 39.7**	**+1.3**
LSA	**Lhasa**	**32.39**	**346**	P	**P**	**18 42 40.0**	**+1.4**
LSA	**Lhasa**	**32.39**	**346**	*e*P	**P**	**18 42 39.6**	**+1.0**
LSA	comp=Z,31nm,0.5s,mb5.4			pmax	pmax		
LSA	**Lhasa** comp=Z,31nm,0.5s,mb5.4	**32.39**	**346**	*e*P	**P**	**18 42 39.6**	**+1.1**
DMN	**Daman** comp=Z,50nm,1.1s,mb5.3	**32.40**	**336**	*e*P	**P**	**18 42 39.6**	**+0.9**
KKN	**Kakani** comp=Z,85nm,0.8s,mb5.6	**32.49**	**336**	*e*P	**P**	**18 42 40.4**	**+0.9**
QZH	**Quanzhou**	**32.52**	**34**	P	**P**	**18 42 39.5**	**-0.3**
QZH				*e*S	**S**	**18 47 52.5**	**-0.2**
QZH	comp=N,2μm,13.2s,MS5.1			LR	LR		
QZH	comp=E,1μm,12.9s,MS5.1			LR	LR		
QZH	comp=Z,4μm,15.5s,MS5.2			LR	LR		
GKN	**Gorkha** comp=Z,51nm,0.6s,mb5.6	**32.95**	**335**	*e*P	**P**	**18 42 44.3**	**+0.9**
KOLN	**Koldanda** comp=Z,91nm,0.7s,mb5.8	**33.19**	**334**	*e*P	**P**	**18 42 46.6**	**+1.1**
DANN	**Dangsing** comp=Z,88nm,0.9s,mb5.7	**33.62**	**335**	*e*P	**P**	**18 42 50.2**	**+0.9**
WHN	**Wuhan**	**35.26**	**23**	*e*P	**P**	**18 43 03.0**	**-0.5**
WHN	comp=N,3μm,15.4s,MS5.3			LR	LR		
WHN	comp=E,2μm,14.7s,MS5.3			LR	LR		
WHN	comp=Z,4μm,17.3s,MS5.2			LR	LR		
XAN	**Xi'an**	**36.84**	**13**	P	**P**	**18 43 15.0**	**-2.0**
XAN	comp=Z,39nm,1.1s,mb5.2			AMB	AMB		
XAN	comp=E,2μm,20.2s			LR	LR		
XAN	comp=Z,4μm,16.9s,MS5.3			LR	LR		
LZH	**Lanzhou**	**38.01**	**6**	⇓P	**P**	**18 43 25.5**	**-1.3**
LZH				AP	pP	18 43 34.5	-2.7
LZH				XP	sP	18 43 39.5	-2.0
LZH				PP	PP	18 44 56.0	+1.8
LZH				*eS	**S**	**18 49 22.0**	**+5.2**
LZH				XS	sS	18 49 33.0	-0.9
LZH				SS	SS	18 51 57.3	-7.6
LZH	comp=Z,60nm,1.6s,mb5.1			AMB	AMB		
LZH	comp=Z,250nm,7.8s			AMB	AMB		
LZH	comp=E,1μm,15.3s			LR	LR		
LZH	comp=Z,2μm,16.5s,MS5.0			LR	LR		
LZH	**Lanzhou**	**38.01**	**6**	⇓P	**P**	**18 43 25.5**	**-1.3**
LZH				*PP	pP	18 43 34.5	-2.7
LZH				*SP	sP	18 43 39.5	-2.0
LZH						18 44 56.0	
LZH				*eS	**S**	**18 49 22.0**	**+5.2**
LZH				*SS	sS	18 49 33.1	-0.8
LZH	comp=Z,60nm,1.6s,mb5.1			pmax	pmax		
LZH	comp=Z,2μm,16.5s,MS5.0			MLR	MLR		
LZH	**Lanzhou** comp=Z,60nm,1.6s,mb5.1	**38.01**	**6**	⇓P	**P**	**18 43 25.5**	**-1.3**
LZH				pP	pP	18 43 34.5	-2.7
LZH				sP	sP	18 43 39.5	-2.0
LZH				PP	PP	18 44 56.0	+1.8
LZH				*eS	**S**	**18 49 22.0**	**+5.2**
LZH				sS	sS	18 49 33.1	-0.8
LZH				SS	SS	18 51 57.2	-7.7
LZH	comp=Z,2μm,16.5s,MS5.0			LR	LR		
NJ2	**Nanjing**	**38.46**	**27**	*e*P	**P**	**18 43 28.3**	**-2.4**
NJ2				PP	PP	18 44 58.8	-0.4
NJ2				S	**S**	**18 49 25.5**	**+1.7**
NJ2	comp=Z,10.0nm,0.8s,mb4.6			AMB	AMB		
NJ2	comp=Z,160nm,5.2s			AMB	AMB		
NJ2	comp=N,500nm,25.6s,MS4.5			LR	LR		
NJ2	comp=E,760nm,23.3s,MS4.5			LR	LR		
NJ2	comp=Z,760nm,27.4s,MS4.4			LR	LR		
WRA	**Warramunga Arr** comp=Z,32nm,0.8s,mb5.1,baz=298,slow=9.1,SNR=186	**38.55**	**120**	P	**P**	**18 43 31.1**	**-0.5**
WRA	comp=Z,4.3nm,1.1s,baz=290,slow=16,SNR=9.2			S	**S**	**18 49 21.5**	**-3.9**
WRAB	**Tennant Creek**	**38.56**	**120**	*c iP*	**P**	**18 43 31.1**	**-0.6**
WRAB	**Tennant Creek** comp=Z,36nm,0.7s,mb5.2	**38.56**	**120**	*e*P	**P**	**18 43 31.0**	**-0.7**
WB2	**Warramunga Arr**	**38.56**	**120**	*e*P	**P**	**18 43 30.9**	**-0.9**
WB2				*e*S	**S**	**18 49 21.0**	**-4.6**
SMLA	**Simla**	**39.07**	**329**	*i* P	**P**	**18 43 35.1**	**-0.7**
SMLA	comp=Z,61nm,0.4s			*ex*	x	18 43 38.2	
SMLA				*i* S	x	18 52 53.3	
FORT	**Forrest** comp=Z,55nm,0.7s,mb5.4	**39.50**	**140**	*e*P	**P**	**18 43 42.8**	**+3.3**
ASAR	**Alice Springs** comp=Z,16nm,0.7s,mb4.9,baz=299,slow=7.7,SNR=275	**39.79**	**126**	P	**P**	**18 43 42.0**	**+0.1**
ASAR				PcP	PcP	18 45 49.3	+1.4
ASAR	comp=Z,2.3nm,0.6s,baz=303,slow=2.0,SNR=3.1			S	**S**	**18 49 42.2**	**-1.7**
GTA	**Gaotai** comp=Z,4.8nm,0.9s,baz=301,slow=15,SNR=13	**41.10**	**0**	⇑P	**P**	**18 43 52.8**	**+0.2**
GTA				AP	pP	18 43 58.0	-5.0
GTA				XP	sP	18 44 01.0	-6.2
GTA				S	**S**	**18 50 11.3**	**+8.2**
GTA				XS	sS	18 50 21.0	+0.7
GTA	comp=Z,50nm,1.4s,mb5.0			AMB	AMB		
GTA	comp=Z,654nm,4.5s			AMB	AMB		
GTA	comp=N,937nm,22.2s,MS4.7			LR	LR		
GTA	comp=E,656nm,20.7s,MS4.7			LR	LR		
GTA	comp=Z,1μm,21.6s,MS4.7			LR	LR		
HHC	**Hu-ho-hao-te**	**43.96**	**13**	*e*P	**P**	**18 44 15.3**	**-0.5**
HHC	comp=Z,23nm,0.9s,mb4.9			AMB	AMB		
HHC	comp=Z,321nm,7.0s			AMB	AMB		
BJT	**Baijiatuao** comp=Z,41nm,1.1s	**44.44**	**18**	*e*P	**P**	**18 44 18.5**	**-1.1**
BJT				pmax	pmax		
BJT	**Baijiatuao** comp=Z,41nm,1.1s,mb5.1	**44.44**	**18**	*e*P	**P**	**18 44 18.5**	**-1.2**
BJI	**Beijing**	**44.47**	**18**	P	**P**	**18 44 19.5**	**-0.3**
BJI	comp=Z,20nm,1.1s,mb4.8			AMB	AMB		
BJI	comp=N,1μm,18.8s,MS4.8			LR	LR		
BJI	comp=E,243nm,18.8s,MS4.8			LR	LR		
BJI	comp=Z,817nm,19.9s,MS4.7			LR	LR		
BJI	**Beijing**	**44.47**	**18**	P	**P**	**18 44 19.4**	**-0.4**
BJI	comp=Z,20nm,1.1s,mb4.8			pmax	pmax		
BJI	comp=Z,820nm,19.9s,MS4.7			MLR	MLR		
BJI	**Beijing** comp=Z,20nm,1.1s,mb4.8	**44.47**	**18**	P	**P**	**18 44 19.4**	**-0.4**
BJI				S	S	18 51 20.4	+28
BJI	comp=Z,820nm,19.9s,MS4.7			LR	LR		
KBL	**Kabul**	**46.11**	**325**	*e*P	**P**	**18 44 32.2**	**-0.8**

*IDC **26** 18:36:06.9±0.5, 176S×9949E, h0km, mb4.9/23, mb1 5.0/23, mb1mx4.9/28, mbtmp5.0/23, MS4.5/12, Ms1 4.5/12, ms1mx4.2/38, Error ellipse: s-maj=17.0km s-min=9.9km az=63.0*
*BJI **26** 18:36:08.5, 201S×9970E, h34km, mB5.4, mb5.1, Ms5.0, Msz5.0*
*ISCJB **26** 18:36:09.8±0.2, 191S±003×9942E±003, h34km, mb5.2/102, MS4.8/28, Error ellipse: s-maj=5.3km s-min=3.2km az=29.1*
*NEIC **26** 18:36:10.6±2.5, 183S×9946E, h24km±17km, mb5.1/37, MS4.6/1, Error ellipse: s-maj=8.2km s-min=4.5km az=225.0*
NEIC Felt [III] at Painan, Sumatra.
*MOS **26** 18:36:10.6±0.9, 168S×9958E, h33km, mb5.5/41, MS4.9/10, Error ellipse: s-maj=11.1km s-min=5.3km az=107.7*

KBL pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
KBL Kabul 46.11 325 eP P 18 44 32.2 -0.8
comp=Z,6.7nm,0.6s,mb4.8
WMQ Urumqi 46.71 348 P P 18 44 38.5 +1.0
WMQ AP pP 18 44 48.5 +0.5
WMQ XP sP 18 44 52.5 +0.2
WMQ PCP PcP 18 46 12.0 +1.3
WMQ PP PP 18 46 28.0 +0.2
WMQ S S 18 51 24.0 -0.7
WMQ XS sS 18 51 40.0 -2.1
WMQ AMB AMB
comp=Z,68nm,1.1s,mb5.5
WMQ AMB AMB
comp=Z,293nm,3.6s
WMQ LR LR
comp=N,970nm,14.7s,MS5.1
WMQ LR LR
comp=E,968nm,13.6s,MS5.1
WMQ LR LR
comp=Z,939nm,24.8s
KSRS Korea Array 47.23 31 P P 18 44 40.8 -0.9
comp=Z,13nm,0.9s,mb4.9,baz=224,slow=8.6,SNR=30
KSRS LR LR 19 05 03.1
comp=Z,586nm,19.2s,MS4.6,baz=217,slow=37
SNY Shenyang 48.72 24 ⇑P P 18 44 54.0 +0.8
SNY AMB AMB
comp=Z,17nm,1.1s,mb5.0
KZA Kyzart 48.93 336 P P 18 44 55.8 +1.0
SNR=5.6
CTA Charters Tower 49.17 115⇑iP P 18 44 56.7 -0.3
comp=Z,14nm,0.7s,mb5.1
CTA Charters Tower 49.17 115 P P 18 44 56.8 -0.3
comp=Z,16nm,0.7s,mb5.2,baz=288,slow=8.8,SNR=29
CTA Charters Tower 49.17 115⇑iP P 18 44 56.7 -0.3
CTA pmax pmax
comp=Z,14nm,0.7s
CTAO Charters Tower 49.17 115 eP P 18 44 56.6 -0.4
CTAO pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
CTAO Charters Tower 49.17 115 eP P 18 44 56.6 -0.4
comp=Z,8.5nm,0.6s,mb5.0
UCH Uchtor 49.36 336 P P 18 44 59.4 +1.3
SNR=16
UCH Uchtor 49.36 336 eP P 18 44 59.0 +0.9
comp=Z,11nm,0.7s,mb5.0
TKM2 Tokmak 2 49.50 337 eP P 18 44 59.8 +0.7
TKM2 pmax pmax
comp=Z,43nm,0.9s,mb5.5
TKM2 Tokmak 2 49.50 337 P P 18 45 00.1 +0.9
SNR=46
TKM2 Tokmak 2 49.50 337 eP P 18 44 59.8 +0.7
comp=Z,43nm,0.9s,mb5.5
KBK Karagaybulak 49.54 336 P P 18 45 00.8 +1.5
SNR=20
AML Almayashu 49.62 335 P P 18 45 01.4 +1.3
SNR=32
AML Almayashu 49.62 335 eP P 18 45 00.9 +0.8
comp=Z,25nm,0.7s,mb5.4
STKA Stephens Creek 49.66 131 eP P 18 45 01.4 +0.9
comp=Z,23nm,0.7s,mb5.3
STKA eS S 18 52 11.5 +4.6
STKA Stephens Creek 49.66 131 P P 18 45 01.2 +0.7
comp=Z,22nm,0.7s,mb5.3,baz=306,slow=7.8,SNR=61
STKA LR LR 19 05 43.0
comp=Z,863nm,21.7s,MS4.7,baz=314,slow=36
AAK Ala-Archa 49.70 336 P P 18 45 01.9 +1.2
SNR=8.6
FRU Bishkek 49.82 336 eP P 18 45 02.0 +0.5
FRU pmax pmax
comp=Z,110nm,2.1s,mb5.5
SONM Songino Array 49.90 6 P P 18 45 02.5 +0.5
comp=Z,30nm,0.8s,mb5.4,baz=188,slow=8.9,SNR=211
SONM PcP PcP 18 46 22.8 +0.8
comp=Z,5.9nm,0.6s,baz=192,slow=3.5,SNR=4.7
CHMS Chumysh 49.90 336 P P 18 45 02.7 +0.6
SNR=12
ULN Ulaanbaatar 50.00 7 ⇑P P 18 45 04.3 +1.5
SNR=15
ULN Ulaanbaatar 50.00 7c iP P 18 45 03.2 +0.4
ULN Ulaanbaatar 50.00 7⇑iP P 18 45 03.3 +0.5
EKS2 Erkin-Say 50.02 335 P P 18 45 04.3 +1.2
SNR=46
EKS2 Erkin-Say 50.02 335 eP P 18 45 04.1 +1.1
comp=Z,11nm,0.7s,mb5.0
USP Ospenovka 50.23 336 P P 18 45 05.2 +0.6
SNR=37
MK31 Makanchi Array 50.77 345 i P P 18 45 08.9 +0.2
MK31 pmax pmax
comp=Z,38nm,0.7s,mb5.4
MK31 Makanchi Array 50.77 345 eP P 18 45 08.7 0.0
MKAR Makanchi Array 50.77 345 P P 18 45 09.0 +0.3
comp=Z,32nm,0.7s,mb5.4,baz=149,slow=8.1,SNR=321
MKAR S S 18 52 21.6 -0.2
comp=Z,1.0nm,1.0s,baz=173,slow=14,SNR=2.6
MKAR LR LR 19 10 42.3
comp=Z,354nm,21.4s,MS4.3,baz=69,slow=41
MKAR Makanchi Array 50.77 345 P P 18 45 09.0 +0.3
MKAR S S 18 52 21.7 -0.2
CN2 Changchun 51.13 24 eP P 18 45 10.0 -1.4
CN2 AMB AMB
comp=Z,30nm,0.7s,mb5.3
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,2μm,17.0s,MS5.2
CN2 LR LR
comp=E,700nm,17.0s,MS5.2
CN2 LR LR
comp=Z,2μm,17.0s,MS5.1
JHJ Hachijo jima 2 51.60 44 LR LR 19 05 19.6
comp=Z,252nm,18.1s,MS4.3,baz=130,slow=34
KK31 Karatay Array 51.79 333 i P P 18 45 16.0 -0.4
KK31 pmax pmax
comp=Z,16nm,1.1s,mb4.9
ZAK Zakamensk 52.18 3 eP P 18 45 18.9 -0.2
ZAK pmax pmax
comp=Z,14nm,1.4s,mb4.7
MAJO Matsushiro 52.56 39 eP P 18 45 20.7 -1.6
MAJO pmax pmax
comp=Z,12nm,0.6s,mb5.0
MAJO Matsushiro 52.56 39 eP P 18 45 20.7 -1.5
comp=Z,12nm,0.6s,mb5.0
MAT Matsushiro 52.56 39 P P 18 45 20.7 -1.6
MJAR Matsushiro Arr 52.56 39 P P 18 45 21.1 -1.2
comp=Z,9.7nm,0.6s,mb4.9,baz=218,slow=7.6,SNR=28
HVS Khovu-Aksy 53.05 356d iP P 18 45 25.3 -0.3
HVS pmax pmax
comp=Z,323nm,2.3s,mb5.8
MOY Mondy 53.38 1 eP P 18 45 28.5 +0.6
MOY pmax pmax
comp=Z,77nm,2.9s,mb5.1
TLY Talaya 53.49 3 P P 18 45 30.1 +1.3
SNR=8.2
TLY Talaya 53.49 3c iP P 18 45 29.6 +0.8
TLY pmax pmax
comp=Z,26nm,0.7s,mb5.3
OPO Ambohidratompo 53.76 248 P P 18 45 31.1 -0.3
comp=Z,3.5nm,0.8s,mb4.3,baz=73,slow=10,SNR=3.7
IRK Irkutsk 54.09 4⇑iP P 18 45 33.2 0.0
IRK e 18 45 40.3
IRK pmax pmax
comp=Z,85nm,1.8s,mb5.4
ABKT Ailbek 54.99 320 P P 18 45 39.2 -0.8
comp=Z,87nm,1.0s,mb5.7,SNR=5.2
CIT Chita 55.03 11 eP P 18 45 40.5 +0.5
CIT pmax pmax
comp=Z,103nm,1.9s,mb5.5
KURK Kurchatov 55.34 344 ⇓P P 18 45 41.8 -0.4
SNR=20
KURK Kurchatov 55.34 344 LR LR 19 12 44.8
comp=Z,418nm,19.0s,MS4.5,baz=180,slow=40
KURK Kurchatov 55.34 344⇑iP P 18 45 42.4 +0.1
ARMA Armidale 56.94 125 eP P 18 45 56.4 +2.3
ZAA0 Zalesovo Array 56.96 350 eP P 18 45 53.7 0.0
ZALV Zalesovo Beam 56.96 350 P P 18 45 53.9 +0.1
comp=Z,87nm,0.8s,mb5.9,baz=184,slow=5.6,SNR=345
ZALV S S 18 53 50.0 +4.7
comp=Z,6.2nm,1.1s,baz=154,slow=11,SNR=9.0
KRAR Krasnoyarsk 57.96 356c iP P 18 46 01.0 +0.2
KRAR pmax pmax
comp=Z,145nm,1.8s,mb5.7
KLR Kul'dur 58.08 24⇓iP P 18 45 57.7 -4.0
KLR eS S 18 54 13.5 +13
KLR e 18 57 49.5
KLR pmax pmax
comp=E,45nm,1.6s
KLR pmax pmax
comp=Z,120nm,1.6s,mb5.7
KLR MLR MLR
comp=E,900nm,14.5s
KLR MLR MLR
comp=Z,1μm,14.5s,MS5.2
NVS Novosibirsk 58.10 349 i P P 18 46 00.4 -1.4
NVS eS S 18 53 55.2 -5.0
NVS pmax pmax
comp=N,56nm,1.2s
NVS pmax pmax
comp=E,26nm,1.2s
NVS pmax pmax
comp=Z,61nm,1.2s,mb5.5
NVS smax
comp=N,23nm,1.7s
NVS smax
comp=E,9.0nm,1.1s
UMR Umm Al-Rimmam 58.42 307 eP P 18 46 04.8 +0.3
baz=307
UMR AMb AMB 18 46 11.7
comp=Z,46nm,1.5s,mb5.3,baz=307
NAY Al-Naaiem 58.69 306 eP P 18 46 05.9 -0.5
baz=306
NAY AMb AMB 18 46 10.5
comp=Z,20nm,1.8s,mb4.8,baz=306
MIB Mutribah 58.82 307 eP P 18 46 07.2 -0.1
baz=307
MIB AMb AMB 18 46 17.4
comp=Z,56nm,1.1s,mb5.5,baz=307
HABR Khabarovsk 58.93 27⇑iP P 18 46 06.8 -0.9
HABR pmax pmax
comp=Z,49nm,1.5s,mb5.3
RST Umm Al-Ruwaisa 58.98 306 eP P 18 46 08.0 -0.5
baz=306
RST AMb AMB 18 46 09.3
comp=Z,34nm,1.8s,mb5.1,baz=306
ASAJ Asahikawa 59.86 35 LR LR 19 12 01.3
comp=Z,382nm,20.3s,MS4.5,baz=239,slow=36
BVA0 Borovoye Array 59.88 340 i P P 18 46 13.2 -1.0
BVA0 pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BRVK Borovoye 59.95 340 ⇓P P 18 46 13.3 -1.3
SNR=11
BRVK Borovoye 59.95 340⇑iP P 18 46 13.9 -0.7
HNR Honiara 60.63 100 P P 18 46 19.3 -0.7
comp=Z,59nm,0.8s,mb5.8,baz=252,slow=20,SNR=6.4
BOD Bodaibo 60.66 9 eP P 18 46 19.1 -0.3
BOD pmax pmax
comp=Z,48nm,1.3s,mb5.5
AB31 Akbulak array 61.27 332 i P P 18 46 23.0 -0.7
AB31 pmax pmax
comp=Z,31nm,0.8s,mb5.5
YSS Yuzh-Sakhalins 61.70 32⇑iP P 18 46 26.0 -0.7
YSS e 18 46 31.3
YSS pmax pmax
comp=Z,110nm,1.0s,mb5.9
YSS Yuzh-Sakhalins 61.70 32⇑iP P 18 46 26.5 -0.2
CLNS Chul'man 62.06 16 eP P 18 46 28.7 -0.2
CLNS pmax pmax
comp=E,7.0nm,0.7s
CLNS pmax pmax
comp=Z,24nm,0.7s,mb5.4
CLNS pmax pmax
comp=N,13nm,0.7s
KMBO Kilima Mbogo 62.14 270⇑eP P 18 46 28.7 -1.6
GNI Garni 65.05 316c iP P 18 46 49.4 +0.4
GNI pmax pmax
comp=Z,29nm,1.7s
SVE Sverdlovsk 66.36 338⇓eP P 18 46 57.0 -0.1
SVE e 18 47 23.8
SVE eS S 18 55 38.8 -5.5
SVE eSSS 19 02 52.6
SVE pmax pmax
comp=Z,56nm,1.0s,mb5.5
SVE MLR MLR
comp=Z,625nm,21.0s,MS4.8
ARU Arti 66.88 337c iP P 18 46 59.7 -0.7
ARU e 18 47 27.6
ARU ePPP 18 51 02.5
ARU eS S 18 55 52.9 +2.3
ARU eSS SS 19 00 15.5 +6.1
ARU pmax pmax
comp=Z,51nm,1.7s,mb5.3
ARU Arti 66.88 337⇑eP P 18 46 59.7 -0.7
YAK Yakutsk 67.79 15c iP P 18 47 04.9 -1.1
YAK pmax pmax
comp=Z,69nm,0.8s,mb5.7
YAK pmax pmax
comp=N,25nm,1.2s
YAK pmax pmax
comp=E,29nm,1.5s
YAK MLR MLR
comp=Z,1μm,18.0s,MS5.2
YAK MLR MLR
comp=N,745nm,18.0s,MS5.1
YAK MLR MLR
comp=E,644nm,18.0s,MS5.1
YAK Yakutsk 67.79 15⇑iP P 18 47 04.8 -1.2
KIV Kislovodsk 68.08 319 eP P 18 47 08.1 -0.2
KIV e 18 47 35.3
KIV eS S 18 56 05.7 +0.2
KIV eSS SS 19 00 33.4 +4.8
KIV pmax pmax
comp=Z,18nm,0.9s,mb5.1
KIV MLR MLR
comp=Z,608nm,19.0s,MS4.8
KIV Kislovodsk 68.08 319⇓iP P 18 47 09.0 +0.7
KIV Kislovodsk 68.08 319⇑iP P 18 47 08.4 +0.1
MALT Malatya 68.83 312⇓iP P 18 47 14.2 +1.1
MALT Malatya 68.83 312 ⇓P P 18 47 14.2 +1.1
SOC Sochi 69.88 318 eP P 18 47 16.9 -2.6
SOC ePPP 18 51 36.5
SOC eS S 18 56 34.4 +7.5
MAW Mawson 70.24 194 P P 18 47 23.2 +2.0
comp=Z,2.9nm,0.7s,mb4.3,baz=7.9,slow=8.0,SNR=5.1
BR131 Keskin Array S 72.82 313 eP P 18 47 35.8 -1.5
comp=Z,2.7nm,0.6s,mb4.3
PETK Petropavlovsk- 73.11 32 P P 18 47 38.5 -0.2
comp=Z,13nm,0.6s,mb5.1,baz=199,slow=1.6,SNR=14
PETK LR LR 19 24 14.6
comp=Z,193nm,19.3s,MS4.4,baz=72,slow=40
VSR Storozhevoye 73.36 325 eP P 18 47 39.1 -1.1
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,8.0nm,0.9s
VSR pmax pmax
comp=E,20nm,0.9s
ANTO Ankara 73.48 313 eP P 18 47 39.5 -1.7
VOR Voronezh 73.56 326 P P 18 47 40.0 -1.4
VOR pmax pmax
comp=Z,100nm,1.4s,mb5.5
PET Petropavlovsk 73.58 33⇓eP P 18 47 41.1 -0.4
PET pmax pmax
comp=Z,20nm,0.4s,mb5.4
RPZ Rata Peaks 75.47 135 LR LR 19 21 07.4
comp=Z,909nm,21.8s,MS5.0,baz=211,slow=36
SEY Seymchan 75.75 22⇑eP P 18 47 53.8 -0.1
TIXI Tiksi 75.84 9c iP P 18 47 53.1 -1.2
TIXI pmax pmax
comp=Z,51nm,1.9s,mb5.1
TIXI Tiksi 75.84 9⇑iP P 18 47 53.2 -1.1
MOS Moscow 76.11 329 eP P 18 47 53.5 -2.5
MOS e pP 18 48 06.8 -0.3
MOS pmax pmax
comp=Z,43nm,0.9s,mb5.4
OBN Obninsk 76.40 328⇑eP P 18 47 57.4 -0.3
OBN e pP 18 48 08.1 -0.7
OBN e 18 50 49.2
OBN pmax pmax
comp=Z,91nm,1.9s,mb5.4
KLMR Klimovskoe 77.48 334 eP P 18 48 03.2 -0.5
KLMR pmax pmax
comp=Z,41nm,1.5s,mb5.1
KIS Kishinev 78.27 319 eP P 18 48 07.0 -1.4
KIS e pP 18 48 20.0 +0.5
KIS Kishinev 78.27 319 eUNK P 18 48 07.0 -1.4
IDI Anoyia 78.50 306 P P 18 48 10.6 +0.6
comp=Z,3.9nm,0.6s,mb4.5,baz=98,slow=7.3,SNR=6.1
AKASG Malin Array Be 79.04 322 P P 18 48 11.7 -0.8
comp=Z,2.3nm,0.6s,mb4.3,baz=84,slow=4.5,SNR=13
KIEV Kiev 79.05 322 eP P 18 48 11.6 -1.0
KIEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KIEV Kiev 79.05 322 eP P 18 48 11.6 -1.0
comp=Z,3.4nm,0.6s,mb4.5
URZ Urewera 79.17 128 P P 18 48 13.4 -0.2
comp=Z,7.7nm,0.8s,mb4.7,baz=336,slow=18,SNR=5.3
VRI Vrincioaia 79.38 317⇑iP P 18 48 15.3 +0.8
VRI Vrincioaia 79.38 317 ⇑P P 18 48 15.3 +0.8
PLOR Plostina 79.43 317⇑iP P 18 48 15.1 +0.3
MLR Muntele Rosu 79.82 317 P P 18 48 17.3 +0.3
comp=Z,13nm,0.8s,mb4.9,baz=104,slow=2.3,SNR=22
MLR Muntele Rosu 79.82 317⇑iP P 18 48 17.1 +0.2
MLR Muntele Rosu 79.82 317 ⇑P P 18 48 17.1 +0.2
VOIR 80.42 317⇑iP P 18 48 19.7 -0.5
VOIR 80.42 317 ⇑P P 18 48 19.7 -0.5
BURAR Bucovina Array 80.79 319⇓iP P 18 48 23.2 +1.1
BURAR Bucovina Array 80.79 319 ⇓P P 18 48 23.2 +1.1
BUR08 Bucovina Ar. S 80.81 319 eP P 18 48 22.9 +0.7
JOF Joensuu 81.87 335 ep P 18 48 26.7 -0.8
comp=Z,7.3nm,0.7s,mb4.7
VSU Vasula 82.62 330⇑eP P 18 48 31.6 +0.1
UZH Uzhgorod 82.92 319 eP P 18 48 31.5 -1.8
UZH e pP 18 48 40.0 -4.5
KOLS Kolonicke sedl 82.99 320 eP P 18 48 34.8 +1.2
BILL Bilibino 83.26 20 eP P 18 48 30.8 -3.8
BILL pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
SUW Suwalki 83.46 325 eP P 18 48 35.4 -0.6
SUW pmax pmax
comp=Z,50nm,1.0s,mb5.5
SUW Suwalki 83.46 325 eP P 18 48 35.4 -0.5
comp=Z,50nm,1.0s,mb5.5
SBA Scott Base 83.47 169 eP pP 18 48 45.6 -1.2
SBA pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
SBA Scott Base 83.47 169 eP pP 18 48 45.6 -1.3
comp=Z,5.2nm,0.8s
CRVS Cervenica-Dubn 83.51 319 eP P 18 48 37.0 +0.7
STHS Stebnicka Huta 83.75 320 eP P 18 48 38.6 +1.1
STHS pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
STHS Stebnicka Huta 83.75 320 eP P 18 48 38.6 +1.1
STHS Stebnicka Huta 83.75 320 eP P 18 48 38.6 +1.1
comp=Z,5.6nm,0.8s,mb4.8
KAF Kangasniemi 83.82 333 ep P 18 48 37.0 -0.6
comp=Z,19nm,0.7s,mb5.3,baz=101,slow=4.8
KAF Kangasniemi 83.82 333 eP P 18 48 37.0 -0.6
KAF pmax pmax
comp=Z,19nm,0.7s,mb5.3
OJC Ojcow 84.80 321 eP P 18 48 42.8 -0.1
VYHS Vyhne 85.16 319 eP P 18 48 44.7 0.0
VYHS e 18 49 49.4
KOLL Kolacno 85.46 319 eP P 18 48 47.3 +1.1
KEV Kevo 85.73 341 ep P 18 48 46.2 -0.9
comp=Z,6.1nm,0.8s,mb4.9
KEV Kevo 85.73 341 eP P 18 48 46.2 -0.9
KEV pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
ARCES ARCESS Array B 86.17 340 P P 18 48 49.8 +0.5
comp=Z,11nm,0.8s,mb5.1,baz=87,slow=5.0,SNR=16
MODS Modra-Piesok 86.17 319 eP P 18 48 49.8 +0.1
MODS pmax pmax
comp=Z,21nm,2.0s,mb5.0
MODS Modra-Piesok 86.17 319 eP P 18 48 49.8 +0.1
MODS Modra-Piesok 86.17 319 eP P 18 48 49.8 +0.1
comp=Z,21nm,2.0s,mb5.0
MORC Moravsky Berou 86.18 320 eP P 18 48 50.1 +0.4
MORC pmax pmax
comp=Z,6.0nm,1.4s,mb4.6
MORC Moravsky Berou 86.18 320 eP P 18 48 50.1 +0.3
comp=Z,6.1nm,1.4s,mb4.6
BOJS Bojanci 87.24 316 i P P 18 48 55.9 +0.9
MAIT Maitri 87.46 199 eP pP 18 49 08.2 +1.4
VISS Visnje 87.56 316 i P P 18 49 00.6 +4.1
LJU Ljubljana 87.79 316 i P P 18 48 59.0 +1.4
JAVS Javornik 88.10 316 i P P 18 48 58.4 -0.7
GEC2 GERESS Array S 88.58 319 eP P 18 49 02.1 +0.8
GERES GERESS Array B 88.58 319 P P 18 49 02.0 +0.7
comp=Z,2.1nm,0.7s,mb4.6,baz=84,slow=4.2,SNR=15
BRG Berggiesshubel 88.59 321 eP P 18 49 01.8 +0.5
BRG pmax pmax
comp=Z,25nm,2.0s,mb5.2
BRG Berggiesshubel 88.59 321 eP P 18 49 01.8 +0.5
comp=Z,41nm,2.0s,mb5.4
KHC Kasperske Hory 88.69 319 i P P 18 49 02.4 +0.6
KHC Kasperske Hory 88.69 319 ex P 18 49 02.0 +0.2
CLL Collm 89.21 321 eP P 18 49 05.0 +0.7
CLL MLR MLR
comp=Z,2μm,24.3s,MS5.3
CLL Collm 89.21 321 eP P 18 49 05.0 +0.7
comp=Z,14nm,1.3s,mb5.1
CLL esP pP 18 49 15.0 -0.5
CLL Collm 89.21 321 P P 18 49 05.0 +0.7
CLL LR LR
comp=Z,2μm,24.3s,MS5.3
MOX Moxa 90.05 320 eP P 18 49 09.2 +1.0
GRA1 Grafenberg Arr 90.26 320 eP P 18 49 10.1 +0.9
comp=Z,11nm,1.2s,mb5.1
GRF Grafenberg Arr 90.26 320 eP P 18 49 10.1 +0.9
GRF pmax pmax
comp=Z,11nm,1.2s,mb5.1
GRF Grafenberg Arr 90.26 320 eP P 18 49 10.1 +0.9
GRF pmax pmax
comp=Z,11nm,1.2s,mb5.1
GRF Grafenberg Arr 90.26 320 eP P 18 49 10.1 +0.9
comp=Z,11nm,1.2s,mb5.1
SPITS Spitsbergen Ar 90.41 348 P P 18 49 08.8 -0.6
comp=Z,6.1nm,0.6s,mb5.1,baz=95,slow=2.1,SNR=14
SPB4 Spitsbergen Ar 90.42 348 eP P 18 49 08.6 -0.8
KBS Kingsbay 91.36 349 i P P 18 49 16.4 +2.7
TORD Torodi Ar. Bea 97.94 283 LR LR 19 34 04.5
comp=Z,310nm,18.7s,MS4.8,baz=0.0,slow=36
IMA2 Indian Mountai 98.54 23 eP P 18 49 46.9 +0.1
EDM Edmonton 122.11 23 ePKIKP PKPdf 18 55 02.7 -0.3
NVAR Mina Array Bea 129.89 39 PKP PKPdf 18 55 19.6 +1.3
comp=Z,1.6nm,0.6s,baz=278,slow=1.8,SNR=13
ULM Lac du Bonnet 130.10 13 PKP PKPdf 18 55 18.4 0.0
comp=Z,4.7nm,0.7s,baz=308,slow=3.1,SNR=3.2
PDAR Pinedale Array 131.77 29 PKP PKPdf 18 55 22.1 +0.3
comp=Z,0.8nm,0.6s,baz=231,slow=1.0,SNR=6.8
ANMO Albuquerque 139.24 33⇑iPKIKP PKPdf 18 55 30.5 -5.4
WMOK Wichita Mounta 143.19 25 ePKHKP 18 55 38.2
CPUP Villa Florida 144.06 217 PKP PKPdf 18 55 44.5 -0.3
comp=Z,3.9nm,0.8s,baz=58,slow=4.6,SNR=8.8
TXAR Lajitas Array 144.97 37 PKP PKPdf 18 55 46.8 +0.5
comp=Z,34nm,0.6s,baz=280,slow=1.2,SNR=318
WVT Waverly 145.28 10 ePKIKP PKPdf 18 55 45.5 -1.1
TZTN Tazewell 145.41 4 ePKPdf PKPdf 18 55 45.9 -1.0
UALR University of 145.50 17 ePKPdf PKPdf 18 55 46.7 -0.3
JCT Junction City 146.24 31 ePKP2 PKPab 18 55 49.4 -0.8
TKL Tuckaleechee C 146.28 5 ePKP2 PKPab 18 55 48.9 -1.3
CPCT Cooper Cave 146.41 6 ePKPdf PKPdf 18 55 49.6 +1.0
SWET Sewanee 146.47 8 ePKPdf PKPdf 18 55 49.1 +0.4
JSC Jenkinsville 147.77 1 ePKP2 PKPab 18 55 53.2 -2.8
GOGA Godfrey 148.53 5 ePKP2 PKPab 18 55 55.3 -3.8
HKT Hockley 148.56 26 ePKP2 PKPab 18 55 56.4 -3.0
SIV San Ignacio 153.78 227 PKPbc PKPbc 18 56 07.7 -0.8
comp=Z,1.5nm,0.8s,baz=176,slow=1.4,SNR=5.7

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*ISCJB **26** 18:39:32.7±0.2, 7.01S±0.03×116.3W±0.04, h10km, mb5.1/111, MS5.3/104, Error ellipse: s-maj=6.4km s-min=4.4km az=30.5*
*SZGRF **26** 18:39:32.3, 7.09S×122.9W, h33km, mb5.5, Ascension Island region*
*IGIL **26** 18:39:32.8, 7.00S×118.0W, h10km, MS5.1*
*IDC **26** 18:39:32.7±0.5, 6.89S×116.1W, h0km, mb4.6/23, mb1 4.6/23, mb1mx4.6/26, mbtmp4.6/23, MS5.1/32, Ms1 5.1/32, ms1mx5.0/38, Error ellipse: s-maj=13.3km s-min=12.3km az=173.0*
*BJI **26** 18:39:32.1, 6.35S×123.7W, h12km, mB5.9, mb5.5, Ms5.7, Msz5.3*
*MOS **26** 18:39:33.6±1.9, 6.97S×118.1W, h10km, mb5.4/54, MS5.2/25, Error ellipse: s-maj=10.5km s-min=4.1km az=71.5*
*GCMT **26** 18:39:34.8±0.1, 6.66S×115.9W, h12km, MW5.6/110, Moment Tensor Solution. s81,c140; s110,c248; Duration: 1.6s Moment tensor: Scale 10^{17}Nm; M_{rr}-0.36±.04; $M_{\theta\theta}$-1.50±.04; $M_{\phi\phi}$1.86±.04; $M_{r\theta}$1.09±.11; $M_{\theta\phi}$2.89±.03; $M_{\phi r}$-0.25±.11; Best double couple: $M_0$3.53900×10^{17} NP1:ϕ_s346.00000°, δ73.00000°, λ-170.00000°. NP2:ϕ_s253.00000°, δ80.00000°,*

λ-17.00000°. Principal axes: T 3.5520, Plg5.0000°, Azm301.0000°; N -0.0300, Plg71.0000°, Azm45.0000°; P -3.5260, Plg19.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.

NEIC ***26*** *18:39:34.8±0.3,707S×1171W,h10km,mb5.2/72, MS5.3/65 Error ellipse: s-maj=8.5km s-min=6.2km az=124.0*

ISC 26 18:39:34.9±0.2,699S±003×1164W±004,h10km, (h12km±1.7km:pP-P),n429,σ1s30/392,mb5.1/111, MS5.3/104,15C-15D,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASCN	**Ascension**	**2.85**	**251**	*e*P	**Pn**	**18 40 16.2**	**-4.3**
SHEL	**Horse Pasture**	**10.62**	**148**	*e*P	**Pn**	**18 42 06.4**	**-0.7**
	282nm,0.6s						
LIC	**Lamto**	**14.69**	**27**	*e*P	**Pn**	**18 42 56.7**	**-6.2**
	68nm,0.7s						
LIC				*e*MLR	MLR		
	comp=Z,5μm,17.0s						
LIC	**Lamto**	**14.69**	**27**	*e*P	**Pn**	**18 42 56.7**	**-6.2**
	comp=Z,221nm,1.1s						
KIC	**Kosan Boka**	**14.95**	**28**	*e*P	**Pn**	**18 42 59.8**	**-6.5**
	comp=Z,1μm,1.5s						
TIC	**Toumodi**	**15.07**	**26**	*e*P	**Pn**	**18 43 01.5**	**-6.6**
	comp=Z,524nm,1.3s						
DBIC	**Dimbokro**	**15.17**	**27**	Pn	**Pn**	**18 43 03.2**	**-6.1**
	comp=Z,0.4nm,0.3s,baz=186,slow=14,SNR=14						
DBIC				LR	LR	18 47 36.9	
	comp=Z,9μm,20.0s,baz=180,slow=32						
DBIC	**Dimbokro**	**15.17**	**27**	*e*P	**Pn**	**18 43 03.1**	**-6.2**
DBIC				pmax	pmax		
	comp=Z,117nm,1.3s						
DBIC	**Dimbokro**	**15.17**	**27**	*e*P	**Pn**	**18 43 03.1**	**-6.2**
	comp=Z,117nm,1.3s						
BBTS	**Babate**	**22.05**	**347**	P	**P**	**18 44 27.8**	**-2.2**
	comp=Z,76nm,0.9s,mb5.1,baz=183,slow=3.0,SNR=8.4						
BBTS				LR	LR	18 51 37.5	
	comp=Z,4μm,19.2s,MS4.9,baz=154,slow=33						
TOA0	**Torodi Ar. Sit**	**24.00**	**34**	*e*P	**P**	**18 44 44.3**	**-5.6**
TORD	**Torodi Ar. Bea**	**24.00**	**34**	P	**P**	**18 44 45.3**	**-4.6**
	comp=Z,26nm,0.7s,mb4.8,baz=213,slow=12,SNR=62						
TORD				S	**S**	**18 49 05.3**	**-1.7**
	comp=Z,3.3nm,1.2s,baz=221,slow=14,SNR=1.9						
TORD				LR	LR	18 52 46.1	
	comp=Z,9μm,21.0s,MS5.2,baz=215,slow=33						
TSUM	**Tsumeb**	**30.88**	**116**	P	**P**	**18 45 50.5**	**-1.2**
	comp=Z,4.7nm,0.8s,mb4.4,baz=284,slow=6.4,SNR=8.7						
TSUM				LR	LR	18 56 22.6	
	comp=Z,9μm,19.0s,MS5.5,baz=275,slow=33						
TSUM	**Tsumeb**	**30.88**	**116**	*e*P	**P**	**18 45 50.6**	**-1.1**
	comp=Z,17nm,1.3s,mb4.7						
TAM	**Tamanrasset**	**34.04**	**29**	*e*P	**P**	**18 46 17.9**	**-1.4**
BDFB	**Brasilia**	**36.64**	**253**	P	**P**	**18 46 41.9**	**0.0**
	comp=Z,4.6nm,0.6s,mb4.5,baz=48,slow=15,SNR=4.5						
BDFB	**Brasilia**	**36.64**	**253**	P	**P**	**18 46 41.9**	**0.0**
BDFB				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
SPB	**Sao Paulo**	**38.11**	**240**	*e*P	**P**	**18 46 54.3**	**0.0**
SUR	**Sutherland**	**39.35**	**134**	P	**P**	**18 47 04.6**	**0.0**
	comp=Z,19nm,0.8s,mb4.9,baz=255,slow=6.1,SNR=12						
SUR	**Sutherland**	**39.35**	**134**	*e*P	**P**	**18 47 05.0**	**+0.4**
LBTB	**Lobatse**	**39.84**	**121**	P	**P**	**18 47 08.3**	**-0.4**
	comp=Z,24nm,1.1s,mb4.8,baz=306,slow=7.0,SNR=9.5						
LBTB				LR	LR	19 01 28.3	
	comp=Z,6μm,19.5s,MS5.4,baz=293,slow=33						
LBTB	**Lobatse**	**39.84**	**121**	*e*P	**P**	**18 47 07.9**	**-0.8**
LBTB				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.1						
LBTB				MLR	MLR		
	comp=Z,6μm,20.0s,MS5.4						
LBTB	**Lobatse**	**39.84**	**121**	*e*P	**P**	**18 47 07.9**	**-0.8**
	comp=Z,50nm,1.3s,mb5.1						
LBTB				LR	LR		
	comp=Z,6μm,20.0s,MS5.4						
LSZ	**Lusaka**	**39.88**	**105**	P	**P**	**18 47 08.5**	**-0.7**
	comp=Z,19nm,1.0s,mb4.8,baz=288,slow=8.2,SNR=15						
LSZ				LR	LR	19 00 43.8	
	comp=Z,5μm,21.4s,MS5.3,baz=284,slow=32						
MDT	**Midelt**	**40.15**	**9**	P	**P**	**18 47 09.5**	**-1.6**
	comp=Z,9.5nm,1.0s,mb4.5,baz=218,slow=9.5,SNR=8.0						
MDT				LR	LR	19 03 03.3	
	comp=Z,6μm,18.3s,MS5.5,baz=199,slow=35						
BOSA	**Boshof**	**40.92**	**126**	P	**P**	**18 47 16.5**	**-1.2**
	comp=Z,12nm,0.9s,mb4.5,baz=314,slow=9.1,SNR=7.9						
BOSA				LR	LR	19 01 58.5	
	comp=Z,4μm,18.6s,MS5.3,baz=293,slow=33						
BOSA	**Boshof**	**40.92**	**126**	*e*P	**P**	**18 47 16.4**	**-1.3**
BOSA				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.7						
BOSA				MLR	MLR		
	comp=Z,4μm,20.0s,MS5.3						
BOSA	**Boshof**	**40.92**	**126**	*e*P	**P**	**18 47 16.4**	**-1.3**
	comp=Z,21nm,1.1s,mb4.7						
BOSA				LR	LR		
	comp=Z,4μm,20.0s,MS5.3						
EJIF	**Jimena Fronter**	**43.60**	**7**	P	**P**	**18 47 40.7**	**+1.4**
EJIF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
EJIF	**Jimena Fronter**	**43.60**	**7**	P	**P**	**18 47 40.6**	**+1.3**
	comp=Z,13nm,0.8s,mb4.7						
ESPR	**Espera**	**43.97**	**7**	P	**P**	**18 47 43.1**	**+0.9**
	comp=Z,39nm,1.8s,mb4.8						
EGUA	**Guajares**	**44.25**	**9**	P	**P**	**18 47 46.5**	**+2.0**
EGUA				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						
EGUA	**Guajares**	**44.25**	**9**	P	**P**	**18 47 46.5**	**+2.0**
	comp=Z,40nm,1.0s,mb5.1						
ERON	**Agron**	**44.39**	**9**	P	**P**	**18 47 46.3**	**+0.7**
	comp=Z,13nm,1.0s,mb4.6						
ELOJ	**Sierra Loja**	**44.47**	**9**	P	**P**	**18 47 46.3**	**+0.1**
ELOJ				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
ELOJ	**Sierra Loja**	**44.47**	**9**	P	**P**	**18 47 46.3**	**0.0**
	comp=Z,14nm,1.1s,mb4.6						
ECOG	**Cogollos-Vega**	**44.68**	**9**	P	**P**	**18 47 46.5**	**-1.5**
ECOG				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
ECOG	**Cogollos-Vega**	**44.68**	**9**	P	**P**	**18 47 46.5**	**-1.5**
	comp=Z,14nm,0.8s,mb4.8						
EMIN	**Mina Concepcio**	**44.77**	**6**	P	**P**	**18 47 47.5**	**-1.1**
	comp=Z,22nm,0.9s,mb5.0						
ELUQ	**Luque**	**44.85**	**8**	P	**P**	**18 47 49.8**	**+0.5**
ELUQ				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.2						
ELUQ	**Luque**	**44.85**	**8**	P	**P**	**18 47 49.8**	**+0.4**
	comp=Z,26nm,0.7s,mb5.2						
ADJB	**Djebel Djouab**	**45.20**	**17**	P	**P**	**18 47 57.8**	**+5.7**
ECAB	**El Cabril**	**45.21**	**7**	P	**P**	**18 47 52.8**	**+0.6**
	comp=Z,23nm,0.9s,mb5.0						
AKET	**Djebel Ketaf**	**45.23**	**18**	P	**P**	**18 47 58.0**	**+5.6**
EHUE	**Huescar**	**45.37**	**10**	P	**P**	**18 47 54.8**	**+1.4**
EHUE				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.6						
EHUE	**Huescar**	**45.37**	**10**	P	**P**	**18 47 54.8**	**+1.4**
	comp=Z,13nm,1.2s,mb4.6						
EADA	**Adamuz**	**45.41**	**8**	P	**P**	**18 47 51.3**	**-2.5**
EVO	**Evora**	**45.42**	**4**	*e*P	**P**	**18 47 54.6**	**+0.8**
	comp=Z,78nm,1.4s,mb5.0						
EVO				*e*MLR	MLR		
	comp=Z,4μm,20.0s,MS5.1						
EVO	**Evora**	**45.42**	**4**	*e*P	**P**	**18 47 54.6**	**+0.8**
	comp=Z,50nm,1.7s,mb5.1						
EBAN	**Banos Encina**	**45.52**	**9**	P	**P**	**18 47 53.2**	**-1.4**
LIS	**Lisbon**	**45.53**	**3**	*e*P	**P**	**18 47 50.5**	**-4.2**
LIS				*e*S	**S**	**18 54 36.3**	**-0.5**
LIS				*e*S	**S**	**18 54 36.9**	**+0.1**
LIS				AMS	AMS	19 06 03.8	
	comp=Z,2μm,16.4s,MS5.1						
EMUR	**La Murta**	**45.65**	**12**	P	**P**	**18 47 54.0**	**-1.6**
	comp=Z,4.6nm,0.6s,mb4.6						
EBAD	**Badajoz**	**45.72**	**5**	P	**P**	**18 47 53.8**	**-2.4**
SET	**Setif**	**45.85**	**19**	P	**P**	**18 48 03.0**	**+5.7**
AKF	**Akfadou**	**45.98**	**18**	P	**P**	**18 48 05.3**	**+7.0**
DFRA	**Djebel Bou Aff**	**46.32**	**20**	P	**P**	**18 48 06.3**	**+5.3**
ETOB	**Tobarra**	**46.36**	**11**	P	**P**	**18 47 59.7**	**-1.5**
KEST	**Kesra**	**46.86**	**24**	P	**P**	**18 48 03.9**	**-1.3**
	comp=Z,9.4nm,0.6s,mb4.9,baz=139,slow=6.7,SNR=14						
KEST				LR	LR	19 08 08.1	
	comp=Z,2μm,18.4s,MS5.2,baz=328,slow=37						
ESDC	**Sonseca Array**	**46.97**	**8**	P	**P**	**18 48 04.1**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=184,slow=8.9,SNR=6.1						
ESDC				LR	LR	19 07 42.8	
	comp=Z,1μm,18.6s,MS4.9,baz=190,slow=36						
ESDC	**Sonseca Array**	**46.97**	**8**	P	**P**	**18 48 03.2**	**-2.9**
ESLA	**Sonseca Array**	**46.97**	**8**	*e*P	**P**	**18 48 03.7**	**-2.3**
	comp=Z,13nm,1.4s,mb4.7						
ESLA				LR	LR		
	comp=Z,9μm,20.0s,MS5.7						
MTE	**Manteigas**	**47.31**	**4**	*e*P	**P**	**18 48 04.9**	**-3.7**
	comp=Z,55nm,1.1s,mb5.4						
ECHE	**Chera**	**47.39**	**11**	P	**P**	**18 48 06.3**	**-3.0**
CPUP	**Villa Florida**	**47.49**	**241**	P	**P**	**18 48 09.5**	**-0.9**
	comp=Z,5.6nm,0.7s,mb4.6,baz=69,slow=7.3,SNR=18						
CPUP				LR	LR	19 04 10.0	
	comp=Z,3μm,21.6s,MS5.3,baz=62,slow=31						
CPUP	**Villa Florida**	**47.49**	**241**	*e*P	**P**	**18 48 09.7**	**-0.7**
CPUP				pmax	pmax		
	comp=Z,89nm,1.2s						
CPUP	**Villa Florida**	**47.49**	**241**	*e*P	**P**	**18 48 09.7**	**-0.7**
	comp=Z,89nm,1.2s,mb5.6						
GUD	**Guadarrama**	**47.90**	**8**	P	**P**	**18 48 13.9**	**+0.7**
KMBO	**Kilima Mbogo**	**49.09**	**85**	P	**P**	**18 48 23.2**	**+0.3**
	comp=Z,1.8nm,0.6s,mb4.3,baz=222,slow=24,SNR=4.0						
KMBO				LR	LR	19 06 30.0	
	comp=Z,3μm,18.5s,MS5.3,baz=271,slow=33						
KMBO	**Kilima Mbogo**	**49.09**	**85**	*e*P	**P**	**18 48 23.2**	**+0.3**
KMBO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KMBO	**Kilima Mbogo**	**49.09**	**85**	*e*P	**P**	**18 48 23.2**	**+0.3**
	comp=Z,8.2nm,1.1s,mb4.7						
SIV	**San Ignacio**	**49.16**	**255**	P	**P**	**18 48 23.7**	**+0.3**
	comp=Z,13nm,1.0s,mb4.9,baz=95,slow=9.1,SNR=31						
STS	**Santiago**	**49.72**	**3**	P	**P**	**18 48 30.3**	**+3.1**
EMAZ	**Mazaricos**	**49.76**	**3**	P	**P**	**18 48 27.9**	**+0.4**
	comp=Z,25nm,0.9s,mb5.2						
VAE	**Valguarnera**	**50.49**	**27**	LR	LR	19 09 31.0	
	comp=Z,3μm,19.6s,MS5.4,baz=301,slow=36						
ELAN	**Lanestosa**	**50.54**	**8**	P	**P**	**18 48 35.3**	**+1.9**
	comp=Z,16nm,0.7s,mb5.1						
ETSF	**Etsaut**	**50.67**	**11**	*e*P	**P**	**18 48 33.4**	**-1.0**
SJPF	**Ste Jean**	**50.76**	**10**	*e*P	**P**	**18 48 34.2**	**-0.9**
	comp=Z,153nm,1.5s,mb5.4						
SJPF	**Ste Jean**	**50.76**	**10**	*e*P	**P**	**18 48 34.2**	**-0.9**
SJPF				pmax	pmax		
	comp=Z,76nm,1.5s,mb5.4						
SJPF	**Ste Jean**	**50.76**	**10**	*e*P	**P**	**18 48 34.2**	**-0.9**
	comp=Z,76nm,1.5s,mb5.4						
EALK	**Alkurruntz**	**50.82**	**10**	P	**P**	**18 48 39.4**	**+3.9**
	comp=Z,7.3nm,0.5s,mb4.9						
EPF	**Esparros**	**50.97**	**11**	*e*P	**P**	**18 48 35.7**	**-0.9**
	comp=Z,71nm,1.3s,mb5.2						
EPF	**Esparros**	**50.97**	**11**	*e*P	**P**	**18 48 35.7**	**-0.9**
EPF				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
EPF	**Esparros**	**50.97**	**11**	*e*P	**P**	**18 48 35.7**	**-0.9**
	comp=Z,36nm,1.3s,mb5.1						
BBGH	**Gun Hill**	**51.63**	**293**	PFAKE		18 48 50.0	+7.9
BBGH				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
CEL	**Celeste**	**51.80**	**28**	PFAKE		18 49 00.0	+17
CEL				LR	LR		
	comp=Z,88μm,22.0s,MS6.8						
LFF	**La Frestale**	**52.88**	**11**	*e*P	**P**	**18 48 49.5**	**-1.4**
CAF	**Calviac**	**53.13**	**12**	*e*P	**P**	**18 48 52.7**	**0.0**
CUC	**Castrocucco**	**53.18**	**26**	*e*P	**P**	**18 48 56.1**	**+3.0**
	comp=Z,77nm,1.4s,mb5.4						
CUC				LR	LR		
	comp=Z,3μm,22.0s,MS5.3						
RJF	**Les Rejaudoux**	**53.38**	**12**	*e*P	**P**	**18 48 54.5**	**-0.1**
RJF				*e*MLR	MLR		
	comp=Z,4μm,18.5s,MS5.2						
RJF	**Les Rejaudoux**	**53.38**	**12**	*e*P	**P**	**18 48 54.5**	**-0.1**
RJF				LR	LR		
	comp=Z,4μm,18.5s,MS5.5						
VIVF	**Saint-Julien-l**	**53.66**	**14**	*e*P	**P**	**18 48 57.5**	**+0.9**
	comp=Z,112nm,1.6s,mb5.2						
VIVF	**Saint-Julien-l**	**53.66**	**14**	*e*P	**P**	**18 48 57.5**	**+0.9**
VIVF				pmax	pmax		
	comp=Z,56nm,1.6s,mb5.2						
VIVF	**Saint-Julien-l**	**53.66**	**14**	*e*P	**P**	**18 48 57.5**	**+0.9**
	comp=Z,56nm,1.6s,mb5.2						
ORIF	**Oris-en-Rattie**	**54.02**	**15**	*e*P	**P**	**18 48 58.7**	**-0.6**
	comp=Z,55nm,1.1s,mb5.1						
ORIF				*e*MLR	MLR		
	comp=Z,4μm,21.2s,MS5.2						
ORIF	**Oris-en-Rattie**	**54.02**	**15**	*e*P	**P**	**18 48 58.7**	**-0.6**
ORIF				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
ORIF	**Oris-en-Rattie**	**54.02**	**15**	*e*P	**P**	**18 48 58.7**	**-0.6**
	comp=Z,28nm,1.1s,mb5.1						
MBDF	**Montbardon**	**54.09**	**16**	*e*P	**P**	**18 48 59.4**	**-0.3**
	comp=Z,72nm,0.9s,mb5.3						
MBDF	**Montbardon**	**54.09**	**16**	*e*P	**P**	**18 48 59.4**	**-0.3**
MBDF				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3						
MBDF	**Montbardon**	**54.09**	**16**	*e*P	**P**	**18 48 59.4**	**-0.3**
	comp=Z,36nm,0.9s,mb5.3						
MFF	**Saint Martin d**	**54.33**	**10**	*e*P	**P**	**18 49 01.5**	**0.0**
	comp=Z,85nm,1.3s,mb5.2						
MFF	**Saint Martin d**	**54.33**	**10**	*e*P	**P**	**18 49 01.5**	**0.0**
MFF				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.2						
MFF	**Saint Martin d**	**54.33**	**10**	*e*P	**P**	**18 49 01.5**	**0.0**
	comp=Z,43nm,1.3s,mb5.2						
IDI	**Anoyia**	**54.34**	**37**	P	**P**	**18 49 01.3**	**-0.5**
	comp=Z,19nm,1.1s,mb4.9,baz=211,slow=14,SNR=3.2						
BNI	**Bardonecchia**	**54.36**	**16**	*e*P	**P**	**18 49 02.1**	**+0.4**
BNI				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
BNI				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.3						
BNI	**Bardonecchia**	**54.36**	**16**	*e*P	**P**	**18 49 02.0**	**+0.3**
	comp=Z,22nm,0.8s,mb5.1						
BNI				LR	LR		
	comp=Z,3μm,20.0s,MS5.3						
TCF	**Toulx Ste Croi**	**54.46**	**12**	*e*P	**P**	**18 49 02.9**	**+0.4**
	comp=Z,82nm,1.2s,mb5.2						
TCF	**Toulx Ste Croi**	**54.46**	**12**	*e*P	**P**	**18 49 02.9**	**+0.4**
TCF				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.2						
TCF	**Toulx Ste Croi**	**54.46**	**12**	*e*P	**P**	**18 49 02.9**	**+0.4**
	comp=Z,41nm,1.2s,mb5.2						
LPG	**La Plagne**	**54.79**	**16**	*e*P	**P**	**18 49 06.2**	**+1.3**
	comp=Z,79nm,1.0s,mb5.4						
LPG	**La Plagne**	**54.79**	**16**	*e*P	**P**	**18 49 06.2**	**+1.3**
LPG				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.4						
LPG	**La Plagne**	**54.79**	**16**	*e*P	**P**	**18 49 06.2**	**+1.3**
	comp=Z,39nm,1.0s,mb5.4						
LPL	**La Plagne**	**54.80**	**16**	*e*P	**P**	**18 49 06.1**	**+1.2**
	comp=Z,35nm,0.8s,mb5.1						
LPL	**La Plagne**	**54.80**	**16**	*e*P	**P**	**18 49 06.1**	**+1.2**
LPL				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
LPL	**La Plagne**	**54.80**	**16**	*e*P	**P**	**18 49 06.1**	**+1.2**
	comp=Z,18nm,0.8s,mb5.1						
BGF	**Bois d'Agland**	**54.85**	**12**	*e*P	**P**	**18 49 05.7**	**+0.4**
TRQA	**Tornquist**	**54.94**	**228**	*e*P	**P**	**18 49 06.2**	**0.0**
	comp=Z,60nm,1.4s,mb5.4						
SMF	**Signal de Mont**	**55.15**	**13**	*e*P	**P**	**18 49 07.4**	**0.0**
	comp=Z,71nm,1.3s,mb5.2						
SMF	**Signal de Mont**	**55.15**	**13**	*e*P	**P**	**18 49 07.4**	**0.0**
SMF				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.2						
SMF	**Signal de Mont**	**55.15**	**13**	*e*P	**P**	**18 49 07.4**	**0.0**
	comp=Z,35nm,1.3s,mb5.2						
AVF	**Avril sur Loir**	**55.18**	**13**	*e*P	**P**	**18 49 07.9**	**+0.3**
	comp=Z,26nm,0.9s,mb5.0						
AVF	**Avril sur Loir**	**55.18**	**13**	*e*P	**P**	**18 49 07.9**	**+0.3**
AVF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
AVF	**Avril sur Loir**	**55.18**	**13**	*e*P	**P**	**18 49 07.9**	**+0.3**
	comp=Z,13nm,0.9s,mb5.0						
PCRV	**Puerto La Cruz**	**55.46**	**287**	LR	LR	19 12 16.5	
	comp=Z,632nm,19.2s,MS4.7,baz=276,slow=35						
SSF	**Saint Saulge**	**55.47**	**13**	*e*P	**P**	**18 49 10.0**	**+0.3**
	comp=Z,54nm,1.1s,mb5.2						
SSF	**Saint Saulge**	**55.47**	**13**	*e*P	**P**	**18 49 10.0**	**+0.3**
SSF				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
SSF	**Saint Saulge**	**55.47**	**13**	*e*P	**P**	**18 49 10.0**	**+0.3**
	comp=Z,27nm,1.1s,mb5.2						
CABF	**La Chapelle**	**55.65**	**15**	*e*P	**P**	**18 49 11.2**	**+0.2**
	comp=Z,69nm,0.9s,mb5.4						
CABF	**La Chapelle**	**55.65**	**15**	*e*P	**P**	**18 49 11.2**	**+0.2**
	comp=Z,35nm,0.9s,mb5.4						
LOR	**Lormes**	**55.74**	**13**	*e*P	**P**	**18 49 11.6**	**-0.1**
	comp=Z,46nm,1.1s,mb5.1						
LOR				*e*MLR	MLR		
	comp=Z,4μm,20.2s,MS5.1						
LOR	**Lormes**	**55.74**	**13**	*e*P	**P**	**18 49 11.6**	**-0.1**
LOR				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
LOR				MLR	MLR		
	comp=Z,4μm,20.3s,MS5.4						
LOR	**Lormes**	**55.74**	**13**	*e*P	**P**	**18 49 11.6**	**-0.1**
	comp=Z,23nm,1.1s,mb5.1						
LOR				LR	LR		
	comp=Z,4μm,20.3s,MS5.4						
LPAZ	**La Paz**	**55.94**	**255**	P	**P**	**18 49 14.0**	**+0.2**
	comp=Z,4.9nm,0.8s,mb4.6,baz=90,slow=7.6,SNR=22						
LPAZ				LR	LR	19 10 54.9	
	comp=Z,918nm,18.5s,MS4.9,baz=269,slow=34						
LPAZ	**La Paz**	**55.94**	**255**	*e*P	**P**	**18 49 13.7**	**0.0**
LPAZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LPAZ				MLR	MLR		
	comp=Z,1μm,20.0s						
LPAZ	**La Paz**	**55.94**	**255**	*e*P	**P**	**18 49 13.7**	**0.0**
	comp=Z,8.6nm,0.9s,mb4.8						
LPAZ				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
GRR	**Gorron**	**55.95**	**9**	*e*P	**P**	**18 49 13.3**	**+0.1**
	comp=Z,282nm,1.7s,mb5.7						
GRR	**Gorron**	**55.95**	**9**	*e*P	**P**	**18 49 13.3**	**+0.1**
GRR				pmax	pmax		
	comp=Z,141nm,1.7s,mb5.7						
GRR	**Gorron**	**55.95**	**9**	P	**P**	**18 49 13.3**	**+0.1**
	comp=Z,141nm,1.7s,mb5.7						
TUE	**Stuetta**	**56.42**	**17**	*e*P	**P**	**18 49 17.1**	**+0.6**
	comp=Z,118nm,1.8s,mb5.6						
BIA	**Bitola**	**56.56**	**30**	*e*P	**P**	**18 49 17.3**	**-0.3**
KRUS	**Krusevo**	**56.79**	**29**	*e*P	**P**	**18 49 18.5**	**-0.8**
HINF	**Hinteralfeld**	**56.97**	**15**	*e*P	**P**	**18 49 19.7**	**-0.7**
	comp=Z,25nm,1.0s,mb4.9						
HAU	**Haudompre**	**57.02**	**14**	*e*P	**P**	**18 49 20.5**	**-0.2**
	comp=Z,95nm,1.3s,mb5.3						
BDRM	**Kayabasi**	**57.06**	**37**	*i* P	**P**	**18 49 20.2**	**-1.1**
LVC	**Limon Verde**	**57.17**	**248**	*e*P	**P**	**18 49 22.3**	**-0.1**
	comp=Z,7.3nm,0.8s,mb4.8						
LVC				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
MEZF	**Maizieres J'vi**	**57.17**	**13**	*e*P	**P**	**18 49 22.1**	**+0.2**
	comp=Z,54nm,0.8s,mb5.3						
MEZF	**Maizieres J'vi**	**57.17**	**13**	*e*P	**P**	**18 49 22.1**	**+0.2**
	comp=Z,54nm,0.8s,mb5.6						
FETA	**Feichten**	**57.33**	**18**	⇑*i*P	**P**	**18 49 22.6**	**-0.3**
	comp=Z,66nm,1.3s,mb5.5,SNR=6.5						
SKO	**Skopje**	**57.34**	**29**	*e*P	**P**	**18 49 20.4**	**-2.7**
GCAM	**G?zelcaml?**	**57.36**	**36**	*i* P	**P**	**18 49 23.0**	**-0.4**
VAY	**Valandovo**	**57.40**	**30**	*e*P	**P**	**18 49 21.9**	**-1.8**
URLA	**Izmir**	**57.44**	**35**	*i* P	**P**	**18 49 23.7**	**-0.3**
JAVS	**Javornik**	**57.45**	**21**	*i* P	**P**	**18 49 28.3**	**+4.5**
STIP	**Stip**	**57.49**	**30**	*e*P	**P**	**18 49 22.4**	**-1.8**
VOY	**Vojsko**	**57.50**	**21**	*e*P	**P**	**18 49 22.3**	**-1.9**
VOY				*e*		18 49 28.9	
VOY				*e*		18 49 37.7	
VOY				*e*		18 50 08.6	
BOJS	**Bojanci**	**57.55**	**22**	*i* P	**P**	**18 49 30.0**	**+5.5**
CDF	**Champ du Feu**	**57.62**	**15**	*e*P	**P**	**18 49 24.7**	**-0.3**
	comp=Z,45nm,1.0s,mb5.2						
TURN	**Turunc**	**57.63**	**38**	*i* P	**P**	**18 49 23.7**	**-1.6**
VISS	**Visnje**	**57.65**	**22**	*i* P	**P**	**18 49 30.0**	**+4.7**
AYDN	**Tasoluk**	**57.72**	**37**	⇓*i*P	**P**	**18 49 27.0**	**+1.1**
LJU	**Ljubljana**	**57.74**	**21**	*i* P	**P**	**18 49 30.2**	**+4.3**
BFO	**Black Forest**	**57.82**	**16**	*e*P	**P**	**18 49 27.1**	**+0.6**
	comp=Z,89nm,1.6s,mb5.5						
BFO				LR	LR		
	comp=Z,2μm,20.0s,MS5.2						
WTTA	**Wattenberg**	**57.83**	**19**	⇑*i*P	**P**	**18 49 24.5**	**-1.9**
	comp=Z,130nm,1.5s,mb5.7,SNR=6.8						
AKAS	**Kas**	**57.84**	**39**	⇓*i*P	**P**	**18 49 26.6**	**-0.2**
AYVA	**Ayvalik**	**58.14**	**35**	*i* P	**P**	**18 49 28.1**	**-0.8**
OPO	**Ambohidratompo**	**58.29**	**107**	P	**P**	**18 49 30.2**	**-0.1**
	comp=Z,5.9nm,1.0s,mb4.6,baz=181,slow=4.4,SNR=3.5						
ABPO	**Ambohimpanom**	**58.35**	**108**	PFAKE		18 49 40.0	+9.3

MODS Modra-Piesok 60.71 22 *ep*P pP 18 49 51.0 +1.3
KDHN Kadinhani 60.83 38 *i* P **P 18 49 46.9 -0.5**
MOX Moxa 60.83 17 *e*P **P 18 49 45.5 -1.7**
comp=Z,96nm,1.9s,mb5.6
MOX
comp=Z,2µm,19.0s
MOX Moxa 60.83 17 *e*P **P 18 49 45.5 -1.7**
MOX pmax pmax
comp=Z,96nm,1.9s,mb5.6
MOX MLR MLR
comp=Z,2µm,19.0s,MS5.2
TREC Trest 60.86 20 *e*P **P 18 49 50.9 +3.5**
TREC *e* 18 51 59.9
TREC *e*S **S 18 58 08.1 +3.1**
TREC MLR MLR
comp=Z,2µm,19.2s,MS5.3
TREC Trest 60.86 20 *e*P **P 18 49 50.9 +3.5**
TREC *e*PP PP 18 51 59.9 -1.8
TREC *e*S **S 18 58 08.1 +3.1**
TREC *e*SS SS 19 02 21.9 +17
TREC AMS AMS 19 15 30.0
comp=Z,2µm,19.2s
SDV Santo Domingo 60.87 284 LR LR 19 12 57.3
comp=Z,919nm,19.4s,MS4.9,baz=92,slow=33
SDV Santo Domingo 60.87 284 *e*P **P 18 49 48.6 +0.4**
comp=Z,16nm,0.9s,mb5.2
PRU Pruhonice 61.14 19 *e*P **P 18 49 53.0 +3.7**
PRU *e* 18 52 07.2
PRU *e*S **S 18 58 08.3 -0.3**
PRU MLR MLR
comp=Z,2µm,20.0s,MS5.2
PRU Pruhonice 61.14 19 *e*P **P 18 49 53.0 +3.7**
PRU *e*PP PP 18 52 07.2 +3.0
PRU *e*S **S 18 58 08.3 -0.3**
PRU *e*SS SS 19 02 00.5 -8.4
PRU AMS AMS 19 14 30.0
comp=Z,2µm,20.0s
VRAC Vranov 61.25 21⇑ *i*P **P 18 49 54.5 +4.4**
VRAC Vranov 61.25 21 P **P 18 49 54.2 +4.1**
KOLL Kolacno 61.30 22 *e*P **P 18 49 50.1 -0.3**
KOLL *ep*P pP 18 49 54.2 +0.5
KOLL Kolacno 61.30 22 *e*P **P 18 49 54.2 +3.8**
KOLL Kolacno 61.30 22 *e* **P 18 49 50.1 -0.3**
PSZ Piszkesteto 61.34 24 P **P 18 49 55.4 +4.7**
PSZ Piszkesteto 61.34 24 *e*P **P 18 49 54.9 +4.2**
PSZ Piszkesteto 61.34 24⇑ *i*P **P 18 49 48.5 -2.2**
PSZ Piszkesteto 61.34 24 *e*P **P 18 49 50.5 -0.3**
comp=Z,231nm,1.8s,mb6.0
PSZ P 18 49 55.4
BUC1 Bucharest 61.35 30 P **P 18 49 53.9 +3.1**
VYHS Vyhne 61.39 23 *e*P **P 18 49 54.6 +3.5**
VYHS *e*S **S 18 58 16.7 +4.8**
HENT Hendek 61.56 36 *i* P **P 18 49 53.6 +1.2**
PVCC Panska Ves 61.62 19 *e*P **P 18 49 56.8 +4.2**
PVCC *e* 18 52 16.3
PVCC *e*S **S 18 58 20.3 +5.6**
PVCC MLR MLR
comp=Z,2µm,18.8s,MS5.2
PVCC Panska Ves 61.62 19 *e*P **P 18 49 56.8 +4.2**
PVCC *e*PP PP 18 52 16.3 +7.9
PVCC *e*S **S 18 58 20.3 +5.6**
PVCC *e*SS SS 19 02 09.1 -7.3
PVCC AMS AMS 19 14 50.0
comp=Z,2µm,18.8s
DRGR 61.63 26⇑ *i*P **P 18 49 54.5 +1.8**
DRGR 61.63 26 P **P 18 49 56.0 +3.3**
VOIR 61.67 29⇓ *i*P **P 18 49 56.0 +3.0**
VOIR 61.67 29 P **P 18 49 55.5 +2.5**
CLL Collm 61.82 17 *e*P **P 18 49 58.0 +4.1**
CLL pmax pmax
comp=Z,61nm,1.9s,mb5.4
CLL Collm 61.82 17 *e*P **P 18 49 55.0 +1.1**
comp=Z,61nm,1.9s,mb5.4
CLL *ex* x 18 50 04.0
comp=Z,119nm,2.4s
CLL *ep*PP PP 18 52 09.0 -1.2
CLL *e*S **S 18 58 19.0 +1.8**
CLL *e*SS SS 19 02 15.0 -4.5
CLL *e*SSS 19 05 12.0
CLL Collm 61.82 17 *e*P **P 18 49 58.0 +4.1**
comp=Z,61nm,1.9s,mb5.4
MORC Moravsky Berou 61.98 21 P **P 18 49 59.4 +4.4**
MORC Moravsky Berou 61.98 21⇑ *i*P **P 18 49 54.8 -0.2**
MORC Moravsky Berou 61.98 21 *e*P **P 18 49 53.3 -1.7**
MORC P 18 49 59.4
DPC Dobruska-Polom 62.04 20 *e*P **P 18 49 59.3 +3.9**
DPC *e*S **S 18 58 21.9 +1.9**
DPC MLR MLR
comp=Z,2µm,21.3s,MS5.3
DPC Dobruska-Polom 62.04 20 *e*P **P 18 49 59.3 +3.9**
DPC *e*S **S 18 58 21.9 +1.9**
DPC *e*SS SS 19 02 17.0 -6.0
DPC AMS AMS 19 16 40.0
comp=Z,2µm,21.3s
UPC Upice 62.07 20 *e*P **P 18 50 00.0 +4.4**
ANTO Ankara 62.08 38⇑ *i*P **P 18 50 00.0 +4.1**
ANTO Ankara 62.08 38 P **P 18 49 59.1 +3.3**
PLCA Paso Flores 62.09 227 P **P 18 49 56.4 +0.4**
comp=Z,1.9nm,0.8s,mb4.3,baz=103,slow=4.9,SNR=4.9
PLCA LR LR 19 13 09.0
comp=Z,1µm,18.5s,MS5.0,baz=84,slow=32
PLCA Paso Flores 62.09 227 *e*P **P 18 49 56.1 +0.2**
PLCA LR LR
comp=Z,1µm,20.0s,MS5.0
MLR Muntele Rosu 62.14 29 P **P 18 49 56.1 -0.1**
comp=Z,59nm,1.2s,mb5.6,baz=300,slow=3.7,SNR=6.7
MLR LR LR 19 17 49.2
comp=Z,2µm,20.8s,MS5.2,baz=222,slow=37
MLR Muntele Rosu 62.14 29⇓ *i*P **P 18 49 58.8 +2.7**
MLR Muntele Rosu 62.14 29 P **P 18 49 58.8 +2.6**
OKC Ostrava-Krasne 62.25 21 *e*P **P 18 50 00.0 +3.2**
OKC *e*S **S 18 58 21.8 -0.9**
OKC *e*SS SS 19 02 24.7 -1.5
OKC AMS AMS 19 17 40.0
comp=Z,2µm,17.8s
OKC Ostrava-Krasne 62.25 21 *e*P **P 18 50 00.0 +3.2**
OKC *e*S **S 18 58 21.8 -0.9**
OKC *e*SS SS 19 02 24.7 -1.5
COBT Iskenderun 62.32 42 *i* P **P 18 49 56.6 -0.9**
KSP Ksiaz 62.45 20 *e*P **P 18 49 59.4 +1.3**
KSP *e*S **S 18 58 27.0 +1.8**
KSP MLR MLR
comp=Z,4µm,20.5s,MS5.6
KSP Ksiaz 62.45 20 *e*P **P 18 49 59.4 +1.3**
KSP *e*S **S 18 58 27.0 +1.8**
KSP *e*SS SS 19 02 16.5 -13
KSP LR LR
comp=Z,4µm,20.5s,MS5.6
ESK Eskdalemuir 62.48 5 *e*P **P 18 49 58.5 +0.2**
ESK LR LR
comp=Z,1µm,21.0s,MS5.1
BR131 Keskin Array S 62.50 38 *e*P **P 18 50 02.4 +3.7**
AVNT Avonos 62.70 40 *i* P **P 18 49 55.6 -4.4**
NIE Niedzica 62.71 23 *e*P **P 18 50 04.8 +4.9**
CRVS Cervenica-Dubn 62.75 24 *e*P **P 18 49 59.1 -1.1**
CRVS *ep*P pP 18 50 04.2 +0.8
CRVS *e*S **S 18 58 31.1 +2.0**
CRVS *e* 20 18 12.6
CRVS Cervenica-Dubn 62.75 24 *e*P **P 18 50 04.2 +4.0**
CRVS *e*S **S 18 58 31.1 +2.0**
CRVS Cervenica-Dubn 62.75 24 *e* **P 18 49 59.1 -1.1**
VRI Vrincioaia 62.79 29⇑ *i*P **P 18 50 04.2 +3.7**
VRI Vrincioaia 62.79 29 P **P 18 50 04.9 +4.4**
UZH Uzhgorod 62.88 25 *e*P **P 18 50 00.0 -1.0**
UZH *i* 18 50 05.3
UZH *e*S **S 18 58 26.0 -4.6**
UZH MLR MLR
comp=N,900nm,16.0s,MS5.3
UZH MLR MLR
comp=E,1µm,16.0s,MS5.3
UZH MLR MLR
comp=Z,1µm,16.0s,MS5.1
CDAG Cicekdag 62.89 39⇓ *i*P **P 18 50 02.4 +1.1**
ANDN Andirin 62.97 42⇓ *i*P **P 18 50 03.1 +1.2**
STHS Stebnicka Huta 63.08 23 *e*P **P 18 50 06.6 +4.3**
STHS pmax pmax
comp=Z,17nm,1.5s,mb5.0
STHS Stebnicka Huta 63.08 23 *e*P **P 18 50 06.6 +4.3**
comp=Z,17nm,1.5s,mb5.0
STHS Stebnicka Huta 63.08 23 *ep*P **P 18 50 06.6 +4.3**
KOLS Kolonicke sedl 63.11 24 *e*P **P 18 50 06.8 +4.3**
KOLS *e*S **S 18 58 35.9 +2.4**
KOLS *e*S **S 18 58 35.9 +2.4**

KOLS Kolonicke sedl 63.11 24 *ep*P **P 18 50 06.8 +4.3**
OJC Ojcow 63.17 22 *e*P **P 18 50 04.1 +1.2**
OJC *e**SP sP 18 50 06.5 -0.9
OJC *e* 18 52 23.4
OJC *e*S **S 18 58 33.7 -0.5**
OJC *e*SS SS 19 02 42.5 +1.9
OJC MLR MLR
comp=Z,1µm,20.0s,MS5.1
ILGA Ilgaz 63.36 37 *i* P **P 18 50 05.2 +0.9**
BALT Daday 63.46 36 *i* P **P 18 50 06.0 +1.0**
VNA1 Neumayer--Stat 63.62 179 *e*P **P 18 50 06.9 +1.3**
VNA1 *e* pP 18 50 10.3 +1.4
VNA1 *e* 18 50 12.3
GZT Gaziantep 63.66 42 *i* P **P 18 50 05.7 -0.7**
ROSC El Rosal 63.66 279 P **P 18 50 06.9 0.0**
comp=Z,21nm,0.9s,mb5.2,baz=89,slow=22,SNR=11
ROSC LR LR 19 15 15.2
comp=Z,2µm,19.4s,MS5.3,baz=280,slow=34
ROSC El Rosal 63.66 279 P **P 18 50 06.9 0.0**
ROSC LR LR 19 15 15.2
CTKT Corum 63.75 38 *i* P **P 18 50 09.6 +2.6**
KWP Kalwaria 63.83 24 *e*P **P 18 50 12.1 +4.8**
KWP Kalwaria 63.83 24⇑ *i*P **P 18 50 07.4 +0.1**
KWP Kalwaria 63.83 24⇑ P **P 18 50 07.4 +0.1**
BBSR BB Station 63.87 311 PFAKE 18 50 20.0 +12
BBSR LR LR
comp=Z,2µm,20.0s,MS5.3
VNA2 Neumayer--Watz 63.91 178 *e*P **P 18 50 08.4 +0.8**
VNA2 *e* pP 18 50 11.6 +0.8
VNA2 *e* pP 18 50 13.3 +2.5
VNA3 Neumayer Olymp 64.19 179 *e*P **P 18 50 10.0 +0.6**
VNA3 *e* pP 18 50 13.2 +0.6
VNA3 *e* pP 18 50 14.8 +2.2
AKCD Akcadag 64.41 42⇓ *i*P **P 18 50 13.0 +1.6**
LVV L'vov 64.52 25 *e*P **P 18 50 15.6 +3.8**
LVV *e* 18 54 15.6
LVV *e*S **S 18 58 53.0 +2.0**
LVV MLR MLR
comp=E,1µm,18.0s,MS5.2
LVV MLR MLR
comp=Z,1µm,18.0s,MS5.2
LVV MLR MLR
comp=N,400nm,16.0s,MS5.2
KIS Kishinev 64.61 29 *e*P **P 18 50 12.0 -0.5**
KIS *i* 18 50 17.0
KIS *e* 18 50 46.0
KIS *e* 18 58 49.0
KIS MLR MLR
comp=Z,1µm,18.0s,MS5.1
KIS MLR MLR
comp=E,1µm,20.0s
KIS MLR MLR
comp=Z,1µm,18.0s
KIS Kishinev 64.61 29 *e*P **P 18 50 12.0 -0.5**
KIS *e*L 19 10 12.0
KIS LRM 19 21 16.0
comp=Z,1µm,18.0s
MALT Malatya 64.75 42⇑ *i*P **P 18 50 18.0 +4.4**
MALT Malatya 64.75 42 P **P 18 50 17.7 +4.1**
GKP Gorka Klasztor 64.83 19 *e*P **P 18 50 15.9 +2.2**
GKP Gorka Klasztor 64.83 19 *e*P **P 18 50 15.9 +2.1**
SNAA Sanae 64.84 177 *e*P **P 18 50 14.5 +0.9**
SNAA *e* pP 18 50 18.0 +1.1
SNAA *e* 18 50 19.6
SNAA Sanae 64.84 177 *i* P **P 18 50 14.8 +1.2**
ELZG Elazig 65.22 42 *i* P **P 18 50 17.8 +1.1**
RST Umm Al-Ruwaisa 66.97 54 *e*P **P 18 50 26.3 -1.9**
baz=54
RST AMb AMB 18 50 54.6
comp=Z,74nm,1.4s,mb5.5,baz=54
OTAV Otavalo 67.02 273 *e*P **P 18 50 29.2 +0.5**
comp=Z,37nm,1.5s,mb5.2
NAY Al-Naaiem 67.08 54 *e*P **P 18 50 27.3 -1.5**
baz=54
NAY AMb AMB 18 50 43.2
comp=Z,34nm,1.7s,mb5.1,baz=54
KIEV Kiev 67.40 27 *e*P **P 18 50 27.6 -2.8**
KIEV pmax pmax
comp=Z,170nm,1.5s,mb5.8
KIEV Kiev 67.40 27 *e*P **P 18 50 27.3 -3.1**
comp=Z,170nm,1.5s,mb5.9
KIEV LR LR
comp=Z,1µm,20.0s,MS5.1
KBD Kabd 67.41 55 *e*P **P 18 50 29.7 -1.2**
baz=55
KBD AMb AMB 18 50 52.5
comp=Z,42nm,1.3s,mb5.3,baz=55
AKASG Malin Array Be 67.42 27 P **P 18 50 27.8 -2.7**
comp=Z,9.9nm,0.7s,mb5.0,baz=228,slow=7.2,SNR=16
AKASG LR LR 19 21 53.9
comp=Z,918nm,19.2s,MS5.0,baz=235,slow=38
AKASG Malin Array Be 67.42 27 *i* P **P 18 50 29.8 -0.7**
AKASG pmax pmax
comp=Z,10.0nm,0.7s
AKASG Malin Array Be 67.42 27 P **P 18 50 27.8 -2.7**
AKASG LR LR 19 21 53.9
AKBB Malin Array Si 67.42 27 P **P 18 50 28.6 -1.9**
AKBB Malin Array Si 67.42 27 *e*P **P 18 50 27.5 -2.9**
SUW Suwalki 67.46 21 *e*P **P 18 50 31.9 +1.3**
SUW Suwalki 67.46 21 *e*P **P 18 50 32.0 +1.3**
ERZM Erzurum 67.53 42 *i* P **P 18 50 28.1 -3.3**
HAKT HAKKARI 67.97 45 *i* P **P 18 50 35.2 +1.0**
DDEM Demirkent 68.29 41 *i* P **P 18 50 37.5 +1.3**
DBAD Bademkaya 68.32 41 *i* P **P 18 50 37.2 +0.9**
SOC Sochi 68.45 38 *e*P **P 18 50 38.4 +1.3**
SOC *e**PP pP 18 50 41.3 +0.9
SOC *e**SP sP 18 50 42.8 +1.2
SOC *e* 18 51 01.0
SOC *ep*PP 18 54 45.8
SOC *e*S S 18 59 40.3 +1.4
SOC pmax pmax
comp=Z,470nm,1.1s,mb6.4
ARTV Artvin 68.56 41⇓ *i*P **P 18 50 38.2 +0.3**
BCIP Isla Barro Col 69.83 282 PFAKE 18 51 00.0 +14
BCIP LR LR
comp=Z,1µm,20.0s,MS5.1
GNI Garni 69.90 43 LR LR 19 22 50.0
comp=Z,678nm,20.5s,MS4.9,baz=249,slow=37
GNI Garni 69.90 43 P **P 18 50 53.0 +6.7**
GNI pmax pmax
comp=Z,180nm,1.7s
GNI Garni 69.90 43 P **P 18 50 50.2 +3.9**
comp=Z,178nm,1.8s,mb5.7
NB2 NORSAR Subarra 70.15 12 P **P 18 50 46.3 -1.0**
comp=Z,12nm,1.1s,mb4.7,baz=205,slow=6.2
NOA NORSAR Array B 70.15 12 P **P 18 50 47.1 -0.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=207,slow=6.5,SNR=3.9
NOA LR LR 19 21 40.8
comp=Z,596nm,19.2s,MS4.9,baz=200,slow=36
SYO Syowa Base 70.32 163⇓ *e*P **P 18 50 45.6 -2.7**
KIV Kislovodsk 70.46 39 *e*P **P 18 50 52.5 +2.9**
KIV *e*S S 19 00 06.8 +4.1
KIV pmax pmax
comp=Z,43nm,1.2s,mb5.2
KIV Kislovodsk 70.46 39⇑ *i*P **P 18 50 54.3 +4.7**
KIV Kislovodsk 70.46 39⇑ P **P 18 50 54.3 +4.7**
BORG Borgarnes 71.91 356 LR LR 19 18 33.7
comp=Z,781nm,18.1s,MS5.0,baz=1.1,slow=33
VSU Vasula 72.17 20 *i* P **P 18 51 00.1 +0.5**
VSR Storozhevoye 72.51 31 *e*P **P 18 51 05.6 +3.8**
VSR pmax pmax
comp=N,20nm,1.3s
VSR pmax pmax
comp=Z,20nm,1.3s,mb4.9
VSR pmax pmax
comp=E,20nm,1.2s
OBN Obninsk 73.67 27⇓ *e*P **P 18 51 12.0 +3.4**
OBN *e* 18 51 17.3
OBN *e* 18 51 22.9
OBN *e* 18 53 55.7
OBN pmax pmax
comp=Z,60nm,2.0s,mb5.2
MOS Moscow 74.54 26 *e*P **P 18 51 12.7 -0.9**
MOS *e*S S 19 00 54.1 +5.3
MOS pmax pmax
comp=Z,107nm,1.4s,mb5.6
MOS MLR MLR
comp=Z,2µm,18.0s,MS5.4
KAF Kangasniemi 74.85 17 *ep* **P 18 51 14.9 -0.4**
comp=Z,18nm,0.8s,mb5.0,baz=218,slow=5.8
KAF Kangasniemi 74.85 17 *e*P **P 18 51 14.9 -0.4**
KAF pmax pmax
comp=Z,18nm,0.8s,mb5.0
CBN Corbin 75.71 312 PFAKE 18 51 30.0 +9.2

CBN LR LR
comp=Z,2µm,21.0s,MS5.4
BINY Binghamton 76.21 316 *e*P **P 18 51 23.7 +0.2**
comp=Z,76nm,1.5s,mb5.4
BINY LR LR
comp=Z,1µm,20.0s,MS5.3
SCHQ Schefferville 76.75 331 P **P 18 51 27.9 +1.6**
comp=Z,4.6nm,0.6s,mb4.6,baz=162,slow=6.0,SNR=3.6
SCHQ LR LR 19 21 01.8
comp=Z,1µm,18.1s,MS5.2,baz=298,slow=32
SSPA Standing Stone 76.95 314 *e*P **P 18 51 27.5 -0.3**
comp=Z,30nm,1.3s,mb5.1
JOF Joensuu 77.00 19 *ep* **P 18 51 24.7 -2.8**
comp=Z,13nm,0.6s,mb5.0
MAW Mawson 77.68 158 P **P 18 51 33.0 +1.6**
comp=Z,3.9nm,0.6s,mb4.5,baz=279,slow=11,SNR=5.8
MAW LR LR 19 17 53.9
comp=Z,1µm,21.8s,MS5.2,baz=299,slow=30
MAW Mawson 77.68 158 *e*P **P 18 51 31.7 +0.3**
MAW pmax pmax
comp=Z,19nm,1.2s
MAW MLR MLR
comp=Z,2µm,20.0s
MAW Mawson 77.68 158 *e*P **P 18 51 31.7 +0.3**
comp=Z,19nm,1.2s,mb4.9
MAW LR LR
comp=Z,2µm,20.0s,MS5.5
JMIC Jan Mayen 77.84 1 LR LR 19 26 28.6
comp=Z,667nm,18.6s,MS5.0,baz=237,slow=36
ELN Prospectdale 77.90 310 *e*P **P 18 51 33.5 +0.3**
KLMR Klimovskoe 78.50 23 *e*P **P 18 51 34.3 -1.7**
KLMR pmax pmax
comp=Z,66nm,1.6s,mb5.3
PAYG Puerto Ayora 78.65 271 PFAKE 18 51 50.0 +12
PAYG LR LR
comp=Z,2µm,19.0s,MS5.4
GOGA Godfrey 78.89 306 PFAKE 18 51 50.0 +11
GOGA LR LR
comp=Z,2µm,21.0s,MS5.3
SFJD Kangerlussuaq 78.93 345 LR LR 19 20 07.3
comp=Z,600nm,18.5s,MS5.0,baz=125,slow=31
ERPA Erie 78.95 315 PFAKE 18 51 50.0 +11
ERPA LR LR
comp=Z,2µm,20.0s,MS5.4
TKL Tuckaleechee C 79.76 308 P **P 18 51 44.7 +1.3**
TKL Tuckaleechee C 79.76 308 *e*P **P 18 51 41.3 -2.1**
TEIG Tepich 79.99 292 *e*P **P 18 51 47.1 +2.2**
comp=Z,18nm,1.0s,mb5.0
ARCES ARCESS Array B 80.50 12 P **P 18 51 46.5 -0.2**
comp=Z,9.4nm,0.8s,mb4.7,baz=216,slow=4.8,SNR=5.9
KEV Kevo 81.00 13 *e*P **P 18 51 53.6 +4.2**
KEV pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KEV MLR MLR
comp=Z,1µm,20.0s,MS5.3
KEV Kevo 81.00 13 *e*P **P 18 51 53.6 +4.2**
comp=Z,8.1nm,0.7s,mb4.8
KEV LR LR
comp=Z,1µm,20.0s,MS5.3
GLMI Grayling 83.00 317 PFAKE 18 52 10.0 +10
GLMI LR LR
comp=Z,2µm,21.0s,MS5.3
WVT Waverly 83.06 308 *e*P **P 18 51 59.9 -1.1**
WVT pmax pmax
comp=Z,19nm,1.1s,mb5.0
WVT Waverly 83.06 308 *e*P **P 18 51 59.3 -1.7**
comp=Z,19nm,1.1s,mb5.0
DGAR Diego Garcia 83.29 97 PFAKE 18 52 10.0 +7.4
DGAR LR LR
comp=Z,2µm,21.0s,MS5.4
OLIL Olney 83.89 310 *e*P **P 18 52 04.9 -0.3**
comp=Z,83nm,1.4s,mb5.7
ARU Arti 85.05 32*d* *i*P **P 18 52 11.8 +1.2**
ARU *e*S S 19 02 36.0 -3.9
ARU *e*SS SS 19 08 15.1 +1.7
ARU pmax pmax
comp=Z,21nm,1.7s,mb5.0
ARU Arti 85.05 32 *e*P **P 18 52 10.3 -0.4**
ARU LR LR
comp=Z,923nm,19.0s,MS5.2
HDIL Hopedale 85.22 312 PFAKE 18 52 20.0 +8.2
HDIL LR LR
comp=Z,2µm,22.0s,MS5.5
FVM French Village 85.50 309 *e*P **P 18 52 11.1 -2.2**
FVM pmax pmax
comp=Z,16nm,0.8s,mb5.3
FVM French Village 85.50 309 *e*P **P 18 52 10.8 -2.5**
comp=Z,16nm,0.8s,mb5.3
CCM Cathedral Cave 86.15 309 *e*P **P 18 52 14.4 -2.1**
CCM pmax pmax
comp=Z,35nm,1.2s,mb5.5
CCM Cathedral Cave 86.15 309 *e*P **P 18 52 13.9 -2.6**
comp=Z,35nm,1.3s,mb5.4
CCM LR LR
comp=Z,2µm,20.0s,MS5.6
KBS Kingsbay 86.72 4 PFAKE 18 52 30.0 +12
KBS LR LR
comp=Z,524nm,21.0s,MS4.9
HKT Hockley 88.45 300 *e*P **P 18 52 25.2 -2.6**
MIR Mirnyy 89.41 157⇑ *i*P **P 18 52 35.0 +3.4**
MIR pmax pmax
comp=Z,100nm,1.5s,mb5.9
KSU1 Kansas State U 90.47 309 PFAKE 18 52 50.0 +13
KSU1 LR LR
comp=Z,2µm,19.0s,MS5.6
BRVK Borovoye 90.70 37 PFAKE 18 52 50.0 +12
BRVK LR LR
comp=Z,1µm,19.0s,MS5.4
AML Almayashu 91.19 48 PFAKE 18 52 50.0 +10
AML LR LR
comp=Z,720nm,19.0s,MS5.1
EKS2 Erkin-Say 91.33 47 *e*P **P 18 52 44.7 +3.7**
comp=Z,36nm,1.8s,mb5.4
EKS2 LR LR
comp=Z,877nm,19.0s,MS5.2
WMOK Wichita Mounta 91.59 305 *e*P **P 18 52 41.6 -0.8**
WMOK pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
WMOK Wichita Mounta 91.59 305 *e*P **P 18 52 41.6 -0.9**
comp=Z,8.7nm,1.1s,mb5.0
ULM Lac du Bonnet 91.65 320 LR LR 19 26 58.0
comp=Z,2µm,21.7s,MS5.6,baz=84,slow=31
JCT Junction City 91.92 300 *e*P **P 18 52 43.7 -0.4**
JCT pmax pmax
comp=Z,12nm,1.0s,mb5.2
JCT Junction City 91.92 300 *e*P **P 18 52 43.7 -0.4**
comp=Z,12nm,1.0s,mb5.2
TKM2 Tokmak 2 92.69 47 *e*P **P 18 52 48.7 +1.4**
TKM2 pmax pmax
comp=Z,12nm,1.3s,mb5.2
TKM2 Tokmak 2 92.69 47 *e*P **P 18 52 48.7 +1.4**
comp=Z,12nm,1.3s,mb5.2
CBKS Cedar Bluff 92.85 309 PFAKE 18 53 00.0 +12
CBKS LR LR
comp=Z,2µm,20.0s,MS5.5
AMTX Amarillo 93.98 305 PFAKE 18 53 00.0 +6.5
AMTX LR LR
comp=Z,2µm,22.0s,MS5.5
TXAR Lajitas Array 95.14 299 P **P 18 52 58.9 0.0**
comp=Z,0.8nm,0.7s,mb4.3,baz=114,slow=5.6,SNR=7.7
TXAR LR LR 19 32 46.7
comp=Z,514nm,18.9s,MS5.0,baz=40,slow=34
SBA Scott Base 95.28 180 *e*P **P 18 52 58.6 0.0**
SBA MLR MLR
comp=Z,559nm,21.0s,MS5.0
FFC Flin Flon 95.85 324 PFAKE 18 53 10.0 +8.5
FFC LR LR
comp=Z,2µm,20.0s,MS5.7
CASY Casey 95.93 160 PFAKE 18 53 10.0 +8.3
CASY LR LR
comp=Z,854nm,20.0s,MS5.2
SDCO Great Sand Dun 97.28 307 *e*P **P 18 53 08.5 +0.1**
comp=Z,6.7nm,1.4s,mb4.9
MKAR Makanchi Array 97.74 44 LR LR 19 44 30.8
comp=Z,492nm,20.1s,MS5.0,baz=266,slow=40
ANMO Albuquerque 97.90 304 PFAKE 18 53 20.0 +8.7
ANMO LR LR
comp=Z,2µm,20.0s,MS5.5
ZALV Zalesovo Beam 99.41 37 LR LR 19 46 01.4
comp=Z,539nm,18.7s,MS5.1,baz=282,slow=40
BW06 Boulder Array 100.52 312 PFAKE 18 53 30.0 +7.5
BW06 LR LR
comp=Z,2µm,22.0s,MS5.7
WMQ Urumqi 101.54 47 *e*P Pdif 18 53 27.0 -0.1
WMQ AP 18 53 32.0
WMQ SKS 19 04 04.0

WMQ				*e*S	Sdif	19 05 03.0	-0.4	-4.7
WMQ				XS		19 05 12.0		
WMQ				AMB	AMB			
	comp=Z,8.0nm,0.9s							
WMQ				AMB	AMB			
	comp=Z,134nm,6.3s							
WMQ				LR	LR			
	comp=N,1μm,17.5s,MS5.5							
WMQ				LR	LR			
	comp=E,877nm,20.5s,MS5.5							
WMQ				LR	LR			
	comp=Z,1μm,24.4s,MS5.3							
AHID	**Auburn Hatcher**	**101.65**	**312**	PFAKE		18 53 40.0	+12	
AHID				LR	LR			
	comp=Z,2μm,21.0s,MS5.7							
BOZ	**Bozeman (W)**	**101.95**	**315**	PFAKE		18 53 40.0	+11	
BOZ				LR	LR			
	comp=Z,1μm,20.0s,MS5.5							
GLA	**Glamis**	**104.82**	**302**	PFAKE		18 53 50.0	+8.3	
GLA				LR	LR			
	comp=Z,897nm,20.0s,MS5.3							
ELK	**Elko**	**104.83**	**310**	PFAKE		18 53 50.0	+8.3	
ELK				LR	LR			
	comp=Z,2μm,21.0s,MS5.6							
BMO	**Blue Mountains**	**106.00**	**315**	PFAKE		18 58 10.0	+11	
BMO				LR	LR			
	comp=Z,1μm,20.0s,MS5.5							
BMN	**Battle Mountai**	**106.36**	**310**	PFAKE		18 58 10.0	+10	
BMN				LR	LR			
	comp=Z,2μm,21.0s,MS5.5							
GSC	**Goldstone**	**106.38**	**305**	PFAKE		18 58 10.0	+10	
GSC				LR	LR			
	comp=Z,1μm,22.0s,MS5.3							
BAR	**Barrett**	**106.39**	**302**	PFAKE		18 58 10.0	+10	
BAR				LR	LR			
	comp=Z,557nm,19.0s,MS5.1							
COCO	**West Island**	**106.39**	**105**	PFAKE		18 58 10.0	+9.1	
COCO				LR	LR			
	comp=Z,1μm,20.0s,MS5.4							
DAC	**Darwin (Calif)**	**106.96**	**306**	PFAKE		18 58 10.0	+8.6	
DAC				LR	LR			
	comp=Z,891nm,22.0s,MS5.3							
CMB	**Columbia Colle**	**109.03**	**308**	PFAKE		18 58 20.0	+15	
CMB				LR	LR			
	comp=Z,568nm,22.0s,MS5.1							
CM31	**Chiang Mai Arr**	**111.67**	**73**	PFAKE		18 58 20.0	+9.3	
CM31				LR	LR			
	comp=Z,608nm,19.0s,MS5.2							
KMI	**Kunming**	**114.99**	**66**	PKP	PKiKP	18 58 18.0	+1.1	
CD2	**Chengdu**	**115.33**	**59**	*e*PKP	PKPdf	18 58 15.3	-2.1	
CD2				XPKP		18 58 24.8		
CD2				PP	PP	18 59 20.5	+2.2	
CD2				PKS		19 01 50.5		
CD2				SKS	SKSdf	19 05 22.5	-7.5	
CD2				SKKS	SKKSac	19 06 09.5	-11	
CD2				SS	SS	19 15 11.8	-5.0	
CD2				PP	PP			
	comp=Z,120nm,10.8s							
CD2				LR	LR			
	comp=N,360nm,15.6s,MS5.2							
CD2				LR	LR			
	comp=E,350nm,15.6s,MS5.2							
CD2				LR	LR			
	comp=Z,270nm,14.4s,MS5.0							
RKT	**Rikitea**	**117.06**	**240**	*e*SS	SS	19 15 38.9	-0.5	
	comp=Z,425nm,28.2s							
RKT	**Rikitea**	**117.06**	**240**	*e*LR	LR	19 33 58.0		
	comp=Z,740nm,23.0s							
YAK	**Yakutsk**	**118.17**	**20**	P	Pdif	18 54 45.4	+4.4	
HHC	**Hu-ho-hao-te**	**119.42**	**47**	*e*PKP	PKPdf	18 58 18.0	-7.0	
HHC				PP	PP	18 59 43.5	-2.8	
HHC				PKS		19 01 53.3		
HHC				SKS	SKSdf	19 05 28.8	-8.5	
HHC				SKKS	SKKSac	19 06 35.5	-11	
HHC				SS	SS	19 16 02.3	-6.9	
HHC				PP	PP			
	comp=Z,340nm,9.4s							
HHC				LR	LR			
	comp=N,612nm,19.7s,MS5.3							
HHC				LR	LR			
	comp=E,496nm,19.5s,MS5.3							
HHC				LR	LR			
	comp=Z,759nm,19.0s,MS5.3							
MBWA	**Marble Bar**	**124.68**	**122**	PFAKE		18 58 50.0	+14	
MBWA				LR	LR			
	comp=Z,2μm,20.0s,MS5.9							
TBI	**Tubuai**	**128.93**	**232**	*e*SS	SS	19 18 07.7	-2.0	
	comp=Z,350nm,28.5s							
TBI	**Tubuai**	**128.93**	**232**	*e*LR	LR	19 39 36.4		
	comp=Z,1μm,28.2s							
MDJ	**Mudanjiang**	**129.60**	**35**	PKP	PKPdf	18 58 41.0	-3.4	
SNZO	**South Karori**	**131.58**	**186**	PFAKE		18 59 00.0	+12	
SNZO				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
PPT	**Papeete**	**131.81**	**239**	*e*SS	SS	19 18 44.6	-1.0	
	comp=Z,746nm,26.8s							
PPT	**Papeete**	**131.81**	**239**	*e*LQ		19 35 12.2		
	comp=Z,1μm,29.0s							
PPT				*e*LR	LR	19 40 46.5		
	comp=Z,653nm,22.2s							
ADK	**Adak**	**133.58**	**347**	PFAKE		18 59 00.0	+8.3	
ADK				LR	LR			
	comp=Z,1μm,19.0s,MS5.5							
ASAR	**Alice Springs**	**134.60**	**133**	PKhKP		18 58 42.8		
	comp=Z,0.6nm,0.9s,baz=228,slow=2.8,SNR=6.9							
ASAR				PKP	PKPdf	18 58 51.9	-2.6	
	comp=Z,0.4nm,0.6s,baz=234,slow=2.8,SNR=6.3							
WRA	**Warramunga Arr**	**137.14**	**129**	PKhKP		18 58 48.4		
	comp=Z,0.4nm,1.0s,baz=202,slow=1.6,SNR=6.2							
WRA				PKP	PKPdf	18 58 56.5	-2.8	
	comp=Z,0.9nm,0.8s,baz=238,slow=2.7,SNR=7.3							
WRA	**Warramunga Arr**	**137.14**	**129**	PKP		18 58 48.4		
WRA				PKP	PKPdf	18 58 56.5	-2.8	
ERM	**Erimo**	**138.59**	**29**	PFAKE		18 59 10.0	+8.7	
ERM				LR	LR			
	comp=Z,677nm,22.0s,MS5.3							
MJAR	**Matsushiro Arr**	**139.73**	**39**	PKP	PKPdf	18 59 03.5	0.0	
	comp=Z,0.7nm,0.5s,baz=316,slow=6.9,SNR=4.5							
CTA	**Charters Tower**	**145.40**	**141**	*e*P	PKPbc	18 59 13.4	-0.5	
	comp=Z,17nm,1.2s							
CTA	**Charters Tower**	**145.40**	**141**	PKPbc	PKPbc	18 59 14.1	+0.2	
	comp=Z,21nm,1.1s,baz=249,slow=4.8,SNR=14							
CTAO	**Charters Tower**	**145.40**	**141**	*e*PKIKP	PKPdf	18 59 13.6	-0.5	

SFS **26** *19:18:06.1,3645N×786W,h21km,ML2.8*
LDG **26** *19:18:40.8±0.2,3645N×784W,h10km,Ml3.3/4,Error ellipse: s-maj=4.2km s-min=2.0km az=36.0*
ISCJB **26** *19:18:41.0±0.5,3656N±003×778W±003,h77km±5km, Error ellipse: s-maj=5.2km s-min=2.9km az=37.4*
CSEM **26** *19:18:41.6±0.3,3655N×751W,h10km,ML3.6/8,Error ellipse: s-maj=6.0km s-min=2.6km az=36.0*
MDD **26** *19:18:41.4±0.6,3641N×792W,h47km±21km,mb4.4/18, Error ellipse: s-maj=6.6km s-min=3.9km az=39.0,PRIMO*
NEIC **26** *19:18:41.0,3646N×785W,h20km,MN2.9(MDD),After MDD.*
INMG **26** *19:18:42.9±1.5,3652N×792W,h19km±4km,ML2.7,Error ellipse: s-maj=5.4km s-min=4.8km az=122.0*
IGIL **26** *19:18:42.5,3651N×791W,h19km,ML2.8*
CNRM **26** *19:18:44.5,3605N×734W,h23km,MD3.2*
ISC 26 19:18:42.0±0.5,3653N±002×780W±003,h58km±10km, n137,σ0̸95/247,1C-17D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.72**	**352**	*i* P		**Pn**		**19 18 56.5**	**+0.1**
PBDV				*e*S		**Sn**		**19 19 06.0**	**-0.9**
PBDV				A				19 19 15.2	
	136nm,0.3s								
PBDV	**Barranco-do-Ve**	**0.72**	**352**	⇓P		**Pn**		**19 18 56.5**	**+0.1**
PBDV				S		**Sn**		**19 19 06.0**	**-0.9**
	68nm,0.3s								
PVAQ	**Vaqueiros**	**0.88**	**5**	*e*P		**Pn**		**19 18 58.7**	**+0.4**
PVAQ				*e*S		**Sn**		**19 19 11.0**	**+0.6**
PVAQ				A				19 19 12.1	
	196nm,0.1s								
PVAQ	**Vaqueiros**	**0.88**	**5**	*e*P		**Pn**		**19 18 58.7**	**+0.4**
PVAQ				*e*S		**Sn**		**19 19 11.0**	**+0.6**
	196nm,0.1s								
PFVI	**Vila Bisbo**	**1.02**	**307**	*i* P		**Pn**		**19 18 59.4**	**-0.8**
PFVI				*e*S		**Sn**		**19 19 12.6**	**-1.1**
PFVI				A				19 19 16.2	
	60nm,0.3s								

MORF	**Marmelete**	**1.03**	**319**	*i* P		**Pn**		**19 18 59.9**	**-0.4**
MORF				*e*Sn		**Sn**		**19 19 13.5**	**-0.5**
MORF				A				19 19 13.8	
	181nm,0.1s								
MORF	**Marmelete**	**1.03**	**319**	⇓P		**Pn**		**19 18 59.9**	**-0.4**
MORF				S		**Sn**		**19 19 12.5**	**-1.5**
EGRO	**El Granado**	**1.04**	**14**	⇓P		**Pn**		**19 19 01.1**	**+0.7**
	4.2nm,0.1s,SNR=18								
EGRO				S		**Sn**		**19 19 14.8**	**+0.7**
	114nm,0.1s,SNR=28								
EGRO	**El Granado**	**1.04**	**14**	P		**Pn**		**19 19 01.1**	**+0.7**
	4.2nm,0.1s,SNR=18								
EGRO				S		**Sn**		**19 19 14.6**	**+0.5**
	114nm,0.1s,SNR=28								
EGRO	**El Granado**	**1.04**	**14**	⇓P		**Pn**		**19 19 01.1**	**+0.7**
EGRO				S		**Sn**		**19 19 14.6**	**+0.5**
PTEO	**Sao Teotonio**	**1.26**	**324**	*e*P		**Pn**		**19 19 03.3**	**0.0**
PTEO				*e*S		**Sn**		**19 19 18.7**	**-0.5**
PTEO				A				19 19 20.6	
	51nm,0.1s								
PTEO	**Sao Teotonio**	**1.26**	**324**	*e*P		**Pn**		**19 19 03.3**	**0.0**
PTEO				*e*S		**Sn**		**19 19 18.7**	**-0.5**
	51nm,0.1s								
CNIL	**Conil**	**1.42**	**96**	P		**Pn**		**19 19 06.1**	**+0.6**
CNIL	**Conil**	**1.42**	**96**	*e*P		**Pn**		**19 19 06.1**	**+0.6**
PBEJ	**Beja**	**1.50**	**358**	*e*P		**Pn**		**19 19 07.4**	**+0.8**
PBEJ				*e*S		**Sn**		**19 19 25.2**	**+0.1**
PBEJ				A				19 19 27.5	
	37nm,0.3s								
PBEJ	**Beja**	**1.50**	**358**	*e*P		**Pn**		**19 19 07.4**	**+0.8**
PBEJ				*e*S		**Sn**		**19 19 25.2**	**+0.1**
	37nm,0.3s								
GIBL	**Gibalbin**	**1.51**	**78**	P		**Pn**		**19 19 07.6**	**+1.0**
GIBL				S		**Sn**		**19 19 19.1**	**-6.2**
GIBL	**Gibalbin**	**1.51**	**78**	*e*P		**Pn**		**19 19 07.6**	**+0.9**
GIBL				*e*S		**Sn**		**19 19 19.1**	**-6.2**
EMIN	**Mina Concepcio**	**1.53**	**36**	⇓P		**Pn**		**19 19 07.4**	**+0.4**
	2.2nm,0.1s,SNR=18								
EMIN				S		**Sn**		**19 19 25.5**	**-0.4**
	23nm,0.1s,SNR=18								
EMIN	**Mina Concepcio**	**1.53**	**36**	P		**Pn**		**19 19 07.4**	**+0.4**
	2.2nm,0.1s,SNR=18								
EMIN				S		**Sn**		**19 19 25.9**	**0.0**
	33nm,0.2s,SNR=18								
EMIN	**Mina Concepcio**	**1.53**	**36**	⇓P		**Pn**		**19 19 07.4**	**+0.4**
EMIN				S		**Sn**		**19 19 25.9**	**-0.1**
ESPR	**Espera**	**1.60**	**77**	⇓P		**Pn**		**19 19 07.8**	**-0.2**
	20nm,0.1s,SNR=18								
ESPR				S		**Sn**		**19 19 28.0**	**+0.4**
	143nm,0.2s,SNR=7.9								
ESPR	**Espera**	**1.60**	**77**	P		**Pn**		**19 19 07.8**	**-0.2**
	20nm,0.1s,SNR=18								
ESPR				S		**Sn**		**19 19 27.8**	**+0.2**
	143nm,0.2s,SNR=7.9								
ESPR	**Espera**	**1.60**	**77**	⇓P		**Pn**		**19 19 07.8**	**-0.2**
ESPR				S		**Sn**		**19 19 27.8**	**+0.2**
MOMI	**Momias**	**1.69**	**96**	P		**Pn**		**19 19 10.7**	**+1.5**
MOMI	**Momias**	**1.69**	**96**	*e*P		**Pn**		**19 19 10.7**	**+1.5**
PBAR	**Barrancos**	**1.75**	**20**	*e*Pn		**Pn**		**19 19 10.9**	**+0.9**
PBAR				*e*Sn		**Sn**		**19 19 32.2**	**+0.9**
PBAR				A				19 19 33.9	
	23nm,0.5s								
PBAR	**Barrancos**	**1.75**	**20**	*e*Pn		**Pn**		**19 19 10.9**	**+0.9**
PBAR				*e*Sn		**Sn**		**19 19 32.2**	**+0.9**
	23nm,0.5s								
EJIF	**Jimena Fronter**	**1.88**	**92**	⇓P		**Pn**		**19 19 11.9**	**+0.1**
	3.3nm,0.2s,SNR=18								
EJIF				S		**Sn**		**19 19 34.9**	**+0.5**
	5.1nm,0.3s,SNR=7.9								
LIJA	**Lijar**	**1.97**	**78**	P		**Pn**		**19 19 13.7**	**+0.8**
LIJA				S		**Sn**		**19 19 33.1**	**-3.4**
LIJA	**Lijar**	**1.97**	**78**	*e*P		**Pn**		**19 19 13.7**	**+0.8**
LIJA				*e*S		**Sn**		**19 19 33.1**	**-3.3**
EVO	**Evora**	**2.01**	**355**	*e*Pn		**Pn**		**19 19 14.0**	**+0.5**
EVO				*e*Sn		**Sn**		**19 19 37.6**	**+0.1**
EVO				*e*Sg		**Sn**		**19 19 47.1**	**+10**
	52nm,0.2s								
EVO	**Evora**	**2.01**	**355**	*e*Pn		**Pn**		**19 19 14.3**	**+0.8**
EVO				*e*Sn		**Sn**		**19 19 37.8**	**+0.3**
EVO				A				19 19 38.5	
	56nm,0.1s								
EVO	**Evora**	**2.01**	**355**	*e*Pn		**Pn**		**19 19 14.3**	**+0.8**
EVO				*e*Sn		**Sn**		**19 19 37.8**	**+0.3**
	56nm,0.1s								
EVOP	**Sao Brissos**	**2.01**	**353**	*e*Pn		**Pn**		**19 19 14.0**	**+0.4**
EVOP				*e*Sn		**Sn**		**19 19 37.6**	**0.0**
EVOP				*e*Sg		**Sn**		**19 19 47.1**	**+9.5**
	26nm,0.2s								
MOE	**Montemor**	**2.04**	**348**	*e*Pn		**Pn**		**19 19 14.7**	**+0.8**
MOE				*e*Sn		**Sn**		**19 19 38.3**	**+0.1**
ECEU	**Ceuta**	**2.06**	**107**	⇓P		**Pn**		**19 19 13.8**	**-0.4**
	9.6nm,0.1s,SNR=18								
ECEU	**Ceuta**	**2.06**	**107**	P		**Pn**		**19 19 13.9**	**-0.3**
	9.6nm,0.1s,SNR=18								
REAL	**Reales**	**2.09**	**90**	⇑P		**Pn**		**19 19 15.4**	**+0.8**
REAL	**Reales**	**2.09**	**90**	*i* P		**Pn**		**19 19 15.4**	**+0.8**
EBAD	**Badajoz**	**2.31**	**16**	P		**Pn**		**19 19 17.5**	**-0.1**
	0.2nm,0.1s,SNR=38								
EBAD				S		**Sn**		**19 19 45.0**	**+0.1**
	14nm,0.1s,SNR=7.9								
EBAD	**Badajoz**	**2.31**	**16**	P		**Pn**		**19 19 18.0**	**+0.4**
	2.0nm,0.1s,SNR=38								
EBAD				S		**Sn**		**19 19 44.9**	**0.0**
	14nm,0.1s,SNR=7.9								
EBAD	**Badajoz**	**2.31**	**16**	P		**Pn**		**19 19 18.0**	**+0.4**
EBAD				S		**Sn**		**19 19 44.9**	**0.0**
PESTR	**Estremoz**	**2.34**	**4**	*e*Pn		**Pn**		**19 19 19.0**	**+1.0**
PESTR				*e*Sn		**Sn**		**19 19 45.6**	**0.0**
PESTR				A				19 20 08.0	
	19nm,0.6s								
PESTR	**Estremoz**	**2.34**	**4**	*e*Pn		**Pn**		**19 19 19.0**	**+1.0**
PESTR				*e*Sn		**Sn**		**19 19 45.6**	**0.0**
	19nm,0.6s								
EMIJ	**Mijas**	**2.44**	**88**	P		**Pn**		**19 19 18.6**	**-0.8**
	4.3nm,0.2s,SNR=15								
EMIJ				S		**Sn**		**19 19 47.8**	**-0.3**
	5.0nm,0.3s,SNR=7.9								
EMIJ	**Mijas**	**2.44**	**88**	P		**Pn**		**19 19 18.6**	**-0.8**
	4.3nm,0.2s,SNR=15								
EMIJ				S		**Sn**		**19 19 47.9**	**-0.2**
	5.0nm,0.3s,SNR=7.9								
EMIJ	**Mijas**	**2.44**	**88**	P		**Pn**		**19 19 18.6**	**-0.7**
EMIJ				S		**Sn**		**19 19 47.9**	**-0.1**
ECAB	**El Cabril**	**2.45**	**50**	P		**Pn**		**19 19 19.9**	**+0.3**
	12nm,0.1s,SNR=33								
ECAB				S		**Sn**		**19 19 47.1**	**-1.2**
	7.7nm,0.0s,SNR=7.7								
ECAB	**El Cabril**	**2.45**	**50**	P		**Pn**		**19 19 19.9**	**+0.4**
	12nm,0.1s,SNR=33								
ECAB				S		**Sn**		**19 19 47.2**	**-1.1**
	21nm,0.1s,SNR=7.7								
ECAB	**El Cabril**	**2.45**	**50**	P		**Pn**		**19 19 19.9**	**+0.3**
ECAB				S		**Sn**		**19 19 47.2**	**-1.1**
PMAFR	**Mafra**	**2.69**	**335**	*e*Pn		**Pn**		**19 19 23.5**	**+0.7**
PMAFR				*e*Sn		**Sn**		**19 19 52.6**	**-1.6**
PMAFR				A				19 19 56.1	
	35nm,0.4s								
ALMR	**Almeirim**	**2.69**	**347**	*e*P		**Pn**		**19 19 23.6**	**+0.8**
ALMR				*e*S		**Sn**		**19 19 52.8**	**-1.5**
ALMR				*e*S		**Sn**		**19 19 52.8**	**-1.4**
ALMR				AML	AML			19 19 53.8	
	comp=E,40nm,0.8s								
ALMR	**Almeirim**	**2.69**	**347**	*e*P		**Pn**		**19 19 23.6**	**+0.8**
ALMR				*e*S		**Sn**		**19 19 52.8**	**-1.5**
PMRV	**Marv??o**	**2.92**	**6**	*e*Pn		**Pn**		**19 19 26.7**	**+0.8**
PMRV				*e*Sn		**Sn**		**19 19 59.7**	**0.0**
PMRV				A				19 20 02.6	
	comp=E,18nm,0.4s								
PMRV	**Marv??o**	**2.92**	**6**	*e*Pn		**Pn**		**19 19 26.7**	**+0.8**
PMRV				*e*Sn		**Sn**		**19 19 59.7**	**0.0**
	comp=E,18nm,0.4s								
ELOJ	**Sierra Loja**	**2.99**	**77**	P		**Pn**		**19 19 27.2**	**+0.3**
	comp=E,1.8nm,0.1s,SNR=7.9								
ELOJ				S		**Sn**		**19 20 02.2**	**+0.6**
	comp=E,2.7nm,0.2s,SNR=7.9								
ELOJ	**Sierra Loja**	**2.99**	**77**	P		**Pn**		**19 19 27.2**	**+0.3**
	comp=E,1.8nm,0.1s,SNR=7.9								
ELOJ				S		**Sn**		**19 20 01.6**	**0.0**
	comp=E,2.7nm,0.2s,SNR=7.9								
ELOJ	**Sierra Loja**	**2.99**	**77**	P		**Pn**		**19 19 27.2**	**+0.3**
ELOJ				S		**Sn**		**19 20 01.6**	**0.0**
ELUQ	**Luque**	**3.01**	**69**	P		**Pn**		**19 19 27.5**	**+0.4**
	comp=E,4.1nm,0.2s,SNR=7.9								
ELUQ				S		**Sn**		**19 20 02.0**	**0.0**
	comp=E,5.6nm,0.2s,SNR=7.9								

ELUQ	**Luque**	**3.01**	**69**	P		**Pn**		**19 19 27.5**	**+0.3**
	comp=E,4.1nm,0.2s,SNR=7.9								
ELUQ				S		**Sn**		**19 20 02.7**	**+0.7**
	comp=E,6.8nm,0.2s,SNR=7.9								
ELUQ	**Luque**	**3.01**	**69**	P		**Pn**		**19 19 27.5**	**+0.3**
ELUQ				S		**Sn**		**19 20 02.7**	**+0.6**
EADA	**Adamuz**	**3.05**	**57**	⇓P		**Pn**		**19 19 28.1**	**+0.5**
	comp=E,2.8nm,0.1s,SNR=18								
EADA				S		**Sn**		**19 20 02.8**	**-0.1**
	comp=E,19nm,0.1s,SNR=7.9								
EADA	**Adamuz**	**3.05**	**57**	P		**Pn**		**19 19 28.2**	**+0.5**
	comp=E,2.8nm,0.1s,SNR=18								
EADA				S		**Sn**		**19 20 02.8**	**-0.1**
	comp=E,19nm,0.1s,SNR=7.9								
EADA	**Adamuz**	**3.05**	**57**	⇓P		**Pn**		**19 19 28.2**	**+0.5**
EADA				S		**Sn**		**19 20 02.8**	**-0.1**
PTOM	**Tomar**	**3.12**	**351**	*e*Pn		**Pn**		**19 19 29.3**	**+0.6**
PTOM				*e*Sn		**Sn**		**19 20 04.1**	**-0.7**
PTOM				A				19 20 07.2	
	comp=E,30nm,0.4s								
PTOM	**Tomar**	**3.12**	**351**	*e*Pn		**Pn**		**19 19 29.3**	**+0.6**
PTOM				*e*Sn		**Sn**		**19 20 04.1**	**-0.7**
	comp=E,30nm,0.4s								
PCBR	**Castelo Branco**	**3.32**	**4**	*e*Pn		**Pn**		**19 19 32.2**	**+0.8**
PCBR				*e*Sn		**Sn**		**19 20 09.4**	**-0.1**
PCBR				A				19 20 11.6	
	comp=E,12nm,0.3s								
PCBR	**Castelo Branco**	**3.32**	**4**	*e*Pn		**Pn**		**19 19 32.2**	**+0.8**
PCBR				*e*Sn		**Sn**		**19 20 09.4**	**-0.1**
	comp=E,12nm,0.3s								
EGUA	**Guajares**	**3.42**	**84**	P		**Pn**		**19 19 32.4**	**-0.4**
	comp=E,13nm,0.3s,SNR=7.9								
ECOG	**Cogollos-Vega**	**3.48**	**76**	P		**Pn**		**19 19 34.4**	**+0.8**
	comp=E,5.8nm,0.2s,SNR=8.8								
ECOG				S		**Sn**		**19 20 13.9**	**+0.5**
	comp=E,3.3nm,0.2s,SNR=7.9								
ECOG	**Cogollos-Vega**	**3.48**	**76**	P		**Pn**		**19 19 34.2**	**+0.6**
	comp=E,5.8nm,0.2s,SNR=8.8								
ECOG	**Cogollos-Vega**	**3.48**	**76**	P		**Pn**		**19 19 34.2**	**+0.7**
EQUE	**Quentar**	**3.56**	**78**	⇓P		**Pn**		**19 19 35.6**	**+0.9**
	comp=E,3.0nm,0.1s,SNR=18								
EQUE				S		**Sn**		**19 20 15.7**	**+0.1**
	comp=E,3.8nm,0.2s,SNR=7.9								
EQUE	**Quentar**	**3.56**	**78**	P		**Pn**		**19 19 35.6**	**+0.9**
	comp=E,3.0nm,0.1s,SNR=18								
EQUE				S		**Sn**		**19 20 16.0**	**+0.4**
	comp=E,3.8nm,0.2s,SNR=7.9								
EBAN	**Banos Encina**	**3.59**	**62**	⇓P		**Pn**		**19 19 35.2**	**+0.1**
	comp=E,3.0nm,0.2s,SNR=18								
EBAN				S		**Sn**		**19 20 15.3**	**-1.1**
	comp=E,8.9nm,0.2s,SNR=7.9								
MIF	**Mishlifen**	**3.76**	**145**	P		**Pn**		**19 19 31.0**	**-6.5**
MIF				S		**Sn**		**19 20 06.0**	**-14**
TZK	**Tazeka**	**3.83**	**128**	P		**Pn**		**19 19 34.0**	**-4.4**
TZK				S		**Sn**		**19 20 09.0**	**-13**
TZK	**Tazeka**	**3.83**	**128**	*e*P		**Pn**		**19 19 34.0**	**-4.4**
MTE	**Manteigas**	**3.87**	**3**	*e*Pn		**Pn**		**19 19 39.9**	**+0.9**
MTE				*e*Sn		**Sn**		**19 20 22.8**	**-0.3**
EALB	**Alboran**	**3.90**	**97**	P		**Pn**		**19 19 37.5**	**-1.9**
	comp=E,1.8nm,0.1s,SNR=7.9								
EALB				S		**Sn**		**19 20 20.8**	**-3.0**
	comp=E,7.6nm,0.2s,SNR=7.9								
EALB	**Alboran**	**3.90**	**97**	P		**Pn**		**19 19 37.5**	**-1.8**
	comp=E,3.4nm,0.2s,SNR=7.9								
EALB				S		**Sn**		**19 20 20.8**	**-3.1**
	comp=E,7.6nm,0.2s,SNR=7.9								
EBER	**Berja**	**3.97**	**83**	P		**Pn**		**19 19 40.1**	**-0.2**
	comp=E,1.9nm,0.2s,SNR=12								
EBER				S		**Sn**		**19 20 25.3**	**-0.2**
	comp=E,1.6nm,0.3s,SNR=7.9								
EBER	**Berja**	**3.97**	**83**	P		**Pn**		**19 19 40.5**	**+0.3**
	comp=E,1.2nm,0.1s,SNR=12								
EBER				S		**Sn**		**19 20 25.3**	**-0.2**
	comp=E,3.5nm,0.3s,SNR=7.9								
EBER	**Berja**	**3.97**	**83**	P		**Pn**		**19 19 40.5**	**+0.2**
EBER				S		**Sn**		**19 20 25.3**	**-0.2**
EQES	**Quesada**	**3.99**	**70**	P		**Pn**		**19 19 40.6**	**0.0**
	comp=E,3.0nm,0.1s,SNR=51								
EQES				S		**Sn**		**19 20 26.7**	**+0.7**
	comp=E,6.2nm,0.2s,SNR=7.9								
EQES	**Quesada**	**3.99**	**70**	P		**Pn**		**19 19 40.6**	**0.0**
	comp=E,3.0nm,0.1s,SNR=51								
EQES				S		**Sn**		**19 20 25.7**	**-0.3**
	comp=E,6.2nm,0.2s,SNR=7.9								
EQES	**Quesada**	**3.99**	**70**	P		**Pn**		**19 19 40.5**	**0.0**
EQES				S		**Sn**		**19 20 25.7**	**-0.3**
PVIS	**Viseu**	**4.18**	**

EMUR	**La Murta**	**5.40**	**74**	P		**Pn**	**19 20 00.0**	**+0.1**
	comp=E,3.4nm,0.3s,SNR=7.9							
ECAL	**Calabor**	**5.47**	**8**	P		**Pn**	**19 20 01.9**	**+1.1**
	comp=E,1.6nm,0.2s,SNR=8.8							
ECAL				S		**Sn**	**19 21 01.6**	**-0.8**
	comp=E,8.6nm,0.2s,SNR=7.9							
ECAL	**Calabor**	**5.47**	**8**	P		**Pn**	**19 20 01.9**	**+1.1**
ECAL				S		**Sn**	**19 21 01.4**	**-0.9**
ETOR	**Torete**	**6.21**	**45**	⇓P		**Pn**	**19 20 12.2**	**+1.2**
	comp=E,8.9nm,0.1s,SNR=18							
ETOR				S		**Sn**	**19 21 19.4**	**-1.2**
	comp=E,17nm,0.2s,SNR=7.9							
ETOR	**Torete**	**6.21**	**45**	⇓P		**Pn**	**19 20 12.1**	**+1.1**
ETOR	**Torete**	**6.21**	**45**	P		**Pn**	**19 20 12.2**	**+1.2**
	comp=E,9.8nm,0.1s,SNR=18							
STS	**Santiago**	**6.38**	**355**	P		**Pn**	**19 20 14.3**	**+1.0**
	comp=E,24nm,0.1s,SNR=7.9							
ECRI	**Cripan**	**7.32**	**32**	P		**Pn**	**19 20 27.4**	**+1.2**
	comp=E,0.8nm,0.1s,SNR=4.0							
EORO	**Oroz-Betelu**	**8.09**	**36**	P		**Pn**	**19 20 38.8**	**+2.2**
	comp=E,0.7nm,0.2s,SNR=6.8							
EORO	**Oroz-Betelu**	**8.09**	**36**	P		**Pn**	**19 20 38.8**	**+2.1**
	comp=E,0.7nm,0.2s,SNR=6.8							
EALK	**Alkurruntz**	**8.25**	**34**	P		**Pn**	**19 20 40.6**	**+1.8**
	SNR=4.0							
SJPF	**Ste Jean**	**8.30**	**36**	*e*Pn		**Pn**	**19 20 40.9**	**+1.4**
SJPF				*e*Sn		**Sn**	**19 22 09.7**	**-2.0**
	comp=E,1.6nm,0.3s							
SJPF	**Ste Jean**	**8.30**	**36**	*e*Pn		**Pn**	**19 20 40.9**	**+1.4**
SJPF				*e*Sn		**Sn**	**19 22 09.7**	**-2.0**
	comp=E,0.8nm,0.3s							
ETSF	**Etsaut**	**8.46**	**39**	*e*Pn		**Pn**	**19 20 42.9**	**+1.1**
ETSF				*e*Sn		**Sn**	**19 22 12.9**	**-2.9**
	comp=E,0.7nm,0.2s							
ETSF	**Etsaut**	**8.46**	**39**	*e*Pn		**Pn**	**19 20 42.9**	**+1.1**
ETSF				*e*Sn		**Sn**	**19 22 12.9**	**-2.9**
	comp=E,0.3nm,0.2s							
EBIE	**Bielsa**	**8.68**	**42**	P		**Pn**	**19 20 46.2**	**+1.4**
	comp=E,3.1nm,0.8s,SNR=14							
EBIE	**Bielsa**	**8.68**	**42**	P		**Pn**	**19 20 46.2**	**+1.4**
	comp=E,3.1nm,0.8s,SNR=14							
EPF	**Esparros**	**9.02**	**41**	*e*Pn		**Pn**	**19 20 50.1**	**+0.6**
EPF				*e*Sn		**Sn**	**19 22 26.3**	**-3.2**
	comp=E,1.8nm,0.3s							
EPF	**Esparros**	**9.02**	**41**	*e*Pn		**Pn**	**19 20 50.1**	**+0.6**
EPF				*e*Sn		**Sn**	**19 22 26.3**	**-3.2**
	comp=E,0.9nm,0.3s							
RJF	**Les Rejaudoux**	**11.24**	**36**	*e*Pn		**Pn**	**19 21 20.1**	**+0.3**
QUIF	**Quistinic**	**11.89**	**15**	*e*Pn		**Pn**	**19 21 28.1**	**-0.4**

NIED ***26*** *19:36:00,2960N×130.10E,h11km,Mw4.0 Best double couple: M₀1.19000×10¹⁵ NP1:φ₀320.00000°,δ59.00000°, λ-59.00000°. NP2:φ₀90.00000°,δ43.00000°, λ-131.00000°.*

ISCJB ***26*** *19:36:42.8±1.0,2955N±005×130.12E±009,h27km±8km, mb4.1/7, Error ellipse: s-maj=15.0km s-min=4.4km az=26.6*

MOS ***26*** *19:36:43.3±0.6,2954N×130.21E,h33km,mb4.9/1, Error ellipse: s-maj=39.7km s-min=18.7km az=94.5*

BJI ***26*** *19:36:43.4,2887N×130.04E,h33km,mB4.9,mb4.2,Ms4.0, Msz4.0*

JMA ***26*** *19:36:43.1±0.1,2959N×130.13E,h26km±3km,M4.1*

JMA Felt I J1.

NEIC ***26*** *19:36:45.9±1.1,2957N×130.12E,h38km±12km,mb4.7/2, MW4.0(NIED), Error ellipse: s-maj=16.6km s-min=9.7km az=101.0*

IDC ***26*** *19:36:46.5±2.4,2956N×130.11E,h43km±26km,mb3.7/5, mb1 3.8/8,mb1mx3.6/26,mbtmp3.7/8,ML3.4/3, Error ellipse: s-maj=37.1km s-min=17.6km az=80.0*

ISC 26 19:36:43.5±1.2,2957N±005×13009E±009,h22km±10km, n24,σ0$98/34,mb4.1/7,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNN	**Nakanoshima**	**0.33**	**326**	P		**Pb**	**19 36 50.6**	**-0.2**
JNN				S		**Sb**	**19 36 56.1**	**+0.4**
JKC	**Kuchinoerabu**	**0.90**	**6**	P		**Pb**	**19 36 59.4**	**-1.0**
JKC				*e*S		**Sb**	**19 37 11.8**	**-0.1**
JAM	**Amami Oshima**	**1.23**	**200**	P		**Pn**	**19 37 04.4**	**-1.0**
JAM				*e*S		**Sn**	**19 37 20.1**	**-1.2**
JZK	**Kikaishima**	**1.25**	**185**	P		**Pn**	**19 37 06.7**	**+1.0**
JZK				*e*S		**Sn**	**19 37 25.1**	**+3.2**
JTN	**Tanegashima 3**	**1.33**	**35**	P		**Pn**	**19 37 05.8**	**-1.0**
JTN				*e*S		**Sn**	**19 37 23.4**	**-0.4**
JTSR	**Tashiro 2**	**1.75**	**24**	P		**Pn**	**19 37 11.7**	**-0.8**
JTSR				*e*S		**Sn**	**19 37 33.4**	**-0.8**
JTK	**Tokunoshima**	**2.04**	**210**	P		**Pn**	**19 37 16.0**	**-0.5**
JTK				*e*S		**Sn**	**19 37 40.3**	**-1.0**
JIH	**Iheya**	**3.14**	**217**	P		**Pn**	**19 37 32.4**	**+0.7**
JIH				*e*S		**Sn**	**19 38 06.7**	**-1.8**
JOW	**Kunigami**	**3.16**	**211**	P		**Pn**	**19 37 33.5**	**+1.5**
	12nm,0.3s,baz=85,slow=18,SNR=30							
JOW				S		**Sn**	**19 38 08.4**	**-0.6**
	24nm,0.3s,baz=117,slow=27,SNR=7.5							
JOW	**Kunigami**	**3.16**	**211**	P		**Pn**	**19 37 33.3**	**+1.3**
JOW				*e*S		**Sn**	**19 38 09.8**	**+0.8**
KSRS	**Korea Array**	**8.07**	**348**	P		**Pn**	**19 38 42.4**	**+3.0**
	0.1nm,0.3s,baz=167,slow=12,SNR=3.0							
MJAR	**Matsushiro Arr**	**9.73**	**42**	P		**Pn**	**19 39 03.2**	**+1.0**
	0.5nm,0.3s,baz=256,slow=15,SNR=5.1							
MJAR	**Matsushiro Arr**	**9.73**	**42**	P		**Pn**	**19 39 03.2**	**+1.0**
CN2	**Changchun**	**14.68**	**347**	*e*P		**Pn**	**19 40 19.3**	**+10**
CN2				AMB		AMB		
	comp=Z,20nm,1.0s							
CN2				AMB		AMB		
	comp=Z,200nm,4.0s							
CN2				LR		LR		
	comp=N,400nm,17.0s							
CN2				LR		LR		
	comp=E,400nm,17.0s							
CN2				LR		LR		
	comp=Z,800nm,19.0s							
SONM	**Songino Array**	**25.81**	**322**	P		**P**	**19 42 12.9**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.3,baz=139,slow=9.6,SNR=5.8							
GTA	**Gaotai**	**26.71**	**300**	*e*P		**P**	**19 42 25.3**	**+4.1**
GTA				AP		pP	19 42 29.0	+1.3
GTA				AMB		AMB		
	comp=Z,3.0nm,0.9s,mb3.8							
KURK	**Kurchatov**	**43.62**	**314**	P		**P**	**19 44 47.3**	**+1.3**
	comp=Z,0.5nm,0.6s,mb3.5,baz=97,slow=8.9,SNR=3.7							
FITZ	**Fitzroy Crossi**	**47.59**	**186**	*e*P		**P**	**19 45 18.0**	**+0.3**
	comp=Z,4.2nm,0.6s,mb4.7							
FITZ	**Fitzroy Crossi**	**47.59**	**186**	P		**P**	**19 45 17.8**	**+0.1**
	comp=Z,2.4nm,0.7s,mb4.4,baz=4.3,slow=11,SNR=8.5							
WRAB	**Tennant Creek**	**49.38**	**175**	*e*P		**P**	**19 45 31.8**	**+0.3**
WRAB				pmax		pmax		
	comp=Z,7.0nm,0.8s,mb4.7							
WRAB	**Tennant Creek**	**49.38**	**175**	*e*P		**P**	**19 45 31.8**	**+0.3**
	comp=Z,7.4nm,0.8s,mb4.8							
WRA	**Warramunga Arr**	**49.39**	**175**	P		**P**	**19 45 31.6**	**-0.1**
	comp=Z,5.0nm,0.7s,mb4.7,baz=353,slow=8.2,SNR=57							
WB2	**Warramunga Arr**	**49.39**	**175**	*e*P		**P**	**19 45 32.0**	**+0.4**
ASAR	**Alice Springs**	**53.05**	**176**	P		**P**	**19 45 59.6**	**+0.6**
	comp=Z,2.0nm,0.6s,mb4.2,baz=2.2,slow=6.1,SNR=48							

VIE ***26*** *19:47:06.0±0.5,4587N×1566E,h8km±2km,mb2.6/5, ML3.0/4, Error ellipse: s-maj=3.0km s-min=1.3km az=130.0 17 km SE of Krsko*

ISCJB ***26*** *19:47:06.3±0.2,4591N±001×1563E±002,h10km±2km, Error ellipse: s-maj=2.3km s-min=2.2km az=166.0*

CSEM ***26*** *19:47:06.7±0.1,4588N×1560E,h12km,ML3.5/9, Error ellipse: s-maj=1.2km s-min=0.9km az=154.0*

SZGRF ***26*** *19:47:06.9,4588N×1604E,h10km,mb3.2,Northwestern Balkan Peninsula*

PRU ***26*** *19:47:07.4,4583N×1561E,h0km*

NEIC ***26*** *19:47:07.3±0.5,4586N×1555E,h10km,ML2.7(BRA), ML2.9(LJU),ML3.2(SZGRF), Error ellipse: s-maj=6.2km s-min=3.5km az=150.0*

NEIC Felt [V] at Brezice.

LJU ***26*** *19:47:07.1,4592N×1561E,h3km,ML2.8*

ISC 26 19:47:07.2±0.3,4589N±001×1562E±002,h9km±2km,n112, σ1$04/214,21C-24D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GCIS	**Gornji Cirnik**	**0.02**	**173**	⇑*i*	Pg	**Pg**	**19 47 08.0**	**-0.7**
GCIS				*i*	Sg	**Sg**	**19 47 08.7**	**-1.1**
GCIS								
	comp=Z,38μm,0.1s							
GCIS	**Gornji Cirnik**	**0.02**	**173**	⇑*i*	Pg	**Pg**	**19 47 08.0**	**-0.7**
GCIS				*i*	Sg	**Sg**	**19 47 08.7**	**-1.1**
GOLS	**Golise**	**0.12**	**0**	⇓*i*	Pg	**Pg**	**19 47 09.6**	**-0.4**
GOLS				*e*	Sg	**Sg**	**19 47 11.0**	**-0.9**
GOLS								
	comp=Z,2μm,0.1s							
GOLS	**Golise**	**0.12**	**0**	⇓*i*	Pg	**Pg**	**19 47 09.6**	**-0.4**
GOLS				*e*	Sg	**Sg**	**19 47 11.0**	**-0.9**
GOLS	**Golise**	**0.12**	**0**	⇓*i*	Pg	**Pg**	**19 47 09.6**	**-0.4**
GOLS				*e*	Sg	**Sg**	**19 47 11.0**	**-0.9**
CRES	**Cresnjev**	**0.13**	**241**	⇑*i*	Pg	**Pg**	**19 47 09.5**	**-0.6**
CRES				*i*	Sg	**Sg**	**19 47 11.4**	**-0.7**
CRES								
	comp=Z,2μm,0.1s							
CRES	**Cresnjev**	**0.13**	**241**	⇑*i*	Pg	**Pg**	**19 47 09.5**	**-0.6**
CRES				*i*	Sg	**Sg**	**19 47 11.4**	**-0.7**
	comp=Z,2μm,0.1s							
CRES	**Cresnjev**	**0.13**	**241**	⇑*i*	Pg	**Pg**	**19 47 09.5**	**-0.6**
CRES				*i*	Sg	**Sg**	**19 47 11.4**	**-0.7**
LEGS	**Legarje**	**0.22**	**286**	⇑*i*	Pg	**Pg**	**19 47 11.2**	**-0.4**
LEGS				*i*	Sg	**Sg**	**19 47 15.0**	**+0.3**
DOBS	**Dobrina**	**0.28**	**338**	⇓*i*	Pg	**Pg**	**19 47 12.7**	**0.0**
DOBS				*i*	Sg	**Sg**	**19 47 16.6**	**0.0**
DOBS								
	comp=Z,583nm,0.1s							
DOBS	**Dobrina**	**0.28**	**338**	⇓*i*	Pg	**Pg**	**19 47 12.7**	**-0.1**
DOBS				*i*	Sg	**Sg**	**19 47 17.1**	**+0.5**
	comp=Z,583nm,0.1s							
DOBS	**Dobrina**	**0.28**	**338**	⇓*i*	Pg	**Pg**	**19 47 12.7**	**0.0**
DOBS				*i*	Sg	**Sg**	**19 47 17.1**	**+0.5**
BOJS	**Bojanci**	**0.47**	**214**	*i*	Pg	**Pg**	**19 47 15.7**	**-0.5**
BOJS				*i*	Sg	**Sg**	**19 47 22.4**	**+0.1**
BOJS								
	comp=Z,591nm,0.2s							
BOJS	**Bojanci**	**0.47**	**214**	*i*	Pg	**Pg**	**19 47 15.7**	**-0.5**
BOJS				*i*	Sg	**Sg**	**19 47 22.4**	**+0.1**
	comp=Z,591nm,0.2s							
BOJS	**Bojanci**	**0.47**	**214**	*i*	Pg	**Pg**	**19 47 15.7**	**-0.5**
BOJS				*i*	Sg	**Sg**	**19 47 22.4**	**+0.1**
PDKS	**Podkum**	**0.47**	**292**	*i*	Pg	**Pg**	**19 47 16.3**	**0.0**
PDKS				*i*	Sg	**Sg**	**19 47 22.5**	**0.0**
PDKS								
	comp=Z,367nm,0.2s							
PDKS	**Podkum**	**0.47**	**292**	*i*	Pg	**Pg**	**19 47 16.3**	**0.0**
PDKS				*i*	Sg	**Sg**	**19 47 22.5**	**+0.1**
PDKS	**Podkum**	**0.47**	**292**	*i*	Pg	**Pg**	**19 47 16.3**	**0.0**
PDKS				*i*	Sg	**Sg**	**19 47 22.5**	**0.0**
VISS	**Visnje**	**0.56**	**261**	*i*	Pg	**Pg**	**19 47 17.4**	**-0.5**
VISS				*i*	Sg	**Sg**	**19 47 24.9**	**-0.2**
VISS								
	comp=Z,434nm,0.3s							
VISS	**Visnje**	**0.56**	**261**	*i*	Pg	**Pg**	**19 47 17.4**	**-0.5**
VISS				*i*	Sg	**Sg**	**19 47 24.9**	**-0.3**
VISS	**Visnje**	**0.56**	**261**	*i*	Pg	**Pg**	**19 47 17.4**	**-0.5**
VISS				*i*	Sg	**Sg**	**19 47 24.9**	**-0.2**
GROS	**Grobnik**	**0.58**	**352**	⇓*i*	Pg	**Pg**	**19 47 18.4**	**0.0**
GROS				*i*	Sg	**Sg**	**19 47 26.1**	**+0.2**
GROS								
	comp=Z,173nm,0.1s							
GROS	**Grobnik**	**0.58**	**352**	⇓*i*	Pg	**Pg**	**19 47 18.4**	**+0.1**
GROS				*i*	Sg	**Sg**	**19 47 26.1**	**+0.2**
GROS	**Grobnik**	**0.58**	**352**	⇓*i*	Pg	**Pg**	**19 47 18.4**	**0.0**
GROS				*i*	Sg	**Sg**	**19 47 26.1**	**+0.2**
SISC	**Sisak**	**0.67**	**128**	*e*P	g	**Pg**	**19 47 21.7**	**+1.6**
SISC					Sg	**Sg**	**19 47 30.9**	**+2.1**
SISC	**Sisak**	**0.67**	**128**	*e*P	g	**Pg**	**19 47 21.7**	**+1.6**
SISC					Sg	**Sg**	**19 47 30.9**	**+2.0**
VNDS	**Vrh nad Dolski**	**0.68**	**289**	*i*	Pg	**Pg**	**19 47 19.9**	**-0.4**
VNDS				*i*	Sg	**Sg**	**19 47 29.3**	**+0.3**
ZAVS	**Zavodnje**	**0.69**	**323**	⇓*i*	Pg	**Pg**	**19 47 20.2**	**-0.2**
ZAVS				*i*	Sg	**Sg**	**19 47 30.4**	**+1.0**
KOGS	**Kog**	**0.71**	**38**	⇓*i*	Pg	**Pg**	**19 47 21.1**	**+0.3**
KOGS				*i*	Sg	**Sg**	**19 47 31.1**	**+1.1**
KOGS	**Kog**	**0.71**	**38**	⇓*i*	Pg	**Pg**	**19 47 21.1**	**+0.3**
KOGS				*i*	Sg	**Sg**	**19 47 31.1**	**+1.0**
LJU	**Ljubljana**	**0.78**	**282**	*i*	Pg	**Pg**	**19 47 21.9**	**-0.3**
LJU				*i*	Sg	**Sg**	**19 47 32.2**	**-0.1**
LJU								
	comp=Z,109nm,0.1s							
LJU	**Ljubljana**	**0.78**	**282**	⇑*i*	Pg	**Pg**	**19 47 21.9**	**-0.3**
	comp=Z,56nm,0.1s							
LJU				*e*	Sg	**Sg**	**19 47 32.2**	**-0.1**
LJU	**Ljubljana**	**0.78**	**282**	*i*	Pg	**Pg**	**19 47 21.9**	**-0.3**
LJU				*i*	Sg	**Sg**	**19 47 32.2**	**-0.1**
PERS	**Pernice**	**0.82**	**335**	⇓*i*	Pg	**Pg**	**19 47 22.8**	**-0.3**
PERS				*i*	Sg	**Sg**	**19 47 33.4**	**-0.4**
PERS								
	comp=Z,256nm,0.2s							
PERS	**Pernice**	**0.82**	**335**	⇓*i*	Pg	**Pg**	**19 47 22.8**	**-0.2**
PERS				*i*	Sg	**Sg**	**19 47 33.4**	**-0.4**
PERS	**Pernice**	**0.82**	**335**	⇓*i*	Pg	**Pg**	**19 47 22.8**	**-0.3**
PERS				*i*	Sg	**Sg**	**19 47 33.4**	**-0.4**
BISS	**Bistriski jare**	**0.83**	**336**	*i*	Pg	**Pg**	**19 47 22.9**	**-0.3**
CEY	**Cerknica**	**0.85**	**260**	*i*	Pg	**Pg**	**19 47 22.9**	**-0.7**
CEY				*i*	Sg	**Sg**	**19 47 35.0**	**+0.4**
CEY								
	comp=Z,216nm,0.2s							
CEY	**Cerknica**	**0.85**	**260**	*e*Pn		**Pn**	**19 47 24.4**	**-0.9**
CEY				*i*	Sg	**Sg**	**19 47 35.0**	**+0.4**
CEY				*e*Sn		**Sn**	**19 47 35.3**	**-2.6**
CEY	**Cerknica**	**0.85**	**260**	*i*	Pg	**Pg**	**19 47 22.9**	**-0.7**
CEY				*i*	Sg	**Sg**	**19 47 35.0**	**+0.4**
SOKA	**Soboth**	**0.89**	**333**	⇓*i*	Pg	**Pg**	**19 47 23.8**	**-0.5**
SOKA				⇑*i*	Sg	**Sg**	**19 47 35.4**	**-0.4**
	comp=Z,64nm,0.3s							
MOZS	**Mozjanca**	**0.92**	**297**	⇓*i*	Pg	**Pg**	**19 47 24.4**	**-0.4**
MOZS				*i*	Sg	**Sg**	**19 47 37.1**	**+0.4**
KNDS	**Knezji Dol**	**0.94**	**248**	*i*	Pg	**Pg**	**19 47 24.5**	**-0.8**
KNDS				*i*	Sg	**Sg**	**19 47 39.3**	**+1.8**
KNDS								
	comp=Z,267nm,0.3s							
KNDS	**Knezji Dol**	**0.94**	**248**	*i*	Pg	**Pg**	**19 47 24.5**	**-0.8**
KNDS				*i*	Sg	**Sg**	**19 47 39.3**	**+1.8**
KNDS	**Knezji Dol**	**0.94**	**248**	*i*	Pg	**Pg**	**19 47 24.5**	**-0.8**
KNDS				*i*	Sg	**Sg**	**19 47 39.3**	**+1.8**
OBKA	**Obir**	**0.97**	**310**	*e*Pg		**Pg**	**19 47 25.4**	**-0.4**
	SNR=135							
OBKA				⇑*i*	Sg	**Sg**	**19 47 39.3**	**+0.9**
	comp=Z,312nm,0.3s							
JAVS	**Javornik**	**1.09**	**271**	*i*	Pg	**Pg**	**19 47 26.9**	**-1.1**
JAVS				*i*	Sg	**Sg**	**19 47 43.0**	**+0.8**
JAVS								
	comp=Z,221nm,0.2s							
JAVS	**Javornik**	**1.09**	**271**	*i*	Sg	**Sg**	**19 47 43.0**	**+0.8**
JAVS	**Javornik**	**1.09**	**271**	*i*	Pg	**Pg**	**19 47 26.9**	**-1.1**
JAVS				*i*	Sg	**Sg**	**19 47 43.0**	**+0.8**
GORS	**Gorjuse**	**1.21**	**291**	*i*	Pg	**Pg**	**19 47 29.4**	**-1.0**
GORS				*i*	Sg	**Sg**	**19 47 46.8**	**+0.7**
GORS								
	comp=Z,194nm,0.4s							
GORS	**Gorjuse**	**1.21**	**291**	*i*	Pg	**Pg**	**19 47 29.4**	**-1.0**
GORS				*i*	Sg	**Sg**	**19 47 46.8**	**+0.7**
GORS	**Gorjuse**	**1.21**	**291**	*i*	Pg	**Pg**	**19 47 29.4**	**-1.0**
GORS				*i*	Sg	**Sg**	**19 47 46.8**	**+0.7**
VOJS	**Vojsko**	**1.22**	**277**	*i*	Pg	**Pg**	**19 47 29.4**	**-1.2**
VOJS				*i*	Sg	**Sg**	**19 47 47.0**	**+0.6**
CADS	**Cadrg**	**1.36**	**285**	⇑*i*	Pg	**Pg**	**19 47 31.9**	**-1.2**
CADS				*i*	Sg	**Sg**	**19 47 50.7**	**-0.1**
CADS								
	comp=Z,256nm,0.4s							
CADS	**Cadrg**	**1.36**	**285**	⇑*i*	Pg	**Pg**	**19 47 31.9**	**-1.3**
CADS				*i*	Sg	**Sg**	**19 47 50.7**	**-0.1**
CADS	**Cadrg**	**1.36**	**285**	⇑*i*	Pg	**Pg**	**19 47 31.9**	**-1.2**
CADS				*i*	Sg	**Sg**	**19 47 50.7**	**-0.1**
ARSA	**Arzberg**	**1.36**	**357**	*e*Pn		**Pn**	**19 47 31.9**	**-0.5**
NVLJ	**Novalja**	**1.43**	**202**	*e*Pn		**Pn**	**19 47 34.1**	**+0.8**
NVLJ					Sg	**Sg**	**19 47 54.1**	**+1.0**
NVLJ	**Novalja**	**1.43**	**202**	*e*Pn		**Pn**	**19 47 34.0**	**+0.8**
ROBS	**Robic**	**1.51**	**284**	⇓*i*	Pg	**Pg**	**19 47 34.6**	**-1.6**
ROBS				*i*	Sg	**Sg**	**19 47 56.0**	**+0.1**
ROBS								
	comp=Z,87nm,0.4s							
ROBS	**Robic**	**1.51**	**284**	⇓*i*	Pg	**Pg**	**19 47 34.6**	**-1.6**
ROBS				*i*	Sg	**Sg**	**19 47 56.0**	**+0.2**
ROBS	**Robic**	**1.51**	**284**	⇓*i*	Pg	**Pg**	**19 47 34.6**	**-1.6**
ROBS				*i*	Sg	**Sg**	**19 47 56.0**	**+0.1**
MYKA	**Terra Mystica**	**1.56**	**299**	⇑*i*	Pg	**Pg**	**19 47 36.0**	**-1.1**
MYKA				⇑*i*	Sg	**Sg**	**19 47 59.1**	**+1.7**
	comp=Z,74nm,0.5s							
BLY	**Banja Luka**	**1.59**	**135**	*e*Pn		**Pg**	**19 47 37.1**	**-0.5**
BLY				*e*Sn		**Sg**	**19 47 59.1**	**+1.0**
RHK3	**Tenkes**	**1.84**	**89**	⇑*e*Pn		**Pn**	**19 47 37.9**	**-0.9**
RHK3				*e*Sn		**Sn**	**19 48 00.0**	**-2.2**
KBA	**Koelnbreinsper**	**1.97**	**308**	⇓*e*Pg		**Pg**	**19 47 43.7**	**-1.3**
	SNR=25							
KBA				⇑*i*	Sn	**Sn**	**19 48 06.8**	**+1.2**
KBA	**Koelnbreinsper**	**1.97**	**308**	*e*Pn		**Pg**	**19 47 44.3**	**-0.7**
KBA				*e*Sn		**Sg**	**19 48 09.0**	**-1.5**
CSNA	**Conrad Observa**	**2.04**	**4**	⇑*i*	Pg	**Pn**	**19 47 42.2**	**+0.5**
CSNA				⇓*i*	Sg	**Sg**	**19 48 14.4**	**+1.5**
	comp=Z,41nm,0.5s							
CONA	**Conrad Observa**	**2.05**	**4**	⇑*e*Pg		**Pn**	**19 47 42.3**	**+0.5**
	SNR=43							
CONA				⇓*i*	Sg	**Sg**	**19 48 14.8**	**+2.0**
	comp=Z,39nm,0.5s							
CONA	**Conrad Observa**	**2.05**	**4**	Pg		**Pn**	**19 47 42.3**	**+0.6**
	SNR=43							
CONA				Sg		**Sg**	**19 48 14.8**	**+1.9**
	comp=Z,39nm,0.5s							
PKSM	**Moragy**	**2.13**	**80**	*e*Pn		**Pn**	**19 47 41.8**	**-1.0**
MOA	**Molln**	**2.17**	**335**	⇓*e*Pn		**Pn**	**19 47 44.5**	**+1.1**
	SNR=15							
MOA				⇑*i*	Sn	**Sn**	**19 48 11.3**	**+0.8**
MOA	**Molln**	**2.17**	**335**	*e*Pn		**Pn**	**19 47 44.8**	**+1.4**
MOA				*e*Sn		**Sn**	**19 48 11.2**	**+0.8**
ABTA	**Abfaltersbach**	**2.32**	**293**	⇑*i*Pn		**Pn**	**19 47 46.7**	**+1.2**
ZST	**Bratislava**	**2.52**	**23**	*e*PN		**Pn**	**19 47 44.9**	**-3.3**
ZST				*e*PG		**Pg**	**19 47 54.8**	**-0.6**
ZST				*e*SN		**Sn**	**19 48 17.1**	**-1.9**
ZST				*e*SG		**Sg**	**19 48 29.5**	**+1.4**
ZST	**Bratislava**	**2.52**	**23**	*e*Pn		**Pn**	**19 47 44.9**	**-3.3**
ZST				*e*Pg		**Pg**	**19 47 54.8**	**-0.6**
ZST				*e*Sn		**Sn**	**19 48 17.1**	**-1.9**
ZST				*e*Sg		**Sg**	**19 48 29.5**	**+1.4**
MODS	**Modra-Piesok**	**2.73**	**24**	*e*PN		**Pn**	**19 47 51.0**	**-0.1**
MODS				*e*PG		**Pg**	**19 47 59.1**	**-0.3**
MODS				*e*SN		**Sn**	**19 48 23.0**	**-1.2**
MODS				*e*SG		**Sg**	**19 48 35.5**	**+0.7**
MODS	**Modra-Piesok**	**2.73**	**24**	*e*Pn		**Pn**	**19 47 51.1**	**0.0**
MODS	**Modra-Piesok**	**2.73**	**24**	*e*Pn		**Pn**	**19 47 51.1**	**0.0**
MODS				*e*Pg		**Pg**	**19 47 59.1**	**-0.3**
MODS				*e*Sn		**Sn**	**19 48 23.1**	**-1.1**
MODS				*e*Sg		**Sg**	**19 48 35.5**	**+0.7**
FGSL	**Fruska Gora**	**3.03**	**102**	*e*Pn		**Pn**	**19 47 54.9**	**-0.4**
WTTA	**Wattenberg**	**3.07**	**298**	*e*Pn		**Pn**	**19 47 57.2**	**+1.3**
GEC2	**GERESS Array S**	**3.23**	**337**	*e*Pn		**Pn**	**19 47 58.7**	**+0.7**
KOLL	**Kolacno**	**3.29**	**34**	*e*SG		**Sn**	**19 48 35.6**	**-2.4**
VYHS	**Vyhne**	**3.40**	**39**	*e*Pn		**Pn**	**19 48 00.3**	**-0.1**
VYHS				*e*Sn		**Sn**	**19 48 38.7**	**-2.1**
VYHS	**Vyhne**	**3.40**	**39**	*e*Pn		**Pn**	**19 48 00.3**	**-0.1**
VYHS				*e*Sn		**Sn**	**19 48 38.7**	**-2.1**
VYHS				*e*SN		**Sn**	**19 48 38.7**	**-2.1**
VYHS	**Vyhne**	**3.40**	**39**	*e*PN		**Pn**	**19 48 00.3**	**-0.1**
TREC	**Trest**	**3.41**	**358**	*e*PG		**Pg**	**19 48 08.9**	**-3.5**
KHC	**Kasperske Hory**	**3.53**	**338**	*e*PN		**Pn**	**19 48 03.2**	**+1.1**
KHC				*ex*		x	19 48 21.5	
KHC				*e*SN		**Sn**	**19 48 42.5**	**-1.4**
KHC				*ex*		x	19 48 57.0	
KHC				*e*SG		**Sg**	**19 49 01.0**	**+0.6**
	comp=Z,17nm,0.8s							
PSZ	**Piszkesteto**	**3.56**	**54**	*e*Pn		**Pn**	**19 48 03.0**	**+0.4**
DIVS	**Divbare**	**3.58**	**118**	*e*Pn		**Pn**	**19 47 56.7**	**-6.1**
TREB	**Trebinje**	**3.73**	**147**	*e*Pn		**Pn**	**19 48

AKASG	**Malin Array Be**	**66.65**	**26**	P		P		20 18 37.2	0.0
	5.7nm,0.9s,baz=225,slow=7.1,SNR=14								
NOA	**NORSAR Array B**	**69.55**	**11**	LR		LR		20 47 47.5	
	comp=Z,49nm,18.2s,baz=200,slow=34								

IDC 26 20:14:54.5±9.2, 693S×1043W, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.6/20, mbtmp3.7/3, MS4.1/1, Ms1 4.0/1, ms1mx3.1/37, Error ellipse: s-maj=388.4km s-min=116.1km az=136.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**23.30**	**31**	P		P	20 20 04.2	-0.1
	2.2nm,0.8s,baz=216,slow=9.8,SNR=14							
BDFB	**Brasilia**	**37.80**	**253**	LR		LR	20 33 45.6	
	comp=Z,276nm,21.8s,baz=248,slow=30							
GERES	**GERESS Array B**	**59.43**	**18**	P		P	20 24 59.0	+0.2
	0.2nm,0.6s,baz=189,slow=5.9,SNR=2.4							
AKASG	**Malin Array Be**	**66.82**	**26**	P		P	20 25 48.0	0.0
	1.1nm,0.6s,baz=224,slow=6.5,SNR=2.7							

*ISCJB **26** 20:26:20.2±0.4, 4375N±004×10524W±005, h0km, mb4.0/4, Error ellipse: s-maj=5.4km s-min=5.3km az=140.6*
*NEIC **26** 20:26:22.0±0.4, 4380N×10528W, h0km, ML3.3, Error ellipse: s-maj=5.6km s-min=4.7km az=143.0, Suspected Mining explosion.*
NEIC 55 km [35 miles] SSE of Gillette.
*IDC **26** 20:26:22.5±1.0, 4396N×10566W, h0km, mb4.0/4, mb1 3.8/8, mb1mx3.7/25, mbtmp3.6/8, ML3.7/4, Error ellipse: s-maj=25.4km s-min=10.5km az=148.0*

ISC 26 20:26:21.7±0.4, 4381N±003×10523W±005, h0km, n46, σ1§12/51, mb4.0/4, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RSSD	**Black Hills**	**0.92**	**70**	*eP*		**Pg**	**20 26 40.5**	**+1.2**
PHWY	**Pilot Hill**	**2.51**	**184**	*eP*		**Pn**	**20 27 03.5**	**-0.3**
RWWY	**Rawlins**	**2.58**	**215**	*eP*		**Pn**	**20 27 04.6**	**0.0**
LAO	**LASA Array**	**2.96**	**347**	Pn		**Pn**	**20 27 06.8**	**-0.1**
LAO				*ePg*		**Pg**	**20 27 16.3**	**-2.1**
RLMT	**Red Lodge**	**3.17**	**296**	*eP*		**Pn**	**20 27 13.0**	**+0.1**
RLMT				*eS*		**Sn**	**20 27 57.6**	**+6.2**
BW06	**Boulder Array**	**3.33**	**253**	*ePn*		**Pn**	**20 27 14.4**	**-0.6**
PDAR	**Pinedale Array**	**3.33**	**253**	Pn		**Pn**	**20 27 14.6**	**-0.4**
	4.8nm,0.3s,baz=74,slow=17,SNR=46							
PDAR				Lg			20 27 58.9	
	17nm,0.3s,baz=71,slow=33,SNR=11							
OGNE	**Ogallala**	**3.72**	**139**	*ePn*		**Pn**	**20 27 20.7**	**+0.4**
OGNE				*ePg*		**Pg**	**20 27 31.0**	**-1.9**
GCMT	**Greycliff**	**3.73**	**304**	*eP*		**Pn**	**20 27 21.2**	**+0.8**
GCMT				*eS*		**Sn**	**20 28 08.0**	**+3.0**
LOHW	**Long Hollow**	**3.90**	**269**	*eP*		**Pn**	**20 27 23.3**	**+0.5**
LOHW				*eS*		**Sn**	**20 28 14.5**	**+5.2**
MOOW	**Moose Ponds**	**4.00**	**271**	*ePn*		**Pn**	**20 27 25.6**	**+1.5**
YNR	**Norris Junctio**	**4.02**	**285**	*ePg*		**Pg**	**20 27 35.8**	**-2.9**
ISCO	**Idaho Springs**	**4.02**	**184**	*ePn*		**Pn**	**20 27 23.9**	**-0.6**
SNOW	**Snow King Moun**	**4.03**	**267**	*ePg*		**Pg**	**20 27 32.4**	**-6.4**
REDW	**Red Top Meadow**	**4.11**	**266**	*eP*		**Pn**	**20 27 26.9**	**+1.2**
IMW	**Indian Meadow**	**4.13**	**273**	*eP*		**Pn**	**20 27 27.7**	**+1.7**
TPAW	**Teton Pass**	**4.17**	**268**	*eP*		**Pn**	**20 27 26.4**	**0.0**
AHID	**Auburn Hatcher**	**4.41**	**258**	*ePg*		**Pg**	**20 27 41.9**	**-4.3**
RRI2	**Red Ridge**	**4.45**	**266**	*ePn*		**Pn**	**20 27 30.3**	**0.0**
QLMT	**Earthquake Lak**	**4.56**	**285**	*ePg*		**Pg**	**20 27 44.6**	**-4.6**
DGMT	**Dagmar**	**4.71**	**8**	Pg		**Pg**	**20 27 49.0**	**-3.0**
BOZ	**Bozeman (W)**	**4.92**	**294**	*eP*		**Pn**	**20 27 36.5**	**-0.3**
HWUT	**Hardware Ranch**	**5.16**	**247**	*ePn*		**Pn**	**20 27 39.5**	**-0.7**
	12nm,0.4s							
DAU	**Daniels Canyon**	**5.62**	**235**	*ePn*		**Pn**	**20 27 47.0**	**+0.5**
SPUT	**South Promonto**	**5.89**	**247**	*ePn*		**Pn**	**20 27 49.5**	**-0.7**
HVU	**Hansel Valley**	**5.91**	**253**	*ePn*		**Pn**	**20 27 48.1**	**-2.3**
	5.8nm,0.6s							
SDCO	**Great Sand Dun**	**6.06**	**182**	*ePn*		**Pn**	**20 27 53.0**	**+0.5**
	2.3nm,0.6s							
PV10	**Paradox Valley**	**6.14**	**209**	*ePn*		**Pn**	**20 27 54.1**	**+0.4**
SRU	**San Rafael**	**6.15**	**222**	*ePn*		**Pn**	**20 27 52.6**	**-1.1**
	12nm,0.4s							
PV01	**Paradox Valley**	**6.21**	**205**	*ePn*		**Pn**	**20 27 54.9**	**+0.4**
CHMT	**Chamberlain Mo**	**6.45**	**302**	*ePn*		**Pn**	**20 27 57.1**	**-0.7**
DUG	**Dugway**	**6.71**	**240**	*ePn*		**Pn**	**20 28 00.8**	**-0.6**
	4.3nm,0.4s							
MSU	**Marysvale**	**7.45**	**227**	*ePn*		**Pn**	**20 28 11.0**	**-0.6**
AGMN	**Agassiz Refuge**	**7.91**	**52**	Pn		**Pn**	**20 28 20.1**	**+2.2**
	7.1nm,0.5s							
ELK	**Elko**	**8.03**	**251**	Pn		**Pn**	**20 28 19.7**	**+0.2**
	0.2nm,0.3s,baz=44,slow=14,SNR=4.8							
ARUT	**Antelope Range**	**8.66**	**229**	*ePn*		**Pn**	**20 28 27.9**	**-0.2**
CCUT	**Cedar City**	**8.79**	**227**	*ePn*		**Pn**	**20 28 29.6**	**-0.3**
ULM	**Lac du Bonnet**	**9.07**	**41**	*ePn*		**Pn**	**20 28 33.0**	**-0.7**
	3.8nm,0.4s							
WUAZ	**Wupatki**	**9.54**	**212**	*ePn*		**Pn**	**20 28 41.3**	**+1.1**
	5.1nm,0.5s							
NVAR	**Mina Array Bea**	**11.23**	**246**	Pn		**Pn**	**20 29 05.3**	**+1.9**
	0.2nm,0.3s,baz=51,slow=12,SNR=4.3							
TXAR	**Lajitas Array**	**14.50**	**175**	Pn		**Pn**	**20 29 52.9**	**+4.8**
	0.1nm,0.3s,baz=347,slow=9.0,SNR=4.0							
TXAR	**Lajitas Array**	**14.50**	**175**	Pn		**Pn**	**20 29 52.9**	**+4.8**
ARCES	**ARCESS Array B**	**61.34**	**18**	P		**P**	**20 36 37.5**	**-1.1**
	1.1nm,0.6s,mb4.2,baz=339,slow=6.5,SNR=4.7							
ZALV	**Zalesovo Beam**	**82.24**	**354**	P		**P**	**20 38 43.4**	**-1.0**
	0.7nm,0.4s,mb4.1,baz=0.3,slow=4.4,SNR=3.8							
SONM	**Songino Array**	**84.58**	**339**	P		**P**	**20 38 58.2**	**+1.6**
	0.2nm,0.4s,mb3.7,baz=18,slow=5.0,SNR=3.5							
MKAR	**Makanchi Array**	**89.54**	**355**	P		**P**	**20 39 21.9**	**+1.2**
	0.2nm,0.3s,mb3.8,baz=2.4,slow=3.5,SNR=2.5							

*ISCJB **26** 20:38:58.6±0.3, 4592N±001×1563E±002, h5km±2km, Error ellipse: s-maj=2.2km s-min=2.1km az=161.4*
*CSEM **26** 20:38:58.8±0.1, 4581N×1562E, h2km, ML3.6/12, Error ellipse: s-maj=1.5km s-min=1.2km az=10.0*
*VIE **26** 20:38:58.9±0.3, 4590N×1562E, h6km±1km, mb2.6/8, ML3.0/7, Error ellipse: s-maj=1.9km s-min=1.2km az=133.0*
*NEIC **26** 20:38:59.2±0.3, 4585N×1558E, h10km, ML2.8(BRA), ML2.9(LJU), ML3.2(SZGRF), Error ellipse: s-maj=4.2km s-min=2.5km az=162.0*
NEIC Felt [V] at Brezice.
*PRU **26** 20:38:59.6, 4583N×1558E, h4km*
*LJU **26** 20:38:59.5, 4589N×1557E, h5km, ML2.9*
*SZGRF **26** 20:39:00.1, 4590N×1587E, h10km, mb3.2, Northwestern Balkan Peninsula*

ISC 26 20:38:59.6±0.3, 4589N±001×1562E±002, h4km±2km, n118, σ1§07/221, 33C-28D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GCIS	**Gornji Cirnik**	**0.03**	**167**	↑*iPg*		**Pg**	**20 39 00.3**	**-0.2**
GCIS				*i* Sg		**Sg**	**20 39 00.9**	**-0.1**
GCIS								
	comp=Z,46μm,0.1s							
GCIS	**Gornji Cirnik**	**0.03**	**167**	↑*iPg*		**Pg**	**20 39 00.3**	**-0.1**
GCIS				*i* Sg		**Sg**	**20 39 01.0**	**0.0**
	comp=Z,46μm,0.1s							
GCIS	**Gornji Cirnik**	**0.03**	**167**	↑*iPg*		**Pg**	**20 39 00.3**	**-0.2**
GCIS				*i* Sg		**Sg**	**20 39 00.9**	**-0.1**
GOLS	**Golise**	**0.12**	**2**	↓*iPg*		**Pg**	**20 39 01.9**	**-0.1**
CRES	**Cresnjev**	**0.13**	**239**	↓*iPg*		**Pg**	**20 39 01.8**	**-0.4**
CRES				*i* Sg		**Sg**	**20 39 03.7**	**-0.3**
CRES								
	comp=Z,5μm,0.1s							
CRES	**Cresnjev**	**0.13**	**239**	↓*iPg*		**Pg**	**20 39 01.8**	**-0.4**
CRES				*eSg*		**Sg**	**20 39 03.4**	**-0.6**
CRES	**Cresnjev**	**0.13**	**239**	↓*iPg*		**Pg**	**20 39 01.8**	**-0.4**
CRES				*i* Sg		**Sg**	**20 39 03.7**	**-0.3**
LEGS	**Legarje**	**0.22**	**285**	↑*iPg*		**Pg**	**20 39 03.5**	**-0.3**
LEGS				*i* Sg		**Sg**	**20 39 07.3**	**+0.6**
DOBS	**Dobrina**	**0.28**	**338**	↓*iPg*		**Pg**	**20 39 05.0**	**0.0**
DOBS				*i* Sg		**Sg**	**20 39 09.3**	**+0.7**
DOBS								
	comp=Z,759nm,0.1s							
DOBS	**Dobrina**	**0.28**	**338**	↓*iPg*		**Pg**	**20 39 05.0**	**0.0**
DOBS				*i* Sg		**Sg**	**20 39 09.4**	**+0.8**
	comp=Z,759nm,0.1s							
DOBS	**Dobrina**	**0.28**	**338**	↓*iPg*		**Pg**	**20 39 05.0**	**0.0**
DOBS				*i* Sg		**Sg**	**20 39 09.3**	**+0.7**
PDKS	**Podkum**	**0.47**	**291**	*i* Pg		**Pg**	**20 39 08.4**	**-0.2**
PDKS				*i* Sg		**Sg**	**20 39 14.6**	**0.0**
PDKS								
	comp=Z,349nm,0.2s							

PDKS	**Podkum**	**0.47**	**291**	*i* Pg		**Pg**		**20 39 08.4**	**-0.2**
PDKS				*i* Sg		**Sg**		**20 39 14.6**	**0.0**
BOJS	**Bojanci**	**0.47**	**214**	*i* Pg		**Pg**		**20 39 07.8**	**-0.8**
BOJS									
	comp=Z,869nm,0.2s								
BOJS	**Bojanci**	**0.47**	**214**	*i* Pg		**Pg**		**20 39 07.8**	**-0.8**
	comp=Z,869nm,0.2s								
VISS	**Visnje**	**0.55**	**261**	*i* Pg		**Pg**		**20 39 09.6**	**-0.6**
VISS				*i* Sg		**Sg**		**20 39 17.2**	**-0.2**
VISS									
	comp=Z,421nm,0.2s								
VISS	**Visnje**	**0.55**	**261**	*i* Pg		**Pg**		**20 39 09.6**	**-0.6**
VISS				*i* Sg		**Sg**		**20 39 17.2**	**-0.2**
GROS	**Grobnik**	**0.57**	**352**	↓*iPg*		**Pg**		**20 39 10.7**	**0.0**
GROS				*i* Sg		**Sg**		**20 39 18.4**	**+0.3**
GROS									
	comp=Z,161nm,0.1s								
GROS	**Grobnik**	**0.57**	**352**	↓*iPg*		**Pg**		**20 39 10.6**	**0.0**
GROS				*i* Sg		**Sg**		**20 39 18.4**	**+0.3**
	comp=Z,161nm,0.1s								
GROS	**Grobnik**	**0.57**	**352**	↓*iPg*		**Pg**		**20 39 10.7**	**0.0**
GROS				*i* Sg		**Sg**		**20 39 18.4**	**+0.3**
VNDS	**Vrh nad Dolski**	**0.67**	**288**	*i* Pg		**Pg**		**20 39 12.3**	**-0.2**
VNDS				*i* Sg		**Sg**		**20 39 21.5**	**+0.2**
SISC	**Sisak**	**0.68**	**128**	*ePg*		**Pg**		**20 39 13.7**	**+1.1**
SISC				Sg		**Sg**		**20 39 23.1**	**+1.8**
SISC	**Sisak**	**0.68**	**128**	*ePg*		**Pg**		**20 39 13.7**	**+1.1**
SISC				Sg		**Sg**		**20 39 23.0**	**+1.7**
ZAVS	**Zavodnje**	**0.68**	**323**	↓*iPg*		**Pg**		**20 39 12.5**	**-0.2**
ZAVS				*i* Sg		**Sg**		**20 39 22.9**	**+1.4**
KOGS	**Kog**	**0.71**	**38**	↓*iPg*		**Pg**		**20 39 13.4**	**+0.2**
KOGS				*i* Sg		**Sg**		**20 39 24.0**	**+1.6**
KOGS	**Kog**	**0.71**	**38**	*ePg*		**Pg**		**20 39 13.7**	**+0.5**
KOGS				*eSg*		**Sg**		**20 39 23.9**	**+1.5**
LJU	**Ljubljana**	**0.78**	**282**	↑*iPg*		**Pg**		**20 39 14.1**	**-0.4**
LJU				*eSg*		**Sg**		**20 39 24.5**	**-0.1**
LJU									
	comp=Z,146nm,0.2s								
LJU	**Ljubljana**	**0.78**	**282**	*ePg*		**Pg**		**20 39 14.3**	**-0.2**
LJU				*eSg*		**Sg**		**20 39 24.5**	**-0.1**
	comp=Z,146nm,0.2s								
LJU	**Ljubljana**	**0.78**	**282**	↑*iPg*		**Pg**		**20 39 14.1**	**-0.4**
LJU				*eSg*		**Sg**		**20 39 24.5**	**-0.1**
PERS	**Pernice**	**0.82**	**335**	↓*iPg*		**Pg**		**20 39 15.0**	**-0.3**
PERS				*i* Sg		**Sg**		**20 39 25.7**	**-0.3**
PERS									
	comp=Z,252nm,0.2s								
PERS	**Pernice**	**0.82**	**335**	↓*iPg*		**Pg**		**20 39 15.0**	**-0.3**
PERS				*i* Sg		**Sg**		**20 39 25.7**	**-0.3**
BISS	**Bistriski jare**	**0.83**	**336**	↓*iPg*		**Pg**		**20 39 15.2**	**-0.3**
CEY	**Cerknica**	**0.85**	**260**	*i* Pg		**Pg**		**20 39 15.0**	**-0.8**
CEY				*i* Sg		**Sg**		**20 39 26.8**	**0.0**
CEY									
	comp=Z,270nm,0.2s								
CEY	**Cerknica**	**0.85**	**260**	*ePg*		**Pg**		**20 39 15.1**	**-0.8**
CEY				*eSg*		**Sg**		**20 39 26.6**	**-0.2**
CEY	**Cerknica**	**0.85**	**260**	*i* Pg		**Pg**		**20 39 15.0**	**-0.8**
CEY				*i* Sg		**Sg**		**20 39 26.8**	**0.0**
SOKA	**Soboth**	**0.88**	**333**	↓*iPg*		**Pg**		**20 39 16.2**	**-0.4**
SOKA				↑*iSg*		**Sg**		**20 39 27.5**	**-0.6**
	comp=Z,86nm,0.3s								
MOZS	**Mozjanca**	**0.91**	**297**	↓*iPg*		**Pg**		**20 39 16.7**	**-0.4**
MOZS				*i* Sg		**Sg**		**20 39 28.9**	**0.0**
KNDS	**Knezji Dol**	**0.94**	**248**	*i* Pg		**Pg**		**20 39 16.8**	**-0.8**
KNDS				*i* Sg		**Sg**		**20 39 31.6**	**+1.7**
OBKA	**Obir**	**0.96**	**310**	*ePg*		**Pg**		**20 39 17.8**	**-0.4**
OBKA	SNR=172								
				↑*iSg*		**Sg**		**20 39 31.6**	**+0.9**
	comp=Z,334nm,0.3s								
JAVS	**Javornik**	**1.09**	**271**	*i* Pg		**Pg**		**20 39 19.3**	**-1.1**
JAVS				*i* Sg		**Sg**		**20 39 34.8**	**+0.3**
JAVS									
	comp=Z,368nm,0.3s								
JAVS	**Javornik**	**1.09**	**271**	*i* Pg		**Pg**		**20 39 19.3**	**-1.1**
JAVS				*i* Sg		**Sg**		**20 39 34.8**	**+0.3**
SKDS	**Skadanscina**	**1.18**	**253**	*i* Sg		**Sg**		**20 39 36.7**	**-0.7**
GORS	**Gorjuse**	**1.21**	**291**	*i* Pg		**Pg**		**20 39 21.7**	**-1.0**
GORS				*i* Sg		**Sg**		**20 39 39.7**	**+1.3**
GORS									
	comp=Z,233nm,0.4s								
GORS	**Gorjuse**	**1.21**	**291**	*i* Pg		**Pg**		**20 39 21.7**	**-1.0**
GORS				*i* Sg		**Sg**		**20 39 39.7**	**+1.3**
VOJS	**Vojsko**	**1.22**	**277**	*i* Pg		**Pg**		**20 39 21.6**	**-1.4**
VOJS				*i* Sg		**Sg**		**20 39 38.5**	**-0.3**
CADS	**Cadrg**	**1.35**	**285**	*i* Pg		**Pg**		**20 39 24.2**	**-1.3**
CADS				*i* Sg		**Sg**		**20 39 43.4**	**+0.4**
CADS									
	comp=Z,194nm,0.2s								
CADS	**Cadrg**	**1.35**	**285**	*i* Pg		**Pg**		**20 39 24.2**	**-1.3**
CADS				*i* Sg		**Sg**		**20 39 43.4**	**+0.4**
ARSA	**Arzberg**	**1.36**	**357**	↑*iPn*		**Pn**		**20 39 24.0**	**-1.3**
ARSA				↓*iPg*		**Pg**		**20 39 24.7**	**-1.0**
ARSA				↑*iSn*		**Sn**		**20 39 41.6**	**-2.2**
ARSA	**Arzberg**	**1.36**	**357**	*ePn*		**Pn**		**20 39 24.1**	**-1.3**
ARSA				*eSn*		**Sn**		**20 39 41.7**	**-2.1**
ARSA	**Arzberg**	**1.36**	**357**	Pg		**Pg**		**20 39 24.7**	**-1.0**
ARSA				Sn		**Sn**		**20 39 41.6**	**-2.2**
DRE	**Drenchia**	**1.40**	**282**	↓*ePg*		**Pg**		**20 39 24.9**	**-1.6**
DRE				*eSg*		**Sg**		**20 39 44.9**	**+0.2**
NVLJ	**Novalja**	**1.43**	**202**	*ePn*		**Pn**		**20 39 26.1**	**-0.2**
NVLJ				Sg		**Sg**		**20 39 46.0**	**+0.5**
ROBS	**Robic**	**1.51**	**284**	*i* Pg		**Pg**		**20 39 26.8**	**-1.8**
ROBS				*i* Sg		**Sg**		**20 39 48.3**	**+0.2**
ROBS									
	comp=Z,99nm,0.4s								
ROBS	**Robic**	**1.51**	**284**	*i* Pg		**Pg**		**20 39 26.8**	**-1.8**
ROBS				*i* Sg		**Sg**		**20 39 48.3**	**+0.2**
MYKA	**Terra Mystica**	**1.56**	**299**	↓*iPn*		**Pn**		**20 39 27.1**	**-0.9**
MYKA				↓*iPg*		**Pg**		**20 39 28.9**	**-0.6**
MYKA				↑*iSg*		**Sg**		**20 39 50.6**	**+1.0**
	comp=Z,48nm,0.4s								
LSR	**Lussari**	**1.56**	**293**	↓*iPg*		**Pg**		**20 39 28.9**	**-0.7**
LSR				*i* Sg		**Sg**		**20 39 51.3**	**+1.4**
COLI	**Coloredo**	**1.58**	**280**	↑*iPg*		**Pg**		**20 39 28.8**	**-1.1**
COLI				*i* Sg		**Sg**		**20 39 51.3**	**+1.0**
BLY	**Banja Luka**	**1.59**	**135**	*ePn*		**Pn**		**20 39 28.4**	**-0.1**
BLY				*eSn*		**Sn**		**20 39 51.3**	**+1.8**
BAD	**Bernadia**	**1.69**	**283**	↓*iPg*		**Pg**		**20 39 30.1**	**-1.9**
BAD				*i* Sg		**Sg**		**20 39 54.8**	**+1.0**
PLRO	**Paularo**	**1.84**	**292**	↑*iPn*		**Pn**		**20 39 33.9**	**+2.0**
PLRO				*i* Sn		**Sn**		**20 39 59.7**	**+4.1**
RHK3	**Tenkes**	**1.84**	**89**	↑*ePn*		**Pn**		**20 39 30.2**	**-1.7**
RHK3				*eSn*		**Sn**		**20 39 52.4**	**-3.2**
MPRI	**Monte Prat**	**1.86**	**282**	↓*iPn*		**Pn**		**20 39 33.4**	**+1.1**
MPRI				*i* Sn		**Sn**		**20 39 59.1**	**+2.9**
SOP	**Sopron**	**1.90**	**19**	↑*ePn*		**Pn**		**20 39 32.2**	**-0.6**
SOP				*eSB*		**Sb**		**20 40 01.8**	**+2.8**
KBA	**Koelnbreinsper**	**1.97**	**308**	↑*ePg*		**Pg**		**20 39 36.1**	**-1.2**
KBA	SNR=35								
				↑*iSg*		**Sg**		**20 40 03.7**	**+0.8**
	comp=Z,21nm,0.3s								
KBA	**Koelnbreinsper**	**1.97**	**308**	*ePn*		**Pn**		**20 39 34.0**	**+0.3**
KBA				*eSn*		**Sn**		**20 40 01.4**	**+2.6**
CONA	**Conrad Observa**	**2.04**	**5**	↓*ePn*		**Pn**		**20 39 34.3**	**-0.4**
CONA	SNR=35								
				↑*iSg*		**Sg**		**20 40 07.1**	**+1.9**
	comp=Z,51nm,0.5s								
CSNA	**Conrad Observa**	**2.04**	**5**	↑*iPn*		**Pn**		**20 39 33.9**	**-0.9**
CSNA				↑*iSg*		**Sg**		**20 40 06.7**	**+1.5**
	comp=Z,42nm,0.5s								
PKSM	**Moragy**	**2.13**	**80**	↑*iP*		**Pn**		**20 39 34.0**	**-1.9**
PKSM	**Moragy**	**2.13**	**80**	↑*ePn*		**Pn**		**20 39 34.0**	**-1.9**
PKSM	**Moragy**	**2.13**	**80**	↑*iP*		**Pn**		**20 39 34.0**	**-2.0**
MOA	**Molln**	**2.17**	**335**	↓*ePn*		**Pn**		**20 39 36.8**	**+0.3**
MOA	SNR=17								
				↑*iSn*		**Sn**		**20 40 03.6**	**-0.1**
MOA	**Molln**	**2.17**	**335**	*ePn*		**Pn**		**20 39 36.7**	**+0.3**
MOA				*eSn*		**Sn**		**20 40 05.2**	**+1.5**
CAE	**Caneva**	**2.22**	**274**	↑*iPn*		**Pn**		**20 39 37.3**	**+0.1**
CAE				*i* Sn		**Sn**		**20 40 07.1**	**+2.0**
ZST	**Bratislava**	**2.52**	**23**	*ePN*		**Pn**		**20 39 40.3**	**-1.0**
ZST				*ePG*		**Pg**		**20 39 47.1**	**-0.7**
ZST				*eSN*		**Sn**		**20 40 09.6**	**-2.8**
ZST				*eSG*		**Sg**		**20 40 21.9**	**+1.4**
ZST	**Bratislava**	**2.52**	**23**	*ePn*		**Pn**		**20 39 40.3**	**-1.0**
ZST				*ePg*		**Pg**		**20 39 47.1**	**-0.7**
ZST				*eSn*		**Sn**		**20 40 09.7**	**-2.7**
ZST				*eSg*		**Sg**		**20 40 21.9**	**+1.4**
MODS	**Modra-Piesok**	**2.73**	**24**	*ePN*		**Pn**		**20 39 43.5**	**-0.7**
MODS				*ePG*		**Pg**		**20 39 51.5**	**-0.5**
MODS				*eSN*		**Sn**		**20 40 15.4**	**-2.1**
MODS				*eSG*		**Sg**		**20 40 27.7**	**+0.5**
MODS	**Modra-Piesok**	**2.73**	**24**	*ePn*		**Pn**		**20 39 43.5**	**-0.7**
MODS				*ePg*		**Pg**		**20 39 51.4**	**-0.5**
MODS				*eSn*		**Sn**		**20 40 15.4**	**-2.1**
MODS				*eSg*		**Sg**		**20 40 27.7**	**+0.5**
BUD	**Budapest**	**2.83**	**55**	*eSg*		**Sg**		**20 40 33.0**	**+2.4**
FGSL	**Fruska Gora**	**3.04**	**103**	*ePn*		**Pn**		**20 39 49.1**	**+0.7**
FGSL				*eSn*		**Sn**		**20 40 27.3**	**+2.1**
WTTA	**Wattenberg**	**3.07**	**298**	*ePn*		**Pn**		**20 39 49.8**	**+1.0**
GEC2	**GERESS Array S**	**3.23**	**337**	*ePn*		**Pn**		**20 39 51.2**	**+0.2**
KOLL	**Kolacno**	**3.29**	**34**	*ePN*		**Pn**		**20 39 51.7**	**-0.2**
KOLL				*eSN*		**Sn**		**20 40 27.8**	**-3.6**
KOLL	**Kolacno**	**3.29**	**34**	*ePn*		**Pn**		**20 39 51.7**	**-0.2**
KOLL	**Kolacno**	**3.29**	**34**	*ePn*		**Pn**		**20 39 51.7**	**-0.2**
KOLL				*eSn*		**Sn**		**20 40 27.8**	**-3.6**
BBLS	**Lazići**	**3.37**	**126**	*ePn*		**Pn**		**20 39 53.2**	**+0.2**
VYHS	**Vyhne**	**3.40**	**39**	*ePN*		**Pn**		**20 39 53.9**	**+0.5**
VYHS				*e*				20 40 02.6	
VYHS	**Vyhne**	**3.40**	**39**	*ePn*		**Pn**		**20 39 53.9**	**+0.5**
VYHS				*e*				20 40 02.6	
VYHS				*eSn*		**Sn**		**20 40 30.8**	**-3.4**
VYHS				*e*				20 40 59.8	
TREC	**Trest**	**3.41**	**359**	*ePG*		**Pg**		**20 40 01.2**	**-3.6**
KHC	**Kasperske Hory**	**3.52**	**338**	*ePN*		**Pn**		**20 39 55.2**	**+0.1**
KHC				*ePG*		**Pg**		**20 40 10.0**	**+2.9**
KHC				*ex*		x		20 40 31.5	
KHC				*eSG*		**Sg**		**20 40 53.2**	**+0.5**
	comp=Z,46nm,1.4s								
PSZ	**Piszkesteto**	**3.56**	**54**	↓*ePn*		**Pn**		**20 39 55.6**	**0.0**
PSZ				*eSn*		**Sn**		**20 40 37.9**	**-0.2**
PSZ	**Piszkesteto**	**3.56**	**54**	↑*iP*		**Pn**		**20 39 56.3**	**+0.7**
PSZ	**Piszkesteto**	**3.56**	**54**	↑*iP*		**Pn**		**20 39 56.3**	**+0.7**
PSZ				*eSn*		**Sn**		**20 40 37.9**	**-0.2**
PSZ	**Piszkesteto**	**3.56**	**54**	↑*iP*		**Pn**		**20 39 56.3**	**+0.6**
DIVS	**Divibare**	**3.58**	**118**	*ePn*		**Pn**		**20 39 56.5**	**+0.6**
DIVS				*eSn*		**Sn**		**20 40 39.5**	**+0.8**
TREB	**Trebinje**	**3.73**	**147**	*ePn*		**Pn**		**20 39 59.5**	**+1.6**
TREB				*eSn*		**Sn**		**20 40 44.0**	**+1.7**
WET	**Wettzell**	**3.75**	**331**	*ePn*		**Pn**		**20 39 57.6**	**-0.5**
MORC	**Moravsky Berou**	**4.10**	**18**	↑*iP*		**Pn**		**20 40 02.9**	**0.0**
MORC	**Moravsky Berou**	**4.10**	**18**	↑*iP*		**Pn**		**20 40 02.9**	**0.0**
PRU	**Pruhonice**	**4.16**	**350**	*ePN*		**Pn**		**20 40 03.8**	**0.0**
PRU				*ePG*		**Pg**		**20 40 16.8**	**-2.5**
PRU				*eSG*		**Sg**		**20 41 13.6**	**+0.4**
	comp=Z,14nm,0.5s								
DPC	**Dobruska-Polom**	**4.49**	**6**	*ePN*		**Pn**		**20 40 09.7**	**+1.4**
DPC				*ePG*		**Pg**		**20 40 20.6**	**-4.9**
DPC				*eSG*		**Sg**		**20 41 24.2**	**+0.6**
	comp=Z,22nm,0.9s								
PVCC	**Panska Ves**	**4.69**	**352**	*ePN*		**Pn**		**20 40 11.3**	**+0.2**
PVCC				*eSG*		**Sg**		**20 41 30.7**	**+0.5**

CNP	**Catarman**	**1.15**	**288**	*e*P	**Pn**	**21 03 21.8**	**-1.0**
CNP				*e*S	**Sn**	**21 03 37.3**	**-0.3**
PLP	**Palo**	**1.27**	**219**↓	*e*P	**Pn**	**21 03 23.3**	**-1.0**
PLP				*e*S	**Sn**	**21 03 40.6**	**+0.2**
OCLP	**Ormoc**	**1.59**	**226**	*e*P	**Pn**	**21 03 29.1**	**+0.2**
PVCP	**Virac**	**2.14**	**312**	*e*P	**Pn**	**21 03 35.4**	**-1.0**
PVCP				*e*S	**Sn**	**21 04 00.2**	**-1.8**
SCPH	**Surigao**	**2.38**	**187**↓	*e*P	**Pn**	**21 03 38.6**	**-1.1**
GUIM	**Jordan**	**3.49**	**244**	*e*P	**Pn**	**21 03 56.0**	**+1.1**
OTRP	**Odiongan**	**3.69**	**274**	*e*P	**Pn**	**21 03 59.4**	**+1.8**
CAUP	**Cauayan**	**6.11**	**322**	*e*P	**Pn**	**21 04 31.4**	**+0.4**
BATI	**Baumata**	**22.32**	**186**	P	**P**	**21 07 58.3**	**+0.2**
	11nm,0.5s,mb4.6,baz=294,slow=5.3,SNR=5.7						
CMAR	**Chiang Mai Arr**	**26.62**	**287**	P	**P**	**21 08 39.0**	**+0.2**
	0.9nm,0.8s,mb3.3,baz=101,slow=7.0,SNR=6.8						
WRA	**Warramunga Arr**	**32.99**	**165**	P	**P**	**21 09 33.5**	**-1.8**
	0.2nm,0.9s,baz=348,slow=9.6,SNR=3.0						
ASAR	**Alice Springs**	**36.48**	**167**	P	**P**	**21 10 05.5**	**+0.2**
	0.3nm,0.4s,mb3.5,baz=346,slow=7.3,SNR=6.5						
SONM	**Songino Array**	**39.10**	**339**	P	**P**	**21 10 27.9**	**+0.6**
	0.4nm,0.8s,mb3.2,baz=146,slow=10,SNR=3.3						
STKA	**Stephens Creek**	**46.33**	**161**	P	**P**	**21 11 25.8**	**-0.3**
	1.6nm,0.8s,mb4.0,baz=346,slow=17,SNR=3.2						
MKAR	**Makanchi Array**	**50.25**	**322**	P	**P**	**21 11 57.2**	**+1.0**
	1.4nm,0.7s,mb4.1,baz=112,slow=8.8,SNR=9.2						
ZALV	**Zalesovo Beam**	**52.75**	**331**	P	**P**	**21 12 15.3**	**+0.5**
	0.2nm,0.3s,mb3.5,baz=159,slow=4.3,SNR=2.5						
KURK	**Kurchatov**	**54.26**	**325**	P	**P**	**21 12 26.6**	**+0.7**
	2.6nm,0.6s,mb4.3,baz=125,slow=7.3,SNR=30						
BVAR	**Borovoye Array**	**59.85**	**325**	P	**P**	**21 13 05.8**	**+0.3**
	0.8nm,0.6s,mb3.9,baz=126,slow=7.5,SNR=8.3						
ARCES	**ARCESS Array B**	**82.27**	**340**	P	**P**	**21 15 21.5**	**+0.5**
	2.9nm,0.9s,mb4.2,baz=72,slow=7.9,SNR=3.6						

CSEM ***26*** *21:11:58.8±0.1,3600N×1141E,h2km,MD3.9,Error ellipse: s-maj=2.7km s-min=2.1km az=177.0*
TUN ***26*** *21:12:00.9,3590N×1120E,h6km,MD3.9*
ISCJB ***26*** *21:12:00.4±0.3,3600N±003×1149E±003,h10km,mb3.5/5, Error ellipse: s-maj=4.9km s-min=2.9km az=164.6*
CRAAG ***26*** *21:12:00.0,3589N×1120E,Mb3.9*
IDC ***26*** *21:12:00.2±1.1,3596N×1141E,h0km,mb3.4/4,mb1 3.6/9, mb1mx3.5/30,mbtmp3.6/9,ML3.8/4,MS3.3/3,Ms1 3.3/3, ms1mx2.8/31,Error ellipse: s-maj=31.7km s-min=14.5km az=156.0*
ROM ***26*** *21:12:01.6±0.6,3591N×1164E,h10km,Md3.2/7,Ml3.8/4, Error ellipse: s-maj=8.8km s-min=4.9km az=116.0*
NEIC ***26*** *21:12:01.1±0.4,3586N×1143E,h10km,mb3.6/4,Error ellipse: s-maj=5.8km s-min=4.5km az=198.0*
LDG ***26*** *21:12:03.9±0.7,3588N×1146E,h5km,Ml3.5/5,Error ellipse: s-maj=15.9km s-min=14.4km az=176.0*

ISC 26 21:12:02.2±1.0,3594N±003×1153E±003,h14km±6km,n85, σ1§15/103,mb3.5/5,Tunisia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTS	**Pantelleria**	**0.94**	**23**	Pg	**Pg**	**21 12 19.4**	**-1.0**
PTS				Sg	**Sg**	**21 12 31.9**	**-0.9**
MBZ	**Menzel Bouzelf**	**1.01**	**317**	*i* P	**Pb**	**21 12 23.2**	**+1.7**
ZGN	**Zaghouan**	**1.23**	**291**	*i* P	**Pn**	**21 12 25.9**	**+0.9**
BTHT	**Jabal bu Thady**	**1.30**	**232**	*i* P	**Pn**	**21 12 26.4**	**+0.5**
TROT	**Trozza**	**1.61**	**257**	*i* P	**Pn**	**21 12 31.2**	**+0.9**
KCHT	**Kechabta**	**1.73**	**313**	*i* P	**Pn**	**21 12 33.6**	**+1.7**
KEST	**Kesra**	**1.79**	**264**	Pn	**Pn**	**21 12 31.1**	**-1.6**
	5.7nm,0.3s,baz=53,slow=6.6,SNR=91						
KEST				Sn	**Sn**	**21 12 54.8**	**-0.3**
	74nm,0.3s,baz=59,slow=19,SNR=27						
KRIT	**Krib**	**2.03**	**282**	*i* P	**Pn**	**21 12 37.6**	**+1.7**
FAVR	**Favara**	**2.17**	**52**	Pg	**Pn**	**21 12 38.2**	**+0.3**
	125nm,0.4s						
ERC	**Erice**	**2.26**	**22**	Pg	**Pn**	**21 12 38.7**	**-0.4**
MEDT	**Meda**	**2.26**	**216**	*i* P	**Pn**	**21 12 34.5**	**-4.6**
CORL	**Corleone**	**2.41**	**36**	Pg	**Pn**	**21 12 40.9**	**-0.3**
	524nm,0.7s						
SYA	**Sidi Yaiche**	**2.53**	**242**	*i* P	**Pn**	**21 12 44.0**	**+1.2**
RAFF	**Raffo Rosso**	**2.61**	**60**	Pg	**Pn**	**21 12 43.5**	**-0.5**
	211nm,1.0s						
SGNT	**Sidi Gnaou**	**2.66**	**211**	*i* P	**Pn**	**21 12 37.5**	**-7.1**
GHAT	**Ghardimaou**	**2.67**	**283**	*i* P	**Pn**	**21 12 45.0**	**+0.3**
BERT	**Berda**	**2.67**	**231**	*i* P	**Pn**	**21 12 45.6**	**+0.8**
VAE	**Valguarnera**	**2.78**	**56**	Pn	**Pn**	**21 12 47.0**	**+0.8**
	17nm,0.3s,baz=112,slow=3.5,SNR=57						
VAE				Sn	**Sn**	**21 13 20.4**	**+0.9**
	12nm,0.3s,baz=295,slow=14,SNR=4.0						
VAE	**Valguarnera**	**2.78**	**56**	Pn	**Pn**	**21 12 47.0**	**+0.8**
VAE				Sn	**Sn**	**21 13 20.4**	**+0.9**
HMDC	**Modica**	**2.81**	**68**	Pg	**Pn**	**21 12 45.5**	**-1.2**
HMDC				Sg	**Sn**	**21 13 18.9**	**-1.5**
CSLB	**Castelbuono**	**2.84**	**45**	Pg	**Pn**	**21 12 47.4**	**+0.3**
HVZN	**Vizzini**	**2.84**	**63**	Pg	**Pn**	**21 12 46.5**	**-0.7**
HVZN				Sg	**Sn**	**21 13 20.9**	**-0.3**
	920nm,0.5s						
GIB	**Gibilmanna**	**2.86**	**44**	Pg	**Pn**	**21 12 48.0**	**+0.6**
GALF	**Gagliano Caste**	**3.01**	**53**	Pg	**Pn**	**21 12 50.3**	**+0.9**
USI	**Ustica**	**3.06**	**25**	Pg	**Pn**	**21 12 52.7**	**+2.6**
	141nm,0.6s						
HAVL	**Avola**	**3.07**	**70**	Pg	**Pn**	**21 12 49.1**	**-1.2**
HAVL				Sg	**Sn**	**21 13 23.9**	**-2.9**
SSY	**Sortino**	**3.10**	**66**	Pg	**Pn**	**21 12 49.9**	**-0.7**
SSY				Sg	**Sn**	**21 13 26.5**	**-1.0**
HAGA	**Augusta**	**3.21**	**64**	Pg	**Pn**	**21 12 50.8**	**-1.4**
	445nm,0.8s						
ESLN	**Serra La Nave**	**3.27**	**57**	Pg	**Pn**	**21 12 53.4**	**+0.4**
VSL	**Villasalto**	**3.94**	**335**	*e*Pn	**Pn**	**21 13 02.1**	**-0.1**
VSL				*e*Sn	**Sn**	**21 13 46.1**	**-2.0**
VSL	**Villasalto**	**3.94**	**335**	*e*Pn	**Pn**	**21 13 02.1**	**-0.1**
VSL				*e*Sn	**Sn**	**21 13 46.1**	**-2.0**
CASM	**Ain Smara**	**4.09**	**276**	P	**Pn**	**21 13 01.0**	**-3.3**
DFRA	**Djebel Bou Aff**	**4.61**	**279**	P	**Pn**	**21 13 10.0**	**-1.4**
SET	**Setif**	**4.97**	**275**	P	**Pn**	**21 13 15.0**	**-1.4**
CUC	**Castrocucco**	**5.27**	**39**	*e*Pn	**Pn**	**21 13 21.3**	**+0.8**
CUC				*e*Sn	**Sn**	**21 14 23.4**	**+2.3**
CUC	**Castrocucco**	**5.27**	**39**	*e*Pn	**Pn**	**21 13 21.3**	**+0.7**
	60nm,0.8s						
CUC				*e*Sn	**Sn**	**21 14 23.4**	**+2.3**
PGF	**Pioggiola**	**6.88**	**344**	*e*Pn	**Pn**	**21 13 44.9**	**+2.3**
PGF				*e*Sn	**Sn**	**21 14 58.4**	**-2.3**
	9.5nm,0.5s						
LMR	**La Mourre**	**8.33**	**334**	*e*Pn	**Pn**	**21 14 02.1**	**-0.4**
LMR				*e*Sn	**Sn**	**21 15 32.1**	**-4.3**
	1.0nm,0.3s						
LMR	**La Mourre**	**8.33**	**334**	*e*Pn	**Pn**	**21 14 02.1**	**-0.4**
LMR				*e*Sn	**Sn**	**21 15 32.1**	**-4.3**
	0.5nm,0.3s						
FRF	**La Foret Royal**	**8.48**	**335**	*e*Pn	**Pn**	**21 14 04.5**	**-0.1**
FRF				*e*Sn	**Sn**	**21 15 35.2**	**-4.9**
	1.9nm,0.4s						
FRF	**La Foret Royal**	**8.48**	**335**	*e*Pn	**Pn**	**21 14 04.5**	**-0.1**
FRF				*e*Sn	**Sn**	**21 15 35.2**	**-4.9**
	0.9nm,0.4s						
SBF	**Sospel**	**8.51**	**340**	*e*Pn	**Pn**	**21 14 05.3**	**+0.3**
SMRF	**Simiane la Rot**	**9.23**	**332**	*e*Pn	**Pn**	**21 14 15.8**	**+1.0**
SMRF				*e*Sn	**Sn**	**21 16 01.8**	**+3.3**
	7.0nm,0.4s						
MBDF	**Montbardon**	**9.49**	**339**	*e*Pn	**Pn**	**21 14 19.8**	**+1.4**
MBDF				*e*P		21 14 25.2	
BNI	**Bardonecchia**	**9.82**	**339**	Pn	**Pn**	**21 14 23.2**	**+0.3**
BNI	**Bardonecchia**	**9.82**	**339**	Pn	**Pn**	**21 14 23.2**	**+0.3**
LASF	**Ste Croix**	**10.03**	**326**	*e*Pn	**Pn**	**21 14 24.4**	**-1.3**
LASF				*e*Sn	**Sn**	**21 16 11.9**	**-6.1**
	2.3nm,0.4s						
LPG	**La Plagne**	**10.21**	**341**	*e*P	**Pn**	**21 14 35.1**	**+6.9**
LPL	**La Plagne**	**10.23**	**341**	*e*P	**Pn**	**21 14 35.2**	**+6.7**
MTLF	**Montolieu**	**10.30**	**319**	*e*Pn	**Pn**	**21 14 29.6**	**+0.2**
VIVF	**Saint-Julien-l**	**10.32**	**332**	*e*Pn	**Pn**	**21 14 29.9**	**+0.2**
IDI	**Anoyia**	**10.90**	**90**	Pn	**Pn**	**21 14 38.0**	**+0.3**
	0.3nm,0.3s,baz=291,slow=17,SNR=3.8						
IDI				Sn	**Sn**	**21 16 32.4**	**-7.0**
	0.6nm,0.3s,baz=58,slow=18,SNR=7.0						
DAVOX	**Davos/Dischmat**	**10.90**	**354**	Pn	**Pn**	**21 14 43.1**	**+5.5**
	0.4nm,0.3s,baz=139,slow=19,SNR=4.0						
EPF	**Esparros**	**11.17**	**313**	*e*P	**Pn**	**21 14 47.3**	**+6.0**
CAF	**Calviac**	**11.50**	**324**	*e*Pn	**Pn**	**21 14 46.1**	**+0.2**
ESDC	**Sonseca Array**	**12.80**	**292**	Pn	**Pn**	**21 15 02.7**	**-1.1**
	0.2nm,0.3s,baz=98,slow=14,SNR=2.7						
GERES	**GERESS Array B**	**12.99**	**6**	LR	LR	21 20 45.1	
	comp=Z,125nm,19.1s,baz=94,slow=40						
PSZ	**Piszkesteto**	**13.48**	**25**	Pn	**Pn**	**21 15 14.0**	**+1.1**
PSZ	**Piszkesteto**	**13.48**	**25**	Pn	**Pn**	**21 15 14.0**	**+1.1**
MDT	**Midelt**	**13.69**	**261**	Pn	**Pn**	**21 15 13.9**	**-2.1**
	0.3nm,0.3s,baz=69,slow=14,SNR=11						
VRAC	**Vranov**	**13.86**	**14**	LR	LR	21 21 22.3	
	comp=Z,117nm,19.3s,baz=31,slow=40						
TAM	**Tamanrasset**	**14.11**	**203**	*e*Pn	**Pn**	**21 15 18.9**	**-2.7**
TAM	**Tamanrasset**	**14.11**	**203**	*e*Pn	**Pn**	**21 15 18.9**	**-2.7**
MLR	**Muntele Rosu**	**14.49**	**44**	Pn	**Pn**	**21 15 34.6**	**+7.9**
	0.1nm,0.3s,baz=135,slow=20,SNR=2.2						
KWP	**Kalwaria**	**15.93**	**27**	*e*P	**Pn**	**21 15 46.0**	**+0.3**
	6.1nm,0.9s						
KWP	**Kalwaria**	**15.93**	**27**	*e*P	**Pn**	**21 15 46.0**	**+0.3**
	6.1nm,0.9s						
RUE	**Ruedersdorf**	**16.61**	**5**	P	**Pn**	**21 15 53.2**	**-1.3**
RUE	**Ruedersdorf**	**16.61**	**5**	P	**Pn**	**21 15 53.2**	**-1.3**
ANTO	**Ankara**	**17.23**	**70**	*e*Pn	**Pn**	**21 16 03.3**	**+1.0**
	2.3nm,0.6s						
CSS	**Prodhromos**	**17.79**	**87**	Pn	**Pn**	**21 16 10.5**	**+1.2**
CSS	**Prodhromos**	**17.79**	**87**	Pn	**Pn**	**21 16 10.5**	**+1.1**
BR131	**Keskin Array S**	**17.86**	**71**	*e*P	**Pn**	**21 16 11.4**	**+1.2**
	0.6nm,0.5s						
BR131	**Keskin Array S**	**17.86**	**71**	*e*P	**Pn**	**21 16 11.4**	**+1.2**
	0.6nm,0.5s						
RGN	**Rugen**	**18.65**	**3**	P	**Pn**	**21 16 18.9**	**-0.8**
RGN	**Rugen**	**18.65**	**3**	P	**Pn**	**21 16 18.9**	**-0.8**
AKASG	**Malin Array Be**	**19.50**	**35**	P	**Pn**	**21 16 29.9**	**-0.1**
	baz=231,slow=12,SNR=4.8						
SUW	**Suwalki**	**19.81**	**21**	P	**Pn**	**21 16 32.5**	**-1.2**
SUW	**Suwalki**	**19.81**	**21**	P	**Pn**	**21 16 32.5**	**-1.1**
MALT	**Malatya**	**21.55**	**76**	*e*P	**P**	**21 16 52.3**	**+1.2**
MALT	**Malatya**	**21.55**	**76**	*e*P	**P**	**21 16 52.3**	**+1.2**
	3.7nm,0.9s,mb3.8						
HFS	**Hagfors**	**24.25**	**3**	P	**P**	**21 17 17.8**	**-0.6**
	1.1nm,0.6s,mb3.5,baz=197,slow=4.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**24.36**	**204**	P	**P**	**21 17 19.6**	**-0.2**
	0.7nm,0.9s,mb3.1,baz=2.2,slow=9.6,SNR=5.5						
TORD				LR	LR	21 27 37.3	
	comp=Z,66nm,19.3s,baz=45,slow=38						
KURK	**Kurchatov**	**49.31**	**51**	P	**P**	**21 20 51.1**	**+0.5**
	0.5nm,0.8s,mb3.6,baz=282,slow=8.9,SNR=4.3						
MKAR	**Makanchi Array**	**52.53**	**55**	P	**P**	**21 21 15.8**	**+1.0**
	0.4nm,0.7s,mb3.5,baz=278,slow=7.1,SNR=2.7						
MKAR	**Makanchi Array**	**52.53**	**55**	P	**P**	**21 21 15.8**	**+0.9**

MAN 26 21:23:19,1014N×12551E,h120km,mb4.4,ML3.3,MS3.1, 2D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.35**	**184**↓	*e*P	Pn	21 23 30.7	-5.5
SCPH				*e*S	Sn	21 23 39.3	-10
MSLP	**Maasin**	**0.65**	**270**	*e*P	Pn	21 23 40.2	+2.3
MSLP				*e*S	Sn	21 23 55.7	+3.5
PLP	**Palo**	**1.15**	**333**↓	*e*P	Pn	21 23 45.1	+2.5
PLP				*e*S	Sn	21 24 06.1	+5.7
BUKP	**Musuan**	**2.29**	**191**	*e*P	Pn	21 23 57.7	+1.6
BUKP				*e*S	Sn	21 24 26.4	+1.8

IDC ***26*** *21:38:41.9±2.4,3855×14369E,h0km,mb3.9/5,mb1 4.2/6, mb1mx3.9/16,mbtmp4.1/6,ML4.3/1,MS3.5/1,Ms1 3.5/1, ms1mx2.6/24,Error ellipse: s-maj=55.9km s-min=29.7km az=92.0*
ISCJB ***26*** *21:38:44.6±0.6,392S±007×14371E±0.10,h33km,mb4.0/6, Error ellipse: s-maj=14.1km s-min=9.5km az=177.0*
NEIC ***26*** *21:38:46.5±0.4,391S×14371E,h35km,mb4.1/5,Error ellipse: s-maj=11.1km s-min=7.0km az=86.0*

ISC 26 21:38:46.6±0.6,392S±007×14373E±010,h35km,n25, σ0§75/23,mb4.0/6,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTAO	**Charters Tower**	**16.26**	**171**	Pn	**Pn**	**21 42 31.9**	**-0.4**
HNR	**Honiara**	**17.01**	**110**	*e*Pn	**Pn**	**21 42 41.8**	**0.0**
GUMO	**Guam**	**17.43**	**4**	LR	LR	21 48 20.7	
	comp=Z,160nm,20.6s,baz=94,slow=33						
WRAB	**Tennant Creek**	**18.36**	**209**	*e*Pn	**Pn**	**21 42 58.2**	**-0.2**
	9.3nm,0.8s						
WB2	**Warramunga Arr**	**18.36**	**209**	*e*P	**Pn**	**21 42 58.1**	**-0.4**
WRA	**Warramunga Arr**	**18.37**	**209**	P	**Pn**	**21 42 58.2**	**-0.4**
	1.0nm,0.3s,baz=25,slow=12,SNR=68						
BATI	**Baumata**	**20.86**	**252**	P	**P**	**21 43 26.9**	**+1.3**
	16nm,0.6s,baz=94,slow=3.1,SNR=4.7						
ASAR	**Alice Springs**	**21.80**	**205**	P	**P**	**21 43 36.8**	**+1.0**
	2.1nm,0.7s,mb3.7,baz=33,slow=12,SNR=16						
FITZ	**Fitzroy Crossi**	**22.63**	**230**	*e*P	**P**	**21 43 44.2**	**-0.4**
	4.8nm,0.8s,mb4.0						
FITZ	**Fitzroy Crossi**	**22.63**	**230**	P	**P**	**21 43 43.5**	**-1.1**
	1.9nm,0.6s,mb3.7,baz=42,slow=14,SNR=7.5						
STKA	**Stephens Creek**	**27.88**	**184**	P	**P**	**21 44 34.3**	**+1.2**
	1.7nm,0.8s,mb3.7,baz=17,slow=11,SNR=3.3						
STKA	**Stephens Creek**	**27.88**	**184**	*e*P	**P**	**21 44 34.1**	**+1.0**
	2.2nm,0.8s,mb3.8						
MBWA	**Marble Bar**	**28.94**	**232**	*e*P	**P**	**21 44 43.1**	**+0.4**
MBWA				*e*PP	PP	21 45 48.3	-0.2
NWAO	**Narrogin (SRO)**	**38.03**	**218**	*e*P	**P**	**21 46 00.0**	**-1.6**
TAU	**Tasmania Unive**	**38.95**	**176**	*e*P	**P**	**21 46 09.7**	**+0.5**
MAJO	**Matsushiro**	**40.58**	**353**	P	**P**	**21 46 17.4**	**-5.5**
	4.8nm,0.5s,mb4.4						
BJT	**Baijiatuan**	**50.53**	**333**	P	**P**	**21 47 41.4**	**0.0**
LSA	**Lhasa**	**60.40**	**307**	P	**P**	**21 48 51.7**	**-1.0**
MKAR	**Makanchi Array**	**73.84**	**321**	P	**P**	**21 50 17.9**	**+0.2**
	0.3nm,0.3s,mb3.8,baz=98,slow=6.4,SNR=3.8						
UCH	**Uchtor**	**77.44**	**315**	P	**P**	**21 50 39.4**	**+1.0**
KURK	**Kurchatov**	**77.61**	**324**	*e*P	**P**	**21 50 39.3**	**+0.1**
KBL	**Kabul**	**79.68**	**306**	*e*P	**P**	**21 50 51.7**	**+0.8**
BRVK	**Borovoye**	**83.26**	**324**	*e*P	**P**	**21 51 08.7**	**-0.7**
	1.5nm,0.5s,mb4.3						
ARU	**Arti**	**90.56**	**326**	P	**P**	**21 51 44.2**	**-0.8**
TORD	**Torodi Ar. Bea**	**141.41**	**286**	PKP	PKPdf	21 58 15.4	+0.5
	0.5nm,1.1s,baz=74,slow=1.5,SNR=4.9						

IDC ***26*** *21:40:40.1±10.0,1460N×12185E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.4/19,mbtmp3.5/3,Error ellipse: s-maj=338.3km s-min=30.3km az=38.0*
ISCJB ***26*** *21:40:47.7±2.9,1336N±005×12061E±006,h12km±21km, mb3.6/2,Error ellipse: s-maj=12.0km s-min=6.4km az=144.0*
MAN ***26*** *21:40:47,1348N×12059E,h32km,mb4.3,ML3.1,MS2.9*

ISC 26 21:40:48.4±0.9,1332N±005×12060E±006,h9km±7km,n9, σ1§10/13,mb3.6/2,1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.54**	**321**	*e*P	**Pg**	**21 40 58.4**	**-0.4**
LUBP				*e*S	**Sg**	**21 41 05.6**	**-0.3**
SJMP	**San Jose**	**0.99**	**149**	*e*P	**Pg**	**21 41 06.8**	**-0.7**
SJMP				*e*S	**Sg**	**21 41 21.7**	**+1.3**
BUSP	**Coron**	**1.36**	**197**	*e*P	**Pn**	**21 41 12.7**	**-0.9**
BUSP				*e*S	**Sb**	**21 41 32.5**	**+0.9**
OTRP	**Odiongan**	**1.68**	**124**	*e*P	**Pn**	**21 41 16.8**	**-1.2**
OTRP				*e*S	**Sn**	**21 41 38.8**	**-0.8**
GQP	**Guinayangan**	**1.89**	**72**↓	*e*P	**Pn**	**21 41 23.0**	**+2.2**
GQP				*e*S		21 41 25.0	
ENPP	**El Nido**	**2.39**	**209**	*e*P	**Pn**	**21 41 26.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**21.44**	**287**	P	**P**	**21 45 39.2**	**+2.3**
	0.3nm,0.3s,baz=91,slow=8.2,SNR=5.0						
WRA	**Warramunga Arr**	**35.71**	**157**	P	**P**	**21 47 47.7**	**+0.3**
	0.5nm,0.5s,mb3.7,baz=340,slow=9.3,SNR=4.3						
ASAR	**Alice Springs**	**38.99**	**160**	P	**P**	**21 48 14.4**	**-0.8**
	0.6nm,0.6s,mb3.5,baz=339,slow=6.8,SNR=11						

ISK ***26*** *21:55:36.0,3838N×3932E,h11km,MD2.5*
DDA ***26*** *21:55:36.9,3841N×3933E,h7km±3km,Md2.7*
CSEM ***26*** *21:55:36.2±0.1,3841N×3930E,h8km,MD2.5,Error ellipse: s-maj=3.6km s-min=3.0km az=173.0*
ISCJB ***26*** *21:55:37.5±0.7,3841N±004×3930E±005,h5km±6km, Error ellipse: s-maj=7.8km s-min=5.9km az=29.8*

ISC 26 21:55:37.9±0.8,3841N±005×3929E±005,h4km±10km,n7, σ0§97/12,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.04**	**155**	*e*PG	**Pg**	**21 55 38.3**	**-0.6**
SVRC				*e*SG	**Sg**	**21 55 39.7**	**+0.1**
ELZG	**Elazig**	**0.25**	**290**	*i* P	**Pg**	**21 55 42.6**	**-0.2**
ELZG				*i* S	**Sg**	**21 55 47.8**	**+1.6**
PTK	**Pertek**	**0.49**	**10**	*e*PG	**Pg**	**21 55 46.3**	**-1.1**
PTK				*e*SG	**Sg**	**21 55 54.4**	**+0.6**
MALT	**Malatya**	**0.68**	**262**	*e*PG	**Pg**	**21 55 50.3**	**-0.8**
MYA	**Malataya**	**0.68**	**263**	*e*PG	**Pg**	**21 55 49.9**	**-1.1**
DIYA	**Diyarbakir**	**0.82**	**126**	*i* P	**Pg**	**21 55 53.3**	**-0.3**
DIYA				*i* S	**Sg**	**21 56 05.7**	**+1.5**
AKCD	**Akcadag**	**1.08**	**264**	*i* P	**Pg**	**21 55 57.7**	**-0.9**
AKCD				*i* S	**Sg**	**21 56 14.0**	**+1.3**

IGQ 26 21:55:40.4,207S×7770W,h12km±3km,Mb4.2,Ms4.0, 9C-9D,Error ellipse: s-maj=2.8km s-min=1.0km az=103.3,Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PATA	**Patacocha**	**0.93**	**307**	↓P	Pg	21 55 58.4	0.0
ULBA	**Ulba**	**0.94**	**311**	↑P	Pg	21 55 58.9	+0.3
ULBA	**Ulba**	**0.94**	**311**	↑S	Sg	21 56 12.3	+1.4
ARRY	**Arrayan**	**0.94**	**306**	↓P	Pg	21 55 58.3	-0.3
ARRY	**Arrayan**	**0.94**	**306**	↓S	Sg	21 56 11.2	+0.2
RETU	**Refugio**	**0.97**	**309**	P	Pg	21 55 59.2	0.0
RETU	**Refugio**	**0.97**	**309**	S	Sg	21 56 12.9	+1.2
RUN5	**Runtun**	**0.97**	**312**	↑P	Pg	21 55 59.4	+0.2
RUN5	**Runtun**	**0.97**	**312**	↑S	Sg	21 56 12.8	+0.8
JUI6	**Juive**	**1.00**	**310**	↓P	Pb	21 55 59.6	-0.2
JUI6	**Juive**	**1.00**	**310**	↓S	Sg	21 56 13.3	+0.5
BIL2	**Estacion Bilba**	**1.01**	**307**	↑P	Pb	21 55 59.9	0.0
BIL2	**Estacion Bilba**	**1.01**	**307**	↑S	Sg	21 56 13.6	+0.4
IGUA	**Igualata**	**1.10**	**301**	P	Pb	21 56 01.9	+0.4
TAMB	**Tambo**	**1.52**	**334**	P	Pn	21 56 09.1	+2.0
TAMB	**Tambo**	**1.52**	**334**	S	Sn	21 56 33.7	+6.5
VC1	**Cotopaxi 1**	**1.58**	**334**	P	Pn	21 56 10.8	+2.4
VC1	**Cotopaxi 1**	**1.58**	**334**	S	Sn	21 56 34.7	+6.0
CAMI	**Rancho Maria**	**1.60**	**330**	P	Pn	21 56 10.2	+1.6
CAMI	**Rancho Maria**	**1.60**	**330**	S	Sn	21 56 34.6	+5.4
ANTI	**Antisana**	**1.68**	**344**	↑P	Pn	21 56 11.6	+2.0
QIL2	**Quilotoa**	**1.71**	**314**	P	Pn	21 56 14.7	+4.7
QIL2	**Quilotoa**	**1.71**	**314**	S	Sn	21 56 37.0	+5.2
LAV3	**Lava3-Reventad**	**1.96**	**2**	↓P	Pn	21 56 16.2	+2.7
LAV3	**Lava3-Reventad**	**1.96**	**2**	↓S	Sn	21 56 43.7	+5.6
CONE	**Cono NE Rev Vo**	**1.99**	**2**	↓P	Pn	21 56 16.7	+2.8
CONE	**Cono NE Rev Vo**	**1.99**	**2**	↓S	Sn	21 56 45.4	+6.7
JUA2	**San Juan 2**	**2.05**	**334**	P	Pn	21 56 19.7	+4.9
JUA2	**San Juan 2**	**2.05**	**334**	S	Sn	21 56 50.2	+10
GGP	**Refugio Guagua**	**2.08**	**334**	P	Pn	21 56 19.7	+4.4
TERV	**Terraza Guagua**	**2.09**	**334**	P	Pn	21 56 20.8	+5.5
TERV	**Terraza Guagua**	**2.09**	**334**	S	Sn	21 56 50.3	+9.1
PINO	**Pino**	**2.10**	**334**	P	Pn	21 56 21.0	+5.5
PINO	**Pino**	**2.10**	**334**	S	Sn	21 56 50.3	+8.6
YANA	**Yana**	**2.13**	**336**	P	Pn	21 56 20.8	+5.0
YANA	**Yana**	**2.13**	**336**	S	Sn	21 56 50.3	+8.2
CAYA	**Cayambe**	**2.15**	**352**	↑P	Pn	21 56 19.9	+3.8
CAYA	**Cayambe**	**2.15**	**352**	↑S	Sn	21 56 50.7	+8.0
COTA	**Cotacachi**	**2.47**	**345**	P	Pn	21 56 26.8	+6.2

*

11nm,0.6s,mb4.7,baz=254,slow=5.7,SNR=125
TSUM Tsumeb 79.74 107 *e*P **P 22 29 48.4 +1.4**
1.4nm,0.7s,mb3.9
LBTB Lobatse 84.77 115 *e*P **P 22 30 13.5 +0.4**
1.3nm,0.5s,mb4.1
ESDC Sonseca Array 85.38 44 P **P 22 30 16.3 +0.5**
1.3nm,0.7s,mb4.0,baz=241,slow=4.9,SNR=5.5
YKA Yellowknife Ar 91.08 340 P **P 22 30 41.7 -0.5**
0.8nm,0.6s,mb4.0,baz=134,slow=4.6,SNR=5.5
YKA Yellowknife Ar 91.08 340 P **P 22 30 41.7 -0.5**
KMBO Kilima Mbogo 104.25 97 Pdif Pdif 22 31 43.3 +1.1
ZALV Zalesovo Beam 141.56 25 PKP PKPdf 22 37 09.2 +0.7
1.4nm,0.6s,baz=320,slow=3.5,SNR=5.7
MK31 Makanchi Array 145.20 36 *e*PKP PKPdf 22 37 16.0 +0.8
MKAR Makanchi Array 145.20 36 PKPbc PKPbc 22 37 16.1 +1.1
5.1nm,0.7s,baz=317,slow=4.3,SNR=26
SONM Songino Array 153.16 8 PKPbc PKPbc 22 37 36.5 +1.2
1.7nm,1.2s,baz=325,slow=1.7,SNR=4.5

*ISCJB **26** 22:29:21.6±0.4, 8.93N±0.03×122.99E±0.06, h98km±4km, mb3.8/8, Error ellipse: s-maj=9.2km s-min=5.3km az=171.6*
*MAN **26** 22:29:23, 9.00N×122.87E, h30km, mb4.5, ML3.4, MS3.2*
*IDC **26** 22:29:23.7±11.0, 9.20N×123.77E, h107km±107km, mb3.4/8, mb1 3.5/8, mb1mx3.4/20, mbtmp3.4/8, Error ellipse: s-maj=134.2km s-min=17.8km az=68.0*
ISC 26 22:29:22.8±0.4, 8.93N±0.03×123.00E±0.06, h91km±4km, n23, σ0.9/84/31, mb3.8/8, 1C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.47**	**30**	*i* P	**Pn**	**22 29 37.7**	**+0.2**
SNPH				*i* S	**Sn**	**22 29 49.0**	**+0.6**
DCPH	**Dipolog City**	**0.49**	**135↑**	*i* P	**Pn**	**22 29 37.3**	**-0.3**
DCPH				*i* S	**Sn**	**22 29 48.3**	**-0.3**
TBP	**Tagbilaran**	**1.14**	**48**	*e*P	**Pn**	**22 29 43.8**	**-0.4**
TBP				*e*S	**Sn**	**22 29 59.9**	**-0.4**
PAGZ	**Pagadian**	**1.14**	**161**	*e*P	**Pn**	**22 29 45.3**	**+1.1**
PAGZ				*e*S	**Sn**	**22 30 01.1**	**+0.8**
IPIL	**Ipil**	**1.21**	**200**	*e*P	**Pn**	**22 29 44.7**	**-0.4**
IPIL				*e*S	**Sn**	**22 30 00.8**	**-1.0**
LLP	**Lapu-Lapu**	**1.68**	**35↓**	*i* P	**Pn**	**22 29 50.8**	**0.0**
LLP				*i* S	**Sn**	**22 30 10.1**	**-2.0**
GUIM	**Jordan**	**1.73**	**347**	*e*P	**Pn**	**22 29 51.1**	**-0.5**
CTBH	**Cotabato--PC H**	**2.10**	**144↓**	*e*P	**Pn**	**22 29 57.2**	**+0.8**
RCP	**Roxas**	**2.62**	**355↓**	*e*P	**Pn**	**22 30 04.3**	**+1.0**
RCP				*e*S	**Sn**	**22 30 36.0**	**+1.5**
CUYO	**Cuyo Island**	**2.73**	**315**	*e*P	**Pn**	**22 30 04.8**	**0.0**
CUYO				*e*S	**Sn**	**22 30 34.9**	**-2.0**
OTRP	**Odiongan**	**3.54**	**344**	*e*P	**Pn**	**22 30 15.9**	**+0.2**
SJMP	**San Jose**	**3.96**	**332**	*e*P	**Pn**	**22 30 21.6**	**+0.2**
ENPP	**El Nido**	**4.18**	**303**	*e*P	**Pn**	**22 30 24.3**	**-0.1**
LUBP	**Lubang**	**5.48**	**331**	*e*P	**Pn**	**22 30 43.5**	**+1.4**
NANT	**Nan**	**23.74**	**297**	P	**P**	**22 34 31.0**	**+4.2**
WRA	**Warramunga Arr**	**30.79**	**159**	P	**P**	**22 35 28.9**	**-1.0**
0.3nm,0.5s,mb3.2,baz=340,slow=9.7,SNR=2.6							
ASAR	**Alice Springs**	**34.10**	**162**	P	**P**	**22 35 58.8**	**-0.1**
0.6nm,0.4s,mb3.7,baz=345,slow=7.4,SNR=10.0							
SONM	**Songino Array**	**41.24**	**343**	P	**P**	**22 36 58.0**	**-0.8**
0.4nm,0.7s,mb3.4,baz=163,slow=8.2,SNR=3.5							
MKAR	**Makanchi Array**	**51.20**	**325**	P	**P**	**22 38 17.8**	**+0.9**
0.6nm,0.6s,mb3.8,baz=118,slow=7.5,SNR=2.2							
MKAR				PcP	PcP	22 39 30.5	-0.4
0.2nm,0.3s,baz=113,slow=4.3,SNR=2.7							
ZALV	**Zalesovo Beam**	**54.30**	**333**	P	**P**	**22 38 39.3**	**-0.3**
0.5nm,0.4s,mb3.9,baz=119,slow=5.4,SNR=2.9							
KURK	**Kurchatov**	**55.39**	**327**	P	**P**	**22 38 48.1**	**+0.7**
0.9nm,0.5s,mb4.0,baz=120,slow=8.4,SNR=11							
BVAR	**Borovoye Array**	**60.97**	**327**	P	**P**	**22 39 26.5**	**+0.2**
1.1nm,0.8s,mb3.9,baz=160,slow=4.7,SNR=4.1							
ARCES	**ARCESS Array B**	**84.32**	**339**	P	**P**	**22 41 43.6**	**-0.7**
2.5nm,0.8s,mb4.1,baz=78,slow=6.1,SNR=5.7							

FUNV 26 22:35:32.2, 7.93N×71.48W, h3km, MW3.5, 1C-3D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.71**	**60↓**	*i* P	Pg	22 35 45.0	-0.9
SOCV				*i* S	Sg	22 35 55.5	+0.4
CAPV	**Capacho**	**0.83**	**266↓**	*i* P	Pg	22 35 48.0	-0.1
CAPV				*e*S	Sg	22 35 59.5	+0.6
VIGV	**El Vigia**	**0.92**	**7↑**	*i* P	Pg	22 35 50.0	+0.2
VIGV				*e*S	Sg	22 36 02.6	+1.0
ELOV	**Elorza**	**2.18**	**115**	*e*P	Pn	22 36 09.3	-0.1
ELOV				*e*S	Sn	22 36 35.9	-1.1
QARV	**Quebrada Arrib**	**2.46**	**23**	*e*P	Pn	22 36 12.6	-0.6
SANV	**Sanarito**	**2.48**	**51**	*e*P	Pn	22 36 13.4	-0.1
SANV				*e*S	Sn	22 36 43.0	-1.3
CURV	**Curarigua**	**2.56**	**36**	*e*S	Sn	22 36 44.5	-1.8
TEPV	**Terepaima**	**3.04**	**48**	*e*P	Pn	22 36 20.2	-1.0
DABV	**Dabajuro**	**3.09**	**16**	*e*P	Pn	22 36 21.5	-0.5
SIQV	**Siquisique**	**3.17**	**31**	*e*P	Pn	22 36 22.0	-1.1
BAUV	**El Baul**	**3.55**	**73**	*e*P	Pn	22 36 26.9	-1.3
TURV	**Turiamo**	**4.38**	**55**	*e*P	Pn	22 36 38.8	-1.0
CAOV	**Caicara del Or**	**5.15**	**96**	*e*P	Pn	22 36 48.6	-1.6
BIRV	**Birongo**	**5.73**	**63**	*e*P	Pn	22 36 56.9	-1.4
CUPV	**Cœpira**	**6.01**	**69**	*e*P	Pn	22 37 00.5	-1.6

*ISCJB **26** 22:43:12.0±0.7, 36S±0.1×100.02E±0.10, h26km, mb4.3/23, Error ellipse: s-maj=19.4km s-min=6.3km az=43.5*
*DJA **26** 22:43:12, 4.17S×99.41E, h10km, MLv5.2/4*
*IDC **26** 22:43:13.9±1.2, 361S×100.06E, h24km±3km, mb3.9/12, mb1 4.1/13, mb1mx3.9/23, mbtmp4.0/13, ML4.1/1, MS3.4/1, Ms1 3.6/1, ms1mx2.9/23, Error ellipse: s-maj=47.9km s-min=12.1km az=53.0*
*MOS **26** 22:43:14.8±1.5, 327S×100.40E, h33km, mb4.5/6, Error ellipse: s-maj=24.3km s-min=10.5km az=105.0*
*BJI **26** 22:43:15.6, 340S×100.30E, h35km, mB5.2, mb5.0*
*NEIC **26** 22:43:16.2±0.7, 341S×100.27E, h35km, mb4.5/8, Error ellipse: s-maj=25.0km s-min=7.1km az=52.0*
ISC 26 22:43:14.5±0.7, 36S±0.1×100.00E±0.01, h27km, h27km±1.0km:pP-P, n52, σ0.9/97/49, mb4.3/23, 1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**2.55**	**92**	P	**Pn**	**22 43 53.9**	**-0.1**
0.0nm,0.0s							
PPI	**Padang Panjang**	**3.10**	**7**	P	**Pn**	**22 44 08.3**	**+6.7**
0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**6.24**	**77**	P	**Pn**	**22 44 45.5**	**+0.7**
0.0nm,0.0s							
DBJI	**Dramaga**	**7.31**	**114**	P	**Pn**	**22 44 59.1**	**-0.5**
0.0nm,0.0s							
CBJI	**Citeko**	**7.35**	**113**	P	**Pn**	**22 45 02.8**	**+2.7**
0.0nm,0.0s							
LEM	**Lembang**	**8.21**	**114**	P	**Pn**	**22 45 13.3**	**+1.4**
0.0nm,0.0s							
KAPI	**Kappang**	**19.71**	**95**	P	**Pn**	**22 47 39.8**	**-3.7**
0.6nm,0.3s,baz=263,slow=16,SNR=3.2							
KAPI	**Kappang**	**19.71**	**95**	*e*P	**Pn**	**22 47 40.0**	**-3.5**
31nm,1.1s							
KAPI				*e*		22 47 48.5	
CM31	**Chiang Mai Arr**	**21.90**	**357**	*e*P	**P**	**22 48 06.1**	**+0.5**
CMAR	**Chiang Mai Arr**	**21.90**	**357**	P	**P**	**22 48 04.3**	**-1.3**
2.5nm,0.7s,mb3.8,baz=186,slow=10,SNR=17							
CMAR				LR	LR	22 56 14.6	
comp=Z,103nm,21.1s,baz=180,slow=36							
CMAR	**Chiang Mai Arr**	**21.90**	**357**	*i* P	**P**	**22 48 06.0**	**+0.4**
CMAR				pmax	pmax		
comp=Z,3.0nm,0.7s							
CHTO	**Chiang Mai**	**22.25**	**357**	*e*P	**P**	**22 48 07.3**	**-2.1**
CHTO				pmax	pmax		
comp=Z,6.0nm,1.0s,mb4.0							
CHTO	**Chiang Mai**	**22.25**	**357**	*e*P	**P**	**22 48 07.3**	**-2.0**
comp=Z,5.6nm,1.0s,mb4.0							
FITZ	**Fitzroy Crossi**	**28.93**	**122**	*e*P	**P**	**22 49 18.0**	**+6.4**
comp=Z,7.6nm,1.0s,mb4.4							
FITZ	**Fitzroy Crossi**	**28.93**	**122**	P	**P**	**22 49 10.3**	**-1.3**
comp=Z,1.8nm,1.0s,mb3.8,baz=315,slow=7.1,SNR=2.4							
FITZ	**Fitzroy Crossi**	**28.93**	**122**	*e*P	**P**	**22 49 11.1**	**-0.5**
comp=Z,6.4nm,0.8s,mb4.4							
LSA	**Lhasa**	**34.15**	**346**	P	**P**	**22 49 55.0**	**-2.3**
LSA	**Lhasa**	**34.15**	**346**	*e*P	**P**	**22 49 57.5**	**+0.2**
LSA				*e*	pP	22 50 06.8	+1.4
LSA				pmax	pmax		
comp=Z,8.0nm,0.8s,mb4.7							
LSA	**Lhasa**	**34.15**	**346**	*e*P	**P**	**22 49 57.5**	**+0.2**
comp=Z,7.8nm,0.8s,mb4.7							
LSA				*e*	pP	22 50 06.8	+1.4
WRA	**Warramunga Arr**	**37.19**	**119**	P	**P**	**22 50 22.6**	**-1.1**
comp=Z,2.0nm,0.7s,mb4.1,baz=293,slow=9.3,SNR=7.7							
WRAB	**Tennant Creek**	**37.20**	**119**	*i* P	**P**	**22 50 23.2**	**-0.5**
WB2	**Warramunga Arr**	**37.20**	**119**	*e*P	**P**	**22 50 23.2**	**-0.5**
XAN	**Xi'an**	**38.32**	**12**	P	**P**	**22 50 33.0**	**+0.1**
XAN				AP	pP	22 50 41.0	-0.1
XAN				AMB	AMB		
comp=Z,22nm,0.7s,mb5.0							
ASAR	**Alice Springs**	**38.32**	**125**	P	**P**	**22 50 33.0**	**-0.1**
comp=Z,4.5nm,0.6s,mb4.4,baz=302,slow=7.5,SNR=16							
ASAR				pP	pP	22 50 38.8	-2.5
comp=Z,4.8nm,0.6s,baz=300,slow=8.0,SNR=25							
KBL	**Kabul**	**47.82**	**325**	*e*P	**P**	**22 51 51.3**	**+1.5**
KBL				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.3							
KBL	**Kabul**	**47.82**	**325**	*e*P	**P**	**22 51 51.3**	**+1.5**
comp=Z,2.3nm,0.6s,mb4.4							
STKA	**Stephens Creek**	**48.10**	**131**	*e*P	pP	22 52 01.3	+0.9
comp=Z,3.4nm,0.8s							
STKA	**Stephens Creek**	**48.10**	**131**	P	**P**	**22 51 52.3**	**+0.2**
comp=Z,1.2nm,0.7s,mb4.1,baz=321,slow=21,SNR=3.2							
KSRS	**Korea Array**	**48.33**	**30**	P	**P**	**22 51 53.7**	**0.0**
comp=Z,0.9nm,0.5s,mb4.0,baz=212,slow=8.2,SNR=4.3							
WMQ	**Urumqi**	**48.45**	**348**	*e*P	**P**	**22 51 54.8**	**+0.3**
WMQ				AMB	AMB		
comp=Z,22nm,0.9s,mb5.2							
WMQ				AMB	AMB		
comp=Z,184nm,5.9s							
AML	**Almayashu**	**51.38**	**335**	*e*P	**P**	**22 52 17.0**	**+0.2**
comp=Z,3.7nm,0.7s,mb4.4							
AML				*e*	pP	22 52 25.2	0.0
SONM	**Songino Array**	**51.48**	**5**	P	**P**	**22 52 18.4**	**+1.0**
comp=Z,3.2nm,0.6s,mb4.4,baz=190,slow=8.8,SNR=26							
SONM				pP	pP	22 52 26.3	+0.5
comp=Z,4.3nm,0.8s,baz=191,slow=8.9,SNR=12							
ULN	**Ulaanbaatar**	**51.57**	**6↓**	*e*P	**P**	**22 52 19.5**	**+1.4**
ULN	**Ulaanbaatar**	**51.57**	**6**	*e*P	**P**	**22 52 18.8**	**+0.7**
comp=Z,6.9nm,1.1s,mb4.5							
ULN				*e*	pP	22 52 26.3	-0.2
EKS2	**Erkin-Say**	**51.78**	**335**	*e*P	**P**	**22 52 20.9**	**+1.0**
comp=Z,7.1nm,0.8s,mb4.7							
EKS2				*e*pP	pP	22 52 27.7	-0.5
MKAR	**Makanchi Array**	**52.53**	**345**	P	**P**	**22 52 25.9**	**+0.7**
comp=Z,1.7nm,0.6s,mb4.2,baz=153,slow=9.0,SNR=9.7							
MKAR				pP	pP	22 52 33.9	+0.2
comp=Z,3.4nm,0.6s,baz=153,slow=8.6,SNR=10							
MKAR	**Makanchi Array**	**52.53**	**345**	P	**P**	**22 52 25.9**	**+0.7**
MKAR				pP	pP	22 52 33.9	+0.2
MK31	**Makanchi Array**	**52.53**	**345**	*e*P	**P**	**22 52 26.2**	**+0.9**
MK31				*e**PP	pP	22 52 33.8	+0.1
KURK	**Kurchatov**	**57.10**	**344**	P	**P**	**22 52 57.9**	**-0.4**
comp=Z,0.3nm,0.3s,mb3.8,baz=165,slow=7.1,SNR=3.6							
KURK	**Kurchatov**	**57.10**	**344**	P	**P**	**22 52 57.9**	**-0.4**
ZAA0	**Zalesovo Array**	**58.69**	**350**	*e*P	**P**	**22 53 09.5**	**+0.1**
ZAA0				*e*pP	pP	22 53 17.3	-0.7
ZAA0				*e*PcP	PcP	22 53 56.4	-2.8
ZALV	**Zalesovo Beam**	**58.69**	**350**	P	**P**	**22 53 09.7**	**+0.2**
comp=Z,3.4nm,0.6s,mb4.5,baz=182,slow=6.4,SNR=16							
BVAR	**Borovoye Array**	**61.65**	**340**	P	**P**	**22 53 28.5**	**-1.2**
comp=Z,0.8nm,0.5s,mb4.1,baz=146,slow=9.2,SNR=8.1							
BVAR				pP	pP	22 53 36.0	-2.2
comp=Z,1.9nm,0.6s,baz=143,slow=9.1,SNR=11							
BRVK	**Borovoye**	**61.71**	**340**	*e*P	**P**	**22 53 29.2**	**-0.9**
BRVK				*e**PP	pP	22 53 37.6	-1.1
BOD	**Bodaibo**	**62.20**	**8**	*e*P	**P**	**22 53 32.8**	**-0.5**
BOD				pmax	pmax		
comp=Z,4.0nm,1.3s,mb4.4							
YSS	**Yuzh-Sakhalins**	**62.77**	**32**	*i* P	**P**	**22 53 34.3**	**-3.1**
ARU	**Arti**	**68.64**	**337**	*i* P	**P**	**22 54 21.4**	**+6.4**
ARU				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.2							
SEY	**Seymchan**	**77.04**	**22**	*i* P	**P**	**22 55 04.2**	**-0.5**
OBN	**Obninsk**	**78.13**	**328**	*e*P	**P**	**22 55 18.1**	**+7.1**
OBN				*e*	pP	22 55 28.0	+8.3
OBN				*e*SS	SS	23 10 13.6	+7.9
OBN				pmax	pmax		
comp=Z,6.0nm,1.3s,mb4.4							
ARCES	**ARCESS Array B**	**87.94**	**340**	P	**P**	**22 56 01.6**	**+0.1**
comp=Z,4.2nm,1.1s,mb4.6,baz=99,slow=5.6,SNR=2.3							
TXAR	**Lajitas Array**	**145.89**	**39**	PKPbc	PKPbc	23 02 53.3	+1.2
comp=Z,1.6nm,0.6s,baz=292,slow=1.3,SNR=10							
TXAR				pPKPbc	pPKPbc	23 03 00.8	-0.3
comp=Z,3.0nm,0.6s,baz=226,slow=1.1,SNR=4.9							
JCT	**Junction City**	**147.31**	**33**	*e*PKP2	PKPab	23 02 55.1	-2.9

MAN 26 22:45:07, 936N×126.81E, h1km, mb4.4, ML3.2, MS3.1, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.24**	**252**	*e*P	Pg	22 45 30.1	-0.6
BIPH	**Bislig**	**1.25**	**201↓**	*e*P	Pg	22 45 30.7	-0.2
BIPH				*e*S	Sg	22 45 45.2	-1.9
SCPH	**Surigao**	**1.37**	**288↑**	*e*P	Pn	22 45 32.1	-1.2
SCPH				*e*S	Sg	22 45 49.9	-1.3
BUKP	**Musuan**	**2.27**	**230**	*e*P	Pn	22 45 46.7	+1.0
BUKP				*e*S	Sn	22 46 15.7	+1.4
TBP	**Tagbilaran**	**2.93**	**277**	*e*P	Pn	22 45 55.6	+0.9
DCPH	**Dipolog City**	**3.50**	**258↑**	*e*P	Pn	22 46 03.4	+0.7
DCPH				*e*S	Sn	22 46 42.3	-2.5
RCP	**Roxas**	**4.56**	**299↑**	*i* P	Pn	22 46 19.2	+2.0

IDC 26 22:52:11.5±6.2, 6.15S×121.90W, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.6/21, mbtmp3.8/4, ML3.0/1, MS3.7/6, Ms1 3.7/6, ms1mx3.3/27, Error ellipse: s-maj=283.6km s-min=87.5km az=132.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**14.22**	**27**	Pn	Pn	22 55 32.3	-2.0
0.1nm,0.3s,baz=204,slow=12,SNR=2.2							
DBIC				LR	LR	22 59 47.9	
comp=Z,102nm,21.2s,baz=249,slow=32							
TORD	**Torodi Ar. Bea**	**23.06**	**34**	P	P	22 57 19.5	+0.8
3.2nm,0.8s,baz=216,slow=11,SNR=23							
TORD				LR	LR	23 05 39.9	
comp=Z,88nm,18.5s,baz=215,slow=35							
KMBO	**Kilima Mbogo**	**48.59**	**86**	LR	LR	23 19 03.7	
comp=Z,70nm,21.5s,baz=207,slow=33							
GERES	**GERESS Array B**	**58.94**	**19**	P	P	23 02 13.2	+0.7
0.2nm,0.5s,baz=194,slow=12,SNR=2.9							
ROSC	**El Rosal**	**63.97**	**278**	LR	LR	23 27 31.2	
comp=Z,51nm,18.2s,baz=354,slow=33							
AKASG	**Malin Array Be**	**66.47**	**27**	P	P	23 03 02.1	-0.7
0.2nm,0.2s,baz=234,slow=5.6,SNR=2.5							
SFJD	**Kangerlussuaq**	**78.23**	**345**	LR	LR	23 35 46.2	
comp=Z,138nm,18.1s,baz=182,slow=33							
ULM	**Lac du Bonnet**	**91.28**	**320**	LR	LR	23 41 17.8	
comp=Z,84nm,18.1s,baz=2.3,slow=32							

*MAN **26** 23:28:08, 1.230N×126.04E, h8km, mb4.5, ML3.4, MS3.2*
*IDC **26** 23:28:12.9±1.9, 11.39N×123.96E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/20, mbtmp3.9/6, Error ellipse: s-maj=210.5km s-min=24.1km az=66.0*
*ISCJB **26** 23:28:13.0±0.9, 12.16N±0.005×125.80E±0.08, h33km, mb3.9/5, Error ellipse: s-maj=11.3km s-min=7.0km az=178.6*
ISC 26 23:28:13.0±2.2, 1217N±007×12575E±009, h18km±13km, n13, σ1.9/11/16, mb3.9/5, 3D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.64**	**208**	*e*P	**Pg**	**23 28 25.3**	**-0.1**
BESP				*e*S	**Sg**	**23 28 35.2**	**+0.9**
CNP	**Catarman**	**1.11**	**288**	*e*P	**Pb**	**23 28 32.3**	**-1.4**
CNP				*e*S	**Sb**	**23 28 48.6**	**+0.7**
PLP	**Palo**	**1.25**	**217↓**	*e*P	**Pn**	**23 28 34.5**	**-1.1**
PLP				*e*S	**Sb**	**23 28 49.8**	**-2.0**
PVCP	**Virac**	**2.10**	**313**	*e*P	**Pn**	**23 28 46.2**	**-1.1**
MSLP	**Maasin**	**2.20**	**203**	*e*P	**Pn**	**23 28 50.6**	**+1.9**
SCPH	**Surigao**	**2.38**	**186↓**	*e*P	**Pn**	**23 28 49.9**	**-1.3**
RCP	**Roxas**	**3.00**	**259↓**	*e*P	**Pn**	**23 29 00.3**	**+0.7**
RCP				*e*S	**Sn**	**23 29 41.6**	**+6.4**
ASAR	**Alice Springs**	**36.50**	**167**	P	**P**	**23 35 17.3**	**0.0**
0.2nm,0.4s,mb3.4,baz=342,slow=8.0,SNR=3.8							
MKAR	**Makanchi Array**	**50.22**	**322**	P	**P**	**23 37 07.8**	**0.0**
1.8nm,0.8s,mb4.2,baz=124,slow=7.8,SNR=11							
ZALV	**Zalesovo Beam**	**52.73**	**331**	P	**P**	**23 37 28.5**	**+2.0**
0.3nm,0.3s,mb3.6,baz=117,slow=5.0,SNR=3.5							
KURK	**Kurchatov**	**54.23**	**325**	P	**P**	**23 37 37.8**	**+0.2**
3.0nm,0.6s,mb4.4,baz=124,slow=7.4,SNR=14							
BVAR	**Borovoye Array**	**59.83**	**325**	P	**P**	**23 38 16.9**	**-0.3**
1.2nm,0.7s,mb4.0,baz=126,slow=7.5,SNR=6.6							
ARCES	**ARCESS Array B**	**82.25**	**340**	P	pP	23 40 36.5	-2.4
3.1nm,1.0s,baz=72,slow=7.8,SNR=3.9							

*IDC **26** 23:36:39.6±2.2, 4.06S×101.27E, h0km, mb4.0/10, mb1 4.1/10, mb1mx4.0/21, mbtmp4.0/10, Error ellipse: s-maj=100.6km s-min=14.9km az=55.0*
*ISCJB **26** 23:36:42.2±1.8, 4.1S±0.3×101.3E±0.05, h33km, mb3.9/11, Error ellipse: s-maj=80.5km s-min=10.5km az=144.0*
*NEIC **26** 23:36:45.3±1.2, 3.96S×101.47E, h35km, mb4.4/1, Error ellipse: s-maj=53.5km s-min=7.2km az=54.0*
ISC 26 23:36:45.2±1.7, 40S±0.3×1015E±0.4, h35km, n16, σ0.5/53/15, mb3.9/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**22.42**	**354**	P	**P**	**23 41 40.5**	**-0.4**
0.5nm,0.3s,mb3.4,baz=180,slow=9.1,SNR=5.0							
FITZ	**Fitzroy Crossi**	**27.53**	**123**	P	**P**	**23 42 28.7**	**-0.1**
1.1nm,0.7s,mb3.6,baz=350,slow=7.9,SNR=5.8							
WRA	**Warramunga Arr**	**35.76**	**119**	P	**P**	**23 43 40.8**	**-0.3**
1.0nm,0.5s,mb4.0,baz=297,slow=9.5,SNR=5.7							
WRAB	**Tennant Creek**	**35.77**	**119**	*e*P	**P**	**23 43 41.2**	**0.0**
3.3nm,0.7s,mb4.4							
WB2	**Warramunga Arr**	**35.77**	**119**	*e*P	**P**	**23 43 40.9**	**-0.4**
ASAR	**Alice Springs**	**36.94**	**125**	P	**P**	**23 43 51.5**	**+0.3**
1.5nm,0.7s,mb4.0,baz=292,slow=8.2,SNR=17							
STKA	**Stephens Creek**	**46.77**	**131**	P	**P**	**23 45 11.8**	**+0.4**
3.0nm,0.5s,mb4.5,baz=287,slow=5.9,SNR=8.3							
SONM	**Songino Array**	**51.77**	**4**	P	**P**	**23 45 50.3**	**+1.0**
0.7nm,0.6s,mb3.8,baz=185,slow=9.6,SNR=4.7							
MK31	**Makanchi Array**	**53.31**	**344**	*e*P	**P**	**23 46 01.9**	**+1.2**
MKAR	**Makanchi Array**	**53.31**	**344**	P	**P**	**23 46 00.6**	**-0.1**
0.5nm,0.4s,mb3.8,baz=139,slow=9.4,SNR=7.4							
KURK	**Kurchatov**	**57.89**	**343**	P	**P**	**23 46 33.4**	**-0.2**
0.7nm,0.9s,mb3.7,baz=136,slow=11,SNR=5.3							
KURK	**Kurchatov**	**57.89**	**343**	P	**P**	**23 46 33.4**	**-0.2**
ZAA0	**Zalesovo Array**	**59.36**	**349**	*e*P	**P**	**23 46 43.3**	**-0.4**
ZALV	**Zalesovo Beam**	**59.36**	**349**	P	**P**	**23 46 43.2**	**-0.5**
1.2nm,0.6s,mb4.1,baz=160,slow=4.7,SNR=7.6							
BVAR	**Borovoye Array**	**62.52**	**339**	P	**P**	**23 47 04.8**	**-0.5**
0.8nm,0.4s,mb4.1,baz=153,slow=9.7,SNR=3.6							
TXAR	**Lajitas Array**	**145.31**	**41**	PKPbc	PKPbc	23 56 20.8	+1.0
1.0nm,0.6s,baz=300,slow=1.2,SNR=14							

*IDC **27** 00:02:21.8±2.6, 4.88S×102.92E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/21, mbtmp3.9/10, Error ellipse: s-maj=117.2km s-min=15.1km az=54.0*
*ISCJB **27** 00:02:23.5±0.6, 50S±0.1×102.7E±0.1, h33km, mb4.1/13, Error ellipse: s-maj=23.4km s-min=8.6km az=141.2*
*NEIC **27** 00:02:25.8±0.5, 501S×102.76E, h35km, mb4.4/5, Error ellipse: s-maj=21.2km s-min=7.7km az=50.0*
ISC 27 00:02:26.0±0.6, 50S±0.1×1028E±0.1, h35km, n30, σ0.8/88/28, mb4.1/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**23.61**	**351**	P	**P**	**00 07 33.5**	**-0.5**
0.7nm,0.4s,mb3.5,baz=180,slow=7.7,SNR=4.2							
QIZ	**Qiongzhong**	**24.87**	**16**	P	**P**	**00 07 39.1**	**-6.4**
DAV	**Davao City (W)**	**25.73**	**62**	P	**P**	**00 07 53.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**25.87**	**122**	P	**P**	**00 07 55.0**	**+0.3**
0.6nm,0.4s,mb3.5,baz=31,slow=8.5,SNR=6.5							
FITZ	**Fitzroy Crossi**	**25.87**	**122**	*e*P	**P**	**00 07 55.0**	**+0.3**
1.1nm,0.4s,mb3.7							
NWAO	**Narrogin (SRO)**	**30.90**	**156**	P	**P**	**00 08 40.6**	**+1.3**
50nm,1.4s,mb5.2							
WRA	**Warramunga Arr**	**34.12**	**119**	P	**P**	**00 09 08.1**	**+0.

*ISCJB **27** 00:15:37.9±3.3, 506S×007×15388E±007, h14km±20km, mb4.7/18, MS3.6/4, Error ellipse: s-maj=13.9km s-min=8.0km az=135.9*
*IDC **27** 00:15:37.6±1.4, 504S×15384E, h0km, mb4.2/9, mb1 4.3/10, mb1mx4.2/18, mbtmp4.2/10, ML3.6/1, MS3.5/4, Ms1 3.5/4, ms1mx3.0/25, Error ellipse: s-maj=48.0km s-min=21.5km az=100.0*
*MOS **27** 00:15:40.3±0.8, 504S×15395E, h33km, mb5.1/6, Error ellipse: s-maj=12.2km s-min=10.7km az=112.2*
*BJI **27** 00:15:41.8, 5.10S×15390E, h25km, mB4.9, mb5.1, Ms4.3, Msz4.4*
*NEIC **27** 00:15:42.8±1.5, 509S×15388E, h39km±14km, mb4.8/7, Error ellipse: s-maj=10.2km s-min=8.7km az=128.0*

ISC 27 00:15:41.9±3.6, 508S±008×15383E±007, h28km±25km, n61, σ0§87/55, mb4.7/18, MS3.6/4, 4C-1D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**7.45**	**126**	*e*Pn		**Pn**	**00 17 28.4**	**-0.3**
HNR				*e*Sn		**Sn**	**00 18 52.9**	**+0.5**
CTA	**Charters Tower**	**16.64**	**206**	Pn		**Pn**	**00 19 34.8**	**+1.6**
	0.2nm,0.3s,baz=25,slow=14,SNR=3.8							
CTA				LR		LR	00 25 07.7	
	comp=Z,190nm,19.7s,baz=43,slow=34							
CTAO	**Charters Tower**	**16.64**	**206**	*e*P		**Pn**	**00 19 33.1**	**-0.1**
CTAO				pmax		pmax		
	comp=Z,6.0nm,1.0s							
CTAO	**Charters Tower**	**16.64**	**206**	*e*P		**Pn**	**00 19 33.1**	**-0.1**
	comp=Z,6.4nm,1.0s							
DZM	**Mont Dzumac**	**20.84**	**145**	*e*P		**P**	**00 20 24.7**	**+3.1**
WRAB	**Tennant Creek**	**24.03**	**230**	*i* P		**P**	**00 20 54.8**	**+0.2**
WRAB	**Tennant Creek**	**24.03**	**230**	*e*P		**P**	**00 20 54.1**	**-0.5**
	comp=Z,4.2nm,0.6s,mb4.0							
WB2	**Warramunga Arr**	**24.03**	**230**	*e*P		**P**	**00 20 54.5**	**-0.1**
WRA	**Warramunga Arr**	**24.04**	**230**	P		**P**	**00 20 54.3**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=55,slow=9.6,SNR=6.7							
WRA				PcP		PcP	00 24 36.7	+0.5
	comp=Z,2.6nm,0.8s,baz=57,slow=2.4,SNR=8.5							
WRA				LR		LR	00 30 01.5	
	comp=Z,96nm,19.6s,MS3.3,baz=260,slow=36							
WRA	**Warramunga Arr**	**24.04**	**230**	*i* P		**P**	**00 20 54.2**	**-0.5**
ASAR	**Alice Springs**	**26.65**	**224**	P		**P**	**00 21 18.9**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=54,slow=9.1,SNR=6.4							
ASAR				PcP		PcP	00 24 42.6	+0.6
	comp=Z,2.3nm,0.8s,baz=58,slow=2.2,SNR=12							
STKA	**Stephens Creek**	**29.02**	**202**	LR		LR	00 32 59.7	
	comp=Z,164nm,19.9s,MS3.6,baz=26,slow=36							
STKA	**Stephens Creek**	**29.02**	**202**	P		**P**	**00 21 39.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**30.43**	**243**	P		**P**	**00 21 51.5**	**-0.7**
	comp=Z,1.8nm,0.9s,mb3.8,baz=150,slow=11,SNR=2.4							
FITZ	**Fitzroy Crossi**	**30.43**	**243**	*e*P		**P**	**00 21 51.3**	**-0.9**
DAV	**Davao City (W)**	**30.67**	**293**	P		**P**	**00 21 53.1**	**-1.2**
RAO	**Raoul Island**	**35.95**	**135**	P		**P**	**00 22 38.8**	**-1.4**
QIZ	**Qiongzhong**	**49.49**	**300**	*e*P		**P**	**00 24 29.9**	**-0.4**
NJ2	**Nanjing**	**49.71**	**320**	*e*P		**P**	**00 24 33.3**	**+1.6**
NJ2				AMB		AMB		
	comp=Z,102nm,1.0s							
HABR	**Khabarovsk**	**55.81**	**345**	*e*P		**P**	**00 25 11.5**	**-4.9**
HABR				*e*			00 25 22.4	
HABR				*e*			00 26 08.8	
HABR				*e*			00 27 19.4	
HABR				*e*S		**S**	**00 33 01.7**	**0.0**
HABR				*e*			00 33 13.4	
HABR				*e*			00 34 57.8	
HABR				*e*			00 36 52.4	
COCO	**West Island**	**56.70**	**259**	*e*P		**P**	**00 25 23.7**	**+0.2**
PET	**Petropavlovsk**	**58.03**	**3**⇑	*e*P		**P**	**00 25 23.6**	**-8.5**
PET				pmax		pmax		
	comp=Z,156nm,1.9s,mb5.7							
PETK	**Petropavlovsk-**	**58.06**	**3**	LR		LR	00 48 01.0	
	comp=Z,21nm,21.1s,MS3.2,baz=310,slow=34							
CM31	**Chiang Mai Arr**	**58.92**	**295**	P		**P**	**00 25 38.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**58.92**	**295**	P		**P**	**00 25 40.0**	**+1.0**
	comp=Z,2.5nm,0.4s,mb4.6,baz=112,slow=5.3,SNR=18							
CHTO	**Chiang Mai**	**59.03**	**295**	*e*P		**P**	**00 25 39.8**	**+0.1**
CD2	**Chengdu**	**59.70**	**310**⇑	*i*P		**P**	**00 25 44.0**	**-0.1**
CD2				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb5.0							
CD2				AMB		AMB		
	comp=Z,30nm,4.8s							
CD2				LR		LR		
	comp=E,130nm,19.2s							
CD2				LR		LR		
	comp=Z,220nm,14.4s,MS4.4							
HIA	**Hailar**	**61.71**	**335**	*i* P		**P**	**00 25 57.0**	**-0.5**
LZH	**Lanzhou**	**62.15**	**315**	*e*P		**P**	**00 26 02.0**	**+1.3**
LZH				AMB		AMB		
	comp=Z,27nm,1.1s,mb5.3							
LZH				AMB		AMB		
	comp=Z,190nm,4.9s							
LZH	**Lanzhou**	**62.15**	**315**	*e*P		**P**	**00 26 02.1**	**+1.4**
	comp=Z,27nm,1.1s,mb5.3							
LZH				pP		pP	00 26 07.5	-2.0
LZH				sP		sP	00 26 09.5	-3.4
GTA	**Gaotai**	**66.56**	**317**	*e*P		**P**	**00 26 30.8**	**+1.3**
GTA				AMB		AMB		
	comp=Z,12nm,1.2s,mb4.8							
ULN	**Ulaanbaatar**	**66.78**	**328**⇑	*e*P		**P**	**00 26 31.7**	**+1.0**
ULN	**Ulaanbaatar**	**66.78**	**328**	*e*P		**P**	**00 26 30.9**	**+0.1**
	comp=Z,3.5nm,0.9s,mb4.4							
SONM	**Songino Array**	**67.11**	**327**	P		**P**	**00 26 32.9**	**0.0**
	comp=Z,1.1nm,0.5s,mb4.2,baz=141,slow=6.0,SNR=8.0							
CASY	**Casey**	**68.05**	**197**	P		**P**	**00 26 38.4**	**-0.1**
ZAK	**Zakamensk**	**70.27**	**328**	*e*P		**P**	**00 26 50.9**	**-1.6**
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb4.2							
HVS	**Khovu-Aksy**	**75.86**	**326**⇓	*e*P		**P**	**00 27 26.2**	**+0.6**
HVS				pmax		pmax		
	comp=Z,24nm,1.2s,mb5.0							
DGAR	**Diego Garcia**	**80.83**	**263**	*e*P		**P**	**00 27 53.0**	**-0.9**
MK31	**Makanchi Array**	**81.21**	**319**	*e*P		**P**	**00 27 55.0**	**-0.2**
MKAR	**Makanchi Array**	**81.21**	**319**	P		**P**	**00 27 55.7**	**+0.5**
	comp=Z,2.5nm,0.7s,mb4.2,baz=101,slow=6.3,SNR=11							
MKAR	**Makanchi Array**	**81.21**	**319**	P		**P**	**00 27 55.7**	**+0.5**
COLA	**College**	**81.73**	**22**	P		**P**	**00 27 55.8**	**-1.7**
ZALV	**Zalesovo Beam**	**81.96**	**326**	P		**P**	**00 27 58.2**	**-0.7**
	comp=Z,1.4nm,0.5s,mb4.2,baz=110,slow=5.8,SNR=6.7							
ZALV	**Zalesovo Beam**	**81.96**	**326**	P		**P**	**00 27 58.2**	**-0.7**
KURK	**Kurchatov**	**84.62**	**322**	*e*P		**P**	**00 28 12.4**	**-0.4**
KURK				pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.7							
KURK	**Kurchatov**	**84.62**	**322**	*e*P		**P**	**00 28 12.4**	**-0.3**
	comp=Z,6.6nm,1.2s,mb4.6							
TKM2	**Tokmak 2**	**84.86**	**314**	*e*P		**P**	**00 28 15.1**	**+0.9**
TKM2				pmax		pmax		
	comp=Z,7.0nm,0.9s,mb4.8							
TKM2	**Tokmak 2**	**84.86**	**314**	*e*P		**P**	**00 28 15.1**	**+0.9**
	comp=Z,6.5nm,0.9s,mb4.8							
MAW	**Mawson**	**85.70**	**203**	P		**P**	**00 28 18.1**	**+0.2**
	comp=Z,4.7nm,0.6s,mb4.9,baz=92,slow=4.7,SNR=12							
MAW	**Mawson**	**85.70**	**203**	*e*P		**P**	**00 28 18.4**	**+0.5**
MAW				pmax		pmax		
	comp=Z,4.0nm,0.4s							
MAW	**Mawson**	**85.70**	**203**	*e*P		**P**	**00 28 18.4**	**+0.5**
	comp=Z,4.1nm,0.4s,mb5.0							
AML	**Almayashu**	**86.09**	**313**	P		**P**	**00 28 21.9**	**+1.5**
	comp=Z,138nm,0.6s							
EKS2	**Erkin-Say**	**86.13**	**313**	*e*P		**P**	**00 28 21.1**	**+0.6**
	comp=Z,9.6nm,0.7s,mb5.1							
BVAR	**Borovoye Array**	**90.08**	**323**	P		**P**	**00 28 38.4**	**-0.7**
	comp=Z,3.6nm,0.7s,mb4.8,baz=110,slow=6.5,SNR=22							
BRVK	**Borovoye**	**90.15**	**323**	*e*P		**P**	**00 28 38.5**	**-0.9**
AKASG	**Malin Array Be**	**115.32**	**325**	*i* PKIKP		PKPdf	00 34 15.0	-5.9
KMBO	**Kilima Mbogo**	**116.35**	**266**⇑	*i* PKIKP		PKPdf	00 34 17.5	-6.5
TAM	**Tamanrasset**	**144.69**	**303**	*e*PKIKP		PKPdf	00 35 16.5	-0.4
MDT	**Midelt**	**145.85**	**327**	PKPbc		PKPbc	00 35 20.3	+1.1
	comp=Z,1.8nm,0.8s,baz=65,slow=3.6,SNR=3.8							
TOA0	**Torodi Ar. Sit**	**151.37**	**288**	*e*PKPbc		PKPbc	00 35 33.0	-1.1
TORD	**Torodi Ar. Bea**	**151.37**	**288**	PKPbc		PKPbc	00 35 33.8	-0.2
	comp=Z,4.0nm,0.4s,baz=52,slon=2.1,SNR=158							
TORD				PKPab		PKPab	00 35 42.0	-0.2
	comp=Z,2.5nm,0.7s,baz=75,slow=3.9,SNR=7.6							

*IDC **27** 00:25:59.3±1.7, 1153S×16553E, h0km, mb4.1/10, mb1 4.2/10, mb1mx4.1/18, mbtmp4.1/10, MS3.3/1, Ms1 3.3/1, ms1mx2.4/24, Error ellipse: s-maj=58.1km s-min=23.7km az=135.0*
*ISCJB **27** 00:26:02.6±0.6, 1163S±007×16543E±009, h33km, mb4.1/11, Error ellipse: s-maj=13.0km s-min=9.0km az=156.0*
*NEIC **27** 00:26:03.7±0.5, 1155S×16548E, h30km, mb4.3/4, Error ellipse: s-maj=12.3km s-min=10.6km az=193.0*

ISC 27 00:26:04.4±0.6, 1153S±007×16546E±009, h35km, n27, σ0§87/28, mb4.1/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.52**	**175**	*e*P		**Pn**	**00 28 31.8**	**-1.0**
DZM	**Mont Dzumac**	**10.52**	**175**	*e*P		**Pn**	**00 28 31.5**	**-1.3**
DZM				*e*S		**Sn**	**00 30 30.0**	**+0.5**
PMG	**Port Moresby**	**18.12**	**275**	*e*P		**Pn**	**00 30 13.3**	**-0.2**
CTA	**Charters Tower**	**20.33**	**243**	P		**P**	**00 30 39.8**	**+2.1**
	6.8nm,0.8s,baz=73,slow=12,SNR=9.9							
CTA				LR		LR	00 37 15.9	
	comp=Z,81nm,21.3s,baz=49,slow=33							
CTAO	**Charters Tower**	**20.33**	**243**	*e*P		**P**	**00 30 38.4**	**+0.7**
	6.9nm,0.8s							
CTAO				*e*S		**S**	**00 34 28.4**	**+4.6**
STKA	**Stephens Creek**	**29.90**	**224**	P		**P**	**00 32 08.0**	**-0.9**
	2.3nm,0.9s,mb3.9,baz=130,slow=12,SNR=2.4							
STKA	**Stephens Creek**	**29.90**	**224**	*e*P		**P**	**00 32 08.7**	**-0.2**
WRAB	**Tennant Creek**	**31.04**	**250**	*e*P		**P**	**00 32 18.1**	**-1.1**
	3.7nm,0.9s,mb4.2							
WB2	**Warramunga Arr**	**31.04**	**250**	*e*P		**P**	**00 32 19.0**	**-0.2**
WRA	**Warramunga Arr**	**31.05**	**250**	P		**P**	**00 32 19.7**	**+0.4**
	0.9nm,0.5s,mb3.9,baz=79,slow=8.9,SNR=6.7							
ASAR	**Alice Springs**	**32.33**	**244**	P		**P**	**00 32 30.5**	**+0.1**
	1.3nm,0.7s,mb3.9,baz=69,slow=8.7,SNR=16							
RAR	**Rarotonga**	**34.65**	**111**	*e*P		**P**	**00 32 50.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**38.99**	**255**	P		**P**	**00 33 28.5**	**+0.9**
	2.8nm,0.7s,mb4.1,baz=115,slow=15,SNR=7.2							
FITZ	**Fitzroy Crossi**	**38.99**	**255**	*e*P		**P**	**00 33 27.0**	**-0.7**
	33nm,1.4s,mb4.9							
NWAO	**Narrogin (SRO)**	**48.96**	**236**	*e*P		**P**	**00 34 47.5**	**0.0**
CASY	**Casey**	**65.83**	**201**	*e*P		**P**	**00 36 46.1**	**+0.3**
	2.3nm,0.9s,mb4.2							
SBA	**Scott Base**	**66.32**	**180**	P		**P**	**00 36 49.4**	**+0.5**
ENH	**Enshi**	**67.98**	**309**	*e*P		**P**	**00 36 59.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**72.05**	**294**	P		**P**	**00 37 28.1**	**+2.7**
	1.1nm,0.3s,mb4.2,baz=131,slow=5.9,SNR=4.5							
SONM	**Songino Array**	**78.89**	**324**	P		**P**	**00 38 04.5**	**+0.5**
	0.6nm,0.6s,mb3.7,baz=53,slow=5.5,SNR=4.7							
MAW	**Mawson**	**84.17**	**202**	P		**P**	**00 38 31.6**	**-0.1**
NVAR	**Mina Array Bea**	**86.55**	**50**	P		**P**	**00 38 45.8**	**+1.7**
	0.5nm,0.5s,mb4.0,baz=231,slow=9.8,SNR=4.8							
MKAR	**Makanchi Array**	**93.68**	**317**	P		**P**	**00 39 16.6**	**-0.8**
	1.2nm,0.7s,mb4.4,baz=96,slow=8.7,SNR=5.9							
ZALV	**Zalesovo Beam**	**93.78**	**324**	P		**P**	**00 39 16.4**	**-1.2**
	0.4nm,0.4s,mb4.2,baz=123,slow=5.3,SNR=3.2							
PMSA	**Palmer Station**	**95.35**	**161**	*e*P		**P**	**00 39 24.8**	**0.0**
	103nm,1.2s							
SNAA	**Sanae**	**96.62**	**184**	*e*P		**P**	**00 39 30.2**	**-0.2**
PLCA	**Paso Flores**	**106.69**	**139**	*e*PKiKP	PKiKP		00 44 27.5	+1.2

*CSEM **27** 00:57:10.8±0.1, 3846N×3917E, h8km, MD3.0, Error ellipse: s-maj=2.3km s-min=2.0km az=170.0*
*ISK **27** 00:57:10.9, 3847N×3916E, h6km, MD2.7*
*ISCJB **27** 00:57:11.6±0.6, 3849N×004×3916E±003, h4km±6km, Error ellipse: s-maj=6.1km s-min=4.5km az=177.7*
*DDA **27** 00:57:11.8, 3847N×3915E, h7km±3km, Md3.0*

ISC 27 00:57:11.9±0.6, 3849N±004×3916E±003, h7km±7km, n11, σ0§76/19, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ELZG	**Elazig**	**0.14**	**274**⇑	*i*P		**Pg**	**00 57 13.4**	**+0.5**
ELZG				*i* S		**Sg**	**00 57 17.4**	**+0.6**
SVRC	**Sivrice-ELAZID**	**0.16**	**134**	*e*PG		**Pg**	**00 57 14.7**	**-0.5**
SVRC				*e*SG		**Sg**	**00 57 16.9**	**-0.4**
PTK	**Pertek**	**0.44**	**24**	*e*PG		**Pg**	**00 57 20.3**	**-0.2**
PTK				*e*SG		**Sg**	**00 57 27.3**	**+1.0**
MYA	**Malataya**	**0.60**	**255**	*e*PG		**Pg**	**00 57 22.6**	**-0.8**
MYA				*e*SG		**Sg**	**00 57 31.7**	**+0.4**
MALT	**Malatya**	**0.60**	**253**	*e*PG		**Pg**	**00 57 23.0**	**-0.5**
DIYA	**Diyarbakir**	**0.94**	**126**	*e*P		**Pg**	**00 57 30.2**	**+0.2**
DIYA				*e*S		**Sg**	**00 57 43.3**	**+1.1**
AKCD	**Akcadag**	**0.99**	**259**⇑	*i*P		**Pg**	**00 57 29.9**	**-1.0**
AKCD				*i* S		**Sg**	**00 57 44.1**	**+0.3**
URFA	**Urfa**	**1.08**	**194**	*e*PG		**Pg**	**00 57 31.4**	**-1.2**
ATAB	**Bozova**	**1.23**	**214**	*e*P		**Pb**	**00 57 35.3**	**0.0**
ATAB				*e*S		**Sb**	**00 57 52.9**	**+1.5**
ATAB	**Bozova**	**1.23**	**214**	*e*P		**Pb**	**00 57 35.3**	**0.0**
ATAB				*e*S		**Sb**	**00 57 52.8**	**+1.5**
EZC	**Erzincan**	**1.36**	**22**	*e*PN		**Pn**	**00 57 36.3**	**-0.9**

BJI 27 02:06:29.8, 2493N×10789E, h13km, ML3.6, 1C, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GYA	**Guiyang**	**1.88**	**324**⇑	*i*PG		Pg	02 07 03.8	-2.1
GYA				SG		Sg	02 07 29.0	-1.4
GYA				Smax				
	comp=N,690nm,0.7s							
GYA				Smax				
	comp=E,820nm,1.0s							
KMI	**Kunming**	**4.68**	**273**	PG		Pg	02 07 55.0	-4.4
KMI				SG		Sg	02 08 58.8	-1.2
KMI				Smax				
	comp=N,67nm,0.9s							
KMI				Smax				
	comp=E,42nm,1.2s							
CD2	**Chengdu**	**6.99**	**329**	*e*P		Pn	02 08 15.3	+3.4
CD2				S		Sn	02 09 28.5	-2.7
CD2				SG		Sg	02 10 13.0	-1.1
CD2				Smax				
	comp=N,80nm,1.2s							
CD2				Smax				
	comp=E,60nm,1.2s							

*ISCJB **27** 02:09:17.4±0.5, 1056N±003×6264W±003, h86km±6km, Error ellipse: s-maj=6.6km s-min=3.6km az=143.6*
*FUNV **27** 02:09:18.6, 1059N×6257W, h82km, MW2.9*
*NEIC **27** 02:09:20.5, 1065N×6255W, h66km, MD3.4(TRN), After TRN.*
*TRN **27** 02:09:21.5, 1066N×6242W, h81km, MD3.4*

ISC 27 02:09:18.3±0.5, 1057N±003×6263W±003, h81km±6km, n24, σ1§01/40, 1C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUIV	**Guiria**	**0.41**	**80**	*e*P		**Pn**	**02 09 31.6**	**+0.3**
GUIV				*e*S		**Sn**	**02 09 40.7**	**-0.3**
GUNV	**Guanoco**	**0.51**	**217**⇑	*i*P		**Pn**	**02 09 33.4**	**+1.3**
GUNV				*e*S		**Sn**	**02 09 43.7**	**+1.3**
CRUV	**Carupano**	**0.60**	**280**	*e*P		**Pn**	**02 09 33.2**	**+0.2**
CRUV				*e*S		**Sn**	**02 09 44.3**	**+0.4**
TCE	**Chacachacare**	**0.88**	**82**	*e*P		**Pn**	**02 09 37.3**	**+1.4**
TCE				*e*S		**Sn**	**02 09 47.9**	**-1.2**
ITEV	**Isla Los Testi**	**0.92**	**328**⇓	*e*P		**Pn**	**02 09 36.3**	**-0.1**
ITEV				*e*S		**Sn**	**02 09 49.7**	**-0.2**
TRN	**Trinidad (W)**	**1.21**	**86**	*e*P		**Pn**	**02 09 40.2**	**+0.3**
TRN				*e*S		**Sn**	**02 09 55.1**	**-1.1**
TBH	**Brigand Hill**	**1.54**	**93**	*e*P		**Pn**	**02 09 44.8**	**+0.6**
ORIV	**Oritupano**	**1.68**	**207**	*e*P		**Pn**	**02 09 46.6**	**+0.7**
ORIV				*e*S		**Sn**	**02 10 06.2**	**-0.7**
GRW	**Mount Saint Ca**	**1.84**	**31**	*e*P		**Pn**	**02 09 48.2**	**+0.1**
GRW				*e*S		**Sn**	**02 10 08.8**	**-2.0**
GRHS	**Sauteurs**	**1.91**	**31**	*e*P		**Pn**	**02 09 50.7**	**+1.7**
GRHS				*e*S		**Sn**	**02 10 11.9**	**-0.4**
TPR	**Prospect**	**1.92**	**71**	*e*P		**Pn**	**02 09 50.1**	**+1.0**
TPR				*e*S		**Sn**	**02 10 12.2**	**-0.5**
GRSS	**Sisters**	**1.99**	**30**	*e*P		**Pn**	**02 09 50.3**	**+0.3**
GRSS				*e*S		**Sn**	**02 10 12.7**	**-1.5**
GRIC	**Isle de Caille**	**1.99**	**31**	*e*P		**Pn**	**02 09 51.2**	**+1.2**
GRIC				*e*S		**Sn**	**02 10 13.1**	**-1.2**
PCRV	**Puerto La Cruz**	**2.01**	**259**⇓	*e*P		**Pn**	**02 09 50.6**	**+0.3**
PCRV				*e*S		**Sn**	**02 10 13.4**	**-1.3**
TOSP	**Speyside**	**2.18**	**71**	*e*P		**Pn**	**02 09 53.8**	**+1.2**
TOSP				*e*S		**Sn**	**02 10 15.4**	**-3.5**
PRGV	**PARIAGUAN**	**2.68**	**228**	*e*P		**Pn**	**02 09 59.4**	**+0.1**
PRGV				*e*S		**Sn**	**02 10 30.3**	**-0.5**
GURV	**El Guri**	**2.83**	**189**	*e*P		**Pn**	**02 10 01.2**	**-0.2**
SVB	**Belmont**	**3.00**	**27**	*e*P		**Pn**	**02 10 07.8**	**+4.1**
SVB				*e*S		**Sn**	**02 10 40.9**	**+2.2**
CUPV	**Cœpira**	**3.15**	**261**	*e*P		**Pn**	**02 10 05.9**	**+0.3**
BIRV	**Birongo**	**3.58**	**269**	*e*P		**Pn**	**02 10 12.5**	**+1.0**
MERV	**Las Mercedes**	**3.84**	**250**	*e*S		**Sn**	**02 10 57.3**	**-1.8**
LUEV	**Luepa**	**4.84**	**166**	*e*P		**Pn**	**02 10 27.4**	**-1.4**
CAOV	**Caicara del Or**	**4.87**	**229**	*e*P		**Pn**	**02 10 29.3**	**+0.3**
BAUV	**El Baul**	**5.57**	**254**	*e*P		**Pn**	**02 10 37.7**	**-1.0**

*ISCJB **27** 02:31:59.5±0.6, 1617S±009×6965W±006, h215km±6km, mb3.9/4, Error ellipse: s-maj=14.3km s-min=8.5km az=17.9*
*NEIC **27** 02:32:00.4±0.6, 1624S×6960W, h203km±7km, mb4.0/2, Error ellipse: s-maj=12.6km s-min=11.6km az=207.0*
*IDC **27** 02:32:00.5±1.0, 1611S×6964W, h203km±6km, mb3.7/3, mb1 3.6/5, mb1mx3.3/20, mbtmp3.6/5, Error ellipse: s-maj=21.5km s-min=14.9km az=15.0*

ISC 27 02:32:00.4±0.6, 1616S±009×6967W±006, h210km±5km, n16, σ1§04/21, mb3.9/4, 1C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LPAZ	**La Paz**	**1.48**	**95**	P		**Pn**	**02 32 35.7**	**+0.9**
	23nm,0.3s,baz=287,slow=6.7,SNR=743							
LPAZ				S		**Sn**	**02 33 01.6**	**+0.1**
	22nm,0.3s,baz=76,slow=20,SNR=21							
LPAZ	**La Paz**	**1.48**	**95**	P		**Pn**	**02 32 35.7**	**+0.9**
LPAZ				S		**Sn**	**02 33 01.6**	**+0.1**
ARE	**Arequipa**	**1.78**	**260**⇑	*i*P		**Pn**	**02 32 38.0**	**+0.6**
ARE				*i* S		**Sn**	**02 33 07.0**	**+0.7**
LVC	**Limon Verde**	**6.46**	**174**	P		**Pn**	**02 33 31.5**	**-2.3**
	2.1nm,0.3s,baz=12,slow=10,SNR=33							
LVC				S		**Sn**	**02 34 38.3**	**-10**
	5.5nm,0.3s,baz=16,slow=24,SNR=16							
LVC	**Limon Verde**	**6.46**	**174**	P		**Pn**	**02 33 31.5**	**-2.3**
LVC				S		**Sn**	**02 34 38.3**	**-10**
NNA	**Nana**	**8.10**	**300**	P		**Pn**	**02 33 55.6**	**+0.5**
	1.4nm,0.3s,baz=33,slow=21,SNR=3.8							
NNA				S		**Sn**	**02 35 24.3**	**-2.3**
	0.7nm,0.3s,baz=353,slow=9.1,SNR=3.1							
SIV	**San Ignacio**	**8.27**	**90**	P		**Pn**	**02 33 55.3**	**-1.8**
	1.3nm,0.3s,baz=272,slow=11,SNR=20							
CFAA	**Coronel Fontan**	**15.43**	**175**	P		**Pn**	**02 35 27.6**	**+0.2**
	0.1nm,0.3s,baz=340,slow=12,SNR=7.3							
TRQA	**Tornquist**	**22.84**	**164**	*e*P		**P**	**02 36 45.4**	**0.0**
	6.9nm,1.2s,mb4.1							
PLCA	**Paso Flores**	**24.50**	**182**	P		**P**	**02 37 01.6**	**+1.2**
	2.0nm,0.7s,mb3.9,baz=350,slow=9.8,SNR=5.9							
PLCA	**Paso Flores**	**24.50**	**182**	*e*P		**P**	**02 37 00.7**	**+0.3**
	2.4nm,0.7s,mb3.9							
DBIC	**Dimbokro**	**68.02**	**76**	P		**P**	**02 42 38.0**	**+0.4**
	3.9nm,0.9s,mb4.0,baz=231,slow=5.6,SNR=6.6							
DBIC	**Dimbokro**	**68.02**	**76**	*e*P		**P**	**02 42 38.6**	**+0.9**
TOA0	**Torodi Ar. Sit**	**76.31**	**72**	*e*P		**P**	**02 43 27.0**	**+0.3**
TORD	**Torodi Ar. Bea**	**76.31**	**72**	P		**P**	**02 43 27.1**	**+0.4**
	1.0nm,0.4s,mb3.8,baz=252,slow=4.7,SNR=27							
SONM	**Songino Array**	**148.25**	**5**	PKPbc		PKPbc	02 51 24.2	+2.5
	0.4nm,0.4s,baz=299,slow=1.4,SNR=4.2							

IDC 27 02:39:45.0±3.1, 669S×14859E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.6/15, mbtmp3.7/3, Error ellipse: s-maj=96.2km s-min=42.4km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.10**	**225**	P		Pn	02 44 08.8	-1.5
	0.3nm,0.3s,baz=52,slow=10,SNR=6.0							
ASAR	**Alice Springs**	**22.00**	**218**	P		P	02 44 42.6	+1.7
	0.9nm,0.5s,baz=52,slow=8.0,SNR=20							
FITZ	**Fitzroy Crossi**	**25.08**	**241**	P		P	02 45 09.7	-1.8
	1.3nm,0.4s,baz=41,slow=13,SNR=15							
TORD	**Torodi Ar. Bea**	**146.78**	**284**	PKPbc		PKPbc	02 59 30.4	+0.2
	0.7nm,0.6s,baz=75,slow=4.3,SNR=15							

*IDC **27** 02:43:22.7±2.1, 521S×152.18E, h0km, mb4.5/9, mb1 4.6/9, mb1mx4.3/18, mbtmp4.5/9, Error ellipse: s-maj=61.9

PTCH					AML	AML	03 08 21.5		
	comp=E,380nm,0.3s								
PTCH	**Petorca**	**1.64**	**158**	⇑	*e*P	Pn	03 07 56.7	0.0	
PTCH					*i* S	Sn	03 08 17.4	+0.1	
LCO	**Las Campanas**	**1.91**	**26**	*e*Pn		Pn	03 08 00.0	-0.4	
LCO				*e*Sn		Sn	03 08 22.7	-1.2	
LCO				*e*Sg		Sg	03 08 28.5	-1.7	
JACH	**Jahuel**	**2.14**	**155**	*e*P		Pn	03 08 04.8	+1.2	
JACH				*i* S		Sn	03 08 32.4	+2.8	
CLCH	**Cerro Calan**	**2.81**	**161**	*e*P		Pn	03 08 14.4	+1.5	
CLCH				*i* S		Sn	03 08 48.2	+1.9	
CLCH					AML	AML	03 08 57.9		
	comp=E,214nm,0.4s								
FCH	**Farellones**	**2.83**	**156**	*e*P		Pn	03 08 15.0	+1.9	
FCH				*i* S		Sn	03 08 50.0	+3.4	
FCH					AML	AML	03 09 01.7		
	comp=E,89nm,0.2s								
RCDM	**Rinconada Maip**	**2.84**	**166**	*e*P		Pn	03 08 14.6	+1.4	
RCDM				*i* S		Sn	03 08 48.9	+2.0	
RCDM					AML	AML	03 08 56.2		
	comp=E,124nm,0.6s								
RCDM	**Rinconada Maip**	**2.84**	**166**	*e*P		Pn	03 08 14.6	+1.4	
RCDM				*i* S		Sn	03 08 48.9	+2.0	
TACH	**Talagante**	**2.97**	**168**	*e*P		Pn	03 08 15.9	+0.9	
LMEL	**Las Melosas**	**3.33**	**159**	*e*P		Pn	03 08 21.9	+1.9	
LMEL				*i* S		Sn	03 09 01.3	+2.2	
LMEL					AML	AML	03 09 14.7		
	comp=N,77nm,0.4s								
LMEL	**Las Melosas**	**3.33**	**159**	*e*P		Pn	03 08 21.9	+1.9	
LMEL				*i* S		Sn	03 09 01.3	+2.2	

IDC 27 03:18:44.8±58.0, 1621S×17484W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/16, mbtmp4.1/3, Error ellipse: s-maj=1092.0km s-min=192.4km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.44**	**240**	P	P	03 26 41.7	+0.2
	1.1nm,0.3s,baz=103,slow=14,SNR=4.2						
WRA	**Warramunga Arr**	**48.31**	**258**	P	P	03 27 28.0	-0.3
	0.8nm,0.8s,baz=95,slow=7.1,SNR=6.5						
ASAR	**Alice Springs**	**48.55**	**253**	P	P	03 27 30.1	0.0
	4.2nm,0.6s,baz=88,slow=8.4,SNR=65						

IDC 27 03:24:16.1±1.1, 5141N×17887W, h0km, mb3.8/7, mb1 4.1/8, mb1mx3.8/26, mbtmp3.9/8, ML4.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/34, Error ellipse: s-maj=34.5km s-min=23.6km az=171.0

ISCJB 27 03:24:21.6±1.2, 513N±02×17847W±008, h44km±8km, mb4.2/10, Error ellipse: s-maj=32.5km s-min=6.3km az=171.1

NEIC 27 03:24:21.5, 5121N×17848W, h27km, ML3.7(PMR), ML4.1(AEIC), After AEIC.

ISC 27 03:24:22.9±1.2, 513N±02×17848W±008, h40km±8km, n29, σ0§71/27, mb4.2/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.25**	**63**	P	Pn	03 24 43.2	-0.6
ADK				S	Sn	03 24 59.8	+0.4
AMKA	**Amchitka**	**1.39**	**273**	P	Pn	03 24 45.1	-0.7
AMKA				S	Sn	03 25 02.3	-0.7
SMY	**Shemya**	**4.79**	**290**	P	Pn	03 25 33.9	+1.4
FX1	**Attu Island--F**	**5.38**	**290**	P	Pn	03 25 41.1	+0.5
NIKO	**Nikolski**	**6.15**	**71**	P	Pn	03 25 50.9	-0.2
OKCD	**Okmok Cone D**	**6.69**	**68**	P	Pn	03 25 58.5	0.0
PETK	**Petropavlovsk-**	**14.70**	**286**	LR	LR	03 32 59.7	
	comp=Z,74nm,18.5s,baz=201,slow=36						
KDAK	**Kodiak Island**	**16.29**	**57**	P	Pn	03 28 08.7	+0.3
	0.9nm,0.3s,baz=295,slow=16,SNR=5.6						
YKA	**Yellowknife Ar**	**35.12**	**46**	P	P	03 31 12.4	+0.3
	0.5nm,0.7s,mb3.5,baz=283,slow=7.5,SNR=4.8						
PDAR	**Pinedale Array**	**46.13**	**72**	P	P	03 32 43.7	+0.6
	0.8nm,0.5s,mb4.0,baz=319,slow=3.4,SNR=9.0						
SPITS	**Spitsbergen Ar**	**50.44**	**356**	P	P	03 33 14.0	-1.8
	6.7nm,0.9s,mb4.7,baz=15,slow=8.1,SNR=5.7						
ARCES	**ARCESS Array B**	**58.18**	**350**	P	P	03 34 08.6	-3.6
	2.9nm,0.8s,mb4.3,baz=16,slow=6.7,SNR=3.8						
ARCES	**ARCESS Array B**	**58.18**	**350**	P	P	03 34 08.6	-3.6
TXAR	**Lajitas Array**	**58.46**	**81**	P	P	03 34 14.4	-0.3
	0.2nm,0.6s,mb3.3,baz=311,slow=5.8,SNR=3.1						
KURK	**Kurchatov**	**59.20**	**314**	P	P	03 34 18.3	-1.2
	0.3nm,0.3s,mb3.7,baz=45,slow=6.7,SNR=3.5						
ODAN	**Odare**	**71.97**	**290**	*e*P	P	03 35 42.6	+0.3
	12nm,0.8s,mb4.8						
GUN	**Gumba**	**72.06**	**292**	*e*P	P	03 35 43.7	+0.9
	35nm,0.3s						
JIRN	**Jiri**	**72.07**	**292**	*e*P	P	03 35 43.3	+0.4
	35nm,0.6s						
RAMN	**Ramite**	**72.36**	**291**	*e*P	P	03 35 45.0	+0.3
	24nm,0.5s						
KKN	**Kakani**	**72.50**	**293**	*e*P	P	03 35 45.7	+0.2
	22nm,0.5s						
PKIN	**Phulchoki**	**72.59**	**292**	*e*P	P	03 35 46.5	+0.5
	18nm,0.5s						
GKN	**Gorkha**	**72.71**	**293**	*e*P	P	03 35 46.6	-0.1
	18nm,0.6s						
DMN	**Daman**	**72.74**	**293**	*e*P	P	03 35 47.1	+0.2
	12nm,0.7s,mb5.0						
DANN	**Dangsing**	**72.95**	**294**	*e*P	P	03 35 48.4	+0.3
	24nm,0.8s						
KOLN	**Koldanda**	**73.49**	**294**	*e*P	P	03 35 51.3	0.0
	12nm,0.9s,mb4.8						
ASAR	**Alice Springs**	**85.58**	**223**	P	P	03 36 56.0	-0.7
	0.4nm,0.5s,mb3.9,baz=24,slow=5.9,SNR=5.9						
TORD	**Torodi Ar. Bea**	**115.80**	**360**	PKiKP	PKiKP	03 42 59.2	-2.0
	0.2nm,0.7s,baz=336,slow=2.8,SNR=4.3						
TORD	**Torodi Ar. Bea**	**115.80**	**360**	PKPdf	PKPdf	03 42 59.2	-2.0
BOSA	**Boshof**	**151.16**	**313**	PKPbc	PKPbc	03 44 10.8	-0.7
	3.0nm,0.9s,baz=55,slow=2.7,SNR=4.0						

IDC 27 03:29:15.9±1.2, 3496N×2727E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.4/22, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=42.4km s-min=20.6km az=166.0

ISK 27 03:29:16.2, 3526N×2715E, h4km, MD4.2

CSEM 27 03:29:16.5±0.1, 3514N×2706E, h20km, MD3.8, Error ellipse: s-maj=2.3km s-min=1.4km az=164.0

ISCJB 27 03:29:17.0±0.9, 3519N±003×2703E±003, h17km±8km, mb3.4/4, Error ellipse: s-maj=5.8km s-min=3.7km az=170.6

NEIC 27 03:29:17.0, 3526N×2701E, h24km, MD3.8(ATH), After ATH.

ATH 27 03:29:17.0, 3526N×2701E, h24km±1km, MD3.7/11

THE 27 03:29:19.7, 3536N×2692E, h0km, ML3.5

ISC 27 03:29:17.5±0.9, 3521N±003×2700E±003, h10km±5km, n66, σ0§87/82, mb3.4/4, 2D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.36**	**22**	⇓ *i* PB	Pg	03 29 23.7	-0.9
KARP				*e*SB	Sg	03 29 30.0	+0.6
NPS	**Neapolis**	**1.13**	**273**	⇓ *i* PN	Pn	03 29 38.7	-0.7
NPS				*e*SN	Sn	03 29 53.7	-1.4
LAST	**Lasithi**	**1.24**	**268**	P	Pn	03 29 40.9	0.0
ARG	**Arkhangelos**	**1.36**	**42**	*e*PN	Pn	03 29 41.7	-0.8
ARG				*e*SN	Sn	03 30 00.3	-0.3
NISR	**Nisiros**	**1.40**	**4**	*e*PN	Pn	03 29 42.5	-0.6
SANT	**Santorini**	**1.70**	**313**	*e*Pg	Pn	03 29 46.6	-0.7
SANT	**Santorini**	**1.70**	**313**	*e*Pn	Pn	03 29 46.5	-0.7
SANT	**Santorini**	**1.70**	**313**	*e*Pn	Pn	03 29 46.5	-0.7
THR1	**Thera Island**	**1.70**	**313**	*e*Pg	Pn	03 29 47.2	0.0
IDI	**Anoyia**	**1.73**	**273**	P	Pn	03 29 49.8	+2.2
THR6	**Thira Island,**	**1.73**	**312**	*e*Pg	Pn	03 29 47.2	-0.4
THR3	**Thira Island,**	**1.76**	**313**	*e*Pb	Pn	03 29 47.8	-0.3
THR4	**Thira Island,**	**1.80**	**314**	*e*Pb	Pn	03 29 48.4	-0.1
THR5	**Thira Island,**	**1.80**	**312**	*e*Pb	Pn	03 29 48.3	-0.3
BODT	**Bodrum**	**1.86**	**8**	*e*PN	Pn	03 29 49.2	-0.2
BODT				*e*SN	Sn	03 30 12.8	-0.2
BDRM	**Kayabasi**	**1.88**	**11**	*i* P	Pn	03 29 48.7	-1.1
BDRM				*i* S	Sn	03 30 13.7	-0.3
TURN	**Turunc**	**2.11**	**38**	*i* P	Pn	03 29 49.3	-3.6
TURN	**Turunc**	**2.11**	**38**	*i* P	Pn	03 29 49.3	-3.5
TURN				*i* S	Sn	03 30 14.2	-4.9
MLSB	**Milas**	**2.17**	**17**	*e*PN	Pn	03 29 53.4	-0.3
YER	**Yerkesik**	**2.18**	**28**	*e*PN	Pn	03 29 52.6	-1.3
APE	**Apeiranthos**	**2.20**	**328**	*e*PN	Pn	03 29 53.5	-0.5
APE				*e*Sn	Sn	03 30 20.2	-1.2
APE	**Apeiranthos**	**2.20**	**328**	*e*PN	Pn	03 29 53.6	-0.5
APE				*e*SN	Sn	03 30 20.2	-1.2
VAM	**Vamos**	**2.29**	**276**	*e*PB	Pn	03 29 56.5	+1.1
AKAS	**Kas**	**2.35**	**64**	*i* P	Pn	03 29 56.2	0.0
AKAS	**Kas**	**2.35**	**64**	*i* P	Pn	03 29 56.2	0.0
AKAS				*i* S	Sn	03 30 26.6	+1.4
GVD	**Gavdhos**	**2.42**	**262**	*e*PN	Pn	03 29 58.0	+0.9
GCAM	**G?zelcaml?**	**2.49**	**4**	*i* P	Pn	03 29 57.8	-0.3
SMG	**Samos**	**2.49**	**357**	*e*PN	Pn	03 29 57.5	-0.6
SMG				*e*SN	Sn	03 30 28.3	-0.3
AYDN	**Tasoluk**	**2.54**	**16**	*i* P	Pn	03 29 59.2	+0.3
ELL	**Elmali**	**2.82**	**56**	*e*PN	Pn	03 30 02.1	-0.5
GOLH	**Golhisar**	**2.90**	**45**	*i* P	Pn	03 30 04.9	+1.3
DNZL	**Cakiroluk**	**2.97**	**33**	*i* P	Pn	03 30 06.0	+1.3
URLA	**Izmir**	**3.16**	**354**	*i* P	Pn	03 30 03.8	-3.5
URLA	**Izmir**	**3.16**	**354**	*i* P	Pn	03 30 03.8	-3.5
URLA				*i* S	Sn	03 30 45.2	+0.2
BLCB	**Balcova**	**3.17**	**1**	*e*PN	Pn	03 30 07.0	-0.4
KDAG	**Bornova**	**3.19**	**4**	*i* P	Pn	03 30 08.6	+0.9
CHOS	**Chios island**	**3.26**	**347**	*e*Pn	Pn	03 30 08.4	-0.2
CHOS				*e*Sn	Sn	03 30 47.5	0.0
KYTH	**Kithira**	**3.39**	**289**	*e*PN	Pn	03 30 11.5	+1.0
ANTB	**Antalya**	**3.41**	**59**	*e*PN	Pn	03 30 10.5	-0.2
KULA	**Kula-Manisa**	**3.56**	**22**	*e*PN	Pn	03 30 12.1	-0.6
VLI	**Veliai**	**3.62**	**296**	*e*PN	Pn	03 30 14.1	+0.5
KHL	**Karahalli**	**3.71**	**32**	*e*PN	Pn	03 30 14.3	-0.5
AKS	**Akhisar**	**3.72**	**10**	*e*PN	Pn	03 30 15.3	+0.3
DID	**Didima**	**3.80**	**308**	*e*Pn	Pn	03 30 17.1	+1.0
DEMI	**Demirci**	**4.06**	**19**	*i* P	Pn	03 30 20.2	+0.5
DEMI	**Demirci**	**4.06**	**19**	*i* P	Pn	03 30 20.2	+0.5
DEMI				*i* S	Sn	03 31 09.3	+2.0
DURS	**Dursunbey**	**4.54**	**15**	*i* P	Pn	03 30 26.9	+0.7
BALY	**Balya**	**4.55**	**6**	*i* P	Pn	03 30 27.2	+0.8
ALT	**Altintas**	**4.57**	**32**	*e*PN	Pn	03 30 26.7	0.0
PYL	**PYLOS**	**4.58**	**293**	*e*Pn	Pn	03 30 28.4	+1.6
LKR	**Lokris**	**4.69**	**318**	*e*PN	Pn	03 30 29.2	+0.8
HDMB	**Hadim**	**4.78**	**67**	*e*PN	Pn	03 30 29.0	-0.6
LEF	**Lefka**	**4.83**	**89**	*e*PN	Pn	03 30 29.9	-0.4
ERMK	**Ermenek**	**5.01**	**72**	*i* P	Pn	03 30 34.0	+1.3
ERMK	**Ermenek**	**5.01**	**72**	*i* P	Pn	03 30 34.0	+1.3
ERMK				*i* S	Sn	03 31 31.9	+1.2
KONT	**Konya--Tatoy**	**5.11**	**56**	*e*PN	Pn	03 30 34.2	+0.2
KDHN	**Kadinhani**	**5.27**	**50**	*i* P	Pn	03 30 36.4	+0.1
IKL	**Isikli**	**5.54**	**77**	*e*PN	Pn	03 30 39.8	-0.2
EVR	**Evrytania**	**5.55**	**313**	*e*Pn	Pn	03 30 40.2	0.0
MEST	**Erdemli**	**5.96**	**75**	*i* P	Pn	03 30 46.1	+0.3
MEST	**Erdemli**	**5.96**	**75**	*i* P	Pn	03 30 46.1	+0.3
MEST				*i* S	Sn	03 31 54.3	+0.1
MMAI	**Mount Meron Ar**	**7.31**	**105**	P	Pn	03 31 01.7	-2.6
	1.0nm,0.3s,baz=300,slow=13,SNR=4.0						
MMAI					Sn	03 32 23.0	-4.3
	2.2nm,0.3s,baz=309,slow=28,SNR=5.5						
ESDC	**Sonseca Array**	**24.91**	**290**	P	P	03 34 44.5	+3.9
	0.7nm,0.6s,mb3.4,baz=80,slow=9.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**31.69**	**232**	P	P	03 35 41.0	-0.4
	0.4nm,0.7s,mb3.4,baz=33,slow=8.6,SNR=15						
KURK	**Kurchatov**	**39.98**	**51**	P	P	03 36 50.5	-1.6
	0.6nm,0.8s,mb3.4,baz=273,slow=8.6,SNR=3.6						
MKAR	**Makanchi Array**	**42.49**	**57**	P	P	03 37 12.1	-0.7
	0.8nm,0.5s,mb3.6,baz=281,slow=6.8,SNR=5.9						

BJI 27 03:39:03.2, 250S×9967E, h32km, mB5.2, mb5.0, Ms4.8, Msz4.5

IDC 27 03:39:04.7±1.1, 1805S×9952E, h0km, mb4.4/14, mb1 4.5/14, mb1mx4.3/22, mbtmp4.4/14, MS3.7/2, Ms1 3.8/2, ms1mx3.0/27, Error ellipse: s-maj=37.5km s-min=15.2km az=58.0

MOS 27 03:39:05.6±1.1, 2065S×9933E, h33km, mb4.9/9, Error ellipse: s-maj=35.1km s-min=15.3km az=86.3

NEIC 27 03:39:05.9±7.4, 190S×9949E, h12km±44km, mb4.6/12, Error ellipse: s-maj=21.6km s-min=7.5km az=52.0

ISCJB 27 03:39:07.0±0.6, 194S±008×9936E±008, h33km, mb4.6/34, MS3.8/4, Error ellipse: s-maj=14.4km s-min=7.7km az=137.2

DJA 27 03:39:12, 193S×9951E, h49km, MLv4.8/8

ISC 27 03:39:09.5±0.5, 191S±008×9944E±008, h35km, n61, σ1§05/52, mb4.6/34, MS3.8/4, 5C-2D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.73**	**34**	P	Pn	03 39 37.9	+0.7
	0.0nm,0.0s						
RGRI	**Rengat**	**3.28**	**62**	P	Pn	03 40 00.7	+2.2
	0.0nm,0.0s						
KSI	**Kapahiang**	**3.59**	**119**	P	Pn	03 40 04.5	+1.8
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**20.25**	**359**	P	P	03 43 38.8	-3.2
	3.4nm,0.5s,baz=190,slow=10,SNR=6.0						
CMAR				LR	LR	03 51 54.7	
	comp=Z,184nm,19.8s,MS3.4,baz=180,slow=38						
CHTO	**Chiang Mai**	**20.60**	**359**	*e*P	P	03 43 44.6	-1.1
	5.0nm,0.8s						
QIZ	**Qiongzhong**	**23.19**	**26**	*e*P	P	03 44 12.7	-0.7
	14nm,0.9s,mb4.4						
NJ2	**Nanjing**	**38.47**	**27**	*e*P	P	03 46 27.5	-0.7
NJ2				AMB	AMB		
	comp=Z,230nm,1.0s						
WRA	**Warramunga Arr**	**38.52**	**120**	P	P	03 46 28.3	-0.5
	comp=Z,6.3nm,0.8s,mb4.4,baz=296,slow=9.5,SNR=25						
WRAB	**Tennant Creek**	**38.53**	**120**	*e*P	P	03 46 27.3	-1.6
WRAB	**Tennant Creek**	**38.53**	**120**	*e*P	P	03 46 27.8	-1.1
	comp=Z,9.1nm,0.8s,mb4.6						
WB2	**Warramunga Arr**	**38.53**	**120**	*e*P	P	03 46 28.4	-0.6
ASAR	**Alice Springs**	**39.76**	**126**	P	P	03 46 39.4	+0.2
	comp=Z,2.2nm,0.7s,mb4.0,baz=296,slow=8.0,SNR=18						
ASAR				PcP	PcP	03 48 46.7	+1.5
	comp=Z,0.7nm,0.8s,baz=305,slow=3.3,SNR=3.5						
JOW	**Kunigami**	**39.87**	**42**	P	P	03 46 39.2	-0.9
	comp=Z,10nm,0.9s,mb4.6,baz=208,slow=15,SNR=2.8						
GTA	**Gaotai**	**41.12**	**0**	*e*P	P	03 46 51.0	+0.8
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.2						
WMQ	**Urumqi**	**46.73**	**348**	⇓ *i* P	P	03 47 37.0	+1.9
WMQ				AP	pP	03 47 46.0	+0.5
WMQ				XP	sP	03 47 50.0	+0.3
WMQ				AMB	AMB		
	comp=Z,17nm,0.8s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,227nm,4.6s						
WMQ				LR	LR		
	comp=N,327nm,24.3s,MS4.3						
WMQ				LR	LR		
	comp=E,209nm,20.2s,MS4.3						
WMQ				LR	LR		
	comp=Z,258nm,18.2s,MS4.2						
KSRS	**Korea Array**	**47.23**	**31**	P	P	03 47 38.7	-0.5
	comp=Z,2.1nm,0.7s,mb4.2,baz=222,slow=8.2,SNR=7.1						
CTAO	**Charters Tower**	**49.14**	**115**	*e*P	P	03 47 53.4	-0.9
	comp=Z,3.9nm,0.8s,mb4.5						
UCH	**Uchtor**	**49.38**	**336**	*e*P	P	03 47 57.2	+1.5
	comp=Z,1.6nm,0.5s,mb4.3						
TKM2	**Tokmak 2**	**49.53**	**337**	*e*P	P	03 47 57.4	+0.6
	comp=Z,5.8nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**49.63**	**131**	P	P	03 47 58.8	+1.0
	comp=Z,4.6nm,0.7s,mb4.6,baz=281,slow=8.1,SNR=6.8						
STKA				LR	LR	04 07 36.9	
	comp=Z,109nm,21.9s,MS3.8,baz=206,slow=34						
AML	**Almayashu**	**49.65**	**335**	*e*P	P	03 47 58.6	+0.9
	comp=Z,4.1nm,0.7s,mb4.6						
SONM	**Songino Array**	**49.91**	**6**	P	P	03 48 00.7	+1.1
	comp=Z,6.8nm,0.8s,mb4.7,baz=186,slow=8.6,SNR=42						
ULN	**Ulaanbaatar**	**50.02**	**7**	⇑ *e*P	P	03 48 00.5	+0.1
ULN	**Ulaanbaatar**	**50.02**	**7**	*e*P	P	03 48 01.4	+1.0
	comp=Z,2.4nm,0.6s,mb4.4						
EKS2	**Erkin-Say**	**50.05**	**335**	*e*P	P	03 48 01.6	+0.9
	comp=Z,7.1nm,0.8s,mb4.8						
MK31	**Makanchi Array**	**50.80**	**345**	*e*P	P	03 48 06.9	+0.6
MKAR	**Makanchi Array**	**50.80**	**345**	P	P	03 48 06.9	+0.6
	comp=Z,6.6nm,0.7s,mb4.7,baz=150,slow=8.1,SNR=44						
ZAK	**Zakamensk**	**52.20**	**3**	*e*P	P	03 48 16.7	0.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
MJAR	**Matsushiro Arr**	**52.56**	**39**	P	P	03 48 18.4	-1.3
	comp=Z,2.6nm,0.7s,mb4.3,baz=226,slow=7.6,SNR=6.8						
HVS	**Khovu-Aksy**	**53.07**	**355**	*e*P	P	03 48 22.2	-1.0
HVS				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
TLY	**Talaya**	**53.51**	**3**	*e*P	P	03 48 27.4	+1.0
TLY				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
TLY				MLR	MLR		
	comp=Z,69nm,16.0s,MS3.8						
KURK	**Kurchatov**	**55.37**	**344**	⇑ *e*P	P	03 48 39.9	0.0
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
KURK	**Kurchatov**	**55.37**	**344**	*e*P	P	03 48 39.9	0.0
	comp=Z,7.7nm,0.8s,mb4.8						
ZAA0	**Zalesovo Array**	**56.98**	**350**	*e*P	P	03 48 51.3	-0.1
ZALV	**Zalesovo Beam**	**56.98**	**350**	P	P	03 48 51.6	+0.3
	comp=Z,16nm,0.8s,mb5.1,baz=182,slow=5.4,SNR=57						
KLR	**Kul'dur**	**58.08**	**24**	*e*P	P	03 48 54.8	-4.4
ERM	**Erimo**	**58.92**	**37**	*e*P	P	03 49 05.3	+0.1
BVAR	**Borovoye Array**	**59.91**	**340**	P	P	03 49 11.3	-0.5
	comp=Z,2.8nm,0.7s,mb4.4,baz=140,slow=7.8,SNR=11						
BRVK	**Borovoye**	**59.97**	**340**	*e*P	P	03 49 09.5	-2.8
	comp=Z,5.3nm,0.7s,mb4.7						
BOD	**Bodaibo**	**60.68**	**9**	*e*P	P	03 49 17.3	+0.3
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
YSS	**Yuzh-Sakhalins**	**61.70**	**32**	⇑ *e*P	P	03 49 24.9	+0.7
YSS				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1						
AKTK	**Aktyubinsk**	**63.01**	**332**	P	P	03 49 31.9	-0.9
AKTO	**Aktyubinsk**	**63.01**	**332**	P	P	03 49 31.9	-0.9
	comp=Z,0.9nm,0.4s,mb4.2,baz=119,slow=7.4,SNR=4.7						
ARU	**Arti**	**66.90**	**337**	*d* iP	P	03 49 57.7	-0.3
ARU				*e*S	S	03 58 51.8	+3.4
ARU				*e*SS	SS	04 03 04.6	-2.7
ARU				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
ARU	**Arti**	**66.90**	**337**	*e*P	P	03 49 57.4	-0.6
YAK	**Yakutsk**	**67.80**	**15**	⇑ *e*P	P	03 50 01.0	-2.6
YAK				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.0						
KIV	**Kislovodsk**	**68.11**	**319**	*e*P	P	03 50 06.4	+0.5
	comp=Z,5.4nm,0.4s,mb4.9						
PETK	**Petropavlovsk-**	**73.11**	**32**	P	P	03 50 35.7	-0.4
	comp=Z,2.9nm,0.6s,mb4.4,baz=240,slow=4.8,SNR=4.8						
SEY	**Seymchan**	**75.76**	**22**	⇑ *e*P	P	03 50 51.7	+0.3
TIXI	**Tiksi**	**75.86**	**9**	*e*P	P	03 50 48.8	-3.0
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
BUR08	**Bucovina Ar. S**	**80.84**	**319**	*e*P	P	03 51 20.7	+0.9
ARCES	**ARCESS Array B**	**86.20**	**340**	P	P	03 51 47.0	+1.0
	comp=Z,4.8nm,1.0s,mb4.7,baz=102,slow=3.8,SNR=3.8						
NVAR	**Mina Array Bea**	**129.88**	**39**	PKP	PKPdf	03 58 16.1	+0.3
	comp=Z,0.5nm,0.9s,baz=266,slow=1.8,SNR=3.9						
WMOK	**Wichita Mounta**	**143.19**	**25**	*e*PKPdf	PKPdf	03 58 40.8	+0.3
CPUP	**Villa Florida**	**144.06**	**217**	*e*PKPdf	PKPdf	03 58 39.9	-2.4
TXAR	**Lajitas Array**	**144.97**	**37**	PKP	PKPdf	03 58 44.0	+0.2
	comp=Z,6.1nm,0.6s,baz=279,slow=1.0,SNR=95						
WVT	**Waverly**	**145.29**	**10**	*e*PKPbc	PKPbc	03 58 43.7	-0.2
MIAR	**Mount Ida**	**145.34**	**19**	*e*PKPbc	PKPbc	03 58 44.1	0.0
UALR	**University of**	**145.51**	**17**	*e*PKPbc	PKPbc	03 58 44.4	-0.2
JCT	**Junction City**	**146.24**	**31**	*e*PKPbc	PKPbc	03 58 47.4	+0.4
OXF	**Oxford**	**146.53**	**13**	*e*PKPbc	PKPbc	03 58 47.3	-0.4

ISCJB 27 03:44:05.2±0.8, 4593N±005×1555E±006, h1km, Error ellipse: s-maj=7.2km s-min=5.6km az=16.5

LJU 27 03:44:05.8, 4590N×1560E, h1km, ML0.3

ISC 27 03:44:05.5±0.8, 4593N±005×1556E±006, h1km, n7, σ0§88/11, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCIS	**Gornji Cirnik**	**0.07**	**143**	⇑ *i* Pg	Pg	03 44 06.5	-0.3
GCIS				*i* Sg	Sg	03 44 07.2	-0.6
GCIS							
	comp=Z,57nm,0.0s						
GOLS	**Golise**	**0.09**	**26**	*i* Pg	Pg	03 44 08.1	+0.9
GOLS							
	comp=Z,2.0nm,0.1s						
CRES	**Cresnjev**	**0.12**	**217**	*i* Pg	Pg	03 44 08.3	+0.5
CRES				*i* Sg	Sg	03 44 09.9	+0.5
CRES							
	comp=Z,4.0nm,0.1s						
LEGS	**Legarje**	**0.17**	**278**	*i* Sg	Sg	03 44 17.3	+6.2
PDKS	**Podkum**	**0.42**	**289**	⇑ *i* P

comp=Z,87nm,21.5s,MS3.2,baz=122,slow=30
FITZ Fitzroy Crossi 27.11 180 *e*P **P 03 51 34.1 -0.9**
8.0nm,0.9s,mb4.2
FITZ Fitzroy Crossi 27.11 180 P **P 03 51 34.2 -0.8**
2.5nm,0.6s,mb3.9,baz=27,slow=9.0,SNR=5.8
JHJ Hachijo jima 2 27.18 27 LR LR 04 00 08.0
comp=Z,92nm,20.8s,MS3.3,baz=228,slow=31
CMAR Chiang Mai Arr 27.44 292 P **P 03 51 37.2 -0.8**
1.2nm,0.5s,mb3.7,baz=102,slow=7.1,SNR=10
CHTO Chiang Mai 27.54 293 *e*P **P 03 51 38.4 -0.5**
CHTO pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
CHTO Chiang Mai 27.54 293 *e*P **P 03 51 38.4 -0.5**
comp=Z,5.7nm,1.0s,mb4.2
KSRS Korea Array 28.22 4 P **P 03 51 44.3 -0.4**
comp=Z,1.7nm,0.8s,mb3.7,baz=190,slow=11,SNR=4.6
KSRS LR LR 04 02 29.5
comp=Z,114nm,19.4s,MS3.5,baz=31,slow=35
PMG Port Moresby 28.32 130 *e*P **P 03 51 46.7 +0.9**
PMG pmax pmax
comp=Z,13nm,0.8s
PMG Port Moresby 28.32 130 *e*P **P 03 51 46.7 +0.8**
comp=Z,13nm,0.8s,mb4.6
COEN Coen 28.86 143 *e*P **P 03 51 52.2 +1.6**
comp=Z,6.6nm,0.8s,mb4.4
MJAR Matsushiro Arr 29.54 21 LR LR 04 01 57.1
comp=Z,152nm,21.2s,MS3.6,baz=215,slow=32
WRAB Tennant Creek 30.19 163 *e*P **P 03 52 04.2 +1.8**
WRAB pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
WRAB Tennant Creek 30.19 163 *e*P **P 03 52 04.2 +1.8**
comp=Z,3.7nm,0.7s,mb4.2
WRA Warramunga Arr 30.20 163 P **P 03 52 01.6 -0.8**
comp=Z,1.1nm,0.8s,mb3.6,baz=341,slow=9.7,SNR=5.3
WB2 Warramunga Arr 30.20 163 *e*P **P 03 52 01.0 -1.4**
ASAR Alice Springs 33.65 166 P **P 03 52 32.3 -0.4**
comp=Z,1.8nm,0.7s,mb4.2,baz=346,slow=6.5,SNR=16
CTA Charters Tower 35.49 145 P **P 03 52 48.5 -0.2**
comp=Z,5.1nm,0.2s,mb5.1,baz=319,slow=13,SNR=5.4
CTAO Charters Tower 35.49 145 *e*P **P 03 52 48.9 +0.2**
HNR Honiara 38.88 118 LR LR 04 07 41.8
comp=Z,59nm,20.0s,MS3.4,baz=300,slow=34
FORT Forrest 39.80 177 *e*P **P 03 53 22.7 -2.4**
comp=Z,4.2nm,0.9s,mb4.2
SONM Songino Array 41.81 341 P **P 03 53 42.3 +0.9**
comp=Z,0.2nm,0.5s,baz=180,slow=7.5,SNR=2.3
SONM LR LR 04 12 45.4
comp=Z,112nm,19.2s,MS3.8,baz=84,slow=39
STKA Stephens Creek 43.60 160 P **P 03 53 55.6 -0.5**
comp=Z,5.1nm,0.8s,mb4.3,baz=333,slow=11,SNR=2.5
PETK Petropavlovsk- 50.89 24 LR LR 04 14 58.7
comp=Z,56nm,19.9s,MS3.6,baz=344,slow=34
MK31 Makanchi Array 52.49 324 *e*P **P 03 55 03.8 -1.0**
MKAR Makanchi Array 52.49 324 P **P 03 55 04.3 -0.5**
comp=Z,2.4nm,0.7s,mb4.2,baz=125,slow=8.1,SNR=18
TKM2 Tokmak 2 54.99 317 *e*P **P 03 55 22.3 -0.9**
TKM2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
TKM2 Tokmak 2 54.99 317 *e*P **P 03 55 22.3 -0.9**
comp=Z,2.8nm,0.8s,mb4.3
ZALV Zalesovo Beam 55.26 332 P **P 03 55 23.3 -1.7**
comp=Z,0.6nm,0.3s,mb4.0,baz=90,slow=4.9,SNR=3.3
ZALV LR LR 04 18 51.6
comp=Z,42nm,21.2s,MS3.5,baz=251,slow=36
UCH Uchtor 55.47 315 *e*P **P 03 55 27.3 +0.6**
comp=Z,12nm,1.0s,mb4.3
AML Almayashu 56.01 315 *e*P **P 03 55 31.0 +0.5**
comp=Z,14nm,1.3s,mb4.8
EKS2 Erkin-Say 56.13 316 *e*P **P 03 55 31.4 -0.1**
comp=Z,4.7nm,1.0s,mb4.5
KURK Kurchatov 56.59 326 P **P 03 55 33.4 -1.2**
comp=Z,2.6nm,0.8s,mb4.3,baz=130,slow=6.4,SNR=15
KURK Kurchatov 56.59 326 *e*P **P 03 55 33.2 -1.3**
KURK pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KURK Kurchatov 56.59 326 *e*P **P 03 55 33.2 -1.3**
comp=Z,5.9nm,0.8s,mb4.7
BRVK Borovoye 62.25 326 *e*P **P 03 56 12.5 -1.1**
BRVK pmax pmax
comp=Z,13nm,1.1s,mb5.0
BRVK Borovoye 62.25 326 *e*P **P 03 56 12.4 -1.2**
comp=Z,13nm,1.1s,mb5.0
AKTK Aktyubinsk 68.73 321 P **P 03 56 53.3 -2.3**
AKTO Aktyubinsk 68.73 321 P **P 03 56 53.3 -2.3**
comp=Z,1.5nm,0.7s,mb4.0,baz=100,slow=6.7,SNR=5.8
CASY Casey 75.07 186 *e*P **P 03 57 37.8 -1.2**
comp=Z,5.6nm,0.9s,mb4.5
BPAW Bear Paw Mtn. 78.92 26 *e*P **P 03 57 54.6 -0.4**
comp=Z,15nm,1.4s,mb4.7
DAWY Dawson 84.00 26 *e*P **P 03 58 22.4 +0.4**
ARCES ARCESS Array B 84.97 340 P **P 03 58 26.2 -0.6**
comp=Z,3.3nm,0.9s,mb4.5,baz=89,slow=4.7,SNR=3.1
ARCES ARCESS Array B 84.97 340 P **P 03 58 26.2 -0.6**
NOA NORSAR Array B 93.43 334 LR LR 04 42 38.3
comp=Z,68nm,18.4s,MS4.1,baz=35,slow=36
YKA Yellowknife Ar 95.01 24 P **P 03 59 17.0 +2.7**
comp=Z,1.9nm,0.9s,mb4.5,baz=299,slow=4.3,SNR=5.6
TXAR Lajitas Array 119.03 49 PKP PKPdf 04 04 43.6 +2.3
comp=Z,0.4nm,0.7s,baz=166,slow=1.0,SNR=5.4
TORD Torodi Ar. Bea 120.05 291 PKP PKPdf 04 04 42.3 -1.3
comp=Z,0.5nm,0.8s,baz=345,slow=1.2,SNR=3.2
PLCA Paso Flores 145.47 158 PKPbc PKPbc 04 05 29.8 -0.5
comp=Z,3.8nm,0.8s,baz=212,slow=5.7,SNR=11

ISC 27 04:55:17.5±0.8, 4161N±005×4394E±004, h10km, n6, σ0.572/12, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOR	**Gori**	**0.40**	**19**	P	**Pg**	**04 55 25.2**	**-0.2**
GOR				S	**Sg**	**04 55 31.9**	**+1.2**
TBLG	**Delisi**	**0.61**	**78**	P	**Pg**	**04 55 28.7**	**-0.8**
TBLG				S	**Sg**	**04 55 37.7**	**+0.2**
MTA	**Mtatsminda**	**0.65**	**82**	P	**Pg**	**04 55 29.4**	**-0.7**
MTA				S	**Sg**	**04 55 38.5**	**-0.1**
ONI	**Oni**	**1.04**	**340**	P	**Pg**	**04 55 36.3**	**-1.2**
ONI				S	**Sg**	**04 55 51.0**	**0.0**
DGRG	**David-gareji**	**1.09**	**98**	P	**Pb**	**04 55 37.7**	**-0.7**
DGRG				S	**Sg**	**04 55 53.8**	**+1.1**
DBAD	**Bademkaya**	**1.79**	**252**	*i* P	**Pn**	**04 55 49.0**	**+0.6**
DBAD				*i* S	**Sn**	**04 56 11.6**	**+0.4**

*NEIC **27** 05:08:51.3±4.9, 543S×15081E, h102km±29km, mb4.7/1, Error ellipse: s-maj=55.8km s-min=41.4km az=88.0*
IDC 27 05:08:38.1±2.9, 517S×15089E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/15, mbtmp3.9/4, Error ellipse: s-maj=73.0km s-min=46.5km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.61**	**221**	*e*Pn	Pn	05 10 08.9	+6.2
	20nm,0.4s						
WRA	**Warramunga Arr**	**21.80**	**226**	P	P	05 13 32.2	+0.3
	0.8nm,0.4s,baz=50,slow=10,SNR=13						
ASAR	**Alice Springs**	**24.62**	**220**	P	P	05 14 00.5	+0.1
	1.8nm,0.4s,baz=56,slow=8.6,SNR=40						
FITZ	**Fitzroy Crossi**	**27.82**	**240**	P	P	05 14 29.5	+0.2
	1.0nm,0.7s,baz=63,slow=11,SNR=3.5						
STKA	**Stephens Creek**	**27.96**	**197**	P	P	05 14 29.8	-0.7
	2.5nm,0.8s,baz=58,slow=9.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**148.60**	**287**	PKPbc	PKPbc	05 28 27.7	-0.5
	0.1nm,0.4s,baz=90,slow=2.2,SNR=6.1						

*MAN **27** 05:36:51, 959N×12422E, h2km, mb4.6, ML3.4, MS3.4*
MAN INTENSITY III - VALENCIA, BOHOL; INTENSITY II - MANDAUE, CEBU, DUERO, JAGNA, BOHOL, CAGAYAN DE ORO.
*ISCJB **27** 05:36:52.4±0.9, 961N±003×12426E±003, h13km±6km, mb3.9/10, MS3.2/9, Error ellipse: s-maj=5.2km s-min=4.2km az=177.8*
*MOS **27** 05:36:54.0±0.8, 975N×12436E, h33km, mb4.7/1, Error ellipse: s-maj=62.7km s-min=19.5km az=119.2*
*IDC **27** 05:36:56.3±4.4, 972N×12423E, h35km±38km, mb3.7/8, mb1 4.0/10, mb1mx3.8/20, mbtmp3.9/10, ML4.9/2, MS3.3/10, Ms1 3.3/10, ms1mx3.1/26, Error ellipse: s-maj=49.3km s-min=16.5km az=67.0*
*NEIC **27** 05:36:57.0±2.6, 980N×12444E, h43km±25km, mb4.5/1, Error ellipse: s-maj=36.2km s-min=14.2km az=66.0*
NEIC Felt [IV PIVS] at Duero, Garcia Hernandez, Jagna and Valencia; [II PIVS] at Carmen. Also felt [II PIVS] at Cagayan de Oro, Mindanao and at Mandaue City, Cebu.

ISC 27 05:36:51.9±0.7, 960N±002×12428E±003, h2km±5km, n46, σ1.803/51, mb3.9/10, MS3.2/9, 4C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.42**	**282**	*i* P	**Pg**	**05 37 00.8**	**+0.9**
TBP				*e*S	**Sg**	**05 37 07.0**	**+1.6**
LLP	**Lapu-Lapu**	**0.78**	**337**	*i* P	**Pg**	**05 37 06.4**	**-0.4**
LLP				*i* S	**Sg**	**05 37 16.5**	**-0.3**
MSLP	**Maasin**	**0.78**	**47**	*e*P	**Pg**	**05 37 07.5**	**+0.6**
SNPH	**Sibulan**	**1.06**	**256**	*i* P	**Pg**	**05 37 12.0**	**-0.2**
SNPH				*e*S	**Sg**	**05 37 30.0**	**+4.0**
SCPH	**Surigao**	**1.21**	**81**	*e*P	**Pg**	**05 37 13.0**	**-2.1**
DCPH	**Dipolog City**	**1.36**	**222**	*i* P	**Pn**	**05 37 16.2**	**-1.7**
DCPH				*e*S	**Sg**	**05 37 34.8**	**-0.9**
BUTP	**Butuan**	**1.47**	**115**	*e*P	**Pn**	**05 37 18.2**	**-1.1**
BUTP				*e*S	**Sb**	**05 37 45.4**	**+6.4**
OCLP	**Ormoc**	**1.48**	**13**	*e*P	**Pn**	**05 37 19.7**	**+0.1**
PLP	**Palo**	**1.70**	**24**	*i* P	**Pn**	**05 37 22.5**	**-0.1**
PLP				*i* S	**Sn**	**05 37 45.0**	**0.0**
BUKP	**Musuan**	**1.88**	**156**	*e*P	**Pn**	**05 37 25.0**	**-0.1**
BUKP				*e*S	**Sn**	**05 37 51.5**	**+2.1**
GUIM	**Jordan**	**1.95**	**302**	*e*P	**Pn**	**05 37 25.0**	**-1.0**
GUIM				*e*S	**Sn**	**05 37 51.4**	**+0.2**
PAGZ	**Pagadian**	**1.95**	**207**	*e*P	**Pn**	**05 37 25.6**	**-0.5**
PAGZ				*e*S	**Sn**	**05 37 51.2**	**-0.1**
BESP	**Borongan**	**2.29**	**30**	*e*P	**Pn**	**05 37 32.1**	**+1.4**
BESP				*e*S	**Sn**	**05 38 05.0**	**+5.4**
CTBH	**Cotabato--PC H**	**2.36**	**181**	*i* P	**Pn**	**05 37 32.1**	**+0.4**
RCP	**Roxas**	**2.46**	**322**	*i* eP	**Pn**	**05 37 32.6**	**-0.5**
IPIL	**Ipil**	**2.47**	**223**	*e*P	**Pn**	**05 37 33.4**	**+0.2**
BIPH	**Bislig**	**2.49**	**124**	*i* eP	**Pn**	**05 37 32.7**	**-0.8**
KALP	**Kalibo**	**2.81**	**317**	*e*P	**Pn**	**05 37 37.8**	**-0.1**
DAV	**Davao City (W)**	**2.82**	**153**	Pn	**Pn**	**05 37 40.3**	**+2.3**
	148nm,0.3s,baz=305,slow=3.7,SNR=7.1						
DAV				Lg		05 38 33.2	
	116nm,0.3s,baz=143,slow=20,SNR=3.4						
DAV				LR	LR	05 38 58.7	
	comp=Z,1μm,18.2s,baz=328,slow=42						
CNP	**Catarman**	**2.92**	**7**	*e*P	**Pn**	**05 37 40.9**	**+1.5**
CNP				*e*S	**Sn**	**05 38 22.8**	**+7.8**
CUYO	**Cuyo Island**	**3.44**	**291**	*e*P	**Pn**	**05 37 46.9**	**+0.4**
OTRP	**Odiongan**	**3.53**	**321**	*e*P	**Pn**	**05 37 48.1**	**+0.3**
PVCP	**Virac**	**3.97**	**358**	*e*P	**Pn**	**05 37 55.7**	**+1.8**
BUSP	**Coron**	**4.67**	**301**	*e*P	**Pn**	**05 38 03.5**	**+0.1**
ENPP	**El Nido**	**5.03**	**289**	*e*P	**Pn**	**05 38 08.7**	**+0.2**
KAPI	**Kappang**	**15.20**	**197**	Pn	**Pn**	**05 40 33.1**	**+5.2**
	1.1nm,0.3s,baz=9.5,slow=6.1,SNR=4.5						
BATI	**Baumata**	**19.68**	**182**	P	**Pn**	**05 41 23.3**	**-0.6**
	3.2nm,0.3s,baz=11,slow=5.2,SNR=2.4						
GUMO	**Guam**	**20.55**	**77**	LR	LR	05 48 57.8	
	comp=Z,37nm,18.9s,MS2.8,baz=89,slow=35						
CBIJ	**Chichi jima**	**24.27**	**42**	LR	LR	05 49 57.0	
	comp=Z,77nm,18.8s,MS3.2,baz=113,slow=32						
CMAR	**Chiang Mai Arr**	**26.08**	**292**	P	**P**	**05 42 27.1**	**-0.1**
	3.8nm,1.0s,mb3.9,baz=109,slow=7.3,SNR=14						
CMAR				LR	LR	05 53 00.2	
	comp=Z,43nm,18.1s,MS3.0,baz=100,slow=37						
FITZ	**Fitzroy Crossi**	**27.56**	**177**	P	**P**	**05 42 39.9**	**-0.5**
	2.3nm,0.8s,mb3.9,baz=1.4,slow=12,SNR=6.1						
KSRS	**Korea Array**	**27.93**	**6**	LR	LR	05 54 11.4	
	comp=Z,37nm,20.9s,MS3.0,baz=225,slow=37						
MJAR	**Matsushiro Arr**	**29.65**	**23**	LR	LR	05 53 52.7	
	comp=Z,51nm,18.8s,MS3.2,baz=190,slow=34						
WRA	**Warramunga Arr**	**30.98**	**161**	P	**P**	**05 43 11.8**	**+1.0**
	0.7nm,0.9s,mb3.5,baz=347,slow=9.4,SNR=5.3						
WRA	**Warramunga Arr**	**30.98**	**161**	P	**P**	**05 43 11.8**	**+1.0**
ASAR	**Alice Springs**	**34.38**	**164**	P	**P**	**05 43 41.3**	**+0.8**
	0.6nm,0.6s,mb3.7,baz=340,slow=6.7,SNR=7.1						
SONM	**Songino Array**	**40.99**	**342**	P	**P**	**05 44 35.7**	**-0.6**
	0.3nm,0.4s,mb3.3,baz=150,slow=6.0,SNR=3.3						
SONM				LR	LR	06 02 38.2	
	comp=Z,71nm,18.5s,MS3.6,baz=116,slow=38						
STKA	**Stephens Creek**	**44.45**	**159**	P	**P**	**05 45 07.7**	**+3.3**
	3.1nm,0.9s,mb4.0,baz=310,slow=12,SNR=3.1						
STKA	**Stephens Creek**	**44.45**	**159**	P	**P**	**05 45 07.7**	**+3.2**
PETK	**Petropavlovsk-**	**51.06**	**25**	LR	LR	06 08 33.9	
	comp=Z,32nm,19.3s,MS3.4,baz=225,slow=37						
MKAR	**Makanchi Array**	**51.39**	**324**	P	**P**	**05 45 57.8**	**-0.4**
	1.3nm,0.8s,mb3.9,baz=116,slow=8.2,SNR=3.7						
MKAR				LR	LR	06 08 51.0	
	comp=Z,36nm,20.2s,MS3.4,baz=153,slow=37						
ZALV	**Zalesovo Beam**	**54.29**	**332**	P	**P**	**05 46 17.1**	**-2.3**
	0.5nm,0.4s,mb3.8,baz=140,slow=7.0,SNR=2.5						
ZALV				LR	LR	06 10 07.0	
	comp=Z,29nm,20.9s,MS3.3,baz=20,slow=37						
KURK	**Kurchatov**	**55.52**	**327**	*e*P	**P**	**05 46 27.6**	**-0.9**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
KURK	**Kurchatov**	**55.52**	**327**	*e*P	**P**	**05 46 27.6**	**-0.9**
	comp=Z,4.7nm,0.9s,mb4.5						
ARCES	**ARCESS Array B**	**84.14**	**340**	P	**P**	**05 49 22.5**	**-1.7**
	comp=Z,3.3nm,0.9s,mb4.5,baz=60,slow=5.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**118.68**	**291**	PKP	PKPdf	05 55 40.0	-2.7
	comp=Z,0.5nm,0.7s,baz=39,slow=2.1,SNR=3.8						

MAN 27 05:45:58, 975N×12408E, h26km, mb4.0, ML2.8, MS2.5, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.22**	**254**	*i* P	Pb	05 46 05.8	+1.7
TBP				*e*S	Sb	05 46 12.3	+4.2
LLP	**Lapu-Lapu**	**0.57**	**349**	*e*P	Pb	05 46 11.0	+1.6
LLP				*e*S	Sb	05 46 20.6	+3.4
MSLP	**Maasin**	**0.86**	**64**	*e*P	Pb	05 46 13.6	-0.6
DCPH	**Dipolog City**	**1.37**	**212**	*i* eP	Pn	05 46 32.0	+11
DCPH				*e*S	Sn	05 46 39.8	+1.1
PAGZ	**Pagadian**	**2.02**	**200**	*e*P	Pn	05 46 31.2	+0.8
PAGZ				*e*S	Sn	05 46 56.2	+1.5

*BJI **27** 06:37:41.1, 5.10S×153.80E, h45km, mB4.9, mb4.8*
*MOS **27** 06:37:41.5±0.6, 5.03S×153.73E, h33km, mb5.0/5, Error ellipse: s-maj=19.2km s-min=11.6km az=55.6*
*ISCJB **27** 06:37:42.2±3.0, 5.13S±008×153.76E±009, h38km±26km, mb4.7/32, MS3.4/6, Error ellipse: s-maj=16.2km s-min=11.6km az=143.3*
*NEIC **27** 06:37:43.1±0.4, 5.09S×153.76E, h35km, mb4.7/9, Error ellipse: s-maj=11.9km s-min=7.7km az=94.0*
*IDC **27** 06:37:46.9±0.8, 5.18S×153.71E, h68km±7km, mb4.1/13, mb1 4.2/14, mb1mx4.2/18, mbtmp4.1/14, MS3.4/7, Ms1 3.4/7, ms1mx3.3/19, Error ellipse: s-maj=21.3km s-min=13.4km az=83.0*
ISC 27 06:37:46.7±2.4, 520S±008×153.76E±009, h64km±21km, h65km±1.8km: pP-P, n71, σ0.982/63, mb4.7/32, 2D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.75**	**237**	*e*P	**Pn**	**06 39 36.0**	**-0.9**
PMG				*e*		06 41 04.9	
PMG				pmax	pmax		
	comp=Z,79nm,0.8s						
PMG	**Port Moresby**	**7.75**	**237**	*e*Pn	**Pn**	**06 39 36.0**	**-0.9**
	comp=Z,79nm,0.8s						
PMG				*e*Sn	**Sn**	**06 41 04.9**	**+1.6**
CTA	**Charters Tower**	**16.50**	**206**	*i* P	**Pn**	**06 41 34.6**	**+0.6**
	comp=Z,4.8nm,0.9s						
CTA	**Charters Tower**	**16.50**	**206**	P	**Pn**	**06 41 34.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=40,slow=13,SNR=7.8						
CTA				LR	LR	06 47 08.8	
	comp=Z,164nm,19.6s,baz=44,slow=34						
CTA	**Charters Tower**	**16.50**	**206**	*i* P	**Pn**	**06 41 34.6**	**+0.6**
CTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CTAO	**Charters Tower**	**16.50**	**206**	*e*P	**Pn**	**06 41 34.5**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,28nm,1.5s						
CTAO	**Charters Tower**	**16.50**	**206**	*e*Pn	**Pn**	**06 41 34.5**	**+0.5**
	comp=Z,28nm,1.5s						
GUMO	**Guam**	**20.64**	**335**	LR	LR	06 49 01.3	
	comp=Z,51nm,20.1s,baz=129,slow=33						
DZM	**Mont Dzumac**	**20.80**	**145**	*e*P	**P**	**06 42 23.4**	**+0.6**
DZM	**Mont Dzumac**	**20.80**	**145**	*e*P	**P**	**06 42 23.5**	**+0.7**
WRAB	**Tennant Creek**	**23.89**	**230**	*e*P	**P**	**06 42 54.1**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**23.89**	**230**	*e*P	**P**	**06 42 54.0**	**-0.5**
	comp=Z,8.7nm,0.6s,mb4.4						
WB2	**Warramunga Arr**	**23.89**	**230**	*e*P	**P**	**06 42 53.1**	**-1.5**
WRA	**Warramunga Arr**	**23.90**	**230**	P	**P**	**06 42 54.0**	**-0.7**
	comp=Z,3.3nm,0.4s,mb4.2,baz=55,slow=9.9,SNR=97						
WRA				PcP	PcP	06 46 36.2	+0.1
	comp=Z,3.4nm,0.8s,baz=58,slow=2.2,SNR=8.3						
ARMA	**Armidale**	**25.17**	**184**	*e*P	**P**	**06 43 07.0**	**+0.9**
ASAR	**Alice Springs**	**26.51**	**224**	P	**P**	**06 43 17.6**	**-0.6**
	comp=Z,2.6nm,0.8s,mb3.8,baz=55,slow=8.1,SNR=24						
ASAR				PcP		06 46 41.8	-0.1
	comp=Z,2.6nm,0.6s,baz=60,slow=2.8,SNR=11						
STKA	**Stephens Creek**	**28.88**	**202**	P	**P**	**06 43 38.4**	**-1.0**
	comp=Z,3.6nm,0.8s,mb4.2,baz=327,slow=11,SNR=4.7						
STKA				LR	LR	06 55 21.9	
	comp=Z,97nm,18.4s,baz=22,slow=36						
FITZ	**Fitzroy Crossi**	**30.30**	**243**	*e*P	**P**	**06 43 50.8**	**-1.4**
	comp=Z,7.1nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**30.30**	**243**	LR	LR	06 57 34.8	
	comp=Z,78nm,18.9s,baz=236,slow=39						
URZ	**Urewera**	**39.18**	**150**	P	**P**	**06 45 08.7**	**+0.3**
	comp=Z,11nm,0.8s,mb4.6,baz=11,slow=5.2,SNR=4.8						
RPZ	**Rata Peaks**	**41.29**	**161**	P	**P**	**06 45 25.3**	**-0.4**
	comp=Z,7.0nm,0.6s,mb4.5,baz=27,slow=11,SNR=6.7						
KSRS	**Korea Array**	**48.78**	**333**	P	**P**	**06 46 24.5**	**-0.8**
	comp=Z,1.7nm,0.8s,mb4.2,baz=146,slow=8.5,SNR=5.4						
KSRS				LR	LR	07 02 39.5	
	comp=Z,12nm,21.5s,baz=245,slow=31						
XAN	**Xi'an**	**57.55**	**316**	P	**P**	**06 47 28.3**	**-1.6**
XAN				AP	pP	06 47 46.0	-0.8
XAN				AMB	AMB		
	comp=Z,14nm,0.7s,mb5.1						
XAN				AMB	AMB		
	comp=Z,87nm,6.4s						
PETK	**Petropavlovsk-**	**58.18**	**3**	P	**P**	**06 47 33.2**	**-0.6**
	comp=Z,1.8nm,0.5s,mb4.3,baz=155,slow=6.7,SNR=4.9						
PETK				pP	pP	06 47 50.7	0.0
	comp=Z,3.3nm,0.6s,baz=149,slow=6.7,SNR=2.5						
PETK				LR	LR	07 06 44.5	
	comp=Z,45nm,21.7s,baz=108,slow=30						
PETK	**Petropavlovsk-**	**58.18**	**3**	P	**P**	**06 47 33.3**	**-0.5**
PETK				*PP	pP	06 47 50.7	-0.1
PETK	**Petropavlovsk-**	**58.18**	**3**	P	**P**	**06 47 33.2**	**-0.6**
PETK				pP	pP	06 47 50.7	0.0
PETK				LR	LR	07 06 44.5	
CM31	**Chiang Mai Arr**	**58.89**	**295**	*e*P	**P**	**06 47 40.5**	**+1.0**
	comp=Z,1.6nm,0.4s,mb4.4						
CMAR	**Chiang Mai Arr**	**58.89**	**295**	P	**P**	**06 47 40.1**	**+0.7**
	comp=Z,5.2nm,0.6s,mb4.8,baz=116,slow=6.0,SNR=18						
CMAR				pP	pP	06 47 57.1	+0.7
	comp=Z,8.1nm,0.8s,baz=111,slow=5.4,SNR=4.9						
GTA	**Gaotai**	**66.58**	**317**	*e*P	**P**	**06 48 31.3**	**+1.0**
GTA				AP	pP	06 48 43.3	-4.2
GTA				XP	sP	06 48 48.0	-6.7
GTA				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.9						
SONM	**Songino Array**	**67.16**	**327**	P	**P**	**06 48 33.7**	**0.0**
	comp=Z,1.9nm,0.7s,mb4.3,baz=144,slow=6.5,SNR=10						
ZAK	**Zakamensk**	**70.32**	**328**	*e*P	**P**	**06 48 52.6**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
ODAN	**Odare**	**71.55**	**300**	*e*P	**P**	**06 49 01.6**	**+0.3**
	comp=Z,28nm,0.8s,mb5.1						
RAMN	**Ramite**	**72.25**	**300**	*e*P	**P**	**06 49 05.4**	**-0.2**
JIRN	**Jiri**	**72.80**	**301**	*e*P	**P**	**06 49 09.2**	**+0.4**
	comp=Z,13nm,0.6s,mb5.1						
GUN	**Gumba**	**73.13**	**301**	*e*P	**P**	**06 49 10.9**	**+0.2**
	comp=Z,33nm,0.7s,mb5.4						
KKN	**Kakani**	**73.61**	**301**	*e*P	**P**	**06 49 13.6**	**0.0**
	comp=Z,16nm,0.7s,mb5.1						
DMN	**Daman**	**73.71**	**301**	*e*P	**P**	**06 49 14.5**	**+0.3**
	comp=Z,30nm,0.8s,mb5.3						
GKN	**Gorkha**	**74.21**	**301**	*e*P	**P**	**06 49 17.1**	**0.0**
	comp=Z,8.2nm,0.4s,mb5.0						
KOLN	**Koldanda**	**75.04**	**300**	*e*P	**P**	**06 49 21.8**	**-0.1**
	comp=Z,11nm,0.6s,mb5.0						
DANN	**Dangsing**	**75.05**	**301**	*e*P	**P**	**06 49 21.7**	**-0.2**
	comp=Z,9.6nm,0.5s,mb5.0						
MK31	**Makanchi Array**	**81.24**	**319**	*e*P	**P**	**06 49 55.5**	**-0.3**
MKAR	**Makanchi Array**	**81.24**	**319**	P	**P**	**06 49 55.4**	**-0.3**
	comp=Z,3.6nm,0.6s,mb4.5,baz=103,slow=5.4,SNR=25						
MKAR	**Makanchi Array**	**81.24**	**319**	P	**P**	**06 49 55.4**	**-0.3**
ZAA0	**Zalesovo Array**	**82.00**	**326**	*e*P	**P**	**06 49 59.4**	**-0.2**
ZAA0				*e*pP	pP	06 50 16.9	-0.5
ZALV	**Zalesovo Beam**	**82.00**	**326**	P	**P**	**06 49 58.0**	**-1.7**
	comp=Z,3.3nm,0.5s,mb4.5,baz=113,slow=5.5,SNR=12						
ULHL	**Ulahol**	**84.27**	**313**	P	**P**	**06 50 12.3**	**+0.7**
	SNR=6.6						
KURK	**Kurchatov**	**84.66**	**322**	*e*P	**P**	**06 50 12.5**	**-0.8**
KURK				*e*PP	pP	06 50 29.9	-1.3
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
KURK	**Kurchatov**	**84.66**	**322**	*e*P	**P**	**06 50 12.5**	**-0.9**
	comp=Z,9.5nm,1.0s,mb4.9						
KURK				*e*pP	pP	06 50 29.9	-1.3
TKM2	**Tokmak 2**	**84.88**	**314**	*e*P	**P**	**06 50 15.0**	**+0.3**
TKM2				*e*PP	pP	06 50 32.7	+0.2
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0						
TKM2	**Tokmak

ATH ***27*** *06:48:31.9, 3922N×2362E, h23km±3km, MD3.3/3*
NEIC ***27*** *06:48:31.9, 3922N×2362E, h23km, MD3.3(ATH), After ATH.*
ISCJB ***27*** *06:48:32.2±0.5, 3919N±002×2359E±004, h13km±4km, Error ellipse: s-maj=4.8km s-min=3.6km az=5.3*
CSEM ***27*** *06:48:33.5±0.1, 3921N×2363E, h20km, ML3.0, Error ellipse: s-maj=2.9km s-min=2.2km az=81.0*
THE ***27*** *06:48:33.4, 3919N×2361E, h13km, ML3.0*

ISC 27 06:48:32.8±0.5, 3919N±002×2360E±004, h17km±3km, n21, σ0§91/37, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.22**	**96**	*e*Pg		**Pg**	**06 48 38.0**	**+0.1**
AOS				*e*Sg		**Sg**	**06 48 41.3**	**0.0**
NEO	**Neokhori**	**0.32**	**291**	*e*PB		**Pg**	**06 48 40.1**	**+0.6**
NEO				*e*SB		**Sg**	**06 48 44.3**	**+0.2**
XOR	**Xorichti**	**0.36**	**299**	*e*Pg		**Pg**	**06 48 40.8**	**+0.4**
XOR				*e*Sg		**Sg**	**06 48 45.9**	**+0.4**
XOR	**Xorichti**	**0.36**	**299**	*e*Pg		**Pg**	**06 48 40.8**	**+0.4**
XOR				*e*Sg		**Sg**	**06 48 45.8**	**+0.4**
LKR	**Lokris**	**0.72**	**221**	*e*Pg		**Pg**	**06 48 47.0**	**+0.1**
LKR				*e*Sg		**Sg**	**06 48 57.0**	**+0.6**
LKR	**Lokris**	**0.72**	**221**	*e*PN		**Pn**	**06 48 46.8**	**-1.4**
LKR				*e*SN		**Sn**	**06 48 57.0**	**-1.8**
PAIG	**Paliouri**	**0.74**	**5**	*e*Pg		**Pg**	**06 48 48.0**	**+0.8**
PAIG				*e*Sg		**Sg**	**06 48 58.9**	**+1.8**
PAIG	**Paliouri**	**0.74**	**5**	*e*Pg		**Pg**	**06 48 48.0**	**+0.8**
PAIG				*e*Sg		**Sg**	**06 48 58.8**	**+1.8**
AGG	**Agios Georgios**	**1.00**	**261**	*e*Pg		**Pg**	**06 48 52.3**	**0.0**
AGG				*e*Sg		**Sg**	**06 49 06.5**	**+1.1**
OUR	**Ouranopolis**	**1.18**	**14**	*e*Pg		**Pg**	**06 48 54.7**	**-0.9**
PLG	**Polygyros**	**1.19**	**354**	*e*Pg		**Pg**	**06 48 54.4**	**-1.4**
PLG				*e*Sg		**Sg**	**06 49 10.0**	**-1.3**
PLG	**Polygyros**	**1.19**	**354**	*e*Pn		**Pn**	**06 48 53.4**	**-1.3**
PLG	**Polygyros**	**1.19**	**354**	*e*Pg		**Pg**	**06 48 54.4**	**-1.4**
PLG				*e*Sg		**Sg**	**06 49 10.0**	**-1.3**
LIT	**Litokhoron**	**1.25**	**317**	*e*Pg		**Pg**	**06 48 55.9**	**-1.0**
LIT				*e*Sg		**Sg**	**06 49 12.9**	**-0.3**
LIT	**Litokhoron**	**1.25**	**317**	*e*Pg		**Pg**	**06 48 55.9**	**-1.0**
LIT				*e*Sg		**Sg**	**06 49 12.9**	**-0.4**
LTK	**Loutraki**	**1.27**	**203**	*e*Pg		**Pg**	**06 48 56.3**	**-1.0**
LTK				*e*Sg		**Sg**	**06 49 13.6**	**-0.3**
THL	**Klokotos Trika**	**1.29**	**287**	*e*Pg		**Pg**	**06 48 56.8**	**-0.8**
THL	**Klokotos Trika**	**1.29**	**287**	*e*PN		**Pn**	**06 48 56.7**	**+0.7**
HORT	**Hortiatis**	**1.46**	**345**	*e*Pg		**Pn**	**06 48 59.1**	**+0.8**
HORT				*e*Sg		**Sn**	**06 49 18.1**	**+1.1**
DID	**Didima**	**1.71**	**190**	*e*Pb		**Pn**	**06 49 02.5**	**+0.7**
DID				*e*Sb		**Sn**	**06 49 24.2**	**+0.9**
APE	**Apeiranthos**	**2.61**	**144**	*e*PN		**Pn**	**06 49 15.3**	**+1.1**

PRE 27 06:59:45.3±0.8, 2145S×3251E, h5km, ML4.0, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
POGA	**Pongola**	**5.95**	**188**	*e*P		Pn	07 01 14.6	+0.5
POGA				*e*S		Sn	07 02 19.5	-3.2
POGA				AML		AML	07 03 10.2	
	comp=Z,18nm,0.5s							
LBTB	**Lobatse**	**7.28**	**239**	*e*P		Pn	07 01 32.8	+0.5
LBTB				*e*S		Sn	07 02 52.7	-2.7
LBTB				AML		AML	07 03 55.7	
	comp=Z,13nm,0.6s							
SWZ	**Schweizer**	**8.68**	**227**	*e*P		Pn	07 01 52.6	+1.0
SWZ				*e*S		Sn	07 03 25.8	-4.2
SWZ				AML		AML	07 04 47.0	
	comp=Z,15nm,0.9s							
BOSA	**Boshof**	**9.70**	**221**	*e*P		Pn	07 02 07.6	+2.0
BOSA				*e*S		Sn	07 03 50.1	-4.8
BOSA				AML		AML	07 05 22.6	
	comp=Z,6.0nm,0.6s							
UPI	**Upington**	**12.31**	**234**	*e*P		Pn	07 02 43.2	+1.9
UPI				*e*S		Sn	07 04 52.9	-6.1
UPI				AML		AML	07 05 15.9	
	comp=Z,1.9nm,0.7s							

CSEM ***27*** *07:00:13.7±0.4, 7326N×755E, h0km±2km, mb4.2/6, Error ellipse: s-maj=2.8km s-min=2.5km az=50.0*
ISCJB ***27*** *07:00:15.0±0.3, 7315N±003×8.1E±0.1, h10km, mb4.0/16, MS3.3/6, Error ellipse: s-maj=5.4km s-min=4.4km az=2.7*
NAO ***27*** *07:00:15.4±1.7, 7297N×780E, ML3.4*
IDC ***27*** *07:00:15.6±0.6, 7309N×757E, h0km, mb4.0/12, mb1 4.2/17, mb1mx4.0/28, mbtmp4.0/17, ML4.0/5, MS3.3/8, Ms1 3.3/8, ms1mx3.1/26, Error ellipse: s-maj=15.7km s-min=11.5km az=60.0*
MOS ***27*** *07:00:16.1±1.6, 7317N×825E, h10km, mb4.2/8, Error ellipse: s-maj=32.5km s-min=5.9km az=96.6*
NEIC ***27*** *07:00:16.8±0.4, 7313N×775E, h10km, ML2.7(BER), Error ellipse: s-maj=7.9km s-min=6.0km az=75.0*
BER ***27*** *07:00:18.7±3.2, 7316N×804E, h10km, MD2.6, ML2.7, ML3.4(NAO)*

ISC 27 07:00:17.1±0.3, 7318N±003×80E±01, h10km, n89, σ1§21/103, mb4.0/16, MS3.3/6, 1C-1D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**3.34**	**61**	*e*P		**Pn**	**07 01 09.3**	**0.0**
BJO1				*e*S		**Sn**	**07 01 47.9**	**-1.0**
BJO1	**Bjornoya**	**3.34**	**61**	*e*P		**Pn**	**07 01 09.3**	**0.0**
BJO1				*e*S		**Sn**	**07 01 47.9**	**-1.0**
BJO	**Bjornoya**	**3.39**	**62**	*e*P		**Pn**	**07 01 09.3**	**-0.6**
BJO				*e*S		**Sn**	**07 01 47.9**	**-2.3**
BJO				AML		AML	07 01 52.8	
	comp=Z,25nm,0.7s							
HSP	**Hornsund**	**4.31**	**23**	*e*P		**Pn**	**07 01 21.8**	**-0.8**
TRO	**Tromso**	**4.98**	**130**	*e*P		**Pn**	**07 01 32.2**	**+0.4**
LOF	**Lofoten**	**5.39**	**157**	*e*P		**Pn**	**07 01 38.2**	**+0.8**
LOF				*e*S		**Sn**	**07 02 31.5**	**-7.8**
LOF				AML		AML	07 02 36.2	
	comp=Z,41nm,0.7s							
LOF				*e*			07 06 20.6	
LOF	**Lofoten**	**5.39**	**157**	*e*P		**Pn**	**07 01 38.2**	**+0.8**
LOF				*e*S		**Sn**	**07 02 31.5**	**-7.8**
LOF				*e*			07 06 20.6	
SPB4	**Spitsbergen Ar**	**5.43**	**18**	*e*Pn		**Pn**	**07 01 38.0**	**+0.1**
SPB4	**Spitsbergen Ar**	**5.43**	**18**	*e*Pn		**Pn**	**07 01 38.0**	**+0.1**
SPA0	**Spitsbergen Ar**	**5.43**	**18**	Pn		**Pn**	**07 01 38.1**	**+0.2**
	baz=196,slow=14							
SPITS	**Spitsbergen Ar**	**5.43**	**18**	Pn		**Pn**	**07 01 38.0**	**+0.1**
	baz=257,slow=14,SNR=113							
SPITS	**Spitsbergen Ar**	**5.43**	**18**	Pn		**Pn**	**07 01 38.0**	**+0.1**
JMIC	**Jan Mayen**	**5.55**	**255**	Pn		**Pn**	**07 01 37.2**	**-2.4**
	comp=Z,5.0nm,0.3s,baz=135,slow=15,SNR=3.3							
JMIC				LR		LR	07 02 38.2	
	comp=Z,314nm,19.7s,baz=154,slow=26							
JMIC	**Jan Mayen**	**5.55**	**255**	*e*P		**Pn**	**07 01 37.6**	**-2.0**
	SNR=49							
JMI	**Jan Mayen**	**5.64**	**255**	*e*P		**Pn**	**07 01 39.9**	**-0.9**
STEI	**Steigen**	**5.79**	**152**	*e*P		**Pn**	**07 01 42.7**	**-0.2**
STEI				*e*S		**Sn**	**07 02 41.8**	**-7.4**
STEI				AML		AML	07 02 50.8	
	comp=Z,10nm,0.7s							
STEI				*e*			07 06 29.3	
KBS	**Kingsbay**	**5.86**	**7**	*e*P		**Pn**	**07 01 43.3**	**-0.4**
KBS				Pn		**Pn**	**07 01 43.4**	**-0.4**
KBS	**Kingsbay**	**5.86**	**7**	Pn		**Pn**	**07 01 43.4**	**-0.4**
	SNR=50							
ARA0	**ARCESS Array S**	**6.67**	**115**	Pn		**Pn**	**07 01 55.0**	**+0.1**
	baz=328,slow=12							
ARA0				Sn		**Sn**	**07 03 04.5**	**-6.3**
	baz=322,slow=22							
ARCES	**ARCESS Array B**	**6.67**	**115**	Pn		**Pn**	**07 01 55.1**	**+0.2**
	comp=Z,4.5nm,0.3s,baz=328,slow=12,SNR=176							
ARCES				Sn		**Sn**	**07 03 00.6**	**-10**
	comp=Z,0.6nm,0.3s,baz=318,slow=17,SNR=1.9							
ARCES				LR		LR	07 05 02.4	
	comp=Z,104nm,20.9s,baz=186,slow=42							
KEV	**Kevo**	**6.93**	**110**	*e*p		**Pn**	**07 02 00.2**	**+1.7**
	comp=Z,18nm,0.4s							
KEV	**Kevo**	**6.93**	**110**	*e*P		**Pn**	**07 02 00.2**	**+1.7**
KEV				pmax		pmax		
	comp=Z,18nm,0.4s							
STOK	**Stokkvaagen**	**7.09**	**163**	*e*P		**Pn**	**07 01 60.0**	**-0.7**
STOK				AML		AML	07 03 18.5	
	comp=Z,12nm,0.4s							
FLOS	**Flostrand**	**7.12**	**162**	*e*P		**Pn**	**07 02 00.8**	**-0.3**
MOR8	**Moi Rana**	**7.38**	**159**	*e*P		**Pn**	**07 02 02.9**	**-1.8**
MOR8				*e*S		**Sn**	**07 03 20.0**	**-8.3**
MOR8				AML		AML	07 03 22.1	
	comp=Z,12nm,0.4s							
MOR8				*e*			07 07 03.8	
MOR8	**Moi Rana**	**7.38**	**159**	*e*P		**Pn**	**07 02 02.9**	**-1.8**
MOR8				*e*S		**Sn**	**07 03 20.0**	**-8.3**
MOR8				*e*			07 07 03.8	
NSS	**Namsos**	**8.80**	**169**	*e*P		**Pn**	**07 02 22.7**	**-1.5**
NSS				*e*S		**Sn**	**07 03 53.0**	**-10**
NSS				AML		AML	07 03 59.4	
	comp=Z,9.5nm,0.6s							
NSS	**Namsos**	**8.80**	**169**	*e*P		**Pn**	**07 02 22.7**	**-1.5**
NSS				*e*S		**Sn**	**07 03 53.0**	**-10**
APA0	**Apatity Array**	**10.00**	**111**	Pn		**Pn**	**07 02 39.8**	**-0.7**
	baz=314,slow=12							
NB2	**NORSAR Subarra**	**12.25**	**173**	Pn		**Pn**	**07 03 09.8**	**-1.5**
	baz=351,slow=14							
NOA	**NORSAR Array B**	**12.25**	**173**	Pn		**Pn**	**07 03 09.6**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=349,slow=12,SNR=6.8							
NOA				Sn		**Sn**	**07 05 18.4**	**-9.4**
	comp=Z,0.3nm,0.3s,baz=162,slow=5.7,SNR=2.7							
KAF	**Kangasniemi**	**13.01**	**139**	*e*p		**Pn**	**07 03 20.2**	**-1.5**
	comp=Z,3.6nm,0.5s							
KAF	**Kangasniemi**	**13.01**	**139**	*e*P		**Pn**	**07 03 20.2**	**-1.5**
KAF				pmax		pmax		
	comp=Z,4.0nm,0.5s							
HFS	**Hagfors**	**13.28**	**168**	Pn		**Pn**	**07 03 23.7**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=2.5,slow=13,SNR=13							
HFS				Sn		**Sn**	**07 05 44.9**	**-8.0**
	comp=Z,0.3nm,0.3s,baz=358,slow=22,SNR=2.6							
HFS				LR		LR	07 08 19.6	
	comp=Z,153nm,18.4s,baz=132,slow=37							
HFS	**Hagfors**	**13.28**	**168**	Pn		**Pn**	**07 03 24.3**	**-1.1**
	baz=347,slow=12							
HFS				Sn		**Sn**	**07 05 45.5**	**-7.3**
	baz=350,slow=28							
HFS	**Hagfors**	**13.28**	**168**	Pn		**Pn**	**07 03 23.7**	**-1.7**
HFS				Sn		**Sn**	**07 05 44.9**	**-8.0**
JOF	**Joensuu**	**13.34**	**128**	*e*p		**Pn**	**07 03 24.6**	**-1.6**
	comp=Z,5.2nm,0.5s							
FIA0	**FINESS Array S**	**13.58**	**141**	Pn		**Pn**	**07 03 28.6**	**-0.9**
	baz=336,slow=12							
FINES	**FINESS Array B**	**13.58**	**141**	*e*P		**Pn**	**07 03 28.0**	**-1.5**
KONO	**Kongsberg**	**13.60**	**177**	*e*P		**Pn**	**07 03 30.5**	**+0.7**
VSU	**Vasula**	**16.50**	**144**	*e*P		**Pn**	**07 04 04.5**	**-3.7**
KLMR	**Klimovskoe**	**17.11**	**120**	*e*P		**Pn**	**07 04 14.7**	**-1.2**
KLMR				pmax		pmax		
	comp=Z,35nm,1.1s							
OBN	**Obninsk**	**21.57**	**132**	*ce*P		**P**	**07 05 07.0**	**+0.7**
OBN				*e*S		**S**	**07 09 09.3**	**+4.4**
OBN				pmax		pmax		
	comp=Z,14nm,1.2s,mb4.3							
OBN				MLR		MLR		
	comp=Z,100nm,20.0s,MS3.2							
OBN	**Obninsk**	**21.57**	**132**	*e*P		**P**	**07 05 07.0**	**+0.7**
	comp=Z,14nm,1.2s,mb4.3							
UPC	**Upice**	**23.02**	**167**	*e*P		**P**	**07 05 24.0**	**+2.2**
NKC	**Novy Kostel**	**23.11**	**173**	*e*P		**P**	**07 05 24.1**	**+1.4**
DPC	**Dobruska-Polom**	**23.20**	**166**	*e*P		**P**	**07 05 25.5**	**+1.8**
PRU	**Pruhonice**	**23.45**	**169**	*e*P		**P**	**07 05 26.8**	**+0.5**
OJC	**Ojcow**	**23.61**	**161**	*e*P		**P**	**07 05 25.5**	**-2.4**
VRAC	**Vranov**	**24.25**	**166**	P		**P**	**07 05 33.1**	**-0.7**
	comp=Z,8.5nm,0.8s,mb4.2,baz=348,slow=11,SNR=4.4							
VRAC				LR		LR	07 15 10.5	
	comp=Z,62nm,19.1s,MS3.1,baz=176,slow=37							
AKASG	**Malin Array Be**	**24.36**	**146**	P		**P**	**07 05 35.1**	**+0.4**
	comp=Z,4.3nm,0.5s,mb4.1,baz=348,slow=9.4,SNR=6.8							
KIEV	**Kiev**	**24.36**	**146**	*e*P		**P**	**07 05 34.7**	**-0.1**
KIEV				pmax		pmax		
	comp=Z,16nm,1.0s,mb4.4							
KIEV	**Kiev**	**24.36**	**146**	*e*P		**P**	**07 05 34.7**	**-0.1**
	comp=Z,16nm,1.0s,mb4.4							
KIEV	**Kiev**	**24.36**	**146**	*e*P		**P**	**07 05 34.7**	**-0.1**
	comp=Z,16nm,1.0s,mb4.4							
NIE	**Niedzica**	**24.45**	**160**	*e*P		**P**	**07 05 37.9**	**+2.3**
GERES	**GERESS Array B**	**24.55**	**171**	P		**P**	**07 05 37.5**	**+1.0**
	comp=Z,2.3nm,0.8s,mb3.7,baz=13,slow=7.1,SNR=8.9							
GERES				LR		LR	07 15 25.0	
	comp=Z,59nm,18.2s,MS3.1,baz=338,slow=37							
STHS	**Stebnicka Huta**	**24.55**	**159**	*e*P		**P**	**07 05 38.8**	**+2.3**
STHS	**Stebnicka Huta**	**24.55**	**159**	*e*P		**P**	**07 05 38.8**	**+2.3**
STHS	**Stebnicka Huta**	**24.55**	**159**	*e*P		**P**	**07 05 38.8**	**+2.3**
CRVS	**Cervenica-Dubn**	**25.08**	**159**	*e*P		**P**	**07 05 40.2**	**-1.1**
MODS	**Modra-Piesok**	**25.23**	**165**	*e*P		**P**	**07 05 43.6**	**+0.9**
VYHS	**Vyhne**	**25.23**	**163**	*e*P		**P**	**07 05 44.0**	**+1.3**
ARU	**Arti**	**26.07**	**103**	*d*iP		**P**	**07 05 52.0**	**+1.8**
ARU				*e*			07 06 24.6	
ARU				*e*S		**S**	**07 10 22.8**	**+1.9**
ARU				pmax		pmax		
	comp=Z,9.0nm,1.2s,mb4.2							
ARU	**Arti**	**26.07**	**103**	*i* P		**P**	**07 05 52.0**	**+1.8**
	comp=Z,9.0nm,1.2s,mb4.2							
ARU				*e*S		**S**	**07 10 22.8**	**+1.9**
ARU	**Arti**	**26.07**	**103**	P		**P**	**07 05 52.7**	**+2.5**
	comp=Z,6.3nm,0.4s,mb4.5							
MLR	**Muntele Rosu**	**28.97**	**153**	LR		LR	07 18 05.0	
	comp=Z,108nm,19.0s,MS3.5,baz=322,slow=37							
KURK	**Kurchatov**	**36.87**	**88**	*e*P		**P**	**07 07 26.6**	**+1.5**
KURK				pmax		pmax		
	comp=Z,2.0nm,1.3s,mb3.8							
KURK	**Kurchatov**	**36.87**	**88**	*e*P		**P**	**07 07 26.6**	**+1.5**
	comp=Z,2.0nm,1.3s,mb3.8							
YKA	**Yellowknife Ar**	**39.25**	**322**	P		**P**	**07 07 44.5**	**-0.5**
	comp=Z,8.0nm,0.9s,mb4.5,baz=20,slow=9.0,SNR=16							
YKA				LR		LR	07 23 49.8	
	comp=Z,48nm,19.1s,MS3.3,baz=145,slow=36							
YKA	**Yellowknife Ar**	**39.25**	**322**	P		**P**	**07 07 44.5**	**-0.6**
YKA	**Yellowknife Ar**	**39.25**	**322**	P		**P**	**07 07 44.5**	**-0.5**
YKA				LR		LR	07 23 49.8	
COLA	**College**	**41.27**	**345**	*e*P		**P**	**07 08 02.9**	**+1.2**
MKAR	**Makanchi Array**	**41.46**	**87**	P		**P**	**07 08 05.4**	**+1.9**
	comp=Z,0.2nm,0.3s,mb3.3,baz=86,slow=8.6,SNR=3.6							
ULM	**Lac du Bonnet**	**46.48**	**301**	P		**P**	**07 08 42.7**	**-1.1**
	comp=Z,4.5nm,0.8s,mb4.5,baz=17,slow=8.0,SNR=5.9							
ULM				LR		LR	07 28 25.5	
	comp=Z,68nm,19.0s,MS3.6,baz=17,slow=36							
SONM	**Songino Array**	**47.28**	**65**	P		**P**	**07 08 51.7**	**+1.7**
	comp=Z,1.1nm,0.8s,mb3.8,baz=326,slow=7.3,SNR=6.7							
SONM				PcP		PcP	07 10 22.6	+1.7
	comp=Z,0.7nm,0.8s,baz=6.7,slow=5.1,SNR=4.0							
EDM	**Edmonton**	**47.69**	**316**	*e*P		**P**	**07 08 53.2**	**+0.1**
EDM	**Edmonton**	**47.69**	**316**	*e*P		**P**	**07 08 53.2**	**+0.2**
PDAR	**Pinedale Array**	**56.78**	**309**	P		**P**	**07 10 01.1**	**+0.3**
	comp=Z,0.9nm,0.8s,mb3.8,baz=55,slow=5.6,SNR=7.7							
TORD	**Torodi Ar. Bea**	**60.12**	**187**	P		**P**	**07 10 24.8**	**+0.4**
	comp=Z,2.2nm,0.9s,mb4.2,baz=354,slow=6.8,SNR=8.8							
NVAR	**Mina Array Bea**	**62.83**	**315**	P		**P**	**07 10 43.0**	**+0.6**
	comp=Z,0.4nm,0.8s,mb3.6,baz=188,slow=1.0,SNR=3.6							
MJAR	**Matsushiro Arr**	**65.43**	**43**	P		**P**	**07 11 00.2**	**+0.6**
	comp=Z,0.7nm,0.4s,mb4.0,baz=12,slow=6.2,SNR=3.5							
MJAR	**Matsushiro Arr**	**65.43**	**43**	P		**P**	**07 11 00.2**	**+0.7**
MJAR				pmax		pmax		
	comp=Z,1.0nm,0.4s							
TXAR	**Lajitas Array**	**68.15**	**299**	P		**P**	**07 11 16.4**	**-0.5**
	comp=Z,0.6nm,1.0s,mb3.6,baz=46,slow=3.6,SNR=3.7							
TXAR	**Lajitas Array**	**68.15**	**299**	P		**P**	**07 11 16.5**	**-0.4**
TXAR				pmax		pmax		
	comp=Z,1.0nm,1.0s							
WRA	**Warramunga Arr**	**119.11**	**60**	PKP		PKPdf	07 19 04.7	-0.9
	comp=Z,0.3nm,0.7s,baz=325,slow=3.0,SNR=4.4							
ASAR	**Alice Springs**	**122.57**	**62**	PKP		PKPdf	07 19 11.8	-0.2
	comp=Z,1.0nm,0.6s,baz=353,slow=1.5,SNR=17							
ASAR	**Alice Springs**	**122.57**	**62**	PKIKP		PKPdf	07 19 11.9	-0.2
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
MAW	**Mawson**	**145.02**	**147**	PKPbc		PKPbc	07 19 52.7	+0.9
	comp=Z,1.4nm,0.8s,baz=346,slow=5.3,SNR=3.6							
MAW	**Mawson**	**145.02**	**147**	PKIKP		PKPdf	07 19 52.7	+0.3
MAW				pmax		pmax		
	comp=Z,1.0nm,0.8s							

ISCJB ***27*** *07:36:10.8±0.4, 2480N±002×12204E±002, h2km±3km, Error ellipse: s-maj=3.2km s-min=2.5km az=148.7*
JMA ***27*** *07:36:10.8±0.2, 2497N×12197E, h26km, M3.2*
TAP ***27*** *07:36:11.3, 2482N×12195E, h9km, ML3.6, C*

ISC 27 07:36:11.3±0.4, 2481N±002×12203E±002, h4km±3km, n50, σ0§83/89, 3C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EGS		**0.10**	**293**	*i*P		**Pg**	**07 36 13.4**	**+0.1**
	baz=320							
EGS				*i* S		**Sg**	**07 36 14.9**	**+0.2**
	baz=320							
TWB1	**Santiao Chiao**	**0.21**	**349**	*i*P		**Pg**	**07 36 15.8**	**+0.5**
	baz=9.0							
TWB1				*i* S		**Sg**	**07 36 18.5**	**+0.4**
	baz=9.0							
TWC	**Suao**	**0.26**	**221**	*i*P		**Pg**	**07 36 16.4**	**+0.1**
	baz=195							
TWC				*e*S		**Sg**	**07 36 19.3**	**-0.4**
	baz=195							
ILA	**Ilan**	**0.26**	**261**	P		**Pg**	**07 36 16.1**	**-0.3**
	baz=254							
ILA				S		**Sg**	**07 36 19.7**	**-0.1**
	baz=254							
TWE	**Neicheng**	**0.34**	**256**	*i*P		**Pg**	**07 36 17.5**	**-0.4**
	baz=249							
TWE				*e*S		**Sg**	**07 36 21.9**	**-0.5**
	baz=249							
NWF	**Wu-fen Shan**	**0.35**	**319**	*i*P		**Pg**	**07 36 18.3**	**+0.3**
	baz=322							
NWF				*i* S		**Sg**	**07 36 22.4**	**-0.2**
	baz=322							
TWA	**Mucha**	**0.44**	**293**	*i*P		**Pg**	**07 36 19.7**	**-0.1**
	baz=284							
TWA				*i* S		**Sg**	**07 36 25.3**	**-0.4**
	baz=284							
ENTT	**Nioudou**	**0.46**	**249**	⇑P		**Pg**	**07 36 19.4**	**-0.7**
	baz=243							
ENTT				*e*S		**Sg**	**07 36 26.7**	**+0.7**
	baz=243							
ENA	**Nanau**	**0.46**	**215**	*e*P		**Pg**	**07 36 20.0**	**-0.2**
	baz=201							
ENA				*e*S		**Sg**	**07 36 25.5**	**-0.7**
	baz=201							
TAP1	**Taipei**	**0.52**	**297**	P		**Pg**	**07 36 21.2**	**0.0**
	baz=299							
TAP1				S		**Sg**	**07 36 27.7**	**-0.4**
	baz=299							
TWY	**Chenhua**	**0.61**	**320**	P		**Pg**	**07 36 23.2**	**+0.1**
	baz=317							
NSK	**Sanguang**	**0.63**	**258**	⇑*i*P		**Pg**	**07 36 22.4**	**-1.0**
	baz=255							
NSK				*e*S		**Sg**	**07 36 31.6**	**+0.1**
	baz=255							
TWS1	**Kuangyinshan**	**0.63**	**298**	*e*P		**Pg**	**07 36 23.5**	**+0.1**
	baz=299							
TWS1				*e*S		**Sg**	**07 36 31.5**	**-0.2**
	baz=299							
NNS	**Nan Shan**	**0.70**	**239**	*e*P		**Pg**	**07 36 24.1**	**-0.7**
	baz=235							
NNS				*e*S		**Sg**	**07 36 34.3**	**+0.4**
	baz=235							
NCU	**National Centr**	**0.79**	**282**	*e*P		**Pg**	**07 36 26.7**	**+0.3**
	baz=282							
NCU				*e*S		**Sg**	**07 36 36.6**	**0.0**
	baz=282							
PCYT	**Pengchaiyu**	**0.82**	**2**	*i*P		**Pg**	**07 36 27.8**	**+0.7**
	baz=7.0							
PCYT				*e*S		**Sg**	**07 36 38.6**	**+0.9**
	baz=7.0							
TWD	**Chiawan**	**0.82**	**209**	*e*P		**Pg**	**07 36 27.1**	**-0.1**
	baz=204							
TWD				*e*S		**Sg**	**07 36 37.0**	**-0.8**
	baz=204							
HWA	**Hwalien**	**0.91**	**205**	*e*P		**Pg**	**07 36 29.2**	**+0.4**
	baz=201							
HWA				*e*S		**Sg**	**07 36 41.9**	**+1.2**
	baz=201							
YOJ	**Yonaguni jima**	**0.95**	**111**	P		**Pg**	**07 36 30.1**	**+0.5**
YOJ				S		**Sg**	**07 36 44.0**	**+2.0**
NSTT	**Nanjuang**	**0.95**	**260**	*e*P		**Pg**	**07 36 28.8**	**-0.8**
	baz=258							
NSTT				*e*S		**Sg**	**07 36 41.7**	**-0.3**
	baz=258							
TWT	**Tachien**	**0.95**	**235**	*e*P		**Pg**	**07 36 29.2**	**-0.5**
	baz=226							
TWT				*e*S		**Sg**	**07 36 43.1**	**+1.1**
	baz=226							
WHF	**Hehuan Shan**	**0.96**	**227**	P		**Pg**	**07 36 29.1**	**-0.6**
	baz=224							
WHF				*e*S		**Sg**	**07 36 41.4**	**-0.8**
	baz=224							
HSN	**Hsinchu**	**0.97**	**270**	*e*P		**Pg**	**07 36 29.4**	**-0.4**
	baz=270							
HSN				*e*S		**Sg**	**07 36 41.5**	**-0.9**
	baz=270							
ESL	**Shilin**	**1.13**	**209**	P		**Pg**	**07 36 32.8**	**-0.2**
	baz=206							
ESL				*e*S		**Sg**	**07 36 48.4**	**+0.8**
	baz=206							
NSY	**Sanyi**	**1.22**	**252**	*e*P		**Pg

Msz4.5

ISCJB ***27*** *08:07:41.2±0.3, 356S×004×10071E±003, h34km, mb5.0/70, MS4.2/26, Error ellipse: s-maj=6.4km s-min=3.7km az=40.9*

NEIC ***27*** *08:07:43.3±0.3, 349S×100 84E, h35km, mb5.0/26, MS4.4/1, Error ellipse: s-maj=10.3km s-min=5.7km az=56.0*

MOS ***27*** *08:07:43.3±1.4, 303S×101.14E, h33km, mb5.2/29, MS4.4/4, Error ellipse: s-maj=14.1km s-min=6.8km az=105.6*

DJA ***27*** *08:07:45, 330S×10081E, h30km, MLv5.1/9*

IDC ***27*** *08:07:48.3±2.6, 274S×101 62E, h50km±24km, mb4.5/15, mb1 4.6/15, mb1mx4.6/16, mbtmp4.5/15, MS4.0/14, Ms1 4.0/14, ms1mx3.9/24, Error ellipse: s-maj=22.8km s-min=10.6km az=47.0*

ISC 27 08:07:43.6±0.3, 353S±004×10075E±003, h36km, h36km±2.5km: pP-P, n197, σ1§17/187, mb5.0/70, MS4.2/26, 14C-6D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.85**	**94**	P	**Pn**	**08 08 12.7**	**-0.2**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.07**	**354**	P	**Pn**	**08 08 28.6**	**-1.1**
	0.0nm,0.0s						
JMBI	**JAMBI**	**3.45**	**57**	P	**Pn**	**08 08 35.6**	**+0.7**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.54**	**27**	P	**Pn**	**08 08 36.5**	**+0.4**
	0.0nm,0.0s						
BLSI	**Bandar Lampung**	**4.84**	**112**	P	**Pn**	**08 08 56.0**	**+1.9**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.88**	**52**	P	**Pn**	**08 08 54.4**	**-0.2**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**5.55**	**76**	P	**Pn**	**08 09 04.6**	**+0.8**
	0.0nm,0.0s						
DBJI	**Dramaga**	**6.69**	**117**	P	**Pn**	**08 09 21.0**	**+1.5**
	0.0nm,0.0s						
LEM	**Lembang**	**7.59**	**116**	P	**Pn**	**08 09 34.4**	**+2.6**
	0.0nm,0.0s						
IPM	**Ipoh**	**7.96**	**2**	⇓P	**Pn**	**08 09 39.3**	**+2.4**
XMIS	**Christmas Isla**	**8.45**	**145**	*e*Pn	**Pn**	**08 09 39.7**	**-3.9**
XMIS				*e*Sn	**Sn**	**08 11 06.5**	**-11**
KTGM	**Kuala Trenggan**	**9.12**	**15**	⇓P	**Pn**	**08 09 55.3**	**+2.5**
CLJI	**Cilicap**	**9.22**	**117**	P	**Pn**	**08 09 52.5**	**-1.7**
	0.0nm,0.0s						
COCO	**West Island**	**9.43**	**204**	*e*Pn	**Pn**	**08 09 57.1**	**0.0**
BJII	**Banjamegara**	**9.69**	**113**	P	**Pn**	**08 10 01.5**	**+0.9**
	0.0nm,0.0s						
BSI	**Banda Aceh**	**10.49**	**329**	P	**Pn**	**08 10 10.2**	**-1.4**
	0.0nm,0.0s						
STKI	**Sintang**	**11.30**	**72**	P	**Pn**	**08 10 25.2**	**+2.4**
	0.0nm,0.0s						
SJI	**Sawahan**	**11.74**	**111**	P	**Pn**	**08 10 29.4**	**+0.7**
	134nm,0.6s						
BTM	**Bintulu**	**14.03**	**62**	⇑P	**Pn**	**08 11 04.5**	**+4.5**
KHKI	**Kahang-Kahang**	**15.54**	**109**	P	**Pn**	**08 11 21.1**	**+0.9**
	0.0nm,0.0s						
MTNI	**Mataram**	**16.15**	**109**	P	**Pn**	**08 11 24.6**	**-3.5**
	0.0nm,0.0s						
KKM	**Kota Kinabalu**	**18.14**	**58**	⇓P	**Pn**	**08 11 53.1**	**+0.2**
KKM	**Kota Kinabalu**	**18.14**	**58**	*e*Pn	**Pn**	**08 11 52.6**	**-0.3**
SDKM	**Sandakan**	**18.79**	**61**	⇑P	**Pn**	**08 12 00.5**	**-0.3**
TSM	**Tawau**	**18.80**	**66**	⇑P	**Pn**	**08 12 01.0**	**+0.1**
KAPI	**Kappang**	**19.01**	**95**	P	**Pn**	**08 12 01.2**	**-2.3**
	323nm,1.3s,SNR=5.2						
KAPI	**Kappang**	**19.01**	**95**	P	**Pn**	**08 12 02.6**	**-0.9**
	3.1nm,0.3s,baz=280,slow=13,SNR=9.1						
KAPI				LR	LR	08 19 57.8	
	comp=Z,397nm,18.3s,baz=283,slow=40						
KAPI	**Kappang**	**19.01**	**95**	*e*Pn	**Pn**	**08 12 01.4**	**-2.1**
	80nm,1.2s						
KAPI				Sn	**Sn**	**08 15 34.9**	**-0.7**
KDM	**Kudat**	**19.12**	**57**	⇓P	**Pn**	**08 12 06.5**	**+1.7**
MYLDM	**Lahad Datu**	**19.73**	**64**	⇓P	**Pn**	**08 12 12.4**	**+0.3**
KDI	**Kendari**	**21.83**	**92**	P	**P**	**08 12 33.4**	**+0.2**
	0.0nm,0.0s						
CMAR	**Chiang Mai Arr**	**21.92**	**355**	P	**P**	**08 12 30.6**	**-3.4**
	4.9nm,0.6s,mb4.1,baz=183,slow=8.8,SNR=13						
CMAR				PcP	PcP	08 16 34.0	+1.5
	0.7nm,0.3s,baz=221,slow=2.7,SNR=4.7						
CMAR				LR	LR	08 22 05.9	
	comp=Z,407nm,18.5s,MS3.9,baz=182,slow=40						
CMAR	**Chiang Mai Arr**	**21.92**	**355**	⇑*e*P	**P**	**08 12 32.2**	**-1.8**
CHG	**Chiang Mai**	**22.27**	**355**	P	**P**	**08 12 38.6**	**+0.8**
CHTO	**Chiang Mai**	**22.27**	**355**	*e*P	**P**	**08 12 36.0**	**-1.8**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
CHTO	**Chiang Mai**	**22.27**	**355**	*e*P	**P**	**08 12 36.0**	**-1.7**
	comp=Z,6.0nm,0.9s,mb4.0						
CHRT	**Chiangrai**	**23.27**	**358**	P	**P**	**08 12 47.5**	**-0.8**
BATI	**Baumata**	**23.69**	**107**	P	**P**	**08 12 54.6**	**+2.2**
	comp=Z,8.6nm,0.3s,mb4.7,baz=206,slow=9.8,SNR=3.8						
QIZ	**Qiongzhong**	**24.14**	**21**	P	**P**	**08 12 57.0**	**+0.6**
QIZ				AP		08 13 05.8	
QIZ				S	**S**	**08 17 14.8**	**+2.7**
QIZ				LR	LR		
	comp=N,363nm,19.5s,MS4.1						
QIZ				LR	LR		
	comp=E,418nm,18.9s,MS4.1						
QIZ				LR	LR		
	comp=Z,556nm,20.2s,MS4.0						
MBWA	**Marble Bar**	**25.46**	**135**	*e*P	**P**	**08 13 08.1**	**-0.3**
	comp=Z,10nm,0.7s,mb4.5						
SGSI	**Sangihe**	**25.78**	**74**	P	**P**	**08 13 08.9**	**-2.6**
	comp=Z,0.0nm,0.0s						
DAV	**Davao City (W)**	**26.93**	**67**	LR	LR	08 24 43.1	
	comp=Z,297nm,21.0s,MS3.8,baz=214,slow=39						
FITZ	**Fitzroy Crossi**	**28.36**	**123**	*e*P	**P**	**08 13 34.7**	**+0.2**
	comp=Z,16nm,0.9s,mb4.7						
FITZ	**Fitzroy Crossi**	**28.36**	**123**	P	**P**	**08 13 34.9**	**+0.4**
	comp=Z,8.2nm,0.8s,mb4.4,baz=289,slow=8.0,SNR=17						
KMI	**Kunming**	**28.55**	**4**	P	**P**	**08 13 37.8**	**+1.7**
KMI				AP	pP	08 13 47.0	+0.6
KMI				PP	PP	08 14 30.5	-11
KMI				PCP	PcP	08 16 50.5	+3.3
KMI				S	**S**	**08 18 20.5**	**-1.4**
KMI				XS	sS	08 18 36.8	-2.0
KMI				SS	SS	08 19 45.3	-38
KMI				AMB	AMB		
	comp=Z,11nm,0.6s,mb4.8						
KMI				AMB	AMB		
	comp=Z,127nm,5.3s						
KMI				LR	LR		
	comp=N,391nm,16.4s,MS4.3						
KMI				LR	LR		
	comp=E,388nm,11.8s,MS4.3						
KMI				LR	LR		
	comp=Z,511nm,14.5s,MS4.3						
KMI	**Kunming**	**28.55**	**4**	P	**P**	**08 13 37.8**	**+1.7**
KMI				*PP	pP	08 13 47.1	+0.7
KMI						08 14 30.6	
KMI						08 16 50.4	
KMI				S	**S**	**08 18 20.4**	**-1.5**
KMI				*SS	sS	08 18 36.7	-2.1
KMI				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.8						
KMI				MLR	MLR		
	comp=Z,510nm,14.5s,MS4.3						
KMI	**Kunming**	**28.55**	**4**	P	**P**	**08 13 37.8**	**+1.7**
	comp=Z,11nm,0.6s,mb4.8						
KMI				pP	pP	08 13 47.1	+0.7
KMI				PP	PP	08 14 30.6	-11
KMI				PPP		08 14 42.3	
KMI				PcP	PcP	08 16 50.4	+3.2
KMI				S	**S**	**08 18 20.4**	**-1.5**
KMI				sS	sS	08 18 36.7	-2.1
KMI				SS	SS	08 19 45.2	-39
KMI				SSS		08 20 04.7	
KMI				LR	LR		
	comp=Z,510nm,14.5s,MS4.3						
GYA	**Guiyang**	**30.36**	**11**	P	**P**	**08 13 52.8**	**+0.6**
GYA				AP	pP	08 14 02.8	+0.4
GYA				XP	sP	08 14 08.0	+1.3
GYA				PP	PP	08 14 51.5	-10
GYA				PCP	PcP	08 16 50.3	-1.5
GYA				S	**S**	**08 18 50.5**	**+0.2**
GYA				XS	sS	08 19 07.3	+0.1
GYA				SCP	ScP	08 20 30.0	-1.6
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,140nm,4.6s						
GYA				LR	LR		
	comp=N,740nm,13.8s,MS4.6						
GYA				LR	LR		
	comp=E,670nm,14.4s,MS4.6						
GYA				LR	LR		
	comp=Z,780nm,14.9s,MS4.5						
SWI	**Sorong**	**30.61**	**86**	P	**P**	**08 13 52.4**	**-2.2**
	comp=Z,0.0nm,0.0s						
ODAN	**Odare**	**32.85**	**338**	*e*P	**P**	**08 14 14.7**	**+0.6**
NWAO	**Narrogin (SRO)**	**33.07**	**154**	P	**P**	**08 14 23.1**	**+7.1**
	comp=Z,8.0nm,0.7s,mb4.8,baz=333,slow=11,SNR=3.1						
RAMN	**Ramite**	**33.24**	**337**	*e*P	**P**	**08 14 18.4**	**+0.9**
	comp=Z,89nm,1.1s,mb5.6						
JIRN	**Jiri**	**34.04**	**337**	*e*P	**P**	**08 14 25.3**	**+0.9**
	comp=Z,168nm,0.9s,mb6.0						
LSA	**Lhasa**	**34.30**	**345**	P	**P**	**08 14 27.0**	**+0.3**
LSA	**Lhasa**	**34.30**	**345**	*e*P	**P**	**08 14 27.0**	**+0.3**
LSA				*e*PP	pP	08 14 38.7	+1.7
LSA				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2						
LSA	**Lhasa**	**34.30**	**345**	*e*P	**P**	**08 14 27.0**	**+0.4**
	comp=Z,39nm,1.1s,mb5.2						
LSA				*e*pP	pP	08 14 38.7	+1.7
CD2	**Chengdu**	**34.37**	**5**	P	**P**	**08 14 28.8**	**+1.5**
CD2				AP	pP	08 14 38.5	+0.9
CD2				XP	sP	08 14 42.8	+0.9
CD2				PP	PP	08 15 44.8	-0.8
CD2				PCP	PcP	08 17 04.3	+1.6
CD2				S	**S**	**08 19 53.5**	**+0.8**
CD2				XS	sS	08 20 09.5	-0.2
CD2				PCS	PcS	08 20 49.5	+0.4
CD2				SS	SS	08 22 05.0	-18
CD2				SCS	ScS	08 24 46.8	-1.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,60nm,6.2s						
CD2				LR	LR		
	comp=N,560nm,18.0s,MS4.6						
CD2				LR	LR		
	comp=E,940nm,18.0s,MS4.6						
CD2				LR	LR		
	comp=Z,590nm,18.0s,MS4.4						
GUN	**Gumba**	**34.38**	**336**	*e*P	**P**	**08 14 28.2**	**+0.8**
	comp=Z,77nm,0.5s,mb5.9						
DMN	**Daman**	**34.44**	**335**	*e*P	**P**	**08 14 28.5**	**+0.6**
KKN	**Kakani**	**34.52**	**335**	*e*P	**P**	**08 14 29.3**	**+0.7**
	comp=Z,68nm,0.8s,mb5.6						
GKN	**Gorkha**	**34.98**	**335**	*e*P	**P**	**08 14 33.3**	**+0.7**
KOLN	**Koldanda**	**35.23**	**333**	*e*P	**P**	**08 14 35.7**	**+0.9**
	comp=Z,36nm,0.8s,mb5.3						
DANN	**Dangsing**	**35.66**	**334**	*e*P	**P**	**08 14 39.2**	**+0.7**
	comp=Z,65nm,0.6s,mb5.8						
WRA	**Warramunga Arr**	**36.59**	**119**	P	**P**	**08 14 46.5**	**0.0**
	comp=Z,8.3nm,0.5s,mb4.8,baz=308,slow=9.1,SNR=125						
WRA				PcP	PcP	08 17 10.3	+0.8
	comp=Z,19nm,1.4s,baz=304,slow=2.2,SNR=5.5						
WRA				S	**S**	**08 20 24.9**	**-2.3**
	comp=Z,3.1nm,1.0s,baz=292,slow=23,SNR=6.4						
WRAB	**Tennant Creek**	**36.60**	**119**	P	**P**	**08 14 46.0**	**-0.6**
	comp=Z,170nm,0.7s,mb6.0,SNR=12						
WRAB	**Tennant Creek**	**36.60**	**119**	*c i*P	**P**	**08 14 46.3**	**-0.3**
WRAB	**Tennant Creek**	**36.60**	**119**	*e*P	**P**	**08 14 46.2**	**-0.4**
	comp=Z,19nm,0.6s,mb5.1						
WB2	**Warramunga Arr**	**36.60**	**119**	*e*P	**P**	**08 14 45.3**	**-1.4**
ASAR	**Alice Springs**	**37.76**	**125**	P	**P**	**08 14 56.9**	**+0.4**
	comp=Z,19nm,0.6s,mb5.0,baz=299,slow=8.3,SNR=91						
ASAR				PcP	PcP	08 17 14.2	+1.1
	comp=Z,2.9nm,0.6s,baz=300,slow=2.2,SNR=7.6						
ASAR				S	**S**	**08 20 44.0**	**-0.9**
	comp=Z,3.7nm,1.0s,baz=294,slow=17,SNR=11						
XAN	**Xi'an**	**38.16**	**11**	P	**P**	**08 14 57.8**	**-1.8**
XAN				AP	pP	08 15 08.8	-1.2
XAN				AMB	AMB		
	comp=Z,19nm,1.1s,mb4.7						
NDI	**New Delhi**	**39.20**	**326**	*e*P	**P**	**08 15 07.0**	**-1.5**
NJ2	**Nanjing**	**39.35**	**25**	*e*P	**P**	**08 15 11.5**	**+1.9**
NJ2				AP	pP	08 15 20.0	-0.1
NJ2				XP	sP	08 15 24.3	0.0
NJ2				PP	PP	08 16 45.5	+5.1
NJ2				S	**S**	**08 21 10.5**	**+1.9**
NJ2				XS	sS	08 21 24.5	-1.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,1μm,3.8s						
NJ2				LR	LR		
	comp=N,270nm,13.1s,MS4.4						
NJ2				LR	LR		
	comp=E,320nm,15.8s,MS4.4						
LZH	**Lanzhou**	**39.52**	**4**	*e*P	**P**	**08 15 13.8**	**+2.8**
LZH				AP	pP	08 15 23.8	+2.4
LZH				XP	sP	08 15 27.0	+1.3
LZH				*e*PP	PP	08 16 50.0	+7.8
LZH				*e*S	**S**	**08 21 15.3**	**+4.3**
LZH				XS	sS	08 21 32.0	+3.8
LZH				SS	SS	08 24 03.0	-3.7
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,190nm,5.6s						
LZH				LR	LR		
	comp=E,586nm,14.2s						
LZH				LR	LR		
	comp=Z,807nm,15.4s,MS4.7						
LZH	**Lanzhou**	**39.52**	**4**	*e*P	**P**	**08 15 13.7**	**+2.7**
LZH				*PP	pP	08 15 23.8	+2.4
LZH				*SP	sP	08 15 26.9	+1.2
LZH				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
LZH				MLR	MLR		
	comp=Z,810nm,15.4s,MS4.7						
LZH	**Lanzhou**	**39.52**	**4**	*e*P	**P**	**08 15 13.7**	**+2.7**
	comp=Z,20nm,1.0s,mb4.8						
LZH				pP	pP	08 15 23.8	+2.4
LZH				sP	sP	08 15 26.9	+1.2
LZH				*e*PP	PP	08 16 50.0	+7.8
LZH				*e*S	**S**	**08 21 15.2**	**+4.2**
LZH				sS	sS	08 21 32.1	+3.9
LZH				SS	SS	08 24 03.0	-3.7
LZH				LR	LR		
	comp=Z,810nm,15.4s,MS4.7						
SSE	**Sheshan**	**39.57**	**28**	P	**P**	**08 15 11.5**	**0.0**
SSE				S	**S**	**08 21 15.8**	**+3.9**
SSE				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
SSE				AMB	AMB		
	comp=Z,43nm,3.5s						
SSE				LR	LR		
	comp=N,147nm,17.7s,MS3.9						
SSE				LR	LR		
	comp=E,84nm,17.5s,MS3.9						
SSE				LR	LR		
	comp=Z,154nm,16.1s,MS3.9						
SSE	**Sheshan**	**39.57**	**28**	P	**P**	**08 15 11.4**	**-0.1**
	comp=Z,20nm,1.0s,mb4.8						
SSE				S	**S**	**08 21 15.7**	**+3.8**
SSE				LR	LR		
	comp=Z,150nm,16.1s,MS3.9						
GTA	**Gaotai**	**42.74**	**359**	P	**P**	**08 15 36.8**	**-0.6**
GTA				AP	pP	08 15 44.3	-3.6
GTA				XP	sP	08 15 47.5	-4.7
GTA				S	**S**	**08 21 58.8**	**+0.1**
GTA				XS	sS	08 22 16.0	0.0
GTA				SS	SS	08 25 04.0	-6.5
GTA				AMB	AMB		
	comp=Z,9.0nm,1.5s,mb4.3						
GTA				AMB	AMB		
	comp=Z,77nm,5.1s						
GTA				LR	LR		
	comp=N,399nm,17.1s,MS4.5						
GTA				LR	LR		
	comp=E,306nm,18.0s,MS4.5						
GTA				LR	LR		
	comp=Z,393nm,17.4s,MS4.4						
HHC	**Hu-ho-hao-te**	**45.26**	**12**	*e*P	**P**	**08 15 57.5**	**-0.1**
HHC				AP	pP	08 16 07.8	-0.4
HHC				XP	sP	08 16 12.0	-0.4
HHC				PCP	PcP	08 17 37.5	+0.3
HHC				PP	PP	08 17 44.5	+0.5
HHC				SCP	ScP	08 21 26.3	-1.0
HHC				PCS	PcS	08 21 30.0	-1.0
HHC				S	**S**	**08 22 35.5**	**0.0**
HHC				XS	sS	08 22 51.8	-1.1
HHC				SS	SS	08 25 49.8	-10
HHC				AMB	AMB		
	comp=Z,22nm,0.8s,mb5.0						
HHC				AMB	AMB		
	comp=Z,93nm,6.4s						
HHC				LR	LR		
	comp=N,385nm,13.9s,MS4.6						
HHC				LR	LR		
	comp=E,297nm,14.1s,MS4.6						
HHC				LR	LR		
	comp=Z,403nm,13.7s,MS4.5						
BJI	**Beijing**	**45.62**	**17**	P	**P**	**08 15 58.8**	**-1.7**
BJI				PP	PP	08 17 50.8	+3.0
BJI				S	**S**	**08 22 44.3**	**+3.7**
BJI				AMB	AMB		
	comp=Z,13nm,1.4s,mb4.7						
BJI				AMB	AMB		
	comp=Z,102nm,3.9s						
BJI				LR	LR		
	comp=N,555nm,18.1s,MS4.6						
BJI				LR	LR		
	comp=E,244nm,16.4s,MS4.6						
BJI				LR	LR		
	comp=Z,454nm,20.3s,MS4.4						
BJI	**Beijing**	**45.62**	**17**	P	**P**	**08 15 58.8**	**-1.7**
	comp=Z,13nm,1.4s,mb4.7						
BJI				PP	PP	08 17 50.7	+2.9
BJI				S	**S**	**08 22 44.2**	**+3.6**
BJI				SS	SS	08 26 17.5	+12
BJI				LR	LR		
	comp=Z,450nm,20.3s,MS4.4						
GUMO	**Guam**	**46.97**	**68**	LR	LR	08 35 21.7	
	comp=Z,57nm,21.7s,MS3.5,baz=229,slow=36						
CTA	**Charters Tower**	**47.29**	**114**	*e*P	**P**	**08 16 13.3**	**-0.7**
	comp=Z,15nm,0.9s,mb4.9						
CTA	**Charters Tower**	**47.29**	**114**	P	**P**	**08 16 14.2**	**+0.2**
	comp=Z,17nm,0.9s,mb5.0,baz=290,slow=9.2,SNR=26						
CTA	**Charters Tower**	**47.29**	**114**	*e*P	**P**	**08 16 13.3**	**-0.7**
CTA				pmax	pmax		
	comp=Z,15nm,0.9s						
CTAO	**Charters Tower**	**47.29**	**114**	*e*P	**P**	**08 16 14.2**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
CTAO	**Charters Tower**	**47.29**	**114**	*e*P	**P**	**08 16 14.2**	**+0.3**
	comp=Z,30nm,1.1s,mb5.1						
STKA	**Stephens Creek**	**47.59**	**131**	*e*P	**P**	**08 16 17.4**	**+1.3**
	comp=Z,17nm,0.6s,mb5.3						
STKA	**Stephens Creek**	**47.59**	**131**	P	**P**	**08 16 17.7**	**+1.6**
	comp=Z,22nm,0.6s,mb5.3,baz=306,slow=7.7,SNR=21						
STKA				LR	LR	08 36 25.0	
	comp=Z,360nm,20.4s,MS4.3,baz=114,slow=36						
KSRS	**Korea Array**	**47.97**	**29**	P	**P**	**08 16 17.9**	**-1.0**
	comp=Z,16nm,0.9s,mb5.0,baz=220,slow=8.2,SNR=31						
KSRS				LR	LR	08 38 50.6	
	comp=Z,113nm,19.8s,MS3.9,baz=104,slow=40						
WMQ	**Urumqi**	**48.58**	**347**	⇑*i*P	**P**	**08 16 23.8**	**+0.3**
WMQ				AP	pP	08 16 33.5	-0.6
WMQ				XP	sP	08 16 37.5	-0.8
WMQ				PCP	PcP	08 17 49.0	+0.2
WMQ				PP	PP	08 18 16.0	-0.7
WMQ				S	**S**	**08 23 21.0**	**-1.7**
WMQ				XS	sS	08 23 38.0	-2.2
WMQ				AMB	AMB		
	comp=Z,44nm,0.9s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,203nm,3.5s						
WMQ				LR	LR		
	comp=N,328nm,24.0s,MS4.3						
WMQ				LR	LR		
	comp=E,270nm,23.4s,MS4.3						
WMQ				LR	LR		
	comp=Z,245nm,23.6s,MS4.1						
ULHL	**Ulahol**	**50.70**	**337**	P	**P**	**08 16 40.4**	**+0.7**
	SNR=14						
KZA	**Kyzart**	**50.96**	**336**	P	**P**	**08 16 42.8**	**+1.1**
	SNR=12						
UCH	**Uchtor**	**51.39**	**335**	P	**P**	**08 16 46.2**	**+1.3**
	SNR=15						
UCH	**Uchtor**	**51.39**	**335**	*e*P	**P**	**08 16 45.4**	**+0.5**
	comp=Z,18nm,1.1s,mb4.9						
SONM	**Songino Array**	**51.39**	**5**	P	**P**	**08 16 44.5**	**-0.2**
	comp=Z,53nm,0.9s,mb5.5,baz=183,slow=8.9,SNR=249						
SONM				PcP	PcP	08 17 59.1	+0.1
	comp=Z,3.5nm,0.6s,baz=184,slow=3.6,SNR=4.7						
ULN	**Ulaanbaatar**	**51.48**	**5**	*e*P	**P**	**08 16 45.1**	**-0.3**
ULN				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.3						
ULN	**Ulaanbaatar**	**51.48**	**5**	*e*P	**P**	**08 16 45.1**	**-0.4**
	comp=Z,33nm,0.9s,mb5.3						
TKM2	**Tokmak 2**	**51.52**	**336**	*e*P	**P**	**08 16 46.1**	**+0.2**
TKM2				*e*PP	pP	08 16 59.1	+2.6
TKM2				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.4						
TKM2	**Tokmak 2**	**51.52**	**336**	P	**P**	**08 16 46.2**	**+0.4**
	SNR=37						
TKM2	**Tokmak 2**	**51.52**	**336**	*e*P	**P**	**08 16 46.1**	**+0.3**
	comp=Z,42nm,0.8s,mb5.4						
TKM2				*e*pP	pP	08 16 59.1	+2.6
KBK	**Karagaybulak**	**51.56**	**336**	P	**P**	**08 16 47.6**	**+1.4**
	SNR=12						
AML	**Almayashu**	**51.66**	**334**	P	**P**	**08 16 48.0**	**+1.2**
	SNR=18						
AML	**Almayashu**	**51.66**	**334**	*e*P	**P**	**08 16 47.8**	**+0.9**
	comp=Z,14nm,0.8s,mb4.9						
AAK	**Ala-Archa**	**51.73**	**335**	P	**P**	**08 16 48.6**	**+1.1**
	SNR=8.0						
FRU	**Bishkek**	**51.85**	**336**	*e*P	**P**	**08 16 49.0**	**+0.7**
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.2						
CHMS	**Chumysh**	**51.93**	**336**	P	**P**	**08 16 49.2**	**+0.3**
	SNR=6.8						
EKS2	**Erkin-Say**	**52.05**	**335**	P	**P**	**08 16 50.4**	**+0.6**
	SNR=66						
EKS2	**Erkin-Say**	**52.05**	**335**	*e*P	**P**	**08 16 50.3**	**+0.5**
	comp=Z,40nm,0.8s,mb5.4						
CN2	**Changchun**	**52.09**	**23**	*e*P	**P**	**08 16 48.0**	**-2.1**
CN2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4						
USP	**Ospenovka**	**52.25**	**336**	P	**P**	**08 16 51.8**	**+0.5**
	SNR=19						
MK31	**Makanchi Array**	**52.69**	**344**	*i* P	**P**	**08 16 54.0**	**-0.5**
MK31				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
MK31	**Makanchi Array**	**52.69**	**344**	*e*P	**P**	**08 16 53.8**	**-0.7**
MKAR	**Makanchi Array**	**52.69**	**344**	P	**P**	**08 16 54.2**	**-0.3**
	comp=Z,14nm,0.7s,mb5.0,baz=149,slow=7.9,SNR=99						
MKAR				LR	LR	08 44 20.4	
	comp=Z,91nm,18.3s,MS3.9,baz=162,slow=42						
MKAR	**Makanchi Array**	**52.69**	**344**	P	**P**	**08 16 54.2**	**-0.3**
MKAR				LR	LR	08 44 20.4	
MAT	**Matsushiro**	**53.00**	**38**	P	**P**	**08 16 54.8**	**-2.2**
MJAR	**Matsushiro Ar**	**53.00**	**38**	P	**P**	**08 16 54.5**	**-2.5**
	comp=Z,9.9nm,0.9s,mb4.7,baz=216,slow=7.6,SNR=20						
ZAK	**Zakamensk**	**53.74**	**2**	*e*P	**P**	**08 17 01.5**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
KK31	**Karatay Array**	**53.84**	**333**	P	**P**	**08 17 02.7**	**

IRK	**Irkutsk**	**55.64**	**3**	*e*P		**P**	**08 17 15.3**	**-0.6**
IRK				pmax	pmax			
	comp=Z,42nm,1.3s,mb5.3							
KURK	**Kurchatov**	**57.27**	**343**	P		**P**	**08 17 27.6**	**+0.1**
	comp=Z,139nm,0.9s,mb6.0,SNR=18							
KURK	**Kurchatov**	**57.27**	**343**	*e*P		**P**	**08 17 26.8**	**-0.7**
KURK				pmax	pmax			
	comp=Z,23nm,0.9s,mb5.2							
KURK	**Kurchatov**	**57.27**	**343**	*e*P		**P**	**08 17 26.8**	**-0.8**
	comp=Z,23nm,0.9s,mb5.2							
ZAA0	**Zalesovo Array**	**58.80**	**349**	*e*P		**P**	**08 17 37.4**	**-0.7**
ZALV	**Zalesovo Beam**	**58.80**	**349**	P	P	**P**	**08 17 37.5**	**-0.7**
	comp=Z,23nm,0.7s,mb5.3,baz=163,slow=5.6,SNR=74							
ZALV				LR	LR		08 46 05.6	
	comp=Z,120nm,19.2s,MS4.0,baz=142,slow=40							
ZALV	**Zalesovo Beam**	**58.80**	**349**	P		**P**	**08 17 37.5**	**-0.7**
ZALV				LR	LR		08 46 05.6	
KLR	**Kul'dur**	**59.03**	**23**	*e*P		**P**	**08 17 34.8**	**-5.0**
HABR	**Khabarovsk**	**59.80**	**26**	*e*P		**P**	**08 17 41.5**	**-3.7**
HABR				*e*			08 18 26.9	
HABR				*e*			08 19 53.1	
HABR				*e*S		**S**	**08 25 50.7**	**-3.3**
HABR				*e*			08 27 28.4	
HABR				*e*			08 29 47.3	
NVS	**Novosibirsk**	**59.95**	**348**	*i* P		**P**	**08 17 44.2**	**-1.9**
BVA0	**Borovoye Array**	**61.87**	**340**	*i* P		**P**	**08 17 57.9**	**-1.2**
BVA0				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.2							
BRVK	**Borovoye**	**61.93**	**340**	*e*P		**P**	**08 17 58.5**	**-1.1**
BRVK				pmax	pmax			
	comp=Z,13nm,0.7s,mb5.2							
BRVK	**Borovoye**	**61.93**	**340**	*e*P		**P**	**08 17 58.5**	**-1.1**
	comp=Z,13nm,0.7s,mb5.2							
BOD	**Bodaibo**	**62.08**	**8**	*e*P		**P**	**08 17 59.6**	**-0.9**
BOD				pmax	pmax			
	comp=Z,16nm,1.0s,mb5.1							
YSS	**Yuzh-Sakhalins**	**62.39**	**31⇑**	*e*P		**P**	**08 18 01.7**	**-1.1**
YSS				pmax	pmax			
	comp=Z,63nm,1.3s,mb5.6							
YSS	**Yuzh-Sakhalins**	**62.39**	**31**	*e*P		**P**	**08 18 02.0**	**-0.8**
AB31	**Akbulak array**	**63.33**	**331**	*i* P		**P**	**08 18 07.9**	**-1.1**
AB31				pmax	pmax			
	comp=Z,7.0nm,0.5s,mb5.0							
KMBO	**Kilima Mbogo**	**63.48**	**270**	LR	LR		08 42 12.6	
	comp=Z,132nm,18.2s,MS4.2,baz=139,slow=32							
KMBO	**Kilima Mbogo**	**63.48**	**270⇑**	*e*P		**P**	**08 18 16.0**	**+5.3**
GNI	**Garni**	**67.14**	**316⇑**	*e*P		**P**	**08 18 34.6**	**+0.7**
GNI				pmax	pmax			
	comp=Z,10.0nm,1.1s							
SVE	**Sverdlovsk**	**68.37**	**338⇑**	*e*P		**P**	**08 18 41.0**	**-0.3**
SVE				*e*SS	SS		08 32 07.5	+3.5
SVE				pmax	pmax			
	comp=Z,32nm,1.0s,mb5.3							
ARU	**Arti**	**68.90**	**336**	*d i*P		**P**	**08 18 44.3**	**-0.3**
ARU				*e*			08 19 03.5	
ARU				*e*			08 21 22.0	
ARU				*e*S	S		08 27 47.4	+1.2
ARU				*e*SS	SS		08 32 16.6	+4.4
ARU				pmax	pmax			
	comp=Z,19nm,1.0s,mb5.0							
ARU	**Arti**	**68.90**	**336**	P	P		**08 18 44.1**	**-0.5**
	comp=Z,16nm,1.0s,mb4.9							
MAW	**Mawson**	**69.00**	**195**	P	pP		08 18 57.1	+1.1
	comp=Z,1.9nm,0.6s,baz=332,slow=7.5,SNR=4.7							
MAW				LR	LR		08 42 24.2	
	comp=Z,258nm,20.3s,MS4.5,baz=65,slow=30							
YAK	**Yakutsk**	**69.03**	**14**	*e*P		**P**	**08 18 41.0**	**-4.3**
YAK				pmax	pmax			
	comp=Z,29nm,0.8s,mb5.3							
YAK				pmax	pmax			
	comp=N,11nm,1.2s							
KIV	**Kislovodsk**	**70.18**	**319**	*e*P		**P**	**08 18 43.0**	**-10**
KIV				pmax	pmax			
	comp=Z,12nm,0.8s,mb4.9							
MALT	**Malatya**	**70.91**	**313**	*e*P		**P**	**08 18 58.8**	**+1.4**
MALT				pmax	pmax			
	comp=Z,9.0nm,1.1s,mb4.6							
MALT	**Malatya**	**70.91**	**313**	*e*P		**P**	**08 18 58.8**	**+1.4**
	comp=Z,9.3nm,1.1s,mb4.6							
LSZ	**Lusaka**	**72.25**	**255**	P	pP		08 19 15.9	-1.1
	comp=Z,10nm,1.2s,baz=124,slow=4.6,SNR=4.1							
PETK	**Petropavlovsk-**	**73.78**	**32**	P		**P**	**08 19 12.4**	**-1.7**
	comp=Z,5.0nm,0.7s,mb4.6,baz=266,slow=3.2,SNR=7.7							
PETK				LR	LR		08 56 52.9	
	comp=Z,82nm,18.4s,MS4.0,baz=97,slow=40							
BR131	**Keskin Array T**	**74.90**	**313**	*e*P		**P**	**08 19 21.1**	**+0.1**
	comp=Z,2.5nm,0.6s,mb4.3							
BOSA	**Boshof**	**75.58**	**242**	P	pP		08 19 36.0	-0.3
	comp=Z,8.5nm,0.9s,baz=67,slow=5.2,SNR=8.6							
BOSA				LR	LR		08 45 42.6	
	comp=Z,148nm,20.1s,MS4.3,baz=130,slow=30							
SEY	**Seymchan**	**76.76**	**22⇑**	*e*P		**P**	**08 19 29.5**	**-1.6**
TIXI	**Tiksi**	**77.24**	**9⇑**	*e*P		**P**	**08 19 31.7**	**-2.0**
TIXI				pmax	pmax			
	comp=Z,9.0nm,1.1s,mb4.6							
TIXI	**Tiksi**	**77.24**	**9**	*e*P		**P**	**08 19 31.9**	**-1.7**
	comp=Z,23nm,1.4s,mb4.9							
MOS	**Moscow**	**78.18**	**329**	*e*P		**P**	**08 19 38.3**	**-0.9**
MOS				*e*			08 22 37.1	
OBN	**Obninsk**	**78.48**	**328⇑**	*e*P		**P**	**08 19 41.0**	**+0.2**
OBN				*e*S	S		08 29 30.7	-3.7
OBN				pmax	pmax			
	comp=Z,20nm,1.2s,mb4.9							
KLMR	**Klimovskoe**	**79.52**	**334**	*e*P		**P**	**08 19 46.0**	**-0.4**
KLMR				pmax	pmax			
	comp=Z,30nm,1.4s,mb5.0							
AKASG	**Malin Array Be**	**81.14**	**322**	P	P		**08 19 54.9**	**-0.5**
	comp=Z,1.5nm,0.5s,mb4.2,baz=74,slow=4.6,SNR=7.5							
BUR08	**Bucovina Ar. S**	**82.91**	**319**	*e*P		**P**	**08 20 05.7**	**+1.0**
BILL	**Bilibino**	**84.33**	**20⇑**	*e*P		**P**	**08 20 08.6**	**-3.0**
BILL				*e*			08 23 23.6	
BILL				*e*S	S		08 30 37.9	+3.4
BILL				pmax	pmax			
	comp=Z,21nm,1.4s,mb5.1							
ARCES	**ARCESS Array B**	**88.16**	**340**	P	P		**08 20 30.3**	**0.0**
	comp=Z,9.0nm,0.8s,mb5.0,baz=104,slow=5.1,SNR=11							
ARCES				LR	LR		09 03 58.1	
	comp=Z,105nm,20.1s,MS4.2,baz=37,slow=38							
GERES	**GERESS Array B**	**90.68**	**319**	P	P		**08 20 43.9**	**+1.3**
	comp=Z,1.1nm,0.6s,mb4.4,baz=99,slow=4.2,SNR=7.8							
BRG	**Berggiesshubel**	**90.69**	**321**	*e*P	P		**08 20 43.6**	**+1.0**
BRG				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.6							
BRG	**Berggiesshubel**	**90.69**	**321**	*e*P		**P**	**08 20 43.6**	**+1.0**
	comp=Z,4.7nm,0.9s,mb4.8							
SNAA	**Sanae**	**90.92**	**198**	*e*P	pP		08 20 55.4	+0.7
SNAA				*e*			08 21 01.3	
VNA2	**Neumayer--Watz**	**92.54**	**198**	*e*P	pP		08 21 02.9	+0.7
VNA2				*e*			08 21 08.7	
NOA	**NORSAR Array B**	**92.83**	**331**	P	P		**08 20 53.0**	**+0.6**
	comp=Z,1.8nm,0.9s,mb4.5,baz=96,slow=4.6,SNR=2.9							
NOA				LR	LR		09 07 33.6	
	comp=Z,65nm,18.2s,MS4.1,baz=75,slow=39							
TBI	**Tubuai**	**106.65**	**115**	*e*LR	LR		08 57 16.7	
	comp=Z,96nm,23.0s							
PPT	**Papeete**	**107.59**	**110**	*e*LR	LR		08 57 40.4	
	comp=Z,94nm,24.8s							
NVAR	**Mina Array Bea**	**130.29**	**40**	PKP	PKPdf		08 26 51.7	+1.1
	comp=Z,0.7nm,0.6s,baz=274,slow=2.2,SNR=6.4							
NVAR	**Mina Array Bea**	**130.29**	**40**	PKP	PKPdf		08 26 51.7	+1.1
PDAR	**Pinedale Array**	**132.53**	**30**	PKP	PKPdf		08 26 54.7	0.0
	comp=Z,0.3nm,0.6s,baz=266,slow=1.4,SNR=3.1							
DUG	**Dugway**	**132.57**	**35**	*e*PKIKP	PKPdf		08 26 56.6	+1.8
CPUP	**Villa Florida**	**143.51**	**214**	PKP	PKPdf		08 27 21.6	+6.3
	comp=Z,4.0nm,0.8s,baz=99,slow=3.9,SNR=9.2							
WMOK	**Wichita Mounta**	**144.04**	**28**	*e*PKIKP	PKPdf		08 27 13.0	-3.0
SIUC	**Southern Illin**	**144.78**	**14**	*e*PKPdf	PKPdf		08 27 15.6	-1.7
TXAR	**Lajitas Array**	**145.43**	**39**	PKP	PKPdf		08 27 19.4	+0.9
	comp=Z,16nm,0.6s,baz=295,slow=1.0,SNR=283							
URVA	**University of**	**146.09**	**358**	*e*PKPbc	PKPbc		08 27 19.9	-0.4
UTMT	**University of**	**146.17**	**14**	*e*PKPbc	PKPbc		08 27 20.2	-0.4
MIAR	**Mount Ida**	**146.39**	**22**	*e*PKP2	PKPab		08 27 20.9	-1.3
HBAR	**Harrisburg**	**146.43**	**17**	*e*PKPbc	PKPbc		08 27 21.4	0.0
ELN	**Prospectdale**	**146.44**	**2**	*e*PKPbc	PKPbc		08 27 19.9	-1.4
WVT	**Waverly**	**146.61**	**13**	*e*PKP2	PKPab		08 27 21.3	-1.6
UALR	**University of**	**146.62**	**20**	*e*PKPbc	PKPbc		08 27 20.9	-1.1
JCT	**Junction City**	**146.90**	**34**	*e*PKPbc	PKPbc		08 27 23.2	+0.3
JCT				*ep*PKPdf	pPKPdf		08 27 32.5	-0.3
TZTN	**Tazewell**	**146.91**	**6**	*e*PKPbc	PKPbc		08 27 22.0	-0.7
TKL	**Tuckaleechee C**	**147.76**	**7**	*e*PKP2	PKPbc		08 27 24.6	-0.5
CPCT	**Cooper Cave**	**147.87**	**8**	*e*PKPbc	PKPbc		08 27 25.3	-0.1
JSC	**Jenkinsville**	**149.35**	**3**	*e*PKP2	PKPbc		08 27 29.1	-0.2
LRAL	**Lakeview Retre**	**149.77**	**13**	*e*PKPdf	PKPbc		08 27 29.4	-1.0
BRAL	**Brewton**	**151.69**	**14**	*e*PKPbc	PKPbc		08 27 35.2	+0.2
BRAL				*e*PKPab	PKPab		08 27 43.6	0.0

ISCJB ***27*** *08:29:22.5±2.4, 838S±009×128.19E±0.10, h61km±39km, Error ellipse: s-maj=18.3km s-min=13.5km az=138.3*
NEIC ***27*** *08:29:23.3±2.3, 825S×128.29E, h50km±26km, Error ellipse: s-maj=41.7km s-min=11.9km az=225.0*
IDC ***27*** *08:29:25.2±3.9, 838S×128.12E, h69km±49km, mb4.0/1, mb1 4.1/6, mb1mx3.7/17, mbtmp4.0/6, ML3.9/5, Error ellipse: s-maj=35.4km s-min=21.9km az=35.0*

ISC 27 08:29:23.6±1.7, 831S±009×128 23E±008, h48km±28km, n8, σ0§81/14, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.89**	**247**	P		**P**	**Pn**	**08 30 34.6**	**0.0**
	14nm,0.3s,baz=129,slow=6.5,SNR=4.4								
BATI				S			**Sn**	**08 31 29.0**	**-0.9**
	8.9nm,0.3s,baz=107,slow=19,SNR=3.5								
KAPI	**Kappang**	**9.04**	**291**	P		**P**	**Pn**	**08 31 31.6**	**+0.1**
	0.9nm,0.3s,baz=191,slow=16,SNR=3.7								
FITZ	**Fitzroy Crossi**	**10.06**	**194**	*e*P		**P**	**Pn**	**08 31 46.0**	**+0.5**
	4.7nm,0.4s								
FITZ				*e*S			**Sn**	**08 33 37.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**10.06**	**194**	P		**P**	**Pn**	**08 31 46.0**	**+0.6**
	0.9nm,0.3s,baz=27,slow=12,SNR=30								
FITZ				S			**Sn**	**08 33 38.1**	**+1.1**
	2.2nm,0.3s,baz=103,slow=20,SNR=6.6								
WRA	**Warramunga Arr**	**12.99**	**154**	P		**P**	**Pn**	**08 32 25.4**	**-0.1**
	0.7nm,0.3s,baz=329,slow=14,SNR=41								
WRA				S			**Sn**	**08 34 47.6**	**-1.1**
	2.9nm,0.3s,baz=329,slow=22,SNR=17								
WB2	**Warramunga Arr**	**13.00**	**154**	*e*P		**P**	**Pn**	**08 32 25.9**	**+0.3**
WB2				*e*S			**Sn**	**08 34 47.4**	**-1.4**
ASAR	**Alice Springs**	**16.21**	**161**	P		**P**	**Pn**	**08 33 09.1**	**+0.9**
	0.3nm,0.3s,baz=334,slow=11,SNR=33								
ASAR				S			**Sn**	**08 36 08.4**	**+1.4**
	0.8nm,0.3s,baz=326,slow=23,SNR=8.8								
STKA	**Stephens Creek**	**26.54**	**154**	P		**P**		**08 34 56.5**	**-0.4**
	4.9nm,1.0s,baz=331,slow=12,SNR=3.5								

NIED ***27*** *09:05:00, 2470N×123.10E, h74km, Mw4.1 Best double couple: M₀1.35000×10¹⁵ NP1:φ₀86.00000°, δ64.00000°, λ-78.00000°. NP2:φ₀239.00000°, δ29.00000°, λ-114.00000°.*
ISCJB ***27*** *09:05:42.6±0.4, 2472N±006×123 07E±003, h95km±4km, mb3.8/10, Error ellipse: s-maj=9.7km s-min=4.7km az=177.8*
JMA ***27*** *09:05:43.9±0.1, 2470N×123 07E, h83km±1km, M3.5*
NEIC ***27*** *09:05:43.8±0.6, 2477N×123 06E, h92km±6km, MG3.5(JMA), Error ellipse: s-maj=10.2km s-min=9.3km az=207.0*
IDC ***27*** *09:05:43.5±3.9, 2482N×123 09E, h88km±36km, mb3.6/10, mb1 3.8/11, mb1mx3.7/24, mbtmp3.6/11, MS3.0/1, Ms1 3.0/1, ms1mx2.5/29, Error ellipse: s-maj=26.4km s-min=15.5km az=71.0*

ISC 27 09:05:43.6±0.4, 2471N±006×123 07E±003, h89km±4km, n29, σ0§76/39, mb3.8/10, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.25**	**191**	P		**P**	**Pn**	**09 05 56.3**	**-0.3**
YOJ				S			**Sn**	**09 06 05.4**	**-0.9**
IRIF	**Iriomote-Funau**	**0.71**	**121**	P		**P**	**Pn**	**09 05 59.8**	**-0.3**
IRIF				S			**Sn**	**09 06 12.0**	**-0.4**
HATJ	**Hateruma jima**	**0.94**	**134**	P		**P**	**Pn**	**09 06 02.6**	**+0.1**
HATJ				S			**Sn**	**09 06 16.1**	**-0.5**
JKRS	**Kuro-shima**	**0.98**	**118**	P		**P**	**Pn**	**09 06 03.1**	**+0.2**
JKRS				S			**Sn**	**09 06 17.6**	**+0.1**
JIJ	**Ishigaki jima**	**1.04**	**109**	P		**P**	**Pn**	**09 06 03.5**	**-0.1**
JIJ				S			**Sn**	**09 06 18.2**	**-0.5**
NACB	**Ninganchiao**	**1.44**	**249**	*e*Pn		**P**	**Pn**	**09 06 08.0**	**-0.5**
TATO	**Taipei**	**1.46**	**281**	*e*Pn		**P**	**Pn**	**09 06 09.8**	**+1.0**
TATO				Sn			**Sn**	**09 06 28.6**	**+0.9**
JTJ	**Tarama**	**1.49**	**92**	P		**P**	**Pn**	**09 06 10.1**	**+1.0**
JTJ				S			**Sn**	**09 06 28.7**	**+0.2**
YHNB	**Yeheng**	**1.54**	**269**	*e*Pn		**P**	**Pn**	**09 06 10.8**	**+1.0**
YHNB				*e*Sn			**Sn**	**09 06 29.2**	**-0.4**
JMJ	**Miyako jima 2**	**2.03**	**87**	S		**P**	**Sn**	**09 06 41.3**	**+0.4**
JKE	**Kume jima 2**	**3.73**	**64**	P		**P**	**Pn**	**09 06 40.2**	**+1.3**
JAGN	**Aguni-jima**	**4.21**	**63**	P		**P**	**Pn**	**09 06 46.3**	**+0.9**
JAGN				S			**Sn**	**09 07 35.7**	**+2.3**
JOW	**Kunigami**	**5.15**	**65**	P		**P**	**Pn**	**09 06 58.0**	**-0.2**
	4.9nm,0.3s,baz=175,slow=9.9,SNR=19								
JOW				S			**Sn**	**09 07 55.1**	**-1.2**
	2.1nm,0.3s,baz=131,slow=20,SNR=2.5								
JOW	**Kunigami**	**5.15**	**65**	P		**P**	**Pn**	**09 06 58.0**	**-0.2**
JTK	**Tokunoshima**	**6.11**	**59**	P		**P**	**Pn**	**09 07 10.4**	**-0.9**
JAM	**Amami Oshima**	**6.92**	**56**	P		**P**	**Pn**	**09 07 21.5**	**-0.8**
KSRS	**Korea Array**	**13.37**	**17**	P		**P**	**Pn**	**09 08 54.2**	**+4.7**
	0.6nm,0.3s,baz=198,slow=12,SNR=21								
ASAJ	**Asahikawa**	**25.08**	**35**	P		**P**		**09 10 58.6**	**-1.0**
	9.7nm,0.9s,mb4.2,baz=209,slow=10,SNR=5.0								
ASAJ				LR		LR		09 20 24.2	
	comp=Z,34nm,18.6s,baz=352,slow=35								
SONM	**Songino Array**	**26.59**	**334**	P		**P**		**09 11 13.3**	**0.0**
	0.4nm,0.4s,mb3.3,baz=150,slow=10,SNR=4.7								
ZALV	**Zalesovo Beam**	**40.76**	**326**	P		**P**		**09 13 14.6**	**-1.1**
	1.0nm,0.5s,mb3.9,baz=119,slow=8.6,SNR=3.5								
KURK	**Kurchatov**	**42.81**	**319**	P		**P**		**09 13 31.9**	**-0.4**
	0.4nm,0.5s,mb3.4,baz=116,slow=9.1,SNR=4.1								
WRA	**Warramunga Arr**	**45.72**	**165**	P		**P**		**09 13 56.3**	**+0.4**
	3.4nm,0.8s,mb4.1,baz=344,slow=8.5,SNR=34								
WB2	**Warramunga Arr**	**45.72**	**165**	*e*P		**P**		**09 13 56.2**	**+0.3**
BVAR	**Borovoye Array**	**48.37**	**320**	P		**P**		**09 14 15.8**	**-0.4**
	0.8nm,0.5s,mb3.8,baz=133,slow=6.3,SNR=3.6								
ASAR	**Alice Springs**	**49.22**	**167**	P		**P**		**09 14 24.2**	**+1.2**
	0.6nm,0.3s,mb4.0,baz=352,slow=7.1,SNR=23								
NOA	**NORSAR Array B**	**78.56**	**333**	P		**P**		**09 17 34.1**	**-0.9**
	0.6nm,0.6s,mb3.6,baz=55,slow=5.5,SNR=2.7								
YKA	**Yellowknife Ar**	**81.82**	**23**	P		**P**		**09 17 52.7**	**+0.2**
	0.4nm,0.7s,mb3.3,baz=321,slow=6.0,SNR=6.0								
YKA	**Yellowknife Ar**	**81.82**	**23**	P		**P**		**09 17 52.7**	**+0.2**
NVAR	**Mina Array Bea**	**94.88**	**44**	P		**P**		**09 18 55.7**	**-0.2**
	0.3nm,0.7s,mb3.8,baz=269,slow=4.5,SNR=4.0								

NEIC ***27*** *09:32:00.7±0.7, 691S×129 47E, h35km, mb4.1/3, Error ellipse: s-maj=17.2km s-min=9.0km az=68.0*
IDC ***27*** *09:32:07.8±5.4, 720S×129 50E, h119km±52km, mb3.7/5, mb1 4.0/9, mb1mx3.8/16, mbtmp3.9/9, Error ellipse: s-maj=46.0km s-min=17.0km az=50.0*
ISCJB ***27*** *09:32:08.6±0.7, 744S±005×129 54E±005, h150km, mb3.9/5, Error ellipse: s-maj=8.3km s-min=6.5km az=38.8*

ISC 27 09:32:08.1±2.4, 72S±01×129 54E±009, h122km±27km, n20, σ1§03/24, mb4.0/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.51**	**243**	P		**P**	**Pn**	**09 33 42.8**	**+1.4**
	17nm,0.3s,baz=157,slow=3.4,SNR=7.7								
BATI				S			**Sn**	**09 34 54.1**	**-0.3**
	23nm,0.3s,baz=112,slow=9.0,SNR=6.8								
FITZ	**Fitzroy Crossi**	**11.44**	**199**	*e*P		**P**	**Pn**	**09 34 46.2**	**-1.6**
	7.4nm,0.3s								
FITZ				*e*S			Sx	09 36 43.1	
FITZ	**Fitzroy Crossi**	**11.44**	**199**	P		**P**	**Pn**	**09 34 46.4**	**-1.4**
	1.5nm,0.3s,baz=27,slow=13,SNR=37								
FITZ				S			Sx	09 36 44.6	
	4.2nm,0.3s,baz=128,slow=20,SNR=11								
FITZ	**Fitzroy Crossi**	**11.44**	**199**	*e*Pn		**P**	**Pn**	**09 34 46.5**	**-1.4**
FITZ				*e*Sn			**Sn**	**09 36 47.3**	**-6.7**
WRAB	**Tennant Creek**	**13.45**	**160**	*e*Pn		**P**	**Pn**	**09 35 12.8**	**-1.3**
	10.0nm,0.4s								
WRAB				Sn			**Sn**	**09 37 35.2**	**-7.3**
WRA	**Warramunga Arr**	**13.46**	**160**	P		**P**	**Pn**	**09 35 12.9**	**-1.3**
	3.7nm,0.3s,baz=347,slow=13,SNR=48								
WRA				S			Sx	09 37 34.4	
	9.2nm,0.3s,baz=337,slow=23,SNR=15								
WB2	**Warramunga Arr**	**13.46**	**160**	*e*P		**P**	**Pn**	**09 35 15.0**	**+0.8**
WB2				*e*S			Sx	09 37 33.1	
WB2	**Warramunga Arr**	**13.46**	**160**	*e*Pn		**P**	**Pn**	**09 35 13.3**	**-0.9**
WB2				*e*Sn			**Sn**	**09 37 34.8**	**-8.0**
COEN	**Coen**	**14.97**	**118**	*e*Pn		**P**	**Pn**	**09 35 34.3**	**+0.8**
	12nm,1.9s								
COEN				*e*Sn			**Sn**	**09 38 12.4**	**-6.8**
MBWA	**Marble Bar**	**16.77**	**213**	Pn		**P**	**Pn**	**09 35 56.7**	**+1.0**
	80nm,2.2s								
ASAR	**Alice Springs**	**16.86**	**166**	P		**P**	**Pn**	**09 35 58.4**	**+1.6**
	1.9nm,0.3s,baz=340,slow=9.5,SNR=91								
ASAR				S			Sx	09 38 55.5	
	1.0nm,0.3s,baz=332,slow=15,SNR=6.0								
CTA	**Charters Tower**	**20.63**	**130**	P		**P**		**09 36 43.2**	**+5.2**
	2.0nm,0.7s,baz=293,slow=13,SNR=3.8								
STKA	**Stephens Creek**	**26.97**	**157**	*e*P		**P**		**09 37 39.4**	**+1.1**
	4.4nm,0.9s,mb4.0								
STKA	**Stephens Creek**	**26.97**	**157**	P		**P**		**09 37 39.5**	**+1.2**
	3.4nm,0.6s,mb4.1,baz=317,slow=13,SNR=12								
CMAR	**Chiang Mai Arr**	**39.54**	**311**	P		**P**		**09 39 27.0**	**-0.3**
	0.9nm,0.3s,mb4.1,baz=143,slow=7.9,SNR=5.4								
SONM	**Songino Array**	**58.52**	**342**	P		**P**		**09 41 52.0**	**+0.4**
	0.4nm,0.5s,mb3.7,baz=123,slow=5.3,SNR=3.0								
MKAR	**Makanchi Array**	**68.18**	**327**	P		**P**		**09 42 55.0**	**-0.2**
	1.4nm,0.4s,mb4.1,baz=118,slow=7.6,SNR=11								
MKAR	**Makanchi Array**	**68.18**	**327**	P		**P**		**09 42 55.0**	**-0.2**
ZALV	**Zalesovo Beam**	**71.60**	**334**	P		**P**		**09 43 14.9**	**-1.1**
	0.7nm,0.4s,mb3.8,baz=110,slow=6.3,SNR=3.3								
TORD	**Torodi Ar. Bea**	**128.41**	**281**	PKP		PKPdf		09 51 00.9	-0.5
	0.5nm,0.7s,baz=112,slow=1.6,SNR=3.5								

NEIC ***27*** *09:43:19.2±0.7, 682S×129 62E, h35km, Error ellipse: s-maj=21.0km s-min=8.9km az=72.0*
ISCJB ***27*** *09:43:23.5±0.8, 708S±008×129 59E±008, h100km, mb3.8/4, Error ellipse: s-maj=11.7km s-min=10.8km az=142.1*
IDC ***27*** *09:43:23.4±7.1, 704S×129 53E, h79km±65km, mb3.8/4, mb1 3.9/7, mb1mx3.6/16, mbtmp3.8/7, ML4.1/3, Error ellipse: s-maj=102.7km s-min=28.7km az=61.0*

ISC 27 09:43:20.5±3.2, 69S±02×129 68E±009, h50km±33km, n15, σ0§64/16, mb3.9/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.81**	**241**	P		**P**	**Pn**	**09 45 03.9**	**+6.0**
	11nm,0.3s,baz=87,slow=6.0,SNR=4.4								
BATI				S			**Sn**	**09 46 14.5**	**+0.4**
	13nm,0.3s,baz=297,slow=22,SNR=9.2								
FITZ	**Fitzroy Crossi**	**11.83**	**199**	*e*P		**P**	**Pn**	**09 46 06.1**	**-0.5**
	4.5nm,0.3s								
FITZ				*e*S			Sx	09 48 03.1	
FITZ	**Fitzroy Crossi**	**11.83**	**199**	P		**P**	**Pn**	**09 46 06.3**	**-0.3**
	0.9nm,0.3s,baz=35,slow=11,SNR=33								
FITZ				S			Sx	09 48 05.0	
	1.6nm,0.3s,baz=258,slow=21,SNR=8.0								
FITZ	**Fitzroy Crossi**	**11.83**	**199**	*e*Pn		**P**	**Pn**	**09 46 06.4**	**-0.2**
	4.3nm,0.3s								
FITZ				*e*S			Sx	09 48 03.1	
WRAB	**Tennant Creek**	**13.74**	**161**	*e*Pn		**P**	**Pn**	**09 46 33.1**	**+0.4**
	17nm,0.6s								
WRAB				*e*Sn			**Sn**	**09 48 56.0**	**-7.9**
WRA	**Warramunga Arr**	**13.75**	**161**	P		**P**	**Pn**	**09 46 32.3**	**-0.5**
	0.9nm,0.3s,baz=326,slow=14,SNR=25								
WRA				S			Sx	09 48 54.4	
	3.7nm,0.3s,baz=336,slow=23,SNR=12								
WB2	**Warramunga Arr**	**13.75**	**161**	*e*P		**P**	**Pn**	**09 46 32.3**	**-0.5**
WB2				*e*S			Sx	09 48 52.7	
WB2	**Warramunga Arr**	**13.75**	**161**	*e*Pn

0.1nm,0.3s,baz=341,slow=12,SNR=12
ASAR Alice Springs 22.58 164 P P 10 22 12.2 +0.5
0.6nm,0.7s,baz=342,slow=11,SNR=9.2
MKAR Makanchi Array 62.47 327 P P 10 27 34.6 -0.1
0.9nm,0.3s,baz=111,slow=8.1,SNR=5.5

*ISCJB **27** 10:18:26.7±0.4, 1388S±008×6606E±006, h10km, mb4.5/28, MS4.1/20, Error ellipse: s-maj=12.4km s-min=8.0km az=159.6*
*BJI **27** 10:18:27.0, 1390S×6600E, h10km, mB5.2, mb4.8, Msz4.6*
*IDC **27** 10:18:27.3±0.6, 1388S×6604E, h0km, mb4.2/17, mb1 4.3/18, mb1mx4.3/23, mbtmp4.2/18, ML4.4/1, MS4.0/19, Ms1 4.0/19, ms1mx3.9/29, Error ellipse: s-maj=22.4km s-min=14.4km az=8.0*
*MOS **27** 10:18:27.2±1.1, 1379S×6614E, h10km, mb5.0/5, Error ellipse: s-maj=14.4km s-min=11.2km az=45.7*
*GCMT **27** 10:18:28.8±0.3, 1372S×6601E, h20km±1km, MW5.0/72, Moment Tensor Solution. s27,c34; s72,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.23±.16; $M_{\theta\theta}$-3.17±.14; $M_{\phi\phi}$3.40±.15; $M_{r\theta}$0.12±.25; $M_{r\phi}$1.52±.14; $M_{\theta\phi}$0.44±.28; Best double couple: $M_0$3.64600×10^{16} NP1:ϕ_s327.00000°, δ85.00000°, λ176.00000°. NP2: ϕ_s58.00000°, δ86.00000°, λ5.00000°. Principal axes: T 3.7870, Plg6.0000°, Azm282.0000°; N -0.2860, Plg84.0000°, Azm99.0000°; P -3.5050, Plg0.0000°, Azm192.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **27** 10:18:28.8±0.3, 1388S×6605E, h10km, mb4.3/2 Error ellipse: s-maj=12.5km s-min=7.6km az=159.0*
ISC 27 10:18:28.7±0.4, 1389S±008×6605E±006, h10km, (h17km±3.7km: pP-P), n60, σ0s79/48, mb4.5/28, MS4.1/20, 1C-2D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**9.00**	**45**	*e*P	**Pn**	**10 20 39.2**	**+0.3**
RER	**Riviere de l'E**	**12.20**	**232**	*e*Pn	**Pn**	**10 21 22.4**	**-0.2**
OPO	**Ambohidratompo**	**18.70**	**253**	P	**Pn**	**10 22 48.9**	**+1.2**
	1.2nm,0.3s,baz=66,slow=14,SNR=6.3						
ABPO	**Ambohimpanom**	**18.75**	**252**	*e*P	**Pn**	**10 22 52.3**	**+3.9**
ABPO				pmax	pmax		
	comp=Z,17nm,1.3s						
ABPO	**Ambohimpanom**	**18.75**	**252**	*e*P	**Pn**	**10 22 52.3**	**+3.9**
	comp=Z,17nm,1.3s						
KMBO	**Kilima Mbogo**	**31.18**	**292**	P	**P**	**10 24 49.1**	**+0.8**
	comp=Z,2.6nm,0.7s,mb4.2,baz=92,slow=7.9,SNR=9.3						
KMBO				LR	LR	10 35 41.9	
	comp=Z,255nm,18.2s,MS3.9,baz=92,slow=33						
KMBO	**Kilima Mbogo**	**31.18**	**292**	*e*P	**P**	**10 24 49.3**	**+1.0**
KMBO	**Kilima Mbogo**	**31.18**	**292**	*e*P	**P**	**10 24 49.1**	**+0.7**
	comp=Z,7.5nm,0.9s,mb4.5						
KMBO				LR	LR	10 35 41.9	
BOSA	**Boshof**	**40.53**	**242**	P	**P**	**10 26 08.4**	**+0.1**
	comp=Z,7.0nm,1.1s,mb4.2,baz=74,slow=6.4,SNR=3.3						
BOSA				LR	LR	10 40 21.4	
	comp=Z,205nm,18.5s,MS4.0,baz=246,slow=32						
CMAR	**Chiang Mai Arr**	**45.66**	**46**	P	**P**	**10 26 50.5**	**+0.6**
	comp=Z,1.2nm,0.7s,mb3.9,baz=239,slow=9.4,SNR=6.2						
NWAO	**Narrogin (SRO)**	**50.13**	**121**	LR	LR	10 43 19.8	
	comp=Z,290nm,21.4s,MS4.2,baz=90,slow=30						
MAW	**Mawson**	**53.71**	**182**	LR	LR	10 45 42.1	
	comp=Z,124nm,20.9s,MS3.9,baz=162,slow=30						
FITZ	**Fitzroy Crossi**	**57.23**	**103**	P	**P**	**10 28 16.8**	**+0.1**
	comp=Z,2.5nm,0.9s,mb4.2,baz=268,slow=8.4,SNR=4.4						
FITZ				LR	LR	10 50 04.4	
	comp=Z,271nm,19.6s,MS4.4,baz=277,slow=33						
FITZ	**Fitzroy Crossi**	**57.23**	**103**	P	**P**	**10 28 16.8**	**+0.1**
FITZ				LR	LR	10 50 04.4	
GNI	**Garni**	**57.30**	**341**	*e*P	**P**	**10 28 17.2**	**+0.5**
GNI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WMQ	**Urumqi**	**60.74**	**18**	*e*P	**P**	**10 28 41.3**	**+0.8**
WMQ				AP	pP	10 28 48.3	+4.5
WMQ				XP	sP	10 28 52.0	+7.0
WMQ				PCP	PcP	10 29 21.0	-3.5
WMQ				PP	PP	10 31 00.0	+5.4
WMQ				S	**S**	**10 37 03.0**	**+5.5**
WMQ				SCS	ScS	10 38 28.0	-3.6
WMQ				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,124nm,3.7s						
WMQ				LR	LR		
	comp=Z,482nm,20.3s,MS4.6						
KIV	**Kislovodsk**	**61.39**	**341**	*e*P	**P**	**10 28 50.3**	**+5.4**
KIV				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
GTA	**Gaotai**	**61.67**	**29**	*e*P	**P**	**10 28 47.0**	**+0.1**
GTA				AP	pP	10 28 52.5	+2.4
GTA				XP	sP	10 28 55.5	+4.1
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.6						
MKAR	**Makanchi Array**	**62.14**	**13**	P	**P**	**10 28 48.7**	**-1.3**
	comp=Z,2.9nm,0.9s,mb4.4,baz=214,slow=8.5,SNR=12						
MKAR				LR	LR	10 54 26.2	
	comp=Z,70nm,18.2s,MS3.9,baz=50,slow=35						
MKAR	**Makanchi Array**	**62.14**	**13**	P	**P**	**10 28 48.7**	**-1.3**
MKAR				LR	LR	10 54 26.2	
DAV	**Davao City (W)**	**62.64**	**74**	LR	LR	10 53 33.7	
	comp=Z,105nm,19.2s,MS4.0,baz=222,slow=34						
ASAR	**Alice Springs**	**64.48**	**110**	P	**P**	**10 29 05.7**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.2,baz=270,slow=5.6,SNR=17						
WRA	**Warramunga Arr**	**65.24**	**106**	P	**P**	**10 29 11.0**	**0.0**
	comp=Z,3.4nm,0.8s,mb4.4,baz=271,slow=5.9,SNR=23						
WRA				LR	LR	10 53 05.3	
	comp=Z,108nm,20.2s,MS4.0,baz=270,slow=32						
WB2	**Warramunga Ar**	**65.25**	**106**	*e*P	**P**	**10 29 10.7**	**-0.4**
WRAB	**Tennant Creek**	**65.25**	**106**	⇓*i*P	**P**	**10 29 10.7**	**-0.4**
KURK	**Kurchatov**	**65.26**	**9**	*d i*P	**P**	**10 29 11.6**	**+1.1**
KURK				pmax	pmax		
	comp=Z,11nm,2.5s,mb4.4						
NJ2	**Nanjing**	**68.13**	**47**	*e*P	**P**	**10 29 28.5**	**-0.7**
HVS	**Khovu-Aksy**	**69.10**	**18**	*e*P	**P**	**10 29 34.2**	**-0.6**
HVS				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.1						
TORD	**Torodi Ar. Bea**	**69.18**	**290**	P	**P**	**10 29 35.6**	**-0.4**
	comp=Z,5.0nm,1.1s,mb4.4,baz=79,slow=3.2,SNR=18						
TORD				LR	LR	11 01 15.4	
	comp=Z,102nm,18.3s,MS4.1,baz=170,slow=37						
ZALV	**Zalesovo Beam**	**69.44**	**12**	P	**P**	**10 29 36.5**	**-0.4**
	comp=Z,3.6nm,0.8s,mb4.3,baz=213,slow=6.1,SNR=10						
ZALV				LR	LR	10 58 53.2	
	comp=Z,72nm,18.9s,MS3.9,baz=230,slow=35						
NVS	**Novosibirsk**	**70.00**	**10**	*e*P	**P**	**10 29 39.4**	**-0.9**
ARU	**Arti**	**70.33**	**356**	*e*P	**P**	**10 29 42.4**	**+0.1**
ARU				*e*		10 32 17.6	
ARU				*e*S	S	10 38 44.7	-10
STKA	**Stephens Creek**	**70.63**	**119**	LR	LR	10 55 44.5	
	comp=Z,293nm,18.7s,MS4.6,baz=215,slow=32						
SONM	**Songino Array**	**71.19**	**27**	P	**P**	**10 29 48.0**	**+0.3**
	comp=Z,3.2nm,1.0s,mb4.2,baz=222,slow=6.3,SNR=13						
ULN	**Ulaanbaatar**	**71.51**	**28**	*e*P	**P**	**10 29 49.2**	**-0.5**
ZAK	**Zakamensk**	**71.83**	**24**	*e*P	**P**	**10 29 44.0**	**-7.5**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.6s,mb4.0						
AKASG	**Malin Array Be**	**71.93**	**336**	P	**P**	**10 29 50.4**	**-1.7**
	comp=Z,0.4nm,0.3s,mb3.9,baz=148,slow=4.2,SNR=4.0						
JOW	**Kunigami**	**72.70**	**56**	LR	LR	11 02 49.7	
	comp=Z,73nm,19.8s,MS4.0,baz=213,slow=37						
KEST	**Kesra**	**72.84**	**315**	LR	LR	10 58 58.9	
	comp=Z,59nm,21.2s,MS3.8,baz=280,slow=33						
KIC	**Kosan Boka**	**73.06**	**281**	*e*P	**P**	**10 29 59.0**	**-0.7**
	comp=Z,34nm,0.9s,mb5.3						
OBN	**Obninsk**	**73.11**	**343**	⇑*e*	**P**	**10 29 58.2**	**-0.9**
OBN				*e*		10 32 43.7	
OBN				*e*S	S	10 39 30.2	+3.7
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
DBIC	**Dimbokro**	**73.26**	**281**	P	**P**	**10 30 00.5**	**-0.4**
	comp=Z,8.1nm,1.0s,mb4.6,baz=112,slow=8.8,SNR=5.3						
DBIC				LR	LR	10 57 52.7	
	comp=Z,117nm,21.0s,MS4.1,baz=104,slow=32						
DBIC	**Dimbokro**	**73.26**	**281**	P	**P**	**10 30 00.5**	**-0.4**
DBIC				LR	LR	10 57 52.7	
LIC	**Lamto**	**73.30**	**281**	*e*P	**P**	**10 30 00.1**	**-1.0**
	comp=Z,44nm,1.0s,mb5.3						
TIC	**Toumodi**	**73.41**	**281**	*e*P	**P**	**10 30 01.6**	**-0.2**
	comp=Z,14nm,0.3s,mb5.4						
CTA	**Charters Tower**	**76.30**	**108**	P	**P**	**10 30 19.0**	**+0.6**
	comp=Z,2.4nm,0.7s,mb4.2,baz=238,slow=7.7,SNR=5.4						
CTA				LR	LR	11 01 50.7	
	comp=Z,251nm,18.6s,MS4.6,baz=236,slow=34						
KSRS	**Korea Array**	**77.30**	**46**	P	**P**	**10 30 25.0**	**+1.4**
	comp=Z,1.0nm,0.7s,mb3.8,baz=253,slow=6.8,SNR=3.8						
KSRS				LR	LR	11 03 14.1	
	comp=Z,65nm,18.2s,MS4.0,baz=66,slow=35						
GERES	**GERESS Array B**	**77.71**	**328**	P	**P**	**10 30 27.3**	**+1.6**
	comp=Z,0.6nm,0.7s,mb3.6,baz=123,slow=7.2,SNR=3.4						
PMG	**Port Moresby**	**79.23**	**97**	*e*P	**P**	**10 30 34.7**	**-0.2**
VLA	**Vladivostok**	**82.61**	**42**	*i*P	**P**	**10 30 48.5**	**-3.8**
VLA				*e*	pP	10 30 51.3	-4.3
ESDC	**Sonseca Array**	**84.00**	**313**	P	**P**	**10 30 59.6**	**+0.1**
	comp=Z,0.3nm,0.3s,mb3.9,baz=95,slow=3.8,SNR=6.3						
ESDC				LR	LR	11 08 21.5	
	comp=Z,85nm,18.7s,MS4.2,baz=170,slow=36						
MJAR	**Matsushiro Arr**	**84.36**	**50**	P	**P**	**10 31 02.9**	**+1.5**
	comp=Z,1.8nm,0.8s,mb4.2,baz=237,slow=5.0,SNR=4.0						
ARCES	**ARCESS Array B**	**87.92**	**347**	LR	LR	11 09 40.6	
	comp=Z,46nm,19.6s,MS3.9,baz=144,slow=35						
HNR	**Honiara**	**91.50**	**100**	LR	LR	11 06 32.8	
	comp=Z,96nm,19.5s,MS4.2,baz=160,slow=32						
TIXI	**Tiksi**	**94.92**	**16**	*e*P	**P**	**10 31 50.8**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.7						
PDAR	**Pinedale Array**	**150.98**	**353**	PKPbc	PKPbc	10 38 22.0	-0.1
	comp=Z,2.8nm,1.0s,baz=83,slow=3.6,SNR=14						
PDAR				PKPab	PKPab	10 38 30.1	+0.7
	comp=Z,3.1nm,0.7s,baz=64,slow=2.1,SNR=14						
YBH	**Yreka Blue Hor**	**151.24**	**14**	PKPbc	PKPbc	10 38 23.3	+0.6
	comp=Z,0.6nm,0.6s,baz=153,slow=2.3,SNR=2.1						
YBH				PKPab	PKPab	10 38 32.2	+1.7
	comp=Z,2.1nm,0.9s,baz=339,slow=1.0,SNR=4.8						
NVAR	**Mina Array Bea**	**155.26**	**8**	PKPbc	PKPdf	10 38 33.0	+10
	comp=Z,0.5nm,0.7s,baz=284,slow=1.5,SNR=3.2						
NVAR				PKPab	PKPab	10 38 48.9	+1.4
	comp=Z,1.3nm,0.9s,baz=302,slow=2.6,SNR=4.8						
NVAR	**Mina Array Bea**	**155.26**	**8**	PKPbc	PKPdf	10 38 33.0	+10
NVAR				PKPab	PKPab	10 38 48.9	+1.4
TXAR	**Lajitas Array**	**161.92**	**330**	PKPab	PKPab	10 39 16.3	-0.3
	comp=Z,0.4nm,0.9s,baz=74,slow=5.3,SNR=4.6						

IDC 27 10:24:31.7±4.6, 2395N×10952W, h0km, mb1 3.7/3, mb1mx3.6/21, mbtmp3.2/3, ML3.3/3, Error ellipse: s-maj=60.1km s-min=11.6km az=169.0, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**0.74**	**282**	Pg	Pg	10 24 45.7	-0.2
	366nm,0.3s,baz=103,slow=19,SNR=54						
LPIG				Lg		10 24 56.7	
	1μm,0.3s,baz=140,slow=19,SNR=78						
TXAR	**Lajitas Array**	**7.49**	**43**	Pn	Pn	10 26 24.2	+1.9
	0.1nm,0.3s,baz=223,slow=14,SNR=8.3						
TXAR				Lg		10 28 27.9	
	0.1nm,0.3s,baz=247,slow=23,SNR=3.0						
NVAR	**Mina Array Bea**	**16.26**	**335**	Pn	Pn	10 28 24.2	+2.7
	0.0nm,0.3s,baz=156,slow=14,SNR=5.5						
PDAR	**Pinedale Array**	**18.77**	**360**	P	Pn	10 28 52.4	-0.4
	0.0nm,0.3s,baz=174,slow=15,SNR=7.5						

*IDC **27** 10:35:41.6±1.3, 7405×13078E, h0km, mb3.8/2, mb1 4.4/5, mb1mx4.0/15, mbtmp4.1/5, ML4.5/3, Error ellipse: s-maj=63.8km s-min=24.2km az=78.0*
*ISCJB **27** 10:35:43.8±0.9, 7465S×0091E±0.1, h33km, mb3.8/2, Error ellipse: s-maj=17.9km s-min=12.2km az=162.2*
*NEIC **27** 10:35:46.3±0.8, 7455S×13092E, h35km, mb4.4/1, Error ellipse: s-maj=15.5km s-min=10.7km az=71.0*
ISC 27 10:35:48.6±4.3, 76S±03×1310E±01, h64km±52km, n13, σ0s56/12, mb3.8/2, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.67**	**206**	*e*P	**Pn**	**10 38 32.7**	**+0.3**
	19nm,0.3s						
FITZ				*e*S	Sx	10 40 33.4	
FITZ	**Fitzroy Crossi**	**11.67**	**206**	Pn	**Pn**	**10 38 32.3**	**-0.1**
	4.5nm,0.3s,baz=32,slow=14,SNR=123						
FITZ				Sn	Sx	10 40 34.2	
	4.8nm,0.3s,baz=114,slow=22,SNR=13						
FITZ	**Fitzroy Crossi**	**11.67**	**206**	*e*Pn	**Pn**	**10 38 32.7**	**+0.3**
FITZ				*e*Sn	Sx	10 40 38.1	
WRAB	**Tennant Creek**	**12.70**	**165**	*e*Pn	**Pn**	**10 38 47.0**	**+0.5**
	6.7nm,0.6s						
WRAB				*e*Sn	Sx	10 41 02.8	
WRA	**Warramunga Arr**	**12.71**	**165**	Pn	**Pn**	**10 38 45.7**	**-0.9**
	1.6nm,0.3s,baz=346,slow=13,SNR=70						
WRA				Sn	Sx	10 41 00.8	
	3.1nm,0.3s,baz=331,slow=24,SNR=11						
WB2	**Warramunga Arr**	**12.71**	**165**	*e*P	**Pn**	**10 38 45.6**	**-1.0**
WB2				*e*S	Sx	10 41 01.0	
WB2	**Warramunga Arr**	**12.71**	**165**	*e*Pn	**Pn**	**10 38 46.1**	**-0.5**
WB2				*e*Sn	Sx	10 41 01.3	
COEN	**Coen**	**13.56**	**119**	*e*Pn	**Pn**	**10 38 58.7**	**+0.6**
	5.4nm,1.6s						
COEN				*e*Sn	Sx	10 41 23.0	
ASAR	**Alice Springs**	**16.23**	**170**	Pn	**Pn**	**10 39 32.7**	**0.0**
	2.1nm,0.3s,baz=359,slow=9.5,SNR=141						
ASAR				Sn	Sx	10 42 28.5	
	0.8nm,0.3s,baz=346,slow=25,SNR=7.6						
MBWA	**Marble Bar**	**17.32**	**218**	*e*P	**Pn**	**10 39 46.7**	**+0.6**
	77nm,2.2s						
SONM	**Songino Array**	**59.30**	**341**	P	**P**	**10 45 43.9**	**+0.2**
	0.5nm,0.8s,mb3.6,baz=134,slow=6.2,SNR=2.9						
MKAR	**Makanchi Array**	**69.24**	**327**	P	**P**	**10 46 48.1**	**-0.6**
	0.6nm,0.3s,mb4.0,baz=127,slow=7.8,SNR=5.9						
LPAZ	**La Paz**	**149.67**	**142**	PKPbc	PKPbc	10 55 35.9	+3.8
	1.7nm,0.9s,baz=146,slow=3.6,SNR=5.7						

IDC 27 10:54:27.3±2.7, 158S×13657E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/14, mbtmp3.8/4, ML3.5/1, Error ellipse: s-maj=86.0km s-min=25.0km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WB2	**Warramunga Arr**	**18.38**	**187**	*e*P	Pn	10 58 43.3	-0.5
WRA	**Warramunga Arr**	**18.38**	**187**	P	Pn	10 58 43.5	-0.3
	0.2nm,0.3s,baz=8.0,slow=12,SNR=13						
ASAR	**Alice Springs**	**22.11**	**187**	P	P	10 59 24.3	-0.1
	3.6nm,0.8s,baz=9.4,slow=11,SNR=35						
CMAR	**Chiang Mai Arr**	**42.03**	**300**	P	P	11 02 21.6	+0.7
	1.0nm,0.6s,baz=125,slow=6.9,SNR=5.2						
MKAR	**Makanchi Array**	**67.60**	**323**	P	P	11 05 25.6	-0.3
	0.6nm,0.6s,baz=116,slow=8.0,SNR=5.6						

*NEIC **27** 11:11:46.4, 4565N×2647E, h140km, MG3.4(BUC), After BUC.*
*CSEM **27** 11:11:48.1±0.8, 4547N×2642E, h121km±9km, MD3.7/2, Error ellipse: s-maj=6.6km s-min=4.6km az=26.0, After BUC*
BUC 27 11:11:48.1±0.8, 4547N×2642E, h121km±9km, MD3.6/2, 4C-7D, Error ellipse: s-maj=6.6km s-min=4.6km az=26.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLR	**Muntele Rosu**	**0.33**	**273**	⇑*i*P	Pn	11 12 05.7	+0.5
MLR				*i*S	Sn	11 12 18.9	+0.8
MLR	**Muntele Rosu**	**0.33**	**273**	P	Pn	11 12 06.1	+0.9
VRI	**Vrincioaia**	**0.45**	**29**	⇑*i*P	Pn	11 12 05.6	-0.2
VRI				*i*S	Sn	11 12 18.4	-0.8
VRI	**Vrincioaia**	**0.45**	**29**	P	Pn	11 12 05.6	-0.2
ODB	**Odobesti**	**0.54**	**56**	⇓*i*P	Pn	11 12 06.9	+0.5
ODB				*i*S	Sn	11 12 20.5	+0.3
ODB	**Odobesti**	**0.54**	**56**	⇓P	Pn	11 12 07.0	+0.6
ODB				S	Sn	11 12 20.5	+0.3
VOIR		**0.96**	**268**	⇑*i*P	Pn	11 12 10.2	+0.4
VOIR				*i*S	Sn	11 12 26.4	+0.2
VOIR		**0.96**	**268**	P	Pn	11 12 10.3	+0.5
CVD	**Cernavoda**	**1.63**	**135**	⇓*i*P	Pn	11 12 17.7	+0.6
TIRR	**Tirgusor**	**1.74**	**125**	⇓*i*P	Pn	11 12 18.9	+0.5
TIRR				*i*S	Sn	11 12 41.2	-0.3
TIRR	**Tirgusor**	**1.74**	**125**	*e*Pn	Pn	11 12 19.0	+0.6
TIRR				*e*Sn	Sn	11 12 40.1	-1.4
IAS	**Iasi**	**1.90**	**24**	⇑*i*P	Pn	11 12 20.8	+0.6
IAS	**Iasi**	**1.90**	**24**	⇓P	Pn	11 12 20.8	+0.5
BURAR	**Bucovina Array**	**2.30**	**339**	⇓*i*P	Pn	11 12 26.4	+1.1
BURAR	**Bucovina Array**	**2.30**	**339**	⇓P	Pn	11 12 26.4	+1.2

MAN 27 11:15:43, 927N×12662E, h1km, mb4.3, ML3.1, MS2.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.03**	**253**	*e*P	Pg	11 16 03.2	+0.4
SCPH	**Surigao**	**1.22**	**295**	⇑*e*P	Pg	11 16 06.0	-0.4
SCPH				*e*S	Sg	11 16 24.4	+2.0
MSLP	**Maasin**	**1.93**	**296**	*e*P	Pn	11 16 17.9	+0.9
MSLP				*e*S	Sn	11 16 44.3	+2.3
BUKP	**Musuan**	**2.07**	**228**	*e*P	Pn	11 16 20.5	+1.6
BUKP				*e*S	Sn	11 16 51.1	+5.7
BESP	**Borongan**	**2.59**	**333**	*e*P	Pn	11 16 27.4	+1.4
BESP				*e*S	Sn	11 16 55.4	-2.8

*NIED **27** 11:29:00, 3500N×14040E, h59km, Mw3.7 Best double couple: M0 4.15000×10^{14} NP1:ϕ_s86.00000°, δ72.00000°, λ-70.00000°. NP2:ϕ_s217.00000°, δ27.00000°, λ-136.00000°.*
*ISCJB **27** 11:29:17.5±1.1, 3504N±006×14034E±006, h70km±7km, Error ellipse: s-maj=10.8km s-min=7.3km az=26.7*
*JMA **27** 11:29:17.9±0.2, 3509N×14039E, h64km±2km, M3.5*
JMA Felt I J1.
ISC 27 11:29:17.9±1.1, 3504N±006×14035E±006, h68km±7km, n13, σ0s55/22, 4C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO4	**Boso 4**	**0.05**	**190**	⇓P	**Pn**	**11 29 27.6**	**-0.2**
BSO4				S	**Sn**	**11 29 35.2**	**+0.2**
KTR	**Katsuura**	**0.11**	**346**	⇓P	**Pn**	**11 29 27.3**	**-0.7**
KTR				S	**Sn**	**11 29 33.9**	**-1.4**
BSO3	**Boso 3**	**0.27**	**151**	⇓P	**Pn**	**11 29 28.4**	**-0.3**
BSO3				*e*S	**Sn**	**11 29 36.6**	**+0.1**
TATJ	**Tateyama 2**	**0.38**	**269**	⇓P	**Pn**	**11 29 30.0**	**+0.6**
TATJ				S	**Sn**	**11 29 39.1**	**+1.2**
JCN	**Nagara**	**0.40**	**342**	⇑P	**Pn**	**11 29 29.5**	**-0.1**
JCN				S	**Sn**	**11 29 38.5**	**+0.3**
BSO2	**Boso 2**	**0.44**	**131**	S	**Sn**	**11 29 39.4**	**+0.6**
BSO1	**Boso 1**	**0.65**	**126**	⇓P	**Pn**	**11 29 31.5**	**-0.6**
BSO1				*e*S	**Sn**	**11 29 43.0**	**+0.6**
JIM2	**Oshima 3**	**0.82**	**247**	⇓P	**Pn**	**11 29 34.0**	**-0.1**
JIM2				S	**Sn**	**11 29 45.7**	**-0.3**
JOD2	**Odawara 2**	**1.06**	**283**	⇑P	**Pn**	**11 29 36.9**	**-0.1**
JOD2				S	**Sn**	**11 29 50.5**	**-0.7**
JIZS	**Izushimoda**	**1.25**	**256**	S	**Sn**	**11 29 55.6**	**-0.1**
JRY	**Ryogami san**	**1.53**	**310**	⇑P	**Pn**	**11 29 43.4**	**+0.2**
JAG	**Ashikaga**	**1.56**	**332**	⇑P	**Pn**	**11 29 43.5**	**-0.1**
MAT	**Matsushiro**	**2.30**	**311**	P	**Pn**	**11 29 53.9**	**+0.4**
MAT				S	**Sn**	**11 30 21.4**	**+0.6**

*ISCJB **27** 11:37:15.3±1.0, 3716N±006×7216E±03, h213km±41km, Error ellipse: s-maj=36.8km s-min=9.1km az=172.4*
*NNC **27** 11:37:22.5±4.8, 3771N×7173E, h187km±50km, mb2.4, mpv3.5, Error ellipse: s-maj=42.8km s-min=24.3km az=12.0*
ISC 27 11:37:16.5±1.9, 373N±01×715E±02, h143km±39km, n10, σ1s50/15, 3C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.12**	**19**	P	**Pn**	**11 38 32.6**	**+1.3**
	SNR=108						
UCH	**Uchtor**	**5.45**	**25**	P	**Pn**	**11 38 36.3**	**+0.6**
	SNR=31						
KZA	**Kyzart**	**5.59**	**30**	P	**Pn**	**11 38 36.0**	**-1.6**
	SNR=5.2						
EKS2	**Erkin-Say**	**5.64**	**18**	P	**Pn**	**11 38 39.8**	**+1.6**
	SNR=16						
AAK	**Ala-Archa**	**5.81**	**23**	P	**Pn**	**11 38 41.2**	**+0.7**
	SNR=18						
KK31	**Karatay Array**	**5.84**	**353**	⇑P	**Pn**	**11 38 43.2**	**+2.3**
	1.4nm,0.3s,baz=164,slow=12,SNR=64						
KK31				⇓S	**Sn**	**11 39 46.5**	**-0.4**
	12nm,0.4s,baz=172,slow=24,SNR=22						
THN	**Thein Dam**	**5.98**	**143**	*e*P	**Pn**	**11 38 38.4**	**-4.5**
THN				*e*S	**Sn**	**11 39 41.2**	**-9.2**
TKM2	**Tokmak 2**	**6.44**	**28**	⇑P	**Pn**	**11 38 48.8**	**-0.1**
	3.2nm,0.6s						
TKM2				⇓S	**Sn**	**11 39 58.7**	**-2.6**
	4.3nm,1.1s						
AB31	**Akbulak array**	**14.58**	**329**	⇑P	**Pn**	**11 40 38.2**	**+2.4**
	0.3nm,0.4s,baz=148,slow=11,SNR=3.8						
AB31				⇓S	**Sn**	**11 43 15.1**	**-2.1**
	1.7nm,0.7s,baz=153,slow=21,SNR=7.0						
AKTO	**Aktyubinsk**	**16.29**	**328**	⇓P	**Pn**	**11 40 57.9**	**+1.0**
	0.4nm,0.7s						
AKTO				⇓S	**S**	**11 43 56.7**	**-1.4**
	0.7nm,1.0s						

IDC 27 11:39:48.8±7.7, 344S×10131E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.3/18, mbtmp3.3/2, Error ellipse: s-maj=332.1km s-min=54.6km az=55.0, Southern Sumatera

| Code | Station Name | Δ° | AZ° | Ph

KARP	**Karpathos**	0.32	16	i	PB		Pg	11 43 30.3	0.0
ZKR	**Zakros**	0.69	260	e	Pg		Pg	11 43 36.0	-1.4
ZKR				e	Sg		Sg	11 43 46.7	+0.3
NPS	**Neapolis**	1.18	272	e	PB		Pb	11 43 45.9	-0.7
NPS				e	SN		Sn	11 44 02.5	-0.6
LAST	**Lasithi**	1.29	267	e	Pg		Pg	11 43 46.7	-2.0
LAST				e	Sg		Sg	11 44 07.5	+2.0
ARG	**Arkhangelos**	1.31	41	e	PN		Pn	11 43 48.2	-0.5
SANT	**Santorini**	1.72	312	e	Pb		Pn	11 43 53.3	-1.0
SANT				e	Sb		Sb	11 44 16.7	-1.0
SANT	**Santorini**	1.72	312	e	Pn		Pn	11 43 53.5	-0.8
SANT				e	Sb		Sb	11 44 16.7	-1.0
SANT	**Santorini**	1.72	312	e	Pn		Pn	11 43 53.5	-0.8
THR1	**Thera Island**	1.72	312	e	Pb		Pn	11 43 54.1	-0.2
THR6	**Thira Island,**	1.75	310	e	Pb		Pn	11 43 54.1	-0.6
IDI	**Anoyia**	1.77	272		Pn		Pn	11 43 55.8	+0.8
	28nm,0.3s,baz=80,slow=16,SNR=63								
IDI					Sn		Sg	11 44 21.0	+0.2
	42nm,0.3s,baz=154,slow=20,SNR=5.0								
THR3	**Thira Island,**	1.78	312	e	Pb		Pn	11 43 54.6	-0.5
THR4	**Thira Island,**	1.82	313	e	Pb		Pn	11 43 55.6	0.0
THR5	**Thira Island,**	1.82	311	e	Pb		Pn	11 43 54.9	-0.7
SIVA	**Sivas**	1.85	264	e	Pb		Pb	11 43 58.7	+0.6
SIVA				e	Sb		Sg	11 44 24.4	+0.9
APE	**Apeiranthos**	2.20	326	e	Pn		Pn	11 44 00.2	-0.8
APE	**Apeiranthos**	2.20	326	e	PB		Pn	11 44 00.2	-0.7
APE				e	SN		Sn	11 44 26.9	-1.5
VAM	**Vamos**	2.34	275	e	PN		Pn	11 44 04.0	+1.2
GVD	**Gavdhos**	2.46	262	e	PB		Pb	11 44 07.0	-1.6
SMG	**Samos**	2.47	356	e	PN		Pn	11 44 04.1	-0.5
CHOS	**Chios island**	3.24	346	e	Pn		Pn	11 44 15.1	-0.1
CHOS				e	Sn		Sn	11 44 54.7	+0.6
VLI	**Veliai**	3.65	295	e	PN		Pn	11 44 21.0	+0.2
DID	**Didima**	3.82	307	e	Pn		Pn	11 44 23.6	+0.4
DID				e	Sn		Sn	11 45 08.4	+0.1
VLX	**Vlachokerasia**	4.33	301	e	Pn		Pn	11 44 31.6	+1.4
ITM	**Ithomi**	4.58	297	e	PN		Pn	11 44 35.3	+1.8
AKASG	**Malin Array Be**	15.54	5		Pn		Pn	11 47 05.8	+2.5
	0.8nm,0.3s,baz=197,slow=12,SNR=3.5								
GERES	**GERESS Array B**	16.79	328		Pn		Pn	11 47 20.7	+1.2
	0.1nm,0.3s,baz=142,slow=12,SNR=7.0								
NOA	**NORSAR Array B**	27.74	343		P		P	11 49 14.4	+1.6
	0.4nm,0.6s,mb3.2,baz=143,slow=9.4,SNR=1.9								
NOA	**NORSAR Array B**	27.74	343		P		P	11 49 14.4	+1.6
TORD	**Torodi Ar. Bea**	31.75	232		P		P	11 49 47.5	-1.2
	0.6nm,0.4s,mb3.7,baz=36,slow=8.9,SNR=10								
TORD	**Torodi Ar. Bea**	31.75	232		P		P	11 49 47.5	-1.2
MKAR	**Makanchi Array**	42.44	57		P		P	11 51 19.2	0.0
	0.5nm,0.4s,mb3.5,baz=282,slow=8.4,SNR=3.9								
MKAR	**Makanchi Array**	42.44	57		P		P	11 51 19.2	0.0

*IDC **27** 11:55:25.6±6.9, 601N×12375E, h466km±94km, mb3.2/11, mb1 3.3/11, mb1mx3.1/22, mbtmp3.2/11, Error ellipse: s-maj=34.5km s-min=19.5km az=73.0*
*ISCJB **27** 11:55:30.6±2.1, 59N±02×1238E±03, h565km±31km, mb3.7/13, Error ellipse: s-maj=45.2km s-min=12.2km az=151.5*
*NEIC **27** 11:55:31.4±1.4, 592N×12384E, h552km±20km, mb4.1/1, Error ellipse: s-maj=29.2km s-min=7.5km az=63.0*

ISC 27 11:55:31.3±2.1, 59N±02×1239E±03, h548km±29km, n17, σ0°69/16, mb3.7/13, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	7.60	271	ePn	P	11 57 25.3	+0.2
FITZ	**Fitzroy Crossi**	23.93	176	P	P	12 00 02.8	0.0
	0.4nm,0.3s,mb3.5,baz=0.0,slow=12,SNR=3.7						
WRAB	**Tennant Creek**	27.69	158	eP	P	12 00 35.8	-0.1
	9.4nm,1.8s,mb4.1						
WRA	**Warramunga Arr**	27.69	158	P	P	12 00 35.3	-0.6
	1.1nm,0.3s,mb4.0,baz=342,slow=9.1,SNR=57						
WB2	**Warramunga Arr**	27.70	158	eP	P	12 00 35.8	-0.1
ASAR	**Alice Springs**	31.00	162	P	P	12 01 05.1	+0.6
	0.9nm,0.5s,mb3.6,baz=341,slow=7.1,SNR=32						
SONM	**Songino Array**	44.36	343	P	P	12 02 52.8	-0.2
	0.7nm,0.6s,mb3.3,baz=170,slow=9.0,SNR=5.2						
POO	**Poona**	50.28	289	ex	x	12 03 30.0	
MKAR	**Makanchi Array**	54.14	326	P	P	12 04 05.5	+0.3
	1.9nm,0.4s,mb3.8,baz=122,slow=8.4,SNR=12						
PETK	**Petropavlovsk-**	54.57	24	P	P	12 04 08.2	+0.2
	3.0nm,0.9s,mb3.5,baz=193,slow=3.6,SNR=4.2						
ZALV	**Zalesovo Beam**	57.36	334	P	P	12 04 26.4	-0.9
	0.8nm,0.4s,mb3.3,baz=145,slow=5.3,SNR=3.4						
KURK	**Kurchatov**	58.37	328	P	P	12 04 33.9	-0.4
	2.5nm,0.6s,mb3.6,baz=129,slow=6.1,SNR=14						
BVAR	**Borovoye Array**	63.94	327	P	P	12 05 10.6	-0.1
	0.4nm,0.3s,mb3.3,baz=140,slow=5.4,SNR=3.4						
AKTK	**Aktyubinsk**	70.18	322	P	P	12 05 48.9	-0.2
AKTO	**Aktyubinsk**	70.18	322	P	P	12 05 48.9	-0.2
	1.5nm,0.5s,mb3.8,baz=108,slow=7.8,SNR=6.1						
ARCES	**ARCESS Array B**	87.42	340	P	P	12 07 22.6	+2.4
	2.3nm,0.8s,mb3.8,baz=72,slow=6.7,SNR=3.1						
KAF	**Kangasniemi**	88.34	332	ep	P	12 07 20.7	-3.9
	9.2nm,0.7s,mb4.6						

*BJI **27** 12:16:57.6, 173S×13769E, h47km, mB4.6, mb4.5*
*IDC **27** 12:16:59.8±0.7, 1.14S×136.70E, h0km, mb4.0/11, mb1 4.2/12, mb1mx4.1/19, mbtmp4.0/12, ML4.0/1, MS3.5/11, Ms1 3.5/11, ms1mx3.3/26, Error ellipse: s-maj=33.9km s-min=14.5km az=76.0*
*ISCJB **27** 12:17:02.2±0.6, 1.19S±007×1369E±02, h33km, mb4.1/10, MS3.5/7, Error ellipse: s-maj=23.1km s-min=8.0km az=166.7*
*NEIC **27** 12:17:04.6±0.5, 1.15S×136.83E, h35km, mb4.0/5, Error ellipse: s-maj=17.1km s-min=6.6km az=75.0*

ISC 27 12:17:04.6±0.6, 120S±006×1368E±02, h35km, n37, σ0°76/23, mb4.1/10, MS3.5/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	13.92	306	LR	LR	12 25 14.9	
	comp=Z,110nm,19.1s,baz=265,slow=36						
COEN	**Coen**	14.14	154	ePn	Pn	12 20 22.1	-0.5
GUMO	**Guam**	16.71	28	LR	LR	12 26 39.1	
	comp=Z,47nm,20.8s,baz=178,slow=35						
KAPI	**Kappang**	17.47	257	LR	LR	12 28 27.1	
	comp=Z,130nm,18.6s,baz=273,slow=40						
WRAB	**Tennant Creek**	18.78	187	eP	Pn	12 21 21.6	-0.1
	8.4nm,0.8s						
WB2	**Warramunga Arr**	18.79	187	eP	Pn	12 21 21.0	-0.8
WB2	**Warramunga Arr**	18.79	187	eP	Pn	12 21 21.5	-0.2
WRA	**Warramunga Arr**	18.79	187	P	Pn	12 21 20.5	-1.3
	0.5nm,0.3s,baz=7.4,slow=12,SNR=28						
WRA				LR	LR	12 29 37.8	
	comp=Z,203nm,18.0s,baz=335,slow=40						
FITZ	**Fitzroy Crossi**	20.08	213	eP	P	12 21 36.5	+1.3
	8.9nm,1.0s						
FITZ	**Fitzroy Crossi**	20.08	213	P	P	12 21 35.9	+0.7
	4.1nm,1.0s,baz=53,slow=11,SNR=5.6						
CTA	**Charters Tower**	20.91	154	eP	P	12 21 45.5	+1.3
	2.9nm,0.6s						
CTA	**Charters Tower**	20.91	154	P	P	12 21 45.0	+0.8
	4.0nm,0.8s,baz=329,slow=11,SNR=5.8						
CTA				LR	LR	12 30 55.8	
	comp=Z,301nm,18.2s,MS3.7,baz=127,slow=40						
CTAO	**Charters Tower**	20.91	154	eP	P	12 21 45.3	+1.0
	7.5nm,1.0s						
ASAR	**Alice Springs**	22.51	187	P	P	12 22 02.1	+0.7
	10.0nm,0.6s,mb4.5,baz=17,slow=11,SNR=86						
JOW	**Kunigami**	29.07	344	LR	LR	12 33 17.4	
	comp=Z,36nm,19.4s,MS3.0,baz=126,slow=34						
STKA	**Stephens Creek**	30.84	172	P	P	12 23 17.1	-0.4
	3.8nm,0.9s,mb4.2,baz=347,slow=13,SNR=2.6						
STKA	**Stephens Creek**	30.84	172	P	P	12 23 17.7	+0.2
	28nm,1.7s,mb4.8						
MJAR	**Matsushiro Arr**	37.57	2	LR	LR	12 37 18.9	
	comp=Z,74nm,21.5s,MS3.5,baz=240,slow=32						
KSRS	**Korea Array**	39.34	349	LR	LR	12 40 20.0	
	comp=Z,36nm,18.6s,MS3.2,baz=359,slow=36						
CMAR	**Chiang Mai Arr**	42.07	300	P	P	12 24 53.0	-0.4
	0.6nm,0.4s,mb3.6,baz=114,slow=5.5,SNR=5.9						
CD2	**Chengdu**	44.81	318	P	P	12 25 15.5	+0.1
CD2				AMB	AMB		
	comp=Z,20nm,6.2s						
ASAJ	**Asahikawa**	45.41	6	LR	LR	12 41 56.8	
	comp=Z,31nm,21.7s,MS3.2,baz=108,slow=33						
LZH	**Lanzhou**	48.16	324	eP	P	12 25 45.5	+4.0
LZH				AP	pP	12 25 52.0	0.0
LZH				XP	sP	12 25 55.8	-0.3
LZH				AMB	AMB		
	comp=Z,80nm,4.3s						

GTA	**Gaotai**	52.75	324	e	P		P	12 26 17.3	+1.1
GTA				AMB	AMB				
	comp=Z,5.0nm,0.9s,mb4.4								
SONM	**Songino Array**	55.57	336	P	P		P	12 26 35.3	-1.3
	comp=Z,0.6nm,0.7s,mb3.7,baz=150,slow=6.7,SNR=4.1								
SONM				LR	LR			12 48 42.1	
	comp=Z,63nm,18.1s,MS3.7,baz=65,slow=34								
PETK	**Petropavlovsk-**	56.86	15	P	P		P	12 26 46.1	+0.4
	comp=Z,5.0nm,0.8s,mb4.6,baz=23,slow=1.9,SNR=3.7								
POO	**Poona**	64.89	291	ex	x			12 28 28.0	
MKAR	**Makanchi Array**	67.46	323	P	P		P	12 27 57.4	+0.4
	comp=Z,1.0nm,0.4s,mb4.2,baz=112,slow=8.2,SNR=6.5								
ZALV	**Zalesovo Beam**	69.70	330	P	P		P	12 28 09.8	-1.0
	comp=Z,0.9nm,0.4s,mb4.0,baz=83,slow=6.0,SNR=4.0								
KURK	**Kurchatov**	71.41	325	P	P		P	12 28 21.4	+0.1
	comp=Z,0.7nm,0.7s,mb3.7,baz=120,slow=5.4,SNR=3.8								
BVAR	**Borovoye Array**	77.01	325	P	P		P	12 28 53.7	-0.2
	comp=Z,0.7nm,0.5s,mb3.8,baz=100,slow=8.3,SNR=4.8								
QSPA	**South Pole Qui**	88.74	180	LR	LR			13 07 25.0	
	comp=Z,123nm,20.8s,MS4.3,baz=162,slow=34								
NVAR	**Mina Array Bea**	102.37	51	P	Pdif			12 30 59.1	+2.5
	comp=Z,0.2nm,0.6s,baz=253,slow=8.2,SNR=2.5								
DBIC	**Dimbokro**	141.41	279	PKP	PKPdf			12 36 34.5	+1.5
	comp=Z,1.4nm,0.8s,baz=143,slow=5.1,SNR=2.9								
CPUP	**Villa Florida**	149.41	154	PKPbc	PKPbc			12 36 51.9	+1.1
	comp=Z,1.2nm,0.5s,baz=265,slow=3.3,SNR=6.1								
CPUP	**Villa Florida**	149.41	154	PKPbc	PKPbc			12 36 51.9	+1.1
LPAZ	**La Paz**	149.84	126	PKPbc	PKPbc			12 36 54.8	+2.7
	comp=Z,0.7nm,0.6s,baz=198,slow=3.2,SNR=3.1								

IDC 27 12:20:55.3±7.7, 3276N×8811E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/22, mbtmp3.3/3, ML3.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/17, Error ellipse: s-maj=503.1km s-min=41.7km az=65.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	14.70	344	Pn	Pn	12 24 22.0	-2.3
	0.2nm,0.3s,baz=179,slow=11,SNR=5.3						
SONM	**Songino Array**	20.44	37	LR	LR	12 34 56.1	
	comp=Z,39nm,19.2s,baz=64,slow=41						
WRA	**Warramunga Arr**	68.55	133	P	P	12 32 01.0	+1.1
	0.2nm,0.7s,baz=328,slow=6.4,SNR=5.3						
ASAR	**Alice Springs**	71.12	136	P	P	12 32 14.9	-0.7
	0.3nm,0.9s,baz=312,slow=6.5,SNR=3.4						

*MAN **27** 12:55:25, 1224N×12603E, h20km, mb4.4, ML3.3, MS3.2*

ISC 27 12:55:25.2±2.3, 1225N±008×12602E±010, h12km±11km, n7, σ0°56/12, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	0.86	221	eP	Pg	12 55 42.0	+0.2
BESP				eS	Sg	12 55 52.9	-0.1
CNP	**Catarman**	1.35	281	eP	Pn	12 55 49.5	-0.4
CNP				eS	Sb	12 56 08.3	+0.2
PLP	**Palo**	1.48	223	eP	Pn	12 55 51.4	-0.4
PLP				eS	Sn	12 56 06.4	-4.7
OCLP	**Ormoc**	1.82	229	eP	Pn	12 55 55.4	-1.0
OCLP				eS	Sn	12 56 19.7	+0.2
PVCP	**Virac**	2.26	307	eP	Pn	12 56 02.8	+0.3
MSLP	**Maasin**	2.39	209	eP	Pn	12 56 05.4	+1.1
MSLP				eS	Sn	12 56 38.0	+4.5
SCPH	**Surigao**	2.50	192	eP	Pn	12 56 05.8	-0.1

*ISCJB **27** 13:20:10.9±2.5, 0.50S±008×1228E±02, h126km±27km, mb3.7/8, Error ellipse: s-maj=28.8km s-min=9.3km az=160.9*
*DJA **27** 13:20:10, 0.47S×122.91E, h100km, MLv4.7/6*
*NEIC **27** 13:20:10.4±1.9, 0.43S×122.93E, h104km±19km, mb4.0/3, Error ellipse: s-maj=29.4km s-min=8.1km az=64.0*
*IDC **27** 13:20:10.2±5.2, 0.44S×122.86E, h99km±49km, mb3.5/6, mb1 3.7/8, mb1mx3.6/18, mbtmp3.6/8, MS2.8/2, Ms1 2.8/2, ms1mx2.4/20, Error ellipse: s-maj=43.5km s-min=15.3km az=56.0*

ISC 27 13:20:10.1±2.1, 044S±008×1229E±02, h99km±23km, n17, σ0°76/17, mb3.7/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	5.54	215	P	Pn	13 21 29.3	-0.9
	5.7nm,0.3s,baz=7.9,slow=4.0,SNR=6.2						
KAPI				S	Sn	13 22 32.3	-0.3
	9.4nm,0.3s,baz=231,slow=23,SNR=12						
KAPI				LR	LR	13 23 43.8	
	comp=Z,71nm,20.5s,baz=65,slow=39						
KKM	**Kota Kinabalu**	9.30	314	ePn	Pn	13 22 22.4	+1.0
FITZ	**Fitzroy Crossi**	17.75	172	eP	Pn	13 24 11.1	+0.1
	5.3nm,0.6s						
FITZ	**Fitzroy Crossi**	17.75	172	P	Pn	13 24 11.2	+0.2
	0.3nm,0.3s,baz=3.9,slow=11,SNR=12						
FITZ				S	S	13 27 19.4	-10
	0.1nm,0.3s,baz=120,slow=20,SNR=2.4						
MBWA	**Marble Bar**	20.82	188	eP	P	13 24 45.1	+1.2
	16nm,1.1s						
WRAB	**Tennant Creek**	22.36	151	eP	P	13 24 59.9	-0.4
	4.8nm,0.8s,mb3.9						
WRA	**Warramunga Arr**	22.37	151	P	P	13 24 59.6	-0.7
	3.7nm,0.8s,mb3.8,baz=326,slow=11,SNR=39						
WB2	**Warramunga Arr**	22.37	151	eP	P	13 24 59.9	-0.4
ASAR	**Alice Springs**	25.42	156	P	P	13 25 29.9	+1.3
	1.7nm,0.5s,mb3.8,baz=342,slow=14,SNR=43						
ASAR				PcP	PcP	13 28 59.0	+0.4
	0.3nm,0.5s,baz=342,slow=1.8,SNR=4.6						
CMAR	**Chiang Mai Arr**	30.15	310	P	P	13 26 11.1	+0.2
	0.4nm,0.4s,mb3.4,baz=130,slow=6.5,SNR=4.4						
STKA	**Stephens Creek**	35.90	152	P	P	13 27 01.3	+0.4
	0.8nm,0.4s,mb4.0,baz=266,slow=5.5,SNR=3.0						
STKA	**Stephens Creek**	35.90	152	P	P	13 27 01.3	+0.4
KSRS	**Korea Array**	37.99	6	LR	LR	13 44 03.8	
	comp=Z,20nm,18.7s,baz=150,slow=38						
ULN	**Ulaanbaatar**	50.06	346	P	P	13 28 53.4	-1.3
	1.3nm,0.8s,mb3.9						
SONM	**Songino Array**	50.20	346	P	P	13 28 56.0	+0.2
	0.7nm,0.7s,mb3.7,baz=161,slow=7.9,SNR=4.7						
MKAR	**Makanchi Array**	58.95	329	P	P	13 29 58.6	-0.5
	0.2nm,0.3s,mb3.6,baz=106,slow=7.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	120.46	285	PKP	PKPdf	13 38 49.7	-1.4
	0.5nm,1.0s,baz=64,slow=3.4,SNR=3.2						

*MOS **27** 13:38:00.2±0.6, 5485N×16289E, h35km, mb4.2/1, Error ellipse: s-maj=33.4km s-min=16.3km az=65.7*

KRSC 27 13:38:00.4±0.7, 5490N×16263E, h43km±42km, ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	1.32	5	eP	Pn	13 38 23.2	+1.0
KBTR				i	S	Sn	13 38 39.6	+1.0
ZLN	**Zelenaya**	1.53	318	eP	Pn	13 39 27.3	+2.1
ZLN				i	S	Sn	13 38 46.6	+2.8
BZMR	**Bezymyannaya**	1.60	311	eP	Pn	13 38 27.6	+1.4
BZMR				i	S	Sn	13 38 47.7	+2.1
KMNR	**Kamenistaya**	1.61	303	eP	Pn	13 38 28.3	+2.0
KMNR				i	S	Sn	13 38 48.5	+2.6
KPT	**Kopyto**	1.74	309	eP	Pn	13 38 30.1	+2.1
KPT				i	S	Sn	13 38 51.6	+2.6
KRSR	**Krestovskiy**	1.77	319	eP	Pn	13 38 29.9	+1.5
KRSR				i	S	Sn	13 38 51.2	+1.6
KOZR	**Kozyr**	1.95	308	PN	Pn	13 38 33.4	+2.5
KOZR				S	Sn	13 38 57.6	+3.5
KOZ	**Kozyrevsk**	1.95	308	eP	Pn	13 38 33.4	+2.4
KOZ				i	S	Sn	13 38 57.6	+3.4
KII	**Karymskiy**	2.05	246	eP	Pn	13 38 34.4	+2.1
KII				i	S	Sn	13 38 59.7	+3.1
SRDR	**Sredinnyy**	2.18	312	eP	Pn	13 38 36.2	+2.1
SRDR				i	S	Sn	13 39 02.6	+2.8
SPN	**Mys Shipunski**	2.37	222	eP	Pn	13 38 37.9	+1.2
SPN				i	S	Sn	13 39 04.7	+0.1
NLC	**Nalytchevo**	2.60	230	eP	Pn	13 38 42.0	+2.2
NLC				i	S	Sn	13 39 12.6	+2.5
AVH	**Avacha**	2.82	236	eP	Pn	13 38 46.6	+3.8
AVH				i	S	Sn	13 39 19.5	+4.0
GNL	**Ganaly**	3.00	248	eP	Pn	13 38 48.7	+3.3
GNL				i	S	Sn	13 39 23.4	+3.4
PET	**Petropavlovsk**	3.01	233	ePN	Pn	13 38 48.8	+3.3
PET				eS	Sn	13 39 22.7	+2.5
PET				smax			
	comp=N,283nm,0.5s						
PET	**Petropavlovsk**	3.01	233	eP	Pn	13 38 48.8	+3.3
PET				i	S	Sn	13 39 23.8	+3.6
RUS	**Russkaya**	3.48	226	eP	Pn	13 38 54.0	+2.1
RUS				i	S	Sn	13 39 33.0	+1.2

KRSC 27 13:40:52.3±0.3, 5269N×16023E, h11km±10km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	0.43	343	eP	Pg	13 41 01.4	+0.7
SPN				i	Sg	13 41 08.2	+1.8
NLC	**Nalytchevo**	0.72	312	eP	Pg	13 41 06.8	+0.6
NLC				i	Sg	13 41 17.6	+1.9
PET	**Petropavlovsk**	1.01	290	eP	Pg	13 41 12.9	+1.1
PET				i	Sg	13 41 26.9	+1.9
AVH	**Avacha**	1.07	303	eP	Pb	13 41 13.0	+0.2
AVH				i	Sb	13 41 28.5	+1.7
RUS	**Russkaya**	1.08	257	eP	Pb	13 41 13.8	+0.9
RUS				i	Sb	13 41 28.7	+1.7
GRL	**Gorelyy**	1.32	265	P	Pn	13 41 16.4	-0.2
GRL				i	Sb	13 41 33.5	-0.5
KII	**Karymskiy**	1.43	341	P	Pn	13 41 17.2	-0.9
KII				i	Sn	13 41 35.2	-1.6
GNL	**Ganaly**	1.71	307	eP	Pn	13 41 22.8	+0.9
GNL				i	Sn	13 41 45.8	+2.1
KMNR	**Kamenistaya**	3.07	0	P	Pn	13 41 41.7	+1.0
KMNR				i	Sn	13 42 19.0	+1.6
ZLN	**Zelenaya**	3.35	6	eP	Pn	13 41 45.9	+1.4
ZLN				eS	Sn	13 42 25.3	+1.1
KLY	**Klyuchi**	3.64	4	eP	Pn	13 41 49.8	+1.3
KLY				i	Sn	13 42 33.2	+1.9
KBTR	**Krutoberegovo**	3.84	22	eP	Pn	13 41 53.1	+1.9
KBTR				i	Sn	13 42 38.8	+2.6

*IDC **27** 14:17:30.1±1.8, 3.16S×101.15E, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.0/19, mbtmp4.2/8, MS3.3/2, Ms1 3.4/2, ms1mx3.0/21, Error ellipse: s-maj=71.0km s-min=16.4km az=59.0*
*MOS **27** 14:17:33.3±1.4, 302S×101.39E, h33km, mb4.8/9, Error ellipse: s-maj=30.4km s-min=14.3km az=107.5*
*NEIC **27** 14:17:35.6±0.6, 301S×101.43E, h35km, mb4.5/13, Error ellipse: s-maj=24.2km s-min=8.1km az=52.0*
*DJA **27** 14:17:41, 303S×101.19E, h30km, MLv4.1/3*
*ISCJB **27** 14:17:47.1±5.0, 29S±01×1015E±01, h162km±48km, mb4.3/27, Error ellipse: s-maj=28.9km s-min=9.2km az=139.2*

ISC 27 14:17:44.6±5.1, 29S±01×1015E±01, h117km±49km, n46, σ0°65/44, mb4.5/27, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	21.40	353	P	P	14 22 23.6	+0.5
	1.6nm,0.7s,mb3.4,baz=186,slow=8.7,SNR=15						
CMAR				LR	LR	14 31 02.3	
	comp=Z,39nm,18.5s,baz=190,slow=38						
CHTO	**Chiang Mai**	21.75	353	P	P	14 22 25.9	-0.9
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.6						
CHTO	**Chiang Mai**	21.75	353	P	P	14 22 25.9	-0.9
	comp=Z,3.1nm,1.0s,mb3.6						
ODAN	**Odare**	32.62	336	eP	P	14 24 05.2	0.0
	comp=Z,20nm,0.7s,mb5.0						
RAMN	**Ramite**	33.02	335	eP	P	14 24 08.1	-0.6
NWAO	**Narrogin (SRO)**	33.27	156	LR	LR	14 35 42.0	
	comp=Z,125nm,22.0s,baz=158,slow=33						
JIRN	**Jiri**	33.82	335	eP	P	14 24 16.3	+0.7
GUN	**Gumba**	34.17	335	eP	P	14 24 19.4	+0.7
	comp=Z,46nm,0.6s,mb5.5						
DMN	**Daman**	34.24	333	eP	P	14 24 19.3	0.0
KKN	**Kakani**	34.32	334	eP	P	14 24 19.7	-0.3
	comp=Z,25nm,0.8s,mb5.1						
GKN	**Gorkha**	34.79	333	eP	P	14 24 24.0	0.0
	comp=Z,11nm,0.5s,mb5.0						
KOLN	**Koldanda**	35.07	332	eP	P	14 24 25.9	-0.6
	comp=Z,11nm,0.6s,mb4.8						
DANN	**Dangsing**	35.49	332	eP	P	14 24 29.9	-0.1
	comp=Z,21nm,0.5s,mb5.2						
WRA	**Warramunga Arr**	36.20	120	P	P	14 24 36.3	+0.1
	comp=Z,2.0nm,0.4s,mb4.4,baz=303,slow=9.0,SNR=42						
WRAB	**Tennant Creek**	36.20	120	eP	P	14 24 35.8	-0.4
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	36.20	120	eP	P	14 24 35.8	-0.4
	comp=Z,3.2nm,0.6s,mb4.4						

*DJA **27** 14:20:43, 904S×10951E, h30km, MLv3.4/2*
ISC 27 14:20:26.1±0.9, 101S±02×1094E±01, h10km±n10, σ0669/12, mb4.0/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**3.71**	**264**	Pn		**Pn**	**14 21 23.4**	**-0.1**
XMIS				*e*Sn		**Sn**	**14 22 02.1**	**-5.1**
FITZ	**Fitzroy Crossi**	**17.62**	**119**	P		**Pn**	**14 24 32.2**	**+0.4**
	0.2nm,0.3s,baz=301,slow=12,SNR=4.4							
FITZ				S		**Sn**	**14 27 29.9**	**-18**
	0.1nm,0.3s,baz=198,slow=20,SNR=2.7							
CMAR	**Chiang Mai Arr**	**30.22**	**340**	P		**P**	**14 26 37.5**	**+0.5**
	0.8nm,0.6s,mb3.6,baz=171,slow=7.7,SNR=6.2							
CHTO	**Chiang Mai**	**30.55**	**340**	P		**P**	**14 26 40.1**	**+0.1**
	2.9nm,1.0s,mb4.1							
SONM	**Songino Array**	**57.76**	**358**	P		**P**	**14 30 17.2**	**0.0**
	0.4nm,0.5s,mb3.7,baz=168,slow=8.4,SNR=4.5							
MKAR	**Makanchi Array**	**61.62**	**339**	P		**P**	**14 30 44.0**	**+0.1**
	0.7nm,0.4s,mb4.1,baz=151,slow=7.6,SNR=13							
MKAR	**Makanchi Array**	**61.62**	**339**	P		**P**	**14 30 44.0**	**+0.1**
KURK	**Kurchatov**	**66.24**	**339**	P		**P**	**14 31 13.6**	**-0.5**
	2.1nm,0.9s,mb4.2							
ZALV	**Zalesovo Beam**	**67.14**	**345**	P		**P**	**14 31 20.9**	**+1.0**
	0.7nm,0.4s,mb4.1,baz=158,slow=6.9,SNR=4.3							
PETK	**Petropavlovsk-**	**75.19**	**28**	P		**P**	**14 32 07.0**	**-1.6**
	4.0nm,0.8s,mb4.4,baz=210,slow=8.3,SNR=2.8							

*IDC **27** 15:13:28.5±1.4, 1940S×16876E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.8/15, mbtmp3.9/5, ML4.7/1, MS3.5/3, Ms1 3.5/3, ms1mx3.0/31, Error ellipse: s-maj=59.5km s-min=29.5km az=160.0*
*NEIC **27** 15:13:29.0±0.7, 1933S×16890E, h10km, mb4.3/3, Error ellipse: s-maj=24.3km s-min=14.6km az=58.0*
*ISCJB **27** 15:13:32.2±3.0, 1938S±009×1686E±02, h33km±24km, mb4.0/7, Error ellipse: s-maj=29.7km s-min=14.9km az=2.8*
ISC 27 15:13:32.6±5.6, 1942S±009×1687E±02, h26km±39km, n19, σ0573/15, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.38**	**218**	*e*P		**Pn**	**15 14 24.4**	**+0.6**
DZM				*e*S		**Sn**	**15 15 02.9**	**-0.2**
HNR	**Honiara**	**13.05**	**318**	Pn		**Pn**	**15 16 36.0**	**-0.6**
	3.7nm,0.3s,baz=352,slow=4.0,SNR=6.1							
HNR				LR		LR	15 20 42.4	
	comp=Z,127nm,18.9s,baz=122,slow=33							
HNR	**Honiara**	**13.05**	**318**	*e*Pn		**Pn**	**15 16 35.0**	**-1.5**
	35nm,0.8s							
HNR				Pn		**Pn**	**15 16 36.0**	**-0.6**
HNR				LR		LR	15 20 42.4	
AFI	**Afiamalu**	**19.48**	**77**	LR		LR	15 23 59.6	
	comp=Z,135nm,19.6s,baz=20,slow=32							
CTAO	**Charters Tower**	**21.14**	**264**	P		**P**	**15 18 21.4**	**+5.5**
	7.9nm,1.0s,mb4.0							
STKA	**Stephens Creek**	**27.32**	**238**	LR		LR	15 29 09.0	
	comp=Z,178nm,21.6s,baz=25,slow=34							
WRA	**Warramunga Arr**	**32.33**	**263**	P		**P**	**15 20 01.1**	**+1.2**
	0.4nm,0.9s,mb3.2,baz=100,slow=8.4,SNR=4.5							
ASAR	**Alice Springs**	**32.59**	**256**	P		**P**	**15 20 02.2**	**0.0**
	1.1nm,0.8s,mb3.8,baz=83,slow=8.8,SNR=12							
SBA	**Scott Base**	**58.48**	**180**	*e*P		**P**	**15 23 25.9**	**-0.2**
	3.0nm,0.9s,mb4.3							
SONM	**Songino Array**	**87.06**	**323**	P		**P**	**15 26 15.8**	**0.0**
	0.7nm,0.8s,mb4.0,baz=123,slow=5.3,SNR=2.9							
SNAA	**Sanae**	**88.96**	**183**	*e*		**P**	**15 26 23.8**	**-0.8**
SNAA	**Sanae**	**88.96**	**183**	*e*P		**P**	**15 26 23.1**	**-1.5**
	3.1nm,1.0s,mb4.6							
NVAR	**Mina Array Bea**	**89.30**	**49**	P		**P**	**15 26 28.0**	**+1.3**
	0.5nm,0.8s,mb3.9,baz=229,slow=8.2,SNR=2.9							
VNA3	**Neumayer Olymp**	**89.57**	**181**	*e*		**P**	**15 26 27.0**	**-0.5**
VNA3				*e*			15 26 32.4	
VNA2	**Neumayer--Watz**	**89.86**	**181**	*e*		**P**	**15 26 28.7**	**-0.1**
VNA2				*e*			15 26 34.4	
ARCES	**ARCESS Array B**	**125.11**	**345**	PKP		PKPdf	15 32 28.9	-1.1
	2.7nm,1.0s,baz=42,slow=2.8,SNR=6.1							
ARCES	**ARCESS Array B**	**125.11**	**345**	PKP		PKPdf	15 32 28.9	-1.1
GERES	**GERESS Array B**	**144.41**	**331**	PKP		PKPdf	15 33 06.0	-0.5
	0.6nm,0.6s,baz=14,slow=4.4,SNR=2.5							
TORD	**Torodi Ar. Bea**	**166.06**	**245**	PKP		PKPdf	15 33 35.7	-0.6
	0.9nm,1.0s,baz=131,slow=1.7,SNR=3.6							

*MAN **27** 15:35:25, 924N×12551E, h2km, mb4.9, ML3.8, MS4.5*
MAN INTENSITY V - BUTUAN CITY; INTENSITY IV - CABADBARAN, AGUSAN DEL NIRTE; INTENSITY II - MAINIT, SURIGAO DEL NORTE, SURIGAO CITY; INTENSITY I - CAMIGUIN ISLAND.
*MOS **27** 15:35:25.3±1.6, 9.12N×12550E, h33km, mb4.9/25, MS4.4/4, Error ellipse: s-maj=13.2km s-min=6.4km az=115.3*
*ISCJB **27** 15:35:27.0±0.4, 9.14N±002×12560E±003, h48km±3km, mb4.6/68, MS4.1/25, Error ellipse: s-maj=5.7km s-min=3.6km az=154.2*
*IDC **27** 15:35:29.4±2.4, 9.15N×12551E, h55km±23km, mb4.2/21, mb1 4.2/25, mb1mx4.2/29, mbtmp4.2/25, ML4.6/3, MS4.0/14, Ms1 4.0/14, ms1mx3.8/25, Error ellipse: s-maj=18.3km s-min=9.8km az=78.0*
*BJI **27** 15:35:29.2, 894N×12547E, h73km, mB4.8, mb4.6, Ms4.4, Msz4.2*
*NEIC **27** 15:35:30.2±1.0, 9.11N×12559E, h65km±10km, mb4.7/34, Error ellipse: s-maj=9.1km s-min=4.7km az=74.0*
NEIC Felt [V PIVS] at Butuan, [IV PIVS] at Cabadbaran and [II PIVS] at Mainit and Surigao. Felt [I PIVS] at Hibok-Hibok, Camiguin.
*DJA **27** 15:35:41, 868N×12567E, h110km, Mw5.3/11*
ISC 27 15:35:28.6±0.4, 914N±002×12558E±003, h46km±3km, h70km±1.9km:pP-P,n171, σ1922/197, mb4.6/68, MS4.1/25, 8C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.17**	**165**	*e*P		**Pn**	**15 35 31.0**	**-5.3**
BUTP				*e*S		**Sn**	**15 35 36.3**	**-5.5**
SCPH	**Surigao**	**0.65**	**352**	*e*P		**Pn**	**15 35 36.3**	**-5.2**
SCPH				*e*S		**Sn**	**15 35 45.7**	**-5.1**
MSLP	**Maasin**	**1.22**	**325**	*e*P		**Pn**	**15 35 46.1**	**-3.1**
BIPH	**Bislig**	**1.22**	**141**	*e*P		**Pn**	**15 35 46.5**	**-2.8**
BIPH				*e*S		**Sn**	**15 36 03.9**	**-0.7**
BUKP	**Musuan**	**1.35**	**202**	*e*P		**Pn**	**15 35 51.4**	**+0.4**
BUKP				*e*S		**Sn**	**15 36 14.5**	**+6.8**
TBP	**Tagbilaran**	**1.78**	**288**	*e*P		**Pn**	**15 35 55.0**	**-1.9**
TBP				*e*S		**Sn**	**15 36 40.1**	**+0.6**
LLP	**Lapu-Lapu**	**1.97**	**307**	*e*P		**Pn**	**15 35 57.4**	**-2.1**
LLP				*e*S		**Sn**	**15 36 21.6**	**-1.5**
DAV	**Davao City (W)**	**2.05**	**180**	P		**Pn**	**15 36 01.1**	**+0.5**
	245nm,0.3s,baz=52,slow=4.4,SNR=14							
DAV				S		**Sn**	**15 36 33.9**	**+8.9**
	487nm,0.3s,baz=182,slow=23,SNR=5.6							
PLP	**Palo**	**2.10**	**344**	*i*P		**Pn**	**15 36 00.2**	**-1.1**
PLP				*i* S		**Sn**	**15 36 26.1**	**-0.1**
OCLP	**Ormoc**	**2.13**	**334**	*e*P		**Pn**	**15 36 00.3**	**-1.4**
KCP	**Kidapawan**	**2.17**	**193**	*e*P		**Pn**	**15 36 04.9**	**+2.7**
KCP				*i* S		Sn	15 37 05.8	+38
DCPH	**Dipolog City**	**2.27**	**256**	*e*P		**Pn**	**15 36 03.1**	**-0.4**
DCPH				*e*S		**Sn**	**15 36 32.6**	**+2.4**
MATI	**Mati**	**2.28**	**163**	*e*P		**Pn**	**15 36 04.6**	**+0.9**
MATI				*e*S		**Sn**	**15 36 36.2**	**+5.6**
CTBH	**Cotabato--PC H**	**2.31**	**215**	*e*P		**Pn**	**15 36 04.0**	**-0.2**
SNPH	**Sibulan**	**2.32**	**275**	*e*P		**Pn**	**15 36 05.0**	**+0.7**
BESP	**Borongan**	**2.45**	**357**	*e*P		**Pn**	**15 36 07.0**	**+0.9**
PAGZ	**Pagadian**	**2.52**	**240**	*e*P		**Pn**	**15 36 07.7**	**+0.7**
PAGZ				*e*S		**Sn**	**15 36 41.0**	**+4.4**
IPIL	**Ipil**	**3.26**	**246**	*e*P		**Pn**	**15 36 17.8**	**+0.6**
GUIM	**Jordan**	**3.29**	**297**	*e*P		**Pn**	**15 36 17.3**	**-0.4**
CNP	**Catarman**	**3.47**	**345**	*e*P		**Pn**	**15 36 19.4**	**-0.8**
CNP				*e*S		**Sn**	**15 37 06.9**	**+6.9**
RCP	**Roxas**	**3.68**	**311**	*e*P		**Pn**	**15 36 21.9**	**-1.2**
KALP	**Kalibo**	**4.07**	**309**	*e*P		**Pn**	**15 36 29.5**	**+1.3**
PVCP	**Virac**	**4.65**	**343**	*e*P		**Pn**	**15 36 36.9**	**+0.6**
CUYO	**Cuyo Island**	**4.80**	**291**	*e*P		**Pn**	**15 36 37.3**	**-1.1**
AUQP	**San Andres**	**5.04**	**326**	*e*P		**Pn**	**15 36 41.9**	**+0.2**
ENPP	**El Nido**	**6.39**	**289**	*e*P		**Pn**	**15 36 59.4**	**-0.9**
POLP	**Polillo Island**	**6.60**	**328**	*e*P		**Pn**	**15 37 08.4**	**+5.3**
KAPI	**Kappang**	**15.21**	**203**	P		**Pn**	**15 39 01.9**	**+1.5**
	baz=34,slow=5.8,SNR=8.3							
KAPI	**Kappang**	**15.21**	**203**	*e*Pn		**Pn**	**15 39 01.8**	**+1.4**
	93nm,1.4s							
NACB	**Ninganchiao**	**15.43**	**346**	Pn		**Pn**	**15 39 04.0**	**+0.8**
	64nm,0.6s							
YHNB	**Yeheng**	**15.96**	**346**	*e*Pn		**Pn**	**15 39 11.3**	**+1.2**
	87nm,1.4s							
KSM	**Kuching**	**16.99**	**244**	*e*Pn		**Pn**	**15 39 27.1**	**+4.0**
QZH	**Quanzhou**	**17.07**	**338**	P		**Pn**	**15 39 27.5**	**+3.5**
QZH				*e*S		**S**	**15 42 38.5**	**-2.3**
QZH				LR		LR		
	comp=N,1μm,16.8s							
QZH				LR		LR		
	comp=E,790nm,10.3s							
QZH				LR		LR		
	comp=Z,2μm,26.0s							
JOW	**Kunigami**	**17.79**	**8**	P		**Pn**	**15 39 34.4**	**+1.5**
	comp=Z,2.0nm,0.3s,baz=243,slow=13,SNR=13							
JOW				LR		LR	15 45 22.3	
	comp=Z,694nm,19.9s,baz=338,slow=33							
QIZ	**Qiongzhong**	**18.14**	**305**	P		**Pn**	**15 39 37.0**	**-0.2**
QIZ				AP		pP	15 39 51.0	+3.1
QIZ				XP		sP	15 39 59.5	+5.8
QIZ				S		**S**	**15 43 02.0**	**-0.6**
QIZ				AMB		AMB		
	comp=Z,13nm,1.5s							
QIZ				AMB		AMB		
	comp=Z,235nm,8.1s							
QIZ				LR		LR		
	comp=E,524nm,16.2s							
QIZ				LR		LR		
	comp=Z,641nm,16.9s							
BATI	**Baumata**	**19.31**	**186**	P		**Pn**	**15 39 50.8**	**-0.6**
	comp=Z,4.2nm,0.3s,baz=149,slow=3.6,SNR=10.0							
BATI				LR		LR	15 48 10.8	
	comp=Z,602nm,19.4s,baz=29,slow=39							
SSE	**Sheshan**	**22.23**	**350**	P		**P**	**15 40 25.0**	**+3.7**
SSE				S		**S**	**15 44 24.5**	**+0.9**
SSE				AMB		AMB		
	comp=Z,19nm,0.8s,mb4.6							
SSE				AMB		AMB		
	comp=Z,74nm,3.8s							
SSE				LR		LR		
	comp=N,207nm,26.4s,MS3.5							
SSE				LR		LR		
	comp=E,100nm,26.8s,MS3.5							
SSE				LR		LR		
	comp=Z,228nm,19.9s							
SSE	**Sheshan**	**22.23**	**350**	P		**P**	**15 40 25.1**	**+3.8**
	comp=Z,19nm,0.8s,mb4.6							
SSE				S		**S**	**15 44 24.5**	**+0.9**
SSE				LR		LR		
	comp=Z,230nm,19.9s,MS3.6							
NJ2	**Nanjing**	**23.64**	**346**	*e*P		**P**	**15 40 37.0**	**+1.2**
NJ2				AP			15 40 53.8	
NJ2				XP		sP	15 41 03.3	+10
NJ2				PP			15 41 16.0	
NJ2				S		**S**	**15 44 45.0**	**-2.1**
NJ2				XS		sS	15 45 17.0	+10
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.9s,mb4.2							
NJ2				AMB		AMB		
	comp=Z,80nm,4.2s							
NJ2				LR		LR		
	comp=N,130nm,15.0s,MS3.9							
NJ2				LR		LR		
	comp=E,280nm,16.5s,MS3.9							
CBIJ	**Chichi jima**	**23.79**	**39**	P		**P**	**15 40 36.2**	**-0.9**
	comp=E,46nm,0.6s,mb5.1,baz=100,slow=21,SNR=8.2							
CBIJ				LR		LR	15 47 34.0	
	comp=E,156nm,20.3s,MS3.5,baz=138,slow=30							
GYA	**Guiyang**	**24.86**	**316**	P		**P**	**15 40 48.3**	**+1.3**
GYA				AP			15 41 05.5	
GYA				XP		sP	15 41 13.3	+8.8
GYA				PP			15 41 29.0	
GYA				PCP		PcP	15 44 22.5	+0.3
GYA				S		**S**	**15 45 03.8**	**-3.1**
GYA				XS		sS	15 45 30.3	+3.2
GYA				SCP		ScP	15 47 53.8	-3.8
GYA				PCS		PcS	15 48 02.5	0.0
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.4							
GYA				AMB		AMB		
	comp=Z,120nm,4.6s							
GYA				LR		LR		
	comp=N,490nm,13.6s,MS4.3							
GYA				LR		LR		
	comp=E,470nm,14.8s,MS4.3							
GYA				LR		LR		
	comp=Z,480nm,14.4s,MS4.1							
NANT	**Nan**	**25.95**	**294**	⇑P		**P**	**15 40 54.5**	**-2.4**
	comp=Z,138nm,1.0s,mb5.4							
KMI	**Kunming**	**26.93**	**309**	P		**P**	**15 41 07.8**	**+2.1**
KMI				XP		sP	15 41 33.0	+10
KMI				PP			15 41 56.8	
KMI				S		**S**	**15 45 40.0**	**+0.3**
KMI				XS		sS	15 46 09.5	+9.5
KMI				AMB		AMB		
	comp=Z,109nm,8.4s							
KMI				LR		LR		
	comp=N,270nm,15.5s,MS4.1							
KMI				LR		LR		
	comp=E,354nm,17.0s,MS4.1							
KMI				LR		LR		
	comp=Z,429nm,19.1s,MS4.0							
KMI	**Kunming**	**26.93**	**309**	P		**P**	**15 41 07.7**	**+2.0**
KMI							15 41 56.7	
KMI				S		**S**	**15 45 40.0**	**+0.3**
KMI				MLR		MLR		
	comp=Z,430nm,19.1s,MS4.0							
KMI	**Kunming**	**26.93**	**309**	P		**P**	**15 41 07.7**	**+2.0**
	comp=Z,0.1nm,8.4s							
KMI				sP		sP	15 41 32.9	+10
KMI				PP			15 41 56.7	
KMI				PPP			15 42 09.7	
KMI				S		**S**	**15 45 40.0**	**+0.3**
KMI				sS		sS	15 46 09.4	+9.4
KMI				SS			15 47 00.4	
KMI				SSS			15 47 20.2	
KMI				LR		LR		
	comp=Z,430nm,19.1s,MS4.0							
FITZ	**Fitzroy Crossi**	**27.06**	**180**	*e*P		**P**	**15 41 06.1**	**-0.8**
	comp=Z,15nm,0.9s,mb4.5							
FITZ	**Fitzroy Crossi**	**27.06**	**180**	P		**P**	**15 41 06.8**	**-0.1**
	comp=Z,8.3nm,0.9s,mb4.3,baz=14,slow=8.9,SNR=15							
FITZ				LR		LR	15 52 02.5	
	comp=Z,160nm,19.4s,MS3.6,baz=237,slow=37							
CHRT	**Chiangrai**	**27.11**	**296**	P		**P**	**15 41 08.0**	**+0.6**
JHJ	**Hachijo jima 2**	**27.23**	**27**	LR		LR	15 49 50.8	
	comp=Z,219nm,20.8s,MS3.7,baz=23,slow=32							
CM31	**Chiang Mai Arr**	**27.44**	**293**	*e*P		**P**	**15 41 10.9**	**+0.6**
	comp=Z,9.8nm,1.0s,mb4.3							
CMAR	**Chiang Mai Arr**	**27.44**	**293**	P		**P**	**15 41 11.1**	**+0.7**
	comp=Z,1.7nm,0.8s,mb3.6,baz=98,slow=6.3,SNR=16							
CMAR				PcP		PcP	15 44 28.6	+0.2
	comp=Z,0.5nm,0.7s,baz=113,slow=3.3,SNR=4.3							
CMAR				LR		LR	15 52 29.6	
	comp=Z,339nm,18.9s,MS3.9,baz=211,slow=37							
CMAR	**Chiang Mai Arr**	**27.44**	**293**	P		**P**	**15 41 11.1**	**+0.7**
CMAR							15 44 28.6	
CHTO	**Chiang Mai**	**27.54**	**293**	*e*P		**P**	**15 41 11.1**	**-0.2**
CHTO				pmax		pmax		
	comp=Z,18nm,1.8s,mb4.4							
CHTO	**Chiang Mai**	**27.54**	**293**	*e*P		**P**	**15 41 11.1**	**-0.1**
	comp=Z,18nm,1.8s,mb4.4							
KSRS	**Korea Array**	**28.27**	**4**	P		**P**	**15 41 17.9**	**+0.4**
	comp=Z,2.3nm,0.7s,mb3.9,baz=183,slow=11,SNR=8.3							
PMG	**Port Moresby**	**28.30**	**130**	*e*P		**P**	**15 41 18.7**	**+0.6**
PMG				pmax		pmax		
	comp=Z,11nm,0.8s							
PMG	**Port Moresby**	**28.30**	**130**	*e*P		**P**	**15 41 18.7**	**+0.6**
	comp=Z,10nm,0.8s,mb4.5							
COEN	**Coen**	**28.83**	**143**	*e*P		**P**	**15 41 21.3**	**-1.5**
	comp=Z,17nm,0.9s,mb4.8							
MAJO	**Matsushiro**	**29.60**	**21**	*e*P		**P**	**15 41 28.8**	**-0.6**
MAT	**Matsushiro**	**29.60**	**21**	P		**P**	**15 41 28.8**	**-0.6**
MJAR	**Matsushiro Arr**	**29.60**	**21**	P		**P**	**15 41 30.7**	**+1.3**
	comp=Z,2.1nm,0.8s,mb3.9,baz=195,slow=9.6,SNR=4.7							
MJAR				LR		LR	15 51 50.7	
	comp=Z,279nm,20.8s,MS3.9,baz=205,slow=33							
CD2	**Chengdu**	**29.71**	**320**	P		**P**	**15 41 32.3**	**+1.9**
CD2				AP		pP	15 41 48.8	+6.2
CD2				XP		sP	15 41 56.5	+8.4
CD2				PP		PP	15 42 31.0	-7.1
CD2				S		**S**	**15 46 23.3**	**0.0**
CD2				XS		sS	15 46 48.8	+5.1
CD2				SS		SS	15 48 02.0	-29
CD2				AMB		AMB		
	comp=Z,10.0nm,0.7s,mb4.7							
CD2				AMB		AMB		
	comp=Z,30nm,5.2s							
CD2				LR		LR		
	comp=N,720nm,18.0s,MS4.5							
CD2				LR		LR		
	comp=E,600nm,15.6s,MS4.5							
CD2				LR		LR		
	comp=Z,540nm,16.8s,MS4.2							
WRAB	**Tennant Creek**	**30.15**	**163**	*e*P		**P**	**15 41 34.0**	**-0.4**
WRAB	**Tennant Creek**	**30.15**	**163**	*e*P		**P**	**15 41 33.4**	**-1.0**
	comp=Z,11nm,0.8s,mb4.6							
WRA	**Warramunga Arr**	**30.16**	**163**	P		**P**	**15 41 34.0**	**-0.4**
	comp=Z,3.1nm,1.0s,mb4.0,baz=344,slow=8.1,SNR=20							
WB2	**Warramunga Arr**	**30.16**	**163**	*e*P		**P**	**15 41 33.9**	**-0.5**
MBWA	**Marble Bar**	**30.65**	**191**	*e*P		**P**	**15 41 36.3**	**-2.4**
	comp=Z,10nm,0.8s,mb4.7							
BJI	**Beijing**	**31.90**	**346**	P		**P**	**15 41 54.0**	**+4.4**
BJI				PP		PP	15 43 04.0	+1.7
BJI				S		**S**	**15 47 00.0**	**+2.7**
BJI				AMB		AMB		
	comp=Z,8.0nm,0.8s,mb4.6							
BJI				AMB		AMB		
	comp=Z,101nm,5.9s							
BJI				LR		LR		
	comp=N,163nm,20.3s,MS4.0							
BJI				LR		LR		
	comp=E,279nm,23.7s,MS4.0							
BJI				LR		LR		
	comp=Z,183nm,23.7s,MS3.7							
BJI	**Beijing**	**31.90**	**346**	P		**P**	**15 41 53.9**	**+4.3**
BJI							15 43 04.0	
BJI				S		**S**	**15 47 00.1**	**+2.8**
BJI				SS		SS	15 49 19.2	+3.6
BJI				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb4.6							
BJI				MLR		MLR		
	comp=Z,180nm,23.7s,MS3.7							
BJI	**Beijing**	**31.90**	**346**	P		**P**	**15 41 53.9**	**+4.3**
	comp=Z,8.0nm,0.8s,mb4.6							
BJI				PP		PP	15 43 04.0	+1.7
BJI				S		**S**	**15 47 00.1**	**+2.8**
BJI				SS		SS	15 49 19.2	+3.6
BJI				LR		LR		
	comp=Z,180nm,23.7s,MS3.7							
LZH	**Lanzhou**	**33.33**	**327**	*e*P		**P**	**15 42 04.5**	**+2.3**
LZH				AP		pP	15 42 21.5	+7.1
LZH				XP		sP	15 42 30.5	+11
LZH				PP		PP	15 43 18.3	+0.1
LZH				*e*S		**S**	**15 47 19.5**	**-0.3**
LZH				XS		sS	15 47 49.0	+8.7
LZH				*e*SS		SS	15 49 24.0	-21
LZH				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.7							
LZH				AMB		AMB		
	comp=Z,83nm,7.8s							
LZH				LR		LR		
	comp=N,495nm,14.8s							
LZH				LR		LR		
	comp=Z,912nm,16.1s,MS4.6							
LZH	**Lanzhou**	**33.33**	**327**	*e*P		**P**	**15 42 04.5**	**+2.3**
LZH				*PP		pP	15 42 21.5	+7.1
LZH							15 43 18.2	
LZH				*e*S		**S**	**15 47 19.5**	**-0.3**
LZH				*e*SS		SS	15 49 24.0	-21
LZH				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
LZH				MLR		MLR		
	comp=Z,910nm,16.1s,MS4.6							
LZH	**Lanzhou**	**33.33**	**327**	*e*P		**P**	**15 42 04.5**	**+2.3**
	comp=Z,10.0nm,1.0s,mb4.7							
LZH				pP		pP	15 42 21.5	+7.1
LZH				sP		sP	15 42 30.5	+11
LZH				PP		PP	15 43 18.2	0.0
LZH				*e*S		**S**	**15 47 19.5**	**-0.3**
LZH				sS		sS	15 47 49.0	+8.7
LZH				*e*SS		SS	15 49 24.0	-21
LZH				LR		LR		
	comp=Z,910nm,16.1s,MS4.6							
ASAR	**Alice Springs**	**33.60**	**166**	P		**P**	**15 42 04.5**	**-0.2**
	comp=Z,5.2nm,0.7s,mb4.6,baz=340,slow=7.1,SNR=66							
HHC	**Hu-ho-hao-te**	**33.94**	**341**	*e*P		**P**	**15 42 09.0**	**+1.5**
HHC				AP		pP	15 42 25.5	+5.8
HHC				XP		sP	15 42 34.0	+8.8
HHC				PP		PP	15 43 25.5	+0.5
HHC				PCP		PcP	15 44 45.0	0.0
HHC				S		**S**	**15 47 28.5**	**-0.6**
HHC				XS		sS	15 47 57.0	+7.3
HHC				SCP		ScP	15 48 22.0	-4.3
HHC				PCS		PcS	15 48 30.0	-1.0
HHC				SS		SS	15 49 41.0	-16
HHC				SCS		ScS	15 52 22.8	-5.3
HHC				AMB		AMB		
	comp=Z,15nm,0.5s,mb5.2							
HHC				AMB		AMB		
	comp=Z,79nm,5.2s							
HHC				LR		LR		
	comp=N,239nm,13.7s,MS4.2							
HHC				LR		LR		
	comp=E,227nm,12.7s,MS4.2							
HHC				LR		LR		
	comp=Z,258nm,12.3s,MS4.2							
CTA	**Charters Tower**	**35.46**	**145**	*e*P		**P**	**15 42 20.5**	**-0.3**
	comp=Z,6.8nm,1.2s,mb4.5							
CTA	**Charters Tower**	**35.46**	**145**	P		**P**	**15 42 21.2**	**+0.4**
	comp=Z,7.8nm,0.8s,mb4.7,baz=328,slow=11,SNR=12							
CTA				LR		LR	15 56 40.9	
	comp=Z,165nm,20.5s,MS3.8,baz=332,slow=36							
CTA	**Charters Tower**	**35.46**	**145**	*e*P		**P**	**15 42 20.5**	**-0.3**
CTA				pmax		pmax		
	comp=Z,7.0nm,1.2s							
CTAO	**Charters Tower**	**35.46**	**145**	*e*P		**P**	**15 42 21.2**	**+0.4**
CTAO				pmax		pmax		
	comp=Z,6.0nm,0.7s,mb4.6							
CTAO	**Charters Tower**	**35.46**	**145**	*e*P		**P**	**15 42 21.2**	**+0.4**
	comp=Z,5.9nm,0.7s,mb4.6							
MDJ	**Mudanjiang**	**35.52**	**5**	P		**P**	**15 42 23.3**	**+2.3**
MDJ				S		**S**	**15

NWAO	**Narrogin (SRO)**	**42.58**	**190**	*e*P		**P**		**15 43 20.8**	**+0.7**
NWAO					pmax	pmax			
	comp=Z,24nm,1.0s								
NWAO	**Narrogin (SRO)**	**42.58**	**190**	*e*P		**P**		**15 43 20.8**	**+0.7**
	comp=Z,24nm,1.0s,mb4.9								
GKN	**Gorkha**	**42.84**	**302**	*e*P		**P**		**15 43 23.1**	**+0.7**
STKA	**Stephens Creek**	**43.56**	**160**	*e*P		**P**		**15 43 28.0**	**-0.1**
	comp=Z,5.9nm,0.6s,mb4.5								
STKA	**Stephens Creek**	**43.56**	**160**	P		**P**		**15 43 28.6**	**+0.5**
	comp=Z,10nm,1.0s,mb4.5,baz=27,slow=4.6,SNR=9.0								
STKA					PP	PP		15 45 10.4	+0.2
	comp=Z,9.1nm,0.8s,baz=339,slow=9.7,SNR=3.1								
KOLN	**Koldanda**	**43.65**	**301**	*e*P		**P**		**15 43 29.6**	**+0.7**
	comp=Z,27nm,0.7s,mb5.1								
DANN	**Dangsing**	**43.68**	**302**	*e*P		**P**		**15 43 29.2**	**0.0**
	comp=Z,28nm,0.6s,mb5.2								
TLY	**Talaya**	**46.07**	**341**	*e*P		**P**		**15 43 48.4**	**+0.6**
TLY					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4								
TLY	**Talaya**	**46.07**	**341**	*e*P		**P**		**15 43 48.4**	**+0.5**
	comp=Z,4.5nm,0.8s,mb4.5								
HYB	**Hyderabad**	**46.40**	**285**	*i* P		**P**		**15 43 51.5**	**+0.5**
HYB	**Hyderabad**	**46.40**	**285**	*e*P		**P**		**15 43 51.5**	**+0.5**
WMQ	**Urumqi**	**47.70**	**323**	*e*P		**P**		**15 44 02.0**	**+1.3**
WMQ					AP	pP		15 44 18.0	+4.6
WMQ					XP	sP		15 44 26.0	+7.3
WMQ					PCP	PcP		15 45 30.0	+0.5
WMQ					S	**S**		**15 50 51.0**	**-2.6**
WMQ					XS	sS		15 51 20.0	+5.3
WMQ					SCS	ScS		15 53 46.0	-4.4
WMQ					AMB	AMB			
	comp=Z,10.0nm,1.2s,mb4.7								
WMQ					AMB	AMB			
	comp=Z,101nm,4.2s								
WMQ					LR	LR			
	comp=N,1μm,15.2s,MS5.1								
WMQ					LR	LR			
	comp=E,954nm,16.2s,MS5.1								
WMQ					LR	LR			
	comp=Z,691nm,18.5s,MS4.7								
DDI	**Dehra Dun**	**49.02**	**302**	*ex*		x		15 44 19.0	
HVS	**Khovu-Aksy**	**49.40**	**334**	*e*P		**P**		**15 44 18.6**	**+5.0**
HVS					pmax	pmax			
	comp=Z,12nm,1.3s,mb4.8								
PEA0B	**Petropavlovsk-**	**50.95**	**24**	*e*P		**P**		**15 44 25.8**	**+0.5**
PETK	**Petropavlovsk-**	**50.95**	**24**	P		**P**		**15 44 25.4**	**+0.1**
	comp=Z,4.5nm,0.7s,mb4.5,baz=190,slow=3.0,SNR=16								
PETK					LR	LR		16 05 04.0	
	comp=Z,139nm,19.7s,MS4.0,baz=234,slow=35								
PETK	**Petropavlovsk-**	**50.95**	**24**	P		**P**		**15 44 25.4**	**+0.1**
PETK					LR	LR		16 05 04.0	
PET	**Petropavlovsk**	**51.28**	**25**	P		**P**		**15 44 30.4**	**+2.6**
PET					pmax	pmax			
	comp=Z,44nm,1.1s,mb5.3								
PET	**Petropavlovsk**	**51.28**	**25**	P		**P**		**15 44 30.4**	**+2.6**
	comp=Z,44nm,1.1s,mb5.3								
MKAR	**Makanchi Array**	**52.52**	**324**	P		**P**		**15 44 37.0**	**-0.1**
	comp=Z,4.4nm,0.6s,mb4.5,baz=123,slow=8.2,SNR=47								
YAK	**Yakutsk**	**52.88**	**2**	*e*P		**P**		**15 44 43.1**	**+3.5**
YAK					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
TKM2	**Tokmak 2**	**55.01**	**317**	*e*P		**P**		**15 44 54.5**	**-0.9**
TKM2					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.6								
TKM2	**Tokmak 2**	**55.01**	**317**	*e*P		**P**		**15 44 54.5**	**-1.0**
	comp=Z,5.5nm,0.8s,mb4.6								
ZALV	**Zalesovo Beam**	**55.29**	**332**	P		**P**		**15 44 55.6**	**-1.6**
	comp=Z,0.8nm,0.4s,mb4.1,baz=108,slow=4.8,SNR=4.9								
ZALV					LR	LR		16 09 48.5	
	comp=Z,124nm,20.4s,MS4.0,baz=110,slow=37								
UCH	**Uchtor**	**55.49**	**315**	*e*P		**P**		**15 45 00.4**	**+1.5**
	comp=Z,12nm,0.9s,mb4.9								
AML	**Almayashu**	**56.02**	**315**	*e*P		**P**		**15 45 02.6**	**-0.1**
	comp=Z,5.0nm,0.5s,mb4.8								
EKS2	**Erkin-Say**	**56.15**	**316**	*e*P		**P**		**15 45 04.2**	**+0.5**
	comp=Z,67nm,0.6s								
KURK	**Kurchatov**	**56.62**	**326**	P		**P**		**15 45 06.2**	**-0.6**
	comp=Z,3.8nm,0.5s,mb4.7,baz=125,slow=7.3,SNR=7.5								
KURK	**Kurchatov**	**56.62**	**326**	*e*P		**P**		**15 45 06.0**	**-0.8**
KURK					pmax	pmax			
	comp=Z,18nm,1.3s,mb4.9								
KURK	**Kurchatov**	**56.62**	**326**	*e*P		**P**		**15 45 06.2**	**-0.6**
	comp=Z,18nm,1.1s,mb5.0								
SEY	**Seymchan**	**57.08**	**14**	*e*P		**P**		**15 45 12.0**	**+2.1**
KBL	**Kabul**	**57.41**	**305**	*e*P		**P**		**15 45 13.0**	**+0.2**
KBL					pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.8								
KBL	**Kabul**	**57.41**	**305**	*e*P		**P**		**15 45 13.0**	**+0.2**
	comp=Z,9.4nm,0.8s,mb4.9								
KK31	**Karatay Array**	**58.56**	**315**	*i* P		**P**		**15 45 20.0**	**-0.7**
KK31					pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.4								
BVA0	**Borovoye Array**	**62.21**	**326**	*i* P		**P**		**15 45 43.7**	**-1.7**
BVA0					pmax	pmax			
	comp=Z,2.0nm,1.3s,mb4.1								
BVAR	**Borovoye Array**	**62.21**	**326**	P		**P**		**15 45 44.6**	**-0.7**
	comp=Z,1.9nm,0.7s,mb4.4,baz=120,slow=8.8,SNR=10								
BRVK	**Borovoye**	**62.28**	**326**	*e*P		**P**		**15 45 43.4**	**-2.4**
BRVK					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb5.0								
BRVK	**Borovoye**	**62.28**	**326**	*e*P		**P**		**15 45 43.4**	**-2.5**
	comp=Z,10.0nm,0.8s,mb5.0								
TIXI	**Tiksi**	**62.49**	**1**	*e*P		**P**		**15 45 48.6**	**+1.7**
TIXI					pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.8								
TIXI	**Tiksi**	**62.49**	**1**	*e*P		**P**		**15 45 47.6**	**+0.7**
	comp=Z,9.0nm,0.8s,mb5.0								
BILL	**Bilibino**	**64.67**	**16**↑	*e*P		**P**		**15 46 04.7**	**+3.3**
BILL				*e*				15 48 21.1	
BILL					*e*S	**S**		**15 54 40.6**	**+2.7**
BILL					*e*SS	SS		15 58 45.9	-3.3
BILL					pmax	pmax			
	comp=Z,13nm,1.5s,mb4.7								
AB31	**Akbulak array**	**67.29**	**320**	*i* P		**P**		**15 46 17.5**	**-1.0**
AKTK	**Aktyubinsk**	**68.76**	**321**	P		**P**		**15 46 26.6**	**-1.1**
AKTO	**Aktyubinsk**	**68.76**	**321**	P		**P**		**15 46 26.6**	**-1.2**
	comp=Z,2.2nm,0.8s,mb4.2,baz=68,slow=7.4,SNR=7.0								
AKTO	**Aktyubinsk**	**68.76**	**321**	P		**P**		**15 46 25.0**	**-2.7**
AKTO					pmax	pmax			
	comp=Z,1.0nm,1.2s,mb3.6								
SVE	**Sverdlovsk**	**68.80**	**328**	*e*P		**P**		**15 46 27.0**	**-0.8**
SVE					pmax	pmax			
	comp=Z,26nm,1.2s,mb5.0								
ARU	**Arti**	**69.80**	**327**	*e*P		**P**		**15 46 37.3**	**+3.3**
ARU				*e*				15 49 09.2	
ARU					*e*S	S		15 55 47.3	+7.5
ARU					*e*SS	SS		16 00 15.6	+6.7
ARU					MLR	MLR			
	comp=Z,226nm,18.0s,MS4.5								
ARU	**Arti**	**69.80**	**327**	*e*P		**P**		**15 46 31.5**	**-2.5**
	comp=Z,5.1nm,0.5s,mb4.7								
CASY	**Casey**	**76.02**	**186**	*e*P		**P**		**15 47 09.3**	**-1.3**
IMA2	**Indian Mountai**	**77.94**	**24**	*e*P		**P**		**15 47 21.9**	**+0.3**
KDAK	**Kodiak Island**	**77.98**	**33**	P		**P**		**15 47 21.6**	**-0.3**
	comp=Z,6.1nm,0.7s,mb4.6,baz=326,slow=3.6,SNR=3.4								
COLD	**Coldfoot**	**79.40**	**23**	*e*P		**P**		**15 47 27.1**	**-2.4**
	comp=Z,4.1nm,0.8s,mb4.4								
MCK	**McKinley**	**79.88**	**27**	*e*P		**P**		**15 47 30.1**	**-2.0**
MCK					pmax	pmax			
	comp=Z,9.0nm,0.6s,mb4.9								
MCK	**McKinley**	**79.88**	**27**	*e*P		**P**		**15 47 30.1**	**-2.0**
	comp=Z,9.3nm,0.6s,mb4.9								
KLMR	**Klimovskoe**	**80.17**	**330**	P		**P**		**15 47 31.4**	**-2.4**
KLMR					pmax	pmax			
	comp=Z,16nm,1.4s,mb4.8								
COLA	**College**	**80.34**	**26**	P		**P**		**15 47 38.7**	**+4.1**
OBN	**Obninsk**	**82.01**	**325**↓	*e*P		**P**		**15 47 47.8**	**+4.1**
OBN					*e*SS	SS		16 03 11.9	-1.9
OBN					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4								
OBN					MLR	MLR			
	comp=Z,200nm,17.0s,MS4.5								
MALT	**Malatya**	**82.18**	**308**	*e*P		**P**		**15 47 45.8**	**+0.8**
MALT					pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.3								
MALT	**Malatya**	**82.18**	**308**	*e*P		**P**		**15 47 45.8**	**+0.8**
	comp=Z,3.5nm,0.9s,mb4.3								
JOF	**Joensuu**	**83.88**	**333**	*e*p		**P**		**15 47 52.5**	**-0.7**
	comp=Z,1.2nm,0.4s,mb4.4								
DAWY	**Dawson**	**84.06**	**26**	*e*P		**P**		**15 47 54.5**	**+0.4**
ARCES	**ARCESS Array B**	**85.01**	**340**	P		**P**		**15 47 57.7**	**-1.1**
	comp=Z,3.8nm,0.9s,mb4.5,baz=93,slow=6.3,SNR=7.1								
ARCES					LR	LR		16 30 16.8	
	comp=Z,86nm,19.0s,MS4.2,baz=187,slow=39								
ARCES	**ARCESS Array B**	**85.01**	**340**	P		**P**		**15 47 57.7**	**-1.1**
ARCES					LR	LR		16 30 16.8	
HYT	**Haines Junctio**	**85.46**	**29**	*e*P		**P**		**15 48 01.9**	**+0.6**
KAF	**Kangasniemi**	**86.31**	**332**	*ep*		**P**		**15 48 04.6**	**-0.8**
	comp=Z,0.8nm,0.4s,mb4.3								
KAF	**Kangasniemi**	**86.31**	**332**	*e*P		**P**		**15 48 04.6**	**-0.8**
KAF					pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.4								
AKASG	**Malin Array Be**	**87.00**	**321**	P		**P**		**15 48 08.3**	**-0.7**
	comp=Z,0.3nm,0.3s,mb4.0,baz=53,slow=4.8,SNR=5.4								
NOA	**NORSAR Array B**	**93.47**	**334**	P		**P**		**15 48 37.8**	**-1.2**
	comp=Z,0.7nm,0.7s,mb4.2,baz=113,slow=1.1,SNR=3.5								
NOA					LR	LR		16 34 19.0	
	comp=Z,122nm,19.8s,MS4.4,baz=65,slow=38								
YKA	**Yellowknife Ar**	**95.07**	**24**	P		**P**		**15 48 45.3**	**-1.0**
	comp=Z,1.1nm,0.7s,mb4.4,baz=301,slow=4.8,SNR=3.0								
CLL	**Collm**	**96.61**	**324**	*e*P		**P**		**15 48 54.0**	**+0.3**
GERES	**GERESS Array B**	**97.16**	**322**	LR		LR		16 34 30.9	
	comp=Z,103nm,18.8s,MS4.3,baz=159,slow=36								
TXAR	**Lajitas Array**	**119.08**	**49**	PKP		PKPdf		15 54 13.9	+0.8
	comp=Z,2.6nm,0.6s,baz=320,slow=1.8,SNR=3.5								
TORD	**Torodi Ar. Bea**	**120.04**	**291**	PKP		PKPdf		15 54 13.8	-1.4
	comp=Z,0.4nm,0.6s,baz=48,slow=1.8,SNR=3.4								
PLCA	**Paso Flores**	**145.43**	**158**	PKPbc		PKPbc		15 55 02.6	+0.7
	comp=Z,4.2nm,0.9s,baz=230,slow=3.3,SNR=9.4								
LPAZ	**La Paz**	**164.86**	**119**	PKP		PKPdf		15 55 32.3	+3.8
	comp=Z,1.3nm,0.8s,baz=234,slow=1.2,SNR=3.1								
LPAZ					PKPab	PKPab		15 56 25.5	+0.8
	comp=Z,0.6nm,0.7s,baz=207,slow=4.5,SNR=2.0								

ISCJB ***27*** *15:40:01.1±0.3, 4282N±002×107W±002, h11km±3km, Error ellipse: s-maj=3.8km s-min=2.8km az=172.2*
NEIC ***27*** *15:40:01.3, 4280N×109W, h5km, ML2.4(STR), ML2.8(LDG), MN2.4(MDD), After STR.*
STR ***27*** *15:40:01.3±0.2, 4280N×109W, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
CSEM ***27*** *15:40:02.0±0.1, 4284N×105W, h5km, ML2.9/8, Error ellipse: s-maj=1.6km s-min=0.8km az=3.0*
LDG ***27*** *15:40:02.1±0.1, 4285N×105W, h5km, Md3.0/2, Ml2.8/8, Error ellipse: s-maj=1.4km s-min=1.1km az=11.0*
MDD ***27*** *15:40:02.3±0.2, 4284N×107W, h4km±4km, mbLg2.4/21, Error ellipse: s-maj=2.3km s-min=1.3km az=169.0, PRIMO*
ISC 27 15:40:01.7±0.3, 4288N±002×105W±002, h18km±2km, n89, σ1s06/155, 1C-3D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LARF	**Larrau**	**0.17**	**16**	Pg	**Pg**	**Pg**	**15 40 06.4**	**+0.3**
LARF				Sg	**Sg**	**Sg**	**15 40 10.0**	**+0.9**
LARF	**Larrau**	**0.17**	**16**	P	**Pg**	**Pg**	**15 40 06.5**	**+0.5**
LARF				S	**Sg**	**Sg**	**15 40 10.1**	**+1.1**
EORO	**Oroz-Betelu**	**0.19**	**274**	⇓Pg	**Pg**	**Pg**	**15 40 05.4**	**-0.9**
	116nm,0.2s,SNR=18							
EORO				Lg			15 40 08.9	
	503nm,0.2s,SNR=7.9							
EORO	**Oroz-Betelu**	**0.19**	**274**	Pg	**Pg**	**Pg**	**15 40 05.4**	**-1.0**
	116nm,0.2s,SNR=18							
EORO				Lg			15 40 08.9	
	503nm,0.2s,SNR=7.9							
SJPF	**Ste Jean**	**0.27**	**332**	*e*Pg	**Pg**	**Pg**	**15 40 07.9**	**+0.3**
SJPF				*e*Sg	**Sg**	**Sg**	**15 40 12.0**	**+0.3**
	345nm,0.4s							
SJPF	**Ste Jean**	**0.27**	**332**	*e*Pg	**Pg**	**Pg**	**15 40 07.9**	**+0.3**
SJPF				*e*Sg	**Sg**	**Sg**	**15 40 12.0**	**+0.3**
	172nm,0.4s							
IZUN	**Zunzarren**	**0.30**	**267**	⇑Pg	**Pg**	**Pg**	**15 40 07.3**	**-0.8**
	32nm,0.2s,SNR=18							
IZUN				Lg			15 40 12.0	
	133nm,0.2s,SNR=7.9							
IZUN	**Zunzarren**	**0.30**	**267**	Pg	**Pg**	**Pg**	**15 40 07.3**	**-0.8**
	32nm,0.2s,SNR=18							
IZUN				Lg			15 40 12.0	
	100nm,0.2s,SNR=7.9							
ATE	**Arette**	**0.33**	**51**	Pg	**Pg**	**Pg**	**15 40 09.3**	**+0.6**
ATE				Sg	**Sg**	**Sg**	**15 40 15.2**	**+1.8**
ATE	**Arette**	**0.33**	**51**	P	**Pg**	**Pg**	**15 40 09.4**	**+0.7**
ATE				S	**Sg**	**Sg**	**15 40 15.3**	**+1.9**
ORDF	**Ordiarp**	**0.35**	**14**	Pg	**Pg**	**Pg**	**15 40 09.8**	**+0.9**
ORDF	**Ordiarp**	**0.35**	**14**	P	**Pg**	**Pg**	**15 40 09.8**	**+0.9**
ORDF				S	**Sg**	**Sg**	**15 40 15.4**	**+1.6**
IUNC	**Unciti**	**0.35**	**250**	Pg	**Pg**	**Pg**	**15 40 08.3**	**-0.7**
	29nm,0.2s,SNR=18							
IUNC				Lg			15 40 14.7	
	436nm,0.3s,SNR=31							
IUNC	**Unciti**	**0.35**	**250**	Pg	**Pg**	**Pg**	**15 40 08.4**	**-0.6**
	37nm,0.3s,SNR=18							
FDAF	**Les Forges d'A**	**0.36**	**99**	P	**Pg**		**15 40 08.8**	**-0.5**
FDAF				S	**Sg**		**15 40 15.3**	**+1.0**
ETSF	**Etsaut**	**0.36**	**87**	*e*Pg	**Pg**		**15 40 09.1**	**-0.1**
ETSF				*e*Sg	**Sg**		**15 40 14.5**	**+0.2**
	157nm,0.3s							
ETSF	**Etsaut**	**0.36**	**87**	*e*Pg	**Pg**		**15 40 09.1**	**-0.1**
ETSF				*e*Sg	**Sg**		**15 40 14.5**	**+0.2**
	78nm,0.3s							
IUSE	**Utxeti**	**0.37**	**281**	⇓Pg	**Pg**	**Pg**	**15 40 09.0**	**-0.4**
	15nm,0.1s,SNR=18							
IUSE				Lg			15 40 15.2	
	98nm,0.2s,SNR=63							
IUSE	**Utxeti**	**0.37**	**281**	Pg	**Pg**	**Pg**	**15 40 09.1**	**-0.3**
	15nm,0.1s,SNR=30							
EARA	**Aranguren**	**0.40**	**255**	Pg	**Pg**	**Pg**	**15 40 09.5**	**-0.4**
	33nm,0.2s,SNR=9.9							
EARA				Lg			15 40 16.5	
	174nm,0.2s,SNR=7.9							
OSSF	**Osses**	**0.41**	**338**	Pg	**Pg**	**Pg**	**15 40 10.4**	**+0.4**
OSSF				Sg	**Sg**	**Sg**	**15 40 16.9**	**+1.2**
OSSF	**Osses**	**0.41**	**338**	P	**Pg**	**Pg**	**15 40 10.6**	**+0.5**
OSSF				S	**Sg**	**Sg**	**15 40 16.7**	**+1.0**
ELIZ	**Elizondo**	**0.45**	**309**	Pg	**Pg**	**Pg**	**15 40 10.8**	**0.0**
	25nm,0.2s,SNR=86							
ELIZ				Lg			15 40 18.3	
	66nm,0.2s,SNR=17							
ELIZ	**Elizondo**	**0.45**	**309**	Pg	**Pg**	**Pg**	**15 40 10.9**	**+0.1**
	25nm,0.2s,SNR=86							
ELIZ	**Elizondo**	**0.45**	**309**	Pg	**Pg**	**Pg**	**15 40 10.9**	**+0.1**
ELIZ				Lg			15 40 18.2	
EALK	**Alkurruntz**	**0.48**	**316**	⇓Pg	**Pg**	**Pg**	**15 40 11.5**	**+0.3**
	1.5nm,0.1s,SNR=18							
EALK				Lg			15 40 18.9	
	241nm,0.4s,SNR=7.9							
EALK	**Alkurruntz**	**0.48**	**316**	Pg	**Pg**	**Pg**	**15 40 11.6**	**+0.3**
EALK				Lg			15 40 19.3	
REYF	**Montagne du Re**	**0.52**	**68**	Pg	**Pg**	**Pg**	**15 40 12.3**	**+0.2**
REYF				Sg	**Sg**	**Sg**	**15 40 20.3**	**+1.2**
REYF	**Montagne du Re**	**0.52**	**68**	P	**Pg**	**Pg**	**15 40 12.4**	**+0.3**
REYF				S	**Sg**	**Sg**	**15 40 20.4**	**+1.3**
VIEF	**Viey**	**0.79**	**89**	Pg	**Pg**	**Pg**	**15 40 16.6**	**-0.5**
VIEF				Sg	**Sg**	**Sg**	**15 40 26.6**	**-1.0**
VIEF	**Viey**	**0.79**	**89**	P	**Pb**	**Pb**	**15 40 16.6**	**-0.2**
VIEF				S	**Sb**	**Sb**	**15 40 28.1**	**+0.8**
LABF	**Labassere**	**0.84**	**78**	Pg	**Pg**	**Pg**	**15 40 18.0**	**-0.1**
LABF				Sg	**Sg**	**Sg**	**15 40 30.2**	**+1.0**
LABF	**Labassere**	**0.84**	**78**	P	**Pb**	**Pb**	**15 40 18.2**	**+0.4**
LABF				S	**Sb**	**Sb**	**15 40 30.1**	**+1.4**
EBIE	**Bielsa**	**0.90**	**102**	Pg	**Pg**	**Pg**	**15 40 18.7**	**-0.4**
	1.5nm,0.2s,SNR=21							
EBIE				Lg			15 40 28.8	
	6.0nm,0.3s,SNR=7.9							
EBIE	**Bielsa**	**0.90**	**102**	Pg	**Pg**	**Pg**	**15 40 18.7**	**-0.5**
	1.5nm,0.2s,SNR=21							
EPF	**Esparros**	**1.03**	**81**	*e*P	**Pb**	**Pb**	**15 40 22.8**	**+1.8**
EPF				*e*Sg	**Sg**	**Sg**	**15 40 35.5**	**+0.3**
	36nm,0.2s							
EPF	**Esparros**	**1.03**	**81**	Pg	**Pg**	**Pg**	**15 40 21.2**	**-0.5**
EPF				Lg			15 40 35.5	
	18nm,0.2s							
EPF	**Esparros**	**1.03**	**81**	*e*P	**Pb**	**Pb**	**15 40 22.8**	**+1.8**
EPF				*e*Sg	**Sg**	**Sg**	**15 40 35.5**	**+0.3**
	18nm,0.2s							
EPF	**Esparros**	**1.03**	**81**	*e*Pg	**Pg**	**Pg**	**15 40 21.2**	**-0.5**
EPF				*e*P			15 40 22.8	
EPF				*e*Sg	**Sg**	**Sg**	**15 40 35.5**	**+0.3**
ECRI	**Cripan**	**1.11**	**256**	Pg	**Pg**	**Pg**	**15 40 23.3**	**+0.2**
	5.3nm,0.2s,SNR=7.9							
ECRI				Lg			15 40 38.8	
	24nm,0.2s,SNR=7.9							
ECRI	**Cripan**	**1.11**	**256**	Pg	**Pg**	**Pg**	**15 40 23.1**	**0.0**
	3.0nm,0.2s,SNR=7.9							
ECRI	**Cripan**	**1.11**	**256**	Pg	**Pg**	**Pg**	**15 40 23.1**	**0.0**
ECRI				Lg			15 40 40.1	
ESAC	**San Caprasio**	**1.23**	**159**	Pg	**Pg**	**Pg**	**15 40 24.9**	**-0.6**
	50nm,0.2s,SNR=13							
ESAC				Lg			15 40 42.1	
	281nm,0.3s,SNR=13							
ESAC	**San Caprasio**	**1.23**	**159**	Pg	**Pg**	**Pg**	**15 40 24.9**	**-0.6**
	3.3nm,0.1s,SNR=13							
ESAC	**San Caprasio**	**1.23**	**159**	Pg	**Pg**	**Pg**	**15 40 24.9**	**-0.6**
ESAC				Lg			15 40 42.1	
MELF	**Melles**	**1.33**	**90**	P	**Pn**	**Pn**	**15 40 27.9**	**+2.5**
MELF				S	**Sn**	**Sn**	**15 40 45.2**	**+2.6**
ELAN	**Lanestosa**	**1.78**	**282**	Pg	**Pg**	**Pg**	**15 40 34.9**	**-1.0**
	2.2nm,0.2s,SNR=7.9							
ELAN				Lg			15 40 59.0	
	8.4nm,0.2s,SNR=7.9							
ELAN	**Lanestosa**	**1.78**	**282**	Pg	**Pg**	**Pg**	**15 40 35.1**	**-0.8**
	2.2nm,0.2s,SNR=7.9							
ELAN	**Lanestosa**	**1.78**	**282**	Pg	**Pg**	**Pg**	**15 40 35.1**	**-0.8**
ELAN				Lg			15 40 59.2	
EMIR	**Miracle**	**2.14**	**116**	Pg	**Pg**	**Pg**	**15 40 41.6**	**-1.1**
	5.5nm,0.2s,SNR=7.9							
EMIR				Lg			15 41 10.0	
	7.6nm,0.2s,SNR=7.9							
EMIR	**Miracle**	**2.14**	**116**	Pg	**Pg**	**Pg**	**15 40 41.6**	**-1.1**
	5.5nm,0.2s,SNR=7.9							
ERTA	**Horta de San J**	**2.18**	**151**	Pn	**Pn**	**Pn**	**15 40 37.8**	**+0.7**
	0.6nm,0.2s,SNR=4.0							
ERTA				Pg	**Pg**	**Pg**	**15 40 42.2**	**-1.3**
	1.2nm,0.2s							
ERTA				Lg			15 41 10.2	
	15nm,0.3s,SNR=7.9							
ERTA	**Horta de San J**	**2.18**	**151**	Pn	**Pn**	**Pn**	**15 40 37.8**	**+0.8**
	SNR=4.0							
ERTA	**Horta de San J**	**2.18**	**151**	Pg	**Pg**	**Pg**	**15 40 42.2**	**-1.3**
	1.2nm,0.2s,SNR=4.0							
ERTA	**Horta de San J**	**2.18**	**151**	Pn	**Pn**	**Pn**	**15 40 37.8**	**+0.7**
ERTA				Pg	**Pg**	**Pg**	**15 40 42.2**	**-1.3**
ERTA				Lg			15 41 10.3	
ETOR	**Torete**	**2.19**	**200**	Pn	**Pn**	**Pn**	**15 40 38.8**	**+1.7**
	2.3nm,0.2s,SNR=7.9							
ETOR				Pg	**Pg**	**Pg**	**15 40 43.2**	**-0.4**
	9.9nm,0.2s,SNR=7.9							
ETOR				Sn	**Sn**	**Sn**	**15 41 05.8**	**+2.0**
	6.1nm,0.3s,SNR=7.9							
ETOR				Lg			15 41 12.0	
	30nm,0.4s,SNR=4.0							
ETOR	**Torete**	**2.19**	**200**	Pn	**Pn**	**Pn**	**15 40 38.7**	**+1.5**
	2.3nm,0.2s,SNR=7.9							
ETOR	**Torete**	**2.19**	**200**	Pn	**Pn**	**Pn**	**15 40 38.7**	**+1.6**
ETOR				Lg			15 41 10.7	
EPOB	**Poblet**	**2.20**	**133**	Pn	**Pn**	**Pn**	**15 40 37.3**	**0.0**
	0.7nm,0.2s,SNR=4.0							
EPOB				Pg	**Pg**	**Pg**	**15 40 43.0**	**-0.8**
	1.4nm,0.1s,SNR=7.0							
EPOB				Lg			15 41 10.8	
	7.6nm,0.2s,SNR=8.8							
EPOB	**Poblet**	**2.20**	**133**	Pn	**Pn**	**Pn**	**15 40 38.3**	**+1.0**
	SNR=4.0							
EPOB	**Poblet**	**2.20**	**133**	Pg	**Pg**	**Pg**	**15 40 43.0**	**-0.8**
	1.4nm,0.1s,SNR=7.0							
EPOB	**Poblet**	**2.20**	**133**	Pn	**Pn**	**Pn**	**15 40 38.3**	**+1.0**
EPOB				Pg	**Pg**	**Pg**	**15 40 43.0**	**-0.8**
EPOB				Lg			15 41 10.8	
LFF	**La Frestale**	**2.43**	**32

baz=299
EAST Anshuo 0.62 304⇑*i*P Pg 16 19 08.0 -0.5
baz=299
EAST S Sg 16 19 15.7 -0.9
baz=299
HEN Hengchun 0.62 267⇑*i*P Pg 16 19 09.2 +0.7
baz=257
HEN *i* S Sg 16 19 17.7 +1.1
baz=257
ECL Taimali 0.69 323 P Pg 16 19 08.8 -1.1
baz=323
ECL *e*S Sg 16 19 18.1 -0.9
baz=323
TTN Taitung 0.75 342 *e*P Pg 16 19 11.1 +0.1
baz=345
TTN *e*S Sg 16 19 21.4 +0.6
baz=345
SCZT Fangliau 0.80 295⇑*i*P Pg 16 19 11.2 -0.8
baz=290
TWG Pinlang 0.83 339 *e*P Pg 16 19 12.4 -0.3
baz=341
TWG *e*S Sg 16 19 23.0 -0.5
baz=341
SSD Sandimen 1.00 315 *e*P Pg 16 19 15.4 -0.4
baz=313
TWP Hsiaoliuchiu 1.01 288 *e*P Pg 16 19 16.6 +0.6
baz=283
TWP *e*S Sg 16 19 30.9 +1.8
baz=283
CHKT Chengkung 1.05 358 *e*P Pg 16 19 16.3 -0.6
baz=2.0
KAU Kaohsiung 1.14 298 *e*P Pb 16 19 17.6 -0.9
baz=294
KAU *e*S Sg 16 19 33.1 -0.2
baz=294
TWM1 Shoushan 1.19 311 *e*P Pb 16 19 19.7 +0.3
baz=309
TWM1 *e*S Sb 16 19 35.3 +0.4
baz=309
ELDTW Lidau 1.20 343 *e*P Pb 16 19 18.7 -0.7
baz=344
STYT Tauyuan 1.27 332 *e*P Pn 16 19 19.4 -1.0
baz=332
STYT *e*S Sb 16 19 37.0 +0.1
baz=332
SGST Jiashian 1.28 324 *e*P Pn 16 19 20.8 +0.1
baz=324
SGST *e*S Sb 16 19 37.2 -0.2
baz=324
TWF1 Yuli 1.31 356 *e*P Pn 16 19 19.7 -1.3
baz=358
TWF1 *e*S Sb 16 19 37.9 -0.3
baz=358
CHN1 Nanshi 1.40 325 *e*P Pn 16 19 22.1 -0.1
baz=324
CHN1 *e*S Sb 16 19 40.5 -0.2
baz=324
WTP Ta-pu 1.40 329 *e*P Pn 16 19 21.7 -0.6
baz=329
WTP *e*S Sn 16 19 40.6 -0.3
baz=329
EHY Hungye 1.46 357 *e*P Pn 16 19 23.2 +0.1
baz=359
TAI1 Yung-k'ang 1.47 313 *e*P Pn 16 19 22.8 -0.5
baz=311
TAI1 *e*S Sn 16 19 41.8 -0.8
baz=311
TWK Hsinying 1.48 325 *e*P Pn 16 19 23.8 +0.4
baz=325
TWK *e*S Sn 16 19 42.7 -0.2
baz=325
YUS Yu-Shan 1.50 344 *e*P Pn 16 19 23.4 -0.2
baz=345
YUS *e*S Sn 16 19 43.2 -0.1
baz=345
CHN4 Tsaushan 1.50 330 *e*P Pn 16 19 24.0 +0.4
baz=330
CHN4 *e*S Sn 16 19 43.0 -0.4
baz=330
ALS Alishan 1.56 339 *e*P Pn 16 19 24.8 +0.4
baz=340
ALS *e*S Sn 16 19 46.8 +1.9
baz=340
SCLT Jiali 1.59 316 *e*P Pn 16 19 24.7 -0.1
baz=314
SCLT *e*S Sn 16 19 44.7 -0.7
baz=314
CHN5 Tsauling 1.69 337 *e*P Pn 16 19 26.0 -0.2
baz=337
CHN5 *e*S Sn 16 19 48.1 +0.2
baz=337
CHN8 Yiju 1.70 320 *e*P Pn 16 19 26.2 -0.2
baz=319
CHN8 *e*S Sn 16 19 48.0 -0.3
baz=319
CHN2 Minshiung 1.71 330 *e*P Pn 16 19 26.3 -0.2
baz=330
CHN2 *e*S Sn 16 19 48.1 -0.4
baz=330
ESL Shilin 1.77 1 *e*P Pn 16 19 27.3 +0.1
baz=3.0
WGK Gukeng 1.81 335 *e*P Pn 16 19 28.6 +0.7
baz=335
WGK *e*S Sn 16 19 51.0 +0.1
baz=335
SMLT Sun Moon Lake 1.89 346 *e*P Pn 16 19 29.5 +0.5
baz=347
SMLT *e*S Sn 16 19 52.9 0.0
baz=347
TYC Yuchr 1.92 345 P Pn 16 19 29.9 +0.4
baz=346
TYC *e*S Sn 16 19 54.3 +0.6
baz=346
WSF Szhu 1.93 326 *e*P Pn 16 19 29.3 -0.2
baz=325
WSF *e*S Sn 16 19 53.4 -0.4
baz=325
WNT Mingjian 1.94 340 *e*P Pn 16 19 30.0 +0.3
baz=341
WNT *e*S Sn 16 19 54.0 -0.3
baz=341
WTCT Ta-ch'eng 2.09 331 *e*P Pn 16 19 32.2 +0.5
baz=330
WTCT *e*S Sn 16 19 57.9 +0.1
baz=330
WHF Hehuan Shan 2.10 357 *e*P Pn 16 19 32.5 +0.7
baz=358
WHF *e*S Sn 16 19 58.6 +0.5
baz=358
TCU Taichung 2.20 342 *e*P Pn 16 19 32.8 -0.5
baz=343
TCU *e*S Sn 16 20 00.7 +0.1
baz=343
TWT Tachien 2.21 355 *e*P Pn 16 19 34.4 +1.0
baz=355
TWT *e*S Sn 16 20 01.4 +0.5
baz=355
PNG Penghu 2.28 312 *e*P Pn 16 19 32.8 -1.6
baz=311
TWQ1 Liyutan 2.37 346 *e*P Pn 16 19 36.0 +0.5
baz=347
TWQ1 *e*S Sn 16 20 05.0 +0.3
baz=347
NNS Nan Shan 2.39 359 *e*P Pn 16 19 36.6 +0.7
baz=1.0
NNS *e*S Sn 16 20 05.0 -0.2
baz=1.0
ENA Nanau 2.40 7 *e*P Pn 16 19 36.5 +0.6
baz=9.0
ENA *e*S Sn 16 20 06.2 +0.7
baz=9.0
NSY Sanyi 2.44 346 *e*P Pn 16 19 36.9 +0.4
baz=347
NSY *e*S Sn 16 20 06.7 +0.2
baz=347
TWC Suao 2.59 9 *e*P Pn 16 19 39.5 +0.9
baz=11
ENTT Nioudou 2.59 3 *e*P Pn 16 19 39.1 +0.5
baz=5.0
ENTT *e*S Sn 16 20 10.7 +0.5
baz=5.0
NSTT Nanjuang 2.60 352 *e*P Pn 16 19 39.3 +0.5
baz=353
NSTT *e*S Sn 16 20 10.8 +0.3
baz=353
NSK Sanguang 2.62 359 *e*P Pn 16 19 39.8 +0.7
NSK *e*S Sn 16 20 11.5 +0.5
TWE Neicheng 2.68 5 *e*P Pn 16 19 41.1 +1.3
baz=6.0
TWE *e*S Sn 16 20 13.2 +0.8
baz=6.0
YOJ Yonaguni jima 2.83 31 P Pn 16 19 41.9 0.0
YOJ *e*S Sn 16 20 12.2 -3.9
HATJ Hateruma jima 2.99 47 P Pn 16 19 42.3 -1.8
HATJ *e*S Sn 16 20 13.7 -6.3
IRIF Iriomote-Funau 3.13 43 P Pn 16 19 44.6 -1.5
IRIF *e*S Sn 16 20 19.2 -4.4
JKRS Kuro-shima 3.25 47 P Pn 16 19 46.2 -1.5
JKRS *e*S Sn 16 20 20.8 -5.6
JIJ Ishigaki jima 3.42 47 P Pn 16 19 48.0 -2.1
JIJ S Sn 16 20 25.0 -5.7
KNM Kinmen 3.61 311 *e*P Pn 16 19 53.7 +1.0
baz=309
JTJ Tarama 3.99 49 P Pn 16 19 56.4 -1.4
JTJ *e*S Sn 16 20 39.6 -5.1

IDC 27 16:23:40.8±5.9, 1864S×17398W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/18, mbtmp3.7/3, Error ellipse: s-maj=313.0km s-min=49.9km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**48.64**	**260**	P	P	16 32 26.7	-0.1
	0.2nm,0.4s,baz=98,slow=7.7,SNR=13						
ASAR	**Alice Springs**	**48.65**	**255**	P	P	16 32 26.7	-0.1
	0.5nm,0.5s,baz=90,slow=7.3,SNR=9.3						
FITZ	**Fitzroy Crossi**	**57.06**	**260**	P	P	16 33 29.3	+0.2
	0.7nm,0.5s,baz=34,slow=7.3,SNR=3.6						
GERES	**GERESS Array B**	**149.23**	**350**	PKPbc	PKPbc	16 43 30.8	-0.5
	0.6nm,0.6s,baz=22,slow=2.1,SNR=5.1						

IDC 27 16:25:03.0±4.1, 1861S×17600W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/17, mbtmp3.8/4, Error ellipse: s-maj=278.3km s-min=31.5km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.76**	**260**	P	P	16 33 35.1	+0.6
	0.5nm,0.3s,baz=97,slow=7.4,SNR=27						
ASAR	**Alice Springs**	**46.81**	**255**	P	P	16 33 34.9	+0.1
	1.9nm,0.7s,baz=90,slow=8.5,SNR=23						
FITZ	**Fitzroy Crossi**	**55.17**	**261**	P	P	16 34 36.9	-0.9
	1.0nm,0.8s,baz=83,slow=8.1,SNR=2.9						
NVAR	**Mina Array Bea**	**78.36**	**43**	P	P	16 37 05.8	+0.4
	0.7nm,0.9s,baz=210,slow=5.2,SNR=3.5						

IDC 27 16:47:26.4±3.7, 166N×97.14E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/21, mbtmp3.7/5, Error ellipse: s-maj=207.9km s-min=23.9km az=53.0
ISCJB 27 16:47:30.4±1.6, 19N±03×974E±03, h33km, mb3.8/6, Error ellipse: s-maj=58.7km s-min=18.0km az=138.6
DJA 27 16:47:32, 205N×9669E, h54km, MLv4.2/4
NEIC 27 16:47:32.7±1.5, 190N×9736E, h35km, mb3.7/2, Error ellipse: s-maj=59.7km s-min=17.5km az=49.0

ISC 27 16:47:32.5±1.6, 19N±03×974E±03, h35km, n7, σ0s90/7, mb3.8/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**28.59**	**79**	P	**P**	**16 53 25.3**	**-0.4**
	0.2nm,1.1s						
WRA	**Warramunga Arr**	**42.24**	**123**	P	**P**	**16 55 22.7**	**+0.1**
	0.2nm,0.5s,mb3.0,baz=304,slow=8.9,SNR=4.1						
ASAR	**Alice Springs**	**43.66**	**128**	P	**P**	**16 55 33.0**	**-1.0**
	0.4nm,0.9s,mb3.1,baz=297,slow=7.4,SNR=4.4						
CTAO	**Charters Tower**	**52.65**	**117**	*e*P	**P**	**16 56 45.0**	**+1.3**
	6.8nm,0.6s,mb4.8						
ZALV	**Zalesovo Beam**	**52.94**	**351**	P	**P**	**16 56 46.1**	**+0.9**
	0.5nm,0.4s,mb3.8,baz=165,slow=6.0,SNR=2.8						
BVAR	**Borovoye Array**	**55.69**	**341**	P	**P**	**16 57 03.9**	**-1.3**
	0.5nm,0.6s,mb3.8,baz=142,slow=7.5,SNR=3.5						
ARCES	**ARCESS Array B**	**81.98**	**340**	P	**P**	**16 59 48.8**	**+0.4**
	3.7nm,1.0s,mb4.3,baz=108,slow=5.2,SNR=5.7						

DJA 27 16:47:40, 3.16N×100.49E, h50km, MLv4.1/3

IDC 27 16:48:07.5±2.0, 077S×10041E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/18, mbtmp3.6/5, Error ellipse: s-maj=93.3km s-min=22.3km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.28**	**122**	P	P	16 55 29.8	-0.1
	0.7nm,0.6s,baz=302,slow=9.2,SNR=7.1						
ASAR	**Alice Springs**	**39.66**	**128**	P	P	16 55 41.1	-0.4
	0.5nm,1.0s,baz=299,slow=7.3,SNR=4.7						
SONM	**Songino Array**	**48.69**	**5**	P	P	16 56 55.4	+1.9
	0.5nm,0.5s,baz=174,slow=6.1,SNR=4.6						
MKAR	**Makanchi Array**	**49.96**	**344**	P	P	16 57 02.8	-0.5
	0.4nm,0.3s,baz=136,slow=7.0,SNR=2.4						
ZALV	**Zalesovo Beam**	**56.04**	**349**	P	P	16 57 46.5	-1.6
	0.7nm,0.6s,baz=178,slow=7.3,SNR=4.2						
BDFB	**Brasilia**	**144.80**	**241**	PKP	PKPdf	17 07 48.9	+1.3
	2.8nm,0.6s,baz=145,slow=4.3,SNR=4.0						

SKHL 27 16:51:52.5±1.3, 5300N×14290E, h10km, mb4.2/8, 2C-1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKH	**Okha**	**0.55**	**2**	*e*Pg	Pg	16 52 04.8	+1.6
OKH				⇓*i*Pg	Pg	16 52 04.8	+1.6
OKH				AMB	AMB	16 52 07.5	
	4μm,0.7s						
OKH				⇑*i*Sg	Sg	16 52 13.4	+2.9
OKH				A		16 52 15.1	
	11μm,0.5s						
OKH				A		16 52 15.1	
	12μm,0.5s						
NKL	**Nikolayevsk**	**1.35**	**277**	*i* P	Pn	16 52 17.3	0.0
NKL				AMB	AMB	16 52 18.0	
	500nm,1.5s						
NKL				AMB	AMB	16 52 18.0	
	700nm,2.0s						
NKL				AMB	AMB	16 52 18.4	
	190nm,0.2s						
NKL				AMB	AMB	16 52 18.4	
	180nm,0.2s						
NKL				*i* Pg	Pg	16 52 19.3	+1.0
NKL				*e*rx	rx	16 52 21.8	
NKL				*e*S	Sb	16 52 35.0	-0.1
NKL				A		16 52 36.5	
	4μm,2.0s						
NKL				A		16 52 37.0	
	550nm,0.3s						
NKL				A		16 52 37.0	
	830nm,0.3s						
TYV	**Tymovskoe**	**2.15**	**184**	⇑*i*P	Pn	16 52 30.0	+1.7
TYV				AMB	AMB	16 52 30.7	
	60nm,1.0s						
TYV				*e*Pg	Pg	16 52 36.0	+2.4
TYV				*e*rx	rx	16 53 20.0	
UGL	**Uglegorsk**	**3.96**	**188**	*e*Pg	Pg	16 53 11.5	+3.1
UGL				AMB	AMB	16 53 17.5	
	39nm,0.5s						
GRNR	**Gornyy**	**4.59**	**243**	*e*P	Pn	16 53 02.0	+0.1
GRNR				AMB	AMB	16 53 14.6	
	56nm,0.8s						
GRNR				*e*Pg	Pg	16 53 20.4	0.0
GRNR				AMB	AMB	16 53 24.0	
	19nm,0.5s						
GRNR				*e*S	Sn	16 53 51.0	-4.2
GRNR				A		16 54 12.2	
	86nm,0.7s						
GRNR				*e*Sg	Sg	16 54 21.0	+1.2
GRNR				A		16 54 23.5	
	72nm,0.5s						
GRNR				A		16 54 23.5	
	59nm,0.5s						
EKMR	**Ekimchan**	**6.00**	**275**	*e*P	Pn	16 53 18.5	-2.8
EKMR				*e*Pg	Pg	16 53 43.0	-4.4
EKMR				AMB	AMB	16 53 43.5	
	8.0nm,0.5s						
EKMR				*e*S	Sn	16 54 27.4	-2.6
EKMR				*e*Sg	Sg	16 55 03.0	-2.1
EKMR				A		16 55 04.0	
	82nm,0.6s						
EKMR				A		16 55 04.0	
	4.0nm,0.6s						
BMKR Bomnak		**8.49**	**287**	*e*P	Pn	16 53 56.5	+1.2
BMKR				*e*Pg	Pn	16 54 35.0	+40
BMKR				AMB	AMB	16 54 36.0	
	2.0nm,0.5s						
BMKR				*e*S	Sn	16 55 38.3	+7.3
BMKR				*e*Sg	Sn	16 56 16.0	+45
BMKR				A		16 56 21.6	
	10.0nm,0.8s						
KROS Kirovskiy		**9.55**	**285**	*e*P	Pn	16 54 09.5	-0.4
KROS				AMB	AMB	16 54 10.1	
	1.0nm,0.4s						
KROS				*e*Sg	Sn	16 56 43.4	+46
KROS				A		16 56 57.7	
	8.0nm,0.7s						

IDC 27 16:52:18.3±0.6, 200S×13907E, h0km, mb4.4/13, mb1 4.6/16, mb1mx4.5/21, mbtmp4.5/16, ML5.1/3, MS3.6/8, Ms1 3.5/8, ms1mx3.4/24, Error ellipse: s-maj=22.7km s-min=13.4km az=76.0
ISCJB 27 16:52:21.6±1.5, 206S±005×13905E±007, h39km±15km, mb4.6/27, MS3.6/5, Error ellipse: s-maj=11.4km s-min=8.0km az=180.0
MOS 27 16:52:21.0±0.8, 201S×13901E, h33km, mb5.0/9, Error ellipse: s-maj=15.6km s-min=8.3km az=109.3
NEIC 27 16:52:21.3±3.9, 201S×13896E, h22km±28km, mb4.8/16, Error ellipse: s-maj=11.4km s-min=8.6km az=74.0
BJI 27 16:52:22.3, 200S×13900E, h21km, mB4.6, mb4.7, Ms4.9, Ms2.8

ISC 27 16:52:23.7±1.3, 206S±005×13910E±007, h41km±13km, n75, σ1s08/72, mb4.6/27, MS3.6/5, 1C, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.67**	**106**	P	**Pn**	**16 52 49.3**	**-1.1**
	0.0nm,0.0s						
PMG	**Port Moresby**	**10.84**	**133**	*e*P	**Pn**	**16 54 59.2**	**+2.8**
GUMO	**Guam**	**16.56**	**20**	LR	LR	17 02 17.9	
	comp=Z,79nm,18.3s,baz=12,slow=36						
KDI	**Kendari**	**16.57**	**263**	P	**Pn**	**16 56 15.1**	**+1.9**
	0.0nm,0.0s						
BATI	**Baumata**	**17.34**	**242**	P	**Pn**	**16 56 26.1**	**+3.2**
	0.0nm,0.0s						
BATI	**Baumata**	**17.34**	**242**	P	**Pn**	**16 56 23.2**	**+0.4**
	14nm,0.3s,baz=136,slow=2.1,SNR=16						
WRAB	**Tennant Creek**	**18.36**	**194**	*e*P	**Pn**	**16 56 33.9**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,30nm,0.6s						
WRAB	**Tennant Creek**	**18.36**	**194**	*e*Pn	**Pn**	**16 56 33.9**	**-1.4**
	comp=Z,30nm,0.6s						
WB2	**Warramunga Arr**	**18.37**	**194**	*e*P	**Pn**	**16 56 33.6**	**-1.8**
WB2				*e*S	**S**	**16 59 50.1**	**-13**
WB2	**Warramunga Arr**	**18.37**	**194**	*e*Pn	**Pn**	**16 56 33.4**	**-2.0**
WB2				*e*Sn	**Sn**	**16 59 43.6**	**-16**
WRA	**Warramunga Arr**	**18.38**	**194**	P	**Pn**	**16 56 34.3**	**-1.2**
	comp=Z,7.6nm,0.3s,baz=18,slow=12,SNR=193						
WRA				S	**S**	**16 59 49.3**	**-14**
	comp=Z,0.6nm,0.3s,baz=11,slow=23,SNR=4.8						
CTA	**Charters Tower**	**19.24**	**159**	*e*P	**Pn**	**16 56 45.1**	**-0.7**
	comp=Z,6.5nm,0.6s						
CTA	**Charters Tower**	**19.24**	**159**	P	**Pn**	**16 56 46.0**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=335,slow=12,SNR=23						
CTA				LR	LR	17 04 58.3	
	comp=Z,257nm,19.8s,baz=340,slow=39						
KAPI	**Kappang**	**19.53**	**261**	LR	LR	17 05 02.5	
	comp=Z,102nm,19.1s,baz=118,slow=39						
FITZ	**Fitzroy Crossi**	**20.71**	**219**	*e*P	**P**	**16 56 59.7**	**-0.9**
	comp=Z,12nm,0.5s						
FITZ				*e*S	**S**	**17 00 41.8**	**-8.0**
FITZ	**Fitzroy Crossi**	**20.71**	**219**	P	**P**	**16 57 01.0**	**+0.4**
	comp=Z,4.0nm,0.5s,baz=59,slow=13,SNR=16						
FITZ				S	**S**	**17 00 45.3**	**-4.5**
	comp=Z,14nm,0.8s,baz=224,slow=20,SNR=7.9						
FITZ				LR	LR	17 06 02.6	
	comp=Z,138nm,20.9s,MS3.3,baz=48,slow=40						
HNR	**Honiara**	**21.98**	**110**	P	**P**	**16 57 14.3**	**-0.1**
	comp=Z,51nm,0.8s,mb5.0,baz=205,slow=2.4,SNR=7.3						
HNR	**Honiara**	**21.98**	**110**	P	**P**	**16 57 14.3**	**-0.1**
HNR				pmax	pmax		
	comp=Z,51nm,0.8s,mb5.0						
HNR	**Honiara**	**21.98**	**110**	*e*P	**P**	**16 57 13.0**	**-1.4**
	comp=Z,48nm,0.7s,mb5.0						
ASAR	**Alice Springs**	**22.07**	**193**	P	**P**	**16 57 15.6**	**+0.4**
	comp=Z,24nm,0.5s,mb4.9,baz=21,slow=10,SNR=278						
ASAR				S	**S**	**17 01 16.6**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=20,slow=23,SNR=7.8						
KKM	**Kota Kinabalu**	**24.23**	**290**	*e*P	**P**	**16 57 33.7**	**-3.3**
BBKI	**Banjar Baru**	**24.27**	**266**	P	**P**	**16 57 39.0**	**+1.7**
	comp=Z,0.0nm,0.0s						
MBWA	**Marble Bar**	**26.77**	**223**	*e*P	**P**	**16 57 59.2**	**-0.7**
	comp=Z,12nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**29.75**	**176**	*e*P	**P**	**16 58 26.5**	**+0.2**
	comp=Z,8.9nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**29.75**	**176**	P	**P**	**16 58 26.4**	**+0.1**
	comp=Z,9.6nm,0.5s,mb4.8,baz=340,slow=9.3,SNR=31						
STKA				LR	LR	17 11 43.8	
	comp=Z,201nm,20.5s,MS3.7,baz=19,slow=39						
STKA	**Stephens Creek**	**29.75**	**176**	*e*P	**P**	**16 58 26.3**	**0.0**
	comp=Z,16nm,0.9s,mb4.8						
STKA				LR	LR	17 11 43.8	
FORT	**Forrest**	**30.42**	**199**	*e*P	**P**	**16 58 32.8**	**+0.5**
	comp=Z,43nm,0.6s,mb5.3						
CAN	**Canberra**	**34.35**	**166**	P	**P**	**16 59 07.2**	**+0.6**
CNB	**Canberra Magne**	**34.44**	**165**	*e*P	**P**	**16 59 08.6**	**+1.2**
KLBR	**Kellerberrin**	**35.62**	**212**	*e*P	**P**	**16 59 17.4**	**-0.2**
	comp=Z,46nm,1.4s,mb5.2						
TOO	**Toolangi**	**35.83**	**171**	*e*P	**P**	**16 59 22.1**	**+2.8**
NWAO	**Narrogin (SRO)**	**36.94**	**211**	*e*P	**P**	**16 59 28.1**	**-0.8**
NWAO				*e*		17 00 52.2	
WHN	**Wuhan**	**40.10**	**326**	*e*P	**P**	**16 59 56.5**	**+1.1**
KSRS	**Korea Array**	**40.66**	**346**	LR	LR	17 15 37.2	
	comp=Z,53nm,18.0s,MS3.4,baz=34,slow=34						
CM31	**Chiang Mai Arr**	**44.46**	**299**	*e*P	**P**	**17 00 30.1**	**-1.0**
	comp=Z,2.7nm,0.7s,mb4.1						
CMAR	**Chiang Mai Arr**	**44.46**	**299**	P	**P**	**17 00 31.4**	**+0.3**
	comp=Z,3.1nm,0.7s,mb4.1,baz=120,slow=6.6,SNR=28						
CMAR				PcP	PcP	17 02 15.9	+1.6
	comp=Z,2.4nm,0.9s,baz=146,slow=1.9,SNR=11						
CD2	**Chengdu**	**46.97**	**317**⇑*i*P		**P**	**17 00 51.3**	**+0.5**
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
CD2				AMB	AMB		
	comp=Z,40nm,7.4s						
GTA	**Gaotai**	**54.78**	**323**	*e*P	**P**	**17 01 50.0**	**+0.6**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.2s,mb4.0						
LSA	**Lhasa**	**55.61**	**308**	*e*P	**P**	**17 01 56.3**	**+0.7**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
LSA	**Lhasa**	**55.61**	**308**	*e*P	**P**	**17 01 56.3**	**+0.7**
	comp=Z,2.0nm,0.4s,mb4.5						
ULN	**Ulaanbaatar**	**57.04**	**335**	*e*P	**P**	**17 02 05.0**	**-0.4**
PETK	**Petropavlovsk-**	**57.14**	**13**	P	**P**	**17 02 06.5**	**+0.5**
	comp=Z,2.1nm,0.7s,mb4.3,baz=143,slow=5.0,SNR=3.4						
PETK				LR	LR	17 28 26.4	
	comp=Z,59nm,18.1s,MS3.7,baz=229,slow=38						
SONM	**Songino Array**	**57.30**	**334**	P	**P**	**17 02 07.9**	**+0.6**
	comp=Z,1.1nm,0.5s,mb4.1,baz=154,slow=7.6,SNR=10						
PALK	**Pallekele**	**59.00**	**280**	P	**P**	**17 02 20.4**	**+0.6**
PALK				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
PALK	**Pallekele**	**59.00**	**280**	P	**P**	**17 02 20.4**	**+0.5**
	comp=Z,27nm,1.2s,mb5.2						
ZAK	**Zakamensk**	**60.57**	**335**	*e*P	**P**	**17 02 29.5**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.6						
MOY	**Mondy**	**62.49**	**334**	*e*P	**P**	**17 02 44.2**	**+1.3**
YAK	**Yakutsk**	**64.32**	**355**	*e*P	**P**	**17 02 54.2**	**-0.5**
YAK				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
YAK	**Yakutsk**	**64.32**	**355**	*e*P	**P**	**17 02 54.2**	**-0.5**
	comp=Z,14nm,0.7s,mb5.1						
CASY	**Casey**	**67.19**	**192**	*e*P	**P**	**17 03 12.3**	**-0.9**
	comp=Z,7.6nm,1.1s,mb4.6						
MKAR	**Makanchi Array**	**69.51**	**322**	P	**P**	**17 03 28.8**	**+0.7**
	comp=Z,1.4nm,0.4s,mb4.2,baz=114,slow=8.1,SNR=10						
ZAA0	**Zalesovo Array**	**71.57**	**330**	*e*P	**P**	**17 03 38.7**	**-1.8**
ZALV	**Zalesovo Beam**	**71.57**	**330**	P	**P**	**17 03 40.0**	**-0.5**
	comp=Z,0.7nm,0.5s,mb3.9,baz=103,slow=6.4,SNR=5.2						
NVS	**Novosibirsk**	**72.82**	**330**	*e*P	**P**	**17 03 46.3**	**-1.7**
UCH	**Uchtor**	**72.86**	**315**	P	**P**	**17 03 45.0**	**-3.5**
	comp=Z,3.8nm,0.8s,mb4.4						

KURK	**Kurchatov**	**73.41**	**325**	P	**P**	**17 03 51.8**	**+0.3**
	comp=Z,2.9nm,0.9s,mb4.2,baz=111,slow=5.2,SNR=13						
KURK	**Kurchatov**	**73.41**	**325**	*e*P	**P**	**17 03 51.2**	**-0.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
KURK	**Kurchatov**	**73.41**	**325**	*e*P	**P**	**17 03 51.2**	**-0.3**
	comp=Z,4.1nm,0.9s,mb4.4						
SBA	**Scott Base**	**77.15**	**174**	*e*P	**P**	**17 04 13.7**	**+1.1**
SBA				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.7						
SBA	**Scott Base**	**77.15**	**174**	*e*P	**P**	**17 04 13.7**	**+1.1**
	comp=Z,18nm,1.7s,mb4.7						
BVAR	**Borovoye Array**	**79.00**	**325**	P	**P**	**17 04 23.8**	**+0.6**
	comp=Z,3.3nm,0.6s,mb4.5,baz=115,slow=6.7,SNR=26						
BRVK	**Borovoye**	**79.07**	**325**	*e*P	**P**	**17 04 22.4**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
BRVK	**Borovoye**	**79.07**	**325**	*e*P	**P**	**17 04 22.4**	**-1.2**
	comp=Z,5.6nm,0.6s,mb4.7						
MAW	**Mawson**	**82.87**	**202**	P	**P**	**17 04 44.4**	**+0.8**
	comp=Z,3.2nm,0.7s,mb4.4,baz=57,slow=6.1,SNR=9.4						
AKTK	**Aktyubinsk**	**85.89**	**321**	P	**P**	**17 04 58.5**	**-0.7**
AKTO	**Aktyubinsk**	**85.89**	**321**	P	**P**	**17 04 58.5**	**-0.7**
	comp=Z,0.9nm,0.6s,mb4.2,baz=107,slow=8.8,SNR=5.5						
ARU	**Arti**	**86.47**	**327**	*e*P	**P**	**17 05 01.2**	**-0.7**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.8						
ARU	**Arti**	**86.47**	**327**	*e*P	**P**	**17 05 01.2**	**-0.7**
	comp=Z,4.6nm,0.8s,mb4.8						
DAWY	**Dawson**	**88.11**	**26**	P	**P**	**17 05 10.9**	**+1.1**
YKA	**Yellowknife Ar**	**99.31**	**27**	LR	LR	17 48 11.1	
	comp=Z,23nm,18.5s,MS3.7,baz=330,slow=34						
NVAR	**Mina Array Bea**	**101.14**	**51**	P	Pdif	17 06 11.2	+1.8
	comp=Z,0.5nm,0.7s,baz=241,slow=4.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	**136.45**	**287**	PKP	PKPdf	17 11 42.9	+0.7
	comp=Z,1.4nm,0.7s,baz=60,slow=2.1,SNR=8.5						
DBIC	**Dimbokro**	**143.78**	**278**	PKP	PKPdf	17 11 53.8	-1.8
	comp=Z,6.2nm,0.8s,baz=85,slow=4.6,SNR=8.3						
LPAZ	**La Paz**	**147.51**	**125**	PKPbc	PKPbc	17 12 06.3	+2.0
	comp=Z,4.7nm,0.8s,baz=232,slow=2.5,SNR=20						
CPUP	**Villa Florida**	**147.62**	**152**	PKPbc	PKPbc	17 12 05.6	+1.1
	comp=Z,2.1nm,0.7s,baz=204,slow=4.6,SNR=5.3						

NEIC ***27*** *16:53:15.6, 1736N×9379W, h172km, MD4.1(MEX), After MEX.*

MEX 27 16:53:15.4±0.9, 1702N×9386W, h181km±12km, MD4.1, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.75**	**109**	*i* P	Pn	16 53 40.1	-1.4
TGIG				*i* S	Sn	16 53 60.0	-1.6
TUIG	**Tuzandepetl**	**1.14**	**332**	*i* P	Pn	16 53 42.6	-1.7
TUIG				*i* S	Sn	16 54 04.3	-2.4
TUIG	**Tuzandepetl**	**1.14**	**332**	*i* P	Pn	16 53 42.9	-1.4
CCIG	**Comitan**	**1.81**	**114**	*i* P	Pn	16 53 49.6	-0.9
CCIG				*i* S	Sn	16 54 15.7	-1.9
CCIG	**Comitan**	**1.81**	**114**	*i* P	Pn	16 53 49.6	-0.9
CCIG				*i* S	Sn	16 54 17.1	-0.5
HUIG	**Huatulco**	**2.49**	**240**	*i* P	Pn	16 53 55.0	-3.1
HUIG				*i* S	Sn	16 54 28.6	-2.5
HUIG	**Huatulco**	**2.49**	**240**	*e*P	Pn	16 53 54.6	-3.4
HUIG				*i* S	Sn	16 54 28.0	-3.1
VHO	**Vista Hermosa**	**2.75**	**272**	*i* P	Pn	16 54 00.7	-0.4
VHO				*i* S	Sn	16 54 35.9	-0.6
TPIG	**Tehuac#an**	**3.61**	**293**	*e*P	Pn	16 54 11.2	-0.4
TPIG				*i* S	Sn	16 54 52.7	-2.9
PNIG	**Pinotepa**	**4.13**	**262**	*i* P	Pn	16 54 15.8	-2.5
PNIG				*i* S	Sn	16 55 04.3	-3.1
PNIG	**Pinotepa**	**4.13**	**262**	*i* P	Pn	16 54 06.1	-12
PNIG				*i* S	Sn	16 55 00.9	-6.5
PPM	**Popocatepetl**	**4.97**	**295**	*i* P	Pn	16 54 28.2	-0.8
PPM	**Popocatepetl**	**4.97**	**295**	*i* P	Pn	16 54 29.9	+0.9

ISCJB ***27*** *17:01:51.8±0.9, 1202N±005×4374E±007, h10km, mb3.8/8, MS3.1/4, Error ellipse: s-maj=10.2km s-min=7.6km az=14.9*
DHMR ***27*** *17:01:51.2±2.3, 1215N×4376E, h10km±19km, ML4.4*
CSEM ***27*** *17:01:51.2, 1215N×4376E, h9km, ML4.4, After DHMR*
IDC ***27*** *17:01:53.5±1.0, 1167N×4412E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/24, mbtmp3.8/8, MS3.2/6, Ms1 3.2/6, ms1mx3.0/31, Error ellipse: s-maj=38.9km s-min=20.4km az=136.0*

ISC 27 17:01:53.5±0.9, 1207N±006×4370E±007, h10km, n23, σ1§22/26, mb3.8/8, MS3.1/4, 2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UDYN	**Al 'Udayn**	**1.91**	**8**	*i* P	**Pn**	**17 02 25.0**	**-1.1**
UDYN				*i* S	**Sn**	**17 02 49.5**	**-0.7**
UDYN				AML	AML	17 03 01.7	
	comp=N,4μm,0.5s						
UDYN	**Al 'Udayn**	**1.91**	**8**	*i* P	**Pn**	**17 02 25.0**	**-1.1**
UDYN				*i* S	**Sn**	**17 02 49.5**	**-0.8**
LBOS		**2.34**	**40**	*i* P	**Pn**	**17 02 29.6**	**-2.6**
LBOS				*i* S	**Sn**	**17 03 01.4**	**+0.4**
DHBB	**Dhamar BB**	**2.58**	**15**	*i* P	**Pn**	**17 02 34.6**	**-0.7**
DHBB				*i* S	**Sn**	**17 03 07.8**	**+0.9**
BDHA	**Al Bayda'**	**2.63**	**44**	⇓*i* P	**Pn**	**17 02 33.5**	**-2.6**
BDHA				*i* S	**Sn**	**17 03 08.9**	**+0.9**
BDHA				AML	AML	17 03 25.7	
	comp=N,4μm,0.6s						
BDHA	**Al Bayda'**	**2.63**	**44**	⇓*i* P	**Pn**	**17 02 33.5**	**-2.5**
BDHA				*i* S	**Sn**	**17 03 08.9**	**+0.9**
HAJJ	**Hajjah**	**3.61**	**358**	*i* P	**Pn**	**17 02 48.8**	**-0.9**
HAJJ				*i* S	**Sn**	**17 03 32.9**	**+0.5**
HAJJ				AML	AML	17 03 53.3	
	comp=Z,2μm,0.6s						
HAJJ	**Hajjah**	**3.61**	**358**	*i* P	**Pn**	**17 02 48.8**	**-0.8**
HAJJ				*i* S	**Sn**	**17 03 32.9**	**+0.5**
MUKL	**Al Mukalla**	**5.72**	**65**	*i* P	**Pn**	**17 03 17.4**	**-1.2**
MUKL				*i* S	**Sn**	**17 04 24.2**	**-0.1**
KMBO	**Kilima Mbogo**	**14.59**	**206**	LR	LR	17 10 52.2	
	comp=Z,220nm,19.2s,baz=74,slow=37						
EIL	**Elat**	**19.32**	**336**	LR	LR	17 14 12.0	
	comp=Z,28nm,18.7s,baz=280,slow=37						
MMAI	**Mount Meron Ar**	**22.20**	**341**	LR	LR	17 14 17.7	
	comp=Z,72nm,21.4s,MS3.1,baz=210,slow=33						
GNI	**Garni**	**27.99**	**2**	LR	LR	17 19 38.3	
	comp=Z,58nm,18.2s,MS3.2,baz=19,slow=38						
IDI	**Anoyia**	**28.73**	**327**	LR	LR	17 20 46.7	
	comp=Z,29nm,20.2s,MS2.9,baz=334,slow=39						
LBTB	**Lobatse**	**40.87**	**206**	P	**P**	**17 09 35.3**	**-0.6**
	comp=Z,1.0nm,0.6s,mb3.7,baz=23,slow=13,SNR=2.6						
TORD	**Torodi Ar. Bea**	**40.98**	**276**	P	**P**	**17 09 42.9**	**+5.9**
	comp=Z,0.9nm,0.9s,mb3.4,baz=94,slow=6.8,SNR=5.9						
BVAR	**Borovoye Array**	**46.10**	**22**	P	**P**	**17 10 21.6**	**+3.9**
	comp=Z,0.7nm,0.7s,mb3.7,baz=213,slow=7.8,SNR=3.9						
MKAR	**Makanchi Array**	**47.45**	**36**	P	**P**	**17 10 29.9**	**+1.5**
	comp=Z,1.2nm,0.6s,mb4.0,baz=235,slow=7.7,SNR=3.8						
KURK	**Kurchatov**	**47.92**	**29**	P	**P**	**17 10 33.3**	**+1.3**
	comp=Z,1.3nm,0.9s,mb4.0,baz=231,slow=8.6,SNR=8.0						
ZALV	**Zalesovo Beam**	**52.91**	**29**	P	**P**	**17 11 10.5**	**+0.8**
	comp=Z,0.4nm,0.3s,mb3.8,baz=249,slow=6.0,SNR=3.6						
CMAR	**Chiang Mai Arr**	**53.51**	**76**	P	**P**	**17 11 15.1**	**+0.4**
	comp=Z,1.7nm,0.9s,mb4.0,baz=269,slow=8.5,SNR=12						
NOA	**NORSAR Array B**	**54.34**	**341**	LR	LR	17 35 58.5	
	comp=Z,29nm,18.4s,MS3.4,baz=240,slow=37						
SONM	**Songino Array**	**62.88**	**42**	P	**P**	**17 12 22.3**	**+2.5**
	comp=Z,1.2nm,1.0s,mb4.0,baz=266,slow=5.9,SNR=7.1						

ISCJB ***27*** *17:33:47.8±0.7, 2202N±004×12142E±003, h12km±5km, Error ellipse: s-maj=6.6km s-min=4.0km az=178.0*
TAP ***27*** *17:33:48.7, 2213N×12132E, h4km, ML3.0, C*
JMA ***27*** *17:33:51.6±0.3, 2208N×12177E, h88km, M2.5*

ISC 27 17:33:48.1±0.6, 2205N±003×12141E±003, h8km±3km, n46, σ0§76/88, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.14**	**95**	⇑*i* P	**Pg**	**17 33 53.7**	**+2.6**
LAY	baz=114			*e*S	**Sg**	**17 33 57.7**	**+4.6**
	baz=114						
TAW	**Tawu**	**0.56**	**303**	*e*P	**Pg**	**17 33 58.7**	**-0.3**
TAW	baz=299			*e*S	**Sg**	**17 34 06.4**	**0.0**
	baz=299						
EAST	**Anshuo**	**0.61**	**303**	⇑*i* P	**Pg**	**17 33 59.8**	**-0.2**
EAST	baz=299			S	**Sg**	**17 34 07.5**	**-0.5**
HEN	**Hengchun**	**0.62**	**266**	P	**Pg**	**17 34 00.3**	**+0.2**
HEN	baz=256			S	**Sg**	**17 34 09.5**	**+1.3**
ECL	**Taimali**	**0.69**	**323**	P	**Pg**	**17 34 00.7**	**-0.7**
ECL	baz=323			*e*S	**Sg**	**17 34 10.2**	**-0.2**
TTN	**Taitung**	**0.74**	**341**	*e*P	**Pg**	**17 34 01.4**	**-1.0**
TTN	baz=345			*e*S	**Sg**	**17 34 12.7**	**+0.6**
SCZT	**Fangliau**	**0.80**	**294**	*e*P	**Pg**	**17 34 02.9**	**-0.6**
SCZT	baz=290			*e*S	**Sg**	**17 34 14.1**	**+0.3**
TWG	**Pinlang**	**0.83**	**338**	*e*P	**Pg**	**17 34 04.0**	**0.0**
TWG	baz=341			*e*S	**Sg**	**17 34 15.3**	**+0.5**
SSD	**Sandimen**	**1.00**	**314**	*e*P	**Pg**	**17 34 07.0**	**-0.3**
SSD	baz=313			*e*S	**Sg**	**17 34 20.0**	**-0.2**
TWP	**Hsiaoliuchiu**	**1.01**	**287**	*e*P	**Pg**	**17 34 08.6**	**+1.0**
TWP	baz=283			*e*S	**Sg**	**17 34 20.5**	**-0.2**
CHKT	**Chengkung**	**1.04**	**358**	*e*P	**Pg**	**17 34 08.5**	**+0.2**
KAU	**Kaohsiung**	**1.14**	**297**	*e*P	**Pg**	**17 34 09.1**	**-1.0**
KAU	baz=294			*e*S	**Sg**	**17 34 24.9**	**0.0**
ELDTW	**Lidau**	**1.19**	**342**	*e*P	**Pb**	**17 34 10.2**	**-0.7**
ELDTW	baz=344			*e*S	**Sg**	**17 34 26.5**	**0.0**
TWM1	**Shoushan**	**1.19**	**310**	*e*P	**Pb**	**17 34 10.3**	**-0.7**
TWM1	baz=309			*e*S	**Sg**	**17 34 26.1**	**-0.5**
STYT	**Tauyuan**	**1.26**	**332**	*e*P	**Pn**	**17 34 11.4**	**-0.7**
STYT	baz=332			*e*S	**Sb**	**17 34 28.4**	**-0.1**
SGST	**Jiashian**	**1.28**	**324**	*e*P	**Pn**	**17 34 12.2**	**-0.1**
SGST	baz=324			*e*S	**Sb**	**17 34 29.1**	**0.0**
TWF1	**Yuli**	**1.30**	**356**	*e*P	**Pn**	**17 34 11.8**	**-0.8**
TWF1	baz=358			*e*S	**Sb**	**17 34 29.0**	**-0.7**
CHN1	**Nanshi**	**1.39**	**324**	*e*P	**Pn**	**17 34 13.7**	**-0.1**
CHN1	baz=324			*e*S	**Sb**	**17 34 32.0**	**-0.3**
WTP	**Ta-pu**	**1.40**	**329**	*e*P	**Pn**	**17 34 13.8**	**-0.1**
WTP	baz=329			*e*S	**Sb**	**17 34 32.2**	**-0.3**
EHY	**Hungye**	**1.45**	**357**	*e*P	**Pn**	**17 34 15.0**	**+0.3**
TWK	**Hsinying**	**1.48**	**325**	*e*P	**Pn**	**17 34 14.8**	**-0.3**
TWK	baz=325			*e*S	**Sn**	**17 34 34.0**	**-0.6**
YUS	**Yu-Shan**	**1.49**	**344**	*e*P	**Pn**	**17 34 15.8**	**+0.5**
YUS	baz=345			*e*S	**Sn**	**17 34 34.6**	**-0.3**
CHN4	**Tsaushan**	**1.50**	**330**	*e*P	**Pn**	**17 34 15.6**	**+0.3**
CHN4	baz=330			*e*S	**Sn**	**17 34 34.5**	**-0.5**
ALS	**Alishan**	**1.56**	**339**	*e*P	**Pn**	**17 34 16.6**	**+0.5**
ALS	baz=340			*e*S	**Sn**	**17 34 37.1**	**+0.6**
CHN5	**Tsauling**	**1.68**	**337**	*e*P	**Pn**	**17 34 18.5**	**+0.7**
CHN5	baz=337			*e*S	**Sn**	**17 34 38.9**	**-0.7**
ESL	**Shilin**	**1.76**	**1**	*e*P	**Pn**	**17 34 18.4**	**-0.5**
WGK	**Gukeng**	**1.81**	**335**	*e*P	**Pn**	**17 34 18.2**	**-1.3**
WGK	baz=335			*e*S	**Sn**	**17 34 42.7**	**+0.1**
SMLT	**Sun Moon Lake**	**1.88**	**346**	*e*P	**Pn**	**17 34 20.9**	**+0.2**
SMLT	baz=347			*e*S	**Sn**	**17 34 45.2**	**+0.6**
TYC	**Yuchr**	**1.91**	**345**	*e*P	**Pn**	**17 34 22.0**	**+0.9**
TYC	baz=346			*e*S	**Sn**	**17 34 45.9**	**+0.6**
WSF	**Szhu**	**1.92**	**326**	*e*P	**Pn**	**17 34 21.2**	**+0.1**
WSF	baz=325			*e*S	**Sn**	**17 34 45.0**	**-0.6**
HWA	**Hwalien**	**1.93**	**5**	*e*P	**Pn**	**17 34 21.9**	**+0.7**
HWA	baz=8.0			*e*S	**Sn**	**17 34 46.0**	**+0.3**
WNT	**Mingjian**	**1.94**	**340**	*e*P	**Pn**	**17 34 22.7**	**+1.3**
TWD	**Chiawan**	**2.03**	**5**	*e*P	**Pn**	**17 34 23.2**	**+0.6**
TWD	baz=7.0			*e*S	**Sn**	**17 34 48.9**	**+0.8**
WHF	**Hehuan Shan**	**2.09**	**356**	*e*P	**Pn**	**17 34 25.1**	**+1.7**
WHF	baz=358			*e*S	**Sn**	**17 34 49.9**	**+0.2**
TCU	**Taichung**	**2.19**	**342**	*e*P	**Pn**	**17 34 25.3**	**+0.4**
TCU	baz=343			*e*S	**Sn**	**17 34 52.5**	**+0.3**
TWQ1	**Liyutan**	**2.36**	**346**	*e*P	**Pn**	**17 34 27.7**	**+0.5**
TWQ1	baz=347			*e*S	**Sn**	**17 34 56.3**	**-0.1**
NNS	**Nan Shan**	**2.38**	**359**	*e*P	**Pn**	**17 34 29.1**	**+1.6**
NNS	baz=1.0			*e*S	**Sn**	**17 34 56.9**	**+0.1**
ENTT	**Nioudou**	**2.58**	**3**	*e*P	**Pn**	**17 34 31.7**	**+1.4**
ENTT	baz=5.0			*e*S	**Sn**	**17 35 02.2**	**+0.4**
NSTT	**Nanjuang**	**2.60**	**352**	*e*P	**Pn**	**17 34 30.0**	**-0.5**
NSTT	baz=353			*e*S	**Sn**	**17 35 02.4**	**+0.3**
NSK	**Sanguang**	**2.61**	**359**	*e*P	**Pn**	**17 34 31.8**	**+1.1**
NSK				*e*S	**Sn**	**17 35 03.3**	**+0.6**
YOJ	**Yonaguni jima**	**2.82**	**31**	P	**Pn**	**17 34 33.2**	**-0.3**
YOJ				*e*S	**Sn**	**17 35 03.7**	**-4.0**
HATJ	**Hateruma jima**	**2.98**	**47**	P	**Pn**	**17 34 34.1**	**-1.6**
HATJ				*e*S	**Sn**	**17 35 06.9**	**-4.7**
IRIF	**Iriomote-Funau**	**3.12**	**43**	P	**Pn**	**17 34 36.3**	**-1.4**
IRIF				*e*S	**Sn**	**17 35 10.9**	**-4.2**
JKRS	**Kuro-shima**	**3.24**	**47**	P	**Pn**	**17 34 37.9**	**-1.4**
JKRS				*e*S	**Sn**	**17 35 12.9**	**-5.1**
JIJ	**Ishigaki jima**	**3.41**	**47**	P	**Pn**	**17 34 39.8**	**-1.9**
JIJ				*e*S	**Sn**	**17 35 16.8**	**-5.5**
JTJ	**Tarama**	**3.98**	**49**	P	**Pn**	**17 34 48.1**	**-1.3**
JTJ				*e*S	**Sn**	**17 35 31.3**	**-5.0**

IDC ***27*** *17:42:23.7±1.5, 4.96S×15377E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/18, mbtmp3.9/10, Error ellipse: s-maj=49.9km s-min=22.3km az=99.0*
NEIC ***27*** *17:42:29.1±1.0, 4.92S×15378E, h35km, mb4.0/1, Error ellipse: s-maj=29.0km s-min=15.5km az=105.0*
ISCJB ***27*** *17:42:33.0±6.1, 5.0S±0.1×153.4E±03, h73km±44km, mb3.7/10, Error ellipse: s-maj=58.1km s-min=23.5km az=173.8*

ISC 27 17:42:35.3±5.0, 50S±01×1535E±03, h79km±36km, n13, σ0§82/12, mb3.7/10, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.62**	**235**	*e*P	**Pn**	**17 44 23.8**	**+0.1**
	11nm,0.5s						
WRA	**Warramunga Arr**	**23.80**	**230**	P	**P**	**17 47 41.2**	**+0.2**
	0.8nm,0.5s,mb3.3,baz=54,slow=9.9,SNR=23						
WRA				PcP	PcP	17 51 23.1	+0.5
	0.6nm,0.6s,baz=55,slow=2.4,SNR=7.0						
ASAR	**Alice Springs**	**26.44**	**224**	P	**P**	**17 48 05.2**	**+0.4**
	0.4nm,0.4s,baz=56,slow=9.1,SNR=23						
ASAR				PcP	PcP	17 51 29.1	+0.7
	0.4nm,0.6s,baz=41,slow=2.6,SNR=7.3						
STKA	**Stephens Creek**	**28.95**	**201**	P	**P**	**17 48 25.2**	**-1.9**
	5.0nm,1.1s,mb4.1,baz=79,slow=19,SNR=2.7						
FITZ	**Fitzroy Crossi**	**30.14**	**242**	P	**P**	**17 48 37.5**	**-0.3**
	1.2nm,0.7s,mb3.6,baz=77,slow=14,SNR=4.0						
CMAR	**Chiang Mai Arr**	**58.55**	**295**	P	**P**	**17 52 25.1**	**+1.0**
	0.6nm,0.7s,mb3.8,baz=108,slow=5.1,SNR=6.0						
SONM	**Songino Array**	**66.85**	**328**	P	**P**	**17 53 18.6**	**0.0**
	0.4nm,0.5s,mb3.5,baz=123,slow=5.3,SNR=3.3						
SBA	**Scott Base**	**73.14**	**177**	P	**P**	**17 53 58.1**	**+1.4**
	2.0nm,1.1s,mb3.9						
MKAR	**Makanchi Array**	**80.91**	**319**	P	**P**	**17 54 41.3**	**+0.4**
	0.5nm,0.5s,mb3.6,baz=99,slow=7.6,SNR=4.1						
KURK	**Kurchatov**	**84.33**	**322**	P	**P**	**17 54 58.0**	**-0.6**
	0.5nm,0.9s,mb3.4,baz=103,slow=5.4,SNR=2.7						
MAW	**Mawson**	**85.63**	**203**	P	**P**	**17 55 04.9**	**+0.2**
	0.8nm,0.3s,mb4.1,baz=37,slow=5.1,SNR=6.0						
BVAR	**Borovoye Array**	**89.80**	**323**	P	**P**	**17 55 23.9**	**-1.0**
	0.5nm,0.6s,mb3.9,baz=132,slow=4.3,SNR=3.0						
TORD	**Torodi Ar. Bea**	**150.99**	**288**	PKPbc	PKPbc	18 02 19.8	-0.3
	1.2nm,0.3s,baz=70,slow=2.7,SNR=6.4						
TORD				PKPab	PKPab	18 02 27.8	0.0
	0.9nm,0.5s,baz=73,slow=3.7,SNR=6.4						

IDC ***27*** *17:45:30.1±1.1, 3612N×6904E, h0km, mb3.4/4, mb1 3.5/8, mb1mx3.4/26, mbtmp3.4/8, ML3.2/3, MS3.0/3, Ms1 3.0/3, ms1mx2.7/30, Error ellipse: s-maj=26.8km s-min=20.9km az=100.0*
NNC ***27*** *17:45:34.5±2.5, 3670N×6869E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=22.2km s-min=19.0km az=122.0*
ISCJB ***27*** *17:45:35.3±0.8, 3648N±004×6869E±009, h58km±11km, mb3.5/3, MS2.9/2, Error ellipse: s-maj=12.3km s-min=6.0km az=178.2*
NEIC ***27*** *17:45:36.4±1.0, 3637N×6887E, h52km±11km, mb3.3/2, Error ellipse: s-maj=16.6km s-min=9.0km az=98.0*

ISC 27 17:45:36.4±0.7, 3643N±004×6857E±009, h60km±10km, n35, σ1§14/38, mb3.5/3, 2C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.92**	**168**	*e*P	**Pn**	**17 46 05.2**	**-1.7**
KBL				*e*S	**Sn**	**17 46 29.3**	**-0.6**
CEP	**Cherat**	**3.78**	**133**	P	**Pn**	**17 46 32.2**	**+0.1**
CEP				S	**Sn**	**17 47 25.0**	**+10**
THW	**Thamme Wali**	**4.47**	**143**	P	**Pn**	**17 46 42.5**	**+0.8**
CHCP	**Chirah Chowk**	**4.74**	**124**	P	**Pn**	**17 46 46.9**	**+1.5**
KK31	**Karatay Array**	**6.83**	**12**	Pn	**Pn**	**17 47 14.9**	**+1.0**
	1.2nm,0.5s,baz=186,slow=12,SNR=9.4						
KK31				⇑Sn	**Sn**	**17 48 34.0**	**+3.8**
	3.3nm,0.5s,baz=192,slow=23						
AML	**Almayashu**	**6.94**	**33**	P	**Pn**	**17 47 15.6**	**+0.2**
	SNR=13						
AML	**Almayashu**	**6.94**	**33**	*e*P	**Pn**	**17 47 15.3**	**-0.2**
	22nm,0.6s						
THN	**Thein Dam**	**7.13**	**122**	*e*P	**Pn**	**17 47 24.1**	**+6.1**
UCH	**Uchtor**	**7.40**	**37**	P	**Pn**	**17 47 24.1**	**+2.4**
	SNR=11						
UCH	**Uchtor**	**7.40**	**37**	*e*P	**Pn**	**17 47 21.7**	**0.0**
	9.1nm,0.6s						
AAK	**Ala-Archa**	**7.70**	**35**	P	**Pn**	**17 47 26.3**	**+0.5**
	SNR=6.1						
KBK	**Karagaybulak**	**7.93**	**36**	P	**Pn**	**17 47 30.4**	**+1.4**
	SNR=7.5						
USP	**Ospenovka**	**8.21**	**32**	P	**Pn**	**17 47 32.3**	**-0.5**
	SNR=5.8						
TKM2	**Tokmak 2**	**8.45**	**38**	⇓Pn	**Pn**	**17 47 35.3**	**-0.7**
	2.7nm,0.5s						
TKM2				⇓Sn	**Sn**	**17 49 08.9**	**-0.9**
	8.4nm,0.9s						
TKM2	**Tokmak 2**	**8.45**	**38**	*e*P	**Pn**	**17 47 35.4**	**-0.6**
	4.2nm,0.5s						
DDI	**Dehra Dun**	**10.00**	**125**	*ex*	x	17 48 03.5	
AB31	**Akbulak array**	**14.28**	**337**	Pn	**Pn**	**17 48 53.9**	**-1.3**
	0.8nm,0.5s,baz=154,slow=12,SNR=20						
AB31				⇓Sn	**Sn**	**17 51 31.3**	**-0.7**
	1.9nm,0.8s						
MKAR	**Makanchi Array**	**14.56**	**40**	Pn	**Pn**	**17 48 56.4**	**-2.5**
	0.1nm,0.3s,baz=229,slow=14,SNR=5.2						
MKAR	**Makanchi Array**	**14.56**	**40**	Pn	**Pn**	**17 48 56.4**	**-2.5**
KURBB	**Kurchatov Arra**	**15.90**	**24**	⇓Pn	**Pn**	**17 49 15.6**	**-0.6**
	1.2nm,1.6s						
AKTK	**Aktyubinsk**	**15.93**	**335**	Pn	**Pn**	**17 49 18.9**	**+2.3**
AKTO	**Aktyubinsk**	**15.93**	**335**	⇑Pn	**Pn**	**17 49 17.1**	**+0.5**
	2.2nm,2.6s						
AKTO	**Aktyubinsk**	**15.93**	**335**	Pn	**Pn**	**17 49 18.9**	**+2.3**
	0.1nm,0.3s,baz=151,slow=13,SNR=3.2						
KURK	**Kurchatov**	**16.01**	**24**	⇓Pn	**Pn**	**17 49 17.6**	**+0.1**
	5.9nm,1.5s						
KURK	**Kurchatov**	**16.01**	**24**	Pn	**Pn**	**17 49 13.0**	**-4.5**
	0.0nm,0.3s,baz=210,slow=10,SNR=5.1						
KURK	**Kurchatov**	**16.01**	**24**	*e*P	**Pn**	**17 49 18.0**	**+0.5**
	1.7nm,0.9s						
VOSK	**Vostochnaya**	**16.38**	**5**	⇓Pn	**Pn**	**17 49 20.2**	**-2.0**
	6.8nm,2.0s						
BVAR	**Borovoye Array**	**16.64**	**4**	Pn	**Pn**	**17 49 24.6**	**-0.8**
	0.1nm,0.3s,baz=161,slow=9.9,SNR=3.9						
BVAR				LR	LR	17 56 51.5	
	comp=Z,43nm,19.1s,baz=57,slow=40						
BRVK	**Borovoye**	**16.67**	**4**	*e*P	**Pn**	**17 49 26.7**	**+0.9**
	2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**20.84**	**28**	P	**P**	**17 50 13.6**	**+0.6**
	1.3nm,0.5s,baz=210,slow=9.8,SNR=5.6						
ZALV				LR	LR	17 58 41.8	
	comp=Z,14nm,20.0s,baz=147,slow=38						
TORD	**Torodi Ar. Bea**	**63.76**	**267**	P	**P**	**17 56 06.3**	**+4.0**
	0.3nm,0.6s,mb3.5,baz=49,slow=5.5,SNR=3.4						
GUMO	**Guam**	**71.11**	**87**	LR	LR	18 30 18.8	
	comp=Z,28nm,18.8s,baz=298,slow=38						
DAWY	**Dawson**	**77.42**	**12**	*e*P	**P**	**17 57 24.6**	**0.0**
WRA	**Warramunga Arr**	**83.63**	**120**	P	**P**	**17 57 58.2**	**-0.3**
	0.2nm,0.7s,mb3.3,baz=331,slow=5.0,SNR=3.3						
ASAR	**Alice Springs**	**85.84**	**123**	P	**P**	**17 58 09.6**	**+0.1**
	0.4nm,1.0s,mb3.6,baz=308,slow=5.2,SNR=3.0						

IDC ***27*** *17:53:11.6±1.7, 4425×10124E, h0km, mb4.1/11, mb1 4.2/

MJAR	**Matsushiro Arr**	**53.35**	**37**	P	**P**	**18 02 31.5**	**-1.6**
	comp=Z,1.4nm,0.7s,mb4.0,baz=206,slow=5.8,SNR=4.0						
MKAR	**Makanchi Array**	**53.66**	**344**	P	**P**	**18 02 35.4**	**+0.1**
	comp=Z,2.1nm,0.8s,mb4.1,baz=143,slow=8.5,SNR=16						
KURK	**Kurchatov**	**58.24**	**343**	P	**P**	**18 03 07.6**	**-0.3**
	comp=Z,1.6nm,0.9s,mb4.1,baz=160,slow=6.5,SNR=9.6						
KURK	**Kurchatov**	**58.24**	**343**	*e*P	**P**	**18 03 07.8**	**-0.2**
	comp=Z,3.8nm,1.0s,mb4.4						
ZAA0	**Zalesovo Array**	**59.74**	**349**	*e*P	**P**	**18 03 17.7**	**-0.5**
ZALV	**Zalesovo Beam**	**59.74**	**349**	P	**P**	**18 03 18.3**	**0.0**
	comp=Z,2.0nm,0.7s,mb4.3,baz=189,slow=4.1,SNR=10						
ZALV	**Zalesovo Beam**	**59.74**	**349**	P	**P**	**18 03 18.3**	**0.0**
PDAR	**Pinedale Array**	**132.98**	**31**	PKP	PKPdf	18 12 27.7	-1.5
	comp=Z,1.2nm,0.4s,baz=326,slow=0.6,SNR=13						
TXAR	**Lajitas Array**	**145.73**	**41**	PKPbc	PKPbc	18 12 52.1	-1.0
	comp=Z,1.5nm,0.8s,baz=252,slow=2.4,SNR=11						

ISCJB ***27*** *18:15:30.0±1.8,20S±03×1003E±05,h41km,mb4.0/7, Error ellipse: s-maj=78.0km s-min=15.7km az=146.9*
DJA ***27*** *18:15:30,202S×9956E,h35km,MLv4.4/4*
NEIC ***27*** *18:15:30.3±1.9,224S×10011E,h35km, Error ellipse: s-maj=77.9km s-min=13.5km az=58.0*
IDC ***27*** *18:15:31.2±1.3,224S×10018E,h39km±5km,mb3.8/8, mb1 3.9/8,mb1mx3.7/20,mbtmp3.8/8, Error ellipse: s-maj=60.1km s-min=12.7km az=57.0*

ISC 27 18:15:31.8±1.8,22S±03×1002E±04,h43km, h43km±1.4km:pP-P,n10,σ0s62/8,mb4.0/7,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.52**	**356**	P	**P**	**18 20 06.2**	**-0.4**
	1.2nm,0.5s,baz=186,slow=10.0,SNR=19						
CMAR				pP		18 20 17.2	
	1.4nm,0.7s,baz=188,slow=9.9,SNR=7.9						
WRA	**Warramunga Arr**	**37.71**	**120**	P	**P**	**18 22 43.3**	**-0.2**
	2.0nm,0.9s,mb3.9,baz=307,slow=8.6,SNR=20						
WRA				pP	pP	18 22 53.8	-1.4
	2.4nm,0.7s,baz=296,slow=9.6,SNR=10						
ASAR	**Alice Springs**	**38.97**	**126**	P	**P**	**18 22 54.1**	**+0.1**
	0.8nm,0.7s,mb3.5,baz=301,slow=7.7,SNR=16						
ASAR				pP	pP	18 23 05.0	-0.8
	1.0nm,0.7s,baz=301,slow=7.6,SNR=5.4						
ASAR				PcP	PcP	18 25 04.8	+0.7
	0.5nm,0.8s,baz=305,slow=2.6,SNR=4.6						
ASAR				pPcP		18 25 16.2	
	0.3nm,0.5s,baz=284,slow=2.6,SNR=5.2						
SONM	**Songino Array**	**50.07**	**5**	P	**P**	**18 24 23.3**	**+1.0**
	0.6nm,0.5s,mb3.9,baz=188,slow=7.6,SNR=6.5						
SONM				pP	pP	18 24 34.8	+0.5
	0.6nm,0.5s,baz=190,slow=7.5,SNR=4.6						
MKAR	**Makanchi Array**	**51.24**	**344**	P	**P**	**18 24 31.6**	**+0.5**
	1.7nm,0.6s,mb4.1,baz=150,slow=7.8,SNR=17						
MKAR				pP	pP	18 24 43.1	-0.1
	2.6nm,0.6s,baz=150,slow=7.7,SNR=16						
KURK	**Kurchatov**	**55.82**	**344**	P	**P**	**18 25 04.2**	**-0.4**
	0.5nm,0.2s,mb4.1,baz=162,slow=7.5,SNR=3.5						
KURK				pP	pP	18 25 15.8	-1.0
	0.8nm,0.3s,baz=181,slow=6.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**57.36**	**349**	P	**P**	**18 25 14.4**	**-1.1**
	0.6nm,0.3s,mb4.1,baz=186,slow=6.0,SNR=5.4						
ZALV				pP	pP	18 25 27.7	-0.1
	3.3nm,0.7s,baz=176,slow=5.0,SNR=9.8						
ARCES	**ARCESS Array B**	**86.70**	**340**	P	**P**	**18 28 11.2**	**+0.5**
	1.8nm,0.7s,mb4.4,baz=99,slow=4.9,SNR=6.7						
CPUP	**Vila Florida**	**144.34**	**216**	PKP	PKPdf	18 35 01.6	-2.5
	0.7nm,0.4s,baz=134,slow=3.8,SNR=4.1						
TXAR	**Lajitas Array**	**144.68**	**38**	PKP	PKPdf	18 35 04.5	-0.1
	1.7nm,0.8s,baz=264,slow=1.7,SNR=8.1						
TXAR				pPKP	pPKPdf	18 35 15.8	-2.1
	1.2nm,0.5s,baz=247,slow=1.2,SNR=7.2						

ISC 27 18:24:18.4±0.8,3959N±006×735E±02,h35km,n10, σ0s70/11,2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**2.55**	**3**	P	**Pn**	**18 24 56.7**	**-0.5**
	SNR=34						
UCH	**Uchtor**	**2.75**	**16**	P	**Pn**	**18 24 59.9**	**0.0**
	SNR=24						
EKS2	**Erkin-Say**	**3.08**	**4**	P	**Pn**	**18 25 04.5**	**0.0**
	SNR=7.1						
AAK	**Ala-Archa**	**3.14**	**14**	P	**Pn**	**18 25 05.7**	**+0.4**
	SNR=11						
KBK	**Karagaybulak**	**3.26**	**19**	P	**Pn**	**18 25 07.8**	**+0.8**
	SNR=5.8						
CHMS	**Chumysh**	**3.54**	**15**	P	**Pn**	**18 25 10.7**	**-0.1**
	SNR=6.4						
USP	**Ospenovka**	**3.76**	**11**	P	**Pn**	**18 25 13.5**	**-0.3**
	SNR=8.9						
KK31	**Karatay Array**	**4.17**	**328**	Pn	**Pn**	**18 25 17.7**	**-1.8**
	0.9nm,0.3s,baz=133,slow=13,SNR=21						
KK31				⇓Sn	**Sn**	**18 26 07.9**	**+1.0**
	3.0nm,0.3s,baz=136,slow=24,SNR=4.8						
KK31				⇓Lg		18 26 18.3	
	5.6nm,0.3s,baz=128,slow=29,SNR=4.3						
CEP	**Cherat**	**5.89**	**193**	P	**Pn**	**18 25 43.6**	**+0.5**
CHCP	**Chirah Chowk**	**5.92**	**182**	P	**Pn**	**18 25 43.4**	**-0.1**

IDC ***27*** *18:52:31.8±50.0,1303S×17149E,h0km,mb4.2/3, mb1 4.4/3,mb1mx3.8/16,mbtmp4.2/3, Error ellipse: s-maj=863.3km s-min=130.3km az=67.0*

ISC 27 18:53:25.5±5.5,155S±03×1662E±06,h35km,n5,σ0s47/6, mb4.3/4,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.59**	**178**	*e*P	**Pn**	**18 54 59.9**	**0.0**
DZM				*e*S	**Sn**	**18 56 14.0**	**+0.1**
STKA	**Stephens Creek**	**27.75**	**230**	P	**P**	**18 59 10.3**	**-0.7**
	4.2nm,1.0s,mb4.0,baz=54,slow=13,SNR=3.0						
WRA	**Warramunga Arr**	**30.67**	**257**	P	**P**	**18 59 37.0**	**-0.1**
	1.1nm,0.6s,mb3.9,baz=85,slow=8.8,SNR=16						
ASAR	**Alice Springs**	**31.47**	**250**	P	**P**	**18 59 44.2**	**+0.2**
	2.6nm,0.4s,mb4.4,baz=79,slow=8.9,SNR=71						
FITZ	**Fitzroy Crossi**	**38.89**	**260**	*e*P	**P**	**19 00 48.4**	**+0.4**
	7.1nm,0.4s,mb4.8						

NEIC 27 18:59:08.2,3709S×17687E,h224km,MG3.7(WEL),After WEL.,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.18**	**171**	P	Pn	18 59 41.8	+0.2
MXZ	**Matakaoa Point**	**1.24**	**113**	P	Pn	18 59 42.0	0.0
MWZ	**Matawai**	**1.35**	**157**	P	Pn	18 59 43.1	+0.3
MWZ				S	S	19 00 10.2	+0.2
PUZ	**Puketiti**	**1.48**	**132**	P	Pn	18 59 44.1	+0.3
KNZ	**Kokohu**	**2.03**	**162**	P	Pn	18 59 49.0	+0.3
BKZ	**Black Stump Fm**	**2.10**	**188**	P	Pn	18 59 49.4	0.0
NGZ	**Ngauruhoe**	**2.31**	**205**	P	Pn	18 59 52.7	+1.1
TUVZ	**Tukino**	**2.38**	**203**	P	Pn	18 59 53.0	+0.8
FWVZ	**Far West T-bar**	**2.40**	**205**	P	Pn	18 59 53.2	+0.7
WNVZ	**Wahianoa**	**2.45**	**204**	P	Pn	18 59 53.7	+0.7
WAZ	**Wanganui**	**3.05**	**208**	P	Pn	18 59 59.9	+0.3
TSZ	**Takapari Road**	**3.05**	**193**	P	Pn	18 59 59.0	-0.6
MRZ	**Mangatainoka R**	**3.71**	**195**	P	Pn	19 00 06.1	-1.1
KIW	**Kapiti Island**	**4.07**	**201**	P	Pn	19 00 09.9	-1.7
MTW	**Mount Morrison**	**4.20**	**194**	P	Pn	19 00 11.5	-1.7
MSWZ	**Moikau Station**	**4.50**	**196**	P	Pn	19 00 15.1	-1.8
TCW	**Tory Channel**	**4.58**	**205**	P	Pn	19 00 15.7	-2.2
NNZ	**Nelson**	**4.94**	**212**	P	Pn	19 00 20.0	-2.3
QRZ	**Quartz Range**	**5.04**	**221**	P	Pn	19 00 21.4	-2.2
THZ	**Tophouse**	**5.59**	**212**	P	Pn	19 00 28.5	-2.0
KHZ	**Kahutara**	**5.91**	**205**	P	Pn	19 00 32.4	-2.1
DSZ	**Denniston Nort**	**6.08**	**219**	P	Pn	19 00 34.4	-2.4
RPZ	**Rata Peaks**	**7.97**	**212**	P	Pn	19 00 58.2	-2.7

IDC 27 19:28:09.8±5.2,2964S×17836W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.8/14,mbtmp4.0/3,Error ellipse: s-maj=168.3km s-min=45.2km az=27.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.35**	**256**	P	P	19 34 59.5	+1.2
	2.3nm,0.8s,baz=100,slow=6.1,SNR=2.9						
ASAR	**Alice Springs**	**42.84**	**266**	P		19 36 09.4	-0.3
	1.0nm,0.5s,baz=109,slow=7.8,SNR=32						
WRA	**Warramunga Arr**	**43.76**	**272**	P	P	19 36 16.8	-0.5
	1.1nm,0.5s,baz=112,slow=7.6,SNR=20						
VNA3	**Neumayer Olymp**	**79.09**	**176**	*e*	P	19 40 17.7	+2.1
VNA2	**Neumayer--Watz**	**79.52**	**177**	*e*	P	19 40 20.3	+2.4
	baz=190,slow=5.5						
TORD	**Torodi Ar. Bea**	**163.59**	**180**	PKPab	PKPab	19 49 06.3	-0.3
	0.3nm,0.6s,baz=180,slow=1.3,SNR=4.6						

IDC 27 19:29:17.3±2.1,599N×12732E,h0km,mb3.4/3,mb1 3.7/3, mb1mx3.4/17,mbtmp3.4/3,MS2.6/1,Ms1 2.6/1, ms1mx2.4/24,Error ellipse: s-maj=171.8km s-min=29.0km az=67.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.03**	**302**	Sn	Sn	19 30 26.8	+7.7
	41nm,0.3s,baz=261,slow=23,SNR=7.0						
JOW	**Kunigami**	**20.74**	**2**	LR	LR	19 41 08.3	
	comp=Z,15nm,19.6s,baz=152,slow=34						
WRA	**Warramunga Arr**	**26.68**	**165**	P	P	19 34 58.4	+0.2
	0.4nm,0.6s,baz=345,slow=10,SNR=7.0						
ASAR	**Alice Springs**	**30.17**	**168**	P	P	19 35 29.8	+0.4
	0.3nm,0.6s,baz=356,slow=8.5,SNR=5.1						
ASAR				PcP	PcP	19 38 29.9	-1.0
	0.5nm,0.9s,baz=350,slow=1.8,SNR=4.2						
MKAR	**Makanchi Array**	**56.06**	**324**	P	P	19 38 58.4	+0.3
	0.2nm,0.3s,baz=112,slow=7.6,SNR=3.4						

IDC 27 19:39:55.7±3.0,533S×15412E,h0km,mb3.6/6,mb1 3.7/6, mb1mx3.7/15,mbtmp3.6/6,Error ellipse: s-maj=93.7km s-min=30.0km az=107.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.11**	**231**	P	P	19 45 12.4	-0.9
	0.5nm,0.6s,baz=54,slow=9.8,SNR=7.5						
ASAR	**Alice Springs**	**26.67**	**225**	P	P	19 45 37.4	+0.8
	0.2nm,0.7s,baz=48,slow=8.2,SNR=5.1						
CMAR	**Chiang Mai Arr**	**59.29**	**295**	P	P	19 50 00.1	+0.4
	1.0nm,0.8s,baz=104,slow=5.4,SNR=6.4						
SONM	**Songino Array**	**67.47**	**327**	P	P	19 50 53.6	+0.3
	0.3nm,0.5s,baz=100,slow=11,SNR=2.5						
MKAR	**Makanchi Array**	**81.59**	**319**	P	P	19 52 15.8	+0.3
	0.2nm,0.4s,baz=106,slow=4.4,SNR=4.9						
ZALV	**Zalesovo Beam**	**82.32**	**326**	P	P	19 52 18.4	-0.8
	0.4nm,0.4s,baz=128,slow=6.3,SNR=2.7						
TORD	**Torodi Ar. Bea**	**151.72**	**288**	PKPbc	PKPbc	19 59 53.4	0.0
	0.6nm,0.4s,baz=49,slow=2.4,SNR=18						
TORD				PKPab	PKPab	20 00 01.6	-0.5
	0.2nm,0.4s,baz=72,slow=3.4,SNR=5.1						

SZGRF ***27*** *19:57:39.2,2347S×16904E,h21km,mb6.2, Southeast of Loyalty Islands*
ISCJB ***27*** *19:57:42.2±1.1,2113S±003×16934E±002,h3km±6km, mb6.0/152,MS6.3/252, Error ellipse: s-maj=4.6km s-min=3.8km az=16.4*
BJI ***27*** *19:57:42.6,2080S×16988E,h10km,mB6.5,mb5.9,Ms6.2, Msz5.9*
PDG ***27*** *19:57:43.7,2120S×16920E,h60km*
IDC ***27*** *19:57:43.4±0.3,2114S×16923E,h0km,mb5.7/23, mb1 5.8/27,mb1mx5.7/28,mbtmp5.7/27,ML5.3/3,MS6.2/31, Ms1 6.2/31,ms1mx6.1/34, Error ellipse: s-maj=10.3km s-min=8.1km az=180.0*
NEIC ***27*** *19:57:44.0±0.1,2110S×16928E,h9km,mb6.2/98,ME6.4, MS6.3/204,MW6.1, Error ellipse: s-maj=4.2km s-min=3.8km az=141.0,Moment Tensor Solution. s55 Moment tensor: Scale 10¹⁸Nm; Mrr=0.45; Mθθ-0.64; Mφφ0.19; Mrθ0.11; Mθφ-0.16; Mφr-1.91; Best double couple: Mo2.00000×10¹⁸ NP1:φs179.00000°,δ88.00000°, λ86.00000°. NP2:φs64.00000°,δ5.00000°,λ155.00000°. Principal axes: T 2.2500, Plg46.0000°, Azm84.0000°; N -0.6500, Plg4.0000°, Azm179.0000°; P -1.6000, Plg42.0000°, Azm273.0000°; Broadband fault plane solution: P waves. NP1:φs282.00000°,δ31.00000°, λ19.00000°. NP2:φs175.00000°,δ80.00000°,λ120.00000°. Principal axes: T Plg47.0000°, Azm116.0000°; N Plg0.0000°, Azm0.0000°; P Plg29.0000°, Azm241.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
GCMT ***27*** *19:57:44.0±0.1,2120S×16921E,h14km,MW6.1/116, Moment Tensor Solution. s116,c250; s115,c414; Duration: 2≥6 Moment tensor: Scale 10¹⁸Nm; Mrr0.39±.01; Mθθ0.47±.01; Mφφ-0.85±.01; Mrθ0.62±.02; Mθφ1.19±.01; Mφr-1.43±.02; Best double couple: Mo1.89500×10¹⁸ NP1:φs280.00000°,δ34.00000°, λ15.00000°. NP2:φs177.00000°,δ82.00000°,λ123.00000°. Principal axes: T 1.3740, Plg44.0000°, Azm119.0000°; N 1.0410, Plg32.0000°, Azm352.0000°; P -2.4160, Plg29.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
BGS ***27*** *19:57:44.0±5.9,2110S×16928E,h10km,mb6.2(NEIC)*
LDG ***27*** *19:57:45.0±0.1,2070S×16907E,h10km,Mb6.3/4, Ms6.2/10, Error ellipse: s-maj=25.6km s-min=9.1km az=32.0*
IGIL ***27*** *19:57:45.0,2128S×16937E,h21km,MS6.8*
MOS ***27*** *19:57:46.2±1.1,2125S×16928E,h33km,mb6.3/57, MS6.2/84, Error ellipse: s-maj=7.6km s-min=7.2km az=28.2*
DJA ***27*** *19:57:48,2130S×16955E,h20km,Mw6.7/38*

ISC 27 19:57:46.5±1.3,2114S±003×16938E±003,h20km±7km, h24km±.9km:pP-P,n1261,σ1s16/422,mb6.0/152,MS6.3/252, 81C-45D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.89**	**251**	*e*P	**Pn**	**19 58 26.7**	**-4.7**
RAO	**Raoul Island**	**14.04**	**128**	Pn	**Pn**	**20 01 04.6**	**+0.2**
	42nm,0.3s,baz=102,slow=23,SNR=1.8						
RAO				Sn	**Sn**	**20 03 45.4**	**+5.8**
	106nm,0.3s,baz=82,slow=22,SNR=4.3						
RAO				LR	LR	20 05 30.0	
	comp=Z,88μm,19.6s,baz=114,slow=33						
RAO	**Raoul Island**	**14.04**	**128**	P	**Pn**	**20 01 04.6**	**+0.3**
RAO						20 03 45.4	
OUZ	**Omahuta**	**14.51**	**166**	P	**Pn**	**20 01 14.5**	**+3.8**
HNR	**Honiara**	**14.77**	**321**	Pn	**Pn**	**20 01 14.0**	**-0.4**
	16nm,0.3s,baz=210,slow=3.9,SNR=30						
HNR				Sn	**Sn**	**20 04 00.5**	**+3.0**
	baz=160,slow=19,SNR=1.9						
HNR				LR	LR	20 06 06.3	
	comp=Z,40μm,21.1s,baz=142,slow=34						
HNR	**Honiara**	**14.77**	**321**	P	**Pn**	**20 01 14.0**	**-0.4**
HNR						20 04 00.5	
HNR				pmax	pmax		
	comp=Z,16nm,0.3s						
HNR				MLR	MLR		
	comp=Z,40μm,21.1s						
HNR	**Honiara**	**14.77**	**321**	*e*Pn	**Pn**	**20 01 13.9**	**-0.5**
	comp=Z,3μm,1.2s						
FUNA	**Funafuti**	**15.71**	**38**	⇑*e*Pn	**Pn**	**20 01 28.6**	**+1.7**
	comp=Z,2μm,1.4s						
HIZ	**Hauiti**	**17.95**	**166**	P	**Pn**	**20 01 57.4**	**+2.6**
URZ	**Urewera**	**18.32**	**160**	P	**Pn**	**20 01 59.8**	**+0.4**
	comp=Z,2.8nm,0.3s,baz=357,slow=5.9,SNR=23						
URZ				S	**Sn**	**20 05 27.4**	**+4.0**
	comp=Z,1.0nm,0.3s,baz=103,slow=4.3,SNR=2.6						
URZ				LR	LR	20 08 07.5	
	comp=Z,58μm,18.9s,baz=348,slow=34						
URZ	**Urewera**	**18.32**	**160**	P	**Pn**	**20 02 00.3**	**+0.9**
ARMA	**Armidale**	**18.45**	**236**	*e*P	**Pn**	**20 02 00.4**	**-0.6**
ARMA				*e*S	**Sn**	**20 05 34.9**	**+8.2**
MWZ	**Matawai**	**18.52**	**159**	P	**Pn**	**20 02 03.2**	**+1.3**
WPVZ	**Whakapapa**	**18.77**	**165**	P	**Pn**	**20 02 07.3**	**+2.5**
BKZ	**Black Stump Fm**	**18.98**	**163**	P	**Pn**	**20 02 08.0**	**+0.6**
AFI	**Afiamalu**	**19.34**	**71**	P	**Pn**	**20 02 11.1**	**-0.9**
	comp=Z,4.4nm,0.3s,baz=297,slow=2.7,SNR=23						
AFI				S	**Sn**	**20 05 55.4**	**+7.0**
	comp=Z,0.3nm,0.3s,baz=168,slow=23,SNR=1.6						
AFI				LR	LR	20 08 10.0	
	comp=Z,134μm,21.5s,baz=266,slow=32						
QRZ	**Quartz Range**	**19.80**	**173**	P	**Pn**	**20 02 17.3**	**0.0**
MRZ	**Mangatainoka R**	**20.16**	**166**	P	**P**	**20 02 18.6**	**-1.0**
SNZO	**South Karori**	**20.61**	**169**	⇑*e*P	**P**	**20 02 24.3**	**-0.1**
	comp=Z,1μm,1.7s						
SNZO				LR	LR		
	comp=Z,34μm,20.0s,MS5.7						
THZ	**Tophouse**	**20.77**	**173**	P	**P**	**20 02 31.3**	**+5.1**
KHZ	**Kahutara**	**21.50**	**172**	P	**P**	**20 02 31.7**	**-2.3**
CTA	**Charters Tower**	**21.67**	**269**	*e*P	**P**	**20 02 35.8**	**-0.3**
	comp=Z,407nm,0.9s,mb5.9						
CTA				*e*S	**S**	**20 06 40.9**	**+5.6**
CTA	**Charters Tower**	**21.67**	**269**	P	**P**	**20 02 35.3**	**-0.8**
	comp=Z,390nm,0.8s,mb5.9,baz=97,slow=12,SNR=95						
CTA				S	**S**	**20 06 36.2**	**+0.9**
	comp=Z,11nm,0.8s,baz=104,slow=17,SNR=2.5						
CTA				LR	LR	20 09 48.0	
	comp=Z,41μm,21.7s,MS5.8,baz=91,slow=34						
CTA	**Charters Tower**	**21.67**	**269**	*e*P	**P**	**20 02 35.8**	**-0.3**
CTA				*e*S	**S**	**20 06 40.9**	**+5.6**
CTA				pmax	pmax		
	comp=Z,407nm,0.9s						
CTAO	**Charters Tower**	**21.67**	**269**	⇑*e*P	**P**	**20 02 34.6**	**-1.5**
CTAO				pmax	pmax		
	comp=Z,3μm,1.8s,mb6.5						
CTAO				MLR	MLR		
	comp=Z,46μm,22.0s,MS5.8						
CTAO	**Charters Tower**	**21.67**	**269**	⇑*e*P	**P**	**20 02 34.6**	**-1.5**
	comp=Z,3μm,1.8s,mb6.5						
CTAO				LR	LR		
	comp=Z,46μm,22.0s,MS5.8						
LTZ	**Lake Taylor**	**21.71**	**174**	P	**P**	**20 02 34.7**	**-1.6**
WVZ	**Waitaha Valley**	**21.90**	**177**	P	**P**	**20 02 39.4**	**+1.1**
FOZ	**Fox Glacier**	**22.36**	**179**	P	**P**	**20 02 43.3**	**+0.1**
CNB	**Canberra Magne**	**22.54**	**227**	*e*P	**P**	**20 02 44.2**	**-1.0**
CNB				*e*PcP	PcP	20 05 57.3	-41
CNB				*e*S	**S**	**20 06 54.2**	**+2.4**
RPZ	**Rata Peaks**	**22.55**	**177**	P	**P**	**20 02 44.4**	**-0.8**
	comp=Z,30nm,1.0s,baz=47,slow=4.1,SNR=9.5						
RPZ				S	**S**	**20 07 00.3**	**+8.3**
	comp=Z,13nm,0.9s,baz=77,slow=16,SNR=1.8						
RPZ				LR	LR	20 10 30.5	
	comp=Z,51μm,18.8s,MS6.0,baz=347,slow=34						
CAN	**Canberra**	**22.79**	**227**	P	**P**	**20 02 48.6**	**+0.8**
JCZ	**Jackson Bay**	**22.88**	**181**	P	**P**	**20 02 50.3**	**+1.6**
ODZ	**Otahua Downs**	**23.86**	**178**	P	**P**	**20 03 01.1**	**+2.6**
PMG	**Port Moresby**	**24.37**	**295**	*d*P	**P**	**20 03 01.7**	**-1.8**
PMG	**Port Moresby**	**24.37**	**295**	⇓*e*P	**P**	**20 03 02.1**	**-1.4**
	comp=Z,2μm,1.6s,mb6.2						
PMG				LR	LR		
	comp=Z,39μm,19.0s,MS5.9						
TUZ	**Tuapeka**	**24.75**	**180**	*e*P	**P**	**20 03 06.9**	**+0.3**
COEN	**Coen**	**25.97**	**282**	*e*P	**P**	**20 03 17.8**	**-0.2**
	comp=Z,242nm,1.4s,mb5.5						
TOO	**Toolangi**	**26.38**	**226**	*e*P	**P**	**20 03 20.8**	**-0.7**
TOO				*e*S	**S**	**20 07 59.8**	**+6.0**
STKA	**Stephens Creek**	**27.00**	**241**	*e*P	**P**	**20 03 25.7**	**-1.4**
	comp=Z,158nm,0.9s,mb5.5						
STKA				*e*S	**S**	**20 08 07.8**	**+4.1**
STKA	**Stephens Creek**	**27.00**	**241**	P	**P**	**20 03 26.1**	**-1.0**
	comp=Z,91nm,0.8s,mb5.3,baz=75,slow=7.7,SNR=35						
STKA				S	**S**	**20 08 14.8**	**+11**
	comp=Z,6.3nm,0.9s,baz=117,slow=24,SNR=1.3						
STKA				LR	LR	20 13 10.6	
	comp=Z,70μm,20.4s,MS6.2,baz=41,slow=34						
TAU	**Tasmania Unive**	**28.49**	**215**	*e*P	**P**	**20 03 37.4**	**-3.0**
TAU				pmax	pmax		
	comp=Z,200nm,1.2s,mb5.6						
TAU				MLR	MLR		
	comp=Z,33μm,19.0s,MS6.0						
TAU	**Tasmania Unive**	**28.49**	**215**	*e*P	**P**	**20 03 37.4**	**-3.0**
	comp=Z,200nm,1.2s,mb5.6						
TAU				LR	LR		
	comp=Z,33μm,19.0s,MS6.0						
RAR	**Rarotonga**	**28.74**	**96**	LR	LR	20 12 35.4	
	comp=Z,26μm,21.5s,MS5.8,baz=262,slow=31						
RAR	**Rarotonga**	**28.74**	**96**	P	**P**	**20 03 41.4**	**-1.5**
RAR				pmax	pmax		
	comp=Z,165nm,1.3s						
RAR				MLR	MLR		
	comp=Z,28μm,22.0s						
RAR	**Rarotonga**	**28.74**	**96**	P	**P**	**20 03 41.4**	**-1.4**
	comp=Z,165nm,1.3s,mb5.6						
RAR				LR	LR		
	comp=Z,28μm,22.0s,MS5.8						
WB2	**Warramunga Arr**	**32.79**	**266**	*e*P	**P**	**20 04 15.1**	**-3.5**
WB2				*e*S	**S**	**20 09 32.1**	**-2.7**
WRAB	**Tennant Creek**	**32.79**	**266**	P	**P**	**20 04 16.0**	**-2.6**
	comp=Z,893nm,1.1s,mb6.6,SNR=31						
WRAB	**Tennant Creek**	**32.79**	**266**	P	**P**	**20 04 15.4**	**-3.2**
WRAB				pmax	pmax		
	comp=Z,180nm,1.0s,mb6.0						
WRAB	**Tennant Creek**	**32.79**	**266**	*e*P	**P**	**20 04 15.2**	**-3.5**
	comp=Z,178nm,1.0s,mb6.0						
WRAB				*e*S	**S**	**20 09 32.9**	**-2.0**
WRAB				LR	LR		
	comp=Z,73μm,19.0s,MS6.4						
WRA	**Warramunga Arr**	**32.80**	**266**	P	**P**	**20 04 16.1**	**-2.6**
	comp=Z,70nm,0.8s,mb5.6,baz=97,slow=7.4,SNR=94						
WRA				S	**S**	**20 09 35.6**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=98,slow=12,SNR=5.5						
WRA				PKiKP	PKiKP	20 14 31.4	+0.8
	comp=Z,1.0nm,0.7s,baz=90,slow=0.2,SNR=5.0						
WRA				LR	LR	20 18 10.8	
	comp=Z,68μm,18.0s,MS6.4,baz=95,slow=38						
WRA				P3KPbc		20 35 41.5	
	comp=Z,2.2nm,0.7s,baz=300,slow=3.0,SNR=6.6						
WRA	**Warramunga Arr**	**32.80**	**266**	P	**P**	**20 04 16.1**	**-2.6**
WRA				S	**S**	**20 09 35.6**	**+0.6**
ASAR	**

comp=Z,181nm,0.7s,mb5.9
TVO Taravao 39.07 92 *e*P P **20 05 14.2 +1.7**
comp=Z,181nm,0.7s,mb5.9
TVO *e*PcP PcP 20 07 19.6 -2.7
XMAS Kiritimati 39.81 59 *e*P P **20 05 17.7 -1.0**
comp=Z,465nm,1.3s,mb6.0
XMAS LR LR
comp=Z,34µm,20.0s,MS6.2
MEH Mehetia 40.16 93 *e*PcP PcP 20 07 22.6 -3.2
comp=Z,1µm,0.8s
MEH Mehetia 40.16 93 *e*P P **20 05 23.1 +1.6**
comp=Z,2µm,1.0s,mb6.7
MEH *e*PcP PcP 20 07 22.6 -3.2
PMOR Pomariorio Ree 40.98 89 *e*PcP PcP 20 07 25.0 -3.5
comp=Z,120nm,0.9s
PMOR Pomariorio Ree 40.98 89 *e*P P **20 05 29.7 +1.4**
comp=Z,222nm,1.2s,mb5.7
PMOR *e*PcP PcP 20 07 25.0 -3.5
VAH Vaihoa 41.17 89 *e*P P **20 05 31.0 +1.1**
comp=Z,93nm,0.9s,mb5.4
VAH *e*PcP PcP 20 07 25.4 -3.7
FITZ Fitzroy Crossi 41.22 266 *e*P P **20 05 28.0 -2.3**
comp=Z,532nm,0.7s,mb6.3
FITZ *e*PP PP 20 07 08.5 +2.9
FITZ *e*S S **20 11 38.3 -5.0**
FITZ *e*SS SS 20 14 40.7 -6.0
FITZ Fitzroy Crossi 41.22 266 P P **20 05 29.9 -0.5**
comp=Z,282nm,0.8s,mb6.0,baz=133,slow=8.6,SNR=123
FITZ S S **20 11 40.8 -2.5**
comp=Z,3.6nm,0.9s,baz=107,slow=16,SNR=2.5
FITZ LR LR 20 23 05.8
comp=Z,59µm,18.4s,MS6.5,baz=279,slow=37
GUMO Guam 42.08 323 P P **20 05 36.7 -0.6**
comp=Z,154nm,0.6s,mb5.8,baz=176,slow=11,SNR=11
GUMO LR LR 20 21 32.5
comp=Z,10µm,20.4s,MS5.7,baz=305,slow=34
GUMO Guam 42.08 323 *e*P P **20 05 38.9 +1.6**
GUMO *e* 20 07 18.9
GUMO pmax pmax
comp=Z,2µm,1.5s,mb6.4
GUMO MLR MLR
comp=Z,13µm,19.0s,MS5.8
GUMO Guam 42.08 323 *e*P P **20 05 38.9 +1.6**
comp=Z,2µm,1.5s,mb6.4
GUMO *e*PP PP 20 07 18.9 +3.9
GUMO LR LR
comp=Z,13µm,19.0s,MS5.8
BATI Baumata 45.20 277 P P **20 06 02.0 -0.5**
comp=Z,122nm,0.9s,mb5.7,baz=182,slow=1.2,SNR=28
BATI LR LR 20 25 03.9
comp=Z,72µm,19.4s,MS6.6,baz=136,slow=36
MBWA Marble Bar 46.15 261 P P **20 06 12.2 +2.2**
SNR=24
MBWA Marble Bar 46.15 261 *e*P P **20 06 07.2 -2.8**
comp=Z,342nm,0.9s,mb6.3
MBWA *e*PP PP 20 07 58.5 +0.2
MBWA *e*ScP ScP 20 11 39.8 +1.6
MBWA LR LR
comp=Z,38µm,19.0s,MS6.4
KLBR Kellerberrin 47.05 246 *e*P P **20 06 13.9 -3.0**
comp=Z,248nm,0.7s,mb6.2
KLBR *e* 20 08 07.2
NWAO Narrogin (SRO) 47.49 244 P P **20 06 19.2 -1.2**
comp=Z,120nm,0.8s,mb5.9,baz=94,slow=7.7,SNR=33
NWAO S S **20 13 06.1 -8.1**
comp=Z,6.3nm,0.8s,baz=285,slow=23,SNR=1.8
NWAO LR LR 20 25 08.7
comp=Z,68µm,21.1s,MS6.6,baz=92,slow=35
NWAO Narrogin (SRO) 47.49 244 P P **20 06 19.3 -1.0**
NWAO pmax pmax
comp=Z,120nm,1.0s
NWAO Narrogin (SRO) 47.49 244 *e*P P **20 06 19.0 -1.3**
comp=Z,120nm,0.9s,mb5.8
NWAO LR LR
comp=Z,54µm,22.0s,MS6.5
MUN Mundaring 48.36 246 *e*P P **20 06 27.2 +0.1**
MUN *e*S S **20 13 25.3 -1.2**
DRV Dumont d'Urvil 49.24 195 P P **20 06 34.0 +0.8**
DRV Dumont d'Urvil 49.24 195 PP PP 20 08 42.0 +15
DRV S S **20 13 41.0 +3.2**
DRV SS SS 20 17 19.0 +10
DRV L 20 18 00.0
DRV R 20 21 00.0
TAOE Nuku Hiva Isla 50.06 84 *e*PcP PcP 20 07 56.7 -3.3
comp=Z,1µm,1.3s
TAOE *e*S S **20 13 53.5 +2.7**
comp=Z,30µm,25.5s
TAOE *e*LQ 20 18 53.5
comp=Z,81µm,25.3s
TAOE *e*LR LR 20 21 03.9
comp=Z,186µm,23.2s,baz=252
TAOE Nuku Hiva Isla 50.06 84 *e*P P **20 06 42.0 +1.7**
comp=Z,1µm,1.0s,mb6.9
TAOE *e*PcP PcP 20 07 56.7 -3.3
TAOE *e*S S **20 13 53.5 +2.7**
TAOE *e*LQ 20 18 53.5
KAPI Kappang 50.69 281 P P **20 06 44.0 -1.1**
comp=Z,1µm,2.4s,mb6.4,SNR=21
KAPI Kappang 50.69 281 P P **20 06 45.5 +0.3**
SNR=40
KAPI Kappang 50.69 281 *e*P P **20 06 42.0 -3.1**
comp=Z,2µm,1.9s,mb6.6
KAPI LR LR
comp=Z,10µm,20.0s,MS5.8
MATI Mati 50.71 299 *e*P P **20 06 44.0 -1.1**
MIDW Midway 50.71 15 PFAKE 20 07 00.0 +15
MIDW LR LR
comp=Z,24µm,20.0s,MS6.2
RKT Rikitea 51.32 103 *e*S S **20 14 09.6 +1.5**
comp=Z,5µm,26.8s
RKT *e*LQ 20 19 40.9
comp=Z,12µm,26.8s
RKT *e*LR LR 20 21 49.5
comp=Z,15µm,24.0s,baz=261
BIPH Bislig 51.33 300⇓ *e*P P **20 06 47.9 -1.9**
DAV Davao City (W) 51.33 298 P P **20 06 50.1 +0.3**
comp=Z,121nm,0.4s,mb6.2,baz=225,slow=5.1,SNR=7.7
DAV Davao City (W) 51.33 298⇑ *i*P P **20 06 49.2 -0.7**
DAV Davao City (W) 51.33 298 P P **20 06 50.1 +0.3**
KCP Kidapawan 51.70 298⇓ *e*P P **20 06 55.5 +2.8**
BUKP Musuan 52.21 299 *e*P P **20 06 57.5 +1.1**
BUTP Butuan 52.37 300 *e*P P **20 06 59.6 +2.0**
KIP Kipapa 52.95 39 PFAKE 20 07 10.0 +8.3
KIP LR LR
comp=Z,24µm,21.0s,MS6.2
SCPH Surigao 52.95 301⇓ *e*P P **20 07 02.5 +0.6**
POHA Pohakuloa 53.20 43 PFAKE 20 07 20.0 +16
POHA LR LR
comp=Z,20µm,21.0s,MS6.2
MSLP Maasin 53.66 301 *e*P P **20 07 09.1 +2.0**
BESP Borongan 54.06 303 *e*P P **20 07 11.7 +1.6**
TBP Tagbilaran 54.21 300 *e*P P **20 07 12.0 +0.8**
IPIL Ipil 54.21 297 *e*P P **20 07 12.6 +1.4**
OCLP Ormoc 54.39 302 *e*P P **20 07 13.6 +1.1**
CBIJ Chichi jima 54.71 330 S S **20 15 01.1 +7.2**
comp=Z,31nm,0.8s,baz=277,slow=21,SNR=2.3
CNP Catarman 55.21 303 *e*P P **20 07 19.0 +0.6**
PTCN Pitcairn Islan 55.41 106 PFAKE 20 07 30.0 +10
PTCN LR LR
comp=Z,12µm,19.0s,MS6.0
GUIM Jordan 55.77 300 *e*P P **20 07 22.8 +0.4**
RCP Roxas 56.17 301⇓ *e*P P **20 07 25.2 -0.1**
PVCP Virac 56.26 304 *e*P P **20 07 25.2 -0.7**
MYLDM Lahad Datu 56.33 292⇑ P P **20 07 33.4 +6.9**
TSM Tawau 56.45 291⇑ P P **20 07 30.0 +2.7**
KALP Kalibo 56.56 301 *e*P P **20 07 30.3 +2.2**
SBA Scott Base 56.77 181 *e*P P **20 07 26.8 -1.9**
SBA pmax pmax
comp=Z,187nm,1.0s,mb6.1
SBA MLR MLR
comp=Z,7µm,22.0s,MS5.7
SBA Scott Base 56.77 181 *e*P P **20 07 26.8 -1.9**
comp=Z,187nm,1.0s,mb6.1
SBA LR LR
comp=Z,7µm,22.0s,MS5.7
CUYO Cuyo Island 57.17 299 *e*P P **20 07 34.5 +2.1**
OTRP Odiongan 57.21 301 *e*P P **20 07 32.5 -0.2**
AUQP San Andres 57.25 303 *e*P P **20 07 34.4 +1.4**
SDKM Sandakan 57.69 292⇑ P P **20 07 37.4 +1.3**
SJMP San Jose 57.99 301 *e*P P **20 07 40.4 +2.2**
CASY Casey 58.45 204 *e*P P **20 07 37.4 -3.2**
CASY *e*S S **20 15 37.4 -5.1**
BUSP Coron 58.47 300 *e*P P **20 07 41.1 -0.5**
PPR Puerto Princes 58.48 297⇓ *e*P P **20 07 48.0 +6.4**
POLP Polilio Island 58.65 303 *e*P P **20 07 42.7 -0.1**

ENPP El Nido 58.67 298 *e*P P **20 07 44.6 +1.7**
KKM Kota Kinabalu 58.73 291 *e*P P **20 07 42.5 -1.0**
KKM LR LR
comp=Z,7µm,21.0s,MS5.8
BATP Bataraza 58.74 295 *e*P P **20 07 45.8 +2.3**
LUBP Lubang 59.41 301 *e*P P **20 07 48.2 +0.1**
BALP Baler 59.53 304 *e*P P **20 07 48.9 0.0**
PALP Palanan 59.68 306 *e*P P **20 07 50.1 +0.3**
CAUP Cauayan 60.06 305 *e*P P **20 07 53.2 +0.7**
SBUM Sibu 60.63 286⇑ P P **20 07 57.8 +1.3**
SGCP Mt. Cagua 60.68 307 *e*P P **20 07 55.7 -1.0**
SCZP Santa Cruz 60.85 303 *e*P P **20 08 00.5 +2.7**
ABRA Dolores 61.33 305 *e*P P **20 08 01.8 +0.6**
XMIS Christmas Isla 61.89 269 *e*P P **20 08 06.2 +1.1**
KSM Kuching 61.94 284⇑ P P **20 08 06.8 +1.4**
KSM Kuching 61.94 284 *e*P P **20 08 04.8 -0.6**
MJAR Matsushiro Arr 64.49 332 P P **20 08 21.0 -0.8**
comp=Z,39nm,0.8s,mb5.5,baz=176,slow=8.1,SNR=42
MJAR LR LR 20 34 43.5
comp=Z,6µm,19.4s,MS5.8,baz=155,slow=34
MJAR PKP2bc 20 37 21.1
comp=Z,3.9nm,1.1s,baz=320,slow=3.7,SNR=4.6
MJAR Matsushiro Arr 64.49 332 P P **20 08 21.0 -0.8**
MJAR LR LR 20 34 43.5
MJAR ⇑ *e* 20 37 21.1
MAJO Matsushiro 64.49 332⇑ *e*P P **20 08 19.9 -1.9**
MAJO pmax pmax
comp=Z,334nm,1.4s,mb6.2
MAJO MLR MLR
comp=Z,6µm,19.0s,MS5.8
MAJO Matsushiro 64.49 332⇑ *e*P P **20 08 19.9 -1.9**
comp=Z,334nm,1.4s,mb6.2
MAJO LR LR
comp=Z,6µm,19.0s,MS5.8
MAT Matsushiro 64.49 332 P P **20 08 20.2 -1.6**
MAT S S **20 16 52.0 -7.9**
NACB Ninganchiao 64.73 312 *e*P P **20 08 22.2 -1.5**
comp=Z,2µm,1.4s,mb7.0
YHNB Yeheng 65.20 312 *e*P P **20 08 27.0 +0.3**
comp=Z,415nm,1.3s,mb6.3
YHNB LR LR
comp=Z,10µm,21.0s,MS6.0
TATO Taipei 65.32 312 P P **20 08 28.4 +0.9**
SNR=8.8
TATO Taipei 65.32 312 *e*P P **20 08 27.3 -0.1**
comp=Z,550nm,1.3s,mb6.4
TATO LR LR
comp=Z,11µm,20.0s,MS6.0
MIR Mirnyy 65.38 205⇓ *i*P P **20 08 26.0 -1.2**
MIR *i* 20 08 42.0
MIR pmax pmax
comp=Z,200nm,1.5s,mb5.9
QZH Quanzhou 67.34 310⇑ *i*P P **20 08 43.8 +3.4**
QZH S S 20 17 37.0 +2.0
QZH SCS ScS 20 18 37.0 -0.6
QZH AMB AMB
comp=Z,590nm,1.8s,mb6.3
QZH AMB AMB
comp=Z,5µm,4.4s
QZH LR LR
comp=N,6µm,16.9s,MS6.1
QZH LR LR
comp=E,7µm,15.8s,MS6.1
QZH LR LR
comp=Z,10µm,20.8s,MS6.0
ERM Erimo 67.36 339 *e*P P **20 08 42.2 +2.1**
ERM LR LR
comp=Z,18µm,20.0s,MS6.3
MYKOM Kota Tinggi 67.96 281⇓ P P **20 08 47.0 +2.4**
YUK Yuzh-Kuril'sk 68.35 342 P P **20 08 45.0 -1.3**
YUK *e* 20 11 23.0
YUK S S 20 17 50.0 +3.7
YUK pmax pmax
comp=Z,6µm,6.0s
KGM Kluang 68.53 281⇑ P P **20 08 49.0 +0.8**
QSPA South Pole Qui 68.92 180 P P **20 08 48.0 -1.5**
comp=Z,73nm,1.0s,mb5.5,baz=25,slow=2.0,SNR=54
QSPA LR LR 20 35 49.1
comp=Z,12µm,19.3s,MS6.2,baz=209,slow=33
QSPA PKP2bc 20 37 00.3
comp=Z,26nm,1.0s,baz=230,slow=3.8,SNR=17
QSPA South Pole Qui 68.92 180 P P **20 08 48.0 -1.5**
QSPA LR LR 20 35 49.1
QSPA ⇑ *e* 20 37 00.3
HKC Hong Kong Obse 69.02 305⇑ *i*P P **20 08 56.0 +5.0**
SSE Sheshan 69.54 317 P P **20 08 54.3 +0.2**
SSE XP sP 20 09 00.5 -2.5
SSE S S 20 18 01.3 +0.2
SSE SCS ScS 20 18 56.8 +2.2
SSE SS SS 20 22 33.8 +4.4
SSE AMB AMB
comp=Z,82nm,1.5s,mb5.4
SSE AMB AMB
comp=Z,3µm,6.9s
SSE LR LR
comp=N,4µm,18.0s,MS5.8
SSE LR LR
comp=E,3µm,18.3s,MS5.8
SSE LR LR
comp=Z,4µm,20.3s,MS5.7
SSE Sheshan 69.54 317 P P **20 08 54.3 +0.2**
comp=Z,82nm,1.5s,mb5.4
SSE sP sP 20 09 00.5 -2.5
SSE S S 20 18 01.2 +0.1
SSE ScS ScS 20 18 56.8 +2.2
SSE SS SS 20 22 33.7 +4.3
SSE LR LR
comp=Z,4µm,20.3s,MS5.7
COCO West Island 69.58 264⇑ P P **20 08 56.8 +2.1**
SNR=5.2
COCO West Island 69.58 264 P P **20 08 55.4 +0.7**
comp=Z,349nm,1.5s,mb6.1
COCO LR LR
comp=Z,10µm,19.0s,MS6.1
GZH Guangzhou 70.10 306 P P **20 09 00.8 +3.1**
GZH S S 20 18 12.8 +4.9
GZH AMB AMB
comp=Z,6µm,9.3s
GZH LR LR
comp=N,4µm,20.3s,MS5.7
GZH LR LR
comp=E,4µm,23.1s,MS5.7
GZH LR LR
comp=Z,7µm,17.9s
KSRS Korea Array 70.15 326 P P **20 08 57.6 0.0**
comp=Z,21nm,1.1s,mb5.0,baz=143,slow=7.2,SNR=26
KSRS PKP2bc 20 36 58.5
comp=Z,2.8nm,1.0s,baz=319,slow=4.1,SNR=5.4
KSRS LR LR 20 38 42.3
comp=Z,6µm,18.1s,MS5.9,baz=25,slow=35
FRIM Kepong 70.57 281⇓ P P **20 09 02.1 +1.3**
QIZ Qiongzhong 70.64 300 P P **20 09 01.3 +0.2**
QIZ PP PP 20 11 37.0 -0.9
QIZ S S 20 18 14.8 +0.4
QIZ XS sS 20 18 26.0 +0.9
QIZ AMB AMB
comp=Z,146nm,1.3s,mb5.8
QIZ AMB AMB
comp=Z,5µm,9.1s
QIZ LR LR
comp=N,4µm,21.5s,MS5.8
QIZ LR LR
comp=E,3µm,18.1s,MS5.8
QIZ LR LR
comp=Z,3µm,18.9s,MS5.6
QIZ Qiongzhong 70.64 300 PFAKE 20 09 10.0 +8.9
QIZ LR LR
comp=Z,4µm,19.0s,MS5.7
INCN Inchon 70.85 325⇓ P P **20 09 03.8 +1.8**
SNR=7.9
INCN Inchon 70.85 325 *e*P P **20 09 01.7 -0.3**
comp=Z,473nm,1.5s,mb6.2
INCN LR LR
comp=Z,5µm,20.0s,MS5.8
IPM Ipoh 71.61 282⇓ P P **20 09 08.9 +1.8**
NJ2 Nanjing 71.67 316 *e*P P **20 09 07.5 +0.5**
NJ2 AP pP 20 09 13.8 +0.3
NJ2 XP sP 20 09 15.3 -0.6
NJ2 PP PP 20 11 49.5 +3.0
NJ2 S S 20 18 25.0 -0.8
NJ2 XS sS 20 18 35.0 -1.6
NJ2 AMB AMB
comp=Z,180nm,1.4s,mb5.8
NJ2 AMB AMB
comp=Z,3µm,8.4s
NJ2 LR LR
comp=N,3µm,17.3s,MS5.8
NJ2 LR LR
comp=E,3µm,13.6s,MS5.8
NJ2 LR LR
comp=Z,12µm,25.3s
YSS Yuzh-Sakhalins 71.91 341 *j*P P **20 09 08.0 -0.1**
YSS *e**SP sP 20 09 20.0 +2.9
YSS *e*S S 20 18 19.0 -9.0
YSS *e* 20 18 58.0
YSS pmax pmax
comp=N,610nm,1.5s
YSS pmax pmax
comp=Z,1µm,1.5s,mb6.6
YSS pmax pmax
comp=Z,4µm,8.0s
YSS smax
comp=E,10µm,10.0s
YSS MLR MLR
comp=N,7µm,17.0s
YSS MLR MLR
comp=Z,8µm,17.0s,MS6.0
YSS Yuzh-Sakhalins 71.91 341 *i*P P **20 09 09.0 +0.9**
SKR Severo-Kuril's 72.46 351 *e*P P **20 09 11.0 -0.3**
SKR *e* 20 09 23.0
SKR *e* 20 11 57.0
SKR *e*PPP 20 13 35.0
SKR *e*S S 20 18 40.0 +5.9
SKR *e* 20 19 06.0
SKR pmax pmax
comp=Z,80nm,1.5s,mb5.4
SKR pmax pmax
comp=Z,5µm,6.0s
SKR pmax pmax
comp=N,2µm,4.0s
SKR pmax pmax
comp=E,4µm,4.0s
SKR pmax pmax
comp=N,3µm,6.0s
SKR pmax pmax
comp=E,4µm,6.0s
SKR pmax pmax
comp=Z,5µm,6.0s
SKR smax
comp=N,5µm,10.0s
SKR smax
comp=E,10µm,10.0s
SKR MLR MLR
comp=N,4µm,16.0s,MS6.0
SKR MLR MLR
comp=E,6µm,16.0s,MS6.0
SKR MLR MLR
comp=Z,8µm,16.0s,MS6.1
VLA Vladivostok 72.65 332 *d*P P **20 09 11.5 -1.1**
VLA pmax pmax
comp=Z,361nm,1.6s,mb6.0
VLA Vladivostok 72.65 332 *i*P P **20 09 11.5 -1.1**
UBT Ubonrachathani 72.78 294⇑ P P **20 09 15.5 +1.5**
SNG Songkhla 73.08 285 P P **20 09 15.0 -0.9**
comp=Z,160nm,1.0s,mb5.9
RPN Rapa Nui 73.22 113 LR LR 20 34 27.5
comp=Z,27910µm,19.9s,baz=263,slow=30
SMY Shemya 73.67 3 PFAKE 20 09 30.0 +12
SMY LR LR
comp=Z,15µm,20.0s,MS6.3
WHN Wuhan 73.73 313⇑ *i*P P **20 09 18.8 -0.5**
WHN *i* S S 20 18 52.3 +2.9
WHN LR LR
comp=N,12µm,15.6s,MS6.3
WHN LR LR
comp=E,5µm,14.1s,MS6.3
WHN LR LR
comp=Z,12µm,15.6s,MS6.3
ADK Adak 73.73 9 PFAKE 20 09 30.0 +11
ADK LR LR
comp=Z,18µm,21.0s,MS6.3
PET Petropavlovsk 74.44 353 *c*P P **20 09 23.4 +0.5**
PET *e*S S 20 18 57.9 +1.5
PET pmax pmax
comp=Z,149nm,2.0s,mb5.6
PET pmax pmax
comp=Z,3µm,5.0s
PET smax
comp=E,6µm,10.0s
PET smax
comp=E,8µm,9.7s
PET Petropavlovsk 74.44 353 *e*P P **20 09 23.1 +0.2**
comp=E,489nm,1.7s,mb6.2
PET LR LR
comp=Z,23µm,21.0s,MS6.5
DL2 Dalian 74.61 323⇑ *i*P P **20 09 24.3 +0.1**
DL2 S S 20 19 03.3 +4.4
DL2 AMB AMB
comp=Z,120nm,1.0s,mb5.8
DL2 AMB AMB
comp=Z,3µm,5.8s
DL2 LR LR
comp=N,3µm,16.7s,MS5.8
DL2 LR LR
comp=E,2µm,16.2s,MS5.8
DL2 LR LR
comp=Z,4µm,19.1s,MS5.7
PEA0B Petropavlovsk- 74.63 353⇑ *e*P P **20 09 24.7 +0.7**
PETK Petropavlovsk- 74.63 353 P P **20 09 23.9 -0.1**
comp=Z,46nm,0.9s,mb5.4,baz=104,slow=6.3,SNR=28
PETK LR LR 20 37 15.2
comp=Z,19µm,20.8s,MS6.4,baz=154,slow=32
PETK Petropavlovsk- 74.63 353 P P **20 09 23.9 -0.1**
PETK LR LR 20 37 15.2
MDJ Mudanjiang 74.85 332 P P **20 09 26.0 +0.5**
MDJ AP pP 20 09 32.5 +0.4
MDJ XP sP 20 09 34.5 0.0
MDJ PCP PcP 20 09 39.8 +0.4
MDJ PP PP 20 12 12.5 -0.9
MDJ S S 20 19 05.0 +3.6
MDJ XS sS 20 19 15.3 +3.1
MDJ SS SS 20 23 50.5 +0.2
MDJ AMB AMB
comp=Z,144nm,1.9s,mb5.6
MDJ AMB AMB
comp=Z,2µm,6.4s
MDJ LR LR
comp=N,6µm,18.3s,MS6.0
MDJ LR LR
comp=E,4µm,19.2s,MS6.0
MDJ LR LR
comp=Z,9µm,20.2s,MS6.1
MDJ Mudanjiang 74.85 332 PFAKE 20 09 40.0 +14
MDJ LR LR
comp=Z,10µm,20.0s,MS6.1
KKTK Khon Kaen 75.15 294 P P **20 09 28.0 +0.1**
comp=Z,926nm,0.5s,mb7.0
TIA Tai'an 75.45 319⇓ P P **20 09 29.5 +0.3**
TIA S S 20 19 12.5 +4.1
TIA AMB AMB
comp=Z,160nm,1.7s,mb5.7
TIA AMB AMB
comp=Z,1µm,7.0s
TIA LR LR
comp=N,3µm,14.0s,MS5.7
TIA LR LR
comp=E,1µm,17.0s,MS5.7
SNY Shenyang 75.63 326⇑ P P **20 09 29.0 -1.1**
SNY PP PP 20 12 24.3 +4.2
SNY S S 20 19 10.0 -0.2
SNY AMB AMB
comp=Z,87nm,2.5s,mb5.2
SNY AMB AMB
comp=Z,3µm,5.6s
SNY LR LR
comp=N,4µm,17.4s,MS6.0
SNY LR LR
comp=E,5µm,16.8s,MS6.0
SNY LR LR
comp=Z,5µm,15.9s,MS6.0
HABR Khabarovsk 75.80 337⇓ *i*P P **20 09 32.0 +1.2**
HABR *e* 20 09 41.2
HABR *e* 20 09 43.4
HABR *e* 20 12 19.0
HABR *e*S S 20 19 14.9 +3.2
HABR *e* 20 19 27.2
HABR *e* 20 19 40.1
HABR *e* 20 24 03.1
HABR pmax pmax
comp=Z,724nm,1.7s,mb6.3
HABR MLR MLR

comp=Z,3µm,20.0s,MS5.6
CN2 Changchun 76.15 329 eP P **20 09 33.0 0.0**
CN2 eXP sP 20 09 40.3 -1.6
CN2 PP PP 20 12 26.5 +2.1
CN2 eS S 20 19 19.0 +3.2
CN2 AMB AMB
comp=Z,90nm,1.3s,mb5.5
CN2 LR LR
comp=N,5µm,18.0s,MS5.9
CN2 LR LR
comp=E,3µm,18.0s,MS5.9
CN2 LR LR
comp=Z,5µm,18.0s,MS5.9
NNT Nongplab 76.16 289 P P **20 09 37.0 +3.3**
MAW Mawson 76.73 202 eP P **20 09 34.5 -1.5**
comp=Z,116nm,2.0s,mb5.5
MAW eS S 20 19 23.4 +1.7
MAW Mawson 76.73 202 P P **20 09 35.7 -0.4**
comp=Z,32nm,0.7s,mb5.3,baz=114,slow=8.3,SNR=42
MAW LR LR 20 39 46.9
comp=Z,14µm,18.8s,MS6.3,baz=103,slow=33
MAW Mawson 76.73 202 P P **20 09 35.7 -0.3**
MAW pmax pmax
comp=Z,32nm,0.7s
MAW MLR MLR
comp=Z,14µm,18.8s
GYA Guiyang 77.02 305⇑ iP P **20 09 37.3 -1.0**
GYA AP pP 20 09 46.8 +1.9
GYA XP sP 20 09 49.5 +2.2
GYA PP PP 20 12 35.5 +3.4
GYA S S 20 19 24.3 -1.7
GYA SKS 20 19 45.5
GYA SS SS 20 24 27.0 +3.3
GYA AMB AMB
comp=Z,1µm,1.0s,mb6.8
GYA AMB AMB
comp=Z,4µm,7.2s
GYA LR LR
comp=N,8µm,18.0s,MS6.1
GYA LR LR
comp=E,5µm,19.4s,MS6.1
GYA LR LR
comp=Z,5µm,19.2s,MS5.9
NST Nakhon Sawan 77.16 292 P P **20 09 38.0 -1.3**
comp=Z,100nm,1.1s,mb5.7
UNV Unalaska Valle 77.52 14 eP P **20 09 38.7 -1.8**
comp=Z,89nm,0.7s,mb5.8
KLR Kul'dur 77.65 336 eP P **20 09 37.4 -3.9**
KLR eS S 20 19 34.0 +2.1
KLR pmax pmax
comp=N,110nm,1.6s
KLR pmax pmax
comp=Z,1µm,1.6s,mb6.5
KLR pmax pmax
comp=N,2µm,13.0s
KLR pmax pmax
comp=Z,6µm,13.0s
KLR smax
comp=N,9µm,10.0s
KLR smax
comp=E,5µm,10.0s
AKUT Akutan 77.96 15 eP P **20 09 43.7 +0.8**
comp=E,516nm,1.9s,mb6.1
AKUT LR LR
comp=Z,15µm,20.0s,MS6.3
NANT Nan 78.08 296⇑ P P **20 09 42.0 -2.4**
comp=Z,138nm,1.0s,mb5.8
BJT Baijiatuau 78.48 321 PFAKE 20 10 00.0 +14
BJT LR LR
comp=Z,6µm,20.0s,MS5.9
BJI Beijing 78.50 321 P P **20 09 46.5 +0.3**
BJI PP PP 20 12 46.5 +2.3
BJI S S 20 19 43.8 +2.3
BJI AMB AMB
comp=Z,79nm,2.5s,mb5.2
BJI AMB AMB
comp=Z,4µm,5.6s
BJI LR LR
comp=N,4µm,29.2s,MS5.8
BJI LR LR
comp=E,5µm,24.9s,MS5.8
BJI LR LR
comp=Z,8µm,39.5s
BJI Beijing 78.50 321 P P **20 09 46.5 +0.3**
comp=Z,79nm,2.5s,mb5.2
BJI PP PP 20 12 46.5 +2.3
BJI S S 20 19 43.7 +2.2
BJI SS SS 20 24 37.6 -8.0
BJI LR LR
comp=Z,8µm,39.5s,MS5.7
BDT Bhumibol Dam 78.82 293 P P **20 09 49.0 +0.5**
comp=Z,42nm,1.1s,mb5.3
TIY Taiyuan 79.32 317 eP P **20 09 56.3 +5.5**
TIY S S 20 19 59.0 +8.7
TIY LR LR
comp=N,1µm,12.6s,MS5.9
TIY LR LR
comp=E,4µm,15.2s,MS5.9
TIY LR LR
comp=Z,5µm,15.9s,MS5.9
CHRT Chiangrai 79.33 296⇓ P P **20 09 52.5 +1.2**
comp=Z,1µm,0.9s,mb6.9
KMI Kunming 79.39 302 P P **20 09 52.5 +1.0**
KMI AP pP 20 09 58.5 +0.4
KMI XP sP 20 10 00.8 +0.3
KMI PP PP 20 12 56.0 +4.0
KMI S S 20 19 54.3 +2.6
KMI XS sS 20 20 04.0 +1.5
KMI SCS ScS 20 20 13.0 -0.9
KMI AMB AMB
comp=Z,282nm,1.2s,mb6.1
KMI AMB AMB
comp=Z,5µm,7.9s
KMI LR LR
comp=N,4µm,17.3s,MS5.9
KMI LR LR
comp=E,3µm,15.9s,MS5.9
KMI LR LR
comp=Z,5µm,17.3s,MS5.9
KMI Kunming 79.39 302 P P **20 09 52.5 +1.0**
KMI *PP pP 20 09 58.6 +0.5
KMI *SP sP 20 10 00.8 +0.3
KMI 20 12 56.1
KMI PPP 20 14 47.0
KMI S S 20 19 54.2 +2.5
KMI 20 20 03.9
KMI *SS sS 20 20 04.0 +1.5
KMI PS 20 20 41.7
KMI pmax pmax
comp=Z,282nm,1.2s,mb6.1
KMI MLR MLR
comp=Z,5µm,17.3s,MS5.9
KMI Kunming 79.39 302 P P **20 09 52.5 +1.0**
comp=Z,282nm,1.2s,mb6.1
KMI pP pP 20 09 58.6 +0.5
KMI PcP PcP 20 10 00.1 +0.5
KMI sP sP 20 10 00.8 +0.3
KMI PP PP 20 12 56.1 +4.1
KMI PPP 20 14 47.0
KMI S S 20 19 54.2 +2.5
KMI SKS 20 20 03.9
KMI sS sS 20 20 04.0 +1.5
KMI ScS ScS 20 20 13.1 -0.8
KMI PS 20 20 41.7
KMI SS SS 20 25 06.8 +7.2
KMI SSS 20 28 27.7
KMI LR LR
comp=Z,5µm,17.3s,MS5.9
CM31 Chiang Mai Arr 79.41 295 eP P **20 09 52.4 +0.6**
comp=Z,5.1nm,0.6s
CM31 LR LR
comp=Z,3µm,19.0s,MS5.7
CMAR Chiang Mai Arr 79.41 295 P P **20 09 52.3 +0.6**
comp=Z,129nm,1.1s,mb5.8,baz=135,slow=4.4,SNR=112
CMAR PKPPKP 20 36 46.9
comp=Z,1.5nm,0.9s,baz=306,slow=5.0,SNR=6.5
CMAR Chiang Mai Arr 79.41 295⇑ eP P **20 09 52.3 +0.6**
XAN Xi'an 79.49 313 P P **20 09 52.8 +1.0**
XAN PP PP 20 12 57.5 +4.8
XAN S S 20 19 54.0 +1.7
XAN AMB AMB
comp=Z,185nm,1.6s,mb5.8
XAN AMB AMB
comp=Z,2µm,7.6s
XAN LR LR
comp=N,813nm,16.9s,MS5.8
XAN LR LR
comp=E,4µm,21.1s,MS5.8
XAN LR LR
comp=Z,8µm,17.7s,MS6.1
CHG Chiang Mai 79.57 295⇑ P P **20 09 52.9 +0.3**
comp=Z,234nm,1.1s,mb6.0
CHTO Chiang Mai 79.57 295 P P **20 09 53.4 +0.9**
SNR=82
CHTO Chiang Mai 79.57 295 eP P **20 09 52.3 -0.3**
CHTO pmax pmax
comp=Z,245nm,1.1s,mb6.0
CHTO MLR MLR
comp=Z,4µm,20.0s,MS5.7
CHTO Chiang Mai 79.57 295 eP P **20 09 52.2 -0.3**
comp=Z,245nm,1.1s,mb6.0
CHTO LR LR
comp=Z,4µm,20.0s,MS5.7
SDPT Sand Point 80.40 17 eP P **20 09 56.7 +0.5**
comp=Z,582nm,1.9s,mb6.2
SDPT LR LR
comp=Z,15µm,19.0s,MS6.3
CD2 Chengdu 81.50 308 P P **20 10 03.5 +0.8**
CD2 AP pP 20 10 11.8 +2.5
CD2 XP sP 20 10 14.3 +2.6
CD2 PP PP 20 13 12.5 +3.1
CD2 S S 20 20 13.3 -0.2
CD2 XS sS 20 20 26.3 +1.9
CD2 SS SS 20 25 34.8 +3.9
CD2 AMB AMB
comp=Z,200nm,1.2s,mb5.9
CD2 AMB AMB
comp=Z,7µm,8.4s
CD2 LR LR
comp=N,5µm,17.4s,MS6.0
CD2 LR LR
comp=E,5µm,19.2s,MS6.0
CD2 LR LR
comp=Z,4µm,20.4s,MS5.8
HHC Hu-ho-hao-te 81.75 320 eP P **20 10 04.0 +0.2**
HHC AP pP 20 10 10.8 +0.4
HHC XP sP 20 10 13.5 +0.7
HHC PP PP 20 13 14.0 +2.8
HHC S S 20 20 16.0 +0.3
HHC SKS 20 20 19.0
HHC XS sS 20 20 27.0 +0.4
HHC SS SS 20 25 38.0 +3.8
HHC AMB AMB
comp=Z,49nm,1.3s,mb5.3
HHC AMB AMB
comp=Z,3µm,6.6s
HHC LR LR
comp=N,3µm,16.9s,MS6.0
HHC LR LR
comp=E,5µm,17.2s,MS6.0
HHC LR LR
comp=Z,7µm,16.8s,MS6.1
CHGN Chignik 81.80 17 eP P **20 10 03.0 -0.7**
BTO Baotou 82.55 319 eP P **20 10 08.8 +0.8**
BTO S S 20 20 26.8 +2.9
HIA Hailar 82.82 330 PFAKE 20 10 20.0 +11
HIA LR LR
comp=Z,7µm,20.0s,MS6.0
SYO Syowa Base 83.15 196⇑ eP P **20 10 07.8 -3.0**
SYO Syowa Base 83.15 196⇓ iPcP PcP 20 10 11.2 -4.1
OHAK Old Harbor 84.09 19 eP P **20 10 14.7 -0.8**
comp=Z,477nm,1.6s,mb6.4
OHAK LR LR
comp=Z,18µm,19.0s,MS6.5
LZH Lanzhou 84.10 312⇑ P P **20 10 17.8 +1.7**
LZH AP pP 20 10 25.5 +2.8
LZH XP sP 20 10 27.0 +1.9
LZH PP PP 20 13 34.0 +3.4
LZH S S 20 20 40.0 +0.2
LZH XS sS 20 20 57.0 +6.2
LZH AMB AMB
comp=Z,806nm,1.6s,mb6.6
LZH AMB AMB
comp=Z,3µm,4.8s
LZH LR LR
comp=E,4µm,17.5s
LZH LR LR
comp=Z,9µm,19.0s,MS6.2
LZH Lanzhou 84.10 312⇑ P P **20 10 17.8 +1.7**
LZH *SP sP 20 10 27.1 +2.0
LZH 20 13 34.1
LZH S S 20 20 40.1 +0.3
LZH pmax pmax
comp=Z,806nm,1.6s,mb6.6
LZH MLR MLR
comp=Z,9µm,19.0s,MS6.2
LZH Lanzhou 84.10 312⇑ P P **20 10 17.8 +1.7**
comp=Z,806nm,1.6s,mb6.6
LZH pP pP 20 10 25.4 +2.7
LZH sP sP 20 10 27.1 +2.0
LZH PP PP 20 13 34.1 +3.5
LZH S S 20 20 40.1 +0.3
LZH sS sS 20 20 57.1 +6.3
LZH SS SS 20 26 23.2 +14
LZH LR LR
comp=Z,9µm,19.0s,MS6.2
KDAK Kodiak Island 84.77 19 P P **20 10 20.4 +1.5**
comp=Z,631nm,2.0s,mb6.4,SNR=5.6
KDAK Kodiak Island 84.77 19 eP P **20 10 19.2 +0.3**
comp=Z,426nm,1.7s,mb6.3
KDAK LR LR
comp=Z,5µm,19.0s,MS5.9
SEY Seymchan 84.86 352⇑ eP P **20 10 18.9 -0.4**
SEY Seymchan 84.86 352⇑ eP P **20 10 18.0 -1.3**
PMSA Palmer Station 85.09 160 P P **20 10 20.7 0.0**
comp=Z,72nm,0.9s,mb5.8,baz=257,slow=1.8,SNR=6.4
PMSA LR LR 20 45 28.2
comp=Z,7µm,18.3s,MS6.1,baz=228,slow=34
PMSA Palmer Station 85.09 160 eP P **20 10 19.7 -1.0**
comp=Z,648nm,1.8s,mb6.5
CLNS Chul'man 86.19 337 eP P **20 10 25.4 -0.6**
CLNS e pP 20 10 32.6 -0.1
CLNS eS S 20 20 49.1 -10
CLNS pmax pmax
comp=Z,715nm,1.6s,mb6.7
CLNS pmax pmax
comp=E,118nm,1.5s
CLNS pmax pmax
comp=N,588nm,1.6s
CLNS smax
comp=E,1870µm,11.9s
CLNS smax
comp=N,1292µm,12.2s
CLNS MLR MLR
comp=Z,4µm,16.0s,MS5.9
CLNS MLR MLR
comp=N,3µm,19.0s,MS5.8
CLNS MLR MLR
comp=E,2µm,16.0s,MS5.8
IMP Imphal 86.35 298 eP P **20 10 27.0 -0.6**
MCCM Marconi Confer 86.66 47 eP P **20 10 28.9 +0.1**
comp=E,128nm,0.9s,mb6.2
MCCM LR LR
comp=Z,16µm,20.0s,MS6.4
SVW2 Sparrevohn 86.68 16 eP P **20 10 29.0 +0.7**
SNCC San Nicolas Is 86.69 53 eP P **20 10 29.7 +0.7**
comp=Z,614nm,1.5s,mb6.6
SNCC LR LR
comp=Z,11µm,19.0s,MS6.3
HOPS Hopland 86.95 46 eP P **20 10 28.4 -1.8**
comp=Z,154nm,1.0s,mb6.2
HOPS LR LR
comp=Z,15µm,20.0s,MS6.4
KCPM Cahto Peak 86.96 45 eP P **20 10 29.7 -0.6**
SAO San Andreas Ge 86.97 49 eP P **20 10 30.2 -0.2**
SAO pmax pmax
comp=Z,114nm,0.9s,mb6.1
SAO MLR MLR
comp=Z,14µm,20.0s,MS6.4
SAO San Andreas Ge 86.97 49 eP P **20 10 30.2 -0.2**
comp=Z,114nm,0.9s,mb6.1
SAO LR LR
comp=Z,14µm,20.0s,MS6.4
NVL N'lazarevskaya 87.00 187 ciP P **20 10 29.6 -0.4**
NVL e*PP pP 20 10 37.7 +1.0
NVL e 20 13 50.6
NVL eS S 20 20 58.1 -9.3
NVL e 20 30 21.7
NVL pmax pmax
comp=Z,93nm,1.1s,mb5.9
MAIT Maitri 87.00 187 eP P **20 10 30.1 +0.1**
KIPM Iron Peak 87.09 45 eP P **20 10 30.8 -0.1**
SNAA Sanae 87.28 182 eP P **20 10 28.5 -2.9**
SNAA e 20 10 30.4
SNAA e pP 20 10 34.6 -3.4
SNAA e 20 10 37.7
SNAA e 20 10 43.7
SNAA e 20 13 41.4
SNAA e 20 13 44.3
SNAA Sanae 87.28 182 ciP P **20 10 28.8 -2.6**
SNAA Sanae 87.28 182 eP P **20 10 28.0 -3.3**
comp=Z,334nm,1.4s,mb6.4
CIT Chita 87.59 329 eP P **20 10 32.8 -0.2**
CIT e 20 21 19.5
CIT pmax pmax
comp=Z,644nm,2.6s,mb6.4
KRMB Red Mountain 87.69 44 eP P **20 10 34.0 +0.3**
SLKM Skilak Lake 87.70 19 eP P **20 10 33.2 -0.1**
KBO Bosley Butte 87.84 43 eP P **20 10 32.1 -2.4**
VNA3 Neumayer Olymp 87.86 180 eP P **20 10 31.3 -2.9**
VNA3 e 20 10 34.1
VNA3 e pP 20 10 39.0 -1.8
VNA3 e 20 10 41.2
VNA3 e 20 10 47.3
VNA3 e 20 13 43.9
VNA3 e 20 13 46.9
OSI Osito Adit 87.91 52 eP P **20 10 35.2 +0.2**
comp=Z,1µm,2.0s,mb6.8
WDC Whiskeytown Da 88.10 45 eP P **20 10 35.2 -0.5**
WDC pmax pmax
comp=Z,545nm,1.8s,mb6.5
WDC MLR MLR
comp=Z,18µm,22.0s,MS6.4
WDC Whiskeytown Da 88.10 45 eP P **20 10 35.2 -0.5**
comp=Z,545nm,1.8s,mb6.5
WDC LR LR
comp=Z,18µm,22.0s,MS6.4
KEBM Edson Butte 88.11 42 eP P **20 10 36.0 +0.3**
TTA Tatalina 88.13 15 eP P **20 10 34.3 -1.0**
TTA pmax pmax
comp=Z,22nm,1.1s,mb5.3
TTA Tatalina 88.13 15 eP P **20 10 34.3 -1.0**
comp=Z,22nm,1.1s,mb5.3
VNA2 Neumayer--Watz 88.15 181 eP P **20 10 33.1 -2.5**
VNA2 e 20 10 34.6
VNA2 e pP 20 10 39.8 -2.4
VNA2 e 20 10 42.2
VNA2 e 20 10 44.9
VNA2 e 20 10 49.2
VNA2 e 20 13 45.6
VNA2 e 20 13 48.8
OHCM Honcut 88.19 46 eP P **20 10 35.5 -0.7**
MWC Mount Wilson 88.22 52 eP P **20 10 35.0 -1.4**
MWC pmax pmax
comp=Z,873nm,1.8s,mb6.7
MWC MLR MLR
comp=Z,13µm,19.0s,MS6.4
MWC Mount Wilson 88.22 52 eP P **20 10 35.0 -1.4**
comp=Z,873nm,1.8s,mb6.7
MWC LR LR
comp=Z,13µm,19.0s,MS6.4
RC01 Rabbit Creek A 88.30 19 eP P **20 10 35.8 -0.3**
comp=Z,47nm,1.3s,mb5.5
CMB Columbia Colle 88.32 48 eP P **20 10 36.0 -0.8**
CMB pmax pmax
comp=Z,121nm,1.0s,mb6.1
CMB MLR MLR
comp=Z,19µm,21.0s,MS6.5
CMB Columbia Colle 88.32 48 eP P **20 10 36.0 -0.8**
comp=Z,121nm,1.0s,mb6.1
CMB LR LR
comp=Z,19µm,21.0s,MS6.5
VNA1 Neumayer--Stat 88.44 181 eP P **20 10 34.1 -2.8**
VNA1 e 20 10 36.4
VNA1 e pP 20 10 40.9 -2.7
VNA1 e 20 10 43.8
VNA1 e 20 10 46.4
VNA1 e 20 10 49.6
VNA1 e 20 13 47.5
VNA1 e 20 13 50.5
ULN Ulaanbaatar 88.47 323 P P **20 10 37.9 +0.7**
SNR=94
ULN Ulaanbaatar 88.47 323⇑ eP P **20 10 37.4 +0.2**
ULN Ulaanbaatar 88.47 323⇑ eP P **20 10 37.5 +0.3**
GTA Gaotai 88.53 313⇑ P P **20 10 37.5 -0.3**
GTA AP pP 20 10 44.0 -0.4
GTA XP sP 20 10 46.5 -0.3
GTA PP PP 20 14 10.5 +4.1
GTA SKS 20 21 04.5
GTA S S 20 21 24.5 +1.7
GTA XS sS 20 21 35.0 +1.1
GTA AMB AMB
comp=Z,2µm,5.7s
GTA LR LR
comp=N,3µm,20.7s,MS5.8
GTA LR LR
comp=E,4µm,22.5s,MS5.8
GTA LR LR
comp=Z,5µm,22.2s,MS5.8
BAR Barrett 88.56 54 eP P **20 10 37.5 -0.6**
comp=Z,215nm,1.5s,mb6.3
BAR LR LR
comp=Z,14µm,19.0s,MS6.4
YBH Yreka Blue Hor 88.57 44 LR LR 20 42 32.0
comp=Z,19µm,20.9s,MS6.5,baz=212,slow=30
YBH Yreka Blue Hor 88.57 44 eP P **20 10 37.7 -0.2**
YBH pmax pmax
comp=Z,477nm,1.8s
YBH MLR MLR
comp=Z,16µm,21.0s
YBH Yreka Blue Hor 88.57 44 eP P **20 10 37.7 -0.2**
comp=Z,477nm,1.8s,mb6.5
YBH LR LR
comp=Z,16µm,21.0s,MS6.4
ISA Isabella 88.57 51 eP P **20 10 37.1 -1.0**
ISA pmax pmax
comp=Z,664nm,1.7s,mb6.7
ISA MLR MLR
comp=Z,15µm,20.0s,MS6.4
ISA Isabella 88.57 51 eP P **20 10 37.1 -0.9**
comp=Z,664nm,1.7s,mb6.7
ISA LR LR
comp=Z,15µm,20.0s,MS6.4
YAK Yakutsk 88.72 342 eP P **20 10 36.0 -2.1**
YAK e 20 14 02.4
YAK eS S 20 21 02.1 -22
YAK e 20 21 26.4
YAK eSSS 20 30 49.7
YAK pmax pmax
comp=Z,357nm,2.2s,mb6.3
YAK pmax pmax
comp=N,117nm,1.8s
YAK pmax pmax
comp=E,83nm,1.9s
YAK pmax pmax
comp=Z,230nm,2.3s,mb6.1
YAK pmax pmax
comp=N,121nm,2.5s
YAK pmax pmax
comp=E,114nm,1.9s
YAK Yakutsk 88.72 342⇑ eP P **20 10 36.5 -1.6**
SONM Songino Array 88.81 323 P P **20 10 39.0 +0.1**
comp=E,52nm,1.1s,mb5.8,baz=143,slow=3.4,SNR=59
SONM PKKP PKKPbc 20 28 20.6 +0.1
comp=E,2.1nm,0.8s,baz=217,slow=2.3,SNR=6.5
SONM PKPPKP 20 36 28.7
comp=E,1.8nm,0.9s,baz=229,slow=1.7,SNR=7.4
SONM LR LR 20 51 40.9
comp=E,8µm,19.4s,MS6.1,baz=122,slow=36
HUMO Hull Mountain 88.85 43 eP P **20 10 39.0 -0.2**
comp=E,84nm,0.8s,mb6.1
HUMO LR LR
comp=Z,21µm,21.0s,MS6.5
PMR Palmer 88.88 18 eP P **20 10 38.8 -0.1**
PMR pmax pmax
comp=Z,5.0nm,0.5s,mb5.1
PMR MLR MLR
comp=Z,16µm,19.0s,MS6.5
PMR Palmer 88.88 18 eP P **20 10 38.8 -0.1**
comp=Z,4.6nm,0.5s,mb5.1
PMR LR LR
comp=Z,16µm,19.0s,MS6.5
BILL Bilibino 88.95 359⇑ eP P **20 10 38.5 -0.5**
BILL e 20 14 09.1
BILL iS S 20 20 59.0 -27

BILL eSS SS 20 27 14.4 -4.7
BILL pmax pmax
comp=Z,408nm,1.7s,mb6.5
BILL MLR MLR
comp=Z,5µm,17.0s,MS6.0
BILL Bilibino 88.95 359 *i* P **P 20 10 38.5 -0.5**
LBCM Butte Creek Ri 89.02 45 P **P 20 10 39.8 -0.2**
EYAK Cordova Ski Ar 89.13 20 *eP* **P 20 10 35.0 -5.1**
PFO Pinyon Flat Ob 89.14 53 P **P 20 10 40.2 -0.6**
comp=Z,411nm,1.6s,mb6.5,SNR=22
PFO Pinyon Flat Ob 89.14 53 P **P 20 10 41.5 +0.7**
comp=Z,25nm,0.6s,mb5.7,baz=260,slow=2.8,SNR=38
PFO LR LR 20 43 15.7
comp=Z,13µm,20.3s,MS6.4,baz=260,slow=31
PFO Pinyon Flat Ob 89.14 53 P **P 20 10 39.6 -1.2**
PFO pmax pmax
comp=Z,440nm,1.8s,mb6.5
PFO Pinyon Flat Ob 89.14 53 *eP* **P 20 10 39.3 -1.5**
comp=Z,442nm,1.8s,mb6.5
PFO LR LR
comp=Z,13µm,20.0s,MS6.4
BUOR Burton Butte 89.14 44 P **P 20 10 40.4 -0.1**
MTUM Tungsten Hills 89.28 49 *eP* **P 20 10 40.9 -0.4**
MPOR Mary's Peak 89.44 41 P **P 20 10 42.5 +0.6**
DAC Darwin (Calif) 89.48 51 PFAKE 20 10 50.0 +7.7
DAC LR LR
comp=Z,15µm,20.0s,MS6.4
GSC Goldstone 89.62 52 *eP* **P 20 10 42.6 -0.4**
GSC pmax pmax
comp=Z,490nm,1.7s,mb6.6
GSC MLR MLR
comp=Z,11µm,21.0s,MS6.3
GSC Goldstone 89.62 52 *eP* **P 20 10 42.6 -0.4**
comp=Z,490nm,1.7s,mb6.6
GSC LR LR
comp=Z,11µm,21.0s,MS6.3
COR Corvallis 89.63 41 *eP* **P 20 10 43.3 +0.5**
COR pmax pmax
comp=Z,502nm,1.8s,mb6.5
COR MLR MLR
comp=Z,13µm,20.0s,MS6.4
COR Corvallis 89.63 41 *eP* **P 20 10 43.3 +0.4**
comp=Z,502nm,1.8s,mb6.5
COR LR LR
comp=Z,13µm,20.0s,MS6.4
HEBO Mount Hebo 89.68 41 *eP* **P 20 10 42.4 -0.6**
comp=Z,211nm,1.1s,mb6.4
USHA Ushuaia 89.72 151 LR LR 20 41 18.3
comp=Z,8µm,21.5s,MS6.1,baz=209,slow=29
PAHR Pah Rah Range 89.80 47 *eP* **P 20 10 43.1 -0.6**
comp=Z,179nm,1.2s,mb6.3
HBO Huckleberry Mo 89.87 42 P **P 20 10 44.2 +0.2**
KTH Kantishna Hill 89.94 17 *eP* **P 20 10 43.5 -0.3**
comp=Z,26nm,1.2s,mb5.4
NVAR Mina Array Bea 89.95 48 P **P 20 10 44.4 -0.1**
comp=Z,51nm,0.7s,mb6.0,baz=228,slow=6.8,SNR=67
NVAR Mina Array Bea 89.95 48 P **P 20 10 44.4 -0.1**
TRF Thorofare Moun 90.03 17 *eP* **P 20 10 44.0 -0.2**
comp=Z,142nm,1.9s,mb6.0
LPIG La Paz 90.11 64 P **P 20 10 46.5 +0.9**
comp=Z,27nm,0.4s,mb5.9,baz=337,slow=3.7,SNR=11
LPIG LR LR 20 41 51.0
comp=Z,24µm,21.3s,MS6.6,baz=235,slow=29
GLA Glamis 90.12 55 *eP* **P 20 10 45.3 -0.1**
GLA pmax pmax
comp=Z,319nm,1.1s,mb6.6
GLA MLR MLR
comp=Z,17µm,19.0s,MS6.5
GLA Glamis 90.12 55 *eP* **P 20 10 45.3 -0.1**
comp=Z,319nm,1.1s,mb6.6
GLA LR LR
comp=Z,17µm,19.0s,MS6.5
CAL Calcutta 90.14 294 *ex* x 20 10 29.7
CAL *ex* x 20 21 10.0
MOD Modoc 90.22 45 *eP* **P 20 10 45.1 -0.5**
comp=Z,148nm,1.1s,mb6.2
MOD LR LR
comp=Z,10µm,20.0s,MS6.3
BPAW Bear Paw Mtn. 90.37 16 *eP* **P 20 10 43.9 -1.9**
comp=Z,115nm,2.1s,mb6.3
CRAG Craig 90.52 29 *eP* **P 20 10 47.0 +0.3**
comp=Z,209nm,1.6s,mb6.2
CRAG LR LR
comp=Z,14µm,22.0s,MS6.3
TPH Tonopah 90.55 49 *eP* **P 20 10 46.6 -0.7**
TPH pmax pmax
comp=Z,136nm,1.1s,mb6.2
TPH MLR MLR
comp=Z,13µm,22.0s,MS6.3
TPH Tonopah 90.55 49 *eP* **P 20 10 46.6 -0.7**
comp=Z,136nm,1.1s,mb6.2
TPH LR LR
comp=Z,13µm,22.0s,MS6.3
SIT Sitka 90.57 27 *eP* **P 20 10 47.8 +0.9**
SIT pmax pmax
comp=Z,312nm,1.8s,mb6.3
SIT MLR MLR
comp=Z,28µm,20.0s,MS6.7
SIT Sitka 90.57 27 *eP* **P 20 10 47.8 +1.0**
comp=Z,312nm,1.8s,mb6.3
SIT LR LR
comp=Z,28µm,20.0s,MS6.7
MCK McKinley 90.62 17 *eP* **P 20 10 47.6 +0.6**
BMW Boistfort Moun 90.64 40 *eP* **P 20 10 47.5 0.0**
LSA Lhasa 90.64 302 P **P 20 10 50.0 +2.1**
LSA LR LR
comp=N,1µm,22.7s,MS5.7
LSA LR LR
comp=E,3µm,21.3s,MS5.7
LSA LR LR
comp=Z,3µm,22.7s,MS5.6
LSA Lhasa 90.64 302 PFAKE 20 11 00.0 +12
LSA LR LR
comp=Z,3µm,20.0s,MS5.7
PNL Peninsula 90.70 23 *eP* **P 20 10 46.8 -0.6**
comp=Z,208nm,1.7s,mb6.2
NLWA Neilton Lookou 90.73 39 *eP* **P 20 10 48.1 +0.2**
comp=Z,213nm,1.4s,mb6.3
NLWA LR LR
comp=Z,11µm,19.0s,MS6.3
TPNV Topopah Spring 90.75 50 *eP* **P 20 10 47.3 -0.9**
TPNV pmax pmax
comp=Z,197nm,1.1s,mb6.3
TPNV MLR MLR
comp=Z,18µm,21.0s,MS6.5
TPNV Topopah Spring 90.75 50 *eP* **P 20 10 47.3 -1.0**
comp=Z,197nm,1.1s,mb6.3
TPNV LR LR
comp=Z,18µm,21.0s,MS6.5
RVW Rose Valley 90.76 40 P **P 20 10 48.5 +0.5**
LDFC Landfair 90.77 53 *eP* **P 20 10 48.4 0.0**
comp=Z,303nm,1.0s,mb6.6
BBB Bella Bella 90.98 33 LR LR 20 45 04.1
comp=Z,10µm,19.6s,MS6.3,baz=278,slow=31
BOD Bodaibo 91.09 334 *eP* **P 20 10 47.7 -1.6**
BOD pmax pmax
comp=Z,119nm,1.8s,mb5.9
VIPM Ingram Point 91.26 42 P **P 20 10 50.6 +0.2**
IMA2 Indian Mountai 91.32 14 *eP* **P 20 10 49.9 -0.2**
HDW Hoodsport 91.33 39 P **P 20 10 51.2 +0.5**
PALK Pallekele 91.36 277 *eP* **P 20 10 52.2 +0.5**
comp=Z,119nm,1.4s,mb6.0
PALK LR LR
comp=Z,8µm,19.0s,MS6.2
GNW Green Mountain 91.42 39 *eP* **P 20 10 50.1 -1.0**
comp=Z,93nm,1.0s,mb6.1
WRAK Wrangell Islan 91.45 28 *eP* **P 20 10 50.8 -0.1**
comp=Z,49nm,0.8s,mb5.9
WRAK LR LR
comp=Z,12µm,20.0s,MS6.3
WVOR Wild Horse Val 91.56 45 *eP* **P 20 10 51.0 -0.9**
WVOR pmax pmax
comp=Z,130nm,1.1s,mb6.2
WVOR Wild Horse Val 91.56 45 *eP* **P 20 10 51.1 -0.8**
comp=Z,133nm,1.1s,mb6.2
WVOR LR LR
comp=Z,13µm,20.0s,MS6.4
BMN Battle Mountai 91.60 47 *eP* **P 20 10 51.6 -0.5**
BMN pmax pmax
comp=Z,98nm,1.1s,mb6.0
BMN MLR MLR
comp=Z,12µm,20.0s,MS6.3
BMN Battle Mountai 91.60 47 *eP* **P 20 10 51.6 -0.5**
comp=Z,98nm,1.1s,mb6.0
BMN LR LR
comp=Z,12µm,20.0s,MS6.3
PGC Sidney 91.61 38 *eP* **P 20 10 52.1 +0.2**
comp=Z,221nm,1.2s,mb6.4
LON Longmire 91.62 40 *eP* **P 20 10 51.7 -0.3**
LON pmax pmax
comp=Z,73nm,1.2s,mb5.9
LON Longmire 91.62 40 *eP* **P 20 10 51.7 -0.3**
comp=Z,73nm,1.2s,mb5.9
COLA College 91.81 17⇑ *iP* **P 20 10 50.7 -1.8**
ZAK Zakamensk 91.91 324⇑ *iP* **P 20 10 52.5 -0.8**
ZAK pmax pmax
comp=Z,107nm,1.7s,mb5.9
SKAG Skagway 92.11 25 *eP* **P 20 10 53.8 -0.2**
comp=Z,343nm,1.8s,mb6.4
SKAG LR LR
comp=Z,21µm,20.0s,MS6.6
HYT Haines Junctio 92.18 23 *eP* **P 20 10 52.2 -2.1**
JCW Jim Creek 92.26 39 *eP* **P 20 10 55.3 +0.3**
IRK Irkutsk 92.36 326 *eP* **P 20 10 54.8 -0.5**
IRK pmax pmax
comp=Z,163nm,3.3s
TLY Talaya 92.39 325 P **P 20 10 55.4 -0.1**
comp=Z,244nm,1.1s,mb6.5,SNR=9.6
TLY Talaya 92.39 325 P **P 20 10 55.7 +0.2**
SNR=11
TLY Talaya 92.39 325 *eP* **P 20 10 54.4 -1.1**
TLY *e* 20 21 26.1
TLY *eS* S 20 22 00.1 +2.3
TLY pmax pmax
comp=Z,115nm,1.8s,mb5.9
TLY Talaya 92.39 325 *eP* **P 20 10 55.3 -0.2**
ODAN Odare 92.58 298 *eP* **P 20 10 56.8 -0.2**
RPW Rockport 92.63 39 *eP* **P 20 10 56.1 -0.5**
BOK Bokaro 92.70 294 *eP* **P 20 10 58.3 +0.7**
BOK AMb AMB 20 11 09.3
comp=Z,191nm,2.4s,mb6.1
VIS Vishakhapatnam 92.71 288 *eP* **P 20 10 58.8 +1.0**
VIS AMb AMB 20 11 10.7
comp=Z,148nm,2.3s,mb6.0
VIS *i* x x 20 21 32.6
HAWA Hanford 92.83 41 *eP* **P 20 10 57.5 -0.1**
comp=Z,245nm,1.7s,mb6.4
HAWA LR LR
comp=Z,13µm,19.0s,MS6.4
ETW Entiat 92.92 40 *eP* **P 20 10 57.4 -0.6**
TUC Tucson 92.93 57 *eP* **P 20 10 58.1 -0.4**
TUC pmax pmax
comp=Z,93nm,1.4s,mb6.0
TUC MLR MLR
comp=Z,15µm,19.0s,MS6.5
TUC Tucson 92.93 57 *eP* **P 20 10 58.0 -0.4**
comp=Z,93nm,1.4s,mb6.0
TUC LR LR
comp=Z,15µm,19.0s,MS6.5
COLD Coldfoot 93.07 15 *eP* **P 20 10 57.8 -0.4**
comp=Z,1µm,1.8s,mb7.0
ELK Elko 93.10 47 LR LR 20 45 56.1
comp=Z,14µm,20.6s,MS6.4,baz=226,slow=31
ELK Elko 93.10 47 *eP* **P 20 10 58.9 -0.1**
ELK pmax pmax
comp=Z,46nm,1.0s
ELK MLR MLR
comp=Z,16µm,20.0s
ELK Elko 93.10 47 *eP* **P 20 10 58.9 -0.1**
comp=Z,46nm,1.0s,mb5.9
ELK LR LR
comp=Z,16µm,20.0s,MS6.5
ARUT Antelope Range 93.13 51 *eP* **P 20 10 59.4 +0.2**
RAMN Ramite 93.27 298 *eP* **P 20 11 00.0 -0.1**
comp=Z,758nm,1.9s,mb6.8
LNOR Lincton Mounta 93.36 42 *eP* **P 20 10 59.2 -0.9**
BMO Blue Mountains 93.52 43 *eP* **P 20 10 58.9 -1.9**
BMO pmax pmax
comp=Z,35nm,1.2s,mb5.7
BMO MLR MLR
comp=Z,19µm,20.0s,MS6.5
BMO Blue Mountains 93.52 43 *eP* **P 20 10 58.9 -1.9**
comp=Z,35nm,1.2s,mb5.7
BMO LR LR
comp=Z,19µm,20.0s,MS6.5
DLBC Dease Lake 93.66 27 *eP* **P 20 11 00.7 -0.4**
DAWY Dawson 93.72 20 *eP* **P 20 11 00.0 -1.3**
WUAZ Wupatki 93.74 53 *eP* **P 20 11 02.3 +0.2**
comp=Z,111nm,1.0s,mb6.2
WUAZ LR LR
comp=Z,12µm,19.0s,MS6.4
DGAR Diego Garcia 93.77 261 PFAKE 20 11 10.0 +7.2
DGAR LR LR
comp=Z,19µm,21.0s,MS6.5
OD2 Odessa Site #2 93.79 40 *eP* **P 20 10 59.0 -3.1**
MOY Mondy 93.81 325 *eP* **P 20 11 01.6 -0.4**
MOY pmax pmax
comp=Z,497nm,3.4s
MDRS Chennai 93.83 282 *eP* **P 20 11 03.1 +0.1**
MDRS AMb AMB 20 11 14.5
comp=Z,206nm,1.8s,mb6.3
JIRN Jiri 93.87 298 *eP* **P 20 11 03.2 +0.3**
comp=Z,636nm,1.8s,mb6.7
GUN Gumba 94.22 298 *eP* **P 20 11 04.6 +0.1**
comp=Z,842nm,2.0s,mb6.8
MVU Marysvale 94.31 50 PFAKE 20 11 20.0 +15
MVU LR LR
comp=Z,17µm,20.0s,MS6.5
MSU Marysvale 94.33 50 *eP* **P 20 11 08.2 +3.4**
PKIN Phulchoki 94.49 298 *eP* **P 20 11 05.5 -0.3**
comp=Z,199nm,1.2s,mb6.4
DUG Dugway 94.56 49 PFAKE 20 11 20.0 +14
DUG LR LR
comp=Z,19µm,21.0s,MS6.5
KKN Kakani 94.67 298 *eP* **P 20 11 05.9 -0.7**
DMN Daman 94.74 298 *eP* **P 20 11 06.5 -0.4**
comp=Z,415nm,1.3s,mb6.7
HLID Hailey 94.84 45 PFAKE 20 11 20.0 +13
HLID LR LR
comp=Z,18µm,20.0s,MS6.5
NEW Newport 95.14 40 *eP* **P 20 11 10.4 +2.2**
NEW pmax pmax
comp=Z,13nm,1.1s
NEW MLR MLR
comp=Z,8µm,20.0s
NEW Newport 95.14 40 *eP* **P 20 11 10.3 +2.2**
comp=Z,13nm,1.1s,mb5.3
NEW LR LR
comp=Z,8µm,20.0s,MS6.2
GKN Gorkha 95.27 298 *eP* **P 20 11 08.3 -1.0**
comp=Z,208nm,1.2s,mb6.4
MPU Maple Canyon 95.31 49 PFAKE 20 11 20.0 +11
MPU LR LR
comp=Z,18µm,20.0s,MS6.5
HWUT Hardware Ranch 95.98 48 PFAKE 20 11 20.0 +7.8
HWUT LR LR
comp=Z,9µm,20.0s,MS6.3
DANN Dangsing 96.12 298 *eP* **P 20 11 12.3 -0.9**
MSO Missoula 96.49 42 PFAKE 20 11 30.0 +16
MSO LR LR
comp=Z,8µm,21.0s,MS6.2
MVCO Mesa Verde 96.53 53 PFAKE 20 11 30.0 +15
MVCO LR LR
comp=Z,14µm,19.0s,MS6.5
LAZ Ladron 96.54 56 *eP* **P 20 11 15.5 +0.5**
LENM Lemitar 96.59 56 *eP* **P 20 11 13.8 -1.4**
AHID Auburn Hatcher 96.75 47 PFAKE 20 11 30.0 +14
AHID LR LR
comp=Z,7µm,21.0s,MS6.1
BNM Barren Site 96.85 56 *eP* **P 20 11 16.4 +0.1**
HYB Hyderabad 96.87 286 *eP* **P 20 11 19.5 +2.7**
HYB *eS* S 20 22 38.0 -0.4
HYB pmax pmax
comp=Z,125nm,1.4s,mb6.2
HYB Hyderabad 96.87 286 *i* P **P 20 11 16.5 -0.3**
comp=Z,125nm,1.4s,mb6.2
HYB *eS* KS 20 21 54.0
HYB *eS* S 20 22 38.0 -0.4
HYB LR LR 21 01 44.0
comp=Z,4.7nm,9.0s
HYB Hyderabad 96.87 286 *eP* **P 20 11 19.5 +2.7**
comp=Z,125nm,1.4s,mb6.2
HYB *eS* KS 20 21 56.0
HYB *eS* S 20 22 38.0 -0.4
LPM Los Pinos Moun 96.90 56 *eP* **P 20 11 17.0 +0.4**
PLCA Paso Flores 97.03 138 P **P 20 11 18.1 +0.9**
comp=Z,9.6nm,0.7s,mb5.3,baz=231,slow=5.6,SNR=20
PLCA PP PP 20 15 11.7 -0.7
comp=Z,3.3nm,1.1s,baz=217,slow=6.1,SNR=3.1
PLCA PKKP PKKPbc 20 28 01.1 +3.0
comp=Z,2.1nm,1.0s,baz=149,slow=7.9,SNR=3.2
PLCA LR LR 20 44 44.7
comp=Z,3µm,20.6s,MS5.8,baz=235,slow=29
PLCA Paso Flores 97.03 138 P **P 20 11 18.1 +0.9**
PLCA 20 15 11.7
PLCA pmax pmax
comp=Z,10.0nm,0.7s
PLCA pmax pmax
comp=Z,3.0nm,1.1s
PLCA MLR MLR
comp=Z,3µm,20.6s
PLCA Paso Flores 97.03 138 *eP* **P 20 11 18.6 +1.4**
comp=Z,79nm,1.6s,mb5.9
PLCA LR LR
comp=Z,3µm,20.0s,MS5.8
ANMO Albuquerque 97.26 55 LR LR 20 48 20.8
comp=Z,15µm,19.5s,MS6.5,baz=229,slow=31
ANMO Albuquerque 97.26 55 *eP* **P 20 11 17.6 -0.6**
ANMO pmax pmax
comp=Z,12nm,1.0s
ANMO MLR MLR
comp=Z,15µm,20.0s
ANMO Albuquerque 97.26 55 *eP* **P 20 11 17.6 -0.6**
comp=Z,12nm,1.0s,mb5.3
ANMO LR LR
comp=Z,15µm,20.0s,MS6.5
WALA Waterton Lakes 97.40 40 *eP* **P 20 11 17.5 -1.0**
comp=Z,20nm,0.9s,mb5.5
BOZ Bozeman (W) 97.50 44 PFAKE 20 11 30.0 +11
BOZ LR LR
comp=Z,17µm,20.0s,MS6.5
JBP Jabalpur 97.54 292 *ex* **P 20 11 21.6 +1.8**
JBP *eS* SKSac 20 21 57.0 +0.5
TXAR Lajitas Array 97.55 62 P **P 20 11 19.0 -0.6**
comp=Z,2.9nm,0.7s,mb4.9,baz=229,slow=4.6,SNR=21
TXAR PKKP PKKPbc 20 28 00.1 +3.4
comp=Z,1.2nm,0.8s,baz=103,slow=4.0,SNR=5.1
TXAR LR LR 20 48 22.3
comp=Z,18µm,19.4s,MS6.6,baz=5.0,slow=31
YMR Madison River 97.56 45 PFAKE 20 11 30.0 +11
YMR LR LR
comp=Z,12µm,21.0s,MS6.4
HVS Khovu-Aksy 97.64 322*c* *iP* **P 20 11 19.1 -0.4**
HVS pmax pmax
comp=Z,352nm,1.7s,mb6.6
HVS MLR MLR
comp=Z,20µm,19.0s,MS6.6
NGP Nagpur 97.68 290 *eP* **P 20 11 20.6 +0.1**
NGP *ex* x 20 11 30.4
comp=Z,76nm,1.6s
NGP *eS* SKSac 20 21 56.9 -0.4
BW06 Boulder Array 97.80 47 PFAKE 20 11 30.0 +10
BW06 LR LR
comp=Z,9µm,19.0s,MS6.3
PDAR Pinedale Array 97.80 47 P **P 20 11 20.3 -0.1**
comp=Z,2.5nm,0.5s,mb5.0,baz=146,slow=1.8,SNR=3.5
PDAR PKKPbc PKKPbc 20 27 55.0 -1.5
comp=Z,1.6nm,0.8s,baz=88,slow=5.9,SNR=7.7
PDAR LR LR 20 52 28.0
comp=Z,7µm,18.4s,MS6.2,baz=255,slow=34
LKWY Lake 97.89 45 PFAKE 20 11 30.0 +9.2
LKWY LR LR
comp=Z,14µm,21.0s,MS6.4
WMQ Urumqi 98.61 314 P **P 20 11 24.0 0.0**
WMQ AP pP 20 11 32.0 +1.3
WMQ XP sP 20 11 36.0 +2.9
WMQ PP PP 20 15 27.0 +1.7
WMQ SKS 20 21 59.0
WMQ S S 20 22 48.0 -4.2
WMQ XS sS 20 23 01.0 -2.3
WMQ SS SS 20 29 38.0 -0.3
WMQ AMB AMB
comp=Z,51nm,1.8s,mb5.8
WMQ AMB AMB
comp=Z,2µm,6.0s
WMQ LR LR
comp=N,10µm,19.1s,MS6.4
WMQ LR LR
comp=E,7µm,19.1s,MS6.4
WMQ LR LR
comp=Z,7µm,23.4s,MS6.0
RLMT Red Lodge 98.85 45 PFAKE 20 11 40.0 +15
RLMT LR LR
comp=Z,16µm,22.0s,MS6.5
SDCO Great Sand Dun 98.95 53 PFAKE 20 11 40.0 +14
SDCO LR LR
comp=Z,16µm,20.0s,MS6.5
PAYG Puerto Ayora 99.39 94 PFAKE 20 11 40.0 +12
PAYG LR LR
comp=Z,6µm,19.0s,MS6.1
ISCO Idaho Springs 99.55 51 PFAKE 20 11 40.0 +12
ISCO LR LR
comp=Z,7µm,19.0s,MS6.2
EGMT Eagleton 99.57 42 PFAKE 20 11 40.0 +12
EGMT LR LR
comp=Z,7µm,19.0s,MS6.2
KRAR Krasnoyarsk 100.04 326*d* *iP* Pdif 20 11 30.8 +0.4
KRAR pmax pmax
comp=Z,28nm,1.7s
GOA Goa 100.51 283⇑ *eP* Pdif 20 11 31.1 -1.4
GOA *ex* x 20 22 13.2
KAD Karad 100.77 284 *eP* Pdif 20 11 33.7 0.0
KAD AMb AMB 20 11 46.4
comp=Z,56nm,1.6s
JCT Junction City 101.09 62 *eP* Pdif 20 11 34.5 -0.6
JCT pmax pmax
comp=Z,8.0nm,0.9s
JCT MLR MLR
comp=Z,18µm,20.0s,MS6.6
JCT Junction City 101.09 62 *eP*Pdif Pdif 20 11 34.5 -0.6
comp=Z,8.0nm,0.9s
JCT LR LR
comp=Z,18µm,20.0s,MS6.6
LAO LASA Array 101.38 44 PFAKE 20 11 50.0 +14
LAO LR LR
comp=Z,22µm,20.0s,MS6.7
POO Poona 101.46 286 *eP* Pdif 20 11 35.8 -0.9
POO AMb AMB 20 11 40.9
comp=Z,54nm,1.0s
DDI Dehra Dun 101.47 298 *ex* Pdif 20 11 36.0 -0.8
NDI New Delhi 101.67 296 *ex* Pdif 20 11 41.0 +3.4
NDI *eS* SKSac 20 22 16.0 -0.7
KVTX Kingsville 101.79 65 PFAKE 20 11 50.0 +12
KVTX LR LR
comp=Z,12µm,21.0s,MS6.4
RSSD Black Hills 102.04 47 PFAKE 20 11 50.0 +11
RSSD LR LR
comp=Z,5µm,20.0s,MS6.0
YKA Yellowknife Ar 102.29 27 P Pdif 20 11 40.6 +0.2
comp=Z,1.9nm,0.6s,baz=253,slow=5.5,SNR=4.0
YKA PKiKP PKiKP 20 16 03.4 +1.7
comp=Z,2.2nm,0.7s,baz=238,slow=1.1,SNR=4.2
BOM Bombay 102.51 286 *ex* x 20 14 59.7
BOM *ex* x 20 15 25.0
comp=Z,118nm,1.4s
BOM *eS* SKSac 20 22 20.4 -0.6
OGNE Ogallala 102.51 51 PFAKE 20 11 50.0 +8.6
OGNE LR LR
comp=Z,10µm,22.0s,MS6.3
MKAR Makanchi Array 103.18 315 Pdiff Pdif 20 11 44.2 -0.2
comp=Z,2.9nm,0.7s,baz=100,slow=5.6,SNR=30
MKAR PP PP 20 15 57.5 -2.3
comp=Z,6.1nm,1.0s,baz=96,slow=6.2,SNR=4.9
MKAR PKKPbc PKKPbc 20 27 40.0 -1.1
comp=Z,2.7nm,0.7s,baz=287,slow=2.7,SNR=9.9
MKAR Makanchi Array 103.18 315 P Pdif 20 11 44.2 -0.2
MKAR 20 15 57.5
MKAR Makanchi Array 103.18 315 Pdif Pdif 20 11 44.2 -0.2
MKAR PP PP 20 15 57.5 -2.3
MKAR PKKPbc PKKPbc 20 27 40.0 -1.1
WMOK Wichita Mounta 103.18 58 PFAKE 20 12 00.0 +16
WMOK LR LR
comp=Z,14µm,20.0s,MS6.5
AJM Ajmer 103.19 293 *eP* Pdif 20 11 43.8 -0.6
AJM AMb AMB 20 11 56.0
comp=Z,55nm,1.7s
DGMT Dagmar 103.23 43 PFAKE 20 12 00.0 +15
DGMT LR LR
comp=Z,8µm,20.0s,MS6.2
LCO Las Campanas 103.58 129 PFAKE 20 12 00.0 +14
LCO LR LR
comp=Z,5µm,22.0s,MS6.0
CBKS Cedar Bluff 103.59 53 PFAKE 20 12 00.0 +14
CBKS LR LR
comp=Z,9µm,22.0s,MS6.2
ZAA0 Zalesovo Array 103.71 323 *eP*Pdif Pdif 20 11 43.9 -2.8
ZALV Zalesovo Beam 103.71 323 Pdiff Pdif 20 11 45.2 -1.5
comp=Z,2.5nm,0.8s,baz=109,slow=4.6,SNR=13

ZALV					PP	PP				
	comp=Z,1.7nm,0.8s,baz=70,slow=4.9,SNR=3.7									
ZALV	**Zalesovo Beam**	**103.71**	**323**		Pdif	Pdif				
ZALV					PP	PP				
TRQA	**Tornquist**	**103.89**	**141**		PFAKE					
TRQA					LR	LR				
	comp=Z,3µm,21.0s,MS5.9									
HKT	**Hockley**	**104.22**	**63**		PFAKE					
HKT					LR	LR				
	comp=Z,21µm,20.0s,MS6.7									
NVS	**Novosibirsk**	**104.85**	**323**	*e*	P	Pdif				
NVS				*e*						
NVS				*e*						
NVS				*e*						
NVS				*e*	PS	PS				
NVS					pmax	pmax				
	comp=N,17nm,2.0s									
NVS					pmax	pmax				
	comp=E,40nm,2.0s									
NATX	**Nacogdoches**	**105.68**	**62**		PFAKE					
NATX					LR	LR				
	comp=Z,27µm,20.0s,MS6.8									
AAA	**Alma-Ata**	**105.90**	**311**	*i*	P					
AAA				*i*	S	Sdif				
AAA					pmax	pmax				
	comp=Z,1µm,7.6s									
AAA					smax					
	comp=E,4µm,8.9s									
AAA					MLR	MLR				
	comp=Z,4µm,17.0s,MS6.0									
KSU1	**Kansas State U**	**106.02**	**54**		PFAKE					
KSU1					LR	LR				
	comp=Z,16µm,19.0s,MS6.6									
FFC	**Flin Flon**	**106.21**	**37**		PFAKE					
FFC					LR	LR				
	comp=Z,9µm,21.0s,MS6.3									
KURK	**Kurchatov**	**106.54**	**318**	*e*	P	Pdif				
KURK					pmax	pmax				
	comp=Z,18nm,1.5s									
KURK					MLR	MLR				
	comp=Z,4µm,19.0s,MS6.0									
KURK	**Kurchatov**	**106.54**	**318**	*e*	Pdif	Pdif				
	comp=Z,18nm,1.5s									
KURK					LR	LR				
	comp=Z,4µm,19.0s,MS6.0									
BHJ	**Bhuj**	**106.61**	**289**	*e*	P	Pdif				
TKM2	**Tokmak 2**	**106.77**	**310**		PFAKE					
TKM2					LR	LR				
	comp=Z,4µm,19.0s,MS6.0									
ECSD	**EROS,Sioux Fal**	**107.11**	**49**	*e*	PKPdf	PKiKP				
ECSD					LR	LR				
	comp=Z,13µm,20.0s,MS6.5									
NNA	**Nana**	**107.11**	**110**		PFAKE					
NNA					LR	LR				
	comp=Z,6µm,22.0s,MS6.1									
TGUH	**Tegucigalpa,Un**	**107.19**	**81**		PFAKE					
TGUH					LR	LR				
	comp=Z,5µm,19.0s,MS6.1									
FRU	**Bishkek**	**107.46**	**310**	*e*	P	Pdif				
FRU				*e*						
FRU				*e*						
AML	**Almayashu**	**107.97**	**309**		PFAKE					
AML					LR	LR				
	comp=Z,3µm,20.0s,MS5.9									
EKS2	**Erkin-Say**	**108.02**	**309**		PFAKE					
EKS2					LR	LR				
	comp=Z,4µm,19.0s,MS6.0									
TEIG	**Tepich**	**108.09**	**75**		PFAKE					
TEIG					LR	LR				
	comp=Z,8µm,19.0s,MS6.3									
JTS	**JuntasAbangare**	**108.16**	**86**		PFAKE					
JTS					LR	LR				
	comp=Z,8µm,21.0s,MS6.2									
LVC	**Limon Verde**	**108.44**	**124**		PFAKE					
LVC					LR	LR				
	comp=Z,4µm,20.0s,MS5.9									
AGMN	**Agassiz Refuge**	**108.58**	**45**		PFAKE					
AGMN					LR	LR				
	comp=Z,22µm,21.0s,MS6.7									
ULM	**Lac du Bonnet**	**108.93**	**43**		PKiKP	PKiKP				
	comp=Z,7.9nm,0.6s,baz=271,slow=1.0,SNR=12									
ULM	**Lac du Bonnet**	**108.93**	**43**		PKPdf	PKiKP				
ULM					LR	LR				
	comp=Z,8µm,20.0s,MS6.3									
SCIA	**State Center**	**109.17**	**52**		PFAKE					
SCIA					LR	LR				
	comp=Z,12µm,19.0s,MS6.5									
VBMS	**Vicksburg**	**109.21**	**62**		PFAKE					
VBMS					LR	LR				
	comp=Z,18µm,21.0s,MS6.6									
MSEY	**Mahe Island**	**110.37**	**256**		PFAKE					
MSEY					LR	LR				
	comp=Z,9µm,21.0s,MS6.3									
OXF	**Oxford**	**110.61**	**60**		PFAKE					
OXF					LR	LR				
	comp=Z,13µm,19.0s,MS6.5									
OTAV	**Otavalo**	**110.71**	**98**		PFAKE					
OTAV					LR	LR				
	comp=Z,3µm,19.0s,MS5.8									
ABPO	**Ambohimpanom**	**110.73**	**239**		PFAKE					
ABPO					LR	LR				
	comp=Z,9µm,20.0s,MS6.3									
EYMN	**Ely**	**111.40**	**45**		PFAKE					
EYMN					LR	LR				
	comp=Z,17µm,20.0s,MS6.6									
JFWS	**Jewell Farm**	**111.51**	**51**		PFAKE					
JFWS					LR	LR				
	comp=Z,15µm,21.0s,MS6.5									
BRAL	**Brewton**	**111.82**	**64**		PFAKE					
BRAL					LR	LR				
	comp=Z,16µm,20.0s,MS6.6									
HDIL	**Hopedale**	**111.83**	**54**		PFAKE					
HDIL					LR	LR				
	comp=Z,16µm,20.0s,MS6.6									
BRVK	**Borovoye**	**112.03**	**320**	⇑*e*	PKiKP	PKiKP				
WVT	**Waverly**	**112.19**	**59**	*e*	P	Pdif				
WVT	**Waverly**	**112.19**	**59**		PFAKE					
WVT					LR	LR				
	comp=Z,10µm,19.0s,MS6.4									
LRAL	**Lakeview Retre**	**112.28**	**62**	*e*	PKPdf	PKiKP				
LRAL					LR	LR				
	comp=Z,17µm,21.0s,MS6.6									
LPAZ	**La Paz**	**112.43**	**119**		PKiKP	PKiKP				
	comp=Z,1.4nm,0.8s,baz=177,slow=2.2,SNR=3.8									
LPAZ	**La Paz**	**112.43**	**119**		PKPdf	PKiKP				
LPAZ					LR	LR				
	comp=Z,2µm,20.0s,MS5.8									
BCIP	**Isla Barro Col**	**112.57**	**89**		PFAKE					
BCIP					LR	LR				
	comp=Z,4µm,19.0s,MS6.0									
USIN	**University of**	**112.64**	**57**	*e*	Pdif	Pdif				
COWI	**Conover**	**112.75**	**48**	*e*	PKPdf	PKiKP				
COWI					LR	LR				
	comp=Z,11µm,20.0s,MS6.5									
WCI	**Wyandotte Cave**	**113.75**	**56**		PFAKE					
WCI					LR	LR				
	comp=Z,13µm,20.0s,MS6.5									
CPUP	**Villa Florida**	**114.60**	**134**		PKP	PKiKP				
	comp=Z,0.7nm,0.3s,baz=183,slow=2.2,SNR=5.4									
CPUP	**Villa Florida**	**114.60**	**134**	*e*	PKPdf	PKiKP				
CPUP					LR	LR				
	comp=Z,653nm,20.0s,MS5.2									
GOGA	**Godfrey**	**115.26**	**62**		PFAKE					
GOGA					LR	LR				
	comp=Z,11µm,20.0s,MS6.5									
TZTN	**Tazewell**	**115.67**	**59**		PFAKE					
TZTN					LR	LR				
	comp=Z,12µm,20.0s,MS6.5									
GLMI	**Grayling**	**115.79**	**49**		PFAKE					
GLMI					LR	LR				
	comp=Z,14µm,20.0s,MS6.6									
DWPF	**Disney**	**116.04**	**68**		PFAKE					
DWPF					LR	LR				
	comp=Z,7µm,19.0s,MS6.3									
ACSO	**Alum Creek Sta**	**116.56**	**55**	*e*	PKPdf	PKPdf				
ACSO					LR	LR				
	comp=Z,16µm,20.0s,MS6.6									
SVE	**Sverdlovsk**	**117.67**	**324**	*i*	PKiKP	PKPdf				
SVE				*e*						
SVE				*e*						
SVE				*e*						
SVE					pmax	pmax				
	comp=Z,31nm,1.5s									
HOQ	**Hoqain**	**117.68**	**286**		P	PKPdf				
	SNR=6.8									

NHSC	**New Hope**	**117.94**	**63**		PFAKE					
NHSC					LR	LR				
	comp=Z,15µm,21.0s,MS6.6									
ELN	**Prospectdale**	**117.98**	**58**	*e*	PKPdf	PKPdf				
BLA	**Blacksburg**	**118.24**	**58**	*e*	PKiKP	PKPdf				
BLA					MLR	MLR				
	comp=Z,14µm,20.0s,MS6.6									
ARU	**Arti**	**118.85**	**324**	*i*	PKIKP	PKPdf				
ARU										
ARU										
ARU					PS	PS				
ARU	**Arti**	**118.85**	**324**	⇑*e*	PKP	PKPdf				
SUR	**Sutherland**	**118.88**	**210**		PFAKE					
SUR					LR	LR				
	comp=Z,5µm,19.0s,MS6.1									
MCWV	**Mont Chateau**	**118.91**	**56**	*e*	PKPdf	PKPdf				
MCWV					LR	LR				
	comp=Z,17µm,20.0s,MS6.7									
ERPA	**Erie**	**118.96**	**53**		PFAKE					
ERPA					LR	LR				
	comp=Z,10µm,20.0s,MS6.4									
HATD	**Hatta, Dubai**	**118.98**	**287**	⇑	P	PKPdf				
	SNR=9.9									
RBK	**Rabkut**	**119.09**	**279**	⇓	P	PKPdf				
	SNR=6.7									
BOSA	**Boshof**	**119.62**	**216**		PKP	PKPdf				
	comp=Z,2.5nm,0.4s,baz=140,slow=3.7,SNR=16									
BOSA	**Boshof**	**119.62**	**216**	*e*	PKPdf	PKPdf				
BOSA					LR	LR				
	comp=Z,4µm,21.0s,MS6.1									
SSPA	**Standing Stone**	**120.47**	**55**	*e*	PKPdf	PKPdf				
SSPA					LR	LR				
	comp=Z,14µm,19.0s,MS6.6									
URVA	**University of**	**120.56**	**58**	*e*	PKPdf	PKPdf				
CBN	**Corbin**	**120.73**	**57**	*e*	PKPdf	PKPdf				
CBN					LR	LR				
	comp=Z,16µm,20.0s,MS6.7									
SDV	**Santo Domingo**	**121.06**	**92**		PFAKE					
SDV					LR	LR				
	comp=Z,876nm,20.0s,MS5.4									
SDMD	**Soldier's Deli**	**121.22**	**56**	*e*	PKPdf	PKPdf				
KBS	**Kingsbay**	**121.23**	**355**	*e*	PP	PP				
KBS	**Kingsbay**	**121.23**	**355**		PFAKE					
KBS					LR	LR				
	comp=Z,4µm,20.0s,MS6.0									
BINY	**Binghamton**	**121.94**	**53**	*e*	PKPdf	PKPdf				
BINY					LR	LR				
	comp=Z,10µm,19.0s,MS6.5									
TRIS	**Tristan da Cun**	**122.08**	**178**		PFAKE					
TRIS					LR	LR				
	comp=Z,4µm,19.0s,MS6.1									
LBTB	**Lobatse**	**122.18**	**219**	*e*	PKiKP	PKPdf				
LBTB					MLR	MLR				
	comp=Z,6µm,21.0s,MS6.2									
LONY	**Lake Ozonia**	**122.93**	**50**		PFAKE					
LONY					LR	LR				
	comp=Z,17µm,19.0s,MS6.7									
BRNJ	**Basking Ridge**	**123.00**	**55**	*e*	PKPdf	PKPdf				
NCB	**Newcomb**	**123.21**	**51**	*e*	PKPdf	PKPdf				
NCB					LR	LR				
	comp=Z,18µm,20.0s,MS6.7									
CPNY	**Central Park**	**123.46**	**54**	*e*	PKPdf	PKPdf				
PAL	**Palisades**	**123.50**	**54**	*e*	PKiKP	PKPdf				
FRNY	**Flat Rock**	**123.63**	**50**	*e*	PKPdf	PKPdf				
ACCN	**Adirondack Com**	**123.63**	**51**	*e*	PKPdf	PKPdf				
MDV	**Middlebury**	**123.96**	**51**	*e*	PKPdf	PKPdf				
DAG	**Danmarks Havn**	**124.18**	**2**	⇑*i*	PKIKP	PKPdf				
DAG					pmax	pmax				
	comp=Z,17nm,0.5s									
DAG					MLR	MLR				
	comp=Z,6µm,23.0s,MS6.2									
DAG	**Danmarks Havn**	**124.18**	**2**	⇑*i*	P	PKPdf				
	comp=Z,17nm,0.5s									
DAG										
	comp=Z,6µm,23.0s									
HNH	**Hanover**	**124.62**	**51**	*e*	PKPdf	PKPdf				
QUA2	**Belchertown**	**124.64**	**53**	*e*	PKPdf	PKPdf				
LBNH	**Lisbon**	**124.85**	**50**	*e*	PKiKP	PKPdf				
LBNH					MLR	MLR				
	comp=Z,21µm,20.0s,MS6.8									
FFD	**Franklin Falls**	**125.09**	**51**	*e*	PKPdf	PKPdf				
HRV	**Adam Dziewonsk**	**125.22**	**52**	*e*	PKiKP	PKPdf				
HRV					MLR	MLR				
	comp=Z,12µm,19.0s,MS6.6									
BRYW	**Bryant College**	**125.26**	**53**	*e*	PKPdf	PKPdf				
WES	**Weston**	**125.40**	**52**	*e*	PKiKP	PKPdf				
WES					MLR	MLR				
	comp=Z,10µm,20.0s,MS6.5									
LVZ	**Lovozero**	**125.49**	**341**		PFAKE					
LVZ					LR	LR				
	comp=Z,10µm,22.0s,MS6.4									
APA	**Apatity**	**126.07**	**341**	⇓*i*	PKIKP	PKPdf				
APA				*i*						
APA					pmax	pmax				
	comp=Z,95nm,1.3s									
APA					MLR	MLR				
	comp=Z,13µm,22.0s,MS6.6									
SUMG	**Summit**	**126.20**	**10**	*e*	PKPdf	PKPdf				
SCHQ	**Schefferville**	**126.35**	**37**		PKP	PKPdf				
	comp=Z,21nm,0.9s,baz=316,slow=1.7,SNR=13									
SCHQ	**Schefferville**	**126.35**	**37**	*e*	PKPdf	PKPdf				
SCHQ					PKP	PKPdf				
SCHQ					LR	LR				
	comp=Z,20µm,20.0s,MS6.8									
KEV	**Kevo**	**126.41**	**345**	*e*	p	PKPdf				
	comp=Z,1.8nm,0.4s									
KEV	**Kevo**	**126.41**	**345**		PFAKE					
KEV					LR	LR				
	comp=Z,6µm,21.0s,MS6.3									
PKME	**Peaks-Kenny Pk**	**126.63**	**49**	*e*	PKPdf	PKPdf				
PKME					LR	LR				
	comp=Z,18µm,20.0s,MS6.8									
ARCES	**ARCESS Array B**	**126.93**	**345**		PKP	PKPdf				
	comp=Z,8.8nm,0.6s,baz=48,slow=1.8,SNR=42									
UMR	**Umm Al-Rimmam**	**127.08**	**292**	*e*	P	PKPdf				
	baz=248									
UMR					AMb	AMb				
	comp=Z,184nm,1.8s,baz=248									
MAK	**Makhachkala**	**127.26**	**308**	*e*	PKIKP	PKPdf				
MAK				*i*						
MAK				*e*	PPP					
MAK				*i*						
MAK				*e*						
MAK				*e*	SP	SP				
MAK				*i*	PS	PS				
MAK				*e*	SS	SS				
MAK					pmax	pmax				
	comp=Z,477nm,1.5s									
KLMR	**Klimovskoe**	**127.27**	**332**	*i*	PKIKP	PKPdf				
KLMR				*e*						
KLMR	**Klimovskoe**	**127.27**	**332**	*i*	P	PKPdf				
MIB	**Mutribah**	**127.43**	**292**	*e*	P	PKPdf				
	baz=248									
MIB					AMb	AMb				
	comp=Z,108nm,1.4s,baz=248									
LSZ	**Lusaka**	**127.46**	**230**		P	PKPdf				
	SNR=11									
LSZ	**Lusaka**	**127.46**	**230**	*e*	PKPdf	PKPdf				
LSZ					LR	LR				
	comp=Z,9µm,20.0s,MS6.4									
NAY	**Al-Naaiem**	**127.47**	**291**	*e*	P	PKPdf				
	baz=247									
NAY					AMb	AMb				
	comp=Z,52nm,1.7s,baz=247									
SFJD	**Kangerlussuaq**	**127.64**	**19**	⇑*i*	P	PKPdf				
	comp=Z,136nm,1.1s									
SFJD				*i*						
SFJD				*e*						
SFJD				*i*						
SFJD					LR	LR				
	comp=Z,13µm,20.0s,MS6.6									
RST	**Umm Al-Ruwaisa**	**127.70**	**291**	*e*	P	PKPdf				
	baz=247									
RST					AMb	AMb				
	comp=Z,154nm,1.8s,baz=247									
SJG	**San Juan**	**127.82**	**83**	*e*	PKPdf	PKPdf				
SJG					LR	LR				
	comp=Z,4µm,21.0s,MS6.1									
BDFB	**Brasilia**	**128.20**	**132**		PKP	PKPdf				

	comp=Z,13nm,0.7s,baz=217,slow=5.7,SNR=12									
BDFB	**Brasilia**	**128.20**	**132**	*e*	PKPdf	PKPdf				
BDFB					LR	LR				
	comp=Z,5µm,19.0s,MS6.2									
KMBO	**Kilima Mbogo**	**128.25**	**251**	⇑	P	PKPdf				
	SNR=16									
KMBO	**Kilima Mbogo**	**128.25**	**251**		PKP	PKPdf				
	comp=Z,20nm,1.2s,baz=104,slow=1.3,SNR=14									
KMBO	**Kilima Mbogo**	**128.25**	**251**	*e*	PKPdf	PKPdf				
KMBO					LR	LR				
	comp=Z,5µm,20.0s,MS6.2									
TRO	**Tromso**	**128.33**	**347**	*e*	PP	PP				
TRO				*e*						
MTP	**Monte Pirata**	**128.37**	**83**	*e*	PKPdf	PKPdf				
DGRG	**David-gareji**	**128.97**	**307**		P	PKPdf				
MTA	**Mtatsminda**	**129.38**	**307**		P	PKPdf				
JOF	**Joensuu**	**129.54**	**337**	*e*	p	PKPdf				
	comp=Z,4.2nm,0.4s									
JOF	**Joensuu**	**129.54**	**337**	*e*	P	PKPdf				
GNI	**Garni**	**129.57**	**305**	*e*	P	PKPdf				
GNI	**Garni**	**129.57**	**305**		P	PKPdf				
	SNR=6.4									
GNI	**Garni**	**129.57**	**305**	*i*	PKP	PKPdf				
GOR	**Gori**	**129.86**	**308**		P	PKPdf				
BHD	**Baghdad**	**130.12**	**296**	*ex*		x				
BHD				*ex*		x				
ONI	**Oni**	**130.27**	**308**		P	PKPdf				
MOS	**Moscow**	**130.34**	**326**	*e*	PKIKP	PKPdf				
MOS					pmax	pmax				
	comp=Z,126nm,2.0s									
MOS					pmax	pmax				
	comp=Z,800µm,3.5s									
MOS					MLR	MLR				
	comp=Z,6µm,19.0s,MS6.3									
DYDN	**Diyadin**	**130.43**	**304**	*i*	P	PKPdf				
GRGR	**Grenville**	**130.46**	**92**		PFAKE					
GRGR					LR	LR				
	comp=Z,3µm,21.0s,MS6.0									
HAKT	**HAKKARI**	**130.56**	**302**	*i*	P	PKPdf				
DIGO	**Kars**	**130.59**	**306**	*i*	P	PKPdf				
KIV	**Kislovodsk**	**130.61**	**310**		P	PKPdf				
	SNR=9.6									
KIV	**Kislovodsk**	**130.61**	**310**	*e*	P	Pdif				
KIV				*i*						
KIV				*e*						
KIV				*e*						
KIV				*e*	PS	PS				
KIV				*e*	SSS					
KIV					pmax	pmax				
	comp=Z,21nm,1.2s									
KIV	**Kislovodsk**	**130.61**	**310**	⇑*i*	P	PKPdf				
KIV	**Kislovodsk**	**130.61**	**310**	⇑*e*	PKP	PKPdf				
VANB	**Van**	**130.74**	**303**	*e*	P	PKPdf				
KARS	**Kars**	**130.78**	**306**	*e*	P	PKPdf				
BBSR	**BB Station**	**130.88**	**65**		PFAKE					
BBSR					LR	LR				
	comp=Z,6µm,20.0s,MS6.3									
VOR	**Voronezh**	**130.95**	**321**		PKIKP	PKPdf				
VOR					pmax	pmax				
	comp=Z,200nm,2.5s									
AGRB	**Hanur-Agry**	**130.97**	**305**	*e*	P	PKPdf				
MSL	**Mosul**	**131.11**	**300**	*ex*		x				
MSL				*ex*		x				
MSL				*ex*		x				
VSR	**Storozhevoye**	**131.14**	**320**	*i*	PKIKP	PKPdf				
VSR					pmax	pmax				
	comp=Z,6.0nm,1.3s									
VSR					pmax	pmax				
	comp=N,5.0nm,1.1s									
VSR					pmax	pmax				
	comp=E,9.0nm,1.1s									
OBN	**Obninsk**	**131.15**	**326**	⇑*i*	PKIKP	PKPdf				
OBN				*i*						
OBN				*i*	PPP					
OBN				*i*	SS	SS				
OBN					pmax	pmax				
	comp=Z,95nm,1.5s									
OBN					MLR	MLR				
	comp=Z,9µm,21.0s,MS6.4									
OBN	**Obninsk**	**131.15**	**326**	⇑*e*	PKP	PKPdf				
OBN					LR	LR				
	comp=Z,3µm,22.0s,MS6.0									
TSUM	**Tsumeb**	**131.32**	**216**	*e*	PKPdf	PKPdf				
TSUM					LR	LR				
	comp=Z,8µm,20.0s,MS6.4									
ARTV	**Artvin**	**131.58**	**307**	*i*	P	PKPdf				
DAGI	**Agillar**	**131.61**	**307**	*i*	P	PKPdf				
DDEM	**Demirkent**	**131.76**	**306**	*i*	P	PKPdf				
DBOC	**Borcka**	**131.76**	**307**	*i*	P	PKPdf				
BCA	**Borcka**	**131.78**	**307**	*e*	P	PKPdf				
DBAD	**Bademkaya**	**131.78**	**307**	*i*	P	PKPdf				
KAF	**Kangasniemi**	**131.86**	**338**	*ep*		PKPdf				
	comp=Z,4.2nm,0.4s									
KAF	**Kangasniemi**	**131.86**	**338**	*ep*		SKPbc				
	comp=Z,2.4nm,0.4s									
KAF	**Kangasniemi**	**131.86**	**338**	*e*	P	SKPbc				
KAF					pmax	pmax				
	comp=Z,2.0nm,0.4s									
ERZM	**Erzurum**	**132.17**	**305**	*i*	P	PKPdf				
BBGH	**Gun Hill**	**132.71**	**91**		PFAKE					
BBGH					LR	LR				
	comp=Z,7µm,22.0s,MS6.3									
SOC	**Sochi**	**132.79**	**310**	*i*	PKIKP	PKPdf				
SOC				*e*						
SOC				*e*	PPP					
SOC				*e*	SSS					
KOPT	**Kop Dagi**	**132.82**	**305**	*i*	P	PKPdf				
MARD	**Mardin**	**132.91**	**302**	*i*	P	PKPdf				
KTUT	**Trabzon**	**133.23**	**307**	*e*	P	PKPdf				
MACK	**Trabzon**	**133.23**	**307**	*i*	P	PKPdf				
DIYA	**Diyarbakir**	**133.37**	**303**	*i*	P	PKPdf				
PTK	**Pertek**	**133.82**	**304**	*e*	P	PKPdf				
NSS	**Namsos**	**134.11**	**347**	*e*	PP	PP				
ANN	**Anapa**	**134.11**	**312**	*d*	PKIKP	PKPdf				
ANN				*i*						
ANN				*i*	PPP					
ANN				*i*						
ANN				*i*	PS	PS				
ANN				*i*	SS	SS				
ANN					pmax	pmax				
	comp=Z,40nm,1.0s									
ANN					pmax	pmax				
	comp=Z,923nm,7.3s									
MALT	**Malatya**	**134.65**	**303**	⇑*i*	P	PKPdf				
MALT	**Malatya**	**134.65**	**303**	*e*	PKPdf	PKPdf				
MALT					LR	LR				
	comp=Z,6µm,19.0s,MS6.3									
ATAB	**Bozova**	**134.86**	**302**	*i*	P	PKPdf				
AKCD	**Akcadag**	**135.04**	**303**	*i*	P	PKPdf				
GZT	**Gaziantep**	**135.45**	**302**	*i*	P	PKPdf				
BORG	**Borgarnes**	**135.84**	**7**		PFAKE					
BORG					LR	LR				
	comp=Z,8µm,20.0s,MS6.4									
MNK	**Minsk**	**135.86**	**329**	*e*	PKIKP	PKPdf				
MNK				*e*						
MNK				*e*	PS	PS				
MNK				*e*	SS	SS				
MNK					MLR	MLR				
	comp=E,8µm,20.0s									
MNK					MLR	MLR				
	comp=Z,23µm,20.0s,MS6.9									
PINB	**Pinarbasi**	**136.16**	**304**	*i*	P	PKPdf				
SIM	**Simferopol'**	**136.34**	**314**	*de*	PKIKP	PKPdf				
SIM				*e*						
SIM					pmax	pmax				
	comp=Z,18nm,0.9s									
SIM					pmax	pmax				
	comp=Z,330nm,8.4s									
ANDN	**Andirin**	**136.38**	**303**	*i*	P	PKPdf				
ASF	**Jabal al Asfar**	**136.44**	**295**		PKP	PKPdf				
	comp=Z,7.4nm,0.9s,baz=307,slow=1.3,SNR=7.6									
ASF					PP	PP				
	comp=Z,3.1nm,0.9s,baz=350,slow=2.3,SNR=3.1									
COBT	**Iskenderun**	**136.60**	**301**	*i*	P	PKPdf				
CTKT	**Corum**	**137.01**	**307**	*i*	P	PKPdf				
YURE	**YUREGIR**	**137.05**	**302**	*i*	P	PKPdf				
HWQ	**Hawqa**	**137.10**	**298**	*e*	P	PKPdf				
AKASG	**Malin Array Be**	**137.10**	**323**		PKP	PKPdf				
	comp=Z,3.8nm,0.6s,baz=52,slow=2.8,SNR=6.2									

AKASG **Malin Array Be** 137.10 323 PKIKP PKPdf 20 17 06.1 -1.9
AKASG 20 19 55.2
AKBB Malin Array Si 137.10 323 *e*PKIKP PKPdf 20 17 08.1 +0.1
KIEV Kiev 137.11 323 *e*PKIKP PKPdf 20 17 06.6 -1.4
KIEV MLR MLR
comp=Z,5µm,19.0s,MS6.3
NB2 NORSAR Subarra137.31 345 PKPdf 20 16 59.5
comp=Z,19nm,1.1s,baz=31,slow=1.9
NB2 NORSAR Subarra137.31 345 PKPdf 20 16 59.5
baz=31,slow=1.9
NB2 NORSAR Subarra137.31 345 PKPdf PKPdf 20 17 05.6 -2.4
NOA NORSAR Array B 137.31 345 PKhKP 20 17 00.5
comp=Z,1.8nm,0.8s,baz=211,slow=22,SNR=5.4
NOA PKP PKPdf 20 17 08.9 +0.9
comp=Z,7.3nm,0.7s,baz=36,slow=2.0,SNR=18
NOA PP PP 20 19 59.9 +7.2
comp=Z,16nm,1.2s,baz=34,slow=6.3,SNR=4.1
NOA SKPbc SKPbc 20 20 41.1 +0.8
comp=Z,6.6nm,0.9s,baz=17,slow=4.3,SNR=7.8
NOA NORSAR Array B 137.31 345 PKHKP 20 17 00.5
NOA 20 17 09.0
NOA 20 19 59.9
NOA pmax pmax
comp=Z,7.0nm,0.7s
NOA pmax pmax
comp=Z,16nm,1.2s
NOA pmax pmax
comp=N,7.0nm,0.9s
NOA NORSAR Array B 137.31 345 PKP PKPdf 20 17 08.9 +0.9
NOA PP PP 20 19 59.9 +7.2
NOA SKPbc SKPbc 20 20 41.1 +0.8
AVNT Avonos 137.34 305 *i* P PKPdf 20 16 55.5 -13
BHL Bhannes 137.37 297 *e*P PKPdf 20 17 11.3 +2.2
CDAG Cicekdag 137.53 306 *i* P PKPdf 20 16 50.1 -19
NAO01 NORSAR Array S 137.56 345 PFAKE 20 17 20.0 +11
NAO01 LR LR
comp=Z,3µm,21.0s,MS6.1
MMAI Mount Meron Ar 137.66 296 PKhKP 20 17 02.7
comp=Z,2.1nm,0.6s,baz=69,slow=12,SNR=3.4
MMAI PKP PKPdf 20 17 10.4 +0.8
comp=Z,12nm,0.8s,baz=72,slow=5.4,SNR=7.6
MMAI PP PP 20 19 58.5 +2.0
comp=Z,3.2nm,0.8s,baz=76,slow=7.8,SNR=3.1
MMAI SKP 20 20 46.0
comp=Z,15nm,1.0s,baz=59,slow=7.0,SNR=5.3
ILGA Ilgaz 137.70 308 *i* P PKPdf 20 17 09.7 +0.3
BR131 Keskin Array S 138.06 306 *e*PKPdf PKPdf 20 17 09.0 -1.1
BR131 LR LR
comp=Z,3µm,20.0s,MS6.1
EIL Elat 138.19 291 PKP PKPdf 20 17 11.3 +0.7
comp=Z,17nm,0.9s,baz=108,slow=1.9,SNR=14
EIL PP PP 20 19 57.8 -2.2
comp=Z,3.7nm,0.9s,baz=156,slow=22,SNR=2.1
EIL Elat 138.19 291 PKP PKPdf 20 17 11.3 +0.7
EIL PP PP 20 19 57.8 -2.2
SUW Suwalki 138.36 330 *e*PKP PKPdf 20 17 09.6 -0.6
SUW *e*PP PP 20 20 05.4 +5.8
SUW LMZ 21 18 18.6
comp=Z,7µm,21.5s
SUW Suwalki 138.36 330 *e*PKP PKPdf 20 17 09.6 -0.6
SUW *e*PP PP 20 20 05.4 +5.8
SAFT Safranbolu 138.40 309 *e*P PKPdf 20 17 12.1 +1.4
ANTO Ankara 138.67 307 *e*P PKPdf 20 17 10.7 -0.5
ANTO Ankara 138.67 307 P PKPdf 20 17 13.6 +2.4
SNR=15
ANTO Ankara 138.67 307⇑ *i*P PKPdf 20 17 13.4 +2.2
ANTO Ankara 138.67 307 *e*PKPdf PKPdf 20 17 12.4 +1.2
ANTO LR LR
comp=Z,4µm,21.0s,MS6.2
KONO Kongsberg 138.92 345 *e*PP PP 20 20 05.2 +2.4
KONO Kongsberg 138.92 345⇑ *i*PKIKP PKPdf 20 17 10.1 -0.9
KONO Kongsberg 138.92 345⇑ *e*PKP PKPdf 20 17 10.1 -0.9
MRKH Merkhyat 138.95 270 *e* SKPbc 20 20 49.2 +2.7
baz=104,slow=7.4
MRKH *i* P 20 20 51.1
KIS Kishinev 139.02 318 *e*PKIKP PKPdf 20 17 14.0 +2.4
KIS *e* 20 20 12.0
KIS Kishinev 139.02 318 *i* PsP 20 17 25.0
KIS Kishinev 139.02 318 *e*PP PP 20 20 12.0 +7.8
KIS *e*SKP 20 20 52.0
KIS Kishinev 139.02 318 *e*PPP 20 23 30.0
KIS *e*SKS SKSdf 20 24 02.0 -19
KIS *e*SKKP 20 27 13.0
KIS Kishinev 139.02 318 *e*PS PS 20 29 52.0 -43
CSS Prodhromos 139.16 299 *e*P PKPdf 20 17 04.0 -8.3
BER Bergen 139.20 348 *e*PP PP 20 20 05.3 +0.8
KDZE Karadeniz Ereo 139.28 309 *e*P PKPdf 20 17 13.9 +1.6
LADK Ladik-KONYA 139.37 304 *e*P PKPdf 20 17 10.9 -1.6
KDHN Kadinhani 139.49 305 *i* P PKPdf 20 17 05.0 -7.8
LEF Lefka 139.50 300 *e*P PKPdf 20 17 12.6 -0.3
BORA Eskisehir 140.40 308 *i* P PKPdf 20 17 14.4 0.0
LVV L'vov 140.41 325 *e*PKIKP PKPdf 20 17 15.9 +1.8
LVV *e* 20 17 26.9
LVV *e* 20 20 15.0
SILT Sile 140.63 310 *e*P PKPdf 20 17 11.8 -3.0
SHUT Suhut-Afyon 140.67 305 *e*P PKPdf 20 17 16.0 +1.1
CAVI Cavuskoy 140.76 308 *e*P PKPdf 20 17 14.0 -1.0
PSN Preselentsi 140.77 314 P PKPdf 20 17 17.4 +2.5
ADVT Abdulvahap 140.77 309 *e*P PKPdf 20 17 14.4 -0.6
VRI Vrincioaia 140.81 318⇑ *i*P PKPdf 20 17 10.9 -4.0
VRI Vrincioaia 140.81 318 ⇑P PKPdf 20 17 10.9 -4.0
ISP Isparta 140.87 304 *e*P PKPdf 20 17 12.1 -3.2
ISP Isparta 140.87 304 *e*P PKPdf 20 17 07.5 -7.8
ISP Isparta 140.87 304 PFAKE 20 17 30.0 +15
ISP LR LR
comp=Z,5µm,20.0s,MS6.3
BCK Bucak 140.90 304 *e*P PKPdf 20 17 14.9 -0.5
BUR08 Bucovina Ar. S 140.90 321 *e*PKPpre 20 17 11.3
BURAR Bucovina Array 140.90 321 ||*i*P PKPdf 20 17 09.1 -5.9
BURAR Bucovina Array 140.90 321 ||P PKPdf 20 17 09.1 -5.9
ANTB Antalya 140.97 303 *e*P PKPdf 20 17 14.0 -1.5
TKTP Tekketepe 140.97 305 *i* P PKPdf 20 17 09.4 -6.0
KWP Kalwaria 141.22 325 *e*PKP PKPdf 20 17 17.7 +2.2
KWP *e*PP PP 20 20 20.9 +3.4
KWP LMZ 21 18 46.6
comp=Z,6µm,21.8s
KWP Kalwaria 141.22 325 ||*i*P PKPdf 20 17 09.9 -5.6
KWP Kalwaria 141.22 325 *e*PKPdf PKPdf 20 17 12.8 -2.7
KWP *e*PKP PKPdf 20 17 17.7 +2.2
KWP *e*PP PP 20 20 20.9 +3.4
KWP LR LR
comp=Z,6µm,20.0s,MS6.3
ULDT Uludag 141.30 308 *i* P PKPdf 20 17 09.7 -6.3
GDZ Gediz 141.34 307 *i* P PKPdf 20 17 10.4 -5.7
COP Copenhagen 141.44 339 *e*PKHKP 20 17 08.1
COP *i* 20 20 21.8
COP pmax pmax
comp=Z,81nm,0.9s
COP MLR MLR
comp=Z,2µm,20.0s,MS5.8
COP Copenhagen 141.44 339 *i* P 20 17 08.1
comp=Z,81nm,0.9s
COP *i* 20 20 21.8
COP
comp=Z,2µm,20.0s
MLR Muntele Rosu 141.47 318 PKhKP 20 17 10.4
comp=Z,4.5nm,0.7s,baz=330,slow=5.9,SNR=9.9
MLR PKP PKPdf 20 17 16.5 +0.3
comp=Z,6.9nm,0.7s,baz=356,slow=4.0,SNR=11
MLR Muntele Rosu 141.47 318⇑ *i*P PKPdf 20 17 13.4 -2.7
MLR Muntele Rosu 141.47 318 P PKPdf 20 17 13.6 -2.5
MLR PKP PKPdf 20 17 16.5 +0.3
PRD Provadia 141.48 314 P PKPdf 20 17 17.0 +0.8
ELBA Catalca 141.50 310 *i* P PKPdf 20 17 10.4 -5.9
ELL Elmali 141.59 303 *e*P PKPdf 20 17 11.1 -5.5
SLVT Silivri 141.62 310 *e*P PKPdf 20 17 11.2 -5.4
GOLH Golhisar 141.75 304 *i* P PKPdf 20 17 08.9 -8.0
MUD Monsted U'grnd 141.80 342 *e*PKIKP PKPdf 20 17 13.8 -2.6
MUD *i* 20 20 23.6
MUD pmax pmax
comp=Z,76nm,1.1s
MUD MLR MLR
comp=Z,8µm,20.0s,MS6.5
MUD Monsted U'grnd 141.80 342 *i* P PKPdf 20 17 13.8 -2.6
comp=Z,76nm,1.1s
MUD *i* 20 20 23.6
MUD
comp=Z,8µm,20.0s
MUD Monsted U'grnd 141.80 342 *e*P PKPdf 20 17 13.8 -2.6
MUD *i* 20 20 23.6
KOLS Kolonicke sedl 141.86 325 *e*PKP PKPdf 20 17 13.5 -3.2
KOLS *e* 20 20 34.0
DEMI Demirci 141.93 307 *i* P PKPdf 20 17 08.0 -9.1

AKAS Kas 141.93 302 *i* P PKPdf 20 17 11.2 -6.1
DURS Dursunbey 141.95 308 *i* P PKPdf 20 17 11.9 -5.2
UZH Uzhgorod 142.02 324 *e*PKIKP PKPdf 20 17 12.4 -4.6
UZH *i* 20 17 19.2
UZH *e* 20 17 27.8
UZH *i* 20 20 27.0
UZH *i* SS SS 20 38 52.0 -2.3
DNZL Cakiroluk 142.04 305 *i* P PKPdf 20 17 12.5 -4.9
STHS Stebnicka Huta 142.12 326 *e*PKP PKPdf 20 17 16.1 -1.1
STHS *e*PP PP 20 20 25.1 +2.2
TKR Tekirdag 142.19 310 *e*P PKPdf 20 17 13.6 -3.9
MANT Manisa 142.20 306 *i* P PKPdf 20 17 14.6 -3.1
CRVS Cervenica-Dubn 142.31 325 *e*PKP PKPdf 20 17 15.6 -1.9
CRVS *e* 20 20 36.0
OJC Ojcow 142.37 328 *e*PKIKP PKPdf 20 17 16.1 -1.5
OJC *e* 20 17 22.6
OJC *e* 20 24 26.0
OJC MLR MLR
comp=Z,6µm,23.1s,MS6.3
OJC Ojcow 142.37 328 *e*PKPdf PKPdf 20 17 16.1 -1.5
OJC *e*pPKPdf pPKPdf 20 17 22.6 -1.8
OJC *e*PP PP 20 20 35.9 +12
OJC *e*SKSdf SKSdf 20 24 26.0 -0.3
OJC *e*SS SS 20 39 07.4 +9.3
OJC LR LR
comp=Z,6µm,23.1s,MS6.3
BALB Balikesir 142.37 308 *e*P PKPdf 20 17 12.5 -5.4
MFT Murefte 142.44 310 *e*P PKPdf 20 17 12.7 -5.3
SZH Strazhica 142.44 314 P PKPdf 20 17 14.3 -3.6
BALY Balya 142.53 308 *i* P PKPdf 20 17 11.1 -7.1
SART Tekirdag 142.54 310 *i* P PKPdf 20 17 10.6 -7.6
RKY Sarkoy-Tekirda 142.54 310 *e*P PKPdf 20 17 12.4 -5.8
TURN Turunc 142.58 303 *i* P PKPdf 20 17 13.6 -4.8
NIE Niedzica 142.61 326 *e*PKPdf PKPdf 20 17 18.4 +0.4
NIE *e*PP PP 20 20 29.7 +3.9
RSC Scourie 142.63 355 *e*P PKPdf 20 17 13.7 -4.0
AKS Akhisar 142.65 307 *e*P PKPdf 20 17 17.2 -1.2
YER Yerkesik 142.76 304 *e*P PKPdf 20 17 11.6 -7.1
SHEL Horse Pasture 142.82 188 PFAKE 20 17 30.0 +11
SHEL LR LR
comp=Z,5µm,19.0s,MS6.3
PVL Pavlikeni 142.86 315 P PKPdf 20 17 17.7 -1.0
AYDN Tasoluk 142.94 305 *i* P PKPdf 20 17 16.5 -2.5
LPK Lapseki 142.95 310 *e*P PKPdf 20 17 15.7 -3.2
ARG Arkhangelos 143.10 303 *e*P PKPdf 20 17 18.0 -1.3
MLSB Milas 143.11 304 *e*P PKPdf 20 17 14.0 -5.4
RRH Rhenigidale 143.16 357 *e*P PKPdf 20 17 14.9 -3.8
RRR Rubha Reidh 143.16 356 *e*P PKPdf 20 17 14.9 -3.9
DIM Dimitrovgrad 143.20 313 P PKPdf 20 17 15.4 -3.9
KDAG Bornova 143.20 306 *i* P PKPdf 20 17 14.6 -4.8
MCD Coleburn Disti 143.21 353 *e*P PKPdf 20 17 11.4 -7.4
RAC Raciborz 143.24 329 *e*PKIKP PKPdf 20 17 14.7 -4.4
RAC MLR MLR
comp=Z,7µm,20.0s,MS6.4
ENEZ Enez 143.26 311 *e*P PKPdf 20 17 15.4 -4.0
ALN Alexandroupoli 143.28 311 *e*P PKPdf 20 17 14.2 -5.3
AYVA Ayvalik 143.35 308 *i* P PKPdf 20 17 16.2 -3.5
CRAR CRAIOVA 143.36 317 PKIKP PKPdf 20 17 17.9 -1.6
CRAR CRAIOVA 143.36 317⇓ *i*P PKPdf 20 17 21.7 +2.2
BLCB Balcova 143.37 306 *e*P PKPdf 20 17 15.8 -4.2
GCAM G?zlecaml? 143.42 305 *i* P PKPdf 20 17 14.0 -5.8
BDRM Kazabasi 143.43 304 *i* P PKPdf 20 17 15.9 -4.0
OKC Ostrava-Krasne 143.43 328 *e*PKP PKPdf 20 17 17.8 -1.7
OKC *e*SS SS 20 39 19.8 +9.5
OKC AMS AMS 21 22 50.0
comp=Z,5µm,19.9s
OKC Ostrava-Krasne 143.43 328 *e*PKP PKPdf 20 17 17.8 -1.7
OKC *e*SS SS 20 39 19.8 +9.5
KDZ Kurdzhali 143.43 312 P PKPdf 20 17 17.2 -2.5
EZN Ezine 143.45 309 *e*P PKPdf 20 17 14.7 -5.1
KAC Achnashellach 143.48 355 *e*P PKPdf 20 17 14.6 -4.7
BODT Bodrum 143.53 304 *e*P PKPdf 20 17 13.0 -7.0
RDO Rodhopi 143.54 311 *e*P PKPdf 20 17 17.0 -2.9
BSEG Bad Segeberg 143.58 339 *e*PKPbc PKPdf 20 17 15.6 -4.0
BSEG *e*PP PP 20 20 36.6 +5.3
KSP Ksiaz 143.62 331 *e*PKP PKPdf 20 17 16.6 -3.2
KSP *e*PP PP 20 20 35.1 +3.4
KSP LMZ 21 21 50.5
comp=Z,19µm,21.5s
KSP Ksiaz 143.62 331 *e*PKP PKPdf 20 17 16.3 -3.5
KSP *e*PP PP 20 20 29.0 -2.7
KSP *e*SS SS 20 39 10.5 -1.8
KSP LR LR
comp=Z,22µm,21.5s,MS6.9
GADA Gvkgeada 143.63 310 *e*P PKPdf 20 17 14.9 -5.2
BOZC Bozcaada 143.64 309 *i* P PKPdf 20 17 14.8 -5.4
KPL Plockton 143.66 355 *e*P PKPdf 20 17 14.6 -5.0
PRK Paraskevi 143.68 308 *e*P PKPdf 20 17 15.7 -4.5
PRK Paraskevi 143.68 308 *e*P PKPdf 20 17 17.3 -3.3
URLA Izmir 143.71 307 *i* P PKPdf 20 17 14.7 -5.6
SMG Samos 143.72 305 *e*P PKPdf 20 17 17.0 -3.4
PSZ Piszkesteto 143.74 325|| *e*PKP PKPdf 20 17 17.5 -2.6
PSZ Piszkesteto 143.74 325|| *i*P PKPdf 20 17 18.3 -1.8
PSZ Piszkesteto 143.74 325 *e*PKPdf PKPdf 20 17 17.4 -2.6
PSZ LR LR
comp=Z,7µm,20.0s,MS6.4
PLD Plovdiv 143.74 313 *e*P PKPdf 20 17 16.5 -3.8
PLD Plovdiv 143.74 313 P PKPdf 20 17 14.1 -6.2
MORC Moravsky Berou 143.76 329⇑ *i*P PKPdf 20 17 17.5 -2.5
MORC Moravsky Berou 143.76 329 *e*PKPdf PKPdf 20 17 16.3 -3.8
KSB Sheil Bridge 143.78 355 *e*P PKPdf 20 17 17.1 -2.7
NISR Nisiros 143.79 304 *e*P PKPdf 20 17 15.0 -5.5
RZN Rozhen 143.90 313 P PKPdf 20 17 18.0 -2.6
PGB Panagyurishte 143.92 314 P PKPdf 20 17 17.7 -2.9
VYHS Vyhne 143.94 326 *e*PKP PKPdf 20 17 17.6 -2.8
VYHS *e*PP PP 20 20 39.8 +5.9
DPC Dobruska-Polom 143.95 330 *e*PKIKP PKPdf 20 17 17.6 -2.8
DPC *e* 20 20 35.9
DPC MLR MLR
comp=Z,8µm,21.6s,MS6.5
DPC Dobruska-Polom 143.95 330 *e*PKP PKPdf 20 17 17.6 -2.8
DPC *e*PP PP 20 20 35.9 +2.2
DPC *ex* x 20 39 28.5
DPC AMS AMS 21 21 00.0
comp=Z,8µm,21.6s
UPC Upice 143.98 331 *e*PKP PKPdf 20 17 17.4 -3.0
KARP Karpathos 144.02 302 *e*P PKPdf 20 17 18.5 -2.5
BZS Buzias 144.06 320⇑ *i*P PKPdf 20 17 19.1 -1.6
BZS Buzias 144.06 320 P PKPdf 20 17 18.3 -2.4
KAR1 Arisaig 144.10 356 *e*P PKPdf 20 17 16.6 -3.8
CHOS Chios Island 144.11 307 *e*P PKPdf 20 17 16.6 -4.4
KOLL Kolacno 144.12 327 *e*PKP PKPdf 20 17 19.0 -1.7
KOLL Kolacno 144.12 327 *e*PKP PKPdf 20 17 19.1 -1.6
LIA Limnos Island 144.25 310 *e*P PKPdf 20 17 18.0 -3.3
LOS Limnos 144.31 310 *e*P PKPdf 20 17 18.6 -2.7
BUD Budapest 144.47 325|| *e*PKP PKPdf 20 17 20.9 -0.5
VTS Vitosha 144.53 315 P PKPdf 20 17 19.9 -1.7
VTS Vitosha 144.53 315 P PKPdf 20 17 20.4 -1.3
VRAC Vranov 144.54 329 PKP PKPdf 20 17 19.7 -1.7
comp=Z,17nm,0.7s,baz=44,slow=2.2,SNR=26
VRAC Vranov 144.54 329 PKIKP PKPdf 20 17 19.7 -1.7
VRAC pmax pmax
comp=Z,17nm,0.7s
VRAC Vranov 144.54 329⇑ *i*P PKPdf 20 17 20.1 -1.3
VRAC Vranov 144.54 329 P PKPdf 20 17 20.0 -1.4
EBH Black Hill 144.55 353⇑ *e*P PKPdf 20 17 18.4 -2.8
PVCC Panska Ves 144.61 332 *e*PKP PKPdf 20 17 19.7 -1.8
PVCC AMS AMS 21 18 20.0
comp=Z,8µm,24.0s
MMB Musomiste 144.62 313 P PKPdf 20 17 19.9 -1.9
BRG Berggiesshubel 144.62 333 *i* PKIKP PKPdf 20 17 20.1 -1.4
BRG pmax pmax
comp=Z,512nm,1.8s
BRG MLR MLR
comp=N,2µm,19.5s,MS6.0
BRG MLR MLR
comp=E,1µm,21.3s,MS6.0
BRG MLR MLR
comp=Z,4µm,20.4s,MS6.1
BRG Berggiesshubel 144.62 333 *e*PKPbc PKPdf 20 17 17.2 -4.3
BRG Berggiesshubel 144.62 333 *i* PKP PKPdf 20 17 20.1 -1.4
comp=Z,855nm,1.8s
BRG *i* 20 17 38.0
comp=Z,730nm,1.7s
BRG PP PP 20 20 32.2 -5.5
comp=Z,19nm,0.6s
BRG *i* 20 23 42.1
comp=Z,25nm,1.6s
BRG *e* 20 35 44.5
comp=Z,6.7nm,0.8s
BRG SS SS 20 39 33.0 +9.2
BRG
comp=N,4µm,19.5s
BRG
comp=E,2µm,21.3s
BRG
comp=Z,6µm,20.4s
BRG Berggiesshubel 144.62 333 *i* PKP PKPdf 20 17 20.1 -1.4
BRG *i* 20 17 38.0
BRG PP PP 20 20 32.2 -5.5
BRG *i* 20 23 42.1
BRG *e* 20 35 44.5
BRG SS SS 20 39 33.0 +9.2
BRG LR LR
comp=Z,4µm,20.4s,MS6.1
CLL Collm 144.69 334 *i* PKIKP PKPdf 20 17 19.6 -2.0
CLL *i* 20 17 27.5
CLL *e* 20 20 41.0
CLL pmax pmax
comp=Z,1µm,2.1s
CLL MLR MLR
comp=Z,5µm,20.7s,MS6.3
CLL Collm 144.69 334 *e*PKPbc PKPdf 20 17 18.7 -2.9
CLL Collm 144.69 334 *i* PKPdf PKPdf 20 17 19.6 -2.0
comp=Z,1µm,2.1s
CLL *e*PKPlp 20 17 21.0
CLL *i* pPKiKP 20 17 27.5
comp=Z,693nm,1.8s
CLL *e*PP PP 20 20 41.0 +3.0
CLL *e*PPlp 20 20 42.0
CLL LmV 20 24 00.0
comp=Z,5µm,20.7s
CLL *e*SS SS 20 39 28.0 +3.5
CLL *ex* x 20 44 30.0
CLL *e*(SSS) 20 44 42.0
CLL Collm 144.69 334 *i* PKP PKPdf 20 17 19.6 -2.0
CLL *i* pPKP pPKPdf 20 17 27.5 -1.0
CLL *e*PP PP 20 20 41.0 +3.0
CLL LR LR
comp=Z,5µm,20.7s,MS6.3
EAB Aberfoyle 144.69 354⇑ *e*P PKPdf 20 17 19.1 -2.4
ESY Stoneypath 144.76 352 *e*P PKPdf 20 17 18.7 -2.9
KRUC Moravsky 144.80 329 PKIKP PKPdf 20 17 20.5 -1.4
MODS Modra-Piesok 144.82 327 *e*PKP PKPdf 20 17 21.2 -0.7
ZKR Zakros 144.87 301 *e*P PKPdf 20 17 20.8 -1.7
APE Apeiranthos 144.90 305 *e*P PKPdf 20 17 19.2 -3.3
APE Apeiranthos 144.90 305 *e*P PKPdf 20 17 20.0 -2.5
APE Apeiranthos 144.90 305⇑ *i*P PKPdf 20 17 20.1 -2.4
EAU Auchinoon 144.93 353 *e*P PKPdf 20 17 19.6 -2.3
EBL Broad Law 144.96 353⇑ *e*P PKPdf 20 17 18.9 -3.0
SVIS Svilajnac 145.01 319 P PKPdf 20 17 19.7 -2.7
PRU Pruhonice 145.01 331 *e*PKP PKPdf 20 17 20.9 -1.3
PRU *ex* x 20 20 33.2
PRU *e*SS SS 20 39 37.2 +8.9
PRU AMS AMS 21 18 20.0
comp=Z,8µm,22.1s
ZST Bratislava 145.03 327 *e*PKP PKPdf 20 17 21.7 -0.6
PMSU Muirshiel 145.07 354 *e*P PKPbc 20 17 19.9 -1.6
TREC Trest 145.07 330 *e*PKP PKPdf 20 17 21.2 -1.1
TREC *e*SS SS 20 39 33.4 +4.3
TREC AMS AMS 21 19 40.0
comp=Z,8µm,22.8s
PGBU Glenifferbraes 145.08 354 *e*P PKPbc 20 17 19.2 -2.4
XSO Sourhope Farm 145.13 352 *e*P PKPbc 20 17 19.8 -2.0
SANT Santorini 145.15 304 *e*P PKPbc 20 17 19.9 -2.9
THR1 Thira Island 145.15 304 *e*P PKPbc 20 17 20.7 -1.8
PCA1 Carrot 145.16 354 *e*P PKPbc 20 17 19.8 -2.1
BEO Beograd 145.18 320 PKIKP PKPdf 20 17 23.5 +0.8
THR3 Thira Island, 145.19 304 *e*P PKPbc 20 17 20.7 -1.9
SOH Sokhos 145.19 312 *e*P PKPbc 20 17 19.6 -2.9
THR6 Thira Island, 145.20 304 *e*P PKPbc 20 17 20.7 -1.9
THR5 Thira Island, 145.22 304 *e*P PKPbc 20 17 21.1 -1.6
CLZ Clausthal 145.28 337 *e*PKPbc PKPbc 20 17 21.4 -1.0
PLG Polygyros 145.30 311 *e*P PKPbc 20 17 20.6 -2.3
PLG Polygyros 145.30 311 *e*P PKPbc 20 17 21.5 -1.3
PAIG Paliouri 145.31 310 *e*P PKPbc 20 17 20.6 -2.3
NPS Neapolis 145.32 302 *e*P PKPbc 20 17 23.0 -0.1
BARS Barje 145.34 316 P PKPbc 20 17 18.9 -4.0
KNT Kendrikon 145.36 313 *e*P PKPbc 20 17 21.1 -1.9
EKA Eskdalemuir Ar 145.40 352 PKPbc PKPbc 20 17 21.1 -1.5
comp=Z,82nm,0.6s,baz=335,slow=1.9,SNR=10
EKA Eskdalemuir Ar 145.40 352 PKP2 PKPab 20 17 21.2 -1.6
EKA pmax pmax
comp=Z,82nm,0.6s
ESK Eskdalemuir 145.42 353 *e*P PKPbc 20 17 20.3 -2.4
ESK Eskdalemuir 145.42 353 *e*PKPdf PKPdf 20 17 20.4 -2.4
ESK LR LR
comp=Z,6µm,20.0s,MS6.4
PKSM Moragy 145.44 323⇑ *i*P PKPbc 20 17 22.8 -0.3
PKSM Moragy 145.44 323 P PKPbc 20 17 22.1 -0.9
LAST Lasithi 145.45 302 *e*P PKPdf 20 17 22.5 -0.9
AOS Alonnisos 145.45 309 *e*P PKPdf 20 17 22.2 -1.2
HORT Hortiatis 145.46 312 *e*P PKPdf 20 17 22.7 -0.6
VAY Valandovo 145.52 313 *e*P PKPdf 20 17 21.1 -2.3
VAY Valandovo 145.52 313 *e*PKP PKPdf 20 17 20.7 -2.7
THE Thessaloniki 145.54 312 *e*P PKPdf 20 17 21.2 -2.3
ECK Cauldkaine Hil 145.55 352⇑ *e*P PKPdf 20 17 20.9 -2.1
TANN Tannenbergstha 145.59 334 *e*PKPbc PKPbc 20 17 21.1 -2.3
STIP Stip 145.61 314 *e*P PKPdf 20 17 22.9 -0.6
STIP Stip 145.61 314 *e*PKP PKPdf 20 17 22.1 -1.4
SOP Sopron 145.64 327|| *e*PKP PKPdf 20 17 24.5 +1.1
NKC Novy Kostel 145.74 333 *e*PKP PKPdf 20 17 23.0 -0.4
NKC AMS AMS 21 24 50.0
comp=Z,6µm,19.4s
XAL Allendale 145.74 351 *e*P PKPdf 20 17 21.8 -1.5
MOX Moxa 145.76 335 *e*PKP PKPdf 20 17 23.2 -0.3
comp=Z,1µm,2.1s
MOX
comp=Z,3µm,21.0s
MOX Moxa 145.76 335 *e*PKPbc PKPbc 20 17 21.1 -2.8
MOX *e*PP PP 20 20 49.8 +5.4
GRG Griva 145.79 313 *e*P PKPdf 20 17 22.3 -1.5
IBBN Ibbenburen 145.79 340 *e*PKPbc PKPbc 20 17 22.6 -1.4
IBBN *e*PP PP 20 20 49.6 +5.2
CONA Conrad Observa 145.83 328⇑ *i*P PKPdf 20 17 23.9 +0.2
comp=Z,6µm,3.7s,SNR=96
CSNA Conrad Observa 145.83 328⇑ *i*P PKPdf 20 17 23.5 -0.2
comp=Z,6µm,3.7s
DIVS Divibare 145.85 319 *e*P PKPdf 20 17 23.3 -0.6
PTL Penteli 145.85 307 *e*P PKPdf 20 17 23.5 -0.6
NEO Neokhori 145.85 310 *e*P PKPdf 20 17 23.0 -1.0
XOR Xorichti 145.87 310 *e*P PKPdf 20 17 22.7 -1.4
IDI Anoyia 145.88 302 PKPbc PKPbc 20 17 24.5 -0.3
comp=Z,76nm,0.8s,baz=52,slow=8.2,SNR=30
GCD Castle Douglas 145.96 353 *e*P PKPdf 20 17 21.9 -1.8
SKO Skopje 145.99 315 *e*P PKPdf 20 17 23.1 -1.1
SKO Skopje 145.99 315 *e*PKP PKPdf 20 17 21.2 -3.0
ATH Athens Observa 145.99 307 *e*P PKPdf 20 17 23.0 -1.3
KVR Kavouri 146.00 307 *e*P PKPdf 20 17 23.0 -1.3
SIVA Sivas 146.01 302 *e*P PKPdf 20 17 24.3 -0.1
GAL1 Galloway 146.03 354 *e*P PKPdf 20 17 23.3 -0.5
MANZ Manzenberg 146.06 333 *e*PKPbc PKPbc 20 17 23.2 -1.7
KHC Kasperske Hory 146.07 331 *e*PKP PKPdf 20 17 22.7 -1.3
KHC *e*pPKP pPKPdf 20 17 31.5 +0.6
KHC *ex* x 20 17 42.5
KHC *ex* x 20 23 45.5
KHC *e*SS SS 20 39 49.5 +9.1
KHC AMS AMS 21 24 40.0
comp=Z,8µm,20.3s
LIT Litokhoron 146.08 311 *e*P PKPdf 20 17 22.9 -1.5
ROTZ Rotzenmuhle 146.19 333 *e*PKPbc PKPbc 20 17 23.5 -1.8
GEC2 GERESS Array S 146.22 331 *e*PKPbc PKPbc 20 17 22.8 -2.6
GERES GERESS Array B 146.22 331 PKPbc PKPbc 20 17 25.3 -0.1
comp=Z,40nm,0.7s,baz=38,slow=2.4,SNR=77
GERES GERESS Array B 146.22 331 PKP2 PKPab 20 17 25.3 -0.8
GERES pmax pmax
comp=Z,40nm,0.7s
NAIG Nisos Aigina 146.23 307 *e*P PKPdf 20 17 24.0 -0.7
UBBA Unterbreizbach 146.25 336 *e*PKPbc PKPbc 20 17 23.0 -2.4
LKR Lokris 146.28 309 *e*P PKPdf 20 17 24.1 -0.6
WET Wettzell 146.37 332 *e*PKPbc PKPdf 20 17 23.8 -0.8
WET *e*PP PP 20 20 51.2 +3.1
WTSB Winterswijk 146.39 340 *e*PKP PKPdf 20 17 23.9 -0.6
comp=Z,603nm,1.7s
KRUS Krusevo 146.39 314 *e*PKP PKPdf 20 17 23.3 -1.6
VAM Vamos 146.40 303 *e*P PKPdf 20 17 25.0 -0.1
ARSA Arzberg 146.45 327⇑ *i*P PKPab 20 17 28.2 +1.1
comp=Z,6µm,3.9s,SNR=22
BIA Bitola 146.50 314 *e*PKP PKPdf 20 17 24.0 -1.0
DID Didima 146.50 307 *e*P PKPdf 20 17 23.1 -2.1
HPK Haverah Park 146.53 350 *e*P PKPbc 20 17 26.9 +0.8
LTK Loutraki 146.53 308 *e*P PKPdf 20 17 23.7 -1.5
IVA Berane 146.54 317 || *i*PKP PKPbc 20 17 27.3 +0.8
FNA Florina 146.56 313 *e*P PKPdf 20 17 24.1 -1.0

GIM North Isle of 146.57 353 eP PKPdf 20 17 23.1 -1.7
KOGS Kog 146.60 325 ePKPbc PKPbc 20 17 27.8 +1.2
PLE Pljevlja 146.62 318 ||iPKP PKPbc 20 17 27.2 +0.4
AGG Agios Georgios 146.62 310 eP PKPdf 20 17 20.9 -4.4
GVD Gavdhos 146.63 302 eP PKPdf 20 17 26.5 +1.0
THL Klokotos Trika 146.63 311 eP PKPdf 20 17 23.6 -1.8
PVY Plav 146.64 317 ||iPKP PKPbc 20 17 27.2 +0.4
GRF Grafenberg Arr 146.66 334 ePKPbc PKPbc 20 17 24.4 -2.2
GRF eSS SS 20 40 05.5 +19
GRF eL 21 34 53.6
comp=Z,4µm,21.5s
MOA Molln 146.66 329 iP PKPdf 20 17 25.6 +0.5
comp=Z,5µm,4.0s,SNR=33
MOA Molln 146.66 329 P PKPdf 20 17 25.5 +0.4
BUG Bochum--Univer 146.69 340 ePKPbc PKPbc 20 17 25.4 -1.3
BCI Bajram Curri 146.69 316 ePN PKPbc 20 17 27.4 +0.4
GMM Mts of Mourne 146.77 355 eP PKPdf 20 17 24.3 -0.7
PHP Peshkopia 146.78 315 ePN PKPbc 20 17 27.4 +0.1
OHR Ohrid 146.81 314 eP PKPdf 20 17 26.1 +0.5
OHR Ohrid 146.81 314 ePKP PKPdf 20 17 24.1 -1.4
LHO Holmfirth 146.96 350 eP PKPdf 20 17 25.2 -0.3
PUK Puka 146.96 316 ePN PKPab 20 17 29.7 +0.5
UPM Unac-Piva 146.99 319 ||iPKP PKPdf 20 17 25.4 -0.4
VLI Veliai 146.99 305 eP PKPdf 20 17 26.0 0.0
KBN Korca 147.04 313 ePN PKPab 20 17 29.7 +0.1
EVR Evrytania 147.04 310 eP PKPdf 20 17 24.0 -2.0
KYTH Kithira 147.05 305 eP PKPdf 20 17 27.0 +0.9
SOKA Soboth 147.08 327 ⇑iP PKPdf 20 17 26.6 +0.8
comp=Z,5µm,5.4s
NKY Niksic 147.14 318 ||iPKP PKPdf 20 17 25.6 -0.5
SISC Sisak 147.15 324 P PKPdf 20 17 27.4 +1.4
TTG Podgorica 147.17 317 ||iPKP PKPdf 20 17 26.3 +0.2
DMUB Kingscourt 147.17 356 eP PKPdf 20 17 21.8 -4.0
KBI1 Birley Grange 147.19 350 eP PKPdf 20 17 26.1 +0.3
VLX Vlachokerasia 147.19 307 eP PKPdf 20 17 26.1 -0.3
ZAVS Zavodnje 147.25 326 P PKPdf 20 17 23.5 -2.6
AEU East Anglia Un 147.27 347 eP PKPdf 20 17 27.5 +1.6
TNS Taunus Mts 147.31 337 ePKPbc PKPbc 20 17 27.1 -1.4
TNS ePP PP 20 20 59.8 +6.3
TIR Tirane 147.32 315 eP PKPdf 20 17 26.8 +0.4
TIR Tirane 147.32 315 ePN PKPbc 20 17 28.9 +0.1
BRY Bratogost 147.38 318 ||iPKP PKPdf 20 17 26.9 +0.4
JAN Janina 147.41 312 eP PKPbc 20 17 29.0 -0.1
ULC Ulcinj 147.42 316 ||iPKP PKPdf 20 17 26.6 0.0
BUM Brajici-Budva 147.47 317 ||iPKP PKPdf 20 17 26.5 -0.1
KWE Weaver Farm 147.47 350 ⇑eP PKPdf 20 17 27.1 +0.8
ITM Ithomi 147.60 307 eP PKPdf 20 17 28.5 +1.5
HCY Herceg Novi 147.65 318 ||iPKP PKPbc 20 17 28.8 -0.9
KBA Koelnbreinsper 147.65 329 ||iP PKPbc 20 17 27.8 -1.7
comp=Z,2µm,3.5s,SNR=17
CWF Charnwood Fore 147.65 349 eP PKPdf 20 17 26.2 -0.4
TOD Tromm 147.68 336 PKIKP PKPdf 20 17 25.3 -1.4
HGN Heimansgroeve 147.70 340 ePKP PKPdf 20 17 28.4 +1.6
comp=Z,453nm,1.7s
DLF Lyons Farm 147.75 355 eP PKPdf 20 17 20.0 -6.7
BEBN Eben Emael 147.75 341 PKPbc PKPbc 20 17 28.8 -0.8
DCN Croghan 147.75 356 eP PKPdf 20 17 19.2 -7.5
LJU Ljubljana 147.77 326 ePKPbc PKPbc 20 17 28.6 -1.4
DSB Dublin 147.79 355 ePKPdf PKPdf 20 17 26.7 -0.1
SBD1 Bryn Du 147.79 352 eP PKPdf 20 17 25.5 -1.3
FUR Furstenfeldbru 147.81 332 ePKPbc PKPbc 20 17 27.8 +0.8
MEM Membach 147.81 340 PKPbc PKPbc 20 17 28.8 -1.0
MYKA Terra Mystica 147.82 328 ||iP PKPdf 20 17 28.3 +1.3
comp=Z,39µm,4.4s
IGT Igoumenitsa 147.83 312 eP PKPdf 20 17 27.8 +0.5
PYL PYLOS 147.83 306 eP PKPdf 20 17 27.4 0.0
SRN Sarande 147.91 312 ePN PKPab 20 17 32.2 -0.8
ABH Alteburg 147.91 338 PKP PKPdf 20 17 25.3 -1.8
STON Ston 147.91 319 P PKPdf 20 17 26.8 -0.6
LKD Levkas 147.95 310 eP PKPdf 20 17 27.6 0.0
CADS Cadrg 148.05 327 ePKPbc PKPdf 20 17 28.4 +0.9
KFL Anninata 148.09 309 eP PKPbc 20 17 31.1 +0.1
VOY Vojsko 148.10 327 ePKPbc PKPdf 20 17 28.4 +0.8
VOY e PKPbc 20 17 30.2 -0.6
HLM1 Long Mynd 148.11 351 eP PKPdf 20 17 27.5 +0.1
KEK Kerkira 148.12 312 eP PKPbc 20 17 31.0 0.0
UCC Uccle 148.15 342 PKP PKPdf 20 17 27.0 -0.4
UCC PKPbc PKPbc 20 17 30.1 -0.6
KTD Kalmit 148.18 337 PKP2 PKPbc 20 17 29.0 -1.9
BCLA Clavier 148.20 341 PKPbc PKPbc 20 17 30.2 -0.7
STU Stuttgart 148.20 335 ePKPbc PKPdf 20 17 28.7 +1.1
STU Stuttgart 148.20 335 ePKPbc PKPbc 20 17 29.4 -1.5
VLS Valsamata 148.21 309 eP PKPdf 20 17 29.7 +1.7
VLS Valsamata 148.21 309 eP PKPbc 20 17 30.0 -1.3
RUP Ruppelstein 148.24 338 PKIKP PKPdf 20 17 25.6 -2.1
ABTA Abfaltersbach 148.28 329 iP PKPdf 20 17 28.3 +0.5
comp=Z,2µm,4.9s,SNR=11
ABTA Abfaltersbach 148.28 329 iPKPdf PKPdf 20 17 28.3 +0.5
comp=Z,2µm,4.9s,SNR=21
WATA Walderalm 148.29 331 ⇑iP PKPdf 20 17 26.9 -1.0
comp=Z,251nm,1.5s,SNR=15
WATA Walderalm 148.29 331 P PKPdf 20 17 28.9 +1.1
WTTA Wattenberg 148.32 331 ⇑iP PKPdf 20 17 27.4 -0.5
comp=Z,2µm,2.5s,SNR=19
WTTA Wattenberg 148.32 331 P PKPdf 20 17 29.3 +1.4
SNF Seneffe 148.43 342 PKP PKPdf 20 17 27.4 -0.5
SNF PKPbc PKPbc 20 17 32.2 +0.8
MOTA Moosalm 148.50 331 ⇑iP PKPdf 20 17 26.9 -1.2
comp=Z,438nm,1.8s,SNR=49
MOTA Moosalm 148.50 331 P PKPdf 20 17 29.2 +1.0
RETA Reutte 148.55 332 ⇑iP PKPbc 20 17 31.9 0.0
comp=Z,2µm,3.8s,SNR=15
LANF Langenberg 148.57 336 PKP PKPdf 20 17 29.0 +0.8
WLF Walferdange 148.58 339 PKPbc PKPbc 20 17 30.4 -1.4
WLF PKPab PKPab 20 17 33.0 -2.3
WLF Walferdange 148.58 339 ePKPbc PKPbc 20 17 30.2 -1.7
WLF Walferdange 148.58 339 ePKPbc PKPbc 20 17 31.0 -0.9
WLF LR LR
comp=Z,5µm,19.0s,MS6.3
HTR Trewern Hill 148.60 351 eP PKPdf 20 17 29.2 +1.0
GIVF Givet 148.62 341 ePKIKP PKPdf 20 17 28.0 -0.3
comp=Z,2µm,1.7s
MCH1 Michaelchurch 148.64 351 eP PKPbc 20 17 31.1 -0.9
DOU Dourbes 148.70 341 PKPbc PKPbc 20 17 30.8 -1.4
BAIF Baives 148.85 341 ePKIKP PKPdf 20 17 28.2 -0.4
comp=Z,1µm,1.7s
BFO Black Forest 148.90 335 ePKPbc PKPdf 20 17 30.1 +1.3
BFO ePP PP 20 21 09.1 +6.3
BFO Black Forest 148.90 335 ePKPbc PKPdf 20 17 30.1 +1.3
BFO ePP PP 20 21 09.1 +6.3
SPAK Spaichingen-Ko 148.90 334 PKP PKPdf 20 17 27.6 -1.2
STR Strasbourg 148.91 336 PKP PKPdf 20 17 28.7 -0.1
FETA Feichten 148.91 331 iP PKPdf 20 17 30.0 +1.2
comp=Z,2µm,3.3s,SNR=28
FETA Feichten 148.91 331 iPKPdf PKPdf 20 17 30.0 +1.2
comp=Z,2µm,3.3s,SNR=28
SWN1 Swindon 148.91 349 eP PKPdf 20 17 30.9 +2.2
HGH Gray Hill 148.96 351 eP PKPdf 20 17 27.6 -1.2
MENF Mencas 148.97 344 PKP PKPdf 20 17 23.2 -5.6
DAVA Damuels 149.09 332 ||iP PKPdf 20 17 30.6 +1.5
comp=Z,2µm,2.8s,SNR=33
DAVA Damuels 149.09 332 ||iPKPdf PKPdf 20 17 30.6 +1.5
comp=Z,2µm,2.8s,SNR=33
CDF Champ du Feu 149.24 336 ePKIKP PKPdf 20 17 28.5 -0.8
comp=Z,774nm,1.4s
LIBD Limburg 149.33 336 PKHKP PKPdf 20 17 28.5 -1.0
FELD Feldberg im Sc 149.40 335 PKP PKPdf 20 17 29.2 -0.4
ECH Echery 149.44 336 PKHKP PKPdf 20 17 29.2 -0.5
ECH e PKPbc 20 17 33.0 -1.1
DAVOX Davos/Dischmat 149.47 332 PKPbc PKPbc 20 17 32.5 -1.7
comp=Z,59nm,0.6s,baz=9.3,slow=0.9,SNR=50
MOF Molkenrain 149.75 336 PKP PKPdf 20 17 29.0 -1.2
HTL Hartland 149.82 352 eP PKPdf 20 17 31.2 +1.1
THEF They Montfort 149.86 338 PKP PKPdf 20 17 29.2 -1.1
HINF Hinteralfeld 149.89 336 ePKIKP PKPdf 20 17 29.7 -0.7
comp=Z,748nm,1.5s
HAU Haudompre 149.92 337 ePKIKP PKPdf 20 17 29.8 -0.6
comp=Z,827nm,1.4s
HAU eMLR MLR
comp=Z,5µm,21.0s,MS6.0
HAU Haudompre 149.92 337 ePKPdf PKPdf 20 17 29.8 -0.6
HAU LR LR
comp=Z,5µm,21.0s,MS6.3
BBS Basel-Blauen 149.93 335 PKHKP PKPdf 20 17 29.1 -1.4
MEZF Maizieres J'vi 149.95 339 ePKIKP PKPdf 20 17 30.3 -0.2
comp=Z,2µm,1.5s
TUE Stuetta 149.95 332 ePKPbc PKPbc 20 17 35.6 +0.2
TUE LR LR
comp=Z,5µm,22.0s,MS6.3
LOMF Lomont 150.28 336 PKP PKPdf 20 17 29.3 -1.7
DYA Yadsworthy 150.29 351 eP PKPbc 20 17 34.0 -2.1
TIP Timpagrande 150.45 314 ePKPbc PKPbc 20 17 36.3 -0.6
TIP LR LR
comp=Z,6µm,21.0s,MS6.4
CSA1 St Austell 150.50 353 eP PKPbc 20 17 35.1 -1.5
CUC Castrocucco 150.66 316 ePKPbc PKPbc 20 17 35.5 -1.8
CUC LR LR
comp=Z,8µm,22.0s,MS6.5
CCA1 Carnmenellis 150.70 353 eP PKPdf 20 17 33.8 +2.2
CMA1 Manaccan 150.79 353 eP PKPbc 20 17 36.2 -1.1
ASCN Ascension 150.87 172 ePKPbc PKPbc 20 17 37.7 -0.9
ASCN LR LR
comp=Z,3µm,20.0s,MS6.1
CABF La Chapelle 151.18 336 ePKIKP PKPdf 20 17 32.1 -0.3
comp=Z,1µm,1.7s
VLC Villacollemand 151.19 328 ePKPbc PKPbc 20 17 38.1 -0.3
VLC LR LR
comp=Z,6µm,20.0s,MS6.4
JVM Valle D.L. Mar 151.19 349 eP PKPbc 20 17 36.4 -1.9
JRS Jersey 151.20 348 eP PKPbc 20 17 36.9 -1.4
JSA Saint Aubin 151.22 348 eP PKPdf 20 17 33.5 +1.1
FLN La Foliniere 151.27 346 ePKIKP PKPdf 20 17 31.8 -0.7
comp=Z,485nm,1.0s
FLN eMLR MLR
comp=Z,10µm,21.2s,MS6.3
FLN La Foliniere 151.27 346 ePKPdf PKPdf 20 17 31.8 -0.7
FLN LR LR
comp=Z,10µm,21.3s,MS6.6
LDF La Druitiere 151.35 345 ePKIKP PKPdf 20 17 31.8 -0.8
comp=Z,771nm,1.5s
LOR Lormes 151.42 339 ePKIKP PKPdf 20 17 32.2 -0.6
comp=Z,1µm,1.5s
LOR eMLR MLR
comp=Z,6µm,18.8s,MS6.1
LOR Lormes 151.42 339 ePKPdf PKPdf 20 17 32.2 -0.6
LOR LR LR
comp=Z,6µm,18.8s,MS6.4
GRR Gorron 151.71 346 ePKIKP PKPdf 20 17 32.7 -0.5
comp=Z,366nm,1.0s
SSF Saint Saulge 151.72 339 ePKIKP PKPdf 20 17 32.7 -0.5
comp=Z,557nm,1.2s
RSL Roselend 151.72 334 PKP PKPdf 20 17 33.3 0.0
HYF Humbligny 151.81 341 ePKIKP PKPdf 20 17 33.3 -0.1
LPL La Plagne 151.82 334 ePKIKP PKPdf 20 17 33.4 0.0
LPG La Plagne 151.83 334 ePKIKP PKPdf 20 17 33.6 +0.1
comp=Z,489nm,1.2s
OG05 Jujurieux 151.90 336 PKP PKPdf 20 17 35.4 +1.9
SMF Signal de Mont 151.97 339 ePKIKP PKPdf 20 17 32.9 -0.7
comp=Z,2µm,1.7s
AVF Avril sur Loir 152.00 339 ePKIKP PKPdf 20 17 32.9 -0.8
comp=Z,2µm,1.7s
SGMF Saint Gilles 152.18 348 ePKIKP PKPdf 20 17 33.2 -0.7
comp=Z,1µm,1.5s
BNI Bardonecchia 152.22 333 ePKIKP PKPdf 20 17 35.2 +1.1
BNI MLR MLR
comp=Z,5µm,20.0s,MS6.3
ROSF Rostrenen 152.23 349 ePKIKP PKPdf 20 17 33.0 -1.0
comp=Z,599nm,1.4s
GDM Grand'Maison 152.33 334 PKP PKPdf 20 17 34.6 +0.4
BGF Bois d'Agland 152.37 340 ePKIKP PKPdf 20 17 33.7 -0.5
comp=Z,1µm,1.7s
MBDF Montbardon 152.44 333 ePKIKP PKPdf 20 17 33.9 -0.5
comp=Z,338nm,1.3s
GRN Grenoble 152.45 335 PKP PKPdf 20 17 36.1 +1.7
SURF Saint Ours 152.62 332 PKP PKPdf 20 17 36.9 +2.2
QUIF Quistinic 152.62 349 ePKIKP PKPdf 20 17 33.8 -0.8
comp=Z,289nm,1.3s
PLDF La Plantade 152.63 338 PKP PKPdf 20 17 37.4 +2.8
ORIF Oris-en-Rattie 152.66 334 ePKIKP PKPdf 20 17 33.9 -0.8
comp=Z,207nm,1.0s
ORIF eMLR MLR
comp=Z,7µm,19.8s,MS6.1
SAOF Saorge 152.67 331 PKP PKPdf 20 17 35.3 +0.5
AUTN L'Aution 152.72 331 PKP PKPdf 20 17 37.1 +2.3
AGO Saint Agoulin 152.72 339 PKP PKPdf 20 17 37.0 +2.2
TOUF Mont Tournerai 152.79 331 PKP PKPdf 20 17 36.9 +2.0
TCF Toul's Ste Croi 152.82 340 ePKIKP PKPdf 20 17 34.4 -0.5
comp=Z,982nm,1.8s
SBF Sospel 152.82 331 ePKIKP PKPdf 20 17 34.2 -0.8
comp=Z,355nm,1.0s
LUCF Luceram 152.84 331 PKP PKPdf 20 17 34.4 -0.6
SSB Saint Sauveur 152.88 336 PKP PKPdf 20 17 35.3 +0.3
SSB Saint Sauveur 152.88 336 ePKPdf PKPdf 20 17 34.0 -1.0
VAE Valguarnera 152.90 312 PKPbc PKPbc 20 17 43.3 +0.8
comp=Z,14nm,1.0s,baz=279,slow=2.2,SNR=2.8
VAE PKPab PKPab 20 17 51.1 -2.5
comp=Z,30nm,0.7s,baz=18,slow=4.4,SNR=9.0
MVIF Mont Vial 152.92 331 PKP PKPdf 20 17 37.1 +2.0
REVF Revere 152.95 331 PKP PKPdf 20 17 35.3 +0.1
COLF Collangettes 152.99 337 PKP PKPdf 20 17 36.3 +1.1
PYM Petit Puy Mans 153.03 339 PKP PKPdf 20 17 37.0 +1.8
PGF Pioggiola 153.05 327 ePKIKP PKPdf 20 17 34.5 -0.9
comp=Z,335nm,1.0s
CORF Corte 153.15 326 PKP PKPbc 20 17 41.8 -1.1
VIVF Saint-Julien-l 153.19 335 ePKIKP PKPdf 20 17 35.0 -0.5
comp=Z,1µm,1.9s
MFF Saint Martin d 153.21 344 ePKIKP PKPdf 20 17 34.8 -0.7
LBL Lubilhac 153.40 338 PKP PKPdf 20 17 37.4 +1.6
FRF La Foret Royal 153.41 331 ePKIKP PKPdf 20 17 35.0 -0.9
comp=Z,485nm,1.6s
SMRF Simiane la Rot 153.55 333 ePKIKP PKPdf 20 17 34.5 -1.5
LMR La Mourre 153.66 331 ePKIKP PKPdf 20 17 35.2 -1.0
comp=Z,333nm,1.4s
RJF Les Rejaudoux 153.91 340 ePKIKP PKPdf 20 17 36.0 -0.5
RJF eMLR MLR
comp=Z,10µm,20.2s,MS6.3
RJF Les Rejaudoux 153.91 340 ePKPdf PKPdf 20 17 36.0 -0.5
RJF LR LR
comp=Z,10µm,20.3s,MS6.6
CAF Calviac 154.07 339 ePKIKP PKPdf 20 17 36.4 -0.3
LASF Ste Croix 154.16 336 ePKIKP PKPdf 20 17 36.5 -0.4
comp=Z,95nm,0.9s
LFF La Frestale 154.48 341 ePKIKP PKPdf 20 17 36.7 -0.6
comp=Z,176nm,0.9s
VSL Villasalto 154.95 321 PFAKE 20 17 50.0 +12
VSL LR LR
comp=Z,5µm,21.0s,MS6.3
MTLF Montolieu 155.41 337 ePKIKP PKPdf 20 17 38.2 -0.4
comp=Z,931nm,1.8s
EJON La Jonquera 155.91 335 PKP PKPdf 20 17 38.2 -1.2
EPF Esparros 156.33 340 ePKIKP PKPdf 20 17 39.6 -0.3
comp=Z,332nm,1.8s
EBIE Bielsa 156.70 340 PKP PKPdf 20 17 40.5 +0.1
EALK Alkurruntz 156.71 343 PKP PKPdf 20 17 41.3 +1.0
SJPF Ste Jean 156.72 342 ePKIKP PKPdf 20 17 39.5 -0.9
ETSF Etsaut 156.73 341 ePKIKP PKPdf 20 17 39.7 -0.7
ELIZ Elizondo 156.76 343 PKIKP PKPdf 20 17 37.8 -2.6
EMIR Miracle 156.90 336 PKP PKPdf 20 17 43.2 +2.6
ELAN Lanestosa 157.17 346 PKP PKPdf 20 17 40.7 -0.2
KEST Kesra 157.27 314 PKP PKPdf 20 17 40.2 -1.1
comp=Z,0.8nm,0.8s,baz=327,slow=17,SNR=2.3
EARI Arriondas 157.45 350 PKP PKPdf 20 17 41.0 -0.3
ECRI Cripan 157.54 344 PKIKP PKPdf 20 17 43.1 +1.7
EPOB Poblet 157.55 336 PKP PKPdf 20 17 42.9 +1.4
EPON Pontenova 157.69 353 PKP PKPdf 20 17 41.3 -0.3
ESAC San Caprasio 157.76 340 PKP PKPdf 20 17 42.4 +0.7
CMAH Djebel Manchou 157.98 318 P PKPab 20 18 16.0 +0.6
ABSA Djebel Ababsia 158.17 318 P PKPab 20 18 20.0 +3.8
ERTA Horta de San J 158.17 337 PKP PKPdf 20 17 42.0 -0.3
ETOS Mallorca 158.17 331 PKP PKPdf 20 17 45.6 +3.3
EMAZ Mazaricos 158.21 357 PKP PKPdf 20 17 43.4 +1.1
STS Santiago 158.25 356 PKIKP PKPdf 20 17 42.6 +0.3
CKFL Kef-Lekhel 158.56 319 P PKPab 20 18 21.0 +3.1
ERUA La Rua 158.61 353 PKIKP PKPdf 20 17 45.0 +2.2
CASM Ain Smara 158.79 319 P PKPab 20 18 21.0 +2.1
PDA Ponta Delgada 158.94 35 iLR LR 21 14 23.5
CTEI Djebel Teioual 158.97 319 P PKPab 20 18 23.5 +3.8
EMOS Mosqueruela 158.98 338 PKP PKPdf 20 17 43.3 0.0
CMLA Cha da Macela 159.00 35 ePKP PKPdf 20 17 42.6 -0.8
CMLA Cha da Macela 159.00 35 eLQ 21 05 49.6
CMLA eLR LR 21 14 15.3
CMLA Cha da Macela 159.00 35 PFAKE 20 17 50.0 +6.6
CMLA LR LR
comp=Z,7µm,21.0s,MS6.5
ECAL Calabor 159.01 352 PKP PKPdf 20 17 42.5 -0.7
ETOR Torete 159.08 342 PKIKP PKPdf 20 17 43.1 -0.3
PBRG Braganca 159.14 352 ePKPab PKPab 20 18 20.6 +0.5
PBRG Braganca 159.14 352 ePP PP 20 22 01.6 +1.5
ELOB Lobios 159.22 355 PKP PKPdf 20 17 42.4 -1.1
PCAB Cabril 159.38 354 ePKPdf PKPdf 20 17 44.1 +0.4
PCAB Cabril 159.38 354 ePKPab PKPab 20 18 19.9 -1.2
PCAB Cabril 159.38 354 ePP PP 20 22 09.8 +8.4
SET Setif 159.49 320 P PKPab 20 18 27.0 +5.1
AKF Akfadou 159.67 323 P PKPab 20 18 23.0 +0.3
PVRL Vila Real 159.78 354 ePKPdf PKPdf 20 17 46.8 +2.6
PVRL Vila Real 159.78 354 ePKPab PKPab 20 18 23.2 +0.3
PVRL Vila Real 159.78 354 ePP PP 20 22 09.8 +6.3
GUD Guadarrama 159.80 346 PKIKP PKPdf 20 17 44.0 -0.2
MVO Moncorvo 159.81 352 ePKPdf PKPdf 20 17 46.1 +1.9
MVO Moncorvo 159.81 352 ePKPab PKPab 20 18 24.6 +1.6
MVO Moncorvo 159.81 352 ePP PP 20 22 11.5 +7.8
MVO Moncorvo 159.81 352 eSKS SS 20 42 18.3 +8.2
MVO Moncorvo 159.81 352 eLR LR 21 13 31.2
comp=Z,8µm,20.0s
ECHE Chera 159.84 338 PKIKP PKPdf 20 17 45.5 +1.2
PVIS Viseu 160.35 354 ePKPdf PKPdf 20 17 46.8 +2.0
PVIS Viseu 160.35 354 ePKPab PKPab 20 18 26.7 +1.3
PVIS Viseu 160.35 354 ePP PP 20 22 14.9 +8.3
ATAF Djebel Tarf 160.37 322 P PKPab 20 18 22.6 -3.2
AKET Djebel Ketaf 160.48 323 P PKPab 20 18 22.2 -4.0
MTE Manteigas 160.63 353 ePKPdf PKPdf 20 17 46.2 +1.1
MTE Manteigas 160.63 353 ePKPab PKPab 20 18 26.7 +0.1
MTE Manteigas 160.63 353 ePP PP 20 22 11.0 +2.9
MTE Manteigas 160.63 353 eSKS SS 20 42 23.4 +4.7
MTE Manteigas 160.63 353 eLQ 21 05 59.6
MTE eLR LR 21 14 27.5
comp=Z,6µm,22.0s
MTE Manteigas 160.63 353 ePKPdf PKPdf 20 17 43.9 -1.2
MTE LR LR
comp=Z,6µm,22.0s
ADJB Djebel Djouab 160.65 324 P PKPab 20 18 20.1 -6.8
ESDC Sonseca Array 160.67 344 PKP PKPdf 20 17 45.8 +0.6
comp=Z,1.0nm,0.7s,baz=332,slow=2.0,SNR=6.7
ESDC PKPab PKPab 20 18 27.0 +0.1
comp=Z,10nm,0.8s,baz=17,slow=3.6,SNR=19
ESDC PP PP 20 22 07.0 -1.5
comp=Z,5.9nm,1.1s,baz=13,slow=5.7,SNR=5.3
ESDC Sonseca Array 160.67 344 PKP PKPdf 20 17 46.7 +1.5
ESLA Sonseca Array 160.67 344 PFAKE 20 18 00.0 +15
ESLA LR LR
comp=Z,37µm,20.0s
PAB San Pablo 160.89 345 ePKIKP PKPdf 20 17 44.8 -0.6
PAB MLR MLR
comp=Z,7µm,21.0s
ETOB Tobarra 160.89 338 PKP PKPdf 20 17 44.7 -0.8
PCBR Castelo Branco 161.17 352 ePKPdf PKPdf 20 17 45.9 +0.2
PCBR Castelo Branco 161.17 352 ePKPab PKPab 20 18 30.2 +1.2
PCBR Castelo Branco 161.17 352 ePP PP 20 22 12.7 +1.6
EVIA Vianos 161.21 340 PKIKP PKPdf 20 17 44.8 -1.0
EMUR La Murta 161.48 336 PKP PKPdf 20 17 46.9 +0.7
PTOM Tomar 161.49 355 ePKPdf PKPdf 20 17 46.1 0.0
PTOM Tomar 161.49 355 ePKPab PKPab 20 18 30.2 -0.2
PTOM Tomar 161.49 355 ePP PP 20 22 14.9 +2.2
PMRV Marv??o 161.56 352 ePKPdf PKPdf 20 17 46.5 +0.3
PMRV Marv??o 161.56 352 ePKPab PKPab 20 18 30.0 -0.7
PMRV Marv??o 161.56 352 ePP PP 20 22 26.8 +14
PMRV Marv??o 161.56 352 eSKS SS 20 42 24.6 -3.9
PMRV Marv??o 161.56 352 eLQ 21 06 16.3
PMRV eLR LR 21 13 52.1
comp=Z,6µm,20.0s
EHUE Huescar 161.99 339 PKIKP PKPdf 20 17 45.7 -1.0
EBAN Banos Encina 162.04 342 PKIKP PKPdf 20 17 47.0 +0.3
PESTR Estremoz 162.14 352 ePKPdf PKPdf 20 17 48.2 +1.4
PESTR Estremoz 162.14 352 ePKPab PKPab 20 18 33.6 +0.3
PESTR Estremoz 162.14 352 ePP PP 20 22 19.4 +3.1
PESTR Estremoz 162.14 352 eSKS SS 20 42 37.2 +2.6
PESTR Estremoz 162.14 352 eLQ 21 06 34.6
PESTR eLR LR 21 15 11.1
comp=Z,9µm,20.0s
EQES Quesada 162.16 340 PKP PKPdf 20 17 46.0 -0.8
EBAD Badajoz 162.17 351 PKP PKPdf 20 17 46.6 -0.2
PMAFR Mafra 162.21 357 ePKPdf PKPdf 20 17 48.3 +1.5
PMAFR Mafra 162.21 357 ePKPab PKPab 20 18 33.8 +0.2
PMAFR Mafra 162.21 357 eSKS SS 20 42 40.1 +4.9
PMAFR Mafra 162.21 357 eLQ 21 06 36.2
PMAFR eLR LR 21 14 43.5
comp=Z,6µm,18.0s
EADA Adamuz 162.25 344 PKP PKPdf 20 17 46.0 -0.9
LIS Lisbon 162.44 356 eP PKPdf 20 17 45.1 -2.0
LIS eSS SS 20 42 40.3 +2.7
LIS AMS AMS 21 33 58.8
comp=Z,13µm,14.2s
LIS Lisbon 162.44 356 A 21 33 58.8
comp=Z,13µm,14.2s
EVO Evora 162.52 353 ePKIKP PKPdf 20 17 45.7 -1.5
comp=Z,285nm,1.8s
EVO eMLR MLR
comp=Z,12µm,20.2s
EVO Evora 162.52 353 ePKPdf PKPdf 20 17 46.6 -0.6
EVO Evora 162.52 353 ePKPab PKPab 20 18 33.8 -1.2
EVO Evora 162.52 353 ePP PP 20 22 18.9 +0.6
ECAB El Cabril 162.54 346 PKP PKPdf 20 17 46.0 -1.2
ELUQ Luque 162.74 343 PKIKP PKPdf 20 17 45.7 -1.7
PBAR Barrancos 162.75 350 ePKPdf PKPdf 20 17 47.1 -0.3
PBAR Barrancos 162.75 350 ePKPab PKPab 20 18 34.9 -1.0
PBAR Barrancos 162.75 350 ePP PP 20 22 26.8 +7.3
PBAR Barrancos 162.75 350 eSKS SS 20 42 42.2 +1.3
PBAR Barrancos 162.75 350 eLQ 21 06 11.3
PBAR eLR LR 21 16 10.8
comp=Z,12µm,20.0s
ECOG Cogollos-Vega 162.79 341 PKIKP PKPdf 20 17 47.9 +0.4
EBER Berja 162.92 338 PKP PKPdf 20 17 44.5 -3.1
PBEJ Beja 163.01 353 ePKPdf PKPdf 20 17 46.9 -0.8
PBEJ Beja 163.01 353 ePKPab PKPab 20 18 36.5 -0.6
PBEJ Beja 163.01 353 ePP PP 20 22 23.9 +3.1
EMIN Mina Concepcio 163.08 349 PKP PKPdf 20 17 46.4 -1.4
ELOJ Sierra Loja 163.09 342 PKIKP PKPdf 20 17 46.1 -1.7
EGUA Guajares 163.20 340 PKIKP PKPdf 20 17 46.7 -1.2
EGRO El Granado 163.44 351 PKP PKPdf 20 17 46.9 -1.2
PTEO Sao Teotonio 163.57 355 ePKPab PKPab 20 18 40.3 +0.7
PTEO Sao Teotonio 163.57 355 ePP PP 20 22 23.9 +0.1
PVAQ Vaqueiros 163.60 352 ePKPdf PKPdf 20 17 50.2 +2.0
PVAQ Vaqueiros 163.60 352 ePKPab PKPab 20 18 39.8 +0.1
PVAQ Vaqueiros 163.60 352 ePP PP 20 22 22.8 -1.2
PVAQ Vaqueiros 163.60 352 eSKS 20 43 03.1
PVAQ Vaqueiros 163.60 352 eLQ 21 07 15.8
PVAQ Vaqueiros 163.60 352 eLR LR 21 19 54.0
comp=Z,11µm,20.0s
PBDV Barranco-do-Ve 163.79 352 ePKPdf PKPdf 20 17 49.6 +1.2
PBDV Barranco-do-Ve 163.79 352 ePKPab PKPab 20 18 41.6 +1.1
PBDV Barranco-do-Ve 163.79 352 ePP PP 20 22 22.8 -2.2
PBDV Barranco-do-Ve 163.79 352 eSKS 20 43 11.3
PBDV Barranco-do-Ve 163.79 352 eLQ 21 07 07.2
PBDV Barranco-do-Ve 163.79 352 eLR LR 21 18 31.8
comp=Z,14µm,20.0s
ESPR Espera 163.79 346 PKP PKPdf 20 17 47.3 -1.1
MORF Marmelete 163.80 354 ePKPdf PKPdf 20 17 48.0 -0.4
MORF Marmelete 163.80 354 ePKPab PKPab 20 18 40.5 -0.1
MORF Marmelete 163.80 354 ePP PP 20 22 27.9 +2.9
MORF Marmelete 163.80 354 eSKS 20 42 57.0
MORF Marmelete 163.80 354 eLQ 21 16 08.4
MORF eLR LR 21 18 40.2
comp=Z,10µm,20.0s
EMIJ Mijas 163.81 343 PKP PKPdf 20 17 47.4 -1.1
EALB Alboran 163.83 337 PKP PKPdf 20 17 45.0 -3.5
PFVI Vila Bisbo 163.99 355 ePKPdf PKPdf 20 17 49.3 +0.7
PFVI Vila Bisbo 163.99 355 ePKPab PKPab 20 18 42.1 +0.7
PFVI Vila Bisbo 163.99 355 ePP PP 20 22 39.2 +13
PFVI Vila Bisbo 163.99 355 eSKS 20 43 06.2
PFVI Vila Bisbo 163.99 355 eLQ 21 07 34.4
PFVI eLR LR 21 15 25.7
comp=Z,10µm,18.0s
EJIF Jimena Fronter 164.10 345 PKIKP PKPdf 20 17 46.8 -1.9
LIC Lamto 164.21 201 ePKIKP PKPdf 20 17 48.8 -0.7
comp=Z,216nm,1.7s
LIC eMLR MLR
comp=Z,13µm,21.5s
LIC Lamto 164.21 201 eP PKPdf 20 17 50.2 +0.7
comp=Z,160nm,1.7s
LIC Lamto 164.21 201 ePKPdf PKPdf 20 17 48.8 -0.7
LIC LR LR
comp=Z,6µm,21.5s
KIC Kosan Boka 164.24 202 eP PKPdf 20 17 49.6 +0.1
comp=Z,508nm,1.8s
SFS San Fernando 164.25 347 PFAKE 20 18 00.0 +11
SFS LR LR
comp=Z,22µm,20.0s
DBIC Dimbokro 164.57 202 PKP PKPdf 20 17 48.8 -1.0
comp=Z,5.8nm,0.9s,baz=155,slow=2.5,SNR=9.2
DBIC PKPab PKPab 20 18 45.1 +0.6
comp=Z,38nm,0.9s,baz=153,slow=5.7,SNR=9.9
DBIC PP PP 20 22 27.4 -2.0
comp=Z,2.8nm,0.9s,baz=147,slow=16,SNR=1.9
DBIC Dimbokro 164.57 202 ePKPdf PKPdf 20 17 48.5 -1.3
DBIC LR LR
comp=Z,9µm,20.0s
TIC Toumodi 164.60 201 eP PKPdf 20 17 46.9 -3.0
comp=Z,420nm,1.7s
TAM Tamanrasset 164.94 279 ePKIKP PKPdf 20 17 50.2 +0.3

TOA0	**Torodi Ar. Sit**	**165.81**	**238**	*e*PKPdf	PKPdf	20	17	49.4	-1.4
TORD	**Torodi Ar. Bea**	**165.81**	**238**	PKP	PKPdf	20	17	49.2	-1.6
	comp=Z,5.9nm,0.7s,baz=146,slow=0.7,SNR=18								
TORD				PKPab	PKPab	20	18	50.9	+0.7
	comp=Z,15nm,1.2s,baz=118,slow=2.8,SNR=4.9								
RTC	**Rabat Centre**	**166.78**	**346**	PFAKE		20	18	00.0	+9.0
RTC				LR	LR				
	comp=Z,7μm,20.0s								
PMAR	**Madeira**	**167.18**	**25**	*e*PKPdf	PKPdf	20	17	55.1	+3.7
PMAR	**Madeira**	**167.18**	**25**	*e*PKPab	PKPab	20	18	57.5	+1.9
PMAR	**Madeira**	**167.18**	**25**	*e*PP	PP	20	22	49.9	+7.0
MDT	**Midelt**	**167.20**	**337**	PKP	PKPdf	20	17	51.5	+0.1
	comp=Z,3.8nm,0.8s,baz=86,slow=1.1,SNR=11								
MDT				PKPab	PKPab	20	18	55.8	+0.1
	comp=Z,13nm,1.1s,baz=41,slow=4.9,SNR=7.1								
EGOM	**La Gomera**	**170.79**	**39**	PKP	PKPdf	20	17	54.2	+0.4

NEIC ***27*** *20:00:55.9±0.4, 21.16S×169.21E, h10km, mb5.2/10, Error ellipse: s-maj=13.8km s-min=9.3km az=157.0*

MOS ***27*** *20:00:57.2±0.9, 21.33S×169.28E, h33km, mb5.3/12, Error ellipse: s-maj=32.5km s-min=18.8km az=166.4*

ISCJB ***27*** *20:01:00.5±3.5, 21.2S±0.1×169.20E±0.08, h59km±33km, mb5.0/22, Error ellipse: s-maj=18.0km s-min=11.9km az=166.9*

IDC ***27*** *20:01:01.7±4.9, 21.27S×169.21E, h55km±43km, mb4.6/15, mb1 4.7/17, mb1mx4.6/22, mbtmp4.6/17, ML3.5/2, Error ellipse: s-maj=18.9km s-min=16.5km az=153.0*

ISC 27 20:01:01.6±2.6, 212S±01×16924E±008, h53km±24km, n66, σ0:96/41, mb5.0/22, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**18.30**	**236**	*e*P	**Pn**	**20 05 13.4**	**+1.8**
URZ	**Urewera**	**18.30**	**160**	P	**Pn**	**20 05 11.7**	**+0.2**
	0.5nm,0.3s,baz=0.0,slow=6.1,SNR=3.2						
AFI	**Afiamalu**	**19.49**	**71**	P	**Pn**	**20 05 25.1**	**-0.9**
	2.2nm,0.3s,baz=180,slow=5.1,SNR=3.0						
CTA	**Charters Tower**	**21.54**	**269**	*e*P	**P**	**20 05 47.5**	**+1.0**
	42nm,1.8s,mb4.6						
CTA	**Charters Tower**	**21.54**	**269**	P	**P**	**20 05 47.0**	**+0.5**
	32nm,0.8s,mb4.8,baz=84,slow=10,SNR=4.4						
CTA	**Charters Tower**	**21.54**	**269**	*e*P	**P**	**20 05 47.5**	**+1.0**
CTA				pmax	pmax		
	comp=Z,42nm,1.8s						
CTAO	**Charters Tower**	**21.54**	**269**	*e*P	**P**	**20 05 46.5**	**0.0**
CTAO				pmax	pmax		
	comp=Z,83nm,1.0s,mb5.1						
CTAO	**Charters Tower**	**21.54**	**269**	*e*P	**P**	**20 05 46.5**	**0.0**
	comp=Z,83nm,1.0s,mb5.1						
CAN	**Canberra**	**22.64**	**227**	*e*P	**P**	**20 05 54.7**	**-3.4**
STKA	**Stephens Creek**	**26.84**	**241**	P	**P**	**20 06 38.2**	**+1.1**
WRA	**Warramunga Arr**	**32.66**	**266**	P	**P**	**20 07 28.4**	**-0.5**
	comp=Z,11nm,1.0s,mb4.8,baz=100,slow=6.7,SNR=3.4						
ASAR	**Alice Springs**	**32.70**	**259**	P	**P**	**20 07 28.4**	**-0.8**
	comp=Z,9.1nm,0.8s,mb4.8,baz=89,slow=8.5,SNR=3.2						
FITZ	**Fitzroy Crossi**	**41.09**	**266**	*e*P	**P**	**20 08 40.1**	**-0.3**
	comp=Z,36nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**41.09**	**266**	P	**P**	**20 08 40.0**	**-0.5**
	comp=Z,14nm,0.7s,mb4.7,baz=108,slow=11,SNR=4.1						
MBWA	**Marble Bar**	**46.01**	**261**	*e*P	**P**	**20 09 18.6**	**-1.4**
	comp=Z,29nm,0.9s,mb5.2						
KLBR	**Kellerberrin**	**46.90**	**246**	*e*P	**P**	**20 09 22.9**	**-4.0**
	comp=Z,43nm,1.0s,mb5.3						
NWAO	**Narrogin (SRO)**	**47.34**	**244**	P	**P**	**20 09 29.3**	**-1.0**
	comp=Z,34nm,1.0s,mb5.2,baz=114,slow=7.8,SNR=4.3						
NWAO	**Narrogin (SRO)**	**47.34**	**244**	*e*P	**P**	**20 09 29.5**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,33nm,1.0s						
NWAO	**Narrogin (SRO)**	**47.34**	**244**	*e*P	**P**	**20 09 29.5**	**-0.8**
	comp=Z,33nm,1.0s,mb5.2						
CBIJ	**Chichi jima**	**54.70**	**330**	P	**P**	**20 10 25.8**	**+0.3**
	comp=Z,38nm,0.6s,mb5.3,baz=144,slow=19,SNR=4.1						
MJAR	**Matsushiro Arr**	**64.49**	**333**	P	**P**	**20 11 32.9**	**+0.1**
	comp=Z,1.4nm,0.5s,mb4.3,baz=163,slow=7.4,SNR=6.3						
MJAR	**Matsushiro Arr**	**64.49**	**333**	P	**P**	**20 11 32.9**	**+0.1**
QSPA	**South Pole Qui**	**68.85**	**180**	P	**P**	**20 11 59.4**	**-0.6**
	comp=Z,28nm,1.1s,mb5.1,baz=60,slow=1.7,SNR=4.4						
QSPA	**South Pole Qui**	**68.85**	**180**	P	**P**	**20 11 59.4**	**-0.6**
YSS	**Yuzh-Sakhalins**	**71.94**	**341**	*e*P	**P**	**20 12 20.0**	**+0.9**
PETK	**Petropavlovsk-**	**74.68**	**353**	P	**P**	**20 12 35.5**	**+0.3**
	comp=Z,8.1nm,0.8s,mb4.7,baz=133,slow=6.8,SNR=7.0						
MAW	**Mawson**	**76.62**	**202**	P	**P**	**20 12 46.3**	**+0.1**
	comp=Z,14nm,1.1s,mb4.8,baz=120,slow=8.1,SNR=3.5						
CMAR	**Chiang Mai Arr**	**79.32**	**295**	P	**P**	**20 13 02.3**	**+0.3**
	comp=Z,3.5nm,0.8s,mb4.4,baz=126,slow=4.6,SNR=2.7						
KDAK	**Kodiak Island**	**84.88**	**19**	P	**P**	**20 13 30.6**	**+0.3**
	comp=Z,18nm,1.1s,mb5.1,baz=217,slow=10,SNR=3.5						
ISA	**Isabella**	**88.72**	**51**	*e*P	**P**	**20 13 49.5**	**+0.1**
ISA				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
ISA	**Isabella**	**88.72**	**51**	*e*P	**P**	**20 13 49.5**	**0.0**
	comp=Z,15nm,0.9s,mb5.3						
SONM	**Songino Array**	**88.79**	**323**	P	**P**	**20 13 49.2**	**-0.3**
	comp=Z,4.2nm,1.0s,mb4.7,baz=142,slow=7.3,SNR=3.4						
PFO	**Pinyon Flat Ob**	**89.28**	**53**	P	**P**	**20 13 52.2**	**0.0**
	comp=Z,3.9nm,0.7s,mb4.9,baz=262,slow=4.7,SNR=3.7						
PFO	**Pinyon Flat Ob**	**89.28**	**53**	P	**P**	**20 13 52.2**	**0.0**
PAHR	**Pah Rah Range**	**89.94**	**47**	*e*P	**P**	**20 13 56.7**	**+1.6**
	comp=Z,14nm,1.0s,mb5.3						
NVAR	**Mina Array Bea**	**90.10**	**48**	P	**P**	**20 13 56.0**	**+0.1**
	comp=Z,6.0nm,0.7s,mb5.1,baz=225,slow=7.5,SNR=11						
MOD	**Modoc**	**90.36**	**45**	*e*P	**P**	**20 13 55.1**	**-1.9**
	comp=Z,12nm,1.0s,mb5.2						
TPNV	**Topopah Spring**	**90.90**	**51**	*e*P	**P**	**20 13 59.3**	**-0.3**
TPNV				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
TPNV	**Topopah Spring**	**90.90**	**51**	*e*P	**P**	**20 13 59.3**	**-0.3**
	comp=Z,15nm,0.9s,mb5.3						
PLCA	**Paso Flores**	**97.06**	**139**	P	**P**	**20 14 30.8**	**+2.8**
	comp=Z,1.2nm,0.7s,mb4.4,baz=204,slow=5.9,SNR=2.9						
PLCA	**Paso Flores**	**97.06**	**139**	P	**P**	**20 14 30.8**	**+2.8**
ARCES	**ARCESS Array B**	**126.97**	**345**	PKP	PKPdf	20 19 58.9	0.0
	comp=Z,5.0nm,0.7s,baz=76,slow=2.4,SNR=5.2						
BPA	**Boggy Peak**	**131.71**	**86**	*e*	PKPdf	20 20 12.7	+3.3
NOA	**NORSAR Array B**	**137.34**	**344**	PKP	PKPdf	20 20 20.1	+1.5
	comp=Z,1.2nm,0.8s,baz=27,slow=1.9,SNR=3.7						
CLL	**Collm**	**144.69**	**334**	*e*PKPdf	PKPdf	20 20 32.0	-0.1
CLL				*e*PP	PP	20 23 41.0	-7.9
	comp=Z,101nm,2.4s						
SANT	**Santorini**	**145.08**	**304**	*e*PKPdf	PKPdf	20 20 33.5	+0.2
EKA	**Eskdalemuir Ar**	**145.46**	**352**	PKPbc	PKPbc	20 20 32.5	-0.8
	comp=Z,24nm,0.7s,baz=354,slow=2.4,SNR=11						
GERES	**GERESS Array B**	**146.23**	**331**	PKPbc	PKPbc	20 20 36.4	+0.5
	comp=Z,8.4nm,0.7s,baz=37,slow=3.0,SNR=4.8						
DAVOS	**Davos**	**149.47**	**332**	PKP2	PKPbc	20 20 45.2	+0.5
DAVOX	**Davos/Dischmat**	**149.47**	**332**	PKPbc	PKPbc	20 20 45.2	+0.4
	comp=Z,10nm,0.6s,baz=76,slow=2.2,SNR=7.4						
HAU	**Haudompre**	**149.93**	**337**	*e*PKIKP	PKPbc	20 20 47.6	+1.8
MEZF	**Maizieres J'vi**	**149.97**	**339**	*e*PKIKP	PKPbc	20 20 48.2	+2.3
CABF	**La Chapelle**	**151.19**	**336**	*e*PKIKP	PKPbc	20 20 49.7	+0.8
FLN	**La Foliniere**	**151.31**	**346**	*e*PKIKP	PKPbc	20 20 48.8	-0.3
LDF	**La Druitiere**	**151.38**	**345**	*e*PKIKP	PKPbc	20 20 48.8	-0.4
LOR	**Lormes**	**151.44**	**339**	*e*PKIKP	PKPbc	20 20 50.4	+1.0
SSF	**Saint Saulge**	**151.73**	**339**	*e*PKIKP	PKPbc	20 20 50.6	+0.5
GRR	**Gorron**	**151.74**	**346**	*e*PKIKP	PKPbc	20 20 50.4	+0.3
LPL	**La Plagne**	**151.82**	**333**	*e*PKIKP	PKPbc	20 20 51.4	+1.0
LPG	**La Plagne**	**151.83**	**333**	*e*PKIKP	PKPbc	20 20 52.0	+1.6
	comp=Z,37nm,0.8s						
SGMF	**Saint Gilles**	**152.23**	**348**	*e*PKIKP	PKPbc	20 20 51.0	-0.2
	comp=Z,31nm,0.7s						
MBDF	**Montbardon**	**152.44**	**332**	*e*PKIKP	PKPbc	20 20 52.0	+0.2
ORIF	**Oris-en-Rattie**	**152.66**	**334**	*e*PKIKP	PKPbc	20 20 52.1	-0.2
	comp=Z,35nm,0.9s						
TCF	**Toulx Ste Croi**	**152.84**	**340**	*e*PKIKP	PKPbc	20 20 52.9	+0.3
SMRF	**Simiane la Rot**	**153.55**	**333**	*e*PKIKP	PKPbc	20 20 52.5	-1.8
ESDC	**Sonseca Array**	**160.70**	**344**	PKPbc	PKPab	20 21 36.7	-1.0
	comp=Z,2.1nm,0.8s,baz=10,slow=4.4,SNR=4.1						

IDC ***27*** *20:04:04.5±1.1, 21.37S×169.37E, h0km, mb4.6/11, mb1 4.7/11, mb1mx4.6/17, mbtmp4.6/11, Error ellipse: s-maj=29.8km s-min=24.3km az=139.0*

NEIC ***27*** *20:04:06.3±0.3, 21.33S×169.34E, h10km, mb5.1/11, Error ellipse: s-maj=17.2km s-min=7.9km az=157.0*

ISCJB ***27*** *20:04:08.6±0.4, 21.3S±0.1×169.21E±0.08, h33km, mb4.8/20, Error ellipse: s-maj=16.6km s-min=9.9km az=156.3*

MOS ***27*** *20:04:11.5±2.9, 21.05S×169.59E, h33km, mb5.4/5, Error ellipse: s-maj=35.6km s-min=25.6km az=57.4*

ISC 27 20:04:10.3±0.4, 214S±01×16928E±008, h35km, (h28km±1.2km:pP-P), n63, σ0:70/37, mb4.8/20, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**21.57**	**269**	*e*P	**P**	**20 08 58.6**	**+1.6**
	31nm,0.9s,mb4.7						
CTA	**Charters Tower**	**21.57**	**269**	P	**P**	**20 08 58.5**	**+1.5**
	36nm,0.8s,mb4.8,baz=91,slow=12,SNR=7.7						
STKA	**Stephens Creek**	**26.81**	**241**	*e*P	**P**	**20 09 47.8**	**+0.5**
	12nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**26.81**	**241**	P	**P**	**20 09 48.1**	**+0.8**
	12nm,0.8s,mb4.5,baz=73,slow=13,SNR=2.9						
WRA	**Warramunga Arr**	**32.69**	**266**	P	**P**	**20 10 38.4**	**-1.1**
	6.6nm,0.8s,mb4.6,baz=98,slow=8.3,SNR=5.0						
ASAR	**Alice Springs**	**32.71**	**259**	P	**P**	**20 10 39.0**	**-0.7**
	13nm,0.8s,mb4.9,baz=82,slow=9.0,SNR=8.2						
FITZ	**Fitzroy Crossi**	**41.11**	**267**	*e*P	**P**	**20 11 51.6**	**+0.4**
	41nm,1.2s,mb4.9						
FITZ	**Fitzroy Crossi**	**41.11**	**267**	P	**P**	**20 11 50.9**	**-0.3**
	27nm,1.1s,mb4.8,baz=112,slow=10,SNR=8.5						
BATI	**Baumata**	**45.12**	**277**	P	**P**	**20 12 22.5**	**-1.2**
	11nm,0.6s,mb4.9,baz=56,slow=7.3,SNR=3.6						
NWAO	**Narrogin (SRO)**	**47.31**	**244**	P	**P**	**20 12 40.3**	**-0.4**
	9.1nm,0.8s,mb4.8,baz=45,slow=10.0,SNR=4.4						
MJAR	**Matsushiro Arr**	**64.63**	**333**	P	**P**	**20 14 44.1**	**-0.2**
	0.8nm,0.5s,mb4.0,baz=165,slow=7.6,SNR=3.8						
QSPA	**South Pole Qui**	**68.72**	**180**	P	**P**	**20 15 09.9**	**0.0**
	2.5nm,0.8s,mb4.2,baz=85,slow=11,SNR=2.5						
KSRS	**Korea Array**	**70.26**	**326**	P	**P**	**20 15 20.2**	**+0.2**
	1.6nm,0.9s,mb4.0,baz=141,slow=4.7,SNR=2.7						
MAW	**Mawson**	**76.50**	**202**	P	**P**	**20 16 01.9**	**+5.5**
	4.8nm,0.9s,mb4.4,baz=98,slow=7.1,SNR=3.5						
CMAR	**Chiang Mai Arr**	**79.40**	**295**	P	**P**	**20 16 14.9**	**+1.6**
	1.9nm,1.0s,mb4.0,baz=115,slow=4.1,SNR=3.4						
CHTO	**Chiang Mai**	**79.56**	**295**	*e*P	**P**	**20 16 13.8**	**-0.4**
SNAA	**Sanae**	**87.07**	**182**	*e*	**P**	**20 16 52.4**	**+0.5**
SNAA				*e*	pP	20 17 00.5	-2.5
SNAA				*e*		20 17 06.3	
SNAA	**Sanae**	**87.07**	**182**	*e*P	**P**	**20 16 52.7**	**+0.7**
KCPM	**Cahto Peak**	**87.18**	**45**	*e*P	**P**	**20 16 53.3**	**+0.4**
VNA3	**Neumayer Olymp**	**87.65**	**180**	*e*	**P**	**20 16 54.0**	**-0.8**
VNA3				*e*	pP	20 17 03.2	-2.7
VNA3				*e*		20 17 10.0	
VNA3				*e*		20 17 24.9	
VNA2	**Neumayer--Watz**	**87.95**	**181**	*e*	**P**	**20 16 56.1**	**-0.1**
	baz=197,slow=3.4						
VNA2				*e*	pP	20 17 05.1	-2.2
VNA2				*e*		20 17 11.7	
VNA2				*e*		20 17 26.9	
VNA1	**Neumayer--Stat**	**88.24**	**181**	*e*	**P**	**20 16 57.9**	**+0.4**
VNA1				*e*	pP	20 17 06.7	-2.0
VNA1				*e*		20 17 13.3	
VNA1				*e*		20 17 28.3	
WDC	**Whiskeytown Da**	**88.32**	**45**	*e*P	**P**	**20 16 58.2**	**-0.1**
OHCM	**Honcut**	**88.41**	**47**	*e*P	**P**	**20 16 58.8**	**0.0**
CMB	**Columbia Colle**	**88.53**	**48**	*e*P	**P**	**20 16 58.7**	**-0.7**
CMB				pmax	pmax		
	comp=Z,11nm,1.2s,mb5.1						
CMB	**Columbia Colle**	**88.53**	**48**	*e*P	**P**	**20 16 58.6**	**-0.8**
	comp=Z,11nm,1.2s,mb5.0						
ISA	**Isabella**	**88.78**	**51**	*e*P	**P**	**20 17 00.2**	**-0.4**
ISA				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.2						
ISA	**Isabella**	**88.78**	**51**	*e*P	**P**	**20 17 00.2**	**-0.4**
	comp=Z,13nm,1.1s,mb5.2						
MTUM	**Tungsten Hills**	**89.49**	**49**	*e*P	**P**	**20 17 04.6**	**+0.7**
PAHR	**Pah Rah Range**	**90.01**	**47**	*e*P	**P**	**20 17 06.4**	**+0.1**
	comp=Z,7.6nm,1.0s,mb5.0						
MOD	**Modoc**	**90.44**	**45**	*e*P	**P**	**20 17 08.3**	**+0.1**
	comp=Z,14nm,1.0s,mb5.2						
TPH	**Tonopah**	**90.76**	**49**	*e*P	**P**	**20 17 09.0**	**-0.9**
TPH				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.3						
TPH	**Tonopah**	**90.76**	**49**	*e*P	**P**	**20 17 09.0**	**-0.9**
	comp=Z,17nm,1.1s,mb5.3						
TPNV	**Topopah Spring**	**90.96**	**51**	*e*P	**P**	**20 17 10.2**	**-0.6**
TPNV				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.3						
TPNV	**Topopah Spring**	**90.96**	**51**	*e*P	**P**	**20 17 10.2**	**-0.6**
	comp=Z,22nm,1.3s,mb5.3						
LDFC	**Landfair**	**90.98**	**53**	*e*P	**P**	**20 17 11.7**	**+0.8**
	comp=Z,11nm,0.7s,mb5.3						
WUAZ	**Wupatki**	**93.94**	**53**	*e*P	**P**	**20 17 25.4**	**+0.7**
	comp=Z,12nm,1.1s,mb5.2						
ARCES	**ARCESS Array B**	**127.11**	**345**	PKP	PKPdf	20 23 09.3	-0.8
	comp=Z,3.2nm,0.9s,baz=42,slow=2.0,SNR=4.4						
ARCES	**ARCESS Array B**	**127.11**	**345**	PKP	PKPdf	20 23 09.3	-0.8
NOA	**NORSAR Array B**	**137.48**	**344**	PKP	PKPdf	20 23 34.3	+4.4
	comp=Z,1.0nm,0.8s,baz=32,slow=2.0,SNR=3.5						
SANT	**Santorini**	**145.18**	**303**	*e*PKPdf	PKPdf	20 23 43.7	-0.8
EKA	**Eskdalemuir Ar**	**145.59**	**352**	PKPbc	PKPbc	20 23 43.5	-1.3
	comp=Z,6.9nm,0.7s,baz=12,slow=3.6,SNR=10						
GERES	**GERESS Array B**	**146.35**	**330**	PKPbc	PKPbc	20 23 47.2	-0.1
	comp=Z,2.3nm,0.7s,baz=25,slow=2.9,SNR=6.2						
GIVF	**Givet**	**148.79**	**341**	*e*PKIKP	PKPbc	20 23 56.2	+2.3
CDF	**Champ du Feu**	**149.38**	**336**	*e*PKIKP	PKPbc	20 23 56.2	+0.7
	comp=Z,36nm,1.2s						
DAVOS	**Davos**	**149.60**	**332**	PKHKP	PKPbc	20 23 56.3	+0.2
DAVOX	**Davos/Dischmat**	**149.61**	**331**	PKPbc	PKPbc	20 23 56.3	+0.2
	comp=Z,6.4nm,0.8s,baz=63,slow=4.5,SNR=7.0						
HINF	**Hinteralfeld**	**150.03**	**336**	*e*PKIKP	PKPbc	20 23 57.3	+0.2
	comp=Z,32nm,1.3s						
HAU	**Haudompre**	**150.07**	**337**	*e*PKIKP	PKPbc	20 23 57.5	+0.3
	comp=Z,16nm,0.9s						
MEZF	**Maizieres J'vi**	**150.10**	**339**	*e*PKIKP	PKPbc	20 23 58.2	+1.0
CABF	**La Chapelle**	**151.33**	**335**	*e*PKIKP	PKPbc	20 23 59.8	-0.4
FLN	**La Foliniere**	**151.45**	**346**	*e*PKIKP	PKPbc	20 23 58.6	-1.8
LDF	**La Druitiere**	**151.52**	**345**	*e*PKIKP	PKPbc	20 23 59.4	-1.2
	comp=Z,51nm,1.1s						
LOR	**Lormes**	**151.57**	**339**	*e*PKIKP	PKPbc	20 23 59.4	-1.3
	comp=Z,22nm,1.1s						
SSF	**Saint Saulge**	**151.87**	**339**	*e*PKIKP	PKPbc	20 24 01.0	-0.4
	comp=Z,27nm,1.1s						
GRR	**Gorron**	**151.88**	**346**	*e*PKIKP	PKPbc	20 24 00.8	-0.6
	comp=Z,26nm,1.0s						
LPL	**La Plagne**	**151.96**	**333**	*e*PKIKP	PKPbc	20 24 01.6	-0.1
LPG	**La Plagne**	**151.97**	**333**	*e*PKIKP	PKPbc	20 24 01.6	-0.1
AVF	**Avril sur Loir**	**152.16**	**339**	*e*PKIKP	PKPbc	20 24 00.0	-2.1
SGMF	**Saint Gilles**	**152.37**	**348**	*e*PKIKP	PKPbc	20 24 00.9	-1.6
	comp=Z,169nm,1.6s						
MBDF	**Montbardon**	**152.57**	**332**	*e*PKIKP	PKPbc	20 24 01.5	-1.6
ORIF	**Oris-en-Rattie**	**152.80**	**334**	*e*PKIKP	PKPbc	20 24 01.7	-1.9
	comp=Z,13nm,0.8s						
TCF	**Toulx Ste Croi**	**152.98**	**340**	*e*PKIKP	PKPbc	20 24 02.2	-1.7
	comp=Z,96nm,1.7s						

ISCJB ***27*** *20:07:14.4±0.5, 4377N±004×10527W±006, h0km, Error ellipse: s-maj=6.6km s-min=6.4km az=149.8*

NEIC ***27*** *20:07:16.0±0.4, 4376N×10526W, h0km, ML3.3, Error ellipse: s-maj=4.9km s-min=4.8km az=141.0, Suspected Mining explosion.*

NEIC 60 km [40 miles] SSE of Gillette.

IDC ***27*** *20:07:17.0±1.6, 4406N×10575W, h0km, mb1 3.7/3, mb1mx3.5/24, mbtmp3.4/3, ML3.2/3, Error ellipse: s-maj=53.1km s-min=9.4km az=147.0*

ISC 27 20:07:16.0±0.5, 4377N±004×10525W±006, h0km, n38, σ0:92/39, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.94**	**68**	*e*P	**Pg**	**20 07 34.0**	**-0.1**
PHWY	**Pilot Hill**	**2.48**	**184**	*e*P	**Pn**	**20 07 56.9**	**-0.6**
RWWY	**Rawlins**	**2.54**	**215**	*e*P	**Pn**	**20 07 58.3**	**-0.1**
LAO	**LASA Array**	**3.00**	**347**	*e*P	**Pn**	**20 08 04.9**	**+0.2**
RLMT	**Red Lodge**	**3.18**	**296**	*e*P	**Pn**	**20 08 07.1**	**-0.1**
BW06	**Boulder Array**	**3.30**	**254**	*e*P	**Pn**	**20 08 08.6**	**-0.4**
PDAR	**Pinedale Array**	**3.30**	**254**	Pn	**Pn**	**20 08 09.2**	**+0.3**
	3.6nm,0.3s,baz=73,slow=16,SNR=49						
PDAR				Pg	**Pg**	**20 08 15.2**	**-4.2**
	6.5nm,0.3s,baz=67,slow=20,SNR=34						
PDAR				Lg		20 08 54.5	
	7.4nm,0.3s,baz=64,slow=28,SNR=5.1						
OGNE	**Ogallala**	**3.70**	**139**	*e*Pn	**Pn**	**20 08 15.2**	**+0.8**
GCMT	**Greycliff**	**3.74**	**304**	*e*P	**Pn**	**20 08 15.1**	**+0.2**
LOHW	**Long Hollow**	**3.89**	**269**	*e*P	**Pn**	**20 08 18.4**	**+1.4**
ISCO	**Idaho Springs**	**3.98**	**184**	*e*P	**Pn**	**20 08 18.6**	**+0.3**
MOOW	**Moose Ponds**	**3.98**	**272**	*e*P	**Pn**	**20 08 18.9**	**+0.7**
SNOW	**Snow King Moun**	**4.01**	**267**	*e*Pn	**Pn**	**20 08 22.5**	**+3.8**
REDW	**Red Top Meadow**	**4.09**	**266**	*e*Pg	**Pg**	**20 08 27.5**	**-6.9**
IMW	**Indian Meadow**	**4.12**	**274**	*e*P	**Pn**	**20 08 21.3**	**+1.1**
TPAW	**Teton Pass**	**4.15**	**268**	*e*P	**Pn**	**20 08 20.9**	**+0.3**
AHID	**Auburn Hatcher**	**4.39**	**259**	*e*Pg	**Pg**	**20 08 34.4**	**-5.8**
RRI2	**Red Ridge**	**4.43**	**267**	*e*P	**Pn**	**20 08 24.0**	**-0.4**
QLMT	**Earthquake Lak**	**4.56**	**286**	*e*Pg	**Pg**	**20 08 38.8**	**-4.6**
DGMT	**Dagmar**	**4.75**	**8**	*e*Pg	**Pg**	**20 08 43.3**	**-3.8**

BOZ	**Bozeman (W)**	**4.92**	**295**	*e*Pg	**Pg**	**20**	**08**	**41.8**	**-8.4**
HWUT	**Hardware Ranch**	**5.13**	**247**	*e*Pn	**Pn**	**20**	**08**	**33.1**	**-1.0**
	15nm,0.7s								
EGMT	**Eagleton**	**5.29**	**325**	*e*Pn	**Pn**	**20**	**08**	**35.9**	**-0.2**
	16nm,0.6s								
DLMT	**Dillon**	**5.48**	**289**	*e*Pg	**Pg**	**20**	**08**	**55.7**	**-5.4**
	17nm,1.3s								
MCMT	**McKenzie Canyo**	**5.55**	**284**	*e*Pg	**Pg**	**20**	**08**	**55.8**	**-6.7**
DAU	**Daniels Canyon**	**5.59**	**235**	*e*Pn	**Pn**	**20**	**08**	**41.2**	**+0.9**
SPUT	**South Promonto**	**5.86**	**248**	*e*Pn	**Pn**	**20**	**08**	**40.7**	**-3.3**
SPUT				*e*Pg	**Pg**	**20**	**09**	**02.5**	**-5.8**
HVU	**Hansel Valley**	**5.89**	**253**	*e*Pn	**Pn**	**20**	**08**	**42.7**	**-1.8**
	9.0nm,0.8s								
SDCO	**Great Sand Dun**	**6.03**	**182**	*e*Pn	**Pn**	**20**	**08**	**47.0**	**+0.7**
	3.9nm,0.7s								
SRU	**San Rafael**	**6.12**	**222**	*e*Pn	**Pn**	**20**	**08**	**47.4**	**-0.2**
	17nm,0.8s								
CHMT	**Chamberlain Mo**	**6.45**	**302**	*e*Pn	**Pn**	**20**	**08**	**51.3**	**-0.9**
HLID	**Hailey**	**6.65**	**271**	*e*Pn	**Pn**	**20**	**08**	**55.0**	**+0.1**
	3.7nm,0.3s								
MSU	**Marysvale**	**7.41**	**227**	*e*Pn	**Pn**	**20**	**09**	**04.2**	**-1.2**
ULM	**Lac du Bonnet**	**9.10**	**41**	Pn	**Pn**	**20**	**09**	**28.4**	**-0.2**
	0.5nm,0.3s,baz=228,slow=14,SNR=3.9								
ULM				Pg	Pn	20	10	02.9	+34
	0.5nm,0.3s,baz=226,slow=16,SNR=2.7								
ULM				Lg		20	12	00.5	
	0.5nm,0.3s,baz=325,slow=18,SNR=2.8								
WUAZ	**Wupatki**	**9.50**	**212**	*e*Pn	**Pn**	**20**	**09**	**33.2**	**-0.8**
	5.3nm,0.6s								
WVOR	**Wild Horse Val**	**9.88**	**267**	*e*Pn	**Pn**	**20**	**09**	**41.1**	**+1.8**
	3.6nm,1.3s								
NVAR	**Mina Array Bea**	**11.20**	**246**	Pn	**Pn**	**20**	**09**	**58.8**	**+1.5**
	0.1nm,0.3s,baz=58,slow=8.6,SNR=4.2				

*IDC **27** 20:11:06.5±0.7,2127S×16941E,h0km,mb4.4/12, mb1 4.6/14,mb1mx4.5/19,mbtmp4.5/14,ML3.0/2,Error ellipse: s-maj=21.8km s-min=18.6km az=138.0*

*BJI **27** 20:11:06.9,2130S×16950E,h10km,mB5.1,mb4.8*

*NEIC **27** 20:11:08.0±0.3,2127S×16947E,h10km,mb5.0/13,Error ellipse: s-maj=10.9km s-min=9.6km az=157.0*

*ISCJB **27** 20:11:08.1±0.4,2124S±007×16943E±008,h19km, mb4.7/27,Error ellipse: s-maj=10.8km s-min=9.7km az=164.9*

*MOS **27** 20:11:11.0±1.0,2119S×16948E,h33km,mb5.1/13,Error ellipse: s-maj=31.8km s-min=16.9km az=122.4*

*SZGRF **27** 20:11:11.1,2303S×16658E,h33km,New Caledonia*

*VIE **27** 20:11:19.3,2065S×16901E,h65km,mb4.2 330 km SSE of Port Vila*

ISC 27 20:11:10.1±4.6,2124S±007×16946E±008,h21km±33km, h20km±1.6km:pP-P,n116,σ1§08/55,mb4.7/27,1C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
HNR	**Honiara**	**14.89**	**321**	P		**Pn**	**20 14 45.5**	**+6.0**
	202nm,1.3s							
URZ	**Urewera**	**18.20**	**160**	P		**Pn**	**20 15 19.9**	**-1.5**
	0.1nm,0.3s,baz=294,slow=20,SNR=1.5							
AFI	**Afiamalu**	**19.30**	**71**	P		**Pn**	**20 15 35.4**	**+0.4**
	1.7nm,0.3s,baz=174,slow=10,SNR=2.3							
CTA	**Charters Tower**	**21.74**	**269**	*eP*		**P**	**20 16 01.5**	**+1.2**
	26nm,0.9s,mb4.7							
CTA	**Charters Tower**	**21.74**	**269**	P		**P**	**20 16 01.0**	**+0.7**
	32nm,0.8s,mb4.8,baz=92,slow=11,SNR=5.7							
CTA	**Charters Tower**	**21.74**	**269**	*eP*		**P**	**20 16 01.5**	**+1.2**
CTA				pmax		pmax		
	comp=Z,26nm,0.9s							
CTAO	**Charters Tower**	**21.74**	**269**	*eP*		**P**	**20 16 01.1**	**+0.8**
RPZ	**Rata Peaks**	**22.45**	**177**	P		**P**	**20 16 10.0**	**+2.4**
	comp=Z,17nm,1.1s,mb4.4,baz=2.9,slow=8.9,SNR=4.3							
CNB	**Canberra Magne**	**22.52**	**227**	*eP*		**P**	**20 16 11.8**	**+3.3**
STKA	**Stephens Creek**	**27.01**	**241**	*eP*		**P**	**20 16 51.0**	**+0.3**
	comp=Z,18nm,1.9s,mb4.3							
STKA	**Stephens Creek**	**27.01**	**241**	P		**P**	**20 16 50.6**	**-0.2**
	comp=Z,3.5nm,0.7s,mb4.0,baz=118,slow=15,SNR=4.1							
WRA	**Warramunga Arr**	**32.87**	**266**	P		**P**	**20 17 41.2**	**-1.6**
	comp=Z,4.7nm,0.9s,mb4.4,baz=96,slow=8.4,SNR=6.8							
ASAR	**Alice Springs**	**32.90**	**259**	P		**P**	**20 17 42.0**	**-1.0**
	comp=Z,7.1nm,0.8s,mb4.6,baz=82,slow=9.2,SNR=9.1							
ASAR				PcP		PcP	20 20 27.5	+0.1
	comp=Z,1.2nm,0.9s,baz=100,slow=2.8,SNR=4.2							
FITZ	**Fitzroy Crossi**	**41.29**	**266**	*eP*		**P**	**20 18 53.6**	**-0.7**
	comp=Z,34nm,0.8s,mb5.0							
FITZ	**Fitzroy Crossi**	**41.29**	**266**	P		**P**	**20 18 52.9**	**-1.4**
	comp=Z,13nm,0.9s,mb4.6,baz=150,slow=9.0,SNR=8.4							
BATI	**Baumata**	**45.28**	**277**	P		**P**	**20 19 28.2**	**+1.6**
	comp=Z,17nm,1.1s,mb4.8,baz=130,slow=7.9,SNR=2.3							
MBWA	**Marble Bar**	**46.20**	**261**	*eP*		**P**	**20 19 29.5**	**-4.3**
KLBR	**Kellerberrin**	**47.07**	**246**	*eP*		**P**	**20 19 38.7**	**-1.8**
	comp=Z,32nm,1.1s,mb5.2							
NWAO	**Narrogin (SRO)**	**47.51**	**244**	P		**P**	**20 19 43.0**	**-0.9**
	comp=Z,4.9nm,0.7s,mb4.6,baz=72,slow=5.2,SNR=3.4							
SBA	**Scott Base**	**56.67**	**181**	*eP*		**P**	**20 20 52.9**	**+1.5**
SBA				pmax		pmax		
	comp=Z,11nm,0.9s,mb4.9							
SBA	**Scott Base**	**56.67**	**181**	*eP*		**P**	**20 20 52.9**	**+1.5**
	comp=Z,11nm,0.9s,mb4.9							
MJAR	**Matsushiro Arr**	**64.61**	**332**	P		**P**	**20 21 45.3**	**-0.8**
	comp=Z,1.3nm,0.5s,mb4.2,baz=172,slow=7.5,SNR=7.3							
MAJO	**Matsushiro**	**64.62**	**332**	*eP*		**P**	**20 21 45.8**	**-0.3**
MAJO				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb4.8							
MAJO	**Matsushiro**	**64.62**	**332**	*eP*		**P**	**20 21 45.8**	**-0.3**
	comp=Z,9.4nm,0.8s,mb4.9							
MAT	**Matsushiro**	**64.62**	**332**	P		**P**	**20 21 45.4**	**-0.7**
MAT				S		PcP	20 22 13.7	-6.1
QSPA	**South Pole Qui**	**68.82**	**180**	P		**P**	**20 22 12.4**	**+0.1**
	comp=Z,9.8nm,1.1s,mb4.6,baz=16,slow=2.9,SNR=7.4							
PETK	**Petropavlovsk-**	**74.74**	**353**	P		**P**	**20 22 47.8**	**-0.3**
	comp=Z,3.6nm,0.8s,mb4.4,baz=125,slow=5.5,SNR=5.7							
MDJ	**Mudanjiang**	**74.98**	**332**	*eP*		**P**	**20 22 48.9**	**-0.7**
CN2	**Changchun**	**76.27**	**329**	*eP*		**P**	**20 22 58.0**	**+0.9**
MAW	**Mawson**	**76.67**	**202**	P		**P**	**20 22 59.2**	**+0.1**
	comp=Z,5.6nm,1.1s,mb4.4,baz=140,slow=8.6,SNR=3.8							
KLR	**Kul'dur**	**77.78**	**336**	*eP*		**P**	**20 23 02.8**	**-2.6**
KLR				pmax		pmax		
	comp=Z,72nm,2.0s,mb5.3							
KMI	**Kunming**	**79.51**	**302**	P		**P**	**20 23 17.0**	**+1.4**
KMI				AP		pP	20 23 23.8	+1.4
KMI				AMB		AMB		
	comp=Z,26nm,1.3s,mb5.0							
KMI	**Kunming**	**79.51**	**302**	P		**P**	**20 23 17.0**	**+1.4**
KMI				*PP		pP	20 23 23.7	+1.3
KMI				pmax		pmax		
	comp=Z,26nm,1.3s,mb5.0							
KMI	**Kunming**	**79.51**	**302**	P		**P**	**20 23 17.0**	**+1.4**
	comp=Z,26nm,1.3s,mb5.0							
KMI				pP		pP	20 23 23.7	+1.3
CMAR	**Chiang Mai Arr**	**79.52**	**294**	P		**P**	**20 23 16.5**	**+0.8**
	comp=Z,4.4nm,1.0s,mb4.4,baz=138,slow=3.9,SNR=10							
CHTO	**Chiang Mai**	**79.67**	**295**	*eP*		**P**	**20 23 17.3**	**+0.7**
CHTO				pmax		pmax		
	comp=Z,29nm,1.3s,mb5.0							
CHTO	**Chiang Mai**	**79.67**	**295**	*eP*		**P**	**20 23 17.3**	**+0.7**
	comp=Z,29nm,1.3s,mb5.0							
LZH	**Lanzhou**	**84.22**	**312**	*eP*		**P**	**20 23 41.0**	**+0.9**
LZH				AP		pP	20 23 46.5	-0.6
LZH				XP		sP	20 23 49.0	-0.5
LZH				AMB		AMB		
	comp=Z,18nm,1.3s,mb5.0							
LZH				AMB		AMB		
	comp=Z,75nm,4.6s							
LZH	**Lanzhou**	**84.22**	**312**	*eP*		**P**	**20 23 41.0**	**+0.9**
	comp=Z,18nm,1.3s,mb5.0							
LZH				pP		pP	20 23 46.5	-0.6
LZH				sP		sP	20 23 49.0	-0.5
SNAA	**Sanae**	**87.18**	**182**	*e*		**P**	**20 23 54.0**	**-0.3**
SNAA				*e*		pP	20 24 00.6	-0.6
SNAA	**Sanae**	**87.18**	**182**	*eP*		**P**	**20 23 53.0**	**-1.3**
SNAA				pmax		pmax		
	comp=Z,11nm,1.0s							
SNAA	**Sanae**	**87.18**	**182**	*eP*		**P**	**20 23 53.0**	**-1.4**
	comp=Z,11nm,1.0s,mb5.0							
VNA3	**Neumayer Olymp**	**87.76**	**180**	*e*		**P**	**20 23 56.3**	**-0.8**
VNA3				*e*		pP	20 24 03.3	-0.8
VNA2	**Neumayer--Watz**	**88.05**	**181**	*e*		**P**	**20 23 58.2**	**-0.3**
	baz=187,slow=4.0							
VNA2				*e*		pP	20 24 05.1	-0.4
WDC	**Whiskeytown Da**	**88.12**	**45**	*eP*		**P**	**20 23 59.2**	**0.0**
WDC				pmax		pmax		
	comp=Z,18nm,1.4s,mb5.1							
WDC	**Whiskeytown Da**	**88.12**	**45**	*eP*		**P**	**20 23 59.2**	**0.0**
	comp=Z,18nm,1.4s,mb5.1							
CMB	**Columbia Colle**	**88.33**	**48**	*eP*		**P**	**20 23 59.8**	**-0.5**
CMB				pmax		pmax		
	comp=Z,7.0nm,1.0s,mb4.8							
CMB	**Columbia Colle**	**88.33**	**48**	*eP*		**P**	**20 23 59.8**	**-0.5**
	comp=Z,6.7nm,1.0s,mb4.8							
VNA1	**Neumayer--Stat**	**88.34**	**181**	*e*		**P**	**20 24 00.1**	**+0.2**
VNA1				*e*		pP	20 24 06.7	-0.1
ULN	**Ulaanbaatar**	**88.59**	**323**	*eP*		**P**	**20 24 01.5**	**+0.2**
ULN				pmax		pmax		
	comp=Z,12nm,1.3s,mb5.1							
ULN	**Ulaanbaatar**	**88.59**	**323**	*eP*		**P**	**20 24 01.5**	**+0.2**
	comp=Z,12nm,1.3s,mb5.1							
GTA	**Gaotai**	**88.65**	**313**	*eP*		**P**	**20 24 07.3**	**+5.5**
GTA				AP		pP	20 24 10.8	+2.1
GTA				XP		sP	20 24 12.3	+1.1
GTA				AMB		AMB		
	comp=Z,2.0nm,1.2s,mb4.3							
SONM	**Songino Array**	**88.94**	**323**	P		**P**	**20 24 03.5**	**+0.6**
	comp=Z,2.0nm,0.9s,mb4.5,baz=152,slow=7.8,SNR=6.1							
LSA	**Lhasa**	**90.75**	**302**	*eP*		**P**	**20 24 13.9**	**+2.0**
ZAK	**Zakamensk**	**92.04**	**324**	*eP*		**P**	**20 24 17.3**	**0.0**
ZAK				pmax		pmax		
	comp=Z,5.0nm,1.4s,mb4.7							
MKAR	**Makanchi Array**	**103.30**	**315**	Pdiff		Pdif	20 25 08.7	+0.3
	comp=Z,0.2nm,0.4s,baz=119,slow=5.8,SNR=2.6							
ARCES	**ARCESS Array B**	**127.05**	**345**	PKP		PKPdf	20 30 10.7	-1.2
	comp=Z,2.9nm,0.6s,baz=102,slow=0.9,SNR=15							
AKASG	**Malin Array Be**	**137.22**	**323**	PKP		PKPdf	20 30 32.1	+0.5
	comp=Z,0.5nm,0.5s,baz=80,slow=1.0,SNR=3.3							
NOA	**NORSAR Array B**	**137.42**	**345**	PKP		PKPdf	20 30 31.6	-0.1
	comp=Z,0.7nm,0.8s,baz=34,slow=1.8,SNR=3.1							
DPC	**Dobruska-Polom**	**144.07**	**330**	*e*PKP		PKPdf	20 30 42.5	-1.5
DPC				*ex*		x	20 30 50.1	
UPC	**Upice**	**144.10**	**331**	*e*PKP		PKPdf	20 30 42.4	-1.6
VRAC	**Vranov**	**144.66**	**329**	PKP		PKPdf	20 30 44.2	-0.9
	comp=Z,2.3nm,0.6s,baz=315,slow=4.3,SNR=2.9							
PVCC	**Panska Ves**	**144.73**	**332**	*e*PKP		PKPdf	20 30 44.0	-1.1
BRG	**Berggiesshubel**	**144.75**	**333**	*e*PKPbc		PKPdf	20 30 43.9	-1.3
BRG	**Berggiesshubel**	**144.75**	**333**	*i*		PKPdf	20 30 44.2	-0.9
	comp=Z,9.2nm,0.8s							
BRG	**Berggiesshubel**	**144.75**	**333**	*i*		PKPdf	20 30 44.2	-0.9
CLL	**Collm**	**144.81**	**334**	*e*PKIKP		PKPdf	20 30 44.0	-1.2
CLL				pmax		pmax		
	comp=Z,11nm,0.7s							
CLL	**Collm**	**144.81**	**334**	*e*PKPbc		PKPdf	20 30 43.8	-1.4
CLL	**Collm**	**144.81**	**334**	*i* PKPdf		PKPdf	20 30 44.4	-0.8
	comp=Z,11nm,0.7s							
CLL				*i* PKiKP		PKiKP	20 30 49.0	0.0
CLL				*i* pPKiKP			20 30 52.1	
MODS	**Modra-Piesok**	**144.94**	**327**	*e*PKP		PKPdf	20 30 46.6	+1.0
PRU	**Pruhonice**	**145.14**	**331**	*e*PKP		PKPdf	20 30 45.4	-0.5
PRU				*ex*		x	20 30 53.1	
TREC	**Trest**	**145.20**	**330**	*e*PKP		PKPdf	20 30 45.9	-0.1
SANT	**Santorini**	**145.27**	**304**	*e*PKPdf		PKPdf	20 30 44.5	-2.0
CLZ	**Clausthal**	**145.40**	**337**	*e*PKPbc		PKPbc	20 30 46.7	+0.5
EKA	**Eskdalemuir Ar**	**145.51**	**353**	PKPbc		PKPbc	20 30 45.4	-1.0
	comp=Z,15nm,0.6s,baz=356,slow=2.5,SNR=39							
TANN	**Tannenbergstha**	**145.71**	**334**	*e*PKPbc		PKPbc	20 30 47.5	+0.3
NKC	**Novy Kostel**	**145.86**	**333**	*e*PKP		PKPdf	20 30 48.2	+1.1
NKC				*ex*		x	20 30 56.9	
MOX	**Moxa**	**145.88**	**335**	*e*PKPbc		PKPbc	20 30 47.6	-0.1
IBBN	**Ibbenburen**	**145.91**	**340**	*e*PKPbc		PKPbc	20 30 48.9	+1.1
MANZ	**Manzenberg**	**146.19**	**333**	*e*PKPbc		PKPbc	20 30 48.2	-0.5
KHC	**Kasperske Hory**	**146.19**	**331**	*e*PKP		PKPdf	20 30 47.9	+0.2
ROTZ	**Rotzenmuhle**	**146.31**	**333**	*e*PKPbc		PKPbc	20 30 50.3	+1.2
GEC2	**GERESS Array S**	**146.34**	**331**	*e*PKPbc		PKPbc	20 30 48.2	-1.0
GEC2	**GERESS Array S**	**146.34**	**331**	*e*PKPdf		PKPdf	20 30 48.2	+0.3
GERES	**GERESS Array B**	**146.34**	**331**	PKPbc		PKPbc	20 30 48.5	-0.6
	comp=Z,4.0nm,0.6s,baz=36,slow=3.2,SNR=18							
GRF	**Grafenberg Arr**	**146.78**	**334**	*e*PKPbc		PKPbc	20 30 50.5	+0.1
FUR	**Furstenfeldbru**	**147.93**	**332**	*e*PKPbc		PKPbc	20 30 53.4	-0.3
MOTA	**Moosalm**	**148.63**	**331**	*i*P		PKPbc	20 30 54.8	-0.7
	comp=Z,31nm,1.7s							
GIVF	**Givet**	**148.75**	**341**	*e*PKIKP		PKPab	20 30 57.9	-1.5
	comp=Z,19nm,0.7s							
BAIF	**Baives**	**148.97**	**341**	*e*PKIKP		PKPbc	20 30 57.9	+1.6
	comp=Z,36nm,1.2s							
BFO	**Black Forest**	**149.02**	**335**	*e*PKPbc		PKPbc	20 30 56.2	-0.3
CDF	**Champ du Feu**	**149.36**	**336**	*e*PKIKP		PKPbc	20 30 57.2	-0.1
DAVOS	**Davos**	**149.59**	**332**	PKP2		PKPbc	20 30 57.7	-0.2
DAVOX	**Davos/Dischmat**	**149.60**	**332**	PKPbc		PKPbc	20 30 57.7	-0.3
	comp=Z,6.8nm,0.6s,baz=116,slow=2.8,SNR=13							
HINF	**Hinteralfeld**	**150.01**	**336**	*e*PKIKP		PKPbc	20 30 58.5	-0.4
	comp=Z,16nm,0.9s							
HAU	**Haudompre**	**150.04**	**337**	*e*PKIKP		PKPbc	20 30 58.7	-0.3
	comp=Z,27nm,1.2s							
MEZF	**Maizieres J'vi**	**150.07**	**339**	*e*PKIKP		PKPbc	20 30 58.7	-0.4
	comp=Z,28nm,0.9s							
TUE	**Stuetta**	**150.07**	**332**	*e*PKPbc		PKPbc	20 30 57.8	-1.4
CABF	**La Chapelle**	**151.30**	**336**	*e*PKIKP		PKPbc	20 31 02.1	+0.1
	comp=Z,17nm,0.7s							
FLN	**La Foliniere**	**151.39**	**346**	*e*PKIKP		PKPbc	20 31 01.4	-0.8
	comp=Z,22nm,1.6s							
LDF	**La Druitiere**	**151.46**	**345**	*e*PKIKP		PKPbc	20 31 01.5	-0.8
LOR	**Lormes**	**151.54**	**339**	*e*PKIKP		PKPbc	20 31 01.9	-0.7
	comp=Z,15nm,0.8s							
GRR	**Gorron**	**151.82**	**346**	*e*PKIKP		PKPbc	20 31 02.5	-0.7
SSF	**Saint Saulge**	**151.84**	**339**	*e*PKIKP		PKPbc	20 31 02.8	-0.4
	comp=Z,14nm,0.9s							
LPL	**La Plagne**	**151.94**	**334**	*e*PKIKP		PKPbc	20 31 03.4	-0.1
	comp=Z,20nm,0.9s							
LPG	**La Plagne**	**151.95**	**334**	*e*PKIKP		PKPbc	20 31 03.6	0.0
	comp=Z,11nm,0.6s							
SMF	**Signal de Mont**	**152.09**	**339**	*e*PKIKP		PKPbc	20 31 03.0	-0.8
	comp=Z,50nm,1.4s							
AVF	**Avril sur Loir**	**152.12**	**339**	*e*PKIKP		PKPbc	20 31 02.9	-1.0
	comp=Z,36nm,1.3s							
SGMF	**Saint Gilles**	**152.30**	**348**	*e*PKIKP		PKPbc	20 31 02.9	-1.4
ROSF	**Rostrenen**	**152.35**	**350**	*e*PKIKP		PKPbc	20 31 03.0	-1.4
	comp=Z,129nm,1.5s							
BGF	**Bois d'Agland**	**152.49**	**340**	*e*PKIKP		PKPbc	20 31 04.0	-0.8
MBDF	**Montbardon**	**152.56**	**333**	*e*PKIKP		PKPbc	20 31 04.3	-0.7
	comp=Z,20nm,0.9s							
ORIF	**Oris-en-Rattie**	**152.78**	**334**	*e*PKIKP		PKPbc	20 31 04.6	-0.8
TCF	**Toulx Ste Croi**	**152.94**	**340**	*e*PKIKP		PKPbc	20 31 04.5	-1.2
VIVF	**Saint-Julien-l**	**153.31**	**335**	*e*PKIKP		PKPbc	20 31 04.6	-2.0
TORD	**Torodi Ar. Bea**	**165.81**	**237**	PKP		PKPdf	20 31 14.2	-0.1
	comp=Z,1.0nm,0.9s,baz=90,slow=1.4,SNR=2.5							
TORD				PKPab		PKPab	20 32 12.1	-1.5
	comp=Z,0.9nm,1.0s,baz=140,slow=2.5,SNR=4.2							

*NEIC **27** 20:16:08.9±0.5,2124S×16945E,h10km,mb4.9/12,Error ellipse: s-maj=14.4km s-min=11.0km az=134.0*

*BJI **27** 20:16:12.6,2032S×16948E,h19km,mb4.8*

*IDC **27** 20:16:14.9±6.0,2133S×16924E,h48km±54km,mb4.4/14, mb1 4.6/15,mb1mx4.5/20,mbtmp4.4/15,ML3.7/1,Error ellipse: s-maj=24.7km s-min=19.6km az=67.0*

*MOS **27** 20:16:15.1±2.3,2132S×16849E,h33km,mb5.1/6,Error ellipse: s-maj=42.9km s-min=20.9km az=117.0*

*ISCJB **27** 20:16:16.3±3.8,2132S±009×1692E±0.1,h71km±32km, mb4.6/23,Error ellipse: s-maj=19.7km s-min=12.9km az=145.0*

ISC 27 20:16:21.9±2.8,2137S±008×1691E±01,h107km±24km, n65,σ1§00/43,mb4.6/23,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
HNR	**Honiara**	**14.80**	**322**	P		**Pn**	**20 19 46.9**	**+1.1**
	baz=226,slow=4.9,SNR=4.0							
URZ	**Urewera**	**18.19**	**160**	P		**P**	**20 20 25.3**	**-0.9**
	0.2nm,0.3s,baz=337,slow=6.2,SNR=4.5							
CTA	**Charters Tower**	**21.44**	**269**	*eP*		**P**	**20 21 01.4**	**-0.2**
	38nm,0.9s,mb4.7							
CTA	**Charters Tower**	**21.44**	**269**	P		**P**	**20 21 01.3**	**-0.3**
	44nm,0.8s,mb4.8,baz=93,slow=12,SNR=52							
CTA	**Charters Tower**	**21.44**	**269**	*eP*		**P**	**20 21 01.4**	**-0.2**
CTA				pmax		pmax		
	comp=Z,38nm,0.9s							
CTAO	**Charters Tower**	**21.44**	**269**	*eP*		**P**	**20 21 01.3**	**-0.3**
CTAO				pmax		pmax		
	comp=Z,57nm,0.9s,mb4.9							
CTAO	**Charters Tower**	**21.44**	**269**	*eP*		**P**	**20 21 01.3**	**-0.3**
	comp=Z,57nm,0.9s,mb4.9							
CNB	**Canberra Magne**	**22.21**	**227**	*eP*		**P**	**20 21 10.4**	**+0.7**
CAN	**Canberra**	**22.47**	**227**	*eP*		**P**	**20 21 13.7**	**+1.4**
PMG	**Port Moresby**	**24.26**	**296**	*eP*		**P**	**20 21 28.2**	**-1.0**
PMG				pmax		pmax		
	comp=Z,32nm,1.0s							
PMG	**Port Moresby**	**24.26**	**296**	*eP*		**P**	**20 21 28.2**	**-1.0**
	comp=Z,32nm,1.0s,mb4.6							
COEN	**Coen**	**25.79**	**282**	*eP*		**P**	**20 21 42.9**	**-0.2**
	comp=Z,21nm,1.4s,mb4.4							
TOO	**Toolangi**	**26.06**	**227**	*eP*		**P**	**20 21 46.7**	**+1.4**
STKA	**Stephens Creek**	**26.68**	**241**	*eP*		**P**	**20 21 51.7**	**+0.7**
	comp=Z,18nm,0.9s,mb4.6							
STKA	**Stephens Creek**	**26.68**	**241**	P		**P**	**20 21 51.3**	**+0.3**
	comp=Z,18nm,0.7s,mb4.7,baz=78,slow=9.0,SNR=23							
WRA	**Warramunga Arr**	**32.55**	**266**	P		**P**	**20 22 41.2**	**-1.9**
	comp=Z,5.3nm,0.9s,mb4.3,baz=97,slow=9.0,SNR=8.5							
ASAR	**Alice Springs**	**32.58**	**259**	P		**P**	**20 22 42.4**	**-0.9**
	comp=Z,20nm,0.8s,mb5.0,baz=83,slow=9.1,SNR=87							
FITZ	**Fitzroy Crossi**	**40.98**	**267**	*eP*		**P**	**20 23 54.4**	**-0.1**
	comp=Z,55nm,0.8s,mb5.4							
FITZ	**Fitzroy Crossi**	**40.98**	**267**	P		**P**	**20 23 54.5**	**-0.1**
	comp=Z,30nm,0.7s,mb5.2,baz=132,slow=7.7,SNR=19							
BATI	**Baumata**	**44.99**	**277**	P		**P**	**20 24 25.9**	**-1.1**
	comp=Z,15nm,0.8s,mb4.8,baz=260,slow=4.8,SNR=4.7							
MBWA	**Marble Bar**	**45.88**	**261**	*eP*		**P**	**20 24 33.6**	**-0.3**
	comp=Z,38nm,1.2s,mb5.0							
KLBR	**Kellerberrin**	**46.74**	**246**	*eP*		**P**	**20 24 39.8**	**-0.7**
	comp=Z,29nm,0.9s,mb5.0							
NWAO	**Narrogin (SRO)**	**47.19**	**244**	P		**P**	**20 24 42.4**	**-1.5**
	comp=Z,11nm,0.9s,mb4.6,baz=134,slow=5.3,SNR=4.1							
CASY	**Casey**	**58.15**	**204**	*eP*		**P**	**20 26 03.0**	**-1.1**
	comp=Z,9.2nm,1.3s,mb4.7							
MJAR	**Matsushiro Arr**	**64.58**	**333**	P		**P**	**20 26 46.0**	**-1.7**
	comp=Z,1.8nm,0.7s,mb4.0,baz=171,slow=7.2,SNR=5.7							
QSPA	**South Pole Qui**	**68.70**	**180**	P		**P**	**20 27 13.3**	**0.0**
	comp=Z,9.4nm,1.0s,mb4.6,baz=16,slow=4.3,SNR=12							
PETK	**Petropavlovsk-**	**74.82**	**353**	P		**P**	**20 27 49.9**	**-0.3**
	comp=Z,3.4nm,0.9s,mb4.1,baz=128,slow=9.3,SNR=3.2							
MAW	**Mawson**	**76.44**	**202**	P		**P**	**20 27 59.8**	**+0.4**
	comp=Z,3.3nm,1.0s,mb4.0,baz=114,slow=5.3,SNR=6.3							
CMAR	**Chiang Mai Arr**	**79.29**	**295**	P		**P**	**20 28 17.6**	**+1.6**
	comp=Z,5.4nm,0.9s,mb4.4,baz=134,slow=4.2,SNR=19							
KMI	**Kunming**	**79.32**	**302**	P		**P**	**20 28 18.0**	**+1.9**
KMI				AMB		AMB		
	comp=Z,17nm,1.1s,mb4.8							
KMI	**Kunming**	**79.32**	**302**	P		**P**	**20 28 17.9**	**+1.8**
KMI				pmax		pmax		
	comp=Z,17nm,1.1s,mb4.8							
KMI	**Kunming**	**79.32**	**302**	P		**P**	**20 28 17.9**	**+1.8**
	comp=Z,17nm,1.1s,mb4.8							
CHTO	**Chiang Mai**	**79.45**	**295**	*eP*		**P**	**20 28 18.2**	**+1.3**
CHTO				pmax		pmax		
	comp=Z,18nm,1.3s,mb4.7							
CHTO	**Chiang Mai**	**79.45**	**295**	*eP*		**P**	**20 28 18.2**	**+1.3**
	comp=Z,18nm,1.3s,mb4.7							
SNAA	**Sanae**	**87.04**	**183**	*e*		**P**	**20 28 55.2**	**+0.2**
SNAA				*e*			20 28 58.0	
SNAA				*e*			20 29 02.2	
SNAA	**Sanae**	**87.04**	**183**	*eP*		**P**	**20 28 54.8**	**-0.2**
SNAA				pmax		pmax		
	comp=Z,9.0nm,1.1s							
SNAA	**Sanae**	**87.04**	**183**	*eP*		**P**	**20 28 54.8**	**-0.2**
	comp=Z,8.9nm,1.1s,mb4.6							
VNA3	**Neumayer Olymp**	**87.64**	**180**	*e*		**P**	**20 28 58.0**	**+0.1**
VNA3				*e*			20 29 00.9	
VNA3				*e*			20 29 05.1	
VNA2	**Neumayer--Watz**	**87.93**	**181**	*e*		**P**	**20 28 59.8**	**+0.6**
	baz=182,slow=3.6							
VNA2				*e*			20 29 01.9	
VNA2				*e*			20 29 06.4	
VNA1	**Neumayer--Stat**	**88.22**	**181**	*e*		**P**	**20 29 01.3**	**+0.7**
VNA1				*e*			20 29 03.6	
VNA1				*e*			20 29 09.3	
GTA	**Gaotai**	**88.51**	**314**	*eP*		**P**	**20 29 04.0**	**+1.6**
GTA				AP		pP	20 29 08.5	-22
GTA				XP		sP	20 29 11.0	-31
GTA				AMB		AMB		
	comp=Z,4.0nm,1.3s,mb4.3							
SONM	**Songino Array**	**88.86**	**323**	P		**P**	**20 29 03.7**	**-0.2**
	comp=Z,1.6nm,0.8s,mb4.1,baz=120,slow=4.1,SNR=4.9							
YBH	**Yreka Blue Hor**	**88.89**	**44**	P		**P**	**20 29 03.4**	**-0.8**
	comp=Z,2.2nm,0.7s,mb4.3,baz=198,slow=3.2,SNR=2.7							
ARCES	**ARCESS Array B**	**127.09**	**345**	PKP		PKPdf	20 35 12.0	-0.8
	comp=Z,1.9nm,0.7s,baz=99,slow=3.0,SNR=9.2							
DPC	**Dobruska-Polom**	**144.03**	**330**	*e*PKP		PKPdf	20 35 43.6	-1.1
PVCC	**Panska Ves**	**144.70**	**332**	*e*PKP		PKPdf	20 35 45.2	-0.6
CLL	**Collm**	**144.79**	**334**	*e*PKPdf		PKPdf	20 35 45.0	-1.0
CLL				e(PKiKP)			20 35 48.0	
CLL	**Collm**	**144.79**

CTA	**Charters Tower**	**21.58 269**	*e*P	**P**	**20 30 50.3 +1.0**			
CTA			pmax	pmax				
	comp=Z,54nm,0.7s							
CTAO	**Charters Tower**	**21.58 269**	*e*P	**P**	**20 30 50.3 +1.0**			
CTAO			pmax	pmax				
	comp=Z,65nm,0.8s,mb5.1							
CTAO	**Charters Tower**	**21.58 269**	*e*P	**P**	**20 30 50.3 +0.9**			
	comp=Z,65nm,0.8s,mb5.1							
CNB	**Canberra Magne**	**22.41 227**	*e*P	**P**	**20 30 59.2 +1.2**			
RPZ	**Rata Peaks**	**22.47 177**	P	**P**	**20 30 59.4 +0.8**			
	comp=Z,9.2nm,0.8s,mb4.3,baz=354,slow=23,SNR=3.6							
CAN	**Canberra**	**22.66 227**	*e*P	**P**	**20 31 02.1 +1.4**			
PMG	**Port Moresby**	**24.33 296**	*e*P	**P**	**20 31 16.5 -0.8**			
PMG			pmax	pmax				
	comp=Z,40nm,0.8s							
PMG	**Port Moresby**	**24.33 296**	*e*P	**P**	**20 31 16.5 -0.8**			
	comp=Z,40nm,0.8s,mb4.9							
COEN	**Coen**	**25.90 282**	*e*P	**P**	**20 31 31.9 +0.3**			
	comp=Z,15nm,0.8s,mb4.6							
TOO	**Toolangi**	**26.25 226**	*e*P	**P**	**20 31 35.8 +1.3**			
STKA	**Stephens Creek**	**26.87 241**	*e*P	**P**	**20 31 40.5 +0.3**			
	comp=Z,29nm,0.8s,mb4.8							
STKA	**Stephens Creek**	**26.87 241**	P	**P**	**20 31 40.6 +0.4**			
	comp=Z,32nm,0.7s,mb5.0,baz=71,slow=8.6,SNR=52							
WB2	**Warramunga Arr**	**32.69 266**	*e*P	**P**	**20 32 30.1 -1.9**			
WRAB	**Tennant Creek**	**32.70 266**	P	**P**	**20 32 30.2 -1.8**			
	comp=Z,142nm,0.9s,mb5.9,SNR=6.8							
WRAB	**Tennant Creek**	**32.70 266**	*e*P	**P**	**20 32 30.3 -1.7**			
WRAB			pmax	pmax				
	comp=Z,19nm,0.8s,mb5.1							
WRAB	**Tennant Creek**	**32.70 266**	*e*P	**P**	**20 32 30.3 -1.7**			
	comp=Z,19nm,0.8s,mb5.1							
WRA	**Warramunga Arr**	**32.70 266**	P	**P**	**20 32 30.0 -2.0**			
	comp=Z,15nm,0.9s,mb4.9,baz=104,slow=8.0,SNR=39							
WRA			LR	LR	20 46 20.8			
	comp=Z,5µm,18.4s,MS5.2,baz=80,slow=37							
ASAR	**Alice Springs**	**32.74 259**	P	**P**	**20 32 31.2 -1.1**			
	comp=Z,34nm,0.7s,mb5.4,baz=85,slow=9.1,SNR=223							
ASAR			PcP	PcP	20 35 17.1 -0.6			
	comp=Z,2.5nm,0.8s,baz=86,slow=4.0,SNR=4.2							
FORT	**Forrest**	**38.08 247**	*e*P	**P**	**20 33 17.5 -0.7**			
	comp=Z,35nm,0.8s,mb5.2							
TBI	**Tubuai**	**38.14 101**	*e*LQ		20 42 01.8			
	comp=Z,2µm,27.0s							
TBI			*e*LR	LR	20 43 41.3			
	comp=Z,2µm,28.8s							
PPT	**Papeete**	**38.90 92**	*e*LR	LR	20 44 01.5			
	comp=Z,2µm,26.5s							
FITZ	**Fitzroy Crossi**	**41.13 266**	*e*P	**P**	**20 33 43.5 -0.2**			
	comp=Z,107nm,0.8s,mb5.5							
FITZ	**Fitzroy Crossi**	**41.13 266**	P	**P**	**20 33 43.4 -0.3**			
	comp=Z,53nm,0.7s,mb5.3,baz=120,slow=9.5,SNR=79							
BATI	**Baumata**	**45.12 277**	P	**P**	**20 34 16.6 +0.6**			
	comp=Z,39nm,0.7s,mb5.3,baz=93,slow=0.5,SNR=8.3							
MBWA	**Marble Bar**	**46.05 261**	*e*P	**P**	**20 34 22.9 -0.4**			
	comp=Z,44nm,0.8s,mb5.4							
KLBR	**Kellerberrin**	**46.93 246**	*e*P	**P**	**20 34 28.8 -1.3**			
	comp=Z,33nm,0.7s,mb5.4							
NWAO	**Narrogin (SRO)**	**47.37 244**	P	**P**	**20 34 31.6 -1.9**			
	comp=Z,31nm,1.0s,mb5.2,baz=72,slow=7.0,SNR=12							
NWAO	**Narrogin (SRO)**	**47.37 244**	*e*P	**P**	**20 34 32.5 -1.1**			
NWAO			pmax	pmax				
	comp=Z,32nm,1.1s							
NWAO	**Narrogin (SRO)**	**47.37 244**	*e*P	**P**	**20 34 32.5 -1.1**			
	comp=Z,32nm,1.1s,mb5.2							
MUN	**Mundaring**	**48.24 246**	*e*P	**P**	**20 34 40.1 -0.2**			
TAOE	**Nuku Hiva Isla**	**50.15 84**	*e*LR	LR	20 49 11.0			
	comp=Z,5µm,28.5s							
KAPI	**Kappang**	**50.62 281**	P	**P**	**20 34 57.7 -1.1**			
	comp=Z,10nm,0.5s,mb5.1,baz=181,slow=11,SNR=4.6							
CASY	**Casey**	**58.33 204**	*e*P	**P**	**20 35 52.7 -1.2**			
MJAR	**Matsushiro Arr**	**64.53 333**	P	**P**	**20 36 35.4 -0.9**			
	comp=Z,5.5nm,1.0s,mb4.5,baz=170,slow=6.9,SNR=7.6							
MAT	**Matsushiro**	**64.53 333**	P	**P**	**20 36 35.4 -0.8**			
YHNB	**Yeheng**	**65.20 312**	*e*P	**P**	**20 36 40.2 -0.6**			
	comp=Z,34nm,0.9s,mb5.4							
KSRS	**Korea Array**	**70.17 326**	P	**P**	**20 37 13.1 +1.1**			
	comp=Z,19nm,0.7s,mb4.1,baz=154,slow=3.5,SNR=5.3							
QIZ	**Qiongzhong**	**70.61 300**	P	**P**	**20 37 15.5 +0.5**			
NJ2	**Nanjing**	**71.67 316**	*e*P	**P**	**20 37 21.8 +0.6**			
NJ2			AMB	AMB				
	comp=Z,70nm,0.8s,mb5.6							
YSS	**Yuzh-Sakhalins**	**71.97 341**⇑	*e*P	**P**	**20 37 23.7 +1.1**			
YSS			pmax	pmax				
	comp=Z,32nm,1.3s,mb5.1							
PETK	**Petropavlovsk-**	**74.71 353**	P	**P**	**20 37 38.7 +0.1**			
	comp=Z,5.1nm,0.7s,mb4.5,baz=128,slow=7.2,SNR=5.6							
MDJ	**Mudanjiang**	**74.89 332**	P	**P**	**20 37 41.5 +1.6**			
MDJ			AMB	AMB				
	comp=Z,13nm,1.5s,mb4.6							
MDJ			AMB	AMB				
	comp=Z,6µm,21.2s							
MDJ	**Mudanjiang**	**74.89 332**	*e*P	**P**	**20 37 40.8 +0.9**			
HABR	**Khabarovsk**	**75.85 337**	*e*P	**P**	**20 37 44.6 -0.7**			
HABR			*e*		20 37 56.3			
HABR			*e*		20 40 33.9			
HABR			*e*		20 42 18.8			
HABR			*e*S	S	20 47 23.3 -2.9			
CN2	**Changchun**	**76.18 329**	*e*P	**P**	**20 37 47.5 +0.2**			
CN2			AMB	AMB				
	comp=Z,10.0nm,0.6s,mb4.9							
MAW	**Mawson**	**76.61 202**	*e*P	**P**	**20 37 49.6 +0.1**			
	comp=Z,6.6nm,0.9s,mb4.6							
MAW	**Mawson**	**76.61 202**	P	**P**	**20 37 49.1 -0.5**			
	comp=Z,8.3nm,0.9s,mb4.7,baz=114,slow=5.9,SNR=7.9							
MAW	**Mawson**	**76.61 202**	*e*P	**P**	**20 37 49.6 +0.1**			
MAW			pmax	pmax				
	comp=Z,7.0nm,0.9s							
GYA	**Guiyang**	**77.00 305**⇑	*i*P	**P**	**20 37 54.0 +1.7**			
GYA			PCP	PcP	20 38 05.3 +2.0			
GYA			PP	PP	20 40 49.5 +3.4			
GYA			S	S	20 47 42.8 +3.0			
GYA			SKS		20 48 02.3			
GYA			AMB	AMB				
	comp=Z,20nm,1.0s,mb5.0							
GYA			AMB	AMB				
	comp=Z,120nm,5.2s							
GYA			LR	LR				
	comp=N,680nm,18.9s,MS5.1							
GYA			LR	LR				
	comp=E,560nm,19.8s,MS5.1							
GYA			LR	LR				
	comp=Z,540nm,19.6s,MS4.9							
BJI	**Beijing**	**78.51 321**	P	**P**	**20 38 01.5 +1.0**			
BJI			AMB	AMB				
	comp=Z,12nm,2.0s,mb4.5							
BJI	**Beijing**	**78.51 321**	P	**P**	**20 38 01.6 +1.1**			
BJI			pmax	pmax				
	comp=Z,12nm,2.0s,mb4.5							
BJI	**Beijing**	**78.51 321**	P	**P**	**20 38 01.6 +1.1**			
	comp=Z,12nm,2.0s,mb4.5							
CMAR	**Chiang Mai Arr**	**79.37 295**	P	**P**	**20 38 06.2 +0.5**			
	comp=Z,8.0nm,0.8s,mb4.7,baz=136,slow=4.3,SNR=41							
CMAR	**Chiang Mai Arr**	**79.37 295**⇑	*e*P	**P**	**20 38 07.1 +1.5**			
KMI	**Kunming**	**79.37 302**	P	**P**	**20 38 07.0 +1.5**			
KMI			AP	pP	20 38 14.5 +1.8			
KMI			AMB	AMB				
	comp=Z,27nm,0.8s,mb5.2							
KMI	**Kunming**	**79.37 302**	P	**P**	**20 38 07.0 +1.5**			
	comp=Z,27nm,0.8s,mb5.2							
KMI			pP	pP	20 38 14.5 +1.8			
CD2	**Chengdu**	**81.48 308**⇑	*i*P	**P**	**20 38 17.3 +0.5**			
CD2			AP	pP	20 38 22.0 -2.0			
CD2			XP	sP	20 38 24.5 -2.1			
CD2			PP	PP	20 41 26.0 +2.6			
CD2			S	S	20 48 27.5 +0.2			
CD2			XS	sS	20 48 35.5 -3.8			
CD2			SS	SS	20 53 47.8 +3.1			
CD2			AMB	AMB				
	comp=Z,10.0nm,1.2s,mb4.6							
CD2			LR	LR				
	comp=N,3µm,16.8s,MS5.9							
CD2			LR	LR				
	comp=E,3µm,14.4s,MS5.9							
CD2			LR	LR				
	comp=Z,3µm,15.6s,MS5.7							
HHC	**Hu-ho-hao-te**	**81.76 320**	*e*P	**P**	**20 38 16.5 -1.5**			
HHC			S	S	20 48 29.3 -0.4			
HHC			AMB	AMB				
	comp=Z,10.0nm,0.7s,mb4.8							
HHC			AMB	AMB				
	comp=Z,933nm,6.6s							
SYO	**Syowa Base**	**83.04 196**⇑	*e*P	**P**	**20 38 25.2 +0.9**			
LZH	**Lanzhou**	**84.09 312**	P	**P**	**20 38 32.5 +2.3**			
LZH			AP	pP	20 38 35.5 -2.0			
LZH			PP	PP	20 41 49.0 +4.2			
LZH			S	S	20 48 54.0 +0.3			
LZH			XS	sS	20 49 04.0 -1.7			
LZH			SS	SS	20 54 26.0 +2.8			
LZH			AMB	AMB				
	comp=Z,97nm,1.5s,mb5.7							
LZH			AMB	AMB				
	comp=Z,595nm,5.8s							
LZH			LR	LR				
	comp=E,2µm,16.4s							
LZH			LR	LR				
	comp=Z,3µm,18.0s,MS5.7							
LZH	**Lanzhou**	**84.09 312**	P	**P**	**20 38 32.5 +2.3**			
LZH					20 41 49.0			
LZH			S	S	20 48 54.0 +0.3			
LZH			SS	SS	20 54 26.0 +2.8			
LZH			pmax	pmax				
	comp=Z,97nm,1.5s,mb5.7							
LZH			MLR	MLR				
	comp=Z,3µm,18.0s,MS5.7							
LZH	**Lanzhou**	**84.09 312**	P	**P**	**20 38 32.5 +2.3**			
	comp=Z,97nm,1.5s,mb5.7							
LZH			pP	pP	20 38 35.5 -2.0			
LZH			sP	sP	20 38 37.5 -2.6			
LZH			PP	PP	20 41 49.0 +4.2			
LZH			S	S	20 48 54.0 +0.3			
LZH			sS	sS	20 49 04.1 -1.6			
LZH			SS	SS	20 54 26.0 +2.8			
LZH			LR	LR				
	comp=Z,3µm,18.0s,MS5.7							
SEY	**Seymchan**	**84.94 352**⇑	*e*P	**P**	**20 38 33.3 -0.5**			
SNAA	**Sanae**	**87.18 182**	*e*P	**P**	**20 38 44.2 -0.8**			
SNAA			*e*		20 38 46.0			
SNAA			*e*		20 38 48.1			
SNAA			*e*	pP	20 38 52.2 -0.1			
SNAA	**Sanae**	**87.18 182**⇑	*e*P	**P**	**20 38 44.8 -0.2**			
KIPM	**Iron Peak**	**87.22 45**	*e*P	**P**	**20 38 46.7 +1.0**			
VNA3	**Neumayer Olymp**	**87.77 180**	*e*P	**P**	**20 38 47.0 -0.9**			
VNA3			*e*		20 38 49.0			
VNA3			*e*		20 38 50.8			
VNA3			*e*	pP	20 38 54.9 -0.3			
VNA2	**Neumayer--Watz**	**88.06 181**	*e*P	**P**	**20 38 48.8 -0.5**			
	baz=190,slow=3.8							
VNA2			*e*		20 38 50.1			
VNA2			*e*		20 38 52.6			
VNA2			*e*	pP	20 38 56.8 +0.2			
WDC	**Whiskeytown Da**	**88.23 45**	*e*P	**P**	**20 38 50.2 -0.3**			
WDC			pmax	pmax				
	comp=Z,37nm,1.7s,mb5.3							
WDC	**Whiskeytown Da**	**88.23 45**	*e*P	**P**	**20 38 50.2 -0.2**			
	comp=Z,37nm,1.7s,mb5.3							
OHCM	**Honcut**	**88.32 47**	*e*P	**P**	**20 38 51.0 +0.1**			
VNA1	**Neumayer--Stat**	**88.35 181**	*e*P	**P**	**20 38 50.1 -0.5**			
VNA1			*e*		20 38 51.6			
VNA1			*e*		20 38 54.0			
VNA1			*e*	pP	20 38 58.4 +0.5			
CMB	**Columbia Colle**	**88.45 48**	*e*P	**P**	**20 38 51.2 -0.4**			
CMB			pmax	pmax				
	comp=Z,10.0nm,1.0s,mb5.0							
CMB	**Columbia Colle**	**88.45 48**	*e*P	**P**	**20 38 51.2 -0.4**			
	comp=Z,9.8nm,1.0s,mb5.0							
ULN	**Ulaanbaatar**	**88.48 323**⇑	*e*P	**P**	**20 38 52.0 +0.5**			
GTA	**Gaotai**	**88.53 313**	P	**P**	**20 38 56.5 +4.6**			
GTA			AP	pP	20 39 01.3 +2.1			
GTA			XP	sP	20 39 03.5 +1.7			
GTA			XS	sS	20 49 55.5 +6.7			
GTA			AMB	AMB				
	comp=Z,7.0nm,1.1s,mb4.9							
GTA			AMB	AMB				
	comp=Z,415nm,5.4s							
GTA			LR	LR				
	comp=N,3µm,16.2s,MS5.8							
GTA			LR	LR				
	comp=E,2µm,16.8s,MS5.8							
GTA			LR	LR				
	comp=Z,2µm,16.8s,MS5.7							
YBH	**Yreka Blue Hor**	**88.69 44**	P	**P**	**20 38 53.3 +0.7**			
	comp=Z,3.6nm,0.9s,mb4.7,baz=129,slow=1.2,SNR=6.8							
YAK	**Yakutsk**	**88.78 343**⇑	*e*P	**P**	**20 38 51.5 -1.0**			
YAK			pmax	pmax				
	comp=Z,14nm,1.2s,mb5.2							
YAK	**Yakutsk**	**88.78 343**⇑	*e*P	**P**	**20 38 51.6 -0.9**			
SONM	**Songino Array**	**88.83 323**	P	**P**	**20 38 53.4 +0.3**			
	comp=Z,3.4nm,0.9s,mb4.7,baz=145,slow=5.1,SNR=12							
PMR	**Palmer**	**89.00 19**	*e*P	**P**	**20 38 54.0 +0.5**			
BILL	**Bilibino**	**89.04 359**⇑	*e*P	**P**	**20 38 52.7 -0.9**			
BILL			pmax	pmax				
	comp=Z,11nm,0.8s,mb5.2							
BILL			MLR	MLR				
	comp=Z,2µm,16.0s,MS5.5							
BILL	**Bilibino**	**89.04 359**	*e*P	**P**	**20 38 52.8 -0.8**			
PFO	**Pinyon Flat Ob**	**89.26 53**	P	**P**	**20 38 54.9 -0.6**			
	comp=Z,4.6nm,0.8s,mb4.9,baz=248,slow=5.4,SNR=2.8							
PFO	**Pinyon Flat Ob**	**89.26 53**	P	**P**	**20 38 54.9 -0.6**			
MOD	**Modoc**	**90.35 45**	*e*P	**P**	**20 39 01.5 +1.1**			
	comp=Z,8.9nm,1.0s,mb5.0							
LSA	**Lhasa**	**90.61 302**	*e*P	**P**	**20 39 02.4 +0.5**			
TPNV	**Topopah Spring**	**90.88 51**	*e*P	**P**	**20 39 03.1 +0.1**			
TPNV			pmax	pmax				
	comp=Z,12nm,0.9s,mb5.2							
TPNV	**Topopah Spring**	**90.88 51**	*e*P	**P**	**20 39 03.1 +0.2**			
	comp=Z,12nm,0.9s,mb5.2							
LDFC	**Landfair**	**90.90 53**	*e*P	**P**	**20 39 03.5 +0.3**			
	comp=Z,28nm,0.9s,mb5.6							
BOD	**Bodaibo**	**91.14 334**	*e*P	**P**	**20 39 02.7 -0.9**			
WVOR	**Wild Horse Val**	**91.69 45**	*e*P	**P**	**20 39 04.2 -2.4**			
WVOR			pmax	pmax				
	comp=Z,10.0nm,1.2s,mb5.0							
WVOR	**Wild Horse Val**	**91.69 45**	*e*P	**P**	**20 39 04.2 -2.4**			
	comp=Z,9.7nm,1.2s,mb5.0							
ZAK	**Zakamensk**	**91.93 324**	*e*P	**P**	**20 39 07.1 -0.4**			
ZAK			pmax	pmax				
	comp=Z,6.0nm,1.3s,mb4.8							
ELK	**Elko**	**93.23 47**	P	**P**	**20 39 14.2 +0.5**			
	comp=Z,2.5nm,1.0s,mb4.6,baz=235,slow=3.3,SNR=9.8							
PLCA	**Paso Flores**	**97.02 139**	P	**P**	**20 39 30.9 -0.3**			
	comp=Z,1.8nm,0.8s,mb4.5,baz=232,slow=6.6,SNR=4.2							
PLCA	**Paso Flores**	**97.02 139**	P	**P**	**20 39 30.9 -0.3**			
HVS	**Khovu-Aksy**	**97.66 322**	*e*P	**P**	**20 39 33.9 +0.2**			
HVS			pmax	pmax				
	comp=Z,10.0nm,1.0s,mb5.3							
TXAR	**Lajitas Array**	**97.67 62**	P	**P**	**20 39 34.0 -0.3**			
	comp=Z,1.1nm,1.0s,mb4.3,baz=205,slow=5.5,SNR=5.3							
PDAR	**Pinedale Array**	**97.93 47**	P	**P**	**20 39 35.5 +0.3**			
	comp=Z,0.4nm,0.5s,mb4.2,baz=192,slow=3.3,SNR=4.4							
WMQ	**Urumqi**	**98.61 314**	*e*P	**P**	**20 39 38.0 -0.2**			
WMQ			AMB	AMB				
	comp=Z,11nm,1.4s,mb5.2							
WMQ			AMB	AMB				
	comp=Z,224nm,5.8s							
WMQ			LR	LR				
	comp=Z,706nm,16.6s,MS5.2							
MKAR	**Makanchi Array**	**103.18 315**	Pdiff	Pdif	20 39 58.8 +0.3			
	comp=Z,1.0nm,0.7s,baz=104,slow=6.4,SNR=7.3							
MKAR			PKKP	PKKPbc	20 56 11.0 +16			
	comp=Z,1.2nm,0.7s,baz=309,slow=3.2,SNR=6.9							
APA	**Apatity**	**126.12 341**⇑	*i*PKHKP		20 44 33.3			
APA			MLR	MLR				
	comp=Z,3µm,16.0s,MS6.1							
ARCES	**ARCESS Array B**	**127.00 345**	PKP	PKPdf	20 45 01.1 -1.4			
	comp=Z,2.5nm,0.5s,baz=62,slow=1.6,SNR=19							
ARCES			PKKP		20 55 15.9			
	comp=Z,4.1nm,1.1s,baz=318,slow=1.6,SNR=3.9							
OBN	**Obninsk**	**131.17 326**	*i*PKIKP	PKPdf	20 45 09.4 -1.4			
OBN			pmax	pmax				
	comp=Z,7.0nm,0.6s							
AKASG	**Malin Array Be**	**137.12 323**	PKP	PKPdf	20 45 20.8 -1.3			
	comp=Z,0.5nm,0.4s,baz=44,slow=2.1,SNR=3.0							
NOA	**NORSAR Array B**	**137.37 344**	PKP	PKPdf	20 45 20.4 -1.9			
	comp=Z,0.6nm,0.6s,baz=37,slow=2.8,SNR=3.7							
BURAR	**Bucovina Array**	**140.92 321**	*i*P	PKPdf	20 45 34.7 +5.5			
MLR	**Muntele Rosu**	**141.48 318**	*i*P	PKPdf	20 45 30.7 +0.4			
KOLS	**Kolonicke sedl**	**141.88 324**	*e*PKIKP	PKPdf	20 45 32.7 +1.8			
KOLS			MLR	MLR				
	comp=Z,3µm,19.5s,MS6.0							
KOLS	**Kolonicke sedl**	**141.88 324**	*e*PKP	PKPdf	20 45 32.7 +1.8			
STHS	**Stebnicka Huta**	**142.15 326**	*e*PKP	PKPdf	20 45 34.8 +3.5			
CRVS	**Cervenica-Dubn**	**142.34 325**	*e*PKP	PKPdf	20 45 35.4 +3.7			
CRVS			*e*		21 01 17.2			
PSZ	**Piszkesteto**	**143.76 325**⇑	*e*PKP	PKPdf	20 45 35.4 +1.2			
VYHS	**Vyhne**	**143.97 326**	*e*PKP	PKPdf	20 45 33.7 -0.9			
VYHS			*e*		21 00 57.3			
DPC	**Dobruska-Polom**	**143.98 330**	*e*PKP	PKPdf	20 45 32.3 -2.2			
UPC	**Upice**	**144.02 331**	*e*PKP	PKPdf	20 45 32.9 -1.7			
UPC			*ex*	x	20 45 42.0			
BZS	**Buzias**	**144.07 320**⇓	*i*P	PKPdf	20 45 31.9 -3.0			
KOLL	**Kolacno**	**144.14 327**	*e*PKP	PKPdf	20 45 34.9 0.0			
BUD	**Budapest**	**144.49 325**	*e*PKP	PKPdf	20 45 34.5 -1.0			
PVCC	**Panska Ves**	**144.65 332**	*e*PKP	PKPdf	20 45 34.1 -1.6			
PVCC			*ex*	x	20 45 40.6			
BRG	**Berggiesshubel**	**144.66 333**	*e*PKIKP	PKPdf	20 45 34.1 -1.6			
BRG			pmax	pmax				
	comp=Z,8.0nm,0.9s							
BRG	**Berggiesshubel**	**144.66 333**	*e*PKPbc	PKPdf	20 45 33.9 -1.8			
BRG	**Berggiesshubel**	**144.66 333**	*e*PKP	PKPdf	20 45 34.1 -1.6			
	comp=Z,14nm,0.8s							
CLL	**Collm**	**144.73 334**	*e*PKIKP	PKPdf	20 45 34.0 -1.8			
CLL			pmax	pmax				
	comp=Z,13nm,1.0s							
CLL	**Collm**	**144.73 334**	*e*PKPdf	PKPdf	20 45 34.0 -1.8			
	comp=Z,13nm,1.0s							
CLL			*i* PKiKP	PKiKP	20 45 37.4 -2.1			
	comp=Z,15nm,0.9s							
CLL			*i* pPKiKP		20 45 41.6			
MODS	**Modra-Piesok**	**144.85 327**	*e*PKP	PKPdf	20 45 36.5 +0.4			
MODS			*e*		21 01 41.4			
FBE	**Freiberg**	**144.88 333**	*e*PKPbc	PKPdf	20 45 34.7 -1.4			
PRU	**Pruhonice**	**145.05 331**	*e*PKP	PKPdf	20 45 35.4 -1.0			
ZST	**Bratislava**	**145.05 327**	*e*PKP	PKPdf	20 45 36.6 +0.1			
TREC	**Trest**	**145.10 330**	*e*PKP	PKPdf	20 45 33.4 -3.1			
TREC			*ex*	x	20 45 39.3			
SANT	**Santorini**	**145.13 304**	*e*PKPdf	PKPdf	20 45 34.4 -2.6			
CLZ	**Clausthal**	**145.33 337**	*e*PKPbc	PKPbc	20 45 35.9 -0.8			
PKSM	**Moragy**	**145.46 323**⇓	*i*P	PKPdf	20 45 36.6 -0.6			
VAY	**Valandovo**	**145.52 313**	*e*PKP	PKPdf	20 45 35.6 -1.9			
TANN	**Tannenbergstha**	**145.63 334**	*e*PKPbc	PKPbc	20 45 37.2 -0.5			
SOP	**Sopron**	**145.66 327**⇑	*e*PKP	PKPdf	20 45 38.6 +1.1			
WERD	**Werda**	**145.67 334**	*e*PKPbc	PKPbc	20 45 37.6 -0.2			
GUNZ	**Gunzen**	**145.73 334**	*e*PKPbc	PKPbc	20 45 38.4 +0.4			
WERN	**Wernitzgruen**	**145.77 333**	*e*PKPbc	PKPbc	20 45 38.6 +0.5			
NKC	**Novy Kostel**	**145.78 333**	*e*PKP	PKPdf	20 45 38.1 +0.5			
MOX	**Moxa**	**145.80 335**	*e*PKP	PKPdf	20 45 38.1 +0.4			
	comp=Z,21nm,1.5s							
MOX	**Moxa**	**145.80 335**	*e*PKPbc	PKPbc	20 45 37.8 -0.4			
IBBN	**Ibbenburen**	**145.84 340**	*e*PKPbc	PKPab	20 45 40.5 +1.8			
CONA	**Conrad Observa**	**145.85 328**⇑	*i*P	PKPdf	20 45 38.9 +1.0			
	comp=Z,39nm,1.5s							
CSNA	**Conrad Observa**	**145.86 328**⇑	*i*P	PKPdf	20 45 38.9 +1.0			
	comp=Z,35nm,1.6s							
SKO	**Skopje**	**145.99 315**	*e*PKP	PKPdf	20 45 37.9 -0.4			
KHC	**Kasperske Hory**	**146.10 331**⇑	*i*PKIKP	PKPdf	20 45 37.3 -0.9			
KHC	**Kasperske Hory**	**146.10 331**	*e*PKP	PKPdf	20 45 39.2 +1.0			
MANZ	**Manzenberg**	**146.11 333**	*e*PKPbc	PKPbc	20 45 39.5 +0.4			
ROTZ	**Rotzenmuhle**	**146.23 333**	*e*PKPbc	PKPbc	20 45 38.9 -0.6			
GEC2	**GERESS Array S**	**146.25 331**	*e*PKPbc	PKPbc	20 45 39.6 0.0			
GEC2	**GERESS Array S**	**146.25 331**	*e*PKPdf	PKPdf	20 45 39.1 +0.6			
GERES	**GERESS Array B**	**146.25 331**	PKPbc	PKPbc	20 45 38.6 -1.0			
	comp=Z,5.5nm,0.7s,baz=36,slow=2.8,SNR=42							
KRUS	**Krusevo**	**146.39 314**	*e*PKP	PKPdf	20 45 39.6 +0.6			
WET	**Wettzell**	**146.41 332**	*e*PKPbc	PKPbc	20 45 39.4 -0.7			
MOA	**Molln**	**146.69 329**⇓	*i*P	PKPbc	20 45 42.4 +1.4			
	comp=Z,12nm,1.2s							
MOA	**Molln**	**146.69 329**⇓	*i*pPKPdf	PKPbc	20 45 42.4 +1.4			
	comp=Z,12nm,1.2s							
GRA1	**Grafenberg Arr**	**146.70 334**	*e*PKP	PKPdf	20 45 40.6 +1.4			
GRF	**Grafenberg Arr**	**146.70 334**	*e*PKP	PKPdf	20 45 40.6 +1.4			
OHR	**Ohrid**	**146.81 314**	*e*PKP	PKPdf	20 45 40.1 +0.4			
SOKA	**Soboth**	**147.11 327**⇑	*i*P	PKPbc	20 45 42.1 -0.1			
	comp=Z,20nm,1.6s							
SOKA	**Soboth**	**147.11 327**⇑	*i*pPKPdf	PKPbc	20 45 42.1 -0.1			
	comp=Z,20nm,1.6s							
RJOB	**

BATI Baumata 45.10 277 LR LR 20 53 00.1
comp=Z,3µm,18.8s,MS5.3,baz=327,slow=34
CMAR Chiang Mai Arr 79.44 295 P **P** **20 40 00.4 0.0**
0.5nm,0.5s,mb3.7,baz=129,slow=4.6,SNR=2.5
SNAA Sanae 86.90 183 *eP* **P** **20 40 44.3 +6.2**
VNA3 Neumayer Olymp 87.48 180 *eP* **P** **20 40 40.7 -0.2**
VNA3 *e* 20 40 47.6
VNA3 *e* pP 20 40 51.7 -0.3
VNA2 Neumayer--Watz 87.78 181 *eP* **P** **20 40 42.1 -0.2**
VNA2 *e* 20 40 49.5
VNA2 *e* pP 20 40 53.4 -0.1
VNA1 Neumayer--Stat 88.07 181 *eP* **P** **20 40 44.4 +0.7**
VNA1 *e* 20 40 51.1
VNA1 *e* pP 20 40 54.9 +0.1
GERES GERESS Array B 146.47 330 PKPbc PKPbc 20 47 35.3 +0.6
1.6nm,0.8s,baz=26,slow=2.5,SNR=4.7

IDC ***27*** *20:32:43.1±1.2, 420S×13789E, h0km, mb4.0/4, mb1 4.2/8, mb1mx3.9/15, mbtmp4.0/8, ML3.9/4, Error ellipse: s-maj=45.6km s-min=20.3km az=70.0*
NEIC ***27*** *20:32:46.2±10.0, 424S×13787E, h19km±64km, mb4.1/4, Error ellipse: s-maj=31.7km s-min=17.8km az=218.0*
ISCJB ***27*** *20:32:47.6±2.8, 444S±008×13761E±009, h36km±28km, mb3.9/5, Error ellipse: s-maj=15.1km s-min=13.0km az=34.8*
ISC 27 20:32:50.7±2.2, 450S±008×13762E±009, h49km±19km, n17, σ0992/21, mb3.8/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**14.95 247**		Pn	**Pn**	**20 36 25.2**	**+6.2**
	1.9nm,0.3s,baz=54,slow=8.7,SNR=2.7						
BATI				Sn	**Sn**	**20 39 04.3**	**+0.7**
	0.7nm,0.3s,baz=107,slow=19,SNR=2.1						
WRAB	**Tennant Creek**	**15.67 191**		*eP*	**Pn**	**20 36 29.1**	**+0.9**
	12nm,0.6s						
WB2	**Warramunga Arr**	**15.68 191**		*eP*	**Pn**	**20 36 27.5**	**-0.9**
WB2				*eS*	**S**	**20 39 17.5**	**-17**
WRA	**Warramunga Arr**	**15.68 191**		Pn	**Pn**	**20 36 28.0**	**-0.4**
	0.5nm,0.3s,baz=14,slow=12,SNR=14						
WRA				Sn	**Sn**	**20 39 20.2**	**-1.0**
	0.5nm,0.3s,baz=14,slow=22,SNR=4.7						
CTA	**Charters Tower**	**17.63 152**		P	**Pn**	**20 36 53.1**	**+0.2**
	0.2nm,0.3s,baz=325,slow=10,SNR=4.0						
CTAO	**Charters Tower**	**17.63 152**		*eP*	**Pn**	**20 36 53.1**	**+0.2**
	7.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**17.89 220**		*eP*	**Pn**	**20 37 00.7**	**+4.6**
	8.8nm,0.8s						
FITZ				*eS*	**S**	**20 40 11.0**	**-8.2**
FITZ	**Fitzroy Crossi**	**17.89 220**		P	**Pn**	**20 36 59.2**	**+3.1**
	0.3nm,0.3s,baz=32,slow=14,SNR=4.1						
FITZ				S	**S**	**20 40 12.4**	**-6.8**
	0.6nm,0.3s,baz=188,slow=16,SNR=7.3						
ASAR	**Alice Springs**	**19.39 190**		P	**Pn**	**20 37 14.5**	**+0.4**
	0.9nm,0.3s,baz=12,slow=11,SNR=39						
ASAR				S	**S**	**20 40 49.2**	**-0.2**
	0.1nm,0.3s,baz=12,slow=28,SNR=3.7						
MBWA	**Marble Bar**	**24.00 225**		P	**P**	**20 38 00.1**	**-0.9**
	8.9nm,1.1s,mb4.1						
STKA	**Stephens Creek**	**27.49 173**		P	**P**	**20 38 33.0**	**+0.5**
	5.2nm,1.1s,mb4.0,baz=9.5,slow=6.1,SNR=2.8						
STKA	**Stephens Creek**	**27.49 173**		P	**P**	**20 38 33.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**44.42 302**		P	**P**	**20 40 56.7**	**-0.2**
	1.2nm,0.8s,mb3.6,baz=139,slow=8.4,SNR=2.6						
MKAR	**Makanchi Array**	**70.55 323**		P	**P**	**20 43 59.2**	**-1.3**
	0.1nm,0.3s,mb3.2,baz=103,slow=6.4,SNR=2.5						
QSPA	**South Pole Qui**	**85.46 180**		P	**P**	**20 45 24.5**	**+1.9**
	1.2nm,0.6s,mb4.2,baz=332,slow=1.0,SNR=10.0						
TORD	**Torodi Ar. Bea**	**135.67 284**		PKP	PKPdf	20 52 07.6	+0.9
	0.5nm,0.8s,baz=97,slow=2.4,SNR=2.6						
LPAZ	**La Paz**	**147.21 130**		PKPbc	PKPbc	20 52 29.3	-0.3
	0.5nm,0.6s,baz=239,slow=5.9,SNR=2.6						

IDC ***27*** *20:36:18.6±3.3, 2165S×16875E, h0km, mb4.2/4, mb1 4.4/4, mb1mx4.0/14, mbtmp4.3/4, Error ellipse: s-maj=102.4km s-min=47.5km az=148.0*
ISC 27 20:36:14.0±7.0, 213S±004×1693E±01, h2km±48km, n9, σ0975/9, mb4.2/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.77 253**		*eP*	**Pn**	**20 36 59.4**	**-0.1**
DZM				*eS*	**Sn**	**20 37 33.7**	**+0.1**
CTA	**Charters Tower**	**21.59 269**		P	**P**	**20 41 07.1**	**+1.8**
	8.8nm,0.7s,mb4.3						
CTA	**Charters Tower**	**21.59 269**		P	**P**	**20 41 06.7**	**+1.4**
	9.6nm,0.7s,mb4.4,baz=90,slow=12,SNR=13						
STKA	**Stephens Creek**	**26.87 241**		P	**P**	**20 41 55.9**	**-0.3**
	7.4nm,0.9s,mb4.2,baz=69,slow=10,SNR=5.6						
WRA	**Warramunga Arr**	**32.71 266**		P	**P**	**20 42 47.2**	**-1.0**
	1.1nm,0.7s,mb3.9,baz=98,slow=8.2,SNR=2.5						
ASAR	**Alice Springs**	**32.75 259**		P	**P**	**20 42 47.8**	**-0.7**
	3.2nm,0.7s,mb4.4,baz=86,slow=9.1,SNR=11						
VNA3	**Neumayer Olymp**	**87.73 180**		*e*	**P**	**20 49 04.7**	**+0.7**
VNA3				*e*		20 49 11.7	
VNA2	**Neumayer--Watz**	**88.03 181**		*e*	**P**	**20 49 05.3**	**-0.1**
	baz=181,slow=4.6						
VNA2				*e*		20 49 13.4	
GERES	**GERESS Array B 146.29 331**			PKPbc	PKPbc	20 56 01.0	+4.9
	1.1nm,0.8s,baz=37,slow=3.3,SNR=6.2						

ISCJB ***27*** *20:38:34.5±0.4, 2116S±008×16925E±006, h10km, mb4.4/20, Error ellipse: s-maj=11.4km s-min=7.7km az=161.7*
IDC ***27*** *20:38:34.4±0.6, 2116S×16931E, h0km, mb4.3/15, mb1 4.5/17, mb1mx4.4/21, mbtmp4.4/17, ML3.4/2, Error ellipse: s-maj=18.6km s-min=16.3km az=132.0*
NEIC ***27*** *20:38:36.2±0.4, 2110S×16928E, h10km, mb4.7/7, Error ellipse: s-maj=12.4km s-min=10.2km az=158.0*
MOS ***27*** *20:38:38.1±1.1, 2124S×16928E, h33km, mb5.0/4, Error ellipse: s-maj=23.7km s-min=14.3km az=175.0*
ISC 27 20:38:36.1±0.4, 2118S±008×16926E±006, h10km, n54, σ1912/38, mb4.4/20, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.76 251**		*eP*	**Pn**	**20 39 20.3**	**-0.2**
DZM				*eS*	**Sn**	**20 39 53.0**	**-0.9**
URZ	**Urewera**	**18.33 160**		P	**Pn**	**20 42 51.6**	**+1.2**
	0.4nm,0.3s,baz=332,slow=15,SNR=3.9						
AFI	**Afiamalu**	**19.46 71**		P	**Pn**	**20 43 01.3**	**-3.0**
	1.6nm,0.3s,baz=265,slow=12,SNR=4.8						
AFI	**Afiamalu**	**19.46 71**		*eP*	**Pn**	**20 43 04.7**	**+0.4**
CTA	**Charters Tower**	**21.55 269**		*eP*	**P**	**20 43 27.9**	**+2.1**
	18nm,0.9s,mb4.5						
CTA	**Charters Tower**	**21.55 269**		P	**P**	**20 43 27.4**	**+1.7**
	22nm,0.8s,mb4.6,baz=93,slow=13,SNR=8.8						
CTAO	**Charters Tower**	**21.55 269**		*eP*	**P**	**20 43 27.8**	**+2.0**
	33nm,1.0s,mb4.7						
CNB	**Canberra Magne**	**22.42 227**		*eP*	**P**	**20 43 37.7**	**+2.7**
RPZ	**Rata Peaks**	**22.53 177**		P	**P**	**20 43 37.3**	**+1.3**
	7.5nm,0.4s,mb4.5,baz=262,slow=6.3,SNR=6.2						
STKA	**Stephens Creek**	**26.87 241**		*eP*	**P**	**20 44 18.2**	**+1.1**
	6.9nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**26.87 241**		P	**P**	**20 44 16.9**	**-0.2**
	6.8nm,0.7s,mb4.3,baz=72,slow=14,SNR=9.1						
WB2	**Warramunga Arr**	**32.67 266**		*eP*	**P**	**20 45 07.2**	**-1.4**
WRA	**Warramunga Arr**	**32.68 266**		P	**P**	**20 45 07.5**	**-1.2**
	2.6nm,0.8s,mb4.2,baz=98,slow=8.3,SNR=6.2						
ASAR	**Alice Springs**	**32.73 259**		P	**P**	**20 45 08.4**	**-0.7**
	5.9nm,0.8s,mb4.6,baz=85,slow=8.9,SNR=11						
FITZ	**Fitzroy Crossi**	**41.10 266**		*eP*	**P**	**20 46 20.8**	**+0.4**
	19nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**41.10 266**		P	**P**	**20 46 20.4**	**0.0**
	8.1nm,0.7s,mb4.5,baz=116,slow=10,SNR=11						
KAPI	**Kappang**	**50.58 281**		P	**P**	**20 47 39.9**	**+4.5**
	5.7nm,0.5s,mb4.7,baz=168,slow=17,SNR=4.3						
MJAR	**Matsushiro Arr**	**64.47 333**		P	**P**	**20 49 13.5**	**+0.7**
	3.1nm,1.0s,mb4.3,baz=159,slow=7.4,SNR=3.9						
QSPA	**South Pole Qui**	**68.89 180**		P	**P**	**20 49 40.9**	**+0.5**
	5.7nm,0.8s,mb4.6,baz=354,slow=2.5,SNR=8.3						
PETK	**Petropavlovsk-**	**74.65 353**		P	**P**	**20 50 15.5**	**+0.2**
	3.5nm,0.9s,mb4.3,baz=134,slow=10,SNR=3.3						
MAW	**Mawson**	**76.65 202**		P	**P**	**20 50 26.4**	**-0.3**
	1.9nm,0.8s,mb4.1,baz=72,slow=3.2,SNR=3.1						
KMI	**Kunming**	**79.31 302**		P	**P**	**20 50 41.6**	**-0.6**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
KMI	**Kunming**	**79.31 302**		P	**P**	**20 50 41.6**	**-0.6**
	comp=Z,8.0nm,0.9s,mb4.7						
CMAR	**Chiang Mai Arr**	**79.31 295**		P	**P**	**20 50 44.1**	**+1.8**
	comp=Z,2.6nm,0.9s,mb4.2,baz=133,slow=4.7,SNR=11						
CHTO	**Chiang Mai**	**79.47 295**		*eP*	**P**	**20 50 44.9**	**+1.7**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CHTO	**Chiang Mai**	**79.47 295**		*eP*	**P**	**20 50 44.9**	**+1.6**
	comp=Z,8.4nm,0.9s,mb4.7						
SNAA	**Sanae**	**87.24 182**		*e*	**P**	**20 51 20.5**	**-1.9**
SNAA				*e*		20 51 27.5	
SNAA				*e*		20 51 31.6	
VNA3	**Neumayer Olymp**	**87.83 180**		*e*	**P**	**20 51 24.0**	**-1.2**
VNA3				*e*		20 51 30.9	
VNA3				*e*		20 51 35.3	
VNA2	**Neumayer--Watz**	**88.12 181**		*e*	**P**	**20 51 25.4**	**-1.2**
	baz=168,slow=4.3						
VNA2				*e*		20 51 32.4	
VNA2				*e*		20 51 36.5	
VNA1	**Neumayer--Stat**	**88.41 181**		*e*	**P**	**20 51 26.9**	**-1.1**
VNA1				*e*		20 51 34.0	
VNA1				*e*		20 51 37.6	
YBH	**Yreka Blue Hor**	**88.67 44**		P	**P**	**20 51 28.9**	**-0.7**
	comp=Z,2.4nm,0.7s,mb4.6,baz=289,slow=3.9,SNR=6.8						
SONM	**Songino Array**	**88.77 323**		P	**P**	**20 51 30.0**	**+0.1**
	comp=Z,0.5nm,0.6s,mb4.0,baz=129,slow=2.0,SNR=3.7						
WVOR	**Wild Horse Val**	**91.67 45**		*eP*	**P**	**20 51 43.6**	**0.0**
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.8						
WVOR	**Wild Horse Val**	**91.67 45**		*eP*	**P**	**20 51 43.5**	**0.0**
	comp=Z,6.0nm,1.2s,mb4.8						
ZAK	**Zakamensk**	**91.87 324**		*eP*	**P**	**20 51 48.5**	**+4.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.5						
ELK	**Elko**	**93.21 47**		P	**P**	**20 51 50.2**	**-0.5**
	comp=Z,1.1nm,0.7s,mb4.4,baz=248,slow=5.4,SNR=6.9						
PDAR	**Pinedale Array**	**97.91 47**		P	**P**	**20 52 13.0**	**+0.8**
	comp=Z,0.2nm,0.3s,mb4.1,baz=209,slow=2.8,SNR=2.3						
ARCES	**ARCESS Array B 126.94 345**			PKP	PKPdf	20 57 37.5	-2.0
	comp=Z,4.3nm,0.9s,baz=47,slow=2.3,SNR=5.6						
AKASG	**Malin Array Be**	**137.06 323**		PKP	PKPdf	20 57 59.4	+0.2
	comp=Z,0.2nm,0.3s,baz=47,slow=2.3,SNR=3.0						
CLL	**Collm**	**144.67 334**		*e*PKPdf	PKPdf	20 58 12.0	-0.8
	comp=Z,9.0nm,1.0s						
KHC	**Kasperske Hory**	**146.04 331**		*e*PKP	PKPdf	20 58 14.5	-0.8
KHC				x	x	20 58 22.5	
KHC	**Kasperske Hory**	**146.04 331**		*eP*	PKPdf	20 58 14.5	-0.8
KHC				*e*		20 58 22.5	
GERES	**GERESS Array B 146.19 331**			PKPbc	PKPbc	20 58 16.1	-0.4
	comp=Z,3.0nm,0.8s,baz=45,slow=2.8,SNR=14						
GRA1	**Grafenberg Arr**	**146.64 334**		*e*PKPbc	PKPbc	20 58 18.1	+0.3
GRF	**Grafenberg Arr**	**146.64 334**		*e*PKP2	PKPab	20 58 18.1	-0.8
CDF	**Champ du Feu**	**149.22 336**		*e*PKIKP	PKPbc	20 58 27.5	+2.7
	comp=Z,5.3nm,0.7s						
HAU	**Haudompre**	**149.90 337**		*e*PKIKP	PKPbc	20 58 28.8	+2.3
CABF	**La Chapelle**	**151.16 336**		*e*PKIKP	PKPbc	20 58 30.2	+0.7
FLN	**La Foliniere**	**151.28 346**		*e*PKIKP	PKPbc	20 58 28.9	-0.8
LDF	**La Druitiere**	**151.35 345**		*e*PKIKP	PKPbc	20 58 29.4	-0.5
LOR	**Lormes**	**151.41 339**		*e*PKIKP	PKPbc	20 58 29.8	-0.3
	comp=Z,18nm,0.9s						
SSF	**Saint Saulge**	**151.71 339**		*e*PKIKP	PKPbc	20 58 31.7	+0.9
	comp=Z,17nm,1.1s						
ORIF	**Oris-en-Rattie**	**152.64 334**		*e*PKIKP	PKPbc	20 58 33.0	+0.1
	comp=Z,34nm,1.2s						
ESDC	**Sonseca Array**	**160.67 344**		PKPab	PKPab	20 59 17.6	-0.5
	comp=Z,0.8nm,0.7s,baz=357,slow=4.8,SNR=3.3						

IDC 27 20:43:40.1±3.7, 2093S×16913E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.9/16, mbtmp4.0/5, Error ellipse: s-maj=107.6km s-min=52.7km az=147.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.44 268**		P	P	20 48 31.4	+1.3
	4.2nm,0.8s,baz=95,slow=12,SNR=5.4						
STKA	**Stephens Creek**	**26.89 240**		P	P	20 49 22.5	-0.3
	3.6nm,0.9s,baz=90,slow=13,SNR=3.1						
WRA	**Warramunga Arr**	**32.58 265**		P	P	20 50 12.7	-0.7
	0.3nm,0.6s,baz=92,slow=8.3,SNR=4.5						
ASAR	**Alice Springs**	**32.66 259**		P	P	20 50 13.5	-0.6
	1.4nm,0.7s,baz=85,slow=9.0,SNR=9.5						
FITZ	**Fitzroy Crossi**	**41.00 266**		P	P	20 51 25.6	+0.5
	2.2nm,0.6s,baz=102,slow=11,SNR=5.6						
GERES	**GERESS Array B 145.91 331**			PKPbc	PKPbc	21 03 21.1	-0.4
	0.3nm,0.5s,baz=82,slow=2.1,SNR=2.4						

IDC ***27*** *20:45:03.1±4.0, 2116S×16922E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.8/15, mbtmp3.8/4, Error ellipse: s-maj=126.6km s-min=51.1km az=143.0*
ISC 27 20:45:06.8±3.6, 2125S±07×1694E±03, h35km, n9, σ056/8, mb3.8/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**26.98 241**		P	**P**	**20 50 45.5**	**+0.2**
	4.8nm,1.1s,mb3.9,baz=79,slow=10,SNR=3.0						
WRA	**Warramunga Arr**	**32.81 266**		P	**P**	**20 51 36.4**	**-0.6**
	0.3nm,0.5s,mb3.5,baz=98,slow=8.2,SNR=4.6						
ASAR	**Alice Springs**	**32.85 259**		P	**P**	**20 51 37.0**	**-0.4**
	0.8nm,0.7s,mb3.8,baz=86,slow=8.9,SNR=4.5						
FITZ	**Fitzroy Crossi**	**41.23 266**		P	**P**	**20 52 49.5**	**+0.9**
	2.6nm,0.9s,mb3.9,baz=130,slow=9.9,SNR=3.3						
SNAA	**Sanae**	**87.23 182**		*e*	**P**	**20 57 49.4**	**+0.3**
VNA3	**Neumayer Olymp**	**87.82 180**		*e*	**P**	**20 57 51.9**	**-0.1**
VNA2	**Neumayer--Watz**	**88.11 181**		*e*	**P**	**20 57 53.9**	**+0.5**
	baz=184,slow=4.0						
VNA1	**Neumayer--Stat**	**88.40 181**		*e*	**P**	**20 57 53.9**	**-0.8**
GERES	**GERESS Array B 146.26 331**			PKPbc	PKPbc	21 04 44.6	+1.1
	0.4nm,0.5s,baz=20,slow=4.3,SNR=5.0						

SZGRF ***27*** *20:47:16.5, 2224S×17062E, h10km, Southeast of Loyalty Islands*
ISCJB ***27*** *20:47:18.6±3.9, 2124S±005×16926E±005, h7km±24km, mb5.3/65, MS5.1/11, Error ellipse: s-maj=9.1km s-min=7.8km az=164.7*
NEIC ***27*** *20:47:20.4±0.2, 2119S×16926E, h10km, mb5.4/24, Error ellipse: s-maj=7.7km s-min=5.4km az=145.0*
GCMT ***27*** *20:47:20.5±0.5, 2099S×16945E, h16km±1km, MW5.2/55, Moment Tensor Solution. s15,c21; s55,c82; Duration: 1s0 Moment tensor: Scale 10¹⁷Nm; Mrr-0.54±.05; Mθθ0.14±.03; Mϕϕ0.40±.03; Mrθ0.76±.12; Mϕθ0.13±.02; Mϕr-0.38±.09; Best double couple: M₀0.90700×10¹⁷ NP1:ϕs301.00000°, δ11.00000°, λ-69.00000°. NP2: ϕs143.00000°, δ80.00000°, λ-94.00000°. Principal axes: T 0.6810, Plg35.0000°, Azm34.0000°; N 0.4520, Plg4.0000°, Azm302.0000°; P -1.1330, Plg55.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
DJA ***27*** *20:47:22.2147S×169.18E, h12km, mb5.5/21*
IDC ***27*** *20:47:22.2±2.0, 2124S×16929E, h21km±11km, mb4.9/20, mb1 5.0/22, mb1mx5.0/23, mbtmp4.9/22, ML3.5/2, MS4.7/8, Ms1 4.7/8, ms1mx4.3/32, Error ellipse: s-maj=15.2km s-min=13.7km az=120.0*
MOS ***27*** *20:47:23.2±1.3, 2125S×169.11E, h33km, mb5.6/20, Error ellipse: s-maj=11.0km s-min=9.8km az=21.7*
BJI ***27*** *20:47:23.0, 2067S×16925E, h16km, mB5.7, mb5.2, Ms5.7, Msz5.4*
LDG ***27*** *20:47:28.0±0.4, 2016S×16751E, h10km, Mb5.7/3, Error ellipse: s-maj=68.7km s-min=27.8km az=26.0*
ISC 27 20:47:20.8±3.8, 2126S±005×16929E±005, h11km±23km, h12km±2.2km: pP-P, n305, σ0998/136, mb5.3/65, MS5.1/11, 20C-19D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.77 252**		*eP*	**Pn**	**20 48 04.2**	**-1.0**
DZM				*eS*	**Sn**	**20 48 41.0**	**+2.3**
RAO	**Raoul Island**	**14.04 127**		LR	LR	20 55 07.5	
	comp=Z,2µm,19.2s,baz=296,slow=33						
HNR	**Honiara**	**14.80 321**		Pn	**Pn**	**20 50 53.5**	**+3.3**
	8.6nm,0.3s,baz=210,slow=11,SNR=7.8						
HNR				LR	LR	20 54 42.1	
	comp=Z,1µm,19.2s,baz=311,slow=30						
HNR	**Honiara**	**14.80 321**		*eP*	**Pn**	**20 50 54.8**	**+4.6**
HNR				pmax	pmax		
	comp=Z,399nm,1.1s						
HNR	**Honiara**	**14.80 321**		*eP*	**Pn**	**20 50 54.8**	**+4.5**
	comp=Z,399nm,1.1s						
URZ	**Urewera**	**18.24 160**		P	**Pn**	**20 51 35.7**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=325,slow=6.0,SNR=8.9						
URZ				LR	LR	20 57 22.9	
	comp=Z,1µm,20.4s,baz=176,slow=33						
ARMA	**Armidale**	**18.31 237**		*eP*	**Pn**	**20 51 36.2**	**+1.3**
AFI	**Afiamalu**	**19.46 71**		P	**Pn**	**20 51 47.8**	**-1.0**
	comp=Z,2.0nm,0.3s,baz=70,slow=16,SNR=7.2						
AFI	**Afiamalu**	**19.46 71**		P	**Pn**	**20 51 47.8**	**-1.0**
CTA	**Charters Tower**	**21.59 269**		↓*iP*	**P**	**20 52 12.1**	**+1.3**
	comp=Z,90nm,0.9s,mb5.2						
CTA	**Charters Tower**	**21.59 269**		P	**P**	**20 52 12.2**	**+1.4**
	comp=Z,110nm,0.9s,mb5.3,baz=92,slow=12,SNR=113						
CTA				LR	LR	20 59 30.7	
	comp=Z,3µm,18.8s,MS4.7,baz=88,slow=34						
CTA	**Charters Tower**	**21.59 269**		↓*iP*	**P**	**20 52 12.1**	**+1.3**
CTA				pmax	pmax		
	comp=Z,90nm,0.9s						
CTAO	**Charters Tower**	**21.59 269**		*eP*	**P**	**20 52 11.6**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,168nm,1.0s,mb5.4						
CTAO	**Charters Tower**	**21.59 269**		*eP*	**P**	**20 52 11.6**	**+0.8**
	comp=Z,168nm,1.0s,mb5.4						
CNB	**Canberra Magne**	**22.40 227**		*eP*	**P**	**20 52 20.6**	**+1.3**
RPZ	**Rata Peaks**	**22.45 177**		P	**P**	**20 52 21.1**	**+1.4**
	comp=Z,14nm,0.9s,mb4.4,baz=92,slow=3.8,SNR=4.9						
CAN	**Canberra**	**22.65 227**		*eP*	**P**	**20 52 23.0**	**+1.0**
PMG	**Port Moresby**	**24.34 296**		*eP*	**P**	**20 52 36.4**	**-2.5**
PMG	**Port Moresby**	**24.34 296**		*eP*	**P**	**20 52 39.0**	**+0.1**
	comp=Z,91nm,0.9s,mb5.2						
COEN	**Coen**	**25.91 282**		*eP*	**P**	**20 52 53.2**	**+0.1**
	comp=Z,74nm,1.4s,mb5.0						
TOO	**Toolangi**	**26.24 226**		*eP*	**P**	**20 52 56.8**	**+0.9**
STKA	**Stephens Creek**	**26.87 241**		*eP*	**P**	**20 53 02.2**	**+0.6**
	comp=Z,44nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**26.87 241**		P	**P**	**20 53 02.0**	**+0.3**
	comp=Z,50nm,0.9s,mb5.1,baz=78,slow=8.9,SNR=41						
STKA				LR	LR	21 03 11.3	
	comp=Z,3µm,20.8s,MS4.8,baz=181,slow=35						
WB2	**Warramunga Arr**	**32.70 266**		*eP*	**P**	**20 53 51.8**	**-1.7**
WRAB	**Tennant Creek**	**32.70 266**		P	**P**	**20 53 52.0**	**-1.5**
	comp=Z,238nm,1.4s,mb5.9,SNR=12						
WRAB	**Tennant Creek**	**32.70 266**		*eP*	**P**	**20 53 50.9**	**-2.6**
WRAB				pmax	pmax		
	comp=Z,64nm,1.3s,mb5.4						
WRAB	**Tennant Creek**	**32.70 266**		*eP*	**P**	**20 53 50.9**	**-2.6**
	comp=Z,64nm,1.3s,mb5.4						
WRA	**Warramunga Arr**	**32.71 266**		P	**P**	**20 53 51.6**	**-1.9**
	comp=Z,26nm,1.0s,mb5.1,baz=96,slow=9.3,SNR=55						
WRA				LR	LR	21 06 59.7	
	comp=Z,2µm,19.7s,MS4.8,baz=65,slow=36						
ASAR	**Alice Springs**	**32.74 259**		P	**P**	**20 53 53.0**	**-0.9**
	comp=Z,49nm,0.8s,mb5.5,baz=83,slow=9.0,SNR=185						
ASAR				PcP	PcP	20 56 38.5	-0.8
	comp=Z,2.5nm,0.8s,baz=92,slow=2.5,SNR=4.6						
FORT	**Forrest**	**38.07 247**		*eP*	**P**	**20 54 39.1**	**-0.5**
	comp=Z,57nm,1.6s,mb5.0						
TBI	**Tubuai**	**38.13 101**		*e*LR	LR	21 05 03.7	
	comp=Z,1µm,27.0s						
PPT	**Papeete**	**38.89 92**		*e*LR	LR	21 05 25.4	
	comp=Z,2µm,27.2s						
FITZ	**Fitzroy Crossi**	**41.13 267**		↓*iP*	**P**	**20 55 05.0**	**-0.3**
	comp=Z,128nm,0.9s,mb5.5						
FITZ	**Fitzroy Crossi**	**41.13 267**		P	**P**	**20 55 05.0**	**-0.2**
	comp=Z,107nm,1.0s,mb5.4,baz=119,slow=9.6,SNR=102						
BATI	**Baumata**	**45.13 277**		P	**P**	**20 55 38.4**	**+0.8**
	comp=Z,50nm,0.8s,mb5.4,baz=170,slow=1.4,SNR=14						
BATI				LR	LR	21 12 23.3	
	comp=Z,3µm,18.9s,MS5.2,baz=307,slow=33						
MBWA	**Marble Bar**	**46.05 261**		*eP*	**P**	**20 55 44.1**	**-0.8**
	comp=Z,140nm,1.2s,mb5.6						
KLBR	**Kellerberrin**	**46.92 246**		*eP*	**P**	**20 55 50.2**	**-1.4**
	comp=Z,49nm,0.7s,mb5.5						
NWAO	**Narrogin (SRO)**	**47.37 244**		*eP*	**P**	**20 55 54.3**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,21nm,0.8s						
NWAO	**Narrogin (SRO)**	**47.37 244**		*eP*	**P**	**20 55 54.3**	**-0.8**
	comp=Z,21nm,0.8s,mb5.1						
MUN	**Mundaring**	**48.23 246**		*eP*	**P**	**20 56 00.4**	**-1.4**
TAOE	**Nuku Hiva Isla**	**50.15 84**		*e*LR	LR	21 10 38.2	
	comp=Z,3µm,25.9s						
CBIJ	**Chichi jima**	**54.77 330**		LR	LR	21 14 18.1	
	comp=Z,645nm,21.9s,MS4.7,baz=157,slow=30						
SBA	**Scott Base**	**56.66 181**		*eP*	**P**	**20

CMAR	Chiang Mai Arr	79.38	295	P		P		20 59 28.2	+0.9
	comp=Z,18nm,1.0s,mb5.0,baz=132,slow=4.2,SNR=76								
KMI	Kunming	79.38	302	P		P		20 59 28.8	+1.6
KMI				AMB		AMB			
	comp=Z,61nm,1.2s,mb5.4								
KMI	Kunming	79.38	302	P		P		20 59 28.8	+1.6
	comp=Z,61nm,1.2s,mb5.4								
XAN	Xi'an	79.51	313	P		P		20 59 28.5	+0.8
XAN				AP		pP		20 59 38.0	+6.7
XAN				AMB		AMB			
	comp=Z,32nm,1.5s,mb5.0								
CHG	Chiang Mai	79.54	295	⇓P		P		20 59 29.2	+1.0
	comp=Z,42nm,0.9s,mb5.4								
CHTO	Chiang Mai	79.54	295	eP		P		20 59 29.1	+0.9
CHTO				pmax		pmax			
	comp=Z,44nm,1.1s,mb5.3								
CHTO	Chiang Mai	79.54	295	eP		P		20 59 29.1	+0.9
	comp=Z,44nm,1.1s,mb5.3								
CD2	Chengdu	81.50	308	⇓P		P		20 59 39.3	+0.8
CD2				AP		pP		20 59 44.0	+1.9
CD2				XP		sP		20 59 46.8	+3.4
CD2				S		S		21 09 49.5	-0.8
CD2				XS		sS		21 09 57.5	+1.2
CD2				AMB		AMB			
	comp=Z,30nm,1.6s,mb5.0								
CD2				LR		LR			
	comp=N,2μm,14.4s,MS5.8								
CD2				LR		LR			
	comp=E,2μm,15.6s,MS5.8								
CD2				LR		LR			
	comp=Z,2μm,15.6s,MS5.5								
HHC	Hu-ho-hao-te	81.78	320	eP		P		20 59 40.5	+0.8
HHC				S		S		21 09 52.3	-0.4
HHC				AMB		AMB			
	comp=Z,13nm,0.7s,mb5.0								
HHC				AMB		AMB			
	comp=Z,2μm,6.9s								
SYO	Syowa Base	83.02	196⇑	eP		P		20 59 43.2	-2.6
LZH	Lanzhou	84.11	312	P		P		20 59 53.0	+1.1
LZH				AP		pP		20 59 57.0	+1.4
LZH				XP		sP		20 59 58.5	+1.6
LZH				PP		PP		21 03 07.0	+0.6
LZH				S		S		21 10 17.3	+0.6
LZH				XS		sS		21 10 23.0	+0.3
LZH				AMB		AMB			
	comp=Z,97nm,1.5s,mb5.7								
LZH				AMB		AMB			
	comp=Z,326nm,4.0s								
LZH				LR		LR			
	comp=N,1μm,16.0s								
LZH				LR		LR			
	comp=Z,1μm,18.0s,MS5.4								
LZH	Lanzhou	84.11	312	P		P		20 59 53.0	+1.1
LZH				*SP		sP		20 59 58.5	+1.6
LZH								21 03 07.1	
LZH				S		S		21 10 17.2	+0.5
LZH				SS		SS		21 15 41.0	-5.1
LZH				pmax		pmax			
	comp=Z,97nm,1.5s,mb5.7								
LZH				MLR		MLR			
	comp=Z,1μm,18.0s,MS5.4								
LZH	Lanzhou	84.11	312	P		P		20 59 53.0	+1.1
	comp=Z,97nm,1.5s,mb5.7								
LZH				pP		pP		20 59 57.0	+1.4
LZH				sP		sP		20 59 58.5	+1.6
LZH				PP		PP		21 03 07.1	+0.7
LZH				S		S		21 10 17.2	+0.5
LZH				sS		sS		21 10 23.0	+0.3
LZH				SS		SS		21 15 41.0	-5.1
LZH				LR		LR			
	comp=Z,1μm,18.0s,MS5.4								
OHAK	Old Harbor	84.23	19	eP		P		20 59 51.2	-0.8
KDAK	Kodiak Island	84.91	19	P		P		20 59 54.7	-0.7
	comp=Z,17nm,1.1s,mb5.1,baz=203,slow=7.7,SNR=3.0								
KDAK	Kodiak Island	84.91	19	P		P		20 59 54.7	-0.7
SEY	Seymchan	84.96	352⇑	eP		P		20 59 55.1	-0.5
SEY	Seymchan	84.96	352⇑	eP		P		20 59 55.2	-0.4
CLNS	Chul'man	86.26	337	eP		P		21 00 08.2	+6.0
CLNS				pmax		pmax			
	comp=Z,84nm,1.4s,mb5.8								
CLNS				pmax		pmax			
	comp=N,49nm,1.5s								
CLNS				pmax		pmax			
	comp=E,13nm,1.3s								
SNAA	Sanae	87.16	182	eP		P		21 00 05.1	-1.5
SNAA				e		pP		21 00 07.0	-3.2
SNAA				e		pP		21 00 08.8	-1.4
SNAA				e				21 00 13.6	
SNAA	Sanae	87.16	182⇑	eP		P		21 00 05.6	-1.0
KIPM	Iron Peak	87.23	45	eP		P		21 00 07.5	+0.2
VNA3	Neumayer Olymp	87.75	180	eP		P		21 00 08.2	-1.2
VNA3				e		pP		21 00 10.0	-3.1
VNA3				e		pP		21 00 11.6	-1.5
VNA3				e				21 00 16.5	
VNA3				e				21 00 19.8	
VNA3				e				21 01 24.3	
VNA3				e				21 01 35.8	
VNA2	Neumayer--Watz	88.04	181	eP		P		21 00 10.1	-0.7
	baz=180,slow=3.8								
VNA2				e		pP		21 00 11.7	-2.8
VNA2				e		pP		21 00 13.4	-1.1
VNA2				e				21 00 18.5	
VNA2				e				21 00 22.0	
VNA2				e				21 01 26.0	
VNA2				e				21 01 39.1	
VNA1	Neumayer--Stat	88.33	181	eP		P		21 00 11.7	-0.5
VNA1				e		pP		21 00 13.4	-2.4
VNA1				e		pP		21 00 15.8	0.0
VNA1				e				21 00 20.8	
VNA1				e				21 00 24.5	
OHCM	Honcut	88.33	47	eP		P		21 00 13.3	+0.7
ULN	Ulaanbaatar	88.51	323⇑	eP		P		21 00 13.3	+0.1
ULN	Ulaanbaatar	88.51	323⇑	eP		P		21 00 13.4	+0.2
GTA	Gaotai	88.54	313	⇑P		P		21 00 14.8	+1.2
GTA				AP		pP		21 00 19.5	+2.2
GTA				XP		sP		21 00 21.8	+3.2
GTA				S		S		21 11 01.0	+1.2
GTA				XS		sS		21 11 09.0	+3.2
GTA				AMB		AMB			
	comp=Z,14nm,1.2s,mb5.2								
GTA				AMB		AMB			
	comp=Z,965nm,8.4s								
GTA				LR		LR			
	comp=N,768nm,16.8s,MS5.5								
GTA				LR		LR			
	comp=E,1μm,16.8s,MS5.5								
GTA				LR		LR			
	comp=Z,1μm,16.5s,MS5.5								
YAK	Yakutsk	88.80	343	eP		P		21 00 12.7	-1.6
YAK				pmax		pmax			
	comp=Z,34nm,1.0s,mb5.6								
YAK	Yakutsk	88.80	343⇑	eP		P		21 00 12.3	-2.0
SONM	Songino Array	88.86	323	P		P		21 00 15.0	+0.1
	comp=Z,9.6nm,1.1s,mb5.0,baz=133,slow=4.7,SNR=29								
BILL	Bilibino	89.06	359	eP		P		21 00 14.8	-0.6
BILL				pmax		pmax			
	comp=Z,44nm,1.2s,mb5.7								
BILL				MLR		MLR			
	comp=Z,1μm,17.0s,MS5.5								
BILL	Bilibino	89.06	359	eP		P		21 00 14.9	-0.5
LBCM	Butte Creek Ri	89.15	45	P		P		21 00 16.6	+0.1
PFO	Pinyon Flat Ob	89.27	53	eP		P		21 00 18.4	+1.2
PFO				pmax		pmax			
	comp=Z,19nm,1.2s,mb5.3								
PFO	Pinyon Flat Ob	89.27	53	eP		P		21 00 18.4	+1.2
	comp=Z,19nm,1.2s,mb5.3								
MPOR	Mary's Peak	89.58	41	P		P		21 00 19.8	+1.4
NVAR	Mina Array Bea	90.09	48	P		P		21 00 20.9	0.0
	comp=Z,9.8nm,0.9s,mb5.2,baz=226,slow=7.3,SNR=8.9								
FRIS	Frissel Point	90.33	42	P		P		21 00 22.4	+0.5
LSA	Lhasa	90.63	302	eP		P		21 00 24.9	+1.3
LSA				pmax		pmax			
	comp=Z,23nm,1.1s,mb5.4								
LSA	Lhasa	90.63	302	eP		P		21 00 24.9	+1.2
	comp=Z,23nm,1.1s,mb5.4								
BMW	Boistfort Moun	90.78	40	eP		P		21 00 24.9	+1.0
BOD	Bodaibo	91.16	334	eP		P		21 00 24.2	-1.2
BOD				pmax		pmax			
	comp=Z,12nm,1.4s,mb5.0								
TDL	Tradedollar La	91.32	40	P		P		21 00 27.1	+0.6
CROR	Criterion Ridg	91.40	42	P		P		21 00 26.6	-0.2
ZAK	Zakamensk	91.95	324	eP		P		21 00 28.4	-0.9
ZAK				pmax		pmax			
	comp=Z,28nm,1.4s,mb5.4								
ODAN	Odare	92.56	298	eP		P		21 00 32.3	-0.3
	comp=Z,59nm,1.0s,mb6.0								
ELK	Elko	93.24	47	eP		P		21 00 35.3	-0.1
ELK				pmax		pmax			
	comp=Z,7.0nm,1.0s								
ELK	Elko	93.24	47	eP		P		21 00 35.3	-0.1
	comp=Z,6.8nm,1.0s,mb5.0								
MDRS	Chennai	93.78	282	ex		x		21 01 01.0	
MDRS				ex		x		21 04 21.0	
MDRS				ex		x		21 09 07.0	
MDRS				ex		x		21 09 07.0	
MDRS				ex		x		21 20 13.0	
MDRS				ex		x		21 24 07.0	
MDRS				ex		x		21 27 34.0	
MDRS				ex		x		21 30 52.0	
MDRS				ex		x		21 34 22.0	
MDRS				ex		x		21 44 07.0	
DLBC	Dease Lake	93.80	27	P		P		21 00 37.5	-0.1
	baz=210,slow=7.2								
JIRN	Jiri	93.85	298	eP		P		21 00 38.5	-0.1
	comp=Z,52nm,1.2s,mb5.8								
DAWY	Dawson	93.86	20	eP		P		21 00 38.3	+0.5
GUN	Gumba	94.19	298	eP		P		21 00 40.3	+0.1
	comp=Z,47nm,1.1s,mb5.8								
KKN	Kakani	94.64	298	eP		P		21 00 42.1	-0.1
	comp=Z,36nm,1.0s,mb5.8								
DMN	Daman	94.72	298	eP		P		21 00 42.0	-0.6
	comp=Z,71nm,1.1s,mb6.0								
HLID	Hailey	94.98	45	eP		P		21 00 43.1	-0.3
	comp=Z,3.2nm,1.0s,mb4.7								
GKN	Gorkha	95.25	298	eP		P		21 00 44.4	-0.6
	comp=Z,53nm,1.2s,mb5.8								
DANN	Dangsing	96.10	298	eP		P		21 00 47.8	-1.1
	comp=Z,41nm,1.1s,mb5.8								
PLCA	Paso Flores	97.00	139	P		P		21 00 54.5	+1.7
	comp=Z,1.3nm,0.9s,mb4.3,baz=248,slow=5.4,SNR=3.6								
ANMO	Albuquerque	97.39	56⇑	eP		P		21 00 56.0	+1.4
TXAR	Lajitas Array	97.68	62	P		P		21 00 55.3	-0.7
	comp=Z,1.7nm,1.1s,mb4.5,baz=235,slow=4.4,SNR=7.6								
HVS	Khovu-Aksy	97.68	322	eP		P		21 00 54.8	-0.6
HVS				pmax		pmax			
	comp=Z,21nm,1.0s,mb5.6								
PDAR	Pinedale Array	97.94	47	P		P		21 00 56.1	-0.7
	comp=Z,0.6nm,0.6s,mb4.3,baz=226,slow=3.4,SNR=5.5								
WMQ	Urumqi	98.63	314	eP		P		21 01 00.3	+0.4
WMQ				AMB		AMB			
	comp=Z,9.0nm,1.1s,mb5.2								
WMQ				LR		LR			
	comp=Z,942nm,18.1s,MS5.3								
MKAR	Makanchi Array	103.20	315	Pdiff		Pdif		21 01 20.3	0.0
	comp=Z,0.2nm,0.3s,baz=116,slow=3.4,SNR=2.6								
MKAR				PP		PP		21 05 34.0	-1.6
	comp=Z,0.9nm,0.7s,baz=92,slow=8.7,SNR=4.9								
MKAR				PKKP		PKKPbc		21 17 33.9	+17
	comp=Z,0.5nm,0.6s,baz=289,slow=3.7,SNR=4.3								
MKAR	Makanchi Array	103.20	315	P		Pdif		21 01 20.3	+0.1
MKAR								21 05 34.0	
ZALV	Zalesovo Beam	103.75	323	Pdiff		Pdif		21 01 24.2	+1.6
	comp=Z,0.4nm,0.4s,baz=101,slow=4.6,SNR=3.5								
BRVK	Borovoye	112.06	320⇑	ePKIKP		PKiKP		21 05 54.6	-1.4
ARU	Arti	118.89	324	i PKIKP		PKPdf		21 06 06.8	-2.2
ARU								21 12 57.7	
ARU				SP		SP		21 17 04.9	-8.5
ARU				PS		PS		21 17 16.0	+0.4
ARU	Arti	118.89	324⇑	ePKP		PKPdf		21 06 08.2	-0.8
ARCES	ARCESS Array B	127.02	345	PKP		PKPdf		21 06 22.8	-1.5
	comp=Z,4.1nm,0.6s,baz=88,slow=1.9,SNR=22								
KMBO	Kilima Mbogo	128.13	251	PKP		PKPdf		21 06 29.1	+1.0
	comp=Z,1.5nm,0.7s,baz=55,slow=5.4,SNR=5.5								
KMBO	Kilima Mbogo	128.13	251	ePKPdf		PKPdf		21 06 29.3	+1.2
BDFB	Brasilia	128.19	132	SKP				21 10 00.6	
	comp=Z,4.9nm,0.7s,baz=260,slow=6.7,SNR=4.9								
MOS	Moscow	130.39	326	ePKIKP		PKPdf		21 06 34.9	+3.9
OBN	Obninsk	131.19	326	i PKIKP		PKPdf		21 06 35.1	+2.5
OBN				e				21 08 52.4	
OBN				ePS		PS		21 18 53.5	-11
OBN				pmax		pmax			
	comp=Z,20nm,1.9s								
MALT	Malatya	134.64	303	⇓P		PKPdf		21 06 41.5	+1.9
MALT	Malatya	134.64	303	⇓P		PKPdf		21 06 41.5	+1.9
AKASG	Malin Array Be	137.14	323	PKP		PKPdf		21 06 42.5	-1.4
	comp=Z,0.2nm,0.2s,baz=60,slow=2.1,SNR=4.8								
AKASG				SKP				21 10 16.9	
	comp=Z,2.6nm,0.8s,baz=54,slow=3.0,SNR=6.6								
AKASG	Malin Array Be	137.14	323	i PKIKP		PKPdf		21 06 46.0	+2.1
AKASG	Malin Array Be	137.14	323	PKP		PKPdf		21 06 42.5	-1.4
AKASG				SKP				21 10 16.9	
NB2	NORSAR Subarra	137.39	344	PKPdf		PKPdf		21 06 44.5	+0.5
	comp=Z,4.0nm,1.2s,baz=31,slow=1.9								
NOA	NORSAR Array B	137.39	344	PKP		PKPdf		21 06 43.8	-0.2
	comp=Z,1.1nm,0.7s,baz=32,slow=2.0,SNR=3.5								
NOA				SKP				21 10 15.2	
	comp=Z,1.4nm,0.9s,baz=16,slow=5.1,SNR=3.3								
KOLS	Kolonicke sedl	141.90	324	ePKP		PKPdf		21 06 51.1	-1.5
STHS	Stebnicka Huta	142.17	326	ePKP		PKPdf		21 06 52.7	-0.4
CRVS	Cervenica-Dubn	142.36	325	ePKP		PKPdf		21 06 53.1	-0.3
CRVS				e				21 14 50.2	
NIE	Niedzica	142.66	326	ePKP		PKPdf		21 06 54.4	+0.5
DRGR		142.83	321	⇑P		PKPdf		21 06 51.0	-3.3
DRGR		142.83	321	⇑P		PKPdf		21 06 51.0	-3.3
OKC	Ostrava-Krasne	143.48	328	ePKP		PKPdf		21 06 56.4	+1.0
BSEG	Bad Segeberg	143.66	339	ePKPbc		PKPdf		21 06 52.1	-3.4
KSP	Ksiaz	143.68	331	ePKIKP		PKPdf		21 06 55.2	-0.5
PSZ	Piszkesteto	143.78	325	epPKP		pPKPdf		21 06 59.0	-0.7
PSZ	Piszkesteto	143.78	325	ePKPpre				21 06 53.5	
MORC	Moravsky Berou	143.82	329	⇓P		PKPdf		21 06 53.8	-2.2
MORC	Moravsky Berou	143.82	329	ePKPpre				21 06 52.5	
VYHS	Vyhne	143.99	326	ePKP		PKPdf		21 06 54.4	-1.9
DPC	Dobruska-Polom	144.00	330	ePKP		PKPdf		21 06 52.8	-3.5
UPC	Upice	144.04	331	ePKP		PKPdf		21 06 53.8	-2.5
BZS	Buzias	144.09	320	⇓P		PKPdf		21 06 54.2	-2.4
BZS	Buzias	144.09	320	⇓P		PKPdf		21 06 54.2	-2.4
KOLL	Kolacno	144.16	327	ePKP		PKPdf		21 06 55.2	-1.4
LOS	Limnos	144.32	310	eP		PKPdf		21 06 54.6	-2.6
BUD	Budapest	144.51	325	ePKP		PKPdf		21 06 55.5	-1.8
VRAC	Vranov	144.59	329	⇑P		PKPdf		21 06 56.1	-1.2
PVCC	Panska Ves	144.67	332	ePKP		PKPdf		21 06 55.9	-1.5
PVCC				ex		x		21 07 03.2	
BRG	Berggiesshubel	144.69	333	ePKPbc		PKPdf		21 06 55.4	-2.0
BRG	Berggiesshubel	144.69	333	i PKP		PKPdf		21 06 55.8	-1.6
	comp=Z,24nm,0.9s								
BRG				PP		PP		21 10 03.7	-10
	comp=Z,22nm,2.0s								
CLL	Collm	144.75	334	⇓i PKIKP		PKPdf		21 06 55.5	-2.0
CLL				pmax		pmax			
	comp=Z,18nm,0.8s								
CLL	Collm	144.75	334	ePKPbc		PKPdf		21 06 55.4	-2.1
CLL	Collm	144.75	334	⇓i PKPdf		PKPdf		21 06 55.5	-2.0
	comp=Z,18nm,0.8s								
CLL				i pPKPdf		pPKPdf		21 06 58.4	-2.9
	comp=Z,31nm,1.3s								
CLL				i (PKiKP)				21 07 02.4	
CLL				i pPKiKP				21 07 05.5	
ZKR	Zakros	144.86	301	eP		PKPdf		21 06 57.1	-1.2
MODS	Modra-Piesok	144.87	327	ePKP		PKPdf		21 06 57.7	-0.1
APE	Apeiranthos	144.90	305⇑	⇓P		PKPdf		21 06 55.9	-2.4
APE	Apeiranthos	144.90	305⇑	⇑P		PKPdf		21 06 55.9	-2.4
OUR	Ouranopolis	144.95	311	eP		PKPdf		21 06 56.5	-1.8
PRU	Pruhonice	145.07	331	ePKP		PKPdf		21 06 57.0	-1.1
ZST	Bratislava	145.07	327	ePKP		PKPdf		21 06 57.8	-0.4
ZST	Bratislava	145.07	327	ePKP		PKPdf		21 06 57.9	-0.3
TREC	Trest	145.13	330	ePKP		PKPdf		21 06 57.3	-1.0
SANT	Santorini	145.14	304	eP		PKPbc		21 06 56.5	-1.7
THR1	Thira Island	145.14	304	eP		PKPbc		21 06 56.4	-1.8
THR3	Thira Island,	145.18	304	eP		PKPbc		21 06 57.0	-1.3
THR6	Thira Island,	145.20	304	eP		PKPbc		21 06 57.2	-1.2
THR5	Thira Island,	145.22	304	eP		PKPbc		21 06 57.1	-1.4
PAIG	Paliouri	145.32	310	eP		PKPbc		21 06 57.3	-1.4
CLZ	Clausthal	145.35	337	ePKPbc		PKPbc		21 06 57.9	-0.5
KNT	Kendrikon	145.38	313	eP		PKPbc		21 06 57.5	-1.4
LAST	Lasithi	145.44	301	eP		PKPbc		21 06 59.3	0.0
PKSM	Moragy	145.48	323	⇓P		PKPdf		21 06 58.7	-0.3
PKSM	Moragy	145.48	323	⇓P		PKPdf		21 06 58.6	-0.3
ESK	Eskdalemuir	145.53	352	ePKIKP		PKPdf		21 06 57.4	-1.3
VAY	Valandovo	145.53	313	ePKP		PKPdf		21 06 56.6	-2.7
TANN	Tannenbergstha	145.66	334	ePKPbc		PKPbc		21 06 58.9	-0.5
SOP	Sopron	145.69	327⇓	ePKP		PKPdf		21 06 59.4	+0.1
NKC	Novy Kostel	145.80	333	ePKP		PKPdf		21 06 58.6	-0.8
MOX	Moxa	145.82	335	ePKP		PKPdf		21 06 59.1	-0.3
	comp=Z,114nm,2.3s								
IBBN	Ibbenburen	145.87	340	ePKPbc		PKPbc		21 06 59.0	-1.0
CONA	Conrad Observa	145.88	328⇓	i P		PKPdf		21 07 00.2	+0.6
	comp=Z,69nm,1.6s,SNR=15								
CSNA	Conrad Observa	145.88	328⇓	i P		PKPdf		21 07 00.1	+0.5
	comp=Z,53nm,1.4s								
XOR	Xorichti	145.88	310	eP		PKPdf		21 06 58.9	-1.0
SKO	Skopje	146.01	315	ePKP		PKPdf		21 07 00.5	+0.5
LIT	Litokhoron	146.10	311	eP		PKPdf		21 06 59.7	-0.5
KHC	Kasperske Hory	146.12	331	ePKP		PKPdf		21 07 00.6	+0.6
KHC				epPKP		pPKPdf		21 07 06.5	+2.8
KHC				ex		x		21 07 14.0	
KHC				ex		x		21 07 51.0	
KHC	Kasperske Hory	146.12	331	ePKP		PKPdf		21 07 00.6	+0.6
KHC				e				21 07 06.5	
KHC				e				21 07 14.0	
MANZ	Manzenberg	146.13	333	ePKPbc		PKPbc		21 07 01.0	+0.1
ROTZ	Rotzenmuhle	146.25	333	ePKPbc		PKPbc		21 07 01.0	-0.3
GEC2	GERESS Array S	146.28	331	ePKPbc		PKPbc		21 07 00.8	-0.6
GERES	GERESS Array B	146.28	331	PKPbc		PKPbc		21 06 59.9	-1.4
	comp=Z,7.3nm,0.7s,baz=46,slow=2.8,SNR=49								
GERES				SKPbc		SKPbc		21 10 41.0	+0.6
	comp=Z,1.1nm,0.9s,baz=48,slow=1.5,SNR=4.4								
LKR	Lokris	146.28	308	eP		PKPdf		21 06 59.6	-1.0
UBBA	Unterbreizbach	146.31	336	ePKPbc		PKPbc		21 07 00.3	-1.1
KRUS	Krusevo	146.41	314	ePKP		PKPdf		21 07 01.3	+0.6
WET	Wettzell	146.43	332	ePKPbc		PKPbc		21 07 01.9	+0.1
DID	Didima	146.50	306	eP		PKPdf		21 07 00.4	-0.6
LTK	Loutraki	146.53	307	eP		PKPdf		21 07 00.5	-0.6
GRA1	Grafenberg Arr	146.72	334	ePKPbc		PKPbc		21 07 02.4	-0.2
GRF	Grafenberg Arr	146.72	334	ePKPbc		PKPbc		21 07 02.4	-0.2
BUG	Bochum--Univer	146.76	339	ePKPbc		PKPbc		21 07 02.9	+0.2
OHR	Ohrid	146.83	314	ePKP		PKPdf		21 07 00.5	-0.9
TNS	Taunus Mts	147.38	337	ePKPbc		PKPbc		21 07 04.1	-0.4
TOD	Tromm	147.75	336	PKP2		PKPbc		21 07 05.1	-0.4
IGT	Igoumenitsa	147.84	311	eP		PKPbc		21 07 05.2	-0.9
MEM	Membach	147.89	340	PKPbc		PKPbc		21 07 05.4	-0.4
ABH	Alteburg	147.99	338	PKP		PKPbc		21 07 05.7	-0.4
VOY	Vojsko	148.15	327	ePKPbc		PKPbc		21 07 05.9	-0.8
VOY				e				21 07 14.2	
VOY				e				21 07 17.1	
STU	Stuttgart	148.27	335	ePKPbc		PKPbc		21 07 06.7	-0.2
STU	Stuttgart	148.27	335	ePKPbc		PKPbc		21 07 05.8	-1.1
BCLA	Clavier	148.28	340	PKPbc		PKPbc		21 07 07.6	+0.7
BCLA				PKPab		PKPab		21 07 10.2	+0.4
RUP	Ruppelstein	148.31	338	PKP2		PKPbc		21 07 06.8	-0.2
MOTA	Moosalm	148.56	331	⇓iP		PKPbc		21 07 06.9	-0.9
	comp=Z,34nm,1.1s,SNR=8.4								
LANF	Langenberg	148.64	336	PKP		PKPbc		21 07 07.6	-0.3
WLF	Walferdange	148.65	339	PKPbc		PKPbc		21 07 07.7	-0.2
WLF	Walferdange	148.65	339	ePKPbc		PKPbc		21 07 07.4	-0.4
GIVF	Givet	148.70	341	ePKIKP		PKPbc		21 07 07.0	-1.0
	comp=Z,80nm,1.2s								
DOU	Dourbes	148.78	341	PKPbc		PKPbc		21 07 07.8	-0.4
BAIF	Baives	148.93	341	ePKIKP		PKPbc		21 07 07.7	-0.9
	comp=Z,101nm,1.4s								
BFO	Black Forest	148.97	335	ePKPbc		PKPbc		21 07 07.8	-0.9
FETA	Feichten	148.97	331	⇓iP		PKPbc		21 07 08.2	-0.6
	comp=Z,29nm,1.1s,SNR=6.3								
CDF	Champ du Feu	149.31	336	ePKIKP		PKPbc		21 07 07.8	-1.8
	comp=Z,52nm,1.1s								
FELD	Feldberg im Sc	149.46	335	PKP		PKPbc		21 07 09.6	-0.4
ECH	Echery	149.51	336	PKP		PKPbc		21 07 09.2	-0.9
ECH	Echery	149.51	336	ePKPbc		PKPbc		21 07 08.2	-1.9
MOF	Molkenrain	149.82	336	PKP		PKPbc		21 07 10.5	-0.4
HINF	Hinteralfeld	149.96	336	ePKIKP		PKPbc		21 07 09.8	-1.4
	comp=Z,60nm,1.2s								
HAU	Haudompre	149.99	337	ePKIKP		PKPbc		21 07 09.9	-1.4
	comp=Z,37nm,0.9s								
TUE	Stuetta	150.01	332	ePKPbc		PKPbc		21 07 10.8	-0.6
MEZF	Maizieres J'vi	150.02	339	ePKIKP		PKPbc		21 07 10.1	-1.2
	comp=Z,104nm,1.1s								
LOMF	Lomont	150.

CTAO	**Charters Tower**	**21.56 269**	*e*P		**P**		**20 57 52.3**	**+1.4**
STKA	**Stephens Creek**	**26.81 241**	*e*P		**P**		**20 58 42.4**	**+1.1**
	comp=Z,7.9nm,1.7s,mb4.0							
STKA	**Stephens Creek**	**26.81 241**	P		**P**		**20 58 41.4**	**+0.1**
	comp=Z,5.5nm,0.8s,mb4.2,baz=92,slow=16,SNR=5.4							
WB2	**Warramunga Arr**	**32.67 266**	*e*P		**P**		**20 59 32.1**	**-1.2**
WRA	**Warramunga Arr**	**32.68 266**	P		**P**		**20 59 32.0**	**-1.4**
	comp=Z,1.3nm,0.5s,mb4.1,baz=98,slow=8.2,SNR=9.9							
ASAR	**Alice Springs**	**32.71 259**	P		**P**		**20 59 33.3**	**-0.3**
	comp=Z,7.1nm,0.7s,mb4.7,baz=83,slow=8.8,SNR=27							
FITZ	**Fitzroy Crossi**	**41.10 267**	*e*P		**P**		**21 00 45.4**	**+0.3**
	comp=Z,20nm,0.9s,mb4.8							
FITZ	**Fitzroy Crossi**	**41.10 267**	P		**P**		**21 00 45.1**	**0.0**
	comp=Z,11nm,0.8s,mb4.5,baz=126,slow=9.2,SNR=16							
BATI	**Baumata**	**45.11 277**	P		**P**		**21 01 17.9**	**+0.3**
	comp=Z,14nm,0.7s,mb4.9,baz=108,slow=9.6,SNR=4.8							
MAW	**Mawson**	**76.52 202**	P		**P**		**21 04 49.8**	**-0.6**
	comp=Z,1.1nm,0.8s,mb3.9,baz=162,slow=6.4,SNR=4.0							
CMAR	**Chiang Mai Arr**	**79.39 295**	P		**P**		**21 05 08.4**	**+1.3**
	comp=Z,1.7nm,0.8s,mb4.0,baz=139,slow=4.1,SNR=9.1							
CHTO	**Chiang Mai**	**79.55 295**	*e*P		**P**		**21 05 09.9**	**+1.9**
CHTO				pmax	pmax			
	comp=Z,5.0nm,1.3s,mb4.3							
CHTO	**Chiang Mai**	**79.55 295**	*e*P		**P**		**21 05 09.9**	**+1.9**
	comp=Z,5.1nm,1.3s,mb4.3							
SNAA	**Sanae**	**87.09 182**	*e*		**P**		**21 05 45.3**	**-0.6**
SNAA			*e*				21 05 48.3	
SNAA			*e*		pP		21 05 53.8	-3.5
SNAA			*e*				21 06 00.4	
SNAA	**Sanae**	**87.09 182**	*e*P		**P**		**21 05 44.8**	**-1.1**
SNAA				pmax	pmax			
	comp=Z,5.0nm,0.9s							
SNAA	**Sanae**	**87.09 182**	*e*P		**P**		**21 05 44.8**	**-1.2**
	comp=Z,5.1nm,0.9s,mb4.8							
VNA3	**Neumayer Olymp**	**87.68 180**	*e*		**P**		**21 05 48.1**	**-0.7**
VNA3			*e*				21 05 51.1	
VNA3			*e*		pP		21 05 56.2	-4.0
VNA3			*e*		pP		21 05 58.8	-1.4
VNA2	**Neumayer--Watz**	**87.97 181**	*e*		**P**		**21 05 49.7**	**-0.5**
VNA2			*e*				21 05 53.1	
VNA2			*e*		pP		21 05 57.8	-3.8
VNA2			*e*		pP		21 06 00.0	-1.6
VNA1	**Neumayer--Stat**	**88.26 181**	*e*		**P**		**21 05 51.3**	**-0.2**
VNA1			*e*				21 05 54.1	
VNA1			*e*		pP		21 05 59.4	-3.6
VNA1			*e*		pP		21 06 02.1	-0.9
SONM	**Songino Array**	**88.90 323**	P		**P**		**21 05 54.8**	**0.0**
	comp=Z,0.3nm,0.3s,mb4.0,baz=108,slow=4.7,SNR=3.5							
NVAR	**Mina Array Bea**	**90.15 48**	P		**P**		**21 06 01.1**	**+0.2**
	comp=Z,1.1nm,0.7s,mb4.3,baz=224,slow=7.6,SNR=5.9							
ARCES	**ARCESS Array B**	**127.08 345**	PKP		PKPdf		21 12 03.0	-0.9
	comp=Z,2.5nm,0.8s,baz=34,slow=3.5,SNR=4.8							
ARCES	**ARCESS Array B**	**127.08 345**	PKP		PKPdf		21 12 03.0	-1.0
NOA	**NORSAR Array B**	**137.46 344**	PKP		PKPdf		21 12 25.1	+1.4
	comp=Z,0.7nm,0.8s,baz=49,slow=2.4,SNR=2.7							
CLL	**Collm**	**144.81 334**	*e*PKPdf		PKPdf		21 12 36.0	-1.2
GERES	**GERESS Array B**	**146.32 330**	PKPbc		PKPbc		21 12 41.2	+0.1
	comp=Z,1.7nm,0.6s,baz=30,slow=3.1,SNR=14							

IDC ***27*** *21:02:03.9±0.5,2130S×16927E,h0km,mb4.6/19, mb1 4.7/21,mb1mx4.7/22,mbtmp4.6/21,ML3.5/2,MS4.9/5, Ms1 4.9/5,ms1mx4.4/24,Error ellipse: s-maj=16.7km s-min=15.0km az=126.0*

ISCJB ***27*** *21:02:03.8±3.1,2137S±005×16937E±004,h10km±19km, mb4.8/46,MS5.0/12,Error ellipse: s-maj=8.4km s-min=6.4km az=158.8*

NEIC ***27*** *21:02:05.2±0.2,2130S×16943E,h10km,mb5.0/21,Error ellipse: s-maj=7.1km s-min=5.7km az=156.0*

BJI ***27*** *21:02:06.5,2066S×16937E,h9km,mB5.5,mb4.9,Ms5.5, Msz5.2*

MOS ***27*** *21:02:08.2±1.3,2128S×16940E,h33km,mb5.1/18,Error ellipse: s-maj=10.3km s-min=9.2km az=29.5*

SZGRF ***27*** *21:02:08.0,2324S×166.18E,h33km,New Caledonia*

ISC 27 21:02:06.8±3.3,2137S±005×16939E±004,h19km±20km, h18km±2.0km:pP-P,n210,σ0s97/124,mb4.8/46,MS5.0/12, 6C-3D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.83**	**255**	*e*P		**Pn**	**21 02 49.7**	**-1.3**
DZM				*e*S		**Sn**	**21 03 23.6**	**-1.0**
HNR	**Honiara**	**14.94**	**321**	Pn		**Pn**	**21 05 41.8**	**+4.6**
	7.1nm,0.3s,baz=181,slow=14,SNR=5.9							
HNR	**Honiara**	**14.94**	**321**	*e*P		**Pn**	**21 05 37.7**	**+0.5**
HNR				pmax	pmax			
	comp=Z,108nm,1.0s							
HNR	**Honiara**	**14.94**	**321**	*e*Pn		**Pn**	**21 05 37.7**	**+0.5**
	comp=Z,108nm,1.0s							
FUNA	**Funafuti**	**15.89**	**38**	*e*Pn		**Pn**	**21 05 49.2**	**-0.4**
	comp=Z,223nm,1.8s							
URZ	**Urewera**	**18.11**	**160**	P		**Pn**	**21 06 19.8**	**+2.4**
	comp=Z,0.5nm,0.3s,baz=331,slow=7.1,SNR=9.4							
ARMA	**Armidale**	**18.33**	**237**	*e*P		**Pn**	**21 06 24.9**	**+4.8**
AFI	**Afiamalu**	**19.41**	**71**	P		**Pn**	**21 06 33.7**	**+0.4**
	comp=Z,1.9nm,0.3s,baz=296,slow=13,SNR=4.2							
AFI	**Afiamalu**	**19.41**	**71**	*e*P		**Pn**	**21 06 32.0**	**-1.3**
AFI				pmax	pmax			
	comp=Z,56nm,1.0s							
AFI	**Afiamalu**	**19.41**	**71**	*e*P		**Pn**	**21 06 32.0**	**-1.3**
	comp=Z,56nm,1.0s							
SNZO	**South Karori**	**20.39**	**168**	Pn		**P**	**21 06 41.6**	**-0.9**
CTA	**Charters Tower**	**21.67**	**269**	*e*P		**P**	**21 06 57.7**	**+1.1**
	comp=Z,24nm,1.3s,mb4.5							
CTA	**Charters Tower**	**21.67**	**269**	P		**P**	**21 06 56.8**	**+0.2**
	comp=Z,17nm,0.7s,mb4.6,baz=90,slow=11,SNR=27							
CTA				LR	LR		21 13 45.9	
	comp=Z,3μm,19.9s,MS4.7,baz=92,slow=32							
CTA	**Charters Tower**	**21.67**	**269**	*e*P		**P**	**21 06 57.7**	**+1.1**
CTA				pmax	pmax			
	comp=Z,24nm,1.3s							
CTAO	**Charters Tower**	**21.67**	**269**	*e*P		**P**	**21 06 57.7**	**+1.1**
CTAO				pmax	pmax			
	comp=Z,88nm,1.3s,mb5.0							
CTAO	**Charters Tower**	**21.67**	**269**	*e*P		**P**	**21 06 57.7**	**+1.1**
	comp=Z,88nm,1.3s,mb5.0							
RPZ	**Rata Peaks**	**22.33**	**177**	P		**P**	**21 07 03.6**	**+0.1**
	comp=Z,12nm,0.9s,mb4.3,baz=72,slow=8.1,SNR=3.9							
CNB	**Canberra Magne**	**22.39**	**227**	*e*P		**P**	**21 07 07.5**	**+3.4**
PMG	**Port Moresby**	**24.47**	**296**	*e*P		**P**	**21 07 26.3**	**+1.4**
PMG				pmax	pmax			
	comp=Z,33nm,1.0s							
PMG	**Port Moresby**	**24.47**	**296**	*e*P		**P**	**21 07 26.3**	**+1.4**
	comp=Z,33nm,1.0s,mb4.7							
TOO	**Toolangi**	**26.23**	**227**	*e*P		**P**	**21 07 45.1**	**+4.4**
STKA	**Stephens Creek**	**26.89**	**241**	*e*P		**P**	**21 07 47.5**	**+0.8**
	comp=Z,11nm,0.8s,mb4.4							
STKA	**Stephens Creek**	**26.89**	**241**	P		**P**	**21 07 45.5**	**-1.2**
	comp=Z,11nm,0.9s,mb4.4,baz=70,slow=5.1,SNR=12							
STKA				LR	LR		21 17 06.5	
	comp=Z,3μm,19.5s,MS4.8,baz=32,slow=34							
TAU	**Tasmania Unive**	**28.31**	**216**	*e*P		**P**	**21 07 59.7**	**+0.4**
RAR	**Rarotonga**	**28.71**	**95**	LR	LR		21 18 00.6	
	comp=Z,1μm,18.4s,MS4.6,baz=104,slow=33							
RAR	**Rarotonga**	**28.71**	**95**	*e*P		**P**	**21 08 02.9**	**-0.2**
WB2	**Warramunga Arr**	**32.77**	**266**	*e*P		**P**	**21 08 37.8**	**-1.2**
WB2	**Warramunga Arr**	**32.77**	**266**	*e*P		**P**	**21 08 41.6**	**+2.6**
WRAB	**Tennant Creek**	**32.78**	**266**	*e*P		**P**	**21 08 38.6**	**-0.4**
WRAB	**Tennant Creek**	**32.78**	**266**	*e*P		**P**	**21 08 39.1**	**+0.1**
WRA	**Warramunga Arr**	**32.79**	**266**	P		**P**	**21 08 37.0**	**-2.1**
	comp=Z,4.2nm,0.8s,mb4.5,baz=98,slow=8.4,SNR=36							
WRA				LR	LR		21 21 04.1	
	comp=Z,2μm,20.0s,MS4.7,baz=5.0,slow=35							
ASAR	**Alice Springs**	**32.81**	**259**	P		**P**	**21 08 38.5**	**-0.8**
	comp=Z,8.8nm,0.8s,mb4.7,baz=85,slow=9.0,SNR=64							
ASAR				PcP	PcP		21 11 24.6	+0.4
	comp=Z,1.2nm,0.8s,baz=111,slow=4.1,SNR=3.2							
FORT	**Forrest**	**38.11**	**247**	*e*P		**P**	**21 09 29.9**	**+5.1**
	comp=Z,26nm,0.7s,mb5.1							
FITZ	**Fitzroy Crossi**	**41.21**	**267**	P		**P**	**21 09 50.6**	**-0.2**
	comp=Z,8.7nm,0.6s,mb4.6,baz=132,slow=9.6,SNR=33							
FITZ	**Fitzroy Crossi**	**41.21**	**267**	*e*P		**P**	**21 09 50.5**	**-0.2**
GUMO	**Guam**	**42.26**	**323**	P		**P**	**21 10 00.4**	**+1.1**
MBWA	**Marble Bar**	**46.12**	**261**	*e*P		**P**	**21 10 29.7**	**-0.5**
	comp=Z,24nm,1.1s,mb5.0							
KLBR	**Kellerberrin**	**46.96**	**246**	*e*P		**P**	**21 10 35.5**	**-1.2**
	comp=Z,101nm,2.0s,mb5.4							
NWAO	**Narrogin (SRO)**	**47.40**	**244**	P		**P**	**21 10 39.1**	**-1.0**
	comp=Z,8.4nm,0.8s,mb4.7,baz=270,slow=1.0,SNR=3.9							
NWAO				LR	LR		21 29 58.4	
	comp=Z,3μm,18.8s,MS5.3,baz=281,slow=35							
NWAO	**Narrogin (SRO)**	**47.40**	**244**	*e*P		**P**	**21 10 40.0**	**-0.1**
NWAO				pmax	pmax			
	comp=Z,18nm,1.0s							
NWAO	**Narrogin (SRO)**	**47.40**	**244**	*e*P		**P**	**21 10 40.0**	**-0.1**
	comp=Z,18nm,1.0s,mb5.0							
SBA	**Scott Base**	**56.55**	**181**	*e*P		**P**	**21 11 48.2**	**+0.6**
SBA				pmax	pmax			
	comp=Z,13nm,1.0s,mb4.9							
SBA	**Scott Base**	**56.55**	**181**	*e*P		**P**	**21 11 48.2**	**+0.6**
	comp=Z,13nm,1.0s,mb4.9							
CASY	**Casey**	**58.25**	**204**	*e*P		**P**	**21 11 59.3**	**-0.4**
KKM	**Kota Kinabalu**	**58.82**	**291**	*e*P		**P**	**21 12 04.6**	**+0.1**
KSM	**Kuching**	**61.99**	**284**	*e*P		**P**	**21 12 26.9**	**+0.6**
MJAR	**Matsushiro Arr**	**64.69**	**333**	P		**P**	**21 12 42.6**	**-1.0**
	comp=Z,3.3nm,0.8s,mb4.4,baz=142,slow=3.7,SNR=7.8							
MAJO	**Matsushiro**	**64.69**	**333**	*e*P		**P**	**21 12 43.3**	**-0.3**
MAT	**Matsushiro**	**64.69**	**333**	P		**P**	**21 12 41.8**	**-1.8**
TATO	**Taipei**	**65.47**	**312**	*e*P		**P**	**21 12 48.5**	**-0.5**
TATO				*e*PcP	PcP		21 13 19.6	-1.2
QSPA	**South Pole Qui**	**68.70**	**180**	P		**P**	**21 13 09.2**	**+0.6**
	comp=Z,12nm,1.0s,mb4.8,baz=4.5,slow=2.9,SNR=3.7							
QSPA	**South Pole Qui**	**68.70**	**180**	P		**P**	**21 13 09.2**	**+0.6**
COCO	**West Island**	**69.56**	**265**	P		**P**	**21 13 15.6**	**+0.5**
ASAJ	**Asahikawa**	**69.63**	**340**	P		**P**	**21 13 14.9**	**+0.1**
	comp=Z,30nm,1.0s,mb5.2,baz=215,slow=9.7,SNR=5.2							
KSRS	**Korea Array**	**70.33**	**326**	P		**P**	**21 13 17.9**	**-1.4**
	comp=Z,0.7nm,0.4s,mb4.0,baz=137,slow=6.8,SNR=3.4							
YSS	**Yuzh-Sakhalins**	**72.12**	**341**	*e*P		**P**	**21 13 31.1**	**+1.2**
YSS				pmax	pmax			
	comp=Z,29nm,1.3s,mb5.0							
YSS	**Yuzh-Sakhalins**	**72.12**	**341**	*e*P		**P**	**21 13 30.2**	**+0.3**
PETK	**Petropavlovsk-**	**74.85**	**353**	P		**P**	**21 13 46.6**	**+0.8**
	comp=Z,4.5nm,0.9s,mb4.4,baz=197,slow=4.5,SNR=2.6							
MDJ	**Mudanjiang**	**75.05**	**332**	P		**P**	**21 13 48.0**	**+0.8**
MDJ				XP	sP		21 13 52.0	-3.5
MDJ				AMB	AMB			
	comp=Z,4.0nm,0.7s,mb4.5							
CN2	**Changchun**	**76.34**	**329**	*e*P		**P**	**21 13 56.0**	**+1.4**
MAW	**Mawson**	**76.53**	**202**	*e*P		**P**	**21 13 56.4**	**+1.0**
	comp=Z,3.3nm,0.8s,mb4.3							
MAW	**Mawson**	**76.53**	**202**	P		**P**	**21 13 55.9**	**+0.5**
	comp=Z,3.8nm,1.0s,mb4.3,baz=104,slow=6.2,SNR=6.6							
MAW	**Mawson**	**76.53**	**202**	*e*P		**P**	**21 13 56.4**	**+1.0**
MAW				pmax	pmax			
	comp=Z,3.0nm,0.8s							
GYA	**Guiyang**	**77.15**	**305**	⇑*i*P		**P**	**21 14 01.5**	**+1.9**
GYA				PCP	PcP		21 14 12.5	+2.2
GYA				PP	PP		21 16 57.3	+3.6
GYA				AMB	AMB			
	comp=Z,20nm,1.0s,mb5.0							
GYA				AMB	AMB			
	comp=Z,120nm,5.8s							
GYA				LR	LR			
	comp=N,640nm,18.4s,MS5.1							
GYA				LR	LR			
	comp=E,580nm,19.0s,MS5.1							
GYA				LR	LR			
	comp=Z,590nm,19.4s,MS4.9							
KLR	**Kul'dur**	**77.86**	**336**	*e*P		**P**	**21 14 00.0**	**-3.0**
NANT	**Nan**	**78.17**	**296**	⇑P		**P**	**21 14 05.0**	**-0.4**
	comp=Z,238nm,1.0s,mb6.1							
BJI	**Beijing**	**78.67**	**321**	P		**P**	**21 14 06.5**	**-1.2**
BJI				AMB	AMB			
	comp=Z,7.0nm,1.4s,mb4.4							
BJI	**Beijing**	**78.67**	**321**	P		**P**	**21 14 06.4**	**-1.3**
BJI				pmax	pmax			
	comp=Z,7.0nm,1.4s,mb4.4							
BJI	**Beijing**	**78.67**	**321**	P		**P**	**21 14 06.4**	**-1.3**
	comp=Z,7.0nm,1.4s,mb4.4							
CM31	**Chiang Mai Arr**	**79.50**	**295**	*e*P		**P**	**21 14 14.2**	**+1.4**
	comp=Z,8.4nm,0.8s,mb4.7							
CMAR	**Chiang Mai Arr**	**79.50**	**295**	P		**P**	**21 14 13.6**	**+0.8**
	comp=Z,2.3nm,0.7s,mb4.2,baz=130,slow=4.0,SNR=19							
KMI	**Kunming**	**79.51**	**302**	P		**P**	**21 14 14.0**	**+1.3**
KMI				AP	pP		21 14 20.5	+1.7
KMI				AMB	AMB			
	comp=Z,16nm,1.5s,mb4.7							
KMI	**Kunming**	**79.51**	**302**	P		**P**	**21 14 13.9**	**+1.2**
KMI				*PP	pP		21 14 20.6	+1.8
KMI				pmax	pmax			
	comp=Z,16nm,1.5s,mb4.7							
KMI	**Kunming**	**79.51**	**302**	P		**P**	**21 14 13.9**	**+1.2**
	comp=Z,16nm,1.5s,mb4.7							
KMI				pP	pP		21 14 20.6	+1.8
XAN	**Xi'an**	**79.64**	**313**	P		**P**	**21 14 13.3**	**+0.1**
XAN				AMB	AMB			
	comp=Z,9.0nm,2.2s,mb4.3							
CHTO	**Chiang Mai**	**79.66**	**295**	*e*P		**P**	**21 14 13.6**	**0.0**
CD2	**Chengdu**	**81.64**	**306**	⇓*i*P		**P**	**21 14 24.8**	**+0.9**
CD2				AP	pP		21 14 29.5	-0.6
CD2				XP	sP		21 14 32.3	0.0
CD2				PP	PP		21 17 34.3	+3.3
CD2				AMB	AMB			
	comp=Z,10.0nm,1.1s,mb4.7							
CD2				LR	LR			
	comp=N,840nm,14.4s							
CD2				LR	LR			
	comp=Z,900nm,13.2s,MS5.3							
HHC	**Hu-ho-hao-te**	**81.92**	**320**	*e*P		**P**	**21 14 26.5**	**+1.3**
HHC				AP	pP		21 14 29.8	-1.5
HHC				XP	sP		21 14 31.5	-2.0
HHC				PP	PP		21 17 37.0	+3.9
HHC				AMB	AMB			
	comp=Z,21nm,0.7s,mb5.2							
HHC				AMB	AMB			
	comp=Z,2μm,6.8s							
HHC				LR	LR			
	comp=N,582nm,17.0s,MS5.3							
HHC				LR	LR			
	comp=E,1μm,16.6s,MS5.3							
HHC				LR	LR			
	comp=Z,766nm,17.6s,MS5.1							
LZH	**Lanzhou**	**84.25**	**312**	*e*P		**P**	**21 14 38.5**	**+1.1**
LZH				AP	pP		21 14 42.5	-1.0
LZH				XP	sP		21 14 44.5	-1.2
LZH				PP	PP		21 17 55.0	+2.6
LZH				AMB	AMB			
	comp=Z,43nm,1.6s,mb5.3							
LZH				AMB	AMB			
	comp=Z,220nm,6.5s							
LZH				LR	LR			
	comp=E,846nm,15.0s							
LZH				LR	LR			
	comp=Z,961nm,17.6s,MS5.2							
LZH	**Lanzhou**	**84.25**	**312**	*e*P		**P**	**21 14 38.5**	**+1.1**
	comp=Z,43nm,1.6s,mb5.3							
LZH				pP	pP		21 14 42.5	-1.0
LZH				sP	sP		21 14 44.5	-1.2
LZH				PP	PP		21 17 55.0	+2.6
LZH				S	S		21 25 03.0	+1.0
LZH				sS	sS		21 25 10.0	-2.2
LZH				SS	SS		21 30 35.0	+2.8
LZH				LR	LR			
	comp=Z,960nm,17.6s,MS5.2							
PMSA	**Palmer Station**	**84.88**	**160**	*e*P		**P**	**21 14 39.4**	**-0.8**
SEY	**Seymchan**	**85.08**	**352**	*e*P		**P**	**21 14 40.6**	**-0.3**
SNAA	**Sanae**	**87.06**	**182**	*e*P		**P**	**21 14 49.9**	**-0.9**
SNAA				*e*			21 14 52.3	
SNAA				*e*			21 14 53.5	
SNAA				*e*			21 14 57.8	
SNAA	**Sanae**	**87.06**	**182**	*e*P		**P**	**21 14 49.2**	**-1.6**
SNAA	**Sanae**	**87.06**	**182**	*e*P		**P**	**21 14 50.4**	**-0.4**
KIPM	**Iron Peak**	**87.25**	**45**	*e*P		**P**	**21 14 52.0**	**-0.2**
VNA3	**Neumayer Olymp**	**87.64**	**180**	*e*P		**P**	**21 14 53.1**	**-0.5**
VNA3				*e*			21 14 55.1	
VNA3				*e*			21 14 56.3	
VNA3				*e*		pP	21 14 59.9	+0.1
VNA2	**Neumayer--Watz**	**87.93**	**181**	*e*P		**P**	**21 14 54.6**	**-0.4**
VNA2				*e*			21 14 56.4	
VNA2				*e*			21 14 58.0	
VNA2				*e*		pP	21 15 01.5	+0.3
VNA1	**Neumayer--Stat**	**88.22**	**181**	*e*P		**P**	**21 14 56.3**	**-0.1**
VNA1				*e*			21 14 58.1	
VNA1				*e*			21 14 59.3	
VNA1				*e*		pP	21 15 03.2	+0.6
WDC	**Whiskeytown Da**	**88.25**	**45**	*e*P		**P**	**21 14 56.4**	**-0.6**
MWC	**Mount Wilson**	**88.35**	**52**	*e*P		**P**	**21 14 56.9**	**-0.7**
CMB	**Columbia Colle**	**88.47**	**48**	*e*P		**P**	**21 14 57.5**	**-0.5**
ULN	**Ulaanbaatar**	**88.64**	**323**	*e*P		**P**	**21 14 59.4**	**+0.8**
ULN	**Ulaanbaatar**	**88.64**	**323**	*e*P		**P**	**21 14 59.0**	**+0.4**
	comp=Z,10nm,1.3s,mb5.0							
GTA	**Gaotai**	**88.68**	**313**	*e*P		**P**	**21 15 00.5**	**+1.5**
GTA				AP	pP		21 15 05.0	-0.2
GTA				XP	sP		21 15 07.5	+0.1
GTA				AMB	AMB			
	comp=Z,3.0nm,1.1s,mb4.5							
GTA				AMB	AMB			
	comp=Z,836nm,6.0s							
GTA				LR	LR			
	comp=N,633nm,16.2s,MS5.2							
GTA				LR	LR			
	comp=E,500nm,16.2s,MS5.2							
GTA				LR	LR			
	comp=Z,522nm,16.8s,MS5.0							
ISA	**Isabella**	**88.71**	**51**	*e*P		**P**	**21 14 58.9**	**-0.3**
YBH	**Yreka Blue Hor**	**88.72**	**44**	*e*P		**P**	**21 14 59.1**	**-0.1**
YAK	**Yakutsk**	**88.93**	**342**	*e*P		**P**	**21 14 59.2**	**-0.4**
YAK				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb5.0							
YAK	**Yakutsk**	**88.93**	**342**	*e*P		**P**	**21 14 57.8**	**-1.8**
SONM	**Songino Array**	**88.99**	**323**	P		**P**	**21 15 00.2**	**-0.1**
	comp=Z,2.3nm,0.9s,mb4.5,baz=144,slow=4.9,SNR=10							
HUMO	**Hull Mountain**	**89.01**	**43**	*e*P		**P**	**21 15 00.6**	**+0.2**
	comp=Z,21nm,1.6s,mb5.2							
BILL	**Bilibino**	**89.17**	**359**	*e*P		**P**	**21 14 59.0**	**-1.6**
BILL				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb5.1							
BILL				MLR	MLR			
	comp=Z,1μm,19.0s,MS5.3							
BILL	**Bilibino**	**89.17**	**359**	*e*P		**P**	**21 14 59.8**	**-0.8**
WAKR	**Walker**	**89.35**	**48**	*e*P		**P**	**21 15 02.2**	**+0.1**
PAHR	**Pah Rah Range**	**89.95**	**47**	*e*P		**P**	**21 15 04.6**	**-0.4**
	comp=Z,6.8nm,0.8s,mb5.0							
NVAR	**Mina Array Bea**	**90.10**	**48**	P		**P**	**21 15 05.2**	**-0.5**
	comp=Z,6.8nm,0.6s,mb5.1,baz=227,slow=8.4,SNR=39							
NVAR	**Mina Array Bea**	**90.10**	**48**	P		**P**	**21 15 05.2**	**-0.5**
GLA	**Glamis**	**90.25**	**55**	*e*P		**P**	**21 15 06.3**	**-0.2**
GLA				pmax	pmax			
	comp=Z,9.0nm,1.0s,mb5.0							
GLA	**Glamis**	**90.25**	**55**	*e*P		**P**	**21 15 06.3**	**-0.2**
	comp=Z,9.3nm,1.0s,mb5.1							
MOD	**Modoc**	**90.37**	**45**	*e*P		**P**	**21 15 08.3**	**+1.4**
MCK	**McKinley**	**90.83**	**17**	*e*P		**P**	**21 15 08.5**	**0.0**
TPNV	**Topopah Spring**	**90.89**	**50**	*e*P		**P**	**21 15 09.2**	**-0.2**
TPNV				pmax	pmax			
	comp=Z,7.0nm,0.7s,mb5.1							
TPNV	**Topopah Spring**	**90.89**	**50**	*e*P		**P**	**21 15 09.2**	**-0.2**
	comp=Z,7.1nm,0.7s,mb5.1							
LDFC	**Landfair**	**90.91**	**53**	*e*P		**P**	**21 15 09.7**	**+0.1**
ZAK	**Zakamensk**	**92.09**	**324**	*e*P		**P**	**21 15 14.3**	**-0.3**
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.5s,mb4.5							
NLU	**North Lily Min**	**95.12**	**49**	*e*P		**P**	**21 15 25.6**	**-3.3**
NEW	**Newport**	**95.31**	**40**	P		**P**	**21 15 28.3**	**-1.2**
SRU	**San Rafael**	**95.90**	**50**	*e*P		**P**	**21 15 28.0**	**-4.4**
PLCA	**Paso Flores**	**96.86**	**139**	P		**P**	**21 15 38.9**	**+1.9**
	comp=Z,1.4nm,0.8s,mb4.4,baz=226,slow=4.9,SNR=3.3							
PV01	**Paradox Valley**	**96.95**	**52**	*e*P		**P**	**21 15 37.0**	**-0.2**
TXAR	**Lajitas Array**	**97.65**	**62**	P		**P**	**21 15 41.5**	**+0.9**
	comp=Z,0.5nm,0.7s,mb4.1,baz=213,slow=6.0,SNR=5.1							
HVS	**Khovu-Aksy**	**97.82**	**322**	*e*P		**P**	**21 15 39.7**	**-1.1**
HVS				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb5.2							
PDAR	**Pinedale Array**	**97.95**	**47**	P		**P**	**21 15 42.7**	**+1.1**
	comp=Z,0.5nm,0.7s,mb4.2,baz=189,slow=1.7,SNR=2.0							
WMQ	**Urumqi**	**98.77**	**314**	*e*P		**P**	**21 15 46.0**	**+0.7**
WMQ				AMB	AMB			
	comp=Z,7.0nm,1.0s,mb5.2							
WMQ				LR	LR			
	comp=Z,568nm,17.4s,MS5.1							
ARU	**Arti**	**119.03**	**324**	*i* PKIKP		PKPdf	21 20 52.9	-1.1
ARU	**Arti**	**119.03**	**324**	*e*PKPdf		PKPdf	21 20 52.3	-1.7
AKTK	**Aktyubinsk**	**119.71**	**317**	PKP		PKPdf	21 20 55.0	-0.4
AKTO	**Aktyubinsk**	**119.71**	**317**	PKP		PKPdf	21 20 55.0	-0.4
	comp=Z,0.9nm,0.6s,baz=66,slow=1.9,SNR=3.7							
ARCES	**ARCESS Array B**	**127.15**	**345**	PKP		PKPdf	21 21 07.7	-1.5
	comp=Z,3.5nm,0.8s,baz=5.7,slow=1.2,SNR=12							
GNI	**Garni**	**129.70**	**305**	*e*PKPdf		PKPdf	21 21 16.1	+1.2
KIV	**Kislovodsk**	**130.75**	**310**

LPG La Plagne 152.03 333 *e*PKIKP PKPdf 21 21 55.5 +1.2
comp=Z,18nm,0.6s
SMF Signal de Mont 152.17 338 *e*PKIKP PKPdf 21 21 54.8 +0.3
AVF Avril sur Loir 152.21 339 *e*PKIKP PKPdf 21 21 54.3 -0.2
comp=Z,33nm,1.1s
SGMF Saint Gilles 152.40 348 *e*PKIKP PKPdf 21 21 54.7 0.0
BNI Bardonecchia 152.41 333 *e*PKIKP PKPbc 21 22 00.8 -0.9
ROSF Rostrenen 152.45 349 *e*PKIKP PKPdf 21 21 54.6 -0.2
BGF Bois d'Agland 152.58 340 *e*PKIKP PKPdf 21 21 54.7 -0.4
MBDF Montbardon 152.63 332 *e*PKIKP PKPdf 21 21 55.4 +0.2
comp=Z,11nm,0.8s
ORIF Oris-en-Rattie 152.86 334 *e*PKIKP PKPdf 21 21 55.3 -0.2
comp=Z,21nm,0.7s
TCF Toulx Ste Croi 153.03 340 *e*PKIKP PKPdf 21 21 55.8 +0.1
comp=Z,17nm,1.0s
FRF La Foret Royal 153.61 331 *e*PKIKP PKPdf 21 21 56.6 -0.1
comp=Z,53nm,1.2s
PVRL Vila Real 160.00 354 *e*PKPab PKPab 21 22 43.4 -1.0
PVIS Viseu 160.57 354 *e*PKPab PKPab 21 22 46.0 -0.9
MTE Manteigas 160.85 353 *e*PKPab PKPab 21 22 47.4 -0.7
ESDC Sonseca Array 160.88 344 PKPab PKPab 21 22 47.0 -1.3
comp=Z,1.1nm,0.8s,baz=25,slow=3.7,SNR=3.7
PBEJ Beja 163.23 352 *e*PKPab PKPab 21 22 59.9 +1.3
DBIC Dimbokro 164.37 202 PKPab PKPab 21 23 04.2 0.0
comp=Z,2.3nm,0.9s,baz=128,slow=12,SNR=2.6
TOA0 Torodi Ar. Sit 165.69 237 *e*PKPdf PKPdf 21 22 09.7 -1.6
TORD Torodi Ar. Bea 165.69 237 PKP PKPdf 21 22 10.4 -0.8
comp=Z,0.7nm,0.9s,baz=312,slow=1.6,SNR=4.1

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*BJI **27** 21:05:31.7, 2091S×16976E, h9km, mB5.7, mb5.2, Ms5.5, Msz5.3*
*ISCJB **27** 21:05:31.2±2.7, 2121S±004×16933E±003, h5km±17km, mb5.3/82, MS5.4/185, Error ellipse: s-maj=6.8km s-min=5.1km az=167.7*
*NEIC **27** 21:05:33.1±0.1, 2121S×16939E, h10km, mb5.4/35, MS5.5/182, Error ellipse: s-maj=6.7km s-min=5.2km az=157.0*
*LDG **27** 21:05:33.3±0.2, 2115S×16894E, h10km, Mb5.6/4, Error ellipse: s-maj=14.9km s-min=3.6km az=154.0*
*DJA **27** 21:05:35, 2162S×16965E, h10km, mb5.5/13*
*MOS **27** 21:05:36.1±1.0, 2115S×16936E, h33km, mb5.7/28, MS5.1/37, Error ellipse: s-maj=13.6km s-min=10.8km az=103.0*
*IDC **27** 21:05:38.4±1.9, 2124S×16938E, h45km±16km, mb4.9/21, mb1 5.0/24, mb1mx5.0/25, mbtmp4.9/24, ML4.4/1, MS4.6/2, Ms1 4.6/2, ms1mx4.2/22, Error ellipse: s-maj=14.5km s-min=12.8km az=80.0*
*SZGRF **27** 21:05:38.7, 2087S×16845E, h33km, Loyalty Islands*

ISC 27 21:05:35.8±2.1, 2124S±004×16937E±003, h24km±15km, h22km±1.8km; pP-P, n634, σ091/220, mb5.3/82, MS5.4/185, 76C-19D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.84**	**252**	*e*P	**Pn**	**21 06 18.7**	**-1.0**
DZM				*e*S	**Sn**	**21 06 52.4**	**-0.8**
RAO	**Raoul Island**	**13.99**	**127**	LR	LR	21 13 05.9	
comp=Z,2μm,21.9s,baz=215,slow=32							
RAO	**Raoul Island**	**13.99**	**127**	P	**Pn**	**21 08 52.0**	**-0.7**
HNR	**Honiara**	**14.83**	**321**	P	**Pn**	**21 09 06.9**	**+2.8**
10nm,0.3s,baz=222,slow=2.4,SNR=8.2							
HNR	**Honiara**	**14.83**	**321**	*e*P	**Pn**	**21 09 05.2**	**+1.0**
HNR				pmax	pmax		
comp=Z,411nm,1.1s							
HNR	**Honiara**	**14.83**	**321**	*e*Pn	**Pn**	**21 09 05.2**	**+1.1**
comp=Z,411nm,1.1s							
FUNA	**Funafuti**	**15.80**	**38**	*e*Pn	**Pn**	**21 09 17.2**	**+0.4**
comp=Z,206nm,1.3s							
URZ	**Urewera**	**18.24**	**160**	P	**Pn**	**21 09 48.6**	**+1.3**
comp=Z,1.2nm,0.3s,baz=349,slow=6.2,SNR=21							
ARMA	**Armidale**	**18.38**	**237**	*e*P	**Pn**	**21 09 51.9**	**+2.8**
AFI	**Afiamalu**	**19.39**	**71**	P	**Pn**	**21 09 59.1**	**-2.3**
comp=Z,1.8nm,0.3s,baz=272,slow=15,SNR=7.6							
AFI				LR	LR	21 15 46.5	
comp=Z,3μm,21.1s,baz=45,slow=31							
AFI	**Afiamalu**	**19.39**	**71**	P	**Pn**	**21 09 59.1**	**-2.3**
AFI				LR	LR	21 15 46.5	
SNZO	**South Karori**	**20.52**	**168**	*e*P	**P**	**21 10 11.3**	**-1.0**
comp=Z,31nm,0.6s							
SNZO				LR	LR		
comp=Z,2μm,19.0s,MS4.4							
CTA	**Charters Tower**	**21.66**	**269**	*e*P	**P**	**21 10 26.2**	**+1.5**
comp=Z,56nm,0.9s,mb5.0							
CTA	**Charters Tower**	**21.66**	**269**	P	**P**	**21 10 26.1**	**+1.4**
comp=Z,74nm,0.8s,mb5.2,baz=96,slow=12,SNR=33							
CTA	**Charters Tower**	**21.66**	**269**	*e*P	**P**	**21 10 26.2**	**+1.5**
CTA				pmax	pmax		
comp=Z,57nm,0.9s							
CTAO	**Charters Tower**	**21.66**	**269**	*e*P	**P**	**21 10 26.4**	**+1.7**
CTAO				MLR	MLR		
comp=Z,3μm,19.0s,MS4.7							
CNB	**Canberra Magne**	**22.46**	**227**	*e*P	**P**	**21 10 35.3**	**+2.1**
RPZ	**Rata Peaks**	**22.46**	**177**	P	**P**	**21 10 33.8**	**+0.7**
comp=Z,29nm,0.9s,mb4.7,baz=93,slow=2.5,SNR=9.0							
CAN	**Canberra**	**22.71**	**227**	*e*P	**P**	**21 10 36.8**	**+0.9**
CAN				*e*		21 14 23.1	
PMG	**Port Moresby**	**24.39**	**295**	*e*P	**P**	**21 10 47.2**	**-5.3**
PMG				MLR	MLR		
comp=Z,2μm,19.0s							
COEN	**Coen**	**25.97**	**282**	*e*P	**P**	**21 11 07.4**	**+0.6**
comp=Z,52nm,1.3s,mb4.9							
TOO	**Toolangi**	**26.30**	**227**	*e*P	**P**	**21 11 10.6**	**+1.0**
STKA	**Stephens Creek**	**26.93**	**241**	*e*P	**P**	**21 11 16.1**	**+0.7**
comp=Z,37nm,0.9s,mb4.9							
STKA				*e*PCP	PcP	21 14 37.6	+0.5
STKA	**Stephens Creek**	**26.93**	**241**	P	**P**	**21 11 15.6**	**+0.1**
comp=Z,38nm,0.9s,mb4.9,baz=79,slow=9.0,SNR=20							
STKA				PcP	PcP	21 14 37.7	+0.6
comp=Z,7.5nm,0.7s,baz=93,slow=6.3,SNR=4.8							
TAU	**Tasmania Unive**	**28.41**	**215**	*e*P	**P**	**21 11 29.3**	**+0.9**
TAU				pmax	pmax		
comp=Z,47nm,1.1s,mb5.0							
TAU				MLR	MLR		
comp=Z,3μm,19.0s,MS4.9							
TAU	**Tasmania Unive**	**28.41**	**215**	*e*P	**P**	**21 11 29.3**	**+0.8**
comp=Z,47nm,1.1s,mb5.0							
TAU				LR	LR		
comp=Z,3μm,19.0s,MS4.9							
RAR	**Rarotonga**	**28.75**	**96**	*e*P	**P**	**21 11 30.9**	**-0.8**
WB2	**Warramunga Ar**	**32.77**	**266**	*e*P	**P**	**21 12 05.9**	**-1.3**
WB2				*e*PCP	PcP	21 14 52.4	+0.1
WRAB	**Tennant Creek**	**32.77**	**266**	*e*P	**P**	**21 12 04.8**	**-2.4**
WRAB	**Tennant Creek**	**32.77**	**266**	*e*P	**P**	**21 12 06.1**	**-1.1**
WRAB				LR	LR		
comp=Z,4μm,20.0s,MS5.1							
WRA	**Warramunga Arr**	**32.78**	**266**	P	**P**	**21 12 05.8**	**-1.5**
comp=Z,19nm,0.9s,mb5.0,baz=98,slow=8.7,SNR=12							
ASAR	**Alice Springs**	**32.81**	**259**	P	**P**	**21 12 06.8**	**-0.7**
comp=Z,29nm,0.7s,mb5.3,baz=84,slow=9.0,SNR=55							
ASAR				PcP	PcP	21 14 51.9	-0.5
comp=Z,4.7nm,0.7s,baz=119,slow=2.8,SNR=7.0							
FORT	**Forrest**	**38.14**	**247**	*e*P	**P**	**21 12 52.9**	**-0.4**
comp=Z,33nm,0.7s,mb5.2							
FORT				*e*PCP	PP	21 14 13.5	-7.2
FITZ	**Fitzroy Crossi**	**41.20**	**266**	*e*P	**P**	**21 13 18.6**	**-0.3**
comp=Z,85nm,0.6s,mb5.5							
FITZ	**Fitzroy Crossi**	**41.20**	**266**	P	**P**	**21 13 18.9**	**-0.1**
comp=Z,60nm,0.7s,mb5.3,baz=118,slow=9.6,SNR=64							
GUMO	**Guam**	**42.15**	**323**	*e*P	**P**	**21 13 25.6**	**-1.0**
BATI	**Baumata**	**45.19**	**277**	P	**P**	**21 13 52.2**	**+1.0**
comp=Z,29nm,0.7s,mb5.2,baz=113,slow=3.4,SNR=4.3							
MBWA	**Marble Bar**	**46.12**	**261**	*e*P	**P**	**21 13 58.6**	**+0.1**
MBWA				LR	LR		
comp=Z,2μm,20.0s,MS5.0							
KLBR	**Kellerberrin**	**46.99**	**246**	*e*P	**P**	**21 14 04.0**	**-1.2**
comp=Z,64nm,1.1s,mb5.5							
NWAO	**Narrogin (SRO)**	**47.43**	**244**	P	**P**	**21 14 08.1**	**-0.6**
comp=Z,18nm,0.6s,mb5.2,baz=99,slow=5.9,SNR=13							
NWAO	**Narrogin (SRO)**	**47.43**	**244**	P	**P**	**21 14 08.1**	**-0.6**
NWAO				LR	LR		
comp=Z,3μm,21.0s,MS5.2							
MUN	**Mundaring**	**48.30**	**246**	*e*P	**P**	**21 14 14.3**	**-1.1**
KAPI	**Kappang**	**50.70**	**281**	P	**P**	**21 14 33.1**	**-0.8**
comp=Z,12nm,0.7s,mb4.9,baz=201,slow=11,SNR=3.9							
KAPI	**Kappang**	**50.70**	**281**	*e*P	**P**	**21 14 32.9**	**-1.0**
KAPI				LR	LR		
comp=Z,41nm,1.3s,mb5.2							
comp=Z,602nm,19.0s,MS4.6							
DAV	**Davao City (W)**	**51.36**	**298**	PFAKE		21 14 50.0	+11
DAV				LR	LR		
comp=Z,1.0nm,19.0s							
BUKP	**Musuan**	**52.24**	**299**	*e*P	**P**	**21 14 46.5**	**+1.1**
BUTP	**Butuan**	**52.41**	**300**	*e*P	**P**	**21 14 46.1**	**-0.5**
PAGZ	**Pagadian**	**53.60**	**298**	*e*P	**P**	**21 14 54.9**	**-0.6**
MSLP	**Maasin**	**53.69**	**301**	*e*P	**P**	**21 14 55.3**	**-0.9**
BESP	**Borongan**	**54.10**	**303**	*e*P	**P**	**21 14 58.4**	**-0.7**
OCLP	**Ormoc**	**54.42**	**302**	*e*P	**P**	**21 14 59.3**	**-2.2**
CBIJ	**Chichi jima**	**54.78**	**330**	P	**P**	**21 15 02.6**	**-1.2**
comp=Z,81nm,1.0s,mb5.7,baz=93,slow=19,SNR=4.0							
GUIM	**Jordan**	**55.80**	**300**	*e*P	**P**	**21 15 09.2**	**-2.2**
RCP	**Roxas**	**56.20**	**301**	⇓*e*P	**P**	**21 15 14.9**	**+0.7**
PVCP	**Virac**	**56.29**	**304**	*e*P	**P**	**21 15 14.9**	**0.0**
SBA	**Scott Base**	**56.68**	**181**	*e*P	**P**	**21 15 17.8**	**+1.0**
SBA				MLR	MLR		
comp=Z,976nm,21.0s,MS4.9							
CUYO	**Cuyo Island**	**57.20**	**299**	*e*P	**P**	**21 15 21.4**	**0.0**
OTRP	**Odiongan**	**57.24**	**301**	*e*P	**P**	**21 15 21.0**	**-0.7**
AUQP	**San Andres**	**57.28**	**303**	*e*P	**P**	**21 15 23.3**	**+1.4**
CASY	**Casey**	**58.35**	**204**	*e*P	**P**	**21 15 28.0**	**-0.7**
BUSP	**Coron**	**58.51**	**300**	*e*P	**P**	**21 15 30.4**	**-0.1**
ENPP	**El Nido**	**58.70**	**298**	*e*P	**P**	**21 15 33.8**	**+1.9**
KKM	**Kota Kinabalu**	**58.75**	**291**	P	**P**	**21 15 31.6**	**-0.8**
KKM				LR	LR		
comp=Z,691nm,21.0s,MS4.8							
LUBP	**Lubang**	**59.44**	**301**	*e*P	**P**	**21 15 34.1**	**-2.9**
BALP	**Baler**	**59.57**	**304**	*e*P	**P**	**21 15 38.1**	**+0.2**
PALP	**Palanan**	**59.72**	**306**	*e*P	**P**	**21 15 38.1**	**-0.8**
CAUP	**Cauayan**	**60.10**	**305**	*e*P	**P**	**21 15 47.2**	**+5.7**
ABRA	**Dolores**	**61.37**	**305**	*e*P	**P**	**21 15 49.1**	**-1.1**
KSM	**Kuching**	**61.94**	**284**	*e*P	**P**	**21 15 53.1**	**-1.1**
MJAR	**Matsushiro Arr**	**64.57**	**333**	P	**P**	**21 16 09.9**	**-1.2**
comp=Z,14nm,0.9s,mb5.0,baz=170,slow=7.2,SNR=27							
MAJO	**Matsushiro**	**64.57**	**333**	*e*P	**P**	**21 16 10.9**	**-0.2**
MAJO				pmax	pmax		
comp=Z,29nm,0.9s,mb5.3							
MAJO				MLR	MLR		
comp=Z,843nm,20.0s,MS4.9							
MAJO	**Matsushiro**	**64.57**	**333**	*e*P	**P**	**21 16 10.9**	**-0.1**
comp=Z,29nm,0.9s,mb5.3							
MAJO				LR	LR		
comp=Z,843nm,20.0s,MS4.9							
MAT	**Matsushiro**	**64.57**	**333**	P	**P**	**21 16 10.4**	**-0.7**
YHNB	**Yeheng**	**65.25**	**312**	*e*P	**P**	**21 16 15.3**	**-0.5**
comp=Z,66nm,0.9s,mb5.7							
MIR	**Mirnyy**	**65.28**	**205**	⇓*i*P	**P**	**21 16 15.0**	**-0.4**
MIR				*i*		21 16 27.0	
MIR				*i*		21 16 29.0	
MIR				pmax	pmax		
comp=Z,200nm,1.8s,mb5.8							
TATO	**Taipei**	**65.37**	**312**	*e*P	**P**	**21 16 16.1**	**-0.5**
TATO				LR	LR		
comp=Z,503nm,22.0s,MS4.7							
QSPA	**South Pole Qui**	**68.83**	**180**	P	**P**	**21 16 37.9**	**+0.2**
comp=Z,58nm,1.1s,mb5.4,baz=24,slow=2.2,SNR=44							
ASAJ	**Asahikawa**	**69.50**	**340**	P	**P**	**21 16 43.5**	**+1.3**
comp=Z,67nm,0.9s,mb5.6,baz=235,slow=11,SNR=15							
COCO	**West Island**	**69.55**	**264**	P	**P**	**21 16 43.9**	**+0.6**
COCO				LR	LR		
comp=Z,745nm,19.0s,MS5.0							
KSRS	**Korea Array**	**70.22**	**326**	P	**P**	**21 16 47.2**	**+0.4**
comp=Z,5.2nm,0.9s,mb4.5,baz=146,slow=6.7,SNR=10							
QIZ	**Qiongzhong**	**70.67**	**300**	P	**P**	**21 16 51.5**	**+1.5**
QIZ	**Qiongzhong**	**70.67**	**300**	*e*P	**P**	**21 16 51.1**	**+1.1**
comp=Z,59nm,1.1s,mb5.4							
QIZ				LR	LR		
comp=Z,657nm,21.0s,MS4.9							
INCN	**Inchon**	**70.92**	**325**	*e*P	**P**	**21 16 51.8**	**+0.7**
INCN				LR	LR		
comp=Z,682nm,19.0s,MS4.9							
NJ2	**Nanjing**	**71.72**	**316**	*e*P	**P**	**21 16 57.5**	**+1.4**
NJ2				AMB	AMB		
comp=Z,10.0nm,0.8s,mb4.8							
YSS	**Yuzh-Sakhalins**	**72.00**	**341**	⇑*i*P	**P**	**21 16 57.5**	**+0.1**
YSS				pmax	pmax		
comp=Z,120nm,1.0s,mb5.8							
YSS	**Yuzh-Sakhalins**	**72.00**	**341**	⇑*e*P	**P**	**21 16 57.7**	**+0.3**
WHN	**Wuhan**	**73.78**	**313**	P	**P**	**21 17 08.5**	**+0.2**
PET	**Petropavlovsk**	**74.53**	**353**	PFAKE		21 17 20.0	+7.8
PET				LR	LR		
comp=Z,2μm,19.0s,MS5.4							
DL2	**Dalian**	**74.67**	**323**	⇓P	**P**	**21 17 14.0**	**+0.6**
DL2				AMB	AMB		
comp=Z,30nm,1.0s,mb5.2							
PETK	**Petropavlovsk-**	**74.72**	**353**	P	**P**	**21 17 14.0**	**+0.7**
comp=Z,20nm,1.0s,mb5.0,baz=122,slow=5.6,SNR=11							
MDJ	**Mudanjiang**	**74.93**	**332**	P	**P**	**21 17 15.0**	**+0.3**
MDJ				AP	pP	21 17 17.8	-4.5
MDJ				AMB	AMB		
comp=Z,19nm,1.3s,mb4.9							
MDJ				AMB	AMB		
comp=Z,626nm,13.8s							
MDJ	**Mudanjiang**	**74.93**	**332**	*e*P	**P**	**21 17 14.7**	**0.0**
comp=Z,22nm,1.0s,mb5.0							
MDJ				LR	LR		
comp=Z,719nm,19.0s,MS5.0							
KKTK	**Khon Kaen**	**75.17**	**294**	P	**P**	**21 17 17.0**	**+0.3**
comp=Z,463nm,0.5s							
SNY	**Shenyang**	**75.70**	**326**	⇑P	**P**	**21 17 19.0**	**-0.2**
SNY				AMB	AMB		
comp=Z,16nm,2.5s,mb4.5							
HABR	**Khabarovsk**	**75.88**	**337**	*e*P	**P**	**21 17 18.1**	**-1.9**
HABR				*e*		21 17 32.5	
HABR				*e*		21 20 07.9	
HABR				*e*S	S	21 26 58.5	-2.5
HABR				*e*		21 27 16.1	
HABR				*e*		21 27 29.4	
HABR				*e*		21 31 50.5	
HABR				*e*		21 35 13.8	
CN2	**Changchun**	**76.22**	**329**	*e*P	**P**	**21 17 22.3**	**+0.2**
CN2				AMB	AMB		
comp=Z,30nm,0.9s,mb5.2							
MAW	**Mawson**	**76.64**	**202**	*e*P	**P**	**21 17 24.5**	**+0.2**
comp=Z,10nm,0.8s,mb4.8							
MAW	**Mawson**	**76.64**	**202**	P	**P**	**21 17 24.4**	**+0.2**
comp=Z,14nm,0.9s,mb4.9,baz=112,slow=7.8,SNR=24							
MAW	**Mawson**	**76.64**	**202**	*e*P	**P**	**21 17 24.5**	**+0.2**
MAW				pmax	pmax		
comp=Z,10.0nm,0.8s							
ENH	**Enshi**	**77.03**	**310**	PFAKE		21 17 40.0	+13
ENH				LR	LR		
comp=Z,6.0nm,22.0s							
GYA	**Guiyang**	**77.06**	**305**	⇑*i*P	**P**	**21 17 29.3**	**+2.0**
GYA				PCP	PcP	21 17 41.5	+3.4
GYA				PP	PP	21 20 25.0	+3.8
GYA				S	S	21 27 18.5	+3.6
GYA				SS	SS	21 32 18.0	+5.2
GYA				AMB	AMB		
comp=Z,40nm,1.0s,mb5.3							
GYA				AMB	AMB		
comp=Z,180nm,5.0s							
GYA				LR	LR		
comp=N,1μm,18.9s,MS5.4							
GYA				LR	LR		
comp=E,960nm,19.8s,MS5.4							
GYA				LR	LR		
comp=Z,2μm,19.6s,MS5.4							
NST	**Nakhon Sawan**	**77.17**	**293**	P	**P**	**21 17 29.0**	**+0.9**
KLR	**Kul'dur**	**77.73**	**336**	*e*P	**P**	**21 17 26.8**	**-3.7**
KLR				pmax	pmax		
comp=Z,100nm,1.8s,mb5.4							
NANT	**Nan**	**78.10**	**296**	⇑P	**P**	**21 17 32.0**	**-1.3**
comp=Z,425nm,1.0s,mb6.3							
BJT	**Baijiatuao**	**78.55**	**321**	PFAKE		21 17 50.0	+15
BJT				LR	LR		
comp=Z,1μm,19.0s,MS5.2							
BJI	**Beijing**	**78.56**	**321**	P	**P**	**21 17 35.3**	**0.0**
BJI				AMB	AMB		
comp=Z,16nm,0.7s,mb5.1							
BJI				AMB	AMB		
comp=Z,488nm,7.1s							
BJI	**Beijing**	**78.56**	**321**	P	**P**	**21 17 35.2**	**-0.1**
BJI				pmax	pmax		
comp=Z,16nm,0.7s,mb5.1							
BJI	**Beijing**	**78.56**	**321**	P	**P**	**21 17 35.2**	**-0.1**
comp=Z,16nm,0.7s,mb5.1							
BDT	**Bhumibol Dam**	**78.84**	**293**	P	**P**	**21 17 38.5**	**+1.1**
CHRT	**Chiangrai**	**79.36**	**296**	⇓P	**P**	**21 17 42.0**	**+1.8**
comp=Z,342nm,1.0s,mb6.2							
KMI	**Kunming**	**79.43**	**302**	P	**P**	**21 17 41.8**	**+1.4**
KMI				AP	pP	21 17 49.3	+1.2
KMI				AMB	AMB		
comp=Z,57nm,0.9s,mb5.5							
KMI	**Kunming**	**79.43**	**302**	P	**P**	**21 17 41.8**	**+1.4**
KMI				*PP	pP	21 17 49.2	+1.1
KMI				pmax	pmax		
comp=Z,57nm,0.9s,mb5.5							
KMI	**Kunming**	**79.43**	**302**	P	**P**	**21 17 41.8**	**+1.4**
comp=Z,57nm,0.9s,mb5.5							
KMI				pP	pP	21 17 49.2	+1.1
CM31	**Chiang Mai Arr**	**79.43**	**295**	*e*P	**P**	**21 17 41.7**	**+1.1**
comp=Z,4.6nm,0.6s,mb4.6							
CM31				LR	LR		
comp=Z,600nm,20.0s,MS4.9							
CMAR	**Chiang Mai Arr**	**79.43**	**295**	P	**P**	**21 17 42.1**	**+1.5**
comp=Z,32nm,0.9s,mb5.2,baz=135,slow=4.4,SNR=107							
CMAR				PKKPbc	PKKPbc	21 36 28.6	-1.3
comp=Z,0.5nm,0.8s,baz=280,slow=4.1,SNR=4.4							
CMAR	**Chiang Mai Arr**	**79.43**	**295**	⇑*e*P	**P**	**21 17 42.0**	**+1.4**
CMAR	**Chiang Mai Arr**	**79.43**	**295**	⇑*e*P	**P**	**21 17 42.1**	**+1.5**
XAN	**Xi'an**	**79.54**	**313**	P	**P**	**21 17 41.5**	**+0.6**
XAN				AP	pP	21 17 48.8	+0.3
XAN				AMB	AMB		
comp=Z,30nm,1.4s,mb5.0							
CHTO	**Chiang Mai**	**79.59**	**295**	*e*P	**P**	**21 17 42.4**	**+1.0**
CHTO				pmax	pmax		
comp=Z,44nm,0.8s,mb5.4							
CHTO				MLR	MLR		
comp=Z,619nm,19.0s,MS5.0							
CHTO	**Chiang Mai**	**79.59**	**295**	*e*P	**P**	**21 17 42.4**	**+0.9**
comp=Z,44nm,0.8s,mb5.5							
CHTO				LR	LR		
comp=Z,619nm,19.0s,MS5.0							
CD2	**Chengdu**	**81.54**	**308**	⇓*i*P	**P**	**21 17 52.8**	**+1.1**
CD2				AP	pP	21 17 57.5	-1.9
CD2				XP	sP	21 18 00.0	-2.1
CD2				PP	PP	21 21 01.5	+3.0
CD2				S	S	21 28 03.8	+1.4
CD2				XS	sS	21 28 11.8	-3.3
CD2				SS	SS	21 33 24.0	+4.0
CD2				AMB	AMB		
comp=Z,30nm,1.2s,mb5.1							
CD2				LR	LR		
comp=E,1μm,16.8s							
CD2				LR	LR		
comp=Z,860nm,15.6s,MS5.2							
HHC	**Hu-ho-hao-te**	**81.81**	**320**	*e*P	**P**	**21 17 53.8**	**+1.0**
HHC				AP	pP	21 17 58.5	-2.0
HHC				XP	sP	21 18 01.0	-2.3
HHC				PP	PP	21 21 03.5	+3.0
HHC				S	S	21 28 06.5	+1.8
HHC				SKS		21 28 09.3	
HHC				XS	sS	21 28 14.3	-3.1
HHC				SS	SS	21 33 28.3	+4.7
HHC				AMB	AMB		
comp=Z,22nm,0.9s,mb5.1							
HHC				AMB	AMB		
comp=Z,2μm,6.5s							
HHC				LR	LR		
comp=N,625nm,17.6s,MS5.3							
HHC				LR	LR		
comp=E,1μm,16.7s,MS5.3							
HHC				LR	LR		
comp=Z,788nm,16.5s,MS5.2							
HIA	**Hailar**	**82.89**	**330**	PFAKE		21 18 10.0	+12
HIA				LR	LR		
comp=Z,1μm,19.0s,MS5.3							
SYO	**Syowa Base**	**83.06**	**196**	⇓*e*P	**P**	**21 17 56.6**	**-2.4**
LZH	**Lanzhou**	**84.15**	**312**	⇑P	**P**	**21 18 06.5**	**+1.4**
LZH				AP	pP	21 18 14.8	+2.0
LZH				XP	sP	21 18 17.3	+1.7
LZH				PP	PP	21 21 25.0	+5.2
LZH				S	S	21 28 28.0	-0.7
LZH				XS	sS	21 28 41.0	-0.4
LZH				SS	SS	21 34 00.0	+1.5
LZH				AMB	AMB		
comp=Z,80nm,1.3s,mb5.7							
LZH				AMB	AMB		
comp=Z,380nm,4.8s							
LZH				LR	LR		
comp=E,846nm,15.0s							
LZH				LR	LR		
comp=Z,2μm,16.4s,MS5.5							
LZH	**Lanzhou**	**84.15**	**312**	⇑P	**P**	**21 18 06.5**	**+1.4**
LZH				*SP	sP	21 18 17.2	+1.6
LZH						21 21 25.0	
LZH				S	S	21 28 28.0	-0.7
LZH				SS	SS	21 34 00.0	+1.5
LZH				pmax	pmax		
comp=Z,80nm,1.3s,mb5.7							
LZH				MLR	MLR		
comp=Z,2μm,16.4s,MS5.5							
LZH	**Lanzhou**	**84.15**	**312**	⇑P	**P**	**21 18 06.5**	**+1.4**
comp=Z,80nm,1.3s,mb5.7							
LZH				pP	pP	21 18 14.7	+1.9
LZH				sP	sP	21 18 17.2	+1.6
LZH				PP	PP	21 21 25.0	+5.2
LZH				S	S	21 28 28.0	-0.7
LZH				sS	sS	21 28 41.0	-0.4
LZH				SS	SS	21 34 00.0	+1.5
LZH				LR	LR		
comp=Z,2μm,16.4s,MS5.5							
KDAK	**Kodiak Island**	**84.87**	**19**	PFAKE		21 18 20.0	+12
KDAK				LR	LR		
comp=Z,253nm,19.0s,MS4.6							
SEY	**Seymchan**	**84.95**	**352**	⇑*e*P	**P**	**21 18 07.9**	**-0.6**
SEY	**Seymchan**	**84.95**	**352**	⇑*e*P	**P**	**21 18 07.0**	**-1.5**
PMSA	**Palmer Station**	**85.00**	**160**	*e*P	**P**	**21 18 09.1**	**+0.1**
CLNS	**Chul'man**	**86.27**	**337**	*e*P	**P**	**21 18 15.1**	**-0.1**
CLNS				*e*	pP	21 18 22.3	-0.6
CLNS				*e*		21 21 35.0	
CLNS				*e*S	S	21 28 40.7	-8.0
CLNS				*e*SS	SS	21 34 24.7	-4.2
CLNS				pmax	pmax		
comp=Z,90nm,1.1s,mb5.9							
CLNS				pmax	pmax		
comp=E,13nm,1.0s							
CLNS				pmax	pmax		
comp=N,51nm,1.2s							
CLNS				smax			
comp=N,6.0nm,0.9s			

comp=Z,1µm,19.0s,MS5.3
OHCM Honcut 88.27 46 *e*P **P 21 18 25.2 -0.1**
MWC Mount Wilson 88.29 52 *e*P **P 21 18 25.6 +0.1**
MWC pmax pmax
comp=Z,16nm,0.8s,mb5.3
MWC MLR MLR
comp=Z,995nm,19.0s,MS5.2
MWC Mount Wilson 88.29 52 *e*P **P 21 18 25.6 +0.1**
comp=Z,16nm,0.8s,mb5.3
MWC LR LR
comp=Z,995nm,19.0s,MS5.2
VNA1 Neumayer--Stat 88.35 181 *e*P **P 21 18 24.8 -0.4**
VNA1 *e* 21 18 26.8
VNA1 *e* pP 21 18 32.3 -0.7
CMB Columbia Colle 88.39 48 *e*P **P 21 18 25.6 -0.3**
CMB pmax pmax
comp=Z,21nm,0.8s,mb5.4
CMB MLR MLR
comp=Z,894nm,19.0s,MS5.2
CMB Columbia Colle 88.39 48 *e*P **P 21 18 25.6 -0.3**
comp=Z,21nm,0.8s,mb5.4
CMB LR LR
comp=Z,894nm,19.0s,MS5.2
ULN Ulaanbaatar 88.53 323⇑ *e*P **P 21 18 26.8 +0.5**
ULN MLR MLR
comp=Z,800nm,19.0s,MS5.2
GTA Gaotai 88.58 313 ⇑P **P 21 18 27.5 +0.8**
GTA AP pP 21 18 32.0 -2.5
GTA XP sP 21 18 34.5 -2.8
GTA S S 21 29 14.3 +2.6
GTA XS sS 21 29 22.0 -2.5
GTA AMB AMB
comp=Z,13nm,1.0s,mb5.2
GTA AMB AMB
comp=Z,1µm,6.0s
GTA LR LR
comp=N,541nm,16.8s,MS5.3
GTA LR LR
comp=E,713nm,16.5s,MS5.3
GTA LR LR
comp=Z,916nm,16.2s,MS5.3
BAR Barrett 88.63 54 PFAKE 21 18 40.0 +13
BAR LR LR
comp=Z,794nm,19.0s,MS5.2
ISA Isabella 88.64 51 *e*P **P 21 18 27.2 +0.1**
ISA MLR MLR
comp=Z,854nm,19.0s,MS5.2
YBH Yreka Blue Hor 88.64 44 *e*P **P 21 18 27.6 +0.6**
YBH MLR MLR
comp=Z,986nm,20.0s
YAK Yakutsk 88.80 342 *e*P **P 21 18 25.8 -1.4**
YAK pmax pmax
comp=Z,44nm,0.9s,mb5.8
YAK Yakutsk 88.80 342⇑ *e*P **P 21 18 23.9 -3.3**
YAK LR LR
comp=Z,994nm,20.0s,MS5.2
SONM Songino Array 88.88 323 P **P 21 18 28.2 +0.3**
comp=Z,8.5nm,0.8s,mb5.1,baz=135,slow=5.1,SNR=29
SONM PKKP PKKPbc 21 36 07.4 -1.6
comp=Z,0.8nm,0.6s,baz=304,slow=1.7,SNR=4.3
LHEM Herd Peak 88.91 44 P **P 21 18 28.6 +0.4**
HUMO Hull Mountain 88.93 43 *e*P **P 21 18 28.9 +0.6**
comp=Z,18nm,0.9s,mb5.4
HUMO LR LR
comp=Z,891nm,19.0s,MS5.2
PMR Palmer 88.97 18 *e*P **P 21 18 23.9 -4.1**
PMR pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
PMR MLR MLR
comp=Z,987nm,19.0s,MS5.2
PMR Palmer 88.97 18 *e*P **P 21 18 23.9 -4.1**
comp=Z,5.0nm,0.8s,mb4.9
PMR LR LR
comp=Z,987nm,19.0s,MS5.2
BILL Bilibino 89.04 359 *i* P **P 21 18 27.9 -0.3**
BILL *e*S S 21 28 53.3 -22
BILL *e*PS 21 30 16.0
BILL pmax pmax
comp=Z,47nm,1.1s,mb5.7
BILL MLR MLR
comp=Z,800nm,15.0s,MS5.3
BILL Bilibino 89.04 359 *i* P **P 21 18 27.0 -1.2**
BILL LR LR
comp=Z,1µm,21.0s,MS5.4
LBCM Butte Creek Ri 89.09 45 P **P 21 18 29.4 +0.3**
PFO Pinyon Flat Ob 89.20 53 *e*P **P 21 18 29.4 -0.4**
PFO pmax pmax
comp=Z,45nm,1.7s,mb5.5
PFO MLR MLR
comp=Z,832nm,20.0s,MS5.2
PFO Pinyon Flat Ob 89.20 53 *e*P **P 21 18 29.4 -0.5**
comp=Z,45nm,1.7s,mb5.5
PFO LR LR
comp=Z,832nm,20.0s,MS5.2
BUOR Burton Butte 89.22 44 P **P 21 18 30.0 +0.3**
WAKR Walker 89.27 48 *e*P **P 21 18 30.4 +0.4**
MPOR Mary's Peak 89.52 41 P **P 21 18 31.4 +0.4**
DAC Darwin (Calif) 89.56 51 PFAKE 21 18 40.0 +8.6
DAC LR LR
comp=Z,788nm,19.0s,MS5.2
GSC Goldstone 89.69 52 *e*P **P 21 18 32.3 +0.2**
GSC pmax pmax
comp=Z,60nm,1.8s,mb5.6
GSC Goldstone 89.69 52 PFAKE 21 18 40.0 +7.9
GSC LR LR
comp=Z,1µm,19.0s,MS5.3
COR Corvallis 89.71 41 PFAKE 21 18 40.0 +8.1
COR LR LR
comp=Z,896nm,19.0s,MS5.2
PAHR Pah Rah Range 89.87 47 *e*P **P 21 18 33.2 +0.4**
comp=Z,27nm,0.9s,mb5.6
NVAR Mina Array Bea 90.03 48 P **P 21 18 33.9 +0.3**
comp=Z,12nm,0.7s,mb5.4,baz=227,slow=9.1,SNR=11
IRO Indian Ridge 90.07 42 P **P 21 18 33.2 -0.5**
GLA Glamis 90.19 55 *e*P **P 21 18 35.2 +0.7**
GLA pmax pmax
comp=Z,34nm,0.9s,mb5.7
GLA MLR MLR
comp=Z,1µm,20.0s,MS5.3
GLA Glamis 90.19 55 *e*P **P 21 18 35.2 +0.7**
comp=Z,34nm,0.9s,mb5.7
GLA LR LR
comp=Z,1µm,20.0s,MS5.3
MOD Modoc 90.30 45 PFAKE 21 18 50.0 +15
MOD LR LR
comp=Z,1µm,20.0s,MS5.2
TPH Tonopah 90.63 49 *e*P **P 21 18 36.7 +0.3**
TPH pmax pmax
comp=Z,20nm,0.9s,mb5.5
TPH MLR MLR
comp=Z,913nm,20.0s,MS5.2
TPH Tonopah 90.63 49 *e*P **P 21 18 36.7 +0.4**
comp=Z,20nm,0.9s,mb5.5
TPH LR LR
comp=Z,913nm,20.0s,MS5.2
SIT Sitka 90.66 27 PFAKE 21 18 50.0 +14
SIT LR LR
comp=Z,2µm,20.0s,MS5.6
LSA Lhasa 90.67 302 *e*P **P 21 18 37.9 +1.1**
LSA pmax pmax
comp=Z,14nm,0.8s,mb5.3
LSA MLR MLR
comp=Z,1µm,22.0s,MS5.3
LSA Lhasa 90.67 302 *e*P **P 21 18 37.9 +1.2**
comp=Z,14nm,0.8s,mb5.3
LSA LR LR
comp=Z,1µm,22.0s,MS5.3
MCK McKinley 90.72 17 *e*P **P 21 18 36.0 -0.1**
OOW Octopus West 90.80 38 P **P 21 18 37.7 +0.8**
NLWA Neilton Lookou 90.81 39 *e*P **P 21 18 37.4 +0.4**
comp=Z,23nm,1.0s,mb5.5
NLWA LR LR
comp=Z,1µm,19.0s,MS5.4
TPNV Topopah Spring 90.82 50 *e*P **P 21 18 37.4 +0.1**
TPNV pmax pmax
comp=Z,35nm,1.0s,mb5.6
TPNV MLR MLR
comp=Z,1µm,19.0s,MS5.3
TPNV Topopah Spring 90.82 50 *e*P **P 21 18 37.4 0.0**
comp=Z,35nm,1.0s,mb5.7
TPNV LR LR
comp=Z,1µm,19.0s,MS5.3
LDFC Landfair 90.84 53 *e*P **P 21 18 37.5 +0.1**
FL2 Flat Top 2 91.10 40 P **P 21 18 38.7 +0.3**
BOD Bodaibo 91.17 334 *e*P **P 21 18 37.0 -1.4**
BOD pmax pmax
comp=Z,11nm,1.9s,mb4.9
TDL Tradedollar La 91.26 40 P **P 21 18 39.5 +0.4**
VIPM Ingram Point 91.34 42 P **P 21 18 39.6 +0.1**
PALK Pallekele 91.36 277 PFAKE 21 18 50.0 +10
PALK LR LR
comp=Z,740nm,19.0s,MS5.2
SHPR Sheep Range 91.42 51 *e*P **P 21 18 40.6 +0.5**
GNW Green Mountain 91.51 39 *e*P **P 21 18 40.4 +0.1**
comp=Z,23nm,0.9s,mb5.5
WRAK Wrangell Islan 91.54 28 PFAKE 21 18 50.0 +10
WRAK LR LR
comp=Z,2µm,21.0s,MS5.4
WVOR Wild Horse Val 91.64 45 *e*P **P 21 18 40.9 -0.1**
WVOR MLR MLR
comp=Z,1µm,19.0s,MS5.3
BMN Battle Mountai 91.68 47 *e*P **P 21 18 41.2 0.0**
BMN pmax pmax
comp=Z,15nm,0.9s,mb5.3
BMN MLR MLR
comp=Z,788nm,19.0s,MS5.2
BMN Battle Mountai 91.68 47 *e*P **P 21 18 41.2 0.0**
comp=Z,15nm,0.9s,mb5.3
BMN LR LR
comp=Z,788nm,19.0s,MS5.2
COLA College 91.91 17 PFAKE 21 18 50.0 +8.4
COLA LR LR
comp=Z,679nm,20.0s,MS5.1
ZAK Zakamensk 91.98 324 *e*P **P 21 18 41.0 -1.3**
ZAK pmax pmax
comp=Z,22nm,1.2s,mb5.4
HYT Haines Junctio 92.27 23 *e*P **P 21 18 42.0 -1.4**
TLY Talaya 92.46 325 *e*P **P 21 18 43.6 -0.9**
TLY pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
TLY Talaya 92.46 325 PFAKE 21 19 00.0 +15
TLY LR LR
comp=Z,1µm,20.0s,MS5.3
ODAN Odare 92.61 298 *e*P **P 21 18 46.3 +0.5**
comp=Z,58nm,0.9s,mb6.0
HAWA Hanford 92.91 41 *e*P **P 21 18 53.8 +7.0**
HAWA LR LR
comp=Z,1µm,20.0s,MS5.3
TUC Tucson 93.00 57 *e*P **P 21 18 47.5 0.0**
TUC MLR MLR
comp=Z,1µm,19.0s,MS5.3
ELK Elko 93.17 47 PFAKE 21 19 00.0 +12
ELK LR LR
comp=Z,1µm,19.0s,MS5.4
RAMN Ramite 93.29 298 *e*P **P 21 18 49.3 +0.3**
BMO Blue Mountains 93.60 43 PFAKE 21 19 00.0 +10
BMO LR LR
comp=Z,1µm,21.0s,MS5.4
DGAR Diego Garcia 93.74 261 PFAKE 21 19 00.0 +8.6
DGAR LR LR
comp=Z,2µm,19.0s,MS5.6
DLBC Dease Lake 93.75 27 *e*P **P 21 18 50.2 -0.1**
WUAZ Wupatki 93.81 53 *e*P **P 21 18 51.6 +0.4**
comp=Z,16nm,0.9s,mb5.5
WUAZ LR LR
comp=Z,1µm,19.0s,MS5.3
MOY Mondy 93.88 325 *e*P **P 21 18 51.0 0.0**
MOY pmax pmax
comp=Z,39nm,2.6s,mb5.4
JIRN Jiri 93.90 298 *e*P **P 21 18 51.7 -0.1**
comp=Z,66nm,1.2s,mb5.9
GUN Gumba 94.25 298 *e*P **P 21 18 53.7 +0.4**
comp=Z,44nm,0.9s,mb5.9
MVU Marysvale 94.38 50 PFAKE 21 19 00.0 +6.3
MVU LR LR
comp=Z,972nm,19.0s,MS5.3
PKIN Phulchoki 94.52 298 *e*P **P 21 18 54.8 +0.2**
comp=Z,38nm,1.0s,mb5.8
DUG Dugway 94.63 49 PFAKE 21 19 10.0 +15
DUG LR LR
comp=Z,1µm,20.0s,MS5.4
KKN Kakani 94.69 298 *e*P **P 21 18 55.4 0.0**
comp=Z,39nm,0.8s,mb5.9
DMN Daman 94.77 298 *e*P **P 21 18 56.2 +0.4**
comp=Z,92nm,1.0s,mb6.2
HLID Hailey 94.92 45 PFAKE 21 19 10.0 +14
HLID LR LR
comp=Z,1µm,19.0s,MS5.5
NEW Newport 95.22 40 P **P 21 18 55.8 -1.5**
NEW MLR MLR
comp=Z,1µm,20.0s
GKN Gorkha 95.30 298 *e*P **P 21 18 57.7 -0.5**
comp=Z,36nm,0.8s,mb5.8
MPU Maple Canyon 95.39 49 PFAKE 21 19 10.0 +12
MPU LR LR
comp=Z,3µm,22.0s,MS5.7
TMUT Trail Mountain 95.41 50 *e*P **P 21 18 58.6 +0.2**
SRU San Rafael 95.83 50 *e*P **P 21 19 00.3 0.0**
HWUT Hardware Ranch 96.06 48 P **P 21 19 00.6 -0.7**
HWUT LR LR
comp=Z,1µm,22.0s,MS5.4
DANN Dangsing 96.15 298 *e*P **P 21 19 01.5 -0.5**
comp=Z,34nm,0.9s,mb5.8
MSO Missoula 96.57 42 PFAKE 21 19 10.0 +6.5
MSO LR LR
comp=Z,1µm,22.0s,MS5.3
MVCO Mesa Verde 96.60 53 PFAKE 21 19 10.0 +6.1
MVCO LR LR
comp=Z,2µm,22.0s,MS5.5
TIXI Tiksi 96.71 348 PFAKE 21 19 10.0 +6.4
TIXI LR LR
comp=Z,1µm,20.0s,MS5.3
AHID Auburn Hatcher 96.82 47 PFAKE 21 19 20.0 +15
AHID LR LR
comp=Z,1µm,21.0s,MS5.4
DLMT Dillon 96.84 44 *e*P **P 21 19 04.9 +0.2**
HYB Hyderabad 96.88 286 *i* P **P 21 19 05.5 -0.1**
HYB Hyderabad 96.88 286 *e*P **P 21 19 05.5 -0.1**
PV01 Paradox Valley 96.88 52 P **P 21 19 04.5 -0.6**
PLCA Paso Flores 96.97 139 P **P 21 19 06.1 +0.4**
comp=Z,2.2nm,0.8s,mb4.6,baz=211,slow=5.6,SNR=5.2
PLCA Paso Flores 96.97 139 P **P 21 19 06.1 +0.4**
MNTX Cornudas Mount 97.03 59 PFAKE 21 19 20.0 +14
MNTX LR LR
comp=Z,4.0nm,20.0s
ANMO Albuquerque 97.33 55 *e*P **P 21 19 05.9 -1.3**
ANMO MLR MLR
comp=Z,2µm,20.0s
WALA Waterton Lakes 97.48 40 *e*P **P 21 19 07.1 -0.5**
BOZ Bozeman (W) 97.57 44 PFAKE 21 19 20.0 +12
BOZ LR LR
comp=Z,1µm,19.0s,MS5.3
TXAR Lajitas Array 97.61 62 P **P 21 19 08.4 -0.2**
comp=Z,0.7nm,0.9s,mb4.2,baz=217,slow=5.3,SNR=5.4
TXAR PKKP PKKPbc 21 35 46.2 +0.9
comp=Z,0.5nm,0.8s,baz=104,slow=3.2,SNR=5.1
TXAR Lajitas Array 97.61 62 P **P 21 19 08.4 -0.2**
TXAR PKKP PKKPbc 21 35 46.2 +0.9
YMR Madison River 97.64 45 PFAKE 21 19 20.0 +12
YMR LR LR
comp=Z,1µm,20.0s,MS5.4
HVS Khovu-Aksy 97.71 322 *e*P **P 21 19 07.8 -0.7**
HVS pmax pmax
comp=Z,43nm,1.3s,mb5.8
BW06 Boulder Array 97.88 47 PFAKE 21 19 20.0 +10
BW06 LR LR
comp=Z,2µm,21.0s,MS5.6
PDAR Pinedale Array 97.88 47 PKKPbc PKKPbc 21 35 43.5 -1.6
comp=Z,0.9nm,0.8s,baz=82,slow=5.2,SNR=7.8
LKWY Lake 97.97 45 PFAKE 21 19 20.0 +10
LKWY LR LR
comp=Z,2µm,19.0s,MS5.7
WMQ Urumqi 98.66 314 *e*P **P 21 19 12.5 -0.5**
WMQ AMB AMB
comp=Z,13nm,1.0s,mb5.4
WMQ LR LR
comp=Z,971nm,22.0s,MS5.3
RLMT Red Lodge 98.93 45 PFAKE 21 19 20.0 +5.9
RLMT LR LR
comp=Z,2µm,21.0s,MS5.5
SDCO Great Sand Dun 99.02 53 PFAKE 21 19 30.0 +15
SDCO LR LR
comp=Z,1µm,21.0s,MS5.5
PAYG Puerto Ayora 99.40 94 PFAKE 21 19 30.0 +13
PAYG LR LR
comp=Z,1µm,19.0s,MS5.4
ISCO Idaho Springs 99.62 51 PFAKE 21 19 30.0 +13
ISCO LR LR
comp=Z,2µm,20.0s,MS5.6
EGMT Eagleton 99.65 42 PFAKE 21 19 30.0 +13
EGMT LR LR
comp=Z,1µm,20.0s,MS5.5
AMTX Amarillo 101.01 57 PFAKE 21 19 30.0 +6.6
AMTX LR LR
comp=Z,3µm,21.0s,MS5.7
JCT Junction City 101.15 62 PFAKE 21 19 40.0 +16
JCT LR LR
comp=Z,2µm,20.0s,MS5.5
LAO LASA Array 101.46 44 PFAKE 21 19 40.0 +15
LAO LR LR
comp=Z,2µm,20.0s,MS5.6
HOPE Hope Point 101.57 165 PFAKE 21 19 40.0 +14
HOPE LR LR
comp=Z,5.0nm,20.0s
KVTX Kingsville 101.84 65 PFAKE 21 19 40.0 +13
KVTX LR LR
comp=Z,2µm,19.0s,MS5.6
RSSD Black Hills 102.12 47 PFAKE 21 19 40.0 +12
RSSD LR LR
comp=Z,3µm,21.0s,MS5.7
OGNE Ogallala 102.58 51 PFAKE 21 19 40.0 +10
OGNE LR LR
comp=Z,2µm,19.0s,MS5.7
MKAR Makanchi Array 103.23 315 Pdiff Pdif 21 19 33.5 +0.2
comp=Z,0.9nm,0.6s,baz=100,slow=5.4,SNR=8.8
MKAR PP PP 21 23 43.2 -5.7
comp=Z,0.2nm,0.3s,baz=103,slow=6.2,SNR=3.0
MKAR PKKPbc PKKPbc 21 35 27.9 -1.8
comp=Z,0.3nm,0.4s,baz=259,slow=2.5,SNR=4.6
MKAR PKKP PKKPbc 21 35 46.0 +16
comp=Z,0.5nm,0.5s,baz=292,slow=3.0,SNR=4.5
MKAR Makanchi Array 103.23 315 Pdif Pdif 21 19 33.5 +0.2
MKAR PP PP 21 23 43.2 -5.8
MKAR PKKPbc PKKPbc 21 35 27.9 -1.8
MKAR PKKP PKKPbc 21 35 46.0 +16
WMOK Wichita Mounta 103.24 58 PFAKE 21 19 40.0 +6.6
WMOK LR LR
comp=Z,2µm,19.0s,MS5.7
DGMT Dagmar 103.31 43 PFAKE 21 19 40.0 +6.3
DGMT LR LR
comp=Z,2µm,20.0s,MS5.5
LCO Las Campanas 103.53 129 PFAKE 21 19 50.0 +15
LCO LR LR
comp=Z,1µm,19.0s,MS5.4
CBKS Cedar Bluff 103.66 54 PFAKE 21 19 50.0 +15
CBKS LR LR
comp=Z,2µm,21.0s,MS5.7
ZALV Zalesovo Beam 103.77 323 Pdiff Pdif 21 19 35.0 -0.7
comp=Z,0.5nm,0.4s,baz=116,slow=6.6,SNR=3.1
TRQA Tornquist 103.83 141 PFAKE 21 19 50.0 +14
TRQA LR LR
comp=Z,2µm,19.0s,MS5.6
HKT Hockley 104.28 63 PFAKE 21 19 50.0 +12
HKT LR LR
comp=Z,2µm,19.0s,MS5.7
NATX Nacogdoches 105.74 62 PFAKE 21 24 10.0 +12
NATX LR LR
comp=Z,2µm,21.0s,MS5.7
KSU1 Kansas State U 106.09 54 PFAKE 21 24 10.0 +12
KSU1 LR LR
comp=Z,3µm,20.0s,MS5.8
FFC Flin Flon 106.30 37 PFAKE 21 24 10.0 +12
FFC LR LR
comp=Z,2µm,19.0s,MS5.7
KURK Kurchatov 106.60 318 Pdiff Pdif 21 19 49.0 +0.8
comp=Z,0.7nm,0.8s,baz=101,slow=3.3,SNR=5.0
KURK PKiKP PKiKP 21 23 57.6 -1.1
comp=Z,1.1nm,0.8s,baz=105,slow=1.9,SNR=6.6
KURK PKKPbc PKKPbc 21 35 17.6 -2.0
comp=Z,1.0nm,0.8s,baz=287,slow=3.1,SNR=6.0
KURK Kurchatov 106.60 318 Pdif Pdif 21 19 49.0 +0.8
KURK PKPdf PKiKP 21 23 57.6 -1.1
KURK PKKPbc PKKPbc 21 35 17.6 -2.0
KURK LR LR
comp=Z,1µm,19.0s,MS5.5
TKM2 Tokmak 2 106.82 310 PFAKE 21 24 10.0 +11
TKM2 LR LR
comp=Z,1µm,20.0s,MS5.5
NNA Nana 107.09 110 PFAKE 21 24 10.0 +9.3
NNA LR LR
comp=Z,1µm,20.0s,MS5.4
TGUH Tegucigalpa,Un 107.22 81 PFAKE 21 24 10.0 +9.1
TGUH LR LR
comp=Z,1µm,20.0s,MS5.4
MIAR Mount Ida 107.33 59 PFAKE 21 24 10.0 +9.4
MIAR LR LR
comp=Z,2µm,20.0s,MS5.7
AML Almayashu 108.01 309 PFAKE 21 24 10.0 +8.4
AML LR LR
comp=Z,2µm,20.0s,MS5.6
EKS2 Erkin-Say 108.07 309 PFAKE 21 24 10.0 +8.3
EKS2 LR LR
comp=Z,1µm,21.0s,MS5.5
TEIG Tepich 108.14 75 PFAKE 21 24 10.0 +7.5
TEIG LR LR
comp=Z,2µm,19.0s,MS5.7
JTS JuntasAbangare 108.18 86 PFAKE 21 24 10.0 +7.3
JTS LR LR
comp=Z,548nm,20.0s,MS5.1
LVC Limon Verde 108.40 124 PFAKE 21 24 10.0 +7.0
LVC LR LR
comp=Z,1µm,19.0s,MS5.6
ULM Lac du Bonnet 109.01 43 PKiKP PKiKP 21 23 58.9 -4.3
comp=Z,4.3nm,0.8s,baz=195,slow=4.4,SNR=3.5
ULM Lac du Bonnet 109.01 43 PKPdf PKiKP 21 23 58.9 -4.3
ULM LR LR
comp=Z,2µm,19.0s,MS5.7
SCIA State Center 109.24 52 PFAKE 21 24 20.0 +16
SCIA LR LR
comp=Z,2µm,20.0s,MS5.8
VBMS Vicksburg 109.27 62 PFAKE 21 24 20.0 +16
VBMS LR LR
comp=Z,2µm,20.0s,MS5.7
CCM Cathedral Cave 109.95 56 PFAKE 21 24 20.0 +15
CCM LR LR
comp=Z,2µm,19.0s,MS5.7
MSEY Mahe Island 110.33 256 PFAKE 21 24 20.0 +13
MSEY LR LR
comp=Z,2µm,22.0s,MS5.7
ABPO Ambohimpanom 110.66 239 PFAKE 21 24 20.0 +13
ABPO LR LR
comp=Z,3µm,20.0s,MS5.9
OXF Oxford 110.67 60 PFAKE 21 24 20.0 +13
OXF LR LR
comp=Z,2µm,20.0s,MS5.8
OTAV Otavalo 110.72 98 PFAKE 21 24 20.0 +12
OTAV LR LR
comp=Z,1µm,19.0s,MS5.5
EYMN Ely 111.48 46 PFAKE 21 24 20.0 +12
EYMN LR LR
comp=Z,3µm,20.0s,MS5.8
JFWS Jewell Farm 111.58 51 PFAKE 21 24 20.0 +12
JFWS LR LR
comp=Z,3µm,20.0s,MS5.9
BRAL Brewton 111.88 64 PFAKE 21 24 20.0 +11
BRAL LR LR
comp=Z,2µm,20.0s,MS5.8
HDIL Hopedale 111.90 54 PFAKE 21 24 20.0 +11
HDIL LR LR
comp=Z,2µm,20.0s,MS5.8
BVAR Borovoye Array 112.02 320 PKiKP PKiKP 21 24 07.1 -1.7
comp=Z,2.0nm,0.6s,baz=158,slow=0.8,SNR=12
BRVK Borovoye 112.09 320 PFAKE 21 24 20.0 +11
BRVK LR LR
comp=Z,2µm,19.0s,MS5.7
WVT Waverly 112.26 59 PFAKE 21 24 20.0 +10
WVT LR LR
comp=Z,2µm,21.0s,MS5.7
LRAL Lakeview Retre 112.34 62 PFAKE 21 24 20.0 +10
LRAL LR LR
comp=Z,3µm,22.0s,MS5.9
LPAZ La Paz 112.40 119 PFAKE 21 24 20.0 +9.3
LPAZ LR LR
comp=Z,893nm,19.0s,MS5.4
BCIP Isla Barro Col 112.58 89 PFAKE 21 24 20.0 +8.9
BCIP LR LR
comp=Z,1µm,20.0s,MS5.4
COWI Conover 112.83 48 PFAKE 21 24 20.0 +9.4
COWI LR LR
comp=Z,3µm,19.0s,MS5.9
WCI Wyandotte Cave 113.82 57 PFAKE 21 24 20.0 +7.3
WCI LR LR
comp=Z,1µm,19.0s,MS5.6
CPUP Villa Florida 114.54 134 PKP PKiKP 21 24 13.3 -1.3
comp=Z,1.2nm,0.7s,baz=270,slow=2.0,SNR=3.5
CPUP Villa Florida 114.54 134 PKiKP PKiKP 21 24 13.2 -1.4

GOGA Godfrey 115.32 62 PFAKE 21 24 30.0 +14
GOGA LR LR
comp=Z,2µm,20.0s,MS5.8
TZTN Tazewell 115.73 59 PFAKE 21 24 30.0 +14
TZTN LR LR
comp=Z,2µm,19.0s,MS5.8
GLMI Grayling 115.86 49 PFAKE 21 24 30.0 +14
GLMI LR LR
comp=Z,2µm,19.0s,MS5.8
DWPF Disney 116.09 68 PFAKE 21 24 30.0 +13
DWPF LR LR
comp=Z,3µm,20.0s,MS5.9
ACSO Alum Creek Sta 116.63 55 PFAKE 21 24 30.0 +12
ACSO LR LR
comp=Z,2µm,21.0s,MS5.7
SVE Sverdlovsk 117.74 324 *e*PKIKP PKPdf 21 24 18.6 -1.1
SVE pmax pmax
comp=Z,7.0nm,0.8s
NHSC New Hope 118.00 63 PFAKE 21 24 30.0 +9.1
NHSC LR LR
comp=Z,2µm,22.0s,MS5.8
BLA Blacksburg 118.31 58 PFAKE 21 24 30.0 +8.6
BLA LR LR
comp=Z,2µm,21.0s,MS5.7
SUR Sutherland 118.79 210 PFAKE 21 24 30.0 +7.4
SUR LR LR
comp=Z,3µm,21.0s,MS5.9
ARU Arti 118.91 324 *i* PKIKP PKPdf 21 24 20.7 -1.2
ARU 21 31 11.4
ARU PS PS 21 35 27.3 -1.7
ARU SS SS 21 41 58.4 -1.1
ARU Arti 118.91 324⇑ *e*PKP PKPdf 21 24 20.9 -1.0
ARU LR LR
comp=Z,1µm,20.0s,MS5.5
MCWV Mont Chateau 118.98 56 *e*PKPdf PKPdf 21 24 23.9 +1.3
MCWV LR LR
comp=Z,3µm,20.0s,MS6.0
ERPA Erie 119.03 53 PFAKE 21 24 30.0 +7.4
ERPA LR LR
comp=Z,3µm,19.0s,MS5.9
BOSA Boshof 119.53 216 PKP PKPdf 21 24 23.9 -0.2
comp=Z,2.8nm,0.8s,baz=84,slow=2.6,SNR=6.7
BOSA Boshof 119.53 216 PKP PKPdf 21 24 23.9 -0.2
BOSA LR LR
comp=Z,3µm,21.0s,MS6.0
AKTK Aktyubinsk 119.61 317 PKP PKPdf 21 24 22.2 -1.2
AKTK PKKPab PKKPab 21 34 35.8 +0.7
AKTO Aktyubinsk 119.61 317 PKP PKPdf 21 24 22.2 -1.2
comp=Z,2.9nm,0.7s,baz=88,slow=3.3,SNR=9.5
AKTO PKKPab PKKPab 21 34 35.8 +0.7
comp=Z,0.5nm,0.3s,baz=288,slow=6.5,SNR=5.1
CNNC Cliffs of the 120.14 61 PFAKE 21 24 40.0 +15
CNNC LR LR
comp=Z,3µm,22.0s,MS5.9
SSPA Standing Stone 120.54 55 *e*PKPdf PKPdf 21 24 23.8 -1.8
SSPA LR LR
comp=Z,2µm,20.0s,MS5.8
URVA University of 120.63 58 *e*PKPdf PKPdf 21 24 23.5 -2.3
CBN Corbin 120.80 57 PFAKE 21 24 40.0 +14
CBN LR LR
comp=Z,3µm,19.0s,MS5.9
SDV Santo Domingo 121.08 92 PFAKE 21 24 40.0 +13
SDV LR LR
comp=Z,507nm,19.0s,MS5.2
SDMD Soldier's Deli 121.28 56 *e*PKPdf PKPdf 21 24 25.5 -1.6
BINY Binghamton 122.01 53 *e*PKPdf PKPdf 21 24 27.0 -1.4
BINY LR LR
comp=Z,2µm,20.0s,MS5.8
LBTB Lobatse 122.10 219 PFAKE 21 24 40.0 +11
LBTB LR LR
comp=Z,3µm,19.0s,MS6.0
LONY Lake Ozonia 123.00 50 *e*PKPdf PKPdf 21 24 27.8 -2.4
LONY LR LR
comp=Z,2µm,19.0s,MS5.8
NCB Newcomb 123.28 51 PFAKE 21 24 40.0 +9.3
NCB LR LR
comp=Z,1µm,19.0s,MS5.6
PAL Palisades 123.57 54 *e*PKIKP PKPdf 21 24 30.5 -0.9
MDV Middlebury 124.03 51 *e*PKPdf PKPdf 21 24 29.8 -2.4
LBNH Lisbon 124.92 50 PFAKE 21 24 50.0 +16
LBNH LR LR
comp=Z,2µm,19.0s,MS5.9
HRV Adam Dziewonsk 125.29 52 PFAKE 21 24 50.0 +15
HRV LR LR
comp=Z,2µm,19.0s,MS5.8
BRYW Bryant College 125.33 53 *e*PKPdf PKPdf 21 24 33.6 -1.1
WES Weston 125.47 52 PFAKE 21 24 50.0 +15
WES LR LR
comp=Z,1µm,20.0s,MS5.6
LVZ Lovozero 125.57 341 PFAKE 21 24 50.0 +16
LVZ LR LR
comp=Z,1µm,20.0s,MS5.6
SCHQ Schefferville 126.44 37 PKP PKPdf 21 24 34.7 -1.7
comp=Z,6.4nm,0.8s,baz=266,slow=7.6,SNR=4.4
SCHQ Schefferville 126.44 37 PKP PKPdf 21 24 34.7 -1.7
SCHQ LR LR
comp=Z,2µm,20.0s,MS5.9
KEV Kevo 126.49 345 *ep* PKPdf 21 24 34.8 -1.3
comp=Z,0.9nm,0.4s
KEV Kevo 126.49 345 *e*P PKPdf 21 24 34.8 -1.3
KEV LR LR
comp=Z,1µm,20.0s,MS5.6
PKME Peaks-Kenny Pk 126.70 49 *e*PKPdf PKPdf 21 24 36.2 -1.0
PKME LR LR
comp=Z,2µm,19.0s,MS5.9
ARCES ARCESS Array B 127.02 345 PKP PKPdf 21 24 36.0 -1.1
comp=Z,11nm,0.5s,baz=71,slow=1.2,SNR=64
RDF Al-Radifah 127.19 291 *e*P PKPdf 21 24 38.9 +0.2
baz=291
RDF AMb AMB 21 24 39.7
comp=Z,63nm,1.2s,baz=291
LSZ Lusaka 127.39 230 PFAKE 21 24 50.0 +11
LSZ LR LR
comp=Z,2µm,20.0s,MS5.8
MIB Mutribah 127.45 292 *e*P PKPdf 21 24 39.0 -0.2
baz=292
MIB AMb AMB 21 24 40.4
comp=Z,27nm,1.2s,baz=292
NAY Al-Naaiem 127.49 291 *e*P PKPdf 21 24 39.0 -0.3
baz=291
NAY AMb AMB 21 24 42.5
comp=Z,16nm,1.6s,baz=291
RST Umm Al-Ruwaisa 127.72 291 *e*P PKPdf 21 24 39.5 -0.1
baz=291
RST AMb AMB 21 24 40.7
comp=Z,36nm,0.9s,baz=291
SFJD Kangerlussuaq 127.74 19 PFAKE 21 24 50.0 +11
SFJD LR LR
comp=Z,2µm,19.0s,MS5.8
SJG San Juan 127.85 83 *e*PKIKP PKPdf 21 24 35.5 -4.7
SJG MLR MLR
comp=Z,2µm,20.0s
CPD Cerro la Pandu 128.05 83 *e*PKIKP PKPdf 21 24 44.7 +4.1
HUMP Col San Antoni 128.14 83 *e*PKPdf PKPdf 21 24 39.4 -1.4
BDFB Brasilia 128.15 132 PKP PKPdf 21 24 39.5 -1.4
comp=Z,5.8nm,0.7s,baz=239,slow=5.9,SNR=6.5
BDFB Brasilia 128.15 132 PKP PKPdf 21 24 39.5 -1.4
BDFB LR LR
comp=Z,2µm,19.0s,MS5.8
KMBO Kilima Mbogo 128.20 251 PKP PKPdf 21 24 41.1 0.0
comp=Z,4.8nm,0.9s,baz=134,slow=2.2,SNR=8.5
KMBO Kilima Mbogo 128.20 251⇑ *i*PKIKP PKPdf 21 24 41.2 +0.1
KMBO Kilima Mbogo 128.20 251 PKP PKPdf 21 24 41.1 0.0
KMBO LR LR
comp=Z,2µm,20.0s,MS5.8
GNI Garni 129.61 305 PFAKE 21 24 50.0 +7.0
GNI LR LR
comp=Z,420nm,19.0s,MS5.2
JOF Joensuu 129.62 337 *ep* PKPdf 21 24 41.2 -1.1
comp=Z,1.4nm,0.4s
JOF Joensuu 129.62 337 *e*PKIKP PKPdf 21 24 41.2 -1.1
JOF pmax pmax
comp=Z,1.0nm,0.4s
MOS Moscow 130.41 326 *e*PKIKP pPKPdf 21 24 58.5 +6.6
GRGR Grenville 130.47 92 PFAKE 21 25 00.0 +15
GRGR LR LR
comp=Z,839nm,19.0s,MS5.5
KIV Kislovodsk 130.66 310 *e*PKIKP PKPdf 21 24 44.9 +0.1
KIV MLR MLR
comp=Z,572nm,19.0s,MS5.3
KIV Kislovodsk 130.66 310 *e*PKPdf PKPdf 21 24 44.9 +0.1
KIV LR LR
comp=Z,572nm,19.0s,MS5.3
BBSR BB Station 130.94 65 PFAKE 21 25 00.0 +14
BBSR LR LR
comp=Z,2µm,20.0s,MS5.8
OBN Obninsk 131.22 326⇑ *i*PKIKP PKPdf 21 24 43.7 -1.8
OBN *e*PS PS 21 37 05.9 -11
OBN pmax pmax
comp=Z,25nm,1.5s
OBN Obninsk 131.22 326 PKPdf PKPdf 21 24 44.9 -0.6
OBN LR LR
comp=Z,666nm,19.0s,MS5.4
TSUM Tsumeb 131.24 216 PFAKE 21 25 00.0 +13
TSUM LR LR
comp=Z,2µm,19.0s,MS5.9
KAF Kangasniemi 131.94 338 *ep* PKPdf 21 24 45.6 -1.1
comp=Z,1.9nm,0.4s
KAF Kangasniemi 131.94 338 *e*PKIKP PKPdf 21 24 45.6 -1.1
KAF pmax pmax
comp=Z,2.0nm,0.4s
BBGH Gun Hill 132.72 92 PFAKE 21 25 00.0 +10
BBGH LR LR
comp=Z,2µm,20.0s,MS5.8
MALT Malatya 134.68 303 ⇓ PKIKP PKPdf 21 24 50.6 -2.0
MALT Malatya 134.68 303 ⇓ *i*P PKPdf 21 24 50.5 -2.1
MALT Malatya 134.68 303 *e*PKPdf PKPdf 21 24 51.2 -1.4
MALT LR LR
comp=Z,620nm,19.0s,MS5.3
ASF Jabal al Asfar 136.47 295 PKP PKPdf 21 24 56.4 +0.3
comp=Z,1.4nm,0.7s,baz=321,slow=4.1,SNR=5.4
AKASG Malin Array Be 137.16 323 PKP PKPdf 21 24 57.4 +0.6
comp=Z,3.6nm,0.6s,baz=62,slow=1.7,SNR=14
AKASG SKPab 21 28 29.8
comp=Z,1.8nm,0.7s,baz=52,slow=2.9,SNR=5.5
AKASG Malin Array Be 137.16 323 PKP PKPdf 21 24 57.4 +0.6
AKASG SKPab 21 28 29.8
KIEV Kiev 137.18 323 PFAKE 21 25 10.0 +13
KIEV LR LR
comp=Z,423nm,19.0s,MS5.2
NB2 NORSAR Subarra 137.39 344 PKPdf PKPdf 21 24 50.7 -6.2
comp=Z,2.7nm,0.8s,baz=31,slow=1.9
NOA NORSAR Array B 137.39 344 PKP PKPdf 21 24 56.0 -0.9
comp=Z,3.5nm,0.7s,baz=37,slow=2.0,SNR=13
NOA SKP 21 28 27.1
comp=Z,2.3nm,1.0s,baz=17,slow=4.2,SNR=3.1
NAO01 NORSAR Array S 137.64 345 PFAKE 21 25 10.0 +13
NAO01 LR LR
comp=Z,1µm,19.0s,MS5.6
MMAI Mount Meron Ar 137.68 296 PKP PKPdf 21 24 58.6 +0.3
comp=Z,3.8nm,0.7s,baz=62,slow=7.7,SNR=3.8
BR131 Keskin Array S 138.11 306 *e*PKPdf PKPdf 21 24 57.8 -1.1
BR131 LR LR
comp=Z,371nm,19.0s,MS5.1
ANTO Ankara 138.71 307 PFAKE 21 25 10.0 +10
ANTO LR LR
comp=Z,395nm,21.0s,MS5.1
ISP Isparta 140.91 304 PFAKE 21 25 20.0 +16
ISP LR LR
comp=Z,265nm,19.0s,MS5.0
BUR08 Bucovina Ar. S 140.96 321 *e*PKPdf PKPdf 21 25 04.1 +0.3
BURAR Bucovina Array 140.97 321 ⇓ *i*P PKPdf 21 25 05.4 +1.5
BURAR Bucovina Array 140.97 321 ⇓ P PKPdf 21 25 05.4 +1.5
KWP Kalwaria 141.29 325 *e*PKP PKPdf 21 25 03.7 -0.6
KWP Kalwaria 141.29 325 *e*PKP PKPdf 21 25 03.7 -0.7
KWP LR LR
comp=Z,545nm,19.0s,MS5.3
MLR Muntele Rosu 141.53 318⇑ *i*P PKPdf 21 24 58.4 -6.5
MLR Muntele Rosu 141.53 318⇑ P PKPdf 21 24 58.4 -6.5
KOLS Kolonicke sedl 141.93 324 *e*PKP PKPdf 21 25 04.3 -1.2
UZH Uzhgorod 142.09 324 *e*PKIKP PKPdf 21 25 07.6 +1.8
STHS Stebnicka Huta 142.19 326 *e*PKP PKPdf 21 25 06.3 +0.3
CRVS Cervenica-Dubn 142.38 325 *e*PKP PKPdf 21 25 04.1 -2.2
NIE Niedzica 142.68 326 *e*PKP PKPdf 21 25 03.6 -3.3
DRGR 142.85 321⇑ *i*P PKPdf 21 25 03.2 -4.1
DRGR 142.85 321⇑ P PKPdf 21 25 03.2 -4.1
OKC Ostrava-Krasne 143.50 328 *e*PKP PKPdf 21 25 06.4 -1.9
GZR Gura Zlata 143.54 319 ⇓ *i*P PKPdf 21 25 06.1 -2.4
GZR Gura Zlata 143.54 319 ⇓ P PKPdf 21 25 06.0 -2.5
BSEG Bad Segeberg 143.66 339 *e*PKPbc PKPdf 21 25 05.4 -3.1
KSP Ksiaz 143.69 331 *e*PKP PKPdf 21 25 06.1 -2.5
KSP Ksiaz 143.69 331 *e*PKP PKPdf 21 25 05.8 -2.8
PRK Paraskevi 143.72 308 *e*P PKPdf 21 25 05.8 -3.2
PRK Paraskevi 143.72 308 *e*P PKPdf 21 25 06.5 -2.5
SMG Samos 143.76 305 *e*P PKPdf 21 25 06.5 -2.7
PSZ Piszkesteto 143.80 325 ⇓ *e*PKP PKPdf 21 25 06.6 -2.3
PSZ Piszkesteto 143.80 325 ⇓ *i*P PKPdf 21 25 06.8 -2.1
PSZ Piszkesteto 143.80 325 ⇓ P PKPdf 21 25 06.8 -2.1
PSZ LR LR
comp=Z,459nm,20.0s,MS5.2
MORC Moravsky Berou 143.83 329⇑ *i*P PKPdf 21 25 06.5 -2.4
MORC Moravsky Berou 143.83 329⇑ P PKPdf 21 25 06.5 -2.4
VYHS Vyhne 144.01 326 *e*PKP PKPdf 21 25 07.0 -2.2
DPC Dobruska-Polom 144.02 330 *e*PKP PKPdf 21 25 07.2 -2.0
UPC Upice 144.05 331 *e*PKP PKPdf 21 25 07.0 -2.2
KARP Karpathos 144.06 302 *e*P PKPdf 21 25 08.0 -1.7
BZS Buzias 144.12 320 ⇓ *i*P PKPdf 21 25 07.4 -2.1
BZS Buzias 144.12 320 ⇓ P PKPdf 21 25 07.4 -2.1
CHOS Chios island 144.15 307 *e*P PKPdf 21 25 07.2 -2.6
KOLL Kolacno 144.18 327 *e*PKP PKPdf 21 25 08.8 -0.7
LIA Limnos Island 144.29 310 *e*P PKPdf 21 25 07.1 -3.0
LOA Limnos 144.35 310 *e*P PKPdf 21 25 07.9 -2.2
BUD Budapest 144.54 325⇑ *e*PKP PKPdf 21 25 08.9 -1.3
VRAC Vranov 144.61 329⇑ *i*P PKPdf 21 25 08.8 -1.4
VRAC Vranov 144.61 329⇑ P PKPdf 21 25 08.8 -1.5
PVCC Panska Ves 144.68 332 *e*PKP PKPdf 21 25 09.1 -1.2
BRG Berggiesshubel 144.70 333 *e*PKPbc PKPdf 21 25 07.7 -2.7
BRG Berggiesshubel 144.70 333 *i* PKP PKPdf 21 25 08.8 -1.6
comp=Z,41nm,0.8s
BRG *i* 21 25 13.1
comp=Z,44nm,1.0s
BRG *i* 21 28 48.9
comp=Z,6.0nm,1.0s
CLL Collm 144.76 334⇑ *i*PKIKP PKPdf 21 25 08.6 -1.9
CLL *e* 21 25 16.0
CLL *e* 21 28 27.0
CLL pmax pmax
comp=Z,99nm,1.6s
CLL Collm 144.76 334 *e*PKPbc PKPdf 21 25 08.0 -2.5
CLL Collm 144.76 334⇑ *i*PKPdf PKPdf 21 25 08.6 -1.9
comp=Z,99nm,1.6s
CLL *i* PKiKP PKiKP 21 25 14.0 -0.2
comp=Z,27nm,0.8s
CLL *ep*PKiKP 21 25 16.0
CLL *es*PKiKP 21 25 19.0
CLL *ex* x 21 25 29.0
CLL *e*PP PP 21 28 27.0 -0.2
CLL *ex* x 21 30 30.0
CLL Collm 144.76 334⇑ *i*PKP PKPdf 21 25 08.6 -1.9
CLL *e* 21 25 16.0
CLL *e*PP PP 21 28 27.0 -0.2
MODS Modra-Piesok 144.89 327 *e*PKP PKPdf 21 25 10.1 -0.7
ZKR Zakros 144.91 301 *e*P PKPdf 21 25 10.3 -0.9
NRDL Niedersach Rie 144.92 338 *e*PKPbc PKPdf 21 25 08.7 -2.0
APE Apeiranthos 144.94 305 *e*P PKPdf 21 25 09.2 -2.0
APE Apeiranthos 144.94 305 *e*P PKPdf 21 25 09.0 -2.2
APE Apeiranthos 144.94 305⇑ *i*P PKPdf 21 25 09.1 -2.1
OUR Ouranopolis 144.99 311 *e*P PKPdf 21 25 09.8 -1.4
PRU Pruhonice 145.09 331 *e*PKP PKPdf 21 25 10.0 -1.1
ZST Bratislava 145.09 327 *e*PKP PKPdf 21 25 11.2 +0.1
TREC Trest 145.14 330 *e*PKP PKPdf 21 25 10.3 -0.9
SANT Santorini 145.19 304 *e*P PKPbc 21 25 09.7 -1.7
SANT Santorini 145.19 304 P PKPbc 21 25 09.7 -1.7
SANT LR LR
comp=Z,422nm,19.0s,MS5.2
THR1 Thera Island 145.19 304 *e*P PKPbc 21 25 09.4 -1.9
THR4 Thira Island, 145.21 304 *e*P PKPbc 21 25 10.3 -1.1
THR3 Thira Island, 145.22 304 *e*P PKPbc 21 25 10.4 -1.1
SOH Sokhos 145.24 312 *e*P PKPbc 21 25 10.1 -1.3
THR6 Thira Island, 145.24 304 *e*P PKPbc 21 25 10.3 -1.1
THR5 Thira Island, 145.26 304 *e*P PKPbc 21 25 10.1 -1.5
NPS Neapolis 145.35 302 *e*P PKPbc 21 25 12.0 +0.1
CLZ Clausthal 145.36 337 *e*PKPbc PKPbc 21 25 10.5 -0.8
PAIG Paliouri 145.36 310 *e*P PKPbc 21 25 10.5 -1.2
KNT Kendrikon 145.41 313 *e*P PKPbc 21 25 10.7 -1.2
LAST Lasithi 145.48 302 *e*P PKPdf 21 25 12.4 +0.2
PKSM Moragy 145.51 323⇑ *i*P PKPdf 21 25 11.3 -0.6
PKSM Moragy 145.51 323⇑ P PKPdf 21 25 11.3 -0.6
ESK Eskdalemuir 145.51 352 *e*PKP2 PKPab 21 25 10.3 -1.6
ESK MLR MLR
comp=Z,1µm,19.0s,MS5.7
VAY Valandovo 145.57 313 *e*PKP PKPdf 21 25 10.3 -1.9
TANN Tannenbergstha 145.67 334 *e*PKPbc PKPbc 21 25 11.5 -0.9
SOP Sopron 145.71 327⇑ *e*PKP PKPdf 21 25 12.4 +0.2
NKC Novy Kostel 145.81 333 *e*PKP PKPdf 21 25 11.8 -0.5
MOX Moxa 145.84 335 *e*PKP PKPdf 21 25 12.0 -0.3
comp=Z,102nm,2.0s
MOX Moxa 145.84 335 *e*PKPbc PKPbc 21 25 11.5 -1.4
IBBN Ibbenburen 145.87 340 *e*PKPbc PKPbc 21 25 12.4 -0.5
PTL Penteli 145.90 307 *e*P PKPdf 21 25 12.5 -0.3
CONA Conrad Observa 145.90 328⇑ *i*P PKPdf 21 25 13.2 +0.7
comp=Z,111nm,1.7s,SNR=21
CSNA Conrad Observa 145.90 328 ⇓ *i*P PKPdf 21 25 13.2 +0.7
comp=Z,101nm,1.6s
DIVS Divibare 145.91 319 *e*P PKPdf 21 25 13.1 +0.5
ATH Athens Observa 146.03 307 *e*P PKPdf 21 25 13.0 -0.1
SKO Skopje 146.04 315 *e*PKP PKPdf 21 25 13.2 +0.2
KVR Kavouri 146.04 307 *e*P PKPdf 21 25 12.5 -0.6
SIVA Sivas 146.05 302 *e*P PKPdf 21 25 14.2 +1.0
LIT Litokhoron 146.13 311 *e*P PKPdf 21 25 12.8 -0.3
KHC Kasperske Hory 146.14 331 *e*PKP PKPdf 21 25 12.4 -0.5
MANZ Manzenberg 146.14 333 *e*PKPbc PKPbc 21 25 12.1 -1.7
NAIG Nisos Aigina 146.27 307 *e*P PKPdf 21 25 12.0 -1.5
GEC2 GERESS Array S 146.29 331 *e*PKPbc PKPbc 21 25 13.1 -1.2
GEC2 GERESS Array S 146.29 331 *e*PKPdf PKPdf 21 25 12.5 -0.6
GEC2 *e*PKPbc PKPbc 21 25 13.1 -1.2
GERES GERESS Array B 146.29 331 PKPbc PKPbc 21 25 12.5 -1.8
comp=Z,16nm,0.7s,baz=34,slow=2.1,SNR=54
UBBA Unterbreizbach 146.32 336 *e*PKPbc PKPbc 21 25 13.3 -1.0
VAM Vamos 146.43 302 *e*P PKPdf 21 25 15.5 +1.7
KRUS Krusevo 146.44 314 *e*PKP PKPdf 21 25 14.0 +0.3
WET Wettzell 146.44 332 *e*PKPbc PKPbc 21 25 13.5 -1.2
DID Didima 146.54 306 *e*P PKPdf 21 25 13.6 -0.3
LTK Loutraki 146.57 308 *e*P PKPdf 21 25 13.9 -0.1
FNA Fiorina 146.62 313 *e*P PKPdf 21 25 12.7 -1.3
KOGS Kog 146.67 325 *e*PKPbc PKPbc 21 25 14.8 -0.7
GVD Gavdhos 146.67 301 *e*P PKPdf 21 25 15.5 +1.2
MOA Molln 146.73 329⇑ *i*P PKPdf 21 25 15.2 +1.3
comp=Z,32nm,1.3s,SNR=7.0
GRA1 Grafenberg Arr 146.74 334 *e*PKPbc PKPbc 21 25 14.5 -1.1
GRF Grafenberg Arr 146.74 334 *e*PKPbc PKPbc 21 25 14.5 -1.1
BUG Bochum--Üniver 146.77 339 *e*PKPbc PKPbc 21 25 15.2 -0.4
OHR Ohrid 146.86 314 *e*PKP PKPdf 21 25 14.7 +0.3
VLI Veliai 147.03 305 *e*P PKPdf 21 25 15.0 +0.2
EVR Evrytania 147.09 310 *e*P PKPdf 21 25 16.5 +1.7
KYTH Kithira 147.09 304 *e*P PKPdf 21 25 16.5 +1.6
MEV Metsovon 147.15 311 *e*P PKPbc 21 25 17.6 +0.5
SOKA Soboth 147.15 327⇑ *i*P PKPdf 21 25 16.2 +1.5
comp=Z,26nm,1.3s
VLX Vlachokerasia 147.23 307 *e*P PKPdf 21 25 16.9 +1.8
TIR Tirane 147.37 315 *e*PKIKP PKPdf 21 25 14.8 -0.4
TIR MLR MLR
comp=Z,675nm,19.0s,MS5.5
TNS Taunus Mts 147.38 337 *e*PKPbc PKPbc 21 25 17.1 -0.3
JAN Janina 147.47 311 *e*P PKPdf 21 25 18.0 +2.6
ITM Ithomi 147.64 307 *e*P PKPdf 21 25 18.0 +2.2
KBA Koelnbreinsper 147.72 329⇑ *i*P PKPdf 21 25 17.2 +1.6
comp=Z,45nm,1.1s,SNR=11
TOD Tromm 147.76 336 PKP2 PKPbc 21 25 17.4 -1.0
VISS Visnje 147.83 326 *e*PKPbc PKPbc 21 25 18.3 -0.4
BEBN Eben Emael 147.84 340 E 21 25 21.4
LJU Ljubljana 147.84 326 *e*PKPbc PKPbc 21 25 18.9 -0.6
DLF Lyons Farm 147.84 355 *e*P PKPdf 21 25 13.2 -2.4
DCN Croghan 147.84 356 *e*P PKPdf 21 25 11.3 -4.3
FUR Furstenfeldbru 147.88 332 *e*PKPbc PKPbc 21 25 18.1 -0.7
IGT Igoumenitsa 147.88 312 *e*P PKPbc 21 25 18.3 -0.8
MYKA Terra Mystica 147.89 328⇑ *i*P PKPdf 21 25 17.6 +1.7
comp=Z,24nm,0.8s
MEM Membach 147.89 340 PKPbc PKPbc 21 25 18.1 -0.6
ABH Alteburg 147.99 338 PKP PKPdf 21 25 17.9 +1.9
LKD Levkas 148.00 310 *e*P PKPbc 21 25 18.5 -0.9
VOY Vojsko 148.17 327 *e*PKPbc PKPbc 21 25 18.7 -1.0
VOY *e* 21 25 27.3
UCC Uccle 148.23 342 PKPbc PKPbc 21 25 19.3 -0.4
VLS Valsamata 148.25 309 *e*P PKPdf 21 25 13.0 -3.8
KTD Kalmit 148.26 336 PKP2 PKPbc 21 25 19.1 -0.7
BCLA Clavier 148.28 340 PKPbc PKPbc 21 25 19.0 -0.8
STU Stuttgart 148.28 335 *e*PKPbc PKPbc 21 25 19.3 -0.5
RUP Ruppelstein 148.31 338 PKP2 PKPbc 21 25 18.8 -1.1
ABTA Abfaltersbach 148.36 329⇑ *i*P PKPbc 21 25 18.8 -1.3
comp=Z,20nm,0.7s,SNR=5.2
SNF Seneffe 148.51 342 PKPbc PKPbc 21 25 19.4 -0.9
MOTA Moosalm 148.57 331⇑ *i*P PKPbc 21 25 19.9 -0.7
comp=Z,33nm,0.8s,SNR=14
RETA Reutte 148.62 332⇑ *i*P PKPdf 21 25 20.0 +3.0
comp=Z,11nm,0.6s
LANF Langenberg 148.65 336 PKP PKPbc 21 25 20.1 -0.7
WLF Walferdange 148.66 339 PKPbc PKPbc 21 25 21.2 +0.4
WLF Walferdange 148.66 339 *e*PKPbc PKPbc 21 25 20.5 -0.3
WLF Walferdange 148.66 339 *e*PKPbc PKPbc 21 25 20.6 -0.2
WLF LR LR
comp=Z,1µm,19.0s,MS5.7
GIVF Givet 148.71 341⇑ *i*PKP1 PKPbc 21 25 20.2 -0.7
comp=Z,93nm,0.9s
DOU Dourbes 148.78 341 PKPbc PKPbc 21 25 19.6 -1.5
BAIF Baives 148.93 341⇑ *i*PKP1 PKPbc 21 25 20.9 -0.6
comp=Z,108nm,1.3s
BFO Black Forest 148.98 335 *e*PKPbc PKPbc 21 25 20.7 -1.0
BFO Black Forest 148.98 335 *e*PKPbc PKPbc 21 25 20.5 -1.1
BFO LR LR
comp=Z,382nm,20.0s,MS5.2
SPAK Spaichingen-Ko 148.98 334 PKP PKPdf 21 25 20.1 +2.5
FETA Feichten 148.99 331⇑ *i*P PKPbc 21 25 21.2 -0.5
comp=Z,32nm,0.8s,SNR=16
STR Strasbourg 148.99 336 PKP PKPbc 21 25 21.5 -0.2
DAVA Damuels 149.16 332 ⇓ *i*P PKPbc 21 25 21.7 -0.4
comp=Z,27nm,0.8s
CDF Champ du Feu 149.31 336⇑ *i*PKP1 PKPbc 21 25 21.7 -0.8
comp=Z,133nm,1.3s
FELD Feldberg im Sc 149.47 335 PKP PKPbc 21 25 22.4 -0.5
ECH Echery 149.52 336 PKP PKPbc 21 25 21.7 -1.3
ECH Echery 149.52 336 *e*PKPbc PKPbc 21 25 21.7 -1.6
MOF Molkenrain 149.83 336 PKP PKPbc 21 25 22.7 -1.1
THEF They Montfort 149.94 338 PKP PKPbc 21 25 23.1 -0.9
HINF Hinteralfeld 149.97 336⇑ *i*PKP1 PKPbc 21 25 23.2 -0.9
comp=Z,42nm,1.0s
HAU Haudompre 150.00 337⇑ *i*PKP1 PKPbc 21 25 23.4 -0.8
comp=Z,78nm,1.0s
TUE Stuetta 150.02 332 *e*PKPbc PKPbc 21 25 23.6 -0.8
TUE LR LR
comp=Z,635nm,19.0s,MS5.4
MEZF Maizieres J'vi 150.03 339⇑ *i*PKP1 PKPbc 21 25 24.0 -0.2
comp=Z,176nm,1.0s
LOMF Lomont 150.36 336 PKP PKPbc 21 25 23.9 -1.2
TIP Timpagrande 150.50 313 *e*PKPbc PKPbc 21 25 26.0 +0.3
TIP LR LR
comp=Z,538nm,19.0s,MS5.4
CUC Castrocucco 150.72 316 *e*PKPbc PKPbc 21 25 24.6 -1.6
CUC LR LR
comp=Z,726nm,19.0s,MS5.5
ASCN Ascension 150.78 172 PFAKE 21 25 30.0 +8.4
ASCN LR LR
comp=Z,900nm,19.0s,MS5.6
VLC Villacollemand 151.25 328 PFAKE 21 25 30.0 +8.7
VLC LR LR
comp=Z,583nm,20.0s,MS5.4
CABF La Chapelle 151.26 336⇑ *i*PKP1 PKPbc 21 25 26.9 -0.3
comp=Z,59nm,0.7s
FLN La Foliniere 151.36 336⇑ *i*PKP1 PKPbc 21 25 26.3 -1.1
comp=Z,135nm,0.8s
LDF La Druitiere 151.43 345⇑ *i*PKP1 PKPbc 21 25 26.4 -1.2
comp=Z,34nm,0.7s
LOR Lormes 151.50 339⇑ *i*PKP1 PKPbc 21 25 27.0 -0.8
comp=Z,61nm,0.9s
GRR Gorron 151.79 346⇑ *i*PKP1 PKPbc 21 25 27.5 -0.9
comp=Z,96nm,0.9s
SSF Saint Saulge 151.80 339⇑ *i*PKP1 PKPbc 21 25 27.6 -0.8
comp=Z,78nm,0.9s
HYF Humbligny 151.89 341 *e*PKP1 PKPbc 21 25 28.2 -0.5
LPL La Plagne 151.90 334⇑ *i*PKP1 PKPbc 21 25 28.4 -0.3
comp=Z,43nm,0.8s
LPG La Plagne 151.90 333⇑ *i*PKP1 PKPbc 21 25 28.6 -0.1
comp=Z,46nm,0.7s
SMF Signal de Mont 152.05 338⇑ *i*PKP1 PKPbc 21 25 27.9 -1.1
comp=Z,45nm,1.1s
AVF Avril sur Loir 152.09 339⇑ *i*PKP1 PKPbc 21 25 28.0 -1.1
comp=Z,26nm,1.0s
SGMF Saint Gilles 152.27 348⇑ *i*PKP1 PKPbc 21 25 28.3 -1.2
comp=Z,92nm,0.9s
BNI Bardonecchia 152.29 333 *e*PKIKP PKPbc 21 25 29.7 +0.1
BNI MLR MLR
comp=Z,1µm,19.0s,MS5.7
ROSF Rostrenen 152.32 349⇑ *i*PKP1 PKPbc 21 25 28.3 -1.3
comp=Z,80nm,0.9s
BGF Bois d'Agland 152.46 340⇑ *i*PKP1 PKPbc 21 25 29.1 -0.9
comp=Z,39nm,0.8s
MBDF Montbardon 152.51 332⇑ *i*PKP1 PKPbc 21 25 29.3 -0.8
comp=Z,18nm,0.7s
QUIF Quistinic 152.71 349⇑ *i*PKP1 PKPbc 21 25 29.2 -1.3
comp=Z,13nm,0.6s
ORIF Oris-en-Rattie 152.73 334⇑ *i*PKP1 PKPbc 21 25 29.9 -0.7
comp=Z,65nm,0.7s

SBF	**Sospel**	**152.90 331**	⇑ *i*PKP1	PKPbc	21 25 29.8	-1.2
TCF	**Toulx Ste Croi**	**152.90 340**	⇑ *i*PKP1	PKPbc	21 25 30.0	-0.9
	comp=Z,56nm,1.0s					
SSB	**Saint Sauveur**	**152.96 336**	*e*PKIKP	PKPdf	21 25 25.0	+1.1
SSB			*e*		21 25 30.6	
PGF	**Pioggiola**	**153.12 327**	⇑ *i*PKP1	PKPbc	21 25 30.6	-1.0
	comp=Z,70nm,0.9s					
VIVF	**Saint-Julien-l**	**153.27 335**	⇑ *i*PKP1	PKPbc	21 25 31.1	-0.7
	comp=Z,33nm,0.9s					
MFF	**Saint Martin d**	**153.29 344**	⇑ *i*PKP1	PKPbc	21 25 30.8	-1.0
	comp=Z,39nm,1.0s					
FRF	**La Foret Royal**	**153.49 331**	⇑ *i*PKP1	PKPbc	21 25 31.2	-1.1
	comp=Z,25nm,0.9s					
SMRF	**Simiane la Rot**	**153.63 333**	⇑ *i*PKP1	PKPbc	21 25 32.1	-0.5
	comp=Z,24nm,0.8s					
LMR	**La Mourre**	**153.73 331**	⇑ *i*PKP1	PKPbc	21 25 31.9	-1.0
LASF	**Ste Croix**	**154.24 335**	⇑ *i*PKP1	PKPbc	21 25 33.2	-0.7
	comp=Z,25nm,0.9s					
LFF	**La Frestale**	**154.56 341**	⇑ *i*PKP1	PKPbc	21 25 33.8	-0.8
	comp=Z,38nm,1.0s					
VSL	**Villasalto**	**155.01 321**	PFAKE		21 25 40.0	+13
VSL			LR	LR		
	comp=Z,657nm,19.0s,MS5.5					
MTLF	**Montolieu**	**155.49 337**	⇑ *i*PKP1	PKPdf	21 25 35.7	+8.2
PVRL	**Vila Real**	**159.87 354**	*e*PKPab	PKPab	21 26 11.6	-0.4
PVRL			*i* P	pPKPab	21 26 18.5	-1.3
MVO	**Moncorvo**	**159.90 352**	*e*PKPab	PKPab	21 26 11.6	-0.6
MVO			*i* P	pPKPab	21 26 18.5	-1.5
PVIS	**Viseu**	**160.44 354**	*e*PKPab	PKPab	21 26 14.2	-0.3
PVIS			*i* P	pPKPab	21 26 21.0	-1.3
MTE	**Manteigas**	**160.72 353**	*e*PKPab	PKPab	21 26 15.4	-0.3
MTE			*i* P	pPKPab	21 26 19.4	-4.1
MTE	**Manteigas**	**160.72 353**	PFAKE		21 25 40.0	+6.1
MTE			LR	LR		
	comp=Z,446nm,19.0s					
ESDC	**Sonseca Array**	**160.75 344**	PKPab	PKPab	21 26 15.4	-0.6
	comp=Z,5.1nm,0.8s,baz=22,slow=3.9,SNR=12					
ESLA	**Sonseca Array**	**160.75 344**	PFAKE		21 25 40.0	+6.0
ESLA			LR	LR		
	comp=Z,2μm,20.0s					
PAB	**San Pablo**	**160.97 345**	PFAKE		21 25 40.0	+5.8
PAB			LR	LR		
	comp=Z,410nm,19.0s					
PCBR	**Castelo Branco**	**161.26 352**	*e*PKPdf	PKPdf	21 25 33.5	-1.0
PCBR	**Castelo Branco**	**161.26 352**	*e*PKPab	PKPab	21 26 17.5	-0.6
PCBR			*i* P	pPKPab	21 26 24.5	-1.4
PTOM	**Tomar**	**161.58 355**	*e*PKPab	PKPab	21 26 19.2	-0.3
PMRV	**Marv??o**	**161.66 352**	*e*PKPab	PKPab	21 26 19.2	-0.7
PESTR	**Estremoz**	**162.23 352**	*e*PKPab	PKPab	21 26 22.1	-0.3
PESTR			*i* P	pPKPab	21 26 29.1	-1.1
EVO	**Evora**	**162.62 353**	*e*PKIKP	PKPdf	21 25 34.7	-1.3
	comp=Z,31nm,1.4s					
EVO	**Evora**	**162.62 353**	*e*PKPdf	PKPdf	21 25 35.8	-0.2
EVO	**Evora**	**162.62 353**	*e*PKPab	PKPab	21 26 23.5	-0.6
EVO			*i* P	pPKPab	21 26 30.2	-1.7
PBAR	**Barrancos**	**162.84 350**	*e*PKPdf	PKPdf	21 25 35.4	-0.8
PBAR	**Barrancos**	**162.84 350**	*e*PKPab	PKPab	21 26 24.3	-0.8
PBAR			*i* P	pPKPab	21 26 29.7	-3.2
PBEJ	**Beja**	**163.10 352**	*e*PKPdf	PKPdf	21 25 36.3	-0.2
PBEJ	**Beja**	**163.10 352**	*e*PKPab	PKPab	21 26 26.0	-0.2
PBEJ			*i* P	pPKPab	21 26 32.9	-1.1
PVAQ	**Vaqueiros**	**163.69 352**	*e*PKPab	PKPab	21 26 28.7	-0.1
PVAQ			*i* P	pPKPab	21 26 35.5	-1.1
PBDV	**Barranco-do-Ve**	**163.88 352**	*e*PKPab	PKPab	21 26 29.9	+0.2
MORF	**Marmelete**	**163.89 354**	*e*PKPab	PKPab	21 26 29.8	+0.1
MORF			*i* P	pPKPab	21 26 37.0	-0.5
PFVI	**Vila Bisbo**	**164.08 355**	*i* P	PKPab	21 26 30.5	-0.1
LIC	**Lamto**	**164.12 201**	*e*PKIKP	PKPdf	21 25 37.4	-0.8
LIC	**Lamto**	**164.12 201**	*e*P	PKPab	21 26 31.3	0.0
	comp=Z,85nm,1.0s					
KIC	**Kosan Boka**	**164.15 202**	*e*P	PKPab	21 26 30.9	-0.5
	comp=Z,142nm,1.3s					
SFS	**San Fernando**	**164.34 347**	PFAKE		21 25 50.0	+12
SFS			LR	LR		
	comp=Z,1μm,19.0s					
DBIC	**Dimbokro**	**164.48 202**	PKP	PKPdf	21 25 36.6	-1.8
	comp=Z,2.8nm,0.8s,baz=120,slow=4.7,SNR=3.4					
DBIC			PKPab	PKPab	21 26 33.1	+0.2
	comp=Z,12nm,0.8s,baz=140,slow=4.4,SNR=13					
DBIC	**Dimbokro**	**164.48 202**	PKP	PKPdf	21 25 36.6	-1.8
DBIC			PKPab	PKPab	21 26 33.1	+0.2
DBIC			LR	LR		
	comp=Z,595nm,19.0s					
TIC	**Toumodi**	**164.51 201**	*e*P	PKPab	21 26 32.6	-0.4
	comp=Z,129nm,1.0s					
TOA0	**Torodi Ar. Sit**	**165.74 238**	*e*PKPdf	PKPdf	21 25 38.8	-0.7
TORD	**Torodi Ar. Bea**	**165.74 238**	PKP	PKPdf	21 25 38.9	-0.6
	comp=Z,3.2nm,0.8s,baz=343,slow=1.7,SNR=14					
TORD			PKPab	PKPab	21 26 38.0	-0.7
	comp=Z,1.7nm,0.9s,baz=106,slow=3.6,SNR=4.6					
TORD			PP	PP	21 30 12.2	-13
	comp=Z,1.4nm,1.1s,baz=122,slow=7.3,SNR=3.8					
TORD	**Torodi Ar. Bea**	**165.74 238**	PKP	PKPdf	21 25 38.9	-0.6
TORD			PKPab	PKPab	21 26 38.0	-0.7
TORD			PP	PP	21 30 12.2	-13
RTC	**Rabat Centre**	**166.87 346**	PFAKE		21 25 50.0	+10
RTC			LR	LR		
	comp=Z,621nm,19.0s					

IDC 27 21:08:48.8±2.9, 2213S×16971E, h0km, mb4.0/6, mb1 4.3/6, mb1mx4.1/16, mbtmp4.1/6, Error ellipse: s-maj=165.1km s-min=26.2km az=163.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.97**	**271**	P	P	21 13 45.2	+0.8
	2.8nm,0.4s,baz=72,slow=16,SNR=2.7						
ASAR	**Alice Springs**	**32.97**	**260**	P	P	21 15 26.0	+0.5
	1.6nm,0.7s,baz=83,slow=9.3,SNR=4.3						
WRA	**Warramunga Arr**	**33.04**	**267**	P	P	21 15 25.4	-0.7
	1.2nm,0.8s,baz=101,slow=8.4,SNR=2.7						
FITZ	**Fitzroy Crossi**	**41.47**	**267**	P	P	21 16 37.6	-0.2
	3.5nm,0.6s,baz=128,slow=14,SNR=4.5						
CMAR	**Chiang Mai Arr**	**80.09**	**295**	P	P	21 21 01.1	+0.1
	1.0nm,0.7s,baz=128,slow=4.5,SNR=5.2						
NVAR	**Mina Array Bea**	**90.38**	**48**	P	P	21 21 52.9	+0.8
	0.6nm,0.6s,baz=238,slow=8.4,SNR=3.0						
ARCES	**ARCESS Array B**	**127.96**	**345**	PKP	PKPdf	21 27 55.0	-0.8
	4.0nm,1.1s,baz=9.5,slow=2.7,SNR=4.3						
GERES	**GERESS Array B**	**147.22**	**330**	PKPbc	PKPbc	21 28 33.2	-0.8
	0.9nm,0.6s,baz=35,slow=3.6,SNR=4.6						

IDC 27 21:12:03.0±4.3, 2211S×16960E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/16, mbtmp4.0/4, Error ellipse: s-maj=183.5km s-min=48.5km az=158.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.87**	**271**	P	P	21 16 57.7	+0.2
	3.6nm,0.7s,baz=84,slow=9.2,SNR=4.7						
ASAR	**Alice Springs**	**32.87**	**260**	P	P	21 18 39.3	+0.4
	1.5nm,0.7s,baz=79,slow=9.2,SNR=4.5						
WRA	**Warramunga Arr**	**32.94**	**267**	P	P	21 18 38.9	-0.6
	1.0nm,0.9s,baz=102,slow=7.7,SNR=4.3						
FITZ	**Fitzroy Crossi**	**41.37**	**267**	P	P	21 19 51.1	-0.1
	3.6nm,0.9s,baz=90,slow=13,SNR=3.8						
GERES	**GERESS Array B**	**147.15**	**330**	PKPbc	PKPbc	21 31 47.5	-0.5
	0.2nm,0.3s,baz=69,slow=3.3,SNR=2.4						

IDC 27 21:14:11.4±1.8, 2179S×16965E, h0km, mb4.2/7, mb1 4.4/7, mb1mx4.2/15, mbtmp4.2/7, Error ellipse: s-maj=81.5km s-min=25.1km az=156.0
NEIC 27 21:14:13.2±1.3, 2165S×16962E, h10km, mb4.1/2, Error ellipse: s-maj=59.0km s-min=19.1km az=156.0
ISCJB 27 21:14:15.7±1.7, 218S±04×1695E±03, h33km, mb4.1/7, Error ellipse: s-maj=64.8km s-min=22.9km az=153.3

ISC 27 21:14:17.7±1.6, 217S±04×1695E±03, h35km, n11, σ0§83/9, mb4.1/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.80**	**270**	*e*P	**P**	**21 19 07.2**	**+0.5**
	7.0nm,0.8s,mb4.1						
CTA	**Charters Tower**	**21.80**	**270**	P	**P**	**21 19 07.3**	**+0.6**
	9.3nm,0.9s,mb4.2,baz=91,slow=12,SNR=12						
STKA	**Stephens Creek**	**26.83**	**242**	*e*P	**P**	**21 19 55.8**	**+1.0**
	5.8nm,1.2s,mb4.0						
STKA	**Stephens Creek**	**26.83**	**242**	P	**P**	**21 19 55.0**	**+0.2**
	5.8nm,0.9s,mb4.1,baz=31,slow=8.1,SNR=3.1						
ASAR	**Alice Springs**	**32.87**	**260**	P	**P**	**21 20 48.4**	**-0.1**
	3.5nm,0.9s,mb4.3,baz=78,slow=9.8,SNR=13						
WRA	**Warramunga Arr**	**32.89**	**267**	P	**P**	**21 20 46.7**	**-2.0**
	2.3nm,0.9s,mb4.1,baz=95,slow=9.3,SNR=6.4						
CMAR	**Chiang Mai Arr**	**79.76**	**295**	P	**P**	**21 26 23.2**	**+0.7**
	1.1nm,0.8s,mb3.9,baz=130,slow=3.5,SNR=4.2						
SONM	**Songino Array**	**89.35**	**323**	P	**P**	**21 27 10.5**	**+0.2**
	0.5nm,0.5s,mb4.1,baz=145,slow=8.5,SNR=2.7						
NVAR	**Mina Array Bea**	**90.24**	**48**	P	**P**	**21 27 14.4**	**-0.3**
	1.3nm,0.6s,mb4.4,baz=225,slow=8.9,SNR=7.3						
ARCES	**ARCESS Array B**	**127.52**	**345**	PKP	PKPdf	21 33 16.6	-1.6
	2.3nm,0.8s,baz=60,slow=2.2,SNR=5.9						
GERES	**GERESS Array B**	**146.78**	**330**	PKPbc	PKPbc	21 33 55.1	-0.8
	1.5nm,0.6s,baz=40,slow=3.6,SNR=12						

IDC 27 21:16:14.0±1.9, 2113S×16904E, h0km, mb4.1/5, mb1 4.3/5, mb1mx4.0/15, mbtmp4.1/5, Error ellipse: s-maj=96.4km s-min=27.4km az=156.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.35**	**269**	P	P	21 21 05.0	+2.1
	3.3nm,0.7s,baz=109,slow=13,SNR=4.8						
CTA	**Charters Tower**	**21.35**	**269**	*e*PCP	P	21 21 06.3	+3.4
STKA	**Stephens Creek**	**26.72**	**241**	P	P	21 21 54.5	-0.7
	5.0nm,0.9s,baz=90,slow=4.0,SNR=2.8						
WRA	**Warramunga Arr**	**32.48**	**266**	P	P	21 22 46.1	-0.4
	0.9nm,0.7s,baz=86,slow=8.9,SNR=3.7						
ASAR	**Alice Springs**	**32.53**	**259**	P	P	21 22 46.7	-0.2
	2.4nm,0.7s,baz=87,slow=8.7,SNR=6.8						
NVAR	**Mina Array Bea**	**90.19**	**49**	P	P	21 29 16.8	+0.5
	0.9nm,0.7s,baz=217,slow=9.6,SNR=2.2						
GERES	**GERESS Array B**	**146.04**	**330**	PKPbc	PKPbc	21 35 55.1	-0.6
	0.4nm,0.5s,baz=31,slow=2.5,SNR=3.6						

CSEM 27 21:17:11.8±0.1, 3735N×37.14E, h15km, MD2.6, Error ellipse: s-maj=2.4km s-min=1.7km az=69.0
ISK 27 21:17:11.7, 3738N×3721E, h9km, MD2.6
DDA 27 21:17:11.8, 3735N×3718E, h7km, Md2.3
ISCJB 27 21:17:12.4±0.6, 3736N±005×3718E±004, h7km±8km, Error ellipse: s-maj=8.9km s-min=5.3km az=15.7

ISC 27 21:17:12.5±0.7, 3735N±005×3718E±004, h12km±8km, n7, σ0§41/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZ	**Gaziantep**	**0.18**	**173**	*e*PG	**Pg**	**21 17 16.6**	**0.0**
GAZ				*e*SG	**Sg**	**21 17 19.9**	**+0.5**
KMRS	**Kahramanmaras**	**0.27**	**304**	*e*PG	**Pg**	**21 17 17.6**	**-0.6**
KMRS				*e*SG	**Sg**	**21 17 22.0**	**0.0**
GZT	**Gaziantep**	**0.30**	**89**	*i* P	**Pg**	**21 17 18.1**	**-0.6**
GZT				*i* S	**Sg**	**21 17 22.6**	**-0.3**
ANDN	**Andirin**	**0.70**	**289**	*i* P	**Pg**	**21 17 25.9**	**-0.3**
ANDN				*i* S	**Sg**	**21 17 35.6**	**+0.1**
KOZT	**Kozan**	**1.09**	**277**	*e*PN	**Pn**	**21 17 33.9**	**+0.4**
AKCD	**Akcadag**	**1.11**	**32**	*i* P	**Pb**	**21 17 33.7**	**+0.1**
AKCD				*i* S	**Sg**	**21 17 49.1**	**+0.8**
MALT	**Malatya**	**1.37**	**45**	*e*PN	**Pn**	**21 17 37.2**	**-0.3**

IDC 27 21:18:10.0±8.6, 764S×12922E, h171km±91km, mb3.0/1, mb1 3.5/5, mb1mx3.2/16, mbtmp3.4/5, Error ellipse: s-maj=86.3km s-min=23.7km az=38.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.05**	**245**	P	Pn	21 19 38.5	+0.9
	9.5nm,0.3s,baz=76,slow=3.8,SNR=10						
BATI				S	Sn	21 20 46.8	+0.3
	8.5nm,0.3s,baz=83,slow=21,SNR=14						
FITZ	**Fitzroy Crossi**	**10.97**	**198**	P	Pn	21 20 41.5	-0.8
	1.3nm,0.3s,baz=33,slow=14,SNR=21						
FITZ				S	Sn	21 22 41.8	-2.3
	0.6nm,0.3s,baz=180,slow=17,SNR=3.4						
WRA	**Warramunga Arr**	**13.20**	**158**	P	Pn	21 21 09.8	-1.2
	1.1nm,0.3s,baz=335,slow=13,SNR=38						
WRA				S	Sn	21 23 29.9	-7.6
	1.1nm,0.3s,baz=334,slow=22,SNR=9.3						
ASAR	**Alice Springs**	**16.55**	**165**	P	Pn	21 21 54.0	+1.5
	0.5nm,0.3s,baz=332,slow=9.5,SNR=20						
MKAR	**Makanchi Array**	**68.34**	**327**	P	P	21 28 52.8	0.0
	0.3nm,0.6s,baz=126,slow=7.3,SNR=2.7						

IDC 27 21:18:08.2±0.9, 2116S×16925E, h0km, mb4.4/11, mb1 4.5/12, mb1mx4.4/19, mbtmp4.4/12, ML3.6/1, Error ellipse: s-maj=24.6km s-min=21.8km az=14.0
NEIC 27 21:18:09.1±0.4, 2111S×16932E, h10km, mb4.6/11, Error ellipse: s-maj=11.7km s-min=7.9km az=37.0
ISCJB 27 21:18:11.0±0.4, 2115S±007×16926E±006, h33km, mb4.5/17, Error ellipse: s-maj=9.8km s-min=7.4km az=11.8
MOS 27 21:18:11.0±1.3, 2123S×16932E, h33km, mb4.6/8, Error ellipse: s-maj=22.0km s-min=13.8km az=9.3

ISC 27 21:18:13.0±0.4, 2116S±007×16926E±006, h35km, n51, σ0§93/47, mb4.5/17, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.77**	**250**	*e*P	**Pn**	**21 18 53.5**	**-1.4**
DZM				*e*S	**Sn**	**21 19 27.1**	**-0.1**
RAO	**Raoul Island**	**14.12**	**127**	P	**Pn**	**21 21 29.7**	**-0.8**
HNR	**Honiara**	**14.71**	**321**	*e*P	**Pn**	**21 21 38.0**	**-0.6**
HNR				pmax	pmax		
	comp=Z,53nm,1.0s						
HNR	**Honiara**	**14.71**	**321**	*e*Pn	**Pn**	**21 21 38.0**	**-0.6**
	comp=Z,53nm,1.0s						
URZ	**Urewera**	**18.34**	**160**	P	**Pn**	**21 22 25.9**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=280,slow=12,SNR=2.0						
CTA	**Charters Tower**	**21.56**	**269**	*e*P	**P**	**21 23 01.1**	**+1.6**
	comp=Z,6.0nm,0.9s,mb4.0						
CTA	**Charters Tower**	**21.56**	**269**	P	**P**	**21 23 00.8**	**+1.3**
	comp=Z,2.3nm,0.3s,mb4.0,baz=115,slow=11,SNR=8.0						
CTA	**Charters Tower**	**21.56**	**269**	*e*P	**P**	**21 23 01.1**	**+1.6**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CTAO	**Charters Tower**	**21.56**	**269**	*e*P	**P**	**21 23 00.5**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
CTAO	**Charters Tower**	**21.56**	**269**	*e*P	**P**	**21 23 00.5**	**+1.0**
	comp=Z,8.1nm,0.9s,mb4.2						
PMG	**Port Moresby**	**24.27**	**295**	P	**P**	**21 23 24.9**	**-2.2**
STKA	**Stephens Creek**	**26.89**	**241**	*e*P	**P**	**21 23 51.8**	**+1.1**
	comp=Z,7.3nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**26.89**	**241**	P	**P**	**21 23 51.7**	**+1.1**
	comp=Z,7.5nm,0.8s,mb4.3,baz=340,slow=24,SNR=5.8						
RAR	**Rarotonga**	**28.85**	**96**	P	**P**	**21 24 06.7**	**-1.6**
WRA	**Warramunga Arr**	**32.68**	**266**	P	**P**	**21 24 41.0**	**-1.2**
	comp=Z,2.6nm,0.9s,mb4.2,baz=98,slow=7.9,SNR=4.3						
ASAR	**Alice Springs**	**32.73**	**259**	P	**P**	**21 24 42.3**	**-0.3**
	comp=Z,4.9nm,0.7s,mb4.5,baz=84,slow=9.2,SNR=20						
FITZ	**Fitzroy Crossi**	**41.11**	**266**	*e*P	**P**	**21 25 54.1**	**+0.3**
	comp=Z,15nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**41.11**	**266**	P	**P**	**21 25 53.9**	**+0.1**
	comp=Z,8.4nm,0.7s,mb4.5,baz=136,slow=10.0,SNR=9.8						
NWAO	**Narrogin (SRO)**	**47.38**	**244**	P	**P**	**21 26 43.1**	**-0.8**
	comp=Z,11nm,0.9s,mb4.8,baz=108,slow=9.1,SNR=3.9						
DAV	**Davao City (W)**	**51.24**	**298**	*e*P	**P**	**21 27 15.1**	**+1.5**
	comp=Z,0.1nm,0.3s						
SBA	**Scott Base**	**56.75**	**181**	*e*P	**P**	**21 27 53.0**	**+0.1**
SBA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
SBA	**Scott Base**	**56.75**	**181**	*e*P	**P**	**21 27 53.0**	**0.0**
	comp=Z,6.1nm,1.0s,mb4.6						
CASY	**Casey**	**58.38**	**204**	*e*P	**P**	**21 28 03.9**	**-0.6**
	comp=Z,5.8nm,0.9s,mb4.6						
KKM	**Kota Kinabalu**	**58.63**	**291**	P	**P**	**21 28 06.5**	**-0.6**
MAJO	**Matsushiro**	**64.45**	**333**	*e*P	**P**	**21 28 45.3**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
MAJO	**Matsushiro**	**64.45**	**333**	*e*P	**P**	**21 28 45.3**	**-0.5**
	comp=Z,4.4nm,0.7s,mb4.6						
QSPA	**South Pole Qui**	**68.91**	**180**	P	**P**	**21 29 14.4**	**+0.7**
	comp=Z,7.4nm,0.9s,mb4.6,baz=35,slow=3.1,SNR=14						
MAW	**Mawson**	**76.67**	**202**	P	**P**	**21 30 00.6**	**+0.7**
	comp=Z,2.8nm,0.8s,mb4.2,baz=120,slow=8.8,SNR=6.6						
MAW	**Mawson**	**76.67**	**202**	*e*P	**P**	**21 30 00.4**	**+0.4**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAW	**Mawson**	**76.67**	**202**	*e*P	**P**	**21 30 00.4**	**+0.4**
	comp=Z,2.2nm,0.6s,mb4.3						
CMAR	**Chiang Mai Arr**	**79.31**	**295**	P	**P**	**21 30 17.5**	**+2.1**
	comp=Z,3.5nm,0.9s,mb4.3,baz=136,slow=4.5,SNR=19						
CHTO	**Chiang Mai**	**79.47**	**295**	*e*P	**P**	**21 30 17.2**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
CHTO	**Chiang Mai**	**79.47**	**295**	*e*P	**P**	**21 30 17.2**	**+0.9**
	comp=Z,6.7nm,1.0s,mb4.5						
HIA	**Hailar**	**82.77**	**330**	P	**P**	**21 30 33.0**	**-0.2**
PMSA	**Palmer Station**	**85.11**	**160**	P	**P**	**21 30 44.7**	**-0.3**
SNAA	**Sanae**	**87.25**	**182**	*e*	**P**	**21 30 55.1**	**-0.4**
SNAA				*e*		21 30 58.2	
SNAA				*e*		21 31 02.3	
SNAA	**Sanae**	**87.25**	**182**	*e*P	**P**	**21 30 54.9**	**-0.6**
SNAA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SNAA	**Sanae**	**87.25**	**182**	*e*P	**P**	**21 30 54.9**	**-0.6**
	comp=Z,4.3nm,0.9s,mb4.7						
VNA3	**Neumayer Olymp**	**87.84**	**180**	*e*	**P**	**21 30 57.9**	**-0.4**
VNA3				*e*		21 31 00.9	
VNA3				*e*		21 31 04.9	
VNA2	**Neumayer--Watz**	**88.14**	**181**	*e*	**P**	**21 30 59.8**	**+0.1**
	baz=181,slow=4.2						
VNA2				*e*		21 31 02.6	
VNA2				*e*		21 31 06.6	
VNA1	**Neumayer--Stat**	**88.42**	**181**	*e*	**P**	**21 31 01.2**	**+0.1**
VNA1				*e*		21 31 04.2	
VNA1				*e*		21 31 08.2	
YAK	**Yakutsk**	**88.70**	**343**	P	**P**	**21 31 02.5**	**+0.3**
SONM	**Songino Array**	**88.76**	**323**	P	**P**	**21 31 03.9**	**+1.0**
	comp=Z,0.6nm,0.7s,mb4.0,baz=46,slow=4.3,SNR=3.6						
NVAR	**Mina Array Bea**	**90.05**	**48**	P	**P**	**21 31 10.3**	**+1.1**
	comp=Z,1.9nm,0.8s,mb4.5,baz=222,slow=9.3,SNR=6.9						
TPNV	**Topopah Spring**	**90.85**	**51**	*e*P	**P**	**21 31 12.7**	**-0.2**
TPNV				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.6						
TPNV	**Topopah Spring**	**90.85**	**51**	*e*P	**P**	**21 31 12.7**	**-0.2**
	comp=Z,3.4nm,1.0s,mb4.6						
ARCES	**ARCESS Array B**	**126.92**	**345**	PKP	PKPdf	21 37 11.9	-0.5
	comp=Z,2.9nm,0.9s,baz=19,slow=3.1,SNR=3.0						
CLL	**Collm**	**144.65**	**334**	*e*PKPdf	PKPdf	21 37 44.0	-1.7
GERES	**GERESS Array B**	**146.18**	**331**	PKPbc	PKPbc	21 37 49.6	+0.2
	comp=Z,1.9nm,0.7s,baz=43,slow=2.7,SNR=6.8						
DBIC	**Dimbokro**	**164.51**	**202**	PKPab	PKPab	21 39 09.8	+1.3
	comp=Z,6.2nm,1.1s,baz=157,slow=4.1,SNR=4.2						
TOA0	**Torodi Ar. Sit**	**165.70**	**238**	*e*PKPdf	PKPdf	21 38 13.8	-1.1

IDC 27 21:21:02.5±3.4, 2218S×16995E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.8/14, mbtmp3.7/4, Error ellipse: s-maj=170.6km s-min=33.8km az=160.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**33.18**	**260**	P	P	21 27 39.7	-1.3
	1.0nm,0.8s,baz=79,slow=9.5,SNR=3.8						
WRA	**Warramunga Arr**	**33.27**	**267**	P	P	21 27 43.7	+1.9
	0.5nm,0.7s,baz=102,slow=8.6,SNR=2.5						
CMAR	**Chiang Mai Arr**	**80.32**	**294**	P	P	21 33 15.7	-0.2
	0.3nm,0.8s,baz=104,slow=3.8,SNR=3.3						
NVAR	**Mina Array Bea**	**90.24**	**48**	P	P	21 34 06.0	+1.0
	0.8nm,0.8s,baz=232,slow=10.0,SNR=3.6						
GERES	**GERESS Array B**	**147.38**	**330**	PKPbc	PKPbc	21 40 46.8	-1.2
	0.4nm,0.6s,baz=48,slow=1.5,SNR=3.2						

IDC 27 21:22:41.5±43.0, 2101S×16867E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/15, mbtmp3.9/4, Error ellipse: s-maj=734.6km s-min=103.5km az=81.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**26.48**	**240**	P	P	21 28 20.5	0.0
	6.6nm,1.1s,baz=59,slow=4.3,SNR=3.1						
WRA	**Warramunga Arr**	**32.15**	**266**	P	P	21 29 10.4	-0.6
	0.3nm,0.5s,baz=98,slow=8.0,SNR=4.2						
ASAR	**Alice Springs**	**32.22**	**259**	P	P	21 29 11.8	+0.2
	1.0nm,0.7s,baz=87,slow=8.4,SNR=5.7						
FITZ	**Fitzroy Crossi**	**40.57**	**266**	P	P	21 30 23.4	+0.4
	1.5nm,0.7s,baz=128,slow=12,SNR=4.2				

WB2 Warramunga Arr 32.62 266 *e*P **P** **21 33 29.0 -1.3**
WRAB Tennant Creek 32.62 266 *i* P **P** **21 33 29.4 -1.0**
WRAB Tennant Creek 32.62 266 *e*P **P** **21 33 29.2 -1.1**
comp=Z,33nm,1.4s,mb5.1
WRA Warramunga Ar 32.63 266 P **P** **21 33 29.0 -1.4**
comp=Z,11nm,0.9s,mb4.8,baz=95,slow=7.9,SNR=67
WRA LR LR 21 46 44.0
comp=Z,2µm,18.8s,MS4.8,baz=85,slow=36
ASAR Alice Springs 32.67 259 P **P** **21 33 30.1 -0.6**
comp=Z,34nm,0.9s,mb5.3,baz=84,slow=9.2,SNR=159
ASAR PcP PcP 21 36 16.1 -0.6
comp=Z,3.1nm,0.9s,baz=98,slow=3.3,SNR=5.1
PPT Papeete 38.98 92 *e*S **S** **21 40 22.7 -1.1**
comp=Z,433nm,23.2s
PPT *e*LQ 21 43 16.3
comp=Z,1µm,32.5s
PPT *e*LR LR 21 45 14.7
comp=Z,1µm,24.8s
PPT Papeete 38.98 92 LR LR 21 46 11.0
comp=Z,1µm,20.0s,MS4.7,baz=187,slow=30
FITZ Fitzroy Crossi 41.05 266 *e*P **P** **21 34 41.9 -0.3**
comp=Z,76nm,1.0s,mb5.3
FITZ *e*PCP PcP 21 36 22.7 -19
FITZ Fitzroy Crossi 41.05 266 LR LR 21 52 06.5
comp=Z,2µm,18.3s,MS5.0,baz=287,slow=37
GUMO Guam 42.04 323 LR LR 21 51 24.9
comp=Z,684nm,18.5s,MS4.6,baz=213,slow=35
BATI Baumata 45.04 277 P **P** **21 35 13.2 -1.3**
comp=Z,30nm,0.9s,mb5.1,baz=204,slow=4.0,SNR=5.1
BATI LR LR 21 52 59.9
comp=Z,2µm,19.0s,MS5.0,baz=322,slow=35
MBWA Marble Bar 45.97 261 *e*P **P** **21 35 21.6 -0.2**
comp=Z,51nm,1.0s,mb5.4
KLBR Kellerberrin 46.86 246 *e*P **P** **21 35 27.4 -1.3**
comp=Z,41nm,0.8s,mb5.4
NWAO Narrogin (SRO) 47.31 244 P **P** **21 35 31.3 -0.9**
comp=Z,11nm,0.6s,mb5.0,baz=99,slow=6.2,SNR=10
NWAO Narrogin (SRO) 47.31 244 *e*P **P** **21 35 31.6 -0.6**
NWAO *e* 21 37 03.1
NWAO pmax pmax
comp=Z,16nm,0.8s
NWAO Narrogin (SRO) 47.31 244 *e*P **P** **21 35 31.6 -0.6**
comp=Z,16nm,0.8s,mb5.0
NWAO *e*PcP PcP 21 37 03.1 -0.1
MUN Mundaring 48.18 246 *e*P **P** **21 35 37.2 -1.8**
KAPI Kappang 50.54 281 P **P** **21 35 56.2 -1.1**
comp=Z,3.2nm,0.4s,mb4.6,baz=143,slow=4.1,SNR=4.6
KAPI LR LR 21 55 07.4
comp=Z,514nm,21.1s,MS4.5,baz=72,slow=33
DAV Davao City (W) 51.22 299 LR LR 21 56 34.2
comp=Z,557nm,18.5s,MS4.6,baz=79,slow=35
CASY Casey 58.32 204 *e*P **P** **21 36 52.2 -0.8**
KKM Kota Kinabalu 58.60 292 P **P** **21 36 53.9 -1.9**
MJAR Matsushiro Arr 64.47 333 P **P** **21 37 34.1 -0.8**
comp=Z,3.5nm,0.7s,mb4.5,baz=178,slow=7.7,SNR=11
MAJO Matsushiro 64.47 333 *e*P **P** **21 37 34.5 -0.5**
MAJO pmax pmax
comp=Z,13nm,0.9s,mb5.0
MAJO Matsushiro 64.47 333 *e*P **P** **21 37 34.5 -0.5**
comp=Z,13nm,0.9s,mb5.0
MAT Matsushiro 64.47 333 P **P** **21 37 34.2 -0.8**
YHNB Yeheng 65.12 312 *e*P **P** **21 37 39.2 -0.3**
comp=Z,58nm,1.2s,mb5.5
MIR Mirnyy 65.24 205⇑ *i*P **P** **21 37 39.0 -0.7**
MIR *i* 21 37 48.0
MIR *i* 21 37 54.0
MIR pmax pmax
comp=Z,100nm,1.2s,mb5.7
TATO Taipei 65.24 312 P **P** **21 37 39.0 -1.3**
KSRS Korea Array 70.11 326 P **P** **21 38 10.6 -0.1**
comp=Z,3.2nm,1.0s,mb4.2,baz=138,slow=6.1,SNR=5.8
NJ2 Nanjing 71.60 316 *e*P **P** **21 38 20.8 +0.9**
YSS Yuzh-Sakhalins 71.92 341 *e*P **P** **21 38 22.0 +0.5**
YSS pmax pmax
comp=Z,80nm,1.1s,mb5.6
YSS Yuzh-Sakhalins 71.92 341 *e*P **P** **21 38 20.3 -1.2**
comp=Z,62nm,1.0s,mb5.5
WHN Wuhan 73.65 313 P **P** **21 38 32.0 -0.2**
PEA0B Petropavlovsk- 74.67 353 *e*P **P** **21 38 38.4 +0.7**
PETK Petropavlovsk- 74.67 353 P **P** **21 38 37.9 +0.3**
comp=Z,5.1nm,0.6s,mb4.6,baz=139,slow=5.6,SNR=14
MDJ Mudanjiang 74.83 332 P **P** **21 38 39.5 +0.8**
MDJ AMB AMB
comp=Z,13nm,1.8s,mb4.6
MDJ AMB AMB
comp=Z,1µm,14.7s
MDJ Mudanjiang 74.83 332 *e*P **P** **21 38 39.3 +0.6**
MDJ *e*PP PP 21 41 24.3 -2.2
SNY Shenyang 75.60 327⇓ P **P** **21 38 42.3 -0.9**
SNY AMB AMB
comp=Z,13nm,2.0s,mb4.5
CN2 Changchun 76.12 329 *e*P **P** **21 38 46.0 -0.1**
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
MAW Mawson 76.61 202 *e*P **P** **21 38 48.7 0.0**
comp=Z,7.7nm,0.9s,mb4.6
MAW Mawson 76.61 202 P **P** **21 38 48.6 -0.1**
comp=Z,11nm,1.0s,mb4.7,baz=104,slow=7.6,SNR=16
MAW Mawson 76.61 202 *e*P **P** **21 38 48.7 0.0**
MAW pmax pmax
comp=Z,8.0nm,0.9s
ENH Enshi 76.90 310 P **P** **21 38 49.9 -1.0**
GYA Guiyang 76.92 305⇑ *i*P **P** **21 38 53.0 +1.9**
GYA PCP PcP 21 39 03.8 +1.6
GYA PP PP 21 41 49.0 +4.5
GYA S S 21 48 41.3 +2.1
GYA SKS 21 49 01.5
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.2
GYA AMB AMB
comp=Z,150nm,5.2s
GYA LR LR
comp=N,880nm,18.0s,MS5.2
GYA LR LR
comp=E,760nm,19.4s,MS5.2
GYA LR LR
comp=Z,820nm,19.2s,MS5.1
KLR Kul'dur 77.64 336 *e*P **P** **21 38 50.6 -4.0**
KLR pmax pmax
comp=Z,110nm,1.8s,mb5.5
BJT Baijiatuan 78.43 321 *e*P **P** **21 38 57.8 -1.4**
BJI Beijing 78.44 321 P **P** **21 38 59.5 +0.2**
BJI AMB AMB
comp=Z,9.0nm,1.0s,mb4.7
BJI AMB AMB
comp=Z,627nm,7.1s
BJI Beijing 78.44 321 P **P** **21 38 59.6 +0.3**
BJI pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
BJI Beijing 78.44 321 P **P** **21 38 59.6 +0.3**
comp=Z,9.0nm,1.0s,mb4.7
CHRT Chiangrai 79.21 296 P **P** **21 39 05.0 +1.0**
CMAR Chiang Mai Arr 79.28 295 P **P** **21 39 05.5 +1.2**
comp=Z,12nm,1.0s,mb4.8,baz=129,slow=4.0,SNR=48
CMAR Chiang Mai Arr 79.28 295⇑ *e*P **P** **21 39 05.6 +1.2**
KMI Kunming 79.28 302 P **P** **21 39 06.0 +1.7**
KMI AP pP 21 39 13.3 +5.2
KMI AMB AMB
comp=Z,32nm,1.0s,mb5.2
KMI Kunming 79.28 302 P **P** **21 39 05.9 +1.6**
KMI *PP pP 21 39 13.2 +5.1
KMI pmax pmax
comp=Z,32nm,1.0s,mb5.2
KMI Kunming 79.28 302 P **P** **21 39 05.9 +1.6**
comp=Z,32nm,1.0s,mb5.2
KMI pP pP 21 39 13.2 +5.1
XAN Xi'an 79.41 313 P **P** **21 39 05.0 +0.2**
XAN AP pP 21 39 17.5 +8.9
XAN AMB AMB
comp=Z,19nm,1.4s,mb4.8
CHG Chiang Mai 79.44 295⇓ P **P** **21 39 06.2 +1.0**
comp=Z,20nm,1.0s,mb5.0
CHTO Chiang Mai 79.44 295 *e*P **P** **21 39 04.1 -1.1**
CD2 Chengdu 81.41 308⇓ *i*P **P** **21 39 15.8 +0.2**
CD2 AP pP 21 39 20.5 +1.1
CD2 XP sP 21 39 23.0 +2.3
CD2 PP PP 21 42 24.5 +2.6
CD2 S S 21 49 26.0 -0.8
CD2 XS sS 21 49 34.0 +0.9
CD2 AMB AMB
comp=Z,20nm,1.1s,mb5.0
CD2 AMB AMB
comp=Z,120nm,6.8s
CD2 LR LR
comp=E,630nm,20.4s
CD2 LR LR
comp=Z,830nm,19.2s,MS5.1
HHC Hu-ho-hao-te 81.69 320 *e*P **P** **21 39 17.5 +0.7**
HHC AP pP 21 39 20.5 -0.1
HHC XP sP 21 39 22.8 +0.8
HHC PP PP 21 42 27.3 +3.3
HHC S S 21 49 29.5 +0.2
HHC SKS 21 49 32.8
HHC XS sS 21 49 35.0 -0.6
HHC AMB AMB
comp=Z,29nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,588nm,7.0s
HHC LR LR
comp=N,509nm,17.6s,MS5.1
HHC LR LR
comp=E,427nm,17.2s,MS5.1
HHC LR LR
comp=Z,833nm,17.6s,MS5.2
SYO Syowa Base 83.04 196⇓ *e*P **P** **21 39 21.0 -2.5**
LZH Lanzhou 84.02 312 P **P** **21 39 30.0 +1.0**
LZH AP pP 21 39 33.5 +0.7
LZH XP sP 21 39 35.0 +0.8
LZH PP PP 21 42 47.0 +3.8
LZH S S 21 49 54.0 +0.7
LZH XS sS 21 50 02.0 +2.4
LZH AMB AMB
comp=Z,61nm,1.3s,mb5.6
LZH AMB AMB
comp=Z,180nm,4.0s
LZH LR LR
comp=E,800nm,15.2s
LZH LR LR
comp=Z,956nm,16.8s,MS5.2
LZH Lanzhou 84.02 312 P **P** **21 39 30.1 +1.1**
LZH *SP sP 21 39 35.1 +0.9
LZH 21 42 47.0
LZH S S 21 49 54.1 +0.8
LZH SS SS 21 55 26.1 +3.9
LZH pmax pmax
comp=Z,61nm,1.3s,mb5.6
LZH MLR MLR
comp=Z,960nm,16.8s,MS5.2
LZH Lanzhou 84.02 312 P **P** **21 39 30.1 +1.1**
comp=Z,61nm,1.3s,mb5.6
LZH pP pP 21 39 33.6 +0.8
LZH sP sP 21 39 35.1 +0.9
LZH PP PP 21 42 47.0 +3.8
LZH S S 21 49 54.1 +0.8
LZH sS sS 21 50 02.0 +2.4
LZH SS SS 21 55 26.1 +3.9
LZH LR LR
comp=Z,960nm,16.8s,MS5.2
KDAK Kodiak Island 84.89 19 P **P** **21 39 31.9 -1.0**
comp=Z,7.6nm,0.9s,mb4.8,baz=168,slow=19,SNR=3.0
SEY Seymchan 84.91 352⇑ *e*P **P** **21 39 32.3 -0.6**
SEY Seymchan 84.91 352⇑ *e*P **P** **21 39 32.4 -0.5**
PMSA Palmer Station 85.08 160 P **P** **21 39 33.1 -0.9**
CLNS Chul'man 86.19 337 *e*P **P** **21 39 38.0 -1.4**
CLNS pmax pmax
comp=E,9.0nm,1.3s
CLNS pmax pmax
comp=Z,51nm,1.3s,mb5.6
CLNS pmax pmax
comp=N,24nm,1.3s
V03C Hunter Liggett 86.93 50⇓ P **P** **21 39 43.7 +0.2**
baz=87
HOPS Hopland 87.12 46⇓ P **P** **21 39 44.7 +0.3**
baz=87
HOPS Hopland 87.12 46 *e*P **P** **21 39 45.7 +1.3**
comp=N,39nm,1.4s,mb5.5
SNAA Sanae 87.20 183 *e*P **P** **21 39 43.0 -1.4**
SNAA *e* pP 21 39 46.6 -1.6
SNAA *e* 21 39 49.9
SNAA Sanae 87.20 183 *e*P **P** **21 39 43.1 -1.2**
CVS Carmenet Viney 87.21 47⇓ P **P** **21 39 45.4 +0.5**
baz=87
KIPM Iron Peak 87.26 45 *e*P **P** **21 39 42.8 -2.2**
PACP Pacheco Peak 87.37 49⇑ P **P** **21 39 45.7 +0.1**
baz=88
PKD Parkfield 87.39 50⇑ P **P** **21 39 45.7 -0.1**
baz=88
PKM Peak Mountain 87.41 51⇓ P **P** **21 39 45.9 0.0**
baz=88
U04C Hernandez Rese 87.42 49⇑ P **P** **21 39 46.3 +0.4**
baz=88
KHMM Horse Mountain 87.64 44 *e*P **P** **21 39 48.9 +2.0**
GASB Alder Springs 87.69 46⇓ P **P** **21 39 47.7 +0.5**
baz=88
VNA3 Neumayer Olymp 87.79 180 *e*P **P** **21 39 45.8 -1.4**
VNA3 *e* pP 21 39 49.2 -1.8
VNA3 *e* 21 39 54.2
N02C Big Bar 87.89 45⇑ P **P** **21 39 48.3 +0.2**
baz=88
O02C Red Bluff 87.90 45⇓ P **P** **21 39 48.5 +0.3**
baz=88
VNA2 Neumayer--Watz 88.08 181 *e*P **P** **21 39 47.3 -1.3**
baz=182,slow=4.5
VNA2 *e* pP 21 39 50.8 -1.6
VNA2 *e* 21 39 54.6
S05C Merced 88.20 49⇑ P **P** **21 39 50.1 +0.4**
baz=88
WDC Whiskeytown Da 88.27 45 *e*P **P** **21 39 50.3 +0.4**
WDC pmax pmax
comp=Z,35nm,1.4s,mb5.4
WDC Whiskeytown Da 88.27 45⇓ P **P** **21 39 50.3 +0.4**
baz=88
WDC Whiskeytown Da 88.27 45 *e*P **P** **21 39 50.3 +0.4**
comp=Z,35nm,1.4s,mb5.4
OHCM Honcut 88.36 47 *e*P **P** **21 39 51.7 +1.3**
VNA1 Neumayer--Stat 88.37 181 *e*P **P** **21 39 49.3 -0.7**
VNA1 *e* pP 21 39 52.5 -1.3
VNA1 *e* 21 39 56.6
MWC Mount Wilson 88.39 52 *e*P **P** **21 39 51.5 +0.9**
MWC pmax pmax
comp=Z,17nm,0.9s,mb5.3
MWC Mount Wilson 88.39 52 *e*P **P** **21 39 51.5 +0.9**
comp=Z,17nm,0.9s,mb5.3
ULN Ulaanbaatar 88.42 323⇑ *e*P **P** **21 39 50.2 -0.2**
GTA Gaotai 88.45 313 P **P** **21 39 51.8 +1.0**
GTA AP pP 21 39 56.5 +1.9
GTA XP sP 21 39 58.8 +2.8
GTA S S 21 50 39.3 +2.9
GTA XS sS 21 50 46.8 +4.1
GTA AMB AMB
comp=Z,6.0nm,1.4s,mb4.6
GTA AMB AMB
comp=Z,1µm,5.4s
GTA LR LR
comp=N,473nm,16.8s,MS5.1
GTA LR LR
comp=E,405nm,16.8s,MS5.1
GTA LR LR
comp=Z,483nm,16.8s,MS5.0
ORV Oroville 88.46 46⇑ P **P** **21 39 50.9 +0.1**
baz=89
M02C Callahan 88.47 44⇓ P **P** **21 39 50.8 0.0**
baz=89
T06C Millerton Lake 88.48 49⇑ P **P** **21 39 50.7 -0.2**
baz=89
CMB Columbia Colle 88.49 48 *e*P **P** **21 39 51.0 0.0**
CMB pmax pmax
comp=Z,21nm,1.2s,mb5.2
CMB Columbia Colle 88.49 48⇓ P **P** **21 39 50.4 -0.5**
baz=89
CMB Columbia Colle 88.49 48 *e*P **P** **21 39 51.0 0.0**
comp=Z,21nm,1.2s,mb5.2
LAVA Lava Cap Winer 88.59 47⇑ P **P** **21 39 51.3 -0.2**
baz=89
BFSC Mount Baldy St 88.69 52⇓ P **P** **21 39 51.5 -0.5**
baz=89
YAK Yakutsk 88.73 343 *e*P **P** **21 39 50.5 -1.0**
YAK pmax pmax
comp=Z,29nm,1.0s,mb5.6
YAK pmax pmax
comp=N,11nm,1.2s
YAK Yakutsk 88.73 343⇑ *e*P **P** **21 39 50.6 -0.9**
YBH Yreka Blue Hor 88.73 44 P **P** **21 39 52.4 +0.3**
comp=N,6.0nm,1.0s,mb4.9,baz=182,slow=3.0,SNR=8.2
YBH Yreka Blue Hor 88.73 44⇑ P **P** **21 39 52.3 +0.3**
baz=89
YBH Yreka Blue Hor 88.73 44 *e*P **P** **21 39 52.7 +0.7**
EDW2 Edwards Air Fo 88.74 52⇓ P **P** **21 39 51.6 -0.6**
baz=89
ISA Isabella 88.74 51⇓ P **P** **21 39 51.8 -0.4**
baz=89
ISA Isabella 88.74 51 *e*P **P** **21 39 52.2 0.0**
SONM Songino Array 88.77 323 P **P** **21 39 51.7 -0.3**
comp=N,7.0nm,1.1s,mb4.9,baz=135,slow=5.3,SNR=18
S06C San Francisco 88.79 48⇑ P **P** **21 39 52.2 -0.2**
baz=89
HELL Mitchell Peak 88.81 50⇓ P **P** **21 39 51.7 -0.9**
baz=89
M03C McCloud 88.89 45⇑ P **P** **21 39 53.3 +0.5**
baz=89
KCC Kaiser Creek 88.90 49⇑ P **P** **21 39 52.7 -0.2**
baz=89
P05C Yuba Gap, Truc 88.94 47⇓ P **P** **21 39 53.4 +0.3**
baz=89
BILL Bilibino 89.01 359 *e*P **P** **21 39 51.4 -1.3**
HUMO Hull Mountain 89.01 43⇓ P **P** **21 39 54.6 +1.3**
baz=89
HUMO Hull Mountain 89.01 43 *e*P **P** **21 39 54.0 +0.7**
comp=N,36nm,1.8s,mb5.4
R05C Kirkwood Meado 89.02 48⇑ P **P** **21 39 53.8 +0.3**
baz=89
MONP Monument Peak 89.02 54⇓ P **P** **21 39 53.4 -0.2**
baz=89
O04C Chester 89.11 46⇓ P **P** **21 39 54.4 +0.6**
baz=89
LRMC Laurel Mountai 89.23 51⇑ P **P** **21 39 54.9 +0.4**
baz=89
PFO Pinyon Flat Ob 89.31 53⇓ P **P** **21 39 54.7 -0.3**
baz=90
PFO Pinyon Flat Ob 89.31 53 *e*P **P** **21 39 56.1 +1.1**
M04C Macdoel 89.32 44⇓ P **P** **21 39 54.1 -0.7**
baz=90
R06C Coleville 89.37 48⇑ P **P** **21 39 54.7 -0.4**
baz=90
WAKR Walker 89.37 48 *e*P **P** **21 39 55.4 +0.3**
R07C Lee Vining 89.45 49⇓ P **P** **21 39 55.8 +0.3**
baz=90
MTUM Tungsten Hills 89.45 49 *e*P **P** **21 39 55.9 +0.4**
SWSC Sam W. Stewart 89.52 54⇓ P **P** **21 39 55.6 -0.3**
baz=90
WCN Washoe City 89.52 47⇑ P **P** **21 39 56.1 +0.3**
baz=90
MPMC Manual Prospec 89.63 51⇑ P **P** **21 39 57.0 +0.6**
baz=90
S08C White Mtn Res 89.80 49⇑ P **P** **21 39 57.7 +0.6**
baz=90
GSC Goldstone 89.80 52⇑ P **P** **21 39 57.5 +0.3**
baz=90
GSC Goldstone 89.80 52 *e*P **P** **21 39 58.0 +0.8**
BELC Belle Mtn. 89.83 53⇑ P **P** **21 39 57.0 -0.4**
baz=90
H03A Soap Creek Ran 89.85 41⇓ P **P** **21 39 57.9 +0.7**
baz=90
O06A Flanigan 89.88 46⇑ P **P** **21 39 57.8 +0.4**
baz=90
M06C Likely Place G 89.94 45⇑ P **P** **21 39 58.2 +0.5**
baz=90
HEC Hector,Ludlow 89.94 52⇑ P **P** **21 39 57.8 0.0**
baz=90
I04A Tendick Farm, 89.95 42⇓ P **P** **21 39 57.7 0.0**
baz=90
PAHR Pah Rah Range 89.97 47 *e*P **P** **21 39 58.7 +0.9**
BC3 Big Chuckw Mtn 90.08 54⇑ P **P** **21 39 58.9 +0.3**
baz=90
L05A Lakeview 90.11 44⇑ P **P** **21 39 58.8 +0.3**
baz=90
NVAR Mina Array Bea 90.12 49 P **P** **21 39 58.7 0.0**
comp=N,7.4nm,0.9s,mb5.0,baz=225,slow=7.8,SNR=28
NVAR Mina Array Bea 90.12 49 P **P** **21 39 58.7 0.0**
GRAC Grapevine Rang 90.14 50⇓ P **P** **21 39 58.7 0.0**
baz=90
N06A Buffalo Meadow 90.15 46⇑ P **P** **21 39 58.8 +0.1**
baz=90
FURC Furnace Creek, 90.27 51⇓ P **P** **21 39 59.2 -0.2**
baz=90
GLA Glamis 90.30 55⇑ P **P** **21 39 59.4 -0.2**
baz=90
GLA Glamis 90.30 55 *e*P **P** **21 39 59.9 +0.3**
MOD Modoc 90.39 45⇑ P **P** **21 40 00.1 +0.3**
baz=91
MOD Modoc 90.39 45 *e*P **P** **21 40 00.1 +0.3**
K05A Summer Lake 90.39 44⇑ P **P** **21 39 60.0 +0.2**
baz=91
GMRC Granite Mounta 90.41 53⇓ P **P** **21 40 00.1 0.0**
baz=91
J05A Fort Rock 90.44 43⇑ P **P** **21 40 00.2 +0.2**
baz=91
TUQ Turquoise Moun 90.50 52⇑ P **P** **21 40 01.0 +0.5**
baz=91
O07A Toulon 90.52 47⇓ P **P** **21 40 00.5 +0.1**
baz=91
IRM Iron Mountain 90.53 53⇑ P **P** **21 40 01.2 +0.6**
baz=91
LSA Lhasa 90.53 302 *e*P **P** **21 40 00.7 0.0**
LSA pmax pmax
comp=Z,15nm,1.1s,mb5.2
LSA Lhasa 90.53 302 *e*P **P** **21 40 00.7 -0.1**
comp=Z,15nm,1.1s,mb5.2
H04A Detroit Lake 90.53 42⇑ P **P** **21 40 00.7 +0.3**
baz=91
S09A Goldfield 90.57 50⇑ P **P** **21 40 00.8 +0.1**
baz=91
Q08A Gabbs 90.58 48⇓ P **P** **21 40 00.6 -0.1**
baz=91
E03A Lebam 90.63 40⇑ P **P** **21 40 01.8 +1.0**
baz=91
U10A Ash Meadows, A 90.63 51⇓ P **P** **21 40 01.0 -0.1**
baz=91
TPH Tonopah 90.72 49 *e*P **P** **21 40 01.9 +0.4**
TPH pmax pmax
comp=Z,26nm,1.4s,mb5.4
TPH Tonopah 90.72 49 *e*P **P** **21 40 01.9 +0.4**
comp=Z,26nm,1.4s,mb5.4
N07B Gerlach 90.75 46⇑ P **P** **21 40 01.5 +0.1**
baz=91
Y12C Blythe 90.83 54⇑ P **P** **21 40 02.2 +0.2**
baz=91
K06A Valley Falls 90.84 44⇓ P **P** **21 40 02.5 +0.6**
baz=91
NLWA Neilton Lookou 90.89 39⇓ P **P** **21 40 02.6 +0.6**
baz=91
NLWA Neilton Lookou 90.89 39 *e*P **P** **21 40 03.1 +1.1**
comp=Z,23nm,1.3s,mb5.3
M07A Soldier Meadow 90.89 46⇑ P **P** **21 40 02.4 +0.3**
baz=91
R09A Tonopah 90.90 49⇑ P **P** **21 40 02.2 -0.1**
baz=91
TPNV Topopah Spring 90.92 51⇑ P **P** **21 40 02.3 -0.1**
baz=91,SNR=16
TPNV Topopah Spring 90.92 51 *e*P **P** **21 40 02.4 0.0**
L07A Adell 91.07 45⇑ P **P** **21 40 03.6 +0.6**
baz=91
BOD Bodaibo 91.08 334 *e*P **P** **21 39 59.9 -2.7**
BOD pmax pmax
comp=Z,7.0nm,1.9s,mb4.7
S10A Tonopah Range, 91.10 50⇑ P **P** **21 40 03.1 -0.1**
baz=91,SNR=21
J06A Christmas Vall 91.12 44⇑ P **P** **21 40 02.4 -0.8**
baz=91
PDMCI Parker Dam,Lak 91.35 54⇑ P **P** **21 40 04.3 -0.2**
baz=92
Y13A Salome 91.38 54⇑ P **P** **21 40 04.4 -0.2**
baz=92
214A Organ Pipe Nat 91.39 56⇑ P **P** **21 40 04.5 -0.2**
baz=92
I06A Prineville 91.42 43⇑ P **P** **21 40 04.6 +0.1**
baz=92
V12A Nelson 91.42 52⇑ P **P** **21 40 04.5 -0.3**
baz=92
K07A Rock Creek Ran 91.45 44⇓ P **P** **21 40 04.6 -0.1**
baz=92
M08A Happy Creek Ra 91.45 46⇑ P **P** **21 40 04.8 +0.1**
baz=92
SHPR Sheep Range 91.52 51 *e*P **P** **21 40 05.9 +0.7**
C04A Brinnon 91.57 39⇑ P **P** **21 40 05.8 +0.6**
baz=92
GNW Green Mountain 91.58 39 *e*P **P** **21 40 06.6 +1.4**
comp=Z,29nm,1.7s,mb5.3
Q10A Clear Creek Ra 91.64 49⇑ P **P** **21 40 05.8 +0.1**
baz=92
O09A Fish Creek Ran 91.68 47⇑ P **P** **21 40 06.0 +0.2**
baz=92
X13A Yucca 91.70 54⇓ P **P** **21 40 05.8 -0.2**
baz=92
H06A Lindquist Farm 91.71 42⇓ P **P** **21 40 06.5 +0.6**
baz=92
J07A Hines 91.72 44⇑ P **P** **21 40 06.3 +0.3**
baz=92

WVOR **Wild Horse Val** 91.73 45 *e*P P 21 40 05.6 -0.4
WVOR pmax pmax
comp=Z,12nm,1.1s,mb5.1
WVOR **Wild Horse Val** 91.73 45 *e*P P 21 40 05.6 -0.4
comp=Z,12nm,1.1s,mb5.2
N09A **Rock Creek Ran** 91.75 47 ⇓P P 21 40 06.2 +0.1
baz=92
G06A **Carlson Farm,** 91.76 42 ⇑P P 21 40 06.2 +0.1
baz=92
T11A **Corn Creek, Al** 91.79 51 ⇓P P 21 40 06.2 -0.2
baz=92
L08A **Fields** 91.81 45 ⇓P P 21 40 06.4 0.0
baz=92
ZAK **Zakamensk** 91.87 324 *e*P P 21 40 05.9 -0.5
ZAK pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
W13A **Hualapai Mount** 91.87 53 ⇓P P 21 40 06.7 -0.2
baz=92
I07A **Izee** 91.93 43 ⇑P P 21 40 07.7 +0.8
baz=92
P10A **Eureka** 91.94 48 ⇑P P 21 40 07.3 +0.3
baz=92
U12A **Valley of Fire** 91.94 52 ⇓P P 21 40 07.2 0.0
baz=92
K08A **Mann Creek Ran** 91.96 45 ⇓P P 21 40 06.9 -0.2
baz=92
R11A **Troy Canyon, C** 92.00 50 ⇓P P 21 40 06.8 -0.6
baz=92,SNR=6.8
Y14A **Wickenburg** 92.05 54 ⇓P P 21 40 07.0 -0.7
baz=92
V13A **Grand Canyon W** 92.11 52 ⇑P P 21 40 07.3 -0.7
baz=92
H07A **Lands Inn, Kim** 92.13 43 ⇓P P 21 40 07.8 0.0
baz=92,SNR=6.2
Q11A **Duckwater** 92.17 49 ⇑P P 21 40 08.0 -0.1
baz=92
S12A **Delamar Landin** 92.21 50 ⇑P P 21 40 08.1 -0.3
baz=92
J08A **Circle Bar Ran** 92.26 44 ⇓P P 21 40 08.8 +0.3
baz=92
TLY **Talaya** 92.35 325 *e*P P 21 40 09.0 +0.3
TLY pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
TLY **Talaya** 92.35 325 *e*P P 21 40 09.1 +0.4
U13A **Pakoon Wash** 92.36 52 ⇓P P 21 40 08.9 -0.1
baz=92
X14A **Yava** 92.36 54 ⇑P P 21 40 08.8 -0.3
baz=92,SNR=12
I08A **Drewsey** 92.45 44 ⇓P P 21 40 09.2 -0.1
baz=93
K09A **Rome** 92.45 45 ⇑P P 21 40 09.3 0.0
baz=93
216A **Three Points,** 92.47 57 ⇑P P 21 40 09.6 -0.1
baz=93
116A **Eloy** 92.50 56 ⇓P P 21 40 09.2 -0.6
baz=93
W14A **Seligman** 92.51 53 ⇑P P 21 40 09.3 -0.6
baz=93,SNR=8.5
Y15A **Casa Rosa Ranc** 92.57 55 ⇑P P 21 40 09.3 -0.8
baz=93,SNR=12
H08A **Prairie City** 92.66 43 ⇑P P 21 40 10.6 +0.3
baz=93
V14A **Boquillas Ranc** 92.67 53 ⇓P P 21 40 10.4 -0.2
baz=93,SNR=13
R12A **Pony Springs,** 92.69 50 ⇓P P 21 40 10.9 +0.4
baz=93
M10A **I.L. Ranch, Tu** 92.72 46 ⇓P P 21 40 11.1 +0.4
baz=93
O11A **Cowboy Ranch,** 92.72 48 ⇑P P 21 40 11.1 +0.4
baz=93
J09A **Fry Pan Ranch,** 92.72 44 ⇑P P 21 40 10.6 0.0
baz=93
G08A **Pilot Rock** 92.83 42 ⇓P P 21 40 11.4 +0.4
baz=93
X15A **Humboldt** 92.86 54 ⇓P P 21 40 11.1 -0.4
baz=93,SNR=9.3
217A **Green Valley** 92.88 57 ⇓P P 21 40 11.0 -0.6
baz=93,SNR=6.2
S13A **Holt Ranch, En** 92.92 51 ⇓P P 21 40 12.1 +0.5
baz=93
U14A **Mt Trumbull** 92.93 52 ⇓P P 21 40 11.9 +0.2
baz=93
L10A **Juniper Basin** 93.01 46 ⇑P P 21 40 12.0 +0.1
baz=93
K10A **MacKenzie Ranc** 93.05 45 ⇓P P 21 40 12.9 +0.8
baz=93
TUC **Tucson** 93.11 57 *e*P P 21 40 12.8 +0.1
W15A **Williams** 93.11 54 ⇓P P 21 40 13.1 +0.5
baz=93
Y16A **Circle Bar Ran** 93.19 55 ⇑P P 21 40 13.3 +0.3
baz=93,SNR=11
117A **Oracle** 93.25 56 ⇓P P 21 40 13.1 -0.2
baz=93,SNR=5.1
ELK **Elko** 93.27 47 *e*P P 21 40 13.3 +0.1
H09A **Durkee** 93.37 43 ⇑P P 21 40 13.5 -0.1
baz=94
318A **Bisbee** 93.40 58 ⇓P P 21 40 13.5 -0.5
baz=94
O12A **Currie** 93.41 48 ⇓P P 21 40 13.8 0.0
baz=94
X16A **Lo Mia Camp, P** 93.43 54 ⇑P P 21 40 14.2 +0.1
baz=94,SNR=12
V15A **Kaibab Nationa** 93.44 53 ⇑P P 21 40 13.9 -0.1
baz=94
N12A **Clover Valley,** 93.45 47 ⇓P P 21 40 14.2 +0.2
baz=94
L11A **Cat Creek Ranc** 93.53 46 ⇓P P 21 40 14.4 +0.1
baz=94
218A **Dragoon** 93.56 57 ⇓P P 21 40 15.2 +0.5
baz=94
U15A **North Rim** 93.59 52 ⇑P P 21 40 15.0 +0.3
baz=94
K11A **Parker Ranch,** 93.60 45 ⇓P P 21 40 15.2 +0.5
baz=94
Y17A **Roosevelt** 93.61 55 ⇑P P 21 40 15.4 +0.5
baz=94
W16A **Flagstaff** 93.63 54 ⇑P P 21 40 14.7 -0.2
baz=94
MOY **Mondy** 93.77 325 *e*P P 21 40 15.1 -0.1
MOY pmax pmax
comp=Z,44nm,3.1s
M12A **Wells** 93.78 47 ⇑P P 21 40 15.7 +0.2
baz=94
118A **Homack Ranch,** 93.87 57 ⇓P P 21 40 16.4 +0.2
baz=94
X17A **Forest Lakes** 93.89 55 ⇑P P 21 40 16.2 0.0
baz=94
E09A **Wood Farm, Sta** 93.90 41 ⇓P P 21 40 16.0 +0.1
baz=94
Q14A **Sevier Lake (B** 93.91 50 ⇓P P 21 40 16.3 +0.1
baz=94
WUAZ **Wupatki** 93.92 53 ⇓P P 21 40 16.2 -0.1
baz=94
H10A **Noah's Angus R** 93.92 44 ⇓P P 21 40 16.1 0.0
baz=94
319A **Douglas** 93.93 58 ⇓P P 21 40 16.2 -0.3
baz=94
G10A **Bishop Farm, J** 93.99 43 ⇑P P 21 40 16.1 -0.3
baz=94
MFID **Camas Ranch** 94.01 45 ⇓P P 21 40 16.4 -0.2
baz=94
219A **White Tail Can** 94.19 57 ⇓P P 21 40 17.1 -0.5
baz=94
F10A **Beach Ranch, E** 94.23 42 ⇑P P 21 40 17.6 +0.1
baz=94
U16A **Tuba City** 94.34 53 ⇓P P 21 40 18.4 +0.1
baz=94
J12A **Stokes Ranch,** 94.42 45 ⇓P P 21 40 18.2 -0.2
baz=95
G11A **Walters Elk Ra** 94.58 43 ⇑P P 21 40 19.1 0.0
baz=95
X18A **Snowflake** 94.61 55 ⇓P P 21 40 18.9 -0.6
baz=95
M14A **Sheep Mountain** 94.88 47 ⇑P P 21 40 21.5 +1.0
baz=95
HLID **Hailey** 95.01 45 ⇓P P 21 40 21.8 +0.7
baz=95
J13A **Cove Ranch, Pi** 95.10 45 ⇑P P 21 40 21.5 0.0
baz=95
H12A **Diamond D Ranc** 95.13 44 ⇓P P 21 40 21.7 +0.1
baz=95
S17A **Black Ridge (B** 95.16 52 ⇓P P 21 40 21.8 -0.2
baz=95
I13A **Wildhorse Cree** 95.35 45 ⇓P P 21 40 22.2 -0.4
baz=96
F12A **Elk City** 95.38 43 ⇑P P 21 40 22.6 -0.1
baz=96
M15A **Larsen Ranch,** 95.49 48 ⇓P P 21 40 23.0 -0.3
baz=96
J14A **Carey** 95.51 46 ⇑P P 21 40 23.1 -0.2
baz=96
H13A **Challis** 95.53 44 ⇑P P 21 40 22.7 -0.7
baz=96
C11A **Tepee Creek (N** 95.64 41 ⇑P P 21 40 23.2 -0.7
baz=96
T18A **Mexican Hat** 95.66 52 ⇓P P 21 40 23.5 -0.7
baz=96
I14A **Mackay** 95.79 45 ⇓P P 21 40 25.3 +0.6
baz=96
SRU **San Rafael** 95.93 50 ⇑P P 21 40 25.5 +0.1
baz=96
F13A **Darby** 95.98 43 ⇑P P 21 40 25.1 -0.4
baz=96
R18A **Canyonlands Na** 96.11 51 ⇓P P 21 40 26.6 +0.3
baz=96
H14A **Leadore** 96.13 45 ⇑P P 21 40 26.8 +0.6
baz=96
HWUT **Hardware Ranch** 96.15 48 *e*P P 21 40 25.3 -1.1
O17A **Robinson Place** 96.19 49 ⇓P P 21 40 26.8 +0.2
baz=96
Q18A **Rafter H Ranch** 96.21 51 ⇑P P 21 40 26.7 +0.1
baz=96
J16A **Bone** 96.77 46 ⇓P P 21 40 29.2 +0.1
baz=97
HVS **Khovu-Aksy** 97.59 322 *e*P P 21 40 32.9 +0.3
HVS pmax pmax
comp=Z,31nm,1.3s,mb5.7
TXAR **Lajitas Array** 97.73 62 P P 21 40 33.2 -0.6
comp=Z,1.4nm,1.0s,mb4.4,baz=219,slow=5.8,SNR=8.1
TXAR **Lajitas Array** 97.73 62 P P 21 40 33.2 -0.6
PDAR **Pinedale Array** 97.97 47 P P 21 40 34.7 +0.1
comp=Z,1.1nm,0.9s,mb4.4,baz=199,slow=4.1,SNR=7.0
WMQ **Urumqi** 98.53 314 *e*P P 21 40 40.3 +3.2
WMQ AMB AMB
comp=Z,10.0nm,1.4s,mb5.2
WMQ LR LR
comp=Z,841nm,17.8s,MS5.3
SDCO **Great Sand Dun** 99.12 53 *e*P P 21 40 39.1 -0.7
KRAR **Krasnoyarsk** 100.00 326 *e*P Pdif 21 40 43.6 0.0
KRAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR **Makanchi Array** 103.11 315 Pdiff Pdif 21 40 53.9 -3.5
comp=Z,0.2nm,0.2s,baz=101,slow=7.5,SNR=2.7
MKAR PP PP 21 45 14.5 +2.0
comp=Z,0.2nm,0.2s,baz=116,slow=8.2,SNR=3.5
MKAR **Makanchi Array** 103.11 315 Pdif Pdif 21 40 53.9 -3.5
MKAR PP PP 21 45 14.5 +2.0
AGMN **Agassiz Refuge** 108.74 45 *e*Pdif Pdif 21 41 30.3 +7.8
BRVK **Borovoye** 111.97 320⇑ *e*PKIKP PKiKP 21 45 30.2 -3.2
GOGA **Godfrey** 115.44 62 P Pdif 21 41 49.2 -3.0
ARU **Arti** 118.80 324 *e*PKIKP PKPdf 21 45 44.1 -2.3
ARU **Arti** 118.80 324 *e*PKPdf PKPdf 21 45 44.1 -2.3
BOSA **Boshof** 119.47 216 PKP PKPdf 21 45 49.0 +0.3
comp=Z,5.9nm,1.1s,baz=217,slow=5.1,SNR=3.2
AKTK **Aktyubinsk** 119.48 317 PKP PKPdf 21 45 47.1 -0.7
AKTO **Aktyubinsk** 119.48 317 PKP PKPdf 21 45 47.1 -0.7
comp=Z,0.8nm,0.4s,baz=129,slow=7.4,SNR=3.4
SUMG **Summit** 126.30 10 *e*PKPdf PKPdf 21 46 00.1 -0.2
PKME **Peaks-Kenny Pk** 126.80 49 *e*PKPdf PKPdf 21 46 01.3 -0.8
ARCES **ARCESS Array B** 126.95 345 PKP PKPdf 21 46 00.1 -1.6
comp=Z,3.3nm,0.6s,baz=77,slow=5.2,SNR=22
KLMR **Klimovskoe** 127.25 332 *e*PKIKP PKPdf 21 46 00.7 -1.8
KMBO **Kilima Mbogo** 128.07 251 PKP PKPdf 21 46 05.0 -0.5
comp=Z,2.4nm,0.8s,baz=56,slow=4.1,SNR=4.0
HUMP **Col San Antoni** 128.28 83 *e*PKPdf PKPdf 21 46 04.4 -1.3
MOS **Moscow** 130.30 326 *e*PKHKP 21 45 50.5
OBN **Obninsk** 131.11 326⇑ *i*PKIKP PKPdf 21 46 10.2 +0.2
OBN *e* 21 48 34.4
OBN pmax pmax
comp=Z,20nm,1.3s
OBN **Obninsk** 131.11 326 *e*PKP PKPdf 21 46 10.3 +0.3
TBG **Guadaloupe-3** 131.66 87 *i* P PKPdf 21 46 14.0 +1.8
MALT **Malatya** 134.54 303 *e*PKIKP PKPdf 21 46 16.7 -0.3
AKASG **Malin Array Be** 137.05 323 PKP PKPdf 21 46 19.9 -1.3
comp=Z,0.3nm,0.3s,baz=44,slow=1.9,SNR=4.7
AKASG SKPab 21 49 55.9
comp=Z,0.3nm,0.4s,baz=61,slow=1.8,SNR=4.3
AKASG **Malin Array Be** 137.05 323 PKP PKPdf 21 46 19.9 -1.3
AKASG SKPab 21 49 55.9
NB2 **NORSAR Subarra** 137.33 344 PKPdf PKPdf 21 46 21.0 -0.5
comp=Z,1.6nm,1.0s,baz=31,slow=1.9
NOA **NORSAR Array B** 137.33 344 PKP PKPdf 21 46 21.7 +0.2
comp=Z,1.2nm,0.7s,baz=33,slow=2.1,SNR=4.7
KWP **Kalwaria** 141.18 325⇑ *i*P PKPdf 21 46 29.0 +0.1
KWP **Kalwaria** 141.18 325 ⇑P PKPdf 21 46 29.0 +0.1
MLR **Muntele Rosu** 141.41 318 ⇓ *i*P PKPdf 21 46 32.5 +3.1
MLR **Muntele Rosu** 141.41 318 ⇓P PKPdf 21 46 32.5 +3.1
KOLS **Kolonicke sedl** 141.81 324 *e*PKP PKPdf 21 46 32.3 +2.3
KOLS *e* 21 55 01.6
STHS **Stebnicka Huta** 142.09 326 *e*PKP PKPdf 21 46 30.9 +0.4
CRVS **Cervenica-Dubn** 142.27 325 *e*PKP PKPdf 21 46 33.9 +3.1
DRGR 142.74 321 ⇓ *i*P PKPdf 21 46 29.3 -2.4
DRGR 142.74 321 ⇓P PKPdf 21 46 29.3 -2.5
KSP **Ksiaz** 143.59 331 *e*PKIKP PKPdf 21 46 31.3 -1.8
PSZ **Piszkesteto** 143.69 325⇓ *e*PKP PKPdf 21 46 33.5 +0.1
PSZ **Piszkesteto** 143.69 325 *e*PKPdf PKPdf 21 46 30.8 -2.6
VYHS **Vyhne** 143.91 326 *e*PKP PKPdf 21 46 31.4 -2.3
VYHS *e* 21 54 57.9
DPC **Dobruska-Polom** 143.92 330 *e*PKP PKPdf 21 46 30.6 -3.1
DPC *ep*PKP pPKPdf 21 46 43.5 +5.8
UPC **Upice** 143.96 331 *e*PKP PKPdf 21 46 30.6 -3.2
BZS **Buzias** 144.00 320⇑ *i*P PKPdf 21 46 31.7 -2.3
BZS **Buzias** 144.00 320 ⇑P PKPdf 21 46 31.7 -2.3
KOLL **Kolacno** 144.08 326 *e*PKP PKPdf 21 46 33.6 -0.4
BUD **Budapest** 144.43 325 *e*PKP PKPdf 21 46 32.6 -2.1
VRAC **Vranov** 144.50 329⇑ *i*P PKPdf 21 46 33.7 -1.1
VRAC **Vranov** 144.50 329 ⇑P PKPdf 21 46 33.7 -1.0
PVCC **Panska Ves** 144.59 332 *e*PKP PKPdf 21 46 32.8 -2.1
BRG **Berggiesshubel** 144.61 333 *e*PKPbc PKPdf 21 46 32.9 -2.0
BRG **Berggiesshubel** 144.61 333 *i* PKP PKPdf 21 46 33.1 -1.8
comp=Z,18nm,0.8s
BRG PP PP 21 49 44.5 -6.4
comp=Z,4.2nm,1.0s
BRG *e* 21 53 58.5
comp=Z,10nm,1.3s
CLL **Collm** 144.67 334 *e*PKPbc PKPdf 21 46 32.7 -2.3
CLL **Collm** 144.67 334⇓ *i*PKPdf PKPdf 21 46 32.5 -2.5
comp=Z,13nm,0.8s
CLL *ep*PKPdf pPKPdf 21 46 36.0 -2.9
CLL *e*PKiKP PKiKP 21 46 39.0 +0.3
CLL *ex* x 21 46 54.0
MODS **Modra-Piesok** 144.78 327 *e*PKP PKPdf 21 46 35.0 -0.3
APE **Apeiranthos** 144.80 305⇓ *i*P PKPdf 21 46 33.9 -1.8
APE **Apeiranthos** 144.80 305 ⇓P PKPdf 21 46 33.9 -1.7
NRDL **Niedersach Rie** 144.84 338 *e*PKPbc PKPdf 21 46 35.1 -0.1
OUR **Ouranopolis** 144.86 311 *e*P PKPdf 21 46 34.0 -1.6
PRU **Pruhonice** 144.99 331 *e*PKP PKPdf 21 46 34.0 -1.6
PRU *ep*PKP pPKPdf 21 46 48.3 +8.8
ZST **Bratislava** 144.99 327 *e*PKP PKPdf 21 46 35.2 -0.4
TREC **Trest** 145.04 330 *e*PKP PKPdf 21 46 34.6 -1.1
SANT **Santorini** 145.05 304 *e*P PKPbc 21 46 33.8 -1.7
SANT **Santorini** 145.05 304 *e*PKP PKPdf 21 46 34.0 -2.1
THR1 **Thera Island** 145.05 304 *e*P PKPbc 21 46 34.1 -1.4
THR3 **Thira Island,** 145.08 304 *e*P PKPbc 21 46 34.4 -1.2
THR6 **Thira Island,** 145.10 304 *e*P PKPbc 21 46 34.5 -1.2
THR5 **Thira Island,** 145.12 304 *e*P PKPbc 21 46 34.5 -1.2
CLZ **Clausthal** 145.28 337 *e*PKPbc PKPbc 21 46 35.5 -0.2
KNT **Kendrikon** 145.28 313 *e*P PKPbc 21 46 35.6 -0.5
LAST **Lasithi** 145.34 302 *e*P PKPbc 21 46 38.1 +1.6
PKSM **Moragy** 145.40 323⇓ *i*P PKPbc 21 46 36.6 +0.3
PKSM **Moragy** 145.40 323 ⇓P PKPbc 21 46 36.6 +0.2
VAY **Valandovo** 145.44 313 *e*PKP PKPdf 21 46 35.0 -1.7
ESK **Eskdalemuir** 145.47 352 *e*PKIKP PKPdf 21 46 35.7 -0.5
TANN **Tannenbergstha** 145.57 333 *e*PKPbc PKPbc 21 46 35.5 -1.2
SOP **Sopron** 145.60 327⇑ *e*PKP PKPdf 21 46 36.9 +0.2
NKC **Novy Kostel** 145.72 333 *e*PKP PKPdf 21 46 36.8 0.0
MOX **Moxa** 145.75 334 *e*PKP PKPdf 21 46 37.1 +0.2
comp=Z,51nm,1.6s
MOX **Moxa** 145.75 334 *e*PKPbc PKPbc 21 46 35.7 -1.6
XOR **Xorichti** 145.79 310 *e*P PKPdf 21 46 36.4 -0.9
CONA **Conrad Observa** 145.79 328⇑ *i*P PKPdf 21 46 37.8 +0.8
comp=Z,47nm,1.4s
CSNA **Conrad Observa** 145.79 328⇑ *i*P PKPdf 21 46 37.7 +0.7
comp=Z,41nm,1.4s
IBBN **Ibbenburen** 145.79 340 *e*PKPbc PKPbc 21 46 37.2 -0.2
SKO **Skopje** 145.91 315 *e*PKP PKPdf 21 46 38.4 +1.0
LIT **Litokhoron** 146.00 311 *e*P PKPdf 21 46 38.6 +1.0
KHC **Kasperske Hory** 146.04 331 *e*PKP PKPdf 21 46 36.8 -0.6
KHC *ex* x 21 46 54.2
MANZ **Manzenberg** 146.05 333 *e*PKPbc PKPbc 21 46 37.4 -0.8
ROTZ **Rotzenmuhle** 146.17 333 *e*PKPbc PKPbc 21 46 37.0 -1.6
GEC2 **GERESS Array S** 146.19 331 *e*PKPbc PKPbc 21 46 36.7 -2.0
GERES **GERESS Array B** 146.19 331 PKPbc PKPbc 21 46 37.1 -1.6
comp=Z,9.3nm,0.9s,baz=36,slow=3.3,SNR=42
GERES SKPbc SKPbc 21 50 20.3 +2.6
comp=Z,0.7nm,0.8s,baz=27,slow=4.5,SNR=4.0
KRUS **Krusevo** 146.31 314 *e*PKP PKPdf 21 46 37.2 -0.9
WET **Wettzell** 146.35 332 *e*PKPbc PKPbc 21 46 38.2 -0.9
DID **Didima** 146.41 306 *e*P PKPdf 21 46 38.5 +0.1
LTK **Loutraki** 146.43 307 *e*P PKPdf 21 46 38.5 0.0
GRA1 **Grafenberg Arr** 146.64 334 *e*PKPbc PKPbc 21 46 39.6 -0.4
GRF **Grafenberg Arr** 146.64 334 *e*PKPbc PKPbc 21 46 39.6 -0.4
BUG **Bochum--Univer** 146.69 339 *e*PKPbc PKPbc 21 46 41.4 +1.3
OHR **Ohrid** 146.73 314 *e*PKP PKPdf 21 46 38.7 -0.2
KBA **Koelnbreinsper** 147.62 329⇑ *i*P PKPbc 21 46 41.8 -1.0
comp=Z,25nm,1.1s
IGT **Igoumenitsa** 147.75 311 *e*P PKPbc 21 46 42.8 -0.6
BEBN **Eben Emael** 147.76 340 PKPab PKPab 21 46 46.3 +0.9
FUR **Furstenfeldbru** 147.78 332 *e*PKPbc PKPbc 21 46 42.3 -0.9
MEM **Membach** 147.82 340 PKPbc PKPbc 21 46 42.4 -0.8
LKD **Levkas** 147.87 310 *e*P PKPbc 21 46 43.6 -0.1
ABH **Alteburg** 147.91 337 PKP PKPbc 21 46 44.1 +0.6
BCLA **Clavier** 148.21 340 PKPbc PKPbc 21 46 44.8 +0.5
RUP **Ruppelstein** 148.23 338 PKP2 PKPbc 21 46 43.0 -1.4
WTTA **Wattenberg** 148.29 330⇑ *i*P PKPbc 21 46 44.6 0.0
comp=Z,16nm,1.3s
WTTA **Wattenberg** 148.29 330⇑ *i*PKPdf pPKPdf 21 46 44.6 -0.6
comp=Z,16nm,1.3s
SNF **Seneffe** 148.44 341 PKPbc PKPbc 21 46 45.2 +0.3
MOTA **Moosalm** 148.48 331⇑ *i*P PKPbc 21 46 44.7 -0.4
comp=Z,12nm,0.7s
LANF **Langenberg** 148.56 336 PKP PKPbc 21 46 46.2 +1.0
WLF **Walferdange** 148.58 339 PKPbc PKPbc 21 46 45.6 +0.3
WLF **Walferdange** 148.58 339 *e*PKPbc PKPbc 21 46 44.5 -0.8
WLF **Walferdange** 148.58 339 *e*PKPdf PKPdf 21 46 40.8 -0.8
GIVF **Givet** 148.63 341 *e*PKP1 PKPbc 21 46 43.3 -2.1
DOU **Dourbes** 148.71 341 PKPbc PKPbc 21 46 44.8 -0.8
BFO **Black Forest** 148.89 335 *e*PKPbc PKPbc 21 46 43.1 -3.0
BFO **Black Forest** 148.89 335 *e*PKPdf PKPdf 21 46 42.0 -0.1
BFO *e*PKPbc PKPbc 21 46 43.1 -3.0
BFO *e*PKPbc PKPbc 21 46 45.9 -0.2
CDF **Champ du Feu** 149.23 336 *e*PKP1 PKPbc 21 46 45.5 -1.5
comp=Z,65nm,1.3s
FELD **Feldberg im Sc** 149.38 335 PKP PKPbc 21 46 47.3 -0.1
ECH **Echery** 149.44 336 PKP PKPbc 21 46 47.3 -0.2
MOF **Molkenrain** 149.75 336 PKP PKPbc 21 46 49.5 +1.2
THEF **They Montfort** 149.86 337 PKP PKPbc 21 46 48.6 +0.1
HINF **Hinteralfeld** 149.88 336 *e*PKP1 PKPbc 21 46 47.2 -1.4
HAU **Haudompre** 149.91 337 *e*PKP1 PKPbc 21 46 47.5 -1.2
BBS **Basel-Blauen** 149.91 335 PKP2 PKPbc 21 46 50.1 +1.4
TUE **Stuetta** 149.93 332 *e*PKPbc PKPbc 21 46 48.1 -0.7
MEZF **Maizieres J'vi** 149.95 339 *e*PKP1 PKPbc 21 46 47.5 -1.2
comp=Z,82nm,1.1s
LOMF **Lomont** 150.27 335 PKP PKPbc 21 46 49.7 +0.1
TIP **Timpagrande** 150.37 313 *e*PKPdf PKPdf 21 46 44.4 -0.4
TIP *e*PKPbc PKPbc 21 46 49.8 -0.3
CABF **La Chapelle** 151.17 335 *e*PKP1 PKPbc 21 46 50.8 -0.9
comp=Z,24nm,0.8s
FLN **La Foliniere** 151.29 346 *e*PKP1 PKPbc 21 46 50.3 -1.6
comp=Z,132nm,1.3s
LDF **La Druitiere** 151.37 345 *e*PKP1 PKPbc 21 46 50.7 -1.4
LOR **Lormes** 151.42 339 *e*PKP1 PKPbc 21 46 50.9 -1.4
comp=Z,20nm,0.8s
SSF **Saint Saulge** 151.72 339 *e*PKP1 PKPbc 21 46 52.1 -0.8
comp=Z,40nm,1.2s
GRR **Gorron** 151.73 346 *e*PKP1 PKPbc 21 46 51.3 -1.6
LPL **La Plagne** 151.81 333 *e*PKP1 PKPbc 21 46 52.1 -1.1
comp=Z,15nm,0.7s
LPG **La Plagne** 151.81 333 *e*PKP1 PKPbc 21 46 52.8 -0.4
comp=Z,19nm,0.7s
SMF **Signal de Mont** 151.97 338 *e*PKP1 PKPbc 21 46 52.7 -0.8
BNI **Bardonecchia** 152.20 333 *e*PKIKP PKPdf 21 46 47.4 0.0
SGMF **Saint Gilles** 152.22 348 *e*PKP1 PKPbc 21 46 53.1 -0.9
ROSF **Rostrenen** 152.27 349 *e*PKP1 PKPbc 21 46 52.9 -1.3
BGF **Bois d'Agland** 152.38 339 *e*PKP1 PKPbc 21 46 53.5 -1.0
MBDF **Montbardon** 152.42 332 *e*PKP1 PKPbc 21 46 53.6 -1.0
comp=Z,19nm,0.9s
ORIF **Oris-en-Rattie** 152.64 334 *e*PKP1 PKPbc 21 46 53.9 -1.2
comp=Z,18nm,0.8s
QUIF **Quistinic** 152.65 349 *e*PKP1 PKPbc 21 46 53.3 -1.7
TCF **Toulx Ste Croi** 152.82 340 *e*PKP1 PKPbc 21 46 54.3 -1.2
comp=Z,22nm,1.0s
PGF **Pioggiola** 153.01 327 *e*PKP1 PKPbc 21 46 54.6 -1.4
VIVF **Saint-Julien-l** 153.18 335 *e*PKP1 PKPbc 21 46 55.7 -0.6
FRF **La Foret Royal** 153.39 331 *e*PKP1 PKPbc 21 46 56.1 -0.7
LMR **La Mourre** 153.63 331 *e*PKP1 PKPbc 21 46 56.1 -1.2
PVRL **Vila Real** 159.83 353 *e*PKPab PKPab 21 47 35.8 -0.7
MVO **Moncorvo** 159.85 352 *e*PKPab PKPab 21 47 38.6 +2.0
PVIS **Viseu** 160.40 353 *e*PKPab PKPab 21 47 38.4 -0.6
MTE **Manteigas** 160.67 352 *e*PKPab PKPab 21 47 40.2 0.0
ESDC **Lonsa Array** 160.69 344 PKPab PKPab 21 47 40.4 +0.1
comp=Z,1.5nm,0.6s,baz=24,slow=4.0,SNR=7.9
PCBR **Castelo Branco** 161.21 352 *e*PKPab PKPab 21 47 41.5 -1.1
PMRV **Marv??o** 161.61 352 *e*PKPab PKPab 21 47 44.7 +0.4
PESTR **Estremoz** 162.19 352 *e*PKPab PKPab 21 47 46.5 -0.3
EVO **Evora** 162.57 353 *e*PKIKP PKPdf 21 46 59.2 -1.4
comp=Z,18nm,1.2s
EVO **Evora** 162.57 353 *e*PKPab PKPab 21 47 48.1 -0.4
PBAR **Barrancos** 162.78 350 *e*PKPab PKPab 21 47 49.2 -0.3
PBEJ **Beja** 163.05 352 *e*PKPab PKPab 21 47 50.8 +0.2
PVAQ **Vaqueiros** 163.64 351 *e*PKPab PKPab 21 47 53.6 +0.3
LIC **Lamto** 164.09 201 *e*PKP2 PKPab 21 47 55.7 -0.1
comp=Z,32nm,1.1s
LIC **Lamto** 164.09 201 *e*PKP2 PKPab 21 47 55.6 -0.2
comp=Z,40nm,1.1s
KIC **Kosan Boka** 164.12 203 *e*PKP2 PKPab 21 47 56.8 +0.9
comp=Z,64nm,1.3s
DBIC **Dimbokro** 164.44 203 PKPab PKPab 21 47 57.3 -0.1
comp=Z,8.4nm,1.0s,baz=135,slow=9.8,SNR=5.1
TIC **Toumodi** 164.48 202 *e*PKP2 PKPab 21 47 56.2 -1.3
comp=Z,63nm,1.1s
TOA0 **Torodi Ar. Sit** 165.63 238 *e*PKPdf PKPdf 21 47 03.7 -0.3
TORD **Torodi Ar. Bea** 165.63 238 PKP PKPdf 21 47 03.2 -0.9
comp=Z,2.0nm,1.1s,baz=323,slow=1.1,SNR=6.9
TORD PKPab PKPab 21 48 03.2 +0.4
comp=Z,1.1nm,0.8s,baz=114,slow=4.3,SNR=4.5
TORD **Torodi Ar. Bea** 165.63 238 PKP PKPdf 21 47 03.2 -0.9
TORD PKPab PKPab 21 48 03.2 +0.4

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*ISCJB **27** 21:34:12.8S 0.6, 215S 0.1×16927E 007, h10km, mb4.4/9, Error ellipse: s-maj=21.1km s-min=9.4km az=168.8*
*IDC **27** 21:34:12.5S 1.8, 2153S×16942E, h0km, mb4.3/5, mb1 4.6/5, mb1mx4.2/15, mbtmp4.4/5, Error ellipse: s-maj=91.9km s-min=26.3km az=157.0*
*NEIC **27** 21:34:13.7S 0.5, 2157S×16944E, h10km, mb4.4/8, Error ellipse: s-maj=20.1km s-min=11.5km az=165.0*

ISC 27 21:34:14.3S 0.6, 215S 01×16930E 008, h10km, n24, σ0 97/23, mb4.4/9, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	2.71	258	*e*P	Pn	21 34 58.8	+0.9
DZM				*e*S	Sn	21 35 28.9	-1.9
CTA	**Charters Tower** 10nm,0.8s,mb4.3	21.59	270	*e*P	P	21 39 06.6	+2.2
CTA	**Charters Tower** 13nm,0.8s,mb4.4,baz=94,slow=11,SNR=18	21.59	270	P	P	21 39 06.7	+2.3
CTAO	**Charters Tower** 12nm,0.8s,mb4.4	21.59	270	*e*P	P	21 39 06.2	+1.7
STKA	**Stephens Creek** 8.0nm,1.2s,mb4.1	26.74	242	*e*P	P	21 39 56.6	+2.5
STKA				*e*		21 41 01.1	
STKA	**Stephens Creek** 5.8nm,0.8s,mb4.2,baz=94,slow=11,SNR=5.3	26.74	242	P	P	21 39 55.2	+1.1
TAU	**Tasmania Unive**	28.13	216	*e*P	P	21 40 05.4	-1.0
TAU				*e*PP	PP	21 41 12.5	+2.5
WB2	**Warramunga Arr**	32.69	266	*e*P	P	21 40 46.2	-0.8
WRAB	**Tennant Creek** 1.2nm,0.5s,mb4.1	32.69	266	*e*P	P	21 40 46.1	-0.9
WRA	**Warramunga Arr** 1.5nm,0.8s,mb4.0,baz=100,slow=8.3,SNR=12	32.70	266	P	P	21 40 46.5	-0.6
ASAR	**Alice Springs** 4.3nm,0.7s,mb4.5,baz=84,slow=9.4,SNR=28	32.70	259	P	P	21 40 47.6	+0.5
FITZ	**Fitzroy Crossi** 7.7nm,0.6s,mb4.5	41.12	267	*e*P	P	21 41 59.6	+0.8
MBWA	**Marble Bar** 4.1nm,0.7s,mb4.5	46.01	261	*e*P	P	21 42 38.3	0.0
NWAO	**Narrogin (SRO)** 36nm,1.3s	47.25	245	*e*P	P	21 42 48.4	+0.6
SNAA	**Sanae**	86.88	182	*e*P	P	21 46 58.1	-0.8
VNA3	**Neumayer Olymp**	87.47	180	*e*	P	21 47 02.4	+0.7
VNA3				*e*		21 47 11.0	
VNA2	**Neumayer--Watz**	87.76	181	*e*	P	21 47 04.0	+0.9

baz=190,slow=3.7

VNA2				*e*			21 47 12.8	
BILL	**Bilibino**	**89.34**	**359**	*eP*	**P**	**21 47 09.5**	**-0.8**
NVAR	**Mina Array Bea**	**90.27**	**48**	P	**P**	**21 47 15.1**	**-0.3**
	2.1nm,0.8s,mb4.5,baz=230,slow=7.7,SNR=9.4							
LSA	**Lhasa**	**90.78**	**302**	*eP*	**P**	**21 47 18.4**	**+0.5**
BMO	**Blue Mountains**	**93.86**	**43**	*eP*	**P**	**21 47 31.6**	**-0.2**
	4.2nm,1.0s,mb4.8							
PLCA	**Paso Flores**	**96.78**	**139**	P	**P**	**21 47 44.5**	**-1.0**
GERES	**GERESS Array B**	**146.52**	**330**	PKPbc	PKPbc	21 53 55.7	0.0
	0.6nm,0.6s,baz=46,slow=3.9,SNR=6.2							
TOA0	**Torodi Ar. Sit**	**165.53**	**237**	*e*PKPdf	PKPdf	21 54 20.3	+0.3

ISCJB **27** *21:42:24.7±1.7,3835N±005×204E±02,h14km±9km, Error ellipse: s-maj=20.5km s-min=6.6km az=167.1*
THE **27** *21:42:26.5,3837N×2049E, h8km, ML2.7*
ATH **27** *21:42:26.2,3837N×2054E, h11km±10km, MD3.6/5*
CSEM **27** *21:42:26.0±0.2,3836N×2048E, h15km, MD3.6, Error ellipse: s-maj=6.8km s-min=1.8km az=79.0*
NEIC **27** *21:42:26.2,3837N×2054E, h11km, MD3.6(ATH), After ATH.*

ISC 27 21:42:25.6±1.7,3836N±004×205E±02,h18km±8km,n11, σ0§62/17,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.20**	**154**	*e*Pg		**Pg**		**21 42 30.4**	**-0.1**
VLS				*e*Sg		**Sg**		**21 42 34.3**	**+0.4**
VLS	**Valsamata**	**0.20**	**154**	*e*PG		**Pg**		**21 42 30.5**	**-0.1**
VLS				*e*SG		**Sg**		**21 42 34.4**	**+0.5**
VLS	**Valsamata**	**0.20**	**154**	*e*Pg		**Pg**		**21 42 30.5**	**-0.1**
VLS				*e*Sg		**Sg**		**21 42 34.3**	**+0.4**
KFL	**Anninata**	**0.35**	**135**	*e*Pg		**Pg**		**21 42 33.1**	**+0.2**
KFL				*e*Sg		**Sg**		**21 42 38.4**	**+0.4**
KFL	**Anninata**	**0.35**	**135**	*e*Pg		**Pg**		**21 42 33.1**	**+0.1**
KFL				*e*Sg		**Sg**		**21 42 38.3**	**+0.3**
LKD	**Levkas**	**0.38**	**21**	*e*Pg		**Pg**		**21 42 33.1**	**-0.4**
LKD				*e*Sg		**Sg**		**21 42 39.2**	**+0.4**
RLS	**Riolos of Patr**	**0.83**	**111**	*e*PB		**Pb**		**21 42 41.7**	**+0.1**
IGT	**Igoumenitsa**	**1.18**	**355**	*e*Pg		**Pg**		**21 42 48.4**	**-0.1**
EVR	**Evrytania**	**1.18**	**61**	*e*PG		**Pg**		**21 42 47.3**	**-1.2**
ITM	**Ithomi**	**1.64**	**135**	*e*PG		**Pg**		**21 42 56.4**	**-0.9**
THL	**Klokotos Trika**	**1.70**	**44**	*e*PB		**Pb**		**21 42 57.5**	**+1.2**

IDC **27** *21:46:09.3±7.9, 1121N×12638E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.7/20, mbtmp4.0/6, Error ellipse: s-maj=170.3km s-min=65.6km az=155.0*
ISCJB **27** *21:46:17.2±3.3, 1225N±007×1259E±02, h15km±20km, mb3.8/6, Error ellipse: s-maj=29.6km s-min=11.8km az=171.8*
MAN **27** *21:46:19, 12.14N×12575E, h23km, mb4.4, ML3.2, MS3.1*

ISC 27 21:46:16.7±3.3,1225N±007×1259E±02,h1km±17km,n14, σ0§80/16,mb3.9/6,1C-1D,Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.79**	**215**	*e*P		**Pg**		**21 46 32.7**	**+0.8**
BESP				*e*S		**Sg**		**21 46 42.6**	**+0.5**
CNP	**Catarman**	**1.24**	**282**	*e*P		**Pg**		**21 46 39.5**	**-1.0**
CNP				*e*S		**Sg**		**21 46 49.4**	**-7.1**
OCLP	**Ormoc**	**1.74**	**227**	*e*P		**Pn**		**21 46 47.2**	**-1.0**
PVCP	**Virac**	**2.17**	**308**	*e*P		**Pn**		**21 46 53.9**	**-0.1**
MSLP	**Maasin**	**2.34**	**206**	*e*P		**Pn**		**21 46 56.5**	**+0.1**
SCPH	**Surigao**	**2.49**	**189**	*e*P		**Pn**		**21 46 57.4**	**-1.0**
RCP	**Roxas**	**3.17**	**258**	*e*P		**Pn**		**21 47 08.4**	**+0.6**
GUIM	**Jordan**	**3.63**	**244**	*e*P		**Pn**		**21 47 14.1**	**0.0**
CMAR	**Chiang Mai Arr**	**26.70**	**287**	P		**P**		**21 51 57.1**	**-0.7**
	0.7nm,0.8s,mb3.4,baz=98,slow=7.2,SNR=6.9								
MKAR	**Makanchi Array**	**50.25**	**322**	P		**P**		**21 55 15.8**	**+1.2**
	1.4nm,0.8s,mb3.9,baz=118,slow=7.8,SNR=11								
ZALV	**Zalesovo Beam**	**52.73**	**331**	P		**P**		**21 55 33.2**	**+0.1**
	0.3nm,0.4s,mb3.6,baz=114,slow=3.5,SNR=2.4								
KURK	**Kurchatov**	**54.24**	**325**	P		**P**		**21 55 45.2**	**+0.9**
	2.0nm,0.7s,mb4.3,baz=125,slow=7.2,SNR=18								
BVAR	**Borovoye Array**	**59.84**	**325**	P		**P**		**21 56 24.8**	**+0.9**
	0.3nm,0.4s,mb3.7,baz=108,slow=4.8,SNR=5.2								
ARCES	**ARCESS Array B**	**82.22**	**340**	P		**P**		**21 58 38.0**	**-1.4**
	3.5nm,0.9s,mb4.5,baz=62,slow=5.6,SNR=5.8								

NEIC 27 21:47:36.1,3590S×17856E,h201km,MG3.8(WEL),After WEL, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.67**	**187**	P			Pn	21 48 11.2	-0.2
MXZ				S			Sn	21 48 37.0	-2.0
PUZ	**Puketiti**	**2.18**	**186**	P			Pn	21 48 17.1	+0.6
PUZ				S			Sn	21 48 48.3	+0.1
MWZ	**Matawai**	**2.57**	**198**	P			Pn	21 48 21.6	+0.9
URZ	**Urewera**	**2.63**	**206**	P			Pn	21 48 23.1	+1.7
BKZ	**Black Stump Fm**	**3.65**	**206**	P			Pn	21 48 35.4	+1.9
MRZ	**Mangatainoka R**	**5.30**	**205**	P			Pn	21 48 54.4	+0.1
KIW	**Kapiti Island**	**5.72**	**209**	P			Pn	21 49 00.0	+0.3

IDC 27 21:56:43.8±3.7,443S×15308E,h0km,mb3.2/2,mb1 3.4/2, mb1mx3.3/15,mbtmp3.2/2,Error ellipse: s-maj=186.3km s-min=44.8km az=121.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.90**	**228**	P		P		22 01 59.8	+0.4
	0.3nm,0.5s,baz=53,slow=9.9,SNR=7.5								
ASAR	**Alice Springs**	**26.61**	**222**	P		P		22 02 23.9	-0.1
	1.7nm,1.3s,baz=53,slow=9.6,SNR=3.6								
TORD	**Torodi Ar. Bea**	**150.45**	**289**	PKPbc		PKPbc		22 16 38.0	-0.4
	0.6nm,0.4s,baz=75,slow=1.9,SNR=32								

IDC **27** *21:59:00.6±2.0, 2128S×16930E, h0km, mb4.1/7, mb1 4.3/7, mb1mx4.1/16, mbtmp4.1/7, Error ellipse: s-maj=90.8km s-min=27.2km az=156.0*
NEIC **27** *21:59:01.3±0.8, 2138S×16938E, h10km, mb4.2/2, Error ellipse: s-maj=23.8km s-min=17.6km az=162.0*
ISCJB **27** *21:59:03.5±1.0, 214S±02×1693E±02, h33km, mb4.1/9, Error ellipse: s-maj=27.2km s-min=21.3km az=158.2*

ISC 27 21:59:05.4±1.0,214S±02×1693E±02,h35km,n13, σ1§03/12,mb4.1/9,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**21.61**	**269**	P		**P**		**22 03 52.8**	**+0.3**
	3.6nm,0.8s,mb3.9,baz=98,slow=13,SNR=5.4								
CTAO	**Charters Tower**	**21.61**	**269**	*e*P		**P**		**22 03 51.6**	**-0.9**
	3.9nm,0.8s,mb3.9								
STKA	**Stephens Creek**	**26.82**	**241**	P		**P**		**22 04 44.3**	**+1.8**
	2.9nm,0.8s,mb3.9,baz=92,slow=13,SNR=4.3								
WRA	**Warramunga Arr**	**32.72**	**266**	P		**P**		**22 05 33.7**	**-1.2**
	1.4nm,0.9s,mb3.9,baz=97,slow=8.0,SNR=8.7								
ASAR	**Alice Springs**	**32.74**	**259**	P		**P**		**22 05 34.6**	**-0.4**
	2.1nm,0.6s,mb4.2,baz=83,slow=9.3,SNR=26								
FITZ	**Fitzroy Crossi**	**41.15**	**267**	P		**P**		**22 06 47.0**	**+0.4**
	1.6nm,0.6s,mb3.9,baz=128,slow=8.2,SNR=14								
CASY	**Casey**	**58.19**	**204**	*e*P		**P**		**22 08 54.5**	**-1.1**
	2.0nm,0.4s,mb4.5								
MAJO	**Matsushiro**	**64.69**	**333**	*e*P		**P**		**22 09 38.8**	**-1.0**
	51nm,2.0s,mb5.2								
CMAR	**Chiang Mai Arr**	**79.46**	**295**	P		**P**		**22 11 10.4**	**+1.8**
	0.4nm,0.4s,mb3.7,baz=132,slow=5.4,SNR=4.4								
SNAA	**Sanae**	**87.02**	**182**	*e*P		**P**		**22 11 46.7**	**0.0**
NVAR	**Mina Array Bea**	**90.17**	**48**	P		**P**		**22 12 02.5**	**+0.3**
	0.2nm,0.3s,mb3.9,baz=213,slow=6.5,SNR=4.8								
NVAR	**Mina Array Bea**	**90.17**	**48**	P		**P**		**22 12 02.5**	**+0.3**
GERES	**GERESS Array B**	**146.41**	**330**	PKPbc		PKPbc		22 18 42.3	-0.2
	0.4nm,0.5s,baz=56,slow=3.7,SNR=2.8								

IDC **27** *22:01:11.6±0.6, 2127S×16937E, h0km, mb4.9/18, mb1 5.0/20, mb1mx5.0/21, mbtmp4.9/20, ML4.4/1, MS4.7/12, Ms1 4.7/12, ms1mx4.4/28, Error ellipse: s-maj=21.7km s-min=14.6km az=157.0*
NEIC **27** *22:01:12.7±0.2, 2129S×16937E, h10km, mb5.4/42, Error ellipse: s-maj=7.8km s-min=4.9km az=152.0*
ISCJB **27** *22:01:12.1±0.2, 2131S±004×16933E±004, h14km, mb5.3/79, MS4.9/15, Error ellipse: s-maj=6.8km s-min=4.5km az=153.7*
SZGRF **27** *22:01:13.2, 2252S×16921E, h33km, Southeast of Loyalty Islands*
BJI **27** *22:01:15.2, 2059S×16935E, h10km, mB5.5, mb5.1, Ms5.4, Msz5.1*
MOS **27** *22:01:15.3±1.1, 2128S×16931E, h33km, mb5.7/27, Error ellipse: s-maj=8.6km s-min=8.2km az=24.2*
DJA **27** *22:01:17, 2172S×16895E, h10km, mb5.2/14*

ISC 27 22:01:15.0±2.4,2132S±005×16935E±004,h23km±16km, h21km±2.8km:pP-P,n369,σ0§95/179,mb5.3/79,MS4.9/15, 23C-18D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.81**	**254**	*e*P		**Pn**		**22 01 56.9**	**-1.7**
DZM				*e*S		**Sn**		**22 02 29.1**	**-2.7**
RAO	**Raoul Island**	**13.95**	**127**	LR		LR		22 08 47.0	
	comp=Z,2μm,18.5s,baz=121,slow=33								
HNR	**Honiara**	**14.89**	**321**	Pn		**Pn**		**22 04 44.8**	**+0.5**
	1.8nm,0.3s,baz=179,slow=18,SNR=5.6								
HNR	**Honiara**	**14.89**	**321**	*e*P		**Pn**		**22 04 44.6**	**+0.3**
HNR					pmax	pmax			
	comp=Z,315nm,1.0s								
HNR	**Honiara**	**14.89**	**321**	*e*Pn		**Pn**		**22 04 44.6**	**+0.3**
	comp=Z,315nm,1.0s								
FUNA	**Funafuti**	**15.87**	**38**	*e*P		**Pn**		**22 04 57.9**	**+0.8**
	comp=Z,398nm,1.5s								
URZ	**Urewera**	**18.16**	**160**	P		**Pn**		**22 05 29.2**	**+3.5**
	comp=Z,0.3nm,0.3s,baz=12,slow=6.2,SNR=4.9								
URZ					S	**Sn**		**22 08 58.8**	**+11**
	comp=Z,0.3nm,0.3s,baz=130,slow=19,SNR=1.8								
URZ					LR	LR		22 11 34.5	
	comp=Z,1μm,18.7s,baz=6.3,slow=34								
ARMA	**Armidale**	**18.32**	**237**	*e*P		**Pn**		**22 05 29.4**	**+1.6**
AFI	**Afiamalu**	**19.42**	**71**	P		**Pn**		**22 05 38.9**	**-2.3**
	baz=295,slow=7.6,SNR=7.5								
AFI					LR	LR		22 11 47.4	
	comp=Z,2μm,19.5s,baz=283,slow=33								
SNZO	**South Karori**	**20.44**	**168**	*e*P		**P**		**22 05 51.7**	**+0.9**
CTA	**Charters Tower**	**21.64**	**269**	*e*P		**P**		**22 06 04.8**	**+0.8**
	comp=Z,45nm,0.9s,mb4.9								
CTA	**Charters Tower**	**21.64**	**269**	P		**P**		**22 06 05.0**	**+1.0**
	comp=Z,54nm,0.9s,mb5.0,baz=89,slow=11,SNR=41								
CTA					LR	LR		22 14 03.7	
	comp=Z,3μm,18.2s,MS4.8,baz=90,slow=36								
CTA	**Charters Tower**	**21.64**	**269**	*e*P		**P**		**22 06 04.8**	**+0.8**
CTA					pmax	pmax			
	comp=Z,45nm,0.9s								
CTAO	**Charters Tower**	**21.64**	**269**	*e*P		**P**		**22 06 04.9**	**+0.9**
CTAO					pmax	pmax			
	comp=Z,92nm,1.0s,mb5.2								
CTAO	**Charters Tower**	**21.64**	**269**	*e*P		**P**		**22 06 04.9**	**+0.9**
	comp=Z,92nm,1.0s,mb5.2								
CNB	**Canberra Magne**	**22.39**	**227**	*e*P		**P**		**22 06 13.7**	**+1.8**
CNB				*e*				22 06 24.9	
CAN	**Canberra**	**22.65**	**228**	*e*P		**P**		**22 06 16.7**	**+2.1**
PMG	**Port Moresby**	**24.42**	**296**	*e*P		**P**		**22 06 32.0**	**-0.1**
COEN	**Coen**	**25.98**	**282**	*e*P		**P**		**22 06 45.8**	**-0.4**
	comp=Z,25nm,1.2s,mb4.6								
TOO	**Toolangi**	**26.23**	**227**	*e*P		**P**		**22 06 49.8**	**+1.4**
STKA	**Stephens Creek**	**26.89**	**241**	*e*P		**P**		**22 06 54.6**	**+0.3**
	comp=Z,32nm,1.0s,mb4.8								
STKA	**Stephens Creek**	**26.89**	**241**	P		**P**		**22 06 54.8**	**+0.5**
	comp=Z,28nm,0.9s,mb4.8,baz=79,slow=8.9,SNR=17								
STKA					PcP	PcP		22 10 17.3	+0.9
	comp=Z,8.3nm,1.0s,baz=326,slow=8.0,SNR=3.2								
STKA					LR	LR		22 17 48.2	
	comp=Z,2μm,18.1s,MS4.8,baz=41,slow=37								
TAU	**Tasmania Unive**	**28.33**	**216**	*e*P		**P**		**22 07 06.9**	**-0.2**
RAR	**Rarotonga**	**28.75**	**95**	LR		LR		22 15 47.0	
	comp=Z,450nm,20.2s,MS4.1,baz=72,slow=30								
RAR	**Rarotonga**	**28.75**	**95**	P		**P**		**22 07 10.7**	**-0.4**
WB2	**Warramunga Arr**	**32.75**	**266**	*e*P		**P**		**22 07 45.4**	**-1.0**
WRAB	**Tennant Creek**	**32.75**	**266**	P		**P**		**22 07 45.5**	**-1.0**
	comp=Z,139nm,1.6s,mb5.6,SNR=5.7								
WRAB	**Tennant Creek**	**32.75**	**266**	*e*P		**P**		**22 07 45.1**	**-1.4**
WRAB	**Tennant Creek**	**32.75**	**266**	*e*P		**P**		**22 07 44.1**	**-2.3**
	comp=Z,44nm,1.3s,mb5.2								
WRA	**Warramunga Arr**	**32.76**	**266**	P		**P**		**22 07 44.8**	**-1.7**
	comp=Z,11nm,0.9s,mb4.8,baz=98,slow=8.5,SNR=34								
WRA					S	**S**		**22 13 12.9**	**+11**
	comp=Z,1.2nm,1.1s,baz=98,slow=17,SNR=6.4								
WRA					LR	LR		22 21 18.7	
	comp=Z,3μm,18.3s,MS5.0,baz=95,slow=37								
ASAR	**Alice Springs**	**32.79**	**259**	P		**P**		**22 07 45.6**	**-1.1**
	comp=Z,22nm,0.8s,mb5.2,baz=83,slow=8.7,SNR=79								
ASAR					PcP	PcP		22 10 31.9	+0.2
	comp=Z,3.7nm,0.9s,baz=93,slow=3.0,SNR=6.0								
TBI	**Tubuai**	**38.06**	**101**	*e*LQ				22 17 16.7	
	comp=Z,2μm,27.8s								
TBI					eLR	LR		22 19 09.9	
	comp=Z,396nm,24.0s								
FORT	**Forrest**	**38.10**	**247**	*e*P		**P**		**22 08 31.1**	**-1.2**
	comp=Z,31nm,0.8s,mb5.1								
PPT	**Papeete**	**38.83**	**92**	*e*LQ				22 17 45.5	
	comp=Z,1μm,27.8s								
PPT					eLR	LR		22 19 24.7	
	comp=Z,1μm,25.0s								
PPT	**Papeete**	**38.83**	**92**	LR		LR		22 20 40.8	
	comp=Z,319nm,18.1s,MS4.2,baz=7.4,slow=30								
FITZ	**Fitzroy Crossi**	**41.18**	**267**	*e*P		**P**		**22 08 57.5**	**-0.7**
	comp=Z,67nm,1.1s,mb5.2								
FITZ	**Fitzroy Crossi**	**41.18**	**267**	P		**P**		**22 08 58.1**	**0.0**
	comp=Z,38nm,0.9s,mb5.0,baz=122,slow=9.8,SNR=57								
FITZ					LR	LR		22 26 23.5	
	comp=Z,2μm,19.3s,MS5.0,baz=291,slow=37								
GUMO	**Guam**	**42.21**	**323**	*e*P		**P**		**22 09 04.4**	**-2.1**
BATI	**Baumata**	**45.19**	**277**	P		**P**		**22 09 31.3**	**+0.7**
	comp=Z,44nm,0.8s,mb5.4,baz=137,slow=2.4,SNR=9.3								
BATI					LR	LR		22 27 24.8	
	comp=Z,1μm,21.5s,MS4.8,baz=139,slow=35								
MBWA	**Marble Bar**	**46.09**	**261**	*e*P		**P**		**22 09 37.5**	**-0.2**
	comp=Z,62nm,1.1s,mb5.5								
KLBR	**Kellerberrin**	**46.95**	**246**	*e*P		**P**		**22 09 42.6**	**-1.7**
	comp=Z,27nm,0.9s,mb5.2								
NWAO	**Narrogin (SRO)**	**47.39**	**244**	*e*P		**P**		**22 09 47.3**	**-0.4**
NWAO					pmax	pmax			
	comp=Z,12nm,0.7s								
NWAO	**Narrogin (SRO)**	**47.39**	**244**	*e*P		**P**		**22 09 47.3**	**-0.4**
	comp=Z,12nm,0.7s,mb4.9								
MUN	**Mundaring**	**48.26**	**246**	*e*P		**P**		**22 09 54.2**	**-0.3**
TAOE	**Nuku Hiva Isla**	**50.10**	**84**	eLR		LR		22 24 35.8	
	comp=Z,3μm,23.9s								
MIDW	**Midway**	**50.89**	**15**	P		**P**		**22 10 14.7**	**+0.3**
RKT	**Rikitea**	**51.30**	**103**	*e*S		**S**		**22 17 41.3**	**+5.5**
	comp=Z,488nm,25.8s								
RKT					eLR	LR		22 25 12.0	
	comp=Z,725nm,33.2s								
DAV	**Davao City (W)**	**51.39**	**299**	*e*P		**P**		**22 10 18.4**	**0.0**
	comp=Z,0.2nm,0.4s								
DAV				*e*				22 10 31.7	
SBA	**Scott Base**	**56.59**	**181**	*e*P		**P**		**22 10 56.9**	**+1.3**
SBA					pmax	pmax			
	comp=Z,24nm,1.1s,mb5.1								
SBA	**Scott Base**	**56.59**	**181**	*e*P		**P**		**22 10 56.9**	**+1.3**
	comp=Z,24nm,1.1s,mb5.1								
CASY	**Casey**	**58.27**	**204**	*e*P		**P**		**22 11 05.8**	**-1.8**
KSM	**Kuching**	**61.95**	**284**	*e*P		**P**		**22 11 32.8**	**-0.8**
JOW	**Kunigami**	**62.24**	**318**	P		**P**		**22 11 35.9**	**+0.6**
	comp=Z,7.7nm,0.9s,mb4.8,baz=181,slow=10,SNR=4.5								
MJAR	**Matsushiro Arr**	**64.64**	**333**	P		**P**		**22 11 50.0**	**-0.9**
	comp=Z,5.0nm,0.9s,mb4.6,baz=166,slow=7.6,SNR=12								
MAJO	**Matsushiro**	**64.64**	**333**	*e*P		**P**		**22 11 50.9**	**0.0**
MAT	**Matsushiro**	**64.64**	**333**	P		**P**		**22 11 50.4**	**-0.5**
MIR	**Mirnyy**	**65.20**	**205**	⇑*i*P		**P**		**22 11 54.0**	**-0.2**
MIR					*i*			22 12 03.0	
MIR					*i*			22 12 08.0	
MIR					pmax	pmax			
	comp=Z,100nm,1.8s,mb5.5								
TATO	**Taipei**	**65.42**	**312**	*e*P		**P**		**22 11 56.7**	**+0.5**
COCO	**West Island**	**69.53**	**265**	P		**P**		**22 12 21.3**	**-1.2**
KSRS	**Korea Array**	**70.28**	**326**	P		**P**		**22 12 27.1**	**+0.5**
	comp=Z,4.4nm,1.0s,mb4.3,baz=146,slow=7.1,SNR=7.5								
YSS	**Yuzh-Sakhalins**	**72.07**	**341**	⇓*i*P		**P**		**22 12 37.9**	**+0.7**
YSS					pmax	pmax			
	comp=Z,100nm,1.0s,mb5.7								
VLA	**Vladivostok**	**72.80**	**332**	*e*P		**P**		**22 12 43.3**	**+1.7**
VLA					pmax	pmax			
	comp=Z,860nm,1.3s,mb6.5								
VLA	**Vladivostok**	**72.80**	**332**	*e*P		**P**		**22 12 43.4**	**+1.8**
PETK	**Petropavlovsk-**	**74.80**	**353**	P		**P**		**22 12 54.1**	**+1.0**
	comp=Z,24nm,1.0s,mb5.0,baz=129,slow=5.8,SNR=15								
MDJ	**Mudanjiang**	**75.00**	**332**	P		**P**		**22 12 55.0**	**+0.5**
MDJ					AMB	AMB			
	comp=Z,12nm,1.6s,mb4.6								
MDJ	**Mudanjiang**	**75.00**	**332**	*e*P		**P**		**22 12 55.1**	**+0.6**
	comp=Z,19nm,1.0s,mb5.0								
HABR	**Khabarovsk**	**75.95**	**337**	*e*P		**P**		**22 12 58.3**	**-1.6**
HABR				*e*				22 13 08.6	
HABR				*e*				22 13 10.6	
HABR				*e*				22 13 12.9	
HABR				*e*				22 15 48.0	
HABR				*e*S		S		22 22 38.6	-2.7
HABR				*e*				22 23 09.7	
HABR				*e*				22 27 32.6	
HABR				*e*				22 30 55.8	
CN2	**Changchun**	**76.28**	**329**	*e*P		**P**		**22 13 01.8**	**-0.1**
CN2					AMB	AMB			
	comp=Z,20nm,1.0s,mb5.0								
MAW	**Mawson**	**76.56**	**202**	*e*P		**P**		**22 13 04.2**	**+1.0**
	comp=Z,11nm,1.4s,mb4.6								
MAW	**Mawson**	**76.56**	**202**	P		**P**		**22 13 04.3**	**+1.1**
	comp=Z,3.8nm,0.8s,mb4.4,baz=93,slow=8.0,SNR=8.7								
MAW	**Mawson**	**76.56**	**202**	*e*P		**P**		**22 13 04.2**	**+1.0**
MAW					pmax	pmax			
	comp=Z,11nm,1.4s								
GYA	**Guiyang**	**77.10**	**305**	⇑*i*P		**P**		**22 13 09.3**	**+2.4**
GYA					PCP	PcP		22 13 20.5	+2.8
GYA					PP	PP		22 16 05.0	+4.1
GYA					AMB	AMB			
	comp=Z,40nm,1.0s,mb5.3								
GYA					AMB	AMB			
	comp=Z,180nm,5.9s								
GYA					LR	LR			
	comp=N,1μm,18.9s,MS5.3								
GYA					LR	LR			
	comp=E,860nm,19.8s,MS5.3								
GYA					LR	LR			
	comp=Z,1μm,19.6s,MS5.3								
NANT	**Nan**	**78.13**	**296**	⇑P		**P**		**22 13 11.0**	**-1.8**
	comp=Z,161nm,1.0s,mb5.9								
BJI	**Beijing**	**78.62**	**321**	P		**P**		**22 13 15.3**	**+0.3**
BJI					AMB	AMB			
	comp=Z,12nm,0.9s,mb4.8								
BJI					AMB	AMB			
	comp=Z,266nm,6.4s								
BJI	**Beijing**	**78.62**	**321**	P		**P**		**22 13 15.3**	**+0.3**
	comp=Z,12nm,0.9s,mb4.8								
CHRT	**Chiangrai**	**79.39**	**296**	⇑P		**P**		**22 13 21.5**	**+1.8**
	comp=Z,158nm,1.0s,mb5.1								
CMAR	**Chiang Mai Arr**	**79.46**	**295**	P		**P**		**22 13 21.5**	**+1.4**
	comp=Z,10.0nm,1.0s,mb4.7,baz=134,slow=4.3,SNR=46								
CMAR	**Chiang Mai Arr**	**79.46**	**295**	⇑*e*P		**P**		**22 13 21.8**	**+1.7**
KMI	**Kunming**	**79.46**	**302**	P		**P**		**22 13 22.0**	**+2.0**
KMI					AMB	AMB			
	comp=Z,34nm,1.0s,mb5.2								
KMI	**Kunming**	**79.46**	**302**	P		**P**		**22 13 21.9**	**+1.9**
KMI					pmax	pmax			
	comp=Z,34nm,1.0s,mb5.2								
KMI	**Kunming**	**79.46**	**302**	P		**P**		**22 13 21.9**	**+1.9**
	comp=Z,34nm,1.0s,mb5.2								
XAN	**Xi'an**	**79.59**	**313**	P		**P**		**22 13 21.3**	**+0.8**
XAN					AP	pP		22 13 30.0	+2.1
XAN					AMB	AMB			
	comp=Z,28nm,1.5s,mb5.0								
CHG	**Chiang Mai**	**79.62**	**295**	⇑P		**P**		**22 13 22.2**	**+1.2**
	comp=Z,25nm,1.4s,mb5.0								
CHTO	**Chiang Mai**	**79.62**	**295**	*e*P		**P**		**22 13 21.6**	**+0.6**
CHTO					pmax	pmax			
	comp=Z,29nm,1.1s,mb5.1								
CHTO	**Chiang Mai**	**79.62**	**295**	*e*P		**P**		**22 13 21.6**	**+0.7**
	comp=Z,29nm,1.1s,mb5.1								
CD2	**Chengdu**	**81.58**	**308**	⇓*i*P		**P**		**22 13 32.5**	**+1.2**
CD2					AP	pP		22 13 37.0	-1.7
CD2					XP	sP		22 13 39.5	-1.8
CD2					PP	PP		22 16 41.8	+3.6
CD2					AMB	AMB			
	comp=Z,30nm,1.4s,mb5.0								
CD2					AMB	AMB			
	comp=Z,300nm,8.4s								
CD2					LR	LR			
	comp=N,270nm,18.0s								
CD2					LR	LR			
	comp=Z,510nm,15.6s,MS5.0								
HHC	**Hu-ho-hao-

comp=Z,74nm,1.6s,mb5.7
CMB Columbia Colle 88.46 48 *e*P **P** 22 14 05.2 -0.4
CMB pmax pmax
comp=Z,38nm,1.3s,mb5.5
CMB Columbia Colle 88.46 48 *e*P **P** 22 14 05.2 -0.4
comp=Z,38nm,1.3s,mb5.5
RC01 Rabbit Creek A 88.48 19 *e*P **P** 22 14 03.1 -2.0
comp=Z,6.4nm,0.5s,mb5.1
ULN Ulaanbaatar 88.59 323⇑*e*P **P** 22 14 06.1 +0.1
GTA Gaotai 88.63 313 ⇓P **P** 22 14 07.5 +1.1
GTA AP pP 22 14 12.0 -1.8
GTA XP sP 22 14 14.8 -1.7
GTA AMB AMB
comp=Z,11nm,1.3s,mb5.0
GTA AMB AMB
comp=Z,618nm,5.7s
GTA LR LR
comp=N,274nm,16.5s,MS4.9
GTA LR LR
comp=E,264nm,16.8s,MS4.9
GTA LR LR
comp=Z,297nm,17.1s,MS4.8
ISA Isabella 88.70 51 *e*P **P** 22 14 06.5 -0.3
ISA pmax pmax
comp=Z,60nm,1.4s,mb5.7
ISA Isabella 88.70 51 *e*P **P** 22 14 06.5 -0.3
comp=Z,60nm,1.4s,mb5.7
YBH Yreka Blue Hor 88.71 44 P **P** 22 14 07.1 +0.4
comp=Z,17nm,1.2s,mb5.3,baz=190,slow=3.3,SNR=15
YAK Yakutsk 88.88 342 *e*P **P** 22 14 04.4 -2.6
YAK pmax pmax
comp=Z,40nm,1.1s,mb5.7
SONM Songino Array 88.94 323 P **P** 22 14 08.2 +0.6
comp=Z,10nm,1.1s,mb5.0,baz=135,slow=4.6,SNR=25
SONM PP PP 22 17 31.0 -6.7
comp=Z,1.0nm,0.7s,baz=103,slow=6.5,SNR=3.6
HUMO Hull Mountain 89.00 43 *e*P **P** 22 14 08.1 +0.1
comp=Z,45nm,1.4s,mb5.6
BILL Bilibino 89.12 359 *e*P **P** 22 14 07.8 -0.2
BILL *e*PS PS 22 26 04.9 +2.2
BILL pmax pmax
comp=Z,63nm,1.2s,mb5.8
BILL Bilibino 89.12 359 *e*P **P** 22 14 07.0 -1.0
comp=Z,23nm,0.6s,mb5.7
LBCM Butte Creek Ri 89.16 45 P **P** 22 14 09.1 +0.2
LTIM Timbered Crate 89.23 45 P **P** 22 14 09.5 +0.3
PFO Pinyon Flat Ob 89.26 53 P **P** 22 14 09.5 0.0
comp=Z,90nm,1.2s,mb6.0,SNR=6.5
PFO Pinyon Flat Ob 89.26 53 *e*P **P** 22 14 09.5 0.0
PFO *e* 22 17 40.2
PFO pmax pmax
comp=Z,29nm,1.3s,mb5.5
PFO Pinyon Flat Ob 89.26 53 *e*P **P** 22 14 09.5 0.0
comp=Z,29nm,1.3s,mb5.4
PFO *e*PP PP 22 17 40.2 -0.4
BUOR Burton Butte 89.29 44 P **P** 22 14 09.8 +0.4
MTUM Tungsten Hills 89.42 49 *e*P **P** 22 14 10.6 +0.4
MPOR Mary's Peak 89.59 41 P **P** 22 14 11.4 +0.6
GSC Goldstone 89.75 52 *e*P **P** 22 14 11.3 -0.4
GSC pmax pmax
comp=Z,53nm,1.6s,mb5.6
GSC Goldstone 89.75 52 *e*P **P** 22 14 11.3 -0.4
comp=Z,53nm,1.6s,mb5.5
PAHR Pah Rah Range 89.94 47 *e*P **P** 22 14 12.3 -0.2
comp=Z,48nm,1.2s,mb5.7
NVAR Mina Array Bea 90.09 48 P **P** 22 14 13.2 -0.1
comp=Z,78nm,0.6s,mb5.2,baz=225,slow=6.6,SNR=29
BROR Big Rock Looko 90.15 42 P **P** 22 14 13.3 -0.1
LPIG La Paz 90.22 64 LR LR 22 45 17.8
comp=Z,734nm,18.9s,MS5.1,baz=84,slow=29
GLA Glamis 90.25 55 *e*P **P** 22 14 13.5 -0.6
GLA pmax pmax
comp=Z,82nm,1.3s,mb5.9
GLA Glamis 90.25 55 *e*P **P** 22 14 13.5 -0.7
comp=Z,82nm,1.3s,mb5.9
MOD Modoc 90.36 45 *e*P **P** 22 14 14.4 -0.1
comp=Z,36nm,1.2s,mb5.6
TPH Tonopah 90.69 49 *e*P **P** 22 14 15.8 -0.2
TPH pmax pmax
comp=Z,60nm,1.4s,mb5.7
TPH Tonopah 90.69 49 *e*P **P** 22 14 15.8 -0.2
comp=Z,60nm,1.4s,mb5.7
LSA Lhasa 90.71 302 *e*P **P** 22 14 16.6 +0.3
LSA pmax pmax
comp=Z,13nm,1.1s,mb5.2
LSA Lhasa 90.71 302 *e*P **P** 22 14 16.6 +0.3
comp=Z,13nm,1.1s,mb5.2
MCK McKinley 90.80 17 P **P** 22 14 14.5 -1.4
MCK pmax pmax
comp=Z,35nm,1.7s,mb5.4
MCK McKinley 90.80 17 P **P** 22 14 14.5 -1.4
comp=Z,35nm,1.7s,mb5.3
OOW Octopus West 90.88 38 P **P** 22 14 18.0 +1.4
NLWA Neilton Lookou 90.88 39 *e*P **P** 22 14 16.5 -0.2
comp=Z,30nm,1.3s,mb5.5
LDFC Landfair 90.90 53 *e*P **P** 22 14 17.0 -0.2
comp=Z,78nm,1.3s,mb5.9
BOD Bodaibo 91.24 334 *e*P **P** 22 14 11.1 -7.0
BOD pmax pmax
comp=Z,9.0nm,1.3s,mb4.9
TDL Tradedollar La 91.33 40 P **P** 22 14 19.4 +0.5
VIPM Ingram Point 91.41 42 P **P** 22 14 19.6 +0.4
GNW Green Mountain 91.58 39 *e*P **P** 22 14 19.0 -1.0
comp=Z,35nm,1.4s,mb5.5
WVOR Wild Horse Val 91.71 45 *e*P **P** 22 14 20.3 -0.4
WVOR pmax pmax
comp=Z,17nm,1.1s,mb5.3
WVOR Wild Horse Val 91.71 45 *e*P **P** 22 14 20.3 -0.4
comp=Z,17nm,1.1s,mb5.3
BMN Battle Mountai 91.75 47 *e*P **P** 22 14 21.0 +0.1
BMN pmax pmax
comp=Z,29nm,1.3s,mb5.5
BMN Battle Mountai 91.75 47 *e*P **P** 22 14 21.0 +0.1
comp=Z,29nm,1.3s,mb5.5
COLA College 91.99 17 *e*P **P** 22 14 20.6 -0.8
ZAK Zakamensk 92.04 324 *e*P **P** 22 14 22.0 0.0
ZAK pmax pmax
comp=Z,11nm,1.3s,mb5.0
JCW Jim Creek 92.42 39 *e*P **P** 22 14 23.5 -0.3
ODAN Odare 92.64 298 *e*P **P** 22 14 26.1 +0.8
comp=Z,49nm,1.0s,mb5.9
RSW Rattlesnake Hi 92.94 41 P **P** 22 14 25.9 -0.4
TUC Tucson 93.06 57 *e*P **P** 22 14 27.2 0.0
TUC pmax pmax
comp=Z,17nm,1.3s,mb5.3
TUC Tucson 93.06 57 *e*P **P** 22 14 27.2 +0.1
comp=Z,17nm,1.3s,mb5.3
ETW Entiat 93.07 40 *e*P **P** 22 14 26.3 -0.5
RAMN Ramite 93.32 298 *e*P **P** 22 14 29.4 +0.9
BMO Blue Mountains 93.67 43 P **P** 22 14 30.4 +0.8
BMO pmax pmax
comp=Z,3.0nm,0.7s,mb4.8
BMO Blue Mountains 93.67 43 P **P** 22 14 30.4 +0.8
comp=Z,2.7nm,0.7s,mb4.8
DAWY Dawson 93.90 20 P **P** 22 14 28.8 -1.5
JIRN Jiri 93.93 298 *e*P **P** 22 14 31.8 +0.5
comp=Z,31nm,1.2s,mb5.6
GUN Gumba 94.28 298 *e*P **P** 22 14 33.5 +0.6
comp=Z,9.9nm,0.5s,mb5.5
KKN Kakani 94.72 298 *e*P **P** 22 14 35.3 +0.4
comp=Z,26nm,0.9s,mb5.7
DMN Daman 94.80 298 *e*P **P** 22 14 35.7 +0.4
comp=Z,58nm,1.1s,mb5.9
GKN Gorkha 95.33 298 *e*P **P** 22 14 37.2 -0.5
comp=Z,34nm,1.1s,mb5.7
KOLN Koldanda 96.11 297 *e*P **P** 22 14 41.2 -0.1
comp=Z,12nm,0.9s,mb5.3
DANN Dangsing 96.18 298 *e*P **P** 22 14 40.7 -0.9
comp=Z,17nm,0.7s,mb5.6
PLCA Paso Flores 96.91 139 P **P** 22 14 47.1 +2.3
comp=Z,4.4nm,1.1s,mb4.8,baz=229,slow=4.8,SNR=3.8
PLCA Paso Flores 96.91 139 *e*P **P** 22 14 44.9 +0.2
ANMO Albuquerque 97.39 55 *e*P **P** 22 14 46.6 -0.3
TXAR Lajitas Array 97.66 62 P **P** 22 14 48.4 +0.2
comp=Z,1.1nm,0.9s,mb4.4,baz=216,slow=6.2,SNR=7.2
TXAR LR LR 22 49 47.6
comp=Z,582nm,18.6s,MS5.1,baz=275,slow=30
TXAR Lajitas Array 97.66 62 P **P** 22 14 48.4 +0.2
TXAR LR LR 22 49 47.6
HVS Khovu-Aksy 97.77 322 *e*P **P** 22 14 48.4 +0.2
HVS pmax pmax
comp=Z,29nm,1.0s,mb5.8
PDAR Pinedale Array 97.94 47 P **P** 22 14 48.4 -0.8
comp=Z,1.0nm,0.8s,mb4.4,baz=207,slow=1.0,SNR=5.5
PDAR PKKPbc PKKPbc 22 31 22.2 -2.0
comp=Z,0.3nm,0.7s,baz=56,slow=4.8,SNR=3.6

WMQ Urumqi 98.71 314 *e*P **P** 22 14 53.5 +0.9
WMQ AMB AMB
comp=Z,13nm,1.2s,mb5.3
WMQ LR LR
comp=Z,306nm,16.2s,MS4.9
MKAR Makanchi Array 103.29 315 Pdiff Pdiff 22 15 12.9 0.0
comp=Z,0.2nm,0.2s,baz=132,slow=2.1,SNR=4.3
MKAR PP PP 22 19 29.0 +0.3
comp=Z,1.4nm,1.1s,baz=124,slow=6.0,SNR=5.5
MKAR PKKP PKKPbc 22 31 26.9 +18
comp=Z,0.8nm,0.7s,baz=301,slow=4.6,SNR=4.4
MKAR Makanchi Array 103.29 315 P Pdif 22 15 13.0 0.0
MKAR 22 19 29.0
MKAR Makanchi Array 103.29 315 Pdif Pdif 22 15 12.9 0.0
MKAR PP PP 22 19 29.0 +0.3
MKAR PKKP PKKPbc 22 31 26.9 +18
KURK Kurchatov 106.66 318 PP PP 22 19 51.3 -2.3
comp=Z,1.2nm,1.0s,baz=102,slow=6.2,SNR=4.0
BVAR Borovoye Array 112.08 320⇑*e*PKIKP PKiKP 22 19 47.7 -0.6
comp=Z,0.7nm,0.7s,baz=101,slow=1.5,SNR=4.6
BRVK Borovoye 112.14 320⇑*e*PKIKP PKiKP 22 19 45.8 -2.6
LPAZ La Paz 112.37 119 PKKPab PKKPab 22 30 47.6 -2.0
comp=Z,0.9nm,0.7s,baz=263,slow=1.8,SNR=5.0
ARU Arti 118.97 324 *e*PKIKP PKPdf 22 20 00.8 -0.6
ARU Arti 118.97 324 *e*PKPdf PKPdf 22 20 00.8 -0.6
AKTK Aktyubinsk 119.66 317 PKP PKPdf 22 20 01.8 -1.2
AKTO Aktyubinsk 119.66 317 PKP PKPdf 22 20 01.8 -1.2
comp=Z,1.5nm,0.9s,baz=127,slow=5.1,SNR=5.5
APA Apatity 126.22 341 ⇓*i*PKIKP PKPdf 22 20 15.5 +0.4
APA pmax pmax
comp=Z,18nm,1.0s
ARCES ARCESS Array B 127.10 345 PKP PKPdf 22 20 15.7 -1.0
comp=Z,3.8nm,0.7s,baz=77,slow=2.4,SNR=14
KMBO Kilima Mbogo 128.17 251 PKP PKPdf 22 20 22.6 +2.2
comp=Z,1.8nm,0.6s,baz=50,slow=6.8,SNR=4.4
GNI Garni 129.65 305⇑*i*PKIKP PKPdf 22 20 23.5 +1.1
GNI Garni 129.65 305 *e*PKPdf PKPdf 22 20 23.6 +1.2
JOF Joensuu 129.70 337 *ep* PKPdf 22 20 26.8 +5.0
comp=Z,0.8nm,0.4s
MOS Moscow 130.47 326 *e*PKIKP PKPdf 22 20 14.8 -8.7
KAF Kangasniemi 132.02 338 *ep* PKPdf 22 20 28.5 +2.3
comp=Z,0.8nm,0.4s
MALT Malatya 134.72 303 ⇓*i*P PKPdf 22 20 34.3 +2.2
MALT Malatya 134.72 303 *e*P PKPdf 22 20 31.9 -0.1
AKASG Malin Array Be 137.22 323 PKP PKPdf 22 20 33.8 -2.5
comp=Z,0.4nm,0.4s,baz=62,slow=1.8,SNR=5.3
NB2 NORSAR Subarra137.47 344 PKPdf PKPdf 22 20 37.0 +0.6
comp=Z,5.5nm,1.4s,baz=31,slow=1.9
NOA NORSAR Array B137.47 344 PKP PKPdf 22 20 36.8 +0.4
comp=Z,1.6nm,0.8s,baz=33,slow=2.1,SNR=4.8
BUR08 Bucovina Ar. S 141.02 321 *e*PKPdf PKPdf 22 20 43.3 0.0
MLR Muntele Rosu 141.58 318 ⇓*i*P PKPdf 22 20 46.6 +2.2
MLR Muntele Rosu 141.58 318 ⇓P PKPdf 22 20 46.6 +2.2
KOLS Kolonicke sedl 141.99 324 *e*PKP PKPdf 22 20 45.3 +0.3
KOLS Kolonicke sedl 141.99 324 *e*PKP PKPdf 22 20 45.4 +0.4
UZH Uzhgorod 142.15 324 *e*PKHKP 22 20 29.4
STHS Stebnicka Huta 142.26 326 *e*PKP PKPdf 22 20 46.1 +0.6
CRVS Cervenica-Dubn 142.44 325 *e*PKP PKPdf 22 20 44.3 -1.6
SZH Strazhica 142.54 314 P PKPdf 22 20 43.5 -2.7
DRGR 142.91 321⇑*i*P PKPdf 22 20 43.7 -3.1
DRGR 142.91 321⇑P PKPdf 22 20 43.7 -3.0
OKC Ostrava-Krasne 143.56 328 *e*PKP PKPdf 22 20 45.6 -2.2
OKC *ep*PKP pPKPdf 22 20 51.5 -4.0
GZR Gura Zlata 143.59 319 ⇓*i*P PKPdf 22 20 45.9 -2.1
GZR Gura Zlata 143.59 319 ⇓P PKPdf 22 20 45.9 -2.1
PRK Paraskevi 143.77 308 *e*P PKPdf 22 20 55.5 +7.0
PSZ Piszkesteto 143.87 325⇓*e*PKP PKPdf 22 20 46.3 -2.1
PSZ Piszkesteto 143.87 325⇓*i*P PKPdf 22 20 45.9 -2.5
PSZ Piszkesteto 143.87 325⇑P PKPdf 22 20 45.9 -2.5
MORC Moravsky Berou 143.90 329 ⇓*i*P PKPdf 22 20 47.2 -1.2
RZN Rozhen 144.00 312 P PKPdf 22 20 46.8 -2.0
PGB Panagyurishte 144.02 314 P PKPdf 22 20 47.2 -1.6
VYHS Vyhne 144.08 326 *e*PKP PKPdf 22 20 47.5 -1.2
DPC Dobruska-Polom 144.09 330 *e*PKP PKPdf 22 20 46.0 -2.7
KARP Karpathos 144.09 302 *e*P PKPdf 22 20 47.5 -1.7
UPC Upice 144.12 331 *e*PKP PKPdf 22 20 46.4 -2.4
UPC *ep*PKP pPKPdf 22 20 53.7 -2.7
BZS Buzias 144.18 320⇓*i*P PKPdf 22 20 46.6 -2.4
BZS Buzias 144.18 320 ⇓P PKPdf 22 20 46.6 -2.5
CHOS Chios island 144.19 307 *e*P PKPdf 22 20 47.2 -2.1
KOLL Kolacno 144.25 327 *e*PKP PKPdf 22 20 48.0 -1.0
KOLL Kolacno 144.25 327 *e*PKP PKPdf 22 20 48.1 -0.9
LIA Limnos Island 144.34 309 *e*P PKPdf 22 20 47.3 -2.2
LOS Limnos 144.40 310 *e*P PKPdf 22 20 47.5 -2.1
BUD Budapest 144.60 325⇓*e*PKP PKPdf 22 20 48.8 -0.9
VTS Vitosha 144.64 315 *e*P PKPdf 22 20 49.3 -0.6
MMB Musomiste 144.72 313 P PKPdf 22 20 48.9 -1.2
PVCC Panska Ves 144.75 332 *e*PKP PKPdf 22 20 47.9 -2.0
BRG Berggiesshubel 144.77 333 *e*PKPbc PKPdf 22 20 48.6 -1.3
BRG Berggiesshubel 144.77 333 *i* PKP PKPdf 22 20 48.5 -1.4
comp=Z,30nm,1.1s
CLL Collm 144.84 334 *e*PKPbc PKPdf 22 20 48.4 -1.6
CLL Collm 144.84 334 *i* PKPdf PKPdf 22 20 48.5 -1.5
comp=Z,28nm,1.1s
CLL *e*PKiKP PKiKP 22 20 54.0 +0.3
ZKR Zakros 144.94 301 *e*P PKPdf 22 20 50.0 -0.7
MODS Modra-Piesok 144.95 327 *e*PKP PKPdf 22 20 50.1 -0.2
APE Apeiranthos 144.98 305 *e*P PKPdf 22 20 48.6 -2.1
APE Apeiranthos 144.98 305⇑*i*P PKPdf 22 20 48.7 -2.0
NRDL Niedersach Rie 145.00 338 *e*PKPbc PKPdf 22 20 49.9 -0.3
OUR Ouranopolis 145.04 311 *e*P PKPbc 22 20 49.6 -0.5
PRU Pruhonice 145.15 331 *e*PKP PKPdf 22 20 49.8 -0.8
PRU *ex* x 22 21 04.9
ZST Bratislava 145.16 327 *e*PKP PKPdf 22 20 50.9 +0.3
TREC Trest 145.21 330 *e*PKP PKPdf 22 20 49.5 -1.2
SANT Santorini 145.23 304 *e*P PKPbc 22 20 49.6 -1.3
SANT Santorini 145.23 304 *e*PKPdf PKPdf 22 20 49.7 -1.5
THR1 Thera Island 145.23 304 *e*P PKPbc 22 20 49.5 -1.3
THR3 Thira Island, 145.26 304 *e*P PKPbc 22 20 49.8 -1.1
THR6 Thira Island, 145.28 303 *e*P PKPbc 22 20 50.0 -1.0
THR5 Thira Island, 145.30 304 *e*P PKPbc 22 20 50.4 -0.7
CLZ Clausthal 145.43 337 *e*PKPbc PKPbc 22 20 50.6 -0.4
KNT Kendrikon 145.46 313 *e*P PKPdf 22 20 50.4 -1.0
LAST Lasithi 145.52 301 *e*P PKPdf 22 20 52.1 +0.4
PKSM Moragy 145.57 323⇑*i*P PKPdf 22 20 51.1 -0.3
PKSM Moragy 145.57 323⇑P PKPdf 22 20 51.1 -0.3
ESK Eskdalemuir 145.60 352 *e*PKP2 PKPab 22 20 50.2 -1.4
VAY Valandovo 145.62 313 *e*Pg PKPdf 22 20 50.5 -1.1
TANN Tannenbergstha 145.74 334 *e*PKPbc PKPbc 22 20 51.6 -0.4
SOP Sopron 145.77 327⇓*e*PKP PKPdf 22 20 52.5 +0.8
NKC Novy Kostel 145.88 333 *e*PKP PKPdf 22 20 52.4 +0.6
NKC *ex* x 22 21 00.8
MOX Moxa 145.91 335 *e*PKP PKPdf 22 20 52.0 +0.2
comp=Z,44nm,1.8s
MOX Moxa 145.91 335 *e*PKPbc PKPbc 22 20 51.7 -0.8
IBBN Ibbenburen 145.95 340 *e*PKPbc PKPbc 22 20 52.5 -0.1
CONA Conrad Observa 145.96 328 *i* P PKPdf 22 20 52.9 +0.9
comp=Z,49nm,1.3s,SNR=15
CSNA Conrad Observa 145.96 328⇑*i*P PKPdf 22 20 53.0 +1.0
comp=Z,46nm,1.3s
XOR Xorichti 145.97 310 *e*P PKPdf 22 20 51.7 -0.6
SKO Skopje 146.09 315 *e*Pg PKPdf 22 20 53.7 +1.3
LIT Litokhoron 146.18 311 *e*P PKPdf 22 20 52.6 0.0
KHC Kasperske Hory 146.21 331 *i* PKIKP PKPdf 22 20 51.2 -1.2
KHC Kasperske Hory 146.21 331 *e*PKP PKPdf 22 20 52.0 -0.4
KHC *ex* x 22 21 03.6
MANZ Manzenberg 146.21 333 *e*PKPbc PKPbc 22 20 53.4 0.0
ROTZ Rotzenmuhle 146.34 333 *e*PKPbc PKPbc 22 20 53.9 +0.1
GEC2 GERESS Array S 146.36 331 *e*PKPbc PKPbc 22 20 52.6 -1.3
GERES GERESS Array B 146.36 331 PKPbc PKPbc 22 20 52.4 -1.5
comp=Z,8.4nm,0.8s,baz=29,slow=2.2,SNR=48
UBBA Unterbreizbach 146.40 336 *e*PKPbc PKPbc 22 20 53.5 -0.4
VAM Vamos 146.47 302 *e*P PKPdf 22 20 55.0 +1.7
KRUS Krusevo 146.49 314 *e*Pg PKPdf 22 20 54.2 +1.1
WET Wettzell 146.51 332 *e*PKPbc PKPbc 22 20 53.6 -0.7
LTK Loutraki 146.61 307 *e*P PKPdf 22 20 53.4 -0.1
MOA Molln 146.80 329 P PKPbc 22 20 55.9 +0.7
comp=Z,19nm,1.3s
MOA Molln 146.80 329⇑*ip*PKPdf PKPbc 22 20 55.9 +0.7
comp=Z,19nm,1.3s
GRA1 Grafenberg Arr 146.81 334 *e*PKPbc PKPbc 22 20 54.3 -0.9
GRF Grafenberg Arr 146.81 334 *e*PKPbc PKPbc 22 20 54.3 -0.9
BUG Bochum--Univer 146.84 339 *e*PKPbc PKPbc 22 20 54.9 -0.3
OHR Ohrid 146.91 314 *e*Pg PKPdf 22 20 54.5 +0.6
VLI Veliai 147.07 305 *e*P PKPdf 22 20 54.0 -0.3
KYTH Kithira 147.13 304 *e*P PKPdf 22 20 56.0 +1.6
TIR Tirane 147.43 315 *e*PKIKP PKPdf 22 20 55.0 +0.3
TNS Taunus Mts 147.46 337 *e*PKPbc PKPbc 22 20 56.6 -0.4
ITM Ithomi 147.68 306 *e*P PKPdf 22 20 57.0 +1.7
TOD Tromm 147.83 336 PKP2 PKPbc 22 20 57.2 -0.8
DLF Lyons Farm 147.92 355 *e*P PKPdf 22 20 56.1 +1.0
DCN Croghan 147.93 356 *e*P PKPdf 22 20 56.0 +0.9

IGT Igoumenitsa 147.93 311 *e*P PKPbc 22 20 58.2 -0.4
MEM Membach 147.97 340 PKPbc PKPbc 22 20 57.9 -0.4
LKD Levkas 148.04 310 *e*P PKPbc 22 20 58.8 -0.2
ABH Alteburg 148.07 338 PKP PKPbc 22 20 58.2 -0.4
VOY Vojsko 148.24 327 *e*PKPdf PKPdf 22 20 58.2 +2.3
VOY *e*PKPbc PKPbc 22 21 04.0 +4.8
VLS Valsamata 148.30 309 *e*P PKPdf 22 20 59.0 +2.7
STU Stuttgart 148.35 335 *e*PKPbc PKPbc 22 20 59.1 -0.3
STU Stuttgart 148.35 335 *e*PKPdf PKPdf 22 20 58.0 +2.0
BCLA Clavier 148.36 340 PKPbc PKPbc 22 20 59.3 0.0
RUP Ruppelstein 148.39 338 PKP2 PKPbc 22 20 59.3 -0.2
MOTA Moosalm 148.64 331⇑*iP* PKPbc 22 20 59.6 -0.6
comp=Z,11nm,1.0s,SNR=8.7
LANF Langenberg 148.72 336 PKP PKPbc 22 21 00.2 -0.2
WLF Walferdange 148.73 339 PKPbc PKPbc 22 20 59.8 -0.6
WLF Walferdange 148.73 339 *e*PKPbc PKPbc 22 21 00.2 -0.2
WLF *e*PKPab PKPab 22 21 05.0 +0.9
WLF Walferdange 148.73 339 *e*PKPdf PKPdf 22 20 56.1 -0.4
GIVF Givet 148.78 341 *e*PKP1 PKPbc 22 20 59.6 -0.9
comp=Z,38nm,0.8s
BAIF Baives 149.01 341 *e*PKP1 PKPbc 22 21 00.4 -0.7
comp=Z,52nm,1.2s
BFO Black Forest 149.05 335 *e*PKP2 PKPbc 22 21 00.4 -0.8
BFO Black Forest 149.05 335 *e*PKPdf PKPdf 22 20 56.3 -0.8
BFO *e*PKPbc PKPbc 22 21 00.4 -0.8
FETA Feichten 149.06 331⇑*iP* PKPbc 22 21 00.9 -0.3
comp=Z,20nm,0.8s
STR Strasbourg 149.06 336 PKP PKPbc 22 21 00.8 -0.4
DAVA Damuels 149.23 332⇓*iP* PKPbc 22 21 01.2 -0.5
comp=Z,19nm,1.4s
CDF Champ du Feu 149.39 336 *e*PKP1 PKPbc 22 21 01.1 -1.0
comp=Z,54nm,1.1s
FELD Feldberg im Sc 149.54 335 PKP PKPbc 22 21 01.5 -1.0
ECH Echery 149.59 336 PKP PKPbc 22 21 01.5 -1.1
ECH Echery 149.59 336 *e*PKPdf PKPdf 22 20 58.1 +0.1
MOF Molkenrain 149.90 336 PKP PKPdf 22 21 01.2 +2.7
HINF Hinteralfeld 150.04 336 *e*PKP1 PKPbc 22 21 02.6 -1.1
comp=Z,55nm,1.4s
HAU Haudompre 150.07 337 *e*PKP1 PKPbc 22 21 02.8 -1.0
comp=Z,47nm,1.0s
BBS Basel-Blauen 150.07 335 PKIKP PKPbc 22 21 02.4 -1.4
TUE Stuetta 150.09 332 *e*PKPbc PKPbc 22 21 03.1 -0.8
MEZF Maizieres J'vi 150.10 339 *e*PKP1 PKPbc 22 21 03.4 -0.4
comp=Z,87nm,1.1s
CABF La Chapelle 151.33 336 *e*PKP1 PKPbc 22 21 06.3 -0.5
comp=Z,26nm,0.8s
FLN La Foliniere 151.44 346 *e*PKP1 PKPbc 22 21 05.8 -1.2
comp=Z,89nm,0.9s
LDF La Druitiere 151.51 345 *e*PKP1 PKPbc 22 21 05.8 -1.3
comp=Z,47nm,0.9s
LOR Lormes 151.57 339 *e*PKP1 PKPbc 22 21 06.4 -0.9
comp=Z,39nm,1.0s
SSF Saint Saulge 151.87 339 *e*PKP1 PKPbc 22 21 07.1 -0.9
comp=Z,25nm,0.8s
GRR Gorron 151.87 346 *e*PKP1 PKPbc 22 21 06.9 -1.1
comp=Z,44nm,1.0s
LPL La Plagne 151.97 333 *e*PKP1 PKPbc 22 21 07.9 -0.4
comp=Z,22nm,0.7s
LPG La Plagne 151.97 333 *e*PKP1 PKPbc 22 21 08.0 -0.3
comp=Z,28nm,0.8s
SMF Signal de Mont 152.12 338 *e*PKP1 PKPbc 22 21 07.4 -1.2
comp=Z,88nm,1.3s
AVF Avril sur Loir 152.16 339 *e*PKP1 PKPbc 22 21 07.4 -1.3
comp=Z,56nm,1.2s
SGMF Saint Gilles 152.35 348 *e*PKP1 PKPbc 22 21 07.5 -1.6
comp=Z,86nm,1.1s
BNI Bardonecchia 152.36 333 *e*PKIKP PKPdf 22 21 01.9 -0.5
BNI *e* 22 21 08.9
ROSF Rostrenen 152.40 349 *e*PKP1 PKPbc 22 21 07.6 -1.6
comp=Z,107nm,1.4s
BGF Bois d'Agland 152.53 340 *e*PKP1 PKPbc 22 21 08.5 -1.0
comp=Z,32nm,0.9s
MBDF Montbardon 152.58 332 *e*PKP1 PKPbc 22 21 09.3 -0.4
QUIF Quistinic 152.79 349 *e*PKP1 PKPbc 22 21 09.3 -0.7
ORIF Oris-en-Rattie 152.80 334 *e*PKP1 PKPbc 22 21 09.2 -1.0
comp=Z,21nm,0.6s
TCF Toulx Ste Croi 152.97 340 *e*PKP1 PKPbc 22 21 09.4 -1.1
comp=Z,36nm,1.0s
VIVF Saint-Julien-l 153.34 335 *e*PKP1 PKPbc 22 21 10.5 -0.9
PVRL Vila Real 159.95 354 *e*PKPab PKPab 22 21 51.4 -0.4
MVO Moncorvo 159.98 352 *e*PKPab PKPab 22 21 51.0 -0.9
PVIS Viseu 160.52 354 *e*PKPab PKPab 22 21 52.7 -1.6
MTE Manteigas 160.80 353 *e*PKPab PKPab 22 21 55.6 +0.1
ESDC Sonseca Array 160.83 344 PKPab PKPab 22 21 55.6 -0.1
comp=Z,3.0nm,0.8s,baz=23,slow=4.4,SNR=13
PCBR Castelo Branco 161.34 352 *e*PKPab PKPab 22 21 57.5 -0.4
PTOM Tomar 161.66 355 *e*PKPab PKPab 22 21 58.9 -0.4
PESTR Estremoz 162.31 352 *e*PKPab PKPab 22 22 01.6 -0.6
PBAR Barrancos 162.92 350 *e*PKPab PKPab 22 22 05.4 +0.6
PVAQ Vaqueiros 163.77 352 *e*PKPab PKPab 22 22 08.4 -0.2
PBDV Barranco-do-Ve 163.96 352 *e*PKPab PKPab 22 22 10.1 +0.7
TOA0 Torodi Ar. Sit 165.69 237 *e*PKPdf PKPdf 22 21 18.3 -0.5
TORD Torodi Ar. Bea 165.69 237 PKP PKPdf 22 21 18.2 -0.6
comp=Z,2.0nm,1.1s,baz=44,slow=1.0,SNR=8.1
TORD PKPab PKPab 22 22 16.9 -0.9
comp=Z,0.6nm,0.7s,baz=104,slow=4.7,SNR=4.3
TORD PP PP 22 26 02.4 -2.3
comp=Z,2.7nm,1.3s,baz=131,slow=8.3,SNR=4.5

BJI ***27*** *22:10:07.8, 2130S×16993E, h18km, mB5.3, mb5.0, Ms5.2, Msz4.9*
IDC ***27*** *22:10:08.5±0.7, 2120S×16927E, h0km, mb4.7/15, mb1 4.9/16, mb1mx4.8/19, mbtmp4.7/16, ML2.7/1, Error ellipse: s-maj=26.4km s-min=15.3km az=152.0*
SZGRF ***27*** *22:10:09.0, 2161S×16929E, h33km, Southeast of Loyalty Islands*
ISCJB ***27*** *22:10:09.9±0.3, 2125S±0.006×16920E±005, h16km, mb5.0/49, MS4.9/6, Error ellipse: s-maj=8.7km s-min=5.8km az=160.2*
LDG ***27*** *22:10:09.9±0.3, 2112S×16888E, h10km, Mb5.1/4, Error ellipse: s-maj=27.9km s-min=5.5km az=152.0*
NEIC ***27*** *22:10:10.3±0.3, 2110S×16924E, h10km, mb5.0/15, Error ellipse: s-maj=11.6km s-min=7.8km az=158.0*
MOS ***27*** *22:10:12.6±1.2, 2124S×16926E, h33km, mb5.2/13, Error ellipse: s-maj=11.8km s-min=9.6km az=18.4*
ISC 27 22:10:11.6±0.3, 2125S±0.006×16920E±005, h17km, h17km±2.2km:pP-P, n173, σ1s10/97, mb5.0/49, MS4.9/6, 8C-3D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
DZM	**Mont Dzumac**	**2.69**	**252**	*e*P		**Pn**	**22 10 53.7**	**-0.5**
DZM				*e*S		**Sn**	**22 11 24.8**	**-1.6**
RAO	**Raoul Island**	**14.11**	**127**	P		**Pn**	**22 13 30.0**	**-0.8**
ARMA	**Armidale**	**18.25**	**236**	*e*P		**Pn**	**22 14 27.4**	**+3.3**
URZ	**Urewera**	**18.28**	**160**	P		**Pn**	**22 14 27.4**	**+3.0**
	0.5nm,0.3s,baz=13,slow=5.0,SNR=3.1							
AFI	**Afiamalu**	**19.54**	**71**	P		**Pn**	**22 14 37.9**	**-1.9**
	1.3nm,0.3s,baz=222,slow=5.2,SNR=6.1							
CTA	**Charters Tower**	**21.50**	**269**	*e*P		**P**	**22 15 01.8**	**+2.0**
	26nm,0.8s,mb4.7							
CTA	**Charters Tower**	**21.50**	**269**	P		**P**	**22 15 01.8**	**+2.0**
	32nm,0.8s,mb4.8,baz=94,slow=12,SNR=46							
CTA	**Charters Tower**	**21.50**	**269**	*e*P		**P**	**22 15 01.8**	**+2.0**
CTA				pmax	pmax			
	comp=Z,26nm,0.8s							
CTAO	**Charters Tower**	**21.50**	**269**	*e*P		**P**	**22 15 01.7**	**+1.9**
CNB	**Canberra Magne**	**22.34**	**227**	*e*P		**P**	**22 15 12.1**	**+3.5**
PMG	**Port Moresby**	**24.26**	**296**	*e*P		**P**	**22 15 28.0**	**-0.1**
TOO	**Toolangi**	**26.18**	**226**	*e*P		**P**	**22 15 47.4**	**+2.1**
STKA	**Stephens Creek**	**26.80**	**241**	*e*P		**P**	**22 15 52.1**	**+1.2**
	comp=Z,18nm,0.8s,mb4.6							
STKA	**Stephens Creek**	**26.80**	**241**	P		**P**	**22 15 52.2**	**+1.2**
	comp=Z,20nm,0.8s,mb4.7,baz=83,slow=7.1,SNR=28							
WB2	**Warramunga Arr**	**32.61**	**266**	*e*P		**P**

BATI Baumata 45.04 277 P **P** 22 18 26.4 -0.4
comp=Z,17nm,0.7s,mb5.0,baz=296,slow=2.9,SNR=3.7
MBWA Marble Bar 45.96 261 *e*P **P** 22 18 33.8 -0.3
comp=Z,27nm,0.7s,mb5.3
KLBR Kellerberrin 46.85 246 *e*P **P** 22 18 40.0 -0.9
comp=Z,23nm,0.6s,mb5.3
MUN Mundaring 48.16 246 *e*P **P** 22 18 51.4 +0.2
SBA Scott Base 56.66 181 *e*P **P** 22 19 54.9 +1.3
SBA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SBA Scott Base 56.66 181 *e*P **P** 22 19 54.9 +1.3
comp=Z,9.9nm,0.9s,mb4.8
MJAR Matsushiro Arr 64.51 333 P **P** 22 20 45.9 -1.7
comp=Z,4.2nm,1.0s,mb4.4,baz=175,slow=7.8,SNR=7.5
MAT Matsushiro 64.51 333 P **P** 22 20 46.5 -1.0
NJ2 Nanjing 71.63 316 *e*P **P** 22 21 33.8 +1.4
NJ2 AMB AMB
comp=Z,90nm,1.0s,mb5.7
YSS Yuzh-Sakhalins 71.96 341 *e*P **P** 22 21 32.5 -1.5
YSS pmax pmax
comp=Z,46nm,1.3s,mb5.2
YSS Yuzh-Sakhalins 71.96 341 *e*P **P** 22 21 32.7 -1.3
PETK Petropavlovsk- 74.71 353 P **P** 22 21 50.2 +0.1
comp=Z,3.6nm,0.7s,mb4.4,baz=128,slow=6.5,SNR=17
MDJ Mudanjiang 74.87 332 P **P** 22 21 50.5 -0.7
MDJ AMB AMB
comp=Z,9.0nm,1.4s,mb4.5
CN2 Changchun 76.15 329 *e*P **P** 22 22 02.0 +3.4
MAW Mawson 76.57 202 P **P** 22 22 01.3 +0.6
comp=Z,5.3nm,0.9s,mb4.5,baz=125,slow=5.8,SNR=9.4
GYA Guiyang 76.94 305 ⇑*i*P **P** 22 22 06.0 +2.5
GYA PCP PcP 22 22 18.5 +4.0
GYA PP PP 22 25 01.8 +4.8
GYA S S 22 31 53.5 +2.3
GYA SKS 22 32 13.0
GYA SS SS 22 36 53.3 +4.8
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,120nm,5.8s
GYA LR LR
comp=N,620nm,18.9s,MS5.1
GYA LR LR
comp=E,540nm,19.6s,MS5.1
GYA LR LR
comp=Z,520nm,19.1s,MS4.9
NANT Nan 77.97 296 ⇓P **P** 22 22 08.0 -1.4
comp=Z,119nm,0.9s,mb5.8
BJI Beijing 78.47 321 P **P** 22 22 12.3 +0.6
BJI AMB AMB
comp=Z,6.0nm,1.9s,mb4.2
BJI Beijing 78.47 321 P **P** 22 22 12.2 +0.5
BJI pmax pmax
comp=Z,6.0nm,1.9s,mb4.2
BJI Beijing 78.47 321 P **P** 22 22 12.2 +0.5
comp=Z,6.0nm,1.9s,mb4.2
CMAR Chiang Mai Arr 79.30 295 P **P** 22 22 18.5 +1.7
comp=Z,9.3nm,1.0s,mb4.7,baz=136,slow=4.2,SNR=30
KMI Kunming 79.31 302 P **P** 22 22 18.5 +1.8
KMI AMB AMB
comp=Z,23nm,1.1s,mb5.0
KMI Kunming 79.31 302 P **P** 22 22 18.4 +1.7
KMI pmax pmax
comp=Z,23nm,1.1s,mb5.0
KMI Kunming 79.31 302 P **P** 22 22 18.4 +1.7
comp=Z,23nm,1.1s,mb5.0
XAN Xi'an 79.44 313 P **P** 22 22 18.0 +0.8
XAN AP pP 22 22 23.5 +0.8
XAN AMB AMB
comp=Z,9.0nm,2.7s,mb4.2
CHTO Chiang Mai 79.46 295 *e*P **P** 22 22 18.7 +1.1
CD2 Chengdu 81.43 308 ⇑*i*P **P** 22 22 29.0 +1.0
CD2 AP pP 22 22 33.5 0.0
CD2 XP sP 22 22 36.0 +0.5
CD2 PP PP 22 25 38.5 +4.1
CD2 S S 22 32 40.5 +1.7
CD2 SS SS 22 38 01.3 +5.5
CD2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
CD2 LR LR
comp=N,450nm,16.8s,MS5.0
CD2 LR LR
comp=E,300nm,14.4s,MS5.0
CD2 LR LR
comp=Z,320nm,18.0s,MS4.7
HHC Hu-ho-hao-te 81.72 320 *e*P **P** 22 22 29.5 +0.2
HHC PP PP 22 25 39.0 +2.4
HHC S S 22 32 41.3 -0.1
HHC SS SS 22 38 03.5 +3.8
HHC AMB AMB
comp=Z,18nm,0.6s,mb5.2
HHC AMB AMB
comp=Z,505nm,8.0s
HHC LR LR
comp=N,379nm,16.2s,MS5.0
HHC LR LR
comp=E,329nm,17.2s,MS5.0
HHC LR LR
comp=Z,377nm,17.7s,MS4.8
SYO Syowa Base 83.00 196 ⇑*e*P **P** 22 22 33.0 -2.6
LZH Lanzhou 84.04 312 *e*P **P** 22 22 42.5 +1.1
LZH AP pP 22 22 45.5 -1.5
LZH *e*PP PP 22 26 02.0 +6.2
LZH *e*S S 22 33 05.5 +0.2
LZH SS SS 22 38 39.3 +4.8
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,170nm,4.9s
LZH LR LR
comp=N,489nm,16.6s
LZH LR LR
comp=Z,902nm,18.3s,MS5.2
LZH Lanzhou 84.04 312 *e*P **P** 22 22 42.5 +1.1
LZH *e* 22 26 02.0
LZH *e*S S 22 33 05.5 +0.2
LZH SS SS 22 38 39.2 +4.7
LZH pmax pmax
comp=Z,28nm,1.5s,mb5.2
LZH MLR MLR
comp=Z,900nm,18.3s,MS5.2
LZH Lanzhou 84.04 312 *e*P **P** 22 22 42.5 +1.1
comp=Z,28nm,1.5s,mb5.2
LZH pP pP 22 22 45.5 -1.5
LZH sP sP 22 22 47.5 -1.5
LZH *e*PP PP 22 26 02.0 +6.2
LZH *e*S S 22 33 05.5 +0.2
LZH sS sS 22 33 14.1 -0.3
LZH SS SS 22 38 39.2 +4.7
LZH LR LR
comp=Z,900nm,18.3s,MS5.2
KDAK Kodiak Island 84.93 19 P **P** 22 22 44.5 -0.9
comp=Z,3.8nm,0.7s,mb4.6,baz=259,slow=10,SNR=4.3
SEY Seymchan 84.95 352 *e*P **P** 22 22 44.5 -0.8
CLNS Chul'man 86.22 337 *e*P **P** 22 22 52.7 +0.9
CLNS pmax pmax
comp=E,6.0nm,1.1s
CLNS pmax pmax
comp=N,10.0nm,1.3s
CLNS pmax pmax
comp=Z,18nm,1.2s,mb5.2
SNAA Sanae 87.16 183 *e*P **P** 22 22 55.6 -0.8
SNAA *e* pP 22 22 59.9 -2.1
SNAA *e* pP 22 23 02.1 +0.1
SNAA Sanae 87.16 183 *e*P **P** 22 22 55.4 -1.0
SNAA pmax pmax
comp=Z,16nm,1.1s
SNAA Sanae 87.16 183 *e*P **P** 22 22 55.4 -1.0
comp=Z,16nm,1.1s,mb5.2
VNA3 Neumayer Olymp 87.75 180 *e*P **P** 22 22 58.2 -1.1
VNA3 *e* pP 22 23 01.9 -2.9
VNA3 *e* pP 22 23 05.2 +0.4
VNA2 Neumayer--Watz 88.04 181 *e*P **P** 22 23 00.5 -0.2
baz=188,slow=3.6
VNA2 *e* pP 22 23 03.8 -2.4
VNA2 *e* pP 22 23 07.1 +0.9
VNA1 Neumayer--Stat 88.33 181 *e*P **P** 22 23 01.6 -0.5
VNA1 *e* 22 23 04.4
VNA1 *e* pP 22 23 08.2 +0.6
ULN Ulaanbaatar 88.45 323 *d i*P **P** 22 23 03.1 +0.3
ULN Ulaanbaatar 88.45 323 *e*P **P** 22 23 03.0 +0.2
GTA Gaotai 88.48 314 *e*P **P** 22 23 04.0 +0.8
GTA AP pP 22 23 08.8 +0.1
GTA XP sP 22 23 11.0 +0.3
GTA S S 22 33 49.5 +1.1
GTA AMB AMB
comp=Z,3.0nm,1.1s,mb4.4
GTA AMB AMB
comp=Z,303nm,6.9s
GTA LR LR
comp=N,227nm,16.2s,MS4.8
GTA LR LR
comp=E,210nm,16.8s,MS4.8
GTA LR LR
comp=Z,225nm,16.5s,MS4.7
YBH Yreka Blue Hor 88.76 44 P **P** 22 23 05.2 +0.8
comp=Z,1.8nm,0.7s,mb4.5,baz=117,slow=11,SNR=3.3
ISA Isabella 88.77 51 *e*P **P** 22 23 03.9 -0.7
ISA pmax pmax
comp=Z,16nm,1.5s,mb5.1
ISA Isabella 88.77 51 *e*P **P** 22 23 03.9 -0.8
comp=Z,16nm,1.5s,mb5.1
YAK Yakutsk 88.77 343 *e*P **P** 22 23 04.7 +0.7
YAK pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
SONM Songino Array 88.80 323 P **P** 22 23 04.7 +0.2
comp=Z,2.5nm,0.7s,mb4.6,baz=139,slow=4.9,SNR=9.5
BILL Bilibino 89.05 359 ⇑*i*P **P** 22 23 04.6 -0.6
BILL *e*S S 22 33 25.2 -27
BILL pmax pmax
comp=Z,17nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,300nm,18.0s,MS4.8
WAKR Walker 89.40 48 *e*P **P** 22 23 07.9 +0.4
MTUM Tungsten Hills 89.48 49 *e*P **P** 22 23 09.3 +1.4
PAHR Pah Rah Range 89.99 47 *e*P **P** 22 23 10.8 +0.5
comp=Z,9.2nm,1.1s,mb5.0
NVAR Mina Array Bea 90.15 49 P **P** 22 23 10.9 -0.1
comp=Z,3.5nm,0.7s,mb4.8,baz=228,slow=8.1,SNR=16
GLA Glamis 90.33 55 *e*P **P** 22 23 12.8 +0.8
MOD Modoc 90.41 45 *e*P **P** 22 23 12.8 +0.6
TPNV Topopah Spring 90.95 51 *e*P **P** 22 23 14.7 -0.1
ZAK Zakamensk 91.90 324 *e*P **P** 22 23 18.8 -0.1
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.6
ODAN Odare 92.48 298 *e*P **P** 22 23 22.4 +0.3
comp=Z,20nm,0.8s,mb5.5
TUC Tucson 93.14 57 *e*P **P** 22 23 23.0 -2.0
TUC pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
TUC Tucson 93.14 57 *e*P **P** 22 23 23.0 -2.0
comp=Z,2.8nm,1.0s,mb4.7
RAMN Ramite 93.17 298 *e*P **P** 22 23 25.8 +0.5
JIRN Jiri 93.77 298 *e*P **P** 22 23 28.1 0.0
comp=Z,9.8nm,0.7s,mb5.4
DLBC Dease Lake 93.83 27 P **P** 22 23 23.7 -3.9
WUAZ Wupatki 93.94 53 *e*P **P** 22 23 27.9 -0.7
comp=Z,6.1nm,0.9s,mb5.0
GUN Gumba 94.12 298 *e*P **P** 22 23 29.0 -0.7
comp=Z,21nm,0.9s,mb5.6
KKN Kakani 94.56 298 *e*P **P** 22 23 31.7 0.0
comp=Z,13nm,0.7s,mb5.5
DMN Daman 94.64 298 *e*P **P** 22 23 32.0 -0.1
comp=Z,20nm,0.7s,mb5.6
GKN Gorkha 95.17 298 *e*P **P** 22 23 33.2 -1.3
comp=Z,17nm,0.8s,mb5.5
KOLN Koldanda 95.95 297 *e*P **P** 22 23 38.0 -0.1
comp=Z,6.4nm,0.6s,mb5.2
DANN Dangsing 96.02 298 *e*P **P** 22 23 36.3 -2.1
HVS Khovu-Aksy 97.62 322 *e*P **P** 22 23 45.0 0.0
HVS pmax pmax
comp=Z,10.0nm,1.0s,mb5.3
TXAR Lajitas Array 97.75 62 P **P** 22 23 46.3 +0.1
comp=Z,0.4nm,0.8s,mb4.0,baz=237,slow=5.8,SNR=3.9
PDAR Pinedale Array 98.00 47 P **P** 22 23 49.1 +2.1
comp=Z,3.9nm,0.4s,mb4.2,baz=220,slow=3.5,SNR=3.3
WMQ Urumqi 98.56 314 *e*P **P** 22 23 49.3 -0.2
MKAR Makanchi Array 103.14 315 Pdiff Pdif 22 24 08.9 -0.9
comp=Z,0.2nm,0.2s,baz=132,slow=3.4,SNR=3.8
MKAR PP PP 22 28 24.1 -1.0
comp=Z,0.2nm,0.2s,baz=102,slow=12,SNR=3.4
BVAR Borovoye Array 111.93 320 PKiKP PKiKP 22 28 44.5 -1.1
comp=Z,0.4nm,0.5s,baz=117,slow=1.6,SNR=4.5
AKTK Aktyubinsk 119.51 317 PKP PKPdf 22 28 58.6 -1.6
AKTO Aktyubinsk 119.51 317 PKP PKPdf 22 28 58.6 -1.6
comp=Z,3.3nm,0.4s,baz=108,slow=6.4,SNR=4.1
ARCES ARCESS Array B 126.99 345 PKP PKPdf 22 29 12.3 -1.7
comp=Z,2.8nm,0.5s,baz=74,slow=1.3,SNR=26
MOS Moscow 130.34 326 *e*PKIKP PKPdf 22 29 15.6 -5.2
NOA NORSAR Array B 137.36 344 PKP PKPdf 22 29 31.9 -1.9
comp=Z,0.7nm,0.8s,baz=30,slow=2.0,SNR=3.3
KOLS Kolonicke sedl 141.85 324 *e*PKP PKPdf 22 29 41.9 -0.4
STHS Stebnicka Huta 142.12 326 *e*PKP PKPdf 22 29 40.3 -2.5
VYHS Vyhne 143.94 326 *e*PKP PKPdf 22 29 43.7 -2.4
DPC Dobruska-Polom 143.96 330 *e*PKP PKPdf 22 29 43.5 -2.5
UPC Upice 143.99 331 *e*PKP PKPdf 22 29 43.4 -2.7
PVCC Panska Ves 144.62 332 *e*PKP PKPdf 22 29 45.5 -1.7
PVCC *e*pPKP pPKPdf 22 29 51.3 -1.6
BRG Berggiesshubel 144.64 333 *e*PKPbc PKPdf 22 29 45.2 -2.0
BRG Berggiesshubel 144.64 333 *e*PKP PKPdf 22 29 45.6 -1.6
comp=Z,13nm,0.8s
BRG *e* 22 45 00.9
comp=Z,5.0nm,1.0s
CLL Collm 144.71 334 *e*PKPbc PKPdf 22 29 44.8 -2.5
CLL Collm 144.71 334 ⇓*i*PKPdf PKPdf 22 29 45.2 -2.1
comp=Z,10.0nm,0.6s
CLL *e*PKiKP PKiKP 22 29 51.0 0.0
MODS Modra-Piesok 144.82 327 *e*PKP PKPdf 22 29 47.0 -0.6
FBE Freiberg 144.85 333 *e*PKPbc PKPdf 22 29 46.2 -1.4
ZST Bratislava 145.02 327 *e*PKP PKPdf 22 29 47.1 -0.8
PRU Pruhonice 145.02 331 *e*PKP PKPdf 22 29 46.6 -1.3
SANT Santorini 145.07 304 *e*PKPbc PKPbc 22 29 46.7 -1.2
TREC Trest 145.08 330 *e*PKP PKPdf 22 29 46.8 -1.2
CLZ Clausthal 145.31 337 *e*PKPbc PKPbc 22 29 46.5 -1.6
TANN Tannenbergstha 145.61 333 *e*PKPbc PKPbc 22 29 47.0 -2.1
WERN Wernitzgruen 145.74 333 *e*PKPbc PKPbc 22 29 49.5 0.0
NKC Novy Kostel 145.75 333 *e*PKP PKPbc 22 29 50.5 +0.9
NKC *ex* x 22 29 56.4
MOX Moxa 145.78 334 *e*PKP PKPbc 22 29 50.4 +0.8
MOX Moxa 145.78 334 *e*PKPbc PKPbc 22 29 49.7 +0.1
CONA Conrad Observa 145.82 328 ⇑*i*P PKPbc 22 29 50.2 +0.3
comp=Z,12nm,0.9s
CSNA Conrad Observa 145.83 328 ⇑*i*P PKPbc 22 29 50.1 +0.2
comp=Z,12nm,0.9s
KHC Kasperske Hory 146.08 331 *e*PKP PKPbc 22 29 50.0 -0.6
KHC *ex* x 22 29 57.4
MANZ Manzenberg 146.08 333 *e*PKPbc PKPbc 22 29 49.7 -0.9
ROTZ Rotzenmuhle 146.21 333 *e*PKPbc PKPbc 22 29 50.0 -1.0
GEC2 GERESS Array S 146.23 330 *e*PKPbc PKPbc 22 29 50.3 -0.8
GEC2 GERESS Array S 146.23 330 *e*PKP PKPbc 22 29 50.6 -0.4
GERES GERESS Array B 146.23 330 PKPbc PKPbc 22 29 50.2 -0.9
comp=Z,4.2nm,0.6s,baz=35,slow=3.6,SNR=39
GERES SKPbc SKPbc 22 33 30.3 +0.8
comp=Z,0.6nm,0.8s,baz=0.0,slow=1.0,SNR=3.6
WET Wettzell 146.38 332 *e*PKPbc PKPbc 22 29 50.7 -0.8
GRA1 Grafenberg Arr 146.68 334 *e*PKP PKPbc 22 29 51.0 -1.4
GRF Grafenberg Arr 146.68 334 *e*PKP PKPbc 22 29 51.0 -1.4
MEM Membach 147.85 340 PKPbc PKPbc 22 29 53.4 -2.2
MOTA Moosalm 148.51 331 ⇑*i*P PKPbc 22 29 56.1 -1.3
comp=Z,6.5nm,1.0s
MOTA Moosalm 148.51 331 ⇑*i*PKPdf PKPbc 22 29 56.1 -1.3
comp=Z,6.5nm,1.0s
WLF Walferdange 148.62 339 PKPbc PKPbc 22 29 58.0 +0.3
WLF Walferdange 148.62 339 *e*PKPbc PKPbc 22 29 57.9 +0.3
GIVF Givet 148.67 341 *e*PKP1 PKPbc 22 29 56.6 -1.2
DOU Dourbes 148.75 341 PKPbc PKPbc 22 29 57.0 -1.0
BAIF Baives 148.90 341 *e*PKP1 PKPbc 22 29 57.4 -0.9
BFO Black Forest 148.92 335 *e*PKPbc PKPbc 22 29 57.0 -1.5
CDF Champ du Feu 149.26 336 *e*PKP1 PKPbc 22 29 58.1 -1.2
comp=Z,7.9nm,0.6s
HINF Hinteralfeld 149.92 336 *e*PKP1 PKPbc 22 29 59.4 -1.5
comp=Z,7.2nm,0.6s
HAU Haudompre 149.95 337 *e*PKP1 PKPbc 22 29 59.7 -1.3
comp=Z,7.5nm,0.7s
TUE Stuetta 149.96 332 *e*PKPbc PKPbc 22 30 00.2 -0.9
MEZF Maizieres J'vi 149.99 339 *e*PKP1 PKPbc 22 30 00.2 -0.9
comp=Z,13nm,0.7s
CABF La Chapelle 151.21 335 *e*PKP1 PKPbc 22 30 03.2 -0.8
comp=Z,25nm,0.8s
FLN La Foliniere 151.33 346 *e*PKP1 PKPbc 22 30 02.6 -1.7
comp=Z,37nm,0.8s
LDF La Druitiere 151.41 345 *e*PKP1 PKPbc 22 30 02.6 -1.8
comp=Z,54nm,1.1s
LOR Lormes 151.46 339 *e*PKP1 PKPbc 22 30 03.2 -1.4
comp=Z,13nm,0.9s
SSF Saint Saulge 151.75 339 *e*PKP1 PKPbc 22 30 04.0 -1.3
comp=Z,14nm,0.8s
GRR Gorron 151.77 346 *e*PKP1 PKPbc 22 30 03.7 -1.6
comp=Z,19nm,0.7s
LPL La Plagne 151.84 333 *e*PKP1 PKPbc 22 30 04.8 -0.7
comp=Z,12nm,0.7s
LPG La Plagne 151.85 333 *e*PKP1 PKPbc 22 30 04.9 -0.7
AVF Avril sur Loir 152.04 339 *e*PKP1 PKPbc 22 30 05.7 -0.3
SGMF Saint Gilles 152.25 348 *e*PKP1 PKPbc 22 30 04.6 -1.8
comp=Z,38nm,1.0s
ROSF Rostrenen 152.31 349 *e*PKP1 PKPbc 22 30 04.5 -2.0
BGF Bois d'Agland 152.41 339 *e*PKP1 PKPbc 22 30 05.4 -1.4
MBDF Montbardon 152.45 332 *e*PKP1 PKPbc 22 30 05.5 -1.5
comp=Z,9.3nm,0.8s
ORIF Oris-en-Rattie 152.68 334 *e*PKP1 PKPbc 22 30 06.3 -1.1
comp=Z,12nm,0.6s
TCF Toulx Ste Croi 152.86 340 *e*PKP1 PKPbc 22 30 06.3 -1.5
VIVF Saint-Julien-l 153.22 335 *e*PKP1 PKPbc 22 30 07.3 -1.3
comp=Z,14nm,0.9s
MFF Saint Martin d 153.26 344 *e*PKP1 PKPbc 22 30 06.5 -2.2
comp=Z,17nm,0.9s
FRF La Foret Royal 153.43 331 *e*PKP1 PKPbc 22 30 07.3 -1.8
LASF Ste Croix 154.19 335 *e*PKP1 PKPbc 22 30 09.5 -1.3
LIC Lamto 164.05 201 *e*PKP2 PKPab 22 31 08.3 +0.4
comp=Z,28nm,1.1s
DBIC Dimbokro 164.41 202 PKPab PKPab 22 31 08.6 -0.9
comp=Z,4.5nm,0.9s,baz=171,slow=7.8,SNR=5.4
TORD Torodi Ar. Bea 165.61 238 PKP PKPdf 22 30 15.3 -1.0
comp=Z,0.8nm,0.8s,baz=344,slow=1.1,SNR=4.4
TORD PKPab PKPab 22 31 14.1 -0.9
comp=Z,0.6nm,0.9s,baz=95,slow=3.2,SNR=3.6
TORD Torodi Ar. Bea 165.61 238 PKP PKPdf 22 30 15.3 -1.0
TORD PKPab PKPab 22 31 14.1 -0.9

JMA ***27*** *22:10:29.8±0.3, 2504N×1220.3E, h42km, M2.3*
TAP ***27*** *22:10:30.8, 2443N×1219.3E, h33km, ML3.0, C*
ISCJB ***27*** *22:10:31.2±0.3, 2441N±002×12200E±002, h25km±4km,*
Error ellipse: s-maj=4.6km s-min=2.8km az=147.3
ISC 27 22:10:31.4±0.4, 2441N±002×12200E±002, h22km±4km,
n37, σ0.9 79/68, 5C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.23**	**275**	⇓*i*P	**Pb**	**22 10 37.3**	**+0.2**
ENA	baz=268			S	**Sb**	**22 10 41.9**	**+0.8**
TWC	**Suao**	**0.24**	**327**	⇓*i*P	**Pb**	**22 10 37.6**	**+0.3**
TWC	baz=338			S	**Sb**	**22 10 42.0**	**+0.7**
TWE	**Neicheng**	**0.43**	**316**	⇑*i*P	**Pb**	**22 10 40.1**	**-0.3**
TWE	baz=320			S	**Sb**	**22 10 46.1**	**-0.3**
EGS		**0.44**	**353**	P	**Pb**	**22 10 40.8**	**+0.2**
EGS	baz=357			S	**Sb**	**22 10 47.1**	**+0.4**
ENTT	**Nioudou**	**0.46**	**301**	⇑*i*P	**Pb**	**22 10 40.3**	**-0.4**
ENTT	baz=305			S	**Sb**	**22 10 46.9**	**-0.2**
TWD	**Chiawan**	**0.49**	**228**	*i* P	**Pb**	**22 10 41.0**	**-0.3**
TWD	baz=229			S	**Sb**	**22 10 49.0**	**+1.0**
HWA	**Hwalien**	**0.56**	**220**	*e*P	**Pb**	**22 10 42.9**	**+0.5**
NNS	baz=213 **Nan Shan**	**0.57**	**274**	⇑*i*P	**Pb**	**22 10 42.1**	**-0.5**
NNS	baz=271			*e*S	**Sb**	**22 10 50.4**	**+0.1**
TWB1	**Santiao Chiao**	**0.60**	**359**	*e*P	**Pb**	**22 10 43.3**	**+0.1**
TWB1	baz=5.0			S	**Sb**	**22 10 51.6**	**+0.4**
NSK	**Sanguang**	**0.64**	**295**	⇑*i*P	**Pb**	**22 10 43.1**	**-0.7**
NSK	baz=295			S	**Sb**	**22 10 51.7**	**-0.6**
TWA	**Mucha**	**0.68**	**327**	P	**Pb**	**22 10 44.2**	**-0.4**
TWA	baz=329			*i* S	**Sb**	**22 10 53.8**	**+0.2**
NWF	**Wu-fen Shan**	**0.69**	**344**	P	**Pb**	**22 10 44.6**	**-0.1**
NWF	baz=348			*e*S	**Sb**	**22 10 54.1**	**+0.3**
WHF	**Hehuan Shan**	**0.71**	**249**	⇑*i*P	**Pb**	**22 10 44.6**	**-0.5**
WHF	baz=244			*i* S	**Sb**	**22 10 54.6**	**0.0**
TWT	**Tachien**	**0.76**	**259**	*e*P	**Pb**	**22 10 45.2**	**-0.7**
TWT	baz=255			*e*S	**Sb**	**22 10 55.9**	**0.0**
ESL	**Shilin**	**0.78**	**221**	*e*P	**Pb**	**22 10 44.4**	**-1.9**
ESL	baz=229			*e*S	**Sb**	**22 10 56.7**	**+0.3**
TWS1	**Kuangyinshan**	**0.87**	**323**	*e*P	**Pb**	**22 10 46.8**	**-1.0**
TWS1	baz=324			*e*S	**Sb**	**22 10 59.4**	**+0.5**
YOJ	**Yonaguni jima**	**0.93**	**86**	P	**Pb**	**22 10 48.5**	**-0.2**
YOJ	baz=324			S	**Sb**	**22 11 02.1**	**+1.5**
NSTT	**Nanjuang**	**0.93**	**284**	P	**Pb**	**22 10 48.3**	**-0.5**
NSTT	baz=282			*e*S	**Sb**	**22 11 00.1**	**-0.7**
TWY	**Chenhua**	**0.94**	**338**	*e*P	**Pb**	**22 10 50.1**	**+1.2**
EHY	baz=340 **Hungye**	**1.09**	**215**	*e*P	**Pn**	**22 10 50.0**	**-1.3**
TWQ1	baz=211 **Liyutan**	**1.12**	**267**	*e*P	**Pn**	**22 10 51.6**	**0.0**
TWQ1	baz=265			*e*S	**Sb**	**22 11 06.2**	**+0.1**
NSY	**Sanyi**	**1.12**	**271**	*e*P	**Pn**	**22 10 51.0**	**-0.8**
NSY	baz=268			*e*S	**Sb**	**22 11 08.0**	**+1.7**
SMLT	**Sun Moon Lake**	**1.13**	**243**	*e*P	**Pn**	**22 10 51.4**	**-0.4**
SMLT	baz=239			*e*S	**Sb**	**22 11 06.2**	**-0.2**
TYC	**Yuchr**	**1.15**	**245**	*e*P	**Pn**	**22 10 51.5**	**-0.7**
TYC	baz=241			*e*S	**Sb**	**22 11 06.1**	**-1.1**
TWF1	**Yuli**	**1.23**	**211**	*e*P	**Pn**	**22 10 52.6**	**-0.6**
TWF1	baz=220			*e*S	**Sn**	**22 11 08.3**	**-0.9**
YUS	**Yu-Shan**	**1.32**	**226**	*e*P	**Pn**	**22 10 53.8**	**-0.7**
YUS	baz=214			*e*S	**Sn**	**22 11 11.0**	**-0.4**
ALS	**Alishan**	**1.41**	**231**	*e*P	**Pn**	**22 10 55.9**	**+0.2**
CHN5	baz=219 **Tsauling**	**1.45**	**236**	*e*P	**Pn**	**22 10 56.5**	**+0.2**
CHN5	baz=234			*e*S	**Sn**	**22 11 15.6**	**+1.0**
IRIF	**Iriomote-Funau**	**1.58**	**92**	P	**Pn**	**22 10 57.3**	**-0.8**
IRIF				S	**Sn**	**22 11 17.7**	**-0.2**
CHN4	**Tsaushan**	**1.66**	**231**	*e*P	**Pn**	**22 11 00.5**	**+1.4**
CHN4	baz=228			*e*S	**Sn**	**22 11 22.6**	**+2.9**
STYT	**Tauyuan**	**1.68**	**223**	*e*P	**Pn**	**22 10 58.8**	**-0.6**
STYT	baz=220			*e*S	**Sn**	**22 11 21.1**	**+0.9**
WTP	**Ta-pu**	**1.71**	**228**	*e*P	**Pn**	**22 10 59.0**	**-0.8**
WTP	baz=225			*e*S	**Sn**	**22 11 23.6**	**+2.6**
TWK	**Hsinying**	**1.79**	**231**	*e*P	**Pn**	**22 11 01.3**	**+0.4**
CHN1	baz=228 **Nanshi**	**1.81**	**228**	*e*P	**Pn**	**22 11 02.0**	**+0.7**
CHN1	baz=225			*e*S	**Sn**	**22 11 25.0**	**+1.5**
JKRS	**Kuro-shima**	**1.84**	**95**	P	**Pn**	**22 11 02.0**	**+0.3**
JKRS				S	**Sn**	**22 11 25.4**	**+1.1**
SGST	**Jiashian**	**1.85**	**225**	*e*P	**Pn**	**22 11 01.0**	**-0.7**
JIJ	baz=222 **Ishigaki jima**	**1.96**	**91**	P	**Pn**	**22 11 02.8**	**-0.5**
JIJ				S	**Sn**	**22 11 26.4**	**-0.8**

*IDC **27** 22:25:19.7±1.7,2150S×16953E, h0km, mb4.1/7, mb1 4.3/7, mb1mx4.1/15, mbtmp4.1/7, Error ellipse: s-maj=75.4km s-min=23.9km az=155.0*
*NEIC **27** 22:25:22.2±1.0,2105S×16943E, h10km, mb4.3/3, Error ellipse: s-maj=53.0km s-min=14.0km az=158.0*
*ISCJB **27** 22:25:24.2±0.6,213S±02×16932E±009, h33km, mb4.3/10, Error ellipse: s-maj=24.9km s-min=9.3km az=162.8*

ISC 27 22:25:25.8±0.6,214S±02×16935E±009,h35km,n29, σ0§90/17,mb4.3/10,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.79**	**255**	*e*P		**Pn**		**22 26 06.6**	**-1.4**
DZM				*e*S		**Sn**		**22 26 39.9**	**-0.5**
CTA	**Charters Tower**	**21.64**	**269**	*e*P		**P**		**22 30 15.1**	**+1.9**
	4.8nm,0.8s,mb4.0								
CTA	**Charters Tower**	**21.64**	**269**	P		**P**		**22 30 15.3**	**+2.2**
	5.8nm,0.7s,mb4.1,baz=91,slow=12,SNR=9.8								
STKA	**Stephens Creek**	**26.86**	**241**	*e*P		**P**		**22 31 06.5**	**+3.3**
	8.2nm,1.4s,mb4.1								
STKA	**Stephens Creek**	**26.86**	**241**	P		**P**		**22 31 03.1**	**-0.1**
	5.9nm,0.8s,mb4.2,baz=80,slow=12,SNR=6.8								
WRA	**Warramunga Arr**	**32.75**	**266**	P		**P**		**22 31 54.6**	**-1.0**
	0.7nm,0.6s,mb3.8,baz=98,slow=8.4,SNR=14								
ASAR	**Alice Springs**	**32.77**	**259**	P		**P**		**22 31 56.0**	**+0.3**
	2.5nm,0.7s,mb4.2,baz=83,slow=9.2,SNR=28								
FITZ	**Fitzroy Crossi**	**41.18**	**267**	*e*P		**P**		**22 33 07.6**	**+0.4**
	11nm,0.7s,mb4.6								
CMAR	**Chiang Mai Arr**	**79.47**	**295**	P		**P**		**22 37 29.9**	**+0.8**
	0.7nm,0.3s,mb4.0,baz=120,slow=3.6,SNR=5.6								
SNAA	**Sanae**	**87.06**	**182**	*e*		**P**		**22 38 07.1**	**-0.2**
SNAA				*e*				22 38 11.9	
VNA3	**Neumayer Olymp**	**87.64**	**180**	*e*		**P**		**22 38 10.0**	**-0.1**
VNA3				*e*				22 38 15.0	
VNA2	**Neumayer--Watz**	**87.94**	**181**	*e*		**P**		**22 38 12.6**	**+1.1**
	baz=211,slow=3.7								
VNA2				*e*				22 38 17.8	
CMB	**Columbia Colle**	**88.49**	**48**	*e*P		**P**		**22 38 13.6**	**-1.1**
	2.1nm,0.4s,mb4.7								
SONM	**Songino Array**	**88.97**	**323**	P		**P**		**22 38 16.9**	**+0.2**
	0.7nm,0.7s,mb4.1,baz=117,slow=2.3,SNR=3.7								
NVAR	**Mina Array Bea**	**90.12**	**48**	P		**P**		**22 38 22.1**	**-0.1**
	1.3nm,0.6s,mb4.4,baz=225,slow=8.9,SNR=11								
HWUT	**Hardware Ranch**	**96.15**	**48**	*e*P		**P**		**22 38 49.4**	**-0.6**
	1.3nm,0.3s,mb4.8								
ARCES	**ARCESS Array B**	**127.14**	**345**	PKP		PKPdf		22 44 24.9	-0.7
	2.4nm,0.7s,baz=76,slow=1.7,SNR=9.5								
CLL	**Collm**	**144.87**	**334**	*e*PKPdf		PKPdf		22 44 57.0	-1.9
GERES	**GERESS Array B**	**146.39**	**331**	PKPbc		PKPbc		22 45 02.8	0.0
	1.2nm,0.5s,baz=32,slow=3.3,SNR=12								
MEZF	**Maizieres J'vi**	**150.14**	**339**	*e*PKP1		PKPbc		22 45 12.6	-0.1
CABF	**La Chapelle**	**151.37**	**336**	*e*PKP1		PKPbc		22 45 15.5	-0.2
	4.3nm,0.5s								
LOR	**Lormes**	**151.61**	**339**	*e*PKP1		PKPbc		22 45 15.5	-0.7
LPL	**La Plagne**	**152.00**	**333**	*e*PKP1		PKPbc		22 45 17.0	-0.2
	5.2nm,0.7s								
LPG	**La Plagne**	**152.01**	**333**	*e*PKP1		PKPbc		22 45 17.1	-0.1
	22nm,1.1s								
SMF	**Signal de Mont**	**152.16**	**338**	*e*PKP1		PKPbc		22 45 16.4	-1.1
AVF	**Avril sur Loir**	**152.20**	**339**	*e*PKP1		PKPbc		22 45 16.6	-1.0
ORIF	**Oris-en-Rattie**	**152.84**	**334**	*e*PKP1		PKPbc		22 45 18.4	-0.7
	7.0nm,0.7s								
FRF	**La Foret Royal**	**153.59**	**331**	*e*PKP1		PKPbc		22 45 20.1	-0.7
SMRF	**Simiane la Rot**	**153.73**	**333**	*e*PKP1		PKPbc		22 45 21.1	0.0

*ISCJB **27** 22:36:29.4±0.6,3742N±004×7234E±008, h192km±8km, mb3.4/4, Error ellipse: s-maj=10.5km s-min=7.0km az=1.5*
*IDC **27** 22:36:30.0±7.1,3725N×7238E, h189km±68km, mb3.3/4, mb1 3.4/9, mb1mx3.2/26, mbtmp3.3/9, Error ellipse: s-maj=41.8km s-min=21.8km az=24.0*
*MOS **27** 22:36:31.8±1.1,3745N×7230E, h218km, mb4.7/1, Error ellipse: s-maj=30.3km s-min=12.4km az=81.1*
*NEIC **27** 22:36:31.7±0.8,3743N×7242E, h201km±7km, mb4.7/2, Error ellipse: s-maj=16.4km s-min=8.4km az=123.0*
*NNC **27** 22:36:34.8±3.2,3815N×7177E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=25.2km s-min=21.4km az=19.0*

ISC 27 22:36:32.5±0.8,3762N±005×7217E±009,h183km±9km, n23,σ1§03/32,mb3.5/4,3C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**3.98**	**220**	*e*Pn		**Pn**		**22 37 34.2**	**+0.8**
KBL				*e*Sn		**Sn**		**22 38 15.9**	**-5.2**
AML	**Almayashu**	**4.66**	**14**	*e*Pn		**Pn**		**22 37 42.9**	**+0.9**
UCH	**Uchtor**	**4.94**	**21**	*e*Pn		**Pn**		**22 37 46.4**	**+0.7**
	41nm,0.6s								
UCH				*e*Sn		**Sn**		**22 38 41.6**	**-1.6**
EKS2	**Erkin-Say**	**5.19**	**13**	*e*Pn		**Pn**		**22 37 50.4**	**+1.6**
	70nm,1.2s								
EKS2				*e*Sn		**Sn**		**22 38 48.7**	**-0.2**
KK31	**Karatay Array**	**5.62**	**348**	Pn		**Pn**		**22 37 55.4**	**+0.9**
	1.6nm,0.5s,baz=158,slow=11,SNR=62								
KK31						Sn		**22 38 57.2**	**-1.8**
	20nm,0.5s,baz=157,slow=22,SNR=20								
TKM2	**Tokmak 2**	**5.91**	**25**	⇑Pn		**Pn**		**22 37 58.5**	**+0.3**
	9.1nm,1.5s								
TKM2				⇓Sn		**Sn**		**22 39 05.3**	**-0.5**
	6.7nm,0.7s								
TKM2	**Tokmak 2**	**5.91**	**25**	*e*Pn		**Pn**		**22 37 59.0**	**+0.8**
SMLA	**Simla**	**7.68**	**146**	*i* P		**Pn**		**22 38 20.1**	**-1.5**
SMLA				*i* S		**Sn**		**22 39 38.2**	**-10**
SMLA				*i* S		**Sn**		**22 39 38.5**	**-9.4**
SMLA				*ex*		x		22 39 42.8	
	comp=E,213nm,0.5s								
SMLA				*ex*		x		22 39 43.4	
	comp=N,280nm,0.4s								
MKAR	**Makanchi Array**	**11.84**	**36**	P		**Pn**		**22 39 15.9**	**+0.4**
	baz=214,slow=9.9,SNR=2.0								
MKAR	**Makanchi Array**	**11.84**	**36**	P		**Pn**		**22 39 15.9**	**+0.4**
KURK	**Kurchatov**	**13.88**	**17**	P		**Pn**		**22 39 42.3**	**+0.9**
	comp=N,0.1nm,0.3s,baz=199,slow=11,SNR=10								
AB31	**Akbulak array**	**14.61**	**327**	Pn		**Pn**		**22 39 51.0**	**+0.5**
	comp=N,1.1nm,0.7s,baz=139,slow=11,SNR=12								
AB31				⇑Sn		**Sn**		**22 42 29.5**	**-3.8**
	comp=N,1.1nm,0.8s,baz=132,slow=24,SNR=6.4								
BVAR	**Borovoye Array**	**15.46**	**356**	P		**Pn**		**22 40 01.1**	**+0.3**
	comp=N,0.3nm,0.3s,baz=151,slow=7.6,SNR=6.5								
AKTK	**Aktyubinsk**	**16.32**	**326**	P		**Pn**		**22 40 12.0**	**+0.7**
AKTO	**Aktyubinsk**	**16.32**	**326**	⇑Pn		**Pn**		**22 40 13.7**	**+2.4**
AKTO				⇓Sn		**Sn**		**22 43 13.3**	**-0.8**
	comp=N,0.7nm,1.9s								
AKTO	**Aktyubinsk**	**16.32**	**326**	P		**Pn**		**22 40 12.0**	**+0.7**
	comp=N,0.3nm,0.3s,baz=112,slow=11,SNR=8.5								
ZAA0	**Zalesovo Array**	**18.51**	**24**	*e*P		**P**		**22 40 34.0**	**-0.7**
ZALV	**Zalesovo Beam**	**18.51**	**24**	P		**P**		**22 40 34.3**	**-0.4**
	comp=N,1.3nm,0.3s,baz=222,slow=10,SNR=40								
ARCES	**ARCESS Array B**	**40.48**	**337**	P		**P**		**22 43 53.2**	**+0.4**
	comp=N,3.8nm,0.9s,mb4.0,baz=103,slow=5.4,SNR=8.5								
NOA	**NORSAR Array B**	**44.06**	**322**	P		**P**		**22 44 21.8**	**-0.1**
	comp=N,0.8nm,0.8s,mb3.4,baz=94,slow=7.7,SNR=2.6								
TORD	**Torodi Ar. Bea**	**66.68**	**269**	P		**P**		**22 47 01.8**	**-2.1**
	comp=N,0.5nm,0.5s,mb3.6,baz=47,slow=5.9,SNR=21								
WRA	**Warramunga Arr**	**81.80**	**123**	P		**P**		**22 48 26.2**	**-4.9**
	comp=N,0.5nm,0.9s,mb3.1,baz=0.2,slow=2.6,SNR=3.6								
WRA	**Warramunga Arr**	**81.80**	**123**	P		**P**		**22 48 26.2**	**-4.9**
WRA				pmax		pmax			
	comp=Z,3.0nm,1.0s								

*IDC **27** 22:37:07.0±2.1,2131S×16935E, h0km, mb4.1/4, mb1 4.3/4, mb1mx4.0/15, mbtmp4.1/4, Error ellipse: s-maj=80.4km s-min=41.1km az=164.0*

NEIC 27 22:37:08.2±1.5,2138S×16944E,h10km,mb4.0/1,Error ellipse: s-maj=60.9km s-min=26.3km az=167.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.87**	**256**	*e*P		Pn		22 37 52.6	-1.4
CTA	**Charters Tower**	**21.73**	**269**	P		P		22 42 00.8	+1.1
	6.1nm,0.8s,baz=92,slow=12,SNR=11								
CTAO	**Charters Tower**	**21.73**	**269**	*e*P		P		22 42 00.2	+0.5
	3.9nm,0.6s								
STKA	**Stephens Creek**	**26.93**	**241**	P		P		22 42 50.4	+0.6
	3.5nm,0.8s,baz=73,slow=11,SNR=3.5								
WRA	**Warramunga Arr**	**32.84**	**266**	P		P		22 43 40.6	-1.6
	1.0nm,0.8s,baz=94,slow=8.3,SNR=4.4								
ASAR	**Alice Springs**	**32.86**	**259**	P		P		22 43 41.8	-0.6
	3.0nm,0.8s,baz=81,slow=9.3,SNR=23								
GERES	**GERESS Array B**	**146.45**	**331**	PKPbc		PKPbc		22 56 49.9	+0.5
	0.4nm,0.6s,baz=64,slow=3.1,SNR=3.5								
TORD	**Torodi Ar. Bea**	**165.73**	**237**	PKP		PKPdf		22 57 14.6	+0.5
	0.4nm,1.1s,baz=122,slow=2.1,SNR=3.0								
TORD				PKPab		PKPab		22 58 11.9	-1.3
	0.3nm,1.0s,baz=132,slow=2.1,SNR=2.5								

*NNC **27** 23:03:18.9±4.3,4058N×7232E, h0km, mb3.6, mpv3.7, Error ellipse: s-maj=31.9km s-min=21.1km az=171.0*
*ISCJB **27** 23:03:23.7±0.7,4042N±005×7183E±009, h33km, Error ellipse: s-maj=9.8km s-min=6.8km az=0.1*

ISC 27 23:03:26.3±0.7,4045N±005×7197E±009,h35km,n16, σ1§29/19,5C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.12**	**37**	P		**Pn**		**23 03 54.3**	**-5.0**
	SNR=261								
EKS2	**Erkin-Say**	**2.59**	**31**	P		**Pn**		**23 04 04.8**	**-0.9**
	SNR=21								
UCH	**Uchtor**	**2.61**	**46**	P		**Pn**		**23 04 03.5**	**-2.4**
	SNR=110								
KK31	**Karatay Array**	**2.87**	**338**	⇑Pn		**Pn**		**23 04 10.5**	**+1.0**
	16nm,0.5s,baz=147,slow=16,SNR=359								
KK31				⇑Sn		**Sn**		**23 04 47.6**	**+4.9**
	33nm,0.4s,baz=153,slow=28,SNR=5.6								
AAK	**Ala-Archa**	**2.89**	**40**	P		**Pn**		**23 04 10.4**	**+0.6**
	SNR=29								
KZA	**Kyzart**	**2.96**	**56**	P		**Pn**		**23 04 10.5**	**-0.2**
	SNR=15								
KBK	**Karagaybulak**	**3.14**	**44**	P		**Pn**		**23 04 12.9**	**-0.3**
	SNR=30								
CHMS	**Chmysh**	**3.29**	**38**	P		**Pn**		**23 04 16.4**	**+1.2**
	SNR=10								
USP	**Ospenovka**	**3.39**	**33**	P		**Pn**		**23 04 19.0**	**+2.4**
	SNR=28								
TKM2	**Tokmak 2**	**3.67**	**47**	P		**Pn**		**23 04 24.6**	**+4.1**
	SNR=8.2								
CEP	**Cherat**	**6.61**	**180**	P		**Pn**		**23 05 00.1**	**-0.9**
CEP				S		**Sn**		**23 06 16.0**	**+0.9**
THW	**Thamme Wali**	**7.64**	**181**	P		**Pn**		**23 05 05.5**	**-10**
KURBB	**Kurchatov Arra**	**11.16**	**22**	⇓Pn		**Pn**		**23 05 55.6**	**-7.6**
	0.6nm,1.4s								
KURBB				⇑Lg				23 09 06.3	
	1.6nm,0.7s								
KURK	**Kurchatov**	**11.27**	**22**	⇓Pn		**Pn**		**23 05 57.2**	**-7.4**
	3.8nm,1.8s								
KURK				⇓Lg				23 09 08.8	
	9.4nm,1.1s								
AB31	**Akbulak array**	**12.25**	**320**	⇑Pn		**Pn**		**23 06 12.8**	**-5.2**
	0.4nm,0.5s,baz=128,slow=14,SNR=7.5								
AB31				⇑Sn		**Sn**		**23 08 33.7**	**+0.6**
	1.1nm,0.8s								
AKTO	**Aktyubinsk**	**13.96**	**320**	⇓Pn		**Pn**		**23 06 39.2**	**-2.2**
	2.9nm,3.1s								

*IDC **27** 23:03:58.6±2.0,2125S×16940E, h0km, mb4.2/6, mb1 4.4/6, mb1mx4.2/15, mbtmp4.2/6, Error ellipse: s-maj=91.7km s-min=26.3km az=157.0*
*ISCJB **27** 23:04:02.0±0.9,2145S±02×16930E±010, h33km, mb4.2/8, Error ellipse: s-maj=32.7km s-min=11.4km az=167.5*
*NEIC **27** 23:04:03.0±1.3,2083S×16902E, h10km, mb4.3/4, Error ellipse: s-maj=44.1km s-min=26.7km az=171.0*

ISC 27 23:04:03.9±0.9,215S±02×16932E±010,h35km,n18, σ0§95/16,mb4.2/8,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.75**	**256**	*e*P		**Pn**		**23 04 44.6**	**-0.8**
DZM				*e*S		**Sn**		**23 05 16.6**	**-0.8**
CTA	**Charters Tower**	**21.61**	**269**	*e*P		**P**		**23 08 53.1**	**+2.1**
	6.8nm,0.9s,mb4.1								
CTA	**Charters Tower**	**21.61**	**269**	P		**P**		**23 08 53.0**	**+2.1**
	7.2nm,0.8s,mb4.2,baz=89,slow=12,SNR=13								
CTAO	**Charters Tower**	**21.61**	**269**	*e*P		**P**		**23 08 51.8**	**+0.8**
	12nm,1.1s,mb4.2								
STKA	**Stephens Creek**	**26.80**	**241**	P		**P**		**23 09 42.5**	**+1.7**
	3.4nm,0.8s,mb3.9,baz=79,slow=10,SNR=3.3								
WRA	**Warramunga Arr**	**32.72**	**266**	P		**P**		**23 10 32.5**	**-0.8**
	1.0nm,0.8s,mb3.8,baz=96,slow=8.3,SNR=13								
ASAR	**Alice Springs**	**32.73**	**259**	P		**P**		**23 10 33.9**	**+0.4**
	3.4nm,0.7s,mb4.4,baz=80,slow=9.1,SNR=25								
FITZ	**Fitzroy Crossi**	**41.15**	**267**	*e*P		**P**		**23 11 45.5**	**+0.5**
	5.8nm,0.6s,mb4.4								
FITZ	**Fitzroy Crossi**	**41.15**	**267**	P		**P**		**23 11 45.6**	**+0.6**
	baz=123,slow=12								
CMAR	**Chiang Mai Arr**	**79.48**	**295**	P		**P**		**23 16 06.8**	**-0.4**
	0.8nm,0.3s,mb4.1,baz=102,slow=6.4,SNR=5.2								
SNAA	**Sanae**	**86.97**	**182**	*e*		**P**		**23 16 53.8**	**+8.8**
SNAA	**Sanae**	**86.97**	**182**	*e*P		**P**		**23 16 52.4**	**+7.4**
	1.5nm,0.8s,mb4.3								
VNA3	**Neumayer Olymp**	**87.55**	**180**	*e*		**P**		**23 16 48.2**	**+0.4**
VNA3				*e*		pP		23 16 57.2	-1.7
VNA2	**Neumayer--Watz**	**87.85**	**181**	*e*		**P**		**23 16 48.1**	**-1.1**
VNA2				*e*		pP		23 16 58.8	-1.5
NVAR	**Mina Array Bea**	**90.20**	**48**	P		**P**		**23 17 00.2**	**-0.5**
	1.4nm,0.7s,mb4.4,baz=234,slow=9.0,SNR=7.7								
TRO	**Tromso**	**128.62**	**347**	*i* P		Pdif		23 19 59.0	+6.5
STOK	**Stokkvaagen**	**132.61**	**347**	*i* P		PKPdf		23 23 16.8	+2.7
GERES	**GERESS Array B**	**146.46**	**330**	PKPbc		PKPbc		23 23 41.8	+0.7
	0.5nm,0.6s,baz=50,slow=2.1,SNR=4.7								

*DJA **27** 23:05:52.662S×10851E, h15km, MLv3.1/5*

IDC 27 23:07:04.9±6.8,274S×10118E,h0km,mb3.4/3,mb1 3.6/3, mb1mx3.4/19,mbtmp3.4/3,Error ellipse: s-maj=374.3km s-min=29.4km az=52.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.60**	**120**	P		P		23 14 12.4	-0.7
	0.2nm,0.4s,baz=289,slow=8.0,SNR=5.5								
ASAR	**Alice Springs**	**37.87**	**126**	P		P		23 14 24.6	+0.9
	0.3nm,0.4s,baz=297,slow=7.6,SNR=4.6								
MKAR	**Makanchi Array**	**52.06**	**344**	P		P		23 16 16.6	+0.3
	0.5nm,0.7s,baz=142,slow=6.1,SNR=4.4								
TXAR	**Lajitas Array**	**144.54**	**39**	PKP		PKPdf		23 26 42.6	-1.5
	0.2nm,0.6s,baz=226,slow=6.2,SNR=4.0								

*ISCJB **27** 23:12:50.7±1.0,2175S±01×657W±0.1, h337km±13km, mb3.9/5, Error ellipse: s-maj=23.2km s-min=12.5km az=142.4*
*NEIC **27** 23:12:50.9±0.9,2169S×6559W, h321km±11km, mb3.9/2, Error ellipse: s-maj=20.5km s-min=12.2km az=55.0*
*IDC **27** 23:12:50.8±1.5,2170S×6552W, h319km±19km, mb3.6/3, mb1 3.4/6, mb1mx3.2/18, mbtmp3.3/6, Error ellipse: s-maj=27.4km s-min=16.1km az=89.0*

ISC 27 23:12:51.1±0.9,2175S±01×657W±01,h327km±13km,n14, σ1§09/14,mb3.9/5,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.88**	**336**	P		**Pn**		**23 14 21.5**	**+1.6**
	3.8nm,0.3s,baz=150,slow=7.9,SNR=55								
LPAZ				S		**S**		**23 15 32.2**	**+0.5**
	baz=227,slow=19,SNR=3.0								
ARE	**Arequipa**	**7.58**	**313**	*e*P		**Pn**		**23 14 39.0**	**-1.0**
ARE				*e*S		**S**		**23 16 06.0**	**-2.5**
CPUP	**Villa Florida**	**8.91**	**123**	P		**Pn**		**23 14 55.6**	**-0.3**
	0.3nm,0.3s,baz=309,slow=13,SNR=2.9								
PLCA	**Paso Flores**	**19.40**	**191**	P		**P**		**23 16 54.3**	**+0.4**
	0.2nm,0.3s,baz=15,slow=13,SNR=8.8								
OTAV	**Otavalo**	**25.13**	**329**	*e*P		**P**		**23 17 49.0**	**+1.5**
	3.9nm,1.1s,mb3.5								
SNAA	**Sanae**	**61.10**	**161**	*e*P		**P**		**23 22 31.6**	**+0.7**
	12nm,1.8s,mb4.0								
DBIC	**Dimbokro**	**65.94**	**72**	P		**P**		**23 23 01.6**	**-1.7**
	1.3nm,0.5s,mb3.9,baz=211,slow=5.9,SNR=3.3								
LAZ	**Ladron**	**68.33**	**324**	P		**P**		**23 23 22.9**	**+5.2**
TOA0	**Torodi Ar. Sit**	**74.62**	**69**	*e*P		**P**		**23 23 55.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**74.62**	**69**	P		**P**		**23 23 55.7**	**+0.3**
	1.3nm,0.6s,mb3.8,baz=257,slow=5.9,SNR=20								
TORD	**Torodi Ar. Bea**	**74.62**	**69**	P		**P**		**23 23 55.7**	**+0.2**
BOSA	**Boshof**	**80.69**	**117**	P		**P**		**23 24 28.1**	**-0.5**
	5.1nm,1.0s,mb4.2,baz=214,slow=3.6,SNR=3.2								
WRA	**Warramunga Arr**	**134.20**	**207**	PKP		PKPdf		23 31 32.7	+1.9
	0.2nm,0.4s,baz=159,slow=1.5,SNR=4.6								
MKAR	**Makanchi Array**	**144.00**	**38**	PKP		PKPdf		23 31 49.4	+1.6
	1.5nm,0.6s,baz=297,slow=4.3,SNR=11								

*CSEM **27** 23:26:50.5±0.2,3872N×4438E, h2km, MD3.0, Error ellipse: s-maj=4.4km s-min=2.6km az=109.0*

*ISCJB **27** 23:26:51.0±1.4,3877N±004×4449E±010, h4km±9km, Error ellipse: s-maj=12.6km s-min=6.6km az=8.6*
*ISK **27** 23:26:52.0,3872N×4433E, h9km, MD3.0*
*DDA **27** 23:26:56.0,3875N×4383E, h7km±3km, Md3.0*

ISC 27 23:26:52.1±1.7,3878N±005×445E±01,h12km±11km,n9, σ0§85/14,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CLDR	**Calciran**	**0.56**	**311**	*e*PG		**Pg**		**23 27 02.8**	**-0.3**
CLDR				*e*SG		**Sg**		**23 27 10.6**	**+0.1**
VANB	**Van**	**0.86**	**258**	*e*PG		**Pg**		**23 27 06.9**	**-1.8**
VANT	**Van**	**0.90**	**249**	*e*PG		**Pg**		**23 27 09.4**	**-0.2**
VANT				*e*SG		**Sg**		**23 27 22.3**	**+1.0**
DYDN	**Diyadin**	**0.97**	**322**	*i* P		**Pb**		**23 27 10.9**	**-0.1**
DYDN				*i* S		**Sg**		**23 27 23.1**	**-0.5**
HAKT	**HAKKARI**	**1.35**	**206**	*i* P		**Pn**		**23 27 15.5**	**-1.3**
HAKT				*i* S		**Sb**		**23 27 35.8**	**+1.2**
GNI	**Garni**	**1.39**	**9**	*e*PN		**Pg**		**23 27 19.2**	**+0.4**
AGRB	**Hanur-Agry**	**1.39**	**305**	*e*PN		**Pn**		**23 27 17.6**	**+0.2**
DIGO	**Kars**	**1.84**	**333**	*i* P		**Pg**		**23 27 28.8**	**+1.4**
DIGO				*i* S		**Sg**		**23 27 57.5**	**+6.2**
SIRT	**Sirnak**	**2.04**	**232**	*e*PN		**Pn**		**23 27 26.1**	**-0.2**

*MOS **27** 23:34:13.5±0.8,5576N×11028E, h7km, mb4.2/1, Error ellipse: s-maj=14.9km s-min=9.4km az=64.0*

BYKL 27 23:34:15.5±0.3,5567N×11026E,h6km±4km,14C-3D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.42**	**285**	*e*PG		Pg		23 34 22.7	-0.9
NIZ				*e*				23 34 29.7	
NIZ				pmax		pmax			
	comp=Z,156nm,0.3s								
NIZ				smax					
	comp=N,882nm,0.3s								
NIZ	**Nizh Angarsk**	**0.42**	**285**	*e*Pg		Pg		23 34 22.2	-1.4
NIZ				*e*Sg		Sg		23 34 29.7	+0.6
NIZ				Pmax					
	comp=N,134nm,0.2s								
NIZ				Smax					
	comp=N,906nm,0.3s								
KMO	**Kumora**	**0.57**	**67**	⇑*i*Pg		Pg		23 34 24.5	-2.0
KMO				⇑*i*				23 34 25.2	
KMO				*e*Sg		Sg		23 34 32.9	-1.1
KMO				max					
	comp=N,71nm,0.2s								
KMO				Smax					
	comp=N,560nm,1.1s								
YOA	**Uoyan**	**0.95**	**60**	*e*PG		Pg		23 34 29.7	-3.9
YOA				*e*				23 34 41.1	
YOA				pmax		pmax			
	comp=Z,225nm,0.2s								
YOA				smax					
	comp=N,1μm,0.4s								
YOA	**Uoyan**	**0.95**	**60**	*e*Sg		Sg		23 34 46.7	+0.8
YOA				Smax					
	comp=N,1μm,0.6s								
YLYR	**Ulyunkhan**	**0.95**	**147**	⇑*i*PG		Pg		23 34 32.3	-1.4
YLYR				*e*				23 34 45.8	
YLYR				pmax		pmax			
	comp=Z,249nm,0.3s								
YLYR				smax					
	comp=N,619nm,0.2s								
YLYR	**Ulyunkhan**	**0.95**	**147**	⇓*i*Pg		Pg		23 34 31.7	-2.0
	comp=N,10.0nm,0.2s								
YLYR				⇑*i*Pg		Pg		23 34 31.7	-2.0
	comp=N,6.0nm,0.2s								
YLYR				⇑*i*Pg		Pg		23 34 31.7	-2.0
	comp=N,14nm,0.2s								
YLYR				*i*				23 34 32.3	
YLYR				*e*Sg		Sg		23 34 46.4	+0.5
YLYR				max					
	comp=N,238nm,0.7s								
YLYR				Smax					
	comp=N,562nm,0.5s								
UKT	**Uakit**	**1.92**	**94**	*e*PN		Pn		23 34 48.8	+0.1
UKT				*e*				23 35 14.9	
UKT				pmax		pmax			
	comp=Z,125nm,0.4s								
UKT				smax					
	comp=N,486nm,0.5s								
UKT	**Uakit**	**1.92**	**94**	*e*Pn		Pn		23 34 48.9	+0.2
UKT				*e*Pg		Pg		23

comp=Z,32nm,1.5s
CRS smax
comp=E,80nm,1.2s
CRS Chara 4.63 71 ⇑*i*Pn Pn 23 35 26.3 +0.4
CRS *e* 23 35 40.1
CRS *e*Sg Sg 23 36 37.5 -6.5
CRS max
comp=E,23nm,0.9s
CRS Smax
comp=E,82nm,1.3s
LSTR Listvyanka 4.99 222 *e*Pn Pn 23 35 32.1 +1.3
LSTR *e*Sg Sg 23 36 48.5 -7.0
LSTR max
comp=E,2.0nm,0.1s
LSTR Smax
comp=E,40nm,0.9s
TLY Talaya 5.61 227 *e*PN Pn 23 35 40.9 +1.6
TLY *e* 23 35 57.4
TLY *e*S Sn 23 36 43.1 -0.8
TLY *e* 23 37 07.7
TLY pmax pmax
comp=Z,10.0nm,0.7s
TLY smax
comp=N,48nm,0.9s
TLY Talaya 5.61 227 ⇑*i*Pn Pn 23 35 39.5 +0.2
TLY *e*Sn Sn 23 36 42.1 -1.8
TLY *e*Sg Sg 23 37 09.2 -6.1
TLY max
comp=N,1.0nm,0.1s
TLY Smax
comp=N,30nm,0.9s
TUP Tupik 5.71 99 *e*PN Pn 23 35 41.1 +0.4
TUP *e*S Sn 23 36 44.3 -2.2
TUP *e*S Sn 23 37 13.2 +27
TUP smax
comp=N,139nm,1.2s
TUP Tupik 5.71 99 ⇓*i*Pn Pn 23 35 41.1 +0.4
TUP ⇑*i*Pg Pg 23 35 58.7 -6.1
TUP *e*Sg Sg 23 37 12.7 -6.0
TUP Pmax
comp=N,10.0nm,1.1s
TUP Smax
comp=N,139nm,0.9s
ARS Arshan 5.97 234 *e*PN Pn 23 35 44.4 +0.1
ARS *e*S Sn 23 37 21.2 +28
ARS smax
comp=E,134nm,0.5s
ARS Arshan 5.97 234 *e*Pn Pn 23 35 44.5 +0.2
ARS *e*Sn Sn 23 36 50.9 -2.0
ARS *e*Sg Sg 23 37 20.4 -6.7
ARS max
comp=E,21nm,0.6s
ARS Smax
comp=E,135nm,0.7s
KPC Khapcheranga 6.11 167 *e*PN Pn 23 35 47.0 +0.7
KPC *e* 23 36 05.3
KPC *e* 23 37 24.2
KPC pmax pmax
comp=Z,18nm,0.7s
KPC smax
comp=E,64nm,0.9s
KPC Khapcheranga 6.11 167 *e*Pn Pn 23 35 47.0 +0.7
KPC *e*Pg Pg 23 36 05.0 -7.5
KPC *e*Sn Sn 23 36 53.8 -2.6
KPC *e*Sg Sg 23 37 24.0 -7.6
KPC Pmax
comp=E,18nm,1.0s
KPC Smax
comp=E,64nm,0.9s
ZAK Zakamensk 6.76 221 *e*PN Pn 23 35 56.6 +1.4
ZAK *e* 23 37 12.9
ZAK pmax pmax
comp=Z,3.0nm,0.2s
ZAK smax
comp=N,49nm,1.5s
ZAK Zakamensk 6.76 221 *e*Sg Sg 23 37 44.1 -8.4
ZAK Smax
comp=N,28nm,1.5s
MOY Mondy 6.81 238 *e*PN Pn 23 35 57.6 +1.8
MOY *e*S Sn 23 37 12.7 -0.9
MOY *e*S Sn 23 37 46.5 +33
MOY smax
comp=N,41nm,1.1s
MOY Mondy 6.81 238 ⇑*i*Pn Pn 23 35 57.4 +1.6
MOY *e*Sn Sn 23 37 11.1 -2.5
MOY *e*Sg Sg 23 37 46.4 -7.5
MOY max
comp=N,33nm,0.9s
MOY Smax
comp=N,36nm,1.3s
ORL Orlik 6.90 247 *e*PN Pn 23 35 58.5 +1.5
ORL *e*S Sn 23 37 14.4 -1.3
ORL Orlik 6.90 247 *e*Pn Pn 23 35 58.5 +1.5
ORL *e*Sn Sn 23 37 12.8 -2.9
ORL *e*Sg Sg 23 37 47.9 -8.9
ORL max
comp=N,8.0nm,1.0s
ORL Smax
comp=N,43nm,1.0s
ULN Ulaanbaatar 8.06 196 *e*Sg Sg 23 38 27.6 -6.6
IENR Iengra 8.22 80 *e*Sg Sg 23 38 31.4 -7.6
TDJR Todzha 8.95 254 *e*Sg Sn 23 38 53.2 +47

*ATH **27** 23:39:55.7, 34°64'N × 23°74'E, h42km ± 5km, MD3.7/4*
*NEIC **27** 23:39:55.7, 34°64'N × 23°74'E, h42km, MD3.7(ATH), After ATH.*
*ISCJB **27** 23:40:01.0 ± 0.9, 35°01'N ± 0°07' × 24°11'E ± 0°05', h12km ± 8km, Error ellipse: s-maj=12.4km s-min=6.9km az=5.8*
*CSEM **27** 23:40:01.0 ± 0.5, 34°92'N × 24°08'E, h20km, MD3.7, Error ellipse: s-maj=9.4km s-min=7.7km az=37.0*
*THE **27** 23:40:03.2, 35°08'N × 24°17'E, h4km, ML2.4*
ISC 27 23:40:01.7 ± 0.9, **34°96'N** ± 0°07' × **24°13'E** ± 0°05', **h18**km ± 6km, **n19**, σ1§**18**/27, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GVD	**Gavdhos**	**0.13**	**196**	*e*P		**Pg**	**23 40 05.0**	**-0.7**
VAM	**Vamos**	**0.45**	**7**	*e*P		**Pg**	**23 40 13.0**	**+2.2**
SIVA	**Sivas**	**0.56**	**84**	*e*Pg		**Pg**	**23 40 13.4**	**+0.5**
SIVA				*e*Sg		**Sg**	**23 40 21.9**	**+1.5**
LAST	**Lasithi**	**1.12**	**79**	*e*Pg		**Pg**	**23 40 22.6**	**-0.8**
LAST				*e*Sg		**Sg**	**23 40 38.7**	**+0.5**
NPS	**Neapolis**	**1.25**	**76**	*e*P		**Pn**	**23 40 24.1**	**-0.1**
NPS				*e*S		**Sb**	**23 40 43.7**	**+3.2**
ZKR	**Zakros**	**1.72**	**84**	*e*Pb		**Pb**	**23 40 33.1**	**+0.4**
ZKR				*e*Sb		**Sb**	**23 40 54.1**	**+0.2**
THR6	**Thira Island,**	**1.73**	**36**	*e*Pb		**Pb**	**23 40 31.7**	**-1.2**
THR5	**Thira Island,**	**1.76**	**34**	*e*Pb		**Pb**	**23 40 31.1**	**-2.2**
THR1	**Thera Island**	**1.77**	**37**	*e*Pb		**Pb**	**23 40 32.2**	**-1.4**
SANT	**Santorini**	**1.78**	**37**	*e*Pb		**Pb**	**23 40 32.1**	**-1.5**
SANT				*e*Sb		**Sb**	**23 40 53.6**	**-1.9**
THR3	**Thira Island,**	**1.78**	**35**	*e*Pb		**Pb**	**23 40 32.0**	**-1.6**
APE	**Apeiranthos**	**2.39**	**28**	*e*Pn		**Pn**	**23 40 40.0**	**+0.1**
APE				*e*Sn		**Sn**	**23 41 09.8**	**+1.2**
APE	**Apeiranthos**	**2.39**	**28**	*e*P		**Pn**	**23 40 39.7**	**-0.1**
APE	**Apeiranthos**	**2.39**	**28**	*e*Pn		**Pn**	**23 40 40.0**	**+0.2**
APE				*e*Sn		**Sn**	**23 41 09.8**	**+1.2**
KARP	**Karpathos**	**2.55**	**76**	*e*P		**Pn**	**23 40 42.0**	**0.0**
DID	**Didima**	**2.64**	**344**	*e*Pn		**Pn**	**23 40 43.5**	**+0.2**
DID				*e*Sn		**Sn**	**23 41 16.4**	**+1.6**
VLX	**Vlachokerasia**	**2.79**	**330**	*e*Pn		**Pn**	**23 40 46.3**	**+1.0**
ARG	**Arkhangelos**	**3.49**	**68**	*e*P		**Pn**	**23 40 54.9**	**-0.1**
CHOS	**Chios island**	**3.75**	**24**	*e*Pn		**Pn**	**23 40 59.3**	**+0.7**

*MOS **27** 23:46:11.0 ± 0.8, 55.18N × 113.51E, h17km, mb4.4/1, Error ellipse: s-maj=16.5km s-min=12.6km az=79.6*
BYKL 27 23:46:11.1 ± 0.2, **5527N × 11353E, h15**km ± 3km, **8C-4D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
UKT	**Uakit**	**0.23**	**14**	*e*PG		Pg	23 46 15.2	-0.9
UKT				pmax	pmax			
comp=Z,428nm,0.1s								
UKT	**Uakit**	**0.23**	**14**	⇓*i*Pg		Pg	23 46 15.3	-0.8
UKT				*e*Sg		Sg	23 46 18.4	-1.2
UKT				Pmax				
comp=Z,643nm,0.4s								
UKT				Smax				
comp=Z,8μm,0.3s								
YOA	**Uoyan**	**1.34**	**311**	⇑*i*PN		Pn	23 46 35.4	+0.2
YOA				*e*			23 46 53.4	
YOA				pmax	pmax			
comp=Z,500nm,0.1s								
YOA				smax				
comp=E,3μm,0.4s								
YOA	**Uoyan**	**1.34**	**311**	⇑*i*Pg		Pg	23 46 35.3	-1.6
YOA				*e*Sg		Sg	23 46 53.5	-0.8
YOA				Pmax				
comp=E,1μm,0.2s								
YOA				Smax				
comp=E,3μm,0.5s								
YLYR	**Ulyunkhan**	**1.42**	**255**	*e*PN		Pn	23 46 36.7	+0.4
YLYR				*e*			23 46 54.7	
YLYR				pmax	pmax			
comp=Z,63nm,0.2s								
YLYR				smax				
comp=N,502nm,0.1s								
YLYR	**Ulyunkhan**	**1.42**	**255**	⇑*i*Pg		Pg	23 46 36.4	-1.9
YLYR				⇑*i*Pb		Pb	23 46 37.5	+0.3
YLYR				*e*Sg		Sg	23 46 55.8	-1.0
YLYR				max				
comp=N,43nm,0.2s								
YLYR				Smax				
comp=N,415nm,0.2s								
KMO	**Kumora**	**1.46**	**296**	*e*PN		Pn	23 46 36.7	-0.2
KMO				*e*			23 46 54.4	
KMO				pmax	pmax			
comp=Z,162nm,0.3s								
KMO				smax				
comp=N,1μm,1.0s								
KMO	**Kumora**	**1.46**	**296**	⇑*i*Pg		Pg	23 46 36.8	-2.4
KMO				*e*Sg		Sg	23 46 56.3	-1.8
KMO				Pmax				
comp=N,169nm,0.4s								
KMO				Smax				
comp=N,1μm,1.3s								
NLYR	**Nelyaty**	**1.73**	**44**	*e*PN		Pn	23 46 41.9	+1.3
NLYR				*e*			23 47 05.2	
NLYR				pmax	pmax			
comp=Z,135nm,0.7s								
NLYR				smax				
comp=E,820nm,1.0s								
NLYR	**Nelyaty**	**1.73**	**44**	*e*Pg		Pg	23 46 42.3	-2.0
NLYR				*e*Sg		Sg	23 47 05.1	-1.7
NLYR				Pmax				
comp=E,137nm,0.8s								
NLYR				Smax				
comp=E,819nm,1.0s								
NIZ	**Nizh Angarsk**	**2.32**	**284**	*e*PN		Pn	23 46 49.7	+1.0
NIZ				*e*			23 46 51.7	
NIZ				*e*			23 47 23.2	
NIZ				pmax	pmax			
comp=Z,38nm,0.3s								
NIZ				smax				
comp=N,477nm,0.4s								
NIZ	**Nizh Angarsk**	**2.32**	**284**	⇓*i*Pn		Pn	23 46 49.8	+1.1
NIZ				*e*Pg		Pg	23 46 53.5	-2.1
NIZ				*e*Sg		Sg	23 47 23.6	-2.1
NIZ				Pmax				
comp=N,58nm,1.0s								
NIZ				Smax				
comp=N,475nm,0.4s								
BOD	**Bodaibo**	**2.57**	**6**	*e*PN		Pn	23 46 55.6	+3.5
BOD				*e*			23 47 30.0	
BOD				pmax	pmax			
comp=Z,32nm,0.2s								
BOD				smax				
comp=E,517nm,0.5s								
BOD	**Bodaibo**	**2.57**	**6**	*e*Pn		Pn	23 46 53.1	+1.0
BOD				⇑*i*Pg		Pg	23 46 56.0	-4.3
BOD				*e*Sg		Sg	23 47 29.4	-4.2
BOD				Pmax				
comp=E,32nm,0.2s								
BOD				Smax				
comp=E,506nm,0.4s								
SYVR	**Suvo**	**2.62**	**233**	*e*PN		Pn	23 46 53.6	+0.8
SYVR				*e*			23 46 56.4	
SYVR				*e*			23 47 32.9	
SYVR				pmax	pmax			
comp=Z,28nm,0.5s								
SYVR				smax				
comp=N,222nm,0.7s								
SYVR	**Suvo**	**2.62**	**233**	⇓*i*Pn		Pn	23 46 53.5	+0.7
SYVR				*e*Pg		Pg	23 46 58.0	-3.2
SYVR				*e*Sg		Sg	23 47 32.7	-2.5
SYVR				Pmax				
comp=N,27nm,0.6s								
SYVR				Smax				
comp=N,218nm,0.8s								
CRS	**Chara**	**3.12**	**56**	*e*PN		Pn	23 47 06.3	+6.7
CRS				*e*			23 47 47.8	
CRS				pmax	pmax			
comp=Z,54nm,1.0s								
CRS				smax				
comp=E,178nm,0.8s								
CRS	**Chara**	**3.12**	**56**	*e*Pn		Pn	23 47 01.4	+1.8
CRS				⇓*i*Pg		Pg	23 47 07.0	-3.8
CRS				*e*			23 47 11.0	
CRS				*e*Sg		Sg	23 47 47.9	-3.2
CRS				max				
comp=E,54nm,1.2s								
CRS				Smax				
comp=E,185nm,1.8s								
CIT	**Chita**	**3.25**	**180**	*e*Pg		Pg	23 47 09.0	-4.4
CIT				*e*Sg		Sg	23 47 51.8	-3.8
CIT				Pmax				
comp=E,69nm,0.1s								
CIT				Smax				
comp=E,691nm,0.2s								
TUP	**Tupik**	**3.81**	**100**	*e*PN		Pn	23 47 10.3	+1.2
TUP				*e*			23 47 19.7	
TUP				*e*S		Sn	23 47 55.1	+1.5
TUP				*e*			23 48 09.1	
TUP				pmax	pmax			
comp=Z,38nm,0.3s								
TUP				smax				
comp=N,132nm,0.8s								
TUP	**Tupik**	**3.81**	**100**	⇑*i*Pn		Pn	23 47 09.8	+0.7
TUP				*e*Pg		Pg	23 47 19.3	-4.7
TUP				*e*			23 47 26.3	
TUP				*e*Sg		Sg	23 48 09.2	-4.1
TUP				max				
comp=N,40nm,0.7s								
TUP				Smax				
comp=N,208nm,1.0s								
OGRR	**Ongureny**	**3.83**	**247**	*e*PN		Pn	23 47 10.1	+0.7
OGRR				*e*			23 47 19.4	
OGRR				*e*			23 48 08.8	
OGRR				pmax	pmax			
comp=Z,16nm,0.8s								
OGRR				smax				
comp=N,78nm,0.8s								
OGRR	**Ongureny**	**3.83**	**247**	*e*Pn		Pn	23 47 10.0	+0.6
OGRR				*e*Pg		Pg	23 47 20.3	-4.1
OGRR				*e*Sg		Sg	23 48 09.2	-4.7
OGRR				Pmax				
comp=N,16nm,0.8s								
OGRR				Smax				
comp=N,79nm,0.8s								
TRG	**Tyrgan**	**4.92**	**242**	*e*Pn		Pn	23 47 25.8	+1.3
TRG				*e*Pg		Pg	23 47 39.8	-5.5
TRG				*e*Sg		Sg	23 48 43.2	-5.9
TRG				Pmax				
comp=N,4.0nm,0.7s								
TRG				Smax				
comp=N,37nm,1.0s								
HRMR	**Khuramsha**	**5.36**	**230**	*e*Pn		Pn	23 47 31.5	+1.1
HRMR				*e*Pg		Pg	23 47 48.8	-4.9
HRMR				*e*Sg		Sg	23 48 58.8	-4.2
HRMR				Pmax				
comp=N,17nm,0.6s								
HRMR				Smax				
comp=N,331nm,0.8s								
KPC	**Khapcheranga**	**5.62**	**188**	*e*PN		Pn	23 47 34.5	+0.5
KPC				*e*			23 47 51.8	
KPC				*e*			23 49 05.3	
KPC				pmax	pmax			
comp=Z,7.0nm,0.3s								
KPC				smax				
comp=E,80nm,0.8s								
KPC	**Khapcheranga**	**5.62**	**188**	*e*Pn		Pn	23 47 34.2	+0.2
KPC				*e*Pg		Pg	23 47 51.6	-7.0
KPC				*e*Sg		Sg	23 49 05.0	-6.3
KPC				Pmax				
comp=E,4.0nm,0.4s								
KPC				Smax				
comp=E,81nm,0.8s								
TNDR	**Tynda**	**6.41**	**87**	*e*Sg		Sg	23 49 29.7	-6.9
IENR	**Iengra**	**6.47**	**77**	*e*Sg		Sg	23 49 30.6	-8.0
CLNS	**Chul'man**	**6.56**	**71**	*e*Sg		Sg	23 49 34.9	-6.4
TLY	**Talaya**	**6.91**	**243**	*e*Sg		Sn	23 49 45.4	+35
TLY				Smax				
comp=E,25nm,1.7s								
HIA	**Hailar**	**7.12**	**145**	*e*Sg		Sn	23 49 51.2	+36
ARS	**Arshan**	**7.41**	**248**	*e*PG		Px	23 48 22.5	
ARS				*e*			23 49 59.2	
ARS				pmax	pmax			
comp=Z,4.0nm,0.1s								
ARS				smax				
comp=E,54nm,0.5s								
ARS	**Arshan**	**7.41**	**248**	*e*Sg		Sn	23 50 00.9	+39
ARS				Smax				
comp=E,54nm,0.8s								
ZAK	**Zakamensk**	**7.90**	**236**	*e*PG		Px	23 48 32.5	
ZAK				*e*			23 50 16.9	
ZAK				pmax	pmax			
comp=Z,4.0nm,0.2s								
ZAK				smax				
comp=N,18nm,1.7s								
MOY	**Mondy**	**8.30**	**249**	*e*PG		Px	23 48 40.0	
MOY				*e*			23 50 28.8	
MOY				pmax	pmax			
comp=Z,1.0nm,0.2s								
MOY				smax				
comp=N,33nm,1.3s								
MOY	**Mondy**	**8.30**	**249**	*e*Sg		Sn	23 50 28.4	+44
MOY				Smax				
comp=N,28nm,1.6s								
ULN	**Ulaanbaatar**	**8.44**	**211**	*e*Sg		Sn	23 50 32.4	+45
ORL	**Orlik**	**8.55**	**257**	*e*PN		Pn	23 48 15.3	+1.1
ORL				*e*			23 48 43.5	
ORL				*e*S		Sn	23 49 48.0	-2.3
ORL	**Orlik**	**8.55**	**257**	⇑*i*Pn		Pn	23 48 13.6	-0.6
ORL				*e*Sn		Sn	23 49 48.1	-2.2
ORL				*e*Sg		Sn	23 50 35.7	+45
ORL				Smax				
comp=N,43nm,1.5s								
TDJR	**Todzha**	**10.69**	**262**	*e*Sg		Sn	23 51 39.3	+57

IDC 28 00:04:12.6 ± 3.3, **2179S × 16947E, h0**km, **mb3.9**/5, **mb1 4.1**/5, **mb1mx3.9**/16, **mbtmp3.9**/5, **MS3.4**/1, **Ms1 3.4**/1, **ms1mx2.6**/29, **Error ellipse: s-maj=191.9km s-min=28.8km az=162.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.82**	**264**	*e*P		Pn	00 04 59.6	+0.7
DZM				*e*S		Sn	00 05 31.5	-2.2
AFI	**Afiamalu**	**19.48**	**69**	LR		LR	00 14 51.7	
comp=Z,107nm,21.1s,baz=50,slow=33								
CTA	**Charters Tower**	**21.75**	**270**	P		P	00 09 06.8	+1.0
2.5nm,0.7s,baz=97,slow=12,SNR=8.7								
ASAR	**Alice Springs**	**32.81**	**260**	P		P	00 10 48.2	+0.4
1.7nm,0.8s,baz=81,slow=8.7,SNR=13								
WRA	**Warramunga Arr**	**32.84**	**267**	P		P	00 10 47.1	-1.0
0.6nm,0.8s,baz=104,slow=8.1,SNR=3.2								
FITZ	**Fitzroy Crossi**	**41.26**	**267**	P		P	00 11 59.9	+0.1
2.1nm,1.0s,baz=86,slow=12,SNR=3.8								
NVAR	**Mina Array Bea**	**90.32**	**48**	P		P	00 17 16.4	+0.8
0.8nm,0.7s,baz=245,slow=7.2,SNR=4.6								
GERES	**GERESS Array B**	**146.82**	**330**	PKPbc		PKPbc	00 23 55.4	-1.2
0.3nm,0.5s,baz=15,slow=4.1,SNR=2.3								

*ISCJB **28** 00:34:43.8 ± 0.7, 39°87'N ± 0°03' × 42°56'E ± 0°04', h3km ± 7km, Error ellipse: s-maj=7.1km s-min=4.1km az=43.6*
*ISK **28** 00:34:43.9, 39°87'N × 42°60'E, h11km, MD2.8*
*CSEM **28** 00:34:43.2 ± 0.1, 39°85'N × 42°57'E, h10km, MD2.8, Error ellipse: s-maj=4.0km s-min=2.3km az=46.0*
*DDA **28** 00:34:44.7, 39°96'N × 42°64'E, h7km ± 6km, Md2.7*
ISC 28 00:34:44.5 ± 0.6, **3985N** ± 004' × **4256E** ± 004, **h12**km ± 5km, **n14**, σ0§**73**/24, **4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AGRB	**Hanur-Agry**	**0.43**	**130**	*e*PG		**Pg**	**00 34 52.7**	**-0.3**
AGRB				*e*SG		**Sg**	**00 34 59.1**	**+0.3**
DIGO	**Kars**	**0.84**	**48**	⇓*i*P		**Pg**	**00 34 59.8**	**-1.0**
DIGO				*i* S		**Sg**	**00 35 14.7**	**+3.0**
KARS	**Kars**	**0.86**	**28**	*e*PG		**Pg**	**00 35 00.8**	**-0.3**
KARS				*e*SG		**Sg**	**00 35 12.3**	**-0.1**
ERZM	**Erzurum**	**0.92**	**274**	⇓*i*P		**Pb**	**00 35 02.2**	**-0.2**
ERZM				*i* S		**Sb**	**00 35 19.1**	**+4.6**
DYDN	**Diyadin**	**0.92**	**109**	*e*P		**Pb**	**00 35 01.9**	**-0.5**
DYDN				*e*S		**Sb**	**00 35 15.5**	**+1.0**
EZM	**Erzurum**	**0.92**	**274**	*e*PG		**Pg**	**00 35 02.6**	**+0.3**
DDEM	**Demirkent**	**1.21**	**329**	⇓*i*P		**Pn**	**00 35 06.1**	**-1.1**
DDEM				*i* S		**Sb**	**00 35 23.6**	**+0.8**
CLDR	**Caldiran**	**1.27**	**124**	*e*PN		**Pn**	**00 35 07.3**	**-0.6**
CLDR	**Caldiran**	**1.27**	**124**	*e*Pn		**Pn**	**00 35 07.3**	**-0.6**
DAGI	**Agillar**	**1.32**	**338**	⇓*i*P		**Pn**	**00 35 08.1**	**-0.6**
DAGI				*e*S		**Sb**	**00 35 25.3**	**-0.7**
DBAD	**Bademkaya**	**1.34**	**331**	*e*P		**Pn**	**00 35 08.6**	**-0.3**
DBAD				*e*S		**Sn**	**00 35 27.4**	**+0.8**
KOPT	**Kop Dagi**	**1.59**	**277**	*e*P		**Pg**	**00 35 15.8**	**+0.7**
KOPT				*e*S		**Sg**	**00 35 43.6**	**+7.8**
DBOC	**Borcka**	**1.64**	**336**	*i* P		**Pn**	**00 35 13.8**	**+0.7**
DBOC				*i* S		**Sg**	**00 35 37.1**	**-0.1**
GNI	**Garni**	**1.70**	**79**	*e*PN		**Pn**	**00 35 14.0**	**+0.1**

*MOS **28** 00:34:56.6 ± 0.9, 23°71'S × 179°69'W, h501km, mb5.0/6, Error ellipse: s-maj=19.6km s-min=11.8km az=168.4*
*ISCJB **28** 00:34:57.5 ± 0.8, 23°90'S ± 0°06' × 179°74'W ± 0°06, h514km ± 10km, mb4.6/17, Error ellipse: s-maj=9.7km s-min=7.2km az=137.7*
*NEIC **28** 00:34:58.2 ± 0.7, 23°96'S × 179°70'W, h513km ± 8km, mb4.9/15, Error ellipse: s-maj=7.9km s-min=6.1km az=141.0*
*IDC **28** 00:34:59.2 ± 1.3, 23°91'S × 179°77'W, h515km ± 13km, mb3.8/11, mb1 3.9/11, mb1mx3.8/18, mbtmp3.8/11, Error ellipse: s-maj=16.5km s-min=11.9km az=5.0*
ISC 28 00:34:58.5 ± 0.7, **2397S** ± 006' × **17972W** ± 006, **h514**km ± 9km, **n84**, σ0§**99**/86, **mb4.6**/17, **1C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**5.50**	**163**	P		**P**	**00 36 30.8**	**+0.2**
245nm,0.3s,baz=95,slow=19,SNR=12								
RAO				S		**S**	**00 37 47.7**	**+1.7**
91nm,0.3s,baz=98,slow=24,SNR=6.2								
RAO	**Raoul Island**	**5.50**	**163**	P		**P**	**00 36 31.7**	**+1.1**
RAO				S		**S**	**00 37 47.7**	**+1.7**
AFI	**Afiamalu**	**12.51**	**38**	P		**P**	**00 37 36.4**	**-6.0**
16nm,0.3s,baz=103,slow=1.9,SNR=22								
AFI				S		**S**	**00 39 44.6**	**-13**
5.0nm,0.3s,baz=53,slow=22,SNR=3.9								
AFI	**Afiamalu**	**12.51**	**38**	*e*P		**P**	**00 37 37.8**	**-4.7**
AFI				*e*S		**S**	**00 39 47.3**	**-10**
MXZ	**Matakaoa Point**	**13.66**	**187**	P		**P**	**00 37 53.5**	**-0.7**
MKAZ	**Moumakai**	**13.82**	**197**	P		**P**	**00 37 57.7**	**+1.8**
PUZ	**Puketiti**	**14.17**	**187**	P		**P**	**00 37 58.7**	**-0.8**
URZ	**Urewera**	**14.50**	**190**	P		**P**	**00 38 01.0**	**-2.0**
29nm,0.3s,baz=338,slow=1.8,SNR=56								
URZ				S		**S**	**00 40 34.6**	**-0.7**
8.3nm,0.3s,baz=36,slow=23,SNR=11								
URZ	**Urewera**	**14.50**	**190**	P		**P**	**00 38 01.1**	**-2.0**
MWZ	**Matawai**	**14.52**	**189**	P		**P**	**00 38 04.0**	**+0.8**
KNZ	**Kokohu**	**15.17**	**188**	P		**P**	**00 38 11.4**	**+1.4**
FUNA	**Funafuti**	**15.39**	**356**	*e*P		**P**	**00 38 10.7**	**-1.9**
49nm,0.8s								
BKZ	**Black Stump Fm**	**15.49**	**191**	P		**P**	**00 38 11.8**	**-1.5**
WNVZ	**Wahianoa**	**15.82**	**193**	P		**P**	**00 38 16.5**	**-0.2**
MOVZ	**Moawhango**	**15.87**	**193**	P		**P**	**00 38 18.0**	**+0.8**
WAZ	**Wanganui**	**16.37**	**195**	P		**P**	**00 38 22.6**	**+0.2**
MRZ	**Mangatainoka R**	**17.11**	**192**	P		**P**	**00 38 26.5**	**-3.2**
KIW	**Kapiti Island**	**17.44**	**194**	P		**P**	**00 38 31.9**	**-0.9**
MRW	**Makara Radio**	**17.84**	**194**	P		**P**	**00 38 35.3**	**-1.1**
SNZO	**South Karori**	**17.91**	**194**	*e*P		**P**	**00 38 36.5**	**-0.6**
107nm,0.4s								
TCW	**Tory Channel**	**17.92**	**195**	P		**P**	**00 38 36.1**	**-1.0**
QRZ	**Quartz Range**	**18.03**	**199**	P		**P**	**00 38 38.9**	**+0.8**
NNZ	**Nelson**	**18.15**	**197**	P		**P**	**00 38 38.7**	**-0.5**
RAR	**Rarotonga**	**18.62**	**85**	P		**P**	**00 38 42.0**	**-1.8**
1.2nm,0.3s,baz=293,slow=6.6,SNR=3.1								
RAR	**Rarotonga**	**18.62**	**85**	P		**P**	**00 38 43.4**	**-0.4**
THZ	**Tophouse**	**18.79**	**197**	P		**P**	**00 38 44.9**	**-0.2**

DSZ	**Denniston Nort**	**19.09**	**200**	P		**P**	**00 38 48.4**	**+0.6**	
KHZ	**Kahutara**	**19.23**	**195**	P		**P**	**00 38 48.8**	**-0.4**	
LTZ	**Lake Taylor**	**19.91**	**198**	P		**P**	**00 38 53.5**	**-1.8**	
WVZ	**Waitaha Valley**	**20.63**	**200**	P		**P**	**00 39 01.7**	**-0.1**	
RPZ	**Rata Peaks**	**21.11**	**199**	P		**P**	**00 39 05.8**	**-0.4**	
	134nm,0.5s,baz=338,slow=1.6,SNR=49								
FOZ	**Fox Glacier**	**21.41**	**201**	P		**P**	**00 39 07.5**	**-1.3**	
LBZ	**Lake Benmore**	**21.98**	**200**	P		**P**	**00 39 12.6**	**-1.4**	
JCZ	**Jackson Bay**	**22.17**	**202**	P		**P**	**00 39 15.8**	**+0.1**	
ODZ	**Otahua Downs**	**22.45**	**198**	P		**P**	**00 39 17.5**	**-0.7**	
WHZ	**Wether Hill Ro**	**24.05**	**201**	P		**P**	**00 39 32.4**	**0.0**	
TBI	**Tubuai**	**27.70**	**95**	*e*P		**P**	**00 40 05.5**	**+0.5**	
	53nm,0.8s,mb5.2								
PAE	**Paea**	**28.82**	**83**	*e*P		**P**	**00 40 14.7**	**-0.2**	
	207nm,1.1s,mb5.7								
PAE	**Paea**	**28.82**	**83**	*e*P		**P**	**00 40 14.7**	**-0.2**	
PAE					pmax	pmax			
	comp=Z,207nm,1.1s,mb5.7								
PPT	**Papeete**	**28.86**	**83**	*e*P		**P**	**00 40 15.2**	**0.0**	
	comp=Z,24nm,1.2s,mb4.7								
PPT	**Papeete**	**28.86**	**83**	*e*P		**P**	**00 40 15.2**	**0.0**	
PPT					pmax	pmax			
	comp=Z,24nm,1.2s								
TIAR	**Tiarei**	**29.07**	**83**	*e*P		**P**	**00 40 17.1**	**0.0**	
	comp=Z,467nm,1.0s								
TVO	**Taravao**	**29.09**	**84**	*e*P		**P**	**00 40 17.1**	**-0.1**	
	comp=Z,234nm,0.8s								
TVO	**Taravao**	**29.09**	**84**	*e*P		**P**	**00 40 17.1**	**-0.1**	
TVO					pmax	pmax			
	comp=Z,234nm,0.8s								
CTA	**Charters Tower**	**31.73**	**270**	⇓*i*P		**P**	**00 40 41.3**	**+1.3**	
	comp=Z,29nm,0.4s,mb5.2								
CTA	**Charters Tower**	**31.73**	**270**	P		**P**	**00 40 41.0**	**+1.0**	
	comp=Z,37nm,0.4s,mb5.3,baz=95,slow=11,SNR=74								
CTA	**Charters Tower**	**31.73**	**270**	⇓*i*P		**P**	**00 40 41.3**	**+1.3**	
CTA					pmax	pmax			
	comp=Z,29nm,0.4s								
CTAO	**Charters Tower**	**31.73**	**270**	*e*P		**P**	**00 40 41.2**	**+1.2**	
CTAO				*e**PP			00 42 04.9		
CTAO					pmax	pmax			
	comp=Z,40nm,0.6s,mb5.1								
CTAO	**Charters Tower**	**31.73**	**270**	*e*P		**P**	**00 40 41.2**	**+1.2**	
	comp=Z,40nm,0.6s,mb5.1								
CTAO				*e*pP			00 42 04.9		
TAU	**Tasmania Unive**	**33.08**	**227**	*e*P		**P**	**00 40 52.8**	**+1.7**	
TAU					pmax	pmax			
	comp=Z,22nm,0.6s,mb4.9								
TAU	**Tasmania Unive**	**33.08**	**227**	*e*P		**P**	**00 40 52.8**	**+1.6**	
	comp=Z,22nm,0.6s,mb4.9								
PMG	**Port Moresby**	**34.76**	**289**	*e*P		**P**	**00 41 06.3**	**+0.6**	
PMG					pmax	pmax			
	comp=Z,26nm,0.8s								
PMG	**Port Moresby**	**34.76**	**289**	*e*P		**P**	**00 41 06.3**	**+0.7**	
	comp=Z,26nm,0.8s,mb4.8								
STKA	**Stephens Creek**	**34.94**	**248**	P		**P**	**00 41 08.3**	**+1.3**	
	comp=Z,3.0nm,0.5s,mb4.0,baz=92,slow=8.0,SNR=8.1								
STKA	**Stephens Creek**	**34.94**	**248**	*e*P		**P**	**00 41 07.6**	**+0.6**	
ASAR	**Alice Springs**	**42.28**	**261**	P		**P**	**00 42 07.5**	**+0.8**	
	comp=Z,6.2nm,0.8s,mb4.2,baz=96,slow=7.3,SNR=47								
ASAR					S	**S**	**00 47 50.0**	**0.0**	
	comp=Z,2.2nm,0.9s,baz=98,slow=16,SNR=4.6								
WB2	**Warramunga Arr**	**42.65**	**266**	⇓*i*P		**P**	**00 42 09.7**	**+0.1**	
WRAB	**Tennant Creek**	**42.65**	**266**	*e*P		**P**	**00 42 09.5**	**-0.2**	
WRAB					pmax	pmax			
	comp=Z,12nm,0.8s,mb4.5								
WRAB	**Tennant Creek**	**42.65**	**266**	*e*P		**P**	**00 42 09.5**	**-0.1**	
	comp=Z,12nm,0.8s,mb4.5								
WRA	**Warramunga Arr**	**42.66**	**266**	P		**P**	**00 42 09.9**	**+0.1**	
	comp=Z,19nm,0.6s,mb4.8,baz=102,slow=8.2,SNR=114								
WRA					S	**S**	**00 47 53.4**	**-2.1**	
	comp=Z,2.3nm,1.0s,baz=105,slow=14,SNR=6.2								
FORT	**Forrest**	**46.53**	**250**	*e*P		**P**	**00 42 39.4**	**0.0**	
	comp=Z,21nm,0.7s,mb4.8								
FITZ	**Fitzroy Crossi**	**51.08**	**266**	*e*P		**P**	**00 43 13.5**	**+0.1**	
	comp=Z,11nm,0.8s,mb4.2								
FITZ	**Fitzroy Crossi**	**51.08**	**266**	P		**P**	**00 43 13.5**	**+0.1**	
	comp=Z,6.6nm,0.8s,mb4.0,baz=107,slow=8.8,SNR=14								
SBA	**Scott Base**	**54.33**	**183**	*e*P		**P**	**00 43 38.9**	**+3.2**	
	comp=Z,30nm,1.2s,mb4.5								
BATI	**Baumata**	**55.49**	**274**	P		**P**	**00 43 45.9**	**+1.1**	
	comp=Z,13nm,0.3s,mb4.7,baz=60,slow=4.0,SNR=3.6								
MBWA	**Marble Bar**	**55.62**	**260**	*e*P		**P**	**00 43 45.7**	**+0.1**	
CASY	**Casey**	**60.16**	**206**	⇑*i*P		**P**	**00 44 16.3**	**+0.6**	
QSPA	**South Pole Qui**	**66.12**	**180**	P		**P**	**00 44 56.0**	**+2.2**	
	comp=Z,8.0nm,0.8s,mb4.3,baz=26,slow=1.3,SNR=50								
MAW	**Mawson**	**77.78**	**200**	P		**P**	**00 46 03.3**	**+1.5**	
	comp=Z,3.4nm,0.7s,mb3.8,baz=129,slow=6.6,SNR=11								
MAW	**Mawson**	**77.78**	**200**	*e*P		**P**	**00 46 03.0**	**+1.2**	
	comp=Z,3.5nm,0.6s,mb3.9								
PMSA	**Palmer Station**	**78.75**	**157**	P		**P**	**00 46 08.8**	**+1.7**	
PETK	**Petropavlovsk-**	**79.22**	**346**	P		**P**	**00 46 09.4**	**-0.2**	
	comp=Z,1.6nm,0.6s,baz=120,slow=7.1,SNR=4.9								
COCO	**West Island**	**79.23**	**261**	*e*P		**P**	**00 46 10.2**	**-0.4**	
SNAA	**Sanae**	**84.60**	**179**	*e*P		**P**	**00 46 37.4**	**+0.5**	
	comp=Z,0.4nm,0.4s								
NVAR	**Mina Array Bea**	**84.62**	**44**	P		**P**	**00 46 37.5**	**0.0**	
	comp=Z,0.5nm,0.6s,baz=222,slow=11,SNR=4.2								
CHTO	**Chiang Mai**	**89.94**	**291**	P		**P**	**00 47 02.1**	**-1.0**	
TRF	**Thorofare Moun**	**90.16**	**13**	*e*P		**P**	**00 47 02.4**	**-0.6**	
TXAR	**Lajitas Array**	**90.25**	**58**	P		**P**	**00 47 05.4**	**+1.2**	
	comp=Z,1.7nm,0.7s,mb4.0,baz=214,slow=7.1,SNR=20								
TRQA	**Tornquist**	**95.06**	**135**	P		**P**	**00 47 25.9**	**-0.3**	
ARCES	**ARCESS Array B**	**132.00**	**348**	PKP		PKPdf	00 53 11.4	-1.1	
	comp=Z,6.3nm,1.1s,baz=10,slow=7.5,SNR=4.0								
NOA	**NORSAR Array B**	**142.19**	**351**	PKP		PKPdf	00 53 29.8	-1.6	
	comp=Z,0.4nm,0.7s,baz=0.0,slow=1.8,SNR=3.3								
AKASG	**Malin Array Be**	**145.16**	**327**	PKPbc		PKPbc	00 53 36.7	-1.1	
	comp=Z,0.4nm,0.3s,baz=37,slow=4.3,SNR=4.2								
AKASG				SKPbc		SKPbc	00 56 28.1	+0.2	
	comp=Z,0.7nm,0.3s,baz=39,slow=3.0,SNR=5.3								
AKASG	**Malin Array Be**	**145.16**	**327**	PKPbc		PKPbc	00 53 36.7	-1.1	
AKASG				SKPbc		SKPbc	00 56 28.1	+0.2	
TORD	**Torodi Ar. Bea**	**169.16**	**187**	PKPab		PKPab	00 55 22.6	+0.2	
	comp=Z,0.2nm,0.5s,baz=168,slow=3.3,SNR=6.5								

*BJI **28** 00:36:53.2, 1257N×141.96E, h29km, mB5.0, mb4.8, Ms5.2, Ms2.5.1*
*MOS **28** 00:36:53.2±0.9, 1246N×141.89E, h33km, mb5.0/14, Error ellipse: s-maj=14.9km s-min=8.5km az=105.6*
*ISCJB **28** 00:36:56.6±2.1, 1242N±006×142.1E±0.1, h71km±21km, mb4.5/32, Error ellipse: s-maj=18.2km s-min=9.5km az=2.6*
*NEIC **28** 00:36:57.9±1.5, 1242N×142.09E, h65km±15km, mb4.7/10, Error ellipse: s-maj=13.3km s-min=7.4km az=86.0*
*IDC **28** 00:36:58.1±3.3, 1244N×142.11E, h66km±33km, mb3.9/7, mb1 4.1/8, mb1mx3.9/19, mbtmp4.0/8, ML4.0/1, MS3.6/4, Ms1 3.6/4, ms1mx3.1/43, Error ellipse: s-maj=29.2km s-min=18.6km az=76.0*

ISC 28 00:36:57.8±2.0, 1242N±006×1421E±01, h64km±21km, n57, σ0°85/52, mb4.6/32, 6C-2D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.96**	**67**	P	**Pn**	**00 37 42.4**	**0.0**
	22nm,0.3s,baz=198,slow=9.7,SNR=15						
GUMO				S	**Sn**	**00 38 22.2**	**+5.4**
	baz=34,slow=18,SNR=3.0						
CBIJ	**Chichi jima**	**14.60**	**0**	LR	LR	00 45 23.8	
	comp=Z,158nm,19.4s,baz=136,slow=35						
JOW	**Kunigami**	**19.33**	**320**	LR	LR	00 46 55.2	
	comp=Z,218nm,20.9s,baz=113,slow=31						
PMG	**Port Moresby**	**22.26**	**167**	*e*P	**P**	**00 41 49.7**	**0.0**
MJAR	**Matsushiro Arr**	**24.27**	**352**	LR	LR	00 50 28.4	
	comp=Z,163nm,21.8s,baz=165,slow=33						
KSRS	**Korea Array**	**27.97**	**335**	LR	LR	00 52 11.5	
	comp=Z,119nm,21.6s,baz=184,slow=33						
CTAO	**Charters Tower**	**32.56**	**173**	*e*P	**P**	**00 43 22.8**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
CTAO	**Charters Tower**	**32.56**	**173**	*e*P	**P**	**00 43 22.8**	**-0.3**
	comp=Z,6.5nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**33.03**	**193**	*e*P	**P**	**00 43 29.2**	**+2.0**
WRAB				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
WRAB	**Tennant Creek**	**33.03**	**193**	*e*P	**P**	**00 43 29.2**	**+1.9**
	comp=Z,19nm,1.1s,mb4.9						
WB2	**Warramunga Arr**	**33.04**	**193**	*e*P	**P**	**00 43 27.0**	**-0.3**
WRA	**Warramunga Arr**	**33.05**	**193**	P	**P**	**00 43 26.9**	**-0.4**
	comp=Z,4.5nm,0.9s,mb4.4,baz=11,slow=9.2,SNR=9.2						
FITZ	**Fitzroy Crossi**	**34.39**	**208**	P	**P**	**00 43 37.3**	**-1.8**
HABR	**Khabarovsk**	**36.42**	**352**	*e*P	**P**	**00 43 55.3**	**-0.8**
HABR				*e*		00 45 21.7	
ASAR	**Alice Springs**	**36.74**	**193**	P	**P**	**00 44 00.1**	**+1.0**
	comp=Z,0.7nm,0.5s,mb3.8,baz=20,slow=12,SNR=6.3						
CD2	**Chengdu**	**39.83**	**304**	P	**P**	**00 44 24.0**	**-1.1**
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
CD2				AMB	AMB		
	comp=Z,40nm,6.8s						
CM31	**Chiang Mai Arr**	**41.93**	**284**	*e*P	**P**	**00 44 41.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**41.93**	**284**	P	**P**	**00 44 42.8**	**+0.2**
	comp=Z,22nm,0.4s,mb4.1,baz=86,slow=6.7,SNR=8.3						
CMAR	**Chiang Mai Arr**	**41.93**	**284**	⇑*e*P	**P**	**00 44 42.7**	**+0.1**
PET	**Petropavlovsk**	**42.62**	**15**	⇑*e*P	**P**	**00 44 48.7**	**+1.0**
PET				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.7						
ULN	**Ulaanbaatar**	**45.84**	**327**	*e*P	**P**	**00 45 14.1**	**+0.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
ULN	**Ulaanbaatar**	**45.84**	**327**	*e*P	**P**	**00 45 14.1**	**+0.6**
	comp=Z,3.1nm,0.9s,mb4.2						
GTA	**Gaotai**	**45.95**	**314**	*e*P	**P**	**00 45 14.8**	**+0.2**
GTA				AP	pP	00 45 19.5	-11
GTA				XP	sP	00 45 22.3	-16
GTA				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.6						
GTA				LR	LR		
	comp=N,606nm,9.6s						
GTA				LR	LR		
	comp=E,744nm,11.1s						
GTA				LR	LR		
	comp=Z,1μm,10.5s						
SONM	**Songino Array**	**46.17**	**327**	P	**P**	**00 45 15.7**	**-0.3**
	comp=Z,0.8nm,0.6s,mb3.8,baz=126,slow=7.5,SNR=4.5						
BOD	**Bodaibo**	**50.07**	**341**	*e*P	**P**	**00 45 45.5**	**-0.5**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.3						
YAK	**Yakutsk**	**50.34**	**352**	⇑*e*P	**P**	**00 45 48.5**	**+0.6**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
SEY	**Seymchan**	**50.97**	**6**	⇑*e*P	**P**	**00 45 54.1**	**+1.4**
HVS	**Khovu-Aksy**	**54.92**	**325**	*e*P	**P**	**00 46 23.2**	**+1.2**
HVS				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.4						
WMQ	**Urumqi**	**56.00**	**315**	P	**P**	**00 46 30.5**	**+0.6**
WMQ				AMB	AMB		
	comp=Z,16nm,1.5s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,782nm,4.4s						
BILL	**Bilibino**	**57.78**	**10**	*e*P	**P**	**00 46 42.0**	**-0.1**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
TIXI	**Tiksi**	**59.74**	**355**	⇑*e*P	**P**	**00 46 54.6**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
MKAR	**Makanchi Array**	**60.46**	**317**	P	**P**	**00 47 01.6**	**+0.7**
	comp=Z,4.0nm,0.7s,mb4.6,baz=94,slow=8.3,SNR=31						
ZAA0	**Zalesovo Array**	**61.01**	**325**	*e*P	**P**	**00 47 03.6**	**-0.9**
ZALV	**Zalesovo Beam**	**61.01**	**325**	P	**P**	**00 47 04.5**	**-0.1**
	comp=Z,1.6nm,0.6s,mb4.3,baz=101,slow=7.7,SNR=8.9						
NVS	**Novosibirsk**	**62.18**	**326**	⇑*i*P	**P**	**00 47 11.9**	**-0.5**
NVS				pmax	pmax		
	comp=N,7.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,16nm,1.4s						
NVS				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.0						
KURK	**Kurchatov**	**63.74**	**321**	*e*P	**P**	**00 47 23.2**	**+0.3**
KURK				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
KURK	**Kurchatov**	**63.74**	**321**	*e*P	**P**	**00 47 23.2**	**+0.4**
	comp=Z,20nm,0.9s,mb5.1						
UCH	**Uchtor**	**65.16**	**311**	*e*P	**P**	**00 47 32.9**	**+0.6**
	comp=Z,8.3nm,1.1s,mb4.7						
AML	**Almayashu**	**65.76**	**311**	*e*P	**P**	**00 47 37.5**	**+1.3**
	comp=Z,8.1nm,1.3s,mb4.6						
VOSK	**Vostochnaya**	**68.77**	**322**	P	**P**	**00 47 54.2**	**-0.8**
VOSK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
PMR	**Palmer**	**69.11**	**29**	P	**P**	**00 47 57.5**	**+0.6**
KBL	**Kabul**	**69.15**	**302**	*e*P	**P**	**00 47 58.9**	**+1.1**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
KBL	**Kabul**	**69.15**	**302**	*e*P	**P**	**00 47 58.9**	**+1.1**
	comp=Z,7.5nm,0.9s,mb4.6						
BVA0	**Borovoye Array**	**69.16**	**322**	*i* P	**P**	**00 47 56.8**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BRVK	**Borovoye**	**69.23**	**322**	*e*P	**P**	**00 47 58.5**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
BRVK	**Borovoye**	**69.23**	**322**	*e*P	**P**	**00 47 58.5**	**+0.6**
	comp=Z,20nm,0.8s,mb5.1						
COLD	**Coldfoot**	**70.06**	**23**	*e*P	**P**	**00 48 00.1**	**-2.7**
	comp=Z,5.5nm,0.7s,mb4.6						
DAWY	**Dawson**	**73.90**	**27**	*e*P	**P**	**00 48 25.1**	**-0.7**
SVE	**Sverdlovsk**	**75.02**	**326**	⇓*e*P	**P**	**00 48 32.7**	**+0.3**
SVE				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
AB31	**Akbulak array**	**75.58**	**318**	*i* P	**P**	**00 48 35.4**	**-0.4**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
ARU	**Arti**	**76.17**	**325**	*d i*P	**P**	**00 48 38.9**	**-0.1**
ARU				*e*		00 48 46.5	
ARU				*e*		00 51 30.3	
ARU				*e*PPP		00 53 23.0	
ARU				*e*S	S	00 58 08.9	-9.1
ARU				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.8						
ARU	**Arti**	**76.17**	**325**	*e*P	**P**	**00 48 39.0**	**0.0**
	comp=Z,12nm,0.8s,mb4.9						
AKTO	**Aktyubinsk**	**76.77**	**319**	P	**P**	**00 48 41.4**	**-1.1**
ARCES	**ARCESS Array B**	**87.34**	**342**	P	**P**	**00 49 37.6**	**+0.1**
	comp=Z,3.0nm,0.8s,mb4.6,baz=59,slow=7.5,SNR=4.6						
NVAR	**Mina Array Bea**	**89.77**	**51**	P	**P**	**00 49 55.1**	**+5.5**
	comp=Z,0.3nm,0.5s,mb3.9,baz=306,slow=6.6,SNR=3.7						
CFAA	**Coronel Fontan**	**146.20**	**129**	PKPbc	PKPbc	00 56 32.6	+1.0
	comp=Z,0.3nm,0.9s,baz=236,slow=3.5,SNR=3.0						
LPAZ	**La Paz**	**150.50**	**101**	PKPbc	PKPbc	00 56 42.4	-0.9
	comp=Z,0.7nm,0.6s,baz=228,slow=2.6,SNR=5.3						

*ISCJB **28** 00:37:08.7±0.4, 4793N±002×16.17E±003, h5km±4km, Error ellipse: s-maj=3.4km s-min=2.8km az=37.1*
*VIE **28** 00:37:09.9±0.2, 4785N×1627E, h10km±1km, mb1.9/4, ML2.6/6, Error ellipse: s-maj=1.6km s-min=1.3km az=148.0*
*CSEM **28** 00:37:10.8±0.1, 4788N×1622E, h5km, ML3.2/9, Error ellipse: s-maj=2.2km s-min=1.5km az=155.0*
*PRU **28** 00:37:10.1, 4790N×1619E, h0km*
*IPEC **28** 00:37:10.1±0.1, 4785N×1629E, h14km±1km, ML2.2/2, Error ellipse: s-maj=0.9km s-min=0.7km az=111.0*

ISC 28 00:37:09.9±0.4, 4790N±002×1624E±003, h10km±3km, n28, σ1°19/52, 4C-9D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONA	**Conrad Observa**	**0.26**	**278**	⇓*e*Pg	**Pg**	**00 37 16.1**	**+1.0**
CONA	13nm,0.1s,SNR=136			⇓*i*Sg	**Sg**	**00 37 19.9**	**+1.4**
	20nm,0.1s						
CSNA	**Conrad Observa**	**0.26**	**278**	⇑*i*Pg	**Pg**	**00 37 16.1**	**+1.0**
CSNA	28nm,0.1s			⇓*i*Sg	**Sg**	**00 37 20.0**	**+1.4**
	116nm,0.1s						
SOP	**Sopron**	**0.30**	**134**	*e*Pg	**Pg**	**00 37 15.3**	**-0.6**
ZST	**Bratislava**	**0.65**	**62**	*e*Pg	**Pg**	**00 37 23.1**	**+0.5**
ZST				*e*Sg	**Sg**	**00 37 33.2**	**+2.1**
ARSA	**Arzberg**	**0.81**	**217**	⇓*e*Pg	**Pg**	**00 37 24.7**	**-0.7**
ARSA	4.9nm,0.1s,SNR=19			⇓*i*Sg	**Sg**	**00 37 35.5**	**-0.4**
	50nm,0.3s						
MODS	**Modra-Piesok**	**0.85**	**55**	*e*Pg	**Pg**	**00 37 27.1**	**+0.9**
MODS				*e*Sg	**Sg**	**00 37 39.8**	**+2.6**
KRUC	**Moravsky**	**1.17**	**5**	*e*Pg	**Pg**	**00 37 32.7**	**+0.3**
KRUC				*e*Sg	**Sg**	**00 37 48.9**	**+1.2**
	29nm,0.1s						
MOA	**Molln**	**1.33**	**269**	⇑*e*Pn	**Pn**	**00 37 35.1**	**+0.7**
	4.5nm,0.1s,SNR=31						
MOA				⇓*i*Sn	**Sn**	**00 37 54.0**	**+1.8**
MOA				⇓*i*Sg	**Sg**	**00 37 54.5**	**+1.9**
	30nm,0.2s						
MOA	**Molln**	**1.33**	**269**	*e*Pg	**Pg**	**00 37 35.2**	**-0.2**
MOA				*e*Sg	**Sg**	**00 37 53.4**	**+0.8**
MOA				Sn	**Sn**	**00 37 54.0**	**+1.8**
VRAC	**Vranov**	**1.43**	**9**	*e*Pg	**Pg**	**00 37 36.5**	**-0.9**
VRAC				*e*Sg	**Sg**	**00 37 55.6**	**-0.4**
	22nm,0.2s						
KOGS	**Kog**	**1.45**	**180**	*i* Pg	**Pg**	**00 37 35.5**	**-2.1**
PERS	**Pernice**	**1.47**	**212**	*i* Pg	**Pg**	**00 37 37.8**	**-0.3**
PERS				*i* Sg	**Sg**	**00 37 55.8**	**-1.5**
PERS							
	comp=Z,10.0nm,0.3s						
TREC	**Trest**	**1.49**	**341**	*e*PG	**Pg**	**00 37 37.9**	**-0.5**
TREC				*e*SG	**Sg**	**00 37 57.8**	**+0.1**
KOLL	**Kolacno**	**1.60**	**64**	*e*Pn	**Pn**	**00 37 38.1**	**-0.1**
KOLL				*e*Sn	**Sn**	**00 37 57.2**	**-1.7**
OBKA	**Obir**	**1.80**	**220**	⇑*i*Pn	**Pn**	**00 37 40.9**	**-0.1**
OBKA				⇓*i*Pg	**Pg**	**00 37 44.5**	**+0.1**
	comp=Z,2.9nm,0.3s						
OBKA				⇓*i*Sn	**Sn**	**00 38 04.6**	**+0.8**
OBKA				⇓*i*Sg	**Sg**	**00 38 08.4**	**+0.6**
	comp=Z,9.4nm,0.5s						
VYHS	**Vyhne**	**1.84**	**70**	*e*PN	**Pn**	**00 37 40.9**	**-0.6**
VYHS				*e*PG	**Pg**	**00 37 45.7**	**+0.5**
VYHS				*e*SN	**Sn**	**00 38 03.7**	**-1.1**
VYHS				*e*SG	**Sg**	**00 38 12.1**	**+3.1**
VYHS	**Vyhne**	**1.84**	**70**	*e*Pn	**Pn**	**00 37 40.9**	**-0.6**
MORC	**Moravsky Berou**	**2.07**	**24**	*e*Pn	**Pn**	**00 37 45.6**	**+0.9**
KHC	**Kasperske Hory**	**2.16**	**306**	*e*PG	**Pg**	**00 37 49.5**	**-1.7**
KHC				*e*SN	**Sn**	**00 38 15.0**	**+2.4**
KHC				*e*SG	**Sg**	**00 38 18.9**	**-0.3**
	comp=Z,13nm,0.3s						
PKSM	**Moragy**	**2.35**	**135**	*e*Pn	**Pn**	**00 37 47.2**	**-1.3**
PRU	**Pruhonice**	**2.38**	**333**	*e*PG	**Pg**	**00 37 53.1**	**-2.3**
PRU				*ex*	x	00 38 21.2	
PRU				*e*SG	**Sg**	**00 38 25.0**	**-1.2**
	comp=Z,18nm,0.4s						
DPC	**Dobruska-Polom**	**2.46**	**1**	*e*SG	**Sg**	**00 38 28.8**	**0.0**
	comp=Z,12nm,0.7s						
PVCC	**Panska Ves**	**2.85**	**338**	*e*PG	**Pg**	**00 38 02.2**	**-2.4**
PVCC				*e*SG	**Sg**	**00 38 40.8**	**-0.7**
	comp=Z,28nm,0.5s						
BRG	**Berggiesshubel**	**3.34**	**334**	SG	**Sg**	**00 38 55.9**	**-1.1**
	comp=Z,10nm,0.6s						
NKC	**Novy Kostel**	**3.42**	**315**	*e*SG	**Sg**	**00 38 59.1**	**-0.5**
	comp=Z,12nm,0.3s						
STHS	**Stebnicka Huta**	**3.65**	**63**	*e*Pn	**Pn**	**00 38 08.0**	**+1.6**
CLL	**Collm**	**4.01**	**330**	*e*Sg	**Sg**	**00 39 17.0**	**-1.6**
MOX	**Moxa**	**4.09**	**314**	*e*SG	**Sg**	**00 39 21.6**	**+0.4**

*ISCJB **28** 00:39:09.8±0.6, 4159N±003×4397E±004, h10km, Error ellipse: s-maj=5.1km s-min=4.1km az=138.5*
*MOS **28** 00:39:11.9±1.9, 4211N×4272E, h9km, mb3.7/1, Error ellipse: s-maj=51.1km s-min=18.6km az=45.5*

ISC 28 00:39:10.2±0.6, 4160N±003×4395E±004, h10km, n16, σ0°89/25, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOR	**Gori**	**0.40**	**17**	P	**Pg**	**00 39 17.9**	**-0.2**
GOR				S	**Sg**	**00 39 24.4**	**+0.9**
TBLG	**Delisi**	**0.60**	**77**	P	**Pg**	**00 39 21.4**	**-0.5**
TBLG				S	**Sg**	**00 39 30.4**	**+0.5**
MTA	**Mtatsminda**	**0.64**	**81**	P	**Pg**	**00 39 22.1**	**-0.5**
MTA				S	**Sg**	**00 39 31.0**	**+0.1**
ONI	**Oni**	**1.05**	**339**	P	**Pg**	**00 39 29.1**	**-1.3**
ONI				S	**Sg**	**00 39 43.9**	**-0.1**
DGRG	**David-gareji**	**1.08**	**97**	P	**Pg**	**00 39 24.4**	**-6.5**
DGRG				S	**Sg**	**00 39 30.4**	**-15**
ZEI	**Tsey**	**1.17**	**358**	*e*PG	**Pg**	**00 39 32.2**	**-0.5**
ZEI				*e*S	**Sb**	**00 39 47.4**	**-0.3**
LACR	**Lac**	**1.25**	**12**	*e*PG	**Pg**	**00 39 33.0**	**-1.2**
DIGO	**Kars**	**1.26**	**200**	*i* P	**Pn**	**00 39 32.9**	**-1.0**
KORR	**Kora**	**1.49**	**3**	*e*PG	**Pg**	**00 39 37.7**	**-1.1**
KORR				*e*S	**Sn**	**00 39 56.9**	**+0.4**
ARTV	**Artvin**	**1.58**	**255**	*e*P	**Pn**	**00 39 38.7**	**+0.5**
ARNR	**Ardon**	**1.61**	**9**	*e*PG	**Pg**	**00 39 40.7**	**-0.3**
ARNR				*e*S	**Sn**	**00 40 02.2**	**+2.8**
DAGI	**Agillar**	**1.62**	**252**	*e*P	**Pn**	**00 39 39.0**	**+0.2**
DBOC	**Borcka**	**1.74**	**262**	*i* P	**Pn**	**00 39 40.7**	**+0.3**
DBAD	**Bademkaya**	**1.80**	**252**	*e*P	**Pn**	**00 39 41.9**	**+0.6**

IDC ***28*** *00:44:45.4±0.4,2127S×16928E,h0km,mb5.2/24, mb1 5.2/27,mb1mx5.2/28,mbtmp5.2/27,ML4.9/2,MS5.6/6, Ms1 5.6/6,ms1mx4.9/34,Error ellipse: s-maj=13.6km s-min=13.3km az=112.0*

ISCJB ***28*** *00:44:46.9±0.1,2134S±003×16925E±003,h16km, mb5.5/120,MS5.8/45,Error ellipse: s-maj=5.2km s-min=3.2km az=161.3*

BJI ***28*** *00:44:46.2,2108S×16947E,h8km,mB5.6,mb5.2,Ms6.1, Msz5.6*

BGS ***28*** *00:44:47.1±4.1,2128S×16926E,h10km,mb5.6(NEIC)*

NEIC ***28*** *00:44:47.1±0.1,2128S×16926E,h10km,mb5.6/72, MS5.8/26,Error ellipse: s-maj=6.2km s-min=4.1km az=154.0*

GCMT ***28*** *00:44:47.1±0.1,2133S×16927E,h14km,MW5.7/97, Moment Tensor Solution. s97,c177; s88,c178; Duration: 1ᵗ8 Moment tensor: Scale 10¹⁷Nm; Mrr2.49±.05; Mθθ0.70±.05; Mϕϕ-3.19±.05; Mrθ1.19±.12; Mrϕ0.65±.04; Mθϕ-3.41±.20; Best double couple: Mo4.63800×10¹⁷ NP1:ϕ₁4.00000°,δ20.00000°, λ111.00000°. NP2:ϕ₂162.00000°,δ71.00000°,λ82.00000°. Principal axes: T 4.2740, Plg63.0000°, Azm60.0000°; N 0.7300, Plg7.0000°, Azm164.0000°; P -5.0010, Plg26.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

LDG ***28*** *00:44:48.1±0.1,2082S×16896E,h10km,Mb5.7/4 Error ellipse: s-maj=30.0km s-min=11.1km az=31.0*

MOS ***28*** *00:44:50.8±1.1,2100S×16931E,h33km,mb5.7/47, MS5.6/10,Error ellipse: s-maj=11.8km s-min=8.9km az=97.8*

DJA ***28*** *00:45:14,2233S×16800E,h180km,Mw5.6/14*

ISC 28 00:44:46.0±1.5,2135S±004×16931E±003,h2km±9km, n976,σ0§66/643,mb5.5/120,MS5.8/45,199C-203D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.76**	**254**	*e*P		**Pn**	**00 45 30.8**	**-0.5**
RAO	**Raoul Island**	**13.97**	**127**	LR	LR		00 52 30.8	
	comp=Z,23μm,18.4s,baz=96,slow=33							
HNR	**Honiara**	**14.88**	**321**	P		**Pn**	**00 48 16.2**	**-1.4**
	7.5nm,0.3s,baz=152,slow=4.9,SNR=3.0							
HNR	**Honiara**	**14.88**	**321**	*e*P		**Pn**	**00 48 17.2**	**-0.4**
HNR				*e*			00 50 58.8	
HNR				pmax	pmax			
	comp=Z,779nm,1.2s							
HNR	**Honiara**	**14.88**	**321**	*e*Pn		**Pn**	**00 48 17.1**	**-0.4**
	comp=Z,779nm,1.2s							
HNR				*e*Sn		**Sn**	**00 50 58.8**	**-4.4**
FUNA	**Funafuti**	**15.91**	**38**	*e*Pn		**Pn**	**00 48 32.8**	**+1.6**
	comp=Z,325nm,1.4s							
FUNA				Sn		**Sn**	**00 51 30.2**	**+1.9**
URZ	**Urewera**	**18.15**	**160**	P		**Pn**	**00 49 01.4**	**+2.1**
	comp=Z,2.4nm,0.3s,baz=345,slow=6.8,SNR=45							
URZ				LR	LR		00 55 07.7	
	comp=Z,11μm,19.0s,baz=346,slow=34							
ARMA	**Armidale**	**18.28**	**237**	*e*P		**Pn**	**00 49 02.3**	**+1.4**
AFI	**Afiamalu**	**19.47**	**71**	P		**Pn**	**00 49 14.3**	**-1.1**
	comp=Z,2.8nm,0.3s,baz=276,slow=5.8,SNR=15							
AFI				LR	LR		00 55 22.6	
	comp=Z,21μm,18.7s,baz=250,slow=33							
AFI	**Afiamalu**	**19.47**	**71**	*e*P		**Pn**	**00 49 14.2**	**-1.2**
AFI				pmax	pmax			
	comp=Z,273nm,1.1s							
AFI	**Afiamalu**	**19.47**	**71**	*e*P		**Pn**	**00 49 14.2**	**-1.2**
	comp=Z,273nm,1.1s							
SNZO	**South Karori**	**20.42**	**168**	*e*P		**P**	**00 49 27.7**	**+3.3**
	comp=Z,206nm,1.0s							
SNZO				*e*S		**S**	**00 53 23.4**	**+10**
SNZO				LR	LR			
	comp=Z,13μm,19.0s,MS5.3							
CTA	**Charters Tower**	**21.60**	**269**	⇓*i*P		**P**	**00 49 38.9**	**+1.5**
	comp=Z,117nm,0.8s,mb5.4							
CTA				*e*S		**S**	**00 53 44.4**	**+6.9**
CTA	**Charters Tower**	**21.60**	**269**	P		**P**	**00 49 37.8**	**+0.3**
	comp=Z,94nm,0.7s,mb5.3,baz=94,slow=12,SNR=120							
CTA	**Charters Tower**	**21.60**	**269**	⇓*i*P		**P**	**00 49 38.9**	**+1.5**
CTA				*e*S		**S**	**00 53 44.4**	**+6.9**
CTA				pmax	pmax			
	comp=Z,117nm,0.8s							
CTAO	**Charters Tower**	**21.60**	**269**	*e*P		**P**	**00 49 38.7**	**+1.3**
CTAO				pmax	pmax			
	comp=Z,250nm,1.1s,mb5.6							
CTAO	**Charters Tower**	**21.60**	**269**	⇓*e*P		**P**	**00 49 39.0**	**+1.6**
	comp=Z,252nm,1.1s,mb5.6							
CTAO				*e*S		**S**	**00 53 40.1**	**+2.6**
CTAO				LR	LR			
	comp=Z,25μm,19.0s,MS5.6							
CNB	**Canberra Magne**	**22.35**	**227**	*e*P		**P**	**00 49 47.3**	**+2.0**
RPZ	**Rata Peaks**	**22.36**	**177**	P		**P**	**00 49 47.7**	**+2.5**
	comp=Z,51nm,0.9s,mb4.9,baz=47,slow=2.7,SNR=13							
CAN	**Canberra**	**22.60**	**228**	*e*P		**P**	**00 49 48.7**	**+0.7**
CAN				*e*S		**S**	**00 54 10.0**	**+13**
PMG	**Port Moresby**	**24.40**	**296**	⇑*e*P		**P**	**00 50 05.8**	**-0.1**
PMG	**Port Moresby**	**24.40**	**296**	*e*P		**P**	**00 50 06.1**	**+0.2**
PMG				*e*S		**S**	**00 54 21.4**	**-5.2**
PMG				LR	LR			
	comp=Z,11μm,21.0s,MS5.3							
COEN	**Coen**	**25.94**	**282**	⇓*e*P		**P**	**00 50 20.8**	**+0.8**
	comp=Z,29nm,0.8s,mb4.9							
TOO	**Toolangi**	**26.19**	**227**	*e*P		**P**	**00 50 23.5**	**+1.5**
TOO				*e*S		**S**	**00 55 04.4**	**+10**
STKA	**Stephens Creek**	**26.84**	**241**	⇓*i*P		**P**	**00 50 28.7**	**+0.7**
	comp=Z,125nm,1.9s,mb5.1							
STKA	**Stephens Creek**	**26.84**	**241**	P		**P**	**00 50 28.8**	**+0.8**
	comp=Z,39nm,0.9s,mb4.9,baz=73,slow=8.8,SNR=23							
STKA				LR	LR		01 00 24.7	
	comp=Z,21μm,20.0s,MS5.7,baz=71,slow=35							
STKA	**Stephens Creek**	**26.84**	**241**	*e*P		**P**	**00 50 28.5**	**+0.5**
STKA				*e*PcP	PcP		00 53 51.0	+0.3
MOO	**Moorlands**	**28.05**	**216**	*e*P		**P**	**00 50 40.2**	**+1.5**
TAU	**Tasmania Unive**	**28.29**	**215**	*e*P		**P**	**00 50 39.7**	**-1.1**
TAU				PcP	PcP		00 53 48.8	-5.2
TAU				*e*S		**S**	**00 55 31.0**	**+3.1**
TAU				LR	LR			
	comp=Z,11μm,19.0s,MS5.5							
RAR	**Rarotonga**	**28.79**	**95**	LR	LR		00 59 36.7	
	comp=Z,4μm,20.5s,MS5.1,baz=265,slow=31							
RAR	**Rarotonga**	**28.79**	**95**	*e*P		**P**	**00 50 43.5**	**-2.0**
RAR				*e*S		**S**	**00 55 26.5**	**-10**
RAR				MLR	MLR			
	comp=Z,5μm,19.0s							
WB2	**Warramunga Arr**	**32.71**	**266**	⇓*i*P		**P**	**00 51 18.4**	**-1.8**
WB2				*e*S		**S**	**00 56 30.4**	**-7.2**
WB2	**Warramunga Arr**	**32.71**	**266**	*e*P		**P**	**00 51 18.9**	**-1.3**
WB2				*e*S		**S**	**00 56 30.4**	**-7.2**
WRAB	**Tennant Creek**	**32.71**	**266**	*d*i P		**P**	**00 51 17.5**	**-2.7**
WRAB	**Tennant Creek**	**32.71**	**266**	⇓*e*P		**P**	**00 51 18.1**	**-2.1**
	comp=Z,32nm,0.7s,mb5.4							
WRAB				S		**S**	**00 56 38.2**	**+0.6**
WRAB				LR	LR			
	comp=Z,24μm,19.0s,MS5.9							
WRA	**Warramunga Arr**	**32.72**	**266**	P		**P**	**00 51 18.7**	**-1.5**
	comp=Z,11nm,0.5s,mb5.0,baz=96,slow=8.7,SNR=30							
WRA				LR	LR		01 04 55.0	
	comp=Z,21μm,18.9s,MS5.8,baz=95,slow=37							
ASAR	**Alice Springs**	**32.74**	**259**	P		**P**	**00 51 19.8**	**-0.7**
	comp=Z,40nm,0.8s,mb5.4,baz=80,slow=9.4,SNR=126							
FORT	**Forrest**	**38.05**	**247**	*e*P		**P**	**00 52 05.4**	**-0.7**
	comp=Z,55nm,0.6s,mb5.5							
TBI	**Tubuai**	**38.09**	**101**	*e*S		**S**	**00 57 58.5**	**-1.9**
	comp=Z,2μm,27.5s							
TBI				*e*LQ			01 00 50.3	
	comp=Z,11μm,27.5s							
TBI				*e*LR	LR		01 02 34.1	
	comp=Z,6μm,26.5s,baz=264							
PAE	**Paea**	**38.85**	**92**	*e*P		**P**	**00 52 14.0**	**+1.1**
PAE				*e*			00 54 23.5	
PAE				pmax	pmax			
	comp=Z,139nm,1.1s,mb5.6							
PAE	**Paea**	**38.85**	**92**	*e*P		**P**	**00 52 14.0**	**+1.1**
	comp=Z,139nm,1.1s,mb5.6							
PAE				*e*PcP	PcP		00 54 23.5	-0.7
PPT	**Papeete**	**38.87**	**92**	*e*PcP	PcP		00 54 24.5	+0.2
	comp=Z,32nm,1.1s							
PPT				*e*S		**S**	**00 58 08.1**	**-4.1**
	comp=Z,3μm,25.2s							
PPT				*e*LQ			01 01 09.8	
	comp=Z,12μm,27.2s							
PPT				*e*LR	LR		01 02 58.9	
	comp=Z,12μm,26.2s,baz=256							
TIAR	**Tiarei**	**39.09**	**92**	*e*PcP	PcP		00 54 25.1	+0.2
	comp=Z,334nm,0.9s							
FITZ	**Fitzroy Crossi**	**41.14**	**267**	⇓*i*P		**P**	**00 52 31.8**	**-0.2**
	comp=Z,187nm,0.6s,mb5.9							
FITZ	**Fitzroy Crossi**	**41.14**	**267**	P		**P**	**00 52 31.8**	**-0.1**
	comp=Z,49nm,0.5s,mb5.4,baz=118,slow=9.5,SNR=95							
GUMO	**Guam**	**42.21**	**323**	*e*P		**P**	**00 52 39.2**	**-1.4**
GUMO				*e*			00 54 39.6	
GUMO				S		**S**	**00 59 03.8**	**+2.0**
GUMO				pmax	pmax			
	comp=Z,165nm,1.0s,mb5.6							
GUMO				MLR	MLR			
	comp=Z,5μm,19.0s,MS5.5							
GUMO	**Guam**	**42.21**	**323**	*e*P		**P**	**00 52 39.1**	**-1.4**
	comp=Z,165nm,1.0s,mb5.6							
GUMO				*e*PcP	PcP		00 54 39.6	+4.7
GUMO				S		**S**	**00 59 03.8**	**+2.0**
GUMO				LR	LR			
	comp=Z,5μm,19.0s,MS5.5							
BATI	**Baumata**	**45.15**	**277**	P		**P**	**00 53 03.0**	**-1.5**
	comp=Z,57nm,0.7s,mb5.5,baz=136,slow=2.6,SNR=7.9							
MBWA	**Marble Bar**	**46.05**	**261**	*e*P		**P**	**00 53 11.2**	**-0.3**
	comp=Z,83nm,1.0s,mb5.6							
MBWA				*e*			00 55 00.7	
MBWA				*e*S		**S**	**01 00 03.3**	**+5.3**
MBWA				LR	LR			
	comp=Z,14μm,19.0s,MS5.9							
KLBR	**Kellerberrin**	**46.90**	**246**	*e*P		**P**	**00 53 16.4**	**-1.7**
	comp=Z,63nm,0.8s,mb5.6							
NWAO	**Narrogin (SRO)**	**47.34**	**244**	P		**P**	**00 53 20.9**	**-0.6**
	comp=Z,23nm,0.7s,mb5.2,baz=96,slow=7.8,SNR=13							
NWAO	**Narrogin (SRO)**	**47.34**	**244**	*e*P		**P**	**00 53 20.9**	**-0.6**
NWAO				*e*			00 54 49.4	
NWAO				S		**S**	**01 00 15.0**	**-1.2**
NWAO				pmax	pmax			
	comp=Z,65nm,0.9s							
NWAO				MLR	MLR			
	comp=Z,18μm,20.0s							
NWAO	**Narrogin (SRO)**	**47.34**	**244**	*e*P		**P**	**00 53 20.9**	**-0.6**
	comp=Z,66nm,0.9s,mb5.6							
NWAO				PcP	PcP		00 54 49.4	-3.0
NWAO				S		**S**	**01 00 15.0**	**-1.3**
NWAO				LR	LR			
	comp=Z,18μm,20.0s,MS6.0							
MUN	**Mundaring**	**48.21**	**246**	*e*P		**P**	**00 53 26.6**	**-1.7**
TAOE	**Nuku Hiva Isla**	**50.15**	**84**	*e*S		**S**	**01 00 49.7**	**-6.5**
	comp=Z,11μm,25.0s							
TAOE				*e*LQ			01 05 57.1	
	comp=Z,11μm,23.3s							
TAOE				*e*LR	LR		01 07 54.6	
	comp=Z,33μm,25.4s,baz=251							
KAPI	**Kappang**	**50.67**	**281**	P		**P**	**00 53 46.3**	**-1.0**
	comp=Z,26nm,1.0s,mb5.1,baz=175,slow=6.9,SNR=6.3							
KAPI	**Kappang**	**50.67**	**281**	*e*P		**P**	**00 53 46.0**	**-1.2**
	comp=Z,203nm,1.8s,mb5.8							
KAPI				*e*PP	PP		00 55 42.6	-0.7
KAPI				*e*S		**S**	**01 01 07.6**	**+4.1**
KAPI				LR	LR			
	comp=Z,9μm,20.0s,MS5.8							
MIDW	**Midway**	**50.92**	**15**	*e*P		**P**	**00 53 46.8**	**-2.0**
MIDW				*e*S		**S**	**01 01 06.2**	**-0.2**
MIDW				LR	LR			
	comp=Z,11μm,21.0s,MS5.8							
RKT	**Rikitea**	**51.34**	**103**	*e*S		**S**	**01 01 08.7**	**-3.9**
	comp=Z,3μm,27.5s							
RKT				*e*LQ			01 06 20.9	
	comp=Z,2μm,24.5s							
RKT				*e*LR	LR		01 08 39.3	
	comp=Z,4μm,24.2s,baz=258							
DAV	**Davao City (W)**	**51.37**	**299**	⇑*e*P		**P**	**00 53 51.0**	**-1.5**
POHA	**Pohakuloa**	**53.40**	**42**	*e*P		**P**	**00 54 12.3**	**+4.9**
	comp=Z,106nm,1.2s,mb5.7							
POHA				*e*S		**S**	**01 01 41.7**	**+1.1**
POHA				LR	LR			
	comp=Z,15μm,22.0s,MS6.0							
CBIJ	**Chichi jima**	**54.85**	**330**	P		**P**	**00 54 16.7**	**-1.2**
	comp=Z,56nm,0.8s,mb5.6,baz=236,slow=19,SNR=3.2							
SBA	**Scott Base**	**56.57**	**181**	*e*P		**P**	**00 54 30.5**	**+0.9**
SBA				*e*S		**S**	**01 02 26.9**	**+5.0**
SBA				MLR	MLR			
	comp=Z,4μm,20.0s,MS5.5							
CASY	**Casey**	**58.23**	**204**	*e*P		**P**	**00 54 40.5**	**-1.0**
KKM	**Kota Kinabalu**	**58.74**	**292**	P		**P**	**00 54 44.9**	**-1.0**
KKM				PcP	PcP		00 55 35.0	-0.8
KKM				LR	LR			
	comp=Z,6μm,20.0s,MS5.7							
KSM	**Kuching**	**61.92**	**284**	*e*P		**P**	**00 55 07.0**	**-0.7**
KSM				*e*PP	PP		00 57 42.3	+18
KSM				*e*S		**S**	**01 03 27.0**	**-5.9**
JOW	**Kunigami**	**62.23**	**318**	P		**P**	**00 55 09.7**	**+0.2**
	comp=Z,26nm,1.0s,mb5.3,baz=153,slow=21,SNR=2.6							
MJAR	**Matsushiro Arr**	**64.64**	**333**	P		**P**	**00 55 24.6**	**-0.6**
	comp=Z,12nm,0.9s,mb4.9,baz=175,slow=7.7,SNR=7.9							
MAJO	**Matsushiro**	**64.64**	**333**	*e*P		**P**	**00 55 24.3**	**-0.9**
MAJO				*e*S		**S**	**01 04 14.1**	**+8.1**
MAJO				pmax	pmax			
	comp=Z,52nm,0.8s,mb5.6							
MAJO				MLR	MLR			
	comp=Z,4μm,21.0s,MS5.6							
MAJO	**Matsushiro**	**64.64**	**333**	*e*P		**P**	**00 55 24.3**	**-0.8**
	comp=Z,52nm,0.8s,mb5.6							
MAJO				*e*S		**S**	**01 04 14.1**	**+8.1**
MAJO				LR	LR			
	comp=Z,4μm,21.0s,MS5.6							
MAT	**Matsushiro**	**64.64**	**333**	P		**P**	**00 55 27.3**	**+2.1**
MAT				S		**S**	**01 04 00.0**	**-6.0**
NACB	**Ninganchiao**	**64.82**	**312**	*e*P		**P**	**00 55 25.8**	**-0.8**
	comp=Z,518nm,1.2s,mb6.4							
NACB				*e*S		**S**	**01 04 08.7**	**0.0**
MIR	**Mirnyy**	**65.17**	**205**	⇓*i*P		**P**	**00 55 28.0**	**-0.3**
MIR				*i*			00 55 45.0	
MIR				pmax	pmax			
	comp=Z,100nm,1.2s,mb5.7							
YHNB	**Yeheng**	**65.29**	**312**	*e*P		**P**	**00 55 29.8**	**+0.2**
	comp=Z,162nm,1.4s,mb5.9							
YHNB				*e*S		S	01 04 07.1	-7.4
YHNB				LR	LR			
	comp=Z,5μm,19.0s,MS5.7							
TATO	**Taipei**	**65.41**	**312**	*e*P		**P**	**00 55 29.9**	**-0.5**
	comp=Z,194nm,1.3s,mb6.0							
TATO				*e*PP	PP		00 58 06.0	+11
TATO				*e*S		S	01 04 06.1	-10
TATO				LR	LR			
	comp=Z,5μm,19.0s,MS5.7							
QZH	**Quanzhou**	**67.42**	**310**	*i* P		**P**	**00 55 44.0**	**+0.7**
QZH				S		S	01 04 41.0	+0.7
QZH				AMB	AMB			
	comp=Z,980nm,8.0s							
QSPA	**South Pole Qui**	**68.72**	**180**	P		**P**	**00 55 50.7**	**0.0**
	comp=Z,49nm,1.0s,mb5.4,baz=24,slow=1.8,SNR=30							
COCO	**West Island**	**69.49**	**265**	P		**P**	**00 55 53.3**	**-3.3**
COCO				*e*S		S	01 05 17.3	+12
COCO				LR	LR			
	comp=Z,6μm,19.0s,MS5.9							
SSE	**Sheshan**	**69.64**	**317**	*e*P		**P**	**00 55 56.5**	**-0.6**
SSE				AP			00 56 06.5	
SSE				XP	sP		00 56 09.8	+12
SSE				PcP	PcP		00 56 19.8	-0.3
SSE				S	S		01 05 04.0	-2.6
SSE				XS	sS		01 05 18.0	+10
SSE				AMB	AMB			
	comp=Z,37nm,0.7s,mb5.4							
SSE				AMB	AMB			
	comp=Z,119nm,4.7s							
SSE				LR	LR			
	comp=N,1μm,18.2s,MS5.9							
SSE				LR	LR			
	comp=E,7μm,18.2s,MS5.9							
SSE				LR	LR			
	comp=Z,7μm,19.1s,MS5.9							
SSE	**Sheshan**	**69.64**	**317**	*e*P		**P**	**00 55 56.6**	**-0.5**
	comp=Z,37nm,0.7s,mb5.4							
SSE				pP			00 56 06.5	
SSE				sP	sP		00 56 09.7	+12
SSE				PcP	PcP		00 56 19.8	-0.3
SSE				S	S		01 05 03.9	-2.7
SSE				sS	sS		01 05 17.9	+10
SSE				LR	LR			
	comp=Z,7μm,19.1s,MS5.9							
GZH	**Guangzhou**	**70.16**	**306**	P		**P**	**00 56 02.3**	**+1.8**
GZH				S	S		01 05 17.5	+4.5
GZH				LR	LR			
	comp=N,4μm,19.4s,MS5.8							
GZH				LR	LR			
	comp=E,4μm,16.7s,MS5.8							
GZH				LR	LR			
	comp=Z,3μm,19.1s,MS5.6							
KSRS	**Korea Array**	**70.28**	**326**	P		**P**	**00 56 00.8**	**-0.1**
	comp=Z,1.7nm,0.4s,mb4.3,baz=135,slow=5.6,SNR=7.7							
QIZ	**Qiongzhong**	**70.69**	**300**	P		**P**	**00 56 04.5**	**+0.8**
QIZ				S		S	01 05 20.3	+1.1
QIZ				AMB	AMB			
	comp=Z,430nm,9.7s							
NJ2	**Nanjing**	**71.77**	**316**	*e*P		**P**	**00 56 10.5**	**+0.5**
NJ2				AP			00 56 15.3	
NJ2				XP	sP		00 56 18.8	+8.0
NJ2				PP	PP		00 58 49.8	+0.2
NJ2				S	S		01 05 29.0	-2.3
NJ2				XS	sS		01 05 38.0	+5.8
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.7s,mb4.8							
NJ2				AMB	AMB			
	comp=Z,1μm,6.8s							
NJ2				LR	LR			
	comp=N,4μm,18.4s,MS6.0							
NJ2				LR	LR			
	comp=E,6μm,17.2s,MS6.0							
NJ2				LR	LR			
	comp=Z,14μm,16.6s,MS6.3							
YSS	**Yuzh-Sakhalins**	**72.08**	**341**	⇓*e*P		**P**	**00 56 11.0**	**-0.6**
YSS				*e*			00 56 19.1	
YSS				*e**SP	sP		00 56 29.0	+17
YSS				*e*S	S		01 05 38.0	+3.7
YSS				*e*PS			01 05 56.0	
YSS				pmax	pmax			
	comp=Z,140nm,1.1s,mb5.8							
YSS				smax				
	comp=E,2μm,12.0s							
YSS				smax				
	comp=N,1μm,10.0s							
YSS	**Yuzh-Sakhalins**	**72.08**	**341**	*e*P		sP	00 56 27.1	+15
YSS				*e*S		S	01 05 38.5	+4.2
YSS				LR	LR			
	comp=Z,5μm,22.0s,MS5.7							
VLA	**Vladivostok**	**72.80**	**332**	*e*P		**P**	**00 56 19.4**	**+3.4**
WHN	**Wuhan**	**73.81**	**313**	P		**P**	**00 56 22.0**	**-0.2**
WHN				S		S	01 05 54.3	-0.4
WHN				LR	LR			
	comp=Z,5μm,13.9s,MS6.0							
PET	**Petropavlovsk**	**74.63**	**353**	*e*P		**P**	**00 56 27.7**	**+1.2**
PET				*e*			00 56 41.4	
PET				*e*PPP			01 00 58.2	
PET				*e*S	S		01 06 03.9	+1.0
PET				*e*PS			01 06 41.3	
PET				*e*SS	SS		01 10 48.0	-2.6
PET				pmax	pmax			
	comp=Z,53nm,1.7s,mb5.2							
PET	**Petropavlovsk**	**74.63**	**353**	*e*P		**P**	**00 56 26.5**	**0.0**
PET				*e*S	S		01 05 57.8	-5.1
PET				LR	LR			
	comp=Z,19μm,20.0s,MS6.4							
DL2	**Dalian**	**74.73**	**323**	P		**P**	**00 56 27.5**	**+0.1**
DL2				S	S		01 06 05.0	+0.3
DL2				AMB	AMB			
	comp=Z,40nm,1.1s,mb5.3							
DL2				AMB	AMB			
	comp=Z,370nm,5.6s							
DL2				LR	LR			
	comp=N,1μm,16.7s,MS5.5							
DL2				LR	LR			
	comp=E,1μm,15.6s,MS5.5							
DL2				LR	LR			
	comp=Z,930nm,15.1s,MS5.2							
PEA0B	**Petropavlovsk-**	**74.82**	**353**	*e*P		**P**	**00 56 28.0**	**+0.4**
PEA0B				*e*S	S		01 06 12.9	+7.9
PETK	**Petropavlovsk-**	**74.82**	**353**	P		**P**	**00 56 27.2**	**-0.3**
	comp=Z,12nm,0.7s,mb4.9,baz=125,slow=6.5,SNR=15							
MDJ	**Mudanjiang**	**75.00**	**332**	P		**P**	**00 56 30.5**	**+1.7**
MDJ				AP			00 56 33.5	
MDJ				S	S		01 06 11.0	+3.6
MDJ				SS	SS		01 10 57.5	+0.9
MDJ				AMB	AMB			
	comp=Z,10.0nm,1.0s,mb4.7							
MDJ				AMB	AMB			
	comp=Z,181nm,5.4s							
MDJ				LR	LR			
	comp=N,4μm,21.3s,MS5.9							
MDJ				LR	LR			
	comp=E,4μm,18.6s,MS5.9							
MDJ				LR	LR			
	comp=Z,2μm,17.8s,MS5.5							
MDJ	**Mudanjiang**	**75.00**	**332**	*e*P		**P**	**00 56 28.6**	**-0.2**
	comp=Z,88nm,1.4s,mb5.5							
MDJ				*e*PcP	PcP		00 56 40.5	-2.1
MDJ				*e*S	S		01 06 35.2	+28
KKTK	**Khon Kaen**	**75.17**	**294**	P		**P**	**00 56 31.0**	**+0.6**
TIA	**Tai'an**	**75.56**	**319**	*e*P		**P**	**00 56 33.3**	**+1.1**
SNY	**Shenyang**	**75.77**	**326**	⇓P		**P**	**00 56 34.8**	**+1.5**
SNY				S	S		01 06 18.0	+2.0
SNY				AMB	AMB			
	comp=Z,9.0nm,0.5s,mb5.0							
SNY				AMB	AMB			
	comp=Z,674nm,8.4s							
SNY				LR	LR			
	comp=N,4μm,20.4s							
SNY				LR	LR			
	comp=Z,3μm,21.0s,MS5.6							
HABR	**Khabarovsk**	**75.96**	**337**	*e*P		**P**	**00 56 35.8**	**+1.6**
HABR				*e*			00 56 45.1	
HABR				*e*			00 56 47.7	
HABR				*e*S	S		01 06 17.7	-0.2
HABR				*e*			01 06 34.8	
HABR				*e*			01 06 45.8	
HABR				*e*			01 11 10.2	
CN2	**Changchun**	**76.29**	**329**	*e*P		**P**	**00 56 35.8**	**-0.4**
CN2				*e*XP	sP		00 56 43.0	+6.1
CN2				PP	PP		00 59 29.5	+1.7
CN2				*e*S	S		01 06 19.5	-2.2
CN2				SS	SS		01 11 14.0	-2.1
CN2				AMB	AMB			
	comp=Z,10.0nm,1.0s,mb4.7							
CN2				AMB	AMB			
	comp=Z,200nm,5.0s							
CN2				LR	LR			
	comp=N,5μm,18.0s,MS6.0							
CN2				LR	LR			
	comp=E,4μm,18.0s,MS6.0							
CN2				LR	LR			
	comp=Z,5μm,20.0s,MS5.8							
MAW	**Mawson**	**76.52**	**202**	*e*P		**P**	**00 56 37.2**	**-0.1**
	comp=Z,16nm,0.9s,mb4.9							
MAW				*e*S	S		01 06 19.5	-4.3
MAW	**Mawson**	**76.52**	**202**	P		**

BJI SS SS 01 11 49.5 -1.9
BJI AMB AMB
comp=Z,11nm,1.4s,mb4.6
BJI AMB AMB
comp=Z,326nm,4.2s
BJI LR LR
comp=N,2µm,19.2s,MS5.9
BJI LR LR
comp=E,5µm,15.6s,MS5.9
BJI LR LR
comp=Z,3µm,24.7s
BJI Beijing 78.61 321 P **P** **00 56 49.0 -0.3**
comp=Z,11nm,1.4s,mb4.6
BJI PP PP 00 59 48.9 +1.5
BJI S S 01 06 48.1 +1.0
BJI SS SS 01 11 49.5 -1.9
BJI LR LR
comp=Z,4µm,24.7s,MS5.6
CHRT Chiangrai 79.36 296 ⇓P **P** **00 56 55.0 +1.1**
comp=Z,395nm,0.6s,mb6.5
TIY Taiyuan 79.42 317 *e*P **P** **00 56 58.5 +4.7**
TIY S S 01 07 00.3 +4.4
CMAR Chiang Mai Arr 79.43 295 P **P** **00 56 55.5 +1.2**
comp=Z,9.9nm,0.7s,mb4.8,baz=135,slow=4.2,SNR=47
CMAR Chiang Mai Arr 79.43 295 *i* P **P** **00 56 55.5 +1.2**
KMI Kunming 79.44 302 ⇓P **P** **00 56 55.5 +1.3**
KMI AP 00 56 59.5
KMI XP sP 00 57 01.0 +6.0
KMI PP PP 00 59 57.5 +2.8
KMI S S 01 06 56.0 -0.6
KMI SKS 01 07 08.5
KMI ScS ScS 01 07 17.0 -1.9
KMI SS SS 01 12 06.0 +1.6
KMI AMB AMB
comp=Z,34nm,1.4s,mb5.1
KMI AMB AMB
comp=Z,512nm,4.6s
KMI LR LR
comp=N,3µm,20.9s,MS5.7
KMI LR LR
comp=E,2µm,24.2s,MS5.7
KMI LR LR
comp=Z,3µm,25.4s,MS5.5
KMI Kunming 79.44 302 ⇓P **P** **00 56 55.6 +1.4**
KMI *SP sP 00 57 00.9 +5.9
KMI 00 59 57.4
KMI PPP 01 01 49.3
KMI S S 01 06 56.0 -0.6
KMI *SS sS 01 07 00.8 +3.3
KMI 01 07 08.4
KMI PS 01 07 42.0
KMI SS SS 01 12 06.0 +1.6
KMI pmax pmax
comp=Z,34nm,1.4s,mb5.1
KMI MLR MLR
comp=Z,3µm,25.4s,MS5.5
KMI Kunming 79.44 302 ⇓P **P** **00 56 55.6 +1.4**
comp=Z,34nm,1.4s,mb5.1
KMI pP 00 56 59.4
KMI sP sP 00 57 00.9 +5.9
KMI PP PP 00 59 57.4 +2.7
KMI PPP 01 01 49.3
KMI S S 01 06 56.0 -0.6
KMI sS sS 01 07 00.8 +3.3
KMI SKS 01 07 08.4
KMI ScS ScS 01 07 17.1 -1.8
KMI PS 01 07 42.0
KMI SS SS 01 12 06.0 +1.6
KMI LR LR
comp=Z,3µm,25.4s,MS5.5
XAN Xi'an 79.58 313 P **P** **00 56 55.0 +0.2**
XAN AP 00 57 05.0
XAN AMB AMB
comp=Z,19nm,1.5s,mb4.8
XAN AMB AMB
comp=Z,235nm,8.8s
CHTO Chiang Mai 79.59 295 *e*P **P** **00 56 55.8 +0.6**
CHTO *e* 00 57 03.3
CHTO *e*S S 01 06 45.5 -13
CD2 Chengdu 81.57 308 ⇓ *i*P **P** **00 57 05.8 +0.3**
CD2 AP 00 57 12.5
CD2 XP sP 00 57 14.8 +8.5
CD2 PP PP 01 00 17.3 +5.1
CD2 S S 01 07 18.5 -0.2
CD2 XS sS 01 07 27.0 +7.4
CD2 SS SS 01 12 40.3 +4.2
CD2 AMB AMB
comp=Z,30nm,1.2s,mb5.1
CD2 AMB AMB
comp=Z,100nm,6.8s
CD2 LR LR
comp=N,6µm,18.0s
CD2 LR LR
comp=Z,3µm,10.8s
HHC Hu-ho-hao-te 81.86 320 *e*P **P** **00 57 07.5 +0.7**
HHC AP 00 57 11.0
HHC PP PP 01 00 17.0 +2.6
HHC S S 01 07 19.8 -1.4
HHC SKS 01 07 23.0
HHC XS sS 01 07 25.3 +3.1
HHC SS SS 01 12 41.8 +1.8
HHC AMB AMB
comp=Z,14nm,0.8s,mb4.9
HHC AMB AMB
comp=Z,440nm,8.5s
HHC LR LR
comp=N,4µm,16.9s,MS5.9
HHC LR LR
comp=E,3µm,16.4s,MS5.9
HHC LR LR
comp=Z,3µm,16.5s,MS5.8
BTO Baotou 82.65 319 *e*P **P** **00 57 13.5 +2.5**
HIA Hailar 82.96 330 *e*P **P** **00 57 11.4 -0.9**
HIA Hailar 82.96 330 *e*P **P** **00 57 03.7 -8.7**
LZH Lanzhou 84.19 312 *e*P **P** **00 57 20.5 +1.5**
LZH AP 00 57 27.5
LZH XP sP 00 57 29.8 +10
LZH PP PP 01 00 35.0 +1.4
LZH SKS 01 07 38.5
LZH S S 01 07 43.0 -2.1
LZH XS sS 01 07 52.0 +6.0
LZH SS SS 01 13 17.3 +2.6
LZH AMB AMB
comp=Z,52nm,1.1s,mb5.6
LZH AMB AMB
comp=Z,298nm,4.5s
LZH LR LR
comp=N,889nm,17.6s
LZH LR LR
comp=Z,1µm,18.8s,MS5.4
LZH Lanzhou 84.19 312 *e*P **P** **00 57 20.5 +1.5**
LZH *SP sP 00 57 29.7 +10
LZH 01 00 35.0
LZH 01 07 38.4
LZH S S 01 07 43.0 -2.1
LZH SS SS 01 13 17.2 +2.5
LZH pmax pmax
comp=Z,52nm,1.1s,mb5.6
LZH MLR MLR
comp=Z,1µm,18.8s,MS5.4
LZH Lanzhou 84.19 312 *e*P **P** **00 57 20.5 +1.5**
comp=Z,52nm,1.1s,mb5.6
LZH pP 00 57 27.6
LZH sP sP 00 57 29.7 +10
LZH PP PP 01 00 35.0 +1.4
LZH SKS 01 07 38.4
LZH S S 01 07 43.0 -2.1
LZH sS sS 01 07 52.1 +6.1
LZH SS SS 01 13 17.2 +2.5
LZH LR LR
comp=Z,1µm,18.8s,MS5.4
PMSA Palmer Station 84.92 160 P **P** **00 57 21.9 -0.4**
comp=Z,44nm,0.9s,mb5.6,baz=185,slow=11,SNR=4.6
PMSA Palmer Station 84.92 160 P **P** **00 57 22.2 -0.1**
KDAK Kodiak Island 84.98 19 P **P** **00 57 21.8 -0.7**
comp=Z,39nm,1.2s,mb5.4,baz=200,slow=6.3,SNR=5.2
KDAK Kodiak Island 84.98 19 *e*P **P** **00 57 23.0 +0.5**
KDAK *e*S S 01 07 42.0 -10
SEY Seymchan 85.05 352 ⇑ *e*P **P** **00 57 22.2 -0.5**
CLNS Chul'man 86.35 337 *e*P **P** **00 57 29.8 +0.5**
CLNS *e* 00 57 37.7
CLNS *e* 01 00 53.7
CLNS *e*S S 01 07 54.6 -11
CLNS *e* 01 09 07.9
CLNS pmax pmax
comp=Z,80nm,1.2s,mb5.8
CLNS pmax pmax
comp=N,53nm,1.3s
CLNS pmax pmax
comp=E,16nm,1.4s
CLNS smax
comp=E,924µm,14.9s
CLNS smax
comp=N,518µm,12.4s
CLNS MLR MLR
comp=E,1µm,14.0s,MS5.5
CLNS MLR MLR
comp=Z,1µm,13.0s,MS5.5
CLNS MLR MLR
comp=N,929nm,13.0s,MS5.5
NVL N'lazarevskaya 86.79 187 *e*P **P** **00 57 30.6 -0.9**
NVL *e**PP 00 57 38.7
NVL *e*S S 01 07 58.8 -11
NVL pmax pmax
comp=Z,30nm,1.2s,mb5.4
MAIT Maitri 86.79 187 *e*P **P** **00 57 31.6 +0.1**
MCCM Marconi Confer 86.84 47 ⇓P **P** **00 57 33.0 +0.8**
baz=87
MCCM Marconi Confer 86.84 47 *e*P **P** **00 57 32.8 +0.5**
comp=Z,52nm,1.1s,mb5.7
MCCM *e*S S 01 08 09.2 -2.1
SNCC San Nicolas Is 86.86 53 ⇓P **P** **00 57 33.1 +0.7**
baz=87
JRSC Jasper Ridge 86.91 48 ⇑P **P** **00 57 33.7 +1.1**
baz=87
V03C Hunter Liggett 86.94 49 ⇓P **P** **00 57 33.2 +0.4**
baz=87,SNR=17
SNAA Sanae 87.07 182 *e*PKPdf **P** **00 57 31.6 -1.3**
SNAA *e* 00 57 34.1
SNAA *e* 00 57 36.4
SNAA *e* 00 57 42.2
SNAA Sanae 87.07 182 *d* iP **P** **00 57 31.5 -1.4**
SNAA Sanae 87.07 182 *e*P **P** **00 57 31.9 -1.0**
comp=Z,58nm,1.0s,mb5.8
BSC Santa Cruz Isl 87.13 52 ⇓P **P** **00 57 34.3 +0.6**
baz=87
HOPS Hopland 87.14 46 ⇓P **P** **00 57 34.7 +1.1**
baz=87
HOPS Hopland 87.14 46 *e*P **P** **00 57 33.9 +0.3**
comp=Z,59nm,1.1s,mb5.7
HOPS *e*S S 01 08 15.8 +1.7
KCPM Cahto Peak 87.15 45 *e*P **P** **00 57 34.1 +0.4**
SAO San Andreas Ge 87.15 49 *e*P **P** **00 57 34.2 +0.5**
SAO *e*S S 01 08 10.5 -3.8
SAO pmax pmax
comp=Z,47nm,1.0s,mb5.7
SAO San Andreas Ge 87.15 49 *e*P **P** **00 57 34.2 +0.4**
comp=Z,47nm,1.0s,mb5.7
SAO *e*S S 01 08 10.5 -3.8
O01C Eel River Cons 87.23 45 ⇑P **P** **00 57 34.6 +0.6**
baz=87
CVS Carmenet Viney 87.23 47 ⇑P **P** **00 57 34.5 +0.4**
baz=87
KIPM Iron Peak 87.28 45 *e*P **P** **00 57 33.6 -0.7**
WENL Wente Vineyard 87.36 48 ⇑P **P** **00 57 35.0 +0.2**
baz=88
PACP Pacheco Peak 87.38 49 ⇓P **P** **00 57 35.2 +0.3**
baz=88,SNR=8.4
PKD Parkfield 87.40 50 ⇓P **P** **00 57 35.1 +0.2**
baz=88,SNR=30
PKM Peak Mountain 87.42 51 ⇑P **P** **00 57 35.2 +0.1**
baz=88,SNR=16
U04C Hernandez Rese 87.42 49 ⇑P **P** **00 57 35.5 +0.4**
baz=88,SNR=24
JCC Jacoby Creek 87.44 44 ⇓P **P** **00 57 35.9 +0.9**
baz=88
BDM Black Diamond 87.44 48 ⇓P **P** **00 57 35.3 +0.1**
baz=88
SCI San Clemente I 87.46 53 ⇓P **P** **00 57 35.5 +0.2**
baz=88,SNR=5.5
SMMC Simmler 87.48 51 ⇓P **P** **00 57 36.0 +0.6**
baz=88
MNRC McLaughlin Nat 87.51 47 ⇑P **P** **00 57 36.6 +1.1**
baz=88,SNR=19
BLG Laguna Peak 87.60 52 ⇑P **P** **00 57 36.5 +0.6**
baz=88
VNA3 Neumayer Olymp 87.66 180 *e*PKPdf **P** **00 57 34.6 -1.1**
VNA3 *e* 00 57 36.9
VNA3 *e* 00 57 39.4
VNA3 *e* 00 57 45.2
Q03C Winters 87.68 47 ⇑P **P** **00 57 37.1 +0.9**
baz=88
GASB Alder Springs 87.71 46 ⇑P **P** **00 57 37.7 +1.3**
baz=88,SNR=58
CIT Chita 87.73 329 *e*P **P** **00 57 37.1 +1.0**
CIT *e* 00 57 44.6
CIT pmax pmax
comp=Z,127nm,1.8s,mb5.8
KRMB Red Mountain 87.88 44 *e*P **P** **00 57 38.4 +1.3**
M01C Crescent City 87.91 43 ⇓P **P** **00 57 38.5 +1.2**
baz=88
SLKM Skilak Lake 87.91 19 *e*P **P** **00 57 36.5 -0.3**
N02C Big Bar 87.91 45 ⇑P **P** **00 57 38.3 +1.0**
baz=88,SNR=21
O02C Red Bluff 87.92 45 ⇑P **P** **00 57 38.1 +0.7**
baz=88,SNR=58
VNA2 Neumayer--Watz 87.95 181 *e*PKPdf **P** **00 57 36.4 -0.7**
baz=173,slow=3.9
VNA2 *e* 00 57 38.8
VNA2 *e* 00 57 41.2
VNA2 *e* 00 57 47.1
Q04C Lincoln 88.21 47 ⇑P **P** **00 57 38.9 +0.1**
baz=88
S05C Merced 88.22 49 ⇑P **P** **00 57 38.5 -0.3**
baz=88,SNR=11
R04C Big Horse Ranc 88.23 48 ⇑P **P** **00 57 39.1 +0.2**
baz=88
VNA1 Neumayer--Stat 88.24 181 *e*PKPdf **P** **00 57 38.0 -0.5**
VNA1 *e* 00 57 40.3
VNA1 *e* 00 57 42.9
VNA1 *e* 00 57 48.3
ARVC Arvin 88.24 51 ⇑P **P** **00 57 39.1 +0.1**
baz=88
WDC Whiskeytown Da 88.29 45 *e*P **P** **00 57 37.9 -1.2**
WDC pmax pmax
comp=Z,67nm,1.2s,mb5.8
WDC Whiskeytown Da 88.29 45 ⇓P **P** **00 57 39.5 +0.4**
baz=88,SNR=26
WDC Whiskeytown Da 88.29 45 *e*P **P** **00 57 37.9 -1.2**
comp=Z,67nm,1.2s,mb5.8
WDC *e*S S 01 08 31.5 +6.4
OHCM Honcut 88.38 46 *e*P **P** **00 57 38.9 -0.7**
VES Vestal, Richgr 88.39 50 ⇑P **P** **00 57 39.8 +0.1**
baz=88
MWC Mount Wilson 88.39 52 *e*P **P** **00 57 39.1 -0.7**
MWC *e*S S 01 08 23.0 -3.3
MWC pmax pmax
comp=Z,64nm,1.3s,mb5.7
MWC Mount Wilson 88.39 52 *e*P **P** **00 57 39.0 -0.7**
comp=Z,64nm,1.3s,mb5.7
MWC *e*S S 01 08 23.0 -3.3
L02A Cave Junction 88.40 43 ⇑P **P** **00 57 40.0 +0.4**
baz=88
ORV Oroville 88.48 46 ⇑P **P** **00 57 39.4 -0.6**
baz=89,SNR=16
T06C Millerton Lake 88.49 49 ⇑P **P** **00 57 40.3 +0.1**
baz=89,SNR=52
M02C Callahan 88.49 44 ⇑P **P** **00 57 39.9 -0.2**
baz=89,SNR=47
RCTC Rector, Farmer 88.50 50 ⇓P **P** **00 57 39.9 -0.3**
baz=89
109C Camp Elliot, M 88.50 54 ⇑P **P** **00 57 40.7 +0.3**
baz=89
CMB Columbia Colle 88.50 48 ⇓P **P** **00 57 40.0 -0.2**
baz=89,SNR=59
CMB Columbia Colle 88.50 48 *e*P **P** **00 57 39.8 -0.3**
CMB *e*S S 01 08 34.6 +7.5
ULN Ulaanbaatar 88.59 323 P **P** **00 57 40.6 +0.3**
ULN pmax pmax
comp=Z,92nm,1.4s,mb5.9
ULN Ulaanbaatar 88.59 323 *e*P pP 00 57 51.9 +11
ULN *e*S S 01 08 11.2 -16
ULN LR LR
comp=Z,6µm,19.0s,MS6.0
LAVA Lava Cap Winer 88.61 47 ⇓P **P** **00 57 40.7 +0.1**
baz=89,SNR=13
GTA Gaotai 88.62 313 *e*P **P** **00 57 41.3 +0.6**
GTA AP 00 57 45.3
GTA XP sP 00 57 48.0 +6.6
GTA PP PP 01 01 10.8 +1.4
GTA SKS 01 08 06.8
GTA S S 01 08 24.8 -3.4
GTA XS sS 01 08 33.8 +4.7
GTA SS SS 01 14 17.5 -2.1
GTA AMB AMB
comp=Z,6.0nm,1.1s,mb4.8
GTA AMB AMB
comp=Z,223nm,5.1s
GTA LR LR
comp=N,4µm,17.1s,MS6.0
GTA LR LR
comp=E,4µm,18.6s,MS6.0
GTA LR LR
comp=Z,2µm,18.3s,MS5.6
BFSC Mount Baldy St 88.69 52 ⇓P **P** **00 57 41.3 +0.1**
baz=89,SNR=13
BAR Barrett 88.74 54 *e*P **P** **00 57 41.3 -0.1**
comp=Z,23nm,1.1s,mb5.4
BAR *e*S S 01 08 16.3 -13
EDW2 Edwards Air Fo 88.74 52 ⇑P **P** **00 57 41.4 0.0**
baz=89,SNR=22
ISA Isabella 88.75 51 ⇑P **P** **00 57 41.5 +0.1**
baz=89,SNR=49
ISA Isabella 88.75 51 *e*P **P** **00 57 41.1 -0.3**
ISA *e*S S 01 08 27.0 -2.6
MURC Murrieta 88.75 53 ⇑P **P** **00 57 41.1 -0.4**
baz=89,SNR=6.4
YBH Yreka Blue Hor 88.76 44 *e*P **P** **00 57 41.4 +0.1**
YBH pmax pmax
comp=Z,39nm,1.0s
YBH Yreka Blue Hor 88.76 44 ⇑P **P** **00 57 41.4 +0.1**
baz=89,SNR=38
YBH Yreka Blue Hor 88.76 44 *e*P **P** **00 57 41.4 +0.1**
comp=Z,39nm,1.0s,mb5.7
YBH *e*S S 01 08 40.9 +11
K02A Glendale 88.78 43 ⇓P **P** **00 57 41.9 +0.5**
baz=89,SNR=8.1
S06C San Francisco 88.81 48 ⇑P **P** **00 57 41.3 -0.3**
baz=89,SNR=60
HELL Mitchell Peak 88.82 50 ⇑P **P** **00 57 41.4 -0.4**
baz=89,SNR=45
YAK Yakutsk 88.89 342 *e*P **P** **00 57 40.6 -0.8**
YAK *e*S S 01 08 08.9 -21
YAK *e* 01 08 29.4
YAK pmax pmax
comp=Z,22nm,0.8s,mb5.5
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK MLR MLR
comp=Z,3µm,21.0s,MS5.8
YAK MLR MLR
comp=N,2µm,21.0s,MS5.8
YAK MLR MLR
comp=E,4µm,25.0s,MS5.8
YAK Yakutsk 88.89 342 *e*P **P** **00 57 41.4 0.0**
comp=E,62nm,0.9s,mb5.9
YAK S S 01 08 30.9 +1.2
M03C McCloud 88.91 45 ⇓P **P** **00 57 41.8 -0.2**
baz=89,SNR=13
KCC Kaiser Creek 88.91 49 ⇑P **P** **00 57 41.7 -0.5**
baz=89,SNR=30
SONM Songino Array 88.94 323 P **P** **00 57 41.6 -0.4**
comp=E,14nm,1.2s,mb5.2,baz=122,slow=3.5,SNR=12
P05C Yuba Gap, Truc 88.96 47 ⇑P **P** **00 57 41.9 -0.4**
baz=89,SNR=12
MONP Monument Peak 89.02 54 ⇑P **P** **00 57 42.7 0.0**
baz=89,SNR=24
J02A Umpqua 89.04 42 ⇑P **P** **00 57 42.7 +0.1**
baz=89,SNR=9.4
R05C Kirkwood Meado 89.04 48 ⇑P **P** **00 57 42.6 0.0**
baz=89,SNR=28
HUMO Hull Mountain 89.04 43 ⇓P **P** **00 57 43.0 +0.4**
baz=89,SNR=20
HUMO Hull Mountain 89.04 43 *e*P **P** **00 57 42.4 -0.2**
comp=E,42nm,1.0s,mb5.7
HUMO *e*S S 01 08 39.2 +7.2
O05C Quincy 89.07 46 ⇓P **P** **00 57 42.5 -0.2**
baz=89,SNR=9.8
O04C Chester 89.13 46 ⇑P **P** **00 57 43.0 -0.1**
baz=89,SNR=13
BILL Bilibino 89.15 359 *e*P **P** **00 57 40.4 -2.1**
BILL *e* 00 57 49.0
BILL *e*S S 01 08 18.9 -13
BILL *e*SS SS 01 14 28.1 +2.0
BILL pmax pmax
comp=Z,112nm,1.2s,mb6.1
BILL MLR MLR
comp=Z,1µm,17.0s,MS5.5
BILL Bilibino 89.15 359 P **P** **00 57 41.7 -0.8**
I02A Mapleton 89.20 42 ⇓P **P** **00 57 43.5 +0.2**
baz=89,SNR=5.7
LBCM Butte Creek Ri 89.20 45 P **P** **00 57 43.6 +0.2**
LRMC Laurel Mountai 89.23 51 ⇓P **P** **00 57 43.5 -0.2**
baz=89,SNR=11
PFO Pinyon Flat Ob 89.31 53 *e*P **P** **00 57 44.3 +0.2**
PFO *e*S S 01 08 21.5 -13
PFO pmax pmax
comp=Z,33nm,1.1s,mb5.6
PFO Pinyon Flat Ob 89.31 53 ⇑P **P** **00 57 44.4 +0.3**
baz=89,SNR=16
PFO Pinyon Flat Ob 89.31 53 *e*P **P** **00 57 44.2 +0.2**
comp=Z,33nm,1.1s,mb5.6
PFO *e*S S 01 08 21.5 -13
M04C Macdoel 89.35 44 ⇓P **P** **00 57 44.4 +0.3**
baz=90,SNR=16
R06C Coleville 89.38 48 ⇓P **P** **00 57 44.7 +0.4**
baz=90,SNR=32
CWC Cottonwood Cre 89.39 50 ⇑P **P** **00 57 44.2 -0.2**
baz=90,SNR=6.5
MLAC Mammoth Lakes 89.40 49 ⇑P **P** **00 57 44.3 -0.1**
baz=90,SNR=12
MTUM Tungsten Hills 89.46 49 *e*P **P** **00 57 44.9 +0.2**
R07C Lee Vining 89.46 48 ⇓P **P** **00 57 44.7 0.0**
baz=90
L04A Klamath Falls 89.51 44 ⇑P **P** **00 57 44.6 -0.2**
baz=90,SNR=9.4
SWSC Sam W. Stewart 89.51 54 ⇓P **P** **00 57 45.1 +0.1**
baz=90,SNR=20
I03A Eugene 89.53 42 ⇑P **P** **00 57 45.1 +0.3**
baz=90,SNR=6.7
WCN Washoe City 89.54 47 ⇑P **P** **00 57 45.2 +0.2**
baz=90,SNR=7.6
TIN Tinemaha 89.56 50 ⇓P **P** **00 57 45.4 +0.2**
baz=90,SNR=5.2
M05C Lookout 89.59 45 ⇑P **P** **00 57 45.4 +0.2**
baz=90,SNR=29
P06A Stead Airport, 89.62 47 ⇑P **P** **00 57 45.4 0.0**
baz=90
MPOR Mary's Peak 89.63 41 P **P** **00 57 46.7 +1.4**
MPMC Manual Prospec 89.64 51 ⇓P **P** **00 57 45.4 -0.2**
baz=90,SNR=77
GSC Goldstone 89.80 52 *e*P **P** **00 57 46.3 0.0**
GSC *e*S S 01 08 18.6 -21
GSC pmax pmax
comp=Z,54nm,1.5s,mb5.7
GSC Goldstone 89.80 52 ⇓P **P** **00 57 46.5 +0.2**
baz=90,SNR=15
GSC Goldstone 89.80 52 *e*P **P** **00 57 46.3 -0.1**
comp=Z,54nm,1.5s,mb5.7
GSC *e*S S 01 08 18.6 -21
S08C White Mtn Res 89.81 49 ⇑P **P** **00 57 46.8 +0.5**
baz=90,SNR=118
BELC Belle Mtn. 89.82 53 ⇑P **P** **00 57 46.5 0.0**
baz=90,SNR=44
COR Corvallis 89.83 41 *e*P **P** **00 57 46.6 +0.4**
COR pmax pmax
comp=Z,53nm,1.3s,mb5.7
COR Corvallis 89.83 41 *e*P **P** **00 57 46.6 +0.4**
comp=Z,53nm,1.3s,mb5.7
COR S S 01 08 48.0 +8.8
K04A Chilquin 89.83 44 ⇓P **P** **00 57 46.5 +0.2**
baz=90
HEBO Mount Hebo 89.87 41 *e*P **P** **00 57 47.1 +0.7**
comp=Z,213nm,1.5s,mb6.2
H03A Soap Creek Ran 89.88 41 ⇑P **P** **00 57 46.6 +0.2**
baz=90,SNR=11
J04A Umpqua Nationa 89.90 43 ⇓P **P** **00 57 46.7 +0.1**
baz=90,SNR=13
O06A Flanigan 89.90 46 ⇑P **P** **00 57 46.3 -0.4**
baz=90,SNR=69
HEC Hector,Ludlow 89.94 52 ⇓P **P** **00 57 46.9 -0.1**
baz=90,SNR=15
M06C Likely Place G 89.96 45 ⇓P **P** **00 57 47.0 0.0**
baz=90,SNR=38

I04A	Tendick Farm, baz=90,SNR=16	89.98	42	⇑P		P	00 57 47.0	0.0
PAHR	Pah Rah Range comp=Z,74nm,1.1s,mb5.9	89.98	47	eP		P	00 57 47.0	-0.1
Q07A	Schurz baz=90	90.02	48	⇑P		P	00 57 47.2	-0.1
BC3	Big Chuckw Mtn baz=90,SNR=39	90.08	54	⇓P		P	00 57 47.9	+0.2
L05A	Lakeview baz=90,SNR=24	90.13	44	⇑P		P	00 57 48.1	+0.4
NVAR	Mina Array Bea comp=Z,32nm,0.8s,mb5.7,baz=227,slow=8.0,SNR=56	90.14	48	P		P	00 57 47.9	0.0
GRAC	Grapevine Rang baz=90,SNR=17	90.15	50	⇑P		P	00 57 47.4	-0.5
N06A	Buffalo Meadow baz=90,SNR=38	90.17	46	⇑P		P	00 57 47.8	-0.1
G03A	Yamhill baz=90	90.21	41	⇑P		P	00 57 48.2	+0.2
R08A	Mina baz=90	90.24	49	⇓P		P	00 57 48.5	+0.1
TRF	Thorofare Moun comp=Z,6.8nm,0.9s,mb5.0	90.24	17	eP		P	00 57 47.9	+0.2
P07A	Fallon baz=90	90.24	47	⇓P		P	00 57 48.3	-0.1
KMOR	Kings Mountain	90.25	40	P		P	00 57 48.3	+0.1
112A	Yuma baz=90,SNR=9.1	90.26	55	⇓P		P	00 57 48.2	-0.3
FURC	Furnace Creek, baz=90,SNR=36	90.28	51	⇑P		P	00 57 48.7	+0.2
GLA	Glamis	90.30	55	eP		P	00 57 48.9	+0.2
GLA	comp=Z,91nm,1.1s,mb6.0				pmax	pmax		
GLA	Glamis baz=90,SNR=27	90.30	55	⇓P		P	00 57 48.9	+0.2
GLA	Glamis comp=Z,91nm,1.1s,mb6.0	90.30	55	eP		P	00 57 48.9	+0.1
GLA				eS		S	01 08 51.7	+7.5
F03A	Seaside baz=90,SNR=11	90.36	40	⇑P		P	00 57 48.7	+0.1
MOD	Modoc baz=90,SNR=28	90.41	45	⇓P		P	00 57 49.3	+0.3
MOD	Modoc comp=Z,76nm,1.2s,mb5.9	90.41	45	eP		P	00 57 49.0	0.0
MOD				eS		S	01 08 49.2	+4.4
GMRC	Granite Mounta baz=90,SNR=27	90.41	53	⇑P		P	00 57 49.4	+0.1
K05A	Summer Lake baz=90,SNR=41	90.42	44	⇑P		P	00 57 49.4	+0.3
SHOC	Shoshone baz=91,SNR=28	90.45	51	⇑P		P	00 57 48.9	-0.4
J05A	Fort Rock baz=91,SNR=76	90.47	43	⇑P		P	00 57 49.2	0.0
SSOR	Sweet Springs	90.48	41	P		P	00 57 49.2	-0.1
TUQ	Turquoise Moun baz=91,SNR=44	90.50	52	⇑P		P	00 57 49.4	-0.2
IRM	Iron Mountain baz=91,SNR=66	90.53	53	⇓P		P	00 57 49.2	-0.5
O07A	Toulon baz=91,SNR=51	90.54	47	⇑P		P	00 57 49.1	-0.5
H04A	Detroit Lake baz=91,SNR=19	90.57	42	⇑P		P	00 57 49.1	-0.6
S09A	Goldfield baz=91,SNR=27	90.58	49	⇓P		P	00 57 49.5	-0.4
Q08A	Gabbs baz=91,SNR=29	90.59	48	⇓P		P	00 57 49.5	-0.5
U10A	Ash Meadows, A baz=91,SNR=44	90.64	51	⇓P		P	00 57 50.2	-0.1
G04A	Mulino baz=91	90.65	41	⇓P		P	00 57 50.1	0.0
E03A	Lebam baz=91,SNR=31	90.67	39	⇑P		P	00 57 50.4	+0.3
LSA	Lhasa	90.69	302	eP		P	00 57 51.3	+0.7
LSA	comp=Z,21nm,0.9s,mb5.5				pmax	pmax		
LSA	Lhasa comp=Z,21nm,0.9s,mb5.5	90.69	302	eP		P	00 57 51.3	+0.7
LSA				eS		S	01 08 27.9	-20
TPH	Tonopah	90.73	49	eP		P	00 57 50.6	0.0
TPH				eS		S	01 08 53.1	+5.1
N07B	Gerlach baz=91,SNR=37	90.77	46	⇑P		P	00 57 50.8	+0.1
C03A	Quillayute Air baz=91	90.81	38	⇓P		P	00 57 51.6	+0.9
Y12C	Blythe baz=91,SNR=27	90.82	54	⇑P		P	00 57 51.0	-0.2
BMW	Boistfort Moun	90.83	40	eP		P	00 57 51.3	+0.4
MCK	McKinley	90.84	17	eP		P	00 57 51.4	+0.9
D03A	Wishkah Elem. baz=91,SNR=10	90.84	39	⇓P		P	00 57 51.2	+0.3
P08A	Dixie Valley baz=91,SNR=5.7	90.87	47	⇓P		P	00 57 51.4	+0.2
K06A	Valley Falls baz=91,SNR=46	90.87	44	⇓P		P	00 57 51.3	+0.2
I05A	Bend baz=91,SNR=5.7	90.88	42	⇑P		P	00 57 51.3	+0.1
M07A	Soldier Meadow baz=91,SNR=46	90.91	46	⇓P		P	00 57 51.5	+0.1
R09A	Tonopah baz=91,SNR=40	90.92	49	⇓P		P	00 57 51.6	+0.1
NLWA	Neilton Lookou baz=91	90.93	39	⇓P		P	00 57 51.9	+0.6
TPNV	Topopah Spring	90.93	51	eP		P	00 57 51.5	-0.1
TPNV				e			01 01 28.2	
TPNV	comp=Z,62nm,1.1s,mb5.8				pmax	pmax		
TPNV	Topopah Spring baz=91	90.93	51	⇓P		P	00 57 51.6	+0.1
TPNV	Topopah Spring comp=Z,62nm,1.1s,mb5.8	90.93	51	eP		P	00 57 51.5	-0.1
TPNV				ePP		PP	01 01 28.2	+0.3
TPNV				eS		S	01 09 02.3	+12
LDFC	Landfair comp=Z,120nm,1.1s,mb6.1	90.95	53	eP		P	00 57 51.7	0.0
113A	Mohawk Valley, baz=91,SNR=11	90.98	55	⇓P		P	00 57 51.5	-0.5
V11A	Goodsprings baz=91,SNR=22	91.04	52	⇑P		P	00 57 51.5	-0.6
F04A	Amboy baz=91,SNR=15	91.05	40	⇑P		P	00 57 51.9	0.0
O08A	Rochester Mine baz=91,SNR=44	91.09	47	⇑P		P	00 57 52.1	-0.2
L07A	Adell baz=91,SNR=68	91.10	45	⇓P		P	00 57 52.1	-0.1
Q09A	Carvers baz=91	91.10	49	⇑P		P	00 57 52.1	-0.2
S10A	Tonopah Range, baz=91,SNR=120	91.11	50	⇑P		P	00 57 52.2	-0.1
H05A	Madras baz=91	91.14	42	⇓P		P	00 57 52.5	+0.1
J06A	Christmas Vall baz=91,SNR=45	91.15	44	⇑P		P	00 57 52.1	-0.3
NEE2	Needles Airpor baz=91	91.18	53	⇓P		P	00 57 52.4	-0.4
E04A	Onalaska baz=91	91.20	40	⇑P		P	00 57 52.9	+0.3
W12A	Cal Nev Ari baz=91	91.22	52	⇓P		P	00 57 53.1	+0.1
BOD	Bodaibo	91.25	334	eP		P	00 57 50.8	-1.7
BOD	comp=Z,16nm,1.6s,mb5.1				pmax	pmax		
U11A	Corn Creek baz=91	91.33	51	⇑P		P	00 57 53.6	+0.2
N08A	GE Springer Mi baz=91,SNR=26	91.33	46	⇑P		P	00 57 53.3	0.0
PDMCI	Parker Dam,Lak baz=91,SNR=24	91.34	54	⇓P		P	00 57 53.4	-0.2
Y13A	Salome baz=92,SNR=46	91.37	54	⇓P		P	00 57 53.6	-0.1
TDL	Tradedollar La	91.38	40	P		P	00 57 53.6	+0.2
G05A	Wamic baz=92	91.38	41	⇓P		P	00 57 53.7	+0.3
214A	Organ Pipe Nat baz=92,SNR=20	91.38	56	⇑P		P	00 57 53.7	-0.2
D04A	Dobbs Creek Ra baz=92	91.41	39	⇓P		P	00 57 53.4	-0.2
V12A	Nelson baz=92,SNR=31	91.42	52	⇓P		P	00 57 53.9	0.0
I06A	Prineville baz=92,SNR=39	91.44	43	⇓P		P	00 57 54.1	+0.3
M08A	Happy Creek Ra baz=92,SNR=30	91.47	46	⇑P		P	00 57 54.2	+0.2
K07A	Rock Creek Ran baz=92,SNR=58	91.47	44	⇑P		P	00 57 54.3	+0.4
B04A	Port Angeles baz=92	91.48	38	⇑P		P	00 57 54.1	+0.2
R10A	Warm Springs baz=92,SNR=46	91.48	49	⇑P		P	00 57 54.1	0.0
S11A	Rachel baz=92,SNR=12	91.59	50	⇓P		P	00 57 55.1	+0.4
F05A	White Salmon baz=92,SNR=7.7	91.61	41	⇑P		P	00 57 54.9	+0.4
C04A	Brinnon baz=92,SNR=14	91.61	39	⇓P		P	00 57 54.6	+0.1
GNW	Green Mountain comp=Z,49nm,1.0s,mb5.8	91.62	39	eP		P	00 57 54.9	+0.4
Q10A	Clear Creek Ra baz=92,SNR=17	91.65	49	⇓P		P	00 57 54.6	-0.3
WRAK	Wrangell Islan comp=Z,40nm,0.9s,mb5.8	91.66	28	eP		P	00 57 54.8	+0.3
WRAK				eS		S	01 08 50.5	-5.0
O09A	Fish Creek Ran baz=92,SNR=24	91.70	47	⇓P		P	00 57 54.8	-0.2
X13A	Yucca baz=92,SNR=48	91.70	53	⇑P		P	00 57 54.9	-0.3
H06A	Lindquist Farm baz=92,SNR=62	91.74	42	⇑P		P	00 57 54.9	-0.3
J07A	Hines baz=92,SNR=15	91.75	44	⇓P		P	00 57 55.3	0.0
WVOR	Wild Horse Val	91.75	45	eP		P	00 57 53.2	-2.0
WVOR	comp=Z,46nm,1.1s,mb5.7				pmax	pmax		
WVOR	Wild Horse Val comp=Z,46nm,1.1s,mb5.7	91.75	45	eP		P	00 57 53.2	-2.1
WVOR				eS		S	01 09 03.0	+5.9
E05A	Randle baz=92,SNR=31	91.75	40	⇓P		P	00 57 54.7	-0.5
N09A	Rock Creek Ran baz=92,SNR=18	91.77	47	⇑P		P	00 57 55.0	-0.4
BMN	Battle Mountai	91.79	47	eP		P	00 57 55.8	+0.3
BMN				eS		S	01 09 00.4	+2.9
BMN	comp=Z,34nm,1.0s,mb5.6				pmax	pmax		
BMN	Battle Mountai comp=Z,34nm,1.0s,mb5.6	91.79	47	eP		P	00 57 55.8	+0.3
BMN				eS		S	01 09 00.4	+3.0
G06A	Carlson Farm, baz=92,SNR=16	91.80	42	⇑P		P	00 57 55.6	+0.2
T11A	Corn Creek, Al baz=92,SNR=61	91.80	51	⇑P		P	00 57 55.6	0.0
PGC	Sidney comp=Z,97nm,1.0s,mb6.1	91.81	38	eP		P	00 57 54.8	-0.5
LON	Longmire	91.82	40	P		P	00 57 55.6	+0.2
LON	comp=Z,18nm,0.8s,mb5.5				pmax	pmax		
LON	Longmire comp=Z,18nm,0.8s,mb5.5	91.82	40	P		P	00 57 55.6	+0.2
L08A	Fields baz=92,SNR=72	91.83	45	⇓P		P	00 57 55.7	+0.1
Z14A	Wintersburg baz=92,SNR=17	91.86	55	⇑P		P	00 57 55.6	-0.4
W13A	Hualapai Mount baz=92,SNR=41	91.87	53	⇑P		P	00 57 55.7	-0.3
D05A	Enumclaw baz=92,SNR=14	91.93	39	⇓P		P	00 57 56.4	+0.4
T12A	Moapa baz=92	91.94	51	⇑P		P	00 57 55.7	-0.6
U12A	Valley of Fire baz=92,SNR=10	91.95	52	⇑P		P	00 57 56.2	-0.1
P10A	Eureka baz=92,SNR=14	91.95	48	⇓P		P	00 57 55.9	-0.4
I07A	Izee baz=92,SNR=43	91.96	43	⇑P		P	00 57 56.0	-0.2
F06A	Goldendale baz=92,SNR=9.2	91.96	41	⇓P		P	00 57 55.9	-0.2
K08A	Mann Creek Ran baz=92,SNR=17	91.99	45	⇓P		P	00 57 56.1	-0.2
R11A	Troy Canyon, C baz=92,SNR=34	92.01	49	⇑P		P	00 57 56.3	-0.3
COLA	College	92.03	17	eP		P	00 57 55.8	-0.2
COLA				eS		S	01 08 49.1	-9.4
COLA	comp=Z,9μm,20.0s,MS6.2				MLR	MLR		
ZAK	Zakamensk	92.04	324	eP		P	00 57 55.6	-0.8
ZAK	comp=Z,35nm,1.4s,mb5.5				pmax	pmax		
Y14A	Wickenburg baz=92,SNR=11	92.05	54	⇑P		P	00 57 56.1	-0.7
M09A	Marrel Ranch, baz=92,SNR=15	92.08	46	⇑P		P	00 57 56.8	0.0
V13A	Grand Canyon W baz=92,SNR=51	92.11	52	⇑P		P	00 57 56.6	-0.5
115A	Sonoran Desert baz=92,SNR=9.1	92.14	56	⇑P		P	00 57 56.9	-0.4
H07A	Lands Inn, Kim baz=92,SNR=56	92.16	43	⇑P		P	00 57 56.5	-0.5
Q11A	Duckwater baz=92,SNR=51	92.18	49	⇓P		P	00 57 57.0	-0.3
L09A	Wilkinson Ranc baz=92,SNR=19	92.20	45	⇑P		P	00 57 57.1	-0.3
E06A	Yakima baz=92,SNR=12	92.22	40	⇓P		P	00 57 57.7	+0.4
S12A	Delamar Landin baz=92,SNR=17	92.22	50	⇓P		P	00 57 57.3	-0.2
O10A	Cortez Mining, baz=92	92.22	47	⇑P		P	00 57 56.9	-0.6
A04A	Legoe Bay, Lum baz=92	92.27	38	⇓P		P	00 57 57.7	+0.2
J08A	Circle Bar Ran baz=92,SNR=42	92.28	44	⇑P		P	00 57 57.2	-0.5
SKAG	Skagway comp=Z,86nm,2.1s,mb5.7	92.32	25	eP		P	00 57 58.3	+0.9
X14A	Yava baz=92,SNR=42	92.35	54	⇑P		P	00 57 57.5	-0.7
C05A	Tolt Reservoir baz=92,SNR=9.4	92.36	39	⇑P		P	00 57 58.7	+0.8
U13A	Pakoon Wash baz=92,SNR=27	92.36	52	⇑P		P	00 57 57.7	-0.5
HYT	Haines Junctio	92.39	23	eP		P	00 57 57.1	-0.6
B05A	Bryant baz=92,SNR=15	92.40	39	⇑P		P	00 57 58.7	+0.6
G07A	Ruggs Ranch, H baz=92,SNR=30	92.41	42	⇑P		P	00 57 58.1	-0.2
P11A	Circle Ranch, baz=92,SNR=9.0	92.42	48	⇓P		P	00 57 58.3	-0.1
Z15A	Gila River Ind baz=92	92.43	55	⇓P		P	00 57 58.9	+0.2
216A	Three Points, baz=92	92.45	57	⇓P		P	00 57 58.6	-0.2
JCW	Jim Creek	92.46	39	eP		P	00 57 59.3	+0.9
K09A	Rome baz=93,SNR=49	92.47	45	⇑P		P	00 57 58.9	+0.4
I08A	Drewsey baz=93,SNR=19	92.48	44	⇓P		P	00 57 58.2	-0.3
116A	Eloy baz=93,SNR=11	92.49	56	⇓P		P	00 57 58.5	-0.4
W14A	Seligman baz=93,SNR=38	92.51	53	⇓P		P	00 57 58.8	-0.2
TLY	Talaya	92.52	325	eP		P	00 58 01.6	+3.0
TLY				e			01 08 29.8	
TLY				eS		S	01 09 02.4	-1.1
TLY	comp=Z,21nm,1.1s,mb5.5				pmax	pmax		
TLY	Talaya	92.52	325	eP		pP	00 58 09.7	+11
TLY				eS		S	01 09 00.3	-3.2
F07A	Phinny Hill Vi baz=93,SNR=5.4	92.55	41	⇓P		P	00 57 59.1	+0.2
Y15A	Casa Rosa Ranc baz=93,SNR=55	92.56	55	⇓P		P	00 57 59.2	0.0
ODAN	Odare comp=Z,73nm,1.0s,mb6.1	92.61	298	eP		P	00 57 59.7	+0.1
T13A	Saint George baz=93,SNR=23	92.65	51	⇓P		P	00 57 59.6	0.0
V14A	Boquillas Ranc baz=93,SNR=49	92.67	53	⇑P		P	00 57 59.9	+0.2
H08A	Prairie City baz=93,SNR=12	92.69	43	⇑P		P	00 57 59.8	+0.3
R12A	Pony Springs, baz=93,SNR=50	92.70	50	⇑P		P	00 58 00.4	+0.7
O11A	Cowboy Ranch, baz=93,SNR=31	92.73	48	⇓P		P	00 57 59.9	0.0
M10A	I.L. Ranch, Tu baz=93,SNR=35	92.74	46	⇓P		P	00 57 59.5	-0.3
J09A	Fry Pan Ranch, baz=93,SNR=54	92.75	44	⇓P		P	00 57 59.6	-0.2
RPW	Rockport	92.83	39	eP		P	00 57 59.2	-0.8
Q12A	Willow Creek R baz=93,SNR=7.5	92.84	49	⇓P		P	00 58 00.2	-0.2
X15A	Humboldt baz=93,SNR=53	92.85	54	⇓P		P	00 58 00.3	-0.2
G08A	Pilot Rock baz=93,SNR=36	92.86	42	⇑P		P	00 58 00.1	-0.2
217A	Green Valley baz=93,SNR=19	92.87	57	⇓P		P	00 58 00.8	+0.2
E07A	Sunnyside baz=93	92.91	41	⇓P		P	00 58 00.6	+0.1
S13A	Holt Ranch, En baz=93,SNR=30	92.92	51	⇑P		P	00 58 00.7	-0.1
U14A	Mt Trumbull baz=93,SNR=70	92.94	52	⇓P		P	00 58 01.0	+0.1
P12A	McGill baz=93	92.97	49	⇓P		P	00 58 00.8	-0.2
RSW	Rattlesnake Hi	92.99	41	eP		P	00 58 01.9	+1.0
Z16A	Peralta Trail, baz=93,SNR=9.6	93.01	55	⇑P		P	00 58 02.3	+1.0
HAWA	Hanford comp=Z,37nm,1.2s,mb5.7	93.02	41	eP		P	00 58 00.7	-0.4
HAWA				ePP		PP	01 01 39.1	-5.2
HAWA				eS		S	01 08 59.6	-8.6
L10A	Juniper Basin baz=93,SNR=24	93.03	46	⇑P		P	00 58 01.1	-0.1
I09A	Lost Marbles R baz=93,SNR=5.7	93.04	44	⇑P		P	00 58 00.9	-0.2
K10A	MacKenzie Ranc baz=93,SNR=18	93.07	45	⇓P		P	00 58 01.3	0.0
R13A	O'Grain Ranch, baz=93,SNR=13	93.09	50	⇓P		P	00 58 01.7	+0.2
TUC	Tucson	93.10	57	eP		P	00 58 01.6	-0.1
TUC	comp=Z,17nm,1.1s,mb5.4				pmax	pmax		
TUC	Tucson comp=Z,17nm,1.1s,mb5.4	93.10	57	eP		P	00 58 01.6	-0.1
TUC				eS		S	01 09 18.8	+9.2
W15A	Williams baz=93,SNR=12	93.11	53	⇓P		P	00 58 02.0	+0.3
ETW	Entiat	93.11	40	eP		P	00 58 01.7	+0.3
A06A	Chilliwack baz=93	93.16	38	⇑P		P	00 58 01.9	+0.3
Y16A	Circle Bar Ran baz=93,SNR=75	93.19	55	⇑P		P	00 58 02.1	0.0
M11A	Holland Ranch, baz=93,SNR=7.2	93.20	47	⇓P		P	00 58 02.3	+0.3
F08A	Pendleton baz=93	93.21	42	⇓P		P	00 58 02.0	+0.1
117A	Oracle baz=93,SNR=22	93.24	56	⇑P		P	00 58 02.3	-0.1
CCUT	Cedar City	93.27	51	eP		P	00 58 02.5	+0.1
T14A	Hurricane baz=93,SNR=14	93.27	51	⇑P		P	00 58 02.4	0.0
COLD	Coldfoot comp=Z,141nm,1.1s,mb6.3	93.28	15	eP		P	00 58 01.3	-0.4
ELK	Elko	93.28	47	eP		P	00 58 01.6	-0.8
ELK				e			01 01 44.5	
ELK				eS		S	01 09 11.5	+0.7
ELK	comp=Z,18nm,1.1s				pmax	pmax		
ELK	Elko comp=Z,18nm,1.1s,mb5.4	93.28	47	eP		P	00 58 01.6	-0.8
ELK				ePP		PP	01 01 44.5	-1.9
ELK				eS		S	01 09 11.5	+0.7
ARUT	Antelope Range	93.31	51	eP		P	00 58 03.1	+0.5
C07A	Waterville baz=93	93.32	40	⇓P		P	00 58 02.1	-0.2
Q13A	Wheeler Ranch, baz=94,SNR=11	93.38	49	⇓P		P	00 58 02.7	-0.2
318A	Bisbee baz=94,SNR=17	93.38	58	⇓P		P	00 58 02.7	-0.4
H09A	Durkee baz=94,SNR=6.8	93.40	43	⇑P		P	00 58 02.3	-0.5
O12A	Currie baz=94,SNR=17	93.42	48	⇓P		P	00 58 02.8	-0.3
X16A	Lo Mia Camp, P baz=94,SNR=46	93.43	54	⇑P		P	00 58 03.2	0.0
V15A	Kaibab Nationa baz=94,SNR=38	93.44	53	⇑P		P	00 58 03.1	-0.1
N12A	Clover Valley, baz=94,SNR=11	93.47	47	⇑P		P	00 58 03.1	-0.1
S14A	Cedar City baz=94	93.50	51	⇓P		P	00 58 03.4	0.0
218A	Dragoon baz=94,SNR=15	93.55	57	⇑P		P	00 58 03.7	-0.1
L11A	Cat Creek Ranc baz=94,SNR=14	93.55	46	⇑P		P	00 58 03.5	-0.1
LNOR	Lincton Mounta	93.55	42	eP		P	00 58 02.8	-0.7
P13A	Bates Ranch, G baz=94,SNR=26	93.59	49	⇑P		P	00 58 03.9	+0.1
U15A	North Rim baz=94,SNR=50	93.59	52	⇑P		P	00 58 04.2	+0.3
Y17A	Roosevelt baz=94,SNR=19	93.60	55	⇓P		P	00 58 03.7	-0.3
G09A	Cove baz=94,SNR=13	93.60	43	⇓P		P	00 58 03.8	0.0
K11A	Parker Ranch, baz=94,SNR=10	93.62	45	⇑P		P	00 58 03.6	-0.3
W16A	Flagstaff baz=94,SNR=24	93.63	54	⇓P		P	00 58 04.0	-0.1
B07A	Winthrop baz=94,SNR=6.2	93.65	39	⇓P		P	00 58 03.9	0.0
BMO	Blue Mountains	93.71	43	eP		P	00 58 03.2	-1.0
BMO	comp=Z,10.0nm,1.0s,mb5.2				pmax	pmax		
BMO	Blue Mountains comp=Z,9.9nm,1.0s,mb5.2	93.71	43	eP		P	00 58 03.2	-1.0
BMO				eS		S	01 09 21.2	+6.9
T15A	Red Dirt Ranch baz=94	93.77	52	⇑P		P	00 58 04.5	-0.2
A07A	Ashnola River, baz=94	93.77	38	⇓P		P	00 58 04.2	-0.2
M12A	Wells baz=94,SNR=12	93.79	47	⇑P		P	00 58 04.2	-0.5
118A	Homack Ranch, baz=94,SNR=16	93.86	57	⇓P		P	00 58 04.9	-0.3
X17A	Forest Lakes baz=94,SNR=32	93.88	55	⇓P		P	00 58 05.0	-0.3
JIRN	Jiri comp=Z,15nm,0.6s,mb5.6	93.90	298	eP		P	00 58 05.8	+0.2
WUAZ	Wupatki baz=94	93.91	53	⇑P		P	00 58 05.6	+0.1
WUAZ	Wupatki comp=Z,37nm,1.1s,mb5.7	93.91	53	eP		P	00 58 05.6	+0.2
WUAZ				eS		S	01 09 23.0	+6.4
319A	Douglas baz=94,SNR=6.7	93.92	58	⇓P		P	00 58 05.4	-0.1
Q14A	Sevier Lake (B baz=94,SNR=27	93.92	50	⇑P		P	00 58 04.8	-0.6
E09A	Wood Farm, Sta baz=94,SNR=11	93.93	41	⇓P		P	00 58 04.5	-0.7
DAWY	Dawson	93.94	20	eP		P	00 58 05.0	+0.2
H10A	Noah's Angus R baz=94,SNR=34	93.95	43	⇓P		P	00 58 04.7	-0.6
OD2	Odessa Site #2	93.99	40	eP		P	00 58 04.7	-0.7
G10A	Bishop Farm, J baz=94,SNR=22	94.02	43	⇓P		P	00 58 05.8	+0.1
L12A	House Creek Ra baz=94	94.03	46	⇓P		P	00 58 05.4	-0.3
MFID	Camas Ranch baz=94,SNR=11	94.04	45	⇓P		P	00 58 05.3	-0.4
N13A	Wendover, West baz=94	94.04	48	⇓P		P	00 58 05.7	-0.1
B08A	Colville Reser baz=94	94.06	39	⇑P		P	00 58 05.3	-0.5
D09A	Jones Farm, Ri baz=94,SNR=5.9	94.08	41	⇓P		P	00 58 06.2	+0.3
I11A	Placerville baz=94	94.17	44	⇓P		P	00 58 06.7	+0.3
219A	White Tail Can baz=94,SNR=18	94.17	57	⇓P		P	00 58 05.9	-0.8
W17A	Winslow baz=94	94.24	54	⇓P		P	00 58 06.8	-0.1
GUN	Gumba	94.25	298	eP		P	00 58 06.3	-0.8
Y18A	Canyon Day Jun baz=94,SNR=18	94.25	56	⇓P		P	00 58 06.8	-0.2
F10A	Beach Ranch, E baz=94,SNR=17	94.26	42	⇑P		P	00 58 06.6	-0.1
M13A	Montello baz=94,SNR=7.2	94.28	47	⇓P		P	00 58 06.8	-0.1
P14A	Drum Mountains baz=94,SNR=7.3	94.31	49	⇓P		P	00 58 06.7	-0.5
K12A	Draper Farm, C baz=94	94.32	46	⇓P		P	00 58 06.9	-0.2
U16A	Tuba City baz=94,SNR=29	94.34	53	⇑P		P	00 58 07.5	+0.2
A08A	Turner Farm, O baz=94,SNR=11	94.37	39	⇓P		P	00 58 07.9	+0.8
119A	Ashpeak Ranch, baz=94,SNR=7.3	94.43	57	⇓P		P	00 58 08.0	+0.1
J12A	Stokes Ranch, baz=95,SNR=11	94.45	45	⇑P		P	00 58 07.3	-0.3
H11A	Donnelly baz=95,SNR=29	94.47	44	⇑P		P	00 58 07.2	-0.5
MSU	Marysvale	94.52	50	eP		P	00 58 09.1	+1.0
PKIN	Phulchoki	94.53	298	eP		P	00 58 07.6	-0.8

comp=Z,35nm,1.0s,mb5.8
X18A **Snowflake** 94.61 55 ⇓P P 00 58 08.4 -0.2
baz=95,SNR=5.9
G11A **Walters Elk Ra** 94.61 43 ⇑P P 00 58 07.7 -0.6
baz=95,SNR=39
KKN **Kakani** 94.70 298 *e*P P 00 58 09.0 -0.2
comp=Z,58nm,1.1s,mb5.9
DUG **Dugway** 94.74 49 ⇓P P 00 58 08.9 -0.2
baz=95
DUG **Dugway** 94.74 49 *e*P P 00 58 09.6 +0.5
comp=Z,10nm,1.0s,mb5.2
DUG *e*S S 01 09 31.2 +7.6
DUG LR LR
comp=Z,19µm,20.0s,MS6.6
N14A **Grayback Hills** 94.75 48 ⇑P P 00 58 09.4 +0.3
baz=95,SNR=7.4
DMN **Daman** 94.78 298 *e*P P 00 58 09.5 -0.1
comp=Z,55nm,0.9s,mb6.0
A09A **Danville** 94.79 39 ⇓P P 00 58 09.4 +0.4
baz=95
B09A **Rice** 94.79 40 ⇓P P 00 58 09.0 -0.2
baz=95
U17A **Shonto** 94.87 53 ⇑P P 00 58 09.8 0.0
baz=95
F11A **Grangeville** 94.89 43 ⇑P P 00 58 09.8 +0.1
baz=95
M14A **Sheep Mountain** 94.90 47 ⇓P P 00 58 09.4 -0.4
baz=95,SNR=11
T17A **Navajo Res., N** 94.92 52 ⇑P P 00 58 10.1 +0.2
baz=95,SNR=11
Y19A **Nutrioso** 94.92 56 ⇑P P 00 58 09.9 -0.2
baz=95,SNR=9.7
R16A **Teasdale** 94.92 51 ⇓P P 00 58 10.2 +0.2
baz=95,SNR=6.8
HLID **Hailey** 95.03 45 ⇑P P 00 58 10.0 -0.3
baz=95,SNR=13
HLID **Hailey** 95.03 45 *e*P P 00 58 10.2 -0.1
comp=Z,7.3nm,0.9s,mb5.1
HLID *e*S S 01 09 24.3 -1.6
E11A **Bogner Ranch,** 95.06 42 ⇓P P 00 58 10.0 -0.4
baz=95
X19A **St. Johns** 95.07 55 ⇓P P 00 58 10.4 -0.3
baz=95,SNR=9.6
J13A **Cove Ranch, Pi** 95.12 45 ⇓P P 00 58 10.5 -0.2
baz=95
H12A **Diamond D Ranc** 95.15 44 ⇑P P 00 58 10.7 -0.2
baz=95,SNR=32
S17A **Black Ridge (B** 95.17 52 ⇑P P 00 58 10.8 -0.3
baz=95
L14A **Malta** 95.19 47 ⇑P P 00 58 10.8 -0.3
baz=95
N15A **Stansbury Isla** 95.22 48 ⇓P P 00 58 10.8 -0.5
baz=95,SNR=6.7
W19A **Sanders** 95.25 54 ⇑P P 00 58 11.4 -0.2
baz=95
D11A **Klaveano Farm,** 95.28 41 ⇓P P 00 58 11.4 0.0
baz=95
GKN **Gorkha** 95.31 298 *e*P P 00 58 11.3 -0.7
comp=Z,38nm,0.9s,mb5.8
NEW **Newport** 95.33 40 *e*P P 00 58 13.2 +1.6
NEW *e*S SKSac 01 08 42.5 -5.9
I13A **Wildhorse Cree** 95.37 45 ⇑P P 00 58 11.8 -0.1
baz=96,SNR=8.0
U18A **Rough Rock, Ch** 95.39 53 ⇓P P 00 58 11.6 -0.5
baz=96
Q16A **Castle Valley** 95.40 50 ⇑P P 00 58 11.6 -0.5
baz=96,SNR=6.2
HVU **Hansel Valley** 95.40 47 *e*P P 00 58 12.0 -0.1
HVU pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
HVU **Hansel Valley** 95.40 47 *e*P P 00 58 12.0 -0.1
comp=Z,7.9nm,0.9s,mb5.1
F12A **Elk City** 95.41 43 ⇓P P 00 58 11.3 -0.7
baz=96,SNR=21
K14A **Jones Ranch, D** 95.44 46 ⇑P P 00 58 11.8 -0.4
baz=96
SPUT **South Promonto** 95.44 48 *e*P P 00 58 12.5 +0.2
E12A **Beaver Dam Sad** 95.49 42 ⇑P P 00 58 12.1 -0.3
baz=96
M15A **Larsen Ranch,** 95.50 48 ⇑P P 00 58 12.1 -0.4
baz=96,SNR=8.8
J14A **Carey** 95.53 46 ⇓P P 00 58 12.3 -0.3
baz=96,SNR=9.3
R17A **Hanksville Air** 95.54 51 ⇑P P 00 58 12.1 -0.7
baz=96
H13A **Challis** 95.55 44 ⇓P P 00 58 12.6 -0.1
baz=96,SNR=8.3
T18A **Mexican Hat** 95.66 52 ⇑P P 00 58 13.4 0.0
baz=96,SNR=24
O16A **Springville** 95.67 49 ⇓P P 00 58 13.2 -0.1
baz=96
C11A **Tepee Creek (N** 95.67 41 ⇑P P 00 58 13.1 -0.1
baz=96,SNR=15
S18A **Hurst Farm, Bl** 95.78 52 ⇓P P 00 58 13.8 -0.1
baz=96,SNR=6.0
G13A **Cobalt** 95.78 44 ⇓P P 00 58 13.3 -0.5
baz=96,SNR=6.4
I14A **Mackay** 95.82 45 ⇓P P 00 58 13.3 -0.6
baz=96,SNR=7.6
JLU **Jordanelle** 95.86 49 *e*P P 00 58 15.3 +1.1
B11A **Sandpoint** 95.86 40 ⇑P P 00 58 13.8 -0.2
baz=96
D12A **Red Ives Fores** 95.89 42 ⇓P P 00 58 13.7 -0.5
baz=96
DAU **Daniels Canyon** 95.92 49 *e*P P 00 58 16.3 +1.8
K15A **Arbon** 95.93 47 ⇓P P 00 58 14.0 -0.4
baz=96
SRU **San Rafael** 95.94 50 *e*P P 00 58 15.2 +0.6
SRU pmax pmax
comp=Z,7.0nm,0.8s,mb5.1
SRU **San Rafael** 95.94 50 ⇑P P 00 58 13.9 -0.7
baz=96,SNR=6.3
SRU **San Rafael** 95.94 50 *e*P P 00 58 15.2 +0.6
comp=Z,6.8nm,0.8s,mb5.1
F13A **Darby** 96.01 43 ⇓P P 00 58 13.9 -0.8
baz=96,SNR=12
KOLN **Koldanda** 96.08 297 *e*P P 00 58 14.9 -0.6
comp=Z,14nm,0.8s,mb5.5
A11A **Hall Mountain,** 96.09 40 ⇑P P 00 58 14.6 -0.5
baz=96
R18A **Canyonlands Na** 96.12 51 ⇓P P 00 58 14.9 -0.5
baz=96
H14A **Leadore** 96.15 44 ⇓P P 00 58 15.2 -0.2
baz=96,SNR=7.0
DANN **Dangsing** 96.16 298 *e*P P 00 58 15.2 -0.6
comp=Z,42nm,0.9s,mb5.8
HWUT **Hardware Ranch** 96.17 48 *e*P P 00 58 15.3 -0.3
HWUT *e* 01 01 37.5
HWUT *e*S S 01 09 42.3 +6.4
T19A **Beclabito** 96.17 53 ⇑P P 00 58 15.3 -0.4
baz=96
O17A **Robinson Place** 96.20 49 ⇑P P 00 58 15.7 0.0
baz=96,SNR=23
Q18A **Rafter H Ranch** 96.22 51 ⇑P P 00 58 15.4 -0.5
baz=96,SNR=8.1
J15A **Blackfoot** 96.28 46 ⇓P P 00 58 16.0 0.0
baz=96,SNR=8.2
P18A **Preston Nutter** 96.33 50 ⇑P P 00 58 16.1 -0.3
baz=96
G14A **Jackson** 96.34 44 ⇑P P 00 58 15.8 -0.5
baz=96,SNR=5.9
L16A **Fish Haven** 96.42 47 ⇑P P 00 58 16.5 -0.2
baz=96
S19A **Harvey Farm, M** 96.43 52 ⇑P P 00 58 16.2 -0.6
baz=96
H15A **Lima** 96.62 45 ⇓P P 00 58 17.2 -0.4
baz=97
K16A **Soda Springs** 96.63 47 ⇑P P 00 58 17.3 -0.3
baz=97,SNR=6.0
F14A **Wisdom** 96.63 43 ⇓P P 00 58 17.3 -0.2
baz=97
LAZ **Ladron** 96.71 56 *e*P P 00 58 19.4 +1.1
PV10 **Paradox Valley** 96.74 52 *e*P P 00 58 18.3 +0.1
J16A **Bone** 96.78 46 ⇓P P 00 58 18.1 -0.2
baz=97,SNR=10
Q19A **Hogan Spring (** 96.79 51 ⇓P P 00 58 18.2 -0.2
baz=97
E14A **Clinton** 96.80 43 ⇓P P 00 58 17.8 -0.5
baz=97,SNR=6.5
TIXI **Tiksi** 96.81 348⇑ *e*P P 00 58 16.6 -1.2
TIXI pmax pmax
comp=Z,16nm,1.5s,mb5.2
TIXI **Tiksi** 96.81 348 *e*P P 00 58 16.5 -1.3
TIXI *e*S S 01 09 40.0 -0.2
HYB **Hyderabad** 96.86 286 *i*P P 00 58 19.5 +0.2
HYB **Hyderabad** 96.86 286 *e*P P 00 58 19.5 +0.2
PLCA **Paso Flores** 96.92 139 P P 00 58 21.2 +2.0
comp=Z,3.8nm,0.8s,mb4.9,baz=210,slow=6.5,SNR=8.7
PLCA **Paso Flores** 96.92 139 *e*P P 00 58 19.7 +0.5
G15A **Dillon** 96.94 44 ⇑P P 00 58 18.0 -1.0
baz=97
DLMT **Dillon** 96.95 44 *e*P P 00 58 18.8 -0.2
comp=Z,8.7nm,1.1s,mb5.1
PV01 **Paradox Valley** 96.99 52 *e*P P 00 58 20.2 +0.9
RRI2 **Red Ridge** 97.01 46 *e*P P 00 58 19.1 -0.3
comp=Z,29nm,1.1s,mb5.5
BNM **Barren Site** 97.02 56 *e*P P 00 58 19.2 -0.5
D14A **Greenough** 97.06 42 ⇓P P 00 58 18.9 -0.6
baz=97
CHMT **Chamberlain Mo** 97.15 42 *e*P P 00 58 21.4 +1.6
F15A **Butte** 97.20 44 ⇑P P 00 58 20.0 -0.1
baz=97
A13A **Flathead Natio** 97.25 40 ⇓P P 00 58 20.4 +0.1
baz=97
TPAW **Teton Pass** 97.31 46 *e*P P 00 58 21.4 +0.7
comp=Z,6.3nm,1.0s,mb5.0
REDW **Red Top Meadow** 97.33 46 *e*P P 00 58 21.0 +0.2
comp=Z,21nm,1.2s,mb5.5
E15A **Deer Lodge** 97.34 43 ⇑P P 00 58 20.5 -0.3
baz=97
O19A **Miners Draw (B** 97.38 50 ⇓P P 00 58 21.1 0.0
baz=98
ANMO **Albuquerque** 97.43 56⇑ *e*P P 00 58 21.7 +0.2
ANMO **Albuquerque** 97.43 56 *e*P P 00 58 21.4 0.0
comp=Z,3.9nm,1.1s,mb4.8
ANMO *e*S S 01 10 05.2 +18
IMW **Indian Meadow** 97.47 46 *e*P P 00 58 21.4 0.0
comp=Z,16nm,1.2s,mb5.3
QLMT **Earthquake Lak** 97.50 45 *e*P P 00 58 22.7 +1.2
H16A **Russell Place,** 97.58 45 ⇑P P 00 58 22.5 +0.7
baz=98,SNR=5.6
WALA **Waterton Lakes** 97.60 40 *e*P P 00 58 20.2 -1.7
comp=Z,11nm,1.4s,mb5.2
D15A **Lincoln** 97.66 42 ⇑P P 00 58 21.9 -0.3
baz=98
BOZ **Bozeman (W)** 97.69 44 ⇑P P 00 58 22.0 -0.3
baz=98
TXAR **Lajitas Array** 97.70 62 P P 00 58 23.4 +0.6
comp=Z,2.4nm,0.9s,mb4.7,baz=226,slow=5.0,SNR=14
TXAR PKKP PKKPbc 01 15 04.7 +5.8
comp=Z,0.6nm,1.1s,baz=136,slow=3.7,SNR=4.7
TXAR **Lajitas Array** 97.70 62 P P 00 58 23.4 +0.6
TXAR PKKP PKKPbc 01 15 04.7 +5.8
B14A **Marquette Ranc** 97.71 41 ⇑P P 00 58 22.0 -0.3
baz=98
HVS **Khovu-Aksy** 97.76 322 *e*P P 00 58 22.5 0.0
HVS pmax pmax
comp=Z,77nm,1.7s,mb6.0
A14A **Double T Ranch** 97.86 40 ⇓P P 00 58 23.2 +0.2
baz=98
C15A **Salmond Ranch,** 97.89 42 ⇑P P 00 58 23.4 +0.3
baz=98
PDAR **Pinedale Array** 97.99 47 P P 00 58 24.6 +0.8
comp=Z,1.8nm,0.9s,mb4.6,baz=208,slow=2.9,SNR=12
PDAR PP PP 01 02 23.6 +0.8
comp=Z,2.0nm,1.1s,baz=251,slow=4.5,SNR=4.8
PDAR PKKP PKKPbc 01 15 07.4 +8.9
comp=Z,1.0nm,0.8s,baz=72,slow=6.4,SNR=5.0
E16A **East Helena** 98.00 43 ⇓P P 00 58 23.9 +0.2
baz=98
B15A **Bradely Ranch,** 98.13 41 ⇑P P 00 58 24.5 +0.3
baz=98
A15A **Johnson Ranch,** 98.28 41 ⇓P P 00 58 25.1 +0.1
baz=98
C16A **Fuhringer Ranc** 98.44 42 ⇑P P 00 58 25.9 +0.2
baz=98
WMQ **Urumqi** 98.70 314 *e*P P 00 58 29.5 +2.5
WMQ AP 00 58 34.0
WMQ XP sP 00 58 36.5 +8.8
WMQ PP PP 01 02 34.0 +5.7
WMQ SKS 01 09 06.0
WMQ S S 01 09 55.0 -2.5
WMQ AMB AMB
comp=Z,15nm,1.4s,mb5.3
WMQ AMB AMB
comp=Z,352nm,6.2s
WMQ LR LR
comp=N,3µm,17.0s,MS6.0
WMQ LR LR
comp=E,3µm,16.2s,MS6.0
WMQ LR LR
comp=Z,3µm,28.6s
F18A **Big Timber** 99.03 44 ⇑P P 00 58 28.1 -0.3
baz=99
RLMT **Red Lodge** 99.04 45 *e*P P 00 58 29.0 +0.6
comp=Z,6.4nm,1.1s,mb5.1
MKAR **Makanchi Array** 103.28 315 Pdiff Pdif 00 58 45.8 -1.5
comp=Z,0.3nm,0.4s,baz=48,slow=2.1,SNR=3.4
MKAR PP PP 01 03 02.6 -0.2
comp=Z,1.2nm,0.8s,baz=98,slow=8.8,SNR=4.4
MKAR PKKPbc PKKPbc 01 14 44.5 +1.1
comp=Z,1.4nm,0.8s,baz=280,slow=3.6,SNR=6.4
MKAR **Makanchi Array** 103.28 315 P Pdif 00 58 45.8 -1.5
MKAR 01 03 02.6
MKAR **Makanchi Array** 103.28 315 Pdif Pdif 00 58 45.8 -1.5
MKAR PP PP 01 03 02.6 -0.2
MKAR PKKPbc PKKPbc 01 14 44.5 +1.1
CFAA **Coronel Fontan** 103.77 132 Pdif Pdif 00 58 49.0 -0.5
comp=Z,0.1nm,0.4s,baz=228,slow=5.4,SNR=3.6
CFAA **Coronel Fontan** 103.77 132 Pdif Pdif 00 58 49.0 -0.5
ZALV **Zalesovo Beam** 103.83 323 Pdiff Pdif 00 58 48.4 -1.4
comp=Z,0.8nm,0.7s,baz=38,slow=2.6,SNR=2.5
NVS **Novosibirsk** 104.97 323 *e*P Pdif 00 59 00.8 +6.0
KURK **Kurchatov** 106.65 318 Pdiff Pdif 00 59 03.5 +1.3
comp=Z,0.2nm,0.2s,baz=252,slow=0.8,SNR=3.2
KURK PKiKP PKiKP 01 03 10.6 -2.0
comp=Z,0.6nm,0.7s,baz=104,slow=1.7,SNR=4.0
KURK PP PP 01 03 28.7 +1.0
comp=Z,2.4nm,0.9s,baz=104,slow=6.9,SNR=6.3
KURK PKKPbc PKKPbc 01 14 34.7 +1.5
comp=Z,1.2nm,0.4s,baz=278,slow=3.8,SNR=4.0
KURK **Kurchatov** 106.65 318 Pdif Pdif 00 59 03.5 +1.3
KURK PKPdf PKiKP 01 03 10.6 -2.0
KURK PKiKP PKiKP 01 03 12.0 -0.6
KURK *e*PP PP 01 03 27.0 -0.7
KURK PP PP 01 03 28.7 +1.0
KURK PKKPbc PKKPbc 01 14 34.7 +1.5
UCH **Uchtor** 107.47 309 PKiKP PKiKP 01 03 14.3 -0.2
UCH *e*PP PP 01 03 32.1 -1.9
ULM **Lac du Bonnet** 109.13 43 PKiKP PKiKP 01 03 16.1 -1.1
comp=Z,4.3nm,0.8s,baz=342,slow=1.7,SNR=3.9
BVAR **Borovoye Array** 112.07 320 PKiKP PKiKP 01 03 21.4 -1.4
comp=Z,1.3nm,0.5s,baz=90,slow=3.3,SNR=7.7
BVAR PKKPbc PKKPbc 01 14 13.2 -2.6
comp=Z,1.4nm,0.8s,baz=290,slow=5.7,SNR=5.1
CPUP **Villa Florida** 114.50 134 PKP PKiKP 01 03 27.1 -1.3
comp=Z,0.2nm,0.3s,baz=181,slow=5.4,SNR=4.0
CPUP **Villa Florida** 114.50 134 *e*PKiKP PKiKP 01 03 27.0 -1.4
SVE **Sverdlovsk** 117.80 324 *e*PKiKP PKPdf 01 03 32.4 -1.2
SVE pmax pmax
comp=Z,14nm,1.4s
SIV **San Ignacio** 118.21 123 PKP PKPdf 01 03 33.8 -1.9
comp=Z,0.8nm,0.5s,baz=74,slow=0.9,SNR=3.8
BLA **Blacksburg** 118.41 58 *e*PKiKP PKPdf 01 03 34.0 -1.4
ARU **Arti** 118.97 324 *i* PKiKP PKPdf 01 03 34.3 -1.6
ARU 01 04 52.3
ARU PPP 01 07 28.5
ARU 01 10 26.4
ARU SP SP 01 14 44.0 +2.2
ARU SS SS 01 21 11.6 -4.5
ARU **Arti** 118.97 324 *e*PKPdf PKPdf 01 03 34.4 -1.5
AKTK **Aktyubinsk** 119.65 317 PKP PKPdf 01 03 35.9 -1.5
AKTK PKKPbc PKKPbc 01 13 51.4 +2.2
AKTO **Aktyubinsk** 119.65 317 PKP PKPdf 01 03 35.9 -1.5
comp=Z,2.5nm,0.6s,baz=101,slow=4.4,SNR=8.1
AKTO PKKPbc PKKPbc 01 13 51.4 +2.2
comp=Z,2.0nm,0.8s,baz=285,slow=5.3,SNR=4.2
SSPA **Standing Stone** 120.64 55 *e*PKPdf PKPdf 01 03 37.6 -2.0
LONY **Lake Ozonia** 123.11 50 *e*PKPdf PKPdf 01 03 43.0 -1.3
NCB **Newcomb** 123.39 51 *e*PKPdf PKPdf 01 03 43.0 -1.7
MDV **Middlebury** 124.14 51 *e*PKPdf PKPdf 01 03 44.5 -1.7
DAG **Danmarks Havn** 124.39 2⇓ *e*PKIKP PKPdf 01 03 43.6 -2.2
DAG pmax pmax
comp=Z,4.0nm,0.6s
DAG **Danmarks Havn** 124.39 2⇓ *i*P PKPdf 01 03 43.6 -2.2
comp=Z,4.0nm,0.6s
QUA2 **Belchertown** 124.81 53 *e*PKPdf PKPdf 01 03 46.1 -1.4
LBNH **Lisbon** 125.03 50 *e*PKIKP PKPdf 01 03 46.8 -1.1
BRYW **Bryant College** 125.43 53 *e*PKPdf PKPdf 01 03 48.1 -0.7
APA **Apatity** 126.24 341⇑ *i*PKIKP PKPdf 01 03 47.4 -2.1
APA pmax pmax
comp=Z,21nm,1.0s
APA MLR MLR
comp=Z,3µm,18.0s,MS6.1
SCHQ **Schefferville** 126.56 37 PKP PKPdf 01 03 49.1 -1.4
comp=Z,13nm,1.1s,baz=37,slow=5.1,SNR=5.1
KEV **Kevo** 126.58 345 *ep* PKPdf 01 03 48.8 -1.4
comp=Z,9.3nm,0.8s
KEV **Kevo** 126.58 345 *e*PKIKP PKPdf 01 03 48.8 -1.4
KEV pmax pmax
comp=Z,9.0nm,0.8s
PKME **Peaks-Kenny Pk** 126.81 49 *e*PKPdf PKPdf 01 03 49.9 -1.4
ARCES **ARCESS Array B** 127.11 345 PKP PKPdf 01 03 49.7 -1.4
comp=Z,5.8nm,0.5s,baz=66,slow=0.9,SNR=44
ARCES **ARCESS Array B** 127.11 345 PKP PKPdf 01 03 49.7 -1.4
ARE0 **ARCESS Array S** 127.11 345 *e*PKPdf PKPdf 01 03 50.2 -1.0
ARE0 *e*PP PP 01 05 48.0 -1.7
LSZ **Lusaka** 127.28 230 *e*PKIKP PKPdf 01 03 53.4 +0.3
KLMR **Klimovskoe** 127.42 332 PKIKP PKPdf 01 03 50.3 -1.7
SJG **San Juan** 127.91 83 *e*PKIKP PKPdf 01 03 54.2 0.0
KMBO **Kilima Mbogo** 128.12 251 *e*PKIKP PKPdf 01 03 55.6 +0.8
GNI **Garni** 129.63 305 *e*PKIKP PKPdf 01 03 57.2 +0.3
JOF **Joensuu** 129.70 337 *ep* PKPdf 01 03 55.1 -1.2
comp=Z,12nm,0.7s
JOF **Joensuu** 129.70 337 *e*PKIKP PKPdf 01 03 55.1 -1.2
JOF pmax pmax
comp=Z,12nm,0.7s
KIV **Kislovodsk** 130.69 310 *e*PKIKP PKPdf 01 03 59.3 +0.6
KIV 01 06 13.7
KIV **Kislovodsk** 130.69 310 *e*PKPdf PKPdf 01 03 59.2 +0.5
KIV PP PP 01 06 13.7 -0.5
TSUM **Tsumeb** 131.12 216 PKP PKPdf 01 04 01.3 +0.9
comp=Z,2.7nm,1.0s,baz=14,slow=4.2,SNR=3.0
TSUM **Tsumeb** 131.12 216 *e*PKPdf PKPdf 01 04 01.1 +0.7
TSUM PKP PKPdf 01 04 01.3 +0.9
OBN **Obninsk** 131.28 326 *i* PKIKP PKPdf 01 03 58.8 -0.7
OBN *i* 01 04 09.7
OBN *e* 01 06 20.4
OBN pmax pmax
comp=Z,30nm,1.7s
OBN MLR MLR
comp=Z,2µm,18.0s,MS5.8
OBN **Obninsk** 131.28 326 *i* PKP PKPdf 01 03 58.9 -0.6
KAF **Kangasniemi** 132.03 338 *ep* PKPdf 01 03 54.4 -6.3
comp=Z,6.1nm,0.5s
KAF **Kangasniemi** 132.03 338 *e*PKIKP PKPdf 01 03 54.4 -6.3
KAF pmax pmax
comp=Z,6.0nm,0.5s
SOC **Sochi** 132.87 310 *i* PKIKP PKPdf 01 03 55.0 -7.9
SOC *e* 01 06 30.1
SOC *e*PPP 01 09 28.5
ANN **Anapa** 134.20 312 *i* PKIKP PKPdf 01 04 07.5 +2.2
ANN pmax pmax
comp=Z,25nm,1.1s
MALT **Malatya** 134.70 303⇓ *i*P PKPdf 01 04 08.1 +1.6
MALT **Malatya** 134.70 303 *e*PKPdf PKPdf 01 04 07.5 +1.0
SIM **Simferopol'** 136.43 313 PKIKP PKPdf 01 04 16.3 +6.8
SIM pmax pmax
comp=Z,52nm,8.6s
AKASG **Malin Array Be** 137.22 323 PKP PKPdf 01 04 08.1 -2.6
comp=Z,1.2nm,0.5s,baz=52,slow=2.4,SNR=8.8
AKASG SKP 01 07 45.6
comp=Z,2.8nm,0.7s,baz=49,slow=3.0,SNR=5.0
NB2 **NORSAR Subarra** 137.48 344 PKPdf PKPdf 01 04 10.2 -0.7
comp=Z,2.1nm,0.7s,baz=31,slow=1.9
NOA **NORSAR Array B** 137.48 344 PKP PKPdf 01 04 10.8 -0.1
comp=Z,2.1nm,0.8s,baz=33,slow=2.0,SNR=7.5
BR131 **Keskin Array S** 138.13 306 *e*PKPdf PKPdf 01 04 13.8 +0.9
SUW **Suwalki** 138.50 330 *e*PKP PKPdf 01 04 20.2 +7.1
SUW **Suwalki** 138.50 330 *e*PKP PKPdf 01 04 20.2 +7.2
ANTO **Ankara** 138.73 307 *e*PKIKP PKPdf 01 04 13.2 -0.7
KIS **Kishinev** 139.12 318 *e*PKP PKPdf 01 04 12.0 -2.4
VRI **Vrincioaia** 140.92 318⇓ *i*P PKPdf 01 04 17.7 0.0
VRI **Vrincioaia** 140.92 318⇓ P PKPdf 01 04 17.7 0.0
BURAR **Bucovina Array** 141.02 321⇓ *i*P PKPdf 01 04 17.7 -0.1
BURAR **Bucovina Array** 141.02 321⇓ P PKPdf 01 04 17.7 -0.2
KWP **Kalwaria** 141.35 325 *e*PKP PKPdf 01 04 24.6 +6.3
KWP **Kalwaria** 141.35 325⇑ *i*P PKPdf 01 04 18.5 +0.2
KWP **Kalwaria** 141.35 325 ⇑P PKPdf 01 04 18.5 +0.2
KWP *e*PKP PKPdf 01 04 24.6 +6.3
MLR **Muntele Rosu** 141.57 318⇑ *i*P PKPdf 01 04 18.2 -0.7
MLR **Muntele Rosu** 141.57 318 ⇑P PKPdf 01 04 18.2 -0.7
KOLS **Kolonicke sedl** 141.98 324 *e*PKIKP PKiKP 01 04 23.6 +1.2
KOLS **Kolonicke sedl** 141.98 324 *e*PKP PKPdf 01 04 23.6 +4.1
KOLS **Kolonicke sedl** 141.98 324 *e*PKP PKiKP 01 04 23.6 +1.2
UZH **Uzhgorod** 142.14 324 *de*PKIKP PKiKP 01 04 25.7 +2.9
STHS **Stebnicka Huta** 142.25 326 *e*PKP PKPdf 01 04 21.2 +1.2
CRVS **Cervenica-Dubn** 142.44 325 *e*PKP PKPdf 01 04 20.0 -0.3
NIE **Niedzica** 142.74 326 *e*PKP PKPdf 01 04 20.3 -2.5
DRGR 142.91 321⇓ *i*P PKPdf 01 04 16.6 -4.6
DRGR 142.91 321 P PKPdf 01 04 19.0 -2.2
OKC **Ostrava-Krasne** 143.57 328 *e*PKP PKPdf 01 04 20.2 -2.1
GZR **Gura Zlata** 143.59 319⇓ *i*P PKPdf 01 04 20.3 -2.2
GZR **Gura Zlata** 143.59 319 P PKPdf 01 04 19.6 -2.9
PRK **Paraskevi** 143.75 308 *e*P PKPdf 01 04 18.1 -4.8
PRK **Paraskevi** 143.75 308 *e*P PKPdf 01 04 20.0 -3.0
KSP **Ksiaz** 143.76 331 *e*PKP PKPdf 01 04 22.2 -0.3
KSP **Ksiaz** 143.76 331 *e*PKP PKPdf 01 04 21.0 -1.6
SMG **Samos** 143.78 305 *e*P PKPdf 01 04 20.0 -3.1
PSZ **Piszkesteto** 143.86 325 *e*PKP PKPdf 01 04 20.6 -2.3
PSZ **Piszkesteto** 143.86 325⇓ *i*P PKPdf 01 04 22.1 -0.8
PSZ **Piszkesteto** 143.86 325 P PKPdf 01 04 22.1 -0.8
MORC **Moravsky Berou** 143.90 329⇓ *i*P PKPdf 01 04 20.9 -2.0
MORC **Moravsky Berou** 143.90 329⇓ P PKPdf 01 04 20.9 -1.9
RZN **Rozhen** 143.99 312 P PKPdf 01 04 23.9 +0.6
PGB **Panagyurishte** 144.01 314 P PKPdf 01 04 21.1 -2.2
KARP **Karpathos** 144.07 301 *e*P PKPdf 01 04 16.5 -7.1
VYHS **Vyhne** 144.07 326 *e*PKP PKPdf 01 04 21.1 -2.1
DPC **Dobruska-Polom** 144.09 330 *e*PKP PKPdf 01 04 20.6 -2.6
DPC *ep*PKP pPKPdf 01 04 28.8 +5.0
UPC **Upice** 144.12 331 *e*PKP PKPdf 01 04 20.5 -2.7
UPC *ep*PKP pPKPdf 01 04 29.0 +5.2
UPC **Upice** 144.12 331 *e*PKP PKPdf 01 04 20.5 -2.7
UPC *e* 01 04 29.0
BZS **Buzias** 144.17 320⇑ *i*P PKPdf 01 04 20.9 -2.6
BZS **Buzias** 144.17 320 P PKPdf 01 04 21.5 -2.0
CHOS **Chios island** 144.18 307 *e*P PKPdf 01 04 19.4 -4.3
KOLL **Kolacno** 144.25 326 *e*PKP PKPdf 01 04 22.9 -0.6
LIA **Limnos Island** 144.32 309 *e*P PKPdf 01 04 20.3 -3.6
LOS **Limnos** 144.39 309 *e*P PKPdf 01 04 21.5 -2.5
BUD **Budapest** 144.59 325⇑ *e*PKP PKPdf 01 04 24.4 +0.2
VTS **Vitosha** 144.63 315⇑ *i*P PKPdf 01 04 23.2 -1.2
VTS **Vitosha** 144.63 315 P PKPdf 01 04 22.6 -1.8
VTS **Vitosha** 144.63 315 P PKPdf 01 04 23.2 -1.2
VRAC **Vranov** 144.67 329 PKP PKPdf 01 04 22.3 -2.0
comp=Z,8.5nm,0.8s,baz=84,slow=3.4
VRAC **Vranov** 144.67 329⇑ *i*P PKPdf 01 04 22.8 -1.4
VRAC **Vranov** 144.67 329 ⇑P PKPdf 01 04 22.8 -1.4
MMB **Musomiste** 144.71 313 P PKPdf 01 04 22.7 -1.8
EBH **Black Hill** 144.74 353 *e*P PKPdf 01 04 23.1 -1.0
PVCC **Panska Ves** 144.75 332 *e*PKP PKPdf 01 04 22.7 -1.6
BRG **Berggiesshubel** 144.77 333 *i* PKIKP PKPdf 01 04 22.6 -1.7
BRG *i* 01 04 30.7
BRG pmax pmax
comp=Z,10.0nm,0.8s
BRG pmax pmax
comp=Z,50nm,1.0s
BRG pmax pmax
comp=Z,17nm,1.7s
BRG **Berggiesshubel** 144.77 333 *i* PKP PKPdf 01 04 22.6 -1.7
comp=Z,16nm,0.8s
BRG *i* 01 04 30.7
comp=Z,83nm,1.0s
BRG *e* 01 08 04.9
comp=Z,28nm,1.7s
CLL **Collm** 144.84 334 *i* PKIKP PKPdf 01 04 22.4 -2.0
CLL *i* 01 04 32.3
CLL pmax pmax
comp=Z,27nm,0.9s
CLL **Collm** 144.84 334 *i* PKPdf PKPdf 01 04 22.4 -2.0
comp=Z,27nm,0.9s
CLL *i* sPKiKP 01 04 32.3
comp=Z,75nm,1.0s
CLL **Collm** 144.84 334 *i* PKP PKPdf 01 04 22.4 -2.0
CLL *i* 01 04 32.3
EAB **Aberfoyle** 144.89 354 *e*P PKPdf 01 04 23.5 -0.9
ZKR **Zakros** 144.92 301 *e*P PKPdf 01 04 23.9 -1.3
ESY **Stoneypath** 144.95 352 *e*P PKPdf 01 04 23.4 -1.0
MODS **Modra-Piesok** 144.95 327 *e*PKP PKPdf 01 04 24.4 -0.3
APE **Apeiranthos** 144.96 305 *e*P PKPdf 01 04 19.7 -5.4
APE **Apeiranthos** 144.96 305 *e*P PKPdf 01 04 22.0 -3.1
APE **Apeiranthos** 144.96 305 *i* PKHKP 01 04 21.2
APE **Apeiranthos** 144.96 305⇑ *i*P PKPdf 01 04 21.9 -3.2
APE **Apeiranthos** 144.96 305 P PKPdf 01 04 19.7 -5.4

APE			*e*PKP	PKPdf	01 04 21.3	-3.8
OUR	**Ouranopolis**	**145.02 311**	*e*P	PKPbc	01 04 23.1	-1.4
EAU	**Auchinoon**	**145.13 353**	*e*P	PKPbc	01 04 22.6	-1.6
EBL	**Broad Law**	**145.15 352**	*e*P	PKPbc	01 04 22.6	-1.8
PRU	**Pruhonice**	**145.16 331**	*e*PKP	PKPdf	01 04 23.7	-1.3
PRU			*ex*	x	01 04 32.3	
ZST	**Bratislava**	**145.16 327**	*e*PKP	PKPdf	01 04 24.5	-0.6
SANT	**Santorini**	**145.21 303**	*e*P	PKPbc	01 04 23.5	-1.7
THR1	**Thera Island**	**145.21 303**	*e*P	PKPbc	01 04 23.4	-1.9
TREC	**Trest**	**145.21 330**	*e*PKP	PKPdf	01 04 24.1	-1.1
TREC			*ex*	x	01 04 32.3	
THR4	**Thira Island,**	**145.23 304**	*e*P	PKPbc	01 04 23.9	-1.4
THR3	**Thira Island,**	**145.24 304**	*e*P	PKPbc	01 04 23.8	-1.5
THR6	**Thira Island,**	**145.25 303**	*e*P	PKPbc	01 04 23.9	-1.5
PGBU	**Glenifferbraes**	**145.27 354**	*e*P	PKPbc	01 04 23.1	-1.7
SOH	**Sokhos**	**145.27 312**	*e*P	PKPbc	01 04 23.6	-1.7
THR5	**Thira Island,**	**145.28 304**	*e*P	PKPbc	01 04 23.9	-1.5
XSO	**Sourhope Farm**	**145.32 352**	*e*P	PKPbc	01 04 22.3	-2.7
NPS	**Neapolis**	**145.37 302**	*e*P	PKPbc	01 04 26.5	+0.7
PLG	**Polygyros**	**145.39 311**	*e*P	PKPbc	01 04 23.8	-1.9
PLG	**Polygyros**	**145.39 311**	*e*P	PKPbc	01 04 24.0	-1.7
PAIG	**Paliouri**	**145.39 310**	*e*P	PKPbc	01 04 23.3	-2.3
KNT	**Kendrikon**	**145.45 313**	*e*P	PKPbc	01 04 23.1	-2.7
LAST	**Lasithi**	**145.50 301**	*e*P	PKPdf	01 04 22.1	-4.0
HORT	**Hortiatis**	**145.54 312**	*e*P	PKPdf	01 04 24.6	-1.4
PKSM	**Moragy**	**145.56 323**⇑	*i*P	PKPdf	01 04 25.6	-0.3
PKSM	**Moragy**	**145.56 323**	P	PKPdf	01 04 25.3	-0.6
VAY	**Valandovo**	**145.61 313**	*e*P	PKPdf	01 04 27.6	+1.5
VAY	**Valandovo**	**145.61 313**	*e*PKP	PKPdf	01 04 24.4	-1.7
ESK	**Eskdalemuir**	**145.62 352**	*e*P	PKPdf	01 04 24.1	-1.5
ESK	**Eskdalemuir**	**145.62 352**	*e*PKPdf	PKPdf	01 04 24.2	-1.5
THE	**Thessaloniki**	**145.62 312**	*e*P	PKPdf	01 04 24.1	-2.1
STIP	**Stip**	**145.71 314**	*e*PKP	PKPdf	01 04 24.1	-2.1
ECK	**Cauldkaine Hil**	**145.74 352**	*e*P	PKPdf	01 04 24.6	-1.3
SOP	**Sopron**	**145.77 327**⇑	*e*PKP	PKPdf	01 04 28.3	+2.1
GRG	**Griva**	**145.88 313**	*e*P	PKPdf	01 04 27.2	+0.6
NKC	**Novy Kostel**	**145.89 333**	*e*PKP	PKPdf	01 04 26.6	+0.3
MOX	**Moxa**	**145.91 334**	*e*PKP	PKPdf	01 04 26.8	+0.5
	comp=Z,146nm,1.9s					
PTL	**Penteli**	**145.92 307**	*e*P	PKPdf	01 04 26.0	-0.7
XAL	**Allendale**	**145.93 351**	*e*P	PKPdf	01 04 24.5	-1.7
IDI	**Anoyia**	**145.93 302**	PKPbc	PKPbc	01 04 27.3	-0.2
XOR	**Xorichti**	**145.95 309**	*e*P	PKPdf	01 04 25.4	-1.3
DIVS	**Divibare**	**145.95 319**	*e*P	PKPdf	01 04 26.4	-0.2
CONA	**Conrad Observa**	**145.96 328**⇓	*i*P	PKPdf	01 04 26.7	+0.2
	comp=Z,136nm,1.3s,SNR=18					
CSNA	**Conrad Observa**	**145.96 328**⇓	*i*P	PKPdf	01 04 26.6	+0.1
	comp=Z,126nm,1.3s					
ATH	**Athens Observa**	**146.06 307**	*e*P	PKPdf	01 04 26.5	-0.5
SIVA	**Sivas**	**146.06 301**	*e*P	PKPdf	01 04 27.6	+0.6
KVR	**Kavouri**	**146.06 307**	*e*P	PKPdf	01 04 25.5	-1.5
GCD	**Castle Douglas**	**146.15 353**	*e*P	PKPdf	01 04 26.0	-0.6
LIT	**Litokhoron**	**146.17 311**	*e*P	PKPdf	01 04 26.3	-0.8
KHC	**Kasperske Hory**	**146.21 331**⇑	*i*PKIKP	PKPdf	01 04 26.4	-0.5
KHC	**Kasperske Hory**	**146.21 331**	*e*PKP	PKPdf	01 04 27.7	+0.8
KHC			*ep*PKP	pPKPdf	01 04 30.0	+2.6
GAL1	**Galloway**	**146.23 354**	*e*P	PKPdf	01 04 26.2	-0.5
NAIG	**Nisos Aigina**	**146.30 307**	*e*P	PKPdf	01 04 26.5	-0.9
LKR	**Lokris**	**146.35 308**	*e*P	PKPdf	01 04 26.8	-0.7
GEC2	**GERESS Array S**	**146.36 330**	*e*PKP2	PKPab	01 04 28.1	-1.1
GERES	**GERESS Array B**	**146.36 330**	PKPbc	PKPbc	01 04 28.0	-0.3
	comp=Z,18nm,0.6s,baz=35,slow=3.1,SNR=43					
VAM	**Vamos**	**146.45 302**	*e*P	PKPdf	01 04 29.0	+1.3
KRUS	**Krusevo**	**146.48 314**	*e*PKP	PKPdf	01 04 28.4	+0.8
WTSB	**Winterswijk**	**146.55 340**	*e*PKP	PKPdf	01 04 27.8	+0.5
DID	**Didima**	**146.57 306**	*e*P	PKPdf	01 04 27.3	-0.6
LTK	**Loutraki**	**146.60 307**	*e*P	PKPdf	01 04 26.7	-1.2
GVD	**Gavdhos**	**146.68 301**	*e*P	PKPdf	01 04 26.0	-2.1
AGG	**Agios Georgios**	**146.70 309**	*e*P	PKPdf	01 04 27.9	-0.2
MOA	**Molln**	**146.80 329**⇑	*i*P	PKPdf	01 04 29.3	+1.3
	comp=Z,79nm,1.3s					
GRA1	**Grafenberg Arr**	**146.81 334**	*e*PKP	PKPdf	01 04 29.0	+1.1
GRF	**Grafenberg Arr**	**146.81 334**	*e*PKP	PKPdf	01 04 29.0	+1.1
GMM	**Mts of Mourne**	**146.96 355**	*e*P	PKPbc	01 04 30.3	+0.4
VLI	**Veliai**	**147.05 305**	*e*P	PKPdf	01 04 28.0	-0.7
KYTH	**Kithira**	**147.11 304**	*e*P	PKPdf	01 04 30.0	+1.2
EVR	**Evrytania**	**147.12 309**	*e*P	PKPdf	01 04 30.0	+1.3
LHO	**Holmfirth**	**147.15 350**	*e*P	PKPdf	01 04 29.1	+0.8
PERS	**Pernice**	**147.20 326**	*i* PKPdf	PKPdf	01 04 30.0	+1.4
VLX	**Vlachokerasia**	**147.26 307**	*e*P	PKPdf	01 04 30.4	+1.4
KBI1	**Birley Grange**	**147.38 350**	*e*P	PKPdf	01 04 30.4	+1.7
TIR	**Tirane**	**147.41 315**	*e*PKIKP	PKPdf	01 04 29.8	+0.6
WME	**Myndd Eilian**	**147.63 353**	*e*P	PKPdf	01 04 30.4	+1.3
STNC	**Stoke**	**147.65 350**	*e*P	PKPdf	01 04 27.6	-1.5
KWE	**Weaver Farm**	**147.66 350**	*e*P	PKPdf	01 04 30.5	+1.3
ITM	**Ithomi**	**147.66 306**	*e*P	PKPdf	01 04 31.0	+1.3
WPM1	**Penmaenmawr**	**147.72 352**	*e*P	PKPbc	01 04 31.3	-0.7
WLF1	**Llynfaes**	**147.75 353**	*e*P	PKPdf	01 04 30.4	+1.1
KBA	**Koelnbreinsper**	**147.79 329**⇓	*i*P	PKPdf	01 04 31.2	+1.6
	comp=Z,59nm,1.0s					
CWF	**Charnwood Fore**	**147.84 349**	*e*P	PKPdf	01 04 30.9	+1.4
TOD	**Tromm**	**147.84 336**	PKP2	PKPbc	01 04 31.3	-1.2
BOJS	**Bojanci**	**147.87 325**	*i* PKPdf	PKPbc	01 04 32.3	-0.4
YLL	**Llanberis**	**147.87 353**	*e*P	PKPdf	01 04 30.8	+1.2
HGN	**Heimansgroeve**	**147.87 340**	*e*PKP	PKPab	01 04 34.5	-0.5
	comp=Z,109nm,1.5s					
VISS	**Visnje**	**147.89 325**	*i* PKPdf	PKPdf	01 04 30.6	+0.8
LJU	**Ljubljana**	**147.90 326**	*e*PKPdf	PKPdf	01 04 31.5	+1.7
BEBN	**Eben Emael**	**147.92 340**	PKP	PKPab	01 04 34.1	-1.1
DLF	**Lyons Farm**	**147.94 355**⇑	*i*P	PKPdf	01 04 31.1	+1.5
DCN	**Croghan**	**147.95 356**⇑	*i*P	PKPdf	01 04 31.3	+1.7
MEM	**Membach**	**147.98 340**	PKPbc	PKPbc	01 04 32.1	-0.7
SBD1	**Bryn Du**	**147.98 352**	*e*P	PKPdf	01 04 30.8	+1.1
LKD	**Levkas**	**148.03 310**	*e*P	PKPbc	01 04 32.5	-0.9
ABH	**Alteburg**	**148.07 337**	PKP	PKPbc	01 04 32.2	-0.9
VOY	**Vojsko**	**148.23 327**	*e*PKPdf	PKPdf	01 04 30.1	-0.3
VOY			*e*		01 04 34.0	
VOY			*e*		01 04 36.2	
VOY			*e*		01 04 39.0	
JAVS	**Javornik**	**148.24 326**	*i* PKPdf	PKPbc	01 04 34.0	+0.3
VLS	**Valsamata**	**148.28 309**	*e*P	PKPbc	01 04 32.9	-1.1
VLS	**Valsamata**	**148.28 309**	*e*P	PKPbc	01 04 33.5	-0.6
HLM1	**Long Mynd**	**148.30 351**	*e*P	PKPdf	01 04 29.3	-1.0
UCC	**Uccle**	**148.32 342**	PKPbc	PKPbc	01 04 32.9	-0.9
STU	**Stuttgart**	**148.36 335**	*e*PKIKP	PKPdf	01 04 31.5	+1.0
BCLA	**Clavier**	**148.37 340**	PKPbc	PKPbc	01 04 35.6	+1.7
RUP	**Ruppelstein**	**148.40 338**	PKP2	PKPbc	01 04 32.6	-1.4
SNF	**Seneffe**	**148.60 342**	PKPbc	PKPbc	01 04 35.0	+0.6
MOTA	**Moosalm**	**148.65 331**⇓	*i*P	PKPbc	01 04 33.5	-1.2
	comp=Z,76nm,0.9s,SNR=11					
LANF	**Langenberg**	**148.73 336**	PKP	PKPbc	01 04 33.4	-1.4
WLF	**Walferdange**	**148.74 339**	PKPbc	PKPbc	01 04 35.0	+0.2
WLF	**Walferdange**	**148.74 339**	PKPbc	PKPbc	01 04 34.0	-0.2
HTR	**Trewern Hill**	**148.79 351**	*e*P	PKPdf	01 04 32.2	+1.2
GIVF	**Givet**	**148.79 341**	*e*PKIKP	PKPdf	01 04 31.3	+0.2
	comp=Z,136nm,1.0s					
MCH1	**Michaelchurch**	**148.83 351**	*e*P	PKPbc	01 04 33.5	-1.5
DOU	**Dourbes**	**148.87 341**	PKPbc	PKPbc	01 04 34.5	-0.6
BAIF	**Baives**	**149.02 341**	*e*PKIKP	PKPdf	01 04 31.3	-0.2
	comp=Z,74nm,0.9s					
BFO	**Black Forest**	**149.05 335**	*e*PKP2	PKPbc	01 04 34.3	-1.4
SPAK	**Spaichingen-Ko**	**149.06 334**	PKP	PKPbc	01 04 34.5	-1.2
FETA	**Feichten**	**149.06 331**⇓	*i*P	PKPbc	01 04 34.5	-1.2
	comp=Z,63nm,1.0s,SNR=19					
SWN1	**Swindon**	**149.10 349**	*e*P	PKPdf	01 04 33.5	+1.9
HGH	**Gray Hill**	**149.15 350**	*e*P	PKPdf	01 04 32.8	+1.1
CDF	**Champ du Feu**	**149.39 336**	*e*PKIKP	PKPdf	01 04 31.7	-0.5
	comp=Z,139nm,1.1s					
FELD	**Feldberg im Sc**	**149.55 335**	PKP	PKPdf	01 04 34.1	+1.7
ECH	**Echery**	**149.60 336**	PKP	PKPbc	01 04 35.2	-1.9
ECH	**Echery**	**149.60 336**	*e*PKPbc	PKPbc	01 04 35.7	-1.3
DAVOS	**Davos**	**149.61 332**	PKP2	PKPbc	01 04 36.7	-0.4
DAVOX	**Davos/Dischmat**	**149.62 331**	PKPbc	PKPbc	01 04 36.7	-0.5
	comp=Z,16nm,0.3s,baz=244,slow=1.7,SNR=34					
MOF	**Molkenrain**	**149.91 336**	PKP	PKPbc	01 04 37.1	-0.7
THEF	**They Montfort**	**150.02 337**	PKP	PKPdf	01 04 34.3	+1.1
HINF	**Hinteralfeld**	**150.04 336**	*e*PKIKP	PKPdf	01 04 32.7	-0.5
	comp=Z,100nm,1.1s					
HAU	**Haudompre**	**150.08 337**	*e*PKIKP	PKPdf	01 04 33.2	-0.1
	comp=Z,135nm,1.0s					
BBS	**Basel-Blauen**	**150.08 335**	PKHKP		01 04 34.7	
TUE	**Stuetta**	**150.09 332**	*e*PKPbc	PKPbc	01 04 38.1	-0.3
MEZF	**Maizieres J'vi**	**150.11 339**	*e*PKIKP	PKPdf	01 04 33.6	+0.3
	comp=Z,299nm,1.1s					
LOMF	**Lomont**	**150.44 335**	PKP	PKPbc	01 04 37.8	-1.3
DYA	**Yadsworthy**	**150.48 351**	*e*P	PKPbc	01 04 37.5	-1.6
TIP	**Timpagrande**	**150.54 313**	*e*PKPbc	PKPbc	01 04 37.9	-1.7
CSA1	**St Austell**	**150.69 352**	*e*P	PKPbc	01 04 38.0	-1.6
CCA1	**Carnmenellis**	**150.90 353**	*e*P	PKPdf	01 04 37.2	+2.8
CMA1	**Manaccan**	**150.99 353**	*e*P	PKPbc	01 04 38.2	-2.1
CABF	**La Chapelle**	**151.34 335**	*e*PKIKP	PKPdf	01 04 35.2	-0.1
	comp=Z,75nm,0.7s					
FLN	**La Foliniere**	**151.45 346**	*e*PKIKP	PKPdf	01 04 34.9	-0.5
	comp=Z,108nm,0.7s					
LDF	**La Druitiere**	**151.53 345**	*e*PKIKP	PKPdf	01 04 34.9	-0.6
	comp=Z,44nm,0.6s					
LOR	**Lormes**	**151.58 339**	*e*PKIKP	PKPdf	01 04 35.4	-0.2
	comp=Z,119nm,1.0s					
SSF	**Saint Saulge**	**151.88 339**	*e*PKIKP	PKPdf	01 04 36.1	0.0
	comp=Z,214nm,1.4s					
GRR	**Gorron**	**151.89 346**	*e*PKIKP	PKPdf	01 04 35.8	-0.2
	comp=Z,71nm,0.8s					
LPL	**La Plagne**	**151.97 333**	*e*PKIKP	PKPdf	01 04 36.7	+0.5
	comp=Z,56nm,0.7s					
HYF	**Humbligny**	**151.98 340**	*e*PKIKP	PKPdf	01 04 36.6	+0.4
LPG	**La Plagne**	**151.98 333**	*e*PKIKP	PKPdf	01 04 36.7	+0.4
	comp=Z,91nm,0.7s					
SMF	**Signal de Mont**	**152.13 338**	*e*PKIKP	PKPdf	01 04 35.7	-0.7
	comp=Z,331nm,1.7s					
AVF	**Avril sur Loir**	**152.17 339**	*e*PKIKP	PKPdf	01 04 36.3	-0.2
	comp=Z,134nm,1.2s					
BNI	**Bardonecchia**	**152.37 333**	*e*PKIKP	PKPbc	01 04 43.2	-0.5
SGMF	**Saint Gilles**	**152.37 348**	*e*PKIKP	PKPdf	01 04 36.4	-0.3
	comp=Z,224nm,1.2s					
ROSF	**Rostrenen**	**152.42 349**	*e*PKIKP	PKPdf	01 04 36.2	-0.6
	comp=Z,87nm,1.0s					
BGF	**Bois d'Agland**	**152.54 340**	*e*PKIKP	PKPdf	01 04 36.4	-0.7
	comp=Z,78nm,1.0s					
MBDF	**Montbardon**	**152.59 332**	*e*PKIKP	PKPdf	01 04 37.0	-0.2
	comp=Z,34nm,0.6s					
SURF	**Saint Ours**	**152.76 332**	PKP	PKPbc	01 04 43.7	-0.9
PLDF	**La Plantade**	**152.79 338**	PKP	PKPdf	01 04 39.9	+2.5
QUIF	**Quistinic**	**152.81 349**	*e*PKIKP	PKPdf	01 04 36.8	-0.6
	comp=Z,160nm,1.3s					
ORIF	**Oris-en-Rattie**	**152.81 334**	*e*PKIKP	PKPdf	01 04 37.0	-0.5
	comp=Z,90nm,0.8s					
SBF	**Sospel**	**152.96 330**	*e*PKIKP	PKPdf	01 04 37.2	-0.6
	comp=Z,139nm,0.9s					
VAE	**Valguarnera**	**152.98 312**	PKPbc	PKPbc	01 04 44.6	-0.7
	comp=Z,7.5nm,1.0s,baz=130,slow=16,SNR=1.9					
VAE			PKPab	PKPab	01 04 53.8	-2.7
	comp=Z,14nm,0.8s,baz=3.4,slow=6.0,SNR=4.6					
VAE	**Valguarnera**	**152.98 312**	PKPbc	PKPbc	01 04 44.6	-0.7
VAE			PKPab	PKPab	01 04 53.8	-2.7
TCF	**Toulx Ste Croi**	**152.98 340**	*e*PKIKP	PKPdf	01 04 37.6	-0.1
	comp=Z,44nm,0.9s					
SSB	**Saint Sauveur**	**153.04 336**	*e*PKIKP	PKPbc	01 04 44.3	-0.9
VIVF	**Saint-Julien-l**	**153.35 335**	*e*PKIKP	PKPdf	01 04 37.9	-0.4
	comp=Z,47nm,0.9s					
MFF	**Saint Martin d**	**153.38 344**	*e*PKIKP	PKPdf	01 04 38.0	-0.3
	comp=Z,62nm,1.1s					
FRF	**La Foret Royal**	**153.56 331**	*e*PKIKP	PKPdf	01 04 38.0	-0.6
	comp=Z,78nm,1.1s					
LBL	**Lubilhac**	**153.56 338**	PKP	PKPdf	01 04 40.6	+2.0
SMRF	**Simiane la Rot**	**153.70 333**	*e*PKIKP	PKPdf	01 04 37.5	-1.3
	comp=Z,34nm,0.8s					
LMR	**La Mourre**	**153.80 331**	*e*PKIKP	PKPdf	01 04 38.1	-0.9
	comp=Z,48nm,1.0s					
RJF	**Les Rejaudoux**	**154.08 340**	*e*PKIKP	PKPdf	01 04 39.1	-0.2
	comp=Z,81nm,1.1s					
CAF	**Calviac**	**154.24 339**	*e*PKIKP	PKPdf	01 04 39.8	+0.2
	comp=Z,96nm,1.2s					
LASF	**Ste Croix**	**154.32 335**	*e*PKIKP	PKPdf	01 04 39.4	-0.3
	comp=Z,36nm,1.0s					
LFF	**La Frestale**	**154.65 341**	*e*PKIKP	PKPdf	01 04 39.9	-0.2
	comp=Z,120nm,1.2s					
MTLF	**Montolieu**	**155.57 337**	*e*PKIKP	PKPdf	01 04 41.1	-0.3
EPF	**Esparros**	**156.49 339**	*e*PKIKP	PKPdf	01 04 42.7	0.0
ETSF	**Etsaut**	**156.90 341**	*e*PKIKP	PKPdf	01 04 42.9	-0.3
SJPF	**Ste Jean**	**156.90 342**	*e*PKIKP	PKPdf	01 04 42.7	-0.5
KEST	**Kesra**	**157.37 314**	PKPbc	PKPdf	01 04 56.0	+12
	comp=Z,1.8nm,1.0s,baz=66,slow=23,SNR=2.4					
PBRG	**Braganca**	**159.33 352**	*e*PKPab	PKPab	01 05 23.9	+0.4
PVRL	**Vila Real**	**159.97 353**	*e*PKPab	PKPab	01 05 25.9	-0.3
MVO	**Moncorvo**	**160.00 352**	*e*PKPab	PKPab	01 05 27.2	+0.8
PVIS	**Viseu**	**160.54 354**	*e*PKPab	PKPab	01 05 29.6	+0.8
MTE	**Manteigas**	**160.82 353**	*e*PKPab	PKPab	01 05 29.9	-0.1
ESDC	**Sonseca Array**	**160.85 344**	PKPab	PKPab	01 05 29.3	-0.8
	comp=Z,9.9nm,1.0s,baz=16,slow=3.6,SNR=16					
ESDC	**Sonseca Array**	**160.85 344**	P	PKPab	01 05 28.6	-1.5
PCBR	**Castelo Branco**	**161.36 352**	*e*PKPdf	PKPdf	01 04 48.5	0.0
PCBR	**Castelo Branco**	**161.36 352**	*e*PKPab	PKPab	01 05 31.4	-0.9
EVIA	**Vianos**	**161.38 340**	PKP2	PKPab	01 05 36.2	+3.7
PTOM	**Tomar**	**161.68 354**	*e*PKPdf	PKPdf	01 04 49.2	+0.3
PTOM	**Tomar**	**161.68 354**	*e*PKPab	PKPab	01 05 34.7	+1.0
PMRV	**Marv??o**	**161.76 352**	*e*PKPab	PKPab	01 05 36.9	+2.8
EHUE	**Huescar**	**162.16 339**	PKP2	PKPab	01 05 38.7	+2.8
EBAN	**Banos Encina**	**162.21 342**	PKP2	PKPab	01 05 36.8	+0.7
EQES	**Quesada**	**162.32 340**	P	PKPab	01 05 40.1	+3.5
PESTR	**Estremoz**	**162.33 352**	*e*PKPab	PKPab	01 05 36.5	-0.1
EBAD	**Badajoz**	**162.36 350**	P	PKPab	01 05 38.3	+1.5
EADA	**Adamuz**	**162.43 344**	P	PKPab	01 05 37.5	+0.4
EVO	**Evora**	**162.72 353**	*e*PKIKP	PKPdf	01 04 49.9	0.0
	comp=Z,74nm,1.5s					
EVO	**Evora**	**162.72 353**	*e*PKPab	PKPab	01 05 39.8	+1.5
PBAR	**Barrancos**	**162.93 350**	*e*PKPdf	PKPdf	01 04 49.6	-0.6
PBAR	**Barrancos**	**162.93 350**	*e*PKPab	PKPab	01 05 39.5	+0.2
ECOG	**Cogollos-Vega**	**162.96 340**	PKP2	PKPab	01 05 41.9	+2.4
PBEJ	**Beja**	**163.20 352**	*e*PKpab		01 05 41.1	
ELOJ	**Sierra Loja**	**163.26 342**	PKP2	PKPab	01 05 43.6	+2.8
EMIN	**Mina Concepcio**	**163.27 349**	P	PKPab	01 05 40.8	0.0
EGRO	**El Granado**	**163.63 351**	P	PKPab	01 05 44.5	+2.2
PVAQ	**Vaqueiros**	**163.79 351**	*e*PKPdf	PKPdf	01 04 52.6	+1.6
PVAQ	**Vaqueiros**	**163.79 351**	*e*PKPab	PKPab	01 05 42.4	-0.7
ESPR	**Espera**	**163.97 346**	P	PKPab	01 05 49.0	+5.2
PBDV	**Barranco-do-Ve**	**163.98 352**	*e*PKPab	PKPab	01 05 46.4	+2.5
MORF	**Marmelete**	**164.00 354**	*e*PKPab	PKPab	01 05 45.7	+1.8
LIC	**Lamto**	**164.00 201**	*e*PKIKP	PKPdf	01 04 52.0	+0.1
	comp=Z,68nm,1.4s					
LIC	**Lamto**	**164.00 201**	*e*P	PKPdf	01 04 54.0	+2.1
	comp=Z,75nm,1.5s					
KIC	**Kan Boka**	**164.03 202**	*e*P	PKPdf	01 04 53.8	+1.9
	comp=Z,129nm,1.4s					
PFVI	**Vila Bisbo**	**164.19 355**	*e*PKPab	PKPab	01 05 46.7	+1.9
DBIC	**Dimbokro**	**164.36 202**	PKP	PKPdf	01 04 49.9	-2.3
	comp=Z,4.9nm,0.9s,baz=190,slow=12,SNR=2.5					
DBIC			PKPab	PKPab	01 05 45.9	-0.3
	comp=Z,6.2nm,0.8s,baz=121,slow=3.0,SNR=6.2					
TIC	**Toumodi**	**164.39 201**	*e*P	PKPdf	01 04 51.9	-0.4
	comp=Z,14nm,0.3s					
TAM	**Tamanrasset**	**164.90 278**	*e*PKIKP	PKPdf	01 04 52.2	-0.2
TOA0	**Torodi Ar. Sit**	**165.64 237**	*e*PKPdf	PKPdf	01 04 52.8	-0.5
TORD	**Torodi Ar. Bea**	**165.64 237**	PKP	PKPdf	01 04 51.8	-1.5
	comp=Z,5.5nm,1.1s,baz=21,slow=0.7,SNR=12					
TORD			PKPab	PKPab	01 05 50.9	-1.1
	comp=Z,3.2nm,0.8s,baz=103,slow=2.7,SNR=5.6					
TORD	**Torodi Ar. Bea**	**165.64 237**	PKP	PKPdf	01 04 51.8	-1.5
TORD			PKPab	PKPab	01 05 50.9	-1.1
MDT	**Midelt**	**167.36 336**	PKP	PKPdf	01 04 53.6	-0.5
	comp=Z,3.1nm,1.0s,baz=185,slow=4.8					
MDT			PKPab	PKPab	01 05 58.3	-0.7
	comp=Z,2.0nm,0.5s,baz=21,slow=3.9,SNR=4.2					

IDC 28 00:50:04.0±2.1,2130S×16937E,h0km,mb4.3/5, mb1 4.5/5,mb1mx4.2/16,mbtmp4.3/5,Error ellipse: s-maj=107.9km s-min=28.0km az=155.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**21.66 269**		P	P	00 54 57.8	+1.5
	7.8nm,0.7s,baz=104,slow=12,SNR=3.7						
STKA	**Stephens Creek**	**26.91 241**		P	P	00 55 47.2	+0.3
	12nm,1.1s,baz=111,slow=8.6,SNR=2.9						
ASAR	**Alice Springs**	**32.80 259**		P	P	00 56 38.5	-0.9
	3.3nm,0.7s,baz=86,slow=9.9,SNR=4.8						
FITZ	**Fitzroy Crossi**	**41.20 267**		P	P	00 57 50.5	-0.3
	5.2nm,0.8s,baz=125,slow=9.2,SNR=5.8						
NVAR	**Mina Array Bea**	**90.07 48**		P	P	01 03 06.7	+0.8
	0.8nm,0.6s,baz=225,slow=9.6,SNR=4.2						
EKA	**Eskdalemuir Ar**	**145.55 352**		PKPbc	PKPbc	01 09 46.2	-0.5
	0.5nm,0.6s,baz=46,slow=4.2,SNR=3.5						
GERES	**GERESS Array B**	**146.35 331**		PKPbc	PKPbc	01 09 46.2	-0.5

*IDC **28** 00:54:38.7±1.1,2155S×16942E,h0km,mb4.4/9, mb1 4.6/9,mb1mx4.3/18,mbtmp4.4/9,Error ellipse: s-maj=35.9km s-min=23.4km az=161.0*
*NEIC **28** 00:54:39.7±0.8,2161S×16950E,h10km,mb4.6/4,Error ellipse: s-maj=17.6km s-min=15.3km az=201.0*
*ISCJB **28** 00:54:43.2±0.9,2155S±02×1692E±0.1,h33km,mb4.4/10, Error ellipse: s-maj=22.9km s-min=16.8km az=19.8*
ISC 28 00:54:44.8±0.9,216S±02×1693E±01,h35km,n23,
σ0s87/20,mb4.4/10,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNZO	**South Karori**	**20.23 168**		P	P	00 59 12.8	-4.0
CTA	**Charters Tower**	**21.57 270**		P	P	00 59 32.6	+1.2
	11nm,0.7s,mb4.4,baz=95,slow=12,SNR=16						
CTAO	**Charters Tower**	**21.57 270**		*e*P	P	00 59 32.9	+1.4
	10nm,0.7s,mb4.4						
CAN	**Canberra**	**22.44 228**		P	P	00 59 39.5	-1.1
PMG	**Port Moresby**	**24.46 296**		*e*P	P	00 59 59.6	-1.0
	12nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**26.71 242**		P	P	01 00 22.0	+1.1
	8.1nm,0.7s,mb4.3,baz=81,slow=7.3,SNR=8.6						
STKA	**Stephens Creek**	**26.71 242**		*e*P	P	01 00 22.9	+2.0
	8.1nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**32.67 266**		P	P	01 01 12.5	-1.3
	2.0nm,0.8s,mb4.1,baz=97,slow=8.3,SNR=64						
ASAR	**Alice Springs**	**32.68 259**		P	P	01 01 13.3	-0.5
	5.7nm,0.8s,mb4.6,baz=81,slow=9.2,SNR=20						
FITZ	**Fitzroy Crossi**	**41.10 267**		P	P	01 02 25.9	+0.3
	9.0nm,0.8s,mb4.5,baz=128,slow=12,SNR=17						
FITZ	**Fitzroy Crossi**	**41.10 267**		*e*P	P	01 02 25.8	+0.2
	20nm,0.9s,mb4.8						
NWAO	**Narrogin (SRO)**	**47.23 245**		P	P	01 03 14.6	+0.1
	7.2nm,0.6s,m

CTAO pmax pmax
comp=Z,397nm,0.9s,mb5.8
CTAO MLR MLR
comp=Z,150μm,19.0s,MS6.4
CTAO Charters Tower 21.68 269 *e*P **P 01 06 40.2 -0.1**
comp=Z,397nm,0.9s,mb5.8
CTAO *e*S **S 01 10 41.9 +1.9**
CTAO LR LR
comp=Z,150μm,19.0s,MS6.4
WVZ Waitaha Valley 21.80 177 P **P 01 06 41.6 +0.2**
FOZ Fox Glacier 22.26 179 P **P 01 06 46.1 -0.2**
RPZ Rata Peaks 22.45 177 P **P 01 06 47.8 -0.5**
comp=Z,127nm,0.8s,mb5.4,baz=38,slow=1.4,SNR=24
RPZ LR LR 01 14 40.9
comp=Z,74μm,19.1s,MS6.1,baz=354,slow=34
CNB Canberra Magne 22.47 227 *e*P **P 01 06 49.5 +0.8**
CNB *e*S **S 01 11 00.9 +5.7**
TARA Tarawa 22.72 9 P **P 01 06 58.4 +7.0**
CAN Canberra 22.73 228 *e*P **P 01 06 49.0 -2.3**
comp=Z,662nm,1.3s,mb5.9
JCZ Jackson Bay 22.78 181 P **P 01 06 51.3 -0.5**
LBZ Lake Benmore 23.09 179 P **P 01 06 55.3 +0.2**
ODZ Otahua Downs 23.76 178 P **P 01 07 05.6 +3.8**
PMG Port Moresby 24.42 295 *e*P **P 01 07 06.8 -1.3**
PMG MLR MLR
comp=Z,60μm,19.0s
WHZ Wether Hill Ro 24.62 182 P **P 01 07 08.0 -1.6**
TUZ Tuapeka 24.65 180 P **P 01 07 10.3 +0.4**
COEN Coen 25.99 282 *e*P **P 01 07 22.1 -0.4**
comp=Z,203nm,0.8s,mb5.7
TOO Toolangi 26.32 227 *e*P **P 01 07 25.4 +0.3**
TOO *e*S **S 01 11 58.0 +0.5**
STKA Stephens Creek 26.95 241 *e*P **P 01 07 30.1 -0.9**
comp=Z,200nm,0.9s,mb5.7
STKA Stephens Creek 26.95 241 P **P 01 07 30.2 -0.7**
comp=Z,202nm,0.9s,mb5.7,baz=77,slow=9.1,SNR=111
STKA LR LR 01 18 26.2
comp=Z,103μm,18.1s,MS6.4,baz=116,slow=37
MOO Moorlands 28.17 216 *e*P **P 01 07 40.5 -1.3**
TAU Tasmania Unive 28.42 215 P **P 01 07 43.0 -0.9**
comp=Z,706nm,1.1s,mb6.2,SNR=5.8
TAU Tasmania Unive 28.42 215 *e*P **P 01 07 43.3 -0.6**
TAU pmax pmax
comp=Z,160nm,1.1s,mb5.6
TAU Tasmania Unive 28.42 215 *e*P **P 01 07 42.8 -1.1**
comp=Z,165nm,1.1s,mb5.6
TAU LR LR
comp=Z,68μm,20.0s,MS6.2
RAR Rarotonga 28.72 96 LR LR 01 17 00.8
comp=Z,21μm,20.0s,MS5.7,baz=263,slow=32
RAR Rarotonga 28.72 96 P **P 01 07 46.0 -0.9**
RAR Rarotonga 28.72 96 PFAKE 01 08 00.0 +13
RAR LR LR
comp=Z,30μm,19.0s,MS5.9
ADE Adelaide 30.19 236 P **P 01 08 00.1 +0.4**
WB2 Warramunga Arr 32.79 266 *e*P **P 01 08 19.3 -3.5**
WB2 *e*S **S 01 13 37.6 -2.0**
WRAB Tennant Creek 32.79 266 P **P 01 08 21.0 -1.8**
comp=Z,785nm,0.9s,mb6.6,SNR=44
WRAB Tennant Creek 32.79 266 *e*P **P 01 08 21.1 -1.7**
WRAB pmax pmax
comp=Z,112nm,0.9s,mb5.8
WRAB MLR MLR
comp=Z,150μm,19.0s,MS6.7
WRAB Tennant Creek 32.79 266 *e*P **P 01 08 21.1 -1.8**
comp=Z,112nm,0.9s,mb5.8
WRAB LR LR
comp=Z,150μm,19.0s,MS6.7
WRA Warramunga Arr 32.80 266 P **P 01 08 20.2 -2.7**
comp=Z,49nm,0.8s,mb5.5,baz=98,slow=8.0,SNR=118
WRA LR LR 01 21 57.5
comp=Z,129μm,18.7s,MS6.7,baz=95,slow=37
ASAR Alice Springs 32.84 259 P **P 01 08 21.1 -2.2**
comp=Z,151nm,0.8s,mb6.0,baz=82,slow=8.7,SNR=336
ASAR PcP PcP 01 11 07.2 -0.8
comp=Z,16nm,0.9s,baz=90,slow=3.7,SNR=4.9
JAY Jayapura 33.56 300 P **P 01 08 31.1 +1.5**
TBI Tubuai 38.04 101 *e*S **S 01 15 05.1 +4.9**
comp=Z,12μm,24.9s
TBI *e*LQ 01 17 55.5
comp=Z,80μm,26.8s
TBI *e*LR LR 01 19 48.7
comp=Z,28μm,25.5s,baz=266
TBI Tubuai 38.04 101 *e*S **S 01 15 05.1 +4.9**
TBI *e*LQ 01 17 55.5
FORT Forrest 38.16 247 *e*P **P 01 09 07.8 -1.1**
comp=Z,186nm,0.6s,mb6.0
PAE Paea 38.77 92 *e*PcP PcP 01 11 22.0 -3.7
comp=Z,469nm,1.1s
PAE Paea 38.77 92 *e*PcP PcP 01 11 22.0 -3.7
PPT Papeete 38.80 92 *e*P **P 01 09 16.3 +1.9**
comp=Z,40nm,1.2s,mb5.0
PPT *e*S **S 01 15 15.8 +4.1**
comp=Z,20μm,24.2s
PPT *e*LQ 01 18 25.4
comp=Z,102μm,27.5s
PPT *e*LR LR 01 20 12.3
comp=Z,61μm,25.5s,baz=257
PPT Papeete 38.80 92 LR LR 01 21 28.4
comp=Z,24μm,19.7s,MS6.0,baz=257,slow=30
PPT Papeete 38.80 92 *e*P **P 01 09 16.3 +1.9**
PPT *e*S **S 01 15 15.8 +4.1**
PPT pmax pmax
comp=Z,40nm,1.2s
PPT Papeete 38.80 92 *e*P **P 01 09 16.3 +1.9**
comp=Z,40nm,1.2s,mb5.0
PPT *e*S **S 01 15 15.8 +4.1**
PPT *e*LQ 01 18 25.4
TIAR Tiarei 39.02 92 *e*PcP PcP 01 11 22.8 -3.7
comp=Z,708nm,0.9s
TIAR Tiarei 39.02 92 *e*P **P 01 09 18.2 +2.0**
comp=Z,331nm,0.8s,mb6.1
TIAR *e*PcP PcP 01 11 22.8 -3.7
TVO Taravao 39.06 92 *e*PcP PcP 01 11 23.3 -3.3
comp=Z,758nm,1.2s
TVO Taravao 39.06 92 *e*PcP PcP 01 11 23.3 -3.3
XMAS Kiritimati 39.85 59 PFAKE 01 09 30.0 +6.8
XMAS LR LR
comp=Z,40μm,20.0s,MS6.2
MEH Mehetia 40.14 93 *e*P **P 01 09 27.5 +1.9**
comp=Z,1μm,0.8s,mb6.6
PMOR Pomariorio Ree 40.97 89 *e*PcP PcP 01 11 29.0 -3.7
comp=Z,85nm,0.9s
PMOR Pomariorio Ree 40.97 89 *e*P **P 01 09 34.6 +2.1**
comp=Z,204nm,1.3s,mb5.6
PMOR *e*PcP PcP 01 11 29.0 -3.7
VAH Vaihoa 41.16 89 *e*P **P 01 09 36.0 +1.9**
comp=Z,98nm,1.1s,mb5.3
FITZ Fitzroy Crossi 41.22 266 *e*P **P 01 09 32.7 -1.9**
comp=Z,377nm,0.7s,mb6.1
FITZ *e*S **S 01 15 48.2 +0.1**
FITZ Fitzroy Crossi 41.22 266 LR LR 01 27 11.1
comp=Z,110μm,18.6s,MS6.8,baz=103,slow=37
GUMO Guam 42.17 323 P **P 01 09 41.6 -0.6**
comp=Z,55nm,0.6s,mb5.3,baz=160,slow=12,SNR=4.0
GUMO Guam 42.17 323 P **P 01 09 41.6 -0.6**
GUMO pmax pmax
comp=Z,55nm,0.6s,mb5.4
GUMO Guam 42.17 323 *e*P **P 01 09 43.2 +1.0**
comp=Z,652nm,1.4s,mb6.1
GUMO LR LR
comp=Z,21μm,19.0s,MS6.0
SWI Sorong 42.35 294 P **P 01 09 43.9 +0.1**
AAI Ambon 43.66 288 P **P 01 09 58.2 +3.8**
BATI Baumata 45.22 277 P **P 01 10 05.6 -1.3**
comp=Z,164nm,0.7s,mb6.0,baz=139,slow=1.0,SNR=19
BATI LR LR 01 28 59.4
comp=Z,92μm,20.6s,MS6.7,baz=144,slow=36
MBWA Marble Bar 46.14 261 *e*P **P 01 10 12.8 -1.3**
comp=Z,243nm,0.9s,mb6.1
MBWA LR LR
comp=Z,57μm,19.0s,MS6.5
KLBR Kellerberrin 47.01 246 *e*P **P 01 10 18.2 -2.6**
comp=Z,229nm,0.9s,mb6.1
NWAO Narrogin (SRO) 47.45 244 P **P 01 10 22.6 -1.7**
comp=Z,94nm,0.6s,mb5.9,baz=90,slow=6.8,SNR=45
NWAO Narrogin (SRO) 47.45 244 *e*P **P 01 10 22.4 -1.9**
NWAO pmax pmax
comp=Z,74nm,0.7s
NWAO MLR MLR
comp=Z,93μm,20.0s
NWAO Narrogin (SRO) 47.45 244 *e*P **P 01 10 22.4 -1.8**
comp=Z,74nm,0.7s,mb5.7
NWAO LR LR
comp=Z,93μm,20.0s,MS6.8
MUN Mundaring 48.32 246 *e*P **P 01 10 29.7 -1.3**

MNI Manado 49.04 292 P **P 01 10 39.9 +3.2**
DRV Dumont d'Urvil 49.14 195 S **S 01 17 46.0 +4.7**
DRV SS SS 01 20 32.0 -40
DRV L 01 22 00.0
DRV R 01 25 00.0
TAOE Nuku Hiva Isla 50.06 84 *e*S **S 01 17 58.4 +2.8**
comp=Z,76μm,24.9s
TAOE *e*LQ 01 23 11.5
comp=Z,87μm,23.5s
TAOE *e*LR LR 01 25 26.2
comp=Z,187μm,23.0s,baz=252
KAPI Kappang 50.72 281 P **P 01 10 47.9 -1.7**
comp=Z,42nm,0.8s,mb5.4,baz=175,slow=3.8,SNR=13
KAPI LR LR 01 31 10.4
comp=Z,13μm,21.2s,MS5.9,baz=140,slow=35
KAPI Kappang 50.72 281 *e*P **P 01 10 48.0 -1.6**
comp=Z,868nm,1.5s,mb6.5
KAPI LR LR
comp=Z,31μm,20.0s,MS6.3
MIDW Midway 50.80 15 PFAKE 01 11 00.0 +10
MIDW LR LR
comp=Z,22μm,20.0s,MS6.2
RKT Rikitea 51.29 103 *e*S **S 01 18 15.4 +3.0**
comp=Z,23μm,27.0s
RKT *e*LQ 01 23 46.4
comp=Z,16μm,24.8s
RKT *e*LR LR 01 25 56.9
comp=Z,18μm,23.5s,baz=264
BIPH Bislig 51.38 300⇓ *e*P **P 01 10 54.4 -0.1**
DAV Davao City (W) 51.39 298 LR LR 01 30 37.9
comp=Z,8μm,18.4s,MS5.8,baz=257,slow=34
DAV Davao City (W) 51.39 298⇑ *e*P **P 01 10 52.5 -2.0**
PCI Palu 52.36 286 P **P 01 11 04.0 +2.2**
KIP Kipapa 53.02 39 PFAKE 01 11 20.0 +14
KIP LR LR
comp=Z,26μm,19.0s,MS6.3
POHA Pohakuloa 53.27 42 PFAKE 01 11 20.0 +12
POHA LR LR
comp=Z,24μm,21.0s,MS6.2
KHKI Kahang-Kahang 53.31 275 P **P 01 11 08.5 -0.4**
DNP Denpasar 53.58 275 P **P 01 11 15.0 +4.2**
CBIJ Chichi jima 54.80 330 P **P 01 11 18.8 -0.6**
comp=Z,101nm,0.7s,mb6.0,baz=126,slow=21,SNR=8.5
CBIJ LR LR 01 32 30.2
comp=Z,13μm,19.9s,MS6.0,baz=315,slow=34
PTCN Pitcairn Islan 55.37 106 PFAKE 01 11 30.0 +6.2
PTCN LR LR
comp=Z,15μm,20.0s,MS6.1
MYLDM Lahad Datu 56.37 292⇓ P **P 01 11 32.4 +1.4**
TSM Tawau 56.49 291⇑ P **P 01 11 32.8 +0.9**
SBA Scott Base 56.67 181 *e*P **P 01 11 31.9 -0.3**
SBA pmax pmax
comp=Z,188nm,1.0s,mb6.1
SBA MLR MLR
comp=Z,18μm,19.0s,MS6.2
SBA Scott Base 56.67 181 *e*P **P 01 11 31.9 -0.3**
comp=Z,188nm,1.0s,mb6.1
SBA LR LR
comp=Z,18μm,19.0s,MS6.2
SDKM Sandakan 57.73 292⇑ P **P 01 11 42.6 +1.9**
CASY Casey 58.36 204 *e*P **P 01 11 42.0 -2.2**
CASY *e*S **S 01 19 44.4 -1.8**
KKM Kota Kinabalu 58.78 291⇑ P **P 01 11 49.0 +1.0**
KKM Kota Kinabalu 58.78 291 *e*P **P 01 11 47.7 -0.2**
comp=Z,128nm,1.3s,mb5.8
KKM LR LR
comp=Z,7μm,20.0s,MS5.8
SBUM Sibu 60.66 286⇓ P **P 01 12 04.3 +3.3**
KSM Kuching 61.97 284⇑ P **P 01 12 10.5 +0.7**
KSM Kuching 61.97 284 *e*P **P 01 12 09.9 +0.1**
comp=Z,93nm,0.9s,mb5.9
MJAR Matsushiro Arr 64.58 333 P **P 01 12 26.5 -0.2**
comp=Z,22nm,0.7s,mb5.3,baz=174,slow=8.6,SNR=33
MJAR PKP2bc 01 41 20.5
comp=Z,1.1nm,0.4s,baz=208,slow=5.4,SNR=4.3
MJAR Matsushiro Arr 64.58 333 P **P 01 12 26.5 -0.2**
MJAR ⇑ *e* 01 41 20.5
MAJO Matsushiro 64.58 333 *e*P **P 01 12 26.8 +0.1**
MAJO pmax pmax
comp=Z,165nm,0.9s,mb6.1
MAJO MLR MLR
comp=Z,8μm,20.0s,MS5.9
MAJO Matsushiro 64.58 333 *e*P **P 01 12 26.8 +0.1**
comp=Z,165nm,0.9s,mb6.1
MAJO LR LR
comp=Z,8μm,20.0s,MS5.9
MAT Matsushiro 64.58 333 P **P 01 12 26.8 +0.1**
MAT S **S 01 20 58.0 -7.8**
NACB Ninganchiao 64.81 312 *e*P **P 01 12 28.4 0.0**
comp=Z,133nm,0.9s,mb6.0
YHNB Yeheng 65.28 312 *e*P **P 01 12 31.9 +0.5**
comp=Z,156nm,0.9s,mb6.0
YHNB LR LR
comp=Z,8μm,21.0s,MS5.9
MIR Mirnyy 65.29 205 *e*P **P 01 12 30.0 -0.9**
MIR *i* 01 12 40.0
MIR *i* 01 13 03.0
MIR *i* 01 15 01.0
MIR *i* S S 01 21 12.0 -1.8
MIR *i* PS 01 21 36.0
MIR *e* 01 22 22.0
MIR *i* SS SS 01 25 40.0 +14
MIR pmax pmax
comp=Z,300nm,1.4s,mb6.1
TATO Taipei 65.40 312⇑ P **P 01 12 32.9 +0.7**
SNR=6.8
TATO Taipei 65.40 312 *e*P **P 01 12 31.4 -0.8**
comp=Z,514nm,1.5s,mb6.3
TATO LR LR
comp=Z,7μm,19.0s,MS5.9
QZH Quanzhou 67.41 310 P **P 01 12 46.8 +1.7**
QZH S S 01 21 40.5 -0.2
QZH AMB AMB
comp=Z,2μm,7.2s
QZH LR LR
comp=N,3μm,11.3s
QZH LR LR
comp=E,7μm,16.5s
QZH LR LR
comp=Z,11μm,18.0s
ERM Erimo 67.46 339 PFAKE 01 12 50.0 +5.0
ERM LR LR
comp=Z,18μm,19.0s,MS6.3
MYKOM Kota Tinggi 67.98 281⇓ P **P 01 12 49.8 +0.8**
YUK Yuzh-Kuril'sk 68.44 342 P **P 01 12 52.0 +0.8**
YUK *e* 01 15 24.0
YUK *e*PPP 01 16 56.0
YUK S S 01 21 54.0 +1.7
YUK *e*SS SS 01 26 17.0 +0.3
YUK *e*SSS 01 29 20.0
YUK MLR MLR
comp=N,12μm,18.0s,MS6.2
YUK MLR MLR
comp=Z,19μm,18.0s,MS6.4
YUK MLR MLR
comp=E,6μm,20.0s,MS6.2
KGM Kluang 68.56 281⇓ P **P 01 12 53.7 +1.0**
QSPA South Pole Qui 68.82 180 P **P 01 12 53.1 -0.1**
comp=E,209nm,1.0s,mb6.0,baz=4.7,slow=1.3,SNR=138
QSPA LR LR 01 39 50.1
comp=E,20μm,19.4s,MS6.4,baz=231,slow=33
QSPA PKPPKP 01 41 04.5
comp=E,9.0nm,1.0s,baz=270,slow=2.4,SNR=7.6
HKC Hong Kong Obse 69.09 305⇑ *i*P **P 01 12 59.0 +3.3**
ASAJ Asahikawa 69.52 340 P **P 01 12 58.8 +1.0**
comp=E,115nm,0.8s,mb5.9,baz=220,slow=9.3,SNR=40
ASAJ LR LR 01 40 33.9
comp=E,23μm,20.0s,MS6.4,baz=166,slow=34
COCO West Island 69.58 264 PFAKE 01 13 10.0 +11
COCO LR LR
comp=Z,25μm,19.0s,MS6.5
KTGM Kuala Trenggan 70.08 284⇑ P **P 01 13 04.9 +2.9**
GZH Guangzhou 70.16 306 P **P 01 13 03.8 +1.5**
GZH S S 01 22 18.8 +5.3
GZH LR LR
comp=N,2μm,19.4s,MS5.8
GZH LR LR
comp=E,5μm,21.3s,MS5.8
GZH LR LR
comp=Z,6μm,20.3s,MS5.8
KSRS Korea Array 70.23 326 P **P 01 13 03.3 +0.9**
comp=Z,13nm,0.8s,mb4.9,baz=154,slow=5.8,SNR=22
KSRS PKPPKP 01 41 01.6
comp=Z,1.7nm,0.7s,baz=356,slow=4.1,SNR=4.7
KSRS LR LR 01 42 49.4

comp=Z,10μm,18.4s,MS6.1,baz=141,slow=35
FRIM Kepong 70.60 282⇓ P **P 01 13 06.2 +1.0**
QIZ Qiongzhong 70.70 300 P **P 01 13 06.3 +0.6**
QIZ S S 01 22 22.5 +2.6
QIZ AMB AMB
comp=Z,63nm,1.3s,mb5.4
QIZ AMB AMB
comp=Z,1μm,10.9s
QIZ LR LR
comp=N,4μm,19.4s
QIZ LR LR
comp=Z,2μm,18.9s,MS5.5
QIZ Qiongzhong 70.70 300 *e*P **P 01 13 06.7 +1.0**
comp=Z,106nm,1.2s,mb5.7
QIZ LR LR
comp=Z,6μm,21.0s,MS5.8
INCN Inchon 70.94 325 *e*P **P 01 13 08.0 +1.3**
comp=Z,330nm,1.4s,mb6.1
INCN LR LR
comp=Z,5μm,19.0s,MS5.8
IPM Ipoh 71.64 282⇑ P **P 01 13 11.3 -0.2**
NJ2 Nanjing 71.75 316 *e*P **P 01 13 12.0 +0.3**
NJ2 AP pP 01 13 16.8 +0.3
NJ2 XP sP 01 13 18.8 +0.6
NJ2 PP PP 01 15 56.0 +4.6
NJ2 S S 01 22 32.0 +0.5
NJ2 XS sS 01 22 41.0 +1.7
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.2
NJ2 AMB AMB
comp=Z,2μm,7.4s
NJ2 LR LR
comp=N,1μm,17.4s,MS5.4
NJ2 LR LR
comp=E,1μm,15.2s,MS5.4
NJ2 LR LR
comp=Z,13μm,18.9s,MS6.2
YSS Yuzh-Sakhalins 72.01 341 *j e*P **P 01 13 12.5 -0.5**
YSS *e**PP pP 01 13 22.0 +4.3
YSS *e* 01 13 26.0
YSS *e*PPP 01 17 40.0
YSS *i* S S 01 22 39.0 +5.1
YSS *e*PPS 01 23 19.0
YSS pmax pmax
comp=E,90nm,1.0s
YSS pmax pmax
comp=Z,310nm,1.0s,mb6.2
YSS pmax pmax
comp=N,130nm,0.9s
YSS pmax pmax
comp=Z,2μm,8.0s
YSS smax
comp=E,13μm,12.0s
YSS smax
comp=N,7μm,13.0s
YSS MLR MLR
comp=N,12μm,18.0s,MS6.3
YSS MLR MLR
comp=Z,12μm,18.0s,MS6.2
YSS MLR MLR
comp=E,8μm,17.0s,MS6.3
SKR Severo-Kuril's 72.56 351 P **P 01 13 20.0 +3.9**
SKR *e* 01 13 37.0
SKR *e* 01 23 07.0
SKR pmax pmax
comp=Z,60nm,0.6s,mb5.7
SKR pmax pmax
comp=N,3μm,8.0s
SKR pmax pmax
comp=Z,4μm,8.0s
VLA Vladivostok 72.75 332⇑ *i*P **P 01 13 19.1 +1.7**
SNG Songkhla 73.12 285 P **P 01 13 20.0 -0.3**
SMY Shemya 73.77 3 PFAKE 01 13 30.0 +6.8
SMY LR LR
comp=Z,18μm,21.0s,MS6.3
WHN Wuhan 73.80 313⇑ P **P 01 13 24.5 +0.5**
WHN S S 01 22 54.8 -0.2
WHN LR LR
comp=N,11μm,15.7s,MS6.3
WHN LR LR
comp=E,5μm,15.7s,MS6.3
WHN LR LR
comp=Z,15μm,13.3s,MS6.5
ADK Adak 73.82 9 PFAKE 01 13 30.0 +6.4
ADK LR LR
comp=Z,15μm,21.0s,MS6.2
PET Petropavlovsk 74.54 353 *e*P **P 01 13 26.1 -1.6**
PET *e*S S 01 23 04.1 +1.8
PET pmax pmax
comp=Z,2μm,8.5s
PET pmax pmax
comp=Z,120nm,1.1s,mb5.7
PET smax
comp=E,7μm,10.4s
PET smax
comp=E,12μm,14.2s
PET MLR MLR
comp=Z,7μm,17.0s,MS6.0
PET MLR MLR
comp=Z,9μm,20.0s
PET Petropavlovsk 74.54 353 *e*P **P 01 13 28.4 +0.7**
DL2 Dalian 74.69 323 P **P 01 13 29.0 0.0**
DL2 S S 01 23 05.5 +0.8
DL2 AMB AMB
comp=Z,110nm,1.3s,mb5.6
DL2 AMB AMB
comp=Z,1μm,8.1s
DL2 LR LR
comp=N,2μm,14.9s,MS5.7
DL2 LR LR
comp=E,2μm,16.2s,MS5.7
DL2 LR LR
comp=Z,4μm,16.9s,MS5.8
PEA0B Petropavlovsk- 74.73 353 *e*P **P 01 13 29.6 +0.7**
PETK Petropavlovsk- 74.73 353 P **P 01 13 29.7 +0.8**
comp=Z,56nm,0.8s,mb5.6,baz=136,slow=6.6,SNR=6.9
MDJ Mudanjiang 74.94 332 P **P 01 13 32.8 +2.5**
MDJ AP pP 01 13 35.8 +0.7
MDJ PP PP 01 16 21.3 +2.9
MDJ S S 01 23 13.0 +5.7
MDJ AMB AMB
comp=Z,55nm,1.1s,mb5.4
MDJ AMB AMB
comp=Z,894nm,7.3s
MDJ LR LR
comp=N,7μm,19.7s,MS6.0
MDJ LR LR
comp=E,4μm,19.7s,MS6.0
MDJ LR LR
comp=Z,10μm,20.7s,MS6.1
MDJ Mudanjiang 74.94 332 *e*P **P 01 13 30.8 +0.5**
comp=Z,202nm,1.3s,mb5.9
MDJ LR LR
comp=Z,11μm,22.0s,MS6.1
KKTK Khon Kaen 75.20 294 P **P 01 13 35.5 +3.1**
TIA Tai'an 75.53 319 *e*P **P 01 13 33.8 -0.1**
TIA S S 01 23 11.0 -3.2
TIA AMB AMB
comp=Z,44nm,1.2s,mb5.3
TIA LR LR
comp=N,2μm,12.0s,MS5.9
TIA LR LR
comp=E,3μm,12.0s,MS5.9
SNY Shenyang 75.72 326⇑ P **P 01 13 37.5 +2.7**
SNY S S 01 23 20.5 +4.5
SNY AMB AMB
comp=Z,34nm,2.1s,mb4.9
SNY AMB AMB
comp=Z,3μm,12.0s
SNY LR LR
comp=N,6μm,16.8s,MS6.0
SNY LR LR
comp=E,2μm,15.6s,MS6.0
SNY LR LR
comp=Z,6μm,18.4s,MS5.9
HABR Khabarovsk 75.89 337 *e*P **P 01 13 36.1 +0.5**
HABR *e* 01 13 48.5
HABR *e* 01 16 24.3
HABR *e*S S 01 23 18.6 +1.0
HABR *e* 01 23 36.0
HABR pmax pmax
comp=Z,652nm,2.6s,mb6.1
CN2 Changchun 76.24 329⇑ P **P 01 13 37.8 +0.1**
CN2 *e*XP sP 01 13 45.0 +0.8
CN2 PP PP 01 16 32.0 +2.7
CN2 *e*S S 01 23 23.0 +1.4

CN2 AMB AMB
comp=Z,90nm,1.0s,mb5.7
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,4μm,16.0s,MS6.0
CN2 LR LR
comp=E,5μm,16.0s,MS6.0
CN2 LR LR
comp=Z,5μm,18.0s,MS5.8
MAW Mawson 76.64 202 *e*P **P 01 13 39.1 -0.7**
comp=Z,41nm,0.8s,mb5.4
MAW *e*S S 01 23 24.5 -1.1
MAW Mawson 76.64 202 P **P 01 13 39.8 0.0**
comp=Z,77nm,1.0s,mb5.6,baz=115,slow=8.5,SNR=49
MAW LR LR 01 43 49.4
comp=Z,24μm,18.8s,MS6.5,baz=101,slow=33
MAW Mawson 76.64 202 *e*P **P 01 13 39.1 -0.7**
MAW *e*S S 01 23 24.5 -1.1
MAW pmax pmax
comp=Z,41nm,0.8s
GYA Guiyang 77.08 305⇑ *i*P **P 01 13 43.0 +0.1**
GYA PCP PcP 01 13 56.5 +2.7
GYA PP PP 01 16 42.0 +5.2
GYA S S 01 23 31.5 -0.1
GYA SKS 01 23 54.0
GYA AMB AMB
comp=Z,160nm,1.0s,mb5.9
GYA AMB AMB
comp=Z,5μm,6.9s
GYA LR LR
comp=N,8μm,18.0s,MS6.1
GYA LR LR
comp=E,5μm,19.4s,MS6.1
GYA LR LR
comp=Z,5μm,19.0s,MS5.8
NST Nakhon Sawan 77.20 293 P **P 01 13 45.0 +1.2**
comp=Z,67nm,1.2s,mb5.4
UNV Unalaska Valle 77.62 14 *e*P **P 01 13 44.0 -1.3**
comp=Z,52nm,0.6s,mb5.6
KLR Kul'dur 77.75 336 *e*P **P 01 13 44.0 -2.1**
KLR *e*S S 01 23 38.5 +0.7
KLR pmax pmax
comp=N,2μm,7.0s
KLR pmax pmax
comp=Z,2μm,7.0s
BJT Baijiatuau 78.57 321 *e*P **P 01 13 51.3 +0.4**
BJT pmax pmax
comp=Z,43nm,0.6s
BJT MLR MLR
comp=Z,8μm,19.0s
BJT Baijiatuau 78.57 321 *e*P **P 01 13 51.3 +0.4**
comp=Z,43nm,0.6s,mb5.6
BJT LR LR
comp=Z,8μm,19.0s,MS6.0
BJI Beijing 78.58 321 P **P 01 13 51.0 +0.1**
BJI PP PP 01 16 50.0 +0.9
BJI S S 01 23 49.0 +1.8
BJI AMB AMB
comp=Z,34nm,1.1s,mb5.2
BJI AMB AMB
comp=Z,1μm,3.7s
BJI LR LR
comp=N,7μm,16.8s
BJI LR LR
comp=E,3μm,23.4s
BJI LR LR
comp=Z,5μm,27.6s
BJI Beijing 78.58 321 P **P 01 13 51.1 +0.2**
comp=Z,34nm,1.1s,mb5.2
BJI PP PP 01 16 49.9 +0.8
BJI S S 01 23 49.0 +1.8
BJI SS SS 01 28 55.5 +3.9
BJI LR LR
comp=Z,5μm,27.6s,MS5.7
BDT Bhumibol Dam 78.87 293 P **P 01 13 56.0 +3.0**
comp=Z,31nm,1.1s,mb5.2
CHRT Chiangrai 79.39 296⇓ P **P 01 13 56.0 +0.2**
comp=Z,816nm,0.8s,mb6.7
TIY Taiyuan 79.40 317 *e*P **P 01 13 59.5 +4.0**
TIY PP PP 01 16 53.0 -3.0
TIY XS sS 01 24 09.5 +5.6
TIY LR LR
comp=N,3μm,13.3s
TIY LR LR
comp=E,4μm,20.0s
TIY LR LR
comp=Z,7μm,19.9s
KMI Kunming 79.45 302 P **P 01 13 58.3 +2.2**
KMI AP pP 01 14 00.5 -0.4
KMI XP sP 01 14 02.0 -0.6
KMI PP PP 01 16 59.8 +3.1
KMI S S 01 23 58.0 +0.9
KMI XS sS 01 24 03.5 -1.5
KMI SKS 01 24 10.5
KMI SCS ScS 01 24 19.3 0.0
KMI SS SS 01 29 07.3 +2.1
KMI AMB AMB
comp=Z,151nm,1.1s,mb5.8
KMI AMB AMB
comp=Z,1μm,3.1s
KMI LR LR
comp=N,3μm,19.1s,MS5.9
KMI LR LR
comp=E,5μm,19.1s,MS5.9
KMI LR LR
comp=Z,5μm,15.9s,MS5.9
KMI Kunming 79.45 302 P **P 01 13 58.2 +2.1**
KMI *SP sP 01 14 02.0 -0.6
KMI 01 16 59.7
KMI PPP 01 18 51.7
KMI S S 01 23 58.1 +1.0
KMI *SS sS 01 24 03.4 -1.6
KMI 01 24 10.4
KMI PS 01 24 45.0
KMI SS SS 01 29 07.3 +2.1
KMI SSS 01 32 29.3
KMI pmax pmax
comp=Z,151nm,1.1s,mb5.8
KMI MLR MLR
comp=Z,5μm,15.9s,MS5.9
KMI Kunming 79.45 302 P **P 01 13 58.2 +2.1**
comp=Z,151nm,1.1s,mb5.8
KMI pP pP 01 14 00.4 -0.5
KMI sP sP 01 14 02.0 -0.6
KMI PP PP 01 16 59.7 +3.0
KMI PPP 01 18 51.7
KMI S S 01 23 58.1 +1.0
KMI sS sS 01 24 03.4 -1.6
KMI SKS 01 24 10.4
KMI ScS ScS 01 24 19.3 0.0
KMI PS 01 24 45.0
KMI SS SS 01 29 07.3 +2.1
KMI SSS 01 32 29.3
KMI LR LR
comp=Z,5μm,15.9s,MS5.9
CM31 Chiang Mai Arr 79.46 295 *e*P **P 01 13 57.2 +1.0**
comp=Z,66nm,0.9s,mb5.6
CM31 LR LR
comp=Z,6μm,19.0s,MS6.0
CMAR Chiang Mai Arr 79.46 295 P **P 01 13 57.4 +1.1**
comp=Z,46nm,0.9s,mb5.4,baz=130,slow=3.9,SNR=87
CMAR PKKPbc PKKPbc 01 32 45.3 -0.1
comp=Z,1.1nm,0.3s,baz=296,slow=4.3,SNR=4.7
CMAR PKPPKP 01 40 49.5
comp=Z,1.2nm,0.3s,baz=293,slow=3.4,SNR=4.3
CMAR Chiang Mai Arr 79.46 295 *i* P **P 01 13 57.4 +1.2**
XAN Xi'an 79.57 313 P **P 01 13 56.0 -0.5**
XAN AP pP 01 14 06.8 +5.5
XAN PP PP 01 16 57.3 -0.2
XAN S S 01 23 58.8 +0.8
XAN AMB AMB
comp=Z,89nm,1.7s,mb5.4
XAN AMB AMB
comp=Z,576nm,11.5s
XAN LR LR
comp=N,1μm,18.7s,MS6.0
XAN LR LR
comp=E,5μm,15.9s,MS6.0
XAN LR LR
comp=Z,9μm,17.6s,MS6.2
CHG Chiang Mai 79.61 295⇑ P **P 01 13 57.9 +0.8**
comp=Z,142nm,0.9s,mb5.9
CHTO Chiang Mai 79.61 295⇓ P **P 01 13 59.7 +2.6**
SNR=61
CHTO Chiang Mai 79.61 295 *e*P **P 01 13 57.8 +0.7**
CHTO pmax pmax
comp=Z,81nm,0.8s,mb5.7
CHTO MLR MLR
comp=Z,7μm,20.0s,MS6.0
CHTO Chiang Mai 79.61 295 *e*P **P 01 13 57.8 +0.7**
comp=Z,81nm,0.8s,mb5.7
CHTO LR LR
comp=Z,7μm,20.0s,MS6.0
CD2 Chengdu 81.56 308⇑ *i*P **P 01 14 08.3 +1.0**
CD2 AP pP 01 14 13.0 +0.9
CD2 XP sP 01 14 15.8 +2.0
CD2 PP PP 01 17 17.5 +3.4
CD2 S S 01 24 19.5 +0.4
CD2 XS sS 01 24 27.5 +0.5
CD2 AMB AMB
comp=Z,120nm,1.6s,mb5.6
CD2 AMB AMB
comp=Z,230nm,5.8s
CD2 LR LR
comp=N,6μm,21.6s,MS6.1
CD2 LR LR
comp=E,5μm,21.6s,MS6.1
CD2 LR LR
comp=Z,6μm,21.6s,MS5.9
HHC Hu-ho-hao-te 81.83 320 *e*P **P 01 14 09.3 +0.8**
HHC AP pP 01 14 12.3 -1.0
HHC XP sP 01 14 14.3 -0.7
HHC PP PP 01 17 19.5 +3.4
HHC S S 01 24 22.8 +1.4
HHC SKS 01 24 25.5
HHC XS sS 01 24 28.5 -0.8
HHC AMB AMB
comp=Z,29nm,1.1s,mb5.1
HHC AMB AMB
comp=Z,1μm,6.6s
HHC LR LR
comp=N,4μm,16.7s,MS6.0
HHC LR LR
comp=E,5μm,17.2s,MS6.0
HHC LR LR
comp=Z,7μm,17.6s,MS6.0
BTO Baotou 82.63 319 *e*P **P 01 14 15.5 +2.9**
HIA Hailar 82.91 330⇑ *i*P **P 01 14 13.0 -0.9**
SYO Syowa Base 83.06 196⇓ *e*P **P 01 14 12.0 -2.5**
SYO Syowa Base 83.06 196⇓ *i*pP pP 01 14 16.0 -3.3
LZH Lanzhou 84.17 312⇑ P **P 01 14 22.8 +2.1**
LZH AP pP 01 14 28.3 +2.8
LZH XP sP 01 14 31.0 +3.8
LZH PP PP 01 17 38.0 +2.6
LZH SKS 01 24 39.0
LZH S S 01 24 45.5 +0.1
LZH XS sS 01 24 59.0 +5.7
LZH AMB AMB
comp=Z,79nm,1.1s,mb5.8
LZH AMB AMB
comp=Z,1μm,7.5s
LZH LR LR
comp=E,3μm,17.7s
LZH LR LR
comp=Z,7μm,18.8s,MS6.1
LZH Lanzhou 84.17 312⇑ P **P 01 14 22.7 +2.0**
LZH *SP sP 01 14 31.1 +3.9
LZH 01 17 38.0
LZH 01 24 39.0
LZH S S 01 24 45.5 +0.1
LZH pmax pmax
comp=Z,79nm,1.1s,mb5.8
LZH MLR MLR
comp=Z,7μm,18.8s,MS6.1
LZH Lanzhou 84.17 312⇑ P **P 01 14 22.7 +2.0**
comp=Z,79nm,1.1s,mb5.8
LZH pP pP 01 14 28.2 +2.7
LZH sP sP 01 14 31.1 +3.9
LZH PP PP 01 17 38.0 +2.6
LZH SKS 01 24 39.0
LZH S S 01 24 45.5 +0.1
LZH sS sS 01 24 59.0 +5.7
LZH SS SS 01 30 22.0 +6.8
LZH LR LR
comp=Z,7μm,18.8s,MS6.1
OHAK Old Harbor 84.19 19 *e*P **P 01 14 20.1 -0.2**
comp=Z,317nm,1.8s,mb6.2
KDAK Kodiak Island 84.86 19 P **P 01 14 25.6 +1.9**
comp=Z,351nm,0.9s,mb6.5,SNR=6.7
KDAK Kodiak Island 84.86 19 P **P 01 14 23.7 +0.1**
comp=Z,14nm,0.6s,mb5.3,baz=222,slow=4.0,SNR=14
KDAK Kodiak Island 84.86 19 *e*P **P 01 14 23.6 -0.1**
comp=Z,134nm,1.3s,mb5.9
KDAK LR LR
comp=Z,4μm,19.0s,MS5.8
SEY Seymchan 84.96 352 *e*P **P 01 14 22.8 -1.3**
PMSA Palmer Station 84.99 160 P **P 01 14 24.2 -0.2**
comp=Z,65nm,0.9s,mb5.8,baz=165,slow=0.8,SNR=8.9
PMSA Palmer Station 84.99 160 *e*P **P 01 14 24.0 -0.4**
comp=Z,210nm,1.3s,mb6.1
PMSA LR LR
comp=Z,15μm,20.0s,MS6.4
CLNS Chul'man 86.28 337 *e*P **P 01 14 29.6 -1.2**
CLNS *e* 01 17 45.5
CLNS *e*S S 01 24 51.1 -14
CLNS pmax pmax
comp=Z,364nm,1.4s,mb6.4
CLNS pmax pmax
comp=N,272nm,1.3s
CLNS pmax pmax
comp=E,49nm,0.8s
CLNS smax
comp=N,3632μm,12.3s
CLNS smax
comp=E,6457μm,15.4s
CLNS MLR MLR
comp=Z,4μm,17.0s,MS5.8
CLNS MLR MLR
comp=N,3μm,18.0s,MS5.8
CLNS MLR MLR
comp=E,2μm,18.0s,MS5.8
MCCM Marconi Confer 86.72 47 *e*P **P 01 14 32.4 -0.9**
comp=E,73nm,0.7s,mb6.0
MCCM LR LR
comp=Z,17μm,20.0s,MS6.4
SNCC San Nicolas Is 86.74 53 *e*P **P 01 14 33.9 +0.3**
comp=Z,87nm,0.9s,mb6.0
SNCC LR LR
comp=Z,13μm,19.0s,MS6.4
SVW2 Sparrevohn 86.77 16 *e*P **P 01 14 33.8 +0.7**
NVL N'lazarevskaya 86.90 187 *e*P **P 01 14 32.8 -1.0**
NVL *e*S S 01 25 00.1 -11
NVL pmax pmax
comp=Z,160nm,1.3s,mb6.1
HOPS Hopland 87.02 46 *e*P **P 01 14 34.1 -0.7**
comp=Z,59nm,0.8s,mb5.9
HOPS LR LR
comp=Z,18μm,19.0s,MS6.5
KCPM Cahto Peak 87.03 45 *e*P **P 01 14 34.8 -0.1**
comp=Z,103nm,0.7s,mb6.2
SAO San Andreas Ge 87.03 49 *e*P **P 01 14 34.3 -0.6**
SAO pmax pmax
comp=Z,68nm,0.9s,mb5.9
SAO MLR MLR
comp=Z,17μm,19.0s,MS6.5
SAO San Andreas Ge 87.03 49 *e*P **P 01 14 34.2 -0.7**
comp=Z,68nm,0.9s,mb5.9
SAO LR LR
comp=Z,17μm,19.0s,MS6.5
KIPM Iron Peak 87.16 45 *e*P **P 01 14 35.3 -0.2**
comp=Z,139nm,0.7s,mb6.3
SNAA Sanae 87.18 182 *e*P **P 01 14 33.1 -2.0**
SNAA *e* 01 14 35.4
SNAA *e* 01 14 37.7 -2.3
SNAA *e*pP 01 14 44.7
SNAA Sanae 87.18 182 *e*P **P 01 14 33.0 -2.1**
SNAA pmax pmax
comp=Z,292nm,1.1s
SNAA Sanae 87.18 182 *e*P **P 01 14 33.0 -2.1**
comp=Z,292nm,1.1s,mb6.4
CIT Chita 87.68 329 *e*P **P 01 14 38.0 +0.3**
CIT *e* 01 14 55.1
CIT *e* 01 25 18.8
SEW Seward 87.70 19 *e*P **P 01 14 36.4 -1.2**
comp=Z,13nm,0.7s,mb5.3
KRMB Red Mountain 87.75 44 *e*P **P 01 14 39.0 +0.7**
comp=Z,42nm,0.6s,mb5.8
VNA3 Neumayer Olymp 87.76 180 *e*P **P 01 14 36.0 -2.0**
VNA3 *e* 01 14 38.0
VNA3 *e* pP 01 14 40.5 -2.3
VNA3 *e* 01 14 46.2
SLKM Skilak Lake 87.79 19 *e*P **P 01 14 38.6 +0.6**
VNA2 Neumayer--Watz 88.06 181 *e*P **P 01 14 38.4 -1.0**
VNA2 *e* 01 14 40.4
VNA2 *e* pP 01 14 42.5 -1.7
VNA2 *e* 01 14 48.1
WDC Whiskeytown Da 88.17 45 *e*P **P 01 14 39.5 -0.8**
WDC pmax pmax
comp=Z,400nm,1.8s,mb6.3
WDC MLR MLR
comp=Z,18μm,20.0s,MS6.5
WDC Whiskeytown Da 88.17 45 *e*P **P 01 14 39.5 -0.8**
comp=Z,400nm,1.8s,mb6.3
WDC LR LR
comp=Z,18μm,20.0s,MS6.5
KEBM Edson Butte 88.18 42 *e*P **P 01 14 41.4 +1.1**
comp=Z,79nm,0.8s,mb6.0
OHCM Honcut 88.26 46 *e*P **P 01 14 40.0 -0.7**
MWC Mount Wilson 88.27 52 *e*P **P 01 14 40.1 -0.9**
MWC pmax pmax
comp=Z,85nm,0.9s,mb6.0
MWC MLR MLR
comp=Z,14μm,20.0s,MS6.4
MWC Mount Wilson 88.27 52 *e*P **P 01 14 40.1 -0.8**
comp=Z,85nm,0.9s,mb6.0
MWC LR LR
comp=Z,14μm,20.0s,MS6.4
VNA1 Neumayer--Stat 88.34 181 *e*P **P 01 14 39.4 -1.3**
VNA1 *e* 01 14 40.6
VNA1 *e* pP 01 14 42.8 -2.8
VNA1 *e* 01 14 49.0
CMB Columbia Colle 88.38 48 *e*P **P 01 14 40.6 -0.8**
CMB pmax pmax
comp=Z,78nm,0.8s,mb6.0
CMB MLR MLR
comp=Z,19μm,20.0s,MS6.5
CMB Columbia Colle 88.38 48 *e*P **P 01 14 40.6 -0.8**
comp=Z,78nm,0.8s,mb6.0
CMB LR LR
comp=Z,19μm,20.0s,MS6.5
RC01 Rabbit Creek A 88.40 19 *e*P **P 01 14 41.6 +0.7**
comp=Z,13nm,0.6s,mb5.3
ULN Ulaanbaatar 88.55 323 P **P 01 14 42.2 +0.3**
SNR=91
ULN Ulaanbaatar 88.55 323 *i* P **P 01 14 42.3 +0.4**
GTA Gaotai 88.60 313⇑ P **P 01 14 42.5 +0.1**
GTA AP pP 01 14 46.8 -0.4
GTA XP sP 01 14 48.5 -0.4
GTA PP PP 01 18 12.5 +1.3
GTA SKS 01 25 07.3
GTA S S 01 25 26.8 -1.6
GTA XS sS 01 25 35.0 -1.4
GTA SS SS 01 31 19.5 -0.5
GTA AMB AMB
comp=Z,15nm,1.2s,mb5.2
GTA AMB AMB
comp=Z,1μm,5.1s
GTA LR LR
comp=N,4μm,17.4s,MS6.0
GTA LR LR
comp=E,4μm,19.2s,MS6.0
GTA LR LR
comp=Z,6μm,23.1s,MS5.9
BAR Barrett 88.62 54 *e*P **P 01 14 42.4 -0.2**
comp=Z,113nm,1.5s,mb6.0
BAR LR LR
comp=Z,19μm,19.0s,MS6.5
ISA Isabella 88.62 51 *e*P **P 01 14 42.0 -0.6**
ISA pmax pmax
comp=Z,225nm,1.4s,mb6.3
ISA MLR MLR
comp=Z,17μm,20.0s,MS6.5
ISA Isabella 88.62 51 *e*P **P 01 14 42.0 -0.6**
comp=Z,225nm,1.4s,mb6.3
ISA LR LR
comp=Z,17μm,20.0s,MS6.5
YBH Yreka Blue Hor 88.63 44 P **P 01 14 42.4 -0.1**
comp=Z,38nm,0.8s,mb5.8,baz=148,slow=1.1,SNR=90
YBH Yreka Blue Hor 88.63 44 *e*P **P 01 14 42.4 -0.1**
YBH pmax pmax
comp=Z,55nm,0.9s
YBH MLR MLR
comp=Z,17μm,21.0s
YBH Yreka Blue Hor 88.63 44 *e*P **P 01 14 42.4 -0.1**
comp=Z,55nm,0.9s,mb5.9
YBH LR LR
comp=Z,17μm,21.0s,MS6.5
YAK Yakutsk 88.81 342 *e*P **P 01 14 42.8 0.0**
YAK *e**PP pP 01 14 52.2 +4.5
YAK *e* 01 18 16.1
YAK *e*S S 01 25 12.5 -17
YAK pmax pmax
comp=Z,171nm,1.2s,mb6.2
YAK pmax pmax
comp=N,31nm,1.5s
YAK pmax pmax
comp=E,10.0nm,0.7s
YAK pmax pmax
comp=Z,212nm,3.5s
YAK pmax pmax
comp=N,257nm,4.1s
YAK pmax pmax
comp=E,93nm,2.7s
YAK MLR MLR
comp=Z,15μm,21.0s,MS6.4
YAK MLR MLR
comp=N,11μm,22.0s,MS6.3
YAK MLR MLR
comp=E,10μm,23.0s,MS6.3
YAK Yakutsk 88.81 342 *e*P **P 01 14 40.8 -2.0**
SONM Songino Array 88.90 323 P **P 01 14 43.7 +0.2**
comp=E,18nm,0.9s,mb5.4,baz=128,slow=3.9,SNR=37
SONM PKKPbc PKKPbc 01 32 23.1 -1.4
comp=E,2.4nm,1.0s,baz=270,slow=2.7,SNR=5.6
SONM PKPPKP 01 40 41.3
comp=E,3.0nm,1.0s,baz=325,slow=1.8,SNR=4.7
SONM LR LR 01 56 16.9
comp=E,10μm,18.5s,MS6.2,baz=122,slow=37
HUMO Hull Mountain 88.92 43 *e*P **P 01 14 44.0 +0.3**
comp=E,85nm,0.8s,mb6.1
HUMO LR LR
comp=Z,24μm,21.0s,MS6.6
PMR Palmer 88.97 18 *e*P **P 01 14 41.2 -2.4**
PMR pmax pmax
comp=Z,10.0nm,0.6s,mb5.3
PMR MLR MLR
comp=Z,18μm,20.0s,MS6.5
PMR Palmer 88.97 18 *e*P **P 01 14 41.2 -2.3**
comp=Z,10nm,0.6s,mb5.3
PMR LR LR
comp=Z,18μm,20.0s,MS6.5
BILL Bilibino 89.05 359*c* *i*P **P 01 14 42.4 -1.4**
BILL *i* S S 01 25 09.4 -22
BILL *i* PS 01 26 34.7
BILL *i* SS SS 01 31 22.3 -3.0
BILL pmax pmax
comp=Z,111nm,0.8s,mb6.2
BILL Bilibino 89.05 359⇑ *i*P **P 01 14 42.5 -1.3**
LTIM Timbered Crate 89.15 45 P **P 01 14 44.5 -0.4**
PFO Pinyon Flat Ob 89.19 53 P **P 01 14 44.2 -1.1**
comp=Z,304nm,1.3s,mb6.5,SNR=12
PFO Pinyon Flat Ob 89.19 53 P **P 01 14 44.8 -0.5**
comp=Z,31nm,0.9s,mb5.6,baz=258,slow=3.7,SNR=32
PFO Pinyon Flat Ob 89.19 53 *e*P **P 01 14 44.8 -0.5**
PFO pmax pmax
comp=Z,122nm,1.4s,mb6.0
PFO MLR MLR
comp=Z,16μm,20.0s,MS6.4
PFO Pinyon Flat Ob 89.19 53 *e*P **P 01 14 44.8 -0.5**
comp=Z,122nm,1.4s,mb6.0
PFO LR LR
comp=Z,16μm,20.0s,MS6.4
MTUM Tungsten Hills 89.34 49 *e*P **P 01 14 45.8 -0.1**
MPOR Mary's Peak 89.51 41 P **P 01 14 47.0 +0.5**
HOG Hogback Mounta 89.54 44 P **P 01 14 48.0 +1.2**
DAC Darwin (Calif) 89.54 51 PFAKE 01 15 00.0 +13
DAC LR LR
comp=Z,19μm,19.0s,MS6.5
GSC Goldstone 89.68 52 P **P 01 14 47.0 -0.5**
GSC pmax pmax
comp=Z,280nm,1.7s,mb6.3
GSC Goldstone 89.68 52 *e*P **P 01 14 47.4 -0.1**
comp=Z,277nm,1.8s,mb6.3
GSC LR LR
comp=Z,12μm,20.0s,MS6.3

COR **Corvallis** 89.70 41 *e*P P 01 14 48.6 +1.2
COR pmax pmax
comp=Z,200nm,1.3s,mb6.3
COR MLR MLR
comp=Z,13µm,20.0s,MS6.4
COR Corvallis 89.70 41 *e*P P 01 14 48.6 +1.2
comp=Z,200nm,1.3s,mb6.3
COR LR LR
comp=Z,13µm,20.0s,MS6.4
HEBO Mount Hebo 89.75 41 *e*P P 01 14 48.1 +0.5
comp=Z,129nm,1.0s,mb6.2
PAHR Pah Rah Range 89.86 47 *e*P P 01 14 47.8 -0.5
comp=Z,103nm,1.0s,mb6.1
HBO Huckleberry Mo 89.94 42 P P 01 14 49.6 +1.0
NVAR Mina Array Bea 90.01 48 P P 01 14 48.8 -0.3
comp=Z,82nm,0.7s,mb6.2,baz=228,slow=7.6,SNR=223
NVAR PKKPbc PKKPbc 01 32 23.7 +2.4
comp=Z,0.8nm,0.7s,baz=102,slow=4.0,SNR=4.9
KTH Kantishna Hill 90.03 17 *e*P P 01 14 46.3 -2.2
comp=Z,7.9nm,0.6s,mb5.2
TRF Thorofare Moun 90.12 17 *e*P P 01 14 47.0 -1.9
comp=Z,16nm,0.6s,mb5.5
LPIG La Paz 90.15 64 P P 01 14 51.1 +1.1
comp=Z,11nm,0.3s,mb5.6,baz=180,slow=6.0,SNR=6.0
GLA Glamis 90.18 55 *e*P P 01 14 50.3 +0.4
GLA pmax pmax
comp=Z,147nm,0.9s,mb6.3
GLA MLR MLR
comp=Z,21µm,19.0s,MS6.6
GLA Glamis 90.18 55 *e*P P 01 14 50.3 +0.4
comp=Z,147nm,0.9s,mb6.3
GLA LR LR
comp=Z,21µm,19.0s,MS6.6
MOD Modoc 90.28 45 *e*P P 01 14 49.2 -1.0
comp=Z,69nm,0.8s,mb6.0
MOD LR LR
comp=Z,12µm,20.0s,MS6.3
SSOR Sweet Springs 90.36 41 P P 01 14 51.2 +0.7
BPAW Bear Paw Mtn. 90.46 16 *e*P P 01 14 49.9 -0.5
comp=Z,48nm,1.7s,mb5.5
BKCOR Black Crater 90.55 42 P P 01 14 52.6 +1.2
CRAG Craig 90.60 29 *e*P P 01 14 51.4 0.0
comp=Z,76nm,1.4s,mb5.8
TPH Tonopah 90.61 49 *e*P P 01 14 51.4 -0.4
TPH pmax pmax
comp=Z,76nm,0.9s,mb6.0
TPH MLR MLR
comp=Z,12µm,19.0s,MS6.4
TPH Tonopah 90.61 49 *e*P P 01 14 51.4 -0.5
comp=Z,76nm,0.9s,mb6.0
TPH LR LR
comp=Z,12µm,19.0s,MS6.4
SIT Sitka 90.65 27 PFAKE 01 15 00.0 +8.5
SIT LR LR
comp=Z,25µm,20.0s,MS6.6
LSA Lhasa 90.70 302 *e*P P 01 14 53.5 +1.1
LSA pmax pmax
comp=Z,51nm,0.9s,mb5.8
LSA MLR MLR
comp=Z,5µm,21.0s,MS6.0
LSA Lhasa 90.70 302 *e*P P 01 14 53.5 +1.1
comp=Z,51nm,0.9s,mb5.8
LSA LR LR
comp=Z,5µm,21.0s,MS6.0
BMW Boistfort Moun 90.71 40 *e*P P 01 14 52.2 +0.1
MCK McKinley 90.72 17 *e*P P 01 14 49.7 -2.0
MCK pmax pmax
comp=Z,103nm,1.6s,mb5.9
MCK McKinley 90.72 17 *e*P P 01 14 49.7 -2.0
comp=Z,103nm,1.6s,mb5.9
PNL Peninsula 90.79 23 *e*P P 01 14 50.6 -1.5
comp=Z,99nm,1.5s,mb5.9
NLWA Neilton Lookou 90.80 39 *e*P P 01 14 52.5 +0.1
comp=Z,78nm,1.0s,mb6.0
NLWA LR LR
comp=Z,13µm,19.0s,MS6.4
TPNV Topopah Spring 90.81 50 *e*P P 01 14 52.2 -0.6
TPNV pmax pmax
comp=Z,104nm,0.9s,mb6.2
TPNV MLR MLR
comp=Z,17µm,22.0s,MS6.5
TPNV Topopah Spring 90.81 50 *e*P P 01 14 52.2 -0.6
comp=Z,104nm,0.9s,mb6.2
TPNV LR LR
comp=Z,17µm,22.0s,MS6.5
LDFC Landfair 90.83 53 *e*P P 01 14 52.7 -0.2
comp=Z,193nm,0.9s,mb6.4
OTR Olympics--Tyee 90.88 38 P P 01 14 54.9 +2.1
BBB Bella Bella 91.06 33 P P 01 14 54.1 +0.6
comp=Z,27nm,0.7s,mb5.7,baz=273,slow=1.3,SNR=9.5
BOD Bodaibo 91.19 334 *e*P P 01 14 53.7 -0.3
BOD pmax pmax
comp=Z,82nm,2.3s,mb5.7
PALK Pallekele 91.38 277 *e*P P 01 14 56.9 +0.9
comp=Z,86nm,1.4s,mb5.9
PALK LR LR
comp=Z,13µm,19.0s,MS6.4
GNW Green Mountain 91.50 39 *e*P P 01 14 55.2 -0.5
comp=Z,62nm,0.8s,mb6.0
WRAK Wrangell Islan 91.53 28 *e*P P 01 14 55.5 -0.2
comp=Z,54nm,0.8s,mb5.9
WRAK LR LR
comp=Z,14µm,19.0s,MS6.4
WVOR Wild Horse Val 91.63 45 *e*P P 01 14 55.6 -0.8
WVOR pmax pmax
comp=Z,208nm,1.4s,mb6.3
WVOR MLR MLR
comp=Z,16µm,20.0s,MS6.5
WVOR Wild Horse Val 91.63 45 *e*P P 01 14 55.6 -0.8
comp=Z,208nm,1.4s,mb6.3
WVOR LR LR
comp=Z,16µm,20.0s,MS6.5
BMN Battle Mountai 91.67 47 *e*P P 01 14 56.5 -0.2
BMN pmax pmax
comp=Z,57nm,0.8s,mb6.0
BMN MLR MLR
comp=Z,14µm,20.0s,MS6.4
BMN Battle Mountai 91.67 47 *e*P P 01 14 56.5 -0.1
comp=Z,57nm,0.8s,mb6.0
BMN LR LR
comp=Z,14µm,20.0s,MS6.4
PGC Sidney 91.69 38 *e*P P 01 14 56.6 +0.1
comp=Z,166nm,0.9s,mb6.4
LON Longmire 91.69 40 *e*P P 01 14 56.2 -0.4
LON pmax pmax
comp=Z,34nm,1.0s,mb5.6
LON Longmire 91.69 40 *e*P P 01 14 56.1 -0.5
comp=Z,34nm,1.0s,mb5.6
COLA College 91.91 17 *e*P P 01 14 55.5 -1.7
ZAK Zakamensk 92.00 324 *e*P P 01 14 58.0 +0.1
ZAK *e* 01 25 30.0
ZAK pmax pmax
comp=Z,97nm,1.5s,mb5.9
SKAG Skagway 92.20 25 *e*P P 01 14 58.9 +0.3
comp=Z,81nm,1.2s,mb5.9
HYT Haines Junctio 92.27 23 *e*P P 01 14 57.7 -1.2
JCW Jim Creek 92.33 39 *e*P P 01 14 59.6 +0.1
IRK Irkutsk 92.45 326 *e*P P 01 14 59.7 -0.3
IRK pmax pmax
comp=Z,86nm,1.8s,mb5.8
TLY Talaya 92.48 325 P P 01 15 00.4 +0.2
comp=Z,235nm,1.6s,mb6.3,SNR=7.6
TLY Talaya 92.48 325 P P 01 15 01.1 +1.0
SNR=14
TLY Talaya 92.48 325 *e*P P 01 15 00.7 +0.5
TLY *e* 01 25 30.4
TLY *e*S S 01 26 03.4 -0.1
TLY *e*PS PS 01 27 15.5 -1.0
TLY *e*SS SS 01 32 08.7 -6.9
TLY pmax pmax
comp=Z,78nm,1.4s,mb5.8
TLY Talaya 92.48 325 *e*P P 01 14 59.8 -0.4
ODAN Odare 92.63 298 *e*P P 01 15 02.2 +0.7
comp=Z,169nm,0.9s,mb6.5
RPW Rockport 92.70 39 *e*P P 01 15 01.2 -0.1
comp=Z,22nm,0.6s,mb5.8
VIS Vishakhapatnam 92.75 288 *i* S S 01 25 35.7 -32
RSW Rattlesnake Hi 92.86 41 *e*P P 01 15 01.5 -0.6
comp=Z,32nm,0.8s,mb5.8
HAWA Hanford 92.90 41 *e*P P 01 15 01.8 -0.4
comp=Z,24nm,0.7s,mb5.7
HAWA LR LR
comp=Z,12µm,19.0s,MS6.4
TUC Tucson 92.98 57 *e*P P 01 15 02.5 -0.5
TUC pmax pmax
comp=Z,30nm,1.0s,mb5.7
TUC MLR MLR
comp=Z,17µm,19.0s,MS6.5
TUC Tucson 92.98 57 *e*P P 01 15 02.5 -0.5
comp=Z,30nm,1.0s,mb5.7
TUC LR LR
comp=Z,17µm,19.0s,MS6.5
ETW Entiat 92.99 40 *e*P P 01 15 02.8 +0.2
comp=Z,41nm,0.7s,mb6.0
CCUT Cedar City 93.15 51 *e*P P 01 15 03.4 -0.2
comp=Z,33nm,0.9s,mb5.8
ELK Elko 93.16 47 P P 01 15 03.0 -0.5
comp=Z,17nm,0.8s,mb5.5,baz=257,slow=5.3,SNR=67
ELK Elko 93.16 47 *e*P P 01 15 02.6 -1.0
ELK pmax pmax
comp=Z,29nm,0.9s
ELK MLR MLR
comp=Z,17µm,20.0s
ELK Elko 93.16 47 *e*P P 01 15 02.6 -0.9
comp=Z,29nm,0.9s,mb5.7
ELK LR LR
comp=Z,17µm,20.0s,MS6.5
COLD Coldfoot 93.17 15 *e*P P 01 15 02.0 -1.0
comp=Z,285nm,2.2s,mb6.3
ARUT Antelope Range 93.19 51 *e*P P 01 15 03.6 -0.2
comp=Z,34nm,1.1s,mb5.7
RAMN Ramite 93.32 297 *e*P P 01 15 05.7 +1.1
comp=Z,260nm,1.5s,mb6.5
LNOR Lincton Mounta 93.43 42 *e*P P 01 15 04.8 +0.1
comp=Z,10nm,0.9s,mb5.3
BMO Blue Mountains 93.58 43 *e*P P 01 15 04.3 -1.1
BMO pmax pmax
comp=Z,16nm,0.8s,mb5.5
BMO MLR MLR
comp=Z,21µm,20.0s,MS6.6
BMO Blue Mountains 93.58 43 *e*P P 01 15 04.3 -1.1
comp=Z,16nm,0.8s,mb5.5
BMO LR LR
comp=Z,21µm,20.0s,MS6.6
DLBC Dease Lake 93.75 27 P P 01 15 05.2 -0.6
DLBC Dease Lake 93.75 27 *e*P P 01 15 04.9 -0.9
DGAR Diego Garcia 93.76 261 PFAKE 01 15 20.0 +13
DGAR LR LR
comp=Z,30µm,21.0s,MS6.7
WUAZ Wupatki 93.79 53 *e*P P 01 15 06.6 0.0
comp=Z,60nm,0.9s,mb6.0
WUAZ LR LR
comp=Z,16µm,19.0s,MS6.5
DAWY Dawson 93.82 20 *e*P P 01 15 04.7 -1.4
OD2 Odessa Site #2 93.86 40 *e*P P 01 15 06.2 -0.4
comp=Z,34nm,1.3s,mb5.6
MDRS Chennai 93.86 282 *j ex* x 01 14 45.0
MDRS *eS* S 01 25 42.0 -35
MOY Mondy 93.89 325 *e*P P 01 15 06.8 +0.1
JIRN Jiri 93.92 298 *e*P P 01 15 07.6 +0.2
comp=Z,204nm,1.3s,mb6.4
GUN Gumba 94.27 298 *e*P P 01 15 08.3 -0.7
comp=Z,140nm,1.1s,mb6.3
MVU Marysvale 94.36 50 PFAKE 01 15 20.0 +11
MVU LR LR
comp=Z,19µm,20.0s,MS6.5
MSU Marysvale 94.39 50 *e*P P 01 15 08.1 -1.2
comp=Z,12nm,0.7s,mb5.4
PKIN Phulchoki 94.55 298 *e*P P 01 15 10.3 0.0
comp=Z,116nm,0.9s,mb6.3
DUG Dugway 94.62 49 *e*P P 01 15 09.9 -0.4
DUG pmax pmax
comp=Z,14nm,0.8s,mb5.4
DUG MLR MLR
comp=Z,19µm,20.0s,MS6.6
DUG Dugway 94.62 49 *e*P P 01 15 09.9 -0.4
comp=Z,14nm,0.8s,mb5.4
DUG LR LR
comp=Z,19µm,20.0s,MS6.6
KKN Kakani 94.72 298 *e*P P 01 15 11.1 0.0
comp=Z,99nm,0.8s,mb6.3
DMN Daman 94.80 298 *e*P P 01 15 11.8 +0.4
comp=Z,185nm,1.0s,mb6.5
HLID Hailey 94.91 45 *e*P P 01 15 10.9 -0.6
comp=Z,17nm,0.8s,mb5.5
HLID LR LR
comp=Z,19µm,20.0s,MS6.6
NLU North Lily Min 95.04 49 *e*P P 01 15 12.1 -0.1
comp=Z,22nm,1.2s,mb5.5
NEW Newport 95.21 40 *e*P P 01 15 12.8 0.0
NEW pmax pmax
comp=Z,4.0nm,0.6s
NEW MLR MLR
comp=Z,8µm,19.0s
NEW Newport 95.21 40 *e*P P 01 15 12.8 0.0
comp=Z,3.6nm,0.6s,mb5.0
NEW LR LR
comp=Z,8µm,19.0s,MS6.2
HVU Hansel Valley 95.28 47 *e*P P 01 15 13.0 -0.3
HVU pmax pmax
comp=Z,24nm,0.9s,mb5.6
HVU Hansel Valley 95.28 47 *e*P P 01 15 13.0 -0.3
comp=Z,24nm,0.9s,mb5.6
TRD Trivandrum 95.29 277 AMS AMS 02 31 06.7
comp=Z,10µm,24.5s,MS6.2
SPUT South Promonto 95.32 48 *e*P P 01 15 13.5 0.0
comp=Z,31nm,1.2s,mb5.6
GKN Gorkha 95.33 298 *e*P P 01 15 13.3 -0.5
comp=Z,138nm,1.1s,mb6.3
MPU Maple Canyon 95.37 49 *e*P P 01 15 13.7 -0.1
comp=Z,19nm,1.0s,mb5.5
MPU LR LR
comp=Z,19µm,20.0s,MS6.6
TMUT Trail Mountain 95.40 50 *e*P P 01 15 14.5 +0.7
comp=Z,44nm,0.9s,mb5.9
JLU Jordanelle 95.73 49 *e*P P 01 15 15.0 -0.4
comp=Z,17nm,0.9s,mb5.5
DAU Daniels Canyon 95.80 49 *e*P P 01 15 14.7 -1.0
comp=Z,17nm,0.9s,mb5.5
SRU San Rafael 95.81 50 *e*P P 01 15 14.6 -1.2
SRU pmax pmax
comp=Z,15nm,0.7s,mb5.5
SRU San Rafael 95.81 50 *e*P P 01 15 14.6 -1.2
comp=Z,22nm,0.7s,mb5.7
HWUT Hardware Ranch 96.04 48 *e*P P 01 15 16.6 -0.2
comp=Z,9.6nm,0.7s,mb5.3
HWUT LR LR
comp=Z,11µm,20.0s,MS6.3
KOLN Koldanda 96.10 297 *e*P P 01 15 17.2 -0.2
comp=Z,47nm,0.8s,mb6.0
DANN Dangsing 96.17 298 *e*P P 01 15 17.3 -0.4
comp=Z,108nm,1.0s,mb6.2
MCMT McKenzie Canyo 96.45 44 *e*P P 01 15 18.9 +0.4
comp=Z,23nm,0.7s,mb5.7
MSO Missoula 96.55 42 *e*P P 01 15 18.0 -1.0
comp=Z,3.7nm,0.7s,mb4.9
MSO LR LR
comp=Z,10µm,19.0s,MS6.3
MVCO Mesa Verde 96.58 53 *e*P P 01 15 18.8 -0.5
comp=Z,15nm,1.2s,mb5.3
MVCO LR LR
comp=Z,18µm,19.0s,MS6.6
LAZ Ladron 96.59 56 *e*P P 01 15 19.8 +0.3
comp=Z,15nm,1.7s,mb5.2
PV10 Paradox Valley 96.61 52 *e*P P 01 15 20.1 +0.7
comp=Z,329nm,0.8s,mb6.8
LENM Lemitar 96.64 56 *e*P P 01 15 19.4 -0.3
comp=Z,7.1nm,1.0s,mb5.0
TIXI Tiksi 96.72 348 *e*P P 01 15 17.4 -1.8
TIXI pmax pmax
comp=Z,11nm,0.8s,mb5.3
TIXI Tiksi 96.72 348 *e*P P 01 15 17.5 -1.6
AHID Auburn Hatcher 96.81 47 *e*P P 01 15 21.1 +0.9
comp=Z,13nm,0.9s,mb5.3
AHID LR LR
comp=Z,7µm,19.0s,MS6.2
DLMT Dillon 96.83 44 *e*P P 01 15 20.3 +0.1
comp=Z,26nm,1.1s,mb5.6
PV01 Paradox Valley 96.87 52 *e*P P 01 15 20.5 -0.1
comp=Z,826nm,0.9s
RRI2 Red Ridge 96.88 46 *e*P P 01 15 20.6 0.0
comp=Z,18nm,0.8s,mb5.6
BNM Barren Site 96.90 56 *e*P P 01 15 21.1 +0.2
comp=Z,26nm,1.6s,mb5.4
HYB Hyderabad 96.90 286 *i* P P 01 15 23.5 +2.3
HYB *e*SKS 01 25 59.0
HYB *eS* S 01 26 42.0 -1.6
HYB LR LR 02 05 14.0
comp=Z,9.2nm,18.0s
HYB Hyderabad 96.90 286 *e*P P 01 15 23.5 +2.3
HYB *e*SKS 01 25 59.0
HYB *eS* S 01 26 42.0 -1.6
PLCA Paso Flores 96.95 139 P P 01 15 22.0 +0.9
comp=Z,11nm,0.9s,mb5.3,baz=219,slow=4.4,SNR=18
PLCA PKKPbc PKKPbc 01 32 01.9 -0.7
comp=Z,1.7nm,0.9s,baz=54,slow=4.2,SNR=3.8
PLCA Paso Flores 96.95 139 *e*P P 01 15 18.2 -2.9
PLCA pmax pmax
comp=Z,19nm,1.0s
PLCA MLR MLR
comp=Z,4µm,20.0s
PLCA Paso Flores 96.95 139 *e*P P 01 15 18.2 -2.9
comp=Z,19nm,1.0s,mb5.5
PLCA PKKPbc PKKPbc 01 32 01.9 -0.7
PLCA LR LR
comp=Z,4µm,20.0s,MS5.9
LPM Los Pinos Moun 96.95 56 *e*P P 01 15 21.1 0.0
comp=Z,6.1nm,0.8s,mb5.1
CHMT Chamberlain Mo 97.02 42 *e*P P 01 15 20.6 -0.4
comp=Z,3.8nm,0.7s,mb4.9
TPAW Teton Pass 97.19 46 *e*P P 01 15 21.6 -0.3
comp=Z,8.6nm,0.7s,mb5.3
TPAW *e*PP PP 01 19 23.9 +5.4
REDW Red Top Meadow 97.20 46 *e*P P 01 15 21.3 -0.7
comp=Z,27nm,1.4s,mb5.5
REDW *e*PP PP 01 19 20.8 +2.1
SNOW Snow King Moun 97.31 46 *e*P P 01 15 22.3 -0.2
comp=Z,18nm,1.1s,mb5.4
ANMO Albuquerque 97.31 55 P P 01 15 22.7 0.0
comp=Z,5.3nm,0.9s,mb5.0,baz=67,slow=23,SNR=18
ANMO Albuquerque 97.31 55 *c i*P P 01 15 22.0 -0.7
ANMO Albuquerque 97.31 55 *e*P P 01 15 22.2 -0.5
comp=Z,5.7nm,0.7s,mb5.1
ANMO *e*PP PP 01 19 18.2 -1.6
ANMO LR LR
comp=Z,20µm,20.0s,MS6.6
IMW Indian Meadow 97.35 46 *e*P P 01 15 22.1 -0.6
comp=Z,14nm,0.7s,mb5.5
IMW *e*PP PP 01 19 22.1 +2.3
QLMT Earthquake Lak 97.38 45 *e*P P 01 15 22.4 -0.4
comp=Z,4.0nm,0.6s,mb5.0
MOOW Moose Ponds 97.42 46 *e*P P 01 15 23.2 +0.2
comp=Z,3.8nm,0.8s,mb4.9
LOHW Long Hollow 97.47 46 *e*P P 01 15 23.0 -0.2
comp=Z,17nm,1.2s,mb5.3
LOHW *e*PP PP 01 19 20.0 -0.7
WALA Waterton Lakes 97.47 40 *e*P P 01 15 23.4 +0.4
comp=Z,5.3nm,0.7s,mb5.1
BOZ Bozeman (W) 97.56 44 *e*P P 01 15 22.1 -1.4
BOZ pmax pmax
comp=Z,5.0nm,0.7s,mb5.2
BOZ MLR MLR
comp=Z,21µm,20.0s,MS6.6
BOZ Bozeman (W) 97.56 44 *e*P P 01 15 22.1 -1.4
comp=Z,5.3nm,0.7s,mb5.2
BOZ LR LR
comp=Z,21µm,20.0s,MS6.6
TXAR Lajitas Array 97.59 62 P P 01 15 24.2 +0.1
comp=Z,4.2nm,0.8s,mb5.0,baz=222,slow=3.9,SNR=31
TXAR PKKPbc PKKPbc 01 31 57.9 -3.0
comp=Z,0.6nm,0.8s,baz=35,slow=4.6,SNR=3.7
YMR Madison River 97.62 45 *e*P P 01 15 24.8 +1.0
comp=Z,18nm,0.8s,mb5.6
YMR LR LR
comp=Z,15µm,20.0s,MS6.5
NGP Nagpur 97.72 290 *e*P P 01 15 26.9 +2.0
NGP *e*S SKSac 01 26 03.9 +1.5
NGP AMP 02 03 01.4
comp=Z,10µm,20.7s
HVS Khovu-Aksy 97.73 322 *e*P P 01 15 23.6 -0.5
HVS pmax pmax
comp=Z,153nm,1.7s,mb6.2
HRY Holter Researc 97.84 43 *e*P P 01 15 24.9 +0.2
comp=Z,10nm,0.7s,mb5.5
BW06 Boulder Array 97.86 47 *e*P P 01 15 24.3 -0.7
comp=Z,6.9nm,0.9s,mb5.2
BW06 LR LR
comp=Z,9µm,19.0s,MS6.3
PDAR Pinedale Array 97.86 47 P P 01 15 24.7 -0.3
comp=Z,4.1nm,1.0s,mb4.9,baz=222,slow=2.0,SNR=11
PDAR PP PP 01 19 27.9 +4.1
comp=Z,2.1nm,0.8s,baz=251,slow=4.5,SNR=5.6
PDAR PKKPbc PKKPbc 01 31 58.1 -2.5
comp=Z,2.3nm,0.9s,baz=66,slow=7.0,SNR=8.0
LKWY Lake 97.96 45 PFAKE 01 15 40.0 +15
LKWY LR LR
comp=Z,25µm,20.0s,MS6.7
WMQ Urumqi 98.69 314 P P 01 15 29.0 +0.4
WMQ AP pP 01 15 33.5 0.0
WMQ XP sP 01 15 36.0 +0.8
WMQ PP PP 01 19 33.0 +2.9
WMQ SKS 01 26 06.0
WMQ S S 01 26 55.0 -2.7
WMQ SS SS 01 33 44.0 -0.1
WMQ AMB AMB
comp=Z,34nm,0.8s,mb5.9
WMQ AMB AMB
comp=Z,560nm,5.9s
WMQ LR LR
comp=N,5µm,11.7s,MS6.4
WMQ LR LR
comp=E,5µm,13.4s,MS6.4
WMQ LR LR
comp=Z,4µm,20.2s
RLMT Red Lodge 98.91 45 *e*P P 01 15 30.3 +0.6
comp=Z,8.8nm,1.0s,mb5.2
RLMT LR LR
comp=Z,16µm,20.0s,MS6.5
SDCO Great Sand Dun 99.00 53 *e*P P 01 15 30.4 +0.2
comp=Z,6.7nm,1.1s,mb5.1
SDCO LR LR
comp=Z,19µm,19.0s,MS6.6
RWWY Rawlins 99.11 49 *e*P P 01 15 30.3 -0.3
comp=Z,48nm,1.5s,mb5.8
PAYG Puerto Ayora 99.38 94 PFAKE 01 15 40.0 +7.5
PAYG LR LR
comp=Z,8µm,19.0s,MS6.2
ISCO Idaho Springs 99.61 51 PFAKE 01 15 40.0 +7.1
ISCO LR LR
comp=Z,6µm,20.0s,MS6.1
EGMT Eagleton 99.64 42 *e*P Pdif 01 15 33.3 +0.4
comp=Z,19nm,1.0s
EGMT LR LR
comp=Z,9µm,19.0s,MS6.3
KRAR Krasnoyarsk 100.13 326 *e*P Pdif 01 15 35.3 +0.2
KRAR pmax pmax
comp=Z,9.0nm,0.8s
GOA Goa 100.54 283 *j ex* PP 01 19 42.3 -2.4
GOA *eS* SKSac 01 26 16.5 -0.1
AMTX Amarillo 100.99 57 *e*Pdif Pdif 01 15 38.6 -0.3
comp=Z,11nm,1.0s
AMTX LR LR
comp=Z,15µm,19.0s,MS6.5
JCT Junction City 101.13 62 PFAKE 01 15 50.0 +10
JCT LR LR
comp=Z,22µm,19.0s,MS6.7
LAO LASA Array 101.44 44 *e*Pdif Pdif 01 15 41.2 +0.3
comp=Z,12nm,1.0s
LAO LR LR
comp=Z,26µm,20.0s,MS6.8
DDI Dehra Dun 101.52 298 *e*P Pdif 01 15 42.0 +0.7
NDI New Delhi 101.72 296 *e*P Pdif 01 15 42.0 -0.1
NDI *eS* SKSac 01 26 21.0 -0.9
KVTX Kingsville 101.83 65 PFAKE 01 15 50.0 +7.4
KVTX LR LR
comp=Z,12µm,20.0s,MS6.4
RSSD Black Hills 102.11 47 *e*P Pdif 01 15 43.8 -0.1
RSSD pmax pmax
comp=Z,5.0nm,0.8s
RSSD MLR MLR
comp=Z,7µm,21.0s,MS6.2
RSSD Black Hills 102.11 47 *e*Pdif Pdif 01 15 43.8 -0.1
comp=Z,5.4nm,0.8s
RSSD LR LR
comp=Z,7µm,21.0s,MS6.2
YKA Yellowknife Ar 102.37 27 P Pdif 01 15 45.0 0.0
comp=Z,4.8nm,0.9s,baz=252,slow=4.7,SNR=5.5
YKA PKiKP PKiKP 01 20 07.4 +1.2
comp=Z,1.1nm,0.5s,baz=251,slow=1.5,SNR=5.4
BOM Bombay 102.54 286 *ex* x 01 19 46.9
BOM *ex* x 01 19 47.1
comp=Z,120nm,1.8s
BOM *eS* SKSac 01 26 23.7 -2.5
OGNE Ogallala 102.57 51 PFAKE 01 16 00.0 +14
OGNE LR LR
comp=Z,11µm,20.0s,MS6.4
WMOK Wichita Mounta 103.23 58 *e*P Pdif 01 15 48.8 0.0
WMOK MLR MLR
comp=Z,15µm,19.0s,MS6.5
MKAR Makanchi Array 103.26 315 Pdiff Pdif 01 15 49.0 +0.1

comp=Z,2.8nm,0.6s,baz=99,slow=5.9,SNR=9.1
MKAR PP PP 01 20 02.2 -2.3
comp=Z,5.3nm,1.2s,baz=103,slow=5.5,SNR=4.8
MKAR PKiKP PKiKP 01 20 08.5 +0.3
comp=Z,3.9nm,0.9s,baz=94,slow=5.1,SNR=6.1
MKAR PKKPbc PKKPbc 01 31 44.6 -0.6
comp=Z,2.2nm,0.9s,baz=285,slow=2.4,SNR=6.2
MKAR Makanchi Array 103.26 315 Pdif Pdif 01 15 49.0 +0.1
MKAR PP PP 01 20 02.2 -2.3
DGMT Dagmar 103.30 43 PFAKE 01 16 00.0 +11
DGMT LR LR
comp=Z,10µm,21.0s,MS6.3
LCO Las Campanas 103.51 129 PFAKE 01 16 00.0 +10
LCO LR LR
comp=Z,7µm,21.0s,MS6.2
CBKS Cedar Bluff 103.64 53 PFAKE 01 16 00.0 +9.3
CBKS LR LR
comp=Z,10µm,21.0s,MS6.3
ZAA0 Zalesovo Array 103.79 323 *e*Pdif Pdif 01 15 51.6 +0.2
ZAA0 *e*PP PP 01 20 07.8 -0.5
ZALV Zalesovo Beam 103.79 323 Pdiff Pdif 01 15 52.3 +1.0
comp=Z,1.9nm,0.7s,baz=104,slow=6.3,SNR=6.9
ZALV PKiKP PKiKP 01 20 08.6 -0.4
comp=Z,3.0nm,0.9s,baz=122,slow=5.6,SNR=5.3
ZALV PKKPbc PKKPbc 01 31 43.0 -0.8
comp=Z,0.5nm,0.3s,baz=297,slow=3.4,SNR=4.0
TRQA Tornquist 103.81 141 PFAKE 01 16 00.0 +8.6
TRQA LR LR
comp=Z,5µm,19.0s,MS6.0
HKT Hockley 104.26 63 PFAKE 01 16 00.0 +6.6
HKT LR LR
comp=Z,20µm,20.0s,MS6.7
NVS Novosibirsk 104.93 323 *e*P Pdif 01 15 56.9 +0.5
NVS pmax pmax
comp=Z,35nm,1.9s
NVS pmax pmax
comp=N,14nm,1.8s
NVS pmax pmax
comp=E,34nm,2.0s
NATX Nacogdoches 105.72 62 PFAKE 01 20 20.0 +6.7
NATX LR LR
comp=Z,29µm,20.0s,MS6.8
KSU1 Kansas State U 106.07 54 PFAKE 01 20 20.0 +6.3
KSU1 LR LR
comp=Z,19µm,19.0s,MS6.7
FFC Flin Flon 106.29 37 PFAKE 01 20 20.0 +6.4
FFC LR LR
comp=Z,12µm,19.0s,MS6.5
KURK Kurchatov 106.62 318 Pdiff Pdif 01 16 08.0 +4.0
comp=Z,1.9nm,0.7s,baz=108,slow=3.0,SNR=4.8
KURK PKiKP PKiKP 01 20 13.7 -0.6
comp=Z,3.8nm,0.8s,baz=104,slow=1.8,SNR=6.8
KURK PKKPbc PKKPbc 01 31 31.5 -3.6
comp=Z,2.9nm,1.0s,baz=280,slow=3.0,SNR=4.7
KURK Kurchatov 106.62 318 Pdif Pdif 01 16 08.0 +4.0
KURK *e*PKP PKiKP 01 20 14.1 -0.2
KURK LR LR
comp=Z,6µm,21.0s,MS6.1
BHJ Bhuj 106.65 289 *e*x x 01 15 56.0
BHJ AMb AMB 01 16 05.5
comp=Z,9.0nm,8.6s
TKM2 Tokmak 2 106.84 310 *e*PKP PKiKP 01 20 14.7 -0.3
TKM2 LR LR
comp=Z,7µm,19.0s,MS6.2
NNA Nana 107.07 110 PFAKE 01 20 30.0 +14
NNA LR LR
comp=Z,8µm,19.0s,MS6.3
ECSD EROS,Sioux Fal 107.17 49 *e*Pdif Pdif 01 16 07.8 +1.5
comp=Z,3.7nm,0.8s
ECSD *e*PKP PKiKP 01 20 13.8 -1.8
ECSD LR LR
comp=Z,13µm,19.0s,MS6.5
TGUH Tegucigalpa,Un 107.20 81 PFAKE 01 20 30.0 +14
TGUH LR LR
comp=Z,6µm,19.0s,MS6.2
MIAR Mount Ida 107.31 59 PFAKE 01 20 30.0 +14
MIAR LR LR
comp=Z,13µm,20.0s,MS6.5
UCH Uchtor 107.46 309 *e*PKP PKiKP 01 20 16.7 +0.5
AML Almayashu 108.04 309 *e*PKP PKiKP 01 20 18.4 +1.2
AML LR LR
comp=Z,5µm,20.0s,MS6.1
EKS2 Erkin-Say 108.09 309 PFAKE 01 20 30.0 +13
EKS2 LR LR
comp=Z,6µm,20.0s,MS6.2
TEIG Tepich 108.11 75 PFAKE 01 20 30.0 +12
TEIG LR LR
comp=Z,9µm,19.0s,MS6.4
JTS JuntasAbangare 108.16 86 PFAKE 01 20 30.0 +12
JTS LR LR
comp=Z,17µm,21.0s,MS6.6
LVC Limon Verde 108.37 124 PKKPbc PKKPbc 01 31 30.8 +2.1
comp=Z,4.2nm,0.7s,baz=79,slow=3.9,SNR=5.6
LVC Limon Verde 108.37 124 PFAKE 01 20 30.0 +11
LVC LR LR
comp=Z,6µm,20.0s,MS6.1
AGMN Agassiz Refuge 108.64 45 PFAKE 01 20 30.0 +12
AGMN LR LR
comp=Z,26µm,21.0s,MS6.8
ULM Lac du Bonnet 109.00 43 PKiKP PKiKP 01 20 18.8 0.0
comp=Z,7.1nm,0.6s,baz=338,slow=2.1,SNR=9.7
ULM PKKPbc PKKPbc 01 31 33.8 +6.2
comp=Z,2.0nm,0.7s,baz=68,slow=4.2,SNR=3.5
ULM Lac du Bonnet 109.00 43 *e*PKP PKiKP 01 20 18.9 +0.1
ULM LR LR
comp=Z,12µm,19.0s,MS6.5
SCIA State Center 109.22 52 PFAKE 01 20 30.0 +11
SCIA LR LR
comp=Z,21µm,19.0s,MS6.7
VBMS Vicksburg 109.25 62 PFAKE 01 20 30.0 +10
VBMS LR LR
comp=Z,17µm,20.0s,MS6.6
CCM Cathedral Cave 109.93 56 PFAKE 01 20 30.0 +9.1
CCM LR LR
comp=Z,14µm,19.0s,MS6.6
KBL Kabul 109.98 300 *e*PKP PKiKP 01 20 20.9 -0.2
MSEY Mahe Island 110.35 256 PFAKE 01 20 30.0 +7.5
MSEY LR LR
comp=Z,16µm,22.0s,MS6.6
KK31 Karatay Array 110.53 309 *i* PKIKP PKiKP 01 20 20.8 -1.1
KK31 pmax pmax
comp=Z,2.0nm,0.5s
OXF Oxford 110.66 60 PFAKE 01 20 30.0 +7.6
OXF LR LR
comp=Z,17µm,19.0s,MS6.6
ABPO Ambohimpanom 110.68 239 PFAKE 01 20 30.0 +7.0
ABPO LR LR
comp=Z,17µm,19.0s,MS6.6
OTAV Otavalo 110.69 98 PFAKE 01 20 30.0 +6.9
OTAV LR LR
comp=Z,5µm,19.0s,MS6.1
EYMN Ely 111.47 46 PFAKE 01 20 30.0 +6.5
EYMN LR LR
comp=Z,19µm,20.0s,MS6.7
JFWS Jewell Farm 111.57 51 *e*PKIKP PKiKP 01 20 22.0 -1.9
JFWS MLR MLR
comp=Z,13µm,20.0s,MS6.5
VOSK Vostochnaya 111.65 320 PKIKP PKiKP 01 20 22.2 -1.5
VOSK pmax pmax
comp=Z,11nm,0.8s
BRAL Brewton 111.86 64 PFAKE 01 20 30.0 +5.2
BRAL LR LR
comp=Z,17µm,20.0s,MS6.6
HDIL Hopedale 111.88 54 PFAKE 01 20 30.0 +5.5
HDIL LR LR
comp=Z,17µm,20.0s,MS6.6
BVA0 Borovoye Array 112.04 320 *i* PKIKP PKiKP 01 20 25.7 +1.3
BVA0 pmax pmax
comp=Z,2.0nm,0.8s
BVAR Borovoye Array 112.04 320 PKiKP PKiKP 01 20 23.5 -1.0
comp=Z,7.0nm,0.6s,baz=123,slow=1.1,SNR=16
BVAR PKKPbc PKKPbc 01 31 15.6 -2.1
comp=Z,3.9nm,0.9s,baz=281,slow=1.7,SNR=8.4
BRVK Borovoye 112.11 320 *e*PKIKP PKiKP 01 20 24.2 -0.3
BRVK MLR MLR
comp=Z,10µm,20.0s,MS6.4
WVT Waverly 112.24 59 PFAKE 01 20 40.0 +15
WVT LR LR
comp=Z,13µm,19.0s,MS6.5
LRAL Lakeview Retre 112.32 62 *e*PKP PKiKP 01 20 25.4 -0.3
LRAL LR LR
comp=Z,17µm,20.0s,MS6.6
LPAZ La Paz 112.38 119 PKiKP PKiKP 01 20 26.6 +0.4
comp=Z,0.9nm,0.5s,baz=59,slow=4.8,SNR=4.2
LPAZ PKKPbc PKKPbc 01 31 16.6 +0.9
comp=Z,1.5nm,0.7s,baz=18,slow=6.6,SNR=5.8
LPAZ La Paz 112.38 119 PKPdf PKiKP 01 20 26.6 +0.4
LPAZ PKKPbc PKKPbc 01 31 16.6 +0.9
LPAZ LR LR
comp=Z,4µm,19.0s,MS6.0
BCIP Isla Barro Col 112.56 89 PFAKE 01 20 40.0 +13
BCIP LR LR
comp=Z,5µm,19.0s,MS6.2
COWI Conover 112.82 48 *e*PKP PKiKP 01 20 24.1 -2.1
COWI LR LR
comp=Z,11µm,20.0s,MS6.5
WCI Wyandotte Cave 113.80 57 *e*PKIKP PKiKP 01 20 28.2 -0.1
WCI MLR MLR
comp=Z,14µm,20.0s,MS6.6
CPUP Villa Florida 114.52 134 PKP PKiKP 01 20 28.6 -1.5
comp=Z,2.5nm,0.7s,baz=270,slow=2.0,SNR=5.0
CPUP PKKPbc PKKPbc 01 31 09.8 +1.1
comp=Z,0.3nm,0.4s,baz=176,slow=4.8,SNR=3.0
CPUP Villa Florida 114.52 134 PKIKP PKiKP 01 20 28.7 -1.4
CPUP 01 31 09.8
CPUP pmax pmax
comp=Z,3.0nm,0.7s
CPUP Villa Florida 114.52 134 *e*PKP PKiKP 01 20 29.3 -0.8
CPUP LR LR
comp=Z,711nm,19.0s,MS5.3
GOGA Godfrey 115.30 62 *e*PKIKP PKPdf 01 20 29.9 -1.4
GOGA MLR MLR
comp=Z,17µm,20.0s,MS6.6
TKL Tuckaleechee C 115.41 60 PKP PKPdf 01 20 30.0 -1.4
comp=Z,5.9nm,0.6s,baz=188,slow=6.2,SNR=14
TKL Tuckaleechee C 115.41 60 PKIKP PKPdf 01 20 30.0 -1.4
TKL pmax pmax
comp=Z,6.0nm,0.6s
TKL Tuckaleechee C 115.41 60 *e*PKPdf PKPdf 01 20 30.3 -1.2
TZTN Tazewell 115.72 59 *e*PKPdf PKPdf 01 20 31.1 -0.9
TZTN LR LR
comp=Z,21µm,19.0s,MS6.8
GLMI Grayling 115.84 49 PFAKE 01 20 40.0 +8.0
GLMI LR LR
comp=Z,18µm,19.0s,MS6.7
DWPF Disney 116.07 68 PFAKE 01 20 40.0 +7.1
DWPF LR LR
comp=Z,13µm,21.0s,MS6.5
ACSO Alum Creek Sta 116.61 55 *e*PKPdf PKPdf 01 20 32.2 -1.4
ACSO LR LR
comp=Z,19µm,20.0s,MS6.7
SVE Sverdlovsk 117.76 324⇑ *e*PKIKP PKPdf 01 20 34.7 -0.6
SVE pmax pmax
comp=Z,38nm,1.5s
NHSC New Hope 117.98 63 PFAKE 01 20 50.0 +14
NHSC LR LR
comp=Z,16µm,21.0s,MS6.6
ELN Prospectdale 118.03 58 *e*PKPdf PKPdf 01 20 36.2 -0.2
SIV San Ignacio 118.20 123 PKP PKPdf 01 20 36.3 -1.1
comp=Z,2.4nm,0.8s,baz=221,slow=2.4,SNR=9.9
SIV PKKPbc PKKPbc 01 30 56.7 +1.2
comp=Z,1.8nm,0.8s,baz=76,slow=6.2,SNR=6.5
BLA Blacksburg 118.29 58 *e*PKIKP PKPdf 01 20 34.5 -2.4
BLA MLR MLR
comp=Z,14µm,19.0s,MS6.6
AB31 Akbulak array 118.40 315 PKIKP PKPdf 01 20 36.0 -0.7
AB31 pmax pmax
comp=Z,7.0nm,0.8s
SUR Sutherland 118.79 210 PKKPbc PKKPbc 01 30 52.9 -1.0
comp=Z,7.7nm,0.9s,baz=313,slow=10,SNR=4.4
SUR Sutherland 118.79 210 PFAKE 01 20 50.0 +12
SUR LR LR
comp=Z,8µm,21.0s,MS6.3
ALLY Alegheny Colle 118.87 53 *e*PKPdf PKPdf 01 20 37.6 -0.3
ARU Arti 118.93 324 *i* PKIKP PKPdf 01 20 36.5 -1.0
ARU 01 21 57.1
ARU PPP 01 24 34.2
ARU 01 27 28.9
ARU SP SP 01 31 36.6 -5.3
ARU PS PS 01 31 48.6 +4.0
ARU Arti 118.93 324 *e*PKPdf PKPdf 01 20 36.2 -1.4
ARU LR LR
comp=Z,5µm,21.0s,MS6.1
MCWV Mont Chateau 118.96 56 *e*PKPdf PKPdf 01 20 36.6 -1.5
MCWV LR LR
comp=Z,22µm,19.0s,MS6.8
ERPA Erie 119.02 53 *e*PKPdf PKPdf 01 20 35.8 -2.4
ERPA LR LR
comp=Z,9µm,20.0s,MS6.4
HATD Hatta, Dubai 119.02 287 ⇓P PKPdf 01 20 41.1 +2.4
SNR=6.0
BOSA Boshof 119.55 216 PKP PKPdf 01 20 39.6 -0.1
comp=Z,5.4nm,0.8s,baz=126,slow=0.6,SNR=4.2
BOSA PKKPbc PKKPbc 01 30 49.3 -1.8
comp=Z,5.8nm,0.8s,baz=216,slow=3.6,SNR=8.9
BOSA Boshof 119.55 216 *e*PKPdf PKPdf 01 20 39.4 -0.4
BOSA LR LR
comp=Z,10µm,21.0s,MS6.4
AKTK Aktyubinsk 119.63 317 PKP PKPdf 01 20 38.7 -0.4
AKTK PKKPbc PKKPbc 01 30 49.7 -1.3
AKTO Aktyubinsk 119.63 317 PKP PKPdf 01 20 38.7 -0.4
comp=Z,10.0nm,0.7s,baz=283,slow=0.6,SNR=15
AKTO PKKPbc PKKPbc 01 30 49.7 -1.3
comp=Z,4.5nm,0.9s,baz=315,slow=10.0,SNR=4.8
AKTO Aktyubinsk 119.63 317 PKIKP PKPdf 01 20 37.0 -2.1
AKTO pmax pmax
comp=Z,3.0nm,0.8s
SADO Sadowa 119.73 50 PKP PKPdf 01 20 37.6 -1.8
baz=300,slow=2.1
CNNC Cliffs of the 120.12 61 PFAKE 01 20 50.0 +9.5
CNNC LR LR
comp=Z,20µm,19.0s,MS6.8
SSPA Standing Stone 120.52 55 *e*PKPdf PKPdf 01 20 38.8 -2.4
SSPA LR LR
comp=Z,19µm,19.0s,MS6.7
URVA University of 120.61 58 *e*PKPdf PKPdf 01 20 39.1 -2.3
CBN Corbin 120.78 57 *e*PKPdf PKPdf 01 20 40.4 -1.3
CBN LR LR
comp=Z,17µm,20.0s,MS6.7
SDV Santo Domingo 121.05 92 PFAKE 01 20 50.0 +7.1
SDV LR LR
comp=Z,3µm,19.0s,MS5.9
SDMD Soldier's Deli 121.27 56 *e*PKPdf PKPdf 01 20 41.2 -1.4
KBS Kingsbay 121.33 355 *e*PP PP 01 22 14.1 +1.5
KBS *e*SS SS 01 38 50.6 +4.9
KBS AMS AMS 02 08 07.2
comp=Z,3µm,16.1s,MS6.0
KBS Kingsbay 121.33 355 PFAKE 01 20 50.0 +8.4
KBS LR LR
comp=Z,4µm,20.0s,MS6.0
SPITS Spitsbergen Ar 121.59 354 PKP PKPdf 01 20 41.4 -0.8
comp=Z,20nm,0.6s,baz=354,slow=7.5,SNR=13
SPB4 Spitsbergen Ar 121.59 354 *e*PKPdf PKPdf 01 20 41.1 -1.1
TRIS Tristan da Cun 121.98 178 PFAKE 01 20 50.0 +5.8
TRIS LR LR
comp=Z,9µm,19.0s,MS6.4
BINY Binghamton 122.00 53 PFAKE 01 20 50.0 +6.1
BINY LR LR
comp=Z,13µm,20.0s,MS6.6
LBTB Lobatse 122.11 219 PKP PKPdf 01 20 44.0 -0.7
comp=Z,6.7nm,1.0s,baz=310,slow=1.5,SNR=4.4
LBTB PKKPbc PKKPbc 01 30 39.8 -1.6
comp=Z,4.2nm,0.8s,baz=82,slow=18,SNR=4.9
LBTB Lobatse 122.11 219 *e*PKPdf PKPdf 01 20 42.6 -2.2
LBTB LR LR
comp=Z,12µm,19.0s,MS6.6
LONY Lake Ozonia 122.99 50 *e*PKPdf PKPdf 01 20 43.9 -1.8
LONY LR LR
comp=Z,14µm,19.0s,MS6.6
BRNJ Basking Ridge 123.05 55 *e*PKPdf PKPdf 01 20 44.2 -1.8
NCB Newcomb 123.27 51 *e*PKPdf PKPdf 01 20 44.5 -1.8
NCB LR LR
comp=Z,19µm,20.0s,MS6.7
CPNY Central Park 123.51 54 *e*PKPdf PKPdf 01 20 44.5 -2.4
PAL Palisades 123.55 54 *e*PKIKP PKPdf 01 20 45.6 -1.3
FRNY Flat Rock 123.69 50 *e*PKPdf PKPdf 01 20 45.4 -1.7
ACCN Adirondack Com 123.69 51 *e*PKPdf PKPdf 01 20 45.1 -2.0
MDV Middlebury 124.02 51 *e*PKPdf PKPdf 01 20 46.4 -1.4
DAG Danmarks Havn 124.28 2⇑ *e*PKIKP PKPdf 01 20 45.5 -1.8
DAG pmax pmax
comp=Z,11nm,0.6s
DAG MLR MLR
comp=Z,9µm,25.0s,MS6.3
DAG Danmarks Havn 124.28 2⇑ *i*P PKPdf 01 20 45.5 -1.8
comp=Z,11nm,0.6s
DAG
comp=Z,9µm,25.0s
BJO Bjornoya 124.37 351 AMS AMS 02 20 05.1
comp=Z,5µm,19.3s,MS6.2
HNH Hanover 124.68 51 *e*PKPdf PKPdf 01 20 46.8 -2.2
QUA2 Belchertown 124.69 53 *e*PKPdf PKPdf 01 20 47.5 -1.6
LBNH Lisbon 124.91 50 *e*PKIKP PKPdf 01 20 47.8 -1.6
LBNH MLR MLR
comp=Z,20µm,20.0s,MS6.8
FFD Franklin Falls 125.15 51 *e*PKPdf PKPdf 01 20 49.1 -0.8
HRV Adam Dziewonsk 125.27 52 *e*PKIKP PKPdf 01 20 49.3 -0.9
HRV MLR MLR
comp=Z,11µm,20.0s,MS6.5
BRYW Bryant College 125.31 53 *e*PKPdf PKPdf 01 20 49.4 -0.9
WES Weston 125.45 52 *e*PKIKP PKPdf 01 20 49.6 -0.9
WES MLR MLR
comp=Z,10µm,20.0s,MS6.5
LVZ Lovozero 125.58 341 PFAKE 01 21 00.0 +10
LVZ LR LR
comp=Z,8µm,20.0s,MS6.4
APA Apatity 126.16 341⇑ *i*PKIKP PKPdf 01 20 51.0 -0.1
APA pmax pmax
comp=Z,24nm,0.9s
APA pmax pmax
comp=Z,1µm,4.0s
APA MLR MLR
comp=Z,11µm,21.0s,MS6.5
SUMG Summit 126.30 10 *e*PKPdf PKPdf 01 20 51.3 +0.1
SCHQ Schefferville 126.43 37 PKP PKPdf 01 20 51.0 -1.0
comp=Z,17nm,0.9s,baz=57,slow=1.0,SNR=12
SCHQ Schefferville 126.43 37 *e*PKPdf PKPdf 01 20 50.6 -1.4
SCHQ LR LR
comp=Z,21µm,19.0s,MS6.8
KEV Kevo 126.50 345 *e*p PKPdf 01 20 51.1 -0.6
comp=Z,26nm,0.7s
KEV Kevo 126.50 345 *e*PKIKP PKPdf 01 20 51.1 -0.6
KEV pmax pmax
comp=Z,26nm,0.7s
ARCES ARCESS Array B 127.03 345 PKP PKPdf 01 20 51.9 -0.8
comp=Z,38nm,0.7s,baz=97,slow=0.9,SNR=57
ARCES ARCESS Array B 127.03 345 PKP PKPdf 01 20 51.9 -0.8
ARE0 ARCESS Array S 127.03 345 *e*PKPdf PKPdf 01 20 51.8 -0.9
UMR Umm Al-Rimmam 127.13 292 *e*P PKPdf 01 20 54.8 +0.7
baz=291
UMR AMb AMB 01 21 01.0
comp=Z,122nm,2.1s,baz=291
RDF Al-Radifah 127.21 291 *e*P PKPdf 01 20 54.6 +0.3
baz=291
RDF AMb AMB 01 20 58.3
comp=Z,107nm,0.8s,baz=291
MAK Makhachkala 127.33 308 *e*P Pdif 01 17 33.3 -2.7
MAK *i* 01 28 01.1
KLMR Klimovskoe 127.36 332 *e*PKIKP PKPdf 01 20 53.0 -0.6
KLMR 01 22 50.2
LSZ Lusaka 127.40 230 P PKPdf 01 20 57.9 +2.8
SNR=9.9
LSZ Lusaka 127.40 230 PKP PKPdf 01 20 55.5 +0.5
comp=Z,13nm,0.9s,baz=169,slow=2.8,SNR=14
LSZ Lusaka 127.40 230 PKIKP PKPdf 01 20 55.5 +0.4
LSZ pmax pmax
comp=Z,13nm,0.9s
LSZ Lusaka 127.40 230 *e*PKPdf PKPdf 01 20 56.0 +0.9
LSZ LR LR
comp=Z,13µm,20.0s,MS6.6
NAY Al-Naaiem 127.51 291 *e*P PKPdf 01 20 55.1 +0.2
baz=291
NAY AMb AMB 01 21 02.5
comp=Z,40nm,1.4s,baz=291
SFJD Kangerlussuaq 127.74 19 PKP PKPdf 01 20 52.8 -1.3
comp=Z,24nm,0.8s,baz=293,slow=1.1,SNR=7.2
SFJD Kangerlussuaq 127.74 19 PKIKP PKPdf 01 20 52.8 -1.3
SFJD pmax pmax
comp=Z,24nm,0.8s
SFJD Kangerlussuaq 127.74 19 *e*PKPdf PKPdf 01 20 54.6 +0.4
SFJD LR LR
comp=Z,12µm,20.0s,MS6.6
RST Umm Al-Ruwaisa 127.75 291 *e*P PKPdf 01 20 55.2 -0.1
baz=291
RST AMb AMB 01 20 58.9
comp=Z,52nm,1.0s,baz=291
SJG San Juan 127.83 83 *e*PKIKP PKPdf 01 20 54.5 -1.3
SJG MLR MLR
comp=Z,6µm,20.0s
BDFB Brasilia 128.13 132 PKP PKPdf 01 20 56.1 -0.4
comp=Z,8.2nm,0.7s,baz=205,slow=5.8,SNR=14
BDFB Brasilia 128.13 132 PKP PKPdf 01 20 56.1 -0.4
BDFB LR LR
comp=Z,7µm,21.0s,MS6.3
KMBO Kilima Mbogo 128.22 251 P PKPdf 01 21 00.4 +3.6
SNR=10
KMBO Kilima Mbogo 128.22 251 PKP PKPdf 01 20 57.2 +0.5
comp=Z,14nm,1.0s,baz=19,slow=2.4,SNR=21
KMBO Kilima Mbogo 128.22 251 PKIKP PKPdf 01 20 57.3 +0.6
KMBO pmax pmax
comp=Z,14nm,1.0s
KMBO Kilima Mbogo 128.22 251 *e*PKPdf PKPdf 01 20 57.7 +1.0
KMBO LR LR
comp=Z,11nm,19.0s,MS6.6
MTP Monte Pirata 128.38 83 *e*PKPdf PKPdf 01 20 55.0 -1.8
TRO Tromso 128.43 347 *e* PKPdf 01 20 57.5 +2.1
TRO *e*PP PP 01 23 00.0 -0.2
TRO *e*SS SS 01 40 19.6 +4.6
TRO AMS AMS 02 12 49.6
comp=Z,4µm,16.6s,MS6.2
DGRG David-gareji 129.04 307 P PKPdf 01 20 59.4 +1.9
MTA Mtatsminda 129.45 307 P PKPdf 01 20 59.2 +1.0
TBLG Delisi 129.49 307 *e*PKIKP PKPdf 01 21 01.1 +2.8
TBLG Delisi 129.49 307 P PKPdf 01 21 01.2 +2.9
GNI Garni 129.63 305 ⇓P PKPdf 01 21 01.0 +2.5
SNR=9.1
GNI Garni 129.63 305 PKP PKPdf 01 20 59.5 +0.9
comp=Z,12nm,0.7s,baz=59,slow=6.0,SNR=8.1
GNI Garni 129.63 305 *e*PKPdf PKPdf 01 20 58.3 -0.3
GNI LR LR
comp=Z,4µm,19.0s,MS6.1
JOF Joensuu 129.64 337 *e*p PKPdf 01 20 56.8 -1.1
comp=Z,34nm,0.7s
JOF Joensuu 129.64 337 *e*PKIKP PKPdf 01 20 56.8 -1.1
JOF pmax pmax
comp=Z,34nm,0.7s
GOR Gori 129.93 307 P PKPdf 01 21 02.3 +3.2
JMIC Jan Mayen 130.23 359 *e*PP PP 01 23 08.6 -3.2
JMIC *e*SS SS 01 40 42.1 +5.0
ONI Oni 130.34 308 P PKPdf 01 21 01.5 +1.7
MOS Moscow 130.43 326 *e*PKIKP PKPdf 01 20 57.8 -1.8
MOS *e* 01 23 13.6
MOS *e*SS SS 01 40 42.6 +1.9
MOS pmax pmax
comp=Z,128nm,1.8s
MOS pmax pmax
comp=Z,400µm,2.6s
MOS MLR MLR
comp=Z,7µm,20.0s,MS6.4
GRGR Grenville 130.45 92 PFAKE 01 21 10.0 +9.1
GRGR LR LR
comp=Z,4µm,20.0s,MS6.1
HAKT HAKKARI 130.62 302⇑ *i*P PKPdf 01 21 03.6 +3.0
DIGO Kars 130.65 306 *e*P PKPdf 01 21 00.5 0.0
KIV Kislovodsk 130.68 310 *e*PKIKP PKPdf 01 21 00.0 -0.4
KIV *e* 01 21 09.7
KIV 01 23 18.6
KIV *e*SS SS 01 40 40.9 -3.9
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV Kislovodsk 130.68 310⇓ *i*P PKPdf 01 21 09.6 +9.2
KIV Kislovodsk 130.68 310 *e*PKPdf PKPdf 01 20 59.8 -0.6
KIV LR LR
comp=Z,5µm,19.0s,MS6.2
KARS Kars 130.84 306 *e*P Pdif 01 17 59.8 +8.2
BBSR BB Station 130.91 65 PFAKE 01 21 10.0 +8.7
BBSR LR LR
comp=Z,6µm,20.0s,MS6.3
AGRB Hanur-Agry 131.03 304 *e*P Pdif 01 18 01.1 +8.7
VOR Voronezh 131.03 321 *e*PKIKP PKPdf 01 21 05.5 +4.6
VOR pmax pmax
comp=Z,200nm,2.0s
VSR Storozhevoye 131.22 320 *e*PKIKP PKPdf 01 21 02.9 +1.7
VSR pmax pmax
comp=Z,20nm,2.2s
VSR pmax pmax
comp=N,10.0nm,2.3s
VSR pmax pmax
comp=E,10.0nm,1.8s
OBN Obninsk 131.23 326⇓ *i*PKIKP PKPdf 01 20 59.9 -1.2
OBN *i* 01 21 09.6
OBN *i* SS SS 01 40 50.5 -0.1
OBN pmax pmax
comp=Z,60nm,2.0s
OBN Obninsk 131.23 326 *e*PKPdf PKPdf 01 21 00.4 -0.7
OBN LR LR
comp=Z,7µm,21.0s,MS6.3

TSUM **Tsumeb** 131.25 216 PKP PKPdf 01 21 04.2 +1.9
comp=Z,10nm,1.1s,baz=122,slow=2.4,SNR=11
TSUM **Tsumeb** 131.25 216 *e*PKPdf PKPdf 01 21 02.9 +0.5
TSUM LR LR
comp=Z,12µm,19.0s,MS6.6
FDF **Fort de France** 131.65 89 *e*PKIKP PKPdf 01 21 03.6 +0.5
DDEM **Demirkent** 131.82 306 *e*P PKPdf 01 21 06.8 +4.1
DBOC **Borcka** 131.82 307 *e*P PKPdf 01 21 04.4 +1.7
BCA **Borcka** 131.84 307 *e*P Pdif 01 18 04.5 +8.4
DBAD **Bademkaya** 131.85 307 *e*P PKPdf 01 21 05.5 +2.7
KAF **Kangasniemi** 131.96 338 *e*p PKPdf 01 21 01.0 -1.3
comp=Z,23nm,0.7s
KAF **Kangasniemi** 131.96 338 *e*PKIKP PKPdf 01 21 01.0 -1.3
KAF pmax pmax
comp=Z,23nm,0.7s
BNGL **BINGOL** 132.51 304 *e*P PKPdf 01 21 06.5 +2.4
BBGH **Gun Hill** 132.70 92 PFAKE 01 21 10.0 +4.9
BBGH LR LR
comp=Z,8µm,20.0s,MS6.4
SOC **Sochi** 132.86 310 *e*P Pdif 01 17 58.9 -1.7
SOC *i* 01 21 06.2
SOC *e* 01 23 26.3
SOC *e*PS PS 01 33 37.1 -10
KOPT **Kop Dagi** 132.89 305 *e*P PKPdf 01 21 09.4 +4.6
KTUT **Trabzon** 133.29 307 *e*P Pdif 01 18 06.8 +4.3
DIYA **Diyarbakir** 133.43 303⇑ *i*P PKPdf 01 21 08.8 +2.9
GUMT **Gumushane** 133.59 306 *e*P Pdif 01 18 08.4 +4.6
PTK **Pertek** 133.88 304 *e*P Pdif 01 18 09.8 +4.7
SVRC **Sivrice-ELAZID** 134.01 303 *e*P Pdif 01 18 09.9 +4.1
ANN **Anapa** 134.19 312 *i* PKIKP PKPdf 01 21 08.0 +1.0
ANN *e*SS SS 01 41 18.5 -8.8
ANN pmax pmax
comp=Z,78nm,2.3s
NSS **Namsos** 134.21 347 *e* PKPdf 01 21 05.2 -1.3
NSS AMS AMS 02 22 38.5
comp=Z,4µm,27.9s,MS6.0
URFA **Urfa** 134.51 302 *e*P Pdif 01 18 09.9 +2.0
MALT **Malatya** 134.71 303⇓ *i*P PKPdf 01 21 00.2 -8.0
MALT **Malatya** 134.71 303 *e*PKPpre 01 20 58.7
MALT *e*PKPdf PKPdf 01 21 09.8 +1.5
MALT LR LR
comp=Z,8µm,19.0s,MS6.4
AKCD **Akcadag** 135.10 303⇓ *i*P PKPdf 01 21 13.2 +4.2
RSDY **Resadiye-TOKAT** 135.22 306 *e*P Pdif 01 18 08.8 -2.3
GAZ **Gaziantep** 135.81 302 *e*P Pdif 01 18 10.7 -3.0
BORG **Borgarnes** 135.94 7 PFAKE 01 21 20.0 +10
BORG LR LR
comp=Z,9µm,19.0s,MS6.5
MNK **Minsk** 135.95 329 *e*PKIKP PKPdf 01 21 12.0 +2.0
MNK *e* 01 23 52.0
MNK *e*PPP 01 26 44.0
MNK *e*PS PS 01 34 08.0 -5.3
MNK *e*SS SS 01 41 52.0 +4.6
MNK MLR MLR
comp=Z,24µm,20.0s,MS6.9
IDID **Didziasalis** 136.01 330 *e*P PKPdf 01 21 13.7 +3.6
KVT **Kavak** 136.04 308 *e*P Pdif 01 18 10.6 -4.2
PINB **Pinarbasi** 136.22 304⇓ *i*P PKPdf 01 21 13.1 +2.1
IIGN **Ignalina** 136.23 330 *e*P PKPdf 01 21 14.0 +3.5
SIM **Simferopol'** 136.41 314 *de*PKIKP PKPdf 01 21 15.3 +4.1
SIM *e* 01 23 58.0
SIM pmax pmax
comp=Z,26nm,1.2s
SIM pmax pmax
comp=Z,190nm,9.0s
ANDN **Andirin** 136.44 303⇓ *i*P PKPdf 01 21 15.7 +4.2
ASF **Jabal al Asfar** 136.49 295 PKP PKPdf 01 21 11.6 -0.2
comp=Z,5.2nm,0.8s,baz=176,slow=9.3,SNR=5.4
MOL **Molde** 136.87 348 *e* PKPdf 01 21 11.2 -0.2
MOL *e*SS SS 01 41 59.3 +1.9
CEYT **Ceyhan** 136.99 302 *e*P Pdif 01 18 12.7 -6.2
AKASG **Malin Array Be** 137.18 323 PKhKP
comp=Z,1.0nm,0.4s,baz=48,slow=3.7,SNR=6.5
AKASG PKP PKPdf 01 21 12.9 +0.5
comp=Z,14nm,0.7s,baz=56,slow=2.1,SNR=22
AKASG SKPbc SKPbc 01 24 46.5 +1.3
comp=Z,12nm,1.0s,baz=49,slow=3.2,SNR=6.6
AKASG **Malin Array Be** 137.18 323 *i* PKIKP PKPdf 01 21 07.0 -5.4
AKBB **Malin Array Si** 137.18 323 *e*PKIKP PKPdf 01 21 10.7 -1.7
KIEV **Kiev** 137.20 323 *e*PKIKP PKPdf 01 21 10.5 -1.9
KIEV MLR MLR
comp=Z,6µm,21.0s,MS6.3
NB2 **NORSAR Subarra137.41 344** PKPdf 01 21 04.3
comp=Z,15nm,1.0s,baz=31,slow=1.9
NB2 **NORSAR Subarra137.41 344** PKPdf 01 21 04.3
baz=31,slow=1.9
NOA **NORSAR Array B 137.41 344** PKhKP 01 21 04.9
comp=Z,1.3nm,0.6s,baz=27,slow=3.1,SNR=6.4
NOA PKP PKPdf 01 21 11.5 -1.0
comp=Z,13nm,0.8s,baz=31,slow=2.0,SNR=26
NOA PP PP 01 24 01.4 +3.8
comp=Z,4.1nm,0.9s,baz=34,slow=6.1,SNR=4.8
NOA SKPbc SKPbc 01 24 46.0 +0.5
comp=Z,3.7nm,0.9s,baz=17,slow=4.2,SNR=4.1
NOA **NORSAR Array B 137.41 344** PKP 01 21 04.9
NOA PKP PKPdf 01 21 11.5 -1.0
NOA PP PP 01 24 01.4 +3.8
NOA SKPbc SKPbc 01 24 46.0 +0.5
HFS **Hagfors** 137.51 342 PKP PKPdf 01 21 10.4 -2.3
comp=Z,17nm,0.8s,baz=108,slow=3.4,SNR=13
HFS SKPbc SKPbc 01 24 46.2 +0.4
comp=Z,8.2nm,1.0s,baz=266,slow=2.2,SNR=3.6
HFS **Hagfors** 137.51 342 PKP PKPdf 01 21 10.4 -2.3
HFS SKPbc SKPbc 01 24 46.2 +0.4
NAO01 **NORSAR Array S 137.66 345** PFAKE 01 21 20.0 +7.0
NAO01 LR LR
comp=Z,5µm,20.0s,MS6.3
MMAI **Mount Meron Ar** 137.71 296 PKhKP 01 21 07.2
comp=Z,4.7nm,1.0s,baz=111,slow=7.9,SNR=3.0
MMAI PKP PKPdf 01 21 13.4 -0.5
comp=Z,10nm,0.9s,baz=76,slow=4.4,SNR=4.2
MMAI SKPbc SKPbc 01 24 50.0 +2.7
comp=Z,6.1nm,1.0s,baz=92,slow=10,SNR=2.6
MERS **Mersin** 137.99 302 *e*P Pdif 01 18 15.1 -8.3
BR131 **Keskin Array S** 138.13 306 *e*PKPpre 01 21 09.2
BR131 LR LR
comp=Z,4µm,21.0s,MS6.2
EIL **Elat** 138.23 291 PKP PKPdf 01 21 16.1 +1.1
comp=Z,48nm,1.2s,baz=311,slow=3.3,SNR=8.9
MEST **Erdemli** 138.33 302 *e*P PKPdf 01 21 08.4 -6.6
SUW **Suwalki** 138.45 330 *e*PKP PKPdf 01 21 12.5 -2.1
SUW *e*PKiKP PKiKP 01 21 17.5 +0.8
SUW *e*PP PP 01 24 51.6 +47
SUW **Suwalki** 138.45 330 *e*PKIKP PKPdf 01 21 12.5 -2.1
SUW *i* 01 21 17.5
SUW **Suwalki** 138.45 330 *e*PKP PKPdf 01 21 12.5 -2.1
SUW *e*PKPdf PKPdf 01 21 17.5 +2.9
SUW *e*PP PP 01 24 51.6 +47
ANTO **Ankara** 138.73 307⇑ *i*P PKPdf 01 21 17.7 +2.0
SNR=13
ANTO **Ankara** 138.73 307⇓ *i*P PKPdf 01 21 16.6 +1.0
ANTO **Ankara** 138.73 307 *e*PKPdf PKPdf 01 21 12.1 -3.5
ANTO LR LR
comp=Z,6µm,21.0s,MS6.3
KONO **Kongsberg** 139.01 344 *e* PKPdf 01 21 11.6 -4.0
KONO *e*PP PP 01 24 09.8 +2.2
KONO AMS AMS 02 24 11.0
comp=Z,5µm,22.9s,MS6.2
KIS **Kishinev** 139.10 318 *e*PsP 01 21 00.0
KIS **Kishinev** 139.10 318 *e*PP PP 01 23 50.0 -19
CSS **Prodhromos** 139.22 299 *e*PKPpre 01 21 07.0
BER **Bergen** 139.30 348 *e*PKPdf PKPdf 01 21 12.5 -3.5
BER *e*SS SS 01 42 28.6 +2.3
BER **Bergen** 139.30 348 *e*P PKPdf 01 21 12.0 -4.1
KDHN **Kadinhani** 139.55 305 *e*P PKPdf 01 21 11.4 -5.8
BORA **Eskisehir** 140.47 307⇓ *i*P PKPdf 01 21 13.5 -5.3
LVV **L'vov** 140.50 325 *e*PKIKP PKPdf 01 21 22.4 +3.9
LVV MLR MLR
comp=Z,7µm,22.0s,MS6.4
LVV MLR MLR
comp=N,4µm,21.0s,MS6.3
LVV MLR MLR
comp=E,3µm,20.0s,MS6.3
WAR **Warsaw** 140.58 329 *e*PKP PKPdf 01 21 20.1 +1.5
WAR **Warsaw** 140.58 329 *e*PKP PKPdf 01 21 20.1 +1.5
VRI **Vrincioaia** 140.89 318⇑ *i*P PKPdf 01 21 17.8 -1.6
VRI **Vrincioaia** 140.89 318⇑ *i*P PKPdf 01 21 17.8 -1.5
ISP **Isparta** 140.94 304 PFAKE 01 21 30.0 +10
ISP LR LR
comp=Z,8µm,19.0s,MS6.5
BURAR **Bucovina Array** 140.99 321⇓ *i*P PKPdf 01 21 19.8 +0.3
BURAR **Bucovina Array** 140.99 321⇓ *i*P PKPdf 01 21 19.8 +0.3
KWP **Kalwaria** 141.31 325 *e*PKP PKPdf 01 21 17.1 -2.9
KWP *e*PKiKP PKiKP 01 21 20.7 -2.1
KWP **Kalwaria** 141.31 325⇑ *i*P PKPdf 01 21 17.2 -2.8
KWP **Kalwaria** 141.31 325 *e*PKP PKPdf 01 21 17.1 -2.9
KWP *e*PKPdf PKPdf 01 21 20.7 +0.7
GDZ **Gediz** 141.41 307⇑ *i*P PKPdf 01 21 22.3 +1.8
COP **Copenhagen** 141.54 339 *i* P PKPdf 01 21 11.3 -8.9
COP *i* 01 24 13.4
COP **Copenhagen** 141.54 339 *e*P PKPdf 01 21 11.3 -8.9
COP *i* 01 24 13.4
MLR **Muntele Rosu** 141.55 318 PKhKP 01 21 15.1
comp=Z,4.5nm,0.6s,baz=308,slow=1.0,SNR=12
MLR **Muntele Rosu** 141.55 318⇑ *i*P PKPdf 01 21 16.3 -4.3
MLR **Muntele Rosu** 141.55 318⇑ *i*P PKPdf 01 21 16.3 -4.2
GKP **Gorka Klasztor** 141.58 333 *e*PKP PKPdf 01 21 23.1 +2.7
GKP **Gorka Klasztor** 141.58 333 *e*PKP PKPdf 01 21 23.1 +2.8
GOLH **Golhisar** 141.81 304 *e*P PKPdf 01 21 24.4 +3.1
MUD **Monsted U'grnd** 141.90 342 *i* P PKPdf 01 21 19.3 -1.5
MUD *i* 01 24 18.7
MUD **Monsted U'grnd** 141.90 342 *e*P PKPdf 01 21 19.3 -1.5
MUD *i* 01 24 18.7
KOLS **Kolonicke sedl** 141.94 324 *e*PKP PKPdf 01 21 20.1 -1.1
AKAS **Kas** 141.99 302 *e*P PKPdf 01 21 21.2 -0.4
DEMI **Demirci** 141.99 307 *e*P PKPdf 01 21 20.5 -1.1
DURS **Dursunbey** 142.01 308 *e*P PKPdf 01 21 16.0 -5.6
DNZL **Cakiroluk** 142.10 304⇑ *i*P PKPdf 01 21 18.1 -3.7
UZH **Uzhgorod** 142.10 324 *c i*PKIKP PKPdf 01 21 18.0 -3.4
UZH *e* 01 24 35.0
UZH *e*PPP 01 27 44.0
UZH *e* 01 28 25.0
UZH *e*SS SS 01 42 55.0 -5.2
VOIR 142.14 318⇑ *i*P PKPdf 01 21 21.5 -0.1
VOIR 142.14 318 P PKPdf 01 21 23.2 +1.6
STHS **Stebnicka Huta** 142.21 326 *e*PKP PKPdf 01 21 22.0 +0.4
MANT **Manisa** 142.26 306 *e*P PKPdf 01 21 18.7 -3.4
JMB **Yambol** 142.39 313 P PKPdf 01 21 22.4 +0.2
CRVS **Cervenica-Dubn** 142.40 325 *e*PKP PKPdf 01 21 20.5 -1.5
OJC **Ojcow** 142.46 328 *e*P Pdif 01 18 43.0 -0.2
OJC **Ojcow** 142.46 328 *e*PKPdf PKPdf 01 21 22.8 +0.8
OJC *ep*PKPdf pPKPdf 01 21 26.7 -0.3
OJC *e*PP PP 01 24 30.8 +1.7
OJC *e*SKSdf SKSdf 01 28 34.1 +2.7
OJC *e*SS SS 01 43 15.4 +11
OJC LR LR
comp=Z,7µm,19.9s,MS6.4
SZH **Strazhica** 142.51 314 P PKPdf 01 21 23.2 +0.8
BALY **Balya** 142.60 308 *e*P PKPdf 01 21 19.3 -3.3
SART **Tekirdag** 142.61 310 *e*P PKPdf 01 21 19.2 -3.4
TURN **Turunc** 142.64 303 *e*P PKPdf 01 21 19.6 -3.2
NIE **Niedzica** 142.69 326 *e*PKPdf PKPdf 01 21 20.3 -2.2
SHEL **Horse Pasture** 142.72 188 PFAKE 01 21 30.0 +6.4
SHEL LR LR
comp=Z,10µm,21.0s,MS6.5
DRGR 142.88 321⇑ *i*P PKPdf 01 21 19.6 -3.3
DRGR 142.88 321 P PKPdf 01 21 19.8 -3.0
PVL **Pavlikeni** 142.93 315 *e*P PKPdf 01 21 22.2 -0.9
AYDN **Tasoluk** 143.00 305⇓ *i*P PKPdf 01 21 23.5 +0.1
MVH1 **Achvaich** 143.06 354 *e*P PKPdf 01 21 18.8 -4.0
ARG **Arkhangelos** 143.16 302 *e*P PKPdf 01 21 22.5 -1.2
DIM **Dimitrovgrad** 143.27 313 P PKPdf 01 21 22.4 -1.3
ALN **Alexandroupoli** 143.35 311 *e*P PKPdf 01 21 20.9 -3.0
AYVA **Ayvalik** 143.42 308 *e*P PKPdf 01 21 20.1 -3.9
CRAR **CRAJOVA** 143.44 317 PKIKP PKPdf 01 21 23.1 -0.9
GCAM **G?zelcaml?** 143.49 305⇑ *i*P PKPdf 01 21 21.4 -2.9
BDRM **Kayabasi** 143.49 304⇑ *i*P PKPdf 01 21 21.1 -3.2
KDZ **Kurdzhali** 143.50 312 P PKPdf 01 21 23.2 -1.0
OKC **Ostrava-Krasne** 143.52 328 *e*PKP PKPdf 01 21 21.1 -2.8
OKC *ex* x 01 43 21.4
OKC AMS AMS 02 27 10.0
comp=Z,5µm,18.3s
OKC **Ostrava-Krasne** 143.52 328 *e*PKP PKPdf 01 21 21.1 -2.8
OKC *e* 01 43 21.4
MDO **Dochfour** 143.56 354 *e*P PKPdf 01 21 21.1 -2.6
GZR **Gura Zlata** 143.56 319⇓ *i*P PKPdf 01 21 22.9 -1.2
GZR **Gura Zlata** 143.56 319 P PKPdf 01 21 22.1 -2.0
KAC **Achnashellach** 143.58 355 *e*P PKPdf 01 21 20.1 -3.7
RDO **Rodhopi** 143.61 311 *e*P PKPdf 01 21 23.0 -1.4
KSP **Ksiaz** 143.71 331 *e*PKP PKPdf 01 21 22.0 -2.2
KSP *e*PKiKP PKiKP 01 21 25.6 -2.0
KSP **Ksiaz** 143.71 331 *e*PKP PKPdf 01 21 21.8 -2.4
KSP *ep*PKP pPKPdf 01 21 24.4 -4.8
KSP *e*SS SS 01 43 06.0 -12
KSP LR LR
comp=Z,19µm,20.5s,MS6.8
BOZC **Bozcaada** 143.71 309⇑ *i*P PKPdf 01 21 22.1 -2.5
PRK **Paraskevi** 143.75 308 *e*P PKPdf 01 21 20.6 -4.0
PRK **Paraskevi** 143.75 308 *e*P PKPdf 01 21 22.0 -2.7
KPL **Plockton** 143.76 355 *e*P PKPdf 01 21 20.6 -3.6
URLA **Izmir** 143.78 306 *e*P PKPdf 01 21 21.6 -3.2
SMG **Samos** 143.78 305 *e*P PKPdf 01 21 22.0 -2.8
PLD **Plovdiv** 143.81 313 *e*P PKPdf 01 21 21.4 -3.3
PLD **Plovdiv** 143.81 313 P PKPdf 01 21 22.9 -1.8
PSZ **Piszkesteto** 143.82 325⇓ *e*PPK/p PKPdf 01 21 22.7 -1.8
PSZ **Piszkesteto** 143.82 325⇓ *i*P PKPdf 01 21 23.3 -1.2
PSZ **Piszkesteto** 143.82 325 *e*PKPdf PKPdf 01 21 21.7 -2.8
PSZ LR LR
comp=Z,7µm,20.0s,MS6.4
MORC **Moravsky Berou** 143.85 329⇓ *i*P PKPdf 01 21 22.1 -2.4
MORC **Moravsky Berou** 143.85 329 *e*PKPdf PKPdf 01 21 21.9 -2.6
KSB **Sheil Bridge** 143.88 355 *e*P PKPdf 01 21 20.3 -4.0
RZN **Rozhen** 143.97 313 P PKPdf 01 21 23.5 -1.5
PGB **Panagyurishte** 143.99 314 P PKPdf 01 21 23.8 -1.2
VYHS **Vyhne** 144.03 326 *e*PKP PKPdf 01 21 22.7 -2.2
DPC **Dobruska-Polom** 144.04 330 *e*PKP PKPdf 01 21 23.3 -1.5
DPC *ex* x 01 43 28.4
DPC AMS AMS 02 25 40.0
comp=Z,7µm,21.9s
UPC **Upice** 144.07 331 *e*PKP PKPdf 01 21 22.2 -2.7
KARP **Karpathos** 144.08 302 *e*P PKPdf 01 21 24.0 -1.4
BZS **Buzias** 144.14 320⇑ *i*P PKPdf 01 21 23.0 -2.1
BZS **Buzias** 144.14 320 P PKPdf 01 21 23.6 -1.5
KOLL **Kolacno** 144.20 327 *e*PKP PKPdf 01 21 24.3 -0.9
KOLL **Kolacno** 144.20 327 *e*PKP PKPdf 01 21 24.4 -0.8
LIA **Limnos Island** 144.32 310 *e*P PKPdf 01 21 22.8 -2.9
BUD **Budapest** 144.56 325⇓ *e*PKP PKPdf 01 21 25.3 -0.5
VTS **Vitosha** 144.61 315⇓ *i*P PKPdf 01 21 25.4 -0.7
VTS **Vitosha** 144.61 315 P PKPdf 01 21 24.8 -1.2
VRAC **Vranov** 144.62 329 PKP PKPdf 01 21 24.9 -0.9
comp=Z,38nm,0.7s,baz=88,slow=2.2,SNR=28
VRAC **Vranov** 144.62 329⇓ *i*P PKPdf 01 21 25.0 -0.9
VRAC **Vranov** 144.62 329 P PKPdf 01 21 24.6 -1.2
EBH **Black Hill** 144.65 353 *e*P PKPdf 01 21 23.4 -2.3
MMB **Musomiste** 144.69 313 P PKPdf 01 21 25.8 -0.4
PVCC **Panska Ves** 144.70 332 *e*PKP PKPdf 01 21 23.6 -2.4
PVCC AMS AMS 02 26 20.0
comp=Z,7µm,20.1s
BRG **Berggiesshubel** 144.72 333 *i* PKP PKPdf 01 21 24.8 -1.2
comp=Z,68nm,0.7s
BRG *i* 01 21 31.0
comp=Z,454nm,1.3s
BRG *e* 01 25 07.9
comp=Z,149nm,2.0s
CLL **Collm** 144.78 334 *e*PKIKP PKPdf 01 21 25.0 -1.1
CLL *e* 01 21 30.0
CLL pmax pmax
comp=Z,56nm,0.7s
CLL MLR MLR
comp=Z,8µm,20.5s,MS6.5
CLL **Collm** 144.78 334 *e*PKPdf PKPdf 01 21 25.0 -1.1
comp=Z,56nm,0.7s
CLL *e*PKiKP PKiKP 01 21 30.0 +0.2
CLL *e*SS SS 01 43 35.0 +4.6
CLL *ex* x 01 45 09.0
CLL *e*SSS 01 48 35.0
CLL LmV 02 28 00.0
comp=Z,8µm,20.5s
CLL **Collm** 144.78 334 *e*PKP PKPdf 01 21 25.0 -1.1
CLL *e* 01 21 30.0
CLL LR LR
comp=Z,8µm,20.5s,MS6.5
EAB **Aberfoyle** 144.79 354 *e*P PKPdf 01 21 23.9 -2.0
ESY **Stoneypath** 144.86 352 *e*P PKPdf 01 21 24.4 -1.6
MODS **Modra-Piesok** 144.91 327 *e*PKP PKPdf 01 21 26.4 0.0
EDI **Edinburgh** 144.93 353 *e*P PKPdf 01 21 23.6 -2.6
ZKR **Zakros** 144.93 301 *e*P PKPdf 01 21 25.5 -1.4
APE **Apeiranthos** 144.96 305 *e*P PKPdf 01 21 24.0 -2.9
APE **Apeiranthos** 144.96 305 *e*P PKPdf 01 21 25.0 -1.9
APE **Apeiranthos** 144.96 305⇑ *i*P PKPdf 01 21 25.4 -1.5
OUR **Ouranopolis** 145.01 311 *e*P PKPbc 01 21 24.6 -1.5
EAU **Auchinoon** 145.03 353 *e*P PKPbc 01 21 24.7 -1.0
EBL **Broad Law** 145.06 353 *e*P PKPbc 01 21 23.9 -1.9
PRU **Pruhonice** 145.10 331 *e*PKP PKPdf 01 21 24.9 -1.8
PRU *ex* x 01 43 44.7
PRU AMS AMS 02 21 20.0
comp=Z,7µm,26.8s
ZST **Bratislava** 145.11 327 *e*PKP PKPdf 01 21 26.6 -0.1
TREC **Trest** 145.16 330 *e*PKP PKPdf 01 21 25.7 -1.1
TREC AMS AMS 02 28 10.0
comp=Z,7µm,20.5s
PGBU **Glenifferbraes** 145.18 354 *e*P PKPbc 01 21 25.0 -1.2
SANT **Santorini** 145.21 304 *e*P PKPbc 01 21 25.2 -1.8
THR1 **Thera Island** 145.21 304 *e*P PKPbc 01 21 27.3 +0.3
XSO **Sourhope Farm** 145.23 352 *e*P PKPbc 01 21 25.9 -0.5
THR3 **Thira Island,** 145.25 304 *e*P PKPbc 01 21 25.1 -1.9
BEO **Beograd** 145.26 320 PKIKP PKPdf 01 21 30.5 +3.4
SOH **Sokhos** 145.26 312 *e*P PKPbc 01 21 25.3 -1.7
PCA1 **Carrot** 145.26 354 *e*P PKPbc 01 21 25.1 -1.4
THR6 **Thira Island,** 145.26 304 *e*P PKPbc 01 21 26.2 -1.0
THR5 **Thira Island,** 145.29 304 *e*P PKPbc 01 21 25.1 -2.1
NPS **Neapolis** 145.38 302 *e*P PKPbc 01 21 28.0 +0.5
PLG **Polygyros** 145.38 311 *e*P PKPbc 01 21 25.9 -1.5
PLG **Polygyros** 145.38 311 *e*P PKPbc 01 21 26.5 -0.9
PAIG **Paliouri** 145.38 310 *e*P PKPbc 01 21 24.5 -2.9
BARS **Barje** 145.42 316 P PKPbc 01 21 27.4 0.0
KNT **Kendrikon** 145.44 313 *e*P PKPbc 01 21 25.9 -1.6
EKA **Eskdalemuir Ar** 145.50 352 PKPbc PKPbc 01 21 25.4 -1.8
comp=Z,192nm,0.7s,baz=346,slow=2.6,SNR=106
LAST **Lasithi** 145.51 302 *e*P PKPdf 01 21 27.6 -0.3
ESK **Eskdalemuir** 145.52 353 *e*PKP2 PKPab 01 21 26.1 -1.4
ESK MLR MLR
comp=Z,7µm,22.0s,MS6.4
PKSM **Moragy** 145.53 323⇑ *i*P PKPdf 01 21 27.8 +0.3
PKSM **Moragy** 145.53 323 P PKPdf 01 21 27.1 -0.4
HORT **Hortiatis** 145.53 312 *e*P PKPdf 01 21 25.4 -2.3
VAY **Valandovo** 145.59 313 *e*P PKPdf 01 21 25.9 -1.9
VAY **Valandovo** 145.59 313 *e*PKP PKPdf 01 21 26.9 -0.9
THE **Thessaloniki** 145.61 312 *e*P PKPdf 01 21 25.8 -2.1
ECK **Cauldkaine Hil** 145.65 352 *e*P PKPdf 01 21 26.7 -0.8
STIP **Stip** 145.69 314 *e*P PKPdf 01 21 26.2 -1.7
STIP **Stip** 145.69 314 *e*PKP PKPdf 01 21 26.8 -1.2
SOP **Sopron** 145.72 327⇓ *e*PKP PKPbc 01 21 30.0 +1.8
NKC **Novy Kostel** 145.83 333 *e*PKP PKPdf 01 21 27.8 -0.1
NKC *ex* x 01 43 56.4
NKC AMS AMS 02 27 20.0
comp=Z,6µm,18.5s
NKC **Novy Kostel** 145.83 333 *e*PKP PKPdf 01 21 27.8 -0.1
NKC *e* 01 43 56.4
XAL **Allendale** 145.84 351 *e*P PKPdf 01 21 27.5 -0.2
MOX **Moxa** 145.85 335 *e*PKP PKPdf 01 21 27.9 0.0
comp=Z,994nm,2.2s
MOX
comp=Z,3µm,21.0s
GRG **Griva** 145.86 313 *e*P PKPdf 01 21 26.8 -1.5
CONA **Conrad Observa** 145.91 328⇑ *i*P PKPdf 01 21 28.5 +0.4
comp=Z,2µm,2.7s,SNR=67
CSNA **Conrad Observa** 145.92 328⇑ *i*P PKPdf 01 21 28.6 +0.5
comp=Z,1µm,2.6s
PTL **Penteli** 145.92 307 *e*P PKPdf 01 21 27.0 -1.5
DIVS **Divibare** 145.93 319 *e*P PKPdf 01 21 28.2 -0.1
IDI **Anoyia** 145.94 302 PKPbc PKPbc 01 21 29.2 -0.1
comp=Z,21nm,0.4s,baz=19,slow=12,SNR=29
NEO **Neokhori** 145.94 310 *e*P PKPdf 01 21 28.5 0.0
XOR **Xorichti** 145.94 310 *e*P PKPdf 01 21 27.2 -1.3
GCD **Castle Douglas** 146.05 353 *e*P PKPdf 01 21 27.3 -0.9
ATH **Athens Observa** 146.06 307 *e*P PKPdf 01 21 27.5 -1.2
SKO **Skopje** 146.06 315 *e*P PKPdf 01 21 28.9 +0.4
SKO **Skopje** 146.06 315 *e*PKP PKPdf 01 21 29.3 +0.7
KVR **Kavouri** 146.06 307 *e*P PKPdf 01 21 25.0 -3.7
SIVA **Sivas** 146.07 302 *e*P PKPdf 01 21 28.8 0.0
GAL1 **Galloway** 146.13 354 P PKPdf 01 21 28.3 0.0
GAL1 **Galloway** 146.13 354 *e*P PKPdf 01 21 28.1 -0.2
GAL1 *e*P 01 21 28.3
LIT **Litokhoron** 146.16 311 *e*P PKPdf 01 21 27.9 -0.9
KHC **Kasperske Hory** 146.16 331 *e*PKP PKPdf 01 21 28.5 0.0
KHC *ex* x 01 21 37.0
KHC *ex* x 01 21 44.5
KHC *e*SS SS 01 43 57.9 +12
KHC AMS AMS 02 28 30.0
comp=Z,7µm,20.0s
NAIG **Nisos Aigina** 146.30 307 *e*P PKPdf 01 21 28.5 -0.6
GEC2 **GERESS Array S** 146.31 331 *e*PKP2 PKPab 01 21 29.4 -1.3
GERES **GERESS Array B** 146.31 331 PKPbc PKPbc 01 21 28.7 -1.2
comp=Z,71nm,0.7s,baz=42,slow=2.9,SNR=233
LKR **Lokris** 146.35 309 *e*P PKPdf 01 21 27.8 -1.4
VAM **Vamos** 146.46 302 *e*P PKPdf 01 21 30.0 +0.5
KRUS **Krusevo** 146.46 314 *e*PKP PKPdf 01 21 28.9 -0.3
WTSB **Winterswijk** 146.48 340 *e*PKP PKPdf 01 21 28.6 -0.4
comp=Z,268nm,2.2s
ARSA **Arzberg** 146.54 327⇓ *i*P PKPbc 01 21 33.1 +2.5
comp=Z,1µm,3.5s,SNR=14
ARSA **Arzberg** 146.54 327 P PKPbc 01 21 33.5 +2.8
DID **Didima** 146.57 306 *e*P PKPdf 01 21 28.5 -1.1
BIA **Bitola** 146.57 313 *e*PKP PKPdf 01 21 29.6 +0.1
LTK **Loutraki** 146.59 308 *e*P PKPdf 01 21 28.9 -0.7
IVA **Berane** 146.62 317⇑ *i*PKP PKPdf 01 21 30.7 +1.2
HPK **Haverah Park** 146.63 350 *e*P PKPdf 01 21 29.1 0.0
FNA **Florina** 146.64 313 *e*P PKPdf 01 21 27.9 -1.7
GIM **North Isle of** 146.67 353 *e*P PKPdf 01 21 29.8 +0.6
AGG **Agios Georgios** 146.69 310 *e*P PKPdf 01 21 28.5 -1.2
PLE **Pljevlja** 146.70 318⇑ *i*PKP PKPdf 01 21 28.9 -0.7
THL **Klokotos Trika** 146.71 311 *e*P PKPdf 01 21 26.4 -3.3
PVY **Plav** 146.71 317⇑ *i*PKP PKPdf 01 21 30.3 +0.6
GRA1 **Grafenberg Arr** 146.75 334 *e*PKP PKPdf 01 21 30.4 +0.9
GRA1 *e*PP PP 01 24 56.9 +2.4
GRA1 LR LR
comp=Z,4µm,22.0s,MS6.2
GRF **Grafenberg Arr** 146.75 334 *e*PKP PKPdf 01 21 30.4 +0.9
GRF *e*PP PP 01 24 56.9 +2.4
GRF *e*L 02 29 22.5
comp=Z,5µm,22.0s
MOA **Molln** 146.75 329⇑ *i*P PKPdf 01 21 30.4 +0.8
comp=Z,2µm,3.6s,SNR=29
MOA **Molln** 146.75 329 P PKPdf 01 21 31.2 +1.7
GMM **Mts of Mourne** 146.87 355 *e*P PKPdf 01 21 31.4 +1.9
PUK **Puka** 147.04 316 *e*PN PKPab 01 21 34.6 +0.8
VLI **Veliai** 147.05 305 *e*P PKPdf 01 21 32.0 +1.6
LHO **Holmfirth** 147.06 350 *e*P PKPdf 01 21 30.8 +1.0
UPM **Unac-Piva** 147.07 318⇑ *i*PKP PKPdf 01 21 30.5 +0.3
EVR **Evrytania** 147.11 310 *e*P PKPdf 01 21 32.0 +1.6
KYTH **Kithira** 147.11 304 *e*P PKPdf 01 21 31.0 +0.5
PERS **Pernice** 147.16 327 *i* PKPdf PKPbc 01 21 32.5 0.0
MEV **Metsovon** 147.17 311 *e*P PKPbc 01 21 33.0 +0.3
SOKA **Soboth** 147.17 327⇑ *i*P PKPdf 01 21 31.4 +1.1
NKY **Niksic** 147.22 318⇑ *i*PKP PKPdf 01 21 31.7 +1.2
SISC **Sisak** 147.24 324 P PKPbc 01 21 33.4 +0.6
TTG **Podgorica** 147.25 317⇑ *i*PKP PKPdf 01 21 32.1 +1.5
VLA **Vlachokerasia** 147.26 307 *e*P PKPdf 01 21 31.1 +0.3
KBI1 **Birley Grange** 147.29 350 *e*P PKPdf 01 21 32.0 +1.8
AEU **East Anglia Un** 147.37 347 *e*P PKPdf 01 21 30.5 +0.1
TIR **Tirane** 147.40 315 *e*P PKPbc 01 21 33.3 0.0
TIR **Tirane** 147.40 315 *e*PN PKPbc 01 21 34.4 +1.1
BRY **Bratogost** 147.46 318⇑ *i*PKP PKPbc 01 21 33.2 -0.2
JAN **Janina** 147.49 311 *e*P PKPdf 01 21 32.5 +1.4
ULC **Ulcinj** 147.50 316⇑ *i*PKP PKPdf 01 21 32.2 +1.2
BUM **Brajici-Budva** 147.55 317⇑ *i*PKP PKPdf 01 21 32.3 +1.2
STNC **Stoke** 147.56 351 *e*P PKPbc 01 21 33.3 -0.1
KWE **Weaver Farm** 147.57 350 *e*P PKPbc 01 21 32.7 -0.7
ITM **Ithomi** 147.66 307 *e*P PKPbc 01 21 33.5 -0.7
HCY **Herceg Novi** 147.72 318⇑ *i*PKP PKPdf 01 21 32.8 +1.4
KBA **Koelnbreinsper** 147.74 329⇓ *i*P PKPbc 01 21 33.3 -0.7
comp=Z,635nm,2.4s,SNR=26
KBA **Koelnbreinsper** 147.74 329⇓ *ip*PKPdf PKPbc 01 21 33.3 -0.7
comp=Z,635nm,2.4s,SNR=26
KBA **Koelnbreinsper** 147.74 329 P PKPbc 01 21 34.4 +0.4
CWF **Charnwood Fore** 147.75 349 *e*P PKPdf 01 21 31.7 +0.6
TOD **Tromm** 147.77 336 PKP2 PKPbc 01 21 33.5 -0.6
HGN **Heimansgroeve** 147.80 340 *e*PKP PKPab 01 21 37.4 +0.9
comp=Z,336nm,1.9s
BEBN **Eben Emael** 147.85 340 E 01 21 38.2
DLF **Lyons Farm** 147.85 355 *e*P PKPdf 01 21 26.9 -4.3
DLF **Lyons Farm** 147.85 355⇑ *i*P PKPdf 01 21 33.7 +2.5
DCN **Croghan** 147.85 356 *e*P PKPdf 01 21 26.9 -4.3
DCN **Croghan** 147.85 356⇑ *i*P PKPdf 01 21 33.8 -0.3
DSB **Dublin** 147.89 355 *e*PKPdf PKPdf 01 21 30.8 -0.5
DSB *e*PKPbc PKPbc 01 21 35.6 +1.4
SBD1 **Bryn Du** 147.89 352 *e*P PKPdf 01 21 31.3 +0.1
PYL **PYLOS** 147.90 306 *e*P PKPdf 01 21 33.1 +1.3
IGT **Igoumenitsa** 147.

LKD	Levkas	148.02	310	*e*P		PKPdf	01 21	33.8 +1.8
VOY	Vojsko	148.19	327	*e*PKPdf		PKPdf	01 21	34.2 +2.2
VOY				*e*			01 21	34.8
KEK	Kerkira	148.19	312	*e*P		PKPdf	01 21	34.0 +1.8
JAVS	Javornik	148.19	326	*i* PKPdf		PKPdf	01 21	34.1 +2.1
PTCC	Patocco-Chiusa	148.21	328	P		PKPbc	01 21	34.7 -0.6
HLM1	Long Mynd	148.21	351	*e*P		PKPdf	01 21	31.3 -0.5
UCC	Uccle	148.24	342	PKPbc		PKPbc	01 21	34.8 -0.5
KTD	Kalmit	148.28	336	PKP2		PKPbc	01 21	34.1 -1.3
VLS	Valsamata	148.28	309	*e*P		PKPbc	01 21	36.0 +0.2
BCLA	Clavier	148.29	341	PKPbc		PKPbc	01 21	35.3 -0.1
STU	Stuttgart	148.30	335	*e*PKIKP		PKPdf	01 21	33.4 +1.3
RUP	Ruppelstein	148.33	338	PKP2		PKPbc	01 21	34.8 -0.7
GMNA	Gemona	148.35	328	P		PKPbc	01 21	36.4 +0.7
ABTA	Abfaltersbach	148.38	329	⇓ *i*P		PKPdf	01 21	31.5 -0.7
	comp=Z,838nm,3.2s,SNR=29							
WATA	Walderalm	148.38	331	⇑ *i*P		PKPdf	01 21	32.5 +0.2
	comp=Z,386nm,1.9s,SNR=35							
WATA	Walderalm	148.38	331	P		PKPbc	01 21	35.5 -0.2
WTTA	Wattenberg	148.41	331	⇑ *i*P		PKPdf	01 21	31.5 -0.8
	comp=Z,2µm,2.4s,SNR=20							
SEST	Monte Rota	148.51	329	P		PKPbc	01 21	35.9 -0.2
SNF	Seneffe	148.52	342	PKPbc		PKPbc	01 21	36.0 0.0
MOTA	Moosalm	148.59	331	⇓ *i*P		PKPdf	01 21	31.7 -0.9
	comp=Z,188nm,1.2s,SNR=42							
MOTA	Moosalm	148.59	331	P		PKPbc	01 21	36.2 -0.1
RETA	Reutte	148.64	332	⇓ *i*P		PKPbc	01 21	35.3 -1.1
	comp=Z,2µm,2.9s,SNR=29							
LANF	Langenberg	148.66	336	PKP		PKPdf	01 21	34.1 +1.4
WLF	Walferdange	148.67	339	PKPbc		PKPbc	01 21	35.9 -0.5
WLF	Walferdange	148.67	339	*e*PKPbc		PKPbc	01 21	35.4 -1.0
WLF				LR		LR		
	comp=Z,8µm,19.0s,MS6.5							
HTR	Trewern Hill	148.70	351	*e*P		PKPdf	01 21	31.3 -1.3
GIVF	Givet	148.72	341	*e*PKIKP		PKPdf	01 21	32.8 +0.1
	comp=Z,182nm,0.6s							
MCH1	Michaelchurch	148.74	351	*e*P		PKPbc	01 21	35.9 -0.6
DOU	Dourbes	148.80	341	PKPbc		PKPbc	01 21	36.5 -0.2
BAIF	Baives	148.95	341	*e*PKIKP		PKPdf	01 21	33.0 -0.1
	comp=Z,798nm,1.5s							
BFO	Black Forest	148.99	335	*e*PKIKP		PKPbc	01 21	36.0 -1.3
BFO				MLR		MLR		
	comp=Z,7µm,19.0s,MS6.5							
SPAK	Spaichingen-Ko	149.00	334	PKP		PKPbc	01 21	36.3 -1.0
SWN1	Swindon	149.01	349	*e*P		PKPbc	01 21	36.8 -0.5
HGH	Gray Hill	149.06	351	*e*P		PKPdf	01 21	35.2 +2.0
MENF	Mencas	149.06	344	PKP		PKPdf	01 21	33.9 +0.6
WOL	Wolverton	149.10	349	*e*P		PKPbc	01 21	36.0 -1.5
DAVA	Damuels	149.18	332	⇓ *i*P		PKPdf	01 21	35.9 +2.3
	comp=Z,805nm,3.0s,SNR=15							
DAVA	Damuels	149.18	332	⇓ *i*PPKPdf		PKPdf	01 21	35.9 +2.3
	comp=Z,805nm,3.0s,SNR=15							
CTI	Castel Tesino	149.29	329	PKP2		PKPbc	01 21	38.5 +0.4
CDF	Champ du Feu	149.33	336	*e*PKIKP		PKPdf	01 21	33.3 -0.5
	comp=Z,227nm,0.9s							
LIBD	Limburg	149.42	336	PKHKP			01 21	35.8
FELD	Feldberg im Sc	149.49	335	PKP		PKPdf	01 21	35.0 +1.0
ECH	Echery	149.54	336	PKP		PKPbc	01 21	37.4 -1.2
ECH	Echery	149.54	336	*e*PKPdf		PKPdf	01 21	34.3 +0.2
ECH				PKP		PKPdf	01 21	37.4 +3.3
ECH				*e*PKPbc		PKPbc	01 21	38.0 -0.6
ECH				*e*PKPab		PKPab	01 21	43.2 -0.3
DAVOS	Davos	149.56	332	PKHKP		PKPdf	01 21	35.0 +0.8
DAVOX	Davos/Dischmat	149.57	332	PKP		PKPdf	01 21	34.9 +0.7
	comp=Z,64nm,0.7s,baz=49,slow=6.8,SNR=13							
DAVOX				PKPbc		PKPbc	01 21	39.1 +0.4
	comp=Z,92nm,0.7s,baz=330,slow=1.1,SNR=70							
BRMO	Bormio	149.58	331	P		PKPbc	01 21	38.4 -0.4
SGRT	San Giovanni R	149.82	319	P		PKPbc	01 21	39.9 +0.4
MOF	Molkenrain	149.85	336	PKP		PKPdf	01 21	34.5 -0.1
HTL	Hartland	149.92	352	*e*P		PKPbc	01 21	38.7 -0.7
THEF	They Montfort	149.96	338	PKP		PKPdf	01 21	36.1 +1.3
RGNG	Rignano Grg	149.96	319	P		PKPbc	01 21	38.1 -1.8
MAGA	Magasa	149.98	330	P		PKPbc	01 21	39.7 -0.1
HINF	Hinteralfeld	149.98	336	*e*PKIKP		PKPdf	01 21	34.5 -0.3
	comp=Z,1µm,1.8s							
HAU	Haudompre	150.01	337	*e*PKIKP		PKPdf	01 21	34.6 -0.3
	comp=Z,288nm,0.9s							
HAU				*e*MLR		MLR		
	comp=Z,8µm,21.2s,MS6.2							
HAU	Haudompre	150.01	337	*e*PKPdf		PKPdf	01 21	34.6 -0.3
HAU				LR		LR		
	comp=Z,8µm,21.3s,MS6.5							
BBS	Basel-Blauen	150.02	335	PKHKP		PKPdf	01 21	37.1 +2.2
TUE	Stuetta	150.04	332	*e*PKPbc		PKPbc	01 21	39.9 0.0
TUE				LR		LR		
	comp=Z,7µm,21.0s,MS6.4							
MEZF	Maizieres J'vi	150.04	339	*e*PKIKP		PKPdf	01 21	35.2 +0.3
	comp=Z,468nm,1.0s							
CING	Cingoli	150.33	324	P		PKPdf	01 21	36.2 +0.7
LOMF	Lomont	150.38	336	PKP		PKPdf	01 21	37.6 +2.1
DYA	Yadsworthy	150.39	351	*e*P		PKPbc	01 21	39.7 -1.0
TIP	Timpagrande	150.53	313	*e*PKPbc		PKPbc	01 21	40.6 -0.7
TIP				*e*PKPab		PKPab	01 21	46.9 -1.0
TIP				LR		LR		
	comp=Z,6µm,22.0s,MS6.4							
SNTG	Esanatoglia	150.55	324	P		PKPbc	01 21	40.7 -0.5
PIEI	Pieia	150.58	324	P		PKPdf	01 21	38.8 +2.9
CSA1	St Austell	150.60	353	*e*P		PKPbc	01 21	40.2 -0.9
SFI	Santa Sofia	150.70	326	PKIKP		PKPdf	01 21	38.5 +2.4
CUC	Castrocucco	150.74	316	*e*PKPbc		PKPbc	01 21	40.4 -1.5
CUC				LR		LR		
	comp=Z,8µm,20.0s,MS6.5							
BADI	Badiali	150.76	325	P		PKPdf	01 21	33.5 -2.7
VAI	Varese	150.76	332	PKIKP		PKPdf	01 21	36.8 +0.7
CSSN	Cassano Irpino	150.77	318	P		PKPbc	01 21	41.2 -0.7
ASCN	Ascension	150.78	172	*e*PKPbc		PKPbc	01 21	43.8 +1.1
ASCN				LR		LR		
	comp=Z,6µm,20.0s,MS6.4							
CDCA	Citt' di Caste	150.80	325	P		PKPbc	01 21	39.7 -2.1
CCA1	Carnmenellis	150.80	353	*e*P		PKPbc	01 21	39.0 -2.6
RNI2	Rionero Sannit	150.82	320	P		PKPbc	01 21	40.4 -1.5
CMA1	Manaccan	150.90	353	*e*P		PKPbc	01 21	41.0 -0.9
FNVD	Fontana Vidola	150.90	327	P		PKPdf	01 21	39.1 +2.7
GSCL	Gusciola	151.04	328	P		PKPbc	01 21	40.2 -2.2
PTQR	Pietraquaria	151.07	321	P		PKPdf	01 21	39.3 +2.6
FIAM	Fiamignano	151.08	322	P		PKPbc	01 21	40.0 -2.5
JLP	Les Platons	151.25	348	*e*P		PKPbc	01 21	40.5 -2.2
CABF	La Chapelle	151.27	336	*e*PKIKP		PKPdf	01 21	36.9 0.0
	comp=Z,242nm,0.7s							
VLC	Villacollemand	151.27	328	*e*PKPbc		PKPbc	01 21	42.1 -0.9
VLC				LR		LR		
	comp=Z,8µm,21.0s,MS6.5							
JVM	Valle D.L. Mar	151.29	348	*e*P		PKPbc	01 21	40.7 -2.1
ORO	Oropa	151.29	332	PKIKP		PKPdf	01 21	38.8 +1.9
FLN	La Foliniere	151.37	346	*e*PKIKP		PKPdf	01 21	36.7 -0.2
	comp=Z,350nm,0.7s							
FLN				*e*MLR		MLR		
	comp=Z,10µm,20.8s,MS6.3							
FLN	La Foliniere	151.37	346	*e*PKPdf		PKPdf	01 21	36.7 -0.2
FLN				LR		LR		
	comp=Z,10µm,20.8s,MS6.6							
LDF	La Druitiere	151.44	345	*e*PKIKP		PKPdf	01 21	36.5 -0.6
	comp=Z,253nm,0.7s							
LOR	Lormes	151.51	339	*e*PKIKP		PKPdf	01 21	36.9 -0.3
	comp=Z,261nm,0.8s							
LOR				*e*MLR		MLR		
	comp=Z,8µm,20.0s,MS6.2							
LOR	Lormes	151.51	339	*e*PKPdf		PKPdf	01 21	36.9 -0.3
LOR				LR		LR		
	comp=Z,8µm,20.0s,MS6.5							
PII	Pisa	151.52	327	PKIKP		PKPbc	01 21	41.9 -1.6
GRR	Gorron	151.81	346	*e*PKIKP		PKPdf	01 21	37.5 -0.1
	comp=Z,430nm,1.0s							
SSF	Saint Saulge	151.81	339	*e*PKIKP		PKPdf	01 21	37.6 -0.1
	comp=Z,497nm,1.2s							
HYF	Humbligny	151.91	341	*e*PKIKP		PKPdf	01 21	37.9 +0.1
LPL	La Plagne	151.91	334	*e*PKIKP		PKPdf	01 21	37.4 -0.5
	comp=Z,187nm,0.7s							
LPG	La Plagne	151.92	334	*e*PKIKP		PKPdf	01 21	38.2 +0.3
	comp=Z,216nm,0.7s							
SMF	Signal de Mont	152.06	338	*e*PKIKP		PKPdf	01 21	37.6 -0.5
	comp=Z,105nm,0.7s							
AVF	Avril sur Loir	152.10	339	*e*PKIKP		PKPdf	01 21	37.7 -0.4
	comp=Z,188nm,1.0s							
SGMF	Saint Gilles	152.28	348	*e*PKIKP		PKPdf	01 21	37.9 -0.4
	comp=Z,433nm,0.9s							
BNI	Bardonecchia	152.31	333	*e*PKIKP		PKPdf	01 21	38.5 0.0
BNI				*e*			01 21	45.4
BNI				MLR		MLR		
	comp=Z,7µm,20.0s,MS6.5							
ROSF	Rostrenen	152.33	349	*e*PKIKP		PKPdf	01 21	37.8 -0.6
	comp=Z,181nm,0.7s							
BGF	Bois d'Agland	152.47	340	*e*PKIKP		PKPdf	01 21	38.5 -0.2
	comp=Z,116nm,0.7s							
MBDF	Montbardon	152.53	333	*e*PKIKP		PKPdf	01 21	38.9 +0.1
	comp=Z,119nm,0.6s							
QUIF	Quistinic	152.72	349	*e*PKIKP		PKPdf	01 21	38.6 -0.4
	comp=Z,164nm,0.9s							
PLDF	La Plantade	152.72	338	PKP		PKPdf	01 21	40.8 +1.7
ORIF	Oris-en-Rattie	152.75	334	*e*PKIKP		PKPdf	01 21	38.8 -0.3
	comp=Z,185nm,0.7s							
ORIF				*e*MLR		MLR		
	comp=Z,7µm,22.8s,MS6.1							
SAOF	Saorge	152.76	331	PKP		PKPbc	01 21	46.2 -0.1
AUTN	L'Aution	152.81	331	PKP		PKPbc	01 21	43.8 -2.6
AGO	Saint Agoulin	152.82	339	PKP		PKPdf	01 21	39.5 +0.3
TOUF	Mont Tournerai	152.88	331	PKP		PKPbc	01 21	46.2 -0.4
SBF	Sospel	152.91	331	*e*PKIKP		PKPdf	01 21	38.9 -0.5
	comp=Z,374nm,1.1s							
TCF	Toulx Ste Croi	152.91	340	*e*PKIKP		PKPdf	01 21	39.1 -0.2
	comp=Z,286nm,1.3s							
LUCF	Luceram	152.93	331	PKP		PKPbc	01 21	46.0 -0.7
VAE	Valguarnera	152.97	312	PKPbc		PKPbc	01 21	49.1 +2.1
	comp=Z,12nm,0.8s,baz=242,slow=23,SNR=3.6							
VAE	Valguarnera	152.97	312	PKPbc		PKPbc	01 21	49.1 +2.1
SSB	Saint Sauveur	152.98	336	PKP		PKPdf	01 21	39.8 +0.3
SSB	Saint Sauveur	152.98	336	*e*PKPbc		PKPbc	01 21	46.7 -0.1
MVIF	Mont Vial	153.02	331	PKP		PKPbc	01 21	44.9 -2.0
PYM	Petit Puy Mans	153.13	339	PKP		PKPdf	01 21	40.9 +1.2
CORF	Corte	153.24	326	PKP		PKPbc	01 21	47.0 -0.4
VIVF	Saint-Julien-l	153.28	335	*e*PKIKP		PKPdf	01 21	39.8 -0.1
MFF	Saint Martin d	153.31	344	*e*PKIKP		PKPdf	01 21	39.6 -0.3
	comp=Z,400nm,1.3s							
LBL	Lubilhac	153.49	338	PKP		PKPdf	01 21	41.3 +1.1
FRF	La Foret Royal	153.51	331	*e*PKIKP		PKPdf	01 21	39.8 -0.5
SMRF	Simiane la Rot	153.64	333	*e*PKIKP		PKPdf	01 21	39.4 -1.1
	comp=Z,436nm,1.4s							
LMR	La Mourre	153.75	331	*e*PKIKP		PKPdf	01 21	39.9 -0.7
	comp=Z,232nm,1.2s							
RJF	Les Rejaudoux	154.01	340	*e*PKIKP		PKPdf	01 21	40.6 -0.3
	comp=Z,273nm,1.3s							
RJF				*e*MLR		MLR		
	comp=Z,11µm,21.0s,MS6.3							
RJF	Les Rejaudoux	154.01	340	*e*PKPdf		PKPdf	01 21	40.6 -0.3
RJF				LR		LR		
	comp=Z,11µm,21.0s,MS6.7							
CAF	Calviac	154.17	339	*e*PKIKP		PKPdf	01 21	41.3 +0.1
	comp=Z,253nm,1.3s							
LASF	Ste Croix	154.26	336	*e*PKIKP		PKPdf	01 21	41.2 -0.1
	comp=Z,197nm,1.1s							
LFF	La Frestale	154.58	341	*e*PKIKP		PKPdf	01 21	41.4 -0.4
	comp=Z,164nm,0.8s							
VSL	Villasalto	155.03	321	PFAKE			01 21	50.0 +7.4
VSL				LR		LR		
	comp=Z,7µm,20.0s,MS6.5							
MTLF	Montolieu	155.50	337	*e*PKIKP		PKPdf	01 21	42.9 -0.2
EPF	Esparros	156.42	340	*e*PKIKP		PKPdf	01 21	44.3 0.0
	comp=Z,310nm,1.7s							
REYF	Montagne du Re	156.62	341	PKP		PKPdf	01 21	46.1 +1.5
RESF	Ens	156.62	339	PKP		PKPdf	01 21	45.9 +1.3
EBIE	Bielsa	156.79	340	PKP		PKPdf	01 21	47.3 +2.5
SJPF	Ste Jean	156.82	342	*e*PKIKP		PKPdf	01 21	44.5 -0.3
	comp=Z,293nm,1.9s							
ETSF	Etsaut	156.82	341	*e*PKIKP		PKPdf	01 21	44.4 -0.4
	comp=Z,40nm,0.8s							
KEST	Kesra	157.35	314	PKP		PKPdf	01 21	45.9 +0.2
	comp=Z,2.5nm,1.0s,baz=296,slow=12,SNR=3.0							
ECRI	Cripan	157.64	344	PKIKP		PKPdf	01 21	49.9 +4.0
EPON	Pontenova	157.79	353	PKP		PKPdf	01 21	48.6 +2.6
ESAC	San Caprasio	157.86	340	PKP		PKPdf	01 21	48.7 +2.5
ERTA	Horta de San J	158.26	337	PKP		PKPdf	01 21	48.1 +1.4
EMAZ	Mazaricos	158.31	357	PKP		PKPdf	01 21	49.3 +2.7
STS	Santiago	158.35	356	PKIKP		PKPdf	01 21	45.1 -1.6
ERUA	La Rua	158.71	353	PKIKP		PKPdf	01 21	48.6 +1.4
PDA	Ponta Delgada	159.02	35	*e*PKP		PKPdf	01 21	50.0 +2.3
PDA	Ponta Delgada	159.02	35	*e*LR		LR	02 16	53.0
CMLA	Cha da Macela	159.08	35	*e*PKP		PKPdf	01 21	53.9 +6.1
CMLA	Cha da Macela	159.08	35	*e*SS		SS	01 46	16.1 +7.6
CMLA	Cha da Macela	159.08	35	*e*LQ			02 08	32.4
CMLA				*e*LR		LR	02 16	07.2
CMLA	Cha da Macela	159.08	35	PFAKE			01 22	00.0 +12
CMLA				LR		LR		
	comp=Z,12µm,19.0s,MS6.7							
EZAM	Zamans	159.09	356	PKIKP		PKPdf	01 21	52.3 +4.7
ECAL	Calabor	159.11	352	PKP		PKPdf	01 21	51.7 +4.1
ETOR	Torete	159.18	341	PKIKP		PKPdf	01 21	47.0 -0.8
PBRG	Braganca	159.24	352	*e*PKPab		PKPab	01 22	25.0 +0.2
ELOB	Lobios	159.32	355	PKP		PKPdf	01 21	51.6 +3.7
PCAB	Cabril	159.48	354	*e*PKPab		PKPab	01 22	25.6 -0.3
PVRL	Vila Real	159.88	354	*e*PKPab		PKPab	01 22	27.7 +0.1
GUD	Guadarrama	159.90	346	PKIKP		PKPdf	01 21	49.8 +1.2
MVO	Moncorvo	159.91	352	*e*PKPdf		PKPdf	01 21	49.1 +0.5
MVO	Moncorvo	159.91	352	*e*PKPab		PKPab	01 22	27.7 0.0
MVO	Moncorvo	159.91	352	*e*PP		PP	01 26	12.2 +3.7
ECHE	Chera	159.94	338	PKIKP		PKPdf	01 21	50.9 +2.2
PVIS	Viseu	160.45	354	*e*PKPdf		PKPdf	01 21	51.4 +2.2
PVIS	Viseu	160.45	354	*e*PKPab		PKPab	01 22	30.1 0.0
MTE	Manteigas	160.73	353	*e*PKPdf		PKPdf	01 21	49.7 +0.2
MTE	Manteigas	160.73	353	*e*PKPab		PKPab	01 22	31.4 +0.1
MTE	Manteigas	160.73	353	*e*PP		PP	01 26	18.5 +5.6
MTE	Manteigas	160.73	353	*e*PKPdf		PKPdf	01 21	49.6 +0.1
MTE				LR		LR		
	comp=Z,9µm,19.0s							
ESDC	Sonseca Array	160.77	344	PKP		PKPdf	01 21	50.8 +1.2
	comp=Z,1.6nm,0.8s,baz=357,slow=2.2,SNR=6.3							
ESDC				PKPab		PKPab	01 22	32.0 +0.4
	comp=Z,15nm,0.7s,baz=16,slow=3.6,SNR=20							
ESDC				PP		PP	01 26	20.1 +6.8
	comp=Z,3.2nm,0.9s,baz=19,slow=5.4,SNR=4.6							
ESLA	Sonseca Array	160.77	344	PFAKE			01 22	00.0 +10
ESLA				LR		LR		
	comp=Z,43µm,20.0s							
PAB	San Pablo	160.99	345	*e*PKIKP		PKPdf	01 21	49.9 +0.1
PAB				MLR		MLR		
	comp=Z,9µm,21.0s							
EVIA	Vianos	161.31	340	PKIKP		PKPdf	01 21	49.5 -0.7
PTOM	Tomar	161.59	355	*e*PKPdf		PKPdf	01 21	52.4 +1.9
PTOM	Tomar	161.59	355	*e*PKPab		PKPab	01 22	35.0 -0.1
PMRV	Marv??o	161.66	352	*e*PKPdf		PKPdf	01 21	53.0 +2.4
PMRV	Marv??o	161.66	352	*e*PKPab		PKPab	01 22	35.4 0.0
PMRV	Marv??o	161.66	352	*e*PP		PP	01 26	22.0 +4.0
EHUE	Huescar	162.09	339	PKIKP		PKPdf	01 21	51.8 +0.7
EBAN	Bancos Encina	162.14	342	PKIKP		PKPdf	01 21	52.6 +1.5
PESTR	Estremoz	162.24	352	*e*PKPdf		PKPdf	01 21	50.9 -0.3
PESTR	Estremoz	162.24	352	*e*PKPab		PKPab	01 22	37.6 -0.4
PESTR	Estremoz	162.24	352	*e*PP		PP	01 26	20.3 -0.8
EQES	Quesada	162.25	340	PKP		PKPdf	01 21	52.3 +1.1
EBAD	Badajoz	162.27	351	PKP		PKPdf	01 21	55.1 +3.9
PMAFR	Mafra	162.31	357	*e*PKPab		PKPab	01 22	39.8 +1.5
EADA	Adamuz	162.35	344	PKP		PKPdf	01 21	55.1 +3.8
LIS	Lisbon	162.54	356	*e*P		PKPdf	01 21	51.6 +0.2
EVO	Evora	162.62	353	*e*PKIKP		PKPdf	01 21	50.8 -0.8
	comp=Z,377nm,1.9s							
EVO				*e*MLR		MLR		
	comp=Z,15µm,20.0s							
EVO	Evora	162.62	353	*e*PKPdf		PKPdf	01 21	51.1 -0.5
EVO	Evora	162.62	353	*e*PKPab		PKPab	01 22	39.4 -0.3
EVO	Evora	162.62	353	*e*PP		PP	01 26	26.6 +3.5
ENIJ	Nijar	162.71	337	PKIKP		PKPdf	01 21	51.5 -0.2
PBAR	Barrancos	162.85	350	*e*PKPdf		PKPdf	01 21	51.0 -0.8
PBAR	Barrancos	162.85	350	*e*PKPab		PKPab	01 22	41.0 +0.3
PBAR	Barrancos	162.85	350	*e*PP		PP	01 26	28.7 +4.4
ECOG	Cogollos-Vega	162.89	341	PKIKP		PKPdf	01 21	51.0 -0.9
PBEJ	Beja	163.11	353	*e*PKPdf		PKPdf	01 21	53.6 +1.5
PBEJ	Beja	163.11	353	*e*PKPab		PKPab	01 22	41.0 -0.8
EMIN	Mina Concepcio	163.18	349	PKP		PKPdf	01 21	53.0 +0.8
ELOJ	Sierra Loja	163.19	342	PKIKP		PKPdf	01 21	55.0 +2.8
ERON	Agron	163.20	341	PKP		PKPdf	01 21	51.4 -0.8
EGUA	Guajares	163.30	340	PKIKP		PKPdf	01 21	51.8 -0.5
EGRO	El Granado	163.54	351	PKP		PKPdf	01 21	54.1 +1.6
PTEO	Sao Teotonio	163.67	355	*e*PKPab		PKPab	01 22	45.0 +0.7
PVAQ	Vaqueiros	163.70	352	*e*PKPdf		PKPdf	01 21	54.5 +1.9
PVAQ	Vaqueiros	163.70	352	*e*PKPab		PKPab	01 22	44.5 +0.1
PVAQ	Vaqueiros	163.70	352	*e*PP		PP	01 26	24.9 -3.9
PBDV	Barranco-do-Ve	163.89	352	*e*PKPdf		PKPdf	01 21	52.1 -0.7
PBDV	Barranco-do-Ve	163.89	352	*e*PKPab		PKPab	01 22	46.2 +1.0
ESPR	Espera	163.89	346	PKP		PKPdf	01 21	53.2 +0.4
MORF	Marmelete	163.90	354	*e*PKPdf		PKPdf	01 21	55.0 +2.2
MORF	Marmelete	163.90	354	*e*PKPab		PKPab	01 22	46.3 +1.0
MORF	Marmelete	163.90	354	*e*PP		PP	01 26	35.7 +5.9
PFVI	Vila Bisbo	164.09	355	*e*PKPdf		PKPdf	01 21	54.5 +1.5
PFVI	Vila Bisbo	164.09	355	*e*PKPab		PKPab	01 22	46.2 +0.1
LIC	Lamto	164.12	201	*e*PKIKP		PKPdf	01 21	53.9 +0.2
	comp=Z,290nm,1.7s							
LIC				*e*MLR		MLR		
	comp=Z,17µm,20.2s							
LIC	Lamto	164.12	201	*e*PKP1		PKPdf	01 21	54.2 +0.5
	comp=Z,216nm,1.7s							
LIC	Lamto	164.12	201	*e*PKPdf		PKPdf	01 21	53.9 +0.2
LIC				LR		LR		
	comp=Z,8µm,20.3s							
KIC	Kosan Boka	164.15	202	*e*PKP1		PKPdf	01 21	53.3 -0.5
	comp=Z,592nm,1.8s							
EJIF	Jimena Fronter	164.20	345	PKIKP		PKPdf	01 21	53.8 +0.7
SFS	San Fernando	164.35	347	PFAKE			01 22	00.0 +6.7
SFS				LR		LR		
	comp=Z,23µm,19.0s							
DBIC	Dimbokro	164.48	202	PKP		PKPdf	01 21	54.1 0.0
	comp=Z,10nm,0.9s,baz=354,slow=1.8,SNR=8.9							
DBIC				PKPab		PKPab	01 22	48.7 +0.2
	comp=Z,64nm,1.1s,baz=151,slow=5.4,SNR=8.5							
DBIC				PP		PP	01 26	40.1 +7.0
	comp=Z,7.8nm,0.9s,baz=101,slow=6.3,SNR=3.8							
DBIC	Dimbokro	164.48	202	PKIKP		PKPdf	01 21	54.1 0.0
DBIC							01 22	48.7
DBIC							01 26	40.1
DBIC				pmax		pmax		
	comp=Z,11nm,1.0s							
DBIC	Dimbokro	164.48	202	*e*PKPdf		PKPdf	01 21	53.8 -0.2
DBIC				LR		LR		
	comp=Z,14µm,20.0s							
TIC	Toumodi	164.51	201	*e*PKP1		PKPdf	01 21	53.7 -0.4
	comp=Z,875nm,2.0s							
TAM	Tamanrasset	164.96	279	*e*PKIKP		PKPdf	01 21	54.2 0.0
TAM				*e*			01 22	51.1
TOA0	Torodi Ar. Sit	165.76	238	*e*PKPdf		PKPdf	01 21	54.7 -0.4
TORD	Torodi Ar. Bea	165.76	238	PKP		PKPdf	01 21	54.0 -1.0
	comp=Z,8.5nm,0.9s,baz=16,slow=0.8,SNR=22							
TORD			

VNA2	**Neumayer--Watz**	**87.94**	**181**	*e*		**P**	**01 20 31.4**	**-0.5**
	baz=175,slow=4.3								
VNA2				*e*			01 20 36.4		
VNA2				*e*		pP	01 20 40.5	-1.6	
WDC	**Whiskeytown Da**	**88.18**	**45**	*e*P		**P**	**01 20 33.4**	**0.0**	
WDC					pmax	pmax			
	comp=Z,6.0nm,1.2s,mb4.7								
WDC	**Whiskeytown Da**	**88.18**	**45**	*e*P		**P**	**01 20 33.4**	**0.0**	
	comp=Z,5.7nm,1.2s,mb4.7								
VNA1	**Neumayer--Stat**	**88.23**	**181**	*e*		**P**	**01 20 41.7**	**+8.5**	
CMB	**Columbia Colle**	**88.39**	**48**	*e*P		**P**	**01 20 34.2**	**-0.2**	
CMB					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.8								
CMB	**Columbia Colle**	**88.39**	**48**	*e*P		**P**	**01 20 34.2**	**-0.2**	
	comp=Z,5.0nm,0.8s,mb4.8								
ISA	**Isabella**	**88.63**	**51**	*e*P		**P**	**01 20 35.0**	**-0.6**	
ISA					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.7								
ISA	**Isabella**	**88.63**	**51**	*e*P		**P**	**01 20 35.0**	**-0.6**	
	comp=Z,2.7nm,0.8s,mb4.6								
YBH	**Yreka Blue Hor**	**88.65**	**44**	P		**P**	**01 20 36.6**	**+1.0**	
	comp=Z,3.1nm,0.8s,mb4.7,baz=136,slow=4.4,SNR=4.4								
HUMO	**Hull Mountain**	**88.94**	**43**	*e*P		**P**	**01 20 35.2**	**-1.7**	
	comp=Z,9.1nm,1.0s,mb5.1								
BILL	**Bilibino**	**89.16**	**359**	*e*P		**P**	**01 20 37.0**	**-0.3**	
BILL					pmax	pmax			
	comp=Z,15nm,1.0s,mb5.3								
MTUM	**Tungsten Hills**	**89.34**	**49**	*e*P		**P**	**01 20 38.7**	**-0.2**	
PAHR	**Pah Rah Range**	**89.87**	**47**	*e*P		**P**	**01 20 41.1**	**-0.3**	
	comp=Z,5.3nm,0.8s,mb4.9								
NVAR	**Mina Array Bea**	**90.02**	**48**	P		**P**	**01 20 43.2**	**+1.1**	
	comp=Z,3.5nm,0.8s,mb4.8,baz=231,slow=8.5,SNR=5.9								
NVAR	**Mina Array Bea**	**90.02**	**48**	P		**P**	**01 20 43.2**	**+1.1**	
GLA	**Glamis**	**90.17**	**54**	*e*P		**P**	**01 20 43.7**	**+0.8**	
GLA					pmax	pmax			
	comp=Z,8.0nm,1.0s,mb5.0								
GLA	**Glamis**	**90.17**	**54**	*e*P		**P**	**01 20 43.7**	**+0.7**	
	comp=Z,8.5nm,1.0s,mb5.0								
TPH	**Tonopah**	**90.62**	**49**	*e*P		**P**	**01 20 45.2**	**+0.3**	
TPNV	**Topopah Spring**	**90.81**	**50**	*e*P		**P**	**01 20 45.7**	**-0.1**	
TPNV					pmax	pmax			
	comp=Z,7.0nm,1.0s,mb5.0								
TPNV	**Topopah Spring**	**90.81**	**50**	*e*P		**P**	**01 20 45.7**	**-0.1**	
	comp=Z,6.8nm,1.0s,mb4.9								
LDFC	**Landfair**	**90.83**	**53**	*e*P		**P**	**01 20 46.2**	**+0.3**	
	comp=Z,7.5nm,0.8s,mb5.1								
GNW	**Green Mountain**	**91.53**	**39**	*e*P		**P**	**01 20 48.9**	**+0.1**	
	comp=Z,6.1nm,0.9s,mb4.9								
WVOR	**Wild Horse Val**	**91.64**	**45**	*e*P		**P**	**01 20 49.8**	**+0.3**	
WVOR					pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.8								
WVOR	**Wild Horse Val**	**91.64**	**45**	*e*P		**P**	**01 20 49.8**	**+0.3**	
	comp=Z,6.2nm,1.1s,mb4.8								
HAWA	**Hanford**	**92.92**	**41**	*e*P		**P**	**01 20 55.1**	**-0.3**	
	comp=Z,7.0nm,1.1s,mb5.0								
TUC	**Tucson**	**92.97**	**57**	*e*P		**P**	**01 20 55.4**	**-0.5**	
TUC					pmax	pmax			
	comp=Z,1.0nm,0.6s,mb4.4								
TUC	**Tucson**	**92.97**	**57**	*e*P		**P**	**01 20 55.4**	**-0.6**	
	comp=Z,1.1nm,0.6s,mb4.5								
ARUT	**Antelope Range**	**93.19**	**51**	*e*P		**P**	**01 20 57.0**	**+0.2**	
DUG	**Dugway**	**94.62**	**49**	*e*P		**P**	**01 21 03.0**	**-0.3**	
DUG					pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.8								
DUG	**Dugway**	**94.62**	**49**	*e*P		**P**	**01 21 03.0**	**-0.3**	
	comp=Z,3.5nm,1.1s,mb4.7								
ARCES	**ARCESS Array B**	**127.16**	**345**	PKP		PKPdf	01 26 45.2	-0.7	
	comp=Z,4.5nm,1.0s,baz=8.1,slow=1.5,SNR=5.4								
PSZ	**Piszkesteto**	**143.97**	**325**	*e*PKIKP		PKPdf	01 27 16.1	-1.6	
CLL	**Colim**	**144.92**	**334**	*e*PKPdf		PKPdf	01 27 18.0	-1.2	
	comp=Z,15nm,1.2s								
SANT	**Santorini**	**145.35**	**304**	*e*PKPbc		PKPbc	01 27 19.0	-1.3	
EKA	**Eskdalemuir Ar**	**145.62**	**353**	PKPbc		PKPbc	01 27 19.4	-1.2	
	comp=Z,15nm,0.8s,baz=343,slow=2.8,SNR=12								
ESK	**Eskdalemuir**	**145.65**	**353**	*e*PKIKP		PKPdf	01 27 19.3	-1.1	
KHC	**Kasperske Hory**	**146.30**	**331**	*e*PKP		PKPdf	01 27 23.0	+1.3	
GEC2	**GERESS Array S**	**146.45**	**331**	*e*PKP2		PKPab	01 27 22.8	-1.4	
GERES	**GERESS Array B**	**146.45**	**331**	PKPbc		PKPbc	01 27 23.3	0.0	
	comp=Z,3.5nm,0.7s,baz=28,slow=2.7,SNR=7.8								
GRA1	**Grafenberg Arr**	**146.89**	**334**	*e*PKP		PKPdf	01 27 23.4	+0.8	
GRF	**Grafenberg Arr**	**146.89**	**334**	*e*PKP2		PKPdf	01 27 23.4	+0.8	
WLF	**Walferdange**	**148.81**	**339**	*e*PKP2		PKPbc	01 27 30.2	+0.5	
BFO	**Black Forest**	**149.13**	**335**	*e*PKP2		PKPbc	01 27 30.0	-0.6	
CDF	**Champ du Feu**	**149.47**	**336**	*e*PKP1		PKPbc	01 27 30.7	-0.7	
DAVOS	**Davos**	**149.70**	**332**	PKP2		PKPbc	01 27 31.9	-0.1	
DAVOX	**Davos/Dischmat**	**149.71**	**332**	PKPbc		PKPbc	01 27 31.9	-0.1	
	comp=Z,6.2nm,0.6s,baz=220,slow=3.6,SNR=5.0								
HINF	**Hinteralfeld**	**150.12**	**336**	*e*PKP1		PKPbc	01 27 32.2	-0.8	
HAU	**Haudompre**	**150.15**	**337**	*e*PKP1		PKPbc	01 27 32.5	-0.6	
MEZF	**Maizieres J'vi**	**150.18**	**339**	*e*PKP1		PKPbc	01 27 33.1	0.0	
TUE	**Stuetta**	**150.18**	**332**	*e*PKPbc		PKPbc	01 27 33.1	-0.1	
CABF	**La Chapelle**	**151.41**	**336**	*e*PKP1		PKPbc	01 27 35.9	-0.2	
	comp=Z,9.9nm,0.6s								
FLN	**La Foliniere**	**151.50**	**346**	*e*PKP1		PKPbc	01 27 35.3	-0.9	
	comp=Z,22nm,0.8s								
LDF	**La Druitiere**	**151.57**	**345**	*e*PKP1		PKPbc	01 27 35.4	-1.0	
LOR	**Lormes**	**151.65**	**339**	*e*PKP1		PKPbc	01 27 35.9	-0.7	
	comp=Z,13nm,0.8s								
GRR	**Gorron**	**151.94**	**346**	*e*PKP1		PKPbc	01 27 36.4	-0.8	
SSF	**Saint Saulge**	**151.95**	**339**	*e*PKP1		PKPbc	01 27 36.6	-0.7	
	comp=Z,21nm,1.1s								
LPL	**La Plagne**	**152.05**	**334**	*e*PKP1		PKPbc	01 27 37.5	-0.1	
	comp=Z,7.4nm,0.7s								
LPG	**La Plagne**	**152.06**	**334**	*e*PKP1		PKPbc	01 27 37.6	0.0	
MBDF	**Montbardon**	**152.67**	**333**	*e*PKP1		PKPbc	01 27 40.5	+1.5	
ORIF	**Oris-en-Rattie**	**152.89**	**334**	*e*PKP1		PKPbc	01 27 39.0	-0.5	
	comp=Z,14nm,0.8s								

IDC ***28*** *01:09:59.4±2.7, 5085N×15930E, h0km, mb4.3/6, mb1 4.3/7, mb1mx4.0/26, mbtmp4.2/7, MS3.0/1, Ms1 3.0/1, ms1mx2.3/52, Error ellipse: s-maj=56.2km s-min=43.9km az=101.0*

NEIC ***28*** *01:09:59.5±0.7, 5083N×15945E, h10km, mb4.7/6, Error ellipse: s-maj=14.0km s-min=12.7km az=218.0*

MOS ***28*** *01:10:00.5±1.2, 5107N×15967E, h14km, mb4.7/6, Error ellipse: s-maj=16.9km s-min=7.5km az=88.7*

KRSC ***28*** *01:10:03.8±0.7, 5130N×15962E, h11km±10km, ML4.6*

ISCJB ***28*** *01:10:04.4±0.9, 5112N±005×15965E±007, h49km±8km, mb4.5/11, Error ellipse: s-maj=10.1km s-min=5.8km az=140.7*

ISC 28 01:10:06.2±0.9, 5115N±005×15960E±008, h45km±8km, n43, σ1°§16/58, mb4.5/11, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.45**	**333**	*e*P			**Pn**	**01 10 28.4**	**-1.6**
RUS				*i* S			**Sn**	**01 10 46.1**	**-1.7**
PET	**Petropavlovsk**	**1.97**	**343**	*e*PN			**Pn**	**01 10 35.9**	**-1.1**
PET				*e*S			**Sn**	**01 10 59.2**	**-1.3**
PET					pmax	pmax			
	comp=Z,104nm,0.5s								
PET					smax				
	comp=N,2μm,0.5s								
PET	**Petropavlovsk**	**1.97**	**343**	*e*P			**Pn**	**01 10 35.2**	**-1.8**
PET				*i* S			**Sn**	**01 10 58.4**	**-2.1**
PET	**Petropavlovsk**	**1.97**	**343**	*e*Pn			**Pn**	**01 10 35.7**	**-1.3**
PET				*e*Sn			**Sn**	**01 11 02.8**	**+2.4**
SPN	**Mys Shipunski**	**1.97**	**8**	*e*P			**Pn**	**01 10 36.9**	**-0.2**
SPN				*i* S			**Sn**	**01 11 00.5**	**-0.1**
NLC	**Nalytchevo**	**2.03**	**356**	*e*P			**Pn**	**01 10 35.9**	**-2.0**
NLC				*i* S			**Sn**	**01 10 58.8**	**-3.3**
MIPR	**Malaya Ipel'ka**	**2.10**	**304**	*e*P			**Pn**	**01 10 39.0**	**+0.2**
MIPR				*i* S			**Sn**	**01 11 05.2**	**+1.6**
AVH	**Avacha**	**2.19**	**346**	P			**Pn**	**01 10 39.9**	**-0.1**
AVH				*i* S			**Sn**	**01 11 06.7**	**+0.9**
SKR	**Severo-Kuril's**	**2.25**	**259**	*e*PN			**Pn**	**01 10 40.7**	**-0.2**
SKR				*i* S			**Sn**	**01 11 07.2**	**-0.2**
SKR					pmax	pmax			
	comp=Z,80nm,0.5s								
SKR					smax				
	comp=N,380nm,0.3s								
PEA0B	**Petropavlovsk-**	**2.29**	**330**	*e*Pn			**Pn**	**01 10 40.7**	**-0.6**
PEA0B				*e*Pg			**Pn**	**01 10 46.8**	**+5.4**
PEA0B				*e*Sn			**Sn**	**01 11 09.3**	**+1.1**
PETK	**Petropavlovsk-**	**2.29**	**330**	Pn			**Pn**	**01 10 41.5**	**+0.1**
	comp=N,36nm,0.3s,baz=130,slow=16,SNR=95								
PETK				Sn			**Sn**	**01 11 12.5**	**+4.2**
	comp=N,25nm,0.3s,baz=134,slow=20,SNR=7.9								
PETK				LR			LR	01 12 01.3	
	comp=N,272nm,18.0s,baz=124,slow=49								
ALID	**Alaid**	**2.57**	**265**	*e*P			**Pn**	**01 10 45.7**	**+0.4**
ALID				*e*S			**Sn**	**01 11 16.5**	**+1.2**
GNL	**Ganaly**	**2.75**	**339**	*e*P			**Pn**	**01 10 47.8**	**+0.1**
GNL				*i* S			**Sn**	**01 11 19.9**	**+0.3**
KII	**Karymskiy**	**2.90**	**358**	P			**Pn**	**01 10 50.3**	**+0.6**
MKZ	**Mys Kozlova**	**3.65**	**20**	*e*P			**Pn**	**01 10 58.9**	**-1.2**
MKZ				*i* S			**Sn**	**01 11 38.3**	**-3.6**
KPT	**Kopyto**	**4.84**	**4**	P			**Pn**	**01 11 17.1**	**+0.7**
KOZ	**Kozyrevsk**	**4.92**	**2**	P			**Pn**	**01 11 19.2**	**+1.6**
KOZR	**Kozyr**	**4.93**	**2**	PN			**Pn**	**01 11 19.2**	**+1.5**
ZLN	**Zelenaya**	**4.93**	**8**	P			**Pn**	**01 11 18.6**	**+0.9**
KRSR	**Krestovskiy**	**5.11**	**6**	P			**Pn**	**01 11 21.0**	**+0.9**
SRDR	**Sredinnyy**	**5.18**	**1**	P			**Pn**	**01 11 21.0**	**-0.1**
KBTR	**Krutoberegovo**	**5.42**	**19**	*e*P			**Pn**	**01 11 24.5**	**+0.1**
HABR	**Khabarovsk**	**16.05**	**270**	*e*P			**Pn**	**01 13 46.4**	**-2.1**
CLNS	**Chul'man**	**21.02**	**299**	*e*P			**Pn**	**01 14 43.3**	**-2.4**
TIXI	**Tiksi**	**24.74**	**337**	*e*P			**P**	**01 15 22.6**	**-0.4**
	comp=N,48nm,0.7s,mb5.1								
PPLA	**Purkeypile**	**28.04**	**47**	*e*P			**P**	**01 15 47.4**	**-5.3**
	comp=N,18nm,1.2s,mb4.6								
MCK	**McKinley**	**29.52**	**45**	*e*P			**P**	**01 16 05.5**	**-0.4**
MCK					pmax	pmax			
	comp=Z,5.0nm,0.5s,mb4.5								
MCK	**McKinley**	**29.52**	**45**	*e*P			**P**	**01 16 05.5**	**-0.4**
	comp=Z,5.5nm,0.5s,mb4.5								
COLA	**College**	**30.02**	**43**	*e*P			**P**	**01 16 11.2**	**+0.9**
COLA					pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.5								
COLA	**College**	**30.02**	**43**	*e*P			**P**	**01 16 11.2**	**+0.9**
	comp=Z,10nm,0.9s,mb4.5								
KURK	**Kurchatov**	**48.52**	**303**	P			**P**	**01 18 44.2**	**-0.1**
	comp=Z,2.2nm,0.4s,mb4.6,baz=63,slow=7.8,SNR=5.6								
KURK	**Kurchatov**	**48.52**	**303**	P			**P**	**01 18 44.2**	**-0.1**
KURK					pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.5								
KURK	**Kurchatov**	**48.52**	**303**	*e*P			**P**	**01 18 43.1**	**-1.2**
	comp=Z,4.3nm,0.6s,mb4.7								
JCW	**Jim Creek**	**48.59**	**61**	*e*P			**P**	**01 18 45.3**	**+0.4**
MKAR	**Makanchi Array**	**48.74**	**297**	P			**P**	**01 18 45.8**	**-0.3**
	comp=Z,1.8nm,0.4s,mb4.4,baz=61,slow=7.5,SNR=15								
BVAR	**Borovoye Array**	**51.37**	**309**	P			**P**	**01 19 05.0**	**-0.9**
	comp=Z,1.5nm,0.4s,mb4.3,baz=56,slow=7.6,SNR=13								
ARCES	**ARCESS Array B**	**55.05**	**342**	P			**P**	**01 19 33.2**	**+0.6**
	comp=Z,4.0nm,0.9s,mb4.4,baz=41,slow=7.2,SNR=7.4								
UCH	**Uchtor**	**55.93**	**297**	*e*P			**P**	**01 19 37.2**	**-2.3**
	comp=Z,11nm,1.3s,mb4.7								
CMAR	**Chiang Mai Arr**	**57.49**	**259**	*i* P			**P**	**01 19 52.7**	**+2.0**
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
NB2	**NORSAR Subarra**	**65.33**	**344**	P			**P**	**01 20 44.1**	**+1.0**
	comp=Z,1.5nm,0.6s,mb4.2,baz=23,slow=6.5								
NOA	**NORSAR Array B**	**65.33**	**344**	P			**P**	**01 20 44.5**	**+1.4**
	comp=Z,1.1nm,0.6s,mb4.0,baz=22,slow=6.7,SNR=5.1								
HFS	**Hagfors**	**65.71**	**342**	P			**P**	**01 20 46.9**	**+1.3**
	comp=Z,1.3nm,0.4s,mb4.3,baz=48,slow=4.4,SNR=11								
WB2	**Warramunga Arr**	**74.18**	**205**	*e*P			**P**	**01 21 33.9**	**-4.0**

ISCJB ***28*** *01:13:25.1±0.3, 2127S±007×16944E±006, h10km, mb4.7/34, Error ellipse: s-maj=10.8km s-min=7.2km az=154.2*

LDG ***28*** *01:13:25.8±0.3, 2145S×16905E, h10km, Mb5.0/1, Error ellipse: s-maj=31.2km s-min=3.1km az=158.0*

IDC ***28*** *01:13:25.5±0.8, 2125S×16945E, h0km, mb4.4/11, mb1 4.6/13, mb1mx4.5/19, mbtmp4.5/13, ML2.7/1, Error ellipse: s-maj=30.9km s-min=17.9km az=158.0*

NEIC ***28*** *01:13:26.6±0.2, 2125S×16949E, h10km, mb4.7/23, Error ellipse: s-maj=9.9km s-min=6.1km az=156.0*

MOS ***28*** *01:13:29.0±1.3, 2125S×16948E, h33km, mb5.1/9, Error ellipse: s-maj=25.2km s-min=16.8km az=96.9*

ISC 28 01:13:26.7±0.3, 2127S±007×16947E±006, h10km, (h16km±4km: pP-P), n111, σ0°80/68, mb4.7/34, 2C-1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.17**	**160**	P			**Pn**	**01 17 40.2**	**+1.2**
	baz=1.7,slow=5.8,SNR=6.6								
ARMA	**Armidale**	**18.45**	**237**	*e*P			**Pn**	**01 17 42.5**	**0.0**
	0.4nm,1.1s								
AFI	**Afiamalu**	**19.30**	**71**	P			**Pn**	**01 17 54.0**	**+1.0**
	1.4nm,0.3s,baz=191,slow=6.8,SNR=6.2								
AFI	**Afiamalu**	**19.30**	**71**	P			**Pn**	**01 17 54.0**	**+1.0**
CTA	**Charters Tower**	**21.75**	**269**	*e*P			**P**	**01 18 21.6**	**+3.0**
	7.0nm,1.0s,mb4.0								
CTA	**Charters Tower**	**21.75**	**269**	P			**P**	**01 18 20.6**	**+2.0**
	5.8nm,0.8s,mb4.0,baz=127,slow=5.1,SNR=3.7								
CTA	**Charters Tower**	**21.75**	**269**	*e*P			**P**	**01 18 21.6**	**+3.0**
CTA					pmax	pmax			
	comp=Z,7.0nm,1.0s								
CTAO	**Charters Tower**	**21.75**	**269**	*e*P			**P**	**01 18 19.7**	**+1.1**
CTAO					pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.2								
CTAO	**Charters Tower**	**21.75**	**269**	*e*P			**P**	**01 18 19.7**	**+1.1**
	comp=Z,7.7nm,0.8s,mb4.2								
CAN	**Canberra**	**22.76**	**228**	*e*P			**P**	**01 18 30.5**	**+1.3**
PMG	**Port Moresby**	**24.50**	**295**	*e*P			**P**	**01 18 46.6**	**+0.3**
PMG					pmax	pmax			
	comp=Z,128nm,1.9s								
PMG	**Port Moresby**	**24.50**	**295**	*e*P			**P**	**01 18 46.6**	**+0.3**
	comp=Z,128nm,1.9s,mb5.1								
COEN	**Coen**	**26.07**	**282**	*e*P			**P**	**01 19 01.0**	**+0.4**
	comp=Z,4.8nm,0.9s,mb4.0								
STKA	**Stephens Creek**	**27.01**	**241**	*e*P			**P**	**01 19 09.2**	**+0.3**
	comp=Z,7.1nm,1.0s,mb4.2								
STKA	**Stephens Creek**	**27.01**	**241**	P			**P**	**01 19 09.2**	**+0.2**
	comp=Z,3.7nm,0.6s,mb4.1,baz=90,slow=14,SNR=4.0								
WB2	**Warramunga Arr**	**32.86**	**266**	*e*P			**P**	**01 20 00.9**	**0.0**
WRAB	**Tennant Creek**	**32.87**	**266**	*e*P			**P**	**01 20 01.1**	**+0.1**
WRAB					pmax	pmax			
	comp=Z,11nm,1.2s,mb4.7								
WRAB	**Tennant Creek**	**32.87**	**266**	*e*P			**P**	**01 20 01.1**	**+0.1**
	comp=Z,11nm,1.2s,mb4.7								
WRA	**Warramunga Arr**	**32.87**	**266**	P			**P**	**01 19 59.9**	**-1.2**
	comp=Z,1.5nm,0.8s,mb4.0,baz=96,slow=8.4,SNR=7.3								
ASAR	**Alice Springs**	**32.91**	**259**	P			**P**	**01 20 01.1**	**-0.1**
	comp=Z,2.8nm,0.8s,mb4.2,baz=81,slow=8.7,SNR=6.2								
FITZ	**Fitzroy Crossi**	**41.30**	**266**	*e*P			**P**	**01 21 12.2**	**-0.5**
	comp=Z,12nm,0.9s,mb4.5								
FITZ	**Fitzroy Crossi**	**41.30**	**266**	P			**P**	**01 21 12.8**	**+0.2**
	comp=Z,2.5nm,0.7s,mb4.0,baz=94,slow=10,SNR=4.1								
MBWA	**Marble Bar**	**46.21**	**261**	*e*P			**P**	**01 21 51.9**	**-0.3**
	comp=Z,20nm,1.1s,mb5.0								
SBA	**Scott Base**	**56.65**	**181**	*e*P			**P**	**01 23 10.0**	**+0.5**
SBA					pmax	pmax			
	comp=Z,13nm,1.3s,mb4.8								
SBA	**Scott Base**	**56.65**	**181**	*e*P			**P**	**01 23 10.0**	**+0.5**
	comp=Z,12nm,1.3s,mb4.8								
CASY	**Casey**	**58.36**	**204**	*e*P			**P**	**01 23 20.4**	**-1.4**
	comp=Z,8.6nm,1.2s,mb4.7								
MJAR	**Matsushiro Arr**	**64.64**	**332**	P			**P**	**01 24 04.0**	**-0.5**
	comp=Z,7.8nm,1.1s,mb4.7,baz=166,slow=7.0,SNR=7.6								
MAJO	**Matsushiro**	**64.64**	**332**	*e*P			**P**	**01 24 04.3**	**-0.3**
PETK	**Petropavlovsk-**	**74.77**	**353**	P			**P**	**01 25 07.8**	**+1.2**
	comp=Z,5.5nm,0.9s,mb4.5,baz=190,slow=4.5,SNR=4.9								
PETK	**Petropavlovsk-**	**74.77**	**353**	P			**P**	**01 25 07.8**	**+1.2**
NIKO	**Nikolski**	**76.29**	**13**	*e*P			**P**	**01 25 14.9**	**-0.4**
	comp=Z,94nm,0.6s,mb5.9								
CMAR	**Chiang Mai Arr**	**79.54**	**294**	P			**P**	**01 25 36.1**	**+1.9**
	comp=Z,3.5nm,0.8s,mb4.3,baz=130,slow=4.1,SNR=12								
CHTO	**Chiang Mai**	**79.70**	**295**	*e*P			**P**	**01 25 35.0**	**-0.1**
CHTO					pmax	pmax			
	comp=Z,14nm,1.3s,mb4.7								
CHTO	**Chiang Mai**	**79.70**	**295**	*e*P			**P**	**01 25 35.0**	**-0.1**
	comp=Z,14nm,1.3s,mb4.8								
KIPM	**Iron Peak**	**87.12**	**45**	*e*P			**P**	**01 26 12.8**	**-0.1**
SNAA	**Sanae**	**87.15**	**182**	*e*			**P**	**01 26 11.5**	**-1.1**
SNAA	**Sanae**	**87.15**	**182**	*e*			**P**	**01 26 11.5**	**-1.1**
SNAA					*e*		pP	01 26 16.0	+0.1
SNAA	**Sanae**	**87.15**	**182**	*e*P			**P**	**01 26 11.1**	**-1.5**
SNAA					pmax	pmax			
	comp=Z,137nm,2.5s								
SNAA	**Sanae**	**87.15**	**182**	*e*P			**P**	**01 26 11.1**	**-1.4**
	comp=Z,137nm,2.5s,mb5.7								
VNA3	**Neumayer Olymp**	**87.73**	**180**	*e*			**P**	**01 26 14.2**	**-1.2**
VNA3	**Neumayer Olymp**	**87.73**	**180**	*e*			**P**	**01 26 14.2**	**-1.2**
VNA3				*e*			pP	01 26 19.2	+0.5
VNA2	**Neumayer--Watz**	**88.03**	**181**	*e*			**P**	**01 26 15.9**	**-0.9**
	baz=183,slow=4.0								
VNA2	**Neumayer--Watz**	**88.03**	**181**	*e*			**P**	**01 26 15.9**	**-0.9**
	baz=170,slow=3.9								
VNA2				*e*			pP	01 26 20.7	+0.6
CMB	**Columbia Colle**	**88.34**	**48**	*e*P			**P**	**01 26 18.1**	**-0.6**
CMB					pmax	pmax			
	comp=Z,10.0nm,1.4s,mb4.8								
CMB	**Columbia Colle**	**88.34**	**48**	*e*P			**P**	**01 26 18.1**	**-0.7**
	comp=Z,10.0nm,1.4s,mb4.8								
YBH	**Yreka Blue Hor**	**88.60**	**44**	P			**P**	**01 26 19.9**	**+0.1**
	comp=Z,1.9nm,0.7s,mb4.5,baz=168,slow=4.7,SNR=4.6								
ULN	**Ulaanbaatar**	**88.62**	**323**	*e*P			**P**	**01 26 19.3**	**-0.5**
ULN					pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.7								
ULN	**Ulaanbaatar**	**88.62**	**323**	*e*P			**P**	**01 26 19.3**	**-0.4**
	comp=Z,1.9nm,0.5s,mb4.7								
HUMO	**Hull Mountain**	**88.88**	**43**	*e*P			**P**	**01 26 21.5**	**+0.4**
	comp=Z,3.8nm,0.8s,mb4.8								
SONM	**Songino Array**	**88.97**	**323**	P			**P**	**01 26 22.0**	**+0.6**
	comp=Z,1.8nm,0.8s,mb4.4,baz=106,slow=3.2,SNR=4.7								
BILL	**Bilibino**	**89.08**	**359**	*e*P			**P**	**01 26 21.5**	**0.0**
BILL					pmax	pmax			
	comp=Z,11nm,0.7s,mb5.3								
PFO	**Pinyon Flat Ob**	**89.14**	**53**	*e*P			**P**	**01 26 23.4**	**+0.8**
PFO					pmax	pmax			
	comp=Z,1.0nm,0.6s,mb4.3								
PFO	**Pinyon Flat Ob**	**89.14**	**53**	*e*P			**P**	**01 26 23.4**	**+0.7**
	comp=Z,1.4nm,0.6s,mb4.5								
MTUM	**Tungsten Hills**	**89.30**	**49**	*e*P			**P**	**01 26 23.8**	**+0.6**
GSC	**Goldstone**	**89.64**	**52**	*e*P			**P**	**01 26 24.6**	**-0.3**
PAHR	**Pah Rah Range**	**89.82**	**47**	*e*P			**P**	**01 26 26.1**	**+0.4**
	comp=Z,4.8nm,1.1s,mb4.7								
NVAR	**Mina Array Bea**	**89.98**	**48**	P			**P**	**01 26 27.0**	**+0.6**
	comp=Z,2.9nm,0.7s,mb4.7,baz=225,slow=7.5,SNR=11								
MOD	**Modoc**	**90.25**	**45**	*e*P			**P**	**01 26 26.4**	**-1.2**
	comp=Z,8.6nm,1.3s,mb4.9								
BMW	**Boistfort Moun**	**90.68**	**40**	*e*P			**P**	**01 26 29.5**	**0.0**
TPNV	**Topopah Spring**	**90.77**	**50**	*e*P			**P**	**01 26 30.1**	**0.0**
TPNV					pmax	pmax			
	comp=Z,8.0nm,1.2s,mb4.9								
TPNV	**Topopah Spring**	**90.77**	**50**	*e*P			**P**	**01 26 30.1**	**0.0**
	comp=Z,8.0nm,1.2s,mb4.9								
LDFC	**Landfair**	**90.79**	**53**	*e*P			**P**	**01 26 30.9**	**+0.6**
	comp=Z,6.7nm,0.8s,mb5.0								
WVOR	**

comp=Z,12nm,0.9s,mb4.8,baz=83,slow=8.7,SNR=7.0
FORT Forrest 38.15 247 *e*P **P 01 21 36.1 +0.3**
comp=Z,4.5nm,1.0s,mb4.2
FITZ Fitzroy Crossi 41.23 267 *e*P **P 01 21 59.7 -1.8**
comp=Z,34nm,0.9s,mb5.0
FITZ Fitzroy Crossi 41.23 267 P P **01 21 59.5 -2.0**
comp=Z,6.7nm,0.8s,mb4.3,baz=131,slow=10,SNR=3.5
MBWA Marble Bar 46.14 261 *e*P **P 01 22 41.1 +0.1**
comp=Z,47nm,1.2s,mb5.3
SBA Scott Base 56.63 181 *e*P **P 01 23 59.1 +0.4**
SBA pmax pmax
comp=Z,12nm,1.1s,mb4.8
SBA Scott Base 56.63 181 *e*P **P 01 23 59.1 +0.3**
comp=Z,12nm,1.1s,mb4.8
CASY Casey 58.32 204 *e*P **P 01 24 10.2 -0.6**
comp=Z,17nm,1.5s,mb4.8
MAJO Matsushiro 64.63 333 *e*P **P 01 24 53.1 -0.6**
QSPA South Pole Qui 68.78 180 P **P 01 25 20.3 +0.7**
comp=Z,14nm,1.0s,mb4.8,baz=7.2,slow=3.5,SNR=4.8
QSPA South Pole Qui 68.78 180 P **P 01 25 20.3 +0.7**
KSRS Korea Array 70.28 326 P **P 01 25 29.6 +0.2**
comp=Z,0.5nm,0.3s,mb3.9,baz=134,slow=7.3,SNR=4.2
PETK Petropavlovsk- 74.78 353 P **P 01 25 57.5 +1.7**
comp=Z,5.1nm,0.8s,mb4.5,baz=141,slow=5.7,SNR=4.1
NIKO Nikolski 76.33 13 *e*P **P 01 26 04.1 -0.6**
comp=Z,258nm,1.1s,mb6.1
MAW Mawson 76.60 202 *e*P **P 01 26 06.7 +0.4**
MAW pmax pmax
comp=Z,16nm,1.2s
MAW Mawson 76.60 202 *e*P **P 01 26 06.7 +0.4**
comp=Z,16nm,1.2s,mb4.8
CMAR Chiang Mai Arr 79.49 295 P **P 01 26 24.9 +1.8**
comp=Z,2.3nm,0.5s,mb4.4,baz=132,slow=4.9,SNR=7.5
CHTO Chiang Mai 79.64 295 *e*P **P 01 26 24.0 +0.1**
CHTO pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
CHTO Chiang Mai 79.64 295 *e*P **P 01 26 24.0 +0.1**
comp=Z,9.6nm,1.1s,mb4.6
KCPM Cahto Peak 87.05 45 *e*P **P 01 27 02.1 +0.5**
SAO San Andreas Ge 87.05 49 *e*P **P 01 27 01.1 -0.6**
SAO pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
SAO San Andreas Ge 87.05 49 *e*P **P 01 27 01.1 -0.6**
comp=Z,8.8nm,1.1s,mb4.9
SNAA Sanae 87.13 182 *e* **P 01 27 00.9 -0.7**
SNAA Sanae 87.13 182 *e* **P 01 27 00.9 -0.7**
SNAA *e* 01 27 05.3
SNAA *e* pP 01 27 09.7 -3.2
SNAA Sanae 87.13 182 *e*P **P 01 27 01.0 -0.6**
SNAA pmax pmax
comp=Z,14nm,1.1s
SNAA Sanae 87.13 182 *e*P **P 01 27 01.0 -0.6**
comp=Z,14nm,1.1s,mb5.1
VNA3 Neumayer Olymp 87.71 180 *e* **P 01 27 04.1 -0.3**
VNA3 Neumayer Olymp 87.71 180 *e* **P 01 27 04.1 -0.3**
VNA3 *e* 01 27 07.5
VNA3 *e* pP 01 27 12.3 -3.4
VNA2 Neumayer--Watz 88.01 181 *e* **P 01 27 05.8 0.0**
baz=183,slow=4.0
VNA2 Neumayer--Watz 88.01 181 *e* **P 01 27 05.8 0.0**
baz=170,slow=3.9
VNA2 *e* 01 27 09.5
VNA2 *e* pP 01 27 13.6 -3.5
WDC Whiskeytown Da 88.19 45 *e*P **P 01 27 07.1 0.0**
WDC pmax pmax
comp=Z,15nm,1.4s,mb5.0
WDC Whiskeytown Da 88.19 45 *e*P **P 01 27 07.1 +0.1**
comp=Z,15nm,1.4s,mb5.0
OHCM Honcut 88.28 46 *e*P **P 01 27 06.8 -0.8**
MWC Mount Wilson 88.29 52 *e*P **P 01 27 07.6 -0.1**
MWC pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
MWC Mount Wilson 88.29 52 *e*P **P 01 27 07.6 -0.1**
comp=Z,5.0nm,0.7s,mb4.8
VNA1 Neumayer--Stat 88.30 181 *e* **P 01 27 06.6 -0.6**
VNA1 Neumayer--Stat 88.30 181 *e* **P 01 27 06.6 -0.6**
VNA1 *e* 01 27 11.0
VNA1 *e* pP 01 27 15.5 -3.0
CMB Columbia Colle 88.40 48 *e*P **P 01 27 08.1 0.0**
CMB pmax pmax
comp=Z,7.0nm,1.2s,mb4.8
CMB Columbia Colle 88.40 48 *e*P **P 01 27 08.1 0.0**
comp=Z,6.7nm,1.2s,mb4.8
ULN Ulaanbaatar 88.59 323 *e*P **P 01 27 07.5 -1.3**
ULN pmax pmax
comp=Z,8.0nm,1.2s,mb4.9
ULN Ulaanbaatar 88.59 323 *e*P **P 01 27 07.5 -1.2**
comp=Z,8.2nm,1.2s,mb4.9
ISA Isabella 88.65 51 *e*P **P 01 27 09.6 +0.3**
ISA pmax pmax
comp=Z,8.0nm,1.3s,mb4.9
ISA Isabella 88.65 51 *e*P **P 01 27 09.6 +0.2**
comp=Z,7.9nm,1.3s,mb4.9
YBH Yreka Blue Hor 88.66 44 P P **01 27 09.7 +0.5**
comp=Z,3.5nm,0.8s,mb4.7,baz=144,slow=1.0,SNR=5.5
SONM Songino Array 88.94 323 P **P 01 27 10.8 +0.3**
comp=Z,2.7nm,0.9s,mb4.6,baz=140,slow=3.2,SNR=4.4
BILL Bilibino 89.09 359 *e*P **P 01 27 10.3 -0.4**
BILL pmax pmax
comp=Z,34nm,1.2s,mb5.5
MTUM Tungsten Hills 89.36 49 *e*P **P 01 27 13.2 +0.6**
GSC Goldstone 89.70 52 *e*P **P 01 27 13.9 -0.4**
GSC pmax pmax
comp=Z,16nm,1.5s,mb5.1
GSC Goldstone 89.70 52 *e*P **P 01 27 13.9 -0.4**
comp=Z,16nm,1.5s,mb5.1
PAHR Pah Rah Range 89.88 47 *e*P **P 01 27 15.4 +0.4**
comp=Z,15nm,1.1s,mb5.2
NVAR Mina Array Bea 90.04 48 P **P 01 27 16.4 +0.7**
comp=Z,5.6nm,0.7s,mb5.0,baz=226,slow=8.5,SNR=14
GLA Glamis 90.19 54 *e*P **P 01 27 17.0 +0.3**
GLA pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
GLA Glamis 90.19 54 *e*P **P 01 27 17.0 +0.4**
comp=Z,8.5nm,0.8s,mb5.1
MOD Modoc 90.31 45 *e*P **P 01 27 17.1 +0.1**
comp=Z,7.9nm,1.0s,mb5.0
TPH Tonopah 90.64 49 *e*P **P 01 27 19.2 +0.6**
TPH pmax pmax
comp=Z,11nm,1.1s,mb5.1
TPH Tonopah 90.64 49 *e*P **P 01 27 19.2 +0.6**
comp=Z,11nm,1.1s,mb5.1
BMW Boistfort Moun 90.74 40 *e*P **P 01 27 19.5 +0.7**
TPNV Topopah Spring 90.83 50 *e*P **P 01 27 19.5 0.0**
TPNV pmax pmax
comp=Z,11nm,1.0s,mb5.1
TPNV Topopah Spring 90.83 50 *e*P **P 01 27 19.4 -0.1**
comp=Z,11nm,1.0s,mb5.1
LDFC Landfair 90.85 53 *e*P **P 01 27 20.3 +0.7**
GNW Green Mountain 91.53 39 *e*P **P 01 27 22.7 +0.3**
comp=Z,4.0nm,0.9s,mb4.8
WVOR Wild Horse Val 91.65 45 *e*P **P 01 27 23.6 +0.4**
WVOR pmax pmax
comp=Z,11nm,1.2s,mb5.1
WVOR Wild Horse Val 91.65 45 *e*P **P 01 27 23.6 +0.4**
comp=Z,11nm,1.2s,mb5.1
ZAK Zakamensk 92.04 324 *e*P **P 01 27 18.8 -6.0**
RSW Rattlesnake Hi 92.89 41 *e*P **P 01 27 29.4 +0.6**
HAWA Hanford 92.93 41 *e*P **P 01 27 29.0 0.0**
comp=Z,7.0nm,1.1s,mb5.0
TUC Tucson 93.00 57 *e*P **P 01 27 29.4 -0.3**
TUC pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
TUC Tucson 93.00 57 *e*P **P 01 27 29.4 -0.3**
comp=Z,3.6nm,1.0s,mb4.8
ELK Elko 93.19 47 *e*P **P 01 27 30.5 +0.2**
ELK pmax pmax
comp=Z,2.0nm,0.8s
ELK Elko 93.19 47 *e*P **P 01 27 30.5 +0.1**
comp=Z,1.8nm,0.8s,mb4.5
BMO Blue Mountains 93.61 43 *e*P **P 01 27 32.2 0.0**
BMO pmax pmax
comp=Z,2.0nm,1.0s,mb4.5
BMO Blue Mountains 93.61 43 *e*P **P 01 27 32.2 0.0**
comp=Z,2.1nm,1.0s,mb4.5
WUAZ Wupatki 93.81 53 *e*P **P 01 27 33.1 -0.3**
comp=Z,9.6nm,1.1s,mb5.1
DAWY Dawson 93.86 20 *e*P **P 01 27 30.9 -2.0**
DUG Dugway 94.64 49 *e*P **P 01 27 35.9 -1.1**
DUG pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
DUG Dugway 94.64 49 *e*P **P 01 27 35.9 -1.2**
comp=Z,2.0nm,0.8s,mb4.6
HLID Hailey 94.93 45 *e*P **P 01 27 38.5 +0.2**
comp=Z,2.0nm,1.0s,mb4.5
ANMO Albuquerque 97.33 55 *e*P **P 01 27 48.9 -0.5**

NCB Newcomb 123.29 51 *e*PKPdf PKPdf 01 33 11.6 -1.3
PKME Peaks-Kenny Pk 126.71 49 *e*PKPdf PKPdf 01 33 18.3 -1.1
ARCES ARCESS Array B 127.08 345 PKP PKPdf 01 33 18.7 -0.7
comp=Z,3.8nm,0.8s,baz=51,slow=2.3,SNR=7.9
PSZ Piszkesteto 143.87 325 *e*PKIKP PKPdf 01 33 51.1 0.0
MORC Moravsky Berou 143.90 329 *e*PKIKP PKPdf 01 33 50.2 -0.9
VYHS Vyhne 144.08 326 *e*PKP PKPdf 01 33 50.5 -1.0
DPC Dobruska-Polom 144.08 330 *e*PKP PKPdf 01 33 50.0 -1.4
UPC Upice 144.12 331 *e*PKP PKPdf 01 33 49.8 -1.7
UPC *e*pPKP pPKPdf 01 33 57.6 -5.5
PVCC Panska Ves 144.75 332 *e*PKP PKPdf 01 33 51.9 -0.7
BRG Berggiesshubel 144.76 333 *i* P PKPdf 01 33 51.5 -1.0
comp=Z,27nm,1.2s
CLL Collm 144.83 334 ǁ *i*PKPdf PKPdf 01 33 50.3 -2.4
comp=Z,44nm,1.9s
CLL *i* pPKiKP 01 33 59.5
MODS Modra-Piesok 144.95 327 *e*PKP PKPdf 01 33 53.8 +0.8
PRU Pruhonice 145.15 331 *e*PKP PKPdf 01 33 52.8 -0.5
PRU *ex* x 01 34 00.6
SANT Santorini 145.25 304 *e*PKPbc PKPbc 01 33 52.9 -0.8
EKA Eskdalemuir Ar 145.55 352 PKPbc PKPbc 01 33 52.8 -1.2
comp=Z,19nm,0.9s,baz=354,slow=2.3,SNR=18
ESK Eskdalemuir 145.57 353 *e*PKP2 PKPbc 01 33 53.0 -1.0
KHC Kasperske Hory 146.20 331 *e*PKP PKPdf 01 33 56.5 +1.4
KHC *ex* x 01 34 04.3
GEC2 GERESS Array S 146.35 331 *e*PKP2 PKPab 01 33 56.4 -1.1
GERES GERESS Array B 146.35 331 PKPbc PKPbc 01 33 56.8 +0.2
comp=Z,3.9nm,0.7s,baz=33,slow=2.8,SNR=7.0
GRA1 Grafenberg Arr 146.80 334 *e*PKP PKPdf 01 33 57.1 +1.0
GRF Grafenberg Arr 146.80 334 *e*PKP2 PKPbc 01 33 57.1 -0.8
WLF Walferdange 148.72 339 *e*PKP2 PKPbc 01 34 02.7 -0.4
GIVF Givet 148.77 341 *e*PKP1 PKPbc 01 34 02.9 -0.3
comp=Z,35nm,0.9s
BAIF Baives 148.99 341 *e*PKP1 PKPbc 01 34 03.7 -0.1
comp=Z,28nm,1.0s
BFO Black Forest 149.04 335 *e*PKP2 PKPbc 01 34 03.4 -0.6
CDF Champ du Feu 149.38 336 *e*PKP1 PKPbc 01 34 04.3 -0.5
comp=Z,22nm,1.0s
ECH Echery 149.58 336 *e*PKP2 PKPbc 01 34 04.7 -0.6
DAVOS Davos 149.60 332 PKP2 PKPbc 01 34 05.9 +0.5
DAVOX Davos/Dischmat 149.61 332 PKPbc PKPbc 01 34 05.8 +0.4
comp=Z,3.3nm,0.3s,baz=20,slow=3.7,SNR=9.6
HINF Hinteralfeld 150.03 336 *e*PKP1 PKPbc 01 34 05.7 -0.7
comp=Z,49nm,1.4s
HAU Haudompre 150.06 337 *e*PKP1 PKPbc 01 34 06.0 -0.5
comp=Z,29nm,1.1s
MEZF Maizieres J'vi 150.09 339 *e*PKP1 PKPbc 01 34 06.6 +0.1
comp=Z,73nm,1.1s
TIP Timpagrande 150.56 313 *e*PKPdf PKPdf 01 34 03.0 +0.5
CABF La Chapelle 151.32 336 *e*PKP1 PKPbc 01 34 09.5 0.0
comp=Z,44nm,1.2s
FLN La Foliniere 151.42 346 *e*PKP1 PKPbc 01 34 08.9 -0.8
comp=Z,86nm,1.1s
LDF La Druitiere 151.49 345 *e*PKP1 PKPbc 01 34 08.9 -0.9
comp=Z,103nm,1.4s
LOR Lormes 151.56 339 *e*PKP1 PKPbc 01 34 09.6 -0.4
comp=Z,44nm,1.2s
GRR Gorron 151.85 346 *e*PKP1 PKPbc 01 34 10.2 -0.5
comp=Z,149nm,1.5s
SSF Saint Saulge 151.86 339 *e*PKP1 PKPbc 01 34 10.3 -0.4
comp=Z,23nm,1.0s
LPL La Plagne 151.96 334 *e*PKP1 PKPbc 01 34 11.0 0.0
comp=Z,30nm,1.1s
LPG La Plagne 151.97 333 *e*PKP1 PKPbc 01 34 11.1 +0.1
comp=Z,20nm,0.9s
SMF Signal de Mont 152.11 338 *e*PKP1 PKPbc 01 34 10.4 -0.9
comp=Z,35nm,1.2s
AVF Avril sur Loir 152.15 339 *e*PKP1 PKPbc 01 34 10.4 -1.0
comp=Z,35nm,1.1s
SGMF Saint Gilles 152.33 348 *e*PKP1 PKPbc 01 34 10.9 -0.8
comp=Z,63nm,1.1s
BNI Bardonecchia 152.35 333 *e*PKIKP PKPbc 01 34 11.8 -0.1
ROSF Rostrenen 152.38 349 *e*PKP1 PKPbc 01 34 11.0 -0.9
comp=Z,112nm,1.4s
BGF Bois d'Agland 152.52 340 *e*PKP1 PKPbc 01 34 11.7 -0.5
comp=Z,20nm,0.9s
MBDF Montbardon 152.58 332 *e*PKP1 PKPbc 01 34 11.8 -0.6
comp=Z,39nm,1.3s
ORIF Oris-en-Rattie 152.80 334 *e*PKP1 PKPbc 01 34 12.4 -0.5
comp=Z,18nm,0.9s
TCF Toulx Ste Croi 152.96 340 *e*PKP1 PKPbc 01 34 12.6 -0.6
comp=Z,24nm,1.1s
VIVF Saint-Julien-l 153.33 335 *e*PKP1 PKPbc 01 34 13.7 -0.4
MFF Saint Martin d 153.35 344 *e*PKP1 PKPbc 01 34 13.3 -0.8
comp=Z,27nm,1.2s
LASF Ste Croix 154.30 335 *e*PKP1 PKPbc 01 34 15.9 -0.3
LFF La Frestale 154.63 341 *e*PKP1 PKPbc 01 34 16.4 -0.5
MTLF Montolieu 155.55 337 *e*PKP1 PKPdf 01 34 18.4 +8.7
ESDC Sonseca Array 160.82 344 PKPab PKPab 01 34 58.4 0.0
comp=Z,1.8nm,0.9s,baz=15,slow=3.9,SNR=4.4
TAM Tamanrasset 164.98 279 *e*PKIKP PKPdf 01 34 20.7 0.0
TAM *e* 01 35 18.2

NEIC ***28*** *01:16:46.4±0.9, 21.13S×169.14E, h10km, mb4.4/6, Error ellipse: s-maj=34.2km s-min=16.5km az=164.0*
ISCJB ***28*** *01:16:47.1±1.0, 21.05S±02×169.3E±0.1, h33km, mb4.3/9, Error ellipse: s-maj=27.7km s-min=18.4km az=23.2*
IDC ***28*** *01:16:47.6±2.9, 2050S×16883E, h0km, mb4.2/5, mb1 4.4/5, mb1mx4.1/16, mbtmp4.2/5, Error ellipse: s-maj=168.3km s-min=27.2km az=160.0*
ISC 28 01:16:48.7±1.0,**211S**±02×**1693E**±01,**h35**km,
(h28km±1.8km**:pP-P),n20,**σ0°**89**/17,**mb4.3**/9,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.60**	**268**	P	**P**		**01 21 34.7**	**-1.0**
	5.4nm,0.7s,mb4.1,baz=125,slow=12,SNR=1.8							
CTA	**Charters Tower**	**21.60**	**268**	P	**P**		**01 21 34.7**	**-1.0**
CTAO	**Charters Tower**	**21.60**	**268**	*e*P	**P**		**01 21 34.7**	**-1.0**
	7.0nm,0.8s,mb4.1							
PMG	**Port Moresby**	**24.26**	**295**	*e*P	**P**		**01 22 01.0**	**-1.7**
	13nm,0.9s,mb4.3							
COEN	**Coen**	**25.88**	**282**	*e*P	**P**		**01 22 17.8**	**+0.4**
	4.8nm,1.0s,mb4.0							
WRA	**Warramunga Arr**	**32.73**	**266**	P	**P**		**01 23 18.6**	**+0.3**
	1.1nm,1.1s,mb3.7,baz=96,slow=8.3,SNR=4.8							
ASAR	**Alice Springs**	**32.79**	**259**	P	**P**		**01 23 19.5**	**+0.7**
	3.2nm,0.8s,mb4.3,baz=82,slow=9.4,SNR=5.7							
FITZ	**Fitzroy Crossi**	**41.15**	**266**	P	**P**		**01 24 31.6**	**+1.6**
	4.2nm,0.6s,mb4.2,baz=111,slow=7.2,SNR=5.6							
FITZ	**Fitzroy Crossi**	**41.15**	**266**	*e*P	**P**		**01 24 31.1**	**+1.1**
	9.0nm,0.7s,mb4.5							
MBWA	**Marble Bar**	**46.09**	**260**	*e*P	**P**		**01 25 09.9**	**+0.2**
	13nm,1.0s,mb4.8							
NIKO	**Nikolski**	**76.12**	**13**	*e*P	**P**		**01 28 33.1**	**+0.5**
	168nm,0.8s							
SNAA	**Sanae**	**87.36**	**182**	*e*PKPdf	**P**		**01 29 31.4**	**-0.3**
SNAA				*e*			01 29 35.8	
SNAA				*e*	pP		01 29 40.3	-2.5
SNAA	**Sanae**	**87.36**	**182**	*e*P	**P**		**01 29 31.0**	**-0.7**
	2.4nm,0.9s,mb4.4							
VNA3	**Neumayer Olymp**	**87.95**	**180**	*e*PKPdf	**P**		**01 29 33.5**	**-1.0**
VNA3				*e*			01 29 38.0	
VNA3				*e*	pP		01 29 43.0	-2.7
VNA2	**Neumayer--Watz**	**88.24**	**181**	*e*PKPdf	**P**		**01 29 36.6**	**+0.7**
	baz=182,slow=4.7							
VNA2				*e*			01 29 40.3	
VNA2				*e*	pP		01 29 44.6	-2.5
VNA1	**Neumayer--Stat**	**88.53**	**181**	*e*PKPdf	**P**		**01 29 46.3**	**+9.0**
NVAR	**Mina Array Bea**	**89.95**	**48**	P	**P**		**01 29 49.5**	**+5.1**
	1.1nm,0.7s,mb4.3,baz=224,slow=8.6,SNR=4.4							
EKA	**Eskdalemuir Ar**	**145.30**	**352**	PKP	PKPdf		01 36 23.8	+1.4
	1.3nm,0.5s,baz=1.0,slow=2.7,SNR=4.0							
GERES	**GERESS Array B**	**146.10**	**331**	PKPbc	PKPbc		01 36 27.2	+2.3
	1.0nm,0.7s,baz=5.7,slow=3.0,SNR=4.6							
DAVOX	**Davos/Dischmat**	**149.36**	**332**	PKPbc	PKPbc		01 36 36.1	+2.2
	1.5nm,0.4s,baz=190,slow=6.1,SNR=5.4							

IDC ***28*** *01:20:03.7±0.9, 2146S×169.44E, h0km, mb4.3/6, mb1 4.5/6, mb1mx4.2/16, mbtmp4.3/6, Error ellipse: s-maj=37.9km s-min=23.4km az=158.0*
NEIC ***28*** *01:20:05.2±0.3, 2136S×169.46E, h10km, mb4.6/17, Error ellipse: s-maj=14.6km s-min=6.9km az=160.0*
ISCJB ***28*** *01:20:07.2±0.4, 2145±0.1×169.34E±0.08, h33km, mb4.5/22, Error ellipse: s-maj=17.4km s-min=9.5km az=157.0*
MOS ***28*** *01:20:07.3±0.9, 2137S×169.38E, h33km, mb4.9/9, Error ellipse: s-maj=30.4km s-min=14.8km az=164.8*
ISC 28 01:20:09.1±0.4,**213S**±01×**16939E**±008,**h35**km,**n44,**
σ0°**78**/38,**mb4.5**/22,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.68**	**269**	P	**P**		**01 24 58.5**	**+1.5**
	12nm,0.8s,mb4.4,baz=92,slow=12,SNR=13							
CTAO	**Charters Tower**	**21.68**	**269**	*e*P	**P**		**01 24 57.7**	**+0.8**
	13nm,0.8s,mb4.4							
COEN	**Coen**	**26.02**	**282**	*e*P	**P**		**01 25 39.5**	**+0.4**
	3.6nm,0.8s,mb4.0							
STKA	**Stephens Creek**	**26.91**	**241**	P	**P**		**01 25 46.8**	**-0.1**
	4.2nm,0.7s,mb4.1,baz=61,slow=13,SNR=3.1							
WB2	**Warramunga Arr**	**32.78**	**266**	*e*P	**P**		**01 26 39.2**	**+0.1**
WRAB	**Tennant Creek**	**32.78**	**266**	*e*P	**P**		**01 26 38.5**	**-0.6**
	8.1nm,1.1s,mb4.6							
WRA	**Warramunga Arr**	**32.79**	**266**	P	**P**		**01 26 38.1**	**-1.1**
	1.2nm,0.6s,mb4.0,baz=97,slow=8.3,SNR=11							
ASAR	**Alice Springs**	**32.82**	**259**	P	**P**		**01 26 39.1**	**-0.3**
	4.4nm,0.7s,mb4.5,baz=83,slow=9.2,SNR=18							
MBWA	**Marble Bar**	**46.12**	**261**	*e*P	**P**		**01 28 30.0**	**-0.3**
	4.8nm,0.7s,mb4.5							
SBA	**Scott Base**	**56.57**	**181**	*e*P	**P**		**01 29 48.8**	**+1.1**
	1.5nm,0.7s,mb4.1							
CASY	**Casey**	**58.27**	**204**	*e*P	**P**		**01 29 59.1**	**-0.7**
	1.4nm,0.7s,mb4.1							
QSPA	**South Pole Qui**	**68.72**	**180**	P	**P**		**01 31 08.6**	**-0.1**
	2.1nm,0.8s,mb4.1,baz=168,slow=0.5,SNR=6.8							
CHTO	**Chiang Mai**	**79.66**	**295**	*e*P	**P**		**01 32 14.4**	**+1.0**
CHTO				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
CHTO	**Chiang Mai**	**79.66**	**295**	*e*P	**P**		**01 32 14.4**	**+1.0**
	comp=Z,3.3nm,0.7s,mb4.4							
SAO	**San Andreas Ge**	**87.09**	**49**	*e*P	**P**		**01 32 51.5**	**+0.2**
SAO				pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.7							
SAO	**San Andreas Ge**	**87.09**	**49**	*e*P	**P**		**01 32 51.5**	**+0.2**
	comp=Z,6.0nm,1.1s,mb4.7							
KCPM	**Cahto Peak**	**87.10**	**45**	*e*P	**P**		**01 32 52.2**	**+0.9**
KIPM	**Iron Peak**	**87.23**	**45**	*e*P	**P**		**01 32 53.1**	**+1.2**
VNA3	**Neumayer Olymp**	**87.66**	**180**	*e*	**P**		**01 32 53.3**	**-0.2**
VNA3				*e*	pP		01 33 01.5	-3.1
VNA2	**Neumayer--Watz**	**87.95**	**181**	*e*	**P**		**01 32 55.3**	**+0.4**
	baz=183,slow=4.9							
VNA2				*e*			01 33 02.5	
WDC	**Whiskeytown Da**	**88.24**	**45**	*e*P	**P**		**01 32 56.5**	**-0.2**
WDC				pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.7							
WDC	**Whiskeytown Da**	**88.24**	**45**	*e*P	**P**		**01 32 56.5**	**-0.2**
	comp=Z,5.1nm,1.1s,mb4.7							
MWC	**Mount Wilson**	**88.33**	**52**	*e*P	**P**		**01 32 57.4**	**+0.1**
MWC				pmax	pmax			
	comp=Z,9.0nm,1.0s,mb5.0							
MWC	**Mount Wilson**	**88.33**	**52**	*e*P	**P**		**01 32 57.4**	**+0.1**
	comp=Z,8.7nm,1.0s,mb4.9							
CMB	**Columbia Colle**	**88.45**	**48**	*e*P	**P**		**01 32 57.6**	**-0.1**
CMB				pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.3							
CMB	**Columbia Colle**	**88.45**	**48**	*e*P	**P**		**01 32 57.6**	**-0.1**
	comp=Z,1.8nm,0.9s,mb4.3							
ISA	**Isabella**	**88.69**	**51**	*e*P	**P**		**01 32 58.3**	**-0.6**
ISA				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.6							
ISA	**Isabella**	**88.69**	**51**	*e*P	**P**		**01 32 58.3**	**-0.6**
	comp=Z,2.6nm,0.9s,mb4.6							
HUMO	**Hull Mountain**	**88.99**	**43**	*e*P	**P**		**01 32 58.7**	**-1.5**
	comp=Z,4.4nm,0.9s,mb4.8							
PAHR	**Pah Rah Range**	**89.93**	**47**	*e*P	**P**		**01 33 01.2**	**-3.4**
	comp=Z,3.7nm,0.8s,mb4.8							
NVAR	**Mina Array Bea**	**90.08**	**48**	P	**P**		**01 33 06.6**	**+1.2**
	comp=Z,2.4nm,0.7s,mb4.7,baz=225,slow=8.7,SNR=10							
NVAR	**Mina Array Bea**	**90.08**	**48**	P	**P**		**01 33 06.6**	**+1.2**
TPNV	**Topopah Spring**	**90.87**	**50**	*e*P	**P**		**01 33 08.9**	**-0.2**
TPNV				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.8							
TPNV	**Topopah Spring**	**90.87**	**50**	*e*P	**P**		**01 33 08.9**	**-0.2**
	comp=Z,3.7nm,0.9s,mb4.7							
WVOR	**Wild Horse Val**	**91.70**	**45**	*e*P	**P**		**01 33 11.8**	**-1.0**
WVOR				pmax	pmax			
	comp=Z,8.0nm,1.4s,mb4.9							
WVOR	**Wild Horse Val**	**91.70**	**45**	*e*P	**P**		**01 33 11.8**	**-1.0**
	comp=Z,7.9nm,1.4s,mb4.8							
DUG	**Dugway**	**94.68**	**49**	*e*P	**P**		**01 33 26.7**	**+0.1**
DUG				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb4.4							
DUG	**Dugway**	**94.68**	**49**	*e*P	**P**		**01 33 26.7**	**+0.1**
	comp=Z,0.8nm,0.6s,mb4.3							
ARCES	**ARCESS Array B**	**127.13**	**345**	PKP	PKPdf		01 39 08.4	-0.4
	comp=Z,2.5nm,0.9s,baz=31,slow=0.9,SNR=5.4							
CLL	**Collm**	**144.87**	**334**	*e*(PKiKP)	PKiKP		01 39 47.0	+1.1
EKA	**Eskdalemuir Ar**	**145.60**	**352**	PKPbc	PKPbc		01 39 43.4	-0.2
	comp=Z,4.4nm,0.9s,baz=7.2,slow=2.7,SNR=6.3							
GERES	**GERESS Array B**	**146.40**	**331**	PKPbc	PKPbc		01 39 47.0	+0.9
	comp=Z,1.2nm,0.6s,baz=39,slow=3.2,SNR=7.9							
DAVOS	**Davos**	**149.65**	**332**	PKP2	PKPbc		01 39 55.0	+0.1
DAVOX	**Davos/Dischmat**	**149.66**	**332**	PKPbc	PKPbc		01 39 55.0	0.0
	comp=Z,1.7nm,0.3s,baz=248,slow=1.4,SNR=8.9							

CSEM ***28*** *01:21:18.7±0.1, 4036N×3446E, h12km, MD2.6, Error ellipse: s-maj=6.4km s-min=2.1km az=51.0*
ISK ***28*** *01:21:18.9, 4037N×3448E, h18km, MD2.6*
ISCJB ***28*** *01:21:19.5±0.6, 4038N±004×3449E±006, h13km±6km, Error ellipse: s-maj=8.2km s-min=5.2km az=150.2*
DDA ***28*** *01:21:19.1, 4037N×3448E, h7km±6km, Md3.1*
ISC 28 01:21:19.8±0.6,**4038N**±003×**3449E**±006,**h15**km±6km,**n9,**
σ0°**58**/15,**1C-1D,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CORM	**Corum**	**0.23**	**152**	*e*PG	**Pg**		**01 21 24.2**	**-0.7**
CORM				*e*SG	**Sg**		**01 21 28.9**	**+0.6**
CTKT	**Corum**	**0.33**	**43**	⇑ *i*P	**Pg**		**01 21 26.3**	**-0.3**
CTKT				*i* S	**Sg**		**01 21 31.9**	**+0.6**
CANT	**Cankiri**	**0.70**	**289**	*e*PG	**Pg**		**01 21 32.8**	**-0.7**
CANT				*e*SG	**Sg**		**01 21 43.4**	**+0.6**
TOS	**Tosya**	**0.75**	**332**	*e*PG	**Pg**		**01 21 34.0**	**-0.3**
CDAG	**Cicekdag**	**0.76**	**187**	ǁ *i*P	**Pg**		**01 21 33.7**	**-0.9**
CDAG				*i* S	**Sg**		**01 21 45.4**	**+0.8**
ILGA	**Ilgaz**	**0.89**	**319**	*e*P	**Pb**		**01 21 36.6**	**-0.3**
YOZ	**Yozgat**	**0.97**	**139**	*e*PG	**Pg**		**01 21 38.3**	**-0.3**
BALT	**Daday**	**1.43**	**324**	*e*P	**Pn**		**01 21 45.9**	**+0.9**
BALT				*e*S	**Sn**		**01 22 09.8**	**+6.3**
AVNT	**Avonos**	**1.62**	**170**	*e*P	**Pn**		**01 21 47.6**	**-0.2**
AVNT				*e*S	**Sn**	

0.8nm,0.6s,mb3.4
ASAR Alice Springs 32.77 260 P **P** **01 29 51.0 -0.2**
2.3nm,0.9s,mb4.1,baz=90,slow=8.8,SNR=5.4
WRA Warramunga Arr 32.77 266 P **P** **01 29 50.5 -0.7**
0.2nm,0.3s,mb3.5,baz=100,slow=7.8,SNR=6.3
FITZ Fitzroy Crossi 41.20 267 P **P** **01 31 03.0 +0.1**
3.2nm,0.7s,mb4.1,baz=109,slow=6.2,SNR=4.8
FITZ Fitzroy Crossi 41.20 267 *eP* **P** **01 31 03.1 +0.2**
4.6nm,0.6s,mb4.3
SNAA Sanae 86.83 182 *e* **P** **01 36 02.1 +0.4**
SNAA *e* 01 36 08.5
SNAA Sanae 86.83 182 *eP* **P** **01 36 01.0 -0.7**
2.1nm,1.0s,mb4.3
VNA3 Neumayer Olymp 87.41 180 *e* **P** **01 36 04.4 -0.1**
VNA3 *e* 01 36 10.3
VNA2 Neumayer--Watz 87.71 181 *e* **P** **01 36 06.3 +0.4**
VNA2 *e* 01 36 11.8
ARCES ARCESS Array B 127.36 345 PKP PKPdf 01 42 20.0 -1.5
4.4nm,1.0s,baz=70,slow=3.0,SNR=3.5
ARCES ARCESS Array B 127.36 345 PKP PKPdf 01 42 20.0 -1.5
EKA Eskdalemuir Ar 145.85 352 PKPbc PKPbc 01 42 54.8 -1.7
1.7nm,0.7s,baz=345,slow=1.9,SNR=4.2
GERES GERESS Array B 146.61 330 PKPbc PKPbc 01 42 58.5 -0.4
1.0nm,0.6s,baz=35,slow=3.0,SNR=7.0
DAVOX Davos/Dischmat 149.87 331 PKPbc PKPbc 01 43 07.3 -0.3
1.2nm,0.3s,baz=280,slow=4.1,SNR=5.8

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*BJI **28** 01:25:12.5,21.10S×169.30E,h10km,mB5.9,mb5.1,Ms6.2, Msz5.8*
*IDC **28** 01:25:14.0±0.5,21.13S×169.33E,h0km,mb4.7/19, mb1 4.9/21,mb1mx4.9/22,mbtmp4.7/21,ML3.6/2,Error ellipse: s-maj=16.5km s-min=14.6km az=120.0*
*ISCJB **28** 01:25:14.8±0.2,21.16S±.005×169.33E±.004,h12km, mb5.1/71,MS5.9/9, Error ellipse: s-maj=7.0km s-min=4.2km az=153.6*
*NEIC **28** 01:25:15.5±0.1,21.07S×169.32E,h10km,mb5.4/38,Error ellipse: s-maj=8.3km s-min=5.0km az=148.0*
*BGS **28** 01:25:15.5±3.7,21.07S×169.32E,h10km,mb5.4(NEIC)*
*LDG **28** 01:25:16.5±0.1,20.58S×169.06E,h10km,Mb5.5/3,Error ellipse: s-maj=28.7km s-min=11.1km az=29.0*
*DJA **28** 01:25:19,21.67S×169.35E,h10km,mb5.2/13*
*MOS **28** 01:25:19.4±3.0,20.68S×169.37E,h33km,mb5.6/26,Error ellipse: s-maj=12.8km s-min=10.0km az=10.6*
ISC 28 01:25:16.3±0.2,21.17S±.005×169.36E±.004,h13km, h13km±1.4km:pP-P,n471,σ0=.80/256,mb5.1/71,MS5.9/9, 69C-60D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.86**	**251**	*eP*	**Pn**	**01 26 00.4**	**-1.2**
HNR	**Honiara**	**14.78**	**321**	*eP*	**Pn**	**01 28 46.7**	**+1.6**
HNR				pmax	pmax		
	comp=Z,363nm,1.1s						
HNR	**Honiara**	**14.78**	**321**	*e*Pn	**Pn**	**01 28 46.7**	**+1.5**
	comp=Z,363nm,1.1s						
URZ	**Urewera**	**18.30**	**160**	P	**Pn**	**01 29 31.6**	**+1.8**
	comp=Z,1.4nm,0.3s,baz=340,slow=7.8,SNR=17						
ARMA	**Armidale**	**18.41**	**236**	*eP*	**Pn**	**01 29 32.6**	**+1.3**
AFI	**Afiamalu**	**19.37**	**71**	P	**Pn**	**01 29 43.1**	**0.0**
	comp=Z,1.7nm,0.3s,baz=286,slow=9.8,SNR=12						
CTA	**Charters Tower**	**21.65**	**269**	*eP*	**P**	**01 30 07.5**	**+0.9**
CTA	**Charters Tower**	**21.65**	**269**	P	**P**	**01 30 07.8**	**+1.1**
	comp=Z,38nm,0.8s,mb4.8,baz=89,slow=11,SNR=37						
CTAO	**Charters Tower**	**21.65**	**269**	*eP*	**P**	**01 30 08.1**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,402nm,1.8s,mb5.5						
CTAO	**Charters Tower**	**21.65**	**269**	*eP*	**P**	**01 30 08.1**	**+1.4**
	comp=Z,402nm,1.8s,mb5.5						
CNB	**Canberra Magne**	**22.50**	**227**	*eP*	**P**	**01 30 17.4**	**+1.8**
RPZ	**Rata Peaks**	**22.52**	**177**	P	**P**	**01 30 17.2**	**+1.4**
	comp=Z,12nm,0.8s,mb4.4,baz=304,slow=1.4,SNR=3.6						
CAN	**Canberra**	**22.75**	**227**	*eP*	**P**	**01 30 20.0**	**+1.8**
PMG	**Port Moresby**	**24.36**	**295**	*eP*	**P**	**01 30 35.8**	**+1.6**
PMG	**Port Moresby**	**24.36**	**295**	*eP*	**P**	**01 30 38.5**	**+4.3**
PMG	**Port Moresby**	**24.36**	**295**	*eP*	**P**	**01 30 37.9**	**+3.7**
	comp=Z,43nm,0.8s,mb4.9						
COEN	**Coen**	**25.95**	**282**	*eP*	**P**	**01 30 49.3**	**+0.7**
	comp=Z,9.3nm,0.9s,mb4.3						
TOO	**Toolangi**	**26.34**	**226**	*eP*	**P**	**01 30 52.6**	**+0.6**
STKA	**Stephens Creek**	**26.96**	**241**	*eP*	**P**	**01 30 58.1**	**+0.4**
	comp=Z,37nm,1.5s,mb4.7						
STKA	**Stephens Creek**	**26.96**	**241**	P	**P**	**01 30 58.8**	**+1.1**
	comp=Z,19nm,0.8s,mb4.7,baz=63,slow=11,SNR=19						
MOO	**Moorlands**	**28.21**	**216**	*eP*	**P**	**01 31 10.0**	**+1.3**
WB2	**Warramunga Arr**	**32.77**	**266**	*eP*	**P**	**01 31 46.8**	**-2.4**
WRAB	**Tennant Creek**	**32.77**	**266**	*eP*	**P**	**01 31 47.3**	**-2.0**
WRAB	**Tennant Creek**	**32.77**	**266**	*eP*	**P**	**01 31 47.7**	**-1.5**
	comp=Z,31nm,1.2s,mb5.1						
WRA	**Warramunga Arr**	**32.78**	**266**	P	**P**	**01 31 47.0**	**-2.3**
	comp=Z,11nm,1.0s,mb4.8,baz=95,slow=9.0,SNR=27						
WRA				S	**S**	**01 37 05.2**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=96,slow=14,SNR=3.1						
ASAR	**Alice Springs**	**32.82**	**259**	P	**P**	**01 31 48.6**	**-1.1**
	comp=Z,18nm,0.9s,mb5.0,baz=84,slow=8.9,SNR=32						
ASAR				S	**S**	**01 37 05.8**	**-0.9**
	comp=Z,2.1nm,1.0s,baz=82,slow=19,SNR=5.4						
FORT	**Forrest**	**38.16**	**247**	*eP*	**P**	**01 32 35.1**	**-0.5**
	comp=Z,4.3nm,0.7s,mb4.3						
FITZ	**Fitzroy Crossi**	**41.20**	**266**	*eP*	**P**	**01 32 59.4**	**-1.6**
	comp=Z,51nm,0.8s,mb5.2						
FITZ	**Fitzroy Crossi**	**41.20**	**266**	P	**P**	**01 32 59.6**	**-1.4**
	comp=Z,19nm,0.9s,mb4.7,baz=112,slow=9.9,SNR=3.6						
MBWA	**Marble Bar**	**46.12**	**261**	*eP*	**P**	**01 33 40.4**	**-0.3**
	comp=Z,56nm,1.0s,mb5.5						
KLBR	**Kellerberrin**	**47.01**	**246**	*eP*	**P**	**01 33 46.4**	**-1.1**
	comp=Z,31nm,0.7s,mb5.3						
NWAO	**Narrogin (SRO)**	**47.46**	**244**	P	**P**	**01 33 50.2**	**-0.8**
	comp=Z,15nm,0.7s,mb5.0,baz=100,slow=6.3						
MUN	**Mundaring**	**48.33**	**246**	*eP*	**P**	**01 33 59.2**	**+1.5**
SBA	**Scott Base**	**56.74**	**181**	*eP*	**P**	**01 35 00.4**	**+1.0**
SBA				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.4						
SBA	**Scott Base**	**56.74**	**181**	*eP*	**P**	**01 35 00.4**	**+1.1**
	comp=Z,36nm,0.9s,mb5.4						
CASY	**Casey**	**58.41**	**204**	*eP*	**P**	**01 35 08.2**	**-3.1**
MJAR	**Matsushiro Arr**	**64.51**	**333**	P	**P**	**01 35 51.3**	**-1.5**
	comp=Z,8.8nm,1.0s,mb4.8,baz=172,slow=6.8,SNR=9.4						
MAJO	**Matsushiro**	**64.51**	**333**	*eP*	**P**	**01 35 53.1**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
MAJO	**Matsushiro**	**64.51**	**333**	*eP*	**P**	**01 35 53.1**	**+0.3**
	comp=Z,11nm,0.7s,mb5.0						
MAT	**Matsushiro**	**64.51**	**333**	P	**P**	**01 35 52.5**	**-0.3**
MAT				*e*S	**S**	**01 44 36.3**	**+4.6**
QSPA	**South Pole Qui**	**68.89**	**180**	P	**P**	**01 36 20.0**	**-0.3**
	comp=Z,15nm,1.1s,mb4.8,baz=21,slow=2.4,SNR=17						
ASAJ	**Asahikawa**	**69.44**	**340**	P	**P**	**01 36 24.9**	**+0.8**
	comp=Z,44nm,1.0s,mb5.3,baz=187,slow=13,SNR=7.7						
KSRS	**Korea Array**	**70.16**	**326**	P	**P**	**01 36 28.9**	**+0.2**
	comp=Z,1.4nm,0.4s,mb4.2,baz=159,slow=7.5,SNR=4.6						
NJ2	**Nanjing**	**71.67**	**316**	*eP*	**P**	**01 36 33.3**	**-4.7**
NJ2				AP	pP	01 36 37.5	-4.8
NJ2				PP	PP	01 39 16.0	-1.4
NJ2				S	S	01 45 52.0	-5.5
NJ2				XS	sS	01 46 01.0	-3.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,1μm,7.0s						
NJ2				LR	LR		
	comp=N,2μm,16.4s,MS5.6						
NJ2				LR	LR		
	comp=E,2μm,16.2s,MS5.6						
NJ2				LR	LR		
	comp=Z,1μm,14.9s,MS5.3						
YSS	**Yuzh-Sakhalins**	**71.94**	**341**	*eP*	**P**	**01 36 39.0**	**-0.2**
YSS				pmax	pmax		
	comp=Z,90nm,1.1s,mb5.6						
YSS	**Yuzh-Sakhalins**	**71.94**	**341⇑**	*eP*	**P**	**01 36 39.5**	**+0.3**
WHN	**Wuhan**	**73.73**	**313**	P	**P**	**01 36 50.0**	**-0.2**
PETK	**Petropavlovsk-**	**74.66**	**353**	P	**P**	**01 36 54.9**	**-0.2**
	comp=Z,8.6nm,0.9s,mb4.7,baz=131,slow=8.1,SNR=5.9						
PETK	**Petropavlovsk-**	**74.66**	**353**	P	**P**	**01 36 54.9**	**-0.2**
MDJ	**Mudanjiang**	**74.87**	**332**	P	**P**	**01 36 57.0**	**+0.5**
MDJ				AP	pP	01 37 00.3	-0.6
MDJ				XP	sP	01 37 01.5	-1.0
MDJ				AMB	AMB		
	comp=Z,25nm,1.3s,mb5.0						
HABR	**Khabarovsk**	**75.82**	**337⇓**	*eP*	**P**	**01 37 00.1**	**-1.8**
HABR				*e*		01 37 09.6	
HABR				*e*		01 37 11.3	
HABR				*e*		01 37 13.4	
HABR				*e*		01 39 50.5	
CN2	**Changchun**	**76.16**	**329**	*eP*	**P**	**01 37 04.5**	**+0.5**
CN2				AMB	AMB		
	comp=Z,50nm,1.3s,mb5.3						
NIKO	**Nikolski**	**76.22**	**13**	*eP*	**P**	**01 37 04.7**	**+0.7**
	comp=Z,301nm,1.3s,mb6.1						
MAW	**Mawson**	**76.69**	**202**	*eP*	**P**	**01 37 06.7**	**0.0**
	comp=Z,7.3nm,0.9s,mb4.6						
MAW	**Mawson**	**76.69**	**202**	P	**P**	**01 37 06.9**	**+0.2**
	comp=Z,6.2nm,1.0s,mb4.5,baz=142,slow=5.8,SNR=7.2						
MAW	**Mawson**	**76.69**	**202**	*eP*	**P**	**01 37 06.7**	**0.0**
MAW				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GYA	**Guiyang**	**77.02**	**305⇓**	*iP*	**P**	**01 37 10.0**	**+0.8**
GYA				PP	PP	01 40 04.3	+1.4
GYA				S	S	01 46 57.0	-0.7
GYA				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.4						
GYA				AMB	AMB		
	comp=Z,260nm,5.1s						
GYA				LR	LR		
	comp=N,8μm,18.1s,MS6.1						
GYA				LR	LR		
	comp=E,5μm,18.7s,MS6.1						
GYA				LR	LR		
	comp=Z,5μm,19.1s,MS5.8						
BJI	**Beijing**	**78.50**	**321**	P	**P**	**01 37 17.5**	**+0.3**
BJI				AMB	AMB		
	comp=Z,18nm,1.9s,mb4.7						
BJI				AMB	AMB		
	comp=Z,1μm,7.8s						
BJI	**Beijing**	**78.50**	**321**	P	**P**	**01 37 17.6**	**+0.4**
BJI				pmax	pmax		
	comp=Z,18nm,1.9s,mb4.7						
BJI	**Beijing**	**78.50**	**321**	P	**P**	**01 37 17.6**	**+0.4**
	comp=Z,18nm,1.9s,mb4.7						
CHRT	**Chiangrai**	**79.33**	**296**	P	**P**	**01 37 23.0**	**+0.8**
	comp=Z,158nm,1.0s,mb5.9						
KMI	**Kunming**	**79.39**	**302**	P	**P**	**01 37 24.8**	**+2.4**
KMI				AP	pP	01 37 28.0	+1.2
KMI				XP	sP	01 37 29.8	+1.4
KMI				PCP	PcP	01 37 32.0	+1.5
KMI				S	S	01 47 25.5	+2.2
KMI				XS	sS	01 47 31.5	+1.0
KMI				SCS	ScS	01 47 44.5	-1.1
KMI				AMB	AMB		
	comp=Z,36nm,1.6s,mb5.0						
KMI				AMB	AMB		
	comp=Z,1μm,8.4s						
KMI				LR	LR		
	comp=N,5μm,23.8s,MS5.9						
KMI				LR	LR		
	comp=E,5μm,20.4s,MS5.9						
KMI				LR	LR		
	comp=Z,6μm,18.3s,MS6.0						
KMI	**Kunming**	**79.39**	**302**	P	**P**	**01 37 24.8**	**+2.4**
KMI						01 37 32.1	
KMI						01 40 28.3	
KMI				PPP		01 42 18.9	
KMI				S	S	01 47 25.4	+2.1
KMI				*SS	sS	01 47 31.5	+1.0
KMI						01 47 37.6	
KMI				PS		01 48 12.6	
KMI				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.0						
KMI				MLR	MLR		
	comp=Z,6μm,18.3s,MS6.0						
KMI	**Kunming**	**79.39**	**302**	P	**P**	**01 37 24.8**	**+2.4**
	comp=Z,36nm,1.6s,mb5.0						
KMI				pP	pP	01 37 27.9	+1.1
KMI				sP	sP	01 37 29.7	+1.3
KMI				PcP	PcP	01 37 32.1	+1.6
KMI				PP	PP	01 40 28.3	+5.5
KMI				PPP		01 42 18.9	
KMI				S	S	01 47 25.4	+2.1
KMI				sS	sS	01 47 31.5	+1.0
KMI				SKS		01 47 37.6	
KMI				ScS	ScS	01 47 44.5	-1.1
KMI				PS		01 48 12.6	
KMI				SS	SS	01 52 38.1	+7.0
KMI				LR	LR		
	comp=Z,6μm,18.3s,MS6.0						
CMAR	**Chiang Mai Arr**	**79.40**	**295**	P	**P**	**01 37 23.9**	**+1.3**
	comp=Z,4.2nm,0.6s,mb4.5,baz=131,slow=4.3,SNR=20						
CMAR	**Chiang Mai Arr**	**79.40**	**295⇑**	*eP*	**P**	**01 37 23.9**	**+1.3**
XAN	**Xi'an**	**79.50**	**313**	P	**P**	**01 37 23.0**	**+0.2**
XAN				AMB	AMB		
	comp=Z,21nm,1.8s,mb4.8						
CHG	**Chiang Mai**	**79.56**	**295**	⇓P	**P**	**01 37 20.7**	**-2.7**
	comp=Z,31nm,1.0s,mb5.2						
CHTO	**Chiang Mai**	**79.56**	**295**	*eP*	**P**	**01 37 24.3**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,51nm,1.3s,mb5.3						
CHTO	**Chiang Mai**	**79.56**	**295**	*eP*	**P**	**01 37 24.3**	**+0.8**
	comp=Z,51nm,1.3s,mb5.3						
CD2	**Chengdu**	**81.50**	**308⇓**	*iP*	**P**	**01 37 34.3**	**+0.7**
CD2				AP	pP	01 37 41.0	+3.0
CD2				XP	sP	01 37 43.5	+3.9
CD2				S	S	01 47 47.5	+2.3
CD2				XS	sS	01 47 55.5	+3.1
CD2				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.8						
CD2				LR	LR		
	comp=N,5μm,20.4s,MS6.1						
CD2				LR	LR		
	comp=E,6μm,15.6s,MS6.1						
CD2				LR	LR		
	comp=Z,5μm,15.6s,MS6.0						
HHC	**Hu-ho-hao-te**	**81.76**	**320**	*eP*	**P**	**01 37 35.5**	**+0.8**
HHC				AP	pP	01 37 38.5	-0.6
HHC				XP	sP	01 37 40.5	-0.2
HHC				PP	PP	01 40 45.3	+3.2
HHC				S	S	01 47 48.0	+0.6
HHC				SKS		01 47 51.5	
HHC				XS	sS	01 47 54.3	-0.4
HHC				AMB	AMB		
	comp=Z,25nm,1.1s,mb5.1						
HHC				AMB	AMB		
	comp=Z,877nm,7.5s						
HHC				LR	LR		
	comp=N,7μm,16.3s,MS6.2						
HHC				LR	LR		
	comp=E,5μm,17.2s,MS6.2						
HHC				LR	LR		
	comp=Z,5μm,16.4s,MS6.0						
HIA	**Hailar**	**82.83**	**330**	*eP*	**P**	**01 37 39.6**	**-0.5**
HIA	**Hailar**	**82.83**	**330**	*eP*	**P**	**01 37 39.7**	**-0.4**
SYO	**Syowa Base**	**83.12**	**196⇑**	*eP*	**P**	**01 37 39.0**	**-2.5**
SYO	**Syowa Base**	**83.12**	**196⇑**	*e*PP	PP	01 40 53.4	+1.4
LZH	**Lanzhou**	**84.10**	**312**	*eP*	**P**	**01 37 49.0**	**+2.0**
LZH				AP	pP	01 37 55.5	+4.1
LZH				XP	sP	01 37 58.3	+5.3
LZH				*e*SKS		01 48 06.0	
LZH				S	S	01 48 13.0	+1.5
LZH				XS	sS	01 48 24.0	+5.2
LZH				AMB	AMB		
	comp=Z,166nm,1.5s,mb5.9						
LZH				AMB	AMB		
	comp=Z,1μm,6.9s						
LZH				LR	LR		
	comp=N,2μm,17.8s						
LZH				LR	LR		
	comp=Z,3μm,18.7s,MS5.7						
LZH	**Lanzhou**	**84.10**	**312**	*eP*	**P**	**01 37 49.1**	**+2.1**
LZH				*SP	sP	01 37 58.2	+5.2
LZH						01 41 06.5	
LZH				*e*		01 48 06.1	
LZH				S	S	01 48 13.0	+1.5
LZH				pmax	pmax		
	comp=Z,166nm,1.5s,mb5.9						
LZH				MLR	MLR		
	comp=Z,3μm,18.7s,MS5.7						
LZH	**Lanzhou**	**84.10**	**312**	*eP*	**P**	**01 37 49.1**	**+2.1**
	comp=Z,166nm,1.5s,mb5.9						
LZH				pP	pP	01 37 55.5	+4.1
LZH				sP	sP	01 37 58.2	+5.2
LZH				PP	PP	01 41 06.5	+5.0
LZH				*e*SKS		01 48 06.1	
LZH				S	S	01 48 13.0	+1.5
LZH				sS	sS	01 48 24.0	+5.2
LZH				LR	LR		
	comp=Z,3μm,18.7s,MS5.7						
OHAK	**Old Harbor**	**84.13**	**19**	*eP*	**P**	**01 37 45.6**	**-1.1**
	comp=Z,22nm,0.9s,mb5.3						
SEY	**Seymchan**	**84.89**	**352⇑**	*eP*	**P**	**01 37 49.8**	**-0.6**
SEY	**Seymchan**	**84.89**	**352⇑**	*eP*	**P**	**01 37 49.9**	**-0.5**
FARB	**Farallon Islan**	**86.39**	**47**	⇑P	**P**	**01 37 57.9**	**-0.5**
	baz=86						
MCCM	**Marconi Confer**	**86.69**	**47**	⇑P	**P**	**01 37 59.9**	**0.0**
	baz=87						
JRSC	**Jasper Ridge**	**86.77**	**48**	⇑P	**P**	**01 38 00.4**	**+0.1**
	baz=87						
V03C	**Hunter Liggett**	**86.79**	**49**	⇓P	**P**	**01 38 00.5**	**0.0**
	baz=87						
NVL	**N'lazarevskaya**	**86.96**	**187**	P	**P**	**01 37 59.1**	**-1.7**
NVL				pmax	pmax		
	comp=Z,37nm,2.0s,mb5.3						
BSC	**Santa Cruz Isl**	**86.99**	**52**	⇑P	**P**	**01 38 01.4**	**0.0**
	baz=87						
HOPS	**Hopland**	**86.99**	**46**	⇑P	**P**	**01 38 01.6**	**+0.3**
	baz=87						
KCPM	**Cahto Peak**	**87.00**	**45**	*eP*	**P**	**01 38 01.5**	**+0.1**
SAO	**San Andreas Ge**	**87.00**	**49**	*eP*	**P**	**01 38 02.5**	**+1.0**
O01C	**Eel River Cons**	**87.07**	**45**	⇓P	**P**	**01 38 02.1**	**+0.4**
	baz=87						
CVS	**Carmenet Viney**	**87.08**	**47**	⇑P	**P**	**01 38 02.2**	**+0.4**
	baz=87						
KIPM	**Iron Peak**	**87.13**	**45**	*eP*	**P**	**01 38 02.5**	**+0.5**
SBC	**Santa Barbara**	**87.14**	**51**	⇓P	**P**	**01 38 02.3**	**+0.1**
	baz=87						
WENL	**Wente Vineyard**	**87.21**	**48**	⇓P	**P**	**01 38 02.6**	**+0.2**
	baz=87						
PACP	**Pacheco Peak**	**87.23**	**49**	⇑P	**P**	**01 38 03.0**	**+0.4**
	baz=87						
SNAA	**Sanae**	**87.25**	**182**	*eP*	**P**	**01 38 00.7**	**-1.4**
SNAA				*e*	pP	01 38 03.7	-2.9
SNAA				*e*		01 38 08.6	
SNAA				*e*		01 38 12.2	
SNAA				*e*		01 38 16.1	
SNAA	**Sanae**	**87.25**	**182⇑**	*eP*	**P**	**01 38 01.3**	**-0.8**
SNAA	**Sanae**	**87.25**	**182**	*eP*	**P**	**01 38 00.7**	**-1.5**
	comp=Z,77nm,1.6s,mb5.7						
PKD	**Parkfield**	**87.25**	**50**	⇓P	**P**	**01 38 02.7**	**0.0**
	baz=87,SNR=7.0						
PKM	**Peak Mountain**	**87.27**	**51**	⇓P	**P**	**01 38 03.1**	**+0.3**
	baz=87						
U04C	**Hernandez Rese**	**87.28**	**49**	⇓P	**P**	**01 38 03.1**	**+0.2**
	baz=87						
JCC	**Jacoby Creek**	**87.28**	**44**	⇓P	**P**	**01 38 03.2**	**+0.5**
	baz=87						
BDM	**Black Diamond**	**87.29**	**48**	⇑P	**P**	**01 38 03.3**	**+0.5**
	baz=87						
SMMC	**Simmler**	**87.34**	**51**	⇑P	**P**	**01 38 03.6**	**+0.4**
	baz=88						
MNRC	**McLaughlin Nat**	**87.36**	**47**	⇓P	**P**	**01 38 03.6**	**+0.5**
	baz=88						
BLG	**Laguna Peak**	**87.46**	**52**	⇓P	**P**	**01 38 03.8**	**+0.1**
	baz=88						
KHMM	**Horse Mountain**	**87.51**	**44**	*eP*	**P**	**01 38 03.9**	**+0.1**
Q03C	**Winters**	**87.53**	**47**	⇓P	**P**	**01 38 04.8**	**+0.9**
	baz=88						
GASB	**Alder Springs**	**87.56**	**46**	⇑P	**P**	**01 38 05.0**	**+0.9**
	baz=88,SNR=13						
N02C	**Big Bar**	**87.76**	**44**	⇑P	**P**	**01 38 05.7**	**+0.7**
	baz=88,SNR=7.2						
O02C	**Red Bluff**	**87.77**	**45**	⇑P	**P**	**01 38 05.8**	**+0.7**
	baz=88,SNR=22						
VNA3	**Neumayer Olymp**	**87.83**	**180**	*eP*	**P**	**01 38 02.5**	**-2.5**
VNA3				*e*	pP	01 38 06.2	-3.2
VNA3				*e*		01 38 11.4	
VNA3				*e*		01 38 15.1	
VNA3				*e*		01 38 19.1	
S05C	**Merced**	**88.07**	**49**	⇓P	**P**	**01 38 06.7**	**+0.1**
	baz=88						
ARVC	**Arvin**	**88.10**	**51**	⇓P	**P**	**01 38 07.0**	**+0.2**
	baz=88						
VNA2	**Neumayer--Watz**	**88.12**	**181**	*eP*	**P**	**01 38 05.5**	**-0.8**
	baz=178,slow=4.4						
VNA2				*e*	pP	01 38 08.4	-2.4
VNA2				*e*		01 38 13.1	
VNA2				*e*		01 38 15.9	
VNA2				*e*		01 38 20.9	
WDC	**Whiskeytown Da**	**88.14**	**45**	*eP*	**P**	**01 38 07.0**	**+0.2**
WDC				pmax	pmax		
	comp=Z,81nm,1.6s,mb5.7						
WDC	**Whiskeytown Da**	**88.14**	**45**	⇓P	**P**	**01 38 07.0**	**+0.2**
	baz=88,SNR=13						
WDC	**Whiskeytown Da**	**88.14**	**45**	*eP*	**P**	**01 38 07.0**	**+0.1**
	comp=Z,80nm,1.6s,mb5.7						
OHCM	**Honcut**	**88.23**	**46**	*eP*	**P**	**01 38 07.2**	**0.0**
L02A	**Cave Junction**	**88.24**	**43**	⇓P	**P**	**01 38 07.2**	**-0.1**
	baz=88						
VES	**Vestal, Richgr**	**88.25**	**50**	⇓P	**P**	**01 38 07.4**	**-0.1**
	baz=88						
MWC	**Mount Wilson**	**88.25**	**52**	*eP*	**P**	**01 38 08.1**	**+0.6**
MWC				pmax	pmax		
	comp=Z,224nm,2.0s,mb6.0						
MWC	**Mount Wilson**	**88.25**	**52**	*eP*	**P**	**01 38 08.1**	**+0.6**
	comp=Z,224nm,2.0s,mb6.0						
ORV	**Oroville**	**88.33**	**46**	⇑P	**P**	**01 38 07.7**	**0.0**
	baz=88,SNR=16						
M02C	**Callahan**	**88.34**	**44**	⇑P	**P**	**01 38 07.7**	**0.0**
	baz=88,SNR=20						
T06C	**Millerton Lake**	**88.34**	**49**	⇓P	**P**	**01 38 07.9**	**0.0**
	baz=88,SNR=17						
CMB	**Columbia Colle**	**88.36**	**48**	*eP*	**P**	**01 38 07.3**	**-0.6**
CMB				pmax	pmax		
	comp=Z,53nm,1.4s,mb5.6						
CMB	**Columbia Colle**	**88.36**	**48**	⇑P	**P**	**01 38 08.2**	**+0.3**
	baz=88,SNR=17						
CMB	**Columbia Colle**	**88.36**	**48**	*eP*	**P**	**01 38 07.3**	**-0.6**
	comp=Z,53nm,1.4s,mb5.6						
109C	**Camp Elliot, M**	**88.36**	**54**	⇑P	**P**	**01 38 07.9**	**-0.2**
	baz=88						
VNA1	**Neumayer--Stat**	**88.41**	**181**	*eP*	**P**	**01 38 07.1**	**-0.6**
VNA1				*e*	pP	01 38 10.0	-2.1
VNA1				*e*		01 38 15.2	
VNA1				*e*		01 38 18.9	
VNA1				*e*		01 38 22.3	
LAVA	**Lava Cap Winer**	**88.46**	**47**	⇑P	**P**	**01 38 08.3**	**-0.1**
	baz=89						
ULN	**Ulaanbaatar**	**88.48**	**323**	*eP*	**P**	**01 38 07.8**	**+0.5**
ULN	**Ulaanbaatar**	**88.48**	**323⇑**	*eP*	**P**	**01 38 08.2**	**0.0**

YAK pmax pmax
comp=N,1.0nm,0.3s
YAK pmax pmax
comp=E,30nm,1.8s
YAK MLR MLR
comp=E,6µm,22.0s,MS6.1
YAK MLR MLR
comp=N,7µm,24.0s,MS6.1
YAK MLR MLR
comp=Z,12µm,27.0s,MS6.2
YAK Yakutsk 88.74 342⇓ *e*P P 01 38 07.8 -1.3
M03C McCloud 88.76 45 ⇑ P P 01 38 09.6 -0.2
baz=89,SNR=11
KCC Kaiser Creek 88.77 49 ⇓ P P 01 38 09.4 -0.5
baz=89,SNR=12
P05C Yuba Gap, Truc 88.81 47 ⇓ P P 01 38 09.9 -0.2
baz=89
SONM Songino Array 88.83 323 P P 01 38 10.1 +0.2
comp=Z,3.2nm,0.8s,mb4.7,baz=139,slow=6.1,SNR=18
J02A Umpqua 88.88 42 ⇓ P P 01 38 10.1 -0.2
baz=89
MONP Monument Peak 88.88 54 ⇓ P P 01 38 10.0 -0.6
baz=89,SNR=12
HUMO Hull Mountain 88.89 43 ⇑ P P 01 38 10.3 0.0
baz=89,SNR=11
HUMO Hull Mountain 88.89 43 *e*P P 01 38 10.9 +0.6
comp=Z,101nm,1.8s,mb5.8
R05C Kirkwood Meado 88.89 48 ⇓ P P 01 38 09.6 -0.8
baz=89,SNR=13
O05C Quincy 88.92 46 ⇓ P P 01 38 10.6 +0.1
baz=89
BILL Bilibino 88.98 359⇓ *i*P P 01 38 09.2 -0.9
BILL pmax pmax
comp=Z,72nm,1.7s,mb5.7
BILL Bilibino 88.98 359 *e*P P 01 38 09.3 -0.8
DVTC Desert V Tower 89.02 54 ⇓ P P 01 38 11.0 -0.2
baz=89
I02A Mapleton 89.05 42 ⇓ P P 01 38 11.5 +0.5
baz=89
LRMC Laurel Mountai 89.09 51 ⇑ P P 01 38 11.6 +0.1
baz=89
PFO Pinyon Flat Ob 89.17 53 P P 01 38 12.5 +0.6
comp=Z,78nm,1.8s,mb5.7,SNR=6.2
PFO Pinyon Flat Ob 89.17 53 *e*P P 01 38 11.1 -0.8
PFO pmax pmax
comp=Z,37nm,1.5s,mb5.5
PFO Pinyon Flat Ob 89.17 53 ⇑ P P 01 38 11.5 -0.4
baz=89
PFO Pinyon Flat Ob 89.17 53 *e*P P 01 38 11.1 -0.8
comp=Z,37nm,1.5s,mb5.5
M04C Macdoel 89.19 44 ⇑ P P 01 38 11.7 0.0
baz=89
R06C Coleville 89.23 48 ⇓ P P 01 38 11.6 -0.5
baz=89,SNR=12
WAKR Walker 89.24 48 *e*P P 01 38 12.1 0.0
CWC Cottonwood Cre 89.24 50 ⇑ P P 01 38 11.9 -0.2
baz=89
MTUM Tungsten Hills 89.31 49 *e*P P 01 38 12.8 +0.3
RRX Edison Barstow 89.33 52 ⇓ P P 01 38 12.4 -0.2
baz=90
L04A Klamath Falls 89.35 44 ⇓ P P 01 38 12.7 +0.2
baz=90
I03A Eugene 89.37 42 ⇓ P P 01 38 12.8 +0.2
baz=90
SWSC Sam W. Stewart 89.38 54 ⇓ P P 01 38 12.2 -0.7
baz=90
WCN Washoe City 89.39 47 ⇑ P P 01 38 12.7 -0.1
baz=90
M05C Lookout 89.44 45 ⇑ P P 01 38 12.8 -0.2
baz=90,SNR=12
P06A Stead Airport, 89.47 47 ⇓ P P 01 38 13.3 +0.2
baz=90
MPMC Manual Prospec 89.50 51 ⇑ P P 01 38 13.1 -0.3
baz=90,SNR=20
GSC Goldstone 89.66 52 *e*P P 01 38 13.5 -0.6
GSC pmax pmax
comp=Z,100nm,2.0s,mb5.8
GSC Goldstone 89.66 52 ⇑ P P 01 38 13.7 -0.4
baz=90,SNR=11
GSC Goldstone 89.66 52 *e*P P 01 38 13.6 -0.5
comp=Z,138nm,2.1s,mb5.9
S08C White Mtn Res 89.66 49 ⇓ P P 01 38 13.9 -0.2
baz=90,SNR=27
K04A Chilquin 89.67 44 ⇑ P P 01 38 14.2 +0.3
baz=90
BELC Belle Mtn. 89.69 53 ⇓ P P 01 38 13.6 -0.6
baz=90,SNR=18
H03A Soap Creek Ran 89.72 41 ⇓ P P 01 38 14.7 +0.5
baz=90
J04A Umpqua Nationa 89.74 43 ⇓ P P 01 38 14.3 0.0
baz=90
O06A Flanigan 89.75 46 ⇑ P P 01 38 14.8 +0.3
baz=90,SNR=21
HEC Hector Ludlow 89.80 52 ⇑ P P 01 38 14.7 -0.1
baz=90,SNR=9.6
M06C Likely Place G 89.81 45 ⇓ P P 01 38 14.8 +0.2
baz=90
I04A Tendick Farm, 89.83 42 ⇑ P P 01 38 14.6 -0.1
baz=90
PAHR Pah Rah Range 89.83 47 *e*P P 01 38 14.8 0.0
comp=Z,63nm,1.5s,mb5.7
BC3 Big Chuckw Mtn 89.94 54 ⇓ P P 01 38 15.4 -0.1
baz=90,SNR=14
L05A Lakeview 89.98 44 ⇓ P P 01 38 15.9 +0.5
baz=90,SNR=7.4
NVAR Mina Array Bea 89.99 48 P P 01 38 15.3 -0.2
comp=Z,6.7nm,0.8s,mb5.0,baz=226,slow=8.7,SNR=31
GRAC Grapevine Rang 90.00 50 ⇑ P P 01 38 15.6 -0.1
baz=90,SNR=8.6
N06A Buffalo Meadow 90.02 46 ⇓ P P 01 38 15.9 +0.2
baz=90,SNR=14
G03A Yamhill 90.05 41 ⇑ P P 01 38 16.1 +0.4
baz=90
TRF Thorofare Moun 90.07 17 *e*P P 01 38 16.8 +1.5
112A Yuma 90.13 55 ⇑ P P 01 38 16.0 -0.4
baz=90
FURC Furnace Creek, 90.14 51 ⇑ P P 01 38 16.4 +0.1
baz=90,SNR=12
GLA Glamis 90.16 55 ⇓ P P 01 38 16.3 -0.2
baz=90,SNR=13
GLA Glamis 90.16 55 *e*P P 01 38 17.0 +0.5
F03A Seaside 90.20 40 ⇑ P P 01 38 16.7 +0.3
baz=90
MOD Modoc 90.26 45 ⇓ P P 01 38 16.9 +0.2
baz=90
K05A Summer Lake 90.27 44 ⇓ P P 01 38 17.4 +0.6
baz=90,SNR=7.7
GMRC Granite Mounta 90.27 53 ⇑ P P 01 38 16.9 -0.1
baz=90,SNR=9.9
SHOC Shoshone 90.31 51 ⇓ P P 01 38 17.2 +0.1
baz=90,SNR=12
IRM Iron Mountain 90.39 53 ⇓ P P 01 38 17.4 -0.2
baz=90,SNR=14
H04A Detroit Lake 90.41 42 ⇑ P P 01 38 17.2 -0.2
baz=91
S09A Goldfield 90.43 49 ⇓ P P 01 38 17.5 -0.2
baz=91,SNR=9.7
TPH Tonopah 90.59 49 *e*P P 01 38 17.5 -0.9
TPH pmax pmax
comp=Z,39nm,1.4s,mb5.5
TPH Tonopah 90.59 49 *e*P P 01 38 17.5 -0.9
comp=Z,39nm,1.4s,mb5.5
LSA Lhasa 90.64 302 *e*P P 01 38 19.0 +0.2
BMW Boistfort Moun 90.67 40 *e*P P 01 38 19.0 +0.4
TPNV Topopah Spring 90.79 51 *e*P P 01 38 18.9 -0.4
TPNV pmax pmax
comp=Z,61nm,1.3s,mb5.8
TPNV Topopah Spring 90.79 51 *e*P P 01 38 18.9 -0.5
comp=Z,61nm,1.3s,mb5.8
LDFC Landfair 90.81 53 *e*P P 01 38 19.8 +0.3
BOD Bodaibo 91.11 334 *e*P P 01 38 19.0 -1.3
BOD pmax pmax
comp=Z,22nm,1.9s,mb5.2
SHPR Sheep Range 91.38 51 *e*P P 01 38 22.3 +0.2
GNW Green Mountain 91.46 39 *e*P P 01 38 22.4 +0.2
WVOR Wild Horse Val 91.60 45 *e*P P 01 38 23.6 +0.6
WVOR pmax pmax
comp=Z,44nm,1.6s,mb5.5
WVOR Wild Horse Val 91.60 45 *e*P P 01 38 23.6 +0.6
comp=Z,44nm,1.6s,mb5.5
COLA College 91.85 17 *e*P P 01 38 20.9 -2.7
COLA College 91.85 17 *e*P P 01 38 22.1 -1.5
comp=Z,9.0nm,1.0s,mb5.0
ZAK Zakamensk 91.92 324 *e*P P 01 38 23.8 -0.5
ZAK pmax pmax
comp=Z,13nm,1.8s,mb5.0
JCW Jim Creek 92.30 39 *e*P P 01 38 25.6 -0.5

RSW Rattlesnake Hi 92.83 41 *e*P P 01 38 29.2 +0.6
HAWA Hanford 92.86 41 *e*P P 01 38 29.2 +0.5
ETW Entiat 92.95 40 *e*P P 01 38 28.6 -0.5
TUC Tucson 92.97 57 *e*P P 01 38 29.9 +0.3
TUC pmax pmax
comp=Z,30nm,1.6s,mb5.5
TUC Tucson 92.97 57 *e*P P 01 38 29.9 +0.3
comp=Z,30nm,1.6s,mb5.5
ARUT Antelope Range 93.17 51 *e*P P 01 38 30.5 +0.1
BMO Blue Mountains 93.55 43 *e*P P 01 38 31.0 -0.9
BMO pmax pmax
comp=Z,12nm,1.6s,mb5.1
BMO Blue Mountains 93.55 43 *e*P P 01 38 31.0 -1.0
comp=Z,12nm,1.6s,mb5.1
DLBC Dease Lake 93.70 27 *e*P P 01 38 32.3 +0.1
DAWY Dawson 93.76 20 *e*P P 01 38 31.6 -0.8
WUAZ Wupatki 93.78 53 *e*P P 01 38 34.2 +1.0
comp=Z,17nm,1.0s,mb5.4
MSU Marysvale 94.37 50 *e*P P 01 38 36.2 +0.3
DUG Dugway 94.59 49 *e*P P 01 38 35.6 -1.3
comp=Z,2.8nm,1.0s,mb4.7
HLID Hailey 94.88 45 *e*P P 01 38 38.2 +0.2
comp=Z,1.7nm,0.8s,mb4.5
HWUT Hardware Ranch 96.02 48 *e*P P 01 38 42.1 -1.2
comp=Z,1.4nm,0.6s,mb4.6
PV10 Paradox Valley 96.59 52 *e*P P 01 38 45.6 -0.4
TIXI Tiksi 96.65 348⇓ *e*P P 01 38 43.6 -1.9
PLCA Paso Flores 97.02 139 P P 01 38 48.4 +0.3
comp=Z,2.3nm,1.0s,mb4.6,baz=229,slow=5.5,SNR=3.8
TPAW Teton Pass 97.16 46 *e*P P 01 38 48.4 -0.1
ANMO Albuquerque 97.30 55 *e*P P 01 38 49.2 -0.1
comp=Z,1.1nm,0.7s,mb4.4
TXAR Lajitas Array 97.58 62 P P 01 38 50.6 -0.1
comp=Z,0.4nm,0.8s,mb4.0,baz=216,slow=7.6,SNR=6.7
HVS Khovu-Aksy 97.65 322 *e*P P 01 38 49.7 -0.8
HVS pmax pmax
comp=Z,51nm,1.7s,mb5.8
PDAR Pinedale Array 97.84 47 P P 01 38 50.5 -1.1
comp=Z,0.5nm,0.8s,mb4.1,baz=351,slow=5.0,SNR=2.8
WMQ Urumqi 98.62 314 *e*P P 01 38 57.5 +2.5
WMQ AP pP 01 39 02.0 +2.6
WMQ XP sP 01 39 04.8 +3.8
WMQ AMB AMB
comp=Z,12nm,1.4s,mb5.2
WMQ AMB AMB
comp=Z,359nm,5.3s
WMQ LR LR
comp=N,3µm,22.0s,MS6.0
WMQ LR LR
comp=E,3µm,17.8s,MS6.0
WMQ LR LR
comp=Z,3µm,22.0s,MS5.8
KRAR Krasnoyarsk 100.06 326 *e*P Pdif 01 39 00.7 -0.7
KRAR pmax pmax
comp=Z,6.0nm,0.8s
MKAR Makanchi Array 103.19 315 Pdiff Pdif 01 39 14.9 -0.5
comp=Z,0.4nm,0.5s,baz=123,slow=5.3,SNR=3.0
BVAR Borovoye Array 111.97 320 PKiKP PKiKP 01 43 49.2 -1.8
comp=Z,0.7nm,0.5s,baz=48,slow=0.9,SNR=4.7
NCB Newcomb 123.25 51 *e*PKPdif PKPdif 01 44 11.0 -1.9
APA Apatity 126.09 341⇑ *i*PKIKP PKPdif 01 44 16.6 -1.0
APA pmax pmax
comp=Z,16nm,1.0s
PKME Peaks-Kenny Pk 126.66 49 *e*PKPdif PKPdif 01 44 18.1 -1.3
ARCES ARCESS Array B 126.96 345 PKP PKPdif 01 44 17.9 -1.4
comp=Z,2.0nm,0.5s,baz=67,slow=0.9,SNR=18
KIV Kislovodsk 130.61 310 *e*PKIKP PKPdif 01 44 26.4 -0.6
KIV *e* 01 46 42.7
KIV pmax pmax
comp=Z,7.0nm,0.9s
AKASG Malin Array Be 137.11 323 PKP PKPdif 01 44 37.4 -1.6
comp=Z,0.4nm,0.4s,baz=54,slow=1.6,SNR=4.3
NOA NORSAR Array B 137.33 344 PKP PKPdif 01 44 37.2 -1.8
comp=Z,1.2nm,0.9s,baz=22,slow=1.7,SNR=2.9
BURAR Bucovina Array 140.91 321⇑ *i*P PKPdif 01 44 46.2 +0.2
BURAR Bucovina Array 140.91 321⇑ *i*P PKPdif 01 44 46.2 +0.2
KWP Kalwaria 141.24 325⇑ *i*P PKPdif 01 44 48.3 +1.8
KWP Kalwaria 141.24 325⇑ P PKPdif 01 44 48.3 +1.8
KOLS Kolonicke sedl 141.87 325 *e*PKP PKPdif 01 44 48.0 +0.3
KOLS Kolonicke sedl 141.87 325 *e*PKP PKPdif 01 44 48.1 +0.4
STHS Stebnicka Huta 142.14 326 *e*PKP PKPdif 01 44 48.2 +0.1
STHS *e* 01 44 48.6
DRGR 142.80 321⇓ *i*P PKPdif 01 44 47.6 -1.8
DRGR 142.80 321 P PKPdif 01 44 46.4 -3.0
OKC Ostrava-Krasne 143.44 328 *e*PKP PKPdif 01 44 50.1 -0.3
GZR Gura Zlata 143.49 319⇑ *i*P PKPdif 01 44 49.8 -0.9
GZR Gura Zlata 143.49 319⇑ P PKPdif 01 44 49.8 -0.9
RDO Rodhopi 143.54 311 *e*P PKPdif 01 44 48.3 -2.6
KSP Ksiaz 143.63 331 *e*PKIKP PKPdif 01 44 48.3 -2.4
PRK Paraskevi 143.68 308 *e*P PKPdif 01 44 47.0 -4.2
PRK Paraskevi 143.68 308 *e*P PKPdif 01 44 48.8 -2.4
SMG Samos 143.72 305 *e*P PKPdif 01 44 46.3 -5.0
PSZ Piszkesteto 143.75 325⇓ *e*PKP PKPdif 01 44 48.6 -2.5
PSZ Piszkesteto 143.75 325⇑ *i*P PKPdif 01 44 49.5 -1.6
PSZ Piszkesteto 143.75 325 *e*PKPdif PKPdif 01 44 48.7 -2.4
MORC Moravsky Berou 143.78 329 *e*PKIKP PKPdif 01 44 52.9 +1.9
RZN Rozhen 143.91 313 P PKPdif 01 44 48.2 -3.3
VYHS Vyhne 143.96 326 *e*PKP PKPdif 01 44 49.3 -2.1
DPC Dobruska-Polom 143.96 330 *e*PKP PKPdif 01 44 48.6 -2.7
UPC Upice 144.00 331 *e*PKP PKPdif 01 44 49.2 -2.2
KARP Karpathos 144.02 302 *e*P PKPdif 01 44 48.9 -3.0
BZS Buzias 144.07 320⇑ *i*P PKPdif 01 44 48.0 -3.7
BZS Buzias 144.07 320 P PKPdif 01 44 49.4 -2.3
CHOS Chios island 144.11 307 *e*P PKPdif 01 44 49.1 -2.9
KOLL Kolacno 144.13 327 *e*PKP PKPdif 01 44 49.3 -2.4
LIA Limnos Island 144.25 310 *e*P PKPdif 01 44 45.3 -6.9
LOS Limnos 144.31 310 *e*P PKPdif 01 44 49.7 -2.6
BUD Budapest 144.48 325⇓ *e*PKP PKPdif 01 44 51.0 -1.3
VTS Vitosha 144.54 315⇑ *i*P PKPdif 01 44 50.9 -1.7
VTS Vitosha 144.54 315 P PKPdif 01 44 51.1 -1.5
VTS Vitosha 144.54 315 P PKPdif 01 44 51.1 -1.5
VRAC Vranov 144.55 329 PKP PKPdif 01 44 51.8 -0.6
comp=Z,3.1nm,0.7s,baz=54,slow=3.7,SNR=6.3
VRAC Vranov 144.55 329⇓ *i*P PKPdif 01 44 51.6 -0.8
MMB Musomiste 144.62 313 P PKPdif 01 44 50.9 -1.9
PVCC Panska Ves 144.62 332 *e*PKP PKPdif 01 44 51.0 -1.5
NVR Nevrokopi 144.63 313 *e*P PKPdif 01 44 49.6 -3.2
BRG Berggiesshubel 144.64 333 *i* PKP PKPdif 01 44 50.7 -1.8
comp=Z,98nm,1.6s
BRG *e* 01 48 31.0
comp=Z,25nm,1.9s
BRG *e* 01 52 41.9
comp=Z,8.0nm,0.8s
CLL Collm 144.71 334⇓ *i*PKPdif PKPdif 01 44 51.3 -1.3
comp=Z,129nm,1.8s
EAB Aberfoyle 144.72 354 *e*P PKPdif 01 44 48.4 -4.1
MODS Modra-Piesok 144.83 327 *e*PKP PKPdif 01 44 52.3 -0.6
ZKR Zakros 144.87 301 *e*P PKPdif 01 44 52.4 -1.1
APE Apeiranthos 144.90 305 *e*P PKPdif 01 44 46.7 -6.7
APE Apeiranthos 144.90 305⇓ *i*P PKPdif 01 44 51.4 -2.0
APE Apeiranthos 144.90 305 P PKPdif 01 44 51.3 -2.1
OUR Ouranopolis 144.95 311 *e*P PKPdif 01 44 51.8 -1.6
EAU Auchincon 144.96 353 *e*P PKPdif 01 44 50.6 -2.3
EBL Broad Law 144.99 353 *e*P PKPdif 01 44 50.7 -2.3
PRU Pruhonice 145.03 331 *e*PKP PKPdif 01 44 52.0 -1.2
ZST Bratislava 145.04 327 *e*PKP PKPdif 01 44 54.0 +0.7
TREC Trest 145.09 330 *e*PKP PKPdif 01 44 52.4 -0.9
PGBU Glenifferbraes 145.11 354 *e*P PKPbc 01 44 50.2 -2.4
SANT Santorini 145.15 304 *e*P PKPbc 01 44 50.3 -3.1
XSO Sourhope Farm 145.16 352 *e*P PKPbc 01 44 51.0 -1.8
SOH Sokhos 145.19 312 *e*P PKPbc 01 44 51.3 -2.1
PLG Polygyros 145.31 311 *e*P PKPbc 01 44 53.2 -0.6
PLG Polygyros 145.31 311 *e*P PKPbc 01 44 53.2 -0.6
NPS Neapolis 145.31 302 *e*P PKPbc 01 44 54.0 0.0
PAIG Paliouri 145.31 310 *e*P PKPbc 01 44 53.5 -0.3
KNT Kendrikon 145.37 313 *e*P PKPbc 01 44 50.7 -3.3
EKA Eskdalemuir Ar 145.43 352 PKPbc PKPbc 01 44 52.0 -1.7
comp=Z,33nm,0.8s,baz=352,slow=2.3,SNR=39
LASH Lasithi 145.45 302 *e*P PKPdf 01 44 54.0 -0.4
ESK Eskdalemuir 145.45 353 *e*P PKPbc 01 44 51.5 -2.3
ESK Eskdalemuir 145.45 353 *e*PKPbc PKPbc 01 44 51.8 -1.9
PKSM Moragy 145.46 323⇑ *i*P PKPdf 01 44 54.2 +0.1
PKSM Moragy 145.46 323 P PKPdf 01 44 54.1 +0.1
HORT Hortiatis 145.46 312 *e*P PKPbc 01 44 51.2 -3.0
VAY Valandovo 145.52 313 *e*PKP PKPbc 01 44 51.9 -2.6
ECK Cauldkaine Hil 145.57 352 *e*P PKPbc 01 44 52.3 -1.9
SOP Sopron 145.65 327⇓ *e*PKP PKPdf 01 44 54.9 +0.5
NKC Novy Kostel 145.75 333 *e*PKP PKPdf 01 44 55.1 +0.7
XAL Allendale 145.77 351 *e*P PKPdf 01 44 53.1 -1.2
MOX Moxa 145.78 335 *e*PKP PKPdf 01 44 54.7 +0.2
comp=Z,227nm,2.1s
CONA Conrad Observa 145.84 328⇑ *i*P PKPdf 01 44 54.6 -0.1
comp=Z,87nm,1.5s,SNR=27

CSNA Conrad Observa 145.84 328⇑ *i*P PKPdf 01 44 54.4 -0.3
comp=Z,83nm,1.5s
NEO Neokhori 145.88 310 *e*P PKPdf 01 44 55.1 +0.1
XOR Xorichti 145.88 310 *e*P PKPdf 01 44 54.5 -0.5
IDI Anoyia 145.88 302 PKPbc PKPbc 01 44 55.7 -0.1
comp=Z,5.0nm,0.5s,baz=16,slow=22,SNR=14
GCD Castle Douglas 145.98 353 *e*P PKPdf 01 44 52.8 -1.9
ATH Athens Observa 145.99 307 *e*P PKPdf 01 44 54.3 -1.0
SKO Skopje 145.99 315 *e*PKP PKPdf 01 44 54.4 -0.7
SIVA Sivas 146.01 302 *e*P PKPdf 01 44 54.6 -0.8
GAL1 Galloway 146.06 354 *e*P PKPdf 01 44 53.5 -1.3
KHC Kasperske Hory 146.08 331⇑ *i*PKIKP PKPdf 01 44 53.2 -1.8
KHC Kasperske Hory 146.08 331 *e*PKP PKPdf 01 44 54.2 -0.8
LIT Litokhoron 146.09 311 *e*P PKPdf 01 44 55.3 -0.1
GEC2 GERESS Array S 146.23 331 *e*PKP2 PKPab 01 44 55.9 -1.2
GERES GERESS Array B 146.23 331 PKPbc PKPbc 01 44 55.9 -0.5
comp=Z,6.5nm,0.7s,baz=36,slow=3.3,SNR=23
LKR Lokris 146.28 309 *e*P PKPdf 01 44 54.3 -1.5
LKR Lokris 146.28 309 *e*P PKPdf 01 44 50.0 -5.7
VAM Vamos 146.39 303 *e*P PKPdf 01 44 58.5 +2.5
WTSB Winterswijk 146.41 340 *e*PKP PKPdf 01 44 56.0 +0.5
comp=Z,96nm,1.7s
DID Didima 146.50 307 *e*P PKPdf 01 44 55.7 -0.4
LTK Loutraki 146.53 308 *e*P PKPdf 01 44 55.6 -0.5
GIM North Isle of 146.60 353 *e*P PKPdf 01 44 56.1 +0.4
GRA1 Grafenberg Arr 146.68 334 *e*PKP PKPdf 01 44 56.6 +0.6
GRA1 *e*PP PP 01 48 20.4 -0.4
GRF Grafenberg Arr 146.68 334 *e*PKP PKPdf 01 44 56.6 +0.6
GRF *e*PP PP 01 48 20.4 -0.4
WIM Isle of Man 146.77 354 *e*P PKPdf 01 44 53.7 -2.3
GMM Mts of Mourne 146.79 355 *e*P PKPdf 01 44 55.8 -0.2
LHO Holmfirth 146.99 350 *e*P PKPdf 01 44 56.8 +0.3
EVR Evrytania 147.04 310 *e*P PKPdf 01 44 56.1 -0.9
VLX Vlachokerasia 147.19 307 *e*P PKPbc 01 44 58.7 -0.8
KBI1 Birley Grange 147.22 350 *e*P PKPdf 01 44 56.8 0.0
KWE Weaver Farm 147.50 350 *e*P PKPbc 01 44 58.5 -1.3
WPM1 Penmaenmawr 147.56 352 *e*P PKPdf 01 44 58.1 +0.7
ITM Ithomi 147.60 307 *e*P PKPbc 01 44 59.7 -1.0
RLS Riolos of Patr 147.62 308 *e*P PKPbc 01 45 00.5 -0.2
YRC Rhoscolyn 147.64 353 *e*P PKPdf 01 44 58.4 +0.9
CWF Charnwood Fore 147.68 349 *e*P PKPbc 01 44 59.1 -1.2
TOD Tromm 147.70 336 PKIKP PKPdf 01 44 58.1 +0.4
HGN Heimansgroeve 147.72 340 *e*PKP PKPbc 01 44 60.0 -0.6
comp=Z,86nm,1.7s
BOJS Bojanci 147.75 325 *i* PKPdf PKPbc 01 45 01.1 +0.3
BEBN Eben Emael 147.77 340 PKPbc PKPbc 01 45 01.3 +0.6
VISS Visnje 147.78 326 *i* PKPdf PKPbc 01 45 02.5 +1.6
DLF Lyons Farm 147.78 355 *e*P PKPdf 01 44 57.5 -0.2
DCN Croghan 147.78 356 *e*P PKPdf 01 44 57.7 -0.1
SBD1 Bryn Du 147.82 352 *e*P PKPbc 01 44 59.7 -1.0
MEM Membach 147.83 340 PKPbc PKPbc 01 45 00.3 -0.5
IGT Igoumenitsa 147.83 312 *e*P PKPbc 01 44 59.0 -2.2
ABH Älteburg 147.93 338 PKP PKPbc 01 44 59.9 -1.2
LKD Levkas 147.96 310 *e*P PKPbc 01 45 00.8 -0.8
JAVS Javornik 148.12 326 *i* PKPdf PKPbc 01 45 01.4 -0.4
KEK Kerkira 148.13 312 *e*P PKPdf 01 44 59.4 +0.6
HLM1 Long Mynd 148.14 351 *e*P PKPbc 01 44 59.2 -2.4
BCLA Clavier 148.22 341 PKPbc PKPbc 01 45 00.1 -1.7
STU Stuttgart 148.22 335 *e*PKP2 PKPbc 01 45 01.7 -0.2
RUP Ruppelstein 148.25 338 PKIKP PKPbc 01 45 00.3 -1.7
MOTA Moosalm 148.52 331⇑ *i*P PKPbc 01 45 01.7 -1.1
comp=Z,13nm,0.8s
LANF Langenberg 148.59 336 PKP PKPdf 01 44 58.8 -0.4
WLF Walferdange 148.60 339 PKPbc PKPbc 01 45 02.2 -0.7
WLF Walferdange 148.60 339 *e*PKPbc PKPbc 01 45 02.7 -0.2
HTR Trewern Hill 148.62 351 *e*P PKPbc 01 45 01.4 -1.5
GIVF Givet 148.65 341 *e*PKIKP PKPdf 01 44 59.6 +0.3
comp=Z,220nm,1.6s
MCH1 Michaelchurch 148.66 351 *e*P PKPdf 01 44 59.9 +0.6
DOU Dourbes 148.72 341 PKPbc PKPbc 01 45 02.3 -0.9
BAIF Baives 148.87 341 *e*PKIKP PKPdf 01 44 59.6 0.0
comp=Z,220nm,1.6s
BFO Black Forest 148.92 335 *e*PKP2 PKPbc 01 45 02.5 -1.2
SPAK Spaichingen-Ko 148.92 334 PKP PKPdf 01 45 01.4 +1.6
SWN1 Swindon 148.94 349 *e*P PKPbc 01 45 02.4 -1.3
CDF Champ du Feu 149.25 336 *e*PKIKP PKPdf 01 44 59.7 -0.6
comp=Z,229nm,1.8s
FELD Feldberg im Sc 149.41 335 PKP PKPdf 01 44 59.2 -1.4
ECH Echery 149.46 336 *e*PKP2 PKPbc 01 45 04.2 -0.9
DAVOS Davos 149.48 332 PKP2 PKPbc 01 45 04.4 -0.8
DAVOX Davos/Dischmat 149.49 332 PKPbc PKPbc 01 45 04.3 -0.9
baz=198,slow=4.3
MOF Molkenrain 149.77 336 PKP PKPdf 01 44 59.4 -1.8
THEF They Montfort 149.88 338 PKP PKPdf 01 44 59.9 -1.4
HINF Interfeld 149.91 336 *e*PKIKP PKPdf 01 45 01.2 -0.2
comp=Z,122nm,1.5s
HAU Haudompre 149.94 337 *e*PKIKP PKPdf 01 45 01.5 +0.1
comp=Z,172nm,1.5s
GRR Gorron 151.73 346 *e*PKIKP PKPdf 01 45 04.1 -0.1
comp=Z,60nm,1.0s
SSF Saint Saulge 151.74 339 *e*PKIKP PKPdf 01 45 04.2 0.0
comp=Z,118nm,1.4s
LPL La Plagne 151.84 334 *e*PKIKP PKPdf 01 45 04.7 +0.3
comp=Z,63nm,1.1s
LPG La Plagne 151.84 334 *e*PKIKP PKPdf 01 45 04.7 +0.3
SMF Signal de Mont 151.99 338 *e*PKIKP PKPdf 01 45 04.2 -0.4
comp=Z,177nm,1.5s
AVF Avril sur Loir 152.02 339 *e*PKIKP PKPdf 01 45 04.2 -0.5
comp=Z,169nm,1.5s
SGMF Saint Gilles 152.21 348 *e*PKIKP PKPdf 01 45 04.6 -0.3
comp=Z,98nm,1.0s
BNI Bardonecchia 152.23 333 *e*PKPbc PKPbc 01 45 11.0 -0.7
ROSF Rostrenen 152.26 349 *e*PKIKP PKPdf 01 45 04.1 -0.9
comp=Z,92nm,1.1s
BGF Bois d'Agland 152.40 340 *e*PKIKP PKPdf 01 45 04.8 -0.4
comp=Z,193nm,1.7s
MBDF Montbardon 152.45 333 *e*PKIKP PKPdf 01 45 05.3 -0.1
QUIF Quistinic 152.65 349 *e*PKIKP PKPdf 01 45 05.1 -0.5
comp=Z,53nm,1.1s
ORIF Oris-en-Rattie 152.68 334 *e*PKIKP PKPdf 01 45 04.7 -1.0
comp=Z,61nm,1.2s
SBF Sospel 152.84 331 *e*PKIKP PKPdf 01 45 05.4 -0.6
comp=Z,82nm,1.0s
TCF Toulx Ste Croi 152.84 340 *e*PKIKP PKPdf 01 45 06.4 +0.5
comp=Z,96nm,1.6s
VIVF Saint-Julien-l 153.21 335 *e*PKIKP PKPdf 01 45 06.4 -0.1
comp=Z,146nm,1.7s
MFF Saint Martin d 153.23 344 *e*PKIKP PKPdf 01 45 06.2 -0.3
comp=Z,112nm,1.4s
SMRF Simiane la Rot 153.57 333 *e*PKIKP PKPdf 01 45 05.8 -1.2
comp=Z,53nm,1.2s
RJF Les Rejaudoux 153.93 340 *e*PKIKP PKPdf 01 45 07.8 +0.3
comp=Z,97nm,1.3s
CAF Calviac 154.09 339 *e*PKIKP PKPdf 01 45 07.2 -0.5
comp=Z,136nm,1.6s
LASF Ste Croix 154.18 336 *e*PKIKP PKPdf 01 45 07.8 -0.1
comp=Z,88nm,1.4s
LFF La Frestale 154.50 341 *e*PKIKP PKPdf 01 45 08.1 -0.2
comp=Z,32nm,0.8s
MTLF Montolieu 155.43 337 *e*PKIKP PKPdf 01 45 09.5 -0.1
comp=Z,81nm,1.3s
EPF Esparros 156.35 340 *e*PKIKP PKPdf 01 45 10.4 -0.5
comp=Z,88nm,1.7s
SJPF Ste Jean 156.75 342 *e*PKIKP PKPdf 01 45 10.7 -0.7
comp=Z,104nm,1.6s
ETSF Etsaut 156.75 341 *e*PKIKP PKPdf 01 45 10.9 -0.5
comp=Z,54nm,1.5s
PBRG Bragança 159.17 352 *e*PKPab PKPab 01 45 50.5 -0.7
PVRL Vila Real 159.81 354 *e*PKPab PKPab 01 45 53.7 -0.3
MVO Moncorvo 159.84 352 *e*PKPab PKPab 01 45 54.3 +0.2
PVIS Viseu 160.38 354 *e*PKPab PKPab 01 45 55.8 -0.7
MTE Manteigas 160.65 353 *e*PKPab PKPab 01 45 57.8 +0.1
ESDC Sonseca Array 160.69 344 PKPab PKPab 01 45 57.0 -0.9
comp=Z,2.9nm,0.8s,baz=18,slow=3.0,SNR=9.1
PCBR Castelo Branco 161.20 352 *e*PKPab PKPab 01 46 00.2 +0.1
PMRV Marv??o 161.59 352 *e*PKPab PKPab 01 46 01.3 -0.5
PESTR Estremoz 162.17 352 *e*PKPab PKPab 01 46 02.9 -1.4
EVO Evora 162.55 353 *e*PKIKP PKPdf 01 45 17.2 -1.0
PBAR Barrancos 162.77 350 *e*PKPab PKPab 01 46 07.1 +0.1

PBEJ	Beja	163.03	352	*e*PKPab	PKPab	01 46 07.5	-0.6	
PVAQ	Vaqueiros	163.63	352	*e*PKPab	PKPab	01 46 11.2	+0.4	
MORF	Marmelete	163.83	354	*e*PKPab	PKPab	01 46 12.7	+1.0	
LIC	Lamto	164.18	201	*e*PKIKP	PKPdf	01 45 20.3	-0.2	
DBIC	Dimbokro	164.53	202	PKPab	PKPab	01 46 15.2	-0.1	
	comp=Z,5.7nm,1.0s,baz=140,slow=2.8,SNR=4.3							
TAM	Tamanrasset	164.92	279	*e*PKIKP	PKPdf	01 45 21.2	+0.4	
TAM				*e*		01 46 18.1		
TOA0	Torodi Ar. Sit	165.77	238	*e*PKPdf	PKPdf	01 45 21.7	-0.1	
TORD	Torodi Ar. Bea	165.77	238	PKP	PKPdf	01 45 20.9	-0.8	
	comp=Z,1.3nm,1.1s,baz=18,slow=0.3,SNR=7.2							
TORD				PKPab	PKPab	01 46 19.6	-1.3	
	comp=Z,1.4nm,1.1s,baz=114,slow=1.4,SNR=2.8							

IDC 28 01:31:10.7±3.1, 2063S×16911E, h0km, mb3.9/4, mb1 4.2/4, mb1mx4.0/15, mbtmp4.0/4, Error ellipse: s-maj=178.2km s-min=30.4km az=160.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.43**	**267**	P		01 36 01.9	+1.4
	5.3nm,0.8s,baz=99,slow=13,SNR=4.8						
WRA	**Warramunga Arr**	**32.58**	**265**	P		01 37 43.9	-0.2
	0.7nm,0.8s,baz=94,slow=8.0,SNR=3.7						
ASAR	**Alice Springs**	**32.70**	**258**	P		01 37 44.0	-1.0
	1.9nm,0.8s,baz=84,slow=9.3,SNR=4.4						
NVAR	**Mina Array Bea**	**89.81**	**49**	P		01 44 11.3	0.0
	1.0nm,0.8s,baz=228,slow=8.7,SNR=5.1						
GERES	**GERESS Array B**	**145.65**	**331**	PKPbc	PKPbc	01 50 51.4	+0.2
	0.5nm,0.7s,baz=69,slow=4.4,SNR=4.0						

*IDC **28** 01:33:04.8±0.8, 2131S×16943E, h0km, mb4.4/11, mb1 4.6/13, mb1mx4.5/19, mbtmp4.5/13, ML3.7/1, Error ellipse: s-maj=24.9km s-min=18.8km az=157.0*

*ISCJB **28** 01:33:05.3±6.0, 2133S±008×169.40E±006, h14km±37km, mb4.6/4, Error ellipse: s-maj=13.4km s-min=9.9km az=169.6*

*LDG **28** 01:33:05.0±0.2, 2145S×169.12E, h10km, Mb4.6/2, Error ellipse: s-maj=24.6km s-min=3.0km az=159.0*

*NEIC **28** 01:33:06.0±0.2, 2128S×169.44E, h10km, mb4.7/25, Error ellipse: s-maj=8.6km s-min=5.3km az=163.0*

*MOS **28** 01:33:07.3±1.0, 2137S×169.47E, h33km, mb4.9/16, Error ellipse: s-maj=30.3km s-min=16.1km az=178.9*

ISC 28 01:33:08.4±4.5, 2132S±008×16943E±006, h24km±31km, n118, σ0§68/66, mb4.6/34, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.14**	**160**	P		**Pn**	**01 37 20.0**	**+1.4**
	0.3nm,0.3s,baz=14,slow=8.2,SNR=4.4							
AFI	**Afiamalu**	**19.36**	**71**	P		**Pn**	**01 37 32.6**	**-1.0**
	baz=228,slow=12,SNR=3.8							
CTA	**Charters Tower**	**21.71**	**269**	P		**P**	**01 37 58.4**	**+0.6**
	11nm,0.8s,mb4.3,baz=94,slow=12,SNR=11							
CTA	**Charters Tower**	**21.71**	**269**	P		**P**	**01 37 58.4**	**+0.6**
CTAO	**Charters Tower**	**21.71**	**269**	*e*P		**P**	**01 37 59.0**	**+1.1**
CTAO					pmax	pmax		
	comp=Z,43nm,1.4s,mb4.7							
CTAO	**Charters Tower**	**21.71**	**269**	*e*P		**P**	**01 37 59.0**	**+1.2**
	comp=Z,43nm,1.4s,mb4.7							
PMG	**Port Moresby**	**24.48**	**296**	*e*P		**P**	**01 38 26.1**	**+0.3**
PMG					pmax	pmax		
	comp=Z,14nm,0.8s							
PMG	**Port Moresby**	**24.48**	**296**	*e*P		**P**	**01 38 26.1**	**+0.3**
	comp=Z,14nm,0.8s,mb4.5							
COEN	**Coen**	**26.04**	**282**	*e*P		**P**	**01 38 40.5**	**+0.5**
	comp=Z,4.1nm,0.8s,mb4.0							
STKA	**Stephens Creek**	**26.95**	**241**	P		**P**	**01 38 48.3**	**+0.3**
	comp=Z,4.7nm,0.9s,mb4.0,baz=332,slow=15,SNR=3.1							
WB2	**Warramunga Arr**	**32.82**	**266**	*e*P		**P**	**01 39 38.7**	**-1.5**
WRAB	**Tennant Creek**	**32.82**	**266**	*e*P		**P**	**01 39 39.0**	**-1.2**
WRAB					pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4							
WRAB	**Tennant Creek**	**32.82**	**266**	*e*P		**P**	**01 39 39.0**	**-1.1**
	comp=Z,5.3nm,1.0s,mb4.4							
WRA	**Warramunga Arr**	**32.83**	**266**	P		**P**	**01 39 39.2**	**-1.1**
	comp=Z,2.5nm,0.9s,mb4.2,baz=96,slow=8.3,SNR=16							
ASAR	**Alice Springs**	**32.85**	**259**	P		**P**	**01 39 40.2**	**-0.3**
	comp=Z,2.6nm,0.7s,mb4.3,baz=70,slow=9.6,SNR=20							
FITZ	**Fitzroy Crossi**	**41.25**	**267**	P		**P**	**01 40 52.2**	**+0.3**
	comp=Z,9.7nm,0.7s,mb4.5,baz=125,slow=9.3,SNR=13							
FITZ	**Fitzroy Crossi**	**41.25**	**267**	*e*P		**P**	**01 40 51.5**	**-0.4**
	comp=Z,19nm,0.8s,mb4.8							
MBWA	**Marble Bar**	**46.16**	**261**	*e*P		**P**	**01 41 31.1**	**-0.3**
	comp=Z,12nm,0.9s,mb4.8							
SBA	**Scott Base**	**56.60**	**181**	*e*P		**P**	**01 42 48.9**	**+0.2**
SBA					pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5							
SBA	**Scott Base**	**56.60**	**181**	*e*P		**P**	**01 42 48.9**	**+0.1**
	comp=Z,5.0nm,0.9s,mb4.5							
CASY	**Casey**	**58.31**	**204**	*e*P		**P**	**01 43 00.9**	**+0.1**
	comp=Z,2.2nm,0.8s,mb4.2							
MJAR	**Matsushiro Arr**	**84.66**	**332**	P		**P**	**01 43 43.4**	**-0.8**
	comp=Z,3.7nm,0.8s,mb4.4,baz=179,slow=7.5,SNR=5.9							
QSPA	**South Pole Qui**	**68.75**	**180**	P		**P**	**01 44 09.8**	**+0.1**
	comp=Z,1.6nm,0.8s,mb4.0,baz=340,slow=4.4,SNR=4.5							
PETK	**Petropavlovsk-**	**74.81**	**353**	P		**P**	**01 44 47.1**	**+0.8**
	comp=Z,6.6nm,0.8s,mb4.6,baz=188,slow=9.0,SNR=6.3							
CMAR	**Chiang Mai Arr**	**79.52**	**295**	P		**P**	**01 45 15.6**	**+2.0**
	comp=Z,4.6nm,0.8s,mb4.4,baz=130,slow=4.5,SNR=15							
CHTO	**Chiang Mai**	**79.67**	**295**	*e*P		**P**	**01 45 15.3**	**+0.9**
CHTO					pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5							
CHTO	**Chiang Mai**	**79.67**	**295**	*e*P		**P**	**01 45 15.2**	**+0.9**
	comp=Z,4.0nm,0.6s,mb4.5							
KCPM	**Cahto Peak**	**87.05**	**45**	*e*P		**P**	**01 45 52.1**	**+0.2**
SNAA	**Sanae**	**87.11**	**182**	*e*		**P**	**01 45 51.4**	**-0.4**
SNAA				*e*			01 45 55.6	
SNAA	**Sanae**	**87.11**	**182**	*e*P		**P**	**01 45 50.7**	**-1.1**
SNAA					pmax	pmax		
	comp=Z,4.0nm,1.0s							
SNAA	**Sanae**	**87.11**	**182**	*e*P		**P**	**01 45 50.7**	**-1.1**
	comp=Z,3.8nm,1.0s,mb4.6							
KIPM	**Iron Peak**	**87.18**	**45**	*e*P		**P**	**01 45 53.0**	**+0.4**
VNA3	**Neumayer Olymp**	**87.69**	**180**	*e*		**P**	**01 45 54.1**	**-0.5**
VNA3				*e*			01 45 57.9	
VNA3				*e*			01 46 05.0	
VNA2	**Neumayer--Watz**	**87.98**	**181**	*e*		**P**	**01 45 56.1**	**+0.1**
VNA2				*e*			01 45 59.9	
VNA2				*e*		pP	01 46 03.6	-0.4
VNA2				*e*			01 46 06.2	
WDC	**Whiskeytown Da**	**88.19**	**45**	*e*P		**P**	**01 45 57.0**	**-0.4**
WDC					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6							
WDC	**Whiskeytown Da**	**88.19**	**45**	*e*P		**P**	**01 45 57.0**	**-0.4**
	comp=Z,3.0nm,0.8s,mb4.6							
VNA1	**Neumayer--Stat**	**88.27**	**181**	*e*		**P**	**01 45 56.7**	**-0.6**
VNA1				*e*			01 46 01.1	
VNA1				*e*		pP	01 46 04.4	-0.9
CMB	**Columbia Colle**	**88.40**	**48**	*e*P		**P**	**01 45 57.5**	**-0.9**
CMB					pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5							
CMB	**Columbia Colle**	**88.40**	**48**	*e*P		**P**	**01 45 57.5**	**-1.0**
	comp=Z,3.4nm,0.9s,mb4.6							
ULN	**Ulaanbaatar**	**88.63**	**323**	*e*P		**P**	**01 45 59.2**	**0.0**
ULN					pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.8							
ULN	**Ulaanbaatar**	**88.63**	**323**	*e*P		**P**	**01 45 59.2**	**0.0**
	comp=Z,7.4nm,1.3s,mb4.9							
ISA	**Isabella**	**88.65**	**51**	*e*P		**P**	**01 45 59.2**	**-0.4**
ISA					pmax	pmax		
	comp=Z,17nm,1.8s,mb5.1							
ISA	**Isabella**	**88.65**	**51**	*e*P		**P**	**01 45 59.2**	**-0.4**
	comp=Z,17nm,1.8s,mb5.1							
HUMO	**Hull Mountain**	**88.95**	**43**	*e*P		**P**	**01 46 01.0**	**+0.1**
	comp=Z,4.2nm,0.9s,mb4.8							
SONM	**Songino Array**	**88.98**	**323**	P		**P**	**01 46 01.7**	**+0.8**
	comp=Z,1.0nm,0.5s,mb4.4,baz=130,slow=5.1,SNR=8.6							
MTUM	**Tungsten Hills**	**89.36**	**49**	*e*P		**P**	**01 46 03.1**	**+0.1**
GSC	**Goldstone**	**89.70**	**52**	*e*P		**P**	**01 46 04.3**	**-0.3**
PAHR	**Pah Rah Range**	**89.89**	**47**	*e*P		**P**	**01 46 05.0**	**-0.4**
	comp=Z,12nm,1.2s,mb5.1							
NVAR	**Mina Array Bea**	**90.04**	**48**	P		**P**	**01 46 06.6**	**+0.5**
	comp=Z,2.4nm,0.7s,mb4.6,baz=238,slow=10,SNR=5.6							
NVAR	**Mina Array Bea**	**90.04**	**48**	P		**P**	**01 46 06.6**	**+0.5**
GLA	**Glamis**	**90.19**	**54**	*e*P		**P**	**01 46 07.7**	**+0.7**
GLA					pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.0							
GLA	**Glamis**	**90.19**	**54**	*e*P		**P**	**01 46 07.7**	**+0.8**
	comp=Z,10nm,1.2s,mb5.0							
TPH	**Tonopah**	**90.64**	**49**	*e*P		**P**	**01 46 08.7**	**-0.2**
TPH					pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.0							
TPH	**Tonopah**	**90.64**	**49**	*e*P		**P**	**01 46 08.7**	**-0.2**
	comp=Z,7.9nm,1.1s,mb5.0							
BMW	**Boistfort Moun**	**90.74**	**40**	*e*P		**P**	**01 46 10.0**	**+0.8**
TPNV	**Topopah Spring**	**90.83**	**50**	*e*P		**P**	**01 46 09.2**	**-0.6**
TPNV					pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.7							
TPNV	**Topopah Spring**	**90.83**	**50**	*e*P		**P**	**01 46 09.2**	**-0.6**
	comp=Z,4.2nm,1.1s,mb4.7							
LDFC	**Landfair**	**90.85**	**53**	*e*P		**P**	**01 46 10.3**	**+0.4**
	comp=Z,14nm,1.3s,mb5.1							
GNW	**Green Mountain**	**91.53**	**39**	*e*P		**P**	**01 46 12.8**	**0.0**
	comp=Z,7.7nm,1.0s,mb5.0							
WVOR	**Wild Horse Val**	**91.66**	**45**	*e*P		**P**	**01 46 13.1**	**-0.4**
WVOR					pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.6							
WVOR	**Wild Horse Val**	**91.66**	**45**	*e*P		**P**	**01 46 13.1**	**-0.4**
	comp=Z,3.4nm,1.0s,mb4.6							
TUC	**Tucson**	**93.00**	**57**	*e*P		**P**	**01 46 20.3**	**+0.3**
BMO	**Blue Mountains**	**93.61**	**43**	*e*P		**P**	**01 46 22.0**	**-0.5**
BMO					pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.6							
BMO	**Blue Mountains**	**93.61**	**43**	*e*P		**P**	**01 46 22.0**	**-0.5**
	comp=Z,2.6nm,1.3s,mb4.5							
WUAZ	**Wupatki**	**93.81**	**53**	*e*P		**P**	**01 46 24.1**	**+0.4**
	comp=Z,1.7nm,0.5s,mb4.7							
HLID	**Hailey**	**94.93**	**45**	*e*P		**P**	**01 46 28.8**	**+0.2**
	comp=Z,2.1nm,1.2s,mb4.4							
PKME	**Peaks-Kenny Pk**	**126.71**	**49**	*e*PKPdf	PKPdf	01 52 08.7	-1.1	
ARCES	**ARCESS Array B**	**127.11**	**345**	PKP	PKPdf	01 52 09.1	-0.7	
	comp=Z,4.3nm,0.9s,baz=74,slow=2.3,SNR=7.0							
KIS	**Kishinev**	**139.17**	**318**	*e*PS	PS	02 05 10.0	-48	
KIS				LRM		02 56 30.0		
	comp=Z,4μm,20.0s							
DPC	**Dobruska-Polom**	**144.12**	**330**	*e*PKP	PKPdf	01 52 39.4	-2.4	
UPC	**Upice**	**144.15**	**331**	*e*PKP	PKPdf	01 52 41.3	-0.6	
PVCC	**Panska Ves**	**144.78**	**332**	*e*PKP	PKPdf	01 52 42.2	-0.8	
CLL	**Colim**	**144.86**	**334**	*i* PKPdf	PKPdf	01 52 41.6	-1.5	
	comp=Z,12nm,1.1s							
PRU	**Pruhonice**	**145.18**	**331**	*e*PKP	PKPdf	01 52 42.6	-1.1	
TREC	**Trest**	**145.24**	**330**	*e*PKP	PKPdf	01 52 43.3	-0.5	
SANT	**Santorini**	**145.28**	**304**	*e*PKPbc	PKPbc	01 52 43.0	-1.1	
ESK	**Eskdalemuir**	**145.60**	**353**	*e*PKP2	PKPab	01 52 43.4	-1.3	
NKC	**Novy Kostel**	**145.91**	**333**	*e*PKP	PKPdf	01 52 46.2	+1.3	
KHC	**Kasperske Hory**	**146.24**	**331**	*e*PKP	PKPdf	01 52 46.3	+0.8	
GEC2	**GERESS Array S**	**146.39**	**331**	*e*PKP2	PKPab	01 52 46.8	-1.2	
GERES	**GERESS Array B**	**146.39**	**331**	PKPbc	PKPbc	01 52 46.9	-0.1	
	comp=Z,4.2nm,0.7s,baz=35,slow=3.1,SNR=21							
WLF	**Walferdange**	**148.75**	**339**	*e*PKP2	PKPbc	01 52 54.0	+0.5	
GIVF	**Givet**	**148.80**	**341**	*e*PKP1	PKPbc	01 52 52.8	-0.8	
	comp=Z,52nm,1.1s							
BAIF	**Baives**	**149.03**	**341**	*e*PKP1	PKPbc	01 52 53.6	-0.6	
	comp=Z,33nm,1.2s							
BFO	**Black Forest**	**149.07**	**335**	*e*PKP2	PKPbc	01 52 53.7	-0.7	
CDF	**Champ du Feu**	**149.41**	**336**	*e*PKP1	PKPbc	01 52 54.6	-0.6	
	comp=Z,18nm,1.1s							
DAVOS	**Davos**	**149.64**	**332**	PKP2	PKPbc	01 52 56.0	+0.2	
DAVOX	**Davos/Dischmat**	**149.65**	**332**	PKPbc	PKPbc	01 52 56.0	+0.2	
	comp=Z,5.0nm,0.7s,baz=314,slow=4.9,SNR=8.1							
HINF	**Hinteralfeld**	**150.06**	**336**	*e*PKP1	PKPbc	01 52 56.0	-0.8	
HAU	**Haudompre**	**150.09**	**337**	*e*PKP1	PKPbc	01 52 55.1	-1.8	
	comp=Z,20nm,1.0s							
TUE	**Stuetta**	**150.12**	**332**	*e*PKPbc	PKPbc	01 52 56.9	-0.1	
MEZF	**Maizieres J'vi**	**150.12**	**339**	*e*PKP1	PKPbc	01 52 56.7	-0.3	
	comp=Z,44nm,1.1s							
TIP	**Timpagrande**	**150.60**	**313**	*e*PKPdf	PKPdf	01 52 54.0	+1.0	
FLN	**La Foliniere**	**151.45**	**346**	*e*PKP1	PKPbc	01 52 58.9	-1.2	
	comp=Z,34nm,0.9s							
LDF	**La Druitiere**	**151.52**	**345**	*e*PKP1	PKPbc	01 52 59.1	-1.2	
	comp=Z,72nm,1.4s							
LOR	**Lormes**	**151.59**	**339**	*e*PKP1	PKPbc	01 52 59.6	-0.9	
	comp=Z,19nm,1.0s							
GRR	**Gorron**	**151.88**	**346**	*e*PKP1	PKPbc	01 53 00.0	-1.1	
	comp=Z,59nm,1.2s							
SSF	**Saint Saulge**	**151.89**	**339**	*e*PKP1	PKPbc	01 53 00.3	-0.8	
	comp=Z,33nm,1.2s							
LPL	**La Plagne**	**151.99**	**334**	*e*PKP1	PKPbc	01 53 01.1	-0.3	
	comp=Z,15nm,1.0s							
LPG	**La Plagne**	**152.00**	**334**	*e*PKP1	PKPbc	01 53 01.2	-0.3	
	comp=Z,11nm,0.8s							
SMF	**Signal de Mont**	**152.14**	**338**	*e*PKP1	PKPbc	01 53 00.8	-0.9	
AVF	**Avril sur Loir**	**152.18**	**339**	*e*PKP1	PKPbc	01 53 00.6	-1.2	
	comp=Z,55nm,1.3s							
SGMF	**Saint Gilles**	**152.36**	**348**	*e*PKP1	PKPbc	01 53 00.9	-1.3	
	comp=Z,134nm,1.8s							
BNI	**Bardonecchia**	**152.39**	**333**	*e*PKIKP	PKPbc	01 53 02.2	-0.1	
ROSF	**Rostrenen**	**152.41**	**349**	*e*PKP1	PKPbc	01 53 00.7	-1.6	
	comp=Z,142nm,1.6s							
BGF	**Bois d'Agland**	**152.55**	**340**	*e*PKP1	PKPbc	01 53 01.6	-1.1	
	comp=Z,25nm,1.1s							
MBDF	**Montbardon**	**152.61**	**332**	*e*PKP1	PKPbc	01 53 01.8	-1.0	
	comp=Z,35nm,1.2s							
QUIF	**Quistinic**	**152.80**	**349**	*e*PKP1	PKPbc	01 53 01.6	-1.6	
ORIF	**Oris-en-Rattie**	**152.83**	**334**	*e*PKP1	PKPbc	01 53 02.4	-0.9	
	comp=Z,15nm,0.9s							
SBF	**Sospel**	**152.99**	**330**	*e*PKP1	PKPbc	01 53 02.3	-1.4	
VIVF	**Saint-Julien-l**	**153.36**	**335**	*e*PKP1	PKPbc	01 53 03.7	-0.8	
	comp=Z,25nm,1.2s							
MFF	**Saint Martin d**	**153.38**	**344**	*e*PKP1	PKPbc	01 53 02.6	-1.9	
	comp=Z,125nm,1.9s							
FRF	**La Foret Royal**	**153.59**	**331**	*e*PKP1	PKPbc	01 53 03.4	-1.6	
SMRF	**Simiane la Rot**	**153.72**	**333**	*e*PKP1	PKPbc	01 53 04.8	-0.5	
LMR	**La Mourre**	**153.83**	**331**	*e*PKP1	PKPbc	01 53 05.1	-0.5	
	comp=Z,121nm,1.5s							
RJF	**Les Rejaudoux**	**154.09**	**340**	*e*PKP1	PKPbc	01 53 05.2	-0.9	
	comp=Z,21nm,1.2s							
LASF	**Ste Croix**	**154.34**	**335**	*e*PKP1	PKPbc	01 53 05.8	-0.8	
LFF	**La Frestale**	**154.66**	**341**	*e*PKP1	PKPbc	01 53 06.4	-0.9	

*BJI **28** 01:35:49.7, 2145S×169.83E, h21km, mB6.6, mb5.8, Ms6.4, Msz6.1*

*IDC **28** 01:35:50.0±0.3, 2123S×16940E, h0km, mb5.9/26, mb1 6.0/29, mb1mx6.0/30, mbtmp5.9/29, ML5.2/2, MS6.4/28, Ms1 6.4/28, ms1mx6.2/33, Error ellipse: s-maj=10.9km s-min=10.3km az=74.0*

*NEIC **28** 01:35:52.0±0.1, 2113S×169.37E, h10km, mb6.1/121, MS6.6/207, MW6.5, Error ellipse: s-maj=4.8km s-min=4.2km az=129.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^18^Nm; Mrr3.60; Mθθ-1.30; Mφφ-2.30; Mrθ3.44; Mθφ1.17; Mφr-4.72; Best double couple: Mo6.70000×10^18^ NP1:ϕs144.00000°, δ75.00000°, λ89.00000°. NP2:ϕs328.00000°, δ15.00000°, λ93.00000°. Principal axes: T 6.9900, Plg59.0000°, Azm53.0000°; N -0.5300, Plg0.0000°, Azm144.0000°; P -6.4600, Plg30.0000°, Azm235.0000°:*

*BGS **28** 01:35:51.9±5.8, 2113S×169.37E, h10km, mb6.1(NEIC)*

*ISCJB **28** 01:35:51.3±0.1, 2118S±003×169.42E±002, h16km, mb6.0/173, MS6.5/242, Error ellipse: s-maj=3.7km s-min=2.9km az=160.9*

*GCMT **28** 01:35:52.0±0.1, 2132S×169.17E, h21km, MW6.3/117, Moment Tensor Solution. s117,c255; s114,c372; Duration: 3§4 Moment tensor: Scale 10^18^Nm; Mrr1.57±.02; Mθθ0.07±.02; Mφφ-1.65±.02; Mrθ1.16±.04; Mθφ1.00±.01; Mφr-2.67±.07; Best double couple: Mo3.44300×10^18^ NP1:ϕs334.00000°, δ16.00000°, λ87.00000°. NP2:ϕs156.00000°, δ74.00000°, λ91.00000°. Principal axes: T 3.1750, Plg61.0000°, Azm68.0000°; N 0.5320, Plg1.0000°, Azm336.0000°; P -3.7120, Plg29.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*MOS **28** 01:35:53.8±1.1, 2123S×169.35E, h33km, mb6.3/65, MS6.4/85 Error ellipse: s-maj=10.0km s-min=8.4km az=16.0*

*LDG **28** 01:35:53.6±0.2, 2109S×16825E, h10km, Mb6.4/4, Ms6.4/10, Error ellipse: s-maj=37.6km s-min=15.6km az=33.0*

*DJA **28** 01:35:53, 2158S×169.45E, h10km, Mw7.0/26*

ISC 28 01:35:53.1±0.1, 2118S±002×16948E±002, h17km, h17km±1.7km:pP-P, n1541, σ0§84/821, mb6.0/173, MS6.5/242, 264C-230D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.96**	**252**	*e*P		**Pn**	**01 36 35.2**	**-4.0**
RAO	**Raoul Island**	**13.95**	**128**	LR		LR	01 43 27.5	
	comp=Z,114μm,19.8s,baz=106,slow=33							
OUZ	**Omahuta**	**14.45**	**166**	P		**Pn**	**01 39 19.5**	**+2.7**
HNR	**Honiara**	**14.85**	**320**	Pn		**Pn**	**01 39 22.8**	**+0.5**
	19nm,0.3s,baz=201,slow=5.9,SNR=30							
HNR					LR	LR	01 43 00.8	
	comp=Z,22μm,20.1s,baz=136,slow=29							
HNR	**Honiara**	**14.85**	**320**	P		**Pn**	**01 39 22.8**	**+0.4**
HNR					pmax	pmax		
	comp=Z,19nm,0.3s							
HNR					MLR	MLR		
	comp=Z,22μm,20.2s							
HNR	**Honiara**	**14.85**	**320**	*e*Pn		**Pn**	**01 39 24.0**	**+1.7**
WCZ	**Waipu Caves**	**15.31**	**165**	P		**Pn**	**01 39 35.4**	**+7.0**
FUNA	**Funafuti**	**15.69**	**38**	*e*P		**Pn**	**01 39 35.9**	**+2.5**
	comp=Z,2μm,1.3s							
EIDS	**Eidsvold**	**17.41**	**253**	*e*Pn		**Pn**	**01 40 01.5**	**+6.3**
HIZ	**Hauiti**	**17.89**	**166**	P		**Pn**	**01 40 04.4**	**+3.3**
URZ	**Urewera**	**18.26**	**160**	P		**Pn**	**01 40 06.3**	**+0.7**
	comp=Z,4.3nm,0.3s,baz=353,slow=6.8,SNR=55							
URZ					LR	LR	01 46 04.4	
	comp=Z,80μm,19.7s,baz=138,slow=34							
PUZ	**Puketiti**	**18.47**	**158**	P		**Pn**	**01 40 10.5**	**+2.3**
ARMA	**Armidale**	**18.50**	**237**	*e*P		**Pn**	**01 40 07.9**	**-0.7**
ARMA				*e*S		**Sn**	**01 43 45.8**	**+11**
WPVZ	**Whakapapa**	**18.71**	**165**	P		**Pn**	**01 40 14.1**	**+3.0**
BKZ	**Black Stump Fm**	**18.92**	**163**	P		**Pn**	**01 40 15.3**	**+1.7**
AFI	**Afiamalu**	**19.27**	**71**	P		**Pn**	**01 40 18.3**	**+0.2**
	comp=Z,3.3nm,0.3s,baz=235,slow=7.7,SNR=39							
AFI					LR	LR	01 46 27.2	
	comp=Z,159μm,19.2s,baz=255,slow=33							
AFI	**Afiamalu**	**19.27**	**71**	*e*P		**Pn**	**01 40 18.1**	**0.0**
AFI					pmax	pmax		
	comp=Z,2μm,1.1s							
AFI	**Afiamalu**	**19.27**	**71**	*e*P		**Pn**	**01 40 18.1**	**0.0**
	comp=Z,2μm,1.1s							
QRZ	**Quartz Range**	**19.76**	**173**	*e*P		**Pn**	**01 40 22.5**	**-1.2**
MRZ	**Mangatainoka R**	**20.11**	**166**	P		**P**	**01 40 24.4**	**-1.5**
NNZ	**Nelson**	**20.25**	**171**	P		**P**	**01 40 29.8**	**+2.3**
SNZO	**South Karori**	**20.55**	**169**	*e*P		**P**	**01 40 30.5**	**-0.3**
SNZO					LR	LR		
	comp=Z,656nm,1.1s							
SNZO					smax			
	comp=Z,85μm,20.0s,MS6.1							
DSZ	**Denniston Nort**	**20.60**	**175**	P		**P**	**01 40 36.0**	**+4.7**
THZ	**Tophouse**	**20.73**	**173**	*e*P		**P**	**01 40 32.4**	**-0.3**
KHZ	**Kahutara**	**21.45**	**172**	P		**P**	**01 40 39.2**	**-1.3**
CTA	**Charters Tower**	**21.76**	**269**	*e*P		**P**	**01 40 42.9**	**-1.1**
	comp=Z,554nm,1.0s,mb5.9							
CTA				*e*S		**S**	**01 44 43.2**	**-1.0**
CTA	**Charters Tower**	**21.76**	**269**	P		**P**	**01 40 43.2**	**-0.8**
	comp=Z,480nm,1.0s,mb5.9,baz=91,slow=12,SNR=94							
CTA					S	**S**	**01 44 44.8**	**+0.6**
	comp=Z,22nm,0.8s,baz=234,slow=3.9,SNR=3.6							
CTA					P3KPbc		02 14 36.7	
	comp=Z,8.4nm,0.9s,baz=258,slow=5.5,SNR=5.9							
CTA	**Charters Tower**	**21.76**	**269**	P		**P**	**01 40 43.2**	**-0.8**
CTA					S	**S**	**01 44 44.8**	**+0.6**
CTA					pmax	pmax		
	comp=Z,480nm,1.0s							
CTA					smax			
	comp=N,22nm,0.8s							
CTAO	**Charters Tower**	**21.76**	**269**	*e*P		**P**	**01 40 44.2**	**+0.2**
CTAO					pmax	pmax		
	comp=Z,2μm,1.5s,mb6.4							
CTAO	**Charters Tower**	**21.76**	**269**	*e*P		**P**	**01 40 42.9**	**-1.1**
	comp=Z,2μm,1.5s,mb6.4							
CTAO					LR	LR		
	comp=Z,224μm,19.0s,MS6.6							
RPZ	**Rata Peaks**	**22.51**	**177**	P		**P**	**01 40 52.2**	**+0.4**
	comp=Z,124nm,1.0s,mb5.3,baz=343,slow=0.1,SNR=17							
RPZ					S	**S**	**01 44 58.9**	**+0.5**
	comp=Z,14nm,0.9s,baz=73,slow=8.3,SNR=2.2							
RPZ					LR	LR	01 48 36.8	
	comp=Z,100μm,19.8s,M

PAE ePcP PcP 01 45 27.4 -0.8
PPT Papeete 38.72 92 ePcP PcP 01 45 27.7 -0.6
comp=Z,155nm,1.0s
PPT eS **S 01 49 13.4 +0.3**
comp=Z,25μm,24.8s
PPT eLQ 01 52 14.1
comp=Z,116μm,27.2s
PPT eLR LR 01 53 55.3
comp=Z,62μm,23.8s,baz=258
PPT Papeete 38.72 92 LR LR 01 55 41.7
comp=Z,30μm,18.8s,MS6.1,baz=257,slow=31
PPT Papeete 38.72 92 eP **P 01 43 18.6 +2.0**
PPT e 01 45 27.7
PPT eS **S 01 49 13.4 +0.3**
PPT pmax pmax
comp=Z,54nm,1.0s
PPT Papeete 38.72 92 eP **P 01 43 18.6 +2.0**
comp=Z,54nm,1.0s,mb5.2
PPT ePcP PcP 01 45 27.7 -0.6
PPT eS **S 01 49 13.4 +0.3**
PPT eLQ 01 52 14.1
TIAR Tiarei 38.94 92 ePcP PcP 01 45 28.2 -0.8
comp=Z,1μm,0.9s
TIAR Tiarei 38.94 92 eP **P 01 43 20.4 +2.0**
comp=Z,524nm,0.9s,mb6.3
TIAR ePcP PcP 01 45 28.2 -0.8
TVO Taravao 38.98 92 ePcP PcP 01 45 28.5 -0.6
comp=Z,752nm,0.9s
TVO Taravao 38.98 92 eP **P 01 43 20.7 +2.0**
TVO e 01 45 28.5
TVO pmax pmax
comp=Z,266nm,1.0s,mb5.9
TVO Taravao 38.98 92 eP **P 01 43 20.7 +2.0**
comp=Z,266nm,1.0s,mb5.9
TVO ePcP PcP 01 45 28.5 -0.6
XMAS Kiritimati 39.75 59 eP **P 01 43 26.6 +1.4**
comp=Z,431nm,1.0s,mb6.1
XMAS LR LR
comp=Z,57μm,19.0s,MS6.4
MEH Mehetia 40.07 93 ePcP PcP 01 45 31.4 -1.1
comp=Z,2μm,0.9s
MEH Mehetia 40.07 93 eP **P 01 43 29.5 +1.7**
comp=Z,1μm,0.9s,mb6.7
MEH ePcP PcP 01 45 31.4 -1.1
PMOR Pomariorio Ree 40.89 89 eP **P 01 43 36.2 +1.6**
comp=Z,233nm,1.1s,mb5.7
PMOR ePcP PcP 01 45 33.9 -1.3
VAH Vaihoa 41.08 89 ePcP PcP 01 45 36.0 +0.2
comp=Z,128nm,0.9s
VAH Vaihoa 41.08 89 eP **P 01 43 37.8 +1.6**
comp=Z,177nm,1.0s,mb5.7
VAH ePcP PcP 01 45 36.0 +0.2
FITZ Fitzroy Crossi 41.31 266 eP **P 01 43 35.9 -2.1**
comp=Z,546nm,0.7s,mb6.3
FITZ Fitzroy Crossi 41.31 266 P **P 01 43 35.6 -2.5**
comp=Z,385nm,0.9s,mb6.0,baz=134,slow=10,SNR=91
FITZ PP PP 01 45 15.0 +1.6
comp=Z,46nm,0.9s,baz=95,slow=11,SNR=3.7
FITZ LR LR 02 01 13.4
comp=Z,163μm,18.3s,MS6.9,baz=102,slow=37
GUMO Guam 42.16 323 P **P 01 43 44.9 -0.1**
comp=Z,272nm,0.6s,mb6.1,baz=172,slow=14,SNR=9.6
GUMO Guam 42.16 323 P **P 01 43 44.9 -0.1**
GUMO pmax pmax
comp=Z,272nm,0.6s,mb6.1
GUMO Guam 42.16 323 eP **P 01 43 46.9 +1.9**
comp=Z,1μm,1.4s,mb6.4
GUMO LR LR
comp=Z,28μm,19.0s,MS6.2
SWI Sorong 42.39 293 P **P 01 43 47.2 +0.3**
AAI Ambon 43.71 288 P **P 01 43 59.6 +2.0**
BATI Baumata 45.29 277 P **P 01 44 10.2 0.0**
comp=Z,330nm,1.1s,mb6.1,baz=119,slow=1.6,SNR=28
BATI LR LR 02 03 01.4
comp=Z,135μm,20.5s,MS6.9,baz=142,slow=36
MBWA Marble Bar 46.23 261 eP **P 01 44 15.6 -2.0**
comp=Z,8.7nm,0.8s
MBWA LR LR
comp=Z,106μm,19.0s
KLBR Kellerberrin 47.11 246 eP **P 01 44 21.1 -3.3**
comp=Z,838nm,1.3s,mb6.5
KLBR e 01 46 13.4
NWAO Narrogin (SRO) 47.55 244 P **P 01 44 25.6 -2.3**
comp=Z,193nm,0.9s,mb6.1,baz=95,slow=7.5,SNR=41
NWAO LR LR 02 03 41.2
comp=Z,140μm,21.5s,MS6.9,baz=91,slow=35
NWAO Narrogin (SRO) 47.55 244 P **P 01 44 25.6 -2.2**
NWAO pmax pmax
comp=Z,193nm,1.0s
NWAO MLR MLR
comp=Z,140μm,21.5s
NWAO Narrogin (SRO) 47.55 244 eP **P 01 44 26.0 -1.9**
comp=Z,212nm,1.0s,mb6.1
NWAO LR LR
comp=Z,109μm,21.0s,MS6.8
MUN Mundaring 48.42 246 eP **P 01 44 33.8 -0.8**
TAOE Nuku Hiva Isla 49.98 84 eP **P 01 44 48.4 +1.7**
comp=Z,2μm,1.0s,mb7.1
TAOE eS **S 01 51 55.5 -1.4**
comp=Z,91μm,24.8s
TAOE eLQ 01 57 01.1
comp=Z,107μm,25.0s
TAOE eLR LR 01 59 08.6
comp=Z,236μm,23.2s,baz=253
TAOE Nuku Hiva Isla 49.98 84 eP **P 01 44 48.4 +1.7**
comp=Z,2μm,1.0s,mb7.1
TAOE eS **S 01 51 55.5 -1.4**
TAOE eLQ 01 57 01.1
MIDW Midway 50.72 15 PFAKE 01 45 00.0 +8.0
MIDW LR LR
comp=Z,33μm,20.0s,MS6.3
KAPI Kappang 50.78 281 P **P 01 44 51.3 -1.5**
comp=Z,1μm,1.3s,mb6.6,SNR=27
KAPI Kappang 50.78 281 P **P 01 44 51.9 -0.9**
comp=Z,138nm,1.1s,mb5.8,baz=120,slow=4.5,SNR=33
KAPI LR LR 02 07 51.3
comp=Z,16μm,18.4s,MS6.1,baz=49,slow=38
KAPI Kappang 50.78 281 eP **P 01 44 52.0 -0.9**
comp=Z,592nm,1.6s,mb6.3
KAPI LR LR
comp=Z,28μm,19.0s,MS6.3
RKT Rikitea 51.23 103 eS **S 01 52 12.6 -1.5**
comp=Z,26μm,27.0s
RKT eLQ 01 57 28.0
comp=Z,19μm,24.8s
RKT eLR LR 01 59 38.2
comp=Z,21μm,23.5s,baz=263
BIPH Bislig 51.42 300⇓ eP **P 01 44 54.2 -3.3**
DAV Davao City (W) 51.42 298 P **P 01 44 56.1 -1.5**
comp=Z,185nm,0.4s,mb6.3,baz=110,slow=9.3,SNR=7.1
DAV LR LR 02 04 49.7
comp=Z,15μm,19.2s,MS6.0,baz=266,slow=34
DAV Davao City (W) 51.42 298⇑ iP **P 01 45 02.0 +4.4**
DAV Davao City (W) 51.42 298 P **P 01 44 56.1 -1.5**
DAV LR LR 02 04 49.7
KIP Kipapa 52.92 39 eP **P 01 45 09.8 +1.3**
KIP pmax pmax
comp=Z,107nm,0.9s,mb5.8
KIP MLR MLR
comp=Z,33μm,20.0s,MS6.4
KIP Kipapa 52.92 39 eP **P 01 45 09.8 +1.2**
comp=Z,107nm,0.9s,mb5.8
KIP LR LR
comp=Z,33μm,20.0s,MS6.4
POHA Pohakuloa 53.17 42 PFAKE 01 45 20.0 +10
POHA LR LR
comp=Z,28μm,20.0s,MS6.3
PAGZ Pagadian 53.66 298 eP **P 01 45 15.3 +1.1**
MSLP Maasin 53.75 301 eP **P 01 45 15.1 +0.4**
TBP Tagbilaran 54.30 300 eP **P 01 45 19.0 +0.2**
CBIJ Chichi jima 54.78 330 P **P 01 45 21.9 -0.1**
comp=Z,381nm,1.0s,mb6.4,baz=172,slow=5.2,SNR=13
CBIJ LR LR 02 06 31.0
comp=Z,17μm,19.9s,MS6.1,baz=315,slow=34
PTCN Pitcairn Islan 55.32 106 PFAKE 01 45 40.0 +14
PTCN LR LR
comp=Z,21μm,19.0s,MS6.2
TSM Tawau 56.54 290⇓ P **P 01 45 37.7 +2.7**
SBA Scott Base 56.74 181 eP **P 01 45 34.7 -0.8**
SBA pmax pmax
comp=Z,300nm,1.0s,mb6.3
SBA Scott Base 56.74 181 eP **P 01 45 34.4 -1.0**
comp=Z,30nm,0.4s,mb5.7
SBA LR LR
comp=Z,17μm,19.0s,MS6.2
OTRP Odiongan 57.30 301 eP **P 01 45 38.6 -1.7**

SDKM Sandakan 57.78 291⇑ P **P 01 45 45.3 +1.5**
CASY Casey 58.45 204 eP **P 01 45 46.7 -0.9**
KKM Kota Kinabalu 58.83 291⇑ P **P 01 45 52.9 +1.8**
KKM Kota Kinabalu 58.83 291 eP **P 01 45 52.6 +1.5**
KKM LR LR
comp=Z,10μm,21.0s,MS5.9
BATP Bataraza 58.84 295 eP **P 01 45 51.7 +0.6**
LUBP Lubang 59.50 301 eP **P 01 45 54.2 -1.5**
BALP Baler 59.62 304 eP **P 01 45 56.1 -0.4**
SBUM Sibu 60.72 286⇓ P **P 01 46 05.4 +1.2**
XMIS Christmas Isla 61.98 269 eP **P 01 46 12.8 +0.1**
KSM Kuching 62.03 284⇓ P **P 01 46 13.6 +0.6**
KSM Kuching 62.03 284 eP **P 01 46 13.5 +0.5**
JOW Kunigami 62.21 318 P **P 01 46 14.2 +0.2**
comp=Z,147nm,0.9s,mb6.1,baz=154,slow=8.2,SNR=29
MJAR Matsushiro Arr 64.56 332 P **P 01 46 29.0 -0.3**
comp=Z,130nm,1.0s,mb5.9,baz=170,slow=7.2,SNR=42
MJAR LR LR 02 11 35.9
comp=Z,12μm,20.5s,MS6.1,baz=155,slow=33
MJAR PKPPKP 02 15 23.0
comp=Z,8.1nm,1.1s,baz=327,slow=3.4,SNR=6.4
MJAR Matsushiro Arr 64.56 332 P **P 01 46 29.0 -0.3**
MJAR LR LR 02 11 35.9
MJAR P'P' 02 15 23.0
MAJO Matsushiro 64.56 332 eP **P 01 46 28.6 -0.7**
MAJO pmax pmax
comp=Z,184nm,0.9s,mb6.1
MAJO MLR MLR
comp=Z,13μm,21.0s,MS6.1
MAJO Matsushiro 64.56 332 eP **P 01 46 28.6 -0.7**
comp=Z,184nm,0.9s,mb6.1
MAJO LR LR
comp=Z,13μm,21.0s,MS6.1
MAT Matsushiro 64.56 332 P **P 01 46 28.9 -0.4**
MAT S **S 01 55 07.0 -1.1**
NACB Ninganchiao 64.82 312 eP **P 01 46 31.4 +0.1**
comp=Z,2μm,1.4s,mb7.0
YHNB Yeheng 65.29 312 eP **P 01 46 34.9 +0.6**
comp=Z,390nm,1.1s,mb6.3
YHNB LR LR
comp=Z,10μm,21.0s,MS6.0
MIR Mirnyy 65.38 205⇓ iP **P 01 46 34.0 -0.3**
MIR i 01 47 08.0
MIR iS S 01 55 20.0 +2.5
MIR pmax pmax
comp=Z,600nm,1.5s,mb6.4
TATO Taipei 65.41 312⇑ P **P 01 46 36.6 +1.6**
SNR=10
TATO Taipei 65.41 312 eP **P 01 46 35.2 +0.2**
comp=Z,671nm,1.3s,mb6.5
TATO LR LR
comp=Z,14μm,20.0s,MS6.2
ERM Erimo 67.42 339 P **P 01 46 49.7 +2.1**
comp=Z,731nm,0.7s,mb6.8,SNR=6.4
ERM Erimo 67.42 339 eP **P 01 46 49.7 +2.1**
ERM pmax pmax
comp=Z,87nm,0.8s,mb5.8
ERM MLR MLR
comp=Z,25μm,19.0s,MS6.5
ERM Erimo 67.42 339 eP **P 01 46 49.7 +2.2**
comp=Z,87nm,0.8s,mb5.8
ERM LR LR
comp=Z,25μm,19.0s,MS6.5
QZH Quanzhou 67.42 310⇑ iP **P 01 46 48.3 +0.3**
QZH S S 01 55 44.0 +0.6
QZH AMB AMB
comp=Z,310nm,1.4s,mb6.2
QZH AMB AMB
comp=Z,5μm,5.4s
QZH LR LR
comp=N,4μm,9.3s
QZH LR LR
comp=E,9μm,14.2s
QZH LR LR
comp=Z,14μm,17.4s,MS6.2
MYKOM Kota Tinggi 68.05 281⇑ P **P 01 46 52.9 +0.7**
YUK Yuzh-Kuril'sk 68.41 342 eP **P 01 46 55.0 +1.3**
YUK S S 01 55 53.0 -1.4
YUK pmax pmax
comp=Z,310nm,0.6s,mb6.5
YUK pmax pmax
comp=N,370nm,0.7s
YUK pmax pmax
comp=E,630nm,0.7s
YUK pmax pmax
comp=Z,6μm,6.0s
YUK smax
comp=E,6μm,9.0s
KGM Kluang 68.62 281⇓ P **P 01 46 57.7 +1.9**
QSPA South Pole Qui 68.89 180 P **P 01 46 54.7 -1.6**
comp=E,322nm,1.1s,mb6.2,baz=12,slow=3.0,SNR=58
QSPA LR LR 02 13 55.4
comp=E,25μm,19.2s,MS6.5,baz=224,slow=33
QSPA PKPPKP 02 15 06.9
comp=E,38nm,1.1s,baz=216,slow=3.0,SNR=11
ASAJ Asahikawa 69.48 340 P **P 01 47 00.7 +0.3**
comp=E,579nm,0.9s,mb6.5,baz=226,slow=11,SNR=39
ASAJ LR LR 02 14 25.2
comp=E,34μm,20.0s,MS6.6,baz=170,slow=33
SSE Sheshan 69.63 317⇑ P **P 01 47 03.0 +1.4**
SSE PCP PcP 01 47 25.0 +0.5
SSE S S 01 56 10.8 +1.4
SSE ScS ScS 01 57 04.3 +1.6
SSE AMB AMB
comp=Z,84nm,1.3s,mb5.5
SSE AMB AMB
comp=Z,3μm,7.9s
SSE LR LR
comp=N,2μm,20.4s,MS6.0
SSE LR LR
comp=E,8μm,20.4s,MS6.0
SSE LR LR
comp=Z,9μm,19.5s,MS6.0
SSE Sheshan 69.63 317⇑ P **P 01 47 03.0 +1.4**
comp=Z,84nm,1.3s,mb5.5
SSE sP sP 01 47 08.4 -0.8
SSE PcP PcP 01 47 24.9 +0.4
SSE S S 01 56 10.7 +1.3
SSE sS sS 01 56 15.6 -2.9
SSE ScS ScS 01 57 04.2 +1.5
SSE LR LR
comp=Z,9μm,19.5s,MS6.0
COCO West Island 69.66 264 eP **P 01 47 03.4 +1.2**
comp=Z,89nm,0.9s,mb5.7
COCO LR LR
comp=Z,17μm,19.0s,MS6.3
KTGM Kuala Trenggan 70.14 284⇓ P **P 01 47 06.9 +1.7**
GZH Guangzhou 70.19 306 P **P 01 47 07.0 +1.8**
GZH S S 01 56 20.5 +4.2
GZH LR LR
comp=N,4μm,17.0s,MS6.0
GZH LR LR
comp=E,6μm,17.1s,MS6.0
GZH LR LR
comp=Z,10μm,18.8s,MS6.1
KSRS Korea Array 70.22 326 P **P 01 47 06.1 +1.0**
comp=Z,30nm,1.1s,mb5.1,baz=140,slow=5.9,SNR=26
KSRS PKPPKP 02 15 05.0
comp=Z,7.9nm,1.0s,baz=320,slow=4.3,SNR=12
FRIM Kepong 70.66 281⇓ P **P 01 47 09.7 +1.3**
QIZ Qiongzhong 70.73 300 P **P 01 47 09.0 +0.4**
QIZ PP PP 01 49 45.5 -0.2
QIZ S S 01 56 26.3 +3.5
QIZ SS SS 02 00 58.0 +2.6
QIZ AMB AMB
comp=Z,145nm,1.3s,mb5.8
QIZ AMB AMB
comp=Z,4μm,10.6s
QIZ LR LR
comp=N,9μm,17.5s
QIZ LR LR
comp=Z,8μm,22.8s
QIZ Qiongzhong 70.73 300 eP **P 01 47 08.3 -0.3**
comp=Z,234nm,1.3s,mb6.0
QIZ LR LR
comp=Z,9μm,22.0s,MS6.0
INCN Inchon 70.93 325 P **P 01 47 12.4 +3.0**
SNR=15
INCN Inchon 70.93 325 eP **P 01 47 09.8 +0.4**
comp=Z,338nm,1.2s,mb6.2
INCN LR LR
comp=Z,8μm,19.0s,MS6.0
NJ2 Nanjing 71.75 316 eP **P 01 47 16.3 +1.8**
NJ2 AP pP 01 47 20.5 +0.4
NJ2 XP sP 01 47 23.3 +1.2
NJ2 PP PP 01 49 57.5 +3.3
NJ2 S S 01 56 34.0 -0.1
NJ2 AMB AMB
comp=Z,120nm,1.3s,mb5.7
NJ2 AMB AMB
comp=Z,1μm,7.8s
NJ2 LR LR
comp=N,18μm,17.0s,MS6.6
NJ2 LR LR
comp=E,21μm,18.2s,MS6.6
NJ2 LR LR
comp=Z,15μm,16.6s,MS6.3
YSS Yuzh-Sakhalins 71.97 341⇓ eP **P 01 47 14.1 -1.4**
YSS e*SP sP 01 47 33.0 +10
YSS e 01 49 58.0
YSS ePPP 01 51 44.0
YSS eS S 01 56 35.0 -1.0
YSS pmax pmax
comp=Z,820nm,1.0s,mb6.6
YSS pmax pmax
comp=N,170nm,0.9s
YSS pmax pmax
comp=Z,6μm,6.0s
YSS pmax pmax
comp=Z,4μm,11.0s
YSS pmax pmax
comp=N,3μm,15.0s
YSS smax
comp=E,20μm,10.0s
YSS MLR MLR
comp=N,20μm,18.0s,MS6.5
YSS MLR MLR
comp=E,13μm,18.0s,MS6.5
YSS Yuzh-Sakhalins 71.97 341⇑ eP **P 01 47 15.9 +0.4**
SKR Severo-Kuril's 72.51 351 eP **P 01 47 20.0 +1.4**
SKR e pP 01 47 26.5 +2.3
SKR S S 01 56 41.0 -1.0
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.0
SKR smax
comp=E,24μm,12.0s
SKR MLR MLR
comp=Z,8μm,16.0s,MS6.1
VLA Vladivostok 72.72 332 eP **P 01 47 20.2 +0.1**
VLA Vladivostok 72.72 332 eP **P 01 47 20.2 +0.1**
RPN Rapa Nui 73.13 113 LR LR 02 12 23.7
comp=Z,44340μm,19.6s,baz=260,slow=30
SNG Songkhla 73.18 285 P **P 01 47 25.0 +1.6**
comp=Z,180nm,0.8s,mb6.0
SMY Shemya 73.70 3 PFAKE 01 47 40.0 +14
SMY LR LR
comp=Z,27μm,21.0s,MS6.5
ADK Adak 73.75 9 eP **P 01 47 26.2 +0.3**
ADK pmax pmax
comp=Z,302nm,1.1s,mb6.1
ADK MLR MLR
comp=Z,23μm,20.0s,MS6.5
ADK Adak 73.75 9 eP **P 01 47 26.2 +0.3**
comp=Z,302nm,1.1s,mb6.1
ADK LR LR
comp=Z,23μm,20.0s,MS6.5
WHN Wuhan 73.81 313⇓ P **P 01 47 27.3 +0.5**
WHN AMB AMB
comp=Z,308nm,1.0s,mb6.2
WHN LR LR
comp=N,7μm,15.8s,MS6.2
WHN LR LR
comp=E,5μm,16.6s,MS6.2
WHN LR LR
comp=Z,9μm,16.4s,MS6.1
PET Petropavlovsk 74.48 353 eP **P 01 47 31.2 +1.0**
PET eS S 01 57 07.0 +2.8
PET pmax pmax
comp=Z,152nm,1.5s,mb5.7
PET smax
comp=E,17μm,15.7s
PET Petropavlovsk 74.48 353⇑ eP **P 01 47 30.3 +0.1**
PEA0B Petropavlovsk- 74.67 353 eP **P 01 47 31.3 0.0**
PETK Petropavlovsk- 74.67 353 P **P 01 47 31.3 0.0**
comp=E,80nm,0.7s,mb5.7,baz=135,slow=6.8,SNR=41
PETK LR LR 02 16 13.4
comp=E,20μm,19.5s,MS6.4,baz=156,slow=32
DL2 Dalian 74.69 323 P **P 01 47 34.3 +2.6**
DL2 AMB AMB
comp=Z,150nm,1.1s,mb5.8
DL2 AMB AMB
comp=Z,3μm,6.6s
DL2 LR LR
comp=N,4μm,16.7s,MS5.8
DL2 LR LR
comp=E,2μm,16.6s,MS5.8
DL2 LR LR
comp=Z,5μm,18.9s,MS5.9
MDJ Mudanjiang 74.92 332 P **P 01 47 35.0 +2.1**
MDJ AP pP 01 47 38.3 -0.2
MDJ PCP PcP 01 47 48.0 +1.3
MDJ PP PP 01 50 23.0 +2.0
MDJ AMB AMB
comp=Z,117nm,1.1s,mb5.7
MDJ AMB AMB
comp=Z,6μm,8.5s
MDJ LR LR
comp=N,9μm,21.4s,MS6.2
MDJ LR LR
comp=E,7μm,19.4s,MS6.2
MDJ LR LR
comp=Z,14μm,19.8s,MS6.3
MDJ Mudanjiang 74.92 332 eP **P 01 47 34.3 +1.4**
comp=Z,251nm,1.1s,mb6.1
MDJ LR LR
comp=Z,15μm,20.0s,MS6.3
TIA Tai'an 75.53 319 eP **P 01 47 36.8 +0.1**
TIA AMB AMB
comp=Z,90nm,1.0s,mb5.7
SNY Shenyang 75.71 326⇓ P **P 01 47 39.0 +1.5**
SNY S S 01 57 23.0 +4.6
SNY AMB AMB
comp=Z,98nm,2.5s,mb5.3
SNY AMB AMB
comp=Z,4μm,12.0s
SNY LR LR
comp=N,6μm,20.1s
SNY LR LR
comp=Z,8μm,19.2s,MS6.1
HABR Khabarovsk 75.86 337⇑ eP **P 01 47 38.6 +0.4**
HABR e 01 47 47.6
HABR e 01 47 49.3
HABR e 01 47 51.3
HABR e 01 50 26.5
HABR e 01 52 12.8
HABR eS S 01 57 20.4 +0.6
HABR e 01 57 35.8
HABR e 01 57 48.9
HABR e 02 02 11.1
HABR pmax pmax
comp=Z,334nm,1.0s,mb6.2
NIKO Nikolski 76.20 13 eP **P 01 47 39.4 -0.7**
comp=Z,325nm,0.7s,mb6.4
CN2 Changchun 76.22 329 eP **P 01 47 39.3 -1.1**
CN2 PP PP 01 50 38.5 +6.5
CN2 eS S 01 57 28.8 +4.9
CN2 SS SS 02 02 19.5 +1.1
CN2 AMB AMB
comp=Z,80nm,0.8s,mb5.7
CN2 AMB AMB
comp=Z,200nm,3.0s
MAW Mawson 76.73 202 eP **P 01 47 42.7 -0.4**
comp=Z,82nm,1.0s,mb5.6
MAW Mawson 76.73 202 P **P 01 47 43.3 +0.3**
comp=Z,127nm,1.1s,mb5.8,baz=107,slow=7.6,SNR=51
MAW LR LR 02 17 54.6
comp=Z,30μm,19.0s,MS6.6,baz=94,slow=33
MAW Mawson 76.73 202 eP **P 01 47 42.7 -0.4**
MAW pmax pmax
comp=Z,82nm,1.0s
GYA Guiyang 77.11 305⇓ iP **P 01 47 45.3 -0.5**
GYA PP PP 01 50 43.0 +3.2
GYA S S 01 57 37.3 +2.9
GYA SKS 01 57 53.0
GYA SS SS 02 02 40.3 +7.9
GYA AMB AMB
comp=Z,180nm,1.1s,mb5.9
GYA AMB AMB
comp=Z,6μm,12.0s
GYA LR LR
comp=N,8μm,18.9s,MS6.1
GYA LR LR

comp=E,5µm,18.0s,MS6.1
GYA LR LR
comp=Z,6µm,17.6s,MS6.0
NST Nakhon Sawan 77.25 292 P **P** **01 47 49.0 +2.2**
comp=Z,108nm,1.0s,mb5.7
UNV Unalaska Valle 77.54 14 *e*P **P** **01 47 45.7 -1.9**
comp=Z,139nm,0.9s,mb5.9
BJT Baijiatuan 78.57 321 *e*P **P** **01 47 54.7 +1.1**
BJT pmax pmax
comp=Z,532nm,1.6s
BJT MLR MLR
comp=Z,9µm,20.0s
BJT Baijiatuan 78.57 321 *e*P **P** **01 47 54.7 +1.0**
comp=Z,532nm,1.6s,mb6.2
BJT LR LR
comp=Z,9µm,20.0s,MS6.1
BJI Beijing 78.58 321 P **P** **01 47 54.3 +0.6**
BJI PP PP 01 50 56.0 +4.1
BJI AMB AMB
comp=Z,52nm,1.5s,mb5.2
BJI AMB AMB
comp=Z,2µm,6.0s
BJI LR LR
comp=N,7µm,19.0s,MS6.1
BJI LR LR
comp=E,5µm,18.1s,MS6.1
BJI LR LR
comp=Z,9µm,25.8s
BJI Beijing 78.58 321 P **P** **01 47 54.2 +0.5**
BJI 01 50 56.0
BJI S S 01 57 53.3 +3.6
BJI SS SS 02 02 54.3 +0.2
BJI pmax pmax
comp=Z,52nm,1.5s,mb5.2
BJI MLR MLR
comp=Z,9µm,25.8s,MS6.0
BJI Beijing 78.58 321 P **P** **01 47 54.2 +0.5**
comp=Z,52nm,1.5s,mb5.2
BJI PP PP 01 50 56.0 +4.1
BJI S S 01 57 53.3 +3.6
BJI SS SS 02 02 54.3 +0.2
BJI LR LR
comp=Z,9µm,25.8s,MS6.0
BDT Bhumibol Dam 78.91 293 P **P** **01 47 56.0 0.0**
comp=Z,44nm,1.1s,mb5.3
TIY Taiyuan 79.40 317 *e*P **P** **01 48 03.0 +4.7**
TIY S S 01 58 05.3 +6.7
TIY LR LR
comp=N,6µm,16.9s,MS6.1
TIY LR LR
comp=E,4µm,15.6s,MS6.1
TIY LR LR
comp=Z,11µm,17.6s,MS6.2
CHRT Chiangrai 79.43 296 P **P** **01 47 59.0 +0.2**
comp=Z,1µm,1.0s,mb6.8
KMI Kunming 79.48 302 P **P** **01 48 00.0 +1.0**
KMI PP PP 01 51 03.5 +3.8
KMI AMB AMB
comp=Z,253nm,1.5s,mb5.9
KMI AMB AMB
comp=Z,5µm,7.6s
KMI LR LR
comp=N,5µm,18.5s,MS6.1
KMI LR LR
comp=E,6µm,17.8s,MS6.1
KMI LR LR
comp=Z,6µm,16.2s,MS6.0
KMI Kunming 79.48 302 P **P** **01 47 59.9 +0.9**
KMI *SP sP 01 48 04.3 -2.4
KMI 01 51 03.5
KMI PPP 01 52 54.1
KMI S S 01 57 59.6 -0.4
KMI *SS sS 01 58 05.1 -4.1
KMI 01 58 13.0
KMI PS 01 58 47.5
KMI SSS 02 06 30.3
KMI pmax pmax
comp=Z,253nm,1.5s,mb5.9
KMI MLR MLR
comp=Z,6µm,16.2s,MS6.0
KMI Kunming 79.48 302 P **P** **01 47 59.9 +0.9**
comp=Z,253nm,1.5s,mb5.9
KMI pP pP 01 48 02.5 -2.1
KMI sP sP 01 48 04.3 -2.4
KMI PP PP 01 51 03.5 +3.8
KMI PPP 01 52 54.1
KMI S S 01 57 59.6 -0.4
KMI sS sS 01 58 05.1 -4.1
KMI SKS 01 58 13.0
KMI PS 01 58 47.5
KMI SSS 02 06 30.3
KMI LR LR
comp=Z,6µm,16.2s,MS6.0
CM31 Chiang Mai Arr 79.50 294 *e*P **P** **01 48 02.0 +2.8**
CM31 LR LR
comp=Z,8µm,19.0s,MS6.1
CMAR Chiang Mai Arr 79.50 294 P **P** **01 47 59.2 0.0**
comp=Z,63nm,0.9s,mb5.5,baz=136,slow=5.8,SNR=32
CMAR PKKPbc PKKPbc 02 06 47.0 -1.0
comp=Z,2.5nm,0.4s,baz=286,slow=3.4,SNR=7.5
CMAR PKPPKP 02 14 43.8
comp=Z,1.2nm,0.4s,baz=316,slow=3.9,SNR=6.7
CMAR Chiang Mai Arr 79.50 294 *i* P **P** **01 47 59.8 +0.6**
XAN Xi'an 79.58 313 P **P** **01 48 00.5 +1.2**
XAN AMB AMB
comp=Z,212nm,1.5s,mb5.8
CHG Chiang Mai 79.66 295 ⇓P **P** **01 48 00.0 -0.1**
comp=Z,236nm,1.0s,mb6.1
CHTO Chiang Mai 79.66 295 P **P** **01 48 00.1 +0.1**
SNR=86
CHTO Chiang Mai 79.66 295 *e*P **P** **01 47 59.3 -0.8**
CHTO pmax pmax
comp=Z,262nm,1.1s,mb6.1
CHTO MLR MLR
comp=Z,8µm,20.0s,MS6.0
CHTO Chiang Mai 79.66 295 *e*P **P** **01 47 59.3 -0.8**
comp=Z,262nm,1.1s,mb6.1
CHTO LR LR
comp=Z,8µm,20.0s,MS6.0
PAF Port-aux-Franc 80.01 221 *e*P **P** **01 48 02.7 +1.2**
SDPT Sand Point 80.41 17 *e*P **P** **01 48 03.0 -0.3**
comp=Z,120nm,0.8s,mb5.9
CD2 Chengdu 81.59 308 ⇓ *i* P **P** **01 48 11.3 +1.1**
CD2 AP pP 01 48 16.5 +0.7
CD2 XP sP 01 48 19.0 +1.1
CD2 PP PP 01 51 21.0 +3.9
CD2 AMB AMB
comp=Z,170nm,1.2s,mb5.8
CD2 LR LR
comp=N,10µm,19.2s,MS6.3
CD2 LR LR
comp=E,9µm,19.2s,MS6.3
CD2 LR LR
comp=Z,9µm,22.8s,MS6.0
HHC Hu-ho-hao-te 81.83 320 *e*P **P** **01 48 12.8 +1.6**
HHC AP pP 01 48 16.0 -0.9
HHC XP sP 01 48 18.0 -0.9
HHC PP PP 01 51 22.8 +3.9
HHC AMB AMB
comp=Z,74nm,1.2s,mb5.5
HHC AMB AMB
comp=Z,5µm,7.2s
HHC LR LR
comp=N,5µm,16.3s,MS6.2
HHC LR LR
comp=E,7µm,16.2s,MS6.2
HHC LR LR
comp=Z,8µm,16.8s,MS6.2
HIA Hailar 82.89 330 *e*P **P** **01 48 16.9 +0.4**
SYO Syowa Base 83.14 196 ⇑ *e*P **P** **01 48 13.6 -4.1**
SYO Syowa Base 83.14 196 ⇓ *e*IX 01 48 16.6
SYO Syowa Base 83.14 196 ⇓ *i*/PP PP 01 51 28.8 +0.5
OHAK Old Harbor 84.10 19 *e*P **P** **01 48 20.5 -2.1**
comp=Z,256nm,1.1s,mb6.3
LZH Lanzhou 84.19 312 ⇑P **P** **01 48 25.5 +1.9**
LZH AP pP 01 48 32.3 +3.1
LZH XP sP 01 48 35.0 +3.8
LZH AMB AMB
comp=Z,441nm,1.3s,mb6.4
LZH AMB AMB
comp=Z,2µm,6.3s
LZH LR LR
comp=E,7µm,16.0s
LZH LR LR
comp=Z,11µm,19.5s,MS6.3
LZH Lanzhou 84.19 312 ⇑P **P** **01 48 25.6 +2.0**
LZH *SP sP 01 48 35.1 +3.9
LZH 01 58 50.0
LZH pmax pmax
comp=Z,441nm,1.3s,mb6.4
LZH MLR MLR
comp=Z,11µm,19.5s,MS6.3
LZH Lanzhou 84.19 312 ⇑P **P** **01 48 25.6 +2.0**
comp=Z,441nm,1.3s,mb6.4
LZH pP pP 01 48 32.2 +3.0
LZH sP sP 01 48 35.1 +3.9
LZH SKS 01 58 50.0
LZH S S 01 58 57.0 +9.0
LZH sS sS 01 59 04.0 +6.6
LZH SS SS 02 04 30.0 +12
LZH LR LR
comp=Z,11µm,19.5s,MS6.3
KDAK Kodiak Island 84.78 19 P **P** **01 48 28.0 +2.0**
comp=Z,786nm,1.2s,mb6.7,SNR=8.7
KDAK Kodiak Island 84.78 19 P **P** **01 48 25.9 -0.1**
comp=Z,109nm,1.1s,mb5.9,baz=193,slow=2.8,SNR=15
KDAK LR LR 02 23 07.5
comp=Z,28µm,18.9s,MS6.7,baz=123,slow=33
KDAK Kodiak Island 84.78 19 *e*P **P** **01 48 26.8 +0.8**
comp=Z,216nm,1.3s,mb6.1
KDAK LR LR
comp=Z,7µm,19.0s,MS6.1
SEY Seymchan 84.91 352 ⇑ *e*P **P** **01 48 25.5 -1.0**
PMSA Palmer Station 85.03 160 *e*P **P** **01 48 27.6 +0.3**
comp=Z,202nm,1.1s,mb6.2
PMSA LR LR
comp=Z,10µm,19.0s,MS6.2
CLNS Chul'man 86.26 337 *e*P **P** **01 48 35.8 +2.4**
CLNS *e* pP 01 48 41.6 +2.5
CLNS *e* 01 51 56.9
CLNS *e*PPP 01 53 47.4
CLNS *e*S S 01 58 58.3 -9.2
CLNS *e*SSS 02 04 40.9
CLNS pmax pmax
comp=E,73nm,1.2s
CLNS pmax pmax
comp=Z,622nm,1.2s,mb6.7
CLNS pmax pmax
comp=N,413nm,1.3s
CLNS smax
comp=E,7861µm,16.5s
CLNS smax
comp=N,3094µm,11.0s
FARB Farallon Islan 86.31 47 ⇑P **P** **01 48 34.1 0.0**
baz=87
IMP Imphal 86.44 298 *e*P **P** **01 48 33.0 -2.1**
MCCM Marconi Confer 86.62 47 ⇓P **P** **01 48 35.6 0.0**
baz=87
MCCM Marconi Confer 86.62 47 *e*P **P** **01 48 36.4 +0.7**
comp=N,192nm,1.0s,mb6.3
MCCM LR LR
comp=Z,27µm,19.0s,MS6.7
SNCC San Nicolas Is 86.64 53 ⇓P **P** **01 48 35.7 -0.1**
baz=87,SNR=11
SNCC San Nicolas Is 86.64 53 *e*P **P** **01 48 36.4 +0.6**
comp=Z,270nm,1.1s,mb6.4
SNCC LR LR
comp=Z,16µm,19.0s,MS6.4
JRSC Jasper Ridge 86.69 48 ⇑P **P** **01 48 35.8 -0.2**
baz=87
SVW2 Sparrevohn 86.69 16 *e*P **P** **01 48 36.4 +0.9**
V03C Hunter Liggett 86.72 49 ⇓P **P** **01 48 36.9 +0.7**
baz=87,SNR=56
BSC Santa Cruz Isl 86.91 52 ⇓P **P** **01 48 37.2 0.0**
baz=87,SNR=11
HOPS Hopland 86.92 46 ⇑P **P** **01 48 37.3 +0.3**
baz=87,SNR=53
HOPS Hopland 86.92 46 *e*P **P** **01 48 37.5 +0.4**
comp=Z,263nm,1.1s,mb6.4
HOPS LR LR
comp=Z,25µm,19.0s,MS6.6
KCPM Cahto Peak 86.92 45 *e*P **P** **01 48 36.9 -0.2**
SAO San Andreas Ge 86.93 49 *e*P **P** **01 48 36.8 -0.4**
SAO pmax pmax
comp=Z,183nm,1.0s,mb6.3
SAO MLR MLR
comp=Z,24µm,19.0s,MS6.6
SAO San Andreas Ge 86.93 49 *e*P **P** **01 48 36.8 -0.4**
comp=Z,183nm,1.0s,mb6.3
SAO LR LR
comp=Z,24µm,19.0s,MS6.6
NVL N'lazarevskaya 86.97 187 *e*P **P** **01 48 36.6 -0.3**
NVL *e*S S 01 59 04.1 -10
NVL pmax pmax
comp=Z,172nm,1.3s,mb6.1
MAIT Maitri 86.98 187 *e*P **P** **01 48 35.8 -1.1**
O01C Eel River Cons 87.00 45 ⇓P **P** **01 48 37.6 +0.2**
baz=87,SNR=55
CVS Carmenet Viney 87.01 47 ⇓P **P** **01 48 37.5 0.0**
baz=87
KIPM Iron Peak 87.06 45 *e*P **P** **01 48 37.6 -0.2**
SBC Santa Barbara 87.06 51 ⇑P **P** **01 48 37.7 -0.2**
baz=87
WENL Wente Vineyard 87.13 48 ⇑P **P** **01 48 38.1 -0.1**
baz=87
PACP Pacheco Peak 87.16 49 ⇓P **P** **01 48 38.5 +0.1**
baz=87,SNR=34
PKD Parkfield 87.17 50 ⇑P **P** **01 48 38.6 +0.2**
baz=87,SNR=145
PKM Peak Mountain 87.19 51 ⇑P **P** **01 48 38.7 +0.2**
baz=87,SNR=75
U04C Hernandez Rese 87.20 49 ⇑P **P** **01 48 38.8 +0.2**
baz=88,SNR=109
JCC Jacoby Creek 87.21 44 ⇑P **P** **01 48 38.8 +0.3**
baz=88,SNR=15
BDM Black Diamond 87.22 47 ⇓P **P** **01 48 39.0 +0.4**
baz=88,SNR=11
SCI San Clemente I 87.24 53 ⇑P **P** **01 48 38.8 -0.1**
baz=88,SNR=16
SNAA Sanae 87.25 182 *e*P **P** **01 48 35.8 -2.4**
SNAA *e* pP 01 48 39.2 -4.7
SNAA *e* pP 01 48 42.4 -1.5
SNAA *e* 01 48 47.8
SNAA Sanae 87.25 182 ⇑ *e*P **P** **01 48 36.0 -2.2**
SNAA Sanae 87.25 182 *e*P **P** **01 48 35.5 -2.7**
comp=Z,413nm,1.1s,mb6.6
SMMC Simmler 87.26 51 ⇓P **P** **01 48 39.7 +0.8**
baz=88,SNR=17
MNRC McLaughlin Nat 87.28 46 ⇓P **P** **01 48 39.8 +1.0**
baz=88,SNR=85
BLG Laguna Peak 87.38 52 ⇑P **P** **01 48 39.1 -0.4**
baz=88,SNR=5.1
Q03C Winters 87.45 47 ⇑P **P** **01 48 40.5 +0.8**
baz=88,SNR=21
GASB Alder Springs 87.49 46 ⇓P **P** **01 48 41.2 +1.4**
baz=88,SNR=149
CIS Catalina Islan 87.54 53 ⇑P **P** **01 48 40.5 +0.3**
baz=88,SNR=8.8
V05C Boulder Hill, 87.59 50 ⇑P **P** **01 48 41.4 +0.9**
baz=88,SNR=7.9
SEW Seward 87.61 19 *e*P **P** **01 48 42.1 +2.2**
KRMB Red Mountain 87.65 44 *e*P **P** **01 48 40.7 +0.1**
U05C Westside ANR, 87.66 50 ⇑P **P** **01 48 41.4 +0.7**
baz=88
CIT Chita 87.66 329 *e*P **P** **01 48 42.2 +1.8**
CIT *e* 01 48 59.4
CIT *e* 01 59 09.8
M01C Crescent City 87.68 43 ⇑P **P** **01 48 41.4 +0.7**
baz=88,SNR=12
N02C Big Bar 87.69 44 ⇓P **P** **01 48 41.3 +0.5**
baz=88,SNR=64
O02C Red Bluff 87.70 45 ⇑P **P** **01 48 41.2 +0.4**
baz=88,SNR=213
SLKM Skilak Lake 87.70 19 *e*P **P** **01 48 39.7 -0.6**
FMP Fort Macarthur 87.76 53 ⇑P **P** **01 48 41.3 -0.1**
baz=88
KBO Bosley Butte 87.81 43 *e*P **P** **01 48 43.6 +2.3**
VNA3 Neumayer Olymp 87.83 180 *e*P **P** **01 48 38.3 -2.7**
VNA3 *e* pP 01 48 42.0 -4.7
VNA3 *e* pP 01 48 45.2 -1.5
VNA3 *e* 01 48 50.9
OSI Osito Adit 87.86 52 ⇓P **P** **01 48 42.4 +0.6**
baz=88
K01A Sixes 87.96 42 ⇑P **P** **01 48 43.4 +1.3**
baz=88,SNR=5.3
DECC Green Verdugo 87.98 52 ⇓P **P** **01 48 42.3 -0.1**
baz=88,SNR=6.6
Q04C Lincoln 87.99 47 ⇓P **P** **01 48 42.8 +0.5**
baz=88,SNR=8.1
S05C Merced 87.99 49 ⇑P **P** **01 48 42.5 +0.2**
baz=88,SNR=38
R04C Big Horse Ranc 88.01 48 ⇑P **P** **01 48 42.5 +0.1**
baz=88,SNR=8.5
ARVC Arvin 88.02 51 ⇓P **P** **01 48 43.0 +0.5**
baz=88,SNR=27
WDC Whiskeytown Da 88.06 45 *e*P **P** **01 48 42.0 -0.6**
WDC pmax pmax
comp=Z,333nm,1.4s,mb6.4
WDC MLR MLR
comp=Z,24µm,20.0s,MS6.6
WDC Whiskeytown Da 88.06 45 ⇑P **P** **01 48 43.1 +0.5**
baz=88,SNR=85
WDC Whiskeytown Da 88.06 45 *e*P **P** **01 48 42.0 -0.6**
comp=Z,333nm,1.4s,mb6.4
WDC LR LR
comp=Z,24µm,20.0s,MS6.6
KEBM Edson Butte 88.08 42 *e*P **P** **01 48 44.1 +1.6**
VNA2 Neumayer--Watz 88.12 181 *e*P **P** **01 48 40.2 -2.2**
VNA2 *e* pP 01 48 43.8 -4.3
VNA2 *e* pP 01 48 46.8 -1.3
VNA2 *e* 01 48 52.5
TTA Tatalina 88.14 15 *e*P **P** **01 48 44.3 +1.9**
TTA pmax pmax
comp=Z,92nm,1.3s,mb5.8
TTA Tatalina 88.14 15 *e*P **P** **01 48 44.3 +2.0**
comp=Z,92nm,1.3s,mb5.8
OHCM Honcut 88.16 46 *e*P **P** **01 48 42.2 -0.8**
VES Vestal, Richgr 88.17 50 ⇓P **P** **01 48 43.8 +0.6**
baz=88,SNR=30
MWC Mount Wilson 88.17 52 *e*P **P** **01 48 42.4 -0.8**
MWC pmax pmax
comp=Z,180nm,1.0s,mb6.3
MWC MLR MLR
comp=Z,22µm,20.0s,MS6.6
MWC Mount Wilson 88.17 52 *e*P **P** **01 48 42.4 -0.9**
comp=Z,180nm,1.0s,mb6.2
MWC LR LR
comp=Z,22µm,20.0s,MS6.6
L02A Cave Junction 88.17 43 ⇑P **P** **01 48 41.6 -1.4**
baz=88,SNR=21
ORV Oroville 88.25 46 ⇓P **P** **01 48 42.7 -0.8**
baz=88,SNR=110
T06C Millerton Lake 88.27 49 ⇓P **P** **01 48 43.1 -0.5**
baz=88,SNR=190
M02C Callahan 88.27 44 ⇓P **P** **01 48 43.9 +0.4**
baz=88,SNR=173
RCTC Rector, Farmer 88.27 50 ⇓P **P** **01 48 42.8 -0.9**
baz=88,SNR=16
CMB Columbia Colle 88.28 48 *e*P **P** **01 48 42.8 -0.9**
CMB pmax pmax
comp=Z,204nm,1.0s,mb6.3
CMB MLR MLR
comp=Z,30µm,20.0s,MS6.7
CMB Columbia Colle 88.28 48 ⇓P **P** **01 48 43.0 -0.6**
baz=88,SNR=182
CMB Columbia Colle 88.28 48 *e*P **P** **01 48 42.8 -0.9**
comp=Z,204nm,1.0s,mb6.3
CMB LR LR
comp=Z,30µm,20.0s,MS6.7
109C Camp Elliot, M 88.28 54 ⇑P **P** **01 48 43.1 -0.7**
baz=88,SNR=20
LAVA Lava Cap Winer 88.38 47 ⇑P **P** **01 48 43.3 -0.8**
baz=89,SNR=51
VNA1 Neumayer--Stat 88.41 181 *e*P **P** **01 48 41.1 -2.7**
VNA1 *e* pP 01 48 45.1 -4.4
VNA1 *e* pP 01 48 48.2 -1.3
SHL Shillong 88.45 298 *ex* x 01 48 31.2
SHL AMb AMB 01 48 35.5
comp=Z,233nm,2.0s,mb6.1
BFSC Mount Baldy St 88.47 52 ⇑P **P** **01 48 44.2 -0.4**
baz=89,SNR=51
BAR Barrett 88.52 54 *e*P **P** **01 48 44.3 -0.6**
comp=Z,111nm,1.2s,mb6.1
BAR LR LR
comp=Z,19µm,20.0s,MS6.5
EDW2 Edwards Air Fo 88.52 52 ⇑P **P** **01 48 44.1 -0.8**
baz=89,SNR=55
ISA Isabella 88.52 51 *e*P **P** **01 48 44.1 -0.8**
ISA pmax pmax
comp=Z,524nm,1.5s,mb6.6
ISA MLR MLR
comp=Z,22µm,20.0s,MS6.6
ISA Isabella 88.52 51 ⇑P **P** **01 48 44.6 -0.2**
baz=89,SNR=178
ISA Isabella 88.52 51 *e*P **P** **01 48 44.1 -0.7**
comp=Z,524nm,1.5s,mb6.6
ISA LR LR
comp=Z,22µm,20.0s,MS6.6
MURC Murrieta 88.53 53 ⇑P **P** **01 48 44.0 -0.9**
baz=89,SNR=37
YBH Yreka Blue Hor 88.53 44 LR LR 02 20 17.4
comp=Z,28µm,20.3s,MS6.7,baz=207,slow=30
YBH Yreka Blue Hor 88.53 44 *e*P **P** **01 48 44.3 -0.5**
YBH pmax pmax
comp=Z,173nm,1.1s
YBH MLR MLR
comp=Z,24µm,20.0s
YBH Yreka Blue Hor 88.53 44 ⇓P **P** **01 48 44.9 +0.2**
baz=89,SNR=117
YBH Yreka Blue Hor 88.53 44 *e*P **P** **01 48 44.3 -0.5**
comp=Z,173nm,1.1s,mb6.3
YBH LR LR
comp=Z,24µm,20.0s,MS6.6
ULN Ulaanbaatar 88.54 323 P **P** **01 48 47.6 +2.9**
SNR=93
ULN Ulaanbaatar 88.54 323 ⇑ *e*P **P** **01 48 44.3 -0.3**
K02A Glendale 88.56 43 ⇓P **P** **01 48 45.4 +0.6**
baz=89,SNR=28
S06C San Francisco 88.58 48 ⇓P **P** **01 48 44.2 -0.9**
baz=89,SNR=192
HELL Mitchell Peak 88.60 50 ⇓P **P** **01 48 44.3 -0.9**
baz=89,SNR=170
GTA Gaotai 88.61 313 *e*P **P** **01 48 44.8 -0.4**
GTA PP PP 01 52 15.0 +0.9
GTA AMB AMB
comp=Z,16nm,1.1s,mb5.3
GTA AMB AMB
comp=Z,2µm,5.4s
GTA LR LR
comp=N,6µm,16.5s,MS6.2
GTA LR LR
comp=E,7µm,18.6s,MS6.2
GTA LR LR
comp=Z,9µm,20.7s,MS6.2
M03C McCloud 88.69 45 ⇓P **P** **01 48 45.6 +0.1**
baz=89,SNR=113
KCC Kaiser Creek 88.69 49 ⇑P **P** **01 48 45.7 +0.1**
baz=89,SNR=121
P05C Yuba Gap, Truc 88.73 47 ⇓P **P** **01 48 45.8 0.0**
baz=89,SNR=72
YAK Yakutsk 88.78 342 *e*P **P** **01 48 44.8 -0.6**
YAK *e**PP pP 01 48 51.5 +0.4
YAK *e*S S 01 59 13.8 -18
YAK pmax pmax
comp=Z,245nm,1.1s,mb6.5
YAK pmax pmax
comp=E,50nm,1.3s
YAK pmax pmax
comp=N,88nm,1.4s
YAK MLR MLR
comp=Z,22µm,21.0s,MS6.5
YAK MLR MLR
comp=N,13µm,21.0s,MS6.5
YAK MLR MLR
comp=E,11µm,20.0s,MS6.5
YAK Yakutsk 88.78 342 ⇑ *e*P **P** **01 48 43.6 -1.8**
MONP Monument Peak 88.80 54 ⇑P **P** **01 48 46.0 -0.3**
baz=89,SNR=110
J02A Umpqua 88.81 42 ⇓P **P** **01 48 46.0 0.0**
baz=89,SNR=30
R05C Kirkwood Meado 88.81 48 ⇑P **P** **01 48 46.2 0.0**
baz=89,SNR=125
HUMO Hull Mountain 88.81 43 ⇑P **P** **01 48 46.4 +0.3**
baz=89,SNR=99
HUMO Hull Mountain 88.81 43 *e*P **P** **01 48 45.6 -0.4**
comp=E,171nm,1.0s,mb6.3
HUMO LR LR
comp=Z,33µm,21.0s,MS6.7
O05C Quincy 88.84 46 ⇑P **P** **01 48 46.0 -0.3**
baz=89,SNR=53
PMR Palmer 88.89 18 *e*P **P** **01 48 46.5 +0.6**
PMR pmax pmax
comp=Z,89nm,1.4s,mb5.9
PMR MLR MLR
comp=Z,31µm,20.0s,MS6.7
PMR Palmer 88.89 18 *e*P **P** **01 48 46.5 +0.5**
comp=Z,89nm,1.4s,mb5.9
PMR LR LR

comp=Z,31µm,20.0s,MS6.7
SONM Songino Array 88.89 323 P **P 01 48 45.1 -1.2**
comp=Z,84nm,1.1s,mb6.0,baz=135,slow=4.8,SNR=57
SONM PKKPbc PKKPbc 02 06 26.7 -0.6
comp=Z,4.9nm,0.9s,baz=263,slow=1.8,SNR=7.8
SONM LR LR 02 29 30.1
comp=Z,13µm,18.6s,MS6.4,baz=123,slow=36
O04C Chester 88.90 46 ⇓P **P 01 48 46.2 -0.3**
baz=89,SNR=41
DVTC Desert V Tower 88.94 54 ⇑P **P 01 48 47.1 +0.2**
baz=89,SNR=34
I02A Mapleton 88.98 42 ⇓P **P 01 48 47.5 +0.7**
baz=89,SNR=26
LBCM Butte Creek Ri 88.98 45 P **P 01 48 46.4 -0.5**
BILL Bilibino 88.98 359*c* /P **P 01 48 45.6 -0.6**
BILL pmax pmax
comp=Z,491nm,1.2s,mb6.7
BILL Bilibino 88.98 359⇑/P **P 01 48 45.7 -0.5**
LRMC Laurel Mountai 89.01 51 ⇓P **P 01 48 46.8 -0.4**
baz=89,SNR=29
BBRC Big Bear Sol-O 89.03 53 P **P 01 48 46.6 -0.7**
baz=89,SNR=15
PFO Pinyon Flat Ob 89.09 53 P **P 01 48 48.5 +0.9**
comp=Z,569nm,1.1s,mb6.8,SNR=30
PFO Pinyon Flat Ob 89.09 53 LR LR 02 19 08.7
comp=Z,19µm,20.8s,MS6.5,baz=289,slow=29
PFO Pinyon Flat Ob 89.09 53 *eP* **P 01 48 48.4 +0.8**
PFO pmax pmax
comp=Z,182nm,1.3s,mb6.2
PFO MLR MLR
comp=Z,19µm,21.0s,MS6.5
PFO Pinyon Flat Ob 89.09 53 ⇓P **P 01 48 47.2 -0.4**
baz=89,SNR=57
PFO Pinyon Flat Ob 89.09 53 *eP* **P 01 48 48.4 +0.8**
comp=Z,182nm,1.3s,mb6.2
PFO LR LR
comp=Z,19µm,21.0s,MS6.5
M04C Macdoel 89.12 44 ⇓P **P 01 48 47.5 0.0**
baz=89,SNR=92
EYAK Cordova Ski Ar 89.13 20 *eP* **P 01 48 49.9 +2.8**
comp=Z,24nm,0.8s,mb5.6
R06C Coleville 89.16 48 ⇑P **P 01 48 47.6 -0.1**
baz=89,SNR=146
CWC Cottonwood Cre 89.16 50 ⇓P **P 01 48 47.9 0.0**
baz=89,SNR=52
MLAC Mammoth Lakes 89.17 49 ⇓P **P 01 48 48.2 +0.3**
baz=89,SNR=42
H02A Toledo 89.22 41 ⇓P **P 01 48 48.5 +0.6**
baz=90,SNR=7.7
MTUM Tungsten Hills 89.24 49 *eP* **P 01 48 47.8 -0.4**
R07C Lee Vining 89.24 48 ⇑P **P 01 48 48.6 +0.5**
baz=90,SNR=6.2
RRX Edison Barstow 89.25 52 ⇑P **P 01 48 47.7 -0.6**
baz=90
L04A Klamath Falls 89.28 44 ⇓P **P 01 48 48.7 +0.4**
baz=90,SNR=37
ELFS Eagle Lake Fie 89.29 46 ⇑P **P 01 48 48.8 +0.4**
baz=90
SWSC Sam W. Stewart 89.29 54 ⇓P **P 01 48 49.4 +0.8**
baz=90,SNR=51
I03A Eugene 89.31 42 ⇑P **P 01 48 47.7 -0.6**
baz=90,SNR=20
WCN Washoe City 89.31 47 ⇓P **P 01 48 48.0 -0.5**
baz=90,SNR=36
TIN Tinemaha 89.34 50 ⇓P **P 01 48 48.8 +0.2**
baz=90,SNR=33
M05C Lookout 89.37 45 ⇓P **P 01 48 48.6 -0.1**
baz=90,SNR=172
P06A Stead Airport, 89.40 47 ⇓P **P 01 48 48.4 -0.5**
baz=90,SNR=23
MPMC Manual Prospec 89.42 51 ⇑P **P 01 48 49.0 0.0**
baz=90,SNR=241
DAC Darwin (Calif) 89.44 51 PFAKE 01 49 00.0 +11
DAC LR LR
comp=Z,24µm,20.0s,MS6.6
GSC Goldstone 89.58 52 *eP* **P 01 48 49.2 -0.6**
GSC pmax pmax
comp=Z,162nm,1.3s,mb6.2
GSC MLR MLR
comp=Z,21µm,19.0s,MS6.6
GSC Goldstone 89.58 52 ⇑P **P 01 48 49.5 -0.3**
baz=90,SNR=71
GSC Goldstone 89.58 52 *eP* **P 01 48 49.1 -0.7**
comp=Z,162nm,1.3s,mb6.2
GSC LR LR
comp=Z,21µm,19.0s,MS6.6
S08C White Mtn Res 89.58 49 ⇑P **P 01 48 49.8 0.0**
baz=90,SNR=329
BELC Belle Mtn. 89.60 53 ⇓P **P 01 48 49.7 -0.2**
baz=90,SNR=195
COR Corvallis 89.60 41 *eP* **P 01 48 50.8 +1.1**
COR pmax pmax
comp=Z,169nm,1.1s,mb6.3
COR MLR MLR
comp=Z,20µm,19.0s,MS6.6
COR Corvallis 89.60 41 *eP* **P 01 48 50.8 +1.0**
comp=Z,169nm,1.1s,mb6.3
COR LR LR
comp=Z,20µm,19.0s,MS6.6
K04A Chilquin 89.60 43 ⇑P **P 01 48 49.8 0.0**
baz=90,SNR=12
HEBO Mount Hebo 89.65 41 *eP* **P 01 48 51.5 +1.6**
comp=Z,427nm,1.2s,mb6.7
H03A Soap Creek Ran 89.65 41 ⇓P **P 01 48 50.3 +0.4**
baz=90,SNR=69
J04A Umpqua Nationa 89.67 43 ⇓P **P 01 48 51.0 +0.9**
baz=90,SNR=59
O06A Flanigan 89.67 46 ⇓P **P 01 48 50.2 0.0**
baz=90,SNR=342
HEC Hector,Ludlow 89.72 52 ⇑P **P 01 48 50.5 0.0**
baz=90,SNR=114
M06C Likely Place G 89.73 45 ⇓P **P 01 48 50.5 +0.1**
baz=90,SNR=102
I04A Tendick Farm, 89.76 42 ⇑P **P 01 48 50.3 -0.2**
baz=90,SNR=51
PAHR Pah Rah Range 89.76 47 *eP* **P 01 48 49.9 -0.7**
comp=Z,318nm,1.1s,mb6.6
Q07A Schurz 89.80 48 ⇑P **P 01 48 51.0 +0.2**
baz=90,SNR=9.3
BC3 Big Chuckw Mtn 89.86 54 ⇑P **P 01 48 51.4 +0.2**
baz=90,SNR=126
L05A Lakeview 89.91 44 ⇑P **P 01 48 51.7 +0.5**
baz=90,SNR=80
NVAR Mina Array Bea 89.91 48 P **P 01 48 50.6 -0.7**
comp=Z,143nm,0.9s,mb6.3,baz=227,slow=8.6,SNR=87
GRAC Grapevine Rang 89.92 50 ⇓P **P 01 48 51.1 -0.4**
baz=90,SNR=195
N06A Buffalo Meadow 89.94 46 ⇓P **P 01 48 50.9 -0.6**
baz=90,SNR=296
G03A Yamhill 89.99 41 ⇓P **P 01 48 52.0 +0.5**
baz=90,SNR=28
R08A Mina 90.01 49 ⇓P **P 01 48 51.7 -0.1**
baz=90,SNR=30
P07A Fallon 90.02 47 ⇓P **P 01 48 51.5 -0.2**
baz=90,SNR=7.9
KMOR Kings Mountain 90.02 40 P **P 01 48 51.5 -0.1**
TRF Thorofare Moun 90.04 17 *eP* **P 01 48 50.1 -1.2**
comp=Z,19nm,0.7s,mb5.5
112A Yuma 90.04 55 ⇓P **P 01 48 51.9 -0.2**
baz=90,SNR=38
LPIG La Paz 90.05 64 LR LR 02 17 34.7
comp=Z,4µm,20.9s,MS5.8,baz=237,slow=28
FURC Furnace Creek, 90.05 51 ⇑P **P 01 48 51.4 -0.7**
baz=90,SNR=121
GLA Glamis 90.08 54 *eP* **P 01 48 51.9 -0.3**
GLA pmax pmax
comp=Z,369nm,1.0s,mb6.7
GLA MLR MLR
comp=Z,25µm,19.0s,MS6.7
GLA Glamis 90.08 54 ⇓P **P 01 48 52.2 -0.1**
baz=90,SNR=111
GLA Glamis 90.08 54 *eP* **P 01 48 51.9 -0.3**
comp=Z,369nm,1.0s,mb6.7
GLA LR LR
comp=Z,25µm,19.0s,MS6.7
F03A Seaside 90.13 40 ⇓P **P 01 48 52.2 0.0**
baz=90,SNR=27
MOD Modoc 90.18 45 ⇑P **P 01 48 52.6 +0.1**
baz=90,SNR=126
MOD Modoc 90.18 45 *eP* **P 01 48 51.6 -0.9**
comp=Z,262nm,1.1s,mb6.5
MOD LR LR
comp=Z,18µm,19.0s,MS6.5
GMRC Granite Mounta 90.19 53 ⇓P **P 01 48 52.5 -0.2**
baz=90,SNR=92
K05A Summer Lake 90.20 44 ⇑P **P 01 48 52.4 -0.1**
baz=90,SNR=170
SHOC Shoshone 90.22 51 ⇑P **P 01 48 52.9 +0.1**
baz=90,SNR=40
J05A Fort Rock 90.25 43 ⇓P **P 01 48 52.9 +0.2**
baz=90,SNR=301
TUQ Turquoise Moun 90.28 52 ⇓P **P 01 48 53.1 -0.1**
baz=90,SNR=51
IRM Iron Mountain 90.31 53 ⇑P **P 01 48 53.0 -0.2**
baz=90,SNR=134
O07A Toulon 90.32 47 ⇓P **P 01 48 52.8 -0.4**
baz=91,SNR=182
H04A Detroit Lake 90.34 42 ⇑P **P 01 48 52.6 -0.5**
baz=91,SNR=66
S09A Goldfield 90.35 49 ⇑P **P 01 48 52.7 -0.7**
baz=91,SNR=137
Q08A Gabbs 90.37 48 ⇓P **P 01 48 53.3 -0.2**
baz=91,SNR=211
U10A Ash Meadows, A 90.42 51 ⇓P **P 01 48 53.7 0.0**
baz=91,SNR=161
G04A Mulino 90.42 41 ⇑P **P 01 48 54.0 +0.5**
baz=91,SNR=41
E03A Lebam 90.45 39 ⇓P **P 01 48 53.8 +0.2**
baz=91,SNR=97
TPH Tonopah 90.51 49 *eP* **P 01 48 53.5 -0.6**
TPH pmax pmax
comp=Z,267nm,1.1s,mb6.5
TPH MLR MLR
comp=Z,22µm,21.0s,MS6.6
TPH Tonopah 90.51 49 *eP* **P 01 48 53.5 -0.6**
comp=Z,267nm,1.1s,mb6.5
TPH LR LR
comp=Z,22µm,21.0s,MS6.6
N07B Gerlach 90.54 46 ⇑P **P 01 48 54.6 +0.4**
baz=91,SNR=118
SIT Sitka 90.56 27 PFAKE 01 49 10.0 +16
SIT LR LR
comp=Z,35µm,20.0s,MS6.8
C03A Quillayute Air 90.59 38 ⇑P **P 01 48 54.2 0.0**
baz=91,SNR=19
Y12C Blythe 90.60 54 ⇑P **P 01 48 54.2 -0.4**
baz=91,SNR=59
BMW Boistfort Moun 90.61 40 *eP* **P 01 48 55.8 +1.4**
D03A Wishkah Elem. 90.62 39 ⇓P **P 01 48 55.2 +0.8**
baz=91,SNR=44
MCK McKinley 90.63 17 *eP* **P 01 48 53.0 -1.0**
MCK pmax pmax
comp=Z,98nm,1.3s,mb6.0
MCK McKinley 90.63 17 *eP* **P 01 48 53.0 -1.0**
comp=Z,98nm,1.3s,mb6.0
P08A Dixie Valley 90.64 47 ⇑P **P 01 48 54.6 -0.1**
baz=91,SNR=22
K06A Valley Falls 90.65 44 ⇑P **P 01 48 54.5 -0.1**
baz=91,SNR=216
I05A Bend 90.66 42 ⇑P **P 01 48 55.1 +0.4**
baz=91,SNR=54
M07A Soldier Meadow 90.69 45 ⇓P **P 01 48 54.8 -0.1**
baz=91,SNR=118
R09A Tonopah 90.69 49 ⇓P **P 01 48 54.6 -0.3**
baz=91,SNR=200
OOW Octopus West 90.69 38 P **P 01 48 56.0 +1.3**
PNL Peninsula 90.70 23 *eP* **P 01 48 54.4 -0.1**
comp=Z,43nm,0.9s,mb5.8
NLWA Neilton Lookou 90.70 39 ⇓P **P 01 48 55.3 +0.6**
baz=91,SNR=50
NLWA Neilton Lookou 90.70 39 PFAKE 01 49 10.0 +15
NLWA LR LR
comp=Z,19µm,19.0s,MS6.5
TPNV Topopah Spring 90.71 50 *eP* **P 01 48 54.6 -0.5**
TPNV pmax pmax
comp=Z,258nm,1.0s,mb6.5
TPNV MLR MLR
comp=Z,22µm,21.0s,MS6.6
TPNV Topopah Spring 90.71 50 ⇓P **P 01 48 54.7 -0.4**
baz=91,SNR=299
TPNV Topopah Spring 90.71 50 *eP* **P 01 48 54.6 -0.5**
comp=Z,258nm,1.0s,mb6.5
TPNV LR LR
comp=Z,22µm,21.0s,MS6.6
LDFC Landfair 90.73 53 *eP* **P 01 48 54.7 -0.5**
comp=Z,506nm,1.1s,mb6.8
LSA Lhasa 90.73 302 *eP* **P 01 48 55.2 -0.1**
LSA pmax pmax
comp=Z,155nm,1.1s,mb6.2
LSA MLR MLR
comp=Z,7µm,19.0s,MS6.1
LSA Lhasa 90.73 302 *eP* **P 01 48 55.2 -0.2**
comp=Z,155nm,1.1s,mb6.2
LSA LR LR
comp=Z,7µm,19.0s,MS6.1
113A Mohawk Valley, 90.76 55 ⇑P **P 01 48 54.5 -1.0**
baz=91,SNR=69
V11A Goodsprings 90.82 52 ⇑P **P 01 48 55.0 -0.6**
baz=91,SNR=106
F04A Amboy 90.82 40 ⇑P **P 01 48 55.0 -0.4**
baz=91,SNR=60
O08A Rochester Mine 90.87 47 ⇓P **P 01 48 55.7 0.0**
baz=91,SNR=255
L07A Adell 90.87 45 ⇑P **P 01 48 55.7 0.0**
baz=91,SNR=327
Q09A Carvers 90.88 48 ⇓P **P 01 48 56.0 +0.2**
baz=91,SNR=19
S10A Tonopah Range, 90.89 49 ⇓P **P 01 48 55.5 -0.4**
baz=91,SNR=486
LVP Lakeview Peak 90.89 40 P **P 01 48 55.5 -0.2**
H05A Madras 90.92 42 ⇑P **P 01 48 55.4 -0.4**
baz=91,SNR=21
J06A Christmas Vall 90.92 43 ⇑P **P 01 48 55.4 -0.5**
baz=91,SNR=213
NEE2 Needles Airpor 90.96 53 ⇑P **P 01 48 55.4 -0.9**
baz=91,SNR=16
E04A Onalaska 90.97 40 ⇑P **P 01 48 55.9 -0.1**
baz=91,SNR=14
W12A Cal Nev Ari 91.00 52 ⇑P **P 01 48 55.8 -0.7**
baz=91,SNR=26
ERK Elk Lake 91.05 40 P **P 01 48 56.9 +0.5**
N08A GE Springer Mi 91.10 46 ⇓P **P 01 48 57.2 +0.4**
baz=91,SNR=38
U11A Corn Creek 91.10 51 ⇓P **P 01 48 57.0 +0.1**
baz=91,SNR=19
PDMCI Parker Dam,Lak 91.12 54 ⇑P **P 01 48 56.7 -0.4**
baz=91,SNR=85
TDL Tradedollar La 91.15 40 P **P 01 48 57.0 +0.1**
G05A Wamic 91.15 41 ⇑P **P 01 48 57.7 +0.8**
baz=91,SNR=24
Y13A Salome 91.15 54 ⇑P **P 01 48 56.9 -0.3**
baz=91,SNR=134
BOD Bodaibo 91.16 334 *eP* **P 01 48 53.7 -2.9**
BOD *e* 01 59 53.1
BOD pmax pmax
comp=Z,86nm,1.4s,mb5.9
214A Organ Pipe Nat 91.17 56 ⇑P **P 01 48 57.2 -0.1**
baz=91,SNR=78
D04A Dobbs Creek Ra 91.18 39 ⇑P **P 01 48 56.9 -0.1**
baz=92
V12A Nelson 91.20 52 ⇑P **P 01 48 57.0 -0.3**
baz=91,SNR=118
I06A Prineville 91.22 43 ⇑P **P 01 48 57.4 +0.2**
baz=92,SNR=202
P09A Austin 91.23 48 ⇑P **P 01 48 56.9 -0.5**
baz=92,SNR=14
VIPM Ingram Point 91.23 42 P **P 01 48 57.1 -0.2**
M08A Happy Creek Ra 91.24 46 ⇓P **P 01 48 57.7 +0.3**
baz=92,SNR=101
K07A Rock Creek Ran 91.25 44 ⇑P **P 01 48 57.3 -0.2**
baz=92,SNR=257
B04A Port Angeles 91.25 38 ⇓P **P 01 48 57.5 +0.2**
baz=92,SNR=20
R10A Warm Springs 91.26 49 ⇑P **P 01 48 57.6 0.0**
baz=92,SNR=32
S11A Rachel 91.37 50 ⇓P **P 01 48 57.7 -0.4**
baz=92,SNR=112
F05A White Salmon 91.38 41 ⇑P **P 01 48 57.2 -0.8**
baz=92,SNR=37
C04A Brinnon 91.39 39 ⇑P **P 01 48 57.5 -0.4**
baz=92,SNR=55
GNW Green Mountain 91.40 39 *eP* **P 01 48 57.4 -0.6**
comp=Z,147nm,1.0s,mb6.3
Q10A Clear Creek Ra 91.42 49 ⇑P **P 01 48 57.6 -0.7**
baz=92,SNR=113
WRAK Wrangell Islan 91.44 28 *eP* **P 01 48 58.2 +0.2**
WRAK comp=Z,93nm,1.0s,mb6.1 LR LR
comp=Z,18µm,19.0s,MS6.5
PALK Pallekele 91.45 277 *eP* **P 01 48 59.0 0.0**
comp=Z,60nm,1.1s,mb5.8
PALK LR LR
comp=Z,19µm,19.0s,MS6.5
O09A Fish Creek Ran 91.47 47 ⇓P **P 01 48 58.1 -0.4**
baz=92,SNR=99
X13A Yucca 91.48 53 ⇓P **P 01 48 58.4 -0.3**
baz=92,SNR=190
H06A Lindquist Farm 91.52 42 ⇑P **P 01 48 57.8 -0.8**
baz=92,SNR=321
J07A Hines 91.52 44 ⇓P **P 01 48 58.6 -0.1**
baz=92,SNR=62
WVOR Wild Horse Val 91.53 45 *eP* **P 01 48 58.2 -0.5**
WVOR pmax pmax
comp=Z,203nm,1.0s,mb6.4
WVOR MLR MLR
comp=Z,20µm,20.0s,MS6.6
WVOR Wild Horse Val 91.53 45 *eP* **P 01 48 58.2 -0.5**
comp=Z,203nm,1.0s,mb6.4
WVOR LR LR
comp=Z,20µm,20.0s,MS6.6
E05A Randle 91.53 40 ⇑P **P 01 48 57.9 -0.7**
baz=92,SNR=105
N09A Rock Creek Ran 91.55 47 ⇑P **P 01 48 58.4 -0.5**
baz=92,SNR=94
BMN Battle Mountai 91.56 47 *eP* **P 01 48 58.3 -0.7**
BMN pmax pmax
comp=Z,165nm,1.0s,mb6.3
BMN MLR MLR
comp=Z,19µm,19.0s,MS6.5
BMN Battle Mountai 91.56 47 *eP* **P 01 48 58.3 -0.6**
comp=Z,165nm,1.0s,mb6.3
BMN LR LR
comp=Z,19µm,19.0s,MS6.5
G06A Carlson Farm, 91.57 42 ⇑P **P 01 48 58.4 -0.4**
baz=92,SNR=62
T11A Corn Creek, Al 91.57 51 ⇑P **P 01 48 58.9 -0.2**
baz=92,SNR=177
PGC Sidney 91.59 38 *eP* **P 01 48 59.3 +0.5**
comp=Z,301nm,1.0s,mb6.6
LON Longmire 91.59 40 *eP* **P 01 48 57.6 -1.3**
LON pmax pmax
comp=Z,79nm,1.1s,mb6.0
LON Longmire 91.59 40 *eP* **P 01 48 57.6 -1.4**
comp=Z,79nm,1.1s,mb6.0
L08A Fields 91.61 45 ⇑P **P 01 48 59.0 -0.1**
baz=92,SNR=296
Z14A Wintersburg 91.64 55 ⇑P **P 01 48 59.3 -0.2**
baz=92,SNR=44
W13A Hualapai Mount 91.65 53 ⇓P **P 01 48 59.1 -0.4**
baz=92,SNR=130
D05A Enumclaw 91.70 39 ⇓P **P 01 48 59.7 +0.3**
baz=92,SNR=46
T12A Moapa 91.72 51 ⇓P **P 01 48 59.6 -0.2**
baz=92,SNR=14
U12A Valley of Fire 91.72 52 ⇑P **P 01 48 60.0 +0.2**
baz=92,SNR=36
P10A Eureka 91.73 48 ⇑P **P 01 48 59.4 -0.3**
baz=92,SNR=41
I07A Izee 91.73 43 ⇓P **P 01 48 58.7 -1.0**
baz=92
F06A Goldendale 91.73 41 ⇓P **P 01 48 59.1 -0.5**
baz=92,SNR=63
K08A Mann Creek Ran 91.76 45 ⇑P **P 01 48 59.4 -0.4**
baz=92,SNR=110
R11A Troy Canyon, C 91.79 49 ⇓P **P 01 48 59.2 -0.9**
baz=92,SNR=147
COLA College 91.82 17 *eP* **P 01 48 58.5 -1.0**
Y14A Wickenburg 91.83 54 ⇓P **P 01 49 00.0 -0.3**
baz=92,SNR=85
M09A Marrel Ranch, 91.86 46 ⇓P **P 01 49 00.2 -0.1**
baz=92,SNR=54
V13A Grand Canyon W 91.89 52 ⇑P **P 01 48 59.7 -0.9**
baz=92,SNR=203
115A Sonoran Desert 91.92 56 ⇓P **P 01 49 00.3 -0.5**
baz=92,SNR=38
H07A Lands Inn, Kim 91.93 43 ⇑P **P 01 48 59.8 -0.7**
baz=92,SNR=212
Q11A Duckwater 91.95 49 ⇑P **P 01 49 00.7 -0.1**
baz=92,SNR=161
L09A Wilkinson Ranc 91.98 45 ⇑P **P 01 49 00.8 -0.1**
baz=92,SNR=89
ZAK Zakamensk 91.99 324 *eP* **P 01 49 00.5 -0.2**
ZAK pmax pmax
comp=Z,116nm,1.3s,mb6.0
E06A Yakima 91.99 40 ⇓P **P 01 49 00.3 -0.5**
baz=92,SNR=49
O10A Cortez Mining, 92.00 47 ⇓P **P 01 49 01.3 +0.3**
baz=92,SNR=36
S12A Delamar Landin 92.00 50 ⇑P **P 01 49 01.5 +0.5**
baz=92,SNR=268
A04A Legoe Bay, Lum 92.05 38 ⇑P **P 01 49 00.3 -0.7**
baz=92,SNR=14
J08A Circle Bar Ran 92.06 44 ⇓P **P 01 49 00.9 -0.3**
baz=92,SNR=193
C05A Tolt Reservoir 92.13 39 ⇑P **P 01 49 02.2 +0.8**
baz=92,SNR=37
X14A Yava 92.13 54 ⇑P **P 01 49 01.6 -0.2**
baz=92,SNR=226
U13A Pakoon Wash 92.14 52 ⇑P **P 01 49 01.6 -0.1**
baz=92,SNR=43
B05A Bryant 92.17 38 ⇑P **P 01 49 02.0 +0.4**
baz=92,SNR=41
HYT Haines Junctio 92.18 23 *eP* **P 01 49 01.2 -0.1**
G07A Ruggs Ranch, H 92.19 42 ⇑P **P 01 49 01.1 -0.6**
baz=92,SNR=100
P11A Circle Ranch, 92.19 48 ⇑P **P 01 49 02.7 +0.8**
baz=92,SNR=32
Z15A Gila River Ind 92.21 55 ⇓P **P 01 49 02.3 +0.1**
baz=92,SNR=16
JCW Jim Creek 92.23 39 *eP* **P 01 49 03.1 +1.2**
216A Three Points, 92.24 57 ⇑P **P 01 49 02.4 +0.1**
baz=92,SNR=31
K09A Rome 92.25 45 ⇑P **P 01 49 01.9 -0.2**
baz=92,SNR=234
I08A Drewsey 92.25 43 ⇑P **P 01 49 01.4 -0.6**
baz=92,SNR=47
116A Eloy 92.27 56 ⇓P **P 01 49 02.0 -0.4**
baz=92,SNR=71
W14A Seligman 92.29 53 ⇓P **P 01 49 02.6 +0.1**
baz=92,SNR=141
F07A Phinny Hill Vi 92.32 41 ⇑P **P 01 49 01.8 -0.6**
baz=93,SNR=17
Y15A Casa Rosa Ranc 92.34 55 ⇓P **P 01 49 02.4 -0.3**
baz=93,SNR=272
D06A Cle Elum 92.39 40 ⇑P **P 01 49 01.6 -1.0**
baz=93,SNR=16
T13A Saint George 92.43 51 ⇓P **P 01 49 03.1 +0.1**
baz=93,SNR=110
IRK Irkutsk 92.44 326 *eP* **P 01 49 03.7 +1.0**
IRK *eS* S 02 00 09.0 +3.4
IRK pmax pmax
comp=Z,65nm,1.2s,mb5.8
V14A Boquillas Ranc 92.45 53 ⇑P **P 01 49 03.2 0.0**
baz=93,SNR=175
H08A Prairie City 92.47 43 ⇓P **P 01 49 02.5 -0.5**
baz=93,SNR=61
TLY Talaya 92.47 325 P **P 01 49 04.9 +2.0**
comp=Z,334nm,1.0s,mb6.6,SNR=13
TLY Talaya 92.47 325 ⇓P **P 01 49 06.1 +3.2**
SNR=19
TLY Talaya 92.47 325 *eP* **P 01 49 05.2 +2.3**
TLY *eS* S 02 00 05.6 -0.3
TLY pmax pmax
comp=Z,78nm,1.1s,mb6.0
TLY Talaya 92.47 325 *eP* **P 01 49 02.5 -0.4**
R12A Pony Springs, 92.47 50 ⇑P **P 01 49 03.3 +0.1**
baz=93,SNR=119
O11A Cowboy Ranch, 92.51 48 ⇓P **P 01 49 02.9 -0.4**
baz=93,SNR=94
M10A I.L. Ranch, Tu 92.51 46 ⇑P **P 01 49 03.6 +0.2**
baz=93,SNR=176
J09A Fry Pan Ranch, 92.52 44 ⇑P **P 01 49 03.3 -0.1**
baz=93,SNR=250
A05A Maple Falls 92.54 38 ⇑P **P 01 49 03.1 -0.2**
baz=93,SNR=8.0
RPW Rockport 92.60 38 *eP* **P 01 49 02.4 -1.2**
Q12A Willow Creek R 92.62 49 ⇓P **P 01 49 03.8 -0.1**
baz=93,SNR=53
X15A Humboldt 92.63 54 ⇑P **P 01 49 03.5 -0.6**
baz=93,SNR=210
G08A Pilot Rock 92.64 42 ⇓P **P 01 49 03.2 -0.6**
baz=93,SNR=182
217A Green Valley 92.65 57 ⇑P **P 01 49 04.0 -0.2**
baz=93,SNR=79
B06A Marblemount 92.65 38 ⇓P **P 01 49 03.3 -0.5**
baz=93
ODAN Odare 92.67 298 *eP* **P 01 49 03.5 -0.9**
comp=Z,254nm,1.0s,mb6.6
E07A Sunnyside 92.68 41 ⇓P **P 01 49 03.4 -0.5**
baz=93,SNR=21
S13A Holt Ranch, En 92.70 51 ⇓P **P 01 49 04.1 -0.2**
baz=93,SNR=131
U14A Mt Trumbull 92.71 52 ⇑P **P 01 49 04.5 +0.1**
baz=93,SNR=200

P12A McGill 92.75 49 ⇓P P 01 49 04.1 -0.4
baz=93
N11A Elko Archery C 92.75 47 ⇑P P 01 49 04.6 +0.2
baz=93
RSW Rattlesnake Hi 92.76 41 *e*P P 01 49 04.6 +0.3
BOK Bokaro 92.79 294 *e*P P 01 49 05.2 +0.2
Z16A Peralta Trail, 92.79 55 ⇓P P 01 49 04.7 -0.1
baz=93,SNR=47
HAWA Hanford 92.80 41 *e*P P 01 49 03.8 -0.7
comp=Z,120nm,1.1s,mb6.2
HAWA LR LR
comp=Z,21µm,20.0s,MS6.6
VIS Vishakhapatnam 92.80 288 *e*P P
VIS *ex* x 01 49 18.0
comp=Z,128nm,1.6s
VIS *i* S S 01 59 37.3 -33
L10A Juniper Basin 92.80 46 ⇓P P 01 49 03.9 -0.7
baz=93,NR=105
I09A Lost Marbles R 92.81 44 ⇑P P 01 49 04.1 -0.5
baz=93,SNR=7.5
K10A MacKenzie Ranc 92.84 45 ⇓P P 01 49 05.1 +0.3
baz=93,SNR=62
R13A O'Grain Ranch, 92.87 50 ⇑P P 01 49 05.3 +0.2
baz=93,SNR=38
TUC Tucson 92.88 57 *e*P P 01 49 04.8 -0.5
TUC pmax pmax
comp=Z,89nm,1.1s,mb6.1
TUC MLR MLR
comp=Z,19µm,19.0s,MS6.6
TUC Tucson 92.88 57 *e*P P 01 49 04.8 -0.5
comp=Z,89nm,1.1s,mb6.1
TUC LR LR
comp=Z,19µm,19.0s,MS6.6
W15A Williams 92.89 53 ⇑P P 01 49 06.2 +0.9
baz=93,SNR=42
ETW Entiat 92.89 40 *e*P P 01 49 06.3 +1.4
D07A Quincy 92.91 40 ⇓P P 01 49 05.5 +0.5
baz=93,SNR=8.4
A06A Chilliwack 92.94 38 ⇑P P 01 49 06.0 +0.9
baz=93,SNR=14
Y16A Circle Bar Ran 92.97 55 ⇓P P 01 49 05.6 0.0
baz=93,SNR=257
M11A Holland Ranch, 92.98 47 ⇑P P 01 49 05.4 0.0
baz=93,SNR=48
F08A Pendleton 92.99 42 ⇓P P 01 49 04.8 -0.6
baz=93,SNR=29
117A Oracle 93.02 56 ⇓P P 01 49 05.7 -0.2
baz=93,SNR=112
CCUT Cedar City 93.05 51 *e*P P 01 49 05.7 -0.2
T14A Hurricane 93.05 51 ⇓P P 01 49 05.3 -0.6
baz=93,SNR=94
ELK Elko 93.06 47 *e*P P 01 49 04.5 -1.4
ELK pmax pmax
comp=Z,59nm,0.9s
ELK MLR MLR
comp=Z,26µm,20.0s
ELK Elko 93.06 47 *e*P P 01 49 04.5 -1.4
comp=Z,59nm,0.9s,mb6.0
ELK LR LR
comp=Z,26µm,20.0s,MS6.7
COLD Coldfoot 93.08 15 *e*P P 01 49 06.0 +0.7
comp=Z,49nm,1.2s,mb5.8
ARUT Antelope Range 93.09 51 *e*P P 01 49 08.0 +1.9
C07A Waterville 93.09 40 ⇓P P 01 49 05.4 -0.4
baz=93,SNR=17
E08A Dider Farm, El 93.13 41 ⇑P P 01 49 06.1 +0.1
baz=93
Q13A Wheeler Ranch, 93.16 49 ⇓P P 01 49 06.1 -0.3
baz=93,SNR=39
318A Bisbee 93.17 58 ⇑P P 01 49 06.4 -0.2
baz=93,SNR=57
H09A Durkee 93.17 43 ⇑P P 01 49 06.3 0.0
baz=93,SNR=16
O12A Currie 93.20 48 ⇑P P 01 49 07.1 +0.5
baz=93,SNR=55
J10A Berg Farm, Mel 93.20 44 ⇑P P 01 49 06.9 +0.4
baz=94,SNR=9.7
X16A Lo Mia Camp, P 93.21 54 ⇓P P 01 49 07.2 +0.5
baz=93,SNR=187
V15A Kaibab Nationa 93.22 53 ⇓P P 01 49 06.7 0.0
baz=93,SNR=128
N12A Clover Valley, 93.24 47 ⇓P P 01 49 06.4 -0.3
baz=94,SNR=76
S14A Cedar City 93.27 51 ⇓P P 01 49 06.2 -0.7
baz=94,SNR=13
L11A Cat Creek Ranc 93.32 46 ⇑P P 01 49 07.5 +0.5
baz=94,SNR=46
218A Dragoon 93.33 57 ⇑P P 01 49 07.5 +0.2
baz=94,SNR=56
LNOR Lincton Mounta 93.33 42 *e*P P 01 49 06.8 -0.2
RAMN Ramite 93.36 297 *e*P P 01 49 07.1 -0.5
comp=Z,280nm,1.3s,mb6.5
P13A Bates Ranch, G 93.37 49 ⇑P P 01 49 06.8 -0.5
baz=94,SNR=102
U15A North Rim 93.37 52 ⇑P P 01 49 07.7 +0.2
baz=94,SNR=151
G09A Cove 93.37 42 ⇓P P 01 49 06.9 -0.3
baz=94,SNR=43
Y17A Roosevelt 93.38 55 ⇓P P 01 49 07.3 -0.3
baz=94,SNR=97
K11A Parker Ranch, 93.40 45 ⇑P P 01 49 07.0 -0.4
baz=94,SNR=37
W16A Flagstaff 93.41 54 ⇑P P 01 49 07.5 -0.1
baz=94,SNR=104
B07A Winthrop 93.42 39 ⇓P P 01 49 07.7 +0.4
baz=94,SNR=50
I10A Payette 93.47 44 ⇓P P 01 49 07.3 -0.3
baz=94,SNR=13
D08A Wollman Farm, 93.48 41 ⇓P P 01 49 07.1 -0.6
baz=94,SNR=12
BMO Blue Mountains 93.48 43 PFAKE
BMO LR LR
comp=Z,32µm,21.0s,MS6.8
F09A S2 Ranch, Eigi 93.49 42 ⇓P P 01 49 07.6 -0.1
baz=94,SNR=17
Z17A San Carlos Hig 93.51 56 ⇓P P 01 49 07.8 -0.3
baz=94
T15A Red Dirt Ranch 93.54 52 ⇓P P 01 49 08.8 +0.6
baz=94,SNR=36
A07A Ashnola River, 93.55 38 ⇑P P 01 49 07.9 0.0
baz=94,SNR=33
M12A Wells 93.57 47 ⇑P P 01 49 08.3 +0.1
baz=94,SNR=55
118A Homack Ranch, 93.64 57 ⇑P P 01 49 08.6 -0.2
baz=94,SNR=62
DLBC Dease Lake 93.65 27 P P 01 49 07.2 -0.9
baz=220,slow=5.7
X17A Forest Lakes 93.66 55 ⇑P P 01 49 09.2 +0.4
baz=94,SNR=52
WUAZ Wupatki 93.69 53 ⇑P P 01 49 09.1 +0.2
baz=94,SNR=137
WUAZ Wupatki 93.69 53 *e*P P 01 49 08.2 -0.7
comp=Z,126nm,0.9s,mb6.3
WUAZ LR LR
comp=Z,17µm,19.0s,MS6.5
Q14A Sevier Lake (B 93.70 50 ⇓P P 01 49 08.4 -0.4
baz=94,SNR=91
319A Douglas 93.70 58 ⇑P P 01 49 09.1 0.0
baz=94,SNR=30
E09A Wood Farm, Sta 93.70 41 ⇑P P 01 49 07.8 -0.8
baz=94,SNR=35
H10A Noah's Angus R 93.72 43 ⇓P P 01 49 07.4 -1.4
baz=94,SNR=89
DAWY Dawson 93.73 20 *e*P P 01 49 07.4 -0.9
C08A Higginbotham F 93.74 40 ⇓P P 01 49 08.4 -0.4
baz=94,SNR=14
OD2 Odessa Site #2 93.76 40 *e*P P 01 49 09.7 +0.7
G10A Bishop Farm, J 93.80 43 ⇑P P 01 49 08.5 -0.6
baz=94,SNR=72
L12A House Creek Ra 93.81 46 ⇑P P 01 49 08.7 -0.5
baz=94,SNR=20
MFID Camas Ranch 93.81 45 ⇑P P 01 49 08.4 -0.8
baz=94,SNR=93
N13A Wendover, West 93.82 48 ⇓P P 01 49 09.0 -0.3
baz=94,SNR=56
S15A Panguitch 93.82 51 ⇑P P 01 49 08.5 -1.0
baz=94,SNR=9.4
B08A Colville Reser 93.84 39 ⇓P P 01 49 08.7 -0.5
baz=94,SNR=40
DGAR Diego Garcia 93.85 261 PFAKE
DGAR LR LR
comp=Z,38µm,21.0s,MS6.8
D09A Jones Farm, Ri 93.85 41 ⇓P P 01 49 08.8 -0.6
baz=94,SNR=39
MOY Mondy 93.89 324 *e*P P 01 49 09.9 +0.5
MOY pmax pmax
comp=Z,430nm,3.3s
MDRS Chennai 93.92 282 *e*P P 01 49 10.7 +0.2

I11A Placerville 93.94 44 ⇑P P 01 49 09.3 -0.6
baz=94,SNR=63
219A White Tail Can 93.95 57 ⇓P P 01 49 09.6 -0.6
baz=94,SNR=61
JIRN Jiri 93.96 298 *e*P P 01 49 10.8 +0.5
comp=Z,203nm,1.2s,mb6.4
W17A Winslow 94.02 54 ⇑P P 01 49 09.8 -0.6
baz=94,SNR=12
F10A Beach Ranch, E 94.03 42 ⇓P P 01 49 08.8 -1.4
baz=94,SNR=79
Y18A Canyon Day Jun 94.03 55 ⇑P P 01 49 10.4 -0.2
baz=94,SNR=115
M13A Montello 94.06 47 ⇑P P 01 49 10.1 -0.3
baz=94,SNR=62
P14A Drum Mountains 94.09 49 ⇑P P 01 49 10.5 -0.2
baz=94,SNR=29
K12A Draper Farm, C 94.09 46 ⇑P P 01 49 09.9 -0.6
baz=94,SNR=35
R15A Junction 94.10 51 ⇓P P 01 49 11.0 +0.3
baz=94,SNR=8.6
U16A Tuba City 94.12 53 ⇑P P 01 49 11.1 +0.2
baz=94,SNR=81
A08A Turner Farm, O 94.15 39 ⇑P P 01 49 10.8 +0.1
baz=94,SNR=27
T16A Glen Canyon Da 94.17 52 ⇑P P 01 49 10.8 -0.3
baz=94,SNR=25
C09A Chrisman Ranch 94.21 40 ⇓P P 01 49 10.4 -0.6
baz=94
119A Ashpeak Ranch, 94.21 57 ⇑P P 01 49 11.8 +0.4
baz=94,SNR=33
J12A Stokes Ranch, 94.22 45 ⇓P P 01 49 10.8 -0.4
baz=94,SNR=77
H11A Donnelly 94.25 44 ⇓P P 01 49 10.3 -0.9
baz=94,SNR=92
MVU Marysvale 94.26 50 PFAKE
MVU LR LR
comp=Z,26µm,20.0s,MS6.7
MSU Marysvale 94.29 50 *e*P P 01 49 12.6 +1.0
GUN Gumba 94.31 298 *e*P P 01 49 12.6 +0.7
E10A Myers Farm, Un 94.33 42 ⇓P P 01 49 10.9 -0.6
baz=95,SNR=8.1
Q15A Fillmore 94.34 50 ⇑P P 01 49 11.5 -0.3
baz=95,SNR=17
G11A Walters Elk Ra 94.39 43 ⇓P P 01 49 11.0 -0.8
baz=95,SNR=129
X18A Snowflake 94.39 55 ⇑P P 01 49 12.2 +0.1
baz=95,SNR=44
S16A Weppner Ranch, 94.40 51 ⇓P P 01 49 10.4 -1.7
baz=95,SNR=18
Z19A T-Link Ranch, 94.44 56 ⇓P P 01 49 11.2 -1.2
baz=95,SNR=12
D10A Wagner Farm, O 94.48 41 ⇓P P 01 49 11.8 -0.5
baz=95,SNR=21
L13A Double Diamond 94.51 47 ⇑P P 01 49 11.6 -0.9
baz=95,SNR=5.2
DUG Dugway 94.52 49 *e*P P 01 49 11.5 -1.1
DUG pmax pmax
comp=Z,126nm,0.9s,mb6.3
DUG MLR MLR
comp=Z,30µm,19.0s,MS6.8
DUG Dugway 94.52 49 ⇓P P 01 49 11.9 -0.6
baz=95,SNR=42
DUG Dugway 94.52 49 *e*P P 01 49 11.4 -1.1
comp=Z,126nm,0.9s,mb6.3
DUG LR LR
comp=Z,30µm,19.0s,MS6.8
N14A Grayback Hills 94.52 48 ⇓P P 01 49 12.0 -0.6
baz=95,SNR=27
A09A Danville 94.56 39 ⇓P P 01 49 12.8 +0.2
baz=95,SNR=11
B09A Rice 94.57 40 ⇓P P 01 49 12.4 -0.2
baz=95,SNR=18
PKIN Phulchoki 94.58 298 *e*P P 01 49 11.8 -1.4
comp=Z,136nm,1.2s,mb6.4
P15A Leamington 94.64 49 ⇓P P 01 49 12.9 -0.3
baz=95,SNR=8.6
K13A Stover Farm, H 94.65 46 ⇑P P 01 49 13.1 -0.1
baz=95,SNR=17
U17A Shonto 94.65 53 ⇑P P 01 49 13.1 -0.2
baz=95,SNR=16
F11A Grangeville 94.67 42 ⇑P P 01 49 12.7 -0.4
baz=95,SNR=23
M14A Sheep Mountain 94.67 47 ⇓P P 01 49 12.4 -0.8
baz=95,SNR=43
T17A Navajo Res., N 94.69 52 ⇓P P 01 49 13.7 +0.2
baz=95,SNR=38
Y19A Nutrioso 94.70 56 ⇓P P 01 49 13.3 -0.3
baz=95,SNR=52
R16A Teasdale 94.70 51 ⇑P P 01 49 13.7 +0.3
baz=95,SNR=51
KKN Kakani 94.76 298 *e*P P 01 49 13.9 -0.1
comp=Z,124nm,0.8s,mb6.4
W18A Petified Fore 94.77 54 ⇓P P 01 49 13.5 -0.4
baz=95,SNR=6.1
O15A The Old Anders 94.79 49 ⇓P P 01 49 13.9 +0.1
baz=95,SNR=17
HLID Hailey 94.81 45 ⇓P P 01 49 13.7 -0.1
baz=95,SNR=60
HLID Hailey 94.81 45 *e*P P 01 49 13.2 -0.6
comp=Z,29nm,0.9s,mb5.7
HLID LR LR
comp=Z,26µm,20.0s,MS6.7
DMN Daman 94.84 298 *e*P P 01 49 13.2 -1.2
comp=Z,368nm,1.1s,mb6.7
E11A Bogner Ranch, 94.84 42 ⇑P P 01 49 13.2 -0.7
baz=95,SNR=6.1
V18A Ganado 94.85 54 ⇓P P 01 49 13.6 -0.6
baz=95,SNR=16
X19A St. Johns 94.85 55 ⇓P P 01 49 14.7 +0.5
baz=95,SNR=29
J13A Cove Ranch, Pi 94.89 45 ⇑P P 01 49 13.5 -0.8
baz=95,SNR=41
H12A Diamond D Ranc 94.93 44 ⇓P P 01 49 13.9 -0.5
baz=95,SNR=94
NLU North Lily Min 94.94 49 *e*P P 01 49 15.9 +1.4
S17A Black Ridge (B 94.94 52 ⇑P P 01 49 13.6 -1.0
baz=95,SNR=30
L14A Malta 94.97 47 ⇓P P 01 49 14.1 -0.5
baz=95,SNR=32
N15A Stansbury Isla 95.00 48 ⇓P P 01 49 14.5 -0.3
baz=95,SNR=37
D11A Klaveano Farm, 95.06 41 ⇓P P 01 49 14.5 -0.4
baz=95,SNR=34
NEW Newport 95.11 40 *e*P P 01 49 16.2 +1.1
NEW pmax pmax
comp=Z,6.0nm,0.7s
NEW MLR MLR
comp=Z,14µm,19.0s
NEW Newport 95.11 40 *e*P P 01 49 16.2 +1.1
comp=Z,6.1nm,0.7s,mb5.1
NEW LR LR
comp=Z,14µm,19.0s,MS6.4
I13A Wildhorse Cree 95.15 45 ⇑P P 01 49 15.1 -0.3
baz=95,SNR=39
A10A Northport 95.17 39 ⇓P P 01 49 15.0 -0.3
baz=95,SNR=8.0
U18A Rough Rock, Ch 95.17 53 ⇓P P 01 49 15.4 -0.2
baz=95,SNR=31
Q16A Castle Valley 95.17 50 ⇓P P 01 49 15.8 +0.1
baz=95,SNR=13
HVU Hansel Valley 95.18 47 *e*P P 01 49 14.7 -0.9
HVU pmax pmax
comp=Z,35nm,0.9s,mb5.8
HVU Hansel Valley 95.18 47 *e*P P 01 49 14.7 -0.9
comp=Z,35nm,0.9s,mb5.8
F12A Elk City 95.18 43 ⇓P P 01 49 14.3 -1.2
baz=95,SNR=81
K14A Jones Ranch, D 95.22 46 ⇓P P 01 49 14.9 -0.8
baz=96,SNR=22
E12A Beaver Dam Sad 95.26 42 ⇑P P 01 49 15.3 -0.6
baz=96,SNR=16
MPU Maple Canyon 95.27 49 PFAKE
MPU LR LR
comp=Z,30µm,20.0s,MS6.8
M15A Larsen Ranch, 95.28 48 ⇓P P 01 49 15.2 -0.9
baz=96,SNR=24
TMUT Trail Mountain 95.30 50 *e*P P 01 49 17.1 +0.9
J14A Carey 95.30 46 ⇑P P 01 49 15.7 -0.4
baz=96,SNR=16
R17A Hanksville Air 95.31 51 ⇓P P 01 49 15.8 -0.5
baz=96,SNR=43
H13A Challis 95.33 44 ⇓P P 01 49 16.0 -0.1
baz=96,SNR=29
TRD Trivandrum 95.36 277 *e*P P 01 49 16.8 -0.3
TRD AMS AMS 02 31 38.2
comp=Z,11µm,18.4s,MS6.4
GKN Gorkha 95.36 298 *e*P P 01 49 15.5 -1.3
comp=Z,180nm,1.0s,mb6.5

T18A Mexican Hat 95.44 52 ⇑P P 01 49 16.4 -0.5
baz=96,SNR=93
O16A Springville 95.44 49 ⇓P P 01 49 16.7 -0.1
baz=96,SNR=32
C11A Tepee Creek (N 95.45 41 ⇓P P 01 49 15.9 -0.8
baz=96
CTU Camp Tracy 95.46 49 *e*P P 01 49 17.2 +0.3
comp=Z,64nm,1.0s,mb6.0
KOD Kodaikanal 95.48 279 *e*P P 01 49 17.5 -0.1
L15A Malad City 95.53 47 ⇓P P 01 49 16.5 -0.8
baz=96,SNR=26
G13A Cobalt 95.56 44 ⇑P P 01 49 16.6 -0.6
baz=96,SNR=32
S18A Hurst Farm, Bl 95.56 52 ⇓P P 01 49 18.1 +0.7
baz=96,SNR=21
I14A Mackay 95.59 45 ⇑P P 01 49 17.4 -0.1
baz=96,SNR=33
B11A Sandpoint 95.64 40 ⇑P P 01 49 17.2 -0.3
baz=96
D12A Red Ives Fores 95.67 42 ⇓P P 01 49 17.6 -0.1
baz=96
DAU Daniels Canyon 95.69 49 *e*P P 01 49 20.3 +2.3
P17A Butcher Ranch, 95.70 50 ⇑P P 01 49 17.9 -0.1
baz=96,SNR=7.9
K15A Arbon 95.71 46 ⇑P P 01 49 17.1 -0.9
baz=96,SNR=19
SRU San Rafael 95.71 50 *e*P P 01 49 18.4 +0.3
SRU pmax pmax
comp=Z,23nm,0.8s,mb5.7
SRU San Rafael 95.71 50 ⇓P P 01 49 18.1 0.0
baz=96,SNR=39
SRU San Rafael 95.71 50 *e*P P 01 49 18.4 +0.3
comp=Z,23nm,0.8s,mb5.7
N16A Rees Ranch, Co 95.75 48 ⇑P P 01 49 17.9 -0.3
baz=96,SNR=18
F13A Darby 95.78 43 ⇓P P 01 49 17.1 -1.1
baz=96,SNR=55
A11A Hall Mountain, 95.86 40 ⇑P P 01 49 19.3 +0.7
baz=96,SNR=11
C12B Naegeli Ranch, 95.87 41 ⇓P P 01 49 18.9 +0.3
baz=96,SNR=6.7
R18A Canyonlands Na 95.89 51 ⇑P P 01 49 19.3 +0.3
baz=96,SNR=29
H14A Leadore 95.92 44 ⇓P P 01 49 18.6 -0.3
baz=96,SNR=25
HWUT Hardware Ranch 95.94 48 *e*P P 01 49 18.2 -0.9
comp=Z,16nm,0.8s,mb5.5
HWUT LR LR
comp=Z,14µm,20.0s,MS6.5
T19A Beclabito 95.95 53 ⇑P P 01 49 19.5 +0.2
baz=96,SNR=12
O17A Robinson Place 95.98 49 ⇓P P 01 49 19.4 +0.1
baz=96,SNR=132
Q18A Rafter H Ranch 95.99 50 ⇑P P 01 49 19.1 -0.3
baz=96,SNR=25
J15A Blackfoot 96.06 46 ⇑P P 01 49 19.4 -0.1
baz=96,SNR=20
P18A Preston Nutter 96.11 50 ⇑P P 01 49 20.1 +0.2
baz=96,SNR=21
G14A Jackson 96.12 44 ⇓P P 01 49 19.5 -0.3
baz=96,SNR=22
KOLN Koldanda 96.14 297 *e*P P 01 49 19.0 -1.3
comp=Z,63nm,0.9s,mb6.0
L16A Fish Haven 96.19 47 ⇑P P 01 49 19.7 -0.5
baz=96,SNR=41
N17A Moffit Pass 96.19 49 ⇓P P 01 49 20.3 0.0
baz=96,SNR=7.5
S19A Harvey Farm, M 96.21 52 ⇓P P 01 49 20.5 +0.1
baz=96,SNR=18
DANN Dangsing 96.21 298 *e*P P 01 49 20.0 -0.6
comp=Z,320nm,1.5s,mb6.5
D13A Huson 96.24 42 ⇑P P 01 49 21.1 +0.8
baz=96,SNR=7.1
A12A Yaak River Ran 96.28 40 ⇑P P 01 49 21.0 +0.6
baz=96,SNR=12
MCMT McKenzie Canyo 96.35 44 *e*P P 01 49 22.1 +1.3
H15A Lima 96.40 45 ⇓P P 01 49 21.1 0.0
baz=97,SNR=32
K16A Soda Springs 96.40 47 ⇑P P 01 49 21.0 -0.1
baz=97,SNR=21
F14A Wisdom 96.41 43 ⇑P P 01 49 21.8 +0.7
baz=97,SNR=12
MSO Missoula 96.45 42 PFAKE 01 49 30.0 +8.7
MSO LR LR
comp=Z,11µm,19.0s,MS6.4
MVCO Mesa Verde 96.48 53 *e*P P 01 49 23.4 +1.8
comp=Z,21nm,1.2s,mb5.4
MVCO LR LR
comp=Z,22µm,19.0s,MS6.7
LAZ Ladron 96.49 56 *e*P P 01 49 21.9 +0.1
LAZ *e*PP PP 01 53 17.4 +1.2
PV10 Paradox Valley 96.51 51 *e*P P 01 49 21.7 -0.1
O18A Roosevelt 96.52 49 ⇓P P 01 49 22.1 +0.4
baz=97,SNR=13
LENM Lemitar 96.54 56 *e*P P 01 49 22.3 +0.3
J16A Bone 96.56 46 ⇑P P 01 49 22.4 +0.6
baz=97,SNR=50
Q19A Hogan Spring (96.56 51 ⇑P P 01 49 22.4 +0.4
baz=97,SNR=21
E14A Clinton 96.57 43 ⇓P P 01 49 21.7 -0.1
baz=97,SNR=26
TIXI Tiksi 96.67 348⇑ *e*P P 01 49 19.1 -2.6
TIXI pmax pmax
comp=Z,73nm,1.6s,mb5.9
TIXI Tiksi 96.67 348⇑ *e*P P 01 49 19.2 -2.5
AHID Auburn Hatcher 96.71 47 *e*P P 01 49 23.2 +0.7
comp=Z,28nm,1.1s,mb5.6
AHID LR LR
comp=Z,10µm,19.0s,MS6.3
G15A Dillon 96.72 44 ⇑P P 01 49 22.8 +0.3
baz=97,SNR=24
DLMT Dillon 96.72 44 *e*P P 01 49 21.2 -1.3
comp=Z,26nm,1.0s,mb5.6
B13A Whitefish 96.76 41 ⇑P P 01 49 22.4 -0.2
baz=97
PV01 Paradox Valley 96.77 52 *e*P P 01 49 23.9 +1.0
RRI2 Red Ridge 96.78 46 *e*P P 01 49 22.1 -0.8
comp=Z,57nm,1.0s,mb6.0
BNM Barren Site 96.80 56 *e*P P 01 49 23.9 +0.8
BNM *e*PP PP 01 53 19.9 +1.3
D14A Greenough 96.83 42 ⇑P P 01 49 22.6 -0.4
baz=97,SNR=11
LPM Los Pinos Moun 96.85 56 *e*P P 01 49 24.5 +1.1
LPM *e*PP PP 01 53 20.2 +1.2
CHMT Chamberlain Mo 96.92 42 *e*P P 01 49 24.4 +1.1
PLCA Paso Flores 96.94 138 P P 01 49 22.8 -1.1
comp=Z,17nm,1.0s,mb5.5,baz=188,slow=4.3,SNR=23
PLCA PKKPbc PKKPbc 02 06 06.6 +1.2
comp=Z,5.4nm,1.0s,baz=65,slow=3.7,SNR=4.9
PLCA LR LR 02 22 41.4
comp=Z,6µm,19.3s,MS6.1,baz=144,slow=29
PLCA Paso Flores 96.94 138 *e*P P 01 49 25.0 +1.2
comp=Z,20nm,1.0s,mb5.5
PLCA LR LR
comp=Z,6µm,19.0s,MS6.1
C14A Swan Lake 96.96 41 ⇓P P 01 49 23.3 -0.2
baz=97
HYB Hyderabad 96.96 286 *e*P P 01 49 25.5 +1.3
HYB *e* 02 00 02.0
HYB *e*S S 02 00 44.0 -2.6
HYB pmax pmax
comp=Z,76nm,1.2s,mb6.0
HYB Hyderabad 96.96 286 *i* P P 01 49 25.5 +1.3
comp=Z,76nm,1.2s,mb6.0
HYB *e*SKS 02 00 02.0
HYB *e*S S 02 00 44.0 -2.6
HYB LR LR 02 39 24.0
comp=Z,15nm,18.0s
HYB Hyderabad 96.96 286 *e*P P 01 49 25.5 +1.3
comp=Z,76nm,1.2s,mb6.0
HYB *e*SKS 02 00 02.0
HYB *e*S S 02 00 44.0 -2.6
F15A Butte 96.98 44 ⇑P P 01 49 23.7 +0.1
baz=97,SNR=16
A13A Flathead Natio 97.02 40 ⇑P P 01 49 23.8 +0.1
baz=97
N18A Larsen Ranch, 97.02 49 ⇑P P 01 49 23.1 -0.9
baz=97,SNR=7.6
TPAW Teton Pass 97.09 46 *e*P P 01 49 25.8 +1.6
comp=Z,20nm,0.9s,mb5.5
TPAW *e*PP PP 01 53 23.6 +3.1
REDW Red Top Meadow 97.11 46 *e*P P 01 49 25.0 +0.7
comp=Z,53nm,1.1s,mb5.9
REDW *e*PP PP 01 53 23.8 +3.1
SNOW Snow King Moun 97.21 46 *e*P P 01 49 27.0 +2.2
comp=Z,34nm,1.0s,mb5.7
ANMO Albuquerque 97.21 55⇑ *e*P P 01 49 24.6 -0.4

ANMO **Albuquerque** 97.21 55 *e*P P 01 49 25.0 0.0
comp=Z,10nm,0.8s,mb5.3
ANMO *e*PP PP 01 53 17.9 -3.8
ANMO LR LR
comp=Z,23μm,19.0s,MS6.7
IMW Indian Meadow 97.25 46 *e*P **P 01 49 25.1 +0.2**
comp=Z,25nm,1.0s,mb5.6
QLMT Earthquake Lak 97.28 45 *e*P **P 01 49 26.2 +1.1**
MOOW Moose Ponds 97.32 46 *e*P **P 01 49 26.1 +0.9**
comp=Z,14nm,1.0s,mb5.3
N19A John Jarvie Ra 97.34 49 ⇑P **P 01 49 25.6 +0.2**
baz=98,SNR=12
H16A Russell Place, 97.35 45 ⇑P **P 01 49 25.6 +0.2**
baz=98,SNR=37
LOHW Long Hollow 97.37 46 *e*P **P 01 49 25.9 +0.4**
comp=Z,17nm,1.0s,mb5.4
LOHW *e*PP PP 01 53 21.4 -1.3
WALA Waterton Lakes 97.38 40 *e*P **P 01 49 26.4 +1.1**
comp=Z,12nm,0.9s,mb5.3
D15A Lincoln 97.43 42 ⇓P **P 01 49 25.9 +0.2**
baz=98
BOZ Bozeman (W) 97.46 44 *e*P **P 01 49 26.6 +0.8**
BOZ pmax pmax
comp=Z,18nm,1.1s,mb5.4
BOZ MLR MLR
comp=Z,26μm,19.0s,MS6.7
BOZ Bozeman (W) 97.46 44 ⇑P **P 01 49 26.1 +0.3**
baz=98
BOZ Bozeman (W) 97.46 44 *e*P **P 01 49 26.6 +0.8**
comp=Z,18nm,1.1s,mb5.4
BOZ LR LR
comp=Z,26μm,19.0s,MS6.7
B14A Marquette Ranc 97.48 41 ⇑P **P 01 49 25.9 0.0**
baz=98
TXAR Lajitas Array 97.49 62 P **P 01 49 26.1 -0.3**
comp=Z,9.8nm,0.9s,mb5.2,baz=223,slow=3.7,SNR=38
TXAR PP PP 01 53 29.3 +5.2
comp=Z,1.8nm,1.1s,baz=239,slow=8.6,SNR=3.6
TXAR PKKPbc PKKPbc 02 06 05.8 +1.8
comp=Z,2.9nm,0.9s,baz=121,slow=2.9,SNR=8.9
TXAR LR LR 02 26 29.4
comp=Z,25μm,19.1s,MS6.7,baz=290,slow=31
TXAR Lajitas Array 97.49 62 P **P 01 49 26.1 -0.3**
TXAR 01 53 29.3
TXAR Lajitas Array 97.49 62 P **P 01 49 26.1 -0.3**
TXAR PP PP 01 53 29.3 +5.2
TXAR PKKPbc PKKPbc 02 06 05.8 +1.8
TXAR LR LR 02 26 29.4
I17A Pilgram Creek 97.50 46 ⇑P **P 01 49 25.9 -0.2**
baz=98
YMR Madison River 97.52 45 *e*P **P 01 49 28.2 +2.0**
comp=Z,36nm,1.1s,mb5.8
YMR LR LR
comp=Z,19μm,20.0s,MS6.6
A14A Double T Ranch 97.64 40 ⇑P **P 01 49 26.7 +0.1**
baz=98
C15A Salmond Ranch, 97.66 42 ⇑P **P 01 49 26.3 -0.4**
baz=98
HVS Khovu-Aksy 97.72 322 *e*P **P 01 49 26.4 -0.5**
YNR Norris Junctio 97.73 45 *e*P **P 01 49 27.5 +0.4**
HRY Holter Researc 97.74 43 *e*P **P 01 49 27.6 +0.5**
BW06 Boulder Array 97.76 47 *e*P **P 01 49 27.2 -0.1**
comp=Z,39nm,1.4s,mb5.7
BW06 LR LR
comp=Z,15μm,19.0s,MS6.5
PDAR Pinedale Array 97.76 47 P **P 01 49 27.4 +0.1**
comp=Z,10nm,1.1s,mb5.3,baz=205,slow=3.1,SNR=33
PDAR PP PP 01 53 28.3 +2.5
comp=Z,8.7nm,1.1s,baz=235,slow=5.2,SNR=7.7
PDAR PKKPbc PKKPbc 02 06 04.2 +0.5
comp=Z,3.6nm,0.9s,baz=86,slow=5.6,SNR=7.7
PDAR PKPPKP 02 14 15.1
comp=Z,0.8nm,0.9s,baz=103,slow=3.9,SNR=3.8
PDAR LR LR 02 30 35.2
comp=Z,13μm,18.6s,MS6.5,baz=250,slow=34
E16A East Helena 97.77 43 ⇓P **P 01 49 27.0 -0.2**
baz=98
NGP Nagpur 97.78 290 *e*P **P 01 49 27.6 -0.3**
LKWY Lake 97.86 45 PFAKE 01 49 40.0 +12
LKWY LR LR
comp=Z,21μm,20.0s,MS6.6
B15A Bradely Ranch, 97.90 41 ⇑P **P 01 49 27.2 -0.5**
baz=98
A15A Johnson Ranch, 98.06 41 ⇑P **P 01 49 28.3 -0.1**
baz=98
C16A Fuhringer Ranc 98.21 42 ⇓P **P 01 49 28.7 -0.4**
baz=98
E17A Martinsdale 98.27 43 ⇑P **P 01 49 29.2 -0.3**
baz=98
WMQ Urumqi 98.70 314 P **P 01 49 30.3 -1.2**
WMQ AP pP 01 49 36.5 -0.7
WMQ XP sP 01 49 41.0 +1.8
WMQ PP PP 01 53 34.0 +1.1
WMQ AMB AMB
comp=Z,55nm,1.1s,mb6.0
WMQ AMB AMB
comp=Z,689nm,6.2s
WMQ LR LR
comp=N,8μm,17.3s,MS6.4
WMQ LR LR
comp=E,6μm,18.2s,MS6.4
WMQ LR LR
comp=Z,6μm,23.0s,MS6.0
A16A West Butte Ran 98.74 41 ⇓P **P 01 49 32.0 +0.6**
baz=99
C17A Wharram Farm, 98.76 42 ⇓P **P 01 49 31.4 -0.2**
baz=99
GCMT Greycliff 98.79 44 *e*P **P 01 49 33.1 +1.3**
F18A Big Timber 98.80 44 ⇑P **P 01 49 32.2 +0.3**
baz=99
RLMT Red Lodge 98.81 45 *e*P **P 01 49 32.0 0.0**
comp=Z,16nm,1.0s,mb5.5
RLMT LR LR
comp=Z,23μm,21.0s,MS6.7
MNGI Mangalore 98.84 280 *ex* x 01 50 39.5
SDCO Great Sand Dun 98.90 53 *e*P **P 01 49 33.5 +1.0**
comp=Z,12nm,1.4s,mb5.2
SDCO LR LR
comp=Z,23μm,20.0s,MS6.7
E18A Harlowton 98.91 44 ⇓P **P 01 49 32.5 +0.2**
baz=99
PAYG Puerto Ayora 99.31 94 PFAKE 01 49 50.0 +15
PAYG LR LR
comp=Z,12μm,21.0s,MS6.4
EDM Edmonton 99.34 36 *e*P **P 01 49 35.6 +1.5**
AKL Akola 99.42 289 *e*P **P 01 49 35.4 +0.2**
AKL AMb AMB 01 49 37.9
comp=Z,59nm,0.9s,mb6.1
ISCO Idaho Springs 99.51 51 PFAKE 01 49 50.0 +15
ISCO LR LR
comp=Z,10μm,20.0s,MS6.3
EGMT Eagleton 99.54 42 ⇓P **P 01 49 35.2 +0.1**
baz=100
EGMT Eagleton 99.54 42 PFAKE 01 49 50.0 +15
EGMT LR LR
comp=Z,13μm,19.0s,MS6.5
KRAR Krasnoyarsk 100.12 326 *e*P Pdif 01 49 33.9 -3.9
KRAR pmax pmax
comp=Z,34nm,1.0s
KAD Karad 100.86 284 *e*PP PP 01 53 49.6 -0.3
AMTX Amarillo 100.89 57 *e*Pdif Pdif 01 49 41.7 +0.5
comp=Z,18nm,1.0s
AMTX LR LR
comp=Z,20μm,19.0s,MS6.6
JCT Junction City 101.03 62 *e*P Pdif 01 49 45.8 +3.9
JCT pmax pmax
comp=Z,7.0nm,0.8s
JCT MLR MLR
comp=Z,26μm,19.0s,MS6.8
JCT Junction City 101.03 62 *e*Pdif Pdif 01 49 45.8 +4.0
comp=Z,6.9nm,0.8s
JCT LR LR
comp=Z,26μm,19.0s,MS6.8
LAO LASA Array 101.34 44 *e*Pdif Pdif 01 49 45.2 +2.0
comp=Z,20nm,1.0s
LAO LR LR
comp=Z,31μm,20.0s,MS6.8
POO Poona 101.55 285 *e*PP PP 01 53 53.4 -1.8
DDI Dehra Dun 101.56 298 *e*P Pdif 01 49 44.0 -0.2
DDI *ex* x 01 53 55.8
KVTX Kingsville 101.73 65 PFAKE 01 50 00.0 +15
KVTX LR LR
comp=Z,17μm,20.0s,MS6.6
RSSD Black Hills 102.00 47 *e*P Pdif 01 49 47.2 +1.0
RSSD pmax pmax
comp=Z,13nm,1.0s
RSSD MLR MLR
comp=Z,9μm,19.0s,MS6.3
RSSD Black Hills 102.00 47 *e*Pdif Pdif 01 49 47.2 +1.1
comp=Z,13nm,1.0s
RSSD LR LR
comp=Z,9μm,19.0s,MS6.3
YKA Yellowknife Ar 102.28 27 Pdiff Pdif 01 49 47.5 +0.2
comp=Z,4.7nm,0.9s,baz=259,slow=4.3,SNR=6.8
YKA PKiKP PKiKP 01 54 09.1 +0.4
comp=Z,1.6nm,0.7s,baz=232,slow=0.9,SNR=5.3
YKA Yellowknife Ar 102.28 27 Pdif Pdif 01 49 47.5 +0.2
OGNE Ogallala 102.47 51 PFAKE 01 50 00.0 +12
OGNE LR LR
comp=Z,15μm,19.0s,MS6.5
SMLA Simla 102.53 299 *e*P Pdif 01 49 50.1 +1.6
SMLA AMb AMB 01 49 59.5
comp=Z,88nm,3.4s
WMOK Wichita Mounta 103.13 58 *e*P Pdif 01 49 51.9 +0.7
WMOK MLR MLR
comp=Z,22μm,20.0s,MS6.7
DGMT Dagmar 103.20 43 *e*Pdif Pdif 01 49 51.8 +0.3
comp=Z,8.9nm,0.8s
DGMT LR LR
comp=Z,14μm,19.0s,MS6.5
MKAR Makanchi Array 103.27 315 Pdiff Pdif 01 49 52.4 +0.6
comp=Z,5.6nm,0.7s,baz=102,slow=6.1,SNR=16
MKAR PKiKP PKiKP 01 54 09.4 -1.6
comp=Z,11nm,1.1s,baz=104,slow=9.1,SNR=7.2
MKAR PKKPbc PKKPbc 02 05 47.9 0.0
comp=Z,6.0nm,0.8s,baz=289,slow=3.7,SNR=14
MKAR PKPPKP 02 13 59.0
comp=Z,0.3nm,0.3s,baz=353,slow=4.9,SNR=3.6
AJM Ajmer 103.28 293 *e*PP PP 01 54 08.0 -0.1
LCO Las Campanas 103.49 129 PFAKE 01 50 10.0 +17
LCO LR LR
comp=Z,8μm,20.0s,MS6.3
CBKS Cedar Bluff 103.55 53 PFAKE 01 50 00.0 +7.0
CBKS LR LR
comp=Z,10μm,20.0s,MS6.3
ZAA0 Zalesovo Array 103.79 323 *e*Pdif Pdif 01 49 54.7 +0.6
ZALV Zalesovo Beam 103.79 323 Pdiff Pdif 01 49 54.1 0.0
comp=Z,6.2nm,0.7s,baz=116,slow=4.4,SNR=15
ZALV PKiKP PKiKP 01 54 11.3 -0.4
comp=Z,2.8nm,0.4s,baz=91,slow=5.8,SNR=6.4
ZALV PKKPbc PKKPbc 02 05 46.5 -0.1
comp=Z,2.3nm,0.8s,baz=7.6,slow=4.5,SNR=4.4
TRQA Tornquist 103.81 141 PFAKE 01 50 10.0 +16
TRQA LR LR
comp=Z,5μm,19.0s,MS6.1
HKT Hockley 104.16 63 PFAKE 01 50 10.0 +14
HKT LR LR
comp=Z,27μm,19.0s,MS6.8
NVS Novosibirsk 104.93 323 *e* SKSac 02 00 37.1 -0.9
NVS *e* 02 01 53.1
NVS pmax pmax
comp=Z,98nm,2.7s
NVS pmax pmax
comp=N,44nm,2.9s
NVS pmax pmax
comp=E,69nm,2.7s
NATX Nacogdoches 105.62 62 PFAKE 01 54 30.0 +14
NATX LR LR
comp=Z,39μm,20.0s,MS7.0
KSU1 Kansas State U 105.97 54 *e*PKP PKiKP 01 54 16.9 +0.7
KSU1 LR LR
comp=Z,22μm,19.0s,MS6.7
FFC Flin Flon 106.19 37 *e*PKP PKiKP 01 54 16.6 +0.5
FFC LR LR
comp=Z,14μm,19.0s,MS6.5
KURK Kurchatov 106.62 318 Pdiff Pdif 01 50 03.6 -3.1
comp=Z,5.6nm,0.7s,baz=103,slow=7.4,SNR=23
KURK PKiKP PKiKP 01 54 18.1 +1.1
comp=Z,5.6nm,1.0s,baz=105,slow=2.2,SNR=5.8
KURK PKKPbc PKKPbc 02 05 37.7 -0.1
comp=Z,9.2nm,0.9s,baz=288,slow=3.5,SNR=15
KURK PKPPKP 02 13 45.2
comp=Z,0.2nm,0.4s,baz=253,slow=3.5,SNR=3.7
KURK Kurchatov 106.62 318 Pdif Pdif 01 50 03.6 -3.1
KURK *e*PKP PKiKP 01 54 15.5 -1.6
KURK LR LR
comp=Z,10μm,19.0s,MS6.4
BHJ Bhuj 106.70 289 *e*PP PP 01 54 33.4 -0.1
BHJ AMS AMS 02 12 04.2
comp=Z,8μm,15.6s,MS6.4
TKM2 Tokmak 2 106.86 310 *e*PKP PKiKP 01 54 19.0 +1.2
TKM2 LR LR
comp=Z,9μm,19.0s,MS6.3
NNA Nana 107.02 110 PFAKE 01 54 30.0 +11
NNA LR LR
comp=Z,9μm,19.0s,MS6.3
ECSD EROS,Sioux Fal 107.07 49 *e*PKP PKiKP 01 54 18.1 -0.1
ECSD LR LR
comp=Z,17μm,20.0s,MS6.6
TGUH Tegucigalpa,Un 107.11 81 PFAKE 01 54 30.0 +11
TGUH LR LR
comp=Z,8μm,22.0s,MS6.2
MIAR Mount Ida 107.22 59 PFAKE 01 54 30.0 +11
MIAR LR LR
comp=Z,17μm,21.0s,MS6.6
TEIG Tepich 108.02 75 PFAKE 01 54 30.0 +9.4
TEIG LR LR
comp=Z,12μm,19.0s,MS6.5
AML Almayashu 108.06 309 PFAKE 01 54 30.0 +10
AML LR LR
comp=Z,5μm,20.0s,MS6.1
JTS JuntasAbangare 108.08 86 PFAKE 01 54 30.0 +9.1
JTS LR LR
comp=Z,10μm,20.0s,MS6.4
EKS2 Erkin-Say 108.11 309 PFAKE 01 54 30.0 +10
EKS2 LR LR
comp=Z,10μm,20.0s,MS6.4
UALR University of 108.25 59 *e*PKP PKiKP 01 54 21.7 +1.1
LVC Limon Verde 108.35 124 PFAKE 01 54 30.0 +8.8
LVC LR LR
comp=Z,5μm,19.0s,MS6.1
AGMN Agassiz Refuge 108.54 45 PFAKE 01 54 30.0 +9.3
AGMN LR LR
comp=Z,32μm,21.0s,MS6.9
ULM Lac du Bonnet 108.90 43 PKiKP PKiKP 01 54 21.2 -0.1
comp=Z,15nm,0.9s,baz=266,slow=2.9,SNR=12
ULM PKKPbc PKKPbc 02 05 30.1 -0.6
comp=Z,4.2nm,0.9s,baz=20,slow=2.5,SNR=2.5
ULM Lac du Bonnet 108.90 43 *e*PKPdf PKiKP 01 54 20.5 -0.8
ULM LR LR
comp=Z,13μm,19.0s,MS6.5
SCIA State Center 109.12 52 *e*PKP PKiKP 01 54 22.9 +0.9
SCIA LR LR
comp=Z,26μm,19.0s,MS6.8
VBMS Vicksburg 109.15 62 PFAKE 01 54 30.0 +7.6
VBMS LR LR
comp=Z,22μm,20.0s,MS6.7
CCM Cathedral Cave 109.83 56 PFAKE 01 54 40.0 +17
CCM LR LR
comp=Z,20μm,20.0s,MS6.7
MSEY Mahe Island 110.44 256 PFAKE 01 54 40.0 +15
MSEY LR LR
comp=Z,22μm,21.0s,MS6.7
FVM French Village 110.45 56 *e*PKIKP PKiKP 01 54 25.2 +0.5
KK31 Karatay Array 110.55 309 *i* PKIKP PKiKP 01 54 25.1 +0.4
KK31 pmax pmax
comp=Z,6.0nm,0.8s
OXF Oxford 110.56 60 PFAKE 01 54 40.0 +15
OXF LR LR
comp=Z,16μm,20.0s,MS6.6
OTAV Otavalo 110.62 98 *e*PKP PKiKP 01 54 27.0 +1.2
OTAV LR LR
comp=Z,5μm,19.0s,MS6.1
ABPO Ambohimpanom 110.78 239 PFAKE 01 54 40.0 +14
ABPO LR LR
comp=Z,20μm,20.0s,MS6.7
SIUC Southern Illin 111.34 57 *e*PKP PKiKP 01 54 25.0 -1.4
EYMN Ely 111.37 45 PFAKE 01 54 40.0 +14
EYMN LR LR
comp=Z,26μm,20.0s,MS6.8
JFWS Jewell Farm 111.47 51 *e*PKIKP PKiKP 01 54 26.0 -0.4
JFWS MLR MLR
comp=Z,21μm,19.0s,MS6.7
VOSK Vostochnaya 111.65 320 PKIKP PKiKP 01 54 25.7 -0.7
VOSK pmax pmax
comp=Z,19nm,0.9s
BRAL Brewton 111.76 64 PFAKE 01 54 40.0 +13
BRAL LR LR
comp=Z,23μm,20.0s,MS6.8
HDIL Hopedale 111.78 54 *e*PKP PKiKP 01 54 25.9 -1.1
HDIL LR LR
comp=Z,24μm,19.0s,MS6.8
BVA0 Borovoye Array 112.04 320 *i* PKIKP PKiKP 01 54 28.1 +0.9
BVA0 pmax pmax
comp=Z,13nm,1.6s
BVAR Borovoye Array 112.04 320 Pdiff Pdif 01 50 35.1 +4.3
comp=Z,3.2nm,0.4s,baz=109,slow=8.0,SNR=14
BVAR PKiKP PKiKP 01 54 28.2 +1.1
comp=Z,5.5nm,0.5s,baz=126,slow=1.3,SNR=15
BVAR PKPPbc PKKPbc 02 05 19.7 -0.7
comp=Z,7.8nm,0.8s,baz=302,slow=3.3,SNR=16
BVAR Borovoye Array 112.04 320 P Pdif 01 50 35.1 +4.3
BVAR 01 54 28.2
BRVK Borovoye 112.11 320 *e*PKIKP PKiKP 01 54 27.5 +0.2
WVT Waverly 112.14 59 *e*PKIKP PKiKP 01 54 27.6 -0.3
WVT MLR MLR
comp=Z,14μm,19.0s,MS6.6
LRAL Lakeview Retre 112.22 62 *e*PKP PKiKP 01 54 27.8 -0.4
LRAL LR LR
comp=Z,23μm,20.0s,MS6.8
LPAZ La Paz 112.34 119 Pdiff Pdif 01 50 35.1 +3.0
comp=Z,1.8nm,0.9s,baz=193,slow=2.9,SNR=6.2
LPAZ PKiKP PKiKP 01 54 31.8 +2.9
comp=Z,2.8nm,1.0s,baz=223,slow=6.7,SNR=5.7
LPAZ La Paz 112.34 119 Pdif Pdif 01 50 35.1 +3.0
LPAZ *e*PKP PKiKP 01 54 29.2 +0.3
LPAZ LR LR
comp=Z,5μm,19.0s,MS6.1
OLIL Olney 112.39 56 *e*PKP PKiKP 01 54 28.8 +0.5
BCIP Isla Barro Col 112.48 89 PFAKE 01 54 40.0 +11
BCIP LR LR
comp=Z,6μm,19.0s,MS6.2
COWI Conover 112.72 48 *e*PKP PKiKP 01 54 29.1 +0.5
COWI LR LR
comp=Z,15μm,20.0s,MS6.6
SWET Sewanee 113.50 60 *e*PKP PKiKP 01 54 30.1 -0.5
BLO Bloomington 113.67 55 *e*PKIKP PKiKP 01 54 30.2 -0.5
WCI Wyandotte Cave 113.70 56 *e*PKIKP PKiKP 01 54 31.0 +0.2
WCI MLR MLR
comp=Z,18μm,21.0s,MS6.6
CPUP Villa Florida 114.51 134 PKP PKiKP 01 54 34.2 +1.3
comp=Z,6.5nm,0.9s,baz=238,slow=1.6,SNR=12
CPUP PKKPbc PKKPbc 02 05 11.7 +0.3
comp=Z,5.6nm,1.0s,baz=241,slow=1.6,SNR=3.0
CPUP Villa Florida 114.51 134 *e*PKP PKiKP 01 54 33.3 +0.4
CPUP LR LR
comp=Z,894nm,22.0s,MS5.3
CPCT Cooper Cave 114.67 60 *e*PKP PKiKP 01 54 30.6 -2.2
GOGA Godfrey 115.20 62 *e*PKIKP PKiKP 01 54 32.9 -1.0
GOGA MLR MLR
comp=Z,17μm,20.0s,MS6.7
TKL Tuckaleechee C 115.31 60 *e*PKIKP PKPdf 01 54 33.1 -0.9
TZTN Tazewell 115.62 59 *e*PKPdf PKPdf 01 54 34.5 -0.1
TZTN LR LR
comp=Z,16μm,20.0s,MS6.6
GLMI Grayling 115.74 49 *e*PKPdf PKPdf 01 54 35.0 +0.5
GLMI LR LR
comp=Z,24μm,19.0s,MS6.8
DWPF Disney 115.97 68 PFAKE 01 54 50.0 +14
DWPF LR LR
comp=Z,10μm,19.0s,MS6.4
ROSC El Rosal 116.15 95 PKP PKPdf 01 54 35.4 -0.8
comp=Z,4.7nm,0.6s,baz=22,slow=11,SNR=2.9
ACSO Alum Creek Sta 116.51 55 *e*PKPdf PKPdf 01 54 32.8 -3.3
ACSO LR LR
comp=Z,24μm,20.0s,MS6.8
JMDO Jabal Madar 116.79 285 ⇑P PKPdf 01 54 40.1 +2.9
SNR=5.8
SMDO Samad 116.99 286 P PKPdf 01 54 39.7 +2.1
SNR=6.1
BIDO Bidbid 117.03 286 P PKPdf 01 54 39.8 +2.1
SNR=6.0
JSC Jenkinsville 117.15 61 *e*PKIKP PKPdf 01 54 38.7 +1.1
BSY Bisya 117.69 285 ⇑P PKPdf 01 54 41.6 +2.7
SNR=6.7
SVE Sverdlovsk 117.75 324 *e*PKIKP PKPdf 01 54 38.7 +0.7
SVE pmax pmax
comp=Z,24nm,1.2s
HOQ Hoqain 117.77 286 ⇑P PKPdf 01 54 41.8 +2.7
SNR=8.9
NHSC New Hope 117.88 63 *e*PKPdf PKPdf 01 54 40.0 +1.0
NHSC LR LR
comp=Z,21μm,20.0s,MS6.8
ELN Prospectdale 117.93 58 *e*PKPdf PKPdf 01 54 38.1 -0.9
SIV San Ignacio 118.17 123 PKKPbc PKKPbc 02 05 00.6 +2.1
comp=Z,4.6nm,1.1s,baz=85,slow=7.0,SNR=6.8
BLA Blacksburg 118.19 58 *e*PKIKP PKPdf 01 54 39.1 -0.4
BLA MLR MLR
comp=Z,20μm,20.0s,MS6.8
AB31 Akbulak array 118.41 315 *i* PKIKP PKPdf 01 54 40.0 +0.5
AB31 pmax pmax
comp=Z,10.0nm,0.8s
MCWV Mont Chateau 118.86 56 *e*PKPdf PKPdf 01 54 40.6 -0.1
MCWV LR LR
comp=Z,22μm,19.0s,MS6.8
SUR Sutherland 118.89 210 PKP PKPdf 01 54 40.8 -0.3
comp=Z,26nm,1.0s,baz=9.3,slow=1.2,SNR=6.7
SUR PKKPbc PKKPbc 02 04 56.5 +0.2
comp=Z,11nm,0.8s,baz=341,slow=4.4,SNR=4.8
SUR Sutherland 118.89 210 *e*PKPdf PKPdf 01 54 41.9 +0.8
SUR LR LR
comp=Z,12μm,20.0s,MS6.5
ERPA Erie 118.92 53 *e*PKPdf PKPdf 01 54 40.7 0.0
ERPA LR LR
comp=Z,13μm,20.0s,MS6.5
ARU Arti 118.93 324 *i* PKIKP PKPdf 01 54 40.4 +0.1
ARU 01 55 58.2
ARU 02 01 32.0
ARU SP SP 02 05 37.5 -6.8
ARU PS PS 02 05 46.7 -0.6
ARU Arti 118.93 324 *i* PKP PKPdf 01 54 40.3 0.0
HATD Hatta, Dubai 119.08 287 ⇑P PKPdf 01 54 44.2 +2.6
SNR=9.5
RBK Rabkut 119.18 279 P PKPdf 01 54 44.1 +2.2
SNR=10
AKTK Aktyubinsk 119.63 317 PKP PKPdf 01 54 42.0 +0.2
AKTK PKKPbc PKKPbc 02 04 53.5 -0.2
AKTO Aktyubinsk 119.63 317 PKP PKPdf 01 54 42.0 +0.2
comp=Z,12nm,0.9s,baz=97,slow=3.3,SNR=18
AKTO PKKPbc PKKPbc 02 04 53.5 -0.2
comp=Z,10nm,1.0s,baz=253,slow=3.1,SNR=12
AKTO Aktyubinsk 119.63 317 PKIKP PKPdf 01 54 42.3 +0.5
AKTO pmax pmax
comp=Z,5.0nm,1.2s
BOSA Boshof 119.64 216 PKP PKPdf 01 54 42.6 -0.1
comp=Z,17nm,1.0s,baz=152,slow=3.5,SNR=17
BOSA PKKPbc PKKPbc 02 04 52.2 -1.2
comp=Z,9.0nm,0.9s,baz=310,slow=2.2,SNR=9.4
BOSA Boshof 119.64 216 PKIKP PKPdf 01 54 42.6 -0.1
BOSA pmax pmax
comp=Z,17nm,1.0s
BOSA pmax pmax
comp=Z,9.0nm,0.9s
BOSA Boshof 119.64 216 *e*PKPdf PKPdf 01 54 43.7 +1.0
BOSA LR LR
comp=Z,10μm,19.0s,MS6.5
WHFO Wadi Hawf 119.69 279 ⇓P PKPdf 01 54 45.5 +2.6
SNR=6.7
ABTO Aybut 119.98 278 P PKPdf 01 54 45.9 +2.4
SNR=8.2
CNNC Cliffs of the 120.02 61 *e*PKPdf PKPdf 01 54 42.8 -0.3
CNNC LR LR
comp=Z,24μm,20.0s,MS6.8
SSPA Standing Stone 120.42 55 *e*PKPdf PKPdf 01 54 41.5 -2.2
SSPA LR LR
comp=Z,18μm,19.0s,MS6.7
URVA University of 120.51 58 *e*PKPdf PKPdf 01 54 43.3 -0.6
CBN Corbin 120.68 57 *e*PKPdf PKPdf 01 54 44.8 +0.5
CBN LR LR
comp=Z,23μm,20.0s,MS6.8
SDV Santo Domingo 120.98 92 *e*PKPdf PKPdf 01 54 46.1 +0.6
SDV LR LR
comp=Z,2μm,20.0s,MS5.7
SDMD Soldier's Deli 121.17 56 *e*PKPdf PKPdf 01 54 44.0 -1.1
KBS Kingsbay 121.27 355 PFAKE 01 55 00.0 +16
KBS LR LR
comp=Z,6μm,20.0s,MS6.2
SPB4 Spitsbergen Ar 121.54 354 *e*PKPdf PKPdf 01 54 44.7 -0.1
BINY Binghamton 121.89 53 PFAKE 01 55 00.0 +14
BINY LR LR
comp=Z,17μm,19.0s,MS6.7
TRIS Tristan da Cun 122.05 178 PFAKE 01 55 00.0 +13
TRIS LR LR
comp=Z,11μm,20.0s,MS6.5
LBTB Lobatse 122.21 219 PKKPbc PKKPbc 02 04 42.5 -1.3
comp=Z,5.8nm,0.8s,baz=236,slow=6.9,SNR=6.1
LBTB Lobatse 122.21 219 *e*PKIKP PKPdf 01 54 48.7 +1.0

LBTB MLR MLR
comp=Z,14µm,19.0s,MS6.6
SPB Sao Paulo 122.80 139 *e*PKPdf PKPdf 01 54 50.3 +1.5
LONY Lake Ozonia 122.89 50 *e*PKPdf PKPdf 01 54 46.4 -1.9
LONY LR LR
comp=Z,24µm,19.0s,MS6.9
BRNJ Basking Ridge 122.95 55 *e*PKPdf PKPdf 01 54 48.9 +0.3
NCB Newcomb 123.17 51 *e*PKPdf PKPdf 01 54 46.8 -2.0
NCB LR LR
comp=Z,26µm,20.0s,MS6.9
CPNY Central Park 123.41 54 *e*PKPdf PKPdf 01 54 49.0 -0.4
PAL Palisades 123.45 54 *e*PKIKP PKPdf 01 54 48.4 -1.1
FRNY Flat Rock 123.58 50 *e*PKPdf PKPdf 01 54 48.7 -0.9
ACCN Adirondack Com 123.59 51 *e*PKPdf PKPdf 01 54 48.1 -1.5
MDV Middlebury 123.92 51 *e*PKPdf PKPdf 01 54 48.8 -1.5
DAG Danmarks Havn 124.21 2⇓ *i*P PKPdf 01 54 46.8 -3.1
comp=Z,45nm,0.4s
HNH Hanover 124.58 51 *e*PKPdf PKPdf 01 54 50.2 -1.4
QUA2 Belchertown 124.59 53 *e*PKPdf PKPdf 01 54 49.4 -2.2
LBNH Lisbon 124.81 50 *e*PKIKP PKPdf 01 54 52.0 0.0
LBNH MLR MLR
comp=Z,28µm,20.0s,MS6.9
FFD Franklin Falls 125.05 51 *e*PKPdf PKPdf 01 54 51.5 -1.0
HRV Adam Dziewonsk 125.17 52 *e*PKIKP PKPdf 01 54 52.3 -0.4
HRV MLR MLR
comp=Z,15µm,19.0s,MS6.7
BRYW Bryant College 125.21 53 *e*PKPdf PKPdf 01 54 52.7 -0.2
WES Weston 125.35 52 *e*PKIKP PKPdf 01 54 52.4 -0.7
WES MLR MLR
comp=Z,15µm,19.0s,MS6.7
LVZ Lovozero 125.55 341 PFAKE 01 55 00.0 +7.3
LVZ LR LR
comp=Z,14µm,22.0s,MS6.6
APA Apatity 126.13 341⇑ *i*PKHKP 01 54 25.0
APA pmax pmax
comp=Z,91nm,1.0s
APA MLR MLR
comp=Z,15µm,22.0s,MS6.6
SUMG Summit 126.22 10 *e*PKPdf PKPdf 01 54 52.8 -1.1
SCHQ Schefferville 126.33 37 PKP PKPdf 01 54 53.0 -1.5
comp=Z,66nm,1.0s,baz=336,slow=3.0,SNR=27
SCHQ Schefferville 126.33 37 *e*PKPdf PKPdf 01 54 53.5 -1.0
SCHQ LR LR
comp=Z,33µm,19.0s,MS7.0
KEV Kevo 126.46 345 *e*PKIKP PKPdf 01 54 55.6 +1.2
KEV MLR MLR
comp=Z,10µm,20.0s,MS6.5
PKME Peaks-Kenny Pk 126.59 49 PFAKE 01 55 10.0 +15
PKME LR LR
comp=Z,26µm,21.0s,MS6.9
ARCES ARCESS Array B 126.99 345 PKP PKPdf 01 54 54.0 -1.4
comp=Z,43nm,0.6s,baz=7.5,slow=0.5,SNR=45
ARE0 ARCESS Array S 126.99 345 *e*PKPdf PKPdf 01 54 54.2 -1.2
UMR Umm Al-Rimmam 127.18 292 *e*P PKPdf 01 54 58.2 +1.2
baz=292
UMR AMb AMB 01 55 08.2
comp=Z,174nm,1.2s,baz=292
RDF Al-Radifah 127.26 291 *e*P PKPdf 01 54 58.6 +1.4
baz=291
RDF AMb AMB 01 55 01.0
comp=Z,221nm,1.1s,baz=291
KLMR Klimovskoe 127.34 332 *i* PKIKP PKPdf 01 54 55.3 -1.0
KLMR *e* 01 56 55.9
LSZ Lusaka 127.50 230 P PKPdf 01 55 01.1 +3.1
SNR=8.4
LSZ Lusaka 127.50 230 *e*PKPdf PKPdf 01 54 58.2 +0.2
LSZ LR LR
comp=Z,18µm,19.0s,MS6.8
MIB Mutribah 127.52 292 *e*P PKPdf 01 54 58.8 +1.2
baz=292
MIB AMb AMB 01 55 01.3
comp=Z,147nm,1.1s,baz=292
NAY Al-Naaiem 127.56 291 *e*P PKPdf 01 54 58.8 +1.0
baz=291
NAY AMb AMB 01 55 01.2
comp=Z,63nm,1.2s,baz=291
SFJD Kangerlussuaq 127.65 19⇑ *i*P PKPdf 01 54 57.0 +0.3
SFJD *i* 01 55 04.6
SFJD
comp=Z,14µm,19.0s
SJG San Juan 127.74 83 *e*PKIKP PKPdf 01 54 55.6 -2.7
SJG MLR MLR
comp=Z,7µm,22.0s
BDFB Brasilia 128.11 132 PKP PKPdf 01 54 58.1 -1.1
comp=Z,34nm,0.9s,baz=176,slow=3.4,SNR=28
BDFB Brasilia 128.11 132 PKP PKPdf 01 54 58.1 -1.1
BDFB LR LR
comp=Z,7µm,22.0s,MS6.3
MTP Monte Pirata 128.29 83 *e*PKPdf PKPdf 01 54 58.7 -0.7
KMBO Kilima Mbogo 128.32 251⇑P PKPdf 01 55 02.6 +2.9
SNR=8.8
KMBO Kilima Mbogo 128.32 251 PKP PKPdf 01 55 00.2 +0.6
comp=Z,31nm,1.0s,baz=54,slow=2.5,SNR=21
KMBO Kilima Mbogo 128.32 251 PKIKP PKPdf 01 55 00.3 +0.6
KMBO pmax pmax
comp=Z,31nm,1.0s
KMBO Kilima Mbogo 128.32 251 *e*PKPdf PKPdf 01 55 00.1 +0.5
KMBO LR LR
comp=Z,16µm,19.0s,MS6.7
DGRG David-gareji 129.06 307 P PKPdf 01 55 03.5 +3.3
CAM3 Guarapari 129.07 143 *e*P PKPdf 01 55 01.6 +0.7
CAM3 *i* 01 55 07.3
CAM3 *i* 01 55 09.6
CAM3 *i* 01 55 15.5
MTA Mtatsminda 129.47 307 P PKPdf 01 55 03.0 +2.0
TBLG Delisi 129.51 307 *e*PKIKP PKPdf 01 55 03.2 +2.2
TBLG Delisi 129.51 307 P PKPdf 01 55 03.2 +2.2
JOF Joensuu 129.61 337 *ep* PKPdf 01 55 01.0 +0.4
comp=Z,42nm,0.7s
GNI Garni 129.66 305 P PKPdf 01 55 05.5 +4.1
SNR=7.5
GNI Garni 129.66 305 *e*PKPdf PKPdf 01 55 01.5 +0.1
GNI LR LR
comp=Z,5µm,20.0s,MS6.2
GOR Gori 129.95 308 P PKPdf 01 55 00.7 -1.2
ONI Oni 130.36 308 P PKPdf 01 55 06.2 +3.6
GRGR Grenville 130.37 92 PFAKE 01 55 20.0 +17
GRGR LR LR
comp=Z,5µm,20.0s,MS6.2
MOS Moscow 130.42 326 *e*PKIKP PKPdf 01 55 02.8 +0.5
MOS *e* 01 57 16.8
MOS *i* SS SS 02 14 41.9 -1.1
MOS pmax pmax
comp=Z,72nm,1.2s
MOS MLR MLR
comp=Z,10µm,19.0s,MS6.5
KIV Kislovodsk 130.70 310 *i* PKIKP PKPdf 01 55 04.0 +0.8
KIV *e* 01 57 14.8
KIV *e* 02 02 08.6
KIV pmax pmax
comp=Z,17nm,0.9s
KIV Kislovodsk 130.70 310 PFAKE 01 55 10.0 +6.8
KIV LR LR
comp=Z,6µm,19.0s,MS6.3
BBSR BB Station 130.82 65 *e*PKPdf PKPdf 01 55 04.0 +0.1
BBSR *e*SKPbc SKPbc 01 58 27.8 +0.5
BBSR LR LR
comp=Z,9µm,19.0s,MS6.5
VOR Voronezh 131.03 321 PKIKP PKPdf 01 55 06.0 +2.4
VOR pmax pmax
comp=Z,200nm,2.5s
VSR Storozhevoye 131.22 320 *i* PKIKP PKPdf 01 55 04.9 +0.9
VSR pmax pmax
comp=Z,5.0nm,0.5s
VSR pmax pmax
comp=N,5.0nm,0.9s
VSR pmax pmax
comp=E,8.0nm,1.0s
OBN Obninsk 131.22 326 *i* PKIKP PKPdf 01 55 03.1 -0.8
OBN *i* 01 55 11.9
OBN *i* 01 57 23.6
OBN pmax pmax
comp=Z,37nm,1.0s
OBN Obninsk 131.22 326 *e*PKP PKPdf 01 55 03.1 -0.8
TSUM Tsumeb 131.34 216 *e*PKPdf PKPdf 01 55 01.1 -4.2
TSUM LR LR
comp=Z,14µm,20.0s,MS6.7
BPA Boggy Peak 131.49 86 *e* PP 01 57 22.9 -1.8
FDF Fort de France 131.57 89 *e*P PKPdf 01 55 05.3 -0.4
FDF Fort de France 131.57 89 *e*PKPdf PKPdf 01 55 05.5 -0.2
FDF *e*SKPbc SKPbc 01 58 31.4 +0.9
ANWB Willy Bob 131.69 85 *e*PKPdf PKPdf 01 55 05.9 0.0
KAF Kangasniemi 131.93 338 *ep* PKPdf 01 55 05.2 +0.2
comp=Z,18nm,0.7s
BBGH Gun Hill 132.62 91 PFAKE 01 55 20.0 +12
BBGH LR LR
comp=Z,10µm,22.0s,MS6.5
SOC Sochi 132.88 310 *i* PKIKP PKPdf 01 55 12.0 +4.6
SOC *e* 01 55 20.4
SOC *e* 01 57 37.6
SOC pmax pmax
comp=Z,2µm,2.0s
ANN Anapa 134.20 312 *i* PKIKP PKPdf 01 55 13.3 +3.5
ANN *e* 01 57 40.9
ANN *e*SSS 02 20 25.6
ANN pmax pmax
comp=Z,47nm,1.2s
MALT Malatya 134.74 303⇑ *i*P PKPdf 01 55 10.8 -0.2
MALT Malatya 134.74 303 *e*PKPdf PKPdf 01 55 10.3 -0.7
MALT LR LR
comp=Z,10µm,19.0s,MS6.6
BORG Borgarnes 135.86 7 PFAKE
BORG LR LR 01 55 20.0 +7.7
comp=Z,10µm,20.0s,MS6.5
MNK Minsk 135.94 329 *e*PKIKP PKPdf 01 55 12.0 -0.7
MNK *e* 01 57 48.0
MNK *e*PS PS 02 08 14.0 -1.9
MNK *e*SS SS 02 15 52.0 +2.3
MNK MLR MLR
comp=Z,34µm,20.0s,MS7.1
SIM Simferopol' 136.42 314 *de*PKIKP PKPdf 01 55 13.1 -0.8
SIM 01 57 54.8
SIM *e*SS SS 02 15 51.1 -5.4
SIM pmax pmax
comp=Z,27nm,0.8s
SIM pmax pmax
comp=Z,450nm,9.6s
ASF Jabal al Asfar 136.54 295 PKP PKPdf 01 55 14.7 +0.2
comp=Z,6.7nm,0.8s,baz=197,slow=3.9,SNR=4.6
AKASG Malin Array Be 137.18 323 PKhKP 01 55 09.8
comp=Z,2.5nm,0.7s,baz=48,slow=3.8,SNR=6.2
AKASG PKP PKPdf 01 55 15.9 +0.7
comp=Z,5.6nm,0.5s,baz=44,slow=3.0,SNR=28
AKASG PP PP 01 57 50.0 -10
comp=Z,4.5nm,1.0s,baz=38,slow=7.8,SNR=4.1
AKASG SKPbc SKPbc 01 58 49.1 +1.5
comp=Z,13nm,0.9s,baz=45,slow=3.3,SNR=7.9
AKASG Malin Array Be 137.18 323 PKIKP PKPdf 01 55 09.8 -5.4
AKASG 01 55 15.9
AKBB Malin Array Si 137.18 323 *e*PKIKP PKPdf 01 55 15.7 +0.5
KIEV Kiev 137.19 323 *e*PKIKP PKPdf 01 55 12.8 -2.4
KIEV *e* 01 57 57.6
KIEV MLR MLR
comp=Z,9µm,20.0s,MS6.5
NB2 NORSAR Subarra 137.36 345 PKIKP PKPdf 01 55 16.4 +1.2
NOA NORSAR Array B 137.36 345 PKP PKPdf 01 55 13.7 -1.5
comp=Z,11nm,0.7s,baz=31,slow=2.0,SNR=9.3
NOA PP PP 01 57 58.3 -1.8
comp=Z,10nm,1.1s,baz=35,slow=6.2,SNR=5.7
NOA SKPbc SKPbc 01 58 49.2 +1.4
comp=Z,7.1nm,0.9s,baz=17,slow=4.3,SNR=5.9
NOA NORSAR Array B 137.36 345 PKIKP PKPdf 01 55 13.7 -1.5
NOA 01 57 58.3
HFS Hagfors 137.47 342 PKhKP 01 55 05.1
comp=Z,5.9nm,0.7s,baz=83,slow=4.8,SNR=8.2
HFS PKP PKPdf 01 55 14.0 -1.4
comp=Z,10nm,0.8s,baz=85,slow=3.3,SNR=11
HFS SKPbc SKPbc 01 58 48.0 -0.2
comp=Z,15nm,0.9s,baz=318,slow=2.0,SNR=6.1
HFS PKP2ab 02 10 26.4
comp=Z,5.0nm,1.1s,baz=114,slow=3.6,SNR=4.3
HFS Hagfors 137.47 342 PKHKP 01 55 05.1
HFS 01 55 14.0
NAO01 NORSAR Array S 137.61 345 *e*PKPdf PKPdf 01 55 08.7 -7.0
NAO01 LR LR
comp=Z,7µm,20.0s,MS6.4
MMAI Mount Meron Ar 137.75 296 PKP PKPdf 01 55 15.2 -1.6
comp=Z,14nm,0.8s,baz=44,slow=3.7,SNR=8.7
MMAI SKPbc SKPbc 01 58 53.0 +3.0
comp=Z,3.1nm,0.7s,baz=98,slow=8.9,SNR=2.8
BR131 Keskin Array S 138.16 306 *e*PKPpre 01 55 09.7
BR131 *e*PP PP 01 58 08.7 +2.4
BR131 LR LR
comp=Z,5µm,19.0s,MS6.3
EIL Elat 138.28 291 PKP PKPdf 01 55 17.9 +0.1
comp=Z,29nm,0.9s,baz=42,slow=3.0,SNR=5.9
SUW Suwalki 138.43 330 *e*PKP PKPdf 01 55 09.8 -7.6
SUW Suwalki 138.43 330 *e*PKP PKPdf 01 55 09.8 -7.6
SUW Suwalki 138.43 330 *e*PKP PKPdf 01 55 09.7 -7.7
ANTO Ankara 138.75 307 P PKPdf 01 55 21.9 +3.5
SNR=12
ANTO Ankara 138.75 307⇑ *i*P PKPdf 01 55 17.5 -0.9
ANTO Ankara 138.75 307 *e*PKPdf PKPdf 01 55 18.9 +0.5
ANTO *e*PP PP 01 58 12.2 +2.2
ANTO LR LR
comp=Z,9µm,20.0s,MS6.5
MRKH Merkhyat 139.04 270 *e* SKPdf 01 58 46.1 -7.7
baz=104,slow=4.3
MRKH *i* P 01 58 56.7
KIS Kishinev 139.10 318 *e*PKIKP PKPdf 01 55 23.0 +4.2
KIS *e* 01 58 12.0
KIS MLR MLR
comp=N,6µm,20.0s,MS6.4
KIS MLR MLR
comp=E,4µm,20.0s,MS6.4
KIS MLR MLR
comp=Z,10µm,20.0s,MS6.5
KIS MLR MLR
comp=Z,9µm,20.0s
KIS Kishinev 139.10 318 *e*PP PP 01 58 12.0 +0.3
KIS *e*SKP 01 59 30.0
KIS *e*SKS SKSdf 02 02 58.0 +29
CSS Prodhromos 139.25 299 *e*P PKPdf 01 55 13.7 -5.8
TIRR Tirgusor 140.40 315 *e*PKIKP PKPdf 01 55 20.5 -0.8
LVV L'vov 140.49 325 *i* PKIKP PKPdf 01 55 22.0 +0.8
LVV *e* 01 55 30.4
LVV *e* 01 58 28.6
LVV MLR MLR
comp=N,6µm,21.0s,MS6.4
LVV MLR MLR
comp=E,4µm,21.0s,MS6.4
LVV MLR MLR
comp=Z,11µm,21.0s,MS6.6
WAR Warsaw 140.56 330 *e*PKP PKPdf 01 55 23.7 +2.4
WAR Warsaw 140.56 330 *e*PKP PKPdf 01 55 24.1 +2.8
WAR Warsaw 140.56 330 *e*PKP PKPdf 01 55 23.7 +2.4
WAR *e*PKP PKPdf 01 55 24.1 +2.8
PSN Preselentsi 140.85 314 *e*P PKPdf 01 55 24.2 +2.1
VRI Vrincioaia 140.90 318⇑ *i*P PKPdf 01 55 18.8 -3.3
VRI Vrincioaia 140.90 318⇑P PKPdf 01 55 18.8 -3.3
PLOR Plostina 140.95 318⇑ *i*P PKPdf 01 55 18.8 -3.4
ISP Isparta 140.96 304 PFAKE 01 55 30.0 +7.5
ISP LR LR
comp=Z,11µm,19.0s,MS6.7
BURAR Bucovina Array 140.99 321⇓ *i*P PKPdf 01 55 21.0 -1.2
BURAR Bucovina Array 140.99 321⇓P PKPdf 01 55 21.0 -1.2
KWP Kalwaria 141.30 325 *e*PKP PKPdf 01 55 22.4 -0.4
KWP *e* 01 58 30.0
KWP Kalwaria 141.30 325 *e*PKP PKPdf 01 55 20.2 -2.6
KWP Kalwaria 141.30 325⇓ *i*P PKPdf 01 55 21.1 -1.6
KWP Kalwaria 141.30 325 *e*PKP PKPdf 01 55 20.2 -2.5
KWP *e*PKP PKPdf 01 55 22.4 -0.3
KWP *e* 01 58 30.0
COP Copenhagen 141.51 339 *i* P PKPdf 01 55 23.9 +1.0
COP
comp=Z,2µm,20.0s
GKP Gorka Klasztor 141.55 333 *e*PKP PKPdf 01 55 19.1 -3.9
GKP Gorka Klasztor 141.55 333 *e*PKP PKPdf 01 55 18.6 -4.5
GKP *e*PKP PKPdf 01 55 19.1 -4.0
MLR Muntele Rosu 141.56 318 PKP PKPdf 01 55 21.4 -1.9
comp=Z,4.2nm,0.6s,baz=308,slow=7.6,SNR=17
MLR Muntele Rosu 141.56 318⇓ *i*P PKPdf 01 55 20.9 -2.4
MLR Muntele Rosu 141.56 318⇓P PKPdf 01 55 20.9 -2.4
MLR P 01 55 24.9
MUD Monsted U'grnd 141.86 342 *i* P PKPdf 01 55 20.4 -3.1
MUD
comp=Z,7µm,19.0s
KOLS Kolonicke sedl 141.94 325 *e*PKP PKPdf 01 55 20.4 -3.5
KOLS *e* 01 55 27.1
KOLS *e* 01 55 35.8
KOLS Kolonicke sedl 141.94 325 *e*PKP PKPdf 01 55 20.4 -3.5
KOLS *e* 01 55 27.1
KOLS *e* 01 55 35.8
KOLS LR LR
comp=Z,5µm,22.8s,MS6.2
UZH Uzhgorod 142.10 324 *c i*PKIKP PKPdf 01 55 23.3 -0.9
UZH *e* 02 02 27.0
UZH *e*SS SS 02 17 04.0 +1.4
VOIR 142.14 318⇓ *i*P PKPdf 01 55 24.3 -0.1
VOIR 142.14 318 P PKPdf 01 55 25.8 +1.5
STHS Stebnicka Huta 142.20 326 *e*PKP PKPdf 01 55 23.0 -1.3
STHS *e* 01 55 35.9
STHS *e*PP PP 01 58 32.8 +2.4
CRVS Cervenica-Dubn 142.39 325 *e*PKIKP PKPdf 01 55 22.1 -2.6
CRVS *e* 01 55 29.4
CRVS *e* 01 55 35.1
CRVS *e* 01 58 35.5
CRVS Cervenica-Dubn 142.39 325 *e*PKP PKPdf 01 55 22.1 -2.6
CRVS *e* 01 55 29.4
CRVS *e* 01 55 35.1
CRVS *e*PP PP 01 58 35.5 +3.9
CRVS *e* 02 02 06.5
JMB Yambol 142.40 313 P PKPdf 01 55 27.2 +2.3
OJC Ojcow 142.44 328 *e*P Pdif 01 52 46.3 +0.4
OJC Ojcow 142.44 328 *e*PKPdf PKPdf 01 55 26.0 +1.3
OJC *ep*PKPdf pPKPdf 01 55 28.8 -1.8
OJC *e*PP PP 01 58 41.5 +10
OJC *e*SKSdf SKSdf 02 02 36.6 +2.8
OJC *e*SS SS 02 17 16.4 +10
OJC LR LR
comp=Z,9µm,19.5s,MS6.5
SZH Strazhica 142.52 314 P PKPdf 01 55 25.8 +0.7
MLA1 Latheron 142.55 354 *e*P PKPdf 01 55 19.4 -5.2
RSC Scourie 142.67 355 *e*P PKPdf 01 55 20.8 -4.0
NIE Niedzica 142.68 326 *e*PKPdf PKPdf 01 55 24.7 -0.5
NIE *ep*PKPdf pPKPdf 01 55 28.5 -2.5
NIE *e*PP PP 01 58 33.7 +0.4
RTO Tolsta 142.71 356 *e*P PKPdf 01 55 20.9 -4.0
ZIMR 142.73 315 PKIKP PKPdf 01 55 24.5 -1.0
SHEL Horse Pasture 142.80 188 *e*PKPbc PKPdf 01 55 26.4 0.0
SHEL LR LR
comp=Z,12µm,20.0s,MS6.6
DRGR 142.87 321⇓ *i*P PKPdf 01 55 21.9 -3.7
DRGR 142.87 321 P PKPdf 01 55 24.1 -1.5
REB Eisghbrachaidh 142.91 355 *e*P PKPdf 01 55 21.3 -4.0
PVL Pavlikeni 142.94 315 P PKPdf 01 55 25.8 -0.1
MVH1 Achvaich 143.00 354 *e*P PKPdf 01 55 21.6 -3.9
ARG Arkhangelos 143.20 303 *e*P PKPdf 01 55 25.0 -1.5
RRR Rubha Reidh 143.20 356 *e*P PKPdf 01 55 21.6 -4.2
MCD Coleburn Disti 143.25 353 *e*P PKPdf 01 55 20.1 -5.9
DIM Dimitrovgrad 143.28 313 P PKPdf 01 55 24.5 -2.0
RAC Raciborz 143.32 329 *e*PKIKP PKPdf 01 55 25.5 -0.8
RAC MLR MLR
comp=Z,12µm,20.0s,MS6.7
ALN Alexandroupoli 143.36 311 *e*P PKPdf 01 55 21.8 -4.9
CRAR CRAIOVA 143.44 317 PKIKP PKPdf 01 55 27.1 +0.4
MDO Dochfour 143.50 354 *e*P PKPdf 01 55 21.2 -5.2
OKC Ostrava-Krasne 143.50 329 *e*PKP PKPdf 01 55 24.4 -2.2
OKC AMS AMS 03 01 00.0
comp=Z,8µm,20.1s
KDZ Kurdzhali 143.52 312 P PKPdf 01 55 24.8 -2.1
KAC Achnashellach 143.52 355 *e*P PKPdf 01 55 21.4 -5.0
RUE Ruedersdorf 143.55 335 *e*PKPbc PKPdf 01 55 25.2 -1.4
GZR Gura Zlata 143.56 319⇑ *i*P PKPdf 01 55 23.6 -3.3
GZR Gura Zlata 143.56 319 P PKPdf 01 55 23.7 -3.2
RDO Rodhopi 143.63 311 *e*P PKPdf 01 55 26.0 -1.1
KSP Ksiaz 143.69 331 *e*PKP PKPdf 01 55 25.4 -1.5
KSP Ksiaz 143.69 331 *e*PKP PKPdf 01 55 25.2 -1.7
KSP Ksiaz 143.69 331 *e*PKP PKPdf 01 55 24.9 -2.0
KSP *e*PKPdf PKPdf 01 55 29.4 +2.5
KSP *ep*PKP pPKPdf 01 55 33.3 +0.5
KSP *e*SS SS 02 17 21.0 +0.5
KSP LR LR
comp=Z,30µm,21.2s,MS7.0
KPL Plockton 143.71 356 *e*P PKPdf 01 55 21.7 -5.1
PRK Paraskevi 143.77 308 *e*P PKPdf 01 55 22.2 -5.2
PRK Paraskevi 143.77 308 *e*P PKPdf 01 55 23.0 -4.4
SMG Samos 143.81 305 *e*P PKPdf 01 55 23.0 -4.6
PSZ Piszkesteto 143.82 325⇓ *e*PKP PKPdf 01 55 26.8 -0.4
PSZ Piszkesteto 143.82 325⇓ *i*P PKPdf 01 55 26.6 -0.6
PSZ Piszkesteto 143.82 325 *e*PKPdf PKPdf 01 55 24.2 -3.0
PSZ LR LR
comp=Z,10µm,19.0s,MS6.6
KSB Sheil Bridge 143.82 355 *e*P PKPdf 01 55 22.7 -4.2
PLD Plovdiv 143.83 313 *e*P PKPdf 01 55 23.5 -4.0
PLD Plovdiv 143.83 313 P PKPdf 01 55 26.4 -1.1
MORC Moravsky Berou 143.84 329⇑ *i*P PKPdf 01 55 26.1 -1.1
MORC Moravsky Berou 143.84 329 *e*PKPdf PKPdf 01 55 25.4 -1.9
RZN Rozhen 143.99 313 P PKPdf 01 55 26.9 -0.9
PGB Panagyurishte 144.00 314 P PKPdf 01 55 27.2 -0.5
DPC Dobruska-Polom 144.02 330 *e*PKP PKPdf 01 55 23.9 -3.6
DPC AMS AMS 02 59 50.0
comp=Z,11µm,21.5s
VYHS Vyhne 144.02 326 *e*PKP PKPdf 01 55 25.0 -2.6
VYHS *e* 01 55 27.9
VYHS *e* 01 56 36.1
UPC Upice 144.05 331 *e*PKP PKPdf 01 55 23.9 -3.7
UPC *ep*PKP pPKPdf 01 55 27.4 -6.0
KARP Karpathos 144.11 302 *e*P PKPdf 01 55 23.0 -5.2
BZS Buzias 144.14 320⇓ *i*P PKPdf 01 55 25.0 -2.9
BZS Buzias 144.14 320 P PKPdf 01 55 26.5 -1.4
KOLL Kolacno 144.19 327 *e*PKP PKPdf 01 55 25.9 -2.0
KOLL *e* 01 55 29.8
KOLL *e* 01 55 35.7
CHOS Chios island 144.20 307 *e*P PKPdf 01 55 23.8 -4.4
LIA Limnos Island 144.34 310 *e*P PKPdf 01 55 24.6 -3.8
LOS Limnos 144.40 310 *e*P PKPdf 01 55 24.7 -3.9
BUD Budapest 144.55 325⇓ *e*PKP PKPdf 01 55 29.6 +1.1
EBH Black Hill 144.59 353 *e*P PKPdf 01 55 25.6 -2.7
VRAC Vranov 144.61 329 PKP PKPdf 01 55 27.3 -1.3
comp=Z,56nm,0.9s,baz=46,slow=2.9,SNR=28
VRAC Vranov 144.61 329⇑ *i*P PKPdf 01 55 26.5 -2.1
VRAC Vranov 144.61 329 P PKPdf 01 55 26.4 -2.1
VTS Vitosha 144.62 315⇓ *i*P PKPdf 01 55 26.3 -2.5
VTS Vitosha 144.62 315 P PKPdf 01 55 26.4 -2.4
VTS Vitosha 144.62 315 P PKPdf 01 55 26.9 -2.0
PVCC Panska Ves 144.68 332 *e*PKP PKPdf 01 55 26.1 -2.6
PVCC AMS AMS 03 00 40.0
comp=Z,11µm,21.0s
BRG Berggiesshubel 144.69 333 *i* PKIKP PKPdf 01 55 26.0 -2.7
BRG *i* 01 55 36.6
BRG pmax pmax
comp=Z,300nm,1.4s
BRG pmax pmax
comp=Z,31nm,1.3s
BRG Berggiesshubel 144.69 333 *i* PKP PKPdf 01 55 26.1 -2.6
comp=Z,501nm,1.4s
BRG *i* 01 55 36.6
comp=Z,448nm,1.1s
BRG *i* 01 59 01.7
comp=Z,40nm,1.6s
BRG *i* 01 59 14.0
comp=Z,52nm,1.3s
MMB Musomiste 144.70 313 P PKPdf 01 55 28.0 -1.0
EAB Aberfoyle 144.74 354 *e*P PKPdf 01 55 26.2 -2.3
CLL Collm 144.76 334 *e*PKPdf PKPdf 01 55 26.0 -2.8
comp=Z,47nm,0.7s
CLL *i* PKiKP PKiKP 01 55 29.6 -2.9
comp=Z,351nm,1.4s
CLL *es*PKiKP 01 55 37.0
comp=Z,390nm,1.2s
CLL *e*SS SS 02 17 38.0 +5.4
CLL Lm 03 03 00.0
comp=N,7µm,20.2s
CLL Lm 03 03 00.0
comp=E,4µm,18.6s
CLL Lm 03 03 00.0
comp=Z,10µm,20.7s
CLL Collm 144.76 334 *e*PKP PKPdf 01 55 26.0 -2.8
CLL *e* 01 55 30.0
CLL LR LR
comp=Z,10µm,20.7s,MS6.6
ESY Stoneypath 144.81 352 *e*P PKPdf 01 55 26.4 -2.3
KRUC Moravsky 144.87 329 PKIKP PKPdf 01 55 30.2 +1.2
MODS Modra-Piesok 144.90 327 *e*PKIKP PKPdf 01 55 27.2 -1.9
MODS *e* 01 55 37.3
MODS *e* 01 58 51.6
MODS MLR MLR
comp=Z,5µm,20.8s,MS6.3
MODS Modra-Piesok 144.90 327 *e*PKP PKPdf 01 55 27.2 -1.9
MODS *e* 01 55 31.3
MODS *e* 01 55 37.3
MODS *e*PP PP 01 58 51.6 +5.1
MODS *e*SKS SKSdf 02 02 16.1 -22
MODS Modra-Piesok 144.90 327 *e*PKP PKPdf 01 55 27.2 -1.9
MODS *e* 01 55 31.3
MODS *e* 01 55 37.3
MODS *e* 01 58 51.6
MODS *e*SKS SKSdf 02 02 16.1 -22
MODS LR LR
comp=Z,5µm,20.8s,MS6.3

ZKR Zakros 144.96 301 eP PKPdf 01 55 27.2 -2.5
EAU Auchinoon 144.98 353 eP PKPdf 01 55 26.4 -2.6
APE Apeiranthos 144.99 305 eP PKPdf 01 55 25.6 -4.1
APE Apeiranthos 144.99 305 eP PKPdf 01 55 26.0 -3.6
APE Apeiranthos 144.99 305 ⇓ iP PKPdf 01 55 26.3 -3.3
APE Apeiranthos 144.99 305 i PKP PKPdf 01 55 25.1 -4.5
EBL Broad Law 145.00 353 eP PKPbc 01 55 26.4 -1.9
OUR Ouranopolis 145.03 311 eP PKPbc 01 55 26.7 -2.3
PRU Pruhonice 145.08 331 ePKP PKPdf 01 55 27.3 -2.1
PRU AMS AMS 03 00 10.0
comp=Z,9µm,23.5s
ZST Bratislava 145.10 327 ePKP PKPdf 01 55 29.1 -0.4
ZST e 01 55 32.3
ZST e 01 55 38.8
PGBU Glenifferbraes 145.12 354 eP PKPbc 01 55 26.4 -2.4
TREC Trest 145.14 330 ePKP PKPdf 01 55 27.4 -2.1
TREC AMS AMS 03 02 00.0
comp=Z,11µm,20.0s
XSO Sourhope Farm 145.18 352 eP PKPbc 01 55 26.9 -2.1
PCA1 Carrot 145.21 354 eP PKPbc 01 55 27.0 -2.1
SANT Santorini 145.24 304 eP PKPbc 01 55 27.2 -2.6
SOH Sokhos 145.28 312 eP PKPbc 01 55 27.4 -2.4
PLG Polygyros 145.39 311 eP PKPbc 01 55 27.3 -2.8
PLG Polygyros 145.39 311 eP PKPbc 01 55 28.0 -2.2
PAIG Paliouri 145.40 310 eP PKPbc 01 55 27.1 -3.1
NPS Neapolis 145.41 302 eP PKPbc 01 55 30.0 -0.4
EKA Eskdalemuir Ar 145.45 353 PKPbc PKPbc 01 55 28.3 -1.5
comp=Z,510nm,0.8s,baz=1.4,slow=2.3,SNR=143
KNT Kendrikon 145.45 313 eP PKPdf 01 55 27.8 -2.5
ESK Eskdalemuir 145.47 353 eP PKPdf 01 55 27.2 -2.7
ESK Eskdalemuir 145.47 353 ePKPbc PKPbc 01 55 27.8 -2.1
ESK LR LR
comp=Z,7µm,19.0s,MS6.5
PKSM Moragy 145.52 323 ⇓ iP PKPdf 01 55 28.9 -1.4
PKSM Moragy 145.52 323 P PKPdf 01 55 29.0 -1.3
LAST Lasithi 145.54 302 eP PKPdf 01 55 29.3 -1.3
HORT Hortiatis 145.54 312 eP PKPdf 01 55 27.9 -2.6
ECK Cauldkaine Hil 145.59 352 eP PKPdf 01 55 28.1 -2.0
VAY Valandovo 145.60 313 eP PKPdf 01 55 28.0 -2.5
VAY Valandovo 145.60 313 ePKP PKPdf 01 55 28.0 -2.6
THE Thessaloniki 145.62 312 eP PKPdf 01 55 27.2 -3.4
STIP Stip 145.70 314 eP PKPdf 01 55 28.8 -1.9
STIP Stip 145.70 314 ePKP PKPdf 01 55 27.8 -2.9
XAL Allendale 145.79 351 eP PKPdf 01 55 28.6 -1.8
NKC Novy Kostel 145.80 334 ePKP PKPdf 01 55 29.8 -0.8
NKC epPKP pPKPdf 01 55 33.3 -3.2
NKC AMS AMS 03 03 00.0
comp=Z,12µm,18.8s
NKC Novy Kostel 145.80 334 ePKP PKPdf 01 55 29.8 -0.8
NKC e 01 55 33.3
MOX Moxa 145.83 335 ePKP PKPdf 01 55 31.4 +0.8
comp=Z,1µm,2.6s
MOX
comp=Z,5µm,20.0s
GRG Griva 145.88 313 eP PKPdf 01 55 29.5 -1.6
CONA Conrad Observa 145.90 328 ⇑ iP PKPdf 01 55 30.2 -0.6
comp=Z,447nm,1.3s,SNR=87
CSNA Conrad Observa 145.90 328 ⇑ iP PKPdf 01 55 30.0 -0.9
comp=Z,420nm,1.3s
DIVS Divibare 145.93 319 eP PKPdf 01 55 30.2 -0.8
NEO Neokhori 145.96 310 eP PKPdf 01 55 32.0 +0.8
XOR Xorichti 145.96 310 eP PKPdf 01 55 28.6 -2.6
IDI Anoyia 145.97 302 PKPbc PKPbc 01 55 31.2 -0.9
comp=Z,206nm,1.0s,baz=195,slow=3.4,SNR=68
GCD Castle Douglas 146.00 353 eP PKPdf 01 55 29.5 -1.3
SKO Skopje 146.07 315 eP PKPdf 01 55 31.1 -0.3
SKO Skopje 146.07 315 ePKP PKPdf 01 55 31.4 -0.1
ATH Athens Observa 146.08 307 eP PKPdf 01 55 30.0 -1.5
GAL1 Galloway 146.08 354 eP PKPdf 01 55 29.6 -1.4
KVR Kavouri 146.09 307 eP PKPdf 01 55 29.5 -2.0
SIVA Sivas 146.11 302 eP PKPdf 01 55 31.4 -0.2
KHC Kasperske Hory 146.14 331 ePKP PKPdf 01 55 30.4 -0.8
KHC epPKP pPKPdf 01 55 33.8 -3.3
KHC AMS AMS 03 02 40.0
comp=Z,11µm,19.7s
LIT Litokhoron 146.17 311 eP PKPdf 01 55 29.5 -2.1
GEC2 GERESS Array S 146.29 331 ePKPdf PKPdf 01 55 30.8 -0.7
GEC2 ePKPbc PKPbc 01 55 34.5 +1.9
GERES GERESS Array B 146.29 331 PKPbc PKPbc 01 55 31.6 -1.0
comp=Z,91nm,0.6s,baz=37,slow=2.8,SNR=52
NAIG Nisos Aigina 146.32 307 eP PKPdf 01 55 30.0 -1.9
LKR Lokris 146.37 309 eP PKPdf 01 55 31.1 -0.9
WET Wettzell 146.44 332 PKP2 PKPbc 01 55 31.7 -1.4
WTSB Winterswijk 146.45 341 ePKP PKPdf 01 55 32.6 +1.0
comp=Z,378nm,1.5s
KRUS Krusevo 146.47 314 ePKP PKPdf 01 55 31.5 -0.5
VAM Vamos 146.49 303 eP PKPdf 01 55 32.0 -0.3
ARSA Arzberg 146.53 327 ⇓ iP PKPdf 01 55 33.4 +1.5
comp=Z,151nm,1.1s,SNR=11
ARSA Arzberg 146.53 327 P PKPbc 01 55 33.6 +0.2
HPK Haverah Park 146.58 350 eP PKPdf 01 55 32.3 +0.5
BIA Bitola 146.58 314 eP PKPdf 01 55 31.4 -0.8
BIA Bitola 146.58 314 ePKP PKPdf 01 55 30.3 -1.9
KZN Kozani 146.59 312 eP PKPdf 01 55 31.1 -1.3
DID Didima 146.59 307 eP PKPdf 01 55 30.3 -2.1
LTK Loutraki 146.62 308 eP PKPdf 01 55 30.4 -2.0
GIM North Isle of 146.62 354 eP PKPdf 01 55 31.5 -0.3
FNA Florina 146.65 313 eP PKPdf 01 55 30.2 -2.2
AGG Agios Georgios 146.71 310 eP PKPdf 01 55 31.1 -1.5
THL Kiokotos Trika 146.72 311 eP PKPdf 01 55 32.9 +0.4
GVD Gavdhos 146.73 302 eP PKPdf 01 55 32.5 -0.2
GRA1 Grafenberg Arr 146.73 344 ePKP PKPdf 01 55 32.3 +0.1
GRA1 LR LR
comp=Z,7µm,21.1s,MS6.4
GRF Grafenberg Arr 146.73 334 ePKP PKPdf 01 55 32.3 +0.1
GRF eL 03 02 07.3
comp=Z,7µm,21.1s
MOA Molln 146.74 329 ⇑ iP PKPdf 01 55 31.8 -0.4
comp=Z,162nm,1.1s,SNR=33
MOA Molln 146.74 329 P PKPdf 01 55 33.0 +0.7
BCI Bajram Curri 146.77 317 eP PKPbc 01 55 34.9 +0.6
GMM Mts of Mourne 146.81 355 eP PKPdf 01 55 32.3 +0.1
PHP Peshkopia 146.86 315 eP PKPbc 01 55 35.3 +0.8
OHR Ohrid 146.89 314 eP PKPdf 01 55 31.7 -1.0
OHR Ohrid 146.89 314 ePKP PKPdf 01 55 30.6 -2.1
LHO Holmfirth 147.01 350 eP PKPdf 01 55 32.3 -0.2
PUK Puka 147.05 316 eP PKPdf 01 55 34.3 +1.3
VLI Veliai 147.08 305 eP PKPdf 01 55 31.0 -2.2
KBN Korca 147.12 313 eP PKPbc 01 55 37.3 +2.0
EVR Evrytania 147.13 310 eP PKPdf 01 55 33.0 -0.2
KYTH Kithira 147.14 305 eP PKPdf 01 55 34.0 +0.7
PERS Pernice 147.14 327 i PKPdf PKPdf 01 55 30.9 -2.1
PERS i PKPbc PKPbc 01 55 36.4 +1.3
SOKA Soboth 147.16 327 ⇑ iP PKPdf 01 55 31.7 -1.3
MEV Metsovon 147.18 312 eP PKPdf 01 55 34.1 +0.9
KBI1 Birley Grange 147.24 350 eP PKPdf 01 55 33.6 +0.7
VLX Vlachokerasia 147.28 307 eP PKPdf 01 55 33.4 -0.2
QSH Qafa e Shtames 147.29 315 eP PKPbc 01 55 39.0 +3.2
TIR Tirane 147.41 315 eP PKPdf 01 55 35.2 +1.6
TIR Tirane 147.41 315 eP PKPbc 01 55 38.0 +1.9
JAN Janina 147.50 312 eP PKPdf 01 55 35.0 +1.2
OBKA Obir 147.52 327 P PKPdf 01 55 34.6 +1.0
KWE Weaver Farm 147.52 350 eP PKPdf 01 55 34.1 +0.7
ITM Ithomi 147.69 307 eP PKPdf 01 55 34.5 +0.3
CWF Charnwood Fore 147.70 349 eP PKPdf 01 55 34.3 +0.6
KBA Koelnbreinsper 147.72 329 ⇑ iP PKPdf 01 55 35.5 +1.5
comp=Z,489nm,1.3s,SNR=44
KBA Koelnbreinsper 147.72 329 P PKPdf 01 55 35.2 +1.3
TOD Tromm 147.75 336 PKP2 PKPab 01 55 35.2 -3.9
HGN Heimansgroeve 147.76 340 ePKP PKPbc 01 55 38.2 +1.5
comp=Z,365nm,1.3s
DLF Lyons Farm 147.79 356 ⇑ iP PKPdf 01 55 33.7 -0.1
DCN Croghan 147.79 356 ⇑ iP PKPdf 01 55 33.8 0.0
BEBN Eben Emael 147.81 341 PKPbc PKPbc 01 55 36.6 -0.3
BOJS Bojanci 147.82 325 i PKPdf PKPdf 01 55 34.6 +0.4
BOJS i PKPbc PKPbc 01 55 40.4 +3.4
DSB Dublin 147.83 355 ePKPdf PKPdf 01 55 34.0 +0.1
DSB ePKPbc PKPbc 01 55 38.5 +1.7
SBD1 Bryn Du 147.84 352 eP PKPdf 01 55 34.6 +0.7
LJU Ljubljana 147.84 326 ePKPdf PKPdf 01 55 34.0 -0.2
LJU Ljubljana 147.84 326 P PKPdf 01 55 35.9 +1.7
MEM Membach 147.87 340 PKPbc PKPbc 01 55 36.5 -0.5
MYKA Terra Mystica 147.89 328 ⇑ iP PKPdf 01 55 34.5 +0.3
comp=Z,172nm,0.9s
IGT Igoumenitsa 147.92 312 eP PKPdf 01 55 35.3 +0.8
PYL PYLOS 147.92 306 eP PKPdf 01 55 35.2 +0.6
ABH Alteburg 147.98 338 PKP PKPdf 01 55 35.8 +1.5
SRN Sarande 148.00 312 eP PKPab 01 55 39.9 -0.5
LKD Levkas 148.04 310 eP PKPdf 01 55 36.0 +1.2
HLM1 Long Mynd 148.16 351 eP PKPdf 01 55 35.1 +0.6
VOY Vojsko 148.18 327 ePKPdf PKPdf 01 55 35.3 +0.6
VOY ePKPbc PKPbc 01 55 38.1 +0.1
KFL Anninata 148.18 309 eP PKPdf 01 55 36.7 +1.7
JAVS Javornik 148.18 327 i PKPdf PKPdf 01 55 33.8 -0.9
JAVS i PKPbc PKPbc 01 55 39.4 +1.4
PTCC Patocco-Chiusa 148.19 328 P PKPdf 01 55 36.5 +1.8
UCC Uccle 148.21 342 PKPbc PKPbc 01 55 37.3 -0.6
KEK Kerkira 148.21 312 eP PKPdf 01 55 35.0 0.0
KTD Kalmit 148.25 337 PKIKP PKPdf 01 55 35.6 +0.9
BCLA Clavier 148.26 341 PKPbc PKPbc 01 55 38.0 -0.1
STU Stuttgart 148.27 335 ePKPdf PKPdf 01 55 36.2 +1.4
STU ePKPbc PKPbc 01 55 39.8 +1.7
VLS Valsamata 148.30 309 eP PKPdf 01 55 36.6 +1.4
VLS Valsamata 148.30 309 eP PKPdf 01 55 36.5 +1.3
RUP Ruppelstein 148.30 338 PKP2 PKPdf 01 55 36.1 +1.3
ABTA Abfaltersbach 148.36 329 ⇑ iP PKPdf 01 55 35.9 +0.9
comp=Z,276nm,1.0s,SNR=24
WATA Walderalm 148.37 331 ⇑ iP PKPdf 01 55 36.1 +1.1
comp=Z,163nm,1.2s,SNR=32
WATA Walderalm 148.37 331 P PKPdf 01 55 36.2 +1.2
WTTA Wattenberg 148.39 331 ⇑ iP PKPdf 01 55 35.5 +0.5
comp=Z,275nm,1.0s,SNR=38
SNF Seneffe 148.49 342 PKPbc PKPbc 01 55 38.0 -0.7
MOTA Moosalm 148.57 331 ⇓ iP PKPdf 01 55 36.8 +1.5
comp=Z,277nm,1.1s,SNR=84
MOTA Moosalm 148.57 331 ⇓ ipPKPdf PKPdf 01 55 36.8 +1.5
comp=Z,277nm,1.1s,SNR=84
MOTA Moosalm 148.57 331 P PKPdf 01 55 36.9 +1.6
RETA Reutte 148.62 332 i P PKPbc 01 55 37.4 -1.7
comp=Z,109nm,0.8s,SNR=10
RETA Reutte 148.62 332 i pPKPdf PKPbc 01 55 37.4 -1.7
comp=Z,109nm,0.8s,SNR=10
LANF Langenberg 148.63 337 PKP PKPdf 01 55 35.8 +0.4
WLF Walferdange 148.64 339 PKPbc PKPbc 01 55 38.0 -1.1
WLF Walferdange 148.64 339 ePKPdf PKPdf 01 55 36.5 +1.1
WLF ePKPbc PKPbc 01 55 41.5 +2.5
WLF LR LR
comp=Z,11µm,19.0s,MS6.7
HTR Trewern Hill 148.65 351 eP PKPdf 01 55 35.4 +0.1
MCH1 Michaelchurch 148.69 351 eP PKPdf 01 55 36.3 +0.9
GIVF Givet 148.69 341 ePKIKP PKPdf 01 55 36.8 +1.4
TFO1 Folkestone 148.75 346 eP PKPdf 01 55 37.3 +1.8
DOU Dourbes 148.76 341 PKPbc PKPbc 01 55 37.9 -1.4
BAIF Baives 148.91 341 ePKIKP PKPdf 01 55 37.4 +1.6
comp=Z,57nm,1.3s
SWN1 Swindon 148.97 349 eP PKPdf 01 55 37.4 +1.6
BFO Black Forest 148.97 335 ePKIKP PKPdf 01 55 36.6 +0.7
BFO e 01 55 40.5
BFO MLR MLR
comp=Z,7µm,19.0s,MS6.5
SPAK Spaichingen-Ko 148.97 335 PKP PKPdf 01 55 37.1 +1.2
STR Strasbourg 148.97 336 PKP PKPdf 01 55 36.7 +0.8
FETA Feichten 148.99 331 ⇑ iP PKPdf 01 55 36.6 +0.6
comp=Z,573nm,1.1s,SNR=68
HGH Gray Hill 149.01 351 eP PKPdf 01 55 37.3 +1.4
MENF Mencas 149.02 344 PKP PKPdf 01 55 37.4 +1.4
WOL Wolverton 149.05 349 eP PKPdf 01 55 37.3 +1.3
DAVA Damuels 149.16 332 ⇑ iP PKPdf 01 55 38.5 -1.9
comp=Z,191nm,1.1s,SNR=16
DAVA Damuels 149.16 332 ⇑ ipPKPdf PKPbc 01 55 38.5 -1.9
comp=Z,191nm,1.1s,SNR=16
CTI Castel Tesino 149.28 329 PKHKP PKPdf 01 55 38.0 +1.5
CDF Charny du Feu 149.30 336 ePKIKP PKPdf 01 55 37.1 +0.6
LIBD Limburg 149.39 336 PKP2 PKPbc 01 55 39.5 -1.5
FELD Feldberg im Sc 149.46 335 PKP PKPdf 01 55 36.3 -0.4
ECH Echery 149.51 336 PKP PKPdf 01 55 38.4 +1.6
ECH Echery 149.51 336 ePKPdf PKPdf 01 55 38.1 +1.3
ECH ePKPbc PKPbc 01 55 42.5 +1.2
DAVOS Davos 149.54 332 PKP2 PKPbc 01 55 40.2 -1.2
DAVOX Davos/Dischmat 149.55 332 PKPbc PKPbc 01 55 40.2 -1.2
comp=Z,142nm,0.6s,baz=205,slow=4.6,SNR=34
MOF Molkenrain 149.82 336 PKP PKPdf 01 55 37.6 +0.3
HTL Hartland 149.87 352 eP PKPbc 01 55 40.1 -2.0
THEF They Montfort 149.93 338 PKP PKPdf 01 55 39.1 +1.6
HINF Hinteralfeld 149.95 336 ePKIKP PKPdf 01 55 38.4 +0.9
comp=Z,60nm,1.1s
MAGA Magnasa 149.96 330 P PKPdf 01 55 38.0 +0.4
RGNG Rignano Grg 149.96 319 P PKPbc 01 55 40.5 -2.2
HAU Haudompre 149.98 337 ePKIKP PKPdf 01 55 38.5 +0.9
HAU eMLR MLR
comp=Z,11µm,21.5s,MS6.3
HAU Haudompre 149.98 337 ePKPdf PKPdf 01 55 38.5 +0.9
HAU LR LR
comp=Z,11µm,21.5s,MS6.6
BBS Basel-Blauen 149.99 335 PKHKP 01 55 39.5
MEZF Maizieres J'vi 150.01 339 ePKIKP PKPdf 01 55 39.1 +1.5
comp=Z,111nm,1.0s
TUE Stuetta 150.02 332 ePKPdf PKPdf 01 55 39.3 +1.7
TUE ePKPbc PKPbc 01 55 44.8 +2.1
TUE LR LR
comp=Z,7µm,20.0s,MS6.5
FSSB Fossombrone 150.34 325 P PKPdf 01 55 40.4 +2.1
DYA Yadsworthy 150.34 351 eP PKPdf 01 55 39.7 +1.6
LOMF Lomont 150.35 336 PKP PKPdf 01 55 40.6 +2.4
TIP Timpagrande 150.54 314 ePKPdf PKPdf 01 55 40.2 +1.5
TIP ePKPbc PKPbc 01 55 46.5 +2.4
TIP LR LR
comp=Z,11µm,22.0s,MS6.6
SNTG Esanatoglia 150.54 324 P PKPdf 01 55 40.5 +1.9
CSA1 St Austell 150.55 353 eP PKPdf 01 55 39.9 +1.5
SFI Santa Sofia 150.69 326 PKIKP PKPdf 01 55 41.0 +2.2
VAI Varese 150.74 332 PKIKP PKPdf 01 55 39.3 +0.5
CUC Castrocucco 150.75 316 ePKPdf PKPdf 01 55 39.8 +0.8
CUC ePKPbc PKPbc 01 55 45.3 +0.7
CUC ePKPab PKPab 01 55 52.2 +0.6
CUC LR LR
comp=Z,11µm,20.0s,MS6.7
CCA1 Carnmenellis 150.75 353 eP PKPdf 01 55 39.2 +0.5
BADI Badiali 150.75 325 P PKPdf 01 55 41.6 +2.7
CDCA Citt' di Caste 150.79 325 P PKPdf 01 55 40.8 +1.8
VMG Vicchio 150.81 326 P PKPdf 01 55 40.6 +1.6
ASCN Ascension 150.83 172 ePKPdf PKPdf 01 55 41.0 +1.0
ASCN ePKPbc PKPbc 01 55 47.2 +1.7
ASCN ePKPab PKPab 01 55 53.1 +0.6
ASCN LR LR
comp=Z,5µm,20.0s,MS6.3
CMA1 Manaccan 150.84 353 eP PKPdf 01 55 39.3 +0.5
SEI Scarperia 150.84 327 P PKPdf 01 55 40.7 +1.7
FNVD Fontana Vidola 150.88 327 P PKPdf 01 55 41.1 +2.0
GSCL Gusciola 151.02 328 P PKPdf 01 55 41.6 +2.3
FIAM Fiamignano 151.08 322 P PKPdf 01 55 41.6 +2.1
JLP Les Platons 151.20 349 eP PKPdf 01 55 41.6 +2.2
JQE Queens East 151.23 348 eP PKPdf 01 55 40.5 +1.1
JVM Valle D.L. Mar 151.25 349 eP PKPdf 01 55 40.8 +1.3
CABF La Chapelle 151.25 336 ePKIKP PKPdf 01 55 41.2 +1.6
comp=Z,146nm,1.3s
JRS Jersey 151.25 348 eP PKPdf 01 55 43.0 +3.5
MNS Montasola 151.25 323 PKIKP PKPdf 01 55 40.8 +1.1
VLC Villacollemand 151.26 328 ePKPbc PKPbc 01 55 45.3 -0.4
VLC LR LR
comp=Z,9µm,20.0s,MS6.6
JSA Saint Aubin 151.27 349 eP PKPdf 01 55 42.0 +2.5
FLN La Foliniere 151.33 346 ePKIKP PKPdf 01 55 40.7 +1.1
comp=Z,88nm,0.9s
FLN eMLR MLR
comp=Z,18µm,19.5s,MS6.6
FLN La Foliniere 151.33 346 ePKPdf PKPdf 01 55 40.7 +1.1
FLN LR LR
comp=Z,18µm,19.5s,MS6.9
LDF La Druitiere 151.40 345 ePKIKP PKPdf 01 55 40.8 +1.1
comp=Z,59nm,1.0s
LOR Lormes 151.48 339 ePKIKP PKPdf 01 55 41.1 +1.2
comp=Z,42nm,1.0s
LOR eMLR MLR
comp=Z,12µm,20.0s,MS6.4
LOR Lormes 151.48 339 ePKPdf PKPdf 01 55 41.1 +1.2
LOR LR LR
comp=Z,12µm,20.0s,MS6.7
CEL Celeste 151.58 313 ePKPbc PKPbc 01 55 44.0 -2.6
GRR Gorron 151.76 346 ePKIKP PKPdf 01 55 41.5 +1.2
comp=Z,104nm,1.2s
SSF Saint Saulge 151.78 339 ePKIKP PKPdf 01 55 41.9 +1.5
comp=Z,89nm,1.0s
HYF Humbligny 151.87 341 ePKIKP PKPdf 01 55 42.3 +1.8
LPL La Plagne 151.89 334 ePKIKP PKPdf 01 55 42.0 +1.4
LPG La Plagne 151.90 334 ePKIKP PKPdf 01 55 42.1 +1.5
SMF Signal de Mont 152.03 339 ePKIKP PKPdf 01 55 41.7 +0.9
comp=Z,56nm,1.2s
AVF Avril sur Loir 152.07 339 ePKIKP PKPdf 01 55 41.7 +0.9
comp=Z,32nm,1.0s
SGMF Saint Gilles 152.24 349 ePKIKP PKPdf 01 55 41.9 +0.9
comp=Z,146nm,1.3s
ROSF Rostrenen 152.28 350 ePKIKP PKPdf 01 55 42.0 +0.9
comp=Z,63nm,1.3s
BNI Bardonecchia 152.29 333 ePKIKP PKPdf 01 55 42.7 +1.5
BNI e 01 55 50.1
BNI MLR MLR
comp=Z,10µm,20.0s,MS6.6
BGF Bois d'Agland 152.44 340 ePKIKP PKPdf 01 55 42.5 +1.1
comp=Z,91nm,1.0s
MBDF Montbardon 152.51 333 ePKIKP PKPdf 01 55 42.6 +1.1
QUIF Quistinic 152.67 349 ePKIKP PKPdf 01 55 42.4 +0.7
PLDF La Plantade 152.69 338 PKP PKPbc 01 55 44.8 -4.0
ORIF Oris-en-Rattie 152.73 334 ePKIKP PKPdf 01 55 42.8 +0.9
ORIF eMLR MLR
comp=Z,13µm,22.0s,MS6.4
SAOF Saorge 152.74 331 PKP PKPdf 01 55 42.3 +0.4
AGO Saint Agoulin 152.79 339 PKP PKPdf 01 55 43.9 +2.0
AUTN L'Aution 152.79 331 PKP PKPdf 01 55 44.9 +2.9
TOUF Mont Tournerai 152.86 331 PKP PKPdf 01 55 45.2 +3.1
TCF Toulx Ste Croi 152.88 340 ePKIKP PKPdf 01 55 43.1 +1.1
comp=Z,79nm,0.9s
SBF Sospel 152.89 331 ePKIKP PKPdf 01 55 42.9 +0.8
SSB Saint Sauveur 152.95 336 PKP PKPdf 01 55 42.5 +0.3
SSB Saint Sauveur 152.95 336 ePKPdf PKPdf 01 55 43.5 +1.3
SSB ePKPbc PKPbc 01 55 50.2 +0.8
SSB ePKPab PKPab 01 55 58.1 -2.5
VAE Valguarnera 152.98 312 PKPbc PKPbc 01 55 49.3 -0.5
comp=Z,36nm,1.0s,baz=42,slow=18,SNR=3.7
VAE Valguarnera 152.98 312 PKPbc PKPbc 01 55 49.3 -0.5
REVF Revere 153.02 331 PKP PKPdf 01 55 42.8 +0.5
PYM Petit Puy Mans 153.09 339 PKP PKPdf 01 55 43.9 +1.5
VIVF Saint-Julien-l 153.26 336 ePKIKP PKPdf 01 55 43.9 +1.3
comp=Z,64nm,1.2s
MFF Saint Martin d 153.26 344 ePKIKP PKPdf 01 55 43.9 +1.3
comp=Z,152nm,1.2s
LBL Lubilhac 153.46 338 PKP PKPdf 01 55 44.8 +1.9
FRF La Foret Royal 153.49 331 ePKIKP PKPdf 01 55 43.8 +0.8
comp=Z,58nm,1.2s
SMRF Simiane la Rot 153.62 333 ePKIKP PKPdf 01 55 43.4 +0.2
comp=Z,76nm,1.2s
LMR La Mourre 153.73 331 ePKIKP PKPdf 01 55 44.0 +0.6
comp=Z,132nm,1.4s
RJF Les Rejaudoux 153.97 340 ePKIKP PKPdf 01 55 45.0 +1.4
comp=Z,117nm,1.5s
RJF eMLR MLR
comp=Z,15µm,19.8s,MS6.5
RJF Les Rejaudoux 153.97 340 ePKPdf PKPdf 01 55 45.0 +1.4
RJF LR LR
comp=Z,15µm,19.8s,MS6.8
CAF Calviac 154.13 339 ePKIKP PKPdf 01 55 45.4 +1.5
comp=Z,41nm,1.1s
LASF Ste Croix 154.23 336 ePKIKP PKPdf 01 55 45.4 +1.4
comp=Z,64nm,1.1s
LFF La Frestale 154.54 341 ePKIKP PKPdf 01 55 45.8 +1.4
comp=Z,55nm,0.9s
VSL Villasalto 155.03 321 ePKPdf PKPdf 01 55 46.1 +0.8
VSL ePKPbc PKPdf 01 55 55.7 +10
VSL LR LR
comp=Z,8µm,20.0s,MS6.6
MTLF Montolieu 155.47 337 ePKIKP PKPdf 01 55 46.8 +1.0
EPF Esparros 156.39 340 ePKIKP PKPdf 01 55 49.0 +2.0
comp=Z,55nm,1.2s
RESF Ens 156.59 340 PKP PKPdf 01 55 49.6 +2.3
VIEF Viey 156.62 340 PKP PKPdf 01 55 45.4 -1.9
SJPF Ste Jean 156.78 343 ePKIKP PKPdf 01 55 48.0 +0.5
comp=Z,33nm,1.0s
ETSF Etsaut 156.79 341 ePKIKP PKPdf 01 55 49.3 +1.8
comp=Z,58nm,1.1s
ELAN Lanestosa 157.22 347 PKP PKPdf 01 55 52.5 +4.4
KEST Kesra 157.36 314 PKP PKPdf 01 55 48.5 0.0
comp=Z,6.4nm,1.1s,baz=234,slow=8.7,SNR=4.5
ECRI Cripan 157.60 344 PKIKP PKPdf 01 55 52.4 +3.8
CMAH Djebel Manchou 158.06 318 P PKPdf 01 56 00.0 +11
ABSA Djebel Ababsia 158.25 318 P PKPdf 01 56 00.0 +10
STS Santiago 158.29 356 PKIKP PKPdf 01 55 53.7 +4.3
CKFL Kef-Lekhel 158.64 319 P PKPdf 01 55 55.0 +5.0
ERUA La Rua 158.66 353 PKIKP PKPdf 01 55 51.1 +1.2
CASM Ain Smara 158.87 319 P PKPdf 01 55 52.0 +1.7
CMLA Cha da Macela 158.98 35 PFAKE 01 56 00.0 +10
CMLA LR LR
comp=Z,12µm,19.0s,MS6.7
CTEI Djebel Teioual 159.05 319 P PKPdf 01 55 52.0 +1.5
DFRA Djebel Bou Aff 159.05 321 P PKPdf 01 55 51.0 +0.5
ETOR Torete 159.14 342 PKIKP PKPdf 01 55 52.7 +2.2
PBRG Braganca 159.19 352 ePKPab PKPab 01 56 27.8 +0.5
ELOB Lobios 159.27 355 PKP PKPdf 01 55 54.2 +3.6
PCAB Cabril 159.42 355 ePKPab PKPab 01 56 29.3 +0.9
PCAB Cabril 159.42 355 ePP PP 02 00 11.7 +3.1
SET Setif 159.57 321 P PKPdf 01 56 03.0 +12
AKF Akfadou 159.75 323 P PKPdf 01 55 51.1 -0.2
PVRL Vila Real 159.82 354 ePKPdf PKPdf 01 55 53.0 +1.7
PVRL Vila Real 159.82 354 ePKPab PKPab 01 56 31.3 +1.2
PVRL Vila Real 159.82 354 ePP PP 02 00 14.7 +3.9
GUD Guadarrama 159.85 346 PKIKP PKPdf 01 55 54.1 +2.8
MVO Moncorvo 159.85 352 ePKPdf PKPdf 01 55 53.3 +2.0
MVO Moncorvo 159.85 352 ePKPab PKPab 01 56 30.8 +0.5
MVO Moncorvo 159.85 352 ePP PP 02 00 15.5 +4.5
PTO Porto 160.03 356 ePKPab PKPab 01 56 31.8 +0.8
PVIS Viseu 160.40 354 ePKPdf PKPdf 01 55 55.3 +3.4
PVIS Viseu 160.40 354 ePKPab PKPab 01 56 33.5 +0.9
PVIS Viseu 160.40 354 ePP PP 02 00 19.1 +5.2
ATAF Djebel Tarf 160.45 322 P PKPdf 01 55 51.7 -0.4
AKET Djebel Ketaf 160.56 323 P PKPdf 01 55 49.7 -2.5
MTE Manteigas 160.67 353 ePKPdf PKPdf 01 55 53.1 +0.9
MTE Manteigas 160.67 353 ePKPab PKPab 01 56 34.4 +0.6
MTE Manteigas 160.67 353 ePKPdf PKPdf 01 55 52.5 +0.2
MTE ePKPab PKPab 01 56 32.6 -1.2
MTE LR LR
comp=Z,11µm,20.0s
ADJB Djebel Djouab 160.72 324 P PKPdf 01 55 55.4 +3.0
ESDC Sonseca Array 160.73 345 PKP PKPdf 01 55 53.4 +1.1
comp=Z,4.6nm,0.9s,baz=2.7,slow=2.4,SNR=11
ESDC PKPab PKPab 01 56 35.1 +1.0
comp=Z,54nm,0.9s,baz=17,slow=3.5,SNR=30
ESDC PP PP 02 00 14.3 -1.5
comp=Z,7.5nm,0.9s,baz=18,slow=6.1,SNR=6.3
ESDC Sonseca Array 160.73 345 PKP PKPdf 01 55 52.4 +0.1
ESLA Sonseca Array 160.73 345 ePKPdf PKPdf 01 55 53.2 +0.9
ESLA ePKPab PKPab 01 56 34.8 +0.6
ESLA LR LR
comp=Z,62µm,20.0s
PAB San Pablo 160.94 345 ePKIKP PKPdf 01 55 53.3 +0.8
PAB e 01 56 35.8
PAB MLR MLR
comp=Z,12µm,22.0s
ETOB Tobarra 160.95 338 PKP PKPdf 01 55 51.9 -0.7
EMHD Djebel Mahouad 160.96 325 P PKPdf 01 56 05.0 +12
PCBR Castelo Branco 161.22 353 ePKPdf PKPdf 01 55 53.6 +0.8
PCBR Castelo Branco 161.22 353 ePKPab PKPab 01 56 36.5 +0.3
PCBR Castelo Branco 161.22 353 ePP PP 02 00 22.7 +4.4
EVIA Vianos 161.28 340 PKIKP PKPdf 01 55 53.8 +0.9
PTOM Tomar 161.53 355 ePKPdf PKPdf 01 55 55.1 +1.9
PTOM Tomar 161.53 355 ePKPab PKPab 01 56 38.5 +0.9
PTOM Tomar 161.53 355 ePP PP 02 00 26.6 +6.6
PMRV Marv??o 161.61 352 ePKPdf PKPdf 01 55 54.8 +1.5
PMRV Marv??o 161.61 352 ePKPab PKPab 01 56 39.6 +1.6
PMRV Marv??o 161.61 352 ePP PP 02 00 22.4 +2.0
EBNR Beni Rached 161.63 328 P PKPdf 01 56 04.0 +11
CART Cartagena 161.68 335 ePKPab PKPab 01 56 39.8 +1.4
ALMR Almeirim 162.00 355 eP PKPdf 01 55 52.6 -1.1
EHUE Huescar 162.05 339 PKIKP PKPdf 01 55 53.4 -0.4
EBAN Banos Encina 162.10 342 PKIKP PKPdf 01 55 55.4 +1.6
EANR 'Ain N'Sour 162.11 328 P PKPdf 01 55 56.0 +2.1
PESTR Estremoz 162.19 352 ePKPdf PKPdf 01 55 55.3 +1.4
PESTR Estremoz 162.19 352 ePKPab PKPab 01 56 41.1 +0.6
PESTR Estremoz 162.19 352 ePP PP 02 00 29.3 +5.8
EQES Quesada 162.22 340 PKP PKPdf 01 55 54.9 +0.9
EBAD Badajoz 162.22 351 PKP PKPdf 01 55 53.1 -0.8
PMAFR Mafra 162.25 357 ePKPab PKPab 01 56 40.3 -0.5
ETRT Tiaret 162.45 326 P PKPdf 01 55 52.0 -2.2
LIS Lisbon 162.48 356 eP PKPdf 01 55 46.0 -8.2
EVO Evora 162.57 353 ePKIKP PKPdf 01 55 53.4 -0.9
comp=Z,194nm,1.4s
EVO eMLR MLR
comp=Z,17µm,19.8s
EVO Evora 162.57 353 ePKPdf PKPdf 01 55 54.4 +0.1
EVO Evora 162.57 353 ePKPab PKPab 01 56 42.8 +0.6
PBAR Barrancos 162.79 351 ePKPdf PKPdf 01 55 56.1 +1.6
PBAR Barrancos 162.79 351 ePKPab PKPab 01 56 44.5 +1.3
PBAR Barrancos 162.79 351 ePP PP 02 00 37.1 +10
ECOG Cogollos-Vega 162.86 341 PKIKP PKPdf 01 55 55.8 +1.2
PBEJ Beja 163.05 353 ePKPdf PKPdf 01 55 56.1 +1.4
PBEJ Beja 163.05 353 ePKPab PKPab 01 56 45.7 +1.4
PBEJ Beja 163.05 353 ePP PP 02 00 34.6 +6.5
EMIN Mina Concepcio 163.13 349 PKP PKPdf 01 55 55.2 +0.4

ELOJ	Sierra Loja	163.15 342	PKIKP	PKPdf	01 55 55.5	+0.6
ERON	Agron	163.17 341	PKP	PKPdf	01 55 53.9	-1.0
EGRO	El Granado	163.49 351	PKP	PKPdf	01 55 58.0	+2.9
PTEO	Sao Teotonio	163.61 355	*e*PKPdf	PKPdf	01 55 56.9	+1.6
PTEO	Sao Teotonio	163.61 355	*e*PKPab	PKPab	01 56 48.2	+1.4
PVAQ	Vaqueiros	163.65 352	*e*PKPdf	PKPdf	01 55 57.3	+2.0
PVAQ	Vaqueiros	163.65 352	*e*PKPab	PKPab	01 56 48.2	+1.3
PVAQ	Vaqueiros	163.65 352	*e*PP	PP	02 00 33.8	+2.6
PBDV	Barranco-do-Ve	163.83 353	*e*PKPdf	PKPdf	01 55 55.4	-0.1
PBDV	Barranco-do-Ve	163.83 353	*e*PKPab	PKPab	01 56 48.5	+0.7
ESPR	Espera	163.84 346	PKP	PKPdf	01 55 55.5	-0.1
MORF	Marmelete	163.84 355	*e*PKPdf	PKPdf	01 55 57.4	+1.9
MORF	Marmelete	163.84 355	*e*PKPab	PKPab	01 56 49.3	+1.5
MORF	Marmelete	163.84 355	*e*PP	PP	02 00 31.1	-1.2
PFVI	Vila Bisbo	164.03 355	*e*PKPdf	PKPdf	01 55 57.4	+1.7
PFVI	Vila Bisbo	164.03 355	*e*PKPab	PKPab	01 56 49.8	+1.2
LIC	Lamto	164.21 200	*e*PKIKP	PKPdf	01 55 55.9	-0.7
	comp=Z,240nm,1.5s					
LIC			*e*MLR	MLR		
	comp=Z,19µm,23.0s					
LIC	Lamto	164.21 200	*e*PKIKP	PKPdf	01 55 56.5	-0.1
	comp=Z,202nm,1.5s					
LIC	Lamto	164.21 200	*e*PKPdf	PKPdf	01 55 55.9	-0.7
LIC			LR	LR		
	comp=Z,10µm,23.0s					
KIC	Kosan Boka	164.24 202	*e*PKIKP	PKPdf	01 55 56.6	0.0
	comp=Z,380nm,1.4s					
SFS	San Fernando	164.31 347	PFAKE		01 56 10.0	+14
SFS			LR	LR		
	comp=Z,33µm,20.0s					
DBIC	Dimbokro	164.57 202	PKP	PKPdf	01 55 58.1	+1.2
	comp=Z,300nm,1.0s,baz=148,slow=0.5,SNR=18					
DBIC			PKPab	PKPab	01 56 52.1	+0.5
	comp=Z,105nm,1.1s,baz=150,slow=5.3,SNR=12					
DBIC			PP	PP	02 00 37.4	+1.0
	comp=Z,9.6nm,1.0s,baz=138,slow=8.4,SNR=3.5					
DBIC	Dimbokro	164.57 202	*e*PKPdf	PKPdf	01 55 56.2	-0.7
DBIC			*e*PKPab	PKPab	01 56 51.6	0.0
DBIC			LR	LR		
	comp=Z,17µm,19.0s					
TIC	Toumodi	164.60 201	*e*PKIKP	PKPdf	01 55 57.2	+0.3
	comp=Z,812nm,2.0s					
TOA0	Torodi Ar. Sit	165.86 238	*e*PKPdf	PKPdf	01 55 57.3	-0.6
TORD	Torodi Ar. Bea	165.86 238	PKP	PKPdf	01 55 57.0	-0.9
	comp=Z,300nm,1.1s,baz=106,slow=0.5,SNR=37					
TORD			PKPab	PKPab	01 56 58.1	+0.6
	comp=Z,18nm,1.1s,baz=116,slow=4.3,SNR=5.3					
TORD			PP	PP	02 00 42.1	-2.3
	comp=Z,18nm,1.2s,baz=106,slow=4.2,SNR=5.8					
RTC	Rabat Centre	166.83 347	PFAKE		01 56 10.0	+12
RTC			LR	LR		
	comp=Z,13µm,20.0s					
MDT	Midelt	167.27 337	PKP	PKPdf	01 55 59.6	+1.1
	comp=Z,13nm,1.0s,baz=12,slow=2.7,SNR=14					
MDT			PKPab	PKPab	01 57 03.4	+0.3
	comp=Z,45nm,1.2s,baz=76,slow=1.8,SNR=15					
MDT			PP	PP	02 00 55.3	+4.9
	comp=Z,9.7nm,1.2s,baz=12,slow=11,SNR=3.6					
BBTS	Babate	171.36 138	PKP	PKPdf	01 56 03.5	+2.1
	comp=Z,115nm,1.2s,baz=204,slow=2.6,SNR=3.7					

NEIC ***28*** *01:43:23.2±0.8, 2139S×169.36E, h10km, mb4.9/7, Error ellipse: s-maj=30.7km s-min=17.6km az=171.0*
IDC ***28*** *01:43:23.5±2.9, 2082S×169.12E, h0km, mb4.6/5, mb1 4.8/5, mb1mx4.4/16, mbtmp4.6/5, Error ellipse: s-maj=162.6km s-min=25.6km az=160.0*
ISCJB ***28*** *01:43:26.5±1.0, 215S±02×169.1E±0.1, h33km, mb4.7/10, Error ellipse: s-maj=31.3km s-min=17.3km az=17.0*

ISC 28 01:43:28.1±1.0, 215S±02×169.2E±0.1, h35km, (h34km±1.2km:pP-P), n21, σ0.88/18, mb4.7/10, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.47 270		*e*P		P	01 48 16.0	+2.3
	34nm,1.3s,mb4.5							
CTA	Charters Tower	21.47 270		P		P	01 48 15.3	+1.6
	23nm,0.9s,mb4.5,baz=93,slow=12,SNR=6.8							
CTAO	Charters Tower	21.47 270		*e*P		P	01 48 15.7	+2.0
	46nm,1.0s,mb4.8							
COEN	Coen	25.84 282		*e*P		P	01 48 56.0	-0.5
	13nm,1.2s,mb4.3							
WRAB	Tennant Creek	32.57 266		*e*P		P	01 49 55.6	-0.7
	14nm,1.1s,mb4.8							
WRA	Warramunga Arr	32.58 266		P		P	01 49 55.7	-0.6
	6.3nm,1.0s,mb4.5,baz=96,slow=8.9,SNR=3.6							
ASAR	Alice Springs	32.60 259		P		P	01 49 57.0	+0.6
	8.3nm,0.9s,mb4.7,baz=78,slow=8.7,SNR=5.7							
FITZ	Fitzroy Crossi	41.01 267		P		P	01 51 08.9	+0.8
	13nm,0.9s,mb4.6,baz=131,slow=6.0,SNR=4.2							
MBWA	Marble Bar	45.90 261		*e*P		P	01 51 45.7	-1.9
	66nm,1.4s,mb5.4							
CASY	Casey	58.07 204		*e*P		P	01 53 17.2	-0.2
	27nm,1.9s,mb5.0							
SNAA	Sanae	86.94 183		*e*P		P	01 56 09.0	-0.1
SNAA	Sanae	86.94 183		*e*P		P	01 56 09.0	-0.1
SNAA				*e*		pP	01 56 19.9	-0.3
SNAA	Sanae	86.94 183		*e*P		P	01 56 09.1	+0.1
	11nm,1.2s,mb5.0							
VNA3	Neumayer Olymp	87.53 180		*e*P		P	01 56 11.7	-0.2
VNA3	Neumayer Olymp	87.53 180		*e*P		P	01 56 11.7	-0.2
VNA3				*e*		pP	01 56 21.9	-1.1
VNA2	Neumayer--Watz	87.83 181		*e*P		P	01 56 14.0	+0.7
VNA2	Neumayer--Watz	87.83 181		*e*P		P	01 56 14.0	+0.7
VNA2				*e*		pP	01 56 23.7	-0.7
NVAR	Mina Array Bea	90.31 49		P		P	01 56 25.6	+0.1
	2.0nm,0.7s,mb4.6,baz=222,slow=7.9,SNR=5.2							
ARCES	ARCESS Array B	127.19 345		PKP		PKPdf	02 02 27.0	-1.0
	6.3nm,1.1s,baz=28,slow=8.2,SNR=4.4							
EKA	Eskdalemuir Ar	145.70 352		PKPbc		PKPbc	02 03 00.2	-2.6
	4.7nm,0.7s,baz=356,slow=2.5,SNR=10							
GERES	GERESS Array B	146.40 330		PKPbc		PKPbc	02 03 04.7	-0.4
	1.9nm,0.7s,baz=28,slow=2.3,SNR=4.0							

IDC ***28*** *01:44:02.0±0.5, 2174S×169.40E, h0km, mb4.9/21, mb1 5.1/24, mb1mx5.0/26, mbtmp5.0/24, ML3.9/1, Error ellipse: s-maj=16.6km s-min=14.6km az=147.0*
ISCJB ***28*** *01:44:02.4±0.2, 2176S±006×169.57E±004, h13km, mb5.1/57, MS6.0/2, Error ellipse: s-maj=8.3km s-min=5.6km az=163.8*
NEIC ***28*** *01:44:03.0±0.3, 2190S×169.34E, h10km, mb5.3/28, Error ellipse: s-maj=11.6km s-min=7.0km az=171.0*
BJI ***28*** *01:44:03.9, 2190S×169.30E, h10km, mB5.9, mb5.0, Ms5.8, Msz5.4*
MOS ***28*** *01:44:03.5±1.1, 2183S×169.45E, h33km, mb5.4/19, Error ellipse: s-maj=32.0km s-min=15.6km az=83.9*

ISC 28 01:44:04.1±0.2, 2175S±006×169.61E±004, h14km, h14km±2.2km:pP-P, n490, σ0.96/390, mb5.1/57, MS6.0/2, 139C-126D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HNR	Honiara	15.37 321		Pn		Pn	01 47 40.8	+0.1
	7.7nm,0.3s,baz=202,slow=14,SNR=2.1							
HNR	Honiara	15.37 321		*e*Pn		Pn	01 47 39.0	-1.6
URZ	Urewera	17.68 160		P		Pn	01 48 09.3	-0.6
	0.4nm,0.3s,baz=329,slow=9.1,SNR=3.3							
ARMA	Armidale	18.30 238		*e*P		Pn	01 48 21.3	+3.8
AFI	Afiamalu	19.35 69		P		Pn	01 48 32.9	+2.6
	1.9nm,0.3s,baz=334,slow=9.3,SNR=5.4							
AFI	Afiamalu	19.35 69		*e*P		Pn	01 48 30.7	+0.4
CTA	Charters Tower	21.88 270		*e*P		P	01 48 54.3	-2.4
	59nm,0.8s,mb5.1							
CTA	Charters Tower	21.88 270		P		P	01 48 54.5	-2.1
	79nm,0.8s,mb5.2,baz=97,slow=13,SNR=14							
CTA	Charters Tower	21.88 270		*e*P		P	01 48 54.3	-2.4
CTA				pmax	pmax			
	comp=Z,59nm,0.8s							
CTAO	Charters Tower	21.88 270		*e*P		P	01 48 53.1	-3.6
CTAO				pmax	pmax			
	comp=Z,88nm,0.9s,mb5.2							
CTAO	Charters Tower	21.88 270		*e*P		P	01 48 53.1	-3.5
	comp=Z,88nm,0.9s,mb5.2							
RPZ	Rata Peaks	21.94 177		P		P	01 48 56.6	-0.6
	comp=Z,9.7nm,1.0s,mb4.2,baz=44,slow=14,SNR=1.8							
CNB	Canberra Magne	22.28 228		*e*P		P	01 49 02.5	+1.6
PMG	Port Moresby	24.82 296		*e*P		P	01 49 24.8	-1.2
PMG				pmax	pmax			
	comp=Z,51nm,0.8s							
PMG	Port Moresby	24.82 296		*e*P		P	01 49 24.8	-1.3
	comp=Z,51nm,0.8s,mb5.1							
COEN	Coen	26.30 283		*e*P		P	01 49 35.2	-4.2
STKA	Stephens Creek	26.89 242		*e*P		P	01 49 44.6	-0.1
	comp=Z,17nm,0.9s,mb4.6							
STKA	Stephens Creek	26.89 242		P		P	01 49 43.8	-0.9
	comp=Z,26nm,0.8s,mb4.8,baz=50,slow=7.7,SNR=8.4							
ASAR	Alice Springs	32.94 260		P		P	01 50 34.9	-3.5
	comp=Z,38nm,0.8s,mb5.4,baz=82,slow=9.0,SNR=18							
WB2	Warramunga Arr	32.96 267		*e*P		P	01 50 33.2	-5.3
WRAB	Tennant Creek	32.96 267		*e*P		P	01 50 35.7	-2.9
WRAB	Tennant Creek	32.96 267		*e*P		P	01 50 30.2	-8.4
	comp=Z,21nm,0.9s,mb5.1							
WRA	Warramunga Arr	32.97 267		P		P	01 50 35.4	-3.3
	comp=Z,14nm,0.9s,mb4.9,baz=98,slow=8.9,SNR=8.5							
FITZ	Fitzroy Crossi	41.40 267		*e*P		P	01 51 47.1	-3.1
	comp=Z,79nm,0.8s,mb5.4							
FITZ	Fitzroy Crossi	41.40 267		P		P	01 51 47.3	-2.9
	comp=Z,56nm,0.9s,mb5.2,baz=119,slow=9.0,SNR=13							
BATI	Baumata	45.48 277		P		P	01 52 21.3	-1.9
	comp=Z,47nm,0.7s,mb5.4,baz=211,slow=0.9,SNR=6.0							
MBWA	Marble Bar	46.26 261		*e*P		P	01 52 23.1	-6.3
	comp=Z,37nm,0.8s,mb5.4							
KLBR	Kellerberrin	47.00 247		*e*P		P	01 52 32.6	-2.4
	comp=Z,40nm,0.8s,mb5.4							
NWAO	Narrogin (SRO)	47.42 245		P		P	01 52 37.1	-1.2
	comp=Z,21nm,0.7s,mb5.2,baz=90,slow=9.3,SNR=8.6							
KAPI	Kappang	51.02 282		P		P	01 53 05.0	-1.0
	comp=Z,12nm,0.7s,mb4.9,baz=134,slow=4.8,SNR=4.7							
CASY	Casey	57.98 204		*e*P		P	01 53 59.2	+3.3
KSM	Kuching	62.28 284		*e*P		P	01 54 26.2	0.0
MJAR	Matsushiro Arr	65.12 332		P		P	01 54 43.8	-0.6
	comp=Z,6.4nm,0.8s,mb4.7,baz=165,slow=6.8,SNR=7.6							
MAJO	Matsushiro	65.12 332		*e*P		P	01 54 49.5	+5.1
MAJO				pmax	pmax			
	comp=Z,98nm,0.5s,mb6.1							
MAJO	Matsushiro	65.12 332		*e*P		P	01 54 49.5	+5.1
	comp=Z,98nm,0.5s,mb6.1							
MAT	Matsushiro	65.12 332		P		P	01 54 47.0	+2.6
QSPA	South Pole Qui	68.32 180		P		P	01 55 06.3	+2.0
	comp=Z,16nm,1.0s,mb5.0,baz=28,slow=3.6,SNR=6.9							
QSPA	South Pole Qui	68.32 180		P		P	01 55 06.3	+2.0
ASAJ	Asahikawa	70.06 340		P		P	01 55 16.4	+0.9
	comp=Z,22nm,0.9s,mb5.1,baz=256,slow=18,SNR=4.8							
KSRS	Korea Array	70.76 326		P		P	01 55 20.8	+0.9
	comp=Z,0.5nm,0.3s,mb3.9,baz=134,slow=5.2,SNR=3.1							
YSS	Yuzh-Sakhalins	72.55 341		*e*P		P	01 55 30.9	+0.5
YSS				pmax	pmax			
	comp=Z,41nm,1.3s,mb5.2							
YSS	Yuzh-Sakhalins	72.55 341		*e*P		P	01 55 32.3	+1.9
	comp=Z,89nm,1.0s,mb5.7							
WHN	Wuhan	74.29 313		P		P	01 55 47.0	+5.9
DL2	Dalian	75.22 323		P		P	01 55 53.5	+7.2
DL2				AMB	AMB			
	comp=Z,30nm,0.9s,mb5.2							
PETK	Petropavlovsk-	75.25 353		P		P	01 55 47.1	+1.0
	comp=Z,5.8nm,0.8s,mb4.5,baz=85,slow=12,SNR=7.4							
MDJ	Mudanjiang	75.48 332		P		P	01 55 51.0	+3.4
MDJ				AMB	AMB			
	comp=Z,9.0nm,1.1s,mb4.6							
MDJ				AMB	AMB			
	comp=Z,2µm,14.1s							
MDJ	Mudanjiang	75.48 332		*e*P		P	01 55 49.5	+1.9
	comp=Z,18nm,1.0s,mb5.0							
MAW	Mawson	76.25 202		P		P	01 55 53.2	+1.4
	comp=Z,9.3nm,0.8s,mb4.8,baz=112,slow=7.2,SNR=13							
BJT	Baijiatuan	79.08 321		*e*P		P	01 56 09.1	+1.1
BJI	Beijing	79.09 321		P		P	01 56 13.0	+5.0
BJI				AMB	AMB			
	comp=Z,12nm,2.1s,mb4.5							
BJI				AMB	AMB			
	comp=Z,2µm,13.4s							
CHRT	Chiangrai	79.79 296		P		P	01 56 14.0	+1.7
	comp=Z,158nm,0.9s,mb5.9							
CMAR	Chiang Mai Arr	79.85 295		P		P	01 56 13.3	+0.7
	comp=Z,9.1nm,0.9s,mb4.7,baz=134,slow=4.2,SNR=9.2							
KMI	Kunming	79.89 302		P		P	01 56 12.5	-0.2
KMI				PP	PP		01 59 17.0	+2.4
KMI				AMB	AMB			
	comp=Z,8.0nm,0.5s,mb4.9							
KMI	Kunming	79.89 302		P		P	01 56 12.4	-0.3
KMI				*SP	sP		01 56 16.6	-2.5
KMI							01 59 17.1	
KMI				PPP			02 01 05.6	
KMI				S	S		02 06 17.4	+1.4
KMI				*SS	sS		02 06 24.6	+0.9
KMI							02 06 26.5	
KMI				PS			02 07 07.5	
KMI				pmax	pmax			
	comp=Z,8.0nm,0.5s,mb4.9							
KMI				MLR	MLR			
	comp=Z,6µm,15.4s,MS6.1							
KMI	Kunming	79.89 302		P		P	01 56 12.4	-0.3
	comp=Z,8.0nm,0.5s,mb4.9							
KMI				pP	pP		01 56 15.2	-2.2
KMI				sP	sP		01 56 16.6	-2.5
KMI				PP	PP		01 59 17.1	+2.5
KMI				PPP			02 01 05.6	
KMI				S	S		02 06 17.4	+1.4
KMI				sS	sS		02 06 24.6	+0.9
KMI				SKS			02 06 26.5	
KMI				PS			02 07 07.5	
KMI				SS	SS		02 11 35.8	+10
KMI				LR	LR			
	comp=Z,6µm,15.4s,MS6.1							
CHG	Chiang Mai	80.01 295		⇑P		P	01 56 15.3	+1.8
	comp=Z,22nm,0.6s,mb5.3							
CHTO	Chiang Mai	80.01 295		*e*P		P	01 56 14.2	+0.7
CHTO				pmax	pmax			
	comp=Z,24nm,1.0s,mb5.1							
CHTO	Chiang Mai	80.01 295		*e*P		P	01 56 14.2	+0.7
	comp=Z,24nm,1.0s,mb5.1							
CD2	Chengdu	82.03 308		P		P	01 56 22.8	-1.2
CD2				AP	pP		01 56 28.5	-0.2
CD2				XP	sP		01 56 31.0	+0.6
CD2				PP	PP		01 59 36.5	+4.3
CD2				AMB	AMB			
	comp=Z,20nm,1.4s,mb4.8							
CD2				AMB	AMB			
	comp=Z,120nm,5.8s							
HHC	Hu-ho-hao-te	82.34 320		*e*P		P	01 56 27.5	+2.1
HHC				AP	pP		01 56 30.8	+0.7
HHC				XP	sP		01 56 32.5	+0.8
HHC				PP	PP		01 59 42.0	+7.4
HHC				AMB	AMB			
	comp=Z,18nm,0.7s,mb5.1							
HHC				LR	LR			
	comp=Z,5µm,17.8s,MS6.0							
SYO	Syowa Base	82.64 196		⇑*e*P		P	01 56 28.2	+1.6
LZH	Lanzhou	84.66 312		*e*P		P	01 56 38.0	+0.6
LZH				AP	pP		01 56 43.8	+1.7
LZH				XP	sP		01 56 47.3	+3.5
LZH				PP	PP		01 59 59.3	+5.7
LZH				AMB	AMB			
	comp=Z,17nm,1.0s,mb5.1							
LZH				AMB	AMB			
	comp=Z,84nm,5.2s							
LZH	Lanzhou	84.66 312		*e*P		P	01 56 38.0	+0.6
LZH				*SP	sP		01 56 47.3	+3.5
LZH							01 59 59.2	
LZH				pmax	pmax			
	comp=Z,17nm,1.0s,mb5.1							
LZH	Lanzhou	84.66 312		*e*P		P	01 56 38.0	+0.6
	comp=Z,17nm,1.0s,mb5.1							
LZH				pP	pP		01 56 43.7	+1.6
LZH				sP	sP		01 56 47.3	+3.5
LZH				PP	PP		01 59 59.2	+5.6
SEY	Seymchan	85.49 352		*e*P		P	01 56 39.7	-1.2
SNAA	Sanae	86.69 182		*e*P		P	01 56 48.7	+1.7
SNAA	Sanae	86.69 182		*e*P		P	01 56 48.7	+1.7
SNAA				*e*			01 56 57.5	
SNAA	Sanae	86.69 182		*e*P		P	01 56 50.3	+3.3
CLNS	Chul'man	86.83 337		*e*P		P	01 56 47.5	-0.2
CLNS				pmax	pmax			
	comp=Z,27nm,1.2s,mb5.3							
CLNS				pmax	pmax			
	comp=N,17nm,1.2s							
CLNS				pmax	pmax			
	comp=E,7.0nm,0.9s							
V03C	Hunter Liggett	86.99 49		⇑P		P	01 56 50.2	+1.1
	baz=88							
SAO	San Andreas Ge	87.21 49		*e*P		P	01 56 52.1	+2.1
HOPS	Hopland	87.22 46		⇑P		P	01 56 51.0	+0.9
	baz=89,SNR=5.3							
VNA3	Neumayer Olymp	87.26 180		*e*P		P	01 56 52.6	+2.8
VNA3	Neumayer Olymp	87.26 180		*e*P		P	01 56 52.6	+2.8
VNA3				*e*			01 57 01.1	
VNA3				*e*			01 57 06.8	
CVS	Carmenet Viney	87.30 47		⇑P		P	01 56 51.4	+1.0
	baz=89							
O01C	Eel River Cons	87.31 45		⇑P		P	01 56 52.0	+1.5
	baz=89							
KIPM	Iron Peak	87.36 45		*e*P		P	01 56 51.7	+0.9
PACP	Pacheco Peak	87.44 48		⇑P		P	01 56 52.1	+1.0
	baz=89							
PKD	Parkfield	87.44 50		⇑P		P	01 56 52.1	+0.9
	baz=89,SNR=8.2							
PKM	Peak Mountain	87.45 51		⇑P		P	01 56 52.0	+0.7
	baz=89,SNR=6.7							
U04C	Hernandez Rese	87.48 49		⇓P		P	01 56 52.6	+1.2
	baz=89,SNR=8.0							
SCI	San Clemente I	87.48 53		⇓P		P	01 56 51.5	0.0
	baz=89							
VNA2	Neumayer--Watz	87.56 181		*e*P		P	01 56 54.0	+2.8
VNA2	Neumayer--Watz	87.56 181		*e*P		P	01 56 54.0	+2.8
VNA2				*e*			01 57 02.7	
VNA2				*e*			01 57 08.8	
MNRC	McLaughlin Nat	87.58 46		⇓P		P	01 56 53.3	+1.5
	baz=89,SNR=8.0							
Q03C	Winters	87.75 47		⇑P		P	01 56 54.1	+1.5
	baz=89							
KHMM	Horse Mountain	87.75 44		*e*P		P	01 56 53.6	+1.0
GASB	Alder Springs	87.79 46		⇑P		P	01 56 55.0	+2.2
	baz=89,SNR=10							
VNA1	Neumayer--Stat	87.84 181		*e*P		P	01 56 55.6	+3.0
VNA1	Neumayer--Stat	87.84 181		*e*P		P	01 56 55.6	+3.0
VNA1				*e*			01 57 04.8	
N02C	Big Bar	88.00 44		⇑P		P	01 56 55.6	+1.8
	baz=90,SNR=8.1							
O02C	Red Bluff	88.01 45		⇑P		P	01 56 55.7	+1.8
	baz=90,SNR=10							
S05C	Merced	88.27 49		⇓P		P	01 56 55.9	+0.7
	baz=90,SNR=6.8							
WDC	Whiskeytown Da	88.38 45		*e*P		P	01 56 56.4	+0.9
WDC				pmax	pmax			
	comp=Z,39nm,1.3s,mb5.5							
WDC	Whiskeytown Da	88.38 45		⇓P		P	01 56 56.8	+1.2
	baz=90,SNR=9.3							
WDC	Whiskeytown Da	88.38 45		*e*P		P	01 56 56.4	+0.8
	comp=Z,39nm,1.3s,mb5.5							
MWC	Mount Wilson	88.42 52		*e*P		P	01 56 54.9	-1.0
MWC				pmax	pmax			
	comp=Z,18nm,0.9s,mb5.3							
MWC	Mount Wilson	88.42 52		*e*P		P	01 56 54.9	-1.0
	comp=Z,18nm,0.9s,mb5.3							
VES	Vestal, Richgr	88.43 50		⇓P		P	01 56 56.5	+0.6
	baz=90							
OHCM	Honcut	88.46 46		*e*P		P	01 56 57.5	+1.6
L02A	Cave Junction	88.50 43		⇑P		P	01 56 56.4	+0.3
	baz=90							
T06C	Millerton Lake	88.54 49		⇑P		P	01 56 56.2	-0.2
	baz=90,SNR=9.4							
ORV	Oroville	88.55 46		⇑P		P	01 56 56.2	-0.2
	baz=90,SNR=10							
CMB	Columbia Colle	88.57 48		*e*P		P	01 56 57.3	+0.8
CMB				pmax	pmax			
	comp=Z,23nm,0.9s,mb5.5							
CMB	Columbia Colle	88.57 48		⇓P		P	01 56 56.1	-0.4
	baz=90,SNR=9.7							
CMB	Columbia Colle	88.57 48		*e*P		P	01 56 57.3	+0.8
	comp=Z,23nm,0.9s,mb5.5							
M02C	Callahan	88.59 44		⇑P		P	01 56 56.8	+0.3
	baz=90,SNR=9.6							
LAVA	Lava Cap Winer	88.67 47		⇑P		P	01 56 56.4	-0.6
	baz=90,SNR=6.0							
BFSC	Mount Baldy St	88.72 52		⇑P		P	01 56 56.6	-0.7
	baz=90,SNR=7.8							
BAR	Barrett	88.75 54		*e*P		P	01 56 59.9	+2.4
MURC	Murrieta	88.77 53		⇓P		P	01 56 56.4	-1.2
	baz=90							
EDW2	Edwards Air Fo	88.77 52		⇑P		P	01 56 57.0	-0.6
	baz=90,SNR=7.1							
ISA	Isabella	88.79 51		⇑P		P	01 56 56.4	-1.2
	baz=90,SNR=8.5							
ISA	Isabella	88.79 51		*e*P		P	01 56 58.2	+0.6
YBH	Yreka Blue Hor	88.85 44		⇓P		P	01 56 58.2	+0.5
	baz=90,SNR=9.1							
S06C	San Francisco	88.86 48		⇓P		P	01 56 57.5	-0.4
	baz=90,SNR=9.5							
HELL	Mitchell Peak	88.87 50		⇑P		P	01 56 57.8	-0.2
	baz=90,SNR=10							
K02A	Glendale	88.89 43		⇓P		P	01 56 58.1	+0.2
	baz=90							
KCC	Kaiser Creek	88.97 49		⇑P		P	01 56 58.2	-0.2
	baz=90,SNR=7.9							
M03C	McCloud	89.00 44		⇓P		P	01 56 59.0	+0.5
	baz=90,SNR=12							
MONP	Monument Peak	89.03 54		⇓P		P	01 56 57.5	-1.3
	baz=90,SNR=5.5							
P05C	Yuba Gap, Truc	89.03 47		⇓P		P	01 56 58.2	-0.4
	baz=90,SNR=8.6							
ULN	Ulaanbaatar	89.07 323		*e*P		P	01 56 59.2	+0.6
ULN				pmax	pmax			
	comp=Z,13nm,1.0s,mb5.2							
ULN	Ulaanbaatar	89.07 323		*e*P		P	01 56 59.2	+0.6
	comp=Z,13nm,1.0s,mb5.2							
GTA	Gaotai	89.09 313		*e*P		P	01 57 01.8	+2.9
GTA				AP	pP		01 57 05.5	+1.9
GTA				XP	sP		01 57 08.0	+2.7
GTA				AMB	AMB			
	comp=Z,7.0nm,0.8s,mb5.0				

BELC **Belle Mtn.** 89.84 53 ⇑P P 01 57 01.2 -1.4
baz=91,SNR=7.8
S08C **White Mtn Res** 89.86 49 ⇑P P 01 57 01.8 -0.8
baz=91,SNR=25
HEC **Hector,Ludlow** 89.97 52 ⇑P P 01 57 01.9 -1.3
baz=91,SNR=5.9
O06A **Flanigan** 89.97 46 ⇓P P 01 57 02.5 -0.5
baz=92,SNR=10
H03A **Soap Creek Ran** 90.00 41 ⇑P P 01 57 03.4 +0.4
baz=92,SNR=8.8
J04A **Umpqua Nationa** 90.00 43 ⇑P P 01 57 03.0 -0.1
baz=92,SNR=5.7
M06C **Likely Place G** 90.05 45 ⇑P P 01 57 03.1 -0.3
baz=92,SNR=8.5
PAHR **Pah Rah Range** 90.06 47 *eP* P 01 57 03.6 +0.1
comp=Z,44nm,1.2s,mb5.7
I04A **Tendick Farm,** 90.09 42 ⇓P P 01 57 03.4 -0.1
baz=92,SNR=7.3
BC3 **Big Chuckw Mtn** 90.10 54 ⇓P P 01 57 03.0 -0.8
baz=91,SNR=7.4
GRAC **Grapevine Rang** 90.19 50 ⇑P P 01 57 03.7 -0.4
baz=92,SNR=6.5
NVAR **Mina Array Bea** 90.20 48 P P 01 57 03.8 -0.4
comp=Z,15nm,0.8s,mb5.4,baz=226,slow=9.0,SNR=21
L05A **Lakeview** 90.22 44 ⇑P P 01 57 04.3 +0.1
baz=92
N06A **Buffalo Meadow** 90.25 46 ⇓P P 01 57 03.9 -0.5
baz=92,SNR=9.9
IRO **Indian Ridge** 90.30 42 P P 01 57 06.2 +1.7
GLA **Glamis** 90.30 54 ⇓P P 01 57 03.4 -1.3
baz=92,SNR=8.5
GLA **Glamis** 90.30 54 *eP* P 01 57 05.0 +0.2
FURC **Furnace Creek,** 90.32 51 ⇑P P 01 57 03.8 -0.9
baz=92,SNR=7.1
G03A **Yamhill** 90.34 41 ⇓P P 01 57 04.9 +0.3
baz=92
KMOR **Kings Mountain** 90.38 40 P P 01 57 06.7 +1.9
GMRC **Granite Mounta** 90.44 53 ⇑P P 01 57 04.8 -0.6
baz=92,SNR=7.0
SHOC **Shoshone** 90.48 51 ⇑P P 01 57 05.2 -0.4
baz=92,SNR=7.8
F03A **Seaside** 90.49 40 ⇑P P 01 57 05.5 +0.2
baz=92
MOD **Modoc** 90.50 45 ⇑P P 01 57 05.5 0.0
baz=92,SNR=10
MOD **Modoc** 90.50 45 *eP* P 01 57 06.6 +1.2
K05A **Summer Lake** 90.52 44 ⇓P P 01 57 05.8 +0.3
baz=92,SNR=9.5
TUQ **Turquoise Moun** 90.53 52 ⇑P P 01 57 05.1 -0.7
baz=92,SNR=7.0
IRM **Iron Mountain** 90.54 53 ⇓P P 01 57 05.0 -0.9
baz=92,SNR=8.4
J05A **Fort Rock** 90.58 43 ⇑P P 01 57 06.0 +0.2
baz=92,SNR=11
O07A **Toulon** 90.61 47 ⇑P P 01 57 05.4 -0.6
baz=92,SNR=8.3
S09A **Goldfield** 90.63 49 ⇓P P 01 57 05.6 -0.6
baz=92,SNR=7.3
Q08A **Gabbs** 90.65 48 ⇓P P 01 57 05.8 -0.4
baz=92,SNR=8.9
U10A **Ash Meadows, A** 90.68 51 ⇑P P 01 57 06.1 -0.3
baz=92,SNR=7.0
H04A **Detroit Lake** 90.68 41 ⇓P P 01 57 05.8 -0.5
baz=92,SNR=6.1
G04A **Mulino** 90.77 41 ⇑P P 01 57 06.8 +0.2
baz=92,SNR=7.4
TPH **Tonopah** 90.79 49 *eP* P 01 57 07.6 +0.7
E03A **Lebam** 90.80 39 ⇑P P 01 57 07.4 +0.7
baz=92,SNR=8.6
Y12C **Blythe** 90.83 54 ⇑P P 01 57 06.8 -0.4
baz=92,SNR=6.9
N07B **Gerlach** 90.84 46 ⇑P P 01 57 06.7 -0.4
baz=92,SNR=8.4
BMW **Boistfort Moun** 90.97 40 *eP* P 01 57 09.1 +1.6
K06A **Valley Falls** 90.97 44 ⇑P P 01 57 07.1 -0.5
baz=92,SNR=11
R09A **Tonopah** 90.97 49 ⇑P P 01 57 07.3 -0.4
baz=92,SNR=6.7
TPNV **Topopah Spring** 90.97 50 *eP* P 01 57 08.2 +0.4
TPNV pmax pmax
comp=Z,28nm,1.0s,mb5.5
TPNV **Topopah Spring** 90.97 50 ⇑P P 01 57 06.8 -1.0
baz=92,SNR=8.1
TPNV **Topopah Spring** 90.97 50 *eP* P 01 57 08.2 +0.4
comp=Z,28nm,1.0s,mb5.5
LDFC **Landfair** 90.97 53 *eP* P 01 57 08.0 +0.1
D03A **Wishkah Elem.** 90.98 39 ⇓P P 01 57 08.5 +1.0
baz=93
113A **Mohawk Valley,** 90.99 55 ⇑P P 01 57 07.4 -0.6
baz=92
I05A **Bend** 90.99 42 ⇑P P 01 57 07.9 +0.2
baz=92,SNR=5.7
M07A **Soldier Meadow** 91.00 45 ⇓P P 01 57 07.3 -0.5
baz=92,SNR=8.1
OOW **Octopus West** 91.06 38 P P 01 57 10.9 +3.0
NLWA **Neilton Lookou** 91.07 39 ⇑P P 01 57 09.1 +1.1
baz=93
V11A **Goodsprings** 91.07 52 ⇓P P 01 57 07.3 -1.0
baz=92,SNR=8.1
S10A **Tonopah Range,** 91.16 49 ⇓P P 01 57 08.1 -0.5
baz=93,SNR=10
O08A **Rochester Mine** 91.16 47 ⇓P P 01 57 08.9 +0.3
baz=93,SNR=11
F04A **Amboy** 91.17 40 ⇓P P 01 57 09.3 +0.8
baz=93,SNR=7.3
L07A **Adell** 91.19 45 ⇑P P 01 57 09.9 +1.2
baz=93,SNR=9.9
LVP **Lakeview Peak** 91.25 40 P P 01 57 11.0 +2.2
W12A **Cal Nev Ari** 91.25 52 ⇑P P 01 57 08.8 -0.3
baz=93
J06A **Christmas Vall** 91.25 43 ⇓P P 01 57 08.3 -0.6
baz=93,SNR=12
H05A **Madras** 91.26 42 ⇓P P 01 57 08.8 -0.2
baz=93
MTMW **Mount Mitchell** 91.34 40 P P 01 57 11.9 +2.6
PDMCI **Parker Dam,Lak** 91.36 54 ⇑P P 01 57 08.8 -0.9
baz=93,SNR=6.8
214A **Organ Pipe Nat** 91.38 56 ⇑P P 01 57 08.9 -0.9
baz=93
Y13A **Salome** 91.38 54 ⇑P P 01 57 09.5 -0.3
baz=93,SNR=16
N08A **GE Springer Mi** 91.41 46 ⇑P P 01 57 09.3 -0.4
baz=93,SNR=8.7
V12A **Nelson** 91.45 52 ⇑P P 01 57 10.2 +0.2
baz=93,SNR=8.7
G05A **Wamic** 91.50 41 ⇓P P 01 57 10.4 +0.4
baz=93
TDL **Tradedollar La** 91.50 40 P P 01 57 12.1 +2.0
R10A **Warm Springs** 91.53 49 ⇑P P 01 57 10.0 -0.4
baz=93
I06A **Prineville** 91.55 43 ⇑P P 01 57 09.5 -0.8
baz=93,SNR=12
M08A **Happy Creek Ra** 91.55 46 ⇓P P 01 57 10.2 -0.1
baz=93
SHPR **Sheep Range** 91.56 51 *eP* P 01 57 11.7 +1.2
K07A **Rock Creek Ran** 91.56 44 ⇑P P 01 57 09.6 -0.8
baz=93,SNR=10.0
B04A **Port Angeles** 91.62 38 ⇑P P 01 57 11.2 +0.6
baz=93
S11A **Rachel** 91.64 50 ⇓P P 01 57 10.3 -0.6
baz=93,SNR=5.6
Q10A **Clear Creek Ra** 91.70 49 ⇓P P 01 57 10.3 -0.8
baz=93,SNR=6.4
X13A **Yucca** 91.71 53 ⇓P P 01 57 10.6 -0.7
baz=93,SNR=6.6
F05A **White Salmon** 91.73 41 ⇑P P 01 57 11.3 +0.2
baz=93,SNR=5.0
C04A **Brinnon** 91.75 39 ⇑P P 01 57 11.8 +0.7
baz=93,SNR=5.4
GNW **Green Mountain** 91.76 39 *eP* P 01 57 13.0 +1.8
comp=Z,20nm,0.9s,mb5.4
O09A **Fish Creek Ran** 91.76 47 ⇑P P 01 57 10.6 -0.7
baz=93,SNR=6.7
T11A **Corn Creek, Al** 91.84 51 ⇑P P 01 57 11.1 -0.7
baz=93,SNR=7.6
WVOR **Wild Horse Val** 91.84 45 *eP* P 01 57 13.0 +1.3
WVOR pmax pmax
comp=Z,40nm,1.2s,mb5.6
WVOR **Wild Horse Val** 91.84 45 *eP* P 01 57 13.0 +1.3
comp=Z,40nm,1.2s,mb5.6
J07A **Hines** 91.85 44 ⇓P P 01 57 11.0 -0.6
baz=93
N09A **Rock Creek Ran** 91.85 46 ⇓P P 01 57 11.4 -0.4
baz=93,SNR=6.3
H06A **Lindquist Farm** 91.85 42 ⇑P P 01 57 11.5 -0.2
baz=93,SNR=14
BMN **Battle Mountai** 91.86 47 *eP* P 01 57 13.1 +1.3
Z14A **Wintersburg** 91.86 55 ⇑P P 01 57 10.4 -1.6
baz=93
E05A **Randle** 91.88 40 ⇓P P 01 57 12.0 +0.3
baz=94,SNR=8.6
W13A **Hualapai Mount** 91.89 53 ⇓P P 01 57 10.5 -1.5
baz=93,SNR=6.9
G06A **Carlson Farm,** 91.91 42 ⇑P P 01 57 11.3 -0.6
baz=94
L08A **Fields** 91.92 45 ⇑P P 01 57 11.6 -0.5
baz=93,SNR=9.3
U12A **Valley of Fire** 91.98 51 ⇓P P 01 57 11.8 -0.7
baz=93,SNR=5.7
P10A **Eureka** 92.01 48 ⇑P P 01 57 11.5 -1.1
baz=94
Y14A **Wickenburg** 92.06 54 ⇑P P 01 57 11.0 -1.9
baz=93,SNR=6.1
D05A **Enumclaw** 92.06 39 ⇓P P 01 57 12.8 +0.2
baz=94,SNR=6.2
I07A **Izee** 92.06 43 ⇓P P 01 57 11.7 -0.9
baz=94
R11A **Troy Canyon, C** 92.06 49 ⇓P P 01 57 12.0 -0.8
baz=94
K08A **Mann Creek Ran** 92.08 44 ⇓P P 01 57 12.7 0.0
baz=94,SNR=9.5
F06A **Goldendale** 92.08 41 ⇓P P 01 57 12.9 +0.2
baz=94,SNR=6.1
115A **Sonoran Desert** 92.14 56 ⇓P P 01 57 11.1 -2.2
baz=93
V13A **Grand Canyon W** 92.14 52 ⇓P P 01 57 12.4 -0.8
baz=94,SNR=8.6
M09A **Marrel Ranch,** 92.16 46 ⇑P P 01 57 13.0 -0.2
baz=94,SNR=5.8
Q11A **Duckwater** 92.23 49 ⇑P P 01 57 13.3 -0.2
baz=94,SNR=10
S12A **Delamar Landin** 92.26 50 ⇓P P 01 57 12.9 -0.8
baz=94,SNR=9.3
H07A **Lands Inn, Kim** 92.27 42 ⇓P P 01 57 12.7 -0.9
baz=94,SNR=12
L09A **Wilkinson Ranc** 92.29 45 ⇓P P 01 57 13.1 -0.6
baz=94,SNR=5.9
O10A **Cortez Mining,** 92.29 47 ⇓P P 01 57 12.9 -0.9
baz=94
COLA **College** 92.33 17 *eP* P 01 57 12.7 -0.7
E06A **Yakima** 92.34 40 ⇑P P 01 57 13.0 -0.9
baz=94
X14A **Yava** 92.36 54 ⇑P P 01 57 12.7 -1.6
baz=94,SNR=6.0
J08A **Circle Bar Ran** 92.38 44 ⇑P P 01 57 13.6 -0.6
baz=94,SNR=10
U13A **Pakoon Wash** 92.39 52 ⇓P P 01 57 14.2 -0.1
baz=94,SNR=5.7
116A **Eloy** 92.48 56 ⇓P P 01 57 13.1 -1.8
baz=94
C05A **Tolt Reservoir** 92.49 39 ⇑P P 01 57 15.0 +0.5
baz=94
ZAK **Zakamensk** 92.52 324 *eP* P 01 57 13.7 -0.9
ZAK pmax pmax
comp=Z,13nm,1.2s,mb5.2
G07A **Ruggs Ranch, H** 92.52 42 ⇓P P 01 57 13.8 -1.0
baz=94,SNR=7.7
W14A **Seligman** 92.53 53 ⇓P P 01 57 14.3 -0.7
baz=94,SNR=5.7
B05A **Bryant** 92.54 38 ⇓P P 01 57 15.7 +0.9
baz=94
K09A **Rose** 92.56 45 ⇑P P 01 57 14.5 -0.5
baz=94,SNR=10.0
SKAG **Skagway** 92.57 25 *eP* P 01 57 15.1 +0.5
comp=Z,17nm,1.1s,mb5.4
Y15A **Casa Rosa Ranc** 92.57 54 ⇑P P 01 57 14.8 -0.4
baz=94,SNR=6.5
T13A **Saint George** 92.69 51 ⇓P P 01 57 15.4 -0.3
baz=94,SNR=6.9
V14A **Boquillas Ranc** 92.69 53 ⇓P P 01 57 15.1 -0.7
baz=94,SNR=5.3
D06A **Cle Elum** 92.74 40 ⇑P P 01 57 16.0 +0.3
baz=94
R12A **Pony Springs,** 92.75 50 ⇑P P 01 57 15.3 -0.6
baz=94,SNR=6.8
H08A **Prairie City** 92.80 43 ⇓P P 01 57 16.2 +0.1
baz=94
O11A **Cowboy Ranch,** 92.80 48 ⇓P P 01 57 15.7 -0.5
baz=94,SNR=6.0
M10A **LL. Ranch, Tu** 92.81 46 ⇑P P 01 57 16.3 +0.1
baz=94,SNR=8.3
J09A **Fry Pan Ranch,** 92.84 44 ⇑P P 01 57 16.4 +0.1
baz=94,SNR=10
217A **Green Valley** 92.85 57 ⇓P P 01 57 15.5 -1.1
baz=94
X15A **Humboldt** 92.86 54 ⇓P P 01 57 16.5 -0.1
baz=94,SNR=8.0
Q12A **Willow Creek R** 92.90 49 ⇑P P 01 57 15.9 -0.8
baz=94
S13A **Holt Ranch, En** 92.96 51 ⇓P P 01 57 17.2 +0.2
baz=94,SNR=8.5
U14A **Mt Trumbull** 92.97 52 ⇓P P 01 57 17.3 +0.3
baz=94,SNR=11
RPW **Rockport** 92.97 38 *eP* P 01 57 18.0 +1.3
G08A **Pilot Rock** 92.98 42 ⇑P P 01 57 17.3 +0.5
baz=94,SNR=12
E07A **Sunnyside** 93.03 41 ⇑P P 01 57 16.8 -0.2
baz=95
P12A **McGill** 93.03 49 ⇓P P 01 57 17.4 +0.1
baz=94
TUC **Tucson** 93.09 57 *eP* P 01 57 17.9 +0.2
TUC pmax pmax
comp=Z,9.0nm,1.1s,mb5.1
TUC **Tucson** 93.09 57 *eP* P 01 57 17.9 +0.2
comp=Z,8.8nm,1.1s,mb5.1
L10A **Juniper Basin** 93.11 46 ⇓P P 01 57 16.1 -1.5
baz=95,SNR=5.7
W15A **Williams** 93.13 53 ⇓P P 01 57 17.8 -0.1
baz=94
R13A **O'Grain Ranch,** 93.14 50 ⇑P P 01 57 19.3 +1.5
baz=94
HAWA **Hanford** 93.14 41 *eP* P 01 57 18.5 +0.9
comp=Z,19nm,1.4s,mb5.3
K10A **MacKenzie Ranc** 93.16 45 ⇑P P 01 57 18.1 +0.4
baz=95,SNR=5.5
Y16A **Circle Bar Ran** 93.19 55 ⇑P P 01 57 17.9 -0.3
baz=94,SNR=7.9
117A **Orofle** 93.23 56 ⇑P P 01 57 17.6 -0.7
baz=94,SNR=6.3
M11A **Holland Ranch,** 93.28 47 ⇓P P 01 57 19.2 +0.9
baz=95
T14A **Hurricane** 93.30 51 ⇓P P 01 57 18.2 -0.4
baz=95,SNR=7.2
F08A **Pendleton** 93.33 42 ⇓P P 01 57 18.8 +0.4
baz=95
ELK **Elko** 93.35 47 *eP* P 01 57 20.3 +1.6
ELK pmax pmax
comp=Z,8.0nm,0.8s
ELK **Elko** 93.35 47 *eP* P 01 57 20.3 +1.6
comp=Z,8.0nm,0.8s,mb5.2
318A **Bisbee** 93.36 58 ⇑P P 01 57 18.0 -0.9
baz=95
Q13A **Wheeler Ranch,** 93.43 49 ⇑P P 01 57 19.1 0.0
baz=95
X16A **Lo Mia Camp, P** 93.44 54 ⇑P P 01 57 18.5 -0.7
baz=95,SNR=7.4
V15A **Kaibab Nationa** 93.46 53 ⇓P P 01 57 19.0 -0.4
baz=95,SNR=7.1
E08A **Dider Farm, El** 93.48 41 ⇓P P 01 57 19.7 +0.6
baz=95
H09A **Durkee** 93.50 43 ⇑P P 01 57 19.1 -0.2
baz=95
218A **Dragoon** 93.53 57 ⇑P P 01 57 19.1 -0.6
baz=95
N12A **Clover Valley,** 93.54 47 ⇓P P 01 57 19.5 -0.1
baz=95,SNR=5.3
Y17A **Roosevelt** 93.60 55 ⇓P P 01 57 19.5 -0.5
baz=95,SNR=6.0
U15A **North Rim** 93.62 52 ⇑P P 01 57 19.5 -0.5
baz=95,SNR=7.3
L11A **Cat Creek Ranc** 93.63 46 ⇓P P 01 57 19.8 -0.2
baz=95
W16A **Flagstaff** 93.64 54 ⇑P P 01 57 18.7 -1.5
baz=95
P13A **Bates Ranch, G** 93.64 49 ⇓P P 01 57 20.1 +0.1
baz=95
K11A **Parker Ranch,** 93.71 45 ⇑P P 01 57 20.3 0.0
baz=95
B07A **Winthrop** 93.78 39 ⇓P P 01 57 20.5 0.0
baz=95
F09A **S2 Ranch, Elgi** 93.82 42 ⇓P P 01 57 20.3 -0.4
baz=95
118A **Homack Ranch,** 93.85 56 ⇓P P 01 57 19.9 -1.3
baz=95
M12A **Wells** 93.86 47 ⇓P P 01 57 20.7 -0.3
baz=95
X17A **Forest Lakes** 93.88 55 ⇑P P 01 57 21.3 0.0
baz=95
A07A **Ashnola River,** 93.91 38 ⇑P P 01 57 22.0 +1.0
baz=96
WUAZ **Wupatki** 93.93 53 ⇑P P 01 57 20.4 -1.1
baz=95,SNR=5.4
WUAZ **Wupatki** 93.93 53 *eP* P 01 57 21.9 +0.4
comp=Z,18nm,1.0s,mb5.5
Q14A **Sevier Lake (B** 93.97 50 ⇓P P 01 57 21.0 -0.6
baz=95,SNR=5.5
E09A **Wood Farm, Sta** 94.05 41 ⇑P P 01 57 22.1 +0.4
baz=96
H10A **Noah's Angus R** 94.05 43 ⇓P P 01 57 21.4 -0.4
baz=96,SNR=8.5
C08A **Higginbotham F** 94.10 40 ⇑P P 01 57 22.7 +0.8
baz=96
N13A **Wendover, West** 94.11 48 ⇓P P 01 57 21.9 -0.3
baz=96
L12A **House Creek Ra** 94.11 46 ⇓P P 01 57 21.2 -1.0
baz=96
MFID **Camas Ranch** 94.12 45 ⇑P P 01 57 22.1 -0.1
baz=96
G10A **Bishop Farm, J** 94.13 43 ⇑P P 01 57 22.6 +0.5
baz=96
219A **White Tail Can** 94.16 57 ⇓P P 01 57 20.7 -1.9
baz=95
B08A **Colville Reser** 94.20 39 ⇑P P 01 57 22.4 0.0
baz=96
D09A **Jones Farm, Ri** 94.20 41 ⇓P P 01 57 22.5 +0.1
baz=96
Y18A **Canyon Day Jun** 94.25 55 ⇑P P 01 57 21.7 -1.3
baz=96,SNR=6.4
I11A **Placerville** 94.26 44 ⇓P P 01 57 22.2 -0.6
baz=96
M13A **Montello** 94.35 47 ⇓P P 01 57 22.2 -1.1
baz=96
U16A **Tuba City** 94.36 53 ⇑P P 01 57 22.7 -0.8
baz=96,SNR=6.3
F10A **Beach Ranch, E** 94.37 42 ⇓P P 01 57 22.4 -0.9
baz=96
K12A **Draper Farm, C** 94.40 46 ⇑P P 01 57 22.1 -1.3
baz=96
119A **Ashpeak Ranch,** 94.42 57 ⇑P P 01 57 22.7 -1.1
baz=96
A08A **Turner Farm, O** 94.51 39 ⇓P P 01 57 24.2 +0.4
baz=96
J12A **Stokes Ranch,** 94.53 45 ⇑P P 01 57 24.2 +0.1
baz=96
MSU **Marysvale** 94.56 50 *eP* P 01 57 26.2 +1.9
H11A **Donnelly** 94.57 44 ⇓P P 01 57 23.6 -0.6
baz=96,SNR=7.9
G11A **Walters Elk Ra** 94.72 43 ⇑P P 01 57 24.2 -0.6
baz=96,SNR=8.1
P15A **Leamington** 94.92 49 ⇑P P 01 57 25.4 -0.5
baz=96
M14A **Sheep Mountain** 94.97 47 ⇑P P 01 57 25.8 -0.3
baz=96
X19A **St. Johns** 95.07 55 ⇓P P 01 57 26.7 -0.1
baz=96
HLID **Hailey** 95.12 45 ⇑P P 01 57 27.3 +0.6
baz=97
HLID **Hailey** 95.12 45 *eP* P 01 57 28.4 +1.7
comp=Z,3.2nm,0.8s,mb4.8
J13A **Cove Ranch, Pi** 95.20 45 ⇑P P 01 57 27.9 +0.8
baz=97
H12A **Diamond D Ranc** 95.25 44 ⇓P P 01 57 27.0 -0.3
baz=97,SNR=7.3
N15A **Stansbury Isla** 95.28 48 ⇑P P 01 57 28.6 +1.0
baz=97
U18A **Rough Rock, Ch** 95.41 53 ⇓P P 01 57 28.5 +0.2
baz=97
Q16A **Castle Valley** 95.44 50 ⇓P P 01 57 28.2 -0.2
baz=97
I13A **Wildhorse Cree** 95.46 45 ⇓P P 01 57 28.6 +0.3
baz=97
F12A **Elk City** 95.51 43 ⇓P P 01 57 28.2 -0.3
baz=97,SNR=6.2
M15A **Larsen Ranch,** 95.57 48 ⇓P P 01 57 28.9 +0.1
baz=97
T18A **Mexican Hat** 95.68 52 ⇓P P 01 57 28.5 -1.0
baz=97
C11A **Tepee Creek (N** 95.80 41 ⇑P P 01 57 29.4 -0.3
baz=97
G13A **Cobalt** 95.88 44 ⇑P P 01 57 29.9 -0.3
baz=97
I14A **Mackay** 95.90 45 ⇓P P 01 57 29.6 -0.7
baz=97
JLU **Jordanelle** 95.91 49 *eP* P 01 57 32.8 +2.4
D12A **Red Ives Fores** 96.01 42 ⇑P P 01 57 32.1 +1.4
baz=98
F13A **Darby** 96.11 43 ⇑P P 01 57 30.7 -0.5
baz=98,SNR=5.4
R18A **Canyonlands Na** 96.15 51 ⇑P P 01 57 31.3 -0.3
baz=98
H14A **Leadore** 96.24 44 ⇑P P 01 57 31.4 -0.4
baz=98
O17A **Robinson Place** 96.25 49 ⇑P P 01 57 31.8 -0.2
baz=98,SNR=8.1
J15A **Blackfoot** 96.36 46 ⇓P P 01 57 32.8 +0.4
baz=98
PLCA **Paso Flores** 96.44 138 P P 01 57 33.1 +0.1
comp=Z,1.7nm,0.9s,mb4.5,baz=212,slow=9.1,SNR=2.6
G14A **Jackson** 96.44 44 ⇓P P 01 57 33.3 +0.6
baz=98
L16A **Fish Haven** 96.48 47 ⇓P P 01 57 33.2 +0.1
baz=98
K16A **Soda Springs** 96.70 47 ⇓P P 01 57 34.0 0.0
baz=98
H15A **Lima** 96.71 45 ⇓P P 01 57 34.6 +0.6
baz=98
Q19A **Hogan Spring (** 96.83 51 ⇑P P 01 57 34.3 -0.3
baz=98
J16A **Bone** 96.86 46 ⇓P P 01 57 35.1 +0.4
baz=98
TXAR **Lajitas Array** 97.65 62 P P 01 57 38.1 -0.5
comp=Z,1.8nm,1.0s,mb4.6,baz=214,slow=4.2,SNR=4.2
HVS **Khovu-Aksy** 98.25 322 *eP* P 01 57 44.3 +3.6
HVS pmax pmax
comp=Z,53nm,1.7s,mb5.8
C17A **Wharram Farm,** 99.10 42 ⇓P P 01 57 44.6 0.0
baz=101
WMQ **Urumqi** 99.18 313 *eP* P 01 57 44.0 -1.1
KRAR **Krasnoyarsk** 100.66 326 *eP* Pdif 01 57 51.2 -0.5
KRAR pmax pmax
comp=Z,7.0nm,1.0s
LSZ **Lusaka** 127.23 229 *e*PKHKP 02 03 00.9
ARCES **ARCESS Array B** 127.57 345 PKP PKPdf 02 03 08.7 +0.7
comp=Z,1.9nm,0.6s,baz=52,slow=2.2,SNR=9.0
KIV **Kislovodsk** 131.16 310 *e*PKIKP PKPdf 02 03 14.9 -0.7
KIV *e*PS PS 02 15 42.1 -4.9
KIV pmax pmax
comp=Z,11nm,1.4s
AKASG **Malin Array Be** 137.71 323 PKP PKPdf 02 03 28.2 +0.5
comp=Z,0.5nm,0.4s,baz=24,slow=3.8,SNR=3.0
NB2 **NORSAR Subarra** 137.94 344 PKPdf PKPdf 02 03 29.8 +2.1
comp=Z,5.3nm,1.4s,baz=31,slow=1.9
NOA **NORSAR Array B** 137.94 344 PKP PKPdf 02 03 27.2 -0.5
comp=Z,1.1nm,0.8s,baz=41,slow=2.0,SNR=2.7
KWP **Kalwaria** 141.84 325 ⇓*i*P PKPdf 02 03 38.1 +2.9
KWP **Kalwaria** 141.84 325 ⇓P PKPdf 02 03 38.1 +2.9
KOLS **Kolonicke sedl** 142.47 324 *e*PKP PKPdf 02 03 40.3 +4.0
STHS **Stebnicka Huta** 142.74 326 *e*PKP PKPdf 02 03 35.4 -1.4
CRVS **Cervenica-Dubn** 142.93 325 *e*PKP PKPdf 02 03 38.2 +1.1
DRGR 143.39 321 ⇓*i*P PKPdf 02 03 40.2 +2.2
OKC **Ostrava-Krasne** 144.05 328 *e*PKP PKPdf 02 03 38.4 -0.7
PSZ **Piszkesteto** 144.35 324 *e*PKHKP 02 03 36.8
MORC **Moravsky Berou** 144.38 329 *e*PKHKP 02 03 35.3
VYHS **Vyhne** 144.56 326 *e*PKP PKPdf 02 03 40.8 +0.8
DPC **Dobruska-Polom** 144.57 330 *e*PKP PKPdf 02 03 42.4 +2.4
UPC **Upice** 144.61 331 *e*PKP PKPdf 02 03 43.5 +3.5
BZS **Buzias** 144.66 320 ⇑*i*P PKPdf 02 03 40.0 -0.3
BZS **Buzias** 144.66 320 ⇑P PKPdf 02 03 40.0 -0.3
KOLL **Kolacno** 144.73 326 *e*PKP PKPdf 02 03 42.0 +1.7
VTS **Vitosha** 145.11 314 ⇓*i*P PKPbc 02 03 42.0 +1.3
VRAC **Vranov** 145.16 329 PKPbc PKPbc 02 03 39.1 -1.5
comp=Z,3.2nm,0.3s,baz=83,slow=16,SNR=2.6
PVCC **Panska Ves** 145.24 332 *e*PKP PKPdf 02 03 42.3 +1.2
BRG **Berggiesshubel** 145.25 333 *e*PKIKP PKPdf 02 03 42.0 +0.9
BRG *i* 02 03 48.3
BRG **Berggiesshubel** 145.25 333 *e*PKP PKPdf 02 03 42.0 +0.8
comp=Z,10nm,0.8s
BRG *i* 02 03 48.3
comp=Z,75nm,1.5s
BRG *e* 02 07 17.3
comp=Z,6.5nm,1.3s
BRG *i* 02 08 45.9
comp=Z,33nm,1.7s

CLL	**Collm**	**145.32**	**334**	*e*PKPdf	PKPdf	02 03 41.0	-0.2
	comp=Z,17nm,1.2s							
CLL				*e*PKiKP	PKiKP	02 03 46.0	+0.8
	comp=Z,33nm,1.1s							
CLL	**Collm**	**145.32**	**334**	*e*PKP	PKPdf	02 03 39.0	-2.2
CLL				*e*		02 03 42.0		
APE	**Apeiranthos**	**145.41**	**304**	⇑*i*P	PKPbc	02 03 41.6	-0.2
MODS	**Modra-Piesok**	**145.44**	**327**	*e*PKP	PKPbc	02 03 43.8	+2.3
PRU	**Pruhonice**	**145.64**	**331**	*e*PKP	PKPdf	02 03 43.2	+1.4
PRU				*ep*PKP	pPKPdf	02 03 48.8	+2.1
ZST	**Bratislava**	**145.64**	**327**	*e*PKP	PKiKP	02 03 47.6	+1.7
SANT	**Santorini**	**145.66**	**303**	*e*PKPdf	PKPdf	02 03 39.4	-3.0
TREC	**Trest**	**145.70**	**330**	*e*PKP	PKPdf	02 03 43.6	+1.6
TREC				*ep*PKP	pPKPdf	02 03 49.2	+2.4
EKA	**Eskdalemuir Ar**	**146.03**	**353**	PKPbc	PKPdf	02 03 40.7	-1.6
	comp=Z,25nm,0.8s,baz=340,slow=2.9,SNR=18							
ESK	**Eskdalemuir**	**146.05**	**353**	*e*PKIKP	PKPdf	02 03 43.3	+0.9
PKSM	**Moragy**	**146.05**	**323**	⇓*i*P	PKPbc	02 03 44.7	+1.2
PKSM	**Moragy**	**146.05**	**323**	⇓P	PKPbc	02 03 44.7	+1.2
VAY	**Valandovo**	**146.08**	**313**	*e*PKP	PKPdf	02 03 43.6	+0.7
NKC	**Novy Kostel**	**146.37**	**333**	*e*PKP	PKPbc	02 03 45.3	+1.0
IDI	**Anoyia**	**146.38**	**301**	PKPbc	PKPbc	02 03 44.3	-0.5
	comp=Z,9.4nm,0.8s,baz=60,slow=10,SNR=4.6							
CONA	**Conrad Observa**	**146.44**	**327**	⇑*i*P	PKPdf	02 03 45.0	+1.7
	comp=Z,57nm,1.7s							
CSNA	**Conrad Observa**	**146.45**	**327**	⇑*i*P	PKPdf	02 03 44.1	+0.9
	comp=Z,49nm,1.5s							
KHC	**Kasperske Hory**	**146.69**	**331**	*e*PKP	PKPbc	02 03 46.9	+1.6
KHC				*ep*PKP	pPKPdf	02 03 51.9	+3.4
GERES	**GERESS Array B**	**146.84**	**330**	PKPbc	PKPbc	02 03 44.4	-1.4
	comp=Z,4.5nm,0.6s,baz=36,slow=3.1,SNR=9.5							
KRUS	**Krusevo**	**146.96**	**314**	*e*PKP	PKPbc	02 03 46.9	+0.6
GRA1	**Grafenberg Arr**	**147.29**	**334**	*e*PKP	PKPbc	02 03 47.7	+0.7
GRF	**Grafenberg Arr**	**147.29**	**334**	*e*PKP	PKPbc	02 03 47.7	+0.7
PERS	**Pernice**	**147.69**	**326**	*i* PKPbc	PKPbc	02 03 48.5	+0.4
BOJS	**Bojanci**	**148.35**	**325**	*i* PKPbc	PKPbc	02 03 51.2	+1.3
MEM	**Membach**	**148.45**	**340**	PKP	PKPbc	02 03 51.1	+1.1
JAVS	**Javornik**	**148.72**	**326**	*i* PKPbc	PKPbc	02 03 53.4	+2.5
STU	**Stuttgart**	**148.84**	**335**	*e*PKHKP		02 03 42.1		
ABTA	**Abfaltersbach**	**148.91**	**329**	⇑*i*P	PKPbc	02 03 51.3	-0.1
	comp=Z,17nm,1.0s							
WLF	**Walferdange**	**149.21**	**339**	PKP	PKPbc	02 03 52.5	+0.5
WLF	**Walferdange**	**149.21**	**339**	*e*PKPbc	PKPdf	02 03 49.7	+1.9
GIVF	**Givet**	**149.26**	**341**	*e*PKIKP	PKPbc	02 03 53.1	+1.0
BAIF	**Baives**	**149.49**	**341**	*e*PKIKP	PKPbc	02 03 53.8	+1.1
BFO	**Black Forest**	**149.53**	**335**	*e*PKP2	PKPbc	02 03 53.4	+0.5
CDF	**Champ du Feu**	**149.87**	**336**	*e*PKIKP	PKPbc	02 03 54.5	+0.8
DAVOS	**Davos**	**150.10**	**332**	PKP2	PKPbc	02 03 56.2	+1.9
DAVOX	**Davos/Dischmat**	**150.10**	**331**	PKPbc	PKPbc	02 03 56.2	+1.9
	comp=Z,22nm,0.9s,baz=234,slow=2.3,SNR=15							
HINF	**Hinteralfeld**	**150.52**	**336**	*e*PKIKP	PKPbc	02 03 55.9	+0.6
HAU	**Haudompre**	**150.55**	**337**	*e*PKIKP	PKPbc	02 03 56.2	+0.9
TUE	**Stuetta**	**150.58**	**332**	*e*PKPbc	PKPbc	02 03 56.9	+1.5
MEZF	**Maizieres J'vi**	**150.58**	**339**	*e*PKIKP	PKPbc	02 03 55.8	+0.4
	comp=Z,105nm,1.1s							
TIP	**Timpagrande**	**151.01**	**313**	*e*PKPbc	PKPbc	02 03 55.2	-1.5
TIP				*e*PKPab	PKPab	02 04 05.0	+0.8
CABF	**La Chapelle**	**151.81**	**336**	*e*PKIKP	PKPbc	02 03 59.5	+1.2
	comp=Z,61nm,1.1s							
FLN	**La Foliniere**	**151.91**	**346**	*e*PKIKP	PKPbc	02 03 59.1	+0.6
	comp=Z,49nm,0.8s							
LDF	**La Druitiere**	**151.98**	**345**	*e*PKIKP	PKPbc	02 03 59.2	+0.6
LOR	**Lormes**	**152.05**	**339**	*e*PKIKP	PKPbc	02 03 59.6	+0.8
GRR	**Gorron**	**152.34**	**346**	*e*PKIKP	PKPbc	02 04 00.2	+0.7
	comp=Z,38nm,0.9s							
SSF	**Saint Saulge**	**152.35**	**339**	*e*PKIKP	PKPbc	02 04 00.4	+0.9
	comp=Z,32nm,1.2s							
LPL	**La Plagne**	**152.45**	**333**	*e*PKIKP	PKPbc	02 04 01.3	+1.5
	comp=Z,20nm,0.9s							
LPG	**La Plagne**	**152.46**	**333**	*e*PKIKP	PKPbc	02 04 01.3	+1.5
	comp=Z,16nm,0.7s							
SGMF	**Saint Gilles**	**152.81**	**348**	*e*PKIKP	PKPbc	02 04 01.1	+0.6
BNI	**Bardonecchia**	**152.85**	**333**	*e*PKIKP	PKPbc	02 04 01.7	+1.0
ROSF	**Rostrenen**	**152.85**	**350**	*e*PKIKP	PKPbc	02 04 01.1	+0.5
BGF	**Bois d'Agland**	**153.01**	**340**	*e*PKIKP	PKPbc	02 04 01.8	+0.8
MBDF	**Montbardon**	**153.07**	**332**	*e*PKIKP	PKPbc	02 04 01.9	+0.7
QUIF	**Quistinic**	**153.25**	**349**	*e*PKIKP	PKPbc	02 04 01.9	+0.4
ORIF	**Oris-en-Rattie**	**153.29**	**334**	*e*PKIKP	PKPbc	02 04 01.5	-0.2
	comp=Z,11nm,0.6s							
SBF	**Sospel**	**153.45**	**330**	*e*PKIKP	PKPbc	02 04 02.5	+0.4
TCF	**Toulx Ste Croi**	**153.45**	**340**	*e*PKIKP	PKPbc	02 04 01.9	-0.1
	comp=Z,29nm,1.1s							
VIVF	**Saint-Julien-l**	**153.82**	**335**	*e*PKIKP	PKPbc	02 04 03.8	+1.0
SMRF	**Simiane la Rot**	**154.18**	**333**	*e*PKIKP	PKPbc	02 04 03.2	-0.4
PVRL	**Vila Real**	**160.40**	**354**	*e*PKPab	PKPab	02 04 44.8	+0.7
PVIS	**Viseu**	**160.97**	**354**	*e*PKPab	PKPab	02 04 47.1	+0.5
MTE	**Manteigas**	**161.25**	**353**	*e*PKPab	PKPab	02 04 48.6	+0.8
ESDC	**Sonseca Array**	**161.31**	**344**	PKPab	PKPab	02 04 45.5	-2.6
	comp=Z,0.9nm,0.5s,baz=22,slow=3.1,SNR=5.2							
PCBR	**Castelo Branco**	**161.79**	**353**	*e*PKPab	PKPab	02 04 50.6	+0.4
PTOM	**Tomar**	**162.10**	**355**	*e*PKPab	PKPab	02 04 52.0	+0.4
PMRV	**Marv??o**	**162.19**	**352**	*e*PKPab	PKPab	02 04 52.9	+0.9
PESTR	**Estremoz**	**162.77**	**353**	*e*PKPab	PKPab	02 04 54.3	-0.2
EVO	**Evora**	**163.15**	**354**	*e*PKIKP	PKPdf	02 04 13.1	+6.8
	comp=Z,48nm,1.5s							
PBEJ	**Beja**	**163.63**	**353**	*e*PKPab	PKPab	02 04 59.1	+0.8
LIC	**Lamto**	**163.72**	**199**	*e*PKIKP	PKPdf	02 04 15.7	+8.1
	comp=Z,58nm,1.5s							
DBIC	**Dimbokro**	**164.09**	**200**	PKPab	PKPab	02 05 03.5	+2.5
	comp=Z,10nm,0.9s,baz=139,slow=4.6,SNR=6.6							
DBIC	**Dimbokro**	**164.09**	**200**	PKPab	PKPab	02 05 03.5	+2.5

*NEIC **28** 01:44:35.1,31.12S×72.18W,h**38**km,MD3.7(GUC),After GUC.*

GUC 28 01:44:35.1±1.0,3112S×7218W,h38km±3km,MD3.7, ML3.3,4C-11D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.95**	**143**	⇑*i*P	Pn	01 44 52.2	+0.2
CHNG				*i* S	Sn	01 45 05.0	+0.6
CHNG				AML	AML	01 45 06.0	
	comp=E,1μm,0.3s						
OVCH	**Ovalle**	**0.98**	**59**	⇓*i*P	Pn	01 44 53.1	+0.6
OVCH				*i* S	Sn	01 45 07.0	+1.9
OVCH				AML	AML	01 45 08.6	
	comp=N,571nm,0.4s						
OVCH	**Ovalle**	**0.98**	**59**	⇓*i*P	Pn	01 44 53.1	+0.6
OVCH				*i* S	Sn	01 45 07.0	+1.9
LSCH	**La Serena**	**1.46**	**34**	*i* P	Pn	01 44 58.9	+0.1
LSCH				*i* S	Sn	01 45 17.1	+0.4
LSCH				AML	AML	01 45 18.1	
	comp=N,80nm,0.5s						
LSCH	**La Serena**	**1.46**	**34**	*i* P	Pn	01 44 58.9	+0.1
LSCH				*i* S	Sn	01 45 17.1	+0.4
TLL	**Tololo Astrono**	**1.52**	**51**	⇓*i*P	Pn	01 45 01.3	+1.5
TLL				*i* S	Sn	01 45 21.4	+3.1
TLL				AML	AML	01 45 24.2	
	comp=E,308nm,0.6s						
TLL	**Tololo Astrono**	**1.52**	**51**	⇓*i*P	Pn	01 45 01.3	+1.5
TLL				*i* S	Sn	01 45 21.4	+3.1
PTCH	**Petorca**	**1.56**	**137**	⇑*i*P	Pn	01 45 01.6	+1.3
PTCH				*i* S	Sn	01 45 21.5	+2.3
PTCH				AML	AML	01 45 23.0	
	comp=E,594nm,0.1s						
PTCH	**Petorca**	**1.56**	**137**	⇑*i*P	Pn	01 45 01.6	+1.3
PTCH				*i* S	Sn	01 45 21.5	+2.3
JACH	**Jahuel**	**2.06**	**139**	⇓*i*P	Pn	01 45 09.2	+2.0
JACH				*i* S	Sn	01 45 35.1	+3.5
PEL	**Peldehue**	**2.38**	**148**	⇓*i*P	Pn	01 45 12.9	+1.3
PEL				*i* S	Sn	01 45 41.6	+2.1
PEL				AML	AML	01 45 43.0	
	comp=E,430nm,0.3s						
LCO	**Las Campanas**	**2.46**	**32**	*e*Pn	Pn	01 45 12.8	0.0
LCO				*e*Sn	Sn	01 45 42.2	+0.6
RCDM	**Rinconada Maip**	**2.63**	**154**	⇓*i*P	Pn	01 45 16.1	+1.1
RCDM				AML	AML	01 45 49.3	
	comp=E,345nm,0.1s						
CLCH	**Cerro Calan**	**2.66**	**149**	⇓*i*P	Pn	01 45 17.0	+1.6
CLCH				*i* S	Sn	01 45 48.3	+1.9
CLCH				AML	AML	01 45 50.0	
	comp=E,192nm,0.2s						
CLCH				AML	AML	01 45 50.4	
	comp=E,240nm,0.3s						
FCH	**Farellones**	**2.72**	**144**	⇓*i*P	Pn	01 45 18.3	+2.0
FCH				*i* S	Sn	01 45 51.3	+3.4
FCH				AML	AML	01 45 52.1	
	comp=E,119nm,0.3s						
TACH	**Talagante**	**2.73**	**158**	⇑*i*P	Pn	01 45 17.8	+1.3
TACH				*i* S	Sn	01 45 49.6	+1.4
VACH	**Vallenar**	**2.82**	**26**	AML	AML	01 45 52.9	
	comp=E,547nm,0.1s						

PCH	**Pirque**	**2.86**	**151**	*e*P	Pn	01 45 19.5	+1.3
PCH				*i* S	Sn	01 45 53.2	+1.8
CHCH	**Chadas Angostu**	**3.08**	**156**	*e*P	Pn	01 45 23.0	+1.7
CHCH				*i* S	Sn	01 45 58.3	+1.5
LMEL	**Las Melosas**	**3.19**	**149**	⇓*i*P	Pn	01 45 24.7	+2.0
LMEL				*i* S	Sn	01 46 01.9	+2.5
LMEL				AML	AML	01 46 04.3	
	comp=N,196nm,0.1s						
LMEL	**Las Melosas**	**3.19**	**149**	⇓*i*P	Pn	01 45 24.7	+2.0
LMEL				*i* S	Sn	01 46 01.9	+2.5
CACH	**El Canelo**	**3.27**	**156**	*e*P	Pn	01 45 26.0	+2.2

*DDA **28** 01:47:19.9,3869N×3098E,h2km±1km,Md3.0*
*CSEM **28** 01:47:19.9±0.2,3871N×3091E,h8km,MD3.0,Error ellipse: s-maj=4.0km s-min=3.6km az=174.0*
*ISCJB **28** 01:47:20.4±0.5,3869N±003×3094E±003,h0km±6km, Error ellipse: s-maj=4.3km s-min=3.9km az=169.9*
*ISK **28** 01:47:20.2,3872N×3092E,h5km,MD3.0*

ISC 28 01:47:21.2±0.5,3868N±003×3094E±003,h5km±6km,n17, σ0°90/27,1D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUT	**Suhut-Afyon**	**0.33**	**247**	*e*PG	**Pg**	**01 47 27.5**	**0.0**
SHUT				*e*SG	**Sg**	**01 47 32.4**	**+0.6**
ALT	**Altintas**	**0.75**	**300**	*e*PG	**Pg**	**01 47 34.6**	**-0.9**
ALT				*e*SG	**Sg**	**01 47 44.0**	**-1.1**
KIZT	**Kizilcal**	**0.76**	**75**	*e*PG	**Pg**	**01 47 35.1**	**-0.7**
KIZT				*e*SG	**Sg**	**01 47 46.9**	**+1.2**
TKTP	**Tekketepe**	**0.81**	**217**	*i* P	**Pg**	**01 47 36.1**	**-0.4**
TKTP				*i* S	**Sg**	**01 47 48.8**	**+1.7**
ESKT	**Eskisehir**	**0.84**	**355**	*i* P	**Pg**	**01 47 36.2**	**-1.1**
ESKT				*i* S	**Sg**	**01 47 48.7**	**+0.5**
SEYT	**Eskypehyr**	**0.84**	**355**	*i* P	**Pg**	**01 47 36.2**	**-1.1**
SEYT				*i* S	**Sg**	**01 47 48.7**	**+0.5**
ISP	**Isparta**	**0.90**	**202**	*e*PG	**Pg**	**01 47 38.4**	**-0.1**
KDHN	**Kadinhani**	**0.94**	**100**	⇓*i*P	**Pg**	**01 47 38.2**	**-1.0**
KDHN				*i* S	**Sg**	**01 47 50.8**	**-0.5**
KHL	**Karahalli**	**1.17**	**253**	*e*PN	**Pn**	**01 47 42.5**	**-1.6**
LADK	**Ladik-KONYA**	**1.22**	**113**	*e*PN	**Pn**	**01 47 44.9**	**0.0**
BORA	**Eskisehir**	**1.25**	**343**	*e*P	**Pg**	**01 47 44.1**	**-1.1**
BORA				*e*S	**Sg**	**01 48 01.3**	**-0.2**
KONT	**Konya--Tatoy**	**1.34**	**123**	*e*PN	**Pn**	**01 47 45.9**	**-0.5**
KULA	**Kula-Manisa**	**1.79**	**265**	*e*PN	**Pn**	**01 47 53.3**	**+0.6**
ULDT	**Uludag**	**2.02**	**317**	*e*P	**Pb**	**01 47 58.1**	**-0.2**
ULDT				*e*S	**Sg**	**01 48 28.0**	**+2.0**
DST	**Dursunbey**	**2.02**	**298**	*e*PN	**Pn**	**01 47 55.9**	**+0.1**
SGKT	**Sivrigoynuk**	**2.08**	**24**	*e*P	**Pb**	**01 48 00.1**	**+0.8**
SGKT				*e*S	**Sg**	**01 48 29.0**	**+1.1**
HDMB	**Hadim**	**2.11**	**144**	*e*PN	**Pn**	**01 47 58.0**	**+1.0**

*IDC **28** 01:48:06.4±3.5,2113S×169.18E,h0km,mb4.1/4, mb1 4.4/4,mb1mx4.1/15,mbtmp4.1/4,Error ellipse: s-maj=192.7km s-min=30.4km az=158.0*
*NEIC **28** 01:48:07.5±0.8,2123S×16929E,h10km,mb4.0/3,Error ellipse: s-maj=31.7km s-min=15.2km az=170.0*
*ISCJB **28** 01:48:10.1±1.2,2125±03×169.1E±02,h33km,mb4.0/7, Error ellipse: s-maj=47.2km s-min=22.7km az=178.4*

ISC 28 01:48:11.8±1.2,2135±03×1692E±02,h35km,n9,σ0°43/7, mb4.0/7,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	**Charters Tower**	**21.50**	**269**	*e*P	**P**	**01 52 58.0**	**+0.3**
	4.2nm,0.8s,mb3.8						
COEN	**Coen**	**25.82**	**282**	*e*P	**P**	**01 53 40.5**	**+0.6**
	2.1nm,0.9s,mb3.7						
WRA	**Warramunga Arr**	**32.62**	**266**	P	**P**	**01 54 40.3**	**-0.1**
	2.1nm,0.9s,mb4.0,baz=96,slow=8.3,SNR=2.9						
ASAR	**Alice Springs**	**32.65**	**259**	P	**P**	**01 54 40.6**	**0.0**
	1.7nm,0.7s,mb4.1,baz=85,slow=9.2,SNR=5.3						
FITZ	**Fitzroy Crossi**	**41.04**	**267**	P	**P**	**01 55 51.1**	**-0.9**
	3.1nm,0.7s,mb4.1,baz=116,slow=6.7,SNR=4.5						
SNAA	**Sanae**	**87.13**	**183**	*e*P	**P**	**02 00 53.9**	**+0.3**
	4.0nm,1.2s,mb4.5						
NVAR	**Mina Array Bea**	**90.18**	**49**	P	**P**	**02 01 08.4**	**-0.1**
	0.5nm,0.6s,mb4.0,baz=226,slow=9.8,SNR=3.8						
EKA	**Eskdalemuir Ar**	**145.52**	**352**	PKPbc	PKPbc	02 07 44.8	-1.2
	2.9nm,0.7s,baz=351,slow=2.1,SNR=6.6						
GERES	**GERESS Array B**	**146.26**	**330**	PKPbc	PKPbc	02 07 48.4	0.0
	0.5nm,0.4s,baz=29,slow=2.2,SNR=4.8						

*IDC **28** 01:49:09.1±0.8,2133S×16942E,h0km,mb4.5/11, mb1 4.7/11,mb1mx4.5/18,mbtmp4.5/11,Error ellipse: s-maj=31.7km s-min=19.5km az=155.0*
*NEIC **28** 01:49:10.6±0.2,2133S×16941E,h10km,mb4.8/24,Error ellipse: s-maj=10.9km s-min=5.6km az=157.0*
*LDG **28** 01:49:10.2±0.3,2130S×16898E,h10km,Mb4.9/2,Error ellipse: s-maj=26.6km s-min=3.3km az=154.0*
*ISCJB **28** 01:49:12.9±0.3,2134S±008×16930E±007,h33km, mb4.7/36,Error ellipse: s-maj=12.7km s-min=7.5km az=154.5*
*MOS **28** 01:49:13.1±1.1,2134S×16933E,h33km,mb5.1/14,Error ellipse: s-maj=17.0km s-min=12.0km az=173.2*

ISC 28 01:49:14.6±0.3,2133S±008×16934E±007,h35km, (h26km±2.2km:pP-P),n104,σ0°69/60,mb4.7/36,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**18.31**	**237**	*e*P	**Pn**	**01 53 25.7**	**-0.1**
	0.2nm,0.8s						
CTA	**Charters Tower**	**21.63**	**269**	P	**P**	**01 54 02.7**	**+0.7**
	9.2nm,0.6s,mb4.4,baz=88,slow=11,SNR=9.5						
CTA	**Charters Tower**	**21.63**	**269**	P	**P**	**01 54 02.7**	**+0.7**
CTAO	**Charters Tower**	**21.63**	**269**	*e*P	**P**	**01 54 03.0**	**+1.0**
	41nm,1.3s,mb4.7						
PMG	**Port Moresby**	**24.42**	**296**	*e*P	**P**	**01 54 29.4**	**-0.7**
	12nm,0.7s,mb4.4						
COEN	**Coen**	**25.97**	**282**	*e*P	**P**	**01 54 44.0**	**-0.1**
	14nm,1.2s,mb4.4						
STKA	**Stephens Creek**	**26.87**	**241**	P	**P**	**01 54 53.0**	**+0.9**
	2.7nm,0.5s,mb4.0,baz=354,slow=6.5,SNR=4.8						
WB2	**Warramunga Arr**	**32.74**	**266**	*e*P	**P**	**01 55 43.7**	**-0.6**
WRAB	**Tennant Creek**	**32.74**	**266**	*e*P	**P**	**01 55 43.7**	**-0.6**
	5.4nm,0.5s,mb4.7						
WRA	**Warramunga Arr**	**32.75**	**266**	P	**P**	**01 55 43.7**	**-0.7**
	2.0nm,0.4s,mb4.4,baz=94,slow=8.4,SNR=22						
ASAR	**Alice Springs**	**32.77**	**259**	P	**P**	**01 55 43.6**	**-0.9**
	4.1nm,0.5s,mb4.6,baz=79,slow=9.0,SNR=17						
FORT	**Forrest**	**38.08**	**247**	*e*P	**P**	**01 56 29.8**	**-0.3**
	4.5nm,0.8s,mb4.2						
FITZ	**Fitzroy Crossi**	**41.17**	**267**	P	**P**	**01 56 56.4**	**+0.4**
	5.2nm,0.5s,mb4.4,baz=101,slow=11,SNR=11						
NWAO	**Narrogin (SRO)**	**47.37**	**244**	*e*P	**P**	**01 57 45.5**	**0.0**
NWAO				pmax	pmax		
	comp=Z,25nm,1.3s						
NWAO	**Narrogin (SRO)**	**47.37**	**244**	*e*P	**P**	**01 57 45.5**	**0.0**
	comp=Z,26nm,1.3s,mb5.0						
SBA	**Scott Base**	**56.58**	**181**	*e*P	**P**	**01 58 54.3**	**+0.9**
SBA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
SBA	**Scott Base**	**56.58**	**181**	*e*P	**P**	**01 58 54.3**	**+1.0**
	comp=Z,10nm,1.0s,mb4.8						
CASY	**Casey**	**58.26**	**204**	*e*P	**P**	**01 59 03.7**	**-1.6**
	comp=Z,15nm,1.6s,mb4.8						
MJAR	**Matsushiro Arr**	**64.64**	**333**	P	**P**	**01 59 48.2**	**-0.6**
	comp=Z,1.1nm,0.4s,mb4.2,baz=181,slow=6.4,SNR=4.2						
QSPA	**South Pole Qui**	**68.73**	**180**	P	**P**	**02 00 14.7**	**+0.4**
	comp=Z,6.1nm,1.0s,mb4.5,baz=21,slow=4.6,SNR=5.7						
CMAR	**Chiang Mai Arr**	**79.45**	**295**	P	**P**	**02 01 19.2**	**+1.4**
	comp=Z,2.5nm,0.4s,mb4.5,baz=127,slow=4.2,SNR=9.0						
CHTO	**Chiang Mai**	**79.61**	**295**	*e*P	**P**	**02 01 19.8**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
CHTO	**Chiang Mai**	**79.61**	**295**	*e*P	**P**	**02 01 19.8**	**+1.1**
	comp=Z,3.1nm,0.7s,mb4.3						
LZH	**Lanzhou**	**84.20**	**312**	*e*P	**P**	**02 01 44.8**	**+2.3**
LZH				*SP	sP	02 01 53.7	-3.9
LZH				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.4						
LZH	**Lanzhou**	**84.20**	**312**	*e*P	**P**	**02 01 44.8**	**+2.3**
	comp=Z,43nm,1.4s,mb5.4						
LZH				pP	pP	02 01 51.1	-2.5
LZH				sP	sP	02 01 53.7	-3.9
CLNS	**Chul'man**	**86.35**	**337**	*e*P	**P**	**02 01 53.0**	**+0.3**
CLNS				pmax	pmax		
	comp=N,7.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.2						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.9s						
SNAA	**Sanae**	**87.08**	**182**	*e*P	**P**	**02 01 56.0**	**-0.3**
SNAA				*e*	pP	02 02 04.9	-2.5
SNAA	**Sanae**	**87.08**	**182**	*e*P	**P**	**02 01 55.9**	**-0.4**
SNAA				pmax	pmax		
	comp=Z,12nm,1.1s						
SNAA	**Sanae**	**87.08**	**182**	*e*P	**P**	**02 01 55.9**	**-0.4**
	comp=Z,12nm,1.1s,mb5.0						
KIPM	**Iron Peak**	**87.25**	**45**	*e*P	**P**	**02 01 57.9**	**+0.3**
VNA3	**Neumayer Olymp**	**87.67**	**180**	*e*P	**P**	**02 01 58.8**	**-0.3**
VNA3				*e*	pP	02 02 07.8	-2.5
VNA2	**Neumayer--Watz**	**87.96**	**181**	*e*P	**P**	**02 02 00.8**	**+0.3**
VNA2				*e*	pP	02 02 10.0	-1.7
VNA1	**Neumayer--Stat**	**88.25**	**181**	*e*P	**P**	**02 02 02.3**	**+0.4**
VNA1				*e*	pP	02 02 11.0	-2.0
WDC	**Whiskeytown Da**	**88.26**	**45**	*e*P	**P**	**02 02 02.2**	**-0.2**
WDC				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.8						
WDC	**Whiskeytown Da**	**88.26**	**45**	*e*P	**P**	**02 02 02.2**	**-0.2**
	comp=Z,8.5nm,1.4s,mb4.8						
CMB	**Columbia Colle**	**88.48**	**48**	*e*P	**P**	**02 02 02.6**	**-0.8**
CMB				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.8						
CMB	**Columbia Colle**	**88.48**	**48**	*e*P	**P**	**02 02 02.6**	**-0.8**
	comp=Z,8.9nm,1.3s,mb4.8						
ISA	**Isabella**	**88.72**	**51**	*e*P	**P**	**02 02 04.7**	**0.0**
ISA				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.9						
ISA	**Isabella**	**88.72**	**51**	*e*P	**P**	**02 02 04.7**	**0.0**
	comp=Z,7.6nm,1.2s,mb4.9						
YBH	**Yreka Blue Hor**	**88.73**	**44**	P	**P**	**02 02 04.5**	**-0.1**
	comp=Z,2.3nm,0.9s,mb4.5,baz=29,slow=1.4,SNR=6.0						
SONM	**Songino Array**	**88.94**	**323**	P	**P**	**02 02 06.0**	**+0.6**
	comp=Z,3.5nm,1.1s,mb4.6,baz=138,slow=5.0,SNR=7.1						
BILL	**Bilibino**	**89.14**	**359**	*e*P	**P**	**02 02 05.0**	**-0.8**
BILL				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.1						
MTUM	**Tungsten Hills**	**89.43**	**49**	*e*P	**P**	**02 02 08.2**	**+0.2**
PAHR	**Pah Rah Range**	**89.96**	**47**	*e*P	**P**	**02 02 10.3**	**-0.1**
	comp=Z,10nm,1.2s,mb5.0						
NVAR	**Mina Array Bea**	**90.11**	**48**	P	**P**	**02 02 11.2**	**+0.1**
	comp=Z,3.8nm,0.8s,mb4.8,baz=227,slow=8.7,SNR=16						
GLA	**Glamis**	**90.27**	**55**	*e*P	**P**	**02 02 12.5**	**+0.5**
GLA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
GLA	**Glamis**	**90.27**	**55**	*e*P	**P**	**02 02 12.5**	**+0.6**
	comp=Z,7.4nm,0.8s,mb5.1						
TPNV	**Topopah Spring**	**90.90**	**51**	*e*P	**P**	**02 02 14.5**	**-0.3**
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
TPNV	**Topopah Spring**	**90.90**	**51**	*e*P	**P**	**02 02 14.5**	**-0.3**
	comp=Z,6.3nm,1.0s,mb4.9						
LDFC	**Landfair**	**90.92**	**53**	*e*P	**P**	**02 02 15.3**	**+0.3**
	comp=Z,18nm,1.1s,mb5.3						
WVOR	**Wild Horse Val**	**91.72**	**45**	*e*P	**P**	**02 02 18.5**	**0.0**
WVOR				pmax	pmax		

STKA	Stephens Creek	26.93	241	P		P		01 55 59.8	+0.2
	3.2nm,0.6s,mb4.0,baz=100,slow=12,SNR=3.2								
WB2	Warramunga Arr	32.80	266	*e*P		P		01 56 50.6	-1.0
WRA	Warramunga Arr	32.81	266	P		P		01 56 50.8	-0.9
	0.9nm,0.4s,mb4.0,baz=97,slow=8.2,SNR=7.7								
ASAR	Alice Springs	32.84	259	P		P		01 56 52.0	0.0
	5.3nm,0.6s,mb4.6,baz=85,slow=8.9,SNR=8.5								
FITZ	Fitzroy Crossi	41.24	267	P		P		01 58 03.3	-0.1
	7.0nm,0.5s,mb4.5,baz=87,slow=9.2,SNR=7.1								
MBWA	Marble Bar	46.15	261	*e*P		P		01 58 42.7	-0.1
	6.3nm,0.8s,mb4.6								
SBA	Scott Base	56.60	181	*e*P		P		02 00 00.7	+0.5
	8.9nm,1.0s,mb4.8								
CASY	Casey	58.30	204	*e*P		P		02 00 11.7	-0.7
	11nm,1.2s,mb4.8								
QSPA	South Pole Qui	68.75	180	P		P		02 01 21.5	+0.3
	8.3nm,1.1s,mb4.6,baz=10.0,slow=3.3,SNR=4.1								
QSPA	South Pole Qui	68.75	180	P		P		02 01 21.5	+0.3
MAW	Mawson	76.58	202	*e*P		P		02 02 07.9	0.0
MAW				pmax	pmax				
	comp=Z,3.0nm,0.8s								
MAW	Mawson	76.58	202	*e*P		P		02 02 07.9	-0.1
	comp=Z,3.2nm,0.8s,mb4.3								
CHTO	Chiang Mai	79.66	295	*e*P		P		02 02 26.9	+1.1
CHTO				pmax	pmax				
	comp=Z,2.0nm,0.4s,mb4.4								
CHTO	Chiang Mai	79.66	295	*e*P		P		02 02 26.9	+1.1
	comp=Z,1.9nm,0.4s,mb4.4								
SNAA	Sanae	87.11	182	*e*P		P		02 03 04.1	+0.9
SNAA	Sanae	87.11	182	*e*P		P		02 03 04.1	+0.9
SNAA				*e*				02 03 11.5	
SNAA	Sanae	87.11	182	*e*P		P		02 03 02.7	-0.5
SNAA				pmax	pmax				
	comp=Z,14nm,1.1s								
SNAA	Sanae	87.11	182	*e*P		P		02 03 02.7	-0.5
	comp=Z,14nm,1.1s,mb5.1								
VNA3	Neumayer Olymp	87.69	180	*e*P		P		02 03 05.8	-0.2
VNA3	Neumayer Olymp	87.69	180	*e*P		P		02 03 05.8	-0.2
VNA3				*e*		pP		02 03 14.6	-2.5
VNA3				*e*				02 03 19.9	
VNA2	Neumayer--Watz	87.98	181	*e*P		P		02 03 07.6	+0.2
VNA2	Neumayer--Watz	87.98	181	*e*P		P		02 03 07.6	+0.2
VNA2				*e*		pP		02 03 16.6	-2.0
VNA2				*e*				02 03 21.7	
WDC	Whiskeytown Da	88.20	45	*e*P		P		02 03 08.3	-0.6
WDC				pmax	pmax				
	comp=Z,7.0nm,1.3s,mb4.7								
WDC	Whiskeytown Da	88.20	45	*e*P		P		02 03 08.2	-0.6
	comp=Z,7.3nm,1.3s,mb4.8								
VNA1	Neumayer--Stat	88.27	181	*e*P		P		02 03 08.9	+0.1
VNA1	Neumayer--Stat	88.27	181	*e*P		P		02 03 08.9	+0.1
VNA1				*e*		pP		02 03 18.1	-1.8
CMB	Columbia Colle	88.41	48	*e*P		P		02 03 10.1	+0.2
CMB				pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.5								
CMB	Columbia Colle	88.41	48	*e*P		P		02 03 10.1	+0.1
	comp=Z,3.1nm,0.9s,mb4.5								
ISA	Isabella	88.66	51	*e*P		P		02 03 10.8	-0.3
ISA				pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.7								
ISA	Isabella	88.66	51	*e*P		P		02 03 10.8	-0.4
	comp=Z,3.8nm,1.0s,mb4.7								
PFO	Pinyon Flat Ob	89.22	53	*e*P		P		02 03 12.4	-1.4
PFO				pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.6								
PFO	Pinyon Flat Ob	89.22	53	*e*P		P		02 03 12.4	-1.5
	comp=Z,2.8nm,0.9s,mb4.6								
PAHR	Pah Rah Range	89.89	47	*e*P		P		02 03 16.6	-0.2
	comp=Z,5.5nm,1.1s,mb4.8								
NVAR	Mina Array Bea	90.05	48	P		P		02 03 18.9	+1.3
	comp=Z,1.1nm,0.7s,mb4.3,baz=230,slow=5.6,SNR=3.0								
GLA	Glamis	90.20	54	*e*P		P		02 03 19.3	+0.8
GLA				pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.9								
GLA	Glamis	90.20	54	*e*P		P		02 03 19.3	+0.8
	comp=Z,6.2nm,0.9s,mb4.9								
TPNV	Topopah Spring	90.84	50	*e*P		P		02 03 21.2	-0.1
TPNV				pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.7								
TPNV	Topopah Spring	90.84	50	*e*P		P		02 03 21.2	-0.1
	comp=Z,3.8nm,1.0s,mb4.7								
LDFC	Landfair	90.86	53	*e*P		P		02 03 22.0	+0.5
GNW	Green Mountain	91.54	39	*e*P		P		02 03 23.9	-0.4
	comp=Z,3.7nm,0.8s,mb4.8								
WVOR	Wild Horse Val	91.67	45	*e*P		P		02 03 23.1	-1.9
WVOR				pmax	pmax				
	comp=Z,4.0nm,1.1s,mb4.7								
WVOR	Wild Horse Val	91.67	45	*e*P		P		02 03 23.1	-1.9
	comp=Z,3.8nm,1.1s,mb4.6								
ETW	Entiat	93.03	40	*e*P		P		02 03 31.8	+0.6
ELK	Elko	93.20	47	*e*P		P		02 03 32.0	-0.1
ELK				pmax	pmax				
	comp=Z,18nm,1.4s								
ELK	Elko	93.20	47	*e*P		P		02 03 32.0	-0.1
	comp=Z,18nm,1.4s,mb5.3								
BMO	Blue Mountains	93.62	43	*e*P		P		02 03 34.7	+0.7
BMO				pmax	pmax				
	comp=Z,1.0nm,0.4s,mb4.6								
BMO	Blue Mountains	93.62	43	*e*P		P		02 03 34.7	+0.7
	comp=Z,0.8nm,0.4s,mb4.5								
WUAZ	Wupatki	93.82	53	*e*P		P		02 03 35.4	+0.3
	comp=Z,4.3nm,0.9s,mb4.9								
ARCES	ARCESS Array B	127.10	345	PKP	PKPdf			02 09 21.4	+0.2
	comp=Z,3.8nm,0.8s,baz=66,slow=1.4,SNR=6.5								
CLL	Collm	144.85	334	*e*PKPdf	PKPdf			02 09 54.0	-0.5
SANT	Santorini	145.27	304	PKPbc	PKPbc			02 09 55.6	+0.2
EKA	Eskdalemuir Ar	145.57	352	PKPbc	PKPbc			02 09 55.6	-0.2
	comp=Z,4.1nm,0.7s,baz=0.0,slow=2.7,SNR=5.8								
GEC2	GERESS Array S	146.38	331	*e*PKP2	PKPab			02 09 59.2	-0.1
GERES	GERESS Array B	146.38	331	PKPbc	PKPbc			02 09 59.3	+0.9
	comp=Z,2.3nm,0.6s,baz=26,slow=3.0,SNR=5.6								
STU	Stuttgart	148.37	335	*e*PKP2	PKPbc			02 10 03.2	-0.8
BNI	Bardonecchia	152.38	333	*e*PKIKP	PKPbc			02 10 14.8	+1.1
TAM	Tamanrasset	164.99	279	*e*PKPdf	PKPdf			02 10 22.6	+0.1

ISCJB ***28*** *01:50:58.4±0.2,2129S±005×16942E±004,h10km, mb5.1/70,MS5.8/10, Error ellipse: s-maj=7.0km s-min=4.3km az=159.0*

BJI ***28*** *01:50:58.7,21.35S×16954E,h12km,mB6.0,mb5.1,Ms6.0, Msz5.8*

IDC ***28*** *01:50:58.3±0.5,2123S×16938E,h0km,mb4.9/22, mb1 5.1/25,mb1mx5.1/26,mbtmp5.0/25,ML4.4/1,MS5.2/3, Ms1 5.2/3,ms1mx4.9/25,Error ellipse: s-maj=15.3km s-min=13.8km az=135.0*

GCMT ***28*** *01:50:59.8±0.3,21.21S×16909E,h12km±1km,MW5.5/76, Moment Tensor Solution. s8,c8; s76,c123; Duration: 1s4 Moment tensor: Scale 10^17^Nm; Mrr0.53±.09; Mθθ0.73±.06; Mφφ-1.26±.07; Mrθ0.26±.17; Mθφ1.20±.06; Mφr-1.59±.34; Best double couple: Mo2.15000×10^17^ NP1:φs288.00000°,δ39.00000°,λ13.00000°. NP2: φs188.00000°,δ82.00000°,λ129.00000°. Principal axes: T 1.7000, Plg40.0000°, Azm133.0000°; N 0.9030, Plg38.0000°, Azm1.0000°; P -2.6010, Plg27.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***28*** *01:50:59.8±0.2,2125S×16940E,h10km,mb5.3/41 Error ellipse: s-maj=8.0km s-min=5.4km az=152.0*

MOS ***28*** *01:51:02.4±1.0,2120S×16935E,h33km,mb5.5/22, MS6.0/4, Error ellipse: s-maj=10.2km s-min=9.4km az=15.0*

DJA ***28*** *01:51:03,2159S×16962E,h10km,mb5.5/17*

ISC 28 01:51:01.2±0.2,2131S±005×16946E±004,h19km, h19km±3.4km:pP-P,n493,σ0°64/366,mb5.1/70,MS5.8/10, 133C-110D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res	ISC
HNR	Honiara	14.94	321	Pn		Pn	01 54 31.1	-0.4	
	11nm,0.3s,baz=184,slow=15,SNR=1.8								
FUNA	Funafuti	15.80	38	*e*Pn		Pn	01 54 43.1	+0.3	
	440nm,1.6s								
URZ	Urewera	18.14	160	P		Pn	01 55 14.3	+2.1	
	1.2nm,0.3s,baz=342,slow=6.6,SNR=24								
ARMA	Armidale	18.41	237	*e*P		Pn	01 55 17.4	+1.9	
AFI	Afiamalu	19.33	71	P		Pn	01 55 27.2	+0.4	
	1.9nm,0.3s,baz=242,slow=6.6,SNR=6.5								
AFI				LR		LR	02 00 50.5		
	comp=Z,2μm,18.6s,baz=53,slow=31								
CTA	Charters Tower	21.74	269	⇑*i*P		P	01 55 52.3	+0.6	
	89nm,0.9s,mb5.2								
CTA	Charters Tower	21.74	269	P		P	01 55 52.3	+0.6	
	87nm,0.9s,mb5.2,baz=92,slow=12,SNR=28								
CTAO	Charters Tower	21.74	269	*e*P		P	01 55 52.5	+0.8	
	128nm,0.9s,mb5.3								
RPZ	Rata Peaks	22.39	177	P		P	01 56 00.7	+2.3	
	42nm,1.1s,mb4.8,baz=90,slow=5.7,SNR=7.2								
CNB	Canberra Magne	22.47	227	*e*P		P	01 56 00.4	+1.0	
CAN	Canberra	22.73	228	*e*P		P	01 56 02.6	+0.5	
PMG	Port Moresby	24.50	295	*e*P		P	01 56 18.9	-0.7	
PMG	Port Moresby	24.50	295	*e*P		P	01 56 19.6	0.0	
COEN	Coen	26.06	282	*e*P		P	01 56 33.8	0.0	
	24nm,0.9s,mb4.7								
STKA	Stephens Creek	26.97	241	⇑*i*P		P	01 56 41.9	0.0	
	23nm,0.8s,mb4.8								
STKA	Stephens Creek	26.97	241	P		P	01 56 42.2	+0.3	
	30nm,0.9s,mb4.8,baz=71,slow=7.1,SNR=12								
WB2	Warramunga Arr	32.84	266	*e*P		P	01 57 31.1	-2.9	
WRAB	Tennant Creek	32.84	266	P		P	01 57 32.0	-2.0	
	199nm,1.0s,mb6.0,SNR=7.0								
WRAB	Tennant Creek	32.84	266	*e*P		P	01 57 31.2	-2.8	
WRAB	Tennant Creek	32.84	266	*e*P		P	01 57 32.5	-1.5	
	53nm,1.1s,mb5.4								
WRA	Warramunga Arr	32.85	266	P		P	01 57 32.6	-1.5	
	25nm,1.1s,mb5.1,baz=95,slow=9.3,SNR=15								
WRA				LR		LR	02 09 54.9		
	comp=Z,4μm,18.6s,MS5.1,baz=105,slow=35								
ASAR	Alice Springs	32.88	259	P		P	01 57 33.0	-1.4	
	47nm,1.0s,mb5.4,baz=84,slow=8.8,SNR=22								
FORT	Forrest	38.19	247	*e*P		P	01 58 19.6	-0.2	
	5.1nm,0.9s,mb4.2								
FITZ	Fitzroy Crossi	41.28	267	*e*P		P	01 58 44.8	-0.9	
	120nm,1.0s,mb5.5								
FITZ	Fitzroy Crossi	41.28	267	P		P	01 58 45.2	-0.5	
	58nm,1.0s,mb5.2,baz=118,slow=8.6,SNR=15								
GUMO	Guam	42.25	323	LR		LR	02 15 00.5		
	comp=Z,8μm,18.3s,MS5.7,baz=336,slow=34								
MBWA	Marble Bar	46.19	261	*e*P		P	01 59 24.8	-0.4	
	68nm,1.1s,mb5.5								
KLBR	Kellerberrin	47.04	246	*e*P		P	01 59 30.5	-1.3	
	51nm,1.0s,mb5.4								
NWAO	Narrogin (SRO)	47.48	244	P		P	01 59 34.2	-1.0	
	19nm,0.8s,mb5.0,baz=69,slow=10,SNR=6.4								
NWAO	Narrogin (SRO)	47.48	244	*e*P		P	01 59 34.9	-0.3	
	29nm,0.9s,mb5.2								
KAPI	Kappang	50.79	281	P		P	02 00 00.1	-0.6	
	26nm,1.0s,mb5.1,baz=147,slow=5.8,SNR=5.1								
KAPI	Kappang	50.79	281	*e*P		P	02 00 00.1	-0.6	
	53nm,1.2s,mb5.3								
SBA	Scott Base	56.61	181	*e*P		P	02 00 43.2	+0.7	
	48nm,1.2s,mb5.4								
CASY	Casey	58.33	204	*e*P		P	02 00 53.1	-1.6	
KSM	Kuching	62.04	284	*e*P		P	02 01 21.4	+0.4	
MJAR	Matsushiro Arr	64.67	332	P		P	02 01 37.2	-0.7	
	8.6nm,0.9s,mb4.8,baz=166,slow=7.1,SNR=11								
MAJO	Matsushiro	64.67	332	*e*P		P	02 01 37.5	-0.4	
MAT	Matsushiro	64.67	332	P		P	02 01 37.7	-0.2	
YHNB	Yeheng	65.36	312	*e*P		P	02 01 43.1	+0.5	
	62nm,0.9s,mb5.6								
QSPA	South Pole Qui	68.76	180	P		P	02 02 03.1	-0.3	
	34nm,1.1s,mb5.2,baz=23,slow=2.7,SNR=15								
QSPA	South Pole Qui	68.76	180	P		P	02 02 03.1	-0.3	
ASAJ	Asahikawa	69.60	340	P		P	02 02 09.4	+0.4	
	34nm,1.0s,mb5.2,baz=235,slow=5.7,SNR=5.7								
KSRS	Korea Array	70.32	326	P		P	02 02 14.5	+0.9	
	5.5nm,0.8s,mb4.5,baz=122,slow=37,SNR=6.0								
NJ2	Nanjing	71.83	316	*e*P		P	02 02 24.0	+1.1	
YSS	Yuzh-Sakhalins	72.09	341	*e*P		P	02 02 25.3	+1.2	
YSS				pmax	pmax				
	comp=Z,38nm,1.0s,mb5.3								
YSS	Yuzh-Sakhalins	72.09	341	*e*P		P	02 02 24.2	+0.1	
	comp=Z,72nm,1.1s,mb5.5								
VLA	Vladivostok	72.83	332	*e*P		P	02 02 27.8	-0.8	
VLA				pmax	pmax				
	comp=Z,37nm,0.8s,mb5.4								
WHN	Wuhan	73.88	313	⇑P		P	02 02 36.0	+0.9	
DL2	Dalian	74.78	323	P		P	02 02 46.5	+6.3	
DL2				AMB	AMB				
	comp=Z,30nm,1.2s,mb5.1								
PETK	Petropavlovsk-	74.80	353	P		P	02 02 39.2	-0.7	
	comp=Z,14nm,1.0s,mb4.8,baz=132,slow=6.6,SNR=7.8								
MDJ	Mudanjiang	75.03	332	P		P	02 02 43.3	+1.9	
MDJ				AMB	AMB				
	comp=Z,9.0nm,0.9s,mb4.7								
MDJ				AMB	AMB				
	comp=Z,5μm,14.1s								
MDJ	Mudanjiang	75.03	332	*e*P		P	02 02 43.0	+1.5	
	comp=Z,14nm,0.8s,mb5.0								
CN2	Changchun	76.32	329	*e*P		P	02 02 49.3	+0.4	
CN2				AMB	AMB				
	comp=Z,20nm,1.0s,mb5.0								
MAW	Mawson	76.61	202	*e*P		P	02 02 51.3	+1.1	
	comp=Z,10nm,1.1s,mb4.7								
MAW	Mawson	76.61	202	P		P	02 02 51.3	+1.1	
	comp=Z,13nm,1.1s,mb4.8,baz=100,slow=9.3,SNR=11								
MAW	Mawson	76.61	202	*e*P		P	02 02 51.3	+1.1	
MAW				pmax	pmax				
	comp=Z,11nm,1.1s								
GYA	Guiyang	77.17	305	⇑*i*P		P	02 02 55.5	+1.4	
GYA				S	S		02 12 43.8	+1.1	
GYA				SKS			02 13 02.8		
GYA				AMB	AMB				
	comp=Z,20nm,1.0s,mb5.0								
GYA				AMB	AMB				
	comp=Z,210nm,5.6s								
GYA				LR	LR				
	comp=N,1μm,17.9s,MS5.3								
GYA				LR	LR				
	comp=E,810nm,18.2s,MS5.3								
GYA				LR	LR				
	comp=Z,1μm,18.9s,MS5.3								
BJI	Beijing	78.66	321	P		P	02 03 02.3	+0.2	
BJI				AMB	AMB				
	comp=Z,10.0nm,1.6s,mb4.5								
BJI	Beijing	78.66	321	P		P	02 03 02.3	+0.2	
	comp=Z,10.0nm,1.6s,mb4.5								
KMI	Kunming	79.53	302	P		P	02 03 09.5	+2.3	
KMI				AP	pP		02 03 12.5	-0.8	
KMI				XP	sP		02 03 13.5	-2.1	
KMI				PP	PP		02 06 08.3	+0.2	
KMI				S	S		02 13 10.3	+2.1	
KMI				SKS			02 13 21.3		
KMI				AMB	AMB				
	comp=Z,40nm,1.2s,mb5.2								
KMI				AMB	AMB				
	comp=Z,4μm,9.4s								
KMI				LR	LR				
	comp=N,4μm,16.5s,MS6.2								
KMI				LR	LR				
	comp=E,7μm,15.1s,MS6.2								
KMI				LR	LR				
	comp=Z,7μm,15.9s,MS6.1								
KMI	Kunming	79.53	302	P		P	02 03 09.5	+2.3	
KMI				*SP	sP		02 03 13.6	-2.0	
KMI							02 06 08.2		
KMI				S	S		02 13 10.3	+2.1	
KMI				*SS	sS		02 13 15.5	-2.9	
KMI							02 13 21.2		
KMI				SS	SS		02 18 21.3	+4.5	
KMI				pmax	pmax				
	comp=Z,40nm,1.2s,mb5.2								
KMI				MLR	MLR				
	comp=Z,7μm,15.9s,MS6.1								
KMI	Kunming	79.53	302	P		P	02 03 09.5	+2.3	
	comp=Z,40nm,1.2s,mb5.2								
KMI				pP	pP		02 03 12.4	-0.9	
KMI				sP	sP		02 03 13.6	-2.0	
KMI				PP	PP		02 06 08.2	+0.1	
KMI				S	S		02 13 10.3	+2.1	
KMI				sS	sS		02 13 15.5	-2.9	
KMI				SKS			02 13 21.2		
KMI				SS	SS		02 18 21.3	+4.5	
KMI				LR	LR				
	comp=Z,7μm,15.9s,MS6.1								
CMAR	Chiang Mai Arr	79.54	295	P		P	02 03 07.5	+0.2	
	comp=Z,12nm,0.8s,mb4.9,baz=133,slow=3.8,SNR=24								
CHTO	Chiang Mai	79.69	295	*e*P		P	02 03 08.9	+0.7	
CHTO				pmax	pmax				
	comp=Z,35nm,1.1s,mb5.2								
CHTO	Chiang Mai	79.69	295	*e*P		P	02 03 08.9	+0.7	
	comp=Z,35nm,1.1s,mb5.2								
CD2	Chengdu	81.65	308	⇓*i*P		P	02 03 19.3	+0.9	
CD2				AP	pP		02 03 25.0	+0.4	
CD2				XP	sP		02 03 27.5	+0.7	
CD2				PP	PP		02 06 29.5	+4.0	
CD2				S	S		02 13 31.5	+1.3	
CD2				XS	sS		02 13 39.5	-0.8	
CD2				AMB	AMB				
	comp=Z,10.0nm,1.2s,mb4.6								
CD2				LR	LR				
	comp=N,5μm,16.8s,MS6.0								
CD2				LR	LR				
	comp=E,4μm,14.4s,MS6.0								
CD2				LR	LR				
	comp=Z,5μm,15.6s,MS6.0								
HHC	Hu-ho-hao-te	81.91	320	*e*P		P	02 03 20.5	+0.9	
HHC				AP	pP		02 03 23.5	-2.2	
HHC				XP	sP		02 03 25.5	-2.4	
HHC				PP	PP		02 06 30.5	+3.0	
HHC				S	S		02 13 33.3	+0.9	
HHC				AMB	AMB				
	comp=Z,22nm,0.7s,mb5.2								
HHC				AMB	AMB				
	comp=Z,3μm,7.1s								
HHC				LR	LR				
	comp=N,2μm,16.7s,MS5.8								
HHC				LR	LR				
	comp=E,3μm,17.1s,MS5.8								
HHC				LR	LR				
	comp=Z,3μm,17.7s,MS5.7								
HIA	Hailar	82.99	330	*e*P		P	02 03 24.8	-0.2	
SYO	Syowa Base	83.02	196	⇓*e*P		P	02 03 23.6	-1.4	
LZH	Lanzhou	84.26	312	*e*P		P	02 03 33.5	+1.7	
LZH				AP	pP		02 03 42.3	+4.3	
LZH				XP	sP		02 03 45.8	+5.6	
LZH				PP	PP		02 06 50.5	+3.7	
LZH				AMB	AMB				
	comp=Z,37nm,1.2s,mb5.4								
LZH				AMB	AMB				
	comp=Z,2μm,8.0s								
LZH				LR	LR				
	comp=E,5μm,14.9s								
LZH				LR	LR				
	comp=Z,6μm,18.0s,MS6.0								
LZH	Lanzhou	84.26	312	*e*P		P	02 03 33.5	+1.7	
LZH				*PP	pP		02 03 42.2	+4.2	
LZH				*SP	sP		02 03 45.8	+5.6	
LZH							02 06 50.5		
LZH				pmax	pmax				
	comp=Z,37nm,1.2s,mb5.4								
LZH				MLR	MLR				
	comp=Z,6μm,18.0s,MS6.0								
LZH	Lanzhou	84.26	312	*e*P		P	02 03 33.5	+1.7	
	comp=Z,37nm,1.2s,mb5.4								
LZH				pP	pP		02 03 42.2	+4.2	
LZH				sP	sP		02 03 45.8	+5.6	
LZH				PP	PP		02 06 50.5	+3.7	
LZH				LR	LR				
	comp=Z,6μm,18.0s,MS6.0								
SEY	Seymchan	85.03	352	*e*P		P	02 03 33.7	-1.4	
CLNS	Chul'man	86.37	337	*e*P		P	02 03 43.1	+1.3	
CLNS				pmax	pmax				
	comp=Z,38nm,1.0s,mb5.6								
CLNS				pmax	pmax				
	comp=E,11nm,1.1s								
CLNS				pmax	pmax				
	comp=N,23nm,1.1s								
MCCM	Marconi Confer	86.72	47	⇑P		P	02 03 44.9	+0.9	
	baz=87								
V03C	Hunter Liggett	86.81	49	⇑P		P	02 03 44.6	+0.1	
	baz=87								
BSC	Santa Cruz Isl	87.00	52	⇑P		P	02 03 45.5	0.0	
	baz=87								
HOPS	Hopland	87.02	46	⇑P		P	02 03 46.0	+0.6	
	baz=87								
SAO	San Andreas Ge	87.03	49	*e*P		P	02 03 46.3	+0.7	
SAO				pmax	pmax				
	comp=Z,9.0nm,0.8s,mb5.0								
SAO	San Andreas Ge	87.03	49	*e*P		P	02 03 46.3	+0.8	
	comp=Z,8.9nm,0.8s,mb5.0								
KCPM	Cahto Peak	87.03	45	*e*P		P	02 03 45.8	+0.3	
O01C	Eel River Cons	87.10	45	⇑P		P	02 03 46.5	+0.6	
	baz=87								
CVS	Carmenet Viney	87.11	47	⇑P		P	02 03 46.0	0.0	
	baz=87								
SNAA	Sanae	87.12	182	*e*P		P	02 03 44.0	-1.5	
SNAA	Sanae	87.12	182	*e*P		P	02 03 44.0	-1.5	
SNAA				*e*			02 03 46.4		
SNAA				*e*			02 03 51.7		
SNAA	Sanae	87.12	182	*e*P		P	02 03 45.2	-0.3	
SNAA				pmax	pmax				
	comp=Z,48nm,1.2s								
SNAA	Sanae	87.12	182	*e*P		P	02 03 45.2	-0.3	
	comp=Z,48nm,1.2s,mb5.6								
KIPM	Iron Peak	87.16	45	*e*P		P	02 03 46.2	+0.1	
PACP	Pacheco Peak	87.26	49	⇑P		P	02 03 47.1	+0.5	
	baz=87								
PKD	Parkfield	87.27	50	⇓P		P	02 03 46.7	-0.1	
	baz=87								
PKM	Peak Mountain	87.29	51	⇓P		P	02 03 46.9	0.0	
	baz=88								
U04C	Hernandez Rese	87.30	49	⇓P		P	02 03 47.1	+0.2	
	baz=88								
MNRC	McLaughlin Nat	87.38	46	⇑P		P	02 03 47.3	0.0	
	baz=88								
KHMM	Horse Mountain	87.54	44	*e*P		P	02 03 49.1	+1.2	
GASB	Alder Springs	87.59	46	⇓P		P	02 03 48.8	+0.5	
	baz=88,SNR=6.7								
VNA3	Neumayer Olymp	87.70	180	*e*P		P	02 03 46.7	-1.6	
VNA3	Neumayer Olymp	87.70	180	*e*P		P	02 03 46.7	-1.6	
VNA3				*e*		

GTA LR LR
comp=E,3µm,20.7s,MS5.9
GTA LR LR
comp=Z,4µm,17.7s,MS5.8
HELL Mitchell Peak 88.70 50 ⇓P P 02 03 52.9 -0.6
baz=89
KCC Kaiser Creek 88.79 49 ⇓P P 02 03 53.3 -0.7
baz=89,SNR=6.9
M03C McCloud 88.79 45 ⇑P P 02 03 53.8 -0.1
baz=89
P05C Yuba Gap, Truc 88.84 47 ⇑P P 02 03 53.9 -0.3
baz=89,SNR=6.1
MONP Monument Peak 88.89 54 ⇑P P 02 03 54.0 -0.5
baz=89,SNR=6.5
YAK Yakutsk 88.89 342 *e*P P 02 03 59.0 +5.2
YAK *e* 02 07 22.3
YAK *e*S S 02 14 29.1 -11
YAK *e*SS SS 02 20 32.4 -1.2
YAK pmax pmax
comp=Z,41nm,0.7s,mb5.9
YAK pmax pmax
comp=N,8.0nm,0.6s
YAK pmax pmax
comp=E,4.0nm,0.4s
YAK smax
comp=N,924µm,7.7s
YAK smax
comp=E,1142µm,10.7s
YAK MLR MLR
comp=Z,3µm,15.0s,MS5.8
YAK MLR MLR
comp=N,3µm,19.0s,MS5.7
YAK MLR MLR
comp=E,2µm,19.0s,MS5.7
R05C Kirkwood Meado 88.91 48 ⇑P P 02 03 54.1 -0.4
baz=89
J02A Umpqua 88.92 42 ⇑P P 02 03 54.3 -0.1
baz=89
HUMO Hull Mountain 88.92 43 ⇑P P 02 03 54.7 +0.2
baz=89,SNR=10.0
HUMO Hull Mountain 88.92 43 *e*P P 02 03 55.5 +1.0
comp=E,16nm,0.9s,mb5.3
O05C Quincy 88.94 46 ⇑P P 02 03 54.4 -0.2
baz=89
SONM Songino Array 88.98 323 P P 02 03 55.2 +0.5
comp=E,8.3nm,1.1s,mb5.0,baz=133,slow=4.6,SNR=12
I02A Mapleton 89.09 42 ⇑P P 02 03 55.7 +0.5
baz=89
BILL Bilibino 89.11 359 *e*P P 02 03 54.2 -0.5
BILL *i* 02 04 06.5
BILL pmax pmax
comp=Z,20nm,1.2s,mb5.3
PFO Pinyon Flat Ob 89.18 53 P P 02 03 56.2 +0.3
comp=Z,2.2nm,0.6s,mb4.7,baz=262,slow=5.1,SNR=5.2
PFO Pinyon Flat Ob 89.18 53 *e*P P 02 03 56.2 +0.3
PFO pmax pmax
comp=Z,26nm,1.5s,mb5.3
PFO Pinyon Flat Ob 89.18 53 ⇑P P 02 03 55.6 -0.3
baz=89
PFO Pinyon Flat Ob 89.18 53 *e*P P 02 03 56.2 +0.3
comp=Z,26nm,1.5s,mb5.3
M04C Macdoel 89.23 44 ⇓P P 02 03 56.0 +0.1
baz=89
R06C Coleville 89.26 48 ⇑P P 02 03 55.7 -0.4
baz=89,SNR=8.2
CWC Cottonwood Cre 89.26 50 ⇓P P 02 03 56.1 -0.1
baz=89
WAKR Walker 89.26 48 *e*P P 02 03 56.1 -0.1
MTUM Tungsten Hills 89.33 49 *e*P P 02 03 56.8 +0.2
SWSC Sam W. Stewart 89.38 54 ⇓P P 02 03 57.0 +0.1
baz=90
M05C Lookout 89.47 45 ⇓P P 02 03 57.4 +0.3
baz=90
MPMC Manual Prospec 89.51 51 ⇑P P 02 03 57.4 0.0
baz=90,SNR=10
GSC Goldstone 89.67 52 *e*P P 02 03 59.0 +0.8
GSC pmax pmax
comp=Z,47nm,1.8s,mb5.5
GSC Goldstone 89.67 52 ⇓P P 02 03 58.1 -0.1
baz=90
GSC Goldstone 89.67 52 *e*P P 02 03 59.0 +0.8
comp=Z,47nm,1.8s,mb5.5
S08C White Mtn Res 89.68 49 ⇓P P 02 03 58.0 -0.1
baz=90
BELC Belle Mtn. 89.69 53 ⇓P P 02 03 58.2 -0.1
baz=90,SNR=10.0
H03A Soap Creek Ran 89.76 41 ⇑P P 02 03 58.7 +0.3
baz=90
O06A Flanigan 89.78 46 ⇓P P 02 03 58.5 0.0
baz=90,SNR=6.3
J04A Umpqua Nationa 89.78 43 ⇓P P 02 03 58.8 +0.4
baz=90
M06C Likely Place G 89.84 45 ⇑P P 02 03 59.0 +0.2
baz=90
PAHR Pah Rah Range 89.86 47 *e*P P 02 03 59.6 +0.7
comp=Z,18nm,1.0s,mb5.3
I04A Tendick Farm, 89.86 42 ⇑P P 02 03 58.7 -0.1
baz=90
BC3 Big Chuckw Mtn 89.95 54 ⇓P P 02 03 59.4 -0.2
baz=90,SNR=6.6
L05A Lakeview 90.01 44 ⇓P P 02 03 59.8 +0.2
baz=90
NVAR Mina Array Bea 90.01 48 P P 02 03 59.2 -0.5
comp=Z,5.5nm,0.6s,mb5.0,baz=227,slow=8.4,SNR=16
GRAC Grapevine Rang 90.02 50 ⇓P P 02 03 59.6 -0.1
baz=90,SNR=6.0
N06A Buffalo Meadow 90.05 46 ⇑P P 02 04 00.0 +0.3
baz=90,SNR=9.3
112A Yuma 90.13 55 ⇑P P 02 04 00.7 +0.3
baz=90
FURC Furnace Creek, 90.15 51 ⇓P P 02 04 00.9 +0.6
baz=90
GLA Glamis 90.17 54 *e*P P 02 04 00.9 +0.4
GLA pmax pmax
comp=Z,19nm,1.0s,mb5.4
GLA Glamis 90.17 54 ⇓P P 02 04 00.6 +0.1
baz=90
GLA Glamis 90.17 54 *e*P P 02 04 00.9 +0.4
comp=Z,19nm,1.0s,mb5.4
TRF Thorofare Moun 90.17 17 *e*P P 02 04 02.7 +2.9
comp=Z,4.8nm,0.8s,mb4.9
F03A Seaside 90.24 40 ⇓P P 02 04 01.0 +0.5
baz=90
GMRC Granite Mounta 90.28 53 ⇓P P 02 04 01.2 +0.1
baz=90
MOD Modoc 90.29 45 ⇑P P 02 04 01.5 +0.7
baz=90
MOD Modoc 90.29 45 *e*P P 02 04 01.8 +0.9
K05A Summer Lake 90.30 44 ⇓P P 02 04 01.5 +0.6
baz=90
J05A Fort Rock 90.35 43 ⇑P P 02 04 01.5 +0.3
baz=90,SNR=6.5
TUQ Turquoise Moun 90.38 52 ⇑P P 02 04 01.4 -0.1
baz=90,SNR=7.5
IRM Iron Mountain 90.40 53 ⇑P P 02 04 01.3 -0.3
baz=91
O07A Toulon 90.42 47 ⇑P P 02 04 01.1 -0.4
baz=91,SNR=6.0
H04A Detroit Lake 90.45 42 ⇓P P 02 04 01.3 -0.2
baz=91
S09A Goldfield 90.45 49 ⇑P P 02 04 01.4 -0.4
baz=91
Q08A Gabbs 90.47 48 ⇓P P 02 04 01.8 0.0
baz=91,SNR=8.6
U10A Ash Meadows, A 90.51 51 ⇓P P 02 04 01.9 -0.2
baz=91,SNR=6.6
E03A Lebam 90.56 39 ⇑P P 02 04 02.4 +0.3
baz=91
TPH Tonopah 90.61 49 *e*P P 02 04 03.0 +0.5
TPH pmax pmax
comp=Z,28nm,1.3s,mb5.4
TPH Tonopah 90.61 49 *e*P P 02 04 03.0 +0.6
comp=Z,28nm,1.3s,mb5.4
N07B Gerlach 90.64 46 ⇑P P 02 04 03.0 +0.5
baz=91
Y12C Blythe 90.69 54 ⇑P P 02 04 03.3 +0.3
baz=91
BMW Boistfort Moun 90.72 40 *e*P P 02 04 03.0 +0.2
K06A Valley Falls 90.75 44 ⇑P P 02 04 03.6 +0.6
baz=91
I05A Bend 90.76 42 ⇓P P 02 04 03.7 +0.6
baz=91
R09A Tonopah 90.79 49 ⇑P P 02 04 02.7 -0.6
baz=91,SNR=5.9
M07A Soldier Meadow 90.79 45 ⇑P P 02 04 03.2 0.0
baz=91,SNR=8.9
TPNV Topopah Spring 90.80 50 *e*P P 02 04 03.4 0.0
TPNV pmax pmax
comp=Z,16nm,0.9s,mb5.3
TPNV Topopah Spring 90.80 50 ⇑P P 02 04 03.1 -0.3
baz=91
TPNV Topopah Spring 90.80 50 *e*P P 02 04 03.4 0.0
comp=Z,16nm,0.9s,mb5.4
NLWA Neilton Lookou 90.81 39 ⇑P P 02 04 03.7 +0.5
baz=91
LDFC Landfair 90.82 53 *e*P P 02 04 03.8 +0.2
113A Mohawk Valley, 90.85 55 ⇓P P 02 04 03.5 -0.2
baz=91
V11A Goodsprings 90.91 52 ⇑P P 02 04 03.6 -0.3
baz=91
F04A Amboy 90.93 40 ⇓P P 02 04 04.1 +0.3
baz=91
O08A Rochester Mine 90.97 47 ⇓P P 02 04 04.0 0.0
baz=91,SNR=7.8
L07A Adell 90.98 45 ⇓P P 02 04 03.9 -0.2
baz=91,SNR=7.4
Q09A Carvers 90.98 48 ⇓P P 02 04 03.7 -0.5
baz=91
S10A Tonopah Range, 90.98 49 ⇑P P 02 04 04.0 -0.3
baz=91,SNR=11
H05A Madras 91.03 42 ⇑P P 02 04 04.5 +0.3
baz=91
J06A Christmas Vall 91.03 44 ⇓P P 02 04 04.6 +0.3
baz=91
U11A Corn Creek 91.20 51 ⇑P P 02 04 05.2 -0.1
baz=91
N08A GE Springer Mi 91.21 46 ⇑P P 02 04 04.8 -0.4
baz=91,SNR=6.9
PDMCI Parker Dam,Lak 91.21 54 ⇑P P 02 04 05.1 -0.3
baz=91
214A Organ Pipe Nat 91.25 56 ⇓P P 02 04 04.6 -1.0
baz=91
BOD Bodaibo 91.27 334 *e*P P 02 04 02.8 -2.2
BOD pmax pmax
comp=Z,13nm,2.0s,mb4.9
V12A Nelson 91.29 52 ⇑P P 02 04 05.1 -0.6
baz=91
I06A Prineville 91.32 43 ⇓P P 02 04 05.6 0.0
baz=92
M08A Happy Creek Ra 91.35 46 ⇑P P 02 04 05.7 -0.1
baz=92
K07A Rock Creek Ran 91.35 44 ⇓P P 02 04 06.1 +0.3
baz=92,SNR=7.4
SHPR Sheep Range 91.40 51 *e*P P 02 04 06.8 +0.6
S11A Rachel 91.47 50 ⇑P P 02 04 06.7 +0.2
baz=92
F05A White Salmon 91.49 41 ⇓P P 02 04 06.8 +0.4
baz=92
C04A Brinnon 91.50 39 ⇓P P 02 04 06.9 +0.5
baz=92
GNW Green Mountain 91.51 39 *e*P P 02 04 05.9 -0.5
comp=Z,18nm,1.0s,mb5.3
Q10A Clear Creek Ra 91.52 49 ⇓P P 02 04 07.2 +0.5
baz=92
X13A Yucca 91.57 53 ⇑P P 02 04 06.5 -0.5
baz=92,SNR=5.9
O09A Fish Creek Ran 91.57 47 ⇑P P 02 04 06.8 -0.1
baz=92
H06A Lindquist Farm 91.62 42 ⇑P P 02 04 07.4 +0.4
baz=92
WVOR Wild Horse Val 91.63 45 *e*P P 02 04 07.9 +0.8
WVOR pmax pmax
comp=Z,18nm,1.1s,mb5.3
WVOR Wild Horse Val 91.63 45 *e*P P 02 04 07.9 +0.8
comp=Z,18nm,1.1s,mb5.3
E05A Randle 91.64 40 ⇓P P 02 04 07.1 +0.1
baz=92
N09A Rock Creek Ran 91.65 47 ⇓P P 02 04 07.3 +0.1
baz=92
T11A Corn Creek, Al 91.67 51 ⇑P P 02 04 07.2 -0.2
baz=92,SNR=10
G06A Carlson Farm, 91.68 42 ⇑P P 02 04 07.3 0.0
baz=92
L08A Fields 91.71 45 ⇑P P 02 04 07.0 -0.5
baz=92,SNR=7.7
Z14A Wintersburg 91.73 55 ⇑P P 02 04 07.2 -0.6
baz=92
W13A Hualapai Mount 91.74 53 ⇑P P 02 04 07.2 -0.7
baz=92
D05A Enumclaw 91.81 39 ⇓P P 02 04 08.4 +0.6
baz=92
F06A Goldendale 91.84 41 ⇑P P 02 04 08.3 +0.3
baz=92
K08A Mann Creek Ran 91.87 45 ⇑P P 02 04 08.2 0.0
baz=92
R11A Troy Canyon, C 91.89 49 ⇑P P 02 04 08.0 -0.4
baz=92,SNR=7.3
Y14A Wickenburg 91.92 54 ⇓P P 02 04 08.1 -0.6
baz=92
COLA College 91.95 17 *e*P P 02 04 08.2 +0.2
M09A Mael Ranch, 91.96 46 ⇑P P 02 04 08.9 +0.2
baz=92
V13A Grand Canyon W 91.98 52 ⇓P P 02 04 08.7 -0.3
baz=92,SNR=6.3
115A Sonoran Desert 92.01 56 ⇓P P 02 04 08.5 -0.6
baz=92
H07A Lands Inn, Kim 92.04 43 ⇓P P 02 04 09.0 +0.1
baz=92
Q11A Duckwater 92.05 49 ⇓P P 02 04 09.2 0.0
baz=92
L09A Wilkinson Ranc 92.08 45 ⇑P P 02 04 09.3 +0.1
baz=92
ZAK Zakamensk 92.08 324 *e*P P 02 04 08.3 -0.7
ZAK pmax pmax
comp=Z,10.0nm,1.3s,mb5.0
S12A Delamar Landin 92.09 50 ⇓P P 02 04 09.4 +0.1
baz=92,SNR=7.2
E06A Yakima 92.10 40 ⇑P P 02 04 09.3 +0.2
baz=92
J08A Circle Bar Ran 92.16 44 ⇓P P 02 04 09.8 +0.3
baz=92,SNR=8.2
X14A Yava 92.22 54 ⇑P P 02 04 09.9 -0.2
baz=92,SNR=9.8
U13A Pakoon Wash 92.23 52 ⇓P P 02 04 09.9 -0.1
baz=92
G07A Ruggs Ranch, H 92.29 42 ⇑P P 02 04 10.2 +0.1
baz=92
K09A Rome 92.35 45 ⇑P P 02 04 10.4 0.0
baz=92
116A Eloy 92.36 56 ⇓P P 02 04 10.3 -0.4
baz=92
I08A Drewsey 92.36 43 ⇓P P 02 04 10.4 -0.1
baz=92
W14A Seligman 92.38 53 ⇑P P 02 04 10.9 +0.1
baz=92,SNR=7.0
Y15A Casa Rosa Ranc 92.43 55 ⇓P P 02 04 10.7 -0.3
baz=93,SNR=9.8
T13A Saint George 92.53 51 ⇓P P 02 04 11.4 0.0
baz=93
V14A Boquillas Ranc 92.54 53 ⇓P P 02 04 11.5 0.0
baz=93,SNR=6.3
TLY Talaya 92.57 325 *e*P P 02 04 11.4 +0.2
TLY pmax pmax
comp=Z,9.0nm,1.3s,mb5.0
H08A Prairie City 92.57 43 ⇑P P 02 04 11.4 -0.1
baz=93
R12A Pony Springs, 92.57 50 ⇑P P 02 04 11.7 +0.1
baz=93
O11A Cowboy Ranch, 92.61 48 ⇓P P 02 04 11.6 -0.1
baz=93
M10A I.L. Ranch, Tu 92.61 46 ⇓P P 02 04 11.6 0.0
baz=93
J09A Fry Pan Ranch, 92.62 44 ⇑P P 02 04 12.1 +0.4
baz=93
Q12A Willow Creek R 92.72 49 ⇑P P 02 04 12.2 0.0
baz=93
X15A Humboldt 92.72 54 ⇑P P 02 04 12.2 -0.2
baz=93,SNR=9.4
217A Green Valley 92.73 57 ⇓P P 02 04 12.4 -0.1
baz=93
G08A Pilot Rock 92.75 42 ⇓P P 02 04 12.4 +0.2
baz=93
S13A Holt Ranch, En 92.79 51 ⇓P P 02 04 12.3 -0.3
baz=93
U14A Mt Trumbull 92.81 52 ⇑P P 02 04 12.5 -0.3
baz=93
P12A McGill 92.85 49 ⇓P P 02 04 12.4 -0.4
baz=93
RSW Rattlesnake Hi 92.87 41 *e*P P 02 04 13.1 +0.4
Z16A Peralta Trail, 92.88 55 ⇑P P 02 04 12.6 -0.5
baz=93
L10A Juniper Basin 92.91 46 ⇓P P 02 04 12.6 -0.4
baz=93
HAWA Hanford 92.91 41 *e*P P 02 04 11.7 -1.2
comp=Z,8.1nm,1.1s,mb5.1
K10A MacKenzie Ranc 92.95 45 ⇓P P 02 04 12.9 -0.3
baz=93
R13A O'Grain Ranch, 92.97 50 ⇓P P 02 04 13.5 +0.1
baz=93
TUC Tucson 92.97 57 *e*P P 02 04 14.3 +0.7
TUC pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
TUC Tucson 92.97 57 *e*P P 02 04 14.3 +0.7
comp=Z,4.3nm,1.0s,mb4.8
W15A Williams 92.98 53 ⇑P P 02 04 13.7 +0.2
baz=93
ETW Entiat 93.00 40 *e*P P 02 04 13.3 0.0
Y16A Circle Bar Ran 93.06 55 ⇓P P 02 04 13.9 0.0
baz=93,SNR=8.7
M11A Holland Ranch, 93.08 47 ⇓P P 02 04 14.4 +0.6
baz=93
F08A Pendleton 93.09 42 ⇓P P 02 04 14.3 +0.5
baz=93
117A Oracle 93.11 56 ⇑P P 02 04 13.8 -0.4
baz=93
T14A Hurricane 93.14 51 ⇓P P 02 04 14.4 +0.1
baz=93
ELK Elko 93.16 47 *e*P P 02 04 14.8 +0.6
ELK pmax pmax
comp=Z,6.0nm,1.0s
ELK Elko 93.16 47 *e*P P 02 04 14.8 +0.6
comp=Z,6.1nm,1.0s,mb5.0
C07A Waterville 93.20 40 ⇓P P 02 04 13.9 -0.3
baz=93
E08A Dider Farm, El 93.24 41 ⇑P P 02 04 14.9 +0.5
baz=93
318A Bisbee 93.25 58 ⇓P P 02 04 14.2 -0.7
baz=93
Q13A Wheeler Ranch, 93.25 49 ⇑P P 02 04 14.5 -0.2
baz=93
X16A Lo Mia Camp, P 93.30 54 ⇑P P 02 04 15.5 +0.5
baz=93,SNR=7.7
O12A Currie 93.30 48 ⇑P P 02 04 15.5 +0.6
baz=94
V15A Kaibab Nationa 93.31 53 ⇑P P 02 04 15.4 +0.3
baz=94
N12A Clover Valley, 93.34 47 ⇓P P 02 04 15.1 0.0
baz=94
218A Dragoon 93.41 57 ⇑P P 02 04 15.4 -0.2
baz=94
L11A Cat Creek Ranc 93.42 46 ⇑P P 02 04 15.6 +0.2
baz=94
P13A Bates Ranch, G 93.47 49 ⇑P P 02 04 16.0 +0.3
baz=94
U15A North Rim 93.47 52 ⇓P P 02 04 15.8 +0.1
baz=94
Y17A Roosevelt 93.47 55 ⇑P P 02 04 15.4 -0.4
baz=94
W16A Flagstaff 93.50 54 ⇓P P 02 04 16.2 +0.3
baz=94
K11A Parker Ranch, 93.50 45 ⇑P P 02 04 16.3 +0.6
baz=94
BMO Blue Mountains 93.59 43 *e*P P 02 04 14.6 -1.5
BMO pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
BMO Blue Mountains 93.59 43 *e*P P 02 04 14.6 -1.5
comp=Z,3.4nm,1.0s,mb4.7
T15A Red Dirt Ranch 93.64 52 ⇓P P 02 04 16.6 +0.1
baz=94
118A Homack Ranch, 93.73 57 ⇓P P 02 04 17.6 +0.6
baz=94
X17A Forest Lakes 93.75 55 ⇓P P 02 04 17.7 +0.6
baz=94
WUAZ Wupatki 93.78 53 ⇓P P 02 04 16.5 -0.7
baz=94
WUAZ Wupatki 93.78 53 *e*P P 02 04 18.4 +1.2
comp=Z,8.3nm,0.8s,mb5.2
319A Douglas 93.78 58 ⇑P P 02 04 17.6 +0.3
baz=94
Q14A Sevier Lake (B 93.80 50 ⇑P P 02 04 17.0 -0.2
baz=94
H10A Noah's Angus R 93.83 43 ⇑P P 02 04 16.9 -0.4
baz=94
C08A Higginbotham F 93.85 40 ⇑P P 02 04 16.9 -0.4
baz=94
G10A Bishop Farm, J 93.90 43 ⇑P P 02 04 17.0 -0.6
baz=94
L12A House Creek Ra 93.91 46 ⇓P P 02 04 17.1 -0.6
baz=94
MFID Camas Ranch 93.92 45 ⇑P P 02 04 17.7 +0.1
baz=94
D09A Jones Farm, Ri 93.96 41 ⇑P P 02 04 17.4 -0.4
baz=94
219A White Tail Can 94.04 57 ⇓P P 02 04 17.6 -0.9
baz=94
I11A Placerville 94.05 44 ⇑P P 02 04 18.2 0.0
baz=94
Y18A Canyon Day Jun 94.12 55 ⇑P P 02 04 18.4 -0.4
baz=94
F10A Beach Ranch, E 94.14 42 ⇓P P 02 04 18.5 -0.1
baz=94
P14A Drum Mountains 94.19 49 ⇑P P 02 04 18.8 -0.2
baz=94
K12A Draper Farm, C 94.19 46 ⇓P P 02 04 19.0 +0.1
baz=94
U16A Tuba City 94.21 53 ⇓P P 02 04 19.1 -0.1
baz=94
A08A Turner Farm, O 94.26 39 ⇓P P 02 04 19.0 -0.1
baz=94
119A Ashpeak Ranch, 94.30 57 ⇑P P 02 04 19.3 -0.3
baz=94
J12A Stokes Ranch, 94.33 45 ⇓P P 02 04 19.0 -0.6
baz=94
H11A Donnelly 94.35 44 ⇓P P 02 04 19.2 -0.4
baz=94
X18A Snowflake 94.47 55 ⇓P P 02 04 20.0 -0.4
baz=95
G11A Walters Elk Ra 94.49 43 ⇑P P 02 04 20.4 +0.1
baz=95
N14A Grayback Hills 94.62 48 ⇓P P 02 04 20.9 0.0
baz=95
M14A Sheep Mountain 94.78 47 ⇑P P 02 04 21.5 -0.1
baz=95
Y19A Nutrioso 94.79 56 ⇑P P 02 04 21.0 -0.9
baz=95
T17A Navajo Res., N 94.79 52 ⇓P P 02 04 21.6 -0.2
baz=95
HLID Hailey 94.91 45 *e*P P 02 04 21.9 -0.3
comp=Z,1.4nm,0.6s,mb4.6
H12A Diamond D Ranc 95.03 44 ⇓P P 02 04 22.8 +0.1
baz=95
S17A Black Ridge (B 95.04 52 ⇑P P 02 04 22.6 -0.3
baz=95
K14A Jones Ranch, D 95.32 46 ⇑P P 02 04 24.1 0.0
baz=96
E12A Beaver Dam Sad 95.37 42 ⇑P P 02 04 24.1 -0.1
baz=96
M15A Larsen Ranch, 95.38 48 ⇑P P 02 04 24.0 -0.4
baz=96
J14A Carey 95.40 46 ⇑P P 02 04 24.0 -0.5
baz=96
R17A Hanksville Air 95.41 51 ⇑P P 02 04 24.6 0.0
baz=96
H13A Challis 95.43 44 ⇑P P 02 04 24.5 -0.1
baz=96
T18A Mexican Hat 95.53 52 ⇓P P 02 04 25.3 +0.1
baz=96
C11A Tepee Creek (N 95.56 41 ⇑P P 02 04 25.1 +0.1
baz=96
G13A Cobalt 95.66 44 ⇑P P 02 04 25.4 -0.2
baz=96
I14A Mackay 95.69 45 ⇓P P 02 04 26.2 +0.4
baz=96
JLU Jordanelle 95.73 49 *e*P P 02 04 33.8 +7.7
F13A Darby 95.89 43 ⇓P P 02 04 26.2 -0.4
baz=96
H14A Leadore 96.03 44 ⇑P P 02 04 27.1 -0.2
baz=96
O17A Robinson Place 96.07 49 ⇑P P 02 04 27.7 +0.1
baz=96
Q18A Rafter H Ranch 96.09 50 ⇑P P 02 04 27.6 -0.1
baz=96
TIXI Tiksi 96.80 348 *e*P P 02 04 29.6 -0.5
TIXI pmax pmax
comp=Z,2.0nm,1.3s,mb4.4
PLCA Paso Flores 96.86 138 P P 02 04 32.6 +1.3
comp=Z,1.5nm,0.7s,mb4.5,baz=232,slow=5.6,SNR=5.5
ANMO Albuquerque 97.30 55 *e*P P 02 04 32.5 -0.8
TXAR Lajitas Array 97.57 62 P P 02 04 36.6 +1.9
comp=Z,0.6nm,0.9s,mb4.1,baz=224,slow=3.8,SNR=3.7
HVS Khovu-Aksy 97.81 322 *e*P P 02 04 33.8 -1.4
HVS pmax pmax
comp=Z,38nm,1.7s,mb5.7
PDAR Pinedale Array 97.86 47 P P 02 04 37.4 +1.8

comp=Z,0.7nm,0.5s,mb4.4,baz=172,slow=2.7,SNR=4.5
WMQ Urumqi 98.77 314 *e*P **P 02 04 40.0 +0.3**
WMQ AMB AMB
comp=Z,11nm,0.6s,mb5.6
NCB Newcomb 123.26 51 *e*PKPdf PKPdf 02 09 54.5 -2.4
MDV Middlebury 124.01 51 *e*PKPdf PKPdf 02 09 56.6 -1.8
ARCES ARCESS Array B 127.11 345 PKP PKPdf 02 10 01.4 -2.1
comp=Z,5.6nm,0.7s,baz=88,slow=2.9,SNR=10.0
SJG San Juan 127.78 83 *e*PKIKP PKPdf 02 10 06.2 -0.1
AKASG Malin Array Be 137.27 323 PKP PKPdf 02 10 21.0 -2.2
comp=Z,0.9nm,0.6s,baz=44,slow=3.0,SNR=3.6
AKASG Malin Array Be 137.27 323 PKP PKPdf 02 10 21.0 -2.2
NB2 NORSAR Subarra137.48 345 PKPdf PKPdf 02 10 20.8 -2.5
comp=Z,2.5nm,0.7s,baz=31,slow=1.9
NOA NORSAR Array B 137.48 345 PKhKP 02 10 18.6
comp=Z,1.0nm,0.9s,baz=227,slow=8.0,SNR=2.8
NOA PKP PKPdf 02 10 23.5 +0.2
comp=Z,0.8nm,0.6s,baz=34,slow=1.9,SNR=4.7
NOA NORSAR Array B 137.48 345 PKP PKPdf 02 10 18.6 -4.7
NOA ⇓*i*P PKPdf 02 10 23.5 +0.2
BURAR Bucovina Array 141.07 321 ⇓*i*P PKPdf 02 10 34.2 +3.9
KWP Kalwaria 141.40 325 ⇑*i*P PKPdf 02 10 36.4 +5.6
KWP Kalwaria 141.40 325 ⇑P PKPdf 02 10 36.4 +5.6
MLR Muntele Rosu 141.64 318 PKP PKPdf 02 10 31.6 +0.3
comp=Z,1.4nm,0.7s,baz=0.5,slow=2.7,SNR=4.4
KOLS Kolonicke sedl 142.03 324 *e*PKP PKPdf 02 10 32.1 +0.2
UZH Uzhgorod 142.19 324 *e*PKIKP PKPdf 02 10 28.5 -3.7
STHS Stebnicka Huta 142.30 326 *e*PKP PKPdf 02 10 33.3 +0.9
CRVS Cervenica-Dubn 142.49 325 *e*PKP PKPdf 02 10 31.0 -1.7
CRVS *e* 02 10 40.7
MORC Moravsky Berou 143.94 329 ⇓*i*P PKPdf 02 10 33.8 -1.5
MORC Moravsky Berou 143.94 329 *e*PKPdf PKPdf 02 10 34.7 -0.5
VYHS Vyhne 144.12 326 *e*PKP PKPdf 02 10 32.6 -3.0
DPC Dobruska-Polom 144.12 330 *e*PKP PKPdf 02 10 34.6 -1.0
UPC Upice 144.15 331 *e*PKP PKPdf 02 10 31.4 -4.2
UPC *ep*PKP pPKPdf 02 10 39.8 -2.2
BZS Buzias 144.23 320 ⇑*i*P PKPdf 02 10 35.3 -0.6
BZS Buzias 144.23 320 ⇑P PKPdf 02 10 35.2 -0.7
KOLL Kolacno 144.29 327 *e*PKP PKPdf 02 10 36.9 +1.0
KOLL *e* 02 14 54.0
VTS Vitosha 144.70 315 ⇓*i*P PKPdf 02 10 35.5 -1.3
VTS Vitosha 144.70 315 ⇓P PKPdf 02 10 35.5 -1.4
VRAC Vranov 144.71 329 ⇑*i*P PKPdf 02 10 37.2 +0.6
VRAC Vranov 144.71 329 ⇑P PKPdf 02 10 37.2 +0.5
PVCC Panska Ves 144.78 332 *e*PKP PKPdf 02 10 34.4 -2.3
PVCC *ep*PKP pPKPdf 02 10 43.1 0.0
BRG Berggiesshubel 144.80 333 *i* PKIKP PKPdf 02 10 35.3 -1.4
BRG *i* 02 10 44.0
BRG SS SKSdf 02 17 38.0 -7.0
BRG MLR MLR
comp=Z,4μm,22.9s,MS6.2
BRG Berggiesshubel 144.80 333 *i* PKP PKPdf 02 10 35.3 -1.4
comp=Z,57nm,1.6s
BRG *i* 02 10 44.0
comp=Z,34nm,1.1s
BRG *e* 02 14 16.7
comp=Z,42nm,1.9s
BRG *e* 02 16 53.6
comp=Z,24nm,1.9s
BRG *e* 02 17 26.2
comp=Z,5.3nm,1.3s
BRG SS SKSdf 02 17 38.0 -7.0
BRG
comp=N,6μm,21.9s
BRG
comp=E,3μm,23.3s
BRG
comp=Z,7μm,22.9s
BRG Berggiesshubel 144.80 333 *i* PKP PKPdf 02 10 35.3 -1.4
BRG *i* 02 10 44.0
BRG *e* 02 14 16.7
BRG *e* 02 16 53.6
BRG *e* 02 17 26.2
BRG SS SKSdf 02 17 38.0 -7.0
BRG LR LR
comp=Z,4μm,22.9s,MS6.2
CLL Collm 144.86 334 *i* PKPdf PKPdf 02 10 34.3 -2.5
comp=Z,24nm,1.2s
CLL *i* pPKiKP 02 10 41.6
comp=Z,42nm,1.3s
MODS Modra-Piesok 144.99 327 *e*PKP PKPdf 02 10 36.2 -1.0
MODS *e* 02 10 43.7
MODS Modra-Piesok 144.99 327 *e*PKP PKPdf 02 10 36.2 -1.0
MODS *e* 02 10 43.7
APE Apeiranthos 145.05 305 ⇓*i*P PKPbc 02 10 33.4 -3.6
APE Apeiranthos 145.05 305 ⇓P PKPbc 02 10 33.4 -3.6
PRU Pruhonice 145.19 331 *e*PKP PKPdf 02 10 36.2 -1.2
PRU *ep*PKP pPKPdf 02 10 42.8 -1.0
ZST Bratislava 145.20 327 *e*PKP PKPdf 02 10 37.0 -0.5
ZST *e* 02 10 44.2
TREC Trest 145.25 330 *e*PKP PKPdf 02 10 36.4 -1.2
TREC *ep*PKP pPKPdf 02 10 43.1 -0.9
SANT Santorini 145.30 304 *e*PKPbc PKPbc 02 10 37.3 -0.6
EKA Eskdalemuir Ar 145.57 353 PKPbc PKPbc 02 10 36.3 -1.8
comp=Z,10nm,0.5s,baz=357,slow=2.4,SNR=17
ESK Eskdalemuir 145.59 353 *e*PKP2 PKPab 02 10 36.6 -1.8
PKSM Moragy 145.61 323 ⇑*i*P PKPdf 02 10 38.4 +0.1
PKSM Moragy 145.61 323 ⇑P PKPdf 02 10 38.4 +0.1
VAY Valandovo 145.68 313 *e*PKP PKPdf 02 10 37.5 -1.1
NKC Novy Kostel 145.91 333 *e*PKP PKPdf 02 10 39.1 +0.4
NKC *ex* x 02 10 46.2
MOX Moxa 145.93 335 *e*PKP PKPdf 02 10 38.8 +0.1
comp=Z,41nm,1.8s
CONA Conrad Observa 146.00 328 ⇑*i*P PKPdf 02 10 37.8 -1.1
comp=Z,65nm,1.5s
CSNA Conrad Observa 146.00 328 ⇑*i*P PKPdf 02 10 37.3 -1.6
comp=Z,60nm,1.5s
IDI Anoyia 146.03 302 PKPbc PKPbc 02 10 39.0 -1.2
comp=Z,9.7nm,1.0s,baz=181,slow=12,SNR=6.4
SKO Skopje 146.15 315 *e*PKP PKPdf 02 10 39.1 -0.3
KHC Kasperske Hory 146.24 331 *e*PKP PKPdf 02 10 39.2 -0.1
KHC *ep*PKP pPKPdf 02 10 46.4 +0.7
GEC2 GERESS Array S 146.39 331 *e*PKP2 PKPab 02 10 39.5 -2.2
GERES GERESS Array B 146.39 331 PKPbc PKPbc 02 10 40.0 -0.8
comp=Z,3.8nm,0.5s,baz=34,slow=2.8,SNR=10
KRUS Krusevo 146.55 314 *e*PKP PKPdf 02 10 40.7 +0.6
OHR Ohrid 146.97 314 *e*PKP PKPdf 02 10 37.4 -3.4
PERS Pernice 147.24 327 *i* PKPdf PKPbc 02 10 44.0 +0.7
PERS *i* PKPbc PKiKP 02 10 50.5 +4.9
SOKA Soboth 147.25 327 ⇑*i*P PKPbc 02 10 44.7 +1.3
BOJS Bojanci 147.91 325 *i* PKPbc PKPbc 02 10 46.7 +1.5
DLF Lyons Farm 147.92 355 *e*P PKPbc 02 10 45.3 +0.4
DCN Croghan 147.92 356 *e*P PKPbc 02 10 45.5 +0.6
MEM Membach 147.99 340 PKPbc PKPbc 02 10 45.0 -0.2
JAVS Javornik 148.28 326 *i* PKPdf PKPdf 02 10 43.9 +1.1
JAVS *i* PKPbc PKPbc 02 10 50.4 +4.2
UCC Uccle 148.32 342 PKPbc PKPbc 02 10 46.7 +0.6
BCLA Clavier 148.37 341 PKPbc PKPbc 02 10 45.4 -0.9
STU Stuttgart 148.38 335 *e*PKPbc PKPbc 02 10 46.4 0.0
MOTA Moosalm 148.68 331 ⇑*i*P PKPdf 02 10 45.5 +2.1
comp=Z,21nm,1.1s
MOTA Moosalm 148.68 331 ⇑*i*pPKPdf PKPdf 02 10 45.5 +2.1
comp=Z,21nm,1.1s
WLF Walferdange 148.75 339 PKPbc PKPbc 02 10 46.9 -0.4
WLF Walferdange 148.75 339 *e*PKPbc PKPbc 02 10 48.0 +0.7
GIVF Givet 148.80 341 *e*PKP1 PKPbc 02 10 46.4 -1.0
comp=Z,60nm,1.0s
GIVF Givet 148.80 341 *e*PKP PKPbc 02 10 46.4 -1.0
DOU Dourbes 148.88 341 PKPbc PKPbc 02 10 46.6 -0.9
BAIF Baives 149.02 341 *e*PKP1 PKPbc 02 10 46.7 -1.2
comp=Z,64nm,1.2s
BAIF Baives 149.02 341 *e*PKP PKPbc 02 10 46.7 -1.2
BFO Black Forest 149.07 335 *e*PKPbc PKPbc 02 10 46.6 -1.5
CDF Champ du Feu 149.41 336 *e*PKP1 PKPbc 02 10 48.0 -1.0
comp=Z,95nm,1.3s
CDF Champ du Feu 149.41 336 *e*PKP PKPbc 02 10 48.0 -1.0
ECH Echery 149.62 336 *e*PKPbc PKPbc 02 10 50.1 +0.6
HINF Hinteralfeld 150.06 336 *e*PKP1 PKPbc 02 10 49.3 -1.3
comp=Z,105nm,1.4s
HINF Hinteralfeld 150.06 336 *e*PKP PKPbc 02 10 49.3 -1.3
HAU Haudompre 150.09 337 *e*PKP1 PKPbc 02 10 49.7 -0.9
comp=Z,76nm,1.1s
HAU Haudompre 150.09 337 *e*PKP PKPbc 02 10 49.7 -0.9
TUE Stuetta 150.12 332 *e*PKPbc PKPbc 02 10 50.2 -0.5
MEZF Maizieres J'vi 150.12 339 *e*PKP1 PKPbc 02 10 49.9 -0.8
comp=Z,148nm,1.1s
TIP Timpagrande 150.61 313 *e*PKPbc PKPbc 02 10 53.5 +1.3
CABF La Chapelle 151.35 336 *e*PKP1 PKPbc 02 10 52.6 -1.1
comp=Z,53nm,1.0s
FLN La Foliniere 151.44 346 *e*PKP1 PKPbc 02 10 52.1 -1.7
comp=Z,76nm,0.9s
LDF La Druitiere 151.52 345 *e*PKP1 PKPbc 02 10 52.1 -1.9
comp=Z,40nm,0.9s
LOR Lormes 151.59 339 *e*PKP1 PKPbc 02 10 52.7 -1.5
comp=Z,34nm,0.8s
GRR Gorron 151.88 346 *e*PKP1 PKPbc 02 10 53.7 -1.1
SSF Saint Saulge 151.89 339 *e*PKP1 PKPbc 02 10 53.3 -1.6
comp=Z,86nm,1.1s
LPL La Plagne 152.00 334 *e*PKP1 PKPbc 02 10 54.2 -1.0
comp=Z,31nm,0.7s
LPG La Plagne 152.00 334 *e*PKP1 PKPbc 02 10 54.3 -0.9
comp=Z,63nm,0.9s
SMF Signal de Mont 152.14 339 *e*PKP1 PKPbc 02 10 54.6 -0.9
AVF Avril sur Loir 152.18 339 *e*PKP1 PKPbc 02 10 54.7 -0.8
comp=Z,122nm,1.5s
SGMF Saint Gilles 152.36 348 *e*PKP1 PKPbc 02 10 54.6 -1.3
comp=Z,43nm,0.8s
BNI Bardonecchia 152.39 333 *e*PKIKP PKPbc 02 10 55.6 -0.5
ROSF Rostrenen 152.41 349 *e*PKP1 PKPbc 02 10 54.9 -1.1
comp=Z,92nm,1.2s
BGF Bois d'Agland 152.55 340 *e*PKP1 PKPbc 02 10 55.3 -1.1
comp=Z,56nm,1.0s
MBDF Montbardon 152.61 333 *e*PKP1 PKPbc 02 10 55.5 -1.1
comp=Z,32nm,0.9s
QUIF Quistinic 152.79 349 *e*PKP1 PKPbc 02 10 55.7 -1.2
ORIF Orix-en-Rattie 152.83 334 *e*PKP1 PKPbc 02 10 55.5 -1.6
comp=Z,34nm,0.8s
TCF Toulx Ste Croi 152.99 340 *e*PKP1 PKPbc 02 10 55.7 -1.7
comp=Z,44nm,1.1s
VIVF Saint-Julien-l 153.37 335 *e*PKP1 PKPbc 02 10 57.2 -1.0
LASF Ste Croix 154.34 336 *e*PKP1 PKPbc 02 10 59.5 -0.9
LFF La Frestale 154.66 341 *e*PKP1 PKPbc 02 11 00.1 -0.9
MTLF Montlieu 155.58 337 *e*PKP1 PKPbc 02 11 02.0 +8.2
PBRG Braganca 159.31 352 *e*PKPab PKPab 02 11 41.9 +6.1
PVRL Vila Real 159.95 354 *e*PKPab PKPab 02 11 37.6 -1.0
MVO Moncorvo 159.98 352 *e*PKPab PKPab 02 11 42.8 +4.1
PVIS Viseu 160.52 354 *e*PKPab PKPab 02 11 44.8 +3.7
MTE Manteigas 160.79 353 *e*PKPab PKPab 02 11 48.8 +6.5
ESDC Sonseca Array 160.84 344 PKPab PKPab 02 11 41.9 -0.6
comp=Z,1.8nm,0.8s,baz=15,slow=6.9,SNR=4.7
PCBR Castelo Branco 161.34 353 *e*PKPab PKPab 02 11 43.0 -1.7
PTOM Tomar 161.66 355 *e*PKPab PKPab 02 11 48.0 +2.0
PESTR Estremoz 162.31 352 *e*PKPab PKPab 02 11 52.0 +3.1
EVO Evora 162.69 353 *e*PKPab PKPab 02 11 56.6 +6.0
PBAR Barrancos 162.92 351 *e*PKPab PKPab 02 11 58.0 +6.4
PBEJ Beja 163.18 353 *e*PKPab PKPab 02 11 54.8 +2.0
PVAQ Vaqueiros 163.77 352 *e*PKPab PKPab 02 11 54.0 -1.4
MORF Marmelete 163.97 355 *e*PKPab PKPab 02 11 56.4 +0.1
DBIC Dimbokro 164.44 202 PKPab PKPab 02 11 59.0 +0.1
comp=Z,9.3nm,1.1s,baz=148,slow=6.4,SNR=4.4
TORD Torodi Ar. Bea 165.78 237 PKP PKPdf 02 11 04.5 -1.2
comp=Z,1.4nm,1.0s,baz=346,slow=1.5,SNR=2.8
TORD PKPab PKPab 02 12 04.6 -0.4
comp=Z,1.8nm,1.1s,baz=88,slow=5.9,SNR=3.4

*IDC **28** 01:53:15.2±2.7,22.16S×169.47E,h0km,mb4.3/4, mb1 4.7/5,mb1mx4.3/16,mbtmp4.5/5,ML2.6/1,Error ellipse: s-maj=162.6km s-min=23.5km az=164.0*
*ISCJB **28** 01:53:16.4±0.5,214S±02×169.23E±0.10,h10km,mb4.6/15, Error ellipse: s-maj=26.0km s-min=10.7km az=162.5*
*NEIC **28** 01:53:17.4±0.5,216.7S×169.36E,h10km,mb4.7/11,Error ellipse: s-maj=28.8km s-min=7.8km az=165.0*
*MOS **28** 01:53:17.0±3.3,211.7S×169.31E,h33km,mb4.9/6,Error ellipse: s-maj=33.6km s-min=17.8km az=168.8*
ISC 28 01:53:18.6±8.2,215S±02×169.3E±.01,h14km±50km,n32, σ0°53/26,mb4.6/15,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m s	ISC
AFI	**Afiamalu**	**19.53**	**70**	P		**Pn**	**01**	**57 46.9**	**-0.1**
	1.1nm,0.3s,baz=126,slow=4.2,SNR=4.3								
CTA	**Charters Tower**	**21.58**	**269**	P		**P**	**01**	**58 08.9**	**+1.0**
	17nm,0.9s,mb4.5,baz=110,slow=15,SNR=4.3								
CTAO	**Charters Tower**	**21.58**	**269**	*e*P		**P**	**01**	**58 09.3**	**+1.4**
	17nm,0.9s,mb4.5								
WB2	**Warramunga Arr**	**32.68**	**266**	*e*P		**P**	**01**	**59 50.1**	**-0.4**
WRA	**Warramunga Arr**	**32.69**	**266**	P		**P**	**01**	**59 50.2**	**-0.5**
	1.3nm,0.4s,mb4.0,baz=104,slow=7.2,SNR=4.0								
ASAR	**Alice Springs**	**32.70**	**259**	P		**P**	**01**	**59 50.2**	**-0.5**
	4.2nm,0.7s,mb4.5,baz=85,slow=9.2,SNR=4.6								
MBWA	**Marble Bar**	**46.01**	**261**	*e*P		**P**	**02**	**01 41.3**	**-0.6**
	12nm,0.8s,mb4.9								
CHTO	**Chiang Mai**	**79.62**	**295**	*e*P		**P**	**02**	**05 26.4**	**+0.6**
CHTO					pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.5								
CHTO	**Chiang Mai**	**79.62**	**295**	*e*P		**P**	**02**	**05 26.4**	**+0.6**
	comp=Z,3.8nm,0.7s,mb4.4								
SNAA	**Sanae**	**86.95**	**182**	*e*		**P**	**02**	**06 02.9**	**+0.1**
SNAA				*e*			02	06 13.7	
SNAA	**Sanae**	**86.95**	**182**	*e*P		**P**	**02**	**06 01.7**	**-1.1**
SNAA					pmax	pmax			
	comp=Z,8.0nm,1.2s								
SNAA	**Sanae**	**86.95**	**182**	*e*P		**P**	**02**	**06 01.7**	**-1.1**
	comp=Z,8.5nm,1.2s,mb4.8								
VNA3	**Neumayer Olymp**	**87.54**	**180**	*e*		**P**	**02**	**06 06.0**	**+0.4**
VNA3				*e*			02	06 15.2	
VNA2	**Neumayer--Watz**	**87.83**	**181**	*e*		**P**	**02**	**06 07.9**	**+0.9**
VNA2				*e*			02	06 17.1	
CMB	**Columbia Colle**	**88.60**	**48**	*e*P		**P**	**02**	**06 10.7**	**-0.4**
CMB					pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.5								
CMB	**Columbia Colle**	**88.60**	**48**	*e*P		**P**	**02**	**06 10.7**	**-0.4**
	comp=Z,2.3nm,0.8s,mb4.6								
HUMO	**Hull Mountain**	**89.14**	**43**	*e*P		**P**	**02**	**06 14.1**	**+0.5**
	comp=Z,3.3nm,0.8s,mb4.7								
NVAR	**Mina Array Bea**	**90.23**	**48**	P		**P**	**02**	**06 18.9**	**+0.1**
	comp=Z,1.5nm,0.8s,mb4.4,baz=229,slow=8.2,SNR=5.2								
TPNV	**Topopah Spring**	**91.02**	**51**	*e*P		**P**	**02**	**06 22.6**	**+0.1**
TPNV					pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.6								
TPNV	**Topopah Spring**	**91.02**	**51**	*e*P		**P**	**02**	**06 22.6**	**+0.1**
	comp=Z,2.5nm,0.7s,mb4.7								
LDFC	**Landfair**	**91.04**	**53**	*e*P		**P**	**02**	**06 22.6**	**0.0**
	comp=Z,5.9nm,0.8s,mb5.0								
BOD	**Bodaibo**	**91.34**	**334**	*e*P		**P**	**02**	**06 17.7**	**-5.7**
BOD					pmax	pmax			
	comp=Z,6.0nm,2.0s,mb4.6								
HAWA	**Hanford**	**93.13**	**41**	*e*P		**P**	**02**	**06 31.8**	**-0.1**
	comp=Z,3.2nm,0.9s,mb4.8								
TUC	**Tucson**	**93.18**	**57**	*e*P		**P**	**02**	**06 32.1**	**-0.5**
TUC					pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.8								
TUC	**Tucson**	**93.18**	**57**	*e*P		**P**	**02**	**06 32.1**	**-0.5**
	comp=Z,4.4nm,1.1s,mb4.8								
HLID	**Hailey**	**95.13**	**45**	*e*P		**P**	**02**	**06 41.4**	**+0.1**
	comp=Z,4.6nm,1.1s,mb4.8								
PSZ	**Piszkesteto**	**143.95**	**324**	*e*PKIKP		PKPdf	02	12 52.0	-1.4
EKA	**Eskdalemuir Ar**	**145.71**	**352**	PKPbc		PKPbc	02	12 55.5	-1.1
	comp=Z,3.4nm,0.7s,baz=358,slow=2.1,SNR=7.7								
ESK	**Eskdalemuir**	**145.73**	**352**	*e*PKIKP		PKPdf	02	12 56.9	+0.6
GEC2	**GERESS Array S**	**146.45**	**330**	*e*PKP2		PKPab	02	12 59.2	-0.8
GERES	**GERESS Array B**	**146.45**	**330**	PKPbc		PKPbc	02	13 01.1	+2.0
	comp=Z,2.1nm,0.9s,baz=67,slow=2.6,SNR=3.9								
TUE	**Stuetta**	**150.19**	**332**	*e*PKPdf		PKPdf	02	13 03.8	-0.1

*IDC **28** 02:00:55.4±4.2,219.9S×169.04E,h0km,mb4.3/5, mb1 4.5/5,mb1mx4.2/16,mbtmp4.3/5,Error ellipse: s-maj=148.4km s-min=46.4km az=154.0*
*NEIC **28** 02:00:56.2±0.9,219.2S×169.15E,h10km,mb4.4/4,Error ellipse: s-maj=26.2km s-min=18.2km az=176.0*
*ISCJB **28** 02:00:58.9±1.0,218S±02×168.9E±0.2,h33km,mb4.3/8, Error ellipse: s-maj=30.5km s-min=19.5km az=16.4*
ISC 28 02:01:00.4±1.0,218S±02×169.0E±0.2,h35km,n17, σ0°74/16,mb4.3/8,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m s	ISC
CTA	**Charters Tower**	**21.34**	**270**	P		**P**	**02**	**05 45.2**	**+0.6**
	10nm,0.8s,mb4.2,baz=98,slow=12,SNR=17								
CTA	**Charters Tower**	**21.34**	**270**	P		**P**	**02**	**05 45.2**	**+0.6**
CTAO	**Charters Tower**	**21.34**	**270**	*e*P		**P**	**02**	**05 46.7**	**+2.1**
	14nm,0.9s,mb4.3								
ASAR	**Alice Springs**	**32.40**	**260**	P		**P**	**02**	**07 27.4**	**+0.4**
	4.2nm,0.8s,mb4.3,baz=86,slow=9.0,SNR=21								
WB2	**Warramunga Arr**	**32.41**	**267**	*e*P		**P**	**02**	**07 26.6**	**-0.6**
WRA	**Warramunga Arr**	**32.43**	**267**	P		**P**	**02**	**07 26.6**	**-0.7**
	2.0nm,0.9s,mb4.0,baz=101,slow=8.2,SNR=6.3								
FITZ	**Fitzroy Crossi**	**40.85**	**267**	P		**P**	**02**	**08 38.7**	**-0.4**
	7.4nm,0.9s,mb4.3,baz=131,slow=10,SNR=5.7								
MBWA	**Marble Bar**	**45.71**	**261**	*e*P		**P**	**02**	**09 18.7**	**+0.4**
	4.7nm,0.9s,mb4.4								
CASY	**Casey**	**57.69**	**204**	*e*P		**P**	**02**	**10 45.4**	**-1.6**
	5.7nm,1.1s,mb4.5								
CMAR	**Chiang Mai Arr**	**79.39**	**295**	P		**P**	**02**	**13 03.5**	**+0.3**
	0.8nm,0.3s,mb4.1,baz=134,slow=4.2,SNR=4.3								
SNAA	**Sanae**	**86.58**	**183**	*e*P		**P**	**02**	**13 40.2**	**+0.7**
	2.3nm,1.1s,mb4.3								
VNA3	**Neumayer Olymp**	**87.17**	**180**	*e*P		**P**	**02**	**13 42.8**	**+0.3**
VNA3	**Neumayer Olymp**	**87.17**	**180**	*e*P		**P**	**02**	**13 42.8**	**+0.3**
VNA2	**Neumayer--Watz**	**87.46**	**181**	*e*P		**P**	**02**	**13 44.6**	**+0.7**
	baz=182,slow=3.8								
VNA2	**Neumayer--Watz**	**87.46**	**181**	*e*P		**P**	**02**	**13 44.6**	**+0.7**
	baz=184,slow=3.5								
DAWY	**Dawson**	**94.48**	**20**	*e*P		**P**	**02**	**14 16.0**	**-0.5**
GERES	**GERESS Array B**	**146.65**	**330**	PKPbc		PKPbc	02	20 39.4	+1.2
	0.7nm,0.6s,baz=46,slow=3.9,SNR=4.7								

*IDC **28** 02:01:32.4±0.5,211.5S×169.27E,h0km,mb4.8/19, mb1 4.9/21,mb1mx4.9/23,mbtmp4.8/21,ML3.3/2,Error ellipse: s-maj=17.5km s-min=14.6km az=155.0*
*BJI **28** 02:01:32.7,213.3S×169.74E,h22km,mB5.7,mb4.8,Ms5.5, Ms25.6*
*NEIC **28** 02:01:33.8±0.2,211.4S×169.33E,h10km,mb5.0/35,Error ellipse: s-maj=8.8km s-min=6.2km az=154.0*
*ISCJB **28** 02:01:33.2±0.2,212.0S±0.05×169.28E±.004,h13km, mb4.9/59,MS5.7/6,Error ellipse: s-maj=7.8km s-min=4.7km az=155.8*
*LDG **28** 02:01:34.0±0.3,209.8S×168.83E,h10km,Mb4.8/2,Error ellipse: s-maj=27.3km s-min=5.3km az=149.0*
*MOS **28** 02:01:36.4±1.3,211.4S×169.22E,h33km,mb5.2/26,Error ellipse: s-maj=11.4km s-min=9.9km az=18.1*
ISC 28 02:01:34.8±0.2,212.0S±0.05×169.31E±.004,h14km, h14km±1.0km:pP-P,n426,σ0°61/338,mb4.9/59,MS5.7/6, 116C-117D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m s	ISC
HNR	**Honiara**	**14.77**	**321**	*e*P		**Pn**	**02**	**05 01.3**	**-2.2**
URZ	**Urewera**	**18.29**	**160**	P		**Pn**	**02**	**05 49.0**	**+0.9**
	0.4nm,0.3s,baz=13,slow=6.5,SNR=6.9								
ARMA	**Armidale**	**18.36**	**236**	*e*P		**Pn**	**02**	**05 49.8**	**+0.7**
AFI	**Afiamalu**	**19.42**	**71**	P		**Pn**	**02**	**05 59.5**	**-2.6**
	1.3nm,0.3s,baz=216,slow=13,SNR=4.2								
CTA	**Charters Tower**	**21.61**	**269**	⇓*i*P		**P**	**02**	**06 25.3**	**+0.7**
	43nm,0.9s,mb4.9								
CTA	**Charters Tower**	**21.61**	**269**	P		**P**	**02**	**06 25.6**	**+1.0**
	49nm,0.8s,mb5.0,baz=93,slow=12,SNR=32								
CTA	**Charters Tower**	**21.61**	**269**	⇓*i*P		**P**	**02**	**06 25.3**	**+0.7**
CTA					pmax	pmax			
	comp=Z,43nm,0.9s								
CTAO	**Charters Tower**	**21.61**	**269**	*e*P		**P**	**02**	**06 25.5**	**+0.9**
CTAO					pmax	pmax			
	comp=Z,51nm,0.8s,mb5.0								
CTAO	**Charters Tower**	**21.61**	**269**	*e*P		**P**	**02**	**06 25.5**	**+0.9**
	comp=Z,51nm,0.8s,mb5.0								
CNB	**Canberra Magne**	**22.45**	**227**	*e*P		**P**	**02**	**06 34.4**	**+1.0**
RPZ	**Rata Peaks**	**22.50**	**177**	P		**P**	**02**	**06 35.8**	**+1.9**
	comp=Z,12nm,0.9s,mb4.3,baz=0.5,slow=5.1,SNR=3.1								
CAN	**Canberra**	**22.70**	**227**	*e*P		**P**	**02**	**06 36.5**	**+0.4**
PMG	**Port Moresby**	**24.34**	**295**	*e*P		**P**	**02**	**06 51.9**	**-0.5**
PMG	**Port Moresby**	**24.34**	**295**	*e*P		**P**	**02**	**06 52.8**	**+0.4**
	comp=Z,28nm,0.8s,mb4.8								
COEN	**Coen**	**25.91**	**282**	*e*P		**P**	**02**	**07 06.9**	**+0.2**
	comp=Z,20nm,0.9s,mb4.6								
STKA	**Stephens Creek**	**26.91**	**241**	*e*P		**P**	**02**	**07 15.8**	**+0.2**
	comp=Z,17nm,0.8s,mb4.6								
STKA	**Stephens Creek**	**26.91**	**241**	P		**P**	**02**	**07 15.8**	**+0.1**
	comp=Z,16nm,0.8s,mb4.6,baz=65,slow=7.0,SNR=12								
WB2	**Warramunga Arr**	**32.72**	**266**	*e*P		**P**	**02**	**08 04.7**	**-2.6**
WRAB	**Tennant Creek**	**32.72**	**266**	*e*P		**P**	**02**	**08 05.5**	**-1.8**
WRAB					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
WRAB	**Tennant Creek**	**32.72**	**266**	*e*P		**P**	**02**	**08 05.5**	**-1.8**
	comp=Z,9.9nm,0.8s,mb4.8								
WRA	**Warramunga Arr**	**32.73**	**266**	P		**P**	**02**	**08 05.4**	**-1.9**
	comp=Z,8.8nm,0.9s,mb4.7,baz=101,slow=8.0,SNR=12								
ASAR	**Alice Springs**	**32.77**	**259**	P		**P**	**02**	**08 06.7**	**-1.1**
	comp=Z,20nm,0.8s,mb5.1,baz=84,slow=9.1,SNR=25								
FORT	**Forrest**	**38.11**	**247**	*e*P		**P**	**02**	**08 56.1**	**+2.6**
	comp=Z,28nm,0.7s,mb5.1								
FITZ	**Fitzroy Crossi**	**41.15**	**266**	P		**P**	**02**	**09 18.4**	**-0.7**
	comp=Z,31nm,0.8s,mb5.0,baz=118,slow=9.3,SNR=19								
BATI	**Baumata**	**45.14**	**277**	P		**P**	**02**	**09 49.6**	**-1.8**
	comp=Z,17nm,0.4s,mb5.2,baz=89,slow=7.7,SNR=2.5								
MBWA	**Marble Bar**	**46.08**	**261**	*e*P		**P**	**02**	**09 57.9**	**-0.8**
	comp=Z,48nm,0.9s,mb5.4								
KLBR	**Kellerberrin**	**46.96**	**246**	*e*P		**P**	**02**	**10 01.9**	**-3.6**
	comp=Z,27nm,0.7s,mb5.3								
NWAO	**Narrogin (SRO)**	**47.41**	**244**	*e*P		**P**	**02**	**10 08.9**	**-0.1**
NWAO					pmax	pmax			
	comp=Z,15nm,0.7s								
NWAO	**Narrogin (SRO)**	**47.41**	**244**	*e*P		**P**	**02**	**10 08.9**	**-0.1**
	comp=Z,15nm,0.7s,mb5.0								
SBA	**Scott Base**	**56.71**	**181**	*e*P		**P**	**02**	**11 18.5**	**+0.9**
SBA					pmax	pmax			
	comp=Z,12nm,0.8s,mb5.0								
SBA	**Scott Base**	**56.71**	**181**	*e*P		**P**	**02**	**11 18.5**	**+0.9**
	comp=Z,12nm,0.8s,mb5.0								
CASY	**Casey**	**58

comp=Z,5µm,16.2s,MS6.0
KMI Kunming 79.37 302 P **P** 02 13 42.9 +2.2
comp=Z,10.0nm,0.9s,mb4.8
KMI pP pP 02 13 45.8 +0.6
KMI sP sP 02 13 47.3 +0.5
KMI PcP PcP 02 13 50.8 +2.0
KMI PP PP 02 16 44.6 +3.5
KMI S S 02 23 41.7 +0.3
KMI sS sS 02 23 49.0 +0.1
KMI SS SS 02 28 53.1 +4.0
KMI LR LR
comp=Z,5µm,16.2s,MS6.0
CMAR Chiang Mai Arr 79.37 295 P **P** **02 13 40.9 0.0**
comp=Z,5.9nm,0.9s,mb4.5,baz=138,slow=4.0,SNR=3.9
CHTO Chiang Mai 79.53 295 *eP* **P** **02 13 42.8 +1.1**
CHTO pmax pmax
comp=Z,12nm,1.0s,mb4.8
CHTO Chiang Mai 79.53 295 *eP* **P** **02 13 42.8 +1.1**
comp=Z,12nm,1.0s,mb4.8
CD2 Chengdu 81.48 308 *eP* **P** **02 13 53.0 +1.1**
CD2 AP pP 02 13 57.8 +1.3
CD2 XP sP 02 14 00.5 +2.4
CD2 PP PP 02 17 01.8 +3.3
CD2 S S 02 24 03.3 -0.1
CD2 SS SS 02 29 23.5 +2.9
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CD2 LR LR
comp=Z,2µm,18.0s,MS5.5
HHC Hu-ho-hao-te 81.75 320 *eP* **P** **02 13 54.0 +0.9**
HHC AP pP 02 13 57.0 -0.6
HHC PP PP 02 17 03.8 +3.3
HHC S S 02 24 06.3 +0.6
HHC SS SS 02 29 28.8 +4.6
HHC AMB AMB
comp=Z,28nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,3µm,6.7s
HHC LR LR
comp=N,2µm,17.7s,MS5.5
HHC LR LR
comp=E,1µm,17.1s,MS5.5
HHC LR LR
comp=Z,2µm,16.4s,MS5.6
HIA Hailar 82.83 330 *eP* **P** **02 13 58.5 -0.1**
LZH Lanzhou 84.09 312 *eP* **P** **02 14 07.3 +1.9**
LZH AP pP 02 14 12.5 +2.6
LZH XP sP 02 14 15.0 +3.5
LZH PP PP 02 17 23.5 +3.7
LZH AMB AMB
comp=Z,21nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,86nm,4.3s
LZH Lanzhou 84.09 312 *eP* **P** **02 14 07.2 +1.8**
LZH *SP sP 02 14 14.9 +3.4
LZH 02 17 23.5
LZH pmax pmax
comp=Z,21nm,1.0s,mb5.2
LZH Lanzhou 84.09 312 *eP* **P** **02 14 07.2 +1.8**
comp=Z,21nm,1.0s,mb5.2
LZH pP pP 02 14 12.4 +2.5
LZH sP sP 02 14 14.9 +3.4
LZH PP PP 02 17 23.5 +3.7
SEY Seymchan 84.91 352 *eP* **P** **02 14 08.1 -0.8**
CLNS Chul'man 86.22 337 *eP* **P** **02 14 21.0 +5.5**
CLNS pmax pmax
comp=N,9.0nm,0.8s
CLNS pmax pmax
comp=Z,19nm,1.0s,mb5.3
CLNS pmax pmax
comp=E,11nm,0.9s
V03C Hunter Liggett 86.84 49 ⇓P **P** **02 14 19.3 +0.1**
baz=87
HOPS Hopland 87.04 46 ⇑P **P** **02 14 20.3 +0.3**
baz=87
BSC Santa Cruz Isl 87.04 52 ⇓P **P** **02 14 19.8 -0.4**
baz=87
KCPM Cahto Peak 87.05 45 *eP* **P** **02 14 20.1 0.0**
O01C Eel River Cons 87.12 45 ⇓P **P** **02 14 20.7 +0.3**
baz=87
KIPM Iron Peak 87.18 45 *eP* **P** **02 14 20.7 0.0**
SNAA Sanae 87.22 182 *eP* **P** **02 14 18.7 -1.7**
SNAA Sanae 87.22 182 *eP* **P** **02 14 18.7 -1.7**
SNAA *e* pP 02 14 22.8 -2.2
SNAA *e* 02 14 27.5
SNAA *e* 02 14 32.0
SNAA *e* 02 19 22.9
SNAA Sanae 87.22 182 *eP* **P** **02 14 18.2 -2.2**
SNAA Sanae 87.22 182 *eP* **P** **02 14 18.5 -1.9**
comp=E,16nm,1.1s,mb5.2
PKD Parkfield 87.30 50 ⇑P **P** **02 14 21.5 +0.1**
baz=87
PKM Peak Mountain 87.33 51 ⇓P **P** **02 14 21.8 +0.3**
baz=88
SMMC Simmler 87.39 51 ⇑P **P** **02 14 22.3 +0.5**
baz=88
KHMM Horse Mountain 87.56 44 *eP* **P** **02 14 23.5 +1.0**
GASB Alder Springs 87.61 46 ⇓P **P** **02 14 23.5 +0.7**
baz=88
VNA3 Neumayer Olymp 87.80 180 *eP* **P** **02 14 21.7 -1.5**
VNA3 Neumayer Olymp 87.80 180 *eP* **P** **02 14 21.7 -1.5**
VNA3 *e* pP 02 14 25.9 -1.9
VNA3 *e* 02 14 30.3
VNA3 *e* 02 14 34.2
VNA3 *e* 02 19 25.5
N02C Big Bar 87.81 45 ⇑P **P** **02 14 23.6 -0.1**
baz=88
O02C Red Bluff 87.82 45 ⇑P **P** **02 14 24.1 +0.4**
baz=88
VNA2 Neumayer--Watz 88.09 181 *eP* **P** **02 14 23.5 -1.1**
baz=182,slow=3.8
VNA2 Neumayer--Watz 88.09 181 *eP* **P** **02 14 23.5 -1.1**
baz=184,slow=3.5
VNA2 *e* pP 02 14 27.7 -1.5
VNA2 *e* 02 14 32.4
VNA2 *e* 02 14 36.2
VNA2 *e* 02 19 27.3
ARVC Arvin 88.15 51 ⇓P **P** **02 14 25.3 -0.1**
baz=88
OHCM Honcut 88.28 46 *eP* **P** **02 14 25.2 -0.8**
L02A Cave Junction 88.29 43 ⇑P **P** **02 14 26.3 +0.3**
baz=88
MWC Mount Wilson 88.31 52 *eP* **P** **02 14 25.7 -0.5**
MWC pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
MWC Mount Wilson 88.31 52 *eP* **P** **02 14 25.7 -0.5**
comp=Z,7.8nm,0.8s,mb5.0
VNA1 Neumayer--Stat 88.39 181 *eP* **P** **02 14 24.6 -1.4**
VNA1 Neumayer--Stat 88.39 181 *eP* **P** **02 14 24.6 -1.4**
VNA1 *e* pP 02 14 28.8 -1.8
VNA1 *e* 02 14 33.2
VNA1 *e* 02 14 36.9
M02C Callahan 88.39 44 ⇑P **P** **02 14 26.7 +0.3**
baz=88,SNR=8.3
CMB Columbia Colle 88.41 48 *eP* **P** **02 14 25.7 -0.9**
CMB pmax pmax
comp=Z,16nm,1.0s,mb5.2
CMB Columbia Colle 88.41 48 *eP* **P** **02 14 25.7 -0.9**
comp=Z,16nm,1.0s,mb5.2
109C Camp Elliot, M 88.42 54 ⇑P **P** **02 14 26.4 -0.3**
baz=88
ULN Ulaanbaatar 88.47 323 *eP* **P** **02 14 26.3 -0.3**
ULN pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
ULN Ulaanbaatar 88.47 323 *eP* **P** **02 14 26.3 -0.3**
comp=Z,9.2nm,1.1s,mb4.9
GTA Gaotai 88.52 313 *eP* **P** **02 14 28.3 +1.2**
GTA AP pP 02 14 31.8 +0.2
GTA XP sP 02 14 35.0 +1.7
GTA S S 02 25 11.5 -1.3
GTA AMB AMB
comp=Z,5.0nm,1.0s,mb4.8
GTA LR LR
comp=Z,4µm,17.4s,MS5.9
BFSC Mount Baldy St 88.61 52 ⇑P **P** **02 14 27.1 -0.5**
baz=89,SNR=8.3
BAR Barrett 88.65 54 *eP* **P** **02 14 26.9 -1.0**
comp=Z,8.7nm,1.3s,mb4.9
EDW2 Edwards Air Fo 88.65 52 ⇓P **P** **02 14 27.4 -0.4**
baz=89
YBH Yreka Blue Hor 88.65 44 P **P** **02 14 27.9 +0.3**
comp=Z,4.3nm,0.8s,mb4.8,baz=200,slow=1.9,SNR=11
YBH Yreka Blue Hor 88.65 44 ⇑P **P** **02 14 27.9 +0.3**
baz=89,SNR=5.4
MURC Murrieta 88.66 53 ⇓P **P** **02 14 27.7 -0.2**
baz=89
K02A Glendale 88.68 43 ⇓P **P** **02 14 27.9 +0.2**
baz=89
S06C San Francisco 88.71 48 ⇓P **P** **02 14 27.8 -0.3**
baz=89
HELL Mitchell Peak 88.73 50 ⇑P **P** **02 14 28.3 +0.2**
baz=89
YAK Yakutsk 88.75 342 *eP* **P** **02 14 25.6 -2.0**
YAK *e**PP pP 02 14 30.7 -1.5
YAK *eS* S 02 24 54.6 -19
YAK *eSS* SS 02 31 05.7 -0.7
YAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.8
M03C McCloud 88.81 45 ⇓P **P** **02 14 28.5 +0.1**
baz=89
KCC Kaiser Creek 88.82 49 ⇑P **P** **02 14 28.6 +0.1**
baz=89
SONM Songino Array 88.82 323 P **P** **02 14 28.4 +0.1**
comp=Z,2.3nm,0.8s,mb4.5,baz=129,slow=5.5,SNR=8.5
P05C Yuba Gap, Truc 88.86 47 ⇓P **P** **02 14 29.1 +0.4**
baz=89
J02A Umpqua 88.93 42 ⇓P **P** **02 14 29.4 +0.5**
baz=89
HUMO Hull Mountain 88.93 43 ⇑P **P** **02 14 29.6 +0.7**
baz=89,SNR=6.0
HUMO Hull Mountain 88.93 43 *eP* **P** **02 14 29.2 +0.3**
comp=Z,9.1nm,0.9s,mb5.1
MONP Monument Peak 88.93 54 ⇑P **P** **02 14 28.8 -0.4**
baz=89,SNR=12
R05C Kirkwood Meado 88.94 48 ⇑P **P** **02 14 28.8 -0.2**
baz=89
O05C Quincy 88.97 46 ⇑P **P** **02 14 29.6 +0.5**
baz=89
BILL Bilibino 89.00 359 *eP* **P** **02 14 27.8 -0.9**
BILL pmax pmax
comp=Z,20nm,1.0s,mb5.4
O04C Chester 89.03 46 ⇓P **P** **02 14 30.0 +0.6**
baz=89
DVTC Desert V Tower 89.08 54 ⇑P **P** **02 14 29.7 -0.1**
baz=89
I02A Mapleton 89.10 42 ⇓P **P** **02 14 30.4 +0.7**
baz=89
LRMC Laurel Mountai 89.14 51 ⇓P **P** **02 14 30.6 +0.5**
baz=89
PFO Pinyon Flat Ob 89.22 53 P **P** **02 14 29.9 -0.7**
comp=Z,5.7nm,1.0s,mb4.9,baz=298,slow=3.6,SNR=7.2
PFO Pinyon Flat Ob 89.22 53 *eP* **P** **02 14 29.8 -0.7**
PFO pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
PFO Pinyon Flat Ob 89.22 53 ⇓P **P** **02 14 30.4 -0.1**
baz=89
PFO Pinyon Flat Ob 89.22 53 *eP* **P** **02 14 29.8 -0.7**
comp=Z,7.1nm,1.0s,mb5.0
R06C Coleville 89.29 48 ⇑P **P** **02 14 31.1 +0.4**
baz=89
CWC Cottonwood Cre 89.29 50 ⇑P **P** **02 14 30.8 0.0**
baz=89
MTUM Tungsten Hills 89.36 49 *eP* **P** **02 14 30.8 -0.3**
SWSC Sam W. Stewart 89.43 54 ⇑P **P** **02 14 32.1 +0.6**
baz=90
TIN Tinemaha 89.47 50 ⇓P **P** **02 14 32.4 +0.8**
baz=90
M05C Lookout 89.49 45 ⇓P **P** **02 14 32.0 +0.4**
baz=90
MPMC Manual Prospec 89.55 51 ⇓P **P** **02 14 31.9 -0.1**
baz=90,SNR=7.2
GSC Goldstone 89.71 52 *eP* **P** **02 14 32.4 -0.4**
GSC pmax pmax
comp=Z,10.0nm,1.3s,mb5.0
GSC Goldstone 89.71 52 ⇓P **P** **02 14 32.0 -0.8**
baz=90
GSC Goldstone 89.71 52 *eP* **P** **02 14 32.4 -0.3**
comp=Z,9.9nm,1.3s,mb5.0
S08C White Mtn Res 89.71 49 ⇓P **P** **02 14 33.0 +0.3**
baz=90,SNR=6.1
BELC Belle Mtn. 89.74 53 ⇓P **P** **02 14 33.0 0.0**
baz=90,SNR=20
H03A Soap Creek Ran 89.77 41 ⇑P **P** **02 14 33.3 +0.5**
baz=90
J04A Umpqua Nationa 89.79 43 ⇑P **P** **02 14 33.0 +0.1**
baz=90
O06A Flanigan 89.80 46 ⇑P **P** **02 14 33.4 +0.3**
baz=90,SNR=7.1
HEC Hector,Ludlow 89.85 52 ⇑P **P** **02 14 33.1 -0.3**
baz=90,SNR=6.6
I04A Tendick Farm, 89.87 42 ⇑P **P** **02 14 33.0 -0.3**
baz=90
PAHR Pah Rah Range 89.89 47 *eP* **P** **02 14 33.2 -0.3**
BC3 Big Chuckw Mtn 90.00 54 ⇓P **P** **02 14 33.8 -0.4**
baz=90,SNR=9.2
L05A Lakeview 90.03 44 ⇓P **P** **02 14 34.3 +0.3**
baz=90
NVAR Mina Array Bea 90.04 48 P **P** **02 14 34.0 -0.2**
comp=Z,12nm,0.8s,mb5.3,baz=226,slow=8.3,SNR=4.8
GRAC Grapevine Rang 90.06 50 ⇑P **P** **02 14 34.5 +0.2**
baz=90
N06A Buffalo Meadow 90.07 46 ⇓P **P** **02 14 34.4 +0.1**
baz=90,SNR=5.3
112A Yuma 90.18 55 ⇓P **P** **02 14 35.1 +0.1**
baz=90,SNR=5.8
FURC Furnace Creek, 90.19 51 ⇓P **P** **02 14 35.3 +0.4**
baz=90
GLA Glamis 90.21 55 *eP* **P** **02 14 35.3 +0.1**
GLA pmax pmax
comp=Z,28nm,1.0s,mb5.5
GLA Glamis 90.21 55 ⇑P **P** **02 14 35.3 +0.1**
baz=90,SNR=10
GLA Glamis 90.21 55 *eP* **P** **02 14 35.3 +0.1**
comp=Z,28nm,1.0s,mb5.5
F03A Seaside 90.25 40 ⇑P **P** **02 14 35.3 +0.3**
baz=90
MOD Modoc 90.31 45 ⇓P **P** **02 14 35.4 0.0**
baz=90
MOD Modoc 90.31 45 *eP* **P** **02 14 34.5 -0.9**
K05A Summer Lake 90.32 44 ⇑P **P** **02 14 35.6 +0.2**
baz=90,SNR=6.5
GMRC Granite Mounta 90.33 53 ⇑P **P** **02 14 35.4 -0.3**
baz=90,SNR=9.7
SHOC Shoshone 90.36 51 ⇓P **P** **02 14 35.5 -0.3**
baz=90,SNR=5.9
J05A Fort Rock 90.37 43 ⇑P **P** **02 14 35.8 +0.2**
baz=90,SNR=14
TUQ Turquoise Moun 90.42 52 ⇑P **P** **02 14 35.5 -0.5**
baz=90,SNR=12
IRM Iron Mountain 90.44 53 ⇓P **P** **02 14 35.5 -0.7**
baz=91,SNR=9.8
O07A Toulon 90.44 47 ⇑P **P** **02 14 36.2 +0.2**
baz=91,SNR=5.1
H04A Detroit Lake 90.46 42 ⇑P **P** **02 14 35.5 -0.5**
baz=91
S09A Goldfield 90.48 49 ⇓P **P** **02 14 35.9 -0.4**
baz=91,SNR=5.5
Q08A Gabbs 90.50 48 ⇓P **P** **02 14 36.2 -0.1**
baz=91,SNR=8.0
G04A Mulino 90.54 41 ⇑P **P** **02 14 36.8 +0.4**
baz=91
U10A Ash Meadows, A 90.55 51 ⇑P **P** **02 14 36.8 +0.1**
baz=91,SNR=8.1
E03A Lebam 90.56 39 ⇑P **P** **02 14 36.8 +0.3**
baz=91
TPH Tonopah 90.64 49 *eP* **P** **02 14 36.8 -0.3**
TPH pmax pmax
comp=Z,15nm,1.1s,mb5.2
TPH Tonopah 90.64 49 *eP* **P** **02 14 36.8 -0.3**
comp=Z,15nm,1.1s,mb5.2
C03A Quillayute Air 90.70 38 ⇑P **P** **02 14 37.3 +0.2**
baz=91
Y12C Blythe 90.74 54 ⇑P **P** **02 14 37.2 -0.4**
baz=91,SNR=6.2
K06A Valley Falls 90.77 44 ⇓P **P** **02 14 37.3 -0.2**
baz=91,SNR=8.3
I05A Bend 90.77 42 ⇓P **P** **02 14 38.0 +0.4**
baz=91
M07A Soldier Meadow 90.81 46 ⇑P **P** **02 14 38.0 +0.2**
baz=91
R09A Tonopah 90.82 49 ⇑P **P** **02 14 37.7 -0.2**
baz=91
TPNV Topopah Spring 90.84 51 *eP* **P** **02 14 37.6 -0.4**
TPNV pmax pmax
comp=Z,22nm,1.0s,mb5.4
TPNV Topopah Spring 90.84 51 ⇓P **P** **02 14 38.1 +0.1**
baz=91
TPNV Topopah Spring 90.84 51 *eP* **P** **02 14 37.5 -0.4**
comp=Z,22nm,1.0s,mb5.4
LDFC Landfair 90.86 53 *eP* **P** **02 14 38.2 +0.1**
113A Mohawk Valley, 90.90 55 ⇓P **P** **02 14 38.1 -0.3**
baz=91
F04A Amboy 90.94 40 ⇓P **P** **02 14 38.2 0.0**
baz=91
V11A Goodsprings 90.95 52 ⇓P **P** **02 14 38.3 -0.3**
baz=91
O08A Rochester Mine 90.99 47 ⇑P **P** **02 14 38.7 0.0**
baz=91,SNR=6.4
L07A Adell 90.99 45 ⇓P **P** **02 14 38.8 +0.2**
baz=91
S10A Tonopah Range, 91.02 50 ⇑P **P** **02 14 38.7 -0.1**
baz=91,SNR=5.2
J06A Christmas Vall 91.05 44 ⇑P **P** **02 14 38.6 -0.2**
baz=91
NEE2 Needles Airpor 91.09 53 ⇑P **P** **02 14 39.0 -0.2**
baz=91
W12A Cal Nev Ari 91.13 52 ⇓P **P** **02 14 39.7 +0.3**
baz=91
N08A GE Springer Mi 91.23 46 ⇑P **P** **02 14 39.8 0.0**
baz=91,SNR=5.8
U11A Corn Creek 91.24 51 ⇓P **P** **02 14 40.1 +0.2**
baz=91
PDMCI Parker Dam,Lak 91.26 54 ⇓P **P** **02 14 39.8 -0.2**
baz=91,SNR=9.7
Y13A Salome 91.29 54 ⇑P **P** **02 14 39.9 -0.3**
baz=91,SNR=12
214A Organ Pipe Nat 91.30 56 ⇑P **P** **02 14 39.9 -0.3**
baz=91,SNR=6.2
V12A Nelson 91.33 52 ⇑P **P** **02 14 40.0 -0.3**
baz=92,SNR=6.0
I06A Prineville 91.34 43 ⇓P **P** **02 14 40.1 -0.1**
baz=92,SNR=7.6
M08A Happy Creek Ra 91.37 46 ⇑P **P** **02 14 40.7 +0.3**
baz=92
K07A Rock Creek Ran 91.37 44 ⇓P **P** **02 14 40.4 +0.1**
baz=92,SNR=9.5
SHPR Sheep Range 91.43 51 *eP* **P** **02 14 35.3 -5.5**
F05A White Salmon 91.50 41 ⇑P **P** **02 14 41.2 +0.4**
baz=92
S11A Rachel 91.50 50 ⇑P **P** **02 14 41.0 -0.1**
baz=92
C04A Brinnon 91.50 39 ⇓P **P** **02 14 41.7 +0.9**
baz=92
GNW Green Mountain 91.51 39 *eP* **P** **02 14 40.9 0.0**
comp=Z,8.9nm,1.0s,mb5.0
X13A Yucca 91.61 53 ⇓P **P** **02 14 41.3 -0.4**
baz=92,SNR=7.8
H06A Lindquist Farm 91.64 42 ⇓P **P** **02 14 41.4 -0.1**
baz=92
J07A Hines 91.64 44 ⇑P **P** **02 14 41.8 +0.3**
baz=92
WVOR Wild Horse Val 91.65 45 *eP* **P** **02 14 41.3 -0.3**
WVOR pmax pmax
comp=Z,11nm,1.0s,mb5.1
WVOR Wild Horse Val 91.65 45 *eP* **P** **02 14 41.2 -0.4**
comp=Z,11nm,1.0s,mb5.2
T11A Corn Creek, Al 91.70 51 ⇑P **P** **02 14 41.1 -0.9**
baz=92,SNR=5.9
L08A Fields 91.73 45 ⇑P **P** **02 14 42.2 +0.2**
baz=92
Z14A Wintersburg 91.77 55 ⇑P **P** **02 14 42.6 +0.2**
baz=92
W13A Hualapai Mount 91.78 53 ⇑P **P** **02 14 42.3 -0.1**
baz=92
F06A Goldendale 91.85 41 ⇓P **P** **02 14 42.4 0.0**
baz=92
I07A Izee 91.85 43 ⇓P **P** **02 14 42.7 +0.2**
baz=92
U12A Valley of Fire 91.86 52 ⇓P **P** **02 14 42.4 -0.3**
baz=92
K08A Mann Creek Ran 91.88 45 ⇑P **P** **02 14 42.6 -0.2**
baz=92,SNR=6.4
R11A Troy Canyon, C 91.92 49 ⇓P **P** **02 14 42.6 -0.3**
baz=92
Y14A Wickenburg 91.96 54 ⇓P **P** **02 14 42.9 -0.4**
baz=92
V13A Grand Canyon W 92.02 52 ⇑P **P** **02 14 43.4 -0.1**
baz=92,SNR=10
H07A Lands Inn, Kim 92.05 43 ⇓P **P** **02 14 43.6 +0.2**
baz=92
L09A Wilkinson Ranc 92.10 45 ⇓P **P** **02 14 44.3 +0.6**
baz=92
E06A Yakima 92.11 40 ⇑P **P** **02 14 44.2 +0.6**
baz=92
S12A Delamar Landin 92.13 50 ⇑P **P** **02 14 44.3 +0.4**
baz=92,SNR=7.1
J08A Circle Bar Ran 92.18 44 ⇑P **P** **02 14 44.4 +0.4**
baz=92
X14A Yava 92.27 54 ⇓P **P** **02 14 44.7 0.0**
baz=92,SNR=12
U13A Pakoon Wash 92.27 52 ⇓P **P** **02 14 45.0 +0.3**
baz=92
G07A Ruggs Ranch, H 92.30 42 ⇑P **P** **02 14 44.6 +0.1**
baz=92
Z15A Gila River Ind 92.35 55 ⇓P **P** **02 14 45.0 -0.1**
baz=92
I08A Drewsey 92.37 44 ⇓P **P** **02 14 45.2 +0.3**
baz=92
K09A Rome 92.37 45 ⇑P **P** **02 14 45.0 +0.1**
baz=92
216A Three Points, 92.38 57 ⇓P **P** **02 14 44.9 -0.4**
baz=92
116A Eloy 92.41 56 ⇓P **P** **02 14 45.2 -0.2**
baz=92,SNR=8.1
W14A Seligman 92.43 53 ⇑P **P** **02 14 45.5 +0.1**
baz=92,SNR=5.5
Y15A Casa Rosa Ranc 92.48 55 ⇑P **P** **02 14 45.8 +0.1**
baz=93,SNR=14
T13A Saint George 92.56 51 ⇓P **P** **02 14 46.2 +0.2**
baz=93
V14A Boquillas Ranc 92.58 53 ⇓P **P** **02 14 46.0 -0.1**
baz=93,SNR=6.8
H08A Prairie City 92.58 43 ⇓P **P** **02 14 45.5 -0.4**
baz=93
R12A Pony Springs, 92.61 50 ⇑P **P** **02 14 46.7 +0.5**
baz=93
O11A Cowboy Ranch, 92.64 48 ⇑P **P** **02 14 46.3 +0.1**
baz=93
M10A I.L. Ranch, Tu 92.64 46 ⇓P **P** **02 14 45.9 -0.4**
baz=93
J09A Fry Pan Ranch, 92.64 44 ⇓P **P** **02 14 46.7 +0.5**
baz=93
G08A Pilot Rock 92.76 42 ⇑P **P** **02 14 47.0 +0.3**
baz=93
X15A Humboldt 92.77 54 ⇓P **P** **02 14 47.0 0.0**
baz=93,SNR=9.5
217A Green Valley 92.79 57 ⇓P **P** **02 14 47.0 -0.1**
baz=93,SNR=5.8
S13A Holt Ranch, En 92.83 51 ⇓P **P** **02 14 47.4 +0.2**
baz=93
U14A Mt Trumbull 92.85 52 ⇓P **P** **02 14 47.5 +0.2**
baz=93,SNR=6.1
HAWA Hanford 92.91 41 *eP* **P** **02 14 47.6 +0.2**
comp=Z,4.4nm,0.8s,mb4.9
Z16A Peralta Trail, 92.93 55 ⇓P **P** **02 14 47.6 -0.2**
baz=93,SNR=6.3
TUC Tucson 93.02 57 *eP* **P** **02 14 47.6 -0.6**
TUC pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
TUC Tucson 93.02 57 *eP* **P** **02 14 47.6 -0.7**
comp=Z,5.2nm,1.0s,mb4.9
W15A Williams 93.02 53 ⇓P **P** **02 14 48.0 -0.1**
baz=93
Y16A Circle Bar Ran 93.10 55 ⇑P **P** **02 14 48.4 -0.2**
baz=93,SNR=8.5
M11A Holland Ranch, 93.10 47 ⇑P **P** **02 14 48.5 +0.1**
baz=93
117A Oracle 93.16 56 ⇑P **P** **02 14 48.5 -0.4**
baz=93,SNR=6.1
T14A Hurricane 93.18 51 ⇓P **P** **02 14 49.0 +0.2**
baz=93
Q13A Wheeler Ranch, 93.28 49 ⇓P **P** **02 14 49.2 -0.1**
baz=93
H09A Durkee 93.29 43 ⇑P **P** **02 14 49.4 +0.2**
baz=93
318A Bisbee 93.31 58 ⇑P **P** **02 14 49.4 -0.2**
baz=93
O12A Currie 93.33 48 ⇓P **P** **02 14 49.4 -0.1**
baz=94
X16A Lo Mia Camp, P 93.34 54 ⇑P **P** **02 14 49.5 -0.2**
baz=94
V15A Kaibab Nationa 93.35 53 ⇑P **P** **02 14 50.2 +0.5**
baz=94
L11A Cat Creek Ranc 93.45 46 ⇓P **P** **02 14 50.3 +0.4**
baz=94
218A Dragoon 93.47 57 ⇓P **P** **02 14 50.6 +0.3**
baz=94
G09A Cove 93.49 43 ⇓P **P** **02 14 50.6 +0.5**
baz=94
P13A Bates Ranch, G 93.50 49 ⇑P **P** **02 14 50.6 +0.4**
baz=94

U15A	North Rim	93.51	52	⇓P		P	02 14 50.8	+0.4
	baz=94							
Y17A	Roosevelt	93.52	55	⇓P		P	02 14 50.6	+0.2
	baz=94							
W16A	Flagstaff	93.54	54	⇑P		P	02 14 51.0	+0.5
	baz=94							
T15A	Red Dirt Ranch	93.68	52	⇑P		P	02 14 51.3	+0.2
	baz=94							
R14A	James Farms, M	93.73	50	⇑P		P	02 14 51.2	-0.2
	baz=94							
118A	Homack Ranch,	93.78	57	⇑P		P	02 14 51.8	+0.1
	baz=94							
X17A	Forest Lakes	93.80	55	⇑P		P	02 14 51.9	+0.2
	baz=94							
Q14A	Sevier Lake (B	93.83	50	⇓P		P	02 14 52.0	+0.2
	baz=94							
WUAZ	Wupatki	93.83	53	⇓P		P	02 14 51.7	-0.2
	baz=94							
WUAZ	Wupatki	93.83	53	*e*P		P	02 14 51.9	+0.1
	comp=Z,11nm,0.9s,mb5.3							
319A	Douglas	93.84	58	⇓P		P	02 14 52.1	0.0
	baz=94							
H10A	Noah's Angus R	93.84	43	⇓P		P	02 14 51.2	-0.5
	baz=94							
G10A	Bishop Farm, J	93.92	43	⇓P		P	02 14 51.8	-0.3
	baz=94							
MFID	Camas Ranch	93.93	45	⇑P		P	02 14 52.4	+0.3
	baz=94							
D09A	Jones Farm, Ri	93.97	41	⇓P		P	02 14 52.8	+0.6
	baz=94							
I11A	Placerville	94.06	44	⇓P		P	02 14 53.0	+0.3
	baz=94							
219A	White Tail Can	94.09	57	⇓P		P	02 14 53.1	-0.1
	baz=94							
F10A	Beach Ranch, E	94.15	42	⇓P		P	02 14 53.0	-0.1
	baz=94							
Y18A	Canyon Day Jun	94.17	55	⇑P		P	02 14 53.6	+0.1
	baz=94							
K12A	Draper Farm, C	94.22	46	⇑P		P	02 14 53.7	+0.2
	baz=94							
U16A	Tuba City	94.25	53	⇓P		P	02 14 53.9	+0.1
	baz=94							
J12A	Stokes Ranch,	94.34	45	⇓P		P	02 14 54.1	0.0
	baz=94							
119A	Ashpeak Ranch,	94.35	57	⇑P		P	02 14 54.3	0.0
	baz=94							
H11A	Donnelly	94.37	44	⇓P		P	02 14 54.2	+0.1
	baz=94							
G11A	Walters Elk Ra	94.50	43	⇓P		P	02 14 54.7	0.0
	baz=95							
X18A	Snowflake	94.52	55	⇑P		P	02 14 55.0	-0.1
	baz=95							
S16A	Weppner Ranch,	94.53	51	⇑P		P	02 14 55.2	+0.2
	baz=95							
Z19A	T-Link Ranch,	94.58	56	⇑P		P	02 14 55.2	-0.2
	baz=95							
F11A	Grangeville	94.79	42	⇓P		P	02 14 55.8	-0.2
	baz=95							
M14A	Sheep Mountain	94.80	47	⇑P		P	02 14 56.0	-0.2
	baz=95							
T17A	Navajo Res., N	94.83	52	⇑P		P	02 14 56.3	-0.1
	baz=95							
R16A	Teasdale	94.83	51	⇓P		P	02 14 56.8	+0.4
	baz=95							
Y19A	Nutrioso	94.84	56	⇓P		P	02 14 56.4	-0.1
	baz=95							
HLID	Hailey	94.93	45	⇓P		P	02 14 56.8	+0.1
	baz=95							
HLID	Hailey	94.93	45	*e*P		P	02 14 56.8	+0.1
V18A	Ganado	94.98	54	⇑P		P	02 14 57.6	+0.4
	baz=95							
J13A	Cove Ranch, Pi	95.02	45	⇓P		P	02 14 57.1	0.0
	baz=95							
H12A	Diamond D Ranc	95.05	44	⇓P		P	02 14 57.0	-0.2
	baz=95							
S17A	Black Ridge (B	95.08	52	⇓P		P	02 14 56.9	-0.6
	baz=95							
L14A	Malta	95.09	47	⇑P		P	02 14 57.4	-0.1
	baz=95							
N15A	Stansbury Isla	95.13	48	⇓P		P	02 14 57.7	0.0
	baz=95							
I13A	Wildhorse Cree	95.27	45	⇑P		P	02 14 58.3	0.0
	baz=95							
F12A	Elk City	95.30	43	⇑P		P	02 14 58.0	-0.3
	baz=95							
K14A	Jones Ranch, D	95.34	46	⇑P		P	02 14 58.7	+0.1
	baz=96							
M15A	Larsen Ranch,	95.41	48	⇑P		P	02 14 59.1	+0.1
	baz=96							
J14A	Carey	95.42	46	⇑P		P	02 14 59.1	+0.1
	baz=96							
R17A	Hanksville Air	95.44	51	⇓P		P	02 14 59.1	-0.1
	baz=96							
C11A	Tepee Creek (N	95.56	41	⇑P		P	02 14 59.3	-0.2
	baz=96							
T18A	Mexican Hat	95.57	52	⇑P		P	02 14 59.8	0.0
	baz=96							
S18A	Hurst Farm, BI	95.69	52	⇓P		P	02 14 59.9	-0.4
	baz=96							
I14A	Mackay	95.71	45	⇑P		P	02 15 00.4	+0.1
	baz=96							
F13A	Darby	95.90	43	⇓P		P	02 15 00.3	-0.8
	baz=96							
R18A	Canyonlands Na	96.03	51	⇓P		P	02 15 01.5	-0.4
	baz=96							
H14A	Leadore	96.05	44	⇑P		P	02 15 01.9	+0.1
	baz=96							
HWUT	Hardware Ranch	96.07	48	*e*P		P	02 15 01.4	-0.6
	comp=Z,2.2nm,0.8s,mb4.6							
O17A	Robinson Place	96.11	49	⇓P		P	02 15 02.3	+0.2
	baz=96							
J15A	Blackfoot	96.18	46	⇓P		P	02 15 02.2	-0.2
	baz=96							
L16A	Fish Haven	96.32	47	⇑P		P	02 15 02.8	-0.3
	baz=96							
S19A	Harvey Farm, M	96.34	52	⇑P		P	02 15 03.0	-0.3
	baz=96							
H15A	Lima	96.52	45	⇓P		P	02 15 03.5	-0.4
	baz=97							
K16A	Soda Springs	96.53	47	⇓P		P	02 15 03.8	-0.2
	baz=97							
J16A	Bone	96.68	46	⇑P		P	02 15 04.7	0.0
	baz=97							
E14A	Clinton	96.69	43	⇓P		P	02 15 04.5	-0.1
	baz=97							
PLCA	Paso Flores	97.03	139	P		P	02 15 08.2	+1.6
	comp=Z,1.0nm,0.7s,mb4.4,baz=220,slow=4.4,SNR=2.9							
ANMO	Albuquerque	97.35	55	*e*P		P	02 15 06.7	-1.2
ANMO				pmax		pmax		
	comp=Z,2.0nm,0.9s							
ANMO	Albuquerque	97.35	55	*e*P		P	02 15 06.7	-1.3
	comp=Z,1.7nm,0.9s,mb4.5							
TXAR	Lajitas Array	97.64	62	P		P	02 15 09.3	-0.1
	comp=Z,0.9nm,0.9s,mb4.3,baz=213,slow=4.3,SNR=6.1							
TXAR	Lajitas Array	97.64	62	P		P	02 15 09.3	-0.1
HVS	Khovu-Aksy	97.65	322	*e*P		P	02 15 08.6	-0.3
HVS				pmax		pmax		
	comp=Z,15nm,1.3s,mb5.4							
PDAR	Pinedale Array	97.89	47	P		P	02 15 11.1	+0.9
	comp=Z,0.8nm,0.8s,mb4.3,baz=213,slow=4.4,SNR=3.6							
WMQ	Urumqi	98.60	314	*e*P		P	02 15 14.0	+0.6
LHS	Liberty Hill	117.69	61	*e*PKIKP		PKPdf	02 20 22.4	+1.4
NCB	Newcomb	123.30	51	*e*PKPdf		PKPdf	02 20 28.9	-2.6
ARCES	ARCESS Array B	126.97	345	PKP		PKPdf	02 20 36.3	-1.4
	comp=Z,5.8nm,0.8s,baz=63,slow=0.5,SNR=9.9							
KIV	Kislovodsk	130.60	310	*e*PKIKP		PKPdf	02 20 41.6	-3.8
KIV				*e*			02 23 02.7	
KIV				*e*PS		PS	02 33 11.0	-2.0
KIV				pmax		pmax		
	comp=Z,4.0nm,1.0s							
KIV				MLR		MLR		
	comp=Z,3μm,18.0s,MS6.0							
AKASG	Malin Array Be	137.11	323	PKP		PKPdf	02 20 57.6	+0.2
	comp=Z,0.7nm,0.5s,baz=59,slow=1.7,SNR=4.2							
NOA	NORSAR Array B	137.34	344	PKP		PKPdf	02 20 57.4	-0.1
	comp=Z,1.1nm,0.8s,baz=32,slow=2.0,SNR=3.2							
KOLS	Kolonicke sedl	141.87	324	*e*PKP		PKPdf	02 21 02.8	-3.3
STHS	Stebnicka Huta	142.13	326	*e*PKP		PKPdf	02 21 05.6	-1.0
CRVS	Cervenica-Dubn	142.32	325	*e*PKP		PKPdf	02 21 03.4	-3.5
CRVS	Cervenica-Dubn	142.32	325	*e*PKP		PKPdf	02 21 03.5	-3.4
MORC	Moravsky Berou	143.78	329	⇑P		PKPdf	02 21 07.2	-2.3
MORC	Moravsky Berou	143.78	329	⇑P		PKPdf	02 21 07.2	-2.2
VYHS	Vyhne	143.96	326	*e*PKP		PKPdf	02 21 08.0	-1.8
DPC	Dobruska-Polom	143.97	330	*e*PKP		PKPdf	02 21 06.7	-3.1
DPC				*ex*		x	02 21 12.6	
UPC	Upice	144.00	331	*e*PKP		PKPdf	02 21 07.6	-2.2
BZS	Buzias	144.06	320	⇓*i*P		PKPdf	02 21 07.4	-2.7
BZS	Buzias	144.06	320	⇓P		PKPdf	02 21 07.4	-2.7
VTS	Vitosha	144.53	315	⇑*i*P		PKPdf	02 21 09.6	-1.4
VRAC	Vranov	144.55	329	PKP		PKPdf	02 21 09.4	-1.4
	comp=Z,4.2nm,0.9s,baz=34,slow=3.6,SNR=5.9							
VRAC	Vranov	144.55	329	⇑*i*P		PKPdf	02 21 09.5	-1.3
VRAC	Vranov	144.55	329	⇑P		PKPdf	02 21 09.5	-1.4
PVCC	Panska Ves	144.63	332	*e*PKP		PKPdf	02 21 09.4	-1.5
PVCC				*ex*		x	02 21 13.2	
BRG	Berggiesshubel	144.65	333	*e*PKP		PKPdf	02 21 08.9	-2.0
	comp=Z,9.9nm,0.9s							
BRG				*i*			02 21 12.4	
	comp=Z,17nm,1.1s							
CLL	Collm	144.71	334	⇓*i*PKPdf		PKPdf	02 21 08.9	-2.1
	comp=Z,9.0nm,0.7s							
CLL				*i* PKiKP		PKiKP	02 21 12.4	-2.4
	comp=Z,12nm,1.0s							
CLL				*e*pPKiKP			02 21 17.0	
	comp=Z,24nm,1.4s							
CLL				*e*PP		PP	02 24 30.0	+2.5
CLL	Collm	144.71	334	⇓*i*PKP		PKPdf	02 21 08.9	-2.1
CLL				*i*			02 21 12.4	
MODS	Modra-Piesok	144.83	327	*e*PKP		PKPdf	02 21 10.0	-1.3
APE	Apeiranthos	144.88	305	⇑*i*P		PKPdf	02 21 09.4	-2.4
APE	Apeiranthos	144.88	305	⇑P		PKPdf	02 21 09.3	-2.4
PRU	Pruhonice	145.03	331	*e*PKP		PKPdf	02 21 10.0	-1.6
PRU				*ex*		x	02 21 13.7	
ZST	Bratislava	145.04	327	*e*PKP		PKPdf	02 21 11.6	-0.1
SANT	Santorini	145.13	304	*e*PKPbc		PKPbc	02 21 10.2	-1.6
PKSM	Moragy	145.45	323	⇑*i*P		PKPdf	02 21 11.6	-0.9
PKSM	Moragy	145.45	323	⇑P		PKPdf	02 21 11.6	-0.9
ESK	Eskdalemuir	145.47	352	*e*PKIKP		PKPdf	02 21 11.2	-1.0
NKC	Novy Kostel	145.76	333	*e*PKP		PKPdf	02 21 12.8	-0.1
KHC	Kasperske Hory	146.09	331	*e*PKP		PKPdf	02 21 13.5	0.0
GEC2	GERESS Array S	146.24	331	*e*PKP2		PKPab	02 21 14.1	-1.4
GERES	GERESS Array B	146.24	331	PKPbc		PKPbc	02 21 13.8	-1.0
	comp=Z,4.8nm,0.7s,baz=35,slow=3.3,SNR=8.4							
KRUS	Krusevo	146.38	314	*e*PKP		PKPdf	02 21 12.5	-1.8
GRA1	Grafenberg Arr	146.68	334	*e*PKP		PKPdf	02 21 15.3	+0.8
GRF	Grafenberg Arr	146.68	334	*e*PKP		PKPdf	02 21 15.3	+0.8
MOTA	Moosalm	148.52	331	⇑*i*P		PKPbc	02 21 19.9	-1.2
	comp=Z,11nm,1.0s							
WLF	Walferdange	148.61	339	PKPbc		PKPbc	02 21 21.3	0.0
WLF	Walferdange	148.61	339	*e*PKPbc		PKPbc	02 21 21.1	-0.3
GIVF	Givet	148.66	341	*e*PKP1		PKPbc	02 21 20.4	-1.0
	comp=Z,96nm,1.5s							
DOU	Dourbes	148.73	341	PKPbc		PKPbc	02 21 20.6	-1.1
BAIF	Baives	148.88	341	*e*PKP1		PKPbc	02 21 21.1	-0.9
	comp=Z,63nm,1.5s							
BFO	Black Forest	148.92	335	*e*PKP2		PKPbc	02 21 21.2	-1.0
FETA	Feichten	148.93	331	⇑*i*P		PKPbc	02 21 21.0	-1.2
	comp=Z,12nm,0.9s							
CDF	Champ du Feu	149.26	336	*e*PKP1		PKPbc	02 21 21.9	-1.1
	comp=Z,20nm,0.9s							
HINF	Hinteralfeld	149.91	336	*e*PKP1		PKPbc	02 21 23.4	-1.3
	comp=Z,17nm,1.0s							
HAU	Haudompre	149.94	337	*e*PKP1		PKPbc	02 21 23.6	-1.1
	comp=Z,20nm,0.9s							
TUE	Stuetta	149.97	332	*e*PKPbc		PKPbc	02 21 24.2	-0.6
MEZF	Maizieres J'vi	149.98	339	*e*PKP1		PKPbc	02 21 24.1	-0.7
CABF	La Chapelle	151.21	336	*e*PKP1		PKPbc	02 21 27.1	-0.7
	comp=Z,39nm,1.2s							
FLN	La Foliniere	151.31	346	*e*PKP1		PKPbc	02 21 26.5	-1.4
	comp=Z,36nm,0.8s							
LDF	La Druitiere	151.39	345	*e*PKP1		PKPbc	02 21 26.4	-1.7
	comp=Z,115nm,1.5s							
LOR	Lormes	151.45	339	*e*PKP1		PKPbc	02 21 27.1	-1.2
	comp=Z,26nm,1.0s							
SSF	Saint Saulge	151.75	339	*e*PKP1		PKPbc	02 21 27.8	-1.2
	comp=Z,22nm,0.9s							
GRR	Gorron	151.75	346	*e*PKP1		PKPbc	02 21 27.6	-1.4
LPL	La Plagne	151.84	334	*e*PKP1		PKPbc	02 21 28.6	-0.7
	comp=Z,27nm,1.0s							
LPG	La Plagne	151.85	333	*e*PKP1		PKPbc	02 21 28.7	-0.6
	comp=Z,22nm,0.8s							
SMF	Signal de Mont	152.00	338	*e*PKP1		PKPbc	02 21 28.4	-1.2
AVF	Avril sur Loir	152.03	339	*e*PKP1		PKPbc	02 21 28.9	-0.8
	comp=Z,39nm,1.3s							
SGMF	Saint Gilles	152.23	348	*e*PKP1		PKPbc	02 21 28.2	-1.8
	comp=Z,35nm,0.8s							
BNI	Bardonecchia	152.24	333	*e*PKIKP		PKPbc	02 21 29.5	-0.7
BGF	Bois d'Agland	152.41	340	*e*PKP1		PKPbc	02 21 29.1	-1.4
	comp=Z,17nm,0.9s							
MBDF	Montbardon	152.46	332	*e*PKP1		PKPbc	02 21 29.1	-1.6
QUIF	Quistinic	152.66	349	*e*PKP1		PKPbc	02 21 29.3	-1.7
ORIF	Oris-en-Rattie	152.68	334	*e*PKP1		PKPbc	02 21 30.1	-1.1
	comp=Z,24nm,0.9s							
TCF	Toulx Ste Croi	152.85	340	*e*PKP1		PKPbc	02 21 30.1	-1.4
	comp=Z,13nm,0.9s							
VIVF	Saint-Julien-l	153.22	335	*e*PKP1		PKPbc	02 21 31.1	-1.3
MFF	Saint Martin d	153.24	344	*e*PKP1		PKPbc	02 21 30.8	-1.6
SMRF	Simiane la Rot	153.57	333	*e*PKP1		PKPbc	02 21 31.2	-2.0
	comp=Z,46nm,1.1s							
RJF	Les Rejaudoux	153.94	340	*e*PKP1		PKPbc	02 21 35.9	+2.0
	comp=Z,24nm,1.0s							
LASF	Ste Croix	154.19	335	*e*PKP1		PKPbc	02 21 33.4	-1.1
LFF	La Frestale	154.51	341	*e*PKP1		PKPbc	02 21 34.6	-0.6
PBRG	Braganca	159.19	352	*e*PKPab		PKPab	02 22 08.6	-1.1
PVRL	Vila Real	159.83	353	*e*PKPab		PKPab	02 22 12.1	-0.4
PVIS	Viseu	160.40	354	*e*PKPab		PKPab	02 22 14.2	-0.8
MTE	Manteigas	160.68	353	*e*PKPab		PKPab	02 22 15.6	-0.6
ESDC	Sonseca Array	160.71	344	PKPab		PKPab	02 22 15.5	-0.8
	comp=Z,2.2nm,0.8s,baz=20,slow=3.0,SNR=6.7							
PCBR	Castelo Branco	161.22	352	*e*PKPab		PKPab	02 22 17.9	-0.7
PTOM	Tomar	161.54	354	*e*PKPab		PKPab	02 22 19.4	-0.6
PESTR	Estremoz	162.19	352	*e*PKPab		PKPab	02 22 19.1	-3.7
PBEJ	Beja	163.06	352	*e*PKPab		PKPab	02 22 26.4	-0.3
PVAQ	Vaqueiros	163.65	352	*e*PKPab		PKPab	02 22 29.3	0.0
TORD	Torodi Ar. Bea	165.72	238	PKP		PKPdf	02 21 38.9	-1.3
	comp=Z,0.7nm,0.8s,baz=339,slow=1.6,SNR=3.6							
TORD				PKPab		PKPab	02 22 39.8	+0.6
	comp=Z,0.7nm,0.7s,baz=97,slow=2.1,SNR=5.0							

*IDC **28** 02:06:35.3± 1.6,2150S×16951E,h0km,mb4.4/9, mb1 4.6/9,mb1mx4.4/17,mbtmp4.4/9, Error ellipse: s-maj=77.3km s-min=20.9km az=157.0*
*NEIC **28** 02:06:36.9± 0.4,2140S×16947E,h10km,mb4.5/17, Error ellipse: s-maj=19.3km s-min=7.1km az=157.0*
*ISCJB **28** 02:06:40.0± 2.5,215S± 0.1×1694E± 0.1,h40km± 21km, mb4.5/24, Error ellipse: s-maj=26.7km s-min=13.4km az=156.5*
*MOS **28** 02:06:40.0± 1.2,2152S×16931E,h33km,mb4.7/7, Error ellipse: s-maj=33.2km s-min=14.7km az=172.5*

ISC 28 02:06:40.0±5.6, 214S± 02×16941E± 009, h28km± 39km, n69, σ 0$ 71/40, mb4.5/24, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.83	257	*e*P		Pn	02 07 23.2	-0.2
DZM				*e*S		Sn	02 07 56.2	-0.4
ARMA	Armidale	18.31	237	*e*P		Pn	02 10 52.0	0.0
	0.4nm,0.9s							
CTA	Charters Tower	21.70	269	P		P	02 11 29.5	+0.6
	2.6nm,0.4s,mb4.0,baz=94,slow=12,SNR=5.6							
CTAO	Charters Tower	21.70	269	*e*P		P	02 11 30.0	+1.1
CTAO				pmax		pmax		
	comp=Z,11nm,1.0s,mb4.2							
CTAO	Charters Tower	21.70	269	*e*P		P	02 11 30.0	+1.2
	comp=Z,11nm,1.0s,mb4.2							
COEN	Coen	26.05	282	*e*P		P	02 12 12.3	+1.1
	comp=Z,2.8nm,0.8s,mb3.8							
STKA	Stephens Creek	26.88	241	P		P	02 12 19.8	+1.3
	comp=Z,6.9nm,0.8s,mb4.2,baz=96,slow=5.8,SNR=4.9							
STKA	Stephens Creek	26.88	241	*e*P		P	02 12 20.0	+1.5
	comp=Z,10nm,0.8s,mb4.4							
WB2	Warramunga Arr	32.80	266	*e*P		P	02 13 09.9	-1.2
WRAB	Tennant Creek	32.80	266	*e*P		P	02 13 10.7	-0.4
WRAB				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.3							
WRAB	Tennant Creek	32.80	266	*e*P		P	02 13 10.7	-0.5
	comp=Z,2.9nm,0.7s,mb4.3							
WRA	Warramunga Arr	32.81	266	P		P	02 13 10.1	-1.1
	comp=Z,1.3nm,0.5s,mb4.1,baz=97,slow=8.4,SNR=13							
ASAR	Alice Springs	32.82	259	P		P	02 13 10.5	-0.8
	comp=Z,7.0nm,0.8s,mb4.6,baz=83,slow=9.0,SNR=21							
FITZ	Fitzroy Crossi	41.23	267	P		P	02 14 22.9	+0.1
	comp=Z,8.3nm,0.7s,mb4.5,baz=127,slow=9.7,SNR=9.6							
MBWA	Marble Bar	46.13	261	*e*P		P	02 15 01.9	-0.3
	comp=Z,11nm,0.9s,mb4.8							
NWAO	Narrogin (SRO)	47.39	245	*e*P		P	02 15 11.9	0.0
NWAO				pmax		pmax		
	comp=Z,46nm,1.4s							
NWAO	Narrogin (SRO)	47.39	245	*e*P		P	02 15 11.9	0.0
	comp=Z,46nm,1.4s,mb5.2							
CASY	Casey	58.19	204	*e*P		P	02 16 31.3	+0.1
	comp=Z,3.0nm,0.9s,mb4.3							
CMAR	Chiang Mai Arr	79.56	295	P		P	02 18 46.9	+2.0
	comp=Z,2.3nm,0.3s,mb4.6,baz=116,slow=6.1,SNR=4.4							
SNAA	Sanae	86.98	182	*e*P		P	02 19 22.5	+0.3
SNAA				pmax		pmax		
	comp=Z,4.0nm,1.1s							
SNAA	Sanae	86.98	182	*e*P		P	02 19 22.5	+0.3
	comp=Z,3.6nm,1.1s,mb4.5							
SAO	San Andreas Ge	87.14	49	*e*P		P	02 19 22.7	-0.8
SAO				pmax		pmax		
	comp=Z,6.0nm,0.9s,mb4.8							
SAO	San Andreas Ge	87.14	49	*e*P		P	02 19 22.7	-0.8
	comp=Z,6.3nm,0.9s,mb4.8							
KCPM	Cahto Peak	87.15	45	*e*P		P	02 19 23.8	+0.3
KIPM	Iron Peak	87.28	45	*e*P		P	02 19 24.2	+0.1
CMB	Columbia Colle	88.50	48	*e*P		P	02 19 29.1	-0.8
CMB				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb4.5							
CMB	Columbia Colle	88.50	48	*e*P		P	02 19 29.1	-0.9
	comp=Z,1.7nm,0.7s,mb4.4							
YBH	Yreka Blue Hor	88.76	44	P		P	02 19 31.6	+0.5
	comp=Z,1.7nm,0.8s,mb4.4,baz=148,slow=4.7,SNR=4.9							
HUMO	Hull Mountain	89.05	43	*e*P		P	02 19 32.9	+0.4
	comp=Z,1.7nm,0.8s,mb4.4							
SONM	Songino Array	89.07	323	P		P	02 19 32.5	+0.1
	comp=Z,0.9nm,0.8s,mb4.2,baz=151,slow=3.4,SNR=4.3							
PAHR	Pah Rah Range	89.98	47	*e*P		P	02 19 36.8	0.0
	comp=Z,3.9nm,1.0s,mb4.7							
NVAR	Mina Array Bea	90.13	48	P		P	02 19 37.6	0.0
	comp=Z,1.9nm,0.7s,mb4.5,baz=226,slow=8.6,SNR=11							
GLA	Glamis	90.27	54	*e*P		P	02 19 38.5	+0.1
GLA				pmax		pmax		
	comp=Z,3.0nm,0.6s,mb4.8							
GLA	Glamis	90.27	54	*e*P		P	02 19 38.5	+0.1
	comp=Z,3.3nm,0.6s,mb4.8							
TPNV	Topopah Spring	90.92	50	*e*P		P	02 19 41.3	0.0
TPNV				pmax		pmax		
	comp=Z,2.0nm,0.8s,mb4.5							
TPNV	Topopah Spring	90.92	50	*e*P		P	02 19 41.3	0.0
	comp=Z,1.7nm,0.8s,mb4.4							
LDFC	Landfair	90.93	53	*e*P		P	02 19 41.3	-0.1
	comp=Z,5.9nm,0.9s,mb4.9							
GNW	Green Mountain	91.64	39	*e*P		P	02 19 43.1	-1.3
	comp=Z,1.6nm,0.6s,mb4.5							
WUAZ	Wupatki	93.89	53	*e*P		P	02 19 55.3	+0.2
	comp=Z,2.1nm,0.8s,mb4.6							
ARCES	ARCESS Array B	127.23	345	PKP		PKPdf	02 25 39.2	-1.8
	comp=Z,4.5nm,1.0s,baz=94,slow=2.7,SNR=5.5							
ARCES	ARCESS Array B	127.23	345	PKP		PKPdf	02 25 39.2	-1.8
PSZ	Piszkesteto	144.00	325	*e*PKIKP		PKPdf	02 26 13.3	+0.5
CLL	Collm	144.97	334	*e*PKPdf		PKPdf	02 26 13.0	-1.3
SANT	Santorini	145.34	303	*e*PKPbc		PKPbc	02 26 14.2	-1.2
ESK	Eskdalemuir	145.72	353	*e*PKIKP		PKPdf	02 26 14.9	-0.6
GEC2	GERESS Array S	146.49	331	*e*PKIKP		PKPdf	02 26 16.9	-0.1
GERES	GERESS Array B	146.49	331	PKPbc		PKPbc	02 26 17.9	-0.5
	comp=Z,0.9nm,0.5s,baz=46,slow=3.9,SNR=6.4							
WLF	Walferdange	148.86	339	*e*PKIKP		PKPdf	02 26 22.3	+1.4
GIVF	Givet	148.91	341	*e*PKP1		PKPbc	02 26 24.8	-0.2
BFO	Black Forest	149.18	335	*e*PKHKP			02 26 22.0	
CDF	Champ du Feu	149.52	336	*e*PKP1		PKPbc	02 26 25.8	-0.7
HINF	Hinteralfeld	150.17	336	*e*PKP1		PKPbc	02 26 27.3	-0.8
HAU	Haudompre	150.20	337	*e*PKP1		PKPbc	02 26 27.8	-0.4
CABF	La Chapelle	151.46	336	*e*PKP1		PKPbc	02 26 31.1	-0.1
FLN	La Foliniere	151.57	346	*e*PKP1		PKPbc	02 26 30.3	-1.1
LDF	La Druitiere	151.64	345	*e*PKP1		PKPbc	02 26 30.7	-0.9
LOR

1.6nm,0.5s,mb4.2
KCPM **Cahto Peak** 87.03 45 *e*P P 02 28 07.6 +0.6
SAO **San Andreas Ge** 87.05 49 *e*P P 02 28 07.1 -0.1
6.5nm,1.0s,mb4.8
SNAA **Sanae** 87.34 183 *e*P P 02 28 06.0 -2.1
4.3nm,1.1s,mb4.6
WDC **Whiskeytown Da** 88.17 45 *e*P P 02 28 13.3 +0.8
1.1nm,0.6s,mb4.3
CMB **Columbia Colle** 88.39 48 *e*P P 02 28 13.2 -0.4
2.1nm,0.8s,mb4.4
YAK **Yakutsk** 88.60 343 *e*P P 02 28 13.1 -0.9
23nm,0.6s,mb5.7
ISA **Isabella** 88.65 51 *e*P P 02 28 14.6 -0.3
1.1nm,0.6s,mb4.4
HUMO **Hull Mountain** 88.91 43 *e*P P 02 28 15.8 -0.1
2.4nm,0.9s,mb4.5
PFO **Pinyon Flat Ob** 89.23 53 *e*P P 02 28 17.3 -0.3
2.0nm,0.8s,mb4.5
PAHR **Pah Rah Range** 89.87 47 *e*P P 02 28 21.8 +1.3
2.4nm,0.8s,mb4.6
NVAR **Mina Array Bea** 90.03 49 P P 02 28 21.4 +0.1
1.3nm,0.6s,mb4.4,baz=227,slow=8.5,SNR=9.5
TPNV **Topopah Spring** 90.83 51 *e*P P 02 28 24.8 -0.3
2.6nm,1.0s,mb4.5
WVOR **Wild Horse Val** 91.63 45 *e*P P 02 28 28.8 +0.2
2.9nm,1.1s,mb4.5
ARCES **ARCESS Array B** 126.82 345 PKP PKPdf 02 34 24.4 -0.1
3.9nm,1.0s,baz=74,slow=3.2,SNR=3.1
GERES **GERESS Array B** 146.07 331 PKPbc PKPbc 02 35 01.5 +0.1
0.9nm,0.6s,baz=46,slow=3.9,SNR=6.5

IDC 28 02:18:57.1±2.1, 2116S×16931E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.9/14, mbtmp3.9/4, Error ellipse: s-maj=128.1km s-min=28.4km az=154.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**26.92**	**241**	P	P	02 24 40.7	+0.6
	4.0nm,1.0s,baz=78,slow=7.6,SNR=3.0						
WRA	**Warramunga Arr**	**32.73**	**266**	P	P	02 25 31.3	-0.5
	0.4nm,0.8s,baz=96,slow=8.1,SNR=4.3						
ASAR	**Alice Springs**	**32.77**	**259**	P	P	02 25 31.9	-0.3
	1.1nm,0.8s,baz=84,slow=9.1,SNR=4.9						
NVAR	**Mina Array Bea**	**90.02**	**48**	P	P	02 31 58.5	-0.2
	0.8nm,0.7s,baz=229,slow=8.8,SNR=7.3						
ARCES	**ARCESS Array B**	**126.93**	**345**	PKP	PKPdf	02 38 01.8	-0.4
	3.6nm,1.0s,baz=46,slow=3.5,SNR=4.2						
GERES	**GERESS Array B**	**146.20**	**331**	PKPbc	PKPbc	02 38 39.8	+0.5
	0.8nm,0.5s,baz=24,slow=2.2,SNR=7.6						

*IDC **28** 02:20:02.5±0.5, 2123S×16938E, h0km, mb4.7/20, mb1 4.8/22, mb1mx4.8/23, mbtmp4.7/22, ML3.8/1, MS5.2/2, Ms1 5.2/2, ms1mx4.0/27, Error ellipse: s-maj=18.2km s-min=14.3km az=150.0*

*LDG **28** 02:20:03.6±0.4, 2136S×16901E, h10km, Mb5.0/3, Error ellipse: s-maj=35.0km s-min=4.9km az=156.0*

*NEIC **28** 02:20:04.0±0.2, 2125S×16939E, h10km, mb5.1/41, Error ellipse: s-maj=8.5km s-min=4.8km az=154.0*

*ISCJB **28** 02:20:04.4±3.3, 2131S±006×16936E±005, h21km±23km, mb4.9/67, MS5.3/6, Error ellipse: s-maj=10.0km s-min=7.1km az=166.8*

*BJI **28** 02:20:05.3, 2090S×16993E, h26km, mB5.1, mb4.9, Ms5.6, Msz5.4*

*MOS **28** 02:20:06.5±1.2, 2127S×16937E, h33km, mb5.3/33, Error ellipse: s-maj=12.0km s-min=9.3km az=160.1*

ISC 28 02:20:06.6±3.4, 2132S±006×16939E±005, h25km±24km, h26km±1.8km: pP-P, n474, σ0s54/394, mb4.9/67, MS5.3/6, 140C-123D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.84**	**254**	*e*P	Pn	02 20 49.0	-1.4
DZM				*e*S	Sn	02 21 18.3	-5.5
URZ	**Urewera**	**18.15**	**160**	P	Pn	02 24 18.6	+1.7
	0.3nm,0.3s,baz=39,slow=5.0,SNR=4.9						
ARMA	**Armidale**	**18.36**	**237**	*e*P	Pn	02 24 20.5	+1.1
AFI	**Afiamalu**	**19.39**	**71**	P	Pn	02 24 30.8	-1.2
	baz=285,slow=14,SNR=5.9						
CTA	**Charters Tower**	**21.68**	**269**	*e*P	P	02 24 56.3	+0.7
	34nm,0.9s,mb4.8						
CTA	**Charters Tower**	**21.68**	**269**	P	P	02 24 56.6	+1.0
	36nm,0.8s,mb4.8,baz=94,slow=11,SNR=51						
CTA				LR	LR	02 31 10.7	
	comp=Z,3μm,18.7s,MS4.7,baz=83,slow=31						
CTA	**Charters Tower**	**21.68**	**269**	*e*P	P	02 24 56.3	+0.7
CTA				pmax	pmax		
	comp=Z,34nm,0.9s						
CTAO	**Charters Tower**	**21.68**	**269**	*e*P	P	02 24 56.9	+1.3
CNB	**Canberra Magne**	**22.42**	**227**	*e*P	P	02 25 05.0	+1.6
CAN	**Canberra**	**22.67**	**228**	*e*P	P	02 25 07.6	+1.5
PMG	**Port Moresby**	**24.45**	**296**	*e*P	P	02 25 23.8	+0.2
PMG				pmax	pmax		
	comp=Z,37nm,0.9s						
PMG	**Port Moresby**	**24.45**	**296**	*e*P	P	02 25 23.8	+0.2
	comp=Z,37nm,0.9s,mb4.8						
COEN	**Coen**	**26.01**	**282**	*e*P	P	02 25 38.3	+0.5
	comp=Z,14nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**26.92**	**241**	*e*P	P	02 25 46.1	+0.3
	comp=Z,18nm,1.1s,mb4.5						
STKA	**Stephens Creek**	**26.92**	**241**	P	P	02 25 46.0	+0.2
	comp=Z,14nm,0.8s,mb4.5,baz=68,slow=9.6,SNR=13						
WB2	**Warramunga Arr**	**32.78**	**266**	*e*P	P	02 26 36.2	-1.7
WRAB	**Tennant Creek**	**32.79**	**266**	*e*P	P	02 26 36.4	-1.6
WRAB				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.0						
WRAB	**Tennant Creek**	**32.79**	**266**	*e*P	P	02 26 36.4	-1.6
	comp=Z,28nm,1.4s,mb5.0						
WRA	**Warramunga Arr**	**32.80**	**266**	P	P	02 26 36.5	-1.6
	comp=Z,5.3nm,0.9s,mb4.5,baz=95,slow=9.6,SNR=16						
ASAR	**Alice Springs**	**32.82**	**259**	P	P	02 26 37.4	-0.9
	comp=Z,15nm,0.9s,mb4.9,baz=84,slow=8.9,SNR=48						
ASAR				PcP	PcP	02 29 22.8	-0.2
	comp=Z,0.9nm,0.8s,baz=98,slow=4.8,SNR=3.8						
FITZ	**Fitzroy Crossi**	**41.22**	**267**	P	P	02 27 49.4	-0.2
	comp=Z,16nm,0.9s,mb4.7,baz=125,slow=10,SNR=18						
FITZ	**Fitzroy Crossi**	**41.22**	**267**	*e*P	P	02 27 48.8	-0.8
	comp=Z,52nm,1.1s,mb5.1						
MBWA	**Marble Bar**	**46.13**	**261**	*e*P	P	02 28 28.1	-1.0
	comp=Z,34nm,1.0s,mb5.2						
KLBR	**Kellerberrin**	**46.98**	**246**	*e*P	P	02 28 34.4	-1.3
	comp=Z,17nm,0.8s,mb5.0						
NWAO	**Narrogin (SRO)**	**47.42**	**244**	P	P	02 28 39.1	-0.1
	comp=Z,13nm,0.8s,mb4.9,baz=62,slow=7.7,SNR=2.8						
NWAO	**Narrogin (SRO)**	**47.42**	**244**	*e*P	P	02 28 38.4	-0.7
NWAO				pmax	pmax		
	comp=Z,25nm,1.1s						
NWAO	**Narrogin (SRO)**	**47.42**	**244**	*e*P	P	02 28 38.4	-0.7
	comp=Z,25nm,1.1s,mb5.0						
SBA	**Scott Base**	**56.60**	**181**	*e*P	P	02 29 46.7	-0.1
SBA				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
SBA	**Scott Base**	**56.60**	**181**	*e*P	P	02 29 46.7	-0.1
	comp=Z,18nm,1.1s,mb5.0						
CASY	**Casey**	**58.29**	**204**	*e*P	P	02 29 58.2	-0.6
MJAR	**Matsushiro Arr**	**64.65**	**333**	P	P	02 30 41.3	-0.8
	comp=Z,2.7nm,0.8s,mb4.3,baz=155,slow=6.9,SNR=3.2						
QSPA	**South Pole Qui**	**68.75**	**180**	P	P	02 31 08.5	+0.8
	comp=Z,7.2nm,1.0s,mb4.5,baz=17,slow=3.4,SNR=8.3						
ASAJ	**Asahikawa**	**69.59**	**340**	P	P	02 31 13.7	+0.4
	comp=Z,16nm,0.8s,mb5.0,baz=218,slow=12,SNR=6.5						
KSRS	**Korea Array**	**70.30**	**326**	P	P	02 31 17.2	-0.6
	comp=Z,1.0nm,0.4s,mb4.1,baz=143,slow=4.4,SNR=3.5						
NJ2	**Nanjing**	**71.80**	**316**	*e*P	P	02 31 28.0	+0.9
NJ2				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.3						
YSS	**Yuzh-Sakhalins**	**72.08**	**341**	*e*P	P	02 31 28.5	+0.1
YSS				pmax	pmax		
	comp=Z,41nm,1.3s,mb5.2						
PETK	**Petropavlovsk-**	**74.81**	**353**	P	P	02 31 44.0	-0.3
	comp=Z,5.3nm,0.8s,mb4.5,baz=140,slow=7.2,SNR=5.7						
PETK	**Petropavlovsk-**	**74.81**	**353**	P	P	02 31 44.0	-0.3
MDJ	**Mudanjiang**	**75.01**	**332**	P	P	02 31 47.0	+1.3
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.5						
HABR	**Khabarovsk**	**75.96**	**337**	*e*P	P	02 31 49.1	-2.0
HABR				*e*		02 31 59.4	
HABR				*e*		02 36 25.5	
HABR				*e*		02 41 47.6	
HABR				*e*		02 42 01.0	
HABR				*e*		02 49 47.1	
MAW	**Mawson**	**76.57**	**202**	P	P	02 31 53.8	-0.6
	comp=Z,2.3nm,0.7s,mb4.2,baz=95,slow=12,SNR=4.7						
MAW	**Mawson**	**76.57**	**202**	*e*P	P	02 31 54.9	+0.5
MAW				pmax	pmax		
	comp=Z,18nm,1.3s						
MAW	**Mawson**	**76.57**	**202**	*e*P	P	02 31 54.9	+0.5
	comp=Z,18nm,1.3s,mb4.8						
GYA	**Guiyang**	**77.13**	**305**	⇑*i*P	P	02 31 59.5	+1.3
GYA				PP	PP	02 34 55.3	+3.0
GYA				S	S	02 41 48.0	+2.0
GYA				SKS		02 42 07.0	
GYA				SS	SS	02 46 49.5	+5.2
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				LR	LR		
	comp=N,670nm,18.9s,MS5.0						
GYA				LR	LR		
	comp=E,310nm,19.2s,MS5.0						
GYA				LR	LR		
	comp=Z,750nm,18.7s,MS5.0						
BJI	**Beijing**	**78.64**	**321**	P	P	02 32 07.8	+1.5
BJI				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.5						
BJI	**Beijing**	**78.64**	**321**	P	P	02 32 07.8	+1.5
	comp=Z,7.0nm,1.2s,mb4.5						
CMAR	**Chiang Mai Arr**	**79.49**	**295**	P	P	02 32 12.3	+0.8
	comp=Z,1.1nm,0.3s,mb4.3,baz=135,slow=5.7,SNR=5.2						
CMAR	**Chiang Mai Arr**	**79.49**	**295**	*i*P	P	02 32 12.1	+0.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMI	**Kunming**	**79.49**	**302**	P	P	02 32 13.5	+2.2
KMI				PP	PP	02 35 16.5	+4.3
KMI				S	S	02 42 15.5	+4.0
KMI				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.7						
KMI				LR	LR		
	comp=N,3μm,13.4s,MS5.9						
KMI				LR	LR		
	comp=E,2μm,12.7s,MS5.9						
KMI				LR	LR		
	comp=Z,2μm,14.7s,MS5.7						
KMI	**Kunming**	**79.49**	**302**	P	P	02 32 13.4	+2.1
KMI				*SP	sP	02 32 17.9	-4.5
KMI						02 35 16.4	
KMI				S	S	02 42 15.5	+4.0
KMI				*SS	sS	02 42 19.7	-5.2
KMI				SS	SS	02 47 26.3	+6.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
KMI				MLR	MLR		
	comp=Z,2μm,14.7s,MS5.7						
KMI	**Kunming**	**79.49**	**302**	P	P	02 32 13.4	+2.1
	comp=Z,9.0nm,0.9s,mb4.7						
KMI				pP	pP	02 32 16.5	-3.0
KMI				sP	sP	02 32 17.9	-4.5
KMI				PP	PP	02 35 16.4	+4.2
KMI				S	S	02 42 15.5	+4.0
KMI				sS	sS	02 42 19.7	-5.2
KMI				SS	SS	02 47 26.3	+6.3
KMI				LR	LR		
	comp=Z,2μm,14.7s,MS5.7						
CHTO	**Chiang Mai**	**79.65**	**295**	*e*P	P	02 32 13.6	+1.3
CHTO				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
CHTO	**Chiang Mai**	**79.65**	**295**	*e*P	P	02 32 13.6	+1.3
	comp=Z,18nm,1.2s,mb4.9						
CD2	**Chengdu**	**81.61**	**308**	P	P	02 32 24.3	+1.7
CD2				AP	pP	02 32 29.5	-1.2
CD2				XP	sP	02 32 32.0	-1.7
CD2				PP	PP	02 35 34.5	+4.9
CD2				S	S	02 42 37.3	+3.8
CD2				XS	sS	02 42 45.0	-2.0
CD2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
CD2				LR	LR		
	comp=N,380nm,16.8s,MS5.0						
CD2				LR	LR		
	comp=E,450nm,15.4s,MS5.0						
CD2				LR	LR		
	comp=Z,350nm,16.2s,MS4.8						
HHC	**Hu-ho-hao-te**	**81.89**	**320**	*e*P	P	02 32 24.3	+0.5
HHC				PP	PP	02 35 35.0	+3.3
HHC				S	S	02 42 37.5	+1.6
HHC				AMB	AMB		
	comp=Z,21nm,0.7s,mb5.2						
HHC				LR	LR		
	comp=N,3μm,16.0s,MS5.9						
HHC				LR	LR		
	comp=E,3μm,17.0s,MS5.9						
HHC				LR	LR		
	comp=Z,2μm,16.9s,MS5.5						
SYO	**Syowa Base**	**82.99**	**196**	⇑*e*P	P	02 32 27.8	-1.4
LZH	**Lanzhou**	**84.22**	**312**	*e*P	P	02 32 36.8	+0.8
LZH				AP	pP	02 32 44.0	-0.2
LZH				XP	sP	02 32 47.8	+0.7
LZH				PP	PP	02 35 53.5	+2.5
LZH				AMB	AMB		
	comp=Z,14nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,59nm,5.3s						
LZH	**Lanzhou**	**84.22**	**312**	*e*P	P	02 32 36.8	+0.8
LZH				*SP	sP	02 32 47.7	+0.6
LZH						02 35 53.5	
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
LZH	**Lanzhou**	**84.22**	**312**	*e*P	P	02 32 36.8	+0.8
	comp=Z,14nm,1.0s,mb5.0						
LZH				pP	pP	02 32 43.9	-0.3
LZH				sP	sP	02 32 47.7	+0.6
LZH				PP	PP	02 35 53.5	+2.5
CLNS	**Chul'man**	**86.36**	**337**	*e*P	P	02 32 53.3	+7.2
CLNS				pmax	pmax		
	comp=E,7.0nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.5						
CLNS				pmax	pmax		
	comp=N,16nm,1.2s						
SNCC	**San Nicolas Is**	**86.78**	**53**	⇑P	P	02 32 49.3	+0.5
	baz=87						
MAIT	**Maitri**	**86.83**	**187**	*e*P	P	02 32 48.3	-0.1
JRSC	**Jasper Ridge**	**86.84**	**48**	⇓P	P	02 32 49.5	+0.5
	baz=87						
V03C	**Hunter Liggett**	**86.86**	**49**	⇑P	P	02 32 49.8	+0.6
	baz=87						
HOPS	**Hopland**	**87.07**	**46**	⇑P	P	02 32 50.3	+0.3
	baz=87						
HOPS	**Hopland**	**87.07**	**46**	*e*P	P	02 32 50.4	+0.3
	comp=N,21nm,1.2s,mb5.2						
SAO	**San Andreas Ge**	**87.08**	**49**	*e*P	P	02 32 50.5	+0.3
KCPM	**Cahto Peak**	**87.08**	**45**	*e*P	P	02 32 50.3	+0.2
SNAA	**Sanae**	**87.10**	**182**	*e*P	P	02 32 47.8	-2.0
SNAA				*e*		02 32 53.0	
SNAA				*e*	pP	02 32 56.8	-1.2
SNAA	**Sanae**	**87.10**	**182**	*e*P	P	02 32 48.6	-1.2
SNAA				pmax	pmax		
	comp=Z,17nm,1.2s						
SNAA	**Sanae**	**87.10**	**182**	*e*P	P	02 32 48.6	-1.2
	comp=Z,17nm,1.2s,mb5.2						
O01C	**Eel River Cons**	**87.16**	**45**	⇑P	P	02 32 50.5	+0.1
	baz=87						
CVS	**Carmenet Viney**	**87.16**	**47**	⇑P	P	02 32 50.5	0.0
	baz=87						
KIPM	**Iron Peak**	**87.21**	**45**	*e*P	P	02 32 51.0	+0.3
PKD	**Parkfield**	**87.32**	**50**	⇑P	P	02 32 51.6	+0.2
	baz=88						
PKM	**Peak Mountain**	**87.34**	**51**	⇑P	P	02 32 52.0	+0.5
	baz=88						
U04C	**Hernandez Rese**	**87.35**	**49**	⇓P	P	02 32 51.8	+0.2
	baz=88						
MNRC	**McLaughlin Nat**	**87.44**	**46**	⇓P	P	02 32 52.2	+0.4
	baz=88,SNR=6.7						
KHMM	**Horse Mountain**	**87.59**	**44**	*e*P	P	02 32 53.5	+1.0
GASB	**Alder Springs**	**87.64**	**46**	⇑P	P	02 32 53.6	+0.8
	baz=88,SNR=8.3						
VNA3	**Neumayer Olymp**	**87.68**	**180**	*e*P	P	02 32 52.0	-0.6
VNA3				*e*		02 32 56.6	
VNA3				*e*	pP	02 33 00.5	-0.3
N02C	**Big Bar**	**87.84**	**44**	⇓P	P	02 32 54.2	+0.4
	baz=88,SNR=7.2						
O02C	**Red Bluff**	**87.85**	**45**	⇓P	P	02 32 54.2	+0.4
	baz=88,SNR=15						
VNA2	**Neumayer--Watz**	**87.98**	**181**	*e*P	P	02 32 53.5	-0.5
	baz=187,slow=5.1						
VNA2				*e*		02 32 57.9	
VNA2				*e*	pP	02 33 02.6	+0.4
S05C	**Merced**	**88.14**	**49**	⇑P	P	02 32 55.4	+0.1
	baz=88,SNR=7.3						
ARVC	**Arvin**	**88.17**	**51**	⇑P	P	02 32 55.3	-0.1
	baz=88						
WDC	**Whiskeytown Da**	**88.22**	**45**	*e*P	P	02 32 55.8	+0.3
WDC				pmax	pmax		
	comp=Z,24nm,1.5s,mb5.2						
WDC	**Whiskeytown Da**	**88.22**	**45**	⇑P	P	02 32 55.5	-0.1
	baz=88,SNR=11						
WDC	**Whiskeytown Da**	**88.22**	**45**	*e*P	P	02 32 55.8	+0.3
	comp=Z,24nm,1.5s,mb5.2						
VNA1	**Neumayer--Stat**	**88.27**	**181**	*e*P	P	02 32 54.9	-0.5
VNA1				*e*	pP	02 33 03.8	+0.2
OHCM	**Honcut**	**88.31**	**46**	*e*P	P	02 32 55.6	-0.4
MWC	**Mount Wilson**	**88.32**	**52**	*e*P	P	02 32 55.8	-0.4
MWC				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.1						
MWC	**Mount Wilson**	**88.32**	**52**	*e*P	P	02 32 55.8	-0.4
	comp=Z,6.5nm,0.6s,mb5.0						
VES	**Vestal, Richgr**	**88.32**	**50**	⇑P	P	02 32 56.0	-0.1
	baz=88						
ORV	**Oroville**	**88.41**	**46**	⇑P	P	02 32 56.1	-0.4
	baz=89,SNR=9.4						
T06C	**Millerton Lake**	**88.42**	**49**	⇓P	P	02 32 56.1	-0.5
	baz=89,SNR=13						
M02C	**Callahan**	**88.42**	**44**	⇑P	P	02 32 56.6	+0.1
	baz=89,SNR=12						
109C	**Camp Elliot, M**	**88.43**	**54**	⇑P	P	02 32 56.0	-0.7
	baz=89						
CMB	**Columbia Colle**	**88.43**	**48**	*e*P	P	02 32 56.6	0.0
CMB				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.1						
CMB	**Columbia Colle**	**88.43**	**48**	⇑P	P	02 32 56.5	-0.1
	baz=89,SNR=16						
CMB	**Columbia Colle**	**88.43**	**48**	*e*P	P	02 32 56.5	-0.1
	comp=Z,13nm,1.0s,mb5.1						
LAVA	**Lava Cap Winer**	**88.53**	**47**	⇓P	P	02 32 56.8	-0.3
	baz=89,SNR=5.4						
ULN	**Ulaanbaatar**	**88.61**	**323**	*e*P	P	02 32 57.4	+0.2
ULN				*e*	pP	02 33 06.2	+0.8
ULN				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.9						
ULN	**Ulaanbaatar**	**88.61**	**323**	*e*P	P	02 32 57.4	+0.2
	comp=Z,8.3nm,1.4s,mb4.9						
ULN				*e*	pP	02 33 06.2	+0.7
BFSC	**Mount Baldy St**	**88.62**	**52**	⇑P	P	02 32 57.1	-0.5
	baz=89						
GTA	**Gaotai**	**88.65**	**313**	*e*P	P	02 32 58.3	+0.7
GTA				AP	pP	02 33 04.0	-1.9
GTA				XP	sP	02 33 06.5	-2.3
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.6						
BAR	**Barrett**	**88.66**	**54**	*e*P	P	02 32 57.3	-0.5
	comp=Z,5.1nm,1.0s,mb4.8						
EDW2	**Edwards Air Fo**	**88.67**	**52**	⇓P	P	02 32 57.5	-0.3
	baz=89,SNR=5.8						
ISA	**Isabella**	**88.67**	**51**	*e*P	P	02 32 57.2	-0.6
ISA				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.3						
ISA	**Isabella**	**88.67**	**51**	⇓P	P	02 32 57.3	-0.5
	baz=89,SNR=10						
ISA	**Isabella**	**88.67**	**51**	*e*P	P	02 32 57.2	-0.6
	comp=Z,18nm,1.2s,mb5.3						
MURC	**Murrieta**	**88.67**	**53**	⇓P	P	02 32 57.6	-0.3
	baz=89						
YBH	**Yreka Blue Hor**	**88.69**	**44**	P	P	02 32 58.3	+0.5
	comp=Z,5.4nm,0.9s,mb4.9,baz=189,slow=2.4,SNR=13						
YBH	**Yreka Blue Hor**	**88.69**	**44**	⇓P	P	02 32 57.6	-0.2
	baz=89,SNR=8.2						
K02A	**Glendale**	**88.71**	**43**	⇓P	P	02 32 58.0	+0.1
	baz=89						
S06C	**San Francisco**	**88.73**	**48**	⇑P	P	02 32 57.5	-0.5
	baz=89,SNR=10						
HELL	**Mitchell Peak**	**88.75**	**50**	⇑P	P	02 32 57.6	-0.5
	baz=89,SNR=8.8						
KCC	**Kaiser Creek**	**88.84**	**49**	⇓P	P	02 32 58.0	-0.5
	baz=89,SNR=7.5						
M03C	**McCloud**	**88.84**	**45**	⇑P	P	02 32 58.4	-0.1
	baz=89,SNR=8.4						
P05C	**Yuba Gap, Truc**	**88.89**	**47**	⇑P	P	02 32 58.8	+0.1
	baz=89,SNR=9.5						
YAK	**Yakutsk**	**88.89**	**342**	*e*P	P	02 33 04.8	+6.6
YAK				e*PP	pP	02 33 11.9	+5.5
YAK				*e*		02 36 37.4	
YAK				*e*S	S	02 43 35.3	-8.7
YAK				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.5						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.3						
YAK				pmax	pmax		
	comp=N,9.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.4s						
YAK				smax			
	comp=N,3μm,0.4s						
YAK				smax			
	comp=E,621nm,0.3s						
MONP	**Monument Peak**	**88.94**	**54**	⇓P	P	02 32 59.2	0.0
	baz=89,SNR=9.4						
SONM	**Songino Array**	**88.96**	**323**	P	P	02 32 59.1	+0.2
	comp=E,1.8nm,0.8s,mb4.5,baz=138,slow=5.1,SNR=7.5						
R05C	**Kirkwood Meado**	**88.96**	**48**	⇑P	P	02 32 59.4	+0.3
	baz=89,SNR=7.3						
J02A	**Umpqua**	**88.97**	**42**	⇓P	P	02 32 59.7	+0.7
	baz=89						
HUMO	**Hull Mountain**	**88.97**	**43**	⇓P	P	02 32 59.4	+0.4
	baz=89,SNR=6.4						
HUMO	**Hull Mountain**	**88.97**	**43**	*e*P	P	02 32 59.6	+0.6
	comp=E,33nm,1.6s,mb5.4						
O05C	**Quincy**	**89.00**	**46**	⇓P	P	02 32 59.3	+0.1
	baz=89						
O04C	**Chester**	**89.06**	**46**	⇑P	P	02 32 59.5	0.0
	baz=89						
DVTC	**Desert V Tower**	**89.08**	**54**	⇑P	P	02 32 59.7	-0.1
	baz=89,SNR=5.4						
BILL	**Bilibino**	**89.12**	**359**	*e*P	P	02 32 57.7	-1.4
BILL				*e*		02 33 07.4	
BILL				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.3						
I02A	**Mapleton**	**89.14**	**42**	⇓P	P	02 33 00.6	+0.8
	baz=89						
PFO	**Pinyon Flat Ob**	**89.23**	**53**	P	P	02 33 00.2	-0.3
	comp=Z,5.7nm,1.0s,mb4.8,baz=268,slow=2.8,SNR=5.1						
PFO	**Pinyon Flat Ob**	**89.23**	**53**	*e*P	P	02 33 00.0	-0.5
PFO				pmax	pmax		
	comp=Z,35nm,1.8s,mb5.4						
PFO	**Pinyon Flat Ob**	**89.23**	**53**	⇑P	P	02 33 00.0	-0.5
	baz=89,SNR=5.4						
PFO	**

baz=90,SNR=6.1
J04A Umpqua Nationa 89.83 43 ⇑P P 02 33 03.5 +0.5
baz=90,SNR=6.0
O06A Flanigan 89.83 46 ⇑P P 02 33 03.3 +0.2
baz=90,SNR=18
HEC Hector,Ludlow 89.86 52 ⇑P P 02 33 03.0 -0.4
baz=90,SNR=10.0
M06C Likely Place G 89.89 45 ⇓P P 02 33 03.4 0.0
baz=90,SNR=11
PAHR Pah Rah Range 89.91 47 *eP* P 02 33 03.7 +0.2
comp=Z,20nm,1.0s,mb5.4
I04A Tendick Farm, 89.91 42 ⇑P P 02 33 03.3 -0.1
baz=90
BC3 Big Chuckw Mtn 90.01 54 ⇑P P 02 33 04.2 +0.1
baz=90,SNR=9.8
L05A Lakeview 90.06 44 ⇓P P 02 33 04.5 +0.3
baz=90,SNR=7.0
NVAR Mina Array Bea 90.06 48 P P 02 33 03.0 -1.3
comp=Z,10.0nm,0.8s,mb5.2,baz=227,slow=8.4,SNR=51
GRAC Grapevine Rang 90.07 50 ⇓P P 02 33 04.3 -0.1
baz=90,SNR=15
N06A Buffalo Meadow 90.10 46 ⇓P P 02 33 04.5 +0.1
baz=90,SNR=20
G03A Yamhill 90.14 41 ⇓P P 02 33 05.0 +0.6
baz=90
R08A Mina 90.17 49 ⇑P P 02 33 04.5 -0.3
baz=90,SNR=5.2
112A Yuma 90.19 55 ⇑P P 02 33 05.4 +0.4
baz=90,SNR=7.1
FURC Furnace Creek, 90.20 51 ⇑P P 02 33 04.7 -0.2
baz=90,SNR=12
GLA Glamis 90.22 55 ⇑P P 02 33 05.4 +0.2
baz=90,SNR=8.9
GLA Glamis 90.22 55 *eP* P 02 33 05.8 +0.7
F03A Seaside 90.29 40 ⇓P P 02 33 05.5 +0.4
baz=90
GMRC Granite Mounta 90.34 53 ⇑P P 02 33 05.5 -0.2
baz=90,SNR=8.2
MOD Modoc 90.34 45 ⇑P P 02 33 05.6 +0.2
baz=90
K05A Summer Lake 90.35 44 ⇓P P 02 33 05.8 +0.3
baz=90,SNR=9.3
SHOC Shoshone 90.37 51 ⇑P P 02 33 05.3 -0.5
baz=90,SNR=8.0
J05A Fort Rock 90.40 43 ⇓P P 02 33 06.0 +0.2
baz=91,SNR=23
TUQ Turquoise Moun 90.43 52 ⇑P P 02 33 05.8 -0.3
baz=91,SNR=12
IRM Iron Mountain 90.45 53 ⇑P P 02 33 06.1 -0.1
baz=91,SNR=10
O07A Toulon 90.47 47 ⇓P P 02 33 05.9 -0.2
baz=91,SNR=17
H04A Detroit Lake 90.50 42 ⇓P P 02 33 06.2 0.0
baz=91
S09A Goldfield 90.50 49 ⇑P P 02 33 06.0 -0.3
baz=91,SNR=15
Q08A Gabbs 90.52 48 ⇑P P 02 33 06.1 -0.2
baz=91,SNR=14
U10A Ash Meadows, A 90.56 51 ⇑P P 02 33 06.9 +0.3
baz=91,SNR=13
G04A Mulino 90.58 41 ⇑P P 02 33 07.1 +0.6
baz=91
E03A Lebam 90.60 39 ⇑P P 02 33 07.2 +0.6
baz=91,SNR=6.5
TPH Tonopah 90.66 49 *eP* P 02 33 06.7 -0.4
TPH *e* pP 02 33 15.6 +0.3
TPH pmax pmax
comp=Z,25nm,1.4s,mb5.3
TPH Tonopah 90.66 49 *eP* P 02 33 06.7 -0.4
comp=Z,25nm,1.4s,mb5.4
TPH *e* pP 02 33 15.6 +0.3
N07B Gerlach 90.69 46 ⇓P P 02 33 07.0 -0.2
baz=91,SNR=11
Y12C Blythe 90.75 54 ⇓P P 02 33 07.6 0.0
baz=91,SNR=6.3
D03A Wishkah Elem. 90.77 39 ⇓P P 02 33 07.9 +0.5
baz=91
K06A Valley Falls 90.80 44 ⇑P P 02 33 07.7 +0.1
baz=91,SNR=16
I05A Bend 90.81 42 ⇑P P 02 33 08.1 +0.5
baz=91
R09A Tonopah 90.84 49 ⇓P P 02 33 07.7 -0.2
baz=91,SNR=13
M07A Soldier Meadow 90.84 46 ⇑P P 02 33 08.1 +0.2
baz=91,SNR=13
TPNV Topopah Spring 90.86 50 ⇓P P 02 33 08.0 0.0
baz=91,SNR=25
TPNV Topopah Spring 90.86 50 *eP* P 02 33 08.1 +0.1
NLWA Neilton Lookou 90.86 39 ⇑P P 02 33 08.4 +0.7
baz=91
LDFC Landfair 90.88 53 *eP* P 02 33 08.7 +0.6
113A Mohawk Valley, 90.91 55 ⇑P P 02 33 08.2 -0.2
baz=91,SNR=5.2
V11A Goodsprings 90.97 52 ⇓P P 02 33 08.4 -0.2
baz=91
F04A Amboy 90.98 40 ⇑P P 02 33 08.5 +0.2
baz=91
O08A Rochester Mine 91.02 47 ⇑P P 02 33 08.6 -0.1
baz=91,SNR=17
L07A Adell 91.03 45 ⇓P P 02 33 08.9 +0.3
baz=91,SNR=19
S10A Tonopah Range, 91.04 49 ⇓P P 02 33 08.9 +0.1
baz=91,SNR=31
J06A Christmas Vall 91.08 44 ⇓P P 02 33 08.6 -0.3
baz=91,SNR=13
BOD Bodaibo 91.25 334 *eP* P 02 33 07.4 -1.9
BOD pmax pmax
comp=Z,8.0nm,1.6s,mb4.8
N08A GE Springer Mi 91.26 46 ⇓P P 02 33 09.7 -0.1
baz=91,SNR=16
PDMCI Parker Dam,Lak 91.27 54 ⇑P P 02 33 10.0 0.0
baz=91,SNR=10
Y13A Salome 91.30 54 ⇓P P 02 33 10.1 0.0
baz=91,SNR=14
214A Organ Pipe Nat 91.31 56 ⇑P P 02 33 10.2 0.0
baz=91,SNR=6.4
V12A Nelson 91.34 52 ⇑P P 02 33 10.1 -0.2
baz=92,SNR=9.7
I06A Prineville 91.37 43 ⇑P P 02 33 10.4 +0.2
baz=92,SNR=18
M08A Happy Creek Ra 91.40 46 ⇓P P 02 33 11.0 +0.6
baz=92,SNR=8.7
K07A Rock Creek Ran 91.40 44 ⇑P P 02 33 10.5 +0.2
baz=92,SNR=18
R10A Warm Springs 91.41 49 ⇓P P 02 33 10.5 -0.1
baz=92
SHPR Sheep Range 91.45 51 *eP* P 02 33 11.3 +0.5
S11A Rachel 91.52 50 ⇑P P 02 33 10.7 -0.3
baz=92,SNR=8.4
F05A White Salmon 91.54 41 ⇓P P 02 33 11.1 +0.2
baz=92
C04A Brinnon 91.55 39 ⇓P P 02 33 11.0 0.0
baz=92,SNR=5.1
GNW Green Mountain 91.56 39 *eP* P 02 33 10.8 -0.2
comp=Z,11nm,1.0s,mb5.2
Q10A Clear Creek Ra 91.57 49 ⇓P P 02 33 11.1 -0.2
baz=92,SNR=8.2
O09A Fish Creek Ran 91.62 47 ⇓P P 02 33 11.3 -0.2
baz=92,SNR=7.9
X13A Yucca 91.62 53 ⇑P P 02 33 11.1 -0.5
baz=92,SNR=14
H06A Lindquist Farm 91.67 42 ⇑P P 02 33 11.8 +0.3
baz=92,SNR=28
J07A Hines 91.68 44 ⇑P P 02 33 11.8 +0.2
baz=92
WVOR Wild Horse Val 91.68 45 *eP* P 02 33 11.3 -0.4
WVOR pmax pmax
comp=Z,17nm,1.1s,mb5.3
WVOR Wild Horse Val 91.68 45 *eP* P 02 33 11.3 -0.4
comp=Z,16nm,1.1s,mb5.3
E05A Randle 91.69 40 ⇑P P 02 33 11.4 -0.2
baz=92,SNR=7.0
N09A Rock Creek Ran 91.70 47 ⇑P P 02 33 11.9 +0.1
baz=92,SNR=6.0
BMN Battle Mountai 91.72 47 *eP* P 02 33 12.2 +0.3
BMN pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
BMN Battle Mountai 91.72 47 *eP* P 02 33 12.2 +0.3
comp=Z,9.4nm,0.9s,mb5.1
T11A Corn Creek, Al 91.72 51 ⇓P P 02 33 12.3 +0.3
baz=92,SNR=19
G06A Carlson Farm, 91.73 42 ⇓P P 02 33 12.0 +0.1
baz=92
L08A Fields 91.76 45 ⇓P P 02 33 12.2 +0.1
baz=92,SNR=17
Z14A Wintersburg 91.78 55 ⇑P P 02 33 12.2 -0.2
baz=92,SNR=7.9
W13A Hualapai Mount 91.79 53 ⇑P P 02 33 12.2 -0.2
baz=92,SNR=13
D05A Enumclaw 91.86 39 ⇑P P 02 33 13.1 +0.7
baz=92
U12A Valley of Fire 91.87 52 ⇓P P 02 33 12.9 +0.2
baz=92
P10A Eureka 91.88 48 ⇓P P 02 33 12.8 +0.1
baz=92
I07A 91.89 43 ⇓P P 02 33 12.6 0.0
baz=92
F06A Goldendale 91.89 41 ⇑P P 02 33 13.1 +0.5
baz=92
K08A Mann Creek Ran 91.92 45 ⇑P P 02 33 12.8 0.0
baz=92,SNR=11
R11A Troy Canyon, C 91.94 49 ⇑P P 02 33 12.8 -0.2
baz=92,SNR=7.9
Y14A Wickenburg 91.97 54 ⇓P P 02 33 13.0 -0.3
baz=92,SNR=5.7
COLA College 91.98 17 *eP* P 02 33 10.4 -2.1
M09A Marrel Ranch, 92.01 46 ⇓P P 02 33 13.6 +0.3
baz=92,SNR=5.7
V13A Grand Canyon W 92.03 52 ⇓P P 02 33 13.4 -0.1
baz=92,SNR=16
ZAK Zakamensk 92.06 324 *eP* P 02 33 12.6 -0.6
ZAK *e* 02 36 51.5
ZAK pmax pmax
comp=Z,6.0nm,1.3s,mb4.8
115A Sonoran Desert 92.06 56 ⇑P P 02 33 13.7 0.0
baz=92
H07A Lands Inn, Kim 92.09 43 ⇑P P 02 33 13.1 -0.4
baz=92,SNR=12
Q11A Duckwater 92.11 49 ⇓P P 02 33 13.7 -0.1
baz=92,SNR=11
L09A Wilkinson Ranc 92.13 45 ⇑P P 02 33 13.9 +0.1
baz=92
S12A Delamar Landin 92.15 50 ⇑P P 02 33 14.4 +0.4
baz=92,SNR=20
E06A Yakima 92.15 40 ⇓P P 02 33 14.1 +0.3
baz=92
O10A Cortez Mining, 92.15 47 ⇓P P 02 33 13.9 0.0
baz=92
J08A Circle Bar Ran 92.21 44 ⇑P P 02 33 14.3 +0.2
baz=92,SNR=13
X14A Yava 92.28 54 ⇓P P 02 33 14.8 +0.1
baz=92,SNR=11
U13A Pakoon Wash 92.28 52 ⇑P P 02 33 14.7 +0.1
baz=92,SNR=6.8
C05A Tolt Reservoir 92.29 39 ⇓P P 02 33 14.8 +0.5
baz=92
B05A Bryant 92.33 38 ⇓P P 02 33 14.6 0.0
baz=92
G07A Ruggs Ranch, H 92.34 42 ⇓P P 02 33 14.9 +0.2
baz=92,SNR=6.2
P11A Circle Ranch, 92.34 48 ⇑P P 02 33 14.8 0.0
baz=92
216A Three Points, 92.38 57 ⇑P P 02 33 15.3 +0.1
baz=92
K09A Rome 92.40 45 ⇑P P 02 33 15.0 0.0
baz=92,SNR=16
I08A Drewsey 92.41 43 ⇓P P 02 33 15.3 +0.3
baz=93
116A Eloy 92.41 56 ⇑P P 02 33 15.4 +0.1
baz=92,SNR=6.0
W14A Seligman 92.44 53 ⇓P P 02 33 15.8 +0.4
baz=92,SNR=11
Y15A Casa Rosa Ranc 92.49 55 ⇑P P 02 33 15.8 +0.2
baz=93,SNR=19
T13A Saint George 92.58 51 ⇑P P 02 33 16.1 +0.1
baz=93
V14A Boquillas Ranc 92.59 53 ⇓P P 02 33 16.1 0.0
baz=93,SNR=14
H08A Prairie City 92.62 43 ⇑P P 02 33 15.7 -0.3
baz=93
R12A Pony Springs, 92.62 50 ⇓P P 02 33 16.3 +0.1
baz=93,SNR=12
O11A Cowboy Ranch, 92.66 48 ⇓P P 02 33 16.0 -0.3
baz=93,SNR=7.1
M10A I.L. Ranch, Tu 92.67 46 ⇓P P 02 33 16.7 +0.4
baz=93,SNR=11
J09A Fry Pan Ranch, 92.67 44 ⇓P P 02 33 16.3 0.0
baz=93,SNR=15
Q12A Willow Creek R 92.77 49 ⇑P P 02 33 16.7 -0.1
baz=93
X15A Humboldt 92.78 54 ⇓P P 02 33 16.9 0.0
baz=93,SNR=17
217A Green Valley 92.79 57 ⇓P P 02 33 17.0 0.0
baz=93,SNR=6.3
G08A Pilot Rock 92.80 42 ⇑P P 02 33 17.0 +0.2
baz=93,SNR=10
E07A Sunnyside 92.84 41 ⇓P P 02 33 16.7 -0.2
baz=93
S13A Holt Ranch, En 92.85 51 ⇓P P 02 33 17.4 +0.2
baz=93,SNR=12
U14A Mt Trumbull 92.86 52 ⇓P P 02 33 17.5 +0.2
baz=93,SNR=18
P12A McGill 92.90 49 ⇑P P 02 33 17.6 +0.2
baz=93
RSW Rattlesnake Hi 92.92 41 *eP* P 02 33 17.7 +0.4
Z16A Peralta Trail, 92.93 55 ⇓P P 02 33 17.9 +0.1
baz=93
HAWA Hanford 92.95 41 *eP* P 02 33 17.4 -0.1
comp=Z,5.8nm,1.0s,mb5.0
L10A Juniper Basin 92.95 46 ⇓P P 02 33 17.9 +0.3
baz=93,SNR=7.8
I09A Lost Marbles R 92.97 44 ⇓P P 02 33 17.6 0.0
baz=93
K10A MacKenzie Ranc 93.00 45 ⇑P P 02 33 17.8 0.0
baz=93
R13A O'Grain Ranch, 93.02 50 ⇑P P 02 33 18.2 +0.3
baz=93
TUC Tucson 93.02 57 *eP* P 02 33 18.1 -0.1
TUC pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
TUC Tucson 93.02 57 *eP* P 02 33 18.1 -0.1
comp=Z,4.2nm,1.0s,mb4.8
W15A Williams 93.03 53 ⇑P P 02 33 18.7 +0.6
baz=93
ETW Entiat 93.05 40 *eP* P 02 33 17.6 -0.3
Y16A Circle Bar Ran 93.11 55 ⇓P P 02 33 18.8 +0.3
baz=93,SNR=17
M11A Holland Ranch, 93.13 47 ⇑P P 02 33 18.9 +0.5
baz=93
F08A Pendleton 93.14 42 ⇑P P 02 33 18.7 +0.4
baz=93
117A Oracle 93.16 56 ⇓P P 02 33 18.8 0.0
baz=93,SNR=11
T14A Hurricane 93.20 51 ⇓P P 02 33 18.6 -0.2
baz=93,SNR=6.2
ELK Elko 93.21 47 *eP* P 02 33 19.1 +0.3
ELK pmax pmax
comp=Z,6.0nm,1.0s
ELK Elko 93.21 47 *eP* P 02 33 19.1 +0.3
comp=Z,5.5nm,1.0s,mb4.9
E08A Dider Farm, El 93.29 41 ⇑P P 02 33 19.0 0.0
baz=93
318A Bisbee 93.31 58 ⇓P P 02 33 19.4 -0.1
baz=93,SNR=5.9
Q13A Wheeler Ranch, 93.31 49 ⇓P P 02 33 19.4 +0.2
baz=93
H09A Burkee 93.33 43 ⇓P P 02 33 19.3 +0.1
baz=94
O12A Currie 93.35 48 ⇑P P 02 33 19.7 +0.2
baz=94,SNR=7.0
X16A Lo Mia Camp, P 93.35 54 ⇑P P 02 33 19.9 +0.3
baz=94,SNR=17
V15A Kaibab Nationa 93.36 53 ⇑P P 02 33 20.0 +0.4
baz=94,SNR=9.1
N12A Clover Valley, 93.40 47 ⇓P P 02 33 19.5 -0.1
baz=94,SNR=6.5
S14A Cedar City 93.42 51 ⇑P P 02 33 19.9 +0.1
baz=94
L11A Cat Creek Ranc 93.47 46 ⇓P P 02 33 20.0 +0.1
baz=94
P13A Bates Ranch, G 93.52 49 ⇑P P 02 33 20.0 -0.2
baz=94,SNR=7.5
U15A North Rim 93.52 52 ⇑P P 02 33 20.5 +0.1
baz=94,SNR=16
Y17A Roosevelt 93.52 55 ⇑P P 02 33 19.9 -0.5
baz=94,SNR=7.9
G09A Cove 93.53 43 ⇑P P 02 33 20.2 +0.1
baz=94
K11A Parker Ranch, 93.55 45 ⇓P P 02 33 20.8 +0.5
baz=94
W16A Flagstaff 93.55 54 ⇑P P 02 33 20.6 +0.1
baz=94
B07A Winthrop 93.58 39 ⇑P P 02 33 20.6 +0.3
baz=94
BMO Blue Mountains 93.64 43 *eP* P 02 33 19.6 -1.1
BMO pmax pmax
comp=Z,48nm,2.5s,mb5.5
BMO Blue Mountains 93.64 43 *eP* P 02 33 19.6 -1.1
comp=Z,48nm,2.5s,mb5.5
T15A Red Dirt Ranch 93.69 52 ⇑P P 02 33 21.0 -0.1
baz=94
A07A Ashnola River, 93.70 38 ⇑P P 02 33 21.3 +0.5
baz=94
M12A Wells 93.72 47 ⇑P P 02 33 21.3 +0.1
baz=94
118A Homack Ranch, 93.79 57 ⇑P P 02 33 21.6 0.0
baz=94,SNR=5.2
X17A Forest Lakes 93.80 55 ⇓P P 02 33 22.0 +0.3
baz=94,SNR=8.4
WUAZ Wupatki 93.84 53 ⇑P P 02 33 21.7 -0.2
baz=94,SNR=9.8
WUAZ Wupatki 93.84 53 *eP* P 02 33 22.2 +0.3
comp=Z,13nm,1.0s,mb5.3
319A Douglas 93.84 58 ⇑P P 02 33 21.7 -0.2
baz=94
Q14A Sevier Lake (B 93.85 50 ⇓P P 02 33 21.7 -0.1
baz=94,SNR=7.0
H10A Noah's Angus R 93.88 43 ⇓P P 02 33 21.3 -0.5
baz=94,SNR=7.5
DAWY Dawson 93.89 20 *eP* P 02 33 20.0 -1.4
G10A Bishop Farm, J 93.95 43 ⇓P P 02 33 21.7 -0.4
baz=94
MFID Camas Ranch 93.97 45 ⇓P P 02 33 21.9 -0.3
baz=94
B08A Colville Reser 93.99 39 ⇑P P 02 33 22.3 +0.1
baz=94
I11A Placerville 94.09 44 ⇓P P 02 33 22.6 -0.1
baz=94,SNR=8.2
219A White Tail Can 94.10 57 ⇑P P 02 33 23.0 -0.1
baz=94,SNR=6.4
Y18A Canyon Day Jun 94.17 55 ⇓P P 02 33 23.5 +0.1
baz=94,SNR=8.1
F10A Beach Ranch, E 94.19 42 ⇑P P 02 33 22.7 -0.4
baz=94,SNR=8.7
M13A Montello 94.21 47 ⇑P P 02 33 23.1 -0.3
baz=94,SNR=6.1
P14A Drum Mountains 94.24 49 ⇓P P 02 33 23.2 -0.4
baz=94
K12A Draper Farm, C 94.25 46 ⇓P P 02 33 23.6 0.0
baz=94
U16A Tuba City 94.27 53 ⇓P P 02 33 23.9 +0.1
baz=94,SNR=7.1
J12A Stokes Ranch, 94.38 45 ⇓P P 02 33 24.0 -0.1
baz=94,SNR=6.0
H11A Donnelly 94.40 44 ⇓P P 02 33 23.8 -0.4
baz=94
MSU Marysvale 94.44 50 *eP* P 02 33 24.8 +0.3
G11A Walters Elk Ra 94.54 43 ⇑P P 02 33 24.2 -0.6
baz=95
DUG Dugway 94.67 49 *eP* P 02 33 26.0 +0.5
DUG pmax pmax
comp=Z,4.0nm,1.2s,mb4.7
DUG Dugway 94.67 49 *eP* P 02 33 26.0 +0.5
comp=Z,4.0nm,1.2s,mb4.7
F11A Grangeville 94.82 42 ⇑P P 02 33 25.4 -0.7
baz=95
M14A Sheep Mountain 94.83 47 ⇑P P 02 33 25.8 -0.4
baz=95
T17A Navajo Res., N 94.84 52 ⇓P P 02 33 25.8 -0.6
baz=95
R16A Teasdale 94.85 51 ⇑P P 02 33 26.0 -0.4
baz=95
HLID Hailey 94.96 45 ⇑P P 02 33 26.8 0.0
baz=95
HLID Hailey 94.96 45 *eP* P 02 33 26.2 -0.6
comp=Z,2.0nm,1.0s,mb4.5
J13A Cove Ranch, Pi 95.05 45 ⇓P P 02 33 27.0 -0.2
baz=95
H12A Diamond D Ranc 95.08 44 ⇑P P 02 33 27.0 -0.3
baz=95,SNR=7.6
S17A Black Ridge (B 95.09 52 ⇑P P 02 33 26.8 -0.7
baz=95
L14A Malta 95.12 47 ⇓P P 02 33 27.1 -0.4
baz=95
N15A Stansbury Isla 95.15 48 ⇑P P 02 33 27.2 -0.5
baz=95
D11A Klaveano Farm, 95.21 41 ⇓P P 02 33 27.2 -0.7
baz=95
I13A Wildhorse Cree 95.30 45 ⇓P P 02 33 28.7 +0.4
baz=95
U18A Rough Rock, Ch 95.31 53 ⇓P P 02 33 28.3 -0.3
baz=95
F12A Elk City 95.34 43 ⇑P P 02 33 27.6 -0.9
baz=96
K14A Jones Ranch, D 95.37 46 ⇑P P 02 33 28.5 -0.1
baz=96
E12A Beaver Dam Sad 95.42 42 ⇑P P 02 33 28.4 -0.3
baz=96
M15A Larsen Ranch, 95.43 48 ⇓P P 02 33 28.4 -0.6
baz=96
J14A Carey 95.45 46 ⇓P P 02 33 29.3 +0.3
baz=96
R17A Hanksville Air 95.46 51 ⇑P P 02 33 29.2 0.0
baz=96
H13A Challis 95.48 44 ⇓P P 02 33 29.2 +0.1
baz=96
T18A Mexican Hat 95.58 52 ⇑P P 02 33 29.6 -0.2
baz=96,SNR=6.4
C11A Tepee Creek (N 95.61 41 ⇑P P 02 33 29.2 -0.4
baz=96
S18A Hurst Farm, Bl 95.70 52 ⇑P P 02 33 29.4 -0.9
baz=96
I14A Mackay 95.75 45 ⇓P P 02 33 30.5 +0.1
baz=96
K15A Arbon 95.86 46 ⇓P P 02 33 31.2 +0.3
baz=96
SRU San Rafael 95.86 50 ⇓P P 02 33 30.8 -0.2
baz=96
F13A Darby 95.94 43 ⇑P P 02 33 30.6 -0.5
baz=96
H14A Leadore 96.08 44 ⇑P P 02 33 31.4 -0.5
baz=96
O17A Robinson Place 96.13 49 ⇑P P 02 33 32.1 -0.1
baz=96,SNR=11
Q18A Rafter H Ranch 96.14 51 ⇑P P 02 33 32.2 -0.1
baz=96
J15A Blackfoot 96.21 46 ⇓P P 02 33 32.7 +0.2
baz=96
H15A Lima 96.55 45 ⇑P P 02 33 33.9 -0.1
baz=97
K16A Soda Springs 96.56 47 ⇓P P 02 33 33.5 -0.6
baz=97
J16A Bone 96.71 46 ⇑P P 02 33 34.7 -0.1
baz=97
Q19A Hogan Spring (96.71 51 ⇑P P 02 33 34.2 -0.6
baz=97
E14A Clinton 96.73 43 ⇑P P 02 33 34.7 -0.1
baz=97
PLCA Paso Flores 96.89 139 P P 02 33 36.8 +1.0
comp=Z,1.3nm,1.0s,mb4.3,baz=122,slow=10,SNR=4.0
RRI2 Red Ridge 96.94 46 *eP* P 02 33 36.1 +0.3
comp=Z,6.3nm,1.3s,mb4.9
TPAW Teton Pass 97.24 46 *eP* P 02 33 36.8 -0.3
comp=Z,9.9nm,1.2s,mb4.7
ANMO Albuquerque 97.35 55 *eP* P 02 33 37.7 -0.2
ANMO pmax pmax
comp=Z,1.0nm,0.8s
ANMO Albuquerque 97.35 55 *eP* P 02 33 37.7 -0.2
comp=Z,1.5nm,0.8s,mb4.5
H16A Russell Place, 97.50 45 ⇓P P 02 33 38.3 -0.1
baz=98
TXAR Lajitas Array 97.63 62 P P 02 33 39.8 +0.6
comp=Z,0.8nm,0.9s,mb4.2,baz=235,slow=4.4,SNR=6.7
PDAR Pinedale Array 97.92 47 P P 02 33 39.8 -0.5
comp=Z,1.0nm,0.9s,mb4.3,baz=184,slow=3.9,SNR=4.9
WMQ Urumqi 98.74 314 *eP* P 02 33 45.0 +1.1
MDV Middlebury 124.06 51 *ePKPdf* PKPdf 02 39 01.3 -1.5
ARCES ARCESS Array B 127.11 345 PKP PKPdf 02 39 06.5 -1.3
comp=Z,2.7nm,0.5s,baz=77,slow=1.2,SNR=20
KIV Kislovodsk 130.73 310 *ePKIKP* PKPdf 02 39 16.9 +1.4
KIV pmax pmax
comp=Z,9.0nm,1.2s
AKASG Malin Array Be 137.25 323 PKP PKPdf 02 39 27.0 -0.5
comp=Z,0.2nm,0.3s,baz=156,slow=26,SNR=3.0
AKASG Malin Array Be 137.25 323 PKP PKPdf 02 39 27.0 -0.5
NB2 NORSAR Subarra 137.48 344 PKPdf PKPdf 02 39 22.1 -5.5
comp=Z,1.6nm,0.9s,baz=31,slow=1.9
NOA NORSAR Array B 137.48 344 PKP PKPdf 02 39 27.4 -0.2
comp=Z,0.7nm,0.8s,baz=53,slow=2.2,SNR=3.6
KOLS Kolonicke sedl 142.01 324 *ePKP* PKPdf 02 39 37.9 +1.7
PSZ Piszkesteto 143.89 325 *ePKIKP* PKPdf 02 39 37.3 -2.3
MORC Moravsky Berou 143.92 329 *ePKIKP* PKPdf 02 39 38.3 -1.3
VYHS Vyhne 144.10 326 *ePKP* PKPdf 02 39 37.8 -2.1
VYHS *e* 02 39 45.7

DPC	**Dobruska-Polom**	**144.10 330**	*e*PKP	PKPdf	02 39 37.0	-2.9
DPC			*ep*PKP	pPKPdf	02 39 46.0	-2.3
KOLL	**Kolacno**	**144.27 327**	*e*PKP	PKPdf	02 39 40.0	-0.2
PVCC	**Panska Ves**	**144.77 332**	*e*PKP	PKPdf	02 39 39.7	-1.3
PVCC			*ex*	x	02 39 47.0	
BRG	**Berggiesshubel**	**144.78 333**	*e*PKIKP	PKPdf	02 39 39.2	-1.8
BRG			*i*		02 39 48.3	
BRG	**Berggiesshubel**	**144.78 333**	*e*PKP	PKPdf	02 39 39.1	-1.9
	comp=Z,6.8nm,0.8s					
BRG			*i*		02 39 44.3	
	comp=Z,9.9nm,1.2s					
BRG			*i*		02 39 48.3	
	comp=Z,45nm,1.3s					
BRG			*e*		02 43 16.6	
	comp=Z,4.0nm,0.8s					
BRG			*i*		02 47 07.5	
	comp=Z,6.0nm,0.9s					
BRG			*e*		02 48 31.9	
	comp=Z,32nm,1.9s					
BRG						
	comp=N,8µm,19.5s					
BRG						
	comp=E,3µm,21.5s					
BRG						
	comp=Z,8µm,21.4s					
BRG	**Berggiesshubel**	**144.78 333**	*e*PKP	PKPdf	02 39 39.1	-1.9
BRG			*i*		02 39 44.3	
BRG			*i*		02 39 48.3	
BRG			*e*		02 43 16.6	
BRG			*i*		02 47 07.5	
BRG			*e*		02 48 31.9	
CLL	**Collm**	**144.85 334**	*e*PKPdf	PKPdf	02 39 39.0	-2.1
	comp=Z,8.0nm,0.7s					
CLL			*e*PKiKP	PKiKP	02 39 43.0	-1.9
	comp=Z,9.0nm,1.0s					
CLL			*i* pPKiKP		02 39 48.0	
	comp=Z,44nm,1.5s					
CLL			*ex*	x	02 40 14.0	
CLL	**Collm**	**144.85 334**	*e*PKP	PKPdf	02 39 38.0	-3.1
MODS	**Modra-Piesok**	**144.97 327**	*e*PKP	PKPdf	02 39 41.5	+0.1
MODS			*e*		02 39 48.6	
PRU	**Pruhonice**	**145.17 331**	*e*PKP	PKPdf	02 39 40.8	-0.9
PRU			*ex*	x	02 39 48.9	
ZST	**Bratislava**	**145.18 327**	*e*PKP	PKPdf	02 39 41.5	-0.3
ZST			*e*		02 39 41.7	
ZST			*e*		02 39 49.3	
SANT	**Santorini**	**145.26 304**	*e*PKPdf	PKPdf	02 39 40.7	-1.6
ESK	**Eskdalemuir**	**145.60 353**	*e*PKP2	PKPab	02 39 41.2	-1.6
NKC	**Novy Kostel**	**145.90 333**	*e*PKP	PKPdf	02 39 44.9	+1.9
NKC			*ex*	x	02 39 51.7	
MOX	**Moxa**	**145.92 335**	*e*(PKP)	PKiKP	02 39 49.8	+2.7
	comp=Z,56nm,1.9s					
CONA	**Conrad Observa**	**145.98 328**⇑	*i*P	PKPdf	02 39 43.9	+0.7
	comp=Z,11nm,1.1s					
CSNA	**Conrad Observa**	**145.98 328**⇓	*i*P	PKPdf	02 39 44.2	+1.0
	comp=Z,49nm,1.4s					
SKO	**Skopje**	**146.12 315**	*e*PKP	PKPdf	02 39 44.2	+0.6
KHC	**Kasperske Hory**	**146.22 331**	*e*PKP	PKPdf	02 39 44.3	+0.7
KHC			*ex*	x	02 39 52.4	
GEC2	**GERESS Array S**	**146.38 331**	*e*PKP2	PKPbc	02 39 44.3	-0.8
GERES	**GERESS Array B**	**146.38 331**	PKPbc	PKPbc	02 39 44.8	-0.3
	comp=Z,3.7nm,0.7s,baz=32,slow=3.0,SNR=20					
KRUS	**Krusevo**	**146.52 314**	*e*PKP	PKPdf	02 39 43.6	-0.7
GRA1	**Grafenberg Arr**	**146.82 334**	*e*PKP	PKPdf	02 39 45.3	+0.8
GRA1			*ep*PKP	pPKPdf	02 39 54.6	+1.6
GRF	**Grafenberg Arr**	**146.82 334**	*e*PKP	PKPdf	02 39 45.3	+0.8
GRF			*ep*PKP	pPKPdf	02 39 54.6	+1.6
WLF	**Walferdange**	**148.75 339**	*e*PKP2	PKPbc	02 39 51.9	+0.3
GIVF	**Givet**	**148.79 341**	*e*PKP1	PKPbc	02 39 51.1	-0.6
DOU	**Dourbes**	**148.87 341**	PKPbc	PKPbc	02 39 51.2	-0.7
BAIF	**Baives**	**149.02 341**	*e*PKP1	PKPbc	02 39 51.8	-0.4
	comp=Z,97nm,1.5s					
BFO	**Black Forest**	**149.06 335**	*e*PKP2	PKPbc	02 39 51.7	-0.7
FETA	**Feichten**	**149.07 331**⇑	*i*P	PKPdf	02 39 50.3	+1.9
	comp=Z,11nm,1.0s					
FETA	**Feichten**	**149.07 331**⇑	*i*pPKPdf	PKPdf	02 39 50.3	+1.9
	comp=Z,11nm,1.0s					
CDF	**Champ du Feu**	**149.40 336**	*e*PKP1	PKPbc	02 39 52.5	-0.7
	comp=Z,74nm,1.3s					
ECH	**Echery**	**149.61 336**	*e*PKP2	PKPbc	02 39 53.8	0.0
HINF	**Hinteralfeld**	**150.05 336**	*e*PKP1	PKPbc	02 39 53.9	-1.0
	comp=Z,76nm,1.5s					
HAU	**Haudompre**	**150.08 337**	*e*PKP1	PKPbc	02 39 54.2	-0.7
	comp=Z,55nm,1.2s					
TUE	**Stuetta**	**150.11 332**	*e*PKPbc	PKPbc	02 39 54.7	-0.3
TUE			*e*PKPab	PKPab	02 40 02.4	+1.5
MEZF	**Maizieres J'vi**	**150.12 339**	*e*PKP1	PKPbc	02 39 54.8	-0.2
	comp=Z,99nm,1.1s					
TIP	**Timpagrande**	**150.58 313**	*e*PKPbc	PKPbc	02 39 56.5	+0.1
CABF	**La Chapelle**	**151.34 336**	*e*PKP1	PKPbc	02 39 57.7	-0.3
	comp=Z,40nm,1.0s					
FLN	**La Foliniere**	**151.44 346**	*e*PKP1	PKPbc	02 39 57.1	-1.0
	comp=Z,150nm,1.3s					
LDF	**La Druitiere**	**151.52 345**	*e*PKP1	PKPbc	02 39 57.2	-1.1
LOR	**Lormes**	**151.59 339**	*e*PKP1	PKPbc	02 39 57.7	-0.8
	comp=Z,68nm,1.4s					
GRR	**Gorron**	**151.88 346**	*e*PKP1	PKPbc	02 39 58.3	-0.8
SSF	**Saint Saulge**	**151.88 339**	*e*PKP1	PKPbc	02 39 58.5	-0.7
	comp=Z,51nm,1.2s					
LPL	**La Plagne**	**151.98 334**	*e*PKP1	PKPbc	02 39 59.3	-0.2
LPG	**La Plagne**	**151.99 333**	*e*PKP1	PKPbc	02 39 59.4	-0.1
	comp=Z,20nm,0.9s					
SMF	**Signal de Mont**	**152.13 338**	*e*PKP1	PKPbc	02 39 58.8	-1.0
	comp=Z,30nm,1.3s					
AVF	**Avril sur Loir**	**152.17 339**	*e*PKP1	PKPbc	02 39 58.8	-1.0
SGMF	**Saint Gilles**	**152.36 348**	*e*PKP1	PKPbc	02 39 59.0	-1.2
	comp=Z,82nm,1.2s					
BNI	**Bardonecchia**	**152.38 333**	*e*PKIKP	PKPbc	02 39 59.5	-0.9
BNI			*e*		02 40 08.9	
ROSF	**Rostrenen**	**152.41 349**	*e*PKP1	PKPbc	02 39 59.0	-1.3
	comp=Z,100nm,1.4s					
BGF	**Bois d'Agland**	**152.54 340**	*e*PKP1	PKPbc	02 39 59.8	-0.9
	comp=Z,24nm,0.9s					
MBDF	**Montbardon**	**152.60 332**	*e*PKP1	PKPbc	02 40 00.6	-0.3
	comp=Z,37nm,1.2s					
ORIF	**Oris-en-Rattie**	**152.82 334**	*e*PKP1	PKPbc	02 40 00.7	-0.6
	comp=Z,16nm,0.7s					
TCF	**Toulx Ste Croi**	**152.99 340**	*e*PKP1	PKPbc	02 40 00.7	-1.0
	comp=Z,31nm,1.1s					
MFF	**Saint Martin d**	**153.38 344**	*e*PKP1	PKPbc	02 40 01.4	-1.1
PVRL	**Vila Real**	**159.96 354**	*e*PKPab	PKPab	02 40 42.2	-0.7
MVO	**Moncorvo**	**159.99 352**	*e*PKPab	PKPab	02 40 42.2	-0.9
PVIS	**Viseu**	**160.53 354**	*e*PKPab	PKPab	02 40 44.7	-0.7
MTE	**Manteigas**	**160.80 353**	*e*PKPab	PKPab	02 40 45.8	-0.8
ESDC	**Sonseca Array**	**160.84 344**	PKPab	PKPab	02 40 46.2	-0.6
	comp=Z,1.9nm,0.8s,baz=23,slow=3.7,SNR=7.3					
PCBR	**Castelo Branco**	**161.35 352**	*e*PKPab	PKPab	02 40 48.3	-0.7
PTOM	**Tomar**	**161.66 355**	*e*PKPab	PKPab	02 40 48.5	-1.9
EVO	**Evora**	**162.70 353**	*e*PKPab	PKPab	02 40 53.6	-1.4
PBEJ	**Beja**	**163.18 353**	*e*PKPab	PKPab	02 40 55.8	-1.3
MORF	**Marmelete**	**163.98 354**	*e*PKPab	PKPab	02 41 00.8	+0.2
LIC	**Lamto**	**164.05 201**	*e*PKP2	PKPab	02 41 10.9	+9.4
	comp=Z,24nm,1.0s					
DBIC	**Dimbokro**	**164.41 202**	PKPab	PKPab	02 41 05.0	+1.8
	comp=Z,5.4nm,0.8s,baz=139,slow=11,SNR=3.5					
TORD	**Torodi Ar. Bea**	**165.72 237**	PKP	PKPdf	02 40 09.2	-0.7
	comp=Z,0.7nm,1.0s,baz=117,slow=1.7,SNR=4.7					

*ISCJB **28** 02:23:41.6±0.5,2135S±0.10×16935E±009,h10km, mb4.4/21, Error ellipse: s-maj=14.6km s-min=11.8km az=161.3*
*IDC **28** 02:23:41.7±0.9,2131S×16940E, h0km, mb4.3/10, mb1 4.5/10, mb1mx4.3/17, mbtmp4.3/10, Error ellipse: s-maj=31.9km s-min=21.4km az=150.0*
*LDG **28** 02:23:42.0±0.2,2139S×16901E, h10km, Mb4.5/2, Error ellipse: s-maj=23.7km s-min=2.9km az=156.0*
*NEIC **28** 02:23:42.8±0.4,2133S×16943E, h10km, mb4.5/12, Error ellipse: s-maj=15.1km s-min=10.5km az=156.0*

ISC 28 02:23:43.1±0.5,**213S**±01×**16940E**±009,**h10km**,**n57**, σ0**87**/28,**mb4.4**/21,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
CTAO	**Charters Tower**	**21.68**	**269**	*e*P		**P**		**02 28 35.1**	**+0.9**
	4.6nm,0.6s,mb4.1								
STKA	**Stephens Creek**	**26.91**	**241**	P		**P**		**02 29 25.5**	**+1.1**
	6.2nm,0.9s,mb4.1,baz=97,slow=12,SNR=3.6								
STKA	**Stephens Creek**	**26.91**	**241**	*e*P		**P**		**02 29 25.4**	**+0.9**
WB2	**Warramunga Arr**	**32.79**	**266**	*e*P		**P**		**02 30 15.9**	**-0.8**
WRAB	**Tennant Creek**	**32.79**	**266**	*e*P		**P**		**02 30 16.5**	**-0.3**
	5.7nm,0.8s,mb4.5								
WRA	**Warramunga Arr**	**32.80**	**266**	P		**P**		**02 30 15.4**	**-1.4**
	0.8nm,0.5s,mb3.9,baz=98,slow=8.1,SNR=8.0								
ASAR	**Alice Springs**	**32.82**	**259**	P		**P**		**02 30 16.6**	**-0.3**
	4.7nm,0.9s,mb4.4,baz=82,slow=8.6,SNR=9.1								
FITZ	**Fitzroy Crossi**	**41.23**	**267**	P		**P**		**02 31 27.9**	**-0.6**
	5.4nm,0.7s,mb4.3,baz=106,slow=11,SNR=9.6								
FITZ	**Fitzroy Crossi**	**41.23**	**267**	*e*P		**P**		**02 31 28.0**	**-0.5**
	18nm,0.6s,mb4.7								
MBWA	**Marble Bar**	**46.13**	**261**	*e*P		**P**		**02 32 07.5**	**-0.5**
	13nm,0.9s,mb4.9								
SBA	**Scott Base**	**56.57**	**181**	*e*P		**P**		**02 33 26.6**	**+1.2**
	4.4nm,0.9s,mb4.5								
CASY	**Casey**	**58.27**	**204**	*e*P		**P**		**02 33 36.1**	**-1.4**
	4.0nm,1.0s,mb4.4								
MJAR	**Matsushiro Arr**	**64.68**	**333**	P		**P**		**02 34 23.0**	**+1.8**
	1.4nm,0.7s,mb4.1,baz=161,slow=9.6,SNR=4.0								
QSPA	**South Pole Qui**	**68.72**	**180**	P		**P**		**02 34 47.8**	**+1.3**
	3.4nm,1.0s,mb4.2,baz=43,slow=3.3,SNR=3.6								
CMAR	**Chiang Mai Arr**	**79.51**	**295**	P		**P**		**02 35 52.4**	**+1.9**
	1.7nm,0.5s,mb4.2,baz=132,slow=4.3,SNR=6.1								
SNAA	**Sanae**	**87.08**	**182**	*e*		**P**		**02 36 27.5**	**-1.1**
SNAA				*e*				02 36 35.9	
SNAA	**Sanae**	**87.08**	**182**	*e*P		**P**		**02 36 28.2**	**-0.4**
	3.8nm,0.8s,mb4.7								
VNA3	**Neumayer Olymp**	**87.66**	**180**	*e*		**P**		**02 36 30.7**	**-0.7**
VNA3				*e*				02 36 38.6	
VNA2	**Neumayer--Watz**	**87.95**	**181**	*e*		**P**		**02 36 33.2**	**+0.4**
	baz=186,slow=4.1								
VNA2				*e*				02 36 40.3	
VNA1	**Neumayer--Stat**	**88.24**	**181**	*e*		**P**		**02 36 34.7**	**+0.5**
ULN	**Ulaanbaatar**	**88.64**	**323**	*e*P		**P**		**02 36 35.8**	**-0.5**
	0.7nm,0.4s,mb4.3								
YBH	**Yreka Blue Hor**	**88.70**	**44**	P		**P**		**02 36 36.7**	**0.0**
	1.3nm,0.9s,mb4.3,baz=150,slow=1.5,SNR=2.7								
SONM	**Songino Array**	**88.98**	**323**	P		**P**		**02 36 38.0**	**0.0**
	0.6nm,0.5s,mb4.2,baz=124,slow=5.6,SNR=2.8								
NVAR	**Mina Array Bea**	**90.08**	**48**	P		**P**		**02 36 43.2**	**-0.1**
	1.8nm,0.7s,mb4.5,baz=228,slow=8.7,SNR=7.4								
WVOR	**Wild Horse Val**	**91.69**	**45**	*e*P		**P**		**02 36 50.2**	**-0.5**
	1.2nm,0.7s,mb4.3								
TLY	**Talaya**	**92.57**	**325**	*e*P		**P**		**02 36 54.5**	**0.0**
	5.7nm,0.8s,mb5.0								
TUC	**Tucson**	**93.03**	**57**	*e*P		**P**		**02 36 56.9**	**-0.3**
	0.7nm,0.7s,mb4.2								
HLID	**Hailey**	**94.97**	**45**	*e*P		**P**		**02 37 05.0**	**-0.7**
	0.7nm,0.7s,mb4.2								
ARCES	**ARCESS Array B**	**127.13**	**345**	PKP		PKPdf		02 42 45.6	-1.3
	1.3nm,0.5s,baz=27,slow=1.4,SNR=9.8								
CLL	**Collm**	**144.88**	**334**	*e*PKPdf		PKPdf		02 43 18.0	-2.2
GERES	**GERESS Array B**	**146.40**	**331**	PKPbc		PKPbc		02 43 23.3	-0.8
	1.7nm,0.6s,baz=36,slow=3.0,SNR=10								
GIVF	**Givet**	**148.82**	**341**	*e*PKP1		PKPbc		02 43 29.5	-1.2
BAIF	**Baives**	**149.04**	**341**	*e*PKP1		PKPbc		02 43 30.3	-1.0
CDF	**Champ du Feu**	**149.43**	**336**	*e*PKP1		PKPbc		02 43 31.1	-1.2
HAU	**Haudompre**	**150.11**	**337**	*e*PKP1		PKPbc		02 43 32.7	-1.3
MEZF	**Maizieres J'vi**	**150.14**	**339**	*e*PKP1		PKPbc		02 43 33.3	-0.8
CABF	**La Chapelle**	**151.37**	**336**	*e*PKP1		PKPbc		02 43 36.3	-0.7
	17nm,0.8s								
FLN	**La Foliniere**	**151.47**	**346**	*e*PKP1		PKPbc		02 43 35.6	-1.6
LDF	**La Druitiere**	**151.55**	**345**	*e*PKP1		PKPbc		02 43 35.8	-1.6
LOR	**Lormes**	**151.61**	**339**	*e*PKP1		PKPbc		02 43 36.4	-1.2
GRR	**Gorron**	**151.91**	**346**	*e*PKP1		PKPbc		02 43 36.8	-1.4
SSF	**Saint Saulge**	**151.91**	**339**	*e*PKP1		PKPbc		02 43 37.1	-1.1
LPL	**La Plagne**	**152.01**	**333**	*e*PKP1		PKPbc		02 43 37.9	-0.6
	7.0nm,0.8s								
LPG	**La Plagne**	**152.01**	**333**	*e*PKP1		PKPbc		02 43 37.9	-0.6
	4.6nm,0.6s								
SMF	**Signal de Mont**	**152.16**	**338**	*e*PKP1		PKPbc		02 43 37.2	-1.6
AVF	**Avril sur Loir**	**152.20**	**339**	*e*PKP1		PKPbc		02 43 37.5	-1.4
BNI	**Bardonecchia**	**152.40**	**333**	*e*PKPbc		PKPbc		02 43 38.1	-1.4
MBDF	**Montbardon**	**152.62**	**332**	*e*PKP1		PKPbc		02 43 38.7	-1.2
ORIF	**Oris-en-Rattie**	**152.84**	**334**	*e*PKP1		PKPbc		02 43 39.2	-1.2
	8.4nm,0.8s								
SBF	**Sospel**	**153.00**	**330**	*e*PKP1		PKPbc		02 43 39.0	-1.8
TCF	**Toulx Ste Croi**	**153.01**	**340**	*e*PKP1		PKPbc		02 43 39.3	-1.4
MFF	**Saint Martin d**	**153.41**	**344**	*e*PKP1		PKPbc		02 43 40.2	-1.4
FRF	**La Foret Royal**	**153.60**	**331**	*e*PKP1		PKPbc		02 43 40.4	-1.7
LMR	**La Mourre**	**153.84**	**331**	*e*PKP1		PKPbc		02 43 41.2	-1.4
LASF	**Ste Croix**	**154.35**	**335**	*e*PKP1		PKPbc		02 43 42.4	-1.3
	29nm,1.1s								
LFF	**La Frestale**	**154.68**	**341**	*e*PKP1		PKPbc		02 43 43.2	-1.2
DBIC	**Dimbokro**	**164.39**	**202**	PKPab		PKPab		02 44 43.5	+1.5
	3.3nm,0.9s,baz=201,slow=18,SNR=3.4								

*ISCJB **28** 02:27:30.9±0.5,213S±0.1×16922E±009,h10km, mb4.5/21, Error ellipse: s-maj=14.9km s-min=12.6km az=164.4*
*IDC **28** 02:27:30.7±1.1,2129S×16928E, h0km, mb4.5/10, mb1 4.7/10, mb1mx4.5/17, mbtmp4.5/10, Error ellipse: s-maj=30.0km s-min=23.3km az=151.0*
*NEIC **28** 02:27:32.3±0.5,2125S×16933E, h10km, mb4.6/12, Error ellipse: s-maj=15.3km s-min=11.4km az=158.0*

ISC 28 02:27:32.5±0.5,**213S**±01×**16928E**±009,**h10km**,**n29**, σ0**89**/28,**mb4.5**/21,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
CTA	**Charters Tower**	**21.57**	**269**	*e*P		**P**		**02 32 24.8**	**+2.4**
	19nm,0.9s,mb4.5								
CTA	**Charters Tower**	**21.57**	**269**	P		**P**		**02 32 23.7**	**+1.3**
	22nm,0.9s,mb4.6,baz=89,slow=12,SNR=28								
CTAO	**Charters Tower**	**21.57**	**269**	*e*P		**P**		**02 32 24.6**	**+2.2**
CAN	**Canberra**	**22.64**	**227**	*e*P		**P**		**02 32 35.3**	**+1.6**
STKA	**Stephens Creek**	**26.85**	**241**	P		**P**		**02 33 14.7**	**+1.3**
	6.3nm,0.8s,mb4.2,baz=52,slow=11,SNR=4.7								
WB2	**Warramunga Arr**	**32.68**	**266**	*e*P		**P**		**02 34 03.9**	**-1.2**
WRAB	**Tennant Creek**	**32.68**	**266**	*e*P		**P**		**02 34 04.2**	**-0.9**
	11nm,1.1s,mb4.7								
WRA	**Warramunga Arr**	**32.69**	**266**	P		**P**		**02 34 04.1**	**-1.1**
	5.6nm,0.9s,mb4.5,baz=96,slow=9.0,SNR=15								
ASAR	**Alice Springs**	**32.73**	**259**	P		**P**		**02 34 03.5**	**-2.1**
	9.2nm,0.8s,mb4.8,baz=88,slow=8.4,SNR=33								
FITZ	**Fitzroy Crossi**	**41.11**	**267**	P		**P**		**02 35 16.6**	**-0.4**
	19nm,0.8s,mb4.8,baz=121,slow=8.5,SNR=29								
MBWA	**Marble Bar**	**46.03**	**261**	*e*P		**P**		**02 35 56.8**	**+0.2**
	26nm,1.1s,mb5.1								
KAPI	**Kappang**	**50.62**	**281**	*e*P		**P**		**02 36 31.5**	**-0.6**
	12nm,1.1s,mb4.7								
SBA	**Scott Base**	**56.66**	**181**	*e*P		**P**		**02 37 16.0**	**+0.5**
	10nm,1.3s,mb4.7								
CASY	**Casey**	**58.30**	**204**	*e*P		**P**		**02 37 26.5**	**-0.7**
	3.1nm,0.9s,mb4.3								
MJAR	**Matsushiro Arr**	**64.54**	**333**	P		**P**		**02 38 10.1**	**+0.4**
	1.4nm,1.1s,mb4.4,baz=180,slow=6.1,SNR=3.9								
QSPA	**South Pole Qui**	**68.81**	**180**	P		**P**		**02 38 36.6**	**+0.2**
	4.3nm,0.9s,mb4.4,baz=0.4,slow=4.6,SNR=7.5								
QIZ	**Qiongzhong**	**70.61**	**300**	*e*P		**P**		**02 38 49.2**	**+0.7**
	7.9nm,0.8s,mb4.7								
CMAR	**Chiang Mai Arr**	**79.36**	**295**	P		**P**		**02 39 39.7**	**+0.6**
	6.5nm,0.8s,mb4.6,baz=129,slow=3.5,SNR=14								
CHTO	**Chiang Mai**	**79.52**	**295**	*e*P		**P**		**02 39 40.9**	**+1.0**
	10nm,0.9s,mb4.8								
SNAA	**Sanae**	**87.16**	**182**	*e*		**P**		**02 40 17.6**	**-0.8**
SNAA				*e*				02 40 25.7	
SNAA	**Sanae**	**87.16**	**182**	*e*P		**P**		**02 40 17.7**	**-0.7**
	7.3nm,1.3s,mb4.8								
VNA3	**Neumayer Olymp**	**87.75**	**180**	*e*		**P**		**02 40 20.8**	**-0.4**
VNA3				*e*				02 40 28.8	
VNA2	**Neumayer--Watz**	**88.04**	**181**	*e*		**P**		**02 40 22.6**	**0.0**
	baz=180,slow=3.4								
VNA2				*e*				02 40 30.5	
SONM	**Songino Array**	**88.84**	**323**	P		**P**		**02 40 26.2**	**-0.4**
	1.3nm,0.9s,mb4.2,baz=151,slow=6.5,SNR=4.1								
NVAR	**Mina Array Bea**	**90.10**	**48**	P		**P**		**02 40 32.8**	**0.0**
	1.6nm,0.8s,mb4.4,baz=225,slow=8.4,SNR=8.6								
WVOR	**Wild Horse Val**	**91.71**	**45**	*e*P		**P**		**02 40 40.7**	**+0.5**
	1.6nm,0.9s,mb4.3								
DUG	**Dugway**	**94.71**	**49**	*e*P		**P**		**02 40 53.6**	**-0.4**
	1.1nm,0.9s,mb4.3								
BOZ	**Bozeman (W)**	**97.65**	**44**	*e*P		**P**		**02 41 07.3**	**0.0**
	0.7nm,0.7s,mb4.3								
GERES	**GERESS Array B**	**146.26**	**331**	PKPbc		PKPbc		02 47 12.8	-0.4
	1.3nm,0.7s,baz=43,slow=2.5,SNR=7.9								

*IDC **28** 02:28:47.1±0.9,2124S×16934E, h0km, mb4.3/9, mb1 4.5/10, mb1mx4.3/19, mbtmp4.3/10, Error ellipse: s-maj=31.5km s-min=21.7km az=167.0*
*NEIC **28** 02:28:48.5±0.6,2124S×16938E, h10km, mb4.4/4, Error ellipse: s-maj=16.1km s-min=12.5km az=204.0*
*ISCJB **28** 02:28:51.8±5.0,214S±0.1×1692E±0.1, h40km±42km, mb4.3/12, Error ellipse: s-maj=28.0km s-min=15.5km az=32.4*

ISC 28 02:28:54.1±4.1,**214S**±01×**1693E**±01,**h48**km±35km,
h36km±.8km**:pP-P**,**n25**,σ0**90**/21,**mb4.3**/12,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
URZ	**Urewera**	**18.15**	**160**	P		**P**	**Pn**	**02 33 02.6**	**0.0**
	baz=8.5,slow=13,SNR=3.5								
CTA	**Charters Tower**	**21.58**	**269**	P		**P**		**02 33 40.5**	**+0.6**
	9.9nm,0.9s,mb4.2,baz=98,slow=10,SNR=5.1								
CTAO	**Charters Tower**	**21.58**	**269**	*e*P		**P**		**02 33 40.0**	**+0.1**
	11nm,0.9s,mb4.3								
STKA	**Stephens Creek**	**26.82**	**241**	P		**P**		**02 34 31.2**	**+1.2**
	5.4nm,0.8s,mb4.1,baz=97,slow=6.9,SNR=2.8								
STKA	**Stephens Creek**	**26.82**	**241**	P		**P**		**02 34 31.2**	**+1.2**
WB2	**Warramunga Arr**	**32.69**	**266**	*e*P		**P**		**02 35 22.6**	**+0.5**
WRA	**Warramunga Arr**	**32.70**	**266**	P		**P**		**02 35 20.3**	**-1.9**
	3.3nm,1.1s,mb4.2,baz=95,slow=9.4,SNR=3.4								
ASAR	**Alice Springs**	**32.72**	**259**	P		**P**		**02 35 21.4**	**-1.0**
	3.8nm,0.7s,mb4.4,baz=79,slow=9.1,SNR=4.6								
FITZ	**Fitzroy Crossi**	**41.12**	**267**	P		**P**		**02 36 33.5**	**-0.3**
	8.7nm,0.9s,mb4.4,baz=120,slow=10.0,SNR=6.6								
SBA	**Scott Base**	**56.56**	**181**	*e*P		**P**		**02 38 32.4**	**+1.0**
	4.1nm,0.9s,mb4.5								
CASY	**Casey**	**58.22**	**204**	*e*P		**P**		**02 38 42.6**	**-0.5**
QSPA	**South Pole Qui**	**68.72**	**180**	P		**P**		**02 39 52.7**	**+0.5**
	4.8nm,1.0s,mb4.4,baz=140,slow=2.3,SNR=4.0								
CMAR	**Chiang Mai Arr**	**79.42**	**295**	P		**P**		**02 40 56.9**	**+1.2**
	1.5nm,0.3s,mb4.4,baz=133,slow=4.6,SNR=4.2								
CHTO	**Chiang Mai**	**79.57**	**295**	*e*P		**P**		**02 40 57.1**	**+0.6**
	4.3nm,0.9s,mb4.4								
SNAA	**Sanae**	**87.07**	**182**	*e*		**P**		**02 41 33.0**	**-1.2**
SNAA				*e*				02 41 39.0	
SNAA				*e*		pP		02 41 44.2	-4.1
SNAA	**Sanae**	**87.07**	**182**	*e*P		**P**		**02 41 33.2**	**-1.0**
	4.1nm,1.0s,mb4.6								
VNA3	**Neumayer Olymp**	**87.65**	**180**	*e*		**P**		**02 41 36.6**	**-0.5**
VNA3				*e*				02 41 42.2	
VNA3				*e*		pP		02 41 47.6	-3.6
VNA2	**Neumayer--Watz**	**87.95**	**181**	*e*		**P**		**02 41 38.5**	**+0.1**
VNA2				*e*				02 41 43.9	
VNA2				*e*		pP		02 41 49.6	-3.0
VNA1	**Neumayer--Stat**	**88.24**	**181**	*e*		**P**		**02 41 40.1**	**+0.3**
VNA1				*e*				02 41 46.0	
VNA1				*e*		pP		02 41 50.4	-3.5
YBH	**Yreka Blue Hor**	**88.78**	**44**	P		**P**		**02 41 43.8**	**+1.0**
	0.5nm,0.4s,mb4.2,baz=186,slow=9.2,SNR=2.3								
NVAR	**Mina Array Bea**	**90.16**	**48**	P		**P**		**02 41

PMG	Port Moresby	24.32	295	eP		P	02 41 38.5	-2.9	
	comp=Z,29nm,0.9s,mb4.7								
COEN	Coen	25.93	282	eP		P	02 41 55.8	-0.2	
	comp=Z,21nm,1.2s,mb4.5								
TOO	Toolangi	26.40	226	eP		P	02 42 01.5	+1.4	
STKA	Stephens Creek	27.00	241	eP		P	02 42 06.9	+1.3	
	comp=Z,12nm,1.5s,mb4.2								
STKA	Stephens Creek	27.00	241	P		P	02 42 05.2	-0.4	
	comp=Z,18nm,1.0s,mb4.6,baz=18,slow=3.9,SNR=8.9								
STKA				LR		LR	02 51 40.5		
	comp=Z,7µm,18.0s,MS5.2,baz=80,slow=34								
WB2	Warramunga Arr	32.77	266	eP		P	02 42 55.9	-0.9	
WRAB	Tennant Creek	32.77	266	eP		P	02 42 56.3	-0.5	
WRAB				pmax		pmax			
	comp=Z,20nm,1.2s,mb4.9								
WRAB	Tennant Creek	32.77	266	eP		P	02 42 56.3	-0.5	
	comp=Z,20nm,1.2s,mb4.9								
WRA	Warramunga Arr	32.78	266	P		P	02 42 56.1	-0.8	
	comp=Z,4.5nm,0.5s,mb4.6,baz=98,slow=8.2,SNR=50								
WRA				LR		LR	02 56 37.1		
	comp=Z,4µm,18.0s,MS5.1,baz=85,slow=37								
ASAR	Alice Springs	32.84	259	P		P	02 42 57.6	+0.3	
	comp=Z,9.2nm,0.7s,mb4.8,baz=84,slow=9.3,SNR=61								
ASAR				PcP		PcP	02 45 42.2	0.0	
	comp=Z,2.9nm,1.0s,baz=103,slow=3.1,SNR=5.1								
FITZ	Fitzroy Crossi	41.20	266	eP		P	02 44 08.4	-0.2	
	comp=Z,26nm,0.6s,mb5.0								
FITZ	Fitzroy Crossi	41.20	266	P		P	02 44 08.7	+0.1	
	comp=Z,20nm,0.8s,mb4.8,baz=122,slow=9.7,SNR=52								
BATI	Baumata	45.16	277	LR		LR	03 01 57.2		
	comp=Z,4µm,18.8s,MS5.3,baz=276,slow=34								
MBWA	Marble Bar	46.13	261	eP		P	02 44 49.1	+0.8	
KLBR	Kellerberrin	47.05	246	eP		P	02 44 54.0	-1.3	
	comp=Z,42nm,1.2s,mb5.2								
NWAO	Narrogin (SRO)	47.49	244	LR		LR	03 04 29.8		
	comp=Z,4µm,18.5s,MS5.4,baz=100,slow=36								
KAPI	Kappang	50.66	281	LR		LR	03 04 25.9		
	comp=Z,1µm,18.7s,MS4.9,baz=212,slow=33								
KAPI	Kappang	50.66	281	eP		P	02 45 22.5	-0.8	
SBA	Scott Base	56.83	181	eP		P	02 46 07.4	-0.2	
SBA				pmax		pmax			
	comp=Z,15nm,0.9s,mb5.0								
SBA	Scott Base	56.83	181	eP		P	02 46 07.4	-0.1	
	comp=Z,15nm,0.9s,mb5.0								
CASY	Casey	58.49	204	eP		P	02 46 19.0	-0.4	
MJAR	Matsushiro Arr	64.43	332	P		P	02 47 00.1	+0.2	
	comp=Z,4.2nm,0.9s,mb4.5,baz=151,slow=8.6,SNR=3.9								
MAJO	Matsushiro	64.43	332	eP		P	02 46 59.5	-0.3	
MAJO				pmax		pmax			
	comp=Z,16nm,0.9s,mb5.0								
MAJO	Matsushiro	64.43	332	eP		P	02 46 59.5	-0.4	
	comp=Z,16nm,0.9s,mb5.1								
YHNB	Yeheng	65.15	312	eP		P	02 47 05.3	+0.5	
	comp=Z,20nm,0.2s,mb5.8								
QSPA	South Pole Qui	68.98	180	P		P	02 47 28.1	-0.3	
	comp=Z,24nm,1.0s,mb5.1,baz=9.3,slow=3.4,SNR=30								
ASAJ	Asahikawa	69.36	340	P		P	02 47 30.6	-0.5	
	comp=Z,23nm,0.9s,mb5.1,baz=210,slow=11,SNR=5.5								
KSRS	Korea Array	70.08	326	P		P	02 47 36.4	+0.7	
	comp=Z,3.0nm,0.9s,mb4.2,baz=136,slow=4.2,SNR=2.9								
IPM	Ipoh	71.58	282	⇑P		P	02 47 46.0	+0.7	
YSS	Yuzh-Sakhalins	71.85	341	eP		P	02 47 48.8	+2.6	
MAW	Mawson	76.78	202	P		P	02 48 15.5	+0.7	
	comp=Z,6.0nm,0.9s,mb4.5,baz=92,slow=7.2,SNR=7.1								
CMAR	Chiang Mai Arr	79.36	295	P		P	02 48 30.6	+0.6	
	comp=Z,9.8nm,0.9s,mb4.7,baz=149,slow=4.6,SNR=6.5								
CHTO	Chiang Mai	79.52	295	eP		P	02 48 32.1	+1.3	
CHTO				pmax		pmax			
	comp=Z,19nm,1.0s,mb5.0								
CHTO	Chiang Mai	79.52	295	eP		P	02 48 32.1	+1.3	
	comp=Z,19nm,1.0s,mb5.0								
JRSC	Jasper Ridge	86.71	48	⇓P		P	02 49 08.4	+0.8	
	baz=83								
V03C	Hunter Liggett	86.74	49	⇑P		P	02 49 09.6	+1.8	
	baz=83								
SAO	San Andreas Ge	86.95	49	eP		P	02 49 11.2	+2.4	
CVS	Carmenet Viney	87.02	47	⇑P		P	02 49 08.4	-0.7	
	baz=83								
PACP	Pacheco Peak	87.18	49	⇓P		P	02 49 10.8	+0.9	
	baz=84								
PKD	Parkfield	87.19	50	⇓P		P	02 49 10.5	+0.5	
	baz=84								
PKM	Peak Mountain	87.22	51	⇑P		P	02 49 11.8	+1.7	
	baz=84								
U04C	Hernandez Rese	87.22	49	⇑P		P	02 49 10.4	+0.2	
	baz=84								
MNRC	McLaughlin Nat	87.30	47	⇑P		P	02 49 10.3	-0.1	
	baz=83								
SNAA	Sanae	87.34	182	ePdiff		P	02 49 08.3	-1.8	
SNAA				e		pP	02 49 11.3	-2.3	
SNAA				e			02 49 19.5		
SNAA	Sanae	87.34	182	eP		P	02 49 08.0	-2.1	
SNAA				pmax		pmax			
	comp=Z,18nm,1.1s								
SNAA	Sanae	87.34	182	eP		P	02 49 08.0	-2.2	
	comp=Z,18nm,1.1s,mb5.2								
GASB	Alder Springs	87.50	46	⇑P		P	02 49 11.4	0.0	
	baz=83								
N02C	Big Bar	87.69	44	⇓P		P	02 49 12.3	+0.1	
	baz=83								
O02C	Red Bluff	87.71	45	⇓P		P	02 49 13.9	+1.5	
	baz=83								
VNA3	Neumayer Olymp	87.92	180	ePdiff		P	02 49 11.2	-1.8	
VNA3				e		pP	02 49 14.4	-2.0	
VNA3				e			02 49 23.6		
S05C	Merced	88.01	49	⇓P		P	02 49 14.5	+0.6	
	baz=84								
WDC	Whiskeytown Da	88.08	45	eP		P	02 49 14.6	+0.5	
WDC				pmax		pmax			
	comp=Z,10.0nm,1.1s,mb5.0								
WDC	Whiskeytown Da	88.08	45	⇑P		P	02 49 13.8	-0.3	
	baz=84,SNR=6.1								
WDC	Whiskeytown Da	88.08	45	eP		P	02 49 14.6	+0.5	
	comp=Z,10nm,1.1s,mb5.0								
VNA2	Neumayer--Watz	88.21	181	ePdiff		P	02 49 13.2	-1.2	
	baz=186,slow=5.2								
VNA2				e		pP	02 49 16.7	-1.1	
VNA2				e			02 49 24.5		
ORV	Oroville	88.27	46	⇑P		P	02 49 15.0	0.0	
	baz=84								
M02C	Callahan	88.28	44	⇑P		P	02 49 13.9	-1.1	
	baz=84								
T06C	Millerton Lake	88.29	49	⇑P		P	02 49 14.7	-0.5	
	baz=85								
CMB	Columbia Colle	88.30	48	eP		P	02 49 15.3	+0.1	
CMB				pmax		pmax			
	comp=Z,12nm,0.9s,mb5.1								
CMB	Columbia Colle	88.30	48	⇑P		P	02 49 14.4	-0.8	
	baz=84								
CMB	Columbia Colle	88.30	48	eP		P	02 49 15.3	+0.1	
	comp=Z,12nm,0.9s,mb5.1								
LAVA	Lava Cap Winer	88.40	47	⇑P		P	02 49 15.5	-0.2	
	baz=84								
ULN	Ulaanbaatar	88.40	323	eP		P	02 49 15.8	+0.3	
ULN				pmax		pmax			
	comp=Z,16nm,1.2s,mb5.1								
ULN	Ulaanbaatar	88.40	323	eP		P	02 49 15.8	+0.3	
	comp=Z,16nm,1.2s,mb5.1								
BFSC	Mount Baldy St	88.50	52	⇓P		P	02 49 16.7	+0.4	
	baz=86								
VNA1	Neumayer--Stat	88.50	181	ePdiff		P	02 49 14.6	-1.1	
VNA1				e		pP	02 49 17.9	-1.3	
VNA1				e			02 49 25.8		
YBH	Yreka Blue Hor	88.54	44	P		P	02 49 17.4	+1.2	
	comp=Z,3.0nm,0.8s,mb4.7,baz=208,slow=4.9,SNR=7.4								
YBH	Yreka Blue Hor	88.54	44	⇓P		P	02 49 15.3	-1.0	
	baz=84								
EDW2	Edwards Air Fo	88.55	52	⇑P		P	02 49 15.9	-0.6	
	baz=86								
ISA	Isabella	88.55	51	eP		P	02 49 16.9	+0.4	
ISA				pmax		pmax			
	comp=Z,8.0nm,0.9s,mb5.0								
ISA	Isabella	88.55	51	⇓P		P	02 49 16.7	+0.2	
	baz=85								
ISA	Isabella	88.55	51	eP		P	02 49 16.9	+0.4	
	comp=Z,8.1nm,0.9s,mb5.0								
S06C	San Francisco	88.60	48	⇓P		P	02 49 15.7	-0.9	
	baz=85								
HELL	Mitchell Peak	88.62	50	⇓P		P	02 49 16.5	-0.3	
	baz=85								
M03C	McCloud	88.70	45	⇓P		P	02 49 17.9	+0.9	
	baz=84								
KCC	Kaiser Creek	88.71	49	⇓P		P	02 49 17.0	-0.2	
	baz=85								
P05C	Yuba Gap, Truc	88.75	47	⇓P		P	02 49 16.5	-0.8	
	baz=85								
J02A	Umpqua	88.81	42	⇑P		P	02 49 16.8	-0.7	
	baz=84								
HUMO	Hull Mountain	88.82	43	⇑P		P	02 49 17.2	-0.4	
	baz=84								
R05C	Kirkwood Meado	88.83	48	⇑P		P	02 49 15.9	-1.8	
	baz=85								
MONP	Monument Peak	88.83	54	⇓P		P	02 49 17.4	-0.5	
	baz=86								
O05C	Quincy	88.86	46	⇓P		P	02 49 19.3	+1.5	
	baz=85								
O04C	Chester	88.92	46	⇑P		P	02 49 18.2	+0.1	
	baz=85								
PFO	Pinyon Flat Ob	89.12	53	P		P	02 49 20.0	+0.8	
	comp=Z,2.8nm,0.8s,mb4.6,baz=224,slow=2.6,SNR=3.9								
PFO	Pinyon Flat Ob	89.12	53	⇑P		P	02 49 20.5	+1.3	
	baz=86								
M04C	Macdoel	89.13	44	⇓P		P	02 49 18.5	-0.5	
	baz=84								
R06C	Coleville	89.18	48	⇑P		P	02 49 19.0	-0.4	
	baz=85								
CWC	Cottonwood Cre	89.19	50	⇓P		P	02 49 21.2	+1.7	
	baz=86								
MTUM	Tungsten Hills	89.26	49	eP		P	02 49 20.6	+0.8	
SWSC	Sam W. Stewart	89.33	54	⇓P		P	02 49 19.4	-0.8	
	baz=87								
WCN	Washoe City	89.33	47	⇑P		P	02 49 19.3	-0.8	
	baz=85								
M05C	Lookout	89.38	45	⇑P		P	02 49 19.3	-0.9	
	baz=85								
MPMC	Manual Prospec	89.44	51	⇑P		P	02 49 20.8	+0.1	
	baz=86,SNR=10								
S08C	White Mtn Res	89.60	49	⇑P		P	02 49 20.6	-0.8	
	baz=86								
BELC	Belle Mtn.	89.63	53	⇓P		P	02 49 21.6	-0.1	
	baz=87								
H03A	Soap Creek Ran	89.66	41	⇑P		P	02 49 21.5	+0.1	
	baz=84								
J04A	Umpqua Nationa	89.68	43	⇑P		P	02 49 20.0	-1.6	
	baz=85								
O06A	Flanigan	89.69	46	⇑P		P	02 49 21.0	-0.7	
	baz=86,SNR=17								
M06C	Likely Place G	89.75	45	⇓P		P	02 49 21.4	-0.6	
	baz=85								
I04A	Tendick Farm,	89.76	42	⇑P		P	02 49 20.8	-1.2	
	baz=85								
PAHR	Pah Rah Range	89.78	47	eP		P	02 49 21.0	-1.1	
	comp=Z,14nm,1.0s,mb5.3								
BC3	Big Chuckw Mtn	89.89	54	⇑P		P	02 49 23.0	+0.1	
	baz=87								
L05A	Lakeview	89.92	44	⇑P		P	02 49 21.3	-1.5	
	baz=85								
NVAR	Mina Array Bea	89.93	48	P		P	02 49 23.3	+0.4	
	comp=Z,3.0nm,0.8s,mb4.7,baz=227,slow=8.6,SNR=18								
NVAR	Mina Array Bea	89.93	48	P		P	02 49 23.3	+0.4	
GRAC	Grapevine Rang	89.95	50	⇓P		P	02 49 24.1	+1.1	
	baz=87								
N06A	Buffalo Meadow	89.96	46	⇑P		P	02 49 20.8	-2.2	
	baz=86								
112A	Yuma	90.08	55	⇓P		P	02 49 25.2	+1.5	
	baz=88								
FURC	Furnace Creek,	90.08	51	⇑P		P	02 49 22.8	-0.8	
	baz=87								
GLA	Glamis	90.11	55	⇑P		P	02 49 23.5	-0.4	
	baz=88								
GLA	Glamis	90.11	55	eP		P	02 49 24.1	+0.3	
MOD	Modoc	90.19	45	⇓P		P	02 49 22.6	-1.4	
	baz=86								
K05A	Summer Lake	90.20	44	⇓P		P	02 49 23.4	-0.6	
	baz=85								
GMRC	Granite Mounta	90.22	53	⇑P		P	02 49 25.1	+0.8	
	baz=87								
J05A	Fort Rock	90.25	43	⇓P		P	02 49 23.4	-0.9	
	baz=85,SNR=16								
TUQ	Turquoise Moun	90.31	52	⇑P		P	02 49 25.2	+0.5	
	baz=87								
O07A	Toulon	90.33	47	⇓P		P	02 49 25.0	+0.3	
	baz=86,SNR=5.7								
IRM	Iron Mountain	90.34	53	⇑P		P	02 49 24.7	-0.2	
	baz=88								
H04A	Detroit Lake	90.34	42	⇑P		P	02 49 23.8	-0.8	
	baz=85								
S09A	Goldfield	90.38	49	⇓P		P	02 49 24.9	0.0	
	baz=87								
Q08A	Gabbs	90.39	48	⇓P		P	02 49 24.8	-0.3	
	baz=87								
U10A	Ash Meadows, A	90.44	51	⇑P		P	02 49 24.1	-1.2	
	baz=87								
TPH	Tonopah	90.53	49	eP		P	02 49 26.1	+0.4	
TPH				pmax		pmax			
	comp=Z,11nm,0.9s,mb5.2								
TPH	Tonopah	90.53	49	eP		P	02 49 26.1	+0.4	
	comp=Z,11nm,0.9s,mb5.2								
N07B	Gerlach	90.55	46	⇓P		P	02 49 25.8	+0.1	
	baz=86,SNR=11								
Y12C	Blythe	90.64	54	⇓P		P	02 49 26.3	0.0	
	baz=88								
K06A	Valley Falls	90.65	44	⇑P		P	02 49 24.8	-1.4	
	baz=86,SNR=5.9								
M07A	Soldier Meadow	90.70	46	⇑P		P	02 49 25.8	-0.6	
	baz=86								
R09A	Tonopah	90.71	49	⇓P		P	02 49 25.7	-0.8	
	baz=87								
TPNV	Topopah Spring	90.73	51	eP		P	02 49 27.1	+0.4	
TPNV				pmax		pmax			
	comp=Z,12nm,0.9s,mb5.2								
TPNV	Topopah Spring	90.73	51	⇓P		P	02 49 26.1	-0.5	
	baz=87								
TPNV	Topopah Spring	90.73	51	eP		P	02 49 27.1	+0.4	
	comp=Z,12nm,0.9s,mb5.2								
LDFC	Landfair	90.76	53	eP		P	02 49 27.5	+0.7	
113A	Mohawk Valley,	90.80	55	⇓P		P	02 49 27.6	+0.5	
	baz=89								
L07A	Adell	90.88	45	⇑P		P	02 49 27.9	+0.6	
	baz=86								
O08A	Rochester Mine	90.88	47	⇓P		P	02 49 27.3	+0.1	
	baz=87								
S10A	Tonopah Range,	90.91	50	⇑P		P	02 49 27.4	-0.1	
	baz=87,SNR=12								
J06A	Christmas Vall	90.93	44	⇑P		P	02 49 26.6	-0.8	
	baz=86								
N08A	GE Springer Mi	91.12	46	⇑P		P	02 49 27.5	-0.8	
	baz=87								
PDMCI	Parker Dam,Lak	91.16	54	⇑P		P	02 49 28.6	-0.1	
	baz=88								
Y13A	Salome	91.19	54	⇓P		P	02 49 28.8	0.0	
	baz=89,SNR=13								
214A	Organ Pipe Nat	91.20	56	⇓P		P	02 49 29.2	+0.2	
	baz=89								
I06A	Prineville	91.22	43	⇓P		P	02 49 28.7	-0.1	
	baz=86								
V12A	Nelson	91.22	52	⇑P		P	02 49 29.6	+0.6	
	baz=88								
K07A	Rock Creek Ran	91.26	44	⇑P		P	02 49 28.1	-0.8	
	baz=86								
M08A	Happy Creek Ra	91.26	46	⇓P		P	02 49 29.2	+0.2	
	baz=87								
R10A	Warm Springs	91.28	49	⇓P		P	02 49 30.0	+0.8	
	baz=88,SNR=5.2								
SHPR	Sheep Range	91.33	51	eP		P	02 49 30.3	+0.8	
S11A	Rachel	91.39	50	⇑P		P	02 49 29.5	-0.2	
	baz=88								
O09A	Fish Creek Ran	91.49	47	⇓P		P	02 49 27.1	-3.0	
	baz=87								
X13A	Yucca	91.51	53	⇓P		P	02 49 30.1	-0.2	
	baz=89								
H06A	Lindquist Farm	91.52	42	⇓P		P	02 49 29.3	-0.8	
	baz=86								
E05A	Randle	91.53	40	⇑P		P	02 49 30.3	+0.2	
	baz=86								
J07A	Hines	91.53	44	⇑P		P	02 49 32.2	+2.0	
	baz=87								
WVOR	Wild Horse Val	91.54	45	eP		P	02 49 30.3	0.0	
WVOR				pmax		pmax			
	comp=Z,9.0nm,1.0s,mb5.0								
WVOR	Wild Horse Val	91.54	45	eP		P	02 49 30.3	0.0	
	comp=Z,8.6nm,1.0s,mb5.0								
N09A	Rock Creek Ran	91.56	47	⇓P		P	02 49 30.9	+0.5	
	baz=87								
G06A	Carlson Farm,	91.57	42	⇓P		P	02 49 30.4	0.0	
	baz=86								
BMN	Battle Mountai	91.58	47	eP		P	02 49 31.6	+1.1	
BMN				pmax		pmax			
	comp=Z,8.0nm,0.9s,mb5.0								
BMN	Battle Mountai	91.58	47	eP		P	02 49 31.6	+1.1	
	comp=Z,8.1nm,0.9s,mb5.0								
T11A	Corn Creek, Al	91.60	51	⇑P		P	02 49 29.4	-1.3	
	baz=88,SNR=15								
L08A	Fields	91.62	45	⇓P		P	02 49 30.4	-0.2	
	baz=87,SNR=5.4								
Z14A	Wintersburg	91.67	55	⇑P		P	02 49 30.7	-0.4	
	baz=89								
W13A	Hualapai Mount	91.68	53	⇓P		P	02 49 30.5	-0.6	
	baz=89								
D05A	Enumclaw	91.70	39	⇓P		P	02 49 31.6	+0.7	
	baz=86								
I07A	Izee	91.74	43	⇑P		P	02 49 30.8	-0.3	
	baz=87								
K08A	Mann Creek Ran	91.77	45	⇑P		P	02 49 30.3	-1.1	
	baz=87,SNR=7.0								
R11A	Troy Canyon, C	91.81	49	⇓P		P	02 49 31.2	-0.5	
	baz=88								
Y14A	Wickenburg	91.86	54	⇓P		P	02 49 33.1	+1.1	
	baz=89								
M09A	Marrel Ranch,	91.87	46	⇑P		P	02 49 31.8	0.0	
	baz=88								
V13A	Grand Canyon W	91.92	52	⇓P		P	02 49 33.8	+1.6	
	baz=89								
H07A	Lands Inn, Kim	91.94	43	⇓P		P	02 49 31.3	-0.8	
	baz=87								
Q11A	Duckwater	91.98	49	⇓P		P	02 49 31.1	-1.3	
	baz=88								
L09A	Wilkinson Ranc	91.99	45	⇓P		P	02 49 32.4	0.0	
	baz=88								
S12A	Delamar Landin	92.02	50	⇓P		P	02 49 33.1	+0.4	
	baz=89,SNR=17								
J08A	Circle Bar Ran	92.07	44	⇑P		P	02 49 32.8	+0.1	
	baz=87,SNR=5.9								
U13A	Pakoon Wash	92.17	52	⇓P		P	02 49 34.4	+1.1	
	baz=89								
X14A	Yava	92.17	54	⇑P		P	02 49 33.3	-0.1	
	baz=90,SNR=13								
G07A	Ruggs Ranch, H	92.19	42	⇓P		P	02 49 32.8	-0.4	
	baz=87								
I08A	Drewsey	92.26	43	⇑P		P	02 49 32.9	-0.7	
	baz=87								
K09A	Rome	92.26	45	⇓P		P	02 49 33.4	-0.2	
	baz=88								
116A	Eloy	92.31	56	⇑P		P	02 49 33.8	-0.3	
	baz=90								
W14A	Seligman	92.32	53	⇓P		P	02 49 34.8	+0.7	
	baz=90								
Y15A	Casa Rosa Ranc	92.38	55	⇑P		P	02 49 34.8	+0.4	
	baz=90,SNR=13								
T13A	Saint George	92.46	51	⇑P		P	02 49 34.7	0.0	
	baz=89								
M10A	I.L. Ranch, Tu	92.53	46	⇓P		P	02 49 33.9	-0.9	
	baz=88,SNR=6.8								
O11A	Cowboy Ranch,	92.53	48	⇑P		P	02 49 35.5	+0.6	
	baz=89								
J09A	Fry Pan Ranch,	92.53	44	⇑P		P	02 49 34.9	+0.1	
	baz=88								
G08A	Pilot Rock	92.64	42	⇑P		P	02 49 35.5	+0.2	
	baz=87								
X15A	Humboldt	92.67	54	⇓P		P	02 49 34.8	-0.9	
	baz=90,SNR=14								
217A	Green Valley	92.69	57	⇑P		P	02 49 37.1	+1.2	
	baz=91								
S13A	Holt Ranch, En	92.72	51	⇑P		P	02 49 35.5	-0.4	
	baz=89								
U14A	Mt Trumbull	92.74	52	⇓P		P	02 49 36.2	+0.2	
	baz=90,SNR=12								
L10A	Juniper Basin	92.81	46	⇑P		P	02 49 35.7	-0.5	
	baz=88								
K10A	MacKenzie Ranc	92.86	45	⇓P		P	02 49 35.3	-1.1	
	baz=88								
TUC	Tucson	92.92	57	eP		P	02 49 39.2	+2.3	
M11A	Holland Ranch,	92.99	47	⇓P		P	02 49 37.0	0.0	
	baz=89								
Y16A	Circle Bar Ran	93.00	55	⇑P		P	02 49 36.6	-0.7	
	baz=91,SNR=14								
117A	Oracle	93.06	56	⇑P		P	02 49 37.2	-0.3	
	baz=91								
T14A	Hurricane	93.08	51	⇑P		P	02 49 37.1	-0.4	
	baz=90								
H09A	Durkee	93.18	43	⇑P		P	02 49 37.4	-0.4	
	baz=88								
O12A	Currie	93.22	48	⇓P		P	02 49 37.1	-1.0	
	baz=89								
X16A	Lo Mia Camp, P	93.24	54	⇓P		P	02 49 37.5	-0.9	
	baz=91								
V15A	Kaibab Nationa	93.25	53	⇑P		P	02 49 38.1	-0.2	
	baz=90								
N12A	Clover Valley,	93.26	47	⇓P		P	02 49 38.3	0.0	
	baz=89								
L11A	Cat Creek Ranc	93.33	46	⇑P		P	02 49 38.9	+0.3	
	baz=89								
P13A	Bates Ranch, G	93.39	49	⇓P		P	02 49 38.2	-0.7	
	baz=90								
U15A	North Rim	93.40	52	⇓P		P	02 49 38.6	-0.4	
	baz=90,SNR=11								
Y17A	Roosevelt	93.42	55	⇑P		P	02 49 39.8	+0.6	
	baz=91								
B07A	Winthrop	93.42	39	⇑P		P	02 49 38.9	+0.1	
	baz=88								
W16A	Flagstaff	93.44	54	⇓P		P	02 49 39.5	+0.3	
	baz=91								
Z17A	San Carlos Hig	93.55	56	⇑P		P	02 49 39.4	-0.4	
	baz=91								
X17A	Forest Lakes	93.69	55	⇓P		P	02 49 40.4	0.0	
	baz=91								
Q14A	Sevier Lake (B	93.72	50	⇓P		P	02 49 41.6	+1.1	
	baz=90								
WUAZ	Wupatki	93.72	53	⇑P		P	02 49 41.9	+1.4	
	baz=91				

comp=Z,1.0nm,0.9s
ANMO Albuquerque 97.25 55 *e*P **P 02 49 56.2 -0.4**
comp=Z,1.0nm,0.9s,mb4.2
MOOW Moose Ponds 97.34 46 *e*P **P 02 49 58.0 +1.2**
comp=Z,2.2nm,1.2s,mb4.5
TXAR Lajitas Array 97.54 62 P **P 02 50 00.1 +2.0**
comp=Z,0.5nm,0.8s,mb4.1,baz=207,slow=7.1,SNR=3.7
PDAR Pinedale Array 97.78 47 P **P 02 50 01.1 +2.3**
comp=Z,0.7nm,0.9s,mb4.2,baz=197,slow=4.6,SNR=5.5
PKME Peaks-Kenny Pk 126.61 49 *e*PKPdf PKPdf 02 55 22.2 -4.7
ARCES ARCESS Array B 126.87 345 PKP PKPdf 02 55 24.6 -2.1
comp=Z,1.8nm,0.5s,baz=20,slow=3.9,SNR=9.1
TSUM Tsumeb 131.35 217 *e*PKPdf PKPdf 02 55 37.4 +0.6
AKASG Malin Array Be 137.04 323 PKP PKPdf 02 55 45.7 -0.7
comp=Z,0.5nm,0.4s,baz=208,slow=31,SNR=3.5
AKASG Malin Array Be 137.04 323 PKP PKPdf 02 55 45.7 -0.7
NB2 NORSAR Subarra137.24 345 PKPdf PKPdf 02 55 46.8 +0.3
comp=Z,3.7nm,1.2s,baz=27,slow=1.8
NOA NORSAR Array B 137.24 345 PKP PKPdf 02 55 46.5 0.0
comp=Z,1.7nm,1.0s,baz=32,slow=2.1,SNR=2.7
NOA NORSAR Array B 137.24 345 PKP PKPdf 02 55 46.5 0.0
NAO01 NORSAR Array S 137.49 345 *e*PKPdf PKPdf 02 55 45.0 -1.9
DRGR 142.73 321 ⇑ *i*P PKPdf 02 55 54.3 -2.6
DRGR 142.73 321 ⇑P PKPdf 02 55 54.2 -2.6
PSZ Piszkesteto 143.67 325 *e*PKPdf PKPdf 02 55 51.4 -7.1
MORC Moravsky Berou 143.70 329 *e*PKPdf PKPdf 02 55 51.0 -7.5
VYHS Vyhne 143.88 326 *e*PKP PKPdf 02 55 57.6 -1.2
DPC Dobruska-Polom 143.88 330 *e*PKP PKPdf 02 55 57.0 -1.8
DPC epPKP pPKPdf 02 56 01.1 -1.3
BZS Buzias 144.00 320 ⇑ *i*P PKPdf 02 55 56.5 -2.6
BZS Buzias 144.00 320 ⇑P PKPdf 02 55 56.5 -2.7
VRAC Vranov 144.47 329 ⇓ *i*P PKPdf 02 55 59.2 -0.7
VRAC Vranov 144.47 329 ⇓P PKPdf 02 55 59.2 -0.6
VTS Vitosha 144.47 315 ⇑ *i*P PKPdf 02 55 59.1 -1.0
VTS Vitosha 144.47 315 ⇑P PKPdf 02 55 59.1 -0.9
PVCC Panska Ves 144.54 332 *e*PKP PKPdf 02 55 58.3 -1.6
PVCC epPKP pPKPdf 02 56 03.4 -0.1
BRG Berggiesshubel 144.56 333 *i* PKP PKPdf 02 55 58.2 -1.8
comp=Z,13nm,0.8s
BRG *e* 03 19 01.7
comp=Z,12nm,1.6s
CLL Collm 144.62 334 *e*PKIKP PKPdf 02 55 58.0 -2.0
CLL pmax pmax
comp=Z,10.0nm,0.7s
CLL Collm 144.62 334 *i* P PKPdf 02 56 02.9 +2.9
CLL Collm 144.62 334 *e*PKPdf PKPdf 02 55 58.0 -2.0
comp=Z,10.0nm,0.7s
CLL *i* PKiKP PKiKP 02 56 02.9 -0.8
comp=Z,14nm,1.0s
CLL *i* pPKiKP 02 56 07.5
CLL Collm 144.62 334 *i* P PKPdf 02 56 02.9 +2.9
CLL Collm 144.62 334 *e*PKP PKPdf 02 55 58.0 -2.0
comp=Z,10.0nm,0.7s
MODS Modra-Piesok 144.76 327 *e*PKP PKPdf 02 55 59.9 -0.5
APE Apeiranthos 144.84 305 ⇑ *i*P PKPdf 02 55 58.5 -2.4
APE Apeiranthos 144.84 305 ⇑P PKPdf 02 55 58.5 -2.4
PRU Pruhonice 144.95 331 *e*PKP PKPdf 02 55 59.6 -1.1
PRU epPKP pPKPdf 02 56 04.3 +0.1
ZST Bratislava 144.96 327 *e*PKP PKPdf 02 56 00.6 -0.1
SANT Santorini 145.10 304 *e*P PKPbc 02 55 59.7 -1.2
ESK Eskdalemuir 145.36 353 *e*PKIKP PKPdf 02 55 59.5 -1.7
PKSM Moragy 145.38 323 ⇑ *i*P PKPbc 02 56 01.4 0.0
NKC Novy Kostel 145.67 333 *e*P PKPdf 02 56 02.2 +0.3
NKC Novy Kostel 145.67 333 *e*P PKPdf 02 56 02.2 +0.3
MOX Moxa 145.69 335 *e*(PKP) PKPdf 02 56 06.5 +4.6
MOX Moxa 145.69 335 PKP PKPdf 02 56 06.5 +4.6
CONA Conrad Observa 145.76 328 ⇑ *i*P PKPdf 02 56 03.2 +1.1
comp=Z,17nm,1.2s
CSNA Conrad Observa 145.76 328 ⇑ *i*P PKPdf 02 56 03.1 +0.9
comp=Z,16nm,1.2s
KHC Kasperske Hory 146.00 331 *e*PKP PKPdf 02 56 03.3 +0.8
KHC *ex* x 02 56 22.5
KHC Kasperske Hory 146.00 331 *e*P PKPdf 02 56 03.3 +0.8
KHC *e* 02 56 22.5
GERES GERESS Array B 146.15 331 PKPbc PKPbc 02 56 03.8 0.0
comp=Z,9.6nm,1.0s,baz=35,slow=3.1,SNR=20
GERES GERESS Array B 146.15 331 PKPbc PKPbc 02 56 03.8 0.0
GRA1 Grafenberg Arr 146.59 334 *e*PKP PKPdf 02 56 04.8 +1.3
GRF Grafenberg Arr 146.59 334 *e*PKPdf PKPdf 02 56 04.8 +1.3
GRF Grafenberg Arr 146.59 334 *e*PKP PKPdf 02 56 04.8 +1.3
MOTA Moosalm 148.44 331 ⇑ *i*PKPdf PKPdf 02 56 08.1 +1.4
comp=Z,8.8nm,0.8s
MOTA Moosalm 148.44 331 ⇑ *i*pPKPdf PKPdf 02 56 08.1 +1.4
comp=Z,8.8nm,0.8s
WLF Walferdange 148.51 339 *e*PKP2 PKPbc 02 56 10.5 +0.2
GIVF Givet 148.56 341 *e*PKP1 PKPbc 02 56 09.1 -1.3
comp=Z,50nm,1.0s
BAIF Baives 148.78 341 *e*PKP1 PKPbc 02 56 09.7 -1.2
comp=Z,34nm,1.1s
BFO Black Forest 148.83 335 *e*PKP2 PKPab 02 56 10.8 -4.1
CDF Champ du Feu 149.17 336 *e*PKP1 PKPbc 02 56 10.8 -1.2
comp=Z,18nm,0.8s
ECH Echery 149.38 336 *e*PKHKP PKPbc 02 56 11.5 -1.0
HINF Hinteralfeld 149.82 336 *e*PKP1 PKPbc 02 56 12.1 -1.5
comp=Z,30nm,1.2s
HAU Haudompre 149.85 337 *e*PKP1 PKPbc 02 56 12.2 -1.5
comp=Z,43nm,1.1s
MEZF Maizieres J'vi 149.88 339 *e*PKP1 PKPbc 02 56 12.8 -0.9
TUE Stuetta 149.88 332 *e*PKPbc PKPbc 02 56 11.7 -2.1
CABF La Chapelle 151.12 336 *e*PKP1 PKPbc 02 56 15.7 -1.0
comp=Z,33nm,0.9s
FLN La Foliniere 151.21 346 *e*PKP1 PKPbc 02 56 14.8 -2.1
comp=Z,140nm,1.4s
LDF La Druitiere 151.28 345 *e*PKP1 PKPbc 02 56 15.3 -1.7
comp=Z,59nm,1.3s
LOR Lormes 151.35 339 *e*PKP1 PKPbc 02 56 15.7 -1.6
comp=Z,45nm,1.3s
GRR Gorron 151.64 346 *e*PKP1 PKPbc 02 56 16.3 -1.6
SSF Saint Saulge 151.65 339 *e*PKP1 PKPbc 02 56 16.4 -1.5
comp=Z,27nm,1.1s
LPL La Plagne 151.75 334 *e*PKP1 PKPbc 02 56 17.4 -0.8
comp=Z,18nm,0.8s
LPG La Plagne 151.76 334 *e*PKP1 PKPbc 02 56 17.4 -0.9
comp=Z,32nm,1.0s
SMF Signal de Mont 151.90 339 *e*PKP1 PKPbc 02 56 17.1 -1.4
comp=Z,29nm,1.1s
AVF Avril sur Loir 151.94 339 *e*PKP1 PKPbc 02 56 17.1 -1.5
comp=Z,26nm,1.1s
SGMF Saint Gilles 152.12 348 *e*PKP1 PKPbc 02 56 16.7 -2.3
comp=Z,63nm,1.1s
BNI Bardonecchia 152.15 333 *e*PKIKP PKPbc 02 56 19.1 -0.1
ROSF Rostrenen 152.17 349 *e*PKP1 PKPbc 02 56 17.1 -2.0
comp=Z,133nm,1.4s
BGF Bois d'Agland 152.31 340 *e*PKP1 PKPbc 02 56 17.9 -1.6
comp=Z,34nm,1.1s
MBDF Montbardon 152.37 333 *e*PKP1 PKPbc 02 56 18.0 -1.7
comp=Z,14nm,0.8s
ORIF Oris-en-Rattie 152.59 334 *e*PKP1 PKPbc 02 56 18.8 -1.3
comp=Z,20nm,0.8s
TCF Toulx Ste Croi 152.75 340 *e*PKP1 PKPbc 02 56 18.9 -1.6
comp=Z,22nm,1.1s
SBF Sospel 152.76 331 *e*PKP1 PKPbc 02 56 18.7 -1.9
comp=Z,99nm,1.2s
VIVF Saint-Julien-l 153.12 335 *e*PKP1 PKPbc 02 56 19.9 -1.4
comp=Z,43nm,1.3s
LASF Ste Croix 154.10 336 *e*PKP1 PKPbc 02 56 22.0 -1.5
comp=Z,56nm,1.4s
ESDC Sonseca Array 160.60 344 PKPab PKPab 02 57 03.8 -1.3
comp=Z,1.7nm,0.8s,baz=20,slow=5.4,SNR=5.2
LIC Lamto 164.26 201 *e*PKP2 PKPab 02 57 14.2 -7.5
comp=Z,26nm,1.0s
LIC Lamto 164.26 201 *e*P PKPab 02 57 20.7 -1.0
comp=Z,34nm,1.0s
DBIC Dimbokro 164.62 202 PKPab PKPab 02 57 22.9 -0.4
comp=Z,6.0nm,0.9s,baz=131,slow=4.9,SNR=5.0

ISCJB ***28*** *02:36:38.4±1.4, 88S±04×16348E±009, h10km, mb4.9/12, MS4.9/2, Error ellipse: s-maj=58.0km s-min=12.5km az=175.5*
BJI ***28*** *02:36:39.7, 850S×16350E, h8km, mB5.3, mb5.1, Ms5.3, Msz5.0*
NEIC ***28*** *02:36:40.7±0.9, 846S×16347E, h10km, mb4.9/10, Error ellipse: s-maj=40.5km s-min=10.5km az=172.0*
ISC 28 02:36:39.3±1.4,**90S**±04×**16354E**±009,**h10**km,
(h17km±4.7km**:pP-P),n25,**σ**86/25,mb4.9**/12,**MS4.9**/2,
Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
PMG	**Port Moresby**	**16.18**	**267**	*e*Pn	**Pn**	**02 40 26.6**	**-0.4**
NJ2	**Nanjing**	**59.03**	**316**	*e*P	**P**	**02 46 40.5**	**+0.8**
NJ2				AMB	AMB		

comp=Z,80nm,0.8s,mb5.8

KMI Kunming 68.19 302 P **P 02 47 42.3 +1.9**
KMI AMB AMB
comp=Z,11nm,1.3s,mb4.7
KMI Kunming 68.19 302 P **P 02 47 42.3 +1.9**
comp=Z,11nm,1.3s,mb4.7
HHC Hu-ho-hao-te 68.86 320 *e*P **P 02 47 43.8 -0.4**
HHC AP pP 02 47 47.0 -0.5
HHC PCP PcP 02 48 09.3 +0.6
HHC SCP 02 52 10.8
HHC PCS 02 52 12.5
HHC S S 02 56 44.8 -3.6
HHC SCS ScS 02 57 40.0 -4.8
HHC SS SS 03 01 10.5 -3.4
HHC AMB AMB
comp=Z,11nm,0.7s,mb4.9
HHC LR LR
comp=N,1μm,16.5s,MS5.3
HHC LR LR
comp=E,1μm,16.7s,MS5.3
HHC LR LR
comp=Z,866nm,17.2s,MS5.0
CD2 Chengdu 69.63 308 P **P 02 47 49.8 +0.6**
CD2 AP pP 02 47 54.5 +2.0
CD2 XP sP 02 47 57.0 +3.3
CD2 PP PP 02 50 25.5 +2.2
CD2 XS sS 02 57 03.0 -0.2
CD2 SS SS 03 01 23.8 -2.4
CD2 AMB AMB
comp=Z,20nm,0.7s,mb5.2
CD2 LR LR
comp=N,230nm,14.8s,MS4.8
CD2 LR LR
comp=E,340nm,18.2s,MS4.8
CD2 LR LR
comp=Z,240nm,16.2s,MS4.5
LZH Lanzhou 71.77 313 *e*P **P 02 48 02.0 -0.1**
LZH AP pP 02 48 09.5 +4.1
LZH XP sP 02 48 13.0 +6.4
LZH AMB AMB
comp=Z,71nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,410nm,6.1s
LZH Lanzhou 71.77 313 *e*P **P 02 48 02.0 -0.1**
comp=Z,71nm,1.5s,mb5.4
LZH pP pP 02 48 09.6 +4.2
LZH sP sP 02 48 12.9 +6.3
KIPM Iron Peak 82.88 48 P **P 02 49 04.0 -0.4**
KHMM Horse Mountain 83.02 47 *e*P **P 02 49 05.4 +0.3**
YBH Yreka Blue Hor 84.02 46 *e*P **P 02 49 09.3 -0.9**
OHCM Honcut 84.21 49 *e*P **P 02 49 11.0 -0.3**
WAKR Walker 85.52 50 *e*P **P 02 49 17.4 -0.5**
GNW Green Mountain 85.72 41 *e*P **P 02 49 18.6 0.0**
comp=Z,8.3nm,1.0s,mb4.9
MOD Modoc 85.79 47 *e*P **P 02 49 19.5 +0.4**
WMQ Urumqi 86.10 315 *e*P **P 02 49 19.8 -0.8**
BAR Barrett 86.30 56 *e*P **P 02 49 22.4 +0.6**
HAWA Hanford 87.54 42 *e*P **P 02 49 27.5 0.0**
comp=Z,11nm,1.4s,mb4.9
INK Inuvik 88.66 19 *e*P **P 02 49 31.3 -1.2**
comp=Z,1μm,1.6s
NEW Newport 89.60 41 *e*P **P 02 49 35.5 -1.7**
comp=Z,8.1nm,1.4s,mb4.9
TPAW Teton Pass 92.86 47 *e*P **P 02 49 54.0 +1.5**
comp=Z,3.6nm,1.2s,mb4.7
REDW Red Top Meadow 92.91 47 *e*P **P 02 49 52.8 0.0**
LOHW Long Hollow 93.13 47 *e*P **P 02 49 55.0 +1.2**
comp=Z,3.0nm,1.3s,mb4.6
BW06 Boulder Array 93.75 47 *e*P **P 02 49 57.3 +0.7**
comp=Z,1.0nm,0.7s,mb4.3
TKM2 Tokmak 2 94.54 313 *e*P **P 02 49 59.0 -1.3**
comp=Z,9.0nm,1.4s,mb5.0

BJI ***28*** *02:39:57.5, 1243N×14200E, h19km, mB5.7, mb5.2, Ms5.3, Msz5.1*
ISCJB ***28*** *02:39:57.9±0.2, 1236N±004×14195E±004, h23km, mb5.2/91, MS5.2/13, Error ellipse: s-maj=6.0km s-min=5.1km az=175.5*
MOS ***28*** *02:39:59.4±0.9, 1240N×14196E, h33km, mb5.5/30, MS5.4/4, Error ellipse: s-maj=10.9km s-min=5.8km az=110.9*
GCMT ***28*** *02:40:01.7±0.3, 1244N×14151E, h18km±1km, MW5.5/68, Moment Tensor Solution. s15,c18; s68,c110; Duration: 1s3 Moment tensor: Scale 10¹⁷Nm; Mrr=1.12±.11; Mθθ 1.14±.07; Mϕϕ -0.01±.06; Mrθ 0.78±.16; Mθϕ -0.01±.04; Mϕr 1.52±.23; Best double couple: M₀1.95400×10¹⁷ NP1:ϕs101.00000°, δ25.00000°, λ-36.00000°. NP2: ϕs225.00000°, δ75.00000°, λ-111.00000°. Principal axes: T 1.6000, Plg28.0000°, Azm331.0000°; N 0.7130, Plg20.0000°, Azm230.0000°; P -2.3080, Plg55.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***28*** *02:40:01.7±1.1, 1238N×14192E, h37km±10km, mb5.2/33 Error ellipse: s-maj=5.8km s-min=4.2km az=86.0*
IDC ***28*** *02:40:01.2±2.8, 1236N×14187E, h31km±20km, mb4.7/22, mb1 4.7/24, mb1mx4.7/28, mbtmp4.7/24, ML4.0/2, MS4.8/5, Ms1 4.8/5, ms1mx4.1/26, Error ellipse: s-maj=16.0km s-min=10.2km az=79.0*
DJA ***28*** *02:40:07, 1162N×14299E, h10km, mb5.1/9*
ISC 28 02:40:00.0±0.2,**1237N**±004×**14197E**±004,**h25**km,
h25km±1.7km**:pP-P,n204,**σ**89**/193,**mb5.2**/91,**MS5.2**/13,
20C-8D,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
GUMO	**Guam**	**3.07**	**66**	Pn	**Pn**	**02 40 48.9**	**+1.9**
GUMO	62nm,0.3s,baz=198,slow=7.7,SNR=43			Sn	**Sn**	**02 41 29.6**	**+6.6**
	38nm,0.3s,baz=210,slow=16,SNR=5.9						
GUMO	**Guam**	**3.07**	**66**	*e*Pn	**Pn**	**02 40 47.9**	**+0.9**
JOW	**Kunigami**	**19.30**	**320**	P	**Pn**	**02 44 23.9**	**-0.5**
JOW	0.5nm,0.3s,baz=139,slow=14,SNR=11			LR	LR	02 50 22.6	
	comp=Z,741nm,19.9s,baz=3.4,slow=32						
PMG	**Port Moresby**	**22.24**	**166**	*e*P	**P**	**02 44 55.3**	**+0.2**
PMG	comp=Z,79nm,1.0s			pmax	pmax		
PMG	**Port Moresby**	**22.24**	**166**	*e*P	**P**	**02 44 55.3**	**+0.2**
	comp=Z,79nm,1.0s,mb5.1						
NACB	**Ninganchiao**	**22.60**	**304**	*e*P	**P**	**02 44 57.6**	**-1.3**
	comp=Z,176nm,1.4s,mb5.3						
YHNB	**Yeheng**	**23.00**	**305**	*e*P	**P**	**02 45 03.4**	**+0.2**
	comp=Z,119nm,1.4s,mb5.1						
MYLDM	**Lahad Datu**	**24.26**	**255**	⇑P	**P**	**02 45 19.5**	**+4.1**
MJAR	**Matsushiro Arr**	**24.30**	**353**	P	**P**	**02 45 15.4**	**-0.1**
	comp=Z,111nm,1.2s,mb4.2,baz=173,slow=8.1,SNR=8.7						
MAJO	**Matsushiro**	**24.31**	**353**	*e*P	**P**	**02 45 14.5**	**-1.1**
MAJO	comp=Z,42nm,1.2s,mb4.7			pmax	pmax		
MAJO	**Matsushiro**	**24.31**	**353**	*e*P	**P**	**02 45 14.5**	**-1.1**
	comp=Z,42nm,1.2s,mb4.8						
MAT	**Matsushiro**	**24.31**	**353**	P	**P**	**02 45 14.4**	**-1.2**
TSM	**Tawau**	**25.14**	**253**	⇑P	**P**	**02 45 23.9**	**+0.4**
SDKM	**Sandakan**	**25.35**	**257**	⇑P	**P**	**02 45 33.4**	**+8.1**
COEN	**Coen**	**26.18**	**177**	*e*P	**P**	**02 45 33.4**	**+0.6**
	comp=Z,14nm,1.0s,mb4.4						
KSRS	**Korea Array**	**27.97**	**336**	P	**P**	**02 45 48.0**	**-0.7**
	comp=Z,3.6nm,0.9s,baz=146,slow=8.6,SNR=5.5						
KAPI	**Kappang**	**28.04**	**233**	P	**P**	**02 45 47.6**	**-2.0**
	comp=Z,4.8nm,0.3s,mb4.6,baz=159,slow=17,SNR=4.3						
SBUM	**Sibu**	**31.07**	**254**	⇓P	**P**	**02 46 16.8**	**+0.3**
WHN	**Wuhan**	**31.29**	**310**	P	**P**	**02 46 16.5**	**-1.8**
WHN				AP	pP	02 46 25.5	-0.2
ASAJ	**Asahikawa**	**31.64**	**1**	LR	LR	02 56 38.0	
	comp=Z,2μm,20.8s,MS4.8,baz=339,slow=32						
CTA	**Charters Tower**	**32.53**	**173**	*e*P	**P**	**02 46 30.7**	**+1.6**
	comp=Z,10nm,0.9s,mb4.8						
CTA	**Charters Tower**	**32.53**	**173**	P	**P**	**02 46 30.1**	**+0.9**
	comp=Z,12nm,0.8s,mb4.9,baz=328,slow=8.3,SNR=18						
CTA				LR	LR	02 57 41.0	
	comp=Z,3μm,20.6s,MS5.0,baz=0.9,slow=33						
CTA	**Charters Tower**	**32.53**	**173**	*e*P	**P**	**02 46 30.7**	**+1.6**
CTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CTAO	**Charters Tower**	**32.53**	**173**	*e*P	**P**	**02 46 30.1**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
CTAO	**Charters Tower**	**32.53**	**173**	*e*P	**P**	**02 46 30.1**	**+0.9**
	comp=Z,22nm,1.0s,mb5.0						
WRAB	**Tennant Creek**	**32.96**	**193**	P	**P**	**02 46 32.4**	**-0.6**
	comp=Z,304nm,0.9s,mb6.2,SNR=7.7						

WRAB Tennant Creek 32.96 193 *e*P **P 02 46 32.9 -0.1**
WRAB pmax pmax
comp=Z,41nm,0.9s,mb5.4
WRAB Tennant Creek 32.96 193 *e*P **P 02 46 32.9 0.0**
comp=Z,41nm,0.9s,mb5.3
WB2 Warramunga Arr 32.97 193 *e*P **P 02 46 32.3 -0.7**
WRA Warramunga Arr 32.98 193 P **P 02 46 33.0 -0.1**
comp=Z,34nm,1.0s,mb5.2,baz=13,slow=9.2,SNR=66
MDJ Mudanjiang 33.84 344 P **P 02 46 42.5 +2.1**
MDJ AMB AMB
comp=Z,11nm,1.3s,mb4.6
FITZ Fitzroy Crossi 34.30 208 P **P 02 46 43.9 -0.7**
comp=Z,12nm,0.9s,mb4.8,baz=48,slow=8.1,SNR=7.5
YSS Yuzh-Sakhalins 34.48 1 *e*P **P 02 46 44.4 -1.5**
BJT Baijiatuan 35.72 325 *e*P **P 02 46 56.6 -0.1**
BJT pmax pmax
comp=Z,77nm,1.1s
BJT Baijiatuan 35.72 325 *e*P **P 02 46 56.6 -0.1**
comp=Z,77nm,1.1s,mb5.5
BJI Beijing 35.73 325 P **P 02 46 57.0 +0.2**
BJI AMB AMB
comp=Z,43nm,1.2s,mb5.2
BJI Beijing 35.73 325 P **P 02 46 57.0 +0.2**
comp=Z,43nm,1.2s,mb5.2
GYA Guiyang 35.99 298 ⇑ *i*P **P 02 47 00.8 +1.6**
GYA PP PP 02 48 22.0 +0.7
GYA S **S** **02 52 37.8 +1.1**
GYA SS SS 02 55 00.5 -14
GYA AMB AMB
comp=Z,50nm,1.2s,mb5.3
GYA AMB AMB
comp=Z,180nm,5.2s
GYA LR LR
comp=N,2μm,15.6s,MS5.3
GYA LR LR
comp=E,3μm,15.7s,MS5.3
GYA LR LR
comp=Z,2μm,15.2s,MS5.0
HABR Khabarovsk 36.45 352 *e*P **P 02 46 59.2 -3.6**
HABR *e* 02 47 10.2
HABR *e* 02 49 29.9
HABR eS **S** **02 52 40.0 -3.1**
HABR *e* 02 55 11.6
ASAR Alice Springs 36.67 192 P **P 02 47 04.8 -0.2**
comp=Z,6.0nm,0.7s,mb4.5,baz=18,slow=13,SNR=30
ASAR PP PP 02 48 30.4 +1.5
comp=Z,2.6nm,0.9s,baz=3.8,slow=11,SNR=4.6
XAN Xi'an 37.00 311 P **P 02 47 07.3 -0.4**
XAN AP pP 02 47 14.5 -0.6
XAN AMB AMB
comp=Z,14nm,1.3s,mb4.6
HHC Hu-ho-hao-te 38.93 322 *e*P **P 02 47 24.0 +0.1**
HHC AP pP 02 47 27.0 -4.4
HHC AMB AMB
comp=Z,21nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,1μm,4.2s
HHC LR LR
comp=N,2μm,14.8s,MS5.2
HHC LR LR
comp=E,2μm,14.7s,MS5.2
HHC LR LR
comp=Z,2μm,14.4s,MS5.1
KMI Kunming 39.11 295 P **P 02 47 27.5 +1.8**
KMI AP pP 02 47 29.3 -3.8
KMI AMB AMB
comp=Z,36nm,1.0s,mb5.1
KMI AMB AMB
comp=Z,5μm,9.8s
KMI LR LR
comp=N,2μm,14.6s,MS5.3
KMI LR LR
comp=E,2μm,13.0s,MS5.3
KMI LR LR
comp=Z,2μm,14.8s,MS5.1
KMI Kunming 39.11 295 P **P 02 47 27.4 +1.7**
KMI 02 48 58.0
KMI PPP 02 49 22.9
KMI S **S** **02 53 25.0 +0.9**
KMI SS SS 02 56 05.6 -12
KMI pmax pmax
comp=Z,36nm,1.0s,mb5.1
KMI MLR MLR
comp=Z,2μm,14.8s,MS5.1
KMI Kunming 39.11 295 P **P 02 47 27.4 +1.7**
comp=Z,36nm,1.0s,mb5.1
KMI pP pP 02 47 29.3 -3.8
KMI sP sP 02 47 30.8 -5.4
KMI PP PP 02 48 58.0 +2.5
KMI PPP 02 49 22.9
KMI S **S** **02 53 25.0 +0.9**
KMI SS SS 02 56 05.6 -12
KMI LR LR
comp=Z,2μm,14.8s,MS5.1
KGM Kluang 39.65 258 ⇓P **P 02 47 30.5 +0.2**
CD2 Chengdu 39.77 304 ⇓ *i*P **P 02 47 31.5 +0.4**
CD2 AP pP 02 47 36.3 -2.3
CD2 XP sP 02 47 39.0 -2.6
CD2 AMB AMB
comp=Z,110nm,1.0s,mb5.5
CD2 LR LR
comp=N,4μm,14.4s,MS5.5
CD2 LR LR
comp=E,3μm,14.2s,MS5.5
CD2 LR LR
comp=Z,3μm,16.6s,MS5.2
FRIM Kepong 40.94 261 ⇓P **P 02 47 48.1 +7.1**
HIA Hailar 41.12 338 *e*P **P 02 47 40.9 -1.1**
CHRT Chiangrai 41.12 286 ⇓P **P 02 47 43.0 +0.6**
comp=Z,132nm,0.8s,mb5.6
LZH Lanzhou 41.63 311 *e*P **P 02 47 47.0 +0.6**
LZH AP pP 02 47 51.5 -2.4
LZH XP sP 02 47 54.0 -2.9
LZH AMB AMB
comp=Z,156nm,1.6s,mb5.4
LZH AMB AMB
comp=Z,689nm,5.1s
LZH LR LR
comp=N,1μm,14.8s
LZH LR LR
comp=Z,2μm,15.7s,MS5.1
LZH Lanzhou 41.63 311 *e*P **P 02 47 47.0 +0.6**
LZH *SP sP 02 47 54.0 -2.9
LZH 02 49 26.8
LZH eS **S** **02 54 02.6 +1.1**
LZH eSS SS 02 57 00.5 -6.7
LZH pmax pmax
comp=Z,156nm,1.6s,mb5.4
LZH MLR MLR
comp=Z,2μm,15.7s,MS5.1
LZH Lanzhou 41.63 311 *e*P **P 02 47 47.0 +0.6**
comp=Z,156nm,1.6s,mb5.4
LZH pP pP 02 47 51.5 -2.4
LZH sP sP 02 47 54.0 -2.9
LZH PP PP 02 49 26.8 +3.9
LZH eS **S** **02 54 02.6 +1.1**
LZH sS sS 02 54 10.2 -3.7
LZH eSS SS 02 57 00.5 -6.7
LZH LR LR
comp=Z,2μm,15.7s,MS5.1
CMAR Chiang Mai Ar 41.85 284 P **P 02 47 49.5 +1.1**
comp=Z,23nm,0.9s,mb4.8,baz=85,slow=6.3,SNR=56
CMAR LR LR 03 05 01.2
comp=Z,1μm,18.6s,MS4.7,baz=310,slow=36
CMAR Chiang Mai Ar 41.85 284 *i* P **P 02 47 49.5 +1.1**
CHG Chiang Mai 41.86 284 ⇑P **P 02 47 53.6 +5.1**
comp=Z,17nm,0.7s,mb4.8
CHTO Chiang Mai 41.86 284 *e*P **P 02 47 48.6 +0.1**
CHTO pmax pmax
comp=Z,12nm,1.0s,mb4.5
CHTO Chiang Mai 41.86 284 *e*P **P 02 47 48.9 +0.5**
CHTO Chiang Mai 41.86 284 *e*P **P 02 47 48.6 +0.1**
comp=Z,12nm,1.0s,mb4.5
PETK Petropavlovsk- 42.54 14 P **P 02 47 55.2 +1.7**
comp=Z,12nm,1.0s,mb4.6,baz=180,slow=5.9,SNR=11
PETK LR LR 03 05 31.2
comp=Z,1μm,19.0s,MS4.9,baz=33,slow=36
PETK Petropavlovsk- 42.54 14 P **P 02 47 55.2 +1.7**
PETK LR LR 03 05 31.2
PET Petropavlovsk 42.69 15 *e*P **P 02 47 55.8 +1.1**
PET Petropavlovsk 42.69 15 ⇑ *e*P **P 02 47 54.8 +0.1**
PET *e*P 02 47 55.5
STKA Stephens Creek 43.99 180 *e*P **P 02 48 05.6 +0.1**
comp=Z,12nm,1.6s,mb4.4
STKA Stephens Creek 43.99 180 P **P 02 48 05.7 +0.2**

comp=Z,5.6nm,0.7s,mb4.4,baz=340,slow=7.9,SNR=7.9
FORT Forrest 44.94 197 *e*P **P 02 48 13.9 +0.9**
comp=Z,42nm,0.8s,mb5.3
ULN Ulaanbaatar 45.83 327⇑ *e*P **P 02 48 21.0 +1.1**
ULN Ulaanbaatar 45.83 327 *e*P **P 02 48 20.8 +0.9**
comp=Z,37nm,1.2s,mb5.2
GTA Gaotai 45.91 314 P **P 02 48 21.8 +1.0**
GTA AP pP 02 48 25.5 -2.9
GTA XP sP 02 48 28.5 -2.9
GTA AMB AMB
comp=Z,48nm,1.2s,mb5.3
GTA AMB AMB
comp=Z,815nm,6.0s
GTA LR LR
comp=N,1μm,16.8s,MS5.0
GTA LR LR
comp=E,1μm,15.6s,MS5.0
GTA LR LR
comp=Z,2μm,15.9s,MS5.1
SONM Songino Array 46.16 327 P **P 02 48 23.5 +1.0**
comp=Z,4.5nm,0.9s,mb4.4,baz=127,slow=9.1,SNR=26
CLNS Chul'man 46.28 347 *e*P **P 02 48 23.8 +0.5**
CLNS *e**PP pP 02 48 32.1 +1.2
CLNS *e* 02 50 00.5
CLNS *e* 02 50 15.0
CLNS *e*PPP 02 50 51.9
CLNS *e*S **S 02 55 07.5 -1.1**
CLNS pmax pmax
comp=Z,19nm,0.8s,mb5.1
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=E,6.0nm,0.7s
CLNS smax
comp=E,1087μm,15.1s
CLNS smax
comp=N,1325μm,14.1s
ZAK Zakamensk 49.33 328⇓ *i*P **P 02 48 47.7 +0.6**
ZAK pmax pmax
comp=Z,69nm,1.4s,mb5.5
KLBR Kellerberrin 49.50 207 *e*P **P 02 48 48.3 -0.3**
comp=Z,36nm,1.0s,mb5.4
TLY Talaya 49.92 330 P **P 02 48 52.3 +0.7**
comp=Z,109nm,1.4s,mb5.7,SNR=6.4
TLY Talaya 49.92 330 *e*P **P 02 48 52.5 +0.9**
TLY *e* pP 02 48 59.9 +0.6
TLY pmax pmax
comp=Z,46nm,1.9s,mb5.2
TLY Talaya 49.92 330 *e*P **P 02 48 50.7 -0.9**
IRK Irkutsk 49.97 331 *e*P **P 02 48 52.4 +0.5**
IRK *e* pP 02 48 59.7 +0.1
IRK pmax pmax
comp=Z,68nm,2.2s,mb5.3
LSA Lhasa 50.06 298 *e*P **P 02 48 54.4 +1.3**
LSA pmax pmax
comp=Z,20nm,0.7s,mb5.3
LSA Lhasa 50.06 298 *e*P **P 02 48 54.4 +1.3**
comp=Z,20nm,0.7s,mb5.3
BOD Bodaibo 50.09 341 *e*P **P 02 48 52.6 -0.1**
BOD pmax pmax
comp=Z,24nm,1.2s,mb5.1
YAK Yakutsk 50.37 353 *e*P **P 02 48 54.8 0.0**
YAK *e* 02 49 08.0
YAK *e* 02 51 42.0
YAK *e*S ScS 02 58 37.6 -6.4
YAK pmax pmax
comp=Z,190nm,0.9s,mb6.1
YAK pmax pmax
comp=E,27nm,0.9s
YAK pmax pmax
comp=N,133nm,1.2s
YAK Yakutsk 50.37 353⇑ *e*P **P 02 48 54.0 -0.8**
MUN Mundaring 50.53 209 *e*P **P 02 48 56.4 -0.1**
MOY Mondy 51.25 328 *e*P **P 02 49 02.7 +1.1**
MOY pmax pmax
comp=Z,124nm,3.0s
ODAN Odare 53.02 294 *e*P **P 02 49 15.1 -0.2**
comp=Z,224nm,1.6s,mb5.9
RAMN Ramite 53.73 294 *e*P **P 02 49 20.1 -0.4**
comp=Z,215nm,1.4s,mb5.9
JIRN Jiri 54.15 295 *e*P **P 02 49 23.3 -0.2**
GUN Gumba 54.45 295 *e*P **P 02 49 25.3 -0.4**
comp=Z,530nm,1.4s,mb6.3
PKIN Phulchoki 54.85 295 *e*P **P 02 49 28.1 -0.5**
comp=Z,139nm,1.4s,mb5.8
HVS Khovu-Aksy 54.90 325⇑ *e*P **P 02 49 29.4 +0.9**
KKN Kakani 54.97 295 *e*P **P 02 49 28.8 -0.6**
comp=Z,100nm,1.1s,mb5.8
DMN Daman 55.11 295 *e*P **P 02 49 29.8 -0.7**
comp=Z,210nm,1.3s,mb6.0
GKN Gorkha 55.55 295 *e*P **P 02 49 33.2 -0.4**
comp=Z,254nm,1.3s,mb6.1
WMQ Urumqi 55.96 315 P **P 02 49 36.8 +0.5**
WMQ AP pP 02 49 41.0 -3.0
WMQ XP sP 02 49 44.0 -3.0
WMQ PCP PcP 02 50 35.0 +0.3
WMQ PP PP 02 51 42.0 +0.8
WMQ *e*S **S 02 57 22.0 -0.9**
WMQ AMB AMB
comp=Z,108nm,1.3s,mb5.7
WMQ AMB AMB
comp=Z,454nm,4.0s
WMQ LR LR
comp=N,2μm,17.6s,MS5.2
WMQ LR LR
comp=E,1μm,19.0s,MS5.2
WMQ LR LR
comp=Z,2μm,18.0s,MS5.3
DANN Dangsing 56.34 296 *e*P **P 02 49 39.2 -0.1**
comp=Z,321nm,1.4s,mb6.2
KOLN Koldanda 56.45 295 *e*P **P 02 49 40.1 0.0**
comp=Z,101nm,1.0s,mb5.8
KRAR Krasnoyarsk 57.63 330 *e*P **P 02 49 46.6 -1.3**
KRAR pmax pmax
comp=Z,27nm,1.3s,mb5.1
BILL Bilibino 57.85 11⇑ *i*P **P 02 49 49.6 +0.3**
BILL pmax pmax
comp=Z,98nm,1.2s,mb5.7
BILL Bilibino 57.85 11⇑ *e*P **P 02 49 49.7 +0.4**
TIXI Tiksi 59.78 355⇑ *e*P **P 02 50 02.0 -0.6**
TIXI pmax pmax
comp=Z,47nm,1.2s,mb5.4
TIXI Tiksi 59.78 355⇑ *e*P **P 02 50 02.0 -0.6**
TIXI pmax pmax
comp=Z,47nm,1.2s,mb5.4
TIXI Tiksi 59.78 355⇑ *e*P **P 02 50 02.1 -0.5**
MKAR Makanchi Array 60.43 317 P **P 02 50 08.2 +0.7**
comp=Z,37nm,0.8s,mb5.5,baz=96,slow=8.7,SNR=183
ZAA0 Zalesovo Array 60.99 325 *e*P **P 02 50 11.3 +0.1**
ZALV Zalesovo Beam 60.99 325 P **P 02 50 11.2 0.0**
comp=Z,13nm,0.8s,mb5.1,baz=105,slow=6.8,SNR=46
HYB Hyderabad 61.27 283 *i*P **P 02 50 14.5 +0.8**
HYB Hyderabad 61.27 283 *e*P **P 02 50 17.5 +3.8**
DDI Dehra Dun 61.42 298 *ex* x 02 50 13.3
RPZ Rata Peaks 61.80 156 P **P 02 50 16.0 -0.8**
comp=Z,19nm,0.9s,mb5.2,baz=125,slow=3.2,SNR=6.4
NVS Novosibirsk 62.16 326⇑ *i*P **P 02 50 18.8 -0.3**
NVS pmax pmax
comp=N,52nm,1.4s
NVS pmax pmax
comp=E,120nm,1.4s
NVS pmax pmax
comp=Z,160nm,1.4s,mb6.0
KURK Kurchatov 63.71 321 P **P 02 50 29.5 0.0**
comp=Z,1μm,0.8s
KURK Kurchatov 63.71 321 P **P 02 50 28.6 -0.9**
comp=Z,98nm,0.8s,mb5.9,baz=105,slow=6.4,SNR=124
KURK Kurchatov 63.71 321⇑ *e*P **P 02 50 29.5 0.0**
TKM2 Tokmak 2 64.40 312 *e*P **P 02 50 34.2 0.0**
TKM2 pmax pmax
comp=Z,36nm,1.3s,mb5.2
TKM2 Tokmak 2 64.40 312 P **P 02 50 34.9 +0.7**
SNR=12
TKM2 Tokmak 2 64.40 312 *e*P **P 02 50 34.2 0.0**
comp=Z,36nm,1.3s,mb5.2
KZA Kyzart 64.56 311 P **P 02 50 37.2 +2.0**
SNR=24
KBK Karagaybulak 64.85 311 P **P 02 50 37.7 +0.6**
SNR=12
CHMS Chumysh 65.03 312 P **P 02 50 38.7 +0.4**
SNR=12
FRU Bishkek 65.11 312 *i*P **P 02 50 39.0 +0.2**
FRU pmax pmax
comp=Z,80nm,2.0s,mb5.4
UCH Uchtor 65.12 311 P **P 02 50 40.4 +1.5**
SNR=32
UCH Uchtor 65.12 311 *e*P **P 02 50 40.3 +1.4**
comp=Z,86nm,1.3s,mb5.6
UCH *e*pP pP 02 50 48.4 +1.7
AAK Ala-Archa 65.18 311 P **P 02 50 39.9 +0.6**
SNR=7.6
USP Ospenovka 65.24 312 P **P 02 50 39.4 -0.3**
SNR=12
EKS2 Erkin-Say 65.70 311 P **P 02 50 43.4 +0.8**
SNR=9.4
EKS2 Erkin-Say 65.70 311 *e*P **P 02 50 43.1 +0.4**
comp=Z,48nm,1.5s,mb5.3
EKS2 *e*pP pP 02 50 50.5 0.0
AML Almayashu 65.72 311 P **P 02 50 44.2 +1.5**
SNR=20
AML Almayashu 65.72 311 *e*P **P 02 50 43.8 +1.0**
comp=Z,70nm,1.4s,mb5.5
AML *e*pP pP 02 50 51.9 +1.3
SVW2 Sparrevohn 66.07 28 *e*P **P 02 50 45.6 +1.0**
KDAK Kodiak Island 66.59 32 P **P 02 50 48.2 +0.2**
comp=Z,11nm,0.8s,mb4.9,baz=114,slow=2.5,SNR=12
IMA2 Indian Mountai 68.47 23 *e*P **P 02 50 59.4 -0.4**
SEW Seward 68.72 30 *e*P **P 02 51 01.0 -0.5**
SEW *e*pP pP 02 51 09.9 +0.6
BPAW Bear Paw Mtn. 68.99 26 *e*P **P 02 51 03.0 0.0**
comp=Z,67nm,1.2s,mb5.5
BPAW *e*pP pP 02 51 11.9 +1.0
KBL Kabul 69.09 302 *e*P **P 02 51 03.8 -0.5**
comp=Z,32nm,1.0s,mb5.2
BVAR Borovoye Array 69.14 322 P **P 02 51 03.8 -0.4**
comp=Z,58nm,0.6s,mb5.7,baz=101,slow=7.7,SNR=251
PMR Palmer 69.20 29 *e*P **P 02 51 04.0 -0.4**
PMR *e**PP pP 02 51 12.1 -0.2
PMR pmax pmax
comp=Z,27nm,1.0s,mb5.1
PMR Palmer 69.20 29 *e*P **P 02 51 04.0 -0.3**
comp=Z,27nm,1.0s,mb5.1
PMR *e*pP pP 02 51 12.1 -0.2
BRVK Borovoye 69.21 322 P **P 02 51 04.9 +0.3**
comp=Z,1μm,0.8s,SNR=44
MCK McKinley 69.77 26 *e*P **P 02 51 07.0 -0.9**
MCK pmax pmax
comp=Z,62nm,1.2s,mb5.4
MCK McKinley 69.77 26 *e*P **P 02 51 07.0 -0.8**
comp=Z,62nm,1.2s,mb5.4
COLD Coldfoot 70.15 23 *e*P **P 02 51 10.7 +0.5**
comp=Z,45nm,1.1s,mb5.3
COLD *e*pP pP 02 51 19.7 +1.6
COLA College 70.49 25 *e*P **P 02 51 11.4 -0.9**
DAWY Dawson 73.99 27 *e*P **P 02 51 34.0 +0.8**
DAWY *e*pP pP 02 51 42.7 +1.6
HYT Haines Junctio 74.67 30 *e*P **P 02 51 38.1 +0.9**
HYT *e*pP pP 02 51 46.9 +1.8
SVE Sverdlovsk 75.01 326⇓ *e*P **P 02 51 39.8 +0.6**
SVE pmax pmax
comp=Z,98nm,0.9s,mb5.7
SKAG Skagway 75.73 32 *e*P **P 02 51 44.4 +1.0**
ARU Arti 76.16 325 P **P 02 51 45.7 -0.1**
comp=Z,456nm,0.8s,SNR=6.5
ARU Arti 76.16 325*d i*P **P 02 51 45.3 -0.5**
ARU *e* 02 54 32.2
ARU *e*S S 03 01 27.4 -0.8
ARU *e*SS SS 03 06 18.5 -3.0
ARU pmax pmax
comp=Z,157nm,1.7s,mb5.7
ARU Arti 76.16 325⇓ *e*P **P 02 51 45.2 -0.6**
AKTK Aktyubinsk 76.74 319 P **P 02 51 48.9 -0.4**
AKTO Aktyubinsk 76.74 319 P **P 02 51 48.9 -0.4**
comp=Z,10nm,0.7s,mb4.9,baz=90,slow=7.4,SNR=48
ABKT Ailbek 77.70 306 P **P 02 51 55.8 +0.8**
comp=Z,120nm,1.0s,mb5.8,SNR=5.6
CASY Casey 81.80 192 *e*P **P 02 52 15.6 -0.8**
ALE Alert 84.60 3 P **P 02 52 31.5 +0.6**
comp=Z,130nm,1.6s,mb5.8,SNR=6.1
JCW Jim Creek 84.91 42 *e*P **P 02 52 33.6 +0.6**
MAK Makhachkala 84.91 313 *e*P **P 02 52 31.6 -1.5**
MAK MLR MLR
comp=Z,5μm,17.0s,MS5.9
KBS Kingsbay 84.99 351⇑ *e*P **P 02 52 32.4 -0.4**
YKA Yellowknife Ar 85.23 27 P **P 02 52 33.9 -0.4**
comp=Z,4.5nm,1.0s,mb4.5,baz=292,slow=5.1,SNR=3.6
YKA Yellowknife Ar 85.23 27⇑ *e*P **P 02 52 33.9 -0.4**
KLMR Klimovskoe 85.27 331 *e*P **P 02 52 33.3 -1.2**
KLMR pmax pmax
comp=Z,23nm,1.1s,mb5.2
HUMO Hull Mountain 85.42 48 *e*P **P 02 52 36.0 +0.3**
comp=Z,5.7nm,0.8s,mb4.8
ETW Entiat 86.09 42 *e*P **P 02 52 39.0 +0.1**
HOG Hogback Mounta 86.41 48 P **P 02 52 41.6 +1.1**
LASM Arnica Sink 86.65 48 P **P 02 52 37.8 -3.9**
RSW Rattlesnake Hi 86.88 43 *e*P **P 02 52 43.0 +0.2**
ARCES ARCESS Array B 87.36 342 P **P 02 52 43.7 -0.9**
comp=Z,6.1nm,0.9s,mb4.8,baz=317,slow=8.3,SNR=12
GNI Garni 87.57 310 *e*P **P 02 52 46.4 +0.1**
GNI pmax pmax
comp=Z,31nm,1.4s
GNI Garni 87.57 310 *e*P **P 02 52 46.4 +0.1**
comp=Z,31nm,1.4s,mb5.3
MOS Moscow 87.79 327 *e*P **P 02 52 44.7 -2.3**
MOS *e* 02 56 17.3
MOS pmax pmax
comp=Z,48nm,0.9s,mb5.7
NEW Newport 88.00 41 *e*P **P 02 52 47.6 -0.6**
comp=Z,14nm,1.1s,mb5.1
NEW *e*pP pP 02 52 54.2 -2.0
KIV Kislovodsk 88.09 315 *i*P **P 02 52 48.6 -0.1**
KIV *e* 02 52 59.0
KIV *e* 02 56 15.7
KIV *e*SS SS 03 09 19.1 -0.3
KIV pmax pmax
comp=Z,5.0nm,1.2s,mb4.6
JOF Joensuu 88.20 335 *ep* **P 02 52 46.9 -1.9**
comp=Z,9.0nm,0.7s,mb5.1
CMB Columbia Colle 88.40 52 *e*P **P 02 52 50.7 +0.4**
CMB pmax pmax
comp=Z,30nm,2.1s,mb5.2
CMB Columbia Colle 88.40 52 *e*P **P 02 52 50.7 +0.5**
comp=Z,30nm,2.1s,mb5.2
OBN Obninsk 88.56 326⇑ *e*P **P 02 52 49.8 -0.8**
OBN pmax pmax
comp=Z,55nm,1.5s,mb5.7
NVAR Mina Array Bea 89.88 51 P **P 02 52 57.0 -0.2**
comp=Z,3.3nm,0.9s,mb4.7,baz=260,slow=3.1,SNR=5.5
KAF Kangasniemi 90.64 335 *ep* **P 02 52 58.0 -2.2**
comp=Z,7.4nm,0.8s,mb5.1,baz=59,slow=4.4
KAF Kangasniemi 90.64 335 *e*P **P 02 52 58.0 -2.2**
KAF pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
DAC Darwin (Calif) 91.01 53 *e*P **P 02 52 56.5 -6.0**
ANN Anapa 91.44 316 *e*P **P 02 53 00.6 -3.7**
ANN pmax pmax
comp=Z,51nm,1.7s,mb5.6
ANN MLR MLR
comp=Z,3μm,17.0s,MS5.9
DLMT Dillon 91.85 43 *e*P **P 02 53 06.3 +0.1**
comp=Z,5.4nm,0.4s,mb5.2
HRY Holter Researc 91.90 41 *e*P **P 02 53 11.1 +4.7**
MALT Malatya 92.79 310 *e*P **P 02 53 10.5 -0.2**
comp=Z,1.4nm,0.5s,mb4.7
AKASG Malin Array Be 94.36 324 P **P 02 53 15.4 -2.3**
comp=Z,0.2nm,0.2s,mb4.1,baz=71,slow=2.1,SNR=4.7
AKASG Malin Array Be 94.36 324 *i*P **P 02 53 15.0 -2.7**
NOA NORSAR Array B 97.15 338 P **P 02 53 28.7 -1.4**
comp=Z,1.4nm,0.9s,mb4.4,baz=69,slow=11,SNR=3.5
QSPA South Pole Qui 102.22 180 P Pdif 02 53 53.2 +0.3
comp=Z,1.4nm,0.9s,baz=1.5,slow=4.4,SNR=3.6
GERES GERESS Array B 103.89 328 Pdiff Pdif 02 53 59.6 -0.7
comp=Z,0.3nm,0.6s,baz=325,slow=2.1,SNR=3.4
SNAA Sanae 117.04 192 *e*PKIKP PKPdf 02 58 41.4 -0.8
TORD Torodi Ar. Bea 133.16 301 PKP PKPdf 02 59 13.2 -1.4
comp=Z,1.5nm,1.0s,baz=326,slow=0.5,SNR=4.2
TORD PP PP 03 01 36.9 -3.9
comp=Z,2.5nm,1.2s,baz=54,slow=7.5,SNR=5.5
TORD SKPbc SKPbc 03 02 39.5 -1.7
comp=Z,1.9nm,1.1s,baz=45,slow=4.5,SNR=4.4
OTAV Otavalo 137.98 76 *e*PKPdf PKPdf 02 59 23.4 -0.3
PLCA Paso Flores 139.86 141 PKP PKPdf 02 59 26.7 +0.4
comp=Z,3.4nm,1.0s,baz=256,slow=5.4,SNR=5.2
PLCA Paso Flores 139.86 141 *e*PKPdf PKPdf 02 59 26.7 +0.4
FCH Farellones 143.91 131 *e*P PKPdf 02 59 32.3 -1.5
LCO Las Campanas 145.40 124 *e*PKPbc PKPbc 02 59 37.5 +1.0
CFAA Coronel Fontan 146.25 129 PKPbc PKPbc 02 59 38.7 -0.3
comp=Z,1.8nm,0.8s,baz=223,slow=2.1,SNR=16
TRQA Tornquist 146.68 144 *e*PKPbc PKPbc 02 59 39.8 -0.2
LVC Limon Verde 148.90 113 PKPbc PKPbc 02 59 48.2 +1.7
comp=Z,8.5nm,0.7s,baz=268,slow=4.7,SNR=7.0
LVC Limon Verde 148.90 113 *e*PKPbc PKPbc 02 59 48.3 +1.8
LPAZ La Paz 150.59 101 PKP PKPdf 02 59 47.0 +1.7
comp=Z,11nm,0.7s,baz=33,slow=3.0,SNR=12
LPAZ PKPbc PKPbc 02 59 52.0 +1.2
comp=Z,11nm,0.7s,baz=318,slow=3.9,SNR=41
LPAZ La Paz 150.59 101 *e*PKPdf PKPdf 02 59 47.0 +1.7
LPAZ *e*PKPbc PKPbc 02 59 52.2 +1.4
CPUP Villa Florida 157.14 130 *e*PKPab PKPab 03 00 26.1 +1.1
comp=Z,4.2nm,0.9s,baz=240,slow=4.1,SNR=5.6
CPUP Villa Florida 157.14 130 *e*PKPab PKPab 03 00 25.8 +0.7
SIV San Ignacio 157.37 102 PKPab PKPab 03 00 27.7 +1.3
comp=Z,2.3nm,1.0s,baz=267,slow=6.0,SNR=3.9

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*MOS **28** 02:42:33.0±0.8,568S×8097W,h33km, mb4.9/18, Error ellipse: s-maj=19.0km s-min=7.1km az=118.0*
*NEIC **28** 02:42:34.4±0.2,578S×8094W,h35km, mb4.8/37, ML4.5(LIM), Error ellipse: s-maj=6.7km s-min=3.9km az=54.0*
NEIC Felt [III] at Sechura and [II] at Chiclayo and Piura.
*BJI **28** 02:42:34.3,580S×8090W,h35km, mB5.0, Ms5.1,Msz4.9*
*ISCJB **28** 02:42:37.7±1.1,568S±004×8086W±006,h79km±11km, mb4.6/46, Error ellipse: s-maj=10.4km s-min=6.0km az=149.6*
*IDC **28** 02:42:38.7±2.2,567S×8091W,h75km±20km, mb4.1/18, mb1 4.2/22,mb1mx4.2/27,mbtmp4.1/22,Error ellipse: s-maj=21.2km s-min=10.1km az=64.0*
ISC 28 02:42:39.0±0.9, 570S±004×8084W±006, h72km±9km, n251, σ0 59/230, mb4.6/46, 41C-51D, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**2.75**	**118**	P	**Pn**	**02 43 21.9**	**+1.0**
	73nm,0.3s,baz=296,slow=8.3,SNR=248						
ATAH				S	**Sn**	**02 43 58.3**	**+5.2**
	149nm,0.3s,baz=43,slow=18,SNR=6.7						
OTAV	**Otavalo**	**6.37**	**22**	*e*Pn	**Pn**	**02 44 08.2**	**-2.0**
OTAV				*e*Sn	**Sn**	**02 45 22.0**	**+0.5**
NNA	**Nana**	**7.39**	**148**	P	**Pn**	**02 44 20.9**	**-3.4**
	9.9nm,0.3s,baz=322,slow=12,SNR=25						
NNA				S	**Sn**	**02 45 38.6**	**-8.0**
	20nm,0.3s,baz=212,slow=18,SNR=3.1						
NNA	**Nana**	**7.39**	**148**	*e*Pn	**Pn**	**02 44 20.6**	**-3.6**
	52nm,0.4s						
PAYG	**Puerto Ayora**	**10.67**	**298**	*e*Pn	**Pn**	**02 45 06.8**	**-2.2**
ROSC	**El Rosal**	**12.34**	**32**	P	**Pn**	**02 45 32.6**	**+0.7**
	0.7nm,0.3s,baz=98,slow=21,SNR=2.5						
ARE	**Arequipa**	**14.08**	**140**	*e*P	**Pn**	**02 45 56.0**	**+0.9**
BCIP	**Isla Barro Col**	**14.80**	**4**	*e*Pn	**Pn**	**02 46 05.0**	**+0.5**
LPAZ	**La Paz**	**16.31**	**131**	P	**Pn**	**02 46 22.8**	**-0.8**
	0.9nm,0.3s,baz=291,slow=8.4,SNR=56						
LPAZ	**La Paz**	**16.31**	**131**	*e*P	**Pn**	**02 46 23.2**	**-0.4**
LPAZ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LPAZ	**La Paz**	**16.31**	**131**	*e*Pn	**Pn**	**02 46 23.1**	**-0.5**
	comp=Z,2.7nm,0.5s						
SDV	**Santo Domingo**	**17.71**	**35**	P	**Pn**	**02 46 41.2**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=330,slow=9.6,SNR=6.4						
SDV	**Santo Domingo**	**17.71**	**35**	*e*P	**Pn**	**02 46 41.1**	**+0.1**
	comp=Z,14nm,0.7s						
LVC	**Limon Verde**	**20.38**	**147**	P	**P**	**02 47 11.1**	**+1.1**
	comp=Z,2.6nm,0.5s,baz=267,slow=6.8,SNR=5.6						
LVC	**Limon Verde**	**20.38**	**147**	*e*P	**P**	**02 47 11.3**	**+1.3**
	comp=Z,11nm,0.8s						
TGUH	**Tegucigalpa,Un**	**20.64**	**342**	*e*Pn	**P**	**02 47 08.8**	**-4.0**
	comp=Z,38nm,0.7s						
SIV	**San Ignacio**	**21.92**	**119**	P	**P**	**02 47 25.8**	**-0.7**
	comp=Z,9.4nm,0.6s,mb4.3,baz=296,slow=10.0,SNR=44						
PCRV	**Puerto La Cruz**	**22.57**	**46**	P	**P**	**02 47 33.4**	**-0.1**
	comp=Z,31nm,0.5s,mb4.8,baz=187,slow=5.9,SNR=19						
TEIG	**Tepich**	**26.78**	**344**	P	**P**	**02 48 11.6**	**-0.8**
	comp=Z,2.7nm,0.5s,mb4.1,baz=234,slow=6.5,SNR=6.5						
AOPR	**Arecibo Observ**	**27.64**	**30**	*e*P	**P**	**02 48 20.5**	**+0.4**
	comp=Z,38nm,0.8s,mb5.0						
SJG	**San Juan**	**27.75**	**31**	*e*P	**P**	**02 48 20.8**	**-0.2**
SJG				pmax	pmax		
	comp=Z,34nm,0.9s						
SJG	**San Juan**	**27.75**	**31**	*e*P	**P**	**02 48 20.8**	**-0.3**
	comp=Z,34nm,0.9s,mb4.9						
HUMP	**Col San Antoni**	**27.93**	**32**	*e*P	**P**	**02 48 24.4**	**+1.8**
	comp=Z,21nm,0.8s,mb4.7						
CBYP	**Canovanas**	**28.04**	**32**	*e*P	**P**	**02 48 24.4**	**+0.8**
CFAA	**Coronel Fontan**	**28.35**	**157**	P	**P**	**02 48 26.4**	**+0.2**
	comp=Z,0.1nm,0.6s,baz=310,slow=10,SNR=2.8						
CPUP	**Villa Florida**	**30.41**	**135**	P	**P**	**02 48 43.5**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=144,slow=7.1,SNR=2.7						
CPUP	**Villa Florida**	**30.41**	**135**	*e*P	**P**	**02 48 44.3**	**-0.3**
CPUP				pmax	pmax		
	comp=Z,17nm,1.0s						
CPUP	**Villa Florida**	**30.41**	**135**	*e*P	**P**	**02 48 44.3**	**-0.3**
	comp=Z,17nm,1.0s,mb4.6						
PLCA	**Paso Flores**	**36.08**	**167**	P	**P**	**02 49 33.6**	**-0.1**
	comp=Z,3.4nm,0.9s,mb4.3,baz=342,slow=13,SNR=7.2						
PLCA				PcP	PcP	02 51 57.8	-0.7
	comp=Z,0.8nm,0.7s,baz=292,slow=8.3,SNR=3.1						
PLCA	**Paso Flores**	**36.08**	**167**	*e*P	**P**	**02 49 33.1**	**-0.6**
	comp=Z,4.4nm,0.9s,mb4.4						
HKT	**Hockley**	**38.26**	**339**	*e*P	**P**	**02 49 52.4**	**+0.1**
HKT				pmax	pmax		
	comp=Z,33nm,1.6s,mb4.9						
HKT	**Hockley**	**38.26**	**339**	*e*P	**P**	**02 49 52.4**	**+0.1**
	comp=Z,33nm,1.6s,mb4.9						
JCT	**Junction City**	**40.30**	**334**	*e*P	**P**	**02 50 09.0**	**-0.3**
	comp=Z,6.2nm,0.6s,mb4.6						
SWET	**Sewanee**	**40.98**	**354**	*e*P	**P**	**02 50 13.6**	**-1.2**
CPCT	**Cooper Cave**	**41.08**	**355**	*e*P	**P**	**02 50 14.9**	**-0.8**
TXAR	**Lajitas Array**	**41.17**	**329**	P	**P**	**02 50 16.3**	**-0.2**
	comp=Z,1.5nm,0.8s,mb3.9,baz=155,slow=9.3,SNR=13						
TXAR				PcP	PcP	02 52 14.5	-0.1
	comp=Z,1.2nm,0.7s,baz=160,slow=7.3,SNR=7.7						
TXAR	**Lajitas Array**	**41.17**	**329**	P	**P**	**02 50 16.3**	**-0.2**
TXAR				PcP	PcP	02 52 14.5	-0.1
MIAR	**Mount Ida**	**41.80**	**344**	*e*P	**P**	**02 50 21.5**	**0.0**
WMOK	**Wichita Mounta**	**43.64**	**338**	*e*P	**P**	**02 50 35.8**	**-0.6**
AMTX	**Amarillo**	**44.90**	**336**	*e*P	**P**	**02 50 46.1**	**-0.4**
	comp=Z,19nm,1.0s,mb4.8						
319A	**Douglas**	**45.79**	**325**	⇓P	**P**	**02 50 54.0**	**+0.4**
	baz=46,SNR=8.6						
318A	**Bisbee**	**46.24**	**325**	⇓P	**P**	**02 50 57.0**	**-0.1**
	baz=46,SNR=9.6						
219A	**White Tail Can**	**46.24**	**326**	⇓P	**P**	**02 50 57.3**	**+0.1**
	baz=46,SNR=7.7						
BNM	**Barren Site**	**46.53**	**330**	*e*P	**P**	**02 50 59.6**	**+0.2**
218A	**Dragoon**	**46.67**	**325**	⇓P	**P**	**02 51 00.5**	**0.0**
	baz=47						
119A	**Ashpeak Ranch,**	**46.85**	**327**	⇑P	**P**	**02 51 02.0**	**+0.1**
	baz=47						
217A	**Green Valley**	**46.96**	**324**	⇑P	**P**	**02 51 03.2**	**+0.3**
	baz=47,SNR=6.0						
LAZ	**Ladron**	**46.99**	**330**	*e*P	**P**	**02 51 03.3**	**+0.3**
ANMO	**Albuquerque**	**47.09**	**331**	*e*P	**P**	**02 51 04.1**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,20nm,1.3s						
ANMO	**Albuquerque**	**47.09**	**331**	*e*P	**P**	**02 51 04.1**	**+0.3**
	comp=Z,20nm,1.3s,mb4.7						
118A	**Homack Ranch,**	**47.12**	**326**	⇑P	**P**	**02 51 04.6**	**+0.5**
	baz=47,SNR=12						
Z19A	**T-Link Ranch,**	**47.23**	**327**	⇑P	**P**	**02 51 05.2**	**+0.3**
	baz=47						
TUC	**Tucson**	**47.34**	**325**	*e*P	**P**	**02 51 05.1**	**-0.6**
TUC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
TUC	**Tucson**	**47.34**	**325**	*e*P	**P**	**02 51 05.1**	**-0.7**
	comp=Z,3.5nm,0.8s,mb4.1						
216A	**Three Points,**	**47.50**	**324**	⇓P	**P**	**02 51 07.0**	**0.0**
	baz=48						
117A	**Oracle**	**47.50**	**325**	⇑P	**P**	**02 51 07.3**	**+0.3**
	baz=48,SNR=10.0						
CBKS	**Cedar Bluff**	**47.63**	**340**	*e*P	**P**	**02 51 07.8**	**-0.1**
CBKS				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.9						
CBKS	**Cedar Bluff**	**47.63**	**340**	*e*P	**P**	**02 51 07.8**	**-0.1**
	comp=Z,17nm,0.8s,mb4.9						
Y19A	**Nutrioso**	**47.73**	**328**	⇓P	**P**	**02 51 09.2**	**+0.5**
	baz=48,SNR=5.3						
Y18A	**Canyon Day Jun**	**48.01**	**327**	⇓P	**P**	**02 51 11.4**	**+0.5**
	baz=48						
116A	**Eloy**	**48.05**	**324**	⇓P	**P**	**02 51 11.2**	**0.0**
	baz=48,SNR=7.7						
X19A	**St. Johns**	**48.11**	**328**	⇓P	**P**	**02 51 11.9**	**+0.3**
	baz=48						
214A	**Organ Pipe Nat**	**48.27**	**323**	⇑P	**P**	**02 51 12.9**	**-0.1**
	baz=48,SNR=7.6						
Y17A	**Roosevelt**	**48.40**	**326**	⇓P	**P**	**02 51 13.7**	**-0.2**

baz=49
115A Sonoran Desert 48.45 324 ⇑P P 02 51 14.6 +0.2
baz=49,SNR=5.3
Z16A Peralta Trail, 48.46 325 ⇑P P 02 51 14.4 0.0
baz=49
X18A Snowflake 48.54 328 ⇓P P 02 51 15.5 +0.5
baz=49
Z15A Gila River Ind 48.84 325 ⇑P P 02 51 17.7 +0.4
baz=49
X17A Forest Lakes 48.85 327 ⇓P P 02 51 17.7 +0.3
baz=49,SNR=8.1
W18A Petrified Fore 48.87 328 ⇑P P 02 51 17.9 +0.4
baz=49
Y16A Circle Bar Ran 48.88 326 ⇓P P 02 51 18.1 +0.4
baz=49,SNR=9.6
SDCO Great Sand Dun 48.95 334 eP P 02 51 18.0 0.0
comp=Z,12nm,0.9s,mb4.8
X16A Lo Mia Camp, P 49.26 326 ⇓P P 02 51 20.8 +0.3
baz=49,SNR=9.2
Z14A Wintersburg 49.35 324 ⇑P P 02 51 21.5 +0.3
baz=50
113A Mohawk Valley, 49.41 323 ⇓P P 02 51 21.8 0.0
baz=50
Y15A Casa Rosa Ranc 49.42 325 ⇑P P 02 51 22.0 +0.3
baz=50,SNR=5.8
V18A Ganado 49.43 329 ⇓P P 02 51 22.0 +0.2
baz=50
112A Yuma 49.74 322 ⇓P P 02 51 24.2 0.0
baz=50
X15A Humboldt 49.76 326 ⇓P P 02 51 24.3 0.0
baz=50,SNR=7.3
Y14A Wickenburg 49.80 325 ⇓P P 02 51 24.7 +0.1
baz=50,SNR=6.1
W16A Flagstaff 49.82 327 ⇑P P 02 51 25.1 +0.3
baz=50,SNR=5.1
T19A Beclabito 49.84 330 ⇓P P 02 51 24.9 0.0
baz=50,SNR=6.0
MVCO Mesa Verde 49.89 331 ⇓P P 02 51 25.4 +0.1
baz=50
U18A Rough Rock, Ch 49.95 329 ⇓P P 02 51 26.0 +0.3
baz=50
WUAZ Wupatki 50.05 327 ⇑P P 02 51 26.7 +0.2
baz=50,SNR=7.1
WUAZ Wupatki 50.05 327 eP P 02 51 27.3 +0.8
comp=Z,10nm,0.8s,mb4.8
X14A Yava 50.11 325 ⇓P P 02 51 26.9 -0.1
baz=50,SNR=5.3
Y13A Salome 50.19 324 ⇓P P 02 51 27.8 +0.2
baz=50
GLA Glamis 50.25 322 ⇓P P 02 51 27.8 -0.2
baz=50
W15A Williams 50.28 326 ⇑P P 02 51 28.9 +0.7
baz=50
U16A Tuba City 50.39 328 ⇑P P 02 51 29.2 +0.2
baz=51,SNR=5.2
U17A Shonto 50.49 329 ⇑P P 02 51 30.1 +0.3
baz=51
T18A Mexican Hat 50.51 330 ⇓P P 02 51 30.1 +0.2
baz=51,SNR=12
Y12C Blythe 50.55 323 ⇑P P 02 51 30.4 +0.1
baz=51
S19A Harvey Farm, M 50.62 331 ⇑P P 02 51 30.8 0.0
baz=51,SNR=12
PV01 Paradox Valley 50.66 332 eP P 02 51 31.3 +0.3
V15A Kaibab Nationa 50.70 327 ⇑P P 02 51 32.0 +0.6
baz=51,SNR=5.2
ISCO Idaho Springs 50.72 335 eP P 02 51 31.5 +0.1
ISCO e 02 52 47.6
ISCO pmax pmax
comp=Z,12nm,1.0s,mb4.9
ISCO Idaho Springs 50.72 335 eP P 02 51 31.5 +0.1
comp=Z,12nm,1.0s,mb4.9
ISCO ePcP PcP 02 52 47.6 -0.2
X13A Yucca 50.74 325 ⇓P P 02 51 31.7 0.0
baz=51
W14A Seligman 50.76 326 ⇓P P 02 51 32.0 +0.2
baz=51
SWSC Sam W. Stewart 50.77 322 ⇓P P 02 51 31.7 -0.3
baz=51
DVTC Desert V Tower 50.77 321 ⇓P P 02 51 32.0 0.0
baz=51
T17A Navajo Res., N 50.87 329 ⇑P P 02 51 33.3 +0.7
baz=51,SNR=12
S18A Hurst Farm, Bl 51.00 330 ⇑P P 02 51 33.8 +0.2
baz=51,SNR=11
BC3 Big Chuckw Mtn 51.05 322 ⇓P P 02 51 34.2 +0.2
baz=51,SNR=5.2
PV10 Paradox Valley 51.07 331 eP P 02 51 33.8 -0.3
V14A Boquillas Ranc 51.08 326 ⇓P P 02 51 34.9 +0.7
baz=51,SNR=13
W13A Hualapai Mount 51.13 325 ⇑P P 02 51 34.8 +0.2
baz=51,SNR=7.6
IRM Iron Mountain 51.21 323 ⇓P P 02 51 34.8 -0.5
baz=51,SNR=5.4
U15A North Rim 51.22 327 ⇑P P 02 51 35.5 +0.3
baz=51
T16A Glen Canyon Da 51.22 328 ⇑P P 02 51 36.0 +0.7
baz=51
ECSD EROS,Sioux Fal 51.23 345 eP P 02 51 33.4 -1.8
comp=Z,3.8nm,0.6s,mb4.6
S17A Black Ridge (B 51.36 329 ⇓P P 02 51 36.5 +0.2
baz=52
R18A Canyonlands Na 51.49 331 ⇑P P 02 51 36.9 -0.3
baz=52
BELC Belle Mtn. 51.61 322 ⇑P P 02 51 38.3 0.0
baz=52
PFO Pinyon Flat Ob 51.63 322 P P 02 51 37.5 -0.8
comp=Z,3.1nm,0.8s,mb4.4,baz=189,slow=2.7,SNR=3.8
PFO Pinyon Flat Ob 51.63 322 eP P 02 51 37.8 -0.6
PFO pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
PFO Pinyon Flat Ob 51.63 322 ⇑P P 02 51 38.5 +0.2
baz=52
PFO Pinyon Flat Ob 51.63 322 eP P 02 51 37.8 -0.6
comp=Z,5.0nm,1.1s,mb4.5
Q19A Hogan Spring (51.64 332 ⇓P P 02 51 38.7 +0.3
baz=52,SNR=11
U14A Mt Trumbull 51.70 327 ⇑P P 02 51 38.9 +0.1
baz=52,SNR=6.9
T15A Red Dirt Ranch 51.71 328 ⇑P P 02 51 39.3 +0.4
baz=52
V13A Grand Canyon W 51.73 326 ⇓P P 02 51 39.5 +0.4
baz=52,SNR=5.5
S16A Weppner Ranch, 51.83 329 ⇓P P 02 51 40.1 +0.3
baz=52,SNR=9.4
R17A Hanksville Air 51.92 330 ⇓P P 02 51 40.6 +0.1
baz=52,SNR=6.0
GMRC Granite Mounta 51.94 323 ⇑P P 02 51 40.8 +0.1
baz=52
MURC Murrieta 52.08 321 ⇑P P 02 51 41.7 0.0
baz=52
T14A Hurricane 52.12 327 ⇑P P 02 51 42.5 +0.5
baz=52
U13A Pakoon Wash 52.12 326 ⇑P P 02 51 42.6 +0.6
baz=52
V12A Nelson 52.13 325 ⇓P P 02 51 42.3 +0.2
baz=52,SNR=7.2
Q18A Rafter H Ranch 52.17 331 ⇑P P 02 51 42.7 +0.4
baz=52,SNR=9.9
S15A Panguitch 52.19 328 ⇓P P 02 51 43.2 +0.7
baz=52
R16A Teasdale 52.20 329 ⇑P P 02 51 43.0 +0.5
baz=52,SNR=8.7
BBRC Big Bear Sol-O 52.35 322 ⇑P P 02 51 44.3 +0.5
baz=52
SRU San Rafael 52.37 331 eP P 02 51 42.9 -0.9
SRU pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
SRU San Rafael 52.37 331 ⇓P P 02 51 44.2 +0.4
baz=53,SNR=7.8
SRU San Rafael 52.37 331 eP P 02 51 42.9 -0.8
comp=Z,6.4nm,1.0s,mb4.6
HEC Hector,Ludlow 52.38 323 ⇓P P 02 51 44.3 +0.3
baz=52
Q16A Castle Valley 52.53 330 ⇑P P 02 51 45.5 +0.5
baz=53
T13A Saint George 52.53 327 ⇑P P 02 51 45.5 +0.5
baz=53,SNR=5.5
R15A Junction 52.55 329 ⇓P P 02 51 45.5 +0.3
baz=53
TUQ Turquoise Moun 52.55 324 ⇓P P 02 51 45.7 +0.5
baz=53,SNR=7.2
P18A Preston Nutter 52.64 332 ⇓P P 02 51 46.3 +0.6
baz=53,SNR=5.6
O19A Miners Draw (B 52.65 333 ⇑P P 02 51 46.0 +0.1
baz=53,SNR=6.9
S14A Cedar City 52.68 328 ⇓P P 02 51 46.5 +0.4
baz=53
MSU Marysvale 52.73 329 eP P 02 51 46.8 +0.4
P17A Butcher Ranch, 52.75 331 ⇓P P 02 51 47.0 +0.4
baz=53
BFSC Mount Baldy St 52.79 321 ⇓P P 02 51 47.1 +0.1
baz=53
ARUT Antelope Range 52.84 328 eP P 02 51 47.9 +0.6
SHPR Sheep Range 52.86 325 eP P 02 51 48.1 +0.6
S13A Holt Ranch, En 52.92 327 ⇓P P 02 51 48.6 +0.8
baz=53,SNR=19
RWWY Rawlins 52.96 335 eP P 02 51 48.4 +0.4
GSC Goldstone 52.98 323 ⇓P P 02 51 48.6 +0.2
baz=53,SNR=5.1
R14A James Farms, M 53.00 328 ⇓P P 02 51 49.0 +0.6
baz=53
O18A Roosevelt 53.03 332 ⇑P P 02 51 49.0 +0.3
baz=53,SNR=6.5
DAU Daniels Canyon 53.73 331 eP P 02 51 54.1 +0.3
TPNV Topopah Spring 53.79 325 eP P 02 51 54.8 +0.5
RSSD Black Hills 53.82 339 eP P 02 51 53.8 -0.6
RSSD pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
RSSD Black Hills 53.82 339 eP P 02 51 53.8 -0.6
comp=Z,4.0nm,0.8s,mb4.5
JLU Jordanelle 53.97 331 eP P 02 51 56.2 +0.7
ISA Isabella 54.23 322 eP P 02 51 57.6 +0.1
ISA pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
ISA Isabella 54.23 322 eP P 02 51 57.6 +0.1
comp=Z,2.4nm,0.9s,mb4.2
DUG Dugway 54.33 330 eP P 02 51 58.6 +0.5
DUG pmax pmax
comp=Z,11nm,0.8s,mb4.9
DUG Dugway 54.33 330 eP P 02 51 58.6 +0.5
comp=Z,11nm,0.8s,mb5.0
HWUT Hardware Ranch 54.81 332 eP P 02 52 01.3 -0.3
BW06 Boulder Array 54.84 334 eP P 02 52 01.1 -0.7
PDAR Pinedale Array 54.84 334 P P 02 52 01.1 -0.7
comp=Z,6.2nm,0.8s,mb4.7,baz=125,slow=8.5,SNR=46
PDAR PcP PcP 02 53 02.1 -1.1
comp=Z,2.0nm,0.6s,baz=119,slow=7.3,SNR=4.6
SPUT South Promonto 55.00 331 eP P 02 52 02.6 -0.4
AGMN Agassiz Refuge 55.37 348 eP P 02 52 04.6 -0.8
MTUM Tungsten Hills 55.41 324 eP P 02 52 06.3 +0.2
HVU Hansel Valley 55.52 331 eP P 02 52 06.6 -0.1
REDW Red Top Meadow 55.88 334 eP P 02 52 08.7 -0.6
comp=Z,19nm,1.2s,mb5.0
SNOW Snow King Moun 55.92 334 eP P 02 52 09.3 -0.2
comp=Z,4.4nm,0.6s,mb4.7
ELK Elko 55.96 329 eP P 02 52 10.1 +0.2
ELK pmax pmax
comp=Z,9.0nm,0.9s
ELK Elko 55.96 329 eP P 02 52 10.1 +0.2
comp=Z,9.1nm,0.9s,mb4.8
LOHW Long Hollow 55.97 334 eP P 02 52 09.8 -0.1
NVAR Mina Array Bea 55.99 325 P P 02 52 10.6 +0.4
comp=Z,5.3nm,0.8s,mb4.7,baz=134,slow=7.5,SNR=26
TPAW Teton Pass 56.02 334 eP P 02 52 10.3 +0.1
comp=Z,11nm,0.8s,mb5.0
RRI2 Red Ridge 56.07 334 eP P 02 52 10.2 -0.4
MOOW Moose Ponds 56.14 334 eP P 02 52 10.5 -0.6
IMW Indian Meadow 56.34 334 eP P 02 52 12.3 -0.2
comp=Z,18nm,1.4s,mb4.9
RLMT Red Lodge 56.64 336 eP P 02 52 13.7 -0.9
comp=Z,4.3nm,0.5s,mb4.7
WAKR Walker 56.70 324 eP P 02 52 15.9 +0.7
LAO LASA Array 56.81 339 eP P 02 52 15.3 -0.5
comp=Z,12nm,1.3s,mb4.8
ULM Lac du Bonnet 57.23 349 P P 02 52 17.3 -1.4
comp=Z,4.8nm,0.6s,mb4.7,baz=155,slow=7.2,SNR=6.7
ULM Lac du Bonnet 57.23 349 eP P 02 52 17.2 -1.5
comp=Z,6.0nm,0.9s,mb4.6
QLMT Earthquake Lak 57.30 335 eP P 02 52 18.7 -0.6
GCMT Greycliff 57.35 336 eP P 02 52 19.2 -0.5
HLID Hailey 57.66 332 eP P 02 52 22.1 +0.3
MCMT McKenzie Canyo 57.92 334 eP P 02 52 23.9 +0.3
BOZ Bozeman (W) 58.04 335 eP P 02 52 24.1 -0.4
BOZ pmax pmax
comp=Z,13nm,1.0s,mb4.9
BOZ Bozeman (W) 58.04 335 eP P 02 52 24.1 -0.4
comp=Z,13nm,1.0s,mb4.9
DLMT Dillon 58.23 334 eP P 02 52 25.8 +0.1
LCCM Lewis and Clar 58.30 335 P P 02 52 26.3 0.0
OHCM Honcut 58.45 324 eP P 02 52 27.4 0.0
LRM Limekiln Ridge 58.53 335 eP P 02 52 27.7 -0.2
HRY Holter Researc 58.98 336 eP P 02 52 30.7 -0.3
EGMT Eagleton 59.23 338 eP P 02 52 32.5 -0.2
comp=Z,11nm,0.8s,mb4.9
MOD Modoc 59.48 327 eP P 02 52 34.4 -0.1
LTIM Timbered Crate 59.65 325 P P 02 52 35.5 -0.2
CHMT Chamberlain Mo 59.73 335 eP P 02 52 35.8 -0.3
BMO Blue Mountains 60.01 331 eP P 02 52 37.4 -0.7
comp=Z,5.2nm,0.9s,mb4.6
YBH Yreka Blue Hor 60.71 325 P P 02 52 40.4 -2.6
comp=Z,9.1nm,0.9s,mb4.8,baz=119,slow=2.3,SNR=16
KHMM Horse Mountain 60.75 324 eP P 02 52 43.1 -0.2
SCHQ Schefferville 61.44 9 P P 02 52 45.9 -1.7
comp=Z,2.1nm,0.8s,mb4.2,baz=238,slow=10,SNR=6.0
BBOR Butler Butte 61.45 326 P P 02 52 46.9 -1.1
WALA Waterton Lakes 61.69 326 eP P 02 52 49.4 -0.1
HAWA Hanford 62.20 331 eP P 02 52 52.5 -0.5
comp=Z,8.0nm,1.0s,mb4.7
BROR Big Rock Looko 62.23 327 P P 02 52 52.5 -0.7
OD2 Odessa Site #2 62.53 332 eP P 02 52 54.6 -0.4
ASR Mount Adams--S 63.05 329 P P 02 52 59.2 +0.6
RPW Rockport 64.60 331 eP P 02 53 08.0 -0.8
JCW Jim Creek 64.63 331 eP P 02 53 07.9 -1.0
EDM Edmonton 64.80 339 eP P 02 53 08.5 -1.5
YKA Yellowknife Ar 72.74 344 P P 02 53 57.6 -1.5
comp=Z,3.7nm,0.8s,mb4.2,baz=144,slow=6.2,SNR=6.5
DLBC Dease Lake 75.04 336 eP P 02 54 12.6 0.0
DBIC Dimbokro 76.82 82 P P 02 54 23.9 +0.2
comp=Z,3.8nm,0.8s,mb4.2,baz=283,slow=7.7,SNR=5.0
SNAA Sanae 80.85 162 ePKiKP P 02 54 43.8 -0.8
SNAA e 02 54 49.8
SNAA e 02 54 55.7
SNAA Sanae 80.85 162 eP P 02 54 43.8 -0.8
SNAA pmax pmax
comp=Z,12nm,0.9s
SNAA Sanae 80.85 162 eP P 02 54 43.8 -0.9
comp=Z,12nm,0.9s,mb4.7
DAWY Dawson 81.97 338 eP P 02 54 49.5 -1.2
ESDC Sonseca Array 83.59 49 P P 02 55 00.2 +0.6
comp=Z,0.7nm,0.5s,mb3.7,baz=266,slow=4.8,SNR=3.4
TORD Torodi Ar. Bea 84.06 76 P P 02 55 02.3 -0.2
comp=Z,1.8nm,0.6s,mb4.1,baz=280,slow=4.3,SNR=52
QSPA South Pole Qui 84.39 180 P P 02 55 03.1 +0.2
comp=Z,15nm,1.0s,mb4.8,baz=159,slow=2.0,SNR=30
QSPA South Pole Qui 84.39 180 P P 02 55 03.1 +0.2
GEC2 GERESS Array S 97.25 42 eP P 02 56 03.5 -0.4
STKA Stephens Creek 124.95 224 PKP PKPdf 03 01 30.4 -1.1
comp=Z,4.9nm,1.0s,baz=270,slow=9.9,SNR=3.8
CTA Charters Tower 127.09 240 eP PKPdf 03 01 35.3 -0.6
comp=Z,3.2nm,1.1s
CTA Charters Tower 127.09 240 PKP PKPdf 03 01 35.2 -0.7
comp=Z,1.5nm,0.3s,baz=107,slow=3.1,SNR=6.7
ZALV Zalesovo Beam 130.50 11 PKP PKPdf 03 01 40.6 -0.7
comp=Z,1.1nm,0.4s,baz=333,slow=1.7,SNR=6.4
KURK Kurchatov 131.96 17 PKP PKPdf 03 01 43.5 -0.7
comp=Z,0.9nm,0.5s,baz=332,slow=2.3,SNR=5.2
KURK Kurchatov 131.96 17 ePKPdf PKPdf 03 01 43.3 -0.9
ASAR Alice Springs 135.26 228 PKP PKPdf 03 01 50.1 -1.1
comp=Z,2.5nm,0.6s,baz=120,slow=2.0,SNR=21
MKAR Makanchi Array 136.56 17 PKP PKPdf 03 01 51.9 -1.0
comp=Z,0.4nm,0.3s,baz=325,slow=1.5,SNR=4.0
MKAR Makanchi Array 136.56 17 PKP PKPdf 03 01 51.9 -1.0
WB2 Warramunga Arr 137.02 233 eP PKPdf 03 01 53.1 -1.5
WRAB Tennant Creek 137.02 233 ePKIKP PKPdf 03 01 53.7 -0.9
WRA Warramunga Arr 137.03 233 PKP PKPdf 03 01 53.9 -0.8
comp=Z,4.8nm,0.7s,baz=119,slow=1.8,SNR=29
WMQ Urumqi 140.72 13 ePKP PKPdf 03 02 02.8 +2.1
BJI Beijing 142.54 338 PKP PKPdf 03 01 59.0 -5.1
HHC Hu-ho-hao-te 143.28 344 ePKP PKPdf 03 02 00.5 -4.8
HHC PP PP 03 05 15.5 0.0
HHC PP PP
comp=Z,697nm,8.5s
HHC LR LR
comp=N,628nm,20.8s
HHC LR LR
comp=E,746nm,20.9s
HHC LR LR
comp=Z,380nm,20.0s
FITZ Fitzroy Crossi 144.75 227 eP PKPdf 03 02 06.9 -1.7
comp=Z,46nm,0.8s
FITZ Fitzroy Crossi 144.75 227 PKP PKPdf 03 02 07.0 -1.6
comp=Z,25nm,0.7s,baz=167,slow=5.5,SNR=50
GTA Gaotai 146.44 359 PKP PKPdf 03 02 11.0 +0.2
GTA APKP 03 02 25.0
GTA PP PP 03 05 42.8 +8.7
NJ2 Nanjing 147.96 327 ePKP PKPdf 03 02 15.5 +1.9
XAN Xi'an 150.38 343 PKP PKPbc 03 02 21.5 -1.2
CD2 Chengdu 154.55 351 ePKP PKPdf 03 02 21.3 -2.4
CD2 APKP 03 02 35.0
CD2 PKP2 PKPab 03 02 50.3 +3.6
CD2 PP PP 03 06 23.5 +2.7
CD2 SKS SKSdf 03 09 22.8 -1.6
CD2 SKKS SKKSac 03 13 05.0 -0.8
CD2 PP PP
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,180nm,21.2s
CD2 LR LR
comp=Z,210nm,24.4s
GYA Guiyang 158.15 342 ePKP PKPdf 03 02 28.0 -0.5
GYA APKP 03 02 37.8
GYA PKP2 PKPab 03 03 03.3 +1.0
GYA PP PP 03 06 44.8 +3.9
GYA PP PP
comp=Z,90nm,7.8s
KMI Kunming 160.39 350 PKP PKPdf 03 02 29.8 -1.3
KMI Kunming 160.39 350 P PKPdf 03 02 29.7 -1.4

IDC 28 02:47:15.3±6.2, 1243N×14226E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/21, mbtmp3.8/5, Error ellipse: s-maj=269.0km s-min=22.6km az=80.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.09	194	P		P		02 53 52.5	-0.6
	0.7nm,0.8s,baz=15,slow=9.6,SNR=4.4								
ASAR	Alice Springs	36.79	193	P		P		02 54 25.4	+0.5
	0.5nm,1.0s,baz=40,slow=7.4,SNR=2.7								
MKAR	Makanchi Array	60.58	317	P		P		02 57 27.9	+0.3
	0.4nm,0.3s,baz=101,slow=6.3,SNR=3.7								
KURK	Kurchatov	63.84	321	P		P		02 57 49.5	0.0
	2.3nm,0.8s,baz=105,slow=6.9,SNR=8.1								
BVAR	Borovoye Array	69.27	322	P		P		02 58 24.3	+0.1
	1.8nm,0.7s,baz=95,slow=7.4,SNR=6.0								

ISCJB 28 02:48:24.7±2.1, 217S±07×1695E±03, h10km, mb4.2/8, Error ellipse: s-maj=102.3km s-min=19.3km az=161.2
NEIC 28 02:48:25.8±1.5, 2167S×16964E, h10km, mb4.3/4, Error ellipse: s-maj=78.2km s-min=13.9km az=163.0
IDC 28 02:48:26.0±3.1, 2132S×16939E, h0km, mb4.0/5, mb1 4.2/5, mb1mx4.0/16, mbtmp4.0/5, Error ellipse: s-maj=175.8km s-min=25.8km az=160.0

ISC 28 02:48:26.4±2.0, 216S±07×1696E±03, h10km, n15, σ0§92/11, mb4.2/8, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.83	270	P		P		02 53 20.5	+1.5
	3.3nm,0.5s,mb4.0,baz=95,slow=11,SNR=8.2								
CTA	Charters Tower	21.83	270	P		P		02 53 20.5	+1.5
CTAO	Charters Tower	21.83	270	eP		P		02 53 19.8	+0.8
	5.8nm,0.7s,mb4.1								
ASAR	Alice Springs	32.92	260	P		P		02 55 01.0	-0.2
	1.5nm,0.7s,mb4.0,baz=86,slow=9.5,SNR=11								
WRA	Warramunga Arr	32.93	266	P		P		02 55 00.3	-1.0
	0.6nm,0.9s,mb3.5,baz=95,slow=7.6,SNR=4.3								
FITZ	Fitzroy Crossi	41.36	267	P		P		02 56 12.9	0.0
	2.8nm,0.8s,mb3.9,baz=114,slow=11,SNR=6.6								
CHTO	Chiang Mai	79.90	295	eP		P		03 00 35.9	0.0
	1.4nm,0.4s,mb4.2								
NVAR	Mina Array Bea	90.13	48	P		P		03 01 28.5	+1.7
	2.2nm,0.8s,mb4.3,baz=223,slow=8.4,SNR=8.6								
NVAR	Mina Array Bea	90.13	48	P		P		03 01 28.5	+1.7
WVOR	Wild Horse Val	91.77	45	eP		P		03 01 33.2	-1.1
	1.4nm,0.9s,mb4.3								
TLY	Talaya	92.85	325	eP		P		03 01 38.7	-0.5
	3.6nm,0.8s,mb4.8								
PSZ	Piszkesteto	144.20	324	ePKPdf		PKPdf		03 07 58.6	-3.9
EKA	Eskdalemuir Ar	145.87	353	PKPbc		PKPbc		03 08 05.0	-0.7
	1.7nm,0.8s,baz=319,slow=2.4,SNR=3.6								
GERES	GERESS Array B	146.69	331	PKPbc		PKPbc		03 08 07.6	-0.7
	0.5nm,0.7s,baz=64,slow=3.1,SNR=4.6								
BNI	Bardonecchia	152.69	333	ePKPdf		PKPdf		03 08 15.8	-0.5

ISCJB 28 02:52:15.5±1.2, 213S±04×1692E±02, h10km, mb3.8/6, Error ellipse: s-maj=52.6km s-min=23.0km az=175.1
IDC 28 02:52:15.5±3.1, 211.1S×16922E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.9/16, mbtmp3.8/5, Error ellipse: s-maj=169.8km s-min=29.5km az=160.0
NEIC 28 02:52:16.4±0.9, 2131S×16935E, h10km, mb4.1/2, Error ellipse: s-maj=39.2km s-min=16.6km az=171.0

ISC 28 02:52:16.9±1.2, 214S±04×1693E±02, h10km, n9, σ0§68/8, mb3.8/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.59	269	P		P		02 57 07.2	+0.2
	1.2nm,0.3s,mb3.8,baz=84,slow=10,SNR=7.1								
CTAO	Charters Tower	21.59	269	eP		P		02 57 08.7	+1.7
	4.7nm,0.8s,mb4.0								
WB2	Warramunga Arr	32.69	266	eP		P		02 58 49.7	+0.1
WRA	Warramunga Arr	32.70	266	P		P		02 58 48.4	-1.3
	0.4nm,0.8s,mb3.4,baz=98,slow=8.4,SNR=5.7								
ASAR	Alice Springs	32.72	259	P		P		02 58 49.8	-0.1
	0.7nm,0.6s,mb3.8,baz=81,slow=9.2,SNR=5.9								
FITZ	Fitzroy Crossi	41.13	267	P		P		03 00 01.7	+0.3
	1.0nm,0.7s,mb3.6,baz=107,slow=11,SNR=3.7								
SNAA	Sanae	87.05	182	P		P		03 05 02.4	+0.2
	1.8nm,1.1s,mb4.2								
NVAR	Mina Array Bea	90.16	48	P		P		03 05 17.5	0.0
	0.6nm,0.7s,mb4.1,baz=224,slow=8.4,SNR=3.1								
EKA	Eskdalemuir Ar	145.61	352	PKPbc		PKPbc		03 11 54.3	-1.0
	0.8nm,0.7s,baz=353,slow=2.7,SNR=4.7								

ISCJB 28 02:52:34.4±2.0, 208S±07×169.1E±03, h10km, mb4.0/7, Error ellipse: s-maj=107.3km s-min=24.3km az=164.3
IDC 28 02:52:34.5±2.9, 2081S×169.19E, h0km, mb4.0/5, mb1 4.2/5, mb1mx4.0/16, mbtmp4.0/5, Error ellipse: s-maj=164.9km s-min=26.4km az=160.0
NEIC 28 02:52:35.4±1.6, 2092S×16928E, h10km, mb4.1/3, Error ellipse: s-maj=86.3km s-min=16.0km az=164.0

ISC 28 02:52:36.1±2.1, 207S±07×1692E±03, h10km, n11, σ0§73/9, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	21.48	268	P		P		02 57 26.8	+1.7
	2.1nm,0.4s,mb3.8,baz=98,slow=12,SNR=5.7								
CTA	Charters Tower	21.48	268	P		P		02 57 26.8	+1.7
CTAO	Charters Tower	21.48	268	eP		P		02 57 26.7	+1.6
	11nm,1.3s,mb4.0								
COEN	Coen	25.68	281	eP		P		02 58 05.8	-0.7
	2.0nm,0.9s,mb3.6								
WRAB	Tennant Creek	32.62	265	eP		P		02 59 08.2	0.0
	2.3nm,0.7s,mb4.2								
WRA	Warramunga Arr	32.63	265	P		P		02 59 07.6	-0.7
	0.6nm,0.4s,mb3.8,baz=93,slow=8.5,SNR=10								
ASAR	Alice Springs	32.74	258	P		P		02 59 08.9	-0.2
	2.2nm,0.8s,mb4.1,baz=86,slow=8.5,SNR=11								
FITZ	Fitzroy Crossi	41.05	266	P		P		03 00 19.8	-0.2
	3.8nm,0.9s,mb4.0,baz=85,slow=9.4,SNR=6.8								
NVAR	Mina Array Bea	89.81	49	P		P		03 05 35.3	+0.3
	0.2nm,0.3s,mb3.9,baz=208,slow=8.9,SNR=2.4								
MORC	Moravsky Berou	143.28	329	ePKPdf		PKPdf		03 12 10.1	-0.4
EKA	Eskdalemuir Ar	144.94	352	PKPbc		PKPdf		03 12 13.1	-0.1
	0.9nm,0.7s,baz=12,slow=3.7,SNR=2.9								

IDC 28 02:59:29.4±3.3, 2122S×16939E, h0km, mb3.7/3, mb1 4.1/3, mb1mx3.8/14, mbtmp3.7/3, Error ellipse: s-maj=186.5km s-min=30.8km az=158.0

NEIC 28 02:59:31.5±2.2, 2087S×16926E, h10km, mb3.9/2, Error ellipse: s-maj=123.0km s-min=16.5km az=160.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTAO	Charters Tower	21.57	268	eP		P		03 04 21.3	0.0
	5.5nm,1.2s								
WRA	Warramunga Arr	32.71	265	P		P		03 06 04.2	-0.2

0.7nm,1.1s,baz=100,slow=8.4,SNR=3.1
ASAR Alice Springs 32.79 258 P P 03 06 05.2 +0.1
0.7nm,0.8s,baz=75,slow=9.9,SNR=3.6
FITZ Fitzroy Crossi 41.13 266 *eP* P 03 07 16.3 +0.2
2.6nm,0.8s
NVAR Mina Array Bea 89.86 48 P P 03 12 30.9 +0.2
0.7nm,0.8s,baz=229,slow=11,SNR=5.8
EKA Eskdalemuir Ar 145.12 352 PKPbc PKPbc 03 19 07.8 -0.6
2.9nm,0.7s,baz=352,slow=4.3,SNR=7.0
GERES GERESS Array B 145.93 331 PKPbc PKPbc 03 19 12.3 +1.1
1.0nm,0.8s,baz=14,slow=1.7,SNR=6.1

IDC ***28*** *03:03:18.8±3.0,21 12Sₓ16935E, h0ᵏᵐ, mb3.9/5, mb1 4.2/5, mb1mx3.9/16, mbtmp3.9/5, Error ellipse: s-maj=181.2km s-min=26.8km az=161.0*
ISCJB ***28*** *03:03:19.6±1.1, 210S±03ₓ1692E±02, h10ᵏᵐ, mb3.9/6, Error ellipse: s-maj=44.8km s-min=12.7km az=156.3*
NEIC ***28*** *03:03:20.4±1.3, 2106Sₓ16944E, h10ᵏᵐ, mb3.8/2, Error ellipse: s-maj=58.4km s-min=25.2km az=172.0*
ISC 28 03:03:21.1±1.1, 211S±03ₓ1692E±02, h10ᵏᵐ, n11, σ0§82/10, mb3.9/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.76**	**248**	*eP*	**Pn**	**03 04 06.1**	**+0.7**
DZM				*eS*	**Sn**	**03 04 37.8**	**-0.9**
CTA	**Charters Tower**	**21.51**	**269**	P	**P**	**03 08 12.3**	**+2.0**
	2.1nm,0.6s,mb3.8,baz=91,slow=14,SNR=6.3						
CTAO	**Charters Tower**	**21.51**	**269**	*eP*	**P**	**03 08 15.3**	**+4.9**
	2.7nm,0.8s,mb3.7						
WRA	**Warramunga Arr**	**32.64**	**266**	P	**P**	**03 09 52.6**	**-0.8**
	0.4nm,0.7s,mb3.5,baz=96,slow=7.9,SNR=5.8						
ASAR	**Alice Springs**	**32.70**	**259**	P	**P**	**03 09 53.9**	**0.0**
	1.3nm,0.8s,mb3.9,baz=81,slow=8.9,SNR=9.6						
FITZ	**Fitzroy Crossi**	**41.06**	**266**	P	**P**	**03 11 05.8**	**+0.7**
	3.0nm,0.9s,mb3.9,baz=111,slow=12,SNR=3.9						
SNAA	**Sanae**	**87.34**	**183**	*eP*	**P**	**03 16 08.2**	**+0.3**
	0.6nm,0.8s,mb3.9						
NVAR	**Mina Array Bea**	**90.03**	**49**	P	**P**	**03 16 20.2**	**-0.9**
	1.1nm,0.7s,mb4.3,baz=228,slow=8.0,SNR=12						
NVAR	**Mina Array Bea**	**90.03**	**49**	P	**P**	**03 16 20.2**	**-0.9**
CLL	**Collm**	**144.55**	**334**	*e*PKPdf	PKPdf	03 22 56.0	-1.6
GERES	**GERESS Array B**	**146.07**	**331**	PKPbc	PKPbc	03 23 00.9	-0.3
	1.2nm,0.6s,baz=21,slow=1.9,SNR=6.6						

IDC ***28*** *03:04:39.0±0.8, 2120Sₓ16937E, h0ᵏᵐ, mb4.3/10, mb1 4.5/11, mb1mx4.3/18, mbtmp4.3/11, ML3.8/1, Error ellipse: s-maj=26.3km s-min=20.6km az=166.0*
ISCJB ***28*** *03:04:39.0±0.6, 212S±0.1ₓ16928E±0.10, h10ᵏᵐ, mb4.4/16, Error ellipse: s-maj=15.3km s-min=12.0km az=31.2*
NEIC ***28*** *03:04:40.5±0.5, 2119Sₓ16938E, h10ᵏᵐ, mb4.6/8, Error ellipse: s-maj=13.6km s-min=11.3km az=193.0*
LDG ***28*** *03:04:43.2±0.5, 2063Sₓ16858E, h10ᵏᵐ, Mb4.9/1, Error ellipse: s-maj=44.9km s-min=8.3km az=138.0*
ISC 28 03:04:40.6±0.6, 212S±01ₓ16934E±010, h10ᵏᵐ, (h16ᵏᵐ±4ᵏᵐ:pP-P), n47, σ0§97/28, mb4.4/16, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.26**	**160**	P	**Pn**	**03 08 55.5**	**+1.5**
	0.3nm,0.3s,baz=301,slow=8.0,SNR=4.3						
CTA	**Charters Tower**	**21.63**	**269**	*eP*	**P**	**03 09 33.5**	**+2.4**
	9.9nm,0.9s,mb4.2						
CTA	**Charters Tower**	**21.63**	**269**	P	**P**	**03 09 33.2**	**+2.1**
	12nm,0.8s,mb4.4,baz=97,slow=12,SNR=18						
CTAO	**Charters Tower**	**21.63**	**269**	*eP*	**P**	**03 09 33.5**	**+2.4**
	24nm,1.1s,mb4.5						
STKA	**Stephens Creek**	**26.92**	**241**	P	**P**	**03 10 23.4**	**+1.3**
	4.7nm,0.8s,mb4.0,baz=134,slow=20,SNR=3.8						
WB2	**Warramunga Arr**	**32.74**	**266**	*eP*	**P**	**03 11 12.4**	**-1.4**
WRAB	**Tennant Creek**	**32.74**	**266**	*eP*	**P**	**03 11 13.4**	**-0.4**
	2.6nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**32.75**	**266**	P	**P**	**03 11 12.8**	**-1.1**
	1.9nm,0.9s,mb4.0,baz=98,slow=7.8,SNR=9.3						
ASAR	**Alice Springs**	**32.79**	**259**	P	**P**	**03 11 14.1**	**-0.1**
	4.0nm,0.8s,mb4.4,baz=83,slow=8.8,SNR=16						
ASAR				PcP	PcP	03 13 59.0	-0.4
	0.8nm,0.8s,baz=106,slow=3.1,SNR=4.5						
FITZ	**Fitzroy Crossi**	**41.18**	**266**	*eP*	**P**	**03 12 26.1**	**+0.5**
	9.8nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**41.18**	**266**	P	**P**	**03 12 26.1**	**+0.6**
	6.1nm,0.7s,mb4.3,baz=122,slow=8.8,SNR=15						
SBA	**Scott Base**	**56.69**	**181**	*eP*	**P**	**03 14 24.2**	**+0.4**
	7.8nm,1.1s,mb4.7						
CASY	**Casey**	**58.36**	**204**	*eP*	**P**	**03 14 35.1**	**-0.6**
	5.6nm,1.0s,mb4.5						
XMIS	**Christmas Isla**	**61.85**	**269**	*eP*	**P**	**03 15 01.5**	**+1.0**
YHNB	**Yeheng**	**65.23**	**312**	*eP*	**P**	**03 15 23.7**	**+1.1**
QSPA	**South Pole Qui**	**68.84**	**180**	P	**P**	**03 15 44.6**	**-0.1**
	6.6nm,1.0s,mb4.5,baz=6.0,slow=3.4,SNR=9.6						
COCO	**West Island**	**69.53**	**264**	*eP*	**P**	**03 15 49.3**	**-0.8**
	44nm,0.9s,mb5.4						
MAW	**Mawson**	**76.64**	**202**	P	**P**	**03 16 31.2**	**0.0**
	1.6nm,0.8s,mb4.0,baz=86,slow=4.6,SNR=4.1						
SNAA	**Sanae**	**87.19**	**182**	*e*	**P**	**03 17 25.2**	**-1.5**
SNAA				*e*	pP	03 17 30.2	+0.2
SNAA				*e*		03 17 34.2	
SNAA	**Sanae**	**87.19**	**182**	*eP*	**P**	**03 17 25.9**	**-0.8**
	6.9nm,1.0s,mb4.8						
VNA3	**Neumayer Olymp**	**87.78**	**180**	*e*	**P**	**03 17 28.1**	**-1.4**
VNA3				*e*	pP	03 17 33.1	+0.3
VNA3				*e*		03 17 36.3	
VNA2	**Neumayer--Watz**	**88.07**	**181**	*e*	**P**	**03 17 30.5**	**-0.4**
	baz=181,slow=5.0						
VNA2				*e*	pP	03 17 35.1	+0.9
VNA2				*e*		03 17 38.4	
VNA1	**Neumayer--Stat**	**88.36**	**181**	*e*	**P**	**03 17 31.9**	**-0.4**
VNA1				*e*		03 17 39.8	
SONM	**Songino Array**	**88.86**	**323**	P	**P**	**03 17 33.5**	**-1.3**
	0.7nm,0.6s,mb4.2,baz=114,slow=3.6,SNR=5.6						
NVAR	**Mina Array Bea**	**90.04**	**48**	P	**P**	**03 17 41.7**	**+1.1**
	2.2nm,0.8s,mb4.5,baz=225,slow=9.3,SNR=15						
NVAR	**Mina Array Bea**	**90.04**	**48**	P	**P**	**03 17 41.7**	**+1.1**
WVOR	**Wild Horse Val**	**91.65**	**45**	*eP*	**P**	**03 17 47.9**	**-0.1**
	3.3nm,1.2s,mb4.5						
PDAR	**Pinedale Array**	**97.89**	**47**	P	**P**	**03 18 16.8**	**+0.2**
	0.3nm,0.7s,mb4.0,baz=283,slow=5.4,SNR=3.0						
ARCES	**ARCESS Array B**	**127.00**	**345**	PKP	PKPdf	03 23 43.5	-0.6
	2.1nm,0.8s,baz=17,slow=1.3,SNR=6.0						
PSZ	**Piszkesteto**	**143.78**	**325**	*e*PKPdf	PKPdf	03 24 15.7	-0.2
CLL	**Collm**	**144.74**	**334**	*e*PKPdf	PKPdf	03 24 17.0	-0.5
KHC	**Kasperske Hory**	**146.12**	**331**	*e*PKP	PKPdf	03 24 21.0	+1.1
KHC				*ex*	x	03 24 30.0	
GERES	**GERESS Array B**	**146.27**	**331**	PKPbc	PKPbc	03 24 21.6	+0.3
	2.3nm,0.6s,baz=34,slow=3.2,SNR=15						
HAU	**Haudompre**	**149.97**	**337**	*e*PKP1	PKPbc	03 24 31.6	+0.4
	7.7nm,0.6s						
MEZF	**Maizieres J'vi**	**150.01**	**339**	*e*PKP1	PKPbc	03 24 32.2	+1.0
CABF	**La Chapelle**	**151.24**	**336**	*e*PKP1	PKPbc	03 24 35.0	+0.8
	8.1nm,0.7s						
FLN	**La Foliniere**	**151.34**	**346**	*e*PKP1	PKPbc	03 24 34.6	+0.2
LDF	**La Druitiere**	**151.41**	**345**	*e*PKP1	PKPbc	03 24 34.5	-0.1
LOR	**Lormes**	**151.48**	**339**	*e*PKP1	PKPbc	03 24 35.1	+0.3
SSF	**Saint Saulge**	**151.78**	**339**	*e*PKP1	PKPbc	03 24 35.8	+0.4
	9.6nm,0.9s						
GRR	**Gorron**	**151.78**	**346**	*e*PKP1	PKPbc	03 24 35.6	+0.2
LPL	**La Plagne**	**151.87**	**334**	*e*PKP1	PKPbc	03 24 36.7	+1.0
LPG	**La Plagne**	**151.88**	**333**	*e*PKP1	PKPbc	03 24 36.8	+1.1
	6.6nm,0.6s						
BGF	**Bois d'Agland**	**152.44**	**340**	*e*PKP1	PKPbc	03 24 37.2	+0.3
MBDF	**Montbardon**	**152.49**	**332**	*e*PKP1	PKPbc	03 24 38.0	+0.9
	5.6nm,0.7s						
ORIF	**Oris-en-Rattie**	**152.71**	**334**	*e*PKP1	PKPbc	03 24 38.6	+1.0
	9.8nm,0.8s						
MFF	**Saint Martin d**	**153.27**	**344**	*e*PKP1	PKPbc	03 24 39.0	+0.2

IDC 28 03:05:25.5±1.1, 4467Nₓ2811W, h0ᵏᵐ, mb3.5/3, mb1 3.8/3, mb1mx3.5/26, mbtmp3.5/3, Error ellipse: s-maj=47.2km s-min=27.3km az=11.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKASG	**Malin Array Be**	**38.23**	**60**	P	P	03 12 47.8	+1.0
	0.2nm,0.3s,baz=272,slow=9.1,SNR=3.4						
TORD	**Torodi Ar. Bea**	**40.41**	**132**	P	P	03 13 05.7	+0.3
	0.4nm,0.8s,baz=328,slow=9.3,SNR=3.2						
TXAR	**Lajitas Array**	**60.20**	**283**	P	P	03 15 36.0	+0.8
	0.9nm,0.8s,baz=74,slow=6.9,SNR=13						
WRA	**Warramunga Arr**	**151.35**	**36**	PKPbc	PKPbc	03 25 20.1	-1.1
	0.8nm,0.9s,baz=318,slow=2.1,SNR=7.7						
ASAR	**Alice Springs**	**154.41**	**41**	PKPbc	PKPbc	03 25 26.6	-1.3
	0.7nm,1.0s,baz=339,slow=2.4,SNR=3.5						

IDC ***28*** *03:10:13.8±2.7, 2232Sₓ16982E, h0ᵏᵐ, mb4.0/5, mb1 4.3/5, mb1mx4.0/16, mbtmp4.0/5, Error ellipse: s-maj=154.7km s-min=27.3km az=163.0*
ISCJB ***28*** *03:10:14.8±0.9, 220S±03ₓ16959E±009, h10ᵏᵐ, mb4.2/9, Error ellipse: s-maj=36.7km s-min=12.4km az=175.7*
NEIC ***28*** *03:10:15.5±0.7, 2209Sₓ16979E, h10ᵏᵐ, mb4.3/6, Error ellipse: s-maj=26.9km s-min=13.5km az=169.0*
ISC 28 03:10:16.2±1.0, 220S±03ₓ1697E±01, h10ᵏᵐ, n15, σ1§00/14, mb4.2/9, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.98**	**269**	*eP*	**Pn**	**03 11 03.1**	**-0.4**
DZM				*eS*	**Sn**	**03 11 36.3**	**-3.0**
CTA	**Charters Tower**	**21.92**	**271**	P	**P**	**03 15 10.9**	**+1.1**
	5.9nm,0.7s,mb4.1,baz=90,slow=14,SNR=14						
CTAO	**Charters Tower**	**21.92**	**271**	*eP*	**P**	**03 15 11.0**	**+1.2**
	6.0nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**32.93**	**260**	P	**P**	**03 16 51.5**	**+0.5**
	2.1nm,0.7s,mb4.2,baz=84,slow=9.3,SNR=21						
WB2	**Warramunga Arr**	**32.98**	**267**	*eP*	**P**	**03 16 52.2**	**+0.7**
WRAB	**Tennant Creek**	**32.99**	**267**	*eP*	**P**	**03 16 52.1**	**+0.6**
	2.5nm,0.9s,mb4.1						
WRA	**Warramunga Arr**	**32.99**	**267**	P	**P**	**03 16 50.6**	**-1.0**
	0.8nm,0.6s,mb3.8,baz=102,slow=7.9,SNR=9.0						
FORT	**Forrest**	**38.08**	**248**	*eP*	**P**	**03 17 36.4**	**+1.2**
	2.2nm,0.8s,mb3.9						
FITZ	**Fitzroy Crossi**	**41.42**	**267**	P	**P**	**03 18 03.9**	**+0.8**
	2.8nm,0.6s,mb4.0,baz=128,slow=11,SNR=9.3						
FITZ	**Fitzroy Crossi**	**41.42**	**267**	*eP*	**P**	**03 18 03.5**	**+0.3**
	9.0nm,0.9s,mb4.4						
YHNB	**Yeheng**	**65.98**	**312**	*eP*	**P**	**03 21 02.5**	**-0.5**
	10nm,0.7s,mb5.0						
SNAA	**Sanae**	**86.40**	**182**	*eP*	**P**	**03 22 56.9**	**-1.4**
	3.7nm,1.3s,mb4.5						
NVAR	**Mina Array Bea**	**90.35**	**48**	P	**P**	**03 23 17.4**	**-0.3**
	0.5nm,0.8s,mb3.9,baz=229,slow=6.9,SNR=4.0						
PSZ	**Piszkesteto**	**144.60**	**324**	*e*PKPdf	PKPdf	03 29 53.0	+0.1
GERES	**GERESS Array B**	**147.11**	**330**	PKPbc	PKPbc	03 29 59.6	+0.3
	0.4nm,0.5s,baz=23,slow=3.2,SNR=4.3						

IDC ***28*** *03:12:24.3±2.9, 2169Sₓ16941E, h0ᵏᵐ, mb3.9/5, mb1 4.2/5, mb1mx3.9/16, mbtmp3.9/5, Error ellipse: s-maj=160.6km s-min=29.6km az=162.0*
ISCJB ***28*** *03:12:25.5±1.2, 217S±03ₓ1692E±02, h10ᵏᵐ, mb3.9/8, Error ellipse: s-maj=46.5km s-min=22.2km az=179.2*
NEIC ***28*** *03:12:26.1±1.1, 2164Sₓ16940E, h10ᵏᵐ, mb4.0/4, Error ellipse: s-maj=46.3km s-min=20.9km az=175.0*
ISC 28 03:12:26.9±1.2, 217S±03ₓ1693E±02, h10ᵏᵐ, n11, σ1§02/10, mb3.9/8, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.59**	**270**	P	**P**	**03 17 18.5**	**+1.5**
	4.0nm,0.5s,mb4.1,baz=100,slow=9.3,SNR=7.9						
CTA	**Charters Tower**	**21.59**	**270**	P	**P**	**03 17 18.5**	**+1.5**
CTAO	**Charters Tower**	**21.59**	**270**	*eP*	**P**	**03 17 18.5**	**+1.5**
	5.0nm,0.7s,mb4.0						
COEN	**Coen**	**26.02**	**283**	*eP*	**P**	**03 18 01.5**	**+1.2**
	1.8nm,0.8s,mb3.6						
ASAR	**Alice Springs**	**32.67**	**260**	P	**P**	**03 18 59.5**	**+0.1**
	1.5nm,0.7s,mb4.0,baz=85,slow=9.1,SNR=7.3						
WRAB	**Tennant Creek**	**32.68**	**267**	*eP*	**P**	**03 18 57.7**	**-1.8**
	3.4nm,1.1s,mb4.2						
WRA	**Warramunga Arr**	**32.69**	**267**	P	**P**	**03 18 58.5**	**-1.1**
	0.7nm,0.8s,mb3.6,baz=100,slow=8.0,SNR=4.5						
FITZ	**Fitzroy Crossi**	**41.12**	**267**	P	**P**	**03 20 11.0**	**-0.4**
	1.9nm,1.0s,mb3.7,baz=180,slow=23,SNR=5.7						
SNAA	**Sanae**	**86.68**	**182**	*eP*	**P**	**03 25 11.1**	**+0.6**
	0.8nm,0.8s,mb4.0						
NVAR	**Mina Array Bea**	**90.40**	**48**	P	**P**	**03 25 28.4**	**-0.2**
	0.5nm,0.7s,mb4.0,baz=223,slow=7.1,SNR=3.7						
GERES	**GERESS Array B**	**146.70**	**330**	PKPbc	PKPbc	03 32 06.6	-2.3
	0.4nm,0.6s,baz=27,slow=4.5,SNR=2.6						

KRSC 28 03:18:42.5±1.7, 5321Nₓ16787E, h21ᵏᵐ±20ᵏᵐ, ML4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**3.88**	**293**	*i* P	Pn	03 19 43.4	+2.6
MKZ				*eS*	Sn	03 20 27.3	+1.7
KBTR	**Krutoberegovo**	**4.20**	**318**	P	Pn	03 19 46.6	+1.5
KBTR				*i* S	Sn	03 20 34.0	+0.5
KMNR	**Kamenistaya**	**5.13**	**303**	P	Pn	03 20 01.7	+3.7
KMNR				*i* S	Sn	03 20 59.0	+2.5
SDLR	**Sedlovina**	**5.40**	**274**	*i* P	Pn	03 20 05.4	+3.7
SDLR				*eS*	Sn	03 21 05.6	+2.5
AVH	**Avacha**	**5.49**	**274**	*i* P	Pn	03 20 06.8	+3.9
SRDR	**Sredinnyy**	**5.65**	**307**	P	Pn	03 20 09.5	+4.3
SRDR				*i* S	Sn	03 21 12.9	+3.5
RUS	**Russkaya**	**5.73**	**266**	P	Pn	03 20 08.9	+2.7
RUS				*i* S	Sn	03 21 12.1	+0.9
GNL	**Ganaly**	**5.95**	**279**	P	Pn	03 20 13.6	+4.3

CSEM ***28*** *03:43:44.6±0.2, 3973Nₓ2778E, h5ᵏᵐ, MD2.6, Error ellipse: s-maj=7.6km s-min=4.4km az=36.0*
ISCJB ***28*** *03:43:45.5±0.6, 3974N±005ₓ2778E±004, h4ᵏᵐ±7ᵏᵐ, Error ellipse: s-maj=9.6km s-min=4.1km az=28.2*
ISK ***28*** *03:43:45.2, 3974Nₓ2779E, h4ᵏᵐ, MD2.6*
DDA ***28*** *03:43:45.1, 3974Nₓ2779E, h7ᵏᵐ±5ᵏᵐ, Md3.0*
ISC 28 03:43:45.5±0.9, 3970N±007ₓ2774E±007, h11ᵏᵐ±7ᵏᵐ, n13, σ0§54/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALY	**Balya**	**0.10**	**292**	*i* P	**Pg**	**03 43 47.8**	**-0.4**
BALY				*i* S	**Sg**	**03 43 49.9**	**-0.3**
BALB	**Balikesir**	**0.12**	**120**	*e*PG	**Pg**	**03 43 48.2**	**-0.2**
BALB				*e*SG	**Sg**	**03 43 50.6**	**0.0**
DURS	**Dursunbey**	**0.57**	**100**	*i* P	**Pg**	**03 43 55.9**	**-0.8**
DURS				*i* S	**Sg**	**03 44 04.1**	**0.0**
DURS	**Dursunbey**	**0.57**	**100**	*i* P	**Pg**	**03 43 55.8**	**-0.8**
DURS				*i* S	**Sg**	**03 44 04.1**	**-0.1**
DST	**Dursunbey**	**0.69**	**98**	*e*PG	**Pg**	**03 43 58.1**	**-0.7**
DST				*e*SG	**Sg**	**03 44 08.3**	**+0.5**
DEMI	**Demirci**	**1.00**	**131**	*i* P	**Pg**	**03 44 04.9**	**+0.2**
DEMI				*i* S	**Sg**	**03 44 18.6**	**+0.9**
DEMI	**Demirci**	**1.00**	**131**	*i* P	**Pg**	**03 44 04.9**	**+0.2**
DEMI				*i* S	**Sg**	**03 44 18.6**	**+0.9**
SKY	**Sarkoy-Tekirda**	**1.08**	**336**	*e*PG	**Pg**	**03 44 06.6**	**+0.4**
SART	**Tekirdag**	**1.08**	**337**	*i* P	**Pg**	**03 44 06.8**	**+0.6**
SART				*i* S	**Sg**	**03 44 20.6**	**+0.4**
MFT	**Murefte**	**1.14**	**342**	*e*PN	**Pn**	**03 44 06.6**	**-0.7**
ULDT	**Uludag**	**1.16**	**67**	*i* P	**Pb**	**03 44 07.0**	**-0.4**
ULDT				*i* S	**Sb**	**03 44 22.1**	**-0.4**
ULDT	**Uludag**	**1.16**	**67**	*i* P	**Pb**	**03 44 07.0**	**-0.5**
ULDT				*i* S	**Sb**	**03 44 22.0**	**-0.5**
YLV	**Yalova**	**1.52**	**55**	*e*PN	**Pn**	**03 44 13.5**	**+1.0**

KRSC 28 03:44:39.9±0.6, 5368Nₓ16200E, h11ᵏᵐ±10ᵏᵐ, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.89**	**350**	*eP*	Pg	03 44 57.1	0.0
MKZ				*eS*	Sg	03 45 09.5	+0.8
SPN	**Mys Shipunski**	**1.32**	**245**	S	Sb	03 45 22.3	+0.8
KII	**Karymskiy**	**1.55**	**284**	P	Pn	03 45 08.0	+0.6
KII				*eS*	Sn	03 45 28.4	+0.9
NLC	**Nalytchevo**	**1.67**	**253**	*eP*	Pn	03 45 09.3	+0.3
NLC				*eS*	Sn	03 45 30.2	-0.2
AVH	**Avacha**	**1.99**	**259**	*eP*	Pn	03 45 14.6	+1.1
AVH				*eS*	Sn	03 45 40.0	+1.6
PET	**Petropavlovsk**	**2.11**	**253**	*eP*	Pn	03 45 16.2	+1.1
PET				*eS*	Sn	03 45 43.1	+1.8
KMNR	**Kamenistaya**	**2.32**	**335**	*eP*	Pn	03 45 18.8	+0.9
KMNR				*eS*	Sn	03 45 47.7	+1.3
GNL	**Ganaly**	**2.41**	**272**	*eP*	Pn	03 45 21.2	+2.0
GNL				*eS*	Sn	03 45 51.9	+3.2
BZMR	**Bezymyannaya**	**2.42**	**339**	*eP*	Pn	03 45 20.2	+0.8
BZMR				*eS*	Sn	03 45 50.2	+1.2
ZLN	**Zelenaya**	**2.44**	**344**	*eP*	Pn	03 45 21.0	+1.4
ZLN				*eS*	Sn	03 45 51.8	+2.4
RUS	**Russkaya**	**2.45**	**241**	*eP*	Pn	03 45 20.1	+0.4
RUS				*eS*	Sn	03 45 49.5	-0.1
KPT	**Kopyto**	**2.51**	**337**	*eP*	Pn	03 45 21.7	+1.1
KPT				*eS*	Sn	03 45 52.9	+1.7
KBTR	**Krutoberegovo**	**2.58**	**10**	*eP*	Pn	03 45 20.7	-0.8
KBTR				*eS*	Sn	03 45 50.9	-1.9
KRSR	**Krestovskiy**	**2.67**	**343**	S	Sn	03 45 58.6	+3.4
KOZ	**Kozyrevsk**	**2.68**	**334**	*eP*	Pn	03 45 25.0	+2.1
KOZ				*eS*	Sn	03 45 58.8	+3.5
KLY	**Klyuchi**	**2.75**	**344**	*eP*	Pn	03 45 24.4	+0.5
KLY				*eS*	Sn	03 45 57.3	+0.2
SRDR	**Sredinnyy**	**2.95**	**334**	*eP*	Pn	03 45 27.7	+1.1
SRDR				*eS*	Sn	03 46 03.6	+1.6
MIPR	**Malaya Ipel'ka**	**3.47**	**248**	*eP*	Pn	03 45 36.9	+3.2

IDC ***28*** *03:47:18.9±0.9, 1237Nₓ14185E, h0ᵏᵐ, mb3.7/5, mb1 4.0/6, mb1mx3.8/19, mbtmp3.8/6, ML4.1/1, Error ellipse: s-maj=27.8km s-min=22.2km az=88.0*
ISCJB ***28*** *03:47:23.5±2.5, 1239N±008ₓ1419E±0.1, h48ᵏᵐ±26ᵏᵐ, mb4.1/14, Error ellipse: s-maj=23.3km s-min=12.8km az=179.2*
NEIC ***28*** *03:47:25.2±1.5, 1240Nₓ14191E, h48ᵏᵐ±16ᵏᵐ, mb4.4/8, Error ellipse: s-maj=12.6km s-min=7.6km az=92.0*
ISC 28 03:47:25.2±2.4, 1239N±008ₓ1419E±01, h46ᵏᵐ±26ᵏᵐ, n18, σ0§62/17, mb4.1/14, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.12**	**67**	Pn	**Pn**	**03 48 12.0**	**0.0**
	24nm,0.3s,baz=184,slow=8.9,SNR=10						
PMG	**Port Moresby**	**22.27**	**166**	*eP*	**P**	**03 52 18.4**	**-0.1**
	6.9nm,0.6s,mb4.3						
KKM	**Kota Kinabalu**	**26.12**	**258**	*eP*	**P**	**03 52 56.0**	**+1.0**
COEN	**Coen**	**26.20**	**177**	*eP*	**P**	**03 52 56.5**	**+0.8**
	3.7nm,1.1s,mb3.8						
WRAB	**Tennant Creek**	**32.97**	**193**	*eP*	**P**	**03 53 54.9**	**-0.7**
	9.0nm,0.9s,mb4.7						
WB2	**Warramunga Arr**	**32.98**	**193**	*eP*	**P**	**03 53 55.2**	**-0.5**
WRA	**Warramunga Arr**	**32.98**	**193**	P	**P**	**03 53 55.2**	**-0.6**
	1.8nm,0.7s,mb4.1,baz=15,slow=9.6,SNR=21						
ASAR	**Alice Springs**	**36.68**	**192**	P	**P**	**03 54 27.7**	**+0.1**
	0.6nm,0.5s,mb3.7,baz=19,slow=12,SNR=11						
CMAR	**Chiang Mai Arr**	**41.78**	**284**	P	**P**	**03 55 10.8**	**+0.3**
	0.8nm,0.4s,mb3.7,baz=82,slow=6.5,SNR=2.7						
FORT	**Forrest**	**44.94**	**197**	*eP*	**P**	**03 55 36.0**	**+0.4**
	3.5nm,1.0s,mb4.1						
SONM	**Songino Array**	**46.10**	**327**	P	**P**	**03 55 43.7**	**-1.0**
	0.2nm,0.4s,mb3.4,baz=141,slow=4.8,SNR=2.2						
MKAR	**Makanchi Array**	**60.37**	**317**	P	**P**	**03 57 30.3**	**+0.7**
	1.6nm,0.6s,mb4.2,baz=92,slow=7.9,SNR=10						
KURK	**Kurchatov**	**63.66**	**321**	*eP*	**P**	**03 57 51.0**	**-0.5**
	6.6nm,0.9s,mb4.7						
TKM2	**Tokmak 2**	**64.34**	**312**	*eP*	**P**	**03 57 56.6**	**+0.4**
	3.1nm,1.0s,mb4.3						
BRVK	**Borovoye**	**69.15**	**322**	*eP*	**P**	**03 58 25.6**	**-1.0**
	3.6nm,0.5s,mb4.6						
MCK	**McKinley**	**69.78**	**26**	*eP*	**P**	**03 58 30.6**	**+0.2**
	7.0nm,1.2s,mb4.5						
NVAR	**Mina Array Bea**	**89.92**	**51**	P	**P**	**04 00 20.3**	**+0.6**
	0.3nm,0.8s,mb3.6,baz=279,slow=7.0,SNR=2.2						
LPAZ	**La Paz**	**150.66**	**101**	PKPbc	PKPbc	04 07 13.9	+0.8
	0.5nm,0.5s,baz=237,slow=4.2,SNR=4.9		

SNJE				*e*S	x	04 31 48.0		
RBDL	**Robledal**	**1.31**	**61**‖	*e*P	x	04 31 30.1		
RBDL				*e*S	x	04 31 46.7		
BOQS	**Boqueron**	**1.57**	**81**‖	*e*P	x	04 31 33.7		
BOQS				*e*S	x	04 31 56.1		
SNET	**Serv Nac Est T**	**1.61**	**83**	*e*P	x	04 31 33.6		
SNET				*e*S	x	04 31 55.2		
SNET				*i*		04 32 02.9		
	comp=Z,673nm,0.2s							
MTO2	**Montecristo 2**	**1.73**	**58**	*e*P	x	04 31 35.7		
LFRS	**El Faro**	**1.77**	**85**‖	*e*P	x	04 31 36.7		
LFRS				*e*S	x	04 31 59.3		
LBRS	**Las Brisas**	**1.80**	**82**⇑	*e*P	x	04 31 37.3		
SNVI	**San Vicente**	**1.98**	**86**	*e*P	x	04 31 39.8		
SNVI				*e*S	x	04 32 05.7		
VSM	**San Miguel**	**2.53**	**91**	*e*P	x	04 31 48.4		
VSM				*e*S	x	04 32 19.6		
BLLM	**Bellamira**	**2.57**	**91**	*e*S	x	04 32 19.3		
CAHU	**Cacacuatique**	**2.61**	**83**	*e*P	x	04 31 48.5		
CNCH	**Conchagua**	**2.97**	**94**	*e*P	x	04 31 53.2		
CNCH				*e*S	x	04 32 29.8		

IDC ***28*** *04:35:14.5±1.2,1182S×16646E,h0km,mb4.4/9, mb1 4.5/10,mb1mx4.2/20,mbtmp4.4/10,ML5.2/1,MS4.5/18, Ms1 4.5/18,ms1mx4.4/29,Error ellipse: s-maj=30.1km s-min=27.2km az=62.0*

BJI ***28*** *04:35:18.5, 1180S×16640E,h36km,mB5.3,mb4.7,Ms4.8, Msz4.7*

ISCJB ***28*** *04:35:20.5±2.7, 1195S±0.1×1663E±0.1,h43km±20km, mb4.4/17,MS4.5/19,Error ellipse: s-maj=24.7km s-min=11.6km az=146.0*

NEIC ***28*** *04:35:20.6±0.7, 1183S×16641E,mb4.5/10,Error ellipse: s-maj=15.6km s-min=12.5km az=72.0*

ISC 28 04:35:23.2±2.1,1186S±010×1663E±01,h53km±15km, h36km±6.1km:pP-P,n44,σ0⇟91/30,mb4.4/17,MS4.5/19,1C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.67**	**291**	Pn	**Pn**	**04 36 57.4**	**-1.3**
	43nm,0.3s,baz=180,slow=8.9,SNR=12						
HNR				Sn	**Sn**	**04 38 13.5**	**+0.1**
	14nm,0.3s,baz=342,slow=20,SNR=3.9						
DZM	**Mont Dzumac**	**10.16**	**179**	*e*P	**Pn**	**04 37 47.0**	**+0.6**
CTA	**Charters Tower**	**20.90**	**244**	*e*P	**P**	**04 40 05.6**	**+4.3**
	10.0nm,1.1s						
CTA	**Charters Tower**	**20.90**	**244**	P	**P**	**04 40 04.1**	**+2.7**
	6.7nm,0.8s,baz=64,slow=13,SNR=12						
CTAO	**Charters Tower**	**20.90**	**244**	*e*P	**P**	**04 40 05.5**	**+4.1**
	29nm,1.3s						
AFI	**Afiamalu**	**21.49**	**98**	LR	LR	04 45 08.0	
	comp=Z,982nm,21.9s,MS4.2,baz=277,slow=28						
COEN	**Coen**	**22.61**	**262**	*e*P	**P**	**04 40 20.1**	**+0.4**
	7.8nm,1.1s,mb4.0						
ARMA	**Armidale**	**22.93**	**214**	*e*P	**P**	**04 40 24.6**	**+1.7**
STKA	**Stephens Creek**	**30.23**	**225**	*e*P	**P**	**04 41 29.2**	**+0.2**
	6.1nm,1.1s,mb4.2						
STKA	**Stephens Creek**	**30.23**	**225**	P	**P**	**04 41 29.4**	**+0.4**
	3.4nm,0.8s,mb4.2,baz=76,slow=18,SNR=3.8						
STKA				LR	LR	04 52 36.0	
	comp=Z,2µm,21.6s,MS4.7,baz=68,slow=34						
WRAB	**Tennant Creek**	**31.69**	**251**	*e*P	**P**	**04 41 41.5**	**-0.6**
	20nm,1.5s,mb4.7						
WB2	**Warramunga Arr**	**31.69**	**251**	*e*P	**P**	**04 41 41.8**	**-0.3**
WRA	**Warramunga Arr**	**31.70**	**251**	P	**P**	**04 41 41.7**	**-0.5**
	1.5nm,0.5s,mb4.1,baz=84,slow=9.2,SNR=21						
WRA				PcP	PcP	04 44 31.6	-1.4
	1.2nm,0.9s,baz=80,slow=2.8,SNR=6.2						
RPZ	**Rata Peaks**	**32.01**	**173**	LR	LR	04 53 11.3	
	comp=Z,1µm,20.8s,MS4.6,baz=318,slow=34						
ASAR	**Alice Springs**	**32.91**	**245**	P	**P**	**04 41 52.2**	**-0.5**
	3.6nm,0.7s,mb4.4,baz=73,slow=9.4,SNR=31						
ASAR				PcP	PcP	04 44 35.5	-0.8
	1.2nm,0.6s,baz=74,slow=2.3,SNR=7.2						
GUMO	**Guam**	**33.01**	**319**	LR	LR	04 53 41.0	
	comp=Z,556nm,20.8s,MS4.2,baz=29,slow=33						
RAR	**Rarotonga**	**33.79**	**110**	LR	LR	04 53 05.3	
	comp=Z,670nm,18.8s,MS4.4,baz=82,slow=32						
FITZ	**Fitzroy Crossi**	**39.68**	**256**	*e*P	**P**	**04 42 51.2**	**+0.6**
	10nm,1.2s,mb4.4						
FITZ	**Fitzroy Crossi**	**39.68**	**256**	P	**P**	**04 42 50.1**	**-0.5**
	3.2nm,1.0s,mb4.0,baz=86,slow=6.7,SNR=5.9						
FITZ				LR	LR	04 58 57.2	
	comp=Z,752nm,21.1s,MS4.5,baz=134,slow=36						
PPT	**Papeete**	**43.01**	**103**	LR	LR	04 57 53.0	
	comp=Z,565nm,18.4s,MS4.5,baz=51,slow=32						
DAV	**Davao City (W)**	**44.63**	**293**	LR	LR	04 59 40.7	
	comp=Z,667nm,20.2s,MS4.6,baz=358,slow=33						
NWAO	**Narrogin (SRO)**	**49.45**	**237**	P	**P**	**04 44 07.8**	**-0.5**
	6.6nm,0.6s,mb4.8,baz=37,slow=9.5,SNR=5.8						
NWAO				LR	LR	05 05 33.4	
	comp=Z,1µm,18.2s,MS4.9,baz=76,slow=37						
NWAO	**Narrogin (SRO)**	**49.45**	**237**	P	**P**	**04 44 07.8**	**-0.5**
NWAO				LR	LR	05 05 33.4	
ASAJ	**Asahikawa**	**59.72**	**340**	LR	LR	05 10 03.7	
	comp=Z,506nm,18.5s,MS4.7,baz=165,slow=35						
KSRS	**Korea Array**	**60.83**	**326**	LR	LR	05 07 33.2	
	comp=Z,196nm,21.0s,MS4.2,baz=135,slow=32						
PETK	**Petropavlovsk-**	**75.12**	**352**	LR	LR	05 10 33.0	
	comp=Z,202nm,19.3s,MS4.3,baz=191,slow=32						
CASY	**Casey**	**65.82**	**202**	*e*P	**P**	**04 46 00.8**	**-1.9**
	13nm,1.2s,mb4.8						
CASY				*e*pP	pP	04 46 11.8	-5.6
SBA	**Scott Base**	**65.99**	**180**	*e*P	**P**	**04 46 03.4**	**-0.3**
	9.9nm,1.2s,mb4.7						
GYA	**Guiyang**	**69.30**	**304**⇑	*i*P	**P**	**04 46 26.0**	**+0.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
KMI	**Kunming**	**71.98**	**301**	P	**P**	**04 46 43.5**	**+1.8**
KMI				AMB	AMB		
	comp=Z,13nm,1.4s,mb4.7						
KMI	**Kunming**	**71.98**	**301**	P	**P**	**04 46 43.4**	**+1.7**
	comp=Z,13nm,1.4s,mb4.7						
CMAR	**Chiang Mai Arr**	**72.91**	**294**	P	**P**	**04 46 46.7**	**-0.7**
	comp=Z,1.8nm,0.5s,mb4.3,baz=122,slow=4.6,SNR=13						
CMAR				LR	LR	05 16 23.1	
	comp=Z,149nm,20.5s,MS4.2,baz=55,slow=34						
KDAK	**Kodiak Island**	**77.14**	**21**	LR	LR	05 15 00.3	
	comp=Z,690nm,19.3s,MS5.0,baz=129,slow=31						
QSPA	**South Pole Qui**	**78.16**	**180**	P	**P**	**04 47 15.7**	**-0.6**
	comp=Z,3.0nm,0.7s,mb4.3,baz=354,slow=1.7,SNR=8.4						
ULN	**Ulaanbaatar**	**79.26**	**324**	*e*P	**P**	**04 47 22.6**	**-0.3**
	comp=Z,3.8nm,0.9s,mb4.3						
ULN				*e*pP	pP	04 47 34.1	-3.8
SONM	**Songino Array**	**79.62**	**324**	P	**P**	**04 47 25.2**	**+0.4**
	comp=Z,0.4nm,0.4s,mb3.7,baz=120,slow=4.5,SNR=3.8						
GTA	**Gaotai**	**79.99**	**314**	*e*P	**P**	**04 47 28.5**	**+1.5**
GTA				AP	pP	04 47 33.0	-9.1
GTA				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.4						
GTA				AMB	AMB		
	comp=Z,211nm,5.1s						
GTA				LR	LR		
	comp=N,155nm,15.9s,MS4.6						
GTA				LR	LR		
	comp=E,215nm,19.2s,MS4.6						
GTA				LR	LR		
	comp=Z,345nm,18.6s,MS4.7						
BBB	**Bella Bella**	**84.95**	**34**	LR	LR	05 21 55.7	
	comp=Z,301nm,18.8s,MS4.7,baz=264,slow=33						
PDAR	**Pinedale Array**	**93.72**	**47**	LR	LR	05 25 11.5	
	comp=Z,290nm,18.5s,MS4.8,baz=199,slow=32						
MKAR	**Makanchi Array**	**94.46**	**317**	P	**P**	**04 48 37.0**	**-0.7**
	comp=Z,1.9nm,0.7s,mb4.7,baz=100,slow=6.5,SNR=11						
MKAR	**Makanchi Array**	**94.46**	**317**	P	**P**	**04 48 37.0**	**-0.7**
ZALV	**Zalesovo Beam**	**94.51**	**324**	LR	LR	05 31 16.2	
	comp=Z,101nm,19.2s,MS4.3,baz=256,slow=36						
TXAR	**Lajitas Array**	**95.76**	**61**	LR	LR	05 23 29.1	
	comp=Z,312nm,20.6s,MS4.8,baz=200,slow=30						
TORD	**Torodi Ar. Bea**	**164.89**	**277**	PKP	PKPdf	04 55 22.0	-0.4
	comp=Z,0.5nm,0.9s,baz=6.9,slow=1.8,SNR=2.8						
TORD				PKPab	PKPab	04 56 17.7	-1.1
	comp=Z,1.0nm,1.0s,baz=85,slow=3.7,SNR=4.2						

NEIC ***28*** *04:36:52.8, 16.10N×91.15W,h4km,MD4.5(MEX),After MEX.*

MEX 28 04:36:53.4±1.5,1605N×9117W,h5km,MD4.5, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**0.96**	**284**	*e*P	Pg	04 37 07.8	-4.0
CCIG				*i* S	Sg	04 37 22.9	-1.3
THIG		**1.55**	**223**	*e*P	Pn	04 37 18.1	-3.6
THIG				*i* S	Sn	04 37 38.3	-3.9
SCX	**San Cristobal**	**1.56**	**296**	*i* P	Pn	04 37 19.3	-2.6
SCX				*i* S	Sn	04 37 36.2	-6.3
TGIG		**2.01**	**291**	*i* P	Pn	04 37 24.3	-3.7
TGIG				*i* S	Sn	04 37 49.6	-3.9
SCIG	**Sabancuy**	**2.90**	**360**	*i* P	Pn	04 37 37.6	-2.7
SCIG				*i* S	Sn	04 38 12.8	-2.8
VHO	**Vista Hermosa**	**5.43**	**282**	*i* P	Pn	04 38 12.4	-2.7
VHO				*i* S	Sn	04 39 14.3	-3.7
VHO	**Vista Hermosa**	**5.43**	**282**	*i* P	Pn	04 38 12.4	-2.7
VHO				*i* S	Sn	04 39 12.7	-5.3
PNIG	**Pinotepa**	**6.69**	**274**	*i* P	Pn	04 38 30.5	-2.0
PNIG				*i* S	Sn	04 39 47.4	-1.7
PNIG	**Pinotepa**	**6.69**	**274**	*i* P	Pn	04 38 28.4	-4.0
PNIG				*i* S	Sn	04 39 43.9	-5.2
PPM	**Popocatepetl**	**7.72**	**294**	*i* P	Pn	04 38 44.6	-1.9
PPM				*i* S	Sn	04 40 10.7	-3.7

NEIC ***28*** *04:42:03.9±1.3,7.16S×12974E,h121km±13km,mb4.4/12, Error ellipse: s-maj=13.1km s-min=7.1km az=225.0*

IDC ***28*** *04:42:03.4±3.9,7.17S×12956E,h114km±36km,mb4.0/9, mb1 4.2/12,mb1mx4.1/19,mbtmp4.1/12,Error ellipse: s-maj=45.3km s-min=14.8km az=61.0*

ISCJB ***28*** *04:42:05.0±0.9,731S±005×12980E±006,h153km±9km, mb4.2/16,Error ellipse: s-maj=10.9km s-min=6.0km az=142.4*

DJA ***28*** *04:42:07, 727S×12989E,h110km,Mw5.4/6*

ISC 28 04:42:05.8±0.9,731S±005×12981E±006,h145km±9km, n45,σ1⇟17/46,mb4.2/16,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**3.94**	**336**	P	**Pn**	**04 43 04.4**	**-0.9**
	0.0nm,0.0s						
AAI	**Ambon**	**3.94**	**336**	P	**Pn**	**04 43 04.1**	**-1.2**
	0.0nm,0.0s						
BATI	**Baumata**	**6.73**	**244**	P	**Pn**	**04 43 43.9**	**+1.7**
	0.0nm,0.0s						
BATI	**Baumata**	**6.73**	**244**	P	**Pn**	**04 43 43.0**	**+0.8**
	33nm,0.3s,baz=49,slow=1.6,SNR=12						
BATI				S	**Sn**	**04 44 57.8**	**+0.1**
	53nm,0.3s,baz=90,slow=20,SNR=21						
KDI	**Kendari**	**7.90**	**295**	P	**Pn**	**04 43 58.8**	**+0.9**
	0.0nm,0.0s						
KAPI	**Kappang**	**10.26**	**282**	P	**Pn**	**04 44 28.0**	**-1.4**
	0.2nm,0.3s,baz=132,slow=6.7,SNR=3.8						
FITZ	**Fitzroy Crossi**	**11.47**	**200**	*e*P	**Pn**	**04 44 44.6**	**-0.8**
	48nm,0.5s						
FITZ				*e*S	**Sn**	**04 46 46.9**	**-5.3**
FITZ	**Fitzroy Crossi**	**11.47**	**200**	P	**Pn**	**04 44 44.5**	**-0.9**
	8.7nm,0.3s,baz=32,slow=14,SNR=136						
FITZ				S	**Sn**	**04 46 46.6**	**-5.6**
	7.3nm,0.3s,baz=146,slow=19,SNR=5.3						
WRAB	**Tennant Creek**	**13.30**	**161**	*e*Pn	**Pn**	**04 45 08.3**	**-0.7**
	37nm,0.6s						
WRAB				*e*Sn	**Sn**	**04 47 30.5**	**-5.7**
WRA	**Warramunga Arr**	**13.30**	**161**	P	**Pn**	**04 45 08.8**	**-0.3**
	4.9nm,0.3s,baz=342,slow=13,SNR=108						
WRA				S	**Sn**	**04 47 31.9**	**-4.4**
	16nm,0.3s,baz=333,slow=23,SNR=11						
WB2	**Warramunga Arr**	**13.31**	**161**	*e*P	**Pn**	**04 45 08.8**	**-0.4**
WB2				*e*S	**Sn**	**04 47 30.8**	**-5.6**
SMKI	**Samarinda**	**14.30**	**298**	P	**Pn**	**04 45 25.0**	**+3.1**
	0.0nm,0.0s						
COEN	**Coen**	**14.69**	**118**	*e*Pn	**Pn**	**04 45 28.2**	**+1.4**
COEN				*e*Sn	**Sn**	**04 47 58.8**	**-11**
ASAR	**Alice Springs**	**16.73**	**167**	P	**Pn**	**04 45 54.7**	**+2.9**
	4.5nm,0.3s,baz=338,slow=8.7,SNR=103						
ASAR				S	**S**	**04 48 55.8**	**-2.2**
	4.6nm,0.3s,baz=356,slow=29,SNR=9.0						
MBWA	**Marble Bar**	**16.87**	**214**	*e*P	**Pn**	**04 45 54.1**	**+0.7**
	9.3nm,0.4s						
PMG	**Port Moresby**	**17.29**	**98**	*e*P	**Pn**	**04 45 59.4**	**+0.8**
	19nm,0.9s						
PBKI	**Pangkalan Bun**	**18.64**	**283**	P	**P**	**04 46 14.0**	**+1.4**
	0.0nm,0.0s						
STKI	**Sintang**	**19.70**	**291**	P	**P**	**04 46 29.4**	**+5.3**
	0.0nm,0.0s						
CTA	**Charters Tower**	**20.38**	**130**	P	**P**	**04 46 34.5**	**+3.2**
	1.5nm,0.2s,baz=299,slow=12,SNR=3.9						
KSM	**Kuching**	**21.33**	**293**	*e*P	**P**	**04 46 41.5**	**-0.1**
FORT	**Forrest**	**23.41**	**184**	*e*P	**P**	**04 47 05.9**	**+4.2**
	35nm,0.7s,mb4.9						
STKA	**Stephens Creek**	**26.80**	**157**	P	**P**	**04 47 35.0**	**+2.6**
	5.5nm,0.6s,mb4.4,baz=334,slow=9.2,SNR=4.1						
CMAR	**Chiang Mai Arr**	**39.79**	**310**	P	**P**	**04 49 23.7**	**-1.2**
	1.8nm,0.4s,mb4.1,baz=141,slow=8.1,SNR=7.2						
CHTO	**Chiang Mai**	**40.00**	**311**	*e*P	**P**	**04 49 25.0**	**-1.7**
	6.3nm,0.9s,mb4.2						
ULN	**Ulaanbaatar**	**58.50**	**342**	*e*P	**P**	**04 51 46.4**	**-0.3**
	1.9nm,0.4s,mb4.3						
SONM	**Songino Array**	**58.67**	**342**	P	**P**	**04 51 47.2**	**-0.7**
	0.7nm,0.6s,mb3.7,baz=149,slow=6.9,SNR=5.0						
MKAR	**Makanchi Array**	**58.38**	**327**	P	**P**	**04 52 51.6**	**0.0**
	7.9nm,0.8s,mb4.5,baz=128,slow=8.0,SNR=29						
TKM2	**Tokmak 2**	**70.10**	**321**	*e*P	**P**	**04 53 02.5**	**+0.1**
	3.9nm,0.7s,mb4.2						
KBL	**Kabul**	**70.82**	**310**	*e*P	**P**	**04 53 06.7**	**-0.2**
AML	**Almayashu**	**70.92**	**319**	*e*P	**P**	**04 53 08.1**	**+0.7**
	4.4nm,0.7s,mb4.3						
EKS2	**Erkin-Say**	**71.13**	**320**	*e*P	**P**	**04 53 09.2**	**+0.5**
	1.5nm,0.5s,mb4.0						
ZALV	**Zalesovo Beam**	**71.78**	**334**	P	**P**	**04 53 10.9**	**-1.4**
	2.6nm,0.7s,mb4.1,baz=108,slow=4.8,SNR=5.2						
KURK	**Kurchatov**	**72.68**	**329**	P	**P**	**04 53 17.3**	**-0.4**
	2.8nm,0.5s,mb4.3,baz=130,slow=5.0,SNR=8.3						
BVAR	**Borovoye Array**	**78.22**	**328**	P	**P**	**04 53 48.7**	**-0.6**
	3.0nm,0.9s,mb3.9,baz=134,slow=6.4,SNR=7.7						
BRVK	**Borovoye**	**78.30**	**328**	*e*P	**P**	**04 53 49.2**	**-0.5**
	6.5nm,0.7s,mb4.4						
QSPA	**South Pole Qui**	**82.67**	**180**	P	**P**	**04 54 14.0**	**+1.4**
	0.8nm,0.5s,mb3.7,baz=315,slow=5.7,SNR=9.0						
QSPA	**South Pole Qui**	**82.67**	**180**	P	**P**	**04 54 14.0**	**+1.4**
KMBO	**Kilima Mbogo**	**92.40**	**269**	*e*P	**P**	**04 55 02.2**	**+1.4**
	3.1nm,1.0s,mb4.3						
TOA0	**Torodi Ar. Sit**	**128.69**	**281**	*e*PKPdf	PKPdf	05 00 57.6	+0.7
TORD	**Torodi Ar. Bea**	**128.69**	**281**	PKP	PKPdf	05 00 57.0	0.0
	0.5nm,0.7s,baz=95,slow=2.3,SNR=4.5						
CPUP	**Villa Florida**	**145.85**	**169**	PKPbc	PKPbc	05 01 30.7	+1.8
	1.0nm,0.6s,baz=180,slow=6.9,SNR=4.6						
CPUP	**Villa Florida**	**145.85**	**169**	*e*PKPbc	PKPbc	05 01 30.6	+1.7
LPAZ	**La Paz**	**150.59**	**143**	PKPbc	PKPbc	05 01 44.6	+3.0
	0.7nm,0.5s,baz=140,slow=2.2,SNR=6.8						
LPAZ	**La Paz**	**150.59**	**143**	*e*PKPbc	PKPbc	05 01 44.4	+2.8
OTAV	**Otavalo**	**150.95**	**103**	*e*PKPdf	PKPdf	05 01 38.0	+1.2

IDC ***28*** *04:43:16.4±2.0,2120S×16961E,h0km,mb4.4/6, mb1 4.6/6,mb1mx4.4/15,mbtmp4.4/6,Error ellipse: s-maj=72.6km s-min=33.2km az=167.0*

LDG ***28*** *04:43:16.6±0.3,2132S×16907E,h10km,Error ellipse: s-maj=27.6km s-min=4.6km az=158.0*

BJI ***28*** *04:43:16.5,2096S×16966E,h8km,mB5.2,mb4.8,Ms5.2, Msz4.6*

ISCJB ***28*** *04:43:17.4±0.2,2130S±008×16942E±006,h12km, mb4.7/35,MS4.6/5,Error ellipse: s-maj=12.6km s-min=6.5km az=152.5*

NEIC ***28*** *04:43:18.1±0.2,2125S×16951E,h10km,mb4.8/26,Error ellipse: s-maj=12.4km s-min=6.7km az=152.0*

MOS ***28*** *04:43:20.6±1.0,2129S×16946E,h33km,mb5.0/17,Error ellipse: s-maj=17.9km s-min=14.4km az=150.0*

ISC 28 04:43:18.9±0.2,2131S±008×16945E±006,h13km, h13km±1.0km:pP-P,n277,σ0⇟44/242,mb4.7/35,MS4.6/5, 90C-84D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.90**	**254**	*e*P	**Pn**	**04 44 02.7**	**-2.1**
DZM				*e*S	**Sn**	**04 44 34.0**	**-5.6**
ARMA	**Armidale**	**18.41**	**237**	*e*P	**Pn**	**04 47 34.9**	**+1.0**
CTA	**Charters Tower**	**21.74**	**269**	P	**P**	**04 48 11.2**	**+1.1**
	13nm,0.8s,mb4.4,baz=100,slow=12,SNR=8.2						
CTAO	**Charters Tower**	**21.74**	**269**	*e*P	**P**	**04 48 09.2**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.6						
CTAO	**Charters Tower**	**21.74**	**269**	*e*P	**P**	**04 48 09.2**	**-1.0**
	comp=Z,29nm,1.1s,mb4.6						
CAN	**Canberra**	**22.73**	**228**	*e*P	**P**	**04 48 21.1**	**+0.5**
SBA	**Scott Base**	**56.61**	**181**	*e*P	**P**	**04 53 01.9**	**+0.9**
SBA				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
SBA	**Scott Base**	**56.61**	**181**	*e*P	**P**	**04 53 01.9**	**+0.9**
	comp=Z,7.6nm,1.3s,mb4.6						
CASY	**Casey**	**58.33**	**204**	*e*P	**P**	**04 53 13.9**	**+0.6**
	comp=Z,3.4nm,0.9s,mb4.4						
MJAR	**Matsushiro Arr**	**64.67**	**332**	P	**P**	**04 53 55.3**	**-1.1**
	comp=Z,0.8nm,0.4s,mb4.1,baz=154,slow=8.9,SNR=3.4						
NJ2	**Nanjing**	**71.83**	**316**	*e*P	**P**	**04 54 40.8**	**-0.7**
PETK	**Petropavlovsk-**	**74.80**	**353**	P	**P**	**04 54 58.7**	**+0.2**
	comp=Z,3.6nm,0.8s,mb4.3,baz=177,slow=5.8,SNR=3.5						
PETK	**Petropavlovsk-**	**74.80**	**353**	P	**P**	**04 54 58.7**	**+0.2**
MAW	**Mawson**	**76.61**	**202**	*e*P	**P**	**04 55 17.3**	**+8.4**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAW	**Mawson**	**76.61**	**202**	*e*P	**P**	**04 55 17.3**	**+8.4**
	comp=Z,3.2nm,0.7s,mb4.4						
GYA	**Guiyang**	**77.16**	**305**	P	**P**	**04 55 13.0**	**+0.4**
GYA				PP	PP	04 58 07.8	+1.0
GYA				S	S	05 05 00.8	-1.1
GYA				SS	SS	05 10 03.0	+2.9
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,60nm,4.8s						
GYA				LR	LR		
	comp=N,240nm,18.0s,MS4.7						
GYA				LR	LR		
	comp=E,190nm,17.9s,MS4.7						
GYA				LR	LR		
	comp=Z,200nm,18.5s,MS4.5						
KMI	**Kunming**	**79.53**	**302**	P	**P**	**04 55 27.3**	**+1.5**
KMI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
KMI	**Kunming**	**79.53**	**302**	P	**P**	**04 55 27.3**	**+1.5**
	comp=Z,9.0nm,0.8s,mb4.8						
CMAR	**Chiang Mai Arr**	**79.54**	**295**	P	**P**	**04 55 26.9**	**+1.0**
	comp=Z,2.2nm,0.8s,mb4.1,baz=134,slow=4.8,SNR=9.7						
CHTO	**Chiang Mai**	**79.69**	**295**	*e*P	**P**	**04 55 27.6**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**79.69**	**295**	*e*P	**P**	**04 55 27.6**	**+0.8**
	comp=Z,4.2nm,0.8s,mb4.4						
CD2	**Chengdu**	**81.65**	**308**	*e*P	**P**	**04 55 37.0**	**0.0**
CD2				AP	pP	04 55 42.0	+0.6
CD2				XP	sP	04 55 45.0	+2.1
CD2				PP	PP	04 58 46.0	+1.9
CD2				S	S	05 05 47.5	-1.8
CD2				XS	sS	05 05 55.5	-1.0
CD2				SS	SS	05 11 07.8	+0.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,8.2s						
CD2				LR	LR		
	comp=N,160nm,16.4s,MS4.6						
CD2				LR	LR		
	comp=E,180nm,16.2s,MS4.6						
CD2				LR	LR		
	comp=Z,150nm,14.8s,MS4.5						
HHC	**Hu-ho-hao-te**	**81.91**	**320**	*e*P	**P**	**04 55 37.3**	**-0.9**
HHC				AP	pP	04 55 40.5	-2.0
HHC				XP	sP	04 55 42.5	-1.6
HHC				PP	PP	04 58 46.8	+0.8
HHC				S	S	05 05 48.8	-2.8
HHC				SS	SS	05 11 10.3	-0.5
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.0						
HHC				AMB	AMB		
	comp=Z,209nm,7.6s						
HHC				LR	LR		
	comp=N,170nm,16.6s,MS4.6						
HHC				LR	LR		
	comp=E,177nm,17.1s,MS4.6						
HHC				LR	LR		
	comp=Z,196nm,16.2s,MS4.6						
LZH	**Lanzhou**	**84.26**	**312**	*e*P	**P**	**04 55 51.5**	**+1.1**
LZH				AP	pP	04 55 56.3	+1.5
LZH				XP	sP	04 55 58.8	+2.5
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
LZH				AMB	AMB		
	comp=Z,87nm,4.3s						
LZH	**Lanzhou**	**84.26**	**312**	*e*P	**P**	**04 55 51.5**	**+1.1**
	comp=Z,20nm,1.4s,mb5.0						
LZH				pP	pP	04 55 56.3	+1.5
LZH				sP	sP	04 55 58.7	+2.4
HOPS	**Hopland**	**87.02**	**46**⇑	P	**P**	**04 56 04.0**	**-0.1**
	baz=87						
SAO	**San Andreas Ge**	**87.03**	**49**	*e*P	**P**	**04 56 04.0**	**-0.2**
SAO				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.9						
SAO	**San Andreas Ge**	**87.03**	**49**	*e*P	**P**	**04 56 04.0**	**-0.2**
	comp=Z,10nm,1.2s,mb4.9						
KCPM	**Cahto Peak**	**87.03**	**45**	*e*P	**P**	**04 56 03.9**	**-0.2**
O01C	**Eel River Cons**	**87.

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ISA	**Isabella** comp=Z,13nm,1.4s,mb5.1	**88.62**	**51**	*e*P	**P**	**04 56 11.6**	**-0.2**
MURC	**Murrieta** baz=89	**88.62**	**53**	⇓P	**P**	**04 56 11.5**	**-0.4**
YBH	**Yreka Blue Hor** baz=89	**88.64**	**44**	⇑P	**P**	**04 56 11.9**	**+0.1**
K02A	**Glendale** baz=89	**88.66**	**43**	⇓P	**P**	**04 56 11.5**	**-0.3**
S06C	**San Francisco** baz=89,SNR=5.5	**88.68**	**48**	⇑P	**P**	**04 56 11.6**	**-0.4**
GTA	**Gaotai**	**88.69**	**313**	*e*P	**P**	**04 56 12.3**	**+0.3**
GTA				AP	pP	04 56 16.0	-0.4
GTA				XP	sP	04 56 19.0	+1.0
GTA				PP	PP	04 59 42.0	+0.9
GTA				S	S	05 06 56.0	-2.6
GTA				XS	sS	05 07 04.3	-1.6
GTA	comp=Z,4.0nm,1.2s,mb4.6			AMB	AMB		
GTA	comp=Z,133nm,3.8s			AMB	AMB		
GTA	comp=N,160nm,16.5s,MS4.6			LR	LR		
GTA	comp=E,160nm,19.5s,MS4.6			LR	LR		
GTA	comp=Z,213nm,16.5s,MS4.6			LR	LR		
HELL	**Mitchell Peak** baz=89	**88.70**	**50**	⇓P	**P**	**04 56 11.6**	**-0.6**
KCC	**Kaiser Creek** baz=89	**88.79**	**49**	⇑P	**P**	**04 56 12.4**	**-0.2**
M03C	**McCloud** baz=89	**88.79**	**45**	⇑P	**P**	**04 56 12.7**	**+0.2**
P05C	**Yuba Gap, Truc** baz=89,SNR=5.6	**88.84**	**47**	⇑P	**P**	**04 56 12.8**	**+0.1**
MONP	**Monument Peak** baz=89	**88.89**	**54**	⇓P	**P**	**04 56 13.4**	**+0.2**
R05C	**Kirkwood Meado** baz=89	**88.91**	**48**	⇓P	**P**	**04 56 13.2**	**+0.1**
HUMO	**Hull Mountain** baz=89	**88.92**	**43**	⇑P	**P**	**04 56 13.5**	**+0.4**
HUMO	**Hull Mountain** comp=Z,4.5nm,0.9s,mb4.8	**88.92**	**43**	*e*P	**P**	**04 56 12.7**	**-0.4**
O05C	**Quincy** baz=89	**88.94**	**46**	⇓P	**P**	**04 56 13.5**	**+0.2**
SONM	**Songino Array** comp=Z,1.4nm,0.9s,mb4.3,baz=134,slow=4.3,SNR=5.8	**88.98**	**323**	P	**P**	**04 56 12.2**	**-1.0**
O04C	**Chester** baz=89	**89.01**	**46**	⇑P	**P**	**04 56 14.0**	**+0.5**
PFO	**Pinyon Flat Ob**	**89.18**	**53**	*e*P	**P**	**04 56 14.1**	**-0.4**
PFO	comp=Z,5.0nm,1.3s,mb4.7			pmax	pmax		
PFO	**Pinyon Flat Ob** baz=89	**89.18**	**53**	⇓P	**P**	**04 56 14.7**	**+0.2**
PFO	**Pinyon Flat Ob** comp=Z,5.2nm,1.3s,mb4.7	**89.18**	**53**	*e*P	**P**	**04 56 14.1**	**-0.4**
M04C	**Macdoel** baz=89	**89.23**	**44**	⇓P	**P**	**04 56 14.6**	**+0.1**
R06C	**Coleville** baz=89	**89.26**	**48**	⇑P	**P**	**04 56 14.4**	**-0.3**
CWC	**Cottonwood Cre** baz=89,SNR=5.2	**89.26**	**50**	⇓P	**P**	**04 56 15.2**	**+0.4**
WAKR	**Walker**	**89.26**	**48**	*e*P	**P**	**04 56 15.3**	**+0.5**
MTUM	**Tungsten Hills**	**89.33**	**49**	*e*P	**P**	**04 56 15.7**	**+0.6**
M05C	**Lookout** baz=90,SNR=5.7	**89.47**	**45**	⇑P	**P**	**04 56 15.0**	**-0.6**
MPMC	**Manual Prospec** baz=90,SNR=7.7	**89.51**	**51**	⇓P	**P**	**04 56 16.0**	**0.0**
GSC	**Goldstone** baz=90	**89.67**	**52**	⇓P	**P**	**04 56 16.8**	**0.0**
S08C	**White Mtn Res** baz=90,SNR=7.9	**89.68**	**49**	⇑P	**P**	**04 56 16.7**	**-0.1**
BELC	**Belle Mtn.** baz=90,SNR=7.8	**89.69**	**53**	⇓P	**P**	**04 56 16.9**	**0.0**
H03A	**Soap Creek Ran** baz=90	**89.76**	**41**	⇓P	**P**	**04 56 17.5**	**+0.5**
O06A	**Flanigan** baz=90	**89.78**	**46**	⇑P	**P**	**04 56 17.3**	**+0.2**
J04A	**Umpqua Nationa** baz=90	**89.78**	**43**	⇑P	**P**	**04 56 17.3**	**+0.3**
HEC	**Hector,Ludlow** baz=90	**89.81**	**52**	⇓P	**P**	**04 56 17.1**	**-0.3**
M06C	**Likely Place G** baz=90	**89.84**	**45**	⇓P	**P**	**04 56 18.1**	**+0.7**
PAHR	**Pah Rah Range** comp=Z,9.2nm,1.2s,mb5.0	**89.86**	**47**	*e*P	**P**	**04 56 17.6**	**+0.1**
BC3	**Big Chuckw Mtn** baz=90	**89.95**	**54**	⇓P	**P**	**04 56 18.3**	**+0.2**
L05A	**Lakeview** baz=90	**90.01**	**44**	⇑P	**P**	**04 56 18.7**	**+0.5**
NVAR	**Mina Array Bea** comp=Z,4.3nm,0.7s,mb4.9,baz=227,slow=8.6,SNR=37	**90.01**	**48**	P	**P**	**04 56 17.8**	**-0.5**
GRAC	**Grapevine Rang** baz=90	**90.02**	**50**	⇓P	**P**	**04 56 18.5**	**+0.1**
N06A	**Buffalo Meadow** baz=90,SNR=8.1	**90.05**	**46**	⇑P	**P**	**04 56 18.6**	**+0.2**
112A	**Yuma** baz=90	**90.13**	**55**	⇓P	**P**	**04 56 19.3**	**+0.3**
FURC	**Furnace Creek,** baz=90	**90.15**	**51**	⇑P	**P**	**04 56 19.0**	**0.0**
GLA	**Glamis**	**90.17**	**54**	*e*P	**P**	**04 56 19.8**	**+0.7**
GLA	comp=Z,7.0nm,0.8s,mb5.0			pmax	pmax		
GLA	**Glamis** baz=90	**90.17**	**54**	⇓P	**P**	**04 56 19.3**	**+0.2**
GLA	**Glamis** comp=Z,7.4nm,0.8s,mb5.1	**90.17**	**54**	*e*P	**P**	**04 56 19.8**	**+0.6**
GMRC	**Granite Mounta** baz=90	**90.28**	**53**	⇑P	**P**	**04 56 19.6**	**0.0**
MOD	**Modoc** baz=90,SNR=5.8	**90.29**	**45**	⇓P	**P**	**04 56 19.1**	**-0.4**
MOD	**Modoc** comp=Z,7.0nm,1.0s,mb5.0	**90.29**	**45**	*e*P	**P**	**04 56 18.9**	**-0.6**
K05A	**Summer Lake** baz=90	**90.30**	**44**	⇑P	**P**	**04 56 19.6**	**+0.1**
SHOC	**Shoshone** baz=90	**90.32**	**51**	⇓P	**P**	**04 56 19.7**	**-0.1**
J05A	**Fort Rock** baz=90,SNR=8.6	**90.35**	**43**	⇓P	**P**	**04 56 20.0**	**+0.2**
TUQ	**Turquoise Moun** baz=90	**90.38**	**52**	⇓P	**P**	**04 56 20.4**	**+0.3**
IRM	**Iron Mountain** baz=90,SNR=6.4	**90.40**	**53**	⇓P	**P**	**04 56 20.2**	**0.0**
O07A	**Toulon** baz=91,SNR=7.1	**90.42**	**47**	⇑P	**P**	**04 56 20.0**	**-0.2**
S09A	**Goldfield** baz=91,SNR=5.8	**90.45**	**49**	⇑P	**P**	**04 56 20.2**	**-0.1**
Q08A	**Gabbs** baz=91,SNR=5.8	**90.47**	**48**	⇓P	**P**	**04 56 20.2**	**-0.2**
U10A	**Ash Meadows, A** baz=91,SNR=6.8	**90.51**	**51**	⇑P	**P**	**04 56 20.7**	**0.0**
E03A	**Lebam** baz=91	**90.56**	**39**	⇑P	**P**	**04 56 20.9**	**+0.3**
TPH	**Tonopah**	**90.61**	**49**	*e*P	**P**	**04 56 20.9**	**-0.2**
TPH	comp=Z,7.0nm,1.1s,mb4.9			pmax	pmax		
TPH	**Tonopah** comp=Z,7.2nm,1.1s,mb4.9	**90.61**	**49**	*e*P	**P**	**04 56 20.9**	**-0.2**
Y12C	**Blythe** baz=91	**90.69**	**54**	⇓P	**P**	**04 56 21.9**	**+0.3**
K06A	**Valley Falls** baz=91,SNR=6.5	**90.75**	**44**	⇓P	**P**	**04 56 21.6**	**0.0**
I05A	**Bend** baz=91	**90.76**	**42**	⇓P	**P**	**04 56 22.1**	**+0.5**
R09A	**Tonopah** baz=91,SNR=6.5	**90.79**	**49**	⇑P	**P**	**04 56 21.3**	**-0.6**
M07A	**Soldier Meadow** baz=91,SNR=8.0	**90.79**	**45**	⇓P	**P**	**04 56 22.2**	**+0.3**
TPNV	**Topopah Spring**	**90.80**	**50**	*e*P	**P**	**04 56 21.6**	**-0.4**
TPNV	comp=Z,6.0nm,0.8s,mb5.0			pmax	pmax		
TPNV	**Topopah Spring** baz=91	**90.80**	**50**	⇑P	**P**	**04 56 22.3**	**+0.2**
TPNV	**Topopah Spring** comp=Z,5.6nm,0.8s,mb5.0	**90.80**	**50**	*e*P	**P**	**04 56 21.6**	**-0.4**
NLWA	**Neilton Lookou** baz=91	**90.81**	**39**	⇑P	**P**	**04 56 22.0**	**+0.2**
LDFC	**Landfair** comp=Z,8.5nm,0.8s,mb5.1	**90.82**	**53**	*e*P	**P**	**04 56 22.6**	**+0.5**
V11A	**Goodsprings** baz=91	**90.91**	**52**	⇓P	**P**	**04 56 22.4**	**-0.2**
O08A	**Rochester Mine** baz=91,SNR=7.5	**90.97**	**47**	⇓P	**P**	**04 56 22.7**	**+0.1**
L07A	**Adell** baz=91,SNR=9.6	**90.97**	**45**	⇑P	**P**	**04 56 22.9**	**+0.2**
S10A	**Tonopah Range,** baz=91,SNR=14	**90.98**	**49**	⇓P	**P**	**04 56 22.7**	**-0.1**
J06A	**Christmas Vall** baz=91,SNR=6.2	**91.03**	**44**	⇓P	**P**	**04 56 22.8**	**-0.1**
N08A	**GE Springer Mi** baz=91,SNR=6.9	**91.21**	**46**	⇑P	**P**	**04 56 23.6**	**-0.2**
PDMCI	**Parker Dam,Lak** baz=91	**91.21**	**54**	⇓P	**P**	**04 56 24.2**	**+0.2**
214A	**Organ Pipe Nat** baz=91	**91.25**	**56**	⇓P	**P**	**04 56 24.2**	**0.0**
G05A	**Wamic** baz=91	**91.26**	**41**	⇑P	**P**	**04 56 23.9**	**0.0**
V12A	**Nelson** baz=91	**91.29**	**52**	⇓P	**P**	**04 56 24.4**	**+0.1**
I06A	**Prineville** baz=92,SNR=7.9	**91.32**	**43**	⇑P	**P**	**04 56 24.4**	**+0.1**
M08A	**Happy Creek Ra** baz=92	**91.35**	**46**	⇑P	**P**	**04 56 24.5**	**+0.1**
K07A	**Rock Creek Ran** baz=92,SNR=7.0	**91.35**	**44**	⇑P	**P**	**04 56 24.6**	**+0.2**
R10A	**Warm Springs** baz=92,SNR=8.8	**91.35**	**49**	⇑P	**P**	**04 56 24.7**	**+0.1**
SHPR	**Sheep Range**	**91.40**	**51**	*e*P	**P**	**04 56 24.8**	**0.0**
S11A	**Rachel** baz=92	**91.47**	**50**	⇓P	**P**	**04 56 25.3**	**+0.2**
C04A	**Brinnon** baz=92	**91.50**	**39**	⇓P	**P**	**04 56 25.0**	**0.0**
GNW	**Green Mountain** comp=Z,6.0nm,0.9s,mb4.9	**91.51**	**39**	*e*P	**P**	**04 56 24.1**	**-0.9**
Q10A	**Clear Creek Ra** baz=92	**91.52**	**49**	⇓P	**P**	**04 56 25.3**	**0.0**
X13A	**Yucca** baz=92,SNR=5.4	**91.57**	**53**	⇑P	**P**	**04 56 25.3**	**-0.3**
O09A	**Fish Creek Ran** baz=92	**91.57**	**47**	⇑P	**P**	**04 56 25.8**	**+0.3**
H06A	**Lindquist Farm** baz=92,SNR=9.3	**91.62**	**42**	⇑P	**P**	**04 56 25.4**	**-0.3**
J07A	**Hines** baz=92	**91.63**	**44**	⇑P	**P**	**04 56 25.8**	**+0.1**
WVOR	**Wild Horse Val**	**91.63**	**45**	*e*P	**P**	**04 56 25.5**	**-0.2**
WVOR	comp=Z,7.0nm,1.1s,mb4.9			pmax	pmax		
WVOR	**Wild Horse Val** comp=Z,6.7nm,1.1s,mb4.9	**91.63**	**45**	*e*P	**P**	**04 56 25.5**	**-0.3**
E05A	**Randle** baz=92	**91.64**	**40**	⇑P	**P**	**04 56 25.8**	**+0.1**
N09A	**Rock Creek Ran** baz=92	**91.65**	**47**	⇑P	**P**	**04 56 26.0**	**+0.2**
T11A	**Corn Creek, Al** baz=92,SNR=6.6	**91.67**	**51**	⇑P	**P**	**04 56 26.0**	**0.0**
G06A	**Carlson Farm,** baz=92	**91.68**	**42**	⇑P	**P**	**04 56 25.5**	**-0.4**
L08A	**Fields** baz=92,SNR=10	**91.71**	**45**	⇓P	**P**	**04 56 26.0**	**-0.1**
Z14A	**Wintersburg** baz=92	**91.73**	**55**	⇓P	**P**	**04 56 26.4**	**0.0**
W13A	**Hualapai Mount** baz=92	**91.74**	**53**	⇑P	**P**	**04 56 26.3**	**-0.1**
I07A	**Izee** baz=92	**91.84**	**43**	⇓P	**P**	**04 56 27.0**	**+0.3**
F06A	**Goldendale** baz=92	**91.84**	**41**	⇑P	**P**	**04 56 27.0**	**+0.4**
K08A	**Mann Creek Ran** baz=92	**91.87**	**45**	⇓P	**P**	**04 56 26.9**	**+0.1**
R11A	**Troy Canyon, C** baz=92	**91.89**	**49**	⇑P	**P**	**04 56 26.5**	**-0.5**
Y14A	**Wickenburg** baz=92	**91.92**	**54**	⇓P	**P**	**04 56 26.8**	**-0.5**
M09A	**Marrel Ranch,** baz=92	**91.96**	**46**	⇓P	**P**	**04 56 27.4**	**+0.2**
V13A	**Grand Canyon W** baz=92,SNR=6.9	**91.98**	**52**	⇓P	**P**	**04 56 27.2**	**-0.3**
115A	**Sonoran Desert** baz=92	**92.01**	**56**	⇑P	**P**	**04 56 27.7**	**0.0**
H07A	**Lands Inn, Kim** baz=92,SNR=7.3	**92.04**	**43**	⇓P	**P**	**04 56 27.4**	**-0.1**
Q11A	**Duckwater** baz=92	**92.05**	**49**	⇑P	**P**	**04 56 28.3**	**+0.5**
L09A	**Wilkinson Ranc** baz=92	**92.08**	**45**	⇑P	**P**	**04 56 28.3**	**+0.4**
S12A	**Delamar Landin** baz=92,SNR=8.3	**92.09**	**50**	⇑P	**P**	**04 56 28.3**	**+0.3**
E06A	**Yakima** baz=92	**92.10**	**40**	⇑P	**P**	**04 56 27.9**	**+0.1**
J08A	**Circle Bar Ran** baz=92,SNR=6.7	**92.16**	**44**	⇓P	**P**	**04 56 28.1**	**0.0**
X14A	**Yava** baz=92,SNR=6.7	**92.22**	**54**	⇓P	**P**	**04 56 28.6**	**-0.1**
G07A	**Ruggs Ranch, H** baz=92	**92.29**	**42**	⇓P	**P**	**04 56 28.8**	**+0.1**
K09A	**Rome** baz=92,SNR=6.7	**92.35**	**45**	⇑P	**P**	**04 56 29.0**	**-0.1**
I08A	**Drewsey** baz=92	**92.36**	**43**	⇑P	**P**	**04 56 29.2**	**+0.2**
W14A	**Seligman** baz=92,SNR=6.6	**92.38**	**53**	⇑P	**P**	**04 56 29.6**	**+0.2**
Y15A	**Casa Rosa Ranc** baz=93,SNR=7.7	**92.43**	**55**	⇓P	**P**	**04 56 29.6**	**-0.1**
T13A	**Saint George** baz=93	**92.53**	**51**	⇓P	**P**	**04 56 30.2**	**+0.2**
V14A	**Boquillas Ranc** baz=93,SNR=6.0	**92.54**	**53**	⇓P	**P**	**04 56 30.0**	**-0.1**
R12A	**Pony Springs,** baz=93	**92.57**	**50**	⇑P	**P**	**04 56 30.4**	**+0.2**
O11A	**Cowboy Ranch,** baz=93	**92.61**	**48**	⇑P	**P**	**04 56 30.4**	**+0.1**
M10A	**I.L. Ranch, Tu** baz=93	**92.61**	**46**	⇓P	**P**	**04 56 30.7**	**+0.4**
J09A	**Fry Pan Ranch,** baz=93,SNR=7.0	**92.62**	**44**	⇓P	**P**	**04 56 30.4**	**+0.1**
X15A	**Humboldt** baz=93,SNR=6.9	**92.72**	**54**	⇑P	**P**	**04 56 31.0**	**0.0**
217A	**Green Valley** baz=93	**92.73**	**57**	⇑P	**P**	**04 56 31.4**	**+0.3**
G08A	**Pilot Rock** baz=93,SNR=6.2	**92.75**	**42**	⇑P	**P**	**04 56 30.9**	**+0.1**
S13A	**Holt Ranch, En** baz=93	**92.79**	**51**	⇑P	**P**	**04 56 31.6**	**+0.3**
U14A	**Mt Trumbull** baz=93,SNR=6.1	**92.81**	**52**	⇑P	**P**	**04 56 31.1**	**-0.2**
P12A	**McGill** baz=93	**92.85**	**49**	⇓P	**P**	**04 56 31.4**	**0.0**
Z16A	**Peralta Trail,** baz=93	**92.88**	**55**	⇑P	**P**	**04 56 31.7**	**0.0**
L10A	**Juniper Basin** baz=93	**92.90**	**46**	⇑P	**P**	**04 56 31.7**	**0.0**
HAWA	**Hanford** comp=Z,1.9nm,0.6s,mb4.7	**92.91**	**41**	*e*P	**P**	**04 56 31.3**	**-0.2**
K10A	**MacKenzie Ranc** baz=93	**92.95**	**45**	⇓P	**P**	**04 56 31.9**	**0.0**
R13A	**O'Grain Ranch,** baz=93	**92.97**	**50**	⇑P	**P**	**04 56 32.2**	**+0.2**
Y16A	**Circle Bar Ran** baz=93,SNR=5.4	**93.06**	**55**	⇓P	**P**	**04 56 32.4**	**-0.1**
117A	**Oracle** baz=93	**93.11**	**56**	⇑P	**P**	**04 56 32.5**	**-0.3**
T14A	**Hurricane** baz=93	**93.14**	**51**	⇓P	**P**	**04 56 33.0**	**+0.2**
318A	**Bisbee** baz=93	**93.25**	**58**	⇓P	**P**	**04 56 33.4**	**0.0**
Q13A	**Wheeler Ranch,** baz=93	**93.25**	**49**	⇑P	**P**	**04 56 33.0**	**-0.3**
X16A	**Lo Mia Camp, P** baz=93,SNR=7.0	**93.30**	**54**	⇑P	**P**	**04 56 33.4**	**-0.2**
O12A	**Currie** baz=93	**93.30**	**48**	⇓P	**P**	**04 56 33.1**	**-0.4**
V15A	**Kaibab Nationa** baz=93	**93.31**	**53**	⇓P	**P**	**04 56 33.8**	**+0.2**
N12A	**Clover Valley,** baz=94	**93.34**	**47**	⇓P	**P**	**04 56 34.1**	**+0.4**
L11A	**Cat Creek Ranc** baz=94	**93.42**	**46**	⇓P	**P**	**04 56 33.9**	**-0.1**
P13A	**Bates Ranch, G** baz=94	**93.47**	**49**	⇓P	**P**	**04 56 34.5**	**+0.2**
U15A	**North Rim** baz=94,SNR=5.2	**93.47**	**52**	⇑P	**P**	**04 56 34.6**	**+0.3**
Y17A	**Roosevelt** baz=94	**93.47**	**55**	⇑P	**P**	**04 56 34.9**	**+0.5**
W16A	**Flagstaff** baz=94	**93.50**	**54**	⇑P	**P**	**04 56 34.7**	**+0.1**
K11A	**Parker Ranch,** baz=94	**93.50**	**45**	⇑P	**P**	**04 56 34.8**	**+0.4**
118A	**Homack Ranch,** baz=94	**93.73**	**57**	⇑P	**P**	**04 56 35.6**	**0.0**
X17A	**Forest Lakes** baz=94,SNR=5.1	**93.75**	**55**	⇑P	**P**	**04 56 36.0**	**+0.2**
WUAZ	**Wupatki** baz=94	**93.78**	**53**	⇓P	**P**	**04 56 35.9**	**0.0**
WUAZ	**Wupatki** comp=Z,3.5nm,0.9s,mb4.8	**93.78**	**53**	*e*P	**P**	**04 56 35.0**	**-0.8**
Q14A	**Sevier Lake (B** baz=94	**93.79**	**50**	⇓P	**P**	**04 56 35.5**	**-0.3**
H10A	**Noah's Angus R** baz=94	**93.83**	**43**	⇑P	**P**	**04 56 35.7**	**-0.1**
G10A	**Bishop Farm, J** baz=94	**93.90**	**43**	⇑P	**P**	**04 56 35.8**	**-0.3**
D09A	**Jones Farm, Ri** baz=94	**93.96**	**41**	⇑P	**P**	**04 56 36.2**	**-0.2**
219A	**White Tail Can** baz=94	**94.04**	**57**	⇓P	**P**	**04 56 37.4**	**+0.3**
I11A	**Placerville** baz=94	**94.04**	**44**	⇓P	**P**	**04 56 36.7**	**-0.1**
Y18A	**Canyon Day Jun** baz=94	**94.12**	**55**	⇓P	**P**	**04 56 37.7**	**+0.2**
F10A	**Beach Ranch, E** baz=94	**94.14**	**42**	⇑P	**P**	**04 56 36.9**	**-0.3**
M13A	**Montello** baz=94	**94.16**	**47**	⇑P	**P**	**04 56 37.6**	**+0.2**
A08A	**Turner Farm, O** baz=94	**94.26**	**39**	⇑P	**P**	**04 56 37.4**	**-0.3**
J12A	**Stokes Ranch,** baz=94	**94.33**	**45**	⇑P	**P**	**04 56 38.0**	**-0.1**
H11A	**Donnelly** baz=94	**94.35**	**44**	⇑P	**P**	**04 56 37.6**	**-0.6**
G11A	**Walters Elk Ra** baz=95	**94.49**	**43**	⇓P	**P**	**04 56 38.3**	**-0.6**
D10A	**Wagner Farm, O** baz=95	**94.59**	**41**	⇓P	**P**	**04 56 38.4**	**-0.8**
N14A	**Grayback Hills** baz=95	**94.62**	**48**	⇓P	**P**	**04 56 39.8**	**+0.2**
T17A	**Navajo Res., N** baz=95	**94.79**	**52**	⇑P	**P**	**04 56 40.6**	**+0.1**
HLID	**Hailey** baz=95	**94.91**	**45**	⇓P	**P**	**04 56 40.8**	**0.0**
HLID	**Hailey** comp=Z,0.8nm,0.8s,mb4.2	**94.91**	**45**	*e*P	**P**	**04 56 40.5**	**-0.3**
H12A	**Diamond D Ranc** baz=95	**95.03**	**44**	⇓P	**P**	**04 56 41.1**	**-0.2**
F12A	**Elk City** baz=95	**95.29**	**43**	⇑P	**P**	**04 56 41.9**	**-0.6**
WMQ	**Urumqi**	**98.77**	**314**	*e*P	**P**	**04 56 58.8**	**+0.5**
WMQ	comp=Z,258nm,18.4s,MS4.8			LR	LR		
PKME	**Peaks-Kenny Pk**	**126.68**	**49**	*e*PKPdf	PKPdf	05 02 20.8	-1.2
ARCES	**ARCESS Array B** comp=Z,8.1nm,1.0s,baz=45,slow=3.6,SNR=9.6	**127.11**	**345**	PKP	PKPdf	05 02 20.8	-1.3
BRG	**Berggiesshubel** comp=Z,6.0nm,0.6s	**144.80**	**333**	*e*PKP	PKPdf	05 02 53.8	-1.5
BRG	comp=Z,14nm,1.1s			*e*		05 03 01.9	
CLL	**Collm** comp=Z,17nm,1.6s	**144.86**	**334**	*e*PKPdf	PKPdf	05 02 54.0	-1.5
CLL	comp=Z,18nm,1.3s			*i* pPKiKP		05 03 01.6	
CLL	**Collm**	**144.86**	**334**	*e*PKP	PKPdf	05 02 54.0	-1.5
CLL				*e*		05 03 01.0	
SANT	**Santorini**	**145.29**	**304**	*e*PKPbc	PKPbc	05 02 55.1	-1.4
ESK	**Eskdalemuir**	**145.59**	**353**	*e*PKIKP	PKPdf	05 02 55.0	-1.6
CONA	**Conrad Observa** comp=Z,13nm,1.4s	**146.00**	**328**	⇑*i*P	PKPdf	05 02 58.0	+0.4
CSNA	**Conrad Observa** comp=Z,11nm,1.3s	**146.00**	**328**	⇑*i*P	PKPdf	05 02 58.0	+0.5
KHC	**Kasperske Hory**	**146.24**	**331**	*e*PKP	PKPdf	05 02 58.5	+0.6
KHC				*e*x	x	05 03 06.5	
GEC2	**GERESS Array S**	**146.39**	**331**	*e*PKP2	PKPbc	05 02 58.4	-1.0
GERES	**GERESS Array B** comp=Z,2.4nm,0.8s,baz=40,slow=2.3,SNR=10	**146.39**	**331**	PKPbc	PKPbc	05 02 58.6	-0.8
GRA1	**Grafenberg Arr**	**146.83**	**334**	*e*PKP	PKPdf	05 03 00.2	+1.3
GRA1				*e*pPKP	pPKPdf	05 03 08.2	+4.8
GRF	**Grafenberg Arr**	**146.83**	**334**	*e*PKP	PKPdf	05 03 00.2	+1.3
GRF				*e*pPKP	pPKPdf	05 03 08.2	+4.8
WLF	**Walferdange**	**148.75**	**339**	*e*PKP2	PKPbc	05 03 05.5	-0.4
GIVF	**Givet**	**148.80**	**341**	*e*PKP1	PKPbc	05 03 03.8	-2.2
BAIF	**Baives** comp=Z,32nm,1.2s	**149.02**	**341**	*e*PKP1	PKPbc	05 03 04.5	-2.1
CDF	**Champ du Feu** comp=Z,24nm,1.0s	**149.41**	**336**	*e*PKP1	PKPbc	05 03 05.6	-2.0
HINF	**Hinteralfeld**	**150.06**	**336**	*e*PKP1	PKPbc	05 03 06.9	-2.3
HAU	**Haudompre** comp=Z,36nm,1.2s	**150.09**	**337**	*e*PKP1	PKPbc	05 03 07.1	-2.2
TUE	**Stuetta**	**150.12**	**332**	*e*PKPbc	PKPbc	05 03 09.0	-0.4
TUE				*e*PKPab	PKPab	05 03 14.7	-0.6
MEZF	**Maizieres J'vi**	**150.12**	**339**	*e*PKP1	PKPbc	05 03 07.7	-1.6
CABF	**La Chapelle** comp=Z,110nm,1.7s	**151.35**	**336**	*e*PKP1	PKPbc	05 03 10.5	-1.8
FLN	**La Foliniere** comp=Z,159nm,1.6s	**151.44**	**346**	*e*PKP1	PKPbc	05 03 09.8	-2.6
LOR	**Lormes** comp=Z,28nm,1.1s	**151.59**	**339**	*e*PKP1	PKPbc	05 03 10.5	-2.3
GRR	**Gorron** comp=Z,126nm,1.6s	**151.88**	**346**	*e*PKP1	PKPbc	05 03 11.1	-2.3
SSF	**Saint Saulge** comp=Z,18nm,1.0s	**151.89**	**339**	*e*PKP1	PKPbc	05 03 11.3	-2.2
LPL	**La Plagne**	**151.99**	**334**	*e*PKP1	PKPbc	05 03 11.9	-1.9
LPG	**La Plagne** comp=Z,18nm,1.1s	**152.00**	**334**	*e*PKP1	PKPbc	05 03 12.5	-1.3
SMF	**Signal de Mont**	**152.14**	**339**	*e*PKP1	PKPbc	05 03 11.6	-2.5
AVF	**Avril sur Loir** comp=Z,44nm,1.5s	**152.18**	**339**	*e*PKP1	PKPbc	05 03 11.5	-2.7
ORIF	**Oris-en-Rattie** comp=Z,23nm,1.2s	**152.83**	**334**	*e*PKP1	PKPbc	05 03 13.4	-2.3
SBF	**Sospel**	**153.00**	**331**	*e*PKP1	PKPbc	05 03 13.6	-2.5
MFF	**Saint Martin d** comp=Z,88nm,1.8s	**153.38**	**344**	*e*PKP1	PKPbc	05 03 14.2	-2.6
FRF	**La Foret Royal**	**153.59**	**331**	*e*PKP1	PKPbc	05 03 15.4	-2.0
LMR	**La Mourre**	**153.83**	**331**	*e*PKP1	PKPbc	05 03 15.7	-2.2

IDC ***28*** *04:55:05.1±0.9, 20.40S×168.89E, h0km, mb4.3/9, mb1 4.5/9, mb1mx4.3/15, mbtmp4.3/9, Error ellipse: s-maj=31.0km s-min=24.6km az=128.0*

NEIC ***28*** *04:55:06.3±0.5, 20.36S×169.01E, h10km, mb4.6/8, Error ellipse: s-maj=14.3km s-min=12.3km az=149.0*

ISCJB ***28*** *04:55:07.9±6.1, 20.53S±0.10×168.9E±0.1, h26km±41km, mb4.3/17, Error ellipse: s-maj=18.5km s-min=14.9km az=34.2*

LDG ***28*** *04:55:07.0±0.3, 20.41S×168.21E, h10km, Mb4.6/2, Error ellipse: s-maj=28.4km s-min=3.7km az=127.0*

ISC 28 04:55:10.2±6.4**, 20.52S**±0.09×**168.9E**±0.1**, h30**km±43km**, n53,** σ1.09/27**, mb4.3**/17**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.72**	**235**	*e*P	**Pn**	**04 55 50.6**	**-1.3**
DZM				*e*S	**Sn**	**04 56 21.9**	**-1.8**
CTA	**Charters Tower** 4.2nm,0.6s,mb3.9,baz=88,slow=13,SNR=6.6	**21.20**	**267**	P	**P**	**04 59 56.2**	**+2.8**
CTA	**Charters Tower**	**21.20**	**267**	P	**P**	**04 59 56.2**	**+2.8**
CTAO	**Charters Tower** 16nm,1.0s,mb4.3	**21.20**	**267**	*e*P	**P**	**04 59 54.9**	**+1.5**
STKA	**Stephens Creek** 6.2nm,1.0s,mb4.1,baz=96,slow=9.2,SNR=3.2	**26.87**	**240**	P	**P**	**05 00 49.8**	**+1.4**
WB2	**Warramunga Arr**	**32.34**	**265**	*e*P	**P**	**05 01 38.5**	**+1.5**
WRAB	**Tennant Creek** 5.7nm,1.1s,mb4.3	**32.34**	**265**	*e*P	**P**	**05 01 38.8**	**+1.8**
WRA	**Warramunga Arr** 1.3nm,0.7s,mb3.9,baz=106,slow=8.1,SNR=12	**32.35**	**265**	P	**P**	**05 01 35.9**	**-1.2**
ASAR	**Alice Springs** 3.1nm,0.8s,mb4.2,baz=85,slow=8.8,SNR=28	**32.48**	**258**	P	**P**	**05 01 37.7**	**-0.6**
ASAR	0.9nm,0.8s,baz=94,slow=3.6,SNR=5.0			PcP	PcP	05 04 23.6	-1.3
FITZ	**Fitzroy Crossi** 91nm,1.4s,mb5.2	**40.77**	**266**	*e*P	**P**	**05 02 49.1**	**+0.2**
KAPI	**Kappang** 20nm,1.2s,mb5.0	**50.08**	**281**	*e*P	**P**	**05 04 02.8**	**0.0**
SBA	**Scott Base**	**57.39**	**181**	*e*P	**P**	**05 04 55.8**	**+0.5**
CASY	**Casey** 5.7nm,1.2s,mb4.5	**58.81**	**204**	*e*P	**P**	**05 05 05.1**	**-0.3**
YHNB	**Yeheng**	**64.42**	**312**	*e*P	**P**	**05 05 40.7**	**-3.1**
QSPA	**South Pole Qui** 2.0nm,0.8s,mb4.1,baz=26,slow=4.3,SNR=7.1	**69.54**	**180**	P	**P**	**05 06 16.3**	**+0.8**
PETK	**Petropavlovsk-** 4.6nm,0.9s,mb4.4,baz=165,slow=12,SNR=4.0	**73.95**	**353**	P	**P**	**05 06 41.9**	**-0.4**
MAW	**Mawson** 0.5nm,0.3s,mb3.9,baz=118,slow=5.2,SNR=4.8	**77.12**	**202**	P	**P**	**05 07 01.4**	**+1.1**
CMAR	**Chiang Mai Arr** 1.3nm,0.4s,mb4.2,baz=124,slow=4.7,SNR=4.5	**78.69**	**295**	P	**P**	**05 07 10.8**	**+0.8**
ULN	**Ulaanbaatar** 3.0nm,0.9s,mb4.5	**87.67**	**324**	*e*P	**P**	**05 07 55.7**	**+0.1**
SNAA	**Sanae**	**87.87**	**183**	*e*	**P**	**05 07 55.2**	**-1.2**
SNAA				*e*		05 08 08.6	
SNAA	**Sanae** 1.8nm,0.8s,mb4.3	**87.87**	**183**	*e*P	**P**	**05 07 55.8**	**-0.6**
SONM	**Songino Array** 1.3nm,1.0s,mb4.1,baz=156,slow=6.0,SNR=5.0	**88.02**	**323**	P	**P**	**05 07 56.8**	**-0.5**
VNA3	**Neumayer Olymp**	**88.48**	**180**	*e*	**P**	**05 07 59.1**	**-0.1**
VNA3				*e*		05 08 11.9	

VNA2 **Neumayer--Watz** **88.77 181** *e* **P** **05 08 01.2 +0.6**
baz=155,slow=4.8
VNA2 *e* 05 08 14.2
NVAR **Mina Array Bea** **89.92 49** P **P** **05 08 05.7 -0.8**
1.6nm,0.9s,mb4.3,baz=230,slow=8.4,SNR=8.3
WVOR **Wild Horse Val** **91.47 45** *e*P **P** **05 08 12.2 -1.4**
3.9nm,1.1s,mb4.7
PSZ **Piszkesteto** **142.94 325** *e*PKPdf PKPdf 05 14 40.2 -0.6
MORC **Moravsky Berou** **142.97 329** *e*PKPdf PKPdf 05 14 39.2 -1.5
KHC **Kasperske Hory** **145.28 331** *e*PKP PKPdf 05 14 42.5 -2.3
KHC *ex* x 05 14 53.5
GERES **GERESS Array B** **145.43 331** PKPbc PKPbc 05 14 44.1 -1.0
1.1nm,0.6s,baz=339,slow=3.4,SNR=6.9
GRA1 **Grafenberg Arr** **145.88 334** *e*PKP PKPdf 05 14 45.8 0.0
GIVF **Givet** **147.87 341** *e*PKP1 PKPbc 05 14 52.0 -0.1
34nm,1.0s
BAIF **Baives** **148.10 341** *e*PKP1 PKPbc 05 14 52.5 -0.2
CDF **Champ du Feu** **148.47 336** *e*PKP1 PKPbc 05 14 52.7 -1.0
23nm,1.0s
HINF **Hinteralfeld** **149.12 336** *e*PKP1 PKPbc 05 14 54.9 -0.5
HAU **Haudompre** **149.15 337** *e*PKP1 PKPbc 05 14 54.6 -0.9
CABF **La Chapelle** **150.41 336** *e*PKP1 PKPbc 05 14 58.3 -0.3
31nm,1.1s
FLN **La Foliniere** **150.55 346** *e*PKP1 PKPbc 05 14 58.0 -0.9
LDF **La Druitiere** **150.62 345** *e*PKP1 PKPbc 05 14 58.3 -0.8
LOR **Lormes** **150.66 339** *e*PKP1 PKPbc 05 14 58.1 -1.1
SSF **Saint Saulge** **150.96 339** *e*PKP1 PKPbc 05 14 59.0 -0.9
11nm,0.9s
GRR **Gorron** **150.99 346** *e*PKP1 PKPbc 05 14 58.8 -1.1
LPL **La Plagne** **151.04 334** *e*PKP1 PKPbc 05 14 59.8 -0.4
7.6nm,0.7s
LPG **La Plagne** **151.05 333** *e*PKP1 PKPbc 05 14 59.9 -0.3
26nm,1.2s
SMF **Signal de Mont** **151.21 338** *e*PKP1 PKPbc 05 14 59.6 -0.9
AVF **Avril sur Loir** **151.25 339** *e*PKP1 PKPbc 05 14 59.4 -1.2
17nm,1.0s
ORIF **Oris-en-Rattie** **151.88 334** *e*PKP1 PKPbc 05 15 01.1 -1.0
34nm,1.2s
SBF **Sospel** **152.03 331** *e*PKP1 PKPbc 05 15 01.4 -1.1
126nm,1.3s
TCF **Toulx Ste Croi** **152.06 340** *e*PKP1 PKPbc 05 15 01.3 -1.2
VIVF **Saint-Julien-l** **152.42 335** *e*PKP1 PKPbc 05 15 02.2 -1.1
FRF **La Foret Royal** **152.63 331** *e*PKP1 PKPbc 05 15 02.7 -1.1
SMRF **Simiane la Rot** **152.77 333** *e*PKP1 PKPbc 05 15 03.4 -0.7
LASF **Ste Croix** **153.39 335** *e*PKP1 PKPbc 05 15 05.0 -0.5
30nm,1.2s

IDC 28 05:22:09.3±2.8, 2144S×16959E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.9/14, mbtmp3.9/4, Error ellipse: s-maj=142.1km s-min=32.5km az=159.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.99**	**257**	*e*P	Pn	05 22 57.2	-0.8
DZM				*e*S	Sn	05 23 27.7	-6.8
WRA	**Warramunga Arr**	**32.97**	**266**	P	P	05 28 44.8	-1.3
	0.7nm,0.9s,baz=98,slow=7.9,SNR=5.5						
ASAR	**Alice Springs**	**32.98**	**259**	P	P	05 28 46.2	+0.2
	1.1nm,0.6s,baz=84,slow=9.4,SNR=12						
CMAR	**Chiang Mai Arr**	**79.70**	**294**	P	P	05 34 20.5	+1.1
	0.5nm,0.3s,baz=132,slow=4.7,SNR=4.8						
NVAR	**Mina Array Bea**	**90.01**	**48**	P	P	05 35 10.5	-0.4
	0.6nm,0.7s,baz=227,slow=6.1,SNR=5.8						
GERES	**GERESS Array B**	**146.57**	**331**	PKPbc	PKPbc	05 41 52.6	0.0
	0.3nm,0.3s,baz=46,slow=3.9,SNR=4.3						

IDC 28 05:28:31.7±2.8, 2149S×16939E, h0km, mb3.9/4, mb1 4.2/4, mb1mx4.0/15, mbtmp3.9/4, Error ellipse: s-maj=157.7km s-min=29.5km az=161.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.79**	**258**	*e*P	Pn	05 29 17.5	-0.3
CTA	**Charters Tower**	**21.67**	**270**	P	P	05 33 25.8	+1.6
	6.2nm,0.8s,baz=96,slow=12,SNR=12						
WRA	**Warramunga Arr**	**32.78**	**266**	P	P	05 35 05.6	-1.2
	0.4nm,0.5s,baz=98,slow=8.4,SNR=11						
ASAR	**Alice Springs**	**32.78**	**259**	P	P	05 35 06.9	+0.1
	2.4nm,0.9s,baz=86,slow=9.1,SNR=17						
NVAR	**Mina Array Bea**	**90.18**	**48**	P	P	05 41 34.6	+0.5
	1.0nm,0.7s,baz=223,slow=8.6,SNR=4.9						
GERES	**GERESS Array B**	**146.52**	**330**	PKPbc	PKPbc	05 48 14.3	-0.6
	0.4nm,0.2s,baz=27,slow=3.3,SNR=4.2						

IDC 28 05:31:59.6±3.3, 1956S×16830E, h0km, mb3.6/3, mb1 4.0/3, mb1mx3.7/14, mbtmp3.6/3, Error ellipse: s-maj=254.8km s-min=34.1km az=159.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.93**	**263**	P	P	05 38 27.4	+0.1
	0.2nm,0.4s,baz=96,slow=8.4,SNR=4.9						
ASAR	**Alice Springs**	**32.19**	**256**	P	P	05 38 29.2	-0.2
	1.4nm,0.9s,baz=74,slow=9.3,SNR=7.3						
NVAR	**Mina Array Bea**	**89.68**	**49**	P	P	05 44 59.6	-0.1
	0.5nm,0.7s,baz=235,slow=7.5,SNR=4.4						
GERES	**GERESS Array B**	**144.35**	**331**	PKP	PKPdf	05 51 38.7	+1.0
	0.5nm,0.5s,baz=73,slow=3.3,SNR=2.9						

*ISCJB **28** 06:00:06.4±0.4, 2037S±0.007×6780E±0.009, h10km, mb4.4/21, MS4.1/12, Error ellipse: s-maj=12.9km s-min=10.1km az=27.2*
*NEIC **28** 06:00:07.9±0.4, 2045S×6771E, h10km, mb4.7/10, Error ellipse: s-maj=12.6km s-min=11.1km az=135.0*
*IDC **28** 06:00:07.1±0.6, 2045S×6781E, h0km, mb4.3/13, mb1 4.4/13, mb1mx4.3/21, mbtmp4.3/13, MS4.0/12, Ms1 4.0/12, ms1mx3.8/28, Error ellipse: s-maj=19.1km s-min=16.9km az=155.0*

ISC 28 06:00:08.5±0.4, 2038S±0.007×6780E±0.009, h10km, n41, σ1§00/34, mb4.4/21, MS4.1/12, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**35.45**	**299**	P	P	**06 07 06.0**	**+0.8**
	0.5nm,0.4s,mb3.8,baz=180,slow=1.0,SNR=3.8						
KMBO				LR	LR	06 18 48.7	
	comp=Z,213nm,18.0s,MS4.0,baz=206,slow=32						
LBTB	**Lobatse**	**39.09**	**255**	P	P	**06 07 36.0**	**-0.1**
	3.0nm,0.8s,mb4.1,baz=146,slow=1.1,SNR=3.4						
LBTB	**Lobatse**	**39.09**	**255**	P	P	**06 07 33.2**	**-2.8**
	5.0nm,0.8s,mb4.3						
BOSA	**Boshof**	**39.41**	**249**	P	P	**06 07 39.7**	**+1.0**
	2.0nm,0.8s,mb3.9,baz=114,slow=10.0,SNR=4.1						
BOSA				LR	LR	06 21 32.6	
	comp=Z,121nm,19.2s,MS3.8,baz=180,slow=33						
BOSA	**Boshof**	**39.41**	**249**	P	P	**06 07 36.4**	**-2.2**
	3.3nm,0.6s,mb4.2						
BOSA				LR	LR	06 21 32.6	
MAW	**Mawson**	**47.32**	**183**	P	P	**06 08 42.4**	**+0.5**
	3.5nm,0.8s,mb4.3,baz=355,slow=9.3,SNR=9.0						
MAW				LR	LR	06 23 13.8	
	comp=Z,249nm,20.5s,MS4.2,baz=58,slow=29						
MAW	**Mawson**	**47.32**	**183**	*e*P	P	**06 08 41.2**	**-0.8**
	8.2nm,1.0s,mb4.6						
MAW				LR	LR	06 23 13.8	
MBWA	**Marble Bar**	**48.39**	**101**	P	P	**06 08 51.2**	**+0.2**
	15nm,1.0s,mb5.0						
CMAR	**Chiang Mai Arr**	**49.22**	**40**	P	P	**06 08 58.6**	**+1.4**
	5.3nm,0.9s,mb4.6,baz=236,slow=8.4,SNR=19						
CMAR				LR	LR	06 25 56.0	
	comp=Z,145nm,19.7s,MS4.0,baz=213,slow=31						
CHTO	**Chiang Mai**	**49.49**	**40**	*e*P	P	**06 08 58.1**	**-1.2**
	4.8nm,1.0s,mb4.5						
FITZ	**Fitzroy Crossi**	**54.42**	**98**	LR	LR	06 26 55.3	
	comp=Z,97nm,21.0s,MS3.9,baz=44,slow=30						
ASAR	**Alice Springs**	**60.89**	**106**	P	P	**06 10 21.6**	**-0.2**
	3.0nm,0.8s,mb4.5,baz=262,slow=6.3,SNR=27						
WRA	**Warramunga Arr**	**62.05**	**102**	P	P	**06 10 29.5**	**-0.1**
	2.7nm,0.8s,mb4.4,baz=257,slow=6.4,SNR=14						
WRA				LR	LR	06 33 44.1	
	comp=Z,119nm,18.5s,MS4.1,baz=175,slow=32						
WRAB	**Tennant Creek**	**62.06**	**102**	*e*P	P	**06 10 28.6**	**-1.1**
	5.3nm,0.7s,mb4.8						
EKS2	**Erkin-Say**	**62.96**	**5**	*e*P	P	**06 10 36.1**	**+1.0**
	5.1nm,1.0s,mb4.6						
TKM2	**Tokmak 2**	**63.39**	**6**	*e*P	P	**06 10 36.8**	**-1.1**
	8.0nm,1.2s,mb4.7						
SNAA	**Sanae**	**64.74**	**199**	*e*	P	**06 10 46.3**	**-0.2**
SNAA				*e*		06 10 52.7	
SNAA	**Sanae**	**64.74**	**199**	*e*P	P	**06 10 46.2**	**-0.3**
	4.1nm,1.1s,mb4.4						
VNA2	**Neumayer--Watz**	**66.06**	**200**	*e*	P	**06 10 55.5**	**+0.4**
	baz=79,slow=5.4						
VNA2				*e*		06 11 02.2	
STKA	**Stephens Creek**	**66.13**	**117**	LR	LR	06 36 39.8	
	comp=Z,332nm,21.6s,MS4.5,baz=210,slow=33						
VNA1	**Neumayer--Stat**	**66.32**	**201**	*e*	P	**06 10 58.1**	**+1.3**
VNA3	**Neumayer Olymp**	**66.83**	**200**	*e*	P	**06 11 00.3**	**+0.2**
VNA3				*e*		06 11 06.9	
MK31	**Makanchi Array**	**68.12**	**11**	*e*P	P	**06 11 07.4**	**-1.0**
MKAR	**Makanchi Array**	**68.12**	**11**	P	P	**06 11 08.4**	**0.0**
	1.4nm,0.8s,mb4.0,baz=190,slow=4.9,SNR=7.8						
MKAR				LR	LR	06 40 34.0	
	comp=Z,88nm,18.0s,MS4.0,baz=172,slow=36						
QSPA	**South Pole Qui**	**69.73**	**180**	P	P	**06 11 17.7**	**-0.4**
	3.3nm,1.0s,mb4.2,baz=141,slow=1.8,SNR=7.1						
KURK	**Kurchatov**	**71.42**	**7**	*e*P	P	**06 11 28.9**	**+0.3**
	7.3nm,1.1s,mb4.5						
CTA	**Charters Tower**	**72.87**	**105**	LR	LR	06 39 42.6	
	comp=Z,247nm,19.7s,MS4.5,baz=231,slow=33						
TOA0	**Torodi Ar. Sit**	**73.02**	**291**	*e*P	P	**06 11 39.6**	**+0.6**
TORD	**Torodi Ar. Bea**	**73.02**	**291**	P	P	**06 11 38.4**	**-0.6**
	1.2nm,0.9s,mb3.8,baz=111,slow=3.6,SNR=6.1						
TORD	**Torodi Ar. Bea**	**73.02**	**291**	P	P	**06 11 38.4**	**-0.6**
BRVK	**Borovoye**	**73.16**	**2**	P	P	**06 11 37.4**	**-1.6**
ZAA0	**Zalesovo Array**	**75.46**	**10**	*e*P	P	**06 11 50.8**	**-1.6**
ZALV	**Zalesovo Beam**	**75.46**	**10**	P	P	**06 11 52.4**	**0.0**
	3.9nm,0.6s,mb4.5,baz=196,slow=6.2,SNR=9.6						
ZALV				LR	LR	06 43 12.6	
	comp=Z,48nm,20.0s,MS3.8,baz=85,slow=34						
SONM	**Songino Array**	**76.22**	**26**	P	P	**06 11 58.1**	**+1.2**
	1.1nm,0.9s,mb3.8,baz=183,slow=9.2,SNR=5.5						
SONM				LR	LR	06 44 35.4	
	comp=Z,108nm,19.4s,MS4.2,baz=88,slow=35						
ULN	**Ulaanbaatar**	**76.51**	**26**	P	P	**06 12 00.5**	**+2.0**
AKASG	**Malin Array Be**	**78.50**	**336**	P	P	**06 12 13.5**	**+3.9**
	2.1nm,0.7s,mb4.2,baz=139,slow=4.8,SNR=7.5						
KSRS	**Korea Array**	**80.66**	**44**	LR	LR	06 46 26.1	
	comp=Z,83nm,18.6s,MS4.1,baz=50,slow=34						
MJAR	**Matsushiro Arr**	**87.24**	**49**	P	P	**06 12 56.0**	**+0.7**
	3.0nm,0.9s,mb4.5,baz=226,slow=6.0,SNR=2.8						
EDM	**Edmonton**	**147.20**	**1**	*e*PKPbc	PKPbc	06 19 53.5	+1.7
ULM	**Lac du Bonnet**	**147.50**	**340**	PKPbc	PKPbc	06 19 53.8	+1.2
	2.5nm,0.7s,baz=3.1,slow=5.6,SNR=4.1						
TXAR	**Lajitas Array**	**168.19**	**321**	PKPab	PKPab	06 21 26.0	+2.1
	0.5nm,0.9s,baz=35,slow=3.3,SNR=3.4						

IDC 28 06:13:56.7±3.8, 2053S×16910E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.9/15, mbtmp3.9/4, Error ellipse: s-maj=268.9km s-min=33.2km az=161.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.91**	**238**	*e*P	Pn	06 14 42.6	-1.7
DZM				*e*S	Sn	06 15 14.8	-5.3
WRA	**Warramunga Arr**	**32.58**	**265**	P	P	06 20 29.6	-0.5
	0.3nm,0.4s,baz=99,slow=8.4,SNR=10						
ASAR	**Alice Springs**	**32.71**	**258**	P	P	06 20 30.8	-0.4
	1.2nm,0.7s,baz=82,slow=9.2,SNR=10						
FITZ	**Fitzroy Crossi**	**41.00**	**266**	P	P	06 21 42.7	+0.9
	2.1nm,0.7s,baz=86,slow=10.0,SNR=6.6						
NVAR	**Mina Array Bea**	**89.75**	**49**	P	P	06 26 57.4	+0.3
	0.5nm,0.6s,baz=228,slow=7.6,SNR=4.3						

*ISCJB **28** 06:19:11.7±0.6, 2720S±0.003×6696W±0.005, h124km±5km, mb4.3/39, Error ellipse: s-maj=8.0km s-min=5.3km az=167.2*
*IDC **28** 06:19:13.0±1.1, 2720S×6703W, h126km±10km, mb3.9/9, mb1 4.0/14, mb1mx3.9/20, mbtmp3.8/14, Error ellipse: s-maj=15.9km s-min=9.1km az=84.0*
*BJI **28** 06:19:13.3, 2720S×6700W, h130km, mB4.7*
*NEIC **28** 06:19:13.4±0.5, 2718S×6699W, h130km±5km, mb4.3/36, Error ellipse: s-maj=6.8km s-min=5.0km az=66.0*

ISC 28 06:19:12.9±0.6, 2720S±0.003×6695W±0.005, h121km±4km, n313, σ0§60/300, mb4.3/39, 109C-115D, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**3.78**	**241**	*e*Pn	Pn	**06 20 09.6**	**+0.1**
LCO				*e*Sn	Sn	**06 20 52.0**	**-1.3**
CFAA	**Coronel Fontan**	**4.54**	**194**	P	Pn	**06 20 20.9**	**+1.3**
	1.0nm,0.3s,baz=7.2,slow=12,SNR=89						
CFAA				S	Sn	**06 21 10.6**	**-0.9**
	1.5nm,0.3s,baz=273,slow=22,SNR=11						
CFAA	**Coronel Fontan**	**4.54**	**194**	P	Pn	06 20 20.9	+1.3
CFAA				S	Sn	06 21 10.6	-0.9
LVC	**Limon Verde**	**4.90**	**338**	P	Pn	**06 20 26.6**	**+2.0**
	4.4nm,0.3s,baz=176,slow=7.7,SNR=44						
LVC				S	Sn	**06 21 20.5**	**+0.3**
	20nm,0.3s,baz=285,slow=20,SNR=66						
LVC	**Limon Verde**	**4.90**	**338**	*e*Pn	Pn	06 20 26.8	+2.2
LVC				*e*Sn	Sn	06 21 18.7	-1.6
CPUP	**Villa Florida**	**8.64**	**86**	P	Pn	06 21 16.8	+1.7
	0.7nm,0.3s,baz=246,slow=12,SNR=12						
CPUP	**Villa Florida**	**8.64**	**86**	*e*Pn	Pn	**06 21 15.7**	**+0.6**
	32nm,0.4s						
LPAZ	**La Paz**	**10.91**	**354**	P	Pn	**06 21 46.7**	**+1.1**
	1.4nm,0.3s,baz=171,slow=7.1,SNR=56						
LPAZ				S	Sn	**06 23 43.9**	**-1.9**
	0.2nm,0.3s,baz=263,slow=19,SNR=3.5						
LPAZ	**La Paz**	**10.91**	**354**	*e*Pn	Pn	**06 21 46.4**	**+0.8**
	3.6nm,0.4s						
TRQA	**Tornquist**	**11.61**	**160**	*e*Pn	Pn	**06 21 55.3**	**+0.6**
	2.9nm,0.8s						
SIV	**San Ignacio**	**12.41**	**27**	P	Pn	**06 22 05.3**	**-0.2**
	0.5nm,0.3s,baz=217,slow=14,SNR=17						
PLCA	**Paso Flores**	**13.83**	**192**	P	Pn	**06 22 23.4**	**-0.3**
	0.1nm,0.3s,baz=343,slow=10.0,SNR=3.2						
PLCA	**Paso Flores**	**13.83**	**192**	*e*Pn	Pn	**06 22 23.0**	**-0.7**
	3.2nm,0.9s						
BDFB	**Brasilia**	**21.01**	**61**	P	P	**06 23 47.2**	**+0.2**
	1.7nm,0.4s,mb3.8,baz=216,slow=15,SNR=5.5						
OTAV	**Otavalo**	**29.43**	**336**	P	P	**06 25 03.7**	**-1.6**
	1.6nm,0.4s,mb4.0						
TEIG	**Tepich**	**51.47**	**334**	*e*P	P	**06 28 04.7**	**-1.3**
	6.4nm,0.6s,mb4.8						
VNA3	**Neumayer Olymp**	**54.13**	**160**	*e*P	P	**06 28 24.2**	**-0.8**
VNA3				*e*		06 28 29.1	
VNA3				*e*		06 29 27.8	
VNA1	**Neumayer--Stat**	**54.34**	**159**	*e*P	P	**06 28 25.2**	**-1.3**
VNA1				*e*		06 29 27.7	
VNA2	**Neumayer--Watz**	**54.71**	**160**	*e*P	P	**06 28 29.9**	**+0.7**
	baz=285,slow=7.5						
VNA2				*e*		06 28 34.4	
VNA2				*e*		06 29 29.7	
SNAA	**Sanae**	**56.34**	**160**	*e*P	P	**06 28 41.0**	**+0.2**
SNAA				*e*		06 28 45.1	
SNAA				*e*		06 29 36.3	
SNAA	**Sanae**	**56.34**	**160**	*e*P	P	**06 28 39.9**	**-0.9**
	1.5nm,0.7s,mb4.1						
SWET	**Sewanee**	**64.62**	**343**	*e*P	P	**06 29 35.5**	**-1.9**
JCT	**Junction City**	**65.39**	**329**	*e*P	P	**06 29 41.9**	**-0.6**
	6.3nm,0.8s,mb4.5						
WVT	**Waverly**	**65.99**	**342**	*e*P	P	**06 29 44.1**	**-2.2**
	12nm,0.8s,mb4.8						
TXAR	**Lajitas Array**	**66.31**	**325**	P	P	**06 29 47.9**	**-0.6**
	0.6nm,0.6s,mb3.6,baz=148,slow=7.7,SNR=9.9						
WMOK	**Wichita Mounta**	**68.57**	**332**	*e*P	P	**06 30 01.0**	**-1.5**
	0.9nm,0.6s,mb3.8						
ACSO	**Alum Creek Sta**	**68.72**	**347**	*e*P	P	**06 30 01.6**	**-1.7**
	10nm,0.8s,mb4.7						
DBIC	**Dimbokro**	**68.80**	**70**	P	P	**06 30 03.9**	**-0.5**
	2.5nm,0.4s,mb4.4,baz=206,slow=6.7,SNR=9.8						
DBIC	**Dimbokro**	**68.80**	**70**	*e*P	P	**06 30 03.2**	**-1.3**
	5.5nm,0.7s,mb4.5						
HDIL	**Hopedale**	**70.53**	**342**	*e*P	P	**06 30 12.6**	**-1.9**
	52nm,1.1s,mb5.3						
SYO	**Syowa Base**	**70.57**	**159**↑	*e*P	P	**06 30 12.8**	**-1.6**
318A	**Bisbee**	**71.31**	**322** ↑	P	P	**06 30 19.7**	**+0.3**
	baz=72,SNR=7.2						
219A	**White Tail Can**	**71.34**	**323** ↑	P	P	**06 30 19.8**	**+0.2**
	baz=72						
KSU1	**Kansas State U**	**71.54**	**336**	P	P	**06 30 18.5**	**-2.1**
218A	**Dragoon**	**71.75**	**322** ↓	P	P	**06 30 22.1**	**+0.1**
	baz=72						
217A	**Green Valley**	**72.02**	**322** ↑	P	P	**06 30 24.0**	**+0.3**
	baz=72						
118A	**Homack Ranch,**	**72.22**	**323** ↑	P	P	**06 30 25.2**	**+0.4**
	baz=72						
ANMO	**Albuquerque**	**72.23**	**327**	*e*P	P	**06 30 24.8**	**0.0**
	1.2nm,0.6s,mb3.9						
Y19A	**Nutrioso**	**72.86**	**324** ↑	P	P	**06 30 28.9**	**+0.3**
	baz=73						
214A	**Organ Pipe Nat**	**73.27**	**320** ↑	P	P	**06 30 31.1**	**0.0**
	baz=74						
Y17A	**Roosevelt**	**73.50**	**323** ↓	P	P	**06 30 32.6**	**+0.2**
	baz=74,SNR=8.1						
X17A	**Forest Lakes**	**73.97**	**323** ↑	P	P	**06 30 35.7**	**+0.6**
	baz=74						
Y16A	**Circle Bar Ran**	**73.98**	**323** ↓	P	P	**06 30 35.6**	**+0.5**
	baz=74						
SDCO	**Great Sand Dun**	**74.03**	**329**	*e*P	P	**06 30 35.4**	**+0.1**
	2.4nm,0.9s,mb3.9						
SUR	**Sutherland**	**74.23**	**119**	*e*P	P	**06 30 38.0**	**+1.1**
	9.5nm,0.7s,mb4.6						
X16A	**Lo Mia Camp, P**	**74.37**	**323** ↑	P	P	**06 30 37.8**	**+0.4**
	baz=75,SNR=5.2						
X15A	**Humboldt**	**74.85**	**323** ↑	P	P	**06 30 40.8**	**+0.6**
	baz=75						
Y14A	**Wickenburg**	**74.86**	**322** ↓	P	P	**06 30 40.8**	**+0.6**
	baz=75						
T19A	**Beclabito**	**74.98**	**326** ↑	P	P	**06 30 41.3**	**+0.4**
	baz=75,SNR=5.6						
MVCO	**Mesa Verde**	**75.02**	**327** ↑	P	P	**06 30 41.6**	**+0.5**
	baz=75						
U18A	**Rough Rock, Ch**	**75.09**	**325** ↑	P	P	**06 30 42.0**	**+0.5**
	baz=75						
WUAZ	**Wupatki**	**75.17**	**324** ↓	P	P	**06 30 42.5**	**+0.5**
	baz=75						
X14A	**Yava**	**75.19**	**322** ↑	P	P	**06 30 42.5**	**+0.3**
	baz=75						
Y13A	**Salome**	**75.22**	**321** ↑	P	P	**06 30 42.6**	**+0.3**
	baz=75						
U16A	**Tuba City**	**75.52**	**324** ↑	P	P	**06 30 44.6**	**+0.7**
	baz=76						
Y12C	**Blythe**	**75.57**	**321** ↓	P	P	**06 30 44.6**	**+0.3**
	baz=76						
U17A	**Shonto**	**75.63**	**325** ↑	P	P	**06 30 45.2**	**+0.6**
	baz=76						
T18A	**Mexican Hat**	**75.64**	**326** ↑	P	P	**06 30 45.0**	**+0.4**
	baz=76,SNR=5.3						
ECSD	**EROS,Sioux Fal**	**75.65**	**338**	*e*P	P	**06 30 43.0**	**-1.5**
	9.4nm,0.9s,mb4.5						
COWI	**Conover**	**75.68**	**344**	*e*P	P	**06 30 42.9**	**-1.7**
	3.2nm,0.5s,mb4.3						
S19A	**Harvey Farm, M**	**75.76**	**327** ↓	P	P	**06 30 45.6**	**+0.3**
	baz=76,SNR=6.1						
ISCO	**Idaho Springs**	**75.76**	**330**	*e*P	P	**06 30 44.9**	**-0.4**
	3.4nm,0.9s,mb4.1						
PV01	**Paradox Valley**	**75.79**	**327**	*e*P	P	**06 30 45.6**	**+0.2**
X13A	**Yucca**	**75.80**	**322** ↓	P	P	**06 30 45.8**	**+0.2**
	baz=76						
V15A	**Kaibab Nationa**	**75.82**	**323** ↑	P	P	**06 30 46.3**	**+0.6**
	baz=76						
W14A	**Seligman**	**75.85**	**322** ↓	P	P	**06 30 46.9**	**+1.0**
	baz=76						
T17A	**Navajo Res., N**	**76.01**	**325** ↑	P	P	**06 30 47.7**	**+1.0**
	baz=76						
BC3	**Big Chuckw Mtn**	**76.03**	**320** ↑	P	P	**06 30 47.2**	**+0.2**
	baz=76						
S18A	**Hurst Farm, Bl**	**76.14**	**326** ↑	P	P	**06 30 48.1**	**+0.6**
	baz=76,SNR=9.4						
V14A	**Boquillas Ranc**	**76.18**	**323** ↑	P	P	**06 30 48.1**	**+0.4**
	baz=76,SNR=5.3						
W13A	**Hualapai Mount**	**76.20**	**322** ↓	P	P	**06 30 48.1**	**+0.2**
	baz=76						
IRM	**Iron Mountain**	**76.22**	**320** ↓	P	P	**06 30 48.1**	**+0.1**
	baz=76						
U15A	**North Rim**	**76.34**	**324** ↓	P	P	**06 30 49.2**	**+0.5**
	baz=77,SNR=7.0						
BELC	**Belle Mtn.**	**76.59**	**320** ↓	P	P	**06 30 50.8**	**+0.7**
	baz=77						
R18A	**Canyonlands Na**	**76.63**	**327** ↓	P	P	**06 30 50.5**	**+0.3**
	baz=77						
TSUM	**Tsumeb**	**76.77**	**105**	*e*P	P	**06 30 50.1**	**-1.5**
	1.8nm,0.6s,mb4.0						
U14A	**Mt Trumbull**	**76.81**	**323** ↓	P	P	**06 30 52.1**	**+0.9**
	baz=77						
V13A	**Grand Canyon W**	**76.82**	**322** ↓	P	P	**06 30 51.5**	**+0.2**
	baz=77						
T15A	**Red Dirt Ranch**	**76.84**	**324** ↓	P	P	**06 30 52.6**	**+1.2**
	baz=77,SNR=6.3						
W12A	**Cal Nev Ari**	**76.90**	**321** ↑	P	P	**06 30 52.1**	**+0.3**
	baz=77						
GMRC	**Granite Mounta**	**76.96**	**321** ↓	P	P	**06 30 52.3**	**+0.1**
	baz=77						
MURC	**Murrieta**	**77.00**	**319** ↓	P	P	**06 30 52.7**	**+0.3**
	baz=77						
R17A	**Hanksville Air**	**77.06**	**326** ↑	P	P	**06 30 53.0**	**+0.4**
	baz=77,SNR=6.3						
V12A	**Nelson**	**77.20**	**322** ↓	P	P	**06 30 53.9**	**+0.4**
	baz=77						
U13A	**Pakoon Wash**	**77.22**	**323** ↓	P	P	**06 30 53.8**	**+0.2**
	baz=78						
T14A	**Hurricane**	**77.24**	**324** ↓	P	P	**06 30 54.3**	**+0.6**
	baz=78,SNR=7.6						
Q18A	**Rafter H Ranch**	**77.30**	**327** ↑	P	P	**06 30 54.2**	**+0.3**
	baz=78						
BBRC	**Big Bear

MPMC	**Manual Prospec** baz=79	78.92 320	⇑P	P	06 31 03.2 +0.2
R12A	**Pony Springs,** baz=79	78.98 324	⇓P	P	06 31 04.4 +1.1
N17A	**Moffit Pass** baz=79	79.07 328	⇑P	P	06 31 04.2 +0.5
JLU	**Jordanelle**	79.11 327	*e*P	P	06 31 03.9 0.0
P14A	**Drum Mountains** baz=79,SNR=8.6	79.14 325	⇑P	P	06 31 04.6 +0.6
Q13A	**Wheeler Ranch,** baz=79,SNR=7.6	79.14 324	⇑P	P	06 31 04.3 +0.2
ISA	**Isabella** baz=79	79.20 320	⇑P	P	06 31 04.6 +0.1
ISA	**Isabella** 1.5nm,0.8s,mb3.9	79.20 320	*e*P	P	06 31 04.2 -0.3
BOSA	**Boshof** 7.5nm,0.7s,mb4.6,baz=247,slow=5.8,SNR=12	79.25 117	P	P	06 31 05.3 +0.2
N16A	**Rees Ranch, Co** baz=80	79.32 327	⇑P	P	06 31 05.5 +0.5
DUG	**Dugway** baz=80	79.46 326	⇓P	P	06 31 06.3 +0.5
P13A	**Bates Ranch, G** baz=80	79.52 325	⇓P	P	06 31 06.7 +0.5
R11A	**Troy Canyon, C** baz=80	79.52 323	⇑P	P	06 31 06.4 +0.2
Q12A	**Willow Creek R** baz=80	79.63 324	⇓P	P	06 31 07.4 +0.6
VES	**Vestal, Richgr** baz=80	79.67 319	⇓P	P	06 31 07.0 -0.1
S10A	**Tonopah Range,** baz=80	79.75 322	⇑P	P	06 31 07.4 -0.1
N15A	**Stansbury Isla** baz=80,SNR=5.2	79.85 327	⇑P	P	06 31 07.7 -0.1
R10A	**Warm Springs** baz=80	79.86 323	⇓P	P	06 31 08.6 +0.6
PDAR	**Pinedale Array** 2.1nm,0.7s,mb4.0,baz=119,slow=7.1,SNR=18	79.91 330	P	P	06 31 07.9 -0.3
Q11A	**Duckwater** baz=80	79.92 323	⇓P	P	06 31 08.3 0.0
HWUT	**Hardware Ranch** 5.1nm,0.7s,mb4.5	79.94 328	*e*P	P	06 31 07.8 -0.5
S09A	**Goldfield** baz=80	79.96 322	⇓P	P	06 31 08.1 -0.5
P12A	**McGill** baz=80	79.99 324	⇑P	P	06 31 08.8 +0.1
N14A	**Grayback Hills** baz=80	80.15 326	⇓P	P	06 31 09.3 -0.2
L16A	**Fish Haven** baz=80	80.19 328	⇓P	P	06 31 09.6 -0.1
HELL	**Mitchell Peak** baz=80	80.23 320	⇓P	P	06 31 09.9 -0.2
R09A	**Tonopah** baz=80	80.24 322	⇓P	P	06 31 09.9 -0.2
M15A	**Larsen Ranch,** baz=80,SNR=7.3	80.25 327	⇑P	P	06 31 10.0 0.0
Q10A	**Clear Creek Ra** baz=80	80.30 323	⇑P	P	06 31 10.5 +0.1
S08C	**White Mtn Res** baz=80	80.32 321	⇑P	P	06 31 10.9 +0.4
O12A	**Currie** baz=81	80.50 325	⇓P	P	06 31 11.5 +0.2
L15A	**Malad City** baz=81,SNR=7.9	80.63 327	⇑P	P	06 31 11.9 -0.1
M14A	**Sheep Mountain** baz=81,SNR=7.0	80.72 327	⇓P	P	06 31 12.5 0.0
O11A	**Cowboy Ranch,** baz=81	80.86 324	⇓P	P	06 31 13.7 +0.4
K16A	**Soda Springs** baz=81	80.89 328	⇓P	P	06 31 14.2 +0.8
P10A	**Eureka** baz=81	80.92 323	⇑P	P	06 31 13.7 +0.1
REDW	**Red Top Meadow** 5.0nm,1.0s,mb4.3	80.97 329	*e*P	P	06 31 13.2 -0.6
M13A	**Montello** baz=81	81.02 326	⇑P	P	06 31 14.1 -0.1
NVAR	**Mina Array Bea** 1.1nm,0.8s,mb3.7,baz=158,slow=6.7,SNR=4.0	81.06 322	P	P	06 31 14.5 +0.1
LBTB	**Lobatse** 9.6nm,0.8s,mb4.7	81.06 113	*e*P	P	06 31 14.8 -0.2
L14A	**Malta** baz=81,SNR=6.5	81.07 327	⇑P	P	06 31 14.2 -0.1
ELK	**Elko** 3.5nm,0.8s,mb4.2	81.10 325	*e*P	P	06 31 14.1 -0.5
TPAW	**Teton Pass** 2.6nm,0.8s,mb4.1	81.11 329	*e*P	P	06 31 13.4 -1.1
Q08A	**Gabbs** baz=81	81.16 322	⇑P	P	06 31 14.7 -0.2
K15A	**Arbon** baz=82,SNR=7.1	81.22 328	⇓P	P	06 31 14.9 -0.2
J16A	**Bone** baz=82	81.25 329	⇓P	P	06 31 15.5 +0.2
ULM	**Lac du Bonnet** 4.2nm,0.6s,mb4.4,baz=147,slow=7.3,SNR=5.6	81.26 342	P	P	06 31 13.8 -1.3
I17A	**Pilgram Creek** baz=82	81.28 330	⇑P	P	06 31 15.6 +0.2
IMW	**Indian Meadow** 6.8nm,0.9s,mb4.5	81.42 329	*e*P	P	06 31 16.0 -0.2
K14A	**Jones Ranch, D** baz=82	81.43 327	⇓P	P	06 31 15.9 -0.4
M12A	**Wells** baz=82	81.43 326	⇑P	P	06 31 16.2 -0.1
L13A	**Double Diamond** baz=82,SNR=11	81.45 327	⇑P	P	06 31 16.7 +0.3
S06C	**San Francisco** baz=82	81.54 320	⇑P	P	06 31 16.5 -0.4
RLMT	**Red Lodge** 3.9nm,0.5s,mb4.5	81.65 331	*e*P	P	06 31 17.4 0.0
I16A	**Newdale** baz=82,SNR=6.5	81.66 329	⇓P	P	06 31 17.6 +0.2
J15A	**Blackfoot** baz=82,SNR=7.1	81.73 328	⇑P	P	06 31 17.8 0.0
R06C	**Coleville** baz=82	81.76 321	⇓P	P	06 31 18.5 +0.3
M11A	**Holland Ranch,** baz=82	81.89 325	⇓P	P	06 31 19.3 +0.6
L12A	**House Creek Ra** baz=82	82.03 326	⇑P	P	06 31 19.7 +0.3
J14A	**Carey** baz=82	82.18 328	⇑P	P	06 31 20.4 +0.2
H16A	**Russell Place,** baz=82	82.19 330	⇓P	P	06 31 20.5 +0.3
R05C	**Kirkwood Meado** baz=82	82.24 321	⇑P	P	06 31 20.7 +0.1
K12A	**Draper Farm, C** baz=83,SNR=8.0	82.33 326	⇓P	P	06 31 21.3 +0.3
L11A	**Cat Creek Ranc** baz=83,SNR=6.8	82.41 326	⇑P	P	06 31 21.3 -0.1
F18A	**Big Timber** baz=83	82.46 331	⇓P	P	06 31 21.3 -0.3
J13A	**Cove Ranch, Pi** baz=83,SNR=12	82.55 327	⇑P	P	06 31 22.3 +0.2
I14A	**Mackay** baz=83,SNR=12	82.61 328	⇑P	P	06 31 22.8 +0.4
N08A	**GE Springer Mi** baz=83	82.64 323	⇓P	P	06 31 22.6 -0.1
L10A	**Juniper Basin** baz=83,SNR=9.6	82.71 325	⇓P	P	06 31 22.8 -0.1
H15A	**Lima** baz=83	82.76 329	⇑P	P	06 31 23.9 +0.8
HLID	**Hailey** baz=83,SNR=18	82.79 327	⇓P	P	06 31 23.7 +0.3
HLID	**Hailey** 7.0nm,0.8s,mb4.5	82.79 327	*e*P	P	06 31 23.4 0.0
J12A	**Stokes Ranch,** baz=83,SNR=8.4	82.89 327	⇓P	P	06 31 23.9 +0.1
I13A	**Wildhorse Cree** baz=83,SNR=10	82.91 328	⇓P	P	06 31 24.4 +0.5
P05C	**Yuba Gap, Truc** baz=83	82.95 321	⇓P	P	06 31 24.7 +0.4
K11A	**Parker Ranch,** baz=83,SNR=7.6	83.00 326	⇑P	P	06 31 24.3 -0.1
MCMT	**McKenzie Canyo**	83.01 329	*e*P	P	06 31 25.0 +0.5
E18A	**Harlowton** baz=83	83.07 332	⇑P	P	06 31 24.5 -0.3
N07B	**Gerlach** baz=83	83.08 323	⇓P	P	06 31 25.0 0.0
H14A	**Leadore** baz=83,SNR=5.8	83.09 329	⇓P	P	06 31 25.4 +0.5
BOZ	**Bozeman (W)** baz=83	83.09 330	⇓P	P	06 31 24.3 -0.6
G15A	**Dillon** baz=83	83.11 329	⇓P	P	06 31 25.2 +0.3
DLMT	**Dillon** 5.4nm,1.1s,mb4.3	83.31 329	*e*P	P	06 31 25.9 -0.1
MFID	**Camas Ranch** baz=84	83.37 326	⇓P	P	06 31 26.4 0.0
E17A	**Martinsdale** baz=84	83.39 331	⇓P	P	06 31 26.6 +0.2
K10A	**MacKenzie Ranc** baz=84	83.42 325	⇓P	P	06 31 26.5 -0.1
H13A	**Challis** baz=84,SNR=12	83.47 328	⇓P	P	06 31 27.1 +0.3
N06A	**Buffalo Meadow** baz=84	83.53 322	⇓P	P	06 31 27.0 -0.3
M07A	**Soldier Meadow** baz=84	83.62 323	⇑P	P	06 31 27.3 -0.3
ORV	**Oroville** baz=84	83.63 321	⇓P	P	06 31 27.7 -0.1
F15A	**Butte** baz=84	83.63 330	⇓P	P	06 31 27.4 -0.2
H12A	**Diamond D Ranc** baz=84	83.74 328	⇓P	P	06 31 28.4 +0.2
L08A	**Fields** baz=84	83.75 324	⇑P	P	06 31 27.9 -0.4
I11A	**Placerville** baz=84	83.80 327	⇑P	P	06 31 28.2 -0.3
K09A	**Rome** baz=84	83.80 325	⇑P	P	06 31 28.5 0.0
G13A	**Cobalt** baz=84,SNR=12	83.85 328	⇑P	P	06 31 29.0 +0.2
F14A	**Wisdom** baz=84	84.00 329	⇑P	P	06 31 29.4 -0.1
L07A	**Adell** baz=84	84.15 324	⇑P	P	06 31 30.6 +0.3
M06C	**Likely Place G** baz=84	84.19 322	⇓P	P	06 31 30.3 -0.3
C17A	**Wharram Farm,** baz=84	84.27 332	⇑P	P	06 31 30.5 -0.3
J09A	**Fry Pan Ranch,** baz=84	84.28 325	⇑P	P	06 31 31.3 +0.3
I10A	**Payette** baz=85	84.34 326	⇑P	P	06 31 31.3 0.0
GASB	**Alder Springs** baz=85	84.38 320	⇓P	P	06 31 32.3 +0.8
H11A	**Donnelly** baz=85	84.41 327	⇑P	P	06 31 31.6 0.0
F13A	**Darby** baz=85,SNR=6.7	84.42 329	⇑P	P	06 31 31.6 0.0
E14A	**Clinton** baz=85	84.52 330	⇓P	P	06 31 32.3 +0.3
D15A	**Lincoln** baz=85	84.56 331	⇑P	P	06 31 32.5 +0.2
K07A	**Rock Creek Ran** baz=85	84.58 324	⇓P	P	06 31 32.7 +0.2
MOD	**Modoc** baz=85	84.58 323	⇓P	P	06 31 32.4 -0.1
J08A	**Circle Bar Ran** baz=85,SNR=8.2	84.65 325	⇑P	P	06 31 32.9 +0.1
M05C	**Lookout** baz=85	84.67 322	⇑P	P	06 31 32.5 -0.4
H10A	**Noah's Angus R** baz=85	84.68 327	⇓P	P	06 31 32.7 -0.2
I09A	**Lost Marbles R** baz=85	84.72 326	⇑P	P	06 31 32.7 -0.5
O02C	**Red Bluff** baz=85	84.78 320	⇓P	P	06 31 33.7 +0.1
C16A	**Fuhringer Ranc** baz=85	84.82 332	⇓P	P	06 31 33.4 -0.2
F12A	**Elk City** baz=85	84.83 328	⇑P	P	06 31 33.7 +0.1
E13A	**Victor** baz=85,SNR=6.2	84.85 329	⇓P	P	06 31 33.7 0.0
L05A	**Lakeview** baz=85	84.97 323	⇑P	P	06 31 34.7 +0.2
G11A	**Walters Elk Ra** baz=85,SNR=7.5	85.04 328	⇑P	P	06 31 34.8 0.0
C15A	**Salmond Ranch,** baz=85,SNR=8.1	85.16 331	⇑P	P	06 31 35.1 -0.2
K06A	**Valley Falls** baz=85	85.18 324	⇓P	P	06 31 35.8 +0.3
M04C	**Maudoel** baz=86	85.33 322	⇓P	P	06 31 36.0 -0.3
F11A	**Grangeville** baz=86	85.35 328	⇑P	P	06 31 35.6 -0.7
G10A	**Bishop Farm, J** baz=86	85.37 327	⇓P	P	06 31 37.2 +0.8
J06A	**Christmas Vall** baz=86,SNR=5.9	85.45 324	⇑P	P	06 31 36.2 -0.6
E12A	**Beaver Dam Sad** baz=86	85.46 329	⇑P	P	06 31 36.4 -0.4
K05A	**Summer Lake** baz=86,SNR=6.2	85.47 323	⇓P	P	06 31 36.9 0.0
N02C	**Big Bar** baz=86	85.50 321	⇑P	P	06 31 36.7 -0.5
B15A	**Bradely Ranch,** baz=86	85.56 331	⇑P	P	06 31 36.3 -0.9
H08A	**Prairie City** baz=86	85.58 326	⇑P	P	06 31 37.4 0.0
M02C	**Dehan** baz=86	85.63 321	⇑P	P	06 31 37.3 -0.5
L04A	**Klamath Falls** baz=86	85.63 322	⇑P	P	06 31 37.6 -0.2
A16A	**West Butte Ran** baz=86,SNR=7.5	85.65 332	⇓P	P	06 31 36.7 -0.9
C14A	**Swan Lake** baz=86	85.66 330	⇓P	P	06 31 37.6 -0.1
G09A	**Cove** baz=86	85.68 327	⇓P	P	06 31 37.9 0.0
I07A	**Izee** baz=86	85.69 325	⇓P	P	06 31 37.9 -0.1
E11A	**Bogner Ranch,** baz=86	85.72 328	⇓P	P	06 31 37.5 -0.6
D12A	**Red Ives Fores** baz=86	85.84 329	⇓P	P	06 31 38.4 -0.3
TAM	**Tamanrasset**	85.84 62	*e*P	P	06 31 40.1 +0.8
F10A	**Beach Ranch, E** baz=86	85.92 327	⇑P	P	06 31 39.5 +0.4
I06A	**Prineville** baz=86,SNR=6.3	85.96 325	⇓P	P	06 31 39.4 0.0
J05A	**Fort Rock** baz=86,SNR=5.7	86.04 324	⇓P	P	06 31 39.2 -0.5
H07A	**Lands Inn, Kim** baz=86	86.08 325	⇓P	P	06 31 39.7 -0.2
A15A	**Johnson Ranch,** baz=86	86.14 332	⇓P	P	06 31 39.8 -0.3
E10A	**Myers Farm, Un** baz=87	86.24 328	⇑P	P	06 31 40.0 -0.6
G08A	**Pilot Rock** baz=86	86.27 326	⇑P	P	06 31 40.4 -0.4
D11A	**Klaveano Farm,** baz=86	86.28 329	⇓P	P	06 31 39.9 -0.9
B13A	**Whitefish** baz=87	86.43 330	⇑P	P	06 31 41.3 -0.3
A14A	**Double T Ranch** baz=87	86.43 331	⇓P	P	06 31 41.0 -0.5
H06A	**Lindquist Farm** baz=87	86.58 325	⇑P	P	06 31 42.1 -0.2
G07A	**Ruggs Ranch, H** baz=87	86.61 326	⇑P	P	06 31 42.3 -0.2
I05A	**Bend** baz=87	86.66 324	⇓P	P	06 31 42.6 -0.1
WALA	**Waterton Lakes** 6.1nm,1.0s,mb4.5	86.71 331	*e*P	P	06 31 42.3 -0.6
CASY	**Casey**	86.81 179	P	P	06 31 49.1 +5.8
A13A	**Flathead Natio** baz=87	86.83 331	⇓P	P	06 31 43.4 0.0
C11A	**Tepee Creek (N** baz=87	86.83 329	⇓P	P	06 31 42.7 -0.8
K02A	**Glendale** baz=87	86.90 322	⇓P	P	06 31 44.0 0.0
B12A	**Libby** baz=87	87.00 330	⇓P	P	06 31 44.1 -0.2
I04A	**Tendick Farm,** baz=87	87.01 323	⇓P	P	06 31 43.8 -0.7
D09A	**Jones Farm, Ri** baz=88	87.22 328	⇑P	P	06 31 44.6 -0.8
C10A	**Spilker Farm,** baz=88	87.30 329	⇑P	P	06 31 45.4 -0.4
J02A	**Umpqua** baz=88	87.35 322	⇓P	P	06 31 46.0 -0.1
G05A	**Wamic** baz=88	87.43 325	⇑P	P	06 31 46.6 +0.1
H04A	**Detroit Lake** baz=88	87.50 324	⇓P	P	06 31 46.2 -0.5
LSZ	**Lusaka** 4.9nm,0.8s,mb4.6	87.59 106	*e*P	P	06 31 50.2 +2.2
OD2	**Odessa Site #2**	87.65 328	*e*P	P	06 31 46.8 -0.6
A11A	**Hall Mountain,** baz=88	87.70 330	⇑P	P	06 31 46.9 -0.7
C09A	**Chrisman Ranch** baz=88	87.74 328	⇓P	P	06 31 47.3 -0.5
G04A	**Mulino** baz=88	88.00 324	⇓P	P	06 31 48.6 -0.5
B09A	**Rice** baz=88	88.13 329	⇑P	P	06 31 49.4 -0.3
C07A	**Waterville** baz=89	88.51 327	⇓P	P	06 31 50.9 -0.6
ASAR	**Alice Springs** 1.6nm,0.7s,baz=135,slow=1.8,SNR=17	125.57 204	PKP	PKPdf	06 37 59.1 -1.4
WRA	**Warramunga Arr** 2.4nm,0.8s,baz=169,slow=1.6,SNR=27	128.81 206	PKP	PKPdf	06 38 05.6 -1.2
EKS2	**Erkin-Say**	144.64 54	*e*PKPdf	PKPdf	06 38 33.6 -1.6
KURK	**Kurchatov**	144.88 39	*e*PKPdf	PKPdf	06 38 34.5 -0.8
USP	**Ospenovka** SNR=7.3	145.01 53	P	PKPbc	06 38 35.7 +0.3
AAK	**Ala-Archa** SNR=19	145.16 54	P	PKPbc	06 38 37.0 +1.1
CHMS	**Chumysh** SNR=7.4	145.25 53	P	PKPbc	06 38 36.8 +0.6
UCH	**Uchtor** SNR=31	145.27 54	P	PKPdf	06 38 37.6 +1.4
UCH	**Uchtor**	145.27 54	*e*PKPdf	PKPdf	06 38 37.1 +0.8
KBK	**Karagaybulak** SNR=7.2	145.48 53	P	PKPdf	06 38 37.9 +1.3
TKM2	**Tokmak 2** SNR=13	145.88 53	P	PKPdf	06 38 38.2 +0.9
TKM2	**Tokmak 2**	145.88 53	*e*PKPdf	PKPdf	06 38 37.8 +0.5
ZAA0	**Zalesovo Array**	146.15 30	*e*PKPdf	PKPdf	06 38 37.0 -0.4
ZALV	**Zalesovo Beam** 14nm,0.3s,baz=298,slow=3.7,SNR=51	146.15 30	PKPbc	PKPbc	06 38 37.4 -1.2
MK31	**Makanchi Array**	148.89 43	*e*PKPbc	PKPbc	06 38 45.5 -0.8
MKAR	**Makanchi Array** 6.5nm,0.6s,baz=255,slow=1.3,SNR=47	148.89 43	PKP	PKPdf	06 38 42.4 +0.2
MKAR			PKPbc	PKPbc	06 38 45.9 -0.4
SONM	**Songino Array** 1.2nm,0.9s,baz=338,slow=1.6,SNR=4.7	158.75 12	PKP	PKPdf	06 38 56.1 +0.1
SONM			PKPab	PKPab	06 39 31.6 -0.6
HHC	**Hu-ho-hao-te** 0.7nm,0.5s,baz=314,slow=4.6,SNR=4.4	166.32 5	*e*PKP	PKPdf	06 38 58.3 -5.4
HHC			PP	PP	06 43 50.8 -1.7
HHC			SS	SS	07 04 18.3 -4.6
HHC			PP	PP	
CD2	comp=Z,66nm,8.0s **Chengdu**	171.06 63	*e*PKP	PKPdf	06 39 04.3 -2.8

IDC 28 06:32:49.4±16.0, 1741S×17392W, h0km, mb4.3/5, mb1 4.4/5, mb1mx4.0/19, mbtmp4.3/5, Error ellipse: s-maj=307.8km s-min=148.1km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	37.74	260	P	P	06 40 07.8	+0.5
	2.7nm,0.4s,baz=85,slow=9.8,SNR=11						
STKA	**Stephens Creek**	42.62	242	P	P	06 40 48.8	+1.2
	4.4nm,0.9s,baz=84,slow=10.0,SNR=4.3						
WB2	**Warramunga Arr**	48.91	258	*e*P	P	06 41 36.9	-0.7
WRA	**Warramunga Arr** 2.9nm,0.4s,baz=97,slow=7.4,SNR=94	48.92	258	P	P	06 41 37.0	-0.7
ASAR	**Alice Springs** 1.7nm,0.5s,baz=94,slow=8.5,SNR=31	49.03	254	P	P	06 41 37.5	-1.0
FITZ	**Fitzroy Crossi** 1.0nm,0.5s,baz=57,slow=4.7,SNR=7.9	57.32	259	P	P	06 42 39.8	+0.1

KRSC 28 06:48:13.2±0.5, 5375N×16166E, h5km±5km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	0.81	3	*e*P	Pg	06 48 28.6	-0.1
MKZ				*e*S	Sg	06 48 39.3	+0.1
SPN	**Mys Shipunski**	1.18	237	S	Sg	06 48 53.9	+2.9
NLC	**Nalytchevo**	1.50	248	*e*P	Pn	06 48 40.9	+0.2
NLC				*e*S	Sn	06 49 01.6	+1.0
SDLR	**Sedlovina**	1.72	255	*e*P	Pn	06 48 44.5	+0.7
AVH	**Avacha**	1.81	256	*e*P	Pn	06 48 45.9	+0.9
AVH				*e*S	Sn	06 49 09.1	+0.8
PET	**Petropavlovsk**	1.94	249	*e*P	Pn	06 48 48.6	+1.8
PET				*e*S	Sn	06 49 14.3	+2.8
GNL	**Ganaly**	2.21	270	P	Pn	06 48 52.8	+2.3
RUS	**Russkaya**	2.31	236	*e*P	Pn	06 48 52.3	+0.4
RUS				*e*S	Sn	06 49 21.1	+0.5

*PRU **28** 06:59:15.7, 4270N×1506E, h0km, M4.1*
*IDC **28** 06:59:22.9±1.1, 4328N×1536E, h0km, mb3.8/7, mb1 3.9/11, mb1mx3.8/26, mbtmp3.8/11, ML3.9/4, MS2.7/1, Ms1 2.7/1, ms1mx2.1/37, Error ellipse: s-maj=22.9km s-min=13.6km az=85.0*
*BEO **28** 06:59:23.5±0.6, 4317N×1523E, ML4.0/5*
*ROM **28** 06:59:23.4±0.2, 4323N×1547E, h21km±3km, Md3.3/38, Ml3.6/35, Error ellipse: s-maj=3.6km s-min=1.7km az=49.0*
*PDG **28** 06:59:23.8±0.7, 4320N×1523E, h8km±1km, MD4.0/4, ML3.9/9, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
*ISCJB **28** 06:59:23.6±0.1, 4321N±0.001×1524E±0.001, h10km, mb3.9/9, Error ellipse: s-maj=1.6km s-min=1.5km az=137.6*
*NEIC **28** 06:59:23.4±0.4, 4311N×1513E, h10km, mb4.1/3, Error ellipse: s-maj=5.5km s-min=4.2km az=155.0*
*CSEM **28** 06:59:24.3±0.0, 4325N×1537E, h15km, mb4.6/1, ML4.2/16, Ms3.6, Error ellipse: s-maj=1.1km s-min=1.0km az=111.0*
*VIE **28** 06:59:24.4±0.4, 4315N×1523E, h10km, mb3.4/13, ML3.5/13, Ms3.6/1, Error ellipse: s-maj=4.2km s-min=3.4km az=50.0 108 km WSW of Split*
*LDG **28** 06:59:24.2±0.1, 4321N×1526E, h10km, Ml3.8/13, Error ellipse: s-maj=2.5km s-min=1.8km az=16.0*
*SZGRF **28** 06:59:24.1, 4319N×1572E, h10km, mb3.8, Adriatic Sea*
*MOS **28** 06:59:24.1±0.6, 4319N×1504E, h31km, mb4.2/1, Error ellipse: s-maj=7.1km s-min=4.5km az=107.4*

ISC 28 06:59:24.6±0.1, 4317N±001×1522E±001, h10km, n217, σ1§24/328, mb3.9/9, 21C-18D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRTR	**Tortoreto Alta**	1.03	250	Pn	Pn	06 59 46.1	+1.1
TRTR				Sn	Sn	07 00 02.7	+3.2
	3μm,0.5s						
CAFR	**Castel Frentan**	1.14	215	Pn	Pn	06 59 45.9	-0.7
	2μm,0.5s						
OFFI	**Offida**	1.15	259	Pn	Pn	06 59 47.9	+1.1
OFFI				Sn	Sn	07 00 05.3	+2.7
	4μm,0.7s						
AOI	**Ancona**	1.24	289	Pn	Pn	06 59 48.1	0.0
AOI				Sn	Sn	07 00 06.5	+1.6
	1μm,0.6s						
FRES	**Fresagrandinar**	1.26	199	Pn	Pn	06 59 47.7	-0.5
	4μm,1.5s						
VCEL	**Villa Celiera**	1.28	233	Pn	Pn	06 59 50.0	+1.5
	2μm,1.0s						
FG2	**Serracapriola**	1.36	182	Pn	Pn	06 59 49.0	-0.6
FG2				Sn	Sn	07 00 08.4	+0.7
	661nm,0.2s						
NVLJ	**Novalja**	1.42	350	*e*Pg	Pn	06 59 49.7	-0.8
NVLJ				Sg	Sg	07 00 09.7	-0.6
SGRT	**San Giovanni R**	1.46	165	Pn	Pn	06 59 49.5	-1.5
SGRT				Sn	Sn	07 00 10.0	-0.2
	1μm,0.5s						
CAMP	**Campotosto**	1.48	245	Pn	Pn	06 59 51.4	+0.2
CAMP				Sn	Sg	07 00 13.2	+1.1
	68nm,0.6s						
CING	**Cingoli**	1.50	279	Pn	Pn	06 59 51.6	+0.1
CING				Sn	Sn	07 00 12.9	+1.8
	666nm,0.7s						
FAGN	**Fagnano**	1.51	234	Pn	Pn	06 59 51.8	+0.2
FAGN				Sn	Sg	07 00 13.8	+0.8
	998nm,0.4s						
INTR	**Introdacqua**	1.51	221	Pn	Pn	06 59 52.4	+0.7
	1μm,0.7s						
RGNG	**Rignano Grg**	1.51	170	Pn	Pn	06 59 50.1	-1.6
CIGN	**Sant'Elia a Pi**	1.53	189	Pn	Pn	06 59 51.3	-0.6
CIGN				Sn	Sn	07 00 11.7	-0.1
	494nm,0.5s						
MSAG	**Monte S. Angel**	1.54	161	Pn	Pn	06 59 51.4	-0.7
	2μm,0.7s						
SENI	**Senigallia**	1.55	291	Pn	Pn	06 59 53.0	+0.8
	494nm,0.5s						
MS1	**Monte Sant'Ang**	1.55	160	*e*Pn	Pn	06 59 54.2	+1.9
FGMS	**Monte Sant'Ang** 2μm,1.0s	1.55	159	Pn	Pn	06 59 51.3	-1.0
AQU	**L'Aquila**	1.57	239	Pn	Pn	06 59 53.0	+0.5
NRCA	**Norcia**	1.58	259	Pn	Pn	06 59 52.7	0.0
SNTG	**Esanatoglia** 130nm,0.2s	1.67	274	Pn	Pn	06 59 54.1	+0.2
MIDA	**Miranda** 647nm,0.5s	1.68	206	Pn	Pn	06 59 54.9	+0.8
BSSO	**Busso** 868nm,0.8s	1.68	196	Pn	Pn	06 59 53.5	-0.6

ARVD	Arcevia	1.70	282	Pn	Pn	06 59 54.7	+0.4	KRUS			eSn	Sn	07 01 29.2	-3.8
	232nm,0.6s							WTTA	Wattenberg	4.82	330⇑iPn	Pn	07 00 37.1	0.0
LNSS	Leonessa	1.70	251	Pn	Pn	06 59 55.0	+0.7	WTTA			⇓iSn	Sn	07 01 34.7	+1.7
	878nm,0.6s							BARS	Barje	4.85	92 ePn	Pn	07 00 37.3	-0.3
CESI	CESI - Serrava	1.71	265	Pn	Pn	06 59 54.9	+0.5	BARS			eSn	Sn	07 01 32.0	-1.7
	172nm,0.5s							RJOB	Jochberg	4.88	340 ePn	Pn	07 00 39.0	+1.0
VVLD	Villa Vallelon	1.75	223	Pn	Pn	06 59 55.7	+0.7	RJOB			eSn	Sn	07 01 35.4	+0.9
	743nm,0.7s							WATA	Walderalm	4.90	330⇓iPn	Pn	07 00 38.6	+0.3
PTQR	Pietraquaria	1.77	230	Pn	Pn	06 59 56.2	+1.0	WATA			⇓iSn	Sn	07 01 37.2	+2.1
SDI	San Donato	1.79	216	Pn	Pn	06 59 54.9	-0.7	FETA	Feichten	5.00	322⇓iPn	Pn	07 00 39.8	+0.1
	120nm,0.3s							FETA			⇑iSn	Sn	07 01 38.9	+1.5
FIAM	Fiamignano	1.79	241	Pn	Pn	06 59 57.0	+1.4	BIA	Bitola	5.02	113 ePn	Pn	07 00 38.9	-1.1
	507nm,0.7s							BIA			eSn	Sn	07 01 34.0	-4.0
POFI	Posta Fibreno	1.83	218	Pn	Pn	06 59 56.1	0.0	BIA	Bitola	5.02	113 ePn	Pn	07 00 38.8	-1.1
	466nm,1.1s							BIA			eSn	Sn	07 01 33.9	-4.1
STON	Ston	1.84	98 ePn		Pn	06 59 55.3	-0.9	MOTA	Moosalm	5.09	327⇑iPn	Pn	07 00 42.0	+1.1
STON			Sn		Sn	07 00 18.8	-0.8	MOTA			⇑iSn	Sn	07 01 41.8	+2.0
FSSB	Fossombrone	1.86	287	Pn	Pn	06 59 56.8	+0.3	ZST	Bratislava	5.20	14 ePN	Pn	07 00 42.5	+0.1
	450nm,0.4s							ZST			eSN	Sn	07 01 40.4	-2.0
SGG	Gregorio Mates	1.88	200	Pn	Pn	06 59 57.0	+0.2	DAVOX	Davos/Dischmat	5.24	315 Pn	Pn	07 00 44.0	+1.1
	456nm,0.6s								5.0nm,0.3s,baz=151,slow=17,SNR=24					
ASS	Assisi	1.89	268	Pn	Pn	06 59 57.6	+0.7	DAVOX			Sn	Sn	07 01 43.9	+0.6
	195nm,0.6s								3.0nm,0.3s,baz=342,slow=20,SNR=2.3					
VAGA	Valle Agricola	1.90	203	Pn	Pn	06 59 56.7	-0.3	DAVOS	Davos	5.32	316 P	Pn	07 00 44.0	-0.1
	1µm,1.2s							DAVOS			S	Sn	07 01 43.9	-1.5
MURB	Monte Urbino	1.98	274	Pn	Pn	06 59 58.9	+0.8	TUE	Stuetta	5.33	310 ePn	Pn	07 00 44.2	0.0
	1µm,0.9s								15nm,0.6s					
PIEI	Pieia	2.00	282	Pn	Pn	06 59 58.8	+0.4	TUE			eSn	Sn	07 01 40.9	-4.7
	226nm,0.5s							TUE	Stuetta	5.33	310 ePn	Pn	07 00 44.2	0.0
MNS	Montasola	2.03	248	Pn	Pn	06 59 59.7	+0.9		15nm,0.6s					
	351nm,1.0s							TUE			eSn	Sn	07 01 40.9	-4.7
BLY	Banja Luka	2.12	41 ePn		Pn	07 00 01.0	+0.9	MODS	Modra-Piesok	5.40	15 ePN	Pn	07 00 44.7	-0.5
BLY			eSg		Sg	07 00 31.5	-1.4	MODS			eSN	Sn	07 01 44.3	-3.1
BADI	Badiali	2.20	280	Pn	Pn	07 00 02.7	+1.5	ZAPS	Zavoj	5.42	86 ePn	Pn	07 00 45.7	+0.3
	189µm,26.0s							ZAPS			eSn	Sn	07 01 46.3	-1.4
MRVN	Minervino Murg	2.22	161	Pn	Pn	06 59 59.5	-2.0	PENC	Penc	5.43	30 eP	Pn	07 00 45.4	-0.2
TREB	Trebinje	2.34	100 ePn		Pn	07 00 02.9	-0.2	PENC			eS	Sn	07 01 50.2	+2.0
TREB			eSn		Sn	07 00 32.4	+0.5	DAVA	Damuels	5.59	319⇓iPn	Pn	07 00 48.3	+0.5
BOJS	Bojanci	2.34	0 iPn		Pn	07 00 04.1	+1.0	DAVA			⇑iSn	Sn	07 01 51.4	-0.6
BOJS			iSn		Sn	07 00 35.5	+3.7	SBF	Sospel	5.71	280 ePn	Pn	07 00 48.5	-0.9
CAFI	Castiglion Fio	2.39	275	Pn	Pn	07 00 04.8	+1.1	SBF			eSn	Sn	07 01 49.5	-5.4
	128nm,0.7s								16nm,0.5s					
CRE	Caprese Michel	2.43	282	Pn	Pn	07 00 05.7	+1.4	SBF	Sospel	5.71	280 ePn	Pn	07 00 48.5	-0.9
	77nm,0.7s							SBF			eSn	Sn	07 01 49.5	-5.4
KNDS	Knezji Dol	2.44	346 ePn		Pn	07 00 04.8	+0.3		7.9nm,0.5s					
KNDS			eSn		Sn	07 00 37.0	+2.7	VAE	Valguarnera	5.71	187 LR	LR	07 03 20.9	
BRY	Bratogost	2.45	95⇑iPn		Pn	07 00 05.6	+1.0		comp=Z,62nm,18.5s,baz=140,slow=41					
BRY			eSn		Sn	07 00 37.1	+2.5	VSL	Villasalto	5.73	232 ePn	Pn	07 00 51.4	+1.7
SISC	Sisak	2.45	19 ePn		Pn	07 00 04.2	-0.4	VSL	Villasalto	5.73	232 ePn	Pn	07 00 51.4	+1.8
SISC			Sn		Sn	07 00 34.3	-0.3	VAY	Valandovo	5.75	106 ePn	Pn	07 00 48.5	-1.6
SISC	Sisak	2.45	19 ePn		Pn	07 00 04.1	-0.5	PSZ	Piszkesteto	5.78	33 eP	Pn	07 00 49.3	-1.0
SISC			Sn		Sn	07 00 34.2	-0.4	PSZ			pmax	pmax		
SACS	San Casciano d	2.45	264	Pn	Pn	07 00 05.3	+0.7		comp=Z,10.0nm,0.8s					
	1µm,2.6s							PSZ	Piszkesteto	5.78	33 e	Pn	07 00 51.4	+1.1
HCY	Herceg Novi	2.51	105⇑iPn		Pn	07 00 06.0	+0.5	PSZ			ePn	Sn	07 01 56.4	-0.1
HCY			eSn		Sn	07 00 38.9	+2.7	PSZ	Piszkesteto	5.78	33 ePn	Pn	07 00 49.3	-1.0
SG1	Sgolgore (BA)	2.56	154 ePn		Pn	07 00 04.3	-1.9		comp=Z,10nm,0.8s					
SFI	Santa Sofia	2.56	288	Pn	Pn	07 00 07.2	+1.0	PSZ	Piszkesteto	5.78	33 ePn	Pn	07 00 49.3	-1.0
	68nm,0.6s								comp=Z,10nm,0.8s					
CEY	Cerknica	2.64	348 ePn		Pn	07 00 07.5	+0.3	GEC2	GERESS Array S	5.78	350 ePn	Pn	07 00 50.1	-0.3
CEY			eSn		Sn	07 00 40.6	+1.4	GEC2			eSn	Sn	07 01 54.9	-1.8
VISS	Visnje	2.65	354 ePn		Pn	07 00 08.2	+0.7	GEC2	GERESS Array S	5.78	350 ePn	Pn	07 00 49.9	-0.5
VISS			eSn		Sn	07 00 42.2	+2.6	GEC2			eS	Sn	07 01 54.9	-1.8
VISS	Visnje	2.65	354 ePn		Pn	07 00 08.1	+0.7	GEC2	GERESS Array S	5.78	350 ePn	Pn	07 00 49.9	-0.5
CRES	Cresnjev	2.67	3 ePn		Pn	07 00 08.3	+0.7	GEC2			eSn	Sn	07 01 54.9	-1.8
CRES			eSn		Sn	07 00 42.2	+2.3	GERES	GERESS Array B	5.78	350 Pn	Pn	07 00 50.2	-0.2
CDRU	Civita di Ruta	2.67	179 Pn		Pn	07 00 06.6	-1.1		comp=Z,5.7nm,0.3s,baz=169,slow=13,SNR=167					
UPM	Unac-Piva	2.70	88⇑iPn		Pn	07 00 08.7	+0.7	GERES			Sn	Sn	07 01 54.5	-2.1
UPM			eSn		Sn	07 00 43.1	+2.4		comp=Z,4.5nm,0.3s,baz=164,slow=25,SNR=6.1					
NKY	Niksic	2.79	96⇑iPn		Pn	07 00 09.8	+0.5	KOLL	Kolacno	5.85	21 ePn	Pn	07 00 51.0	-0.3
NKY			eSn		Sn	07 00 45.5	+2.5	KOLL			eSN	Sn	07 01 58.2	-0.2
VMG	Vicchio	2.79	288	Pn	Pn	07 00 11.0	+1.7	VYHS	Vyhne	5.90	24 ePN	Pn	07 00 52.4	+0.4
	44nm,0.3s							VYHS			eSN	Sn	07 01 57.4	-2.1
BUM	Brajici-Budva	2.84	106⇑iPn		Pn	07 00 10.4	+0.4	KHC	Kasperske Hory	6.08	350 ex	x	07 00 03.0	
BUM			eSn		Sn	07 00 46.8	+2.5	KHC			ePN	Pn	07 00 54.1	-0.3
JAVS	Javornik	2.85	343 i Pn		Pn	07 00 10.2	+0.1	KHC			eSN	Sn	07 02 00.8	-3.2
JAVS			iSn		Sn	07 00 46.4	+1.8	KHC			ex	x	07 02 22.0	
PE1	Pezze di Greco	2.87	144 ePn		Pn	07 00 08.7	-1.7	TREC	Trest	6.13	2 ePN	Pn	07 00 55.0	-0.2
CSNT	Castellina Chi	2.89	277	Pn	Pn	07 00 11.2	+0.6	WET	Wettzell	6.20	346 ePn	Pn	07 00 55.7	-0.4
	92nm,1.0s							WET			eSn	Sn	07 02 04.3	-2.7
LJU	Ljubljana	2.92	350 ePn		Pn	07 00 11.8	+0.7	VRAC	Vranov	6.22	8 Pn	Pn	07 00 55.0	-1.3
LJU	Ljubljana	2.92	350 ePn		Pn	07 00 11.0	-0.1		comp=Z,0.6nm,0.3s,baz=189,slow=16,SNR=3.0					
LJU			eSn		Sn	07 00 47.6	+1.4	VRAC			Sn	Sn	07 02 05.4	-2.1
SEI	Scarperia	2.95	289	Pn	Pn	07 00 13.2	+1.7		comp=Z,1.2nm,0.3s,baz=288,slow=20,SNR=2.7					
	172nm,0.3s							FRF	La Foret Royal	6.27	277 ePn	Pn	07 00 54.9	-2.1
VOY	Vojsko	3.02	342⇓ePn		Pn	07 00 12.6	+0.1	MBDF	Montbardon	6.30	287 ePn	Pn	07 00 56.1	-1.4
VOY			eSn		Sn	07 00 50.4	+1.7	MBDF			eSn	Sn	07 02 03.7	-5.8
PLE	Pljevlja	3.05	85⇓iPn		Pn	07 00 13.3	+0.4		comp=Z,18nm,0.6s					
PLE			eSn		Sn	07 00 51.6	+2.2	MBDF	Montbardon	6.30	287 ePn	Pn	07 00 56.1	-1.4
PDG	Podgorica	3.06	103⇑iPn		Pn	07 00 13.2	+0.2	MBDF			eSn	Sn	07 02 03.7	-5.8
PDG			eSn		Sn	07 00 52.0	+2.3		comp=Z,8.9nm,0.6s					
TTG	Podgorica	3.06	103⇑iPn		Pn	07 00 13.2	+0.2	LMR	La Mourre	6.37	274 ePn	Pn	07 00 56.9	-1.5
TTG			eSn		Sn	07 00 52.0	+2.3	BNI	Bardonecchia	6.43	290 ePn	Pn	07 00 58.9	-0.5
BBLS	Lazići	3.12	76 ePg		Pg	07 00 19.1	-5.3	BNI			eSn	Sn	07 02 08.6	-4.2
BBLS			eSn		Sn	07 00 51.2	0.0	BNI	Bardonecchia	6.43	290 ePn	Pn	07 00 58.9	-0.5
BBLS			eSg		Sg	07 01 02.3	-2.5	BNI			eSn	Sn	07 02 08.6	-4.3
BBLS	Lazići	3.12	76⇓iPn		Pn	07 00 14.2	+0.4	LPG	La Plagne	6.51	294 ePn	Pn	07 00 59.1	-1.3
BBLS			eSn		Sn	07 00 51.2	0.0	LPG			eSn	Sn	07 02 07.8	-6.8
CUC	Castrocucco	3.20	172 ePn		Pn	07 00 12.1	-2.8		comp=Z,28nm,0.5s					
CUC	Castrocucco	3.20	172 ePn		Pn	07 00 12.1	-2.9	LPG	La Plagne	6.51	294 ePn	Pn	07 00 59.1	-1.3
ULC	Ulcinj	3.21	111⇑iPn		Pn	07 00 15.8	+0.8	LPG			eSn	Sn	07 02 07.8	-6.8
ULC			eSn		Sn	07 00 55.7	+2.4		comp=Z,14nm,0.5s					
KOGS	Kog	3.36	12 ePn		Pn	07 00 17.3	+0.1	LPL	La Plagne	6.53	294 ePn	Pn	07 00 57.0	-3.6
KOGS			eSn		Sn	07 00 58.8	+1.7	LPL			eSn	Sn	07 02 08.5	-6.6
OBKA	Obir	3.38	352⇓iPn		Pn	07 00 17.3	-0.1		comp=Z,25nm,0.4s					
OBKA			⇓iSn		Sn	07 00 58.9	+1.4	MORC	Moravsky Berou	6.80	13 ePn	Pn	07 01 03.1	-1.3
OBKA	Obir	3.38	352 Pn		Pn	07 00 17.3	-0.1	MORC			eS	Sn	07 02 22.5	+0.6
OBKA			Sn		Sn	07 00 58.9	+1.4	MORC	Moravsky Berou	6.80	13 ePn	Pn	07 01 03.1	-1.3
BEY	Berane	3.44	93⇑iPn		Pn	07 00 19.2	+1.0	MORC			eSn	Sn	07 02 22.5	+0.6
BEY			eSn		Sn	07 01 01.3	+2.3	PRU	Pruhonice	6.84	356 ePN	Pn	07 01 04.0	-0.9
IVA	Berane	3.44	93⇑iPn		Pn	07 00 19.2	+1.0	PRU			eSN	Sn	07 02 20.3	-2.5
IVA			eSn		Sn	07 01 01.3	+2.3	ORIF	Oris-en-Rattie	6.96	288 ePn	Pn	07 01 05.3	-1.3
PERS	Pernice	3.47	359 i Pn		Pn	07 00 18.8	+0.1	ORIF			eSn	Sn	07 02 19.7	-6.0
PERS			i Sn		Sn	07 01 00.1	+0.2		comp=Z,20nm,0.6s					
SJES	Sjenica	3.47	87 ePn		Pn	07 00 18.1	-0.6	ORIF	Oris-en-Rattie	6.96	288 ePn	Pn	07 01 05.3	-1.3
SJES			eSn		Sn	07 00 59.8	0.0	ORIF			eSn	Sn	07 02 19.7	-6.0
RHK3	Tenkes	3.48	37 eP		Pn	07 00 17.9	-0.9		comp=Z,9.8nm,0.6s					
PTCC	Patocco-Chiusa	3.50	338 Pn		Pn	07 00 18.9	-0.2	NKC	Novy Kostel	7.32	346 ePN	Pn	07 01 10.8	-0.7
	74nm,0.5s							CABF	La Chapelle	7.35	301 ePn	Pn	07 01 09.5	-2.4
PVY	Plav	3.54	98⇓iPn		Pn	07 00 20.3	+0.7	CABF			eSn	Sn	07 02 28.1	-7.1
PVY			eSn		Sn	07 01 03.8	+2.4		comp=Z,6.4nm,0.3s					
DIVS	Divibare	3.58	73 ePn		Pn	07 00 20.2	0.0	CABF	La Chapelle	7.35	301 ePn	Pn	07 01 09.5	-2.4
DIVS			eSn		Sn	07 01 03.0	+0.4	CABF			eSn	Sn	07 02 28.1	-7.1
DIVS	Divibare	3.58	73 ePn		Pn	07 00 20.7	+0.5		comp=Z,3.2nm,0.3s					
DIVS			eSn		Sn	07 01 03.0	+0.4	TANN	Tannenbergstha	7.50	346 ePn	Pn	07 01 13.0	-0.9
MYKA	Terra Mystica	3.64	343⇓iPn		Pn	07 00 21.3	+0.3	HINF	Hinteralfeld	7.50	311 ePn	Pn	07 01 13.3	-0.6
MYKA			⇑iSn		Sn	07 01 06.0	+2.0	HINF			eSn	Sn	07 02 30.8	-8.1
VLC	Villacollemand	3.65	287 ePn		Pn	07 00 21.2	+0.1		comp=Z,17nm,0.5s					
VLC	Villacollemand	3.65	287 ePn		Pn	07 00 21.2	+0.1	HINF	Hinteralfeld	7.50	311 ePn	Pn	07 01 13.3	-0.6
CTI	Castel Tesino	3.85	320 Pn		Pn	07 00 23.7	-0.2	HINF			eSn	Sn	07 02 30.8	-8.1
	41nm,0.4s								comp=Z,8.4nm,0.5s					
FGSL	Fruska Gora	3.85	57 ePn		Pn	07 00 23.7	-0.2	STHS	Stebnicka Huta	7.51	32 ePN	Pn	07 01 15.7	+1.6
FGSL			eSn		Sn	07 01 09.2	0.0	STHS			eSN	Sn	07 02 42.0	+2.7
FGSL	Fruska Gora	3.85	57 ePn		Pn	07 00 24.2	+0.3	CDF	Champ du Feu	7.64	316 ePn	Pn	07 01 13.4	-2.5
FGSL			eSn		Sn	07 01 09.2	0.0	BRG	Berggiesshubel	7.76	354 P	Pn	07 01 16.6	-0.9
TIR	Tirane	3.89	116 ePn		Pn	07 00 24.0	-0.5	BRG			pmax	pmax		
TIR			eSn		Sn	07 01 09.9	-0.3		comp=Z,11nm,1.2s					
PKSM	Moragy	3.90	37⇓ePn		Pn	07 00 24.1	-0.5	BRG	Berggiesshubel	7.76	354 ePn	Pn	07 01 16.4	-1.1
GRUS	Gruza	4.06	78⇑iPn		Pn	07 00 25.5	-1.2	BRG	Berggiesshubel	7.76	354 PN	Pn	07 01 16.6	-0.9
GRUS			eSn		Sn	07 01 14.0	-0.3	BRG			e		07 03 11.5	
ARSA	Arzberg	4.09	3⇑iPn		Pn	07 00 27.1	-0.1	BRG	Berggiesshubel	7.76	354 SG	Sx	07 03 39.6	
ARSA	Arzberg	4.09	3⇑iPn		Pn	07 00 26.6	-0.6		comp=Z,18nm,1.2s					
KBA	Koelnbreinsper	4.13	342⇓iPn		Pn	07 00 28.5	+0.8	BRG	Berggiesshubel	7.76	354 Pn	Pn	07 01 16.6	-0.9
KBA			⇓iSn		Sn	07 01 17.6	+1.5		comp=Z,11nm,1.2s					
TIP	Timpagrande	4.15	163 ePn		Pn	07 00 27.9	-0.1	BRG			e		07 03 11.5	
TIP	Timpagrande	4.15	163 ePn		Pn	07 00 27.9	-0.1	BRG			Sg	Sn	07 03 39.6	+54
SEST	Monte Rota	4.17	330 Pn		Pn	07 00 29.1	+0.8	VIVF	Saint-Julien-l	7.79	286 ePn	Pn	07 01 15.7	-2.3
	150nm,0.7s							MOX	Moxa	7.88	343 ePN	Pn	07 01 18.1	-1.1
MAGA	Magasa	4.20	310	Pn	Pn	07 00 27.9	-0.8	MOX			eSN	Sn	07 02 44.1	-4.2
	189nm,0.4s							HAU	Haudompre	7.88	311 ePn	Pn	07 01 17.8	-1.4
APPI	Appiano	4.37	321	Pn	Pn	07 00 30.8	-0.1	HAU			eSn	Sn	07 02 40.3	-8.2
	95nm,0.3s								comp=Z,20nm,0.5s					
SOP	Sopron	4.62	11⇓ePn		Pn	07 00 34.1	-0.3	HAU	Haudompre	7.88	311 ePn	Pn	07 01 17.8	-1.4
SOP			eSn		Sn	07 01 25.7	-2.3	HAU			eSn	Sn	07 02 40.3	-8.2
OHR	Ohrid	4.62	114 i Pn		Pn	07 00 41.5	+7.0		comp=Z,10nm,0.5s					
MOA	Molln	4.73	352⇑iPn		Pn	07 00 36.6	+0.6	SSB	Saint Sauveur	7.96	289 ePn	Pn	07 01 17.9	-2.4
MOA			⇓iSn		Sn	07 01 32.3	+1.4	SSB			eS	Sn	07 02 49.3	-1.0
SKO	Skopje	4.74	102 ePn		Pn	07 00 40.6	+4.5	SSB	Saint Sauveur	7.96	289 ePn	Pn	07 01 17.9	-2.4
SKO	Skopje	4.74	102 ePn		Pn	07 00 40.6	+4.5	SSB			eSn	Sn	07 02 49.3	-1.0
CONA	Conrad Observa	4.79	5⇑iPn		Pn	07 00 36.4	-0.3	CLL	Collm	8.29	350 ePn	Pn	07 01 24.0	-0.7
CSNA	Conrad Observa	4.79	5⇓iPn		Pn	07 00 36.7	0.0		comp=Z,12nm,0.4s					
KRUS	Krusevo	4.82	110 i Pn		Pn	07 00 37.5	+0.3	CLL			eSg	Sn	07 03 58.0	+60
									comp=Z,24nm,1.1s					

LASF	Ste Croix	8.30	280 ePn		Pn	07 01 23.0	-1.9				
RFYF	Reffroy	8.72	312 ePn		Pn	07 01 27.5	-3.2				
SFTF	Sexfontaines	8.73	309 ePn		Pn	07 01 27.5	-3.3				
SMF	Signal de Mont	8.80	297 ePn		Pn	07 01 29.1	-2.6				
SMF			eSn		Sn	07 03 03.0	-7.9				
	comp=Z,15nm,0.6s										
SMF	Signal de Mont	8.80	297 ePn		Pn	07 01 29.1	-2.6				
SMF			eSn		Sn	07 03 03.0	-7.9				
	comp=Z,7.3nm,0.6s										
LOR	Lormes	9.01	301 ePn		Pn	07 01 32.8	-1.9				
	baz=126										
LOR			eSn		Sn	07 03 07.0	-9.1				
	comp=Z,8.4nm,0.3s										
LOR	Lormes	9.01	301 ePn		Pn	07 01 32.8	-1.9				
LOR			eSn		Sn	07 03 07.0	-9.1				
	comp=Z,4.2nm,0.3s										
SSF	Saint Saulge	9.15	299 ePn		Pn	07 01 33.5	-3.2				
SSF			eSn		Sn	07 03 11.5	-8.2				
	comp=Z,9.8nm,0.6s										
SSF	Saint Saulge	9.15	299 ePn		Pn	07 01 33.5	-3.2				
SSF			eSn		Sn	07 03 11.5	-8.2				
	comp=Z,4.9nm,0.6s										
AVF	Avril sur Loir	9.16	297 ePn		Pn	07 01 34.2	-2.6				
BGF	Bois d'Agland	9.42	295 ePn		Pn	07 01 37.8	-2.5				
BGF			eSn		Sn	07 03 17.5	-8.7				
	comp=Z,21nm,0.6s										
BGF	Bois d'Agland	9.42	295 ePn		Pn	07 01 37.8	-2.5				
BGF			eSn		Sn	07 03 17.5	-8.7				
	comp=Z,10nm,0.6s										
MTLF	Montolieu	9.49	276 ePn		Pn	07 01 38.6	-2.7				
TCF	Toulx Ste Croi	9.78	293 eSn		Sn	07 03 26.1	-8.8				
	comp=Z,3.1nm,0.4s										
TCF	Toulx Ste Croi	9.78	293 eSn		Sn	07 03 26.1	-8.8				
	comp=Z,1.5nm,0.4s										
NOA	NORSAR Array B	18.07	354 P		Pn	07 03 34.8	-0.7				
	comp=Z,0.1nm,0.3s,baz=168,slow=11,SNR=4.6										
TORD	Torodi Ar. Bea	32.11	205 P		P	07 05 51.7	-0.3				
	comp=Z,0.2nm,0.4s,mb3.3,baz=23,slow=8.4,SNR=3.4										
BRVK	Borovoye	37.21	55 eP		P	07 06 35.1	-0.7				
BRVK			pmax	pmax							
	comp=Z,6.0nm,0.4s,mb4.8										
BRVK	Borovoye	37.21	55 eP		P	07 06 35.1	-0.7				
	comp=Z,5.6nm,0.4s,mb4.8										
BRVK	Borovoye	37.21	55 eP		P	07 06 35.1	-0.7				
	comp=Z,5.6nm,0.4s,mb4.8										
KURK	Kurchatov	42.74	57 eP		P	07 07 19.4	-2.3				
KURK			pmax	pmax							
	comp=Z,2.0nm,1.0s,mb3.8										
KURK	Kurchatov	42.74	57 eP		P	07 07 19.4	-2.3				
	comp=Z,1.9nm,1.0s,mb3.8										
KURK	Kurchatov	42.74	57 eP		P	07 07 19.4	-2.3				
	comp=Z,1.9nm,1.0s,mb3.8										
ZALV	Zalesovo Beam	45.52	51 P		P	07 07 42.5	-1.5				
	comp=Z,0.8nm,0.4s,mb4.2,baz=273,slow=13,SNR=3.3										
MKAR	Makanchi Array	46.28	61 P		P	07 07 48.8	-1.3				
	comp=Z,1.1nm,0.6s,mb4.0,baz=283,slow=6.1,SNR=6.8										
SONM	Songino Array	60.42	51 P		P	07 09 33.4	-0.6				
	comp=Z,0.5nm,0.6s,mb3.7,baz=292,slow=7.6,SNR=2.9										
ULM	Lac du Bonnet	69.30	320 P		P	07 10 31.1	-0.6				
	comp=Z,1.2nm,0.7s,mb4.0,baz=63,slow=6.8,SNR=3.0										
ULM	Lac du Bonnet	69.30	320 P		P	07 10 31.1	-0.7				
PDAR	Pinedale Array	81.15	322 P		P	07 11 40.1	0.0				
	comp=Z,0.4nm,0.5s,mb3.6,baz=57,slow=6.0,SNR=4.2										
TXAR	Lajitas Array	88.65	310 P		P	07 12 20.0	+1.8				
	comp=Z,0.8nm,1.1s,mb4.0,baz=48,slow=1.3,SNR=3.4										

*BJI **28** 07:16:22.5, 4240N×12650W, h10km, mB5.0, mb4.4*
*ISCJB **28** 07:16:25.3±2.1, 4245N±005×12650W±008, h12km±15km,*
Error ellipse: s-maj=9.7km s-min=7.6km az=172.7
*NEIC **28** 07:16:26.5±1.1, 4241N×12649W, h10km, mb4.0/1, Error*
ellipse: s-maj=13.9km s-min=5.8km az=76.0

ISC 28 07:16:28.7±2.5, 4242N±005×12648W±009, h26km±20km, n41, σ0s96/44, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	1.64	73	ePn	Pn	07 16 54.4	-1.4
KEBM				eSn	Sn	07 17 15.9	-0.1
KBO	Bosley Butte	1.68	96	ePn	Pn	07 16 55.0	-1.4
KRMB	Red Mountain	2.12	114	ePn	Pn	07 17 01.4	-0.9
DBO	Dodson Butte	2.48	73	P	Pn	07 17 06.9	-0.4
HUMO	Hull Mountain	2.61	85	ePn	Pn	07 17 08.6	-0.5
HSO	Harness Mounta	2.72	65	P	Pn	07 17 10.2	-0.4
YBH	Yreka Blue Hor	2.89	103	ePn	Pn	07 17 13.3	+0.4
BUOR	Burton Butte	3.14	91	P	Pn	07 17 17.8	+1.4
COR	Corvallis	3.16	46	ePn	Pn	07 17 15.8	-0.9
COR				eSn	Sn	07 17 53.2	-0.3
KIPM	Iron Peak	3.46	138	ePn	Pn	07 17 19.5	-1.2
BROR	Big Rock Looko	3.46	57	P	Pn	07 17 20.8	0.0
WDC	Whiskeytown Da	3.48	121	ePn	Pn	07 17 20.5	-0.5
FRIS	Friss

1.6nm,0.7s,baz=347,slow=2.5,SNR=3.7
GERES GERESS Array B 146.84 330 PKPbc PKPbc 07 36 50.8 -3.5
0.8nm,0.6s,baz=36,slow=2.5,SNR=4.7

*NEIC **28** 07:27:14.4, 3055S×7137W, h14km, ML4.0(GUC), After GUC.*
GUC 28 07:27:14.4±0.7, 3055S×7137W, h14km±1km, MD3.9, ML4.0,7C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.16**	**111**	⇑*i*P		Pg	07 27 18.5	+0.2
OVCH				*i* S		Sg	07 27 21.8	+0.7
OVCH				AML		AML	07 27 22.1	
	comp=N,37μm,0.2s							
OVCH	**Ovalle**	**0.16**	**111**	⇑*i*P		Pg	07 27 18.5	+0.2
OVCH				*i* S		Sg	07 27 21.8	+0.7
TLL	**Tololo Astrono**	**0.62**	**52**	⇓*i*P		Pg	07 27 26.7	+0.1
TLL				*i* S		Sg	07 27 36.0	+1.2
LSCH	**La Serena**	**0.65**	**10**	⇓*i*P		Pg	07 27 26.4	-0.7
LSCH				*i* S		Sg	07 27 36.5	-0.2
CHNG	**Los Chungos**	**1.33**	**185**	⇓*i*P		Pn	07 27 36.5	-2.1
CHNG				*i* S		Sb	07 27 53.8	-2.3
LCO	**Las Campanas**	**1.64**	**21**	⇑*i*P		Pn	07 27 42.7	-0.1
LCO				*i* S		Sn	07 28 05.1	+1.4
LCO	**Las Campanas**	**1.64**	**21**	*e*Pn		Pn	07 27 42.4	-0.4
LCO				⇑*i*P			07 27 42.7	
LCO				*e*Sn		Sn	07 28 03.9	+0.2
LCO				*i* S		Sn	07 28 05.1	+1.4
PTCH	**Petorca**	**1.75**	**168**	⇓*i*P		Pn	07 27 43.9	-0.4
PTCH				*i* S		Sn	07 28 06.2	-0.2
PTCH				AML		AML	07 28 09.4	
	comp=E,1μm,0.2s							
PTCH	**Petorca**	**1.75**	**168**	⇓*i*P		Pn	07 27 43.9	-0.4
PTCH				*i* S		Sn	07 28 06.2	-0.2
PACH	**Papudo**	**1.98**	**182**	⇓*i*P		Pn	07 27 47.7	+0.2
PACH				*i* S		Sn	07 28 13.6	+1.5
VACH	**Vallenar**	**2.04**	**15**	⇑*i*P		Pn	07 27 48.8	+0.5
VACH				*i* S		Sn	07 28 15.0	+1.5
VACH				AML		AML	07 28 20.8	
	comp=E,2μm,0.2s							
VACH	**Vallenar**	**2.04**	**15**	⇑*i*P		Pn	07 27 48.8	+0.5
VACH				*i* S		Sn	07 28 15.0	+1.5
JACH	**Jahuel**	**2.23**	**163**	*i* P		Pn	07 27 51.9	+1.0
JACH				*i* S		Sn	07 28 20.2	+2.0
PEL	**Peldehue**	**2.65**	**167**	*e*P		Pn	07 27 58.2	+1.5
PEL				*i* S		Sn	07 28 30.9	+2.2
PEL				AML		AML	07 28 37.9	
	comp=E,962nm,0.4s							
CLCH	**Cerro Calan**	**2.92**	**166**	AML		AML	07 28 47.5	
	comp=N,587nm,0.4s							
RCDM	**Rinconada Maip**	**2.97**	**171**	*e*P		Pn	07 28 01.9	+0.8
RCDM				AML		AML	07 28 44.4	
	comp=E,319nm,0.1s							
ANTU	**Antumapu**	**3.08**	**168**	AML		AML	07 28 49.6	
	comp=E,413nm,0.5s							
TACH	**Talagante**	**3.12**	**173**	⇑*i*P		Pn	07 28 04.3	+1.2
TACH				*i* S		Sn	07 28 41.3	+1.2
PCH	**Pirque**	**3.15**	**167**	*i* P		Pn	07 28 04.6	+1.0
PCH				*i* S		Sn	07 28 43.2	+2.3
LNV	**Longovilo**	**3.40**	**181**	*e*P		Pn	07 28 07.8	+0.9
CHCH	**Chadas Angostu**	**3.43**	**170**	*i* P		Pn	07 28 08.4	+1.0
CACH	**El Canelo**	**3.62**	**170**	*e*P		Pn	07 28 11.6	+1.6
CICH	**Cipreses**	**3.84**	**168**	*i* P		Pn	07 28 14.6	+1.5
LVC	**Limon Verde**	**8.21**	**16**	Pn		Pn	07 29 11.6	-1.5
LVC				*e*Sg		Sn	07 31 23.9	+38
TRQA	**Tornquist**	**10.78**	**136**	*e*Pn		Pn	07 29 48.5	+0.2

*MOS **28** 07:29:38.6±1.2, 5563N×11027E, h9km, mb4.2/1, Error ellipse: s-maj=27.1km s-min=21.6km az=60.5*
BYKL 28 07:29:39.2±0.3, 5569N×11027E, h3km±4km, 11C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.42**	**282**	⇑*i*PG		Pg	07 29 46.4	-0.9
NIZ				*e*			07 29 53.5	
NIZ				pmax	pmax			
	comp=Z,176nm,0.2s							
NIZ				smax				
	comp=N,854nm,0.2s							
NIZ	**Nizh Angarsk**	**0.42**	**282**	⇑*i*Pg		Pg	07 29 46.5	-0.8
NIZ				*e*Sg		Sg	07 29 52.7	0.0
NIZ				*e*			07 29 54.1	
NIZ				Pmax				
	comp=N,106nm,0.1s							
NIZ				max				
	comp=N,857nm,0.2s							
KMO	**Kumora**	**0.56**	**69**	⇑*i*Pg		Pg	07 29 48.8	-1.2
KMO				*e*Sg		Sg	07 29 56.2	-1.0
KMO				Pmax				
	comp=N,113nm,0.2s							
KMO				Smax				
	comp=N,456nm,1.4s							
YOA	**Uoyan**	**0.93**	**61**	*e*Sg		Sg	07 30 09.0	-0.1
YOA				Smax				
	comp=N,711nm,0.8s							
YLYR	**Ulyunkhan**	**0.96**	**148**	⇓*i*Pg		Pg	07 29 56.0	-1.6
	comp=N,59nm,0.2s							
YLYR				⇑*i*Pg		Pg	07 29 56.0	-1.6
	comp=N,37nm,0.2s							
YLYR				⇑*i*Pg		Pg	07 29 56.0	-1.6
	comp=N,74nm,0.2s							
YLYR				*e*Sg		Sg	07 30 10.2	+0.1
YLYR				Pmax				
	comp=N,39nm,0.1s							
YLYR				Smax				
	comp=N,593nm,0.4s							
UKT	**Uakit**	**1.92**	**95**	*e*PN		Pn	07 30 13.0	+0.3
UKT				*e*			07 30 38.8	
UKT				pmax	pmax			
	comp=Z,89nm,0.4s							
UKT				smax				
	comp=N,320nm,0.5s							
UKT	**Uakit**	**1.92**	**95**	⇓*i*Pg		Pg	07 30 13.1	-2.8
UKT				*e*Sg		Sg	07 30 38.9	-1.8
UKT				Pmax				
	comp=N,90nm,0.7s							
UKT				Smax				
	comp=N,323nm,0.7s							
SYVR	**Suvo**	**2.04**	**185**	*e*PN		Pn	07 30 15.2	+0.8
SYVR				*e*			07 30 43.1	
SYVR				pmax	pmax			
	comp=Z,8.0nm,0.8s							
SYVR				smax				
	comp=N,495nm,0.4s							
SYVR	**Suvo**	**2.04**	**185**	*e*Pg		Pg	07 30 15.3	-3.0
SYVR				*e*Sg		Sg	07 30 43.1	-1.6
SYVR				Pmax				
	comp=N,51nm,0.7s							
SYVR				Smax				
	comp=N,407nm,0.7s							
OGRR	**Ongureny**	**2.57**	**218**	⇑*i*Pn		Pn	07 30 22.2	+0.5
OGRR				*e*Sg		Sg	07 30 57.8	-4.0
OGRR				max				
	comp=N,15nm,0.4s							
OGRR				Smax				
	comp=N,107nm,0.5s							
MXMB	**Maximikha**	**2.59**	**201**	*e*Pg		Pg	07 30 25.5	-3.3
MXMB				*e*Sg		Sg	07 31 00.5	-1.8
MXMB				Pmax				
	comp=N,30nm,0.6s							
MXMB				Smax				
	comp=N,256nm,0.5s							
BOD	**Bodaibo**	**2.96**	**42**	⇑*i*Pn		Pn	07 30 27.3	+0.2
BOD				⇑*e*Pg		Pg	07 30 32.8	-3.1
BOD				*e*			07 30 36.8	
BOD				*e*Sn		Sn	07 31 03.5	+0.4
BOD				*e*Sg		Sg	07 31 09.6	-4.7
BOD				max				
	comp=N,5.0nm,0.1s							
BOD				Smax				
	comp=N,78nm,0.8s							
NLYR	**Nelyaty**	**3.15**	**73**	⇓*i*Pn		Pn	07 30 29.5	-0.1
NLYR				*e*Pg		Pg	07 30 36.5	-3.0
NLYR				*e*			07 30 39.0	
NLYR				*e*Sg		Sg	07 31 15.9	-4.3
NLYR				max				
	comp=N,35nm,0.8s							
NLYR				Smax				
	comp=N,137nm,1.4s							
TRG	**Tyrgan**	**3.73**	**220**	*e*Pn		Pn	07 30 38.0	+0.4
TRG				*e*Sn		Sn	07 31 22.4	+0.4
TRG				*e*Sg		Sg	07 31 33.3	-5.6
TRG				max				
	comp=N,6.0nm,0.3s							
TRG				Smax				
	comp=N,80nm,1.0s							
HRMR	**Khuramsha**	**4.52**	**207**	*e*Pn		Pn	07 30 50.1	+1.6
HRMR				*e*Pg		Pg	07 30 59.2	-6.6
HRMR				*e*Sg		Sg	07 31 57.6	-6.7
HRMR				Pmax				
	comp=N,16nm,0.5s							
HRMR				Smax				
	comp=N,155nm,0.9s							
CRS	**Chara**	**4.62**	**71**	*e*PN		Pg	07 31 04.0	-3.6
CRS				*e*			07 32 01.5	
CRS				pmax	pmax			
	comp=Z,21nm,1.0s							
CRS				smax				
	comp=E,65nm,1.2s							
CRS	**Chara**	**4.62**	**71**	⇓*i*Pn		Pn	07 30 50.2	+0.4
CRS				⇓*i*Pg		Pg	07 31 03.4	-4.2
CRS				*e*Sg		Sg	07 32 01.4	-6.0
CRS				Pmax				
	comp=E,21nm,1.1s							
CRS				Smax				
	comp=E,73nm,1.6s							
LSTR	**Listvyanka**	**5.00**	**222**	⇑*i*Pn		Pn	07 30 55.0	-0.1
LSTR				*e*Sn		Sn	07 31 51.1	-2.3
LSTR				*e*Sg		Sg	07 32 13.7	-6.1
LSTR				max				
	comp=E,2.0nm,0.1s							
LSTR				Smax				
	comp=E,34nm,1.2s							
TLY	**Talaya**	**5.62**	**227**	*e*PN		Pn	07 31 04.2	+0.6
TLY				*e*			07 31 20.3	
TLY				*e*S		Sn	07 32 06.4	-2.2
TLY				*e*			07 32 31.6	
TLY				pmax	pmax			
	comp=Z,7.0nm,0.6s							
TLY				smax				
	comp=N,39nm,1.0s							
TLY	**Talaya**	**5.62**	**227**	⇑*i*Pn		Pn	07 31 04.2	+0.6
TLY				*e*Sn		Sn	07 32 07.1	-1.5
TLY				*e*Sg		Sg	07 32 32.2	-7.4
TLY				max				
	comp=N,3.0nm,0.4s							
TLY				Smax				
	comp=N,27nm,1.0s							
TUP	**Tupik**	**5.71**	**99**	*e*PN		Pn	07 31 04.1	-0.7
TUP				*e*			07 31 21.5	
TUP				*e*S		Sn	07 32 09.2	-1.5
TUP				*e*			07 32 35.9	
TUP				pmax	pmax			
	comp=Z,5.0nm,0.5s							
TUP				smax				
	comp=N,95nm,1.2s							
TUP	**Tupik**	**5.71**	**99**	*e*Pn		Pn	07 31 04.0	-0.8
TUP				*e*Pg		Pg	07 31 21.1	-7.4
TUP				*e*Sg		Sg	07 32 36.2	-6.2
TUP				Smax				
	comp=N,94nm,1.0s							
ARS	**Arshan**	**5.99**	**234**	*e*Pn		Pn	07 31 10.0	+1.4
ARS				*e*Sn		Sn	07 32 13.4	-4.2
ARS				*e*Sg		Sg	07 32 46.0	-5.3
ARS				max				
	comp=N,16nm,0.4s							
ARS				Smax				
	comp=N,91nm,0.9s							
ZAK	**Zakamensk**	**6.78**	**221**	*e*Sg		Sg	07 33 09.9	-6.9
ZAK				Smax				
	comp=N,25nm,1.7s							
MOY	**Mondy**	**6.83**	**238**	*e*PN		Pn	07 31 21.1	+1.0
MOY				*e*			07 31 42.1	
MOY				*e*S		Sn	07 32 35.1	-3.1
MOY				*e*			07 33 08.1	
MOY				pmax	pmax			
	comp=Z,6.0nm,0.4s							
MOY				smax				
	comp=N,36nm,1.3s							
MOY	**Mondy**	**6.83**	**238**	⇑*i*Pn		Pn	07 31 22.0	+1.9
MOY				*e*Sn		Sn	07 32 35.3	-2.9
MOY				*e*Sg		Sg	07 33 10.7	-7.5
MOY				max				
	comp=N,19nm,1.4s							
MOY				Smax				
	comp=N,36nm,1.9s							
ORL	**Orlik**	**6.91**	**247**	*e*Pn		Pn	07 31 22.4	+1.1
ORL				*e*Sn		Sn	07 32 38.5	-1.8
ORL				*e*Sg		Sg	07 33 13.0	-7.9
ORL				max				
	comp=N,2.0nm,0.4s							
ORL				Smax				
	comp=N,35nm,1.3s							
IENR	**Iengra**	**8.21**	**80**	*e*Sg		Sg	07 33 53.4	-9.1
TDJR	**Todzha**	**8.96**	**254**	*e*Sg		Sn	07 34 17.2	+46

*CSEM **28** 07:38:46.7±0.1, 3642N×151E, h10km, ML3.8, Error ellipse: s-maj=2.2km s-min=1.7km az=54.0*
*CRAAG **28** 07:38:46.1, 3646N×154E, Ml3.8*
*ISCJB **28** 07:38:47.1±0.7, 3649N±004×154E±004, h13km±7km, Error ellipse: s-maj=7.0km s-min=5.0km az=177.3*
*MDD **28** 07:38:47.7±0.4, 3644N×158E, h0km, mb4.0/11, Error ellipse: s-maj=5.0km s-min=4.7km az=103.0, PRIMO*
*NEIC **28** 07:38:48.4±1.0, 3647N×157E, h10km, MG4.0(MDD), Error ellipse: s-maj=11.9km s-min=8.6km az=156.0*
ISC 28 07:38:47.1±0.8, 3650N±005×158E±004, h5km±8km, n53, σ1°20/84, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.22**	**191**	P		**Pg**	**07 38 50.4**	**-0.9**
ECHA	**Ech Chlef**	**0.39**	**206**	P		**Pg**	**07 38 54.0**	**-0.7**
ECHF	**Ech Chlef**	**0.40**	**209**	P		**Pg**	**07 38 54.0**	**-0.8**
EANR	**'Ain N'Sour**	**0.68**	**215**	P		**Pg**	**07 38 59.3**	**-0.8**
OKGL	**Djebel Kef Gue**	**0.89**	**239**	P		**Pg**	**07 38 56.0**	**-8.2**
ETRT	**Tiaret**	**1.14**	**192**	P		**Pg**	**07 39 07.3**	**-1.6**
EMHD	**Djebel Mahouad**	**1.15**	**105**	P		**Pg**	**07 39 08.5**	**-0.6**
ABA	**Alger-Bouzarea**	**1.21**	**75**	P		**Pg**	**07 39 11.0**	**+0.8**
ADJB	**Djebel Djouab**	**1.54**	**102**	P		**Pn**	**07 39 15.1**	**-0.1**
AKET	**Djebel Ketaf**	**1.91**	**103**	P		**Pn**	**07 39 22.4**	**+2.0**
ATAF	**Djebel Tarf**	**2.27**	**105**	P		**Pn**	**07 39 15.4**	**-10**
CART	**Cartagena**	**2.33**	**298**	*e*Pn		**Pn**	**07 39 27.8**	**+1.7**
CART	**Cartagena**	**2.33**	**298**	*e*Pn		**Pn**	**07 39 27.8**	**+1.6**
AKF	**Akfadou**	**2.41**	**86**	P		**Pn**	**07 39 25.3**	**-1.8**
EIBI	**Ibiza**	**2.52**	**356**	P		**Pn**	**07 39 29.9**	**+1.1**
	8.5nm,0.2s,SNR=14							
EIBI				S		**Sn**	**07 39 58.6**	**-1.3**
	29nm,0.2s,SNR=6.9							
EIBI	**Ibiza**	**2.52**	**356**	P		**Pn**	**07 39 29.9**	**+1.1**
	8.5nm,0.2s,SNR=14							
EIBI				S		**Sn**	**07 39 58.7**	**-1.2**
	40nm,0.2s,SNR=6.9							
EIBI	**Ibiza**	**2.52**	**356**	P		**Pn**	**07 39 29.9**	**+1.1**
EIBI				S		**Sn**	**07 39 58.7**	**-1.3**
EMUR	**La Murta**	**2.62**	**301**	P		**Pn**	**07 39 29.8**	**-0.3**
	3.1nm,0.2s,SNR=7.9							
EMUR				S		**Sn**	**07 40 01.4**	**-0.8**
	21nm,0.5s,SNR=7.9							
EMUR	**La Murta**	**2.62**	**301**	P		**Pn**	**07 39 29.8**	**-0.3**
	3.1nm,0.2s,SNR=7.9							
EMUR				S		**Sn**	**07 40 01.4**	**-0.9**
	5.4nm,0.2s,SNR=7.9							
EBEN	**Beniarda**	**2.62**	**327**	P		**Pn**	**07 39 30.7**	**+0.6**
	2.3nm,0.2s,SNR=10							
EBEN				S		**Sn**	**07 40 01.4**	**-1.0**
	1.4nm,0.1s							
EBEN	**Beniarda**	**2.62**	**327**	P		**Pn**	**07 39 30.7**	**+0.6**
	2.3nm,0.2s,SNR=10							
EBEN				S		**Sn**	**07 40 01.4**	**-0.9**
	1.2nm,0.1s							
ETOB	**Tobarra**	**3.28**	**312**	P		**Pn**	**07 39 40.5**	**+1.4**
	2.1nm,0.2s,SNR=8.7							
ETOB				S		**Sn**	**07 40 18.2**	**-0.2**
	13nm,0.4s							
ETOB	**Tobarra**	**3.28**	**312**	P		**Pn**	**07 39 40.5**	**+1.4**
	2.1nm,0.2s,SNR=8.7							
ETOB				S		**Sn**	**07 40 19.2**	**+0.7**
	2.7nm,0.2s							
ETOB	**Tobarra**	**3.28**	**312**	P		**Pn**	**07 39 40.5**	**+1.4**
ETOB				S		**Sn**	**07 40 19.1**	**+0.7**
ETOS	**Mallorca**	**3.40**	**16**	P		**Pn**	**07 39 40.8**	**0.0**
	0.9nm,0.1s,SNR=7.3							
ETOS				S		**Sn**	**07 40 17.8**	**-3.7**
	5.2nm,0.2s,SNR=5.8							
ETOS	**Mallorca**	**3.40**	**16**	P		**Pn**	**07 39 40.8**	**0.0**
	0.9nm,0.1s,SNR=7.3							
EBER	**Berja**	**3.62**	**278**	P		**Pn**	**07 39 43.7**	**-0.1**
	2.6nm,0.1s,SNR=15							
EBER				S		**Sn**	**07 40 24.1**	**-2.7**
	15nm,0.4s,SNR=7.9							
EBER	**Berja**	**3.62**	**278**	P		**Pn**	**07 39 44.0**	**+0.3**
	2.6nm,0.1s,SNR=15							
EBER				S		**Sn**	**07 40 26.4**	**-0.4**
	5.9nm,0.2s,SNR=7.9							
EBER	**Berja**	**3.62**	**278**	P		**Pn**	**07 39 44.0**	**+0.3**
EBER				S		**Sn**	**07 40 26.4**	**-0.4**
ECHE	**Chera**	**3.68**	**328**	P		**Pn**	**07 39 46.2**	**+1.5**
	1.3nm,0.2s,SNR=8.0							
EVIA	**Vianos**	**3.88**	**305**	P		**Pn**	**07 39 48.1**	**+0.7**
	3.3nm,0.2s,SNR=6.7							
EVIA				S		**Sn**	**07 40 33.9**	**+0.6**
	5.2nm,0.3s							
EVIA	**Vianos**	**3.88**	**305**	P		**Pn**	**07 39 48.1**	**+0.7**
	3.3nm,0.2s,SNR=6.7							
EVIA				S		**Sn**	**07 40 34.2**	**+0.8**
	5.2nm,0.3s							
EVIA	**Vianos**	**3.88**	**305**	P		**Pn**	**07 39 48.1**	**+0.7**
EVIA				S		**Sn**	**07 40 34.2**	**+0.8**
EQES	**Quesada**	**3.94**	**291**	P		**Pn**	**07 39 49.8**	**+1.6**
	1.3nm,0.1s,SNR=7.9							
EQES				S		**Sn**	**07 40 34.7**	**0.0**
	10nm,0.3s,SNR=6.7							
EQES	**Quesada**	**3.94**	**291**	P		**Pn**	**07 39 49.8**	**+1.6**
	1.3nm,0.1s,SNR=7.9							
EQES				S		**Sn**	**07 40 34.8**	**+0.1**
	9.1nm,0.2s,SNR=6.7							
EQES	**Quesada**	**3.94**	**291**	P		**Pn**	**07 39 49.8**	**+1.6**
EQES				S		**Sn**	**07 40 34.8**	**+0.1**
EQUE	**Quentar**	**4.09**	**281**	P		**Pn**	**07 39 50.7**	**+0.5**
	1.8nm,0.2s,SNR=7.1							
EQUE				S		**Sn**	**07 40 36.9**	**-1.6**
	4.0nm,0.3s,SNR=7.9							
EQUE	**Quentar**	**4.09**	**281**	P		**Pn**	**07 39 50.7**	**+0.5**
	1.8nm,0.2s,SNR=7.1							
EQUE				S		**Sn**	**07 40 40.8**	**+2.3**
	5.7nm,0.3s,SNR=7.9							
EMOS	**Mosqueruela**	**4.18**	**338**	P		**Pn**	**07 39 53.3**	**+1.8**
	7.1nm,0.1s,SNR=68							
EMOS				S		**Sn**	**07 40 38.6**	**-2.0**
	3.5nm,0.2s							
EMOS	**Mosqueruela**	**4.18**	**338**	P		**Pn**	**07 39 53.3**	**+1.8**
	7.1nm,0.1s,SNR=68							
EMOS				S		**Sn**	**07 40 38.8**	**-1.9**
	3.5nm,0.2s							
EMOS	**Mosqueruela**	**4.18**	**338**	P		**Pn**	**07 39 53.3**	**+1.8**
EMOS				S		**Sn**	**07 40 38.8**	**-1.8**
ERTA	**Horta de San J**	**4.55**	**348**	P		**Pn**	**07 39 58.3**	**+1.7**
	0.8nm,0.1s,SNR=7.9							
ERTA				S		**Sn**	**07 40 48.2**	**-1.7**
	1.9nm,0.2s,SNR=7.9							
ERTA	**Horta de San J**	**4.55**	**348**	P		**Pn**	**07 39 58.3**	**+1.7**
	0.8nm,0.1s,SNR=7.9							
ERTA	**Horta de San J**	**4.55**	**348**	P		**Pn**	**07 39 58.3**	**+1.7**
ERTA				S		**Sn**	**07 40 47.5**	**-2.4**
EPOB	**Poblet**	**4.86**	**356**	P		**Pn**	**07 40 01.7**	**+0.9**
	2.4nm,0.2s,SNR=7.9							
EPOB				S		**Sn**	**07 40 55.6**	**-1.8**
	2.7nm,0.3s,SNR=7.9							
EPOB	**Poblet**	**4.86**	**356**	P		**Pn**	**07 40 02.1**	**+1.3**
	2.4nm,0.2s,SNR=7.9							
EPOB	**Poblet**	**4.86**	**356**	P		**Pn**	**07 40 02.1**	**+1.3**
EPOB				S		**Sn**	**07 40 54.7**	**-2.7**
EADA	**Adamuz**	**5.18**	**291**	P		**Pn**	**07 40 05.4**	**+0.1**
	1.4nm,0.2s,SNR=7.9							
EADA				S		**Sn**	**07 41 04.9**	**-0.5**
	3.3nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**5.18**	**291**	P		**Pn**	**07 40 05.4**	**+0.1**
	1.4nm,0.2s,SNR=7.9							
EADA				S		**Sn**	**07 41 04.7**	**-0.7**
	1.5nm,0.2s,SNR=7.9							
ESDC	**Sonseca Array**	**5.40**	**308**	P		**Pn**	**07 40 08.6**	**+0.3**
	1.0nm,0.1s,baz=124,slow=13,SNR=5.5							
ESDC	**Sonseca Array**	**5.40**	**308**	P		**Pn**	**07 40 08.6**	**+0.4**
	1.0nm,0.1s,SNR=5.5							
EMIR	**Miracle**	**5.40**	**360**	S		**Sn**	**07 41 09.2**	**-1.7**
	3.4nm,0.2s,SNR=7.9							
RER	**Riviere de l'E**	**76.83**	**129**	*e*P		**P**	**07 50 40.9**	**+0.8**

*IDC **28** 07:41:45.9±3.0, 2156S×16948E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.9/15, mbtmp3.8/5, Error ellipse: s-maj=149.9km s-min=31.6km az=159.0*
*ISCJB **28** 07:41:51.3±3.8, 212S±03×1692E±02, h43km±29km, mb3.7/5, Error ellipse: s-maj=46.1km s-min=27.0km az=169.6*
ISC 28 07:41:50.1±7.1, 214S±03×1694E±01, h22km±49km, n9, σ0°95/9, mb3.7/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.80**	**255**	*e*P		**Pn**	**07 42 33.9**	**+0.3**
DZM				*e*S		Sn	07 43 06.6	-0.1
WRA	**Warramunga Arr**	**32.76**	**266**	P		**P**	**07 48 21.2**	**-0.4**
	0.4nm,0.9s,mb3.3,baz=98,slow=8.5,SNR=5.0							
ASAR	**Alice Springs**	**32.78**	**259**	P		**P**	**07 48 22.2**	**+0.4**
	0.3nm,0.6s,mb3.4,baz=80,slow=9.2,SNR=6.8							
FITZ	**Fitzroy Crossi**	**41.18**	**267**	P		**P**	**07 49 31.6**	**-1.8**
	1.4nm,0.7s,mb3.7,baz=162,slow=10,SNR=3.9							
CMAR	**Chiang Mai Arr**	**79.47**	**295**	P		**P**	**07 53 57.6**	**+2.2**
	1.1nm,0.4s,mb4.1,baz=120,slow=5.9,SNR=4.4							
VNA3	**Neumayer Olymp**	**87.65**	**180**	*e*		**P**	**07 54 36.3**	**-0.1**
VNA3				*e*		pP	07 54 41.0	-2.7
VNA2	**Neumayer--Watz**	**87.94**	**181**	*e*		**P**	**07 54 38.3**	**+0.5**
	baz=181,slow=2.9							
VNA2				*e*			07 54 42.4	
NVAR	**Mina Array Bea**	**90.12**	**48**	P		**P**	**07 54 47.9**	**-0.7**
	0.5nm,0.7s,mb4.0,baz=224,slow=8.1,SNR=4.5							
GERES	**GERESS Array B 146.39 331**			PKPbc	PKPbc		08 01 28.6	-0.6
	0.4nm,0.2s,baz=62,slow=2.5,SNR=2.8							

*ISK **28** 07:49:47.7, 3874N×4006E, h4km, MD3.1*
*CSEM **28** 07:49:48.8±0.1, 3875N×3997E, h12km, MD3.1, Error ellipse: s-maj=3.4km s-min=2.6km az=109.0*
*ISCJB **28** 07:49:49.2±0.7, 3874N±003×4004E±004, h1km±5km, Error ellipse: s-maj=4.7km s-min=4.6km az=148.8*
*DDA **28** 07:49:49.7, 3871N×4005E, h12km±1km, Md3.3*
ISC 28 07:49:49.6±0.7, 3875N±003×4007E±004, h5km±5km, n18, σ1°16/28, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.55**	**285**	*e*PG		**Pg**	**07 49 59.0**	**-1.0**
PTK				*e*SG		**Sg**	**07 50 07.0**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.70**	**238**	*e*PG		**Pg**	**07 50 01.7**	**-1.3**
DIYA

Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.43**	**209**	Pn	Pn	07 54 14.2	+4.1
	0.2nm,0.3s,baz=62,slow=6.3,SNR=4.1						
WRA	**Warramunga Arr**	**23.40**	**234**	P	P	07 55 41.7	-0.2
	1.3nm,0.9s,baz=56,slow=9.9,SNR=6.2						
ASAR	**Alice Springs**	**25.84**	**227**	P	P	07 56 04.6	+0.2
	0.8nm,0.9s,baz=52,slow=9.9,SNR=4.4						
MKAR	**Makanchi Array**	**82.69**	**319**	P	P	08 02 57.5	+0.9
	0.3nm,0.2s,baz=98,slow=6.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**152.24**	**286**	PKPbc	PKPbc	08 10 28.7	-1.1
	0.4nm,0.8s,baz=93,slow=2.9,SNR=2.9						
TORD				PKPab	PKPab	08 10 39.5	-0.1
	0.5nm,0.8s,baz=63,slow=1.3,SNR=3.2						

CSEM ***28*** *08:01:43.0±0.2, 3809N×3801E, h40km, MD2.8, Error ellipse: s-maj=7.5km s-min=5.7km az=78.0*
ISK ***28*** *08:01:45.1, 3807N×3820E, h8km, MD2.7*
ISCJB ***28*** *08:01:46.1±0.6, 3816N±004×3820E±005, h23km±8km, Error ellipse: s-maj=6.6km s-min=5.9km az=145.7*
DDA ***28*** *08:01:49.3, 3814N×3781E, h7km±7km, Md2.8*
ISC 28 08:01:46.0±0.6**, 3816N**±004×**3820E**±005**, h23**km±8km**, n10,** σ1§**10**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	**Malatya**	**0.23**	**50**	*e*PG	**Pb**	**08 01 51.6**	**-0.3**
MALT				*e*SG	**Sb**	**08 01 56.3**	**+0.3**
MYA	**Malataya**	**0.24**	**48**	*e*PG	**Pb**	**08 01 52.3**	**+0.3**
AKCD	**Akcadag**	**0.25**	**301**	*i* P	**Pb**	**08 01 52.6**	**+0.4**
AKCD				*i* S	**Sb**	**08 01 57.3**	**+0.9**
ELZG	**Elazig**	**0.70**	**61**	*i* P	**Pb**	**08 01 59.9**	**+0.3**
ELZG				*i* S	**Sb**	**08 02 09.9**	**+1.1**
DARE	**Darende-Malaty**	**0.84**	**339**	*e*PG	**Pb**	**08 02 00.4**	**-1.6**
DARE				*e*SG	**Sb**	**08 02 11.0**	**-1.9**
URFA	**Urfa**	**0.88**	**145**	*e*PG	**Pb**	**08 02 00.8**	**-1.8**
URFA				*e*SG	**Sb**	**08 02 12.3**	**-1.4**
SVRC	**Sivrice-ELAZID**	**0.90**	**76**	*e*PG	**Pb**	**08 02 02.9**	**0.0**
GZT	**Gaziantep**	**0.95**	**212**	*i* P	**Pb**	**08 02 03.8**	**0.0**
GZT				*i* S	**Sb**	**08 02 17.4**	**+1.4**
PTK	**Pertek**	**1.19**	**52**	*e*PN	**Pn**	**08 02 09.4**	**+2.2**
KMRS	**Kahramanmaras**	**1.22**	**238**	*e*PN	**Pn**	**08 02 07.9**	**+0.2**

ISCJB ***28*** *08:21:21.7±0.6, 3942N±003×2794E±005, h14km±5km, Error ellipse: s-maj=6.5km s-min=4.8km az=155.7*
CSEM ***28*** *08:21:21.2±0.1, 3941N×2798E, h15km, MD2.7, Error ellipse: s-maj=3.7km s-min=1.9km az=93.0*
DDA ***28*** *08:21:21.9, 3943N×2796E, h7km±3km, Md2.8*
ISK ***28*** *08:21:21.0, 3944N×2766E, h8km, MD2.7*
ISC 28 08:21:22.0±0.6**, 3942N**±003×**2795E**±005**, h17**km±4km**, n13,** σ0§**55**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.23**	**345**	*e*PG	**Pg**	**08 21 27.4**	**+0.1**
BALB				*e*SG	**Sg**	**08 21 31.0**	**+0.2**
BALY	**Balya**	**0.41**	**321**	*i* P	**Pg**	**08 21 30.4**	**-0.1**
BALY				*i* S	**Sg**	**08 21 36.4**	**+0.3**
DURS	**Dursunbey**	**0.44**	**66**	*i* P	**Pg**	**08 21 30.7**	**-0.2**
DURS				*i* S	**Sg**	**08 21 37.4**	**+0.5**
AKS	**Akhisar**	**0.55**	**192**	*e*PG	**Pg**	**08 21 32.4**	**-0.6**
AKS				*e*SG	**Sg**	**08 21 40.9**	**+0.6**
DEMI	**Demirci**	**0.70**	**122**	*i* P	**Pg**	**08 21 35.7**	**0.0**
DEMI				*i* S	**Sg**	**08 21 45.4**	**+0.3**
KCT	**Karacabey**	**0.90**	**20**	*e*PG	**Pg**	**08 21 39.4**	**-0.1**
EDC	**Edincik**	**0.93**	**356**	*e*PG	**Pg**	**08 21 39.5**	**-0.5**
BNT	**Bandirma**	**0.94**	**358**	*e*PG	**Pg**	**08 21 39.8**	**-0.4**
ULDT	**Uludag**	**1.16**	**51**	*i* P	**Pn**	**08 21 43.3**	**-0.2**
ULDT				*i* S	**Sb**	**08 21 58.5**	**+0.1**
MRMT	**Marmara Adasi**	**1.21**	**347**	*e*PN	**Pn**	**08 21 43.6**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.40**	**335**	*e*PN	**Pn**	**08 21 45.9**	**-0.8**
SART	**Tekirdag**	**1.40**	**335**	*i* P	**Pn**	**08 21 47.5**	**+0.7**
SART				*i* S	**Sn**	**08 22 06.4**	**+1.6**
MFT	**Murefte**	**1.46**	**339**	*e*PN	**Pn**	**08 21 46.9**	**-0.7**

IDC ***28*** *08:21:20.9±0.5, 2112S×16946E, h0km, mb4.8/18, mb1 5.0/20, mb1mx5.0/21, mbtmp4.8/20, ML3.6/2, MS5.1/21, Ms1 5.1/21, ms1mx5.0/24, Error ellipse: s-maj=15.5km s-min=13.2km az=156.0*
BJI ***28*** *08:21:21.3, 2108S×16967E, h9km, mB5.7, mb5.1, Ms5.2, Msz4.9*
ISCJB ***28*** *08:21:22.1±0.1, 2124S±004×16947E±003, h15km, mb5.2/92, MS5.0/44, Error ellipse: s-maj=5.7km s-min=3.8km az=162.2*
GCMT ***28*** *08:21:22.1±0.1, 2124S×16930E, h12km, MW5.5/105, Moment Tensor Solution. s90,c148; s105,c191; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr 1.59±.03; Mθθ-0.25±.03; Mφφ-1.34±.03; Mrθ-0.01±.07; Mrφ 1.27±.02; Mθφ-0.35±.06; Best double couple: M0 1.92400×10^17 NP1:φs315.00000°, δ42.00000°, λ74.00000°. NP2:φs157.00000°, δ50.00000°, λ104.00000°. Principal axes: T 1.6510, Plg78.0000°, Azm126.0000°; N 0.5510, Plg11.0000°, Azm328.0000°; P -2.1970, Plg4.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***28*** *08:21:22.1±0.2, 2124S×16941E, h10km, mb5.4/66, MS5.2/4 Error ellipse: s-maj=7.8km s-min=4.9km az=158.0*
LDG ***28*** *08:21:23.1±0.2, 2091S×16895E, h10km, Mb5.5/4, Ms5.1/9, Error ellipse: s-maj=33.2km s-min=17.1km az=24.0*
MOS ***28*** *08:21:25.3±1.1, 2112S×16947E, h33km, mb5.6/40, MS5.1/13, Error ellipse: s-maj=9.4km s-min=8.6km az=105.2*
DJA ***28*** *08:21:26, 2157S×16930E, h21km, Mw5.6/11*
ISC 28 08:21:23.8±0.1**, 2123S**±004×**16952E**±003**, h16**km**,**
h16km±1.5km**:pP-P, n706,** σ0§**67**/519**, mb5.2**/92**, MS5.0**/44**,**
153C-172D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.98**	**253**	*e*P	**Pn**	**08 22 06.6**	**-3.9**
HNR	**Honiara**	**14.92**	**320**	Pn	**Pn**	**08 24 55.1**	**+1.0**
	baz=215,slow=16,SNR=8.6						
HNR				LR	LR	08 29 28.3	
	comp=Z,4μm,20.0s,baz=147,slow=33						
HNR	**Honiara**	**14.92**	**320**	*e*P	**Pn**	**08 24 55.3**	**+1.1**
HNR				pmax	pmax		
	comp=Z,717nm,1.3s						
HNR	**Honiara**	**14.92**	**320**	*e*Pn	**Pn**	**08 24 55.3**	**+1.1**
	comp=Z,717nm,1.3s						
FUNA	**Funafuti**	**15.70**	**38**	Pn	**Pn**	**08 25 05.2**	**+0.7**
	comp=Z,435nm,1.4s						
HIZ	**Hauiti**	**17.83**	**166**	P	**Pn**	**08 25 35.7**	**+4.5**
URZ	**Urewera**	**18.19**	**161**	P	**Pn**	**08 25 37.6**	**+1.9**
	comp=Z,1.9nm,0.3s,baz=346,slow=6.0,SNR=24						
URZ				LR	LR	08 31 31.3	
	comp=Z,4μm,18.0s,baz=345,slow=33						
URZ	**Urewera**	**18.19**	**161**	P	**Pn**	**08 25 38.2**	**+2.5**
ARMA	**Armidale**	**18.51**	**237**	*e*P	**Pn**	**08 25 42.4**	**+2.8**
ARMA				*e*		08 26 41.5	
AFI	**Afiamalu**	**19.25**	**71**	P	**Pn**	**08 25 48.0**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=323,slow=5.9,SNR=5.8						
AFI				LR	LR	08 31 47.7	
	comp=Z,10μm,21.3s,baz=264,slow=32						
AFI	**Afiamalu**	**19.25**	**71**	*e*P	**Pn**	**08 25 47.8**	**-0.9**
AFI				pmax	pmax		
	comp=Z,343nm,1.5s						
AFI	**Afiamalu**	**19.25**	**71**	*e*P	**Pn**	**08 25 47.8**	**-0.9**
	comp=Z,343nm,1.5s						
SNZO	**South Karori**	**20.50**	**169**	*e*P	**P**	**08 26 00.2**	**-0.9**
	comp=Z,87nm,1.0s						
THZ	**Tophouse**	**20.67**	**173**	P	**P**	**08 26 04.7**	**+1.7**
CTA	**Charters Tower**	**21.80**	**269**	*e*P	**P**	**08 26 15.0**	**-0.4**
	comp=Z,68nm,1.3s,mb4.9						
CTA				*e*S	**S**	**08 30 19.7**	**+3.7**
CTA	**Charters Tower**	**21.80**	**269**	P	**P**	**08 26 15.4**	**0.0**
	comp=Z,26nm,0.8s,mb4.7,baz=91,slow=11,SNR=31						
CTA	**Charters Tower**	**21.80**	**269**	*e*P	**P**	**08 26 15.0**	**-0.4**
CTA				*e*S	**S**	**08 30 19.7**	**+3.7**
CTA				pmax	pmax		
	comp=Z,68nm,1.3s						
CTAO	**Charters Tower**	**21.80**	**269**	*e*P	**P**	**08 26 14.6**	**-0.8**
CTAO				*e*S	**S**	**08 30 17.1**	**+1.1**
RPZ	**Rata Peaks**	**22.46**	**177**	P	**P**	**08 26 22.8**	**+0.7**
	comp=Z,19nm,1.0s,mb4.5,baz=9.5,slow=1.3,SNR=5.8						
RPZ				LR	LR	08 34 32.2	
	comp=Z,9μm,18.5s,MS5.2,baz=351,slow=35						
CNB	**Canberra Magne**	**22.57**	**227**	*e*P	**P**	**08 26 25.9**	**+2.5**
CNB				*e*S	**S**	**08 30 37.0**	**+6.3**
CAN	**Canberra**	**22.82**	**228**	*e*P	**P**	**08 26 27.6**	**+1.5**
PMG	**Port Moresby**	**24.52**	**295**	*e*P	**P**	**08 26 41.9**	**-0.9**
PMG				pmax	pmax		
	comp=Z,84nm,1.1s						
PMG	**Port Moresby**	**24.52**	**295**	*e*P	**P**	**08 26 41.9**	**-0.9**
	comp=Z,84nm,1.1s,mb5.2						
COEN	**Coen**	**26.11**	**282**	*e*P	**P**	**08 26 56.5**	**-0.7**
	comp=Z,38nm,1.2s,mb4.8						
TOO	**Toolangi**	**26.41**	**227**	*e*P	**P**	**08 27 00.2**	**+0.5**
TOO				*e*S	**S**	**08 31 25.5**	**-7.2**
STKA	**Stephens Creek**	**27.07**	**241**	*e*P	**P**	**08 27 04.9**	**-0.8**
	comp=Z,44nm,1.4s,mb4.8						
STKA	**Stephens Creek**	**27.07**	**241**	P	**P**	**08 27 05.0**	**-0.7**
	comp=Z,37nm,1.1s,mb4.8,baz=76,slow=10,SNR=12						
STKA				LR	LR	08 37 08.0	
	comp=Z,14μm,19.6s,MS5.5,baz=100,slow=35						
RAR	**Rarotonga**	**28.60**	**96**	LR	LR	08 36 04.2	
	comp=Z,3μm,21.6s,MS4.9,baz=265,slow=31						
WB2	**Warramunga Arr**	**32.91**	**266**	*e*P	**P**	**08 27 54.9**	**-2.7**
WRAB	**Tennant Creek**	**32.91**	**266**	P	**P**	**08 27 56.2**	**-1.4**
	comp=Z,181nm,1.3s,mb5.8,SNR=9.8						
WRAB	**Tennant Creek**	**32.91**	**266**	*e*P	**P**	**08 27 55.0**	**-2.6**
WRAB				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.3						
WRAB	**Tennant Creek**	**32.91**	**266**	*e*P	**P**	**08 27 55.0**	**-2.6**
	comp=Z,46nm,1.2s,mb5.3						
WRA	**Warramunga Arr**	**32.98**	**266**	P	**P**	**08 27 55.1**	**-2.6**
	comp=Z,23nm,1.0s,mb5.0,baz=100,slow=8.3,SNR=50						
WRA				S	**S**	**08 33 17.7**	**+2.5**
	comp=Z,4.4nm,1.3s,baz=97,slow=14,SNR=6.0						
WRA				LR	LR	08 41 34.9	
	comp=Z,9μm,18.1s,MS5.5,baz=90,slow=37						
WRA	**Warramunga Arr**	**32.92**	**266**	P	**P**	**08 27 55.1**	**-2.6**
WRA				S	**S**	**08 33 17.7**	**+2.5**
ASAR	**Alice Springs**	**32.96**	**259**	P	**P**	**08 27 55.8**	**-2.2**
	comp=Z,47nm,1.1s,mb5.3,baz=82,slow=8.8,SNR=60						
ASAR				PcP	PcP	08 30 41.0	-1.1
	comp=Z,2.6nm,0.9s,baz=117,slow=2.4,SNR=4.1						
KAKA	**Kakadu**	**36.39**	**277**	*e*P	**P**	**08 28 24.5**	**-3.3**
	comp=Z,70nm,1.5s,mb5.4						
TBI	**Tubuai**	**37.92**	**101**	*e*S	**S**	**08 34 30.6**	**-1.4**
	comp=Z,463nm,30.8s						
TBI				*e*LQ		08 37 20.0	
	comp=Z,6μm,28.8s						
TBI				*e*LR	LR	08 39 09.2	
	comp=Z,3μm,26.8s,baz=266						
FORT	**Forrest**	**38.28**	**247**	*e*P	**P**	**08 28 42.2**	**-1.4**
	comp=Z,26nm,0.7s,mb5.1						
PPT	**Papeete**	**38.68**	**92**	*e*S	**S**	**08 34 42.1**	**-1.4**
	comp=Z,616nm,24.8s						
PPT				*e*LQ		08 37 49.3	
	comp=Z,8μm,28.5s						
PPT				*e*LR	LR	08 39 28.9	
	comp=Z,6μm,27.2s,baz=255						
PPT	**Papeete**	**38.68**	**92**	LR	LR	08 40 53.9	
	comp=Z,2μm,20.1s,MS4.9,baz=257,slow=30						
FITZ	**Fitzroy Crossi**	**41.35**	**266**	*e*P	**P**	**08 29 07.7**	**-1.6**
	comp=Z,88nm,0.8s,mb5.4						
FITZ				*e*S	**S**	**08 35 24.7**	**+1.2**
FITZ	**Fitzroy Crossi**	**41.35**	**266**	LR	LR	08 46 30.1	
	comp=Z,7μm,18.7s,MS5.6,baz=104,slow=36						
GUMO	**Guam**	**42.23**	**323**	LR	LR	08 46 14.6	
	comp=Z,1μm,18.1s,MS4.8,baz=137,slow=36						
BATI	**Baunata**	**45.34**	**277**	LR	LR	08 48 49.8	
	comp=Z,4μm,19.0s,MS5.4,baz=136,slow=36						
MBWA	**Marble Bar**	**46.26**	**261**	*e*P	**P**	**08 29 46.6**	**-2.2**
	comp=Z,102nm,1.1s,mb5.7						
MBWA				*e*PP	PP	08 31 41.0	+3.6
KLBR	**Kellerberrin**	**47.13**	**246**	*e*P	**P**	**08 29 53.2**	**-2.3**
	comp=Z,76nm,1.2s,mb5.5						
NWAO	**Narrogin (SRO)**	**47.57**	**244**	P	**P**	**08 29 57.6**	**-1.3**
	comp=Z,22nm,1.0s,mb5.2,baz=97,slow=12,SNR=5.6						
NWAO				LR	LR	08 49 18.2	
	comp=Z,13μm,20.7s,MS5.9,baz=91,slow=35						
NWAO	**Narrogin (SRO)**	**47.57**	**244**	*e*P	**P**	**08 29 56.8**	**-2.1**
NWAO				pmax	pmax		
	comp=Z,35nm,1.1s						
NWAO	**Narrogin (SRO)**	**47.57**	**244**	*e*P	**P**	**08 29 56.8**	**-2.1**
	comp=Z,35nm,1.1s,mb5.3						
DRV	**Dumont d'Urvil**	**49.19**	**195**	P	**P**	**08 30 15.0**	**+4.2**
DRV				S	**S**	**08 37 22.0**	**+6.5**
DRV				SS	SS	08 41 00.0	+13
DRV				L		08 42 00.0	
DRV				R		08 44 00.0	
KAPI	**Kappang**	**50.84**	**281**	P	**P**	**08 30 24.9**	**+0.8**
	comp=Z,233nm,1.4s,mb5.9,SNR=5.0						
KAPI	**Kappang**	**50.84**	**281**	P	**P**	**08 30 23.6**	**-0.6**
	comp=Z,34nm,1.1s,mb5.2,baz=324,slow=1.5,SNR=8.3						
KAPI	**Kappang**	**50.84**	**281**	*e*P	**P**	**08 30 23.8**	**-0.4**
	comp=Z,86nm,1.3s,mb5.5						
RKT	**Rikitea**	**51.17**	**103**	*e*S	**S**	**08 37 43.4**	**-1.0**
	comp=Z,514nm,30.0s						
RKT				*e*LQ		08 42 48.1	
	comp=Z,858nm,26.8s						
RKT				*e*LR	LR	08 45 18.4	
	comp=Z,2μm,27.0s,baz=261						
DAV	**Davao City (W)**	**51.49**	**298**	LR	LR	08 52 45.5	
	comp=Z,548nm,19.0s,MS4.6,baz=156,slow=37						
SBA	**Scott Base**	**56.69**	**181**	*e*P	**P**	**08 31 06.1**	**+0.1**
SBA				pmax	pmax		
	comp=Z,97nm,1.4s,mb5.6						
SBA	**Scott Base**	**56.69**	**181**	*e*P	**P**	**08 31 06.1**	**0.0**
	comp=Z,97nm,1.4s,mb5.6						
CASY	**Casey**	**58.42**	**204**	*e*P	**P**	**08 31 17.3**	**-1.1**
CASY				*e*S	**S**	**08 39 15.8**	**-4.7**
KKM	**Kota Kinabalu**	**58.88**	**291**	*e*P	**P**	**08 31 25.3**	**+2.8**
KSM	**Kuching**	**62.08**	**284**	P	**P**	**08 31 43.0**	**-1.3**
MJAR	**Matsushiro Arr**	**64.63**	**332**	P	**P**	**08 31 59.9**	**-0.7**
	comp=Z,6.9nm,0.9s,mb4.7,baz=165,slow=6.8,SNR=9.2						
MJAR				LR	LR	08 55 47.6	
	comp=Z,440nm,21.0s,MS4.6,baz=95,slow=32						
MAJO	**Matsushiro**	**64.63**	**332**	*e*P	**P**	**08 31 59.7**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
MAJO	**Matsushiro**	**64.63**	**332**	*e*P	**P**	**08 31 59.7**	**-0.9**
MAT				*e*P	**P**	**08 31 59.7**	**-0.9**
MAT				*e*S	**S**	**08 40 37.0**	**-2.9**
NACB	**Ninganchiao**	**64.89**	**312**	P	**P**	**08 31 58.1**	**-4.5**
	comp=Z,486nm,1.4s,mb6.3						
MIR	**Mirnyy**	**65.35**	**205**	*i*P	**P**	**08 32 06.0**	**+1.0**
MIR				*i*		08 32 20.0	
MIR				*e*S	S	08 40 50.0	+1.8
MIR				pmax	pmax		
	comp=Z,200nm,2.0s,mb5.8						
YHNB	**Yeheng**	**65.36**	**312**	*e*P	**P**	**08 32 05.1**	**-0.6**
	comp=Z,48nm,0.6s,mb5.7						
QZH	**Quanzhou**	**67.49**	**310**	P	**P**	**08 32 21.0**	**+1.7**
QZH				S	S	08 41 17.5	+2.3
QZH				SCS	ScS	08 42 17.8	+0.5
QZH				AMB	AMB		
	comp=Z,1μm,9.4s						
QZH				LR	LR		
	comp=N,2μm,17.3s,MS5.4						
QZH				LR	LR		
	comp=E,420nm,13.5s,MS5.4						
QZH				LR	LR		
	comp=Z,710nm,16.2s,MS5.0						
QSPA	**South Pole Qui**	**68.84**	**180**	P	**P**	**08 32 27.3**	**+0.3**
	comp=Z,26nm,1.0s,mb5.1,baz=35,slow=1.9,SNR=26						
SSE	**Sheshan**	**69.69**	**317**	*e*P	**P**	**08 32 33.5**	**+0.6**
SSE				XP	sP	08 32 39.8	-0.2
SSE				PCP	PcP	08 32 57.3	+1.6
SSE				S	S	08 41 40.5	-0.7
SSE				SCS	ScS	08 42 34.8	+0.5
SSE				AMB	AMB		
	comp=Z,41nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,141nm,5.9s						
SSE				LR	LR		
	comp=N,172nm,21.1s,MS4.5						
SSE				LR	LR		
	comp=E,200nm,21.3s,MS4.5						
SSE				LR	LR		
	comp=Z,179nm,23.5s,MS4.2						
SSE	**Sheshan**	**69.69**	**317**	*e*P	**P**	**08 32 33.6**	**+0.7**
	comp=Z,41nm,0.7s,mb5.5						
SSE				sP	sP	08 32 39.7	-0.3
SSE				PcP	PcP	08 32 57.2	+1.5
SSE				S	S	08 41 40.4	-0.8
SSE				sS	sS	08 41 46.0	-3.8
SSE				ScS	ScS	08 42 34.7	+0.4
SSE				LR	LR		
	comp=Z,180nm,23.5s,MS4.2						
GZH	**Guangzhou**	**70.25**	**306**	P	**P**	**08 32 38.5**	**+1.9**
GZH				S	S	08 41 51.3	+3.2
GZH				LR	LR		
	comp=N,189nm,21.3s,MS4.7						
GZH				LR	LR		
	comp=E,371nm,20.7s,MS4.7						
GZH				LR	LR		
	comp=Z,743nm,19.1s,MS5.0						
KSRS	**Korea Array**	**70.29**	**326**	P	**P**	**08 32 36.7**	**+0.2**
	comp=Z,4.6nm,1.1s,mb4.3,baz=146,slow=6.0,SNR=7.5						
KSRS				LR	LR	08 59 52.4	
	comp=Z,386nm,18.1s,MS4.7,baz=143,slow=33						
QIZ	**Qiongzhong**	**70.80**	**300**	P	**P**	**08 32 40.5**	**+0.5**
QIZ				PP	PP	08 35 17.5	+0.4
QIZ				S	S	08 41 58.3	+3.7
QIZ				SS	SS	08 46 30.5	+3.1
QIZ				AMB	AMB		
	comp=Z,44nm,1.5s,mb5.2						
QIZ				AMB	AMB		
	comp=Z,427nm,8.3s						
QIZ				LR	LR		
	comp=N,432nm,19.1s						
QIZ				LR	LR		
	comp=Z,424nm,23.4s,MS4.6						
QIZ	**Qiongzhong**	**70.80**	**300**	*e*P	**P**	**08 32 39.2**	**-0.7**
	comp=Z,74nm,1.4s,mb5.4						
INCN	**Inchon**	**71.00**	**325**	P	**P**	**08 32 41.0**	**+0.2**
	comp=Z,85nm,1.3s,mb5.5						
YSS	**Yuzh-Sakhalins**	**72.04**	**341**	*e*P	**P**	**08 32 46.9**	**+0.1**
YSS				*e*		08 32 56.0	
YSS				*e*S	S	08 42 12.0	+4.2
YSS	**Yuzh-Sakhalins**	**72.04**	**341**	‖ *i*P	**P**	**08 32 46.0**	**-0.8**
WHN	**Wuhan**	**73.88**	**313**	P	**P**	**08 33 00.5**	**+2.4**
WHN				S	S	08 42 26.5	-3.0
WHN				LR	LR		
	comp=Z,975nm,21.8s,MS5.0						
PET	**Petropavlovsk**	**74.54**	**353**	*e*P	pP	08 33 12.0	+5.3
PET				pmax	pmax		
	comp=Z,100nm,10.7s						
PETK	**Petropavlovsk-**	**74.73**	**353**	P	**P**	**08 33 02.3**	**-0.3**
	comp=Z,20nm,1.1s,mb4.9,baz=66,slow=4.0,SNR=6.2						
PETK				LR	LR	09 00 21.7	
	comp=Z,1μm,20.4s,MS5.2,baz=148,slow=31						
DL2	**Dalian**	**74.76**	**323**	P	**P**	**08 33 04.5**	**+1.4**
DL2				S	S	08 42 43.5	+4.5
DL2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.2						
DL2				AMB	AMB		
	comp=Z,230nm,6.2s						
DL2				LR	LR		
	comp=N,350nm,15.1s,MS4.8						
DL2				LR	LR		
	comp=E,190nm,15.0s,MS4.8						
DL2				LR	LR		
	comp=Z,350nm,15.1s,MS4.8						
MDJ	**Mudanjiang**	**74.99**	**332**	P	**P**	**08 33 05.5**	**+1.2**
MDJ				AP	pP	08 33 08.5	-1.0
MDJ				XP	sP	08 33 10.0	-1.4
MDJ				PP	PP	08 35 54.0	+1.5
MDJ				S	S	08 42 44.5	+3.2
MDJ				XS	sS	08 42 48.8	-1.1
MDJ				SCS	ScS	08 43 18.0	+2.2
MDJ				SS	SS	08 47 34.5	+3.8
MDJ				AMB	AMB		
	comp=Z,17nm,1.8s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,296nm,4.6s						
MDJ				LR	LR		
	comp=N,432nm,16.1s,MS5.0						
MDJ				LR	LR		
	comp=E,292nm,11.9s,MS5.0						
MDJ				LR	LR		
	comp=Z,492nm,23.8s						
MDJ	**Mudanjiang**	**74.99**	**332**	P	**P**	**08 33 04.1**	**-0.2**
	comp=Z,97nm,1.6s,mb5.5						
SNY	**Shenyang**	**75.78**	**326**	P	**P**	**08 33 10.0**	**+1.1**
SNY				S	S	08 42 54.8	+4.6
SNY				AMB	AMB		
	comp=Z,378nm,8.2s						
SNY				LR	LR		
	comp=N,563nm,20.0s						
SNY				LR	LR		
	comp=Z,403nm,24.0s,MS4.7						
HABR	**Khabarovsk**	**75.93**	**337**	*e*P	**P**	**08 33 07.3**	**-2.2**
HABR				*e*		08 33 17.6	
HABR				*e*		08 33 19.8	
HABR				*e*		08 35 55.4	
HABR				*e*S	S	08 42 47.2	-4.3
HABR				*e*		08 47 40.4	
HABR				*e*		08 51 03.2	
CN2	**Changchun**	**76.29**	**329**	*e*P	**P**	**08 33 11.3**	**-0.4**
CN2				*e*XP	sP	08 33 18.5	-0.3
CN2				*e*S	S	08 43 00.3	+4.6
CN2				SS	SS	08 47 55.8	+5.4
CN2				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=E,500nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=Z,500nm,18.0s,MS4.9						
MAW	**Mawson**	**76.70**	**202**	*e*P	**P**	**08 33 15.3**	**+1.5**
	comp=Z,12nm,1.6s,mb4.6						
MAW	**Mawson**	**76.70**	**202**	P	**P**	**08 33 15.6**	**+1.8**
	comp=Z,8.6nm,1.0s,mb4.6,baz=102,slow=8.3,SNR=11						
MAW				LR	LR	09 02 42.3	
	comp=Z,2μm,20.0s,MS5.5,baz=89,slow=32						
MAW	**Mawson**	**76.70**	**202**	*e*P	**P**	**08 33 15.3**	**+1.5**
MAW				pmax	pmax		
	comp=Z,12nm,1.6s						
GYA	**Guiyang**	**77.17**	**305**	‖ *i*P	**P**	**08 33 17.8**	**+0.7**
GYA				PP	PP	08 36 12.8	+1.5
GYA				S	S	08 43 07.8	+1.7
GYA				SKS		08 43 28.0	
GYA				AMB	AMB		
	comp=Z,20nm,1.0s

KMI AP pP 08 33 35.8 +0.2
KMI PCP PcP 08 33 40.8 +2.6
KMI PP PP 08 36 33.0 +1.8
KMI S S 08 43 33.0 +1.3
KMI XS sS 08 43 39.3 -1.1
KMI SKS 08 43 44.8
KMI SCS ScS 08 43 52.8 -0.8
KMI SS SS 08 48 45.3 +5.1
KMI AMB AMB
comp=Z,70nm,1.3s,mb5.4
KMI AMB AMB
comp=Z,471nm,3.1s
KMI LR LR
comp=N,338nm,17.9s,MS4.9
KMI LR LR
comp=E,366nm,16.5s,MS4.9
KMI LR LR
comp=Z,433nm,17.6s,MS4.8
KMI Kunming 79.55 302 P P **08 33 31.1 +0.8**
KMI *SP sP 08 33 37.0 -0.5
KMI 08 33 40.8
KMI 08 36 33.0
KMI PPP 08 38 21.2
KMI S S 08 43 32.9 +1.2
KMI *SS sS 08 43 39.2 -1.2
KMI 08 43 44.7
KMI PS 08 44 18.6
KMI SS SS 08 48 45.3 +5.1
KMI pmax pmax
comp=Z,70nm,1.3s,mb5.4
KMI MLR MLR
comp=Z,430nm,17.6s,MS4.8
KMI Kunming 79.55 302 P P **08 33 31.1 +0.8**
comp=Z,70nm,1.3s,mb5.4
KMI pP pP 08 33 35.8 +0.2
KMI sP sP 08 33 37.0 -0.5
KMI PcP PcP 08 33 40.8 +2.6
KMI PP PP 08 36 33.0 +1.8
KMI PPP 08 38 21.2
KMI S S 08 43 32.9 +1.2
KMI sS sS 08 43 39.2 -1.2
KMI SKS 08 43 44.7
KMI ScS ScS 08 43 52.7 -0.9
KMI PS 08 44 18.6
KMI SS SS 08 48 45.3 +5.1
KMI SSS 08 52 05.8
KMI LR LR
comp=Z,430nm,17.6s,MS4.8
CM31 Chiang Mai Arr 79.56 294 *eP* P **08 33 31.3 +0.8**
comp=Z,59nm,1.0s,mb5.5
CMAR Chiang Mai Arr 79.56 294 P P **08 33 31.0 +0.5**
comp=Z,27nm,1.0s,mb5.1,baz=128,slow=3.6,SNR=33
XAN Xi'an 79.64 313 P P **08 33 30.8 +0.2**
XAN AP pP 08 33 42.0 +6.1
XAN AMB AMB
comp=Z,29nm,2.5s,mb4.8
XAN AMB AMB
comp=Z,277nm,4.9s
CHTO Chiang Mai 79.72 295 *eP* P **08 33 31.8 +0.4**
CHTO pmax pmax
comp=Z,56nm,1.1s,mb5.4
CHTO Chiang Mai 79.72 295 *eP* P **08 33 31.8 +0.4**
comp=Z,56nm,1.1s,mb5.4
CD2 Chengdu 81.65 308 *eP* P **08 33 42.0 +0.5**
CD2 AP pP 08 33 46.8 +0.1
CD2 XP sP 08 33 49.3 +0.7
CD2 PP PP 08 36 51.8 +3.2
CD2 S S 08 43 54.3 +0.8
CD2 XS sS 08 44 02.3 +0.1
CD2 SS SS 08 49 16.5 +5.0
CD2 AMB AMB
comp=Z,30nm,1.4s,mb5.0
CD2 AMB AMB
comp=Z,60nm,5.8s
CD2 LR LR
comp=N,650nm,23.8s,MS5.1
CD2 LR LR
comp=E,620nm,20.2s,MS5.1
CD2 LR LR
comp=Z,460nm,23.8s,MS4.8
HHC Hu-ho-hao-te 81.90 319 *eP* P **08 33 43.8 +1.3**
HHC AP pP 08 33 47.0 -0.8
HHC PP PP 08 36 53.8 +3.4
HHC S S 08 43 57.5 +1.9
HHC XS sS 08 44 03.0 -1.3
HHC SS SS 08 49 20.5 +5.7
HHC AMB AMB
comp=Z,20nm,0.8s,mb5.1
HHC AMB AMB
comp=Z,383nm,7.3s
HHC LR LR
comp=N,311nm,17.6s,MS4.9
HHC LR LR
comp=E,353nm,16.4s,MS4.9
HHC LR LR
comp=Z,426nm,17.4s,MS4.9
BTO Baotou 82.70 319 *eP* P **08 33 48.3 +1.6**
SYO Syowa Base 83.11 196⇑ *eP* P **08 33 46.0 -2.5**
SYO Syowa Base 83.11 196⇑ *ep*P pP 08 33 47.5 -6.2
SYO Syowa Base 83.11 196⇑ *e*PcP PcP 08 33 49.9 -3.2
OHAK Old Harbor 84.13 19 P P **08 33 53.7 0.0**
comp=Z,43nm,1.0s,mb5.5
LZH Lanzhou 84.25 312 *eP* P **08 33 56.0 +1.2**
LZH AP pP 08 34 03.3 +3.2
LZH SKS 08 44 18.0
LZH S S 08 44 25.0 +5.2
LZH AMB AMB
comp=Z,84nm,1.5s,mb5.7
LZH AMB AMB
comp=Z,535nm,6.9s
LZH LR LR
comp=E,1μm,17.9s
LZH LR LR
comp=Z,2μm,18.3s,MS5.4
LZH Lanzhou 84.25 312 *eP* P **08 33 56.1 +1.3**
LZH *SP sP 08 34 05.1 +3.1
LZH 08 44 18.0
LZH S S 08 44 25.1 +5.3
LZH pmax pmax
comp=Z,84nm,1.5s,mb5.7
LZH MLR MLR
comp=Z,2μm,18.3s,MS5.4
LZH Lanzhou 84.25 312 *eP* P **08 33 56.1 +1.3**
comp=Z,84nm,1.5s,mb5.7
LZH pP pP 08 34 03.2 +3.1
LZH sP sP 08 34 05.1 +3.1
LZH PP PP 08 37 28.0 +18
LZH SKS 08 44 18.0
LZH S S 08 44 25.1 +5.3
LZH sS sS 08 44 37.0 +8.5
LZH SS SS 08 50 07.0 +17
LZH LR LR
comp=Z,2μm,18.3s,MS5.4
SEY Seymchan 84.97 352⇑ *iP* P **08 33 56.6 -1.2**
CLNS Chul'man 86.32 337 *eP* P **08 34 05.0 +0.4**
CLNS *e* 08 37 19.8
CLNS *eS* S 08 44 28.3 -11
CLNS pmax pmax
comp=Z,81nm,1.5s,mb5.7
CLNS pmax pmax
comp=E,20nm,1.4s
CLNS pmax pmax
comp=N,50nm,1.5s
CLNS pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS pmax pmax
comp=E,6.0nm,0.9s
CLNS smax
comp=E,130μm,12.1s
CLNS smax
comp=N,108μm,11.9s
CLNS MLR MLR
comp=E,115nm,16.0s,MS4.7
CLNS MLR MLR
comp=N,228nm,16.0s,MS4.7
CLNS MLR MLR
comp=Z,187nm,15.0s,MS4.6
MCCM Marconi Confer 86.62 47 *eP* P **08 34 06.3 -0.3**
comp=Z,29nm,1.0s,mb5.5
JRSC Jasper Ridge 86.69 48 ⇓P P **08 34 06.8 -0.1**
baz=87
V03C Hunter Liggett 86.72 49 ⇓P P **08 34 07.6 +0.5**
baz=87
HOPS Hopland 86.92 46 ⇓P P **08 34 08.0 -0.1**
baz=87
HOPS Hopland 86.92 46 *eP* P **08 34 08.2 +0.2**
comp=Z,67nm,1.4s,mb5.7
SAO San Andreas Ge 86.93 49 *eP* P **08 34 08.8 +0.7**
SAO pmax pmax
comp=Z,17nm,0.8s,mb5.3
SAO San Andreas Ge 86.93 49 *eP* P **08 34 08.8 +0.6**
comp=Z,17nm,0.8s,mb5.3
NVL N'lazarevskaya 86.93 187 P P **08 34 08.3 +0.7**
NVL pmax pmax
comp=Z,54nm,2.3s,mb5.4
KCPM Cahto Peak 86.93 45 *eP* P **08 34 08.7 +0.6**
MAIT Maitri 86.93 187 *eP* P **08 34 07.9 +0.2**
O01C Eel River Cons 87.00 45⇑ P **08 34 08.1 -0.3**
baz=87
CVS Carmenet Viney 87.01 47⇑ P **08 34 08.7 +0.2**
baz=87
SBC Santa Barbara 87.05 51 ⇓P P **08 34 08.7 -0.1**
baz=87
KIPM Iron Peak 87.06 45 *eP* P **08 34 08.6 -0.1**
PACP Pacheco Peak 87.16 49⇑ P **08 34 09.3 0.0**
baz=88
PKD Parkfield 87.17 50 ⇓P P **08 34 09.1 -0.3**
baz=88
SNAA Sanae 87.20 182 *eP* P **08 34 07.9 -1.0**
SNAA *e* 08 34 09.9
SNAA *e* pP 08 34 13.5 -0.7
SNAA *e* 08 34 20.3
SNAA Sanae 87.20 182 *eP* P **08 34 08.1 -0.8**
SNAA pmax pmax
comp=Z,69nm,1.4s
SNAA Sanae 87.20 182 *eP* P **08 34 08.1 -0.9**
comp=Z,69nm,1.4s,mb5.7
U04C Hernandez Rese 87.20 49 ⇓P P **08 34 09.6 +0.1**
baz=88
SMMC Simmler 87.26 51 ⇓P P **08 34 09.9 +0.1**
baz=88
PTRM Twisselman Ran 87.27 50 P P **08 34 09.4 -0.4**
MNRC McLaughlin Nat 87.28 46⇑ P **08 34 10.3 +0.5**
baz=88,SNR=6.0
Q03C Winters 87.45 47 ⇓P P **08 34 10.7 +0.1**
baz=88
GASB Alder Springs 87.49 46 ⇓P P **08 34 11.1 +0.3**
baz=88,SNR=31
CIS Catalina Islan 87.54 53⇑ P P **08 34 11.0 -0.2**
baz=88
V05C Boulder Hill, 87.59 50⇑ P P **08 34 11.6 +0.2**
baz=88
KRMB Red Mountain 87.66 44 *eP* P **08 34 11.5 -0.1**
M01C Crescent City 87.69 43 ⇓P P **08 34 12.0 +0.4**
baz=88
N02C Big Bar 87.69 44⇑ P P **08 34 11.8 +0.1**
baz=88,SNR=9.7
O02C Red Bluff 87.70 45⇑ P P **08 34 12.6 +0.8**
baz=88,SNR=19
CIT Chita 87.73 329 *eP* P **08 34 11.6 0.0**
FMP Fort Macarthur 87.76 53 ⇓P P **08 34 12.2 0.0**
baz=88
VNA3 Neumayer Olymp 87.78 180 *eP* P **08 34 10.2 -1.5**
VNA3 *e* 08 34 12.1
VNA3 *e* pP 08 34 16.1 -0.9
VNA3 *e* 08 34 20.8
VNA3 *e* 08 34 30.5
OSI Osito Adit 87.86 52⇑ P P **08 34 12.7 0.0**
baz=88
Q04C Lincoln 87.99 47⇑ P P **08 34 13.1 -0.1**
baz=88
S05C Merced 87.99 49⇑ P P **08 34 13.4 +0.1**
baz=88,SNR=8.6
R04C Big Horse Ranc 88.01 48 ⇓P P **08 34 13.3 0.0**
baz=88
ARVC Arvin 88.02 51⇑ P P **08 34 13.1 -0.4**
baz=88
WDC Whiskeytown Da 88.07 45 *eP* P **08 34 13.5 0.0**
WDC pmax pmax
comp=Z,28nm,1.2s,mb5.4
WDC Whiskeytown Da 88.07 45 ⇓P P **08 34 13.2 -0.3**
baz=88,SNR=9.9
WDC Whiskeytown Da 88.07 45 *eP* P **08 34 13.5 -0.1**
comp=Z,28nm,1.2s,mb5.4
VNA2 Neumayer--Watz 88.07 181 *eP* P **08 34 12.4 -0.7**
VNA2 *e* 08 34 13.8
VNA2 *e* pP 08 34 17.2 -1.2
VNA2 *e* 08 34 22.5
VNA2 *e* 08 34 32.4
VES Vestal, Richgr 88.17 50 ⇓P P **08 34 13.5 -0.6**
baz=88,SNR=7.0
MWC Mount Wilson 88.17 52 *eP* P **08 34 14.4 +0.2**
MWC pmax pmax
comp=Z,32nm,1.1s,mb5.5
MWC Mount Wilson 88.17 52 *eP* P **08 34 14.3 +0.2**
comp=Z,32nm,1.1s,mb5.5
ORV Oroville 88.25 46 ⇓P P **08 34 14.3 -0.2**
baz=89
T06C Millerton Lake 88.27 49 ⇓P P **08 34 14.3 -0.3**
baz=89,SNR=17
RCTC Rector, Farmer 88.27 50 ⇓P P **08 34 14.4 -0.2**
baz=89
M02C Callahan 88.27 44⇑ P P **08 34 14.4 -0.1**
baz=89,SNR=15
CMB Columbia Colle 88.28 48 *eP* P **08 34 14.4 -0.2**
CMB pmax pmax
comp=Z,19nm,0.8s,mb5.4
CMB Columbia Colle 88.28 48⇑ P P **08 34 14.4 -0.2**
baz=89,SNR=12
CMB Columbia Colle 88.28 48 *eP* P **08 34 14.4 -0.2**
comp=Z,19nm,0.8s,mb5.4
VNA1 Neumayer--Stat 88.36 181 *eP* P **08 34 14.3 -0.2**
VNA1 *e* 08 34 16.4
VNA1 *e* pP 08 34 18.7 -1.1
VNA1 *e* 08 34 26.5
VNA1 *e* 08 34 34.8
LAVA Lava Cap Winer 88.38 47 ⇓P P **08 34 15.1 +0.1**
baz=89
BFSC Mount Baldy St 88.47 52 ⇓P P **08 34 15.2 -0.4**
baz=89
BAR Barrett 88.51 54 P P **08 34 14.1 -1.7**
EDW2 Edwards Air Fo 88.52 52⇑ P **08 34 15.4 -0.4**
baz=89,SNR=7.2
ISA Isabella 88.52 51 *eP* P **08 34 15.9 +0.1**
ISA pmax pmax
comp=Z,23nm,0.9s,mb5.5
ISA Isabella 88.52 51⇑ P P **08 34 15.5 -0.3**
baz=89,SNR=19
ISA Isabella 88.52 51 *eP* P **08 34 15.9 +0.1**
comp=Z,23nm,0.9s,mb5.5
MURC Murrieta 88.52 53 ⇓P P **08 34 15.7 -0.2**
baz=89
YBH Yreka Blue Hor 88.54 44 *eP* P **08 34 16.4 +0.7**
YBH pmax pmax
comp=Z,14nm,0.9s
YBH Yreka Blue Hor 88.54 44⇑ P P **08 34 15.7 -0.1**
baz=89,SNR=13
YBH Yreka Blue Hor 88.54 44 *eP* P **08 34 16.4 +0.7**
comp=Z,14nm,0.9s,mb5.3
K02A Glendale 88.56 43⇑ P P **08 34 15.9 +0.1**
baz=89
S06C San Francisco 88.58 48 ⇓P P **08 34 16.2 +0.1**
baz=89,SNR=21
HELL Mitchell Peak 88.60 50 ⇓P P **08 34 15.8 -0.3**
baz=89,SNR=12
ULN Ulaanbaatar 88.61 323⇑ *iP* P **08 34 15.7 -0.2**
GTA Gaotai 88.68 313 *eP* P **08 34 16.8 +0.3**
GTA AP pP 08 34 20.8 -1.0
GTA XP sP 08 34 23.8 +0.2
GTA PP PP 08 37 48.0 +2.5
GTA SKS 08 44 45.5
GTA S S 08 45 06.0 +3.3
GTA XS sS 08 45 14.3 +2.8
GTA AMB AMB
comp=Z,9.0nm,1.4s,mb4.9
GTA AMB AMB
comp=Z,299nm,3.9s
GTA LR LR
comp=N,233nm,16.2s,MS4.8
GTA LR LR
comp=E,239nm,16.5s,MS4.8
GTA LR LR
comp=Z,209nm,20.7s,MS4.5
KCC Kaiser Creek 88.69 49 ⇓P P **08 34 16.4 -0.2**
baz=89,SNR=15
M03C McCloud 88.69 44⇑ P P **08 34 16.4 -0.1**
baz=89,SNR=13
P05C Yuba Gap, Truc 88.74 47 ⇓P P **08 34 16.8 +0.1**
baz=89,SNR=13
MONP Monument Peak 88.79 54 ⇓P P **08 34 16.5 -0.6**
baz=89
R05C Kirkwood Meado 88.81 48⇑ P P **08 34 16.9 -0.2**
baz=89,SNR=13
J02A Umpqua 88.82 42 ⇓P P **08 34 17.1 +0.1**
baz=89
HUMO Hull Mountain 88.82 43 ⇓P P **08 34 17.0 0.0**
baz=89,SNR=11
HUMO Hull Mountain 88.82 43 *eP* P **08 34 17.4 +0.4**
comp=Z,21nm,1.0s,mb5.4
YAK Yakutsk 88.84 342 *eP* P **08 34 16.4 -0.2**
YAK *eS* S 08 44 44.9 -18
YAK *e* 08 45 06.8
YAK pmax pmax
comp=Z,4.0nm,0.4s,mb5.1
YAK pmax pmax
comp=N,3.0nm,0.6s
YAK pmax pmax
comp=E,4.0nm,0.7s
YAK MLR MLR
comp=Z,719nm,20.0s,MS5.1
YAK MLR MLR
comp=N,459nm,18.0s,MS5.0
YAK MLR MLR
comp=E,260nm,17.0s,MS5.0
YAK Yakutsk 88.84 342⇑ *iP* P **08 34 16.2 -0.4**
O05C Quincy 88.85 46⇑ P P **08 34 17.1 -0.2**
baz=89
O04C Chester 88.91 46⇑ P P **08 34 17.2 -0.3**
baz=89,SNR=11
PMR Palmer 88.92 18 P P **08 34 19.0 +2.0**
PMR pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
PMR Palmer 88.92 18 P P **08 34 19.0 +2.0**
comp=Z,8.4nm,1.1s,mb5.0
SONM Songino Array 88.96 323 P P **08 34 17.5 -0.1**
comp=Z,6.0nm,1.0s,mb4.9,baz=145,slow=2.0,SNR=22
SONM LR LR 09 15 23.4
comp=Z,260nm,18.2s,MS4.7,baz=25,slow=36
SONM Songino Array 88.96 323 P P **08 34 17.5 -0.1**
SONM LR LR 09 15 23.4
BBRC Big Bear Sol-O 89.03 53 ⇓P P **08 34 17.4 -0.8**
baz=89
BILL Bilibino 89.03 359⇑ *eP* P **08 34 15.5 -1.9**
BILL pmax pmax
comp=Z,39nm,1.6s,mb5.5
BILL Bilibino 89.03 359⇑ *iP* P **08 34 15.6 -1.8**
PFO Pinyon Flat Ob 89.08 53 *eP* P **08 34 18.7 +0.2**
PFO pmax pmax
comp=Z,41nm,1.5s,mb5.5
PFO Pinyon Flat Ob 89.08 53 ⇓P P **08 34 17.9 -0.6**
baz=89
PFO Pinyon Flat Ob 89.08 53 *eP* P **08 34 18.7 +0.2**
comp=Z,41nm,1.5s,mb5.5
M04C Macdoel 89.13 44⇑ P P **08 34 18.2 -0.3**
baz=89
R06C Coleville 89.16 48⇑ P P **08 34 18.6 -0.1**
baz=90,SNR=13
WAKR Walker 89.16 48 *eP* P **08 34 19.6 +0.8**
CWC Cottonwood Cre 89.16 50 ⇓P P **08 34 18.8 0.0**
baz=89,SNR=8.5
H02A Toledo 89.23 41⇑ P P **08 34 18.8 -0.1**
baz=90
SWSC Sam W. Stewart 89.29 54 ⇓P P **08 34 19.2 -0.3**
baz=90,SNR=7.1
L04A Klamath Falls 89.29 44 ⇓P P **08 34 18.8 -0.4**
baz=90
ELFS Eagle Lake Fie 89.29 46⇑ P P **08 34 19.6 +0.3**
baz=90
I03A Eugene 89.31 42⇑ P P **08 34 19.4 +0.1**
baz=90
WCN Washoe City 89.32 47 ⇓P P **08 34 19.5 0.0**
baz=90
TIN Tinemaha 89.34 50⇑ P P **08 34 19.8 +0.2**
baz=90
M05C Lookout 89.37 45⇑ P P **08 34 19.7 0.0**
baz=90,SNR=13
P06A Stead Airport, 89.40 47 ⇓P P **08 34 20.0 +0.2**
baz=90
MPMC Manual Prospec 89.41 51⇑ P P **08 34 19.9 -0.1**
baz=90,SNR=13
GSC Goldstone 89.57 52 ⇓P P **08 34 20.7 0.0**
baz=90
GSC Goldstone 89.57 52 *eP* P **08 34 20.3 -0.4**
S08C White Mtn Res 89.58 49 ⇓P P **08 34 20.9 +0.2**
baz=90,SNR=21
BELC Belle Mtn, 89.60 53⇑ P P **08 34 20.6 -0.3**
baz=90,SNR=9.0
K04A Chilquin 89.61 43⇑ P P **08 34 20.7 -0.1**
baz=90
H03A Soap Creek Ran 89.66 41⇑ P P **08 34 21.5 +0.5**
baz=90
O06A Flanigan 89.68 46⇑ P P **08 34 21.1 -0.1**
baz=90,SNR=12
J04A Umpqua Nationa 89.68 43⇑ P P **08 34 21.7 +0.7**
baz=90
HEC Hector,Ludlow 89.71 52 ⇓P P **08 34 21.4 -0.1**
baz=90
M06C Likely Place G 89.74 45 ⇓P P **08 34 21.5 +0.1**
baz=90,SNR=5.6
PAHR Pah Rah Range 89.76 47 *eP* P **08 34 21.8 +0.2**
comp=Z,25nm,1.0s,mb5.5
I04A Tendick Farm, 89.76 42 ⇓P P **08 34 21.9 +0.5**
baz=90
Q07A Schurz 89.80 48 ⇓P P **08 34 21.4 -0.4**
baz=90
BC3 Big Chuckw Mtn 89.86 54⇑ P P **08 34 21.8 -0.4**
baz=90,SNR=7.8
L05A Lakeview 89.91 44 ⇓P P **08 34 22.2 0.0**
baz=90,SNR=7.4
NVAR Mina Array Bea 89.91 48 P P **08 34 22.8 +0.5**
comp=Z,5.5nm,0.6s,mb5.1,baz=228,slow=8.3,SNR=63
GRAC Grapevine Rang 89.92 50 ⇓P P **08 34 22.4 0.0**
baz=90
N06A Buffalo Meadow 89.95 46 ⇓P P **08 34 21.8 -0.5**
baz=90,SNR=12
G03A Yamhill 90.00 41 ⇓P P **08 34 22.3 -0.2**
baz=90
R08A Mina 90.02 49 ⇓P P **08 34 22.5 -0.3**
baz=90
P07A Fallon 90.02 47⇑ P P **08 34 22.5 -0.2**
baz=90
112A Yuma 90.04 55⇑ P P **08 34 22.9 0.0**
baz=90
FURC Furnace Creek, 90.05 51⇑ P P **08 34 22.8 -0.1**
baz=90,SNR=15
GLA Glamis 90.07 54 *eP* P **08 34 23.3 +0.2**
GLA pmax pmax
comp=Z,31nm,0.8s,mb5.7
GLA Glamis 90.07 54⇑ P P **08 34 23.0 -0.2**
baz=90,SNR=9.2
GLA Glamis 90.07 54 *eP* P **08 34 23.3 +0.2**
comp=Z,31nm,0.8s,mb5.7
F03A Seaside 90.14 40 ⇓P P **08 34 23.8 +0.7**
baz=90
GMRC Granite Mounta 90.19 53 ⇓P P **08 34 23.2 -0.4**
baz=90
MOD Modoc 90.19 45 ⇓P P **08 34 23.2 -0.2**
baz=90,SNR=15
MOD Modoc 90.19 45 *eP* P **08 34 23.2 -0.3**
comp=Z,16nm,0.8s,mb5.4
K05A Summer Lake 90.20 44⇑ P P **08 34 23.3 -0.2**
baz=90,SNR=9.5
SHOC Shoshone 90.22 51⇑ P P **08 34 23.6 -0.1**
baz=90,SNR=9.5
J05A Fort Rock 90.25 43 ⇓P P **08 34 23.5 -0.2**
baz=91,SNR=15
TUQ Turquoise Moun 90.28 52⇑ P P **08 34 23.9 -0.2**
baz=91
IRM Iron Mountain 90.30 53⇑ P P **08 34 23.8 -0.3**
baz=91,SNR=11
O07A Toulon 90.32 47 ⇓P P **08 34 24.0 -0.1**
baz=91,SNR=12
H04A Detroit Lake 90.35 42 ⇓P P **08 34 23.4 -0.8**
baz=91
S09A Goldfield 90.35 49⇑ P P **08 34 24.1 -0.2**
baz=91,SNR=9.6
Q08A Gabbs 90.37 48 ⇓P P **08 34 24.1 -0.3**
baz=91,SNR=17
U10A Ash Meadows, A 90.41 51 ⇓P P **08 34 24.3 -0.4**
baz=91,SNR=10
G04A Mulino 90.43 41 ⇓P P **08 34 24.4 -0.1**
baz=91
E03A Lebam 90.46 39 ⇓P P **08 34 24.4 -0.2**
baz=91
N07B Gerlach 90.54 46⇑ P P **08 34 25.1 -0.1**
baz=91

Y12C **Blythe** 90.60 54 ⇑P P 08 34 24.7 -0.9
baz=91,SNR=7.6
C03A **Quillayute Air** 90.60 38 ⇑P P 08 34 25.1 -0.1
baz=91
BMW **Boistfort Moun** 90.62 40 P P 08 34 30.6 +5.2
P08A **Dixie Valley** 90.65 47 ⇓P P 08 34 25.7 0.0
baz=91
K06A **Valley Falls** 90.65 44 ⇓P P 08 34 25.5 -0.1
baz=91,SNR=16
I05A **Bend** 90.66 42 ⇑P P 08 34 25.3 -0.3
baz=91
R09A **Tonopah** 90.69 49 ⇑P P 08 34 25.7 -0.2
baz=91,SNR=17
M07A **Soldier Meadow** 90.69 45 ⇓P P 08 34 26.0 +0.2
baz=91,SNR=13
TPNV **Topopah Spring** 90.70 50 *eP* P 08 34 26.5 +0.5
TPNV pmax pmax
comp=Z,20nm,0.8s,mb5.5
TPNV **Topopah Spring** 90.70 50 ⇓P P 08 34 25.9 -0.1
baz=91,SNR=18
TPNV **Topopah Spring** 90.70 50 *eP* P 08 34 26.5 +0.5
comp=Z,20nm,0.8s,mb5.5
NLWA **Neilton Lookou** 90.71 39 ⇓P P 08 34 25.9 +0.1
baz=91
NLWA **Neilton Lookou** 90.71 39 P P 08 34 26.7 +0.9
comp=Z,70nm,1.6s,mb5.7
LDFC **Landfair** 90.72 53 *eP* P 08 34 26.5 +0.3
comp=Z,39nm,0.8s,mb5.8
113A **Mohawk Valley,** 90.76 55 ⇓P P 08 34 25.9 -0.4
baz=91,SNR=9.1
LSA **Lhasa** 90.79 302 P P 08 34 26.3 -0.3
LSA pmax pmax
comp=Z,57nm,1.7s,mb5.6
LSA **Lhasa** 90.79 302 P P 08 34 26.3 -0.3
comp=Z,58nm,1.7s,mb5.6
V11A **Goodsprings** 90.81 52 ⇓P P 08 34 26.2 -0.3
baz=91,SNR=8.9
F04A **Amboy** 90.83 40 ⇓P P 08 34 26.1 -0.2
baz=91
O08A **Rochester Mine** 90.87 47 ⇑P P 08 34 26.9 +0.3
baz=91,SNR=15
L07A **Adell** 90.88 45 ⇓P P 08 34 26.5 -0.1
baz=91,SNR=18
Q09A **Carvers** 90.88 48 ⇓P P 08 34 26.7 0.0
baz=91
S10A **Tonopah Range,** 90.89 49 ⇓P P 08 34 26.5 -0.3
baz=91,SNR=25
H05A **Madras** 90.93 42 ⇓P P 08 34 26.7 -0.2
baz=91
W12A **Cal Nev Ari** 91.00 52 ⇑P P 08 34 26.9 -0.5
baz=91
N08A **GE Springer Mi** 91.11 46 ⇑P P 08 34 27.6 -0.2
baz=91
PDMCI **Parker Dam,Lak** 91.12 54 ⇑P P 08 34 28.0 0.0
baz=91,SNR=7.3
Y13A **Salome** 91.15 54 ⇓P P 08 34 27.9 -0.3
baz=91,SNR=7.2
214A **Organ Pipe Nat** 91.16 56 ⇓P P 08 34 28.4 +0.1
baz=91,SNR=7.8
G05A **Wamic** 91.16 41 ⇓P P 08 34 27.8 -0.1
baz=92
V12A **Nelson** 91.19 52 ⇑P P 08 34 28.4 +0.1
baz=92,SNR=8.1
I06A **Prineville** 91.22 43 ⇓P P 08 34 28.5 +0.3
baz=92,SNR=13
BOD **Bodaibo** 91.23 334 *eP* P 08 34 26.1 -1.8
BOD pmax pmax
comp=Z,20nm,1.6s,mb5.2
P09A **Austin** 91.23 48 ⇓P P 08 34 28.2 -0.1
baz=92
M08A **Happy Creek Ra** 91.25 46 ⇑P P 08 34 28.3 -0.1
baz=92
K07A **Rock Creek Ran** 91.25 44 ⇓P P 08 34 28.3 -0.1
baz=92,SNR=16
R10A **Warm Springs** 91.26 49 ⇑P P 08 34 28.6 0.0
baz=92,SNR=16
SHPR **Sheep Range** 91.30 51 *eP* P 08 34 29.4 +0.7
S11A **Rachel** 91.37 50 ⇓P P 08 34 29.1 0.0
baz=92,SNR=11
F05A **White Salmon** 91.39 41 ⇓P P 08 34 29.3 +0.4
baz=92
C04A **Brinnon** 91.40 39 ⇓P P 08 34 29.4 +0.5
baz=92
GNW **Green Mountain** 91.41 39 *eP* P 08 34 28.8 -0.2
comp=Z,16nm,0.9s,mb5.3
Q10A **Clear Creek Ra** 91.42 49 ⇑P P 08 34 29.5 +0.2
baz=92
X13A **Yucca** 91.47 53 ⇓P P 08 34 29.2 -0.4
baz=92,SNR=17
O09A **Fish Creek Ran** 91.47 47 ⇓P P 08 34 29.1 -0.4
baz=92,SNR=8.2
H06A **Lindquist Farm** 91.53 42 ⇓P P 08 34 29.7 +0.1
baz=92,SNR=15
J07A **Hines** 91.53 44 ⇑P P 08 34 29.7 0.0
baz=92
WVOR **Wild Horse Val** 91.53 45 *eP* P 08 34 29.4 -0.3
WVOR pmax pmax
comp=Z,23nm,1.3s,mb5.3
WVOR **Wild Horse Val** 91.53 45 *eP* P 08 34 29.4 -0.3
comp=Z,23nm,1.3s,mb5.3
E05A **Randle** 91.54 40 ⇓P P 08 34 29.3 -0.3
baz=92
N09A **Rock Creek Ran** 91.55 47 ⇑P P 08 34 29.6 -0.2
baz=92
BMN **Battle Mountai** 91.57 47 *eP* P 08 34 30.4 +0.5
BMN pmax pmax
comp=Z,15nm,0.8s,mb5.4
BMN **Battle Mountai** 91.57 47 *eP* P 08 34 30.4 +0.5
comp=Z,15nm,0.8s,mb5.4
T11A **Corn Creek, Al** 91.57 51 ⇓P P 08 34 29.5 -0.5
baz=92,SNR=15
G06A **Carlson Farm,** 91.58 42 ⇓P P 08 34 29.7 -0.2
baz=92
LON **Longmire** 91.60 40 *eP* P 08 34 28.5 -1.4
LON pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
LON **Longmire** 91.60 40 *eP* P 08 34 28.5 -1.4
comp=Z,7.2nm,1.0s,mb5.0
L08A **Fields** 91.61 45 ⇓P P 08 34 30.2 +0.1
baz=92,SNR=13
Z14A **Wintersburg** 91.63 55 ⇑P P 08 34 29.8 -0.6
baz=92
W13A **Hualapai Mount** 91.64 53 ⇓P P 08 34 30.0 -0.4
baz=92,SNR=11
D05A **Enumclaw** 91.71 39 ⇑P P 08 34 30.8 +0.4
baz=92
T12A **Moapa** 91.72 51 ⇓P P 08 34 30.4 -0.3
baz=92
U12A **Valley of Fire** 91.72 52 ⇑P P 08 34 30.6 -0.2
baz=92,SNR=6.8
P10A **Eureka** 91.73 48 ⇓P P 08 34 31.0 +0.3
baz=92
I07A **Izee** 91.74 43 ⇑P P 08 34 30.9 +0.3
baz=92
F06A **Goldendale** 91.75 41 ⇑P P 08 34 31.1 +0.5
baz=92
K08A **Mann Creek Ran** 91.77 45 ⇓P P 08 34 30.9 +0.1
baz=92
R11A **Troy Canyon, C** 91.79 49 ⇑P P 08 34 30.5 -0.5
baz=92,SNR=12
Y14A **Wickenburg** 91.82 54 ⇑P P 08 34 31.0 -0.3
baz=92,SNR=8.7
COLA **College** 91.86 17⇑*iP* P 08 34 29.2 -1.5
COLA **College** 91.86 17 P P 08 34 36.5 +5.8
comp=Z,2.8nm,0.8s,mb4.6
M09A **Marrel Ranch,** 91.86 46 ⇓P P 08 34 31.5 +0.3
baz=92
V13A **Grand Canyon W** 91.88 52 ⇓P P 08 34 31.5 0.0
baz=92,SNR=11
115A **Sonoran Desert** 91.91 56 ⇓P P 08 34 31.5 -0.2
baz=92
H07A **Lands Inn, Kim** 91.94 43 ⇑P P 08 34 31.6 0.0
baz=92,SNR=10
Q11A **Duckwater** 91.96 49 ⇑P P 08 34 31.8 0.0
baz=92,SNR=14
L09A **Wilkinson Ranc** 91.98 45 ⇑P P 08 34 32.2 +0.4
baz=92,SNR=5.6
S12A **Delamar Landin** 92.00 50 ⇓P P 08 34 32.2 +0.2
baz=92,SNR=16
E06A **Yakima** 92.00 40 ⇓P P 08 34 31.6 -0.1
baz=92
ZAK **Zakamensk** 92.06 324 *eP* P 08 34 30.6 -1.3
ZAK *e* 08 38 19.6
ZAK pmax pmax
comp=Z,22nm,1.4s,mb5.3
J08A **Circle Bar Ran** 92.06 44 ⇑P P 08 34 32.3 +0.1
baz=92
X14A **Yava** 92.13 54 ⇑P P 08 34 32.6 0.0
baz=92,SNR=16
SKAG **Skagway** 92.13 25 *eP* P 08 34 32.7 +0.7
U13A **Pakoon Wash** 92.13 52 ⇓P P 08 34 32.3 -0.3
baz=92,SNR=9.0
C05A **Tolt Reservoir** 92.14 39 ⇓P P 08 34 32.4 0.0
baz=92
B05A **Bryant** 92.19 38 ⇓P P 08 34 32.8 +0.2
baz=92
P11A **Circle Ranch,** 92.19 48 ⇑P P 08 34 33.2 +0.3
baz=92
G07A **Ruggs Ranch, H** 92.19 42 ⇑P P 08 34 32.6 -0.1
baz=92
216A **Three Points,** 92.23 57 ⇑P P 08 34 33.2 0.0
baz=92
K09A **Rome** 92.25 45 ⇓P P 08 34 33.2 +0.2
baz=93,SNR=11
I08A **Drewsey** 92.26 43 ⇑P P 08 34 33.3 +0.3
baz=93
116A **Eloy** 92.26 56 ⇓P P 08 34 32.8 -0.5
baz=92,SNR=9.5
W14A **Seligman** 92.29 53 ⇓P P 08 34 33.4 0.0
baz=93,SNR=14
F07A **Phinny Hill Vi** 92.33 41 ⇓P P 08 34 33.8 +0.5
baz=93
Y15A **Casa Rosa Ranc** 92.34 55 ⇑P P 08 34 33.6 -0.1
baz=93,SNR=15
D06A **Cle Elum** 92.40 40 ⇓P P 08 34 33.8 +0.3
baz=93
T13A **Saint George** 92.43 51 ⇓P P 08 34 34.1 +0.1
baz=93,SNR=7.6
V14A **Boquillas Ranc** 92.44 53 ⇓P P 08 34 34.0 -0.1
baz=93,SNR=12
H08A **Prairie City** 92.47 43 ⇑P P 08 34 33.9 -0.1
baz=93,SNR=5.5
R12A **Pony Springs,** 92.47 50 ⇓P P 08 34 34.1 -0.1
baz=93,SNR=11
O11A **Cowboy Ranch,** 92.51 48 ⇓P P 08 34 34.2 0.0
baz=93,SNR=13
M10A **I.L. Ranch, Tu** 92.52 46 ⇓P P 08 34 34.4 +0.1
baz=93
J09A **Fry Pan Ranch,** 92.53 44 ⇓P P 08 34 34.5 +0.2
baz=93,SNR=13
TLY **Talaya** 92.54 325 *eP* P 08 34 34.0 -0.1
TLY *eS* S 08 45 27.7 -10
TLY *eSS* SS 08 51 53.8 +3.8
TLY pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
TLY **Talaya** 92.54 325⇑*iP* P 08 34 33.2 -0.9
RPW **Rockport** 92.61 38 P P 08 34 34.5 0.0
Q12A **Willow Creek R** 92.62 49 ⇑P P 08 34 34.7 -0.1
baz=93
X15A **Humboldt** 92.63 54 ⇓P P 08 34 34.7 -0.3
baz=93,SNR=13
217A **Green Valley** 92.64 57 ⇑P P 08 34 34.5 -0.5
baz=93,SNR=6.5
G08A **Pilot Rock** 92.65 42 ⇑P P 08 34 35.2 +0.4
baz=93,SNR=12
E07A **Sunnyside** 92.69 41 ⇓P P 08 34 35.3 +0.3
baz=93
S13A **Holt Ranch, En** 92.70 51 ⇑P P 08 34 35.2 0.0
baz=93,SNR=8.3
U14A **Mt Trumbull** 92.71 52 ⇓P P 08 34 35.5 +0.2
baz=93,SNR=16
P12A **McGill** 92.75 49 ⇓P P 08 34 35.6 +0.2
baz=93
RSW **Rattlesnake Hi** 92.77 41 *eP* P 08 34 35.8 +0.5
Z16A **Peralta Trail,** 92.78 55 ⇑P P 08 34 35.5 -0.2
baz=93,SNR=7.1
L10A **Juniper Basin** 92.81 46 ⇑P P 08 34 35.6 0.0
baz=93,SNR=6.1
HAWA **Hanford** 92.81 41 *eP* P 08 34 35.9 +0.4
comp=Z,30nm,1.6s,mb5.5
I09A **Lost Marbles R** 92.82 44 ⇓P P 08 34 35.5 -0.1
baz=93
K10A **MacKenzie Ranc** 92.85 45 ⇓P P 08 34 36.3 +0.6
baz=93,SNR=5.3
R13A **O'Grain Ranch,** 92.87 50 ⇑P P 08 34 36.5 +0.5
baz=93,SNR=8.0
TUC **Tucson** 92.87 57 *eP* P 08 34 36.0 -0.2
TUC pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
TUC **Tucson** 92.87 57 *eP* P 08 34 36.0 -0.2
comp=Z,4.9nm,0.9s,mb4.9
ETW **Entiat** 92.90 40 P P 08 34 41.1 +5.2
D07A **Quincy** 92.92 40 ⇓P P 08 34 36.6 +0.6
baz=93
Y16A **Circle Bar Ran** 92.96 55 ⇑P P 08 34 36.8 +0.3
baz=93,SNR=16
M11A **Holland Ranch,** 92.98 47 ⇑P P 08 34 37.3 +0.9
baz=93
117A **Oracle** 93.01 56 ⇓P P 08 34 36.6 -0.2
baz=93,SNR=11
CCUT **Cedar City** 93.04 51 *eP* P 08 34 37.0 +0.1
T14A **Hurricane** 93.05 51 ⇓P P 08 34 36.9 0.0
baz=93
ELK **Elko** 93.06 47 *eP* P 08 34 37.3 +0.5
ELK pmax pmax
comp=Z,9.0nm,1.1s
ELK **Elko** 93.06 47 *eP* P 08 34 37.3 +0.4
comp=Z,8.9nm,1.1s,mb5.1
ARUT **Antelope Range** 93.09 51 *eP* P 08 34 37.7 +0.7
E08A **Dider Farm, El** 93.14 41 ⇑P P 08 34 37.2 +0.2
baz=94
318A **Bisbee** 93.16 58 ⇓P P 08 34 37.5 0.0
baz=93
Q13A **Wheeler Ranch,** 93.16 49 ⇓P P 08 34 37.7 +0.4
baz=93
H09A **Durkee** 93.18 43 ⇓P P 08 34 37.3 0.0
baz=94
O12A **Currie** 93.20 48 ⇑P P 08 34 37.8 +0.3
baz=94
X16A **Lo Mia Camp, P** 93.20 54 ⇓P P 08 34 37.9 +0.3
baz=94,SNR=14
V15A **Kaibab Nationa** 93.21 53 ⇑P P 08 34 38.0 +0.4
baz=94,SNR=6.4
N12A **Clover Valley,** 93.25 47 ⇑P P 08 34 37.9 +0.2
baz=94
218A **Dragoon** 93.32 57 ⇓P P 08 34 38.2 -0.1
baz=94
L11A **Cat Creek Ranc** 93.33 46 ⇑P P 08 34 38.4 +0.4
baz=94,SNR=7.5
P13A **Bates Ranch, G** 93.37 49 ⇓P P 08 34 38.4 +0.1
baz=94,SNR=9.9
U15A **North Rim** 93.37 52 ⇓P P 08 34 38.7 +0.4
baz=94,SNR=15
Y17A **Roosevelt** 93.37 55 ⇓P P 08 34 38.4 0.0
baz=94,SNR=5.7
G09A **Cove** 93.38 42 ⇓P P 08 34 38.3 +0.1
baz=94
K11A **Parker Ranch,** 93.40 45 ⇑P P 08 34 38.7 +0.4
baz=94
W16A **Flagstaff** 93.40 54 ⇑P P 08 34 38.5 -0.1
baz=94
B07A **Winthrop** 93.43 39 ⇑P P 08 34 39.1 +0.8
baz=94
BMO **Blue Mountains** 93.49 43 *eP* P 08 34 38.5 -0.2
F09A **S2 Ranch, Elgi** 93.50 42 ⇓P P 08 34 39.6 +0.9
baz=94
Z17A **San Carlos Hig** 93.50 56 ⇑P P 08 34 39.1 +0.1
baz=94
T15A **Red Dirt Ranch** 93.54 52 ⇑P P 08 34 39.9 +0.8
baz=94,SNR=7.8
A07A **Ashnola River,** 93.56 38 ⇑P P 08 34 38.8 -0.1
baz=94
M12A **Wells** 93.57 47 ⇓P P 08 34 39.4 +0.2
baz=94
X17A **Forest Lakes** 93.65 55 ⇓P P 08 34 39.9 +0.2
baz=94,SNR=11
WUAZ **Wupatki** 93.69 53 ⇑P P 08 34 39.8 0.0
baz=94,SNR=11
WUAZ **Wupatki** 93.69 53 *eP* P 08 34 40.5 +0.7
comp=Z,11nm,0.9s,mb5.3
319A **Douglas** 93.69 58 ⇓P P 08 34 40.0 0.0
baz=94
Q14A **Sevier Lake (B** 93.70 50 ⇑P P 08 34 39.9 +0.1
baz=94
H10A **Noah's Angus R** 93.73 43 ⇓P P 08 34 39.4 -0.4
baz=94,SNR=15
DAWY **Dawson** 93.76 20 *eP* P 08 34 38.5 -1.0
G10A **Bishop Farm, J** 93.81 43 ⇑P P 08 34 40.1 0.0
baz=94,SNR=11
L12A **House Creek Ra** 93.81 46 ⇓P P 08 34 40.2 0.0
baz=94
MFID **Camas Ranch** 93.82 45 ⇑P P 08 34 40.0 -0.2
baz=94
S15A **Panguitch** 93.82 51 ⇑P P 08 34 40.4 0.0
baz=94
N13A **Wendover, West** 93.82 48 ⇓P P 08 34 40.5 +0.2
baz=94
D09A **Jones Farm, Ri** 93.86 41 ⇓P P 08 34 40.5 +0.2
baz=94
219A **White Tail Can** 93.94 57 ⇑P P 08 34 41.0 -0.1
baz=94
I11A **Placerville** 93.95 44 ⇓P P 08 34 40.9 +0.1
baz=94
Y18A **Canyon Day Jun** 94.03 55 ⇑P P 08 34 41.4 0.0
baz=94,SNR=12
F10A **Beach Ranch, E** 94.04 42 ⇓P P 08 34 41.6 +0.4
baz=94
M13A **Montello** 94.06 47 ⇓P P 08 34 41.3 -0.1
baz=94,SNR=7.9
P14A **Drum Mountains** 94.09 49 ⇓P P 08 34 41.7 +0.1
baz=94
K12A **Draper Farm, C** 94.10 46 ⇑P P 08 34 41.5 0.0
baz=94
U16A **Tuba City** 94.12 53 ⇓P P 08 34 41.5 -0.3
baz=94,SNR=7.9
T16A **Glen Canyon Da** 94.17 52 ⇓P P 08 34 41.6 -0.4
baz=94
119A **Ashpeak Ranch,** 94.20 57 ⇑P P 08 34 41.7 -0.6
baz=94
J12A **Stokes Ranch,** 94.23 45 ⇑P P 08 34 42.1 0.0
baz=94
H11A **Donnelly** 94.25 44 ⇓P P 08 34 42.0 -0.2
baz=94,SNR=8.8
MSU **Marysvale** 94.29 50 *eP* P 08 34 43.1 +0.6
X18A **Snowflake** 94.38 55 ⇓P P 08 34 43.5 +0.5
baz=95
G11A **Walters Elk Ra** 94.39 43 ⇑P P 08 34 43.0 +0.2
baz=95
DUG **Dugway** 94.52 49 *eP* P 08 34 43.7 +0.2
DUG pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
DUG **Dugway** 94.52 49 ⇑P P 08 34 43.6 +0.1
baz=95
DUG **Dugway** 94.52 49 *eP* P 08 34 43.7 +0.2
comp=Z,7.2nm,1.1s,mb5.0
N14A **Grayback Hills** 94.52 48 ⇑P P 08 34 43.7 +0.1
baz=95
M14A **Sheep Mountain** 94.68 47 ⇓P P 08 34 43.9 -0.3
baz=95
T17A **Navajo Res., N** 94.69 52 ⇑P P 08 34 44.1 -0.3
baz=95,SNR=6.8
Y19A **Nutrioso** 94.69 56 ⇑P P 08 34 44.7 +0.2
baz=95
R16A **Teasdale** 94.70 51 ⇓P P 08 34 44.4 0.0
baz=95
HLID **Hailey** 94.81 45 ⇓P P 08 34 44.9 +0.1
baz=95
HLID **Hailey** 94.81 45 *eP* P 08 34 44.5 -0.3
comp=Z,7.1nm,1.3s,mb4.9
X19A **St. Johns** 94.84 55 ⇓P P 08 34 44.8 -0.4
baz=95
E11A **Bogner Ranch,** 94.84 42 ⇑P P 08 34 44.9 0.0
baz=95
V18A **Ganado** 94.84 54 ⇓P P 08 34 44.7 -0.5
baz=95
J13A **Cove Ranch, Pi** 94.90 45 ⇑P P 08 34 45.2 0.0
baz=95
H12A **Diamond D Ranc** 94.94 44 ⇓P P 08 34 45.4 0.0
baz=95
S17A **Black Ridge (B** 94.94 52 ⇓P P 08 34 44.9 -0.6
baz=95
W19A **Sanders** 95.03 54 ⇓P P 08 34 45.9 -0.1
baz=95
D11A **Klaveano Farm,** 95.07 41 ⇓P P 08 34 46.2 +0.4
baz=95
I13A **Wildhorse Cree** 95.15 45 ⇓P P 08 34 46.3 0.0
baz=95
F12A **Elk City** 95.19 43 ⇑P P 08 34 46.4 -0.1
baz=96
K14A **Jones Ranch, D** 95.22 46 ⇓P P 08 34 46.2 -0.4
baz=96
E12A **Beaver Dam Sad** 95.27 42 ⇑P P 08 34 46.9 +0.1
baz=96
M15A **Larsen Ranch,** 95.28 48 ⇓P P 08 34 46.7 -0.2
baz=96
TMUT **Trail Mountain** 95.29 50 P P 08 34 47.3 +0.2
J14A **Carey** 95.31 46 ⇑P P 08 34 47.1 +0.1
baz=96
R17A **Hanksville Air** 95.31 51 ⇓P P 08 34 47.1 -0.1
baz=96
H13A **Challis** 95.33 44 ⇑P P 08 34 47.4 +0.3
baz=96
T18A **Mexican Hat** 95.43 52 ⇑P P 08 34 47.5 -0.3
baz=96,SNR=11
O16A **Springville** 95.44 49 ⇑P P 08 34 47.8 +0.1
baz=96
C11A **Tepee Creek (N** 95.46 41 ⇓P P 08 34 47.9 +0.3
baz=96
L15A **Malad City** 95.54 47 ⇑P P 08 34 47.5 -0.6
baz=96
G13A **Cobalt** 95.56 44 ⇑P P 08 34 47.8 -0.4
baz=96
I14A **Mackay** 95.60 45 ⇓P P 08 34 48.3 0.0
baz=96
JLU **Jordanelle** 95.63 49 *eP* P 08 34 49.9 +1.3
D12A **Red Ives Fores** 95.68 42 ⇑P P 08 34 48.1 -0.5
baz=96
SRU **San Rafael** 95.71 50 *eP* P 08 34 50.3 +1.3
SRU pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
SRU **San Rafael** 95.71 50 ⇓P P 08 34 49.4 +0.4
baz=96
SRU **San Rafael** 95.71 50 *eP* P 08 34 50.2 +1.2
comp=Z,4.9nm,0.8s,mb5.0
N16A **Rees Ranch, Co** 95.75 48 ⇑P P 08 34 50.1 +0.9
baz=96
F13A **Darby** 95.79 43 ⇓P P 08 34 48.7 -0.5
baz=96
R18A **Canyonlands Na** 95.89 51 ⇑P P 08 34 50.2 +0.3
baz=96
H14A **Leadore** 95.93 44 ⇑P P 08 34 50.2 +0.3
baz=96
O17A **Robinson Place** 95.98 49 ⇑P P 08 34 49.7 -0.5
baz=96,SNR=9.6
Q18A **Rafter H Ranch** 95.99 50 ⇑P P 08 34 50.4 +0.1
baz=96
J15A **Blackfoot** 96.06 46 ⇓P P 08 34 51.0 +0.5
baz=96
E13A **Victor** 96.15 43 ⇑P P 08 34 51.5 +0.7
baz=96
MCMT **McKenzie Canyo** 96.35 44 *eP* P 08 34 51.9 +0.1
H15A **Lima** 96.40 45 ⇓P P 08 34 52.2 +0.2
baz=97
K16A **Soda Springs** 96.41 47 ⇓P P 08 34 52.1 0.0
baz=97
J16A **Bone** 96.56 46 ⇓P P 08 34 52.4 -0.4
baz=97
Q19A **Hogan Spring (** 96.56 51 ⇑P P 08 34 52.1 -0.8
baz=97
E14A **Clinton** 96.58 43 ⇑P P 08 34 52.2 -0.6
baz=97
TIXI **Tiksi** 96.73 348⇑*iP* P 08 34 50.0 -2.9
PV01 **Paradox Valley** 96.77 52 *eP* P 08 34 54.3 +0.5
RRI2 **Red Ridge** 96.79 46 *eP* P 08 34 55.0 +1.2
comp=Z,3.3nm,0.6s,mb4.9
PLCA **Paso Flores** 96.88 138 P P 08 34 55.2 +0.8
comp=Z,1.5nm,0.7s,mb4.5,baz=342,slow=4.0,SNR=4.2
PLCA LR LR 09 12 02.1
comp=Z,333nm,18.1s,MS4.9,baz=224,slow=31
PLCA **Paso Flores** 96.88 138 *eP* P 08 34 55.0 +0.5
PLCA pmax pmax
comp=Z,14nm,1.5s
PLCA **Paso Flores** 96.88 138 *eP* P 08 34 55.0 +0.5
comp=Z,14nm,1.5s,mb5.2
REDW **Red Top Meadow** 97.11 46 *eP* P 08 34 55.4 +0.2
comp=Z,9.1nm,1.3s,mb5.0
ANMO **Albuquerque** 97.20 55 *eP* P 08 35 03.2 +7.3
SNOW **Snow King Moun** 97.21 46 *eP* P 08 35 01.6 +5.9
comp=Z,33nm,2.1s,mb5.4
IMW **Indian Meadow** 97.25 46 *eP* P 08 34 57.1 +1.2
comp=Z,22nm,1.9s,mb5.3
TXAR **Lajitas Array** 97.48 62 P P 08 34 57.6 +0.3
comp=Z,0.3nm,0.8s,baz=185,slow=7.2,SNR=4.5
TXAR LR LR 09 11 12.1
comp=Z,1μm,19.2s,MS5.4,baz=275,slow=31
PDAR **Pinedale Array** 97.77 47 P P 08 34 57.6 -0.6
comp=Z,0.6nm,0.5s,mb4.3,baz=199,slow=2.3,SNR=5.9
PDAR PKKP PKKPbc 08 51 43.2 +8.6
comp=Z,0.6nm,0.8s,baz=76,slow=7.8,SNR=4.8
PDAR LR LR 09 15 56.6
comp=Z,521nm,18.6s,MS5.0,baz=249,slow=34
HVS **Khovu-Aksy** 97.79 322⇓*iP* P 08 34 57.7 -0.4
HVS pmax pmax
comp=Z,31nm,1.3s,mb5.7

WMQ	**Urumqi**	**98.76**	**314**	*e*P	**P**	08 35 03.8	**+1.1**
WMQ				AP	pP	08 35 08.5	+0.5
WMQ				XP	sP	08 35 11.0	+1.1
WMQ				PP	PP	08 39 07.0	+2.6
WMQ				*e*S	S	08 46 29.0	-2.9
WMQ				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,179nm,4.4s						
WMQ				LR	LR		
	comp=N,513nm,20.5s						
WMQ				LR	LR		
	comp=E,624nm,26.7s						
WMQ				LR	LR		
	comp=Z,388nm,22.6s,MS4.8						
MKAR	**Makanchi Array**	**103.33**	**315**	Pdiff	Pdif	08 35 22.8	-0.2
	comp=Z,0.3nm,0.2s,baz=100,slow=6.0,SNR=2.8						
MKAR				PP	PP	08 39 39.2	+0.4
	comp=Z,0.9nm,0.7s,baz=101,slow=6.3,SNR=5.7						
MKAR				PKKP	PKKPdf	08 51 43.0	+16
	comp=Z,1.8nm,0.9s,baz=287,slow=4.6,SNR=6.9						
MKAR	**Makanchi Array**	**103.33**	**315**	P	Pdif	08 35 22.8	-0.2
MKAR						08 39 39.2	
MKAR	**Makanchi Array**	**103.33**	**315**	Pdif	Pdif	08 35 22.8	-0.2
MKAR				PP	PP	08 39 39.2	+0.4
MKAR				PKKP	PKKPdf	08 51 43.0	+15
KURK	**Kurchatov**	**106.69**	**318**	PKiKP	PKiKP	08 39 46.5	-1.6
	comp=Z,0.3nm,0.8s,baz=110,slow=3.7,SNR=2.9						
KURK				PKKPab	PKKPab	08 51 23.6	+2.5
	comp=Z,0.6nm,0.8s,baz=288,slow=3.6,SNR=3.1						
BVAR	**Borovoye Array**	**112.11**	**320**	PKiKP	PKiKP	08 39 56.9	-1.3
	comp=Z,0.9nm,0.6s,baz=85,slow=3.1,SNR=3.9						
BRVK	**Borovoye**	**112.17**	**320**	⇑*i*PKiKP	PKiKP	08 39 57.9	-0.5
ARU	**Arti**	**118.99**	**324**	*i* PKiKP	PKPdf	08 40 11.2	-0.2
ARU				*e*		08 41 28.3	
ARU						08 47 03.0	
ARU				SS	SS	08 57 43.8	-6.7
ARU	**Arti**	**118.99**	**324**	⇑*i*PKP	PKPdf	08 40 11.1	-0.3
AKTK	**Aktyubinsk**	**119.70**	**317**	PKP	PKPdf	08 40 11.6	-1.3
AKTK				PKKPab	PKKPab	08 50 28.7	+4.8
AKTO	**Aktyubinsk**	**119.70**	**317**	PKP	PKPdf	08 40 11.6	-1.3
	comp=Z,1.0nm,0.6s,baz=18,slow=6.4,SNR=3.4						
AKTO				PKKPab	PKKPab	08 50 28.7	+4.8
	comp=Z,0.9nm,0.6s,baz=225,slow=2.9,SNR=4.0						
SPITS	**Spitsbergen Ar**	**121.59**	**354**	PKP	PKPdf	08 40 14.3	-1.5
	comp=Z,21nm,1.1s,baz=15,slow=10,SNR=2.8						
LONY	**Lake Ozonia**	**122.89**	**50**	*e*PKPdf	PKPdf	08 40 16.1	-3.2
QUA2	**Belchertown**	**124.59**	**53**	*e*PKPdf	PKPdf	08 40 21.0	-1.6
BRYW	**Bryant College**	**125.20**	**53**	*e*PKPdf	PKPdf	08 40 22.0	-1.7
SCHQ	**Schefferville**	**126.35**	**37**	PKP	PKPdf	08 40 24.1	-1.4
	comp=Z,1.9nm,0.7s,baz=337,slow=7.7,SNR=2.4						
PKME	**Peaks-Kenny Pk**	**126.59**	**49**	*e*PKPdf	PKPdf	08 40 24.9	-1.4
ARCES	**ARCESS Array B**	**127.05**	**345**	PKP	PKPdf	08 40 25.1	-1.3
	comp=Z,4.7nm,0.7s,baz=78,slow=1.8,SNR=11						
MAK	**Makhachkala**	**127.41**	**308**	*e*PKiKP	PKPdf	08 40 37.1	+9.2
SJG	**San Juan**	**127.70**	**83**	*e*PKiKP	PKPdf	08 40 27.9	-1.3
KMBO	**Kilima Mbogo**	**128.34**	**251**	PKP	PKPdf	08 40 31.7	+1.1
	comp=Z,0.7nm,0.4s,baz=349,slow=12,SNR=4.6						
KMBO	**Kilima Mbogo**	**128.34**	**251**	*e*PKPdf	PKPdf	08 40 29.9	-0.8
GNI	**Garni**	**129.73**	**305**	*i* PKiKP	PKPdf	08 40 31.6	-0.9
GNI	**Garni**	**129.73**	**305**	*i* PKP	PKPdf	08 40 31.7	-0.8
MOS	**Moscow**	**130.48**	**326**	*e*PKiKP	PKPdf	08 40 38.1	+4.7
KIV	**Kislovodsk**	**130.76**	**310**	*e*PKiKP	PKPdf	08 40 33.4	-0.9
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
OBN	**Obninsk**	**131.29**	**326**	⇑*i*PKiKP	PKPdf	08 40 33.5	-1.4
OBN				pmax	pmax		
	comp=Z,51nm,2.0s						
MALT	**Malatya**	**134.80**	**303**	*e*PKiKP	PKPdf	08 40 43.0	+0.9
AKASG	**Malin Array Be**	**137.25**	**323**	PKP	PKPdf	08 40 46.5	+0.2
	comp=Z,0.6nm,0.3s,baz=56,slow=1.6,SNR=5.3						
AKASG				SKPbc	SKPbc	08 44 18.9	0.0
	comp=Z,0.2nm,0.2s,baz=51,slow=2.6,SNR=6.7						
AKASG	**Malin Array Be**	**137.25**	**323**	PKP	PKPdf	08 40 46.5	+0.2
AKASG				SKPbc	SKPbc	08 44 18.9	0.0
NOA	**NORSAR Array B**	**137.42**	**345**	PKP	PKPdf	08 40 44.8	-1.5
	comp=Z,1.9nm,0.9s,baz=26,slow=1.9,SNR=3.7						
NOA				SKPbc	SKPbc	08 44 17.7	-1.4
	comp=Z,1.6nm,0.9s,baz=32,slow=2.1,SNR=3.3						
KOLS	**Kolonicke sedl**	**142.00**	**325**	*e*PKP	PKPdf	08 40 58.4	+3.5
UZH	**Uzhgorod**	**142.16**	**324**	*e*PKiKP	PKPdf	08 40 57.0	+1.8
CRVS	**Cervenica-Dubn**	**142.46**	**325**	*e*PKP	PKPdf	08 40 58.2	+2.4
NIE	**Niedzica**	**142.75**	**326**	*e*PKP	PKPdf	08 40 55.1	-1.2
DRGR		**142.94**	**321**	⇓*i*P	PKPdf	08 41 00.9	+4.2
ALN	**Alexandroupoli**	**143.43**	**311**	*e*P	PKPdf	08 40 51.6	-6.1
OKC	**Ostrava-Krasne**	**143.57**	**329**	*e*PKP	PKPdf	08 41 00.6	+2.9
OKC				AMS	AMS	09 48 10.0	
	comp=Z,400nm,21.4s						
OKC	**Ostrava-Krasne**	**143.57**	**329**	*e*PKP	PKPdf	08 41 00.6	+2.9
KDZ	**Kurdzhali**	**143.59**	**312**	*i* P	PKPdf	08 40 56.2	-1.8
KSP	**Ksiaz**	**143.75**	**331**	*e*PKiKP	PKPdf	08 40 55.3	-2.7
PRK	**Paraskevi**	**143.83**	**308**	*e*P	PKPdf	08 40 54.6	-4.0
PRK	**Paraskevi**	**143.83**	**308**	*e*P	PKPdf	08 40 56.8	-1.7
SMG	**Samos**	**143.88**	**305**	*e*P	PKPdf	08 40 55.4	-3.2
PSZ	**Piszkesteto**	**143.88**	**325**	*e*PKiKP	PKPdf	08 40 55.8	-2.5
MORC	**Moravsky Berou**	**143.90**	**329**	⇓*i*P	PKPdf	08 41 00.6	+2.3
MORC	**Moravsky Berou**	**143.90**	**329**	*e*PKPdf	PKPdf	08 41 01.1	+2.8
RZN	**Rozhen**	**144.05**	**313**	*i* P	PKPdf	08 40 57.4	-1.4
PGB	**Panagyurishte**	**144.07**	**314**	*i* P	PKPdf	08 40 58.0	-0.8
DPC	**Dobruska-Polom**	**144.09**	**330**	*e*PKP	PKPdf	08 40 56.6	-2.0
DPC				AMS	AMS	09 38 10.0	
	comp=Z,500nm,25.5s						
VYHS	**Vyhne**	**144.09**	**326**	*e*PKP	PKPdf	08 40 56.7	-1.9
UPC	**Upice**	**144.12**	**331**	*e*PKP	PKPdf	08 40 56.0	-2.6
KARP	**Karpathos**	**144.18**	**302**	*e*P	PKPdf	08 40 56.7	-2.5
BZS	**Buzias**	**144.21**	**320**	⇓*i*P	PKPdf	08 41 00.1	+1.1
KOLL	**Kolacno**	**144.26**	**327**	*e*PKP	PKPdf	08 40 59.1	+0.2
CHOS	**Chios island**	**144.27**	**307**	*e*P	PKPdf	08 40 57.3	-2.0
LIA	**Limnos Island**	**144.40**	**310**	*e*P	PKPdf	08 40 55.8	-3.6
LIA	**Limnos Island**	**144.40**	**310**	*e*P	PKPdf	08 40 58.4	-1.1
LOS	**Limnos**	**144.46**	**310**	*e*P	PKPdf	08 40 56.2	-3.3
BUD	**Budapest**	**144.61**	**325**	⇓*e*PKP	PKPdf	08 40 59.6	0.0
VRAC	**Vranov**	**144.68**	**329**	PKP	PKPdf	08 40 56.8	-2.9
	comp=Z,6.9nm,0.9s,baz=98,slow=7.1,SNR=7.7						
VRAC	**Vranov**	**144.68**	**329**	⇓*i*P	PKPdf	08 40 58.3	-1.3
VTS	**Vitosha**	**144.69**	**315**	*i* P	PKPdf	08 40 59.8	-0.1
PVCC	**Panska Ves**	**144.75**	**332**	*e*PKP	PKPdf	08 40 58.3	-1.4
PVCC				*ex*	x	08 41 05.1	
PVCC				AMS	AMS	09 41 10.0	
	comp=Z,800nm,25.0s						
BRG	**Berggiesshubel**	**144.76**	**333**	*i* PKiKP	PKPdf	08 40 58.3	-1.4
BRG				*i*		08 41 05.7	
BRG	**Berggiesshubel**	**144.76**	**333**	*i* PKP	PKPdf	08 40 58.3	-1.4
	comp=Z,46nm,1.4s						
BRG				*i*		08 41 05.7	
	comp=Z,116nm,1.4s						
BRG				*i*		08 44 40.2	
	comp=Z,31nm,1.4s						
BRG				*e*		08 53 59.5	
	comp=Z,6.2nm,1.0s						
MMB	**Musomiste**	**144.77**	**313**	*i* P	PKPdf	08 40 58.0	-2.1
NVR	**Nevrokopi**	**144.78**	**313**	*e*P	PKPdf	08 40 58.5	-1.6
CLL	**Collm**	**144.82**	**334**	*i* PKPdf	PKPdf	08 40 57.7	-2.1
	comp=Z,43nm,1.4s						
CLL				*e*pPKiKP		08 41 05.0	
	comp=Z,82nm,1.3s						
MODS	**Modra-Piesok**	**144.96**	**327**	*e*PKP	PKPdf	08 40 59.6	-0.6
APE	**Apeiranthos**	**145.06**	**305**	*e*P	PKPbc	08 40 57.7	-2.4
APE	**Apeiranthos**	**145.06**	**305**	*e*P	PKPbc	08 40 59.4	-0.8
APE	**Apeiranthos**	**145.06**	**305**	⇓*i*P	PKPbc	08 40 58.6	-1.5
OUR	**Ouranopolis**	**145.10**	**311**	*e*P	PKPbc	08 40 58.3	-1.8
PRU	**Pruhonice**	**145.15**	**331**	*e*PKP	PKPdf	08 40 59.3	-1.1
PRU				*e*pPKP	pPKPdf	08 41 05.4	-0.5
PRU				AMS	AMS	09 41 50.0	
	comp=Z,700nm,23.2s						
ZST	**Bratislava**	**145.17**	**327**	*e*PKP	PKPdf	08 41 00.4	-0.1
ZST				LR	LR		
	comp=Z,200nm,20.1s,MS4.9						
TREC	**Trest**	**145.21**	**330**	*e*PKP	PKPdf	08 40 59.5	-1.1
TREC				AMS	AMS	09 43 20.0	
	comp=Z,700nm,29.4s						
SANT	**Santorini**	**145.31**	**304**	*e*PKPdf	PKPdf	08 40 59.2	-2.0
PLG	**Polygyros**	**145.46**	**311**	*e*P	PKPdf	08 41 01.0	-0.3
PLG	**Polygyros**	**145.46**	**311**	*e*P	PKPdf	08 40 59.6	-1.7
PAIG	**Paliouri**	**145.47**	**310**	*e*P	PKPdf	08 41 00.8	-0.5
NPS	**Neapolis**	**145.47**	**302**	*e*P	PKPdf	08 41 01.7	+0.2
EKA	**Eskdalemuir Ar**	**145.50**	**353**	PKPbc	PKPbc	08 40 58.8	-2.2
	comp=Z,21nm,0.7s,baz=350,slow=2.3,SNR=46						
KNT	**Kendrikon**	**145.52**	**313**	*e*P	PKPdf	08 40 59.4	-1.9
ESK	**Eskdalemuir**	**145.53**	**353**	*e*PKP2	PKPab	08 40 58.9	-2.3
PKSM	**Moragy**	**145.59**	**323**	⇑*i*P	PKPdf	08 41 01.2	-0.1
LAST	**Lasithi**	**145.60**	**302**	*e*P	PKPdf	08 41 00.6	-1.1
HORT	**Hortiatis**	**145.61**	**312**	*e*P	PKPdf	08 40 59.1	-2.4
VAY	**Valandovo**	**145.67**	**313**	*e*PKP	PKPdf	08 40 59.0	-2.6
THE	**Thessaloniki**	**145.69**	**312**	*e*P	PKPdf	08 41 01.2	-0.5
NKC	**Novy Kostel**	**145.87**	**334**	*e*PKP	PKPdf	08 41 01.8	+0.1
NKC				*ex*	x	08 41 08.2	
MOX	**Moxa**	**145.89**	**335**	*e*PKP	PKPdf	08 41 02.4	+0.7
	comp=Z,90nm,1.6s						
GRG	**Griva**	**145.94**	**313**	*e*P	PKPdf	08 41 02.6	+0.5
CONA	**Conrad Observa**	**145.97**	**328**	⇑*i*P	PKPdf	08 41 03.2	+1.3
	comp=Z,181nm,1.6s						
CSNA	**Conrad Observa**	**145.97**	**328**	⇑*i*P	PKPdf	08 41 03.2	+1.3
	comp=Z,177nm,1.6s						
NEO	**Neokhori**	**146.03**	**310**	*e*P	PKPdf	08 41 03.1	+0.8
XOR	**Xorichti**	**146.03**	**310**	*e*P	PKPdf	08 41 00.9	-1.4
SKO	**Skopje**	**146.14**	**315**	*e*PKP	PKPdf	08 41 02.0	-0.4
ATH	**Athens Observa**	**146.14**	**307**	*e*P	PKPdf	08 41 02.6	0.0
KHC	**Kasperske Hory**	**146.20**	**331**	*e*PKP	PKPdf	08 41 01.6	-0.7
KHC				*ex*	x	08 41 08.8	
KHC				AMS	AMS	09 43 20.0	
	comp=Z,700nm,30.9s						
LIT	**Litokhoron**	**146.24**	**311**	*e*P	PKPdf	08 41 02.4	-0.3
GEC2	**GERESS Array S**	**146.36**	**331**	*e*PKP2	PKPab	08 41 02.6	-2.0
GERES	**GERESS Array B**	**146.36**	**331**	PKPbc	PKPbc	08 41 03.0	-0.8
	comp=Z,4.5nm,0.6s,baz=37,slow=3.1,SNR=22						
LKR	**Lokris**	**146.43**	**309**	*e*P	PKPdf	08 41 02.1	-0.9
LKR	**Lokris**	**146.43**	**309**	*e*P	PKPdf	08 41 04.2	+1.2
WTSB	**Winterswijk**	**146.51**	**341**	*e*PKP	PKPdf	08 41 04.7	+2.0
	comp=Z,109nm,2.4s						
KRUS	**Krusevo**	**146.54**	**314**	*e*PKP	PKPdf	08 41 00.9	-2.2
VAM	**Vamos**	**146.55**	**303**	*e*P	PKPab	08 41 05.8	0.0
DID	**Didima**	**146.66**	**307**	*e*P	PKPdf	08 41 02.7	-0.7
LTK	**Loutraki**	**146.68**	**308**	*e*P	PKPdf	08 41 02.4	-1.0
FNA	**Florina**	**146.72**	**313**	*e*P	PKPdf	08 41 04.6	+1.2
AGG	**Agios Georgios**	**146.78**	**310**	*e*P	PKPdf	08 41 04.0	+0.4
GRA1	**Grafenberg Arr**	**146.79**	**334**	*e*PKP	PKPdf	08 41 03.4	+0.2
GRA1				LR	LR		
	comp=Z,400nm,21.8s,MS5.2						
GRF	**Grafenberg Arr**	**146.79**	**334**	*e*PKP	PKPdf	08 41 03.4	+0.2
GRF				*e*L		09 58 40.6	
	comp=Z,365nm,21.8s						
OHR	**Ohrid**	**146.96**	**314**	*e*P	PKPbc	08 41 05.4	-0.4
OHR	**Ohrid**	**146.96**	**314**	*e*PKP	PKPdf	08 41 03.7	-0.1
VLI	**Veliai**	**147.14**	**305**	*e*P	PKPdf	08 41 01.1	-3.2
EVR	**Evrytania**	**147.19**	**310**	*e*P	PKPdf	08 41 00.6	-3.7
PERS	**Pernice**	**147.21**	**327**	*i* PKPbc	PKPbc	08 41 11.2	+4.9
VLX	**Vlachokerasia**	**147.35**	**307**	*e*P	PKPdf	08 41 06.0	+1.4
JAN	**Janina**	**147.57**	**312**	*e*P	PKPdf	08 41 02.7	-2.2
ITM	**Ithomi**	**147.75**	**307**	*e*P	PKPdf	08 41 05.8	+0.6
RLS	**Riolos of Patr**	**147.77**	**308**	*e*P	PKPbc	08 41 07.9	-0.2
HGN	**Heimansgroeve**	**147.82**	**340**	*e*PKP	PKPbc	08 41 08.6	+0.7
	comp=Z,76nm,2.5s						
BEBN	**Eben Emael**	**147.88**	**341**	PKPbc	PKPbc	08 41 07.3	-0.7
BOJS	**Bojanci**	**147.88**	**325**	*i* PKPbc	PKPbc	08 41 08.5	+0.3
MEM	**Membach**	**147.94**	**340**	PKPbc	PKPbc	08 41 07.1	-1.0
PYL	**PYLOS**	**147.99**	**306**	*e*P	PKPdf	08 41 04.0	-1.6
LKD	**Levkas**	**148.11**	**310**	*e*P	PKPbc	08 41 09.6	+0.6
VOY	**Vojsko**	**148.24**	**327**	*e*PKPbc	PKPbc	08 41 07.8	-1.3
VOY				*e*		08 41 15.0	
JAVS	**Javornik**	**148.25**	**327**	*i* PKPbc	PKPbc	08 41 08.8	-0.4
UCC	**Uccle**	**148.27**	**342**	PKPbc	PKPbc	08 41 08.2	-0.8
BCLA	**Clavier**	**148.32**	**341**	PKPbc	PKPbc	08 41 08.8	-0.4
STU	**Stuttgart**	**148.34**	**335**	*e*PKP2	PKPbc	08 41 09.0	-0.3
ABTA	**Abfaltersbach**	**148.43**	**329**	⇑*i*P	PKPbc	08 41 08.5	-1.1
	comp=Z,27nm,1.0s						
SNF	**Seneffe**	**148.55**	**342**	PKP	PKPbc	08 41 10.3	+0.6
WLF	**Walferdange**	**148.70**	**339**	PKPbc	PKPbc	08 41 10.0	-0.2
WLF	**Walferdange**	**148.70**	**339**	*e*PKPbc	PKPbc	08 41 10.2	0.0
GIVF	**Givet**	**148.75**	**341**	*e*PKP1	PKPbc	08 41 09.5	-0.8
	comp=Z,191nm,1.5s						
DOU	**Dourbes**	**148.82**	**341**	PKPbc	PKPbc	08 41 09.8	-0.6
BAIF	**Baives**	**148.97**	**342**	*e*PKP1	PKPbc	08 41 10.2	-0.7
BFO	**Black Forest**	**149.03**	**335**	*e*PKP2	PKPbc	08 41 09.7	-1.4
FETA	**Feichten**	**149.05**	**331**	⇑*i*P	PKPbc	08 41 10.0	-1.1
	comp=Z,64nm,1.3s						
CDF	**Champ du Feu**	**149.37**	**337**	*e*PKP1	PKPbc	08 41 11.0	-0.9
	comp=Z,151nm,1.3s						
FELD	**Feldberg im Sc**	**149.53**	**335**	PKP	PKPdf	08 41 06.3	-1.5
ECH	**Echery**	**149.57**	**336**	PKiKP	PKPdf	08 41 05.1	-2.8
ECH				*e*	PKPbc	08 41 11.5	-0.9
DAVOS	**Davos**	**149.60**	**332**	PKP2	PKPbc	08 41 11.9	-0.6
DAVOX	**Davos/Dischmat**	**149.61**	**332**	PKPbc	PKPbc	08 41 11.9	-0.6
	comp=Z,5.1nm,0.3s,baz=359,slow=2.9,SNR=11						
HINF	**Hinteralfeld**	**150.02**	**336**	*e*PKP1	PKPbc	08 41 12.5	-1.0
	comp=Z,114nm,1.4s						
HAU	**Haudompre**	**150.05**	**337**	*e*PKP1	PKPbc	08 41 12.6	-1.0
	comp=Z,97nm,1.1s						
HAU				*e*MLR	MLR		
	comp=Z,519nm,23.0s,MS5.0						
HAU	**Haudompre**	**150.05**	**337**	*e*PKP	PKPbc	08 41 12.6	-1.0
HAU				LR	LR		
	comp=Z,520nm,23.0s,MS5.3						
MEZF	**Maizieres J'vi**	**150.07**	**339**	*e*PKP1	PKPbc	08 41 13.2	-0.4
	comp=Z,433nm,1.6s						
TUE	**Stuetta**	**150.08**	**332**	*e*PKPdf	PKPbc	08 41 11.2	-2.5
TIP	**Timpagrande**	**150.60**	**314**	*e*PKPdf	PKPdf	08 41 09.9	+0.1
TIP				*e*PKPbc	PKPbc	08 41 15.3	+0.1
CABF	**La Chapelle**	**151.31**	**336**	*e*PKP1	PKPbc	08 41 16.1	-0.5
	comp=Z,213nm,1.5s						
FLN	**La Foliniere**	**151.39**	**346**	*e*PKP1	PKPbc	08 41 15.5	-1.2
	comp=Z,120nm,1.1s						
FLN				*e*MLR	MLR		
	comp=Z,573nm,21.0s,MS5.0						
LDF	**La Druitiere**	**151.46**	**346**	*e*PKP1	PKPbc	08 41 15.7	-1.2
LOR	**Lormes**	**151.54**	**339**	*e*PKP1	PKPbc	08 41 16.3	-0.8
	comp=Z,175nm,1.4s						
LOR				*e*MLR	MLR		
	comp=Z,718nm,22.0s,MS5.1						
GRR	**Gorron**	**151.82**	**346**	*e*PKP1	PKPbc	08 41 16.6	-1.1
	comp=Z,110nm,1.1s						
SSF	**Saint Saulge**	**151.84**	**340**	*e*PKP1	PKPbc	08 41 17.0	-0.8
	comp=Z,77nm,1.1s						
LPL	**La Plagne**	**151.95**	**334**	*e*PKP1	PKPbc	08 41 17.6	-0.5
	comp=Z,32nm,0.7s						
LPG	**La Plagne**	**151.96**	**334**	*e*PKP1	PKPbc	08 41 17.8	-0.3
	comp=Z,48nm,0.9s						
SMF	**Signal de Mont**	**152.09**	**339**	*e*PKP1	PKPbc	08 41 17.2	-1.2
	comp=Z,148nm,1.3s						
AVF	**Avril sur Loir**	**152.13**	**339**	*e*PKP1	PKPbc	08 41 17.4	-1.1
	comp=Z,190nm,1.6s						
SGMF	**Saint Gilles**	**152.29**	**349**	*e*PKP1	PKPbc	08 41 17.4	-1.4
	comp=Z,109nm,1.1s						
ROSF	**Rostrenen**	**152.34**	**350**	*e*PKP1	PKPbc	08 41 17.5	-1.4
	comp=Z,72nm,1.1s						
BNI	**Bardonecchia**	**152.35**	**333**	*e*PKiKP	PKPdf	08 41 12.5	+0.3
BNI				*e*		08 41 18.3	
BGF	**Bois d'Agland**	**152.50**	**340**	*e*PKP1	PKPbc	08 41 18.3	-1.0
	comp=Z,108nm,1.2s						
MBDF	**Montbardon**	**152.57**	**333**	*e*PKP1	PKPbc	08 41 18.5	-1.1
QUIF	**Quistinic**	**152.73**	**349**	*e*PKP1	PKPbc	08 41 18.5	-1.3
PLDF	**La Plantade**	**152.76**	**338**	PKP	PKPdf	08 41 13.2	+0.4
ORIF	**Oris-en-Rattie**	**152.79**	**334**	*e*PKP1	PKPbc	08 41 19.1	-0.9
	comp=Z,44nm,0.8s						
ORIF				*e*MLR	MLR		
	comp=Z,518nm,22.0s,MS5.0						
TCF	**Toulx Ste Croi**	**152.94**	**340**	*e*PKP1	PKPbc	08 41 19.1	-1.2
	comp=Z,70nm,1.3s						
SSB	**Saint Sauveur**	**153.02**	**336**	*e*PKIKP	PKPbc	08 41 18.6	-1.9
VIVF	**Saint-Julien-l**	**153.32**	**336**	*e*PKP1	PKPbc	08 41 20.2	-1.0
MFF	**Saint Martin d**	**153.33**	**344**	*e*PKP1	PKPbc	08 41 20.0	-1.1
CAF	**Calviac**	**154.20**	**339**	*e*PKP1	PKPbc	08 41 22.7	-0.4
LASF	**Ste Croix**	**154.29**	**336**	*e*PKP1	PKPbc	08 41 22.6	-0.7
	comp=Z,31nm,1.0s						
LFF	**La Frestale**	**154.60**	**341**	*e*PKP1	PKPbc	08 41 23.1	-0.9
ESDC	**Sonseca Array**	**160.79**	**345**	PKPab	PKPab	08 42 04.7	-0.6
	comp=Z,0.8nm,0.5s,baz=9.2,slow=5.3,SNR=5.5						
EVO	**Evora**	**162.62**	**354**	*e*PKIKP	PKPdf	08 41 23.8	-1.5
	comp=Z,65nm,1.7s						
EVO				*e*MLR	MLR		
	comp=Z,1μm,20.2s						
LIC	**Lamto**	**164.18**	**200**	⇑*i*PKIKP	PKPdf	08 41 27.1	-0.4
	comp=Z,89nm,1.7s						
LIC				*e*MLR	MLR		
	comp=Z,1μm,20.8s						
LIC	**Lamto**	**164.18**	**200**	*e*P	PKPab	08 42 20.3	-0.5
LIC	**Lamto**	**164.18**	**200**	⇑*i*PKPdf	PKPdf	08 41 27.1	-0.4
LIC				LR	LR		
	comp=Z,570nm,20.8s						
KIC	**Kosan Boka**	**164.21**	**201**	*e*P	PKPab	08 42 24.6	+3.6
DBIC	**Dimbokro**	**164.54**	**201**	PKPab	PKPab	08 42 22.9	+0.5
	comp=Z,6.8nm,1.0s,baz=100,slow=9.6,SNR=4.1						
TIC	**Toumodi**	**164.57**	**201**	*e*P	PKPab	08 42 22.7	+0.2
TAM	**Tamanrasset**	**165.08**	**279**	*e*PKIKP	PKPdf	08 41 28.3	+0.3
TAM				*e*		08 42 25.3	
TORD	**Torodi Ar. Bea**	**165.87**	**237**	PKP	PKPdf	08 41 28.6	-0.2
	comp=Z,1.0nm,0.9s,baz=344,slow=0.7,SNR=6.8						
TORD				PKPab	PKPab	08 42 28.7	+0.3
	comp=Z,1.3nm,0.9s,baz=100,slow=2.0,SNR=4.2						
TORD				PP	PP	08 46 15.3	-0.1
	comp=Z,2.5nm,1.2s,baz=124,slow=7.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**165.87**	**237**	PKP	PKPdf	08 41 28.6	-0.2
TORD				PKPab	PKPab	08 42 28.7	+0.3
TORD				PP	PP	08 46 15.3	-0.1

IDC ***28*** *08:27:52.0±1.1, 168S×10001E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/21, mbtmp3.7/6, Error ellipse: s-maj=42.6km s-min=22.1km az=51.0*
ISCJB ***28*** *08:27:55.1±0.8, 17S±02×1000E±02, h33km, mb3.7/6, Error ellipse: s-maj=32.1km s-min=17.9km az=139.5*
NEIC ***28*** *08:27:57.1±0.6, 170S×10002E, h35km, Error ellipse: s-maj=24.9km s-min=13.7km az=49.0*

ISC 28 08:27:57.3±0.8, 17S±02×1000E±02, h35km, n10, σ0°33/9, mb3.7/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.13**	**121**	P		**P**		**08 35 13.0**	**-0.4**
	1.4nm,0.5s,mb3.9,baz=303,slow=8.9,SNR=4.8								
ASAR	**Alice Springs**	**39.42**	**126**	P		**P**		**08 35 24.6**	**+0.4**
	1.3nm,0.8s,mb3.7,baz=299,slow=8.3,SNR=7.4								
MKAR	**Makanchi Array**	**50.73**	**344**	P		**P**		**08 36 53.9**	**+0.3**
	0.2nm,0.3s,mb3.5,baz=152,slow=6.5,SNR=2.0								
MKAR	**Makanchi Array**	**50.73**	**344**	P		**P**		**08 36 53.9**	**+0.3**
OPO	**Ambohidratompo**	**54.41**	**248**	P		**P**		**08 37 21.2**	**-0.2**
	1.5nm,0.7s,mb4.0,baz=96,slow=9.2,SNR=3.0								
KURK	**Kurchatov**	**55.31**	**344**	P		**P**		**08 37 27.1**	**-0.3**
	0.3nm,0.7s,mb3.4,baz=166,slow=7.3,SNR=2.2							

FITZ				Sn	Sn	08 44 00.9	+1.6		
	0.7nm,0.3s,baz=337,slow=23,SNR=12								
ASAR	**Alice Springs**	**12.17**	**95**	Pn	Pn	08 43 53.5	0.0		
	0.3nm,0.3s,baz=274,slow=12,SNR=20								
ASAR				Sn	Sn	08 46 11.4	+1.4		
	0.1nm,0.3s,baz=271,slow=23,SNR=4.2								
WRA	**Warramunga Arr**	**13.12**	**79**	Pn	Pn	08 44 06.0	-0.4		
	0.1nm,0.3s,baz=255,slow=12,SNR=7.7								
WRA				Sn	Sn	08 46 34.0	+0.9		
	0.1nm,0.3s,baz=258,slow=23,SNR=3.7								
STKA	**Stephens Creek**	**20.48**	**120**	P	P	08 45 37.6	-0.4		
	2.4nm,0.8s,baz=304,slow=11,SNR=7.2								

NEIC ***28*** *08:41:41.1, 1689N×10038W, h11km, MD3.5(MEX), After MEX.*

MEX 28 08:41:41.1±0.5, 1689N×10038W, h11km±4km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.19**	**34**	*i* P	Pg	08 41 44.8	-0.5
CAIG				*i* S	Sg	08 41 47.7	-0.4
ACX	**Acapulco**	**0.44**	**93**	*i* P	Pg	08 41 49.2	-0.6
ACX				*i* S	Sg	08 41 55.3	-0.4
ZIIG	**Zihuatanejo**	**1.26**	**305**	*e*P	Pn	08 41 59.9	-4.7
ZIIG				*i* S	Sb	08 42 16.6	-4.5
PLIG	**Platanillo**	**1.71**	**29**	*e*P	Pn	08 42 08.7	-2.2
PLIG				*i* S	Sn	08 42 27.9	-4.7

NEIC ***28*** *08:46:05.8, 4199N×8060W, h5km, MD2.7(LDO), MN2.7(OGSO), MN2.8(OTT), After OGSO. NEIC Felt at Conneaut and North Kingsville.*

OTT 28 08:46:05.6±0.0, 4200N×8061W, h5km, MN2.8/22, Southern Lake Erie 81km south from Forestville, On Eastern Background Seismic Zone., Ohio

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERPA	**Erie**	**0.48**	**75**	PG	Pg	08 46 14.4	-0.5
ERPA				SG	Sg	08 46 20.6	-0.4
ERPA				Trac		08 46 20.9	
	comp=Z,47nm,0.1s						
ERPA	**Erie**	**0.48**	**75**	*e*Pg	Pg	08 46 14.2	-0.6
ERPA				*e*Sg	Sg	08 46 20.4	-0.7
ALLY	**Alegheny Colle**	**0.49**	**134**	PG	Pg	08 46 16.1	+1.1
ALLY				SG	Sg	08 46 20.2	-1.2
ALLY	**Alegheny Colle**	**0.49**	**134**	*e*Pg	Pg	08 46 19.8	+4.8
TYNO	**Tyneside**	**1.23**	**26**	PG	Pg	08 46 27.7	-1.4
TYNO				SG	Sg	08 46 43.8	-1.3
TYNO				Trac		08 46 55.1	
	comp=Z,22nm,0.1s						
ELFO	**Elginfield**	**1.30**	**337**	PG	Pg	08 46 29.0	-1.6
ELFO				SG	Sg	08 46 46.8	-0.7
ELFO				Trac		08 46 52.1	
	comp=Z,35nm,0.1s						
EFO	**Effingham**	**1.46**	**41**	PG	Pg	08 46 31.8	-1.7
EFO				SG	Sg	08 46 50.5	-2.0
EFO				Trac		08 46 55.1	
	comp=Z,14nm,0.1s						
PLIO	**Pelee Island,**	**1.52**	**261**	PG	Pg	08 46 32.9	-1.8
PLIO				SG	Sg	08 46 53.0	-1.5
PLIO				Trac		08 46 53.3	
	comp=Z,26nm,0.1s						
STCO	**Saint Catharin**	**1.62**	**41**	PN	Pn	08 46 34.4	-0.3
STCO				SN	Sn	08 46 55.8	-0.1
STCO				Trac		08 47 00.0	
	comp=Z,23nm,0.1s						
ACTO	**Acton**	**1.66**	**14**	PN	Pn	08 46 35.2	-0.2
ACTO				SN	Sn	08 46 57.6	+0.5
ACTO				Trac		08 47 02.9	
	comp=Z,24nm,0.1s						
TORO	**Toronto--Lesli**	**1.87**	**30**	PN	Pn	08 46 38.2	0.0
TORO				SN	Sn	08 47 01.8	-0.3
TORO				SN	Sn	08 47 02.0	-0.1
TORO				SG	Sg	08 47 04.1	-1.5
TORO				Trac		08 47 08.1	
	comp=Z,32nm,0.1s						
MEDO	**Medina**	**1.98**	**53**	PN	Pn	08 46 39.5	-0.2
MEDO				SN	Sn	08 47 04.5	-0.3
MEDO				Trac		08 47 09.3	
	comp=Z,9.5nm,0.1s						
BWLO	**Walkerton**	**2.16**	**350**	PN	Pn	08 46 42.1	-0.1
BWLO				PN	Pn	08 46 42.2	+0.1
BWLO				PN	Pn	08 46 42.6	+0.5
BWLO				PN	Pn	08 46 43.6	+1.4
BWLO				SN	Sn	08 47 08.9	-0.3
BWLO				SN	Sn	08 47 09.2	0.0
BWLO				SN	Sn	08 47 09.2	0.0
BWLO				SN	Sn	08 47 09.3	+0.1
BWLO				Trac		08 47 15.3	
	comp=Z,16nm,0.2s						
BASO	**Ashfield**	**2.16**	**339**	PN	Pn	08 46 42.1	-0.1
BASO				PN	Pn	08 46 42.7	+0.5
BASO				PN	Pn	08 46 43.3	+1.1
BASO				PN	Pn	08 46 43.3	+1.1
BASO				SN	Sn	08 47 08.7	-0.6
BASO				SN	Sn	08 47 09.0	-0.3
BASO				SN	Sn	08 47 09.0	-0.3
BASO				Trac		08 47 15.0	
	comp=Z,7.8nm,0.1s						
PKRO	**Pickering**	**2.27**	**29**	PN	Pn	08 46 44.8	+1.1
PKRO				SN	Sn	08 47 11.7	-0.4
PKRO				Trac		08 47 20.0	
	comp=Z,29nm,0.1s						
BRCO	**Bruce Peninsul**	**2.33**	**345**	PN	Pn	08 46 45.6	+1.1
BRCO				SN	Sn	08 47 12.9	-0.6
BRCO				Trac		08 47 22.1	
	comp=Z,32nm,0.2s						
MCWV	**Mont Chateau**	**2.41**	**166**	Pn	Pn	08 46 46.8	+1.2
MCWV				*e*Sn	Sn	08 47 16.9	+1.5
SSPA	**Standing Stone**	**2.46**	**123**	*e*Pn	Pn	08 47 16.9	+1.1
SSPA				*e*Sn	Sn	08 47 19.3	+2.5
CLWO	**Collingwood**	**2.46**	**5**	PN	Pn	08 46 46.2	-0.1
CLWO				SN	Sn	08 47 16.5	-0.3
CLWO				Trac		08 47 26.4	
	comp=Z,21nm,0.2s						
ACSO	**Alum Creek Sta**	**2.51**	**226**	*e*Pn	Pn	08 46 47.3	+0.3
ACSO				*e*Sn	Sn	08 47 18.8	+0.8
WLVO	**Wesleyville**	**2.52**	**39**	PN	Pn	08 46 47.1	-0.1
WLVO				SN	Sn	08 47 18.1	-0.2
WLVO				Trac		08 47 26.6	
	comp=Z,11nm,0.2s						
BMRO	**Meriville Lake**	**2.64**	**351**	PN	Pn	08 46 49.8	+1.0
BMRO				PN	Pn	08 46 49.9	+1.1
BMRO				PN	Pn	08 46 51.3	+2.6
BMRO				SN	Sn	08 47 20.2	-0.8
BMRO				SN	Sn	08 47 20.8	-0.3
BMRO				SN	Sn	08 47 20.8	-0.2
SADO	**Sadowa**	**2.97**	**21**	PN	Pn	08 46 52.9	-0.5
SADO				SN	Sn	08 47 27.1	-2.3
SADO				Trac		08 47 43.5	
	comp=Z,3.9nm,0.1s						
SADO	**Sadowa**	**2.97**	**21**	Pn	Pn	08 46 52.9	-0.5
PECO	**Prince Edward**	**3.29**	**53**	PN	Pn	08 46 58.2	+0.5
PECO				SN	Sn	08 47 36.8	-0.3
PECO				Trac		08 47 49.7	
	comp=Z,4.0nm,0.1s						
TOBO	**Tobermory, Bru**	**3.30**	**349**	PN	Pn	08 46 57.5	-0.3
TOBO				SN	Sn	08 47 35.9	-1.4
TOBO				Trac		08 47 53.4	
	comp=Z,4.3nm,0.2s						
DELO	**Deloro Mine**	**3.34**	**40**	PN	Pn	08 46 59.1	+0.8
DELO				Trac		08 47 52.7	
	comp=Z,3.5nm,0.1s						
KLBO	**Killbear Provi**	**3.37**	**5**	PN	Pn	08 46 58.2	-0.6
KLBO				SN	Sn	08 47 38.0	-1.2
KLBO				Trac		08 47 51.3	
	comp=Z,4.7nm,0.1s						
BINY	**Binghamton**	**3.45**	**85**	PN	Pn	08 47 00.2	+0.3
BINY				SN	Sn	08 47 39.5	-1.6
BINY	**Binghamton**	**3.45**	**85**	Pn	Pn	08 47 00.2	+0.3
BINY				*e*Sn	Sn	08 47 46.7	+5.6
BUKO	**Buck Lake**	**3.56**	**14**	PN	Pn	08 47 00.6	-0.8
BUKO				SN	Sn	08 47 41.6	-2.2
BUKO				Trac		08 48 03.4	
	comp=Z,4.4nm,0.2s						
BANO	**Bancroft**	**3.60**	**32**	PN	Pn	08 47 01.1	-0.9
BANO				SN	Sn	08 47 41.6	-3.2
BANO				SG	Sg	08 47 58.0	-3.2
BANO				Trac		08 47 59.6	
	comp=Z,5.5nm,0.1s						
KGNO	**Kingston**	**3.75**	**52**	PN	Pn	08 47 04.7	+0.7
KGNO				SN	Sn	08 47 47.0	-1.6
KGNO				Trac		08 48 03.0	
	comp=Z,3.6nm,0.1s						
KGNO	**Kingston**	**3.75**	**52**	Pn	Pn	08 47 04.7	+0.7
PLVO	**Plevna**	**3.99**	**39**	PN	Pn	08 47 07.2	0.0
PLVO				SN	Sn	08 47 50.7	-3.7
PLVO				Trac		08 48 16.5	
	comp=Z,3.8nm,0.1s						
RSPO	**Restoule Provi**	**4.12**	**8**	PN	Pn	08 47 08.8	-0.3
RSPO				SN	Sn	08 47 55.1	-2.7
RSPO				Trac		08 47 59.2	
	comp=Z,3.6nm,0.2s						
MPPO	**Murphy's Point**	**4.21**	**47**	PN	Pn	08 47 08.5	-1.9
MPPO				SN	Sn	08 47 56.1	-3.9
MPPO				Trac		08 48 16.4	
	comp=Z,3.1nm,0.1s						
PEMO	**Pembroke**	**4.41**	**32**	PN	Pn	08 47 12.1	-1.1
PEMO				SN	Sn	08 48 01.2	-3.7
PEMO				Trac		08 48 27.8	
	comp=Z,4.0nm,0.2s						
CRLO	**Chalk River**	**4.67**	**29**	PN	Pn	08 47 14.9	-1.7
CRLO				SN	Sn	08 48 05.9	-5.2
CRLO				Trac		08 48 36.0	
	comp=Z,1.6nm,0.1s						
WBO	**Williamsburg**	**4.91**	**50**	PN	Pn	08 47 21.4	+1.4
WBO				SN	Sn	08 48 14.3	-2.8
WBO				Trac		08 48 42.1	
	comp=Z,1.5nm,0.1s						
NCB	**Newcomb**	**5.09**	**65**	PN	Pn	08 47 23.7	+1.3
NCB				SN	Sn	08 48 19.2	-2.3
NCB	**Newcomb**	**5.09**	**65**	Pn	Pn	08 47 23.7	+1.3
LONY	**Lake Ozonia**	**5.12**	**57**	PN	Pn	08 47 25.1	+2.2
LONY				SN	Sn	08 48 19.8	-2.6
LONY	**Lake Ozonia**	**5.12**	**57**	Pn	Pn	08 47 25.1	+2.2
	0.6nm,1.7s						
LONY				*e*Sg	Sg	08 48 38.5	-12
GAC	**Glen Almond**	**5.25**	**43**	PN	Pn	08 47 23.1	-1.5
GAC				SN	Sn	08 48 22.9	-2.5
GAC				Trac		08 48 53.1	
	comp=Z,1.4nm,0.2s						
ALFO	**Alfred**	**5.51**	**47**	PN	Pn	08 47 28.4	+0.2
GRQ	**Grand Remous**	**5.74**	**35**	PN	Pn	08 47 29.1	-2.1
GRQ				SN	Sn	08 48 33.6	-3.9
GRQ				Trac		08 49 07.3	
	comp=Z,0.7nm,0.1s						
WCI	**Wyandotte Cave**	**5.75**	**231**	Pn	Pn	08 47 24.5	-7.1
WCI				*e*Sg	Sg	08 49 01.2	-9.0
TRQ	**Mont Tremblant**	**6.07**	**44**	PN	Pn	08 47 34.5	-1.4
TRQ				SN	Sn	08 48 42.6	-3.1
TRQ				Trac		08 49 09.8	
	comp=Z,0.8nm,0.1s						
VLDQ	**Val d'Or**	**6.51**	**19**	PN	Pn	08 47 42.5	+0.5
VLDQ				Trac		08 49 35.9	
	comp=Z,0.9nm,0.2s						

IDC 28 09:07:14.1±1.8, 035N×12579E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/16, mbtmp3.6/3, Error ellipse: s-maj=168.2km s-min=24.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.84**	**158**	P	P	09 12 07.5	-0.8
	1.4nm,0.6s,baz=336,slow=11,SNR=9.3						
ASAR	**Alice Springs**	**25.14**	**162**	P	P	09 12 41.8	+0.7
	0.6nm,0.5s,baz=346,slow=12,SNR=11						
MKAR	**Makanchi Array**	**59.81**	**327**	P	P	09 17 21.2	0.0
	0.3nm,0.4s,baz=126,slow=7.6,SNR=2.6						

ISCJB ***28*** *09:08:24.6±0.8, 212S±0.1×16929E±007, h10km, mb4.5/9, Error ellipse: s-maj=18.8km s-min=9.8km az=0.0*
IDC ***28*** *09:08:24.7±1.1, 2131S×16934E, h0km, mb4.5/8, mb1 4.7/8, mb1mx4.4/17, mbtmp4.5/8, MS3.6/3, Ms1 3.6/3, ms1mx3.3/22, Error ellipse: s-maj=36.1km s-min=24.5km az=170.0*
NEIC ***28*** *09:08:26.1±0.9, 2116S×16934E, h10km, mb4.6/5, Error ellipse: s-maj=24.9km s-min=15.7km az=206.0*

ISC 28 09:08:26.2±0.8, 212S±01×16929E±007, h10km, (h13km±8km:pP-P), n24, σ0§97/21, mb4.5/9, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.79**	**251**	*e*P	**Pn**	**09 09 10.5**	**-0.4**
DZM				*e*S	**Sn**	**09 09 44.9**	**+0.2**
HNR	**Honiara**	**14.75**	**321**	LR	LR	09 16 08.1	
	comp=Z,183nm,18.1s,baz=340,slow=31						
URZ	**Urewera**	**18.30**	**160**	P	**Pn**	**09 12 41.7**	**+1.5**
	0.2nm,0.3s,baz=350,slow=6.1,SNR=4.5						
AFI	**Afiamalu**	**19.44**	**71**	LR	LR	09 18 19.0	
	comp=Z,110nm,18.6s,baz=242,slow=31						
CTA	**Charters Tower**	**21.59**	**269**	*e*P	**P**	**09 13 18.4**	**+2.1**
	14nm,0.8s,mb4.4						
CTA	**Charters Tower**	**21.59**	**269**	P	**P**	**09 13 18.1**	**+1.8**
	19nm,0.9s,mb4.5,baz=91,slow=12,SNR=28						
CTAO	**Charters Tower**	**21.59**	**269**	*e*P	**P**	**09 13 17.4**	**+1.1**
	24nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**26.90**	**241**	*e*P	**P**	**09 14 08.7**	**+1.2**
	7.6nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**26.90**	**241**	P	**P**	**09 14 07.8**	**+0.3**
	7.6nm,0.8s,mb4.3,baz=94,slow=16,SNR=7.6						
WB2	**Warramunga Arr**	**32.70**	**266**	*e*P	**P**	**09 14 58.1**	**-1.0**
WRA	**Warramunga Arr**	**32.71**	**266**	P	**P**	**09 14 58.3**	**-0.9**
	2.8nm,0.6s,mb4.4,baz=96,slow=7.8,SNR=24						
ASAR	**Alice Springs**	**32.76**	**259**	P	**P**	**09 14 58.9**	**-0.6**
	7.5nm,0.7s,mb4.7,baz=82,slow=9.3,SNR=54						
FITZ	**Fitzroy Crossi**	**41.13**	**266**	*e*P	**P**	**09 16 10.6**	**-0.3**
	26nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**41.13**	**266**	P	**P**	**09 16 10.8**	**-0.1**
	14nm,0.6s,mb4.8,baz=122,slow=8.7,SNR=34						
QSPA	**South Pole Qui**	**68.87**	**180**	P	**P**	**09 19 30.7**	**+0.1**
	5.0nm,1.1s,mb4.4,baz=5.2,slow=2.6,SNR=8.2						
PETK	**Petropavlovsk-**	**74.67**	**353**	LR	LR	09 51 07.2	
	comp=Z,73nm,19.7s,baz=66,slow=34						
CMAR	**Chiang Mai Arr**	**79.35**	**295**	P	**P**	**09 20 34.8**	**+2.1**
	1.3nm,0.3s,mb4.3,baz=136,slow=5.0,SNR=7.5						
SNAA	**Sanae**	**87.22**	**182**	*e*	**P**	**09 21 12.5**	**0.0**
SNAA				*e*	pP	09 21 15.9	+0.1
SNAA				*e*		09 21 19.7	
SNAA				*e*		09 21 24.5	
SNAA	**Sanae**	**87.22**	**182**	*e*P	**P**	**09 21 10.8**	**-1.7**
	7.0nm,1.2s,mb4.8						
VNA3	**Neumayer Olymp**	**87.81**	**180**	*e*	**P**	**09 21 14.5**	**-0.8**
VNA3				*e*	pP	09 21 18.4	-0.2
VNA3				*e*		09 21 22.4	
VNA3				*e*		09 21 26.1	
VNA2	**Neumayer--Watz**	**88.11**	**181**	*e*	**P**	**09 21 15.6**	**-1.1**
	baz=177,slow=4.6						
VNA2				*e*	pP	09 21 20.2	+0.2
VNA2				*e*		09 21 24.3	
VNA2				*e*		09 21 27.8	
VNA1	**Neumayer--Stat**	**88.39**	**181**	*e*	**P**	**09 21 17.9**	**-0.2**
VNA1				*e*	pP	09 21 21.6	+0.2
VNA1				*e*		09 21 26.0	
VNA1				*e*		09 21 29.4	
NVAR	**Mina Array Bea**	**90.05**	**48**	P	**P**	**09 21 26.5**	**+0.2**
	0.9nm,0.7s,mb4.2,baz=223,slow=8.3,SNR=8.5						
GERES	**GERESS Array B**	**146.22**	**331**	PKPbc	PKPbc	09 28 06.4	-0.3
	1.4nm,0.7s,baz=73,slow=3.3,SNR=6.3						

IDC ***28*** *09:11:30.6±17.0, 2244S×17428W, h0km, mb4.2/5, mb1 4.4/6, mb1mx4.0/20, mbtmp4.2/6, ML4.3/1, Error ellipse: s-maj=327.2km s-min=60.2km az=75.0*
NEIC ***28*** *09:11:37.0±9.7, 2270S×17444W, h35km, mb4.7/2, Error ellipse: s-maj=183.0km s-min=22.8km az=75.0*

ISC 28 09:11:38.0±13.0, 227S±05×175W±, h35km, n10, σ0§68/10, mb4.3/5, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**17.04**	**203**	P	**Pn**	**09 15 33.4**	**-0.1**
	1.0nm,0.3s,baz=8.1,slow=7.1,SNR=8.2						
CTA	**Charters Tower**	**36.50**	**267**	*e*P	**P**	**09 18 40.6**	**+0.4**
	4.0nm,0.4s,mb4.7						
CTA	**Charters Tower**	**36.50**	**267**	P	**P**	**09 18 40.7**	**+0.5**
	5.1nm,0.5s,mb4.7,baz=97,slow=11,SNR=20						
CTAO	**Charters Tower**	**36.50**	**267**	*e*P	**P**	**09 18 40.3**	**+0.1**
	5.6nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**39.78**	**247**	P	**P**	**09 19 08.4**	**+0.7**
	5.5nm,1.0s,mb4.2,baz=66,slow=10.0,SNR=5.1						
ASAR	**Alice Springs**	**47.15**	**258**	P	**P**	**09 20 07.3**	**0.0**
	0.9nm,0.7s,mb3.8,baz=90,slow=7.3,SNR=6.8						
WB2	**Warramunga Arr**	**47.47**	**263**	*e*P	**P**	**09 20 08.9**	**-0.9**
WRA	**Warramunga Arr**	**47.48**	**263**	P	**P**	**09 20 08.9**	**-1.0**
	2.3nm,0.5s,mb4.3,baz=94,slow=8.4,SNR=56						
KAKA	**Kakadu**	**51.22**	**272**	*e*P	**P**	**09 20 38.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**55.91**	**263**	P	**P**	**09 21 14.0**	**+1.1**
	1.8nm,0.7s,mb4.2,baz=78,slow=7.8,SNR=3.9						

IDC 28 09:14:41.6±3.5, 2094S×16897E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.8/15, mbtmp3.7/4, MS4.2/1, Ms1 4.2/1, ms1mx3.1/26, Error ellipse: s-maj=241.0km s-min=34.2km az=161.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.61**	**244**	*e*P	Pn	09 15 23.5	-1.5
WRA	**Warramunga Arr**	**32.43**	**266**	P	P	09 21 13.1	-0.5
	0.3nm,0.5s,baz=98,slow=8.1,SNR=2.7						
ASAR	**Alice Springs**	**32.51**	**259**	P	P	09 21 13.7	-0.5
	0.9nm,0.8s,baz=79,slow=9.5,SNR=6.8						
FITZ	**Fitzroy Crossi**	**40.85**	**266**	P	P	09 22 26.5	+1.1
	1.1nm,0.8s,baz=90,slow=11,SNR=3.3						
GUMO	**Guam**	**41.70**	**323**	LR	LR	09 36 21.2	
	comp=Z,262nm,18.9s,baz=92,slow=31						
NVAR	**Mina Array Bea**	**90.11**	**49**	P	P	09 27 43.9	+0.3
	0.4nm,0.7s,baz=233,slow=7.5,SNR=4.3						

NEIC ***28*** *09:15:16.8±1.1, 2435S×6737W, h241km±36km, mb3.3/1, Error ellipse: s-maj=23.9km s-min=13.4km az=94.0*
ISCJB ***28*** *09:15:18.0±0.9, 2432S±008×67.1W±0.1, h181km±14km, mb3.6/2, Error ellipse: s-maj=18.5km s-min=13.2km az=172.9*
IDC ***28*** *09:15:19.1±1.6, 2430S×6706W, h168km±18km, mb3.4/2, mb1 3.2/6, mb1mx3.1/19, mbtmp3.2/6, Error ellipse: s-maj=22.5km s-min=20.4km az=137.0*

ISC 28 09:15:19.9±1.1, 242S±01×670W±01, h178km±14km, n11, σ0§76/13, mb3.6/2, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.35**	**312**	P	**Pn**	**09 16 01.1**	**+0.4**
	13nm,0.3s,baz=150,slow=6.9,SNR=62						
LVC				S	**Sn**	**09 16 32.1**	**-0.2**
	80nm,0.3s,baz=313,slow=20,SNR=75						
LVC	**Limon Verde**	**2.35**	**312**	P	**Pn**	**09 16 01.1**	**+0.4**
LVC				S	**Sn**	**09 16 32.1**	**-0.2**
LCO	**Las Campanas**	**5.80**	**214**	*e*Pn	**Pn**	**09 16 38.8**	**-5.5**
LPAZ	**La Paz**	**7.95**	**352**	P	**Pn**	**09 17 14.8**	**+2.2**
	0.4nm,0.3s,baz=167,slow=6.1,SNR=12						
LPAZ				S	**Sn**	**09 18 40.3**	**-1.4**
	0.1nm,0.3s,baz=203,slow=15,SNR=3.2						
LPAZ	**La Paz**	**7.95**	**352**	*e*Pn	**Pn**	**09 17 11.9**	**-0.7**
	1.0nm,0.3s						
LPAZ				Sn	**Sn**	**09 18 42.5**	**+0.7**
CPUP	**Villa Florida**	**9.03**	**106**	P	**Pn**	**09 17 26.8**	**+0.1**
	0.2nm,0.3s,baz=256,slow=13,SNR=3.6						
SIV	**San Ignacio**	**9.91**	**35**	P	**Pn**	**09 17 37.8**	**-0.5**
	0.3nm,0.3s,baz=217,slow=14,SNR=9.3						
QSPA	**South Pole Qui**	**66.00**	**180**	P	**P**	**09 25 46.1**	**-0.6**
	2.8nm,1.1s,mb4.0,baz=203,slow=2.5,SNR=12						
TORD	**Torodi Ar. Bea**	**76.67**	**69**	P	**P**	**09 26 52.2**	**+0.6**
	0.3nm,0.4s,mb3.2,baz=258,slow=6.1,SNR=6.5						
WRA	**Warramunga Arr**	**131.43**	**207**	PKP	PKPdf	09 34 12.3	+0.4
	0.3nm,0.9s,baz=166,slow=1.8,SNR=4.7						
MKAR	**Makanchi Array**	**146.70**	**40**	PKPbc	PKPbc	09 34 42.2	+1.6
	0.2nm,0.3s,baz=308,slow=2.6,SNR=3.4						

ISCJB ***28*** *09:15:20.8±0.9, 213S±02×1693E±0.1, h10km, mb4.0/7, Error ellipse: s-maj=27.8km s-min=18.4km az=19.2*
IDC ***28*** *09:15:20.5±1.1, 2128S×16938E, h0km, mb3.9/7, mb1 4.1/7, mb1mx4.0/17, mbtmp3.9/7, Error ellipse: s-maj=39.3km s-min=27.0km az=170.0*
NEIC ***28*** *09:15:22.0±0.9, 2129S×16941E, h10km, mb4.3/2, Error ellipse: s-maj=33.9km s-min=18.9km az=171.0*

ISC 28 09:15:22.2±0.9, 213S±02×1694E±01, h10km, (h12km±3km:pP-P), n15, σ0§74/14, mb4.0/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.67**	**269**	P	**P**	**09 20 11.4**	**-1.8**
	0.7nm,0.3s,mb3.6,baz=138,slow=15,SNR=2.3						
CTAO	**Charters Tower**	**21.67**	**269**	*e*P	**P**	**09 20 15.2**	**+2.1**
	10nm,1.2s,mb4.1						
WRA	**Warramunga Arr**	**32.79**	**266**	P	**P**	**09 21 55.1**	**-0.7**
	1.0nm,1.0s,mb3.7,baz=95,slow=8.8,SNR=4.0						
ASAR	**Alice Springs**	**32.82**	**259**	P	**P**	**09 21 56.0**	**0.0**
	1.9nm,0.9s,mb4.0,baz=85,slow=9.1,SNR=7.0						
FITZ	**Fitzroy Crossi**	**41.22**	**267**	*e*P	**P**	**09 23 07.9**	**+0.4**
	5.5nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**41.22**	**267**	P	**P**	**09 23 07.9**	**+0.4**
	2.2nm,0.6s,mb3.9,baz=116,slow=14,SNR=6.6						
FITZ	**Fitzroy Crossi**	**41.22**	**267**	*e*P	**P**	**09 23 07.6**	**+0.1**
	9.1nm,0.9s,mb4.4						
QSPA	**South Pole Qui**	**68.77**	**180**	P	**P**	**09 26 26.3**	**+0.5**
	3.3nm,1.0s,mb4.2,baz=40,slow=1.4,SNR=6.2						
SNAA	**Sanae**	**87.12**	**182**	*e*	**P**	**09 28 06.9**	**-1.0**
SNAA				*e*	pP	09 28 10.7	-0.6
SNAA				*e*		09 28 17.3	
VNA3	**Neumayer Olymp**	**87.71**	**180**	*e*	**P**	**09 28 10.7**	**0.0**
VNA3				*e*	pP	09 28 14.1	0.0
VNA3				*e*		09 28 20.8	
VNA2	**Neumayer--Watz**	**88.00**	**181**	*e*	**P**	**09 28 12.3**	**+0.1**
	baz=190,slow=4.2						
VNA2				*e*	pP	09 28 15.8	+0.3
VNA2				*e*		09 28 22.1	
VNA1	**Neumayer--Stat**	**88.29**	**181**	*e*	**P**	**09 28 14.1**	**+0.6**
VNA1				*e*	pP	09 28 17.7	+0.8
**

WRA				PcP	PcP	09 26 04.3	+0.3		
	0.8nm,1.0s,baz=105,slow=3.2,SNR=3.4								
WRA				LR	LR	09 35 32.5			
	comp=Z,317nm,20.7s,MS4.0,baz=95,slow=34								
ASAR	**Alice Springs**	**32.84**	**259**	P	**P**	**09 23 18.8**	**-0.3**		
	6.0nm,0.9s,mb4.5,baz=84,slow=9.1,SNR=13								
ASAR				PcP	PcP	09 26 03.4	-0.6		
	0.8nm,0.8s,baz=102,slow=3.3,SNR=4.5								
PPT	**Papeete**	**38.77**	**92**	LR	LR	09 36 30.4			
	comp=Z,227nm,18.2s,MS4.0,baz=166,slow=31								
FITZ	**Fitzroy Crossi**	**41.24**	**267**	*e*P	**P**	**09 24 30.7**	**+0.1**		
	14nm,0.7s,mb4.7								
FITZ	**Fitzroy Crossi**	**41.24**	**267**	P	**P**	**09 24 30.6**	**0.0**		
	8.9nm,0.7s,mb4.5,baz=132,slow=9.4,SNR=15								
MBWA	**Marble Bar**	**46.14**	**261**	*e*P	**P**	**09 25 09.4**	**-0.6**		
	18nm,1.1s,mb4.9								
MJAR	**Matsushiro Arr**	**64.72**	**333**	P	**P**	**09 27 22.4**	**-1.0**		
	8.0nm,1.1s,mb4.7,baz=173,slow=7.4,SNR=7.1								
QSPA	**South Pole Qui**	**68.68**	**180**	P	**P**	**09 27 49.2**	**+1.0**		
	9.0nm,1.0s,mb4.7,baz=10,slow=2.9,SNR=11								
QIZ	**Qiongzhong**	**70.79**	**300**	*e*P	**P**	**09 28 02.1**	**-0.1**		
	166nm,2.1s,mb5.6								
PETK	**Petropavlovsk-**	**74.87**	**353**	P	**P**	**09 28 27.0**	**+1.4**		
	2.7nm,0.8s,mb4.2,baz=111,slow=7.9,SNR=3.8								
MAW	**Mawson**	**76.52**	**202**	*e*P	**P**	**09 28 33.0**	**-2.0**		
	2.3nm,0.6s,mb4.3								
CMAR	**Chiang Mai Arr**	**79.54**	**295**	P	**P**	**09 28 54.2**	**+1.6**		
	3.4nm,0.6s,mb4.5,baz=134,slow=4.4,SNR=11								
SNAA	**Sanae**	**87.04**	**182**	*e*	**P**	**09 29 30.4**	**0.0**		
SNAA				*e*	pP	09 29 32.5	-1.2		
SNAA				*e*		09 29 36.6			
SNAA				*e*		09 29 40.3			
SNAA	**Sanae**	**87.04**	**182**	*e*P	**P**	**09 29 30.0**	**-0.4**		
	7.8nm,1.0s,mb4.9								
VNA3	**Neumayer Olymp**	**87.62**	**180**	*e*	**P**	**09 29 33.2**	**0.0**		
VNA3				*e*		09 29 39.3			
VNA3				*e*		09 29 43.8			
VNA2	**Neumayer--Watz**	**87.92**	**181**	*e*	**P**	**09 29 35.1**	**+0.5**		
	baz=183,slow=3.8								
VNA2				*e*	pP	09 29 36.9	-1.1		
VNA2				*e*		09 29 41.2			
VNA2				*e*		09 29 44.9			
VNA1	**Neumayer--Stat**	**88.20**	**181**	*e*	**P**	**09 29 36.5**	**+0.5**		
VNA1				*e*	pP	09 29 38.2	-1.1		
VNA1				*e*		09 29 41.8			
VNA1				*e*		09 29 46.2			
CMB	**Columbia Colle**	**88.45**	**48**	*e*P	**P**	**09 29 36.9**	**-0.7**		
	4.1nm,0.8s,mb4.7								
SONM	**Songino Array**	**89.03**	**323**	P	**P**	**09 29 39.9**	**-0.2**		
	1.9nm,0.9s,mb4.4,baz=149,slow=6.9,SNR=6.6								
NVAR	**Mina Array Bea**	**90.09**	**48**	P	**P**	**09 29 45.0**	**-0.3**		
	2.4nm,0.6s,mb4.7,baz=227,slow=8.7,SNR=20								
NVAR	**Mina Array Bea**	**90.09**	**48**	P	**P**	**09 29 45.0**	**-0.3**		
PDAR	**Pinedale Array**	**97.94**	**47**	P	**P**	**09 30 23.4**	**+2.1**		
	0.2nm,0.5s,mb3.9,baz=225,slow=3.6,SNR=2.6								
ARCES	**ARCESS Array B**	**127.17**	**345**	PKP	PKPdf	09 35 46.2	-2.7		
	3.6nm,0.8s,baz=66,slow=3.0,SNR=6.4								
BRG	**Berggiesshubel**	**144.85**	**333**	*e*P	PKPdf	09 36 20.4	-1.8		
	12nm,1.2s								
CLL	**Collm**	**144.92**	**334**	*i* PKPdf	PKPdf	09 36 20.4	-1.9		
CLL				ePKiKP		09 36 27.0			
KHC	**Kasperske Hory**	**146.29**	**331**	*e*PKP	PKPdf	09 36 25.0	+0.3		
GERES	**GERESS Array B**	**146.44**	**331**	PKPbc	PKPbc	09 36 25.2	-1.0		
	2.2nm,0.6s,baz=33,slow=3.2,SNR=13								
GRA1	**Grafenberg Arr**	**146.89**	**334**	*e*PKP	PKPdf	09 36 26.6	+0.9		
GIVF	**Givet**	**148.86**	**341**	*e*PKP1	PKPbc	09 36 31.5	-1.3		
	82nm,1.4s								
BAIF	**Baives**	**149.09**	**341**	*e*PKP1	PKPbc	09 36 32.3	-1.1		
CDF	**Champ du Feu**	**149.47**	**336**	*e*PKP1	PKPbc	09 36 33.1	-1.3		
HAU	**Haudompre**	**150.15**	**337**	*e*PKP1	PKPbc	09 36 34.9	-1.2		
CABF	**La Chapelle**	**151.41**	**336**	*e*PKP1	PKPbc	09 36 38.3	-0.8		
FLN	**La Foliniere**	**151.51**	**346**	*e*PKP1	PKPbc	09 36 37.7	-1.6		
	22nm,0.7s								
LDF	**La Druitiere**	**151.59**	**345**	*e*PKP1	PKPbc	09 36 37.7	-1.7		
LOR	**Lormes**	**151.65**	**339**	*e*PKP1	PKPbc	09 36 38.4	-1.2		
	12nm,0.8s								
GRR	**Gorron**	**151.95**	**346**	*e*PKP1	PKPbc	09 36 38.7	-1.6		
	39nm,1.0s								
SSF	**Saint Saulge**	**151.95**	**339**	*e*PKP1	PKPbc	09 36 39.1	-1.2		
	26nm,1.2s								
LPL	**La Plagne**	**152.05**	**333**	*e*PKP1	PKPbc	09 36 39.7	-0.9		
LPG	**La Plagne**	**152.06**	**333**	*e*PKP1	PKPbc	09 36 40.0	-0.6		
AVF	**Avril sur Loir**	**152.24**	**339**	*e*PKP1	PKPbc	09 36 39.3	-1.7		
SGMF	**Saint Gilles**	**152.43**	**348**	*e*PKP1	PKPbc	09 36 39.7	-1.7		
	32nm,1.0s								
ROSF	**Rostrenen**	**152.48**	**349**	*e*PKP1	PKPbc	09 36 39.5	-2.0		
	90nm,1.4s								
ORIF	**Oris-en-Rattie**	**152.89**	**334**	*e*PKP1	PKPbc	09 36 41.2	-1.3		
	19nm,0.9s								
TCF	**Toulx Ste Croi**	**153.05**	**340**	*e*PKP1	PKPbc	09 36 41.3	-1.5		
	19nm,1.0s								
MFF	**Saint Martin d**	**153.45**	**344**	*e*PKP1	PKPbc	09 36 42.2	-1.5		
LMR	**La Mourre**	**153.88**	**331**	*e*PKP1	PKPbc	09 36 43.1	-1.6		
LFF	**La Frestale**	**154.72**	**341**	*e*PKP1	PKPbc	09 36 44.7	-1.8		
MTLF	**Montolieu**	**155.64**	**337**	*e*PKP1	PKPdf	09 36 46.9	+7.7		
LIC	**Lamto**	**164.00**	**200**	*e*PKP2	PKPab	09 37 42.5	+0.2		
	29nm,1.2s								

*ISCJB **28** 09:23:06.5±2.8, 353N±02×271E±0.1, h1^{km}±11^{km}, Error ellipse: s-maj=38.6km s-min=10.5km az=154.8*
*ATH **28** 09:23:09.4, 3543N×2698E, h9^{km}±8^{km}, MD3.5/5*
*NEIC **28** 09:23:09.6, 3546N×2696E, h5^{km}, MD3.5(ATH), After ATH.*
*CSEM **28** 09:23:09.5±0.2, 3549N×2696E, h11^{km}±2^{km}, MD3.5, Error ellipse: s-maj=9.4km s-min=3.9km az=156.0*
*DDA **28** 09:23:40.6, 3745N×2761E, h7^{km}±6^{km}, Md2.7*

ISC 28 09:23:07.6±2.6, 353N±02×271E±01, h4^{km}±10^{km}, n11, σ0§98/17, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.28**	**17**	*e*PG	**Pg**	**09 23 13.1**	**+0.1**
NPS	**Neapolis**	**1.19**	**270**	*e*PG	**Pg**	**09 23 30.5**	**+0.1**
ARG	**Arkhangelos**	**1.27**	**42**	*e*PG	**Pg**	**09 23 32.2**	**+0.2**
ARG				*e*SB	**Sb**	**09 23 49.5**	**+0.7**
ARG	**Arkhangelos**	**1.27**	**42**	*e*Pg	**Pg**	**09 23 32.2**	**+0.2**
ARG				*e*Sb	**Sb**	**09 23 49.7**	**+0.9**
BDRM	**Kayabasi**	**1.81**	**10**	*i* P	**Pn**	**09 23 38.5**	**-0.9**
BDRM				*i* S	**Sn**	**09 23 55.0**	**-7.8**
APE	**Apeiranthos**	**2.17**	**326**	*e*PN	**Pn**	**09 23 45.6**	**+1.1**
GCAM	**G?zelcaml?**	**2.42**	**3**	*i* P	**Pn**	**09 23 47.0**	**-0.9**
GCAM				*i* S	**Pg**	**09 23 55.0**	**+1.0**
SMG	**Samos**	**2.43**	**356**	*e*PN	**Pn**	**09 23 49.5**	**+1.5**
SMG	**Samos**	**2.43**	**356**	*e*Pg	**Pb**	**09 23 50.7**	**-1.2**
AYDN	**Tasoluk**	**2.46**	**15**	*i* P	**Pn**	**09 23 47.9**	**-0.7**
AYDN				*i* S	**Pg**	**09 23 51.4**	**-3.4**
AYDN	**Tasoluk**	**2.46**	**15**	*i* P	**Pn**	**09 23 47.8**	**-0.7**
AYDN				*i* S	**Pg**	**09 23 51.4**	**-3.5**

*ATH **28** 09:41:48.5, 3581N×28.12E, h218^{km}*
*CSEM **28** 09:42:00.8±0.1, 3615N×2746E, h80^{km}, MD2.9, Error ellipse: s-maj=2.6km s-min=1.4km az=88.0*
*ISCJB **28** 09:42:01.7±0.6, 3614N±003×2743E±006, h92^{km}±8^{km}, Error ellipse: s-maj=8.7km s-min=5.4km az=9.1*
*ISK **28** 09:42:03.5, 3618N×2757E, h22^{km}, MD3.0*
*DDA **28** 09:42:06.2, 3639N×2788E, h6^{km}±6^{km}, Md2.9*
*HLW **28** 09:42:13.9, 3541N×2795E, h26^{km}, Mb3.8*

ISC 28 09:42:03.2±0.7, 3616N±003×2745E±006, h81^{km}±9^{km}, n25, σ0§85/37, 5C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.55**	**83**	*e*P	**Pn**	**09 42 18.0**	**+0.5**
KARP	**Karpathos**	**0.65**	**201**	*e*P	**Pn**	**09 42 19.8**	**+1.4**
KARP				S	**Sn**	**09 42 30.5**	**+0.8**
BDRM	**Kayabasi**	**0.91**	**360**	*i* P	**Pn**	**09 42 21.6**	**+0.4**
BDRM				*i* S	**Sn**	**09 42 34.0**	**-0.7**
BODT	**Bodrum**	**0.91**	**353**	*e*PG	**Pn**	**09 42 21.6**	**+0.4**
BODT				*e*SG	**Sn**	**09 42 34.1**	**-0.7**
MLSB	**Milas**	**1.17**	**13**	*e*PN	**Pn**	**09 42 24.5**	**+0.2**
TURN	**Turunc**	**1.18**	**52**	*i* P	**Pn**	**09 42 21.1**	**-3.3**
TURN				*i* S	**Sn**	**09 42 33.0**	**-7.4**
YER	**Yerkesik**	**1.19**	**34**	*e*PN	**Pn**	**09 42 24.4**	**-0.2**
YER				*e*SN	**Sn**	**09 42 39.6**	**-1.0**
AYDN	**Tasoluk**	**1.54**	**13**	*i* P	**Pn**	**09 42 30.1**	**+1.0**
AYDN				*i* S	**Sn**	**09 42 47.6**	**-1.0**
GCAM	**G?zelcaml?**	**1.55**	**354**	*i* P	**Pn**	**09 42 25.0**	**-4.2**
GCAM				*i* S	**Sn**	**09 42 48.0**	**-0.9**
SMG	**Samos**	**1.63**	**343**	*e*P	**Pn**	**09 42 31.1**	**+0.9**
NPS	**Neapolis**	**1.74**	**240**	*e*P	**Pn**	**09 42 30.3**	**-1.3**
AKAS	**Kas**	**1.75**	**87**	*i* P	**Pn**	**09 42 32.8**	**+1.1**
AKAS				*i* S	**Sn**	**09 42 52.4**	**-1.0**
DNZL	**Cakiroluk**	**2.00**	**39**	*i* P	**Pn**	**09 42 34.5**	**-0.6**
DNZL				*i* S	**Sn**	**09 42 51.2**	**-8.2**
GOLH	**Golhisar**	**2.01**	**57**	*i* P	**Pn**	**09 42 36.8**	**+1.5**
GOLH				*i* S	**Sn**	**09 43 00.7**	**+0.9**
ELL	**Elmali**	**2.07**	**73**	*e*PN	**Pn**	**09 42 36.5**	**+0.4**
KULA	**Kula-Manisa**	**2.55**	**22**	*e*PN	**Pn**	**09 42 43.4**	**+1.0**
KHL	**Karahalli**	**2.73**	**37**	*e*PN	**Pn**	**09 42 45.4**	**+0.6**
BALY	**Balya**	**3.58**	**2**	*i* P	**Pn**	**09 42 56.9**	**+0.5**
HMYD	**Mayadein**	**6.94**	**155⇓**	*e*P	**Pn**	**09 43 41.6**	**-0.6**
SQR		**7.00**	**152**	⇑P	**Pn**	**09 43 42.7**	**-0.4**
HNAT	**Natroun**	**7.03**	**157**	P	**Pn**	**09 43 43.3**	**-0.1**
HNAT				S	**Sn**	**09 44 48.0**	**-14**
FYM	**Al Fayyum**	**7.12**	**154⇓**	*e*P	**Pn**	**09 43 44.0**	**-0.6**
AYT	**Al 'Ayyat**	**7.15**	**153⇓**	*e*P	**Pn**	**09 43 44.5**	**-0.5**
HSAF	**As Saff**	**7.38**	**151**	P	**Pn**	**09 43 48.0**	**-0.2**
GLL	**Jalalah**	**7.47**	**150⇓**	*e*P	**Pn**	**09 43 48.7**	**-0.7**
GLL				S	**Sn**	**09 44 59.0**	**-14**

*IDC **28** 09:42:14.6±1.3, 2177S×16953E, h0^{km}, mb4.0/7, mb1 4.3/8, mb1mx4.1/17, mbtmp4.0/8, ML3.5/1, MS3.7/3, Ms1 3.7/3, ms1mx3.1/28, Error ellipse: s-maj=44.6km s-min=25.8km az=168.0*
*ISCJB **28** 09:42:15.2±0.8, 2175S±0.1×1695E±0.1, h10^{km}, mb4.0/7, MS3.6/3, Error ellipse: s-maj=22.8km s-min=11.6km az=21.8*
*NEIC **28** 09:42:16.2±0.6, 2175S×16956E, h10^{km}, mb4.2/2, Error ellipse: s-maj=20.6km s-min=10.7km az=208.0*

ISC 28 09:42:17.0±0.8, 2175S±01×1695E±01, h10^{km}, n17, σ1§42/17, mb4.0/7, MS3.6/3, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.86**	**262**	*e*P	**Pn**	**09 43 02.2**	**-0.5**
DZM				*e*S	**Sn**	**09 43 31.5**	**-5.7**
RAO	**Raoul Island**	**13.62**	**126**	*e*Pn	**Pn**	**09 45 29.0**	**-1.3**
	177nm,0.4s						
URZ	**Urewera**	**17.76**	**160**	P	**Pn**	**09 46 22.2**	**-2.1**
	0.1nm,0.3s,baz=45,slow=4.3,SNR=2.6						
CTA	**Charters Tower**	**21.77**	**270**	*e*P	**P**	**09 47 10.0**	**+1.0**
	4.3nm,0.9s,mb3.9						
CTA	**Charters Tower**	**21.77**	**270**	P	**P**	**09 47 08.1**	**-1.0**
	4.1nm,0.8s,mb3.9,baz=91,slow=7.1,SNR=7.3						
CTA				LR	LR	09 54 44.6	
	comp=Z,207nm,19.8s,MS3.5,baz=227,slow=34						
ASAR	**Alice Springs**	**32.85**	**260**	P	**P**	**09 48 50.9**	**-0.2**
	1.8nm,0.7s,mb4.1,baz=85,slow=9.0,SNR=20						
WRA	**Warramunga Arr**	**32.87**	**267**	P	**P**	**09 48 49.7**	**-1.6**
	0.4nm,0.5s,mb3.6,baz=100,slow=8.3,SNR=16						
WRA				LR	LR	10 02 01.5	
	comp=Z,86nm,20.4s,MS3.4,baz=125,slow=36						
FITZ	**Fitzroy Crossi**	**41.30**	**267**	*e*P	**P**	**09 50 02.5**	**-0.4**
	5.7nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**41.30**	**267**	P	**P**	**09 50 02.6**	**-0.4**
	3.3nm,0.7s,mb4.1,baz=117,slow=11,SNR=13						
FITZ				LR	LR	10 07 00.8	
	comp=Z,146nm,18.2s,MS3.9,baz=270,slow=36						
CMAR	**Chiang Mai Arr**	**79.73**	**295**	P	**P**	**09 54 26.4**	**+0.8**
	1.1nm,0.6s,mb4.0,baz=137,slow=4.4,SNR=4.2						
SNAA	**Sanae**	**86.73**	**182**	*e*	**P**	**09 55 03.1**	**+2.3**
SNAA				*e*		09 55 08.3	
VNA3	**Neumayer Olymp**	**87.31**	**180**	*e*	**P**	**09 55 05.4**	**+1.8**
VNA3				*e*		09 55 11.1	
VNA2	**Neumayer--Watz**	**87.61**	**181**	*e*	**P**	**09 55 07.1**	**+2.0**
	baz=181,slow=3.1						
VNA2				*e*		09 55 13.3	
VNA1	**Neumayer--Stat**	**87.89**	**181**	*e*	**P**	**09 55 09.2**	**+2.8**
VNA1				*e*		09 55 14.6	
SONM	**Songino Array**	**89.32**	**323**	P	**P**	**09 55 12.4**	**-1.0**
	0.2nm,0.3s,mb4.0,baz=141,slow=9.3,SNR=2.9						
NVAR	**Mina Array Bea**	**90.24**	**48**	P	**P**	**09 55 17.5**	**-0.4**
	0.9nm,0.6s,mb4.3,baz=227,slow=8.6,SNR=8.6						
GERES	**GERESS Array B**	**146.75**	**330**	PKPbc	PKPbc	10 01 58.3	-0.8
	0.6nm,0.4s,baz=64,slow=3.1,SNR=5.3						

*MOS **28** 09:46:31.8±2.4, 5370N×16203E, h9^{km}, mb4.5/1, Error ellipse: s-maj=15.7km s-min=9.5km az=87.8*
*IDC **28** 09:46:32.9±1.2, 5414N×16173E, h0^{km}, mb3.6/6, mb1 3.9/8, mb1mx3.7/25, mbtmp3.7/8, ML3.5/2, Error ellipse: s-maj=38.9km s-min=19.9km az=157.0*
*ISCJB **28** 09:46:33.4±0.6, 5368N±003×16201E±007, h10^{km}, mb3.8/7, Error ellipse: s-maj=6.3km s-min=3.5km az=29.2*
*KRSC **28** 09:46:34.4±0.5, 5373N×16177E, h5^{km}±5^{km}, ML4.1*
*NEIC **28** 09:46:37.8±1.0, 5401N×16171E, h35^{km}, Error ellipse: s-maj=33.0km s-min=12.9km az=151.0*

ISC 28 09:46:34.8±1.0, 5368N±003×16198E±007, h13^{km}±6^{km}, n37, σ1§12/56, mb3.8/7, 2C-1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.89**	**351**	*e*P	**Pg**	**09 46 51.0**	**-0.9**
MKZ				*i* S	**Sg**	**09 47 02.8**	**-0.7**
KII	**Karymskiy**	**1.54**	**284**	*e*P	**Pn**	**09 47 01.3**	**-0.6**
KII				*i* S	**Sn**	**09 47 21.2**	**-0.6**
NLC	**Nalytchevo**	**1.66**	**253**	*e*P	**Pn**	**09 47 03.2**	**-0.3**
NLC				*i* S	**Sn**	**09 47 24.8**	**+0.1**
AVH	**Avacha**	**1.98**	**259**	*e*P	**Pn**	**09 47 08.5**	**+0.5**
AVH				*i* S	**Sn**	**09 47 33.1**	**+0.4**
PET	**Petropavlovsk**	**2.10**	**253**	*e*PN	**Pn**	**09 47 10.3**	**+0.7**
PET				*e*S	**Sn**	**09 47 37.2**	**+1.6**
PET				pmax	pmax		
	comp=Z,38nm,0.6s						
PET				smax			
	comp=N,252nm,0.8s						
PET	**Petropavlovsk**	**2.10**	**253**	*e*P	**Pn**	**09 47 09.4**	**-0.2**
PET				*i* S	**Sn**	**09 47 34.9**	**-0.7**
PET	**Petropavlovsk**	**2.10**	**253**	*e*Pn	**Pn**	**09 47 07.4**	**-2.2**
KMNR	**Kamenistaya**	**2.31**	**335**	*e*P	**Pn**	**09 47 13.4**	**+0.9**
KMNR				*i* S	**Sn**	**09 47 41.9**	**+1.1**
GNL	**Ganaly**	**2.40**	**272**	P	**Pn**	**09 47 15.0**	**+1.2**
GNL				*i* S	**Sn**	**09 47 44.1**	**+1.1**
BZMR	**Bezymyannaya**	**2.42**	**340**	*e*P	**Pn**	**09 47 14.3**	**+0.4**
BZMR				*i* S	**Sn**	**09 47 43.7**	**+0.3**
ZLN	**Zelenaya**	**2.44**	**344**	*e*P	**Pn**	**09 47 14.6**	**+0.4**
ZLN				*i* S	**Sn**	**09 47 44.0**	**+0.2**
RUS	**Russkaya**	**2.44**	**240**	*e*P	**Pn**	**09 47 14.1**	**-0.2**
RUS				*i* S	**Sn**	**09 47 42.7**	**-1.2**
KPT	**Kopyto**	**2.50**	**337**	*e*P	**Pn**	**09 47 15.6**	**+0.4**
KBTR	**Krutoberegovo**	**2.58**	**10**	*e*P	**Pn**	**09 47 16.1**	**+2.0**
KBTR				*i* S	**Sn**	**09 47 49.8**	**+2.5**
PEA0B	**Petropavlovsk-**	**2.63**	**259**	*e*Pn	**Pn**	**09 47 17.4**	**+0.5**
PETK	**Petropavlovsk-**	**2.63**	**259**	Pn	**Pn**	**09 47 18.1**	**+1.3**
	comp=N,6.2nm,0.3s,baz=79,slow=19,SNR=163						
PETK				Sn	**Sn**	**09 47 53.6**	**+5.0**
	comp=N,6.8nm,0.3s,baz=91,slow=18,SNR=5.3						
PETK	**Petropavlovsk-**	**2.63**	**259**	Pn	**Pn**	**09 47 18.1**	**+1.2**
PETK				Sn	**Sn**	**09 47 53.6**	**+5.0**
KRSR	**Krestovskiy**	**2.67**	**343**	*e*P	**Pn**	**09 47 17.5**	**+0.1**
KRSR				*i* S	**Sn**	**09 47 48.9**	**-0.6**
KOZ	**Kozyrevsk**	**2.67**	**334**	*e*P	**Pn**	**09 47 18.0**	**+0.5**
KOZ				*i* S	**Sn**	**09 47 49.6**	**-0.1**
KOZR	**Kozyr**	**2.67**	**334**	PN	**Pn**	**09 47 18.0**	**+0.5**
KOZR				S	**Sn**	**09 47 49.6**	**-0.1**
KLY	**Klyuchi**	**2.74**	**344**	*e*P	**Pn**	**09 47 17.8**	**-0.7**
KLY				*i* S	**Sn**	**09 47 48.5**	**-3.0**
SMKR	**Semkarok**	**2.92**	**354**	P	**Pn**	**09 47 23.0**	**+2.1**
SRDR	**Sredinnyy**	**2.94**	**335**	*e*P	**Pn**	**09 47 21.5**	**+0.3**
SRDR				*i* S	**Sn**	**09 47 55.1**	**-1.3**
ASAJ	**Asahikawa**	**15.89**	**241**	Pn	**Pn**	**09 50 17.2**	**-0.8**
	comp=N,0.4nm,0.3s,baz=72,slow=13,SNR=4.4						
TIXI	**Tiksi**	**23.03**	**334⇑**	*i* P	**P**	**09 51 35.6**	**-3.6**
MJAR	**Matsushiro Arr**	**23.80**	**234**	P	**P**	**09 51 48.8**	**+1.6**
	comp=N,1.9nm,0.6s,mb3.7,baz=22,slow=11,SNR=3.9						
COLA	**College**	**27.18**	**46⇑**	*i* P	**P**	**09 52 16.3**	**-1.3**
KURK	**Kurchatov**	**48.38**	**302**	P	**P**	**09 55 12.6**	**-3.4**
	comp=N,0.4nm,0.3s,mb3.9,baz=59,slow=7.9,SNR=4.1						
MKAR	**Makanchi Array**	**48.91**	**296**	P	**P**	**09 55 17.6**	**-2.5**
	comp=N,0.3nm,0.3s,mb3.9,baz=76,slow=9.1,SNR=2.0						
ARU	**Arti**	**53.72**	**318⇓**	*i* P	**P**	**09 55 54.0**	**-2.0**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
PDAR	**Pinedale Array**	**56.25**	**62**	P	**P**	**09 56 14.6**	**+0.2**
	comp=Z,0.5nm,1.0s,mb3.5,baz=311,slow=4.7,SNR=3.0						
NB2	**NORSAR Subarra**	**63.28**	**345**	P	**P**	**09 57 00.5**	**-2.1**
	comp=Z,0.8nm,0.6s,mb4.0,baz=20,slow=6.9						
NOA	**NORSAR Array B**	**63.28**	**345**	P	**P**	**09 57 00.5**	**-2.1**
	comp=Z,1.3nm,0.7s,mb4.2,baz=20,slow=6.5,SNR=5.5						
NOA	**NORSAR Array B**	**63.28**	**345**	P	**P**	**09 57 00.5**	**-2.1**
TXAR	**Lajitas Array**	**69.37**	**68**	P	**P**	**09 57 41.7**	**-0.3**
	comp=Z,0.1nm,0.5s,mb3.0,baz=283,slow=2.2,SNR=3.5						
TXAR	**Lajitas Array**	**69.37**	**68**	*e*P	**P**	**09 57 43.6**	**+1.5**
TXAR	**Lajitas Array**	**69.37**	**68**	P	**P**	**09 57 41.7**	**-0.3**

*ISCJB **28** 09:50:37.9±0.9, 3383N±003×3588E±007, h0^{km}, Error ellipse: s-maj=8.6km s-min=4.6km az=172.7*
*CSEM **28** 09:50:38.9±2.4, 3378N×3577E, h0^{km}, ML2.7, Error ellipse: s-maj=199.5km s-min=42.1km az=77.0, After GRAL*
*GRAL **28** 09:50:38.9±0.3, 3378N×3577E, h0^{km}±31^{km}, MD2.7, Fault plane solution: NP1:φ±245.00000°, δ90.00000°, λ60.00000°.*
*GII **28** 09:50:39.1±1.1, 3368N×3590E, h0^{km}, ML2.2/3, EXPLOSION*

ISC 28 09:50:38.0±1.0, 3385N±003×3589E±007, h0^{km}, n13, σ0§92/22, 2C-1D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHL	**Bhannes**	**0.20**	**286⇑**	*e*P	**Pg**	**09 50 41.5**	**-0.4**
BHL				*e*S	**Sg**	**09 50 43.7**	**-0.9**
BHL	**Bhannes**	**0.20**	**286**	*e*P	**Pg**	**09 50 41.5**	**-0.5**
BHL				*e*S	**Sg**	**09 50 43.7**	**-0.9**
RCY	**Rachaya**	**0.37**	**189⇓**	*e*P	**Pg**	**09 50 44.1**	**-0.9**
RCY				*e*S	**Sg**	**09 50 48.1**	**-1.7**
HWQ	**Hawqa**	**0.43**	**6⇑**	*e*P	**Pg**	**09 50 48.2**	**+1.8**
HRI	**Mount Hermon**	**0.59**	**193**	Pg	**Pg**	**09 50 50.0**	**+0.6**
HRI				Sg	**Sg**	**09 50 57.6**	**+0.6**
KSDI	**Kefar Szold**	**0.68**	**196**	Pg	**Pg**	**09 50 50.4**	**-0.7**
KSDI				Sg	**Sg**	**09 51 00.3**	**+0.4**
MMA0	**Mount Meron ar**	**0.92**	**206**	Sg	**Sg**	**09 51 08.3**	**+0.7**
HNTI	**Hanita**	**0.97**	**218**	Pg	**Pg**	**09 50 57.0**	**+0.4**
HNTI				Sg	**Sg**	**09 51 10.9**	**+1.8**
OFRI	**'Ofer**	**1.44**	**212**	Sn	**Sn**	**09 51 24.4**	**-0.6**
MMLI	**Mount Malkishu**	**1.46**	**196**	Pn	**Pn**	**09 51 04.7**	**-0.9**
MMLI				Sn	**Sn**	**09 51 26.8**	**+1.3**
HMDT	**Nahal Hemdat**	**1.62**	**191**	Pn	**Pn**	**09 51 06.9**	**-0.9**
HMDT				Sn	**Sn**	**09 51 29.0**	**-0.4**
SLTI	**Sal'it**	**1.75**	**204**	Pn	**Pn**	**09 51 09.3**	**-0.3**
SLTI				Sn	**Sn**	**09 51 33.3**	**+0.6**
DSI	**Dead Sea**	**2.31**	**191**	Pn	**Pn**	**09 51 17.2**	**-0.1**

*NEIC **28** 10:00:32.6, 3002S×7166W, h36^{km}, MD3.7(GUC), After GUC.*

GUC 28 10:00:32.6±0.4, 3002S×7166W, h36^{km}±2^{km}, MD3.7, ML2.9, 2C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	**La Serena**	**0.37**	**73⇓**	*i* P	Pn	10 00 41.

comp=Z,32nm,1.6s,mb5.0
KLBR Kellerberrin 47.01 246 *e*P **P** 10 20 48.5 -1.2
comp=Z,37nm,1.2s,mb5.2
KAPI Kappang 50.74 281 LR LR 10 40 12.1
comp=Z,121nm,18.6s,MS3.9,baz=238,slow=33
SBA Scott Base 56.64 181 *e*P **P** **10 22 01.4 +0.5**
SBA pmax pmax
comp=Z,16nm,1.2s,mb4.9
SBA Scott Base 56.64 181 *e*P **P** **10 22 01.4 +0.5**
comp=Z,16nm,1.2s,mb4.9
JOW Kunigami 62.24 318 LR LR 10 47 58.0
comp=Z,68nm,18.3s,MS3.9,baz=102,slow=34
MJAR Matsushiro Arr 64.62 333 P **P** **10 22 55.7 -0.1**
comp=Z,5.1nm,1.0s,mb4.5,baz=166,slow=6.9,SNR=7.6
MAT Matsushiro 64.62 333 P **P** **10 22 55.8 0.0**
QSPA South Pole Qui 68.79 180 LR LR 10 50 54.7
comp=Z,195nm,18.3s,MS4.4,baz=107,slow=34
NJ2 Nanjing 71.78 316 *e*P **P** **10 23 42.0 +1.2**
NJ2 AMB AMB
comp=Z,40nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 72.05 341⇑ *e*P **P** **10 23 43.0 +0.9**
YSS pmax pmax
comp=Z,24nm,1.1s,mb5.0
PETK Petropavlovsk- 74.77 353 P **P** **10 23 58.1 +0.2**
comp=Z,6.9nm,1.0s,mb4.6,baz=132,slow=6.6,SNR=4.1
PETK LR LR 10 51 26.9
comp=Z,137nm,20.3s,MS4.2,baz=210,slow=32
MDJ Mudanjiang 74.98 332 P **P** **10 24 00.8 +1.4**
MDJ AMB AMB
comp=Z,7.0nm,1.4s,mb4.4
MDJ AMB AMB
comp=Z,236nm,4.3s
CN2 Changchun 76.27 329 *e*P **P** **10 24 07.3 +0.4**
MAW Mawson 76.61 202 P **P** **10 24 08.6 +0.1**
comp=Z,3.6nm,1.0s,mb4.2,baz=103,slow=8.8,SNR=8.2
MAW LR LR 10 53 38.7
comp=Z,345nm,19.1s,MS4.7,baz=58,slow=32
GYA Guiyang 77.11 305 P **P** **10 24 13.5 +1.5**
GYA PP PP 10 27 08.8 +2.8
GYA S S 10 34 01.5 +0.6
GYA SKS 10 34 21.3
GYA SS SS 10 39 01.5 +2.6
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,60nm,4.8s
GYA LR LR
comp=N,430nm,17.8s,MS4.9
GYA LR LR
comp=E,210nm,18.0s,MS4.9
GYA LR LR
comp=Z,290nm,19.1s,MS4.6
BJI Beijing 78.61 321 P **P** **10 24 17.5 -2.6**
BJI AMB AMB
comp=Z,6.0nm,0.7s,mb4.6
BJI Beijing 78.61 321 P **P** **10 24 17.4 -2.7**
KMI Kunming 79.48 302 P **P** **10 24 27.8 +2.6**
KMI AP pP 10 24 30.5 +0.9
KMI XP sP 10 24 32.0 +0.8
KMI PP PP 10 27 29.5 +3.7
KMI S S 10 34 28.3 +1.8
KMI XS sS 10 34 33.0 -0.8
KMI SS SS 10 39 38.8 +4.1
KMI AMB AMB
comp=Z,16nm,1.3s,mb4.8
KMI LR LR
comp=N,124nm,7.8s
KMI LR LR
comp=E,92nm,9.2s
KMI LR LR
comp=Z,102nm,16.2s,MS4.2
KMI Kunming 79.48 302 P **P** **10 24 27.7 +2.5**
KMI pP pP 10 24 30.6 +1.0
KMI sP sP 10 24 32.0 +0.8
KMI PP PP 10 27 29.6 +3.8
KMI S S 10 34 28.2 +1.7
KMI sS sS 10 34 33.1 -0.7
KMI SS SS 10 39 38.8 +4.1
CMAR Chiang Mai Arr 79.48 295 P **P** **10 24 25.8 +0.5**
comp=Z,0.9nm,0.4s,mb4.1,baz=125,slow=4.1,SNR=9.4
CD2 Chengdu 81.60 308 *e*P **P** **10 24 38.3 +1.9**
CD2 AP pP 10 24 43.3 +2.5
CD2 XP sP 10 24 45.5 +3.1
CD2 PP PP 10 27 47.5 +4.2
CD2 S S 10 34 49.5 +1.1
CD2 XS sS 10 34 57.5 +1.7
CD2 SS SS 10 40 10.8 +4.7
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CD2 AMB AMB
comp=Z,40nm,6.8s
CD2 LR LR
comp=N,130nm,15.6s,MS4.6
CD2 LR LR
comp=E,150nm,14.2s,MS4.6
CD2 LR LR
comp=Z,140nm,14.8s,MS4.5
HHC Hu-ho-hao-te 81.86 320 *e*P **P** **10 24 37.3 -0.3**
HHC AP pP 10 24 40.5 -1.5
HHC XP sP 10 24 42.5 -1.1
HHC PP PP 10 27 47.3 +2.0
HHC S S 10 34 49.8 -0.9
HHC XS sS 10 34 55.8 -2.3
HHC SS SS 10 40 11.5 +1.8
HHC AMB AMB
comp=Z,16nm,0.7s,mb5.1
HHC AMB AMB
comp=Z,126nm,6.8s
HHC LR LR
comp=N,187nm,17.2s,MS4.6
HHC LR LR
comp=E,157nm,17.3s,MS4.6
HHC LR LR
comp=Z,184nm,17.2s,MS4.5
LZH Lanzhou 84.20 312 *e*P **P** **10 24 50.8 +1.0**
LZH AP pP 10 24 56.0 +1.7
LZH XP sP 10 24 58.0 +2.1
LZH PP PP 10 28 07.5 +2.9
LZH *e*SKS 10 35 10.0
LZH S S 10 35 13.0 -1.8
LZH AMB AMB
comp=Z,21nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,116nm,6.4s
LZH LR LR
comp=E,528nm,16.5s
LZH LR LR
comp=Z,920nm,18.4s,MS5.2
LZH Lanzhou 84.20 312 *e*P **P** **10 24 50.8 +1.0**
LZH *SP sP 10 24 57.9 +2.0
LZH 10 28 07.6
LZH *e* 10 35 10.0
LZH S S 10 35 13.0 -1.8
LZH Lanzhou 84.20 312 *e*P **P** **10 24 50.8 +1.0**
LZH pP pP 10 24 56.0 +1.7
LZH sP sP 10 24 57.9 +2.0
LZH PP PP 10 28 07.6 +3.0
LZH *e*SKS 10 35 10.0
LZH S S 10 35 13.0 -1.8
LZH sS sS 10 35 40.1 +18
SEY Seymchan 85.00 352⇑ *e*P **P** **10 24 52.6 -0.6**
HOPS Hopland 87.03 46 ⇓P **P** **10 25 04.4 +0.6**
baz=87
O01C Eel River Cons 87.12 45 ⇑P **P** **10 25 04.9 +0.7**
baz=87
CVS Carmenet Viney 87.12 47 ⇑P **P** **10 25 04.8 +0.5**
baz=87
SNAA Sanae 87.14 182 *e*P **P** **10 25 02.8 -1.1**
SNAA Sanae 87.14 182 *e*P **P** **10 25 02.3 -1.6**
SNAA pmax pmax
comp=Z,17nm,1.2s
SNAA Sanae 87.14 182 *e*P **P** **10 25 02.3 -1.6**
comp=Z,17nm,1.2s,mb5.1
KIPM Iron Peak 87.17 45 *e*P **P** **10 25 04.3 -0.2**
PKD Parkfield 87.29 50 ⇑P **P** **10 25 05.7 +0.5**
baz=87
PKM Peak Mountain 87.31 51 ⇓P **P** **10 25 05.5 +0.2**
baz=87
U04C Hernandez Rese 87.32 49 ⇑P **P** **10 25 05.8 +0.6**
baz=87
SMMC Simmler 87.37 51 ⇓P **P** **10 25 06.1 +0.5**
baz=88
MNRC McLaughlin Nat 87.40 46 ⇓P **P** **10 25 06.1 +0.5**
baz=88,SNR=5.2
GASB Alder Springs 87.60 46 ⇓P **P** **10 25 07.6 +1.1**
baz=88,SNR=7.9
VNA3 Neumayer Olymp 87.72 180 *e*P **P** **10 25 05.7 -1.0**
VNA3 *e* 10 25 07.7
N02C Big Bar 87.80 44 ⇑P **P** **10 25 07.5 0.0**
baz=88,SNR=5.4
O02C Red Bluff 87.82 45 ⇓P **P** **10 25 07.9 +0.3**
baz=88,SNR=9.6
VNA2 Neumayer--Watz 88.02 181 *e*P **P** **10 25 07.5 -0.6**
baz=191,slow=4.0
VNA2 *e* 10 25 09.0
WDC Whiskeytown Da 88.18 45 ⇑P **P** **10 25 09.7 +0.4**
baz=88,SNR=7.2
WDC Whiskeytown Da 88.18 45 *e*P **P** **10 25 09.5 +0.2**
OHCM Honcut 88.27 46 *e*P **P** **10 25 09.5 -0.2**
VES Vestal, Richgr 88.28 50 ⇓P **P** **10 25 10.2 +0.4**
baz=88
VNA1 Neumayer--Stat 88.31 181 *e*P **P** **10 25 09.4 -0.1**
VNA1 *e* 10 25 11.0
ORV Oroville 88.37 46 ⇑P **P** **10 25 10.0 -0.2**
baz=88,SNR=11
T06C Millerton Lake 88.38 49 ⇓P **P** **10 25 10.0 -0.3**
baz=88,SNR=8.4
M02C Callahan 88.39 44 ⇑P **P** **10 25 10.3 +0.1**
baz=88,SNR=7.0
CMB Columbia Colle 88.39 48 *e*P **P** **10 25 10.1 -0.3**
CMB pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
CMB Columbia Colle 88.39 48 ⇑P **P** **10 25 10.0 -0.4**
baz=88,SNR=5.7
CMB Columbia Colle 88.39 48 *e*P **P** **10 25 10.1 -0.3**
comp=Z,8.4nm,1.0s,mb4.9
LAVA Lava Cap Winer 88.50 47 ⇓P **P** **10 25 10.8 0.0**
baz=89
ULN Ulaanbaatar 88.58 323 *e*P **P** **10 25 11.2 +0.2**
ULN pmax pmax
comp=Z,17nm,1.5s,mb5.2
ULN Ulaanbaatar 88.58 323 *e*P **P** **10 25 11.2 +0.2**
comp=Z,18nm,1.5s,mb5.2
BFSC Mount Baldy St 88.59 52 ⇑P **P** **10 25 11.3 -0.1**
baz=89
EDW2 Edwards Air Fo 88.63 52 ⇑P **P** **10 25 11.5 -0.1**
baz=89
GTA Gaotai 88.63 313 *e*P **P** **10 25 12.5 +1.0**
GTA AP pP 10 25 16.5 +0.6
GTA XP sP 10 25 18.8 +1.3
GTA AMB AMB
comp=Z,4.0nm,1.2s,mb4.6
ISA Isabella 88.64 51 ⇑P **P** **10 25 11.4 -0.1**
baz=89,SNR=8.0
ISA Isabella 88.64 51 *e*P **P** **10 25 11.6 0.0**
MURC Murrieta 88.64 53 ⇑P **P** **10 25 11.7 0.0**
baz=89
YBH Yreka Blue Hor 88.65 44 ⇑P **P** **10 25 11.6 +0.1**
baz=89
S06C San Francisco 88.70 48 ⇓P **P** **10 25 11.2 -0.6**
baz=89,SNR=7.7
HELL Mitchell Peak 88.72 50 ⇑P **P** **10 25 11.2 -0.7**
baz=89,SNR=7.5
M03C McCloud 88.80 45 ⇑P **P** **10 25 12.5 +0.3**
baz=89
KCC Kaiser Creek 88.81 49 ⇑P **P** **10 25 11.9 -0.5**
baz=89
P05C Yuba Gap, Truc 88.85 47 ⇑P **P** **10 25 12.5 0.0**
baz=89,SNR=5.8
YAK Yakutsk 88.85 342⇑ *e*P **P** **10 25 11.5 -0.4**
YAK pmax pmax
comp=Z,26nm,1.2s,mb5.4
R05C Kirkwood Meado 88.93 48 ⇑P **P** **10 25 12.2 -0.6**
baz=89,SNR=8.8
HUMO Hull Mountain 88.93 43 ⇓P **P** **10 25 12.9 +0.1**
baz=89
HUMO Hull Mountain 88.93 43 *e*P **P** **10 25 13.9 +1.1**
SONM Songino Array 88.94 323 P **P** **10 25 12.3 -0.4**
comp=Z,2.7nm,1.1s,mb4.5,baz=132,slow=2.2,SNR=8.3
O05C Quincy 88.96 46 ⇑P **P** **10 25 13.0 0.0**
baz=89,SNR=5.3
O04C Chester 89.02 46 ⇑P **P** **10 25 13.2 -0.1**
baz=89
BILL Bilibino 89.08 359⇑ *i*P **P** **10 25 13.0 +0.1**
BILL pmax pmax
comp=Z,21nm,1.3s,mb5.3
BBRC Big Bear Sol-O 89.14 53 ⇑P **P** **10 25 13.9 -0.1**
baz=89
M04C Macdoel 89.24 44 ⇑P **P** **10 25 14.7 +0.5**
baz=89
R06C Coleville 89.28 48 ⇑P **P** **10 25 14.2 -0.3**
baz=89,SNR=7.8
WAKR Walker 89.28 48 *e*P **P** **10 25 14.7 +0.2**
L04A Klamath Falls 89.40 44 ⇑P **P** **10 25 14.8 -0.1**
baz=90
SWSC Sam W. Stewart 89.41 54 ⇓P **P** **10 25 15.0 -0.3**
baz=90
M05C Lookout 89.49 45 ⇓P **P** **10 25 15.4 -0.1**
baz=90,SNR=8.5
MPMC Manual Prospec 89.53 51 ⇓P **P** **10 25 15.5 -0.3**
baz=90,SNR=8.1
GSC Goldstone 89.69 52 *e*P **P** **10 25 17.0 +0.5**
GSC pmax pmax
comp=Z,32nm,2.0s,mb5.3
GSC Goldstone 89.69 52 ⇓P **P** **10 25 16.5 -0.1**
baz=90
GSC Goldstone 89.69 52 *e*P **P** **10 25 17.0 +0.5**
comp=Z,32nm,2.0s,mb5.3
S08C White Mtn Res 89.70 49 ⇑P **P** **10 25 16.8 +0.3**
baz=90,SNR=12
BELC Belle Mtn. 89.72 53 ⇓P **P** **10 25 16.2 -0.5**
baz=90,SNR=7.9
H03A Soap Creek Ran 89.77 41 ⇑P **P** **10 25 17.2 +0.6**
baz=90
J04A Umpqua Nationa 89.79 43 ⇓P **P** **10 25 17.4 +0.6**
baz=90
O06A Flanigan 89.79 46 ⇑P **P** **10 25 16.6 -0.2**
baz=90,SNR=6.1
HEC Hector,Ludlow 89.83 52 ⇓P **P** **10 25 16.8 -0.4**
baz=90,SNR=7.0
M06C Likely Place G 89.85 45 ⇑P **P** **10 25 17.2 +0.1**
baz=90,SNR=6.7
PAHR Pah Rah Range 89.88 47 *e*P **P** **10 25 17.8 +0.5**
comp=Z,13nm,1.2s,mb5.1
BC3 Big Chuckw Mtn 89.97 54 P **P** **10 25 17.4 -0.5**
baz=90,SNR=5.2
L05A Lakeview 90.02 44 ⇓P **P** **10 25 18.1 +0.2**
baz=90,SNR=7.4
NVAR Mina Array Bea 90.03 48 P **P** **10 25 17.8 -0.2**
comp=Z,4.8nm,0.9s,mb4.8,baz=225,slow=8.2,SNR=28
GRAC Grapevine Rang 90.04 50 ⇓P **P** **10 25 17.9 -0.3**
baz=90
N06A Buffalo Meadow 90.06 46 ⇑P **P** **10 25 18.4 +0.3**
baz=90,SNR=7.1
R08A Mina 90.13 49 ⇓P **P** **10 25 18.3 -0.2**
baz=90,SNR=6.4
LPIG La Paz 90.16 64 LR LR 10 55 48.4
comp=Z,270nm,20.4s,MS4.7,baz=346,slow=29
FURC Furnace Creek, 90.17 51 ⇑P **P** **10 25 18.4 -0.3**
baz=90,SNR=7.3
GLA Glamis 90.19 54 *e*P **P** **10 25 19.3 +0.4**
GLA pmax pmax
comp=Z,23nm,1.4s,mb5.3
GLA Glamis 90.19 54 ⇓P **P** **10 25 19.1 +0.2**
baz=90,SNR=9.4
GLA Glamis 90.19 54 *e*P **P** **10 25 19.3 +0.4**
comp=Z,23nm,1.4s,mb5.3
MOD Modoc 90.30 45 ⇓P **P** **10 25 19.4 +0.2**
baz=90,SNR=7.4
MOD Modoc 90.30 45 *e*P **P** **10 25 19.2 0.0**
GMRC Granite Mounta 90.31 53 ⇑P **P** **10 25 19.3 -0.1**
baz=90
K05A Summer Lake 90.31 44 ⇑P **P** **10 25 19.3 +0.1**
baz=90,SNR=5.3
SHOC Shoshone 90.34 51 ⇓P **P** **10 25 19.2 -0.3**
baz=90
J05A Fort Rock 90.37 43 ⇑P **P** **10 25 19.7 +0.2**
baz=90,SNR=11
TUQ Turquoise Moun 90.40 52 ⇓P **P** **10 25 19.4 -0.5**
baz=90
IRM Iron Mountain 90.42 53 ⇑P **P** **10 25 19.8 -0.1**
baz=90,SNR=8.1
O07A Toulon 90.43 47 ⇑P **P** **10 25 19.4 -0.5**
baz=91,SNR=7.6
H04A Detroit Lake 90.46 42 ⇑P **P** **10 25 19.7 -0.2**
baz=91
S09A Goldfield 90.47 49 ⇑P **P** **10 25 19.5 -0.6**
baz=91,SNR=6.6
Q08A Gabbs 90.48 48 ⇓P **P** **10 25 19.8 -0.3**
baz=91,SNR=7.6
U10A Ash Meadows, A 90.53 51 ⇑P **P** **10 25 20.3 -0.2**
baz=91,SNR=8.7
G04A Mulino 90.54 41 ⇓P **P** **10 25 20.8 +0.6**
baz=91
Y12C Blythe 90.71 54 ⇑P **P** **10 25 21.3 0.0**
baz=91
P08A Dixie Valley 90.76 47 ⇑P **P** **10 25 21.8 +0.3**
baz=91
K06A Valley Falls 90.76 44 ⇑P **P** **10 25 21.4 +0.1**
baz=91,SNR=6.3
I05A Bend 90.78 42 ⇑P **P** **10 25 21.9 +0.5**
baz=91
M07A Soldier Meadow 90.81 46 ⇓P **P** **10 25 21.4 -0.2**
baz=91,SNR=8.6
R09A Tonopah 90.81 49 ⇑P **P** **10 25 21.6 -0.1**
baz=91,SNR=6.5
TPNV Topopah Spring 90.82 50 *e*P **P** **10 25 21.3 -0.5**
TPNV pmax pmax
comp=Z,16nm,1.3s,mb5.2
TPNV Topopah Spring 90.82 50 ⇑P **P** **10 25 21.7 0.0**
baz=91
TPNV Topopah Spring 90.82 50 *e*P **P** **10 25 21.3 -0.5**
comp=Z,16nm,1.3s,mb5.2
LDFC Landfair 90.84 53 *e*P **P** **10 25 22.3 +0.4**
F04A Amboy 90.94 40 ⇑P **P** **10 25 22.3 +0.2**
baz=91
O08A Rochester Mine 90.98 47 ⇓P **P** **10 25 22.3 -0.1**
baz=91,SNR=7.8
L07A Adell 90.99 45 ⇓P **P** **10 25 22.5 0.0**
baz=91,SNR=12
S10A Tonopah Range, 91.00 49 ⇑P **P** **10 25 22.2 -0.4**
baz=91,SNR=9.3
H05A Madras 91.04 42 ⇓P **P** **10 25 22.6 0.0**
baz=91
N08A GE Springer Mi 91.22 46 ⇑P **P** **10 25 23.5 0.0**
baz=91
PDMCI Parker Dam,Lak 91.23 54 ⇓P **P** **10 25 24.1 +0.3**
baz=91
Y13A Salome 91.27 54 ⇑P **P** **10 25 23.6 -0.3**
baz=91
214A Organ Pipe Nat 91.28 56 ⇑P **P** **10 25 23.6 -0.4**
baz=91
V12A Nelson 91.31 52 ⇓P **P** **10 25 24.0 -0.1**
baz=91
I06A Prineville 91.34 43 ⇑P **P** **10 25 24.0 0.0**
baz=92,SNR=7.4
K07A Rock Creek Ran 91.36 44 ⇑P **P** **10 25 25.1 +0.9**
baz=92,SNR=9.9
R10A Warm Springs 91.37 49 ⇓P **P** **10 25 24.4 +0.1**
baz=92,SNR=7.7
SHPR Sheep Range 91.42 51 *e*P **P** **10 25 25.4 +0.8**
S11A Rachel 91.48 50 ⇑P **P** **10 25 24.3 -0.5**
baz=92,SNR=5.2
F05A White Salmon 91.50 41 ⇓P **P** **10 25 24.9 +0.2**
baz=92
C04A Brinnon 91.51 39 ⇑P **P** **10 25 24.8 +0.1**
baz=92
Q10A Clear Creek Ra 91.54 49 ⇓P **P** **10 25 24.7 -0.3**
baz=92
O09A Fish Creek Ran 91.59 47 ⇓P **P** **10 25 25.1 -0.2**
baz=92,SNR=6.2
X13A Yucca 91.59 53 ⇑P **P** **10 25 25.1 -0.3**
baz=92
H06A Lindquist Farm 91.64 42 ⇓P **P** **10 25 25.1 -0.2**
baz=92,SNR=11
J07A Hines 91.64 44 ⇓P **P** **10 25 25.4 0.0**
baz=92
WVOR Wild Horse Val 91.64 45 *e*P **P** **10 25 24.9 -0.5**
WVOR pmax pmax
comp=Z,8.0nm,1.2s,mb4.9
WVOR Wild Horse Val 91.64 45 *e*P **P** **10 25 24.9 -0.5**
comp=Z,8.1nm,1.2s,mb4.9
E05A Randle 91.65 40 ⇑P **P** **10 25 25.1 -0.3**
baz=92
N09A Rock Creek Ran 91.67 47 ⇑P **P** **10 25 25.2 -0.4**
baz=92
G06A Carlson Farm, 91.69 42 ⇑P **P** **10 25 25.6 0.0**
baz=92
T11A Corn Creek, Al 91.69 51 ⇑P **P** **10 25 25.7 0.0**
baz=92,SNR=8.8
L08A Fields 91.72 45 ⇑P **P** **10 25 26.0 +0.2**
baz=92,SNR=10
Z14A Wintersburg 91.75 55 ⇑P **P** **10 25 26.0 -0.2**
baz=92
W13A Hualapai Mount 91.76 53 ⇑P **P** **10 25 26.0 -0.1**
baz=92
D05A Enumclaw 91.82 39 ⇓P **P** **10 25 26.5 +0.4**
baz=92
U12A Valley of Fire 91.84 52 ⇓P **P** **10 25 26.0 -0.5**
baz=92
I07A Izee 91.85 43 ⇓P **P** **10 25 26.2 -0.1**
baz=92,SNR=5.7
K08A Mann Creek Ran 91.88 45 ⇑P **P** **10 25 26.4 -0.1**
baz=92
R11A Troy Canyon, C 91.91 49 ⇑P **P** **10 25 26.4 -0.4**
baz=92
M09A Marrel Ranch, 91.97 46 ⇑P **P** **10 25 26.9 -0.1**
baz=92
V13A Grand Canyon W 92.00 52 ⇑P **P** **10 25 26.8 -0.5**
baz=92,SNR=5.6
ZAK Zakamensk 92.03 324 *e*P **P** **10 25 25.6 -1.4**
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.6
H07A Lands Inn, Kim 92.05 43 ⇓P **P** **10 25 26.9 -0.4**
baz=92,SNR=8.4
Q11A Duckwater 92.07 49 ⇓P **P** **10 25 27.4 -0.1**
baz=92,SNR=7.4
L09A Wilkinson Ranc 92.10 45 ⇑P **P** **10 25 27.3 -0.2**
baz=92,SNR=5.8
E06A Yakima 92.11 40 ⇓P **P** **10 25 27.4 -0.1**
baz=92
S12A Delamar Landin 92.11 50 ⇓P **P** **10 25 27.6 -0.2**
baz=92,SNR=15
Q10A Cortez Mining, 92.11 47 ⇑P **P** **10 25 27.5 -0.2**
baz=92
J08A Circle Bar Ran 92.18 44 ⇑P **P** **10 25 27.8 -0.1**
baz=92
X14A Yava 92.24 54 ⇓P **P** **10 25 28.4 -0.1**
baz=92
U13A Pakoon Wash 92.25 52 ⇑P **P** **10 25 28.7 +0.3**
baz=92
B05A Bryant 92.29 38 ⇓P **P** **10 25 28.5 +0.3**
baz=92
G07A Ruggs Ranch, H 92.30 42 ⇓P **P** **10 25 28.6 +0.1**
baz=92
K09A Rome 92.36 45 ⇑P **P** **10 25 28.3 -0.5**
baz=92,SNR=6.9
I08A Drewsey 92.37 43 ⇓P **P** **10 25 28.3 -0.4**
baz=92
W14A Seligman 92.41 53 ⇓P **P** **10 25 29.0 -0.1**
baz=92,SNR=5.5
Y15A Casa Rosa Ranc 92.46 55 ⇑P **P** **10 25 29.1 -0.3**
baz=92,SNR=5.5
T13A Saint George 92.55 51 ⇑P **P** **10 25 29.9 +0.2**
baz=93
V14A Boquillas Ranc 92.56 53 ⇑P **P** **10 25 29.6 -0.3**
baz=93
R12A Pony Springs, 92.59 50 ⇑P **P** **10 25 29.5 -0.4**
baz=93,SNR=7.3
O11A Cowboy Ranch, 92.62 48 ⇓P **P** **10 25 29.8 -0.2**
baz=93
M10A I.L. Ranch, Tu 92.63 46 ⇑P **P** **10 25 30.2 +0.2**
baz=93,SNR=6.3
J09A Fry Pan Ranch, 92.64 44 ⇑P **P** **10 25 29.7 -0.3**
baz=93,SNR=7.6
Q12A Willow Creek R 92.73 49 ⇑P **P** **10 25 30.8 +0.2**
baz=93
X15A Humboldt 92.75 54 ⇓P **P** **10 25 30.3 -0.4**
baz=93,SNR=8.2
217A Green Valley 92.76 57 ⇑P **P** **10 25 30.6 -0.3**
baz=93
G08A Pilot Rock 92.76 42 ⇓P **P** **10 25 30.4 -0.1**
baz=93,SNR=5.1
S13A Holt Ranch, En 92.81 51 ⇓P **P** **10 25 30.8 -0.2**
baz=93,SNR=9.2
U14A Mt Trumbull 92.83 52 ⇑P **P** **10 25 31.2 +0.1**
baz=93,SNR=11
P12A McGill 92.86 49 ⇓P **P** **10 25 31.4 +0.3**
baz=93
Z16A Peralta Trail, 92.90 55 ⇓P **P** **10 25 31.6 +0.1**
baz=93
L10A Juniper Basin 92.92 46 ⇓P **P** **10 25 31.2 -0.1**
baz=93
I09A Lost Marbles R 92.93 44 ⇑P **P** **10 25 31.3 -0.1**
baz=93
K10A MacKenzie Ranc 92.96 45 ⇓P **P** **10 25 31.3 -0.2**
baz=93
R13A O'Grain Ranch, 92.98 50 ⇑P **P** **10 25 32.2 +0.4**
baz=93
W15A Williams 93.00 53 ⇓P **P** **10 25 32.4 +0.4**

baz=93
Y16A Circle Bar Ran 93.08 55 ⇑P P 10 25 32.2 -0.1
baz=93,SNR=11
M11A Holland Ranch, 93.09 47 ⇓P P 10 25 32.1 0.0
baz=93
117A Oracle 93.13 56 ⇑P P 10 25 32.2 -0.4
baz=93
T14A Hurricane 93.16 51 ⇑P P 10 25 32.6 0.0
baz=93
C07A Waterville 93.21 40 ⇑P P 10 25 32.9 +0.3
baz=93
318A Bisbee 93.27 58 ⇓P P 10 25 32.9 -0.3
baz=93
O12A Currie 93.31 48 ⇓P P 10 25 33.1 -0.1
baz=93
X16A Lo Mia Camp, P 93.32 54 ⇑P P 10 25 33.6 +0.2
baz=93,SNR=5.4
V15A Kaibab Nationa 93.33 53 ⇑P P 10 25 33.5 +0.1
baz=93
N12A Clover Valley, 93.36 47 ⇑P P 10 25 33.6 +0.2
baz=94
218A Dragoon 93.44 57 ⇓P P 10 25 33.9 -0.1
baz=94
L11A Cat Creek Ranc 93.44 46 ⇓P P 10 25 34.5 +0.7
baz=94
P13A Bates Ranch, G 93.48 49 ⇓P P 10 25 33.8 -0.3
baz=94,SNR=6.0
U15A North Rim 93.49 52 ⇑P P 10 25 34.0 -0.1
baz=94,SNR=7.4
Y17A Roosevelt 93.49 55 ⇑P P 10 25 34.4 +0.2
baz=94
G09A Cove 93.49 43 ⇑P P 10 25 34.2 +0.3
baz=94
B07A Winthrop 93.54 39 ⇓P P 10 25 34.4 +0.3
baz=94
T15A Red Dirt Ranch 93.66 52 ⇓P P 10 25 34.9 0.0
baz=94
M12A Wells 93.68 47 ⇑P P 10 25 35.4 +0.5
baz=94
118A Homack Ranch, 93.75 57 ⇓P P 10 25 35.6 +0.2
baz=94
X17A Forest Lakes 93.77 55 ⇓P P 10 25 36.1 +0.6
baz=94
WUAZ Wupatki 93.81 53 ⇓P P 10 25 35.8 +0.2
baz=94
WUAZ Wupatki 93.81 53 *e*P P 10 25 36.2 +0.6
comp=Z,9.5nm,1.3s,mb5.1
Q14A Sevier Lake (B 93.81 50 ⇓P P 10 25 35.7 +0.2
baz=94
H10A Noah's Angus R 93.84 43 ⇓P P 10 25 35.3 -0.2
baz=94
G10A Bishop Farm, J 93.92 43 ⇑P P 10 25 35.2 -0.7
baz=94
I11A Placerville 94.06 44 ⇓P P 10 25 36.6 0.0
baz=94
Y18A Canyon Day Jun 94.14 55 ⇓P P 10 25 37.2 0.0
baz=94
F10A Beach Ranch, E 94.15 42 ⇑P P 10 25 36.4 -0.5
baz=94
U16A Tuba City 94.23 53 ⇑P P 10 25 37.8 +0.2
baz=94
A08A Turner Farm, O 94.27 39 ⇑P P 10 25 37.6 +0.2
baz=94
J12A Stokes Ranch, 94.34 45 ⇓P P 10 25 38.0 +0.1
baz=94
H11A Donnelly 94.36 44 ⇓P P 10 25 37.6 -0.3
baz=94
G11A Walters Elk Ra 94.50 43 ⇓P P 10 25 38.2 -0.3
baz=95
L13A Double Diamond 94.62 47 ⇓P P 10 25 39.9 +0.7
baz=95
M14A Sheep Mountain 94.79 47 ⇑P P 10 25 40.2 +0.3
baz=95
T17A Navajo Res., N 94.81 52 ⇑P P 10 25 40.3 +0.1
baz=95
R16A Teasdale 94.82 51 ⇓P P 10 25 40.2 0.0
baz=95
HLID Hailey 94.92 45 ⇓P P 10 25 40.2 -0.3
baz=95
H12A Diamond D Ranc 95.05 44 ⇑P P 10 25 41.2 +0.1
baz=95
F12A Elk City 95.30 43 ⇑P P 10 25 41.5 -0.7
baz=95
TMUT Trail Mountain 95.41 50 *e*P P 10 25 40.4 -2.5
H13A Challis 95.44 44 ⇑P P 10 25 42.7 -0.2
baz=96
T18A Mexican Hat 95.55 52 ⇑P P 10 25 43.4 -0.2
baz=96
G13A Cobalt 95.68 44 ⇓P P 10 25 43.7 -0.3
baz=96
I14A Mackay 95.71 45 ⇑P P 10 25 44.0 -0.1
baz=96
D12A Red Ives Fores 95.79 42 ⇓P P 10 25 45.2 +0.8
baz=96
SRU San Rafael 95.83 50 ⇑P P 10 25 45.0 +0.2
baz=96
F13A Darby 95.90 43 ⇓P P 10 25 44.5 -0.4
baz=96
H14A Leadore 96.04 44 ⇓P P 10 25 45.4 -0.2
baz=96
O17A Robinson Place 96.09 49 ⇓P P 10 25 46.5 +0.5
baz=96
J15A Blackfoot 96.17 46 ⇓P P 10 25 46.6 +0.4
baz=96
F14A Wisdom 96.52 43 ⇓P P 10 25 47.2 -0.5
baz=97
E14A Clinton 96.69 43 ⇑P P 10 25 47.6 -0.9
baz=97
TIXI Tiksi 96.76 348 ⇓*i*P P 10 25 47.1 -1.1
WMQ Urumqi 98.72 314 *e*P P 10 25 59.5 +1.8
WMQ AMB AMB
comp=Z,8.0nm,0.6s,mb5.4
WMQ AMB AMB
comp=Z,100nm,4.3s
WMQ LR LR
comp=Z,138nm,21.6s,MS4.4
ARCES ARCESS Array B 127.07 345 PKP PKPdf 10 31 20.6 -1.1
comp=Z,12nm,1.1s,baz=62,slow=2.0,SNR=13
KIV Kislovodsk 130.71 310 *e*PKIKP PKPdf 10 31 26.4 -3.0
KIV pmax pmax
comp=Z,4.0nm,0.7s
DPC Dobruska-Polom 144.07 330 *e*PKP PKPdf 10 31 52.2 -1.6
UPC Upice 144.11 331 *e*PKP PKPdf 10 31 52.2 -1.6
UPC *ep*PKP pPKPdf 10 32 01.1 +2.6
PVCC Panska Ves 144.74 332 *e*PKP PKPdf 10 31 53.6 -1.3
BRG Berggiesshubel 144.75 333 *e*PKIKP PKPdf 10 31 53.5 -1.5
BRG pmax pmax
comp=Z,15nm,1.4s
BRG Berggiesshubel 144.75 333 *e*PKP PKPdf 10 31 53.5 -1.5
comp=Z,26nm,1.4s
CLL Collm 144.82 334 *e*PKIKP PKPdf 10 31 54.0 -1.1
CLL pmax pmax
comp=Z,19nm,1.2s
CLL Collm 144.82 334 *e*PKPdf PKPdf 10 31 54.0 -1.1
comp=Z,19nm,1.2s
MODS Modra-Piesok 144.94 327 *e*PKP PKPdf 10 31 53.1 -2.3
PRU Pruhonice 145.14 331 *e*PKP PKPdf 10 31 55.4 -0.3
ZST Bratislava 145.15 327 *e*PKP PKPdf 10 31 56.7 +1.0
CONA Conrad Observa 145.95 328 ⇑*i*P PKPdf 10 31 57.6 +0.5
comp=Z,17nm,1.4s
CSNA Conrad Observa 145.95 328 ⇑*i*P PKPdf 10 31 57.5 +0.4
comp=Z,17nm,1.5s
KHC Kasperske Hory 146.19 331 ⇑*i*PKP2 PKPab 10 31 58.2 -1.0
KHC Kasperske Hory 146.19 331 *e*PKP PKPdf 10 31 58.3 +0.8
KHC *ex* x 10 32 05.9
GEC2 GERESS Array S 146.34 331 *e*PKP2 PKPab 10 31 58.9 -0.9
GERES GERESS Array B 146.34 331 PKPbc PKPbc 10 31 58.4 -0.6
comp=Z,1.6nm,0.5s,baz=48,slow=2.0,SNR=13
GRA1 Grafenberg Arr 146.79 334 *e*PKP PKPdf 10 31 59.0 +0.5
GRF Grafenberg Arr 146.79 334 *e*PKP PKPdf 10 31 59.0 +0.5
MEM Membach 147.94 340 PKP PKPdf 10 32 00.7 +0.3
UCC Uccle 148.28 342 PKPbc PKPbc 10 32 04.9 +0.6
BCLA Clavier 148.33 341 PKPbc PKPbc 10 32 04.6 +0.2
WLF Walferdange 148.71 339 PKPbc PKPbc 10 32 05.7 +0.2
GIVF Givet 148.76 341 *e*PKP1 PKPbc 10 32 04.7 -0.8
BAIF Baives 148.98 341 *e*PKP1 PKPbc 10 32 04.6 -1.5
FETA Feichten 149.04 331 ⇑*i*P PKPbc 10 32 05.9 -0.5
comp=Z,12nm,1.0s
CDF Champ du Feu 149.37 336 *e*PKP1 PKPbc 10 32 05.4 -1.7
HINF Hinteralfeld 150.02 336 *e*PKP1 PKPbc 10 32 07.7 -1.1
comp=Z,40nm,1.4s
HAU Haudompre 150.05 337 *e*PKP1 PKPbc 10 32 07.8 -1.0
TUE Stuetta 150.07 332 *e*PKPbc PKPbc 10 32 08.8 -0.1
MEZF Maizieres J'vi 150.08 339 *e*PKP1 PKPbc 10 32 08.5 -0.4
CABF La Chapelle 151.31 336 *e*PKP1 PKPbc 10 32 11.0 -0.9
FLN La Foliniere 151.41 346 *e*PKP1 PKPbc 10 32 10.7 -1.3
LDF La Druitiere 151.48 345 *e*PKP1 PKPbc 10 32 10.9 -1.3
LOR Lormes 151.55 339 *e*PKP1 PKPbc 10 32 11.4 -1.0
GRR Gorron 151.84 346 *e*PKP1 PKPbc 10 32 11.7 -1.3
SSF Saint Saulge 151.85 339 *e*PKP1 PKPbc 10 32 11.2 -1.9
LPL La Plagne 151.95 334 *e*PKP1 PKPbc 10 32 12.0 -1.4
comp=Z,13nm,1.0s
LPG La Plagne 151.96 334 *e*PKP1 PKPbc 10 32 12.1 -1.3
ROSF Rostrenen 152.37 349 *e*PKP1 PKPdf 10 32 11.9 +4.5
MBDF Montbardon 152.57 332 *e*PKP1 PKPbc 10 32 13.8 -1.0
ORIF Oris-en-Rattie 152.79 334 *e*PKP1 PKPbc 10 32 14.0 -1.3
comp=Z,7.6nm,0.5s
TCF Toulx Ste Croi 152.95 340 *e*PKP1 PKPbc 10 32 13.6 -2.0
VIVF Saint-Julien-l 153.32 335 *e*PKP1 PKPbc 10 32 15.6 -0.8
MFF Saint Martin d 153.34 344 *e*PKP1 PKPbc 10 32 15.4 -1.0
FRF La Foret Royal 153.54 331 *e*PKP1 PKPbc 10 32 15.5 -1.5
RJF Les Rejaudoux 154.05 340 *e*PKP1 PKPbc 10 32 17.9 -0.1
TORD Torodi Ar. Bea 165.75 237 PKP PKPdf 10 32 23.1 -0.9
comp=Z,0.7nm,1.0s,baz=264,slow=10,SNR=4.2

NEIC ***28*** *10:17:17.9±2.3,3649N×7008E,h236km±52km,mb4.2/4, Error ellipse: s-maj=135.1km s-min=11.6km az=126.0*
ISCJB ***28*** *10:17:20.2±1.0,3672N±010×700E±0.1,h171km±23km, Error ellipse: s-maj=22.7km s-min=9.0km az=37.6*
NNC ***28*** *10:17:22.0±4.4,3726N×6973E,h0km,mb3.6,mpv3.5, Error ellipse: s-maj=44.2km s-min=34.3km az=110.0*

ISC 28 10:17:21.2±0.9,3672N±008×700E±01,h166km±19km,n16, σ0s51/21,3C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.31**	**200**	⇓*i*P		**Pn**		**10 18 00.6**	**-0.4**
KBL				*e*S		**Sn**		**10 18 31.8**	**+0.2**
AML	**Almayashu**	**6.11**	**27**	P		**Pn**		**10 18 49.8**	**+0.5**
SNR=23									
AML	**Almayashu**	**6.11**	**27**	*e*Pn		**Pn**		**10 18 49.6**	**+0.3**
15nm,0.4s									
AML				*e*Sn		**Sn**		**10 19 58.9**	**+0.3**
KK31	**Karatay Array**	**6.39**	**3**	Pn		**Pn**		**10 18 53.8**	**+0.8**
1.4nm,0.3s,baz=186,slow=12,SNR=35									
KK31				⇑Sn		**Sn**		**10 20 04.5**	**-0.7**
4.9nm,0.7s,baz=186,slow=21,SNR=3.7									
UCH	**Uchtor**	**6.51**	**31**	P		**Pn**		**10 18 54.9**	**+0.3**
SNR=12									
UCH	**Uchtor**	**6.51**	**31**	*e*Pn		**Pn**		**10 18 54.5**	**-0.1**
11nm,0.8s									
UCH				*e*Sn		**Sn**		**10 20 08.1**	**0.0**
EKS2	**Erkin-Say**	**6.60**	**25**	P		**Pn**		**10 18 56.4**	**+0.5**
SNR=29									
EKS2	**Erkin-Say**	**6.60**	**25**	*e*Pn		**Pn**		**10 18 56.0**	**+0.1**
11nm,0.3s									
KZA	**Kyzart**	**6.71**	**36**	P		**Pn**		**10 18 57.0**	**-0.3**
SNR=8.4									
AAK	**Ala-Archa**	**6.84**	**29**	P		**Pn**		**10 18 59.9**	**+0.8**
SNR=6.7									
ULHL	**Ulahol**	**7.32**	**39**	P		**Pn**		**10 19 05.0**	**-0.5**
SNR=5.5									
TKM2	**Tokmak 2**	**7.53**	**33**	⇑Pn		**Pn**		**10 19 07.4**	**-0.8**
3.2nm,0.8s									
TKM2				⇑Sn		**Sn**		**10 20 32.5**	**-0.1**
4.2nm,0.9s									
TKM2	**Tokmak 2**	**7.53**	**33**	*e*Pn		**Pn**		**10 19 07.5**	**-0.7**
2.6nm,0.6s									
AB31	**Akbulak array**	**14.52**	**333**	Pn		**Pn**		**10 20 39.4**	**+0.7**
0.6nm,0.4s,baz=147,slow=12,SNR=16									
AKTO	**Aktyubinsk**	**16.20**	**332**	⇓Pn		**Pn**		**10 20 58.7**	**-0.7**
0.2nm,0.6s									
ECH	**Echery**	**46.55**	**305**	*e*P		**P**		**10 25 23.2**	**-8.7**

MAN 28 10:18:46,1471N×12329E,h71km,mb4.0,ML2.8,MS2.5, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**1.15**	**226**	⇓*i*P		Pn		10 19 07.0	+0.6
GQP				*i* S		Sn		10 19 23.5	+1.9
POLP	**Polilio Island**	**1.31**	**271**	*e*S		Sn		10 19 27.4	+2.0

MEX 28 10:36:39.4±0.5,1472N×9428W,h15km±40km,MD4.0,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
THIG		**1.96**	**84**	*i* P		Pn		10 37 09.4	-2.7
THIG				*i* S		Sn		10 37 31.7	-4.7
TGIG		**2.33**	**28**	*i* P		Pn		10 37 14.3	-3.0
TGIG				*i* S		Sn		10 37 41.1	-4.6
SCX	**San Cristobal**	**2.56**	**38**	*i* P		Pn		10 37 18.7	-1.7
SCX				*i* S		Sn		10 37 48.2	-3.1
CCIG	**Comitan**	**2.59**	**53**	*e*P		Pn		10 37 18.0	-2.8
CCIG				*i* S		Sn		10 37 48.6	-3.3

IDC ***28*** *10:40:33.3±0.7,2153S×16929E,h0km,mb4.6/15, mb1 4.7/15,mb1mx4.6/19,mbtmp4.6/15,MS3.8/6, Ms1 3.8/6,ms1mx3.3/31,Error ellipse: s-maj=24.6km s-min=18.0km az=146.0*
ISCJB ***28*** *10:40:34.9±0.2,2156S±006×16923E±004,h17km, mb4.9/48,MS4.4/8,Error ellipse: s-maj=9.6km s-min=5.3km az=163.5*
BJI ***28*** *10:40:35.2,2123S×16928E,h11km,mB5.4,mb4.9,Ms5.3, Msz5.1*
NEIC ***28*** *10:40:35.2±0.2,2153S×16926E,h10km,mb5.2/22,Error ellipse: s-maj=10.5km s-min=5.8km az=159.0*
LDG ***28*** *10:40:36.3±0.5,2047S×16940E,h10km,Mb5.2/2,Error ellipse: s-maj=81.9km s-min=34.4km az=39.0*
MOS ***28*** *10:40:37.8±1.1,2144S×16927E,h33km,mb5.4/16,Error ellipse: s-maj=12.5km s-min=11.0km az=149.4*

ISC 28 10:40:36.5±0.2,2157S±007×16927E±004,h17km, h17km±2.2km:pP-P,n398,σ0s56/352,mb4.9/48,MS4.4/8, 132C-116D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.67**	**259**	*e*P		**Pn**		**10 41 17.2**	**-1.5**
DZM				*e*S		**Sn**		**10 41 44.3**	**-6.4**
HNR	**Honiara**	**15.04**	**322**	LR		LR		10 48 05.1	
comp=Z,166nm,19.2s,baz=321,slow=30									
HNR	**Honiara**	**15.04**	**322**	*e*P		**Pn**		**10 44 09.0**	**+0.7**
URZ	**Urewera**	**17.95**	**160**	LR		LR		10 50 02.8	
comp=Z,194nm,19.3s,baz=244,slow=32									
AFI	**Afiamalu**	**19.58**	**70**	LR		LR		10 50 45.4	
comp=Z,175nm,19.4s,baz=235,slow=31									
AFI	**Afiamalu**	**19.58**	**70**	*e*P		**Pn**		**10 45 03.0**	**-2.2**
AFI				pmax		pmax			
comp=Z,67nm,1.1s									
AFI	**Afiamalu**	**19.58**	**70**	*e*P		**Pn**		**10 45 03.0**	**-2.2**
comp=Z,67nm,1.1s									
CTA	**Charters Tower**	**21.56**	**270**	*e*P		**P**		**10 45 25.5**	**+0.2**
comp=Z,14nm,1.0s,mb4.3									
CTA	**Charters Tower**	**21.56**	**270**	P		**P**		**10 45 25.6**	**+0.3**
comp=Z,12nm,0.8s,mb4.4,baz=86,slow=12,SNR=15									
CTAO	**Charters Tower**	**21.56**	**270**	*e*P		**P**		**10 45 25.5**	**+0.2**
RPZ	**Rata Peaks**	**22.13**	**177**	LR		LR		10 53 36.4	
comp=Z,492nm,18.1s,MS4.0,baz=325,slow=35									
PMG	**Port Moresby**	**24.46**	**296**	⇑*i*P		**P**		**10 45 49.8**	**-4.9**
COEN	**Coen**	**25.95**	**283**	*e*P		**P**		**10 46 08.2**	**0.0**
comp=Z,11nm,1.3s,mb4.2									
STKA	**Stephens Creek**	**26.70**	**242**	P		**P**		**10 46 15.4**	**+0.6**
comp=Z,9.3nm,1.0s,mb4.3,baz=170,slow=2.9,SNR=3.9									
STKA				LR		LR		10 56 44.7	
comp=Z,334nm,21.9s,MS3.9,baz=38,slow=36									
WRAB	**Tennant Creek**	**32.66**	**266**	⇑*i*P		**P**		**10 47 02.5**	**-5.3**
WRA	**Warramunga Arr**	**32.67**	**266**	P		**P**		**10 47 06.1**	**-1.8**
comp=Z,2.2nm,0.5s,mb4.4,baz=98,slow=8.5,SNR=11									
WRA				LR		LR		10 59 53.8	
comp=Z,148nm,19.5s,MS3.7,baz=80,slow=36									
MBWA	**Marble Bar**	**45.98**	**261**	*e*P		**P**		**10 48 58.5**	**-0.5**
KLBR	**Kellerberrin**	**46.78**	**246**	*e*P		**P**		**10 49 03.9**	**-1.3**
comp=Z,58nm,14s,mb5.3									
NWAO	**Narrogin (SRO)**	**47.21**	**245**	P		**P**		**10 49 07.7**	**-0.9**
comp=Z,7.3nm,0.7s,mb4.7,baz=120,slow=6.0,SNR=5.5									
KAPI	**Kappang**	**50.67**	**282**	P		**P**		**10 49 34.1**	**-1.3**
comp=Z,14nm,1.1s,mb4.8,baz=333,slow=3.9,SNR=4.1									
KAPI	**Kappang**	**50.67**	**282**	*e*P		**P**		**10 49 33.9**	**-1.4**
SBA	**Scott Base**	**56.34**	**181**	*e*P		**P**		**10 50 18.7**	**+2.7**
SBA				pmax		pmax			
comp=Z,28nm,1.3s,mb5.1									
SBA	**Scott Base**	**56.34**	**181**	*e*P		**P**		**10 50 18.6**	**+2.6**
comp=Z,28nm,1.3s,mb5.1									
CASY	**Casey**	**58.01**	**204**	*e*P		**P**		**10 50 27.6**	**-0.4**
QSPA	**South Pole Qui**	**68.49**	**180**	P		**P**		**10 51 37.8**	**+0.5**
comp=Z,6.1nm,1.2s,mb4.5,baz=360,slow=6.7,SNR=10
KSRS Korea Array 70.44 326 P P 10 51 49.9 0.0
comp=Z,1.5nm,0.8s,mb4.0,baz=145,slow=7.4,SNR=5.6
NJ2 Nanjing 71.91 316 *e*P P 10 52 00.0 +1.2
NJ2 AMB AMB
comp=Z,70nm,0.6s,mb5.8
YSS Yuzh-Sakhalins 72.29 341 ⇑*i*P P 10 52 00.6 -0.1
YSS pmax pmax
comp=Z,63nm,1.7s,mb5.3
WHN Wuhan 73.94 313 P P 10 52 11.3 +0.4
PETK Petropavlovsk- 75.04 353 P P 10 52 16.1 -0.7
comp=Z,5.6nm,0.9s,mb4.5,baz=123,slow=5.5,SNR=7.2
MDJ Mudanjiang 75.18 332 P P 10 52 19.8 +2.0
MDJ AMB AMB
comp=Z,8.0nm,1.1s,mb4.6
MDJ AMB AMB
comp=Z,146nm,4.8s
MAW Mawson 76.30 202 *e*P P 10 52 24.7 +0.7
comp=Z,1.8nm,1.2s,mb3.9
MAW Mawson 76.30 202 P P 10 52 24.1 +0.1
comp=Z,2.0nm,0.9s,mb4.1,baz=84,slow=7.4,SNR=4.2
MAW Mawson 76.30 202 *e*P P 10 52 25.6 +1.6
MAW pmax pmax
comp=Z,10.0nm,1.4s
MAW Mawson 76.30 202 *e*P P 10 52 25.6 +1.6
comp=Z,9.6nm,1.4s,mb4.5
CN2 Changchun 76.46 329 *e*P P 10 52 28.3 +3.2
GYA Guiyang 77.18 305 P P 10 52 30.0 +0.4
GYA PP PP 10 55 25.0 +1.2
GYA S S 11 02 17.8 -0.7
GYA SKS 11 02 37.0
GYA SS SS 11 07 18.3 +1.5
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,100nm,4.8s
GYA LR LR
comp=N,450nm,19.1s,MS4.9
GYA LR LR
comp=E,250nm,17.5s,MS4.9
GYA LR LR
comp=Z,410nm,18.6s,MS4.8
BJI Beijing 78.76 321 P P 10 52 37.8 -0.3
BJI AMB AMB
comp=Z,8.0nm,1.2s,mb4.5
BJI Beijing 78.76 321 P P 10 52 37.7 -0.4
CMAR Chiang Mai Arr 79.49 295 P P 10 52 43.8 +1.2
comp=Z,1.9nm,0.8s,mb4.1,baz=127,slow=5.4,SNR=6.9
KMI Kunming 79.53 302 P P 10 52 43.8 +1.1
KMI AP pP 10 52 47.8 -0.5
KMI PCP PcP 10 52 53.3 +2.7
KMI PP PP 10 55 42.5 -1.0
KMI S S 11 02 46.0 +2.2
KMI XS sS 11 02 50.5 -2.7
KMI SKS 11 02 57.0
KMI AMB AMB
comp=Z,13nm,1.0s,mb4.8
KMI AMB AMB
comp=Z,71nm,3.2s
KMI LR LR
comp=N,107nm,12.6s,MS4.5
KMI LR LR
comp=E,114nm,12.6s,MS4.5
KMI LR LR
comp=Z,107nm,13.3s,MS4.4
KMI Kunming 79.53 302 P P 10 52 43.8 +1.1
KMI pP pP 10 52 47.7 -0.6
KMI sP sP 10 52 49.1 -1.2
KMI PcP PcP 10 52 53.3 +2.7
KMI PP PP 10 55 42.4 -1.1
KMI PPP 10 57 37.0
KMI S S 11 02 45.9 +2.1
KMI sS sS 11 02 50.6 -2.6
KMI SKS 11 02 57.1
KMI PS 11 03 31.7
KMI SS SS 11 07 57.2 +4.9
KMI SSS 11 11 17.5
CHTO Chiang Mai 79.65 295 *e*P P 10 52 44.4 +1.0
CD2 Chengdu 81.68 308 ⇑*i*P P 10 52 54.3 +0.3
CD2 AP pP 10 53 02.0 +2.3
CD2 XP sP 10 53 05.5 +3.8
CD2 PP PP 10 56 03.5 +2.3
CD2 S S 11 03 04.5 -1.6
CD2 XS sS 11 03 17.5 +2.1
CD2 SS SS 11 08 25.8 +1.6
CD2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CD2 AMB AMB
comp=Z,30nm,8.2s
CD2 LR LR
comp=E,110nm,14.2s
CD2 LR LR
comp=Z,100nm,13.2s,MS4.3
HHC Hu-ho-hao-te 82.01 320 *e*P P 10 52 56.0 +0.5
HHC AP pP 10 52 59.3 -1.9
HHC XP sP 10 53 01.0 -2.2
HHC PP PP 10 56 06.3 +2.6
HHC S S 11 03 09.5 +0.5
HHC XS sS 11 03 15.5 -2.9
HHC SS SS 11 08 32.3 +3.6
HHC AMB AMB
comp=Z,21nm,0.7s,mb5.2
HHC AMB AMB
comp=Z,121nm,6.4s
HHC LR LR
comp=N,350nm,16.9s,MS5.0
HHC LR LR
comp=E,411nm,17.2s,MS5.0
HHC LR LR
comp=Z,1μm,17.1s,MS5.3
LZH Lanzhou 84.31 312 *e*P P 10 53 08.0 +0.5
LZH AP pP 10 53 13.3 +0.1
LZH XP sP 10 53 15.0 -0.3
LZH PP PP 10 56 25.0 +2.3
LZH *e*SKS 11 03 30.3
LZH S S 11 03 39.0 +6.4
LZH XS sS 11 03 47.3 +5.3
LZH AMB AMB
comp=Z,44nm,1.2s,mb5.5
LZH AMB AMB
comp=Z,172nm,4.5s
LZH LR LR
comp=N,456nm,17.9s
LZH LR LR
comp=Z,752nm,18.5s,MS5.1
LZH Lanzhou 84.31 312 *e*P P 10 53 08.0 +0.5
LZH *SP sP 10 53 15.0 -0.3
LZH 10 56 25.0
LZH *e* 11 03 30.2
LZH S S 11 03 39.0 +6.4
LZH Lanzhou 84.31 312 *e*P P 10 53 08.0 +0.5
LZH pP pP 10 53 13.2 0.0
LZH sP sP 10 53 15.0 -0.3
LZH PP PP 10 56 25.0 +2.3
LZH *e*SKS 11 03 30.2
LZH S S 11 03 39.0 +6.4
LZH sS sS 11 03 47.2 +5.2
SEY Seymchan 85.27 352 ⇑*i*P P 10 53 09.9 -1.8
SNAA Sanae 86.84 182 *e*P P 10 53 19.6 -0.1
SNAA *e* 10 53 20.9
SNAA *e* 10 53 27.1
SNAA *e* 10 53 40.8
SNAA Sanae 86.84 182 *e*P P 10 53 19.8 +0.1
SNAA *e*PP pP 10 53 27.1 +1.7
SNAA pmax pmax
comp=Z,14nm,1.1s
SNAA Sanae 86.84 182 *e*P P 10 53 19.8 +0.1
comp=Z,14nm,1.1s,mb5.1
SNAA *ep*P pP 10 53 27.1 +1.7
MCCM Marconi Confer 87.03 47 ⇑P P 10 53 21.3 +0.2
baz=87
V03C Hunter Liggett 87.12 49 ⇑P P 10 53 22.2 +0.6
baz=87
HOPS Hopland 87.33 46 ⇑P P 10 53 23.1 +0.6
baz=87
HOPS Hopland 87.33 46 *e*P P 10 53 23.1 +0.6
comp=Z,15nm,1.0s,mb5.2
SAO San Andreas Ge 87.33 49 *e*P P 10 53 23.7 +1.2
KCPM Cahto Peak 87.34 45 *e*P P 10 53 22.5 0.0
KCPM *ep*P pP 10 53 29.8 +1.6
CVS Carmenet Viney 87.41 47 ⇑P P 10 53 23.0 +0.1
baz=88
VNA3 Neumayer Olymp 87.43 180 *e*P P 10 53 21.9 -0.6
VNA3 *e* 10 53 23.6

VNA3				*e*		pP	10 53 26.0	-2.2	
VNA3				*e*			10 53 29.9		
VNA3				*e*			10 53 42.0		
KIPM	**Iron Peak**	**87.47**	**45**	*eP*		**P**	**10 53 23.1**	**0.0**	
PKD	**Parkfield**	**87.57**	**50**	⇓P		**P**	**10 53 24.0**	**+0.2**	
	baz=88								
PKM	**Peak Mountain**	**87.59**	**51**	⇑P		**P**	**10 53 24.5**	**+0.7**	
	baz=88								
U04C	**Hernandez Rese**	**87.60**	**49**	⇓P		**P**	**10 53 24.5**	**+0.6**	
	baz=88								
SMMC	**Simmler**	**87.66**	**51**	⇓P		**P**	**10 53 24.7**	**+0.6**	
	baz=88								
MNRC	**McLaughlin Nat**	**87.69**	**47**	⇑P		**P**	**10 53 24.7**	**+0.5**	
	baz=88,SNR=8.0								
VNA2	**Neumayer--Watz**	**87.72**	**181**	*eP*		**P**	**10 53 23.5**	**-0.4**	
	baz=184,slow=3.5								
VNA2				*e*			10 53 24.9		
VNA2				*e*		pP	10 53 27.9	-1.7	
VNA2				*e*			10 53 31.6		
VNA2				*e*			10 53 44.4		
KHMM	**Horse Mountain**	**87.85**	**44**	*eP*		**P**	**10 53 24.9**	**0.0**	
Q03C	**Winters**	**87.86**	**47**	⇓P		**P**	**10 53 26.1**	**+1.1**	
	baz=88								
GASB	**Alder Springs**	**87.90**	**46**	⇑P		**P**	**10 53 25.4**	**+0.3**	
	baz=88,SNR=11								
VNA1	**Neumayer--Stat**	**88.01**	**181**	*eP*		**P**	**10 53 25.9**	**+0.6**	
VNA1				*e*			10 53 27.1		
VNA1				*e*			10 53 28.7		
VNA1				*e*			10 53 33.1		
N02C	**Big Bar**	**88.10**	**45**	⇓P		**P**	**10 53 26.3**	**+0.2**	
	baz=88								
O02C	**Red Bluff**	**88.11**	**45**	⇓P		**P**	**10 53 26.7**	**+0.5**	
	baz=88,SNR=19								
S05C	**Merced**	**88.39**	**49**	⇑P		**P**	**10 53 27.4**	**-0.2**	
	baz=88								
Q04C	**Lincoln**	**88.39**	**47**	⇓P		**P**	**10 53 28.1**	**+0.6**	
	baz=88								
ARVC	**Arvin**	**88.42**	**51**	⇑P		**P**	**10 53 27.7**	**-0.1**	
	baz=88								
WDC	**Whiskeytown Da**	**88.48**	**45**	*eP*		**P**	**10 53 28.1**	**+0.2**	
WDC					pmax	pmax			
	comp=Z,20nm,1.3s,mb5.2								
WDC	**Whiskeytown Da**	**88.48**	**45**	⇓P		**P**	**10 53 28.2**	**+0.3**	
	baz=89,SNR=12								
WDC	**Whiskeytown Da**	**88.48**	**45**	*eP*		**P**	**10 53 28.1**	**+0.2**	
	comp=Z,20nm,1.3s,mb5.2								
MWC	**Mount Wilson**	**88.56**	**52**	*eP*		**P**	**10 53 28.4**	**-0.1**	
OHCM	**Honcut**	**88.56**	**47**	*eP*		**P**	**10 53 28.5**	**+0.1**	
VES	**Vestal, Richgr**	**88.57**	**50**	⇑P		**P**	**10 53 28.9**	**+0.4**	
	baz=89								
ORV	**Oroville**	**88.66**	**46**	⇓P		**P**	**10 53 28.6**	**-0.1**	
	baz=89,SNR=19								
T06C	**Millerton Lake**	**88.67**	**49**	⇓P		**P**	**10 53 28.4**	**-0.5**	
	baz=89								
109C	**Camp Elliot, M**	**88.67**	**54**	⇑P		**P**	**10 53 28.8**	**-0.2**	
	baz=89								
RCTC	**Rector, Farmer**	**88.67**	**50**	⇑P		**P**	**10 53 29.1**	**+0.2**	
	baz=89								
M02C	**Callahan**	**88.68**	**44**	⇑P		**P**	**10 53 28.4**	**-0.4**	
	baz=89,SNR=7.5								
CMB	**Columbia Colle**	**88.68**	**48**	*eP*		**P**	**10 53 28.3**	**-0.6**	
CMB					pmax	pmax			
	comp=Z,17nm,1.1s,mb5.3								
CMB	**Columbia Colle**	**88.68**	**48**	⇑P		**P**	**10 53 28.9**	**-0.1**	
	baz=89,SNR=12								
CMB	**Columbia Colle**	**88.68**	**48**	*eP*		**P**	**10 53 28.3**	**-0.6**	
	comp=Z,17nm,1.1s,mb5.3								
GTA	**Gaotai**	**88.75**	**313**	*eP*		**P**	**10 53 29.5**	**+0.3**	
GTA				AP		pP	10 53 33.0	-1.9	
GTA				XP		sP	10 53 36.3	-0.6	
GTA				S		S	11 04 15.0	-0.6	
GTA				XS		sS	11 04 23.8	-1.3	
GTA				AMB		AMB			
	comp=Z,7.0nm,1.1s,mb4.9								
GTA				AMB		AMB			
	comp=Z,86nm,4.2s								
GTA				LR		LR			
	comp=N,201nm,7.8s								
GTA				LR		LR			
	comp=E,249nm,9.6s								
GTA				LR		LR			
	comp=Z,904nm,9.3s								
ULN	**Ulaanbaatar**	**88.75**	**323**	⇑*iP*		**P**	**10 53 25.3**	**-3.7**	
ULN	**Ulaanbaatar**	**88.75**	**323**	*eP*		**P**	**10 53 29.6**	**+0.6**	
	comp=Z,29nm,1.7s,mb5.3								
LAVA	**Lava Cap Winer**	**88.79**	**47**	⇓P		**P**	**10 53 28.7**	**-0.7**	
	baz=89,SNR=7.9								
BFSC	**Mount Baldy St**	**88.86**	**52**	⇑P		**P**	**10 53 29.4**	**-0.5**	
	baz=89,SNR=7.8								
BAR	**Barrett**	**88.90**	**54**	*eP*		**P**	**10 53 30.0**	**-0.1**	
EDW2	**Edwards Air Fo**	**88.91**	**52**	⇑P		**P**	**10 53 29.2**	**-0.8**	
	baz=89,SNR=6.8								
MURC	**Murrieta**	**88.92**	**53**	⇓P		**P**	**10 53 29.6**	**-0.5**	
	baz=89								
ISA	**Isabella**	**88.92**	**51**	⇓P		**P**	**10 53 29.7**	**-0.4**	
	baz=89,SNR=18								
ISA	**Isabella**	**88.92**	**51**	*eP*		**P**	**10 53 29.9**	**-0.2**	
YBH	**Yreka Blue Hor**	**88.95**	**44**	P		**P**	**10 53 30.1**	**0.0**	
	comp=Z,6.3nm,1.0s,mb4.9,baz=227,slow=0.8,SNR=12								
YBH	**Yreka Blue Hor**	**88.95**	**44**	*eP*		**P**	**10 53 30.2**	**+0.1**	
YBH					pmax	pmax			
	comp=Z,20nm,1.4s								
YBH	**Yreka Blue Hor**	**88.95**	**44**	⇑P		**P**	**10 53 29.6**	**-0.4**	
	baz=89,SNR=8.6								
YBH	**Yreka Blue Hor**	**88.95**	**44**	*eP*		**P**	**10 53 30.1**	**+0.1**	
	comp=Z,20nm,1.4s,mb5.2								
K02A	**Glendale**	**88.98**	**43**	⇓P		**P**	**10 53 30.2**	**0.0**	
	baz=89								
S06C	**San Francisco**	**88.98**	**48**	⇑P		**P**	**10 53 29.8**	**-0.6**	
	baz=89,SNR=14								
HELL	**Mitchell Peak**	**89.00**	**50**	⇓P		**P**	**10 53 30.1**	**-0.4**	
	baz=89,SNR=13								
KCC	**Kaiser Creek**	**89.09**	**49**	⇑P		**P**	**10 53 30.3**	**-0.6**	
	baz=89,SNR=8.0								
SONM	**Songino Array**	**89.09**	**323**	P		**P**	**10 53 30.2**	**-0.4**	
	comp=Z,4.0nm,1.1s,mb4.7,baz=139,slow=5.4,SNR=7.0								
M03C	**McCloud**	**89.10**	**45**	⇑P		**P**	**10 53 31.1**	**+0.3**	
	baz=89,SNR=10								
P05C	**Yuba Gap, Truc**	**89.14**	**47**	⇑P		**P**	**10 53 31.1**	**+0.1**	
	baz=89,SNR=7.3								
R05C	**Kirkwood Meado**	**89.22**	**48**	⇓P		**P**	**10 53 31.6**	**+0.2**	
	baz=89,SNR=11								
HUMO	**Hull Mountain**	**89.23**	**43**	⇓P		**P**	**10 53 31.6**	**+0.2**	
	baz=89								
HUMO	**Hull Mountain**	**89.23**	**43**	*eP*		**P**	**10 53 31.8**	**+0.4**	
	comp=Z,16nm,1.3s,mb5.2								
O05C	**Quincy**	**89.25**	**46**	⇑P		**P**	**10 53 31.5**	**0.0**	
	baz=89,SNR=6.6								
O04C	**Chester**	**89.31**	**46**	⇓P		**P**	**10 53 31.7**	**-0.1**	
	baz=89,SNR=11								
BILL	**Bilibino**	**89.37**	**359**	⇑*eP*		**P**	**10 53 29.9**	**-1.6**	
BILL				*e*			10 53 37.9		
BILL					pmax	pmax			
	comp=Z,33nm,1.2s,mb5.5								
BBRC	**Big Bear Sol-O**	**89.42**	**53**	⇓P		**P**	**10 53 32.1**	**-0.4**	
	baz=90								
PFO	**Pinyon Flat Ob**	**89.48**	**53**	*eP*		**P**	**10 53 32.9**	**+0.1**	
PFO					pmax	pmax			
	comp=Z,13nm,1.2s,mb5.1								
PFO	**Pinyon Flat Ob**	**89.48**	**53**	⇑P		**P**	**10 53 32.7**	**0.0**	
	baz=90,SNR=6.2								
PFO	**Pinyon Flat Ob**	**89.48**	**53**	*eP*		**P**	**10 53 32.9**	**+0.1**	
	comp=Z,13nm,1.2s,mb5.1								
M04C	**Macdoel**	**89.54**	**44**	⇓P		**P**	**10 53 32.8**	**-0.1**	
	baz=90								
R06C	**Coleville**	**89.56**	**48**	⇓P		**P**	**10 53 33.0**	**-0.1**	
	baz=90,SNR=15								
WAKR	**Walker**	**89.56**	**48**	*eP*		**P**	**10 53 33.3**	**+0.2**	
SWSC	**Sam W. Stewart**	**89.68**	**54**	⇓P		**P**	**10 53 33.4**	**-0.3**	
	baz=90,SNR=8.3								
ELFS	**Eagle Lake Fie**	**89.70**	**46**	⇑P		**P**	**10 53 34.0**	**+0.4**	
	baz=90								
L04A	**Klamath Falls**	**89.70**	**44**	⇓P		**P**	**10 53 33.6**	**+0.1**	
	baz=90								
WCN	**Washoe City**	**89.72**	**47**	⇑P		**P**	**10 53 33.8**	**+0.1**	
	baz=90,SNR=5.8								
M05C	**Lookout**	**89.78**	**45**	⇑P		**P**	**10 53 34.0**	**0.0**	
	baz=90,SNR=13								
P06A	**Stead Airport,**	**89.80**	**47**	⇑P		**P**	**10 53 34.0**	**-0.2**	
	baz=90								
MPMC	**Manual Prospec**	**89.81**	**51**	⇑P		**P**	**10 53 34.2**	**-0.1**	
	baz=90,SNR=22								
GSC	**Goldstone**	**89.97**	**52**	⇑P		**P**	**10 53 34.8**	**-0.2**	
	baz=90,SNR=6.6								
GSC	**Goldstone**	**89.97**	**52**	*eP*		**P**	**10 53 35.2**	**+0.1**	
S08C	**White Mtn Res**	**89.98**	**49**	⇓P		**P**	**10 53 35.2**	**+0.1**	
	baz=90,SNR=28								
BELC	**Belle Mtn.**	**89.99**	**53**	⇓P		**P**	**10 53 34.9**	**-0.3**	
	baz=90,SNR=23								
H03A	**Soap Creek Ran**	**90.08**	**41**	⇓P		**P**	**10 53 35.2**	**-0.1**	
	baz=90								
O06A	**Flanigan**	**90.08**	**46**	⇑P		**P**	**10 53 35.0**	**-0.4**	
	baz=90,SNR=12								
J04A	**Umpqua Nationa**	**90.09**	**43**	⇓P		**P**	**10 53 35.2**	**-0.2**	
	baz=90								
HEC	**Hector,Ludlow**	**90.11**	**52**	⇑P		**P**	**10 53 35.4**	**-0.3**	
	baz=90,SNR=5.7								
M06C	**Likely Place G**	**90.15**	**45**	⇑P		**P**	**10 53 35.7**	**0.0**	
	baz=90,SNR=14								
PAHR	**Pah Rah Range**	**90.17**	**47**	*eP*		**P**	**10 53 36.0**	**+0.2**	
	comp=Z,22nm,1.1s,mb5.4								
BC3	**Big Chuckw Mtn**	**90.25**	**54**	⇓P		**P**	**10 53 36.1**	**-0.3**	
	baz=90,SNR=11								
NVAR	**Mina Array Bea**	**90.32**	**48**	P		**P**	**10 53 36.0**	**-0.6**	
	comp=Z,9.8nm,1.0s,mb5.1,baz=227,slow=7.9,SNR=47								
L05A	**Lakeview**	**90.32**	**44**	⇑P		**P**	**10 53 36.4**	**-0.1**	
	baz=90								
GRAC	**Grapevine Rang**	**90.32**	**50**	⇓P		**P**	**10 53 36.4**	**-0.3**	
	baz=90,SNR=18								
N06A	**Buffalo Meadow**	**90.36**	**46**	⇓P		**P**	**10 53 36.7**	**0.0**	
	baz=90,SNR=18								
R08A	**Mina**	**90.42**	**49**	⇓P		**P**	**10 53 36.9**	**-0.1**	
	baz=90,SNR=18								
FURC	**Furnace Creek,**	**90.45**	**51**	⇑P		**P**	**10 53 37.0**	**-0.2**	
	baz=91,SNR=19								
GLA	**Glamis**	**90.46**	**55**	⇑P		**P**	**10 53 37.3**	**-0.1**	
	baz=91,SNR=15								
GLA	**Glamis**	**90.46**	**55**	*eP*		**P**	**10 53 37.7**	**+0.3**	
F03A	**Seaside**	**90.56**	**40**	⇓P		**P**	**10 53 37.9**	**+0.4**	
	baz=91								
GMRC	**Granite Mounta**	**90.58**	**53**	⇑P		**P**	**10 53 37.5**	**-0.4**	
	baz=91,SNR=13								
MOD	**Modoc**	**90.60**	**45**	⇓P		**P**	**10 53 37.7**	**-0.1**	
	baz=91,SNR=11								
MOD	**Modoc**	**90.60**	**45**	*eP*		**P**	**10 53 37.5**	**-0.3**	
K05A	**Summer Lake**	**90.61**	**44**	⇑P		**P**	**10 53 37.8**	**-0.1**	
	baz=91,SNR=7.4								
SHOC	**Shoshone**	**90.62**	**51**	⇑P		**P**	**10 53 37.7**	**-0.3**	
	baz=91,SNR=13								
J05A	**Fort Rock**	**90.67**	**43**	⇓P		**P**	**10 53 38.1**	**+0.1**	
	baz=91,SNR=13								
TUQ	**Turquoise Moun**	**90.67**	**52**	⇑P		**P**	**10 53 37.8**	**-0.5**	
	baz=91,SNR=12								
IRM	**Iron Mountain**	**90.69**	**53**	⇓P		**P**	**10 53 38.0**	**-0.4**	
	baz=91,SNR=21								
O07A	**Toulon**	**90.72**	**47**	⇓P		**P**	**10 53 38.4**	**-0.1**	
	baz=91,SNR=12								
S09A	**Goldfield**	**90.75**	**49**	⇓P		**P**	**10 53 38.9**	**+0.2**	
	baz=91,SNR=12								
H04A	**Detroit Lake**	**90.76**	**42**	⇑P		**P**	**10 53 38.2**	**-0.3**	
	baz=91								
Q08A	**Gabbs**	**90.77**	**48**	⇑P		**P**	**10 53 38.2**	**-0.5**	
	baz=91,SNR=20								
U10A	**Ash Meadows, A**	**90.81**	**51**	⇑P		**P**	**10 53 39.0**	**0.0**	
	baz=91,SNR=17								
G04A	**Mulino**	**90.84**	**41**	⇓P		**P**	**10 53 39.2**	**+0.4**	
	baz=91								
E03A	**Lebam**	**90.87**	**40**	⇓P		**P**	**10 53 39.5**	**+0.6**	
	baz=91								
TPH	**Tonopah**	**90.91**	**49**	*eP*		**P**	**10 53 40.0**	**+0.6**	
TPH					pmax	pmax			
	comp=Z,20nm,1.1s,mb5.4								
TPH	**Tonopah**	**90.91**	**49**	*eP*		**P**	**10 53 40.0**	**+0.7**	
	comp=Z,20nm,1.1s,mb5.4								
N07B	**Gerlach**	**90.95**	**46**	⇓P		**P**	**10 53 39.4**	**0.0**	
	baz=91								
Y12C	**Blythe**	**90.99**	**54**	⇑P		**P**	**10 53 39.8**	**-0.1**	
	baz=91,SNR=9.4								
D03A	**Wishkah Elem.**	**91.04**	**39**	⇑P		**P**	**10 53 40.2**	**+0.4**	
	baz=91								
P08A	**Dixie Valley**	**91.05**	**47**	⇑P		**P**	**10 53 39.9**	**-0.1**	
	baz=91								
K06A	**Valley Falls**	**91.06**	**44**	⇑P		**P**	**10 53 39.8**	**-0.1**	
	baz=91,SNR=13								
I05A	**Bend**	**91.08**	**42**	⇓P		**P**	**10 53 40.0**	**+0.1**	
	baz=91								
R09A	**Tonopah**	**91.09**	**49**	⇑P		**P**	**10 53 40.1**	**-0.1**	
	baz=91,SNR=11								
M07A	**Soldier Meadow**	**91.10**	**46**	⇓P		**P**	**10 53 39.6**	**-0.5**	
	baz=91,SNR=11								
TPNV	**Topopah Spring**	**91.10**	**51**	⇑P		**P**	**10 53 39.8**	**-0.4**	
	baz=91								
TPNV	**Topopah Spring**	**91.10**	**51**	*eP*		**P**	**10 53 40.2**	**-0.1**	
LDFC	**Landfair**	**91.12**	**53**	*eP*		**P**	**10 53 40.3**	**-0.1**	
113A	**Mohawk Valley,**	**91.15**	**55**	⇑P		**P**	**10 53 39.9**	**-0.7**	
	baz=91								
V11A	**Goodsprings**	**91.21**	**52**	⇑P		**P**	**10 53 40.6**	**-0.2**	
	baz=91,SNR=12								
F04A	**Amboy**	**91.24**	**40**	⇑P		**P**	**10 53 40.5**	**-0.2**	
	baz=91								
O08A	**Rochester Mine**	**91.27**	**47**	⇓P		**P**	**10 53 40.8**	**-0.2**	
	baz=91,SNR=15								
Q09A	**Carvers**	**91.28**	**49**	⇓P		**P**	**10 53 40.9**	**-0.1**	
	baz=91,SNR=5.1								
L07A	**Adell**	**91.28**	**45**	⇓P		**P**	**10 53 40.9**	**-0.1**	
	baz=91,SNR=18								
S10A	**Tonopah Range,**	**91.29**	**50**	⇓P		**P**	**10 53 41.2**	**+0.1**	
	baz=91,SNR=27								
H05A	**Madras**	**91.34**	**42**	⇓P		**P**	**10 53 41.3**	**+0.1**	
	baz=92								
U11A	**Corn Creek**	**91.50**	**51**	⇑P		**P**	**10 53 42.0**	**-0.1**	
	baz=92								
PDMCI	**Parker Dam,Lak**	**91.51**	**54**	⇓P		**P**	**10 53 42.0**	**-0.2**	
	baz=92,SNR=8.2								
N08A	**GE Springer Mi**	**91.51**	**46**	⇑P		**P**	**10 53 42.0**	**-0.1**	
	baz=92,SNR=13								
Y13A	**Salome**	**91.54**	**54**	⇑P		**P**	**10 53 42.4**	**0.0**	
	baz=92								
214A	**Organ Pipe Nat**	**91.54**	**56**	⇑P		**P**	**10 53 41.8**	**-0.6**	
	baz=92,SNR=6.5								
V12A	**Nelson**	**91.59**	**52**	⇓P		**P**	**10 53 42.6**	**0.0**	
	baz=92,SNR=12								
P09A	**Austin**	**91.63**	**48**	⇓P		**P**	**10 53 42.6**	**-0.1**	
	baz=92								
I06A	**Prineville**	**91.64**	**43**	⇑P		**P**	**10 53 42.4**	**-0.2**	
	baz=92,SNR=14								
R10A	**Warm Springs**	**91.66**	**49**	⇑P		**P**	**10 53 42.7**	**-0.2**	
	baz=92,SNR=15								
K07A	**Rock Creek Ran**	**91.66**	**44**	⇓P		**P**	**10 53 42.7**	**0.0**	
	baz=92,SNR=13								
SHPR	**Sheep Range**	**91.70**	**51**	*eP*		**P**	**10 53 43.6**	**+0.5**	
S11A	**Rachel**	**91.77**	**50**	⇓P		**P**	**10 53 43.8**	**+0.4**	
	baz=92,SNR=10								
GNW	**Green Mountain**	**91.82**	**39**	*eP*		**P**	**10 53 44.1**	**+0.8**	
Q10A	**Clear Creek Ra**	**91.83**	**49**	⇓P		**P**	**10 53 43.8**	**+0.2**	
	baz=92,SNR=6.9								
X13A	**Yucca**	**91.86**	**54**	⇑P		**P**	**10 53 43.3**	**-0.6**	
	baz=92,SNR=14								
O09A	**Fish Creek Ran**	**91.88**	**47**	⇑P		**P**	**10 53 43.6**	**-0.2**	
	baz=92,SNR=8.0								
H06A	**Lindquist Farm**	**91.94**	**42**	⇓P		**P**	**10 53 43.5**	**-0.4**	
	baz=92,SNR=18								
WVOR	**Wild Horse Val**	**91.94**	**45**	*eP*		**P**	**10 53 42.5**	**-1.5**	
WVOR					pmax	pmax			
	comp=Z,15nm,1.1s,mb5.2								
WVOR	**Wild Horse Val**	**91.94**	**45**	*eP*		**P**	**10 53 42.5**	**-1.5**	
	comp=Z,14nm,1.1s,mb5.2								
J07A	**Hines**	**91.94**	**44**	⇑P		**P**	**10 53 43.4**	**-0.6**	
	baz=92,SNR=6.7								
E05A	**Randle**	**91.95**	**40**	⇑P		**P**	**10 53 43.7**	**-0.2**	
	baz=92								
N09A	**Rock Creek Ran**	**91.96**	**47**	⇑P		**P**	**10 53 43.7**	**-0.4**	
	baz=92								
T11A	**Corn Creek, Al**	**91.97**	**51**	⇑P		**P**	**10 53 43.8**	**-0.5**	
	baz=92,SNR=25								
BMN	**Battle Mountai**	**91.97**	**47**	*eP*		**P**	**10 53 44.5**	**+0.3**	
BMN					pmax	pmax			
	comp=Z,10.0nm,1.0s,mb5.1								
BMN	**Battle Mountai**	**91.97**	**47**	*eP*		**P**	**10 53 44.5**	**+0.3**	
	comp=Z,9.7nm,1.0s,mb5.1								
G06A	**Carlson Farm,**	**91.99**	**42**	⇑P		**P**	**10 53 43.9**	**-0.3**	
	baz=92								
L08A	**Fields**	**92.02**	**45**	⇓P		**P**	**10 53 44.1**	**-0.3**	
	baz=92,SNR=15								
Z14A	**Wintersburg**	**92.02**	**55**	⇑P		**P**	**10 53 44.6**	**0.0**	
	baz=92								
W13A	**Hualapai Mount**	**92.03**	**53**	⇓P		**P**	**10 53 44.7**	**+0.1**	
	baz=92,SNR=10								
U12A	**Valley of Fire**	**92.12**	**52**	⇓P		**P**	**10 53 44.9**	**-0.1**	
	baz=92								
D05A	**Enumclaw**	**92.13**	**40**	⇓P		**P**	**10 53 45.2**	**+0.4**	
	baz=92								
P10A	**Eureka**	**92.13**	**48**	⇑P		**P**	**10 53 45.1**	**+0.1**	
	baz=92								
I07A	**Izee**	**92.15**	**43**	⇑P		**P**	**10 53 45.0**	**0.0**	
	baz=92,SNR=9.2								
F06A	**Goldendale**	**92.16**	**41**	⇓P		**P**	**10 53 45.0**	**+0.1**	
	baz=92								
K08A	**Mann Creek Ran**	**92.18**	**45**	⇑P		**P**	**10 53 44.8**	**-0.3**	
	baz=92,SNR=6.3								
R11A	**Troy Canyon, C**	**92.19**	**50**	⇑P		**P**	**10 53 45.0**	**-0.3**	
	baz=92,SNR=6.9								
ZAK	**Zakamensk**	**92.20**	**324**	*eP*		**P**	**10 53 44.0**	**-1.0**	
ZAK					pmax	pmax			
	comp=Z,9.0nm,1.4s,mb4.9								
Y14A	**Wickenburg**	**92.21**	**54**	⇓P		**P**	**10 53 45.2**	**-0.3**	
	baz=92,SNR=9.8								
COLA	**College**	**92.25**	**17**	⇑*iP*		**P**	**10 53 43.6**	**-1.3**	
M09A	**Marrel Ranch,**	**92.27**	**46**	⇑P		**P**	**10 53 45.7**	**+0.2**	
	baz=92,SNR=6.7								
V13A	**Grand Canyon W**	**92.28**	**52**	⇑P		**P**	**10 53 45.5**	**-0.3**	
	baz=92,SNR=14								
115A	**Sonoran Desert**	**92.30**	**56**	⇓P		**P**	**10 53 45.4**	**-0.5**	
	baz=92								
H07A	**Lands Inn, Kim**	**92.35**	**43**	⇑P		**P**	**10 53 45.6**	**-0.3**	
	baz=92,SNR=8.0								
Q11A	**Duckwater**	**92.36**	**49**	⇓P		**P**	**10 53 45.8**	**-0.3**	
	baz=92,SNR=14								
L09A	**Wilkinson Ranc**	**92.39**	**46**	⇓P		**P**	**10 53 46.1**	**0.0**	
	baz=92,SNR=6.8								
S12A	**Delamar Landin**	**92.40**	**50**	⇓P		**P**	**10 53 46.5**	**+0.3**	
	baz=92,SNR=35								
O10A	**Cortez Mining,**	**92.41**	**47**	⇑P		**P**	**10 53 46.2**	**0.0**	
	baz=92								
E06A	**Yakima**	**92.41**	**40**	⇑P		**P**	**10 53 46.4**	**+0.3**	
	baz=92								
J08A	**Circle Bar Ran**	**92.47**	**44**	⇓P		**P**	**10 53 46.0**	**-0.5**	
	baz=93								
X14A	**Yava**	**92.52**	**54**	⇓P		**P**	**10 53 46.3**	**-0.6**	
	baz=93,SNR=11								
U13A	**Pakoon Wash**	**92.53**	**52**	⇓P		**P**	**10 53 46.5**	**-0.4**	
	baz=83,SNR=7.1								
SKAG	**Skagway**	**92.54**	**25**	*eP*		**P**	**10 53 46.4**	**0.0**	
C05A	**Tolt Reservoir**	**92.56**	**39**	⇑P		**P**	**10 53 46.9**	**+0.2**	
	baz=93								
Z15A	**Gila River Ind**	**92.59**	**55**	⇑P		**P**	**10 53 46.9**	**-0.4**	
	baz=93								
B05A	**Bryant**	**92.60**	**39**	⇓P		**P**	**10 53 47.2**	**+0.3**	
	baz=93								
G07A	**Ruggs Ranch, H**	**92.61**	**42**	⇑P		**P**	**10 53 46.6**	**-0.4**	
	baz=93								
216A	**Three Points,**	**92.61**	**57**	⇑P		**P**	**10 53 47.2**	**-0.2**	
	baz=93								
HYT	**Haines Junctio**	**92.61**	**23**	*eP*		**P**	**10 53 45.2**	**-1.5**	
116A	**Eloy**	**92.64**	**56**	⇑P		**P**	**10 53 47.4**	**-0.2**	
	baz=93,SNR=5.7								
K09A	**Rome**	**92.66**	**45**	⇓P		**P**	**10 53 47.1**	**-0.3**	
	baz=93,SNR=12								
I08A	**Drewsey**	**92.67**	**44**	⇓P		**P**	**10 53 47.0**	**-0.4**	
	baz=93,SNR=6.4								
W14A	**Seligman**	**92.68**	**53**	⇓P		**P**	**10 53 47.6**	**-0.1**	
	baz=93,SNR=15								
Y15A	**Casa Rosa Ranc**	**92.73**	**55**	⇑P		**P**	**10 53 47.5**	**-0.4**	
	baz=93,SNR=13								
T13A	**Saint George**	**92.83**	**51**	⇑P		**P**	**10 53 48.1**	**-0.1**	
	baz=93,SNR=13								
V14A	**Boquillas Ranc**	**92.84**	**53**	⇑P		**P**	**10 53 48.2**	**-0.2**	
	baz=93,SNR=20								
R12A	**Pony Springs,**	**92.88**	**50**	⇓P		**P**	**10 53 48.8**	**+0.3**	
	baz=93,SNR=11								
O11A	**Cowboy Ranch,**	**92.91**	**48**	⇓P		**P**	**10 53 48.7**	**+0.1**	
	baz=93,SNR=6.2								
M10A	**I.L. Ranch, Tu**	**92.92**	**46**	⇓P		**P**	**10 53 48.9**	**+0.3**	
	baz=93,S

baz=94,SNR=5.9
I11A Placerville 94.36 44 ⇑P P 10 53 54.8 -0.3
baz=94
Y18A Canyon Day Jun 94.41 56 ⇓P P 10 53 55.5 -0.2
baz=94,SNR=13
F10A Beach Ranch, E 94.45 42 ⇓P P 10 53 55.3 -0.2
baz=95
R15A Junction 94.50 51 ⇑P P 10 53 57.5 +1.6
baz=95
U16A Tuba City 94.51 53 ⇓P P 10 53 56.1 0.0
baz=95,SNR=8.6
A08A Turner Farm, O 94.57 39 ⇓P P 10 53 56.5 +0.5
baz=95
J12A Stokes Ranch, 94.63 45 ⇑P P 10 53 56.2 -0.2
baz=95
H11A Donnelly 94.66 44 ⇓P P 10 53 56.7 +0.2
baz=95
MSU Marysvale 94.69 50 *e*P P 10 53 56.9 +0.1
X18A Snowflake 94.77 55 ⇑P P 10 53 56.8 -0.4
baz=95
G11A Walters Elk Ra 94.80 43 ⇓P P 10 53 56.7 -0.4
baz=95
DUG Dugway 94.92 49 ⇓P P 10 53 57.7 -0.1
baz=95
U17A Shonto 95.04 53 ⇑P P 10 53 59.3 +0.9
baz=95
Y19A Nutrioso 95.08 56 ⇑P P 10 53 59.1 +0.4
baz=95
M14A Sheep Mountain 95.08 47 ⇑P P 10 53 59.5 +0.9
baz=95
T17A Navajo Res., N 95.09 52 ⇑P P 10 53 59.3 +0.7
baz=95
R16A Teasdale 95.10 51 ⇓P P 10 54 00.1 +1.5
baz=95
HLID Hailey 95.22 45 ⇑P P 10 53 59.1 0.0
baz=95
HLID Hailey 95.22 45 *e*P P 10 53 59.8 +0.7
X19A St. Johns 95.23 55 ⇑P P 10 53 59.9 +0.6
baz=95
J13A Cove Ranch, Pi 95.31 45 ⇑P P 10 53 59.4 -0.1
baz=95
S17A Black Ridge (B 95.34 52 ⇑P P 10 53 59.0 -0.8
baz=95
H12A Diamond D Ranc 95.34 44 ⇑P P 10 53 58.9 -0.7
baz=96
U18A Rough Rock, Ch 95.56 53 ⇓P P 10 54 00.7 -0.1
baz=96
I13A Wildhorse Cree 95.56 45 ⇓P P 10 54 00.7 0.0
baz=96
Q16A Castle Valley 95.57 50 ⇑P P 10 54 01.0 +0.2
baz=96
TMUT Trail Mountain 95.69 50 *e*P P 10 54 01.7 +0.3
R17A Hanksville Air 95.71 51 ⇓P P 10 54 01.4 -0.1
baz=96
J14A Carey 95.71 46 ⇓P P 10 54 01.5 +0.1
baz=96
H13A Challis 95.74 44 ⇓P P 10 54 01.3 -0.1
baz=96
T18A Mexican Hat 95.83 52 ⇓P P 10 54 02.4 +0.4
baz=96
O16A Springville 95.84 49 ⇑P P 10 54 01.9 -0.1
baz=96
I14A Mackay 96.00 45 ⇑P P 10 54 02.5 -0.1
baz=96
JLU Jordanelle 96.03 49 *e*P P 10 54 04.4 +1.5
SRU San Rafael 96.11 50 ⇓P P 10 54 03.5 +0.2
baz=96
SRU San Rafael 96.11 50 *e*P P 10 54 04.0 +0.8
F13A Darby 96.20 43 ⇓P P 10 54 03.1 -0.4
baz=96
H14A Leadore 96.34 45 ⇑P P 10 54 03.5 -0.6
baz=96
O17A Robinson Place 96.38 49 ⇓P P 10 54 04.4 0.0
baz=96
K16A Soda Springs 96.81 47 ⇓P P 10 54 06.4 0.0
baz=97
J16A Bone 96.97 46 ⇑P P 10 54 07.1 0.0
baz=97
E14A Clinton 96.99 43 ⇓P P 10 54 07.1 0.0
baz=97
TIXI Tiksi 97.02 348 ⇑*i*P P 10 54 03.4 -3.2
TIXI pmax pmax
comp=Z,3.0nm,1.3s,mb4.6
RRI2 Red Ridge 97.19 46 *e*P P 10 54 08.5 +0.4
REDW Red Top Meadow 97.51 46 *e*P P 10 54 10.1 +0.6
comp=Z,16nm,1.7s,mb5.3
ANMO Albuquerque 97.59 56 ⇑*i*P P 10 54 10.1 0.0
TXAR Lajitas Array 97.85 62 P P 10 54 10.8 -0.6
comp=Z,1.1nm,1.0s,mb4.3,baz=231,slow=6.0,SNR=7.4
TXAR Lajitas Array 97.85 62 P P 10 54 10.8 -0.6
PDAR Pinedale Array 98.17 47 P P 10 54 12.7 +0.2
comp=Z,1.7nm,1.1s,mb4.5,baz=222,slow=2.0,SNR=5.1
WMQ Urumqi 98.83 314 *e*P P 10 54 17.5 +2.1
WMQ AMB AMB
WMQ AMB AMB
comp=Z,9.0nm,0.6s,mb5.5
comp=Z,168nm,4.8s
ARCES ARCESS Array B 127.32 345 PKP PKPdf 10 59 36.4 -3.0
comp=Z,8.3nm,1.0s,baz=48,slow=1.8,SNR=6.4
ARCES ARCESS Array B 127.32 345 PKP PKPdf 10 59 36.4 -3.0
OBN Obninsk 131.44 326 ⇑*i*PKIKP PKPdf 10 59 48.6 +1.0
OBN pmax pmax
comp=Z,5.0nm,0.9s
STHS Stebnicka Huta 142.42 325 *e*PKP PKPdf 11 00 07.4 -0.7
VYHS Vyhne 144.24 326 *e*PKP PKPdf 11 00 09.3 -2.0
DPC Dobruska-Polom 144.27 330 *e*PKP PKPdf 11 00 10.0 -1.3
DPC *ep*PKP pPKPdf 11 00 15.7 -1.5
UPC Upice 144.30 331 *e*PKP PKPdf 11 00 08.3 -3.1
PVCC Panska Ves 144.94 332 *e*PKP PKPdf 11 00 11.9 -0.6
BRG Berggiesshubel 144.96 333 *e*PKP PKPdf 11 00 10.8 -1.6
comp=Z,11nm,1.0s
BRG *e* 11 00 18.2
comp=Z,24nm,1.2s
BRG *e* 11 14 18.6
comp=Z,10.0nm,1.5s
CLL Collm 145.03 334 *e*PKPdf PKPdf 11 00 12.0 -0.6
CLL *e*PKiKP PKiKP 11 00 16.0 -0.4
CLL *ep*PKiKP 11 00 18.0
comp=Z,14nm,1.0s
CLL *ex* x 11 00 25.0
MODS Modra-Piesok 145.12 327 *e*PKP PKPdf 11 00 12.5 -0.4
MODS *e* 11 00 19.3
ZST Bratislava 145.33 327 *e*PKP PKPdf 11 00 13.4 +0.2
ZST *e* 11 00 20.4
PRU Pruhonice 145.34 331 *e*PKP PKPdf 11 00 11.5 -1.7
PRU *ep*PKP pPKPdf 11 00 17.6 -1.5
EKA Eskdalemuir Ar 145.81 352 PKPbc PKPbc 11 00 13.3 -1.0
comp=Z,3.5nm,0.6s,baz=353,slow=1.9,SNR=16
NKC Novy Kostel 146.07 333 *e*PKP PKPdf 11 00 15.3 +0.9
NKC *ep*PKP pPKPdf 11 00 21.7 +1.4
MOX Moxa 146.10 334 *e*(PKP) 11 00 17.4
CONA Conrad Observa 146.13 327 ⇑*i*P PKPdf 11 00 15.6 +1.0
comp=Z,25nm,1.3s
CSNA Conrad Observa 146.13 327 ⇓*i*P PKPdf 11 00 15.6 +0.9
comp=Z,24nm,1.3s
KHC Kasperske Hory 146.39 331 *e*PKP PKPdf 11 00 15.8 +0.8
KHC *ep*PKP pPKPdf 11 00 20.8 -0.1
KHC *ex* x 11 00 30.0
GERES GERESS Array B 146.54 330 PKPbc PKPbc 11 00 16.5 -0.2
comp=Z,2.7nm,0.6s,baz=8.1,slow=2.8,SNR=14
GRA1 Grafenberg Arr 147.00 334 *e*PKP PKPdf 11 00 16.6 +0.6
GRF Grafenberg Arr 147.00 334 *e*PKP PKPdf 11 00 16.6 +0.6
BAIF Baives 149.22 341 *e*PKP1 PKPbc 11 00 22.8 -1.1
comp=Z,72nm,1.4s
CDF Champ du Feu 149.59 336 *e*PKP1 PKPbc 11 00 23.5 -1.4
comp=Z,47nm,1.4s
DAVOX Davos/Dischmat 149.80 331 PKPbc PKPbc 11 00 25.6 +0.1
comp=Z,9.2nm,1.0s,baz=288,slow=8.5,SNR=5.2
HINF Hinteralfeld 150.24 336 *e*PKP1 PKPbc 11 00 24.9 -1.6
comp=Z,41nm,1.4s
HAU Haudompre 150.27 337 *e*PKP1 PKPbc 11 00 25.2 -1.3
MEZF Maizieres J'vi 150.31 339 *e*PKP1 PKPbc 11 00 25.8 -0.8
comp=Z,165nm,1.5s
CABF La Chapelle 151.53 335 *e*PKP1 PKPbc 11 00 27.2 -2.3
LOR Lormes 151.78 339 *e*PKP1 PKPbc 11 00 28.7 -1.4
comp=Z,63nm,1.6s
SSF Saint Saulge 152.08 339 *e*PKP1 PKPbc 11 00 29.4 -1.4
comp=Z,44nm,1.4s
GRR Gorron 152.10 346 *e*PKP1 PKPbc 11 00 30.1 -0.7
LPL La Plagne 152.16 333 *e*PKP1 PKPbc 11 00 30.2 -0.8
LPG La Plagne 152.16 333 *e*PKP1 PKPbc 11 00 30.3 -0.7
SMF Signal de Mont 152.33 338 *e*PKP1 PKPbc 11 00 29.7 -1.7
comp=Z,43nm,1.4s
AVF Avril sur Loir 152.37 339 *e*PKP1 PKPbc 11 00 29.5 -1.9
comp=Z,83nm,1.9s
BGF Bois d'Agland 152.74 339 *e*PKP1 PKPbc 11 00 30.8 -1.5

TCF Toulx Ste Croi 153.18 340 *e*PKP1 PKPbc 11 00 31.7 -1.6
comp=Z,16nm,1.1s
MFF Saint Martin d 153.59 343 *e*PKP1 PKPbc 11 00 32.7 -1.4
FRF La Foret Royal 153.74 331 *e*PKP1 PKPbc 11 00 33.7 -0.9
SMRF Simiane la Rot 153.88 333 *e*PKP1 PKPbc 11 00 33.9 -1.0
comp=Z,21nm,1.0s
TORD Torodi Ar. Bea 165.49 237 PKP PKPdf 11 00 40.5 -0.5
comp=Z,1.6nm,1.1s,baz=127,slow=0.8,SNR=4.2
TORD Torodi Ar. Bea 165.49 237 PKP PKPdf 11 00 40.5 -0.5

NEIC 28 10:42:24.7,3777S×17682E,h2km,ML3.7(WEL),**After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.24**	**208**	P	Pg	10 42 30.1	+0.7
MARZ				S	Sg	10 42 34.0	+1.4
EDRZ	**Edgecumbe**	**0.34**	**191**	P	Pg	10 42 31.9	+0.6
WIZ	**White Island**	**0.38**	**51**	P	Pg	10 42 32.7	+0.7
LIRZ	**Lichensteins R**	**0.42**	**236**	P	Pg	10 42 33.6	+0.9
TGRZ	**Tauranga**	**0.45**	**275**	P	Pg	10 42 34.0	+0.8
MKRZ	**Makatiti**	**0.46**	**217**	P	Pg	10 42 34.8	+1.2
KARZ	**Kaharoa**	**0.52**	**241**	P	Pg	10 42 35.4	+0.7
TAZ	**Tarawera**	**0.52**	**208**	P	Pg	10 42 35.9	+1.1
URZ	**Urewera**	**0.54**	**155**	P	Pg	10 42 35.3	+0.2
UTU	**Utuhina**	**0.64**	**230**	P	Pg	10 42 38.1	+1.1
MWZ	**Matawai**	**0.79**	**136**	P	Pg	10 42 40.1	+0.2
TOZ	**Tahuroa Road**	**1.05**	**272**	P	Pg	10 42 44.3	-0.4
PUZ	**Puketiti**	**1.18**	**105**	P	Pg	10 42 48.2	+1.0
MXZ	**Matakaoa Point**	**1.20**	**81**	P	Pg	10 42 46.5	-1.1
KUZ	**Kuaotunu**	**1.35**	**319**	P	Pn	10 42 48.8	-1.7
KNZ	**Kokohu**	**1.42**	**152**	P	Pn	10 42 53.0	+1.5
BKZ	**Black Stump Fm**	**1.42**	**190**	P	Pn	10 42 49.6	-1.9
MKAZ	**Moumakai**	**1.47**	**296**	P	Pn	10 42 51.6	-0.6
OTAZ	**Otara**	**1.72**	**298**	P	Pn	10 42 56.4	+0.8
HIZ	**Hauiti**	**1.72**	**244**	P	Pn	10 42 55.7	+0.1
FWVZ	**Far West T-bar**	**1.79**	**213**	P	Pn	10 42 58.3	+1.7
TSZ	**Takapari Road**	**2.38**	**196**	P	Pn	10 43 04.5	-0.3
WCZ	**Waipu Caves**	**2.70**	**312**	P	Pn	10 43 06.8	-2.3

*ISCJB **28** 10:42:50.9±0.9,83S±0.1×1240E±0.1,h188km±12km, mb4.1/7,Error ellipse: s-maj=27.2km s-min=8.1km az=140.3*
*NEIC **28** 10:42:51.0±0.9,824S×12387E,h170km±10km,mb4.7/2, Error ellipse: s-maj=19.6km s-min=7.3km az=52.0*
*IDC **28** 10:42:51.8±1.1,823S×12394E,h176km±13km,mb3.8/7, mb1 3.9/11,mb1mx3.8/17,mbtmp3.8/11,MS3.6/1, Ms1 3.6/1,ms1mx2.6/38,Error ellipse: s-maj=30.2km s-min=9.8km az=65.0*
ISC 28 10:42:51.5±0.8,818S±009×1240E±01,h170km±11km,n23, σ0°82/26,mb4.1/7,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.04**	**189**	P	**Pn**	**10 43 29.2**	**+0.8**
	466nm,0.3s,baz=359,slow=3.1,SNR=112						
BATI				S	**Sn**	**10 43 57.4**	**+0.5**
	219nm,0.3s,baz=39,slow=21,SNR=11						
KAPI	**Kappang**	**5.25**	**306**	P	**Pn**	**10 44 07.6**	**-1.0**
	0.8nm,0.3s,baz=256,slow=20,SNR=3.6						
KAKA	**Kakadu**	**9.46**	**119**	*e*Pn	**Pn**	**10 45 03.4**	**-0.6**
	80nm,0.6s						
FITZ	**Fitzroy Crossi**	**10.00**	**171**	*e*P	**Pn**	**10 45 08.9**	**-2.2**
	16nm,0.3s						
FITZ				*e*S	**Sn**	**10 46 54.5**	**-7.7**
FITZ	**Fitzroy Crossi**	**10.00**	**171**	P	**Pn**	**10 45 09.2**	**-2.0**
FITZ				S	**Sn**	**10 46 54.8**	**-7.4**
WRA	**Warramunga Arr**	**15.40**	**140**	P	**Pn**	**10 46 19.6**	**-0.5**
	1.6nm,0.3s,baz=313,slow=14,SNR=97						
WRA				S	**S**	**10 48 59.9**	**-12**
	2.2nm,0.3s,baz=317,slow=24,SNR=9.2						
WRAB	**Tennant Creek**	**15.40**	**140**	*e*Pn	**Pn**	**10 46 20.1**	**0.0**
	8.4nm,0.5s						
WRAB				*e*Sn	**Sn**	**10 49 03.1**	**-8.9**
WB2	**Warramunga Arr**	**15.41**	**140**	*e*P	**Pn**	**10 46 21.2**	**+1.0**
WB2				*e*S	**S**	**10 49 00.6**	**-11**
ASAR	**Alice Springs**	**18.10**	**149**	P	**P**	**10 46 51.5**	**+1.1**
	1.4nm,0.3s,baz=329,slow=12,SNR=127						
ASAR				S	**S**	**10 50 08.7**	**-0.4**
	0.8nm,0.3s,baz=322,slow=21,SNR=9.5						
GUMO	**Guam**	**29.96**	**44**	LR	LR	10 58 50.5	
	comp=Z,123nm,21.7s,baz=83,slow=32						
CMAR	**Chiang Mai Arr**	**36.21**	**317**	P	**P**	**10 49 38.4**	**+0.2**
	1.2nm,0.4s,mb3.9,baz=141,slow=7.2,SNR=6.0						
KSRS	**Korea Array**	**45.54**	**4**	P	**P**	**10 50 54.7**	**+0.5**
	0.6nm,0.3s,mb3.7,baz=182,slow=9.2,SNR=4.3						
MJAR	**Matsushiro Arr**	**46.44**	**16**	P	**P**	**10 51 00.7**	**-0.6**
	1.1nm,0.4s,mb3.8,baz=192,slow=8.4,SNR=6.3						
LZH	**Lanzhou**	**47.93**	**338**	*e*P	**P**	**10 51 14.2**	**+1.4**
LZH				pP	pP	10 51 28.5	-22
LZH				sP	sP	10 51 36.1	-34
SONM	**Songino Array**	**57.90**	**346**	P	**P**	**10 52 25.4**	**-0.1**
	2.2nm,0.7s,mb4.1,baz=164,slow=7.6,SNR=12						
MK31	**Makanchi Array**	**66.09**	**330**	*e*P	**P**	**10 53 20.2**	**-0.1**
MKAR	**Makanchi Array**	**66.09**	**330**	P	**P**	**10 53 20.5**	**+0.2**
	3.4nm,0.5s,mb4.5,baz=132,slow=7.4,SNR=29						
MKAR				PcP	PcP	10 53 49.5	+0.2
	0.9nm,0.5s,baz=132,slow=5.1,SNR=6.6						
MKAR	**Makanchi Array**	**66.09**	**330**	P	**P**	**10 53 20.5**	**+0.2**
MKAR				PcP	PcP	10 53 49.5	+0.2
PETK	**Petropavlovsk-**	**67.43**	**21**	P	**P**	**10 53 29.1**	**+0.5**
	9.0nm,1.0s,mb4.5,baz=188,slow=2.3,SNR=5.6						
ZALV	**Zalesovo Beam**	**70.14**	**337**	P	**P**	**10 53 44.1**	**-1.1**
	1.9nm,0.4s,mb4.2,baz=136,slow=5.6,SNR=8.9						
TORD	**Torodi Ar. Bea**	**123.17**	**280**	PKP	PKPdf	11 01 28.2	-0.8
	0.8nm,0.6s,baz=80,slow=1.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**123.17**	**280**	PKP	PKPdf	11 01 28.2	-0.8
CPUP	**Villa Florida**	**145.68**	**178**	PKPbc	PKPbc	11 02 09.5	-1.5
	0.7nm,0.4s,baz=75,slow=0.6,SNR=3.7						

*NEIC **28** 10:53:07.8±3.9,24.18S×17998E,h490km±44km,Error ellipse: s-maj=36.7km s-min=19.5km az=207.0*
*ISCJB **28** 10:53:08.6±5.9,242S±03×1799E±02,h511km±69km, mb3.6/6, Error ellipse: s-maj=52.7km s-min=25.5km az=28.2*
*IDC **28** 10:53:08.8±6.2,2415S×17997E,h504km±69km,mb3.2/7, mb1 3.4/8,mb1mx3.2/19,mbtmp3.2/8,Error ellipse: s-maj=41.0km s-min=20.2km az=35.0*
ISC 28 10:53:07.5±4.9,242S±03×1800E±02,h484km±55km,n9, σ0°82/8,mb3.6/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.27**	**189**	P	**P**	**10 56 09.5**	**-0.5**
	0.5nm,0.3s,baz=69,slow=10,SNR=3.9						
RPZ	**Rata Peaks**	**20.84**	**198**	P	**P**	**10 57 15.5**	**+1.2**
	4.0nm,0.5s,baz=2.3,slow=4.6,SNR=4.5						
CTA	**Charters Tower**	**31.45**	**271**	P	**P**	**10 58 49.1**	**+0.7**
	5.4nm,0.4s,mb4.3,baz=98,slow=11,SNR=17						
ASAR	**Alice Springs**	**41.97**	**261**	P	**P**	**11 00 15.2**	**-0.1**
	0.7nm,0.5s,mb3.3,baz=93,slow=6.8,SNR=21						
WRA	**Warramunga Arr**	**42.36**	**266**	P	**P**	**11 00 18.0**	**-0.5**
	2.1nm,0.5s,mb3.8,baz=98,slow=8.3,SNR=47						
FITZ	**Fitzroy Crossi**	**50.78**	**266**	P	**P**	**11 01 22.1**	**-0.3**
	1.4nm,0.7s,mb3.4						
QSPA	**South Pole Qui**	**65.93**	**180**	P	**P**	**11 03 03.6**	**-0.6**
	0.6nm,0.7s,mb3.3,baz=86,slow=3.7,SNR=5.5						
TXAR	**Lajitas Array**	**90.59**	**58**	P	**P**	**11 05 17.8**	**+0.2**
	0.4nm,0.7s,mb3.4,baz=207,slow=5.9,SNR=5.6						
HFS	**Hagfors**	**142.79**	**349**	PKhKP		11 11 40.2	
	1.9nm,0.7s,baz=35,slow=5.4,SNR=6.2						

*ISCJB **28** 10:55:35.8±1.5, 1865N±005×1457E±0.2,h102km±14km, mb4.1/15, Error ellipse: s-maj=27.3km s-min=7.2km az=175.2*
*IDC **28** 10:55:37.2±2.1, 1862N×14579E,h102km±20km,mb3.9/14, mb1 4.0/17,mb1mx3.9/26,mbtmp3.9/17,Error ellipse: s-maj=24.5km s-min=9.5km az=88.0*
*NEIC **28** 10:55:38.3±1.6, 1860N×14583E,h114km±15km,mb4.7/2, Error ellipse: s-maj=20.1km s-min=8.7km az=91.0*
ISC 28 10:55:37.0±1.3,1865N±004×1458E±02,h99km±11km,n21, σ0°88/23,mb4.1/15,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.11**	**190**	P	**Pn**	**10 56 52.3**	**+1.1**
	23nm,0.3s,baz=350,slow=3.8,SNR=15						
GUMO				S	**Sn**	**10 57 48.9**	**-0.1**

33nm,0.3s,baz=194,slow=22,SNR=6.5
CBIJ Chichi jima 9.03 339 P Pn 10 57 44.5 +0.1
2.3nm,0.3s,baz=259,slow=19,SNR=3.2
CBIJ S Sn 10 59 23.1 -1.1
8.0nm,0.3s,baz=287,slow=23,SNR=4.4
MJAR Matsushiro Arr 19.02 341 P Pn 10 59 51.8 -1.1
0.5nm,0.3s,baz=166,slow=10,SNR=4.5
KSRS Korea Array 24.39 324 P P 11 00 47.0 +1.0
1.6nm,0.6s,mb3.6,baz=148,slow=8.6,SNR=7.0
ASAJ Asahikawa 25.52 355 P P 11 00 57.5 +1.3
17nm,0.9s,mb4.5,baz=27,slow=24,SNR=4.4
CTA Charters Tower 38.50 179 P P 11 02 47.6 -2.1
1.7nm,0.5s,mb4.1,baz=345,slow=11,SNR=3.5
WRAB Tennant Creek 39.95 197 *e*P P 11 03 02.0 +0.3
13nm,0.9s,mb4.8
WB2 Warramunga Arr 39.96 197 *e*P P 11 03 01.8 0.0
WRA Warramunga Arr 39.96 197 P P 11 03 02.0 +0.2
3.7nm,0.4s,mb4.6,baz=16,slow=8.4,SNR=45
FITZ Fitzroy Crossi 41.53 210 *e*P P 11 03 15.8 +1.0
9.2nm,0.8s,mb4.6
FITZ Fitzroy Crossi 41.53 210 P P 11 03 15.4 +0.5
2.8nm,0.3s,mb4.4,baz=38,slow=11,SNR=35
SONM Songino Array 43.22 321 P P 11 03 29.2 +1.1
0.3nm,0.3s,mb3.5,baz=135,slow=6.5,SNR=3.9
ASAR Alice Springs 43.62 196 P P 11 03 31.1 -0.5
1.1nm,0.4s,mb3.9,baz=12,slow=6.3,SNR=24
STKA Stephens Creek 50.40 185 P P 11 04 22.6 -1.6
2.8nm,0.9s,mb4.2,baz=303,slow=19,SNR=5.9
KURK Kurchatov 61.34 318 P P 11 05 41.2 -1.0
0.9nm,0.4s,mb4.1,baz=96,slow=8.0,SNR=3.9
BVAR Borovoye Array 66.55 320 P P 11 06 16.9 +0.6
1.0nm,0.5s,mb3.9,baz=104,slow=6.1,SNR=4.2
DLBC Dease Lake 71.30 34 P P 11 06 46.2 +0.7
baz=207,slow=2.3
YKA Yellowknife Ar 78.00 28 P P 11 07 23.8 -0.4
2.8nm,0.6s,mb4.2,baz=285,slow=5.7,SNR=5.1
ARCES ARCESS Array B 82.55 342 P P 11 07 48.8 +0.2
4.3nm,0.8s,mb4.4,baz=61,slow=9.9,SNR=8.1
NVAR Mina Array Bea 83.12 52 P P 11 07 52.5 +0.4
0.9nm,0.6s,mb3.8,baz=268,slow=5.7,SNR=12
PDAR Pinedale Array 87.81 45 P P 11 08 15.0 -0.3
0.3nm,0.5s,mb3.6,baz=136,slow=1.5,SNR=4.2

*ISCJB **28** 11:06:43.1±0.7,2142S±006×672W±0.1,h199km±17km, Error ellipse: s-maj=22.9km s-min=9.4km az=7.9*
*IDC **28** 11:06:43.3±0.8,2138S×6708W,h174km±16km,mb3.6/1, mb1 3.3/6,mb1mx3.2/20,mbtmp3.2/6,Error ellipse: s-maj=22.6km s-min=11.1km az=111.0*
*NEIC **28** 11:06:44.1±1.1,2143S×6750W,h226km±30km,mb4.5/2, Error ellipse: s-maj=27.8km s-min=14.1km az=101.0*
ISC 28 11:06:43.9±0.7,2142S±006×672W±02,h189km±17km,n11, σ1°11/16,1C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.01**	**233**	P	**Pn**	**11 07 22.9**	**+1.2**
	23nm,0.3s,baz=42,slow=7.2,SNR=358						
LVC				S	**Sn**	**11 07 50.7**	**-0.3**
	15nm,0.3s,baz=272,slow=22,SNR=29						
LVC	**Limon Verde**	**2.01**	**233**	*e*Pn	**Pn**	**11 07 22.7**	**+1.1**
LVC				*e*Sn	**Sn**	**11 07 50.9**	**-0.1**
LPAZ	**La Paz**	**5.18**	**350**	P	**Pn**	**11 08 01.8**	**+1.3**
	1.1nm,0.3s,baz=173,slow=9.1,SNR=22						
LPAZ				S	**Sn**	**11 08 60.0**	**-0.7**
	0.5nm,0.3s,baz=72,slow=24,SNR=6.5						
LPAZ	**La Paz**	**5.18**	**350**	P	**Pn**	**11 08 01.8**	**+1.3**
LPAZ				S	**Sn**	**11 08 60.0**	**-0.7**
SIV	**San Ignacio**	**7.91**	**48**	P	**Pn**	**11 08 34.9**	**-1.0**
	1.8nm,0.3s,baz=238,slow=12,SNR=27						
SIV				S	**Sn**	**11 09 59.0**	**-5.9**
	0.7nm,0.3s,baz=320,slow=23,SNR=10						
LCO	**Las Campanas**	**8.21**	**202**	*e*Pn	**Pn**	**11 08 37.8**	**-2.0**
	6.5nm,0.3s						
CFAA	**Coronel Fontan**	**10.19**	**185**	P	**Pn**	**11 09 05.7**	**0.0**
	0.1nm,0.3s,baz=5.6,slow=11,SNR=7.9						
CFAA	**Coronel Fontan**	**10.19**	**185**	P	**Pn**	**11 09 05.7**	**0.0**
CPUP	**Villa Florida**	**10.25**	**120**	P	**Pn**	**11 09 07.3**	**+0.8**
	1.7nm,0.3s,baz=277,slow=8.9,SNR=8.3						
CPUP	**Villa Florida**	**10.25**	**120**	*e*Pn	**Pn**	**11 09 09.2**	**+2.7**
	13nm,0.3s						
TORD	**Torodi Ar. Bea**	**75.81**	**70**	P	**P**	**11 18 09.9**	**+0.4**
	0.8nm,0.5s,baz=261,slow=5.4,SNR=10.0						

*ISCJB **28** 11:10:01.1±0.4,2141S±008×169.17E±007,h10km, mb4.5/24,Error ellipse: s-maj=12.6km s-min=8.5km az=159.9*
*IDC **28** 11:10:01.3±1.1,2152S×16923E,h0km,mb4.2/11, mb1 4.4/11,mb1mx4.2/17,mbtmp4.2/11,Error ellipse: s-maj=31.8km s-min=22.3km az=149.0*
*NEIC **28** 11:10:02.5±0.3,2148S×16923E,h10km,mb4.8/16,Error ellipse: s-maj=12.6km s-min=8.2km az=162.0*
*MOS **28** 11:10:04.7±1.7,2144S×169.15E,h33km,mb5.0/9,Error ellipse: s-maj=17.3km s-min=12.5km az=177.4*
ISC 28 11:10:02.6±0.4,2144S±008×16920E±007,h10km, (h9km±2.2km:pP-P),n64,σ1°00/48,mb4.5/24,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.64**	**256**	*e*P	**Pn**	**11 10 44.9**	**-0.4**
HNR	**Honiara**	**14.89**	**322**	P	**Pn**	**11 13 32.4**	**-1.0**
HNR				pmax	pmax		
	comp=Z,67nm,0.9s						
HNR	**Honiara**	**14.89**	**322**	Pn	**Pn**	**11 13 32.4**	**-1.0**
	comp=Z,67nm,0.9s						
AFI	**Afiamalu**	**19.60**	**71**	*e*P	**Pn**	**11 14 30.6**	**-1.9**
AFI				pmax	pmax		
	comp=Z,39nm,1.0s						
AFI	**Afiamalu**	**19.60**	**71**	*e*P	**Pn**	**11 14 30.6**	**-1.8**
	comp=Z,39nm,1.0s						
CTA	**Charters Tower**	**21.50**	**269**	*e*P	**P**	**11 14 53.6**	**+1.8**
	comp=Z,6.4nm,0.8s,mb4.0						
CTA	**Charters Tower**	**21.50**	**269**	P	**P**	**11 14 53.4**	**+1.6**
	comp=Z,3.4nm,0.5s,mb3.9,baz=101,slow=11,SNR=9.4						
CTA	**Charters Tower**	**21.50**	**269**	*e*P	**P**	**11 14 53.6**	**+1.8**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CTAO	**Charters Tower**	**21.50**	**269**	*e*P	**P**	**11 14 52.5**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
CTAO	**Charters Tower**	**21.50**	**269**	*e*P	**P**	**11 14 52.5**	**+0.8**
	comp=Z,8.3nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**26.70**	**241**	P	**P**	**11 15 42.8**	**+0.6**
	comp=Z,4.4nm,1.0s,mb3.9,baz=92,slow=17,SNR=3.1						
WRAB	**Tennant Creek**	**32.60**	**266**	*e*P	**P**	**11 16 33.3**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
WRAB	**Tennant Creek**	**32.60**	**266**	*e*P	**P**	**11 16 33.3**	**-1.3**
	comp=Z,6.2nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**32.61**	**266**	P	**P**	**11 16 33.9**	**-0.8**
	comp=Z,1.0nm,0.6s,mb3.9,baz=95,slow=8.5,SNR=23						
ASAR	**Alice Springs**	**32.63**	**259**	P	**P**	**11 16 34.7**	**-0.1**
	comp=Z,4.2nm,0.9s,mb4.4,baz=98,slow=10,SNR=24						
FITZ	**Fitzroy Crossi**	**41.04**	**267**	P	**P**	**11 17 46.6**	**+0.1**
	comp=Z,9.9nm,0.6s,mb4.1,baz=122,slow=10						
MBWA	**Marble Bar**	**45.94**	**261**	*e*P	**P**	**11 18 25.7**	**-0.2**
	comp=Z,9.6nm,0.9s,mb4.7						
NWAO	**Narrogin (SRO)**	**47.21**	**245**	*e*P	**P**	**11 18 34.3**	**-1.5**
NWAO

SNAA	**Sanae**	**86.98**	**183**	*e*P		**P**		**11 22 47.8**	**+0.2**	
SNAA					pmax	pmax				
	comp=Z,9.0nm,1.1s									
SNAA	**Sanae**	**86.98**	**183**	*e*P		**P**		**11 22 47.8**	**+0.2**	
	comp=Z,8.6nm,1.1s,mb4.9									
KCPM	**Cahto Peak**	**87.29**	**45**	*e*P		**P**		**11 22 49.9**	**+0.3**	
SAO	**San Andreas Ge**	**87.29**	**49**	*e*P		**P**		**11 22 51.3**	**+1.6**	
SAO					pmax	pmax				
	comp=Z,8.0nm,0.9s,mb5.0									
SAO	**San Andreas Ge**	**87.29**	**49**	*e*P		**P**		**11 22 51.3**	**+1.6**	
	comp=Z,7.8nm,0.9s,mb4.9									
VNA3	**Neumayer Olymp**	**87.57**	**180**	*e*		**P**		**11 22 50.8**	**+0.3**	
VNA3				*e*		pP		11 22 53.0	-0.9	
VNA3				*e*				11 22 59.5		
VNA2	**Neumayer--Watz**	**87.86**	**181**	*e*		**P**		**11 22 52.5**	**+0.6**	
VNA2				*e*		pP		11 22 54.7	-0.6	
VNA2				*e*				11 22 58.2		
VNA2				*e*				11 23 01.2		
VNA1	**Neumayer--Stat**	**88.15**	**181**	*e*		**P**		**11 22 54.1**	**+0.8**	
VNA1				*e*		pP		11 22 56.1	-0.5	
VNA1				*e*				11 23 00.2		
CMB	**Columbia Colle**	**88.64**	**48**	*e*P		**P**		**11 22 54.8**	**-1.3**	
CMB					pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.9									
CMB	**Columbia Colle**	**88.64**	**48**	*e*P		**P**		**11 22 54.8**	**-1.3**	
	comp=Z,5.5nm,0.9s,mb4.9									
ISA	**Isabella**	**88.89**	**51**	*e*P		**P**		**11 22 57.5**	**+0.2**	
ISA					pmax	pmax				
	comp=Z,9.0nm,1.1s,mb5.0									
ISA	**Isabella**	**88.89**	**51**	*e*P		**P**		**11 22 57.5**	**+0.2**	
	comp=Z,9.0nm,1.1s,mb5.0									
SONM	**Songino Array**	**88.95**	**323**	P		**P**		**11 22 56.7**	**-0.6**	
	comp=Z,0.2nm,0.3s,mb3.9,baz=142,slow=7.5,SNR=4.2									
NVAR	**Mina Array Bea**	**90.28**	**49**	P		**P**		**11 23 04.3**	**+0.6**	
	comp=Z,2.0nm,0.8s,mb4.5,baz=228,slow=7.9,SNR=16									
GLA	**Glamis**	**90.43**	**55**	*e*P		**P**		**11 23 05.1**	**+0.5**	
GLA					pmax	pmax				
	comp=Z,10.0nm,1.0s,mb5.1									
GLA	**Glamis**	**90.43**	**55**	*e*P		**P**		**11 23 05.1**	**+0.5**	
	comp=Z,9.8nm,1.0s,mb5.1									
MOD	**Modoc**	**90.55**	**45**	*e*P		**P**		**11 23 04.1**	**-0.8**	
	comp=Z,6.7nm,1.0s,mb4.9									
TPNV	**Topopah Spring**	**91.07**	**51**	*e*P		**P**		**11 23 07.1**	**-0.4**	
TPNV					pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.9									
TPNV	**Topopah Spring**	**91.07**	**51**	*e*P		**P**		**11 23 07.1**	**-0.4**	
	comp=Z,6.0nm,1.0s,mb4.9									
LDFC	**Landfair**	**91.09**	**53**	*e*P		**P**		**11 23 07.1**	**-0.5**	
	comp=Z,18nm,1.0s,mb5.4									
MTP	**Monte Pirata**	**128.58**	**84**	*e*PKPdf		PKPdf		11 29 10.4	-0.3	
KHC	**Kasperske Hory**	**146.24**	**331**	*e*PKP		PKPab		11 29 44.0	+0.1	
KHC				*ex*		x		11 29 54.5		
GERES	**GERESS Array B**	**146.39**	**330**	PKPbc		PKPbc		11 29 44.1	+0.4	
	comp=Z,17nm,0.8s,baz=16,slow=6.9,SNR=5.5									
GERES	**GERESS Array B**	**146.39**	**330**	PKPbc		PKPbc		11 29 44.1	+0.4	
BAIF	**Baives**	**149.07**	**341**	*e*PKP1		PKPab		11 29 59.5	+4.4	
CDF	**Champ du Feu**	**149.44**	**336**	*e*PKP1		PKPab		11 30 00.2	+3.6	
	comp=Z,8.5nm,0.8s									
HAU	**Haudompre**	**150.12**	**337**	*e*PKP1		PKPab		11 30 02.0	+2.6	
MEZF	**Maizieres J'vi**	**150.16**	**339**	*e*PKP1		PKPab		11 30 02.8	+3.2	
CABF	**La Chapelle**	**151.38**	**335**	*e*PKP1		PKPab		11 30 05.5	+0.8	
FLN	**La Foliniere**	**151.51**	**346**	*e*PKP1		PKPab		11 30 05.0	-0.2	
LDF	**La Druitiere**	**151.59**	**345**	*e*PKP1		PKPab		11 30 05.0	-0.5	
LOR	**Lormes**	**151.63**	**339**	*e*PKP1		PKPab		11 30 05.1	-0.6	
GRR	**Gorron**	**151.95**	**346**	*e*PKP1		PKPab		11 30 06.1	-0.9	
LPL	**La Plagne**	**152.01**	**333**	*e*PKP1		PKPab		11 30 07.0	-0.4	
	comp=Z,4.1nm,0.5s									
LPG	**La Plagne**	**152.01**	**333**	*e*PKP1		PKPab		11 30 07.2	-0.2	
	comp=Z,3.6nm,0.5s									
SMF	**Signal de Mont**	**152.18**	**338**	*e*PKP1		PKPab		11 30 06.8	-1.2	

ISCJB ***28*** *11:12:39.9±0.1, 21.39S×004×1692.2E±003, h13km, mb5.3/84, MS5.5/24, Error ellipse: s-maj=5.9km s-min=3.8km az=162.5*

IDC ***28*** *11:12:39.3±0.5, 21.34S×169.14E, h0km, mb5.0/23, mb1 5.0/26, mb1mx5.0/27, mbtmp5.0/26, ML4.4/2, Error ellipse: s-maj=14.7km s-min=13.4km az=123.0*

GCMT ***28*** *11:12:40.5±0.2, 21.49S×169.1E, h15km, MW5.7/109, Moment Tensor Solution. s95,c180; s109,c233; Duration: 1s8 Moment tensor: Scale 10^17 Nm; Mrr=4.14±.08; Mθθ=1.40±.07; Mϕϕ=2.73±.07; Mrθ=1.11±.14; Mθϕ=2.01±.06; Mϕr=2.17±.15; Best double couple: M0=4.82300×10^17 NP1:ϕs320.00000°, δ30.00000°, λ82.00000°. NP2:ϕs149.00000°, δ60.00000°, λ94.00000°. Principal axes: T 4.8140, Plg74.0000°, Azm70.0000°; N 0.0270, Plg4.0000°, Azm326.0000°; P -4.8310, Plg15.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

BJI ***28*** *11:12:40.1, 21.15S×169.31E, h7km, mB5.8, mb5.2, Ms5.8, Msz5.5*

NEIC ***28*** *11:12:40.5±0.2, 21.40S×169.19E, h10km, mb5.5/35, MS5.8/2, MW5.8, Error ellipse: s-maj=8.4km s-min=5.4km az=156.0, Moment Tensor Solution. s38 Moment tensor: Scale 10^17 Nm; Mrr=2.66; Mθθ=3.36; Mϕϕ=0.69; Mrθ=3.51; Mθϕ=0.31; Mϕr=-5.58; Best double couple: M0=7.30000×10^17 NP1:ϕs139.00000°, δ81.00000°, λ108.00000°. NP2: ϕs255.00000°, δ20.00000°, λ28.00000°. Principal axes: T 7.9200, Plg50.0000°, Azm69.0000°; N -1.5300, Plg17.0000°, Azm316.0000°; P -6.3900, Plg33.0000°, Azm214.0000°;*

LDG ***28*** *11:12:42.5±0.3, 2085S×169.18E, h10km, Mb5.7/4 Error ellipse: s-maj=32.0km s-min=17.6km az=17.0*

MOS ***28*** *11:12:43.1±1.4, 2143S×169.18E, h33km, mb5.7/26, MS5.7/12, Error ellipse: s-maj=8.6km s-min=8.3km az=150.5*

DJA ***28*** *11:12:44, 21.72S×169.08E, h10km, Mw5.8/14*

ISC 28 11:12:41.5±0.1, 2141S±0.004×16928E±0.003, h14km±1.9km:pP-P, n740, σ0.973/586, mb5.3/84, MS5.5/24, 218C-178D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.71**	**255**	*e*P		**Pn**	**11 13 21.7**	**-2.9**
HNR	**Honiara**	**14.91**	**322**	Pn		**Pn**	**11 16 10.3**	**-1.8**
	2.7nm,0.3s,baz=195,slow=10,SNR=2.2							
HNR	**Honiara**	**14.91**	**322**	*e*P		**Pn**	**11 16 13.3**	**+1.3**
HNR				*e*			11 19 05.2	
HNR					pmax	pmax		
	comp=Z,489nm,1.3s							
HNR	**Honiara**	**14.91**	**322**	*e*Pn		**Pn**	**11 16 13.3**	**+1.3**
	comp=Z,489nm,1.3s							
HNR				*e*Sn		**Sn**	**11 19 05.2**	**+8.0**
EIDS	**Eidsvold**	**17.16**	**253**	*e*P		**Pn**	**11 16 49.6**	**+8.7**
URZ	**Urewera**	**18.10**	**160**	P		**Pn**	**11 16 54.3**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=355,slow=7.3,SNR=10							
ARMA	**Armidale**	**18.22**	**237**	*e*P		**Pn**	**11 16 55.5**	**+1.5**
ARMA				*e*S		Sn	11 20 42.7	+26
ARMA	**Armidale**	**18.22**	**237**	*e*Pn		**Pn**	**11 16 51.6**	**-2.3**
AFI	**Afiamalu**	**19.52**	**71**	P		**Pn**	**11 17 10.0**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=305,slow=23,SNR=8.5							
AFI	**Afiamalu**	**19.52**	**71**	*e*P		**Pn**	**11 17 06.8**	**-3.1**
AFI					pmax	pmax		
	comp=Z,220nm,1.0s							
AFI	**Afiamalu**	**19.52**	**71**	*e*P		**Pn**	**11 17 06.8**	**-3.0**
	comp=Z,218nm,1.0s							
CTA	**Charters Tower**	**21.57**	**269**	*e*P		**P**	**11 17 30.2**	**-0.6**
	comp=Z,48nm,0.8s,mb5.0							
CTA	**Charters Tower**	**21.57**	**269**	P		**P**	**11 17 30.9**	**+0.1**
	comp=Z,31nm,0.7s,mb4.8,baz=92,slow=11,SNR=27							
CTA	**Charters Tower**	**21.57**	**269**	*e*P		**P**	**11 17 30.2**	**-0.6**
CTA					pmax	pmax		
	comp=Z,48nm,0.8s							
CTAO	**Charters Tower**	**21.57**	**269**	*e*P		**P**	**11 17 30.5**	**-0.3**
CTAO					pmax	pmax		
	comp=Z,320nm,1.5s,mb5.5							
CTAO	**Charters Tower**	**21.57**	**269**	*e*P		**P**	**11 17 30.5**	**-0.3**
	comp=Z,319nm,1.5s,mb5.5							
CNB	**Canberra Magne**	**22.28**	**227**	*e*P		**P**	**11 17 40.9**	**+2.6**
RPZ	**Rata Peaks**	**22.29**	**177**	P		**P**	**11 17 40.0**	**+1.8**
	comp=Z,14nm,0.6s,mb4.5,baz=80,slow=4.9,SNR=5.0							
CAN	**Canberra**	**22.53**	**228**	*e*P		**P**	**11 17 39.2**	**-1.8**
PMG	**Port Moresby**	**24.40**	**296**	*e*P		**P**	**11 17 58.1**	**-1.5**
COEN	**Coen**	**25.92**	**282**	*e*P		**P**	**11 18 11.8**	**-1.7**
	comp=Z,80nm,1.5s,mb5.0							
TOO	**Toolangi**	**26.12**	**227**	*e*P		**P**	**11 18 15.6**	**+0.6**
STKA	**Stephens Creek**	**26.78**	**241**	*e*P		**P**	**11 18 22.0**	**+0.9**
	comp=Z,17nm,0.8s,mb4.6							
STKA	**Stephens Creek**	**26.78**	**241**	P		**P**	**11 18 20.6**	**-0.4**
	comp=Z,13nm,0.7s,mb4.6,baz=94,slow=7.7,SNR=13							
STKA	**Stephens Creek**	**26.78**	**241**	*e*P		**P**	**11 18 18.9**	**-2.2**
WB2	**Warramunga Arr**	**32.67**	**266**	*e*P		**P**	**11 19 10.7**	**-2.7**
WB2				*e*S		**S**	**11 24 11.6**	**-18**
WRAB	**Tennant Creek**	**32.67**	**266**	*e*P		**P**	**11 19 11.6**	**-1.9**
WRA	**Warramunga Arr**	**32.68**	**266**	P		**P**	**11 19 10.8**	**-2.7**
	comp=Z,14nm,0.8s,mb4.9,baz=97,slow=8.6,SNR=33							
WRA				P3KPbc			11 50 45.8	
	comp=Z,0.3nm,0.7s,baz=292,slow=2.8,SNR=4.7							
WRA	**Warramunga Arr**	**32.68**	**266**	P		**P**	**11 19 10.8**	**-2.7**
WRA				*e*			11 50 45.8	
ASAR	**Alice Springs**	**32.70**	**259**	P		**P**	**11 19 11.0**	**-2.7**
	comp=Z,35nm,0.8s,mb5.3,baz=80,slow=8.7,SNR=45							
ASAR				P3KPbc			11 50 45.6	
	comp=Z,0.5nm,0.8s,baz=258,slow=4.2,SNR=5.0							
ASAR	**Alice Springs**	**32.70**	**259**	P		**P**	**11 19 11.0**	**-2.7**
ASAR				*e*			11 50 45.6	
KAKA	**Kakadu**	**36.19**	**278**	*e*P		**P**	**11 19 44.6**	**+0.6**
	comp=Z,21nm,0.8s,mb5.1							
FORT	**Forrest**	**38.00**	**247**	*e*P		**P**	**11 19 56.7**	**-2.5**
	comp=Z,82nm,0.7s,mb5.6							
TBI	**Tubuai**	**38.11**	**101**	*e*S		**S**	**11 25 49.9**	**-3.1**
	comp=Z,2μm,27.8s							
TBI				*e*LQ			11 28 43.8	
	comp=Z,13μm,28.0s							
TBI				*e*LR		LR	11 30 09.3	
	comp=Z,4μm,28.5s							
PAE	**Paea**	**38.88**	**92**	*e*P		**P**	**11 20 06.6**	**-0.1**
	comp=Z,331nm,1.5s,mb5.8							
PAE	**Paea**	**38.88**	**92**	*e*PcP		PcP	11 22 17.4	-0.3
	comp=Z,162nm,1.1s							
PAE	**Paea**	**38.88**	**92**	*e*P		**P**	**11 20 06.6**	**-0.1**
PAE				*e*PcP		PcP	11 22 17.4	-0.3
PPT	**Papeete**	**38.90**	**92**	*e*S		**S**	**11 26 01.9**	**-3.1**
	comp=Z,3μm,25.5s							
PPT				*e*LQ			11 29 02.9	
	comp=Z,15μm,28.0s							
PPT				*e*LR		LR	11 30 38.5	
	comp=Z,7μm,29.0s							
TIAR	**Tiarei**	**39.12**	**92**	*e*P		**P**	**11 20 09.0**	**+0.3**
	comp=Z,195nm,0.9s,mb5.8							
PMOR	**Pomariorio Ree**	**41.08**	**88**	*e*P		**P**	**11 20 25.4**	**+0.3**
	comp=Z,106nm,1.4s,mb5.3							
FITZ	**Fitzroy Crossi**	**41.11**	**267**	*e*P		**P**	**11 20 24.0**	**-1.3**
	comp=Z,57nm,0.9s,mb5.2							
FITZ	**Fitzroy Crossi**	**41.11**	**267**	P		**P**	**11 20 22.3**	**-2.9**
	comp=Z,29nm,0.8s,mb5.0,baz=173,slow=11							
VAH	**Vaihoa**	**41.27**	**89**	*e*P		**P**	**11 20 26.5**	**-0.1**
	comp=Z,77nm,1.4s,mb5.2							
MBWA	**Marble Bar**	**46.01**	**261**	*e*P		**P**	**11 21 04.5**	**-0.3**
KLBR	**Kellerberrin**	**46.85**	**246**	*e*P		**P**	**11 21 08.7**	**-2.5**
	comp=Z,113nm,0.9s,mb5.8							
NWAO	**Narrogin (SRO)**	**47.28**	**244**	P		**P**	**11 21 13.0**	**-1.6**
	comp=Z,45nm,0.8s,mb5.5,baz=91,slow=7.7,SNR=20							
NWAO	**Narrogin (SRO)**	**47.28**	**244**	*e*P		**P**	**11 21 11.9**	**-2.7**
MUN	**Mundaring**	**48.16**	**246**	*e*P		**P**	**11 21 21.1**	**-0.3**
DRV	**Dumont d'Urvil**	**48.95**	**195**	P		**P**	**11 21 30.0**	**+3.0**
DRV	**Dumont d'Urvil**	**48.95**	**195**	PP		PP	11 23 40.0	+20
DRV				S		S	**11 28 37.0**	**+6.7**
DRV				SS		SS	11 32 23.0	+22
KAPI	**Kappang**	**50.65**	**281**	P		**P**	**11 21 42.7**	**+2.0**
	comp=Z,428nm,1.5s,mb6.2,SNR=7.1							
KAPI	**Kappang**	**50.65**	**281**	P		**P**	**11 21 40.0**	**-0.6**
	comp=Z,24nm,0.9s,mb5.1,baz=169,slow=8.9,SNR=7.7							
KAPI	**Kappang**	**50.65**	**281**	*e*P		**P**	**11 21 40.7**	**0.0**
RKT	**Rikitea**	**51.35**	**103**	*e*S		**S**	**11 29 00.6**	**-4.5**
	comp=Z,2μm,27.0s							
RKT				*e*LR		LR	11 36 29.5	
	comp=Z,3μm,28.2s							
CBIJ	**Chichi jima**	**54.89**	**330**	P		**P**	**11 22 11.6**	**-0.1**
	comp=Z,88nm,0.9s,mb5.8,baz=152,slow=13,SNR=4.4							
SBA	**Scott Base**	**56.50**	**181**	*e*P		**P**	**11 22 23.0**	**+0.3**
SBA					pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6							
SBA	**Scott Base**	**56.50**	**181**	*e*P		**P**	**11 22 23.0**	**+0.3**
	comp=Z,60nm,1.0s,mb5.6							
CASY	**Casey**	**58.16**	**204**	*e*P		**P**	**11 22 33.4**	**-1.1**
CASY	**Casey**	**58.16**	**204**	*e*S		**S**	**11 30 35.8**	**+0.5**
KSM	**Kuching**	**61.91**	**284**	*e*P		**P**	**11 23 00.5**	**-0.6**
JOW	**Kunigami**	**62.26**	**319**	P		**P**	**11 23 02.0**	**-1.1**
	comp=Z,32nm,1.1s,mb5.3,baz=121,slow=18,SNR=3.6							
MJAR	**Matsushiro Arr**	**64.68**	**333**	P		**P**	**11 23 18.8**	**-0.2**
	comp=Z,11nm,1.1s,mb4.8,baz=165,slow=6.7,SNR=9.6							
MAJO	**Matsushiro**	**64.68**	**333**	*e*P		**P**	**11 23 17.6**	**-1.4**
MAT	**Matsushiro**	**64.68**	**333**	P		**P**	**11 23 17.8**	**-1.2**
MAT				S		**S**	**11 31 55.0**	**-3.8**
MIR	**Mirnyy**	**65.09**	**205**	*de*P		**P**	**11 23 20.0**	**-1.3**
MIR				*e*			11 23 50.0	
MIR				*i* S		S	11 32 03.0	-0.1
MIR				*e*			11 33 18.0	
MIR					pmax	pmax		
	comp=Z,100nm,1.8s,mb5.5							
MIR					MLR	MLR		
	comp=Z,8μm,19.0s,MS5.9							
YHNB	**Yeheng**	**65.31**	**312**	*e*P		**P**	**11 23 24.1**	**+0.8**
	comp=Z,147nm,1.5s,mb5.8							
TATO	**Taipei**	**65.43**	**312**	*e*P		**P**	**11 23 24.7**	**+0.7**
	comp=Z,15nm,0.4s,mb5.4							
QZH	**Quanzhou**	**67.43**	**310**	*e*P		**P**	**11 23 34.3**	**-2.6**
QZH					AMB	AMB		
	comp=Z,770nm,3.0s							
QZH					LR	LR		
	comp=Z,3μm,14.1s,MS5.6							
QSPA	**South Pole Qui**	**68.65**	**180**	P		**P**	**11 23 45.1**	**+1.4**
	comp=Z,11nm,0.9s,mb4.8,baz=351,slow=3.0,SNR=13							
QSPA	**South Pole Qui**	**68.65**	**180**	P		**P**	**11 23 45.1**	**+1.4**
ASAJ	**Asahikawa**	**69.64**	**340**	P		**P**	**11 23 50.8**	**+0.5**
	comp=Z,24nm,0.9s,mb5.1,baz=202,slow=16,SNR=6.8							
SSE	**Sheshan**	**69.67**	**317**	*e*P		**P**	**11 23 50.5**	**-0.3**
SSE				XP		sP	11 23 55.0	-2.0
SSE				PCP		PcP	11 24 13.3	-0.3
SSE				AMB		AMB		
	comp=Z,29nm,0.8s,mb5.3							
SSE				AMB		AMB		
	comp=Z,109nm,4.0s							
SSE					LR	LR		
	comp=N,400nm,23.8s,MS5.1							
SSE					LR	LR		
	comp=E,1μm,24.0s,MS5.1							
SSE					LR	LR		
	comp=Z,1μm,20.3s,MS5.1							
SSE	**Sheshan**	**69.67**	**317**	*e*P		**P**	**11 23 50.4**	**-0.4**
SSE				sP		sP	11 23 55.1	-1.9
SSE				PcP		PcP	11 24 13.2	-0.4
SSE				S		S	11 32 59.5	+0.4
SSE				sS		sS	11 33 04.4	-2.2
GZH	**Guangzhou**	**70.17**	**306**	P		**P**	**11 23 57.5**	**+3.5**
GZH					LR	LR		
	comp=N,1μm,15.7s,MS5.4							
GZH					LR	LR		
	comp=E,1μm,14.8s,MS5.4							
GZH					LR	LR		
	comp=Z,3μm,18.8s,MS5.5							
KSRS	**Korea Array**	**70.31**	**326**	P		**P**	**11 23 54.0**	**-0.6**
	comp=Z,6.9nm,1.0s,mb4.5,baz=145,slow=6.5,SNR=16							
QIZ	**Qiongzhong**	**70.69**	**300**	P		**P**	**11 23 57.8**	**+0.5**
QIZ					AMB	AMB		
	comp=Z,296nm,7.8s							
QIZ					LR	LR		
	comp=N,2μm,16.7s							
QIZ					LR	LR		
	comp=Z,2μm,18.2s,MS5.3							
NJ2	**Nanjing**	**71.79**	**316**	*e*P		**P**	**11 24 04.5**	**+0.8**
NJ2				AP		pP	11 24 10.8	+2.5
NJ2				XP		sP	11 24 11.8	+1.8
NJ2				AMB		AMB		
	comp=Z,20nm,1.1s,mb5.0							
NJ2				AMB		AMB		
	comp=Z,570nm,11.0s							
NJ2					LR	LR		
	comp=N,1μm,12.0s,MS5.7							
NJ2					LR	LR		
	comp=E,2μm,12.0s,MS5.7							
YSS	**Yuzh-Sakhalins**	**72.14**	**341**	*e*P		**P**	**11 24 05.4**	**0.0**
YSS				*e*			11 24 14.2	
YSS				*e**SP		sP	11 24 26.0	+14
YSS					pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3							
YSS					MLR	MLR		
	comp=N,4μm,19.0s,MS5.8							
YSS					MLR	MLR		
	comp=Z,5μm,19.0s,MS5.8							
YSS					MLR	MLR		
	comp=E,2μm,18.0s,MS5.8							
YSS	**Yuzh-Sakhalins**	**72.14**	**341**	*i*P		**P**	**11 24 06.6**	**+1.2**
WHN	**Wuhan**	**73.83**	**313**	P		**P**	**11 24 17.5**	**+1.7**
WHN				LR		LR		
	comp=N,4μm,15.5s,MS5.9							
WHN				LR		LR		
	comp=E,4μm,16.4s,MS5.9							
WHN				LR		LR		
	comp=Z,5μm,17.6s,MS5.8							
PET	**Petropavlovsk**	**74.69**	**353**	*e*P		**P**	**11 24 20.9**	**+0.6**
PET				*e*S		S	11 33 56.0	+0.2
PET				smax				
	comp=E,2μm,8.2s							
PET				smax				
	comp=E,2μm,11.1s							
DL2	**Dalian**	**74.77**	**323**	⇑P		**P**	**11 24 22.5**	**+1.4**
DL2					AMB	AMB		
	comp=Z,50nm,1.0s,mb5.4							
DL2					AMB	AMB		
	comp=Z,380nm,6.2s							
DL2					LR	LR		
	comp=N,1μm,16.7s,MS5.4							
DL2					LR	LR		
	comp=E,870nm,15.9s,MS5.4							
DL2					LR	LR		
	comp=Z,1μm,18.1s,MS5.2							
PETK	**Petropavlovsk-**	**74.88**	**353**	P		**P**	**11 24 20.9**	**-0.5**
	comp=Z,38nm,1.0s,mb5.3,baz=112,slow=5.0,SNR=14							
MDJ	**Mudanjiang**	**75.04**	**332**	P		**P**	**11 24 24.0**	**+1.5**
MDJ				AP		pP	11 24 27.3	+0.2
MDJ				PCP		PcP	11 24 37.3	+1.1
MDJ				PP		PP	11 27 09.8	-1.1
MDJ				AMB		AMB		
	comp=Z,15nm,1.6s,mb4.7							
MDJ				AMB		AMB		
	comp=Z,641nm,4.8s							
MDJ				LR		LR		
	comp=N,2μm,20.0s,MS5.5							
MDJ				LR		LR		
	comp=E,1μm,18.1s,MS5.5							
MDJ				LR		LR		
	comp=Z,3μm,19.4s,MS5.6							
MDJ	**Mudanjiang**	**75.04**	**332**	*e*P		**P**	**11 24 23.3**	**+0.7**
	comp=Z,68nm,1.5s,mb5.4							
TIA	**Tai'an**	**75.59**	**319**	⇑P		**P**	**11 24 27.0**	**+1.1**
SNY	**Shenyang**	**75.80**	**327**	⇑P		**P**	**11 24 27.5**	**+0.5**
SNY				AMB		AMB		
	comp=Z,356nm,1.2s,mb6.2							
SNY				AMB		AMB		
	comp=Z,790nm,12.0s							
SNY				LR		LR		
	comp=N,2μm,20.6s							
SNY				LR		LR		
	comp=Z,1μm,22.8s,MS5.2							
CN2	**Changchun**	**76.33**	**329**	*e*P		**P**	**11 24 31.3**	**+1.4**
CN2				XP		sP	11 24 38.5	+2.3
CN2				AMB		AMB		
	comp=Z,20nm,1.3s,mb4.9							
CN2				AMB		AMB		
	comp=Z,200nm,3.0s							
CN2				LR		LR		
	comp=N,2μm,18.0s,MS5.5							
CN2				LR		LR		
	comp=E,2μm,18.0s,MS5.5							
CN2				LR		LR		
	comp=Z,1μm,20.0s,MS5.3							
MAW	**Mawson**	**76.45**	**202**	*e*P		**P**	**11 24 32.4**	**+2.1**
	comp=Z,19nm,1.1s,mb4.9							
MAW	**Mawson**	**76.45**	**202**	P		**P**	**11 24 30.4**	**0.0**
	comp=Z,9.6nm,0.9s,mb4.7,baz=95,slow=13,SNR=18							
MAW	**Mawson**	**76.45**	**202**	*e*P		**P**	**11 24 32.4**	**+2.1**
MAW					pmax	pmax		
	comp=Z,19nm,1.1s							
MAW	**Mawson**	**76.45**	**202**	*e*S		S	11 34 15.9	+0.8
GYA	**Guiyang**	**77.09**	**305**	⇑*i*P		**P**	**11 24 37.3**	**+2.7**
GYA				PP		PP	11 27 32.8	+4.3
GYA				AMB		AMB		
	comp=Z,140nm,1.0s,mb5.8							
GYA				AMB		AMB		
	comp=Z,820nm,8.7s							
GYA				LR		LR		
	comp=N,1μm,17.9s,MS5.5							
GYA				LR		LR		
	comp=E,1μm,16.4s,MS5.5							
GYA				LR		LR		
	comp=Z,2μm,18.2s,MS5.4							
KLR	**Kul'dur**	**77.86**	**336**	*e*P		**P**	**11 24 36.0**	**-2.4**
BJT	**Baijiatuan**	**78.63**	**321**	*e*P		**P**	**11 24 43.9**	**+1.0**
BJT					pmax	pmax		
	comp=Z,31nm,0.9s							
BJT	**Baijiatuan**	**78.63**	**321**	*e*P		**P**	**11 24 43.9**	**+1.0**
	comp=Z,31nm,0.9s,mb5.2							
BJI	**Beijing**	**78.64**	**321**	P		**P**	**11 24 44.0**	**+1.0**
BJI				PP		PP	11 27 40.8	-0.5
BJI				AMB		AMB		
	comp=Z,17nm,1.3s,mb4.8							
BJI				AMB		AMB		
	comp=Z,574nm,4.7s							
BJI				LR		LR		
	comp=N,2μm,22.8s							
BJI				LR		LR		
	comp=E,1μm,16.3

CD2					PP	PP	11 28 09.0	+3.1			
CD2					AMB	AMB					
	comp=Z,30nm,1.6s,mb5.0										
CD2					AMB	AMB					
	comp=Z,1μm,7.2s										
CD2					LR	LR					
	comp=N,2μm,16.8s,MS5.7										
CD2					LR	LR					
	comp=E,2μm,15.6s,MS5.7										
CD2					LR	LR					
	comp=Z,2μm,13.2s,MS5.6										
HHC	**Hu-ho-hao-te**	**81.89**	**320**	*eP*	**P**	**11 25 00.8**	**+0.4**				
HHC				AP	pP	11 25 04.0	-1.1				
HHC				XP	sP	11 25 05.5	-1.3				
HHC				PP	PP	11 28 10.8	+2.6				
HHC				AMB	AMB						
	comp=Z,20nm,0.7s,mb5.2										
HHC				AMB	AMB						
	comp=Z,400nm,7.5s										
HHC				LR	LR						
	comp=N,2μm,16.0s,MS5.6										
HHC				LR	LR						
	comp=E,2μm,16.9s,MS5.6										
HHC				LR	LR						
	comp=Z,2μm,17.3s,MS5.6										
BTO	**Baotou**	**82.68**	**319**	*eP*	**P**	**11 25 05.8**	**+1.2**				
SYO	**Syowa Base**	**82.87**	**196**	*eP*	**P**	**11 25 06.0**	**+0.8**				
HIA	**Hailar**	**83.00**	**330**	*iP*	**P**	**11 25 06.8**	**+0.8**				
LZH	**Lanzhou**	**84.20**	**312**	⇑P	**P**	**11 25 15.5**	**+2.9**				
LZH				AP	pP	11 25 22.3	+5.1				
LZH				XP	sP	11 25 24.8	+5.9				
LZH				AMB	AMB						
	comp=Z,86nm,1.5s,mb5.7										
LZH				AMB	AMB						
	comp=Z,545nm,6.8s										
LZH				LR	LR						
	comp=N,1μm,16.5s										
LZH				LR	LR						
	comp=Z,2μm,18.8s,MS5.5										
LZH	**Lanzhou**	**84.20**	**312**	⇑P	**P**	**11 25 15.4**	**+2.8**				
LZH				*SP	sP	11 25 24.8	+5.9				
LZH						11 28 34.0					
LZH				S	S	11 35 42.0	+4.6				
LZH	**Lanzhou**	**84.20**	**312**	⇑P	**P**	**11 25 15.4**	**+2.8**				
LZH				pP	pP	11 25 22.2	+5.0				
LZH				sP	sP	11 25 24.8	+5.9				
LZH				PP	PP	11 28 34.0	+6.6				
LZH				SKS		11 35 38.0					
LZH				S	S	11 35 42.0	+4.6				
LZH				sS	sS	11 35 51.0	+5.8				
LZH				SS	SS	11 41 13.5	+6.1				
SEY	**Seymchan**	**85.11**	**352**	⇑*eP*	**P**	**11 25 14.9**	**-1.6**				
SEY	**Seymchan**	**85.11**	**352**	⇑*eP*	**P**	**11 25 14.0**	**-2.5**				
CLNS	**Chul'man**	**86.40**	**337**	*eP*	**P**	**11 25 24.6**	**+1.6**				
CLNS				*e*		11 28 45.4					
CLNS				*eS*	S	11 35 47.9	-10				
CLNS				*eSS*	SS	11 41 32.4	-6.4				
CLNS				pmax	pmax						
	comp=E,5.0nm,0.8s										
CLNS				pmax	pmax						
	comp=N,22nm,1.1s										
CLNS				pmax	pmax						
	comp=Z,36nm,1.1s,mb5.5										
CLNS				smax							
	comp=N,577μm,13.6s										
CLNS				smax							
	comp=E,1441μm,12.8s										
CLNS				MLR	MLR						
	comp=E,2μm,16.0s,MS5.7										
CLNS				MLR	MLR						
	comp=Z,2μm,16.0s,MS5.6										
CLNS				MLR	MLR						
	comp=N,1μm,15.0s,MS5.7										
FARB	**Farallon Islan**	**86.60**	**47**	⇓P	**P**	**11 25 24.7**	**+0.2**				
	baz=87										
NVL	**N'lazarevskaya**	**86.72**	**187**	*eP*	**P**	**11 25 25.2**	**+0.6**				
NVL				pmax	pmax						
	comp=Z,19nm,1.2s,mb5.2										
MCCM	**Marconi Confer**	**86.91**	**47**	⇑P	**P**	**11 25 26.3**	**+0.4**				
	baz=87										
SNCC	**San Nicolas Is**	**86.93**	**53**	⇑P	**P**	**11 25 27.0**	**+0.8**				
	baz=87										
JRSC	**Jasper Ridge**	**86.98**	**48**	⇑P	**P**	**11 25 26.6**	**+0.2**				
	baz=87										
SNAA	**Sanae**	**87.00**	**182**	*eP*	**P**	**11 25 25.4**	**-0.6**				
SNAA				*e*	pP	11 25 28.4	-2.3				
SNAA				*e*		11 25 36.5					
SNAA				*e*		11 25 40.6					
SNAA				*e*		11 25 44.2					
SNAA	**Sanae**	**87.00**	**182**	⇑*eP*	**P**	**11 25 25.3**	**-0.7**				
SNAA	**Sanae**	**87.00**	**182**	*eP*	**P**	**11 25 25.9**	**-0.1**				
V03C	**Hunter Liggett**	**87.01**	**49**	⇑P	**P**	**11 25 26.8**	**+0.3**				
	baz=87										
HOPS	**Hopland**	**87.21**	**46**	⇓P	**P**	**11 25 27.7**	**+0.3**				
	baz=88,SNR=10										
HOPS	**Hopland**	**87.21**	**46**	*eP*	**P**	**11 25 27.0**	**-0.4**				
	comp=Z,70nm,1.2s,mb5.8										
SAO	**San Andreas Ge**	**87.22**	**49**	*eP*	**P**	**11 25 28.3**	**+0.8**				
KCPM	**Cahto Peak**	**87.22**	**45**	*eP*	**P**	**11 25 26.6**	**-0.9**				
NSHM	**Saint Helena R**	**87.28**	**47**	*eP*	**P**	**11 25 27.1**	**-0.7**				
O01C	**Eel River Cons**	**87.30**	**45**	⇓P	**P**	**11 25 28.6**	**+0.8**				
	baz=88,SNR=9.4										
CVS	**Carmenet Viney**	**87.30**	**47**	⇑P	**P**	**11 25 28.0**	**+0.1**				
	baz=88,SNR=8.5										
SBC	**Santa Barbara**	**87.34**	**51**	⇑P	**P**	**11 25 28.6**	**+0.4**				
	baz=88										
KIPM	**Iron Peak**	**87.35**	**45**	*eP*	**P**	**11 25 27.2**	**-0.9**				
WENL	**Wente Vineyard**	**87.42**	**48**	⇑P	**P**	**11 25 28.9**	**+0.4**				
	baz=88										
PACP	**Pacheco Peak**	**87.45**	**49**	⇓P	**P**	**11 25 29.5**	**+0.9**				
	baz=88										
PKD	**Parkfield**	**87.46**	**50**	⇑P	**P**	**11 25 29.2**	**+0.5**				
	baz=88										
PKM	**Peak Mountain**	**87.48**	**51**	⇑P	**P**	**11 25 29.3**	**+0.4**				
	baz=88										
U04C	**Hernandez Rese**	**87.49**	**49**	⇑P	**P**	**11 25 29.7**	**+0.9**				
	baz=88										
JCC	**Jacoby Creek**	**87.51**	**44**	⇑P	**P**	**11 25 29.2**	**+0.4**				
	baz=88										
BDM	**Black Diamond**	**87.51**	**48**	⇑P	**P**	**11 25 29.5**	**+0.6**				
	baz=88										
SCI	**San Clemente I**	**87.53**	**53**	⇓P	**P**	**11 25 29.1**	**0.0**				
	baz=88										
SMMC	**Simmler**	**87.55**	**51**	⇓P	**P**	**11 25 29.6**	**+0.5**				
	baz=88										
PTRM	**Twissleman Ran**	**87.56**	**50**	*eP*	**P**	**11 25 29.9**	**+0.7**				
MNRC	**McLaughlin Nat**	**87.58**	**47**	⇓P	**P**	**11 25 29.4**	**+0.2**				
	baz=88,SNR=13										
VNA3	**Neumayer Olymp**	**87.59**	**180**	*eP*	**P**	**11 25 28.3**	**-0.5**				
VNA3				*e*	pP	11 25 31.2	-2.3				
VNA3				*e*		11 25 40.1					
VNA3				*e*		11 25 43.5					
BLG	**Laguna Peak**	**87.67**	**52**	⇓P	**P**	**11 25 29.5**	**-0.2**				
	baz=88										
Q03C	**Winters**	**87.74**	**47**	⇑P	**P**	**11 25 30.7**	**+0.7**				
	baz=88,SNR=5.9										
CIT	**Chita**	**87.77**	**329**	*eP*	**P**	**11 25 30.9**	**+1.1**				
GASB	**Alder Springs**	**87.78**	**46**	⇓P	**P**	**11 25 31.0**	**+0.9**				
	baz=88,SNR=26										
CIS	**Catalina Islan**	**87.83**	**53**	⇑P	**P**	**11 25 30.4**	**-0.2**				
	baz=88										
V05C	**Boulder Hill,**	**87.88**	**50**	⇑P	**P**	**11 25 31.2**	**+0.5**				
	baz=88										
VNA2	**Neumayer--Watz**	**87.89**	**181**	*eP*	**P**	**11 25 30.2**	**0.0**				
VNA2				*e*	pP	11 25 32.9	-2.0				
VNA2				*e*		11 25 41.4					
VNA2				*e*		11 25 45.2					
VNA2				*e*		11 25 48.8					
U05C	**Westside ANR,**	**87.95**	**50**	⇓P	**P**	**11 25 31.8**	**+0.7**				
	baz=88										
M01C	**Crescent City**	**87.98**	**43**	⇑P	**P**	**11 25 30.8**	**-0.2**				
	baz=88										
N02C	**Big Bar**	**87.98**	**45**	⇑P	**P**	**11 25 31.2**	**+0.2**				
	baz=88,SNR=14										
O02C	**Red Bluff**	**87.99**	**45**	⇑P	**P**	**11 25 31.3**	**+0.1**				
	baz=88,SNR=34										
FMP	**Fort Macarthur**	**88.05**	**53**	⇑P	**P**	**11 25 31.6**	**0.0**				
	baz=88										
OSI	**Osito Adit**	**88.15**	**52**	⇓P	**P**	**11 25 31.9**	**-0.1**				
	baz=88										
VNA1	**Neumayer--Stat**	**88.17**	**181**	*eP*	**P**	**11 25 31.2**	**-0.4**				
VNA1				*e*	pP	11 25 34.4	-1.9				
VNA1				*e*		11 25 42.7					
VNA1				*e*		11 25 46.5					
VNA1				*e*		11 25 50.4					
DECC	**Green Verdugo**	**88.27**	**52**	⇑P	**P**	**11 25 32.5**	**-0.1**				
	baz=89										
Q04C	**Lincoln**	**88.28**	**47**	⇑P	**P**	**11 25 32.5**	**-0.1**				
	baz=89,SNR=7.7										
S05C	**Merced**	**88.28**	**49**	⇓P	**P**	**11 25 32.7**	**+0.1**				
	baz=89,SNR=7.3										
R04C	**Big Horse Ranc**	**88.30**	**48**	⇓P	**P**	**11 25 32.4**	**-0.2**				
	baz=89										
ARVC	**Arvin**	**88.31**	**51**	⇓P	**P**	**11 25 32.8**	**0.0**				
	baz=89										
WDC	**Whiskeytown Da**	**88.36**	**45**	⇓P	**P**	**11 25 33.0**	**+0.1**				
	baz=89,SNR=30										
WDC	**Whiskeytown Da**	**88.36**	**45**	*eP*	**P**	**11 25 32.2**	**-0.7**				
OHCM	**Honcut**	**88.45**	**47**	*eP*	**P**	**11 25 33.0**	**-0.3**				
MWC	**Mount Wilson**	**88.46**	**52**	*eP*	**P**	**11 25 33.0**	**-0.5**				
VES	**Vestal, Richgr**	**88.46**	**50**	⇑P	**P**	**11 25 33.4**	**-0.1**				
	baz=89										
L02A	**Cave Junction**	**88.47**	**43**	⇑P	**P**	**11 25 33.8**	**+0.4**				
	baz=89										
ORV	**Oroville**	**88.55**	**46**	⇓P	**P**	**11 25 33.9**	**+0.1**				
	baz=89,SNR=40										
T06C	**Millerton Lake**	**88.56**	**49**	⇑P	**P**	**11 25 33.5**	**-0.4**				
	baz=89,SNR=36										
M02C	**Callahan**	**88.56**	**44**	⇑P	**P**	**11 25 34.6**	**+0.8**				
	baz=89,SNR=23										
RCTC	**Rector, Farmer**	**88.56**	**50**	⇑P	**P**	**11 25 33.0**	**-0.9**				
	baz=89										
109C	**Camp Elliot, M**	**88.57**	**54**	⇓P	**P**	**11 25 33.6**	**-0.4**				
	baz=89										
CMB	**Columbia Colle**	**88.57**	**48**	*eP*	**P**	**11 25 33.0**	**-0.9**				
CMB				pmax	pmax						
	comp=Z,44nm,1.1s,mb5.7										
CMB	**Columbia Colle**	**88.57**	**48**	⇑P	**P**	**11 25 33.7**	**-0.2**				
	baz=89,SNR=23										
CMB	**Columbia Colle**	**88.57**	**48**	*eP*	**P**	**11 25 33.0**	**-0.9**				
	comp=Z,44nm,1.1s,mb5.7										
ULN	**Ulaanbaatar**	**88.62**	**323**	⇑*eP*	**P**	**11 25 34.2**	**+0.3**				
GTA	**Gaotai**	**88.64**	**313**	⇑P	**P**	**11 25 35.8**	**+1.6**				
GTA				AP	pP	11 25 39.0	+0.1				
GTA				XP	sP	11 25 42.0	+1.4				
GTA				AMB	AMB						
	comp=Z,14nm,1.2s,mb5.2										
GTA				AMB	AMB						
	comp=Z,242nm,4.2s										
GTA				LR	LR						
	comp=N,925nm,17.1s,MS5.4										
GTA				LR	LR						
	comp=E,1μm,19.8s,MS5.4										
GTA				LR	LR						
	comp=Z,1μm,19.2s,MS5.3										
LAVA	**Lava Cap Winer**	**88.67**	**47**	⇑P	**P**	**11 25 34.2**	**-0.2**				
	baz=89,SNR=16										
BFSC	**Mount Baldy St**	**88.76**	**52**	⇑P	**P**	**11 25 34.9**	**0.0**				
	baz=89,SNR=17										
BAR	**Barrett**	**88.80**	**54**	*eP*	**P**	**11 25 34.3**	**-0.8**				
	comp=Z,37nm,1.4s,mb5.5										
EDW2	**Edwards Air Fo**	**88.81**	**52**	⇓P	**P**	**11 25 35.3**	**+0.1**				
	baz=89,SNR=18										
ISA	**Isabella**	**88.81**	**51**	*eP*	**P**	**11 25 34.4**	**-0.7**				
ISA				pmax	pmax						
	comp=Z,73nm,1.2s,mb5.9										
ISA	**Isabella**	**88.81**	**51**	⇑P	**P**	**11 25 35.3**	**+0.2**				
	baz=89,SNR=44										
ISA	**Isabella**	**88.81**	**51**	*eP*	**P**	**11 25 34.4**	**-0.7**				
	comp=Z,74nm,1.3s,mb5.8										
MURC	**Murrieta**	**88.81**	**53**	⇓P	**P**	**11 25 34.8**	**-0.4**				
	baz=89,SNR=6.4										
YBH	**Yreka Blue Hor**	**88.83**	**44**	P	**P**	**11 25 33.7**	**-1.3**				
	comp=Z,13nm,1.0s,mb5.2,baz=154,slow=4.1,SNR=21										
YBH	**Yreka Blue Hor**	**88.83**	**44**	*eP*	**P**	**11 25 34.7**	**-0.3**				
YBH	**Yreka Blue Hor**	**88.83**	**44**	⇑P	**P**	**11 25 35.5**	**+0.4**				
	baz=89,SNR=14										
K02A	**Glendale**	**88.85**	**43**	⇓P	**P**	**11 25 35.1**	**-0.1**				
	baz=89										
S06C	**San Francisco**	**88.87**	**48**	⇓P	**P**	**11 25 35.4**	**0.0**				
	baz=89,SNR=31										
HELL	**Mitchell Peak**	**88.89**	**50**	⇑P	**P**	**11 25 35.2**	**-0.3**				
	baz=89,SNR=28										
YAK	**Yakutsk**	**88.94**	**343**	*eP*	**P**	**11 25 34.9**	**-0.2**				
YAK				*e*		11 25 44.9					
YAK				*e*PP	pP	11 25 48.4	+8.6				
YAK				*eS*	S	11 36 04.0	-18				
YAK				*e*		11 36 27.2					
YAK				*eSS*	SS	11 42 14.8	-0.9				
YAK				pmax	pmax						
	comp=Z,13nm,0.9s,mb5.3										
YAK				pmax	pmax						
	comp=N,3.0nm,0.9s										
YAK				smax							
	comp=N,237μm,4.8s										
YAK				smax							
	comp=E,168μm,3.6s										
YAK				MLR	MLR						
	comp=Z,3μm,17.0s,MS5.7										
YAK				MLR	MLR						
	comp=N,2μm,16.0s,MS5.7										
YAK				MLR	MLR						
	comp=E,1μm,16.0s,MS5.7										
YAK	**Yakutsk**	**88.94**	**343**	⇑*eP*	**P**	**11 25 34.6**	**-0.5**				
SONM	**Songino Array**	**88.97**	**323**	P	**P**	**11 25 35.4**	**-0.1**				
	comp=E,6.0nm,1.0s,mb4.9,baz=138,slow=4.2,SNR=21										
KCC	**Kaiser Creek**	**88.98**	**49**	⇓P	**P**	**11 25 35.3**	**-0.6**				
	baz=89,SNR=17										
M03C	**McCloud**	**88.98**	**45**	⇓P	**P**	**11 25 35.9**	**+0.1**				
	baz=89										
P05C	**Yuba Gap, Truc**	**89.03**	**47**	⇓P	**P**	**11 25 35.9**	**-0.2**				
	baz=89,SNR=22										
MONP	**Monument Peak**	**89.08**	**54**	⇑P	**P**	**11 25 36.8**	**+0.3**				
	baz=89										
R05C	**Kirkwood Meado**	**89.11**	**48**	⇓P	**P**	**11 25 36.6**	**+0.2**				
	baz=89,SNR=24										
J02A	**Umpqua**	**89.11**	**42**	⇑P	**P**	**11 25 36.3**	**0.0**				
	baz=89										
HUMO	**Hull Mountain**	**89.11**	**43**	⇑P	**P**	**11 25 36.4**	**+0.1**				
	baz=89,SNR=17										
HUMO	**Hull Mountain**	**89.11**	**43**	*eP*	**P**	**11 25 37.4**	**+1.1**				
	comp=E,60nm,1.4s,mb5.7										
O05C	**Quincy**	**89.14**	**46**	⇓P	**P**	**11 25 35.5**	**-1.0**				
	baz=89,SNR=15										
PMR	**Palmer**	**89.17**	**19**	*eP*	**P**	**11 25 35.8**	**-0.3**				
O04C	**Chester**	**89.20**	**46**	⇓P	**P**	**11 25 36.5**	**-0.3**				
	baz=90,SNR=20										
BILL	**Bilibino**	**89.21**	**359**	*c iP*	**P**	**11 25 35.8**	**-0.4**				
BILL				*i*	pP	11 25 41.8	+0.9				
BILL				*i* S	S	11 36 26.8	+2.2				
BILL				pmax	pmax						
	comp=Z,50nm,1.2s,mb5.7										
BILL	**Bilibino**	**89.21**	**359**	⇑*iP*	**P**	**11 25 35.9**	**-0.3**				
I02A	**Mapleton**	**89.28**	**42**	⇓P	**P**	**11 25 37.7**	**+0.6**				
	baz=90										
LRMC	**Laurel Mountai**	**89.30**	**51**	⇓P	**P**	**11 25 37.9**	**+0.4**				
	baz=90										
BBRC	**Big Bear Sol-O**	**89.32**	**53**	⇑P	**P**	**11 25 37.5**	**0.0**				
	baz=90										
LTIM	**Timbered Crate**	**89.35**	**45**	P	**P**	**11 25 36.4**	**-1.1**				
PFO	**Pinyon Flat Ob**	**89.38**	**53**	*eP*	**P**	**11 25 37.2**	**-0.6**				
PFO				pmax	pmax						
	comp=Z,41nm,1.4s,mb5.6										
PFO	**Pinyon Flat Ob**	**89.38**	**53**	⇑P	**P**	**11 25 37.8**	**-0.1**				
	baz=90,SNR=13										
PFO	**Pinyon Flat Ob**	**89.38**	**53**	*eP*	**P**	**11 25 37.2**	**-0.6**				
	comp=Z,41nm,1.4s,mb5.6										
BUOR	**Burton Butte**	**89.40**	**44**	P	**P**	**11 25 38.5**	**+0.8**				
M04C	**Macdoel**	**89.42**	**44**	⇓P	**P**	**11 25 37.7**	**-0.1**				
	baz=90,SNR=14										
R06C	**Coleville**	**89.45**	**48**	⇓P	**P**	**11 25 38.1**	**0.0**				
	baz=90,SNR=29										
WAKR	**Walker**	**89.45**	**48**	*eP*	**P**	**11 25 37.9**	**-0.1**				
CWC	**Cottonwood Cre**	**89.45**	**50**	⇑P	**P**	**11 25 37.6**	**-0.6**				
	baz=90,SNR=9.3										
MLAC	**Mammoth Lakes**	**89.46**	**49**	⇑P	**P**	**11 25 38.6**	**+0.5**				
	baz=90										
R07C	**Lee Vining**	**89.53**	**49**	⇑P	**P**	**11 25 38.8**	**+0.4**				
	baz=90										
RRX	**Edison Barstow**	**89.53**	**52**	⇓P	**P**	**11 25 38.5**	**0.0**				
	baz=90										
L04A	**Klamath Falls**	**89.58**	**44**	⇑P	**P**	**11 25 38.2**	**-0.3**				
	baz=90										
SWSC	**Sam W. Stewart**	**89.58**	**54**	⇓P	**P**	**11 25 38.6**	**-0.2**				
	baz=90										
ELFS	**Eagle Lake Fie**	**89.58**	**46**	⇑P	**P**	**11 25 38.5**	**-0.2**				
	baz=90,SNR=8.4										
I03A	**Eugene**	**89.60**	**42**	⇓P	**P**	**11 25 39.0**	**+0.3**				
	baz=90										
WCN	**Washoe City**	**89.61**	**47**	⇑P	**P**	**11 25 39.3**	**+0.5**				
	baz=90,SNR=9.6										
TIN	**Tinemaha**	**89.63**	**50**	⇑P	**P**	**11 25 38.9**	**-0.1**				
	baz=90,SNR=5.8										
M05C	**Lookout**	**89.66**	**45**	⇑P	**P**	**11 25 39.3**	**+0.4**				
	baz=90,SNR=21										
P06A	**Stead Airport,**	**89.69**	**47**	⇑P	**P**	**11 25 39.3**	**+0.2**				
	baz=90,SNR=8.4										
MPMC	**Manual Prospec**	**89.71**	**51**	⇓P	**P**	**11 25 39.6**	**+0.3**				
	baz=90,SNR=61										
GSC	**Goldstone**	**89.86**	**52**	*eP*	**P**	**11 25 39.3**	**-0.8**				
GSC				pmax	pmax						
	comp=Z,35nm,1.2s,mb5.6										
GSC	**Goldstone**	**89.86**	**52**	⇓P	**P**	**11 25 40.2**	**+0.1**				
	baz=90,SNR=9.1										
GSC	**Goldstone**	**89.86**	**52**	*eP*	**P**	**11 25 39.2**	**-0.8**				
	comp=Z,36nm,1.2s,mb5.6										
S08C	**White Mtn Res**	**89.87**	**49**	⇓P	**P**	**11 25 39.8**	**-0.3**				
	baz=90,SNR=46										
BELC	**Belle Mtn.**	**89.89**	**53**	⇓P	**P**	**11 25 39.9**	**-0.3**				
	baz=90,SNR=43										
K04A	**Chilquin**	**89.90**	**44**	⇓P	**P**	**11 25 40.4**	**+0.4**				
	baz=90										
H03A	**Soap Creek Ran**	**89.95**	**41**	⇓P	**P**	**11 25 40.5**	**+0.2**				
	baz=90										
J04A	**Umpqua Nationa**	**89.97**	**43**	⇓P	**P**	**11 25 40.4**	**+0.1**				
	baz=90,SNR=6.7										
O06A	**Flanigan**	**89.97**	**46**	⇓P	**P**	**11 25 40.8**	**+0.3**				
	baz=90,SNR=12										
HEC	**Hector,Ludlow**	**90.00**	**52**	⇑P	**P**	**11 25 40.5**	**-0.3**				
	baz=90,SNR=10										
M06C	**Likely Place G**	**90.03**	**45**	⇓P	**P**	**11 25 40.6**	**-0.1**				
	baz=90,SNR=12										
I04A	**Tendick Farm,**	**90.05**	**42**	⇓P	**P**	**11 25 40.7**	**-0.1**				
	baz=90										
PAHR	**Pah Rah Range**	**90.05**	**47**	*eP*	**P**	**11 25 40.0**	**-0.8**				
	comp=Z,67nm,1.2s,mb5.8										
Q07A	**Schurz**	**90.09**	**48**	⇓P	**P**	**11 25 41.3**	**+0.3**				
	baz=90										
BC3	**Big Chuckw Mtn**	**90.15**	**54**	⇓P	**P**	**11 25 41.4**	**-0.1**				
	baz=90,SNR=25										
CAL	**Calcutta**	**90.16**	**294**	*eP*	pP	11 25 53.7	+7.2				
CAL				*ex*	x	11 36 43.8					
L05A	**Lakeview**	**90.20**	**44**	⇑P	**P**	**11 25 42.4**	**+0.9**				
	baz=90,SNR=11										
NVAR	**Mina Airpay Bea**	**90.20**	**48**	P	**P**	**11 25 40.3**	**-1.3**				
	comp=Z,18nm,1.0s,mb5.4,baz=229,slow=6.2,SNR=44										
GRAC	**Grapevine Rang**	**90.22**	**50**	⇑P	**P**	**11 25 41.5**	**-0.2**				
	baz=90,SNR=18										
N06A	**Buffalo Meadow**	**90.24**	**46**	⇑P	**P**	**11 25 42.3**	**+0.6**				
	baz=91,SNR=22										
IRO	**Indian Ridge**	**90.26**	**42**	P	**P**	**11 25 42.1**	**+0.4**				
G03A	**Yamhill**	**90.28**	**41**	⇓P	**P**	**11 25 41.8**	**0.0**				
	baz=91										
R08A	**Mina**	**90.31**	**49**	⇑P	**P**	**11 25 41.8**	**-0.3**				
	baz=91,SNR=16										
P07A	**Fallon**	**90.31**	**47**	⇑P	**P**	**11 25 42.0**	**-0.1**				
	baz=91										
112A	**Yuma**	**90.33**	**55**	⇓P	**P**	**11 25 42.0**	**-0.4**				
	baz=91										
FURC	**Furnace Creek,**	**90.34**	**51**	⇓P	**P**	**11 25 42.3**	**0.0**				
	baz=91,SNR=29										
GLA	**Glamis**	**90.36**	**55**	⇑P	**P**	**11 25 42.5**	**0.0**				
	baz=91,SNR=27										
GLA	**Glamis**	**90.36**	**55**	*eP*	**P**	**11 25 42.3**	**-0.2**				
F03A	**Seaside**	**90.43**	**40**	⇑P	**P**	**11 25 42.3**	**-0.1**				
	baz=91										
MOD	**Modoc**	**90.48**	**45**	⇑P	**P**	**11 25 43.0**	**+0.2**				
	baz=91,SNR=22										
MOD	**Modoc**	**90.48**	**45**	*eP*	**P**	**11 25 42.5**	**-0.2**				
GMRC	**Granite Mounta**	**90.48**	**53**	⇑P	**P**	**11 25 42.8**	**-0.1**				
	baz=91,SNR=17										
K05A	**Summer Lake**	**90.49**	**44**	⇑P	**P**	**11 25 43.2**

K07A **Rock Creek Ran** 91.54 44 ⇓P P 11 25 47.9 +0.2
baz=92,SNR=25
R10A **Warm Springs** 91.55 49 ⇑P P 11 25 48.3 +0.4
baz=92,SNR=37
SHPR **Sheep Range** 91.59 51 *e*P P 11 25 47.9 -0.2
S11A **Rachel** 91.66 50 ⇑P P 11 25 48.2 -0.2
baz=92,SNR=16
F05A **White Salmon** 91.67 41 ⇓P P 11 25 47.8 -0.4
baz=92
C04A **Brinnon** 91.69 39 ⇑P P 11 25 48.4 +0.1
baz=92
GNW **Green Mountain** 91.69 39 *e*P P 11 25 47.8 -0.4
comp=Z,24nm,1.1s,mb5.4
Q10A **Clear Creek Ra** 91.71 49 ⇑P P 11 25 48.4 -0.2
baz=92,SNR=15
WRAK **Wrangell Islan** 91.73 28 *e*P P 11 25 47.2 -1.0
comp=Z,34nm,1.0s,mb5.6
O09A **Fish Creek Ran** 91.76 47 ⇓P P 11 25 49.3 +0.5
baz=92,SNR=12
X13A **Yucca** 91.76 54 ⇓P P 11 25 48.9 -0.1
baz=92,SNR=24
H06A **Lindquist Farm** 91.81 42 ⇑P P 11 25 48.8 -0.1
baz=92,SNR=24
J07A **Hines** 91.82 44 ⇓P P 11 25 48.7 -0.3
baz=92,SNR=11
WVOR **Wild Horse Val** 91.82 45 *e*P P 11 25 48.0 -1.0
WVOR pmax pmax
comp=Z,34nm,1.3s,mb5.5
WVOR **Wild Horse Val** 91.82 45 *e*P P 11 25 48.0 -1.0
comp=Z,34nm,1.3s,mb5.5
E05A **Randle** 91.83 40 ⇑P P 11 25 48.8 -0.1
baz=92
N09A **Rock Creek Ran** 91.84 47 ⇓P P 11 25 49.4 +0.3
baz=92,SNR=7.0
BMN **Battle Mountai** 91.86 47 *e*P P 11 25 50.0 +0.8
BMN pmax pmax
comp=Z,40nm,1.2s,mb5.6
BMN **Battle Mountai** 91.86 47 *e*P P 11 25 50.0 +0.8
comp=Z,40nm,1.3s,mb5.6
T11A **Corn Creek, Al** 91.86 51 ⇑P P 11 25 48.6 -0.7
baz=92,SNR=43
G06A **Carlson Farm,** 91.87 42 ⇓P P 11 25 48.7 -0.4
baz=92
L08A **Fields** 91.90 45 ⇑P P 11 25 49.5 +0.1
baz=92,SNR=19
Z14A **Wintersburg** 91.92 55 ⇓P P 11 25 49.7 0.0
baz=92,SNR=9.1
W13A **Hualapai Mount** 91.93 53 ⇓P P 11 25 49.8 +0.1
baz=92,SNR=14
D05A **Enumclaw** 92.00 39 ⇓P P 11 25 50.1 +0.4
baz=92
T12A **Moapa** 92.01 51 ⇓P P 11 25 50.0 0.0
baz=92
U12A **Valley of Fire** 92.01 52 ⇑P P 11 25 50.2 +0.1
baz=92,SNR=11
P10A **Eureka** 92.02 48 ⇓P P 11 25 50.3 +0.3
baz=92
I07A **Izee** 92.03 43 ⇑P P 11 25 49.6 -0.4
baz=92,SNR=12
F06A **Goldendale** 92.03 41 ⇑P P 11 25 50.2 +0.3
baz=92
K08A **Mann Creek Ran** 92.06 45 ⇑P P 11 25 49.7 -0.4
baz=92,SNR=10
ZAK **Zakamensk** 92.07 324 *e*P P 11 25 49.7 -0.2
ZAK pmax pmax
comp=Z,25nm,1.5s,mb5.3
R11A **Troy Canyon, C** 92.08 50 ⇓P P 11 25 50.1 -0.2
baz=92,SNR=13
COLA **College** 92.10 17⇑*i*P P 11 25 49.6 -0.1
Y14A **Wickenburg** 92.11 54 ⇓P P 11 25 50.2 -0.4
baz=92,SNR=14
M09A **Marrel Ranch,** 92.15 46 ⇓P P 11 25 50.7 +0.2
baz=92,SNR=9.3
V13A **Grand Canyon W** 92.18 52 ⇓P P 11 25 50.9 +0.1
baz=92
115A **Sonoran Desert** 92.20 56 ⇑P P 11 25 50.7 -0.3
baz=92,SNR=6.5
H07A **Lands Inn, Kim** 92.23 43 ⇑P P 11 25 50.2 -0.6
baz=92,SNR=14
Q11A **Duckwater** 92.25 49 ⇑P P 11 25 51.0 -0.1
baz=92,SNR=32
L09A **Wilkinson Ranc** 92.27 46 ⇓P P 11 25 51.0 -0.1
baz=93,SNR=10
E06A **Yakima** 92.29 40 ⇑P P 11 25 51.5 +0.5
baz=93
S12A **Delamar Landin** 92.29 50 ⇑P P 11 25 50.8 -0.5
baz=93,SNR=45
O10A **Cortez Mining,** 92.29 47 ⇑P P 11 25 51.1 -0.1
baz=93
J08A **Circle Bar Ran** 92.35 44 ⇑P P 11 25 51.0 -0.4
baz=93,SNR=14
SKAG **Skagway** 92.39 25 *e*P P 11 25 51.3 +0.1
comp=Z,30nm,1.1s,mb5.5
X14A **Yava** 92.42 54 ⇑P P 11 25 52.1 +0.1
baz=93,SNR=23
U13A **Pakoon Wash** 92.42 52 ⇓P P 11 25 52.4 +0.5
baz=93
C05A **Tolt Reservoir** 92.43 39 ⇓P P 11 25 51.5 -0.1
baz=93
HYT **Haines Junctio** 92.46 23 *e*P P 11 25 50.6 -0.9
B05A **Bryant** 92.47 39 ⇑P P 11 25 51.6 -0.2
baz=93
G07A **Ruggs Ranch, H** 92.48 42 ⇑P P 11 25 51.6 -0.3
baz=93
P11A **Circle Ranch,** 92.48 48 ⇑P P 11 25 52.1 0.0
baz=93
Z15A **Gila River Ind** 92.49 55 ⇑P P 11 25 52.3 0.0
baz=93
216A **Three Points,** 92.52 57 ⇓P P 11 25 52.1 -0.4
baz=93,SNR=6.7
IRK **Irkutsk** 92.53 326 *e*P P 11 25 48.4 -3.6
JCW **Jim Creek** 92.53 39 *e*P P 11 25 52.1 -0.1
K09A **Rome** 92.54 45 ⇓P P 11 25 52.4 +0.1
baz=93,SNR=18
I08A **Drewsey** 92.55 44 ⇑P P 11 25 52.7 +0.4
baz=93,SNR=5.8
116A **Eloy** 92.55 56 ⇓P P 11 25 52.2 -0.4
baz=93,SNR=12
TLY **Talaya** 92.56 325 *e*P P 11 25 52.9 +0.7
TLY *e*S S 11 36 55.4 -0.5
TLY pmax pmax
comp=Z,22nm,1.4s,mb5.4
TLY MLR MLR
comp=Z,1µm,17.0s,MS5.4
TLY **Talaya** 92.56 325⇑*i*P P 11 25 51.8 -0.4
W14A **Seligman** 92.58 53 ⇑P P 11 25 52.6 -0.1
baz=93,SNR=20
F07A **Phinny Hill Vi** 92.62 41 ⇓P P 11 25 52.4 -0.2
baz=93
Y15A **Casa Rosa Ranc** 92.63 55 ⇑P P 11 25 52.6 -0.4
baz=93,SNR=26
D06A **Cle Elum** 92.68 40 ⇓P P 11 25 53.1 +0.2
baz=93
T13A **Saint George** 92.72 51 ⇓P P 11 25 52.9 -0.4
baz=93,SNR=17
V14A **Boquillas Ranc** 92.73 53 ⇓P P 11 25 53.3 -0.1
baz=93,SNR=25
H08A **Prairie City** 92.76 43 ⇑P P 11 25 53.4 +0.1
baz=93
R12A **Pony Springs,** 92.77 50 ⇑P P 11 25 53.3 -0.2
baz=93,SNR=31
O11A **Cowboy Ranch,** 92.80 48 ⇓P P 11 25 53.6 0.0
baz=93,SNR=9.9
M10A **I.L. Ranch, Tu** 92.81 46 ⇓P P 11 25 53.7 +0.1
baz=93,SNR=12
J09A **Fry Pan Ranch,** 92.81 44 ⇓P P 11 25 53.5 0.0
baz=93,SNR=23
Q12A **Willow Creek R** 92.91 49 ⇓P P 11 25 54.6 +0.4
baz=93
X15A **Humboldt** 92.92 54 ⇓P P 11 25 54.8 +0.5
baz=93,SNR=37
217A **Green Valley** 92.93 57 ⇑P P 11 25 54.8 +0.4
baz=93,SNR=13
G08A **Pilot Rock** 92.94 42 ⇓P P 11 25 53.9 -0.2
baz=93
B06A **Marblemount** 92.95 39 ⇓P P 11 25 53.9 -0.1
baz=93
E07A **Sunnyside** 92.98 41 ⇑P P 11 25 54.3 +0.1
baz=93
S13A **Holt Ranch, En** 92.99 51 ⇑P P 11 25 54.9 +0.4
baz=93,SNR=16
U14A **Mt Trumbull** 93.00 52 ⇑P P 11 25 54.9 +0.3
baz=93,SNR=45
C06A **Tall Timber Ra** 93.00 39 ⇓P P 11 25 54.2 -0.1
baz=93
P12A **McGill** 93.04 49 ⇑P P 11 25 55.3 +0.6
baz=93
N11A **Elko Archery C** 93.04 47 ⇓P P 11 25 54.4 -0.3
baz=93
RSW **Rattlesnake Hi** 93.06 41 *e*P P 11 25 55.2 +0.6
Z16A **Peralta Trail,** 93.08 55 ⇓P P 11 25 54.6 -0.4
baz=93,SNR=8.4
HAWA **Hanford** 93.09 41 *e*P P 11 25 54.4 -0.4
comp=Z,18nm,1.2s,mb5.4
L10A **Juniper Basin** 93.10 46 ⇑P P 11 25 55.3 +0.4
baz=93,SNR=9.6
I09A **Lost Marbles R** 93.11 44 ⇑P P 11 25 54.6 -0.3
baz=93
K10A **MacKenzie Ranc** 93.14 45 ⇑P P 11 25 55.3 +0.2
baz=93,SNR=6.0
R13A **O'Grain Ranch,** 93.16 50 ⇑P P 11 25 55.9 +0.6
baz=94
TUC **Tucson** 93.16 57 *e*P P 11 25 54.3 -1.2
TUC pmax pmax
comp=Z,15nm,1.1s,mb5.3
TUC **Tucson** 93.16 57 *e*P P 11 25 54.3 -1.1
comp=Z,14nm,1.1s,mb5.3
W15A **Williams** 93.17 53 ⇓P P 11 25 56.2 +0.8
baz=94,SNR=10
D07A **Quincy** 93.20 40 ⇓P P 11 25 55.2 -0.1
baz=94
A06A **Chilliwack** 93.24 38 ⇓P P 11 25 54.9 -0.5
baz=94
Y16A **Circle Bar Ran** 93.25 55 ⇓P P 11 25 54.8 -1.0
baz=94,SNR=42
M11A **Holland Ranch,** 93.27 47 ⇓P P 11 25 56.0 +0.2
baz=94,SNR=5.9
F08A **Pendleton** 93.28 42 ⇓P P 11 25 55.2 -0.5
baz=94
117A **Oracle** 93.30 56 ⇑P P 11 25 55.9 -0.2
baz=94,SNR=18
CCUT **Cedar City** 93.33 51 *e*P P 11 25 55.3 -0.8
T14A **Hurricane** 93.34 52 ⇓P P 11 25 56.4 +0.2
baz=94,SNR=8.9
ELK **Elko** 93.35 47 *e*P P 11 25 56.1 0.0
ELK pmax pmax
comp=Z,15nm,1.3s
ELK **Elko** 93.35 47 *e*P P 11 25 56.1 0.0
comp=Z,15nm,1.3s,mb5.3
COLD **Coldfoot** 93.36 15 *e*P P 11 25 55.2 -0.3
comp=Z,111nm,1.2s,mb6.2
ARUT **Antelope Range** 93.38 51 *e*P P 11 25 55.5 -0.8
C07A **Waterville** 93.39 40 ⇑P P 11 25 55.8 -0.3
baz=94
E08A **Dider Farm, El** 93.43 41 ⇑P P 11 25 56.9 +0.5
baz=94
318A **Bisbee** 93.44 58 ⇓P P 11 25 56.4 -0.4
baz=94,SNR=11
Q13A **Wheeler Ranch,** 93.45 49 ⇓P P 11 25 56.9 +0.3
baz=94,SNR=5.6
H09A **Durkee** 93.47 43 ⇓P P 11 25 56.2 -0.4
baz=94
O12A **Currie** 93.49 48 ⇑P P 11 25 56.8 +0.1
baz=94,SNR=7.2
X16A **Lo Mia Camp, P** 93.49 54 ⇓P P 11 25 57.3 +0.4
baz=94,SNR=38
J10A **Berg Farm, Mel** 93.50 45 ⇑P P 11 25 56.3 -0.4
baz=94
V15A **Kaibab Nationa** 93.50 53 ⇑P P 11 25 57.4 +0.4
baz=94,SNR=26
N12A **Clover Valley,** 93.54 47 ⇑P P 11 25 57.2 +0.2
baz=94,SNR=9.0
S14A **Cedar City** 93.56 51 ⇑P P 11 25 57.4 +0.2
baz=94
218A **Dragoon** 93.61 57 ⇓P P 11 25 57.5 0.0
baz=94,SNR=6.2
L11A **Cat Creek Ranc** 93.61 46 ⇓P P 11 25 57.7 +0.4
baz=94,SNR=5.8
P13A **Bates Ranch, G** 93.66 49 ⇑P P 11 25 57.2 -0.3
baz=94,SNR=11
U15A **North Rim** 93.66 52 ⇑P P 11 25 58.0 +0.3
baz=94,SNR=34
Y17A **Rosevelt** 93.66 55 ⇑P P 11 25 57.4 -0.3
baz=94,SNR=13
G09A **Cove** 93.67 43 ⇑P P 11 25 57.2 -0.3
baz=94
K11A **Parker Ranch,** 93.69 45 ⇓P P 11 25 57.4 -0.2
baz=94
W16A **Flagstaff** 93.69 54 ⇓P P 11 25 57.7 -0.1
baz=94,SNR=15
B07A **Winthrop** 93.72 39 ⇓P P 11 25 57.6 0.0
baz=94
D08A **Wollman Farm,** 93.78 41 ⇓P P 11 25 58.2 +0.3
baz=94
Z17A **San Carlos Hig** 93.79 56 ⇓P P 11 25 58.4 +0.1
baz=94
T15A **Red Dirt Ranch** 93.83 52 ⇑P P 11 25 59.1 +0.7
baz=94,SNR=7.9
A07A **Ashnola River,** 93.84 38 ⇓P P 11 25 58.5 +0.4
baz=94
M12A **Wells** 93.86 47 ⇑P P 11 25 58.7 +0.2
baz=94,SNR=5.7
R14A **James Farms, M** 93.89 50 ⇑P P 11 25 58.6 0.0
baz=94
118A **Homack Ranch,** 93.93 57 ⇑P P 11 25 59.3 +0.3
baz=94
DLBC **Dease Lake** 93.94 27 P P 11 25 58.7 +0.3
baz=232,slow=12
DLBC **Dease Lake** 93.94 27 *e*P P 11 25 58.7 +0.3
X17A **Forest Lakes** 93.94 55 ⇓P P 11 25 58.4 -0.7
baz=94,SNR=26
WUAZ **Wupatki** 93.98 53 ⇓P P 11 25 59.5 +0.4
baz=94
WUAZ **Wupatki** 93.98 53 *e*P P 11 25 58.1 -1.0
comp=Z,31nm,1.1s,mb5.7
319A **Douglas** 93.98 58 ⇑P P 11 25 59.4 +0.1
baz=94,SNR=7.1
Q14A **Sevier Lake (B** 93.99 50 ⇓P P 11 25 59.0 -0.1
baz=94,SNR=8.4
E09A **Wood Farm, Sta** 94.00 41 ⇑P P 11 25 58.5 -0.5
baz=94
DAWY **Dawson** 94.01 20 *e*P P 11 25 57.0 -1.6
H10A **Noah's Angus R** 94.02 44 ⇑P P 11 25 57.9 -1.2
baz=94
C08A **Higginbotham F** 94.04 40 ⇑P P 11 25 58.3 -0.8
baz=94
Z18A **Geronimo** 94.05 56 ⇑P P 11 25 59.3 -0.2
baz=94
G10A **Bishop Farm, J** 94.09 43 ⇓P P 11 25 58.3 -1.1
baz=94
L12A **House Creek Ra** 94.10 46 ⇓P P 11 25 58.4 -1.1
baz=94
MFID **Camas Ranch** 94.11 45 ⇓P P 11 25 58.9 -0.6
baz=94
N13A **Wendover, West** 94.11 48 ⇑P P 11 25 59.6 -0.1
baz=94
B08A **Colville Reser** 94.13 39 ⇑P P 11 25 59.3 -0.2
baz=94
D09A **Jones Farm, Ri** 94.15 41 ⇓P P 11 25 59.7 0.0
baz=94
219A **White Tail Can** 94.23 57 ⇑P P 11 26 00.7 +0.2
baz=94,SNR=11
I11A **Placerville** 94.23 44 ⇓P P 11 25 59.3 -0.8
baz=94
W17A **Winslow** 94.30 54 ⇑P P 11 26 00.0 -0.6
baz=95
Y18A **Canyon Day Jun** 94.32 56 ⇑P P 11 26 00.7 -0.1
baz=95,SNR=23
F10A **Beach Ranch, E** 94.33 42 ⇑P P 11 26 00.1 -0.4
baz=95
M13A **Montello** 94.35 47 ⇓P P 11 26 00.4 -0.3
baz=95
P14A **Drum Mountains** 94.38 49 ⇓P P 11 26 00.4 -0.5
baz=95
K12A **Draper Farm, C** 94.39 46 ⇓P P 11 26 00.9 +0.1
baz=95
R15A **Junction** 94.39 51 ⇓P P 11 26 01.2 +0.2
baz=95
U16A **Tuba City** 94.41 53 ⇑P P 11 26 00.6 -0.5
baz=95,SNR=24
A08A **Turner Farm, O** 94.44 39 ⇓P P 11 26 00.8 -0.2
baz=95
T16A **Glen Canyon Da** 94.46 52 ⇓P P 11 26 00.9 -0.5
baz=95,SNR=5.3
119A **Ashpeak Ranch,** 94.49 57 ⇓P P 11 26 01.5 -0.1
baz=95
J12A **Stokes Ranch,** 94.52 45 ⇓P P 11 26 01.4 0.0
baz=95,SNR=8.8
H11A **Donnelly** 94.54 44 ⇑P P 11 26 01.0 -0.4
baz=95
MSU **Marysvale** 94.58 50 *e*P P 11 26 02.4 +0.6
Q15A **Fillmore** 94.63 50 ⇓P P 11 26 01.4 -0.6
baz=95
X18A **Snowflake** 94.67 55 ⇑P P 11 26 01.7 -0.7
baz=95,SNR=8.8
G11A **Walters Elk Ra** 94.68 43 ⇓P P 11 26 01.7 -0.4
baz=95
S16A **Weppner Ranch,** 94.69 51 ⇑P P 11 26 01.7 -0.7
baz=95
Z19A **T-Link Ranch,** 94.72 56 ⇓P P 11 26 02.6 0.0
baz=95
L13A **Double Diamond** 94.80 47 ⇑P P 11 26 02.5 -0.3
baz=95
DUG **Dugway** 94.81 49 *e*P P 11 26 03.2 +0.4
DUG *e* 11 26 11.5
DUG **Dugway** 94.81 49 ⇑P P 11 26 02.5 -0.4
baz=95
DUG **Dugway** 94.81 49 *e*P P 11 26 03.2 +0.4
N14A **Grayback Hills** 94.81 48 ⇓P P 11 26 03.0 +0.2
baz=95
A09A **Danville** 94.86 39 ⇑P P 11 26 03.0 +0.2
baz=95
B09A **Rice** 94.86 40 ⇓P P 11 26 02.5 -0.3
baz=95
U17A **Shonto** 94.93 53 ⇑P P 11 26 03.4 -0.1
baz=95
K13A **Stover Farm, H** 94.94 46 ⇑P P 11 26 03.8 +0.5
baz=95
F11A **Grangeville** 94.96 43 ⇓P P 11 26 03.1 -0.3
baz=95
M14A **Sheep Mountain** 94.97 47 ⇑P P 11 26 03.3 -0.2
baz=95,SNR=6.1
T17A **Navajo Res., N** 94.98 52 ⇓P P 11 26 04.1 +0.4
baz=95,SNR=6.6
Y19A **Nutrioso** 94.98 56 ⇓P P 11 26 03.3 -0.5
baz=95
R16A **Teasdale** 94.99 51 ⇑P P 11 26 03.8 +0.1
baz=95,SNR=6.9
W18A **Petrified Fore** 95.06 54 ⇑P P 11 26 03.8 -0.3
baz=95
HLID **Hailey** 95.10 45 ⇑P P 11 26 03.9 -0.1
baz=95
HLID **Hailey** 95.10 45 *e*P P 11 26 05.5 +1.4
E11A **Bogner Ranch,** 95.13 42 ⇓P P 11 26 03.9 -0.3
baz=95
X19A **St. Johns** 95.13 55 ⇑P P 11 26 04.8 +0.3
baz=95,SNR=6.1
V18A **Ganado** 95.14 54 ⇑P P 11 26 03.9 -0.5
baz=95
J13A **Cove Ranch, Pi** 95.19 45 ⇑P P 11 26 04.1 -0.4
baz=96
H12A **Diamond D Ranc** 95.22 44 ⇑P P 11 26 03.9 -0.7
baz=96
S17A **Black Ridge (B** 95.23 52 ⇑P P 11 26 04.2 -0.6
baz=96
L14A **Malta** 95.26 47 ⇓P P 11 26 05.0 +0.2
baz=96
N15A **Stansbury Isla** 95.29 48 ⇓P P 11 26 04.7 -0.4
baz=96
W19A **Sanders** 95.32 54 ⇑P P 11 26 05.1 -0.2
baz=96
P16A **Fountain Green** 95.39 50 ⇑P P 11 26 06.0 +0.5
baz=96
I13A **Wildhorse Cree** 95.44 45 ⇑P P 11 26 05.5 -0.1
baz=96
U18A **Rough Rock, Ch** 95.45 53 ⇑P P 11 26 06.0 +0.1
baz=96
Q16A **Castle Valley** 95.46 50 ⇑P P 11 26 06.0 +0.2
baz=96
F12A **Elk City** 95.48 43 ⇑P P 11 26 05.0 -0.7
baz=96
K14A **Jones Ranch, D** 95.51 46 ⇑P P 11 26 05.8 -0.2
baz=96
MPU **Maple Canyon** 95.56 49 *e*P P 11 26 08.9 +2.7
M15A **Larsen Ranch,** 95.57 48 ⇑P P 11 26 06.2 -0.1
baz=96
TMUT **Trail Mountain** 95.58 50 *e*P P 11 26 09.5 +3.1
J14A **Carey** 95.60 46 ⇑P P 11 26 05.9 -0.4
baz=96
R17A **Hanksville Air** 95.60 51 ⇑P P 11 26 06.7 +0.2
baz=96,SNR=6.6
H13A **Challis** 95.62 44 ⇓P P 11 26 06.5 +0.1
baz=96
T18A **Mexican Hat** 95.72 52 ⇑P P 11 26 07.3 +0.2
baz=96,SNR=16
O16A **Springville** 95.73 49 ⇑P P 11 26 07.3 +0.2
baz=96,SNR=6.7
C11A **Tepee Creek (N** 95.74 41 ⇓P P 11 26 07.0 +0.1
baz=96
V19A **Window Rock** 95.81 54 ⇑P P 11 26 07.7 +0.2
baz=96
L15A **Malad City** 95.83 47 ⇓P P 11 26 07.0 -0.5
baz=96
S18A **Hurst Farm, Bl** 95.84 52 ⇓P P 11 26 06.6 -1.0
baz=96
G13A **Cobalt** 95.85 44 ⇑P P 11 26 06.9 -0.6
baz=96
I14A **Mackay** 95.89 45 ⇑P P 11 26 07.2 -0.4
baz=96
JLU **Jordanelle** 95.92 49 *e*P P 11 26 09.5 +1.6
D12A **Red Ives Fores** 95.96 42 ⇑P P 11 26 08.0 +0.1
baz=96
P17A **Butcher Ranch,** 95.99 50 ⇑P P 11 26 08.2 -0.1
baz=96
K15A **Arbon** 96.00 47 ⇑P P 11 26 08.3 0.0
baz=96
SRU **San Rafael** 96.00 50 ⇑P P 11 26 08.5 +0.2
baz=96,SNR=5.5
SRU **San Rafael** 96.00 50 *e*P P 11 26 08.6 +0.3
N16A **Rees Ranch, Co** 96.04 49 ⇓P P 11 26 07.8 -0.6
baz=96
F13A **Darby** 96.08 43 ⇓P P 11 26 09.0 +0.5
baz=96
A11A **Hall Mountain,** 96.16 40 ⇓P P 11 26 08.8 0.0
baz=96
C12B **Naegeli Ranch,** 96.17 41 ⇑P P 11 26 08.3 -0.6
baz=96
R18A **Canyonlands Na** 96.18 51 ⇑P P 11 26 08.8 -0.4
baz=96
H14A **Leadore** 96.22 45 ⇑P P 11 26 08.8 -0.4
baz=96
HWUT **Hardware Ranch** 96.24 48 *e*P P 11 26 08.4 -0.9
comp=Z,1.5nm,0.9s,mb4.4
T19A **Beclabito** 96.24 53 ⇑P P 11 26 09.0 -0.4
baz=96
O17A **Robinson Place** 96.27 49 ⇑P P 11 26 09.6 +0.1
baz=97
Q18A **Rafter H Ranch** 96.28 51 ⇓P P 11 26 09.4 -0.2
baz=97
J15A **Blackfoot** 96.35 46 ⇑P P 11 26 09.8 0.0
baz=97
G14A **Jackson** 96.41 44 ⇑P P 11 26 10.0 0.0
baz=97
L16A **Fish Haven** 96.49 47 ⇑P P 11 26 09.7 -0.8
baz=97
N17A **Moffit Pass** 96.49 49 ⇓P P 11 26 10.5 +0.1
baz=97
S19A **Harvey Farm, M** 96.50 52 ⇓P P 11 26 10.4 -0.2
baz=97
I15A **Monteview** 96.55 45 ⇑P P 11 26 09.7 -0.9
baz=97
H15A **Lima** 96.69 45 ⇓P P 11 26 10.5 -0.8
baz=97
K16A **Soda Springs** 96.70 47 ⇑P P 11 26 10.8 -0.6
baz=97
F14A **Wisdom** 96.70 43 ⇓P P 11 26 10.7 -0.6
baz=97
J16A **Bone** 96.85 46 ⇑P P 11 26 11.7 -0.4
baz=97
Q19A **Hogan Spring (** 96.85 51 ⇓P P 11 26 11.4 -0.8
baz=97
TIXI **Tiksi** 96.86 348⇑*e*P P 11 26 11.7 +0.2
TIXI pmax pmax
comp=Z,5.0nm,1.3s,mb4.8
TIXI **Tiksi** 96.86 348⇑*e*P P 11 26 11.8 +0.3
PLCA **Paso Flores** 96.89 139 P P 11 26 13.1 +0.6
comp=Z,1.2nm,0.9s,mb4.3,baz=259,slow=10,SNR=2.7
PLCA **Paso Flores** 96.89 139 P P 11 26 13.1 +0.6
G15A **Dillon** 97.01 44 ⇑P P 11 26 11.9 -0.8
baz=97
DLMT **Dillon** 97.02 44 *e*P P 11 26 16.6 +3.8
D14A **Greenough** 97.12 42 ⇑P P 11 26 12.4 -0.8
baz=97
LRM **Limekiln Ridge** 97.29 44 *e*P P 11 26 15.4 +1.5
TPAW **Teton Pass** 97.38 46 *e*P P 11 26 10.5 -4.0
comp=Z,8.6nm,1.3s,mb5.0
REDW **Red Top Meadow** 97.40 46 *e*P P 11 26 15.7 +1.2
ANMO **Albuquerque** 97.50 56⇑*e*P P 11 26 15.2 0.0
ANMO **Albuquerque** 97.50 56 *e*P P 11 26 16.7 +1.5
SNOW **Snow King Moun** 97.50 46 *e*P P 11 26 17.0 +2.0
IMW **Indian Meadow** 97.54 46 *e*P P 11 26 17.1 +1.9
LOHW **Long Hollow** 97.66 46 *e*P P 11 26 17.3 +1.6
TXAR **Lajitas Array** 97.76 62 P P 11 26 17.0 +0.5

comp=Z,1.9nm,1.0s,mb4.6,baz=224,slow=7.0,SNR=12
B14A Marquette Ranc 97.78 41 ⇑P **P 11 26 15.9 -0.3**
baz=98
PDAR Pinedale Array 98.06 47 P **P 11 26 17.8 +0.2**
comp=Z,2.2nm,1.1s,mb4.6,baz=220,slow=3.5,SNR=8.6
B15A Bradely Ranch, 98.20 41 ⇓P **P 11 26 17.5 -0.5**
baz=98
WMQ Urumqi 98.72 314 *e*P **P 11 26 20.5 0.0**
WMQ AP pP 11 26 25.0 -0.2
WMQ XP sP 11 26 27.5 +0.6
WMQ AMB AMB
comp=Z,12nm,0.9s,mb5.4
WMQ AMB AMB
comp=Z,222nm,7.0s
WMQ LR LR
comp=N,3μm,14.9s
WMQ LR LR
comp=E,2μm,20.5s
WMQ LR LR
comp=Z,2μm,21.7s
MKAR Makanchi Array 103.30 315 Pdiff Pdif 11 26 41.1 +0.3
comp=Z,1.2nm,0.7s,baz=97,slow=6.2,SNR=6.6
APA Apatity 126.29 341 ⇑*i*PKIKP PKPdf 11 31 47.0 +4.0
APA pmax pmax
comp=Z,43nm,1.4s
ARCES ARCESS Array B 127.17 345 PKP PKPdf 11 31 42.4 -2.3
comp=Z,3.5nm,0.8s,baz=0.0,slow=4.5,SNR=2.6
ARCES ARCESS Array B 127.17 345 PKP PKPdf 11 31 42.4 -2.3
MAK Makhachkala 127.35 308 *i* PKIKP PKPdf 11 31 44.2 -1.6
MAK pmax pmax
comp=Z,241nm,1.2s
KMBO Kilima Mbogo 128.07 251 ⇑*i*PKIKP PKPdf 11 31 46.5 -1.6
BDFB Brasilia 128.10 132 PKP PKPdf 11 31 49.7 +1.7
comp=Z,2.1nm,0.5s,baz=270,slow=5.1,SNR=2.8
KIV Kislovodsk 130.71 310 *e*PKIKP PKPdf 11 31 49.8 -2.4
KIV *e* 11 39 01.2
KIV *e*PS PS 11 44 21.3 +0.7
KIV *e*SS SS 11 51 38.7 +1.9
KIV pmax pmax
comp=Z,8.0nm,1.1s
OBN Obninsk 131.31 326 ⇓*i*PKIKP PKPdf 11 31 54.0 +1.1
OBN pmax pmax
comp=Z,12nm,0.6s
OBN Obninsk 131.31 326 ⇓*i*PKP PKPdf 11 31 54.1 +1.2
ANN Anapa 134.22 312 *e*PKIKP PKPdf 11 32 02.1 +3.3
AKASG Malin Array Be 137.25 323 PKP PKPdf 11 32 04.3 +0.1
comp=Z,0.3nm,0.4s,baz=57,slow=2.1,SNR=6.0
AKASG Malin Array Be 137.25 323 PKP PKPdf 11 32 04.3 +0.1
NB2 NORSAR Subarra 137.54 344 PKPdf PKPdf 11 32 06.8 +2.4
comp=Z,0.6nm,0.7s,baz=31,slow=1.9
NOA NORSAR Array B 137.54 344 PKP PKPdf 11 32 05.5 +1.0
comp=Z,1.8nm,0.9s,baz=30,slow=1.8,SNR=3.6
KIS Kishinev 139.15 318 *e*PKIKP PKPdf 11 32 10.0 +2.2
KIS MLR MLR
comp=Z,1μm,20.0s,MS5.6
KIS MLR MLR
comp=Z,2μm,20.0s
KOLS Kolonicke sedl 142.02 324 *e*PKP PKPdf 11 32 14.1 +1.2
KOLS Kolonicke sedl 142.02 324 *e*PKP PKPdf 11 32 14.2 +1.3
UZH Uzhgorod 142.18 324 *e*PKIKP PKPdf 11 32 11.7 -1.5
JMB Yambol 142.43 313 *i* P PKPdf 11 32 08.4 -5.5
ARG Arkhangelos 143.16 302 *e*P PKPdf 11 32 06.0 -9.4
ALN Alexandroupoli 143.37 310 *e*P PKPdf 11 32 12.6 -3.0
KDZ Kurdzhali 143.54 312 *i* P PKPdf 11 32 13.2 -2.7
PRK Paraskevi 143.76 308 *e*P PKPdf 11 32 13.6 -2.8
PRK Paraskevi 143.76 308 *e*P PKPdf 11 32 13.0 -3.4
KSP Ksiaz 143.80 331 *e*PKP PKPdf 11 32 13.2 -2.8
KSP *e*PP PP 11 35 48.0 +19
KSP LR LR
comp=Z,4μm,27.0s,MS6.0
PSZ Piszkesteto 143.90 324 ⇓*e*PKP PKPdf 11 32 15.4 -0.9
PSZ Piszkesteto 143.90 324 *e*PKPdf PKPdf 11 32 14.2 -2.1
RZN Rozhen 144.01 312 *i* P PKPdf 11 32 13.9 -2.8
KARP Karpathos 144.08 301 *e*P PKPdf 11 32 15.7 -1.4
VYHS Vyhne 144.11 326 *e*PKP PKPdf 11 32 16.3 -0.4
VYHS *e* 11 32 44.1
DPC Dobruska-Polom 144.13 330 *e*PKP PKPdf 11 32 15.0 -1.6
DPC AMS AMS 12 33 40.0
comp=Z,2μm,26.7s
UPC Upice 144.16 331 *e*PKP PKPdf 11 32 15.5 -1.2
UPC *ex* x 11 32 30.2
CHOS Chios island 144.19 306 *e*P PKPdf 11 32 14.0 -3.2
KOLL Kolacno 144.28 326 *e*PKP PKPdf 11 32 16.7 -0.3
LIA Limnos Island 144.34 309 *e*P PKPdf 11 32 15.9 -1.5
LIA Limnos Island 144.34 309 *e*P PKPdf 11 32 14.9 -2.5
LOS Limnos 144.40 309 *e*P PKPdf 11 32 15.8 -1.7
BUD Budapest 144.63 324 ⇓*e*PKP PKPdf 11 32 17.8 +0.2
VTS Vitosha 144.65 315 *i* P PKPdf 11 32 17.7 -0.1
MMB Musomiste 144.73 313 *i* P PKPdf 11 32 16.9 -1.1
NVR Nevrokopi 144.73 312 *e*P PKPdf 11 32 17.3 -0.7
PVCC Panska Ves 144.80 332 *e*PKP PKPdf 11 32 17.0 -0.8
PVCC *ex* x 11 32 32.1
BRG Berggiesshubel 144.82 333 *i* PKIKP PKPdf 11 32 16.9 -0.9
BRG *i* 11 32 32.0
BRG pmax pmax
comp=Z,27nm,1.2s
BRG Berggiesshubel 144.82 333 *i* PKP PKPdf 11 32 16.9 -0.9
comp=Z,45nm,1.2s
BRG *i* 11 32 32.0
comp=Z,32nm,1.0s
BRG *i* 11 35 56.0
CLL Collm 144.88 334 *e*pPKiKP 11 29 48.0
CLL Collm 144.88 334 ⇓*i*PKPdf PKPdf 11 32 16.9 -1.0
comp=Z,38nm,1.2s
CLL *i* pPKPdf pPKPdf 11 32 20.0 -2.7
CLL *e*(sPKiKP) 11 32 27.0
CLL Collm 144.88 334 *i* (PKPdf) pPKPdf 11 32 30.7 +8.0
comp=Z,23nm,0.8s
CLL *ex* x 11 32 43.0
ZKR Zakros 144.93 301 *e*P PKPdf 11 32 13.6 -4.9
APE Apeiranthos 144.97 305 *e*P PKPdf 11 32 17.1 -1.5
APE Apeiranthos 144.97 305 *e*P PKPdf 11 32 14.1 -4.5
MODS Modra-Piesok 144.99 327 *e*PKP PKPdf 11 32 18.9 +0.7
MODS *e* 11 32 33.6
OUR Ouranopolis 145.04 311 *e*P PKPbc 11 32 17.5 -0.4
ZST Bratislava 145.19 327 *e*PKP PKPdf 11 32 19.5 +1.0
ZST *e* 11 32 33.6
ZST Bratislava 145.19 327 *e*PKP PKPdf 11 32 19.5 +1.0
ZST *e* 11 32 33.7
PRU Pruhonice 145.20 331 *e*PKP PKPdf 11 32 18.2 -0.3
PRU *ex* x 11 32 32.7
PRU AMS AMS 12 36 10.0
comp=Z,1μm,18.3s
SANT Santorini 145.22 303 *e*P PKPbc 11 32 16.2 -2.4
TREC Trest 145.25 330 *e*PKP PKPdf 11 32 19.0 +0.4
NPS Neapolis 145.37 301 *e*P PKPbc 11 32 19.9 +0.8
PLG Polygyros 145.41 311 *e*P PKPbc 11 32 18.8 -0.3
PLG Polygyros 145.41 311 *e*P PKPbc 11 32 19.4 +0.3
PAIG Paliouri 145.41 310 *e*P PKPbc 11 32 18.9 -0.3
LAST Lasithi 145.50 301 *e*P PKPdf 11 32 18.4 -1.1
VAY Valandovo 145.63 313 *e*PKP PKPdf 11 32 18.7 -0.8
ESK Eskdalemuir 145.68 352 *e*PKHKP 11 32 15.5
SOP Sopron 145.81 327 ⇓*e*PKP PKPab 11 32 21.7 +1.2
NKC Novy Kostel 145.93 333 *e*PKP PKPab 11 32 21.6 +0.7
NKC AMS AMS 12 43 40.0
comp=Z,2μm,21.0s
MOX Moxa 145.96 334 *e*PKP PKPdf 11 32 21.5 +1.7
comp=Z,61nm,2.0s
MOX *e* 11 32 31.2
MOX
comp=Z,2μm,21.0s
NEO Neokhori 145.97 309 *e*P PKPdf 11 32 18.9 -1.3
XOR Xorichti 145.97 309 *e*P PKPdf 11 32 19.2 -0.9
CONA Conrad Observa 146.00 327 ⇑*i*P PKPab 11 32 21.8 +0.5
comp=Z,42nm,1.4s
CSNA Conrad Observa 146.00 327 ⇑*i*P PKPab 11 32 22.0 +0.8
comp=Z,40nm,1.4s
ATH Athens Observa 146.07 307 *e*P PKPdf 11 32 21.0 +0.6
SIVA Sivas 146.07 301 *e*P PKPdf 11 32 22.0 +1.5
SKO Skopje 146.10 315 *e*PKP PKPdf 11 32 22.0 +1.7
LIT Litokhoron 146.19 311 *e*P PKPdf 11 32 21.3 +0.7
KHC Kasperske Hory 146.25 331 *e*PKP PKPdf 11 32 20.3 0.0
KHC *ex* x 11 32 33.4
KHC AMS AMS 12 44 40.0
comp=Z,2μm,16.5s
LKR Lokris 146.37 308 *e*P PKPdf 11 32 21.5 +0.7
LKR Lokris 146.37 308 *e*P PKPdf 11 32 14.3 -6.5
GEC2 GERESS Array S 146.40 330 *e*PKIKP PKPdf 11 32 19.8 -0.8
GERES GERESS Array B 146.40 330 PKPbc PKPbc 11 32 22.1 +0.2
comp=Z,7.8nm,0.8s,baz=64,slow=3.1,SNR=16
VAM Vamos 146.46 302 *e*P PKPdf 11 32 22.4 +1.2
KRUS Krusevo 146.50 314 *e*PKP PKPdf 11 32 21.9 +0.9
DID Didima 146.58 306 *e*P PKPdf 11 32 22.0 +0.7

LTK Loutraki 146.61 307 *e*P PKPdf 11 32 22.1 +0.8
AGG Agios Georgios 146.72 309 *e*P PKPdf 11 32 22.3 +0.8
GRA1 Grafenberg Arr 146.85 334 *e*PKP PKPbc 11 32 23.1 -0.1
GRF Grafenberg Arr 146.85 334 *e*PKP PKPbc 11 32 23.1 -0.1
VLI Veliai 147.06 305 *e*P PKPdf 11 32 14.3 -7.8
EVR Evrytania 147.13 309 *e*P PKPab 11 32 25.6 -0.4
PERS Pernice 147.24 326 *i* PKPdf PKPbc 11 32 24.9 +0.6
VLX Vlachokerasia 147.27 306 *e*P PKPab 11 32 25.2 -1.3
JAN Janina 147.52 311 *e*P PKPab 11 32 26.9 -0.5
ITM Ithomi 147.68 306 *e*P PKPdf 11 32 18.3 -4.8
RLS Riolos of Patr 147.71 308 *e*P PKPdf 11 32 20.2 -2.9
TOD Tromm 147.88 336 PKP2 PKPab 11 32 25.9 -2.6
BOJS Bojanci 147.90 325 *i* PKPdf PKPab 11 32 27.1 -1.6
MEM Membach 148.03 340 PKPbc PKPbc 11 32 26.2 -0.1
LKD Levkas 148.05 310 *e*P PKPab 11 32 27.7 -1.9
ABH Alteburg 148.12 337 PKP PKPbc 11 32 26.5 -0.1
VOY Vojsko 148.27 327 *e*PKPdf PKPbc 11 32 26.8 -0.4
VOY *e* 11 32 32.9
VOY *e* 11 32 41.5
JAVS Javornik 148.28 326 *i* PKPdf PKPbc 11 32 26.8 -0.4
VLS Valsamata 148.30 309 *e*P PKPdf 11 32 21.5 -2.6
RUP Ruppelstein 148.45 338 PKP2 PKPbc 11 32 27.1 -0.4
MOTA Moosalm 148.69 331 ⇑*i*P PKPbc 11 32 27.1 -1.1
comp=Z,21nm,0.9s
LANF Langenberg 148.77 336 PKP PKPbc 11 32 28.7 +0.3
WLF Walferdange 148.79 339 PKPbc PKPbc 11 32 29.9 +1.5
WLF Walferdange 148.79 339 *e*PKPbc PKPbc 11 32 29.0 +0.7
GIVF Givet 148.84 341 *e*PKP1 PKPbc 11 32 29.2 +0.7
comp=Z,75nm,1.0s
DOU Dourbes 148.92 341 PKPbc PKPbc 11 32 29.3 +0.6
BAIF Baives 149.07 341 *e*PKP1 PKPbc 11 32 29.8 +0.7
comp=Z,132nm,1.6s
FETA Feichten 149.10 331 ⇑*i*P PKPbc 11 32 30.0 +0.7
comp=Z,34nm,1.4s
BFO Black Forest 149.10 335 *e*PKP2 PKPbc 11 32 28.8 -0.4
SPAK Spaichingen-Ko 149.10 334 PKP PKPbc 11 32 29.1 -0.1
CDF Champ du Feu 149.44 336 *e*PKP1 PKPbc 11 32 30.6 +0.5
comp=Z,35nm,1.0s
ECH Echery 149.65 336 PKP PKPbc 11 32 31.3 +0.7
ECH Echery 149.65 336 *e*PKPbc PKPbc 11 32 29.8 -0.7
HINF Hinteralfeld 150.09 336 *e*PKP1 PKPbc 11 32 32.0 +0.3
comp=Z,76nm,1.4s
HAU Haudompre 150.12 337 *e*PKP1 PKPbc 11 32 32.2 +0.5
comp=Z,69nm,1.2s
TUE Stuetta 150.14 332 *e*PKPbc PKPbc 11 32 30.2 -1.6
MEZF Maizieres J'vi 150.16 339 *e*PKP1 PKPbc 11 32 32.8 +1.0
comp=Z,227nm,1.4s
LOMF Lomont 150.49 335 PKP PKPbc 11 32 33.3 +0.7
TIP Timpagrande 150.56 313 *e*PKPab PKPab 11 32 37.5 -2.3
CABF La Chapelle 151.38 335 *e*PKP1 PKPbc 11 32 35.7 +0.9
comp=Z,108nm,1.3s
FLN La Foliniere 151.51 346 *e*PKP1 PKPbc 11 32 35.0 0.0
comp=Z,129nm,1.1s
LDF La Druitiere 151.58 345 *e*PKP1 PKPbc 11 32 35.1 0.0
comp=Z,36nm,0.9s
LOR Lormes 151.63 339 *e*PKP1 PKPbc 11 32 35.8 +0.5
comp=Z,38nm,1.0s
SSF Saint Saulge 151.93 339 *e*PKP1 PKPbc 11 32 36.4 +0.4
comp=Z,94nm,1.4s
GRR Gorron 151.94 346 *e*PKP1 PKPbc 11 32 36.2 +0.2
LPL La Plagne 152.01 333 *e*PKP1 PKPbc 11 32 37.3 +1.1
comp=Z,44nm,1.1s
LPG La Plagne 152.02 333 *e*PKP1 PKPbc 11 32 37.3 +1.0
comp=Z,56nm,1.1s
SMF Signal de Mont 152.18 338 *e*PKP1 PKPbc 11 32 36.8 +0.2
comp=Z,77nm,1.3s
AVF Avril sur Loir 152.22 339 *e*PKP1 PKPbc 11 32 36.8 +0.1
comp=Z,116nm,1.5s
BNI Bardonecchia 152.41 333 *e*PKIKP PKPbc 11 32 37.2 +0.1
SGMF Saint Gilles 152.43 348 *e*PKP1 PKPbc 11 32 36.8 -0.3
comp=Z,42nm,0.9s
ROSF Rostrenen 152.48 349 *e*PKP1 PKPbc 11 32 36.8 -0.4
comp=Z,63nm,1.1s
BGF Bois d'Agland 152.59 339 *e*PKP1 PKPbc 11 32 37.8 +0.3
comp=Z,36nm,0.9s
MBDF Montbardon 152.63 332 *e*PKP1 PKPbc 11 32 37.8 +0.2
comp=Z,15nm,0.8s
ORIF Oris-en-Rattie 152.85 334 *e*PKP1 PKPbc 11 32 38.3 +0.2
comp=Z,32nm,0.9s
QUIF Quistinic 152.86 349 *e*PKP1 PKPbc 11 32 37.8 -0.3
SBF Sospel 153.00 330 *e*PKP1 PKPbc 11 32 38.5 0.0
TCF Toulx Ste Croi 153.03 340 *e*PKP1 PKPbc 11 32 38.8 +0.3
comp=Z,28nm,1.1s
VIVF Saint-Julien-l 153.39 335 *e*PKP1 PKPbc 11 32 39.8 +0.5
MFF Saint Martin d 153.44 344 *e*PKP1 PKPbc 11 32 39.5 +0.1
comp=Z,34nm,1.1s
FRF La Foret Royal 153.60 331 *e*PKP1 PKPbc 11 32 40.0 +0.2
LMR La Mourre 153.84 331 *e*PKP1 PKPbc 11 32 40.4 +0.1
LASF Ste Croix 154.36 335 *e*PKP1 PKPbc 11 32 41.8 +0.4
comp=Z,39nm,1.2s
MTLF Montolieu 155.61 337 *e*PKP1 PKPdf 11 32 44.4 +10
ESDC Sonseca Array 160.90 344 PKPab PKPab 11 33 24.3 +0.5
comp=Z,0.6nm,0.2s,baz=28,slow=6.7,SNR=5.7
LIC Lamto 163.93 201 *e*PKIKP PKPdf 11 32 46.4 +1.2
comp=Z,62nm,1.5s
DBIC Dimbokro 164.29 202 PKPab PKPab 11 33 40.5 +1.3
comp=Z,3.1nm,0.8s,baz=146,slow=3.6,SNR=2.6
TAM Tamanrasset 164.88 278 *e*PKIKP PKPdf 11 32 45.5 -0.3
TOA0 Torodi Ar. Sit 165.58 237 *e*PKPdf PKPdf 11 32 46.5 -0.1
TORD Torodi Ar. Bea 165.58 237 PKP PKPdf 11 32 47.1 +0.5
comp=Z,3.7nm,1.0s,baz=8.1,slow=0.1,SNR=13
TORD PKPab PKPab 11 33 45.5 +0.4
comp=Z,1.9nm,0.8s,baz=100,slow=4.4,SNR=3.7

IDC ***28*** *11:16:37.7±0.5, 2133S×169.12E, h0km, mb4.9/23, mb1 4.9/26, mb1mx4.9/27, mbtmp4.9/26, ML3.8/3, MS5.6/21, Ms1 5.6/21, ms1mx5.3/35, Error ellipse: s-maj=14.9km s-min=13.5km az=132.0*

ISCJB ***28*** *11:16:38.4±0.1, 2137S±004×169.12E±003, h14km, mb5.3/73, MS5.6/51, Error ellipse: s-maj=6.6km s-min=4.0km az=167.6*

LDG ***28*** *11:16:38.3±0.2, 2130S×16889E, h10km, Mb5.9/2, Ms5.6/10, Error ellipse: s-maj=21.3km s-min=3.4km az=154.0*

GCMT ***28*** *11:16:39.2±0.1, 2145S×16908E, h14km, MW5.9/114, Moment Tensor Solution. s97,c187; s114,c341; Duration: 2≥1 Moment tensor: Scale 10^17 Nm; Mrr 6.05±.08; Mθθ 1.29±.06; Mφφ -4.76±.06; Mrθ 2.32±.14; Mθφ 2.89±.05; Mφr -4.04±.16; Best double couple: M 7.77400×10^17 NP1 ϕs 331.00000°, δ 27.00000°, λ 90.00000°. NP2 ϕs 150.00000°, δ 63.00000°, λ 90.00000°. Principal axes: T 7.6010, Plg 72.0000°, Azm 60.0000°; N 0.3460, Plg 0.0000°, Azm 150.0000°; P -7.9460, Plg 18.0000°, Azm 240.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***28*** *11:16:39.1±0.2, 2133S×169.14E, h10km, mb5.6/31, MS5.7/5 Error ellipse: s-maj=8.0km s-min=5.0km az=157.0*

MOS ***28*** *11:16:41.7±1.5, 2138S×169.14E, h33km, mb5.7/22, MS5.6/9, Error ellipse: s-maj=8.8km s-min=8.4km az=109.8*

DJA ***28*** *11:16:43, 2182S×168.95E, h10km, Mw6.1/9*

BJI ***28*** *11:16:44.1, 2038S×168.54E, h10km, mB5.9, mb5.2, Ms5.7, Msz5.5*

ISC 28 11:16:40.1±0.1, 2138S±004×16918E±003, h15km, h15km±1.9km: pP-P, n739, σ 0§66/598, mb5.3/73, MS5.6/51, 214C-203D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**14.05**	**126**	LR	LR	11 23 36.6	
	comp=Z,18μm,18.6s,baz=323,slow=30						
HNR	**Honiara**	**14.83**	**322**	Pn	**Pn**	**11 20 06.6**	**-2.8**
	2.5nm,0.3s,baz=77,slow=13,SNR=1.6						
HNR	**Honiara**	**14.83**	**322**	*e*P	**Pn**	**11 20 12.8**	**+3.4**
HNR				pmax	pmax		
	comp=Z,2μm,1.8s						
HNR	**Honiara**	**14.83**	**322**	*e*Pn	**Pn**	**11 20 12.8**	**+3.4**
	comp=Z,2μm,1.8s						
ARMA	**Armidale**	**18.16**	**237**	*e*P	**Pn**	**11 20 56.9**	**+5.2**
URZ	**Urewera**	**18.16**	**160**	P	**Pn**	**11 20 53.5**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=351,slow=7.0,SNR=6.5						
AFI	**Afiamalu**	**19.60**	**71**	P	**Pn**	**11 21 06.4**	**-2.9**
	comp=Z,2.0nm,0.3s,baz=9.0,slow=22,SNR=6.0						
AFI				LR	LR	11 27 09.4	
	comp=Z,27μm,19.4s,baz=255,slow=32						
AFI	**Afiamalu**	**19.60**	**71**	P	**Pn**	**11 21 06.4**	**-2.9**
AFI				LR	LR	11 27 09.3	

CTA Charters Tower 21.48 269 *e*P **P 11 21 29.5 +1.3**
comp=Z,35nm,0.8s,mb4.7
CTA Charters Tower 21.48 269 P **P 11 21 28.8 +0.5**
comp=Z,36nm,0.7s,mb4.8,baz=101,slow=12,SNR=16
CTA Charters Tower 21.48 269 *e*P **P 11 21 29.5 +1.3**
CTA pmax pmax
comp=Z,35nm,0.8s
CTAO Charters Tower 21.48 269 *e*P **P 11 21 29.5 +1.3**
CTAO pmax pmax
comp=Z,640nm,1.9s,mb5.6
CTAO Charters Tower 21.48 269 *e*P **P 11 21 29.5 +1.3**
comp=Z,639nm,1.9s,mb5.6
CNB Canberra Magne 22.23 227 *e*P **P 11 21 40.0 +3.8**
RPZ Rata Peaks 22.33 176 P **P 11 21 38.7 +1.5**
comp=Z,20nm,1.1s,mb4.5,baz=357,slow=9.0,SNR=5.6
PMG Port Moresby 24.30 296 ⇑*i*P **P 11 21 56.6 -0.5**
PMG Port Moresby 24.30 296 *e*P **P 11 21 57.2 +0.1**
COEN Coen 25.82 282 *e*P **P 11 22 11.5 +0.5**
TOO Toolangi 26.08 227 *e*P **P 11 22 15.6 +2.5**
STKA Stephens Creek 26.71 241 *e*P **P 11 22 20.3 +1.4**
comp=Z,61nm,1.9s,mb4.8
STKA Stephens Creek 26.71 241 P **P 11 22 20.1 +1.2**
comp=Z,18nm,0.8s,mb4.7,baz=64,slow=8.5,SNR=10
STKA LR LR 11 32 19.2
comp=Z,31μm,18.2s,MS5.9,baz=45,slow=35
RAR Rarotonga 28.91 95 LR LR 11 31 36.2
comp=Z,7μm,18.2s,MS5.3,baz=262,slow=31
WB2 Warramunga Arr 32.58 266 *e*P **P 11 23 09.1 -2.0**
WRAB Tennant Creek 32.58 266 *e*P **P 11 23 11.9 +0.8**
WRA Warramunga Arr 32.59 266 P **P 11 23 09.4 -1.8**
comp=Z,7.5nm,0.5s,mb4.9,baz=97,slow=8.3,SNR=34
WRA LR LR 11 35 33.7
comp=Z,19μm,20.5s,MS5.8,baz=90,slow=35
ASAR Alice Springs 32.61 259 P **P 11 23 10.3 -1.1**
comp=Z,13nm,0.6s,mb5.1,baz=95,slow=9.3,SNR=39
KAKA Kakadu 36.09 278 *e*P **P 11 23 40.3 -1.3**
comp=Z,53nm,1.3s,mb5.3
FORT Forrest 37.92 247 *e*P **P 11 23 55.9 -1.1**
comp=Z,52nm,0.7s,mb5.4
TBI Tubuai 38.21 101 *e*LQ 11 32 45.1
comp=Z,22μm,27.5s
TBI *e*LR LR 11 34 25.5
comp=Z,6μm,28.5s
PPT Papeete 38.99 92 *e*S **S 11 30 00.5 -4.2**
comp=Z,4μm,25.2s
PPT *e*LQ 11 33 04.9
comp=Z,25μm,27.8s
PPT *e*LR LR 11 34 43.1
comp=Z,12μm,28.5s
PPT Papeete 38.99 92 LR LR 11 36 05.4
comp=Z,5μm,18.9s,MS5.4,baz=257,slow=30
FITZ Fitzroy Crossi 41.02 267 *e*P **P 11 24 22.5 -0.4**
comp=Z,83nm,1.2s,mb5.2
FITZ *e*S **S 11 30 33.0 -2.0**
FITZ Fitzroy Crossi 41.02 267 P **P 11 24 22.0 -1.0**
comp=Z,21nm,0.7s,mb4.9,baz=119,slow=13
GUMO Guam 42.16 323 LR LR 11 40 59.7
comp=Z,5μm,19.6s,MS5.4,baz=283,slow=35
MBWA Marble Bar 45.92 261 *e*P **P 11 25 02.3 -0.2**
comp=Z,85nm,0.9s,mb5.7
KLBR Kellerberrin 46.77 246 *e*P **P 11 25 07.5 -1.6**
comp=Z,124nm,0.9s,mb5.8
NWAO Narrogin (SRO) 47.22 244 P **P 11 25 11.1 -1.4**
comp=Z,50nm,1.1s,mb5.4,baz=92,slow=8.5,SNR=17
NWAO LR LR 11 44 29.0
comp=Z,26μm,19.7s,MS6.2,baz=94,slow=35
NWAO Narrogin (SRO) 47.22 244 *e*P **P 11 25 11.7 -0.8**
MUN Mundaring 48.09 246 *e*P **P 11 25 17.7 -1.6**
DRV SS SS 11 36 11.0 +12
DRV R 11 40 00.0
DRV Dumont d'Urvil 48.96 195 R 11 35 00.0
DRV Dumont d'Urvil 48.96 195 S **S 11 32 31.0 +2.2**
KAPI Kappang 50.55 281 P **P 11 25 37.3 -1.0**
comp=Z,8.5nm,0.4s,mb5.0,baz=172,slow=8.9,SNR=5.2
KAPI Kappang 50.55 281 *e*P **P 11 25 37.5 -0.9**
RKT Rikitea 51.45 103 *e*S **S 11 33 01.9 -2.9**
comp=Z,4μm,27.8s
RKT *e*LQ 11 38 25.9
comp=Z,4μm,24.8s
RKT *e*LR LR 11 40 28.4
comp=Z,3μm,29.8s
CBIJ Chichi jima 54.82 330 P **P 11 26 08.3 -1.3**
comp=Z,56nm,0.8s,mb5.7,baz=114,slow=19,SNR=2.8
CBIJ LR LR 11 48 14.1
comp=Z,3μm,18.7s,MS5.5,baz=332,slow=35
SBA Scott Base 56.54 181 *e*P **P 11 26 22.1 +0.7**
CASY Casey 58.16 204 *e*P **P 11 26 31.5 -1.4**
KSM Kuching 61.81 284 *e*P **P 11 26 57.3 -1.5**
JOW Kunigami 62.17 319 P **P 11 27 00.9 -0.1**
comp=Z,20nm,1.0s,mb5.2,baz=132,slow=12,SNR=3.1
JOW LR LR 11 49 35.7
comp=Z,3μm,18.5s,MS5.5,baz=344,slow=32
MJAR Matsushiro Arr 64.61 333 P **P 11 27 16.3 -0.6**
comp=Z,6.2nm,0.8s,mb4.7,baz=176,slow=6.5,SNR=5.9
MAJO Matsushiro 64.61 333 *e*P **P 11 27 20.8 +3.9**
MAT Matsushiro 64.61 333 P **P 11 27 17.2 +0.3**
MAT S **S 11 35 55.0 -1.2**
YHNB Yeheng 65.22 312 *e*P **P 11 27 21.4 +0.3**
comp=Z,103nm,1.4s,mb5.7
QZH Quanzhou 67.34 311 ⇑*i*P **P 11 27 32.0 -2.8**
QZH AMB AMB
comp=Z,3μm,4.8s
QZH LR LR
comp=Z,5μm,15.1s,MS5.9
YUK Yuzh-Kuril'sk 68.51 342 *e*P **P 11 27 40.0 -1.7**
YUK *e* 11 28 07.0
YUK *e*PPP 11 31 48.0
YUK *e*S S 11 36 45.0 +1.9
YUK *e*PS 11 37 08.0
YUK *e*SS SS 11 41 05.0 -2.8
YUK smax
comp=E,4μm,11.0s
QSPA South Pole Qui 68.69 180 P **P 11 27 41.8 -0.6**
comp=E,14nm,0.9s,mb4.9,baz=14,slow=3.8,SNR=11
QSPA South Pole Qui 68.69 180 P **P 11 27 41.8 -0.6**
ASAJ Asahikawa 69.58 340 P **P 11 27 46.4 -1.9**
comp=E,13nm,1.0s,mb4.8,baz=143,slow=15,SNR=3.1
ASAJ LR LR 11 53 11.2
comp=E,6μm,20.1s,MS5.8,baz=152,slow=32
SSE Sheshan 69.58 317 *e*P **P 11 27 49.5 +0.8**
SSE AP pP 11 27 53.5 -0.1
SSE PCP PcP 11 28 13.3 +1.6
SSE AMB AMB
comp=Z,25nm,0.8s,mb5.2
SSE AMB AMB
comp=Z,229nm,4.2s
SSE LR LR
comp=N,512nm,16.6s,MS5.3
SSE LR LR
comp=E,1μm,16.6s,MS5.3
SSE LR LR
comp=Z,2μm,16.6s,MS5.5
SSE Sheshan 69.58 317 *e*P **P 11 27 49.6 +0.9**
SSE pP pP 11 27 53.4 -0.2
SSE PcP PcP 11 28 13.2 +1.6
SSE S S 11 36 58.5 +2.1
SSE ScS ScS 11 37 50.9 +1.0
GZH Guangzhou 70.08 306 P **P 11 27 52.8 +0.9**
GZH LR LR
comp=N,1μm,16.3s,MS5.4
GZH LR LR
comp=E,1μm,19.7s,MS5.4
GZH LR LR
comp=Z,3μm,18.8s,MS5.5
KSRS Korea Array 70.23 326 P **P 11 27 53.4 +0.9**
comp=Z,6.9nm,0.9s,mb4.6,baz=144,slow=6.4,SNR=12
QIZ Qiongzhong 70.59 300 P **P 11 27 55.8 +0.7**
QIZ S S 11 37 11.3 +2.6
QIZ AMB AMB
comp=Z,1μm,10.2s
QIZ LR LR
comp=N,2μm,15.0s
QIZ LR LR
comp=Z,2μm,17.4s,MS5.3
INCN Inchon 70.93 325 *e*P **P 11 27 58.5 +1.7**
comp=Z,282nm,1.9s,mb5.9
NJ2 Nanjing 71.70 316 *e*P **P 11 28 03.0 +1.4**
YSS Yuzh-Sakhalins 72.07 341 *e*P **P 11 28 04.3 +0.9**
YSS *e**SP sP 11 28 17.0 +6.8
YSS *e*S S 11 37 31.0 +6.3
YSS *e*PPS 11 38 06.0
YSS smax
comp=E,7μm,10.0s
YSS MLR MLR
comp=Z,3μm,17.0s,MS5.7
YSS MLR MLR

comp=N,3µm,18.0s,MS5.7
YSS MLR MLR
comp=E,3µm,18.0s,MS5.7
YSS Yuzh-Sakhalins 72.07 341 ⇑*i*P **P 11 28 03.3 -0.1**
WHN Wuhan 73.74 313 P **P 11 28 13.5 -0.2**
WHN AMB AMB
comp=Z,397nm,2.0s,mb6.0
WHN LR LR
comp=N,5µm,17.6s,MS5.9
WHN LR LR
comp=E,2µm,17.6s,MS5.9
WHN LR LR
comp=Z,4µm,16.8s,MS5.8
PET Petropavlovsk 74.65 353 *e*P **P 11 28 18.4 -0.1**
PET *e*S S 11 37 57.2 +3.6
PET *e*PPS 11 38 48.9
PET pmax pmax
comp=Z,56nm,1.6s,mb5.2
PET pmax pmax
comp=Z,1µm,8.8s
PET smax
comp=N,60nm,1.2s
PET smax
comp=E,4µm,11.9s
PET smax
comp=N,2µm,12.3s
PET MLR MLR
comp=Z,3µm,18.0s,MS5.7
PET Petropavlovsk 74.65 353 ⇑*i*P **P 11 28 16.6 -1.9**
DL2 Dalian 74.68 323 ⇑P **P 11 28 19.5 +0.5**
DL2 S S 11 37 56.5 +1.9
DL2 AMB AMB
comp=Z,40nm,1.1s,mb5.3
DL2 AMB AMB
comp=Z,550nm,5.7s
DL2 LR LR
comp=N,950nm,16.4s,MS5.3
DL2 LR LR
comp=E,1µm,15.7s,MS5.3
DL2 LR LR
comp=Z,2µm,15.6s,MS5.4
PETK Petropavlovsk- 74.84 353 P **P 11 28 18.7 -0.9**
comp=Z,44nm,1.1s,mb5.3,baz=135,slow=4.9,SNR=11
PETK LR LR 11 57 02.7
comp=Z,4µm,18.8s,MS5.8,baz=162,slow=32
MDJ Mudanjiang 74.97 332 P **P 11 28 22.0 +1.5**
MDJ AP pP 11 28 25.3 -0.2
MDJ PCP PcP 11 28 35.3 +1.0
MDJ PP PP 11 31 06.5 -2.2
MDJ S S 11 37 57.5 0.0
MDJ AMB AMB
comp=Z,24nm,1.4s,mb4.9
MDJ AMB AMB
comp=Z,654nm,7.7s
MDJ LR LR
comp=N,2µm,19.2s,MS5.5
MDJ LR LR
comp=E,1µm,20.7s,MS5.5
MDJ LR LR
comp=Z,3µm,18.7s,MS5.6
MDJ Mudanjiang 74.97 332 *e*P **P 11 28 20.7 +0.2**
comp=Z,203nm,2.0s,mb5.7
TIA Tai'an 75.50 319 ⇑P **P 11 28 24.5 +0.7**
SNY Shenyang 75.72 327 ⇓P **P 11 28 26.3 +1.4**
SNY SS SS 11 42 45.0 -13
SNY AMB AMB
comp=Z,30nm,2.5s,mb4.8
SNY AMB AMB
comp=Z,1µm,12.0s
SNY LR LR
comp=N,2µm,19.8s
SNY LR LR
comp=Z,2µm,20.4s,MS5.3
HABR Khabarovsk 75.94 337 *e*P **P 11 28 27.3 +1.3**
HABR *e* 11 28 37.7
HABR *e* 11 28 39.2
HABR *e* 11 28 41.8
HABR *e*S S 11 38 09.2 +1.1
HABR *e* 11 38 22.2
HABR *e* 11 38 39.1
HABR *e* 11 43 04.0
CN2 Changchun 76.25 329 *e*P **P 11 28 27.5 -0.4**
CN2 *e*XP sP 11 28 34.5 -0.2
CN2 AMB AMB
comp=Z,40nm,1.2s,mb5.2
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,2µm,18.0s,MS5.6
CN2 LR LR
comp=E,2µm,18.0s,MS5.6
CN2 LR LR
comp=Z,2µm,18.0s,MS5.4
MAW Mawson 76.44 202 *e*P **P 11 28 28.3 -0.5**
comp=Z,12nm,0.9s,mb4.8
MAW Mawson 76.44 202 P **P 11 28 28.2 -0.5**
comp=Z,6.7nm,0.9s,mb4.6,baz=116,slow=6.8,SNR=8.3
MAW LR LR 11 57 21.6
comp=Z,6µm,19.1s,MS5.9,baz=91,slow=32
MAW Mawson 76.44 202 *e*P **P 11 28 28.9 +0.1**
GYA Guiyang 77.00 305 ⇓*i*P **P 11 28 34.0 +1.5**
GYA PP PP 11 31 30.0 +3.8
GYA S S 11 38 23.3 +2.6
GYA SKS 11 38 41.5
GYA AMB AMB
comp=Z,150nm,1.0s,mb5.9
GYA AMB AMB
comp=Z,1µm,8.4s
GYA LR LR
comp=N,2µm,18.9s,MS5.5
GYA LR LR
comp=E,1µm,17.1s,MS5.5
GYA LR LR
comp=Z,2µm,18.3s,MS5.5
KLR Kul'dur 77.79 336 *e*P **P 11 28 32.5 -3.9**
KLR *e* 11 38 29.5
BJT Baijiatuau 78.55 321 *e*P **P 11 28 40.1 -0.8**
BJT pmax pmax
comp=Z,54nm,1.4s
BJT Baijiatuau 78.55 321 *e*P **P 11 28 40.1 -0.8**
comp=Z,54nm,1.4s,mb5.3
BJI Beijing 78.56 321 P **P 11 28 41.5 +0.6**
BJI PP PP 11 31 40.5 +1.5
BJI S S 11 38 39.5 +2.5
BJI AMB AMB
comp=Z,23nm,1.0s,mb5.1
BJI AMB AMB
comp=Z,1µm,5.0s
BJI LR LR
comp=N,2µm,15.9s,MS5.7
BJI LR LR
comp=E,1µm,17.7s,MS5.7
BJI LR LR
comp=Z,995nm,16.8s,MS5.2
BJI Beijing 78.56 321 P **P 11 28 41.6 +0.7**
BJI PP PP 11 31 40.5 +1.5
BJI S S 11 38 39.4 +2.4
BJI SS SS 11 43 41.2 -0.1
CMAR Chiang Mai Arr 79.33 295 P **P 11 28 46.6 +1.0**
comp=Z,6.2nm,1.0s,mb4.5,baz=124,slow=5.2,SNR=11
CMAR Chiang Mai Arr 79.33 295 *i*P **P 11 28 46.7 +1.1**
KMI Kunming 79.35 302 P **P 11 28 47.5 +1.9**
KMI AP pP 11 28 51.3 +0.7
KMI PCP PcP 11 28 56.0 +2.2
KMI PP PP 11 31 50.5 +4.5
KMI S S 11 38 48.8 +2.7
KMI XS sS 11 38 54.0 -0.4
KMI SKS 11 39 00.0
KMI AMB AMB
comp=Z,18nm,1.6s,mb4.8
KMI AMB AMB
comp=Z,1µm,6.8s
KMI LR LR
comp=N,1µm,18.1s,MS5.5
KMI LR LR
comp=E,2µm,18.1s,MS5.5
KMI LR LR
comp=Z,2µm,19.5s,MS5.5
KMI Kunming 79.35 302 P **P 11 28 47.6 +2.0**
KMI *SP sP 11 28 52.4 -0.1
KMI 11 28 56.1
KMI 11 31 50.4
KMI PPP 11 33 38.0
KMI S S 11 38 48.8 +2.7
KMI *SS sS 11 38 54.0 -0.4
KMI PS 11 38 59.9
KMI 11 39 34.3
KMI SS SS 11 43 58.3 +4.5
KMI Kunming 79.35 302 P **P 11 28 47.6 +2.0**
KMI pP pP 11 28 51.2 +0.6
KMI sP sP 11 28 52.4 -0.1
KMI PcP PcP 11 28 56.1 +2.3
KMI PP PP 11 31 50.4 +4.4
KMI PPP 11 33 38.0
KMI S S 11 38 48.8 +2.7
KMI sS sS 11 38 54.0 -0.4
KMI SKS 11 38 59.9
KMI ScS ScS 11 39 08.7 +0.2
KMI PS 11 39 34.3
KMI SS SS 11 43 58.3 +4.5
KMI SSS 11 47 20.5
TIY Taiyuan 79.36 318 *e*P **P 11 28 47.5 +2.1**
TIY LR LR
comp=N,2µm,13.3s,MS5.7
TIY LR LR
comp=E,1µm,13.1s,MS5.7
TIY LR LR
comp=Z,3µm,17.4s,MS5.6
CHTO Chiang Mai 79.49 295 *e*P **P 11 28 47.1 +0.6**
XAN Xi'an 79.51 313 P **P 11 28 47.3 +1.0**
XAN AP pP 11 28 56.3 +5.0
XAN AMB AMB
comp=Z,44nm,2.2s,mb5.0
XAN AMB AMB
comp=Z,469nm,5.7s
CD2 Chengdu 81.49 308 ⇓P **P 11 28 58.8 +1.8**
CD2 AP pP 11 29 06.8 +4.8
CD2 XP sP 11 29 10.3 +6.5
CD2 S S 11 39 09.0 +0.7
CD2 AMB AMB
comp=Z,50nm,1.8s,mb5.1
CD2 AMB AMB
comp=Z,2µm,8.4s
CD2 LR LR
comp=N,2µm,20.4s
CD2 LR LR
comp=E,2µm,14.4s
CD2 LR LR
comp=Z,1µm,20.4s,MS5.3
HHC Hu-ho-hao-te 81.80 320 *e*P **P 11 28 59.5 +1.1**
HHC AP pP 11 29 02.8 -0.6
HHC XP sP 11 29 04.8 -0.4
HHC PP PP 11 32 09.8 +3.8
HHC S S 11 39 12.3 +1.2
HHC XS sS 11 39 18.3 -1.1
HHC AMB AMB
comp=Z,37nm,1.1s,mb5.2
HHC AMB AMB
comp=Z,792nm,7.1s
HHC LR LR
comp=N,2µm,17.3s,MS5.6
HHC LR LR
comp=E,2µm,16.8s,MS5.6
HHC LR LR
comp=Z,2µm,17.0s,MS5.6
HIA Hailar 82.92 330 ⇑*i*P **P 11 29 04.5 +0.5**
LZH Lanzhou 84.11 312 *e*P **P 11 29 12.3 +1.8**
LZH AP pP 11 29 18.3 +2.8
LZH XP sP 11 29 20.5 +3.2
LZH AMB AMB
comp=Z,36nm,1.3s,mb5.3
LZH AMB AMB
comp=Z,205nm,5.3s
LZH LR LR
comp=N,2µm,17.2s
LZH LR LR
comp=Z,2µm,18.8s,MS5.6
LZH Lanzhou 84.11 312 *e*P **P 11 29 12.3 +1.8**
LZH pP pP 11 29 18.3 +2.8
LZH sP sP 11 29 20.5 +3.2
LZH PP PP 11 32 32.3 +7.3
LZH *e*SKS 11 39 36.2
LZH S S 11 39 40.2 +5.4
LZH sS sS 11 39 51.1 +8.0
LZH SS SS 11 45 16.0 +12
PMSA Palmer Station 84.93 160 LR LR 12 05 09.5
comp=Z,3µm,18.4s,MS5.7,baz=228,slow=34
KDAK Kodiak Island 85.06 19 P **P 11 29 13.9 -0.8**
comp=Z,11nm,0.8s,mb5.0,baz=138,slow=14,SNR=2.9
SEY Seymchan 85.07 352 ⇑*e*P **P 11 29 14.2 -0.5**
IMP Imphal 86.29 298 *ex* **P 11 29 21.0 -0.7**
CLNS Chul'man 86.33 337 *e*P **P 11 29 22.3 +1.2**
CLNS *e* 11 29 29.3
CLNS *e* 11 32 42.0
CLNS *e*S S 11 39 45.7 -10
CLNS pmax pmax
comp=Z,27nm,1.0s,mb5.4
CLNS pmax pmax
comp=E,3.0nm,1.1s
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS smax
comp=N,869µm,14.1s
CLNS smax
comp=E,2308µm,14.8s
CLNS MLR MLR
comp=N,670nm,14.0s,MS5.2
CLNS MLR MLR
comp=E,218nm,14.0s,MS5.2
CLNS MLR MLR
comp=Z,728nm,14.0s,MS5.2
FARB Farallon Islan 86.65 47 ⇑P **P 11 29 22.9 -0.3**
baz=87
NVL N'lazarevskaya 86.74 187 P **P 11 29 23.1 0.0**
NVL *e*S S 11 39 51.0 -8.8
NVL pmax pmax
comp=Z,44nm,2.0s,mb5.3
MAIT Maitri 86.74 187 *e*P **P 11 29 22.8 -0.3**
MCCM Marconi Confer 86.96 47 ⇓P **P 11 29 24.5 -0.1**
baz=87
MCCM Marconi Confer 86.96 47 *e*P **P 11 29 24.9 +0.3**
comp=Z,58nm,1.0s,mb5.8
SNCC San Nicolas Is 86.98 53 ⇑P **P 11 29 25.1 +0.2**
baz=87
JRSC Jasper Ridge 87.03 48 ⇓P **P 11 29 24.6 -0.4**
baz=87,SNR=5.8
SNAA Sanae 87.03 183 *e*P **P 11 29 23.4 -1.1**
SNAA *e* pP 11 29 26.8 -2.8
SNAA *e* 11 29 34.7
SNAA Sanae 87.03 183 *e*P **P 11 29 22.8 -1.7**
V03C Hunter Liggett 87.06 50 ⇑P **P 11 29 26.0 +0.9**
baz=87,SNR=12
BSC Santa Cruz Isl 87.25 52 ⇑P **P 11 29 25.6 -0.5**
baz=87
HOPS Hopland 87.25 46 ⇑P **P 11 29 26.5 +0.4**
baz=88,SNR=11
SAO San Andreas Ge 87.27 49 *e*P **P 11 29 27.2 +1.0**
NSHM Saint Helena R 87.33 47 *e*P **P 11 29 24.2 -2.3**
O01C Eel River Cons 87.34 45 ⇑P **P 11 29 27.1 +0.7**
baz=88,SNR=15
CVS Carmenet Viney 87.34 47 ⇓P **P 11 29 26.9 +0.4**
baz=88,SNR=9.2
KIPM Iron Peak 87.39 45 *e*P **P 11 29 27.0 +0.3**
SBC Santa Barbara 87.40 52 ⇓P **P 11 29 27.4 +0.5**
baz=88
WENL Wente Vineyard 87.47 48 ⇑P **P 11 29 27.3 +0.2**
baz=88
PACP Pacheco Peak 87.50 49 ⇓P **P 11 29 27.7 +0.4**
baz=88
PKD Parkfield 87.51 50 ⇑P **P 11 29 27.1 -0.3**
baz=88,SNR=27
PKM Peak Mountain 87.53 51 ⇓P **P 11 29 27.5 0.0**
baz=88,SNR=6.7
U04C Hernandez Rese 87.54 49 ⇑P **P 11 29 27.9 +0.3**
baz=88,SNR=27
JCC Jacoby Creek 87.55 44 ⇑P **P 11 29 28.4 +1.0**
baz=88
BDM Black Diamond 87.56 48 ⇑P **P 11 29 27.7 +0.2**
baz=88
SCI San Clemente I 87.58 53 ⇑P **P 11 29 27.5 -0.3**
baz=88,SNR=7.7
SMMC Simmler 87.60 51 ⇓P **P 11 29 28.3 +0.4**
baz=88,SNR=9.4
PTRM Twissleman Ran 87.61 50 *e*P **P 11 29 28.3 +0.4**
MNRC McLaughlin Nat 87.62 47 ⇑P **P 11 29 28.6 +0.7**
baz=88,SNR=22
VNA3 Neumayer Olymp 87.62 180 *e*P **P 11 29 25.8 -1.6**
VNA3 *e* pP 11 29 29.0 -3.5
VNA3 *e* 11 29 37.2
BLG Laguna Peak 87.72 52 ⇓P **P 11 29 27.8 -0.7**
baz=88
Q03C Winters 87.79 47 ⇑P **P 11 29 29.2 +0.6**
baz=88,SNR=6.7
GASB Alder Springs 87.82 46 ⇑P **P 11 29 29.4 +0.6**
baz=88,SNR=20
CIS Catalina Islan 87.89 53 ⇑P **P 11 29 28.7 -0.5**
baz=88
VNA2 Neumayer--Watz 87.92 181 *e*P **P 11 29 27.8 -1.0**
VNA2 *e* pP 11 29 30.8 -3.1
VNA2 *e* 11 29 39.2
V05C Boulder Hill, 87.93 50 ⇑P **P 11 29 30.2 +0.8**
baz=88
KRMB Red Mountain 87.99 44 *e*P **P 11 29 29.1 -0.4**
U05C Westside ANR, 88.00 50 ⇓P **P 11 29 30.4 +0.7**
baz=88
M01C Crescent City 88.02 43 ⇑P **P 11 29 30.2 +0.5**
baz=88
N02C Big Bar 88.02 45 ⇑P **P 11 29 30.4 +0.7**
baz=88,SNR=12
O02C Red Bluff 88.04 45 ⇓P **P 11 29 30.4 +0.7**
baz=88,SNR=40
FMP Fort Macarthur 88.11 53 ⇓P **P 11 29 29.6 -0.7**
baz=88
KBO Bosley Butte 88.14 43 *e*P **P 11 29 31.9 +1.7**
OSI Osito Adit 88.20 52 ⇓P **P 11 29 30.6 -0.2**
baz=88
K01A Sixes 88.30 42 ⇑P **P 11 29 30.7 -0.2**
baz=88
DECC Green Verdugo 88.33 52 ⇓P **P 11 29 30.9 -0.4**
baz=88
Q04C Lincoln 88.33 47 ⇑P **P 11 29 30.9 -0.3**
baz=88,SNR=7.0
S05C Merced 88.33 49 ⇑P **P 11 29 31.0 -0.3**
baz=88,SNR=8.1
R04C Big Horse Ranc 88.35 48 ⇑P **P 11 29 30.6 -0.7**
baz=88
ARVC Arvin 88.36 51 ⇑P **P 11 29 30.7 -0.8**
baz=88,SNR=6.9
WDC Whiskeytown Da 88.40 45 ⇑P **P 11 29 31.4 -0.1**
baz=89,SNR=13
WDC Whiskeytown Da 88.40 45 *e*P **P 11 29 31.6 0.0**
L02A Cave Junction 88.51 43 ⇓P **P 11 29 32.6 +0.6**
baz=89,SNR=5.9
VES Vestal, Richgr 88.51 51 ⇑P **P 11 29 31.3 -0.9**
baz=89,SNR=6.5
MWC Mount Wilson 88.51 52 *e*P **P 11 29 32.5 +0.3**
ULN Ulaanbaatar 88.54 323 *e*P **P 11 29 32.3 +0.3**
ULN Ulaanbaatar 88.54 323 ⇓*i*P **P 11 29 31.8 -0.2**
GTA Gaotai 88.55 314 *e*P **P 11 29 33.8 +1.6**
GTA AP pP 11 29 37.8 +0.5
GTA XP sP 11 29 40.5 +1.4
GTA PP PP 11 33 04.8 +3.9
GTA SKS 11 40 01.0
GTA S S 11 40 21.5 +3.6
GTA XS sS 11 40 29.5 +3.2
GTA AMB AMB
comp=Z,21nm,1.1s,mb5.4
GTA AMB AMB
comp=Z,446nm,5.4s
GTA LR LR
comp=N,2µm,16.5s,MS5.8
GTA LR LR
comp=E,2µm,19.2s,MS5.8
GTA LR LR
comp=Z,2µm,18.6s,MS5.5
ORV Oroville 88.59 46 ⇑P **P 11 29 32.0 -0.4**
baz=89,SNR=20
M02C Callahan 88.61 44 ⇑P **P 11 29 33.0 +0.6**
baz=89,SNR=21
T06C Millerton Lake 88.61 49 ⇑P **P 11 29 32.3 -0.3**
baz=89,SNR=38
RCTC Rector, Farmer 88.61 50 ⇓P **P 11 29 32.1 -0.5**
baz=89
CMB Columbia Colle 88.62 48 ⇑P **P 11 29 32.4 -0.2**
baz=89,SNR=30
CMB Columbia Colle 88.62 48 *e*P **P 11 29 32.2 -0.4**
109C Camp Elliot, M 88.62 54 ⇓P **P 11 29 32.5 -0.3**
baz=89,SNR=5.5
LAVA Lava Cap Winer 88.72 47 ⇓P **P 11 29 32.9 -0.2**
baz=89,SNR=18
BFSC Mount Baldy St 88.81 52 ⇑P **P 11 29 33.4 -0.2**
baz=89,SNR=12
BAR Barrett 88.86 54 *e*P **P 11 29 33.5 -0.4**
comp=Z,191nm,2.4s,mb6.0
EDW2 Edwards Air Fo 88.86 52 ⇑P **P 11 29 33.6 -0.2**
baz=89,SNR=13
ISA Isabella 88.87 51 *e*P **P 11 29 33.6 -0.2**
ISA pmax pmax
comp=Z,46nm,1.0s,mb5.8
ISA Isabella 88.87 51 ⇓P **P 11 29 34.1 +0.2**
baz=89,SNR=28
ISA Isabella 88.87 51 *e*P **P 11 29 33.6 -0.2**
comp=Z,46nm,1.0s,mb5.8
MURC Murrieta 88.87 53 ⇑P **P 11 29 33.2 -0.7**
baz=89,SNR=9.0
YBH Yreka Blue Hor 88.87 44 P **P 11 29 34.0 +0.3**
comp=Z,13nm,0.8s,mb5.3,baz=169,slow=3.1,SNR=27
YBH LR LR 11 59 57.0
comp=Z,2µm,21.5s,MS5.6,baz=229,slow=29
YBH Yreka Blue Hor 88.87 44 ⇓P **P 11 29 34.0 +0.3**
baz=89,SNR=17
YBH Yreka Blue Hor 88.87 44 *e*P **P 11 29 33.9 +0.2**
YAK Yakutsk 88.88 343 *e*P **P 11 29 32.8 -0.4**
YAK *e**PP pP 11 29 40.4 +2.1
YAK *e*S S 11 39 59.8 -20
YAK *e* 11 40 21.1
YAK *e*SS SS 11 46 09.0 -4.2
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,13nm,0.9s,mb5.3
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK MLR MLR
comp=N,4µm,21.0s,MS5.9
YAK MLR MLR
comp=Z,5µm,20.0s,MS5.9
YAK MLR MLR
comp=E,2µm,16.0s,MS5.9
YAK Yakutsk 88.88 343 ⇑*i*P **P 11 29 32.9 -0.3**
SONM Songino Array 88.89 323 P **P 11 29 34.0 +0.4**
comp=E,7.0nm,0.9s,mb5.0,baz=127,slow=4.0,SNR=12
SONM LR LR 12 12 00.6
comp=E,3µm,18.1s,MS5.7,baz=122,slow=37
K02A Glendale 88.89 43 ⇓P **P 11 29 33.8 0.0**
baz=89,SNR=5.9
S06C San Francisco 88.92 48 ⇓P **P 11 29 34.0 0.0**
baz=89,SNR=28
HELL Mitchell Peak 88.94 50 ⇓P **P 11 29 33.7 -0.4**
baz=89,SNR=15
M03C McCloud 89.02 45 ⇓P **P 11 29 34.6 +0.2**
baz=89,SNR=8.8
KCC Kaiser Creek 89.03 49 ⇑P **P 11 29 34.1 -0.4**
baz=89,SNR=15
P05C Yuba Gap, Truc 89.07 47 ⇑P **P 11 29 35.1 +0.4**
baz=89,SNR=32
LHEM Herd Peak 89.14 44 P **P 11 29 34.8 -0.1**
MONP Monument Peak 89.14 54 ⇑P **P 11 29 35.3 +0.1**
baz=89,SNR=5.4
J02A Umpqua 89.14 42 ⇓P **P 11 29 35.3 +0.4**
baz=89
HUMO Hull Mountain 89.15 43 ⇑P **P 11 29 35.2 +0.2**
baz=89,SNR=22
HUMO Hull Mountain 89.15 43 *e*P **P 11 29 34.8 -0.2**
comp=E,44nm,1.0s,mb5.7
R05C Kirkwood Meado 89.15 48 ⇑P **P 11 29 35.0 -0.1**
baz=89,SNR=15
PMR Palmer 89.17 19 *e*P **P 11 29 34.8 +0.2**
PMR pmax pmax
comp=Z,120nm,2.3s,mb5.8
PMR Palmer 89.17 19 *e*P **P 11 29 34.8 +0.3**
comp=Z,121nm,2.3s,mb5.8
BILL Bilibino 89.18 359 ⇓*i*P **P 11 29 34.2 -0.3**
BILL *e* 11 29 42.2
BILL *i*S S 11 40 27.7 +5.1
BILL *e*SS SS 11 46 22.5 +5.3
BILL pmax pmax
comp=Z,76nm,1.6s,mb5.8
O05C Quincy 89.18 46 ⇑P **P 11 29 34.9 -0.3**
baz=89,SNR=27
O04C Chester 89.24 46 ⇓P **P 11 29 35.5 0.0**
baz=90,SNR=21
DVTC Desert V Tower 89.28 54 ⇓P **P 11 29 35.8 -0.1**
baz=89
I02A Mapleton 89.31 42 ⇓P **P 11 29 36.0 +0.3**
baz=90
LRMC Laurel Mountai 89.35 51 ⇑P **P 11 29 36.2 +0.1**

baz=90
BBRC **Big Bear Sol-O** 89.37 53 ⇑P P 11 29 36.0 -0.2
baz=90
PFO **Pinyon Flat Ob** 89.43 53 LR LR 12 01 54.9
comp=Z,4µm,18.5s,MS5.8,baz=306,slow=30
PFO **Pinyon Flat Ob** 89.43 53 *eP* P 11 29 36.5 0.0
PFO pmax pmax
comp=Z,80nm,1.6s,mb5.8
PFO **Pinyon Flat Ob** 89.43 53 ⇑P P 11 29 36.0 -0.5
baz=90,SNR=10
PFO **Pinyon Flat Ob** 89.43 53 *eP* P 11 29 36.5 0.0
comp=Z,80nm,1.6s,mb5.8
BUOR **Burton Butte** 89.44 44 P P 11 29 37.0 +0.7
M04C **Macdoel** 89.46 44 ⇑P P 11 29 36.5 +0.1
baz=90,SNR=9.6
R06C **Coleville** 89.50 48 ⇑P P 11 29 37.2 +0.5
baz=90,SNR=24
WAKR **Walker** 89.50 48 *eP* P 11 29 37.3 +0.6
CWC **Cottonwood Cre** 89.50 50 ⇑P P 11 29 36.4 -0.4
baz=90,SNR=16
MLAC **Mammoth Lakes** 89.51 49 ⇓P P 11 29 36.8 0.0
baz=90
R07C **Lee Vining** 89.58 49 ⇑P P 11 29 37.5 +0.4
baz=90
RRX **Edison Barstow** 89.59 52 ⇑P P 11 29 36.5 -0.7
baz=90
L04A **Klamath Falls** 89.62 44 ⇓P P 11 29 36.9 -0.3
baz=90,SNR=6.5
ELFS **Eagle Lake Fie** 89.62 46 ⇑P P 11 29 37.4 +0.1
baz=90,SNR=11
SWSC **Sam W. Stewart** 89.64 54 ⇑P P 11 29 37.8 +0.3
baz=90,SNR=6.7
I03A **Eugene** 89.64 42 ⇓P P 11 29 37.7 +0.4
baz=90
WCN **Washoe City** 89.65 47 ⇑P P 11 29 37.8 +0.4
baz=90,SNR=9.0
TIN **Tinemaha** 89.68 50 ⇓P P 11 29 37.4 -0.2
baz=90
M05C **Lookout** 89.71 45 ⇓P P 11 29 37.5 -0.1
baz=90,SNR=22
P06A **Stead Airport,** 89.73 47 ⇓P P 11 29 38.2 +0.4
baz=90,SNR=9.2
MPMC **Manual Prospec** 89.76 51 ⇑P P 11 29 37.9 -0.1
baz=90,SNR=18
GSC **Goldstone** 89.92 52 *eP* P 11 29 36.3 -2.5
GSC pmax pmax
comp=Z,53nm,1.3s,mb5.7
GSC **Goldstone** 89.92 52 ⇑P P 11 29 38.3 -0.4
baz=90,SNR=13
GSC **Goldstone** 89.92 52 *eP* P 11 29 36.3 -2.5
comp=Z,53nm,1.4s,mb5.7
S08C **White Mtn Res** 89.92 49 ⇑P P 11 29 38.8 +0.1
baz=90,SNR=22
K04A **Chilquin** 89.94 44 ⇑P P 11 29 38.6 0.0
baz=90
BELC **Belle Mtn.** 89.94 53 ⇓P P 11 29 38.8 -0.1
baz=90,SNR=43
H03A **Soap Creek Ran** 89.99 41 ⇑P P 11 29 39.0 +0.2
baz=90,SNR=6.2
J04A **Umpqua Nationa** 90.01 43 ⇓P P 11 29 39.1 +0.1
baz=90,SNR=5.6
O06A **Flanigan** 90.01 46 ⇓P P 11 29 38.9 -0.2
baz=90,SNR=20
HEC **Hector,Ludlow** 90.06 52 ⇓P P 11 29 39.1 -0.4
baz=90,SNR=16
M06C **Likely Place G** 90.07 45 ⇑P P 11 29 39.2 -0.1
baz=90,SNR=13
I04A **Tendick Farm,** 90.09 42 ⇑P P 11 29 39.0 -0.3
baz=90
PAHR **Pah Rah Range** 90.10 47 *eP* P 11 29 39.5 0.0
comp=Z,82nm,1.4s,mb5.9
Q07A **Schurz** 90.14 48 ⇑P P 11 29 39.6 -0.1
baz=90
BC3 **Big Chuckw Mtn** 90.20 54 ⇑P P 11 29 40.5 +0.3
baz=90,SNR=25
L05A **Lakeview** 90.24 44 ⇑P P 11 29 40.3 +0.2
baz=90,SNR=9.2
NVAR **Mina Array Bea** 90.25 49 P P 11 29 40.5 +0.3
comp=Z,22nm,0.8s,mb5.5,baz=227,slow=7.5,SNR=53
GRAC **Grapevine Rang** 90.27 50 ⇑P P 11 29 40.2 -0.1
baz=90,SNR=14
N06A **Buffalo Meadow** 90.28 46 ⇑P P 11 29 40.2 -0.1
baz=90,SNR=23
IRO **Indian Ridge** 90.29 42 P P 11 29 40.5 +0.2
G03A **Yamhill** 90.32 41 ⇓P P 11 29 40.5 +0.1
baz=91
R08A **Mina** 90.35 49 ⇑P P 11 29 40.3 -0.4
baz=90,SNR=19
P07A **Fallon** 90.36 47 ⇑P P 11 29 40.5 -0.2
baz=91
112A **Yuma** 90.39 55 ⇓P P 11 29 40.8 -0.2
baz=90
LPIG **La Paz** 90.39 64 LR LR 12 00 50.3
comp=Z,5µm,19.2s,MS5.9,baz=235,slow=29
FURC **Furnace Creek,** 90.40 51 ⇓P P 11 29 40.6 -0.4
baz=91,SNR=24
GLA **Glamis** 90.42 55 *eP* P 11 29 41.1 -0.1
GLA pmax pmax
comp=Z,71nm,1.0s,mb6.0
GLA **Glamis** 90.42 55 ⇓P P 11 29 40.9 -0.2
baz=91,SNR=31
GLA **Glamis** 90.42 55 *eP* P 11 29 41.0 -0.1
comp=Z,71nm,1.0s,mb6.0
F03A **Seaside** 90.47 40 ⇓P P 11 29 41.4 +0.4
baz=91
MOD **Modoc** 90.52 45 ⇓P P 11 29 41.1 -0.3
baz=91,SNR=15
MOD **Modoc** 90.52 45 *eP* P 11 29 41.9 +0.5
K05A **Summer Lake** 90.53 44 ⇓P P 11 29 41.5 +0.1
baz=91,SNR=12
GMRC **Granite Mounta** 90.53 53 ⇑P P 11 29 41.5 -0.1
baz=91,SNR=23
SHOC **Shoshone** 90.57 51 ⇑P P 11 29 41.1 -0.7
baz=91,SNR=19
J05A **Fort Rock** 90.58 43 ⇑P P 11 29 41.9 +0.2
baz=91,SNR=24
TUQ **Turquoise Moun** 90.62 52 ⇓P P 11 29 41.7 -0.3
baz=91,SNR=28
IRM **Iron Mountain** 90.65 53 ⇓P P 11 29 42.2 0.0
baz=91,SNR=20
O07A **Toulon** 90.66 47 ⇓P P 11 29 42.1 +0.1
baz=91,SNR=29
H04A **Detroit Lake** 90.67 42 ⇑P P 11 29 41.6 -0.4
baz=91
S09A **Goldfield** 90.69 50 ⇑P P 11 29 42.2 -0.1
baz=91,SNR=20
Q08A **Gabbs** 90.71 48 ⇑P P 11 29 42.0 -0.4
baz=91,SNR=32
G04A **Mulino** 90.75 41 ⇑P P 11 29 42.2 -0.2
baz=91,SNR=10
U10A **Ash Meadows, A** 90.76 51 ⇑P P 11 29 42.6 0.0
baz=91,SNR=37
E03A **Lebam** 90.78 40 ⇑P P 11 29 42.1 -0.4
baz=91
TPH **Tonopah** 90.85 49 *eP* P 11 29 43.6 +0.6
TPH pmax pmax
comp=Z,61nm,1.3s,mb5.8
TPH **Tonopah** 90.85 49 *eP* P 11 29 43.6 +0.6
comp=Z,61nm,1.3s,mb5.8
N07B **Gerlach** 90.88 46 ⇓P P 11 29 43.1 0.0
baz=91,SNR=6.3
C03A **Quillayute Air** 90.92 38 ⇓P P 11 29 43.4 +0.3
baz=91
Y12C **Blythe** 90.94 54 ⇑P P 11 29 43.4 -0.2
baz=91,SNR=22
D03A **Wishkah Elem.** 90.95 39 ⇑P P 11 29 43.8 +0.5
baz=91
K06A **Valley Falls** 90.98 44 ⇑P P 11 29 43.7 +0.2
baz=91,SNR=21
P08A **Dixie Valley** 90.98 47 ⇓P P 11 29 43.8 +0.1
baz=91,SNR=6.4
I05A **Bend** 90.99 42 ⇓P P 11 29 43.9 +0.4
baz=91,SNR=9.8
OOW **Octopus West** 91.02 38 P P 11 29 44.6 +1.0
M07A **Soldier Meadow** 91.03 46 ⇓P P 11 29 44.3 +0.5
baz=91
NLWA **Neilton Lookou** 91.03 39 ⇓P P 11 29 43.8 +0.2
baz=91
NLWA **Neilton Lookou** 91.03 39 *eP* P 11 29 44.3 +0.6
R09A **Tonopah** 91.03 49 ⇓P P 11 29 43.4 -0.4
baz=91,SNR=26
TPNV **Topopah Spring** 91.05 51 *eP* P 11 29 43.7 -0.3
TPNV pmax pmax
comp=Z,50nm,1.0s,mb5.8
TPNV **Topopah Spring** 91.05 51 ⇓P P 11 29 43.8 -0.1
baz=91,SNR=26
TPNV **Topopah Spring** 91.05 51 *eP* P 11 29 43.7 -0.3
comp=Z,50nm,0.9s,mb5.8

LDFC **Landfair** 91.07 53 *eP* P 11 29 37.3 -6.8
113A **Mohawk Valley,** 91.11 55 ⇓P P 11 29 44.0 -0.4
baz=91,SNR=12
F04A **Amboy** 91.15 40 ⇑P P 11 29 43.8 -0.4
baz=91,SNR=7.1
V11A **Goodsprings** 91.16 52 ⇑P P 11 29 44.3 -0.2
baz=91,SNR=17
O08A **Rochester Mine** 91.20 47 ⇓P P 11 29 44.8 +0.2
baz=91,SNR=20
L07A **Adell** 91.21 45 ⇓P P 11 29 45.0 +0.4
baz=91,SNR=28
BOD **Bodaibo** 91.22 334 *eP* P 11 29 41.8 -2.4
BOD pmax pmax
comp=Z,19nm,1.7s,mb5.2
Q09A **Carvers** 91.22 49 ⇑P P 11 29 45.1 +0.3
baz=91
S10A **Tonopah Range,** 91.23 50 ⇑P P 11 29 44.8 0.0
baz=91,SNR=73
H05A **Madras** 91.25 42 ⇑P P 11 29 44.9 +0.1
baz=92
E04A **Onalaska** 91.30 40 ⇓P P 11 29 45.5 +0.6
baz=92
NEE2 **Needles Airpor** 91.30 53 ⇑P P 11 29 45.0 -0.3
baz=92
W12A **Cal Nev Ari** 91.34 53 ⇓P P 11 29 45.2 -0.2
baz=92,SNR=7.1
N08A **GE Springer Mi** 91.44 46 ⇑P P 11 29 45.5 -0.2
baz=92,SNR=9.9
U11A **Corn Creek** 91.45 51 ⇑P P 11 29 46.2 +0.3
baz=92,SNR=9.7
PDMCI **Parker Dam,Lak** 91.46 54 ⇑P P 11 29 46.2 +0.2
baz=92,SNR=22
TDL **Tradedollar La** 91.48 40 P P 11 29 46.3 +0.5
G05A **Wamic** 91.49 41 ⇑P P 11 29 46.0 +0.2
baz=92
Y13A **Salome** 91.50 54 ⇓P P 11 29 46.3 +0.2
baz=92,SNR=34
214A **Organ Pipe Nat** 91.51 56 ⇑P P 11 29 46.1 -0.2
baz=92,SNR=9.5
D04A **Dobbs Creek Ra** 91.51 39 ⇓P P 11 29 46.9 +1.0
baz=92
V12A **Nelson** 91.54 52 ⇓P P 11 29 46.3 0.0
baz=92,SNR=14
I06A **Prineville** 91.55 43 ⇑P P 11 29 46.4 +0.2
baz=92,SNR=20
VIPM **Ingram Point** 91.56 42 P P 11 29 46.5 +0.3
P09A **Austin** 91.57 48 ⇓P P 11 29 46.2 -0.1
baz=92,SNR=6.0
B04A **Port Angeles** 91.58 38 ⇑P P 11 29 46.6 +0.4
baz=92
K07A **Rock Creek Ran** 91.58 44 ⇑P P 11 29 46.2 -0.1
baz=92,SNR=15
R10A **Warm Springs** 91.60 49 ⇑P P 11 29 46.5 0.0
baz=92,SNR=18
SHPR **Sheep Range** 91.64 51 *eP* P 11 29 47.2 +0.4
S11A **Rachel** 91.71 50 ⇓P P 11 29 46.8 -0.3
baz=92,SNR=12
F05A **White Salmon** 91.71 41 ⇑P P 11 29 47.0 +0.2
baz=92
C04A **Brinnon** 91.72 39 ⇑P P 11 29 47.1 +0.3
baz=92
GNW **Green Mountain** 91.73 39 *eP* P 11 29 47.2 +0.4
WRAK **Wrangell Islan** 91.75 28 *eP* P 11 29 46.0 -0.8
comp=Z,42nm,0.9s,mb5.8
Q10A **Clear Creek Ra** 91.76 49 ⇑P P 11 29 47.2 -0.1
baz=92,SNR=18
O09A **Fish Creek Ran** 91.81 47 ⇓P P 11 29 47.7 +0.3
baz=92,SNR=13
X13A **Yucca** 91.82 54 ⇓P P 11 29 47.1 -0.5
baz=92,SNR=21
H06A **Lindquist Farm** 91.85 42 ⇓P P 11 29 47.1 -0.4
baz=92,SNR=24
E05A **Randle** 91.86 40 ⇑P P 11 29 47.8 +0.3
baz=92
J07A **Hines** 91.86 44 ⇓P P 11 29 47.0 -0.6
baz=92,SNR=15
WVOR **Wild Horse Val** 91.86 45 *eP* P 11 29 47.9 +0.3
WVOR **Wild Horse Val** 91.86 45 *eP* P 11 29 47.5 -0.1
N09A **Rock Creek Ran** 91.89 47 ⇓P P 11 29 47.9 +0.2
baz=92,SNR=8.8
G06A **Carlson Farm,** 91.90 42 ⇑P P 11 29 48.0 +0.3
baz=92
BMN **Battle Mountai** 91.91 47 *eP* P 11 29 48.0 +0.1
T11A **Corn Creek, Al** 91.92 51 ⇑P P 11 29 48.0 0.0
baz=92,SNR=15
L08A **Fields** 91.94 45 ⇑P P 11 29 48.7 +0.7
baz=92,SNR=20
Z14A **Wintersburg** 91.98 55 ⇓P P 11 29 48.3 -0.1
baz=92,SNR=7.6
ZAK **Zakamensk** 91.99 324 *eP* P 11 29 45.8 -2.2
ZAK *e* 11 33 34.9
ZAK pmax pmax
comp=Z,22nm,1.6s,mb5.2
W13A **Hualapai Mount** 91.99 53 ⇓P P 11 29 48.2 -0.2
baz=92,SNR=11
D05A **Emmolaw** 92.03 40 ⇓P P 11 29 48.9 +0.6
baz=92
T12A **Moapa** 92.06 51 ⇑P P 11 29 48.8 +0.1
baz=92
U12A **Valley of Fire** 92.07 52 ⇓P P 11 29 48.3 -0.5
baz=92,SNR=12
I07A **Izee** 92.07 43 ⇓P P 11 29 49.0 +0.5
baz=92,SNR=8.9
P10A **Eureka** 92.07 48 ⇑P P 11 29 48.6 0.0
baz=92,SNR=5.5
F06A **Goldendale** 92.07 41 ⇓P P 11 29 48.8 +0.3
baz=92
COLA **College** 92.09 17 ⇑*i*P P 11 29 45.5 -2.6
K08A **Mann Creek Ran** 92.10 45 ⇓P P 11 29 48.6 -0.1
baz=92,SNR=13
R11A **Troy Canyon, C** 92.13 50 ⇓P P 11 29 48.9 -0.1
baz=92,SNR=8.4
Y14A **Wickenburg** 92.17 54 ⇑P P 11 29 49.0 -0.2
baz=92,SNR=12
M09A **Marrel Ranch,** 92.19 46 ⇓P P 11 29 49.5 +0.3
baz=92,SNR=13
V13A **Grand Canyon W** 92.23 52 ⇓P P 11 29 49.6 +0.1
baz=92
115A **Sonoran Desert** 92.26 56 ⇑P P 11 29 50.2 +0.5
baz=92,SNR=10
H07A **Lands Inn, Kim** 92.27 43 ⇑P P 11 29 49.3 -0.2
baz=92,SNR=9.2
Q11A **Duckwater** 92.30 49 ⇓P P 11 29 49.8 0.0
baz=92,SNR=11
L09A **Wilkinson Ranc** 92.32 46 ⇑P P 11 29 49.8 +0.1
baz=92,SNR=14
E06A **Yakima** 92.32 40 ⇑P P 11 29 50.1 +0.4
baz=93
O10A **Cortez Mining,** 92.34 47 ⇓P P 11 29 50.4 +0.5
baz=92
S12A **Delamar Landin** 92.34 50 ⇓P P 11 29 50.2 +0.2
baz=92,SNR=31
A04A **Legoe Bay, Lum** 92.38 38 ⇓P P 11 29 50.1 +0.3
baz=93
J08A **Circle Bar Ran** 92.39 44 ⇓P P 11 29 50.1 0.0
baz=93,SNR=22
SKAG **Skagway** 92.40 25 *eP* P 11 29 49.7 0.0
comp=Z,110nm,2.0s,mb5.8
IRK **Irkutsk** 92.45 326 *eP* P 11 29 52.8 +2.7
IRK pmax pmax
comp=Z,48nm,1.4s,mb5.6
C05A **Tolt Reservoir** 92.46 39 ⇑P P 11 29 50.2 0.0
baz=93
HYT **Haines Junctio** 92.47 23 *eP* P 11 29 48.4 -1.6
X14A **Yava** 92.47 54 ⇓P P 11 29 50.6 -0.1
baz=93,SNR=26
TLY **Talaya** 92.48 325 *eP* P 11 29 50.7 +0.5
TLY *eS* S 11 40 51.1 -2.4
TLY *eSS* SS 11 47 11.4 +5.8
TLY pmax pmax
comp=Z,30nm,1.8s,mb5.3
TLY **Talaya** 92.48 325 ⇑*i*P P 11 29 47.6 -2.6
U13A **Pakoon Wash** 92.48 52 ⇑P P 11 29 50.9 +0.3
baz=93,SNR=11
B05A **Bryant** 92.50 39 ⇓P P 11 29 51.0 +0.5
baz=93
G07A **Ruggs Ranch, H** 92.52 42 ⇓P P 11 29 50.5 -0.1
baz=93,SNR=6.0
P11A **Circle Ranch,** 92.53 48 ⇑P P 11 29 51.0 +0.2
baz=93
Z15A **Gila River Ind** 92.55 55 ⇑P P 11 29 51.0 0.0
baz=93
JCW **Jim Creek** 92.56 39 *eP* P 11 29 51.2 +0.5
216A **Three Points,** 92.58 57 ⇑P P 11 29 51.5 +0.3
baz=93,SNR=14
K09A **Rome** 92.58 45 ⇑P P 11 29 51.1 +0.1
baz=93,SNR=11

I08A **Drewsey** 92.59 44 ⇑P P 11 29 50.9 -0.1
baz=93,SNR=8.8
116A **Eloy** 92.61 56 ⇑P P 11 29 51.4 +0.1
baz=93,SNR=23
W14A **Seligman** 92.63 53 ⇓P P 11 29 51.6 +0.2
baz=93,SNR=29
F07A **Phinny Hill Vi** 92.66 41 ⇑P P 11 29 51.2 0.0
baz=93
Y15A **Casa Rosa Ranc** 92.69 55 ⇓P P 11 29 51.4 -0.2
baz=93,SNR=23
D06A **Cle Elum** 92.72 40 ⇑P P 11 29 51.7 +0.2
baz=93
T13A **Saint George** 92.77 51 ⇓P P 11 29 52.3 +0.3
baz=93,SNR=14
V14A **Boquillas Ranc** 92.79 53 ⇓P P 11 29 52.2 +0.1
baz=93,SNR=29
H08A **Prairie City** 92.80 43 ⇑P P 11 29 51.6 -0.3
baz=93
R12A **Pony Springs,** 92.82 50 ⇓P P 11 29 52.1 0.0
baz=93,SNR=12
O11A **Cowboy Ranch,** 92.85 48 ⇓P P 11 29 52.6 +0.3
baz=93,SNR=16
M10A **I.L. Ranch, Tu** 92.85 46 ⇓P P 11 29 52.1 -0.1
baz=93,SNR=13
J09A **Fry Pan Ranch,** 92.86 44 ⇑P P 11 29 52.0 -0.2
baz=93,SNR=12
A05A **Maple Falls** 92.87 38 ⇑P P 11 29 52.0 -0.1
baz=93
RPW **Rockport** 92.93 39 *eP* P 11 29 51.4 -1.1
Q12A **Willow Creek R** 92.96 49 ⇓P P 11 29 52.7 -0.1
baz=93,SNR=6.3
G08A **Pilot Rock** 92.97 42 ⇑P P 11 29 52.3 -0.4
baz=93,SNR=14
X15A **Humboldt** 92.97 54 ⇑P P 11 29 52.7 -0.2
baz=93,SNR=28
B06A **Marblemount** 92.98 39 ⇓P P 11 29 52.3 -0.4
baz=93
217A **Green Valley** 92.99 57 ⇑P P 11 29 53.0 -0.1
baz=93,SNR=16
E07A **Sunnyside** 93.01 41 ⇑P P 11 29 52.5 -0.3
baz=93
C06A **Tall Timber Ra** 93.04 39 ⇓P P 11 29 52.8 -0.1
baz=93
S13A **Holt Ranch, En** 93.04 51 ⇑P P 11 29 52.8 -0.4
baz=93,SNR=13
U14A **Mt Trumbull** 93.06 52 ⇓P P 11 29 53.2 -0.1
baz=93,SNR=30
P12A **McGill** 93.09 49 ⇑P P 11 29 53.3 -0.1
baz=93,SNR=8.3
N11A **Elko Archery C** 93.09 47 ⇓P P 11 29 53.0 -0.4
baz=93
RSW **Rattlesnake Hi** 93.10 41 *eP* P 11 29 52.9 -0.3
HAWA **Hanford** 93.13 41 *eP* P 11 29 54.7 +1.3
Z16A **Peralta Trail,** 93.13 55 ⇓P P 11 29 53.8 +0.1
baz=93,SNR=10
L10A **Juniper Basin** 93.14 46 ⇓P P 11 29 53.2 -0.3
baz=93,SNR=10
I09A **Lost Marbles R** 93.15 44 ⇓P P 11 29 53.4 -0.1
baz=93
K10A **MacKenzie Ranc** 93.18 45 ⇑P P 11 29 53.4 -0.3
baz=93,SNR=5.5
R13A **O'Grain Ranch,** 93.21 50 ⇑P P 11 29 54.4 +0.5
baz=93
TUC **Tucson** 93.22 57 *eP* P 11 29 54.3 +0.1
TUC pmax pmax
comp=Z,16nm,1.1s,mb5.4
TUC **Tucson** 93.22 57 *eP* P 11 29 53.8 -0.4
comp=Z,16nm,1.1s,mb5.4
W15A **Williams** 93.23 54 ⇓P P 11 29 54.3 +0.2
baz=93
D07A **Quincy** 93.24 40 ⇑P P 11 29 53.8 -0.1
baz=94
A06A **Chilliwack** 93.27 38 ⇑P P 11 29 53.8 -0.1
baz=94
Y16A **Circle Bar Ran** 93.31 55 ⇑P P 11 29 54.3 -0.3
baz=94,SNR=35
M11A **Holland Ranch,** 93.32 47 ⇑P P 11 29 54.8 +0.4
baz=94
F08A **Pendleton** 93.32 42 ⇑P P 11 29 54.3 0.0
baz=94
COLD **Coldfoot** 93.35 15 *eP* P 11 29 53.2 -0.7
comp=Z,21nm,1.1s,mb5.5
117A **Oracle** 93.36 56 ⇓P P 11 29 54.3 -0.5
baz=94,SNR=19
CCUT **Cedar City** 93.39 51 *eP* P 11 29 54.2 -0.6
T14A **Hurricane** 93.39 52 ⇓P P 11 29 55.0 +0.1
baz=94,SNR=14
ELK **Elko** 93.40 47 *eP* P 11 29 54.4 -0.4
ELK pmax pmax
comp=Z,10.0nm,0.9s
ELK **Elko** 93.40 47 *eP* P 11 29 54.4 -0.4
comp=Z,9.5nm,0.9s,mb5.2
C07A **Waterville** 93.42 40 ⇑P P 11 29 54.5 -0.2
baz=94
ARUT **Antelope Range** 93.43 51 *eP* P 11 29 52.8 -2.2
E08A **Dider Farm, El** 93.47 41 ⇑P P 11 29 55.3 +0.4
baz=94
Q13A **Wheeler Ranch,** 93.50 50 ⇓P P 11 29 55.3 0.0
baz=94,SNR=9.0
318A **Bisbee** 93.51 58 ⇓P P 11 29 55.3 -0.2
baz=94,SNR=8.7
H09A **Durkee** 93.51 43 ⇑P P 11 29 55.2 0.0
baz=94
J10A **Berg Farm, Mel** 93.54 45 ⇑P P 11 29 55.4 +0.1
baz=94
O12A **Currie** 93.54 48 ⇑P P 11 29 55.7 +0.3
baz=94,SNR=9.8
X16A **Lo Mia Camp, P** 93.55 54 ⇑P P 11 29 56.0 +0.4
baz=94,SNR=25
V15A **Kaibab Nationa** 93.56 53 ⇑P P 11 29 55.9 +0.3
baz=94,SNR=23
N12A **Clover Valley,** 93.58 47 ⇑P P 11 29 55.6 0.0
baz=94,SNR=9.2
S14A **Cedar City** 93.61 51 ⇓P P 11 29 56.1 +0.3
baz=94
L11A **Cat Creek Ranc** 93.66 46 ⇑P P 11 29 56.6 +0.6
baz=94
218A **Dragoon** 93.67 57 ⇑P P 11 29 56.5 +0.2
baz=94,SNR=6.3
P13A **Bates Ranch, G** 93.71 49 ⇓P P 11 29 56.2 0.0
baz=94,SNR=7.9
G09A **Cove** 93.71 43 ⇑P P 11 29 55.9 -0.2
baz=94
U15A **North Rim** 93.72 52 ⇑P P 11 29 57.2 +0.8
baz=94,SNR=23
Y17A **Roosevelt** 93.72 55 ⇓P P 11 29 56.5 +0.1
baz=94,SNR=12
K11A **Parker Ranch,** 93.73 45 ⇑P P 11 29 56.8 +0.6
baz=94
W16A **Flagstaff** 93.75 54 ⇓P P 11 29 56.9 +0.4
baz=94,SNR=15
B07A **Winthrop** 93.75 39 ⇑P P 11 29 56.3 +0.1
baz=94
I10A **Payette** 93.80 44 ⇑P P 11 29 56.5 0.0
baz=94
D08A **Wollman Farm,** 93.81 41 ⇓P P 11 29 56.4 -0.1
baz=94
BMO **Blue Mountains** 93.82 43 *eP* P 11 29 56.7 +0.1
F09A **S2 Ranch, Elgi** 93.82 42 ⇓P P 11 29 56.4 -0.2
baz=94
Z17A **San Carlos Hig** 93.85 56 ⇓P P 11 29 57.2 +0.2
baz=94
A07A **Ashnola River,** 93.88 38 ⇓P P 11 29 57.1 +0.4
baz=94
T15A **Red Dirt Ranch** 93.89 52 ⇑P P 11 29 57.5 +0.4
baz=94,SNR=8.6
M12A **Wells** 93.91 47 ⇓P P 11 29 57.1 0.0
baz=94,SNR=5.3
R14A **James Farms, M** 93.94 50 ⇓P P 11 29 57.6 +0.3
baz=94
DLBC **Dease Lake** 93.96 27 P P 11 29 56.6 -0.3
baz=226,slow=6.4
118A **Homack Ranch,** 93.99 57 ⇓P P 11 29 58.2 +0.5
baz=94,SNR=12
X17A **Forest Lakes** 94.00 55 ⇓P P 11 29 58.3 +0.6
baz=94,SNR=12
WUAZ **Wupatki** 94.03 54 ⇓P P 11 29 58.1 +0.3
baz=94,SNR=19
WUAZ **Wupatki** 94.03 54 *eP* P 11 29 58.5 +0.6
Q14A **Sevier Lake (B** 94.04 50 ⇑P P 11 29 58.1 +0.3
baz=94,SNR=11
E09A **Wood Farm, Sta** 94.04 41 ⇓P P 11 29 57.0 -0.5
baz=94
319A **Douglas** 94.04 58 ⇓P P 11 29 58.0 +0.1
baz=94,SNR=11
H10A **Noah's Angus R** 94.06 44 ⇑P P 11 29 57.4 -0.4
baz=94,SNR=8.5
C08A **Higginbotham F** 94.07 40 ⇓P P 11 29 57.4 -0.3

baz=94
Z18A **Geronimo** 94.11 56 ⇓P P 11 29 58.2 0.0
baz=94
G10A **Bishop Farm, J** 94.13 43 ⇑P P 11 29 57.2 -0.8
baz=94,SNR=5.1
L12A **House Creek Ra** 94.15 46 ⇓P P 11 29 58.3 +0.1
baz=94
MFID **Camas Ranch** 94.15 45 ⇑P P 11 29 57.7 -0.4
baz=94,SNR=12
N13A **Wendover, West** 94.16 48 ⇑P P 11 29 58.0 -0.3
baz=94
S15A **Panguitch** 94.16 51 ⇓P P 11 29 59.1 +0.8
baz=94,SNR=5.8
B08A **Colville Reser** 94.17 39 ⇑P P 11 29 57.5 -0.6
baz=94
D09A **Jones Farm, Ri** 94.19 41 ⇑P P 11 29 58.0 -0.2
baz=94
I11A **Placerville** 94.28 44 ⇓P P 11 29 58.3 -0.4
baz=94,SNR=9.9
219A **White Tail Can** 94.30 57 ⇓P P 11 29 59.1 0.0
baz=94,SNR=6.2
W17A **Winslow** 94.36 54 ⇓P P 11 29 59.1 -0.3
baz=94
F10A **Beach Ranch, E** 94.37 42 ⇑P P 11 29 58.8 -0.3
baz=95
Y18A **Canyon Day Jun** 94.37 56 ⇓P P 11 29 59.5 0.0
baz=94,SNR=15
M13A **Montello** 94.39 47 ⇓P P 11 29 59.5 +0.2
baz=95
K12A **Draper Farm, C** 94.43 46 ⇑P P 11 29 59.5 0.0
baz=95
P14A **Drum Mountains** 94.43 49 ⇓P P 11 29 59.3 -0.3
baz=95
R15A **Junction** 94.44 51 ⇓P P 11 29 59.4 -0.2
baz=95
U16A **Tuba City** 94.46 53 ⇓P P 11 29 59.8 0.0
baz=95,SNR=5.7
A08A **Turner Farm, O** 94.48 39 ⇑P P 11 29 59.5 0.0
baz=95
T16A **Glen Canyon Da** 94.52 52 ⇓P P 11 30 00.2 +0.2
baz=95,SNR=5.9
C09A **Chrisman Ranch** 94.54 40 ⇓P P 11 29 59.4 -0.5
baz=95
119A **Ashpeak Ranch,** 94.55 57 ⇑P P 11 30 00.4 +0.1
baz=95
J12A **Stokes Ranch,** 94.56 45 ⇓P P 11 30 00.2 +0.2
baz=95,SNR=7.9
H11A **Donnelly** 94.58 44 ⇑P P 11 29 60.0 -0.1
baz=95,SNR=7.3
MSU **Marysvale** 94.63 51 *e*P P 11 30 02.0 +1.5
E10A **Myers Farm, Un** 94.67 42 ⇓P P 11 29 59.9 -0.6
baz=95
Q15A **Fillmore** 94.68 50 ⇑P P 11 30 00.7 -0.1
baz=95
G11A **Walters Elk Ra** 94.72 43 ⇓P P 11 30 00.1 -0.6
baz=95,SNR=11
X18A **Snowflake** 94.73 55 ⇓P P 11 30 01.1 +0.1
baz=95,SNR=7.1
S16A **Weppner Ranch,** 94.74 51 ⇑P P 11 30 00.3 -0.8
baz=95
Z19A **T-Link Ranch,** 94.78 56 ⇓P P 11 30 00.7 -0.6
baz=95
D10A **Wagner Farm, O** 94.81 41 ⇑P P 11 30 00.6 -0.5
baz=95
L13A **Double Diamond** 94.85 47 ⇑P P 11 30 01.2 -0.2
baz=95
DUG **Dugway** 94.86 49 P P 11 30 02.0 +0.5
DUG pmax pmax
comp=Z,11nm,1.2s,mb5.2
DUG **Dugway** 94.86 49 ⇑P P 11 30 01.1 -0.4
baz=95
DUG **Dugway** 94.86 49 *e*P P 11 30 00.3 -1.2
comp=Z,11nm,1.3s,mb5.1
N14A **Grayback Hills** 94.86 48 ⇓P P 11 30 01.0 -0.5
baz=95
A09A **Danville** 94.89 39 ⇓P P 11 30 00.6 -0.8
baz=95
B09A **Rice** 94.90 40 ⇓P P 11 30 00.5 -1.0
baz=95
P15A **Leamington** 94.98 50 ⇑P P 11 30 02.0 -0.1
baz=95
K13A **Stover Farm, H** 94.98 46 ⇑P P 11 30 02.2 +0.2
baz=95
U17A **Shonto** 94.99 53 ⇓P P 11 30 02.0 -0.2
baz=95
M14A **Sheep Mountain** 95.02 47 ⇑P P 11 30 02.2 0.0
baz=95
T17A **Navajo Res., N** 95.04 52 ⇑P P 11 30 02.6 +0.2
baz=95
Y19A **Nutrioso** 95.04 56 ⇓P P 11 30 02.5 0.0
baz=95
R16A **Teasdale** 95.04 51 ⇓P P 11 30 03.0 +0.6
baz=95,SNR=7.8
W18A **Petrified Fore** 95.11 54 ⇓P P 11 30 02.6 -0.2
baz=95
O15A **The Old Anders** 95.13 49 ⇓P P 11 30 02.3 -0.4
baz=95
C10A **Spilker Farm,** 95.13 40 ⇓P P 11 30 02.5 0.0
baz=95
HLID **Hailey** 95.14 45 ⇓P P 11 30 03.0 +0.3
baz=95
E11A **Bogner Ranch,** 95.17 42 ⇑P P 11 30 02.5 -0.2
baz=95
V18A **Ganado** 95.19 54 ⇑P P 11 30 03.2 +0.1
baz=95,SNR=5.5
X19A **St. Johns** 95.19 55 ⇓P P 11 30 03.2 0.0
baz=95
J13A **Cove Ranch, Pi** 95.23 45 ⇓P P 11 30 03.0 -0.1
baz=95
H12A **Diamond D Ranc** 95.27 44 ⇓P P 11 30 02.9 -0.3
baz=96,SNR=9.5
S17A **Black Ridge (B** 95.29 52 ⇓P P 11 30 03.1 -0.4
baz=96
L14A **Malta** 95.30 47 ⇑P P 11 30 03.0 -0.4
baz=96
N15A **Stansbury Isla** 95.34 48 ⇑P P 11 30 03.2 -0.5
baz=96
W19A **Sanders** 95.38 55 ⇑P P 11 30 03.6 -0.4
baz=96
D11A **Klaveano Farm,** 95.39 41 ⇓P P 11 30 03.3 -0.4
baz=96
B10A **Chitwood Farm,** 95.39 40 ⇑P P 11 30 02.9 -0.9
baz=96
P16A **Fountain Green** 95.44 50 ⇓P P 11 30 03.6 -0.6
baz=96
I13A **Wildhorse Cree** 95.48 45 ⇓P P 11 30 03.4 -0.9
baz=96
A10A **Northport** 95.50 39 ⇓P P 11 30 03.2 -1.0
baz=96
U18A **Rough Rock, Ch** 95.51 53 ⇑P P 11 30 03.7 -0.9
baz=96
Q16A **Castle Valley** 95.52 50 ⇑P P 11 30 04.5 0.0
baz=96
F12A **Elk City** 95.52 43 ⇓P P 11 30 03.5 -0.9
baz=96
HVU **Hansel Valley** 95.52 47 *e*P P 11 30 05.5 +1.0
K14A **Jones Ranch, D** 95.55 46 ⇓P P 11 30 04.3 -0.3
baz=96
E12A **Beaver Dam Sad** 95.59 42 ⇑P P 11 30 04.1 -0.6
baz=96
MPU **Maple Canyon** 95.61 49 *e*P P 11 30 07.4 +2.5
M15A **Larsen Ranch,** 95.62 48 ⇑P P 11 30 04.4 -0.5
baz=96
TMUT **Trail Mountain** 95.64 50 *e*P P 11 30 06.5 +1.4
J14A **Carey** 95.64 46 ⇓P P 11 30 04.7 -0.3
baz=96
R17A **Hanksville Air** 95.66 51 ⇑P P 11 30 04.8 -0.4
baz=96,SNR=7.9
H13A **Challis** 95.66 44 ⇓P P 11 30 04.3 -0.7
baz=96
T18A **Mexican Hat** 95.78 52 ⇓P P 11 30 05.7 -0.1
baz=96,SNR=12
C11A **Tepee Creek (N** 95.78 41 ⇑P P 11 30 05.3 -0.2
baz=96
O16A **Springville** 95.78 49 ⇑P P 11 30 05.3 -0.4
baz=96,SNR=5.7
V19A **Window Rock** 95.86 54 ⇓P P 11 30 05.8 -0.4
baz=96
L15A **Malad City** 95.88 47 ⇓P P 11 30 06.2 +0.1
baz=96
G13A **Cobalt** 95.89 44 ⇓P P 11 30 06.1 +0.1
baz=96
S18A **Hurst Farm, Bl** 95.90 52 ⇓P P 11 30 06.4 0.0
baz=96
I14A **Mackay** 95.93 45 ⇑P P 11 30 06.3 0.0
baz=96,SNR=5.3
JLU **Jordanelle** 95.97 49 *e*P P 11 30 07.4 +0.9
P17A **Butcher Ranch,** 96.04 50 ⇓P P 11 30 07.5 +0.6
baz=96
K15A **Arbon** 96.05 47 ⇑P P 11 30 07.5 +0.7
baz=96
SRU **San Rafael** 96.06 50 ⇑P P 11 30 06.8 -0.1
baz=96,SNR=12
SRU **San Rafael** 96.06 50 *e*P P 11 30 07.5 +0.5
N16A **Rees Ranch, Co** 96.09 49 ⇓P P 11 30 07.3 +0.2
baz=96
C12B **Naegeli Ranch,** 96.20 41 ⇑P P 11 30 07.7 +0.3
baz=96
R18A **Canyonlands Na** 96.23 51 ⇑P P 11 30 07.8 -0.1
baz=96,SNR=6.1
H14A **Leadore** 96.26 45 ⇓P P 11 30 08.0 +0.3
baz=96
T19A **Beclabito** 96.29 53 ⇓P P 11 30 08.2 +0.1
baz=96
O17A **Robinson Place** 96.32 49 ⇓P P 11 30 08.4 +0.3
baz=96,SNR=24
Q18A **Rafter H Ranch** 96.33 51 ⇓P P 11 30 07.8 -0.4
baz=96
J15A **Blackfoot** 96.39 46 ⇓P P 11 30 08.7 +0.3
baz=97
P18A **Preston Nutter** 96.45 50 ⇓P P 11 30 09.3 +0.5
baz=97,SNR=13
G14A **Jackson** 96.45 44 ⇓P P 11 30 08.7 0.0
baz=97
L16A **Fish Haven** 96.53 47 ⇓P P 11 30 09.1 0.0
baz=97
S19A **Harvey Farm, M** 96.55 52 ⇓P P 11 30 09.4 +0.1
baz=97,SNR=5.4
I15A **Monteview** 96.60 45 ⇑P P 11 30 09.5 +0.2
baz=97
MCMT **McKenzie Canyo** 96.69 44 *e*P P 11 30 09.8 +0.1
F14A **Wisdom** 96.74 43 ⇑P P 11 30 09.6 -0.3
baz=97
K16A **Soda Springs** 96.74 47 ⇓P P 11 30 09.9 -0.1
baz=97
TIXI **Tiksi** 96.81 348 ⇑*i*P P 11 30 09.0 -0.7
MVCO **Mesa Verde** 96.82 53 ⇓P P 11 30 10.6 +0.1
baz=97
LAZ **Ladron** 96.84 56 *e*P P 11 30 11.7 +1.1
Y22C **IRIS PASSCAL I** 96.89 56 ⇓P P 11 30 11.3 +0.4
baz=97
J16A **Bone** 96.90 46 ⇑P P 11 30 10.8 +0.1
baz=97,SNR=7.7
E14A **Clinton** 96.91 43 ⇑P P 11 30 10.7 0.0
baz=97
Q19A **Hogan Spring (** 96.91 51 ⇑P P 11 30 10.4 -0.5
baz=97
PLCA **Paso Flores** 96.98 139 P P 11 30 12.5 +1.2
comp=Z,2.5nm,1.1s,mb4.6,baz=204,slow=9.4,SNR=3.8
PLCA LR LR 12 03 15.1
comp=Z,821nm,20.5s,MS5.2,baz=234,slow=29
G15A **Dillon** 97.05 44 ⇓P P 11 30 10.7 -0.6
baz=97
DLMT **Dillon** 97.06 44 *e*P P 11 30 11.7 +0.3
RRI2 **Red Ridge** 97.12 46 *e*P P 11 30 12.3 +0.6
A13A **Flathead Natio** 97.35 40 ⇑P P 11 30 12.6 0.0
baz=98
N18A **Larsen Ranch,** 97.36 49 ⇑P P 11 30 13.4 +0.5
baz=98
REDW **Red Top Meadow** 97.44 46 *e*P P 11 30 13.5 +0.3
O19A **Miners Draw (B** 97.50 50 ⇑P P 11 30 13.5 -0.1
baz=98
SNOW **Snow King Moun** 97.55 46 *e*P P 11 30 14.8 +1.2
ANMO **Albuquerque** 97.55 56⇑*e*P P 11 30 12.4 -1.5
ANMO **Albuquerque** 97.55 56 *e*P P 11 30 14.2 +0.3
N19A **Jon Jarvie Ra** 97.68 49 ⇑P P 11 30 14.4 +0.1
baz=98
H16A **Russell Place,** 97.69 45 ⇓P P 11 30 14.5 +0.3
baz=98
D15A **Lincoln** 97.77 43 ⇓P P 11 30 14.2 -0.4
baz=98
BOZ **Bozeman (W)** 97.80 44 ⇓P P 11 30 14.5 -0.2
baz=98
B14A **Marquette Ranc** 97.82 41 ⇑P P 11 30 14.7 0.0
baz=98
TXAR **Lajitas Array** 97.83 62 P P 11 30 15.8 +0.5
comp=Z,3.0nm,1.0s,mb4.8,baz=226,slow=4.5,SNR=14
TXAR LR LR 12 08 07.5
comp=Z,4μm,18.1s,MS6.0,baz=25,slow=32
TXAR **Lajitas Array** 97.83 62 P P 11 30 15.8 +0.5
TXAR LR LR 12 08 07.5
I17A **Pilgram Creek** 97.84 46 ⇓P P 11 30 14.8 -0.1
baz=98
A14A **Double T Ranch** 97.97 40 ⇓P P 11 30 15.8 +0.5
baz=98
C15A **Salmond Ranch,** 98.00 42 ⇓P P 11 30 15.2 -0.3
baz=98
BW06 **Boulder Array** 98.10 47 *e*P P 11 30 15.7 -0.4
PDAR **Pinedale Array** 98.10 47 P P 11 30 16.8 +0.6
comp=Z,2.7nm,0.9s,mb4.8,baz=226,slow=3.9,SNR=11
PDAR PKKPbc PKKPbc 11 46 54.6 +4.6
comp=Z,0.4nm,0.7s,baz=82,slow=5.2,SNR=3.7
PDAR LR LR 12 12 03.4
comp=Z,1μm,18.0s,MS5.5,baz=235,slow=34
E16A **East Helena** 98.11 43 ⇑P P 11 30 16.2 +0.1
baz=98
GDL2 **Guadalupe Moun** 98.24 59 *e*P P 11 30 17.8 +0.7
A15A **Johnson Ranch,** 98.39 41 ⇑P P 11 30 17.5 +0.2
baz=99
C16A **Fuhringer Ranc** 98.54 42 ⇓P P 11 30 18.0 0.0
baz=99
E17A **Martinsdale** 98.60 44 ⇓P P 11 30 18.0 -0.3
baz=99
WMQ **Urumqi** 98.63 314 *e*P P 11 30 19.8 +1.3
WMQ AP pP 11 30 24.0 +0.4
WMQ XP sP 11 30 27.0 +1.6
WMQ PP PP 11 34 24.0 +4.2
WMQ SKS 11 40 57.0
WMQ S S 11 41 46.0 -1.2
WMQ AMB AMB
comp=Z,16nm,1.2s,mb5.4
WMQ AMB AMB
comp=Z,252nm,4.0s
WMQ LR LR
comp=N,3μm,15.2s,MS6.0
WMQ LR LR
comp=E,2μm,16.8s,MS6.0
WMQ LR LR
comp=Z,2μm,21.5s,MS5.6
C17A **Wharram Farm,** 99.10 42 ⇑P P 11 30 19.7 -0.8
baz=99
F18A **Big Timber** 99.14 44 ⇓P P 11 30 20.3 -0.4
baz=99
RLMT **Red Lodge** 99.15 45 *e*P P 11 30 20.7 -0.1
comp=Z,3.9nm,1.1s,mb4.8
MKAR **Makanchi Array** 103.21 315 Pdiff Pdif 11 30 38.5 -0.4
comp=Z,1.7nm,0.8s,baz=103,slow=5.4,SNR=5.6
MKAR PKKPbc PKKPbc 11 46 38.7 +3.3
comp=Z,0.2nm,0.5s,baz=305,slow=4.3,SNR=4.0
MKAR **Makanchi Array** 103.21 315 Pdif Pdif 11 30 38.5 -0.4
MKAR PKKPbc PKKPbc 11 46 38.7 +3.3
ZALV **Zalesovo Beam** 103.78 323 Pdiff Pdif 11 30 41.5 +0.1
comp=Z,1.2nm,0.4s,baz=69,slow=7.9,SNR=4.9
KURK **Kurchatov** 106.59 318 *e*PKPdf PKiKP 11 35 01.9 -2.5
ARU **Arti** 118.92 324 PKIKP PKPdf 11 35 26.1 -1.5
AKTK **Aktyubinsk** 119.59 317 PKP PKPdf 11 35 28.5 -0.6
AKTO **Aktyubinsk** 119.59 317 PKP PKPdf 11 35 28.5 -0.6
comp=Z,0.9nm,0.6s,baz=91,slow=2.5,SNR=3.9
APA **Apatity** 126.22 341 ⇓*i*PKIKP PKPdf 11 35 38.0 -3.3
APA *e*PPS 11 49 10.0
APA *i* SS SS 11 54 42.0 +4.1
APA MLR MLR
comp=Z,3μm,17.0s,MS6.0
ARCES **ARCESS Array B** 127.11 345 PKP PKPdf 11 35 43.9 +0.9
comp=Z,4.8nm,0.8s,baz=11,slow=1.2,SNR=7.3
KLMR **Klimovskoe** 127.39 332 PKIKP PKPdf 11 35 47.3 +3.6
KMBO **Kilima Mbogo** 127.99 251 PKP PKPdf 11 35 47.1 +0.8
comp=Z,2.5nm,0.9s,baz=270,slow=3.0,SNR=3.1
BDFB **Brasilia** 128.19 132 PKP PKPdf 11 35 48.7 +2.0
comp=Z,2.7nm,0.5s,baz=43,slow=7.8,SNR=3.5
KIV **Kislovodsk** 130.61 310 *e*PKIKP PKPdf 11 35 47.7 -2.7
KIV *e* 11 38 05.9
KIV *e* 11 42 57.1
KIV pmax pmax
comp=Z,14nm,1.6s
OBN **Obninsk** 131.23 326 *i* PKIKP PKPdf 11 35 51.4 +0.2
OBN pmax pmax
comp=Z,11nm,0.9s
ANN **Anapa** 134.13 312 *i* PKIKP PKPdf 11 36 01.5 +4.5
ANN *e* 11 38 35.2
ANN pmax pmax
comp=Z,45nm,1.2s
SIM **Simferopol'** 136.36 313 PKHKP 11 35 32.3
SIM SS SS 11 56 34.9 -8.3
SIM pmax pmax
comp=Z,100nm,9.4s
AKASG **Malin Array Be** 137.17 323 PKP PKPdf 11 36 02.4 -0.1
comp=Z,0.3nm,0.3s,baz=70,slow=1.7,SNR=4.2
NB2 **NORSAR Subarra** 137.48 344 PKPdf PKPdf 11 36 06.1 +3.4
comp=Z,6.5nm,1.2s,baz=31,slow=1.9
NOA **NORSAR Array B** 137.48 344 PKP PKPdf 11 36 02.7 0.0
comp=Z,1.2nm,1.0s,baz=140,slow=3.5,SNR=2.8
KIS **Kishinev** 139.06 318 *e*PKP PKPdf 11 36 05.0 -1.1
KIS LRM 12 42 48.0
comp=Z,2μm,20.0s
KOLS **Kolonicke sedl** 141.94 324 *e*PKP PKPdf 11 36 10.6 -0.6
UZH **Uzhgorod** 142.10 324 *e*PKIKP PKPdf 11 36 07.7 -3.8
UZH *e* 11 39 23.0
UZH *e* 11 43 16.0
UZH *e*SS SS 11 57 42.0 -8.1
STHS **Stebnicka Huta** 142.21 326 *e*PKP PKPdf 11 36 10.4 -1.3
ARG **Arkhangelos** 143.07 302 *e*P PKPdf 11 36 12.4 -1.3
PRK **Paraskevi** 143.67 308 *e*P PKPdf 11 36 10.2 -4.4
KSP **Ksiaz** 143.73 331 *e*PKIKP PKPdf 11 36 15.5 +1.2
KSP *e*SS SS 11 58 13.0 +4.5
PSZ **Piszkesteto** 143.82 324⇓*e*PKP PKPdf 11 36 13.4 -1.2
PSZ **Piszkesteto** 143.82 324 *e*PKPdf PKPdf 11 36 10.6 -4.0
MORC **Moravsky Berou** 143.86 329 *e*PKIKP PKPdf 11 36 13.6 -1.0
VYHS **Vyhne** 144.03 326 *e*PKP PKPdf 11 36 13.4 -1.5
DPC **Dobruska-Polom** 144.06 330 *e*PKP PKPdf 11 36 13.1 -1.8
DPC *ex* x 11 36 21.4
UPC **Upice** 144.09 331 *e*PKP PKPdf 11 36 13.3 -1.7
UPC *ep*PKP pPKPdf 11 36 21.4 +1.2
KOLL **Kolacno** 144.20 326 *e*PKP PKPdf 11 36 12.3 -2.9
BUD **Budapest** 144.55 324⇓*e*PKP PKPdf 11 36 15.7 -0.2
PVCC **Panska Ves** 144.72 332 *e*PKP PKPdf 11 36 15.4 -0.7
BRG **Berggiesshubel** 144.74 333 *i* PKIKP PKPdf 11 36 15.2 -0.9
BRG *i* 11 36 22.8
BRG pmax pmax
comp=Z,34nm,1.3s
BRG MLR MLR
comp=N,787nm,17.8s,MS5.5
BRG MLR MLR
comp=E,328nm,19.0s,MS5.5
BRG MLR MLR
comp=Z,1μm,18.8s,MS5.7
BRG **Berggiesshubel** 144.74 333 *i* PKP PKPdf 11 36 15.2 -0.9
comp=Z,57nm,1.3s
BRG *i* 11 36 22.8
comp=Z,84nm,1.4s
BRG *i* 11 36 53.2
comp=Z,86nm,1.3s
BRG *e* 11 39 59.3
comp=Z,22nm,1.6s
BRG *i* 11 44 51.0
BRG
comp=N,1μm,17.8s
BRG
comp=E,548nm,19.0s
BRG
comp=Z,2μm,18.8s
BRG **Berggiesshubel** 144.74 333 *i* PKP PKPdf 11 36 15.2 -0.9
BRG *i* 11 36 22.8
BRG *i* 11 36 53.2
BRG *e* 11 39 59.3
BRG *i* 11 44 51.0
BRG LR LR
comp=Z,1μm,18.8s,MS5.7
CLL **Collm** 144.81 334 *e*PKIKP PKPdf 11 36 14.0 -2.2
CLL pmax pmax
comp=Z,36nm,1.1s
CLL MLR MLR
comp=Z,1μm,20.6s,MS5.7
CLL **Collm** 144.81 334 *e*PKPdf PKPdf 11 36 15.0 -1.2
comp=Z,36nm,1.1s
CLL *ep*PKPdf pPKPdf 11 36 18.0 -3.4
comp=Z,163nm,2.1s
CLL *ep*PKiKP 11 36 23.0
comp=Z,60nm,1.2s
CLL *e*(PP) 11 39 50.0
CLL *e*SS SS 11 58 25.0 +4.2
CLL *e*(SSS) 12 03 48.0
CLL LmV 12 40 00.0
comp=Z,1μm,20.6s
MODS **Modra-Piesok** 144.91 327 *e*PKP PKPdf 11 36 16.5 0.0
ZST **Bratislava** 145.12 327 *e*PKP PKPdf 11 36 17.6 +0.8
ZST LR LR
comp=Z,800nm,20.9s,MS5.5
SANT **Santorini** 145.12 303 *e*PKPbc PKPbc 11 36 15.3 -1.5
PRU **Pruhonice** 145.12 331 *e*PKP PKPdf 11 36 16.6 -0.2
EAU **Auchinoon** 145.14 353 *e*P PKPbc 11 36 15.9 -0.3
EBL **Broad Law** 145.16 352 *e*P PKPbc 11 36 17.1 +0.8
TREC **Trest** 145.18 329 *e*PKP PKPdf 11 36 17.0 +0.1
NPS **Neapolis** 145.28 301 *e*P PKPbc 11 36 11.5 -5.8
PLG **Polygyros** 145.31 311 *e*P PKPbc 11 36 17.7 +0.4
VAY **Valandovo** 145.54 313 *e*PKP PKPdf 11 36 16.5 -1.3
ESK **Eskdalemuir** 145.63 352 *e*P PKPbc 11 36 15.4 -2.0
ESK **Eskdalemuir** 145.63 352 *e*PKPdf PKPdf 11 36 16.8 -0.7
SOP **Sopron** 145.73 327⇓*e*PKP PKPdf 11 36 19.5 +1.6
ECK **Cauldkaine Hil** 145.75 352 *e*P PKPdf 11 36 17.1 -0.6
NKC **Novy Kostel** 145.86 333 *e*PKP PKPdf 11 36 18.4 +0.4
MOX **Moxa** 145.89 334 *e*PKP PKPdf 11 36 19.5 +1.4
comp=Z,217nm,2.3s
CONA **Conrad Observa** 145.92 327⇑*i*P PKPdf 11 36 19.9 +1.7
comp=Z,104nm,1.6s
CSNA **Conrad Observa** 145.92 327⇑*i*P PKPdf 11 36 19.8 +1.6
comp=Z,97nm,1.6s
XAL **Allendale** 145.94 351 *e*P PKPdf 11 36 16.5 -1.5
ATH **Athens Observa** 145.97 307 *e*P PKPdf 11 36 17.9 -0.7
SKO **Skopje** 146.01 315 *e*PKP PKPdf 11 36 20.0 +1.5
KHC **Kasperske Hory** 146.18 331 *e*PKP PKPdf 11 36 19.7 +1.1
GAL1 **Galloway** 146.25 354 *e*P PKPdf 11 36 18.4 -0.2
GEC2 **GERESS Array S** 146.33 330 *e*PKP2 PKPab 11 36 19.7 -1.2
GERES **GERESS Array B** 146.33 330 PKPbc PKPbc 11 36 20.1 0.0
comp=Z,17nm,1.0s,baz=60,slow=3.2,SNR=13
KRUS **Krusevo** 146.41 314 *e*PKP PKPdf 11 36 20.3 +1.0
WTSB **Winterswijk** 146.54 340 *e*PKP PKPdf 11 36 20.9 +1.7
comp=Z,111nm,2.5s
GRA1 **Grafenberg Arr** 146.78 334 *e*PKP PKPdf 11 36 21.3 +1.7
GRA1 LR LR
comp=Z,1μm,21.1s,MS5.7
GRF **Grafenberg Arr** 146.78 334 *e*PKP PKPdf 11 36 21.3 +1.7
GRF *e*L 12 42 11.7
comp=Z,1μm,21.1s
OHR **Ohrid** 146.83 314 *e*PKP PKPdf 11 36 19.8 -0.2
EVR **Evrytania** 147.04 309 *e*P PKPdf 11 36 13.8 -6.6
PERS **Pernice** 147.16 326 *e*PKPdf PKPbc 11 36 22.6 +0.1
LHO **Holmfirth** 147.16 350 *e*P PKPdf 11 36 21.2 +1.0
KBI1 **Birley Grange** 147.39 350 *e*P PKPbc 11 36 23.4 +0.4
JAN **Janina** 147.43 311 *e*P PKPdf 11 36 17.9 -3.1
ITM **Ithomi** 147.58 306 *e*P PKPdf 11 36 17.2 -4.2
KWE **Weaver Farm** 147.67 350 *e*P PKPdf 11 36 20.3 -0.7
BOJS **Bojanci** 147.82 325 *i* PKPdf PKPbc 11 36 24.4 -0.1
VISS **Visnje** 147.85 325 *i* PKPdf PKPbc 11 36 25.1 +0.6
HGN **Heimansgroeve** 147.85 340 *e*PKP PKPab 11 36 27.1 +0.3
comp=Z,61nm,1.8s
BEBN **Eben Emael** 147.91 340 PKPbc PKPbc 11 36 25.0 +0.6
MEM **Membach** 147.96 340 PKPbc PKPbc 11 36 24.6 -0.1
DLF **Lyons Farm** 147.97 355 *e*P PKPbc 11 36 24.0 -0.5
DCN **Croghan** 147.97 356 *e*P PKPbc 11 36 24.0 -0.5
KEK **Kerkira** 148.13 312 *e*P PKPdf 11 36 17.4 -4.8
VOY **Vojsko** 148.19 326 *e*PKPdf PKPbc 11 36 24.9 -0.5
JAVS **Javornik** 148.19 326 *e*PKPdf PKPdf 11 36 19.0 -3.1
UCC **Uccle** 148.31 342 PKPbc PKPbc 11 36 25.5 -0.1
MOTA **Moosalm** 148.61 331⇑*i*P PKPbc 11 36 26.1 -0.3
comp=Z,21nm,0.8s
WLF **Walferdange** 148.73 339 PKPbc PKPbc 11 36 26.7 +0.1
WLF **Walferdange** 148.73 339 *e*PKPbc PKPbc 11 36 26.1 -0.5
GIVF **Givet** 148.78 340 *e*PKP1 PKPbc 11 36 25.5 -1.3
comp=Z,159nm,1.4s
DOU **Dourbes** 148.86 341 PKPbc PKPbc 11 36 26.9 -0.1
BAIF **Baives** 149.01 341 *e*PKP1 PKPbc 11 36 26.3 -1.0
comp=Z,269nm,1.9s
FETA **Feichten** 149.02 331⇑*i*P PKPbc 11 36 27.7 +0.2
comp=Z,32nm,1.0s
BFO **Black Forest** 149.03 335 *e*PKIKP PKPdf 11 36 25.4 +2.0
CDF **Champ du Feu** 149.37 336 *e*PKP1 PKPbc 11 36 27.1 -1.2
comp=Z,42nm,1.1s
ECH **Echery** 149.58 336 *e*PKP2 PKPbc 11 36 28.2 -0.6
HINF **Hinteralfeld** 150.02 336 *e*PKP1 PKPbc 11 36 28.4 -1.5
comp=Z,185nm,1.8s
HAU **Haudompre** 150.06 337 *e*PKP1 PKPbc 11 36 28.6 -1.4
comp=Z,81nm,1.2s
HAU *e*MLR MLR
comp=Z,2μm,21.2s,MS5.5
MEZF **Maizieres J'vi** 150.10 339 *e*PKP1 PKPbc 11 36 29.2 -0.9
comp=Z,381nm,1.5s
CCA1 **Carnmenellis** 150.91 353 *e*P PKPdf 11 36 27.9 +1.6

CABF	**La Chapelle**	**151.31**	**335**	*e*PKP1	PKPbc	11 36 32.1	-0.9	
	comp=Z,121nm,1.3s							
FLN	**La Foliniere**	**151.45**	**346**	*e*PKP1	PKPbc	11 36 31.4	-1.9	
	comp=Z,192nm,1.2s							
FLN				*e*MLR	MLR			
	comp=Z,2µm,21.0s,MS5.6							
LDF	**La Druitiere**	**151.52**	**345**	*e*PKP1	PKPbc	11 36 31.6	-1.8	
	comp=Z,97nm,1.3s							
LOR	**Lormes**	**151.57**	**339**	*e*PKP1	PKPbc	11 36 32.2	-1.4	
	comp=Z,96nm,1.3s							
LOR				*e*MLR	MLR			
	comp=Z,1µm,21.8s,MS5.4							
SSF	**Saint Saulge**	**151.87**	**339**	*e*PKP1	PKPbc	11 36 32.8	-1.5	
	comp=Z,77nm,1.2s							
GRR	**Gorron**	**151.89**	**346**	*e*PKP1	PKPbc	11 36 32.6	-1.7	
	comp=Z,98nm,1.2s							
LPL	**La Plagne**	**151.94**	**333**	*e*PKP1	PKPbc	11 36 33.7	-0.8	
	comp=Z,29nm,0.9s							
LPG	**La Plagne**	**151.95**	**333**	*e*PKP1	PKPbc	11 36 33.8	-0.7	
	comp=Z,42nm,0.8s							
SMF	**Signal de Mont**	**152.11**	**338**	*e*PKP1	PKPbc	11 36 33.2	-1.6	
	comp=Z,170nm,1.7s							
AVF	**Avril sur Loir**	**152.15**	**339**	*e*PKP1	PKPbc	11 36 33.2	-1.7	
	comp=Z,34nm,1.0s							
BNI	**Bardonecchia**	**152.34**	**333**	*e*PKIKP	PKPdf	11 36 30.8	+2.2	
SGMF	**Saint Gilles**	**152.37**	**348**	*e*PKP1	PKPbc	11 36 33.5	-1.9	
BGF	**Bois d'Agland**	**152.53**	**339**	*e*PKP1	PKPbc	11 36 34.3	-1.5	
ORIF	**Oris-en-Rattie**	**152.78**	**333**	*e*PKP1	PKPbc	11 36 35.0	-1.4	
	comp=Z,66nm,1.1s							
ORIF				*e*MLR	MLR			
	comp=Z,2µm,21.5s,MS5.6							
QUIF	**Quistinic**	**152.81**	**349**	*e*PKP1	PKPbc	11 36 34.6	-1.8	
SBF	**Sospel**	**152.93**	**330**	*e*PKP1	PKPbc	11 36 35.2	-1.6	
TCF	**Toulx Ste Croi**	**152.97**	**340**	*e*PKP1	PKPbc	11 36 35.3	-1.5	
VIVF	**Saint-Julien-l**	**153.32**	**335**	*e*PKP1	PKPbc	11 36 36.3	-1.3	
MFF	**Saint Martin d**	**153.38**	**343**	*e*PKP1	PKPbc	11 36 35.9	-1.8	
SMRF	**Simiane la Rot**	**153.67**	**333**	*e*PKP1	PKPbc	11 36 37.4	-1.0	
	comp=Z,91nm,1.4s							
RJF	**Les Rejaudoux**	**154.07**	**340**	*e*PKP1	PKPbc	11 36 37.8	-1.4	
	comp=Z,38nm,1.1s							
RJF				*e*MLR	MLR			
	comp=Z,2µm,19.5s,MS5.7							
LASF	**Ste Croix**	**154.29**	**335**	*e*PKP1	PKPbc	11 36 38.5	-1.2	
LFF	**La Frestale**	**154.64**	**341**	*e*PKP1	PKPbc	11 36 38.9	-1.5	
KEST	**Kesra**	**157.29**	**313**	PKPab	PKPab	11 37 08.3	+1.5	
	comp=Z,4.5nm,1.0s,baz=322,slow=4.0,SNR=5.5							
ESDC	**Sonseca Array**	**160.84**	**344**	PKPab	PKPab	11 37 22.5	+0.5	
	comp=Z,2.2nm,0.8s,baz=16,slow=3.0,SNR=7.1							
LIC	**Lamto**	**163.93**	**201**	⇑*i*PKIKP	PKPdf	11 36 43.2	-0.5	
	comp=Z,96nm,1.7s							
LIC				*e*MLR	MLR			
	comp=Z,3µm,20.8s							
DBIC	**Dimbokro**	**164.28**	**202**	PKP	PKPdf	11 36 42.7	-1.3	
	comp=Z,7.4nm,1.0s,baz=78,slow=3.2,SNR=4.7							
DBIC				PKPab	PKPab	11 37 38.2	+0.6	
	comp=Z,3.6nm,0.8s,baz=73,slow=5.6,SNR=4.0							
DBIC	**Dimbokro**	**164.28**	**202**	PKP	PKPdf	11 36 42.7	-1.3	
DBIC				PKPab	PKPab	11 37 38.2	+0.6	
TAM	**Tamanrasset**	**164.78**	**278**	*e*PKIKP	PKPdf	11 36 45.5	+1.4	
TOAO	**Torodi Ar. Sit**	**165.52**	**238**	*e*PKPdf	PKPdf	11 36 43.6	-1.4	
TORD	**Torodi Ar. Bea**	**165.52**	**238**	PKP	PKPdf	11 36 44.3	-0.7	
	comp=Z,8.1nm,1.2s,baz=119,slow=0.6,SNR=11							
TORD				PP	PP	11 41 33.0	+3.0	
	comp=Z,2.0nm,1.2s,baz=118,slow=4.0,SNR=3.9							
TORD	**Torodi Ar. Bea**	**165.52**	**238**	PKP	PKPdf	11 36 44.3	-0.7	
TORD				PP	PP	11 41 33.0	+3.0	

*NNC **28** 11:33:29.4±0.5, 43.13N×7726E, h0km, mb3.2, mpv3.2, Error ellipse: s-maj=4.1km s-min=2.6km az=18.0*
*ISCJB **28** 11:33:32.3±1.1, 432N±0.1×77.16E±0.10, h10km, Error ellipse: s-maj=16.9km s-min=8.5km az=158.8*
ISC 28 11:33:33.1±1.1, **4318N**±009×**7710E**±010, **h10**km, **n13,** σ1§**04**/15, **5C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**0.10**	**291**	⇑P		**Pg**	**11 33 33.8**	**-1.9**
	265nm,0.5s							
KNDC				⇑S		**Sg**	**11 33 37.3**	**-0.3**
	871nm,0.3s							
ULHL	**Ulahol**	**1.13**	**214**	P		**Pb**	**11 33 54.0**	**-0.7**
	SNR=15							
TKM2	**Tokmak 2**	**1.13**	**257**	⇑P		**Pb**	**11 33 53.2**	**-1.5**
	10nm,0.3s							
TKM2				⇓S		**Sb**	**11 34 09.9**	**+0.4**
	6.6nm,0.2s							
TKM2	**Tokmak 2**	**1.13**	**257**	P		**Pb**	**11 33 53.3**	**-1.4**
	SNR=29							
KBK	**Karagaybulak**	**1.66**	**252**	P		**Pn**	**11 34 03.2**	**+0.9**
	SNR=13							
CHMS	**Chumysh**	**1.73**	**265**	P		**Pn**	**11 34 03.5**	**+0.3**
	SNR=6.4							
USP	**Uspenovka**	**1.90**	**273**	P		**Pn**	**11 34 06.0**	**+0.5**
	SNR=6.6							
AAK	**Ala-Archa**	**1.99**	**255**	P		**Pn**	**11 34 08.3**	**+1.6**
	SNR=17							
UCH	**Uchtor**	**2.13**	**244**	P		**Pb**	**11 34 11.6**	**-0.1**
	SNR=26							
EKS2	**Erkin-Say**	**2.49**	**259**	P		**Pb**	**11 34 16.5**	**-1.4**
	SNR=10							
AML	**Almayashu**	**2.72**	**248**	P		**Pb**	**11 34 21.9**	**+0.1**
	SNR=12							
KK31	**Karatay Array**	**4.82**	**271**	Pg		**Pb**	**11 34 59.6**	**+2.0**
	0.6nm,0.5s,baz=85,slow=15,SNR=9.5							
KK31				⇓Lg			11 36 04.2	
	1.9nm,0.5s,baz=84,slow=28,SNR=7.2							
MK31	**Makanchi Array**	**5.16**	**44**	⇑Pn		**Pn**	**11 34 50.5**	**+0.2**
	0.9nm,0.3s,baz=219,slow=15,SNR=5.7							
MK31				⇑Lg			11 36 12.5	
	1.1nm,0.6s,baz=219,slow=31,SNR=3.6							

*ISK **28** 11:37:58.8, 3661N×2971E, h5km, MD2.9*
*CSEM **28** 11:37:58.6±0.1, 3656N×2973E, h5km, MD2.9, Error ellipse: s-maj=2.6km s-min=1.9km az=145.0*
*ISCJB **28** 11:38:00.0±0.7, 3658N±005×2971E±007, h3km±8km, Error ellipse: s-maj=10.3km s-min=5.6km az=36.4*
*DDA **28** 11:38:01.1, 3653N×2961E, h7km±7km*
ISC 28 11:38:00.2±0.8, **3659N**±005×**2969E**±007, **h3**km±9km, **n13,** σ1§**08**/18, **1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ELL	**Elmali**	**0.24**	**49**	*e*PG		**Pg**	**11 38 03.4**	**-1.4**
ELL				*e*SG		**Sg**	**11 38 07.7**	**-0.2**
AKAS	**Kas**	**0.36**	**191**	⇑*i*P		**Pg**	**11 38 06.2**	**-1.0**
AKAS				*i* S		**Sg**	**11 38 13.1**	**+1.1**
AKAS	**Kas**	**0.36**	**191**	*i* P		**Pg**	**11 38 06.2**	**-1.0**
GOLH	**Golhisar**	**0.65**	**351**	*e*P		**Pg**	**11 38 14.5**	**+1.8**
GOLH				*i* S		**Sg**	**11 38 26.3**	**+5.2**
ANTB	**Antalya**	**0.83**	**68**	*e*PG		**Pg**	**11 38 14.8**	**-1.5**
ANTB	**Antalya**	**0.83**	**68**	*e*Pg		**Pg**	**11 38 14.8**	**-1.4**
ANTB				*e*Sg		**Sg**	**11 38 28.2**	**+1.1**
BCK	**Bucak**	**1.13**	**40**	*e*PN		**Pn**	**11 38 22.0**	**-1.0**
YER	**Yerkesik**	**1.25**	**296**	*e*PN		**Pn**	**11 38 24.2**	**-0.4**
ISP	**Isparta**	**1.41**	**27**	*e*PN		**Pn**	**11 38 26.7**	**-0.2**
TKTP	**Tekketepe**	**1.53**	**19**	*e*P		**Pn**	**11 38 30.4**	**+2.0**
TKTP				*i* S		**Sn**	**11 38 58.1**	**+9.2**
MLSB	**Milas**	**1.68**	**295**	*e*PN		**Pn**	**11 38 29.9**	**-0.6**
KHL	**Karahalli**	**1.73**	**356**	*e*PN		**Pn**	**11 38 30.9**	**-0.4**
HDMB	**Hadim**	**2.28**	**80**	*e*PN		**Pn**	**11 38 39.5**	**+0.7**

*ISCJB **28** 11:42:53.6±0.8, 560S±02×276W±04, h100km, mb4.1/4, Error ellipse: s-maj=39.8km s-min=12.3km az=150.9*
*NEIC **28** 11:42:55.2±5.5, 5597S×2753W, h102km±51km, mb4.6/1, Error ellipse: s-maj=41.0km s-min=14.8km az=47.0*
*IDC **28** 11:42:56.4±8.4, 5597S×2755W, h111km±76km, mb3.8/4, mb1 3.9/4, mb1mx3.7/15, mbtmp3.8/4, Error ellipse: s-maj=42.4km s-min=19.8km az=44.0*
ISC 28 11:42:55.4±0.8, **560S**±02×**276W**±04, **h100**km, **n12,** σ0§**42**/10, **mb4.1/4, 1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**17.11**	**160**	*e*P		**Pn**	**11 46 47.6**	**-0.2**
VNA3				*e*			11 46 51.4	
VNA2	**Neumayer--Watz**	**17.32**	**158**	*e*P		**Pn**	**11 46 50.5**	**+0.2**
	baz=316,slow=13							
VNA2				*e*			11 46 53.6	
VNA2				*e*			11 46 55.1	
SNAA	**Sanae**	**18.87**	**156**	*e*P		**P**	**11 47 07.1**	**-0.2**
SNAA				*e*			11 47 10.2	
SNAA				*e*			11 47 12.2	
SNAA	**Sanae**	**18.87**	**156**	⇑*i*P		**P**	**11 47 07.1**	**-0.2**
	18nm,0.5s							
CPUP	**Villa Florida**	**36.63**	**312**	P		**P**	**11 49 51.1**	**-0.7**
	0.9nm,0.5s,mb3.9,baz=135,slow=8.6,SNR=4.0							
CPUP				PcP		PcP	11 52 12.0	-0.7
	0.4nm,0.5s,baz=68,slow=2.6,SNR=3.1							
MAW	**Mawson**	**40.31**	**144**	P		**P**	**11 50 22.3**	**+0.1**
	2.6nm,0.6s,mb4.2,baz=231,slow=6.1,SNR=15							
LPAZ	**La Paz**	**50.18**	**306**	P		**P**	**11 51 41.5**	**+0.8**
	3.2nm,0.5s,mb4.5,baz=133,slow=5.5,SNR=15							
LPAZ	**La Paz**	**50.18**	**306**	P		**P**	**11 51 41.5**	**+0.8**
TORD	**Torodi Ar. Bea**	**73.11**	**30**	P		**P**	**11 54 14.6**	**0.0**
	0.8nm,0.6s,mb3.8,baz=201,slow=6.7,SNR=10.0							
TORD	**Torodi Ar. Bea**	**73.11**	**30**	P		**P**	**11 54 14.6**	**0.0**
KDAK	**Kodiak Island**	**150.61**	**297**	PKPbc		PKPbc	12 02 33.8	-0.3
	5.3nm,0.4s,baz=56,slow=14,SNR=12							
SONM	**Songino Array**	**150.92**	**87**	PKPbc		PKPbc	12 02 34.6	-0.6
	2.2nm,0.5s,baz=223,slow=3.3,SNR=13							

*SZGRF **28** 11:43:18.8, 2133S×17791W, h33km, Fiji Islands region*
*ISCJB **28** 11:44:19.6±0.7, 1995S±005×17831W±003, h538km±8km, mb4.9/67, Error ellipse: s-maj=7.6km s-min=4.5km az=159.0*
*BJI **28** 11:44:20.4, 1996S×17776W, h574km, mB5.2, mb5.0*
*NEIC **28** 11:44:21.6±0.9, 1991S×17824W, h548km±11km, mb5.0/21, Error ellipse: s-maj=10.5km s-min=7.8km az=150.0*
*BGS **28** 11:44:21.6±5.1, 1991S×17824W, h548km, mb5.0(NEIC)*
*MOS **28** 11:44:23.4±2.9, 1987S×17836W, h557km, mb5.2/8, Error ellipse: s-maj=10.4km s-min=8.6km az=17.4*
*IDC **28** 11:44:23.1±0.8, 2006S×17822W, h571km±8km, mb4.2/29, mb1 4.3/32, mb1mx4.3/32, mbtmp4.3/32, Error ellipse: s-maj=8.5km s-min=7.2km az=150.0*
*DJA **28** 11:44:24, 2004S×17825W, h590km, Mw6.0/4*
ISC 28 11:44:22.2±0.8, **1996S**±005×**17829W**±003, **h554**km±9km, **h554**km±6.4km; **pP-P, n496,** σ0§**67**/314, **mb4.9**/67, **125C-115D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.66**	**47**	P		**P**	**11 46 25.9**	**-0.8**
	12nm,0.3s,baz=30,slow=3.7,SNR=21							
AFI				S		**S**	**11 48 02.4**	**-6.5**
	11nm,0.3s,baz=40,slow=23,SNR=14							
AFI	**Afiamalu**	**8.66**	**47**	*e*P		**P**	**11 46 26.2**	**-0.6**
AFI				*e*S		**S**	**11 48 02.2**	**-6.7**
AFI				pmax		pmax		
	comp=Z,54nm,0.6s							
AFI	**Afiamalu**	**8.66**	**47**	*e*P		**P**	**11 46 26.1**	**-0.6**
	comp=Z,54nm,0.6s							
AFI				*e*S		**S**	**11 48 02.2**	**-6.7**
RAO	**Raoul Island**	**9.25**	**178**	P		**P**	**11 46 31.0**	**-1.4**
	comp=Z,84nm,0.3s,baz=95,slow=22,SNR=9.2							
RAO				S		**S**	**11 48 13.9**	**-5.5**
	comp=Z,44nm,0.3s,baz=271,slow=22,SNR=2.2							
RAO	**Raoul Island**	**9.25**	**178**	*e*P		**P**	**11 46 33.2**	**+0.8**
RAO				*e*S		**S**	**11 48 21.0**	**+1.5**
RAR	**Rarotonga**	**17.39**	**97**	P		**P**	**11 47 53.0**	**-1.2**
	comp=Z,26nm,0.3s,baz=236,slow=7.4,SNR=12							
RAR	**Rarotonga**	**17.39**	**97**	*e*P		**P**	**11 47 53.8**	**-0.5**
URZ	**Urewera**	**18.66**	**191**	P		**P**	**11 48 04.0**	**-1.8**
	comp=Z,16nm,0.3s,baz=306,slow=2.3,SNR=105							
URZ				S		**S**	**11 51 01.4**	**-6.0**
	comp=Z,1.2nm,0.3s,baz=38,slow=24,SNR=7.4							
URZ				ScP		ScP	11 54 45.8	-3.2
	comp=Z,1.5nm,0.3s,baz=311,slow=4.9,SNR=8.2							
SNZO	**South Karori**	**22.10**	**194**	*e*P		**P**	**11 48 36.3**	**-0.4**
	comp=Z,15nm,0.5s,mb4.9							
HNR	**Honiara**	**23.48**	**293**	P		**P**	**11 48 49.4**	**0.0**
	comp=Z,34nm,0.3s,mb5.5,baz=200,slow=8.0,SNR=5.1							
RPZ	**Rata Peaks**	**25.31**	**198**	P		**P**	**11 49 05.3**	**+0.2**
	comp=Z,7.7nm,0.5s,mb4.5,baz=219,slow=2.7,SNR=7.5							
TBI	**Tubuai**	**26.99**	**102**	⇑*i*P		**P**	**11 49 20.3**	**0.0**
	comp=Z,69nm,0.9s,mb5.3							
PAE	**Paea**	**27.26**	**90**	⇑*i*P		**P**	**11 49 22.2**	**-0.5**
	comp=Z,463nm,1.1s,mb6.0							
PPT	**Papeete**	**27.28**	**90**	⇑*i*P		**P**	**11 49 22.6**	**-0.3**
	comp=Z,60nm,1.0s,mb5.2							
PPT				*e*pP			11 50 48.9	
	comp=Z,39nm,1.4s							
PPT	**Papeete**	**27.28**	**90**	P		**P**	**11 49 22.7**	**-0.2**
	comp=Z,51nm,0.8s,mb5.2,baz=193,slow=0.5,SNR=15							
TIAR	**Tiarei**	**27.50**	**90**	⇑*i*P		**P**	**11 49 24.4**	**-0.4**
	comp=Z,389nm,0.7s							
TIAR				*e*pP			11 50 52.7	
	comp=Z,451nm,1.2s							
TVO	**Taravao**	**27.55**	**90**	⇑*i*P		**P**	**11 49 24.8**	**-0.5**
	comp=Z,271nm,0.8s,mb5.9							
TVO				*e*pP			11 50 53.1	
	comp=Z,494nm,1.3s							
MEH	**Mehetia**	**28.65**	**91**	⇑*i*P		**P**	**11 49 34.1**	**-0.8**
	comp=Z,2µm,0.9s							
EIDS	**Eidsvold**	**28.73**	**253**	*e*P		**P**	**11 49 34.9**	**-0.6**
ARMA	**Armidale**	**29.06**	**243**	⇓*i*P		**P**	**11 49 40.5**	**+2.2**
PMOR	**Pomariorio Ree**	**29.39**	**85**	⇑*i*P		**P**	**11 49 40.7**	**-0.6**
	comp=Z,296nm,1.4s,mb5.7							
VAH	**Vaihoa**	**29.58**	**86**	⇑*i*P		**P**	**11 49 42.0**	**-0.9**
	comp=Z,108nm,1.0s,mb5.3							
CTA	**Charters Tower**	**33.27**	**264**	⇓*i*P		**P**	**11 50 15.8**	**+1.4**
	comp=Z,132nm,0.4s,mb5.8							
CTA				*e*			11 55 32.0	
CTA	**Charters Tower**	**33.27**	**264**	P		**P**	**11 50 15.9**	**+1.5**
	comp=Z,152nm,0.5s,mb5.8,baz=93,slow=10,SNR=465							
CTA				ScP		ScP	11 55 32.0	-0.4
	comp=Z,11nm,0.9s,baz=98,slow=2.7,SNR=7.7							
CTA	**Charters Tower**	**33.27**	**264**	⇓*i*P		**P**	**11 50 15.8**	**+1.4**
CTA				pmax		pmax		
	comp=Z,132nm,0.4s							
CTAO	**Charters Tower**	**33.27**	**264**	*e*P		**P**	**11 50 15.5**	**+1.1**
PMG	**Port Moresby**	**34.96**	**282**	*d i*P		**P**	**11 50 28.7**	**+0.1**
PMG	**Port Moresby**	**34.96**	**282**	*e*P		**P**	**11 50 29.4**	**+0.8**
COEN	**Coen**	**37.28**	**273**	*e*P		**P**	**11 50 49.0**	**+1.2**
	comp=Z,60nm,0.8s,mb5.2							
STKA	**Stephens Creek**	**37.78**	**243**	⇓*i*P		**P**	**11 50 53.1**	**+1.5**
	comp=Z,23nm,1.0s,mb4.7							
STKA	**Stephens Creek**	**37.78**	**243**	P		**P**	**11 50 53.1**	**+1.5**
	comp=Z,28nm,0.9s,mb4.8,baz=84,slow=8.6,SNR=22							
STKA				ScP		ScP	11 55 47.9	-1.0
	comp=Z,4.5nm,0.9s,baz=47,slow=5.9,SNR=3.6							
RKT	**Rikitea**	**40.31**	**102**	⇑*i*P		**P**	**11 51 12.0**	**-0.1**
	comp=Z,91nm,0.9s,mb5.3							
ASAR	**Alice Springs**	**44.38**	**256**	P		**P**	**11 51 44.8**	**+0.7**
	comp=Z,110nm,0.8s,mb5.5,baz=90,slow=7.8,SNR=1366							
ASAR				PcP		PcP	11 53 15.6	-0.3
	comp=Z,7.9nm,0.7s,baz=100,slow=4.7,SNR=5.9							
ASAR				ScP		ScP	11 56 14.9	-0.4
	comp=Z,6.2nm,0.7s,baz=100,slow=4.5,SNR=10.0							
ASAR				S		**S**	**11 57 36.8**	**-1.9**
	comp=Z,6.3nm,0.8s,baz=93,slow=16,SNR=21							
ASAR	**Alice Springs**	**44.38**	**256**	P		**P**	**11 51 44.8**	**+0.8**
ASAR							11 53 15.6	
ASAR				S		**S**	**11 57 36.8**	**-1.9**
WB2	**Warramunga Arr**	**44.40**	**262**	*e*P		**P**	**11 51 44.2**	**0.0**
WRAB	**Tennant Creek**	**44.40**	**262**	P		**P**	**11 51 44.0**	**-0.2**
	comp=Z,629nm,0.9s,SNR=64							
WRAB	**Tennant Creek**	**44.40**	**262**	*e*P		**P**	**11 51 44.3**	**+0.1**
WRAB				pmax		pmax		
	comp=Z,118nm,1.1s,mb5.3							
WRAB	**Tennant Creek**	**44.40**	**262**	*e*P		**P**	**11 51 44.3**	**+0.1**
	comp=Z,118nm,1.1s,mb5.3							
WRA	**Warramunga Arr**	**44.41**	**262**	P		**P**	**11 51 44.1**	**-0.2**
	comp=Z,57nm,0.6s,mb5.2,baz=97,slow=8.5,SNR=506							
WRA				ScP		ScP	11 56 14.7	-0.8
	comp=Z,4.7nm,0.9s,baz=86,slow=4.6,SNR=6.7							
WRA				S		**S**	**11 57 36.1**	**-3.0**
	comp=Z,2.7nm,0.8s,baz=97,slow=13,SNR=5.7							
KAKA	**Kakadu**	**47.69**	**271**	⇓*i*P		**P**	**11 52 09.3**	**0.0**
	comp=Z,74nm,0.6s,mb5.4							
GUMO	**Guam**	**49.25**	**310**	P		**P**	**11 52 20.3**	**-0.5**
	comp=Z,100nm,0.9s,mb5.3,baz=93,slow=5.9,SNR=4.1							
FORT	**Forrest**	**49.26**	**246**	*e*P		**P**	**11 52 20.6**	**-0.1**
	comp=Z,47nm,0.6s,mb5.2							
FITZ	**Fitzroy Crossi**	**52.83**	**262**	P		**P**	**11 52 47.2**	**+0.4**
	comp=Z,8.3nm,0.5s,mb4.3,baz=119,slow=5.0,SNR=54							
BATI	**Baumata**	**56.65**	**271**	P		**P**	**11 53 15.2**	**+1.7**
	comp=Z,33nm,0.5s,mb4.8,baz=110,slow=3.4,SNR=4.9							
MBWA	**Marble Bar**	**57.70**	**257**	*e*P		**P**	**11 53 20.4**	**-0.3**
	comp=Z,31nm,0.6s,mb4.7							
KLBR	**Kellerberrin**	**58.04**	**245**	*e*P		**P**	**11 53 22.3**	**-0.4**
	comp=Z,28nm,0.7s,mb4.6							
NWAO	**Narrogin (SRO)**	**58.37**	**243**	P		**P**	**11 53 24.8**	**-0.1**
	comp=Z,7.7nm,0.7s,mb4.1,baz=98,slow=7.3,SNR=6.9							
SBA	**Scott Base**	**58.39**	**184**	*e*P		**P**	**11 53 26.6**	**+2.3**
SBA				pmax		pmax		
	comp=Z,68nm,1.1s,mb4.8							
SBA	**Scott Base**	**58.39**	**184**	*e*P		**P**	**11 53 26.6**	**+2.3**
	comp=Z,68nm,1.1s,mb4.8							
MUN	**Mundaring**	**59.31**	**244**	*e*P		**P**	**11 53 30.8**	**-0.5**
CASY	**Casey**	**64.33**	**205**	⇑*i*P		**P**	**11 54 03.3**	**+0.1**
JOW	**Kunigami**	**69.61**	**310**	P		**P**	**11 54 36.8**	**+0.4**
	comp=Z,18nm,0.5s,mb4.9,baz=144,slow=7.9,SNR=13							
MJAR	**Matsushiro Arr**	**69.62**	**324**	P		**P**	**11 54 35.5**	**-0.6**
	comp=Z,29nm,0.6s,mb5.0,baz=158,slow=6.0,SNR=70							
MAJO	**Matsushiro**	**69.62**	**324**	*e*P		**P**	**11 54 35.8**	**-0.4**
MAJO				pmax		pmax		
	comp=Z,35nm,0.6s,mb5.1							
MAJO	**Matsushiro**	**69.62**	**324**	*e*P		**P**	**11 54 35.8**	**-0.4**
	comp=Z,35nm,0.6s,mb5.1							
MAT	**Matsushiro**	**69.62**	**324**	P		**P**	**11 54 35.4**	**-0.8**
KSM	**Kuching**	**73.07**	**278**	*e*P		**P**	**11 54 56.9**	**0.0**
ASAJ	**Asahikawa**	**73.13**	**332**	P		**P**	**11 54 57.7**	**+1.2**
	comp=Z,84nm,0.8s,mb5.2,baz=212,slow=7.0,SNR=23							
NACB	**Ninganchiao**	**73.15**	**304**	*e*P		**P**	**11 54 56.1**	**-1.0**
	comp=Z,129nm,0.6s,mb5.5							
YHNB	**Yeheng**	**73.58**	**304**	*e*P		**P**	**11 54 58.7**	**-0.8**
	comp=Z,24nm,0.8s,mb4.7							
YSS	**Yuzh-Sakhalins**	**75.29**	**334**	⇓*e*P		**P**	**11 55 07.9**	**-0.8**
YSS				pmax		pmax		
	comp=Z,80nm,0.9s,mb5.2							
YSS	**Yuzh-Sakhalins**	**75.29**	**334**	*e*P		**P**	**11 55 09.0**	**+0.3**
	comp=Z,65nm,0.8s,mb5.1							
PEA0B	**Petropavlovsk-**	**75.68**	**345**	*e*P		**P**	**11 55 10.1**	**-0.6**
PETK	**Petropavlovsk-**	**75.68**	**345**	P		**P**	**11 55 10.0**	**-0.7**
	comp=Z,36nm,0.7s,mb4.9,baz=127,slow=8.0,SNR=27							
KSRS	**Korea Array**	**76.31**	**319**	P		**P**	**11 55 14.8**	**+0.4**
	comp=Z,8.9nm,0.7s,mb4.3,baz=128,slow=6.1,SNR=37							
KS15	**Wonju Array Si**	**76.32**	**319**	*e*P		**P**	**11 55 15.3**	**+0.7**
SCI	**San Clemente I**	**77.61**	**48**	⇓P		**P**	**11 55 22.6**	**+0.8**
	baz=78							
GASB	**Alder Springs**	**78.77**	**40**	⇓P		**P**	**11 55 28.1**	**+0.4**
	baz=79							
BFSC	**Mount Baldy St**	**78.92**	**47**	⇑P		**P**	**11 55 28.3**	**-0.4**
	baz=79							
O02C	**Red Bluff**	**79.04**	**40**	⇓P		**P**	**11 55 29.8**	**+0.6**
	baz=79							
EDW2	**Edwards Air Fo**	**79.05**	**47**	⇑P		**P**	**11 55 29.4**	**0.0**
	baz=79							
ISA	**Isabella**	**79.16**	**46**	⇓P		**P**	**11 55 29.7**	**-0.2**
	baz=79							
NJ2	**Nanjing**	**79.33**	**310**	*e*P		**P**	**11 55 27.3**	**-3.6**
HELL	**Mitchell Peak**	**79.36**	**45**	⇑P		**P**	**11 55 30.7**	**-0.3**
	baz=80							
PFO	**Pinyon Flat Ob**	**79.42**	**48**	P		**P**	**11 55 31.2**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=266,slow=9.9,SNR=2.6							
PFO	**Pinyon Flat Ob**	**79.42**	**48**	⇓P		**P**	**11 55 31.1**	**-0.3**
	baz=80							
ORV	**Oroville**	**79.45**	**41**	⇓P		**P**	**11 55 31.5**	**+0.1**
	baz=80							
S06C	**San Francisco**	**79.51**	**43**	⇑P		**P**	**11 55 31.1**	**-0.6**
	baz=80							
KCC	**Kaiser Creek**	**79.54**	**44**	⇓P		**P**	**11 55 32.0**	**+0.1**
	baz=80							
SWSC	**Sam W. Stewart**	**79.54**	**49**	⇓P		**P**	**11 55 31.1**	**-0.8**
	baz=80	

comp=Z,4.7nm,0.6s,mb4.1,baz=137,slow=7.2,SNR=22
115A **Sonoran Desert** 81.99 51 ⇓P P 11 55 44.7 +0.1
baz=82
R10A **Warm Springs** 82.06 45 ⇓P P 11 55 45.2 +0.3
baz=82,SNR=7.2
S11A **Rachel** 82.08 45 ⇑P P 11 55 45.0 0.0
baz=82
K06A **Valley Falls** 82.14 39 ⇑P P 11 55 45.7 +0.5
baz=82
T11A **Corn Creek, Al** 82.21 46 ⇑P P 11 55 45.7 0.0
baz=82,SNR=6.1
216A **Three Points,** 82.22 52 ⇓P P 11 55 46.0 +0.1
baz=82,SNR=7.0
L07A **Adell** 82.23 40 ⇑P P 11 55 45.9 +0.2
baz=82
U12A **Valley of Fire** 82.25 47 ⇑P P 11 55 46.0 +0.1
baz=82
N08A **GE Springer Mi** 82.26 42 ⇓P P 11 55 46.1 +0.3
baz=82
Q10A **Clear Creek Ra** 82.28 44 ⇓P P 11 55 46.6 +0.6
baz=82
116A **Eloy** 82.31 51 ⇑P P 11 55 46.6 +0.3
baz=82,SNR=6.0
V13A **Grand Canyon W** 82.33 48 ⇓P P 11 55 46.6 +0.3
baz=82
X14A **Yava** 82.40 49 ⇑P P 11 55 46.7 0.0
baz=82,SNR=6.5
Y15A **Casa Rosa Ranc** 82.54 50 ⇓P P 11 55 47.5 +0.1
baz=83,SNR=7.1
R11A **Troy Canyon, C** 82.56 45 ⇑P P 11 55 47.3 -0.1
baz=83
217A **Green Valley** 82.58 53 ⇓P P 11 55 47.9 +0.2
baz=83,SNR=8.4
W14A **Seligman** 82.64 49 ⇓P P 11 55 48.3 +0.4
baz=83,SNR=8.8
U13A **Pakoon Wash** 82.64 47 ⇑P P 11 55 47.9 +0.1
baz=83,SNR=8.6
S12A **Delamar Landin** 82.66 46 ⇑P P 11 55 48.3 +0.4
baz=83,SNR=9.3
Q11A **Duckwater** 82.78 44 ⇓P P 11 55 48.8 +0.3
baz=83
F04A **Amboy** 82.80 36 ⇑P P 11 55 48.7 +0.2
baz=83
SVW2 **Sparrevohn** 82.83 11 *e*P P 11 55 47.0 -1.2
V14A **Boquillas Ranc** 82.83 48 ⇑P P 11 55 49.0 +0.1
baz=83,SNR=8.9
I06A **Prineville** 82.84 38 ⇓P P 11 55 48.5 -0.2
baz=83
X15A **Humboldt** 82.87 50 ⇑P P 11 55 48.8 -0.3
baz=83,SNR=6.2
L08A **Fields** 82.94 40 ⇑P P 11 55 49.1 -0.1
baz=83
NLWA **Neilton Lookou** 82.94 34 ⇑P P 11 55 49.4 +0.3
baz=83
T13A **Saint George** 82.99 47 ⇑P P 11 55 50.1 +0.5
baz=83
G05A **Wamic** 82.99 37 ⇑P P 11 55 49.4 0.0
baz=83
117A **Oracle** 83.03 52 ⇑P P 11 55 50.1 +0.3
baz=83,SNR=7.4
318A **Bisbee** 83.04 53 ⇑P P 11 55 50.5 +0.5
baz=83,SNR=16
Y16A **Circle Bar Ran** 83.12 50 ⇓P P 11 55 50.4 +0.1
baz=83,SNR=8.8
K08A **Mann Creek Ran** 83.16 40 ⇑P P 11 55 51.0 +0.7
baz=83
SEW **Seward** 83.16 14 *e*P P 11 55 48.3 -1.6
U14A **Mt Trumbull** 83.18 47 ⇑P P 11 55 51.0 +0.4
baz=83,SNR=11
R12A **Pony Springs,** 83.20 45 ⇑P P 11 55 50.6 0.0
baz=83
H06A **Lindquist Farm** 83.24 37 ⇓P P 11 55 50.2 -0.5
baz=83
218A **Dragoon** 83.25 53 ⇑P P 11 55 51.3 +0.2
baz=83,SNR=6.4
S13A **Holt Ranch, En** 83.31 46 ⇓P P 11 55 50.9 -0.3
baz=83
I07A **Izee** 83.34 38 ⇓P P 11 55 51.5 +0.4
baz=84
G06A **Carlson Farm,** 83.37 37 ⇓P P 11 55 51.1 -0.2
baz=84
X16A **Lo Mia Camp, P** 83.41 50 ⇓P P 11 55 52.1 +0.3
baz=84,SNR=9.6
Q12A **Willow Creek R** 83.43 45 ⇑P P 11 55 51.4 -0.3
baz=84
O11A **Cowboy Ranch,** 83.48 43 ⇓P P 11 55 52.5 +0.6
baz=84
Y17A **Roosevelt** 83.49 51 ⇓P P 11 55 52.0 -0.2
baz=84
J08A **Circle Bar Ran** 83.53 39 ⇑P P 11 55 52.6 +0.5
baz=84
319A **Douglas** 83.55 53 ⇓P P 11 55 52.8 +0.3
baz=84,SNR=13
E05A **Randle** 83.55 35 ⇑P P 11 55 52.4 +0.2
baz=84
V15A **Kaibab Nationa** 83.58 48 ⇑P P 11 55 52.7 +0.1
baz=84,SNR=5.4
H07A **Lands Inn, Kim** 83.60 38 ⇓P P 11 55 52.7 +0.3
baz=84
P12A **McGill** 83.61 44 ⇑P P 11 55 52.7 0.0
baz=84
118A **Homack Ranch,** 83.63 52 ⇓P P 11 55 53.1 +0.2
baz=84,SNR=6.2
I08A **Drewsey** 83.79 39 ⇓P P 11 55 54.0 +0.6
baz=84
U15A **North Rim** 83.81 48 ⇓P P 11 55 53.9 +0.3
baz=84,SNR=9.1
D05A **Enumclaw** 83.81 35 ⇓P P 11 55 54.3 +0.9
baz=84
X17A **Forest Lakes** 83.83 50 ⇓P P 11 55 54.0 +0.2
baz=84
219A **White Tail Can** 83.86 53 ⇑P P 11 55 54.0 0.0
baz=84,SNR=7.8
Q13A **Wheeler Ranch,** 83.92 45 ⇑P P 11 55 54.3 +0.1
baz=84
J09A **Fry Pan Ranch,** 83.95 40 ⇑P P 11 55 54.9 +0.7
baz=84
WUAZ **Wupatki** 84.00 49 ⇑P P 11 55 54.5 -0.1
baz=84
WUAZ **Wupatki** 84.00 49 *e*P P 11 55 55.3 +0.7
T15A **Red Dirt Ranch** 84.04 47 ⇑P P 11 55 55.0 +0.2
baz=84
H08A **Prairie City** 84.08 38 ⇑P P 11 55 54.9 +0.1
baz=84
Y18A **Canyon Day Jun** 84.12 51 ⇓P P 11 55 55.4 +0.1
baz=84,SNR=7.6
119A **Ashpeak Ranch,** 84.18 52 ⇓P P 11 55 56.1 +0.5
baz=84
P13A **Bates Ranch, G** 84.19 45 ⇑P P 11 55 56.2 +0.8
baz=84
G08A **Pilot Rock** 84.36 38 ⇓P P 11 55 56.3 +0.1
baz=84
B05A **Bryant** 84.42 34 ⇑P P 11 55 56.4 0.0
baz=85
Q14A **Sevier Lake (B** 84.43 45 ⇑P P 11 55 56.9 +0.2
baz=85
D06A **Ole Elum** 84.44 35 ⇑P P 11 55 56.7 +0.2
baz=85
U16A **Tuba City** 84.48 49 ⇑P P 11 55 57.6 +0.6
baz=85
X18A **Snowflake** 84.54 50 ⇑P P 11 55 57.7 +0.4
baz=85
E07A **Sunnyside** 84.60 36 ⇓P P 11 55 57.4 +0.1
baz=85
T16A **Glen Canyon Da** 84.63 48 ⇑P P 11 55 57.8 +0.1
baz=85
HAWA **Hanford** 84.68 36 *e*P P 11 55 58.0 +0.3
USHA **Ushuaia** 84.72 147 P P 11 55 57.2 -0.8
comp=Z,13nm,0.9s,mb4.5,baz=304,slow=15,SNR=3.5
Y19A **Nutrioso** 84.78 51 ⇑P P 11 55 59.1 +0.6
baz=85,SNR=9.5
ETW **Entiat** 84.96 35 *e*P P 11 55 59.1 +0.1
X19A **St. Johns** 84.97 51 ⇓P P 11 55 60.0 +0.5
baz=85
G09A **Cove** 85.03 38 ⇓P P 11 55 59.4 0.0
baz=85
V18A **Ganado** 85.12 49 ⇑P P 11 56 00.6 +0.4
baz=85
T17A **Navajo Res., N** 85.12 48 ⇓P P 11 56 00.7 +0.6
baz=85
H10A **Noah's Angus R** 85.25 39 ⇑P P 11 56 00.5 -0.1
baz=85
R16A **Teasdale** 85.29 47 ⇓P P 11 56 01.4 +0.5
baz=85
BJI **Beijing** 85.32 315 P P 11 56 00.5 -0.5
BJI AMB AMB
comp=Z,31nm,0.7s,mb5.0
BJI AMB AMB
comp=Z,324nm,5.5s
BJI **Beijing** 85.32 315 P P 11 56 00.6 -0.4
D08A **Wollman Farm,** 85.41 36 ⇓P P 11 56 01.1 -0.1
baz=86
G10A **Bishop Farm, J** 85.42 38 ⇓P P 11 56 01.3 0.0
baz=86
S17A **Black Ridge (B** 85.44 47 ⇓P P 11 56 01.1 -0.5
baz=86
U18A **Rough Rock, Ch** 85.50 49 ⇑P P 11 56 02.3 +0.3
baz=86
B07A **Winthrop** 85.59 35 ⇑P P 11 56 02.3 +0.2
baz=86
F10A **Beach Ranch, E** 85.75 38 ⇑P P 11 56 02.5 -0.4
baz=86
H11A **Donnelly** 85.75 39 ⇓P P 11 56 03.0 0.0
baz=86
D09A **Jones Farm, Ri** 85.75 36 ⇑P P 11 56 02.8 -0.1
baz=86
C08A **Higginbotham F** 85.77 36 ⇑P P 11 56 02.3 -0.6
baz=86
SEY **Seymchan** 85.79 347⇑ *e*P P 11 56 01.8 -0.9
T18A **Mexican Hat** 85.84 48 ⇓P P 11 56 03.6 +0.1
baz=86
R17A **Hanksville Air** 85.88 47 ⇑P P 11 56 03.7 0.0
baz=86
B08A **Colville Reser** 85.95 35 ⇑P P 11 56 03.2 -0.6
baz=86
KTH **Kantishna Hill** 85.95 12 *e*P P 11 56 01.0 -2.4
comp=Z,19nm,0.9s,mb4.7
G11A **Walters Elk Ra** 85.98 39 ⇑P P 11 56 04.3 +0.3
baz=86
CHUM **Lake Minchumin** 85.99 11 *e*P P 11 56 01.7 -1.9
comp=Z,14nm,0.6s,mb4.8
GYA **Guiyang** 86.15 300⇓ *i*P P 11 56 05.8 +0.6
GYA AP pP 11 58 05.0 -0.6
GYA XP sP 11 59 01.3 -0.3
GYA PP PP 11 59 42.0 +5.6
GYA SKS 12 05 41.0
GYA S S 12 05 55.0 +0.9
GYA XS sS 12 09 28.0 -0.6
GYA AMB AMB
comp=Z,20nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,230nm,7.2s
J13A **Cove Ranch, Pi** 86.16 41 ⇓P P 11 56 04.9 0.0
baz=86
D10A **Wagner Farm, O** 86.33 37 ⇑P P 11 56 05.5 -0.1
baz=86
A08A **Turner Farm, O** 86.33 34 ⇑P P 11 56 05.6 +0.1
baz=86
SRU **San Rafael** 86.35 46 ⇓P P 11 56 05.7 -0.2
baz=86
H12A **Diamond D Ranc** 86.36 40 ⇓P P 11 56 05.6 -0.2
baz=86
R18A **Canyonlands Na** 86.43 47 ⇓P P 11 56 06.2 -0.1
baz=86
MCK **McKinley** 86.51 13 *e*P P 11 56 04.7 -1.4
J14A **Carey** 86.53 41 ⇓P P 11 56 06.7 +0.1
baz=87
LAZ **Ladron** 86.54 52 *e*P P 11 56 07.2 +0.2
E11A **Bogner Ranch,** 86.55 38 ⇓P P 11 56 06.4 -0.3
baz=87
Q18A **Rafter H Ranch** 86.61 46 ⇓P P 11 56 06.5 -0.6
baz=87
B09A **Rice** 86.63 35 ⇑P P 11 56 06.5 -0.5
baz=87
S19A **Harvey Farm, M** 86.65 48 ⇑P P 11 56 07.3 0.0
baz=87
A09A **Danville** 86.71 35 ⇑P P 11 56 06.9 -0.4
baz=87
O17A **Robinson Place** 86.74 45 ⇑P P 11 56 07.8 +0.1
baz=87
F12A **Elk City** 86.77 39 ⇑P P 11 56 07.3 -0.5
baz=87
D11A **Klaveano Farm,** 86.86 37 ⇓P P 11 56 07.3 -0.8
baz=87
MENT **Mentasta** 86.99 15 *e*P P 11 56 07.5 -0.8
TXAR **Lajitas Array** 87.00 57 P P 11 56 09.6 +0.4
comp=Z,7.6nm,0.8s,mb4.4,baz=218,slow=6.8,SNR=89
TXAR pP pP 11 58 13.2 +3.3
comp=Z,0.5nm,1.0s,baz=231,slow=5.7,SNR=2.2
L16A **Fish Haven** 87.18 43 ⇓P P 11 56 09.1 -0.6
baz=87
SYO **Syowa Base** 87.19 193⇓ *e*P P 11 56 06.8 -2.6
SYO **Syowa Base** 87.19 193⇓ *e*PcP PcP 11 56 10.0 -0.8
J15A **Blackfoot** 87.25 42 ⇓P P 11 56 10.9 +0.9
baz=87
ANMO **Albuquerque** 87.28 51 *e*P P 11 56 10.5 +0.1
F13A **Darby** 87.34 39 ⇓P P 11 56 09.8 -0.6
baz=88
C11A **Tepee Creek (N** 87.34 37 ⇓P P 11 56 10.6 +0.2
baz=88
D12A **Red Ives Fores** 87.42 38 ⇑P P 11 56 10.7 0.0
baz=88
K16A **Soda Springs** 87.49 43 ⇓P P 11 56 11.2 0.0
baz=88
XAN **Xi'an** 87.59 307 P P 11 56 12.3 +0.4
XAN AMB AMB
comp=Z,57nm,0.9s,mb5.3
XAN AMB AMB
comp=Z,245nm,12.1s
GDL2 **Guadalupe Moun** 87.66 55 *e*P P 11 56 12.9 +0.7
DLBC **Dease Lake** 87.67 23 P P 11 56 11.4 -0.2
baz=199,slow=7.7
J16A **Bone** 87.70 42 ⇑P P 11 56 12.7 +0.5
baz=88
C12B **Naegeli Ranch,** 87.71 37 ⇑P P 11 56 12.0 0.0
baz=88
COLA **College** 87.74 13 *d i*P P 11 56 09.9 -1.9
COLA **College** 87.74 13⇓ *e*P P 11 56 10.1 -1.8
comp=Z,37nm,0.7s,mb5.2
O19A **Miners Draw (B** 87.87 46 ⇑P P 11 56 12.2 -0.8
baz=88
A11A **Hall Mountain,** 87.91 36 ⇑P P 11 56 12.7 -0.2
baz=88
RRI2 **Red Ridge** 87.92 42 *e*P P 11 56 12.2 -1.0
comp=Z,3.5nm,0.7s,mb4.2
B12A **Libby** 88.06 36 ⇓P P 11 56 13.4 -0.3
baz=88
HIA **Hailar** 88.10 325⇓ *i*P P 11 56 13.5 -0.4
BILL **Bilibino** 88.48 354⇓ *i*P P 11 56 13.3 -1.9
BILL pmax pmax
comp=Z,13nm,0.6s,mb4.8
SNAA **Sanae** 88.55 179 *e*P P 11 56 14.2 -1.5
SNAA *e* 11 56 16.1
SNAA **Sanae** 88.55 179 *e*P P 11 56 14.4 -1.3
VNA3 **Neumayer Olymp** 88.69 176 *e*P P 11 56 15.5 -0.9
VNA3 *e* 11 56 17.5
BW06 **Boulder Array** 88.76 43 *e*P P 11 56 17.0 -0.1
comp=Z,12nm,1.8s,mb4.4
PDAR **Pinedale Array** 88.76 43 P P 11 56 16.9 -0.2
comp=Z,1.4nm,0.6s,mb4.0,baz=214,slow=3.2,SNR=14
HHC **Hu-ho-hao-te** 88.78 314 *e*P P 11 56 15.0 -2.3
HHC S S 12 06 14.0 -4.0
HHC AMB AMB
comp=Z,15nm,0.7s,mb4.9
HHC AMB AMB
comp=Z,703nm,7.3s
KMI **Kunming** 88.86 297 ⇓P P 11 56 19.3 +1.3
KMI AP pP 11 58 22.3 +3.1
KMI S S 12 06 19.0 -0.4
KMI XS sS 12 09 58.3 +2.7
KMI SS SS 12 12 31.8 +2.6
KMI AMB AMB
comp=Z,31nm,0.9s,mb5.1
KMI AMB AMB
comp=Z,1μm,15.4s
KMI **Kunming** 88.86 297 ⇓P P 11 56 19.3 +1.3
KMI *PP pP 11 58 22.2 +3.0
KMI S S 12 06 19.1 -0.3
KMI SS SS 12 12 31.7 +2.5
KMI **Kunming** 88.86 297 ⇓P P 11 56 19.3 +1.3
KMI pP pP 11 58 22.2 +3.0
KMI S S 12 06 19.1 -0.3
KMI sS sS 12 09 58.3 +2.7
KMI SS SS 12 12 31.7 +2.5
DAWY **Dawson** 89.02 16 *e*P P 11 56 17.0 -0.8
VNA2 **Neumayer--Watz** 89.13 177 *e*P P 11 56 17.8 -0.6
baz=201,slow=3.6
VNA2 *e* 11 56 19.6
BDT **Bhumibol Dam** 89.19 289 P P 11 56 20.5 +0.8
comp=Z,20nm,0.9s,mb5.0
VNA1 **Neumayer--Stat** 89.36 177 *e*P P 11 56 18.9 -0.6
VNA1 *e* 11 56 20.8
C15A **Salmond Ranch,** 89.39 38 ⇑P P 11 56 19.9 0.0
baz=90
COLD **Coldfoot** 89.40 11 *e*P P 11 56 18.8 -0.7
comp=Z,24nm,1.1s,mb5.0
CHRT **Chiangrai** 89.45 291 ⇓P P 11 56 22.0 +1.2
comp=Z,179nm,0.7s,mb6.0
A14A **Double T Ranch** 89.55 37 ⇓P P 11 56 20.4 -0.2
baz=90
CMAR **Chiang Mai Arr** 89.68 290 P P 11 56 23.0 +1.1
comp=Z,20nm,0.9s,mb5.0,baz=124,slow=3.4,SNR=61
CHG **Chiang Mai** 89.80 290 ⇓P P 11 56 23.1 +0.6
comp=Z,34nm,0.9s,mb5.2
CHTO **Chiang Mai** 89.80 290 *e*P P 11 56 22.1 -0.4
CHTO pmax pmax
comp=Z,24nm,0.8s,mb5.1
CHTO **Chiang Mai** 89.80 290 *e*P P 11 56 22.1 -0.4
comp=Z,24nm,0.8s,mb5.1
PLCA **Paso Flores** 89.84 134 P P 11 56 22.4 +0.1
comp=Z,5.7nm,0.7s,mb4.5,baz=238,slow=5.4,SNR=15
CD2 **Chengdu** 90.27 303 *e*P P 11 56 26.3 +1.9
CD2 AP pP 11 58 27.3 +1.4
CD2 PP PP 12 00 12.8 +4.0
CD2 SKS 12 06 05.5
CD2 S S 12 06 33.3 +1.4
CD2 XS sS 12 10 08.3 -0.7
CD2 SS SS 12 12 54.0 +4.8
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CD2 AMB AMB
comp=Z,30nm,6.8s
YAK **Yakutsk** 91.52 338⇑ *e*P P 11 56 27.5 -1.9
YAK pmax pmax
comp=Z,44nm,1.0s,mb5.4
YAK **Yakutsk** 91.52 338 *e*P P 11 56 28.2 -1.2
LZH **Lanzhou** 92.23 308 *e*P P 11 56 34.0 +0.7
LZH AP pP 11 58 34.3 -0.7
LZH PP PP 12 00 26.5 +2.6
LZH *e*SKS 12 06 15.3
LZH S S 12 06 49.0 +0.1
LZH AMB AMB
comp=Z,28nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,185nm,6.3s
LZH **Lanzhou** 92.23 308 *e*P P 11 56 34.0 +0.7
LZH *PP pP 11 58 34.2 -0.8
LZH *SP sP 11 59 27.0 -3.5
LZH 12 00 26.5
LZH *e* 12 06 15.3
LZH S S 12 06 49.0 +0.1
LZH **Lanzhou** 92.23 308 *e*P P 11 56 34.0 +0.7
LZH pP pP 11 58 34.2 -0.8
LZH sP sP 11 59 27.0 -3.5
LZH PP PP 12 00 26.5 +2.6
LZH *e*SKS 12 06 15.3
LZH S S 12 06 49.0 +0.1
LZH sS sS 12 10 22.5 -4.7
ULN **Ulaanbaatar** 94.78 319⇑ *i*P P 11 56 43.4 -1.2
SONM **Songino Array** 95.17 319 P P 11 56 45.8 -0.6
comp=Z,1.3nm,0.5s,mb4.3,baz=136,slow=5.5,SNR=11
SONM PP PP 12 00 40.6 -5.6
comp=Z,1.9nm,1.0s,baz=130,slow=6.5,SNR=5.5
SONM PKKPbc PKKPbc 12 13 37.1 -1.8
comp=Z,0.8nm,0.8s,baz=262,slow=4.2,SNR=4.1
YKA **Yellowknife Ar** 96.14 25 P P 11 56 48.3 -2.1
comp=Z,0.9nm,0.6s,mb4.2,baz=239,slow=5.0,SNR=3.5
GTA **Gaotai** 96.42 309 *e*P P 11 56 52.0 -0.3
GTA AMB AMB
comp=Z,2.0nm,1.1s,mb4.3
TIXI **Tiksi** 98.16 345⇑ *e*P Pdif 11 56 57.3 -2.6
TIXI pmax pmax
comp=Z,9.0nm,2.0s,mb4.8
LPAZ **La Paz** 102.52 113 Pdiff Pdif 11 57 22.6 +3.3
comp=Z,0.7nm,0.8s,baz=235,slow=3.7,SNR=6.1
ZALV **Zalesovo Beam** 109.91 321 PKiKP PKiKP 12 01 48.4 -2.0
comp=Z,1.7nm,0.6s,baz=130,slow=0.9,SNR=7.5
MKAR **Makanchi Array** 110.63 314 Pdiff Pdif 11 57 58.4 +3.0
comp=Z,0.3nm,0.5s,baz=96,slow=5.4,SNR=3.8
MKAR PKiKP PKiKP 12 01 50.0 -2.0
comp=Z,1.8nm,0.6s,baz=81,slow=0.5,SNR=14
MKAR PKKPbc PKKPbc 12 12 51.6 -2.0
comp=Z,0.8nm,0.6s,baz=278,slow=3.6,SNR=7.7
MKAR **Makanchi Array** 110.63 314 Pdif Pdif 11 57 58.4 +3.0
MKAR PKPdf PKiKP 12 01 50.0 -2.0
MKAR PKKPbc PKKPbc 12 12 51.6 -2.0
KURK **Kurchatov** 113.42 318 PKiKP PKiKP 12 01 55.0 -2.2
comp=Z,2.6nm,0.7s,baz=95,slow=1.9,SNR=15
KURK PP PP 12 03 02.2 +2.9
comp=Z,1.6nm,1.0s,baz=87,slow=6.0,SNR=4.1
KURK SKP 12 04 36.5
comp=Z,0.9nm,0.6s,baz=82,slow=1.9,SNR=4.2
KURK **Kurchatov** 113.42 318⇑ *i*PKiKP PKiKP 12 01 55.2 -2.0
BVAR **Borovoye Array** 118.49 320 PKP PKPdf 12 02 05.3 -1.6
comp=Z,4.5nm,0.4s,baz=95,slow=1.7,SNR=23
ARU **Arti** 124.61 326 *i*PKiKP PKPdf 12 02 16.9 -1.6
ARU 12 04 14.1
ARU **Arti** 124.61 326 *e*PKPdf PKPdf 12 02 17.2 -1.3
AKTK **Aktyubinsk** 126.49 319 PKP PKPdf 12 02 21.1 -1.2
AKTO **Aktyubinsk** 126.49 319 PKP PKPdf 12 02 21.1 -1.2
comp=Z,4.4nm,0.8s,baz=41,slow=1.0,SNR=10
BOSA **Boshof** 126.62 206 PKP PKPdf 12 02 22.5 -0.9
comp=Z,2.1nm,0.7s,baz=160,slow=15,SNR=4.2
ARCES **ARCESS Array B** 128.35 350 PKP PKPdf 12 02 23.8 -1.6
comp=Z,14nm,1.0s,baz=31,slow=1.4,SNR=22
ARCES SKPbc 12 04 50.7
comp=Z,10.0nm,0.9s,baz=46,slow=5.2,SNR=6.4
ARCES **ARCESS Array B** 128.35 350 PKP PKPdf 12 02 23.8 -1.6
ARCES SKPbc 12 04 50.7
LBTB **Lobatse** 129.61 208 PKP PKPdf 12 02 27.1 -2.1
comp=Z,2.8nm,0.8s,baz=192,slow=2.5,SNR=2.9
LBTB SKPbc SKPbc 12 04 57.9 -1.9
comp=Z,2.1nm,0.6s,baz=127,slow=2.0,SNR=5.1
JOF **Joensuu** 132.54 342 *e*p PKPdf 12 02 31.7 -1.7
comp=Z,8.2nm,0.5s
JOF **Joensuu** 132.54 342 *e*PKiKP PKPdf 12 02 31.7 -1.7
JOF pmax pmax
comp=Z,8.0nm,0.5s
KAF **Kangasniemi** 134.56 344 *e*p PKPdf 12 02 36.4 -0.8
comp=Z,3.7nm,0.5s
KAF **Kangasniemi** 134.56 344 *e*PKiKP PKPdf 12 02 36.4 -0.8
KAF pmax pmax
comp=Z,4.0nm,0.5s
OBN **Obninsk** 136.16 332 *i*PKiKP PKPdf 12 02 40.0 -0.4
OBN pmax pmax
comp=Z,3.0nm,0.6s
TSUM **Tsumeb** 138.08 203 PKP PKPdf 12 02 45.2 +0.1
comp=Z,2.2nm,0.6s,baz=124,slow=3.6,SNR=6.3
TSUM SKP 12 05 25.5
comp=Z,1.8nm,0.8s,baz=246,slow=19,SNR=3.4
KIV **Kislovodsk** 138.39 315 *e*PKiKP PKPdf 12 02 41.1 -3.8
KIV *e*SS SS 12 23 07.6 -4.4
KIV pmax pmax
comp=Z,12nm,1.3s
NB2 **NORSAR Subarra** 138.42 353 PKP 12 02 32.9
comp=Z,1.4nm,0.7s,baz=16,slow=3.2
NOA **NORSAR Array B** 138.42 353 PKhKP 12 02 32.4
comp=Z,2.8nm,0.7s,baz=15,slow=2.4,SNR=8.2
NOA PKP PKPdf 12 02 45.2 +0.8
comp=Z,1.8nm,0.6s,baz=13,slow=4.0,SNR=4.7
NOA SKP 12 05 24.9
comp=Z,6.0nm,1.1s,baz=14,slow=4.3,SNR=4.1
NOA **NORSAR Array B** 138.42 353 PKP PKPdf 12 02 45.2 +0.8
NOA SKP 12 05 24.9
KMBO **Kilima Mbogo** 139.34 243 SKPbc SKPbc 12 05 30.6 -0.5
comp=Z,3.2nm,0.8s,baz=74,slow=7.0,SNR=5.6
ANN **Anapa** 141.44 318 *i*PKHKP 12 02 43.9
ANN pmax pmax
comp=Z,36nm,1.1s
KAC **Achnashellach** 142.16 6 *e*P PKPdf 12 02 46.6 -4.6
MCD **Coleburn Disti** 142.25 4 *e*P PKPdf 12 02 44.5 -6.9
KPL **Plockton** 142.28 7 *e*P PKPdf 12 02 46.4 -5.0
MDO **Dochfour** 142.31 5 *e*P PKPdf 12 02 46.6 -4.8
AKASG **Malin Array Be** 142.41 331 PKhKP 12 02 46.9
comp=Z,13nm,0.3s,baz=44,slow=4.4,SNR=89
AKASG SKPbc SKPbc 12 05 35.5 -2.2
comp=Z,7.4nm,0.7s,baz=40,slow=2.8,SNR=15
AKASG **Malin Array Be** 142.41 331 PKP 12 02 46.9
AKASG SKPbc SKPbc 12 05 35.5 -2.2
AKBB **Malin Array Si** 142.41 331 *e*PKPdf PKPdf 12 02 46.9 -5.0
AKBB *e*SKPdf SKPdf 12 05 34.8 +0.7
KSB **Sheil Bridge** 142.43 6 *e*P PKPdf 12 02 47.3 -4.5
KAR1 **Arisaig** 142.68 7 *e*P PKPdf 12 02 47.5 -4.6
MUD **Monsted U'grnd** 143.14 353 *i*P PKPdf 12 02 49.8 -3.2
MALT **Malatya** 143.39 308⇑ *i*P PKPdf 12 02 52.0 -2.0
MALT **Malatya** 143.39 308 *e*PKPdf PKPdf 12 02 52.3 -1.7
SIM **Simferopol'** 143.41 320 *de*PKHKP 12 02 52.4
SIM pmax pmax
comp=Z,75nm,0.6s

EAB	**Aberfoyle**	**143.55**	**6**	*e*P		PKPdf	12 02 51.1	-2.6
EBH	**Black Hill**	**143.56**	**5**	*e*P		PKPdf	12 02 50.9	-2.8
PGBU	**Glenifferbraes**	**143.91**	**6**	*e*P		PKPdf	12 02 51.7	-2.7
ESY	**Stoneypath**	**143.96**	**4**	*e*P		PKPdf	12 02 52.3	-2.1
EAU	**Auchinoon**	**143.97**	**5**	*e*P		PKPdf	12 02 52.2	-2.2
EBL	**Broad Law**	**144.07**	**5**	*e*P		PKPdf	12 02 52.5	-2.2
ESK	**Eskdalemuir**	**144.51**	**5**	*e*P		PKPdf	12 02 53.4	-2.0
ECK	**Cauldkaine Hil**	**144.65**	**5**	*e*P		PKPdf	12 02 53.9	-1.7
GAL1	**Galloway**	**144.81**	**6**	*e*P		PKPdf	12 02 54.6	-1.3
XAL	**Allendale**	**145.03**	**4**	*e*P		PKPdf	12 02 55.8	-0.6
KIS	**Kishinev**	**145.14**	**327**	*e*PKP		PKPdf	12 02 58.0	+1.2
LVV	**L'vov**	**145.31**	**334**	*e*PKIKP		PKPdf	12 02 56.9	0.0
BSEG	**Bad Segeberg**	**145.45**	**351**	*e*PKPab		PKPab	12 03 00.6	+0.9
BR131	**Keskin Array S**	**146.28**	**313**	*e*PKPdf		PKPdf	12 03 00.2	+1.3
LHO	**Holmfirth**	**146.37**	**4**	*e*P		PKPdf	12 02 59.3	+0.7
BUR08	**Bucovina Ar. S**	**146.45**	**331**	*e*PKPbc		PKPbc	12 03 01.3	-0.1
BUR08				*e*SKPbc		SKPbc	12 05 47.2	0.0
BURAR	**Bucovina Array**	**146.46**	**331**	⇑*i*P		PKPbc	12 03 01.2	-0.2
BURAR	**Bucovina Array**	**146.46**	**331**	⇑P		PKPbc	12 03 01.2	-0.2
OJC	**Ojcow**	**146.56**	**339**	*e*PKIKP		PKPdf	12 03 00.6	+1.6
KOLS	**Kolonicke sedl**	**146.71**	**335**	*e*PKP		PKPbc	12 03 01.6	-0.5
KOLS				*e*			12 03 04.5	
KOLS	**Kolonicke sedl**	**146.71**	**335**	*e*PKP		PKPbc	12 03 01.6	-0.5
KOLS				*e*			12 03 04.5	
STHS	**Stebnicka Huta**	**146.72**	**337**	*e*PKP		PKPbc	12 03 01.5	-0.5
STHS				*e*			12 03 05.6	
ANTO	**Ankara**	**146.79**	**313**	⇑*i*P		PKPdf	12 03 01.7	+1.9
ANTO	**Ankara**	**146.79**	**313**	*e*PKPbc		PKPbc	12 03 01.8	-0.8
NRDL	**Niedersach Rie**	**146.88**	**351**	*e*PKPbc		PKPbc	12 03 01.1	-1.3
KWE	**Weaver Farm**	**146.90**	**4**	*e*P		PKPdf	12 03 00.8	+1.3
UZH	**Uzhgorod**	**146.94**	**335**	*d*PKIKP		PKPbc	12 03 02.0	-0.7
VRI	**Vrincioaia**	**146.97**	**327**	⇓*i*P		PKPdf	12 03 01.6	+1.7
VRI	**Vrincioaia**	**146.97**	**327**	P		PKPbc	12 03 02.2	-0.7
TIRR	**Tirgusor**	**147.00**	**324**	⇑*i*P		PKPdf	12 03 01.0	+1.0
TIRR	**Tirgusor**	**147.00**	**324**	⇑P		PKPdf	12 03 01.0	+1.1
CRVS	**Cervenica-Dubn**	**147.06**	**336**	*e*PKIKP		PKPbc	12 03 02.2	-0.8
CRVS				*e*			12 03 05.7	
CRVS	**Cervenica-Dubn**	**147.06**	**336**	*e*PKP		PKPbc	12 03 02.2	-0.8
CRVS				*e*			12 03 05.7	
CRVS				*e*			12 05 16.5	
NIE	**Niedzica**	**147.06**	**337**	*e*PKP		PKPbc	12 03 02.7	-0.3
KSP	**Ksiaz**	**147.10**	**343**	*e*PKP		PKPbc	12 03 02.6	-0.4
KSP	**Ksiaz**	**147.10**	**343**	⇓*i*PKP		PKPbc	12 03 02.6	-0.4
KSP				*e*			12 03 06.1	
HARR	**Harsova**	**147.12**	**325**	PKP2		PKPab	12 03 11.3	+4.6
IBBN	**Ibbenburen**	**147.38**	**353**	*e*PKPab		PKPab	12 03 06.3	-1.2
OKC	**Ostrava-Krasne**	**147.44**	**340**	⇑*e*PKP		PKPbc	12 03 03.1	-0.8
OKC				*e*PKPAB		PKPab	12 03 07.4	-0.4
CLZ	**Clausthal**	**147.47**	**350**	*e*PKP2		PKPab	12 03 06.8	-1.1
CLZ	**Clausthal**	**147.47**	**350**	*e*PKPbc		PKPbc	12 03 03.3	-0.6
CLZ				*e*PKPab		PKPab	12 03 06.8	-1.1
CLL	**Collm**	**147.48**	**347**	⇓*i*PKIKP		PKPbc	12 03 03.1	-0.9
CLL				*i*			12 03 07.0	
CLL				pmax	pmax			
	comp=Z,56nm,0.9s							
CLL	**Collm**	**147.48**	**347**	*e*PKPbc		PKPbc	12 03 03.0	-1.0
CLL	**Collm**	**147.48**	**347**	⇓*i*PKPbc		PKPbc	12 03 03.1	-0.9
	comp=Z,56nm,0.9s							
CLL				*i* PKPab		PKPab	12 03 07.0	-0.9
	comp=Z,35nm,0.9s							
UPC	**Upice**	**147.48**	**343**	⇑*e*PKP		PKPbc	12 03 03.6	-0.4
UPC				*e*PKPAB		PKPab	12 03 07.7	-0.3
DPC	**Dobruska-Polom**	**147.53**	**342**	⇑*e*PKP		PKPbc	12 03 03.8	-0.4
BRG	**Berggiesshubel**	**147.68**	**345**	*i* PKIKP		PKPbc	12 03 03.8	-0.7
BRG				*i*			12 03 07.9	
BRG				pmax	pmax			
	comp=Z,16nm,0.6s							
BRG	**Berggiesshubel**	**147.68**	**345**	*e*PKPbc		PKPbc	12 03 03.7	-0.8
BRG				*e*PKPab		PKPab	12 03 07.4	-1.3
BRG	**Berggiesshubel**	**147.68**	**345**	*i* PKP		PKPbc	12 03 03.8	-0.7
	comp=Z,26nm,0.6s							
BRG				*i*			12 03 07.9	
	comp=Z,22nm,0.8s							
MORC	**Moravsky Berou**	**147.68**	**341**	PKIKP		PKPbc	12 03 03.9	-0.7
MORC	**Moravsky Berou**	**147.68**	**341**	⇓*i*P		PKPbc	12 03 03.4	-1.2
MORC	**Moravsky Berou**	**147.68**	**341**	*e*PKPbc		PKPbc	12 03 03.8	-0.8
FBE	**Freiberg**	**147.77**	**346**	*e*PKPbc		PKPbc	12 03 04.0	-0.7
FBE				*e*PKPab		PKPab	12 03 08.2	-0.9
MCH1	**Michaelchurch**	**147.82**	**5**	*e*P		PKPbc	12 03 03.2	-1.6
PVCC	**Panska Ves**	**147.84**	**345**	⇑*e*PKP		PKPbc	12 03 04.3	-0.6
PVCC				*e*PKPAB		PKPab	12 03 08.8	-0.6
DRGR		**148.21**	**332**	⇓*i*P		PKPbc	12 03 05.2	-0.8
DRGR		**148.21**	**332**	P		PKPbc	12 03 05.3	-0.6
PRU	**Pruhonice**	**148.34**	**344**	*e*PKPDF		PKPdf	12 03 01.7	-0.3
PRU				⇑*e*PKP		PKPbc	12 03 05.5	-0.7
PRU				*e*PKPAB		PKPab	12 03 10.7	-0.8
VYHS	**Vyhne**	**148.36**	**338**	*e*PKP		PKPbc	12 03 05.5	-0.8
VYHS				*e*			12 03 11.4	
CSS	**Prodhromos**	**148.37**	**305**	*e*PKPdf		PKPbc	12 03 05.7	-1.1
VRAC	**Vranov**	**148.39**	**341**	⇑*i*P		PKPbc	12 03 05.4	-0.9
VRAC	**Vranov**	**148.39**	**341**	⇑P		PKPbc	12 03 05.4	-0.9
MOX	**Moxa**	**148.40**	**348**	*e*PKP		PKPbc	12 03 05.4	-0.9
	comp=Z,39nm,1.3s							
EIL	**Elat**	**148.41**	**294**	PKPbc		PKPbc	12 03 06.5	-0.6
	comp=Z,18nm,0.7s,baz=12,slow=4.9,SNR=18							
TANN	**Tannenbergstha**	**148.44**	**347**	*e*PKPbc		PKPbc	12 03 05.3	-1.1
TANN				*e*PKPab		PKPab	12 03 10.8	-1.1
KOLL	**Kolacno**	**148.44**	**339**	*e*PKP		PKPbc	12 03 06.0	-0.5
WERD	**Werda**	**148.44**	**347**	*e*PKPbc		PKPbc	12 03 05.7	-0.7
PSZ	**Piszkesteto**	**148.46**	**336**	⇑*i*P		PKPbc	12 03 05.6	-1.0
PSZ	**Piszkesteto**	**148.46**	**336**	*e*PKPdf		PKPbc	12 03 05.6	-1.0
GUNZ	**Gunzen**	**148.51**	**347**	*e*PKPbc		PKPbc	12 03 05.7	-0.9
GUNZ				*e*PKPab		PKPab	12 03 11.1	-1.1
WERN	**Wernitzgruen**	**148.58**	**347**	*e*PKPbc		PKPbc	12 03 05.7	-1.1
WERN				*e*PKPab		PKPab	12 03 11.5	-1.0
NKC	**Novy Kostel**	**148.61**	**347**	⇑*e*PKP		PKPbc	12 03 06.3	-0.6
NKC				*e*PKPAB		PKPab	12 03 11.6	-1.0
TREC	**Trest**	**148.72**	**343**	*e*PKHKP		PKPbc	12 03 06.3	-0.9
TREC	**Trest**	**148.72**	**343**	⇑*e*PKP		PKPbc	12 03 06.3	-0.9
MANZ	**Manzenberg**	**148.92**	**347**	*e*PKPbc		PKPbc	12 03 06.5	-1.1
MODS	**Modra-Piesok**	**149.00**	**340**	*e*PKP		PKPbc	12 03 07.6	-0.3
BEBN	**Eben Emael**	**149.07**	**355**	PKPbc		PKPbc	12 03 08.2	+0.2
ROTZ	**Rotzenmuhle**	**149.10**	**347**	*e*PKPbc		PKPbc	12 03 07.1	-1.0
UCC	**Uccle**	**149.16**	**357**	PKPbc		PKPbc	12 03 07.3	-0.9
UCC				PKPab		PKPab	12 03 15.9	+1.1
ZST	**Bratislava**	**149.21**	**340**	*e*PKP		PKPbc	12 03 06.9	-1.5
MEM	**Membach**	**149.23**	**355**	PKPbc		PKPbc	12 03 07.6	-0.8
GZR	**Gura Zlata**	**149.24**	**330**	⇑*i*P		PKPbc	12 03 06.9	-1.7
GZR	**Gura Zlata**	**149.24**	**330**	P		PKPbc	12 03 07.6	-0.9
TNS	**Taunus Mts**	**149.34**	**352**	*e*PKPbc		PKPbc	12 03 07.3	-1.3
TNS				*e*PKPab		PKPab	12 03 14.6	-1.0
GRA1	**Grafenberg Arr**	**149.38**	**348**	*e*PKPbc		PKPbc	12 03 08.1	-0.6
GRF	**Grafenberg Arr**	**149.38**	**348**	*e*PKPbc		PKPbc	12 03 08.1	-0.6
KHC	**Kasperske Hory**	**149.38**	**345**	*i* PKHKP		PKPbc	12 03 07.9	-0.9
KHC	**Kasperske Hory**	**149.38**	**345**	⇑*e*PKP		PKPbc	12 03 08.1	-0.7
KHC				*e*PKPAB		PKPab	12 03 15.5	-0.3
SNF	**Seneffe**	**149.45**	**357**	PKPbc		PKPbc	12 03 08.2	-0.7
BCLA	**Clavier**	**149.48**	**355**	PKPab		PKPab	12 03 15.0	-1.1
WET	**Wettzell**	**149.54**	**345**	*e*PKP2		PKPab	12 03 15.8	-0.7
WET	**Wettzell**	**149.54**	**345**	*e*PKPbc		PKPbc	12 03 08.1	-1.0
WET				*e*PKPab		PKPab	12 03 15.8	-0.7
BZS	**Buzias**	**149.60**	**332**	⇓*i*P		PKPbc	12 03 08.2	-1.2
BZS	**Buzias**	**149.60**	**332**	P		PKPbc	12 03 08.3	-1.1
GEC2	**GERESS Array S**	**149.61**	**344**	*e*PKPbc		PKPbc	12 03 08.3	-1.0
GERES	**GERESS Array B**	**149.61**	**344**	PKPbc		PKPbc	12 03 08.5	-0.8
	comp=Z,17nm,0.8s,baz=42,slow=2.2,SNR=34							
GERES				PKPab		PKPab	12 03 16.1	-0.7
	comp=Z,4.0nm,0.5s,baz=46,slow=3.9,SNR=7.0							
GIVF	**Givet**	**149.83**	**356**	*e*PKP1		PKPbc	12 03 08.5	-1.3
	comp=Z,88nm,0.9s							
CONA	**Conrad Observa**	**149.84**	**341**	⇓*i*P		PKPbc	12 03 09.2	-0.7
	comp=Z,16nm,0.7s							
CSNA	**Conrad Observa**	**149.84**	**341**	⇓*i*P		PKPbc	12 03 09.2	-0.7
	comp=Z,14nm,0.6s							
DOU	**Dourbes**	**149.85**	**356**	PKPbc		PKPbc	12 03 09.1	-0.7
BAIF	**Baives**	**149.91**	**357**	*e*PKP1		PKPbc	12 03 08.7	-1.3
	comp=Z,67nm,1.0s							
WLF	**Walferdange**	**150.15**	**354**	PKPbc		PKPbc	12 03 10.3	-0.3
WLF	**Walferdange**	**150.15**	**354**	*e*PKPbc		PKPbc	12 03 09.3	-1.3
WLF				*e*PKPab		PKPab	12 03 18.3	-0.7
WLF	**Walferdange**	**150.15**	**354**	*e*PKPbc		PKPbc	12 03 09.5	-1.0
PKSM	**Moragy**	**150.35**	**336**	⇑*i*P		PKPbc	12 03 08.4	-2.8
PKSM	**Moragy**	**150.35**	**336**	P		PKPbc	12 03 10.0	-1.2
RJOB	**Jochberg**	**150.87**	**345**	*e*PKPbc		PKPbc	12 03 11.0	-1.3
BFO	**Black Forest**	**151.20**	**351**	*e*PKPbc		PKPbc	12 03 12.0	-1.0
BFO				*e*PKPab		PKPab	12 03 22.0	-1.4
FLN	**La Foliniere**	**151.22**	**3**	*e*PKP1		PKPbc	12 03 11.2	-1.8
	comp=Z,24nm,0.6s							
PERS	**Pernice**	**151.22**	**341**	*i* PKPdf		PKPbc	12 03 11.6	-1.5
CDF	**Champ du Feu**	**151.26**	**352**	*e*PKP1		PKPbc	12 03 11.7	-1.5
	comp=Z,20nm,0.8s							
LDF	**La Druitiere**	**151.40**	**3**	*e*PKP1		PKPbc	12 03 11.5	-2.0
	comp=Z,10.0nm,0.5s							
MEZF	**Maizieres J'vi**	**151.40**	**355**	*e*PKP1		PKPbc	12 03 12.1	-1.4
ROSF	**Rostrenen**	**151.41**	**7**	*e*PKP1		PKPbc	12 03 11.4	-2.1
	comp=Z,7.3nm,0.5s							
WATA	**Walderalm**	**151.54**	**346**	⇓*i*P		PKPbc	12 03 12.5	-1.3
	comp=Z,6.7nm,0.5s							
GRR	**Gorron**	**151.57**	**4**	*e*PKP1		PKPbc	12 03 12.1	-1.7
	comp=Z,13nm,0.5s							
SGMF	**Saint Gilles**	**151.57**	**6**	*e*PKP1		PKPbc	12 03 11.8	-2.0
	comp=Z,19nm,0.7s							
WTTA	**Wattenberg**	**151.59**	**346**	⇑*i*P		PKPbc	12 03 12.9	-1.0
	comp=Z,12nm,0.4s							
MOTA	**Moosalm**	**151.63**	**346**	⇓*i*P		PKPbc	12 03 12.1	-1.9
	comp=Z,11nm,1.0s							
MYKA	**Terra Mystica**	**151.66**	**343**	⇑*i*P		PKPbc	12 03 12.2	-2.0
	comp=Z,9.1nm,0.5s							
HAU	**Haudompre**	**151.78**	**353**	*e*PKP1		PKPbc	12 03 12.6	-1.7
	comp=Z,7.6nm,0.5s							
QUIF	**Quistinic**	**151.84**	**7**	*e*PKP1		PKPbc	12 03 12.5	-2.0
ABTA	**Abfaltersbach**	**151.86**	**344**	⇓*i*P		PKPbc	12 03 12.8	-1.7
	comp=Z,16nm,0.5s							
HINF	**Hinteralfeld**	**151.90**	**353**	*e*PKP1		PKPbc	12 03 12.8	-1.8
	comp=Z,8.6nm,0.6s							
FETA	**Feichten**	**152.02**	**347**	⇑*i*P		PKPbc	12 03 14.2	-0.7
	comp=Z,12nm,1.2s							
VISS	**Visnje**	**152.05**	**340**	*i* PKPdf		PKPbc	12 03 13.6	-1.4
BOJS	**Bojanci**	**152.18**	**339**	*i* PKPdf		PKPbc	12 03 14.3	-1.0
JAVS	**Javorovik**	**152.21**	**341**	*i* PKPdf		PKPbc	12 03 13.7	-1.6
LOR	**Lormes**	**152.71**	**357**	*e*PKP1		PKPbc	12 03 14.8	-1.6
	comp=Z,7.9nm,0.6s							
SSF	**Saint Saulge**	**152.93**	**357**	*e*PKP1		PKPbc	12 03 15.5	-1.4
CABF	**La Chapelle**	**153.18**	**353**	*e*PKP1		PKPbc	12 03 15.8	-1.6
SMF	**Signal de Mont**	**153.33**	**357**	*e*PKP1		PKPbc	12 03 16.3	-1.4
MFF	**Saint Martin d**	**153.39**	**3**	*e*PKP1		PKPbc	12 03 16.0	-1.9
TCF	**Toulx Ste Croi**	**153.74**	**359**	*e*PKP1		PKPbc	12 03 17.2	-1.4
LPL	**La Plagne**	**154.18**	**352**	*e*PKP1		PKPbc	12 03 18.0	-1.6
ORIF	**Oris-en-Rattie**	**154.88**	**353**	*e*PKP1		PKPdf	12 03 18.4	+6.5
EVO	**Evora**	**159.67**	**22**	*e*PKP2		PKPab	12 03 58.4	-1.8
	comp=Z,12nm,0.9s							
ESDC	**Sonseca Array**	**159.76**	**13**	PKPab		PKPab	12 03 57.8	-2.8
	comp=Z,2.0nm,0.7s,baz=348,slow=4.0,SNR=11							
KEST	**Kesra**	**162.91**	**338**	PKPab		PKPab	12 04 13.5	-1.1
	comp=Z,3.0nm,0.8s,baz=340,slow=3.3,SNR=6.8							
LIC	**Lamto**	**164.85**	**153**	*e*PKP2		PKPab	12 04 23.1	-0.5
	comp=Z,48nm,1.0s							
LIC	**Lamto**	**164.85**	**153**	*e*PKP1		PKPdf	12 03 21.7	-2.1
	comp=Z,19nm,0.8s							
LIC	**Lamto**	**164.85**	**153**	*e*PKP2		PKPab	12 04 22.7	-0.9
	comp=Z,64nm,1.0s							
KIC	**Kosan Boka**	**165.10**	**154**	*e*PKP1		PKPdf	12 03 20.9	-3.1
	comp=Z,24nm,0.9s							
KIC	**Kosan Boka**	**165.10**	**154**	*e*PKP2		PKPab	12 04 23.6	-1.1
	comp=Z,124nm,0.9s							
TIC	**Toumodi**	**165.24**	**153**	*e*PKP1		PKPdf	12 03 21.9	-2.3
	comp=Z,8.6nm,0.2s							
TIC	**Toumodi**	**165.24**	**153**	*e*PKP2		PKPab	12 04 24.2	-1.1
	comp=Z,23nm,0.2s							
DBIC	**Dimbokro**	**165.33**	**153**	PKPab		PKPab	12 04 25.1	-0.6
	comp=Z,13nm,0.7s,baz=178,slow=5.8,SNR=14							
TORD	**Torodi Ar. Bea**	**173.22**	**180**	PKP		PKPdf	12 03 25.4	-3.5
	comp=Z,1.1nm,0.9s,baz=34,slow=1.3,SNR=5.2							
TORD				PKPab		PKPab	12 04 59.2	-1.3
	comp=Z,3.6nm,0.9s,baz=185,slow=3.5,SNR=14							
TORD				PP		PP	12 08 49.5	-1.9
	comp=Z,2.3nm,1.1s,baz=172,slow=3.6,SNR=6.0							
TORD	**Torodi Ar. Bea**	**173.22**	**180**	PKP		PKPdf	12 03 25.4	-3.5
TORD				PKPab		PKPab	12 04 59.2	-1.3
TORD				PP		PP	12 08 49.5	-1.9

MAN 28 11:54:07,1407N×11989E,h32km,mb4.0,ML2.8,MS2.5, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.48**	**134**	*e*S	Sb	11 54 26.8	+2.5
NBP	**Mount Natib**	**0.84**	**37**	⇑*e*P	Pn	11 54 22.5	-0.2
NBP				*e*S	Sn	11 54 33.1	-0.8
BUSP	**Coron**	**2.08**	**172**	*e*S	Sn	11 55 04.4	0.0
BALP	**Baler**	**2.33**	**44**	*e*S	Sn	11 55 09.9	-0.8
ENPP	**El Nido**	**2.88**	**189**	*e*S	Sn	11 55 22.4	-1.8

*NEIC **28** 12:17:41.0±1.7,2.10S×9960E,h35km, Error ellipse: s-maj=69.7km s-min=12.2km az=58.0*

IDC 28 12:17:36.2±3.4,209S×9963E,h0km,mb3.6/6,mb1 3.8/6, mb1mx3.6/19,mbtmp3.6/6,Error ellipse: s-maj=139.6km s-min=21.2km az=58.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.43**	**358**	P	P	12 22 15.6	+0.4
	0.8nm,0.3s,baz=177,slow=12,SNR=4.8						
WRA	**Warramunga Arr**	**38.27**	**120**	P	P	12 24 58.0	-0.6
	0.3nm,0.6s,baz=293,slow=8.5,SNR=4.1						
ASAR	**Alice Springs**	**39.50**	**126**	P	P	12 25 09.1	+0.2
	0.3nm,0.8s,baz=302,slow=7.7,SNR=5.1						
SONM	**Songino Array**	**50.07**	**6**	P	P	12 26 32.7	0.0
	1.0nm,0.8s,baz=192,slow=13,SNR=5.0						
MK31	**Makanchi Array**	**51.02**	**345**	*e*P	P	12 26 39.1	-0.8
MKAR	**Makanchi Array**	**51.02**	**345**	P	P	12 26 39.7	-0.2
	0.9nm,0.8s,baz=158,slow=8.6,SNR=6.3						
ZALV	**Zalesovo Beam**	**57.19**	**350**	P	P	12 27 24.4	-0.5
	0.8nm,0.4s,baz=163,slow=5.7,SNR=4.0						
ZALV	**Zalesovo Beam**	**57.19**	**350**	P	P	12 27 24.4	-0.5
TXAR	**Lajitas Array**	**145.00**	**37**	PKPbc	PKPbc	12 37 15.7	+0.2
	0.3nm,0.3s,baz=180,slow=1.2,SNR=11						

*IDC **28** 12:22:00.6±3.2,2174S×16954E,h0km,mb3.8/4, mb1 4.1/4,mb1mx3.8/15,mbtmp3.8/4,Error ellipse: s-maj=192.7km s-min=28.6km az=162.0*

*ISCJB **28** 12:22:02.7±1.5,214S±05×1693E±02,h10km,mb3.9/5, Error ellipse: s-maj=74.5km s-min=14.0km az=160.7*

ISC 28 12:22:04.5±1.5,214S±05×1692E±02,h10km,n8,σ1§25/8, mb3.9/5,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.68**	**255**	*e*P	**Pn**	**12 22 47.6**	**-0.1**
DZM				*e*S	**Sn**	**12 23 18.8**	**-1.4**
CTA	**Charters Tower**	**21.53**	**269**	P	**P**	**12 26 55.4**	**+1.4**
	3.2nm,0.6s,mb3.9,baz=73,slow=11,SNR=6.0						
MTSU	**Mount Surprise**	**23.67**	**274**	*e*P	**P**	**12 27 18.1**	**+1.6**
STKA	**Stephens Creek**	**26.75**	**241**	*e*P	**P**	**12 27 46.0**	**+1.6**
	5.2nm,1.1s,mb4.0						
WRA	**Warramunga Arr**	**32.65**	**266**	P	**P**	**12 28 36.3**	**-0.6**
	0.2nm,0.5s,mb3.3,baz=99,slow=8.3,SNR=4.4						
ASAR	**Alice Springs**	**32.66**	**259**	P	**P**	**12 28 36.3**	**-0.7**
	1.1nm,0.8s,mb3.8,baz=84,slow=8.7,SNR=9.3						
NVAR	**Mina Array Bea**	**90.23**	**48**	P	**P**	**12 35 03.7**	**-1.7**
	1.0nm,0.7s,mb4.3,baz=224,slow=7.6,SNR=9.9						
GERES	**GERESS Array B**	**146.38**	**330**	PKPbc	PKPbc	12 41 43.7	-1.8
	1.0nm,0.6s,baz=67,slow=2.6,SNR=4.6						

*IDC **28** 12:22:35.7±3.3,2108S×16893E,h0km,mb4.1/5, mb1 4.3/5,mb1mx4.0/16,mbtmp4.1/5,Error ellipse: s-maj=97.1km s-min=45.8km az=146.0*

NEIC 28 12:22:13.8±1.8,2042S×17171E,h10km,mb4.3/4,Error ellipse: s-maj=85.6km s-min=26.2km az=160.0,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**23.88**	**266**	P	P	12 27 25.7	-2.0
	3.0nm,0.3s,baz=86,slow=11,SNR=5.4						
CTAO	**Charters Tower**	**23.88**	**266**	*e*P	P	12 27 26.6	-1.1
	5.6nm,0.7s						
MTSU	**Mount Surprise**	**25.94**	**270**	*e*P	P	12 27 48.1	+1.6
STKA	**Stephens Creek**	**29.24**	**241**	*e*P	P	12 28 16.7	+0.7
	2.8nm,0.8s						
STKA	**Stephens Creek**	**29.24**	**241**	P	P	12 28 16.3	+0.3
	3.4nm,0.7s,baz=80,slow=11,SNR=5.8						
STKA	**Stephens Creek**	**29.24**	**241**	*e*P	P	12 28 16.1	+0.1
	3.7nm,0.8s						
WB2	**Warramunga Arr**	**35.02**	**264**	P	P	12 29 06.3	-0.5
WRAB	**Tennant Creek**	**35.02**	**264**	*e*P	P	12 29 07.6	+0.8
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**35.03**	**264**	P	P	12 29 06.4	-0.5
	0.3nm,0.3s,baz=97,slow=7.9,SNR=8.7						
ASAR	**Alice Springs**	**35.12**	**258**	P	P	12 29 07.5	-0.2
	2.8nm,0.8s,baz=83,slow=9.1,SNR=16						
FITZ	**Fitzroy Crossi**	**43.44**	**265**	*e*P	P	12 30 19.7	+2.4
	5.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**43.44**	**265**	P	P	12 30 19.2	+1.9
	4.0nm,0.9s,baz=86,slow=12,SNR=9.7						
GERES	**GERESS Array B**	**146.60**	**333**	PKPbc	PKPbc	12 42 16.8	+21
	0.7nm,0.6s,baz=52,slow=6.4,SNR=2.0						

*CSEM **28** 12:25:47.2±0.0,3976N×2583E,h18km,MD3.3,Error ellipse: s-maj=1.4km s-min=0.3km az=43.0,After ATH*

ATH 28 12:25:47.2,3976N×2583E,h18km,MD3.3/3,1C,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.19**	**64**	⇑*i*P	Pg	12 25 53.9	+1.9
BOZC				*i* S	Sg	12 25 58.5	+3.2
LIA	**Limnos Island**	**0.52**	**286**	*e*PN	Pg	12 25 57.5	-0.1
PRK	**Paraskevi**	**0.62**	**146**	*e*PN	Pn	12 25 59.2	-1.8
PRK				*e*SN	Sg	12 26 08.1	+0.5
RDO	**Rodhopi**	**1.40**	**351**	*e*PN	Pn	12 26 13.6	+1.7

IDC 28 13:03:31.6±3.1,1916S×16850E,h0km,mb3.6/3, mb1 4.0/3,mb1mx3.7/14,mbtmp3.6/3,Error ellipse: s-maj=243.6km s-min=32.0km az=158.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.48**	**213**	*e*P	Pn	13 04 14.5	-13
DZM				*e*S	Sn	13 04 47.2	-22
WRA	**Warramunga Arr**	**32.17**	**263**	P	P	13 10 01.8	+0.5
	0.3nm,0.8s,baz=93,slow=8.2,SNR=6.2						
ASAR	**Alice Springs**	**32.47**	**256**	P	P	13 10 03.4	-0.6
	0.7nm,0.9s,baz=78,slow=9.4,SNR=6.6						
NVAR	**Mina Array Bea**	**89.27**	**49**	P	P	13 16 29.9	+0.1
	0.7nm,0.7s,baz=236,slow=8.1,SNR=7.

STKA	**Stephens Creek**	**26.89 241**	P	**P**	**13 31 20.6**	**-0.4**
	6.4nm,1.0s,mb4.1,baz=250,slow=4.8,SNR=3.1					
WRA	**Warramunga Arr**	**32.73 266**	P	**P**	**13 32 12.0**	**-0.9**
	0.6nm,0.9s,mb3.5,baz=101,slow=8.6,SNR=4.6					
ASAR	**Alice Springs**	**32.77 259**	P	**P**	**13 32 13.8**	**+0.5**
	0.9nm,0.7s,mb3.8,baz=92,slow=9.2,SNR=13					
FITZ	**Fitzroy Crossi**	**41.15 266**	P	**P**	**13 33 25.7**	**+1.1**
	3.1nm,1.0s,mb3.9,baz=171,slow=22,SNR=6.0					
CMAR	**Chiang Mai Arr**	**79.39 295**	P	**P**	**13 37 47.6**	**+1.1**
	1.6nm,0.8s,mb4.0,baz=138,slow=5.3,SNR=5.8					
VNA3	**Neumayer Olymp**	**87.77 180**	*e*	**P**	**13 38 28.8**	**+0.1**
VNA3			*e*		13 38 39.8	
VNA2	**Neumayer--Watz**	**88.06 181**	*e*	**P**	**13 38 30.7**	**+0.6**
	baz=183,slow=4.3					
VNA2			*e*		13 38 41.8	
SONM	**Songino Array**	**88.85 323**	P	**P**	**13 38 33.5**	**-0.5**
	0.6nm,0.7s,mb4.0,baz=132,slow=2.2,SNR=4.3					
NVAR	**Mina Array Bea**	**90.06 48**	P	**P**	**13 38 38.0**	**-2.0**
	1.0nm,0.8s,mb4.2,baz=219,slow=8.7,SNR=8.3					

IDC 28 13:29:44.5±3.4, 2142S×16942E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.7/15, mbtmp3.6/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/37, Error ellipse: s-maj=222.9km s-min=33.8km az=161.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**15.00 321**		LR	LR	13 38 25.0	
	comp=Z,42nm,19.1s,baz=312,slow=35						
WRA	**Warramunga Arr**	**32.81 266**		P	P	13 36 20.2	+0.3
	0.1nm,0.5s,baz=98,slow=8.3,SNR=6.7						
ASAR	**Alice Springs**	**32.83 259**		P	P	13 36 20.8	+0.8
	0.6nm,0.8s,baz=96,slow=8.7,SNR=6.2						
FITZ	**Fitzroy Crossi**	**41.24 267**		P	P	13 37 30.3	-1.3
	1.6nm,0.9s,baz=98,slow=7.1,SNR=4.3						
NVAR	**Mina Array Bea**	**90.11 48**		P	P	13 42 47.0	+0.4
	0.4nm,0.6s,baz=229,slow=5.7,SNR=4.4						

NIED ***28*** *13:38:00, 22.00N×143.10E, h290km, Mw7.5 Best double couple: M₀1.88000×10²⁰ NP1:φs92.00000°, δ53.00000°, λ90.00000°. NP2:φs271.00000°, δ37.00000°, λ90.00000°.*

JMA ***28*** *13:38:54.9±0.4, 2199N×143.10E, h268km±4km, M7.6*

JMA Felt II J1.

BJI ***28*** *13:38:55.4, 22.13N×14276E, h241km, mB7.2, mb6.4*

ISCJB ***28*** *13:38:56.0±0.1, 2197N±001×14269E±001, h251km, mb6.7/362, Error ellipse: s-maj=1.9km s-min=1.6km az=8.5*

IGIL ***28*** *13:38:56.9, 2198N×14269E, h261km, MS7.2*

NEIC ***28*** *13:38:57.9±0.1, 2201N×14267E, h260km, mb6.7/262, ME7.6, MW7.4, MW7.5(NIED), Error ellipse: s-maj=3.0km s-min=2.3km az=69.0, Moment Tensor Solution. s55 Moment tensor: Scale 10²⁰Nm; Mrr1.21; Mθθ-0.89; Mφφ-0.32; Mrθ0.22; Mrφ0.05; Mθφ0.82; Best double couple: M₀1.40000×10²⁰ NP1:φs64.00000°, δ57.00000°, λ63.00000°. NP2:φs287.00000°, δ41.00000°, λ125.00000°. Principal axes: T 1.5900, Plg66.0000°, Azm283.0000°; N -0.6700, Plg22.0000°, Azm79.0000°; P -0.9200, Plg8.0000°, Azm172.0000°; Broadband fault plane solution: P waves. NP1:φs74.00000°, δ48.00000°, λ51.00000°. NP2:φs305.00000°, δ55.00000°, λ125.00000°. Principal axes: T Plg62.0000°, Azm274.0000°; N Plg0.0000°, Azm0.0000°; P Plg4.0000°, Azm11.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Chatan and Naha, Okinawa. Felt [III] at Yokosuka; [II] at Tokyo and Yokohama, Honshu. Recorded [2 JMA] in the Chichijima-retto. Also recorded [2 JMA] in Chiba, Fukushima, Ibaraki, Kanagawa, Miyagi, Niigata, Saitama and Tokyo; [1 JMA] in Akita, Fukuoka, Gumma, Nagano, Shizuoka, Tochigi and Yamagata Prefectures, Honshu.

NIC ***28*** *13:38:57.9±0.5, 2198N×14269E, h270km, Earthquake Mariana Islands Region 568 km S Ogigaura.*

MOS ***28*** *13:38:57.6±0.9, 2199N×14276E, h270km, mb6.9/99, MS7.1/40, Error ellipse: s-maj=8.8km s-min=5.1km az=104.3 Broadband fault plane solution: P waves. NP1:φs282.00000°, δ35.00000°, λ115.00000°. NP2: φs72.00000°, δ59.00000°, λ73.00000°. Principal axes: T Plg71.0000°, Azm304.0000°; N Plg14.0000°, Azm81.0000°; P Plg12.0000°, Azm174.0000°;*

IDC ***28*** *13:38:58.6±0.6, 2199N×14275E, h263km±4km, mb6.1/44, mb1 6.2/45, mb1mx6.2/45, mbtmp6.1/45 Error ellipse: s-maj=6.8km s-min=4.6km az=71.0*

GCMT ***28*** *13:38:59.5±0.1, 2194N×14307E, h276km±1km, MW7.5/122, Moment Tensor Solution. s120, c332; s122, c630; Duration: 13s2 Moment tensor: Scale 10²⁰ Nm; Mrr1.53±.01; Mθθ-1.88±.01; Mφφ0.34±.01; Mrθ-0.05±.01; Mrφ0.36±.01; Mθφ0.92±.01; Best double couple: M₀1.99400×10²⁰ NP1:φs73.00000°, δ49.00000°, λ50.00000°. NP2:φs305.00000°, δ55.00000°, λ126.00000°. Principal axes: T 2.0380, Plg61.0000°, Azm274.0000°; N -0.0890, Plg29.0000°, Azm102.0000°; P -1.9490, Plg4.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

DJA ***28*** *13:39:00, 2199N×14290E, h286km, Mw7.6/61*

SZGRF ***28*** *13:39:04.2, 2327N×14081E, h240km, mb7.0, Volcano Islands, Japan, region*

BGS ***28*** *13:39:06.0±1.3, 2362N×14239E, h275km, mb6.7*

ISC 28 13:38:57.6±0.1, 2201N±001×14271E±001, h253km, h253km±1.8km: pP-P, n2247, σ1§02/1767, mb6.7/357, 729C-286D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**4.62 354**		⇓P	**Pn**	**13 40 08.4**	**-0.5**
JHHJ				S	**S**	**13 41 04.8**	**-1.0**
CBIJ	**Chichi jima**	**5.08 355**		P	**Pn**	**13 40 13.2**	**-1.4**
	5μm,0.3s,baz=184,slow=5.8,SNR=484						
CBIJ				S	**S**	**13 41 14.9**	**-1.0**
	7μm,0.3s,baz=312,slow=24,SNR=3.7						
CBIJ	**Chichi jima**	**5.08 355**		⇓P	**Pn**	**13 40 13.5**	**-1.0**
CBIJ				*e*S	**S**	**13 41 15.8**	**-0.1**
CBIJ	**Chichi jima**	**5.08 355**		P	**Pn**	**13 40 13.1**	**-1.4**
GUMO	**Guam**	**8.62 166**		P	**Pn**	**13 41 00.4**	**+1.5**
	2μm,0.3s,baz=167,slow=3.3,SNR=314						
GUMO				S	**S**	**13 42 39.3**	**+2.4**
	baz=28,slow=23,SNR=1.3						
GUMO	**Guam**	**8.62 166**		*e*Pn	**Pn**	**13 41 00.3**	**+1.4**
JMZ	**Minamidaito 2**	**11.17 292**		⇑P	**Pn**	**13 41 31.4**	**+0.6**
JHJ2	**Mitsune**	**11.35 348**		P	**Pn**	**13 41 30.6**	**-2.4**
JHJ2				*e*S	**S**	**13 43 44.0**	**+4.2**
JHJ2	**Mitsune**	**11.35 348**		P	**Pn**	**13 41 32.0**	**-1.0**
JHJ	**Hachijo jima 2**	**11.36 347**		P	**Pn**	**13 41 31.6**	**-1.6**
	182nm,0.3s,baz=160,slow=12,SNR=82						
JHJ				S	**S**	**13 43 54.6**	**+15**
	2μm,0.3s,baz=67,slow=17,SNR=4.9						
JHJ				ScP	ScP	13 50 09.8	-1.9
	86nm,0.3s,baz=192,slow=8.7,SNR=16						
JHJ				ScS	ScS	13 53 49.3	+2.1
	16nm,0.3s,baz=54,slow=22,SNR=11						
JMY	**Miyakejima3**	**12.34 348**		P	**Pn**	**13 41 44.6**	**-0.7**
JMY				*e*S	**S**	**13 43 53.7**	**-8.9**
JKO	**Kozu shima**	**12.53 346**		P	**Pn**	**13 41 45.6**	**-2.0**
JKO				*e*S	**S**	**13 44 04.0**	**-3.0**
TK01	**Tokai 1**	**12.55 340**		P	**Pn**	**13 41 47.9**	**+0.1**
TK01				*e*S	**S**	**13 44 04.5**	**-2.9**
BSO1	**Boso 1**	**12.69 354**		P	**Pn**	**13 41 48.2**	**-1.3**
JWZ	**Kozaga**	**13.03 333**		P	**Pn**	**13 41 55.2**	**+1.4**
JWZ				*e*S	**S**	**13 44 24.2**	**+5.7**
JZK	**Kikaishima**	**13.12 301**		P	**Pn**	**13 42 00.8**	**+5.8**
JIE	**Ise**	**13.42 338**		⇓P	**Pn**	**13 41 59.4**	**+0.9**
JIE				*e*S	**S**	**13 44 32.6**	**+5.4**
JAM	**Amami Oshima**	**13.46 301**		⇑P	**Pn**	**13 42 02.0**	**+3.0**
JAM				*e*S	**S**	**13 44 34.2**	**+5.9**
JOD2	**Odawara 2**	**13.58 347**		P	**Pn**	**13 41 59.0**	**-1.4**
JOD2				*e*S	**S**	**13 44 23.8**	**-7.1**
JNAR	**Kushima--Naru**	**13.92 315**		P	**Pn**	**13 42 07.7**	**+3.0**
JTO	**Tosashimizu**	**13.92 323**		⇑P	**Pn**	**13 42 06.9**	**+2.3**
JTO				S	**S**	**13 44 47.0**	**+8.2**
JNN	**Nakanoshima**	**13.92 307**		⇑P	**Pn**	**13 42 07.1**	**+2.4**
JOW	**Kunigami**	**13.99 293**		P	**Pn**	**13 42 05.1**	**-0.5**
	224nm,0.3s,baz=117,slow=15,SNR=318						
JOW				S	**S**	**13 44 40.9**	**+0.4**
	baz=240,slow=12,SNR=1.5						
JOW				ScP	ScP	13 50 15.2	-0.7
	5.6nm,0.3s,baz=353,slow=1.5,SNR=7.8						
JOW				P4KP		14 25 59.0	
	0.4nm,0.3s,baz=164,slow=2.4,SNR=6.4						
JOW	**Kunigami**	**13.99 293**		⇑P	**Pn**	**13 42 07.6**	**+2.0**
JOW				*e*S	**S**	**13 44 47.7**	**+7.2**
JOW	**Kunigami**	**13.99 293**		P	**Pn**	**13 42 05.1**	**-0.5**
JOW				S	**S**	**13 44 40.9**	**+0.4**
JOW				ScP	ScP	13 50 15.2	-0.7
JTSN	**Tsunu**	**14.25 318**		P	**Pn**	**13 42 11.8**	**+3.2**
JJT2	**Tamagusuku 2**	**14.26 290**		P	**Pn**	**13 42 11.7**	**+2.8**
JTZ	**Takazaki**	**14.28 316**		P	**Pn**	**13 42 11.9**	**+2.9**
JIH	**Iheya**	**14.31 293**		⇑P	**Pn**	**13 42 11.9**	**+2.4**
NAH1	**Naha**	**14.33 290**		P	**Pn**	**13 42 13.2**	**+3.5**
JMIK	**Miki**	**14.41 334**		P	**Pn**	**13 42 14.0**	**+3.5**
JKIT	**Kitakata**	**14.54 319**		⇑P	**Pn**	**13 42 15.2**	**+3.1**
JUS	**Usuki**	**14.67 321**		⇑P	**Pn**	**13 42 16.8**	**+3.1**
JUS				S	**S**	**13 45 04.5**	**+8.8**
JZO	**Okuchi**	**14.76 316**		P	**Pn**	**13 42 17.0**	**+2.3**
JAGN	**Aguni-jima**	**14.81 291**		⇑P	**Pn**	**13 42 17.9**	**+2.4**
JIU2	**Izumi 2**	**14.88 317**		⇑P	**Pn**	**13 42 19.0**	**+2.8**
MJAR	**Matsushiro Arr**	**15.00 346**		P	**Pn**	**13 42 15.4**	**-2.2**
	84nm,0.3s,baz=164,slow=6.5,SNR=187						
MJAR				S	**S**	**13 45 04.1**	**+1.2**
	61nm,0.3s,baz=147,slow=7.4,SNR=4.2						
MJAR				ScP	ScP	13 50 15.1	-2.4
	6.1nm,0.3s,baz=178,slow=2.6,SNR=12						
MJAR				P3KPbc		14 17 14.0	
	0.1nm,0.3s,baz=48,slow=1.9,SNR=4.1						
MJAR				P4KP		14 26 02.6	
	0.6nm,0.3s,baz=166,slow=4.6,SNR=20						
MJAR	**Matsushiro Arr**	**15.00 346**		P	**Pn**	**13 42 15.4**	**-2.2**
MJAR				S	**S**	**13 45 04.1**	**+1.3**
MJAR	**Matsushiro Arr**	**15.00 346**		P	**Pn**	**13 42 15.4**	**-2.2**
MJAR				S	**S**	**13 45 04.1**	**+1.2**
MJAR				ScP	ScP	13 50 15.1	-2.4
MAJO	**Matsushiro**	**15.00 346**		*e*P	**Pn**	**13 42 16.3**	**-1.3**
MAT	**Matsushiro**	**15.00 346**		P	**Pn**	**13 42 15.6**	**-2.0**
MAT				S	**S**	**13 45 03.1**	**+0.2**
MAT	**Matsushiro**	**15.00 346**		P	**Pn**	**13 42 15.5**	**-2.1**
JSJ	**Shimokoshiki**	**15.06 312**		P	**Pn**	**13 42 20.4**	**+2.0**
JSJ				*e*S	**S**	**13 45 07.9**	**+3.8**
JJG	**Jouge**	**15.12 328**		P	**Pn**	**13 42 21.1**	**+2.0**
JKE	**Kume jima 2**	**15.15 290**		⇑P	**Pn**	**13 42 21.2**	**+1.7**
JKI	**Kunimi**	**15.19 322**		P	**Pn**	**13 42 22.4**	**+2.5**
JNU	**Nakatsue**	**15.23 319**		P	**Pn**	**13 42 22.6**	**+2.2**
JHD	**Hondo**	**15.26 316**		P	**Pn**	**13 42 22.9**	**+2.1**
JKD	**Kudamatsu**	**15.33 324**		P	**Pn**	**13 42 23.9**	**+2.3**
JFK	**Kawauchi**	**15.39 354**		⇓P	**Pn**	**13 42 21.4**	**-0.8**
NGSJ	**Nagasakinomoza**	**15.59 315**		P	**Pn**	**13 42 25.8**	**+1.1**
NGSJ				S	**S**	**13 45 20.1**	**+5.2**
JFT	**Otama**	**15.59 353**		P	**Pn**	**13 42 24.3**	**-0.3**
JFA	**Akaike**	**15.69 321**		P	**Pn**	**13 42 27.3**	**+1.4**
JFI	**Itaya**	**15.74 319**		P	**Pn**	**13 42 28.0**	**+1.5**
JUR	**Ureshino**	**15.79 317**		P	**Pn**	**13 42 28.5**	**+1.4**
JMM	**Marumori**	**15.89 354**		P	**Pn**	**13 42 28.4**	**+0.2**
JOGS	**Gusukube**	**16.12 283**		⇑P	**P**	**13 42 33.4**	**+3.8**
JMJ	**Miyako jima 2**	**16.23 283**		⇑P	**P**	**13 42 34.3**	**+3.5**
JMJ	**Miyako jima 2**	**16.23 283**		P	**P**	**13 42 35.9**	**+5.1**
JFU	**Fukue jima 2**	**16.30 314**		⇑P	**P**	**13 42 34.1**	**+2.6**
JOU	**Okura**	**16.39 354**		⇓P	**P**	**13 42 34.4**	**+1.9**
JIO	**Ouri**	**16.43 356**		⇓P	**P**	**13 42 34.4**	**+1.5**
JTJ	**Tarama**	**16.74 282**		P	**P**	**13 42 39.3**	**+2.9**
JMK	**Ichinoseki**	**16.93 356**		⇓P	**P**	**13 42 39.8**	**+1.5**
JMK				*e*S	**S**	**13 45 42.0**	**+0.3**
OFUJ	**Ofunato**	**17.04 357**		⇓P	**P**	**13 42 41.0**	**+1.5**
JTU	**Tsushima**	**17.09 320**		P	**P**	**13 42 41.5**	**+1.4**
JTU				S	**S**	**13 45 47.0**	**+2.1**
JJ	**Ishigaki jima**	**17.23 281**		P	**P**	**13 42 44.0**	**+2.3**
JKRS	**Kuro-shima**	**17.34 281**		P	**P**	**13 42 45.8**	**+2.9**
JRG	**Rokugo**	**17.42 355**		⇓P	**P**	**13 42 45.6**	**+2.0**
JOM	**Ohasama**	**17.45 356**		P	**P**	**13 42 45.6**	**+1.7**
HATJ	**Hateruma jima**	**17.52 280**		P	**P**	**13 42 47.2**	**+2.3**
IRIF	**Iriomote-Funau**	**17.60 281**		P	**P**	**13 42 47.7**	**+1.9**
JTH	**Tanohata**	**17.89 358**		P	**P**	**13 42 50.0**	**+1.3**
YOJ	**Yonaguni jima**	**18.26 281**		P	**P**	**13 42 54.8**	**+1.9**
YOJ				*e*S	**S**	**13 46 11.0**	**+2.6**
BESP	**Borongan**	**19.48 241**		*e*P	**P**	**13 43 09.0**	**+2.9**
NACB	**Ninganchiao**	**19.54 280**		⇑*i*P	**P**	**13 43 07.2**	**+0.6**
	5μm,1.0s						
CNP	**Catarman**	**19.63 244**		*e*P	**P**	**13 43 10.6**	**+2.9**
TATO	**Taipei**	**19.68 283**		P	**P**	**13 43 08.8**	**+0.7**
	SNR=29						
TATO	**Taipei**	**19.68 283**		*e*P	**P**	**13 43 09.2**	**+1.1**
PALP	**Palanan**	**19.73 259**		*e*P	**P**	**13 43 10.9**	**+2.1**
SGCP	**Mt. Cagua**	**19.75 263**		*e*P	**P**	**13 43 10.7**	**+1.7**
YHNB	**Yeheng**	**19.76 282**		⇑*i*P	**P**	**13 43 09.8**	**+0.8**
	4μm,0.8s						
JKB	**Kayabe**	**19.87 356**		P	**P**	**13 43 10.3**	**+0.4**
JKB				*e*S	**S**	**13 46 38.1**	**-1.2**
ERM	**Erimo**	**19.95 1**		⇑*i*P	**P**	**13 43 12.5**	**+1.7**
ERM				*e*S	**S**	**13 46 32.1**	**-8.8**
ERM				pmax	pmax		
	comp=Z,8μm,0.9s						
ERM	**Erimo**	**19.95 1**		⇑ *i*P	**P**	**13 43 12.5**	**+1.8**
	comp=Z,8μm,0.9s						
ERM				*e*S	**S**	**13 46 32.1**	**-8.8**
KSRS	**Korea Array**	**20.00 324**		P	**P**	**13 43 10.6**	**-0.7**
	comp=Z,1μm,0.7s,baz=140,slow=10,SNR=360						
KSRS				S	**S**	**13 46 42.0**	**0.0**
	comp=Z,94nm,0.9s,baz=142,slow=5.8,SNR=2.5						
KSRS				ScP	ScP	13 50 28.7	+0.8
	comp=Z,1μm,0.9s,baz=135,slow=2.5,SNR=39						
KSRS				PKiKP	PKiKP	13 55 03.2	-1.4
	comp=Z,56nm,1.0s,baz=268,slow=0.7,SNR=8.4						
KSRS				P3KPbc		14 17 15.6	
	comp=Z,3.0nm,0.8s,baz=328,slow=1.4,SNR=5.8						
KSRS				P4KP		14 26 26.6	
	comp=Z,55nm,1.0s,baz=136,slow=4.8,SNR=36						
KSRS	**Korea Array**	**20.00 324**		P	**P**	**13 43 10.6**	**-0.7**
KSRS				S	**S**	**13 46 42.0**	**+0.1**
KSRS				smax			
	comp=N,94nm,0.9s						
KS15	**Wonju Array Si**	**20.01 323**		*e*P	**P**	**13 43 10.6**	**-0.9**
JOSM	**Okushiri--Mats**	**20.20 353**		P	**P**	**13 43 14.5**	**+1.1**
JOSM				S	**S**	**13 46 47.4**	**+1.8**
JNBK	**Urakawa-nobuka**	**20.21 0**		P	**P**	**13 43 15.3**	**+1.8**
CAUP	**Cauayan**	**20.32 259**		*e*P	**P**	**13 43 17.9**	**+3.0**
OCLP	**Ormoc**	**20.46 241**		*e*P	**P**	**13 43 18.9**	**+2.4**
SCPH	**Surigao**	**20.51 236**		⇑*e*P	**P**	**13 43 18.3**	**+1.3**
JCH	**Churui**	**20.55 1**		P	**P**	**13 43 18.1**	**+1.0**
JCH				*e*S	**S**	**13 46 56.4**	**+4.7**
MMPH	**Masbate**	**20.58 245**		⇑*e*P	**P**	**13 43 19.7**	**+2.0**
APYP	**Conner**	**20.59 262**		*e*P	**P**	**13 43 18.3**	**+0.5**
INCN	**Inchon**	**20.75 322**		⇓P	**P**	**13 43 19.5**	**+0.2**
	SNR=134						
INCN	**Inchon**	**20.75 322**		*e*P	**P**	**13 43 17.8**	**-1.5**
	comp=N,3μm,0.8s						
GQP	**Guinayangan**	**20.87 251**		⇓*e*P	**P**	**13 43 22.1**	**+1.4**
BIPH	**Bislig**	**20.90 231**		⇑*e*P	**P**	**13 43 21.1**	**0.0**
AUQP	**San Andres**	**20.93 249**		*e*P	**P**	**13 43 24.7**	**+3.3**
BALP	**Baler**	**20.93 256**		*e*P	**P**	**13 43 22.3**	**+0.9**
POLP	**Polilio Island**	**20.98 253**		*e*P	**P**	**13 43 23.0**	**+1.1**
PIP	**Pasuquin**	**21.05 264**		⇓*e*P	**P**	**13 43 21.9**	**-0.7**
ABRA	**Dolores**	**21.13 262**		*e*P	**P**	**13 43 23.0**	**-0.5**
SSE	**Sheshan**	**21.24 300**		⇓P	**P**	**13 43 23.8**	**-0.6**
SSE				XP	sP	13 44 38.8	+1.1
SSE				S	**S**	**13 47 02.0**	**-1.2**
SSE				AMB	AMB		
	comp=Z,2μm,1.6s,mb6.3						
SSE				AMB	AMB		
	comp=Z,168μm,12.0s						
SSE				LR	LR		
	comp=N,377μm,16.6s						
SSE				LR	LR		
	comp=E,718μm,16.6s						
SSE				LR	LR		
	comp=Z,379μm,23.6s						
SSE	**Sheshan**	**21.24 300**		⇓P	**P**	**13 43 23.7**	**-0.7**
	comp=Z,2μm,1.6s,mb6.3						
SSE				sP	sP	13 44 38.8	+1.1
SSE				S	**S**	**13 47 02.0**	**-1.2**
SSE				sS	sS	13 48 19.2	+12
SSE				LR	LR		
	comp=Z,379μm,23.6s						
SIPP	**Brgy, Tapao**	**21.30 263**		⇓*e*P	**P**	**13 43 26.9**	**+1.9**
LLP	**Lapu-Lapu**	**21.40 240**		⇑*i*P	**P**	**13 43 26.9**	**+0.9**
LLP				*e*S	**S**	**13 47 04.9**	**-1.1**
NEM2	**Nemuro 2**	**21.45 6**		P	**P**	**13 43 26.1**	**0.0**
NEM2				*e*S	**S**	**13 47 05.3**	**-0.9**
BCPH	**Baguio City Da**	**21.62 259**		⇓*e*P	**P**	**13 43 28.2**	**+0.2**
RCP	**Roxas**	**21.73 245**		⇑*e*P	**P**	**13 43 30.2**	**+1.2**
QVPH	**Quezon City--P**	**21.80 254**		⇑*e*P	**P**	**13 43 33.4**	**+3.8**
TBP	**Tagbilaran**	**21.84 239**		*e*P	**P**	**13 43 30.8**	**+0.7**
LBPH	**Los Banos**	**21.89 253**		⇑*e*P	**P**	**13 43 31.5**	**+1.1**
OTRP	**Odiongan**	**21.94 247**		*e*P	**P**	**13 43 32.9**	**+1.9**
KALP	**Kalibo**	**22.01 245**		⇑*e*P	**P**	**13 43 34.2**	**+2.7**
ASAJ	**Asahikawa**	**22.05 360**		P	**P**	**13 43 32.7**	**+1.1**
	comp=Z,2μm,0.8s,mb6.7,baz=231,slow=18,SNR=110						
ASAJ				S	**S**	**13 47 16.9**	**+1.0**
	comp=Z,301nm,0.8s,baz=173,slow=15,SNR=2.0						
ASAJ				P3KPbc		14 17 06.5	
	comp=Z,38nm,0.9s,baz=286,slow=2.2,SNR=4.8						
ASAJ				P4KP		14 26 31.9	
	comp=Z,46nm,0.9s,baz=43,slow=22,SNR=5.0						
ASAJ	**Asahikawa**	**22.05 360**		P	**P**	**13 43 32.7**	**+1.1**
ASAJ				S	**S**	**13 47 17.0**	**+1.0**
ASAJ				smax			
	comp=N,301nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**22.12 6**		⇓ *i*P	**P**	**13 43 33.0**	**+0.7**
YUK				*i*		13 44 25.0	
YUK				*i* S	**S**	**13 47 14.0**	**-3.1**
YUK				pmax	pmax		
	comp=E,2μm,0.5s						
YUK				pmax	pmax		
	comp=Z,4μm,0.5s,mb7.2						
YUK				pmax	pmax		
	comp=N,1μm,0.4s						
YUK				pmax	pmax		
	comp=Z,112μm,7.0s						
YUK				pmax	pmax		
	comp=N,114μm,4.0s						
YUK				pmax	pmax		
	comp=E,12μm,1.6s						
YUK				smax			
	comp=N,12μm,1.0s						
YUK				smax			
	comp=E,12μm,0.8s						
YUK				smax			
	comp=N,315μm,14.0s						
YUK				smax			
	comp=E,350μm,13.0s						
YUK				MLR	MLR		
	comp=Z,277μm,14.0s						
YUK				MLR	MLR		
	comp=N,248μm,15.0s						
YUK				MLR	MLR		
	comp=E,138μm,12.0s						
DAV	**Davao City (W)**	**22.22 231**		P	**P**	**13 43 34.6**	**+1.1**
	comp=E,797nm,0.4s,mb6.6,baz=35,slow=3.2,SNR=38						
DAV				S	**S**	**13 47 28.1**	**+8.7**
	comp=E,2μm,1.0s,baz=87,slow=23,SNR=3.8						
DAV	**Davao City (W)**	**22.22 231**		⇑*e*P	**P**	**13 43 33.7**	**+0.2**
BOLP	**Bolinao**	**22.23 259**		*e*P	**P**	**13 43 32.6**	**-0.9**
QZH	**Quanzhou**	**22.30 282**		⇑*i*P	**P**	**13 43 34.5**	**+0.3**
QZH				XP	sP	13 44 50.3	+1.0
QZH				S	**S**	**13 47 28.0**	**+7.4**
QZH				AMB	AMB		
	comp=Z,3μm,0.8s,mb6.9						
QZH				AMB	AMB		
	comp=Z,257μm,10.6s						
QZH				LR	LR		
	comp=N,107μm,10.0s						
QZH				LR	LR		
	comp=E,205μm,13.4s						
QZH				LR	LR		
	comp=Z,276μm,13.5s						
NBP	**Mount Natib**	**22.34 255**		⇑*e*P	**P**	**13 43 35.3**	**+0.7**
GUIM	**Jordan**	**22.35 243**		*e*P	**P**	**13 43 35.9**	**+1.2**
SCZP	**Santa Cruz**	**22.43 258**		*e*P	**P**	**13 43 34.3**	**-1.1**
SNPH	**Sibulan**	**22.55 239**		*e*P	**P**	**13 43 38.0**	**+1.5**
KCP	**Kidapawan**	**22.61 231**		⇑*e*P	**P**	**13 43 39.6**	**+2.5**
SJMP	**San Jose**	**22.67 249**		*e*P	**P**	**13 43 39.9**	**+2.2**
LUBP	**Lubang**	**22.88 253**		*e*P	**P**	**13 43 40.1**	**+0.5**
VLA	**Vladivostok**	**22.90 339**		*i* P	**P**	**13 43 40.0**	**+0.6**
VLA	**Vladivostok**	**22.90 339**		*i* P	**P**	**13 43 40.0**	**+0.6**
DCPH	**Dipolog City**	**22.91 237**		⇑*e*P	**P**	**13 43 40.2**	**+0.4**
CTBH	**Cotabato--PC H**	**23.09 233**		⇑*i*P	**P**	**13 43 43.6**	**+2.1**
GSPH	**General Santos**	**23.35 230**		*e*P	**P**	**13 43 42.2**	**-1.6**
NJ2	**Nanjing**	**23.44 300**		*e*P	**P**	**13 43 44.8**	**+0.4**
NJ2				XP	sP	13 45 00.8	-0.6
NJ2				PCP	PcP	13 47 25.8	+2.9
NJ2				SCP	ScP	13 50 35.3	-1.5
NJ2				AMB	AMB		
	comp=Z,980nm,0.9s,mb6.3						
NJ2				AMB	AMB		
	comp=Z,130μm,10.0s						
NJ2				LR	LR		
	comp=N,292μm,25.4s						
NJ2				LR	LR		
	comp=E,174μm,19.2s						
NJ2				LR	LR		
	comp=Z,156μm,14.9s						
CUYO	**Cuyo Island**	**23.54 245**		*e*P	**P**	**13 43 47.1**	**+1.6**
BUSP	**Coron**	**23.68 249**		*e*P	**P**	**13 43 48.2**	**+1.4**
IPIL	**Ipil**	**24.00 237**		*e*P	**P**	**13 43 50.2**	**+0.5**
JAY	**Jayapura**	**24.45 185**		P	**P**	**13 43 53.5**	**-0.3**

	comp=Z,1μm,1.5s,mb6.4								
TIA					AMB	AMB			
	comp=Z,8μm,9.0s								
TIA					LR	LR			
	comp=N,419μm,18.0s								
TIA					LR	LR			
	comp=E,248μm,15.0s								
HKC	**Hong Kong Obse**	**26.41**	**276**	⇑	*i*P	**P**	**13**	**44**	**12.0 +0.7**
WHN	**Wuhan**	**26.75**	**294**	⇑	*i*P	**P**	**13**	**44**	**14.0 -0.3**
WHN					XP	sP	13	45	34.0 +0.7
WHN					S	**S**	**13**	**48**	**32.0 +1.0**
WHN					LR	LR			
	comp=N,503μm,15.0s								
WHN					LR	LR			
	comp=E,1198μm,29.0s								
WHN					LR	LR			
	comp=Z,776μm,25.0s								
HABR	**Khabarovsk**	**27.11**	**349**	⇑	*i*P	**P**	**13**	**44**	**17.8 +0.7**
HABR					*e*	pP	13	45	08.0 +1.4
HABR					*e*		13	45	37.1
HABR					*e*		13	47	32.0
HABR					*e*S	**S**	**13**	**48**	**36.3 +0.2**
HABR					*e*		13	50	08.0
HABR					*e*		13	54	37.8
HABR					pmax	pmax			
	comp=Z,2μm,1.6s,mb6.5								
GZH	**Guangzhou**	**27.12**	**278**		P	**P**	**13**	**44**	**15.8 -1.8**
GZH					S	**S**	**13**	**48**	**36.8 -0.1**
GZH					AMB	AMB			
	comp=Z,71μm,11.1s								
GZH					LR	LR			
	comp=N,206μm,21.0s								
GZH					LR	LR			
	comp=E,77μm,19.4s								
GZH					LR	LR			
	comp=Z,672μm,22.2s								
BATP	**Bataraza**	**27.31**	**245**		*e*P	**P**	**13**	**44**	**22.2 +2.8**
KLR	**Kul'dur**	**28.52**	**345**		*e*P	**P**	**13**	**44**	**26.2 -3.5**
KLR					*e*S	**S**	**13**	**48**	**50.3 -8.0**
MYLDM	**Lahad Datu**	**28.79**	**238**	⇑	P	**P**	**13**	**44**	**36.3 +3.8**
BJT	**Baijiatuau**	**28.81**	**315**	⇑	*i*P	**P**	**13**	**44**	**32.4 0.0**
BJT					*e*		13	47	35.0
BJT					pmax	pmax			
	comp=Z,707nm,0.6s								
BJT	**Baijiatuau**	**28.81**	**315**	⇑	*i*P	**P**	**13**	**44**	**32.4 0.0**
	comp=Z,707nm,0.6s,mb6.5								
BJT					*e*PcP	PcP	13	47	35.0 -0.3
BJT					*e*ScP	ScP	13	50	51.4 -1.0
BJI	**Beijing**	**28.82**	**315**		P	**P**	**13**	**44**	**32.5 +0.1**
BJI					AP	pP	13	45	23.3 +1.0
BJI					S	**S**	**13**	**49**	**01.3 -1.9**
BJI					XS	sS	13	50	34.0 +0.8
BJI					AMB	AMB			
	comp=Z,415nm,1.4s,mb5.9								
BJI					AMB	AMB			
	comp=Z,53μm,7.5s								
BJI	**Beijing**	**28.82**	**315**		P	**P**	**13**	**44**	**32.6 +0.2**
BJI					*PP	pP	13	45	23.2 +0.9
BJI					*SP	sP	13	45	57.2 +5.4
BJI					S	**S**	**13**	**49**	**01.2 -2.0**
BJI					*SS	sS	13	50	34.1 +0.9
BJI					pmax	pmax			
	comp=Z,415nm,1.4s,mb5.9								
BJI	**Beijing**	**28.82**	**315**		P	**P**	**13**	**44**	**32.6 +0.2**
	comp=Z,415nm,1.4s,mb5.9								
BJI					pP	pP	13	45	23.2 +0.9
BJI					sP	sP	13	45	57.2 +5.4
BJI					S	**S**	**13**	**49**	**01.2 -2.0**
BJI					sS	sS	13	50	34.1 +0.9
KDM	**Kudat**	**29.13**	**243**	⇓	P	**P**	**13**	**44**	**37.7 +2.3**
AAI	**Ambon**	**29.22**	**211**		P	**P**	**13**	**44**	**36.8 +0.5**
SDKM	**Sandakan**	**29.55**	**240**	⇓	P	**P**	**13**	**44**	**40.8 +1.5**
TSM	**Tawau**	**29.82**	**237**	⇓	P	**P**	**13**	**44**	**43.1 +1.5**
KKM	**Kota Kinabalu**	**30.12**	**242**	⇑	P	**P**	**13**	**44**	**46.7 +2.4**
KKM	**Kota Kinabalu**	**30.12**	**242**	⇑	*i*P	**P**	**13**	**44**	**46.3 +2.1**
	comp=Z,2μm,0.8s,mb6.9								
MMPI	**Merauke**	**30.37**	**185**		P	**P**	**13**	**44**	**48.4 +2.0**
TIY	**Taiyuan**	**30.39**	**308**	⇑	P	**P**	**13**	**44**	**49.0 +2.6**
TIY					S	**S**	**13**	**49**	**32.3 +4.4**
TIY					AMB	AMB			
	comp=Z,53μm,6.4s								
TIY					LR	LR			
	comp=N,146μm,15.3s								
TIY					LR	LR			
	comp=E,91μm,14.8s								
TIY					LR	LR			
	comp=Z,169μm,20.3s								
SKR	**Severo-Kuril's**	**30.49**	**17**		*e*P	**P**	**13**	**44**	**47.4 +0.4**
SKR					*e*	pP	13	45	37.0 -0.1
SKR					*e*PPP		13	45	55.0
SKR					*e*		13	47	34.0
SKR					*i* S	**S**	**13**	**49**	**28.0 -1.0**
SKR					pmax	pmax			
	comp=Z,1μm,0.8s,mb6.5								
SKR					pmax	pmax			
	comp=N,1μm,1.0s								
SKR					pmax	pmax			
	comp=E,450nm,1.0s								
SKR					pmax	pmax			
	comp=N,13μm,20.0s								
SKR					pmax	pmax			
	comp=E,16μm,20.0s								
SKR					pmax	pmax			
	comp=Z,24μm,20.0s								
SKR					smax				
	comp=N,8μm,2.0s								
SKR					smax				
	comp=E,540nm,1.0s								
SKR					smax				
	comp=N,707μm,18.0s								
SKR					smax				
	comp=E,324μm,18.0s								
SKR					MLR	MLR			
	comp=N,44μm,14.0s								
SKR					MLR	MLR			
	comp=Z,103μm,14.0s								
SKR					MLR	MLR			
	comp=E,130μm,18.0s								
QIZ	**Qiongzhong**	**30.89**	**271**		P	**P**	**13**	**44**	**52.3 +1.4**
QIZ					AP	pP	13	45	41.0 -0.1
QIZ					XP	sP	13	46	11.5 +1.1
QIZ					S	**S**	**13**	**49**	**35.0 -1.0**
QIZ					AMB	AMB			
	comp=Z,641nm,1.7s,mb6.0								
QIZ					LR	LR			
	comp=E,103μm,18.0s								
QIZ					LR	LR			
	comp=Z,158μm,21.2s								
QIZ	**Qiongzhong**	**30.89**	**271**	⇑	*i*P	**P**	**13**	**44**	**52.4 +1.4**
	comp=Z,1μm,1.1s,mb6.4								
PMG	**Port Moresby**	**31.52**	**172**	⇑	*e*P	**P**	**13**	**44**	**55.2 -1.3**
PMG	**Port Moresby**	**31.52**	**172**		*e*P	**P**	**13**	**44**	**55.0 -1.5**
PCI	**Palu**	**31.89**	**227**		P	**P**	**13**	**44**	**59.5 -0.2**
XAN	**Xi'an**	**32.00**	**299**		P	**P**	**13**	**45**	**00.3 -0.1**
XAN					PP	PP	13	46	17.5 -0.9
XAN					AMB	AMB			
	comp=Z,351nm,2.1s,mb5.5								
XAN					LR	LR			
	comp=N,88μm,16.8s								
XAN					LR	LR			
	comp=E,198μm,16.8s								
XAN					LR	LR			
	comp=Z,214μm,16.8s								
HHC	**Hu-ho-hao-te**	**32.30**	**313**		*e*P	**P**	**13**	**45**	**03.8 +0.9**
HHC					AP	pP	13	45	56.8 +3.5
HHC					PP	PP	13	46	23.0 +1.4
HHC					PCP	PcP	13	47	45.5 +1.0
HHC					S	**S**	**13**	**49**	**57.5 +0.1**
HHC					SCP	ScP	13	51	03.8 -0.1
HHC					PCS	PcS	13	51	29.3 -0.4
HHC					SS	SS	13	52	15.8 -7.5
HHC					SCS	ScS	13	55	02.0 -1.5
HHC					AMB	AMB			
	comp=Z,676nm,0.9s,mb6.2								
HHC					AMB	AMB			
	comp=Z,78μm,7.7s								
HHC					LR	LR			
	comp=N,494μm,19.3s								
HHC					LR	LR			
	comp=E,266μm,22.8s								
HHC					LR	LR			
	comp=Z,315μm,21.6s								
HIA	**Hailar**	**32.73**	**332**	⇑	*i*P	**P**	**13**	**45**	**07.0 +0.5**
GYA	**Guiyang**	**33.09**	**285**	⇑	*i*P	**P**	**13**	**45**	**10.0 0.0**
GYA					AP	pP	13	46	02.5 +1.9
GYA					XP	sP	13	46	31.5 +1.7
GYA					S	**S**	**13**	**50**	**11.3 +1.2**
GYA					SCP	ScP	13	51	06.3 -0.7
GYA					PCS	PcS	13	51	32.8 -0.2
GYA					XS	sS	13	51	42.8 +2.0
GYA					SCS	ScS	13	55	05.8 -2.3
GYA					AMB	AMB			
	comp=Z,3μm,0.9s,mb6.8								
GYA					LR	LR			
	comp=N,128μm,14.9s								
GYA					LR	LR			
	comp=E,114μm,15.5s								
GYA					LR	LR			
	comp=Z,99μm,13.1s								
PEA0B	**Petropavlovsk-**	**33.10**	**17**		*e*P	**P**	**13**	**45**	**11.1 +1.4**
PETK	**Petropavlovsk-**	**33.10**	**17**		P	**P**	**13**	**45**	**10.6 +0.9**
	comp=Z,183nm,0.9s,mb5.6,baz=195,slow=3.2,SNR=67								
PETK					PcP	PcP	13	47	47.7 +1.2
	comp=Z,1μm,1.0s,baz=141,slow=3.8,SNR=7.2								
PETK					S	**S**	**13**	**50**	**14.7 +5.2**
	comp=Z,15nm,0.6s,baz=275,slow=35,SNR=1.9								
PETK					ScP	ScP	13	51	03.9 -2.5
	comp=Z,398nm,1.1s,baz=180,slow=1.3,SNR=6.3								
PETK					PKiKP	PKiKP	13	55	11.3 -0.6
	comp=Z,48nm,0.7s,baz=106,slow=3.9,SNR=8.9								
PETK					P3KPbc		14	16	26.2
	comp=Z,6.9nm,0.7s,baz=83,slow=7.0,SNR=11								
PETK					P3KP		14	17	39.9
	comp=Z,20nm,1.1s,baz=90,slow=5.9,SNR=4.3								
PETK					PKPPKP		14	18	21.5
	comp=Z,5.3nm,0.7s,baz=220,slow=9.1,SNR=4.0								
PETK	**Petropavlovsk-**	**33.10**	**17**		P	**P**	**13**	**45**	**10.6 +0.9**
PETK					PcP	PcP	13	47	47.7 +1.2
PETK					S	**S**	**13**	**50**	**14.7 +5.2**
PETK					ScP	ScP	13	51	03.9 -2.5
BTO	**Baotou**	**33.26**	**311**		*i*P	**P**	**13**	**45**	**11.8 +0.6**
BTO					S	**S**	**13**	**50**	**14.5 +2.3**
BTO					LR	LR			
	comp=N,72μm,15.7s								
BTO					LR	LR			
	comp=E,70μm,21.6s								
PET	**Petropavlovsk**	**33.29**	**18**	⇑	*i*P	**P**	**13**	**45**	**12.3 +1.0**
PET					*e*SP	sP	13	46	33.6 +2.4
PET					*e*		13	47	49.0
PET					*e*S	**S**	**13**	**50**	**13.2 +0.9**
PET					*e*		13	55	04.4
PET					pmax	pmax			
	comp=Z,720nm,1.0s,mb6.2								
PET					pmax	pmax			
	comp=Z,13μm,4.9s								
PET					pmax	pmax			
	comp=Z,7μm,7.7s								
PET					smax				
	comp=N,604nm,4.4s								
PET	**Petropavlovsk**	**33.29**	**18**		*e*P	**P**	**13**	**45**	**11.8 +0.5**
BTM	**Bintulu**	**34.30**	**241**	⇑	P	**P**	**13**	**45**	**22.9 +2.3**
KAPI	**Kappang**	**35.02**	**223**		P	**P**	**13**	**45**	**27.0 +0.3**
	comp=N,25μm,0.6s,mb7.9								
KAPI	**Kappang**	**35.02**	**223**		P	**P**	**13**	**45**	**27.3 +0.6**
	SNR=403								
KAPI	**Kappang**	**35.02**	**223**		S	**S**	**13**	**50**	**38.5 -1.3**
	comp=N,105nm,1.0s,baz=255,slow=23,SNR=14								
KAPI	**Kappang**	**35.02**	**223**		*e*P	**P**	**13**	**45**	**26.0 -0.7**
SBUM	**Sibu**	**35.43**	**241**	⇓	P	**P**	**13**	**45**	**32.3 +2.1**
HNR	**Honiara**	**35.53**	**150**		P	**P**	**13**	**45**	**27.8 -3.1**
	comp=N,276nm,0.8s,mb5.9,baz=174,slow=8.0,SNR=45								
HNR					S	**S**	**13**	**50**	**34.7 -13**
	comp=N,181nm,0.8s,baz=231,slow=8.0,SNR=2.3								
HNR	**Honiara**	**35.53**	**150**		P	**P**	**13**	**45**	**28.4 -2.6**
HNR					pmax	pmax			
	comp=Z,4μm,1.3s,mb6.8								
COEN	**Coen**	**35.75**	**179**	⇑	*i*P	**P**	**13**	**45**	**33.1 +0.4**
	comp=Z,3μm,0.8s,mb6.9								
CD2	**Chengdu**	**35.83**	**293**	⇑	*i*P	**P**	**13**	**45**	**34.0 +0.6**
CD2					AP	pP	13	46	25.8 +1.3
CD2					XP	sP	13	46	55.0 +1.4
CD2					PP	PP	13	47	05.0 +4.4
CD2					PCP	PcP	13	47	56.0 +1.1
CD2					S	**S**	**13**	**50**	**52.0 +0.2**
CD2					PCS	PcS	13	51	42.5 -0.2
CD2					XS	sS	13	52	21.5 -1.8
CD2					SS	SS	13	53	32.8 -7.0
CD2					SCS	ScS	13	55	21.0 -1.7
CD2					AMB	AMB			
	comp=Z,6μm,1.1s,mb7.1								
CD2					AMB	AMB			
	comp=Z,146μm,8.4s								
CD2					LR	LR			
	comp=N,393μm,20.4s								
CD2					LR	LR			
	comp=E,199μm,16.8s								
CD2					LR	LR			
	comp=Z,168μm,21.6s								
TARA	**Tarawa**	**35.86**	**121**		P	**P**	**13**	**45**	**32.9 -0.9**
KAKA	**Kakadu**	**35.95**	**197**	⇓	*i*P	**P**	**13**	**45**	**33.6 -0.8**
	comp=Z,1μm,0.9s,mb6.5								
KAKA					*e*PCP	PcP	13	47	58.9 +3.5
KAKA					*e*PKPPKP		14	17	51.3
UBT	**Ubonrachathani**	**36.27**	**266**		P	**P**	**13**	**45**	**39.5 +2.2**
	comp=Z,3μm,1.0s,mb6.8								
LZH	**Lanzhou**	**36.50**	**301**	⇑	P	**P**	**13**	**45**	**40.5 +1.5**
LZH					AP	pP	13	46	32.5 +2.2
LZH					XP	sP	13	47	00.3 +0.9
LZH					PCP	PcP	13	48	01.0 +4.1
LZH					S	**S**	**13**	**51**	**03.0 +1.1**
LZH					SCP	ScP	13	51	19.3 +0.2
LZH					SS	SS	13	53	46.0 -7.2
LZH					SCS	ScS	13	55	27.5 +1.2
LZH					AMB	AMB			
	comp=Z,2μm,1.0s,mb6.6								
LZH					AMB	AMB			
	comp=Z,17μm,5.7s								
LZH					LR	LR			
	comp=E,104μm,14.8s								
LZH					LR	LR			
	comp=Z,129μm,16.6s								
LZH	**Lanzhou**	**36.50**	**301**	⇑	P	**P**	**13**	**45**	**40.4 +1.4**
LZH					*PP	pP	13	46	32.6 +2.3
LZH							13	48	01.0
LZH					S	**S**	**13**	**51**	**03.0 +1.1**
LZH					*SS	sS	13	52	37.0 +3.4
LZH					SS	SS	13	53	46.0 -7.2
LZH							13	55	27.4
LZH					pmax	pmax			
	comp=Z,2μm,1.0s,mb6.6								
LZH					MLR	MLR			
	comp=Z,129μm,16.6s								
LZH	**Lanzhou**	**36.50**	**301**	⇑	P	**P**	**13**	**45**	**40.4 +1.4**
	comp=Z,2μm,1.0s,mb6.6								
LZH					pP	pP	13	46	32.6 +2.3
LZH					sP	sP	13	47	00.2 +0.8
LZH					PcP	PcP	13	48	01.0 +4.1
LZH					S	**S**	**13**	**51**	**03.0 +1.1**
LZH					ScP	ScP	13	51	19.3 +0.2
LZH					sS	sS	13	52	37.0 +3.4
LZH					SS	SS	13	53	46.0 -7.2
LZH					ScS	ScS	13	55	27.4 +1.1
LZH					LR	LR			
	comp=Z,129μm,16.6s								
MIDW	**Midway**	**36.56**	**72**		*e*P	**P**	**13**	**45**	**40.1 +0.6**
	comp=Z,3μm,1.1s,mb6.8								
KMI	**Kunming**	**36.67**	**283**	⇑	P	**P**	**13**	**45**	**42.3 +1.7**
KMI					AP	pP	13	46	34.5 +2.6
KMI					PP	PP	13	47	14.0 +4.1
KMI					PCP	PcP	13	47	58.3 +0.7
KMI					S	**S**	**13**	**51**	**04.0 -0.8**
KMI					SCP	ScP	13	51	19.0 -0.9
KMI					PCS	PcS	13	51	45.8 -0.3
KMI					SS	SS	13	53	51.0 -5.9
KMI					SCS	ScS	13	55	25.5 -2.1
KMI					AMB	AMB			
	comp=Z,3μm,1.3s,mb6.6								
KMI					AMB	AMB			
	comp=Z,89μm,11.9s								
KMI					LR	LR			
	comp=N,127μm,18.6s								
KMI					LR	LR			
	comp=E,107μm,17.1s								
KMI					LR	LR			
	comp=Z,106μm,19.5s								
KMI	**Kunming**	**36.67**	**283**	⇑	P	**P**	**13**	**45**	**42.3 +1.7**
KMI					*PP	pP	13	46	34.5 +2.6
KMI					*SP	sP	13	47	04.3 +3.3
KMI							13	47	13.9
KMI							13	47	58.2
KMI					S	**S**	**13**	**51**	**04.1 -0.7**
KMI					*SS	sS	13	52	40.2 +3.7
KMI					SS	SS	13	53	51.0 -5.9
KMI							13	55	25.4
KMI					pmax	pmax			
	comp=Z,3μm,1.3s,mb6.6								
KMI					MLR	MLR			
	comp=Z,106μm,19.5s								
KMI	**Kunming**	**36.67**	**283**	⇑	P	**P**	**13**	**45**	**42.3 +1.7**
	comp=Z,3μm,1.3s,mb6.6								
KMI					pP	pP	13	46	34.5 +2.6
KMI					sP	sP	13	47	04.3 +3.3
KMI					PP	PP	13	47	13.9 +4.0
KMI					PPP		13	47	45.3
KMI					PcP	PcP	13	47	58.2 +0.6
KMI					S	**S**	**13**	**51**	**04.1 -0.7**
KMI					ScP	ScP	13	51	19.1 -0.8
KMI					PcS	PcS	13	51	45.7 -0.4
KMI					sS	sS	13	52	40.2 +3.7
KMI					SS	SS	13	53	51.0 -5.9
KMI					SSS		13	54	36.8
KMI					ScS	ScS	13	55	25.4 -2.2
KMI					LR	LR			
	comp=Z,106μm,19.5s								
BATI	**Baumata**	**37.07**	**212**		S	**S**	**13**	**51**	**06.7 -4.1**
	comp=Z,806nm,0.8s,baz=250,slow=24,SNR=11								
CLNS	**Chul'man**	**37.17**	**344**		*ce*P	**P**	**13**	**45**	**44.6 +0.4**
CLNS					*e*		13	47	59.4
CLNS					*e*S	**S**	**13**	**51**	**09.9 -1.4**
CLNS					pmax	pmax			
	comp=E,121nm,0.8s								
CLNS					pmax	pmax			
	comp=Z,662nm,0.8s,mb6.2								
CLNS					pmax	pmax			
	comp=N,300nm,1.0s								
CLNS					MLR	MLR			
	comp=Z,214μm,16.0s								
CLNS					MLR	MLR			
	comp=E,149μm,18.0s								
CLNS					MLR	MLR			
	comp=N,190μm,15.0s								
CIT	**Chita**	**37.46**	**330**		*e*P	**P**	**13**	**45**	**47.8 +1.0**
CIT					*e*		13	48	03.8
CIT					*e*S	**S**	**13**	**51**	**17.0 +1.1**
CIT					*e*		13	55	33.0
CIT					pmax	pmax			
	comp=Z,6μm,2.7s,mb6.7								
KSM	**Kuching**	**37.55**	**242**	⇓	P	**P**	**13**	**45**	**49.2 +1.2**
KSM	**Kuching**	**37.55**	**242**	⇑	*i*P	**P**	**13**	**45**	**48.7 +0.6**
	comp=Z,1μm,0.9s,mb6.4								
KKTK	**Khon Kaen**	**38.01**	**269**	⇑	P	**P**	**13**	**45**	**53.0 +1.1**
	comp=Z,7μm,0.4s,mb7.6								
ULN	**Ulaanbaatar**	**38.44**	**321**		P	**P**	**13**	**45**	**56.2 +1.2**
	SNR=943								
ULN	**Ulaanbaatar**	**38.44**	**321**		*e*P	**P**	**13**	**45**	**55.9 +0.9**
SONM	**Songino Array**	**38.81**	**320**		P	**P**	**13**	**45**	**59.2 +1.0**
	comp=Z,774nm,0.6s,mb6.5,baz=131,slow=8.7,SNR=1096								
SONM					PcP	PcP	13	48	05.6 +1.9
	comp=Z,467nm,0.8s,baz=136,slow=3.7,SNR=5.8								
SONM					ScP	ScP	13	51	27.0 -0.6
	comp=Z,591nm,1.0s,baz=146,slow=4.2,SNR=11								
SONM					PKiKP	PKiKP	13	55	15.6 -0.9
	comp=Z,26nm,0.9s,baz=188,slow=3.5,SNR=6.4								
SONM					P3KPbc		14	15	58.8
	comp=Z,29nm,0.8s,baz=290,slow=4.1,SNR=32								
SONM					PKPPKP		14	17	59.4
	comp=Z,20nm,1.1s,baz=239,slow=1.8,SNR=4.1								
SONM					PKP2ab		14	19	46.4
	comp=Z,12nm,1.1s,baz=298,slow=2.0,SNR=3.7								
SONM	**Songino Array**	**38.81**	**320**		P	**P**	**13**	**45**	**59.2 +1.0**
SONM					PcP	PcP	13	48	05.6 +1.9
SONM					ScP	ScP	13	51	27.0 -0.6
SMY	**Shemya**	**38.97**	**30**		*e*P	**P**	**13**	**46**	**00.8 +1.5**
SMY					pmax	pmax			
	comp=Z,4μm,1.3s,mb6.8								
SMY	**Shemya**	**38.97**	**30**		*e*P	**P**	**13**	**46**	**02.1 +2.8**
	comp=Z,7μm,1.8s,mb6.9								
SMY					LR	LR			
	comp=Z,141μm,19.0s								
CHRT	**Chiangrai**	**40.05**	**275**	⇑	P	**P**	**13**	**46**	**10.0 +1.3**
	comp=Z,3μm,0.6s,mb6.9								
GTA	**Gaotai**	**40.33**	**305**	⇑	*i*P	**P**	**13**	**46**	**12.0 +1.3**
GTA					AP	pP	13	47	05.0 +2.1
GTA					XP	sP	13	47	30.3 -1.5
GTA					PCP	PcP	13	48	13.3 +4.5
GTA					SCP	ScP	13	51	33.8 +0.1
GTA					S	**S**	**13**	**51**	**59.5 +0.4**
GTA					XS	sS	13	53	32.8 +0.8
GTA					SS	SS	13	54	58.3 -11
GTA					SCS	ScS	13	55	49.5 +1.1
GTA					AMB	AMB			
	comp=Z,1μm,1.2s,mb6.2								
GTA					AMB	AMB			
	comp=Z,103μm,13.2s								
GTA					LR	LR			
	comp=N,509μm,18.3s								
GTA					LR	LR			
	comp=E,185μm,23.4s								
GTA					LR	LR			
	comp=Z,228μm,20.7s								
NST	**Nakhon Sawan**	**40.68**	**269**	⇓	P	**P**	**13**	**46**	**16.0 +2.1**
	comp=Z,892nm,0.6s,mb6.4								
AMKA	**Amchitka**	**40.77**	**35**		*e*P	**P**	**13**	**46**	**15.6 +1.5**
	comp=Z,1μm,1.2s,mb6.2								
AMKA					LR	LR			
	comp=Z,700nm,17.0s								
YAK	**Yakutsk**	**40.99**	**351**	*c*	*i*P	**P**	**13**	**46**	**14.8 -0.9**
YAK					*e*PP	pP	13	47	15.0 +7.0
YAK					*e*		13	47	56.2
YAK					*e*		13	48	11.7
YAK					*e*S	**S**	**13**	**52**	**05.2 -2.9**
YAK					*e*SS	SS	13	55	10.6 -10
YAK					*e*		13	55	46.7
YAK					pmax	pmax			
	comp=Z,3μm,1.1s,mb6.6								
YAK					pmax	pmax			
	comp=N,1μm,1.0s								
YAK					pmax	pmax			
	comp=E,197nm,1.1s								
YAK					pmax	pmax			
	comp=Z,2μm,1.6s,mb6.4								
YAK					pmax	pmax			
	comp=N,4μm,1.9s								
YAK					pmax	pmax			
	comp=E,2μm,2.0s								
YAK	**Yakutsk**	**40.99**	**351**		*e*P	**P**	**13**	**46**	**14.9 -0.8**
CHG	**Chiang Mai**	**41.04**	**274**	⇑	P	**P**	**13**	**46**	**18.3 +1.6**
	comp=E,220nm,1.6s								
CHTO	**Chiang Mai**	**41.04**	**274**	⇓	P	**P**	**13**	**46**	**17.1 +0.4**
	SNR=746								
CHTO	**Chiang Mai**	**41.04**	**274**		P	**P**	**13**	**46**	**17.7 +1.0**
CHTO					pmax	pmax			
	comp=Z,4μm,1.4s,mb6.7								
CHTO	**Chiang Mai**	**41.04**	**274**	⇑	*i*P	**P**	**13**	**46**	**17.7 +0.9**
	comp=Z,4μm,1.4s,mb6.7								
CHTO					*e*PcP	PcP	13	48	11.8 +0.3
CHTO	

ZAK e 13 52 20.4
ZAK e 13 55 57.6
ZAK pmax pmax
comp=Z,2µm,1.0s,mb6.5
NNT Nongplab 41.96 264 P P 13 46 26.5 +2.2
CTA Charters Tower 41.98 175 ⇓iP P 13 46 24.2 -0.1
comp=Z,1µm,0.6s,mb6.6
CTA ePCP PcP 13 48 20.4 +6.0
CTA eSCP ScP 13 51 39.9 -0.5
CTA eS S **13 52 14.1 -1.0**
CTA eSS SS 13 55 39.3 -2.5
CTA Charters Tower 41.98 175 P P 13 46 24.4 +0.1
comp=Z,2µm,0.9s,mb6.6,baz=358,slow=8.5,SNR=1395
CTA ScP ScP 13 51 40.5 +0.1
comp=Z,184nm,1.0s,baz=326,slow=6.1,SNR=6.1
CTA S S **13 52 22.7 -1.0**
comp=Z,83nm,0.8s,baz=174,slow=14,SNR=6.8
CTA P3KP 14 17 11.3
comp=Z,7.6nm,1.0s,baz=186,slow=4.4,SNR=5.1
CTAO Charters Tower 41.98 175 P P 13 46 24.1 -0.2
CTAO pmax pmax
comp=Z,3µm,1.0s,mb6.7
CTAO Charters Tower 41.98 175 ⇓iP P 13 46 24.3 +0.1
comp=Z,3µm,1.0s,mb6.7
IRK Irkutsk 42.20 325 ⇑iP P 13 46 26.3 +0.7
IRK eS S **13 52 31.8 +5.6**
IRK e 13 55 51.9
IRK pmax pmax
comp=Z,5µm,1.9s,mb6.6
TLY Talaya 42.25 324 P P 13 46 27.5 +1.5
SNR=786
TLY Talaya 42.25 324 c iP **P 13 46 27.4 +1.3**
TLY e 13 48 14.9
TLY eS S **13 52 22.8 -4.1**
TLY e 13 54 05.9
TLY e 13 55 49.3
TLY pmax pmax
comp=Z,2µm,1.2s,mb6.4
TLY Talaya 42.25 324 ⇑iP P 13 46 27.2 +1.1
WRAB Tennant Creek 42.48 192 eP **P 13 46 28.4 +0.1**
WB2 Warramunga Arr 42.49 192 eP **P 13 46 28.2 -0.1**
WB2 ePCP PcP 13 48 21.7 +5.6
WB2 eSCP ScP 13 51 46.1 +3.7
WB2 eS S **13 52 27.1 -3.9**
WB2 eSS SS 13 55 48.0 -3.6
WRA Warramunga Arr 42.49 192 P P 13 46 28.1 -0.2
comp=Z,2µm,0.7s,mb6.7,baz=13,slow=9.0,SNR=1340
WRA PcP PcP 13 48 19.5 +3.4
comp=Z,700nm,0.8s,baz=10,slow=4.2,SNR=9.2
WRA ScP ScP 13 51 42.9 +0.4
comp=Z,330nm,0.9s,baz=10,slow=4.0,SNR=7.7
WRA S S **13 52 28.2 -2.8**
comp=Z,952nm,1.2s,baz=13,slow=14,SNR=16
WRA PKiKP PKiKP 13 55 19.2 -1.3
comp=Z,53nm,0.6s,baz=323,slow=1.5,SNR=13
WRA P3KPbc 14 15 44.4
comp=Z,1.7nm,0.6s,baz=182,slow=3.7,SNR=11
WRA P3KP 14 17 36.4
comp=Z,15nm,0.9s,baz=145,slow=1.5,SNR=8.2
WRA PKPPKP 14 18 23.5
comp=Z,28nm,1.0s,baz=189,slow=2.6,SNR=6.0
WRA P4KPbc 14 24 24.2
comp=Z,4.9nm,0.7s,baz=14,slow=4.9,SNR=17
WRA tx tx 14 28 05.9
comp=Z,12nm,1.1s,baz=4.5,slow=2.5,SNR=6.8
WRA tx tx 14 29 56.3
comp=Z,3.4nm,1.2s,baz=157,slow=0.7,SNR=4.9
WRA Warramunga Arr 42.49 192 P P 13 46 28.1 -0.2
WRA 13 48 19.5
WRA S S **13 52 28.2 -2.8**
WRA Warramunga Arr 42.49 192 P P 13 46 28.1 -0.2
WRA PcP PcP 13 48 19.5 +3.4
WRA ScP ScP 13 51 42.9 +0.4
WRA S S **13 52 28.2 -2.8**
MYKOM **Kota Tinggi 42.79 247 ⇓P P 13 46 33.9 +2.9**
KGM Kluang 43.13 248 ⇓P P 13 46 36.4 +2.7
SNG Songkhla 43.15 257 P P 13 46 37.0 +3.2
comp=Z,1µm,1.0s,mb6.2
ADK Adak 43.19 36 eP **P 13 46 34.1 +0.5**
FITZ Fitzroy Crossi 43.22 204 ⇓iP P 13 46 34.5 +0.3
comp=Z,7µm,1.3s,mb6.9
FITZ ePCP PcP 13 48 25.2 +6.6
FITZ eSCP ScP 13 51 44.3 -1.2
FITZ eS S **13 52 24.1 -18**
FITZ eSS SS 13 55 57.6 -7.6
FITZ ePKPPKP 14 17 52.3
FITZ Fitzroy Crossi 43.22 204 S S 13 52 39.0 -2.7
comp=Z,293nm,1.1s,baz=176,slow=19,SNR=8.8
MOY Mondy 43.70 323 ⇑iP P 13 46 38.8 +1.1
MOY e 13 48 23.8
MOY e 13 52 50.9
MOY e 13 56 10.8
MOY pmax pmax
comp=Z,8µm,2.2s,mb6.7
IPM Ipoh 43.95 253 ⇑P P 13 46 42.6 +2.4
FRIM Kepong 44.00 251 ⇑P P 13 46 43.0 +2.4
IMP Imphal 44.66 283 i P **P 13 46 44.0 -1.7**
IMP ex x 13 53 06.0
ASAR Alice Springs 46.20 191 P P 13 46 57.2 -0.3
comp=Z,356nm,0.5s,mb6.0,baz=14,slow=9.4,SNR=3947
ASAR PP PP 13 48 55.2 +5.4
comp=Z,356nm,1.1s,baz=19,slow=9.7,SNR=4.2
ASAR ScP ScP 13 51 59.1 +1.5
comp=Z,470nm,1.2s,baz=10,slow=3.8,SNR=6.6
ASAR S S **13 53 22.3 -2.1**
comp=Z,515nm,0.9s,baz=17,slow=18,SNR=20
ASAR P3KPbc 14 15 28.3
comp=Z,0.7nm,0.4s,baz=186,slow=4.1,SNR=11
ASAR P3KP 14 17 13.2
comp=Z,6.9nm,1.0s,baz=297,slow=3.1,SNR=5.6
ASAR PKPPKP 14 18 19.1
comp=Z,18nm,0.9s,baz=195,slow=2.2,SNR=4.1
ASAR PKP2ab 14 19 24.7
comp=Z,12nm,1.0s,baz=175,slow=3.2,SNR=4.1
ASAR P4KPbc 14 24 41.8
comp=Z,9.2nm,1.0s,baz=13,slow=4.2,SNR=19
ASAR tx tx 14 28 14.2
comp=Z,5.7nm,1.0s,baz=17,slow=2.9,SNR=4.8
ASAR tx tx 14 30 03.2
comp=Z,5.8nm,1.2s,baz=168,slow=0.8,SNR=4.7
ASAR Alice Springs 46.20 191 P P 13 46 57.3 -0.3
ASAR 13 48 55.3
ASAR S S **13 53 22.3 -2.1**
ASAR Alice Springs 46.20 191 P P 13 46 57.2 -0.3
ASAR PP PP 13 48 55.2 +5.4
ASAR ScP ScP 13 51 59.1 +1.5
ASAR S S **13 53 22.3 -2.1**
ASAR e 14 15 28.3
ASAR PKKKP 14 17 13.2
ASAR P'P' 14 18 19.1
ASAR P'P'ab 14 19 24.7
SHL Shillong 46.42 285 ex x 13 46 47.9
SHL AMb AMB 13 46 52.4
comp=Z,4µm,1.3s,mb6.6
LSA Lhasa 46.71 291 P P 13 47 03.0 +1.4
LSA S S **13 53 32.8 +1.1**
LSA SS SS 13 56 54.5 -7.0
LSA AMB AMB
comp=Z,850nm,1.5s,mb5.8
LSA LR LR
comp=N,52µm,21.7s
LSA LR LR
comp=E,68µm,27.6s
LSA LR LR
comp=Z,92µm,17.9s
LSA Lhasa 46.71 291 ⇑iP P 13 47 04.1 +2.5
LSA pmax pmax
comp=Z,5µm,0.6s,mb7.0
LSA Lhasa 46.71 291 ⇑iP P 13 47 04.1 +2.5
comp=Z,5µm,0.6s,mb7.0
FUNA Funafuti 46.92 126 eP **P 13 47 03.2 -0.2**
comp=Z,14µm,1.6s,mb7.0
FUNA epP pP 13 47 55.7 -1.4
FUNA ePcP PcP 13 48 30.6 -1.0
FUNA eScP ScP 13 51 58.7 -2.3
FUNA eS S **13 53 34.9 0.0**
NIKO Nikolski 48.01 38 eP **P 13 47 09.2 -2.0**
comp=Z,1µm,0.5s,mb6.6
BILL Bilibino 48.30 12 c iP **P 13 47 13.0 -0.2**
BILL i 13 49 04.8
BILL i S S **13 53 52.8 -0.1**
BILL i SS SS 13 57 28.0 +2.3
BILL pmax pmax
comp=Z,2µm,1.0s,mb6.4
BILL MLR MLR
comp=Z,87µm,16.0s
BILL Bilibino 48.30 12⇑iP P 13 47 13.1 -0.1
MBWA Marble Bar 48.41 209 P P 13 47 15.5 +0.9
SNR=232
MBWA Marble Bar 48.41 209⇑iP P 13 47 15.2 +0.6
comp=Z,2µm,0.7s,mb6.5
MBWA eS S **13 53 51.4 -4.2**
XMIS Christmas Isla 48.62 232⇑iP P 13 47 15.8 -0.6
comp=Z,5µm,1.0s,mb6.8
XMIS eS S **13 53 52.0 -6.7**
PBA Port Blair 48.73 266 eP x 13 47 49.8
PBA eS x 13 54 38.2
GTK Gangtok 49.13 288 eP **P 13 47 18.0 -2.1**
GTK ex x 13 47 22.0
SLGI Shiliguri 49.38 287 i P **P 13 47 22.3 +0.3**
DZM Mont Dzumac 49.55 151 eP **P 13 47 22.5 -0.8**
DZM eS pP 13 48 18.5 +0.9
DZM Mont Dzumac 49.55 151⇓iP P 13 47 22.3 -0.9
comp=Z,2µm,1.2s,mb6.4
DZM epP pP 13 48 13.2 -4.4
KRAR Krasnoyarsk 49.88 326 c iP **P 13 47 25.1 -0.1**
KRAR pmax pmax
comp=Z,2µm,1.7s,mb6.2
WMQ Urumqi 50.04 309⇑iP P 13 47 28.0 +1.3
WMQ AP pP 13 48 23.0 +1.9
WMQ PCP PcP 13 48 45.0 +2.5
WMQ PP PP 13 49 27.0 +2.7
WMQ SCP ScP 13 52 15.0 +1.2
WMQ S S **13 54 18.0 +0.2**
WMQ XS sS 13 55 55.0 +1.0
WMQ SCS ScS 13 56 50.0 -0.9
WMQ SS SS 13 57 52.0 -2.1
WMQ AMB AMB
comp=Z,3µm,1.2s,mb6.5
WMQ AMB AMB
comp=Z,31µm,5.3s
WMQ LR LR
comp=N,276µm,26.8s
WMQ LR LR
comp=E,90µm,17.5s
WMQ LR LR
comp=Z,174µm,28.6s
CAL Calcutta 50.08 282 eP **P 13 47 27.2 -0.1**
CAL ex x 13 54 24.7
AKUT Akutan 50.13 37 eP **P 13 47 26.9 -0.3**
comp=Z,4µm,0.7s,mb6.8
AKUT LR LR
comp=Z,104µm,18.0s
SHBG Sahibganj 50.24 285 ex x 13 47 31.5
SHBG ex x 13 48 11.8
ODAN Odare 50.27 287 eP **P 13 47 26.8 -1.9**
TIXI Tiksi 50.30 354 eP **P 13 47 27.2 -0.9**
TIXI pmax pmax
comp=Z,2µm,1.2s,mb6.2
TIXI Tiksi 50.30 354⇑eP P 13 47 27.3 -0.8
RAMN Ramite 50.96 287 eP **P 13 47 31.9 -1.9**
JIRN Jiri 51.23 288 eP **P 13 47 34.6 -1.2**
GUN Gumba 51.47 289 eP **P 13 47 36.2 -1.4**
PKIN Phulchoki 51.94 288 eP **P 13 47 38.8 -2.3**
comp=Z,6µm,0.5s,mb7.3
KKN Kakani 52.02 289 eP **P 13 47 39.6 -2.0**
BOK Bokaro 52.07 284 eP **P 13 47 42.8 +0.7**
BOK AMb AMB 13 47 49.9
comp=Z,11µm,1.4s,mb7.1
DMN Daman 52.19 288 eP **P 13 47 40.6 -2.3**
GKN Gorkha 52.55 289 eP **P 13 47 43.5 -2.1**
ARMA Armidale 52.83 170 eP **P 13 47 47.2 -0.1**
ARMA ePCP PcP 13 48 58.4 +5.4
ARMA eSCP ScP 13 52 27.6 +1.8
ARMA eS S **13 54 51.2 -4.7**
BWNR Bhubaneshwar 52.83 279 eP **P 13 47 47.0 -0.7**
BWNR eS S **13 54 55.0 -1.5**
DANN Dangsing 53.28 290 eP **P 13 47 49.0 -1.8**
SDPT Sand Point 53.42 37 eP **P 13 47 51.0 -0.4**
comp=Z,3µm,1.2s,mb6.6
SDPT LR LR
comp=Z,157µm,22.0s
STKA Stephens Creek 53.59 181 ⇓iP P 13 47 52.4 -0.5
comp=Z,943nm,0.5s,mb6.6
STKA eSCP ScP 13 52 29.5 +0.4
STKA eS S **13 54 58.2 -7.9**
STKA eSS sS 13 56 49.5 +5.8
STKA Stephens Creek 53.59 181 P P 13 47 52.5 -0.3
comp=Z,617nm,0.5s,mb6.4,baz=350,slow=7.6,SNR=767
STKA S S **13 55 06.3 +0.2**
comp=Z,112nm,0.9s,baz=91,slow=24,SNR=8.3
STKA P3KP 14 17 05.0
comp=Z,16nm,1.2s,baz=130,slow=8.7,SNR=3.7
STKA tx tx 14 28 27.5
comp=Z,10nm,1.1s,baz=60,slow=5.1,SNR=2.9
ZAA0 Zalesovo Array 53.69 322⇑iP P 13 47 53.6 +0.2
ZAA0 e pP 13 48 54.0 +5.4
ZAA0 eS S **13 54 48.4 -19**
ZALV Zalesovo Beam 53.69 322 P P 13 47 53.5 +0.2
comp=Z,1µm,0.6s,mb6.6,baz=104,slow=7.3,SNR=858
ZALV PcP PcP 13 48 56.9 +0.9
comp=Z,588nm,0.6s,baz=125,slow=4.1,SNR=1.9
ZALV ScP ScP 13 52 28.9 -0.5
comp=Z,102nm,0.7s,baz=122,slow=3.9,SNR=4.2
ZALV S S **13 55 11.6 +4.6**
comp=Z,244nm,1.1s,baz=110,slow=11,SNR=7.9
ZALV P3KP 14 17 01.0
comp=Z,6.5nm,1.0s,baz=284,slow=1.2,SNR=4.2
ZALV PKPPKP 14 18 15.4
comp=Z,71nm,1.0s,baz=313,slow=3.1,SNR=6.6
ZALV P4KPbc 14 25 13.4
comp=Z,6.5nm,0.6s,baz=111,slow=3.4,SNR=9.8
ZALV Zalesovo Beam 53.69 322 P P 13 47 53.5 +0.1
ZALV 13 48 56.9
ZALV S S **13 55 11.6 +4.5**
ZALV Zalesovo Beam 53.69 322 P P 13 47 53.5 +0.2
ZALV PcP PcP 13 48 56.9 +0.9
ZALV ScP ScP 13 52 28.9 -0.5
ZALV S S **13 55 11.6 +4.6**
ZALV PKKKP 14 17 01.0
ZALV P'P' 14 18 15.4
MK31 Makanchi Array 54.16 313 P P 13 47 57.9 +1.0
MK31 Makanchi Array 54.16 313 i P **P 13 47 57.8 +0.9**
MKAR Makanchi Array 54.16 313 P P 13 47 57.4 +0.5
comp=Z,489nm,0.7s,mb6.2,baz=92,slow=9.5,SNR=831
MKAR PcP PcP 13 48 58.0 -0.1
comp=Z,605nm,0.8s,baz=76,slow=7.0,SNR=3.1
MKAR ScP ScP 13 52 31.0 -0.6
comp=Z,323nm,1.0s,baz=91,slow=5.3,SNR=6.1
MKAR S S **13 55 14.6 +1.0**
comp=Z,162nm,1.0s,baz=90,slow=16,SNR=5.8
MKAR P3KP 14 17 08.8
comp=Z,8.5nm,1.0s,baz=178,slow=3.0,SNR=4.1
MKAR PKPPKP 14 18 07.9
comp=Z,44nm,0.9s,baz=266,slow=2.4,SNR=5.3
MKAR PKP2bc 14 18 29.7
comp=Z,56nm,0.9s,baz=268,slow=3.5,SNR=7.9
MKAR PKP2ab 14 18 51.4
comp=Z,47nm,1.1s,baz=316,slow=3.3,SNR=4.0
MKAR P4KPbc 14 25 19.6
comp=Z,6.2nm,0.7s,baz=88,slow=5.0,SNR=8.1
MKAR Makanchi Array 54.16 313 P P 13 47 57.4 +0.5
MKAR 13 48 58.0
MKAR S S **13 55 14.6 +1.0**
MKAR Makanchi Array 54.16 313 P P 13 47 57.4 +0.5
MKAR PcP PcP 13 48 58.0 -0.1
MKAR ScP ScP 13 52 31.0 -0.6
MKAR S S **13 55 14.6 +1.0**
MKAR PKKKP 14 17 08.8
MKAR P'P' 14 18 07.9
MKAR ⇑e 14 18 29.7
MKAR P'P'ab 14 18 51.4
FORT Forrest 54.34 196 eP **P 13 47 58.3 0.0**
comp=Z,4µm,0.6s,mb7.1
FORT ePCP PcP 13 48 57.6 -1.2
FORT ePP PP 13 49 53.3 -10
FORT eS S **13 55 13.0 -3.2**
KIP Kipapa 54.76 79⇑iP P 13 48 02.1 +0.5
KIP e pP 13 48 54.3 -2.8
KIP eS S **13 55 22.7 +0.3**
KIP pmax pmax
comp=Z,2µm,0.8s,mb6.7
KIP Kipapa 54.76 79⇑iP P 13 48 02.1 +0.5
comp=Z,2µm,0.8s,mb6.7
KIP e pP 13 48 54.3 -2.8
KIP eScP ScP 13 52 29.6 -5.2
KIP eS S **13 55 22.6 +0.3**
NVS Novosibirsk 54.79 322⇑iP P 13 48 00.6 -0.6
NVS e pP 13 49 00.8 +4.1
NVS eS S **13 55 18.7 -3.0**
NVS pmax pmax
comp=N,3µm,1.7s
NVS pmax pmax
comp=E,8µm,1.7s
NVS pmax pmax
comp=Z,10µm,1.7s,mb7.0
NVS smax
comp=E,10µm,3.0s
HON Honolulu 54.79 79 eP **P 13 48 02.4 +0.5**
HON e 13 48 54.4 -2.9
HON Honolulu 54.79 79 eP **P 13 48 02.4 +0.5**
HON ePcP PcP 13 48 54.4 -6.6
HON eScP ScP 13 52 27.5 -7.4
ALBI Allahabad 55.46 286 i P **P 13 48 05.0 -1.6**
VIS Vishakhapatnam 55.72 277 eP **P 13 48 09.1 +0.7**
VIS AMb AMB 13 48 16.1
comp=Z,5µm,1.2s,mb6.9
VIS i x x 13 55 36.4
PTH Pithoragarh 56.20 292 eP **P 13 48 13.1 +1.4**
PTH eS S **13 55 41.9 +0.8**
COCO West Island 56.39 237 P P 13 48 14.7 +1.5
SNR=62
COCO West Island 56.39 237⇑iP P 13 48 14.0 +0.8
comp=Z,17µm,1.5s,mb7.3
HKL Haleakala 56.52 79 P P 13 48 15.4 +1.3
HKL Haleakala 56.52 79 eP **P 13 48 15.1 +1.0**
ADE Adelaide 56.79 184 i Pcr **P 13 48 16.1 +0.5**
KURK Kurchatov 56.95 317 P P 13 48 17.1 +0.5
SNR=2009
KURK Kurchatov 56.95 317 P P 13 48 17.3 +0.7
comp=Z,987nm,0.6s,mb6.6,baz=97,slow=7.0
KURK S S **13 55 52.8 +2.6**
comp=Z,290nm,1.1s,baz=295,slow=11,SNR=9.7
KURK P3KP 14 16 52.0
comp=Z,3.9nm,1.1s,baz=219,slow=2.6,SNR=3.8
KURK PKPPKP 14 18 00.6
comp=Z,65nm,1.2s,baz=237,slow=1.9,SNR=8.7
KURK P4KPbc 14 25 31.6
comp=Z,3.1nm,0.7s,baz=96,slow=5.0,SNR=8.0
KURK Kurchatov 56.95 317 P P 13 48 17.3 +0.7
KURK S S **13 55 52.8 +2.6**
KURK Kurchatov 56.95 317 P P 13 48 17.3 +0.7
KURK S S **13 55 52.8 +2.6**
KURK PKKKP 14 16 52.0
KURK P'P' 14 18 00.6
AFI Afiamalu 57.15 124 P P 13 48 18.3 -0.2
AFI S S **13 55 51.1 -2.7**
comp=Z,27nm,0.9s,baz=303,slow=23,SNR=3.3
AFI Afiamalu 57.15 124 P P 13 48 18.3 -0.2
AFI S S **13 55 51.1 -2.7**
CNB Canberra Magne 57.36 174⇓iP P 13 48 19.7 +0.2
CNB ePCP PcP 13 49 16.2 +5.8
CNB eS S **13 55 53.8 -2.0**
CNB eSS ScS 13 57 34.7 -8.1
CNB ePKPPKP 14 18 15.7
SVW2 Sparrevohn 57.36 31 eP **P 13 48 19.5 +0.2**
POHA Pohakuloa 57.40 80⇑iP P 13 48 20.9 +0.6
comp=Z,6µm,1.3s,mb7.1
POHA ePcP PcP 13 49 11.2 0.0
POHA eS S **13 55 55.7 -1.4**
KHU Kahuku 57.45 81 P P 13 48 21.4 +0.8
KHU Kahuku 57.45 81⇑iP P 13 48 21.2 +0.6
KHU ePcP PcP 13 49 11.8 +0.5
TTA Tatalina 57.63 28⇑eP P 13 48 21.7 +0.6
TTA e 13 49 08.6
TTA eS S **13 55 59.4 +0.6**
TTA pmax pmax
comp=Z,4µm,1.5s,mb6.9
TTA Tatalina 57.63 28⇑eP P 13 48 21.7 +0.5
comp=Z,4µm,1.5s,mb6.9
TTA ePcP PcP 13 49 08.6 -2.6
TTA eScP ScP 13 52 44.3 -2.3
TTA eS S **13 55 59.4 +0.6**
OHAK Old Harbor 57.73 35⇑iP P 13 48 21.6 -0.3
comp=Z,2µm,0.8s,mb6.7
AAA Alma-Ata 57.81 308 eP **P 13 48 24.0 +1.3**
AAA eS S **13 56 06.2 +4.5**
AAA pmax pmax
comp=Z,102µm,5.7s
AAA smax
comp=N,207µm,16.0s
AAA MLR MLR
comp=Z,86µm,15.0s
STCH Steam Cracks 57.86 80⇑iP P 13 48 23.7 +0.2
STCH eScP ScP 13 52 45.0 -3.4
STCH eS S **13 56 02.8 -0.3**
DDI Dehra Dun 57.95 293 eP **P 13 48 23.6 -0.3**
DDI ex x 13 56 10.7
KDAK Kodiak Island 58.20 35 P P 13 48 24.9 -0.2
comp=Z,389nm,0.3s,mb6.5,baz=264,slow=3.3,SNR=4.3
KDAK S S **13 56 05.8 -0.5**
comp=Z,266nm,1.1s,baz=17,slow=23,SNR=34
ULHL Ulahol 58.35 307 P P 13 48 28.4 +1.9
SNR=54
KLBR Kellerberrin 58.41 205⇑iP P 13 48 27.0 +0.1
comp=Z,2µm,0.9s,mb6.8
KLBR ePCP PcP 13 49 12.7 -2.0
KLBR eS S **13 56 07.7 -1.9**
SMLA Simla 58.59 294 i P **P 13 48 29.2 +0.9**
SMLA ex x 13 48 30.6
comp=Z,5µm,0.7s
SMLA i S S **13 56 13.1 +0.9**
KSH Kashi 58.69 304⇑iP P 13 48 31.5 +2.6
KSH ePCP PcP 13 49 17.0 +1.1
KSH eAP pP 13 49 28.0 +2.9
KSH eXP sP 13 49 55.3 +2.4
KSH ePP PP 13 50 46.0 +4.4
KSH eSCP ScP 13 52 52.0 +0.3
KSH ePCS PcS 13 53 18.0 +0.1
KSH eS S **13 56 11.0 -2.2**
KSH eSCS ScS 13 57 51.0 -1.9
KSH eSS SS 14 00 14.0 +3.6
KSH LR LR
comp=N,218µm,18.1s
KSH LR LR
comp=E,166µm,12.5s
KSH LR LR
comp=Z,136µm,13.4s
SDNR Sundarnagar 58.70 294 eP **P 13 48 29.4 +0.3**
SDNR ex x 13 56 16.4
NGP Nagpur 58.80 282 eP **P 13 48 29.1 -0.9**
NGP eS S **13 56 12.9 -2.3**
TKM2 Tokmak 2 58.80 308⇑iP P 13 48 31.1 +1.5
TKM2 pmax pmax
comp=Z,2µm,0.7s,mb6.8
TKM2 Tokmak 2 58.80 308 P **P 13 48 31.4 +1.8**
SNR=53
TKM2 Tokmak 2 58.80 308⇑iP P 13 48 31.1 +1.5
comp=Z,2µm,0.7s,mb6.8
NDI New Delhi 58.92 291⇑eP P 13 48 30.0 -0.7
NDI eS S **13 56 15.0 -1.6**
KZA Kyzart 59.09 307 P P 13 48 34.0 +2.4
SNR=617
BHK Bhakra 59.18 294 eP **P 13 48 33.0 +0.6**
KBK Karagaybulak 59.29 307 P P 13 48 34.6 +1.7
SNR=501
TOO Toolangi 59.32 177⇓iP P 13 48 33.3 +0.3
TOO ePCP PcP 13 49 19.0 +0.8
TOO eS S **13 56 19.1 -1.9**
TOO eSS ScS 13 57 58.6 +1.4
MUN Mundaring 59.37 206⇑iP P 13 48 33.8 +0.3
MUN ePCP PcP 13 49 18.4 -0.2
MUN eS S **13 56 20.9 -1.0**
MUN ePKIKP 14 17 57.4
MUN Mundaring 59.37 206⇑iP P 13 48 33.8 +0.3
MUN ePcP PcP 13 49 18.4 -0.2
MUN eS S **13 56 20.9 -1.0**
DLH Dalhousie 59.40 296 eP **P 13 48 34.0 +0.1**
CHMS Chumysh 59.42 308 P P 13 48 34.9 +1.1
SNR=295
IMA2 Indian Mountai 59.44 25 eP **P 13 48 34.0 +0.5**
CHUM Lake Minchumin 59.48 28⇑iP P 13 48 34.7 +0.9
comp=Z,2µm,1.0s,mb6.7
PONG Pong 59.50 295 eP **P 13 48 33.0 -1.5**
PONG eS S **13 56 25.0 +1.2**
FRU Bishkek 59.53 308⇑iP P 13 48 35.5 +1.0
FRU e 13 50 49.0
FRU e 13 52 20.0
FRU i S S **13 56 28.0 +4.2**
FRU i 13 58 00.0
FRU pmax pmax

comp=Z,40µm,10.0s
FRU MLR MLR
comp=Z,80µm,16.0s
USP Ospenovka 59.59 308 P **P** **13 48 36.0 +1.0**
SNR=372
AAK Ala-Archa 59.62 307 P **P** **13 48 36.5 +1.3**
SNR=23
THN Thein Dam 59.63 296 *e*P **P** **13 48 34.6 -0.8**
THN *e*S **S** **13 56 22.3 -3.1**
UCH Uchtor 59.63 307 P **P** **13 48 37.1 +1.8**
SNR=1491
UCH Uchtor 59.63 307 *e*P **P** **13 48 32.6 -2.6**
comp=Z,5µm,1.4s,mb6.9
NWAO Narrogin (SRO) 59.80 205 P **P** **13 48 37.2 +0.8**
SNR=83
NWAO Narrogin (SRO) 59.80 205 P **P** **13 48 36.9 +0.5**
NWAO pmax pmax
comp=Z,950nm,0.8s
NWAO Narrogin (SRO) 59.80 205⇑ *i*P **P** **13 48 36.8 +0.4**
comp=Z,945nm,0.8s,mb6.5
SLKM Skilak Lake 59.82 32 *e*P **P** **13 48 35.4 -0.8**
SLKM Skilak Lake 59.82 32 *e*P **P** **13 48 35.3 -0.9**
MDRS Chennai 59.88 273 *e*P **P** **13 48 36.5 -0.8**
MDRS AMb AMB 13 48 44.7
comp=Z,6µm,1.1s,mb7.2
MDRS *i* PP PP 13 50 50.0 -2.7
MDRS *i* S **S** **13 56 26.0 -3.1**
KTH Kantishna Hill 60.02 28⇑ *i*P **P** **13 48 37.5 0.0**
comp=Z,460nm,1.0s,mb6.1
RC01 Rabbit Creek A 60.15 31⇑ *i*P **P** **13 48 37.4 -1.0**
comp=Z,471nm,1.0s,mb6.1
EKS2 Erkin-Say 60.15 307 P **P** **13 48 40.2 +1.4**
SNR=399
EKS2 Erkin-Say 60.15 307⇑ *i*P **P** **13 48 40.0 +1.3**
comp=Z,980nm,0.9s,mb6.4
HYB Hyderabad 60.19 278 *e*P **P** **13 48 40.0 +0.6**
HYB *e*S **S** **13 56 32.0 -1.0**
HYB pmax pmax
comp=Z,1µm,1.0s,mb6.5
HYB Hyderabad 60.19 278 *i* P **P** **13 48 40.0 +0.6**
comp=Z,1µm,1.0s,mb6.5
HYB *e*S **S** **13 56 32.0 -1.0**
HYB LR LR 14 06 28.0
comp=Z,106nm,28.0s
HYB Hyderabad 60.19 278 *e*P **P** **13 48 40.0 +0.6**
comp=Z,1µm,1.0s,mb6.5
HYB *e*S **S** **13 56 32.0 -1.0**
HYB *e* 14 06 28.0
AML Almayashu 60.25 307 P **P** **13 48 41.6 +2.2**
SNR=88
AML Almayashu 60.25 307⇑ *i*P **P** **13 48 41.5 +2.1**
comp=Z,2µm,0.9s,mb6.7
JMU Jammu 60.27 296 *ex* x 13 48 42.5
PMR Palmer 60.51 31 *e*P **P** **13 48 39.5 -1.3**
PMR pmax pmax
comp=Z,2µm,0.9s,mb6.8
PMR MLR MLR
comp=Z,126µm,17.0s
PMR Palmer 60.51 31 *e*P **P** **13 48 39.5 -1.3**
comp=Z,2µm,0.9s,mb6.8
PMR LR LR
comp=Z,126µm,17.0s
AKL Akola 60.75 282 *e*P **P** **13 48 44.5 +1.3**
MCK McKinley 60.92 28⇑ *i*P **P** **13 48 43.1 -0.5**
MCK pmax pmax
comp=Z,3µm,1.1s,mb6.9
MCK McKinley 60.92 28⇑ *i*P **P** **13 48 43.1 -0.5**
comp=Z,3µm,1.1s,mb6.9
COLD Coldfoot 61.06 24⇑ *i*P **P** **13 48 45.1 +0.6**
comp=Z,2µm,1.0s,mb6.7
PALK Pallekele 61.38 266 P **P** **13 48 48.9 +1.4**
SNR=147
PALK Pallekele 61.38 266 *e*P **P** **13 48 45.1 -2.4**
comp=Z,5µm,1.4s,mb6.9
XMAS Kiritimati 61.38 100⇑ *i*P **P** **13 48 47.2 -0.3**
comp=Z,4µm,1.0s,mb7.0
XMAS *e*pP pP 13 49 42.9 -1.5
XMAS *e*S **S** **13 56 47.6 -0.5**
COLA College 61.57 27 *c i*P **P** **13 48 47.3 -0.6**
COLA College 61.57 27⇑ *i*P **P** **13 48 47.0 -0.9**
comp=Z,688nm,0.8s,mb6.3
COLA *e*S **S** **13 56 48.1 -0.9**
AJM Ajmer 61.58 289 *e*P **P** **13 48 48.8 +0.1**
AJM AMb AMB 13 48 55.4
comp=Z,7µm,1.3s,mb7.1
MID Middleton Isla 61.64 33 *e*P **P** **13 48 49.3 +0.9**
VOSK Vostochnaya 61.79 319 P **P** **13 48 49.5 -0.1**
VOSK pmax pmax
comp=Z,17µm,2.1s,mb7.3
BVA0 Borovoye Array 62.15 319 *i* P **P** **13 48 52.2 +0.3**
BVAR Borovoye Array 62.15 319 P **P** **13 48 52.5 +0.6**
comp=Z,940nm,0.5s,mb6.7,baz=94,slow=7.9,SNR=341
BVAR S **S** **13 57 00.0 +3.5**
comp=Z,514nm,0.9s,baz=90,slow=8.9,SNR=14
BVAR P3KP 14 16 50.3
comp=Z,3.3nm,0.8s,baz=174,slow=4.3,SNR=4.0
BVAR PKPPKP 14 17 53.6
comp=Z,31nm,0.8s,baz=279,slow=3.5,SNR=3.6
BVAR PKP2ab 14 18 10.4
comp=Z,36nm,0.8s,baz=284,slow=7.5,SNR=8.0
BVAR P4KPbc 14 25 55.8
comp=Z,8.7nm,0.8s,baz=87,slow=5.3,SNR=11
BVAR Borovoye Array 62.15 319 P **P** **13 48 52.5 +0.6**
BVAR S **S** **13 57 00.0 +3.5**
BVAR Borovoye Array 62.15 319 P **P** **13 48 52.5 +0.6**
BVAR S **S** **13 57 00.0 +3.5**
BVAR PKKKP 14 16 50.3
BVAR P'P' 14 17 53.6
BVAR P'P'ab 14 18 10.4
BRVK Borovoye 62.21 319 P **P** **13 48 53.2 +0.9**
SNR=3275
BRVK Borovoye 62.21 319 P **P** **13 48 52.9 +0.6**
BRVK Borovoye 62.21 319⇑ *e*P **P** **13 48 52.8 +0.5**
SALM Salem 62.22 272 *e*P **P** **13 48 51.0 -2.1**
KK31 Karatay Array 62.51 308 *i* P **P** **13 48 55.3 +0.7**
KK31 pmax pmax
comp=Z,5µm,1.0s,mb7.1
KOD Kodaikanal 63.36 271 *e*P **P** **13 49 01.5 +0.9**
KOD AMb AMB 13 49 07.7
comp=Z,5µm,1.1s,mb7.0
RAO Raoul Island 63.53 142 S **S** **13 57 09.3 -4.9**
comp=Z,140nm,0.4s,baz=87,slow=21,SNR=1.9
RAO Raoul Island 63.53 142 P **P** **13 49 01.6 +0.3**
RAO pmax pmax
comp=Z,2µm,0.6s,mb6.8
RAO Raoul Island 63.53 142 *e*P **P** **13 49 01.2 -0.1**
comp=Z,2µm,0.6s,mb6.9
OUZ Omahuta 64.02 152 *e*P **P** **13 49 04.6 +0.2**
POO Poona 64.20 281 *e*P **P** **13 49 06.4 +0.4**
POO AMb AMB 13 49 12.8
comp=Z,7µm,1.6s,mb7.0
POO *e*S **S** **13 57 23.0 +0.1**
KAD Karad 64.23 279 *e*P **P** **13 49 06.7 +0.5**
KAD AMb AMB 13 49 12.7
comp=Z,6µm,1.5s,mb7.0
TRD Trivandrum 64.42 269 *e*P **P** **13 49 08.1 +0.7**
TRD AMb AMB 13 49 14.3
comp=Z,5µm,1.1s,mb7.1
TAU Tasmania Unive 64.73 176 *e*P **P** **13 49 09.2 +0.4**
TAU pmax pmax
comp=Z,716nm,0.9s,mb6.3
TAU Tasmania Unive 64.73 176 *e*P **P** **13 49 09.2 +0.4**
comp=Z,716nm,0.9s,mb6.3
KBL Kabul 64.80 299⇑ *i*P **P** **13 49 10.3 +0.7**
KBL pmax pmax
comp=Z,319nm,0.4s,mb6.3
KBL Kabul 64.80 299⇑ *i*P **P** **13 49 10.3 +0.6**
comp=Z,318nm,0.4s,mb6.3
BHV Bhavnagar 64.89 284 *e*P **P** **13 49 10.5 +0.1**
WCZ Waipu Caves 64.95 152 P **P** **13 49 10.7 +0.3**
GOA Goa 65.08 277⇑ *i*P **P** **13 49 12.3 +0.5**
GOA AMb AMB 13 49 18.6
comp=Z,6µm,1.8s,mb6.9
GOA *i* x x 13 57 34.7
DAWY Dawson 65.16 28⇑ *i*P **P** **13 49 11.7 +0.4**
DAWY *e*S S 13 57 26.6 -6.6
KAAZ Kauri Point 65.85 152 *e*P **P** **13 49 15.8 -0.3**
WTAZ Waiatarua 65.89 152 *e*P **P** **13 49 16.8 +0.5**
OTAZ Otara 66.05 152 *e*P **P** **13 49 17.7 +0.3**
HYT Haines Junctio 66.08 32 *e*P **P** **13 49 18.4 +1.1**
KUZ Kuaotunu 66.23 151 P **P** **13 49 18.3 -0.2**
MKAZ Moumakai 66.29 152 P **P** **13 49 18.8 -0.1**
BHJ Bhuj 66.73 287 *e*P **P** **13 49 23.1 +1.0**
TOZ Tahuroa Road 66.95 152 P **P** **13 49 23.6 +0.5**
SKAG Skagway 67.26 33 *e*P **P** **13 49 25.3 +0.6**

comp=Z,2µm,1.1s,mb6.6
SKAG LR LR
comp=Z,132µm,21.0s
TGRZ Tauranga 67.29 152 *e*P **P** **13 49 24.2 -0.9**
HIZ Hauiti 67.34 153 P **P** **13 49 25.6 +0.2**
SIT Sitka 67.49 36 *e*P **P** **13 49 27.8 +1.6**
SIT pmax pmax
comp=Z,981nm,1.9s,mb6.1
SIT MLR MLR
comp=Z,65µm,20.0s
SIT Sitka 67.49 36 *e*P **P** **13 49 27.8 +1.6**
comp=Z,980nm,1.9s,mb6.1
SIT LR LR
comp=Z,65µm,20.0s
KARZ Kaharoa 67.52 152 *e*P **P** **13 49 26.6 0.0**
PKE Pukeiti 67.56 154 *e*P **P** **13 49 27.7 +0.9**
SVE Sverdlovsk 67.56 324⇓ *e*P **P** **13 49 27.5 +0.8**
SVE *e*S S 13 58 01.8 -0.5
SVE *e*SS SS 14 02 23.8 -3.9
SVE pmax pmax
comp=Z,7µm,0.9s,mb7.3
SVE pmax pmax
comp=Z,53µm,14.1s
NWEZ Newall Road 67.58 154 P **P** **13 49 28.2 +1.3**
NEZ North Egmont 67.67 154 *e*P **P** **13 49 28.2 +0.7**
RAEZ Rainy Point 67.80 154 *e*P **P** **13 49 29.2 +0.9**
EDRZ Edgecumbe 67.81 152 *e*P **P** **13 49 27.6 -0.8**
VRZ Vera Road 67.81 154 P **P** **13 49 28.4 0.0**
WATZ Wairara 67.87 153 *e*P **P** **13 49 29.1 +0.3**
RATZ Rangitukua 68.02 153 *e*P **P** **13 49 29.4 -0.3**
TWVZ Taurewa 68.05 153 *e*P **P** **13 49 29.6 -0.3**
MXZ Matakaoa Point 68.07 150 P **P** **13 49 28.0 -2.1**
KATZ Kakaramea 68.08 153 *e*P **P** **13 49 30.2 +0.1**
URZ Urewera 68.10 151 P **P** **13 49 28.4 -1.8**
comp=Z,232nm,0.3s,mb6.2,baz=346,slow=3.4,SNR=126
URZ PKPPKP 14 17 44.6
comp=Z,27nm,1.1s,baz=102,slow=8.8,SNR=5.3
URZ Urewera 68.10 151 P **P** **13 49 28.4 -1.8**
WTVZ West Tongariro 68.15 153 *e*P **P** **13 49 30.2 -0.3**
NGZ Ngauruhoe 68.21 153 *e*P **P** **13 49 30.8 0.0**
WPVZ Whakapapa 68.21 153 P **P** **13 49 30.5 -0.4**
FWVZ Far West T-bar 68.25 153 P **P** **13 49 30.7 -0.4**
TUVZ Tukino 68.31 153 P **P** **13 49 31.3 -0.2**
WNVZ Wahianoa 68.33 153 *e*P **P** **13 49 31.2 -0.4**
QRZ Quartz Range 68.39 156 P **P** **13 49 31.3 -0.6**
WAZ Wanganui 68.44 154 P **P** **13 49 32.3 0.0**
PUZ Puketiti 68.47 150 P **P** **13 49 30.4 -2.1**
MOVZ Moawhango 68.47 153 *e*P **P** **13 49 31.2 -1.2**
BKZ Black Stump Fm 68.58 152 P **P** **13 49 31.6 -1.5**
ARU Arti 68.75 324 *c i*P **P** **13 49 34.1 +0.1**
ARU *e* 13 49 56.4
ARU *e**PP pP 13 50 33.1 +0.9
ARU *e* 13 51 06.5
ARU *e* 13 52 08.2
ARU *e*PPP 13 53 47.7
ARU *e*S S 13 58 17.3 +1.0
ARU *e* 13 59 03.0
ARU pmax pmax
comp=Z,3µm,1.7s,mb6.7
ARU Arti 68.75 324⇑ *e*P **P** **13 49 34.0 0.0**
CRAG Craig 68.90 37 *e*P **P** **13 49 35.1 +0.1**
comp=Z,3µm,1.6s,mb6.6
CRAG LR LR
comp=Z,62µm,18.0s
DSZ Denniston Nort 68.92 157 *e*P **P** **13 49 33.4 -1.8**
KNZ Kokohu 68.98 151 P **P** **13 49 34.2 -1.4**
AB31 Akbulak array 69.02 316 P **P** **13 49 36.0 +0.2**
AB31 pmax pmax
comp=Z,3µm,0.6s,mb7.2
AB31 Akbulak array 69.02 316⇑ *e*P **P** **13 49 36.0 +0.2**
NNZ Nelson 69.05 156 P **P** **13 49 34.6 -1.4**
TSZ Takapari Road 69.10 153 P **P** **13 49 34.4 -1.9**
WRAK Wrangell Islan 69.19 36 *e*P **P** **13 49 37.2 +0.4**
comp=Z,33nm,0.7s
KIW Kapiti Island 69.35 154 P **P** **13 49 36.4 -1.4**
TCW Tory Channel 69.39 155 P **P** **13 49 36.7 -1.4**
MRZ Mangatainoka R 69.45 154 P **P** **13 49 36.5 -1.9**
MRW Makara Radio 69.58 155 P **P** **13 49 37.6 -1.6**
VIB Van Inlet 69.58 40 T 15 05 59.4
SNR=6.3
CAW Cannon Point 69.62 154 *e*P **P** **13 49 37.7 -1.8**
DIB Dawson Inlet, 69.63 40 T 15 06 17.8
SNR=6.1
SNZO South Karori 69.64 155 P **P** **13 49 37.6 -2.0**
BSWZ Blackbirch Sta 69.67 156 *e*P **P** **13 49 38.0 -1.7**
WVZ Waitaha Valley 69.72 158 *e*P **P** **13 49 37.7 -2.3**
FOZ Fox Glacier 69.80 159 P **P** **13 49 39.3 -1.2**
MTW Mount Morrison 69.84 154 P **P** **13 49 39.2 -1.6**
MSWZ Moikau Station 69.95 154 P **P** **13 49 40.0 -1.5**
JCZ Jackson Bay 69.96 160 P **P** **13 49 41.2 -0.3**
PAWZ Paruwai Farm 69.99 154 *e*P **P** **13 49 37.0 -4.7**
LTZ Lake Taylor 70.00 157 P **P** **13 49 40.7 -1.0**
AKTK Aktyubinsk 70.04 317 P **P** **13 49 41.5 -0.6**
AKTK S S 13 58 32.0 +0.5
AKTK P'P'ab 14 17 40.2
AKTO Aktyubinsk 70.04 317 P **P** **13 49 41.5 -0.6**
comp=Z,578nm,0.6s,mb6.4,baz=88,slow=6.0,SNR=54
AKTO S S 13 58 32.0 +0.5
comp=Z,35nm,0.8s,baz=23,slow=22,SNR=5.0
AKTO PKP2ab 14 17 40.2
comp=Z,48nm,1.0s,baz=250,slow=4.4,SNR=7.7
AKTO Aktyubinsk 70.04 317 P **P** **13 49 41.5 -0.5**
AKTO S S 13 58 32.1 +0.5
DLBC Dease Lake 70.11 34 S S 13 58 31.0 -1.2
DLBC Dease Lake 70.11 34 *e*P **P** **13 49 36.9 -5.4**
MSZ Milford Sound 70.25 161 P **P** **13 49 42.8 -0.4**
RPZ Rata Peaks 70.39 159 P **P** **13 49 42.4 -1.6**
comp=Z,1µm,0.9s,mb6.5,baz=357,slow=0.8,SNR=145
RPZ S S 13 58 40.3 +4.7
comp=Z,84nm,1.3s,baz=185,slow=14,SNR=6.6
RPZ Rata Peaks 70.39 159 P **P** **13 49 41.9 -2.2**
RAR Rarotonga 70.67 123 P **P** **13 49 46.8 +0.5**
comp=Z,1µm,0.8s,mb6.5,baz=256,slow=5.9,SNR=150
RAR S S 13 58 38.6 -1.1
comp=Z,15nm,0.9s,baz=296,slow=17,SNR=3.5
LBZ Lake Benmore 70.70 159 P **P** **13 49 44.5 -1.4**
WKZ Wanaka 70.72 160 P **P** **13 49 47.0 +0.9**
DCZ Deep Cove 70.76 162 P **P** **13 49 45.0 -1.2**
CRLZ Canterbury Las 70.81 157 P **P** **13 49 45.5 -1.1**
MLZ Mavora Lakes 70.94 161 P **P** **13 49 46.1 -1.2**
MQZ McQueen's Vall 70.94 157 P **P** **13 49 46.6 -0.8**
EAZ Earnscleugh 71.18 160 P **P** **13 49 47.7 -1.1**
ODZ Otahua Downs 71.43 159 P **P** **13 49 49.4 -0.9**
TUZ Tuapeka 71.93 161 *e*P **P** **13 49 52.5 -0.7**
BBB Bella Bella 72.44 40 P **P** **13 49 55.8 -0.6**
baz=277,slow=8.7
BBB S S 13 58 58.1 -0.9
comp=Z,19nm,1.0s,baz=90,slow=10,SNR=3.5
ABKT Ailbek 72.70 304 P **P** **13 49 59.6 +1.4**
comp=Z,27µm,1.0s,mb7.8
DGAR Diego Garcia 74.74 255 P **P** **13 50 10.7 +0.3**
SNR=42
DGAR Diego Garcia 74.74 255⇑ *i*P **P** **13 50 10.4 0.0**
ALE Alert 74.99 3 P **P** **13 50 10.0 -0.7**
comp=Z,6µm,0.8s,mb7.3
SPITS Spitsbergen Ar 75.45 350 P **P** **13 50 12.8 -0.5**
comp=Z,89nm,0.5s,mb5.6
SPITS S S 13 59 29.8 -2.0
comp=Z,34nm,1.1s,baz=327,slow=8.9,SNR=2.2
SPITS PKKPbc PKKPbc 14 09 33.4 0.0
comp=Z,12nm,0.5s,baz=289,slow=2.6,SNR=22
SPITS PKPPKP 14 17 37.4
comp=Z,109nm,1.2s,baz=264,slow=16,SNR=6.6
SPITS Spitsbergen Ar 75.45 350 P **P** **13 50 12.8 -0.5**
SPITS S S 13 59 29.8 -1.9
KBS Kingsbay 75.61 351⇑ *i*P **P** **13 50 14.3 +0.1**
KBS AMb AMB 13 50 23.0
comp=Z,1µm,1.7s,mb6.2
KBS S S 13 59 31.2 -2.3
KBS *e*SS SS 14 04 20.5 -9.1
KBS Kingsbay 75.61 351 P **P** **13 50 14.1 -0.1**
KBS pmax pmax
comp=Z,390nm,0.7s,mb6.2
KBS Kingsbay 75.61 351⇑ *e*P **P** **13 50 13.0 -1.2**
C03A Quillayute Air 75.75 44⇑ P **P** **13 50 16.9 +1.4**
baz=76
OOW Octopus West 76.06 44 P **P** **13 50 18.7 +1.4**
PGC Sidney 76.25 43 *e*P **P** **13 50 18.5 +0.2**
comp=Z,3µm,1.1s,mb6.9
WBK Wadi Bani Khal 76.35 289 P **P** **13 50 20.4 +1.0**
SNR=291
NLWA Neilton Lookou 76.37 44⇑ P **P** **13 50 20.1 +1.1**
baz=76

NLWA Neilton Lookou 76.37 44⇑ *i*P **P** **13 50 20.1 +1.1**
comp=Z,18µm,0.9s,mb7.7
YKA Yellowknife Ar 76.39 28 P **P** **13 50 18.3 -0.5**
comp=Z,414nm,0.6s,mb6.3,baz=292,slow=6.0,SNR=164
YKA S S 13 59 39.8 -2.5
comp=Z,34nm,1.1s,baz=294,slow=10,SNR=4.0
YKA PKKP PKKPdf 14 08 54.2 -22
comp=Z,6.3nm,0.7s,baz=165,slow=2.3,SNR=4.9
YKA PKKPbc PKKPbc 14 09 30.1 -0.7
comp=Z,11nm,0.6s,baz=120,slow=2.3,SNR=6.4
YKA PKPPKP 14 17 34.3
comp=Z,18nm,1.0s,baz=110,slow=2.2,SNR=4.9
YKA Yellowknife Ar 76.39 28 P **P** **13 50 18.3 -0.5**
YKA S S 13 59 39.9 -2.4
YKA Yellowknife Ar 76.39 28 P **P** **13 50 18.3 -0.5**
YKA S S 13 59 39.9 -2.5
YKA PKKP PKKPdf 14 08 54.2 -22
YKA PKKPbc PKKPbc 14 09 30.1 -0.7
YKA P'P' 14 17 34.4
B04A Port Angeles 76.40 44⇓ P **P** **13 50 20.1 +0.9**
baz=76,SNR=108
D03A Wishkah Elem. 76.51 45⇓ P **P** **13 50 21.1 +1.2**
baz=76,SNR=109
WISH Wishkah 76.51 45 P **P** **13 50 21.2 +1.4**
A04A Legoe Bay, Lum 76.70 43⇑ P **P** **13 50 21.5 +0.6**
baz=77,SNR=134
BIDO Bidbid 76.80 290 P **P** **13 50 22.9 +1.0**
SNR=630
E03A Lebam 76.83 45⇓ P **P** **13 50 22.3 +0.7**
baz=77,SNR=209
C04A Brinnon 76.84 44⇓ P **P** **13 50 22.7 +1.0**
baz=77,SNR=190
APA Apatity 76.92 338⇓ *i*P **P** **13 50 21.0 -0.7**
APA *e**PP pP 13 51 20.0 -1.2
APA *i* 13 53 23.0
APA *i*S S 13 59 42.0 -5.9
APA pmax pmax
comp=Z,63µm,9.0s
APA MLR MLR
comp=Z,140µm,17.0s
GNW Green Mountain 76.99 44 P **P** **13 50 23.4 +0.9**
A05A Maple Falls 77.00 42⇓ P **P** **13 50 22.8 +0.3**
baz=77,SNR=228
SMDO Samad 77.01 290 P **P** **13 50 23.4 +0.3**
SNR=410
F03A Seaside 77.02 46⇑ P **P** **13 50 23.6 +1.0**
baz=77,SNR=183
PPT Papeete 77.06 115⇑ *i*P **P** **13 50 24.5 +1.2**
comp=Z,2µm,1.2s,mb6.7
PPT *e*pP pP 13 51 27.9 +5.0
comp=Z,880nm,1.4s
PPT *e*S S 13 59 43.0 -8.0
comp=Z,132µm,26.8s
PPT Papeete 77.06 115 *e*LQ 14 10 49.0
comp=Z,491µm,26.0s
PPT *e*LR LR 14 14 17.1
comp=Z,274µm,26.2s
PPT Papeete 77.06 115 P **P** **13 50 24.5 +1.1**
comp=Z,2µm,1.1s,mb6.7,baz=315,slow=1.2,SNR=104
PPT PKPPKP 14 17 33.8
comp=Z,40nm,1.1s,baz=0.2,slow=15,SNR=4.2
BMW Boistfort Moun 77.07 45 *e*P **P** **13 50 23.6 +0.7**
PAE Paea 77.11 115⇑ *i*P **P** **13 50 24.5 +0.9**
comp=Z,17µm,1.2s,mb7.5
PAE *e*pP pP 13 51 28.0 +4.9
comp=Z,10µm,1.3s
HEBO Mount Hebo 77.11 46⇑ *i*P **P** **13 50 24.2 +1.0**
comp=Z,3µm,1.2s,mb6.7
H02A Toledo 77.11 47 ⇑P **P** **13 50 24.3 +1.1**
baz=77
D04A Dobbs Creek Ra 77.14 44 ⇑P **P** **13 50 24.6 +1.2**
baz=77,SNR=23
JMDO Jabal Madar 77.19 289 P **P** **13 50 24.6 +0.5**
SNR=328
KLMR Klimovskoe 77.22 331⇑ *i*P **P** **13 50 23.1 -0.4**
KLMR *e* 13 53 21.6
KLMR pmax pmax
comp=Z,3µm,1.4s,mb6.8
BJO Bjornoya 77.22 347⇑ *i*P **P** **13 50 22.7 -0.6**
BJO AMb AMB 13 50 30.0
comp=Z,1µm,2.5s,mb6.1
BJO *e*S S 13 59 48.9 -2.1
BJO AMS AMS 14 24 57.1
comp=Z,89µm,19.5s
B05A Bryant 77.23 43 ⇑P **P** **13 50 24.5 +0.7**
baz=77,SNR=140
TIAR Tiarei 77.25 115⇑ *i*P **P** **13 50 25.4 +1.0**
comp=Z,27µm,1.1s,mb7.8
TIAR *e*pP pP 13 51 28.8 +4.9
comp=Z,7µm,1.2s
BJO1 Bjornoya 77.27 347⇑ *i*P **P** **13 50 22.7 -0.8**
comp=Z,1µm,2.5s,mb6.1
BJO1 LR LR
comp=Z,89µm,19.5s
PMOR Pomariorio Ree 77.31 112⇑ *i*P **P** **13 50 25.4 +0.7**
comp=Z,7µm,1.1s,mb7.2
PMOR *e*pP pP 13 51 29.0 +4.7
comp=Z,4µm,1.3s
A06A Chilliwack 77.35 42 ⇑P **P** **13 50 24.6 +0.1**
baz=77,SNR=144
JCW Jim Creek 77.36 43 *e*P **P** **13 50 25.2 +0.7**
K01A Sixes 77.37 49⇓ P **P** **13 50 25.5 +0.8**
baz=77,SNR=119
G03A Yamhill 77.40 46⇓ P **P** **13 50 25.5 +0.7**
baz=77,SNR=246
TVO Taravao 77.44 115⇑ *i*P **P** **13 50 26.7 +1.3**
comp=Z,26µm,1.1s,mb7.8
I02A Mapleton 77.44 48 ⇑P **P** **13 50 25.7 +0.7**
baz=77,SNR=104
KEBM Edson Butte 77.45 49 *e*P **P** **13 50 25.7 +0.5**
comp=Z,94nm,0.5s,mb5.7
MCQ Macquarie Isla 77.47 170⇑ *i*P **P** **13 50 25.1 +0.4**
HOQ Hoqain 77.49 290 P **P** **13 50 26.5 +0.7**
SNR=1164
B06A Marblemount 77.53 43 ⇑P **P** **13 50 25.6 +0.1**
baz=77,SNR=148
RPW Rockport 77.54 43 *e*P **P** **13 50 25.1 -0.5**
comp=Z,2µm,1.5s,mb6.4
H03A Soap Creek Ran 77.59 47 ⇑P **P** **13 50 26.9 +1.1**
baz=78,SNR=410
COR Corvallis 77.61 47 *e*P **P** **13 50 27.0 +1.0**
COR pmax pmax
comp=Z,3µm,1.2s,mb6.8
COR Corvallis 77.61 47 *e*P **P** **13 50 27.0 +1.0**
comp=Z,3µm,1.2s,mb6.8
BANOM Banah 77.62 293 P **P** **13 50 27.5 +1.1**
SNR=481
D05A Enumclaw 77.65 44⇓ P **P** **13 50 27.1 +1.0**
baz=78,SNR=116
VAH Vaihoa 77.65 112⇑ *i*P **P** **13 50 27.0 +0.4**
comp=Z,2µm,1.1s,mb6.8
VAH *e*pP pP 13 51 30.7 +4.5
comp=Z,1µm,1.3s
C05A Tolt Reservoir 77.67 43⇓ P **P** **13 50 26.7 +0.5**
baz=78,SNR=36
F04A Amboy 77.77 45⇓ P **P** **13 50 27.2 +0.3**
baz=78,SNR=406
J02A Umpqua 77.82 48⇓ P **P** **13 50 27.8 +0.7**
baz=78,SNR=245
I03A Eugene 77.83 47 ⇑P **P** **13 50 28.0 +0.8**
baz=78,SNR=257
BSY Bisya 77.86 290 P **P** **13 50 28.4 +0.7**
SNR=536
LON Longmire 77.91 44 *e*P **P** **13 50 27.2 -0.4**
LON pmax pmax
comp=Z,82nm,0.5s,mb5.6
LON Longmire 77.91 44 *e*P **P** **13 50 27.2 -0.4**
comp=Z,82nm,0.5s,mb5.6
M01C Crescent City 77.92 50⇓ P **P** **13 50 28.5 +0.8**
baz=78,SNR=132
KEV Kevo 77.92 341 *ep* **P** **13 50 26.1 -1.1**
comp=Z,681nm,0.5s,mb6.5
KEV Kevo 77.92 341 *ep* PKKPbc 14 09 25.2 -2.6
comp=Z,2.9nm,0.3s
KEV Kevo 77.92 341 *eP* **P** **13 50 26.1 -1.1**
KEV pmax pmax
comp=Z,681nm,0.5s,mb6.5
G04A Mulino 77.97 46⇓ P **P** **13 50 28.6 +0.7**
baz=78,SNR=378
E05A Randle 78.00 45⇓ P **P** **13 50 28.0 0.0**
baz=78,SNR=182
A07A Ashnola River, 78.05 42⇓ P **P** **13 50 28.8 +0.5**
baz=78,SNR=634
K02A Glendale 78.07 49⇓ P **P** **13 50 29.1 +0.6**
baz=78
C06A Tall Timber Ra 78.10 43⇓ P **P** **13 50 29.0 +0.3**
baz=78,SNR=178

HATD **Hatta, Dubai** 78.11 292 P P 13 50 29.9 +0.8
SNR=881
KRMB **Red Mountain** 78.18 50 *e*P P 13 50 27.7 -1.4
comp=Z,1μm,1.2s,mb6.5
L02A **Cave Junction** 78.19 49 ⇓P P 13 50 30.0 +0.8
baz=78,SNR=354
JCC **Jacoby Creek** 78.32 51 ⇓P P 13 50 30.8 +0.9
baz=78,SNR=154
H04A **Detroit Lake** 78.34 47 ⇑P P 13 50 30.3 +0.3
baz=78,SNR=618
D06A **Cle Elum** 78.38 44 ⇓P P 13 50 30.6 +0.5
baz=78,SNR=323
B07A **Winthrop** 78.41 42 ⇓P P 13 50 30.8 +0.5
baz=78,SNR=554
F05A **White Salmon** 78.42 45 ⇓P P 13 50 31.1 +0.7
baz=78,SNR=238
I04A **Tendick Farm,** 78.48 47 ⇓P P 13 50 31.1 +0.3
baz=78,SNR=759
MEH **Mehetia** 78.48 115 ⇑*i*P P 13 50 32.0 +0.9
comp=Z,89μm,1.3s
MEH *e*pP pP 13 51 35.9 +5.0
comp=Z,34μm,1.4s
ARCES **ARCESS Array B** 78.49 341 P P 13 50 30.3 0.0
comp=Z,900nm,0.6s,mb6.6,baz=62,slow=5.1,SNR=768
ARCES PKiKP PKiKP 13 56 06.4 +2.5
comp=Z,17nm,0.4s,baz=120,slow=1.0,SNR=6.9
ARCES S S 14 00 04.8 +0.3
comp=Z,95nm,1.0s,baz=151,slow=23,SNR=8.4
ARCES PKKPbc PKKPbc 14 09 23.6 -3.0
comp=Z,24nm,0.5s,baz=241,slow=1.6,SNR=18
ARCES PKPPKP 14 17 27.7
comp=Z,33nm,0.9s,baz=225,slow=0.7,SNR=11
ARE0 **ARCESS Array S** 78.49 341 *e*P P 13 50 30.2 -0.1
HUMO **Hull Mountain** 78.49 49 ⇓P P 13 50 31.5 +0.7
baz=78,SNR=588
HUMO **Hull Mountain** 78.49 49 *e*P P 13 50 31.4 +0.5
comp=Z,2μm,1.1s,mb6.6
E06A **Yakima** 78.51 44 ⇑P P 13 50 31.7 +0.8
baz=78,SNR=430
ETW **Entiat** 78.57 43 *e*P P 13 50 31.2 0.0
comp=Z,699nm,1.1s,mb6.2
O01C **Eel River Cons** 78.69 51 ⇑P P 13 50 33.1 +1.1
baz=79,SNR=299
C07A **Waterville** 78.71 43 ⇑P P 13 50 31.8 -0.2
baz=79,SNR=487
G05A **Wamic** 78.73 46 ⇓P P 13 50 32.7 +0.6
baz=79,SNR=193
A08A **Turner Farm, O** 78.77 42 ⇑P P 13 50 32.4 +0.2
baz=79,SNR=532
N02C **Big Bar** 78.83 51 ⇑P P 13 50 33.3 +0.5
baz=79,SNR=558
J04A **Umpqua Nationa** 78.87 48 ⇓P P 13 50 33.5 +0.7
baz=79,SNR=374
F06A **Goldendale** 78.91 45 ⇑P P 13 50 33.4 +0.3
baz=79,SNR=293
B08A **Colville Reser** 78.94 42 ⇑P P 13 50 33.1 0.0
baz=79,SNR=1000
D07A **Quincy** 78.94 44 ⇑P P 13 50 33.5 +0.3
baz=79,SNR=211
YBH **Yreka Blue Hor** 78.96 49 P P 13 50 34.0 +0.6
comp=Z,1μm,1.1s,mb6.5
YBH S S 14 00 09.4 -1.2
comp=Z,31nm,1.0s,baz=89,slow=20,SNR=15
YBH **Yreka Blue Hor** 78.96 49 ⇓P P 13 50 34.2 +0.8
baz=79,SNR=1000
M02C **Callahan** 78.97 50 ⇓P P 13 50 34.2 +0.8
baz=79,SNR=938
MAK **Makhachkala** 78.97 312 *c i*P P 13 50 34.3 +0.8
MAK *i* 13 50 41.7
MAK *i* *PP pP 13 51 33.6 +0.4
MAK *e**SP sP 13 52 04.1 +4.0
MAK *e* 13 53 31.1
MAK *i* S S 14 00 10.3 -0.4
MAK *i* 14 00 28.5
MAK pmax pmax
comp=Z,5μm,1.4s,mb7.0
MAK pmax pmax
comp=E,5μm,1.2s
MAK pmax pmax
comp=N,2μm,1.0s
MAK MLR MLR
comp=E,207μm,20.0s
MAK MLR MLR
comp=Z,165μm,21.0s
H05A **Madras** 78.99 46 ⇑P P 13 50 34.1 +0.5
baz=79,SNR=569
KCPM **Cahto Peak** 79.01 52 *e*P P 13 50 34.6 +0.9
comp=Z,2μm,0.9s,mb6.7
KIPM **Iron Peak** 79.04 52 *e*P P 13 50 34.7 +0.8
comp=Z,2μm,1.3s,mb6.5
I05A **Bend** 79.13 47 ⇓P P 13 50 35.0 +0.7
baz=79,SNR=208
A09A **Danville** 79.18 42 ⇓P P 13 50 34.9 +0.5
baz=79,SNR=782
G06A **Carlson Farm,** 79.19 46 ⇑P P 13 50 34.7 +0.2
baz=79,SNR=475
E07A **Sunnyside** 79.24 44 ⇓P P 13 50 35.4 +0.6
baz=79,SNR=271
C08A **Higginbotham F** 79.32 43 ⇓P P 13 50 35.3 +0.1
baz=79,SNR=256
K04A **Chilquin** 79.34 48 ⇓P P 13 50 36.2 +0.7
baz=79
L04A **Klamath Falls** 79.38 49 ⇑P P 13 50 36.2 +0.5
baz=79,SNR=116
F07A **Phinny Hill Vi** 79.42 45 ⇑P P 13 50 36.2 +0.4
baz=79,SNR=159
O02C **Red Bluff** 79.42 51 ⇑P P 13 50 36.8 +0.9
baz=79,SNR=1000
J05A **Fort Rock** 79.45 48 ⇓P P 13 50 36.8 +0.8
baz=79,SNR=1000
WDC **Whiskeytown Da** 79.46 51 ⇑*i*P P 13 50 36.1 -0.1
WDC pmax pmax
comp=Z,2μm,1.4s,mb6.6
WDC **Whiskeytown Da** 79.46 51 ⇑P P 13 50 36.7 +0.5
baz=79,SNR=557
WDC **Whiskeytown Da** 79.46 51 ⇑*i*P P 13 50 36.1 -0.1
comp=Z,2μm,1.4s,mb6.6
RSW **Rattlesnake Hi** 79.47 44 *e*P P 13 50 36.2 +0.2
comp=Z,3μm,1.1s,mb6.8
HAWA **Hanford** 79.50 44 ⇑*i*P P 13 50 36.4 +0.1
comp=Z,3μm,1.5s,mb6.7
HAWA *e*S S 14 00 12.9 -3.2
M03C **McCloud** 79.53 50 ⇓P P 13 50 37.1 +0.6
baz=79,SNR=349
M04C **Macdoel** 79.55 49 ⇑P P 13 50 37.0 +0.4
baz=79,SNR=480
H06A **Lindquist Farm** 79.56 46 ⇑P P 13 50 36.8 +0.2
baz=79,SNR=716
HOPS **Hopland** 79.62 52 ⇓P P 13 50 37.2 +0.2
baz=80,SNR=195
HOPS **Hopland** 79.62 52 ⇑*i*P P 13 50 37.1 +0.1
comp=Z,3μm,1.6s,mb6.6
B09A **Rice** 79.65 42 ⇑P P 13 50 37.3 +0.3
baz=80,SNR=714
GASB **Alder Springs** 79.65 51 ⇑P P 13 50 38.3 +1.1
baz=80,SNR=631
D08A **Wollman Farm,** 79.66 43 ⇓P P 13 50 37.3 +0.2
baz=80,SNR=693
OD2 **Odessa Site #2** 79.67 43 *e*P P 13 50 37.0 -0.2
comp=Z,5μm,1.2s,mb7.0
E08A **Dider Farm, El** 79.77 44 ⇑P P 13 50 38.1 +0.4
baz=80,SNR=394
C09A **Chrisman Ranch** 79.80 43 ⇑P P 13 50 38.0 +0.2
baz=80,SNR=516
A10A **Northport** 79.81 41 ⇓P P 13 50 38.3 +0.4
baz=80,SNR=927
G07A **Ruggs Ranch, H** 79.81 45 ⇓P P 13 50 38.2 +0.3
baz=80,SNR=562
VRHR **Novokhopersk** 79.82 321 *c*e*i*P P 13 50 37.8 0.0
VRHR *e*S S 14 00 17.0 -2.3
VRHR pmax pmax
comp=Z,1μm,1.5s,mb6.3
VRHR pmax pmax
comp=N,450nm,1.2s
VRHR pmax pmax
comp=E,630nm,0.9s
VRHR smax
comp=N,67μm,8.6s
VRHR smax
comp=Z,10μm,4.4s
VRHR smax
comp=E,37μm,9.4s
VRHR MLR MLR
comp=N,43μm,16.0s
VRHR MLR MLR
comp=Z,72μm,16.0s
VRHR MLR MLR
comp=E,75μm,18.0s
JOF **Joensuu** 79.84 334 *ep* P 13 50 37.3 -0.4
comp=E,3μm,0.6s,mb7.1
JOF **Joensuu** 79.84 334 *ep* PKKPbc 14 09 20.2 -3.2
comp=E,46nm,0.6s
JOF **Joensuu** 79.84 334 *e*P P 13 50 37.3 -0.4
JOF pmax pmax
comp=Z,3μm,0.6s,mb7.1
K05A **Summer Lake** 79.88 48 ⇓P P 13 50 39.1 +0.8
baz=80,SNR=1000
I06A **Prineville** 79.92 47 ⇑P P 13 50 39.1 +0.5
baz=80,SNR=821
TBI **Tubuai** 79.92 120 ⇑*i*P P 13 50 40.0 +1.2
comp=Z,6μm,1.1s,mb7.1
TBI *e*S S 14 00 11.4 -10
comp=Z,106μm,41.8s
TBI **Tubuai** 79.92 120 *e*LQ 14 11 57.4
comp=Z,171μm,32.0s
TBI *e*LR LR 14 15 34.5
comp=Z,56μm,26.5s
TBI **Tubuai** 79.92 120 ⇑*i*P P 13 50 40.0 +1.2
comp=Z,6μm,1.1s,mb7.1
TBI *e*S S 14 00 11.4 -10
TBI *e*LQ 14 11 57.4
MCCM **Marconi Confer** 80.05 53 ⇑P P 13 50 39.2 -0.2
baz=80,SNR=158
MCCM **Marconi Confer** 80.05 53 ⇑*i*P P 13 50 39.3 -0.1
comp=Z,15μm,0.5s,mb7.9
D09A **Jones Farm, Ri** 80.05 43 ⇓P P 13 50 39.3 +0.2
baz=80,SNR=874
FARB **Farallon Islan** 80.11 53 ⇑P P 13 50 39.4 -0.3
baz=80,SNR=104
MNRC **McLaughlin Nat** 80.12 52 ⇓P P 13 50 40.5 +0.8
baz=80,SNR=1000
NSHM **Saint Helena R** 80.12 53 *e*P P 13 50 39.8 0.0
H07A **Lands Inn, Kim** 80.12 46 ⇑P P 13 50 39.6 0.0
baz=80,SNR=342
L05A **Lakeview** 80.16 49 ⇑P P 13 50 40.4 +0.5
baz=80,SNR=458
MOS **Moscow** 80.17 326 *c i*P P 13 50 39.2 -0.4
MOS *i* S S 14 00 20.5 -2.2
MOS pmax pmax
comp=Z,5μm,1.4s,mb7.0
MOS MLR MLR
comp=Z,88μm,14.0s
M05C **Lookout** 80.19 49 ⇑P P 13 50 40.1 +0.1
baz=80,SNR=607
F08A **Pendleton** 80.21 45 ⇓P P 13 50 40.7 +0.7
baz=80,SNR=1000
B10A **Chitwood Farm,** 80.27 42 ⇓P P 13 50 40.6 +0.3
baz=80,SNR=35
G08A **Pilot Rock** 80.27 45 ⇑P P 13 50 40.5 +0.1
baz=80,SNR=1000
CVS **Carmenet Viney** 80.29 53 ⇑P P 13 50 40.6 0.0
baz=80,SNR=369
K06A **Valley Falls** 80.30 48 ⇑P P 13 50 41.0 +0.4
baz=80,SNR=1000
TRO **Tromso** 80.31 343 ⇑*i*P P 13 50 37.8 -2.3
TRO AMb AMB 13 50 45.3
comp=Z,2μm,1.4s,mb6.6
TRO *e*S S 14 00 20.5 -3.2
TRO AMS AMS 14 29 54.7
comp=Z,55μm,17.2s
TRO **Tromso** 80.31 343 ⇑*i*P P 13 50 37.8 -2.3
TRO pmax pmax
comp=Z,2μm,1.4s,mb6.6
TRO MLR MLR
comp=Z,55μm,17.2s
TRO **Tromso** 80.31 343 ⇑*i*P P 13 50 37.8 -2.3
comp=Z,2μm,1.4s,mb6.6
TRO LR LR
comp=Z,55μm,17.2s
NEW **Newport** 80.35 42 P P 13 50 40.9 +0.2
NEW pmax pmax
comp=Z,3μm,1.1s
NEW **Newport** 80.35 42 *e*P P 13 50 40.1 -0.6
comp=Z,3μm,1.1s,mb6.8
I07A **Izee** 80.35 46 ⇓P P 13 50 41.1 +0.3
baz=80,SNR=661
E09A **Wood Farm, Sta** 80.35 44 ⇑P P 13 50 40.9 +0.1
baz=80
C10A **Spilker Farm,** 80.40 42 ⇓P P 13 50 41.4 +0.4
baz=80,SNR=276
LNOR **Lincton Mounta** 80.50 44 *e*P P 13 50 41.5 -0.1
comp=Z,75nm,1.1s,mb5.2
Q03C **Winters** 80.52 52 ⇑P P 13 50 42.8 +1.0
baz=80,SNR=45
A11A **Hall Mountain,** 80.55 41 ⇑P P 13 50 42.8 +1.1
baz=80,SNR=657
ORV **Oroville** 80.57 51 ⇓P P 13 50 41.8 -0.3
baz=80,SNR=737
MOD **Modoc** 80.58 49 ⇑P P 13 50 42.2 +0.1
baz=80,SNR=539
MOD **Modoc** 80.58 49 *e*P P 13 50 42.0 -0.1
comp=Z,1μm,1.1s,mb6.4
O04C **Chester** 80.59 50 ⇓P P 13 50 42.7 +0.5
baz=80,SNR=538
EDM **Edmonton** 80.61 36 P P 13 50 42.2 +0.2
EDM **Edmonton** 80.61 36 *e*P P 13 50 41.8 -0.2
OHCM **Honcut** 80.66 51 *e*P P 13 50 41.9 -0.6
D10A **Wagner Farm, O** 80.71 43 ⇑P P 13 50 42.3 -0.3
baz=81,SNR=470
M06C **Likely Place G** 80.71 49 ⇓P P 13 50 43.2 +0.4
baz=81,SNR=463
J07A **Hines** 80.74 47 ⇑P P 13 50 43.6 +0.7
baz=81,SNR=586
ELFS **Eagle Lake Fie** 80.74 50 ⇓P P 13 50 43.6 +0.6
baz=81,SNR=766
B11A **Sandpoint** 80.75 41 ⇓P P 13 50 43.4 +0.5
baz=81,SNR=699
H08A **Prairie City** 80.75 46 ⇑P P 13 50 43.3 +0.4
baz=81,SNR=477
JRSC **Jasper Ridge** 80.78 53 ⇑P P 13 50 43.2 -0.1
baz=81,SNR=312
DAG **Danmarks Havn** 80.79 356 ⇓*i*P P 13 50 42.0 -0.5
DAG pmax pmax
comp=Z,2μm,1.4s,mb6.5
DAG **Danmarks Havn** 80.79 356 *i*P P 13 50 42.0 -0.5
comp=Z,2μm,1.4s,mb6.5
DAG **Danmarks Havn** 80.79 356 *i* P P 13 50 42.0 -0.5
comp=Z,2μm,1.4s,mb6.5
F09A **S2 Ranch, Elgi** 80.81 44 ⇓P P 13 50 43.5 +0.3
baz=81,SNR=304
SHAO **Shalim** 80.82 286 P P 13 50 44.7 +0.9
SNR=95
O05C **Quincy** 80.84 51 ⇑P P 13 50 43.5 0.0
baz=81,SNR=164
BDM **Black Diamond** 80.86 53 ⇓P P 13 50 43.9 +0.2
baz=81,SNR=123
Q04C **Lincoln** 80.91 52 ⇑P P 13 50 44.1 +0.2
baz=81,SNR=106
OBN **Obninsk** 80.98 326 ⇑*e*P P 13 50 43.7 -0.2
OBN *i* *PP pP 13 51 42.6 -1.4
OBN *i* 13 53 56.3
OBN *i* PPP 13 55 43.5
OBN *i* 14 00 30.3
OBN *i* PS 14 01 33.9
OBN *i* SS SS 14 05 53.3 +2.6
OBN *i* SSS 14 09 23.9
OBN pmax pmax
comp=Z,8μm,1.4s,mb7.1
OBN pmax pmax
comp=Z,67μm,13.0s
OBN MLR MLR
comp=Z,105μm,17.0s
DGRG **David-gareji** 80.98 311 P P 13 50 35.3 -8.9
DGRG S S 14 00 34.0 +2.2
A12A **Yaak River Ran** 80.99 41 ⇓P P 13 50 44.9 +0.8
baz=81,SNR=603
E10A **Myers Farm, Un** 81.03 44 ⇓P P 13 50 44.4 0.0
baz=81,SNR=314
K07A **Rock Creek Ran** 81.03 48 ⇑P P 13 50 44.8 +0.4
baz=81,SNR=1000
I08A **Drewsey** 81.04 46 ⇓P P 13 50 44.8 +0.4
baz=81,SNR=642
C11A **Tepee Creek (N** 81.05 42 ⇑P P 13 50 44.7 +0.3
baz=81,SNR=822
G09A **Cove** 81.05 45 ⇓P P 13 50 44.9 +0.4
baz=81,SNR=1000
WENL **Wente Vineyard** 81.06 53 ⇑P P 13 50 44.9 +0.2
baz=81,SNR=142
F10A **Beach Ranch, E** 81.15 44 ⇓P P 13 50 45.0 0.0
baz=81,SNR=492
VSR **Storozhevoye** 81.20 322 *c*e*i*P P 13 50 45.0 -0.1
VSR *e*S S 14 00 32.1 -1.4
VSR *e*SS SS 14 05 48.9 -5.2
VSR *e*SSS 14 09 19.6
VSR pmax pmax
comp=Z,1μm,1.5s,mb6.2
VSR pmax pmax
comp=N,390nm,1.6s
VSR pmax pmax
comp=E,830nm,1.4s
VSR smax
comp=N,22μm,3.1s
VSR smax
comp=Z,390nm,1.7s
VSR smax
comp=E,9μm,2.0s
VSR MLR MLR
comp=E,38μm,16.0s
VSR MLR MLR
comp=Z,21μm,16.0s
VSR MLR MLR
comp=N,23μm,20.0s
B12A **Libby** 81.21 41 ⇓P P 13 50 46.1 +0.8
baz=81,SNR=195
L07A **Adell** 81.21 48 ⇓P P 13 50 46.1 +0.7
baz=81,SNR=1000
MTA **Mtatsminda** 81.30 311 P P 13 50 46.4 +0.5
MTA S S 14 00 33.4 -1.5
D11A **Klaveano Farm,** 81.30 43 ⇓P P 13 50 45.6 -0.2
baz=81,SNR=463
P05C **Yuba Gap, Truc** 81.30 51 ⇑P P 13 50 46.2 +0.2
baz=81,SNR=666
J08A **Circle Bar Ran** 81.31 47 ⇓P P 13 50 46.4 +0.5
baz=81,SNR=1000
TBLG **Delisi** 81.33 311 *e*P P 13 50 46.4 +0.4
TBLG *e*S S 14 00 36.2 +1.0
TBLG **Delisi** 81.33 311 P P 13 50 46.5 +0.5
TBLG S S 14 00 36.2 +1.0
N06A **Buffalo Meadow** 81.33 50 ⇓P P 13 50 46.4 +0.3
baz=81,SNR=830
H09A **Durkee** 81.36 45 ⇓P P 13 50 46.5 +0.4
baz=81,SNR=474
LAVA **Lava Cap Winer** 81.41 52 ⇓P P 13 50 46.3 -0.2
baz=81,SNR=613
R04C **Big Horse Ranc** 81.44 52 ⇓P P 13 50 46.4 -0.3
baz=81,SNR=234
G10A **Bishop Farm, J** 81.48 45 ⇓P P 13 50 46.9 +0.1
baz=81,SNR=1000
BMO **Blue Mountains** 81.52 45 *e*P P 13 50 47.0 +0.1
comp=N,2μm,1.2s,mb6.7
K08A **Mann Creek Ran** 81.53 47 ⇑P P 13 50 47.4 +0.3
baz=81,SNR=953
WVOR **Wild Horse Val** 81.54 48 P P 13 50 47.3 +0.2
WVOR pmax pmax
comp=Z,2μm,1.1s,mb6.5
WVOR **Wild Horse Val** 81.54 48 *e*P P 13 50 47.1 0.0
comp=Z,1μm,0.5s,mb6.8
O06A **Flanigan** 81.55 50 ⇓P P 13 50 47.3 +0.1
baz=81,SNR=1000
M07A **Soldier Meadow** 81.56 49 ⇑P P 13 50 47.7 +0.5
baz=81,SNR=875
I09A **Lost Marbles R** 81.57 46 ⇑P P 13 50 47.6 +0.4
baz=81,SNR=526
C12B **Naegeli Ranch,** 81.58 42 ⇑P P 13 50 47.4 +0.1
baz=81,SNR=166
SAO **San Andreas Ge** 81.60 54 P P 13 50 47.5 -0.1
SAO pmax pmax
comp=Z,2μm,1.0s,mb6.6
SAO **San Andreas Ge** 81.60 54 *e*P P 13 50 47.2 -0.3
comp=Z,2μm,1.0s,mb6.6
PACP **Pacheco Peak** 81.63 54 ⇑P P 13 50 48.3 +0.6
baz=82,SNR=143
E11A **Bogner Ranch,** 81.65 43 ⇑P P 13 50 47.5 -0.1
baz=82,SNR=671
GOR **Gori** 81.67 312 P P 13 50 52.7 +4.9
P06A **Stead Airport,** 81.68 51 ⇓P P 13 50 48.3 +0.4
baz=82,SNR=96
A13A **Flathead Natio** 81.74 41 ⇓P P 13 50 48.6 +0.6
baz=82
J09A **Fry Pan Ranch,** 81.80 47 ⇑P P 13 50 48.7 +0.2
baz=82,SNR=1000
PUL **Pulkovo** 81.81 332 ⇑*e*P P 13 50 47.5 -0.6
L08A **Fields** 81.84 48 ⇑P P 13 50 49.1 +0.5
baz=82,SNR=1000
F11A **Grangeville** 81.87 44 ⇑P P 13 50 48.1 -0.6
baz=82,SNR=652
KIV **Kislovodsk** 81.89 314 P P 13 50 50.0 +1.0
SNR=1101
KIV **Kislovodsk** 81.89 314 *c i*P P 13 50 49.7 +0.8
KIV *i* *PP pP 13 51 51.6 +2.5
KIV *e* 13 53 59.1
KIV *e*S S 14 00 40.7 -0.2
KIV *e*SS SS 14 06 06.5 +1.8
KIV pmax pmax
comp=Z,12μm,2.2s,mb7.1
KIV pmax pmax
comp=Z,15μm,2.2s,mb7.2
KIV MLR MLR
comp=Z,119μm,21.0s
KIV **Kislovodsk** 81.89 314 ⇑*i*P P 13 50 49.9 +1.0
KIV **Kislovodsk** 81.89 314 ⇓*i*P PKKPbc 14 09 17.4 -0.7
KIV **Kislovodsk** 81.89 314 ⇑P P 13 50 49.9 +1.0
ONI **Oni** 81.90 313 P P 13 50 50.4 +1.4
ONI S S 14 00 42.2 +1.2
R05C **Kirkwood Meado** 81.91 52 ⇓P P 13 50 49.2 +0.1
baz=82,SNR=391
GNI **Garni** 81.91 310 *e*P P 13 50 49.7 +0.6
GNI **Garni** 81.91 310 P P 13 50 50.6 +1.5
SNR=1121
GNI **Garni** 81.91 310 P P 13 50 50.5 +1.4
comp=Z,1μm,1.1s,mb6.5,baz=154,slow=1.5,SNR=110
GNI S S 14 00 42.6 +1.4
comp=Z,5.1nm,0.3s,baz=58,slow=19,SNR=1.8
GNI PKKPbc PKKPbc 14 09 18.7 +0.8
comp=Z,54nm,1.0s,baz=37,slow=5.4,SNR=8.4
GNI PKPPKP 14 17 22.5
comp=Z,4.8nm,0.3s,baz=349,slow=2.1,SNR=7.5
GNI **Garni** 81.91 310 P P 13 50 50.5 +1.4
GNI S S 14 00 42.6 +1.4
WCN **Washoe City** 81.92 51 ⇓P P 13 50 49.7 +0.6
baz=82
D12A **Red Ives Fores** 81.92 43 ⇑P P 13 50 49.1 +0.1
baz=82
CMB **Columbia Colle** 81.92 52 *e*P P 13 50 49.0 -0.2
CMB pmax pmax
comp=Z,4μm,1.2s,mb6.9
CMB **Columbia Colle** 81.92 52 ⇑P P 13 50 49.4 +0.2
baz=82,SNR=1000
CMB **Columbia Colle** 81.92 52 *e*P P 13 50 49.0 -0.2
comp=Z,4μm,1.2s,mb6.9
N07B **Gerlach** 81.93 49 ⇑P P 13 50 49.5 +0.3
baz=82,SNR=1000
B13A **Whitefish** 81.93 41 ⇑P P 13 50 49.8 +0.8
baz=82,SNR=634
G11A **Walters Elk Ra** 81.99 44 ⇑P P 13 50 49.0 -0.4
baz=82,SNR=1000
WALA **Waterton Lakes** 81.99 40 ⇑*i*P P 13 50 50.0 +0.6
comp=Z,7μm,1.6s,mb7.0
H10A **Noah's Angus R** 81.99 45 ⇑P P 13 50 49.4 0.0
baz=82,SNR=809
V03C **Hunter Liggett** 82.03 54 ⇑P P 13 50 50.5 +0.7
baz=82,SNR=565
E12A **Beaver Dam Sad** 82.03 43 ⇓P P 13 50 50.0 +0.4
baz=82,SNR=851
PAHR **Pah Rah Range** 82.03 50 *e*P P 13 50 49.6 -0.2
comp=Z,1μm,1.1s,mb6.5
K09A **Rome** 82.07 47 ⇑P P 13 50 50.1 +0.2
baz=82,SNR=1000
I10A **Payette** 82.15 46 ⇑P P 13 50 50.6 +0.3
baz=82,SNR=206
S05C **Merced** 82.22 53 ⇑P P 13 50 50.8 0.0
baz=82,SNR=526
O07A **Toulon** 82.23 50 ⇓P P 13 50 51.1 +0.3
baz=82,SNR=889
U04C **Hernandez Rese** 82.24 54 ⇓P P 13 50 51.6 +0.7
baz=82
KAF **Kangasniemi** 82.25 335 *ep* P 13 50 48.6 -1.8
comp=Z,1μm,0.7s,mb6.7,baz=55,slow=4.9
KAF **Kangasniemi** 82.25 335 *ep* PKKPbc 14 09 14.6 -3.4
comp=Z,52nm,0.8s
KAF **Kangasniemi** 82.25 335 *e*P P 13 50 48.6 -1.8
KAF pmax pmax
comp=Z,1μm,0.7s,mb6.7
RBK **Rabkut** 82.27 286 P P 13 50 51.6 +0.3
SNR=908
A14A **Double T Ranch** 82.32 40 ⇓P P 13 50 51.5 +0.5
baz=82,SNR=1000
L09A **Wilkinson Ranc** 82.37 48 ⇓P P 13 50 52.0 +0.6
baz=82,SNR=157
S06C **San Francisco** 82.38 52 ⇓P P 13 50 51.5 -0.1
baz=82,SNR=537
R06C **Coleville** 82.43 52 ⇓P P 13 50 52.2 +0.4

baz=82,SNR=783
H11A Donnelly 82.43 45 ⇓P **P 13 50 51.5 -0.2**
baz=82,SNR=283
J10A Berg Farm, Mel 82.43 46 ⇑P **P 13 50 51.8 +0.1**
baz=82,SNR=84
P07A Fallon 82.45 51 ⇑P **P 13 50 52.5 +0.6**
baz=82,SNR=67
D13A Huson 82.46 42 ⇓P **P 13 50 51.4 -0.4**
baz=82,SNR=317
F12A Elk City 82.50 44 ⇓P **P 13 50 51.9 -0.1**
baz=82,SNR=571
WHFO Wadi Hawf 82.51 286 P **P 13 50 52.6 0.0**
SNR=588
N08A GE Springer Mi 82.52 49 ⇓P **P 13 50 52.5 +0.3**
baz=82
PKD Parkfield 82.58 54 ⇓P **P 13 50 52.9 +0.3**
baz=82,SNR=1000
K10A MacKenzie Ranc 82.62 47 ⇑P **P 13 50 53.1 +0.4**
baz=82,SNR=1000
C14A Swan Lake 82.62 41 ⇑P **P 13 50 52.7 +0.1**
baz=82
B14A Marquette Ranc 82.67 41 ⇓P **P 13 50 53.3 +0.5**
baz=82,SNR=1000
O08A Rochester Mine 82.69 50 ⇓P **P 13 50 53.8 +0.7**
baz=83,SNR=1000
A15A Johnson Ranch, 82.73 40 ⇑P **P 13 50 53.5 +0.4**
baz=83,SNR=1000
Q07A Schurz 82.74 51 ⇓P **P 13 50 53.7 +0.3**
baz=83
M09A Marrel Ranch, 82.75 48 ⇓P **P 13 50 53.8 +0.4**
baz=83,SNR=184
U05C Westside ANR, 82.75 54 ⇑P **P 13 50 54.0 +0.5**
baz=83,SNR=16
LOF Lofoten 82.77 343 ⇑*i*P **P 13 50 54.0 +1.0**
LOF AMb AMB 13 51 01.6
comp=Z,2μm,1.6s,mb6.6
LOF Lofoten 82.77 343 ⇑*i*P **P 13 50 54.0 +1.0**
comp=Z,2μm,1.6s,mb6.6
I11A Placerville 82.78 46 ⇑P **P 13 50 53.6 +0.1**
baz=83,SNR=302
T06C Millerton Lake 82.81 53 ⇑P **P 13 50 53.6 -0.2**
baz=83,SNR=955
CLDR Caldiran 82.88 309 *e*P **P 13 50 55.5 +1.4**
R07C Lee Vining 82.89 52 ⇓P **P 13 50 54.8 +0.7**
baz=83,SNR=83
MSO Missoula 82.89 42 ⇑*i*P **P 13 50 53.3 -0.7**
comp=Z,909nm,1.4s,mb6.3
E13A Victor 82.90 43 ⇓P **P 13 50 53.3 -0.8**
baz=83,SNR=207
KARS Kars 82.90 311 *e*P **P 13 50 56.0 +1.8**
N09A Rock Creek Ran 82.92 49 ⇑P **P 13 50 55.0 +0.7**
baz=83
PTRM Twissleman Ran 82.93 55 *e*P **P 13 50 54.4 -0.1**
P08A Dixie Valley 82.97 50 ⇓P **P 13 50 55.1 +0.5**
baz=83,SNR=115
KCC Kaiser Creek 82.97 53 ⇑P **P 13 50 54.8 +0.2**
baz=83
D14A Greenough 83.06 42 ⇓P **P 13 50 54.2 -0.6**
baz=83,SNR=458
MFID Camas Ranch 83.07 46 ⇑P **P 13 50 55.4 +0.4**
baz=83,SNR=1000
F13A Darby 83.08 43 ⇑P **P 13 50 54.5 -0.5**
baz=83,SNR=802
V05C Boulder Hill, 83.09 54 ⇓P **P 13 50 56.0 +0.8**
baz=83,SNR=73
B15A Bradely Ranch, 83.11 41 ⇑P **P 13 50 55.2 +0.1**
baz=83,SNR=1000
ABTO Aybut 83.13 286 P **P 13 50 56.3 +0.5**
SNR=1007
L10A Juniper Basin 83.16 47 ⇓P **P 13 50 55.9 +0.4**
baz=83
K11A Parker Ranch, 83.19 47 ⇑P **P 13 50 55.8 +0.2**
baz=83,SNR=1000
MLAC Mammoth Lakes 83.21 52 ⇓P **P 13 50 56.5 +0.6**
baz=83,SNR=276
SMMC Simmler 83.22 55 ⇓P **P 13 50 56.4 +0.4**
baz=83,SNR=318
H12A Diamond D Ranc 83.25 45 ⇓P **P 13 50 56.0 +0.1**
baz=83,SNR=993
CHMT Chamberlain Mo 83.29 42 ⇑*i*P **P 13 50 55.3 -0.7**
comp=Z,577nm,1.1s,mb6.2
BMN Battle Mountai 83.29 49 P **P 13 50 56.6 +0.4**
BMN pmax pmax
comp=Z,1μm,1.0s,mb6.5
BMN Battle Mountai 83.29 49 ⇑*i*P **P 13 50 56.5 +0.3**
comp=Z,1μm,1.0s,mb6.5
NVAR Mina Array Bea 83.30 51 P **P 13 50 56.6 +0.4**
comp=Z,1μm,0.8s,mb6.6,baz=268,slow=5.4,SNR=936
NVAR S S 14 00 48.4 -6.9
comp=Z,2.7nm,0.8s,baz=254,slow=42,SNR=3.3
NVAR PKKPbc PKKPbc 14 09 16.0 +1.3
comp=Z,5.8nm,0.6s,baz=128,slow=3.2,SNR=8.7
NVAR PKPPKP 14 17 15.1
comp=Z,6.9nm,0.9s,baz=82,slow=3.2,SNR=5.4
NVAR Mina Array Bea 83.30 51 P **P 13 50 56.6 +0.4**
NVAR S S 14 00 48.4 -6.9
NVAR PKKPbc PKKPbc 14 09 16.0 +1.3
NVAR P'P' 14 17 15.1
C15A Salmond Ranch, 83.32 41 ⇓P **P 13 50 56.4 +0.2**
baz=83,SNR=1000
M10A I.L. Ranch, Tu 83.34 48 ⇓P **P 13 50 57.0 +0.5**
baz=83
E14A Clinton 83.35 43 ⇑P **P 13 50 55.8 -0.5**
baz=83
AGRB Hanur-Agry 83.37 310 *e*P **P 13 50 57.9 +1.3**
Q08A Gabbs 83.40 51 ⇑P **P 13 50 56.9 +0.1**
baz=83,SNR=607
A16A West Butte Ran 83.42 40 ⇓P **P 13 50 56.9 +0.2**
baz=83,SNR=1000
O09A Fish Creek Ran 83.42 49 ⇑P **P 13 50 57.5 +0.7**
baz=83
RCTC Rector, Farmer 83.42 54 ⇓P **P 13 50 56.7 -0.2**
baz=83
G13A Cobalt 83.43 44 ⇓P **P 13 50 56.6 -0.2**
baz=83,SNR=1000
HELL Mitchell Peak 83.44 53 ⇑P **P 13 50 56.7 -0.4**
baz=83,SNR=959
VANB Van 83.47 309 *e*P **P 13 50 58.1 +0.9**
R08A Mina 83.47 51 ⇑P **P 13 50 57.6 +0.4**
baz=83,SNR=214
PKM Peak Mountain 83.52 55 ⇓P **P 13 50 58.2 +0.8**
baz=83
UMR Umm Al-Rimmam 83.54 299 *e*P **P 13 50 57.8 +0.1**
baz=299
UMR AMb AMB 13 51 07.4
comp=Z,16μm,1.5s,mb7.5,baz=299
BCA Borcka 83.59 312 *e*P **P 13 50 58.3 +0.5**
HKR Hakkari 83.61 308 *e*P **P 13 50 59.3 +1.5**
L11A Cat Creek Ranc 83.62 47 ⇓P **P 13 50 58.5 +0.7**
baz=84
J12A Stokes Ranch, 83.62 46 ⇑P **P 13 50 58.1 +0.3**
baz=84,SNR=563
H13A Challis 83.63 44 ⇑P **P 13 50 58.3 +0.4**
baz=84
F14A Wisdom 83.68 43 ⇓P **P 13 50 57.9 -0.2**
baz=84
D15A Lincoln 83.69 42 ⇑P **P 13 50 57.6 -0.4**
baz=84,SNR=288
KBD Kabd 83.70 299 *e*P **P 13 50 59.1 +0.6**
baz=299
KBD AMb AMB 13 51 08.2
comp=Z,8μm,1.6s,mb7.2,baz=299
P09A Austin 83.70 50 ⇓P **P 13 50 58.5 +0.3**
baz=84
VES Vestal, Richgr 83.72 54 ⇓P **P 13 50 57.8 -0.6**
baz=84
S08C White Mtn Res 83.75 52 ⇓P **P 13 50 59.4 +0.8**
baz=84
MIB Mutribah 83.75 299 *e*P **P 13 50 59.1 +0.4**
baz=299
MIB AMb AMB 13 51 08.4
comp=Z,26μm,0.9s,mb8.0,baz=299
SBC Santa Barbara 83.77 56 ⇓P **P 13 50 59.1 +0.4**
baz=84
C16A Fuhringer Ranc 83.83 41 ⇑P **P 13 50 58.7 0.0**
baz=84
O10A Cortez Mining, 83.85 49 ⇑P **P 13 50 59.6 +0.5**
baz=84
MOR8 Moi Rana 83.86 341 ⇑*i*P **P 13 50 56.6 -2.0**
MOR8 AMb AMB 13 51 03.6
comp=Z,3μm,1.5s,mb6.8
MOR8 Moi Rana 83.86 341 ⇑*i*P **P 13 50 56.6 -2.0**
comp=Z,3μm,1.5s,mb6.8
G14A Jackson 83.86 44 ⇑P **P 13 50 58.6 -0.4**
baz=84
E15A Deer Lodge 83.88 42 ⇑P **P 13 50 59.1 +0.1**
baz=84,SNR=1000
TIN Tinemaha 83.88 53 ⇑P **P 13 50 59.9 +0.6**
baz=84
M11A Holland Ranch, 83.89 48 ⇑P **P 13 50 59.9 +0.7**
baz=84,SNR=578
RDF Al-Radifah 83.90 299 *e*P **P 13 50 59.7 +0.1**
baz=299
RDF AMb AMB 13 51 09.2
comp=Z,15μm,1.2s,mb7.6,baz=299
HLID Hailey 83.94 45 ⇓P **P 13 50 60.0 +0.5**
baz=84
HLID Hailey 83.94 45 ⇑*i*P **P 13 50 59.9 +0.5**
comp=Z,896nm,0.5s,mb6.8
Q09A Carvers 83.95 51 ⇑P **P 13 50 59.8 +0.3**
baz=84,SNR=138
I13A Wildhorse Cree 83.99 45 ⇑P **P 13 50 00.2 +0.5**
baz=84
BSC Santa Cruz Isl 84.00 56 ⇑P **P 13 50 59.5 -0.4**
baz=84,SNR=69
K12A Draper Farm, C 84.00 46 ⇑P **P 13 51 00.0 +0.3**
baz=84,SNR=1000
SOC Sochi 84.01 315*c i*P **P 13 50 59.0 -0.8**
SOC *e**PP pP 13 51 59.7 -0.6
SOC *e**SP sP 13 52 27.4 +0.4
SOC *e* 13 54 19.3
SOC *e*PPP 13 56 09.0
SOC *i* S S 14 00 55.0 -7.2
SOC *e*SS SS 14 06 39.0 +3.0
NAY Al-Naaiem 84.03 299 *e*P **P 13 51 00.4 +0.2**
baz=299
NAY AMb AMB 13 51 09.8
comp=Z,10μm,1.1s,mb7.5,baz=299
VSU Vasula 84.07 332 ⇑*i*P **P 13 50 58.8 -0.9**
L12A House Creek Ra 84.13 47 ⇑P **P 13 51 01.3 +0.9**
baz=84
RST Umm Al-Ruwaisa 84.14 299 *e*P **P 13 51 00.5 -0.2**
baz=299
RST AMb AMB 13 51 10.0
comp=Z,14μm,1.3s,mb7.5,baz=299
P10A Eureka 84.15 50 ⇑P **P 13 51 01.1 +0.5**
baz=84
STOK Stokkvaagen 84.17 342 ⇑*i*P **P 13 50 59.1 -1.0**
STOK AMb AMB 13 51 06.2
comp=Z,4μm,1.5s,mb6.9
STOK Stokkvaagen 84.17 342 ⇑*i*P **P 13 50 59.1 -1.0**
comp=Z,4μm,1.5s,mb6.9
J13A Cove Ranch, Pi 84.17 46 ⇑P **P 13 51 01.0 +0.4**
baz=84,SNR=1000
N11A Elko Archery C 84.18 48 ⇑P **P 13 51 01.3 +0.6**
baz=84,SNR=165
ARVC Arvin 84.18 55 ⇓P **P 13 51 00.5 -0.3**
baz=84
H14A Leadore 84.19 44 ⇓P **P 13 51 00.9 +0.3**
baz=84,SNR=1000
PZAR Pazar-Rize 84.20 312 *e*P **P 13 51 01.5 +0.7**
TPH Tonopah 84.22 51 ⇑*i*P **P 13 51 01.1 +0.2**
TPH pmax pmax
comp=Z,2μm,1.2s,mb6.8
TPH Tonopah 84.22 51 ⇑*i*P **P 13 51 01.1 +0.1**
comp=Z,2μm,1.2s,mb6.8
F15A Butte 84.22 43 ⇑P **P 13 51 01.1 +0.3**
baz=84,SNR=1000
CWC Cottonwood Cre 84.23 53 ⇑P **P 13 51 01.0 0.0**
baz=84
ISA Isabella 84.24 54 ⇑*i*P **P 13 51 00.3 -0.8**
ISA pmax pmax
comp=Z,2μm,1.5s,mb6.7
ISA Isabella 84.24 54 ⇓P **P 13 51 00.5 -0.6**
baz=84
ISA Isabella 84.24 54 ⇑*i*P **P 13 51 00.3 -0.8**
comp=Z,2μm,1.5s,mb6.7
HRY Holter Researc 84.25 42 *e*P **P 13 50 59.5 -1.5**
comp=Z,1μm,0.9s,mb6.7
R09A Tonopah 84.26 51 ⇓P **P 13 51 01.5 +0.4**
baz=84
S09A Goldfield 84.36 52 ⇓P **P 13 51 02.0 +0.4**
baz=84
DLMT Dillon 84.36 43 ⇑*i*P **P 13 51 01.4 -0.1**
comp=Z,3μm,1.2s,mb6.9
SNCC San Nicolas Is 84.37 57 ⇑P **P 13 51 01.8 0.0**
baz=84
SNCC San Nicolas Is 84.37 57 ⇑*i*P **P 13 51 01.4 -0.4**
comp=Z,2μm,1.1s,mb6.7
BLG Laguna Peak 84.39 56 ⇓P **P 13 51 01.4 -0.5**
baz=84
EZM Erzurum 84.39 311 *e*P **P 13 51 03.1 +1.3**
I14A Mackay 84.42 45 ⇑P **P 13 51 02.8 +0.9**
baz=84,SNR=796
E16A East Helena 84.43 42 ⇑P **P 13 51 02.2 +0.4**
baz=84
MCMT McKenzie Canyo 84.43 44 *e*P **P 13 51 01.9 0.0**
comp=Z,50nm,0.7s,mb5.4
OSI Osito Adit 84.46 55 ⇓P **P 13 51 02.3 +0.1**
baz=84
OSI Osito Adit 84.46 55 *e*P **P 13 51 02.3 +0.1**
comp=Z,3μm,1.3s,mb6.8
M12A Wells 84.50 48 ⇓P **P 13 51 03.0 +0.8**
baz=84
C17A Wheaam Farm, 84.50 41 ⇓P **P 13 51 01.7 -0.4**
baz=84,SNR=983
O11A Cowboy Ranch, 84.51 49 ⇑P **P 13 51 02.9 +0.5**
baz=84
Q10A Clear Creek Ra 84.51 50 ⇑P **P 13 51 02.5 +0.1**
baz=84
G15A Dillon 84.52 43 ⇓P **P 13 51 02.3 +0.1**
baz=84,SNR=1000
MSL Mosul 84.53 307 *ex* x 13 51 03.0
MSL Mosul 84.53 307 *ex* x 14 01 04.0
GRAC Grapevine Rang 84.54 52 ⇓P **P 13 51 02.8 +0.3**
baz=84
K13A Stover Farm, H 84.55 46 ⇓P **P 13 51 03.2 +0.8**
baz=84,SNR=625
ELK Elko 84.55 48 P **P 13 51 03.0 +0.5**
comp=Z,2μm,0.9s,mb6.7,baz=294,slow=4.3,SNR=525
ELK S S 14 01 01.4 -6.3
comp=Z,13nm,1.0s,baz=86,slow=22,SNR=15
ELK PKKPbc PKKPbc 14 09 11.4 -0.5
comp=Z,11nm,0.7s,baz=118,slow=2.3,SNR=9.7
ELK Elko 84.55 48 P **P 13 51 03.0 +0.5**
ELK S S 14 01 01.4 -6.3
ELK Elko 84.55 48 P **P 13 51 03.0 +0.5**
ELK S S 14 01 01.4 -6.3
ELK PKKPbc PKKPbc 14 09 11.4 -0.5
SIRT Sirnak 84.59 308 *e*P **P 13 51 05.5 +2.7**
J14A Carey 84.64 45 ⇑P **P 13 51 03.8 +0.9**
baz=84,SNR=1000
N12A Clover Valley, 84.64 48 ⇓P **P 13 51 03.4 +0.4**
baz=84,SNR=578
H15A Lima 84.65 44 ⇓P **P 13 51 03.3 +0.3**
baz=84
P11A Circle Ranch, 84.68 50 ⇑P **P 13 51 03.7 +0.5**
baz=84
S10A Tonopah Range, 84.73 51 ⇑P **P 13 51 04.0 +0.5**
baz=85
BHD Baghdad 84.79 304 *ex* x 13 51 02.0
BHD Baghdad 84.79 304 *ex* x 14 01 03.0
R10A Warm Springs 84.80 51 ⇓P **P 13 51 04.1 +0.2**
baz=85,SNR=658
MPMC Manual Prospec 84.82 53 ⇑P **P 13 51 04.5 +0.5**
baz=85
BOZ Bozeman (W) 84.85 43 *e*P **P 13 51 04.2 +0.3**
BOZ pmax pmax
comp=Z,634nm,0.6s,mb6.5
BOZ Bozeman (W) 84.85 43 ⇓P **P 13 51 04.3 +0.4**
baz=85
BOZ Bozeman (W) 84.85 43 *e*P **P 13 51 04.2 +0.2**
comp=Z,634nm,0.6s,mb6.5
L13A Double Diamond 84.88 47 ⇓P **P 13 51 04.9 +0.8**
baz=85
DECC Cerro Verdugo 84.90 55 ⇓P **P 13 51 04.0 -0.4**
baz=85
LRMC Laurel Mountai 84.90 54 ⇑P **P 13 51 04.8 +0.4**
baz=85
EDW2 Edwards Air Fo 84.91 55 ⇑P **P 13 51 04.5 +0.1**
baz=85
E17A Martinsdale 84.97 42 ⇓P **P 13 51 04.9 +0.4**
baz=85
ANN Anapa 84.97 316*c i*P **P 13 51 03.6 -0.9**
ANN *e**PP pP 13 52 04.1 -1.1
ANN *e* 13 54 28.3
ANN *e* 14 01 02.0
ANN pmax pmax
comp=Z,3μm,1.5s,mb6.9
ANN MLR MLR
comp=N,54μm,19.0s
ANN MLR MLR
comp=E,45μm,19.0s
ANN MLR MLR
comp=Z,60μm,19.0s
I15A Monteview 85.02 44 ⇑P **P 13 51 05.5 +0.7**
baz=85,SNR=186
M13A Montello 85.03 47 ⇑P **P 13 51 05.6 +0.6**
baz=85
Q11A Duckwater 85.04 50 ⇓P **P 13 51 05.4 +0.4**
baz=85
JNW Jan Mayen West 85.05 351 *e*P **P 13 51 05.8 +1.4**
KTUT Trabzon 85.06 312 *e*P **P 13 51 05.0 -0.1**
O12A Currie 85.09 49 ⇑P **P 13 51 05.4 +0.1**
baz=85
JMIC Jan Mayen 85.10 351 S S 14 01 03.9 -8.1
comp=Z,40nm,0.4s,baz=188,slow=15,SNR=2.0
JMIC Jan Mayen 85.10 351 ⇑*i*P **P 13 51 04.1 -0.5**
JMIC AMb AMB 13 51 13.4
comp=Z,2μm,2.4s,mb6.5
JMIC *e*S S 14 01 09.1 -2.8
JMIC Jan Mayen 85.10 351 ⇑*i*P **P 13 51 04.1 -0.5**
comp=Z,2μm,2.4s,mb6.5
MWC Mount Wilson 85.11 55 *e*P **P 13 51 05.0 -0.5**
MWC pmax pmax
comp=Z,1μm,1.1s,mb6.6
MWC Mount Wilson 85.11 55 *e*P **P 13 51 05.0 -0.5**
comp=Z,1μm,1.1s,mb6.6
FURC Furnace Creek, 85.12 53 ⇓P **P 13 51 05.7 +0.2**
baz=85
FMP Fort Macarthur 85.13 56 ⇓P **P 13 51 05.3 -0.3**
baz=85
CIS Catalina Islan 85.17 56 ⇓P **P 13 51 04.9 -0.9**
baz=85
K14A Jones Ranch, D 85.20 46 ⇑P **P 13 51 06.3 +0.6**
baz=85,SNR=576
N13A Wendover, West 85.22 48 ⇓P **P 13 51 05.9 0.0**
baz=85,SNR=516
SCI San Clemente I 85.23 56 ⇑P **P 13 51 05.5 -0.5**
baz=85
R11A Troy Canyon, C 85.29 51 ⇑P **P 13 51 06.4 +0.2**
baz=85
P12A McGill 85.31 49 ⇑P **P 13 51 06.7 +0.4**
baz=85
J15A Blackfoot 85.32 45 ⇓P **P 13 51 07.3 +1.0**
baz=85,SNR=1000
QLMT Earthquake Lak 85.34 43 ⇑*e*P **P 13 51 07.2 +0.8**
comp=Z,2μm,1.3s,mb6.6
L14A Malta 85.37 46 ⇓P **P 13 51 07.1 +0.5**
baz=85
TPNV Topopah Spring 85.38 52 P **P 13 51 06.8 +0.1**
TPNV pmax pmax
comp=Z,2μm,0.9s,mb6.8
TPNV Topopah Spring 85.38 52 ⇓P **P 13 51 06.8 +0.1**
baz=85
TPNV Topopah Spring 85.38 52 ⇑*i*P **P 13 51 06.8 +0.1**
comp=Z,32nm,0.3s,mb5.5
BFSC Mount Baldy St 85.41 55 ⇓P **P 13 51 06.4 -0.5**
baz=85
S11A Rachel 85.46 51 ⇑P **P 13 51 07.8 +0.6**
baz=85
GUMT Gumushane 85.48 312 *e*P **P 13 51 07.8 +0.6**
E18A Harlowton 85.50 41 ⇑P **P 13 51 07.7 +0.6**
baz=85
H16A Russell Place, 85.51 43 ⇑P **P 13 51 08.1 +0.9**
baz=85,SNR=1000
M14A Sheep Mountain 85.53 47 ⇑P **P 13 51 08.0 +0.6**
baz=85,SNR=1000
U10A Ash Meadows, A 85.53 53 ⇑P **P 13 51 08.1 +0.6**
baz=85
Q12A Willow Creek R 85.54 50 ⇓P **P 13 51 07.7 +0.2**
baz=85,SNR=965
EZC Erzincan 85.54 311 *e*P **P 13 51 09.9 +2.4**
K15A Arbon 85.57 46 ⇑P **P 13 51 08.4 +0.9**
baz=85
GSC Goldstone 85.63 54 *e*P **P 13 51 08.0 0.0**
GSC pmax pmax
comp=Z,4μm,1.3s,mb6.9
GSC Goldstone 85.63 54 ⇓P **P 13 51 08.2 +0.2**
baz=86
GSC Goldstone 85.63 54 *e*P **P 13 51 08.0 0.0**
comp=Z,3μm,1.3s,mb6.9
RRX Edison Barstow 85.66 54 ⇑P **P 13 51 08.4 +0.3**
baz=86
SUMG Summit 85.66 0 *e*P **P 13 51 07.9 +0.5**
comp=Z,234nm,0.5s,mb6.2
MNK Minsk 85.70 328*c i*P **P 13 51 05.0 -2.9**
MNK *e*S S 14 01 08.0 -10
MNK *e**SS 14 02 14.0
MNK pmax pmax
comp=Z,1μm,1.4s,mb6.4
MNK pmax pmax
comp=N,950nm,1.6s
MNK MLR MLR
comp=Z,200μm,14.0s
MNK MLR MLR
comp=E,168μm,16.0s
YMR Madison River 85.71 43 ⇑*i*P **P 13 51 09.5 +1.3**
comp=E,2μm,0.8s,mb7.0
I16A Newdale 85.73 44 ⇑P **P 13 51 09.4 +1.1**
baz=86
NSS Namsos 85.75 341 ⇑*i*P **P 13 51 05.4 -2.5**
NSS AMb AMB 13 51 12.9
comp=Z,3μm,2.1s,mb6.6
NSS *e*SKS 14 01 04.7
NSS *e*SS SS 14 06 59.8 -0.4
NSS AMS AMS 14 32 14.5
comp=Z,84μm,17.9s
NSS Namsos 85.75 341 ⇑*i*P **P 13 51 05.4 -2.5**
comp=Z,3μm,2.1s,mb6.6
NSS LR LR
comp=Z,84μm,17.9s
SHOC Shoshone 85.78 53 ⇑P **P 13 51 08.9 +0.2**
baz=86
IDID Didziasalis 85.79 329 *i* P **P 13 51 08.3 -0.1**
FFC Flin Flon 85.80 32 *e*P **P 13 51 08.2 -0.2**
FFC *e*S S 14 01 14.8 -4.5
FFC pmax pmax
comp=Z,3μm,1.1s,mb7.0
FFC Flin Flon 85.80 32 *e*P **P 13 51 08.2 -0.2**
comp=Z,3μm,1.1s,mb7.0
FFC *e*S S 14 01 14.8 -4.5
HVU Hansel Valley 85.80 47 P **P 13 51 09.2 +0.5**
HVU pmax pmax
comp=Z,2μm,1.0s,mb6.9
HVU Hansel Valley 85.80 47 *e*P **P 13 51 09.0 +0.3**
comp=Z,2μm,0.4s,mb7.2
ESPY Espiye-Giresun 85.80 312 *e*P **P 13 51 07.9 -0.8**
YNR Norris Junctio 85.87 43 ⇑*i*P **P 13 51 10.6 +1.6**
comp=Z,4μm,1.2s,mb7.0
J16A Bone 85.91 45 ⇓P **P 13 51 10.2 +1.0**
baz=86
N14A Grayback Hills 85.92 48 ⇑P **P 13 51 09.8 +0.5**
baz=86
F18A Big Timber 85.93 42 ⇓P **P 13 51 09.7 +0.5**
baz=86
P13A Bates Ranch, G 85.94 49 ⇑P **P 13 51 09.6 +0.2**
baz=86
L15A Malad City 85.96 46 ⇑P **P 13 51 09.4 0.0**
baz=86
BBRC Big Bear Sol-O 85.96 55 ⇓P **P 13 51 09.6 -0.1**
baz=86
BGU Big Grassy Mou 85.99 47 *e*P **P 13 51 09.4 -0.3**
comp=Z,2μm,1.3s,mb6.6
R12A Pony Springs, 86.00 50 ⇑P **P 13 51 10.1 +0.4**
baz=86
T11A Corn Creek, Al 86.01 51 ⇓P **P 13 51 09.9 +0.1**
baz=86
GCMT Greycliff 86.01 42 ⇑*i*P **P 13 51 10.0 +0.3**
comp=Z,956nm,1.1s,mb6.4
IIGN Ignalina 86.02 329 *i* P **P 13 51 09.1 -0.4**
MURC Murrieta 86.02 55 ⇓P **P 13 51 09.7 -0.3**
baz=86
DIY Diyarbakir 86.03 309 *e*P **P 13 51 10.0 +0.1**
DCID1 Drake Creek 86.05 44 *e*P **P 13 51 10.4 +0.6**
comp=Z,3μm,1.1s,mb6.9
RRI2 Red Ridge 86.07 45 ⇑*i*P **P 13 51 10.5 +0.5**
comp=Z,3μm,1.5s,mb6.8
IMW Indian Meadow 86.07 44 *e*P **P 13 51 10.8 +0.8**
comp=Z,2μm,1.1s,mb6.7
LKWY Lake 86.11 43 ⇑*i*P **P 13 51 12.3 +2.1**
LKWY pmax pmax
comp=Z,3μm,1.4s,mb6.8
LKWY Lake 86.11 43 ⇑*i*P **P 13 51 12.3 +2.2**
comp=Z,3μm,1.4s,mb6.9
K16A Soda Springs 86.12 45 ⇑P **P 13 51 11.2 +1.0**
baz=86
S12A Delamar Landin 86.12 51 ⇑P **P 13 51 10.9 +0.5**
baz=86
Q13A Wheeler Ranch, 86.15 50 ⇓P **P 13 51 10.5 +0.1**
baz=86
M15A Larsen Ranch, 86.16 47 ⇑P **P 13 51 10.6 +0.2**

	baz=86									
HEC	Hector,Ludlow	86.18	54	⇓P		P	13 51 10.7	0.0		
	baz=86									
PTK	Pertek	86.20	310	*e*P		P	13 51 11.5	+0.8		
SPUT	South Promonto	86.22	47	*e*P		P	13 51 10.9	+0.2		
	comp=Z,51nm,0.5s,mb5.5									
U11A	Corn Creek	86.23	52	⇑P		P	13 51 11.3	+0.4		
	baz=86									
TUQ	Turquoise Moun	86.24	53	⇑P		P	13 51 11.3	+0.4		
	baz=86									
TPAW	Teton Pass	86.25	44	*e*P		P	13 51 10.3	-0.5		
	comp=Z,1μm,1.1s,mb6.5									
MOOW	Moose Ponds	86.26	44⇑	*i*P		P	13 51 11.1	+0.2		
	comp=Z,744nm,1.1s,mb6.3									
I17A	Pilgram Creek	86.29	44	⇑P		P	13 51 12.2	+1.1		
	baz=86									
N15A	Stansbury Isla	86.36	47	⇑P		P	13 51 11.4	0.0		
	baz=86									
REDW	Red Top Meadow	86.37	44⇑	*e*P		P	13 51 11.3	-0.1		
	comp=Z,3μm,1.4s,mb6.8									
109C	Camp Elliot, M	86.38	56	⇓P		P	13 51 11.4	-0.3		
	baz=86									
SNOW	Snow King Moun	86.39	44⇑	*i*P		P	13 51 12.1	+0.5		
	comp=Z,1μm,1.3s,mb6.4									
LOHW	Long Hollow	86.42	44⇑	*i*P		P	13 51 12.0	+0.3		
	comp=Z,2μm,1.5s,mb6.6									
V11A	Goodsprings	86.44	53	⇓P		P	13 51 12.2	+0.3		
	baz=86									
DUG	Dugway	86.46	48⇑	*i*P		P	13 51 12.0	+0.1		
DUG					pmax	pmax				
	comp=Z,3μm,1.1s,mb6.9									
DUG	Dugway	86.46	48	⇑P		P	13 51 12.2	+0.3		
	baz=86									
DUG	Dugway	86.46	48⇑	*i*P		P	13 51 12.0	+0.1		
	comp=Z,3μm,1.1s,mb6.9									
AHID	Auburn Hatcher	86.47	45⇑	*i*P		P	13 51 11.9	-0.1		
	comp=Z,1μm,1.1s,mb6.6									
SVRC	Sivrice-ELAZID	86.48	310	*e*P		P	13 51 12.9	+0.8		
R13A	O'Grain Ranch,	86.52	50	⇓P		P	13 51 12.6	+0.4		
	baz=86									
P14A	Drum Mountains	86.54	49	⇑P		P	13 51 12.7	+0.3		
	baz=86									
RLMT	Red Lodge	86.57	42	*e*P		P	13 51 12.4	0.0		
	comp=Z,4μm,1.3s,mb7.0									
RLMT				*e*pP		pP	13 52 14.1	+0.9		
PFO	Pinyon Flat Ob	86.58	55	P		P	13 51 12.5	-0.2		
	comp=Z,2μm,0.9s,mb6.8,baz=298,slow=4.3,SNR=292									
PFO				S		S	14 01 13.7	-14		
	comp=Z,6.2nm,0.8s,baz=72,slow=23,SNR=12									
PFO				PKPPKP			14 17 13.8			
	comp=Z,11nm,0.9s,baz=1.1,slow=1.7,SNR=4.2									
PFO	Pinyon Flat Ob	86.58	55	P		P	13 51 12.5	-0.2		
PFO				S		S	14 01 13.7	-14		
PFO	Pinyon Flat Ob	86.58	55	⇓P		P	13 51 12.6	-0.1		
	baz=86									
PFO	Pinyon Flat Ob	86.58	55	P		P	13 51 12.5	-0.2		
PFO				S		S	14 01 13.7	-14		
PFO				P'P'			14 17 13.8			
T12A	Moapa	86.59	52	⇓P		P	13 51 13.0	+0.4		
	baz=86									
L16A	Fish Haven	86.59	46	⇓P		P	13 51 13.2	+0.6		
	baz=86									
O15A	The Old Anders	86.66	48	⇓P		P	13 51 12.8	-0.1		
	baz=86									
Q14A	Sevier Lake (B	86.66	49	⇑P		P	13 51 13.3	+0.4		
	baz=86									
HWUT	Hardware Ranch	86.69	46⇑	*i*P		P	13 51 13.0	-0.1		
	comp=Z,24μm,0.9s,mb7.9									
HWUT				*e*pP		pP	13 52 19.9	+6.0		
GMRC	Granite Mounta	86.70	54	⇓P		P	13 51 13.5	+0.2		
	baz=87									
NOQ	North Oquirrh	86.73	47⇑	*i*P		P	13 51 13.3	0.0		
	comp=Z,2μm,1.1s,mb6.7									
BELC	Belle Mtn.	86.77	55	⇓P		P	13 51 13.3	-0.3		
	baz=87									
BAR	Barrett	86.79	56⇑	*i*P		P	13 51 13.1	-0.6		
	comp=Z,5μm,1.7s,mb6.9									
U12A	Valley of Fire	86.84	52	⇑P		P	13 51 14.2	+0.4		
	baz=87									
S13A	Holt Ranch, En	86.85	51	⇑P		P	13 51 14.4	+0.5		
	baz=87									
MONP	Monument Peak	86.90	56	⇓P		P	13 51 14.3	+0.1		
	baz=87									
V12A	Nelson	86.91	53	⇑P		P	13 51 14.4	+0.1		
	baz=87									
CTU	Camp Tracy	86.97	47⇑	*e*P		P	13 51 14.0	-0.4		
	comp=Z,2μm,1.1s,mb6.7									
RSDY	Resadiye-TOKAT	86.98	312	*e*P		P	13 51 14.7	+0.2		
LDFC	Landfair	86.99	53	*e*P		P	13 51 14.5	-0.1		
	comp=Z,7μm,1.3s,mb7.2									
AKASG	Malin Array Be	87.00	324	P		P	13 51 13.0	-1.3		
	comp=Z,83nm,0.4s,mb5.8,baz=48,slow=4.7,SNR=305									
AKASG				PKKPbc		PKKPbc	14 09 04.5	-2.1		
	comp=Z,16nm,0.5s,baz=258,slow=2.7,SNR=15									
AKASG				SKKPbc			14 12 17.1			
	comp=Z,8.5nm,0.7s,baz=259,slow=2.9,SNR=6.2									
AKASG				PKPPKP			14 17 06.9			
	comp=Z,12nm,0.9s,baz=247,slow=2.7,SNR=10									
AKASG	Malin Array Be	87.00	324	P		P	13 51 13.0	-1.3		
AKASG				PKKPbc		PKKPbc	14 09 04.5	-2.1		
AKASG				SKKPbc			14 12 17.1			
AKASG				P'P'			14 17 06.9			
AKBB	Malin Array Si	87.00	324⇑	*i*P		P	13 51 12.9	-1.4		
SIM	Simferopol'	87.00	318	*ce*P		P	13 51 14.2	-0.3		
SIM				*PP		pP	13 52 15.1	-0.3		
SIM							13 54 44.3			
SIM				*e*S		S	14 01 18.0	-13		
SIM					pmax	pmax				
	comp=Z,3μm,0.9s,mb7.0									
SIM					pmax	pmax				
	comp=Z,26μm,13.0s									
SIM					MLR	MLR				
	comp=Z,87μm,17.0s									
KIEV	Kiev	87.01	324⇑	*i*P		P	13 51 13.0	-1.3		
KIEV				*e*S		S	14 01 26.5	-4.6		
KIEV					pmax	pmax				
	comp=Z,2μm,1.1s,mb6.8									
KIEV	Kiev	87.01	324⇑	*i*P		P	13 51 13.0	-1.4		
	comp=Z,2μm,1.1s,mb6.8									
KIEV				*e*S		S	14 01 26.5	-4.6		
T13A	Saint George	87.05	51	⇑P		P	13 51 15.2	+0.4		
	baz=87									
ARUT	Antelope Range	87.06	50	*e*P		P	13 51 14.8	-0.1		
	comp=Z,1μm,1.0s,mb6.6									
NLU	North Lily Min	87.07	48	*e*P		P	13 51 14.9	0.0		
	comp=Z,729nm,1.5s,mb6.2									
W12A	Cal Nev Ari	87.08	53	⇓P		P	13 51 15.5	+0.5		
	baz=87									
N16A	Rees Ranch, Co	87.09	47	⇓P		P	13 51 15.0	0.0		
	baz=87									
P15A	Leamington	87.10	48	⇓P		P	13 51 15.3	+0.3		
	baz=87									
MYA	Malataya	87.13	310	*e*P		P	13 51 16.0	+0.8		
MALT	Malatya	87.13	310	*e*P		P	13 51 15.7	+0.5		
MALT	Malatya	87.13	310⇑	*i*P		P	13 51 15.4	+0.2		
MALT	Malatya	87.13	310⇑	*i*P		PKKPdf	14 08 57.9	-0.6		
MALT	Malatya	87.13	310	P		P	13 51 15.6	+0.3		
R14A	James Farms, M	87.14	50	⇑P		P	13 51 15.6	+0.4		
	baz=87									
JLU	Jordanelle	87.21	47	*e*P		P	13 51 15.5	-0.1		
	comp=Z,48nm,0.5s,mb5.5									
CCUT	Cedar City	87.22	51	*e*P		P	13 51 16.0	+0.3		
	comp=Z,3μm,1.6s,mb6.8									
URFA	Urfa	87.23	309	*e*P		P	13 51 16.0	+0.3		
DVTC	Desert V Tower	87.24	56	⇑P		P	13 51 15.7	-0.1		
	baz=87									
S14A	Cedar City	87.27	50	⇑P		P	13 51 16.1	+0.2		
	baz=87									
U13A	Pakoon Wash	87.27	52	⇑P		P	13 51 16.5	+0.6		
	baz=87									
Q15A	Fillmore	87.28	49	⇓P		P	13 51 16.3	+0.4		
	baz=87									
DARE	Darende-Malaty	87.29	311	*e*P		P	13 51 18.6	+2.6		
BC3	Big Chuckw Mtn	87.32	55	⇑P		P	13 51 16.3	+0.1		
	baz=87									
IRM	Iron Mountain	87.34	54	⇓P		P	13 51 16.4	+0.1		
	baz=87									
MPU	Maple Canyon	87.35	48	*e*P		P	13 51 15.8	-0.4		
	comp=Z,425nm,0.5s,mb6.4									
MPU				*e*pP		pP	13 52 17.6	+0.4		
O16A	Springville	87.35	48	⇓P		P	13 51 16.5	+0.3		
	baz=87									
SWSC	Sam W. Stewart	87.36	56	⇓P		P	13 51 16.0	-0.4		
	baz=87									
SVSK	Karacayir	87.42	312	*e*P		P	13 51 16.9	+0.3		
DAU	Daniels Canyon	87.43	47⇑	*i*P		P	13 51 16.8	+0.3		
	comp=Z,767nm,0.9s,mb6.4									
N17A	Moffit Pass	87.48	47	⇑P		P	13 51 16.7	-0.1		
	baz=87									
BW06	Boulder Array	87.48	45⇑	*i*P		P	13 51 16.1	-0.7		
	comp=Z,539nm,1.2s,mb6.2									
PDAR	Pinedale Array	87.48	45	P		P	13 51 16.2	-0.6		
	comp=Z,88nm,0.8s,mb5.5,baz=246,slow=1.9,SNR=108									
PDAR				S		S	14 01 19.4	-17		
	comp=Z,22nm,1.1s,baz=329,slow=7.2,SNR=2.7									
PDAR				PKKPbc		PKKPbc	14 09 04.5	-0.6		
	comp=Z,18nm,0.9s,baz=113,slow=4.8,SNR=6.9									
PDAR				PKPPKP			14 16 54.0			
	comp=Z,7.6nm,1.1s,baz=132,slow=2.2,SNR=4.7									
NEE2	Needles Airpor	87.49	54	⇑P		P	13 51 17.1	+0.1		
	baz=87									
V13A	Grand Canyon W	87.50	52	⇓P		P	13 51 17.3	+0.3		
	baz=87									
P16A	Fountain Green	87.51	48	⇓P		P	13 51 17.3	+0.3		
	baz=87									
KVT	Kavak	87.55	314	*e*P		P	13 51 17.3	+0.2		
TOKT	Tokat	87.55	313	*e*P		P	13 51 17.4	+0.2		
T14A	Hurricane	87.63	51	⇑P		P	13 51 18.2	+0.6		
	baz=88									
MSU	Marysvale	87.64	49	*e*P		P	13 51 18.0	+0.4		
	comp=Z,3μm,1.7s,mb6.8									
LAO	LASA Array	87.67	40⇑	*i*P		P	13 51 17.7	+0.1		
	comp=Z,3μm,1.1s,mb7.0									
R15A	Junction	87.70	50	⇓P		P	13 51 18.5	+0.6		
	baz=88									
DIKM	Dikmen	87.81	314	*e*P		P	13 51 17.9	-0.5		
U14A	Mt Trumbull	87.84	52	⇑P		P	13 51 19.1	+0.5		
	baz=88									
S15A	Panguitch	87.88	50	⇓P		P	13 51 19.5	+0.7		
	baz=88									
O17A	Robinson Place	87.88	47	⇓P		P	13 51 19.1	+0.4		
	baz=88									
W13A	Hualapai Mount	87.89	53	⇑P		P	13 51 19.2	+0.3		
	baz=88									
DGMT	Dagmar	87.95	38⇑	*i*P		P	13 51 18.2	-0.7		
	comp=Z,3μm,1.6s,mb6.8									
TMUT	Trail Mountain	87.97	48⇑	*i*P		P	13 51 19.2	0.0		
	comp=Z,5μm,0.5s,mb7.6									
Y12C	Blythe	87.99	54	⇓P		P	13 51 19.7	+0.3		
	baz=88									
MUKL	Al Mukalla	87.99	285⇑	*e*P		P	13 51 19.8	+0.1		
PDMCI	Parker Dam,Lak	88.04	54	⇑P		P	13 51 19.8	+0.2		
	baz=88									
GLA	Glamis	88.05	55	⇑P		P	13 51 19.9	+0.2		
GLA					pmax	pmax				
	comp=Z,2μm,0.9s,mb6.9									
GLA	Glamis	88.05	55	⇑P		P	13 51 20.1	+0.4		
	baz=88									
GLA	Glamis	88.05	55	⇑*i*P		P	13 51 19.9	+0.2		
	comp=Z,2μm,0.9s,mb6.9									
X13A	Yucca	88.15	53	⇓P		P	13 51 20.4	+0.3		
	baz=88									
T15A	Red Dirt Ranch	88.15	51	⇓P		P	13 51 20.5	+0.5		
	baz=88									
Q16A	Castle Valley	88.16	49	⇓P		P	13 51 20.6	+0.5		
	baz=88									
P17A	Butcher Ranch,	88.21	48	⇓P		P	13 51 20.4	+0.2		
	baz=88									
BYBT	Boyabat	88.22	314	*e*P		P	13 51 20.0	-0.3		
R16A	Teasdale	88.23	49	⇓P		P	13 51 21.2	+0.8		
	baz=88									
SUW	Suwalki	88.23	329	*e*P		P	13 51 19.4	-0.7		
SUW				*e*PcP		PcP	13 51 22.9	+1.3		
SUW				*e*PP		PP	13 54 51.3	+0.8		
SUW				*e*SKS			14 01 21.5			
SUW				*e*S		S	14 01 38.5	-4.1		
SUW	Suwalki	88.23	329	*e*P		P	13 51 19.4	-0.7		
SUW				*e*PcP		PcP	13 51 22.9	+1.4		
SUW				*e*PP		PP	13 54 51.3	+0.8		
SUW				*e*SKS			14 01 21.5			
SUW				*e*S		S	14 01 38.5	-4.0		
V14A	Boquillas Ranc	88.23	52	⇓P		P	13 51 21.1	+0.6		
	baz=88									
N18A	Larsen Ranch,	88.24	46	⇑P		P	13 51 20.2	-0.2		
	baz=88									
HFS	Hagfors	88.27	337	P		P	13 51 18.4	-1.7		
	comp=Z,320nm,0.5s,mb6.4,baz=66,slow=3.7,SNR=380									
HFS				PP		PP	13 54 54.5	+4.0		
	comp=Z,201nm,0.8s,baz=62,slow=10,SNR=4.4									
HFS				S		S	14 01 23.0	-20		
	comp=Z,33nm,0.8s,baz=305,slow=5.2,SNR=3.7									
HFS				PKKP		PKKPbc	14 08 44.0	-20		
	comp=Z,11nm,0.9s,baz=222,slow=2.0,SNR=4.4									
HFS				PKKPbc		PKKPbc	14 08 59.8	-4.1		
	comp=Z,46nm,0.5s,baz=197,slow=4.6,SNR=21									
HFS				PKPPKP			14 16 56.8			
	comp=Z,6.3nm,0.9s,baz=240,slow=2.9,SNR=4.1									
HFS	Hagfors	88.27	337	P		P	13 51 18.4	-1.7		
HFS							13 54 54.5			
HFS				S		S	14 01 23.0	-20		
O18A	Roosevelt	88.35	47	⇑P		P	13 51 21.4	+0.5		
	baz=88									
S16A	Weppner Ranch,	88.40	50	⇑P		P	13 51 21.4	+0.2		
	baz=88									
DRV	Dumont d'Urvil	88.42	181	P		P	13 51 23.0	+2.6		
DRV				S		S	14 01 44.0	+0.6		
DRV				SS		SS	14 07 45.0	+4.3		
DRV				L			14 15 00.0			
W14A	Seligman	88.43	53	⇓P		P	13 51 22.1	+0.7		
	baz=88									
112A	Yuma	88.46	56	⇓P		P	13 51 21.9	+0.3		
	baz=88									
DOMB	Dombas	88.46	340⇑	*i*P		P	13 51 20.0	-1.0		
DOMB					AMb	AMB	13 51 26.9			
	comp=Z,2μm,1.6s,mb6.7									
DOMB	Dombas	88.46	340⇑	*i*P		P	13 51 20.0	-1.0		
	comp=Z,2μm,1.6s,mb6.7									
P18A	Preston Nutter	88.48	48	⇓P		P	13 51 22.0	+0.4		
	baz=88									
U15A	North Rim	88.48	51	⇑P		P	13 51 22.2	+0.6		
	baz=88									
Y13A	Salome	88.48	54	⇑P		P	13 51 22.1	+0.5		
	baz=88									
NB2	NORSAR Subarra	88.49	339	P		P	13 51 19.7	-1.4		
	comp=Z,776nm,0.8s,mb6.6,baz=43,slow=5.1									
NOA	NORSAR Array B	88.49	339	P		P	13 51 19.6	-1.5		
	comp=Z,187nm,0.7s,mb6.0,baz=47,slow=4.6,SNR=614									
NOA				PP		PP	13 54 55.1	+2.8		
	comp=Z,178nm,1.0s,baz=45,slow=8.1,SNR=4.9									
NOA				S		SKSac	14 01 23.7	-1.8		
	comp=Z,6.1nm,0.8s,baz=8.1,slow=2.9,SNR=2.5									
NOA				PKKPbc		PKKPbc	14 09 01.7	-1.6		
	comp=Z,21nm,0.5s,baz=226,slow=2.5,SNR=40									
NOA				PKPPKP			14 17 04.6			
	comp=Z,22nm,1.0s,baz=238,slow=2.3,SNR=9.6									
NOA	NORSAR Array B	88.49	339	P		P	13 51 19.7	-1.4		
NOA							13 54 55.1			
NOA				S		SKSac	14 01 23.7	-1.8		
BZK	Bozkurt	88.50	315	*e*P		P	13 51 21.0	-0.5		
GAZ	Gaziantep	88.50	310	*e*P		P	13 51 21.9	+0.2		
SRU	San Rafael	88.52	48⇑	*i*P		P	13 51 21.6	-0.2		
SRU					pmax	pmax				
	comp=Z,722nm,0.9s,mb6.5									
SRU	San Rafael	88.52	48	⇓P		P	13 51 21.8	0.0		
	baz=88									
SRU	San Rafael	88.52	48⇑	*i*P		P	13 51 21.6	-0.1		
	comp=Z,1μm,0.9s,mb6.7									
MOL	Molde	88.54	341⇑	*i*P		P	13 51 20.5	-0.9		
MOL					AMb	AMB	13 51 27.7			
	comp=Z,2μm,1.3s,mb6.7									
MOL				*e*SKS			14 01 22.3			
MOL				*e*SS		SS	14 07 35.4	-5.4		
MOL					AMS	AMS	14 33 02.6			
	comp=Z,65μm,18.9s									
MOL	Molde	88.54	341⇑	*i*P		P	13 51 20.5	-0.9		
	comp=Z,2μm,1.3s,mb6.7									
MOL					LR	LR				
	comp=Z,65μm,18.9s									
KMRS	Kahramanmaras	88.57	310	*e*P		P	13 51 22.1	0.0		
N19A	John Jarvie Ra	88.61	46	⇓P		P	13 51 21.8	-0.3		
	baz=88									
YOZ	Yozgat	88.70	313	*e*P		P	13 51 21.9	-0.7		
BNN	Bunyan	88.70	312	*e*P		P	13 51 22.7	0.0		
R17A	Hanksville Air	88.71	49	⇓P		P	13 51 22.6	0.0		
	baz=89									
T16A	Glen Canyon Da	88.80	50	⇓P		P	13 51 22.8	-0.3		
	baz=89									
Q18A	Rafter H Ranch	88.80	48	⇓P		P	13 51 22.6	-0.4		
	baz=89									
V15A	Kaibab Nationa	88.83	52	⇓P		P	13 51 24.1	+0.8		
	baz=89									
X14A	Yava	88.90	53	⇓P		P	13 51 24.4	+0.8		
	baz=89									
CORM	Corum	88.92	313	*e*P		P	13 51 23.7	+0.1		
TOS	Tosya	88.92	314	*e*P		P	13 51 22.8	-0.8		
O19A	Miners Draw (B	88.93	47	⇓P		P	13 51 23.3	-0.3		
	baz=89									
113A	Mohawk Valley,	88.98	55	⇑P		P	13 51 24.2	+0.1		
	baz=89									
S17A	Black Ridge (B	89.00	50	⇓P		P	13 51 23.8	-0.2		
	baz=89									
Y14A	Wickenburg	89.05	54	⇓P		P	13 51 24.7	+0.4		
	baz=89									
W15A	Williams	89.05	52	⇓P		P	13 51 25.3	+1.0		
	baz=89									
MSEY	Mahe Island	89.16	265	P		P	13 51 25.7	+0.5		
	SNR=15									
MSEY	Mahe Island	89.16	265⇑	*i*P		P	13 51 24.9	-0.3		
	comp=Z,985nm,1.4s,mb6.5									
MSEY				*e*pP		pP	13 52 26.6	+0.2		
MSEY				*e*PP		PP	13 55 01.6	+2.1		
KIS	Kishinev	89.17	321α	*i*P		P	13 51 23.0	-1.6		
KIS				*i* *PP		pP	13 52 25.0	-0.9		
KIS				*i* S		SKSac	14 01 32.0	+2.0		
KIS				*i* PS		SP	14 02 58.0	+0.9		
KIS					pmax	pmax				
	comp=Z,1μm,1.5s,mb6.5									
KIS					pmax	pmax				
	comp=E,12μm,14.0s									
KIS					pmax	pmax				
	comp=Z,46μm,14.0s									
KIS					pmax	pmax				
	comp=N,10μm,15.0s									
KIS					pmax	pmax				
	comp=Z,45μm,20.0s									
KIS					MLR	MLR				
	comp=Z,100μm,16.0s									
KIS					MLR	MLR				
	comp=N,25μm,15.0s									
KIS					MLR	MLR				
	comp=E,64μm,17.0s									
KIS					MLR	MLR				
	comp=Z,94μm,17.0s									
KIS	Kishinev	89.17	321⇓	*i*P		P	13 51 24.8	+0.2		
KIS	Kishinev	89.17	321⇑	*i*P		P	13 51 23.0	-1.6		
	comp=Z,1μm,1.5s,mb6.5									
KIS				*i* pP		pP	13 52 25.0	-0.9		
KIS	Kishinev	89.17	321	*i* PP		PP	13 54 34.0	-24		
	comp=Z,26μm,16.0s									
KIS	Kishinev	89.17	321	*i* PS		SP	14 02 58.0	+0.9		
KIS				*i* sS		sS	14 03 57.0	+18		
KIS				*i* SS		SS	14 08 02.0	+11		
KIS				LRM			14 35 23.0			
	comp=Z,64μm,17.0s									
KIS	Kishinev	89.17	321	⇓P		P	13 51 24.8	+0.2		
T17A	Navajo Res., N	89.29	50	⇑P		P	13 51 25.5	+0.1		
	baz=89									
R18A	Canyonlands Na	89.29	49	⇓P		P	13 51 25.0	-0.4		
	baz=89									
Z14A	Wintersburg	89.34	54	⇓P		P	13 51 26.1	+0.4		
	baz=89									
KOZT	Kozan	89.35	310	*e*P		P	13 51 26.9	+1.3		
X15A	Humboldt	89.38	53	⇓P		P	13 51 26.7	+0.8		
	baz=89									
CANT	Cankiri	89.40	314	*e*P		P	13 51 25.5	-0.3		
U16A	Tuba City	89.45	51	⇑P		P	13 51 26.8	+0.7		
	baz=89									
Q19A	Hogan Spring (	89.47	48	⇑P		P	13 51 25.7	-0.4		
	baz=89									
RWWY	Rawlins	89.53	45	*e*P		P	13 51 25.9	-0.5		
	comp=Z,4μm,1.7s,mb6.9									
Y15A	Casa Rosa Ranc	89.54	53	⇓P		P	13 51 27.2	+0.6		
	baz=89									
S18A	Hurst Farm, Bl	89.55	49	⇓P		P	13 51 26.5	-0.1		
	baz=89									
WUAZ	Wupatki	89.55	52	⇑P		P	13 51 27.3	+0.7		
	baz=89									
WUAZ	Wupatki	89.55	52⇑	*i*P		P	13 51 27.1	+0.5		
	comp=Z,811nm,0.9s,mb6.5									
U17A	Shonto	89.57	50	⇑P		P	13 51 27.4	+0.6		
	baz=89									
CEYT	Ceyhan	89.62	310	*e*P		P	13 51 27.0	+0.1		
W16A	Flagstaff	89.63	52	⇓P		P	13 51 27.7	+0.7		
	baz=90									
SAFT	Safranbolu	89.71	315	*e*P		P	13 51 26.8	-0.5		
HTY	Hatay	89.75	309	*e*P		P	13 51 27.3	-0.3		
IAS	Iasi	89.79	322⇑	*i*P		P	13 51 26.4	-1.1		
IAS	Iasi	89.79	322	P		P	13 51 26.7	-0.8		
BR131	Keskin Array S	89.81	313	*e*P		P	13 51 26.8	-1.0		
	comp=Z,1.2nm,0.7s									
T18A	Mexican Hat	89.89	50	⇓P		P	13 51 27.9	-0.3		
	baz=90		

SFJD S SKSac 14 01 33.2 -4.9
comp=Z,32nm,1.0s,baz=239,slow=23,SNR=14
SFJD PKKPbc PKKPbc 14 08 59.9 +1.8
comp=Z,32nm,0.6s,baz=145,slow=3.6,SNR=10
SFJD SKKPbc 14 12 09.2
comp=Z,12nm,0.7s,baz=130,slow=2.8,SNR=4.4
SFJD PKPPKP 14 17 03.5
comp=Z,33nm,1.0s,baz=165,slow=2.5,SNR=3.9
SFJD Kangerlussuaq 90.70 5⇑ *i*P P 13 51 30.5 -0.8
SFJD *i* S SKSac 14 01 33.8 -4.3
SFJD *i* 14 02 01.8
SFJD *e* 14 03 11.2
SFJD pmax pmax
comp=Z,940nm,1.5s,mb6.5
SFJD Kangerlussuaq 90.70 5⇑ *i*P P 13 51 30.5 -0.8
comp=Z,943nm,1.5s,mb6.5
SFJD *i* S SKSac 14 01 33.8 -4.3
SFJD *i* 14 02 01.8
SFJD *e* 14 03 11.2
SFJD Kangerlussuaq 90.70 5⇓ *i*P PKKPdf 14 08 58.2 +5.8
comp=Z,88nm,1.1s
TIRR Tirgusor 90.76 319⇑ *i*P P 13 51 31.1 -1.0
TIRR Tirgusor 90.76 319⇑ *i*P PKKPdf 14 08 55.7 +3.5
TIRR Tirgusor 90.76 319 P P **13 51 31.3 -0.8**
Y17A Roosevelt 90.77 53⇑P P 13 51 32.9 +0.6
baz=91
MVCO Mesa Verde 90.82 49 P P **13 51 32.6 +0.1**
baz=91
MVCO Mesa Verde 90.82 49⇑ *i*P P 13 51 32.4 -0.1
comp=Z,80nm,0.7s,mb5.8
ODD1 Odda 90.86 340⇑ *i*P P 13 51 30.1 -2.0
ODB Odobesti 90.86 321⇓ *i*P P 13 51 31.9 -0.6
PHWY Pilot Hill 90.86 44⇑ *i*P P 13 51 32.7 0.0
comp=Z,805nm,1.1s,mb6.6
ASK Askoy 90.87 340 *e*P P 13 51 32.2 0.0
RUND Rundenannen 90.87 340⇑ *i*P P 13 51 33.5 +1.3
RUND AMb AMB 13 51 40.7
comp=Z,650nm,1.2s,mb6.5
RUND Rundenannen 90.87 340⇑ *i*P P 13 51 33.5 +1.3
comp=Z,650nm,1.2s,mb6.4
BUR08 Bucovina Ar. S 90.88 323⇑ *e*P P 13 51 32.0 -0.5
BURAR Bucovina Array 90.88 323⇓ *i*P P 13 51 32.0 -0.6
BURAR Bucovina Array 90.88 323⇑ *i*P PKKPdf 14 08 56.9 +4.9
BURAR Bucovina Array 90.88 323 P P **13 51 32.2 -0.4**
BER Bergen 90.90 340⇑ *e*P P 13 51 31.3 -1.0
BER Bergen 90.90 340⇑ *i*P P 13 51 31.0 -1.3
BER AMb AMB 13 51 39.2
comp=Z,654nm,1.5s,mb6.3
BER *e*SKS 14 01 37.5
BER *e*SS SS 14 08 15.9 +1.0
BER AMS AMS 14 33 55.4
comp=Z,80μm,17.2s
BER Bergen 90.90 340⇑ *i*P P 13 51 31.0 -1.4
BER pmax pmax
comp=Z,654nm,1.5s,mb6.3
BER MLR MLR
comp=Z,80μm,17.2s
BER Bergen 90.90 340⇑ *i*P P 13 51 31.0 -1.3
comp=Z,654nm,1.5s,mb6.3
BER LR LR
comp=Z,80μm,17.2s
W18A Petrified Fore 90.92 51⇓P P 13 51 33.4 +0.4
baz=91
ASF Jabal al Asfar 90.97 305 P P **13 51 33.1 -0.2**
comp=Z,523nm,1.0s,mb6.4,baz=294,slow=1.6,SNR=100
ASF PKKPbc PKKPbc 14 08 58.7 +2.5
comp=Z,12nm,0.7s,baz=77,slow=2.8,SNR=12
ASF PKPPKP 14 16 57.9
comp=Z,16nm,1.3s,baz=37,slow=2.8,SNR=3.3
VRI Vrincioaia 91.00 321⇑ *i*P P 13 51 32.4 -0.8
VRI Vrincioaia 91.00 321⇓ *i*P PKKPdf 14 08 54.8 +3.0
VRI Vrincioaia 91.00 321 P P **13 51 32.5 -0.6**
X18A Snowflake 91.04 52⇓P P 13 51 34.1 +0.5
baz=91
PLOR Plostina 91.06 321 P P **13 51 32.7 -0.7**
PLOR Plostina 91.06 321⇑ *i*P P 13 51 32.5 -0.9
PLOR Plostina 91.06 321⇓ *i*P PKKPdf 14 08 54.9 +3.2
KWP Kalwaria 91.07 326 *e*P P 13 51 33.2 -0.2
KWP *e*PcP PcP 13 51 37.1 +2.9
KWP *e*PP PP 13 55 14.1 +1.1
KWP *e*SKS 14 01 42.2
KWP *e*S S 14 02 07.6 -1.2
KWP *e*SS SS 14 08 32.1 +14
KWP Kalwaria 91.07 326⇓ *i*P P 13 51 32.9 -0.5
KWP Kalwaria 91.07 326 *e*P P 13 51 33.2 -0.2
KWP *e*PcP PcP 13 51 37.1 +2.9
KWP *e*PP PP 13 55 14.1 +1.1
KWP *e*SKS 14 01 42.2
KWP *e*S S 14 02 07.6 -1.2
KWP *e*SS SS 14 08 32.1 +14
216A Three Points, 91.07 55⇑P P 13 51 34.4 +0.7
baz=91
CVD Cernavoda 91.07 319⇑ *i*P P 13 51 33.1 -0.4
BHL Bhannes 91.11 307 *e*P P 13 51 33.4 -0.6
V19A Window Rock 91.14 51⇓P P 13 51 34.9 +0.8
baz=91
W19A Sanders 91.18 51⇑P P 13 51 34.8 +0.6
baz=91
RCY Rachaya 91.18 307 *e*P P 13 51 33.5 -0.8
Z17A San Carlos Hig 91.22 53⇑P P 13 51 35.3 +0.8
baz=91
BLS5 Blasjo 91.29 339⇑ *i*P P 13 51 33.5 -0.7
BLS5 AMb AMB 13 51 44.2
comp=Z,348nm,0.7s,mb6.4
BLS5 *e*PP PP 13 55 15.1 +0.7
BLS5 Blasjo 91.29 339⇑ *i*P P 13 51 33.5 -0.7
comp=Z,348nm,0.7s,mb6.4
BDHA Al Bayda' 91.29 286⇑ *e*P P 13 51 35.4 +0.4
BDHA AMb AMB 13 51 37.1
comp=Z,1μm,1.6s,mb6.5
CASY Casey 91.32 192⇑ *i*PDIF P 13 51 33.6 -0.3
CASY *i* PKIKP PP 13 55 10.2 -5.3
CASY *e*S SKSac 14 01 40.5 -0.5
PSN Preselentsi 91.32 319 *i* P P **13 51 34.2 -0.5**
Y18A Canyon Day Jun 91.33 53⇑P P 13 51 35.6 +0.7
baz=91
117A Oracle 91.36 54⇑P P 13 51 35.5 +0.5
baz=91
KIZT Kizilcal 91.41 313 *e*P P 13 51 34.4 -0.8
LADK Ladik-KONYA 91.41 312 *e*P P 13 51 34.3 -0.9
ULM Lac du Bonnet 91.43 33 P P **13 51 34.1 -0.9**
comp=Z,290nm,1.0s,mb6.2,baz=311,slow=4.9,SNR=84
ULM S SKSac 14 01 41.8 -1.0
comp=Z,54nm,1.2s,baz=144,slow=19,SNR=5.3
ULM PKPPKP 14 16 58.5
comp=Z,22nm,1.1s,baz=144,slow=0.9,SNR=3.5
EREN Erenkoy 91.44 309 *e*P P 13 51 34.6 -0.8
TUC Tucson 91.44 54⇑P P 13 51 35.7 +0.2
TUC *e* 13 55 16.5
TUC *e*S S 14 02 12.2 -0.6
TUC pmax pmax
comp=Z,2μm,1.6s,mb6.7
TUC Tucson 91.44 54⇑ *i*P P 13 51 35.7 +0.2
comp=Z,2μm,1.6s,mb6.7
TUC *e*PP PP 13 55 16.5 -0.1
TUC *e*S S 14 02 12.2 -0.7
IKL Isikli 91.44 310 *e*P P 13 51 34.4 -1.1
GKP Gorka Klasztor 91.46 331 *e*P P 13 51 34.6 -0.5
GKP *e*PcP PcP 13 51 38.4 +2.5
GKP *e*PP PP 13 55 15.3 -0.7
GKP *e*SKS 14 01 43.2
GKP *e*S S 14 02 09.5 -2.7
GKP *e*SS SS 14 08 26.3 +3.0
GKP Gorka Klasztor 91.46 331 *e*P P 13 51 34.6 -0.5
GKP *e*PcP PcP 13 51 38.4 +2.5
GKP *e*PP PP 13 55 15.3 -0.7
GKP *e*SKS 14 01 43.2
GKP *e*S S 14 02 09.5 -2.7
GKP *e*SS SS 14 08 26.3 +3.0
ISR Istrita 91.52 321⇑ *i*P PKKPdf 14 08 53.5 +2.6
ISCO Idaho Springs 91.52 46⇑ *i*P P 13 51 36.5 +0.8
ISCO pmax pmax
comp=Z,140nm,0.6s,mb6.1
ISCO Idaho Springs 91.52 46⇑ *i*P P 13 51 36.5 +0.8
comp=Z,140nm,0.6s,mb6.1
GULT Gulveren 91.54 315 *e*P P 13 51 34.8 -0.9
KONT Konya--Tatoy 91.54 312 *e*P P 13 51 34.8 -1.1
X19A St. Johns 91.57 52⇓P P 13 51 36.8 +0.8
baz=91
LBOS 91.62 286⇑ *e*P P 13 51 37.0 +0.5
Z18A Geronimo 91.64 53⇑P P 13 51 37.2 +0.8
baz=92
217A Green Valley 91.66 55⇓P P 13 51 37.2 +0.7
baz=92

MMAI Mount Meron Ar 91.71 307 P **P 13 51 36.5 -0.3**
comp=Z,899nm,1.0s,mb6.7,baz=58,slow=7.0,SNR=72
MMAI PP PP 13 55 27.7 +9.0
comp=Z,74nm,0.9s,baz=64,slow=9.4,SNR=3.5
MMAI PKKPbc PKKPbc 14 08 54.9 +0.6
comp=Z,19nm,0.5s,baz=48,slow=1.2,SNR=14
KOLS Kolonicke sedl 91.71 325 *e*P P 13 51 35.7 -0.7
KOLS *e*S SKSac 14 01 46.1 +1.6
KOLS *e* 14 02 09.0
KOLS *e*SS SS 14 08 23.4 -3.8
KOLS Kolonicke sedl 91.71 325 *e*P P 13 51 35.7 -0.7
KOLS *e*S SKSac 14 01 46.1 +1.6
KOLS *e* 14 02 09.0
KOLS *e*PS SP 14 03 18.5 -6.5
KOLS *e*SS SS 14 08 23.4 -3.8
SILT Sile 91.73 316 *e*P P 13 51 35.8 -0.8
PHNC Paralimni 91.78 309 P P **13 51 35.0 -2.0**
comp=Z,14nm,1.0s
RKT Rikitea 91.80 114 *e*SKSac SKSac 14 01 42.3 -3.4
comp=Z,115μm,24.3s
RKT Rikitea 91.80 114 *e*LQ 14 16 41.3
comp=Z,311μm,37.0s
RKT *e*LR LR 14 21 07.4
comp=Z,119μm,29.0s
RKT Rikitea 91.80 114⇑ *i*P P 13 51 38.9 +1.7
RKT *e* 14 01 42.3
RKT pmax pmax
comp=Z,2μm,1.0s,mb7.1
RKT Rikitea 91.80 114⇑ *i*P P 13 51 38.9 +1.7
comp=Z,2μm,1.0s,mb7.1
RKT *e*SKSac SKSac 14 01 42.3 -3.4
RKT *e*LQ 14 16 41.3
Y19A Nutrioso 91.82 52⇑P P 13 51 38.1 +1.0
baz=92
SNART Snartemo 91.86 338⇑ *i*P P 13 51 35.7 -1.2
SNART AMb AMB 13 51 43.0
comp=Z,459nm,0.7s,mb6.5
COP Copenhagen 91.87 334⇑ *i*P P 13 51 35.5 -1.4
COP *i* 13 55 18.7
COP *i* S SKSac 14 01 45.1 0.0
COP *i* 14 03 22.1
COP pmax pmax
comp=Z,710nm,1.4s,mb6.4
COP Copenhagen 91.87 334⇑ *i*P P 13 51 35.5 -1.4
comp=Z,707nm,1.4s,mb6.4
COP *i* 13 55 18.7
COP *i* S SKSac 14 01 45.1 0.0
COP *i* 14 03 22.1
COP Copenhagen 91.87 334 *i* P PKKPdf 14 08 39.7 -11
COP
comp=Z,46μm,19.0s
UZH Uzhgorod 91.88 325 *c i*P P **13 51 35.6 -1.6**
UZH *e**PP pP 13 52 39.0 +0.5
UZH *i* 13 53 12.0
UZH *i* 14 01 47.0
UZH *i* S S 14 02 10.8 -5.3
UZH *i* PS SP 14 03 23.0 -4.0
UZH *i* 14 08 32.0
UZH *i* 14 12 11.0
UZH MLR MLR
comp=N,42μm,16.0s
UZH MLR MLR
comp=E,58μm,16.0s
UZH MLR MLR
comp=Z,40μm,16.0s
HRT Hereke 91.89 316 *e*P P 13 51 35.6 -1.8
118A Homack Ranch, 91.90 54⇑P P 13 51 38.2 +0.6
baz=92
STAV Stavanger 91.91 339⇑ *i*P P 13 51 36.0 -1.1
STAV AMb AMB 13 51 43.3
comp=Z,604nm,1.9s,mb6.2
STAV Stavanger 91.91 339⇑ *i*P P 13 51 36.0 -1.1
comp=Z,604nm,1.9s,mb6.2
HDMB Hadim 91.94 311 *e*P P 13 51 36.4 -1.3
STHS Stebnicka Huta 91.96 326 *i* P P 13 51 37.2 -0.3
STHS pmax pmax
comp=Z,545nm,1.3s,mb6.3
STHS Stebnicka Huta 91.96 326 *i* P P 13 51 37.2 -0.3
comp=Z,545nm,1.3s,mb6.3
STHS *e*S SKSac 14 01 49.9 +4.1
STHS *e* 14 02 12.8
LFK Lefkose 92.01 309 *e*P P 13 51 37.4 -0.7
ADVT Abdulvahap 92.05 315 *e*P P 13 51 37.0 -1.1
PRD Provadia 92.06 319 *i* P P 13 51 38.0 -0.1
KLYT Kilyos 92.07 316 *e*P P 13 51 37.2 -1.0
CAVI Cavuskoy 92.10 315 *e*P P 13 51 37.5 -0.8
DHBB Dhamar BB 92.11 287⇑ *e*P P 13 51 39.3 +0.5
DHBB AMb AMB 13 51 41.6
comp=Z,4μm,1.6s,mb7.1
Z19A T-Link Ranch, 92.12 53⇓P P 13 51 39.3 +0.7
baz=92
218A Dragoon 92.15 54⇓P P 13 51 39.6 +0.8
baz=92
CRVS Cervenica-Dubn 92.16 326 *e*P P 13 51 38.0 -0.4
CRVS *e*S SKSac 14 01 47.5 +0.5
CRVS *e* 14 02 13.7
CRVS *e*PS SP 14 03 28.1 -1.9
CRVS *e*SS SS 14 08 29.7 -3.8
OJC Ojcow 92.19 327⇑ *i*P P 13 51 38.1 -0.5
OJC *e*PcP PcP 13 51 41.5 +2.3
OJC *e*PP PP 13 55 02.9 -19
OJC *e*SKSac SKSac 14 01 47.8 +0.7
OJC *e*S S 14 02 13.6 -5.2
OJC *e*SP SP 14 03 27.9 -2.4
OJC LR LR
comp=Z,149μm,17.2s
YLV Yalova 92.21 316 *e*P P 13 51 37.6 -1.3
VOIR 92.22 321⇑ *i*P P 13 51 37.7 -1.1
VOIR 92.22 321⇓ *i*P PKKPdf 14 08 54.7 +5.0
VOIR 92.22 321 P P **13 51 38.0 -0.8**
BUC1 Bucharest 92.26 320 P P **13 51 42.5 +3.5**
BGKT Bogazkoy 92.28 316 *e*P P 13 51 38.0 -1.2
MAMC Mammari 92.29 309 P P **13 51 37.0 -2.3**
RGN Rugen 92.31 333 *e*P P 13 51 37.9 -1.1
comp=Z,2μm,1.4s,mb6.8
RGN *e*PP PP 13 55 21.3 -1.2
RGN *e*SKS 14 01 46.1
RGN *e*PS SP 14 03 28.8 -2.5
RGN *e*SS SS 14 08 28.9 -6.3
RGN *e*PKKP PKKPbc 14 08 52.7 -1.0
CSS Prodhromos 92.31 309 P P **13 51 37.3 -2.1**
comp=Z,8.5nm,0.8s
119A Ashpeak Ranch, 92.34 53⇑P P 13 51 40.3 +0.7
baz=92
HAJJ Hajjah 92.36 288⇑ *e*P P 13 51 40.4 +0.3
GEMT Gemlik 92.40 316 *e*P P 13 51 38.5 -1.3
CTKS Kestanelik-??a 92.42 316 *e*P P 13 51 38.7 -1.1
NIE Niedzica 92.43 326 *e*P P 13 51 39.4 -0.3
318A Bisbee 92.44 55⇑P P 13 51 40.7 +0.6
baz=92
SHUT Suhut-Afyon 92.47 313 *e*P P 13 51 39.5 -0.6
ALT Altintas 92.51 314 *e*P P 13 51 39.4 -0.8
CTT Catalca 92.52 316 *e*P P 13 51 38.2 -2.1
LEF Lefka 92.55 309 *e*P P 13 51 39.5 -1.0
MUD Monsted U'grnd 92.58 336⇑ *i*P P 13 51 38.8 -1.4
MUD *i* S SKSac 14 01 49.3 +0.3
MUD pmax pmax
comp=Z,1μm,1.4s,mb6.7
MUD Monsted U'grnd 92.58 336⇑ *i*P P 13 51 38.8 -1.4
comp=Z,1μm,1.4s,mb6.7
MUD *i* 13 55 22.7
MUD *i* S SKSac 14 01 49.3 +0.3
MUD *i* 14 03 30.7
MUD Monsted U'grnd 92.58 336⇓ *i*P PKKPdf 14 08 40.2 -8.9
comp=Z,207nm,1.2s
SLVT Silivri 92.61 317 *e*P P 13 51 40.1 -0.6
AGMN Agassiz Refuge 92.62 35 *e*P P 13 51 39.2 -1.3
comp=Z,1μm,0.4s,mb7.3
SDCO Great Sand Dun 92.64 47⇑ *i*P P 13 51 41.0 +0.1
comp=Z,1μm,1.6s,mb6.7
SDCO *e*pP pP 13 52 41.0 -1.3
BORG Borgarnes 92.64 353 PKKPbc PKKPbc 14 08 56.9 +3.8
comp=Z,116nm,0.9s,baz=173,slow=3.9,SNR=12
BORG PKPPKP 14 17 03.4
comp=Z,52nm,1.0s,baz=215,slow=1.7,SNR=4.7
BORG Borgarnes 92.64 353 *e*P P **13 51 40.6 +0.3**
comp=Z,989nm,1.2s,mb6.7
219A White Tail Can 92.73 54⇓P P 13 51 42.0 +0.6
baz=93
SZAC Souni-Zanaja 92.73 309 P P **13 51 39.3 -2.1**
ALFC Alevga 92.74 310⇑P P 13 51 39.0 -2.4
comp=Z,18nm,0.7s
DRGR 92.75 323⇑ *i*P P 13 51 40.5 -0.7
DRGR 92.75 323⇓ *i*P PKKPdf 14 08 49.5 +0.7

DRGR 92.75 323 P **P 13 51 40.5 -0.7**
ISP Isparta 92.86 313 *e*P P 13 51 39.5 -2.5
ISP Isparta 92.86 313 *e*P P 13 51 40.1 -1.8
ISP Isparta 92.86 313 P P **13 51 40.4 -1.5**
ISP Isparta 92.86 313⇓ *i*P P 13 51 40.0 -1.9
JMB Yambol 92.96 318 *e*P P 13 51 42.1 -0.2
JMB Yambol 92.96 318 *i* P P 13 51 42.1 -0.2
CRLT Corlu 92.97 317 *e*P P 13 51 40.1 -2.2
AKMC Akamas 93.00 310 P P **13 51 40.1 -2.5**
BCK Bucak 93.00 312 *e*P P 13 51 40.7 -1.9
319A Douglas 93.00 55⇑P P 13 51 43.3 +0.5
baz=93
LRW Lerwick 93.02 343⇑ *e*P P 13 51 41.3 -0.8
LRW AMb AMB 13 51 48.4
comp=Z,2μm,1.4s,mb7.0
WAL1 Walls 93.03 343⇑ *e*P P 13 51 41.2 -1.0
ZIMR 93.04 320 P P **13 51 41.9 -0.7**
PPCY Paphos 93.06 309⇑P P 13 51 40.2 -2.7
RAC Raciborz 93.08 328 *e*P P 13 51 42.4 -0.2
RAC *e*pP pP 13 52 41.8 -2.2
RAC *e*PP PP 13 55 28.2 -0.5
RAC *e*SKSac SKSac 14 01 52.6 +0.6
RAC *e*S S 14 02 23.1 -3.5
RAC LR LR
comp=Z,140μm,17.0s
SAN1 Sandwick 93.13 343⇑ *e*P P 13 51 41.8 -0.9
LAZ Ladron 93.14 51 *e*P P 13 51 43.4 +0.1
comp=Z,1μm,1.0s,mb6.8
TKR Tekirdag 93.17 317 *e*P P 13 51 42.9 -0.3
EDRB Edirne 93.20 318 *e*P P 13 51 42.8 -0.6
DST Dursunbey 93.20 315 *e*P P 13 51 41.3 -2.2
ANTB Antalya 93.24 312 *e*P P 13 51 40.1 -3.6
OGNE Ogallala 93.25 43 *e*P P 13 51 42.9 -0.8
comp=Z,2μm,1.5s,mb7.0
OKC Ostrava-Krasne 93.26 328⇑ *i*P P 13 51 42.6 -0.9
OKC *e*SKS 14 01 55.1
OKC *e*S S 14 02 23.7 -4.5
OKC *e*SP SP 14 03 38.2 -3.9
OKC *e*SS SS 14 08 53.2 +4.1
OKC AMS AMS 14 35 00.0
comp=Z,114μm,15.7s
OKC Ostrava-Krasne 93.26 328⇑ *i*P P 13 51 42.6 -0.9
OKC *e*SKS 14 01 55.1
OKC *e*S S 14 02 23.7 -4.5
OKC *e* 14 03 38.2
OKC *e*PKKP PKKPbc 14 08 53.2 +2.1
BNT Bandirma 93.27 316 *e*P P 13 51 41.5 -2.2
KHL Karahalli 93.28 314 *e*P P 13 51 43.7 -0.1
LIKS Likavka 93.28 327 *e*P P 13 51 44.3 +0.7
LIKS Likavka 93.28 327 *e*P P 13 51 44.4 +0.8
ANMO Albuquerque 93.36 50 P P **13 51 44.4 +0.1**
comp=Z,251nm,1.0s,mb6.2,baz=278,slow=3.1,SNR=143
ANMO pP pP 13 52 41.7 -4.0
comp=Z,114nm,1.0s,baz=293,slow=4.7,SNR=1.8
ANMO PKKPbc PKKPbc 14 08 51.1 +0.9
comp=Z,37nm,1.0s,baz=203,slow=3.7,SNR=6.0
ANMO Albuquerque 93.36 50 P P **13 51 44.4 +0.1**
ANMO pP pP 13 52 41.7 -4.0
ANMO PKKPbc PKKPbc 14 08 51.1 +0.9
LENM Lemitar 93.38 51 *e*P P 13 51 44.2 -0.2
comp=Z,356nm,1.3s,mb6.2
Y22C IRIS PASSCAL I 93.46 51⇑P P 13 51 45.4 +0.7
baz=93
KSP Ksiaz 93.50 329⇑ *i*P P 13 51 44.0 -0.6
KSP *e**PP pP 13 52 49.0 +3.0
KSP *e* 13 55 29.0
KSP *e* 14 01 54.2
KSP *e*S S 14 02 25.5 -4.8
KSP *e*SS SS 14 08 51.5 -1.0
KSP Ksiaz 93.50 329⇑ *i*P P 13 51 44.0 -0.6
KSP *e*pP pP 13 52 49.0 +3.0
KSP *e*PP PP 13 55 29.0 -3.0
KSP *e*SKS 14 01 54.2
KSP *e*S S 14 02 25.5 -4.8
KSP *e*SP SP 14 03 36.7 -7.9
KSP *e*SS SS 14 08 51.5 -1.0
KSP Ksiaz 93.50 329 *e*P P 13 51 44.3 -0.2
KSP *e*PcP PcP 13 51 48.1 +3.1
KSP *e*PP PP 13 55 31.8 -0.2
KSP *e*SKS 14 01 56.4
KSP *e*S S 14 02 28.1 -2.2
KSP *e*SS SS 14 08 57.0 +4.5
RUE Ruedersdorf 93.55 332 *e*P P 13 51 43.8 -0.9
comp=Z,2μm,1.4s,mb6.9
RUE *e*pP pP 13 52 41.0 -5.1
RUE *e*SKS 14 01 51.9
RUE *e*S S 14 02 22.9 -7.7
RUE *e*SS SS 14 08 49.7 -3.3
RUE Ruedersdorf 93.55 332 *e*P P 13 51 43.7 -1.0
comp=Z,1μm,1.4s,mb6.8
RUE *e*PP PP 13 55 33.3 +1.1
GZR Gura Zlata 93.55 322⇑ *i*P P 13 51 43.8 -1.1
GZR Gura Zlata 93.55 322⇓ *i*P PKKPdf 14 08 46.6 -0.8
GZR Gura Zlata 93.55 322 P P **13 51 44.2 -0.7**
LPM Los Pinos Moun 93.55 51 *e*P P 13 51 44.9 -0.2
comp=Z,470nm,1.5s,mb6.3
RKY Sarkoy-Tekirda 93.56 317 *e*P P 13 51 44.1 -0.9
CRAR CRAIOVA 93.58 321 P P **13 51 44.7 -0.4**
PSZ Piszkesteto 93.59 325⇑ *e*P P 13 51 44.4 -0.6
PSZ Piszkesteto 93.59 325⇑ *i*P P 13 51 44.4 -0.6
PSZ Piszkesteto 93.59 325⇓ *i*P PKKPdf 14 08 52.8 +5.5
EIL Elat 93.60 304 PKKPbc PKKPbc 14 08 48.7 -0.7
comp=Z,28nm,0.6s,baz=292,slow=1.9,SNR=11
EIL SKKPbc 14 12 04.0
comp=Z,12nm,0.7s,baz=320,slow=6.8,SNR=6.3
EIL PKPPKP 14 16 59.6
comp=Z,13nm,1.0s,baz=249,slow=0.2,SNR=6.0
MORC Moravsky Berou 93.60 328 P P **13 51 44.4 -0.6**
MORC Moravsky Berou 93.60 328⇑ *i*P P 13 51 44.3 -0.7
MORC Moravsky Berou 93.60 328⇑ *i*P PKKPdf 14 08 49.1 +1.8
MORC Moravsky Berou 93.60 328 *e*P P 13 51 44.2 -0.8
MORC *e* 14 02 00.4
MORC *e* 14 08 49.0
BNM Barren Site 93.64 51 *e*P P 13 51 45.5 0.0
comp=Z,25μm,1.4s,mb8.1
BALB Balikesir 93.67 315 *e*P P 13 51 44.6 -1.0
KULA Kula-Manisa 93.76 314 *e*P P 13 51 44.9 -1.1
VYHS Vyhne 93.77 326 *e*P P 13 51 45.3 -0.6
VYHS *e*PP PP 13 55 31.1 -3.1
VYHS Vyhne 93.77 326 *e* PKKPdf 14 08 45.5 -1.5
VYHS *e*S SS 14 08 50.6 -5.9
VYHS Vyhne 93.77 326 *e*P P 13 51 45.3 -0.6
VYHS *e*PP PP 13 55 31.1 -3.1
VYHS *e*S SKSac 14 01 55.9 0.0
VYHS *e* 14 02 29.6
VYHS *e*PS SP 14 03 45.4 -2.3
VYHS *e*SS SS 14 08 57.0 +0.5
DPC Dobruska-Polom 93.82 329⇑ *i*P P 13 51 45.6 -0.4
DPC *e* 13 55 32.9
DPC *e* 14 01 57.0
DPC *e*S S 14 02 30.5 -2.5
DPC *e* 14 08 57.2
DPC MLR MLR
comp=Z,92μm,17.6s
DPC Dobruska-Polom 93.82 329⇑ *i*P P 13 51 45.6 -0.4
DPC *e*PP PP 13 55 32.9 -1.5
DPC *e*SKS 14 01 57.0
DPC *e*S S 14 02 30.5 -2.5
DPC *e*SP SP 14 03 41.9 -6.2
DPC *e*SS SS 14 08 57.2 +0.2
DPC AMS AMS 14 37 40.0
comp=Z,92μm,17.6s
ELL Elmali 93.83 312 *e*P P 13 51 45.4 -1.0
UPC Upice 93.86 329⇑ *i*P P 13 51 45.6 -0.6
KOLL Kolacno 93.94 327 *e*P P 13 51 45.9 -0.7
KOLL *e* 13 55 34.6
KOLL *e*S SKSac 14 01 57.3 +0.5
KOLL *e* 14 02 31.5
KOLL Kolacno 93.94 327 *e*P P 13 51 45.9 -0.7
KOLL *e*PP PP 13 55 34.6 -0.9
KOLL Kolacno 93.94 327 *e*P P 13 51 45.9 -0.7
KOLL *e*PP PP 13 55 34.6 -0.9
KOLL *e*S SKSac 14 01 57.3 +0.5
KOLL *e* 14 02 31.5
KOLL *e* 14 08 37.6
KOLL *e* 14 08 48.5
BSEG Bad Segeberg 93.98 334 *e*P P 13 51 45.6 -1.1
BSEG *e* 13 55 33.7
BSEG *e* 14 01 54.0
BSEG *e*S S 14 02 25.6 -8.7
BSEG *e*SS SS 14 08 56.7 -2.4

BSEG pmax pmax
comp=Z,862nm,1.3s,mb6.6
BSEG Bad Segeberg 93.98 334 *eP* **P 13 51 45.6 -1.1**
comp=Z,862nm,1.3s,mb6.6
BSEG *e*PP PP 13 55 33.7 -1.9
BSEG *e*SKS 14 01 54.0
BSEG *e*S S 14 02 25.6 -8.7
BSEG *e*PKKP PKKPbc 14 08 48.2 -1.2
BSEG *e*SS SS 14 08 56.7 -2.4
LPK Lapseki 94.00 316 *eP* **P 13 51 47.1 0.0**
BZS Buzias 94.07 323 *i*P **P 13 51 45.8 -1.5**
BZS Buzias 94.07 323 *i*P PKKPdf 14 08 44.6 -1.9
BZS Buzias 94.07 323 P **P 13 51 46.2 -1.1**
AKS Akhisar 94.13 315 *eP* **P 13 51 47.0 -0.7**
KDZ Kurdzhali 94.14 318 *i* P **P 13 51 47.2 -0.5**
ALN Alexandroupoli 94.17 317 *eP* **P 13 51 46.1 -1.7**
ENEZ Enez 94.19 317 *eP* **P 13 51 45.6 -2.3**
BUD Budapest 94.32 326⇑ *eP* **P 13 51 47.6 -0.8**
PLD Plovdiv 94.32 319 *eP* **P 13 51 47.7 -0.8**
RDO Rodhopi 94.35 318 *eP* **P 13 51 47.1 -1.6**
VRAC Vranov 94.37 328 P **P 13 51 48.0 -0.6**
comp=Z,87nm,0.6s,mb6.0,baz=54,slow=4.4,SNR=86
VRAC PP PP 13 55 40.2 +1.4
comp=Z,67nm,0.8s,baz=43,slow=11,SNR=4.0
VRAC PKKPbc PKKPbc 14 08 47.4 -0.8
comp=Z,18nm,0.5s,baz=261,slow=6.6,SNR=5.0
VRAC Vranov 94.37 328⇑ *i*P **P 13 51 48.1 -0.5**
VRAC Vranov 94.37 328⇑ *i*P PKKPdf 14 08 47.0 +1.1
VRAC Vranov 94.37 328 *eP* **P 13 51 48.0 -0.6**
VRAC *e* 14 02 36.1
VRAC *e* 14 08 46.6
VRAC *e* 14 19 37.9
PGB Panagyurishte 94.39 319 *i* P **P 13 51 48.3 -0.5**
PVCC Panska Ves 94.53 330⇑ *i*P **P 13 51 48.8 -0.5**
PVCC *e*SKS 14 02 00.3
PVCC *e*S S 14 02 35.7 -3.5
PVCC *e*PKKP PKKPbc 14 09 05.3 +17
PVCC AMS AMS 14 35 50.0
comp=Z,107µm,17.5s
RZN Rozhen 94.55 318 *i* P **P 13 51 48.8 -0.8**
BRG Berggiesshubel 94.58 330⇑ *i*P **P 13 51 48.8 -0.7**
BRG *PP pP 13 52 50.0 -0.9
BRG *SP sP 13 53 17.0 -0.4
BRG 14 02 01.0
BRG S S 14 02 35.0 -4.7
BRG *i* 14 03 55.0
BRG pmax pmax
comp=Z,621nm,2.0s,mb6.4
BRG MLR MLR
comp=N,44µm,17.0s
BRG MLR MLR
comp=E,22µm,15.0s
BRG MLR MLR
comp=Z,84µm,16.9s
BRG Berggiesshubel 94.58 330 *eP* **P 13 51 48.6 -0.9**
comp=Z,1µm,1.4s,mb6.8
BRG *e*SKS 14 01 57.7
BRG *e*S S 14 02 30.8 -8.9
BRG *e*SS SS 14 09 02.3 -5.4
BRG Berggiesshubel 94.58 330⇑ *i*P **P 13 51 48.8 -0.7**
comp=Z,1µm,2.0s,mb6.6
BRG pP pP 13 52 50.0 -0.9
BRG sP sP 13 53 17.0 -0.4
BRG PP PP 13 55 21.0 -19
BRG SKS 14 02 01.0
BRG S S 14 02 35.0 -4.7
BRG *i* 14 03 55.0
BRG *i* PKKP PKKPbc 14 08 51.1 +3.4
comp=Z,144nm,1.1s
BRG SS SS 14 09 00.0 -7.7
BRG PKPPKP 14 16 55.7
comp=Z,157nm,1.7s
BRG
comp=N,74µm,17.0s
BRG
comp=E,37µm,15.0s
BRG
comp=Z,140µm,16.9s
BRG Berggiesshubel 94.58 330⇑ *i*P **P 13 51 48.8 -0.7**
comp=Z,621nm,2.0s,mb6.4
BRG pP pP 13 52 50.0 -0.9
BRG sP sP 13 53 17.0 -0.4
BRG PP PP 13 55 21.0 -19
BRG SKS 14 02 01.0
BRG S S 14 02 35.0 -4.7
BRG *i* 14 03 55.0
BRG *i* PKKP PKKPbc 14 08 51.1 +3.4
BRG SS SS 14 09 00.0 -7.7
BRG P'P' 14 16 55.7
BRG LR LR
comp=Z,84µm,16.9s
EZN Ezine 94.58 316 *eP* **P 13 51 48.7 -1.1**
MODS Modra-Piesok 94.64 327 *i* P **P 13 51 49.9 0.0**
MODS *e*S SKSac 14 02 02.5 +1.9
MODS *e* 14 02 36.6
MODS *e*PS SP 14 03 54.4 -2.9
MODS *e*SS SS 14 09 08.7 -0.1
MODS Modra-Piesok 94.64 327 *i* P **P 13 51 49.9 0.0**
MODS *e*PCP PcP 13 51 53.5 +3.4
MODS Modra-Piesok 94.64 327 *i* P **P 13 51 49.9 0.0**
MODS *e*S SKSac 14 02 02.5 +1.9
MODS *e* 14 02 36.6
MODS *e*PS SP 14 03 54.4 -2.9
MODS *e* 14 08 41.9
MODS *e* 14 08 48.2
MODS *e*SS SS 14 09 08.7 -0.1
GADA Gvkgeada 94.65 317 *eP* **P 13 51 48.7 -1.4**
CLL Collm 94.71 331⇑ *i*P **P 13 51 49.1 -1.0**
CLL *e*PP pP 13 52 55.0 +3.5
CLL *e* 14 02 01.0
CLL *e*S S 14 02 41.0 +0.3
CLL pmax pmax
comp=Z,1µm,1.5s,mb6.9
CLL MLR MLR
comp=Z,104µm,18.1s
CLL Collm 94.71 331 *eP* **P 13 51 48.8 -1.3**
comp=Z,1µm,1.5s,mb6.9
CLL *e*pP pP 13 52 47.4 -4.1
CLL *e*SKS 14 01 57.0
CLL *e*S S 14 02 33.6 -7.1
CLL *e*PKKP PKKPbc 14 08 45.6 -1.8
CLL *e*SS SS 14 09 04.3 -5.2
CLL *e* 14 23 25.4
CLL Collm 94.71 331⇑ *i*P **P 13 51 49.1 -1.0**
comp=Z,1µm,1.5s,mb6.9
CLL *e*Plp 13 51 50.0
comp=Z,21µm,14.0s
CLL *e*Pmax 13 51 53.0
CLL *e*(pP) pP 13 52 55.0 +3.5
CLL *e*PP PP 13 55 41.0 -0.3
CLL *e*PPlp 13 55 42.0
CLL *i* x x 13 55 50.1
comp=Z,898nm,1.5s
CLL *e*sPP 13 57 06.0
CLL *e*SKSac SKSac 14 02 01.0 +0.2
CLL *e*S S 14 02 41.0 +0.3
comp=N,64µm,16.2s
CLL *e*S S 14 02 41.0 +0.3
comp=E,37µm,15.3s
CLL *e*SP SP 14 04 00.0 +2.2
CLL *e*PPS 14 05 12.0
CLL *i* PKKPbc PKKPbc 14 08 44.9 -2.5
comp=Z,89nm,1.1s
CLL *e*SS SS 14 09 09.0 -0.5
CLL *e*SSS 14 12 54.0
CLL LmV 14 38 00.0
comp=Z,104µm,18.1s
CLL Collm 94.71 331⇑ *i*P **P 13 51 49.1 -1.0**
comp=Z,1µm,1.5s,mb6.9
CLL *e*pP pP 13 52 55.0 +3.5
CLL *e*SKS 14 02 01.0
CLL *e*S S 14 02 41.0 +0.3
CLL *i* PKKP PKKPbc 14 08 44.9 -2.5
CLL *i* P'P' 14 16 51.6
CLL LR LR
comp=Z,104µm,18.1s
YER Yerkesik 94.74 313 *eP* **P 13 51 50.1 -0.5**
HLG Helgoland 94.76 335 *eP* **P 13 51 49.2 -1.1**
comp=Z,2µm,1.5s,mb6.9
HLG *e*SKS 14 01 58.8
HLG *e*PS SP 14 03 53.0 -5.2
FBE Freiberg 94.82 331 *eP* **P 13 51 49.9 -0.7**
comp=Z,2µm,1.5s,mb7.1

ZST Bratislava 94.85 327 *i* P **P 13 51 50.3 -0.5**
ZST *e*PP PP 13 55 47.5 +5.0
ZST Bratislava 94.85 327 *i* P **P 13 51 50.3 -0.5**
comp=Z,2µm,2.3s,mb6.9
ZST *e*PP PP 13 55 47.5 +5.0
ZST *e*S SKSac 14 02 03.0 +1.3
ZST *e* 14 02 42.7
ZST *e* 14 08 45.6
ZST *e*SS SS 14 09 05.5 -6.2
ZST LR LR
comp=Z,56µm,17.4s
BLCB Balcova 94.90 315 *eP* **P 13 51 50.2 -1.1**
PRU Pruhonice 94.91 329⇑ *i*P **P 13 51 50.0 -1.0**
PRU *ex* x 13 55 42.1
PRU *e*SKS 14 02 02.8
PRU *e*S S 14 02 40.0 -2.5
PRU *e*SP SP 14 03 58.1 -2.0
PRU *e*SS SS 14 09 14.6 +2.2
PRU AMS AMS 14 36 10.0
comp=Z,87µm,19.1s
TREC Trest 94.92 328⇑ *i*P **P 13 51 50.2 -0.9**
TREC *e*SKS 14 02 04.0
TREC *e*S S 14 02 39.5 -3.2
TREC *e*SP SP 14 03 58.4 -1.9
TREC *e*SS SS 14 09 18.7 +6.0
TREC AMS AMS 14 38 30.0
comp=Z,105µm,20.7s
PRK Paraskevi 94.93 316 *eP* **P 13 51 50.0 -1.4**
PRK Paraskevi 94.93 316 *eP* **P 13 51 49.9 -1.5**
VTS Vitosha 94.94 320 *i* P **P 13 51 51.1 -0.2**
VTS Vitosha 94.94 320 P **P 13 51 51.2 -0.2**
ECSD EROS,Sioux Fal 94.97 39 *eP* **P 13 51 50.2 -1.2**
comp=Z,8µm,0.8s,mb7.9
MLSB Milas 95.00 313 *eP* **P 13 51 51.1 -0.6**
EYMN Ely 95.11 33 *eP* **P 13 51 50.9 -1.1**
comp=Z,19µm,1.0s
NRDL Niedersach Rie 95.12 333 *eP* **P 13 51 50.9 -1.0**
NRDL *e*PP PP 13 55 41.6 -2.8
NRDL *e*PKKP PKKPbc 14 08 45.4 -1.0
MMB Musomiste 95.21 319 *i* P **P 13 51 51.6 -1.0**
NVR Nevrokopi 95.27 319 *eP* **P 13 51 51.3 -1.6**
LIA Limnos Island 95.27 317 *eP* **P 13 51 51.2 -1.7**
LIA Limnos Island 95.27 317 *eP* **P 13 51 51.1 -1.8**
LOS Limnos 95.31 317 *eP* **P 13 51 51.5 -1.6**
PKSM Moragy 95.33 325 P **P 13 51 51.9 -1.1**
PKSM Moragy 95.33 325⇑ *i*P **P 13 51 51.8 -1.2**
PKSM Moragy 95.33 325⇑ *i*P PKKPdf 14 08 42.2 -2.0
PKSM Moragy 95.33 325⇑ *eP* **P 13 51 51.6 -1.4**
ARG Arkhangelos 95.33 312 *eP* **P 13 51 52.2 -1.0**
SMG Samos 95.40 314 *eP* **P 13 51 52.1 -1.5**
BODT Bodrum 95.44 313 *eP* **P 13 51 50.5 -3.2**
SOP Sopron 95.46 327⇑ *eP* **P 13 51 53.1 -0.5**
CLZ Clausthal 95.48 333 *eP* **P 13 51 52.8 -0.8**
CLZ *e* 14 02 04.7
CLZ *e*S S 14 02 39.7 -7.7
CLZ pmax pmax
comp=Z,970nm,1.5s,mb6.7
CLZ Clausthal 95.48 333 *eP* **P 13 51 52.8 -0.8**
comp=Z,970nm,1.5s,mb6.7
CLZ *e*SKS 14 02 04.7
CLZ *e*S S 14 02 39.7 -7.7
CLZ *e*PKKP PKKPbc 14 08 44.5 -0.9
CLZ *e*SS SS 14 09 13.2 -7.1
CLZ *e* 14 23 23.2
LPIG La Paz 95.53 61 P **P 13 51 54.9 +0.5**
comp=Z,408nm,1.1s,mb6.6,baz=87,slow=1.8,SNR=11
LPIG S SKSac 14 02 06.0 -0.2
comp=Z,16nm,0.3s,baz=120,slow=20,SNR=7.2
CHOS Chios island 95.55 315 *eP* **P 13 51 52.6 -1.5**
TANN Tannenbergstha 95.58 331 *eP* **P 13 51 53.3 -0.7**
comp=Z,782nm,1.5s,mb6.7
TANN *e*pP pP 13 52 50.7 -4.8
TANN *e*PP PP 13 55 46.8 -1.2
TANN *e*SKS 14 02 04.8
TANN *e*S S 14 02 40.8 -7.5
TANN *e*SS SS 14 09 18.8 -3.0
TANN *e* 14 23 21.7
RSC Scourie 95.61 344⇑ *eP* **P 13 51 52.4 -1.6**
WERD Werda 95.62 331 *eP* **P 13 51 53.3 -1.0**
comp=Z,941nm,1.5s,mb6.8
WERD *e* 14 23 21.3
CONA Conrad Observa 95.65 327 *i* P **P 13 51 54.0 -0.4**
comp=Z,13µm,6.3s,SNR=114
CONA Conrad Observa 95.65 327 *i* PcP **P 13 51 54.0 -0.4**
comp=Z,13µm,6.3s,SNR=114
CSNA Conrad Observa 95.65 327⇑ *i*P **P 13 51 54.1 -0.3**
comp=Z,12µm,6.4s
CSNA Conrad Observa 95.65 327⇑ *i*PcP **P 13 51 54.1 -0.3**
comp=Z,12µm,6.4s
GUNZ Gunzen 95.67 331 *eP* **P 13 51 53.8 -0.7**
comp=Z,995nm,1.4s,mb6.8
GUNZ *e*PP PP 13 55 47.0 -1.7
GUNZ *e* 14 23 22.8
WERN Wernitzgruen 95.71 331 *eP* **P 13 51 54.1 -0.5**
comp=Z,1µm,1.4s,mb6.9
WERN *e*PKKP PKKPbc 14 08 43.4 -1.3
WERN *e* 14 23 22.0
NKC Novy Kostel 95.71 330⇑ *i*P **P 13 51 53.8 -0.9**
NKC *e* 14 02 07.6
NKC *e*S S 14 02 45.0 -4.5
NKC *e* 14 09 20.1
NKC MLR MLR
comp=Z,75µm,17.9s
NKC Novy Kostel 95.71 330⇑ *i*P **P 13 51 53.8 -0.9**
NKC *e*SKS 14 02 07.6
NKC *e*S S 14 02 45.0 -4.5
NKC *ex* x 14 03 59.9
NKC *e*SS SS 14 09 20.1 -3.6
NKC AMS AMS 14 35 10.0
comp=Z,75µm,17.9s
NKC Novy Kostel 95.71 330⇑ *i*P **P 13 51 53.8 -0.9**
NKC *e*SKS 14 02 07.6
NKC *e*S S 14 02 45.0 -4.5
NKC *e* 14 03 59.9
NKC *e*PKKP PKKPbc 14 09 20.1 +35
OUR Ouranopolis 95.78 318 *eP* **P 13 51 58.0 +2.8**
MOX Moxa 95.80 331 *eP* **P 13 51 53.9 -1.1**
comp=Z,940nm,1.6s,mb6.8
MOX *e* 13 55 51.9
MOX
comp=Z,60µm,20.0s
MOX Moxa 95.80 331 *eP* **P 13 51 53.9 -1.1**
MOX *e* 13 55 51.9
MOX pmax pmax
comp=Z,940nm,1.6s,mb6.8
MOX MLR MLR
comp=Z,60µm,20.0s
MOX Moxa 95.80 331 *eP* **P 13 51 54.1 -0.9**
comp=Z,859nm,1.5s,mb6.8
MOX *e*pP pP 13 52 52.6 -3.9
MOX *e*PP PP 13 55 46.4 -3.3
MOX *e*SKS 14 02 05.3
MOX *e*S S 14 02 42.9 -7.3
MOX *e*PS SP 14 04 04.0 -5.7
MOX *e*SS SS 14 09 18.5 -6.4
MOX *e* 14 23 21.7
MIR Mirnyy 95.81 198α *i*P **P 13 51 54.0 -0.5**
MIR *i* S SKSac 14 02 04.0 -1.4
MIR pmax pmax
comp=Z,500nm,1.8s,mb6.4
MIR pmax pmax
comp=Z,25µm,12.0s
REB Eisghbrachaidh 95.84 344⇑ *eP* **P 13 51 53.8 -1.3**
RTO Tolsta 95.86 344⇑ *eP* **P 13 51 53.8 -1.3**
SOH Sokhos 95.89 318 *eP* **P 13 51 54.1 -1.6**
CBKS Cedar Bluff 95.90 44 *eP* **P 13 51 54.3 -1.5**
CBKS pmax pmax
comp=Z,730nm,1.2s,mb6.8
CBKS Cedar Bluff 95.90 44 *eP* **P 13 51 54.3 -1.5**
comp=Z,730nm,1.2s,mb6.8
DIVS Divibare 95.91 322 *eP* **P 13 51 54.5 -1.2**
KHC Kasperske Hory 95.95 329⇑ *i*P **P 13 51 54.8 -1.0**
KHC *e* 13 55 51.7
KHC *e* 14 02 07.5
KHC *e*S S 14 02 47.7 -3.9
KHC *e* 14 09 25.2
KHC MLR MLR
comp=Z,111µm,16.8s
KHC Kasperske Hory 95.95 329⇑ *i*P **P 13 51 54.8 -1.0**
KHC *e*PP PP 13 55 51.7 +0.8
KHC *e*SKS 14 02 07.5
KHC *e*S S 14 02 47.7 -3.9

KHC *ex* x 14 04 01.7
KHC *e*SS SS 14 09 25.2 -2.0
KHC AMS AMS 14 36 50.0
comp=Z,111µm,16.8s
KNT Kendrikon 95.97 319 *eP* **P 13 51 54.8 -1.2**
MANZ Manzenberg 96.04 330 *eP* **P 13 51 55.5 -0.7**
comp=Z,754nm,1.5s,mb6.7
MANZ *e*pP pP 13 52 53.1 -4.6
MANZ *e*SKS 14 02 07.9
MANZ *e*S S 14 02 47.8 -4.5
MANZ *e*PKKP PKKPbc 14 08 42.3 -1.5
MANZ *e*SS SS 14 09 23.8 -4.6
MANZ *e* 14 23 20.5
VAY Valandovo 96.08 319 *eP* **P 13 51 54.9 -1.7**
VAY Valandovo 96.08 319 *eP* **P 13 51 54.9 -1.6**
STIP Stip 96.09 320 *eP* **P 13 51 54.8 -1.7**
GEC2 GERESS Array S 96.09 329 *eP* **P 13 51 55.5 -0.9**
GEC2 *e* 14 02 07.2
GEC2 *e*S S 14 02 47.6 -5.2
GEC2 *e*SS SS 14 09 24.8 -4.3
GEC2 pmax pmax
comp=Z,462nm,1.3s,mb6.5
GEC2 GERESS Array S 96.09 329 *eP* **P 13 51 55.5 -0.9**
comp=Z,462nm,1.3s,mb6.5
GEC2 *e*SKS 14 02 07.2
GEC2 *e*S S 14 02 47.6 -5.2
GEC2 *e*PKKP PKKPbc 14 08 41.9 -1.7
GEC2 *e*SS SS 14 09 24.8 -4.3
GERES GERESS Array B 96.09 329 P **P 13 51 55.3 -1.1**
comp=Z,63nm,0.7s,mb6.0,baz=42,slow=4.9,SNR=60
GERES PP PP 13 55 52.2 +0.2
comp=Z,38nm,0.8s,baz=50,slow=8.9,SNR=4.5
GERES PKKP PKKPbc 14 08 37.4 -6.2
comp=Z,45nm,1.1s,baz=206,slow=1.8,SNR=4.7
GERES PKKPbc PKKPbc 14 08 42.3 -1.4
comp=Z,25nm,0.7s,baz=208,slow=2.3,SNR=21
GERES SKKPbc 14 11 56.4
comp=Z,9.1nm,0.8s,baz=252,slow=2.7,SNR=4.5
GERES PKPPKP 14 16 21.6
comp=Z,2.9nm,0.8s,baz=162,slow=1.3,SNR=4.0
GERES GERESS Array B 96.09 329 P **P 13 51 55.3 -1.1**
GERES 13 55 52.2
PLG Polygyros 96.09 318 *eP* **P 13 51 55.1 -1.5**
PLG Polygyros 96.09 318 *eP* **P 13 51 55.2 -1.4**
ROTZ Rotzenmuhle 96.15 330 *eP* **P 13 51 56.2 -0.5**
comp=Z,1µm,1.5s,mb6.9
ROTZ *e*PP PP 13 55 49.1 -3.3
ROTZ *e*SKS 14 02 08.5
ROTZ *e*S S 14 02 48.4 -4.9
ROTZ *e*SS SS 14 09 24.8 -5.1
ROTZ *e* 14 23 19.4
HORT Hortiatis 96.17 318 *eP* **P 13 51 55.3 -1.7**
PAIG Paliouri 96.20 317 *eP* **P 13 51 55.4 -1.8**
RRR Rubha Reidh 96.21 344⇑ *eP* **P 13 51 55.5 -1.3**
IBBN Ibbenburen 96.23 334 *eP* **P 13 51 55.7 -1.2**
comp=Z,1µm,1.4s,mb6.9
IBBN *e*SKS 14 02 07.3
IBBN *e*S S 14 02 44.2 -10
IBBN *e*PS SP 14 04 08.5 -5.8
IBBN *e*PKKP PKKPbc 14 08 42.3 -1.1
IBBN *e*SS SS 14 09 21.8 -9.0
THE Thessaloniki 96.24 318 *eP* **P 13 51 55.4 -1.8**
WET Wettzell 96.27 330 *eP* **P 13 51 56.6 -0.6**
WET *e* 14 02 09.0
WET *e*S S 14 02 49.3 -5.1
WET *e*PS SP 14 04 09.4 -5.6
WET *e*SS SS 14 09 29.1 -2.6
WET pmax pmax
comp=Z,920nm,1.7s,mb6.7
WET Wettzell 96.27 330 *eP* **P 13 51 56.6 -0.6**
comp=Z,920nm,1.7s,mb6.7
WET *e*SKS 14 02 09.0
WET *e*S S 14 02 49.3 -5.1
WET *e*PS SP 14 04 09.4 -5.6
WET *e*PKKP PKKPbc 14 08 41.2 -2.0
WET *e*SS SS 14 09 29.1 -2.6
WET *e* 14 23 19.8
ARSA Arzberg 96.28 327 *i* P **P 13 51 56.4 -0.9**
comp=Z,5µm,3.1s,SNR=63
ARSA Arzberg 96.28 327 *i* PcP **P 13 51 56.4 -0.9**
comp=Z,5µm,3.1s,SNR=63
ARSA Arzberg 96.28 327 P **P 13 51 56.3 -1.0**
KARP Karpathos 96.35 312 *eP* **P 13 51 56.5 -1.4**
SKO Skopje 96.37 320 *eP* **P 13 51 58.1 +0.3**
SKO Skopje 96.37 320 *eP* **P 13 51 57.9 +0.1**
RRH Rhenigidale 96.38 344⇑ *eP* **P 13 51 56.0 -1.5**
UBBA Unterbreizbach 96.38 332 *eP* **P 13 51 56.6 -1.1**
comp=Z,731nm,1.6s,mb6.7
UBBA *e*SKS 14 02 08.9
UBBA *e*S S 14 02 48.2 -7.0
UBBA *e*PS SP 14 04 10.2 -5.9
UBBA *e*SS SS 14 09 27.5 -5.6
UBBA *e* 14 23 17.9
KAC Achnashellach 96.39 343⇑ *eP* **P 13 51 56.5 -1.0**
GRG Griva 96.39 319 *eP* **P 13 51 56.6 -1.3**
MOA Molln 96.50 328 *i* P **P 13 51 57.5 -0.8**
comp=Z,11µm,6.5s,SNR=53
MOA Molln 96.50 328 *i* PcP **P 13 51 57.5 -0.8**
comp=Z,11µm,6.5s,SNR=53
MOA Molln 96.50 328 P **P 13 51 57.4 -0.9**
AOS Alonnisos 96.51 317 *eP* **P 13 51 56.3 -2.2**
KPL Plockton 96.62 343⇑ *eP* **P 13 51 57.5 -1.1**
KPL AMb AMB 13 52 03.8
comp=Z,1µm,1.5s,mb6.8
APE Apeiranthos 96.62 314 *eP* **P 13 51 56.4 -2.7**
APE Apeiranthos 96.62 314 *eP* **P 13 51 56.3 -2.8**
APE Apeiranthos 96.62 314⇑ *i*P **P 13 51 56.2 -2.9**
APE Apeiranthos 96.62 314⇑ *i*P PKKPdf 14 08 41.4 -0.5
GRA1 Grafenberg Arr 96.65 331 *eP* **P 13 51 58.3 -0.6**
comp=Z,2µm,1.5s,mb7.0
GRA1 *e*pP pP 13 52 57.6 -2.9
GRA1 *e*SKS 14 02 10.9
GRA1 *e*S S 14 02 52.6 -5.0
GRA1 *e*PS SP 14 04 11.9 -7.2
GRA1 *e*SS SS 14 09 30.4 -6.6
GRA1 *e*P'P' 14 16 34.9
GRF Grafenberg Arr 96.65 331 *eP* **P 13 51 58.3 -0.6**
GRF *e* 14 02 10.9
GRF *e*S S 14 02 52.6 -5.0
GRF pmax pmax
comp=Z,2µm,1.5s,mb7.0
GRF Grafenberg Arr 96.65 331 *eP* **P 13 51 58.3 -0.6**
GRF *e* 14 02 10.9
GRF *e*S S 14 02 52.6 -5.0
GRF *e*SS SS 14 09 30.4 -6.6
GRF pmax pmax
comp=Z,2µm,1.5s,mb7.0
GRF Grafenberg Arr 96.65 331 *eP* **P 13 51 58.3 -0.6**
comp=Z,2µm,1.5s,mb7.0
GRF *e*pP pP 13 52 57.6 -2.9
GRF *e*SKS 14 02 10.9
GRF *e*S S 14 02 52.6 -5.0
GRF *e*PS SP 14 04 11.9 -7.2
GRF *e*SS SS 14 09 30.4 -6.6
GRF *e*PKPPKP 14 16 34.9
GRF Grafenberg Arr 96.65 331 *eP* **P 13 51 58.3 -0.6**
comp=Z,2µm,1.5s,mb7.0
GRF *e*pP pP 13 52 57.6 -2.9
GRF *e*SKS 14 02 10.9
GRF *e*S S 14 02 52.6 -5.0
GRF *e*PS SP 14 04 11.9 -7.2
GRF *e*SS SS 14 09 30.4 -6.6
GRFO Grafenberg 96.66 331 *eP* **P 13 55 54.3 -2.0**
GRFO *e*SKS 14 02 10.9
GRFO *e*S S 14 02 52.2 -5.4
GRFO *e*PS SP 14 04 13.4 -5.7
GRFO *e*SS SS 14 09 31.4 -5.6
GRFO *e* 14 23 17.5
KSB Sheil Bridge 96.67 343⇑ *eP* **P 13 51 57.5 -1.4**
AMTX Amarillo 96.76 48 *eP* **P 13 51 59.4 -0.4**
comp=Z,1µm,1.3s,mb6.9
AMTX *e*pP pP 13 53 00.3 -1.0
XOR Xorichti 96.83 317 *eP* **P 13 52 03.6 +3.6**
LIT Litokhoron 96.84 318 *eP* **P 13 51 58.4 -1.6**
KRUS Krusevo 96.84 320 *eP* **P 13 51 59.0 -1.0**
NEO Neokhori 96.85 317 *eP* **P 13 51 57.9 -2.2**
WTSB Winterswijk 96.87 334⇑ *i*P **P 13 51 58.4 -1.5**
comp=Z,538nm,1.9s,mb6.5
SOKA Soboth 96.91 327⇑ *i*P **P 13 51 59.2 -1.0**
comp=Z,3µm,2.3s,mb7.1
SOKA Soboth 96.91 327⇑ *i*PcP **P 13 51 59.2 -1.0**
comp=Z,3µm,2.3s,mb7.1

BCI Bajram Curri 96.94 321 *e*PN P **13 52 00.5 +0.1**
EBH Black Hill 96.97 342⇑ *e*P P **13 51 58.9 -1.4**
ESY Stoneypath 96.99 341⇑ *e*P P **13 51 58.7 -1.6**
BIA Bitola 97.01 319 *e*P P **13 51 56.8 -3.9**
SISC Sisak 97.02 325 P P **13 51 58.7 -2.0**
KAR1 Arisaig 97.04 343⇑ *e*P P **13 51 59.4 -1.1**
SANT Santorini 97.06 314 *e*P P **13 51 57.9 -3.2**
THR1 Thera Island 97.06 314 *e*P P **13 51 58.1 -2.9**
THR3 Thira Island, 97.08 314 *e*P P **13 51 58.4 -2.7**
BUG Bochum--Univer 97.08 334 *e*P P **13 51 59.5 -1.3**
comp=Z,681nm,1.5s,mb6.7
BUG *e*SKS 14 02 11.8
BUG *e*S S 14 02 53.2 -7.9
BUG *e*SS SS 14 09 29.8 -13
THR6 Thira Island, 97.11 314 *e*P P **13 51 58.5 -2.8**
FNA Florina 97.12 319 *e*P P **13 51 59.6 -1.7**
EDI Edinburgh 97.15 341⇑ *e*P P **13 51 59.3 -1.8**
EDI AMb AMB 13 52 09.7
comp=Z,280nm,1.8s,mb6.2
KZN Kozani 97.17 319 *e*P P **13 51 59.6 -1.8**
PUK Puka 97.24 321 *e*PN P **13 52 01.4 -0.3**
XSO Sourhope Farm 97.24 341⇑ *e*P P **13 52 00.2 -1.2**
EBL Broad Law 97.24 341⇑ *e*P P **13 52 00.2 -1.3**
EAB Aberfoyle 97.26 342⇑ *e*P P **13 52 00.1 -1.4**
OBKA Obir 97.27 327⇑ *i*P P **13 52 00.4 -1.3**
comp=Z,7μm,5.7s,SNR=7.8
OBKA Obir 97.27 327⇑ *i*PcP P **13 52 00.4 -1.3**
comp=Z,7μm,5.7s,SNR=7.8
OHR Ohrid 97.27 320 *e*P P **13 52 00.3 -1.6**
OHR Ohrid 97.27 320 *e*P P **13 52 00.1 -1.8**
RJOB Jochberg 97.30 329 *e*P P **13 52 01.3 -0.6**
comp=Z,272nm,0.9s,mb6.5
RJOB *e*pP pP 13 53 00.5 -2.9
RJOB *e*SKS 14 02 12.0
RJOB *e*S S 14 02 57.7 -5.4
RJOB *e*PS SP 14 04 22.1 -4.0
RJOB *e*PKKP PKKPbc 14 08 38.6 -1.8
RJOB *e*SS SS 14 09 37.4 -8.7
RJOB *e* 14 23 14.9
EAU Auchinoon 97.30 342⇑ *e*P P **13 52 00.2 -1.5**
ATH Athens Observa 97.30 316 *e*P P **13 51 59.7 -2.4**
LKR Lokris 97.37 317 *e*P P **13 51 59.8 -2.6**
LKR Lokris 97.37 317 *e*P P **13 51 59.8 -2.7**
THL Klokotos Trika 97.45 318 *e*P P **13 52 00.0 -2.8**
THL Klokotos Trika 97.45 318 *e*P P **13 51 60.0 -2.8**
KBA Koelnbreinsper 97.48 328 *i* P P **13 52 01.3 -1.4**
comp=Z,4μm,3.6s,SNR=15
KBA Koelnbreinsper 97.48 328 *i* PcP P **13 52 01.3 -1.4**
comp=Z,4μm,3.6s,SNR=15
KBA Koelnbreinsper 97.48 328 P P **13 52 01.3 -1.4**
TNS Taunus Mts 97.50 332 *e*P P **13 52 01.9 -0.8**
TNS *e* 13 55 59.6
TNS *e* 14 02 15.1
TNS *e*S S 14 02 58.2 -6.5
TNS pmax pmax
comp=Z,651nm,1.6s,mb6.6
TNS Taunus Mts 97.50 332 *e*P P **13 52 01.9 -0.8**
comp=Z,651nm,1.6s,mb6.6
TNS *e*pP pP 13 53 00.3 -4.0
TNS *e*PP PP 13 55 59.6 -3.0
TNS *e*SKS 14 02 15.1
TNS *e*S S 14 02 58.2 -6.5
TNS *e*SS SS 14 09 37.7 -11
COWI Conover 97.55 33 *e*P P **13 52 03.2 +0.2**
comp=Z,907nm,0.6s,mb7.3
NPS Neapolis 97.57 313 *e*P P **13 52 01.6 -1.7**
KBN Korca 97.57 319 *e*PN P **13 52 02.6 -0.7**
AGG Agios Georgios 97.58 317 *e*P P **13 52 00.8 -2.5**
BOJS Bojanci 97.58 326 *e*P P **13 52 02.2 -1.0**
BOJS *e* 13 52 13.3
BOJS *i* S SKSac 14 02 18.1 +2.1
BOJS *e* 14 03 02.2
LJU Ljubljana 97.59 326 *e*P P **13 52 01.7 -1.6**
LJU *e* 13 56 01.0
LJU *e*S SKSac 14 02 17.1 +1.1
LJU *e* 14 03 01.9
LJU *e* 14 04 27.5
LJU *e* 14 09 47.4
LJU Ljubljana 97.59 326 *e*P P **13 52 01.7 -1.6**
LJU *e* 13 52 09.5
LJU *e*PP PP 13 56 01.0 -2.6
LJU *e*S SKSac 14 02 17.1 +1.1
LJU *e* 14 03 01.9
LJU *e* 14 04 11.2
LJU *e* 14 04 27.5
LJU *e* 14 09 47.4
PGBU Glenifferbraes 97.63 342⇑ *e*P P **13 52 02.1 -1.1**
PGBU AMb AMB 13 52 09.1
comp=Z,1μm,1.5s,mb7.0
MYKA Terra Mystica 97.64 327⇑ *i*P P **13 52 01.7 -1.8**
comp=Z,93μm,4.6s
MYKA Terra Mystica 97.64 327⇑ *i*PcP P **13 52 01.7 -1.8**
comp=Z,93μm,4.6s
EKA Eskdalemuir Ar 97.65 341 PKKPbc PKKPbc 14 08 37.1 -2.6
comp=Z,29nm,0.5s,baz=235,slow=3.2,SNR=12
EKA SKKPbc 14 11 55.8
comp=Z,5.4nm,0.9s,baz=244,slow=2.6,SNR=4.9
EKA PKPPKP 14 16 42.3
comp=Z,6.0nm,0.9s,baz=188,slow=2.4,SNR=5.2
ESK Eskdalemuir 97.68 341⇑ *e*P P **13 52 01.3 -2.1**
ESK AMb AMB 13 52 09.2
comp=Z,544nm,1.4s,mb6.7
ESK Eskdalemuir 97.68 341 *e*P P **13 52 02.2 -1.2**
ESK pmax pmax
comp=Z,362nm,1.3s,mb6.5
ESK Eskdalemuir 97.68 341 *e*P P **13 52 02.2 -1.2**
comp=Z,362nm,1.3s,mb6.5
TIR Tirane 97.68 320 *e*P P **13 52 02.6 -1.1**
TIR Tirane 97.68 320 *e*PN P **13 52 02.7 -1.1**
FUR Furstenfeldbru 97.72 330 *e*P P **13 52 03.0 -0.8**
FUR *e* 14 02 15.9
FUR *e*S S 14 03 02.9 -3.8
FUR *e*PS SP 14 04 24.8 -5.8
FUR *e*SS SS 14 09 49.6 -2.4
FUR pmax pmax
comp=Z,1μm,1.1s,mb7.1
FUR Furstenfeldbru 97.72 330 *e*P P **13 52 03.0 -0.8**
comp=Z,1μm,1.1s,mb7.1
FUR *e*SKS 14 02 15.9
FUR *e*S S 14 03 02.9 -3.8
FUR *e*PS SP 14 04 24.8 -5.8
FUR *e*PKKP PKKPbc 14 08 37.4 -1.8
FUR *e*SS SS 14 09 49.6 -2.4
FUR *e* 14 23 12.3
KSU1 Kansas State U 97.73 42 *e*P P **13 52 02.5 -1.5**
comp=Z,449nm,1.1s,mb6.7
LTK Loutraki 97.76 316 *e*P P **13 52 00.8 -3.4**
XAL Allendale 97.76 340⇑ *e*P P **13 52 01.9 -1.9**
ECK Cauldkaine Hil 97.77 341⇑ *e*P P **13 52 02.6 -1.2**
TOD Tromm 97.80 332 *e*P P **13 52 03.2 -0.9**
DID Didima 97.88 316 *e*P P **13 52 01.1 -3.7**
VOY Vojsko 97.93 327 *e*P P **13 52 02.5 -2.2**
VOY *e* 13 52 06.0
JAVS Javornik 97.93 327 *e*P P **13 52 03.0 -1.8**
JAVS *e* 13 52 07.3
PTCC Patocco-Chiusa 97.94 327 P P **13 52 02.7 -2.1**
EVR Evrytania 97.97 317 *e*P P **13 52 03.2 -1.9**
IDI Anoyia 98.05 313 P P **13 52 03.6 -1.9**
comp=Z,42nm,0.5s,mb6.0,baz=22,slow=9.3,SNR=30
IDI PP PP 13 56 11.9 +4.4
comp=Z,64nm,0.7s,baz=106,slow=3.4,SNR=3.0
IDI S SKSac 14 02 13.2 -5.6
comp=Z,81nm,1.1s,baz=12,slow=5.7,SNR=4.0
IDI PKKPbc PKKPbc 14 08 40.4 +2.5
comp=Z,76nm,0.6s,baz=242,slow=4.9,SNR=20
IDI PKPPKP 14 16 53.4
comp=Z,9.9nm,0.3s,baz=326,slow=13,SNR=6.9
SCIA State Center 98.06 39 *e*P P **13 52 05.1 -0.3**
comp=Z,210nm,0.8s,mb6.5
GMNA Gemona 98.09 327 P P **13 52 04.2 -1.3**
JAN Janina 98.12 319 *e*P P **13 52 04.9 -0.9**
ABTA Abfaltersbach 98.12 328⇓ *i*P P **13 52 03.8 -1.9**
comp=Z,3μm,4.0s,SNR=34
ABH Alteburg 98.14 333 *e*P P **13 52 04.5 -1.1**
HGN Heimansgroeve 98.14 334⇑ *e*P P **13 52 04.1 -1.5**
HGN Heimansgroeve 98.14 334⇑ *i*P P **13 52 04.3 -1.3**
comp=Z,453nm,2.3s,mb6.4
HGN Heimansgroeve 98.14 334 *e*PP PP 13 56 05.7 -1.9
HGN Heimansgroeve 98.14 334 *e*S S 14 03 01.9 -8.3
HGN Heimansgroeve 98.14 334 *e*PPS SP 14 04 31.4 -3.7
HGN Heimansgroeve 98.14 334 *e*SS SS 14 09 47.3 -10
WATA Walderalm 98.17 329⇓ *i*P P **13 52 04.6 -1.2**
comp=Z,327nm,1.9s,mb6.3
WTTA Wattenberg 98.19 329 *i* P P **13 52 04.8 -1.1**
comp=Z,8μm,5.4s,SNR=42
BEBN Eben Emael 98.22 334 P P **13 52 04.8 -1.2**
comp=Z,123nm,1.9s,mb5.9
MEM Membach 98.23 334 P P **13 52 04.7 -1.3**
comp=Z,158nm,1.8s,mb6.0
TXAR Lajitas Array 98.23 54 P P **13 52 06.2 -0.3**
comp=Z,161nm,1.0s,mb6.3,baz=296,slow=2.6,SNR=217
TXAR pP pP 13 53 06.7 -1.4
comp=Z,22nm,0.8s,baz=270,slow=3.6,SNR=0.9
TXAR PP PP 13 56 15.8 +6.6
comp=Z,66nm,1.1s,baz=270,slow=4.4,SNR=4.3
TXAR S SKSac 14 02 16.4 -3.5
comp=Z,8.6nm,1.0s,baz=273,slow=4.8,SNR=2.2
TXAR PKKPbc PKKPbc 14 08 37.6 +0.5
comp=Z,28nm,0.8s,baz=135,slow=4.1,SNR=27
TXAR PKPPKP 14 16 34.4
comp=Z,7.0nm,1.1s,baz=151,slow=2.9,SNR=5.1
TXAR Lajitas Array 98.23 54 P P **13 52 06.2 -0.3**
TXAR *PP pP 13 53 06.7 -1.4
TXAR 13 56 15.8
TXAR S SKSac 14 02 16.4 -3.5
TXAR Lajitas Array 98.23 54 P P **13 52 06.2 -0.3**
TXAR pP pP 13 53 06.7 -1.4
TXAR PP PP 13 56 15.8 +6.6
TXAR S SKSac 14 02 16.4 -3.5
TXAR PKKPbc PKKPbc 14 08 37.6 +0.5
TXAR P'P' 14 16 34.4
STU Stuttgart 98.24 331 *e*P P **13 52 04.8 -1.3**
STU pmax pmax
comp=Z,925nm,1.4s,mb6.9
STU Stuttgart 98.24 331 *e*P P **13 52 05.1 -1.0**
comp=Z,1μm,1.6s,mb7.0
STU *e*SKS 14 02 17.4
STU *e*S S 14 03 05.0 -6.1
STU *e*PS SP 14 04 29.1 -7.1
STU *e*SS SS 14 09 54.9 -4.2
STU *e* 14 23 10.4
STU Stuttgart 98.24 331 *e*P P **13 52 04.8 -1.2**
comp=Z,925nm,1.4s,mb6.9
SIVA Sivas 98.25 313 *e*P P **13 52 05.4 -1.0**
KTD Kalmit 98.32 332 *e*P P **13 52 05.3 -1.1**
HPK Haverah Park 98.33 340⇓ *e*P P **13 52 05.4 -1.0**
HPK AMb AMB 13 52 12.4
comp=Z,952nm,1.4s,mb6.9
MOTA Moosalm 98.39 329 *i* P P **13 52 05.4 -1.4**
comp=Z,222nm,1.5s,mb6.3,SNR=20
MOTA Moosalm 98.39 329 P P **13 52 05.3 -1.5**
NVLJ Novalja 98.41 325 P P **13 52 05.2 -1.7**
RETA Reutte 98.44 329 *i* P P **13 52 06.0 -1.0**
comp=Z,3μm,2.7s,mb7.2,SNR=35
VAM Vamos 98.45 313 *e*P P **13 52 07.0 -0.4**
AEU East Anglia Un 98.47 337 *e*P P **13 52 06.4 -0.6**
RUP Ruppelstein 98.48 333 *e*P P **13 52 06.3 -0.8**
SRN Sarande 98.50 319 *e*PN P **13 52 06.3 -1.2**
GAL1 Galloway 98.51 342⇓ *e*P P **13 52 05.5 -1.7**
GAL1 AMb AMB 13 52 12.8
comp=Z,643nm,1.5s,mb6.7
IGT Igoumenitsa 98.51 319 *e*P P **13 52 06.0 -1.5**
VLX Vlachokerasia 98.52 316 *e*P P **13 52 05.3 -2.2**
BCLA Clavier 98.66 334 P P **13 52 06.7 -1.2**
comp=Z,201nm,1.8s,mb6.2
RLS Riolos of Patr 98.69 317 *e*P P **13 52 07.2 -1.2**
LANF Langenberg 98.70 332 *e*P P **13 52 07.2 -0.9**
KEK Kerkira 98.73 319 *e*P P **13 52 07.5 -0.9**
UCC Uccle 98.75 335 P P **13 52 07.1 -1.2**
comp=Z,290nm,2.2s,mb6.2
LHO Holmfirth 98.76 340⇓ *e*P P **13 52 07.0 -1.3**
FETA Feichten 98.80 329 *i* P P **13 52 07.5 -1.1**
comp=Z,6μm,6.4s,SNR=36
LKD Levkas 98.82 318 *e*P P **13 52 07.6 -1.3**
WMOK Wichita Mounta 98.83 47 *e*P P **13 52 08.0 -1.0**
WMOK pmax pmax
comp=Z,871nm,1.0s,mb7.0
WMOK Wichita Mounta 98.83 47 *e*Pdif P **13 52 08.0 -1.0**
comp=Z,870nm,1.0s,mb7.0
WLF Walferdange 98.89 333 P Pdif 13 52 08.5 -0.4
comp=Z,525nm,2.0s
WLF Walferdange 98.89 333 *e*P Pdif 13 52 08.4 -0.6
WLF *e* 13 56 14.1
WLF pmax pmax
comp=Z,709nm,1.3s,mb6.8
WLF Walferdange 98.89 333 *e*P Pdif 13 52 08.4 -0.6
comp=Z,1μm,1.5s
WLF *e*SKS 14 02 21.2
WLF *e*S S 14 03 10.8 -5.7
WLF *e*PKKP PKKPbc 14 08 34.8 -1.3
WLF Walferdange 98.89 333 *e*Pdif Pdif 13 52 08.4 -0.6
comp=Z,709nm,1.3s
WLF *e*PP PP 13 56 14.1 +0.9
KBI1 Birley Grange 98.89 339⇑ *e*P Pdif 13 52 07.5 -1.5
SPAK Spaichingen-Ko 98.91 331 *e*P Pdif 13 52 07.9 -1.2
ITM Ithomi 98.92 316 *e*P Pdif 13 52 07.8 -1.3
APPI Appiano 98.94 328 P Pdif 13 52 13.0 +3.8
BFO Black Forest 98.95 331 *e*P Pdif 13 52 08.2 -1.0
BFO *e*S S 14 03 08.3 -8.8
BFO *e*PS SP 14 04 39.7 -4.2
BFO *e*SS SS 14 10 05.8 -3.3
BFO pmax pmax
comp=Z,530nm,1.3s,mb6.7
BFO Black Forest 98.95 331 *e*P Pdif 13 52 08.2 -1.0
comp=Z,530nm,1.3s
BFO *e*pP pP 13 53 06.4 -4.5
BFO *e*S S 14 03 08.3 -8.8
BFO *e*PS SP 14 04 39.7 -4.2
BFO *e*PKKP PKKPbc 14 08 33.9 -2.0
BFO *e*SS SS 14 10 05.8 -3.3
BFO *e* 14 23 06.3
SNF Seneffe 99.00 335 P Pdif 13 52 08.2 -1.2
comp=Z,220nm,2.1s
DAVA Damuels 99.01 330 *i* P Pdif 13 52 08.5 -0.9
comp=Z,4μm,2.9s,SNR=40
DAVA Damuels 99.01 330 P Pdif 13 52 08.5 -1.0
STR Strasbourg 99.01 332 *e*P Pdif 13 52 05.2 -4.3
CTI Castel Tesino 99.04 328 P Pdif 13 52 07.9 -1.7
JFWS Jewell Farm 99.09 36 *e*P Pdif 13 52 08.1 -1.7
JFWS pmax pmax
comp=Z,2μm,2.5s,mb6.9
JFWS Jewell Farm 99.09 36 *e*Pdif Pdif 13 52 08.1 -1.7
comp=Z,2μm,2.5s
KFL Anninata 99.09 317 *e*P Pdif 13 52 08.4 -1.4
GIVF Givet 99.10 334⇑ *i*P Pdif 13 52 08.7 -1.2
comp=Z,451nm,1.2s
GIVF Givet 99.10 334⇑ *i*P Pdif 13 52 08.7 -1.2
GIVF pmax pmax
comp=Z,226nm,1.2s,mb6.4
GIVF Givet 99.10 334⇑ *i*P Pdif 13 52 08.7 -1.2
comp=Z,226nm,1.2s
WIM Isle of Man 99.12 341⇑ *e*P Pdif 13 52 09.2 -0.8
VLS Valsamata 99.18 317 *e*P Pdif 13 52 09.0 -1.2
VLS Valsamata 99.18 317 *e*P Pdif 13 52 09.2 -1.0
KWE Weaver Farm 99.20 339 *e*P Pdif 13 52 09.1 -1.2
DOU Dourbes 99.20 334 P Pdif 13 52 09.1 -1.3
comp=Z,157nm,2.2s
PYL PYLOS 99.21 316 *e*P Pdif 13 52 08.4 -2.0
CWF Charnwood Fore 99.25 339⇑ *e*P Pdif 13 52 09.1 -1.5
CWF AMb AMB 13 52 16.1
comp=Z,900nm,1.5s,mb6.9
STNC Stoke 99.25 339⇑ *e*P Pdif 13 52 09.7 -0.8
STNC AMb AMB 13 52 16.6
comp=Z,604nm,1.5s,mb6.7
BRMO Bormio 99.36 329 P Pdif 13 52 13.6 +2.6
CDF Champ du Feu 99.36 332⇑ *i*P Pdif 13 52 10.2 -0.8
comp=Z,923nm,1.3s
CDF Champ du Feu 99.36 332⇑ *i*P Pdif 13 52 10.2 -0.8
CDF pmax pmax
comp=Z,462nm,1.3s,mb6.7
CDF Champ du Feu 99.36 332⇑ *i*P Pdif 13 52 10.2 -0.8
comp=Z,462nm,1.3s
DAVOS Davos 99.37 329 P Pdif 13 52 10.2 -0.9
DAVOS 13 56 18.4
DAVOX Davos/Dischmat 99.37 329 P Pdif 13 52 10.2 -0.9
comp=Z,78nm,0.8s,baz=59,slow=5.3,SNR=25
DAVOX PP PP 13 56 18.4 +1.4
comp=Z,53nm,0.8s,baz=30,slow=8.8,SNR=4.7
BAIF Baives 99.39 334⇑ *i*P Pdif 13 52 10.0 -1.1
comp=Z,342nm,1.2s
BAIF Baives 99.39 334⇑ *i*P Pdif 13 52 10.0 -1.1
BAIF pmax pmax
comp=Z,171nm,1.2s,mb6.2
BAIF Baives 99.39 334⇑ *i*P Pdif 13 52 10.0 -1.1
comp=Z,171nm,1.2s
SCHQ Schefferville 99.39 17 P Pdif 13 52 10.3 -0.9
comp=Z,35nm,0.8s,baz=343,slow=4.5,SNR=17
SCHQ PKKPbc PKKPbc 14 08 27.1 -7.8
comp=Z,19nm,0.8s,baz=110,slow=1.5,SNR=5.6
SCHQ PKKP PKKPbc 14 08 35.3 +0.4
comp=Z,77nm,1.1s,baz=197,slow=2.0,SNR=5.4
SCHQ SKKPbc 14 11 51.9
comp=Z,10.0nm,0.7s,baz=47,slow=2.3,SNR=3.9
SCHQ PKPPKP 14 16 45.8
comp=Z,25nm,1.0s,baz=312,slow=1.6,SNR=6.3
SCHQ Schefferville 99.39 17 P Pdif 13 52 10.3 -0.9
SCHQ PKKPbc PKKPbc 14 08 27.1 -7.8
SCHQ PKKP PKKPbc 14 08 35.3 +0.4
SCHQ SKKPbc 14 11 51.9
SCHQ P'P' 14 16 45.8
LIBD Limburg 99.41 331 *e*P Pdif 13 52 10.5 -0.8
FELD Feldberg im Sc 99.44 331 *e*P Pdif 13 52 10.0 -1.4
FURI Furi 99.50 284 *e*P Pdif 13 52 13.3 +1.7
FURI S PP 13 56 17.8 -1.7
ECH Echery 99.56 332 *e*P Pdif 13 52 10.4 -1.5
MABI Malga Bissina 99.59 328 P Pdif 13 52 10.8 -1.3
WPM1 Penmaenmawr 99.65 340⇑ *e*P Pdif 13 52 11.0 -1.3
WME Myndd Eilian 99.66 341⇑ *e*P Pdif 13 52 10.8 -1.5
FGMS Monte Sant'Ang 99.72 323 P Pdif 13 52 12.0 -0.6
TFO1 Folkestone 99.73 337⇑ *e*P Pdif 13 52 11.6 -1.0
TFO1 AMb AMB 13 52 17.7
comp=Z,909nm,1.4s,mb7.0
WLF1 Llynfaes 99.78 341⇑ *e*P Pdif 13 52 11.2 -1.6
MENF Mencas 99.79 336 *e*P Pdif 13 52 08.7 -4.3
SGRT San Giovanni R 99.81 323 P Pdif 13 52 16.5 +3.5
YLL Llanberis 99.83 340⇑ *e*P Pdif 13 52 11.7 -1.5
MOF Molkenrain 99.84 331 *e*P Pdif 13 52 11.8 -1.4
TUE Stuetta 99.85 329 *e*Pdif Pdif 13 52 12.2 -1.0
comp=Z,121nm,0.8s
YRC Rhoscolyn 99.86 341⇑ *e*P Pdif 13 52 11.9 -1.4
PESA Pesaro 99.91 326 P Pdif 13 52 14.8 +1.3
RGNG Rignano Grg 99.95 323 P Pdif 13 52 13.1 -0.5
BBS Basel-Blauen 99.97 331 *e*P Pdif 13 52 12.5 -1.2
HINF Hinteralfeld 99.99 332⇑ *i*P Pdif 13 52 12.7 -1.2
comp=Z,338nm,1.2s
HINF Hinteralfeld 99.99 332⇑ *i*P Pdif 13 52 12.7 -1.2
HINF pmax pmax
comp=Z,169nm,1.2s,mb6.3
HINF Hinteralfeld 99.99 332⇑ *i*P Pdif 13 52 12.7 -1.2
comp=Z,169nm,1.2s
YRE Yr Eifl 100.05 341⇑ *e*P Pdif 13 52 12.8 -1.3
THEF They Montfort 100.06 332 *e*P Pdif 13 52 13.2 -0.9
HAU Haudompre 100.07 332⇑ *i*P Pdif 13 52 13.0 -1.2
comp=Z,995nm,1.6s
HAU *e*MLR MLR
comp=Z,95μm,21.5s
HAU Haudompre 100.07 332⇑ *i*P Pdif 13 52 13.0 -1.2
HAU pmax pmax
comp=Z,497nm,1.6s
HAU MLR MLR
comp=Z,95μm,21.5s
HAU Haudompre 100.07 332⇑ *i*P Pdif 13 52 13.0 -1.2
comp=Z,497nm,1.6s
HAU LR LR
comp=Z,95μm,21.5s
FSSB Fossombrone 100.11 326 P Pdif 13 52 13.6 -0.8
FIU Minerbio Fiu 100.11 327 P Pdif 13 52 15.8 +1.4
RSM Repubblica di 100.12 326 P Pdif 13 52 14.8 +0.4
OFFI Offida 100.15 325 P Pdif 13 52 15.1 +0.6
MEZF Maizieres J'vi 100.25 333⇑ *i*P Pdif 13 52 14.5 -0.5
comp=Z,643nm,1.0s
MEZF Maizieres J'vi 100.25 333⇑ *i*P Pdif 13 52 14.5 -0.5
comp=Z,643nm,1.0s
SNTG Esanatoglia 100.33 325 P Pdif 13 52 15.1 -0.2
CIGN Sant'Elia a Pi 100.34 323 P Pdif 13 52 15.4 0.0
PIEI Pieia 100.35 326 P Pdif 13 52 15.5 +0.1
LOMF Lomont 100.36 331 *e*P Pdif 13 52 14.3 -1.2
FG5 Orsara di Pugl 100.39 323 P Pdif 13 52 15.9 +0.3
DSB Dublin 100.41 342 *e*Pdif Pdif 13 52 14.1 -1.6
comp=Z,132nm,1.1s
DSB *e*PP PP 13 56 22.6 -1.9
DLF Lyons Farm 100.41 342⇑ *i*P Pdif 13 52 14.4 -1.3
DLF Lyons Farm 100.41 342⇓ *i*P SP 14 04 56.5 -2.6
DLF Lyons Farm 100.41 342⇓ *i*P PKKPbc 14 08 28.7 -3.3
WOL Wolverton 100.41 338⇑ *e*P Pdif 13 52 14.2 -1.5
WOL AMb AMB 13 52 20.7
comp=Z,701nm,1.4s
PTRP Pietrapertosa 100.43 322 P Pdif 13 52 16.2 +0.4
MCH1 Michaelchurch 100.44 339⇑ *e*P Pdif 13 52 14.6 -1.2
MCH1 AMb AMB 13 52 21.0
comp=Z,559nm,1.4s
SWN1 Swindon 100.44 338⇑ *e*P Pdif 13 52 13.6 -2.3
SWN1 AMb AMB 13 52 22.0
comp=Z,1μm,1.4s
SFI Santa Sofia 100.45 326 P Pdif 13 52 15.4 -0.5
JCT Junction City 100.47 51 *e*P Pdif 13 52 15.4 -0.6
JCT *e* 13 56 27.1
JCT pmax pmax
comp=Z,397nm,1.2s
JCT Junction City 100.47 51 *e*Pdif Pdif 13 52 15.4 -0.5
comp=Z,397nm,1.2s
JCT *e*PP PP 13 56 27.1 +1.0
ORI Oriolo Calabro 100.50 321 P Pdif 13 52 14.0 -2.1
BADI Badiali 100.52 326 P Pdif 13 52 16.3 +0.1
NRCA Norcia 100.52 325 P Pdif 13 52 16.1 -0.1
CDCA Citt' di Caste 100.56 326 P Pdif 13 52 16.8 +0.4
VMG Vicchio 100.56 326 P Pdif 13 52 16.2 -0.2
VAI Varese 100.57 329 P Pdif 13 52 14.7 -1.7
ZCCA Zocca 100.58 327 P Pdif 13 52 17.2 +0.8
DCN Croghan 100.58 342⇑ *i*P Pdif 13 52 15.3 -1.2
DCN Croghan 100.58 342⇓ *i*P SP 14 04 58.6 -2.3
DCN Croghan 100.58 342⇓ *i*P PKKPbc 14 08 28.3 -3.2
SEI Scarperia 100.59 327 P Pdif 13 52 16.9 +0.4
FNVD Fontana Vidola 100.63 327 P Pdif 13 52 20.7 +4.0
SBA Scott Base 100.64 175 *e*P Pdif 13 52 16.6 -0.1
SBA pmax pmax
comp=Z,8μm,0.8s
SBA Scott Base 100.64 175 *e*Pdif Pdif 13 52 16.6 -0.1
comp=Z,8μm,0.8s
PSB1 Pescosannita 100.68 323 P Pdif 13 52 16.5 -0.4
AQU L'Aquila 100.70 324 P Pdif 13 52 17.2 +0.2
MIDA Miranda 100.71 323 P Pdif 13 52 17.0 0.0
GLMI Grayling 100.71 32 *e*Pdif Pdif 13 52 20.1 +3.1
comp=Z,290nm,1.1s
RNI2 Rionero Sannit 100.73 323 P Pdif 13 52 17.5 +0.4
GSCL Gusciola 100.77 327 P Pdif 13 52 18.1 +0.8
CSSN Cassano Irpino 100.80 322 P Pdif 13 52 17.6 +0.2
SGO Sicignano 100.84 322 P Pdif 13 52 17.2 -0.4
TIP Timpagrande 100.89 320 P Pdif 13 52 18.2 +0.3
VVLD Villa Vallelon 100.91 324 P Pdif 13 52 17.8 -0.1
SDI San Donato 100.91 324 P Pdif 13 52 17.3 -0.6
CUC Castrocucco 100.92 321 *e*Pdif Pdif 13 52 16.5 -1.4
comp=Z,421nm,1.0s
PTQR Pietraquaria 100.92 324 P Pdif 13 52 17.7 -0.3
VLC Villacollemand 101.01 327 *e*Pdif Pdif 13 52 22.0 +3.6
comp=Z,158nm,1.0s
VLC *e* 13 56 30.9
BOB Bobbio (Coli) 101.04 328 P Pdif 13 52 17.7 -0.8
RFI Roccamonfina 101.09 323 P Pdif 13 52 19.4 +0.7
ORO Oropa 101.11 329 P Pdif 13 52 17.2 -1.6
HDIL Hopedale 101.19 38 *e*Pdif Pdif 13 52 17.8 -1.4
comp=Z,68nm,0.6s
HDIL *e*PP PP 13 56 27.1 -3.8
HDIL *e*PKPdif PKiKP 13 56 39.8 -3.0
CABF La Chapelle 101.25 331⇑ *i*P Pdif 13 52 18.6 -0.8
comp=Z,604nm,1.6s
CABF La Chapelle 101.25 331⇑ *i*P Pdif 13 52 18.6 -0.8
CABF pmax pmax
comp=Z,302nm,1.6s
CABF La Chapelle 101.25 331⇑ *i*P Pdif 13 52 18.6 -0.8
comp=Z,302nm,1.6s
PII Pisa 101.25 327 P Pdif 13 52 21.2 +1.7
GRI Girifalco 101.33 320 P Pdif 13 52 20.3 +0.5
GRFL Gerfalco 101.43 326 P Pdif 13 52 21.3 +1.1
OPO Ambohidratompo 101.69 255 P Pdif 13 52 20.8 -0.6
comp=Z,131nm,1.1s,baz=69,slow=4.1,SNR=3.3
OPO PP PP 13 56 38.6 +2.5
comp=Z,31nm,1.0s,baz=67,slow=7.6,SNR=4.0
OPO PKKPbc PKKPbc 14 08 31.2 +3.9
comp=Z,46nm,0.9s,baz=235,slow=2.7,SNR=15
LOR Lormes 101.71 333⇑ *i*P Pdif 13 52 20.5 -1.0
comp=Z,804nm,1.5s
LOR *e*MLR MLR
comp=Z,68μm,18.8s
LOR Lormes 101.71 333⇑ *i*P Pdif 13 52 20.5 -1.0
LOR pmax pmax
comp=Z,402nm,1.5s
LOR MLR MLR
comp=Z,68μm,18.8s
LOR Lormes 101.71 333⇑ *i*P Pdif 13 52 20.5 -1.0
comp=Z,402nm,1.5s

LOR LR LR
comp=Z,68µm,18.8s
HTL Hartland 101.78 340⇑ *e*P Pdif 13 52 20.8 -1.0
HTL AMb AMB 13 52 27.2
comp=Z,251nm,1.2s
LPL La Plagne 101.78 330⇑ *i*P Pdif 13 52 21.2 -0.6
comp=Z,195nm,0.9s
LPL La Plagne 101.78 330⇑ *i*P Pdif 13 52 21.2 -0.6
LPL pmax pmax
comp=Z,97nm,0.9s
LPL La Plagne 101.78 330⇑ *i*P Pdif 13 52 21.2 -0.6
comp=Z,97nm,0.9s
LPG La Plagne 101.79 330⇑ *i*P Pdif 13 52 21.3 -0.5
comp=Z,320nm,1.0s
LPG La Plagne 101.79 330⇑ *i*P Pdif 13 52 21.3 -0.5
LPG pmax pmax
comp=Z,160nm,1.0s
LPG La Plagne 101.79 330⇑ *i*P Pdif 13 52 21.3 -0.5
comp=Z,160nm,1.0s
ABPO Ambohimpanom 101.80 254 *e*Pdif Pdif 13 52 22.1 +0.2
comp=Z,483nm,1.1s
ABPO *e*PP PP 13 56 34.3 -2.6
SLAT Slait 101.81 293 *i*P Pdif 13 52 14.5 -7.4
SLAT *i*S SKSac 14 02 28.3 -9.4
SLAT AMS AMS 14 06 39.0
comp=N,11µm,20.0s
SLM Saint Louis 101.91 40 *e*P Pdif 13 52 22.6 +0.2
SLM pmax pmax
comp=Z,122nm,1.1s
SLM Saint Louis 101.91 40 *e*Pdif Pdif 13 52 22.6 +0.2
comp=Z,122nm,1.1s
CEL Celeste 102.00 320 *e*Pdif Pdif 13 52 23.2 +0.5
comp=Z,701nm,0.9s
SSF Saint Saulge 102.03 333⇑ *i*P Pdif 13 52 22.0 -0.9
comp=Z,598nm,1.4s
SSF Saint Saulge 102.03 333⇑ *i*P Pdif 13 52 22.0 -0.9
SSF pmax pmax
comp=Z,299nm,1.4s
SSF Saint Saulge 102.03 333⇑ *i*P Pdif 13 52 22.0 -0.9
comp=Z,299nm,1.4s
SOI Samo 102.03 320 P Pdif 13 52 23.2 +0.3
FIN Finale Ligure 102.05 328 P Pdif 13 52 22.0 -1.0
SCLL Scilla 102.11 320 P Pdif 13 52 23.3 0.0
BNI Bardonecchia 102.16 330 *e*P Pdif 13 52 23.2 -0.3
BNI pmax pmax
comp=Z,83nm,0.9s
BNI Bardonecchia 102.16 330 *e*Pdif Pdif 13 52 23.2 -0.3
comp=Z,83nm,0.9s
SMF Signal de Mont 102.21 332⇑ *i*P Pdif 13 52 22.8 -0.9
comp=Z,790nm,1.4s
SMF Signal de Mont 102.21 332⇑ *i*P Pdif 13 52 22.8 -0.9
SMF pmax pmax
comp=Z,395nm,1.4s
SMF Signal de Mont 102.21 332⇑ *i*P Pdif 13 52 22.8 -0.9
comp=Z,395nm,1.4s
FVM French Village 102.22 40 *e*P Pdif 13 52 22.4 -1.3
FVM pmax pmax
comp=Z,47nm,1.0s
FVM French Village 102.22 40 *e*Pdif Pdif 13 52 22.4 -1.3
comp=Z,62nm,1.0s
HYF Humbligny 102.22 333⇑ *i*P Pdif 13 52 23.5 -0.3
FLN La Foliniere 102.25 336⇑ *i*P Pdif 13 52 22.9 -1.0
comp=Z,622nm,1.6s
FLN *e*MLR MLR
comp=Z,105µm,22.2s
FLN La Foliniere 102.25 336⇑ *i*P Pdif 13 52 22.9 -1.0
FLN pmax pmax
comp=Z,311nm,1.6s
FLN MLR MLR
comp=Z,105µm,22.3s
FLN La Foliniere 102.25 336⇑ *i*P Pdif 13 52 22.9 -1.0
comp=Z,311nm,1.6s
FLN LR LR
comp=Z,105µm,22.3s
LDF La Druitiere 102.26 336⇑ *i*P Pdif 13 52 22.9 -1.0
comp=Z,575nm,1.5s
LDF La Druitiere 102.26 336⇑ *i*P Pdif 13 52 22.9 -1.0
LDF pmax pmax
comp=Z,288nm,1.5s
LDF La Druitiere 102.26 336⇑ *i*P Pdif 13 52 22.9 -1.0
comp=Z,288nm,1.5s
JAWL J.Aulia 102.26 292 *i*P Pdif 13 52 15.7 -8.3
JAWL *i*S SKSac 14 02 31.1 -8.8
JAWL AMS AMS 14 03 16.2
comp=E,10µm,18.9s
AVF Avril sur Loir 102.30 333⇑ *i*P Pdif 13 52 23.3 -0.8
comp=E,639nm,1.2s
AVF Avril sur Loir 102.30 333⇑ *i*P Pdif 13 52 23.3 -0.8
AVF pmax pmax
comp=Z,320nm,1.2s
AVF Avril sur Loir 102.30 333⇑ *i*P Pdif 13 52 23.3 -0.8
comp=Z,320nm,1.2s
MBDF Montbardon 102.36 330⇑ *i*P Pdif 13 52 22.8 -1.6
comp=Z,129nm,0.7s
MBDF Montbardon 102.36 330⇑ *i*P Pdif 13 52 22.8 -1.6
MBDF pmax pmax
comp=Z,64nm,0.7s
MBDF Montbardon 102.36 330⇑ *i*P Pdif 13 52 22.8 -1.6
comp=Z,64nm,0.7s
MIAR Mount Ida 102.41 45 *e*P Pdif 13 52 23.4 -1.2
MIAR *e* 13 56 39.3
MIAR pmax pmax
comp=Z,788nm,1.1s
MIAR Mount Ida 102.41 45 *e*Pdif Pdif 13 52 23.4 -1.3
comp=Z,788nm,1.1s
MIAR *e*PP PP 13 56 39.3 -1.0
IMI Imperia 102.43 328 P Pdif 13 52 27.4 +2.7
CSA1 St Austell 102.46 339 *e*P Pdif 13 52 24.0 -0.8
JQE Queens East 102.46 337 *e*P Pdif 13 52 23.9 -0.9
SAOF Saorge 102.53 329 *e*P Pdif 13 52 23.4 -1.8
AUTN L'Aution 102.59 329 *e*P Pdif 13 52 23.5 -1.9
ORIF Oris-en-Rattie 102.63 330⇑ *i*P Pdif 13 52 24.8 -0.8
comp=Z,91nm,0.8s
ORIF *e*MLR MLR
comp=Z,124µm,20.5s
ORIF Oris-en-Rattie 102.63 330⇑ *i*P Pdif 13 52 24.8 -0.8
ORIF pmax pmax
comp=Z,45nm,0.8s
ORIF Oris-en-Rattie 102.63 330⇑ *i*P Pdif 13 52 24.8 -0.8
comp=Z,45nm,0.8s
TOUF Mont Tournerai 102.66 329 *e*P Pdif 13 52 23.8 -1.9
SBF Sospel 102.69 329 *e*P Pdif 13 52 25.2 -0.6
comp=Z,249nm,0.8s
SBF Sospel 102.69 329 *e*P Pdif 13 52 25.2 -0.6
SBF pmax pmax
comp=Z,125nm,0.8s
SBF Sospel 102.69 329 *e*P Pdif 13 52 25.2 -0.6
comp=Z,125nm,0.8s
BGF Bois d'Agland 102.70 333⇑ *i*P Pdif 13 52 25.1 -0.8
comp=Z,432nm,1.5s
BGF Bois d'Agland 102.70 333⇑ *i*P Pdif 13 52 25.1 -0.8
BGF pmax pmax
comp=Z,216nm,1.5s
BGF Bois d'Agland 102.70 333⇑ *i*P Pdif 13 52 25.1 -0.8
comp=Z,216nm,1.5s
GRR Gorron 102.70 336⇑ *i*P Pdif 13 52 25.0 -0.9
comp=Z,737nm,1.5s
GRR Gorron 102.70 336⇑ *i*P Pdif 13 52 25.0 -0.9
GRR pmax pmax
comp=Z,369nm,1.5s
GRR Gorron 102.70 336⇑ *i*P Pdif 13 52 25.0 -0.9
comp=Z,369nm,1.5s
LUCF Luceram 102.71 329 *e*P Pdif 13 52 24.3 -1.6
CCA1 Carmmenellis 102.72 340 *e*P Pdif 13 52 24.7 -1.3
MVIF Mont Vial 102.80 329 *e*P Pdif 13 52 24.3 -2.0
REVF Revere 102.81 328 *e*P Pdif 13 52 23.8 -2.6
PLDF La Plantade 102.83 332 *e*P Pdif 13 52 25.6 -0.9
SSB Saint Sauveur 102.96 331 *e*P Pdif 13 52 25.4 -1.6
CORF Corte 102.98 327 *e*P Pdif 13 52 26.3 -0.8
AGO Saint Agoulin 102.98 332 *e*P Pdif 13 52 25.6 -1.5
CALN Calern 103.03 329 *e*P Pdif 13 52 24.9 -2.5
UALR University of 103.07 44 *e*Pdif Pdif 13 52 27.6 +0.1
comp=Z,61nm,1.3s
OLIL Olney 103.09 38 *e*Pdif Pdif 13 52 27.7 +0.1
comp=Z,65nm,0.9s
SIUC Southern Illin 103.11 40 *e*Pdif Pdif 13 52 30.1 +2.4
comp=Z,60nm,0.8s
TCF Toulx Ste Croi 103.18 333⇑ *i*P Pdif 13 52 27.5 -0.5
VIVF Saint-Julien-l 103.23 331⇑ *i*P Pdif 13 52 27.3 -0.9
comp=Z,495nm,1.6s
VIVF Saint-Julien-l 103.23 331⇑ *i*P Pdif 13 52 27.3 -0.9
VIVF pmax pmax
comp=Z,248nm,1.6s
VIVF Saint-Julien-l 103.23 331⇑ *i*P Pdif 13 52 27.3 -0.9
comp=Z,248nm,1.6s
PYM Petit Puy Mans 103.27 332 *e*P Pdif 13 52 26.8 -1.6

FRF La Foret Royal 103.29 329⇑ *i*P Pdif 13 52 27.0 -1.5
comp=Z,139nm,1.0s
FRF La Foret Royal 103.29 329⇑ *i*P Pdif 13 52 27.0 -1.5
FRF pmax pmax
comp=Z,70nm,1.0s
FRF La Foret Royal 103.29 329⇑ *i*P Pdif 13 52 27.0 -1.5
comp=Z,70nm,1.0s
STOF St-Etienne Org 103.31 329 *e*P Pdif 13 52 27.1 -1.5
SADO Sadowa 103.35 29 Pdiff Pdif 13 52 26.6 -2.2
SADO PKKP PKKPbc 14 08 27.4 +4.1
NATX Nacogdoches 103.36 48 *e*Pdif Pdif 13 52 29.2 +0.4
comp=Z,235nm,1.4s
VAE Valguarnera 103.40 320 Pdiff Pdif 13 52 27.4 -1.6
comp=Z,6.5nm,0.3s,baz=170,slow=5.8,SNR=2.6
VAE PKKPbc PKKPbc 14 08 22.3 -0.4
comp=Z,75nm,1.0s,baz=357,slow=4.1,SNR=7.8
VAE Valguarnera 103.40 320 Pdif Pdif 13 52 27.4 -1.6
VAE PKKPbc PKKPbc 14 08 22.3 -0.5
OSPF L'Ospedale 103.42 326 *e*P Pdif 13 52 31.8 +2.7
SGMF Saint Gilles 103.44 337⇑ *i*P Pdif 13 52 28.5 -0.7
comp=Z,168nm,1.1s
SGMF Saint Gilles 103.44 337⇑ *i*P Pdif 13 52 28.5 -0.7
SGMF pmax pmax
comp=Z,84nm,1.0s
SGMF Saint Gilles 103.44 337⇑ *i*P Pdif 13 52 28.5 -0.7
comp=Z,84nm,1.0s
PARMO Parma 103.48 41 *e*Pdif Pdif 13 52 28.4 -1.0
SMRF Simiane la Rot 103.49 330⇑ *i*P Pdif 13 52 28.5 -0.9
comp=Z,372nm,1.7s
SMRF Simiane la Rot 103.49 330⇑ *i*P Pdif 13 52 28.5 -0.9
comp=Z,372nm,1.7s
VILF Villenus 103.51 330 *e*P Pdif 13 52 28.6 -0.9
LMR La Mourre 103.53 329⇑ *i*P Pdif 13 52 28.3 -1.3
comp=Z,132nm,0.9s
LMR La Mourre 103.53 329⇑ *i*P Pdif 13 52 28.3 -1.3
LMR pmax pmax
comp=Z,66nm,0.9s
LMR La Mourre 103.53 329⇑ *i*P Pdif 13 52 28.3 -1.3
comp=Z,66nm,0.9s
TAVF Tavernes 103.53 329 *e*P Pdif 13 52 28.6 -1.0
LBL Lubilhac 103.57 332 *e*P Pdif 13 52 27.5 -2.3
HKT Hockley 103.61 50 *e*P Pdif 13 52 30.9 +1.0
HKT pmax pmax
comp=Z,128nm,1.5s
HKT Hockley 103.61 50 *e*Pdif Pdif 13 52 30.9 +1.0
comp=Z,128nm,1.5s
ROSF Rostrenen 103.63 337⇑ *i*P Pdif 13 52 29.3 -0.7
comp=Z,586nm,1.4s
ROSF Rostrenen 103.63 337⇑ *i*P Pdif 13 52 29.3 -0.7
ROSF pmax pmax
comp=Z,293nm,1.4s
ROSF Rostrenen 103.63 337⇑ *i*P Pdif 13 52 29.3 -0.7
comp=Z,293nm,1.4s
PUYF Puyloubier 103.76 329 *e*P Pdif 13 52 28.3 -2.3
PRAF Pradon 103.81 330 *e*P Pdif 13 52 28.8 -2.0
TREF Trevaresse 103.84 330 *e*P Pdif 13 52 27.6 -3.4
MFF Saint Martin d 103.89 335⇑ *i*P Pdif 13 52 30.7 -0.5
comp=Z,450nm,1.3s
MFF Saint Martin d 103.89 335⇑ *i*P Pdif 13 52 30.7 -0.5
MFF pmax pmax
comp=Z,225nm,1.3s
MFF Saint Martin d 103.89 335⇑ *i*P Pdif 13 52 30.7 -0.5
comp=Z,225nm,1.3s
BERF Bertagne 103.94 329 *e*P Pdif 13 52 29.0 -2.4
QUIF Quistinic 103.95 337⇑ *i*P Pdif 13 52 30.6 -0.8
comp=Z,251nm,1.4s
QUIF Quistinic 103.95 337⇑ *i*P Pdif 13 52 30.6 -0.8
QUIF pmax pmax
comp=Z,125nm,1.4s
QUIF Quistinic 103.95 337⇑ *i*P Pdif 13 52 30.6 -0.8
comp=Z,125nm,1.4s
LASF Ste Croix 104.20 331⇑ *i*P Pdif 13 52 32.0 -0.6
comp=Z,371nm,1.5s
RJF Les Rejaudoux 104.26 333⇑ *i*P Pdif 13 52 32.5 -0.3
comp=Z,606nm,1.5s
RJF *e*MLR MLR
comp=Z,75µm,21.2s
RJF Les Rejaudoux 104.26 333⇑ *i*P Pdif 13 52 32.5 -0.3
RJF pmax pmax
comp=Z,303nm,1.5s
RJF MLR MLR
comp=Z,75µm,21.3s
RJF Les Rejaudoux 104.26 333⇑ *i*P Pdif 13 52 32.5 -0.3
comp=Z,303nm,1.5s
RJF LR LR
comp=Z,75µm,21.3s
CAF Calviac 104.33 332⇑ *i*P Pdif 13 52 33.1 0.0
comp=Z,464nm,1.5s
CAF Calviac 104.33 332⇑ *i*P Pdif 13 52 33.1 0.0
CAF pmax pmax
comp=Z,232nm,1.5s
CAF Calviac 104.33 332⇑ *i*P Pdif 13 52 33.1 0.0
comp=Z,232nm,1.5s
WCI Wyandotte Cave 104.47 38 *e*P Pdif 13 52 33.5 -0.3
WCI pmax pmax
comp=Z,36nm,0.8s
WCI Wyandotte Cave 104.47 38 *e*Pdif Pdif 13 52 33.5 -0.2
comp=Z,36nm,0.8s
KMBO Kilima Mbogo 104.74 275 Pdiff Pdif 13 52 35.5 +0.6
comp=Z,60nm,1.2s,baz=34,slow=7.2,SNR=14
KMBO PKIKP PKiKP 13 56 51.2 +1.2
comp=Z,50nm,1.0s,baz=40,slow=7.9,SNR=6.1
KMBO PKKPbc PKKPbc 14 08 19.2 +1.2
comp=Z,11nm,1.0s,baz=344,slow=3.9,SNR=4.1
ACSO Alum Creek Sta 104.87 35 *e*Pdif Pdif 13 52 34.7 -0.8
comp=Z,33nm,0.7s
VSL Villasalto 104.87 324 *e*Pdif Pdif 13 52 35.4 -0.2
comp=Z,188nm,1.3s
VSL *e*PKKPbc PKKPbc 14 08 16.8 -1.8
LFF La Frestale 104.88 333⇑ *i*P Pdif 13 52 35.4 -0.2
comp=Z,291nm,1.2s
LFF La Frestale 104.88 333⇑ *i*P Pdif 13 52 35.4 -0.2
LFF pmax pmax
comp=Z,146nm,1.2s
LFF La Frestale 104.88 333⇑ *i*P Pdif 13 52 35.4 -0.2
comp=Z,146nm,1.2s
WVT Waverly 105.00 40 *e*P Pdif 13 52 35.0 -1.1
WVT pmax pmax
comp=Z,25nm,0.8s
WVT Waverly 105.00 40 *e*Pdif Pdif 13 52 35.0 -1.1
comp=Z,25nm,0.8s
WVT *e*PKPdf PKiKP 13 56 49.0 -0.9
WVT *e*PKKPbc PKKPbc 14 08 14.5 -3.5
OXF Oxford 105.10 42 *e*P Pdif 13 52 35.7 -0.8
OXF pmax pmax
comp=Z,67nm,0.8s
OXF Oxford 105.10 42 *e*Pdif Pdif 13 52 35.7 -0.9
comp=Z,67nm,0.8s
OXF *e*PKPdf PKiKP 13 56 48.8 -1.4
LONY Lake Ozonia 105.45 27 *e*Pdif Pdif 13 52 38.8 +0.7
comp=Z,30nm,1.4s
LONY *e*PKPdf PKiKP 13 56 41.9 -8.6
MTLF Montolieu 105.52 331⇑ *i*P Pdif 13 52 38.2 -0.2
comp=Z,208nm,1.7s
MTLF Montolieu 105.52 331⇑ *i*P Pdif 13 52 38.2 -0.2
MTLF pmax pmax
comp=Z,104nm,1.7s
MTLF Montolieu 105.52 331⇑ *i*P Pdif 13 52 38.2 -0.2
comp=Z,104nm,1.7s
EJON La Jonquera 105.91 330 ⇑Pdif Pdif 13 52 39.2 -1.0
NCB Newcomb 106.13 27 *e*Pdif Pdif 13 52 41.8 +0.6
comp=Z,22nm,1.1s
NCB *e*PKPdf PKiKP 13 56 49.8 -1.9
MLS Moulis 106.32 332 *e*P Pdif 13 52 40.9 -1.1
MAW Mawson 106.34 203 *e*PDIF Pdif 13 52 41.4 -0.7
comp=Z,63nm,1.6s
MAW *e*PKIKP PKiKP 13 56 55.2 +3.9
MAW Mawson 106.34 203 Pdiff Pdif 13 52 41.7 -0.3
comp=Z,9.2nm,0.9s,baz=68,slow=6.6,SNR=18
MAW PKiKP PKiKP 13 56 51.6 +0.4
comp=Z,103nm,1.0s,baz=355,slow=1.6,SNR=12
MAW PKKPbc PKKPbc 14 08 15.8 +0.6
comp=Z,57nm,1.0s,baz=264,slow=5.3,SNR=9.6
MAW PKPPKP 14 16 34.1
comp=Z,17nm,1.1s,baz=247,slow=3.8,SNR=4.8
MAW Mawson 106.34 203 *e*Pdif Pdif 13 52 41.4 -0.7
comp=Z,63nm,1.6s
MAW PKPdf PKiKP 13 56 51.6 +0.4
MAW *e*PKPdf PKiKP 13 56 55.2 +3.9
MAW PKKPbc PKKPbc 14 08 15.8 +0.6
MAW P'P' 14 16 34.1
VALF Valcebollere 106.35 331 *e*P Pdif 13 52 41.4 -0.7
EPF Esparros 106.59 332⇑ *i*P Pdif 13 52 42.5 -0.7
comp=Z,121nm,1.5s
EPF Esparros 106.59 332⇑ *i*P Pdif 13 52 42.5 -0.7
EPF pmax pmax
comp=Z,61nm,1.5s
EPF Esparros 106.59 332⇑ *i*P Pdif 13 52 42.5 -0.7
comp=Z,60nm,1.5s
SWET Sewanee 106.75 40 *e*Pdif Pdif 13 52 43.7 -0.2
RESF Ens 106.77 332 *e*P Pdif 13 52 44.1 +0.1
BINY Binghamton 106.79 29 *e*Pdif Pdif 13 52 44.0 0.0
comp=Z,43nm,1.2s
BINY *e*PKPdf PKiKP 13 56 51.7 -1.3
BINY *e*PP PP 13 57 11.3 -0.7
ACCN Adirondack Com 106.84 27 *e*PKPdf PKiKP 13 56 52.2 -0.9
LBNH Lisbon 106.84 25 *e*PKPdf PKiKP 13 56 52.0 -1.0
VIEF Viey 106.85 332 *e*P Pdif 13 52 44.4 +0.1
MCWV Mont Chateau 106.91 33 *e*Pdif Pdif 13 52 45.2 +0.6
comp=Z,50nm,1.0s
MCWV *e*PKPdf PKiKP 13 56 52.6 -0.7
EBIE Bielsa 106.95 332 ⇑Pdif Pdif 13 52 44.8 0.0
EMIR Miracle 106.96 331 ⇑Pdif Pdif 13 52 44.4 -0.5
ETSF Etsaut 107.08 333⇑ *i*P Pdif 13 52 45.6 +0.2
SSPA Standing Stone 107.13 31 *e*Pdif Pdif 13 52 44.1 -1.5
comp=Z,35nm,1.0s
SSPA *e*PKPdf PKiKP 13 56 53.1 -0.6
SSPA *e*PKKPbc PKKPbc 14 08 09.4 -2.3
HNH Hanover 107.15 26 *e*PKPdf PKiKP 13 56 52.9 -0.8
SJPF Ste Jean 107.19 333⇑ *i*P Pdif 13 52 45.8 0.0
comp=Z,56nm,1.1s
SJPF Ste Jean 107.19 333⇑ *i*P Pdif 13 52 45.8 0.0
SJPF pmax pmax
comp=Z,28nm,1.1s
SJPF Ste Jean 107.19 333⇑ *i*P Pdif 13 52 45.8 0.0
comp=Z,28nm,1.1s
TZTN Tazewell 107.21 38 *e*Pdif Pdif 13 52 46.6 +0.7
comp=Z,28nm,1.2s
TZTN *e*PKPdf PKiKP 13 56 52.6 -1.3
EALK Alkurruntz 107.22 333 ⇑Pdif Pdif 13 52 45.3 -0.7
ELIZ Elizondo 107.28 333 Pdif Pdif 13 52 46.4 +0.2
ELIZ PKPdf PKiKP 13 56 52.0 -1.9
CPCT Cooper Cave 107.42 39 *e*Pdif Pdif 13 52 46.8 -0.1
CPCT *e*PKPdf PKiKP 13 56 54.7 +0.2
KEST Kesra 107.56 322 Pdiff Pdif 13 52 48.3 +0.8
comp=Z,10nm,0.8s,baz=345,slow=1.6,SNR=18
KEST PKKPbc PKKPbc 14 08 10.3 +0.1
comp=Z,27nm,1.1s,baz=242,slow=1.4,SNR=11
LRAL Lakeview Retre 107.58 42 *e*Pdif Pdif 13 52 47.2 -0.3
comp=Z,23nm,1.0s
LRAL *e*PKPdf PKiKP 13 56 53.8 -1.0
EPOB Poblet 107.61 331 ⇑Pdif Pdif 13 52 46.5 -1.2
TKL Tuckaleechee C 107.71 38 Pdiff Pdif 13 52 48.0 -0.1
comp=Z,18nm,1.0s,baz=343,slow=1.1,SNR=10
TKL PKiKP PKiKP 13 56 54.2 -0.7
comp=Z,62nm,0.6s,baz=156,slow=4.7,SNR=17
TKL SKP 14 00 03.8
comp=Z,59nm,0.7s,baz=125,slow=3.4,SNR=7.1
TKL Tuckaleechee C 107.71 38 Pdif Pdif 13 52 48.0 -0.1
TKL PKPdf PKiKP 13 56 54.2 -0.7
TKL SKP 14 00 03.8
ELAN Lanestosa 107.99 335 ⇑Pdif Pdif 13 52 48.7 -0.7
ELAN PKPdf PKiKP 13 56 58.8 +3.4
ELAN *e* 14 06 20.3
ESAC San Caprasio 108.00 332 ⇑Pdif Pdif 13 52 49.4 -0.1
ESAC PKPdf PKiKP 13 56 58.5 +3.2
ESAC *e* 14 06 15.2
CMAH Djebel Manchou 108.01 323 P Pdif 13 52 50.0 +0.5
ETOS Mallorca 108.04 329 Pdif Pdif 13 52 49.2 -0.5
ETOS PKPdf PKiKP 13 56 58.8 +3.3
ECRI Cripan 108.14 334 Pdif Pdif 13 52 50.1 0.0
ECRI PKPdf PKiKP 13 56 54.0 -1.6
CAEH 'Ain El Ouahch 108.21 324 P Pdif 13 52 54.0 +3.6
ABSA Djebel Ababsia 108.23 323 P Pdif 13 52 48.0 -2.5
ELN Prospectdale 108.25 35 *e*Pdif Pdif 13 52 49.8 -0.8
ELN *e*PKPdf PKiKP 13 56 55.5 -0.4
ERTA Horta de San J 108.26 331 ⇑Pdif Pdif 13 52 49.5 -1.1
ERTA PKPdf PKiKP 13 56 58.9 +3.0
ERTA *e* 14 06 16.0
ERTA *e* 14 08 10.0
HRV Adam Dziewonsk 108.44 26 *e*PKPdf PKiKP 13 56 54.6 -1.5
CKFL Kef-Lekhel 108.56 324 P Pdif 13 52 55.0 +3.1
EARI Arriondas 108.62 336 ⇑Pdif Pdif 13 52 51.4 -0.9
EARI PKPdf PKiKP 13 56 57.5 +1.1
CASM Ain Smara 108.79 324 P Pdif 13 52 56.0 +3.0
BRAL Brewton 108.89 44 *e*PKPdf PKiKP 13 56 57.4 +0.1
BRAL *e*PP PP 13 57 28.8 +1.0
DFRA Djebel Bou Aff 108.91 324 P Pdif 13 52 57.5 +4.0
EMOS Mosqueruela 109.10 331 ⇑Pdif Pdif 13 52 54.1 -0.2
EMOS *e* 14 06 29.9
EPON Pontenova 109.32 337 ⇑Pdif Pdif 13 52 54.2 -1.1
EPON PKPdf PKiKP 13 56 59.2 +1.5
EPON *e* 14 06 15.4
EIBI Ibiza 109.33 329 ⇑Pdif Pdif 13 52 54.7 -0.6
EIBI PKPdf PKiKP 13 57 01.2 +3.3
SET Setif 109.43 324 P Pdif 13 52 57.0 +1.2
ETOR Torete 109.43 332 P Pdif 13 52 53.5 -2.3
GOGA Godfrey 109.47 40 *e*Pdif Pdif 13 52 55.1 -0.9
GOGA *e*PKPdf PKiKP 13 56 56.5 -1.9
CKHR Kef el Ahmar 109.50 324 P Pdif 13 53 03.5 +7.4
AKF Akfadou 109.55 325 P Pdif 13 53 03.8 +7.5
ECHE Chera 109.95 331 P Pdif 13 52 57.7 -0.4
ERUA La Rua 110.13 337 PKIKP PKiKP 13 57 01.2 +1.9
STS Santiago 110.20 338 PKIKP PKiKP 13 57 03.0 +3.6
STS *e* 14 06 32.5
STS Santiago 110.20 338 PKPdf PKiKP 13 57 03.0 +3.6
STS *e* 14 06 32.5
STS *e* 14 07 59.8
ATAF Djebel Tarf 110.27 325 P Pdif 13 52 50.0 -10
EMAZ Mazaricos 110.30 338 ⇑Pdif Pdif 13 52 58.4 -1.3
EMAZ PKPdf PKiKP 13 57 02.7 +3.1
EMAZ *e* 14 06 33.7
EMAZ *e* 14 08 05.2
EBEN Beniarda 110.32 330 ⇑Pdif Pdif 13 52 59.7 -0.1
EBEN PKPdf PKiKP 13 57 03.2 +3.4
EBEN *e* 14 06 40.3
AKET Djebel Ketaf 110.35 325 P Pdif 13 53 04.4 +4.5
ECAL Calabor 110.37 336 ⇑Pdif Pdif 13 52 59.3 -0.7
ECAL PKPdf PKiKP 13 57 02.8 +3.0
ECAL *e* 14 06 40.4
GUD Guadarrama 110.46 334 Pdif Pdif 13 52 59.4 -1.0
GUD PKPdf PKiKP 13 57 03.8 +3.8
GUD *e* 14 06 37.4
GUD *e* 14 07 56.2
PBRG Braganca 110.49 336 *e*Pdif Pdif 13 52 59.9 -0.6
PBRG Braganca 110.49 336 *e*PKPdf PKiKP 13 56 59.9 -0.1
PBRG Braganca 110.49 336 *e*PP PP 13 57 39.4 +0.7
ADJB Djebel Djouab 110.50 326 P Pdif 13 53 04.4 +3.8
ELOB Lobios 110.92 337 ⇑Pdif Pdif 13 53 02.1 -0.3
ELOB PKPdf PKiKP 13 57 04.0 +3.2
ELOB *e* 14 06 39.5
ELOB *e* 14 08 04.2
ETOB Tobarra 110.98 331 ⇑Pdif Pdif 13 53 02.2 -0.3
ETOB PKPdf PKiKP 13 57 02.3 +1.3
ETOB *e* 14 06 46.2
ETOB *e* 14 07 58.5
PCAB Cabril 111.05 337 *e*Pdif Pdif 13 53 02.5 -0.5
PCAB Cabril 111.05 337 *e*PKPdf PKiKP 13 57 00.9 -0.1
PCAB Cabril 111.05 337 *e*PP PP 13 57 42.4 -0.3
MVO Moncorvo 111.15 336 *e*Pdif Pdif 13 53 03.3 -0.2
MVO Moncorvo 111.15 336 *e*PKPdf PKiKP 13 57 01.4 +0.1
MVO Moncorvo 111.15 336 *e*PP PP 13 57 41.9 -1.6
ESDC Sonseca Array 111.19 333 Pdiff Pdif 13 53 03.1 -0.5
comp=Z,2.6nm,0.8s,baz=50,slow=3.1,SNR=8.8
ESDC PKiKP PKiKP 13 57 01.2 -0.2
comp=Z,17nm,0.8s,baz=23,slow=2.2,SNR=11
ESDC PP PP 13 57 36.7 -7.1
comp=Z,40nm,0.9s,baz=40,slow=6.5,SNR=7.0
ESDC PKKPbc PKKPbc 14 07 58.3 -0.6
comp=Z,30nm,0.8s,baz=223,slow=2.8,SNR=17
ESDC PKPPKP 14 16 26.9
comp=Z,8.4nm,1.0s,baz=213,slow=2.0,SNR=5.9
ESDC Sonseca Array 111.19 333 Pdif Pdif 13 53 03.1 -0.5
ESLA Sonseca Array 111.19 333 *e*Pdif Pdif 13 53 05.7 +2.1
ESLA *e*PKPdf PKiKP 13 57 02.0 +0.6
ESLA *e*PP PP 13 57 43.9 +0.1
HUIG Huatulco 111.23 62 *e*P PKiKP 13 57 00.8 -1.2
PVRL Vila Real 111.31 336 *e*PKPdf PKiKP 13 57 02.5 +0.9
PVRL Vila Real 111.31 336 *e*PP PP 13 57 44.9 +0.3
TUIG Tuzandepetl 111.38 59 *e*P PKiKP 13 57 04.5 +2.3
EVIA Vianos 111.42 331 P Pdif 13 53 04.4 -0.2
PAB San Pablo 111.46 333 *e*P Pdif 13 53 03.6 -1.2
PAB *e* 13 57 01.6
EMUR La Murta 111.49 330 ⇑Pdif Pdif 13 53 04.2 -0.8
EMUR PKPdf PKiKP 13 57 04.7 +2.7
EMUR *e* 14 06 50.1
EMUR *e* 14 07 57.4

CMIG	**Matias Romero**	**111.52**	**60**	SKP	SKPdf	14 00 11.5	-2.1
	comp=Z,58nm,0.8s,baz=276,slow=2.3,SNR=12						
CMIG				PKPPKP		14 16 29.6	
	comp=Z,5.2nm,1.0s,baz=95,slow=4.3,SNR=3.9						
QSPA	**South Pole Qui**	**111.80**	**180**	Pdiff	Pdif	13 53 06.1	-0.3
	comp=Z,9.7nm,1.1s,baz=316,slow=1.2,SNR=10						
QSPA				PKiKP	PKiKP	13 57 01.3	0.0
	comp=Z,224nm,0.5s,baz=264,slow=0.3,SNR=45						
QSPA				SKP		14 00 12.0	
	comp=Z,216nm,1.0s,baz=346,slow=1.3,SNR=5.4						
QSPA				PKKPbc	PKKPbc	14 07 58.4	+0.3
	comp=Z,86nm,0.9s,baz=178,slow=1.6,SNR=11						
QSPA	**South Pole Qui**	**111.80**	**180**	Pdif	Pdif	13 53 06.1	-0.3
QSPA				PKPdf	PKiKP	13 57 01.3	0.0
QSPA				SKP		14 00 12.0	
QSPA				PKKPbc	PKKPbc	14 07 58.4	+0.3
PVIS	**Viseu**	**111.87**	**336**	*e*PKPdf	PKiKP	13 57 03.4	+0.8
PVIS	**Viseu**	**111.87**	**336**	*e*PP	PP	13 57 48.8	+0.3
MTE	**Manteigas**	**112.01**	**336**	*e*Pdif	Pdif	13 53 05.8	-1.5
MTE	**Manteigas**	**112.01**	**336**	*e*PDif	Pdif	13 53 07.4	+0.1
MTE				*e*PKPdf	PKiKP	13 57 02.3	-0.7
EHUE	**Huescar**	**112.13**	**331**	PKIKP	PKiKP	13 57 05.3	+2.1
EQES	**Quesada**	**112.36**	**331**	⇑Pdif	Pdif	13 53 08.0	-0.9
EQES				PKPdf	PKiKP	13 57 06.8	+3.1
EQES				*e*		14 06 58.8	
EQES				*e*		14 07 58.2	
EBAN	**Banos Encina**	**112.37**	**332**	Pdif	Pdif	13 53 08.1	-0.8
EBAN				PKPdf	PKiKP	13 57 07.0	+3.3
EBAN				*e*		14 07 59.1	
PCBR	**Castelo Branco**	**112.47**	**336**	*e*Pdif	Pdif	13 53 10.9	+1.6
PCBR	**Castelo Branco**	**112.47**	**336**	*e*PKPdf	PKiKP	13 57 04.2	+0.4
PCBR	**Castelo Branco**	**112.47**	**336**	*e*PP	PP	13 57 51.2	-1.6
ENIJ	**Nijar**	**112.64**	**330**	PKPdf	PKiKP	13 57 06.7	+2.5
ENIJ				*e*		14 07 58.5	
EADA	**Adamuz**	**112.71**	**332**	⇑Pdif	Pdif	13 53 09.8	-0.6
EADA				PKPdf	PKiKP	13 57 07.7	+3.4
EADA				*e*		14 06 57.0	
EADA				*e*		14 07 53.1	
PMRV	**Marv??o**	**112.79**	**335**	*e*Pdif	Pdif	13 53 10.4	-0.3
PMRV	**Marv??o**	**112.79**	**335**	*e*PKPdf	PKiKP	13 57 03.7	-0.7
PMRV	**Marv??o**	**112.79**	**335**	*e*PP	PP	13 57 53.4	-1.7
ECOG	**Cogollos-Vega**	**113.01**	**331**	PKPdf	PKiKP	13 57 06.0	+1.1
ECOG				*e*		14 07 51.1	
PTOM	**Tomar**	**113.02**	**336**	*e*PKPdf	PKiKP	13 57 05.9	+1.0
EBER	**Berja**	**113.02**	**331**	⇑Pdif	Pdif	13 53 10.6	-1.1
EBER				PKPdf	PKiKP	13 57 08.7	+3.8
ELUQ	**Luque**	**113.09**	**332**	P	Pdif	13 53 13.0	+0.9
ELUQ						13 57 02.7	
EBAD	**Badajoz**	**113.22**	**335**	⇑Pdif	Pdif	13 53 11.9	-0.7
EBAD				PKPdf	PKiKP	13 57 08.1	+2.8
EBAD				*e*		14 06 57.9	
ERON	**Agron**	**113.33**	**331**	PKPdf	PKiKP	13 57 05.5	0.0
PESTR	**Estremoz**	**113.35**	**335**	*e*Pdif	Pdif	13 53 12.8	-0.4
PESTR	**Estremoz**	**113.35**	**335**	*e*PKPdf	PKiKP	13 57 04.8	-0.7
PESTR	**Estremoz**	**113.35**	**335**	*e*PP	PP	13 57 55.3	-3.8
ELOJ	**Sierra Loja**	**113.38**	**332**	PKPdf	PKiKP	13 57 08.4	+2.8
ELOJ				SS		14 16 19.0	
ALMR	**Almeirim**	**113.48**	**336**	*e*P	PKiKP	13 57 05.4	-0.4
PBAR	**Barrancos**	**113.73**	**334**	*e*Pdif	Pdif	13 53 15.0	+0.1
PBAR	**Barrancos**	**113.73**	**334**	*e*PKPdf	PKiKP	13 57 04.8	-1.5
PBAR	**Barrancos**	**113.73**	**334**	*e*PP	PP	13 58 00.0	-1.8
EVO	**Evora**	**113.81**	**335**	*e*P	Pdif	13 53 17.5	+2.2
	comp=Z,92nm,1.6s						
EVO				*e*MLR	MLR		
	comp=Z,87μm,22.5s						
EVO	**Evora**	**113.81**	**335**	*e*Pdif	Pdif	13 53 15.4	+0.1
EVO	**Evora**	**113.81**	**335**	*e*PKPdf	PKiKP	13 57 06.4	0.0
EVO	**Evora**	**113.81**	**335**	*e*PP	PP	13 58 00.8	-1.5
EALB	**Alboran**	**113.87**	**330**	Pdif	Pdif	13 53 14.0	-1.6
EALB				PKPdf	PKiKP	13 57 09.3	+2.7
EMIN	**Mina Concepcio**	**113.93**	**334**	⇑Pdif	Pdif	13 53 14.8	-1.0
EMIN				PKPdf	PKiKP	13 57 06.8	+0.2
EMIN				SS		14 16 22.1	
LIS	**Lisbon**	**114.08**	**336**	*e*PP	PP	13 58 03.0	-1.2
LIS				*e*SS	SS	14 13 34.2	+0.7
LIS				AMS	AMS	14 42 18.9	
	comp=E,81μm,17.1s						
LIS	**Lisbon**	**114.08**	**336**	*e*PP	PP	13 58 03.0	-1.2
EMIJ	**Mijas**	**114.14**	**332**	⇑Pdif	Pdif	13 53 15.1	-1.6
CCIG	**Comitan**	**114.17**	**59**	*i* P	PKiKP	13 57 07.1	-0.5
PBEJ	**Beja**	**114.19**	**335**	*e*PKPdf	PKiKP	13 57 07.2	0.0
PBEJ	**Beja**	**114.19**	**335**	*e*PP	PP	13 58 04.5	-0.5
ESPR	**Espera**	**114.35**	**333**	⇑Pdif	Pdif	13 53 17.6	-0.1
ESPR				PKPdf	PKiKP	13 57 09.1	+1.6
DWPF	**Disney**	**114.44**	**43**	*e*PKPdf	PKiKP	13 57 07.0	-0.9
EGRO	**El Granado**	**114.46**	**334**	⇑Pdif	Pdif	13 53 17.5	-0.7
EGRO				PKPdf	PKiKP	13 57 11.0	+3.3
EGRO				*e*		14 07 16.0	
EJIF	**Jimena Fronter**	**114.54**	**332**	P	Pdif	13 53 21.2	+2.7
EJIF						13 57 09.2	
PVAQ	**Vaqueiros**	**114.67**	**334**	*e*Pdif	Pdif	13 53 18.6	-0.5
PVAQ	**Vaqueiros**	**114.67**	**334**	*e*PKPdf	PKiKP	13 57 05.8	-2.3
PVAQ	**Vaqueiros**	**114.67**	**334**	*e*PP	PP	13 58 08.9	+0.5
TEIG	**Tepich**	**114.87**	**54**	SKP	SKPdf	14 00 18.5	-1.6
	comp=E,65nm,0.9s,baz=312,slow=6.4,SNR=4.4						
TEIG				PKKPbc	PKKPbc	14 07 45.8	-0.2
	comp=E,17nm,0.5s,baz=62,slow=2.2,SNR=13						
TEIG				PKPPKP		14 16 17.6	
	comp=E,9.4nm,0.9s,baz=44,slow=10,SNR=3.9						
TEIG	**Tepich**	**114.87**	**54**	*e*PKPdf	PKiKP	13 57 07.4	-1.5
TEIG				*e*SKPdf	SKPdf	14 00 16.7	-3.3
PBDV	**Barranco-do-Ve**	**114.89**	**334**	*e*Pdif	Pdif	13 53 20.9	+0.8
PBDV	**Barranco-do-Ve**	**114.89**	**334**	*e*PKPdf	PKiKP	13 57 07.1	-1.4
PBDV	**Barranco-do-Ve**	**114.89**	**334**	*e*PP	PP	13 58 11.6	+1.6
PTEO	**Sao Teotonio**	**114.94**	**335**	*e*Pdif	Pdif	13 53 20.6	+0.3
PTEO	**Sao Teotonio**	**114.94**	**335**	*e*PKPdf	PKiKP	13 57 08.2	-0.4
PTEO	**Sao Teotonio**	**114.94**	**335**	*e*PP	PP	13 58 10.4	+0.1
SYO	**Syowa Base**	**115.05**	**203**	‖*e*P	Pdif	13 53 25.2	+4.4
SYO	**Syowa Base**	**115.05**	**203**	‖*e*P	PKiKP	13 57 06.0	-1.7
MORF	**Marmelete**	**115.12**	**335**	*e*Pdif	Pdif	13 53 20.7	-0.4
MORF	**Marmelete**	**115.12**	**335**	*e*PKPdf	PKPdf	13 57 07.6	-1.4
MORF	**Marmelete**	**115.12**	**335**	*e*PP	PP	13 58 08.4	-3.2
PFVI	**Vila Bisbo**	**115.34**	**335**	*e*Pdif	Pdif	13 53 18.3	-3.8
PFVI	**Vila Bisbo**	**115.34**	**335**	*e*PKPdf	PKPdf	13 57 09.4	0.0
PFVI	**Vila Bisbo**	**115.34**	**335**	*e*PP	PP	13 58 09.4	-3.7
MDT	**Midelt**	**117.18**	**329**	Pdiff	Pdif	13 53 30.9	+0.7
	comp=E,5.9nm,0.7s,baz=241,slow=8.7,SNR=5.1						
MDT				PKP	PKPdf	13 57 13.9	+0.8
	comp=E,307nm,1.0s,baz=44,slow=2.3,SNR=35						
MDT				pPKP	pPKPdf	13 58 16.4	-1.1
	comp=E,67nm,0.9s,baz=98,slow=8.8,SNR=2.1						
MDT				SKP		14 00 24.7	
	comp=E,76nm,0.9s,baz=99,slow=4.2,SNR=4.2						
MDT				PKKPab	PKKPab	14 07 41.3	-3.5
	comp=E,68nm,0.9s,baz=210,slow=4.3,SNR=11						
RTC	**Rabat Centre**	**117.22**	**332**	*e*PKPdf	PKPdf	13 57 13.2	+0.1
LSZ	**Lusaka**	**117.98**	**264**	Pdiff	Pdif	13 53 36.7	+2.9
	comp=E,54nm,1.3s,baz=77,slow=4.0,SNR=15						
LSZ				PKP	PKPdf	13 57 15.4	+0.5
	comp=E,246nm,0.4s,baz=66,slow=1.7,SNR=120						
LSZ				SKP		14 00 26.8	
	comp=E,131nm,0.9s,baz=87,slow=2.2,SNR=3.6						
LSZ				PKKPab	PKKPab	14 07 39.6	+0.9
	comp=E,54nm,1.0s,baz=306,slow=1.3,SNR=7.5						
LSZ	**Lusaka**	**117.98**	**264**	P	Pdif	13 53 36.8	+3.0
LSZ						13 57 15.5	
SRBC	**Serra Branca**	**118.66**	**352**	*e*PKP	PKPdf	13 57 16.6	+0.9
ROSA	**Rosais**	**119.00**	**352**	*e*PKP	PKPdf	13 57 15.8	-0.6
CALA	**Caldeira**	**119.19**	**352**	*e*PKP	PKPdf	13 57 20.6	+3.8
TGUH	**Tegucigalpa,Un**	**119.29**	**58**	*e*PKPdf	PKPdf	13 57 15.8	-1.7
TGUH				*e*PP	PP	13 58 42.5	+0.8
TGUH				*e*SKPdf	SKPdf	14 00 26.8	-1.9
CMLA	**Cha da Macela**	**119.52**	**349**	*e*PKP	PKPdf	13 57 18.1	+0.7
CMLA	**Cha da Macela**	**119.52**	**349**	*e*LQ		14 28 48.0	
CMLA	**Cha da Macela**	**119.52**	**349**	*e*PKPdf	PKPdf	13 57 18.2	+0.8
MGV	**Manicaragua**	**119.55**	**46**	*e*P	PKPdf	13 57 16.4	-1.5
PDA	**Ponta Delgada**	**119.56**	**349**	*e*P	Pdif	13 53 41.0	+0.1
PDA	**Ponta Delgada**	**119.56**	**349**	*e*PKP	PKPdf	13 57 18.7	+1.2
PDA	**Ponta Delgada**	**119.56**	**349**	*e*PKP	PKPdf	13 57 26.0	+8.5
PDA	**Ponta Delgada**	**119.56**	**349**	*i* PP	PP	13 58 40.0	-2.0
PDA				*i* P	Sdif	14 06 10.0	+1.1
PDA				*i* SS	SS	14 14 54.0	+10
PDA	**Ponta Delgada**	**119.56**	**349**	*i* LQ		14 28 55.0	
PDA	**Ponta Delgada**	**119.56**	**349**	*i* LR	LR	19 35 39.0	
BBSR	**BB Station**	**119.91**	**27**	*e*PKPdf	PKPdf	13 57 17.8	-0.5
PSMN	**Pico do Norte,**	**120.18**	**349**	*e*PKP	PKPdf	13 57 21.8	+3.1
PMPS	**Porto Santo**	**121.70**	**339**	*e*PKiKP	PKiKP	13 57 22.7	+0.8
PMPS	**Porto Santo**	**121.70**	**339**	*e*PP	PP	13 59 00.8	+4.1
PMAR	**Madeira**	**122.19**	**340**	*e*PKPdf	PKPdf	13 57 23.0	+0.3
PMAR	**Madeira**	**122.19**	**340**	*e*PP	PP	13 59 04.2	+4.1
LBTB	**Lobatse**	**122.71**	**254**	PKKPab	PKKPab	14 07 21.7	+4.0
	comp=E,24nm,0.8s,baz=261,slow=4.6,SNR=7.1						
LBTB	**Lobatse**	**122.71**	**254**	*e*PKIKP	PKPdf	13 57 22.8	-1.0
LBTB				*e*		13 59 00.9	
VCR	**Vista de Mar**	**122.84**	**61**	*e*P	PKPdf	13 57 25.2	+0.9
LMGC	**Las Mercedes**	**122.96**	**46**	*e*P	PKPdf	13 57 24.9	+0.4
JCR	**Jicaral**	**123.42**	**61**	*e*P	PKPdf	13 57 25.8	+0.3
NVL	**N'lazarevskaya**	**123.56**	**198**	*c i*PKIKP	PKPdf	13 57 24.3	+0.3
NVL				*e*		13 59 09.1	
NVL				*e*S	SKSac	14 03 59.9	-1.5
NVL				pmax	pmax		
	comp=Z,3μm,1.7s						
MAIT	**Maitri**	**123.58**	**197**	*e*PKPab	PKPdf	13 57 24.7	+0.6
BOSA	**Boshof**	**123.61**	**250**	PKP	PKPdf	13 57 25.5	0.0
	comp=Z,90nm,0.8s,baz=93,slow=1.6,SNR=8.9						
BOSA				PKKPab	PKKPab	14 07 17.6	+3.9
	comp=Z,26nm,0.9s,baz=230,slow=2.2,SNR=11						
BOSA				SKKPbc		14 10 40.9	
	comp=Z,22nm,1.0s,baz=272,slow=1.6,SNR=3.7						
BOSA	**Boshof**	**123.61**	**250**	*e*PKPdf	PKPdf	13 57 24.9	-0.5
BOSA				PKP	PKPdf	13 57 25.5	+0.1
BOSA				PKKPab	PKKPab	14 07 17.6	+3.9
BOSA				SKKPbc		14 10 40.9	
CGA2	**Cerro Gallo 2**	**123.85**	**60**	*e*P	PKPdf	13 57 26.6	+0.3
MOAC	**Moa**	**123.86**	**44**	*e*P	PKPdf	13 57 27.4	+1.2
RCC	**Rio Carpintero**	**123.87**	**45**	*e*P	PKPdf	13 57 24.7	-1.5
CVJ	**Coleyville**	**123.88**	**48**	*e*P	PKPdf	13 57 25.3	-1.0
PRS1	**Puriscal**	**123.99**	**60**	*e*P	PKPdf	13 57 28.2	+1.6
EFAM	**Famara**	**124.24**	**335**	PKPdf	PKPdf	13 57 27.9	+1.2
PAYG	**Puerto Ayora**	**124.26**	**75**	*e*PKPdf	PKPdf	13 57 27.6	+0.4
STH	**Stony Hill**	**124.48**	**47**	‖*e*P	PKPdf	13 57 26.7	-0.7
HOJ	**Hope**	**124.57**	**47**	‖*e*P	PKPdf	13 57 26.6	-1.0
BUS	**Buena Vista**	**124.68**	**60**	*e*P	PKPdf	13 57 27.8	-0.1
MASC	**Masc**	**124.68**	**43**	*e*P	PKPdf	13 57 28.1	+0.3
LIO	**Limon**	**125.00**	**59**	*e*P	PKPdf	13 57 28.8	+0.3
CFTV	**Fuerteventura**	**125.09**	**335**	PKPdf	PKPdf	13 57 28.4	+0.1
ACR	**Cerro Adams**	**125.67**	**61**	*e*P	PKPdf	13 57 30.4	+0.6
EBAJ	**Bajamar**	**125.83**	**337**	PKPdf	PKPdf	13 57 32.9	+3.1
EOSO	**Osorio**	**125.96**	**336**	PKPdf	PKPdf	13 57 31.2	+1.1
CCAN	**Las Canadas**	**126.22**	**337**	PKPdf	PKPdf	13 57 31.5	+1.0
EHIG	**Higuera**	**126.33**	**339**	PKPdf	PKPdf	13 57 32.6	+1.9
EGOM	**La Gomera**	**126.49**	**338**	PKPdf	PKPdf	13 57 34.2	+3.2
SNAA	**Sanae**	**126.55**	**193**	⇑*i*PKIKP	PKPdf	13 57 29.0	-0.8
SNAA	**Sanae**	**126.55**	**193**	*e*	PKPdf	13 57 29.4	-0.4
SNAA				*e*		13 57 36.1	
SNAA				*e*		14 00 21.1	
SNAA				*e*		14 00 25.2	
SNAA				*e*		14 00 28.6	
SNAA				*e*		14 00 43.7	
SNAA				*e*		14 07 48.1	
SNAA				*e*		14 07 51.4	
CHIE	**El Hierro**	**127.14**	**338**	PKPdf	PKPdf	13 57 33.6	+1.3
SUR	**Sutherland**	**127.84**	**245**	SKKPbc		14 10 24.5	
	comp=Z,23nm,0.7s,baz=248,slow=5.0,SNR=9.3						
SUR	**Sutherland**	**127.84**	**245**	*e*PKPdf	PKPdf	13 57 33.6	+0.2
SUR				*e*PP	PP	13 59 37.4	-1.9
SUR				*e*SKPdf	SKPdf	14 00 29.9	-14
VNA2	**Neumayer--Watz**	**128.05**	**192**	*e*	PKPdf	13 57 32.9	+0.3
VNA2				*e*		13 57 39.6	
VNA2				*e*		14 00 26.8	
VNA2				*e*		14 00 32.5	
VNA2				*e*		14 00 35.4	
VNA2				*e*		14 00 48.3	
VNA2				*e*		14 07 43.1	
VNA2				*e*		14 07 46.6	
VNA2				*e*		14 10 21.7	
VNA2				*e*		14 10 34.8	
VNA2				*e*		14 10 49.1	
VNA2				*e*		14 10 54.6	
TORD	**Torodi Ar. Bea**	**128.20**	**309**	PKP	PKPdf	13 57 33.8	-0.8
	comp=Z,206nm,0.6s,baz=27,slow=2.0,SNR=87						
TORD				PP	PP	13 59 47.2	+6.2
	comp=Z,254nm,0.9s,baz=42,slow=5.1,SNR=7.0						
TORD				SKPbc		14 00 28.5	
	comp=Z,270nm,0.9s,baz=47,slow=3.1,SNR=6.7						
TORD				PKKPab		14 06 56.2	
	comp=Z,11nm,0.5s,baz=220,slow=3.9,SNR=14						
TORD				SKKPbc		14 10 23.1	
	comp=Z,40nm,1.0s,baz=216,slow=2.4,SNR=6.0						
TORD	**Torodi Ar. Bea**	**128.20**	**309**	PKP	PKPdf	13 57 33.8	-0.8
TORD				PP	PP	13 59 47.2	+6.2
TORD				SKPbc		14 00 28.5	
TORD				PKKPab		14 06 56.2	
TORD				SKKPbc		14 10 23.1	
VNA3	**Neumayer Olymp**	**128.21**	**191**	*e*	PKPdf	13 57 32.7	-0.2
VNA3				*e*		13 57 39.6	
VNA3				*e*		14 00 26.9	
VNA3				*e*		14 00 32.8	
VNA3				*e*		14 00 36.4	
VNA3				*e*		14 00 48.8	
VNA3				*e*		14 07 42.8	
VNA3				*e*		14 07 44.8	
VNA3				*e*		14 10 21.6	
VNA3				*e*		14 10 33.6	
VNA3				*e*		14 10 46.9	
VNA3				*e*		14 10 52.9	
TSUM	**Tsumeb**	**128.78**	**263**	PKP	PKPdf	13 57 33.9	-1.6
	comp=Z,147nm,1.2s,baz=115,slow=2.3,SNR=32						
TSUM				SKPbc		14 00 32.9	
	comp=Z,200nm,0.8s,baz=67,slow=3.8,SNR=12						
TSUM				PKKPbc		14 06 58.6	
	comp=Z,16nm,0.8s,baz=197,slow=2.1,SNR=4.6						
SJG	**San Juan**	**131.14**	**38**	*e*PKPdf	PKPdf	13 57 39.8	-0.3
SJG				*e*SKPbc	SKPbc	14 00 37.9	-2.9
BSK	**Brimstone Hill**	**133.57**	**35**	*e*P	SKPbc	14 00 46.2	-3.0
PMSA	**Palmer Station**	**133.77**	**165**	PKP	PKPdf	13 57 40.7	-2.9
	comp=Z,163nm,1.0s,baz=151,slow=3.0,SNR=12						
PMSA				SKPbc	SKPbc	14 00 48.1	-0.2
	comp=Z,284nm,0.9s,baz=188,slow=4.8,SNR=11						
ANWB	**Willy Bob**	**133.85**	**33**	*e*PKPdf	PKPdf	13 57 42.5	-2.7
BPA	**Boggy Peak**	**134.34**	**34**	*e*	PKPdf	13 57 44.7	-1.5
BPA	**Boggy Peak**	**134.34**	**34**	*e*	PP	14 00 16.9	-2.8
ROSC	**El Rosal**	**134.98**	**58**	PKhKP		13 57 37.2	
	comp=Z,28nm,0.6s,baz=90,slow=21,SNR=9.6						
ROSC				PKP	PKPdf	13 57 48.7	+1.2
	comp=Z,94nm,0.5s,baz=148,slow=4.1,SNR=25						
ROSC				SKPbc	SKPbc	14 00 52.2	-1.7
	comp=Z,132nm,0.7s,baz=104,slow=6.2,SNR=5.2						
LZG	**Guadaloupe-1**	**135.13**	**34**	*e*P	PKPdf	13 57 38.7	-9.0
SDV	**Santo Domingo**	**135.15**	**50**	PKhKP		13 57 33.5	
	comp=Z,66nm,0.7s,baz=332,slow=5.3,SNR=11						
SDV				PKP	PKPdf	13 57 46.8	-1.0
	comp=Z,1μm,1.1s,baz=90,slow=1.3,SNR=38						
SDV				SKPbc	SKPbc	14 00 52.2	-2.3
	comp=Z,853nm,0.8s,baz=345,slow=1.1,SNR=16						
SDV				SKKPbc		14 09 55.1	
	comp=Z,38nm,1.1s,baz=324,slow=5.3,SNR=3.1						
SDV	**Santo Domingo**	**135.15**	**50**	PKP	PKPdf	13 57 46.8	-1.0
SDV				SKPbc	SKPbc	14 00 52.2	-2.3
SDV				SKKPbc		14 09 55.1	
FDF	**Fort de France**	**136.63**	**35**	⇑*i*P	SKPbc	14 00 56.4	-2.5
DBIC	**Dimbokro**	**137.31**	**308**	PKhKP		13 57 40.6	
	comp=Z,41nm,0.4s,baz=36,slow=3.7,SNR=32						
DBIC				PKP	PKPdf	13 57 50.4	-1.4
	comp=Z,145nm,0.5s,baz=30,slow=2.9,SNR=17						
DBIC				SKPbc	SKPbc	14 01 00.1	-0.9
	comp=Z,589nm,0.8s,baz=45,slow=2.0,SNR=11						
DBIC				PKKP		14 07 26.7	
	comp=Z,46nm,1.0s,baz=264,slow=21,SNR=4.8						
DBIC				SKKPbc		14 09 44.2	
	comp=Z,50nm,1.1s,baz=187,slow=6.9,SNR=3.9						
DBIC	**Dimbokro**	**137.31**	**308**	PKHKP		13 57 40.7	
DBIC						13 57 50.4	
DBIC				pmax	pmax		
	comp=Z,41nm,0.4s						
DBIC	**Dimbokro**	**137.31**	**308**	PKP	PKPdf	13 57 50.4	-1.4
DBIC				SKPbc	SKPbc	14 01 00.1	-0.9
DBIC				PKKP		14 07 26.7	
DBIC				SKKPbc		14 09 44.2	
SLW	**Petit Monier**	**137.34**	**35**	*e*P	SKPbc	14 00 58.0	-3.0
KIC	**Kosan Boka**	**137.43**	**308**	*e*P	PKPdf	13 57 38.0	-14
	comp=Z,3μm,1.1s						
TIC	**Toumodi**	**137.44**	**308**	*e*P	PKPdf	13 57 39.7	-12
	comp=Z,543nm,0.3s						
SLB	**Belfond**	**137.45**	**35**	*e*	PKPdf	13 57 45.9	-6.1
LIC	**Lamto**	**137.73**	**308**	*e*PKIKP	PKPdf	13 57 52.2	-0.4
	comp=Z,2μm,1.1s						
LIC				*e*MLR	MLR		
	comp=Z,46μm,22.2s						
LIC	**Lamto**	**137.73**	**308**	*e*P	PKPdf	13 57 41.2	-11
	comp=Z,3μm,1.1s						
LIC	**Lamto**	**137.73**	**308**	*e*PKPdf	PKPdf	13 57 52.2	-0.4
LIC				LR	LR		
	comp=Z,23μm,22.3s						
SVV	**Soufriere Volc**	**137.77**	**36**	*e*	PKPdf	13 57 44.0	-8.6
SSV	**Crater Summit**	**137.78**	**36**	*e*	PKPdf	13 57 44.8	-7.8
BBTS	**Babate**	**138.25**	**329**	PKhKP		13 57 47.1	
	comp=Z,84nm,0.5s,baz=163,slow=1.3,SNR=14						
BBTS				PKP	PKPdf	13 57 55.2	+1.7
	comp=Z,960nm,1.1s,baz=332,slow=1.5,SNR=31						
BBTS				PP	PP	14 00 44.3	+0.1
	comp=Z,406nm,1.0s,baz=0.2,slow=2.7,SNR=4.1						
BBTS				SKPbc	SKPbc	14 01 03.9	+0.3
	comp=Z,923nm,0.9s,baz=348,slow=1.9,SNR=12						
BBTS				SKKPbc		14 09 45.8	
	comp=Z,59nm,0.9s,baz=20,slow=5.1,SNR=4.2						
BBTS	**Babate**	**138.25**	**329**	PKP	PKPdf	13 57 55.2	+1.7
BBTS				PP	PP	14 00 44.3	+0.1
BBTS				SKPbc	SKPbc	14 01 03.9	+0.3
BBTS				SKKPbc		14 09 45.8	
PCRV	**Puerto La Cruz**	**138.26**	**43**	PKhKP		13 57 43.7	
	comp=Z,30nm,0.4s,baz=320,slow=1.8,SNR=15						
PCRV				PKP	PKPdf	13 57 53.6	0.0
	comp=Z,130nm,0.5s,baz=11,slow=5.9,SNR=24						
PCRV				SKPbc	SKPbc	14 01 00.3	-3.4
	comp=Z,206nm,0.7s,baz=289,slow=3.4,SNR=3.6						
PCRV	**Puerto La Cruz**	**138.26**	**43**	PKP	PKPdf	13 57 53.6	0.0
PCRV				SKPbc	SKPbc	14 01 00.3	-3.4
GRCU	**Cariacou**	**138.34**	**37**	*e*	PKPdf	13 57 42.2	-11
GRHS	**Sauteurs**	**138.43**	**37**	*e*	PKPdf	13 57 51.0	-2.8
GRW	**Mount Saint Ca**	**138.47**	**37**	*e*P	PKPdf	13 57 47.6	-6.3
GRW	**Mount Saint Ca**	**138.47**	**37**	*e*	PKPdf	13 57 48.0	-5.9
GRGR	**Grenville**	**138.50**	**37**	*e*PKPdf	PKPdf	13 57 48.5	-5.5
TCE	**Chacachacare**	**139.60**	**39**	*e*P	PKPdf	13 57 46.9	-9.1
TPR	**Prospect**	**139.76**	**37**	*e*P	PKPdf	13 57 47.9	-8.4
USHA	**Ushuaia**	**139.77**	**152**	PKhKP		13 57 48.5	
	comp=Z,145nm,1.0s,baz=196,slow=1.5,SNR=20						
USHA				PKP	PKPdf	13 57 55.8	+0.8
	comp=Z,700nm,1.0s,baz=230,slow=3.0,SNR=29						
USHA				SKPbc	SKPbc	14 01 06.1	-0.4
	comp=Z,640nm,0.9s,baz=195,slow=1.9,SNR=12						
USHA				SKKPbc		14 09 41.5	
	comp=Z,61nm,1.0s,baz=7.9,slow=2.6,SNR=5.2						
USHA	**Ushuaia**	**139.77**	**152**	PKP	PKPdf	13 57 55.8	+0.8
USHA				SKPbc	SKPbc	14 01 06.1	-0.4
USHA				SKKPbc		14 09 41.5	
BOT	**Bacolet**	**139.81**	**37**	*e*P	PKPdf	13 57 48.7	-7

s-maj=38.0km s-min=17.5km az=74.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.17**	**353**	P	Pn	14 11 58.4	-0.4
	16nm,0.3s,baz=248,slow=19,SNR=16						
CBIJ				S	S	14 12 55.2	-6.1
	22nm,0.3s,baz=281,slow=23,SNR=13						
JHJ	**Hachijo jima 2**	**11.46**	**347**	P	Pn	14 13 16.6	-0.6
	3.9nm,0.3s,baz=77,slow=11,SNR=4.7						
MJAR	**Matsushiro Arr**	**15.10**	**346**	P	Pn	14 14 01.0	-0.5
	0.9nm,0.3s,baz=173,slow=10,SNR=7.9						
KSRS	**Korea Array**	**20.14**	**323**	P	P	14 14 56.3	+1.1
	1.4nm,0.5s,baz=144,slow=8.5,SNR=7.9						
SONM	**Songino Array**	**38.95**	**320**	P	P	14 17 41.8	+0.3
	2.7nm,0.8s,baz=116,slow=6.1,SNR=3.2						
WRA	**Warramunga Arr**	**42.45**	**192**	P	P	14 18 09.8	-0.4
	47nm,1.1s,baz=7.2,slow=8.4,SNR=9.0						
BVAR	**Borovoye Array**	**62.29**	**319**	P	P	14 20 35.4	+0.4
	5.9nm,0.9s,baz=99,slow=7.8,SNR=4.5						
ARCES	**ARCESS Array B**	**78.60**	**341**	P	P	14 22 12.6	-0.4
	4.7nm,0.8s,baz=68,slow=7.2,SNR=5.6						
HFS	**Hagfors**	**88.39**	**337**	P	P	14 23 00.8	-1.9
	11nm,1.2s,baz=71,slow=9.8,SNR=4.0						
PLCA	**Paso Flores**	**146.15**	**131**	PKPbc	PKPbc	14 29 50.5	+0.3
	1.5nm,0.6s,baz=208,slow=8.9,SNR=7.0						
LPAZ	**La Paz**	**150.23**	**85**	PKPbc	PKPbc	14 30 02.3	+0.9
	1.0nm,0.6s,baz=323,slow=4.8,SNR=5.2						

*NEIC **28** 14:30:35.3±5.7, 2196N×14290E, h225km±57km, mb4.0/3, Error ellipse: s-maj=20.4km s-min=10.6km az=69.0*
*ISCJB **28** 14:30:36.0±1.6, 2195N±010×1429E±02, h248km±14km, mb3.5/9, Error ellipse: s-maj=22.9km s-min=15.2km az=169.3*
*IDC **28** 14:30:37.5±2.5, 2193N×14304E, h251km±24km, mb3.3/9, mb1 3.4/10, mb1mx3.3/22, mbtmp3.3/10, Error ellipse: s-maj=38.6km s-min=13.2km az=80.0*
*MOS **28** 14:30:41.1±0.7, 2194N×14284E, h302km, mb4.0/1, Error ellipse: s-maj=31.7km s-min=19.4km az=107.3*

ISC 28 14:30:36.7±1.5, 2196N±010×1429E±01, h238km±15km, n17, σ0°71/18, mb3.5/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.16**	**353**	P	**Pn**	**14 31 55.2**	**+1.2**
	16nm,0.3s,baz=281,slow=18,SNR=15						
CBIJ				S	**S**	**14 32 54.5**	**-1.1**
	4.9nm,0.3s,baz=300,slow=23,SNR=4.0						
TATO	**Taipei**	**19.87**	**283**	P	**P**	**14 34 49.4**	**-0.8**
	7.0nm,0.3s						
YHNB	**Yeheng**	**19.95**	**282**	P	**P**	**14 34 43.6**	**-7.4**
	5.1nm,1.4s						
KSRS	**Korea Array**	**20.15**	**323**	P	**P**	**14 34 54.8**	**+1.7**
	3.4nm,0.6s,baz=146,slow=8.9,SNR=19						
SONM	**Songino Array**	**38.97**	**320**	P	**P**	**14 37 40.3**	**+0.4**
	0.6nm,0.4s,mb3.5,baz=120,slow=6.6,SNR=9.6						
WRAB	**Tennant Creek**	**42.46**	**192**	*e*P	**P**	**14 38 09.3**	**+0.7**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
WRAB	**Tennant Creek**	**42.46**	**192**	*e*P	**P**	**14 38 09.2**	**+0.7**
	comp=Z,2.1nm,0.5s,mb3.8						
WRA	**Warramunga Arr**	**42.47**	**192**	P	**P**	**14 38 08.1**	**-0.6**
	comp=Z,1.3nm,0.7s,mb3.5,baz=8.5,slow=7.7,SNR=21						
ASAR	**Alice Springs**	**46.18**	**191**	P	**P**	**14 38 37.5**	**-0.4**
	comp=Z,0.3nm,0.6s,mb2.8,baz=16,slow=13,SNR=9.3						
ZALV	**Zalesovo Beam**	**53.85**	**322**	P	**P**	**14 39 34.9**	**-0.2**
	comp=Z,0.7nm,0.3s,mb3.6,baz=101,slow=9.1,SNR=3.4						
MK31	**Makanchi Array**	**54.33**	**313**	P	**P**	**14 39 38.6**	**-0.1**
MKAR	**Makanchi Array**	**54.33**	**313**	P	**P**	**14 39 38.7**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.1,baz=89,slow=9.1,SNR=3.2						
HON	**Honolulu**	**54.62**	**79**	P	**P**	**14 39 41.3**	**+0.1**
BVAR	**Borovoye Array**	**62.31**	**319**	P	**P**	**14 40 33.6**	**0.0**
	comp=Z,0.5nm,0.4s,mb3.5,baz=94,slow=8.1,SNR=3.8						
YKA	**Yellowknife Ar**	**76.35**	**28**	P	**P**	**14 41 58.9**	**-0.3**
	comp=Z,1.8nm,0.8s,mb3.8,baz=274,slow=24,SNR=2.7						
YKA	**Yellowknife Ar**	**76.35**	**28**	P	**P**	**14 41 58.9**	**-0.4**
ARCES	**ARCESS Array B**	**78.60**	**341**	P	**P**	**14 42 11.2**	**-0.4**
	comp=Z,1.1nm,0.6s,mb3.6,baz=338,slow=2.6,SNR=5.1						

*IDC **28** 14:39:22.1±2.0, 2133S×16943E, h0km, mb4.0/6, mb1 4.3/6, mb1mx4.0/15, mbtmp4.0/6, MS5.4/1, Ms1 5.4/1, ms1mx3.7/27, Error ellipse: s-maj=87.8km s-min=28.5km az=157.0*
*ISCJB **28** 14:39:23.8±6.6, 215S±03×1694E±0.1, h22km±45km, mb4.2/10, Error ellipse: s-maj=44.0km s-min=18.1km az=165.4*
*NEIC **28** 14:39:23.6±1.1, 2138S×16940E, h10km, mb4.3/6, Error ellipse: s-maj=35.7km s-min=19.4km az=163.0*

ISC 28 14:39:24.9±6.3, 2145S±03×1694E±01, h16km±40km, n15, σ0°90/16, mb4.2/10, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.81**	**256**	*e*P	**Pn**	**14 40 09.1**	**0.0**
DZM				*e*S	**Sn**	**14 40 42.5**	**-0.1**
DZM	**Mont Dzumac**	**2.81**	**256**	*e*Pn	**Pn**	**14 40 08.3**	**-0.8**
CTA	**Charters Tower**	**21.66**	**269**	*e*P	**P**	**14 44 16.5**	**+1.6**
	3.7nm,0.8s,mb3.9						
CTA	**Charters Tower**	**21.66**	**269**	P	**P**	**14 44 16.4**	**+1.6**
	3.2nm,0.8s,mb3.8,baz=135,slow=7.8,SNR=3.7						
STKA	**Stephens Creek**	**26.87**	**241**	*e*P	**P**	**14 45 06.3**	**+1.4**
	11nm,1.4s,mb4.2						
STKA	**Stephens Creek**	**26.87**	**241**	P	**P**	**14 45 06.0**	**+1.1**
	4.0nm,1.0s,mb3.9,baz=69,slow=13,SNR=3.0						
WRAB	**Tennant Creek**	**32.77**	**266**	*e*P	**P**	**14 45 56.7**	**-0.6**
	0.8nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**32.78**	**266**	P	**P**	**14 45 55.9**	**-1.5**
	0.6nm,0.5s,mb3.8,baz=96,slow=8.5,SNR=26						
ASAR	**Alice Springs**	**32.80**	**259**	P	**P**	**14 45 57.2**	**-0.3**
	2.4nm,0.7s,mb4.2,baz=81,slow=9.3,SNR=37						
FITZ	**Fitzroy Crossi**	**41.20**	**267**	*e*P	**P**	**14 47 09.0**	**-0.1**
	9.1nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**41.20**	**267**	*e*P	**P**	**14 47 08.7**	**-0.4**
	14nm,0.9s,mb4.6						
MBWA	**Marble Bar**	**46.10**	**261**	*e*P	**P**	**14 47 48.1**	**-0.4**
	3.0nm,0.8s,mb4.3						
CASY	**Casey**	**58.21**	**204**	*e*P	**P**	**14 49 18.0**	**+0.1**
	8.3nm,1.5s,mb4.5						
CMAR	**Chiang Mai Arr**	**79.51**	**295**	P	**P**	**14 51 32.7**	**+1.5**
	0.9nm,0.6s,mb3.9,baz=133,slow=4.8,SNR=3.6						
NVAR	**Mina Array Bea**	**90.13**	**48**	P	**P**	**14 52 23.7**	**-0.6**
	1.3nm,0.8s,mb4.3,baz=231,slow=8.0,SNR=8.5						

IDC 28 14:42:32.9±9.4, 2154N×14224E, h174km±185km, mb2.7/3, mb1 2.9/4, mb1mx2.8/21, mbtmp2.9/4, ML3.6/1, Error ellipse: s-maj=276.2km s-min=32.1km az=67.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.53**	**359**	P	Pn	14 43 55.4	+1.7
	4.7nm,0.3s,baz=268,slow=19,SNR=4.3						
CBIJ				S	Sn	14 44 56.1	-0.9
	3.3nm,0.3s,baz=288,slow=23,SNR=9.3						
KSRS	**Korea Array**	**20.13**	**325**	P	P	14 46 54.0	+0.7
	0.8nm,0.6s,baz=144,slow=8.8,SNR=5.6						
WRA	**Warramunga Arr**	**41.95**	**191**	P	P	14 50 06.8	+0.1
	0.7nm,1.1s,baz=8.6,slow=8.2,SNR=6.5						
ASAR	**Alice Springs**	**45.66**	**191**	P	P	14 50 35.7	-0.5
	0.3nm,0.9s,baz=13,slow=8.7,SNR=3.3						

*ISCJB **28** 14:51:55.2±1.6, 220N±01×1436E±02, h272km±16km, mb3.4/9, Error ellipse: s-maj=35.5km s-min=15.4km az=170.9*
*NEIC **28** 14:51:57.5±3.4, 2193N×143.17E, h265km±34km, mb4.2/4, Error ellipse: s-maj=23.8km s-min=13.0km az=89.0*
*IDC **28** 14:51:57.6±2.2, 2186N×14289E, h261km±21km, mb3.2/9, mb1 3.5/12, mb1mx3.3/25, mbtmp3.4/12, Error ellipse: s-maj=28.7km s-min=12.5km az=77.0*

ISC 28 14:51:56.2±1.6, 2198N±010×1434E±02, h261km±16km, n18, σ0°80/18, mb3.4/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.22**	**348**	P	**Pn**	**14 53 16.2**	**+1.3**
	11nm,0.3s,baz=315,slow=22,SNR=31						
CBIJ				S	**S**	**14 54 15.8**	**-2.2**
	34nm,0.3s,baz=129,slow=22,SNR=17						
JHJ	**Hachijo jima 2**	**11.56**	**345**	P	**Pn**	**14 54 35.5**	**+1.5**
	4.9nm,0.3s,baz=222,slow=14,SNR=7.4						
MJAR	**Matsushiro Arr**	**15.20**	**344**	P	**Pn**	**14 55 18.0**	**-0.3**
	baz=167,slow=11,SNR=1.1						
MAJO	**Matsushiro**	**15.20**	**344**	*e*P	**Pn**	**14 55 18.0**	**-0.3**
	4.8nm,0.3s						
TATO	**Taipei**	**20.33**	**283**	*e*P	**P**	**14 56 13.6**	**+0.5**
	5.3nm,0.4s						
YHNB	**Yeheng**	**20.41**	**282**	*e*P	**P**	**14 56 14.0**	**0.0**
	3.1nm,0.4s						
KSRS	**Korea Array**	**20.42**	**322**	P	**P**	**14 56 14.3**	**+0.4**
	2.4nm,0.6s,baz=146,slow=9.1,SNR=12						
SONM	**Songino Array**	**39.26**	**320**	P	**P**	**14 58 59.5**	**-0.2**
	0.3nm,0.4s,mb3.1,baz=126,slow=5.8,SNR=3.7						
WRAB	**Tennant Creek**	**42.59**	**193**	P	**P**	**14 59 26.8**	**-0.1**
	1.7nm,0.6s,mb3.5						
WRA	**Warramunga Arr**	**42.60**	**193**	P	**P**	**14 59 26.8**	**-0.2**
	0.9nm,0.4s,mb3.3,baz=8.4,slow=7.6,SNR=26						
ASAR	**Alice Springs**	**46.30**	**192**	P	**P**	**14 59 55.6**	**-0.6**
	0.3nm,0.5s,mb2.9,baz=12,slow=7.3,SNR=13						
MKAR	**Makanchi Array**	**54.67**	**312**	P	**P**	**15 00 57.7**	**-0.6**
	0.3nm,0.3s,mb3.3,baz=89,slow=9.3,SNR=3.2						
KURK	**Kurchatov**	**57.42**	**317**	P	**P**	**15 01 18.0**	**+0.3**
	1.1nm,0.5s,mb3.5,baz=95,slow=7.6,SNR=5.6						
BVAR	**Borovoye Array**	**62.60**	**319**	P	**P**	**15 01 52.0**	**-0.7**
	1.2nm,0.4s,mb3.9,baz=95,slow=8.5,SNR=7.3						
ARCES	**ARCESS Array B**	**78.73**	**342**	P	**P**	**15 03 29.8**	**+0.5**
	5.8nm,0.9s,mb4.3,baz=68,slow=8.2,SNR=4.2						
ARCES	**ARCESS Array B**	**78.73**	**342**	P	**P**	**15 03 29.8**	**+0.4**
NVAR	**Mina Array Bea**	**82.80**	**52**	P	**P**	**15 03 55.8**	**+4.3**
	0.2nm,0.5s,mb3.2,baz=290,slow=5.4,SNR=3.0						
PLCA	**Paso Flores**	**145.78**	**131**	PKPbc	PKPbc	15 11 07.1	+2.4
	0.8nm,0.5s,baz=250,slow=4.2,SNR=5.7						

IDC 28 15:19:09.4±3.4, 2121S×16934E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/15, mbtmp3.7/4, Error ellipse: s-maj=235.1km s-min=30.9km az=161.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.75**	**266**	P	P	15 25 43.8	-0.5
	0.3nm,0.5s,baz=96,slow=8.3,SNR=8.3						
ASAR	**Alice Springs**	**32.79**	**259**	P	P	15 25 44.8	+0.3
	1.2nm,0.8s,baz=92,slow=10.0,SNR=10						
FITZ	**Fitzroy Crossi**	**41.17**	**266**	P	P	15 26 56.1	+0.1
	1.7nm,0.7s,baz=104,slow=12,SNR=5.4						
NVAR	**Mina Array Bea**	**90.03**	**48**	P	P	15 32 11.4	+0.3
	0.2nm,0.5s,baz=224,slow=7.6,SNR=2.8						

*ISCJB **28** 15:29:57.5±0.7, 2455N±003×12263E±002, h95km±6km, Error ellipse: s-maj=5.8km s-min=3.2km az=172.8*
*TAP **28** 15:29:57.2, 2457N×12256E, h105km, ML3.2, C*
*JMA **28** 15:29:57.4±0.2, 2466N×12266E, h100km, M2.2*

ISC 28 15:29:58.0±0.7, 2455N±003×12262E±002, h94km±6km, n37, σ0°53/72, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.36**	**103**	P	**Pn**	**15 30 12.4**	**+0.2**
YOJ				*e*S	**Sn**	**15 30 23.9**	**+1.1**
EGS		**0.70**	**296**	*e*P	**Pn**	**15 30 14.1**	**-0.7**
	baz=288						
EGS				S	**Sn**	**15 30 27.6**	**+0.2**
	baz=288						
TWC	**Suao**	**0.71**	**275**	P	**Pn**	**15 30 14.6**	**-0.3**
	baz=271						
TWC				S	**Sn**	**15 30 27.2**	**-0.4**
	baz=271						
TWB1	**Santiao Chiao**	**0.74**	**309**	*e*P	**Pn**	**15 30 14.3**	**-0.9**
	baz=306						
TWB1				S	**Sn**	**15 30 28.2**	**+0.1**
	baz=306						
ENA	**Nanau**	**0.81**	**262**	P	**Pn**	**15 30 16.0**	**0.0**
	baz=255						
ENA				S	**Sn**	**15 30 29.3**	**-0.1**
	baz=255						
TWE	**Neicheng**	**0.89**	**282**	P	**Pn**	**15 30 16.8**	**+0.1**
	baz=281						
TWE				S	**Sn**	**15 30 30.9**	**+0.1**
	baz=281						
NWF	**Wu-fen Shan**	**0.93**	**305**	*e*P	**Pn**	**15 30 17.0**	**-0.2**
	baz=298						
NWF				S	**Sn**	**15 30 31.9**	**+0.3**
	baz=298						
ENTT	**Nioudou**	**0.97**	**276**	P	**Pn**	**15 30 18.1**	**+0.5**
	baz=275						
ENTT				S	**Sn**	**15 30 32.3**	**0.0**
	baz=275						
IRIF	**Iriomote-Funau**	**1.03**	**101**	P	**Pn**	**15 30 17.9**	**-0.4**
IRIF				*e*S	**Sn**	**15 30 33.9**	**+0.3**
TWA	**Mucha**	**1.04**	**295**	*e*P	**Pn**	**15 30 18.5**	**+0.1**
	baz=288						
TWA				*e*S	**Sn**	**15 30 32.5**	**-1.2**
	baz=288						
TWD	**Chiawan**	**1.04**	**244**	P	**Pn**	**15 30 17.9**	**-0.6**
	baz=237						
TWD				S	**Sn**	**15 30 34.1**	**+0.2**
	baz=237						
NNS	**Nan Shan**	**1.14**	**265**	*e*P	**Pn**	**15 30 20.0**	**+0.4**
	baz=258						
NNS				*e*S	**Sn**	**15 30 36.3**	**+0.4**
	baz=258						
NSK	**Sanguang**	**1.16**	**277**	P	**Pn**	**15 30 19.9**	**+0.1**
	baz=276						
NSK				S	**Sn**	**15 30 36.3**	**+0.1**
	baz=276						
HATJ	**Hateruma jima**	**1.18**	**114**	*e*S	**Sn**	**15 30 37.4**	**+0.7**
PCYT	**Pengchaiyu**	**1.19**	**335**	*e*P	**Pn**	**15 30 20.4**	**+0.2**
	baz=328						
PCYT				*e*S	**Sn**	**15 30 36.9**	**0.0**
	baz=328						
TWS1	**Kuangyinshan**	**1.23**	**297**	*e*P	**Pn**	**15 30 19.6**	**-1.0**
	baz=297						
JKRS	**Kuro-shima**	**1.30**	**103**	P	**Pn**	**15 30 21.9**	**+0.4**
JKRS				S	**Sn**	**15 30 39.7**	**+0.5**
WHF	**Hehuan Shan**	**1.30**	**252**	*e*P	**Pn**	**15 30 22.0**	**+0.5**
	baz=250						
WHF				*e*S	**Sn**	**15 30 39.7**	**+0.5**
	baz=250						
ESL	**Shilin**	**1.31**	**236**	*e*P	**Pn**	**15 30 21.2**	**-0.4**
	baz=229						
ESL				*e*S	**Sn**	**15 30 39.0**	**-0.4**
	baz=229						
TWT	**Tachien**	**1.35**	**258**	*e*P	**Pn**	**15 30 22.6**	**+0.5**
	baz=256						
TWT				*e*S	**Sn**	**15 30 40.5**	**+0.2**
	baz=256						
JIJ	**Ishigaki jima**	**1.40**	**97**	P	**Pn**	**15 30 22.4**	**-0.3**
JIJ				*e*S	**Sn**	**15 30 40.4**	**-0.9**
NSTT	**Nanjuang**	**1.48**	**274**	*e*P	**Pn**	**15 30 23.8**	**+0.1**
	baz=273						
NSTT				*e*S	**Sn**	**15 30 43.0**	**-0.1**
	baz=273						
EHY	**Hungye**	**1.58**	**229**	*e*P	**Pn**	**15 30 24.8**	**-0.1**
	baz=227						
EHY				*e*S	**Sn**	**15 30 44.2**	**-1.1**
	baz=227						
SMLT	**Sun Moon Lake**	**1.71**	**248**	*e*P	**Pn**	**15 30 26.5**	**-0.1**
	baz=241						
SMLT				*e*S	**Sn**	**15 30 48.4**	**+0.2**
	baz=241						
TYC	**Yuchr**	**1.73**	**249**	*e*P	**Pn**	**15 30 27.3**	**+0.4**
	baz=243						
TYC				*e*S	**Sn**	**15 30 49.1**	**+0.2**
	baz=243						
CHKT	**Chengkung**	**1.84**	**219**	*e*P	**Pn**	**15 30 27.3**	**-1.0**
	baz=217						
CHKT				*e*S	**Sn**	**15 30 49.6**	**-1.8**
	baz=217						
YUS	**Yu-Shan**	**1.85**	**236**	*e*P	**Pn**	**15 30 29.0**	**+0.6**
	baz=230						
YUS				*e*S	**Sn**	**15 30 51.7**	**+0.1**
	baz=230						
JTJ	**Tarama**	**1.90**	**87**	P	**Pn**	**15 30 28.7**	**-0.3**
JTJ				*e*S	**Sn**	**15 30 51.8**	**-0.8**
ALS	**Alishan**	**1.96**	**239**	*e*P	**Pn**	**15 30 30.5**	**+0.7**
	baz=237						
ALS				*e*S	**Sn**	**15 30 54.0**	**0.0**
	baz=237						
ELDTW	**Lidau**	**2.00**	**228**	*e*P	**Pn**	**15 30 30.1**	**-0.2**
	baz=225						
ELDTW				*e*S	**Sn**	**15 30 54.8**	**-0.2**
	baz=225						
CHN5	**Tsauling**	**2.01**	**242**	*e*P	**Pn**	**15 30 31.0**	**+0.4**
	baz=233						
CHN5				*e*S	**Sn**	**15 30 55.7**	**+0.4**
	baz=233						
STYT	**Tauyuan**	**2.19**	**232**	*e*P	**Pn**	**15 30 33.3**	**+0.4**
	baz=229						
STYT				*e*S	**Sn**	**15 30 59.4**	**-0.2**
	baz=229						
CHN4	**Tsaushan**	**2.21**	**238**	*e*P	**Pn**	**15 30 33.7**	**+0.6**
	baz=236						
CHN4				*e*S	**Sn**	**15 31 00.3**	**+0.4**
	baz=236						
TWG	**Pinlang**	**2.23**	**220**	*e*P	**Pn**	**15 30 33.8**	**+0.4**
	baz=218						
TWG				*e*S	**Sn**	**15 30 59.8**	**-0.6**
	baz=218						
WTP	**Ta-pu**	**2.25**	**235**	*e*P	**Pn**	**15 30 34.2**	**+0.6**
	baz=233						
WTP				*e*S	**Sn**	**15 31 01.1**	**+0.2**
	baz=233						
CHN1	**Nanshi**	**2.35**	**235**	*e*P	**Pn**	**15 30 36.2**	**+1.3**
	baz=233						
CHN1				*e*S	**Sn**	**15 31 03.1**	**-0.1**
	baz=233						
SSD	**Sandimen**	**2.56**	**226**	*e*P	**Pn**	**15 30 37.4**	**-0.3**
	baz=224						
SSD				*e*S	**Sn**	**15 31 08.1**	**-0.1**
	baz=224						

*ISCJB **28** 15:40:28.4±2.9, 156S±01×1673E±03, h148km±20km, mb3.6/4, Error ellipse: s-maj=54.6km s-min=15.3km az=167.2*
*NEIC **28** 15:40:28.1±1.9, 1553S×16747E, h141km±14km, mb3.9/1, Error ellipse: s-maj=28.6km s-min=14.3km az=71.0*
*IDC **28** 15:40:31.1±15.0, 1540S×16729E, h160km±102km, mb3.3/4, mb1 3.6/5, mb1mx3.4/18, mbtmp3.6/5, Error ellipse: s-maj=140.6km s-min=33.1km az=123.0*

ISC 28 15:40:28.6±2.8, 156S±01×1674E±03, h138km±19km, n10, σ0°37/10, mb3.6/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.52**	**188**	*e*P	**Pn**	**15 42 02.7**	**+0.5**
DZM				*e*S	**Sn**	**15 43 14.7**	**-0.7**
DZM	**Mont Dzumac**	**6.52**	**188**	*e*Pn	**Pn**	**15 42 02.6**	**+0.4**
DZM				*e*Sn	**Sn**	**15 43 15.3**	**0.0**
HNR	**Honiara**	**9.48**	**309**	P	**Pn**	**15 42 41.9**	**-0.1**
	12nm,0.3s,baz=172,slow=6.3,SNR=8.7						
WRA	**Warramunga Arr**	**31.73**	**257**	P	**P**	**15 46 39.2**	**-0.4**
	0.6nm,0.8s,mb3.4,baz=86,slow=8.9,SNR=6.5						
ASAR	**Alice Springs**	**32.48**	**250**	P	**P**	**15 46 46.5**	**+0.3**
	0.6nm,0.4s,mb3.7,baz=76,slow=9.1,SNR=29						
FITZ	**Fitzroy Crossi**	**39.97**	**260**	P	**P**	**15 47 50.3**	**+0.5**
	1.1nm,0.7s,mb3.6,baz=74,slow=10,SNR=3.9						
FITZ	**Fitzroy Crossi**	**39.97**	**260**	*e*P	**P**	**15 47 50.2**	**+0.3**
	1.6nm,0.6s,mb3.8						
SONM	**Songino Array**	**83.24**	**324**	P	**P**	**15 52 39.2**	**-0.3**
	0.5nm,0.5s,mb3.5,baz=120,slow=4.9,SNR=4.2						
ARCES	**ARCESS Array B**	**121.09**	**345**	PKP	PKPdf	15 59 03.2	-1.1
	3.8nm,0.8s,baz=46,slow=2.6,SNR=4.3						
ARCES	**ARCESS Array B**	**121.09**	**345**	PKP	PKPdf	15 59 03.2	-1.1

*CSEM **28** 15:43:02.9±0.1, 3971N×2579E, h5km, MD3.1, Error ellipse: s-maj=1.8km s-min=1.1km az=7.0*
*THE **28** 15:43:02.8, 3965N×2572E, h8km, ML3.1*
*NEIC **28** 15:43:02.0, 3971N×2581E, h4km, MD3.4(ATH), After ATH.*
*ATH **28** 15:43:02.0, 3971N×2581E, h4km, MD3.4/4*
*ISCJB **28** 15:43:02.1±0.4, 3965N±003×2572E±003, h10km, Error ellipse: s-maj=4.4km s-min=3.3km az=44.5*
*ISK **28** 15:43:03.0, 3974N×2582E, h5km, MD3.1*

ISC 28 15:43:02.6±0.5, 3966N±003×2573E±004, h1km±6km, n24, σ0°86/33, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.48**	**299**	*e*Pg	**Pg**	**15 43 12.0**	**+0.1**
LIA				*e*Sg	**Sg**	**15 43 19.3**	**+1.1**
LIA	**Limnos Island**	**0.48**	**299**	*e*PG	**Pg**	**15 43 12.2**	**+0.3**
LIA				*e*SG	**Sg**	**15 43 19.3**	**+1.1**
EZN	**Ezine**	**0.49**	**70**	*e*PG	**Pg**	**15 43 11.8**	**-0.2**
EZN				*e*SG	**Sg**	**15 43 18.7**	**+0.4**
GADA	**Gvkgeada**	**0.54**	**14**	*e*PG	**Pg**	**15 43 13.0**	**-0.1**
GADA				*e*SG	**Sg**	**15 43 20.9**	**+0.7**
LOS	**Limnos**	**0.57**	**299**	*e*Pg	**Pg**	**15 43 14.0**	**+0.4**
LOS				*e*Sg	**Sg**	**15 43 22.5**	**+1.6**
PRK	**Paraskevi**	**0.59**	**135**	*e*Pg	**Pg**	**15 43 14.0**	**+0.1**
PRK				*e*Sg	**Sg**	**15 43 22.8**	**+1.3**
PRK	**Paraskevi**	**0.59**	**135**	*e*PG	**Pg**	**15 43 13.1**	**-0.8**
LPK	**Lapseki**	**1.06**	**48**	*e*PG	**Pg**	**15 43 22.4**	**-0.6**
ENEZ	**Enez**	**1.12**	**17**	*e*PG	**Pg**	**15 43 23.5**	**-0.7**
ALN	**Alexandroupoli**	**1.26**	**11**	*e*Pg	**Pg**	**15 43 25.4**	**-1.3**
ALN				*e*Sg	**Sg**	**15 43 43.2**	**+0.2**
CHOS	**Chios island**	**1.30**	**169**	*e*Pg	**Pg**	**15 43 26.0**	**-1.4**
CHOS				*e*Sg	**Sg**	**15 43 44.0**	**-0.2**
CHOS	**Chios island**	**1.30**	**169**	*e*Pg	**Pg**	**15 43 26.0**	**-1.5**
CHOS				*e*Sg	**Sg**	**15 43 44.0**	**-0.3**
RDO	**Rodhopi**	**1.49**	**354**	*e*PB	**Pb**	**15 43 29.3**	**-1.8**
OUR	**Ouranopolis**	**1.50**	**297**	*e*Pg	**Pn**	**15 43 29.2**	**-1.4**
RKY	**Sarkoy-Tekirda**	**1.51**	**47**	*e*PN	**Pn**	**15 43 30.2**	**-0.5**
MFT	**Murefte**	**1.63**	**46**	*e*PN	**Pn**	**15 43 32.0**	**-0.5**
BALB	**Balikesir**	**1.66**	**90**	*e*PN	**Pn**	**15 43 34.1**	**+1.3**
EDC	**Edincik**	**1.77**	**67**	*e*PN	**Pn**	**15 43 34.8**	**+0.4**
AKS	**Akhisar**	**1.79**	**115**	*e*PN	**Pg**	**15 43 36.8**	**-0.2**
BNT	**Bandirma**	**1.82**	**67**	*e*PN	**Pn**	**15 43 35.0**	**0.0**
PLG	**Polygyros**	**1.90**	**293**	*e*PG	**Pg**	**15 43 38.4**	**-0.5**
KCT	**Karacabey**	**2.10**	**72**	*e*PN	**Pn**	**15

σ0$89/35, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.73**	**26**	*e*Pg	**Pg**	**15 48 17.9**	**+0.2**
KFL				*e*Sg	**Sg**	**15 48 27.4**	**+0.3**
VLS	**Valsamata**	**0.74**	**12**	*e*Pg	**Pg**	**15 48 18.1**	**+0.2**
VLS				*e*Sg	**Sg**	**15 48 28.1**	**+0.5**
VLS	**Valsamata**	**0.74**	**12**	*e*PN	**Pn**	**15 48 18.2**	**-2.9**
VLS				*e*SN	**Sg**	**15 48 27.8**	**+0.2**
RLS	**Riolos of Patr**	**1.05**	**54**	*e*PN	**Pn**	**15 48 23.4**	**-1.9**
RLS				*e*SN	**Sn**	**15 48 36.2**	**-4.2**
PYL	**PYLOS**	**1.22**	**117**	*e*Pg	**Pg**	**15 48 27.6**	**+0.6**
PYL				*e*Sg	**Sg**	**15 48 43.6**	**+0.8**
ITM	**Ithomi**	**1.26**	**102**	*e*PN	**Pn**	**15 48 28.2**	**+0.1**
LKD	**Levkas**	**1.27**	**9**	*e*Pg	**Pg**	**15 48 27.7**	**-0.4**
LKD				*e*Sg	**Sg**	**15 48 44.9**	**+0.3**
VLX	**Vlachokerasia**	**1.59**	**92**	*e*Pg	**Pg**	**15 48 32.4**	**-1.7**
VLX				*e*Sg	**Sg**	**15 48 54.4**	**-0.3**
EVR	**Evrytania**	**1.84**	**37**	*e*PN	**Pn**	**15 48 36.3**	**+0.1**
EVR	**Evrytania**	**1.84**	**37**	*e*Pn	**Pn**	**15 48 38.4**	**+2.2**
IGT	**Igoumenitsa**	**2.08**	**359**	*e*Pn	**Pn**	**15 48 41.1**	**+1.7**
IGT				*e*Sn	**Sn**	**15 49 06.4**	**+0.6**
LTK	**Loutraki**	**2.12**	**74**	*e*Pn	**Pn**	**15 48 40.1**	**0.0**
LTK				*e*Sn	**Sn**	**15 49 07.5**	**+0.5**
AGG	**Agios Georgios**	**2.19**	**44**	*e*Pn	**Pn**	**15 48 41.8**	**+0.8**
AGG				*e*Sn	**Sn**	**15 49 08.6**	**0.0**
DID	**Didima**	**2.27**	**88**	*e*Pn	**Pn**	**15 48 41.8**	**-0.3**
DID				*e*Sn	**Sn**	**15 49 10.9**	**+0.4**
KEK	**Kerkira**	**2.31**	**349**	*e*PB	**Pb**	**15 48 44.2**	**-1.7**
LKR	**Lokris**	**2.39**	**59**	*e*Pn	**Pn**	**15 48 44.1**	**+0.5**
LKR				*e*Sn	**Sn**	**15 49 12.5**	**-0.9**
LKR	**Lokris**	**2.39**	**59**	*e*PN	**Pn**	**15 48 44.0**	**+0.3**
THL	**Klokotos Trika**	**2.47**	**31**	*e*Pn	**Pn**	**15 48 45.3**	**+0.6**
THL				*e*Sn	**Sn**	**15 49 15.0**	**-0.5**
THL	**Klokotos Trika**	**2.47**	**31**	*e*PN	**Pn**	**15 48 45.5**	**+0.7**
THL				*e*Sn	**Sn**	**15 49 15.0**	**-0.4**
NEO	**Neokhori**	**2.90**	**49**	*e*PN	**Pn**	**15 48 50.8**	**+0.1**
XOR	**Xorichti**	**2.92**	**48**	*e*Pn	**Pn**	**15 48 50.9**	**-0.1**

IDC 28 15:51:56.1±2.9, 377S×10448E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/18, mbtmp3.7/3, Error ellipse: s-maj=210.1km s-min=60.3km az=38.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.25**	**121**	P	P	15 58 35.6	+0.2
	0.3nm,0.6s,baz=301,slow=9.1,SNR=6.8						
WRA				PcP	PcP	16 01 17.7	-0.4
	0.2nm,0.4s,baz=302,slow=1.9,SNR=3.5						
ASAR	**Alice Springs**	**34.62**	**128**	P	P	15 58 47.1	-0.1
	0.3nm,0.3s,baz=296,slow=7.8,SNR=16						
ASAR				PcP	PcP	16 01 21.9	0.0
	0.2nm,0.4s,baz=310,slow=3.0,SNR=7.3						
STKA	**Stephens Creek**	**44.66**	**133**	P	P	16 00 10.5	-0.3
	3.0nm,0.8s,baz=315,slow=7.1,SNR=4.5						

*IDC **28** 16:02:17.7±0.7, 2144S×169.17E, h0km, mb4.6/14, mb1 4.8/16, mb1mx4.7/18, mbtmp4.6/16, ML3.1/2, Error ellipse: s-maj=24.2km s-min=16.8km az=155.0*
*NEIC **28** 16:02:19.1±0.3, 2143S×169.23E, h10km, mb5.1/21, Error ellipse: s-maj=13.3km s-min=7.2km az=158.0*
*MOS **28** 16:02:21.5±1.4, 2161S×169.22E, h33km, mb5.2/14, Error ellipse: s-maj=12.1km s-min=10.5km az=21.8*
*ISCJB **28** 16:02:21.3±0.2, 2153S±006×169.19E±004, h34km, mb4.9/43, MS5.5/6, Error ellipse: s-maj=8.7km s-min=4.2km az=161.2*
*DJA **28** 16:02:22, 2208S×169.26E, h10km, mb4.8/10*
*BJI **28** 16:02:22.7, 2086S×168.97E, h12km, mB5.5, mb4.8, Ms5.6, Msz5.5*

ISC 28 16:02:21.0±4.0, 2153S±007×16924E±005, h21km±27km, h33km±4.4km:pP-P, n283, σ0$67/261, mb4.9/43, MS5.5/6, 80C-92D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.65**	**258**	*e*P	**Pn**	**16 03 00.4**	**-2.1**
DZM				*e*S	**Sn**	**16 03 32.0**	**-1.9**
DZM	**Mont Dzumac**	**2.65**	**258**	*e*Pn	**Pn**	**16 03 00.1**	**-2.3**
HNR	**Honiara**	**14.99**	**322**	Pn	**Pn**	**16 05 54.7**	**+3.1**
	2.3nm,0.3s,baz=325,slow=8.8,SNR=3.0						
HNR	**Honiara**	**14.99**	**322**	*e*P	**Pn**	**16 05 55.4**	**+3.8**
HNR				pmax	pmax		
	comp=Z,104nm,1.0s						
HNR	**Honiara**	**14.99**	**322**	*e*Pn	**Pn**	**16 05 55.4**	**+3.8**
	comp=Z,104nm,1.0s						
EIDS	**Eidsvold**	**17.09**	**254**	*e*Pn	**Pn**	**16 06 13.7**	**-5.0**
	comp=Z,103nm,0.8s						
URZ	**Urewera**	**18.00**	**160**	P	**Pn**	**16 06 32.1**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=5.6,slow=6.0,SNR=5.3						
ARMA	**Armidale**	**18.12**	**237**	*e*P	**Pn**	**16 06 34.3**	**+3.0**
AFI	**Afiamalu**	**19.60**	**70**	P	**Pn**	**16 06 50.0**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=92,slow=12,SNR=4.3						
AFI	**Afiamalu**	**19.60**	**70**	*e*P	**Pn**	**16 06 44.8**	**-4.5**
AFI				pmax	pmax		
	comp=Z,91nm,1.1s						
AFI	**Afiamalu**	**19.60**	**70**	*e*P	**Pn**	**16 06 44.8**	**-4.5**
	comp=Z,91nm,1.1s						
CTA	**Charters Tower**	**21.53**	**270**	*e*P	**P**	**16 07 10.0**	**+1.2**
	comp=Z,18nm,1.0s,mb4.5						
CTA	**Charters Tower**	**21.53**	**270**	P	**P**	**16 07 09.5**	**+0.7**
	comp=Z,23nm,1.0s,mb4.5,baz=94,slow=11,SNR=16						
CTA	**Charters Tower**	**21.53**	**270**	*e*P	**P**	**16 07 10.0**	**+1.2**
CTA				pmax	pmax		
	comp=Z,18nm,1.0s						
CTAO	**Charters Tower**	**21.53**	**270**	*e*P	**P**	**16 07 08.8**	**0.0**
PMG	**Port Moresby**	**24.41**	**296**	⇑*i*P	**P**	**16 07 38.7**	**+0.6**
STKA	**Stephens Creek**	**26.69**	**242**	*e*P	**P**	**16 07 59.6**	**+1.0**
	comp=Z,10nm,1.4s,mb4.2						
STKA	**Stephens Creek**	**26.69**	**242**	P	**P**	**16 07 59.1**	**+0.5**
	comp=Z,7.2nm,1.0s,mb4.2,baz=72,slow=14,SNR=4.4						
WB2	**Warramunga Arr**	**32.62**	**266**	*e*P	**P**	**16 08 50.0**	**-1.4**
WRAB	**Tennant Creek**	**32.63**	**266**	*e*P	**P**	**16 08 49.9**	**-1.6**
WRA	**Warramunga Arr**	**32.64**	**266**	P	**P**	**16 08 49.9**	**-1.6**
	comp=Z,5.4nm,1.0s,mb4.4,baz=96,slow=7.8,SNR=50						
ASAR	**Alice Springs**	**32.64**	**259**	P	**P**	**16 08 50.5**	**-1.1**
	comp=Z,15nm,1.0s,mb4.9,baz=85,slow=8.7,SNR=56						
KAKA	**Kakadu**	**36.17**	**278**	*e*P	**P**	**16 09 20.9**	**-1.3**
	comp=Z,24nm,1.1s,mb5.0						
FORT	**Forrest**	**37.91**	**247**	*e*P	**P**	**16 09 36.3**	**-0.6**
	comp=Z,21nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**41.06**	**267**	*e*P	**P**	**16 10 02.8**	**-0.5**
	comp=Z,26nm,0.9s,mb4.9						
MBWA	**Marble Bar**	**45.95**	**261**	*e*P	**P**	**16 10 42.2**	**-0.4**
	comp=Z,29nm,1.1s,mb5.1						
KLBR	**Kellerberrin**	**46.76**	**246**	*e*P	**P**	**16 10 47.7**	**-1.2**
	comp=Z,62nm,1.3s,mb5.4						
MUN	**Mundaring**	**48.07**	**246**	*e*P	**P**	**16 10 58.2**	**-0.9**
SBA	**Scott Base**	**56.38**	**181**	*e*P	**P**	**16 12 01.7**	**+1.5**
SBA				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.2						
SBA	**Scott Base**	**56.38**	**181**	*e*P	**P**	**16 12 01.7**	**+1.5**
	comp=Z,33nm,1.3s,mb5.2						
KSM	**Kuching**	**61.90**	**284**	*e*P	**P**	**16 12 39.0**	**-0.3**
MJAR	**Matsushiro Arr**	**64.77**	**333**	P	**P**	**16 12 58.5**	**+0.7**
	comp=Z,1.5nm,0.8s,mb4.1,baz=172,slow=5.7,SNR=4.3						
MAT	**Matsushiro**	**64.78**	**333**	P	**P**	**16 12 57.6**	**-0.3**
MIR	**Mirnyy**	**64.97**	**205**	*e*P	**P**	**16 13 00.0**	**+1.2**
MIR				pmax	pmax		
	comp=Z,100nm,1.5s,mb5.6						
KSRS	**Korea Array**	**70.39**	**326**	P	**P**	**16 13 32.9**	**-0.5**
	comp=Z,4.2nm,1.1s,mb4.3,baz=131,slow=6.1,SNR=6.3						
NJ2	**Nanjing**	**71.85**	**316**	*e*P	**P**	**16 13 44.5**	**+2.1**
YSS	**Yuzh-Sakhalins**	**72.24**	**341**	⇑*i*P	**P**	**16 13 44.1**	**-0.2**
PETK	**Petropavlovsk-**	**75.00**	**353**	P	**P**	**16 14 00.1**	**-0.2**
	comp=Z,10nm,1.0s,mb4.7,baz=134,slow=6.4,SNR=3.6						
MAW	**Mawson**	**76.32**	**202**	P	**P**	**16 14 09.0**	**+1.1**
	comp=Z,3.6nm,0.8s,mb4.4,baz=116,slow=7.0,SNR=8.7						
CN2	**Changchun**	**76.41**	**329**	*e*P	**P**	**16 14 10.8**	**+2.1**
GYA	**Guiyang**	**77.13**	**305**	P	**P**	**16 14 13.8**	**+0.6**
GYA				AP	pP	16 14 24.3	+4.1
GYA				XP	sP	16 14 28.5	+5.8
GYA				PP	PP	16 17 08.8	+1.5
GYA				S	S	16 23 59.0	-2.3
GYA				XS	sS	16 24 15.3	+2.4
GYA				SS	SS	16 29 01.0	+1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,80nm,5.2s						
GYA				LR	LR		
	comp=N,390nm,17.8s,MS4.8						
GYA				LR	LR		
	comp=E,270nm,18.2s,MS4.8						
GYA				LR	LR		
	comp=Z,300nm,18.6s,MS4.6						
BJI	**Beijing**	**78.71**	**321**	P	**P**	**16 14 23.5**	**+1.9**
BJI				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.5						
BJI	**Beijing**	**78.71**	**321**	P	**P**	**16 14 23.5**	**+1.9**
	comp=Z,8.0nm,1.2s,mb4.5						
CMAR	**Chiang Mai Arr**	**79.45**	**295**	P	**P**	**16 14 27.0**	**+0.9**
	comp=Z,4.2nm,1.1s,mb4.3,baz=131,slow=3.1,SNR=10						
KMI	**Kunming**	**79.48**	**302**	P	**P**	**16 14 28.0**	**+1.8**
KMI				AP	pP	16 14 39.8	+6.6
KMI				PP	PP	16 17 31.8	+4.8
KMI				S	S	16 24 28.0	+1.3
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
KMI				AMB	AMB		
	comp=Z,923nm,11.8s						
KMI				LR	LR		
	comp=N,1μm,18.4s,MS5.4						
KMI				LR	LR		
	comp=E,1μm,21.8s,MS5.4						
KMI				LR	LR		
	comp=Z,4μm,47.1s						
KMI	**Kunming**	**79.48**	**302**	P	**P**	**16 14 28.1**	**+1.9**
	comp=Z,10.0nm,1.2s,mb4.6						
KMI				pP	pP	16 14 39.8	+6.6
KMI				sP	sP	16 14 43.8	+8.0
KMI				PP	PP	16 17 31.7	+4.7
KMI				S	S	16 24 27.9	+1.2
KMI				sS	sS	16 24 45.2	+6.9
KMI				SS	SS	16 29 39.1	+4.1
KMI				SSS		16 32 59.7	
KMI				LR	LR		
	comp=Z,4μm,47.1s,MS5.3						
PAF	**Port-aux-Franc**	**79.60**	**221**	*e*P	**P**	**16 14 28.5**	**+2.0**
CHTO	**Chiang Mai**	**79.61**	**295**	*e*P	**P**	**16 14 28.9**	**+1.9**
XAN	**Xi'an**	**79.66**	**313**	P	**P**	**16 14 27.3**	**+0.3**
XAN				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.6						
CD2	**Chengdu**	**81.63**	**308**	*e*P	**P**	**16 14 39.3**	**+1.7**
CD2				AP	pP	16 14 49.8	+5.2
CD2				XP	sP	16 14 54.0	+6.8
CD2				PP	PP	16 17 49.3	+4.6
CD2				S	S	16 24 49.3	+0.4
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,40nm,6.2s						
CD2				LR	LR		
	comp=E,2μm,15.6s						
CD2				LR	LR		
	comp=Z,3μm,15.6s,MS5.7						
HHC	**Hu-ho-hao-te**	**81.95**	**320**	*e*P	**P**	**16 14 39.8**	**+0.7**
HHC				AP	pP	16 14 50.8	+4.7
HHC				XP	sP	16 14 55.0	+6.3
HHC				PP	PP	16 17 50.5	+3.3
HHC				S	S	16 24 51.5	-0.4
HHC				SKS		16 24 53.8	
HHC				AMB	AMB		
	comp=Z,14nm,0.6s,mb5.1						
HHC				AMB	AMB		
	comp=Z,1μm,7.4s						
HHC				LR	LR		
	comp=N,3μm,16.9s,MS5.7						
HHC				LR	LR		
	comp=E,1μm,17.0s,MS5.7						
HHC				LR	LR		
	comp=Z,4μm,16.9s,MS5.8						
LZH	**Lanzhou**	**84.26**	**312**	*e*P	**P**	**16 14 52.5**	**+1.4**
LZH				AP	pP	16 14 59.0	+0.8
LZH				XP	sP	16 15 02.0	+1.3
LZH				PP	PP	16 18 09.3	+3.1
LZH				eS	S	16 25 16.3	+0.8
LZH				XS	sS	16 25 27.0	-0.1
LZH				AMB	AMB		
	comp=Z,31nm,1.0s,mb5.4						
LZH				AMB	AMB		
	comp=Z,125nm,4.3s						
LZH				LR	LR		
	comp=N,3μm,16.8s						
LZH				LR	LR		
	comp=Z,4μm,18.1s,MS5.8						
LZH	**Lanzhou**	**84.26**	**312**	*e*P	**P**	**16 14 52.5**	**+1.4**
LZH				*SP	sP	16 15 01.9	+1.2
LZH						16 18 09.2	
LZH				eS	S	16 25 16.2	+0.7
LZH				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.4						
LZH				MLR	MLR		
	comp=Z,4μm,18.1s,MS5.8						
LZH	**Lanzhou**	**84.26**	**312**	*e*P	**P**	**16 14 52.5**	**+1.4**
	comp=Z,31nm,1.0s,mb5.4						
LZH				pP	pP	16 14 58.9	+0.7
LZH				sP	sP	16 15 01.9	+1.2
LZH				PP	PP	16 18 09.2	+3.0
LZH				eS	S	16 25 16.2	+0.7
LZH				sS	sS	16 25 27.0	-0.1
LZH				LR	LR		
	comp=Z,4μm,18.1s,MS5.8						
SEY	**Seymchan**	**85.23**	**352**	⇓*i*P	**P**	**16 14 54.1**	**-1.2**
SNAA	**Sanae**	**86.88**	**183**	*e*P	**P**	**16 15 02.6**	**-1.1**
SNAA				*e*		16 15 05.5	
SNAA				*e*		16 15 13.0	
SNAA				*e*		16 15 17.0	
SNAA	**Sanae**	**86.88**	**183**	*e*P	**P**	**16 15 02.7**	**-1.0**
SNAA				pmax	pmax		
	comp=Z,12nm,1.0s						
SNAA	**Sanae**	**86.88**	**183**	*e*P	**P**	**16 15 02.7**	**-1.0**
	comp=Z,12nm,1.0s,mb5.1						
V03C	**Hunter Liggett**	**87.11**	**50**	⇑P	**P**	**16 15 05.7**	**+0.4**
	baz=87						
HOPS	**Hopland**	**87.32**	**46**	⇓P	**P**	**16 15 06.7**	**+0.4**
	baz=88						
CVS	**Carmenet Viney**	**87.41**	**47**	⇑P	**P**	**16 15 06.8**	**+0.1**
	baz=88						
VNA3	**Neumayer Olymp**	**87.47**	**180**	*e*P	**P**	**16 15 06.1**	**-0.4**
VNA3				*e*		16 15 08.5	
VNA3				*e*		16 15 17.3	
VNA3				*e*		16 15 20.6	
PKD	**Parkfield**	**87.57**	**50**	⇓P	**P**	**16 15 07.5**	**0.0**
	baz=88						
PKM	**Peak Mountain**	**87.59**	**51**	⇓P	**P**	**16 15 07.5**	**-0.2**
	baz=88						
U04C	**Hernandez Rese**	**87.60**	**49**	⇑P	**P**	**16 15 08.0**	**+0.4**
	baz=88						
VNA2	**Neumayer--Watz**	**87.76**	**181**	*e*P	**P**	**16 15 08.0**	**+0.1**
	baz=184,slow=4.0						
VNA2				*e*		16 15 10.2	
VNA2				*e*		16 15 19.6	
VNA2				*e*		16 15 23.5	
GASB	**Alder Springs**	**87.89**	**46**	⇑P	**P**	**16 15 09.1**	**+0.2**
	baz=88,SNR=7.9						
VNA1	**Neumayer--Stat**	**88.05**	**181**	*e*P	**P**	**16 15 09.5**	**+0.2**
VNA1				*e*		16 15 11.8	
VNA1				*e*		16 15 20.6	
VNA1				*e*		16 15 23.8	
O02C	**Red Bluff**	**88.11**	**45**	⇑P	**P**	**16 15 10.3**	**+0.3**
	baz=88,SNR=12						
WDC	**Whiskeytown Da**	**88.47**	**45**	⇓P	**P**	**16 15 11.3**	**-0.4**
	baz=89,SNR=8.2						
WDC	**Whiskeytown Da**	**88.47**	**45**	*e*P	**P**	**16 15 11.8**	**+0.1**
MWC	**Mount Wilson**	**88.56**	**52**	*e*P	**P**	**16 15 12.6**	**+0.3**
ORV	**Oroville**	**88.66**	**46**	⇓P	**P**	**16 15 11.9**	**-0.7**
	baz=89,SNR=6.6						
T06C	**Millerton Lake**	**88.67**	**49**	⇓P	**P**	**16 15 12.2**	**-0.5**
	baz=89,SNR=7.2						
M02C	**Callahan**	**88.68**	**44**	⇑P	**P**	**16 15 12.5**	**-0.1**
	baz=89,SNR=7.7						
CMB	**Columbia Colle**	**88.68**	**48**	*e*P	**P**	**16 15 12.5**	**-0.2**
CMB				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.1						
CMB	**Columbia Colle**	**88.68**	**48**	⇑P	**P**	**16 15 12.0**	**-0.7**
	baz=89						
CMB	**Columbia Colle**	**88.68**	**48**	*e*P	**P**	**16 15 12.5**	**-0.2**
	comp=Z,11nm,1.0s,mb5.2						
GTA	**Gaotai**	**88.69**	**313**	*e*P	**P**	**16 15 14.0**	**+1.2**
GTA				AP	pP	16 15 18.0	-1.9
GTA				XP	sP	16 15 20.8	-1.6
GTA				S	S	16 26 02.5	+4.0
GTA				SS	SS	16 31 52.3	+1.6
GTA				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.8						
GTA				LR	LR		
	comp=N,2μm,22.8s,MS5.6						
GTA				LR	LR		
	comp=E,1μm,20.1s,MS5.6						
GTA				LR	LR		
	comp=Z,3μm,20.7s,MS5.7						
ULN	**Ulaanbaatar**	**88.69**	**323**	*e*P	**P**	**16 15 13.2**	**+0.7**
ULN				pmax	pmax		
	comp=Z,33nm,2.1s,mb5.3						
ULN	**Ulaanbaatar**	**88.69**	**323**	*e*P	**P**	**16 15 13.2**	**+0.6**
	comp=Z,33nm,2.1s,mb5.3						
LAVA	**Lava Cap Winer**	**88.78**	**47**	⇓P	**P**	**16 15 12.8**	**-0.4**
	baz=89						
BFSC	**Mount Baldy St**	**88.86**	**52**	⇑P	**P**	**16 15 13.0**	**-0.7**
	baz=89						
EDW2	**Edwards Air Fo**	**88.91**	**52**	⇓P	**P**	**16 15 13.5**	**-0.4**
	baz=89,SNR=5.7						
ISA	**Isabella**	**88.92**	**51**	⇓P	**P**	**16 15 13.3**	**-0.6**
	baz=89,SNR=13						
ISA	**Isabella**	**88.92**	**51**	*e*P	**P**	**16 15 13.6**	**-0.4**
YBH	**Yreka Blue Hor**	**88.94**	**44**	P	**P**	**16 15 13.6**	**-0.3**
	comp=Z,6.4nm,1.0s,mb4.9,baz=182,slow=3.3,SNR=8.7						
YBH	**Yreka Blue Hor**	**88.94**	**44**	⇓P	**P**	**16 15 13.9**	**0.0**
	baz=89,SNR=7.7						
K02A	**Glendale**	**88.97**	**43**	⇑P	**P**	**16 15 13.8**	**-0.2**
	baz=89						
S06C	**San Francisco**	**88.98**	**48**	⇓P	**P**	**16 15 13.7**	**-0.5**
	baz=89,SNR=9.4						
HELL	**Mitchell Peak**	**89.00**	**50**	⇓P	**P**	**16 15 13.4**	**-0.9**
	baz=89,SNR=8.9						
SONM	**Songino Array**	**89.04**	**323**	P	**P**	**16 15 13.7**	**-0.5**
	comp=Z,4.3nm,1.2s,mb4.7,baz=137,slow=3.5,SNR=14						
YAK	**Yakutsk**	**89.05**	**343**	⇓*i*P	**P**	**16 15 16.3**	**+2.4**
YAK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.9						
KCC	**Kaiser Creek**	**89.09**	**49**	⇓P	**P**	**16 15 14.3**	**-0.4**
	baz=89,SNR=6.8						
P05C	**Yuba Gap, Truc**	**89.14**	**47**	⇓P	**P**	**16 15 14.6**	**-0.3**
	baz=89,SNR=5.5						
MONP	**Monument Peak**	**89.19**	**54**	⇓P	**P**	**16 15 14.9**	**-0.4**
	baz=89						
R05C	**Kirkwood Meado**	**89.22**	**48**	⇓P	**P**	**16 15 15.2**	**-0.1**
	baz=90						
J02A	**Umpqua**	**89.22**	**42**	⇓P	**P**	**16 15 15.2**	**+0.1**
	baz=90						
HUMO	**Hull Mountain**	**89.22**	**43**	⇑P	**P**	**16 15 15.1**	**-0.1**
	baz=90,SNR=7.1						
HUMO	**Hull Mountain**	**89.22**	**43**	*e*P	**P**	**16 15 15.5**	**+0.3**
	comp=Z,13nm,1.0s,mb5.2						
O05C	**Quincy**	**89.25**	**46**	⇓P	**P**	**16 15 15.5**	**+0.1**
	baz=90						
BILL	**Bilibino**	**89.33**	**359**	⇓*e*P	**P**	**16 15 14.3**	**-0.8**
BILL				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.1						
LRMC	**Laurel Mountai**	**89.40**	**51**	⇑P	**P**	**16 15 16.0**	**-0.2**
	baz=90						
M04C	**Macdoel**	**89.53**	**44**	⇑P	**P**	**16 15 16.2**	**-0.4**
	baz=90,SNR=5.2						
R06C	**Coleville**	**89.56**	**48**	⇑P	**P**	**16 15 16.8**	**-0.1**
	baz=90,SNR=6.7						
WAKR	**Walker**	**89.56**	**48**	*e*P	**P**	**16 15 17.0**	**+0.2**
MTUM	**Tungsten Hills**	**89.64**	**49**	*e*P	**P**	**16 15 17.6**	**+0.4**
L04A	**Klamath Falls**	**89.69**	**44**	⇑P	**P**	**16 15 17.6**	**+0.2**
	baz=90						
WCN	**Washoe City**	**89.72**	**47**	⇓P	**P**	**16 15 17.9**	**+0.3**
	baz=90						
M05C	**Lookout**	**89.78**	**45**	⇓P	**P**	**16 15 18.0**	**+0.2**
	baz=90,SNR=7.4						
MPMC	**Manual Prospec**	**89.81**	**51**	⇑P	**P**	**16 15 18.0**	**-0.1**
	baz=90,SNR=14						
GSC	**Goldstone**	**89.97**	**52**	⇑P	**P**	**16 15 18.5**	**-0.4**
	baz=90						
S08C	**White Mtn Res**	**89.98**	**49**	⇓P	**P**	**16 15 18.8**	**0.0**
	baz=90,SNR=23						
BELC	**Belle Mtn.**	**89.99**	**53**	⇓P	**P**	**16 15 18.9**	**-0.1**
	baz=90,SNR=12						
H03A	**Soap Creek Ran**	**90.07**	**41**	⇑P	**P**	**16 15 18.9**	**-0.2**
	baz=90						
O06A	**Flanigan**	**90.08**	**46**	⇓P	**P**	**16 15 19.2**	**0.0**
	baz=90,SNR=9.8						
M06C	**Likely Place G**	**90.14**	**45**	⇓P	**P**	**16 15 19.5**	**0.0**
	baz=90						
PAHR	**Pah Rah Range**	**90.16**	**47**	*e*P	**P**	**16 15 19.9**	**+0.2**
	comp=Z,20nm,1.2s,mb5.3						
BC3	**Big Chuckw Mtn**	**90.25**	**54**	⇑P	**P**	**16 15 19.8**	**-0.4**
	baz=90						
NVAR	**Mina Array Bea**	**90.31**	**48**	P	**P**	**16 15 20.2**	**-0.2**
	comp=Z,5.9nm,0.8s,mb5.0,baz=227,slow=8.0,SNR=32						
L05A	**Lakeview**	**90.31**	**44**	⇓P	**P**	**16 15 20.6**	**+0.3**
	baz=91						
N06A	**Buffalo Meadow**	**90.35**	**46**	⇑P	**P**	**16 15 20.1**	**-0.4**
	baz=91,SNR=8.8						
FURC	**Furnace Creek,**	**90.45**	**51**	⇑P	**P**	**16 15 20.8**	**-0.2**
	baz=91						
GLA	**Glamis**	**90.46**	**55**	⇑P	**P**	**16 15 20.8**	**-0.4**
	baz=91,SNR=5.2						
GLA	**Glamis**	**90.46**	**55**	*e*P	**P**	**16 15 21.3**	**+0.1**
GMRC	**Granite Mounta**	**90.58**	**53**	⇓P	**P**	**16 15 21.3**	**-0.4**
	baz=91,SNR=6.7						
MOD	**Modoc**	**90.59**	**45**	⇓P	**P**	**16 15 21.8**	**+0.2**
	baz=91						
MOD	**Modoc**	**90.59**	**45**	*e*P	**P**	**16 15 21.6**	**0.0**
K05A	**Summer Lake**	**90.61**	**44**	⇓P	**P**	**16 15 21.5**	**-0.2**
	baz=91,SNR=7.2						
J05A	**Fort Rock**	**90.66**	**43**	⇓P	**P**	**16 15 21.7**	**-0.1**
	baz=91,SNR=5.9						

baz=92
X13A Yucca 91.87 54 ⇓P P 16 15 26.8 -0.9
baz=92,SNR=8.9
O09A Fish Creek Ran 91.87 47 ⇑P P 16 15 27.9 +0.3
baz=92
H06A Lindquist Farm 91.93 42 ⇑P P 16 15 27.9 +0.1
baz=92
E05A Randle 91.94 40 ⇓P P 16 15 28.2 +0.5
baz=92
N09A Rock Creek Ran 91.95 47 ⇑P P 16 15 27.6 -0.3
baz=92
T11A Corn Creek, Al 91.97 51 ⇓P P 16 15 28.0 -0.1
baz=92,SNR=12
L08A Fields 92.01 45 ⇑P P 16 15 28.1 -0.1
baz=92,SNR=7.2
W13A Hualapai Mount 92.04 53 ⇑P P 16 15 28.2 -0.2
baz=92,SNR=6.2
D05A Enumclaw 92.12 40 ⇓P P 16 15 29.3 +0.8
baz=92
I07A Izee 92.14 43 ⇓P P 16 15 28.8 +0.1
baz=92
ZAK Zakamensk 92.15 324 *e*P **P 16 15 18.0 -11**
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.6
K08A Mann Creek Ran 92.17 45 ⇑P P 16 15 28.9 0.0
baz=92
R11A Troy Canyon, C 92.19 50 ⇓P P 16 15 28.6 -0.4
baz=92,SNR=6.9
V13A Grand Canyon W 92.28 52 ⇓P P 16 15 29.7 +0.2
baz=92
115A Sonoran Desert 92.30 56 ⇓P P 16 15 29.8 0.0
baz=92
H07A Lands Inn, Kim 92.34 43 ⇓P P 16 15 29.4 -0.3
baz=93
Q11A Duckwater 92.36 49 ⇓P P 16 15 29.6 -0.3
baz=93,SNR=9.6
S12A Delamar Landin 92.39 50 ⇓P P 16 15 30.1 0.0
baz=93,SNR=11
E06A Yakima 92.40 40 ⇓P P 16 15 30.0 +0.1
baz=93
A04A Legoe Bay, Lum 92.46 38 ⇓P P 16 15 30.9 +0.8
baz=93
J08A Circle Bar Ran 92.47 44 ⇓P P 16 15 29.9 -0.3
baz=93,SNR=5.6
X14A Yava 92.52 54 ⇑P P 16 15 30.4 -0.3
baz=93,SNR=9.3
U13A Pakoon Wash 92.53 52 ⇑P P 16 15 30.5 -0.2
baz=93
P11A Circle Ranch, 92.59 48 ⇓P P 16 15 30.9 0.0
baz=93
G07A Ruggs Ranch, H 92.60 42 ⇓P P 16 15 30.3 -0.5
baz=93
216A Three Points, 92.62 57 ⇓P P 16 15 31.2 0.0
baz=93
TLY Talaya 92.64 325 *e*P **P 16 15 31.2 +0.4**
TLY pmax pmax
comp=Z,5.0nm,1.4s,mb4.8
116A Eloy 92.65 56 ⇓P P 16 15 31.4 0.0
baz=93
K09A Rome 92.66 45 ⇓P P 16 15 30.6 -0.5
baz=93,SNR=8.9
W14A Seligman 92.68 53 ⇑P P 16 15 31.4 0.0
baz=93,SNR=6.3
Y15A Casa Rosa Ranc 92.73 55 ⇑P P 16 15 32.0 +0.3
baz=93,SNR=9.2
T13A Saint George 92.83 51 ⇑P P 16 15 31.8 -0.3
baz=93
V14A Boquillas Ranc 92.84 53 ⇓P P 16 15 32.2 0.0
baz=93,SNR=6.8
R12A Pony Springs, 92.87 50 ⇓P P 16 15 31.9 -0.3
baz=93,SNR=6.1
H08A Prairie City 92.88 43 ⇑P P 16 15 31.9 -0.2
baz=93
O11A Cowboy Ranch, 92.91 48 ⇑P P 16 15 32.4 0.0
baz=93
M10A I.L. Ranch, Tu 92.92 46 ⇓P P 16 15 32.2 -0.2
baz=93,SNR=5.9
J09A Fry Pan Ranch, 92.93 44 ⇓P P 16 15 32.2 -0.2
baz=93
Q12A Willow Creek R 93.02 49 ⇓P P 16 15 32.8 -0.1
baz=93
X15A Humboldt 93.02 54 ⇓P P 16 15 33.0 -0.1
baz=93,SNR=8.5
217A Green Valley 93.03 57 ⇓P P 16 15 32.9 -0.2
baz=93
G08A Pilot Rock 93.05 42 ⇓P P 16 15 32.6 -0.3
baz=93
S13A Holt Ranch, En 93.09 51 ⇑P P 16 15 33.3 0.0
baz=93
U14A Mt Trumbull 93.11 52 ⇑P P 16 15 33.2 -0.2
baz=93,SNR=7.3
P12A McGill 93.15 49 ⇓P P 16 15 33.6 +0.1
baz=93
L10A Juniper Basin 93.21 46 ⇑P P 16 15 33.7 0.0
baz=94,SNR=5.3
I09A Lost Marbles R 93.22 44 ⇑P P 16 15 33.9 +0.2
baz=94
K10A MacKenzie Ranc 93.25 45 ⇑P P 16 15 33.9 0.0
baz=94
R13A O'Grain Ranch, 93.27 50 ⇓P P 16 15 34.1 0.0
baz=94
W15A Williams 93.28 54 ⇑P P 16 15 34.0 -0.2
baz=94
Y16A Circle Bar Ran 93.35 55 ⇓P P 16 15 34.4 -0.2
baz=94,SNR=8.5
M11A Holland Ranch, 93.38 47 ⇑P P 16 15 35.1 +0.5
baz=94
117A Oracle 93.40 56 ⇑P P 16 15 34.7 -0.2
baz=94
T14A Hurricane 93.44 52 ⇑P P 16 15 35.1 +0.2
baz=94
ARUT Antelope Range 93.48 51 *e*P **P 16 15 34.5 -0.6**
C07A Waterville 93.50 40 ⇓P P 16 15 35.6 +0.7
baz=94
318A Bisbee 93.54 58 ⇑P P 16 15 35.4 -0.1
baz=94
H09A Durkee 93.58 43 ⇑P P 16 15 35.3 -0.1
baz=94
X16A Lo Mia Camp, P 93.59 54 ⇓P P 16 15 35.8 +0.2
baz=94,SNR=9.4
V15A Kaibab Nationa 93.61 53 ⇓P P 16 15 35.9 +0.2
baz=94,SNR=5.7
218A Dragoon 93.71 57 ⇑P P 16 15 36.3 0.0
baz=94
L11A Cat Creek Ranc 93.73 46 ⇑P P 16 15 36.5 +0.4
baz=94
Y17A Roosevelt 93.76 55 ⇑P P 16 15 36.6 +0.1
baz=94
U15A North Rim 93.77 52 ⇓P P 16 15 36.6 +0.1
baz=94,SNR=6.8
P13A Bates Ranch, G 93.77 49 ⇑P P 16 15 36.4 0.0
baz=94
W16A Flagstaff 93.80 54 ⇑P P 16 15 36.7 +0.1
baz=94
K11A Parker Ranch, 93.80 45 ⇑P P 16 15 36.5 +0.1
baz=94
M12A Wells 93.97 47 ⇑P P 16 15 37.2 0.0
baz=94
118A Homack Ranch, 94.03 57 ⇑P P 16 15 37.9 +0.2
baz=94
X17A Forest Lakes 94.04 55 ⇓P P 16 15 38.0 +0.3
baz=94
319A Douglas 94.08 58 ⇓P P 16 15 38.1 +0.1
baz=94
WUAZ Wupatki 94.08 54 ⇑P P 16 15 38.2 +0.3
baz=94
WUAZ Wupatki 94.08 54 *e*P **P 16 15 38.1 +0.2**
comp=Z,9.8nm,1.0s,mb5.2
Q14A Sevier Lake (B 94.10 50 ⇓P P 16 15 37.9 0.0
baz=94
H10A Noah's Angus R 94.13 44 ⇑P P 16 15 37.6 -0.3
baz=94
DAWY Dawson 94.14 20 *e*P **P 16 15 35.0 -2.5**
G10A Bishop Farm, J 94.21 43 ⇑P P 16 15 38.0 -0.2
baz=94
MFID Camas Ranch 94.22 45 ⇑P P 16 15 38.4 +0.1
baz=94
N13A Wendover, West 94.22 48 ⇓P P 16 15 38.6 +0.2
baz=94
219A White Tail Can 94.33 57 ⇑P P 16 15 38.9 -0.2
baz=94
Y18A Canyon Day Jun 94.42 56 ⇓P P 16 15 39.6 +0.1
baz=95
F10A Beach Ranch, E 94.44 42 ⇓P P 16 15 38.5 -0.8
baz=95
U16A Tuba City 94.51 53 ⇑P P 16 15 39.9 +0.1
baz=95,SNR=6.3
G11A Walters Elk Ra 94.80 43 ⇑P P 16 15 40.6 -0.3
baz=95
M14A Sheep Mountain 95.08 47 ⇓P P 16 15 42.3 -0.1
baz=95
Y19A Nutrioso 95.08 56 ⇑P P 16 15 42.1 -0.4
baz=95
X19A St. Johns 95.23 55 ⇑P P 16 15 43.0 -0.2
baz=95
H12A Diamond D Ranc 95.34 44 ⇓P P 16 15 43.5 +0.1
baz=96
S17A Black Ridge (B 95.34 52 ⇓P P 16 15 43.6 0.0
baz=96
F12A Elk City 95.59 43 ⇑P P 16 15 44.2 -0.4
baz=96
T18A Mexican Hat 95.83 52 ⇓P P 16 15 45.5 -0.3
baz=96
DAU Daniels Canyon 96.09 49 *e*P **P 16 15 57.5 +11**
F13A Darby 96.19 43 ⇑P P 16 15 47.0 -0.3
baz=96
O17A Robinson Place 96.38 49 ⇓P P 16 15 48.6 +0.3
baz=97
TIXI Tiksi 96.97 348 ⇓*i*P **P 16 15 52.6 +2.4**
TIXI pmax pmax
comp=Z,6.0nm,1.7s,mb4.8
ANMO Albuquerque 97.59 56 ⇑*i*P **P 16 15 52.6 -1.3**
TXAR Lajitas Array 97.86 62 P **P 16 15 54.8 -0.4**
comp=Z,1.2nm,1.1s,mb4.3,baz=235,slow=4.4,SNR=7.0
PDAR Pinedale Array 98.17 47 P **P 16 15 56.9 +0.6**
comp=Z,0.7nm,0.6s,mb4.3,baz=204,slow=3.3,SNR=5.5
WMQ Urumqi 98.78 314 *e*P **P 16 16 03.5 +4.5**
WMQ AMB AMB
comp=Z,15nm,0.8s,mb5.6
KIV Kislovodsk 130.76 310 PKIKP PKPdf 16 21 30.6 +0.1
KIV *e* 16 28 39.2
KIV pmax pmax
comp=Z,2.0nm,0.6s
DPC Dobruska-Polom 144.22 330 *e*PKP PKPdf 16 21 53.2 -1.8
DPC *ex* x 16 22 00.4
UPC Upice 144.25 331 *e*PKP PKPdf 16 21 54.0 -1.1
BRG Berggiesshubel 144.91 333 *e*PKIKP PKPdf 16 21 54.4 -1.8
BRG pmax pmax
comp=Z,10.0nm,1.4s
BRG Berggiesshubel 144.91 333 *e*PKP PKPdf 16 21 54.4 -1.8
comp=Z,16nm,1.4s
CLL Collm 144.98 334 *e*PKIKP PKPdf 16 21 55.0 -1.3
CLL pmax pmax
comp=Z,11nm,1.1s
CLL Collm 144.98 334 *e*PKPdf PKPdf 16 21 55.0 -1.3
comp=Z,11nm,1.1s
CLL *e*pPKiKP 16 22 03.0
CLL *ex* x 16 22 15.0
SANT Santorini 145.25 303 *e*PKPbc PKPbc 16 21 55.9 -1.1
PRU Pruhonice 145.29 331 *e*PKP PKPdf 16 21 55.9 -1.0
PRU *ex* x 16 22 04.8
NKC Novy Kostel 146.02 333 *e*PKP PKPdf 16 21 59.3 +1.2
NKC *ex* x 16 22 07.2
KHC Kasperske Hory 146.34 331 *e*PKP PKPdf 16 21 59.6 +0.9
KHC *ex* x 16 22 19.0
GERES GERESS Array B 146.49 330 PKPbc PKPbc 16 21 59.6 -0.8
comp=Z,2.3nm,0.8s,baz=83,slow=3.4,SNR=5.4
GRA1 Grafenberg Arr 146.95 334 *e*PKP PKPdf 16 22 01.3 +1.6
GRF Grafenberg Arr 146.95 334 *e*PKP PKPdf 16 22 01.3 +1.6
GIVF Givet 148.95 340 *e*PKP1 PKPbc 16 22 05.9 -1.1
CDF Champ du Feu 149.54 336 *e*PKP1 PKPbc 16 22 07.6 -0.9
HAU Haudompre 150.22 337 *e*PKP1 PKPbc 16 22 09.0 -1.2
comp=Z,40nm,1.3s
MEZF Maizieres J'vi 150.26 339 *e*PKP1 PKPbc 16 22 09.7 -0.6
comp=Z,51nm,1.2s
CABF La Chapelle 151.48 335 *e*PKP1 PKPbc 16 22 12.4 -0.8
SSF Saint Saulge 152.03 339 *e*PKP1 PKPbc 16 22 13.4 -1.1
comp=Z,26nm,1.2s
TCF Toulx Ste Croi 153.13 340 *e*PKP1 PKPbc 16 22 15.8 -1.2
LASF Ste Croix 154.46 335 *e*PKP1 PKPbc 16 22 19.0 -0.9
TORD Torodi Ar. Bea 165.48 237 PKP PKPdf 16 22 23.4 -1.4
comp=Z,2.9nm,1.1s,baz=357,slow=1.1,SNR=9.0
TORD PKPab PKPab 16 23 21.9 -1.1
comp=Z,1.0nm,1.0s,baz=142,slow=3.5,SNR=2.5

IDC 28 16:06:15.6±3.0, 2191N×14325E, h249km±45km, mb2.7/4, mb1 2.9/5, mb1mx2.7/21, mbtmp2.8/5, Error ellipse: s-maj=156.2km s-min=18.5km az=76.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.25**	**350**	P		Pn	16 07 34.6	+0.2
	3.6nm,0.3s,baz=297,slow=21,SNR=5.2							
CBIJ				S		S	16 08 34.5	-2.7
	5.0nm,0.3s,baz=112,slow=22,SNR=7.7							
KSRS	**Korea Array**	**20.38**	**323**	P		P	16 10 33.5	-0.1
	0.5nm,0.5s,baz=144,slow=8.7,SNR=2.9							
WRA	**Warramunga Arr**	**42.50**	**192**	P		P	16 13 46.7	0.0
	0.3nm,0.6s,baz=15,slow=9.2,SNR=8.2							
ASAR	**Alice Springs**	**46.21**	**192**	P		P	16 14 15.9	-0.1
	0.3nm,1.0s,baz=16,slow=6.9,SNR=4.1							
ZALV	**Zalesovo Beam**	**54.08**	**322**	P		P	16 15 14.6	0.0
	0.4nm,0.4s,baz=95,slow=9.3,SNR=2.7							

IDC 28 16:07:56.0±2.2, 2197N×14328E, h261km±47km, mb2.7/4, mb1 2.9/6, mb1mx2.8/22, mbtmp2.8/6, Error ellipse: s-maj=140.0km s-min=18.5km az=74.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.20**	**349**	P		Pn	16 09 16.4	+1.8
	13nm,0.3s,baz=299,slow=20,SNR=14							
CBIJ				S		S	16 10 15.9	-1.5
	8.1nm,0.3s,baz=297,slow=24,SNR=6.5							
MJAR	**Matsushiro Arr**	**15.18**	**344**	P		Pn	16 11 18.4	+0.6
	0.3nm,0.3s,baz=164,slow=10,SNR=3.1							
KSRS	**Korea Array**	**20.35**	**323**	P		P	16 12 13.8	+0.9
	1.2nm,0.5s,baz=143,slow=9.4,SNR=7.0							
SONM	**Songino Array**	**39.13**	**320**	P		P	16 14 58.0	-0.8
	0.2nm,0.4s,baz=126,slow=7.5,SNR=4.6							
WRA	**Warramunga Arr**	**42.56**	**192**	P		P	16 15 26.5	0.0
	0.3nm,0.6s,baz=16,slow=9.2,SNR=5.6							
ASAR	**Alice Springs**	**46.26**	**192**	P		P	16 15 55.3	-0.3
	0.3nm,1.0s,baz=9.2,slow=7.5,SNR=2.6							

IDC 28 16:08:04.7±2.0, 2084S×16849E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/14, mbtmp3.9/4, Error ellipse: s-maj=128.5km s-min=30.7km az=155.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**26.42**	**240**	P		P	16 13 42.9	-0.3
	3.4nm,0.8s,baz=67,slow=7.7,SNR=3.3							
WRA	**Warramunga Arr**	**31.99**	**265**	P		P	16 14 32.9	+0.1
	0.6nm,0.9s,baz=98,slow=8.2,SNR=4.3							
ASAR	**Alice Springs**	**32.09**	**258**	P		P	16 14 33.9	+0.2
	1.4nm,0.7s,baz=83,slow=9.3,SNR=12							
VNA3	**Neumayer Olymp**	**88.15**	**181**	*e*		P	16 20 49.2	-7.8
VNA3				*e*			16 20 51.3	
VNA2	**Neumayer--Watz**	**88.43**	**181**	*e*		P	16 20 50.8	-7.6
	baz=176,slow=4.8							
VNA2				*e*			16 20 52.9	
NVAR	**Mina Array Bea**	**90.38**	**49**	P		P	16 21 08.3	+0.3
	0.4nm,0.6s,baz=246,slow=6.7,SNR=3.5							

*ISCJB **28** 16:42:52.1±1.0, 2455N×12261E±003, h91km±9km, Error ellipse: s-maj=12.0km s-min=3.8km az=4.3*
*TAP **28** 16:42:52.9, 2465N×122.44E, h103km, ML2.8, C*
*JMA **28** 16:42:52.6±0.2, 2480N×122.71E, h87km, M1.6*
ISC 28 16:42:52.5±0.9, 2457N±007×12261E±003, h90km±9km, n19, σ0°50/35, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.38**	**106**	P		**Pn**	**16 43 06.6**	**+0.2**
YOJ				*e*S		**Sn**	**16 43 17.0**	**+0.3**
EGS		**0.68**	**294**	P		**Pn**	**16 43 09.3**	**+0.5**
	baz=286							
EGS				S		**Sn**	**16 43 20.8**	**-0.2**
	baz=286							
TWC	**Suao**	**0.70**	**274**	*e*P		**Pn**	**16 43 09.6**	**+0.6**
	baz=263							
TWC				S		**Sn**	**16 43 21.2**	**-0.1**
	baz=263							
TWB1	**Santiao Chiao**	**0.72**	**308**	*e*P		**Pn**	**16 43 09.3**	**+0.1**
	baz=304							
TWB1				*i* S		**Sn**	**16 43 21.7**	**-0.1**
	baz=304							
ENA	**Nanau**	**0.81**	**260**	*e*P		**Pn**	**16 43 10.5**	**+0.4**
	baz=249							
ENA				*e*S		**Sn**	**16 43 23.5**	**+0.2**
	baz=249							
TWE	**Neicheng**	**0.88**	**280**	*e*P		**Pn**	**16 43 11.2**	**+0.4**
	baz=279							
TWE				*e*S		**Sn**	**16 43 24.3**	**-0.3**
	baz=279							
ENTT	**Nioudou**	**0.96**	**275**	*e*P		**Pn**	**16 43 12.1**	**+0.4**
	baz=270							
ENTT				*e*S		**Sn**	**16 43 26.6**	**+0.4**
	baz=270							
IRIF	**Iriomote-Funau**	**1.04**	**102**	P		**Pn**	**16 43 12.5**	**-0.2**
IRIF				*e*S		**Sn**	**16 43 28.1**	**+0.2**
TWD	**Chiawan**	**1.05**	**243**	*e*P		**Pn**	**16 43 13.1**	**+0.4**
	baz=231							
TWD				*e*S		**Sn**	**16 43 27.2**	**-0.8**
	baz=231							
NNS	**Nan Shan**	**1.14**	**264**	*e*P		**Pn**	**16 43 13.8**	**0.0**
	baz=254							
NNS				*e*S		**Sn**	**16 43 30.1**	**+0.2**
	baz=254							
NSK	**Sanguang**	**1.15**	**276**	P		**Pn**	**16 43 14.2**	**+0.2**
	baz=266							
NSK				*e*S		**Sn**	**16 43 30.2**	**+0.1**
	baz=266							
HATJ	**Hateruma jima**	**1.20**	**115**	*e*S		**Sn**	**16 43 31.7**	**+0.5**
TWS1	**Kuangyinshan**	**1.21**	**296**	*e*P		**Pn**	**16 43 13.4**	**-1.2**
	baz=296							
WHF	**Hehuan Shan**	**1.30**	**251**	*e*P		**Pn**	**16 43 16.3**	**+0.6**
	baz=246							
WHF				*e*S		**Sn**	**16 43 33.3**	**0.0**
	baz=246							
ESL	**Shilin**	**1.31**	**235**	*e*P		**Pn**	**16 43 16.4**	**+0.5**
	baz=223							
ESL				*e*S		**Sn**	**16 43 32.4**	**-1.2**
	baz=223							
JKRS	**Kuro-shima**	**1.31**	**104**	P		**Pn**	**16 43 16.4**	**+0.5**
JKRS				*e*S		**Sn**	**16 43 33.9**	**+0.3**
JIJ	**Ishigaki jima**	**1.41**	**98**	P		**Pn**	**16 43 16.8**	**-0.3**
JIJ				*e*S		**Sn**	**16 43 34.6**	**-1.1**
NSTT	**Nanjuang**	**1.47**	**273**	*e*P		**Pn**	**16 43 17.7**	**-0.1**
	baz=270							
NSTT				*e*S		**Sn**	**16 43 36.3**	**-0.7**
	baz=270							
JTJ	**Tarama**	**1.90**	**87**	*e*S		**Sn**	**16 43 46.3**	**-0.7**

*IDC **28** 16:44:59.0±2.1, 2043S×16906E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.9/15, mbtmp3.9/6, Error ellipse: s-maj=69.9km s-min=28.9km az=147.0*
*NEIC **28** 16:45:00.0±1.4, 2090S×16921E, h10km, mb4.3/1, Error ellipse: s-maj=66.5km s-min=18.1km az=153.0*
*ISCJB **28** 16:45:02.3±1.5, 2075S±03×1690E±02, h33km, mb3.9/6, Error ellipse: s-maj=51.6km s-min=10.0km az=141.2*
ISC 28 16:45:04.2±1.6, 2085S±03×1691E±03, h35km, n10, σ0°92/12, mb3.9/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.76**	**241**	*e*P		**Pn**	**16 45 44.8**	**-1.1**
DZM				*e*S		**Sn**	**16 46 16.4**	**-1.5**
DZM	**Mont Dzumac**	**2.76**	**241**	*e*Pn		**Pn**	**16 45 44.7**	**-1.2**
DZM				*e*Sn		**Sn**	**16 46 18.6**	**+0.6**
STKA	**Stephens Creek**	**26.91**	**240**	P		P	**16 50 42.6**	**+0.5**
	1.7nm,0.7s,mb3.7,baz=67,slow=13,SNR=3.3							
WB2	**Warramunga Arr**	**32.50**	**265**	*e*P		P	**16 51 32.3**	**+0.5**
WRA	**Warramunga Arr**	**32.52**	**265**	P		P	**16 51 31.9**	**0.0**
	0.3nm,0.4s,mb3.5,baz=95,slow=8.4,SNR=16							
ASAR	**Alice Springs**	**32.62**	**258**	P		P	**16 51 33.2**	**+0.5**
	1.1nm,0.7s,mb3.9,baz=79,slow=9.6,SNR=13							
FITZ	**Fitzroy Crossi**	**40.93**	**266**	*e*P		P	**16 52 45.3**	**+1.7**
	4.2nm,0.6s,mb4.2							
FITZ	**Fitzroy Crossi**	**40.93**	**266**	P		P	**16 52 44.9**	**+1.4**
	2.3nm,0.7s,mb4.0,baz=124,slow=11,SNR=9.9							
KSRS	**Korea Array**	**69.65**	**326**	P		P	**16 56 08.7**	**-1.4**
	1.0nm,0.7s,mb3.9,baz=149,slow=9.0,SNR=5.5							
NVAR	**Mina Array Bea**	**89.93**	**49**	P		P	**16 57 59.5**	**-0.3**
	0.7nm,0.7s,mb4.1,baz=233,slow=7.8,SNR=4.4							

*ISCJB **28** 17:12:00.1±2.3, 2381N±006×12272E±003, h14km±20km, Error ellipse: s-maj=10.2km s-min=3.9km az=179.4*
*TAP **28** 17:12:00.7, 2395N×12254E, h102km±2km, ML2.7, C*
*JMA **28** 17:12:01.9±0.2, 2393N×12280E, h6km, M2.3*
ISC 28 17:11:59.6±0.9, 2384N±006×12273E±002, h10km±6km, n17, σ0°63/25, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.68**	**23**	P		**Pg**	**17 12 13.1**	**+0.4**
YOJ				*e*S		**Sg**	**17 12 20.7**	**-0.8**
HATJ	**Hateruma jima**	**1.01**	**77**	P		**Pg**	**17 12 19.5**	**+0.5**
HATJ				*e*S		**Sg**	**17 12 32.5**	**+0.3**
IRIF	**Iriomote-Funau**	**1.04**	**61**	P		**Pg**	**17 12 19.9**	**+0.2**
IRIF				*e*S		**Sg**	**17 12 32.8**	**-0.4**
TWD	**Chiawan**	**1.06**	**283**	*e*P		**Pg**	**17 12 20.4**	**+0.4**
	baz=279							
ENA	**Nanau**	**1.08**	**303**	*i* P		**Pg**	**17 12 20.2**	**-0.1**
	baz=297							
ENA				*e*S		**Sg**	**17 12 35.0**	**+0.6**
	baz=297							
TWC	**Suao**	**1.11**	**314**	⇑*i*P		**Pb**	**17 12 20.8**	**-0.2**
	baz=316							
TWC				*e*S		**Sg**	**17 12 34.8**	**-0.6**
	baz=316							
ESL	**Shilin**	**1.19**	**269**	*e*P		**Pb**	**17 12 21.2**	**-1.0**
	baz=267							
JKRS	**Kuro-shima**	**1.24**	**71**	P		**Pn**	**17 12 23.8**	**+0.8**
JKRS				*e*S		**Sb**	**17 12 39.0**	**-0.2**
TWE	**Neicheng**	**1.31**	**313**	*e*P		**Pn**	**17 12 23.9**	**-0.1**
	baz=310							
TWE				*e*S		**Sb**	**17 12 42.0**	**+0.8**
	baz=310							
ENTT	**Nioudou**	**1.33**	**307**	*e*P		**Pn**	**17 12 24.4**	**+0.1**
	baz=301							
NNS	**Nan Shan**	**1.38**	**296**	*e*P		**Pn**	**17 12 25.3**	**+0.4**
	baz=291							
JIJ	**Ishigaki jima**	**1.40**	**68**	P		**Pn**	**17 12 25.8**	**+0.6**
JIJ				*e*S		**Sb**	**17 12 43.1**	**-0.6**
SMLT	**Sun Moon Lake**	**1.67**	**272**	*e*P		**Pn**	**17 12 29.1**	**0.0**
	baz=267							
ELDTW	**Lidau**	**1.70**	**248**	*e*P		**Pn**	**17 12 27.9**	**-1.4**
	baz=242							
TYC	**Yuchr**	**1.71**	**273**	*e*P		**Pn**	**17 12 28.4**	**-1.1**
	baz=268							
ALS	**Alishan**	**1.79**	**260**	*e*P		**Pn**	**17 12 30.9**	**+0.3**
	baz=255							
CHN5	**Tsauling**	**1.89**	**263**	*e*P		**Pn**	**17 12 33.1**	**+1.0**
	baz=266							

*MOS **28** 17:12:28.2±2.5, 5641N×121.11E, h19km, mb4.7/1, Error ellipse: s-maj=17.0km s-min=16.4km az=46.6*
BYKL 28 17:12:27.9±0.5, 5651N×12120E, h13km±31km, 7C-3D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CRS	**Chara**	**1.66**	**285**	*e*P		Pn	17 12 58.3	+1.6
CRS				*e*			17 13 18.7	
CRS				pmax		pmax		
	comp=Z,491nm,0.3s							
CRS				smax				
	comp=E,3μm,0.6s							
CRS	**Chara**	**1.66**	**285**	⇓*i*Pg		Pg	17 12 58.2	-1.6
CRS				Pmax			17 12 58.9	
	comp=E,427nm,0.3s							
CRS				*e*Sg		Sg	17 13 19.9	-1.5
CRS				Smax			17 13 21.4	
	comp=E,3μm,1.2s							
IENR	**Iengra**	**2.06**	**96**	⇓*i*Pn		Pn	17 13 03.6	+1.5
IENR				*e*Pg		Pg	17 13 06.3	-1.0
IENR				*e*Sg		Sg	17 13 33.5	-0.5
CLNS	**Chul'man**	**2.06**	**79**	*e*P		Pn	17 13 04.2	+2.0
CLNS				*e*S		Sn	17 13 31.1	+3.3
CLNS				pmax		pmax		
	comp=N,2.0nm,0.2s							
CLNS				pmax		pmax		
	comp=Z,6.0nm,0.2s							
CLNS				pmax		pmax		
	comp=E,5.0nm,0.2s							
CLNS				smax				
	comp=N,36nm,0.2s							

CLNS					smax				
	comp=E,61nm,0.2s								
CLNS					smax				
	comp=Z,26nm,0.2s								
CLNS	**Chul'man**	**2.06**	**79**	⇓*i*	Pn	Pn	17 13 04.2	+2.0	
CLNS				*e*	Pg	Pg	17 13 06.4	-1.0	
CLNS				*e*	Sg	Sg	17 13 34.3	+0.1	
TUP	**Tupik**	**2.21**	**199**	⇑*i*	Pn	Pn	17 13 03.9	-0.3	
TUP				⇑*i*	Pg	Pg	17 13 06.8	-3.4	
TUP				*e*			17 13 11.6		
TUP				max			17 13 12.4		
	comp=Z,881nm,0.7s								
TUP				*e*	Sg	Sg	17 13 35.2	-3.6	
TUP				Smax			17 13 35.7		
	comp=Z,3μm,1.0s								
TNDR	**Tynda**	**2.41**	**123**	*e*	Pn	Pn	17 13 10.3	+3.3	
TNDR				*e*	Pg	Pg	17 13 12.8	-1.3	
TNDR				*e*	Sn	Sn	17 13 36.5	+0.2	
TNDR				*e*	Sg	Sg	17 13 43.5	-1.8	
NLYR	**Nelyaty**	**3.05**	**272**	*e*	Pn	Pn	17 13 16.5	+0.8	
NLYR				⇑*i*	Pg	Pg	17 13 21.5	-4.7	
NLYR				Pmax			17 13 25.6		
	comp=Z,152nm,1.0s								
NLYR				*i*	Sg	Sg	17 14 00.0	-5.7	
NLYR				Smax			17 14 07.1		
	comp=Z,1μm,0.8s								
ALDR	**Aldan**	**3.10**	**45**	*e*	Pn	Pn	17 13 18.0	+1.6	
ALDR				*e*	Pg	Pg	17 13 23.4	-3.7	
ALDR				*e*	Sn	Sn	17 13 55.2	+2.1	
ALDR				*e*	Sg	Sg	17 14 03.7	-3.5	
KROS	**Kirovskiy**	**3.89**	**120**	*i*	Pn	Pn	17 13 23.7	-3.6	
KROS				*i*	Pg	Pg	17 13 34.0	-8.3	
KROS				*i*	Sn	Sn	17 14 06.1	-6.6	
KROS				*i*	Sg	Sg	17 14 23.6	-9.0	
BOD	**Bodaibo**	**4.13**	**292**	*e*	Pn	Pn	17 13 31.5	+0.9	
BOD				pmax	pmax				
	comp=Z,33nm,0.2s								
BOD	**Bodaibo**	**4.13**	**292**	*e*	Pn	Pn	17 13 30.9	+0.3	
BOD				*e*	Pg	Pg	17 13 41.5	-5.5	
BOD				Pmax			17 13 43.9		
	comp=Z,23nm,0.3s								
BOD				*e*	Sg	Sg	17 14 33.5	-6.9	
BOD				Smax			17 14 35.6		
	comp=Z,557nm,1.0s								
UKT	**Uakit**	**4.37**	**260**	*e*	Pg	Pg	17 13 44.8	-6.8	
UKT				pmax	pmax				
	comp=Z,80nm,0.5s								
UKT	**Uakit**	**4.37**	**260**	*e*	Pn	Pn	17 13 34.6	+0.7	
UKT				⇑*i*	Pg	Pg	17 13 45.1	-6.5	
UKT				Pmax			17 13 46.2		
	comp=Z,79nm,0.7s								
UKT				*i*	Sg	Sg	17 14 42.7	-5.5	
UKT				Smax			17 14 48.4		
	comp=Z,385nm,0.4s								
YOA	**Uoyan**	**5.29**	**270**	*e*	Pg	Pg	17 14 02.2	-6.9	
YOA				pmax	pmax				
	comp=Z,82nm,0.5s								
YOA	**Uoyan**	**5.29**	**270**	*e*	Sg	Sg	17 15 11.2	-6.3	
YOA				Smax			17 15 30.4		
	comp=Z,1μm,1.4s								
KMO	**Kumora**	**5.62**	**268**	*e*	Pn	Pn	17 13 50.6	-0.4	
KMO				pmax	pmax				
	comp=Z,34nm,0.7s								
KMO	**Kumora**	**5.62**	**268**	*e*	Pn	Pn	17 13 53.0	+2.0	
KMO				*e*	Pg	Pg	17 14 07.4	-8.0	
KMO				Pmax			17 14 22.9		
	comp=Z,32nm,0.4s								
KMO				*e*	Sg	Sg	17 15 21.4	-6.7	
KMO				Smax			17 15 26.7		
	comp=Z,457nm,1.0s								
YLYR	**Ulyunkhan**	**5.91**	**258**	*e*	Pb	Pb	17 14 12.5	+1.9	
YLYR				pmax	pmax				
	comp=Z,16nm,0.5s								
YLYR	**Ulyunkhan**	**5.91**	**258**	*e*	Sg	Sg	17 15 29.9	-7.5	
YLYR				Smax			17 15 36.2		
	comp=Z,277nm,1.3s								
NIZ	**Nizh Angarsk**	**6.56**	**268**	*e*	Sg	Sg	17 15 50.2	-8.0	
NIZ				Smax			17 16 11.5		
	comp=Z,136nm,1.0s								
YAK	**Yakutsk**	**7.03**	**35**	*e*	Pn	Pn	17 14 19.4	+9.0	
YAK				*e*			17 15 26.6		
YAK				pmax	pmax				
	comp=E,5.0nm,0.4s								
YAK				pmax	pmax				
	comp=Z,23nm,0.4s								
SYVR	**Suvo**	**7.04**	**251**	*e*	Pn	Pn	17 14 10.6	+0.1	
SYVR				*e*	Sg	Sg	17 16 06.3	-7.2	
SYVR				Smax			17 16 10.5		
	comp=Z,355nm,1.3s								
HIA	**Hailar**	**7.31**	**188**	⇑*i*	Pn	Pn	17 14 11.2	-3.0	
MXMB	**Maximikha**	**7.88**	**251**	*e*	Sg	Sn	17 16 32.6	+42	
MXMB				Smax			17 16 41.8		
	comp=Z,586nm,1.0s								
OGRR	**Ongureny**	**8.32**	**255**	*e*		Sn	17 16 03.0	+1.3	
OGRR				*e*	Sg	Sn	17 16 45.7	+44	
OGRR				Smax			17 16 54.9		
	comp=Z,112nm,1.3s								
KPC	**Khapcheranga**	**8.63**	**222**	*e*	Pn	Pn	17 14 31.6	-0.8	
KPC				*e*	Pg	Pn	17 15 03.8	+31	
KPC				Pmax			17 15 12.7		
	comp=Z,9.0nm,0.4s								
KPC				*e*	Sg	Sn	17 16 55.2	+46	
KPC				Smax			17 17 02.3		
	comp=Z,333nm,1.0s								
TRG	**Tyrgan**	**9.39**	**253**	*e*	Sg	Sn	17 17 19.4	+51	
TRG				Smax			17 17 37.5		
	comp=Z,82nm,1.3s								
KLR	**Kul'dur**	**9.68**	**134**	*e*	Pn	Pn	17 14 52.0	+5.3	
KLR				*e*			17 16 29.4		
HRMR	**Khuramsha**	**9.69**	**246**	*e*	Sg	Sn	17 17 25.8	+50	
LSTR	**Listvyanka**	**10.65**	**251**	*e*	Sg	Sn	17 17 59.1	+60	
LSTR				Smax			17 18 06.4		
	comp=Z,67nm,1.2s								
IRK	**Irkutsk**	**10.75**	**254**	*e*	Sg	Sn	17 17 59.0	+58	
IRK				Smax			17 18 22.5		
	comp=Z,133nm,0.8s								
TLY	**Talaya**	**11.38**	**252**	*e*	Sg	Sn	17 18 22.4	+66	
TLY				Smax			17 18 47.6		
	comp=Z,34nm,1.5s								
ZAK	**Zakamensk**	**12.30**	**248**	*e*	Sg		17 18 51.3		
ZAK				Smax			17 19 12.3		
	comp=Z,64nm,1.2s								
MOY	**Mondy**	**12.80**	**256**	*e*	Sg		17 19 05.9		
MOY				Smax			17 19 11.4		
	comp=Z,63nm,1.8s								
ORL	**Orlik**	**13.03**	**261**	*e*	Sg		17 19 11.0		
ORL				Smax			17 19 19.4		
	comp=Z,64nm,3.0s								
KRAR	**Krasnoyarsk**	**15.70**	**280**	⇑*i*	P	Pn	17 16 11.1	+2.6	
SEY	**Seymchan**	**16.86**	**55**	⇑*i*	P	Pn	17 16 25.1	+1.9	

IDC 28 17:15:30.0±4.6, 2167N×14200E, h196km±95km, mb2.9/3, mb1 3.1/5, mb1mx3.0/21, mbtmp3.1/5, Error ellipse: s-maj=189.3km s-min=18.2km az=72.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
CBIJ	**Chichi jima**	**5.40**	**2**	P	Pn	17	16	48.8	-0.6
	4.2nm,0.3s,baz=57,slow=20,SNR=3.8								
CBIJ				S	Sn	17	17	48.2	-4.0
	6.4nm,0.3s,baz=295,slow=22,SNR=7.6								
KSRS	**Korea Array**	**19.89**	**325**	P	P	17	19	48.6	+2.1
	0.3nm,0.3s,baz=147,slow=9.3,SNR=10.0								
SONM	**Songino Array**	**38.66**	**321**	P	P	17	22	33.6	-0.9
	0.3nm,0.4s,baz=117,slow=6.9,SNR=3.1								
WB2	**Warramunga Arr**	**42.03**	**191**	*e*P	P	17	23	02.6	+0.2
WRA	**Warramunga Arr**	**42.03**	**191**	P	P	17	23	02.4	0.0
	0.5nm,0.5s,baz=8.2,slow=8.6,SNR=26								
FITZ	**Fitzroy Crossi**	**42.65**	**203**	*e*P	P	17	23	09.0	+1.6
	4.4nm,1.5s								
ASAR	**Alice Springs**	**45.75**	**190**	P	P	17	23	31.9	-0.1
	0.3nm,0.7s,baz=15,slow=9.7,SNR=5.4								

IDC 28 17:30:48.2±0.9, 2107S×16933E, h0km, mb4.2/9, mb1 4.5/10, mb1mx4.3/17, mbtmp4.3/10, ML3.9/1, MS4.0/1, Ms1 4.0/1, ms1mx2.9/20, Error ellipse: s-maj=32.4km s-min=20.8km az=156.0

ISCJB 28 17:30:50.6±4.7, 2120S±010×16932E±007, h28km±32km, mb4.5/22, Error ellipse: s-maj=16.2km s-min=11.3km az=177.3

2007 SEP

MOS 28 17:30:51.9±1.3, 2131S×16931E, h33km, mb4.9/11, Error ellipse: s-maj=19.7km s-min=13.1km az=179.0

NEIC 28 17:30:51.2±5.8, 2112S×16934E, h23km±39km, mb4.7/14, Error ellipse: s-maj=16.8km s-min=14.1km az=209.0

ISC 28 17:30:52.7±4.9, 2120S±009×16934E±007, h32km±34km, n74, σ1°02/49, mb4.5/22, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
DZM	**Mont Dzumac**	**2.83**	**252**	*e*P	**Pn**	**17**	**31**	**34.3**	**-1.3**
DZM				*e*S	**Sn**	**17**	**32**	**08.8**	**+0.2**
DZM	**Mont Dzumac**	**2.83**	**252**	*e*Pn	**Pn**	**17**	**31**	**33.8**	**-1.9**
DZM				*e*Sn	**Sn**	**17**	**32**	**09.2**	**+0.5**
HNR	**Honiara**	**14.79**	**321**	LR	LR	17	38	43.7	
	comp=Z,591nm,21.1s,baz=73,slow=32								
URZ	**Urewera**	**18.28**	**160**	P	**Pn**	**17**	**35**	**05.6**	**+1.8**
	0.4nm,0.3s,baz=344,slow=7.6,SNR=7.0								
CTA	**Charters Tower**	**21.63**	**269**	*e*P	**P**	**17**	**35**	**42.0**	**+1.6**
	7.4nm,0.9s,mb4.1								
CTA	**Charters Tower**	**21.63**	**269**	P	**P**	**17**	**35**	**41.2**	**+0.8**
	9.7nm,0.9s,mb4.2,baz=89,slow=11,SNR=10								
CTA	**Charters Tower**	**21.63**	**269**	*e*P	**P**	**17**	**35**	**42.0**	**+1.6**
CTA				pmax	pmax				
	comp=Z,7.0nm,0.9s								
CTAO	**Charters Tower**	**21.63**	**269**	*e*P	**P**	**17**	**35**	**41.0**	**+0.6**
CTAO				pmax	pmax				
	comp=Z,11nm,0.9s,mb4.3								
CTAO	**Charters Tower**	**21.63**	**269**	*e*P	**P**	**17**	**35**	**41.0**	**+0.6**
	comp=Z,11nm,0.9s,mb4.3								
STKA	**Stephens Creek**	**26.93**	**241**	P	**P**	**17**	**36**	**32.3**	**+1.2**
	comp=Z,3.6nm,0.7s,mb4.0,baz=92,slow=12,SNR=4.3								
WB2	**Warramunga Arr**	**32.74**	**266**	*e*P	**P**	**17**	**37**	**22.5**	**-0.3**
WRAB	**Tennant Creek**	**32.74**	**266**	P	**P**	**17**	**37**	**23.4**	**+0.6**
WRAB				pmax	pmax				
	comp=Z,7.0nm,1.2s,mb4.5								
WRAB	**Tennant Creek**	**32.74**	**266**	P	**P**	**17**	**37**	**23.4**	**+0.6**
	comp=Z,6.9nm,1.2s,mb4.5								
WRA	**Warramunga Arr**	**32.75**	**266**	P	**P**	**17**	**37**	**21.3**	**-1.6**
	comp=Z,1.2nm,0.5s,mb4.1,baz=99,slow=8.0,SNR=14								
WRA				PcP	PcP				
	comp=Z,0.4nm,0.8s,baz=91,slow=2.8,SNR=4.5								
WRA	**Warramunga Arr**	**32.75**	**266**	P	**P**	**17**	**37**	**21.3**	**-1.6**
WRA				PcP	PcP	17	40	08.4	+0.4
ASAR	**Alice Springs**	**32.79**	**259**	P	**P**	**17**	**37**	**22.8**	**-0.5**
	comp=Z,5.1nm,0.7s,mb4.5,baz=84,slow=9.3,SNR=42								
ASAR				PcP	PcP	17	40	08.8	+0.9
	comp=Z,0.4nm,0.7s,baz=94,slow=3.6,SNR=4.2								
FITZ	**Fitzroy Crossi**	**41.17**	**266**	*e*P	**P**	**17**	**38**	**35.1**	**+0.6**
	comp=Z,9.2nm,0.8s,mb4.5								
MBWA	**Marble Bar**	**46.09**	**261**	*e*P	**P**	**17**	**39**	**14.0**	**-0.1**
	comp=Z,14nm,0.9s,mb4.9								
NWAO	**Narrogin (SRO)**	**47.42**	**244**	*e*P	**P**	**17**	**39**	**24.3**	**-0.1**
NWAO				pmax	pmax				
	comp=Z,16nm,1.2s								
NWAO	**Narrogin (SRO)**	**47.42**	**244**	*e*P	**P**	**17**	**39**	**24.3**	**0.0**
	comp=Z,16nm,1.2s,mb4.8								
CASY	**Casey**	**58.38**	**204**	*e*P	**P**	**17**	**40**	**43.4**	**-1.2**
	comp=Z,11nm,1.3s,mb4.7								
MJAR	**Matsushiro Arr**	**64.52**	**333**	P	**P**	**17**	**41**	**26.2**	**-0.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=167,slow=6.9,SNR=4.5								
MAJO	**Matsushiro**	**64.52**	**333**	P	**P**	**17**	**41**	**23.7**	**-2.8**
YSS	**Yuzh-Sakhalins**	**71.95**	**341**	*e*P	**P**	**17**	**42**	**09.4**	**-3.4**
MAW	**Mawson**	**76.66**	**202**	P	**P**	**17**	**42**	**39.7**	**-0.4**
KMI	**Kunming**	**79.39**	**302**	P	**P**	**17**	**42**	**59.5**	**+3.6**
KMI				pmax	pmax				
	comp=Z,11nm,1.5s,mb4.6								
KMI	**Kunming**	**79.39**	**302**	P	**P**	**17**	**42**	**59.5**	**+3.6**
	comp=Z,11nm,1.5s,mb4.6								
CMAR	**Chiang Mai Arr**	**79.39**	**295**	P	**P**	**17**	**42**	**58.0**	**+1.9**
	comp=Z,1.5nm,0.6s,mb4.1,baz=132,slow=4.8,SNR=15								
CHTO	**Chiang Mai**	**79.55**	**295**	*e*P	**P**	**17**	**42**	**58.5**	**+1.6**
CHTO				pmax	pmax				
	comp=Z,3.0nm,0.6s,mb4.4								
CHTO	**Chiang Mai**	**79.55**	**295**	*e*P	**P**	**17**	**42**	**58.5**	**+1.6**
	comp=Z,3.3nm,0.6s,mb4.4								
SNAA	**Sanae**	**87.22**	**182**	*e*	**P**	**17**	**43**	**34.2**	**-1.3**
SNAA				*e*		17	43	36.6	
SNAA				*e*		17	43	40.9	
SNAA	**Sanae**	**87.22**	**182**	*e*P	**P**	**17**	**43**	**34.4**	**-1.1**
SNAA				pmax	pmax				
	comp=Z,14nm,1.4s								
SNAA	**Sanae**	**87.22**	**182**	*e*P	**P**	**17**	**43**	**34.4**	**-1.1**
	comp=Z,14nm,1.4s,mb5.0								
VNA3	**Neumayer Olymp**	**87.80**	**180**	*e*	**P**	**17**	**43**	**37.4**	**-0.9**
VNA3				*e*		17	43	40.0	
VNA3				*e*	pP	17	43	45.1	-3.3
VNA2	**Neumayer--Watz**	**88.10**	**181**	*e*	**P**	**17**	**43**	**38.8**	**-0.9**
	baz=182,slow=4.9								
VNA2				*e*		17	43	41.8	
VNA2				*e*	pP	17	43	46.6	-3.2
VNA1	**Neumayer--Stat**	**88.39**	**181**	*e*	**P**	**17**	**43**	**41.8**	**+0.7**
VNA1				*e*		17	43	44.4	
VNA1				*e*		17	43	48.3	
CMB	**Columbia Colle**	**88.39**	**48**	*e*P	**P**	**17**	**43**	**41.3**	**-0.3**
CMB				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.7								
CMB	**Columbia Colle**	**88.39**	**48**	*e*P	**P**	**17**	**43**	**41.3**	**-0.3**
	comp=Z,3.8nm,0.8s,mb4.7								
ISA	**Isabella**	**88.64**	**51**	*e*P	**P**	**17**	**43**	**42.9**	**+0.1**
ISA				pmax	pmax				
	comp=Z,2.0nm,0.7s,mb4.6								
ISA	**Isabella**	**88.64**	**51**	*e*P	**P**	**17**	**43**	**42.9**	**+0.1**
	comp=Z,2.4nm,0.7s,mb4.6								
YBH	**Yreka Blue Hor**	**88.64**	**44**	P	**P**	**17**	**43**	**42.9**	**+0.2**
	comp=Z,0.6nm,0.4s,mb4.3,baz=152,slow=4.8,SNR=3.6								
YAK	**Yakutsk**	**88.76**	**342**	P	**P**	**17**	**43**	**42.5**	**-0.2**
YAK				pmax	pmax				
	comp=Z,8.0nm,0.8s,mb5.1								
YAK	**Yakutsk**	**88.76**	**342**	P	**P**	**17**	**43**	**42.5**	**-0.1**
	comp=Z,8.2nm,0.8s,mb5.1								
SONM	**Songino Array**	**88.83**	**323**	P	**P**	**17**	**43**	**43.9**	**+0.5**
	comp=Z,0.7nm,0.8s,mb4.1,baz=158,slow=4.8,SNR=6.1								
NVAR	**Mina Array Bea**	**90.03**	**48**	P	**P**	**17**	**43**	**49.6**	**+0.4**
	comp=Z,2.3nm,0.6s,mb4.7,baz=228,slow=8.4,SNR=14								
TPH	**Tonopah**	**90.62**	**49**	P	**P**	**17**	**43**	**52.0**	**0.0**
TPH				pmax	pmax				
	comp=Z,3.0nm,0.5s,mb4.9								
TPH	**Tonopah**	**90.62**	**49**	P	**P**	**17**	**43**	**52.0**	**0.0**
	comp=Z,2.5nm,0.5s,mb4.8								
ZAK	**Zakamensk**	**91.93**	**324**	*e*P	**P**	**17**	**43**	**57.9**	**+0.1**
ZAK				pmax	pmax				
	comp=Z,3.0nm,1.4s,mb4.4								
MKAR	**Makanchi Array**	**103.19**	**315**	Pdiff	Pdif	17	44	49.9	+1.1
	comp=Z,0.1nm,0.5s,baz=104,slow=4.0,SNR=3.5								
ARCES	**ARCESS Array B**	**126.98**	**345**	PKP	PKPdf	17	49	52.2	-0.4
	comp=Z,5.0nm,0.8s,baz=31,slow=2.0,SNR=6.3								
DPC	**Dobruska-Polom**	**143.97**	**330**	*e*PKP	PKPdf	17	50	23.5	-1.2
UPC	**Upice**	**144.01**	**331**	*e*PKP	PKPdf	17	50	23.0	-1.8
PVCC	**Panska Ves**	**144.64**	**332**	*e*PKP	PKPdf	17	50	25.5	-0.4
BRG	**Berggiesshubel**	**144.66**	**333**	*e*PKP	PKPdf	17	50	24.5	-1.4
	comp=Z,17nm,1.4s								
BRG				*e*		17	50	31.9	
	comp=Z,12nm,1.2s								
CLL	**Collm**	**144.72**	**334**	*e*PKPdf	PKPdf	17	50	25.0	-1.0
CLL				*e*pPKiKP		17	50	31.0	
PRU	**Pruhonice**	**145.04**	**331**	*e*PKP	PKPdf	17	50	26.9	+0.3
EKA	**Eskdalemuir Ar**	**145.45**	**352**	PKPbc	PKPbc	17	50	26.2	-0.9
	comp=Z,5.9nm,0.7s,baz=350,slow=2.2,SNR=26								
NKC	**Novy Kostel**	**145.77**	**333**	*e*PKP	PKPdf	17	50	29.0	+1.2
KHC	**Kasperske Hory**	**146.09**	**331**	*e*PKP	PKPab	17	50	30.6	+0.6
KHC				*e*pPKP	pPKPdf	17	50	38.5	-0.4
GEC2	**GERESS Array S**	**146.25**	**331**	*e*PKP2	PKPab	17	50	29.3	-1.3
GERES	**GERESS Array B**	**146.25**	**331**	PKPbc	PKPbc	17	50	29.5	-0.3
	comp=Z,1.7nm,0.5s,baz=33,slow=3.1,SNR=11								
GRA1	**Grafenberg Arr**	**146.69**	**334**	*e*PKP	PKPab	17	50	31.4	-0.9
GRF	**Grafenberg Arr**	**146.69**	**334**	*e*PKP2	PKPab	17	50	31.4	-0.9
DAVOS	**Davos**	**149.50**	**332**	PKP2	PKPbc	17	50	38.6	0.0
DAVOX	**Davos/Dischmat**	**149.50**	**332**	PKPbc	PKPbc	17	50	38.6	-0.1
	comp=Z,3.4nm,0.3s,baz=161,slow=3.3,SNR=17								
HAU	**Haudompre**	**149.95**	**337**	*e*PKP1	PKPbc	17	50	39.4	-0.3
MEZF	**Maizieres J'vi**	**149.99**	**339**	*e*PKP1	PKPbc	17	50	40.6	+0.8
FLN	**La Foliniere**	**151.32**	**346**	*e*PKP1	PKPbc	17	50	42.1	-0.8
	comp=Z,28nm,0.9s								
LDF	**La Druitiere**	**151.39**	**345**	*e*PKP1	PKPbc	17	50	42.3	-0.8
LOR	**Lormes**	**151.46**	**339**	*e*PKP1	PKPbc	17	50	43.5	+0.2
	comp=Z,5.1nm,0.7s								
SSF	**Saint Saulge**	**151.75**	**339**	*e*PKP1	PKPbc	17	50	45.0	+1.0
	comp=Z,10nm,0.8s								
LPL	**La Plagne**	**151.85**	**334**	*e*PKP1	PKPbc	17	50	44.4	+0.1
	comp=Z,5.8nm,0.6s								
LPG	**La Plagne**	**151.86**	**333**	*e*PKP1	PKPbc	17	50	44.5	+0.2
	comp=Z,6.3nm,0.5s								
SMF	**Signal de Mont**	**152.00**	**338**	*e*PKP1	PKPbc	17	50	43.9	-0.7

IDC 28 17:52:44.2±2.8, 2199N×14314E, h250km±66km, mb2.7/4, mb1 2.9/5, mb1mx2.8/21, mbtmp2.8/5, Error ellipse: s-maj=192.1km s-min=17.7km az=73.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
CBIJ	**Chichi jima**	**5.16**	**351**	P	Pn	17	54	01.4	-0.5
	3.9nm,0.3s,baz=344,slow=19,SNR=7.7								
CBIJ				S	S	17	55	00.2	-3.6
	1.8nm,0.3s,baz=258,slow=20,SNR=3.9								
KSRS	**Korea Array**	**20.26**	**323**	P	P	17	57	02.1	+1.2
	1.2nm,0.6s,baz=150,slow=9.1,SNR=6.4								
SONM	**Songino Array**	**39.09**	**320**	P	P	17	59	46.8	-0.5
	0.2nm,0.4s,baz=108,slow=5.1,SNR=3.2								
WRA	**Warramunga Arr**	**42.55**	**192**	P	P	18	00	15.4	-0.3
	0.5nm,0.5s,baz=7.9,slow=7.7,SNR=13								
ASAR	**Alice Springs**	**46.26**	**192**	P	P	18	00	45.4	+0.4
	0.6nm,1.0s,baz=7.2,slow=6.3,SNR=5.9								

ISCJB 28 17:53:20.6±1.2, 2115S±02×1692E±0.1, h10km, mb4.1/8, Error ellipse: s-maj=33.9km s-min=19.2km az=168.0

IDC 28 17:53:20.8±1.9, 2112S×16925E, h0km, mb4.1/6, mb1 4.3/6, mb1mx4.0/16, mbtmp4.1/6, Error ellipse: s-maj=92.8km s-min=26.8km az=157.0

NEIC 28 17:53:22.4±1.0, 2111S×16923E, h10km, mb4.3/3, Error ellipse: s-maj=30.7km s-min=17.1km az=166.0

ISC 28 17:53:22.5±1.2, 2115S±02×1692E±02, h10km, n15, σ0°78/15, mb4.1/8, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
DZM	**Mont Dzumac**	**2.74**	**248**	*e*P	**Pn**	**17**	**54**	**05.6**	**-0.8**
DZM				*e*S	**Sn**	**17**	**54**	**32.4**	**-7.2**
DZM	**Mont Dzumac**	**2.74**	**248**	*e*Pn	**Pn**	**17**	**54**	**05.6**	**-0.8**
CTA	**Charters Tower**	**21.48**	**268**	P	**P**	**17**	**58**	**12.9**	**+1.5**
	7.6nm,0.8s,mb4.1,baz=101,slow=10,SNR=9.7								
CTAO	**Charters Tower**	**21.48**	**268**	*e*P	**P**	**17**	**58**	**14.1**	**+2.7**
	3.1nm,0.8s,mb3.7								
STKA	**Stephens Creek**	**26.87**	**241**	P	**P**	**17**	**59**	**03.8**	**+0.3**
	4.1nm,0.9s,mb4.0,baz=76,slow=13,SNR=3.7								
WRA	**Warramunga Arr**	**32.61**	**266**	P	**P**	**17**	**59**	**53.8**	**-0.8**
	0.5nm,0.5s,mb3.7,baz=98,slow=8.4,SNR=14								
ASAR	**Alice Springs**	**32.67**	**259**	P	**P**	**17**	**59**	**55.0**	**-0.1**
	2.4nm,0.8s,mb4.2,baz=83,slow=9.5,SNR=29								
FITZ	**Fitzroy Crossi**	**41.03**	**266**	P	**P**	**18**	**01**	**06.8**	**+0.5**
	2.7nm,0.9s,mb3.9,baz=109,slow=9.4,SNR=7.2								
MBWA	**Marble Bar**	**45.97**	**261**	P	**P**	**18**	**01**	**45.5**	**-0.6**
	3.7nm,0.8s,mb4.4								
SBA	**Scott Base**	**56.86**	**181**	P	**P**	**18**	**03**	**07.3**	**+0.4**
	2.9nm,0.9s,mb4.3								
VNA3	**Neumayer Olymp**	**87.95**	**180**	*e*	**P**	**18**	**06**	**19.3**	**+7.1**
VNA2	**Neumayer--Watz**	**88.24**	**181**	*e*	**P**	**18**	**06**	**20.9**	**+7.3**
NVAR	**Mina Array Bea**	**90.04**	**49**	P	**P**	**18**	**06**	**22.2**	**-0.3**
	1.0nm,0.7s,mb4.3,baz=229,slow=8.1,SNR=6.0								
NVAR	**Mina Array Bea**	**90.04**	**49**	P	**P**	**18**	**06**	**22.2**	**-0.3**
GERES	**GERESS Array B**	**146.04**	**331**	PKPbc	PKPbc	18	13	03.2	+0.8
	0.3nm,0.5s,baz=357,slow=4.3,SNR=2.6								

MAN 28 17:59:19, 922N×12692E, h19km, mb4.8, ML3.7, MS3.7

ISCJB 28 17:59:20.4±1.5, 923N±005×1269E±0.1, h51km±13km, mb4.2/16, Error ellipse: s-maj=20.6km s-min=6.8km az=162.7

*IDC 28 17:59:26.7±7.5, 926N×12698E, h89km±63km, mb3.6/8, mb1 3.8/10, mb1mx3.6/22, mbtmp3.7/10, ML4.1/1, Error ellipse: s-maj=110.1km s-min=14.7km az

comp=E,580nm,0.3s
YUK smax
comp=N,8μm,1.0s
YUK smax
comp=N,2μm,0.4s
YUK smax
comp=E,2μm,0.4s
JNK Nakash 1.29 302 P **Pn** **18 03 37.2 -0.5**
JNK eS **Sn** **18 03 52.9 -0.9**
JRA Rausu 1.30 322 P **Pn** **18 03 37.9 +0.1**
JRA eS **Sn** **18 03 54.9 +0.8**
JAR Ashorobuto 1.84 283 P **Pn** **18 03 45.1 -0.1**
JAR eS **Sn** **18 04 07.6 +0.2**
JTKR Abashiri--Toko 2.00 303 P **Pn** **18 03 48.2 +0.9**
JTKR eS **Sn** **18 04 11.6 +0.5**
JCH Churui 2.13 263 P **Pn** **18 03 49.0 -0.2**
ASAJ Asahikawa 2.91 296 P **Pn** **18 04 01.9 +2.0**
comp=E,19nm,0.3s,baz=108,slow=12,SNR=67
ASAJ S **Sn** **18 04 38.9 +5.3**
comp=E,4.8nm,0.3s,baz=31,slow=19,SNR=5.3
ASAJ Asahikawa 2.91 296 PN **Pn** **18 04 01.9 +2.1**
ASAJ S **Sn** **18 04 38.9 +5.3**
ASAJ pmax pmax
comp=Z,19nm,0.3s
ASAJ smax
comp=N,5.0nm,0.3s
MJAR Matsushiro Arr 8.87 227 LR LR 18 08 58.0
comp=N,212nm,19.2s,baz=310,slow=40
SONM Songino Array 28.19 294 P **P** **18 09 05.7 +0.5**
comp=N,2.3nm,0.6s,mb4.0,baz=86,slow=8.7,SNR=19
SONM Songino Array 28.19 294 P **P** **18 09 05.7 +0.5**
SONM pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 44.38 298 P **P** **18 11 22.8 -0.3**
comp=Z,1.7nm,0.7s,mb3.9,baz=80,slow=9.8,SNR=9.6
MKAR Makanchi Array 44.38 298 P **P** **18 11 22.8 -0.2**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
KURK Kurchatov 45.45 304 P **P** **18 11 31.5 +0.1**
comp=Z,0.5nm,0.4s,mb3.7,baz=68,slow=8.9,SNR=5.0
KURK Kurchatov 45.45 304 P **P** **18 11 31.5 +0.1**
KURK pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
JOF Joensuu 62.52 332 *e*p **P** **18 13 35.3 -0.5**
comp=Z,0.9nm,0.3s,mb4.4
JOF Joensuu 62.52 332 *e*P **P** **18 13 35.3 -0.5**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.4
NVAR Mina Array Bea 68.59 57 P **P** **18 14 16.3 +0.8**
comp=Z,0.5nm,0.8s,mb3.5,baz=295,slow=8.5,SNR=3.0
NB2 NORSAR Subarra 70.14 339 P **P** **18 14 24.4 -0.2**
comp=Z,1.6nm,0.5s,mb4.2,baz=32,slow=6.5
NOA NORSAR Array B 70.14 339 P **P** **18 14 24.6 0.0**
comp=Z,1.8nm,0.7s,mb4.1,baz=33,slow=6.2,SNR=6.5
NOA NORSAR Array B 70.14 339 P **P** **18 14 24.6 0.0**
NOA pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 71.86 323 P **P** **18 14 34.5 -0.6**
comp=Z,0.9nm,0.5s,mb3.9,baz=41,slow=6.7,SNR=4.7
AKASG Malin Array Be 71.86 323 P **P** **18 14 34.6 -0.6**
AKASG pmax pmax
comp=Z,1.0nm,0.5s

*NEIC **28** 18:06:58.3±2.7,2184N×14293E,h237km±27km,mb3.5/2, Error ellipse: s-maj=21.7km s-min=9.6km az=83.0*
*ISCJB **28** 18:06:59.6±1.6,218N±0.1×1429E±0.2,h264km±16km, mb3.4/10, Error ellipse: s-maj=35.5km s-min=15.5km az=170.2*
*IDC **28** 18:07:01.7±2.4,2183N×14291E,h272km±24km,mb3.2/9, mb1 3.3/11,mb1mx3.3/23,mbtmp3.2/11, Error ellipse: s-maj=37.0km s-min=13.9km az=78.0*
ISC 28 18:07:00.3±1.6,219N±01×1430E±02,h257km±16km,n15, σ0§90/16,mb3.3/10,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.26**	**353**	P	**Pn**	**18 08 21.4**	**+2.0**
	4.9nm,0.3s,baz=238,slow=20,SNR=21						
CBIJ				S	**S**	**18 09 21.9**	**-0.6**
	8.4nm,0.3s,baz=134,slow=23,SNR=11						
MJAR	**Matsushiro Arr**	**15.20**	**345**	P	**Pn**	**18 10 21.5**	**-1.0**
	0.7nm,0.3s,baz=169,slow=11,SNR=6.6						
MAJO	**Matsushiro**	**15.20**	**345**	P	**Pn**	**18 10 20.8**	**-1.7**
KSRS	**Korea Array**	**20.25**	**323**	P	**P**	**18 11 17.9**	**+1.4**
	2.4nm,0.6s,baz=145,slow=9.0,SNR=14						
SONM	**Songino Array**	**39.07**	**320**	P	**P**	**18 14 02.4**	**-0.2**
	0.3nm,0.5s,mb3.0,baz=128,slow=9.6,SNR=5.2						
WRAB	**Tennant Creek**	**42.38**	**192**	*e*P	**P**	**18 14 29.6**	**-0.2**
	1.1nm,0.6s,mb3.3						
WRA	**Warramunga Arr**	**42.39**	**192**	P	**P**	**18 14 29.7**	**-0.3**
	0.6nm,0.5s,mb3.1,baz=9.2,slow=8.0,SNR=12						
ASAR	**Alice Springs**	**46.10**	**192**	P	**P**	**18 14 58.5**	**-0.6**
	0.2nm,0.5s,mb2.7,baz=10,slow=7.6,SNR=5.2						
LSA	**Lhasa**	**46.98**	**291**	*e*P	**P**	**18 15 06.9**	**+0.9**
	1.5nm,0.6s,mb3.5						
ZALV	**Zalesovo Beam**	**53.95**	**322**	P	**P**	**18 15 57.6**	**+0.1**
	1.4nm,0.5s,mb3.5,baz=108,slow=8.9,SNR=6.7						
MKAR	**Makanchi Array**	**54.43**	**313**	P	**P**	**18 16 00.8**	**-0.4**
	0.4nm,0.5s,mb3.0,baz=92,slow=8.9,SNR=3.4						
KURK	**Kurchatov**	**57.21**	**317**	P	**P**	**18 16 20.9**	**+0.2**
	0.3nm,0.4s,mb3.1,baz=94,slow=6.7,SNR=6.1						
KURK	**Kurchatov**	**57.21**	**317**	P	**P**	**18 16 20.9**	**+0.2**
ARCES	**ARCESS Array B**	**78.70**	**341**	P	**P**	**18 18 33.5**	**-0.3**
	8.5nm,1.1s,mb4.4,baz=69,slow=6.6,SNR=6.3						
NVAR	**Mina Array Bea**	**83.21**	**51**	P	**P**	**18 18 59.1**	**+1.0**
	0.5nm,0.7s,mb3.5,baz=264,slow=5.3,SNR=3.3						

*ISCJB **28** 18:15:04.9±0.5,213S±0.1×16939E±0.07,h10km,mb4.4/20, Error ellipse: s-maj=15.4km s-min=8.7km az=160.4*
*IDC **28** 18:15:04.6±1.2,2131S×16947E,h0km,mb4.2/10, mb1 4.4/10,mb1mx4.3/16,mbtmp4.2/10, Error ellipse: s-maj=52.6km s-min=20.5km az=155.0*
*NEIC **28** 18:15:06.0±0.5,2134S×16951E,h10km,mb4.6/13, Error ellipse: s-maj=17.9km s-min=11.2km az=156.0*
*LDG **28** 18:15:07.2±0.3,2110S×16891E,h10km,Mb5.0/3, Error ellipse: s-maj=24.2km s-min=4.5km az=152.0*
ISC 28 18:15:06.5±0.5,213S±01×16939E±007,h10km, (h12km±3.3km:pP-P),n64,σ0§93/32,mb4.4/20,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.83**	**255**	*e*P	**Pn**	**18 15 51.5**	**-0.3**
DZM				*e*S	**Sn**	**18 16 24.7**	**-1.2**
DZM	**Mont Dzumac**	**2.83**	**255**	*e*Pn	**Pn**	**18 15 51.6**	**-0.2**
CTA	**Charters Tower**	**21.67**	**269**	P	**P**	**18 19 59.5**	**+2.0**
	9.0nm,0.7s,mb4.3,baz=96,slow=11,SNR=14						
CTA	**Charters Tower**	**21.67**	**269**	P	**P**	**18 19 59.5**	**+2.0**
CTAO	**Charters Tower**	**21.67**	**269**	*e*P	**P**	**18 19 59.6**	**+2.2**
	5.9nm,0.7s,mb4.1						
STKA	**Stephens Creek**	**26.90**	**241**	P	**P**	**18 20 49.1**	**+1.4**
	3.5nm,0.9s,mb3.9,baz=56,slow=10,SNR=5.0						
STKA	**Stephens Creek**	**26.90**	**241**	P	**P**	**18 20 48.9**	**+1.1**
	4.5nm,0.9s,mb4.0						
WRAB	**Tennant Creek**	**32.78**	**266**	*e*P	**P**	**18 21 39.6**	**-0.4**
	2.2nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**32.79**	**266**	P	**P**	**18 21 39.0**	**-1.1**
	1.3nm,0.9s,mb3.9,baz=98,slow=8.4,SNR=24						
WRA				PcP	PcP	18 24 24.6	-0.7
	0.4nm,0.8s,baz=91,slow=1.0,SNR=4.1						
ASAR	**Alice Springs**	**32.81**	**259**	P	**P**	**18 21 39.9**	**-0.4**
	2.6nm,0.7s,mb4.2,baz=83,slow=9.4,SNR=47						
ASAR				PcP	PcP	18 24 25.1	-0.2
	0.9nm,0.8s,baz=121,slow=2.3,SNR=5.8						
FITZ	**Fitzroy Crossi**	**41.21**	**267**	*e*P	**P**	**18 22 51.8**	**0.0**
	9.7nm,0.9s,mb4.4						
FITZ	**Fitzroy Crossi**	**41.21**	**267**	P	**P**	**18 22 52.1**	**+0.4**
	4.0nm,0.7s,mb4.2,baz=127,slow=11,SNR=16						
FITZ	**Fitzroy Crossi**	**41.21**	**267**	*e*P	**P**	**18 22 51.6**	**-0.2**
	10nm,0.7s,mb4.6						
MBWA	**Marble Bar**	**46.12**	**261**	P	**P**	**18 23 31.2**	**-0.1**
	22nm,1.1s,mb5.0						
SBA	**Scott Base**	**56.57**	**181**	*e*P	**P**	**18 24 49.8**	**+1.0**
	5.3nm,1.0s,mb4.5						
CASY	**Casey**	**58.27**	**204**	P	**P**	**18 25 00.4**	**-0.5**
	2.2nm,0.9s,mb4.2						
KSM	**Kuching**	**61.99**	**284**	P	**P**	**18 25 30.5**	**+3.2**
MJAR	**Matsushiro Arr**	**64.67**	**333**	P	**P**	**18 25 43.8**	**-0.7**
	1.1nm,0.6s,mb4.0,baz=167,slow=7.1,SNR=4.1						
YSS	**Yuzh-Sakhalins**	**72.11**	**341**	*e*P	**P**	**18 26 29.6**	**-1.3**
	35nm,1.1s,mb5.2						
CMAR	**Chiang Mai Arr**	**79.50**	**295**	P	**P**	**18 27 14.0**	**+0.2**
	2.8nm,0.9s,mb4.2,baz=126,slow=4.0,SNR=7.1						
KMI	**Kunming**	**79.50**	**302**	P	**P**	**18 27 15.6**	**+1.9**
	7.0nm,0.7s,mb4.7						
CHTO	**Chiang Mai**	**79.65**	**295**	*e*P	**P**	**18 27 15.6**	**+0.9**
	3.8nm,0.9s,mb4.3						
SNAA	**Sanae**	**87.08**	**182**	*e*	**P**	**18 27 51.6**	**-0.4**
SNAA				*e*	pP	18 27 56.2	+0.9
SNAA				*e*		18 28 00.4	
SNAA	**Sanae**	**87.08**	**182**	*e*P	**P**	**18 27 51.5**	**-0.5**
	6.4nm,1.1s,mb4.8						
VNA3	**Neumayer Olymp**	**87.66**	**180**	*e*	**P**	**18 27 54.4**	**-0.4**
VNA3				*e*	pP	18 27 56.7	-1.5
VNA3				*e*	pP	18 27 59.3	+1.1
VNA3				*e*		18 28 03.2	
VNA2	**Neumayer--Watz**	**87.95**	**181**	*e*	**P**	**18 27 56.2**	**0.0**
	baz=188,slow=4.7						
VNA2				*e*	pP	18 27 58.0	-1.6
VNA2				*e*	pP	18 28 00.3	+0.7
VNA2				*e*		18 28 04.4	
CMB	**Columbia Colle**	**88.45**	**48**	*e*P	**P**	**18 27 58.7**	**-0.4**
	3.3nm,0.6s,mb4.7						
YAK	**Yakutsk**	**88.91**	**342**	P	**P**	**18 28 00.4**	**-0.2**
	8.0nm,0.8s,mb5.1						
SONM	**Songino Array**	**88.98**	**323**	P	**P**	**18 28 01.9**	**+0.6**
	1.6nm,1.0s,mb4.3,baz=134,slow=6.4,SNR=7.2						
NVAR	**Mina Array Bea**	**90.08**	**48**	P	**P**	**18 28 06.7**	**0.0**
	2.4nm,0.7s,mb4.7,baz=226,slow=8.9,SNR=19						
PDAR	**Pinedale Array**	**97.94**	**47**	P	**P**	**18 28 41.5**	**-1.1**
	0.5nm,1.0s,mb4.0,baz=184,slow=4.5,SNR=3.7						
ARCES	**ARCESS Array B**	**127.13**	**345**	PKP	PKPdf	18 34 09.4	-0.8
	4.8nm,1.0s,baz=29,slow=2.8,SNR=9.1						
AKASG	**Malin Array Be**	**137.26**	**323**	PKP	PKPdf	18 34 29.4	-0.5
	0.2nm,0.3s,baz=79,slow=3.7,SNR=2.7						
BRG	**Berggiesshubel**	**144.80**	**333**	*e*P	PKPdf	18 34 42.1	-1.4
	14nm,1.4s						
KHC	**Kasperske Hory**	**146.24**	**331**	*e*PKP	PKPdf	18 34 43.0	-3.0
KHC				*ep*PKP	pPKPdf	18 34 47.5	-1.9
GEC2	**GERESS Array S**	**146.39**	**331**	*e*PKPdf	PKPdf	18 34 46.8	+0.5
GERES	**GERESS Array B**	**146.39**	**331**	PKPbc	PKPbc	18 34 47.7	+0.2
	2.3nm,0.6s,baz=32,slow=3.5,SNR=10.0						
GRA1	**Grafenberg Arr**	**146.84**	**334**	*e*PKP	PKPdf	18 34 47.5	+0.5
GIVF	**Givet**	**148.81**	**341**	*e*PKP1	PKPbc	18 34 53.9	-0.2
CDF	**Champ du Feu**	**149.42**	**336**	*e*PKP1	PKPbc	18 34 55.5	-0.2
HINF	**Hinteralfeld**	**150.07**	**336**	*e*PKP1	PKPbc	18 34 56.9	-0.4
HAU	**Haudompre**	**150.10**	**337**	*e*PKP1	PKPbc	18 34 57.2	-0.2
MEZF	**Maizieres J'vi**	**150.14**	**339**	*e*PKP1	PKPbc	18 34 57.8	+0.4
CABF	**La Chapelle**	**151.36**	**336**	*e*PKP1	PKPbc	18 35 00.6	+0.2
	6.7nm,0.6s						
FLN	**La Foliniere**	**151.47**	**346**	*e*PKP1	PKPbc	18 35 00.0	-0.6
	18nm,0.8s						
LDF	**La Druitiere**	**151.54**	**345**	*e*PKP1	PKPbc	18 35 00.2	-0.5
LOR	**Lormes**	**151.61**	**339**	*e*PKP1	PKPbc	18 35 00.7	-0.2
	7.3nm,0.8s						
GRR	**Gorron**	**151.90**	**346**	*e*PKP1	PKPbc	18 35 01.1	-0.5
	7.4nm,0.5s						
SSF	**Saint Saulge**	**151.90**	**339**	*e*PKP1	PKPbc	18 35 01.4	-0.2
	7.1nm,0.8s						
LPL	**La Plagne**	**152.00**	**333**	*e*PKP1	PKPbc	18 35 02.2	+0.3
	5.5nm,0.7s						
LPG	**La Plagne**	**152.01**	**333**	*e*PKP1	PKPbc	18 35 02.2	+0.3
	13nm,0.9s						
SMF	**Signal de Mont**	**152.15**	**338**	*e*PKP1	PKPbc	18 35 01.9	-0.3
SGMF	**Saint Gilles**	**152.38**	**348**	*e*PKP1	PKPbc	18 35 01.9	-0.8
	39nm,0.8s						
ROSF	**Rostrenen**	**152.43**	**349**	*e*PKP1	PKPbc	18 35 02.1	-0.7
BGF	**Bois d'Agland**	**152.56**	**340**	*e*PKP1	PKPbc	18 35 02.7	-0.4
MBDF	**Montbardon**	**152.62**	**332**	*e*PKP1	PKPbc	18 35 04.0	+0.7
QUIF	**Quistinic**	**152.82**	**349**	*e*PKP1	PKPbc	18 35 02.8	-0.8
ORIF	**Oris-en-Rattie**	**152.84**	**334**	*e*PKP1	PKPbc	18 35 03.5	-0.3
	6.9nm,0.7s						
TCF	**Toulx Ste Croi**	**153.01**	**340**	*e*PKP1	PKPbc	18 35 03.6	-0.5
	3.7nm,0.7s						
VIVF	**Saint-Julien-l**	**153.37**	**335**	*e*PKP1	PKPbc	18 35 04.7	-0.3
	9.3nm,0.9s						
FRF	**La Foret Royal**	**153.59**	**331**	*e*PKP1	PKPbc	18 35 05.1	-0.4
SMRF	**Simiane la Rot**	**153.73**	**333**	*e*PKP1	PKPbc	18 35 05.8	0.0
LASF	**Ste Croix**	**154.35**	**335**	*e*PKP1	PKPbc	18 35 07.0	-0.1
MTLF	**Montolieu**	**155.59**	**337**	*e*PKP1	PKPdf	18 35 09.4	+8.9
	8.1nm,1.1s						

IDC 28 18:43:43.1±2.0,101N×12625E,h0km,mb3.4/3,mb1 3.6/3, mb1mx3.4/15,mbtmp3.4/3,Error ellipse: s-maj=185.6km s-min=23.9km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.28**	**160**	P	P	**18 48 40.2**	**-1.9**
	0.3nm,0.6s,baz=338,slow=11,SNR=10						
ASAR	**Alice Springs**	**25.63**	**164**	P	P	18 49 16.1	+1.6
	0.4nm,0.3s,baz=346,slow=12,SNR=11						
MKAR	**Makanchi Array**	**59.52**	**326**	P	P	18 53 48.2	0.0
	0.6nm,0.5s,baz=119,slow=8.8,SNR=11						

*IDC **28** 19:00:36.9±8.8, 726S×12860E, h88km±89km, mb3.4/4, mb1 3.8/7,mb1mx3.6/15,mbtmp3.6/7,ML4.3/3, Error ellipse: s-maj=102.8km s-min=22.5km az=53.0*
*NEIC **28** 19:00:40.8±2.7,764S×12823E,h128km±30km,mb4.1/4, Error ellipse: s-maj=25.7km s-min=17.8km az=220.0*
*ISCJB **28** 19:00:44.0±1.1,796S±006×12824E±006,h194km±12km, mb3.5/5, Error ellipse: s-maj=11.7km s-min=7.4km az=36.0*
ISC 28 19:00:45.5±1.3,809S±010×12826E±007,h193km±16km, n19,σ1§28/29,mb3.5/5,Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.01**	**245**	P	**Pn**	**19 01 59.5**	**-0.3**
	17nm,0.3s,baz=103,slow=3.4,SNR=14						
BATI				S	**Sn**	**19 02 58.3**	**0.0**
	24nm,0.3s,baz=55,slow=22,SNR=19						
KAKA	**Kakadu**	**6.16**	**139**	*e*P	**Pn**	**19 02 15.9**	**+1.1**
	39nm,0.4s						
KAKA				*e*S	**Sn**	**19 03 24.8**	**-0.6**
KAKA	**Kakadu**	**6.16**	**139**	*e*Pn	**Pn**	**19 02 15.8**	**+1.0**
	77nm,0.4s						
KAKA				*e*Sn	**Sn**	**19 03 24.7**	**-0.7**
FITZ	**Fitzroy Crossi**	**10.28**	**194**	*e*P	**Pn**	**19 03 09.8**	**+1.4**
	8.8nm,0.3s						
FITZ				*e*S	**Sn**	**19 05 01.7**	**-1.4**
FITZ	**Fitzroy Crossi**	**10.28**	**194**	P	**Pn**	**19 03 09.8**	**+1.4**
	1.9nm,0.3s,baz=32,slow=13,SNR=50						
FITZ				S	**Sn**	**19 05 03.8**	**+0.7**
	1.6nm,0.3s,baz=307,slow=22,SNR=8.6						
WRAB	**Tennant Creek**	**13.17**	**154**	*e*Pn	**Pn**	**19 03 46.9**	**+1.5**
	5.8nm,0.6s						
WRAB				*e*Sn	**Sn**	**19 06 09.6**	**-2.6**
WRA	**Warramunga Arr**	**13.17**	**154**	P	**Pn**	**19 03 46.9**	**+1.5**
	1.5nm,0.3s,baz=330,slow=14,SNR=72						
WRA				S	**Sn**	**19 06 11.4**	**-0.9**
	1.9nm,0.3s,baz=326,slow=23,SNR=9.4						
WB2	**Warramunga Arr**	**13.18**	**154**	*e*P	**Pn**	**19 03 46.7**	**+1.2**
WB2				*e*S	**Sn**	**19 06 10.7**	**-1.7**
WB2	**Warramunga Arr**	**13.18**	**154**	*e*Pn	**Pn**	**19 03 46.6**	**+1.2**
WB2				*e*Sn	**Sn**	**19 06 06.2**	**-6.2**
MBWA	**Marble Bar**	**15.39**	**211**	*e*Pn	**Pn**	**19 04 16.9**	**+4.1**
MBWA				*e*Sn	**Sn**	**19 06 58.8**	**-6.4**
ASAR	**Alice Springs**	**16.41**	**161**	P	**Pn**	**19 04 30.8**	**+5.7**
	0.6nm,0.3s,baz=334,slow=9.6,SNR=54						
KSM	**Kuching**	**20.27**	**297**	P	**P**	**19 05 04.8**	**-1.6**
STKA	**Stephens Creek**	**26.73**	**154**	P	**P**	**19 06 14.1**	**+7.0**
	1.2nm,0.5s,mb3.8,baz=326,slow=11,SNR=5.6						
STKA	**Stephens Creek**	**26.73**	**154**	*e*P	**P**	**19 06 13.7**	**+6.6**
	1.5nm,0.5s,mb3.9						
COCO	**West Island**	**31.19**	**260**	P	**P**	**19 06 47.2**	**+0.4**
	63nm,0.4s						
SONM	**Songino Array**	**58.95**	**343**	P	**P**	**19 10 23.7**	**-0.7**
	0.4nm,0.5s,mb3.3,baz=173,slow=6.5,SNR=5.0						
MKAR	**Makanchi Array**	**68.21**	**328**	P	**P**	**19 11 24.5**	**-0.5**
	0.2nm,0.4s,mb3.1,baz=112,slow=8.2,SNR=2.6						
UCH	**Uchtor**	**70.05**	**320**	P	**P**	**19 11 38.7**	**+2.2**
	1.9nm,0.8s,mb3.8						
ZALV	**Zalesovo Beam**	**71.81**	**335**	P	**P**	**19 11 45.1**	**-1.7**
	0.3nm,0.4s,mb3.2,baz=145,slow=5.3,SNR=3.6						

*ISCJB **28** 19:12:35.9±0.5,5041N±004×1878E±003,h0km,Error ellipse: s-maj=5.9km s-min=2.7km az=18.9*
*WAR **28** 19:12:37.1,5036N×1888E,ML2.7,Mining Induced*
*NEIC **28** 19:12:37.8±0.8,5036N×1879E,h5km,MG2.7(WAR), Error ellipse: s-maj=13.5km s-min=5.9km az=192.0*
*PRU **28** 19:12:38.3,5036N×1874E,h0km*
ISC 28 19:12:37.2±0.5,5038N±004×1879E±003,h0km,n22, σ1§22/45,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.67**	**104**	*e*Pg	**Pg**	**19 12 49.3**	**-0.7**
OJC				*e*Sg	**Sg**	**19 12 57.8**	**-0.8**
OKC	**Ostrava-Krasne**	**0.69**	**217**	*e*PG	**Pg**	**19 12 50.9**	**+0.6**
OKC				*e*SG	**Sg**	**19 13 00.6**	**+1.5**
	comp=Z,24nm,0.3s						
MORC	**Moravsky Berou**	**1.01**	**233**	*e*Pg	**Pg**	**19 12 55.8**	**-0.6**
MORC				*e*Sg	**Sg**	**19 13 10.5**	**+1.0**
NIE	**Niedzica**	**1.38**	**134**	*e*Pg	**Pg**	**19 13 02.6**	**-1.0**
NIE				*e*Sg	**Sg**	**19 13 20.5**	**-1.0**
DPC	**Dobruska-Polom**	**1.58**	**270**	*e*PG	**Pg**	**19 13 06.5**	**-0.9**
DPC				*e*SG	**Sg**	**19 13 28.4**	**+0.5**
	comp=Z,20nm,0.9s						
KSP	**Ksiaz**	**1.65**	**287**	*e*Pn	**Pn**	**19 13 07.4**	**0.0**
KSP				*e*Pg	**Pg**	**19 13 09.2**	**+0.4**
KSP				*e*Sg	**Sg**	**19 13 32.9**	**+2.6**
UPC	**Upice**	**1.78**	**275**	*e*PG	**Pg**	**19 13 10.7**	**-0.5**
UPC				*e*SG	**Sg**	**19 13 35.5**	**+1.2**
KOLL	**Kolacno**	**1.82**	**188**	*e*PN	**Pn**	**19 13 11.4**	**+1.7**
KOLL				*e*SN	**Sn**	**19 13 34.1**	**+0.6**
KOLL	**Kolacno**	**1.82**	**188**	*e*Pn	**Pn**	**19 13 11.4**	**+1.7**
KOLL				*e*Sn	**Sn**	**19 13 34.1**	**+0.6**
STHS	**Stebnicka Huta**	**1.86**	**120**	*e*PN	**Pn**	**19 13 11.5**	**+1.3**
STHS				*e*SN	**Sn**	**19 13 36.4**	**+2.0**
STHS	**Stebnicka Huta**	**1.86**	**120**	*e*Pn	**Pn**	**19 13 11.5**	**+1.3**
STHS				*e*Sn	**Sn**	**19 13 36.4**	**+2.0**
VYHS	**Vyhne**	**1.89**	**179**	*e*PN	**Pn**	**19 13 09.5**	**-1.2**
VYHS				*e*SN	**Sn**	**19 13 33.5**	**-1.7**
VYHS	**Vyhne**	**1.89**	**179**	*e*Pn	**Pn**	**19 13 09.5**	**-1.2**
VYHS				*e*Sn	**Sn**	**19 13 33.5**	**-1.7**
CRVS	**Cervenica-Dubn**	**2.29**	**129**	*e*PN	**Pn**	**19 13 19.1**	**+3.0**
CRVS				*e*SN	**Sn**	**19 13 48.6**	**+3.7**
CRVS	**Cervenica-Dubn**	**2.29**	**129**	*e*Pn	**Pn**	**19 13 19.1**	**+3.0**
CRVS				*e*Sn	**Sn**	**19 13 48.6**	**+3.7**
KOLS	**Kolonicke sedl**	**2.69**	**121**	*e*PG	**Pg**	**19 13 29.8**	**+1.1**
KOLS	**Kolonicke sedl**	**2.69**	**121**	*e*Pg	**Pg**	**19 13 29.8**	**+1.1**
PRU	**Pruhonice**	**2.76**	**263**	*e*PN	**Pn**	**19 13 21.9**	**-0.7**
PRU				*e*PG	**Pg**	**19 13 27.4**	**-2.6**
PRU				*e*SG	**Sg**	**19 14 04.9**	**-0.8**
	comp=Z,4.8nm,0.6s						
BRG	**Berggiesshubel**	**3.12**	**281**	PG	**Pg**	**19 13 35.3**	**-1.7**
BRG				SG	**Sg**	**19 14 17.9**	**+0.4**
	comp=Z,3.7nm,0.4s						
KHC	**Kasperske Hory**	**3.60**	**252**	*e*PN	**Pn**	**19 13 33.9**	**-0.3**
KHC				*e*PG	**Pg**	**19 13 41.0**	**-5.2**
KHC				*e*SG	**Sg**	**19 14 31.7**	**-1.1**
	comp=Z,8.8nm,0.5s						
GEC2	**GERESS Array S**	**3.65**	**247**	*e*Pn	**Pn**	**19 13 35.3**	**+0.5**
GEC2				*e*Pg	**Pg**	**19 13 44.9**	**-2.2**
CLL	**Collm**	**3.78**	**286**	*e*Pg	**Pg**	**19 13 50.0**	**+0.4**
CLL				*e*Sg	**Sg**	**19 14 43.0**	**+4.4**

*IDC **28** 19:12:51.9±3.1,2095S×16916E,h0km,mb3.9/3, mb1 4.3/3,mb1mx3.9/14,mbtmp3.9/3, Error ellipse: s-maj=195.4km s-min=31.2km az=159.0*
*ISCJB **28** 19:12:56.1±3.8,2125S±03×16926E±02,h46km±30km, mb3.9/3, Error ellipse: s-maj=46.2km s-min=28.3km az=165.1*
ISC 28 19:12:55.4±7.1,2145S±03×16936E±01,h29km±50km, h29km±.4km:pP-P,n8,σ0§37/8,mb3.9/3,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.74**	**255**	*e*P	**Pn**	**19 13 37.5**	**0.0**
DZM				*e*S	**Sn**	**19 14 09.8**	**+0.1**
WRA	**Warramunga Arr**	**32.70**	**266**	P	**P**	**19 19 25.1**	**-0.6**
	0.3nm,0.6s,mb3.4,baz=96,slow=8.3,SNR=6.4						
ASAR	**Alice Springs**	**32.72**	**259**	P	**P**	**19 19 26.1**	**+0.4**
	1.7nm,0.9s,mb4.0,baz=83,slow=8.4,SNR=12						
SNAA	**Sanae**	**87.04**	**182**	*e*	**P**	**19 25 37.6**	**-0.3**
SNAA				*e*	pP	19 25 46.4	-0.7
VNA3	**Neumayer Olymp**	**87.63**	**180**	*e*	**P**	**19 25 40.8**	**+0.1**
VNA3				*e*		19 25 45.1	
VNA3				*e*	pP	19 25 49.3	-0.6
VNA2	**Neumayer--Watz**	**87.92**	**181**	*e*	**P**	**19 25 42.2**	**+0.1**
	baz=185,slow=5.5						
VNA2				*e*		19 25 46.5	
VNA2				*e*	pP	19 25 51.2	-0.1
NVAR	**Mina Array Bea**	**90.17**	**48**	P	**P**	**19 25 53.3**	**+0.2**
	1.1nm,0.6s,mb4.4,baz=219,slow=7.3,SNR=8.9						
GERES	**GERESS Array B**	**146.38**	**330**	PKPbc	PKPbc	19 32 33.5	0.0
	1.3nm,0.6s,baz=49,slow=3.0,SNR=4.4						

**IDC 28

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.32**	**333**	⇓*iP*	**Pb**	**20 16 18.5**	**-0.5**
GUIV				*eS*	**Sb**	**20 16 23.5**	**-0.4**
TCE	**Chacachacare**	**0.46**	**43**	*eP*	**Pb**	**20 16 21.0**	**-0.4**
TCE				*eS*	**Sb**	**20 16 27.4**	**-0.4**
TRN	**Trinidad (W)**	**0.72**	**66**	*eP*	**Pb**	**20 16 25.2**	**-0.5**
TRN				*eS*	**Sb**	**20 16 36.7**	**+1.5**
GUNV	**Guanoco**	**0.88**	**257**	⇑*eP*	**Pb**	**20 16 28.6**	**+0.2**
GUNV				*eS*	**Sb**	**20 16 41.0**	**+1.2**
CRUV	**Carupano**	**1.19**	**285**	*eP*	**Pn**	**20 16 32.9**	**-0.2**
CRUV				*eS*	**Sn**	**20 16 48.2**	**-0.3**
ITEV	**Isla Los Testi**	**1.44**	**314**	*eP*	**Pn**	**20 16 37.2**	**+0.7**
ITEV				*eS*	**Sn**	**20 16 55.2**	**+0.5**
CAOV	**Caicara del Or**	**5.17**	**235**	*eP*	**Pn**	**20 17 26.4**	**-1.5**
CAOV				*eS*	**Sn**	**20 18 21.1**	**-5.7**

*ISCJB **28** 20:36:48.5±0.4, 4381N±004×10526W±005, h0km, mb4.0/3, Error ellipse: s-maj=6.1km s-min=5.2km az=168.4*
*NEIC **28** 20:36:49.9±0.3, 4378N×10527W, h0km, ML3.3, Error ellipse: s-maj=5.2km s-min=4.4km az=165.0, Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.
*IDC **28** 20:36:50.1±0.9, 4385N×10554W, h0km, mb4.0/4, mb1 3.9/10, mb1mx3.7/27, mbtmpg3.7/10, ML3.5/6, Error ellipse: s-maj=24.4km s-min=8.3km az=149.0*

ISC 28 20:36:50.1±0.4, **4379N**±004×**10525W**±005, **h0km, n39, σ0$98/39, mb4.0/3, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.94**	**69**	*e*Pg	**Pg**	**20 37 08.6**	**+0.6**
PHWY	**Pilot Hill**	**2.49**	**184**	*e*Pn	**Pn**	**20 37 31.0**	**-0.8**
RWWY	**Rawlins**	**2.55**	**215**	*e*Pn	**Pn**	**20 37 33.2**	**+0.6**
LAO	**LASA Array**	**2.98**	**347**	*e*Pn	**Pn**	**20 37 38.4**	**-0.1**
RLMT	**Red Lodge**	**3.17**	**296**	*e*Pn	**Pn**	**20 37 41.3**	**+0.2**
PDAR	**Pinedale Array** 5.9nm,0.3s,baz=66,slow=16,SNR=63	**3.31**	**253**	Pn	**Pn**	**20 37 43.1**	**+0.1**
PDAR	18nm,0.3s,baz=76,slow=32,SNR=7.4			Lg		20 38 29.1	
BW06	**Boulder Array**	**3.31**	**253**	*e*Pn	**Pn**	**20 37 42.9**	**-0.1**
OGNE	**Ogallala**	**3.71**	**139**	*e*Pn	**Pn**	**20 37 50.1**	**+1.5**
GCMT	**Greycliff**	**3.72**	**304**	*e*Pn	**Pn**	**20 37 48.9**	**+0.2**
LKWY	**Lake**	**3.78**	**284**	*e*Pn	**Pn**	**20 37 52.5**	**+2.9**
LOHW	**Long Hollow**	**3.88**	**269**	*e*Pn	**Pn**	**20 37 51.1**	**+0.1**
MOOW	**Moose Ponds**	**3.98**	**271**	*e*Pn	**Pn**	**20 37 53.0**	**+0.7**
ISCO	**Idaho Springs**	**4.00**	**184**	*e*Pn	**Pn**	**20 37 52.4**	**-0.2**
YNR	**Norris Junctio**	**4.01**	**285**	*e*Pn	**Pn**	**20 37 52.9**	**+0.2**
SNOW	**Snow King Moun**	**4.01**	**267**	*e*Pn	**Pn**	**20 37 50.3**	**-2.4**
REDW	**Red Top Meadow**	**4.09**	**266**	*e*Pn	**Pn**	**20 37 54.6**	**+0.8**
IMW	**Indian Meadow**	**4.12**	**273**	*e*Pn	**Pn**	**20 37 55.7**	**+1.6**
TPAW	**Teton Pass**	**4.15**	**267**	*e*Pn	**Pn**	**20 37 55.1**	**+0.5**
YMR	**Madison River**	**4.20**	**284**	*e*Pn	**Pn**	**20 37 53.4**	**-1.9**
AHID	**Auburn Hatcher**	**4.39**	**258**	*e*Pn	**Pn**	**20 37 57.3**	**-0.7**
RRI2	**Red Ridge**	**4.43**	**266**	*e*Pn	**Pn**	**20 37 58.6**	**+0.2**
DGMT	**Dagmar**	**4.74**	**9**	*e*P	**Pn**	**20 38 04.0**	**+1.4**
HRY	**Holter Researc**	**5.49**	**304**	*e*Pn	**Pn**	**20 38 12.8**	**-0.1**
SPUT	**South Promonto**	**5.87**	**247**	*e*Pn	**Pn**	**20 38 18.1**	**-0.1**
SDCO	**Great Sand Dun** 2.5nm,0.5s	**6.04**	**182**	*e*Pn	**Pn**	**20 38 20.0**	**-0.6**
SRU	**San Rafael** 13nm,0.4s	**6.13**	**222**	*e*Pn	**Pn**	**20 38 20.2**	**-1.6**
ECSD	**EROS,Sioux Fal** 9.0nm,0.5s	**6.26**	**88**	*e*Pn	**Pn**	**20 38 22.8**	**-0.8**
CHMT	**Chamberlain Mo**	**6.44**	**302**	*e*Pn	**Pn**	**20 38 25.8**	**-0.3**
WALA	**Waterton Lakes** 3.1nm,0.4s	**7.97**	**314**	*e*Pn	**Pn**	**20 38 45.8**	**-1.2**
ELK	**Elko** 0.6nm,0.3s,baz=63,slow=9.6,SNR=8.4	**8.01**	**251**	Pn	**Pn**	**20 38 47.6**	**0.0**
ULM	**Lac du Bonnet** 1.0nm,0.3s,baz=240,slow=11,SNR=10.0	**9.09**	**41**	Pn	**Pn**	**20 39 02.3**	**-0.1**
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=47,slow=7.4,SNR=3.8	**11.21**	**246**	Pn	**Pn**	**20 39 31.7**	**+0.3**
YBH	**Yreka Blue Hor** 0.1nm,0.3s,baz=71,slow=10.0,SNR=3.8	**13.00**	**267**	Pn	**Pn**	**20 39 58.9**	**+3.1**
TXAR	**Lajitas Array** 0.0nm,0.3s,baz=358,slow=6.3,SNR=3.7	**14.49**	**174**	Pn	**Pn**	**20 40 19.5**	**+3.2**
ARCES	**ARCESS Array B** 5.4nm,1.0s,baz=336,slow=4.2,SNR=3.8	**61.36**	**18**	P	**P**	**20 47 06.0**	**-1.1**
ZALV	**Zalesovo Beam** 0.6nm,0.5s,mb4.0,baz=16,slow=6.5,SNR=3.8	**82.25**	**354**	P	**P**	**20 49 12.4**	**-0.4**
SONM	**Songino Array** 0.4nm,0.6s,mb3.9,baz=38,slow=3.0,SNR=3.3	**84.59**	**339**	P	**P**	**20 49 24.8**	**-0.2**
SONM	**Songino Array**	**84.59**	**339**	P	**P**	**20 49 24.8**	**-0.2**
MKAR	**Makanchi Array** 0.3nm,0.2s,mb4.1,baz=10,slow=4.8,SNR=3.6	**89.55**	**355**	P	**P**	**20 49 48.6**	**-0.5**

IDC 28 20:53:59.2±2.3, **2207N×14350E, h260km**±44km, **mb2.8/5, mb1 2.9/6, mb1mx2.9/21, mbtmp2.9/6, Error ellipse: s-maj=170.6km s-min=16.6km az=74.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima** 6.1nm,0.3s,baz=168,slow=21,SNR=14	**5.14**	**347**	P	Pn	20 55 18.9	+1.9
CBIJ	7.5nm,0.3s,baz=270,slow=22,SNR=9.8			S	S	20 56 17.9	-1.2
KSRS	**Korea Array** 1.0nm,0.6s,baz=146,slow=8.9,SNR=5.6	**20.40**	**322**	P	P	20 58 17.8	+1.1
SONM	**Songino Array** 0.2nm,0.3s,baz=123,slow=9.2,SNR=3.8	**39.24**	**320**	P	P	21 01 02.7	+0.1
WRA	**Warramunga Arr** 0.5nm,0.6s,baz=14,slow=9.0,SNR=3.2	**42.71**	**193**	P	P	21 01 30.8	-0.2
ASAR	**Alice Springs** 0.2nm,0.4s,baz=9.9,slow=7.4,SNR=4.2	**46.41**	**192**	P	P	21 02 00.1	-0.1
MKAR	**Makanchi Array** 0.3nm,0.2s,baz=88,slow=9.0,SNR=3.2	**54.66**	**312**	P	P	21 03 01.1	-0.3

*ISCJB **28** 21:12:01.8±0.6, 2484N±004×12251E±002, h123km±4km, Error ellipse: s-maj=6.4km s-min=3.2km az=165.6*
*TAP **28** 21:12:01.5, 2490N×12247E, h128km, ML3.5, C*
*JMA **28** 21:12:01.7±0.2, 2490N×12252E, h126km±3km, M2.4*

ISC 28 21:12:02.4±0.6, **2485N**±004×**12251E**±002, **h122km**±5km, **n41, σ0$55/78, 2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=284	**0.50**	**288**	*i* P	**Pn**	**21 12 20.5**	**0.0**
TWB1	baz=284			*e*S	**Sn**	**21 12 34.3**	**+0.1**
EGS		**0.52**	**269**	*e*P	**Pn**	**21 12 21.0**	**+0.4**
EGS	baz=257			*e*S	**Sn**	**21 12 35.0**	**+0.5**
YOJ	**Yonaguni jima**	**0.60**	**130**	P	**Pn**	**21 12 21.2**	**0.0**
YOJ				*e*S	**Sn**	**21 12 36.3**	**+0.9**
TWC	**Suao** baz=236	**0.65**	**248**	P	**Pn**	**21 12 21.3**	**-0.3**
TWC	baz=236			*e*S	**Sn**	**21 12 34.9**	**-1.0**
NWF	**Wu-fen Shan** baz=285	**0.69**	**288**	P	**Pn**	**21 12 21.6**	**-0.3**
NWF	baz=285			*e*S	**Sn**	**21 12 36.7**	**+0.1**
TWE	**Neicheng** baz=256	**0.78**	**260**	P	**Pn**	**21 12 22.2**	**-0.3**
TWE	baz=256			*e*S	**Sn**	**21 12 37.5**	**-0.3**
ENA	**Nanau** baz=229	**0.82**	**239**	P	**Pn**	**21 12 23.0**	**+0.1**
ENA	baz=229			*e*S	**Sn**	**21 12 38.8**	**+0.4**
TWA	**Mucha** baz=268	**0.85**	**279**	P	**Pn**	**21 12 22.7**	**-0.4**
TWA	baz=268			*e*S	**Sn**	**21 12 38.3**	**-0.6**
ENTT	**Nioudou** baz=252	**0.88**	**256**	P	**Pn**	**21 12 23.4**	**-0.1**
ENTT	baz=252			*e*S	**Sn**	**21 12 40.2**	**+0.8**
TWY	**Chenhua** baz=289	**0.93**	**297**	*e*P	**Pn**	**21 12 23.2**	**-0.6**
TWS1	**Kuangyinshan** baz=276	**1.02**	**284**	⇓*i*P	**Pn**	**21 12 24.5**	**-0.2**
TWS1	baz=276			*e*S	**Sn**	**21 12 42.5**	**+0.8**
NSK	**Sanguang** baz=257	**1.06**	**261**	⇓P	**Pn**	**21 12 25.1**	**-0.1**
NSK				S	**Sn**	**21 12 42.0**	**-0.4**
NNS	**Nan Shan** baz=239	**1.11**	**248**	*e*P	**Pn**	**21 12 25.9**	**+0.2**
NNS	baz=239			S	**Sn**	**21 12 43.9**	**+0.6**
TWD	**Chiawan** baz=220	**1.13**	**227**	*e*P	**Pn**	**21 12 25.8**	**-0.1**
TWD	baz=220			*e*S	**Sn**	**21 12 43.5**	**-0.3**
IRIF	**Iriomote-Funau**	**1.23**	**115**	P	**Pn**	**21 12 26.6**	**-0.3**
IRIF				S	**Sn**	**21 12 45.7**	**+0.2**
WHF	**Hehuan Shan** baz=232	**1.33**	**238**	*e*P	**Pn**	**21 12 28.1**	**+0.1**
WHF	baz=232			*e*S	**Sn**	**21 12 47.7**	**+0.2**
TWT	**Tachien** baz=237	**1.35**	**244**	*e*P	**Pn**	**21 12 29.0**	**+0.7**
TWT	baz=237			*e*S	**Sn**	**21 12 48.5**	**+0.5**
NSTT	**Nanjuang** baz=258	**1.39**	**261**	P	**Pn**	**21 12 28.2**	**-0.4**
NSTT	baz=258			*e*S	**Sn**	**21 12 47.7**	**-0.9**
HATJ	**Hateruma jima**	**1.42**	**124**	*e*S	**Sn**	**21 12 50.1**	**+0.8**
ESL	**Shilin** baz=227	**1.43**	**224**	*e*P	**Pn**	**21 12 28.7**	**-0.4**
ESL	baz=227			*e*S	**Sn**	**21 12 48.6**	**-0.8**
JKRS	**Kuro-shima**	**1.50**	**114**	P	**Pn**	**21 12 30.1**	**+0.2**
JKRS				*e*S	**Sn**	**21 12 51.2**	**+0.3**
JIJ	**Ishigaki jima**	**1.57**	**108**	P	**Pn**	**21 12 30.6**	**-0.1**
JIJ				S	**Sn**	**21 12 51.6**	**-0.7**
TWQ1	**Liyutan** baz=258	**1.66**	**253**	*e*P	**Pn**	**21 12 31.5**	**-0.3**
TWQ1	baz=258			*e*S	**Sn**	**21 12 53.4**	**-0.7**
EHY	**Hungye** baz=222	**1.72**	**219**	*e*P	**Pn**	**21 12 33.3**	**+0.7**
EHY	baz=222			*e*S	**Sn**	**21 12 54.2**	**-1.4**
SMLT	**Sun Moon Lake** baz=232	**1.76**	**237**	*e*P	**Pn**	**21 12 33.4**	**+0.4**
SMLT	baz=232			*e*S	**Sn**	**21 12 56.9**	**+0.6**
TYC	**Yuchr** baz=235	**1.78**	**238**	*e*P	**Pn**	**21 12 33.7**	**+0.5**
TYC	baz=235			*e*S	**Sn**	**21 12 57.2**	**+0.5**
JTJ	**Tarama**	**2.01**	**96**	P	**Pn**	**21 12 36.3**	**+0.3**
JTJ				S	**Sn**	**21 13 01.1**	**-0.6**
CHKT	**Chengkung** baz=202	**2.04**	**211**	*e*P	**Pn**	**21 12 37.7**	**+1.3**
CHKT	baz=202			*e*S	**Sn**	**21 13 01.0**	**-1.4**
ALS	**Alishan** baz=220	**2.05**	**230**	*e*P	**Pn**	**21 12 36.8**	**+0.2**
ALS	baz=220			*e*S	**Sn**	**21 13 02.8**	**+0.1**
CHN5	**Tsauling** baz=239	**2.09**	**234**	*e*P	**Pn**	**21 12 37.2**	**+0.2**
CHN5	baz=239			*e*S	**Sn**	**21 13 04.2**	**+0.6**
WGK	**Gukeng** baz=234	**2.12**	**237**	*e*P	**Pn**	**21 12 38.0**	**+0.5**
WGK	baz=234			*e*S	**Sn**	**21 13 04.5**	**+0.1**
ELDTW	**Lidau** baz=212	**2.15**	**220**	*e*P	**Pn**	**21 12 38.0**	**+0.3**
ELDTW	baz=212			*e*S	**Sn**	**21 13 04.4**	**-0.4**
CHN4	**Tsaushan** baz=227	**2.30**	**230**	*e*P	**Pn**	**21 12 40.4**	**+0.7**
CHN4	baz=227			*e*S	**Sn**	**21 13 08.3**	**-0.1**
STYT	**Tauyuan** baz=221	**2.32**	**224**	*e*P	**Pn**	**21 12 40.2**	**+0.2**
STYT	baz=221			*e*S	**Sn**	**21 13 09.9**	**+1.0**
WTP	**Ta-pu** baz=225	**2.36**	**228**	*e*P	**Pn**	**21 12 40.8**	**+0.4**
WTP	baz=225			*e*S	**Sn**	**21 13 09.4**	**-0.2**
TWG	**Pinlang** baz=211	**2.41**	**213**	*e*P	**Pn**	**21 12 40.3**	**-0.8**
TWG	baz=211			*e*S	**Sn**	**21 13 09.8**	**-1.1**
TWK	**Hsinying** baz=227	**2.43**	**230**	*e*P	**Pn**	**21 12 41.1**	**-0.2**
TWK	baz=227			*e*S	**Sn**	**21 13 10.8**	**-0.4**
CHN1	**Nanshi** baz=225	**2.46**	**228**	*e*P	**Pn**	**21 12 42.2**	**+0.5**
CHN1	baz=225			*e*S	**Sn**	**21 13 11.6**	**-0.3**
JOGS	**Gusukube**	**2.64**	**91**	*e*S	**Sn**	**21 13 16.1**	**+0.1**
SSD	**Sandimen** baz=217	**2.71**	**220**	*e*P	**Pn**	**21 12 45.5**	**+0.5**
JKE	**Kume jima 2**	**4.13**	**68**	P	**Pn**	**21 13 02.9**	**-0.8**
JKE				*e*S	**Sn**	**21 13 50.9**	**-0.4**

*ISCJB **28** 21:29:42.6±2.9, 464N±03×1530E±03, h37km±20km, mb3.8/5, Error ellipse: s-maj=52.2km s-min=18.0km az=147.2*
*MOS **28** 21:29:43.5±0.9, 4648N×15294E, h46km, mb4.1/4, Error ellipse: s-maj=35.4km s-min=26.2km az=75.2*
*IDC **28** 21:29:45.2±3.7, 4634N×15304E, h48km±29km, mb3.5/5, mb1 3.7/7, mb1mx3.4/24, mbtmp3.6/7, ML3.4/2, Error ellipse: s-maj=54.8km s-min=26.0km az=166.0*

ISC 28 21:29:45.5±2.5, **464N**±03×**1531E**±03, **h47**km±17km, **n12, σ0$23/12, mb3.8/5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-** 0.3nm,0.3s,baz=175,slow=11,SNR=4.3	**7.38**	**22**	P	**Pn**	**21 31 30.4**	**-0.1**
ASAJ	**Asahikawa** 0.9nm,0.3s,baz=94,slow=13,SNR=5.3	**7.71**	**257**	P	**Pn**	**21 31 35.1**	**+0.1**
ASAJ	**Asahikawa**	**7.71**	**257**	PN	**Pn**	**21 31 35.2**	**+0.1**
ASAJ	comp=Z,1.0nm,0.3s			pmax	pmax		
MKAR	**Makanchi Array** comp=Z,0.5nm,0.4s,mb3.8,baz=69,slow=7.5,SNR=5.9	**47.07**	**298**	P	**P**	**21 38 11.8**	**-0.4**
MKAR	**Makanchi Array**	**47.07**	**298**	P	**P**	**21 38 11.8**	**-0.4**
MKAR	comp=Z,1.0nm,0.4s			pmax	pmax		
KURK	**Kurchatov** comp=Z,0.7nm,0.8s,mb3.8,baz=68,slow=8.5,SNR=6.5	**47.53**	**304**	P	**P**	**21 38 15.7**	**-0.1**
KURK	**Kurchatov**	**47.53**	**304**	P	**P**	**21 38 15.7**	**0.0**
KURK	comp=Z,1.0nm,0.8s,mb3.9			pmax	pmax		
NOA	**NORSAR Array B** comp=Z,0.8nm,0.8s,mb3.7,baz=40,slow=5.0,SNR=2.8	**68.56**	**341**	P	**P**	**21 40 43.1**	**+0.4**
NOA	**NORSAR Array B**	**68.56**	**341**	P	**P**	**21 40 43.1**	**+0.4**
NOA	comp=Z,1.0nm,0.8s			pmax	pmax		
AKASG	**Malin Array Be** comp=Z,1.1nm,0.4s,mb4.1,baz=34,slow=6.4,SNR=7.3	**71.83**	**326**	P	**P**	**21 41 02.9**	**+0.1**
AKASG	**Malin Array Be**	**71.83**	**326**	P	**P**	**21 41 02.9**	**+0.1**
AKASG	comp=Z,1.0nm,0.4s			pmax	pmax		
TXAR	**Lajitas Array** comp=Z,0.4nm,0.5s,mb3.6,baz=293,slow=3.9,SNR=7.2	**77.72**	**60**	P	**P**	**21 41 37.1**	**-0.1**

*THE **28** 22:24:52.6, 3496N×2575E, h0km, ML3.1*
*ISCJB **28** 22:24:53.3±0.7, 3505N±004×2575E±004, h4km±5km, Error ellipse: s-maj=6.3km s-min=4.9km az=178.6*
*ATH **28** 22:24:53.8, 3503N×2575E, h26km±2km, MD3.5/6*
*CSEM **28** 22:24:53.5±0.3, 3501N×2573E, h5km, MD3.5, Error ellipse: s-maj=5.5km s-min=4.0km az=173.0*
*NEIC **28** 22:24:53.7, 3499N×2573E, h23km, MD3.5(ATH), Error ATH.*

ISC 28 22:24:53.3±0.9, **3501N**±004×**2578E**±004, **h6**km±7km, **n23, σ1$22/33, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	**Neapolis**	**0.29**	**332**	*e*PB	**Pg**	**22 24 59.9**	**+0.9**
NPS				*e*SB	**Sg**	**22 25 04.9**	**+2.0**
LAST	**Lasithi**	**0.29**	**302**	*e*Pg	**Pg**	**22 24 59.2**	**+0.1**
LAST				*e*Sg	**Sg**	**22 25 04.5**	**+1.6**
ZKR	**Zakros**	**0.37**	**73**	*e*Pg	**Pg**	**22 25 01.3**	**+0.7**
ZKR				*e*Sg	**Sg**	**22 25 08.4**	**+3.0**
IDI	**Anoyia**	**0.78**	**291**	P	**Pg**	**22 25 07.8**	**-0.6**
SIVA	**Sivas**	**0.80**	**271**	*e*Pg	**Pg**	**22 25 07.6**	**-1.0**
SIVA				*e*Sg	**Sg**	**22 25 20.4**	**+1.5**
KARP	**Karpathos**	**1.25**	**64**	*e*PN	**Pn**	**22 25 17.6**	**+0.2**
VAM	**Vamos**	**1.36**	**288**	*e*PN	**Pn**	**22 25 18.6**	**-0.2**
THR6	**Thira Island,**	**1.38**	**347**	*e*Pg	**Pg**	**22 25 18.3**	**-1.6**
THR1	**Thera Island**	**1.39**	**349**	*e*Pg	**Pg**	**22 25 18.3**	**-1.7**
THR1				*e*Sg	**Sg**	**22 25 38.7**	**+0.8**
SANT	**Santorini**	**1.39**	**349**	*e*Pg	**Pg**	**22 25 18.3**	**-1.7**
SANT				*e*Sg	**Sg**	**22 25 38.3**	**+0.4**
SANT	**Santorini**	**1.39**	**349**	*e*Pn	**Pn**	**22 25 18.8**	**-0.4**
SANT				*e*Sg	**Sg**	**22 25 38.3**	**+0.3**
SANT	**Santorini**	**1.39**	**349**	*e*Pn	**Pn**	**22 25 18.8**	**-0.5**
GVD	**Gavdhos**	**1.40**	**264**	*e*PN	**Pn**	**22 25 19.5**	**+0.1**
THR3	**Thira Island,**	**1.44**	**348**	*e*Pg	**Pg**	**22 25 19.2**	**-1.7**
THR3				*e*Sg	**Sg**	**22 25 39.7**	**+0.3**
THR5	**Thira Island,**	**1.45**	**346**	*e*Pg	**Pg**	**22 25 19.1**	**-2.1**
THR5				*e*Sg	**Sg**	**22 25 40.5**	**+0.5**
THR5	**Thira Island,**	**1.45**	**346**	*e*Pg	**Pg**	**22 25 19.0**	**-2.2**
THR5				*e*Sg	**Sg**	**22 25 40.5**	**+0.5**
THR4	**Thira Island,**	**1.48**	**348**	*e*Pg	**Pg**	**22 25 19.6**	**-2.2**
THR4	**Thira Island,**	**1.48**	**348**	*e*Pg	**Pg**	**22 25 19.6**	**-2.2**
ARG	**Arkhangelos**	**2.26**	**57**	*e*PN	**Pn**	**22 25 32.3**	**+1.1**
ARG	**Arkhangelos**	**2.26**	**57**	*e*Pb	**Pb**	**22 25 33.7**	**-0.9**
SMG	**Samos**	**2.83**	**17**	P	**Pn**	**22 25 41.2**	**+2.1**
DID	**Didima**	**3.23**	**321**	*e*Pn	**Pn**	**22 25 44.4**	**-0.2**
ITM	**Ithomi**	**3.80**	**306**	*e*PN	**Pn**	**22 25 52.7**	**+0.3**

*ISK **28** 22:26:15.6, 3819N×2682E, h6km, MD3.3*
*CSEM **28** 22:26:15.4±0.1, 3818N×2681E, h5km±1km, MD3.0, Error ellipse: s-maj=2.4km s-min=1.5km az=70.0*
*ISCJB **28** 22:26:15.6±0.5, 3817N±002×2676E±003, h5km±3km, Error ellipse: s-maj=3.9km s-min=2.8km az=153.7*
*THE **28** 22:26:16.1, 3818N×2682E, h1km, ML3.6*
*ATH **28** 22:26:16.0, 3816N×2667E, h27km±9km, MD3.4/5*
*DDA **28** 22:26:16.1, 3818N×2681E, h10km±5km, Md3.0*
*NEIC **28** 22:26:16.0, 3816N×2667E, h27km, MD3.3(ISK), MD3.4(ATH), After ATH.*

ISC 28 22:26:16.4±0.4, **3817N**±002×**2678E**±003, **h7**km±3km, **n44, σ0$91/64, 2C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.24**	**322**	⇑*iP*	**Pg**	**22 26 21.3**	**+0.1**
URLA				*i* S	**Sg**	**22 26 25.4**	**+1.0**
BLCB	**Balcova**	**0.30**	**44**	PG	**Pg**	**22 26 21.7**	**-0.5**
BLCB				*e*SG	**Sg**	**22 26 25.1**	**-1.1**
SMG	**Samos**	**0.46**	**175**	*e*PB	**Pg**	**22 26 25.8**	**+0.4**
SMG				*e*SB	**Sg**	**22 26 33.3**	**+1.9**
GCAM	**G?zelcaml?**	**0.59**	**143**	⇑*iP*	**Pg**	**22 26 27.9**	**+0.1**
GCAM				*i* S	**Sg**	**22 26 36.0**	**+0.5**
CHOS	**Chios island**	**0.61**	**291**	*e*Pg	**Pg**	**22 26 28.5**	**+0.3**
CHOS				*e*Sg	**Sg**	**22 26 38.5**	**+2.3**
AYDN	**Tasoluk**	**1.01**	**120**	*e*P	**Pg**	**22 26 35.8**	**0.0**
AYDN				*e*S	**Sg**	**22 26 48.4**	**-0.4**
AKS	**Akhisar**	**1.07**	**48**	*e*PG	**Pg**	**22 26 36.0**	**-1.0**
AKS				*e*SG	**Sg**	**22 26 51.0**	**0.0**
AKS	**Akhisar**	**1.07**	**48**	*e*Sg	**Sg**	**22 26 51.0**	**0.0**
AYVA	**Ayvalik**	**1.14**	**356**	*e*P	**Pg**	**22 26 37.0**	**-1.3**
AYVA				*i* P		22 26 55.2	
PRK	**Paraskevi**	**1.15**	**340**	*e*Pg	**Pg**	**22 26 37.8**	**-0.7**
PRK				*e*Sg	**Sg**	**22 26 53.5**	**+0.2**
PRK	**Paraskevi**	**1.15**	**340**	*e*PN	**Pn**	**22 26 37.6**	**-1.2**
PRK				*e*SN	**Sn**	**22 26 53.2**	**-1.6**
PRK	**Paraskevi**	**1.15**	**340**	*e*Sg	**Sg**	**22 26 53.5**	**+0.2**
PRK	**Paraskevi**	**1.15**	**340**	*e*Pg	**Pg**	**22 26 37.8**	**-0.6**
PRK				Sn	**Sn**	**22 26 53.2**	**-1.6**
MLSB	**Milas**	**1.18**	**138**	*e*PN	**Pn**	**22 26 38.6**	**-0.7**
MLSB				*e*SN	**Sn**	**22 26 54.6**	**-0.9**
BODT	**Bodrum**	**1.18**	**159**	*e*PN	**Pn**	**22 26 38.7**	**-0.6**
BDRM	**Kayabasi**	**1.22**	**154**	*e*P	**Pb**	**22 26 38.8**	**-1.0**
BDRM				*i* S	**Sg**	**22 26 56.2**	**+0.5**
MANT	**Manisa**	**1.43**	**77**	*e*P	**Pn**	**22 26 43.5**	**+0.7**
MANT				*i* S	**Sn**	**22 27 01.1**	**-0.8**
APE	**Apeiranthos**	**1.48**	**222**	*e*Pg	**Pg**	**22 26 42.1**	**-2.8**
APE				*e*Sg	**Sg**	**22 27 04.3**	**+0.3**
APE	**Apeiranthos**	**1.48**	**222**	*e*PN	**Pn**	**22 26 42.0**	**-1.5**
KULA	**Kula-Manisa**	**1.52**	**76**	*e*PN	**Pn**	**22 26 43.9**	**0.0**
YER	**Yerkesik**	**1.58**	**131**	*e*PN	**Pn**	**22 26 45.0**	**+0.3**
EZN	**Ezine**	**1.69**	**348**	*e*PN	**Pn**	**22 26 46.1**	**-0.2**
BALY	**Balya**	**1.70**	**22**	*e*P	**Pn**	**22 26 45.5**	**-0.9**
BALY				*i* S	**Sn**	**22 27 10.8**	**+2.4**
BALY	**Balya**	**1.70**	**22**	*i* S	**Sn**	**22 27 10.8**	**+2.4**
BALB	**Balikesir**	**1.70**	**30**	*e*PN	**Pn**	**22 26 46.3**	**-0.1**
DEMI	**Demirci**	**1.75**	**60**	*e*P	**Pn**	**22 26 49.0**	**+1.9**
DEMI				*i* S	**Sn**	**22 27 11.3**	**+1.7**
DST	**Dursunbey**	**2.03**	**45**	*e*PN	**Pn**	**22 26 50.9**	**-0.1**
LIA	**Limnos Island**	**2.13**	**325**	*e*Pn	**Pn**	**22 26 51.8**	**-0.6**
LIA				*e*Sn	**Sn**	**22 27 19.1**	**+0.1**
LIA	**Limnos Island**	**2.13**	**325**	*e*Pb	**Pb**	**22 26 52.0**	**-3.3**
LIA				*e*Sn	**Sn**	**22 27 19.1**	**+0.1**
GADA	**Gvkgeada**	**2.13**	**341**	*e*PN	**Pn**	**22 26 52.0**	**-0.4**
KHL	**Karahalli**	**2.16**	**85**	*e*PN	**Pn**	**22 26 53.1**	**+0.3**
LPK	**Lapseki**	**2.20**	**360**	*e*PN	**Pn**	**22 26 53.1**	**-0.2**
LOS	**Limnos**	**2.20**	**324**	*e*Pn	**Pn**	**22 26 53.3**	**0.0**
LOS				*e*Sn	**Sn**	**22 27 21.8**	**+0.9**
EDC	**Edincik**	**2.33**	**21**	*e*PN	**Pn**	**22 26 55.5**	**+0.4**
BNT	**Bandirma**	**2.35**	**22**	*e*PN	**Pn**	**22 26 55.6**	**+0.2**
KCT	**Karacabey**	**2.42**	**30**	*e*PN	**Pn**	**22 26 56.9**	**+0.5**
MRMT	**Marmara Adasi**	**2.51**	**14**	*e*PN	**Pn**	**22 26 58.1**	**+0.5**
RKY	**Sarkoy-Tekirda**	**2.53**	**7**	*e*PN	**Pn**	**22 26 58.1**	**+0.2**
ENEZ	**Enez**	**2.61**	**349**	*e*PN	**Pn**	**22 26 58.7**	**-0.2**
MFT	**Murefte**	**2.64**	**8**	*e*PN	**Pn**	**22 26 59.8**	**+0.4**
ALT	**Altintas**	**2.75**	**70**	*e*PN	**Pn**	**22 27 01.9**	**+1.0**
ALN	**Alexandroupoli**	**2.78**	**348**	*e*Pn	**Pn**	**22 27 00.8**	**-0.6**
ALN				*e*Sn	**Sn**	**22 27 35.6**	**+0.5**
RDO	**Rodhopi**	**3.12**	**342**	*e*PN	**Pn**	**22 27 05.9**	**-0.1**
YLV	**Yalova**	**3.12**	**39**

*IDC **28** 22:56:18.7±0.9, 2282N×1442E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.9/22, mbtmp3.8/10, ML3.8/2, MS3.4/1, Ms1 3.4/1, ms1mx2.2/27, Error ellipse: s-maj=37.4km s-min=17.7km az=72.0*

*ISCJB **28** 22:56:21.8±0.7, 2283N±009×144.1E±02, h33km, mb4.1/11, Error ellipse: s-maj=26.3km s-min=11.1km az=166.0*

*NEIC **28** 22:56:23.8±2.4, 2281N×1442E, h35km±22km, mb4.1/1, Error ellipse: s-maj=23.3km s-min=13.0km az=87.0*

ISC 28 22:56:23.8±0.7, **2289N**±008×**1441E**±02, **h35**km, **n17, σ1§22/15, mb4.1/11, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**4.52**	**338**	Pn	**Pn**	**22 57 28.9**	**-1.0**
	10nm,0.3s,baz=102,slow=20,SNR=8.3						
CBIJ				Sn	**Sn**	**22 58 19.2**	**-1.9**
	14nm,0.3s,baz=289,slow=23,SNR=7.0						
MJAR	**Matsushiro Arr**	**14.52**	**341**	Pn	**Pn**	**22 59 48.3**	**+1.5**
	0.3nm,0.3s,baz=159,slow=10,SNR=3.5						
JOW	**Kunigami**	**14.86**	**289**	LR	LR	23 05 10.8	
	comp=Z,157nm,20.6s,baz=73,slow=35						
KSRS	**Korea Array**	**20.09**	**320**	P	**P**	**23 00 57.4**	**+3.0**
	0.6nm,0.3s,baz=137,slow=9.7,SNR=4.2						
SONM	**Songino Array**	**38.96**	**319**	P	**P**	**23 03 48.7**	**+2.2**
	0.6nm,0.6s,mb3.5,baz=132,slow=6.2,SNR=4.4						
WRA	**Warramunga Arr**	**43.61**	**193**	P	**P**	**23 04 25.1**	**+0.2**
	1.3nm,0.6s,mb3.8,baz=15,slow=8.8,SNR=5.9						
ASAR	**Alice Springs**	**47.31**	**193**	P	**P**	**23 04 54.1**	**0.0**
	0.6nm,0.8s,mb3.6,baz=9.6,slow=6.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**53.79**	**321**	P	**P**	**23 05 42.4**	**-0.4**
	0.5nm,0.6s,mb3.6,baz=105,slow=9.7,SNR=3.3						
MKAR	**Makanchi Array**	**54.50**	**312**	P	**P**	**23 05 49.6**	**+1.5**
	0.6nm,0.4s,mb4.0,baz=90,slow=8.8,SNR=6.2						
STKA	**Stephens Creek**	**54.50**	**183**	P	**P**	**23 05 46.7**	**-1.4**
	1.4nm,0.6s,mb4.2,baz=7.8,slow=9.6,SNR=3.9						
NVAR	**Mina Array Bea**	**81.77**	**52**	P	**P**	**23 08 39.4**	**+0.2**
	0.3nm,0.4s,mb3.6,baz=216,slow=1.7,SNR=3.6						
MIB	**Mutribah**	**84.41**	**300**	*e*P	**P**	**23 08 52.6**	**-0.4**
	baz=326						
MIB				AMb	AMB	23 09 04.9	
	comp=Z,12nm,0.9s,mb5.0,baz=326						
NAY	**Al-Naaiem**	**84.70**	**299**	*e*P	**P**	**23 08 53.8**	**-0.7**
	baz=326						
NAY				AMb	AMB	23 09 02.0	
	comp=Z,8.0nm,1.1s,mb4.8,baz=326						
RST	**Umm Al-Ruwaisa**	**84.80**	**300**	*e*P	**P**	**23 08 53.7**	**-1.3**
	baz=326						
RST				AMb	AMB	23 08 58.6	
	comp=Z,12nm,1.4s,mb4.8,baz=326						
REDW	**Red Top Meadow**	**84.87**	**45**	*e*P	**P**	**23 08 55.3**	**+0.3**
	comp=Z,1.1nm,0.7s,mb4.1						
REDW				*e*pP	pP	23 09 05.2	-1.0
PLCA	**Paso Flores**	**145.91**	**130**	PKPbc	PKPbc	23 15 59.8	0.0
	comp=Z,0.9nm,0.8s,baz=257,slow=7.6,SNR=4.4						
LPAZ	**La Paz**	**149.01**	**84**	PKPbc	PKPbc	23 16 09.4	+0.4
	comp=Z,0.8nm,0.6s,baz=0.0,slow=10,SNR=4.2						

*ISCJB **28** 23:02:34.4±0.9, 2467N±006×12260E±003, h102km±7km, Error ellipse: s-maj=9.1km s-min=3.9km az=0.7*

*JMA **28** 23:02:34.3±0.2, 2487N×12265E, h101km, M1.9*

*TAP **28** 23:02:34.0, 2473N×12255E, h110km, ML3.2, C*

ISC 28 23:02:34.8±0.9, **2467N**±006×**12260E**±003, **h102**km±8km, **n26, σ0§62/46, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.43**	**119**	P	**Pn**	**23 02 50.4**	**+0.1**
YOJ				*e*S	**Sn**	**23 03 02.6**	**+0.7**
EGS		**0.63**	**286**	*e*P	**Pn**	**23 02 52.0**	**+0.2**
	baz=275						
TWB1	**Santiao Chiao**	**0.65**	**301**	*e*P	**Pn**	**23 02 51.5**	**-0.5**
	baz=291						
TWB1				*e*S	**Sn**	**23 03 05.1**	**+0.2**
	baz=291						
TWC	**Suao**	**0.69**	**265**	*i* P	**Pn**	**23 02 52.0**	**-0.3**
	baz=255						
TWC				S	**Sn**	**23 03 05.0**	**-0.4**
	baz=255						
ILA	**Ilan**	**0.78**	**277**	*e*P	**Pn**	**23 02 52.7**	**-0.4**
	baz=269						
ENA	**Nanau**	**0.82**	**253**	P	**Pn**	**23 02 53.5**	**0.0**
	baz=244						
ENA				*e*S	**Sn**	**23 03 07.8**	**+0.2**
	baz=244						
NWF	**Wu-fen Shan**	**0.85**	**298**	P	**Pn**	**23 02 53.6**	**-0.1**
	baz=289						
NWF				S	**Sn**	**23 03 08.2**	**+0.1**
	baz=289						
TWE	**Neicheng**	**0.85**	**274**	⇓ *i* P	**Pn**	**23 02 53.8**	**0.0**
	baz=273						
TWE				S	**Sn**	**23 03 07.9**	**-0.2**
	baz=273						
ENTT	**Nioudou**	**0.94**	**269**	P	**Pn**	**23 02 55.1**	**+0.4**
	baz=270						
TWA	**Mucha**	**0.97**	**289**	*e*P	**Pn**	**23 02 54.7**	**-0.4**
	baz=279						
IRIF	**Iriomote-Funau**	**1.08**	**108**	P	**Pn**	**23 02 56.1**	**-0.2**
IRIF				*e*S	**Sn**	**23 03 12.9**	**+0.5**
TWD	**Chiawan**	**1.09**	**238**	*e*P	**Pn**	**23 02 55.7**	**-0.6**
	baz=229						
NSK	**Sanguang**	**1.13**	**271**	*i* P	**Pn**	**23 02 57.0**	**+0.2**
	baz=260						
NSK				S	**Sn**	**23 03 13.4**	**0.0**
	baz=260						
NNS	**Nan Shan**	**1.14**	**259**	P	**Pn**	**23 02 57.0**	**+0.1**
	baz=250						
NNS				S	**Sn**	**23 03 13.9**	**+0.2**
	baz=250						
TWS1	**Kuangyinshan**	**1.16**	**292**	*e*P	**Pn**	**23 02 57.0**	**-0.1**
	baz=283						
TWS1				*e*S	**Sn**	**23 03 13.7**	**-0.3**
	baz=283						
WHF	**Hehuan Shan**	**1.32**	**247**	P	**Pn**	**23 02 59.2**	**+0.2**
	baz=244						
WHF				S	**Sn**	**23 03 17.6**	**+0.1**
	baz=244						
JKRS	**Kuro-shima**	**1.35**	**108**	P	**Pn**	**23 02 59.8**	**+0.4**
JKRS				*e*S	**Sn**	**23 03 18.8**	**+0.8**
ESL	**Shilin**	**1.36**	**232**	*e*P	**Pn**	**23 02 58.6**	**-0.9**
	baz=223						
ESL				*e*S	**Sn**	**23 03 16.9**	**-1.3**
	baz=223						
TWT	**Tachien**	**1.36**	**253**	P	**Pn**	**23 03 00.3**	**+0.8**
	baz=245						
TWT				*e*S	**Sn**	**23 03 18.8**	**+0.6**
	baz=245						
JIJ	**Ishigaki jima**	**1.44**	**102**	P	**Pn**	**23 03 00.3**	**-0.1**
JIJ				*e*S	**Sn**	**23 03 18.7**	**-1.1**
NSTT	**Nanjuang**	**1.46**	**269**	*e*P	**Pn**	**23 03 00.8**	**+0.2**
	baz=266						
NSTT				*e*S	**Sn**	**23 03 19.6**	**-0.6**
	baz=266						
EHY	**Hungye**	**1.64**	**226**	*e*P	**Pn**	**23 03 01.9**	**-1.1**
	baz=223						
EHY				*e*S	**Sn**	**23 03 22.1**	**-2.2**
	baz=223						
SMLT	**Sun Moon Lake**	**1.74**	**244**	*e*P	**Pn**	**23 03 04.9**	**+0.8**
	baz=238						
SMLT				*e*S	**Sn**	**23 03 27.6**	**+1.2**
	baz=238						
TYC	**Yuchr**	**1.76**	**245**	P	**Pn**	**23 03 05.1**	**+0.7**
	baz=241						
TYC				*e*S	**Sn**	**23 03 27.7**	**+0.7**
	baz=241						
JTJ	**Tarama**	**1.91**	**90**	*e*S	**Sn**	**23 03 30.3**	**-0.1**
CHN5	**Tsauling**	**2.06**	**239**	*e*P	**Pn**	**23 03 08.3**	**+0.1**
	baz=228						
CHN5				*e*S	**Sn**	**23 03 34.9**	**+1.2**
	baz=228						

IDC 28 23:05:24.3±8.6, **689S**×**1145W**, **h0**km, **mb3.9**/4, **mb1 4.0**/4, **mb1mx3.7**/21, **mbtmp3.9**/4, **MS3.9**/11, **Ms1 3.9**/11, **ms1mx3.6**/26, **Error ellipse: s-maj=397.2km s-min=29.5km az=141.0, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**14.99**	**26**	LR	LR	23 13 31.0	
	comp=Z,219nm,21.1s,baz=106,slow=32						
TORD	**Torodi Ar. Bea**	**23.80**	**33**	P	P	23 10 38.1	-1.0
	4.5nm,0.8s,baz=212,slow=11,SNR=25						
TORD				LR	LR	23 19 08.6	
	comp=Z,172nm,18.1s,baz=190,slow=35						
TSUM	**Tsumeb**	**30.75**	**116**	LR	LR	23 22 27.5	
	comp=Z,264nm,18.3s,baz=344,slow=33						
BOSA	**Boshof**	**40.83**	**127**	LR	LR	23 27 31.7	
	comp=Z,223nm,19.2s,baz=1.2,slow=32						
CPUP	**Villa Florida**	**47.71**	**241**	LR	LR	23 29 58.0	
	comp=Z,124nm,21.6s,baz=21,slow=31						
SIV	**San Ignacio**	**49.37**	**255**	P	P	23 14 15.7	-0.3
	0.9nm,0.8s,baz=129,slow=14,SNR=4.4						
GERES	**GERESS Array B**	**59.72**	**19**	P	P	23 15 31.4	+0.7
	1.3nm,0.8s,baz=225,slow=9.6,SNR=5.3						
GERES				LR	LR	23 41 53.4	
	comp=Z,68nm,18.5s,baz=231,slow=37						
PLCA	**Paso Flores**	**62.30**	**227**	LR	LR	23 38 03.1	
	comp=Z,213nm,21.6s,baz=221,slow=31						
ROSC	**El Rosal**	**63.84**	**279**	LR	LR	23 44 17.2	
	comp=Z,117nm,18.3s,baz=26,slow=37						
AKASG	**Malin Array Be**	**67.24**	**27**	P	P	23 16 20.9	+0.4
	0.4nm,0.3s,baz=226,slow=6.5,SNR=7.2						
NOA	**NORSAR Array B**	**70.01**	**12**	LR	LR	23 47 00.5	
	comp=Z,43nm,20.4s,baz=245,slow=36						
ULM	**Lac du Bonnet**	**91.69**	**320**	LR	LR	23 54 47.6	
	comp=Z,74nm,18.0s,baz=74,slow=32						
ZALV	**Zalesovo Beam**	**99.22**	**37**	LR	LR	00 06 28.8	
	comp=Z,35nm,18.3s,baz=98,slow=37						

IDC 28 23:07:27.8±9.5, **720S**×**1122W**, **h0**km, **mb3.9**/4, **mb1 4.0**/4, **mb1mx3.6**/21, **mbtmp3.9**/4, **Error ellipse: s-maj=439.7km s-min=28.1km az=141.0, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**23.94**	**32**	P	P	23 12 42.9	-0.9
	3.8nm,0.8s,baz=214,slow=11,SNR=10						
SIV	**San Ignacio**	**49.51**	**255**	P	P	23 16 20.3	-0.3
	0.8nm,0.8s,baz=85,slow=11,SNR=3.5						
GERES	**GERESS Array B**	**59.33**	**19**	P	P	23 17 36.4	+0.8
	0.8nm,0.7s,baz=204,slow=6.5,SNR=2.5						
AKASG	**Malin Array Be**	**67.41**	**27**	P	P	23 18 25.4	+0.4
	2.4nm,0.8s,baz=227,slow=6.3,SNR=4.5						

KRSC 28 23:16:11.1±1.7, **5321N**×**16312E**, **h52**km±51km, **ML3.8, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AVH	**Avacha**	**2.63**	**273**	*e*P	Pn	23 16 53.6	+2.5
AVH				*e*S	Sn	23 17 24.6	+2.8
RUS	**Russkaya**	**2.90**	**256**	S	Sn	23 17 29.2	+0.9
KBTR	**Krutoberegovo**	**3.01**	**357**	*e*P	Pn	23 16 57.5	+1.3
KMNR	**Kamenistaya**	**3.06**	**328**	*e*P	Pn	23 16 58.5	+1.7
ZLN	**Zelenaya**	**3.12**	**335**	*e*P	Pn	23 16 59.9	+2.2
ZLN				*e*S	Sn	23 17 35.4	+1.8
GNL	**Ganaly**	**3.13**	**281**	*e*P	Pn	23 17 00.8	+2.9
GNL				*e*S	Sn	23 17 36.7	+2.7

IDC 28 23:20:00.6±16.0, **258N**×**9591E**, **h72**km±135km, **mb3.3**/5, **mb1 3.5**/6, **mb1mx3.3**/20, **mbtmp3.3**/6, **ML4.3**/1, **Error ellipse: s-maj=144.7km s-min=20.9km az=60.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.06**	**10**	P	Pn	23 23 42.1	0.0
	0.4nm,0.3s,baz=202,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**43.86**	**122**	P	P	23 27 59.9	-0.2
	0.3nm,0.3s,baz=299,slow=9.3,SNR=3.3						
ASAR	**Alice Springs**	**45.25**	**127**	P	P	23 28 11.2	+0.1
	0.3nm,0.7s,baz=307,slow=8.5,SNR=5.7						
MKAR	**Makanchi Array**	**45.61**	**347**	P	P	23 28 13.7	+0.1
	1.1nm,0.7s,baz=164,slow=8.7,SNR=10.0						
SONM	**Songino Array**	**45.99**	**10**	P	P	23 28 16.7	+0.2
	0.7nm,0.7s,baz=192,slow=8.4,SNR=8.1						
ZALV	**Zalesovo Beam**	**52.01**	**352**	P	P	23 29 02.3	-0.2
	0.7nm,0.4s,baz=168,slow=7.0,SNR=5.4						

*NEIC **28** 23:25:46.9±2.6, 3396N×14069E, h10km, MG4.4(JMA), Error ellipse: s-maj=110.0km s-min=12.0km az=68.0*

NEIC Recorded [1 JMA] on Hachijo-jima, Mikura-jima and Miyake-jima.

*IDC **28** 23:25:46.1±1.6, 3388N×14044E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/23, mbtmp3.6/6, ML3.8/1, Error ellipse: s-maj=37.9km s-min=16.2km az=88.0*

*ISCJB **28** 23:25:48.9±0.7, 3397N±003×14033E±005, h29km±5km, mb3.7/5, Error ellipse: s-maj=6.5km s-min=4.5km az=13.7*

*JMA **28** 23:25:49.2±0.1, 3399N×14032E, h29km±2km, M4.4*

JMA Felt I J1.

*NIED **28** 23:26:00, 3400N×14030E, h20km, Mw3.9 Best double couple: M08.48000×10^14 NP1:φs250.00000°, δ78.00000°, λ161.00000°. NP2:φs344.00000°, δ72.00000°, λ13.00000°.*

ISC 28 23:25:48.7±1.0, **3397N**±003×**14031E**±004, **h16**km±6km, **n19, σ0§99/32, mb3.7**/5, **1C-4D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMY	**Miyakejima3**	**0.67**	**279**	P	**Pg**	**23 26 01.9**	**+0.1**
JMY				S	**Sg**	**23 26 11.0**	**+0.3**
BSO3	**Boso 3**	**0.85**	**11**	P	**Pb**	**23 26 04.8**	**-0.2**
BSO3				*e*S	**Sb**	**23 26 16.5**	**+0.4**
BSO1	**Boso 1**	**0.88**	**39**	P	**Pb**	**23 26 04.5**	**-1.0**
BSO1				*e*S	**Sb**	**23 26 16.2**	**-0.8**
JHJ2	**Mitsune**	**0.95**	**206**	⇑ P	**Pb**	**23 26 07.0**	**+0.3**
JHJ2				S	**Sb**	**23 26 20.0**	**+1.1**
JHJ	**Hachijo jima 2**	**0.95**	**208**	Pn	**Pn**	**23 26 06.9**	**-0.4**
	2μm,0.3s,baz=64,slow=23,SNR=161						
JHJ				Sn	**Sn**	**23 26 19.8**	**-0.7**
	2μm,0.3s,baz=80,slow=22,SNR=54						
JKO	**Kozu shima**	**1.00**	**283**	⇓ P	**Pb**	**23 26 07.1**	**-0.4**
JKO				*e*S	**Sb**	**23 26 20.4**	**0.0**
BSO4	**Boso 4**	**1.02**	**1**	P	**Pb**	**23 26 07.7**	**-0.2**
BSO4				*e*S	**Sb**	**23 26 22.2**	**+1.2**
JIM2	**Oshima 3**	**1.04**	**316**	⇓ P	**Pb**	**23 26 07.5**	**-0.8**
JIM2				*e*S	**Sb**	**23 26 20.7**	**-1.0**
JIZS	**Izushimoda**	**1.40**	**303**	⇓ P	**Pn**	**23 26 13.2**	**-0.3**
JIZS				*e*S	**Sn**	**23 26 31.1**	**-0.5**
KTJJ	**Kamata 2**	**1.40**	**313**	⇓ P	**Pn**	**23 26 12.7**	**-0.8**
KTJJ				*e*S	**Sn**	**23 26 29.7**	**-1.9**
JOD2	**Odawara 2**	**1.64**	**322**	P	**Pn**	**23 26 16.0**	**-0.7**
JOD2				*e*S	**Sn**	**23 26 35.6**	**-1.8**
MJAR	**Matsushiro Arr**	**3.09**	**327**	Pn	**Pn**	**23 26 38.0**	**+1.3**
	12nm,0.3s,baz=153,slow=13,SNR=56						
MJAR				Sn	**Sn**	**23 27 15.5**	**+2.3**
	7.8nm,0.3s,baz=80,slow=9.8,SNR=6.7						
MAJO	**Matsushiro**	**3.09**	**327**	*e*Pn	**Pn**	**23 26 38.5**	**+1.8**
MAT	**Matsushiro**	**3.09**	**327**	P	**Pn**	**23 26 36.5**	**-0.2**
MAT				S	**Sn**	**23 27 14.6**	**+1.3**
MKAR	**Makanchi Array**	**45.05**	**305**	P	**P**	**23 34 05.8**	**+2.4**
	0.4nm,0.6s,mb3.4,baz=99,slow=9.1,SNR=2.9						
KURK	**Kurchatov**	**47.17**	**310**	P	**P**	**23 34 20.5**	**+0.4**
	0.3nm,0.5s,mb3.5,baz=83,slow=7.3,SNR=2.4						
WRA	**Warramunga Arr**	**53.91**	**187**	P	**P**	**23 35 10.8**	**-0.5**
	1.4nm,0.5s,mb4.2,baz=4.3,slow=7.6,SNR=6.9						
ASAR	**Alice Springs**	**57.64**	**187**	P	**P**	**23 35 37.3**	**-0.6**
	1.0nm,0.6s,mb4.0,baz=8.2,slow=7.7,SNR=14						
AKASG	**Malin Array Be**	**76.17**	**322**	P	**P**	**23 37 36.5**	**+0.8**
	0.2nm,0.3s,mb3.5,baz=50,slow=6.5,SNR=3.0						

*IDC **28** 23:32:00.6±0.9, 2152S×16949E, h0km, mb4.3/11, mb1 4.4/11, mb1mx4.3/17, mbtmp4.3/11, MS3.9/6, Ms1 3.8/6, ms1mx3.4/24, Error ellipse: s-maj=25.6km s-min=24.4km az=153.0*

*LDG **28** 23:32:02.6±0.3, 2104S×16886E, h10km, Mb4.4/1, Error ellipse: s-maj=26.5km s-min=4.3km az=149.0*

*ISCJB **28** 23:32:06.5±2.0, 2155S±01×16923E±008, h46km±17km, mb4.2/11, MS3.9/5, Error ellipse: s-maj=20.4km s-min=12.6km az=2.8*

*NEIC **28** 23:32:06.6±0.6, 2179S×16898E, h10km, Error ellipse: s-maj=21.0km s-min=15.8km az=4.0*

ISC 28 23:32:07.5±1.7, **2155S**±01×**16925E**±008, **h39**km±16km, **n37, σ1§03/17, mb4.2**/11, **MS3.9**/5, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.68**	**256**	*e*P	**Pn**	**23 32 47.8**	**-0.3**
DZM				*e*S	**Sn**	**23 33 19.0**	**-0.3**
DZM	**Mont Dzumac**	**2.68**	**256**	*e*Pn	**Pn**	**23 32 46.9**	**-1.2**
URZ	**Urewera**	**18.07**	**160**	P	**Pn**	**23 36 16.7**	**+1.1**
	0.2nm,0.3s,baz=350,slow=7.7,SNR=11						
AFI	**Afiamalu**	**19.56**	**71**	P	**Pn**	**23 36 33.7**	**0.0**
	1.1nm,0.3s,baz=291,slow=20,SNR=4.1						
AFI				LR	LR	23 42 24.4	
	comp=Z,231nm,19.5s,baz=44,slow=32						
AFI	**Afiamalu**	**19.56**	**71**	P	**Pn**	**23 36 33.7**	**+0.1**
AFI				LR	LR	23 42 24.4	
CTA	**Charters Tower**	**21.54**	**269**	P	**P**	**23 36 55.6**	**+2.1**
	7.6nm,1.1s,mb4.1,baz=82,slow=12,SNR=6.3						
RPZ	**Rata Peaks**	**22.25**	**177**	LR	LR	23 44 28.8	
	comp=Z,358nm,20.6s,MS3.8,baz=163,slow=34						
STKA	**Stephens Creek**	**26.73**	**241**	P	**P**	**23 37 44.3**	**+0.9**
	4.8nm,0.8s,mb4.1,baz=64,slow=12,SNR=5.6						
STKA				LR	LR	23 47 17.4	
	comp=Z,215nm,21.9s,MS3.7,baz=194,slow=34						
WRA	**Warramunga Arr**	**32.65**	**266**	P	**P**	**23 38 34.6**	**-1.5**
	0.7nm,0.5s,mb3.8,baz=96,slow=8.2,SNR=4.5						
ASAR	**Alice Springs**	**32.66**	**259**	P	**P**	**23 38 35.7**	**-0.4**
	3.5nm,0.8s,mb4.3,baz=83,slow=9.0,SNR=28						
ASAR				PcP	PcP	23 41 20.4	-1.2
	0.9nm,1.1s,baz=76,slow=3.8,SNR=4.1						
FITZ	**Fitzroy Crossi**	**41.08**	**267**	P	**P**	**23 39 47.8**	**+0.1**
	4.6nm,0.8s,mb4.1,baz=100,slow=9.3,SNR=12						
MJAR	**Matsushiro Arr**	**64.70**	**333**	P	**P**	**23 42 42.6**	**+0.9**
	1.0nm,0.4s,mb4.2,baz=161,slow=5.9,SNR=3.5						
QSPA	**South Pole Qui**	**68.61**	**180**	P	**P**	**23 43 05.3**	**-0.8**
	7.0nm,1.0s,mb4.6,baz=26,slow=3.4,SNR=15						
PETK	**Petropavlovsk-**	**74.92**	**353**	LR	LR	00 15 13.3	
	comp=Z,52nm,20.0s,MS3.8,baz=167,slow=35						
MAW	**Mawson**	**76.40**	**202**	P	**P**	**23 43 51.9**	**-0.6**
	2.4nm,0.7s,mb4.3,baz=106,slow=9.7,SNR=8.5						
MAW				LR	LR	00 15 04.7	
	comp=Z,90nm,18.9s,MS4.1,baz=60,slow=34						
CMAR	**Chiang Mai Arr**	**79.42**	**295**	P	**P**	**23 44 11.7**	**+1.6**
	0.7nm,0.4s,mb4.0,baz=141,slow=4.7,SNR=4.2						
SONM	**Songino Array**	**88.98**	**323**	P	**P**	**23 44 57.6**	**-0.4**
	0.7nm,0.8s,mb4.1,baz=145,slow=4.7,SNR=4.8						
NVAR	**Mina Array Bea**	**90.25**	**48**	P	**P**	**23 45 02.5**	**-1.6**
	2.5nm,0.7s,mb4.7,baz=225,slow=8.2,SNR=6.1						
TXAR	**Lajitas Array**	**97.81**	**62**	LR	LR	00 21 51.0	
	comp=Z,60nm,21.4s,MS4.0,baz=0.0,slow=31						
BRG	**Berggiesshubel**	**144.84**	**333**	*e*P	PKPdf	23 51 37.6	-2.5
	4.3nm,0.7s						
CLL	**Collm**	**144.91**	**334**	*e*PKPdf	PKPdf	23 51 44.0	+3.8
KHC	**Kasperske Hory**	**146.27**	**331**	*e*P	PKPdf	23 51 34.5	-8.1
KHC				*ex*	x	23 51 46.0	
GERES	**GERESS Array B**	**146.42**	**330**	PKPbc	PKPbc	23 51 43.0	-1.2
	1.5nm,0.6s,baz=25,slow=3.4,SNR=9.7						
GIVF	**Givet**	**148.87**	**340**	*e*PKP1	PKPbc	23 51 49.2	-1.6
BAIF	**Baives**	**149.10**	**341**	*e*PKP1	PKPbc	23 51 49.9	-1.5
CDF	**Champ du Feu**	**149.47**	**336**	*e*PKP1	PKPbc	23 51 50.4	-2.0
HAU	**Haudompre**	**150.15**	**337**	*e*PKP1	PKPbc	23 51 52.3	-1.8
	4.2nm,0.6s						
MEZF	**Maizieres J'vi**	**150.19**	**339**	*e*PKP1	PKPbc	23 51 52.8	-1.3
	13nm,0.8s						
CABF	**La Chapelle**	**151.41**	**335**	*e*PKP1	PKPbc	23 51 55.7	-1.4
	5.6nm,0.6s						
LOR	**Lormes**	**151.66**	**339**	*e*PKP1	PKPbc	23 51 55.7	-1.9
	5.1nm,0.7s						
SSF	**Saint Saulge**	**151.96**	**339**	*e*PKP1	PKPbc	23 51 56.5	-1.8
LPL	**La Plagne**	**152.04**	**333**	*e*PKP1	PKPbc	23 51 57.3	-1.3
LPG	**La Plagne**	**152.04**	**333**	*e*PKP1	PKPbc	23 51 57.5	-1.1
BGF	**Bois d'Agland**	**152.62**	**339**	*e*PKP1	PKPbc	23 51 57.7	-2.1
MBDF	**Montbardon**	**152.65**	**332**	*e*PKP1	PKPbc	23 51 58.0	-2.0
	5.9nm,0.8s						
ORIF	**Oris-en-Rattie**	**152.88**	**334**	*e*PKP1	PKPbc	23 51 58.7	-1.7
	8.8nm,0.7s						
TCF	**Toulx Ste Croi**	**153.06**	**340**	*e*PKP1	PKPbc	23 51 58.7	-2.1
	6.1nm,0.9s						

*ISK **28** 23:33:12.5, 3515N×2671E, h5km, MD3.5*

*ISCJB **28** 23:33:15.9±1.0, 3524N±005×2708E±004, h3km±8km, mb3.4/4, Error ellipse: s-maj=8.9km s-min=5.3km az=159.2*

*IDC **28** 23:33:15.8±1.4, 3490N×2729E, h0km, mb3.5/4, mb1 3.5/4, mb1mx3.4/22, mbtmp3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/17, Error ellipse: s-maj=539.4km s-min=25.5km az=143.0*

*ATH **28** 23:33:16.3, 3524N×2710E, h24km±5km, MD3.7/4*

*CSEM **28** 23:33:16.8±0.2, 3529N×2701E, h10km, MD3.7, Error ellipse: s-maj=4.6km s-min=2.0km az=159.0*

*NEIC **28** 23:33:16.6, 3525N×2712E, h22km, mb4.1/1, MD3.7(ATH), After ATH.*

*THE **28** 23:33:19.2, 3530N×2697E, h0km, ML3.1*

ISC 28 23:33:17.1±0.9, **3525N**±005×**2702E**±004, **h6**km±5km, **n39, σ1§07/48, mb3.4**/4, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.32**	**21**	*e*PB	**Pg**	**23 33 22.9**	**-0.5**
KARP				*e*SB	**Sg**	**23 33 29.0**	**+1.4**
ZKR	**Zakros**	**0.67**	**259**	*e*Pg	**Pg**	**23 33 29.6**	**-0.4**
ZKR				*e*Sg	**Sg**	**23 33 41.5**	**+2.7**
ZKR	**Zakros**	**0.67**	**259**	*e*Pg	**Pg**	**23 33 29.6**	**-0.5**
ZKR				*e*Sg	**Sg**	**23 33 41.5**	**+2.7**
NPS	**Neapolis**	**1.15**	**271**	*e*PN	**Pn**	**23 33 39.3**	**-0.5**
LAST	**Lasithi**	**1.27**	**266

ellipse: s-maj=31.4km s-min=13.3km az=92.0

ISC 28 23:56:34.6±0.7,**4076N**±003×**14302E**±006,**h35**km±8km, **h44**km±2.6km:**pP-P,n31,**σ0°**96**/44,**mb3.6**/8,**2C-2D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JTH	**Tanohata**	**1.20**	**227**	⇑P		**Pn**	**23 56 53.4**	**-1.5**
JTH				*e*S		**Sn**	**23 57 08.9**	**-1.1**
JANG	**Nango**	**1.21**	**252**	⇑P		**Pn**	**23 56 53.7**	**-1.3**
JANG				S		**Sn**	**23 57 08.5**	**-1.6**
ERM	**Erimo**	**1.26**	**5**	*e*P		**Pn**	**23 56 55.6**	**-0.1**
JEM	**Erimo**	**1.26**	**5**	P		**Pn**	**23 56 55.5**	**-0.2**
JEM				*e*S		**Sn**	**23 57 11.8**	**+0.4**
JTM	**Tenmabayashi**	**1.48**	**272**	P		**Pn**	**23 56 58.4**	**-0.3**
JTM				*e*S		**Sn**	**23 57 16.3**	**-0.5**
JNBK	**Urakawa-nobuka**	**1.53**	**353**	⇓P		**Pn**	**23 56 59.3**	**-0.1**
JNBK				S		**Sn**	**23 57 19.3**	**+1.2**
JOT	**Ohata**	**1.61**	**293**	P		**Pn**	**23 57 00.1**	**-0.4**
JOT				*e*S		**Sn**	**23 57 19.1**	**-1.0**
JOM	**Ohasama**	**1.84**	**226**	P		**Pn**	**23 57 03.5**	**-0.2**
JOM				*e*S		**Sn**	**23 57 26.8**	**+1.0**
JCH	**Churui**	**1.87**	**8**	⇓P		**Pn**	**23 57 04.0**	**-0.1**
JCH				*e*S		**Sn**	**23 57 26.5**	**0.0**
JKB	**Kayabe**	**1.87**	**308**	P		**Pn**	**23 57 03.9**	**-0.2**
JKB				S		**Sn**	**23 57 26.2**	**-0.3**
JAH	**Hinai**	**1.90**	**253**	P		**Pn**	**23 57 04.9**	**+0.4**
JAH				*e*S		**Sn**	**23 57 28.4**	**+1.1**
JMK	**Ichinoseki**	**2.27**	**218**	P		**Pn**	**23 57 10.1**	**+0.5**
JMK				*e*S		**Sn**	**23 57 37.5**	**+1.1**
JEW	**Eniwo**	**2.39**	**331**	*e*S		**Sn**	**23 57 42.0**	**+2.8**
ASAJ	**Asahikawa**	**3.37**	**355**	P		**Pn**	**23 57 25.4**	**+0.7**
	6.6nm,0.3s,baz=197,slow=8.2,SNR=9.9							
ASAJ				S		**Sn**	**23 58 03.3**	**-0.1**
	4.8nm,0.3s,baz=239,slow=33,SNR=3.9							
ASAJ	**Asahikawa**	**3.37**	**355**	P		**Pn**	**23 57 25.4**	**+0.7**
ASAJ				S		**Sn**	**23 58 03.3**	**-0.1**
ASAJ				pmax		pmax		
	comp=Z,7.0nm,0.3s							
ASAJ				smax				
	comp=N,5.0nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**3.89**	**32**	*e*P		Px	23 57 48.0	
YUK				*e*S		**Sn**	**23 58 13.9**	**-2.4**
YUK				smax				
	comp=E,450nm,0.4s							
YUK				smax				
	comp=N,2μm,0.5s							
YUK				smax				
	comp=N,2μm,1.0s							
YUK				smax				
	comp=E,5μm,2.0s							
MAJO	**Matsushiro**	**5.65**	**223**	*e*P		**Pn**	**23 57 55.9**	**-0.1**
MAJO				pmax		pmax		
	comp=Z,17nm,0.6s							
MAJO	**Matsushiro**	**5.65**	**223**	*e*Pn		**Pn**	**23 57 55.9**	**-0.1**
	comp=Z,17nm,0.6s							
MAT	**Matsushiro**	**5.65**	**223**	P		**Pn**	**23 57 59.0**	**+3.0**
MJAR	**Matsushiro Arr**	**5.65**	**223**	P		**Pn**	**23 57 58.2**	**+2.3**
	comp=Z,1.7nm,0.3s,baz=30,slow=14,SNR=11							
SONM	**Songino Array**	**26.95**	**298**	P		**P**	**00 02 12.5**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.1,baz=87,slow=9.2,SNR=3.5							
SONM				pP		pP	00 02 25.4	+2.8
	comp=Z,0.5nm,0.5s,baz=88,slow=8.3,SNR=3.8							
ZALV	**Zalesovo Beam**	**40.43**	**309**	P		**P**	**00 04 09.2**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.5,baz=91,slow=12,SNR=2.5							
ZALV				pP		pP	00 04 20.5	+1.0
	comp=Z,0.8nm,0.5s,baz=100,slow=6.1,SNR=3.5							
MKAR	**Makanchi Array**	**43.30**	**299**	P		**P**	**00 04 33.0**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.3,baz=82,slow=10,SNR=2.5							
MKAR				pP		pP	00 04 44.1	+1.0
	comp=Z,0.5nm,0.7s,baz=77,slow=12,SNR=3.6							
KURK	**Kurchatov**	**44.71**	**305**	P		**P**	**00 04 44.2**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.7,baz=78,slow=8.9,SNR=3.2							
KURK				pP		pP	00 04 55.3	+1.0
	comp=Z,0.7nm,0.4s,baz=81,slow=9.5,SNR=4.1							
KURK	**Kurchatov**	**44.71**	**305**	P		**P**	**00 04 44.2**	**+0.3**
KURK				*PP		pP	00 04 55.3	+1.0
KURK				pmax		pmax		
	comp=Z,1.0nm,0.5s,mb3.9							
WRA	**Warramunga Arr**	**60.92**	**189**	P		**P**	**00 06 43.1**	**-0.8**
	comp=Z,0.6nm,0.4s,mb4.1,baz=5.8,slow=6.7,SNR=3.6							
WRA	**Warramunga Arr**	**60.92**	**189**	P		**P**	**00 06 43.1**	**-0.8**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.4s							
ASAR	**Alice Springs**	**64.65**	**189**	P		**P**	**00 07 07.7**	**-0.9**
	comp=Z,0.4nm,0.6s,mb3.6,baz=3.7,slow=5.6,SNR=8.2							
BMO	**Blue Mountains**	**68.51**	**49**	*e*P		**P**	**00 07 28.9**	**-4.3**
	comp=Z,1.3nm,0.6s,mb4.0							
TXAR	**Lajitas Array**	**86.88**	**53**	P		**P**	**00 09 16.7**	**+0.9**
	comp=Z,0.3nm,0.7s,mb3.6,baz=301,slow=5.5,SNR=4.8							
GNAR	**Gosnell**	**89.44**	**40**	*e*P		**P**	**00 09 27.9**	**+0.1**
	comp=Z,593nm,0.7s							

IDC 29 00:02:20.0±2.9,**5660S**×**2379W,h0**km,**mb3.7**/2, **mb1 3.9**/2,**mb1mx3.6**/15,**mbtmp3.7**/2,**Error ellipse: s-maj=93.8km s-min=47.2km az=12.0,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
CPUP	**Villa Florida**	**38.63**	**307**	P		P	00 09 44.8	-0.1
	0.6nm,0.4s,baz=144,slow=8.7,SNR=3.5							
TORD	**Torodi Ar. Bea**	**72.66**	**26**	P		P	00 13 49.4	+0.1
	0.5nm,0.6s,baz=200,slow=5.9,SNR=13							
SONM	**Songino Array**	**148.88**	**85**	PKPbc		PKPbc	00 22 08.2	-0.3
	0.3nm,0.5s,baz=242,slow=3.2,SNR=3.6							

*ISCJB **29** 00:02:26.4±2.2,221N±02×1436E±09,h262km±26km, mb3.2/7,Error ellipse: s-maj=141.5km s-min=17.1km az=168.3*

*IDC **29** 00:02:27.0±2.2,2206N×14356E,h250km±26km,mb3.3/8, mb1 3.4/10,mb1mx3.3/24,mbtmp3.4/10,Error ellipse: s-maj=106.0km s-min=13.4km az=77.0*

ISC 29 00:02:27.3±2.0,**221N**±02×**1435E**±08,**h248**km±27km,**n10,** σ0°**90**/**11**,**mb3.3**/7,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
CBIJ	**Chichi jima**	**5.16**	**347**	P		**Pn**	**00 03 46.8**	**+1.9**
	23nm,0.3s,baz=293,slow=21,SNR=12							
CBIJ				S		**S**	**00 04 45.1**	**-1.7**
	22nm,0.3s,baz=298,slow=24,SNR=9.7							
MJAR	**Matsushiro Arr**	**15.14**	**344**	P		**Pn**	**00 05 49.1**	**-0.1**
	1.8nm,0.3s,baz=170,slow=9.9,SNR=8.7							
KSRS	**Korea Array**	**20.39**	**322**	P		**P**	**00 06 46.9**	**+1.4**
	5.1nm,0.6s,baz=147,slow=9.0,SNR=16							
SONM	**Songino Array**	**39.23**	**320**	P		**P**	**00 09 31.7**	**0.0**
	0.8nm,0.4s,mb3.6,baz=131,slow=7.6,SNR=6.9							
WRA	**Warramunga Arr**	**42.67**	**193**	P		**P**	**00 10 00.2**	**+0.3**
	1.1nm,0.5s,mb3.6,baz=7.8,slow=8.4,SNR=5.8							
FITZ	**Fitzroy Crossi**	**43.54**	**205**	P		**P**	**00 10 06.1**	**-0.8**
	0.5nm,0.3s,mb3.3,baz=33,slow=7.1,SNR=5.7							
ASAR	**Alice Springs**	**46.38**	**192**	P		**P**	**00 10 28.8**	**-0.3**
	0.4nm,0.6s,mb3.0,baz=15,slow=8.9,SNR=8.6							
ZALV	**Zalesovo Beam**	**54.09**	**321**	P		**P**	**00 11 25.9**	**-0.5**
	0.5nm,0.4s,mb3.4,baz=91,slow=5.9,SNR=4.1							
MKAR	**Makanchi Array**	**54.64**	**312**	P		**P**	**00 11 30.2**	**-0.3**
	0.2nm,0.4s,mb3.0,baz=75,slow=6.1,SNR=2.5							
KURK	**Kurchatov**	**57.39**	**317**	P		**P**	**00 11 50.0**	**+0.2**
	0.6nm,0.5s,mb3.5,baz=93,slow=7.6,SNR=2.9							

*NEIC **29** 00:17:46.0±2.5,795S×10760E,h14km±15km,mb4.9/16, Error ellipse: s-maj=6.9km s-min=4.8km az=220.0*

*MOS **29** 00:17:46.9±1.1,794S×10760E,h33km,mb5.0/13,Error ellipse: s-maj=13.7km s-min=8.7km az=119.9*

*BJI **29** 00:17:47.0,790S×10760E,h14km,mB5.0,mb4.6,Ms4.8, Msz4.6*

*DJA **29** 00:17:49,826S×10757E,h15km,Mw5.4/4*

*IDC **29** 00:17:50.1±2.6,790S×10760E,h41km±22km,mb4.1/13, mb1 4.3/14,mb1mx4.2/21,mbtmp4.2/14,ML4.9/1,MS3.6/6, Ms1 3.6/6,ms1mx3.3/29,Error ellipse: s-maj=26.9km s-min=13.0km az=58.0*

*ISCJB **29** 00:17:50.2±0.6,813S±004×10758E±004,h62km±5km, mb4.7/47,Error ellipse: s-maj=8.3km s-min=5.6km az=38.8*

ISC 29 00:17:51.3±0.6,**809S**±004×**10757E**±004,**h54**km±5km, **h9**km±7.8km:**pP-P,n131,**σ1°**21**/120,**mb4.7**/47,**MS3.8**/8, **3C-2D,Jawa**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
LEM	**Lembang**	**1.26**	**2**	P		**Pn**	**00 18 14.1**	**+1.5**
	0.0nm,0.0s							
CLJI	**Cilicap**	**1.48**	**76**	P		**Pn**	**00 18 14.7**	**-0.8**
	0.0nm,0.0s							
SKJI	**Sukabumi**	**1.48**	**317**	P		**Pn**	**00 18 16.5**	**+0.9**
	0.0nm,0.0s							
DBJI	**Dramaga**	**1.73**	**332**	P		**Pn**	**00 18 21.1**	**+2.1**
	0.0nm,0.0s							
JCJI	**Jatiwangi**	**1.74**	**24**	P		**Pn**	**00 18 17.6**	**-1.5**
	0.0nm,0.0s							
CBJI	**Citeko**	**1.81**	**337**	P		**Pn**	**00 18 18.3**	**-1.8**
	0.0nm,0.0s							
TNG	**Tangerang**	**2.12**	**334**	P		**Pn**	**00 18 31.6**	**+7.3**
	0.0nm,0.0s							
BJII	**Banjamegara**	**2.25**	**71**	P		**Pn**	**00 18 25.2**	**-0.9**
	0.0nm,0.0s							
SBJI	**Serang**	**2.43**	**324**	P		**Pn**	**00 18 31.2**	**+2.7**
	0.0nm,0.0s							
XMIS	**Christmas Isla**	**3.04**	**218**	⇓*i*P		**Pn**	**00 18 34.4**	**-2.5**
XMIS				*e*S		**Sn**	**00 19 05.1**	**-6.9**
BLSI	**Bandar Lampung**	**3.56**	**319**	P		**Pn**	**00 18 49.3**	**+5.2**
	0.0nm,0.0s							
SJI	**Sawahan**	**4.17**	**85**	P		**Pn**	**00 18 52.6**	**+0.2**
	0.0nm,0.0s							
PPBI	**Pangkal Pinang**	**6.06**	**346**	P		**Pn**	**00 19 22.5**	**+4.1**
	69nm,0.9s							
PBKI	**Pangkalan Bun**	**6.73**	**38**	P		**Pn**	**00 19 32.1**	**+4.6**
	317nm,1.1s							
IGBI	**Denpasar**	**7.53**	**96**	P		**Pn**	**00 19 43.8**	**+5.3**
	412nm,0.7s							
MTNI	**Mataram**	**8.52**	**94**	P		**Pn**	**00 19 52.9**	**+0.8**
	148nm,0.8s							
COCO	**West Island**	**11.33**	**248**	*e*P		**Pn**	**00 20 29.1**	**-1.4**
KAPI	**Kappang**	**12.48**	**77**	P		**Pn**	**00 20 47.7**	**+1.4**
	baz=240,slow=15							
KAPI				LR		LR	00 26 11.5	
	comp=Z,265nm,21.7s,baz=278,slow=40							
KAPI	**Kappang**	**12.48**	**77**	P		**Pn**	**00 20 47.6**	**+1.4**
KAPI				LR		LR	00 26 11.5	
PCI	**Palu**	**14.15**	**60**	P		**Pn**	**00 21 18.0**	**+9.0**
	85nm,1.2s							
KDI	**Kendari**	**15.51**	**76**	P		**Pn**	**00 21 32.0**	**+5.2**
	35nm,1.2s							
BATI	**Baumata**	**16.02**	**99**	P		**Pn**	**00 21 32.9**	**-0.4**
	57nm,0.8s							
BATI	**Baumata**	**16.02**	**99**	P		**Pn**	**00 21 31.5**	**-1.8**
	4.8nm,0.3s,baz=288,slow=19,SNR=4.1							
BATI				S		**Sn**	**00 24 17.4**	**-13**
	2.4nm,0.3s,baz=0.0,slow=20,SNR=3.1							
BATI				LR		LR	00 30 32.3	
	comp=Z,365nm,18.9s,baz=116,slow=48							
KKM	**Kota Kinabalu**	**16.48**	**32**	*e*Pn		**Pn**	**00 21 35.7**	**-3.2**
MBWA	**Marble Bar**	**17.51**	**139**	*e*Pn		**Pn**	**00 21 51.1**	**-0.6**
FITZ	**Fitzroy Crossi**	**20.19**	**121**	*e*P		**P**	**00 22 22.2**	**+0.5**
	34nm,0.6s							
FITZ	**Fitzroy Crossi**	**20.19**	**121**	P		**P**	**00 22 22.6**	**+0.9**
	19nm,0.7s,baz=289,slow=8.7,SNR=78							
FITZ				S		**S**	**00 25 52.6**	**-13**
	1.9nm,0.8s,baz=210,slow=20,SNR=3.6							
FITZ				LR		LR	00 29 03.1	
	comp=Z,80nm,21.3s,MS3.0,baz=168,slow=33							
LBMI	**Labuha**	**21.19**	**71**	P		**P**	**00 22 33.8**	**+1.3**
	143nm,0.7s,mb5.4							
DAV	**Davao City (W)**	**23.43**	**50**	LR		LR	00 31 42.7	
	comp=Z,81nm,19.9s,MS3.2,baz=208,slow=36							
KAKA	**Kakadu**	**24.88**	**103**	*e*P		**P**	**00 23 07.7**	**-1.5**
	17nm,0.6s,mb4.7							
NWAO	**Narrogin (SRO)**	**26.28**	**161**	LR		LR	00 32 39.2	
	comp=Z,251nm,19.9s,MS3.8,baz=310,slow=34							
CMAR	**Chiang Mai Arr**	**27.72**	**342**	P		**P**	**00 23 33.3**	**-1.5**
	0.9nm,0.3s,mb3.9,baz=159,slow=7.7,SNR=3.5							
CMAR				PcP		PcP	00 26 52.2	+1.5
	0.8nm,0.5s,baz=225,slow=2.1,SNR=4.2							
CMAR				LR		LR	00 36 22.8	
	comp=Z,100nm,19.0s,MS3.4,baz=126,slow=40							
CMAR	**Chiang Mai Arr**	**27.72**	**342**	P		**P**	**00 23 33.3**	**-1.5**
CMAR							00 26 52.3	
WRA	**Warramunga Arr**	**28.46**	**117**	P		**P**	**00 23 41.8**	**+0.3**
	3.2nm,0.5s,mb4.2,baz=288,slow=11,SNR=11							
WRAB	**Tennant Creek**	**28.47**	**117**	*e*P		**P**	**00 23 41.6**	**+0.1**
WRAB				pmax		pmax		
	comp=Z,103nm,2.4s,mb5.0							
WRAB	**Tennant Creek**	**28.47**	**117**	*e*P		**P**	**00 23 41.6**	**+0.1**
	comp=Z,103nm,2.4s,mb5.0							
WB2	**Warramunga Arr**	**28.47**	**117**	*e*P		**P**	**00 23 41.9**	**+0.3**
ASAR	**Alice Springs**	**29.60**	**125**	P		**P**	**00 23 51.8**	**+0.2**
	comp=Z,0.9nm,0.5s,mb3.7,baz=300,slow=8.2,SNR=17							
ASAR				PcP		PcP	00 26 55.8	+0.4
	comp=Z,0.8nm,0.7s,baz=292,slow=2.4,SNR=5.3							
ASAR				ScP		ScP	00 30 32.7	-0.3
	comp=Z,1.0nm,0.9s,baz=247,slow=1.0,SNR=5.8							
KMI	**Kunming**	**33.35**	**352**	P		**P**	**00 24 27.5**	**+3.1**
KMI				AMB		AMB		
	comp=Z,8.0nm,0.8s,mb4.7							
GYA	**Guiyang**	**34.35**	**359**	*e*P		**P**	**00 24 35.3**	**+2.2**
GYA				PP		PP	00 25 51.0	-0.9
GYA				S		**S**	**00 30 02.8**	**+5.7**
GYA				SCP		ScP	00 30 55.3	+6.3
GYA				AMB		AMB		
	comp=Z,10.0nm,1.0s,mb4.7							
GYA				AMB		AMB		
	comp=Z,110nm,4.9s							
GYA				LR		LR		
	comp=N,490nm,17.9s,MS4.4							
GYA				LR		LR		
	comp=E,470nm,18.0s,MS4.4							
GYA				LR		LR		
	comp=Z,400nm,18.4s,MS4.2							
DGAR	**Diego Garcia**	**34.80**	**269**	*e*P		**P**	**00 24 37.4**	**+0.2**
DGAR				pmax		pmax		
	comp=Z,196nm,1.3s							
DGAR	**Diego Garcia**	**34.80**	**269**	*e*P		**P**	**00 24 37.4**	**+0.2**
	comp=Z,196nm,1.3s							
CD2	**Chengdu**	**38.95**	**355**	*e*P		**P**	**00 25 13.0**	**+0.8**
CD2				AP		pP	00 25 17.5	-8.6
CD2				XP		sP	00 25 20.3	-12
CD2				PP		PP	00 26 46.5	+4.1
CD2				S		**S**	**00 31 11.0**	**+3.9**
CD2				XS		sS	00 31 18.8	-12
CD2				SS		SS	00 33 54.5	-6.3
CD2				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb4.7							
CD2				AMB		AMB		
	comp=Z,20nm,5.2s							
CD2				LR		LR		
	comp=N,100nm,12.0s,MS4.1							
CD2				LR		LR		
	comp=E,150nm,13.2s,MS4.1							
CD2				LR		LR		
	comp=Z,230nm,10.8s,MS4.3							
STKA	**Stephens Creek**	**39.49**	**132**	*e*P		**P**	**00 25 17.3**	**+0.5**
	comp=Z,9.7nm,0.4s,mb4.9							
STKA	**Stephens Creek**	**39.49**	**132**	P		**P**	**00 25 17.2**	**+0.4**
	comp=Z,14nm,0.5s,mb4.9,baz=306,slow=8.0,SNR=52							
NJ2	**Nanjing**	**41.35**	**15**	*e*P		**P**	**00 25 31.5**	**-0.5**
NJ2				AMB		AMB		
	comp=Z,20nm,1.1s,mb4.7							
LZH	**Lanzhou**	**44.08**	**356**	*e*P		**P**	**00 25 56.0**	**+1.9**
LZH				AP		pP	00 26 01.3	-6.9
LZH				XP		sP	00 26 05.3	-9.2
LZH				PP		PP	00 27 40.5	+2.7
LZH				*e*S		**S**	**00 32 29.0**	**+6.1**
LZH				XS		sS	00 32 36.0	-11
LZH				*e*SS		SS	00 35 37.0	-5.1
LZH				AMB		AMB		
	comp=Z,16nm,1.4s,mb4.6							
LZH				AMB		AMB		
	comp=Z,68nm,4.6s							
LZH				LR		LR		
	comp=E,459nm,14.3s							
LZH				LR		LR		
	comp=Z,642nm,16.3s,MS4.6							
LZH	**Lanzhou**	**44.08**	**356**	*e*P		**P**	**00 25 56.0**	**+1.9**
LZH				*SP		sP	00 26 05.2	-9.3
LZH							00 27 40.6	
LZH				*e*S		**S**	**00 32 29.0**	**+6.1**
LZH				*e*SS		SS	00 35 37.0	-5.1
LZH	**Lanzhou**	**44.08**	**356**	*e*P		**P**	**00 25 56.0**	**+1.9**
LZH				pP		pP	00 26 01.3	-6.9
LZH				sP		sP	00 26 05.2	-9.3
LZH				PP		PP	00 27 40.6	+2.8
LZH				*e*S		**S**	**00 32 29.0**	**+6.1**
LZH				sS		sS	00 32 36.0	-11
LZH				*e*SS		SS	00 35 37.0	-5.1

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
EIDS	**Eidsvold**	**44.82**	**118**	*e*P		**P**	**00 25 59.0**	**-1.3**
GTA	**Gaotai**	**47.81**	**352**	*e*P		**P**	**00 26 24.8**	**+1.4**
GTA				AP		pP	00 26 28.3	-9.4
GTA				XP		sP	00 26 31.5	-12
GTA				AMB		AMB		
	comp=Z,3.0nm,0.9s,mb4.3							
BJI	**Beijing**	**48.55**	**9**	P		**P**	**00 26 30.0**	**+0.9**
BJI				AMB		AMB		
	comp=Z,7.0nm,0.5s,mb5.0							
BJI	**Beijing**	**48.55**	**9**	P		**P**	**00 26 29.9**	**+0.8**
HHC	**Hu-ho-hao-te**	**48.84**	**4**	*e*P		**P**	**00 26 30.8**	**-0.5**
HHC				PCP		PcP	00 27 55.5	+0.2
HHC				PP		PP	00 28 24.0	-1.1
HHC				SCP		ScP	00 31 48.3	+2.4
HHC				PCS		PcS	00 31 50.3	-1.1
HHC				S		**S**	**00 33 33.0**	**+2.2**
HHC				SCS		ScS	00 36 20.5	+1.6
HHC				SS		SS	00 37 00.0	-2.3
HHC				AMB		AMB		
	comp=Z,19nm,0.6s,mb5.3							
HHC				AMB		AMB		
	comp=Z,161nm,6.7s							
HHC				LR		LR		
	comp=N,154nm,14.5s,MS4.3							
HHC				LR		LR		
	comp=E,186nm,14.8s,MS4.3							
HHC				LR		LR		
	comp=Z,126nm,14.5s,MS4.0							
TAU	**Tasmania Unive**	**49.14**	**142**	*e*P		**P**	**00 26 33.1**	**-0.6**
TAU				pmax		pmax		
	comp=Z,79nm,1.4s,mb5.5							
TAU	**Tasmania Unive**	**49.14**	**142**	*e*P		**P**	**00 26 33.1**	**-0.6**
	comp=Z,79nm,1.4s,mb5.5							
CN2	**Changchun**	**54.13**	**16**	*e*P		**P**	**00 27 14.0**	**+3.1**
SONM	**Songino Array**	**55.69**	**359**	P		**P**	**00 27 22.0**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.2,baz=173,slow=7.9,SNR=17							
SONM				PcP		PcP	00 28 21.2	+0.3
	comp=Z,3.5nm,0.8s,baz=171,slow=3.9,SNR=12							
SONM				ScP		ScP	00 32 15.7	+0.2
	comp=Z,0.3nm,0.6s,baz=90,slow=3.0,SNR=3.6							
SONM	**Songino Array**	**55.69**	**359**	P		**P**	**00 27 22.0**	**0.0**
SONM							00 28 21.2	
ULN	**Ulaanbaatar**	**55.71**	**360**	*e*P		**P**	**00 27 21.3**	**-0.9**
ULN				pmax		pmax		
	comp=Z,68nm,2.9s,mb5.2							
ULN	**Ulaanbaatar**	**55.71**	**360**	*e*P		**P**	**00 27 21.3**	**-0.9**
	comp=Z,68nm,2.9s,mb5.2							
KBL	**Kabul**	**55.91**	**322**	*e*P		**P**	**00 27 23.3**	**-0.6**
KBL				pmax		pmax		
	comp=Z,3.0nm,0.5s,mb4.6							
KBL	**Kabul**	**55.91**	**322**	*e*P		**P**	**00 27 23.3**	**-0.5**
	comp=Z,3.0nm,0.5s,mb4.6							
UCH	**Uchtor**	**58.48**	**332**	*e*P		**P**	**00 27 41.7**	**-0.2**
	comp=Z,0.5nm,0.8s							
TKM2	**Tokmak 2**	**58.53**	**333**	*e*P		**P**	**00 27 40.5**	**-1.7**
TKM2				pmax		pmax		
	comp=Z,12nm,0.6s,mb5.1							
TKM2	**Tokmak 2**	**58.53**	**333**	*e*P		**P**	**00 27 40.5**	**-1.7**
	comp=Z,12nm,0.6s,mb5.1							
AML	**Almayashu**	**58.80**	**331**	*e*P		**P**	**00 27 44.0**	**-0.1**
	comp=Z,4.7nm,0.6s,mb4.7							
MK31	**Makanchi Array**	**59.10**	**340**	P		**P**	**00 27 44.6**	**-1.5**
MK31				pmax		pmax		
	comp=Z,3.0nm,0.4s,mb4.7							
MK31	**Makanchi Array**	**59.10**	**340**	*e*P		**P**	**00 27 45.1**	**-0.9**
MKAR	**Makanchi Array**	**59.10**	**340**	P		**P**	**00 27 44.8**	**-1.2**
	comp=Z,5.3nm,0.6s,mb4.8,baz=148,slow=7.7,SNR=42							
EKS2	**Erkin-Say**	**59.17**	**331**	*e*P		**P**	**00 27 46.5**	**-0.1**
	comp=Z,4.9nm,0.7s,mb4.7							
KURK	**Kurchatov**	**63.71**	**340**	P		**P**	**00 28 14.4**	**-2.8**
	comp=Z,2.0nm,0.5s,mb4.4,baz=153,slow=6.0,SNR=6.2							
ZALV	**Zalesovo Beam**	**64.73**	**345**	P		**P**	**00 28 21.6**	**-2.1**
	comp=Z,1.0nm,0.5s,mb4.1,baz=173,slow=6.0,SNR=6.2							
MAW	**Mawson**	**66.49**	**197**	*e*P		**P**	**00 28 36.4**	**+1.4**
	comp=Z,2.3nm,0.6s,mb4.4							
MAW	**Mawson**	**66.49**	**197**	P		**P**	**00 28 36.6**	**+1.7**
	comp=Z,4.0nm,0.8s,mb4.5,baz=47,slow=7.3,SNR=20							
MAW	**Mawson**	**66.49**	**197**	*e*P		**P**	**00 28 36.4**	**+1.4**
MAW				pmax		pmax		
	comp=Z,2.0nm,0.6s							
VOSK	**Vostochnaya**	**68.13**	**337**	P		**P**	**00 28 44.6**	**-0.9**
VOSK				pmax		pmax		
	comp=Z,3.0nm,0.5s,mb4.6							
BVA0	**Borovoye Array**	**68.59**	**337**	*i* P		**P**	**00 28 47.8**	**-0.6**
BVA0				pmax		pmax		
	comp=Z,2.0nm,0.8s,mb4.1							
UMR	**Umm Al-Rimmam**	**68.62**	**306**	*e*P		**P**	**00 28 49.1**	**0.0**
	baz=306							
UMR				AMb		AMB	00 28 50.3	
	comp=Z,36nm,0.8s,mb5.3,baz=306							
BRVK	**Borovoye**	**68.66**	**337**	P		**P**	**00 28 47.4**	**-1.4**
BRVK				pmax		pmax		
	comp=Z,9.0nm,0.7s,mb4.8							
BRVK

	comp=Z,435nm,0.9s								
NVAR	**Mina Array Bea**	**128.90**	**46**	PKP	PKPdf	00 36 55.6	+2.3		
	comp=Z,0.2nm,0.3s,baz=302,slow=5.2,SNR=3.6								
TXAR	**Lajitas Array**	**143.84**	**50**	PKP	PKPdf	00 37 20.5	-0.7		
	comp=Z,0.6nm,0.6s,baz=273,slow=2.4,SNR=12								
WMOK	**Wichita Mounta**	**144.10**	**39**	*e*PKIKP	PKPdf	00 37 20.1	-1.4		
CCM	**Cathedral Cave**	**145.66**	**27**	*e*PKP2	PKPab	00 37 24.3	-0.5		
OLIL	**Olney**	**146.39**	**22**	*e*PKPdf	PKPdf	00 37 26.8	+1.5		
ACSO	**Alum Creek Sta**	**146.64**	**15**	*e*PKPbc	PKPbc	00 37 27.4	+0.1		
MIAR	**Mount Ida**	**147.27**	**33**	*e*PKP2	PKPbc	00 37 29.6	+0.3		
WCI	**Wyandotte Cave**	**147.49**	**21**	*e*PKP2	PKPbc	00 37 29.6	-0.2		
UALR	**University of**	**147.75**	**32**	*e*PKPbc	PKPbc	00 37 30.9	+0.3		
MCWV	**Mont Chateau**	**147.88**	**11**	*e*PKPbc	PKPbc	00 37 31.2	+0.5		
TZTN	**Tazewell**	**149.92**	**18**	*e*PKPbc	PKPbc	00 37 36.1	+0.1		
ELN	**Prospectdale**	**150.03**	**13**	*e*PKPbc	PKPbc	00 37 36.1	-0.2		
SWET	**Sewanee**	**150.30**	**23**	*e*PKPbc	PKPbc	00 37 36.7	-0.4		
CPCT	**Cooper Cave**	**150.60**	**20**	*e*PKPbc	PKPbc	00 37 38.2	+0.5		
CPCT				*e*PKPab	PKPab	00 37 44.7	+0.2		
TKL	**Tuckaleechee C**	**150.66**	**19**	PKPbc	PKPbc	00 37 38.2	+0.3		
	comp=Z,12nm,0.6s,baz=140,slow=3.5,SNR=25								
TKL	**Tuckaleechee C**	**150.66**	**19**	*e*PKPbc	PKPbc	00 37 38.2	+0.3		
TKL				*e*PKPab	PKPab	00 37 44.4	-0.4		
JSC	**Jenkinsville**	**152.70**	**16**	*e*PKIKP	PKPbc	00 37 42.8	+0.2		
GOGA	**Godfrey**	**152.82**	**21**	*e*PKIKP	PKPbc	00 37 42.9	0.0		
GOGA				*e*		00 37 53.5			

MOS 29 00:35:46.6±0.3, 4326N×4513E, h20km, mb3.7/1, 1C, Error ellipse: s-maj=65.0km s-min=23.8km az=158.9, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSR	**Komsomolskaya**	**0.62**	**280**	*e*PG	Pb	00 35 59.4	+0.7
ARNR	**Ardon**	**0.62**	**264**	*e*PG	Pb	00 35 59.7	+0.9
LACR	**Lac**	**0.75**	**235**↑	*e*PG	Pb	00 36 01.6	+0.7
LACR				*i* S	Sb	00 36 18.9	+8.2
KORR	**Kora**	**0.79**	**257**	*e*PG	Pb	00 36 02.3	+0.6
KORR				*e*S	Sb	00 36 20.6	+8.6
ZEI	**Tsey**	**1.03**	**242**	*e*PG	Pb	00 36 05.1	-0.6
ZEI				*e*S	Sb	00 36 25.5	+6.8

MOS 29 00:36:26.8±0.4, 4347N×4592E, h19km, mb3.7/1, 1D, Error ellipse: s-maj=99.9km s-min=22.5km az=156.8, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSR	**Komsomolskaya**	**1.19**	**266**	*e*PG	Pg	00 36 48.3	-1.5
KMSR				*e*S	Sb	00 37 04.3	+0.6
ARNR	**Ardon**	**1.23**	**257**	*e*PG	Pg	00 36 49.2	-1.4
ARNR				*e*S	Sb	00 37 05.4	+0.6
LACR	**Lac**	**1.35**	**242**↓	*i*PG	Pg	00 36 51.2	-1.7
LACR				*i* S	Sn	00 37 09.3	+1.3
KORR	**Kora**	**1.41**	**255**	*e*PG	Pg	00 36 51.8	-2.1
KORR				*e*S	Sn	00 37 09.9	+0.6
ZEI	**Tsey**	**1.64**	**245**	*e*PN	Pn	00 36 54.6	+0.1

*ISK **29** 00:59:13.6, 3631N×4093E, h11km, MD4.0*
*CSEM **29** 00:59:13.8±0.2, 3634N×4093E, h10km, MD4.0, Error ellipse: s-maj=4.7km s-min=1.9km az=165.0*
*ISCJB **29** 00:59:14.0±1.3, 363N±0.1×4092E±006, h10km, Error ellipse: s-maj=16.6km s-min=5.9km az=168.3*

ISC 29 00:59:15.2±1.3, 363N±01×4094E±006, h10km, n21, σ0§75/21, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**1.69**	**45**	*e*PN	**Pn**	**00 59 43.4**	**-1.4**
SIRT				*e*SN	**Sn**	**01 00 06.2**	**-0.3**
MSL	**Mosul**	**1.74**	**90**	*ex*	x	00 59 47.0	
MSL				*ex*	x	01 00 11.0	
URFA	**Urfa**	**2.04**	**304**	*e*PN	**Pn**	**00 59 47.9**	**-1.6**
URFA				*e*SN	**Sn**	**01 00 14.4**	**-0.6**
SVRC	**Sivrice-ELAZID**	**2.44**	**328**	*e*PN	**Pn**	**00 59 54.9**	**-0.2**
HKR	**Hakkari**	**2.58**	**60**	*e*PN	**Pn**	**00 59 57.1**	**+0.1**
MALT	**Malatya**	**2.83**	**316**	*e*PN	**Pn**	**01 00 00.3**	**-0.1**
MYA	**Malatya**	**2.84**	**316**	*e*PN	**Pn**	**01 00 00.4**	**-0.2**
PTK	**Pertek**	**2.85**	**335**	*e*PN	**Pn**	**01 00 00.5**	**-0.3**
GAZ	**Gaziantep**	**3.11**	**287**	*e*PN	**Pn**	**01 00 04.0**	**-0.3**
KMRS	**Kahramanmaras**	**3.45**	**291**	*e*PN	**Pn**	**01 00 08.9**	**-0.1**
EZC	**Erzincan**	**3.54**	**346**	*e*PN	**Pn**	**01 00 12.3**	**+2.0**
EZM	**Erzurum**	**3.60**	**5**	*e*PN	**Pn**	**01 00 11.7**	**+0.6**
DARE	**Darende-Malaty**	**3.62**	**318**	*e*PN	**Pn**	**01 00 10.5**	**-0.9**
AGRB	**Hanur-Agry**	**3.64**	**26**	*e*PN	**Pn**	**01 00 12.1**	**+0.4**
CLDR	**Caldiran**	**3.68**	**39**	*e*PN	**Pn**	**01 00 12.4**	**+0.2**
HTY	**Hatay**	**3.88**	**269**	*e*PN	**Pn**	**01 00 15.5**	**+0.5**
BHD	**Baghdad**	**4.15**	**136**	*ex*	x	01 00 20.0	
BHD				*ex*	x	01 01 10.0	
KOZT	**Kozan**	**4.26**	**287**	*e*PN	**Pn**	**01 00 20.5**	**+0.4**
GUMT	**Gumushane**	**4.30**	**345**	*e*PN	**Pn**	**01 00 20.8**	**+0.2**
SVSK	**Karacayir**	**4.75**	**320**	*e*PN	**Pn**	**01 00 27.4**	**+0.5**
BNN	**Bunyan**	**4.77**	**304**	*e*PN	**Pn**	**01 00 28.2**	**+1.1**

*ISCJB **29** 01:04:07.8±3.1, 473N±02×1530E±03, h81km±29km, mb3.5/6, Error ellipse: s-maj=38.6km s-min=28.2km az=179.7*
*IDC **29** 01:04:08.8±4.5, 4730N×15301E, h75km±41km, mb3.4/6, mb1 3.6/7, mb1mx3.3/24, mbtmp3.4/7, ML2.7/1, Error ellipse: s-maj=33.3km s-min=22.2km az=90.0*
*MOS **29** 01:04:09.3±1.1, 4733N×15298E, h96km, mb3.8/1, Error ellipse: s-maj=60.4km s-min=25.1km az=80.2*

ISC 29 01:04:09.8±2.8, 473N±02×1530E±03, h82km±26km, n11, σ0§52/11, mb3.5/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.95**	**30**	*e*PN	**Pn**	**01 05 08.5**	**+0.6**
SKR				*e*		01 05 49.4	
PETK	**Petropavlovsk-**	**6.54**	**26**	P	**Pn**	**01 05 42.5**	**-0.7**
	0.1nm,0.3s,baz=174,slow=12,SNR=3.5						
KURK	**Kurchatov**	**47.02**	**303**	P	**P**	**01 12 32.7**	**+0.2**
	0.2nm,0.6s,mb3.0,baz=71,slow=9.0,SNR=2.5						
NOA	**NORSAR Array B**	**67.69**	**341**	P	**P**	**01 14 57.4**	**-0.2**
	1.0nm,0.8s,mb3.7,baz=27,slow=6.5,SNR=2.8						
NOA	**NORSAR Array B**	**67.69**	**341**	P	**P**	**01 14 57.4**	**-0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HFS	**Hagfors**	**67.92**	**339**	P	**P**	**01 14 59.1**	**0.0**
	comp=Z,0.8nm,0.4s,mb4.0,baz=27,slow=3.5,SNR=8.4						
HFS	**Hagfors**	**67.92**	**339**	P	**P**	**01 14 59.1**	**0.0**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**69.02**	**199**	P	**P**	**01 15 05.5**	**-0.8**
	comp=Z,0.2nm,0.3s,mb3.4,baz=23,slow=6.7,SNR=2.7						
ASAR	**Alice Springs**	**72.71**	**198**	P	**P**	**01 15 29.4**	**+0.7**
	comp=Z,0.7nm,0.7s,mb3.6,baz=5.8,slow=4.8,SNR=7.3						
ASAR	**Alice Springs**	**72.71**	**198**	P	**P**	**01 15 29.4**	**+0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**77.27**	**61**	P	**P**	**01 15 55.2**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.3,baz=292,slow=4.4,SNR=6.4						

*NEIC **29** 01:10:31.9, 3871N×2266E, h25km, MD3.0(ATH), After ATH.*
*ATH **29** 01:10:31.9, 3871N×2266E, h25km±16km, MD3.0/5*
*ISCJB **29** 01:10:32.2±0.4, 3872N±002×2265E±004, h14km±5km, Error ellipse: s-maj=5.5km s-min=3.5km az=170.0*
*CSEM **29** 01:10:32.7±0.1, 3869N×2262E, h12km, MD3.0, Error ellipse: s-maj=1.9km s-min=1.4km az=77.0*
*THE **29** 01:10:33.1, 3871N×2263E, h5km*

ISC 29 01:10:32.9±0.4, 3872N±002×2265E±004, h18km±4km, n15, σ0§81/27, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.28**	**104**	*e*Pg	**Pg**	**01 10 38.6**	**-0.5**
LKR				*e*Sg	**Sg**	**01 10 43.9**	**+0.5**
AGG	**Agios Georgios**	**0.39**	**321**	*e*Pg	**Pg**	**01 10 40.3**	**-0.7**
AGG				*e*Sg	**Sg**	**01 10 46.4**	**0.0**
EVR	**Evrytania**	**0.68**	**287**	*e*PN	**Pg**	**01 10 45.8**	**-0.5**
LTK	**Loutraki**	**0.74**	**160**	*e*Pg	**Pg**	**01 10 46.2**	**-1.1**
LTK				*e*Sg	**Sg**	**01 10 57.7**	**+0.6**
NEO	**Neokhori**	**0.74**	**37**	*e*PN	**Pg**	**01 10 46.1**	**-1.3**
NEO				*e*SN	**Sn**	**01 10 58.1**	**-1.1**
XOR	**Xorichti**	**0.77**	**33**	*e*Pg	**Pg**	**01 10 47.6**	**-0.4**
XOR				*e*Sg	**Sg**	**01 10 59.5**	**+1.2**
THL	**Klokotos Trika**	**0.98**	**330**	*e*Pg	**Pg**	**01 10 51.1**	**-0.7**
THL				*e*Sg	**Sg**	**01 11 06.3**	**+1.6**
THL	**Klokotos Trika**	**0.98**	**330**	*e*Pn	**Pn**	**01 10 50.5**	**-1.2**
THL	**Klokotos Trika**	**0.98**	**330**	*e*Pg	**Pg**	**01 10 51.1**	**-0.7**
THL				*e*Sg	**Sg**	**01 11 06.3**	**+1.6**
RLS	**Riolos of Patr**	**1.14**	**235**	*e*PN	**Pn**	**01 10 53.8**	**-0.1**
DID	**Didima**	**1.30**	**159**	*e*Pg	**Pn**	**01 10 56.5**	**+0.4**
DID				*e*Sg	**Sg**	**01 11 14.8**	**0.0**
VLX	**Vlachokerasia**	**1.36**	**189**	*e*Pg	**Pn**	**01 10 57.9**	**+0.9**
VLX				*e*Sg	**Sg**	**01 11 17.1**	**+0.2**
VLX	**Vlachokerasia**	**1.36**	**189**	*e*Pg	**Pn**	**01 10 57.9**	**+0.9**
VLX				*e*Sg	**Sg**	**01 11 17.1**	**+0.2**
LIT	**Litokhoron**	**1.39**	**355**	*e*Pg	**Pn**	**01 10 58.7**	**+1.4**
LIT				*e*Sg	**Sg**	**01 11 18.0**	**+0.3**
PAIG	**Paliouri**	**1.45**	**33**	*e*Pg	**Pn**	**01 10 58.8**	**+0.6**
PAIG				*e*Sg	**Sg**	**01 11 19.7**	**0.0**

*ISCJB **29** 01:15:49.6±0.8, 832S±008×123.12E±0.10, h216km±7km, mb3.9/6, Error ellipse: s-maj=18.9km s-min=7.4km az=142.7*
*IDC **29** 01:15:50.6±1.2, 836S×123.19E, h214km±9km, mb3.5/2, mb1 3.4/6, mb1mx3.2/18, mbtmp3.3/6, Error ellipse: s-maj=43.1km s-min=14.2km az=63.0*
*NEIC **29** 01:15:50.8±1.3, 828S×12322E, h215km±14km, mb4.0/8, Error ellipse: s-maj=19.8km s-min=9.9km az=55.0*
*DJA **29** 01:15:52, 801S×123.12E, h105km, MLv4.1/4*

ISC 29 01:15:50.7±0.8, 835S±008×12331E±010, h215km±7km, n19, σ1§29/24, mb3.9/6, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.87**	**169**	P	**Pn**	**01 16 28.4**	**-0.7**
	107nm,0.3s,baz=315,slow=1.8,SNR=53						
BATI				S	**S**	**01 17 00.1**	**+0.8**
	122nm,0.3s,baz=86,slow=2.6,SNR=9.5						
KAPI	**Kappang**	**4.85**	**313**	P	**Pn**	**01 17 02.1**	**-1.5**
	0.8nm,0.3s,baz=72,slow=7.3,SNR=4.5						
FITZ	**Fitzroy Crossi**	**9.95**	**167**	*e*P	**Pn**	**01 18 08.0**	**-1.2**
	8.5nm,0.4s						
FITZ				*e*S	**S**	**01 19 57.3**	**-3.5**
FITZ	**Fitzroy Crossi**	**9.95**	**167**	P	**Pn**	**01 18 08.3**	**-0.9**
	1.7nm,0.3s,baz=13,slow=12,SNR=33						
FITZ				S	**S**	**01 19 58.8**	**-1.9**
	1.7nm,0.3s,baz=129,slow=11,SNR=11						
MBWA	**Marble Bar**	**13.19**	**195**	*e*P	**Pn**	**01 18 52.7**	**+2.6**
	9.2nm,0.8s						
WRA	**Warramunga Arr**	**15.71**	**138**	P	**Pn**	**01 19 20.1**	**-0.8**
	0.5nm,0.3s,baz=312,slow=12,SNR=6.1						
WRA				S	**S**	**01 22 14.0**	**-0.8**
	0.9nm,0.3s,baz=310,slow=23,SNR=8.2						
WRAB	**Tennant Creek**	**15.71**	**138**	*e*P	**Pn**	**01 19 23.4**	**+2.4**
	2.9nm,0.7s						
WB2	**Warramunga Arr**	**15.71**	**138**	*e*P	**Pn**	**01 19 22.3**	**+1.3**
WB2				*e*S	**S**	**01 22 13.7**	**-1.2**
ASAR	**Alice Springs**	**18.30**	**148**	P	**P**	**01 19 51.5**	**+2.6**
	0.4nm,0.3s,baz=332,slow=13,SNR=31						
ASAR				S	**S**	**01 23 05.2**	**-1.6**
	0.0nm,0.3s,baz=315,slow=14,SNR=3.9						
COEN	**Coen**	**20.26**	**108**	*e*P	**P**	**01 20 11.3**	**+1.2**
	1.4nm,0.4s						
FORT	**Forrest**	**22.75**	**169**	*e*P	**P**	**01 20 36.6**	**+2.1**
	1.1nm,0.6s,mb3.6						
KLBR	**Kellerberrin**	**23.69**	**192**	*e*P	**P**	**01 20 42.4**	**-0.7**
	7.9nm,0.5s,mb4.6						
MUN	**Mundaring**	**24.42**	**195**	*e*P	**P**	**01 20 49.9**	**+0.2**
NWAO	**Narrogin (SRO)**	**25.09**	**192**	P	**P**	**01 20 56.1**	**+0.4**
	3.8nm,0.5s,mb4.3,baz=46,slow=11,SNR=8.9						
PALK	**Pallekele**	**45.22**	**289**	*e*P	**P**	**01 23 47.0**	**0.0**
	15nm,1.2s,mb4.2						
MK31	**Makanchi Array**	**65.91**	**330**	*e*P	**P**	**01 26 12.8**	**-0.8**
MKAR	**Makanchi Array**	**65.91**	**330**	P	**P**	**01 26 13.6**	**+0.1**
	0.4nm,0.5s,mb3.3,baz=138,slow=6.6,SNR=3.7						
TKM2	**Tokmak 2**	**66.97**	**324**	*e*P	**P**	**01 26 19.8**	**-0.6**
	0.7nm,0.5s,mb3.5						
TORD	**Torodi Ar. Bea**	**122.54**	**280**	PKP	PKPdf	01 34 19.7	-1.9
	0.4nm,1.0s,baz=104,slow=3.0,SNR=2.6						

*ISCJB **29** 01:24:53.1±0.2, 4596N±001×1538E±001, h13km±1km, Error ellipse: s-maj=2.2km s-min=1.7km az=5.9*
*LDG **29** 01:24:53.8±0.1, 4594N×1547E, h10km, Ml3.2/7, Error ellipse: s-maj=2.9km s-min=2.1km az=159.0*
*PRU **29** 01:24:53.6, 4592N×1519E, h0km*
*NEIC **29** 01:24:53.7±0.3, 4590N×1538E, h11km±2km, ML2.9(BRA), ML3.1(LJU), ML3.4(SZGRF), Error ellipse: s-maj=3.8km s-min=2.4km az=151.0*
NEIC Felt in the Krsko area.
*CSEM **29** 01:24:53.7±0.1, 4592N×1538E, h12km, ML3.5/16, Error ellipse: s-maj=1.1km s-min=0.9km az=171.0*
*VIE **29** 01:24:54.0±0.2, 4595N×1538E, h5km, mb2.9/14, ML3.1/14, Error ellipse: s-maj=1.5km s-min=1.3km az=127.0*
*SZGRF **29** 01:24:54.4, 4586N×1552E, h10km, mb3.4, Northwestern Balkan Peninsula*
*LJU **29** 01:24:54.1, 4592N×1539E, h7km, ML3.0*

ISC 29 01:24:54.0±0.2, 4595N±001×1541E±001, h7km±1km, n149, σ1§07/262, 15C-41D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESS	**Cesta pri Krsk**	**0.05**	**56**↓	*i*Pg	**Pg**	**01 24 55.6**	**0.0**
CESS							
	comp=Z,18μm,0.1s						
CESS	**Cesta pri Krsk**	**0.05**	**56**↓	*i*Pg	**Pg**	**01 24 55.6**	**0.0**
	comp=Z,18μm,0.1s						
LEGS	**Legarje**	**0.06**	**272**	*i* Pg	**Pg**	**01 24 55.6**	**-0.1**
LEGS				*i* Sg	**Sg**	**01 24 56.8**	**-0.2**
CRES	**Cresnjev**	**0.13**	**164**↓	*i*Pg	**Pg**	**01 24 56.4**	**-0.3**
CRES				*i* Sg	**Sg**	**01 24 58.3**	**-0.2**
CRES							
	comp=Z,2μm,0.1s						
CRES	**Cresnjev**	**0.13**	**164**↓	*i*Pg	**Pg**	**01 24 56.4**	**-0.3**
CRES				*i* Sg	**Sg**	**01 24 58.3**	**-0.3**
	comp=Z,2μm,0.1s						
CRES	**Cresnjev**	**0.13**	**164**↓	*i*Pg	**Pg**	**01 24 56.4**	**-0.3**
CRES				*i* Sg	**Sg**	**01 24 58.3**	**-0.2**
GOLS	**Golise**	**0.17**	**67**	*i* Pg	**Pg**	**01 24 57.9**	**+0.5**
GOLS				*i* Sg	**Sg**	**01 25 01.0**	**+1.3**
GOLS							
	comp=Z,7μm,0.2s						
GOLS	**Golise**	**0.17**	**67**	*i* Pg	**Pg**	**01 24 57.9**	**+0.5**
GOLS				*i* Sg	**Sg**	**01 25 01.0**	**+1.3**
	comp=Z,7μm,0.2s						
GOLS	**Golise**	**0.17**	**67**	*i* Pg	**Pg**	**01 24 57.9**	**+0.5**
GOLS				*i* Sg	**Sg**	**01 25 01.0**	**+1.3**
GCIS	**Gornji Cirnik**	**0.17**	**117**↓	*i*Pg	**Pg**	**01 24 57.5**	**0.0**
GCIS				*i* Sg	**Sg**	**01 25 00.3**	**+0.3**
GCIS							
	comp=Z,3μm,0.1s						
GCIS	**Gornji Cirnik**	**0.17**	**117**↓	*i*Pg	**Pg**	**01 24 57.5**	**-0.1**
GCIS				*i* Sg	**Sg**	**01 25 00.3**	**+0.4**
	comp=Z,3μm,0.1s						
GCIS	**Gornji Cirnik**	**0.17**	**117**↓	*i*Pg	**Pg**	**01 24 57.5**	**0.0**
GCIS				*i* Sg	**Sg**	**01 25 00.3**	**+0.3**
DOBS	**Dobrina**	**0.21**	**12**↓	*i*Pg	**Pg**	**01 24 58.8**	**+0.6**
DOBS				*i* Sg	**Sg**	**01 25 02.4**	**+1.4**
DOBS							
	comp=Z,1μm,0.1s						
DOBS	**Dobrina**	**0.21**	**12**↓	*i*Pg	**Pg**	**01 24 58.8**	**+0.6**
DOBS				*i* Sg	**Sg**	**01 25 02.4**	**+1.4**
	comp=Z,1μm,0.1s						
DOBS	**Dobrina**	**0.21**	**12**↓	*i*Pg	**Pg**	**01 24 58.8**	**+0.6**
DOBS				*i* Sg	**Sg**	**01 25 02.4**	**+1.4**
PDKS	**Podkum**	**0.31**	**292**↓	*i*Pg	**Pg**	**01 25 00.4**	**+0.4**
PDKS				*i* Sg	**Sg**	**01 25 05.1**	**+1.0**
PDKS							
	comp=Z,1μm,0.1s						
PDKS	**Podkum**	**0.31**	**292**↓	*i*Pg	**Pg**	**01 25 00.4**	**+0.4**
PDKS				*i* Sg	**Sg**	**01 25 05.1**	**+1.0**
	comp=Z,1μm,0.1s						
PDKS	**Podkum**	**0.31**	**292**↓	*i*Pg	**Pg**	**01 25 00.4**	**+0.4**
PDKS				*i* Sg	**Sg**	**01 25 05.1**	**+1.0**
VISS	**Visnje**	**0.42**	**250**	*i* Pg	**Pg**	**01 25 02.0**	**-0.2**
VISS				*i* Sg	**Sg**	**01 25 08.0**	**+0.3**
VISS							
	comp=Z,180nm,0.1s						
VISS	**Visnje**	**0.42**	**250**	*i* Pg	**Pg**	**01 25 02.0**	**-0.2**
VISS				*i* Sg	**Sg**	**01 25 08.0**	**+0.3**
	comp=Z,180nm,0.1s						
VISS	**Visnje**	**0.42**	**250**	*i* Pg	**Pg**	**01 25 02.0**	**-0.2**
VISS				*i* Sg	**Sg**	**01 25 08.0**	**+0.3**

BOJS	**Bojanci**	**0.46**	**194**	*i* Pg	**Pg**	**01 25 02.3**	**-0.5**
BOJS				*i*		01 25 08.6	
BOJS	**Bojanci**	**0.46**	**194**	*i* Pg	**Pg**	**01 25 02.3**	**-0.5**
BOJS				*i* Sg	**Sg**	**01 25 08.6**	**-0.2**
VNDS	**Vrh nad Dolski**	**0.52**	**288**↓	*i*Pg	**Pg**	**01 25 04.1**	**+0.2**
VNDS				*e*Sg	**Sg**	**01 25 10.9**	**+0.2**
GROS	**Grobnik**	**0.52**	**7**↓	*i*Pg	**Pg**	**01 25 04.6**	**+0.6**
ZAVS	**Zavodnje**	**0.56**	**332**↓	*i*Pg	**Pg**	**01 25 05.2**	**+0.4**
LJU	**Ljubljana**	**0.62**	**279**↓	*i*Pg	**Pg**	**01 25 06.0**	**+0.1**
LJU				*i* Sg	**Sg**	**01 25 14.4**	**+0.4**
LJU							
	comp=Z,203nm,0.1s						
LJU	**Ljubljana**	**0.62**	**279**↓	*i*Pg	**Pg**	**01 25 06.0**	**+0.1**
LJU				*e*Sg	**Sg**	**01 25 13.9**	**-0.1**
LJU	**Ljubljana**	**0.62**	**279**↓	*i*Pg	**Pg**	**01 25 06.0**	**+0.1**
LJU				*i* Sg	**Sg**	**01 25 14.4**	**+0.4**
CEY	**Cerknica**	**0.72**	**253**	*i* Pg	**Pg**	**01 25 07.4**	**-0.3**
CEY	**Cerknica**	**0.72**	**253**	*e*Pn	**Pn**	**01 25 07.5**	**-2.9**
CEY				*e*Sn	**Sg**	**01 25 18.0**	**+0.9**
PERS	**Pernice**	**0.72**	**344**↓	*i*Pg	**Pg**	**01 25 08.1**	**+0.3**
BISS	**Bistriski jare**	**0.73**	**345**↓	*i*Pg	**Pg**	**01 25 08.3**	**+0.3**
MOZS	**Mozjanca**	**0.76**	**298**	*i* Pg	**Pg**	**01 25 08.5**	**0.0**
KOGS	**Kog**	**0.77**	**49**↓	*i*Pg	**Pg**	**01 25 09.4**	**+0.6**
KOGS				*i* Sg	**Sg**	**01 25 20.1**	**+1.3**
SOKA	**Soboth**	**0.78**	**341**↓	*i*Pg	**Pg**	**01 25 09.1**	**+0.2**
SOKA				↑*i* Sg	**Sg**	**01 25 19.3**	**+0.3**
	comp=Z,84nm,0.2s						
SOKA	**Soboth**	**0.78**	**341**	Pg	**Pg**	**01 25 09.1**	**+0.2**
SOKA				Sg	**Sg**	**01 25 19.3**	**+0.3**
	comp=Z,84nm,0.2s						
OBKA	**Obir**	**0.82**	**314**	*e*Pg	**Pg**	**01 25 09.9**	**+0.2**
	SNR=342						
OBKA				↓*i* Sg	**Sg**	**01 25 20.7**	**+0.3**
	comp=Z,760nm,0.5s						
SISC	**Sisak**	**0.83**	**125**	*e*Pg	**Pg**	**01 25 10.7**	**+0.8**
SISC				Sg	**Sg**	**01 25 22.1**	**+1.5**
KNDS	**Knezji Dol**	**0.83**	**240**	*i* Pg	**Pg**	**01 25 09.4**	**-0.5**
KNDS				*e*Sg	**Sg**	**01 25 20.6**	**-0.1**
KNDS							
	comp=Z,271nm,0.3s						
KNDS	**Knezji Dol**	**0.83**	**240**	*i* Pg	**Pg**	**01 25 09.4**	**-0.6**
KNDS				*e*Sg	**Sg**	**01 25 20.6**	**-0.2**
	comp=Z,271nm,0.3s						
KNDS	**Knezji Dol**	**0.83**	**240**	*i* Pg	**Pg**	**01 25 09.4**	**-0.5**
KNDS				*e*Sg	**Sg**	**01 25 20.6**	**-0.1**
JAVS	**Javornik**	**0.94**	**267**	*i* Pg	**Pg**	**01 25 11.2**	**-0.8**
GORS	**Gorjuse**	**1.05**	**291**	*e*Pg	**Pg**	**01 25 13.5**	**-0.6**
GORS				*e*Sg	**Sg**	**01 25 28.5**	**+0.8**
GORS							
	comp=Z,512nm,0.4s						
GORS	**Gorjuse**	**1.05**	**291**	*e*Pg	**Pg**	**01 25 13.5**	**-0.6**
GORS				*e*Sg	**Sg**	**01 25 28.5**	**+0.8**
	comp=Z,512nm,0.4s						
GORS	**Gorjuse**	**1.05**	**291**	*e*Pg	**Pg**	**01 25 13.5**	**-0.6**
GORS				*e*Sg	**Sg**	**01 25 28.5**	**+0.8**
SKDS	**Skadanscina**	**1.05**	**248**	*i* Pg	**Pg**	**01 25 13.3**	**-0.9**
VOJS	**Vojsko**	**1.06**	**275**	*i* Pg	**Pg**	**01 25 13.6**	**-0.9**
VOJS				*e*Sg	**Sg**	**01 25 29.3**	**+1.0**
CADS	**Cadrg**	**1.20**	**284**	*i* Pg	**Pg**	**01 25 15.8**	**-1.1**
CADS							
	comp=Z,316nm,0.2s						
CADS	**Cadrg**	**1.20**	**284**	*i* Pg	**Pg**	**01 25 15.8**	**-1.1**
	comp=Z,316nm,0.2s						
DRE	**Drenchia**	**1.25**	**281**↑	*i*Pg	**Pg**	**01 25 16.8**	**-1.2**
DRE				*i* Sg	**Sg**	**01 25 34.5**	**+0.4**
ARSA	**Arzberg**	**1.31**	**3**	*e*Pg	**Pg**	**01 25 18.2**	**-0.8**
	SNR=107						
MYKA	**Terra Mystica**	**1.40**	**300**↑	*i*Pg	**Pg**	**01 25 20.1**	**-0.8**
MYKA				↓*i*Sg	**Sg**	**01 25 39.6**	**+0.5**
	comp=Z,136nm,0.4s						
LSR	**Lussari**	**1.41**	**293**↑	*i*Pg	**Pg**	**01 25 20.1**	**-0.9**
LSR				*i* Sg	**Sg**	**01 25 39.2**	**0.0**
COLI	**Coloredo**	**1.43**	**278**↓	*e*Pg	**Pg**	**01 25 20.3**	**-1.0**
COLI				*e*Sg	**Sg**	**01 25 40.4**	**+0.6**
NVLJ	**Novalja**	**1.44**	**195**	*e*Pg	**Pg**	**01 25 21.4**	**0.0**
NVLJ

PSZ	**Piszkesteto**	**3.65**	**56**	⇑*e*Pn	**Pn**	**01 25 49.8**	**-1.0**
PSZ				*e*Sn	**Sn**	**01 26 34.1**	**0.0**
PSZ	**Piszkesteto**	**3.65**	**56**	*e*Pn	**Pn**	**01 25 50.7**	**-0.1**
PSZ				*e*Sn	**Sn**	**01 26 34.1**	**0.0**
PSZ	**Piszkesteto**	**3.65**	**56**	*e*Pn	**Pn**	**01 25 50.7**	**-0.1**
PSZ				*e*Pb	**Pb**	**01 25 58.1**	**-0.7**
PSZ				*e*Pg	**Pg**	**01 26 03.2**	**-0.7**
DIVS	**Divibare**	**3.74**	**118**	*e*Pn	**Pn**	**01 25 52.5**	**+0.5**
DIVS				*e*Sn	**Sn**	**01 26 36.7**	**+0.5**
TREB	**Trebinje**	**3.86**	**146**	*e*Pn	**Pn**	**01 25 54.6**	**+1.0**
TREB				*e*Sn	**Sn**	**01 26 39.2**	**0.0**
DAVA	**Damuels** SNR=5.6	**4.04**	**291**	⇓*i*Pn	**Pn**	**01 25 56.5**	**+0.4**
DAVA				⇓*i*Sn	**Sn**	**01 26 45.1**	**+1.6**
PRU	**Pruhonice**	**4.08**	**352**	*e*PN	**Pn**	**01 25 57.5**	**+0.7**
PRU				*e*PG	**Pg**	**01 26 08.6**	**-3.6**
PRU				*e*SG	**Sg**	**01 27 04.1**	**-1.0**
	comp=Z,27nm,0.6s						
MORC	**Moravsky Berou**	**4.09**	**20**	*e*Pn	**Pn**	**01 25 57.0**	**+0.1**
MORC				*e*Sn	**Sn**	**01 26 42.6**	**-2.3**
MORC	**Moravsky Berou**	**4.09**	**20**	*e*Pn	**Pn**	**01 25 57.0**	**+0.1**
MORC				*e*Sn	**Sn**	**01 26 42.6**	**-2.3**
TUE	**Stuetta**	**4.24**	**279**	*e*Pn	**Pn**	**01 26 00.9**	**+2.0**
TUE	**Stuetta**	**4.24**	**279**	*e*Pn	**Pn**	**01 26 00.9**	**+2.0**
OKC	**Ostrava-Krasne**	**4.31**	**24**	*e*PN	**Pn**	**01 26 00.8**	**+1.0**
OKC				*e*SN	**Sn**	**01 26 48.4**	**-1.8**
ROTZ	**Rotzenmuhle**	**4.39**	**332**	*e*Pn	**Pn**	**01 26 00.9**	**0.0**
DPC	**Dobruska-Polom** comp=Z,16nm,0.7s	**4.45**	**8**	*e*SG	**Sg**	**01 27 16.2**	**-0.6**
MANZ	**Manzenberg**	**4.61**	**332**	*e*Pn	**Pn**	**01 26 04.6**	**+0.7**
PVCC	**Panska Ves**	**4.62**	**353**	*e*PN	**Pn**	**01 26 04.7**	**+0.6**
GRF	**Grafenberg Arr**	**4.69**	**325**	*e*Sg	**Sg**	**01 27 27.3**	**+2.8**
NKC	**Novy Kostel**	**4.72**	**336**	*e*Sg	**Sg**	**01 27 26.6**	**+1.0**
NKC	**Novy Kostel**	**4.72**	**336**	*e*PN	**Pn**	**01 26 05.4**	**-0.1**
WERN	**Wernitzgruen**	**4.79**	**336**	*e*Pn	**Pn**	**01 26 06.3**	**-0.2**
BRG	**Berggiesshubel**	**5.03**	**349**	PN	**Pn**	**01 26 08.3**	**-1.4**
BRG				*i*		01 26 33.2	
BRG	**Berggiesshubel** comp=Z,16nm,0.9s	**5.03**	**349**	SN	**Sn**	**01 27 06.1**	**-1.8**
BRG				SG	**Sg**	**01 27 34.5**	**-0.7**
BRG	**Berggiesshubel** comp=Z,9.7nm,0.9s	**5.03**	**349**	Pn	**Pn**	**01 26 08.3**	**-1.4**
BRG				*i*		01 26 33.2	
BRG				Sn	**Sn**	**01 27 06.1**	**-1.8**
BRG				Sg	**Sg**	**01 27 34.5**	**-0.7**
MOX	**Moxa**	**5.34**	**333**	*e*PN	**Pn**	**01 26 14.1**	**+0.2**
MOX				*e*SN	**Sn**	**01 27 13.6**	**-2.0**
MOX				*e*SG	**Sg**	**01 27 45.0**	**-0.3**
MOX	**Moxa**	**5.34**	**333**	*e*Pn	**Pn**	**01 26 14.0**	**+0.1**
MOX	**Moxa**	**5.34**	**333**	*e*Pn	**Pn**	**01 26 14.1**	**+0.2**
MOX				*e*Sn	**Sn**	**01 27 13.6**	**-2.0**
BFO	**Black Forest** comp=Z,8.6nm,0.7s	**5.38**	**299**	*e*Pn	**Pn**	**01 26 14.5**	**-0.1**
BFO	**Black Forest**	**5.38**	**299**	*e*Pg	**Pg**	**01 26 37.2**	**+0.1**
BFO	**Black Forest** comp=Z,8.6nm,0.7s	**5.38**	**299**	*e*Pn	**Pn**	**01 26 14.5**	**-0.1**
BFO				*e*Pg	**Pg**	**01 26 37.2**	**+0.1**
BFO				*e*Sn	**Sn**	**01 27 15.4**	**-1.3**
CLL	**Collm**	**5.60**	**344**	*e*Pn	**Pn**	**01 26 17.0**	**-0.5**
CLL				*ex*	x	01 26 36.0	
CLL				*e*Sn	**Sn**	**01 27 19.0**	**-3.0**
CLL				*e*Sg	**Sg**	**01 27 52.0**	**-1.6**
	comp=Z,19nm,0.9s						
SBF	**Sospel** comp=Z,6.2nm,0.3s	**6.03**	**253**	*e*Sn	**Sn**	**01 27 27.4**	**-5.3**
SBF	**Sospel** comp=Z,3.1nm,0.3s	**6.03**	**253**	*e*Sn	**Sn**	**01 27 27.4**	**-5.3**
CDF	**Champ du Feu**	**6.07**	**297**	*e*Pn	**Pn**	**01 26 22.0**	**-2.0**
CDF				*e*Sg	**Sg**	**01 28 03.8**	**-4.8**
	comp=Z,12nm,0.8s						
CDF	**Champ du Feu**	**6.07**	**297**	*e*Pn	**Pn**	**01 26 22.0**	**-2.0**
CDF				*e*Sg	**Sg**	**01 28 03.8**	**-4.8**
	comp=Z,6.2nm,0.8s						
ECH	**Echery**	**6.07**	**295**	*e*Pn	**Pn**	**01 26 23.2**	**-0.8**
ECH	**Echery**	**6.07**	**295**	*e*Pn	**Pn**	**01 26 23.2**	**-0.9**
LPL	**La Plagne**	**6.09**	**269**	*e*P	**Pn**	**01 26 27.2**	**+2.9**
HINF	**Hinteralfeld**	**6.15**	**291**	*e*Pn	**Pn**	**01 26 24.3**	**-0.9**
HINF				*e*Sn	**Sn**	**01 27 30.1**	**-5.6**
	comp=Z,5.8nm,0.5s						
HINF	**Hinteralfeld**	**6.15**	**291**	*e*Pn	**Pn**	**01 26 24.3**	**-0.9**
HINF				*e*Sn	**Sn**	**01 27 30.1**	**-5.6**
	comp=Z,2.9nm,0.5s						
MBDF	**Montbardon**	**6.21**	**262**	*e*Pn	**Pn**	**01 26 24.9**	**-1.0**
MBDF				*e*Sn	**Sn**	**01 27 31.7**	**-5.4**
	comp=Z,5.3nm,0.6s						
MBDF	**Montbardon**	**6.21**	**262**	*e*Pn	**Pn**	**01 26 24.9**	**-1.0**
MBDF				*e*Sn	**Sn**	**01 27 31.7**	**-5.4**
	comp=Z,2.7nm,0.6s						
CABF	**La Chapelle**	**6.49**	**279**	*e*Pn	**Pn**	**01 26 28.7**	**-1.1**
HAU	**Haudompre**	**6.53**	**292**	*e*Pn	**Pn**	**01 26 28.6**	**-1.7**
HAU				*e*Sn	**Sn**	**01 27 39.0**	**-6.0**
	comp=Z,8.7nm,0.5s						
HAU	**Haudompre**	**6.53**	**292**	*e*Pn	**Pn**	**01 26 28.6**	**-1.7**
HAU				*e*Sn	**Sn**	**01 27 39.0**	**-6.0**
	comp=Z,4.3nm,0.5s						
FRF	**La Foret Royal**	**6.68**	**252**	*e*Pn	**Pn**	**01 26 31.0**	**-1.4**
FRF				*e*Sn	**Sn**	**01 27 42.9**	**-5.7**
	comp=Z,2.0nm,0.4s						
FRF	**La Foret Royal**	**6.68**	**252**	*e*Pn	**Pn**	**01 26 31.0**	**-1.4**
FRF				*e*Sn	**Sn**	**01 27 42.9**	**-5.7**
	comp=Z,1.0nm,0.4s						
ORIF	**Oris-en-Rattie**	**6.78**	**265**	*e*P	**Pn**	**01 26 36.2**	**+2.4**
LMR	**La Mourre**	**6.86**	**251**	*e*Pn	**Pn**	**01 26 32.6**	**-2.3**
VIVF	**Saint-Julien-l**	**7.63**	**266**	*e*Pn	**Pn**	**01 26 44.6**	**-0.9**
SMF	**Signal de Mont**	**8.04**	**279**	*e*P	**Pn**	**01 26 54.0**	**+2.9**
LOR	**Lormes**	**8.06**	**284**	*e*Pn	**Pn**	**01 26 49.3**	**-2.1**
LOR				*e*Sn	**Sn**	**01 28 15.7**	**-7.0**
	comp=Z,1.5nm,0.3s						
LOR	**Lormes**	**8.06**	**284**	*e*Pn	**Pn**	**01 26 49.3**	**-2.1**
LOR				*e*Sn	**Sn**	**01 28 15.7**	**-7.0**
	comp=Z,0.8nm,0.3s						
AVF	**Avril sur Loir**	**8.38**	**280**	*e*Pn	**Pn**	**01 26 53.7**	**-2.0**
LASF	**Ste Croix**	**8.39**	**261**	*e*Pn	**Pn**	**01 26 54.1**	**-1.8**
TCF	**Toulx Ste Croi**	**9.18**	**277**	*e*Pn	**Pn**	**01 27 04.8**	**-1.8**

MOS 29 01:29:35.9±1.4, 4355N×4571E, h19km, mb3.7/1, Error ellipse: s-maj=39.7km s-min=18.5km az=160.9, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKR	**Terskaya**	**0.73**	**284**	*e*Pg	Pg	01 29 50.4	+0.1
TRKR				*e*Sg	Sg	01 30 01.9	+1.9
SNJR	**Sundja**	**0.81**	**234**	*e*Pg	Pg	01 29 52.8	+1.0
SNJR				*e*Sg	Sg	01 30 05.1	+2.5
KMSR	**Komsomolskaya**	**1.05**	**261**	*e*Pg	Pg	01 29 57.5	+1.3
KMSR				*e*Sg	Sg	01 30 13.3	+3.3
PRTR	**Priterechnaya**	**1.06**	**281**	*i* Pg	Pg	01 29 56.8	+0.4
PRTR				*i* Sg	Sg	01 30 12.0	+1.7
ARNR	**Ardon**	**1.10**	**251**	*e*Pg	Pg	01 29 57.9	+0.6
ARNR				*e*Sg	Sg	01 30 14.1	+2.3
LACR	**Lac**	**1.26**	**235**	*i* Pg	Pg	01 29 59.8	-0.5
LACR				*i* Sg	Sg	01 30 17.3	+0.5

*MOS **29** 01:30:19.8±0.5, 4367N×4628E, h17km, mb4.1/1, Error ellipse: s-maj=42.8km s-min=11.6km az=158.7*
*ISCJB **29** 01:30:24.4±1.1, 4375N±007×4571E±010, h10km±7km, Error ellipse: s-maj=15.4km s-min=6.8km az=43.0*
*CSEM **29** 01:30:40.0±12.0, 4236N×49.15E, h0km, mb3.2, Error ellipse: s-maj=164.0km s-min=104.0km az=12.0, After NNC*

ISC 29 01:30:26.2±1.2, 4370N±007×4563E±010, h10km±8km, n16, σ0s83/21, 5C-8D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKR	**Terskaya**	**0.65**	**272**	⇑*i* PG	**Pg**	**01 30 40.1**	**+1.3**
SNJR	**Sundja**	**0.87**	**224**	⇓*i* PG	**Pg**	**01 30 42.5**	**-0.4**
PRTR	**Priterechnaya**	**0.98**	**273**	⇑*i* PG	**Pg**	**01 30 45.8**	**+0.8**
KMSR	**Komsomolskaya**	**1.03**	**252**	⇓*i* PG	**Pg**	**01 30 45.3**	**-0.6**
ARNR	**Ardon**	**1.11**	**243**	⇑*i* PG	**Pg**	**01 30 47.0**	**-0.5**
KORR	**Kora**	**1.29**	**242**	⇑*i* PN	**Pn**	**01 30 49.6**	**-0.7**
LACR	**Lac**	**1.31**	**229**	⇑*i* PN	**Pn**	**01 30 48.8**	**-1.7**
LSNR	**Lesken**	**1.39**	**253**	⇓*i* PN	**Pn**	**01 30 51.8**	**+0.2**
ZEI	**Tsey**	**1.57**	**234**	⇓*i* PN	**Pn**	**01 30 52.5**	**-1.6**
ONI	**Oni**	**1.95**	**236**	P	**Pn**	**01 30 59.4**	**0.0**
ONI				S	**Sn**	**01 31 24.7**	**+0.8**
GOR	**Gori**	**2.05**	**214**	P	**Pn**	**01 31 00.6**	**-0.1**
GOR				S	**Sn**	**01 31 26.7**	**+0.4**
TBLG	**Delisi**	**2.08**	**199**	P	**Pn**	**01 31 01.3**	**+0.2**
TBLG				S	**Sn**	**01 31 27.4**	**+0.4**
MTA	**Mtatsminda**	**2.10**	**197**	P	**Pn**	**01 31 01.0**	**-0.4**
DGRG	**David-gareji**	**2.26**	**185**	S	**Pn**	**01 31 04.9**	**+1.3**
AKTO	**Aktyubinsk**	**10.80**	**47**	⇓P	**Pn**	**01 33 05.3**	**+4.6**
	0.6nm,1.4s						
AKTO				⇓S	**Sn**	**01 35 01.1**	**-0.4**
	0.5nm,1.2s						
AB31	**Akbulak array**	**11.32**	**56**	⇓P	**Pn**	**01 33 08.7**	**+0.8**
	0.2nm,0.3s,baz=249,slow=12,SNR=12						
AB31				⇓S	**Sn**	**01 35 04.7**	**-10**
	1.6nm,0.8s,baz=231,slow=25,SNR=5.8						

MOS 29 01:32:39.2±0.5, 4352N×4560E, h17km, mb3.7/1, 1C-1D, Error ellipse: s-maj=39.6km s-min=14.8km az=152.9, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.73**	**232**	*e*PG	Pg	01 32 54.4	+0.9
SNJR				*e*S	Sb	01 33 06.4	+3.2
KMSR	**Komsomolskaya**	**0.97**	**262**	*e*PG	Pg	01 32 57.8	-0.1
KMSR				*e*S	Sb	01 33 12.7	+2.8
PRTR	**Priterechnaya**	**0.99**	**284**	⇑*i* PG	Pg	01 32 57.6	-0.8
PRTR				*e*S	Sb	01 33 12.0	+1.4
LACR	**Lac**	**1.18**	**235**	⇓*i* PG	Pg	01 33 00.6	-1.4
LACR				*e*S	Sb	01 33 17.9	+1.8
KORR	**Kora**	**1.20**	**250**	*e*PG	Pg	01 33 00.8	-1.6
KORR				*e*S	Sb	01 33 18.6	+1.9
LSNR	**Lesken**	**1.33**	**260**	*e*PG	Pg	01 33 03.1	-1.7
LSNR				*e*S	Sn	01 33 22.0	+1.9
ZEI	**Tsey**	**1.46**	**240**	*e*PG	Pg	01 33 04.2	-3.0
ZEI				*e*S	Sn	01 33 24.7	+1.4

JMA 29 01:38:29.6±0.3, 4364N×14768E, h17km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.44**	**260**	P	Pn	01 38 55.3	+0.5
NEM2				*e*S	Sn	01 39 13.8	+0.5
JRA	**Rausu**	**1.88**	**280**	*e*S	Sn	01 39 25.5	+1.4
JAK	**Akkeshi**	**2.27**	**255**	P	Pn	01 39 07.3	+1.0
JAK				*e*S	Sn	01 39 35.1	+1.3
JAR	**Ashorobuto**	**2.87**	**264**	P	Pn	01 39 15.9	+1.4
JAR				*e*S	Sn	01 39 51.5	+2.9
JCH	**Churui**	**3.32**	**254**	P	Pn	01 39 23.0	+2.2
JNBK	**Urakawa-nobuka**	**3.86**	**251**	P	Pn	01 39 30.1	+1.9

*ISCJB **29** 01:40:44.1±0.7, 218N±0.1×1434E±02, h150km, mb4.0/9, Error ellipse: s-maj=25.9km s-min=14.9km az=177.4*
*IDC **29** 01:40:47.0±12.0, 2182N×14343E, h161km±115km, mb3.6/6, mb1 3.8/6, mb1mx3.3/22, mbtmp3.6/6, Error ellipse: s-maj=38.3km s-min=20.4km az=70.0*
*NEIC **29** 01:40:49.9±6.8, 2180N×14343E, h190km±62km, mb4.1/4, Error ellipse: s-maj=24.2km s-min=12.0km az=65.0*

ISC 29 01:40:45.7±0.7, 218N±01×1435E±02, h150km, n14, σ0s53/11, mb4.0/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**30.69**	**243**	*e*P	**P**	**01 46 47.3**	**+0.8**
COEN	**Coen**	**35.56**	**181**	*e*P	**P**	**01 47 28.8**	**+0.1**
	6.4nm,1.3s,mb4.1						
CTAO	**Charters Tower**	**41.74**	**176**	*e*P	**P**	**01 48 19.6**	**-0.5**
	9.0nm,1.4s,mb4.2						
WRA	**Warramunga Arr**	**42.47**	**193**	P	**P**	**01 48 25.8**	**-0.3**
	0.4nm,0.4s,mb3.4,baz=16,slow=9.1,SNR=3.2						
KURK	**Kurchatov**	**57.58**	**317**	P	**P**	**01 50 19.9**	**+0.3**
	2.7nm,0.6s,mb4.2,baz=92,slow=7.6,SNR=15						
KURK	**Kurchatov**	**57.58**	**317**	*e*P	**P**	**01 50 19.2**	**-0.4**
	1.2nm,0.6s,mb3.9						
BVAR	**Bovovoye Array**	**62.76**	**319**	P	**P**	**01 50 55.0**	**+0.2**
	2.3nm,0.4s,mb4.3,baz=99,slow=6.7,SNR=14						
BRVK	**Borovoye**	**62.83**	**319**	*e*P	**P**	**01 50 54.8**	**-0.5**
	3.2nm,0.5s,mb4.4						
YKA	**Yellowknife Ar**	**76.21**	**28**	P	**P**	**01 52 17.1**	**0.0**
	1.0nm,0.4s,mb3.8,baz=294,slow=6.0,SNR=5.0						
ARCES	**ARCESS Array B**	**78.89**	**342**	P	**P**	**01 52 31.2**	**-0.7**
	2.1nm,0.9s,mb3.8,baz=54,slow=9.1,SNR=4.4						
NVAR	**Mina Array Bea**	**82.84**	**52**	P	**P**	**01 52 54.4**	**+0.9**
	0.8nm,0.6s,mb3.6,baz=270,slow=7.6,SNR=6.2						
TORD	**Torodi Ar. Bea**	**128.89**	**309**	PKP	PKPdf	01 59 35.5	-0.9
	0.5nm,1.0s,baz=61,slow=2.0,SNR=5.7						
PLCA	**Paso Flores**	**145.62**	**131**	PKPbc	PKPbc	02 00 07.1	+0.3
	0.9nm,0.6s,baz=285,slow=2.3,SNR=2.8						
LPAZ	**La Paz**	**149.64**	**85**	PKPbc	PKPbc	02 00 18.6	+0.3
	1.0nm,0.6s,baz=333,slow=2.3,SNR=5.7						

IDC 29 01:54:07.7±4.8, 1757S×17506W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/17, mbtmp4.1/4, Error ellipse: s-maj=165.3km s-min=94.3km az=167.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.65**	**260**	P	P	02 01 16.8	+0.5
	0.9nm,0.3s,baz=95,slow=12,SNR=2.1						
STKA	**Stephens Creek**	**41.59**	**242**	P	P	02 01 57.5	0.0
	2.9nm,0.9s,baz=81,slow=13,SNR=3.2						
WRA	**Warramunga Arr**	**47.83**	**259**	P	P	02 02 46.8	-0.6
	0.7nm,0.4s,baz=96,slow=6.9,SNR=4.3						
ASAR	**Alice Springs**	**47.95**	**254**	P	P	02 02 48.2	-0.1
	2.8nm,0.6s,baz=87,slow=8.9,SNR=55						
ASAR				PcP	PcP	02 04 16.7	-0.1
	0.3nm,0.5s,baz=107,slow=3.8,SNR=4.8						

KRSC 29 02:00:07.1±1.2, 5153N×16096E, h41km±41km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.76**	**302**	*e*P	Pn	02 00 37.5	+2.4
RUS				*i* S	Sn	02 00 59.6	+3.3
PET	**Petropavlovsk**	**2.06**	**317**	P	Pn	02 00 42.1	+2.9
PET				*i* S	Sn	02 01 07.7	+4.1
AVH	**Avacha**	**2.21**	**323**	*e*P	Pn	02 00 44.2	+3.0
AVH				*i* S	Sn	02 01 10.9	+3.7
GNL	**Ganaly**	**2.84**	**321**	*e*P	Pn	02 00 53.9	+4.4
GNL				*i* S	Sn	02 01 27.9	+5.0
KMNR	**Kamenistaya**	**4.26**	**354**	*e*P	Pn	02 01 13.9	+4.6
KMNR				*i* S	Sn	02 02 03.3	+5.7
KBTR	**Krutoberegovo**	**4.81**	**12**	*e*P	Pn	02 01 18.9	+2.0

*IDC **29** 02:25:44.6±1.1, 330N×12465E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.7/17, mbtmp3.8/3, Error ellipse: s-maj=116.6km s-min=27.9km az=68.0*
*ISCJB **29** 02:25:48.2±1.3, 33N±01×1245E±02, h33km, mb3.9/3, Error ellipse: s-maj=35.1km s-min=20.3km az=1.3*

ISC 29 02:25:50.7±1.3, 33N±01×1245E±02, h35km, n6, σ0s27/4, mb3.9/3, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJI	**Sawahan**	**16.74**	**229**	P	**Pn**	**02 29 42.6**	**0.0**
	48nm,0.6s						
ASAR	**Alice Springs**	**28.28**	**162**	P	**P**	**02 31 41.0**	**0.0**
	1.8nm,0.7s,mb3.8,baz=331,slow=13,SNR=4.8						
SONM	**Songino Array**	**47.07**	**343**	P	**P**	**02 34 18.8**	**-0.2**
	0.9nm,0.8s,mb3.7,baz=155,slow=7.5,SNR=4.8						
MKAR	**Makanchi Array**	**56.69**	**326**	P	**P**	**02 35 30.9**	**+0.2**
	0.8nm,0.5s,mb4.0,baz=126,slow=8.2,SNR=5.5						
TORD	**Torodi Ar. Bea**	**120.93**	**287**	PKP	PKPdf	02 44 39.0	-1.6
	0.2nm,0.4s,baz=73,slow=1.6,SNR=11						
TXAR	**Lajitas Array**	**123.65**	**51**	PKP	PKPdf	02 44 43.8	-1.6
	0.1nm,0.6s,baz=341,slow=1.9,SNR=2.4						

*BJI **29** 02:27:12.9, 740S×12257E, h621km, mB4.8, mb4.7*
*MOS **29** 02:27:13.9±0.8, 712S×12238E, h595km, mb4.4/12, Error ellipse: s-maj=17.8km s-min=8.8km az=109.8*
*IDC **29** 02:27:14.8±0.5, 723S×12235E, h587km±5km, mb3.9/17, mb1 3.9/21, mb1mx3.9/24, mbtmp3.9/21, Error ellipse: s-maj=12.1km s-min=6.5km az=69.0*
*ISCJB **29** 02:27:14.3±0.3, 719S±004×12239E±005, h604km±4km, mb4.4/44, Error ellipse: s-maj=8.5km s-min=4.9km az=153.6*
*NEIC **29** 02:27:14.6±0.4, 722S×12231E, h590km±5km, mb4.4/25, Error ellipse: s-maj=8.1km s-min=4.1km az=68.0*

*DJA **29** 02:27:19, 745S×121.98E, h500km, MLv4.7/7*

ISC 29 02:27:15.0±0.3, 723S±004×12237E±005, h594km±4km, n114, σ0s75/108, mb4.4/44, 10C-2D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSI	**Bau Bau**	**1.74**	**7**	P	**P**	**02 28 28.8**	**+1.1**
	0.0nm,0.0s						
BATI	**Baumata**	**3.23**	**157**	P	**P**	**02 28 34.6**	**-0.3**
	0.0nm,0.0s						
BATI	**Baumata**	**3.23**	**157**	P	**P**	**02 28 35.3**	**+0.4**
	821nm,0.3s,baz=27,slow=0.9,SNR=496						
BATI				S	**S**	**02 29 38.9**	**-1.2**
	207nm,0.3s,baz=252,slow=23,SNR=9.8						
KDI	**Kendari**	**3.26**	**4**	P	**P**	**02 28 35.4**	**+0.2**
	0.0nm,0.0s						
KAPI	**Kappang**	**3.41**	**310**	P	**P**	**02 28 35.7**	**-0.3**
	18nm,0.3s,baz=146,slow=4.0,SNR=79						
KAPI				S	**S**	**02 29 41.9**	**-0.2**
	baz=198,slow=20,SNR=4.0						
PCI	**Palu**	**6.77**	**338**	P	**P**	**02 29 03.7**	**+1.1**
	184nm,0.8s						
AAI	**Ambon**	**6.78**	**59**	P	**P**	**02 29 04.0**	**+1.2**
	437nm,0.7s						
AAI	**Ambon**	**6.78**	**59**	P	**P**	**02 29 04.1**	**+1.3**
	629nm,0.7s						
KHKI	**Kahang-Kahang**	**6.79**	**260**	P	**P**	**02 29 02.8**	**0.0**
	57nm,1.1s						
SWI	**Sorong**	**10.89**	**55**	P	**P**	**02 29 42.5**	**0.0**
	356nm,0.7s						
FITZ	**Fitzroy Crossi**	**11.27**	**164**	⇑*i* P	**P**	**02 29 45.8**	**-0.5**
	56nm,0.4s						
FITZ	**Fitzroy Crossi**	**11.27**	**164**	P	**P**	**02 29 45.9**	**-0.4**
	9.6nm,0.3s,baz=351,slow=8.6,SNR=317						
FITZ				S	**S**	**02 31 54.5**	**+3.9**
	1.0nm,0.3s,baz=180,slow=20,SNR=5.8						
KAKA	**Kakadu**	**11.32**	**120**	*e*P	**P**	**02 29 46.3**	**-0.5**
	12nm,0.5s						
BJII	**Banjamegara**	**12.56**	**269**	P	**P**	**02 29 58.3**	**-1.1**
	49nm,1.1s						
MBWA	**Marble Bar**	**14.09**	**190**	*e*P	**P**	**02 30 13.3**	**-1.4**
	40nm,0.7s						
KKM	**Kota Kinabalu**	**14.54**	**335**	*e*P	**P**	**02 30 17.7**	**-1.5**
KSM	**Kuching**	**14.81**	**305**	*e*P	**P**	**02 30 21.7**	**-0.1**
TPI	**Tanjungpandan**	**15.31**	**286**	P	**P**	**02 30 26.8**	**+0.4**
	66nm,0.7s						
SKJI	**Sukabumi**	**15.69**	**270**	P	**P**	**02 30 30.1**	**+0.2**
	295nm,0.7s						
PPBI	**Pangkal Pinang**	**16.94**	**286**	P	**P**	**02 30 43.7**	**+2.4**
	50nm,0.7s						
WRA	**Warramunga Arr**	**17.16**	**139**	P	**P**	**02 30 44.3**	**+1.0**
	4.5nm,0.3s,baz=315,slow=11,SNR=70						
WRA				S	**S**	**02 33 31.0**	**-1.7**
	baz=314,slow=15,SNR=3.0						
WRA	**Warramunga Arr**	**17.16**	**139**	*i* P	**P**	**02 30 44.2**	**+1.0**
WRA				pmax	pmax		
	comp=Z,14nm,0.4s						
WRAB	**Tennant Creek**	**17.16**	**139**	*c i* P	**P**	**02 30 44.4**	**+1.2**
WRAB	**Tennant Creek**	**17.16**	**139**	*e*P	**P**	**02 30 44.1**	**+0.9**
	comp=Z,25nm,0.7s						
WB2	**Warramunga Arr**	**17.17**	**139**	⇓*i* P	**P**	**02 30 44.3**	**+1.0**
WB2	**Warramunga Arr**	**17.17**	**139**	*e*P	**P**	**02 30 44.0**	**+0.7**
ASAR	**Alice Springs**	**19.75**	**147**	P	**P**	**02 31 07.2**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=326,slow=9.0,SNR=65						
ASAR				S	**S**	**02 34 14.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=344,slow=26,SNR=4.2						
ASAR				PcP	PcP	02 34 56.6	0.0
	comp=Z,0.2nm,0.3s,baz=320,slow=1.5,SNR=4.9						
ASAR	**Alice Springs**	**19.75**	**147**	P	**P**	**02 31 07.2**	**+0.5**
ASAR				S	**S**	**02 34 14.2**	**+0.1**
FORT	**Forrest**	**24.03**	**168**	*e*P	**P**	**02 31 45.2**	**+0.3**
	comp=Z,1.4nm,0.6s,mb3.8						
KLBR	**Kellerberrin**	**24.62**	**189**	*e*P	**P**	**02 31 49.2**	**-0.9**
	comp=Z,56nm,1.8s,mb4.9						
NWAO	**Narrogin (SRO)**	**26.02**	**190**	P	**P**	**02 32 02.2**	**-0.1**
	comp=Z,5.8nm,0.5s,mb4.5,baz=26,slow=7.0,SNR=15						
NWAO	**Narrogin (SRO)**	**26.02**	**190**	P	**P**	**02 32 02.2**	**-0.1**
QIZ	**Qiongzhong**	**28.86**	**335**	*e*P	**P**	**02 32 26.9**	**-0.4**
	comp=Z,16nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**30.38**	**146**	⇓*i* P	**P**	**02 32 41.2**	**+1.0**
	comp=Z,3.8nm,0.3s,mb4.5						
STKA	**Stephens Creek**	**30.38**	**146**	P	**P**	**02 32 41.3**	**+1.1**
	comp=Z,6.1nm,0.4s,mb4.6,baz=314,slow=9.3,SNR=18						
STKA				S	**S**	**02 37 00.0**

BOD	**Bodaibo**	**65.18**	**355**	*e*P		**P**	**02 36 58.6**	**+0.3**
BOD				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.3							
TKM2	**Tokmak 2**	**65.52**	**324**	*e*P		**P**	**02 37 00.4**	**-0.4**
UCH	**Uchtor**	**65.74**	**323**	*e*P		**P**	**02 37 02.5**	**+0.3**
	comp=Z,2.8nm,0.9s,mb3.7							
EKS2	**Erkin-Say**	**66.44**	**323**	*e*P		**P**	**02 37 06.5**	**+0.1**
	comp=Z,3.1nm,0.8s,mb3.8							
PETK	**Petropavlovsk-**	**67.15**	**22**	P		**P**	**02 37 11.8**	**+1.2**
	comp=Z,5.3nm,0.5s,mb4.2,baz=238,slow=2.5,SNR=20							
PETK	**Petropavlovsk-**	**67.15**	**22**	P		**P**	**02 37 11.8**	**+1.2**
ZALV	**Zalesovo Beam**	**68.64**	**337**	P		**P**	**02 37 18.6**	**-1.0**
	comp=Z,8.6nm,0.4s,mb4.5,baz=135,slow=5.0,SNR=28							
KURK	**Kurchatov**	**68.95**	**332**	*e*P		**P**	**02 37 20.9**	**-0.6**
KURK				pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.2							
KURK	**Kurchatov**	**68.95**	**332**	*e*P		**P**	**02 37 20.9**	**-0.7**
	comp=Z,5.8nm,0.6s,mb4.2							
YAK	**Yakutsk**	**69.28**	**4**	*e*P		**P**	**02 37 22.7**	**-0.6**
YAK				pmax		pmax		
	comp=Z,31nm,1.0s,mb4.7							
YAK	**Yakutsk**	**69.28**	**4**	*e*P		**P**	**02 37 23.2**	**-0.1**
	comp=Z,44nm,0.7s,mb5.0							
MAW	**Mawson**	**72.04**	**200**	*e*P		**P**	**02 37 39.8**	**+0.3**
	comp=Z,4.0nm,0.9s,mb4.0							
MAW	**Mawson**	**72.04**	**200**	P		**P**	**02 37 39.5**	**0.0**
	comp=Z,5.9nm,0.9s,mb4.1,baz=87,slow=7.1,SNR=5.5							
MAW	**Mawson**	**72.04**	**200**	*e*P		**P**	**02 37 39.8**	**+0.3**
MAW				pmax		pmax		
	comp=Z,4.0nm,0.9s							
SEY	**Seymchan**	**73.62**	**14**⇑	*e*P		**P**	**02 37 49.4**	**+0.9**
OPO	**Ambohidratompo**	**73.72**	**253**	P		**P**	**02 37 50.6**	**+0.5**
	comp=Z,7.9nm,0.7s,mb4.4,baz=89,slow=2.9,SNR=17							
BRVK	**Borovoye**	**74.43**	**330**	*e*P		**P**	**02 37 53.9**	**+0.6**
BRVK				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.0							
BRVK	**Borovoye**	**74.43**	**330**	*e*P		**P**	**02 37 53.9**	**+0.6**
	comp=Z,4.0nm,0.8s,mb4.0							
TIXI	**Tiksi**	**78.83**	**2**⇑	*e*P		**P**	**02 38 16.1**	**-0.8**
TIXI				pmax		pmax		
	comp=Z,10.0nm,1.1s,mb4.1							
ARU	**Arti**	**81.99**	**330**⇑	*e*P		**P**	**02 38 32.5**	**-1.0**
ARU				pmax		pmax		
	comp=Z,20nm,2.9s,mb4.1							
QSPA	**South Pole Qui**	**82.76**	**180**	P		**P**	**02 38 37.7**	**+0.7**
	comp=Z,3.1nm,0.5s,mb4.1,baz=25,slow=4.5,SNR=10							
KMBO	**Kilima Mbogo**	**85.02**	**269**	P		**P**	**02 38 49.6**	**0.0**
	comp=Z,1.8nm,0.9s,mb3.7,baz=61,slow=9.4,SNR=4.8							
KMBO	**Kilima Mbogo**	**85.02**	**269**⇑	*e*P		**P**	**02 38 51.7**	**+2.2**
KMBO	**Kilima Mbogo**	**85.02**	**269**	*e*P		**P**	**02 38 49.6**	**+0.1**
	comp=Z,2.3nm,0.6s,mb4.0							
LSZ	**Lusaka**	**92.13**	**254**	P		**P**	**02 39 22.8**	**+0.2**
	comp=Z,2.5nm,0.6s,mb4.5,baz=89,slow=5.4,SNR=8.6							
BOSA	**Boshof**	**92.78**	**241**	P		**P**	**02 39 25.4**	**0.0**
	comp=Z,2.6nm,0.7s,mb4.4,baz=358,slow=20,SNR=5.6							
BOSA	**Boshof**	**92.78**	**241**	*e*P		**P**	**02 39 25.3**	**-0.1**
BOSA				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.7							
BOSA	**Boshof**	**92.78**	**241**	*e*P		**P**	**02 39 25.3**	**-0.1**
	comp=Z,5.9nm,0.8s,mb4.7							
SNAA	**Sanae**	**93.58**	**195**	*e*P		**P**	**02 39 28.4**	**+0.3**
SNAA	**Sanae**	**93.58**	**195**	*e*P		**P**	**02 39 27.9**	**-0.2**
SNAA				pmax		pmax		
	comp=Z,2.0nm,0.5s							
SNAA	**Sanae**	**93.58**	**195**	*e*P		**P**	**02 39 27.9**	**-0.2**
	comp=Z,2.4nm,0.5s,mb4.6							
VNA2	**Neumayer--Watz**	**95.20**	**195**	*e*P		**P**	**02 39 36.0**	**+0.5**
	baz=130,slow=4.4							
VNA3	**Neumayer Olymp**	**95.55**	**194**	*e*P		**P**	**02 39 37.2**	**+0.2**
NVAR	**Mina Array Bea**	**117.32**	**50**	PKP	PKPdf		02 44 55.4	+1.2
	comp=Z,0.7nm,0.9s,baz=260,slow=5.4,SNR=3.5							
TOA0	**Torodi Ar. Sit**	**121.42**	**281**	*e*PKPdf	PKPdf		02 45 02.1	-0.6
TORD	**Torodi Ar. Bea**	**121.42**	**281**	PKP	PKPdf		02 45 02.4	-0.3
	comp=Z,3.0nm,0.6s,baz=50,slow=1.8,SNR=51							
ULM	**Lac du Bonnet**	**126.59**	**30**	*e*PKPdf	PKPdf		02 45 10.7	-0.9
DBIC	**Dimbokro**	**127.63**	**273**	PKP	PKPdf		02 45 15.1	+0.4
	comp=Z,4.3nm,1.0s,baz=90,slow=5.1,SNR=6.7							
DBIC	**Dimbokro**	**127.63**	**273**	*e*PKPdf	PKPdf		02 45 14.8	+0.1
PLCA	**Paso Flores**	**130.82**	**167**	*e*PKIKP	PKPdf		02 45 20.0	0.0
TXAR	**Lajitas Array**	**131.48**	**57**	PKP	PKPdf		02 45 23.4	+1.9
	comp=Z,0.1nm,0.4s,baz=352,slow=3.6,SNR=2.6							
TXAR				SKPbc	SKPbc		02 47 53.4	+1.1
	comp=Z,1.6nm,0.7s,baz=250,slow=2.5,SNR=19							
ELN	**Prospectdale**	**143.47**	**32**	*e*PKPdf	PKPdf		02 45 41.6	-1.7
CPUP	**Villa Florida**	**146.64**	**180**	*e*PKPbc	PKPbc		02 45 52.1	+0.4
	comp=Z,3.3nm,0.7s,baz=121,slow=1.7,SNR=16							
CPUP	**Villa Florida**	**146.64**	**180**	*e*PKPbc	PKPbc		02 45 51.4	-0.3
LPAZ	**La Paz**	**154.43**	**156**	PKPbc	PKPbc		02 46 11.4	+1.4
	comp=Z,0.5nm,0.8s,baz=225,slow=1.4,SNR=3.3							
LPAZ				PKPab	PKPab		02 46 29.2	+1.9
	comp=Z,2.3nm,0.4s,baz=110,slow=1.7,SNR=17							
LPAZ	**La Paz**	**154.43**	**156**	PKPbc	PKPbc		02 46 11.4	+1.4
LPAZ				*e*PKPab	PKPab		02 46 29.0	+1.7

*SSS **29** 02:44:18.4, 1362N×9071W, h61km, MD3.4, ML3.8*
*GCG **29** 02:44:20.2, 1369N×9081W, h50km, MD3.8*
CASC 29 02:44:18.5±1.5, 1356N×9075W, h45km±45km, MD4.0, ML3.7, 1C-4D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.84**	**9**	*e*P	Pn	02 44 34.7	+0.7
PCG				*e*S	Sn	02 44 47.6	+2.3
FUG	**Fuego 3**	**0.89**	**354**	*e*P	Pn	02 44 35.0	+0.4
FG6		**1.00**	**352**	*e*P	Pn	02 44 36.8	+0.6
FG6				*e*S	Sn	02 44 50.0	+0.8
NBG	**Las Nubes**	**1.09**	**21**	*e*P	Pn	02 44 39.2	+1.8
RTR	**El Retiro**	**1.12**	**72**⇓	*i*P	x	02 44 38.2	
RTR				*e*S	x	02 44 53.0	
SBLS	**San Blas**	**1.13**	**76**⇓	*i*P	x	02 44 38.0	
SBLS				*e*S	x	02 44 53.3	
JAT	**Jato**	**1.15**	**311**	*e*P	Pn	02 44 39.4	+1.2
JAT				*e*S	Sn	02 44 51.8	-0.9
SNJE	**San Jose**	**1.15**	**74**⇓	*i*P	x	02 44 38.4	
SNJE				*e*S	x	02 44 54.0	
RBDL	**Robledal**	**1.17**	**62**⇓	*i*P	x	02 44 39.0	
RBDL				*e*S	x	02 44 54.7	
BOQS	**Boqueron**	**1.44**	**83**⇑	*e*P	x	02 44 42.4	
BOQS				*e*S	x	02 45 01.5	
SNET	**Serv Nac Est T**	**1.48**	**85**	*e*P	x	02 44 43.6	
SNET				*e*S	x	02 45 01.9	
SNET				*i*		02 45 03.3	
	comp=Z,1μm,0.2s						
MTO2	**Montecristo 2**	**1.58**	**58**	*e*P	x	02 44 44.2	
MTO2				*e*S	x	02 45 04.4	
LFRS	**El Faro**	**1.64**	**88**	*e*P	x	02 44 45.7	
LFRS				*e*S	x	02 45 06.1	
LBRS	**Las Brisas**	**1.67**	**84**	*e*P	x	02 44 45.3	
LBRS				*e*S	x	02 45 06.0	
SNVI	**San Vicente**	**1.86**	**88**	*e*P	x	02 44 48.2	
SNVI				*e*S	x	02 45 11.6	
VSM	**San Miguel**	**2.41**	**93**	*e*P	x	02 44 56.2	
VSM				*e*S	x	02 45 24.9	

*IDC **29** 03:26:19.6±7.2, 3555N×14092E, h41km±58km, mb3.2/3, mb1 3.4/4, mb1mx3.2/23, mbtmp3.2/4, Error ellipse: s-maj=68.0km s-min=28.7km az=60.0*
*ISCJB **29** 03:26:21.8±0.7, 3538N±005×14054E±008, h65km±4km, mb3.5/3, Error ellipse: s-maj=10.9km s-min=6.8km az=154.5*
*JMA **29** 03:26:22.7±0.2, 3542N×14046E, h54km±2km, M2.9*
ISC 29 03:26:22.9±0.6, 3539N±004×14053E±007, h58km±5km, n15, σ0°80/22, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.27**	**277**	P	**Pn**	**03 26 32.1**	**-0.4**
JCN				*e*S	**Sn**	**03 26 39.5**	**0.0**
KTR	**Katsuura**	**0.29**	**217**	P	**Pn**	**03 26 31.9**	**-0.8**
KTR				S	**Sn**	**03 26 39.0**	**-0.8**
CHOJ	**Chosi**	**0.42**	**40**	P	**Pn**	**03 26 33.8**	**0.0**
CHOJ				S	**Sn**	**03 26 41.8**	**+0.1**
BSO4	**Boso 4**	**0.42**	**202**	P	**Pn**	**03 26 33.6**	**-0.3**
BSO4				S	**Sn**	**03 26 42.1**	**+0.3**
BSO3	**Boso 3**	**0.58**	**182**	P	**Pn**	**03 26 35.6**	**0.0**
BSO3				S	**Sn**	**03 26 45.8**	**+1.0**
BSO2	**Boso 2**	**0.66**	**164**	*e*S	**Sn**	**03 26 48.1**	**+1.7**
JYT	**Yasato**	**0.88**	**342**	P	**Pn**	**03 26 38.5**	**-0.8**
JIM2	**Oshima 3**	**1.12**	**234**	P	**Pn**	**03 26 40.9**	**-1.5**
JOD2	**Odawara 2**	**1.19**	**265**	P	**Pn**	**03 26 42.0**	**-1.2**
JAG	**Ashikaga**	**1.36**	**320**	P	**Pn**	**03 26 45.1**	**-0.4**
MJAR	**Matsushiro Arr**	**2.21**	**302**	P	**Pn**	**03 26 57.0**	**-0.1**
MJAR				S	**Sn**	**03 27 24.4**	**+1.2**
	8.1nm,0.3s,baz=97,slow=18,SNR=8.5						
MAT	**Matsushiro**	**2.21**	**302**	P	**Pn**	**03 26 57.3**	**+0.2**
MAT				S	**Sn**	**03 27 24.9**	**+1.6**
KURK	**Kurchatov**	**46.40**	**309**	P	**P**	**03 34 44.0**	**+0.7**
	0.5nm,0.4s,mb3.8,baz=79,slow=7.3,SNR=5.4						
WRA	**Warramunga Arr**	**55.34**	**187**	P	**P**	**03 35 50.3**	**-0.4**
	0.3nm,0.4s,mb3.7,baz=3.1,slow=7.3,SNR=2.6						
ASAR	**Alice Springs**	**59.06**	**187**	P	**P**	**03 36 16.9**	**-0.1**
	0.1nm,0.6s,mb3.1,baz=19,slow=12,SNR=3.0						

*GII **29** 03:38:16.7±0.7, 3354N×3527E, h0km, EXPLOSION*
*ISCJB **29** 03:38:17.6±1.5, 3354N±006×352E±0.1, h0km, Error ellipse: s-maj=14.8km s-min=6.7km az=28.4*
*GRAL **29** 03:38:20.0±0.4, 3350N×3527E, h0km±336km, MD2.6*
*CSEM **29** 03:38:20.0, 3350N×3527E, h0km, ML2.6, After GRAL*
ISC 29 03:38:17.7±1.5, 3356N±006×352E±01, h0km, n18, σ0°56/20, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	**Matirih**	**0.16**	**117**	*e*P	**Pg**	**03 38 20.8**	**0.0**
BHL	**Bhannes**	**0.53**	**50**	*e*P	**Pg**	**03 38 29.2**	**+1.2**
RCY	**Rachaya**	**0.56**	**98**	*e*P	**Pg**	**03 38 28.5**	**+0.1**
KSDI	**Kefar Szold**	**0.56**	**131**	Pg	**Pg**	**03 38 28.0**	**-0.4**
HRI	**Mount Hermon**	**0.56**	**121**	Pg	**Pg**	**03 38 27.8**	**-0.7**
MMC1	**Mount Meron ar**	**0.57**	**159**	Pg	**Pg**	**03 38 28.6**	**0.0**
MMC7	**Mount Meron ar**	**0.57**	**160**	Pg	**Pg**	**03 38 28.6**	**-0.1**
MMB3	**Mount Meron ar**	**0.58**	**160**	Pg	**Pg**	**03 38 28.8**	**0.0**
MMC6	**Mount Meron ar**	**0.58**	**160**	Pg	**Pg**	**03 38 28.7**	**-0.2**
MMC3	**Mount Meron ar**	**0.58**	**158**	Pg	**Pg**	**03 38 29.3**	**+0.4**
MMA3	**Mount Meron ar**	**0.58**	**160**	Pg	**Pg**	**03 38 28.8**	**-0.2**
MMC5	**Mount Meron ar**	**0.59**	**159**	Pg	**Pg**	**03 38 29.1**	**0.0**
MMC4	**Mount Meron ar**	**0.59**	**159**	Pg	**Pg**	**03 38 29.0**	**-0.1**
OFRI	**'Ofer**	**0.95**	**189**	Pg	**Pg**	**03 38 36.3**	**+0.3**
MMLI	**Mount Malkishu**	**1.14**	**169**	Pg	**Pg**	**03 38 39.0**	**-0.6**
SLTI	**Sal'it**	**1.32**	**184**	Pn	**Pn**	**03 38 42.9**	**-0.6**
SLTI				Sn	**Sn**	**03 39 02.6**	**+0.9**
HMDT	**Nahal Hemdat**	**1.34**	**167**	Pg	**Pg**	**03 38 42.8**	**-0.6**
HMDT				Sg	**Sg**	**03 39 02.2**	**+1.4**
DSI	**Dead Sea**	**2.00**	**175**	Pn	**Pn**	**03 38 52.2**	**-0.5**

IDC 29 03:39:16.2±1.9, 7595N×15555E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.6/16, mbtmp3.8/3, ML3.9/1, Error ellipse: s-maj=59.9km s-min=30.8km az=167.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.72**	**113**	Pn	Pn	03 40 28.3	-0.4
	5.8nm,0.3s,baz=194,slow=8.3,SNR=2.5						
HNR				Sn	Sn	03 41 19.7	-4.4
	9.0nm,0.3s,baz=249,slow=17,SNR=3.0						
WRA	**Warramunga Arr**	**23.95**	**237**	P	P	03 44 32.7	+0.4
	2.2nm,0.6s,baz=60,slow=9.3,SNR=9.6						
ASAR	**Alice Springs**	**26.21**	**230**	P	P	03 44 52.0	-0.9
	0.4nm,0.5s,baz=60,slow=9.7,SNR=8.0						
GERES	**GERESS Array B**	**127.84**	**329**	PKP	PKPdf	03 58 24.6	+0.7
	0.7nm,0.9s,baz=330,slow=5.8,SNR=4.6						

*ISCJB **29** 04:11:27.8±0.3, 3404S±003×7042W±006, h113km±2km, mb4.1/16, Error ellipse: s-maj=8.5km s-min=4.4km az=19.3*
*GUC **29** 04:11:29.1±0.6, 3404S×7048W, h107km±3km, ML4.5*
*IDC **29** 04:11:29.6±0.8, 3391S×7011W, h114km±6km, mb4.0/8, mb1 3.8/12, mb1mx3.8/19, mbtmp3.7/12, Error ellipse: s-maj=18.0km s-min=10.8km az=113.0*
*NEIC **29** 04:11:29.1, 3404S×7048W, h107km, mb4.2/13, After GUC.*
NEIC Felt [III] at Codegua, Graneros, Rancagua, Rengo and San Francisco de Mostazal; [II] at Santiago.
ISC 29 04:11:28.9±0.3, 3403S±003×7042W±006, h108km±2km, h114km±4.7km: pP-P, n60, σ0°77/80, mb4.1/16, 6C-12D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**0.17**	**239**⇓	*i*P	**Pn**	**04 11 44.4**	**+0.5**
CHCH	**Chadas Angostu**	**0.21**	**297**⇓	*i*P	**Pn**	**04 11 44.2**	**+0.3**
LMEL	**Las Melosas**	**0.26**	**45**⇓	*i*P	**Pn**	**04 11 44.2**	**0.0**
LMEL				*i* S	**Sn**	**04 11 56.4**	**+0.8**
LMEL				AML	AML	04 11 59.3	
	comp=E,17μm,0.8s						
LMEL	**Las Melosas**	**0.26**	**45**	P	**Pn**	**04 11 44.2**	**0.0**
LMEL				*i* S	**Sn**	**04 11 56.4**	**+0.8**
CICH	**Cipreses**	**0.29**	**179**⇑	*i*P	**Pn**	**04 11 44.8**	**+0.5**
SJCH	**San Jose de Ma**	**0.39**	**9**⇓	*i*P	**Pn**	**04 11 44.4**	**-0.4**
SJCH				*i* S	**Sn**	**04 11 56.7**	**0.0**
SJCH				AML	AML	04 11 57.8	
	comp=E,23μm,0.8s						
SJCH	**San Jose de Ma**	**0.39**	**9**⇓	*i*P	**Pn**	**04 11 44.4**	**-0.4**
SJCH				*i* S	**Sn**	**04 11 56.7**	**0.0**
PCH	**Pirque**	**0.41**	**350**⇓	*i*P	**Pn**	**04 11 45.2**	**+0.3**
TACH	**Talagante**	**0.57**	**311**⇓	*i*P	**Pn**	**04 11 46.0**	**+0.1**
SAN	**Santiago**	**0.61**	**341**	*e*P	**Pn**	**04 11 46.2**	**-0.1**
SAN				*e*S	**Sn**	**04 11 59.3**	**0.0**
RCDM	**Rinconada Maip**	**0.63**	**329**	*e*P	**Pn**	**04 11 46.4**	**0.0**
RCDM				*e*S	**Sn**	**04 11 59.5**	**0.0**
RCDM				AML	AML	04 12 00.6	
	comp=E,27μm,0.2s						
RCDM	**Rinconada Maip**	**0.63**	**329**	*e*P	**Pn**	**04 11 46.4**	**0.0**
RCDM				*e*S	**Sn**	**04 11 59.5**	**0.0**
CLCH	**Cerro Calan**	**0.64**	**352**⇑	*i*P	**Pn**	**04 11 46.7**	**+0.2**
CLCH				*i* S	**Sn**	**04 12 00.3**	**+0.6**
CLCH				AML	AML	04 12 01.7	
	comp=N,33μm,0.7s						
FCH	**Farellones**	**0.71**	**9**⇓	*i*P	**Pn**	**04 11 47.2**	**+0.2**
FCH				*i* S	**Sn**	**04 12 01.8**	**+1.1**
FCH				AML	AML	04 12 02.9	
	comp=N,15μm,0.2s						
LNV	**Longovilo**	**0.82**	**275**⇑	*i*P	**Pn**	**04 11 48.0**	**-0.1**
PEL	**Peldehue**	**0.91**	**346**⇓	*i*P	**Pn**	**04 11 49.0**	**+0.1**
PEL				*i* S	**Sn**	**04 12 04.2**	**+0.2**
PEL				AML	AML	04 12 06.3	
	comp=N,19μm,0.5s						
NICH	**Los Niches**	**1.18**	**214**	*e*P	**Pn**	**04 11 51.8**	**0.0**
IHA	**Instituto Hidr**	**1.43**	**314**⇑	*i*P	**Pn**	**04 11 54.8**	**+0.2**
IHA				*i* S	**Sn**	**04 12 13.9**	**-0.3**
TALC	**Talca**	**1.69**	**216**⇑	*i*P	**Pn**	**04 12 04.8**	**+7.0**
TALC				*i* S	**Sn**	**04 12 26.8**	**+6.9**
TALC				AML	AML	04 12 28.3	
	comp=E,13μm,0.1s						
TALC	**Talca**	**1.69**	**216**⇑	*i*P	**Pn**	**04 12 04.8**	**+7.0**
TALC				*i* S	**Sn**	**04 12 26.8**	**+6.9**
PTCH	**Petorca**	**1.81**	**346**	*e*P	**Pn**	**04 11 59.1**	**-0.2**
PTCH				*i* S	**Sn**	**04 12 21.8**	**-0.8**
CTCH	**Constitucion**	**2.09**	**231**	*e*P	**Pn**	**04 12 03.0**	**+0.1**
CTCH				*e*S	**Sn**	**04 12 28.5**	**-0.3**
CTCH				AML	AML	04 12 34.6	
	comp=N,11μm,0.0s						
CTCH	**Constitucion**	**2.09**	**231**	*e*P	**Pn**	**04 12 03.0**	**+0.1**
CTCH				*e*S	**Sn**	**04 12 28.5**	**-0.3**
CNCO	**Chanco**	**2.43**	**225**⇓	*e*P	**Pn**	**04 12 07.2**	**0.0**
CNCO				*i* S	**Sn**	**04 12 36.2**	**-0.5**
COCH	**Cobquecura**	**2.85**	**222**	*e*P	**Pn**	**04 12 11.9**	**-1.0**
COCH				*i* S	**Sn**	**04 12 44.9**	**-1.8**
CCHI	**Chillan**	**2.90**	**207**⇓	*e*P	**Pn**	**04 12 13.6**	**+0.1**
CCHI				*i* S	**Sn**	**04 12 47.5**	**-0.3**
CCHI				AML	AML	04 13 23.4	
	comp=N,524nm,0.5s						
CCHI	**Chillan**	**2.90**	**207**⇓	*e*P	**Pn**	**04 12 13.6**	**+0.1**
CCHI				*i* S	**Sn**	**04 12 47.5**	**-0.3**
CFAA	**Coronel Fontan**	**3.04**	**38**	P	**Pn**	**04 12 14.6**	**-0.7**
	comp=N,0.7nm,0.3s,baz=213,slow=14,SNR=123						
CFAA				S	**Sn**	**04 12 46.1**	**-5.0**
	comp=N,5.5nm,0.3s,baz=213,slow=13,SNR=14						
CFAA	**Coronel Fontan**	**3.04**	**38**	P	**Pn**	**04 12 14.6**	**-0.8**
CFAA				S	**Sn**	**04 12 46.1**	**-5.0**
LCO	**Las Campanas**	**5.01**	**357**	*e*Pn	**Pn**	**04 12 40.8**	**-1.0**
	comp=N,69nm,0.4s						
LCO				*e*Sn	**Sn**	**04 13 35.0**	**-3.5**
PLCA	**Paso Flores**	**6.69**	**181**	P	**Pn**	**04 13 06.1**	**+1.6**
	comp=N,0.3nm,0.3s,baz=341,slow=8.8,SNR=8.5						
TRQA	**Tornquist**	**7.93**	**123**	*e*Pn	**Pn**	**04 13 19.8**	**-1.5**
	comp=N,40nm,0.9s						
CPUP	**Villa Florida**	**13.67**	**59**	P	**Pn**	**04 14 33.8**	**-4.5**
	comp=N,0.1nm,0.3s,baz=191,slow=16,SNR=2.7						
LPAZ	**La Paz**	**17.79**	**7**	P	**Pn**	**04 15 29.0**	**-0.6**
	comp=N,0.0nm,0.3s,baz=180,slow=12,SNR=4.7						
LPAZ	**La Paz**	**17.79**	**7**	*e*P	**Pn**	**04 15 30.6**	**+1.0**
	comp=N,2.1nm,0.9s						
SIV	**San Ignacio**	**19.84**	**27**	P	**P**	**04 15 49.6**	**-1.7**
	comp=N,0.1nm,0.3s,baz=220,slow=11,SNR=17						
USHA	**Ushuaia**	**20.84**	**177**	P	**P**	**04 16 03.2**	**+1.4**
	comp=N,8.9nm,0.9s,baz=20,slow=10,SNR=2.7						
BDFB	**Brasilia**	**27.26**	**53**	P	**P**	**04 17 01.4**	**-1.7**
	comp=N,5.8nm,0.6s,mb4.3,baz=213,slow=12,SNR=8.1						
OTAV	**Otavalo**	**34.91**	**346**	*e*P	**P**	**04 18 09.7**	**-0.6**
	comp=N,1.6nm,0.8s,mb3.9						
SNAA	**Sanae**	**51.05**	**158**	*e*P	**P**	**04 20 19.6**	**0.0**
	comp=N,3.4nm,0.8s,mb4.4						
TEIG	**Tepich**	**56.57**	**340**	P	**P**	**04 21 00.5**	**+0.1**
	comp=N,12nm,0.6s,mb5.1,baz=109,slow=5.0,SNR=12						
JCT	**Junction City**	**69.90**	**333**	*e*P	**P**	**04 22 28.7**	**+0.5**
	comp=N,7.7nm,1.0s,mb4.5						
TXAR	**Lajitas Array**	**70.43**	**329**	P	**P**	**04 22 32.2**	**+0.8**
	comp=N,1.5nm,0.6s,mb4.0,baz=154,slow=8.8,SNR=23						
TXAR				pP	pP	04 22 58.8	+0.4
	comp=N,0.7nm,0.7s,baz=150,slow=8.4,SNR=3.8						
TXAR	**Lajitas Array**	**70.43**	**329**	P	**P**	**04 22 32.2**	**+0.8**
TXAR				pP	pP	04 22 58.8	+0.4
WVT	**Waverly**	**71.67**	**345**	*e*P	**P**	**04 22 38.1**	**-0.6**
	comp=N,13nm,0.8s,mb4.8						
ANMO	**Albuquerque**	**76.47**	**330**	*e*P	**P**	**04 23 07.6**	**+1.0**
	comp=N,1.9nm,0.9s,mb3.8						
CBKS	**Cedar Bluff**	**77.41**	**337**	*e*P	**P**	**04 23 12.5**	**+0.7**
	comp=N,4.3nm,0.5s,mb4.4						
SDCO	**Great Sand Dun**	**78.51**	**332**	*e*P	**P**	**04 23 18.9**	**+0.9**
BOSA	**Boshof**	**78.86**	**117**	P	**P**	**04 23 20.4**	**0.0**
	comp=N,2.9nm,0.7s,mb4.2,baz=225,slow=4.3,SNR=5.9						
BOSA				pP	pP	04 23 49.8	+1.9
	comp=N,3.6nm,0.9s,baz=225,slow=8.9,SNR=2.1						
BOSA	**Boshof**	**78.86**	**117**	*e*P	**P**	**04 23 21.6**	**+1.3**
	comp=N,4.6nm,0.7s,mb4.4						
BOSA				pP	pP	04 23 49.8	+1.9
TOA0	**Torodi Ar. Sit**	**82.96**	**69**	*e*P	**P**	**04 23 42.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**82.96**	**69**	P	**P**	**04 23 40.4**	**-1.8**
	comp=N,1.7nm,0.8s,mb3.9,baz=246,slow=4.3,SNR=15						
TORD				pP	pP	04 24 10.9	+1.0
	comp=N,1.4nm,0.8s,baz=254,slow=4.1,SNR=5.4						
HWUT	**Hardware Ranch**	**84.23**	**330**	*e*P	**P**	**04 23 48.5**	**+0.5**
	comp=N,1.3nm,0.6s,mb3.8						
PDAR	**Pinedale Array**	**84.40**	**332**	P	**P**	**04 23 49.8**	**+0.9**
	comp=N,1.0nm,1.0s,mb3.6,baz=142,slow=5.5,SNR=5.5						
NVAR	**Mina Array Bea**	**84.68**	**324**	P	**P**	**04 23 51.1**	**+0.7**
	comp=N,0.7nm,0.7s,mb3.7,baz=164,slow=5.2,SNR=4.3						
LOHW	**Long Hollow**	**85.53**	**332**	*e*P	**P**	**04 23 55.1**	**+0.6**
	comp=N,1.0nm,0.7s,mb3.9						
MOOW	**Moose Ponds**	**85.70**	**332**	*e*P	**P**	**04 23 55.3**	**0.0**
	comp=N,0.4nm,0.6s,mb3.5						
ASAR	**Alice Springs**	**118.13**	**205**	PKP	PKPdf	04 30 02.6	-1.0
	comp=N,0.3nm,0.7s,baz=166,slow=1.9,SNR=3.3						
WRA	**Warramunga Arr**	**121.37**	**207**	PKP	PKPdf	04 30 09.2	-0.8
	comp=N,0.4nm,0.6s,baz=152,slow=1.8,SNR=2.6						
ZALV	**Zalesovo Beam**	**153.52**	**34**	PKPbc	PKPbc	04 31 13.1	-1.0
	comp=N,1.1nm,0.5s,baz=245,slow=3.1,SNR=4.0						

**KRSC 29 04:49:49.6±0.9, 5542N×16650E, h31km±31km, ML4.1, Komandors

CTA	**Charters Tower**	**21.72**	**269**	P	**P**	**05 30 27.3**	**+1.4**	
	8.5nm,0.8s,mb4.2,baz=92,slow=11,SNR=15							
CTAO	**Charters Tower**	**21.72**	**269**	*e*P	**P**	**05 30 27.3**	**+1.5**	
	8.6nm,0.8s,mb4.2							
STKA	**Stephens Creek**	**26.98**	**241**	*e*P	**P**	**05 31 17.2**	**+1.1**	
	3.7nm,0.9s,mb3.9							
STKA	**Stephens Creek**	**26.98**	**241**	P	**P**	**05 31 15.4**	**-0.7**	
	2.9nm,0.6s,mb4.0,baz=103,slow=9.6,SNR=5.3							
WB2	**Warramunga Arr**	**32.83**	**266**	*e*P	**P**	**05 32 07.2**	**-0.9**	
WRA	**Warramunga Arr**	**32.84**	**266**	P	**P**	**05 32 07.7**	**-0.5**	
	1.3nm,0.7s,mb4.0,baz=96,slow=8.0,SNR=9.2							
WRA				PcP	PcP	05 34 51.0	-1.8	
	0.4nm,0.5s,baz=101,slow=3.0,SNR=5.0							
ASAR	**Alice Springs**	**32.87**	**259**	P	**P**	**05 32 08.6**	**+0.1**	
	4.1nm,0.8s,mb4.4,baz=75,slow=9.3,SNR=53							
ASAR				PcP	PcP	05 34 53.4	+0.6	
	0.9nm,0.7s,baz=111,slow=3.3,SNR=6.7							
KAKA	**Kakadu**	**36.32**	**277**	*e*P	**P**	**05 32 38.4**	**0.0**	
	5.3nm,0.5s,mb4.7							
FITZ	**Fitzroy Crossi**	**41.27**	**266**	*e*P	**P**	**05 33 20.4**	**+0.6**	
	14nm,0.8s,mb4.7							
SBA	**Scott Base**	**56.64**	**181**	*e*P	**P**	**05 35 18.1**	**+1.3**	
	5.4nm,0.9s,mb4.6							
QSPA	**South Pole Qui**	**68.79**	**180**	LR	LR	06 03 00.5		
	comp=Z,447nm,18.3s,baz=30,slow=33							
SNAA	**Sanae**	**87.15**	**182**	*e*	**P**	**05 38 18.7**	**-1.0**	
SNAA				*e*		05 38 22.1		
SNAA	**Sanae**	**87.15**	**182**	*e*P	**P**	**05 38 19.1**	**-0.7**	
	9.4nm,1.1s,mb4.9							
VNA3	**Neumayer Olymp**	**87.73**	**180**	*e*	**P**	**05 38 22.2**	**-0.4**	
VNA3				*e*		05 38 26.1		
VNA2	**Neumayer--Watz**	**88.03**	**181**	*e*	**P**	**05 38 24.0**	**0.0**	
	baz=185,slow=4.7							
VNA2				*e*		05 38 27.9		
VNA1	**Neumayer--Stat**	**88.31**	**181**	*e*	**P**	**05 38 25.5**	**+0.2**	
VNA1				*e*		05 38 29.2		
SONM	**Songino Array**	**88.95**	**323**	P	**P**	**05 38 29.2**	**+0.6**	
	0.5nm,0.6s,mb4.0,baz=136,slow=5.7,SNR=5.6							
NVAR	**Mina Array Bea**	**90.00**	**48**	P	**P**	**05 38 33.6**	**-0.1**	
	1.5nm,0.6s,mb4.5,baz=226,slow=8.5,SNR=6.0							
JLU	**Jordanelle**	**95.72**	**49**	*e*P	**P**	**05 38 56.7**	**-3.4**	
ARCES	**ARCESS Array B**	**127.07**	**345**	PKP	PKPdf	05 44 37.7	+0.2	
	3.5nm,0.8s,baz=60,slow=1.9,SNR=12							
ARCES	**ARCESS Array B**	**127.07**	**345**	PKP	PKPdf	05 44 37.7	+0.2	
VRAC	**Vranov**	**144.67**	**329**	PKPbc	PKPdf	05 45 08.2	-2.4	
	3.6nm,0.6s,baz=341,slow=3.7,SNR=5.6							
EKA	**Eskdalemuir Ar**	**145.54**	**353**	PKPbc	PKPbc	05 45 11.9	-0.2	
	9.4nm,0.7s,baz=348,slow=2.2,SNR=23							
GIVF	**Givet**	**148.76**	**341**	*e*PKP1	PKPbc	05 45 22.0	+0.7	
BAIF	**Baives**	**148.99**	**341**	*e*PKP1	PKPbc	05 45 22.7	+0.8	
MEZF	**Maizieres J'vi**	**150.09**	**339**	*e*PKP1	PKPbc	05 45 25.7	+1.0	
FLN	**La Foliniere**	**151.41**	**346**	*e*PKP1	PKPbc	05 45 28.0	+0.2	
	17nm,0.7s							
LDF	**La Druitiere**	**151.49**	**345**	*e*PKP1	PKPbc	05 45 28.2	+0.3	
LOR	**Lormes**	**151.56**	**339**	*e*PKP1	PKPbc	05 45 28.6	+0.4	
	4.9nm,0.5s							
GRR	**Gorron**	**151.85**	**346**	*e*PKP1	PKPbc	05 45 29.1	+0.3	
	8.1nm,0.5s							
SSF	**Saint Saulge**	**151.85**	**339**	*e*PKP1	PKPbc	05 45 29.4	+0.6	
SMF	**Signal de Mont**	**152.11**	**339**	*e*PKP1	PKPbc	05 45 29.6	+0.2	
SGMF	**Saint Gilles**	**152.32**	**348**	*e*PKP1	PKPbc	05 45 29.9	0.0	
ROSF	**Rostrenen**	**152.37**	**349**	*e*PKP1	PKPbc	05 45 30.0	0.0	
QUIF	**Quistinic**	**152.76**	**349**	*e*PKP1	PKPbc	05 45 30.8	0.0	
LBL	**Lubilhac**	**153.54**	**338**	*e*P	PKPdf	05 45 28.2	+3.3	
ESDC	**Sonseca Array**	**160.81**	**344**	PKPab	PKPab	05 46 16.0	-0.4	
	0.8nm,0.5s,baz=74,slow=2.3,SNR=5.0							
TORD	**Torodi Ar. Bea**	**165.78**	**237**	PKP	PKPdf	05 45 39.3	-0.5	
	0.6nm,0.9s,baz=12,slow=2.2,SNR=3.3							

IDC ***29*** *05:32:38.6±0.3,292N×9557E,h0km,mb5.0/34, mb1 5.1/35,mb1mx5.1/36,mbtmp5.0/35,ML5.1/1,MS5.2/1, Ms1 5.2/1,ms1mx4.0/33,Error ellipse: s-maj=13.1km s-min=10.4km az=47.0*

BJI ***29*** *05:32:41.9,288N×9549E,h36km,mB6.0,mb5.8,Ms6.1, Msz5.9*

ISCJB ***29*** *05:32:41.7±0.1,290N±002×9559E±002,h30km, mb5.5/203,MS5.9/91,Error ellipse: s-maj=3.5km s-min=2.4km az=32.2*

NEIC ***29*** *05:32:42.0±0.1,292N×9553E,h20km,mb5.5/99,ME5.6, MW5.6,Error ellipse: s-maj=4.4km s-min=3.2km az=42.0, Moment Tensor Solution. s39 Moment tensor: Scale 1017Nm; Mrr2.29; Mθθ-1.32; Mϕϕ-0.98; Mrθ1.95; Mθϕ0.34; Mϕr-1.71; Best double couple: M0 3.30000×1017 NP1: ϕs129.00000°,δ72.00000°,λ92.00000°. NP2: ϕs303.00000°,δ18.00000°,λ83.00000°. Principal axes: T 3.6100, Plg63.0000°, Azm42.0000°; N -0.7800, Plg2.0000°, Azm308.0000°; P -2.8300, Plg26.0000°, Azm217.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [IV] on Simuelue. Felt [III] at Meulaboh, Sumatra.

MOS ***29*** *05:32:42.4±0.8,298N×9559E,h33km,mb5.7/84, MS5.7/30 Error ellipse: s-maj=7.3km s-min=3.9km az=116.8*

GCMT ***29*** *05:32:44.2±0.2,246N×9521E,h38km±1km,MW5.7/84, Moment Tensor Solution. s81,c125; s84,c135; Duration: 1s6 Moment tensor: Scale 1017Nm; Mrr2.49±.09; Mθθ-1.56±.07; Mϕϕ-0.93±.08; Mrθ1.65±.10; Mθϕ2.06±.07; Mϕr-1.78±.12; Best double couple: M0 3.79300×1017 NP1:ϕs303.00000°,δ26.00000°, λ78.00000°. NP2:ϕs136.00000°,δ65.00000°,λ96.00000°. Principal axes: T 3.3860, Plg69.0000°, Azm57.0000°; N 0.8130, Plg5.0000°, Azm314.0000°; P -4.2010, Plg20.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

SZGRF ***29*** *05:32:44.4,250N×9450E,h33km,mb5.5,MS5.5,Off west coast of northern Sumatera, Indonesia*

DJA ***29*** *05:32:46,299N×9569E,h40km,Mw5.8/28*

ISC 29 05:32:43.8±0.1,290N±002×9557E±002,h32km, h32km±.6km:pP-P,n923,σ1°07/648,mb5.5/203,MS5.9/91, 142C-101D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**2.60**	**354**	P	**Pn**	**05 33 22.0**	**-1.6**
	0.0nm,0.0s						
TSI	**Tuntungan**	**3.05**	**79**	P	**Pn**	**05 33 32.3**	**+2.4**
	0.0nm,0.0s						
TRSI	**Tarutung**	**3.50**	**104**	P	**Pn**	**05 33 37.2**	**+1.2**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**5.87**	**125**	P	**Pn**	**05 34 08.9**	**+0.3**
	0.0nm,0.0s						
SNG	**Songkhla**	**6.58**	**50**	P	**Pn**	**05 34 18.0**	**-0.5**
	1μm,1.0s						
KSI	**Kapahiang**	**9.57**	**133**	P	**Pn**	**05 35 00.0**	**+0.5**
	0.0nm,0.0s						
DSRI	**Dabo**	**9.61**	**110**	P	**Pn**	**05 34 59.8**	**-0.2**
	0.0nm,0.0s						
NNT	**Nongplab**	**10.48**	**23**	P	**Pn**	**05 35 14.5**	**+2.6**
PPBI	**Pangkal Pinang**	**11.70**	**115**	P	**Pn**	**05 35 29.3**	**+0.7**
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**13.32**	**115**	P	**Pn**	**05 35 51.6**	**+0.8**
	0.0nm,0.0s						
NST	**Nakhon Sawan**	**13.47**	**19**	P	**Pn**	**05 35 53.5**	**+0.7**
CBJI	**Citeko**	**14.58**	**129**	P	**Pn**	**05 36 07.9**	**-0.1**
	0.0nm,0.0s						
DBJI	**Dramaga**	**14.59**	**130**	P	**Pn**	**05 36 04.8**	**-3.3**
	0.0nm,0.0s						
BDT	**Bhumibol Dam**	**14.65**	**13**	⇑P	**Pn**	**05 36 08.5**	**-0.4**
	40nm,1.0s						
KSM	**Kuching**	**14.80**	**95**	*e*Pn	**Pn**	**05 36 11.8**	**+0.8**
	430nm,1.3s						
COCO	**West Island**	**15.04**	**175**	Pn	**Pn**	**05 36 14.4**	**+0.2**
	376nm,1.3s						
KKTK	**Khon Kaen**	**15.14**	**28**	P	**Pn**	**05 36 16.0**	**+0.5**
	4μm,1.0s						
UBT	**Ubonrachathani**	**15.40**	**37**	P	**Pn**	**05 36 22.0**	**+3.1**
	1μm,1.0s						
LEM	**Lembang**	**15.43**	**129**	P	**Pn**	**05 36 17.6**	**-1.6**
	0.0nm,0.0s						
PALK	**Pallekele**	**15.43**	**287**	*e*Pn	**Pn**	**05 36 17.2**	**-2.1**
CMAR	**Chiang Mai Arr**	**15.81**	**12**	Pn	**Pn**	**05 36 24.1**	**-0.2**
	2.4nm,0.3s,baz=202,slow=13,SNR=47						
STKI	**Sintang**	**16.15**	**100**	P	**Pn**	**05 36 29.5**	**+0.9**
	0.0nm,0.0s						
CHG	**Chiang Mai**	**16.16**	**12**	⇑P	**Pn**	**05 36 27.7**	**-1.0**
	289nm,1.1s						
CHTO	**Chiang Mai**	**16.16**	**12**	P	**Pn**	**05 36 28.5**	**-0.2**
	SNR=102						
CHTO	**Chiang Mai**	**16.16**	**12**	*e*P	**Pn**	**05 36 28.0**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,528nm,1.4s						
CHTO	**Chiang Mai**	**16.16**	**12**	*e*Pn	**Pn**	**05 36 28.0**	**-0.7**
	comp=Z,528nm,1.4s						
NANT	**Nan**	**16.58**	**17**	⇑P	**Pn**	**05 36 34.4**	**+0.3**
	comp=Z,1μm,1.0s						
PBKI	**Pangkalan Bun**	**17.03**	**109**	P	**Pn**	**05 36 39.6**	**-0.1**
	comp=Z,0.0nm,0.0s						
CHRT	**Chiangrai**	**17.36**	**13**	⇑P	**Pn**	**05 36 43.0**	**-0.8**
	comp=Z,540nm,1.1s						
BJII	**Banjamegara**	**17.39**	**126**	P	**Pn**	**05 36 43.2**	**-1.0**
	comp=Z,0.0nm,0.0s						
MDRS	**Chennai**	**18.21**	**305**	⇓*i*P	**Pn**	**05 36 57.0**	**+2.7**
MDRS				*e*S	**Sn**	**05 40 20.0**	**+3.1**
VIS	**Vishakhapatnam**	**19.00**	**322**	*e*P	**Pn**	**05 37 03.7**	**-0.3**
VIS				AMb	AMB	05 37 23.6	
	comp=Z,768nm,1.4s						
VIS				*ex*	x	05 41 16.2	
SJI	**Sawahan**	**19.31**	**123**	P	**Pn**	**05 37 05.8**	**-1.8**
	comp=Z,0.0nm,0.0s						
TRD	**Trivandrum**	**19.33**	**288**	*e*S	**Sn**	**05 40 45.0**	**+1.0**
KOD	**Kodaikanal**	**19.39**	**293**	*e*P	**Pn**	**05 37 06.9**	**-1.7**
KOD				AMb	AMB	05 37 15.7	
	comp=Z,264nm,1.6s						
BWNR	**Bhubaneshwar**	**19.74**	**332**	*e*P	**Pn**	**05 37 10.0**	**-2.7**
BWNR				*ex*	x	05 40 56.0	
BBKI	**Banjar Baru**	**20.27**	**108**	P	**P**	**05 37 17.5**	**+0.5**
	comp=Z,0.0nm,0.0s						
CAL	**Calcutta**	**20.75**	**341**	*e*P	**P**	**05 37 23.2**	**+1.2**
CAL				*ex*	x	05 41 23.9	
KKM	**Kota Kinabalu**	**20.82**	**81**	*e*P	**P**	**05 37 23.9**	**+1.1**
	comp=Z,690nm,1.1s						
QIZ	**Qiongzhong**	**21.26**	**40**	P	**P**	**05 37 27.5**	**-0.1**
QIZ				S	**S**	**05 41 23.3**	**+1.0**
QIZ				AMB	AMB		
	comp=Z,2μm,7.9s						
QIZ				LR	LR		
	comp=N,32μm,16.5s						
QIZ				LR	LR		
	comp=Z,27μm,20.3s,MS5.6						
QIZ	**Qiongzhong**	**21.26**	**40**	*e*P	**P**	**05 37 27.7**	**+0.1**
	comp=Z,1μm,1.8s,mb5.9						
IMP	**Imphal**	**21.82**	**356**	*e*P	**P**	**05 37 31.0**	**-2.5**
IMP				*ex*	x	05 41 26.0	
HYB	**Hyderabad**	**22.07**	**312**	*e*P	**P**	**05 37 37.0**	**+0.7**
HYB				*e*S	**S**	**05 41 40.0**	**+1.8**
HYB				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.2						
HYB	**Hyderabad**	**22.07**	**312**	*i* P	**P**	**05 37 37.0**	**+0.7**
	comp=Z,100nm,1.0s,mb5.2						
HYB				*e*S	**S**	**05 41 35.5**	**-2.7**
HYB				LR	LR	05 49 40.0	
	comp=Z,20nm,20.0s						
HYB	**Hyderabad**	**22.07**	**312**	*e*P	**P**	**05 37 37.0**	**+0.7**
	comp=Z,100nm,1.0s,mb5.2						
HYB				*e*S	**S**	**05 41 40.0**	**+1.8**
HYB				*e*		05 49 40.0	
BOK	**Bokaro**	**22.79**	**337**	*i* P	**P**	**05 37 42.9**	**-0.9**
BOK				*i* S	**S**	**05 41 52.9**	**+1.8**
BATP	**Bataraza**	**22.87**	**74**	*e*P	**P**	**05 37 45.3**	**+0.5**
KHKI	**Kahang-Kahang**	**22.90**	**119**	P	**P**	**05 37 42.8**	**-2.4**
	comp=Z,0.0nm,0.0s						
KMI	**Kunming**	**23.15**	**17**	⇑P	**P**	**05 37 48.3**	**+0.6**
KMI				AP		05 37 58.5	
KMI				XP	sP	05 38 02.3	+2.1
KMI				PP		05 38 20.8	
KMI				PCP	PcP	05 41 37.8	+2.1
KMI				S	**S**	**05 41 55.0**	**-2.1**
KMI				XS	sS	05 42 10.0	-2.0
KMI				AMB	AMB		
	comp=Z,202nm,1.3s,mb5.4						
KMI				AMB	AMB		
	comp=Z,3μm,4.8s						
KMI				LR	LR		
	comp=N,45μm,12.8s						
KMI				LR	LR		
	comp=E,28μm,23.2s						
KMI				LR	LR		
	comp=Z,49μm,15.2s,MS6.1						
KMI	**Kunming**	**23.15**	**17**	⇑P	**P**	**05 37 48.2**	**+0.5**
KMI				*PP		05 37 58.4	
KMI				*SP	sP	05 38 02.2	+2.0
KMI				PP		05 38 20.7	
KMI				PPP		05 38 30.2	
KMI						05 41 37.8	
KMI				S	**S**	**05 41 54.9**	**-2.2**
KMI				*SS	sS	05 42 10.0	-2.0
KMI				SS		05 42 40.2	
KMI				SSS		05 42 56.0	
KMI				pmax	pmax		
	comp=Z,202nm,1.3s,mb5.4						
KMI				MLR	MLR		
	comp=Z,49μm,15.2s,MS6.1						
KMI	**Kunming**	**23.15**	**17**	⇑P	**P**	**05 37 48.2**	**+0.5**
	comp=Z,202nm,1.3s,mb5.4						
KMI				pP		05 37 58.4	
KMI				sP	sP	05 38 02.2	+2.0
KMI				PP		05 38 20.7	
KMI				PPP		05 38 30.2	
KMI				PcP	PcP	05 41 37.8	+2.1
KMI				S	**S**	**05 41 54.9**	**-2.2**
KMI				sS	sS	05 42 10.0	-2.0
KMI				SS		05 42 40.2	
KMI				SSS		05 42 56.0	
KMI				LR	LR		
	comp=Z,49μm,15.2s,MS6.1						
SHBG	**Sahibganj**	**23.46**	**342**	*ex*	x	05 37 18.2	
MTNI	**Mataram**	**23.52**	**119**	P	**P**	**05 37 48.3**	**-3.2**
	comp=Z,0.0nm,0.0s						
PPR	**Puerto Princes**	**24.00**	**72**	⇓*e*P	**P**	**05 37 58.0**	**+2.1**
LATR	**Latur**	**24.18**	**311**	*ex*	x	05 38 00.0	
NGP	**Nagpur**	**24.24**	**320**	*e*P	**P**	**05 37 57.3**	**-0.7**
NGP				*ex*	x	05 38 17.2	
	comp=Z,294nm,1.9s						
NGP				*e*S	**S**	**05 42 15.8**	**+0.9**
PCI	**Palu**	**24.55**	**99**	P	**P**	**05 38 01.5**	**+0.5**
	comp=Z,0.0nm,0.0s						
GOA	**Goa**	**24.81**	**302**	⇓*i*x	x	05 38 08.0	
GOA				*i* S	**S**	**05 42 27.7**	**+3.7**
ENPP	**El Nido**	**25.05**	**70**	*e*P	**P**	**05 38 05.5**	**0.0**
ODAN	**Odare**	**25.08**	**343**	*e*P	**P**	**05 38 06.2**	**+0.6**
	comp=Z,5μm,1.9s,mb6.7						
JBP	**Jabalpur**	**25.18**	**324**	*e*P	**P**	**05 38 07.1**	**+0.6**
JBP				*ex*	x	05 42 34.1	
GTK	**Gangtok**	**25.19**	**345**	*e*P	**P**	**05 38 06.0**	**-0.6**
DGAR	**Diego Garcia**	**25.24**	**246**	*e*P	**P**	**05 38 07.7**	**+0.5**
DGAR				*e*	pP	05 38 15.4	-0.9
DGAR				pmax	pmax		
	comp=Z,920nm,1.4s,mb6.1						
DGAR	**Diego Garcia**	**25.24**	**246**	*e*P	**P**	**05 38 07.2**	**0.0**
	comp=Z,852nm,1.9s,mb6.0						
DGAR				LR	LR		
	comp=Z,25μm,20.0s,MS5.7						
AKL	**Akola**	**25.30**	**316**	*e*P	**P**	**05 38 05.3**	**-2.3**
AKL				AMb	AMB	05 38 28.4	
	comp=Z,357nm,2.3s,mb5.5						
KAPI	**Kappang**	**25.41**	**108**	P	**P**	**05 38 07.6**	**-1.1**
	comp=Z,1μm,0.9s,mb6.4,SNR=24						
KAPI	**Kappang**	**25.41**	**108**	P	**P**	**05 38 07.2**	**-1.5**
	comp=Z,428nm,1.5s,mb5.8,SNR=24						
KAPI	**Kappang**	**25.41**	**108**	P	**P**	**05 38 08.2**	**-0.6**
	SNR=21						
KAPI	**Kappang**	**25.41**	**108**	P	**P**	**05 38 08.0**	**-0.8**
	comp=Z,148nm,0.9s,mb5.5,baz=284,slow=8.6,SNR=37						
KAPI	**Kappang**	**25.41**	**108**	*e*P	**P**	**05 38 07.9**	**-0.8**
	comp=Z,567nm,1.1s,mb6.0						
KAD	**Karad**	**25.41**	**306**	*e*P	**P**	**05 38 09.6**	**+0.9**
KAD				AMb	AMB	05 38 21.9	
	comp=Z,252nm,1.3s,mb5.6						
KAD				*ex*	x	05 42 25.5	
RAMN	**Ramite**	**25.41**	**341**	*e*P	**P**	**05 38 09.7**	**+1.1**
GYA	**Guiyang**	**25.73**	**23**	⇑*i*P	**P**	**05 38 10.3**	**-1.2**
GYA				AP	pP	05 38 20.0	-0.6
GYA				XP	sP	05 38 24.0	-0.5
GYA				PP		05 38 50.3	
GYA				S	**S**	**05 42 32.3**	**-6.2**
GYA				AMB	AMB		
	comp=Z,280nm,1.0s,mb5.8						
GYA				AMB	AMB		
	comp=Z,2μm,6.5s						
GYA				LR	LR		
	comp=N,24μm,15.9s,MS5.9						
GYA				LR	LR		
	comp=E,15μm,14.5s,MS5.9						
GYA				LR	LR		
	comp=Z,27μm,16.5s,MS5.8						
BUSP	**Coron**	**26.02**	**68**	*e*P	**P**	**05 38 13.4**	**-0.9**
JIRN	**Jiri**	**26.20**	**341**	*e*P	**P**	**05 38 16.7**	**+0.9**
	comp=Z,940nm,1.0s,mb6.3						
POO	**Poona**	**26.34**	**308**	*e*P	**P**	**05 38 16.9**	**-0.2**
POO				AMb	AMB	05 38 37.2	
	comp=Z,169nm,2.0s,mb5.2						
POO				*e*PP		05 38 56.0	
POO				*ex*	x	05 42 40.0	
PKIN	**Phulchoki**	**26.40**	**339**	*e*P	**P**	**05 38 19.1**	**+1.6**
HKC	**Hong Kong Obse**	**26.43**	**42**	⇑*i*P	**P**	**05 38 20.0**	**+2.1**
HKC				*i* S	**S**	**05 42 48.0**	**-1.6**
GZH	**Guangzhou**	**26.45**	**39**	P	**P**	**05 38 23.0**	**+5.0**
GZH				LR	LR		
	comp=N,20μm,14.8s,MS6.0						
GZH				LR	LR		
	comp=E,22μm,14.4s,MS6.0						
GZH				LR	LR		
	comp=Z,38μm,14.8s,MS6.1						
CUYO	**Cuyo Island**	**26.45**	**71**	*e*P	**P**	**05 38 16.8**	**-1.5**
DMN	**Daman**	**26.53**	**339**	*e*P	**P**	**05 38 19.7**	**+1.0**
	comp=Z,366nm,0.9s,mb5.9						
GUN	**Gumba**	**26.54**	**341**	*e*P	**P**	**05 38 19.3**	**+0.5**
	comp=Z,737nm,0.8s,mb6.3						
KKN	**Kakani**	**26.63**	**339**	*e*P	**P**	**05 38 19.8**	**+0.1**
	comp=Z,475nm,0.9s,mb6.0						
LUBP	**Lubang**	**26.65**	**65**	*e*P	**P**	**05 38 20.1**	**+0.1**
LSA	**Lhasa**	**26.98**	**352**	P	**P**	**05 38 24.0**	**+1.2**
LSA				AP	pP	05 38 33.0	+1.1
LSA				XP	sP	05 38 36.8	+1.1
LSA				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.3						
LSA				LR	LR		
	comp=N,10μm,25.1s						
LSA				LR	LR		
	comp=E,12μm,19.9s						
LSA				LR	LR		
	comp=Z,22μm,25.0s,MS5.6						
LSA	**Lhasa**	**26.98**	**352**	*e*P	**P**	**05 38 23.8**	**+1.0**
LSA				pmax	pmax		
	comp=Z,277nm,0.9s,mb5.8						
LSA	**Lhasa**	**26.98**	**352**	*e*P	**P**	**05 38 23.8**	**+1.0**
	comp=Z,277nm,0.9s,mb5.8						
GKN	**Gorkha**	**27.06**	**338**	*e*P	**P**	**05 38 23.9**	**+0.4**
	comp=Z,1μm,1.0s,mb6.3						
KOLN	**Koldanda**	**27.25**	**336**	*e*P	**P**	**05 38 25.5**	**+0.3**
	comp=Z,474nm,0.8s,mb6.1						
IPIL	**Ipil**	**27.31**	**79**	*e*P	**P**	**05 38 26.6**	**+0.6**
DANN	**Dangsing**	**27.70**	**337**	*e*P	**P**	**05 38 29.5**	**+0.2**
	comp=Z,1μm,1.2s,mb6.4						
OTRP	**Odiongan**	**27.82**	**69**	*e*P	**P**	**05 38 31.4**	**+0.9**
KDI	**Kendari**	**27.88**	**104**	P	**P**	**05 38 30.2**	**-0.8**
	comp=Z,0.0nm,0.0s						
PAGZ	**Pagadian**	**28.12**	**79**	*e*P	**P**	**05 38 33.1**	**0.0**
BBSI	**Bau Bau**	**28.23**	**107**	P	**P**	**05 38 35.4**	**+1.2**
	comp=Z,0.0nm,0.0s						
RCP	**Roxas**	**28.27**	**71**	⇑*e*P	**P**	**05 38 35.2**	**+0.6**
BALP	**Baler**	**28.61**	**62**	*e*P	**P**	**05 38 37.9**	**+0.4**
CD2	**Chengdu**	**28.92**	**15**	⇑*i*P	**P**	**05 38 39.3**	**-0.8**
CD2				AP	pP	05 38 48.8	-0.4
CD2				XP	sP	05 38 52.8	-0.2
CD2				PP	PP	05 39 33.5	-12
CD2				PCP	PcP	05 41 47.5	-1.3
CD2				AMB	AMB		
	comp=Z,300nm,1.3s,mb5.9						
CD2				AMB	AMB		
	comp=Z,2μm,8.4s						
CD2				LR	LR		
	comp=N,27μm,13.2s,MS6.1						
CD2				LR	LR		
	comp=E,20μm,16.8s,MS6.1						
CD2				LR	LR		
	comp=Z,35μm,12.0s,MS6.2						
GSPH	**General Santos**	**29.46**	**83**	*e*P	pP	05 38 55.3	+1.0
GSPH				*e*S	sP	05 39 00.2	+2.1
BUKP	**Musuan**	**29.77**	**79**	*e*P	**P**	**05 38 49.2**	**+1.4**
DMPH	**Davao City--Mi**	**30.11**	**81**	⇑*e*P	**P**	**05 38 55.3**	**+4.4**
DAV	**Davao City (W)**	**30.18**	**81**	⇑*i*P	**P**	**05 38 51.1**	**-0.4**
DAV	**Davao City (W)**	**30.18**	**81**	PFAKE		05 39 00.0	+8.5
DAV				LR	LR		
	comp=Z,1.0nm,19.0s						
PVCP	**Virac**	**30.18**	**68**	*e*P	**P**	**05 38 52.1**	**+0.6**
PTH	**Pithoragarh**	**30.25**	**333**	*ex*	x	05 38 55.6	
PTH				*ex*	x	05 43 17.4	
CNP	**Catarman**	**30.34**	**70**	*e*P	**P**	**05 38 53.2**	**+0.4**
BUTP	**Butuan**	**30.48**	**77**	*e*P	**P**	**05 38 56.0**	**+1.9**
MATI	**Mati**	**30.83**	**81**	*e*P	**P**	**05 38 56.6**	**-0.6**
AJM	**Ajmer**	**30.86**	**321**	*e*P	**P**	**05 38 56.9**	**-0.5**
AJM				AMb	AMB	05 39 03.1	
	comp=Z,45nm,1.2s,mb5.2						
NDI	**New Delhi**	**31.03**	**328**	*e*P	**P**	**05 38 56.5**	**-2.3**
NDI				*ex*	x	05 43 20.0	
QZH	**Quanzhou**	**31.19**	**43**	⇑*i*P	**P**	**05 39 00.8**	**+0.6**
QZH				AMB	AMB		
	comp=Z,180nm,0.9s,mb5.9						
QZH				AMB	AMB		
	comp=Z,2μm,5.1s						
QZH				LR	LR		
	comp=N,22μm,13.1s,MS6.1						
QZH				LR	LR		
	comp=E,20μm,14.2s,MS6.1						
QZH				LR	LR		
	comp=Z,33μm,15.2s,MS6.1						
WHN	**Wuhan**	**32.74**	**31**	P	**P**	**05 39 14.3**	**+0.5**
WHN				AP	pP	05 39 23.5	+0.5
WHN				AMB	AMB		
	comp=Z,436nm,1.3s,mb6.2						
WHN				LR	LR		
	comp=N,26μm,13.4s,MS6.3						
WHN				LR	L

comp=Z,18µm,16.3s,MS5.9
DLH Dalhousie 34.76 330 *ex* x 05 39 34.0
THN Thein Dam 34.80 330 *eP* **P** **05 39 30.0 -1.7**
SWI Sorong 35.88 95 P **P** **05 39 40.9 -0.3**
comp=Z,0.0nm,0.0s
FITZ Fitzroy Crossi 36.24 126 *eP* **P** **05 39 42.7 -1.5**
comp=Z,32nm,0.7s,mb5.4
FITZ *eS* **S** **05 45 13.3 -10**
NJ2 Nanjing 36.34 35 *eP* **P** **05 39 45.5 +0.6**
NJ2 AP pP 05 39 55.3 +1.1
NJ2 XP sP 05 39 59.3 +1.3
NJ2 PP PP 05 41 09.5 +1.5
NJ2 AMB AMB
comp=Z,110nm,1.2s,mb5.7
NJ2 AMB AMB
comp=Z,220nm,4.2s
NJ2 LR LR
comp=N,7µm,20.6s,MS5.9
NJ2 LR LR
comp=E,16µm,16.7s,MS5.9
NJ2 LR LR
comp=Z,18µm,16.8s,MS5.9
GTA Gaotai 36.55 6 ⇑P **P** **05 39 46.0 -0.6**
GTA AP pP 05 39 56.0 +0.2
GTA XP sP 05 40 00.5 +0.8
GTA PP PP 05 41 12.0 +1.8
GTA AMB AMB
comp=Z,63nm,1.0s,mb5.4
GTA AMB AMB
comp=Z,1µm,4.8s
GTA LR LR
comp=N,9µm,14.4s
GTA LR LR
comp=E,7µm,20.4s
GTA LR LR
comp=Z,11µm,14.4s,MS5.8
SSE Sheshan 37.03 38 ⇑P **P** **05 39 51.3 +0.5**
SSE AMB AMB
comp=Z,81nm,1.1s,mb5.5
SSE AMB AMB
comp=Z,778nm,7.1s
SSE LR LR
comp=N,12µm,16.6s,MS6.0
SSE LR LR
comp=E,16µm,16.7s,MS6.0
SSE LR LR
comp=Z,26µm,16.6s,MS6.1
SSE Sheshan 37.03 38 ⇑P **P** **05 39 51.3 +0.5**
comp=Z,81nm,1.1s,mb5.5
SSE pP pP 05 39 54.5 -5.6
SSE S **S** **05 45 34.9 +0.3**
SSE sS sS 05 45 40.7 -9.2
SSE LR LR
comp=Z,26µm,16.6s,MS6.1
TIY Taiyuan 37.95 22 *eP* **P** **05 40 00.5 +2.0**
TIY AP pP 05 40 09.3 +1.5
TIY LR LR
comp=N,22µm,14.3s,MS6.3
TIY LR LR
comp=E,23µm,14.8s,MS6.3
TIY LR LR
comp=Z,33µm,15.4s,MS6.3
TIA Tai'an 38.67 28 *eP* **P** **05 40 04.3 -0.3**
TIA AMB AMB
comp=Z,125nm,1.2s,mb5.5
TIA LR LR
comp=N,16µm,15.0s,MS6.1
TIA LR LR
comp=E,12µm,14.0s,MS6.1
BTO Baotou 39.74 17 *i* P **P** **05 40 13.8 +0.3**
BTO S **S** **05 46 15.8 +0.4**
BTO LR LR
comp=N,19µm,12.7s,MS6.1
BTO LR LR
comp=E,8µm,16.7s,MS6.1
KAKA Kakadu 39.77 114 *eP* **P** **05 40 12.2 -1.9**
comp=E,39nm,0.6s,mb5.3
MUN Mundaring 39.84 152 *eP* **P** **05 40 15.7 +1.3**
MUN *e*PCP PcP 05 42 29.3 +9.2
MUN *eS* **S** **05 46 15.8 -1.2**
KBL Kabul 40.00 325 *eP* **P** **05 40 15.2 -0.6**
KBL pmax pmax
comp=Z,23nm,0.8s,mb5.0
KBL Kabul 40.00 325 *eP* **P** **05 40 15.2 -0.6**
comp=Z,23nm,0.8s,mb5.0
KLBR Kellerberrin 40.27 150 *eP* **P** **05 40 18.8 +0.8**
comp=Z,67nm,1.2s,mb5.2
KLBR *e*PCP PcP 05 42 23.0 +1.5
HHC Hu-ho-hao-te 40.45 19 ⇑*i*P **P** **05 40 20.5 +1.2**
HHC AP pP 05 40 31.0 +2.3
HHC XP sP 05 40 34.5 +2.0
HHC PP PP 05 41 57.5 +4.6
HHC PCP PcP 05 42 23.0 +1.1
HHC AMB AMB
comp=Z,174nm,1.2s,mb5.7
HHC AMB AMB
comp=Z,2µm,5.5s
HHC LR LR
comp=N,26µm,15.5s,MS6.3
HHC LR LR
comp=E,28µm,17.5s,MS6.3
HHC LR LR
comp=Z,37µm,14.7s,MS6.4
WBK Wadi Bani Khal 40.52 302 P pP 05 40 31.1 +1.4
SNR=7.2
KSH Kashi 40.57 336 ⇑*i*P **P** **05 40 20.5 +0.1**
KSH *e*AP pP 05 40 29.0 -0.7
KSH *e*XP sP 05 40 33.0 -0.5
KSH *e*PP PP 05 41 57.0 +2.8
KSH *e*PCP PcP 05 42 23.0 +0.7
KSH AMB AMB
comp=Z,2µm,3.4s
KSH LR LR
comp=N,27µm,15.8s,MS6.3
KSH LR LR
comp=E,19µm,15.0s,MS6.3
KSH LR LR
comp=Z,23µm,17.5s,MS6.1
MSEY Mahe Island 40.75 259 *eP* **P** **05 40 25.6 +3.3**
NWAO Narrogin (SRO) 41.11 152 P **P** **05 40 24.1 -0.8**
comp=Z,29nm,1.0s,mb4.9,baz=320,slow=8.0,SNR=9.8
NWAO LR LR 05 55 29.9
comp=Z,3µm,19.7s,MS5.2,baz=329,slow=33
NWAO Narrogin (SRO) 41.11 152 P **P** **05 40 26.8 +1.9**
NWAO pmax pmax
comp=Z,230nm,1.5s
NWAO Narrogin (SRO) 41.11 152 *eP* **P** **05 40 25.6 +0.7**
comp=Z,186nm,1.4s,mb5.5
JMDO Jabal Madar 41.17 301 ⇑P **P** **05 40 29.0 +3.5**
SNR=6.9
WMQ Urumqi 41.34 351 ⇑*i*P **P** **05 40 27.3 +0.6**
WMQ AP pP 05 40 37.0 +1.0
WMQ XP sP 05 40 41.0 +1.2
WMQ PP PP 05 42 04.0 +1.4
WMQ AMB AMB
comp=Z,178nm,1.0s,mb5.7
WMQ AMB AMB
comp=Z,1µm,3.5s
WMQ LR LR
comp=N,10µm,18.2s,MS6.0
WMQ LR LR
comp=E,18µm,20.6s,MS6.0
WMQ LR LR
comp=Z,10µm,24.8s,MS5.6
BJT Baijiatuau 41.40 24 *eP* **P** **05 40 28.4 +1.2**
BJT pmax pmax
comp=Z,788nm,1.1s
BJT MLR MLR
comp=Z,8µm,19.0s
BJT Baijiatuau 41.40 24 *eP* **P** **05 40 28.4 +1.2**
comp=Z,788nm,1.1s,mb6.2
BJT LR LR
comp=Z,8µm,19.0s,MS5.6
BJI Beijing 41.42 24 P **P** **05 40 28.5 +1.1**
BJI PP PP 05 42 03.8 +0.3
BJI LR LR
comp=N,6µm,17.0s,MS6.0
BJI LR LR
comp=E,17µm,18.2s,MS6.0
BJI LR LR
comp=Z,4µm,20.6s,MS5.2
BJI Beijing 41.42 24 P **P** **05 40 28.4 +1.0**
BJI 05 42 03.8
BJI S **S** **05 46 38.1 -2.3**
BJI pmax pmax
comp=Z,467nm,1.0s,mb6.1
BJI MLR MLR
comp=Z,4µm,20.6s,MS5.2
BJI Beijing 41.42 24 P **P** **05 40 28.4 +1.0**
comp=Z,467nm,1.0s,mb6.1
BJI PP PP 05 42 03.8 +0.3
BJI S **S** **05 46 38.1 -2.3**
BJI SS SS 05 49 48.2 +2.8
BJI LR LR
comp=Z,4µm,20.6s,MS5.2
SMDO Samad 41.48 302 P pP 05 40 39.0 +1.5
SNR=9.6
BIDO Bidbid 41.60 303 P **P** **05 40 32.6 +3.5**
SNR=23
BSY Bisya 42.08 301 ⇑P **P** **05 40 36.0 +2.9**
SNR=33
HOQ Hoqain 42.31 302 P **P** **05 40 38.4 +3.5**
SNR=26
ULHL Ulahol 42.83 339 P **P** **05 40 39.5 +0.7**
SNR=27
DL2 Dalian 42.99 30 ⇑*i*P **P** **05 40 40.0 -0.2**
DL2 AP pP 05 40 50.0 +0.4
DL2 XP sP 05 40 52.5 -0.9
DL2 PP PP 05 42 22.3 +1.9
DL2 AMB AMB
comp=Z,240nm,0.7s,mb6.0
DL2 AMB AMB
comp=Z,690nm,4.8s
DL2 LR LR
comp=N,4µm,16.5s,MS5.7
DL2 LR LR
comp=E,7µm,14.8s,MS5.7
DL2 LR LR
comp=Z,6µm,15.4s,MS5.6
KZA Kyzart 43.05 338 P **P** **05 40 41.9 +1.3**
SNR=21
RBK Rabkut 43.09 293 ⇓P **P** **05 40 44.6 +3.3**
SNR=7.6
UCH Uchtor 43.46 337 P **P** **05 40 45.2 +1.3**
SNR=75
UCH Uchtor 43.46 337 *eP* **P** **05 40 45.0 +1.0**
comp=Z,87nm,0.8s,mb5.5
WHFO Wadi Hawf 43.59 293 P **P** **05 40 48.8 +3.4**
SNR=6.2
TKM2 Tokmak 2 43.65 339 *eP* **P** **05 40 46.2 +0.8**
TKM2 pmax pmax
comp=Z,238nm,1.6s,mb5.7
TKM2 Tokmak 2 43.65 339 P **P** **05 40 46.3 +0.9**
SNR=45
TKM2 Tokmak 2 43.65 339 *eP* **P** **05 40 46.2 +0.8**
comp=Z,238nm,1.6s,mb5.7
KBK Karagaybulak 43.66 338 P **P** **05 40 47.0 +1.4**
SNR=27
AML Almayashu 43.70 336 P **P** **05 40 47.1 +1.2**
SNR=28
AML Almayashu 43.70 336 *eP* **P** **05 40 47.1 +1.2**
comp=Z,156nm,1.0s,mb5.7
AML LR LR
comp=Z,7µm,20.0s,MS5.6
HATD Hatta, Dubai 43.79 303 P **P** **05 40 49.7 +2.8**
SNR=27
AAK Ala-Archa 43.81 337 P **P** **05 40 48.4 +1.7**
SNR=23
ABTO Aybut 43.89 292 ⇓P **P** **05 40 50.9 +3.1**
SNR=7.5
FRU Bishkek 43.94 338 ⇑*i*P **P** **05 40 49.0 +1.2**
FRU *e* 05 47 21.0
FRU pmax pmax
comp=Z,490nm,2.2s,mb5.8
FRU pmax pmax
comp=Z,2µm,4.0s
CHMS Chumysh 44.03 338 P **P** **05 40 48.8 +0.3**
SNR=13
EKS2 Erkin-Say 44.11 337 P **P** **05 40 50.4 +1.2**
SNR=54
EKS2 Erkin-Say 44.11 337 *eP* **P** **05 40 50.3 +1.1**
comp=Z,71nm,0.8s,mb5.5
EKS2 LR LR
comp=Z,8µm,19.0s,MS5.6
WRA Warramunga Arr 44.31 123 P **P** **05 40 50.4 -0.7**
comp=Z,50nm,1.1s,mb5.2,baz=301,slow=9.0,SNR=104
WRAB Tennant Creek 44.32 122 P **P** **05 40 50.0 -1.2**
comp=Z,465nm,1.2s,mb6.1,SNR=36
WRAB Tennant Creek 44.32 122 P **P** **05 40 50.6 -0.6**
WRAB pmax pmax
comp=Z,110nm,1.1s,mb5.5
WRAB Tennant Creek 44.32 122 *eP* **P** **05 40 50.6 -0.6**
comp=Z,87nm,1.1s,mb5.4
WB2 Warramunga Arr 44.32 123 *eP* **P** **05 40 50.2 -1.0**
WB2 *eS* **S** **05 47 21.0 -2.6**
USP Ospenovka 44.35 338 P **P** **05 40 51.7 +0.6**
SNR=51
INCN Inchon 44.69 36 ⇑P **P** **05 40 52.6 -1.3**
SNR=8.9
INCN Inchon 44.69 36 *eP* **P** **05 40 53.6 -0.3**
comp=Z,796nm,1.9s,mb6.2
MK31 Makanchi Array 45.22 347 *eP* **P** **05 40 58.4 +0.4**
MKAR Makanchi Array 45.22 347 P **P** **05 40 58.1 +0.2**
comp=Z,145nm,0.7s,mb5.9,baz=165,slow=7.8,SNR=544
KS15 Wonju Array Si 45.40 37 *eP* **P** **05 40 59.6 +0.1**
KSRS Korea Array 45.43 37 P **P** **05 40 59.1 -0.6**
comp=Z,26nm,1.0s,mb5.0,baz=227,slow=8.1,SNR=36
KSRS Korea Array 45.43 37 P **P** **05 40 59.2 -0.6**
KSRS pmax pmax
comp=Z,26nm,1.0s,mb5.0
FORT Forrest 45.62 140 *eP* **P** **05 41 01.8 +0.5**
comp=Z,95nm,0.8s,mb5.8
ASAR Alice Springs 45.71 127 P **P** **05 41 01.7 -0.5**
comp=Z,9.6nm,0.7s,mb4.8,baz=302,slow=7.2,SNR=86
ASAR PcP PcP 05 42 38.7 -1.2
comp=Z,4.9nm,0.7s,baz=310,slow=5.0,SNR=2.5
SONM Songino Array 45.73 10 P **P** **05 41 02.1 +0.2**
comp=Z,71nm,0.9s,mb5.6,baz=190,slow=8.6,SNR=271
SONM PcP PcP 05 42 39.9 +0.5
comp=Z,15nm,0.8s,baz=209,slow=3.0,SNR=4.2
KK31 Karatay Array 45.83 334 *eP* **P** **05 41 02.9 +0.1**
KK31 pmax pmax
comp=Z,69nm,0.8s,mb5.6
KK31 Karatay Array 45.83 334 *i* P **P** **05 41 02.0 -0.8**
ULN Ulaanbaatar 45.88 11 P **P** **05 41 02.8 -0.4**
SNR=82
ULN Ulaanbaatar 45.88 11 *eP* **P** **05 41 03.5 +0.4**
ULN pmax pmax
comp=Z,331nm,1.8s,mb6.0
ULN Ulaanbaatar 45.88 11 *eP* **P** **05 41 03.5 +0.3**
comp=Z,331nm,1.8s,mb6.0
SNY Shenyang 46.18 29 ⇑P **P** **05 41 05.3 -0.3**
SNY AP pP 05 41 13.0 -2.1
SNY XP sP 05 41 19.5 +0.6
SNY AMB AMB
comp=Z,186nm,1.6s,mb5.8
SNY AMB AMB
comp=Z,2µm,3.5s
SNY LR LR
comp=N,21µm,16.6s,MS6.2
SNY LR LR
comp=E,6µm,15.9s,MS6.2
SNY LR LR
comp=Z,23µm,15.9s,MS6.2
ZAK Zakamensk 47.76 7 ⇓*i*P **P** **05 41 17.5 -0.3**
ZAK *e* 05 43 10.4
ZAK pmax pmax
comp=Z,73nm,1.5s,mb5.5
ZAK pmax pmax
comp=Z,26nm,1.7s,mb5.0
CN2 Changchun 48.57 29 ⇑P **P** **05 41 24.3 +0.1**
CN2 *e*AP pP 05 41 35.5 +1.8
CN2 AMB AMB
comp=Z,70nm,1.3s,mb5.5
CN2 AMB AMB
comp=Z,2µm,6.0s
CN2 LR LR
comp=N,3µm,21.0s,MS5.4
CN2 LR LR
comp=E,2µm,21.0s,MS5.4
CN2 LR LR
comp=Z,4µm,21.0s,MS5.4
ABKT Ailbek 48.87 320 P **P** **05 41 26.9 +0.3**
comp=Z,380nm,0.8s,mb6.5,SNR=7.5
VAN Vannovskaya 48.89 320 P **P** **05 41 27.0 +0.2**
TLY Talaya 49.08 7 P **P** **05 41 28.4 +0.4**
comp=Z,479nm,0.9s,mb6.5,SNR=13
TLY Talaya 49.08 7 ⇓P **P** **05 41 28.4 +0.5**
SNR=20
TLY Talaya 49.08 7*c* *i*P **P** **05 41 28.5 +0.5**
TLY *e* 05 43 16.4
TLY *eS* **S** **05 48 34.5 +3.7**
TLY *e* 05 48 44.8
TLY pmax pmax
comp=Z,98nm,1.0s,mb5.8
TLY MLR MLR
comp=Z,9µm,18.0s,MS5.8
TLY Talaya 49.08 7 *eP* **P** **05 41 28.0 0.0**
comp=Z,78nm,0.9s,mb5.7
IRK Irkutsk 49.71 7 ⇑*i*P **P** **05 41 33.0 +0.2**
IRK *e* 05 43 28.0
IRK pmax pmax
comp=Z,346nm,2.0s,mb6.0
KURK Kurchatov 49.75 346 P **P** **05 41 33.5 +0.4**
comp=Z,950nm,1.7s,mb6.5,SNR=80
GUMO Guam 49.84 75 P **P** **05 41 34.9 +0.5**
comp=Z,49nm,0.8s,mb5.6,baz=354,slow=13,SNR=2.6
COEN Coen 50.08 111 *eP* **P** **05 41 35.6 -0.6**
comp=Z,60nm,1.3s,mb5.5
HIA Hailar 50.59 20 *eP* **P** **05 41 39.5 0.0**
HIA pmax pmax
comp=Z,168nm,1.2s
HIA Hailar 50.59 20 *eP* **P** **05 41 39.5 0.0**
comp=Z,168nm,1.2s,mb5.8
CIT Chita 51.21 14 *eP* **P** **05 41 45.3 +1.2**
CIT *e* pP 05 41 54.3 +0.7
CIT *e* 05 42 01.2
CIT pmax pmax
comp=Z,413nm,2.0s,mb6.0
MDJ Mudanjiang 51.22 31 P **P** **05 41 45.3 +1.0**
MDJ AP pP 05 41 54.5 +0.6
MDJ XP sP 05 41 58.5 +0.9
MDJ PCP PcP 05 42 55.5 -3.8
MDJ PP PP 05 43 46.0 +4.6
MDJ AMB AMB
comp=Z,77nm,1.6s,mb5.4
MDJ AMB AMB
comp=Z,1µm,5.8s
MDJ LR LR
comp=N,7µm,17.0s,MS6.0
MDJ LR LR
comp=E,9µm,14.9s,MS6.0
MDJ LR LR
comp=Z,6µm,19.1s,MS5.7
MDJ Mudanjiang 51.22 31 *eP* **P** **05 41 45.0 +0.6**
comp=Z,214nm,1.4s,mb5.9
MDJ *e*pP pP 05 41 54.1 +0.3
VLA Vladivostok 51.44 34*d* *i*P **P** **05 41 46.3 +0.3**
VLA pmax pmax
comp=Z,361nm,1.7s,mb6.0
VLA Vladivostok 51.44 34 *i* P **P** **05 41 46.4 +0.4**
MAT Matsushiro 51.58 44 P **P** **05 41 46.6 -0.6**
MAT S **S** **05 49 06.0 0.0**
MAJO Matsushiro 51.58 44 P **P** **05 41 47.4 +0.2**
MAJO pmax pmax
comp=Z,72nm,1.3s,mb5.4
MAJO Matsushiro 51.58 44 *eP* **P** **05 41 46.6 -0.6**
comp=Z,295nm,2.1s,mb5.8
MJAR Matsushiro Arr 51.58 44 P **P** **05 41 46.5 -0.7**
comp=Z,7.7nm,0.7s,mb4.7,baz=234,slow=8.7,SNR=18
MJAR PcP PcP 05 43 00.9 0.0
comp=Z,13nm,1.1s,baz=229,slow=2.9,SNR=6.6
ZAA0 Zalesovo Array 51.65 352 *eP* **P** **05 41 47.5 +0.1**
ZALV Zalesovo Beam 51.65 352 P **P** **05 41 47.3 0.0**
comp=Z,190nm,0.7s,mb6.1,baz=181,slow=6.9,SNR=515
OPO Ambohidratompo 52.17 244 P **P** **05 41 51.6 -0.2**
comp=Z,14nm,0.5s,mb5.1,baz=67,slow=4.8,SNR=33
ABPO Ambohimpanom 52.28 243 *eP* **P** **05 41 53.0 +0.3**
comp=Z,245nm,1.6s,mb5.9
ABPO LR LR
comp=Z,5µm,22.0s,MS5.5
KBD Kabd 52.40 305 *eP* **P** **05 41 52.5 -0.9**
baz=305
KBD AMb AMB 05 42 04.1
comp=Z,201nm,1.5s,mb5.8,baz=305
UMR Umm Al-Rimmam 52.51 305 *eP* **P** **05 41 54.1 -0.1**
baz=305
UMR AMb AMB 05 42 07.3
comp=Z,213nm,1.3s,mb5.9,baz=305
NVS Novosibirsk 52.75 351 ⇑*i*P **P** **05 41 53.9 -1.6**
NVS *eS* **S** **05 49 17.0 -4.4**
NVS pmax pmax
comp=N,176nm,1.0s
NVS pmax pmax
comp=E,86nm,1.0s
NVS pmax pmax
comp=Z,195nm,1.0s,mb6.0
NVS smax
comp=N,274nm,2.1s
NVS smax
comp=E,432nm,2.1s
PMG Port Moresby 52.84 104*c* *i*P **P** **05 41 56.1 -0.8**
PMG Port Moresby 52.84 104 *eP* **P** **05 41 55.7 -1.2**
MIB Mutribah 52.91 306 *eP* **P** **05 41 57.1 -0.1**
baz=306
MIB AMb AMB 05 42 07.8
comp=Z,444nm,1.3s,mb6.2,baz=306
KRAR Krasnoyarsk 53.00 358*c* *i*P **P** **05 41 57.7 +0.4**
BVA0 Borovoye Array 54.13 342 *i* P **P** **05 42 05.2 -0.5**
BVA0 pmax pmax
comp=Z,77nm,1.9s,mb5.3
BRVK Borovoye 54.19 341 P **P** **05 42 06.0 -0.1**
comp=Z,976nm,1.3s,mb6.6,SNR=24
BRVK Borovoye 54.19 341 ⇑P **P** **05 42 06.8 +0.7**
SNR=71
BRVK Borovoye 54.19 341 P **P** **05 42 05.1 -1.0**
BRVK pmax pmax
comp=Z,190nm,1.0s,mb6.0
BRVK Borovoye 54.19 341 *eP* **P** **05 42 04.7 -1.4**
BRVK LR LR
comp=Z,8µm,20.0s,MS5.8
CTA Charters Tower 54.72 117 *eP* **P** **05 42 10.4 -0.1**
comp=Z,29nm,0.8s,mb5.3
CTA *eS* **S** **05 49 43.8 -5.4**
CTA Charters Tower 54.72 117 P **P** **05 42 10.6 +0.1**
comp=Z,45nm,1.1s,mb5.4,baz=291,slow=8.7,SNR=29
CTA Charters Tower 54.72 117 P **P** **05 42 10.6 +0.1**
CTA pmax pmax
comp=Z,45nm,1.1s
CTAO Charters Tower 54.72 117 *eP* **P** **05 42 10.5 -0.1**
CTAO LR LR
comp=Z,9µm,19.0s,MS5.8
AB31 Akbulak array 55.26 332 ⇑*eP* **P** **05 42 13.9 -0.1**
KLR Kul'dur 55.50 28 ⇓*i*P **P** **05 42 12.2 -3.5**
KLR *eS* **S** **05 50 00.0 +1.2**
KLR pmax pmax
comp=E,150nm,1.8s
KLR pmax pmax
comp=Z,370nm,1.8s,mb6.1
KLR pmax pmax
comp=Z,2µm,6.5s
KLR MLR MLR
comp=Z,15µm,14.0s,MS6.2
STKA Stephens Creek 55.70 132 *eP* **P** **05 42 17.4 0.0**
comp=Z,27nm,1.0s,mb5.2
STKA Stephens Creek 55.70 132 P **P** **05 42 17.6 +0.2**
comp=Z,17nm,1.1s,mb5.0,baz=310,slow=9.3,SNR=11
STKA Stephens Creek 55.70 132 *eS* **S** **05 50 03.0 +1.0**
HABR Khabarovsk 56.60 30 *eP* **P** **05 42 23.3 -0.3**
HABR *e* pP 05 42 31.0 -2.2
HABR *e* 05 43 21.8
HABR *e* 05 44 27.4
HABR *eS* **S** **05 50 13.0 -0.5**
HABR *e* 05 50 29.5
HABR *e* 05 52 08.3
HABR *e* 05 54 01.9
HABR pmax pmax
comp=Z,169nm,1.7s,mb5.8
BOD Bodaibo 56.67 12 *eP* **P** **05 42 23.5 -0.4**
BOD pmax pmax
comp=Z,113nm,1.8s,mb5.6
AKTK Aktyubinsk 56.98 332 *i* P **P** **05 42 25.4 -0.8**
AKTO Aktyubinsk 56.98 332 *i* P **P** **05 42 25.4 -0.8**
ERM Erimo 57.63 41 PFAKE 05 42 40.0 +9.0
ERM LR LR
comp=Z,13µm,19.0s,MS6.1
MAK Makhachkala 58.39 320 *eP* **P** **05 42 35.5 -0.8**
MAK *i* 05 43 28.6
MAK *i* 05 44 45.9
MAK *e*PPP 05 46 14.7
MAK *eS* **S** **05 50 35.1 -2.1**
MAK *e* 05 52 23.9
MAK *e*SS SS 05 54 34.8 +5.0
MAK pmax pmax
comp=Z,286nm,1.9s,mb6.0
MAK MLR MLR
comp=Z,4µm,22.0s,MS5.5
KMBO Kilima Mbogo 58.43 267 ⇓P **P** **05 42 40.3 +3.2**

SNR=12
KMBO Kilima Mbogo 58.43 267 P **P** **05 42 38.2 +1.0**
comp=Z,16nm,1.0s,mb5.0,baz=69,slow=9.2,SNR=18
KMBO Kilima Mbogo 58.43 267 P **P** **05 42 38.2 +1.1**
KMBO pmax pmax
comp=Z,16nm,1.0s
KMBO Kilima Mbogo 58.43 267 *e*P **P** **05 42 38.1 +1.0**
comp=Z,96nm,1.6s,mb5.6
HAKT HAKKARI 58.62 313 *i* P **P** **05 42 40.4 +2.3**
CLNS Chul'man 58.63 18 *e*P **P** **05 42 37.2 -0.5**
CLNS *e**PP pP 05 42 47.3 -0.1
CLNS *e* 05 43 26.1
CLNS *e* 05 44 48.7
CLNS *e*PPP 05 46 10.6
CLNS *e*S **S** **05 50 47.2 +7.4**
CLNS pmax pmax
comp=N,117nm,1.6s
CLNS pmax pmax
comp=Z,205nm,2.0s,mb5.8
CLNS pmax pmax
comp=E,63nm,1.4s
CLNS smax
comp=N,632μm,11.7s
CLNS smax
comp=E,741μm,18.2s
CLNS MLR MLR
comp=Z,24μm,17.0s,MS6.4
CLNS MLR MLR
comp=N,16μm,17.0s,MS6.3
CLNS MLR MLR
comp=E,12μm,15.0s,MS6.3
GNI Garni 58.95 316*c* *i*P **P** **05 42 41.5 +1.3**
GNI pmax pmax
comp=Z,72nm,2.5s
GNI Garni 58.95 316 *e*P **P** **05 42 41.3 +1.0**
comp=Z,78nm,1.1s,mb5.7
GNI *e*pP pP 05 42 49.8 -0.1
YSS Yuzh-Sakhalins 59.90 36⇑ *e*P **P** **05 42 45.8 -0.9**
YSS *e* 05 42 57.2
YSS *e* 05 51 09.0
YSS pmax pmax
comp=Z,100nm,1.0s,mb5.8
YSS Yuzh-Sakhalins 59.90 36 *e*P **P** **05 42 46.8 +0.1**
DIGO Kars 60.01 316 *i*P **P** **05 42 50.5 +2.9**
SVE Sverdlovsk 60.52 339⇓ *e*P **P** **05 42 50.4 -0.3**
SVE *e* 05 45 04.8
SVE *e*S **S** **05 51 06.7 +2.5**
SVE *e* 05 52 40.2
SVE pmax pmax
comp=Z,251nm,1.0s,mb6.3
SVE MLR MLR
comp=Z,8μm,21.0s,MS5.9
MARD Mardin 60.70 312 *i*P **P** **05 42 53.2 +0.9**
ARU Arti 61.00 338 P **P** **05 42 53.4 -0.6**
comp=Z,661nm,1.0s,mb6.7,SNR=19
ARU Arti 61.00 338 P **P** **05 42 53.3 -0.7**
ARU pmax pmax
comp=Z,220nm,1.2s,mb6.2
ARU Arti 61.00 338 *e*P **P** **05 42 53.3 -0.6**
ARU LR LR
comp=Z,8μm,20.0s,MS5.8
TOO Toolangi 61.29 136 *e*P **P** **05 42 57.4 +1.1**
ARTV Artvin 61.32 316 *i*P **P** **05 42 59.2 +2.7**
DDEM Demirkent 61.33 316 *i*P **P** **05 42 59.2 +2.7**
DBOC Borcka 61.57 316 *i*P **P** **05 43 00.7 +2.5**
KIV Kislovodsk 61.97 319*c* *e*P **P** **05 43 01.3 +0.5**
KIV *e**PP pP 05 43 10.2 -0.3
KIV *e**SP sP 05 43 15.4 +1.2
KIV *e* 05 43 36.1
KIV *i*S **S** **05 51 21.8 -1.2**
KIV *i*PS 05 51 36.6
KIV *i* 05 52 53.6
KIV pmax pmax
comp=Z,98nm,2.5s,mb5.5
KIV Kislovodsk 61.97 319 *e*P **P** **05 43 03.6 +2.8**
ELZG Elazig 62.44 312 *i*P **P** **05 43 07.3 +3.2**
CAN Canberra 62.76 132 P **P** **05 43 09.2 +3.0**
CAN Canberra 62.76 132 *e*P **P** **05 43 08.5 +2.3**
comp=Z,183nm,1.8s,mb5.9
MALT Malatya 62.79 312 P **P** **05 43 06.3 -0.1**
MALT pmax pmax
comp=Z,45nm,1.2s,mb5.5
MALT Malatya 62.79 312⇑ *i*P **P** **05 43 06.2 -0.2**
MALT Malatya 62.79 312 *e*P **P** **05 43 06.3 -0.1**
comp=Z,45nm,1.3s,mb5.4
ARMA Armidale 62.85 126 *e*P **P** **05 43 07.9 +1.0**
ARMA *e*S **S** **05 51 38.8 +4.2**
CNB Canberra Magne 63.03 132 *e*P **P** **05 43 08.2 +0.2**
GZT Gaziantep 63.13 311 *i*P **P** **05 43 09.4 +0.7**
AKCD Akcadag 63.16 312 *i*P **P** **05 43 12.0 +3.2**
HWQ Hawqa 63.49 307 *e*P **P** **05 43 10.5 -0.6**
BHL Bhannes 63.62 307 *e*P **P** **05 43 12.3 +0.3**
SOC Sochi 63.77 318 *e*P **P** **05 43 12.9 +0.1**
SOC *e**PP pP 05 43 21.4 -1.2
SOC *e**SP sP 05 43 25.7 -0.6
SOC *e* 05 43 46.4
SOC *e* 05 45 28.2
SOC *e*S **S** **05 51 42.9 -2.8**
SOC *e* 05 53 06.0
SOC *e*SS SS 05 55 59.2 +5.1
SOC pmax pmax
comp=Z,1μm,0.9s
SOC MLR MLR
comp=Z,11μm,21.0s,MS6.0
ANDN Andirin 64.12 311 *i*P **P** **05 43 18.7 +3.5**
YAK Yakutsk 64.27 17*c* *i*P **P** **05 43 15.0 -0.7**
YAK *e**PP pP 05 43 48.4 -1.1
YAK *e* 05 43 48.4
YAK *e* 05 45 34.9
YAK *e*S **S** **05 51 51.4 +0.2**
YAK *e**SS sS 05 52 05.3 -2.0
YAK *e* 05 52 58.4
YAK *e*SS SS 05 55 59.0 -2.1
YAK *e*SSS 05 58 51.9
YAK pmax pmax
comp=Z,296nm,1.7s,mb6.0
YAK pmax pmax
comp=N,75nm,1.5s
YAK pmax pmax
comp=E,45nm,1.0s
YAK pmax pmax
comp=Z,214nm,2.8s,mb5.7
YAK smax
comp=E,393μm,3.8s
YAK smax
comp=N,608μm,3.2s
YAK MLR MLR
comp=E,13μm,16.0s,MS6.2
YAK MLR MLR
comp=Z,14μm,19.0s,MS6.2
YAK MLR MLR
comp=N,7μm,18.0s,MS6.2
YAK Yakutsk 64.27 17 *e*P **P** **05 43 15.2 -0.5**
PINB Pinarbasi 64.41 312 *i*P **P** **05 43 20.2 +3.1**
YURE YUREGIR 64.44 310 *i*P pP 05 43 26.4 -0.7
HNR Honiara 65.30 102 P **P** **05 43 23.4 +0.1**
HNR pmax pmax
comp=Z,340nm,1.2s,mb6.2
HNR Honiara 65.30 102 *e*P **P** **05 43 22.8 -0.5**
comp=Z,335nm,1.3s,mb6.2
HNR *e*pP pP 05 43 32.6 -0.5
AVNT Avonos 65.59 312 *i*P **P** **05 43 22.5 -2.3**
CSS Prodhromos 65.75 307 *e*P **P** **05 43 26.9 +1.0**
comp=Z,71nm,1.1s,mb5.6
CSS LR LR
comp=Z,8μm,19.0s,MS5.9
ANN Anapa 65.76 318 *e*P **P** **05 43 24.1 -1.6**
ANN *e*S S 05 52 07.2 -2.9
ANN pmax pmax
comp=Z,42nm,1.1s,mb5.4
VRHR Novokhopersk 65.82 326 *e*P **P** **05 43 26.5 +0.5**
VRHR pmax pmax
comp=E,180nm,1.9s
VRHR pmax pmax
comp=Z,120nm,1.4s,mb5.7
VRHR pmax pmax
comp=N,150nm,2.2s
CTKT Corum 66.19 313 *i*P **P** **05 43 31.6 +3.0**
CDAG Cicekdag 66.20 312 *i*P **P** **05 43 27.5 -1.2**
BR131 Keskin Array S 66.77 312 *e*P **P** **05 43 31.3 -1.1**
comp=N,8.8nm,0.8s,mb4.8
BR131 LR LR
comp=Z,3μm,20.0s,MS5.5
ILGA Ilgaz 67.10 314 *i*P **P** **05 43 37.0 +2.6**

VSR Storozhevoye 67.25 325 *e*P **P** **05 43 33.1 -2.1**
VSR pmax pmax
comp=Z,10.0nm,1.8s
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.9s
ANTO Ankara 67.44 312⇓ *i*P **P** **05 43 37.4 +0.9**
ANTO Ankara 67.44 312 P **P** **05 43 36.2 -0.4**
ANTO pmax pmax
comp=Z,32nm,1.0s,mb5.3
ANTO Ankara 67.44 312 *e*P **P** **05 43 36.1 -0.4**
comp=Z,32nm,0.9s,mb5.3
ANTO LR LR
comp=Z,3μm,20.0s,MS5.5
VOR Voronezh 67.46 326 *e*P **P** **05 43 35.0 -1.4**
VOR pmax pmax
comp=Z,200nm,2.0s,mb5.8
BALT Daday 67.47 314 *i*P **P** **05 43 36.7 -0.1**
KDHN Kadinhani 67.59 311 *i*P **P** **05 43 39.5 +1.9**
SIM Simferopol' **68.02 318** *e*P **P** **05 43 41.3 +1.2**
SIM *e*S S 05 52 34.0 -3.4
SIM pmax pmax
comp=Z,43nm,1.1s,mb5.4
ISP Isparta 68.65 310⇑ *i*P **P** **05 43 44.6 +0.4**
ESKT Eskisehir 68.79 311 *i*P **P** **05 43 45.3 +0.2**
LSZ Lusaka 69.05 253⇓ *i*P **P** **05 43 50.3 +3.2**
SNR=11
LSZ Lusaka 69.05 253 P **P** **05 43 47.3 +0.2**
LSZ pmax pmax
comp=Z,98nm,1.4s,mb5.5
LSZ Lusaka 69.05 253 *e*P **P** **05 43 47.3 +0.2**
BORA Eskisehir 69.18 312 *i*P **P** **05 43 49.3 +1.9**
GOLH Golhisar 69.25 309 *i*P **P** **05 43 50.1 +2.1**
MIR Mirnyy 69.31 181 *de*P **P** **05 43 50.0 +2.3**
MIR *e* 05 44 07.0
MIR *i*S S 05 53 24.0 +32
MIR pmax pmax
comp=Z,100nm,1.8s,mb5.4
MIR pmax pmax
comp=Z,1μm,6.0s
MIR MLR MLR
comp=Z,6μm,19.0s,MS5.8
GDZ Gediz 69.72 311 *i*P **P** **05 43 53.0 +2.2**
CASY Casey 69.85 174 *e*P **P** **05 43 52.3 +1.3**
CASY *e*S S 05 52 58.4 +0.1
CASY Casey 69.85 174 *e*P **P** **05 43 52.3 +1.3**
CASY *e*S S 05 52 58.4 +0.1
CASY LR LR
comp=Z,7μm,19.0s,MS5.9
TURN Turunc 69.92 308 *i*P pP 05 44 02.0 +0.1
MOS Moscow 70.05 329 *e*P **P** **05 43 50.0 -2.5**
MOS *e* 05 44 11.4
MOS *e*PPP 05 48 07.3
MOS *e*S S 05 52 57.5 -3.5
MOS pmax pmax
comp=Z,194nm,1.7s,mb5.8
ARG Arkhangelos 70.16 307 *e*P **P** **05 43 54.0 +0.4**
ULDT Uludag 70.22 312 *i*P **P** **05 43 55.4 +1.5**
OBN Obninsk 70.33 328 P **P** **05 43 55.0 +0.8**
comp=Z,699nm,0.8s,mb6.6,SNR=5.3
OBN Obninsk 70.33 328*a* *i*P **P** **05 43 53.3 -0.9**
OBN *e**PP pP 05 44 01.0 -3.1
OBN *e* 05 44 11.9
OBN 05 44 16.6
OBN *i*S S 05 53 01.6 -2.7
OBN *e* 05 53 53.3
OBN *i*SS SS 05 57 38.5 +3.3
OBN SSS 06 00 46.0
OBN pmax pmax
comp=Z,152nm,1.7s,mb5.7
OBN MLR MLR
comp=Z,2μm,20.0s,MS5.4
OBN Obninsk 70.33 328 *e*P **P** **05 43 53.8 -0.5**
comp=Z,209nm,1.3s,mb5.9
DURS Dursunbey 70.60 311 *i*P **P** **05 43 58.3 +2.1**
KARP Karpathos 70.81 307 *e*P **P** **05 43 57.5 -0.1**
PETK Petropavlovsk- 71.25 34 P **P** **05 43 59.0 -0.8**
comp=Z,8.3nm,0.9s,mb4.7,baz=205,slow=6.6,SNR=4.1
BALY Balya 71.27 311 *i*P **P** **05 43 59.6 -0.7**
KLMR Klimovskoe 71.53 335 *e*P **P** **05 43 59.6 -1.8**
KLMR pmax pmax
comp=Z,268nm,1.8s,mb5.9
PET Petropavlovsk 71.75 35 *e*P **P** **05 44 02.1 -0.8**
PET *e* 05 44 19.7
PET *e*S S 05 53 23.6 +2.7
PET pmax pmax
comp=Z,86nm,1.1s,mb5.6
PET pmax pmax
comp=Z,3μm,5.4s
PET pmax pmax
comp=Z,1μm,5.5s
PET smax
comp=N,1μm,21.2s
PET MLR MLR
comp=Z,7μm,19.0s,MS5.9
PET MLR MLR
comp=Z,7μm,16.0s
URLA Izmir 71.77 309 *i*P **P** **05 44 03.1 -0.2**
TIRR Tirgusor 71.78 316⇓ *i*P **P** **05 44 02.5 -0.7**
TIRR Tirgusor 71.78 316 *e*P **P** **05 44 02.0 -1.3**
comp=Z,30nm,0.8s,mb5.3
SART Tekirdag 71.80 312 *i*P **P** **05 44 05.5 +2.0**
TIXI Tiksi 71.82 11⇑ *e*P **P** **05 44 01.5 -1.4**
TIXI pmax pmax
comp=Z,284nm,2.0s,mb5.8
TIXI Tiksi 71.82 11 *e*P **P** **05 44 01.9 -1.1**
comp=Z,411nm,1.7s,mb6.1
TIXI *e*pP pP 05 44 12.1 -0.7
NPS Neapolis 72.00 306 *e*P **P** **05 44 04.5 -0.3**
KIS Kishinev 72.15 319 *e*P **P** **05 44 05.0 -0.4**
KIS *e*S S 05 53 24.0 -1.8
KIS *e*PS 05 54 10.0
KIS Kishinev 72.15 319 *e*PcP PcP 05 44 18.0 -5.6
KIS *e*ScP 05 48 20.0
KIS *e*S S 05 53 24.0 -1.8
HARR Harsova 72.17 316 P **P** **05 44 05.4 -0.2**
HARR Harsova 72.17 316⇑ *i*P **P** **05 44 05.3 -0.3**
HARR Harsova 72.17 316⇑ P **P** **05 44 05.2 -0.3**
PRK Paraskevi 72.19 310 *e*P **P** **05 44 05.9 +0.1**
IDI Anoyia 72.59 306 P **P** **05 44 08.1 -0.2**
comp=Z,17nm,0.5s,mb5.3,baz=88,slow=8.0,SNR=18
SEY Seymchan 72.86 24⇑ *e*P **P** **05 44 08.5 -0.8**
SEY Seymchan 72.86 24⇑ *e*P **P** **05 44 08.6 -0.7**
AKASG Malin Array Be 72.93 322 P **P** **05 44 08.6 -1.4**
comp=Z,9.5nm,0.7s,mb4.8,baz=93,slow=4.7,SNR=28
AKBB Malin Array Si 72.93 322 P **P** **05 44 09.0 -1.0**
AKBB Malin Array Si 72.93 322 *e*P **P** **05 44 08.9 -1.1**
KIEV Kiev 72.94 322 *e*P **P** **05 44 08.9 -1.1**
KIEV pmax pmax
comp=Z,39nm,1.0s,mb5.3
KIEV Kiev 72.94 322 *e*P **P** **05 44 08.9 -1.1**
comp=Z,39nm,1.0s,mb5.3
VAM Vamos 73.17 306 *e*P **P** **05 44 11.0 -0.7**
GVD Gavdhos 73.17 305 *e*P **P** **05 44 12.0 +0.2**
LBTB Lobatse 73.19 243 *e*P **P** **05 44 12.0 0.0**
LBTB pmax pmax
comp=Z,153nm,1.4s,mb5.7
LBTB Lobatse 73.19 243 *e*P **P** **05 44 12.0 0.0**
comp=Z,153nm,1.4s,mb5.7
VRI Vrincioaia 73.27 317 P **P** **05 44 12.9 +0.8**
VRI Vrincioaia 73.27 317⇑ *i*P **P** **05 44 12.2 +0.1**
VRI Vrincioaia 73.27 317⇑ P **P** **05 44 12.2 +0.1**
PLOR Plostina 73.32 317 P **P** **05 44 13.0 +0.6**
DZM Mont Dzumac 73.46 114 *e*P **P** **05 44 14.2 +0.6**
MLR Muntele Rosu 73.72 317 P **P** **05 44 13.7 -1.1**
comp=Z,14nm,0.8s,mb4.9,baz=136,slow=2.2,SNR=6.9
MLR Muntele Rosu 73.72 317⇓ *i*P **P** **05 44 15.1 +0.3**
ZIMR 73.74 315 P **P** **05 44 15.1 +0.2**
PTL Penteli 73.84 309 *e*P **P** **05 44 13.8 -1.8**
MAW Mawson 74.00 192 *e*P **P** **05 44 17.1 +1.2**
comp=Z,23nm,1.1s,mb5.0
MAW *e*S S 05 53 50.6 +4.7
MAW Mawson 74.00 192 P **P** **05 44 16.9 +1.0**
comp=Z,20nm,1.1s,mb5.0,baz=32,slow=9.0,SNR=20
MAW Mawson 74.00 192 P **P** **05 44 17.3 +1.4**
MAW pmax pmax
comp=Z,65nm,1.2s
BOSA Boshof 74.22 239 P **P** **05 44 17.6 -0.4**
comp=Z,20nm,1.0s,mb5.0,baz=84,slow=7.2,SNR=14
BOSA Boshof 74.22 239 P **P** **05 44 17.6 -0.4**
BOSA LR LR
comp=Z,6μm,19.0s,MS5.9

BURAR Bucovina Array 74.68 319⇑ *i*P **P** **05 44 20.6 +0.3**
BUR08 Bucovina Ar. S 74.70 319 *e*P **P** **05 44 20.9 +0.5**
MNK Minsk 74.84 326 *e*P **P** **05 44 18.0 -3.1**
VTS Vitosha 75.09 313⇑ *i*P **P** **05 44 22.4 -0.4**
VTS Vitosha 75.09 313⇑ P **P** **05 44 22.4 -0.4**
VAY Valandovo 75.34 312 *e*P **P** **05 44 18.6 -5.7**
IDID Didziasalis 75.68 327 *e*P **P** **05 44 25.6 -0.3**
JOF Joensuu 75.92 335 *ep* **P** **05 44 26.3 -0.8**
comp=Z,18nm,0.8s,mb5.1
JOF Joensuu 75.92 335 *e*P **P** **05 44 26.3 -0.8**
JOF pmax pmax
comp=Z,18nm,0.8s,mb5.0
LVV L'vov 75.93 321 *e*P **P** **05 44 26.6 -0.8**
LVV *e*S S 05 54 07.7 -0.4
IIGN Ignalina 75.97 327 *e*P **P** **05 44 27.4 -0.2**
DRGR 76.19 317⇓ *i*P **P** **05 44 29.0 0.0**
DRGR 76.19 317⇓ P **P** **05 44 29.0 0.0**
DRV Dumont d'Urvil 76.23 163 P **P** **05 44 34.0 +5.2**
DRV S S 05 54 15.0 +4.3
DRV *e*SS SS 05 58 35.0 -30
KRUS Krusevo 76.34 312 *e*P **P** **05 44 28.1 -1.8**
VSU Vasula 76.57 330⇑ *i*P **P** **05 44 33.0 +2.1**
VSU Vasula 76.57 330⇑ *i*P **P** **05 44 33.1 +2.2**
OHR Ohrid 76.64 311 *e*P **P** **05 44 35.6 +3.9**
BZS Buzias 76.73 316 P **P** **05 44 32.0 -0.1**
BZS Buzias 76.73 316⇓ *i*P **P** **05 44 31.2 -0.9**
BZS Buzias 76.73 316⇓ P **P** **05 44 31.2 -0.9**
KWP Kalwaria 76.73 320 *e*P **P** **05 44 32.4 +0.4**
UZH Uzhgorod 76.81 319 *e*P **P** **05 44 31.7 -0.7**
UZH *e* 05 47 22.0
UZH *e*S S 05 54 14.0 -3.8
UZH *e*PS 05 54 52.0
KOLS Kolonicke sedl 76.88 320 *e*P **P** **05 44 32.8 0.0**
KOLS *e* pP 05 44 42.8 0.0
KOLS *e*S S 05 54 16.3 -2.2
KOLS Kolonicke sedl 76.88 320 *e*P **P** **05 44 32.8 0.0**
KOLS *e*pP pP 05 44 42.8 0.0
KOLS *e*S S 05 54 16.3 -2.2
KOLS *e*SS SS 05 58 41.9 -33
APA Apatity 76.98 340⇑ *i*P **P** **05 44 32.2 -0.8**
APA *i* pP 05 44 39.7 -3.3
APA *i* 05 47 27.5
APA *i*S S 05 54 18.0 -0.9
APA *e*SS SS 05 59 20.0 +4.0
APA pmax pmax
comp=Z,86nm,1.4s,mb5.5
APA MLR MLR
comp=Z,6μm,22.0s,MS5.9
SUW Suwalki 77.36 325 *e*P **P** **05 44 34.9 -0.5**
SUW Suwalki 77.36 325 *e*P **P** **05 44 34.9 -0.5**
CRVS Cervenica-Dubn 77.40 319 *e*P **P** **05 44 37.2 +1.4**
CRVS *e* 05 44 41.0
CRVS *e*S S 05 54 22.7 -1.5
CRVS Cervenica-Dubn 77.40 319 *e*P **P** **05 44 37.2 +1.4**
CRVS *e*pP pP 05 44 41.0 -4.7
CRVS *e*S S 05 54 22.7 -1.5
CRVS *e*SS SS 05 58 52.2 -31
STHS Stebnicka Huta 77.63 320 *e*P **P** **05 44 38.0 +1.0**
STHS pmax pmax
comp=Z,34nm,0.9s,mb5.3
STHS Stebnicka Huta 77.63 320 *e*P **P** **05 44 38.0 +1.0**
comp=Z,34nm,0.9s,mb5.3
KAF Kangasniemi 77.84 333 *ep* **P** **05 44 37.1 -0.9**
comp=Z,26nm,0.8s,mb5.2,baz=104,slow=5.2
KAF Kangasniemi 77.84 333 *e*P **P** **05 44 37.1 -0.9**
KAF pmax pmax
comp=Z,26nm,0.8s,mb5.2
NIE Niedzica 78.23 320 *e*P **P** **05 44 40.7 +0.3**
PSZ Piszkesteto 78.27 318 *e*P **P** **05 44 40.9 +0.3**
PSZ pmax pmax
comp=Z,24nm,0.9s,mb5.1
PSZ Piszkesteto 78.27 318⇑ *e*P **P** **05 44 41.8 +1.2**
PSZ Piszkesteto 78.27 318⇑ *i*P **P** **05 44 40.7 +0.1**
PSZ Piszkesteto 78.27 318 *e*P **P** **05 44 40.9 +0.2**
comp=Z,24nm,0.9s,mb5.1
OJC Ojcow 78.69 321 *e*P **P** **05 44 42.6 -0.3**
OJC *e* pP 05 44 51.8 -1.1
OJC *e* 05 47 43.8
OJC *e*S S 05 54 36.9 -1.1
OJC Ojcow 78.69 321 *e*P **P** **05 44 42.6 -0.3**
OJC *e*PcP PcP 05 44 51.8 +0.1
OJC *e*PP PP 05 47 43.8 +2.6
OJC *e*S S 05 54 36.9 -1.1
OJC LR LR
comp=Z,2μm,21.2s,MS5.3
SUR Sutherland 78.73 236 P **P** **05 44 42.4 -1.2**
comp=Z,26nm,1.0s,mb5.1,baz=65,slow=8.5,SNR=5.1
BUD Budapest 78.78 318⇑ *e*P **P** **05 44 44.3 +0.8**
PKSM Moragy 78.87 316 P **P** **05 44 43.7 -0.3**
PKSM Moragy 78.87 316⇓ *i*P **P** **05 44 43.4 -0.6**
PKSM Moragy 78.87 316⇓ P **P** **05 44 43.4 -0.6**
VYHS Vyhne 79.05 319 *e*P **P** **05 44 44.7 -0.2**
VYHS *e*S S 05 54 40.5 -1.5
TSUM Tsumeb 79.62 250 *e*P **P** **05 44 49.8 +1.1**
comp=Z,20nm,1.0s,mb5.0
OKC Ostrava-Krasne 79.68 320⇑ *e*P **P** **05 44 48.4 +0.1**
OKC *ep*P pP 05 44 57.5 -0.8
OKC *e*S S 05 54 48.2 -0.4
OKC AMS AMS 06 26 30.0
comp=Z,1μm,21.8s
OKC Ostrava-Krasne 79.68 320 *e*P **P** **05 44 48.4 +0.1**
OKC *e* pP 05 44 57.5 -0.8
OKC *e*SKS 05 54 48.2
KEV Kevo 79.97 341 *ep* pP 05 44 57.7 -1.8
comp=Z,18nm,0.8s
KEV Kevo 79.97 341 *e*P pP 05 44 57.7 -1.8
KEV pmax pmax
comp=Z,18nm,0.8s,mb5.0
MODS Modra-Piesok 80.06 318 *e*P **P** **05 44 50.0 -0.4**
MODS *e*S S 05 54 51.7 -1.0
MORC Moravsky Berou 80.06 320 *e*P **P** **05 44 50.5 +0.1**
MORC *e**PP pP 05 45 00.5 +0.1
MORC *e**SP sP 05 45 05.7 +1.7
MORC pmax pmax
comp=Z,53nm,1.4s,mb5.3
MORC Moravsky Berou 80.06 320⇑ *i*P **P** **05 44 50.7 +0.3**
MORC Moravsky Berou 80.06 320 *e*P **P** **05 44 50.5 +0.1**
comp=Z,53nm,1.4s,mb5.3
MORC *ep*P pP 05 45 00.5 +0.1
MORC *e*sP sP 05 45 05.7 +1.6
ZST Bratislava 80.16 318 *e*P **P** **05 44 50.8 -0.2**
ZST pmax pmax
comp=Z,32nm,1.0s,mb5.2
ZST Bratislava 80.16 318 *e*P **P** **05 44 50.8 -0.2**
comp=Z,32nm,1.0s,mb5.2
ZST *e*S S 05 55 03.4 +10
BILL Bilibino 80.17 21⇓ *i*P **P** **05 44 50.2 -0.4**
BILL *e**PP pP 05 44 59.0 -1.6
BILL *e* 05 47 57.2
BILL *i* 05 54 54.9
BILL PS 05 55 46.0
BILL *e*SSS 06 03 23.7
BILL pmax pmax
comp=Z,300nm,2.3s,mb5.8
BILL pmax pmax
comp=Z,82nm,1.7s,mb5.4
BILL MLR MLR
comp=Z,8μm,15.0s,MS6.2
BILL Bilibino 80.17 21⇓ *i*P **P** **05 44 49.9 -0.7**
BILL LR LR
comp=Z,16μm,19.0s,MS6.4
CUC Castrocucco 80.29 310 PFAKE 05 45 00.0 +8.1
CUC LR LR
comp=Z,4μm,21.0s,MS5.7
ARCES ARCESS Array B 80.40 340 P **P** **05 44 52.2 +0.4**
comp=Z,12nm,0.8s,mb4.9,baz=97,slow=6.4,SNR=14
ARE0 ARCESS Array S 80.40 340 *e*P **P** **05 44 52.3 +0.5**
KOGS Kog 80.55 316 *e*P **P** **05 44 52.6 -0.5**
VRAC Vranov 80.62 319 P **P** **05 44 53.2 -0.2**
comp=Z,1.5nm,0.5s,baz=54,slow=2.3,SNR=5.0
VRAC Vranov 80.62 319⇓ *i*P **P** **05 44 53.6 +0.2**
VRAC Vranov 80.62 319⇓ P **P** **05 44 53.6 +0.2**
DPC Dobruska-Polom 80.91 320⇑ *i*P **P** **05 44 55.3 +0.3**
DPC *ep*P pP 05 45 04.6 -0.4
DPC *e*S S 05 55 03.1 +1.6
DPC AMS AMS 06 31 20.0
comp=Z,2μm,17.9s
GOLS Golise 80.94 316 *e*P **P** **05 44 55.2 0.0**
CSNA Conrad Observa 80.96 318⇓ *i*P **P** **05 44 55.4 +0.1**
comp=Z,11nm,1.4s
KSP Ksiaz 80.99 321 *e*P **P** **05 44 55.9 +0.6**
KSP Ksiaz 80.99 321 *e*P **P** **05 44 55.5 +0.2**

KSP e*PP pP 05 45 04.7 -0.6
KSP eS S 05 55 00.0 -2.3
SYO Syowa Base 81.11 198⇑ eP P 05 44 55.0 -0.6
SYO Syowa Base 81.11 198‖ ePcP PcP 05 45 02.6 +0.7
SYO Syowa Base 81.11 198⇑ esP sP 05 45 14.8 +5.6
ARSA Arzberg 81.12 317⇓ iP P 05 44 56.7 +0.6
comp=Z,30nm,1.5s,mb5.0
UPC Upice 81.13 321⇑ iP P 05 44 56.2 +0.1
UPC epP pP 05 45 05.1 -1.0
BOJS Bojanci 81.15 315 eP P 05 44 54.2 -2.1
VAE Valguarnera 81.22 307 P P 05 44 56.3 -0.6
comp=Z,9.8nm,0.4s,mb5.1,baz=233,slow=7.6,SNR=1.8
VAE Valguarnera 81.22 307 P P 05 44 56.3 -0.6
TREC Trest 81.34 319⇑ iP P 05 44 58.1 +0.9
TREC AMS AMS 06 29 00.0
comp=Z,2µm,21.6s
PERS Pernice 81.34 317 eP P 05 44 57.2 -0.1
SOKA Soboth 81.40 317⇑ iP P 05 44 57.7 0.0
comp=Z,52nm,2.4s,mb5.0
RPZ Rata Peaks 81.55 135 P P 05 44 58.3 -0.2
comp=Z,14nm,0.7s,mb5.0,baz=292,slow=11,SNR=2.7
PRU Pruhonice 82.02 320⇓ iP P 05 45 00.5 -0.3
PRU epP pP 05 45 09.6 -1.2
PRU eS S 05 55 13.7 +0.7
PRU AMS AMS 06 32 40.0
comp=Z,2µm,16.3s
PVCC Panska Ves 82.05 320⇑ eP P 05 45 00.8 -0.1
PVCC epP pP 05 45 10.6 -0.4
PVCC eS S 05 55 13.7 +0.4
PVCC AMS AMS 06 32 10.0
comp=Z,3µm,18.7s
VOY Vojsko 82.14 316 eP P 05 45 01.3 -0.2
VOY e pP 05 45 10.5 -1.1
VOY e 05 45 28.3
GEC2 GERESS Array S 82.47 319 P P 05 45 03.0 -0.2
GEC2 GERESS Array S 82.47 319 eP P 05 45 02.1 -1.1
comp=Z,197nm,2.3s,mb5.6
GERES GERESS Array B 82.47 319 P P 05 45 03.5 +0.3
comp=Z,7.4nm,0.9s,baz=95,slow=5.6,SNR=23
BRG Berggiesshubel 82.47 321 eP P 05 45 03.2 0.0
BRG i 05 45 18.3
BRG S S 05 55 18.0 +0.4
BRG pmax pmax
comp=Z,36nm,1.9s,mb5.0
BRG MLR MLR
comp=N,2µm,21.2s,MS5.5
BRG MLR MLR
comp=E,1µm,20.7s,MS5.5
BRG MLR MLR
comp=Z,1µm,22.7s,MS5.3
BRG Berggiesshubel 82.47 321 eP P 05 45 02.4 -0.8
comp=Z,93nm,1.9s,mb5.4
BRG Berggiesshubel 82.47 321 eP P 05 45 03.2 0.0
comp=Z,61nm,1.9s,mb5.2
BRG i 05 45 18.3
comp=Z,100nm,1.9s
BRG S S 05 55 18.0 +0.4
BRG SS SS 05 59 50.0 -49
BRG
comp=N,4µm,21.2s
BRG
comp=E,2µm,20.7s
BRG
comp=Z,2µm,22.7s
BRG Berggiesshubel 82.47 321 eP P 05 45 03.2 0.0
comp=Z,36nm,1.9s,mb5.0
BRG i 05 45 18.3
BRG S S 05 55 18.0 +0.4
BRG SS SS 05 59 50.0 -49
BRG LR LR
comp=Z,1µm,22.7s,MS5.3
KHC Kasperske Hory 82.57 319⇑ iP P 05 45 03.3 -0.4
KHC epP pP 05 45 12.5 -1.3
KHC eS S 05 55 18.5 -0.2
KHC AMS AMS 06 31 40.0
comp=Z,2µm,19.0s
TRO Tromso 82.66 340 eP P 05 45 03.1 -0.6
RUE Ruedersdorf 82.70 322 eP P 05 45 03.1 -1.2
comp=Z,152nm,1.6s,mb5.6
FBE Freiberg 82.85 321 eP P 05 45 04.1 -1.0
comp=Z,109nm,1.8s,mb5.6
RJOB Jochberg 83.00 318 eP P 05 45 04.8 -1.2
comp=Z,19nm,1.0s,mb5.1
WET Wettzell 83.03 319 eP P 05 45 05.0 -1.1
WET pmax pmax
comp=Z,162nm,2.3s,mb5.7
WET Wettzell 83.03 319 eP P 05 45 05.0 -1.1
comp=Z,162nm,2.3s,mb5.7
CLL Collm 83.10 321 eP P 05 45 06.1 -0.3
comp=Z,28nm,1.3s,mb5.1
CLL Collm 83.10 321⇑ iP P 05 45 06.8 +0.4
comp=Z,98nm,2.3s,mb5.4
CLL LmV 05 29 00.0
comp=Z,2µm,21.8s
CLL ePlp 05 45 08.0
comp=Z,400nm,10.2s
CLL i PcP PcP 05 45 10.6 -0.4
CLL i sP sP 05 45 15.7 -4.4
CLL i sPcP 05 45 20.4
CLL eS S 05 55 22.0 -2.0
comp=N,1µm,11.5s
CLL eS S 05 55 22.0 -2.0
comp=E,400nm,13.5s
CLL eS S 05 55 22.0 -2.0
comp=Z,300nm,15.0s
NKC Novy Kostel 83.38 320⇑ eP P 05 45 07.4 -0.5
NKC eS S 05 55 29.3 +2.4
NKC AMS AMS 06 30 10.0
comp=Z,3µm,17.4s
NKC Novy Kostel 83.38 320 eP P 05 45 07.4 -0.5
NKC eSKS 05 55 29.3
TANN Tannenbergstha 83.38 320 eP P 05 45 06.7 -1.2
comp=Z,34nm,1.8s,mb5.1
WERN Wernitzgruen 83.43 320 eP P 05 45 06.8 -1.3
comp=Z,109nm,2.3s,mb5.5
HFS Hagfors 83.45 330 P P 05 45 07.2 -0.8
comp=Z,11nm,0.8s,mb4.9,baz=140,slow=7.2,SNR=2.5
GUNZ Gunzen 83.46 320 eP P 05 45 07.1 -1.2
comp=Z,28nm,1.3s,mb5.1
WERD Werda 83.48 320 eP P 05 45 07.1 -1.3
comp=Z,44nm,1.7s,mb5.2
ROTZ Rotzenmuhle 83.51 320 eP P 05 45 09.0 +0.4
comp=Z,131nm,2.3s,mb5.7
MANZ Manzenberg 83.58 320 eP P 05 45 08.1 -0.8
comp=Z,35nm,1.1s,mb5.4
WTTA Wattenberg 83.76 317⇑ iP P 05 45 09.2 -0.7
comp=Z,33nm,1.1s,mb5.4
MOR8 Moi Rana 83.77 336 eP P 05 45 09.1 -0.5
MOR8 AMb AMB 05 45 21.9
comp=Z,89nm,1.6s,mb5.6
MOR8 Moi Rana 83.77 336 eP P 05 45 09.1 -0.5
comp=Z,89nm,1.6s,mb5.6
MOX Moxa 83.93 320 eP P 05 45 11.6 +0.9
comp=Z,71nm,2.1s,mb5.4
MOX Moxa 83.93 320 eP P 05 45 11.6 +0.9
MOX pmax pmax
comp=Z,71nm,2.1s,mb5.4
MOX Moxa 83.93 320 eP P 05 45 09.4 -1.3
comp=Z,66nm,1.9s,mb5.4
FUR Furstenfeldbru 84.04 318 eP P 05 45 09.9 -1.4
FUR pmax pmax
comp=Z,193nm,2.7s,mb5.8
FUR Furstenfeldbru 84.04 318 eP P 05 45 09.9 -1.4
comp=Z,193nm,2.7s,mb5.8
GRA1 Grafenberg Arr 84.14 319 eP P 05 45 10.8 -1.0
comp=Z,46nm,1.0s,mb5.6
GRA1 eS S 05 55 34.6 0.0
GRA1 LR LR
comp=Z,2µm,21.1s,MS5.5
GRF Grafenberg Arr 84.14 319 eP P 05 45 10.8 -1.0
GRF eS S 05 55 34.6 0.0
GRF pmax pmax
comp=Z,46nm,1.0s,mb5.6
GRF MLR MLR
comp=Z,2µm,21.1s,MS5.5
GRF Grafenberg Arr 84.14 319 eP P 05 45 10.8 -1.0
comp=Z,46nm,1.0s,mb5.6
GRF eS S 05 55 34.6 0.0
GRF eL 06 29 46.5
comp=Z,2µm,21.1s
LOF Lofoten 84.35 338 eP P 05 45 14.8 +2.3
LOF AMb AMB 05 45 18.1
comp=Z,122nm,1.6s,mb5.8
LOF Lofoten 84.35 338 eP P 05 45 14.8 +2.3
comp=Z,122nm,1.6s,mb5.8
NSS Namsos 84.64 334 eP P 05 45 13.1 -1.0

NB2 NORSAR Subarra 84.74 331 P P 05 45 14.0 -0.6
comp=Z,2.8nm,0.6s,baz=98,slow=4.8
NOA NORSAR Array B 84.74 331 P P 05 45 14.1 -0.5
comp=Z,4.3nm,0.8s,mb4.7,baz=95,slow=5.4,SNR=11
NOA PP PP 05 48 26.3 -4.4
comp=Z,2.0nm,0.8s,baz=94,slow=7.1,SNR=3.5
CLZ Clausthal 84.76 322 eP P 05 45 11.9 -3.0
CLZ pmax pmax
comp=Z,27nm,1.2s,mb5.2
CLZ Clausthal 84.76 322 eP P 05 45 11.9 -3.0
comp=Z,27nm,1.2s,mb5.2
BSEG Bad Segeberg 84.87 324 eP P 05 45 14.6 -0.8
BSEG pmax pmax
comp=Z,58nm,1.3s,mb5.5
BSEG Bad Segeberg 84.87 324 eP P 05 45 14.6 -0.8
comp=Z,58nm,1.3s,mb5.5
DAVOX Davos/Dischmat 84.95 317 P P 05 45 16.0 +0.1
comp=Z,8.0nm,0.8s,mb4.9,baz=113,slow=4.2,SNR=12
NRDL Niedersach Rie 84.95 322 eP P 05 45 14.9 -0.9
comp=Z,79nm,1.6s,mb5.6
DAVA Damuels 84.96 317⇑ iP P 05 45 15.8 -0.2
comp=Z,25nm,1.4s,mb5.2
UBBA Unterbreizbach 84.96 321 eP P 05 45 16.2 +0.3
comp=Z,20nm,1.5s,mb5.0
SPB4 Spitsbergen Ar 84.97 348 eP P 05 45 16.9 +1.5
SPB4 epP pP 05 45 25.3 -0.2
DAVOS Davos 85.01 317 P P 05 45 16.1 -0.1
URZ Urewera 85.14 129 P P 05 45 16.1 -1.0
comp=Z,3.0nm,0.3s,mb4.9,baz=336,slow=4.2,SNR=7.8
KEST Kesra 85.25 305 P P 05 45 17.9 +0.2
comp=Z,4.6nm,1.0s,baz=0.4,slow=9.3,SNR=8.0
TUE Stuetta 85.31 316 eP P 05 45 18.4 +0.6
comp=Z,40nm,1.1s,mb5.5
STU Stuttgart 85.44 319 eP P 05 45 16.8 -1.6
comp=Z,32nm,1.3s,mb5.3
SPAK Spaichingen-Ko 85.71 318 eP P 05 45 19.8 +0.1
TNS Taunus Mts 85.95 320 eP P 05 45 19.6 -1.2
TNS pmax pmax
comp=Z,27nm,1.3s,mb5.3
TNS Taunus Mts 85.95 320 eP P 05 45 19.6 -1.2
comp=Z,27nm,1.3s,mb5.3
BFO Black Forest 86.02 318 P P 05 45 20.2 -1.0
BFO pmax pmax
comp=Z,11nm,0.8s,mb5.1
BFO Black Forest 86.02 318 ePKPbc P 05 45 20.4 -0.8
BFO Black Forest 86.02 318 eP P 05 45 19.3 -1.9
comp=Z,13nm,0.8s,mb5.2
BFO LR LR
comp=Z,1µm,20.0s,MS5.4
FELD Feldberg im Sc 86.23 318 eP P 05 45 22.2 -0.1
ADK Adak 86.35 38 PFAKE 05 45 30.0 +7.2
ADK LR LR
comp=Z,3µm,20.0s,MS5.7
LANF Langenberg 86.36 319 eP P 05 45 22.2 -0.7
IBBN Ibbenburen 86.39 322 eP P 05 45 23.7 +0.7
comp=Z,293nm,2.3s,mb6.1
LIBD Limburg 86.50 318 eP P 05 45 21.8 -1.8
MOL Molde 86.53 332 eP P 05 45 24.3 +0.8
SBF Sospel 86.66 314 eP P 05 45 24.0 -0.5
comp=Z,43nm,0.7s,mb5.5
SBF Sospel 86.66 314 eP P 05 45 24.0 -0.5
SBF pmax pmax
comp=Z,22nm,0.7s,mb5.5
SBF Sospel 86.66 314 eP P 05 45 24.0 -0.5
comp=Z,22nm,0.7s,mb5.5
CDF Champ du Feu 86.72 318 eP P 05 45 24.1 -0.6
CDF Champ du Feu 86.72 318 ePKP1 P 05 45 23.3 -1.4
ABSA Djebel Ababsia 86.76 306 P P 05 45 31.0 +5.8
ECH Echery 86.80 318 eP P 05 45 25.2 +0.1
ECH Echery 86.80 318 ePKPbc P 05 45 24.9 -0.2
ECH Echery 86.80 318 eP P 05 45 24.8 -0.3
comp=Z,9.3nm,0.9s,mb5.0
CMAH Djebel Manchou 86.80 306 P P 05 45 30.0 +4.6
RUP Ruppelstein 86.84 319 eP P 05 45 20.9 -4.4
LOMF Lomont 87.03 317 eP P 05 45 24.8 -1.5
LPG La Plagne 87.12 315 eP P 05 45 26.4 -0.3
comp=Z,56nm,0.9s,mb5.5
LPG La Plagne 87.12 315 eP P 05 45 26.4 -0.3
LPG pmax pmax
comp=Z,28nm,0.9s,mb5.5
LPG La Plagne 87.12 315 eP P 05 45 26.4 -0.3
comp=Z,28nm,0.9s,mb5.5
MBDF Montbardon 87.12 314 eP P 05 45 26.4 -0.4
comp=Z,13nm,0.6s,mb5.0
MBDF Montbardon 87.12 314 eP P 05 45 26.4 -0.4
MBDF pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
MBDF Montbardon 87.12 314 eP P 05 45 26.4 -0.4
comp=Z,6.4nm,0.6s,mb5.0
LPL La Plagne 87.14 315 eP P 05 45 26.5 -0.3
comp=Z,84nm,1.2s,mb5.6
LPL La Plagne 87.14 315 eP P 05 45 26.5 -0.3
LPL pmax pmax
comp=Z,42nm,1.2s,mb5.5
LPL La Plagne 87.14 315 eP P 05 45 26.5 -0.3
comp=Z,42nm,1.2s,mb5.5
BNI Bardonecchia 87.18 315 P P 05 45 30.8 +3.8
BNI pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
BNI MLR MLR
comp=Z,2µm,20.0s,MS5.6
BNI Bardonecchia 87.18 315 P P 05 45 30.8 +3.7
comp=Z,9.6nm,0.8s,mb5.1
BNI LR LR
comp=Z,2µm,20.0s,MS5.6
FRF La Foret Royal 87.24 313 eP P 05 45 26.8 -0.6
comp=Z,21nm,0.8s,mb5.1
FRF La Foret Royal 87.24 313 eP P 05 45 26.8 -0.6
FRF pmax pmax
comp=Z,11nm,0.8s,mb5.1
FRF La Foret Royal 87.24 313 eP P 05 45 26.8 -0.6
comp=Z,11nm,0.8s,mb5.1
HAU Haudompre 87.34 318 eP P 05 45 26.8 -0.9
comp=Z,23nm,0.6s,mb5.3
HAU Haudompre 87.34 318 eP P 05 45 26.8 -0.9
HAU pmax pmax
comp=Z,12nm,0.6s,mb5.3
HAU Haudompre 87.34 318 eP P 05 45 26.8 -0.9
comp=Z,12nm,0.6s,mb5.3
LMR La Mourre 87.35 313 eP P 05 45 27.4 -0.5
comp=Z,52nm,1.2s,mb5.3
LMR La Mourre 87.35 313 eP P 05 45 27.4 -0.5
LMR pmax pmax
comp=Z,26nm,1.2s,mb5.3
LMR La Mourre 87.35 313 eP P 05 45 27.4 -0.5
comp=Z,26nm,1.2s,mb5.3
CKFL Kef-Lekhel 87.37 306 P P 05 45 32.0 +3.8
WLF Walferdange 87.43 319 eP P 05 45 27.2 -0.9
comp=Z,25nm,1.1s,mb5.4
CABF La Chapelle 87.56 316 eP P 05 45 28.3 -0.5
comp=Z,22nm,0.8s,mb5.1
CABF La Chapelle 87.56 316 eP P 05 45 28.3 -0.5
CABF pmax pmax
comp=Z,11nm,0.8s,mb5.1
CABF La Chapelle 87.56 316 eP P 05 45 28.3 -0.5
comp=Z,11nm,0.8s,mb5.1
CASM Ain Smara 87.56 306 P P 05 45 33.0 +3.9
THEF They Montfort 87.58 318 eP P 05 45 26.1 -2.8
CTEI Djebel Teioual 87.64 306 P pP 05 45 40.0 +0.5
ORIF Oris-en-Rattie 87.75 315 eP P 05 45 29.6 -0.2
comp=Z,38nm,1.0s,mb5.3
ORIF Oris-en-Rattie 87.75 315 eP P 05 45 29.6 -0.2
ORIF pmax pmax
comp=Z,19nm,1.0s,mb5.3
ORIF Oris-en-Rattie 87.75 315 eP P 05 45 29.6 -0.2
comp=Z,19nm,1.0s,mb5.3
SMRF Simiane la Rot 88.00 314 eP P 05 45 30.3 -0.7
comp=Z,54nm,1.2s,mb5.4
SMRF Simiane la Rot 88.00 314 eP P 05 45 30.3 -0.7
comp=Z,54nm,1.2s,mb5.7
DFRA Djebel Bou Aff 88.05 306 P P 05 45 37.0 +5.6
GIVF Givet 88.28 320 eP P 05 45 32.0 -0.1
CKHR Kef el Ahmar 88.36 306 P P 05 45 40.0 +7.1
VIVF Saint-Julien-l 88.61 315 eP P 05 45 33.3 -0.6
comp=Z,29nm,1.2s,mb5.2
VIVF Saint-Julien-l 88.61 315 eP P 05 45 33.3 -0.6
VIVF pmax pmax
comp=Z,15nm,1.2s,mb5.2
VIVF Saint-Julien-l 88.61 315 eP P 05 45 33.3 -0.6
comp=Z,15nm,1.2s,mb5.2
BAIF Baives 88.68 320 eP P 05 45 34.0 0.0
comp=Z,34nm,0.9s,mb5.4
BAIF Baives 88.68 320 eP P 05 45 34.0 0.0
BAIF pmax pmax
comp=Z,17nm,0.9s,mb5.4
BAIF Baives 88.68 320 eP P 05 45 34.0 0.0
comp=Z,17nm,0.9s,mb5.4
SBA Scott Base 88.90 168 eP P 05 45 36.2 +1.7
SBA pmax pmax
comp=Z,46nm,1.3s,mb5.7
SBA Scott Base 88.90 168 eP P 05 45 36.2 +1.6
comp=Z,46nm,1.4s,mb5.6
TAM Tamanrasset 88.93 293 eP P 05 45 38.7 +2.8
comp=Z,104nm,1.8s,mb5.9
LOR Lormes 89.06 317 eP P 05 45 35.4 -0.5
comp=Z,90nm,1.4s,mb5.6
LOR Lormes 89.06 317 eP P 05 45 35.4 -0.5
LOR pmax pmax
comp=Z,45nm,1.4s,mb5.6
LOR Lormes 89.06 317 eP P 05 45 35.4 -0.5
comp=Z,45nm,1.4s,mb5.6
SMF Signal de Mont 89.10 316 eP P 05 45 35.4 -0.7
LASF Ste Croix 89.24 314 eP P 05 45 37.0 +0.2
comp=Z,122nm,1.9s,mb5.6
SSF Saint Saulge 89.31 317 eP P 05 45 36.8 -0.3
AVF Avril sur Loir 89.43 317 eP P 05 45 37.2 -0.5
BGF Bois d'Agland 89.79 316 eP P 05 45 39.3 -0.1
TCF Toulx Ste Croi 90.25 316 eP P 05 45 41.4 -0.1
comp=Z,63nm,1.6s,mb5.4
TCF Toulx Ste Croi 90.25 316 eP P 05 45 41.4 -0.1
TCF pmax pmax
comp=Z,32nm,1.6s,mb5.4
TCF Toulx Ste Croi 90.25 316 eP P 05 45 41.4 -0.1
comp=Z,32nm,1.6s,mb5.4
MTLF Montolieu 90.47 313 eP P 05 45 42.5 -0.1
comp=Z,39nm,1.2s,mb5.3
MTLF Montolieu 90.47 313 eP P 05 45 42.5 -0.1
MTLF pmax pmax
comp=Z,20nm,1.2s,mb5.3
MTLF Montolieu 90.47 313 eP P 05 45 42.5 -0.1
comp=Z,20nm,1.2s,mb5.3
MAIT Maitri 90.68 199 eP P 05 45 45.8 +2.9
RJF Les Rejaudoux 90.81 315 eP P 05 45 44.4 +0.2
LDF La Druitiere 91.62 319 eP P 05 45 47.5 -0.3
comp=Z,227nm,1.8s,mb5.9
LDF La Druitiere 91.62 319 eP P 05 45 47.5 -0.3
LDF pmax pmax
comp=Z,114nm,1.8s,mb5.9
LDF La Druitiere 91.62 319 eP P 05 45 47.5 -0.3
comp=Z,114nm,1.8s,mb5.9
FLN La Foliniere 91.83 319 eP P 05 45 48.6 -0.2
comp=Z,70nm,1.1s,mb5.6
FLN La Foliniere 91.83 319 eP P 05 45 48.6 -0.2
FLN pmax pmax
comp=Z,35nm,1.1s,mb5.6
FLN La Foliniere 91.83 319 eP P 05 45 48.6 -0.2
comp=Z,35nm,1.1s,mb5.6
EPF Esparros 91.87 313 eP P 05 45 48.0 -1.1
GRR Gorron 92.12 318 eP P 05 45 50.0 -0.2
EKA Eskdalemuir Ar 92.60 326 P P 05 45 52.0 -0.1
comp=Z,4.0nm,1.0s,mb4.8,baz=59,slow=4.2,SNR=3.5
DAG Danmarks Havn 92.61 348‖ eP P 05 45 51.1 -0.7
DAG pmax pmax
comp=Z,22nm,1.2s,mb5.5
DAG Danmarks Havn 92.61 348⇓ iP P 05 45 51.1 -0.7
comp=Z,22nm,1.2s,mb5.5
DAG Danmarks Havn 92.61 348⇓ eP P 05 45 51.1 -0.7
comp=Z,22nm,1.2s,mb5.5
QSPA South Pole Qui 92.83 180 P P 05 45 53.8 +1.1
comp=Z,7.3nm,1.1s,mb5.0,baz=270,slow=1.0,SNR=7.9
SJPF Ste Jean 93.00 313 eP P 05 45 53.8 -0.5
comp=Z,43nm,1.2s,mb5.5
SJPF Ste Jean 93.00 313 eP P 05 45 53.8 -0.5
SJPF pmax pmax
comp=Z,22nm,1.2s,mb5.5
SJPF Ste Jean 93.00 313 eP P 05 45 53.8 -0.5
comp=Z,22nm,1.2s,mb5.5
TOA0 Torodi Ar. Sit 93.12 283 eP P 05 45 56.0 +0.5
TORD Torodi Ar. Bea 93.12 283 P P 05 45 55.3 -0.1
comp=Z,4.3nm,1.0s,mb4.8,baz=87,slow=5.2,SNR=15
TORD PP PP 05 49 36.4 -2.6
comp=Z,0.9nm,1.1s,baz=94,slow=8.3,SNR=2.7
TORD PKKPbc PKKPbc 06 03 05.2 +1.0
comp=Z,0.5nm,0.7s,baz=280,slow=2.6,SNR=3.8
AFI Afiamalu 93.26 104 PFAKE 05 46 10.0 +14
AFI LR LR
comp=Z,2µm,21.0s,MS5.5
QUIF Quistinic 93.72 318 eP P 05 45 57.0 -0.5
SNAA Sanae 95.38 198 eP P 05 46 07.4 +2.8
SNAA e pP 05 46 15.2 +0.5
SNAA e 05 46 19.6
SNAA Sanae 95.38 198 eP P 05 46 05.7 +1.1
SNAA pmax pmax
comp=Z,16nm,1.2s
SNAA Sanae 95.38 198 eP P 05 46 05.7 +1.1
comp=Z,16nm,1.3s,mb5.3
ESDC Sonseca Array 95.49 310 P P 05 46 04.8 -1.0
comp=Z,0.4nm,0.3s,baz=270,slow=35,SNR=6.0
TTA Tatalina 95.72 26 eP P 05 46 07.1 +0.7
TTA pmax pmax
comp=Z,140nm,1.8s,mb6.1
TTA Tatalina 95.72 26 eP P 05 46 09.4 +3.0
COLD Coldfoot 96.51 21 P P 05 46 11.1 +1.3
comp=Z,21nm,1.5s,mb5.3
VNA2 Neumayer--Watz 96.95 199 eP P 05 46 17.2 +5.4
VNA2 e 05 46 23.3
VNA2 e pP 05 46 27.8 +5.9
CHUM Lake Minchumin 96.97 24 eP P 05 46 11.9 -0.1
comp=Z,33nm,1.3s,mb5.6
CHUM epP pP 05 46 22.7 +0.5
BPAW Bear Paw Mtn. 97.44 24 eP P 05 46 14.5 +0.4
comp=Z,36nm,1.2s,mb5.7
BPAW epP pP 05 46 24.1 -0.1
MVO Moncorvo 97.56 312 eP P 05 46 12.0 -3.2
MVO Moncorvo 97.56 312 iP PP 05 50 18.1 +5.4
MVO eSKS 05 57 35.6
MVO Moncorvo 97.56 312 A 06 38 24.6
comp=Z,2µm,20.0s
MTE Manteigas 98.08 311 eP P 05 46 17.2 -0.4
MTE Manteigas 98.08 311 iP PP 05 50 23.5 +6.7
MTE eSKS 05 57 47.3
MTE Manteigas 98.08 311 eLQ 06 22 34.3
MTE eLR LR 06 30 14.9
comp=Z,2µm,18.0s
PBAR Barrancos 98.10 309 eP P 05 46 23.5 +5.8
PBAR Barrancos 98.10 309 iP PP 05 50 15.6 -1.4
PBAR eSKS 05 57 41.6
PBAR Barrancos 98.10 309 eLQ 06 20 26.1
PBAR eLR LR 06 24 18.5
comp=Z,2µm,20.0s
PMRV Marv??o 98.15 310 iP PP 05 50 28.8 +12
PMRV eSKS 05 57 29.5
PMRV Marv??o 98.15 310 eLR LR 06 31 16.6
comp=Z,2µm,18.0s
COLA College 98.36 23 PFAKE 05 46 30.0 +12
COLA LR LR
comp=Z,3µm,21.0s,MS5.8
PESTR Estremoz 98.40 310 eP P 05 46 14.9 -4.1
PESTR Estremoz 98.40 310 iP PP 05 50 32.6 +13
PESTR eSKS 05 57 45.4
PESTR Estremoz 98.40 310 A 06 43 20.5
comp=Z,1µm,18.0s
BORG Borgarnes 98.54 337 PFAKE 05 46 30.0 +11
BORG LR LR
comp=Z,4µm,21.0s,MS5.9
PVAQ Vaqueiros 98.77 308 eP P 05 46 29.8 +9.1
PVAQ Vaqueiros 98.77 308 iP PP 05 50 36.0 +14
PVAQ eSKS 05 57 55.0
PVAQ Vaqueiros 98.77 308 eLQ 06 22 28.0
PVAQ A 06 36 43.7
comp=Z,2µm,20.0s
PBDV Barranco-do-Ve 98.96 308 eP pP 05 46 32.2 +0.5
PBDV Barranco-do-Ve 98.96 308 iP PP 05 50 22.7 -0.9
PBDV eSKS 05 57 49.4
PBDV Barranco-do-Ve 98.96 308 eLQ 06 22 14.1
PBDV eLR LR 06 27 27.5
comp=Z,2µm,20.0s
MORF Marmelete 99.52 308 iP PP 05 50 46.7 +19
MORF Marmelete 99.52 308 eLQ 06 21 44.6
MORF eLR LR 06 27 23.2
comp=Z,2µm,20.0s
PMAFR Mafra 99.68 310 iP PP 05 50 23.0 -6.0
PMAFR Mafra 99.68 310 A 06 35 31.9
comp=Z,1µm,22.0s
PFVI Vila Bisbo 99.69 308 eP pP 05 46 38.6 +3.6
PFVI Vila Bisbo 99.69 308 iP PP 05 50 46.4 +17
PFVI eSKS 05 57 55.0
PFVI Vila Bisbo 99.69 308 eLQ 06 22 57.4
PFVI eLR LR 06 28 09.9
comp=Z,2µm,20.0s
DBIC Dimbokro 100.00 277 PFAKE 05 46 40.0 +14

DBIC LR LR
comp=Z,4µm,20.0s,MS5.9
SFJD Kangerlussuaq 106.26 347 *i* P PKiKP 05 50 59.2 -5.5
SFJD *i* 05 55 29.3
SFJD *i* 06 00 33.3
SFJD
comp=Z,3µm,19.0s
DLBC Dease Lake 108.96 23 Pdif Pdif 05 46 56.7 -8.8
ASCN Ascension 110.12 263 PFAKE 05 51 20.0 +6.6
ASCN LR LR
comp=Z,3µm,20.0s,MS5.8
CMLA Cha da Macela 112.22 313 PFAKE 05 51 30.0 +13
CMLA LR LR
comp=Z,1µm,21.0s,MS5.6
TBI Tubuai 114.03 114 *e*PP PP 05 52 11.0 -4.1
comp=Z,234nm,26.8s
TBI Tubuai 114.03 114 *e*PS PS 06 01 53.0 0.0
comp=Z,695nm,28.2s
TBI *e*SS SS 06 08 06.1 +2.3
comp=Z,964nm,28.0s
TBI Tubuai 114.03 114 *e*LR LR 06 25 32.9
comp=Z,4µm,24.8s
PPT Papeete 114.55 108 *e*PP PP 05 52 09.5 -9.4
comp=Z,248nm,24.8s
PPT Papeete 114.55 108 *e*PS PS 06 01 57.5 -0.5
comp=Z,2µm,28.5s
PPT Papeete 114.55 108 *e*LR LR 06 25 37.8
comp=Z,3µm,24.5s
E03A Lebam 119.89 30 ⇑P PKPdf 05 51 31.5 +0.3
baz=120
C05A Tolt Reservoir 120.00 28 ⇓P PKPdf 05 51 30.6 -0.7
baz=120
B07A Winthrop 120.17 27 ⇓P PKPdf 05 51 32.1 +0.5
baz=120
A08A Turner Farm, O 120.17 26 ⇓P PKPdf 05 51 32.0 +0.3
baz=120
SCHQ Schefferville 120.65 348 PKP PKPdf 05 51 31.1 -1.4
comp=Z,1.8nm,0.6s,baz=137,slow=2.5,SNR=2.5
C07A Waterville 120.76 27 ⇑P PKPdf 05 51 32.2 -0.6
baz=120
B09A Rice 121.06 26 ⇓P PKPdf 05 51 33.5 +0.1
baz=121
COR Corvallis 121.37 32 PFAKE 05 51 40.0 +5.9
COR LR LR
comp=Z,3µm,20.0s,MS5.9
A11A Hall Mountain, 121.39 24 ⇑P PKPdf 05 51 33.8 -0.3
baz=121
C09A Chrisman Ranch 121.48 26 ⇑P PKPdf 05 51 33.7 -0.6
baz=121
NEW Newport 121.62 25 *e*PKIKP PKPdf 05 51 33.5 -1.0
RSW Rattlesnake Hi 121.93 28 *e*PKPdf PKPdf 05 51 37.4 +2.3
RSW *ep*PKPdf pPKPdf 05 51 45.6 +0.1
HAWA Hanford 121.96 28 *e*PKPdf PKPdf 05 51 36.0 +0.7
D09A Jones Farm, Ri 122.02 27 ⇓P PKPdf 05 51 35.5 +0.2
baz=122
E08A Dider Farm, El 122.11 28 ⇑P PKPdf 05 51 34.8 -0.7
baz=122
A13A Flathead Natio 122.19 23 ⇓P PKPdf 05 51 35.5 -0.1
baz=122
G06A Carlson Farm, 122.27 30 ⇑P PKPdf 05 51 35.9 +0.1
baz=122
C11A Tepee Creek (N 122.32 25 ⇑P PKPdf 05 51 35.4 -0.5
baz=122
D10A Wagner Farm, O 122.49 26 ⇑P PKPdf 05 51 34.9 -1.3
baz=122
E09A Wood Farm, Sta 122.51 27 ⇓P PKPdf 05 51 35.5 -0.8
baz=122
B13A Whitefish 122.62 23 ⇓P PKPdf 05 51 35.8 -0.6
baz=122
A15A Johnson Ranch, 122.79 22 ⇑P PKPdf 05 51 36.4 -0.3
baz=122
HUMO Hull Mountain 122.89 33 *e*PKPdf PKPdf 05 51 37.9 +0.8
HUMO *ep*PKPdf pPKPdf 05 51 47.7 +0.2
D11A Klaveano Farm, 122.90 25 ⇑P PKPdf 05 51 35.7 -1.3
baz=123
LNOR Lincton Mounta 122.93 28 *e*PKIKP PKPdf 05 51 36.7 -0.4
E10A Myers Farm, Un 123.00 26 ⇓P PKPdf 05 51 36.8 -0.4
baz=123
F09A S2 Ranch, Elgi 123.22 28 ⇓P PKPdf 05 51 37.2 -0.4
baz=123
A16A West Butte Ran 123.23 21 ⇑P PKPdf 05 51 36.7 -0.9
baz=123
H07A Lands Inn, Kim 123.26 29 ⇑P PKPdf 05 51 37.4 -0.3
baz=123
D12A Red Ives Fores 123.31 25 ⇓P PKPdf 05 51 37.4 -0.4
baz=123
F10A Beach Ranch, E 123.33 27 ⇓P PKPdf 05 51 36.7 -1.2
baz=123
C14A Swan Lake 123.40 23 ⇑P PKPdf 05 51 36.7 -1.2
baz=123
B15A Bradely Ranch, 123.41 22 P PKPdf 05 51 37.2 -0.7
baz=123,SNR=7.0
E11A Bogner Ranch, 123.49 26 ⇑P PKPdf 05 51 37.4 -0.8
baz=123
G09A Cove 123.61 28 ⇓P PKPdf 05 51 38.5 +0.1
baz=123
D13A Huson 123.65 24 ⇓P PKPdf 05 51 37.7 -0.8
baz=123
C15A Salmond Ranch, 123.83 23 P PKPdf 05 51 38.8 0.0
baz=124,SNR=7.9
F11A Grangeville 123.88 26 ⇑P PKPdf 05 51 38.5 -0.4
baz=124
K05A Summer Lake 123.92 32 ⇑P PKPdf 05 51 39.3 +0.3
baz=124
J06A Christmas Vall 123.93 31 ⇑P PKPdf 05 51 39.1 0.0
baz=124
D14A Greenough 124.05 24 ⇑P PKPdf 05 51 38.7 -0.5
baz=124
MSO Missoula 124.08 24 *e*PKPdf PKPdf 05 51 39.0 -0.3
MSO *e*PP PP 05 53 29.3 +6.6
C16A Fuhringer Ranc 124.14 22 ⇑P PKPdf 05 51 38.9 -0.4
baz=124
BMO Blue Mountains 124.15 28 PFAKE 05 51 50.0 +11
BMO LR LR
comp=Z,3µm,20.0s,MS5.9
K06A Valley Falls 124.20 31 ⇓P PKPdf 05 51 40.1 +0.5
baz=124
G11A Walters Elk Ra 124.21 27 ⇑P PKPdf 05 51 39.2 -0.3
baz=124
M03C McCloud 124.25 34 ⇑P PKPdf 05 51 39.6 -0.2
baz=124
I08A Drewsey 124.25 29 ⇑P PKPdf 05 51 39.8 +0.1
baz=124
CHMT Chamberlain Mo 124.29 24 *e*PKPdf PKPdf 05 51 39.3 -0.4
CHMT *e*PP PP 05 53 25.0 +0.9
E13A Victor 124.29 25 P PKPdf 05 51 39.5 -0.2
baz=124,SNR=7.6
F12A Elk City 124.38 26 ⇑P PKPdf 05 51 39.7 -0.2
baz=124
D15A Lincoln 124.47 23 ⇓P PKPdf 05 51 40.1 +0.1
baz=124
E14A Clinton 124.59 24 ⇓P PKPdf 05 51 39.4 -0.8
baz=124
H10A Noah's Angus R 124.61 28 ⇑P PKPdf 05 51 39.9 -0.5
baz=124
C17A Wharram Farm, 124.64 21 ⇓P PKPdf 05 51 39.8 -0.5
baz=124
J08A Circle Bar Ran 124.70 30 ⇑P PKPdf 05 51 40.4 -0.1
baz=124
M05C Lookout 124.73 33 ⇓P PKPdf 05 51 40.1 -0.6
baz=124
F13A Darby 124.75 25 ⇓P PKPdf 05 51 40.4 -0.2
baz=124
MOD Modoc 124.80 32 ⇓P PKPdf 05 51 41.0 +0.2
baz=125
MOD Modoc 124.80 32 *e*PKPdf PKPdf 05 51 41.6 +0.8
MOD *ep*PKPdf pPKPdf 05 51 51.3 +0.1
D16A Dana Ranch, Ca 124.85 22 ⇓P PKPdf 05 51 40.8 +0.1
baz=125
H11A Donnelly 124.86 27 ⇑P PKPdf 05 51 40.5 -0.3
baz=125
WVOR Wild Horse Val 125.29 31 *e*PKIKP PKPdf 05 51 42.4 +0.7
O04C Chester 125.47 34 ⇓P PKPdf 05 51 41.9 -0.2
baz=125
I11A Placerville 125.49 28 ⇑P PKPdf 05 51 41.9 -0.1
baz=125
H12A Diamond D Ranc 125.50 26 ⇓P PKPdf 05 51 41.7 -0.4
baz=125
G14A Jackson 125.55 25 ⇓P PKPdf 05 51 42.2 0.0
baz=125,SNR=10.0
K09A Rome 125.56 30 ⇑P PKPdf 05 51 42.2 0.0
baz=125
E17A Martinsdale 125.59 22 ⇑P PKPdf 05 51 42.0 -0.2
baz=125
L08A Fields 125.62 31 ⇑P PKPdf 05 51 42.8 +0.5
baz=125
MNRC McLaughlin Nat 125.65 36 ⇓P PKPdf 05 51 43.2 +0.7
baz=125
ORV Oroville 125.75 35 ⇑P PKPdf 05 51 42.6 -0.1
baz=126
H13A Challis 125.75 26 ⇓P PKPdf 05 51 42.5 0.0
baz=126,SNR=6.8
O05C Quincy 125.81 34 ⇑P PKPdf 05 51 42.7 -0.1
baz=126
DLMT Dillon 125.81 24 *e*PKPdf PKPdf 05 51 43.2 +0.6
DLMT *ep*PKPdf pPKPdf 05 51 52.9 -0.1
N06A Buffalo Meadow 125.86 33 ⇑P PKPdf 05 51 43.0 +0.2
baz=126
K10A MacKenzie Ranc 125.92 29 ⇑P PKPdf 05 51 43.4 +0.5
baz=126
MFID Camas Ranch 125.93 28 ⇑P PKPdf 05 51 43.5 +0.6
baz=126
I12A Atlanta 125.96 27 ⇓P PKPdf 05 51 43.1 +0.1
baz=126
G15A Dillon 126.02 24 ⇑P PKPdf 05 51 43.3 +0.3
baz=126,SNR=5.9
DGMT Dagmar 126.02 16 *e*PKPdf PKPdf 05 51 42.7 -0.2
DGMT LR LR
comp=Z,3µm,20.0s,MS6.0
H14A Leadore 126.09 25 ⇓P PKPdf 05 51 43.6 +0.4
baz=126
ULM Lac du Bonnet 126.15 9 PKP PKPdf 05 51 42.0 -1.1
comp=Z,2.8nm,0.7s,baz=70,slow=2.2,SNR=4.3
ULM Lac du Bonnet 126.15 9 *e*PKPdf PKPdf 05 51 42.5 -0.7
BEKR Beckwourth 126.19 34 ⇓P PKPdf 05 51 42.9 -0.6
baz=126
G16A Moss Hill, Enn 126.25 24 ⇓P PKPdf 05 51 42.8 -0.6
baz=126
I13A Wildhorse Cree 126.33 26 ⇓P PKPdf 05 51 44.3 +0.6
baz=126,SNR=6.2
H15A Lima 126.40 25 ⇑P PKPdf 05 51 43.8 0.0
baz=126
J12A Stokes Ranch, 126.40 28 ⇓P PKPdf 05 51 44.4 +0.6
baz=126
HLID Hailey 126.47 27 ⇓P PKPdf 05 51 44.2 +0.2
baz=126,SNR=7.8
HLID Hailey 126.47 27 *e*PKPdf PKPdf 05 51 44.7 +0.8
HLID *ep*PKPdf pPKPdf 05 51 54.7 +0.4
F18A Big Timber 126.49 22 ⇑P PKPdf 05 51 43.7 -0.2
baz=126
GCMT Greycliff 126.60 22 *e*PKPdf PKPdf 05 51 45.0 +0.8
GCMT *ep*PKPdf pPKPdf 05 51 54.9 +0.3
L10A Juniper Basin 126.64 29 ⇑P PKPdf 05 51 44.1 -0.2
baz=126
J13A Cove Ranch, Pi 126.71 27 ⇑P PKPdf 05 51 44.6 +0.2
baz=126,SNR=8.1
QLMT Earthquake Lak 126.72 24 *e*PKPdf PKPdf 05 51 45.1 +0.7
N08A GE Springer Mi 126.75 32 ⇓P PKPdf 05 51 45.2 +0.7
baz=126
O07A Toulon 126.80 33 ⇑P PKPdf 05 51 44.9 +0.3
baz=126
H16A Russell Place, 126.90 24 ⇓P PKPdf 05 51 44.8 +0.1
baz=127
L11A Cat Creek Ranc 126.92 29 ⇓P PKPdf 05 51 45.1 +0.3
baz=127
LAO LASA Array 127.01 19 *e*PKPdf PKPdf 05 51 45.8 +1.0
LAO *ep*PKPdf pPKPdf 05 51 55.9 +0.6
M10A I.L. Ranch, Tu 127.02 30 ⇑P PKPdf 05 51 45.7 +0.7
baz=127
YMR Madison River 127.04 24 *e*PKPdf PKPdf 05 51 46.1 +1.1
J14A Carey 127.06 26 ⇓P PKPdf 05 51 45.0 -0.1
baz=127
O08A Rochester Mine 127.09 32 ⇑P PKPdf 05 51 45.6 +0.4
baz=127
RKT Rikitea 127.15 117 *e*PP PP 05 53 40.6 -4.2
comp=Z,152nm,25.0s
RKT Rikitea 127.15 117 *e*SS SS 06 10 53.6 +1.6
comp=Z,1µm,27.8s
RKT Rikitea 127.15 117 *e*LR LR 06 31 34.8
comp=Z,3µm,22.8s
RLMT Red Lodge 127.32 22 PKPdf PKPdf 05 51 43.5 -2.0
CMB Columbia Colle 127.42 36 PFAKE 05 52 00.0 +14
CMB LR LR
comp=Z,2µm,20.0s,MS5.7
M11A Holland Ranch, 127.46 30 ⇓P PKPdf 05 51 45.8 -0.1
baz=127
BMN Battle Mountai 127.48 31 PFAKE 05 52 00.0 +14
BMN LR LR
comp=Z,2µm,20.0s,MS5.8
I16A Newdale 127.48 24 ⇑P PKPdf 05 51 44.8 -1.1
baz=127
R06C Coleville 127.62 35 ⇓P PKPdf 05 51 46.9 +0.6
baz=127
O09A Fish Creek Ran 127.69 32 ⇓P PKPdf 05 51 47.3 +0.9
baz=127
K14A Jones Ranch, D 127.83 27 ⇓P PKPdf 05 51 46.9 +0.3
baz=128
L13A Double Diamond 127.84 28 ⇓P PKPdf 05 51 46.8 +0.1
baz=128
MOOW Moose Ponds 127.89 24 *e*PKPdf PKPdf 05 51 47.2 +0.5
M12A Wells 127.90 29 ⇑P PKPdf 05 51 47.5 +0.8
baz=128,SNR=7.8
RRI2 Red Ridge 127.99 25 *e*PKPdf PKPdf 05 51 48.7 +1.8
K15A Arbon 128.00 26 ⇑P PKPdf 05 51 48.1 +1.2
baz=128
TPAW Telford Pass 128.02 24 *e*PKPdf PKPdf 05 51 47.6 +0.7
AGMN Agassiz Refuge 128.05 10 PFAKE 05 52 00.0 +13
AGMN LR LR
comp=Z,5µm,19.0s,MS6.2
LOHW Long Hollow 128.06 24 *e*PKPdf PKPdf 05 51 48.0 +1.0
SNOW Snow King Moun 128.13 24 *e*PKPdf PKPdf 05 51 48.1 +1.0
REDW Red Top Meadow 128.17 24 *e*PKPdf PKPdf 05 51 48.0 +0.8
L14A Malta 128.21 27 ⇑P PKPdf 05 51 48.5 +1.1
baz=128
ELK Elko 128.25 30 *e*PKIKP PKPdf 05 51 48.7 +1.3
ELK *e* 05 51 58.3
ELK MLR MLR
comp=Z,3µm,22.0s
N12A Clover Valley, 128.27 29 ⇓P PKPdf 05 51 48.3 +0.9
baz=128,SNR=5.9
M13A Montello 128.30 28 ⇑P PKPdf 05 51 48.3 +0.8
baz=128
NVAR Mina Array Bea 128.33 34 PKP PKPdf 05 51 46.3 -1.3
comp=Z,1.6nm,0.7s,baz=254,slow=4.0,SNR=8.4
NVAR PP PP 05 53 52.8 +1.5
comp=Z,1.4nm,0.8s,baz=297,slow=4.0,SNR=4.2
O11A Cowboy Ranch, 128.50 31 ⇑P PKPdf 05 51 48.3 +0.3
baz=128
T06C Millerton Lake 128.51 36 ⇓P PKPdf 05 51 47.4 -0.6
baz=128
AHID Auburn Hatcher 128.56 25 PFAKE 05 52 00.0 +12
AHID LR LR
comp=Z,3µm,20.0s,MS6.0
M14A Sheep Mountain 128.57 28 ⇓P PKPdf 05 51 48.3 +0.2
baz=128
L15A Malad City 128.61 27 ⇓P PKPdf 05 51 48.1 0.0
baz=128
O12A Currie 128.86 30 ⇑P PKPdf 05 51 49.7 +1.1
baz=129,SNR=6.3
EYMN Ely 128.99 6 *e*PKPdf PKPdf 05 51 46.6 -2.0
S08C White Mtn Res 129.06 35 ⇑P PKPdf 05 51 49.4 +0.3
baz=129
Q10A Clear Creek Ra 129.09 32 ⇓P PKPdf 05 51 48.6 -0.5
baz=129
HELL Mitchell Peak 129.13 36 ⇑P PKPdf 05 51 48.7 -0.5
baz=129,SNR=6.7
V05C Boulder Hill, 129.15 37 ⇑P PKPdf 05 51 48.5 -0.8
baz=129
N14A Grayback Hills 129.16 28 ⇑P PKPdf 05 51 48.7 -0.4
baz=129,SNR=6.0
TPH Tonopah 129.18 33 *e*PKIKP PKPdf 05 51 50.3 +1.0
BW06 Boulder Array 129.19 24 PFAKE 05 52 00.0 +11
BW06 LR LR
comp=Z,4µm,19.0s,MS6.1
PDAR Pinedale Array 129.19 24 PKP PKPdf 05 51 49.7 +0.5
comp=Z,1.2nm,0.7s,baz=304,slow=1.1,SNR=11
HWUT Hardware Ranch 129.30 26 *e*PKPdf PKPdf 05 51 49.3 -0.1
HWUT *ep*PKPdf pPKPdf 05 52 00.2 +0.4
P12A McGill 129.38 31 ⇓P PKPdf 05 51 50.6 +0.9
baz=129,SNR=5.7
S09A Goldfield 129.43 34 ⇓P PKPdf 05 51 50.7 +0.9
baz=129,SNR=5.5
N15A Stansbury Isla 129.44 28 ⇑P PKPdf 05 51 50.7 +1.0
baz=129
Q11A Duckwater 129.46 32 ⇑P PKPdf 05 51 50.1 +0.3
baz=129
S10A Tonopah Range, 129.64 33 ⇓P PKPdf 05 51 51.1 +0.9
baz=129,SNR=7.1
PKM Peak Mountain 129.84 38 ⇑P PKPdf 05 51 51.3 +0.6
baz=130
DUG Dugway 129.85 28 *e*PKIKP PKPdf 05 51 51.5 +1.0
DUG *e* 05 52 01.1
DUG MLR MLR
comp=Z,3µm,20.0s,MS6.0
R11A Troy Canyon, C 129.87 32 ⇓P PKPdf 05 51 51.7 +1.1
baz=130,SNR=12
RSSD Black Hills 130.00 18 *e*PKIKP PKPdf 05 51 50.9 +0.2
JLU Jordanelle 130.16 27 *e*PKPdf PKPdf 05 51 51.0 -0.1
N17A Moffit Pass 130.16 26 ⇓P PKPdf 05 51 52.3 +1.2
baz=130
P14A Drum Mountains 130.20 29 ⇓P PKPdf 05 51 52.4 +1.2
baz=130
DAC Darwin (Calif) 130.24 35 PFAKE 05 52 00.0 +8.6
DAC LR LR
comp=Z,2µm,19.0s,MS5.8
ARVC Arvin 130.30 37 ⇓P PKPdf 05 51 52.8 +1.3
baz=130
NLU North Lily Min 130.39 28 *e*PKPdf PKPdf 05 51 52.4 +0.9
DAU Daniels Canyon 130.40 27 *e*PKIKP PKPdf 05 51 53.2 +1.7
O16A Springville 130.45 27 ⇑P PKPdf 05 51 52.7 +1.1
baz=130
MPMC Manual Prospec 130.45 36 ⇓P PKPdf 05 51 52.2 +0.5
baz=130,SNR=7.8
O17A Robinson Place 130.81 27 ⇑P PKPdf 05 51 52.9 +0.5
baz=130
T11A Corn Creek, Al 130.88 33 ⇑P PKPdf 05 51 54.0 +1.4
baz=131
COWI Conover 131.04 4 PKPdf PKPdf 05 51 50.5 -2.1
COWI LR LR
comp=Z,5µm,22.0s,MS6.2
S13A Holt Ranch, En 131.35 31 ⇓P PKPdf 05 51 54.4 +1.0
baz=131
GSC Goldstone 131.38 36 *e*PKIKP PKPdf 05 51 55.1 +1.6
O19A Miners Draw (B 131.43 25 ⇑P PKPdf 05 51 54.5 +1.0
baz=131
MSU Marysvale 131.48 29 *e*PKIKP PKPdf 05 51 54.4 +0.8
CCUT Cedar City 131.63 31 *e*PKPdf PKPdf 05 51 55.1 +1.2
Q16A Castle Valley 131.64 28 ⇓P PKPdf 05 51 54.4 +0.5
baz=131
T13A Saint George 131.74 32 ⇓P PKPdf 05 51 54.5 +0.3
baz=132
Q18A Rafter H Ranch 131.97 27 ⇑P PKPdf 05 51 55.2 +0.6
baz=132
R17A Hanksville Air 132.25 28 ⇓P PKPdf 05 51 55.3 +0.2
baz=132
ECSD EROS,Sioux Fal 132.31 12 *e*PKPdf PKPdf 05 51 53.7 -1.3
LDFC Landfair 132.52 35 *e*PKPdf PKPdf 05 51 58.4 +2.7
U15A North Rim 133.04 31 ⇑P PKPdf 05 51 57.3 +0.7
baz=133
PV10 Paradox Valley 133.05 27 *e*PKPdf PKPdf 05 51 58.3 +1.7
BAR Barrett 133.27 38 PFAKE 05 52 10.0 +13
BAR LR LR
comp=Z,2µm,20.0s,MS5.7
ISCO Idaho Springs 133.27 22 *e*PKIKP PKPdf 05 51 58.9 +1.9
T17A Navajo Res., N 133.34 29 ⇓P PKPdf 05 51 59.2 +2.0
baz=133
S19A Harvey Farm, M 133.52 27 ⇓P PKPdf 05 51 57.0 -0.6
baz=133
V15A Kaibab Nationa 133.56 31 ⇓P PKPdf 05 51 59.2 +1.5
baz=133
X13A Yucca 133.59 34 ⇓P PKPdf 05 51 59.2 +1.5
baz=133
JFWS Jewell Farm 134.10 6 *e*PKIKP PKPdf 05 51 59.2 +0.8
GLA Glamis 134.13 36 ⇑P PKPdf 05 51 59.9 +1.1
baz=134
MVCO Mesa Verde 134.25 27 ⇓P PKPdf 05 51 58.3 -0.6
baz=134
T19A Beclabito 134.32 28 ⇑P PKPdf 05 51 59.2 +0.1
baz=134
BINY Binghamton 134.47 351 PFAKE 05 52 10.0 +11
BINY LR LR
comp=Z,3µm,20.0s,MS6.1
Y14A Wickenburg 134.53 34 ⇑P PKPdf 05 51 58.9 -0.7
baz=134
Y15A Casa Rosa Ranc 134.89 33 ⇑P PKPdf 05 52 00.7 +0.5
baz=135
ERPA Erie 135.02 355 PFAKE 05 52 10.0 +10
ERPA LR LR
comp=Z,5µm,21.0s,MS6.2
X16A Lo Mia Camp, P 135.02 32 ⇑P PKPdf 05 52 01.6 +1.2
baz=135
SDCO Great Sand Dun 135.09 24 *e*PKPdf PKPdf 05 51 58.5 -2.0
V19A Window Rock 135.21 29 ⇓P PKPdf 05 52 02.0 +1.2
baz=135
W19A Sanders 135.53 30 ⇓P PKPdf 05 52 02.8 +1.5
baz=135
Y17A Roosevelt 135.89 32 ⇓P PKPdf 05 52 03.4 +1.3
baz=136
CBKS Cedar Bluff 136.16 17 PFAKE 05 52 10.0 +7.6
CBKS LR LR
comp=Z,4µm,21.0s,MS6.2
Y18A Canyon Day Jun 136.25 31 ⇑P PKPdf 05 52 04.4 +1.7
baz=136
KSU1 Kansas State U 136.73 14 PKPdf PKPdf 05 52 00.3 -3.1
ANMO Albuquerque 137.05 27 *e*PKIKP PKPdf 05 52 05.1 +0.9
ANMO MLR MLR
comp=Z,2µm,21.0s
ACSO Alum Creek Sta 137.06 358 PFAKE 05 52 10.0 +6.0
ACSO LR LR
comp=Z,4µm,19.0s,MS6.2
LAZ Ladron 137.19 28 *e*PKPdf PKPdf 05 52 03.5 -0.9
LAZ *ep*PKPdf pPKPdf 05 52 15.4 +0.6
BNM Barren Site 137.63 28 *e*PKPdf PKPdf 05 52 06.0 +0.7
318A Bisbee 138.08 34 ⇓P PKPdf 05 52 05.4 -0.8
baz=138
OLIL Olney 138.44 4 *e*PKPdf PKPdf 05 52 06.6 0.0
OLIL *ep*PKPdf pPKPdf 05 52 17.7 +0.6
CBN Corbin 138.59 352 PFAKE 05 52 20.0 +13
CBN LR LR
comp=Z,3µm,20.0s,MS6.0
CCM Cathedral Cave 138.77 8 PFAKE 05 52 20.0 +13
CCM LR LR
comp=Z,4µm,22.0s,MS6.1
WCI Wyandotte Cave 139.04 2 *e*PKIKP PKPdf 05 52 07.6 -0.2
WCI *e* 05 52 19.4
AMTX Amarillo 139.08 22 PFAKE 05 52 20.0 +12
AMTX LR LR
comp=Z,3µm,22.0s,MS6.0
SIUC Southern Illin 139.35 6 *e*PKPdf PKPdf 05 52 08.6 +0.2
TRQA Tornquist 139.42 208 *e*PKPdf PKPdf 05 52 10.1 +1.7
BLA Blacksburg 139.92 355 PFAKE 05 52 20.0 +11
BLA LR LR
comp=Z,4µm,19.0s,MS6.1
ELN Prospectdale 139.93 355 *e*PKPdf PKPdf 05 52 08.6 -0.8
BBSR BB Station 140.24 333 PFAKE 05 52 20.0 +10
BBSR LR LR
comp=Z,2µm,20.0s,MS5.8
PLCA Paso Flores 140.30 197 PKhKP 05 52 03.4
comp=Z,1.6nm,0.9s,baz=152,slow=5.8,SNR=2.8
PLCA PKP PKPdf 05 52 11.8 +1.9
comp=Z,8.0nm,1.1s,baz=186,slow=6.5,SNR=12
PLCA Paso Flores 140.30 197 PKP PKPdf 05 52 11.8 +1.9
PARMO Parma 140.33 7 *e*PKPdf PKPdf 05 52 10.5 +0.3
WVT Waverly 141.05 4 PKHKP 05 52 05.0
CNNC Cliffs of the 141.57 351 PFAKE 05 52 20.0 +7.6
CNNC LR LR
comp=Z,4µm,20.0s,MS6.2
TKL Tuckaleechee C 141.64 359 *e*PKIKP PKPdf 05 52 12.6 +0.1
MIAR Mount Ida 141.78 12 *e*PKIKP PKPdf 05 52 07.8 -5.0
CPCT Cooper Cave 141.85 0 *e*PKPdf PKPdf 05 52 12.2 -0.7
BDFB Brasilia 141.98 248 PFAKE 05 52 20.0 +6.4
BDFB LR LR
comp=Z,4µm,22.0s,MS6.1
TXAR Lajitas Array 143.03 29 PKhKP 05 52 11.9
comp=Z,1.5nm,0.7s,baz=294,slow=1.6,SNR=19
TXAR PKP PKPdf 05 52 17.2 +2.0
comp=Z,4.4nm,0.7s,baz=90,slow=0.9,SNR=25
TXAR PP PP 05 55 26.4 +2.6
comp=Z,7.5nm,1.3s,baz=312,slow=4.3,SNR=4.9
TXAR Lajitas Array 143.03 29 PKP PKPdf 05 52 11.9 -3.3
TXAR PKP PKPdf 05 52 17.2 +2.0
TXAR PP PP 05 55 26.4 +2.6
JCT Junction City 143.71 23 *e*PKIKP PKPdf 05 52 13.7 -2.7
GOGA Godfrey 143.88 359 *e*PKIKP PKPdf 05 52 15.4 -1.2
LRAL Lakeview Retre 144.18 4 *e*PKPdf PKPdf 05 52 14.7 -2.4
NATX Nacogdoches 144.19 15 *e*PKPdf PKPdf 05 52 15.7 -1.4
VBMS Vicksburg 144.60 9 *e*PKPdf PKPdf 05 52 17.3 -0.6
CPUP Villa Florida 145.09 226 PKPbc PKPbc 05 52 18.6 +0.3
comp=Z,30nm,1.0s,baz=92,slow=3.9,SNR=45
CPUP Villa Florida 145.09 226 *e*PKPdf PKPdf 05 52 18.5 -0.3
CPUP LR LR
comp=Z,536nm,20.0s,MS5.3
BRAL Brewton 146.19 4 *e*PKPbc PKPbc 05 52 22.3 +0.7
BRAL LR LR
comp=Z,4µm,21.0s,MS6.1
LMEL Las Melosas 146.46 202 *e*P pPKPdf 05 52 30.9 -0.5
FCH Farellones 146.96 202 *e*P pPKPdf 05 52 32.1 -0.2
CLCH Cerro Calan 146.99 202 ⇑P pPKPdf 05 52 31.2 -1.1
KVTX Kingsville 147.07 22 *e*PKPbc PKPbc 05 52 26.7 +2.4

IDC ***29*** *05:37:01.7±0.3,293N×9554E, h0km, mb5.1/35, mb1 5.1/35,mb1mx5.1/36, mbtmp5.1/35, MS5.7/21, Ms1 5.7/21, ms1mx5.6/32, Error ellipse: s-maj=13.2km s-min=10.2km az=44.0*

BJI ***29*** *05:37:04.7, 285N×9543E, h39km, mB6.0, mb5.8, Ms6.1, Msz5.9*

MOS ***29*** *05:37:04.6± 1.3, 290N×9551E, h33km, mb5.7/82, MS6.0/13, Error ellipse: s-maj=12.6km s-min=6.5km az=94.1*

ISCJB ***29*** *05:37:05.0± 0.1, 290N± 002×9555E± 002, h31km, mb5.5/190, MS5.9/59, Error ellipse: s-maj=3.9km s-min=2.7km az=38.3*

SZGRF ***29*** *05:37:06.4, 223N×95.13E, h33km, mb5.5, Off west coast of northern Sumatera, Indonesia*

GCMT ***29*** *05:37:07.3± 0.2, 271N×95.39E, h15km, MW6.0/102, Moment Tensor Solution. s87,c147; s102,c175; Duration: 2≥2 Moment tensor: Scale 10^18 Nm; Mrr0.24±.01; Mθθ-0.17±.01; Mϕϕ-0.07±.01; Mrθ0.64±.02; Mθϕ0.16±.01; Mϕr-0.81±.02; Best double couple: M=1.06700×10^18 NP1:ϕs288.00000°,δ8.00000°, λ57.00000°. NP2:ϕs141.00000°,δ83.00000°,λ94.00000°. Principal axes: T 1.0550, Plg52.0000°, Azm56.0000°; N 0.0230, Plg4.0000°, Azm321.0000°; P -1.0790, Plg38.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***29*** *05:37:07.3± 0.1, 290N×9552E, h35km, mb5.5/97, MW5.7 Error ellipse: s-maj=5.1km s-min=3.8km az=48.0, Moment Tensor Solution. s56 Moment tensor: Scale 10^17 Nm; Mrr3.76; Mθθ-1.98; Mϕϕ-1.77; Mrθ2.49; Mθϕ1.50; Mϕr-2.49; Best double couple: M=0.00000×10^17 NP1: ϕs134.00000°,δ67.00000°,λ91.00000°. NP2: ϕs312.00000°,δ23.00000°,λ88.00000°. Principal axes: T 5.2100, Plg67.0000°, Azm46.0000°; N -0.3700, Plg0.0000°, Azm313.0000°; P -4.8200, Plg22.0000°, Azm223.0000°;*

NEIC Felt [IV] on Simeulue. Also felt [IV] at Meulaboh, Sumatra.

DJA ***29*** *05:37:10, 308N×9561E, h56km, Mw6.0/20*

ISC 29 05:37:07.1±0.1,290N±002×9552E±002,h33km, h33km±8km:pP-P,n539,σ1s08/522,mb5.5/190,MS5.9/59, 27C-18D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSI	**Banda Aceh**	**2.59**	**355**	P	**Pn**	**05 37 44.9**	**-1.8**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**5.91**	**124**	P	**Pn**	**05 38 32.2**	**-0.1**
	0.0nm,0.0s						
RGRI	**Rengat**	**7.54**	**115**	P	**Pn**	**05 38 55.2**	**+0.4**
	0.0nm,0.0s						
KSI	**Kapahiang**	**9.61**	**133**	P	**Pn**	**05 39 23.6**	**+0.4**
	0.0nm,0.0s						
DSRI	**Dabo**	**9.66**	**110**	P	**Pn**	**05 39 24.1**	**+0.2**
	0.0nm,0.0s						
PPBI	**Pangkal Pinang**	**11.74**	**115**	P	**Pn**	**05 39 54.1**	**+1.6**
	0.0nm,0.0s						
TPI	**Tanjungpandan**	**13.37**	**115**	P	**Pn**	**05 40 15.1**	**+0.5**
	0.0nm,0.0s						
CBJI	**Citeko**	**14.62**	**129**	P	**Pn**	**05 40 31.8**	**+0.1**
	0.0nm,0.0s						
DBJI	**Dramaga**	**14.62**	**130**	P	**Pn**	**05 40 32.4**	**+0.6**
	0.0nm,0.0s						
KSM	**Kuching**	**14.85**	**95**	*e*Pn	**Pn**	**05 40 35.5**	**+0.6**
COCO	**West Island**	**15.04**	**175**	*e*Pn	**Pn**	**05 40 37.8**	**+0.4**
	557m,1.7s						
KKTK	**Khon Kaen**	**15.17**	**28**	P	**Pn**	**05 40 39.8**	**+0.8**
	5μm,0.5s						
PALK	**Pallekele**	**15.38**	**287**	*e*P	**Pn**	**05 40 48.1**	**+6.2**
CM31	**Chiang Mai Arr**	**15.82**	**12**	Pn	**Pn**	**05 40 48.2**	**+0.6**
	297nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.82**	**12**	Pn	**Pn**	**05 40 50.3**	**+2.8**
	6.6nm,0.3s,baz=202,slow=11,SNR=55						
CMAR				LR	LR	05 47 53.9	
	comp=Z,46μm,18.0s,baz=199,slow=41						
CHTO	**Chiang Mai**	**16.17**	**12**	P	**Pn**	**05 40 52.3**	**+0.3**
	SNR=12						
CHTO	**Chiang Mai**	**16.17**	**12**	*e*P	**Pn**	**05 40 52.7**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,216nm,1.2s						
CHTO	**Chiang Mai**	**16.17**	**12**	*e*Pn	**Pn**	**05 40 52.7**	**+0.7**
	comp=Z,216nm,1.2s						
STKI	**Sintang**	**16.20**	**100**	P	**Pn**	**05 40 53.4**	**+1.0**
	comp=Z,0.0nm,0.0s						
NANT	**Nan**	**16.60**	**17**	⇑P	**Pn**	**05 40 59.0**	**+1.6**
PBKI	**Pangkalan Bun**	**17.08**	**109**	P	**Pn**	**05 41 04.3**	**+0.8**
	comp=Z,0.0nm,0.0s						
PLKI	**Palangkaraya**	**19.11**	**105**	P	**Pn**	**05 41 29.0**	**+0.6**
	comp=Z,674nm,1.0s						
SJI	**Sawahan**	**19.35**	**123**	P	**Pn**	**05 41 28.4**	**-2.9**
	comp=Z,0.0nm,0.0s						
BBKI	**Banjar Baru**	**20.32**	**108**	P	**P**	**05 41 42.0**	**+1.4**
	comp=Z,0.0nm,0.0s						
KKM	**Kota Kinabalu**	**20.87**	**81**	*e*P	**P**	**05 41 46.5**	**-0.1**
QIZ	**Qiongzhong**	**21.30**	**40**	P	**P**	**05 41 51.8**	**+0.7**
QIZ				S	**S**	**05 45 47.0**	**+0.9**
QIZ				AMB	AMB		
	comp=Z,195nm,0.9s,mb5.4						
QIZ				LR	LR		
	comp=N,53μm,16.6s						
QIZ				LR	LR		
	comp=Z,43μm,17.0s,MS5.9						
QIZ	**Qiongzhong**	**21.30**	**40**	*e*P	**P**	**05 41 51.5**	**+0.4**
	comp=Z,144nm,0.9s,mb5.3						
KDM	**Kudat**	**21.61**	**79**	⇓P	**P**	**05 41 56.0**	**+1.5**
SDKM	**Sandakan**	**21.79**	**82**	⇑P	**P**	**05 41 57.2**	**+0.8**
SMKI	**Samarinda**	**21.94**	**98**	P	**P**	**05 41 59.9**	**+1.8**
	comp=Z,0.0nm,0.0s						
TARAI	**Tarakan**	**22.02**	**88**	P	**P**	**05 41 56.7**	**-2.3**
	comp=Z,0.0nm,0.0s						
TSM	**Tawau**	**22.35**	**86**	⇓P	**P**	**05 42 03.1**	**+0.6**
KHKI	**Kahang-Kahang**	**22.95**	**119**	P	**P**	**05 42 07.2**	**-1.6**
	comp=Z,0.0nm,0.0s						
MYLDM	**Lahad Datu**	**23.04**	**84**	⇑P	**P**	**05 42 11.5**	**+1.8**
KMI	**Kunming**	**23.17**	**17**	P	**P**	**05 42 11.8**	**+0.8**
KMI				AP		05 42 21.5	
KMI				XP	sP	05 42 26.5	+2.6
KMI				PP		05 42 42.3	
KMI				S	**S**	**05 46 15.3**	**-5.1**
KMI				XS	sS	05 46 35.0	-0.7
KMI				SS		05 47 02.5	
KMI				AMB	AMB		
	comp=Z,277nm,0.8s,mb5.7						
KMI				AMB	AMB		
	comp=Z,5μm,6.4s						
KMI				LR	LR		
	comp=N,69μm,13.3s,MS6.2						
KMI				LR	LR		
	comp=E,29μm,18.1s,MS6.2						
KMI				LR	LR		
	comp=E,74μm,12.2s						
KMI	**Kunming**	**23.17**	**17**	P	**P**	**05 42 11.8**	**+0.8**
KMI				**PP*		05 42 21.6	
KMI				**SP*	sP	05 42 26.5	+2.6
KMI						05 42 42.2	
KMI				PPP		05 42 53.4	
KMI				S	**S**	**05 46 15.3**	**-5.1**
KMI				**SS*	sS	05 46 34.9	-0.8
KMI				SS		05 47 02.4	
KMI				SSS		05 47 17.5	
KMI				LR	LR		
	comp=Z,277nm,0.8s,mb5.7						
KMI				MLR	MLR		
	comp=Z,74μm,12.2s,MS6.3						
KMI	**Kunming**	**23.17**	**17**	P	**P**	**05 42 11.8**	**+0.8**
	comp=Z,277nm,0.8s,mb5.7						
KMI				pP		05 42 21.6	
KMI				sP	sP	05 42 26.5	+2.6
KMI				PP		05 42 42.2	
KMI				PPP		05 42 53.4	
KMI				S	**S**	**05 46 15.3**	**-5.1**
KMI				sS	sS	05 46 34.9	-0.8
KMI				SS		05 47 02.4	
KMI				SSS		05 47 17.5	
KMI				LR	LR		
	comp=Z,74μm,12.2s,MS6.3						
MTNI	**Mataram**	**23.57**	**119**	P	**P**	**05 42 13.8**	**-1.3**
	comp=Z,0.0nm,0.0s						
PPR	**Puerto Princes**	**24.05**	**72**	⇓*e*P	**P**	**05 42 22.0**	**+2.5**
PCI	**Palu**	**24.60**	**98**	P	**P**	**05 42 24.2**	**-0.4**
	comp=Z,0.0nm,0.0s						
ODAN	**Odare**	**25.07**	**343**	*e*P	**P**	**05 42 28.9**	**+0.3**
	comp=Z,1μm,1.3s,mb6.3						
RAMN	**Ramite**	**25.40**	**341**	*e*P	**P**	**05 42 32.1**	**+0.5**
KAPI	**Kappang**	**25.45**	**108**	P	**P**	**05 42 31.0**	**-1.3**
	comp=Z,1μm,1.0s,mb6.3,SNR=20						
KAPI	**Kappang**	**25.45**	**108**	P	**P**	**05 42 31.1**	**-1.2**
	SNR=10						
KAPI	**Kappang**	**25.45**	**108**	P	**P**	**05 42 31.1**	**-1.2**
	comp=Z,189nm,1.0s,mb5.6,baz=288,slow=9.1,SNR=21						
KAPI	**Kappang**	**25.45**	**108**	*e*P	**P**	**05 42 30.0**	**-2.3**
	comp=Z,159nm,0.9s,mb5.5						
GYA	**Guiyang**	**25.75**	**24**	⇑*i*P	**P**	**05 42 33.8**	**-1.1**
GYA				AP	pP	05 42 43.0	-1.2
GYA				XP	sP	05 42 47.5	-0.7
GYA				PP		05 43 14.3	
GYA				S	**S**	**05 46 56.0**	**-5.9**
GYA				XS	sS	05 47 11.8	-5.7
GYA				SS		05 48 02.0	
GYA				AMB	AMB		
	comp=Z,180nm,1.2s,mb5.5						
GYA				AMB	AMB		
	comp=Z,1μm,8.7s						
GYA				LR	LR		
	comp=N,33μm,16.4s,MS6.0						
GYA				LR	LR		
	comp=E,19μm,15.3s,MS6.0						
GYA				LR	LR		
	comp=Z,33μm,17.8s,MS5.9						
JIRN	**Jiri**	**26.19**	**341**	*e*P	**P**	**05 42 39.4**	**+0.6**
	comp=Z,806nm,0.8s,mb6.3						
PKIN	**Phulchoki**	**26.38**	**339**	*e*P	**P**	**05 42 41.1**	**+0.6**
GZH	**Guangzhou**	**26.48**	**39**	P	**P**	**05 42 46.0**	**+4.5**
GZH				LR	LR		
	comp=N,30μm,15.4s,MS6.1						
GZH				LR	LR		
	comp=E,29μm,15.1s,MS6.2						
GZH				LR	LR		
	comp=Z,59μm,15.1s,MS6.2						
DMN	**Daman**	**26.51**	**339**	*e*P	**P**	**05 42 42.6**	**+0.9**
	comp=Z,452nm,0.8s,mb6.1						
GUN	**Gumba**	**26.52**	**341**	*e*P	**P**	**05 42 42.3**	**+0.5**
	comp=Z,744nm,0.9s,mb6.2						
KKN	**Kakani**	**26.62**	**339**	*e*P	**P**	**05 42 42.7**	**0.0**
	comp=Z,674nm,0.9s,mb6.2						
LSA	**Lhasa**	**26.98**	**352**	*e*P	**P**	**05 42 46.5**	**+0.6**
LSA				*e*S	**S**	**05 47 23.6**	**+2.4**
LSA				pmax	pmax		
	comp=Z,179nm,0.8s,mb5.7						
LSA	**Lhasa**	**26.98**	**352**	*e*P	**P**	**05 42 46.5**	**+0.6**
	comp=Z,179nm,0.8s,mb5.7						
LSA				*e*S	**S**	**05 47 23.6**	**+2.4**
GKN	**Gorkha**	**27.04**	**338**	*e*P	**P**	**05 42 46.5**	**0.0**
	comp=Z,1μm,0.9s,mb6.4						
KOLN	**Koldanda**	**27.23**	**336**	*e*P	**P**	**05 42 48.6**	**+0.4**
	comp=Z,530nm,0.7s,mb6.2						
DANN	**Dangsing**	**27.68**	**337**	*e*P	**P**	**05 42 51.9**	**-0.3**
	comp=Z,702nm,0.9s,mb6.3						
KDI	**Kendari**	**27.93**	**104**	P	**P**	**05 42 54.4**	**-0.2**
	comp=Z,0.0nm,0.0s						
BBSI	**Bau Bau**	**28.28**	**107**	P	**P**	**05 42 59.7**	**+2.0**
	comp=Z,0.0nm,0.0s						
RCP	**Roxas**	**28.32**	**71**	⇑*e*P	**P**	**05 42 57.1**	**-1.0**
CD2	**Chengdu**	**28.93**	**15**	⇑*i*P	**P**	**05 43 03.5**	**+0.2**
CD2				AP	pP	05 43 13.0	+0.2
CD2				XP	sP	05 43 17.0	+0.3
CD2				PP	PP	05 43 57.8	-11
CD2				PCP	PcP	05 46 11.8	-0.2
CD2				S	**S**	**05 47 51.0**	**-0.9**
CD2				XS	sS	05 48 06.0	-1.5
CD2				SS	SS	05 49 20.8	-35
CD2				PCS	PcS	05 49 53.3	-1.4
CD2				SCS	ScS	05 53 42.0	-3.1
CD2				AMB	AMB		
	comp=Z,280nm,0.7s,mb6.1						
CD2				AMB	AMB		
	comp=Z,2μm,6.0s						
CD2				LR	LR		
	comp=N,44μm,13.2s,MS6.3						
CD2				LR	LR		
	comp=E,27μm,15.6s,MS6.3						
CD2				LR	LR		
	comp=Z,55μm,13.2s,MS6.3						
DAV	**Davao City (W)**	**30.23**	**81**	⇑*i*P	**P**	**05 43 14.6**	**-0.5**
QZH	**Quanzhou**	**31.22**	**43**	⇑*i*P	**P**	**05 43 22.0**	**-1.7**
QZH				S	**S**	**05 48 29.3**	**+1.2**
QZH				AMB	AMB		
	comp=Z,3μm,5.7s						
QZH				LR	LR		
	comp=N,32μm,15.3s,MS6.3						
QZH				LR	LR		
	comp=E,37μm,14.4s,MS6.3						
QZH				LR	LR		
	comp=Z,38μm,13.3s,MS6.2						
WHN	**Wuhan**	**32.76**	**31**	⇓P	**P**	**05 43 36.8**	**-0.4**
WHN				AP	pP	05 43 46.8	+0.2
WHN				S	**S**	**05 48 45.5**	**-6.5**
WHN				LR	LR		
	comp=N,42μm,12.8s,MS6.5						
WHN				LR	LR		
	comp=E,54μm,13.2s,MS6.5						
WHN				LR	LR		
	comp=Z,104μm,14.2s,MS6.7						
NACB	**Ninganchiao**	**32.88**	**48**	*e*P	**P**	**05 43 38.7**	**+0.4**
	comp=Z,397nm,0.9s,mb6.3						
TATO	**Taipei**	**33.28**	**46**	*e*P	**P**	**05 43 42.5**	**+0.7**
	comp=Z,82nm,0.8s,mb5.7						
XAN	**Xi'an**	**33.41**	**20**	P	**P**	**05 43 41.0**	**-1.8**
XAN				AMB	AMB		
	comp=Z,292nm,1.0s,mb6.2						
XAN				AMB	AMB		
	comp=Z,2μm,9.3s						
XAN				LR	LR		
	comp=N,3μm,14.9s,MS6.0						
XAN				LR	LR		
	comp=E,23μm,14.4s,MS6.0						
XAN				LR	LR		
	comp=Z,30μm,16.1s,MS6.1						
MBWA	**Marble Bar**	**33.67**	**136**	*e*P	**P**	**05 43 44.8**	**-0.5**
	comp=Z,40nm,0.9s,mb5.3						
LZH	**Lanzhou**	**33.91**	**12**	*e*P	**P**	**05 43 46.0**	**-1.1**
LZH				AP	pP	05 43 56.0	-0.6
LZH				XP	sP	05 43 59.5	-1.0
LZH				PP	PP	05 45 00.5	-3.8
LZH				*e*S	**S**	**05 49 04.0**	**-5.7**
LZH				XS	sS	05 49 24.0	-1.3
LZH				*e*SS	SS	05 51 16.3	-21
LZH				AMB	AMB		
	comp=Z,262nm,1.3s,mb6.0						
LZH				AMB	AMB		
	comp=Z,912nm,4.5s						
LZH				LR	LR		
	comp=E,28μm,15.4s						
LZH				LR	LR		
	comp=Z,36μm,16.8s,MS6.2						
LZH	**Lanzhou**	**33.91**	**12**	*e*P	**P**	**05 43 45.9**	**-1.2**
	comp=Z,262nm,1.3s,mb6.0						
LZH				pP	pP	05 43 56.0	-0.6
LZH				sP	sP	05 43 59.5	-1.0
LZH				PP	PP	05 45 00.4	-3.9
LZH				*e*S	**S**	**05 49 04.0**	**-5.7**
LZH				sS	sS	05 49 24.0	-1.3
LZH				*e*SS	SS	05 51 16.2	-21
LZH				ScS	ScS	05 54 11.5	+1.9
LZH				LR	LR		
	comp=Z,36μm,16.8s,MS6.2						
SWI	**Sorong**	**35.92**	**95**	P	**P**	**05 44 03.6**	**-1.2**
	comp=Z,0.0nm,0.0s						
FITZ	**Fitzroy Crossi**	**36.28**	**126**	*e*P	**P**	**05 44 05.4**	**-2.3**
	comp=Z,54nm,0.8s,mb5.5						
NJ2	**Nanjing**	**36.37**	**35**	*e*P	**P**	**05 44 07.5**	**-0.8**
NJ2				AP	pP	05 44 17.3	-0.6
NJ2				XP	sP	05 44 21.3	-0.5
NJ2				PP	PP	05 45 31.5	0.0
NJ2				S	**S**	**05 49 44.0**	**-3.6**
NJ2				XS	sS	05 50 01.0	-2.3
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,500nm,4.9s						
NJ2				LR	LR		
	comp=N,6μm,15.6s,MS5.9						
NJ2				LR	LR		
	comp=E,16μm,16.7s,MS5.9						
NJ2				LR	LR		
	comp=Z,16μm,16.7s,MS5.9						
GTA	**Gaotai**	**36.55**	**6**	*e*P	**P**	**05 44 08.0**	**-1.8**
GTA				AP	pP	05 44 17.8	-1.5
GTA				XP	sP	05 44 22.8	-0.5
GTA				PP	PP	05 45 34.0	+0.6
GTA				PCP	PcP	05 46 35.3	+2.4
GTA				S	**S**	**05 49 46.5**	**-3.7**
GTA				XS	sS	05 50 02.3	-3.6
GTA				SS	SS	05 52 13.8	-17
GTA				AMB	AMB		
	comp=Z,103nm,0.8s,mb5.7						
GTA				AMB	AMB		
	comp=Z,2μm,7.2s						
GTA				LR	LR		
	comp=N,12μm,13.5s,MS5.9						
GTA				LR	LR		
	comp=E,8μm,14.1s,MS5.9						
GTA				LR	LR		
	comp=Z,17μm,13.2s,MS6.0						
SSE	**Sheshan**	**37.06**	**38**	⇑P	**P**	**05 44 15.5**	**+1.3**
SSE				AP	pP	05 44 26.0	+2.2
SSE				XP	sP	05 44 31.5	+3.8
SSE				PCP	PcP	05 46 35.8	+1.2
SSE				S	**S**	**05 49 58.8**	**+0.6**
SSE				XS	sS	05 50 15.5	+1.6
SSE				SCS	ScS	05 54 22.3	-4.6
SSE				AMB	AMB		
	comp=Z,92nm,0.8s,mb5.7						
SSE				AMB	AMB		
	comp=Z,1μm,6.5s						
SSE				LR	LR		
	comp=N,24μm,15.3s,MS6.2						
SSE				LR	LR		
	comp=E,16μm,15.3s,MS6.2						
SSE				LR	LR		
	comp=Z,41μm,16.0s,MS6.3						
SSE	**Sheshan**	**37.06**	**38**	⇑P	**P**	**05 44 15.5**	**+1.3**
	comp=Z,92nm,0.8s,mb5.7						
SSE				pP	pP	05 44 26.1	+2.3
SSE				sP	sP	05 44 31.6	+3.9
SSE				PcP	PcP	05 46 35.7	+1.1
SSE				S	**S**	**05 49 58.7**	**+0.5**
SSE				sS	sS	05 50 15.4	+1.5
SSE				ScS	ScS	05 54 22.3	-4.6
SSE				LR	LR		
	comp=Z,41μm,16.0s,MS6.3						
TIY	**Taiyuan**	**37.97**	**22**	⇑*e*P	**P**	**05 44 23.0**	**+1.2**
TIY				PP	PP	05 45 54.3	+5.3
TIY				S	**S**	**05 50 12.5**	**+0.8**
TIY				LR	LR		
	comp=N,9μm,14.3s,MS6.1						
TIY				LR	LR		
	comp=E,22μm,16.1s,MS6.1						
TIY				LR	LR		
	comp=Z,22μm,18.1s,MS6.0						
TIA	**Tai'an**	**38.70**	**28**	*e*P	**P**	**05 44 26.8**	**-1.2**
TIA				S	**S**	**05 50 15.0**	**-7.8**
TIA				AMB	AMB		
	comp=Z,105nm,1.0s,mb5.5						
TIA				LR	LR		
	comp=N,28μm,15.0s,MS6.3						
TIA				LR	LR		
	comp=E,24μm,15.0s,MS6.3						
JOW	**Kunigami**	**39.37**	**50**	LR	LR	06 03 19.4	
	comp=E,9μm,18.2s,MS5.6,baz=72,slow=40						
KAKA	**Kakadu**	**39.81**	**114**	*e*P	**P**	**05 44 35.7**	**-1.9**
	comp=E,42nm,0.6s,mb5.3						
MUN	**Mundaring**	**39.86**	**152**	*e*P	**P**	**05 44 38.6**	**+0.8**
MUN				*e*PCP	PcP	05 46 51.2	+7.9
KBL	**Kabul**	**39.97**	**325**	*e*P	**P**	**05 44 40.4**	**+1.7**
KBL				*e**PP	pP	05 44 49.8	+1.5
KLBR	**Kellerberrin**	**40.29**	**150**	*e*P	**P**	**05 44 42.0**	**+0.7**
	comp=E,76nm,1.4s,mb5.2						
KLBR				*e*PCP	PcP	05 46 44.3	-0.4
HHC	**Hu-ho-hao-te**	**40.46**	**19**	*e*P	**P**	**05 44 42.5**	**-0.1**
HHC				AP	pP	05 44 53.0	+0.8
HHC				XP	sP	05 44 57.0	+0.9
HHC				PP	PP	05 46 20.5	+4.3
HHC				PCP	PcP	05 46 45.5	+0.5
HHC				SCP	ScP	05 50 31.0	-1.2
HHC				PCS	PcS	05 50 35.0	-0.5
HHC				S	**S**	**05 50 49.0**	**-0.2**
HHC				XS	sS	05 51 06.0	+1.0
HHC				SS	SS	05 53 44.5	-4.9
HHC				SCS	ScS	05 54 43.8	-2.4
HHC				AMB	AMB		
	comp=Z,58nm,1.4s,mb5.1						
HHC				AMB	AMB		
	comp=Z,3μm,5.5s						
HHC				LR	LR		
	comp=N,42μm,15.1s,MS6.5						
HHC				LR	LR		
	comp=E,12μm,13.2s,MS6.5						
HHC				LR	LR		
	comp=Z,37μm,15.5s,MS6.3						
KSH	**Kashi**	**40.55**	**337**	P	**P**	**05 44 45.5**	**+2.2**
KSH				*e*AP	pP	05 44 54.0	+1.0
KSH				*e*XP	sP	05 44 58.3	+1.4
KSH				*e*PP	PP	05 46 22.3	+5.1
KSH				*e*PCP	PcP	05 46 48.0	+2.7
KSH				*e*SCP	ScP	05 50 33.3	+0.7
KSH				*e*PCS	PcS	05 50 37.3	+1.4
KSH				*e*S	**S**	**05 50 49.8**	**-0.7**
KSH				*e*XS	sS	05 51 07.0	+0.7
KSH				*e*SS	SS	05 53 46.0	-5.1
KSH				*e*SCS	ScS	05 54 46.0	-0.8
KSH				AMB	AMB		
	comp=Z,4μm,7.0s						
KSH				LR	LR		
	comp=N,11μm,11.6s,MS6.1						
KSH				LR	LR		
	comp=E,14μm,13.9s,MS6.1						
KSH				LR	LR		
	comp=Z,11μm,15.1s,MS5.8						
NWAO	**Narrogin (SRO)**	**41.13**	**152**	P	**P**	**05 44 49.1**	**+0.9**
	comp=Z,16nm,0.5s,mb4.9,baz=308,slow=9.5,SNR=15						
NWAO	**Narrogin (SRO)**	**41.13**	**152**	*e*P	**P**	**05 44 50.3**	**+2.1**
NWAO				pmax	pmax		
	comp=Z,142nm,1.4s						
NWAO	**Narrogin (SRO)**	**41.13**	**152**	*e*P	**P**	**05 44 50.3**	**+2.1**
	comp=Z,142nm,1.4s,mb5.4						
WMQ	**Urumqi**	**41.34**	**351**	P	**P**	**05 44 49.5**	**-0.3**
WMQ				AP	pP	05 44 59.0	-0.4
WMQ				XP	sP	05 45 03.0	-0.3
WMQ				PP	PP	05 46 27.0	+1.3
WMQ				S	**S**	**05 51 02.0**	**-0.1**
WMQ				XS	sS	05 51 18.0	0.0
WMQ				SCS	ScS	05 54 49.0	-2.4
WMQ				AMB	AMB		
	comp=Z,153nm,0.9s,mb5.6						

WMQ AMB AMB
comp=Z,2μm,4.4s
WMQ LR LR
comp=N,15μm,16.6s,MS6.2
WMQ LR LR
comp=E,30μm,21.6s,MS6.2
WMQ LR LR
comp=Z,13μm,23.2s,MS5.7
BJT Baijiatuau 41.42 24 *e*P **P 05 44 50.7 +0.2**
BJT pmax pmax
comp=Z,766nm,0.8s
BJT Baijiatuau 41.42 24 *e*P **P 05 44 50.7 +0.2**
comp=Z,766nm,0.8s,mb6.4
BJI Beijing 41.44 24 P **P 05 44 51.0 +0.3**
BJI PP PP 05 46 28.8 +1.9
BJI S **S 05 50 54.5 -9.3**
BJI AMB AMB
comp=Z,999nm,0.8s,mb6.5
BJI AMB AMB
comp=Z,4μm,4.1s
BJI LR LR
comp=N,7μm,24.1s
BJI LR LR
comp=E,21μm,14.2s
BJI LR LR
comp=Z,5μm,17.5s
BJI Beijing 41.44 24 P **P 05 44 51.0 +0.3**
comp=Z,999nm,0.8s,mb6.5
BJI PP PP 05 46 28.7 +1.8
BJI S **S 05 50 54.6 -9.2**
BJI SS SS 05 54 12.9 +4.0
BJI LR LR
comp=Z,5μm,17.5s,MS5.4
BIDO Bidbid 41.56 303 P **P 05 44 54.7 +2.8**
SNR=9.5
ULHL Ulahol 42.81 339 P **P 05 45 01.4 -0.4**
SNR=16
DL2 Dalian 43.02 30⇑ *i*P **P 05 45 03.0 -0.6**
DL2 AP pP 05 45 13.0 -0.2
DL2 XP sP 05 45 16.0 -1.2
DL2 PP PP 05 46 48.3 +4.4
DL2 S **S 05 51 29.0 +1.9**
DL2 AMB AMB
comp=Z,290nm,0.8s,mb6.1
DL2 AMB AMB
comp=Z,980nm,6.1s
DL2 LR LR
comp=N,9μm,14.2s,MS5.8
DL2 LR LR
comp=E,5μm,16.5s,MS5.8
DL2 LR LR
comp=Z,9μm,16.1s,MS5.8
UCH Uchtor 43.44 337 P **P 05 45 08.0 +1.1**
SNR=16
UCH Uchtor 43.44 337 *e*P **P 05 45 07.7 +0.8**
comp=Z,131nm,1.0s,mb5.6
TKM2 Tokmak 2 43.63 339 *e*P **P 05 45 09.0 +0.6**
TKM2 pmax pmax
comp=Z,89nm,1.1s,mb5.4
TKM2 Tokmak 2 43.63 339 P **P 05 45 10.3 +1.8**
SNR=8.9
TKM2 Tokmak 2 43.63 339 *e*P **P 05 45 09.0 +0.6**
comp=Z,89nm,1.1s,mb5.4
KBK Karagaybulak 43.64 338 P **P 05 45 09.8 +1.3**
SNR=18
AML Almayashu 43.68 336 P **P 05 45 09.7 +0.9**
SNR=15
AML Almayashu 43.68 336 *e*P **P 05 45 09.4 +0.6**
comp=Z,248nm,1.1s,mb5.8
AAK Ala-Archa 43.79 338 P **P 05 45 13.3 +3.6**
SNR=5.9
FRU Bishkek 43.92 338⇓ *i*P **P 05 45 11.0 +0.3**
FRU *e* 05 51 41.0
FRU pmax pmax
comp=Z,420nm,2.5s,mb5.7
FRU pmax pmax
comp=Z,2μm,7.0s
CHMS Chumysh 44.01 338 P **P 05 45 13.5 +2.0**
SNR=6.7
EKS2 Erkin-Say 44.09 337 P **P 05 45 12.5 +0.4**
SNR=14
USP Ospenovka 44.33 338 P **P 05 45 16.6 +2.5**
SNR=8.0
WRA Warramunga Arr 44.36 122 P **P 05 45 13.6 -1.0**
comp=Z,51nm,0.8s,mb5.3,baz=302,slow=8.9,SNR=27
WRA LR LR 06 04 33.2
comp=Z,14μm,19.5s,MS5.9,baz=285,slow=37
WRAB Tennant Creek 44.36 122⇓ *e*P **P 05 45 12.4 -2.3**
WB2 Warramunga Arr 44.37 122 *e*P **P 05 45 12.7 -2.0**
WB2 sS PcS 05 51 01.3 +9.4
MK31 Makanchi Array 45.21 347 *i*P **P 05 45 20.3 -0.7**
MKAR Makanchi Array 45.21 347 P **P 05 45 20.3 -0.7**
comp=Z,215nm,0.7s,mb6.1,baz=164,slow=7.6,SNR=63
MKAR LR LR 06 07 05.1
comp=Z,8μm,21.9s,MS5.6,baz=162,slow=40
KS15 Wonju Array Si 45.43 37 *e*P **P 05 45 23.1 +0.2**
KSRS Korea Array 45.46 37 P **P 05 45 21.8 -1.3**
comp=Z,17nm,0.7s,mb5.0,baz=232,slow=8.1,SNR=17
KSRS PcP PcP 05 47 01.8 -0.1
comp=Z,2.0nm,0.7s,baz=228,slow=2.5,SNR=4.5
KSRS Korea Array 45.46 37 P **P 05 45 21.8 -1.3**
KSRS 05 47 01.8
KSRS pmax pmax
comp=Z,17nm,0.7s,mb5.0
FORT Forrest 45.65 140 *e*P **P 05 45 24.6 -0.1**
comp=Z,116nm,0.7s,mb5.9
SONM Songino Array 45.74 10 P **P 05 45 24.5 -0.7**
comp=Z,144nm,0.9s,mb5.9,baz=189,slow=8.9,SNR=46
SONM PcP PcP 05 47 02.9 +0.3
comp=Z,26nm,0.7s,baz=196,slow=2.7,SNR=7.6
SONM LR LR 06 05 37.8
comp=Z,16μm,19.9s,MS6.0,baz=188,slow=38
SONM Songino Array 45.74 10 P **P 05 45 24.5 -0.7**
SONM 05 47 02.9
ASAR Alice Springs 45.75 127 P **P 05 45 24.6 -1.0**
comp=Z,23nm,1.0s,mb5.1,baz=296,slow=8.2,SNR=17
ASAR ScP ScP 05 50 54.5 +0.5
comp=Z,3.2nm,0.9s,baz=299,slow=4.2,SNR=4.1
KK31 Karatay Array 45.80 334 P **P 05 45 26.0 +0.2**
KK31 pmax pmax
comp=Z,27nm,0.6s,mb5.3
KK31 Karatay Array 45.80 334 *i*P **P 05 45 26.0 +0.2**
ULN Ulaanbaatar 45.89 11 P **P 05 45 27.9 +1.6**
SNR=14
ULN Ulaanbaatar 45.89 11⇑ *e*P **P 05 45 25.7 -0.7**
ULN Ulaanbaatar 45.89 11 *e*P **P 05 45 25.0 -1.4**
comp=Z,76nm,1.0s,mb5.6
SNY Shenyang 46.21 29⇑ P **P 05 45 27.5 -1.5**
SNY AMB AMB
comp=Z,142nm,1.0s,mb5.8
ZAK Zakamensk 47.77 7 *e*P **P 05 45 40.4 -0.6**
ZAK pmax pmax
comp=Z,81nm,1.3s,mb5.6
CN2 Changchun 48.60 29⇑ P **P 05 45 48.8 +1.3**
CN2 *e*AP pP 05 46 00.5 +3.2
CN2 *e*S **S 05 52 47.3 0.0**
CN2 AMB AMB
comp=Z,50nm,1.2s,mb5.4
CN2 AMB AMB
comp=Z,2μm,7.0s
CN2 LR LR
comp=N,16μm,15.0s,MS6.3
CN2 LR LR
comp=E,18μm,15.0s,MS6.3
CN2 LR LR
comp=Z,12μm,17.0s,MS6.0
MOY Mondy 48.82 5 *e*P **P 05 45 48.0 -1.1**
MOY pmax pmax
comp=Z,152nm,3.1s
TLY Talaya 49.09 7 P **P 05 45 51.7 +0.5**
comp=Z,590nm,0.8s,mb6.7,SNR=8.1
TLY Talaya 49.09 7⇓ P **P 05 45 53.0 +1.8**
SNR=14
TLY Talaya 49.09 7*c i*P **P 05 45 50.7 -0.5**
TLY *e* 05 47 47.3
TLY *e*S **S 05 52 54.5 +0.6**
TLY *e* 05 53 09.8
TLY pmax pmax
comp=Z,80nm,0.8s,mb5.8
TLY MLR MLR
comp=Z,13μm,18.0s,MS6.0
TLY Talaya 49.09 7 *e*P **P 05 45 50.9 -0.3**
comp=Z,76nm,0.8s,mb5.8
IRK Irkutsk 49.72 7 *e*P **P 05 45 55.3 -0.7**
IRK *e* 05 47 45.2
IRK pmax pmax
comp=Z,326nm,2.0s,mb6.0
KURK Kurchatov 49.74 346 P **P 05 45 55.6 -0.5**
comp=Z,854nm,0.8s,mb6.8,SNR=7.3
KURK Kurchatov 49.74 346 LR LR 06 09 43.0
comp=Z,10μm,21.9s,MS5.8,baz=170,slow=40
COEN Coen 50.13 111 *e*P **P 05 45 58.5 -1.2**
HIA Hailar 50.61 20 *e*P **P 05 46 02.7 -0.1**
HIA *e**PP pP 05 46 12.2 -0.4
HIA pmax pmax
comp=Z,89nm,0.8s
HIA Hailar 50.61 20 *e*P **P 05 46 02.7 -0.1**
comp=Z,88nm,0.8s,mb5.7
HIA *e*pP pP 05 46 12.2 -0.4
CIT Chita 51.22 14 *e*P **P 05 46 09.6 +2.3**
CIT *e* 05 46 16.7
CIT pmax pmax
comp=Z,311nm,2.7s,mb5.8
MDJ Mudanjiang 51.25 31 P **P 05 46 09.0 +1.3**
MDJ AP pP 05 46 18.0 +0.5
MDJ XP sP 05 46 21.5 +0.1
MDJ PCP PcP 05 47 24.3 +1.8
MDJ PP PP 05 48 06.8 +2.0
MDJ SCP ScP 05 51 17.3 +0.5
MDJ PCS PcS 05 51 21.3 +1.2
MDJ S **S 05 53 25.3 +1.1**
MDJ SS SS 05 56 58.3 -1.8
MDJ LR LR
comp=N,5μm,15.3s,MS6.1
MDJ LR LR
comp=E,11μm,12.7s,MS6.1
MDJ LR LR
comp=Z,13μm,16.6s,MS6.0
MDJ Mudanjiang 51.25 31 *e*P **P 05 46 07.6 0.0**
comp=Z,90nm,1.0s,mb5.7
MDJ *e*pP pP 05 46 17.6 +0.1
VLA Vladivostok 51.47 34⇓ *e*P **P 05 46 08.6 -0.7**
VLA pmax pmax
comp=Z,210nm,2.1s,mb5.7
VLA Vladivostok 51.47 34⇓ *e*P **P 05 46 08.7 -0.6**
MAJO Matsushiro 51.61 44 *e*P **P 05 46 10.7 +0.1**
MAJO pmax pmax
comp=Z,28nm,0.7s,mb5.3
MAJO Matsushiro 51.61 44 *e*P **P 05 46 10.5 -0.1**
comp=Z,28nm,0.7s,mb5.3
MAT Matsushiro 51.61 44 P **P 05 46 10.6 0.0**
MAT S **S 05 53 28.0 -1.6**
MJAR Matsushiro Arr 51.62 44 P **P 05 46 10.2 -0.4**
comp=Z,14nm,0.7s,mb5.0,baz=243,slow=8.5,SNR=21
MJAR PcP PcP 05 47 25.0 +0.9
comp=Z,19nm,1.0s,baz=245,slow=4.6,SNR=8.2
MJAR LR LR 06 08 31.0
comp=Z,11μm,19.6s,MS5.9,baz=250,slow=37
MJAR Matsushiro Arr 51.62 44 P **P 05 46 10.2 -0.4**
MJAR 05 47 25.0
MJAR Matsushiro Arr 51.62 44 P **P 05 46 10.2 -0.4**
MJAR PcP PcP 05 47 25.0 +0.9
MJAR LR LR 06 08 31.0
ZAA0 Zalesovo Array 51.64 352 *e*P **P 05 46 09.7 -0.8**
ZALV Zalesovo Beam 51.64 352 P **P 05 46 09.6 -0.8**
comp=Z,272nm,0.7s,mb6.3,baz=171,slow=6.6,SNR=91
ZALV LR LR 06 12 32.3
comp=Z,5μm,18.4s,MS5.6,baz=7.2,slow=41
OPO Ambohidratompo 52.12 244 P **P 05 46 14.0 -0.6**
comp=Z,13nm,0.5s,mb5.1,baz=54,slow=6.6,SNR=20
ABPO Ambohimpanom 52.23 243 *e*P **P 05 46 16.3 +0.9**
comp=Z,44nm,1.0s,mb5.3
KBD Kabd 52.35 305 *e*P **P 05 46 15.7 -0.5**
baz=305
KBD AMb AMB 05 46 30.9
comp=Z,89nm,1.0s,mb5.7,baz=305
UMR Umm Al-Rimmam 52.47 306 *e*P **P 05 46 15.9 -1.1**
baz=305
UMR AMb AMB 05 46 31.5
comp=Z,139nm,1.0s,mb5.8,baz=305
NVS Novosibirsk 52.74 351 *e*P **P 05 46 15.8 -2.8**
NVS *e*S **S 05 53 44.7 +0.4**
NVS pmax pmax
comp=N,121nm,0.7s
NVS pmax pmax
comp=E,94nm,0.7s
NVS pmax pmax
comp=Z,162nm,0.7s,mb6.1
NVS smax
comp=N,62nm,1.5s
NVS smax
comp=E,130nm,1.4s
MIB Mutribah 52.87 306 *e*P **P 05 46 19.5 -0.5**
baz=306
MIB AMb AMB 05 46 35.1
comp=Z,333nm,1.0s,mb6.2,baz=306
PMG Port Moresby 52.88 104*c i*P **P 05 46 20.0 -0.4**
PMG Port Moresby 52.88 104 *e*P **P 05 46 19.2 -1.2**
comp=Z,73nm,0.9s,mb5.6
KRAR Krasnoyarsk 53.00 358 *i*P **P 05 46 20.2 -0.3**
BVA0 Borovoye Array 54.11 342 *i*P **P 05 46 28.0 -0.7**
BVA0 pmax pmax
comp=Z,22nm,0.9s,mb5.1
BRVK Borovoye 54.17 341 P **P 05 46 28.1 -1.0**
comp=Z,959nm,0.8s,mb6.8,SNR=13
BRVK Borovoye 54.17 341⇑ P **P 05 46 31.2 +2.0**
SNR=8.3
BRVK Borovoye 54.17 341 *e*P **P 05 46 28.0 -1.2**
comp=Z,119nm,0.8s,mb5.9
CTA Charters Tower 54.76 117 *e*P **P 05 46 33.7 -0.3**
comp=Z,34nm,0.9s,mb5.4
CTA Charters Tower 54.76 117 P **P 05 46 33.7 -0.3**
comp=Z,49nm,0.9s,mb5.5,baz=289,slow=9.3,SNR=23
CTA Charters Tower 54.76 117 *e*P **P 05 46 33.7 -0.3**
CTA pmax pmax
comp=Z,34nm,0.9s
CTAO Charters Tower 54.76 117 *e*P **P 05 46 33.4 -0.6**
comp=Z,59nm,1.0s,mb5.6
AB31 Akbulak array 55.24 332⇑ *e*P **P 05 46 36.1 -0.8**
KLR Kul'dur 55.53 28 *e*P **P 05 46 34.8 -4.2**
KLR *e* pP 05 46 43.8 -5.1
KLR *e*S **S 05 54 14.0 -8.2**
KLR pmax pmax
comp=Z,2μm,6.5s
KLR MLR MLR
comp=E,18μm,13.5s
KLR MLR MLR
comp=Z,32μm,13.5s,MS6.6
STKA Stephens Creek 55.73 132 *e*P **P 05 46 40.6 -0.2**
comp=Z,24nm,0.8s,mb5.3
STKA Stephens Creek 55.73 132 P **P 05 46 41.0 +0.2**
comp=Z,15nm,0.9s,mb5.0,baz=304,slow=5.5,SNR=5.8
STKA LR LR 06 13 24.8
comp=Z,6μm,19.7s,MS5.7,baz=305,slow=39
HABR Khabarovsk 56.63 30 *e*P **P 05 46 45.7 -1.2**
HABR *e* pP 05 46 54.1 -2.7
HABR *e* 05 47 40.1
HABR *e* 05 48 49.9
HABR *e*S **S 05 54 36.3 -0.5**
HABR *e* 05 54 52.3
HABR *e* 05 56 31.1
HABR *e* 05 58 24.1
BOD Bodaibo 56.68 12 *e*P **P 05 46 44.7 -2.4**
BOD *e* pP 05 46 54.4 -2.6
BOD pmax pmax
comp=Z,65nm,1.1s,mb5.6
BOD pmax pmax
comp=Z,101nm,2.2s,mb5.5
AKTK Aktyubinsk 56.95 332 *i*P **P 05 46 47.7 -1.5**
AKTO Aktyubinsk 56.95 332 P **P 05 46 47.7 -1.5**
AKTO pmax pmax
comp=Z,29nm,2.0s,mb5.0
MAK Makhachkala 58.36 320 *e*P **P 05 46 57.8 -1.4**
MAK *i* 05 47 53.0
MAK *i* 05 49 02.9
MAK *e*PPP 05 50 28.4
MAK S **S 05 54 53.4 -6.4**
MAK *i* 05 56 44.6
MAK pmax pmax
comp=Z,236nm,1.3s,mb6.1
KMBO Kilima Mbogo 58.38 267 P **P 05 47 01.0 +1.1**
comp=Z,12nm,1.0s,mb4.9,baz=50,slow=9.6,SNR=11
KMBO LR LR 06 09 42.0
comp=Z,13μm,18.8s,MS6.1,baz=76,slow=34
KMBO Kilima Mbogo 58.38 267 *e*P **P 05 47 00.1 +0.2**
comp=Z,24nm,1.0s,mb5.2
CLNS Chul'man 58.65 18 *e*P **P 05 47 02.2 +1.2**
CLNS *e**PP pP 05 47 11.1 +0.2
CLNS *e* 05 47 50.7
CLNS *e* 05 49 13.2
CLNS *e*S **S 05 55 06.5 +3.4**
CLNS pmax pmax
comp=Z,76nm,0.7s,mb5.8
CLNS pmax pmax
comp=E,40nm,1.2s
CLNS pmax pmax
comp=N,52nm,0.9s
CLNS smax
comp=N,852μm,11.5s
CLNS smax
comp=E,962μm,18.0s
CLNS MLR MLR
comp=Z,32μm,16.0s,MS6.5
CLNS MLR MLR
comp=E,17μm,14.0s,MS6.5
CLNS MLR MLR
comp=N,23μm,17.0s,MS6.5
GNI Garni 58.91 316 P **P 05 47 04.3 +1.2**
GNI pmax pmax
comp=Z,65nm,1.0s
GNI Garni 58.91 316 P **P 05 47 04.3 +1.1**
comp=Z,65nm,1.0s,mb5.6
YSS Yuzh-Sakhalins 59.93 36⇑ *e*P **P 05 47 07.8 -2.2**
YSS *e* 05 47 15.0
YSS *e**SP sP 05 47 22.0 -1.8
YSS *e* 05 49 24.0
YSS *e*S **S 05 55 14.0 -6.0**
YSS *e*PS 05 55 33.0
YSS pmax pmax
comp=Z,150nm,1.1s,mb5.9
YSS MLR MLR
comp=Z,8μm,16.0s,MS6.0
YSS MLR MLR
comp=N,6μm,14.0s,MS6.1
YSS MLR MLR
comp=E,8μm,15.0s,MS6.1
YSS Yuzh-Sakhalins 59.93 36 *e*P **P 05 47 09.1 -0.9**
comp=E,130nm,0.9s,mb6.0
SVE Sverdlovsk 60.51 339⇑ *e*P **P 05 47 13.0 -0.7**
SVE pmax pmax
comp=Z,170nm,0.9s,mb6.2
EIDS Eidsvold 60.69 121 *e*P **P 05 47 10.1 -5.5**
ARU Arti 60.98 338 P **P 05 47 16.7 -0.3**
comp=Z,496nm,0.8s,mb6.7,SNR=5.6
ARU Arti 60.98 338*c i*P **P 05 47 15.3 -1.7**
ARU *e* 05 47 56.3
ARU *e* 05 49 30.6
ARU *e*S **S 05 55 32.7 -0.4**
ARU *e*SS SS 05 59 32.1 -0.8
ARU *e*SSS 06 02 12.2
ARU pmax pmax
comp=Z,114nm,1.2s,mb5.9
ARU Arti 60.98 338 *e*P **P 05 47 15.8 -1.2**
comp=Z,68nm,0.8s,mb5.8
TOO Toolangi 61.32 136 *e*P **P 05 47 21.5 +1.8**
KIV Kislovodsk 61.93 319*de*P **P 05 47 24.2 +0.5**
KIV *e**PP pP 05 47 34.0 +0.3
KIV 05 48 03.0
KIV *i* S **S 05 55 43.6 -2.0**
KIV *i* SSS 06 02 26.7
KIV pmax pmax
comp=Z,41nm,1.0s,mb5.5
KIV Kislovodsk 61.93 319 *e*P **P 05 47 25.1 +1.5**
comp=Z,65nm,1.0s,mb5.7
ASF Jabal al Asfar 62.12 305 P **P 05 47 26.6 +1.4**
comp=Z,12nm,0.9s,mb5.0,baz=6.7,slow=2.9,SNR=10
MALT Malatya 62.75 312 *e*P **P 05 47 30.2 +0.9**
comp=Z,58nm,1.4s,mb5.5
CAN Canberra 62.80 132 *e*P **P 05 47 30.6 +1.0**
ARMA Armidale 62.89 126 *e*P **P 05 47 32.0 +1.7**
EIL Elat 63.14 302 P **P 05 47 33.5 +1.5**
comp=Z,22nm,0.8s,mb5.3,baz=138,slow=2.5,SNR=12
MMAI Mount Meron Ar 63.55 306 P **P 05 47 35.4 +0.7**
comp=Z,8.4nm,0.6s,mb5.0,baz=93,slow=9.3,SNR=12
SOC Sochi 63.74 318 *e*P **P 05 47 34.8 -0.9**
SOC *e**PP pP 05 47 43.9 -1.9
SOC *e**SP sP 05 47 47.6 -2.0
SOC *e* 05 48 13.0
SOC *e* 05 49 55.7
SOC *e*PPP 05 51 23.4
SOC *e*S **S 05 56 04.5 -3.8**
SOC *e* 05 57 26.4
SOC pmax pmax
comp=Z,1μm,0.9s,mb6.9
YAK Yakutsk 64.29 17 *e*P **P 05 47 36.9 -2.0**
YAK *e**PP pP 05 47 47.6 -1.4
YAK *e* 05 48 07.0
YAK *e* 05 49 59.0
YAK *e*S **S 05 56 13.4 -1.0**
YAK *e**SS sS 05 56 25.4 -5.6
YAK *e* 05 57 28.2
YAK *e*SS SS 06 00 21.1 -3.3
YAK pmax pmax
comp=E,94nm,1.6s
YAK pmax pmax
comp=Z,381nm,1.1s,mb6.3
YAK pmax pmax
comp=N,89nm,1.2s
YAK pmax pmax
comp=Z,351nm,3.8s
YAK smax
comp=E,604μm,4.4s
YAK smax
comp=N,1382μm,7.1s
YAK MLR MLR
comp=N,18μm,20.0s,MS6.4
YAK MLR MLR
comp=Z,28μm,20.0s,MS6.5
YAK MLR MLR
comp=E,13μm,17.0s,MS6.4
YAK Yakutsk 64.29 17 *e*P **P 05 47 37.2 -1.7**
HNR Honiara 65.34 102 *e*P **P 05 47 46.2 -0.6**
HNR pmax pmax
comp=Z,160nm,1.0s,mb6.0
HNR Honiara 65.34 102 *e*P **P 05 47 46.2 -0.6**
comp=Z,158nm,0.9s,mb6.0
ANN Anapa 65.72 318 *e*P **P 05 47 45.5 -3.1**
ANN *e*S S 05 56 29.3 -3.4
ANN pmax pmax
comp=Z,41nm,1.0s,mb5.4
BR131 Keskin Array S 66.73 312 *e*P **P 05 47 54.1 -1.2**
comp=Z,6.2nm,0.6s,mb4.8
VSR Storozhevoye 67.23 325 *e*P **P 05 47 56.1 -2.0**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,1.1s
ANTO Ankara 67.40 312 *e*P **P 05 47 59.9 +0.4**
ANTO pmax pmax
comp=Z,35nm,1.0s,mb5.3
ANTO Ankara 67.40 312 *e*P **P 05 47 59.8 +0.3**
comp=Z,35nm,1.0s,mb5.3
SIM Simferopol' 67.99 318 *e*P **P 05 48 03.3 +0.2**
SIM *e*S S 05 56 57.0 -3.1
SIM pmax pmax
comp=Z,39nm,1.0s,mb5.4
ISP Isparta 68.61 310⇑ *e*P **P 05 48 07.6 +0.5**
LSZ Lusaka 69.00 253 *e*P **P 05 48 09.3 -0.6**
LSZ pmax pmax
comp=Z,255nm,2.3s,mb5.7
LSZ Lusaka 69.00 253 *e*P **P 05 48 09.3 -0.6**
comp=Z,255nm,2.3s,mb5.7
SKR Severo-Kuril's 69.47 36 *e*P **P 05 48 11.0 -1.2**
SKR *e* pP 05 48 20.0 -2.3
SKR *e* 05 48 33.9
SKR *e* 05 57 25.0
SKR pmax pmax
comp=Z,3μm,4.0s
SKR pmax pmax
comp=N,220nm,1.0s
SKR pmax pmax
comp=E,220nm,1.0s
SKR pmax pmax
comp=Z,450nm,1.0s,mb6.3
SKR MLR MLR
comp=Z,12μm,24.0s,MS6.0
SKR MLR MLR
comp=N,6μm,20.0s,MS6.1
SKR MLR MLR
comp=E,9μm,20.0s,MS6.1
SKR MLR MLR
comp=N,7μm,16.0s
SKR MLR MLR
comp=E,8μm,16.0s

SKR MLR MLR
comp=Z,14µm,16.0s
CASY Casey 69.86 174 *eP* **P 05 48 14.9 +0.7**
CASY *eS* S 05 57 23.8 +2.4
MOS Moscow 70.02 329 *eP* **P 05 48 14.9 -0.6**
MOS *e* 05 48 39.4
MOS *eS* S 05 57 16.5 -7.2
MOS pmax pmax
comp=Z,110nm,1.0s,mb5.7
OBN Obninsk 70.30 328⇓ *eP* **P 05 48 16.1 -1.1**
OBN *e**PP pP 05 48 28.1 +0.8
OBN *SP sP 05 48 32.0 +0.8
OBN 05 48 39.0
OBN *e* 05 50 53.2
OBN *i* S S 05 57 25.4 -1.6
OBN *eP*S 05 57 52.4
OBN SS SS 06 02 04.0 +6.1
OBN SSS 06 05 07.0
OBN pmax pmax
comp=Z,66nm,1.0s,mb5.5
OBN MLR MLR
comp=Z,5µm,16.0s,MS5.8
OBN Obninsk 70.30 328 *eP* **P 05 48 16.6 -0.6**
comp=Z,63nm,0.9s,mb5.5
KARP Karpathos 70.77 307 *eP* **P 05 48 21.5 +1.1**
PETK Petropavlovsk- 71.27 34 P **P 05 48 22.8 -0.3**
comp=Z,14nm,1.0s,mb4.8,baz=14,slow=1.0,SNR=9.0
PETK LR LR 06 23 22.5
comp=Z,6µm,18.2s,MS5.9,baz=258,slow=39
KLMR Klimovskoe 71.51 335 *eP* **P 05 48 23.4 -1.0**
KLMR pmax pmax
comp=Z,72nm,1.3s,mb5.4
TIRR Tirgusor 71.74 316 *eP* **P 05 48 25.3 -0.9**
TIRR pmax pmax
comp=Z,424nm,0.9s,mb6.4
TIRR Tirgusor 71.74 316 *eP* **P 05 48 25.3 -0.9**
comp=Z,424nm,0.9s,mb6.4
PET Petropavlovsk 71.78 35 *eP* **P 05 48 25.9 -0.3**
PET *eS* S 05 57 42.0 -2.3
PET pmax pmax
comp=Z,125nm,1.2s,mb5.7
PET pmax pmax
comp=Z,1µm,5.8s
PET pmax pmax
comp=Z,2µm,11.2s
PET smax
comp=N,2µm,16.4s
PET MLR MLR
comp=Z,8µm,20.0s,MS6.0
PET MLR MLR
comp=Z,7µm,18.0s
PET Petropavlovsk 71.78 35 *eP* **P 05 48 26.4 +0.2**
comp=Z,157nm,1.2s,mb5.8
TIXI Tiksi 71.83 11⇑ *eP* **P 05 48 24.4 -1.7**
TIXI pmax pmax
comp=Z,64nm,1.0s,mb5.5
TIXI Tiksi 71.83 11 *eP* **P 05 48 23.8 -2.4**
comp=Z,277nm,1.6s,mb5.9
NPS Neapolis 71.96 306 *eP* **P 05 48 28.0 +0.3**
KIS Kishinev 72.12 319 *eP* **P 05 48 27.0 -1.4**
KIS *eS* S 05 57 47.0 -1.4
KIS Kishinev 72.12 319 *eP* **P 05 48 27.0 -1.4**
KIS *eS* S 05 57 47.0 -1.4
KIS LRM 06 28 32.0
comp=Z,2µm,16.0s
IDI Anoyia 72.55 306 P **P 05 48 29.2 -2.0**
comp=Z,25nm,0.6s,mb5.3,baz=102,slow=9.4,SNR=9.3
SEY Seymchan 72.88 24⇑ *eP* **P 05 48 33.0 +0.4**
AKASG Malin Array Be 72.90 322 P **P 05 48 31.3 -1.6**
comp=Z,16nm,0.6s,mb5.1,baz=90,slow=5.1,SNR=20
AKBB Malin Array Si 72.90 322 *eP* **P 05 48 31.5 -1.4**
AKBB Malin Array Si 72.90 322 *eP* **P 05 48 31.2 -1.7**
KIEV Kiev 72.91 322 *eP* **P 05 48 31.4 -1.6**
KIEV pmax pmax
comp=Z,19nm,0.6s,mb5.2
KIEV Kiev 72.91 322 *eP* **P 05 48 31.4 -1.5**
comp=Z,19nm,0.6s,mb5.2
VAM Vamos 73.12 306 *eP* **P 05 48 34.0 -0.6**
GVD Gavdhos 73.13 305 *eP* **P 05 48 35.0 +0.3**
LBTB Lobatse 73.14 243 *eP* **P 05 48 35.1 +0.2**
comp=Z,38nm,0.9s,mb5.3
DZM Mont Dzumac 73.50 114 *eP* **P 05 48 37.0 -0.1**
DZM *ep*P pP 05 48 47.1 -0.1
MLR Muntele Rosu 73.69 317 P **P 05 48 37.0 -0.7**
comp=Z,26nm,0.9s,mb5.2,baz=152,slow=4.6,SNR=10
MAW Mawson 73.98 192 *eP* **P 05 48 39.3 +0.4**
comp=Z,20nm,0.9s,mb5.0
MAW *eS* S 05 58 13.1 +4.3
MAW Mawson 73.98 192 P **P 05 48 37.1 -1.8**
comp=Z,16nm,0.7s,mb5.0,baz=62,slow=14,SNR=6.7
MAW LR LR 06 15 15.3
comp=Z,3µm,20.6s,MS5.6,baz=30,slow=31
MAW Mawson 73.98 192 *eP* **P 05 48 39.5 +0.6**
BOSA Boshof 74.18 239 P **P 05 48 40.2 -0.7**
comp=Z,8.2nm,0.7s,mb4.8,baz=70,slow=3.1,SNR=10
BOSA LR LR 06 18 52.5
comp=Z,9µm,18.0s,MS6.1,baz=65,slow=34
VLI Velial 74.33 307 *eP* **P 05 48 41.0 -0.6**
BUR08 Bucovina Ar. S 74.67 319 *eP* **P 05 48 43.3 0.0**
VAY Valandovo 75.31 312 *eP* **P 05 48 46.0 -1.3**
EVR Evrytania 75.52 309 *eP* **P 05 48 45.0 -3.5**
LVV L'vov 75.90 321 *eP* **P 05 48 51.0 +0.6**
LVV *eS* S 05 58 26.5 -4.3
JOF Joensuu 75.90 335 *ep* **P 05 48 49.5 -0.7**
comp=Z,31nm,0.8s,mb5.3
JOF Joensuu 75.90 335 *eP* **P 05 48 49.5 -0.7**
JOF pmax pmax
comp=Z,31nm,0.8s,mb5.3
DRV Dumont d'Urvil 76.25 163 P sP 05 49 13.0 +7.0
DRV S S 05 58 43.0 +9.1
DRV SS SS 06 03 20.0 -8.2
SKO Skopje 76.25 312 *eP* **P 05 48 52.6 0.0**
KRUS Krusevo 76.30 312 *eP* **P 05 48 51.2 -1.6**
VLS Valsamata 76.37 308 *eP* **P 05 48 54.0 +0.6**
OHR Ohrid 76.60 311 *eP* **P 05 48 51.6 -2.9**
KWP Kalwaria 76.70 320 *eP* **P 05 48 56.6 +1.7**
KWP Kalwaria 76.70 320 *eP* **P 05 48 56.6 +1.6**
UZH Uzhgorod 76.77 319 *eP* **P 05 48 57.5 +2.1**
UZH *e* 05 49 05.0
UZH *e* 05 51 56.0
UZH *eP*PP 05 53 36.0
UZH *eS* S 05 58 42.0 +1.5
UZH *e* 05 59 07.0
KOLS Kolonicke sedl 76.84 320 *eP* **P 05 48 57.6 +1.8**
KOLS *eS* S 05 58 40.2 -1.0
APA Apatity 76.96 340⇓ *i P* **P 05 48 57.0 +0.9**
APA *i* 05 49 08.8
APA *eS* S 05 58 37.0 -4.8
APA pmax pmax
comp=Z,40nm,1.2s,mb5.2
APA MLR MLR
comp=Z,8µm,21.0s,MS6.0
SUW Suwalki 77.33 325 *eP* **P 05 48 57.8 -0.6**
SUW Suwalki 77.33 325 *eP* **P 05 48 59.2 +0.8**
SUW *e* 05 49 05.7
SUW *e* 05 49 14.7
SUW pmax pmax
comp=Z,190nm,0.9s,mb6.0
SUW Suwalki 77.33 325 *eP* **P 05 48 57.8 -0.6**
CRVS Cervenica-Dubn 77.36 319 *eP* **P 05 48 59.1 +0.4**
CRVS *eS* S 05 58 45.6 -1.3
CRVS Cervenica-Dubn 77.36 319 *eP* **P 05 48 59.1 +0.4**
CRVS *eS* S 05 58 45.7 -1.2
STHS Stebnicka Huta 77.60 320 *eP* **P 05 49 02.0 +2.0**
STHS *e* 05 49 15.1
STHS pmax pmax
comp=Z,36nm,1.1s,mb5.2
STHS Stebnicka Huta 77.60 320 *eP* **P 05 49 02.0 +2.0**
comp=Z,36nm,1.1s,mb5.2
STHS *e* 05 49 15.1
KAF Kangasniemi 77.82 333 *ep* **P 05 49 00.3 -0.7**
comp=Z,26nm,0.8s,mb5.2,baz=104,slow=5.2
KAF Kangasniemi 77.82 333 *eP* **P 05 49 00.3 -0.7**
KAF pmax pmax
comp=Z,26nm,0.8s,mb5.2
PSZ Piszkesteto 78.23 318 *eP* **P 05 49 04.5 +0.9**
PSZ Piszkesteto 78.23 318 *e* **P 05 49 03.4 -0.2**
PSZ *e* 05 49 07.6
PSZ Piszkesteto 78.23 318 *eP* **P 05 49 03.1 -0.5**
comp=Z,50nm,1.0s,mb5.4
OJC Ojcow 78.65 321 *eP* **P 05 49 06.2 +0.4**
OJC *e* pP 05 49 15.2 -0.9
OJC *eS* S 05 59 02.1 +1.4
OJC Ojcow 78.65 321 *eP* **P 05 49 06.2 +0.4**
OJC *e*PcP PcP 05 49 15.2 +0.5
OJC *eS* S 05 59 02.1 +1.4
OJC LR LR
comp=Z,1µm,20.1s,MS5.3
SUR Sutherland 78.69 236 P **P 05 49 06.5 +0.1**
comp=Z,8.1nm,0.7s,mb4.8,baz=98,slow=10.0,SNR=3.9
BUD Budapest 78.75 318 *eP* **P 05 49 07.2 +0.8**
VYHS Vyhne 79.02 319 *eP* **P 05 49 07.6 -0.3**
VYHS *eS* S 05 59 03.5 -1.1
VYHS Vyhne 79.02 319 *eP* **P 05 49 07.7 -0.2**
VYHS *eS* S 05 59 03.5 -1.1
KOLL Kolacno 79.31 319 *eP* **P 05 49 10.6 +1.1**
TSUM Tsumeb 79.58 250 P **P 05 49 11.5 0.0**
comp=Z,4.6nm,0.9s,baz=239,slow=23,SNR=5.4
TSUM Tsumeb 79.58 250 *eP* **P 05 49 11.9 +0.4**
comp=Z,18nm,0.9s,mb5.0
OKC Ostrava-Krasne 79.65 320 *eP* **P 05 49 11.1 -0.2**
OKC *eS* S 05 59 09.6 -1.7
MODS Modra-Piesok 80.03 318 *eP* **P 05 49 14.7 +1.3**
MODS *eS* S 05 59 14.6 -0.8
MODS Modra-Piesok 80.03 318 *eP* **P 05 49 14.7 +1.3**
MODS *eS* S 05 59 14.7 -0.7
MORC Moravsky Berou 80.03 320 *eP* **P 05 49 13.3 -0.1**
comp=Z,20nm,1.1s,mb5.0
ZST Bratislava 80.12 318 *eP* **P 05 49 15.3 +1.4**
ZST *eS* S 05 59 14.2 -2.2
ZST Bratislava 80.12 318 *eP* **P 05 49 15.3 +1.4**
comp=Z,43nm,0.9s,mb5.4
ZST *eS* S 05 59 14.2 -2.2
ZST LR LR
comp=Z,1µm,17.8s,MS5.3
BILL Bilibino 80.19 21⇑ P **P 05 49 18.0 +4.1**
BILL *e* pP 05 49 29.5 +5.3
BILL *e* 05 52 23.4
BILL *i* 05 59 20.1
BILL *i* SSS 06 07 52.0
BILL pmax pmax
comp=Z,122nm,1.9s,mb5.5
BILL MLR MLR
comp=Z,15µm,16.0s,MS6.4
BILL Bilibino 80.19 21⇑ *eP* **P 05 49 14.7 +0.8**
ARCES ARCESS Array B 80.38 340 P **P 05 49 14.6 -0.3**
comp=Z,11nm,0.6s,mb5.0,baz=99,slow=6.9,SNR=19
ARCES LR LR 06 30 37.0
comp=Z,8µm,20.1s,MS6.1,baz=117,slow=40
ARCES ARCESS Array B 80.38 340 P **P 05 49 14.6 -0.3**
ARCES LR LR 06 30 37.0
SOP Sopron 80.43 318 *eP* **P 05 49 16.9 +1.3**
VRAC Vranov 80.59 319 P **P 05 49 16.2 -0.1**
comp=Z,4.9nm,0.8s,baz=117,slow=5.6,SNR=4.5
DPC Dobruska-Polom 80.88 320 *eP* **P 05 49 18.1 +0.2**
DPC *ep*P pP 05 49 25.6 -2.6
DPC *eS* S 05 59 24.3 +0.1
GOLS Golise 80.90 316 *eP* **P 05 49 18.3 +0.1**
KSP Ksiaz 80.95 321 *eP* **P 05 49 18.6 +0.3**
KSP Ksiaz 80.95 321 *eP* **P 05 49 18.1 -0.2**
KSP *e**PP pP 05 49 28.8 +0.2
KSP *eS* S 05 59 24.0 -1.0
KSP Ksiaz 80.95 321 *eP* **P 05 49 18.1 -0.2**
KSP *ep*P pP 05 49 28.8 +0.2
KSP *eS* S 05 59 24.0 -1.0
KSP LR LR
comp=Z,5µm,21.1s,MS5.8
ARSA Arzberg 81.09 317⇑ *i P* **P 05 49 20.6 +1.5**
comp=Z,16nm,0.9s,mb4.9
ARSA Arzberg 81.09 317⇓ *i P* **P 05 49 18.7 -0.4**
comp=Z,16nm,0.9s,mb4.9
UPC Upice 81.10 321 *eP* **P 05 49 20.5 +1.4**
UPC *ep*P pP 05 49 27.8 -1.6
BOJS Bojanci 81.11 315 *eP* **P 05 49 19.2 -0.1**
PERS Pernice 81.31 317 *eP* **P 05 49 20.0 -0.3**
TREC Trest 81.31 319 *eP* **P 05 49 21.1 +0.9**
SOKA Soboth 81.37 317⇓ *i P* **P 05 49 20.7 +0.1**
comp=Z,20nm,0.9s,mb5.0
SOKA Soboth 81.37 317⇓ *i P* **P 05 49 20.4 -0.2**
comp=Z,20nm,0.9s,mb5.0
RPZ Rata Peaks 81.59 135 P **P 05 49 20.4 -1.4**
comp=Z,30nm,0.9s,mb5.2,baz=7.6,slow=1.3,SNR=4.7
PRU Pruhonice 81.98 320 *eP* **P 05 49 24.9 +1.1**
PRU *ep*P pP 05 49 31.7 -2.4
PRU *eS* S 05 59 34.5 -1.2
PVCC Panska Ves 82.01 320 *eP* **P 05 49 25.1 +1.2**
PVCC *ep*P pP 05 49 31.5 -2.7
VOY Vojsko 82.11 316 *eP* sP 05 49 43.0 +4.4
GEC2 GERESS Array S 82.44 319 *eP* **P 05 49 27.4 +1.2**
GEC2 pmax pmax
comp=Z,62nm,1.3s,mb5.4
GEC2 GERESS Array S 82.44 319 *eP* **P 05 49 27.4 +1.2**
comp=Z,62nm,1.3s,mb5.4
GERES GERESS Array B 82.44 319 P **P 05 49 26.4 +0.2**
comp=Z,14nm,0.8s,mb4.9,baz=93,slow=4.2,SNR=20
GERES LR LR 06 32 26.2
comp=Z,2µm,19.9s,MS5.5,baz=90,slow=40
BRG Berggiesshubel 82.44 321 *eP* **P 05 49 27.3 +1.2**
comp=Z,51nm,1.6s,mb5.2
BRG Berggiesshubel 82.44 321 PP **P 05 49 27.5 +1.3**
BRG Berggiesshubel 82.44 321 PP **P 05 49 27.5 +1.3**
comp=Z,16nm,1.1s,mb4.9
KHC Kasperske Hory 82.54 319 *eP* **P 05 49 27.4 +0.7**
KHC *ep*P pP 05 49 35.3 -1.7
KHC *eS* S 05 59 41.0 -0.4
TRO Tromso 82.64 340 *eP* **P 05 49 25.9 -0.9**
TRO Tromso 82.64 340 *i P* **P 05 49 28.0 +1.2**
RUE Ruedersdorf 82.67 322 *eP* **P 05 49 28.5 +1.2**
comp=Z,82nm,1.3s,mb5.6
FBE Freiberg 82.82 321 *eP* **P 05 49 29.2 +1.1**
comp=Z,50nm,1.4s,mb5.3
RJOB Jochberg 82.97 318 *eP* **P 05 49 29.4 +0.5**
comp=Z,27nm,1.0s,mb5.2
WET Wettzell 83.00 319 *eP* **P 05 49 30.1 +1.0**
WET pmax pmax
comp=Z,463nm,3.5s
WET Wettzell 83.00 319 *eP* **P 05 49 30.1 +1.0**
comp=Z,463nm,3.5s
CLL Collm 83.06 321 *i P* **P 05 49 29.8 +0.4**
CLL *eS* S 05 59 45.0 -1.7
CLL pmax pmax
comp=Z,44nm,1.6s,mb5.2
CLL Collm 83.06 321 *eP* **P 05 49 30.0 +0.6**
comp=Z,24nm,1.2s,mb5.1
CLL Collm 83.06 321 *i P* **P 05 49 29.8 +0.4**
comp=Z,44nm,1.6s,mb5.2
CLL *eP*Ip 05 49 31.0
CLL *ex* x 05 49 53.0
CLL *eS* S 05 59 45.0 -1.7
comp=N,2µm,14.1s
CLL *eS* S 05 59 45.0 -1.7
comp=E,500nm,13.4s
CLL *eSP* 06 00 48.0
CLL *eSS* SS 06 05 24.0 +13
CLL *eSSS* 06 08 48.0
CLL Collm 83.06 321 *i P* **P 05 49 29.8 +0.4**
comp=E,44nm,1.6s,mb5.2
CLL *eS* S 05 59 45.0 -1.7
NKC Novy Kostel 83.35 320 *eP* **P 05 49 31.7 +0.8**
TANN Tannenbergstha 83.35 320 *eP* **P 05 49 31.8 +0.9**
WERN Wernitzgruen 83.40 320 *eP* **P 05 49 32.1 +1.0**
comp=Z,15nm,0.9s,mb5.0
HFS Hagfors 83.42 330 P **P 05 49 30.0 -1.1**
comp=Z,16nm,0.6s,mb5.2,baz=108,slow=4.8,SNR=17
GUNZ Gunzen 83.43 320 *eP* **P 05 49 32.3 +1.0**
comp=Z,15nm,1.0s,mb5.0
WERD Werda 83.45 320 *eP* **P 05 49 32.3 +0.9**
comp=Z,14nm,1.0s,mb5.0
ROTZ Rotzenmuhle 83.47 320 *eP* **P 05 49 32.9 +1.4**
comp=Z,70nm,1.9s,mb5.4
MANZ Manzenberg 83.55 320 *eP* **P 05 49 33.4 +1.5**
comp=Z,48nm,1.2s,mb5.5
COP Copenhagen 83.72 326 *i P* **P 05 49 25.5 -7.1**
COP *i* 05 55 25.3
COP
comp=Z,2µm,19.0s
WTTA Wattenberg 83.73 317⇓ *i P* **P 05 49 32.0 -0.8**
comp=Z,29nm,1.0s,mb5.3
WTTA Wattenberg 83.73 317⇓ *i P* **P 05 49 31.8 -1.1**
comp=Z,29nm,1.0s,mb5.3
MOR8 Moi Rana 83.75 336 *eP* **P 05 49 30.9 -1.7**
MOR8 AMb AMB 05 49 47.0
comp=Z,63nm,1.6s,mb5.5
MOX Moxa 83.90 320 *eP* **P 05 49 34.7 +1.0**
comp=Z,27nm,1.5s,mb5.2
MOX Moxa 83.90 320 *eP* **P 05 49 34.7 +1.0**
MOX pmax pmax
comp=Z,27nm,1.5s,mb5.2
MOX Moxa 83.90 320 *eP* **P 05 49 34.6 +0.9**
comp=Z,71nm,1.8s,mb5.5
FUR Furstenfeldbru 84.01 318 *eP* **P 05 49 34.7 +0.4**
FUR pmax pmax
comp=Z,67nm,1.4s,mb5.6
FUR Furstenfeldbru 84.01 318 *eP* **P 05 49 34.7 +0.4**
comp=Z,67nm,1.4s,mb5.6
GRA1 Grafenberg Arr 84.11 319 *eP* **P 05 49 35.9 +1.1**
comp=Z,46nm,1.1s,mb5.5
GRA1 *eS* S 06 00 01.1 +3.8
GRF Grafenberg Arr 84.11 319 *eP* **P 05 49 35.9 +1.1**
GRF *eS* S 06 00 01.1 +3.8
GRF pmax pmax
comp=Z,46nm,1.1s,mb5.5
GRF Grafenberg Arr 84.11 319 *eP* **P 05 49 35.9 +1.1**
GRF *eS* S 06 00 01.1 +3.8
GRF pmax pmax
comp=Z,46nm,1.1s,mb5.5
GRF Grafenberg Arr 84.11 319 *eP* **P 05 49 35.9 +1.1**
comp=Z,46nm,1.1s,mb5.5
GRF *eS* S 06 00 01.1 +3.8
LOF Lofoten 84.33 338 *eP* **P 05 49 38.2 +2.7**
LOF AMb AMB 05 49 50.6
comp=Z,124nm,1.6s,mb5.8
STOK Stokkvaagen 84.34 336 *eP* **P 05 49 37.8 +2.1**
NB2 NORSAR Subarra 84.72 331 P **P 05 49 36.6 -1.0**
comp=Z,1.3nm,0.8s,baz=95,slow=5.9
NOA NORSAR Array B 84.72 331 P **P 05 49 36.8 -0.8**
comp=Z,10nm,0.9s,mb5.0,baz=98,slow=5.4,SNR=12
NOA PP PP 05 52 53.5 -0.1
comp=Z,2.1nm,0.8s,baz=92,slow=8.3,SNR=3.4
NOA LR LR 06 30 22.6
comp=Z,4µm,20.7s,MS5.7,baz=65,slow=38
NOA NORSAR Array B 84.72 331 P **P 05 49 36.8 -0.8**
NOA 05 52 53.6
CLZ Clausthal 84.73 322 *eP* **P 05 49 38.7 +0.8**
CLZ pmax pmax
comp=Z,25nm,1.0s,mb5.3
CLZ Clausthal 84.73 322 *eP* **P 05 49 38.7 +0.8**
comp=Z,25nm,1.0s,mb5.3
BSEG Bad Segeberg 84.84 324 *eP* **P 05 49 39.5 +1.1**
BSEG pmax pmax
comp=Z,42nm,1.0s,mb5.5
BSEG Bad Segeberg 84.84 324 *eP* **P 05 49 39.5 +1.1**
comp=Z,42nm,1.0s,mb5.5
NAO01 NORSAR Array S 84.86 331 *eP* **P 05 49 38.7 +0.3**
comp=Z,12nm,0.8s,mb5.1
DAVOX Davos/Dischmat 84.91 317 P **P 05 49 37.8 -1.1**
comp=Z,20nm,0.8s,mb5.3,baz=118,slow=9.5,SNR=15
NRDL Niedersach Rie 84.92 322 *eP* **P 05 49 40.2 +1.4**
comp=Z,118nm,2.1s,mb5.7
DAVA Damuels 84.92 317⇑ *i P* **P 05 49 39.6 +0.6**
comp=Z,29nm,1.0s,mb5.4
DAVA Damuels 84.92 317⇓ *i P* **P 05 49 39.2 +0.2**
comp=Z,29nm,1.0s,mb5.4
UBBA Unterbreizbach 84.93 321 *eP* **P 05 49 39.6 +0.7**
comp=Z,51nm,1.9s,mb5.3
SPITS Spitsbergen Ar 84.96 348 P **P 05 49 37.9 -0.6**
comp=Z,11nm,0.7s,mb5.1,baz=348,slow=7.9,SNR=6.2
SPB4 Spitsbergen Ar 84.96 348 *eP* **P 05 49 38.0 -0.5**
DAVOS Davos 84.97 317 P **P 05 49 37.8 -1.4**
VSL Villasalto 85.19 309 *eP* **P 05 49 41.0 +0.5**
comp=Z,30nm,1.1s,mb5.3
VSL *ep*P pP 05 49 51.2 +0.4
KEST Kesra 85.21 305 P **P 05 49 41.6 +1.0**
comp=Z,5.2nm,0.9s,baz=279,slow=1.5,SNR=7.8
KEST PKP2bc 06 15 24.8
comp=Z,0.9nm,0.8s,baz=242,slow=7.0,SNR=3.8
KEST LR LR 06 27 05.3
comp=Z,2µm,20.4s,MS5.5,baz=33,slow=35
TUE Stuetta 85.28 316 *eP* **P 05 49 40.9 +0.1**
STU Stuttgart 85.41 319 *eP* **P 05 49 41.9 +0.6**
comp=Z,19nm,0.8s,mb5.3
KONO Kongsberg 85.45 329 *eP* **P 05 49 41.1 -0.2**
MUD Monsted U'grnd 85.58 326 *e* S 06 00 06.4 -5.2
MUD
comp=Z,2µm,19.0s
TNS Taunus Mts 85.91 320 *eP* **P 05 49 44.8 +1.0**
TNS pmax pmax
comp=Z,26nm,1.1s,mb5.4
TNS Taunus Mts 85.91 320 *eP* **P 05 49 44.8 +1.0**
comp=Z,26nm,1.1s,mb5.4
BFO Black Forest 85.98 318 *eP* **P 05 49 44.7 +0.5**
BFO pmax pmax
comp=Z,23nm,1.3s,mb5.2
BFO Black Forest 85.98 318 *eP* **P 05 49 44.7 +0.5**
comp=Z,23nm,1.3s,mb5.2
IBBN Ibbenburen 86.36 322 *eP* **P 05 49 47.1 +1.2**
comp=Z,85nm,1.4s,mb5.8
MOL Molde 86.51 332 *eP* **P 05 49 48.0 +1.5**
SBF Sospel 86.63 314 *eP* **P 05 49 46.5 -1.0**
comp=Z,157nm,1.1s,mb5.8
SBF Sospel 86.63 314 *eP* **P 05 49 46.5 -1.0**
SBF pmax pmax
comp=Z,79nm,1.1s,mb5.9
SBF Sospel 86.63 314 *eP* **P 05 49 46.5 -1.0**
comp=Z,79nm,1.1s,mb5.8
BUG Bochum--Univer 86.66 321 *eP* **P 05 49 48.4 +0.9**
comp=Z,38nm,1.2s,mb5.5
CDF Champ du Feu 86.68 318 *eP* **P 05 49 46.3 -1.4**
comp=Z,16nm,0.8s,mb5.0
CDF Champ du Feu 86.68 318 *eP* **P 05 49 46.3 -1.4**
CDF pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
CDF Champ du Feu 86.68 318 *eP* **P 05 49 46.3 -1.4**
comp=Z,8.0nm,0.8s,mb5.0
HINF Hinteralfeld 86.97 318 *eP* **P 05 49 48.3 -0.8**
LPG La Plagne 87.09 315 *eP* **P 05 49 49.0 -0.7**
comp=Z,62nm,0.9s,mb5.5
LPG La Plagne 87.09 315 *eP* **P 05 49 49.0 -0.7**
LPG pmax pmax
comp=Z,31nm,0.9s,mb5.5
LPG La Plagne 87.09 315 *eP* **P 05 49 49.0 -0.7**
comp=Z,31nm,0.9s,mb5.5
MBDF Montbardon 87.09 314 *eP* **P 05 49 49.1 -0.6**
comp=Z,26nm,0.9s,mb5.2
MBDF Montbardon 87.09 314 *eP* **P 05 49 49.1 -0.6**
MBDF pmax pmax
comp=Z,13nm,0.9s,mb5.2
MBDF Montbardon 87.09 314 *eP* **P 05 49 49.1 -0.6**
comp=Z,13nm,0.9s,mb5.2
LPL La Plagne 87.10 315 *eP* **P 05 49 49.1 -0.7**
comp=Z,90nm,1.0s,mb5.7
LPL La Plagne 87.10 315 *eP* **P 05 49 49.1 -0.7**
LPL pmax pmax
comp=Z,45nm,1.0s,mb5.7
LPL La Plagne 87.10 315 *eP* **P 05 49 49.1 -0.7**
comp=Z,45nm,1.0s,mb5.7
BNI Bardonecchia 87.15 315 *eP* **P 05 49 52.8 +2.8**
BNI pmax pmax
comp=Z,11nm,1.2s,mb5.0
BNI Bardonecchia 87.15 315 *eP* **P 05 49 50.4 +0.4**
comp=Z,15nm,0.9s,mb5.2
FRF La Foret Royal 87.20 313 *eP* **P 05 49 49.5 -0.8**
comp=Z,54nm,1.1s,mb5.4
FRF La Foret Royal 87.20 313 *eP* **P 05 49 49.5 -0.8**
FRF pmax pmax
comp=Z,27nm,1.1s,mb5.4
FRF La Foret Royal 87.20 313 *eP* **P 05 49 49.5 -0.8**
comp=Z,27nm,1.1s,mb5.4
LMR La Mourre 87.31 313 *eP* **P 05 49 49.7 -1.1**
comp=Z,38nm,1.2s,mb5.2
LMR La Mourre 87.31 313 *eP* **P 05 49 49.7 -1.1**
LMR pmax pmax
comp=Z,19nm,1.2s,mb5.2
LMR La Mourre 87.31 313 *eP* **P 05 49 49.7 -1.1**
comp=Z,19nm,1.2s,mb5.2
HAU Haudompre 87.31 318 *eP* **P 05 49 49.4 -1.3**
comp=Z,69nm,1.0s,mb5.5
HAU *e*MLR MLR
comp=Z,3µm,20.5s,MS5.3
HAU Haudompre 87.31 318 *eP* **P 05 49 49.4 -1.3**
HAU pmax pmax
comp=Z,35nm,1.0s,mb5.5
HAU MLR MLR
comp=Z,3µm,20.5s,MS5.6
HAU Haudompre 87.31 318 *eP* **P 05 49 49.4 -1.3**
comp=Z,34nm,1.0s,mb5.5
HAU LR LR
comp=Z,3µm,20.5s,MS5.6
WLF Walferdange 87.40 319 *eP* **P 05 49 52.5 +1.4**
comp=Z,35nm,1.1s,mb5.5
MEM Membach 87.47 320 P **P 05 49 52.5 +1.1**
comp=Z,12nm,1.2s,mb5.0
CABF La Chapelle 87.52 316 *eP* **P 05 49 51.1 -0.7**
comp=Z,44nm,0.9s,mb5.4
CABF La Chapelle 87.52 316 *eP* **P 05 49 51.1 -0.7**

CABF pmax pmax
comp=Z,22nm,0.9s,mb5.4
CABF La Chapelle 87.52 316 *e*P **P 05 49 51.1 -0.7**
comp=Z,22nm,0.9s,mb5.4
ORIF Oris-en-Rattie 87.72 315 *e*P **P 05 49 52.1 -0.6**
comp=Z,25nm,0.9s,mb5.1
ORIF *e*MLR MLR
comp=Z,4μm,21.0s,MS5.5
ORIF Oris-en-Rattie 87.72 315 *e*P **P 05 49 52.1 -0.6**
ORIF pmax pmax
comp=Z,13nm,0.9s,mb5.2
ORIF Oris-en-Rattie 87.72 315 *e*P **P 05 49 52.1 -0.6**
comp=Z,13nm,0.9s,mb5.2
MEZF Maizieres J'vi 88.16 318 *e*P **P 05 49 54.0 -0.8**
comp=Z,24nm,0.8s,mb5.2
MEZF Maizieres J'vi 88.16 318 *e*P **P 05 49 54.0 -0.8**
comp=Z,24nm,0.8s,mb5.5
GIVF Givet 88.25 320 *e*P **P 05 49 54.3 -0.8**
comp=Z,51nm,1.1s,mb5.3
GIVF Givet 88.25 320 *e*P **P 05 49 54.3 -0.8**
GIVF pmax pmax
comp=Z,25nm,1.1s,mb5.4
GIVF Givet 88.25 320 *e*P **P 05 49 54.3 -0.8**
comp=Z,25nm,1.1s,mb5.4
DOU Dourbes 88.39 320 P **P 05 49 56.4 +0.6**
VIVF Saint-Julien-l 88.58 315 *e*P **P 05 49 55.9 -0.9**
comp=Z,57nm,1.3s,mb5.4
VIVF Saint-Julien-l 88.58 315 *e*P **P 05 49 55.9 -0.9**
VIVF pmax pmax
comp=Z,28nm,1.3s,mb5.4
VIVF Saint-Julien-l 88.58 315 *e*P **P 05 49 55.9 -0.9**
comp=Z,28nm,1.3s,mb5.4
BAIF Baives 88.64 320 *e*P **P 05 49 56.5 -0.5**
comp=Z,82nm,1.2s,mb5.7
BAIF Baives 88.64 320 *e*P **P 05 49 56.5 -0.5**
BAIF pmax pmax
comp=Z,41nm,1.2s,mb5.6
BAIF Baives 88.64 320 *e*P **P 05 49 56.5 -0.5**
comp=Z,41nm,1.2s,mb5.6
SSB Saint Sauveur 88.65 315 *e*P **P 05 49 58.3 +1.1**
SSB *e**PP pP 05 50 08.7 +1.1
SBA Scott Base 88.91 168 P **P 05 49 59.9 +2.2**
SBA pmax pmax
comp=Z,71nm,1.0s,mb6.0
SBA Scott Base 88.91 168 *e*P **P 05 49 58.7 +1.0**
comp=Z,186nm,1.9s,mb6.1
SBA *e*pP pP 05 50 07.3 -0.9
LOR Lormes 89.02 317 *e*P **P 05 49 57.9 -1.0**
comp=Z,58nm,1.1s,mb5.5
LOR *e*MLR MLR
comp=Z,2μm,23.0s,MS5.2
LOR Lormes 89.02 317 *e*P **P 05 49 57.9 -1.0**
LOR pmax pmax
comp=Z,29nm,1.1s,mb5.5
LOR MLR MLR
comp=Z,2μm,23.0s,MS5.5
LOR Lormes 89.02 317 *e*P **P 05 49 57.9 -1.0**
comp=Z,29nm,1.1s,mb5.5
LOR LR LR
comp=Z,2μm,23.0s,MS5.5
SMF Signal de Mont 89.07 316 *e*P **P 05 49 58.1 -1.0**
comp=Z,56nm,1.0s,mb5.6
SMF Signal de Mont 89.07 316 *e*P **P 05 49 58.1 -1.0**
SMF pmax pmax
comp=Z,28nm,1.0s,mb5.5
SMF Signal de Mont 89.07 316 *e*P **P 05 49 58.1 -1.0**
comp=Z,28nm,1.0s,mb5.5
LASF Ste Croix 89.20 314 *e*P **P 05 49 59.4 -0.4**
comp=Z,104nm,1.5s,mb5.6
SSF Saint Saulge 89.27 317 *e*P **P 05 49 59.1 -0.9**
comp=Z,114nm,1.7s,mb5.6
SSF Saint Saulge 89.27 317 *e*P **P 05 49 59.1 -0.9**
SSF pmax pmax
comp=Z,57nm,1.7s,mb5.6
SSF Saint Saulge 89.27 317 *e*P **P 05 49 59.1 -0.9**
comp=Z,57nm,1.7s,mb5.6
AVF Avril sur Loir 89.40 317 *e*P **P 05 49 59.6 -1.0**
comp=Z,85nm,1.4s,mb5.6
AVF Avril sur Loir 89.40 317 *e*P **P 05 49 59.6 -1.0**
AVF pmax pmax
comp=Z,42nm,1.4s,mb5.6
AVF Avril sur Loir 89.40 317 *e*P **P 05 49 59.6 -1.0**
comp=Z,42nm,1.4s,mb5.6
BGF Bois d'Agland 89.76 316 *e*P **P 05 50 02.0 -0.3**
comp=Z,93nm,1.3s,mb5.7
BGF Bois d'Agland 89.76 316 *e*P **P 05 50 02.0 -0.3**
BGF pmax pmax
comp=Z,46nm,1.3s,mb5.7
BGF Bois d'Agland 89.76 316 *e*P **P 05 50 02.0 -0.3**
comp=Z,46nm,1.3s,mb5.7
TCF Toulx Ste Croi 90.22 316 *e*P **P 05 50 03.9 -0.6**
comp=Z,111nm,1.9s,mb5.6
TCF Toulx Ste Croi 90.22 316 *e*P **P 05 50 03.9 -0.6**
TCF pmax pmax
comp=Z,56nm,1.9s,mb5.6
TCF Toulx Ste Croi 90.22 316 *e*P **P 05 50 03.9 -0.6**
comp=Z,56nm,1.9s,mb5.6
CAF Calvia 90.42 315 *e*P **P 05 50 05.2 -0.3**
MTLF Montolieu 90.44 313 *e*P **P 05 50 05.1 -0.5**
comp=Z,19nm,1.0s,mb5.1
MTLF Montolieu 90.44 313 *e*P **P 05 50 05.1 -0.5**
MTLF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
MTLF Montolieu 90.44 313 *e*P **P 05 50 05.1 -0.5**
comp=Z,9.6nm,1.0s,mb5.1
MAIT Maitri 90.66 199 *e*P **P 05 50 09.9 +3.9**
RJF Les Rejaudoux 90.78 315 *e*P **P 05 50 06.8 -0.3**
comp=Z,56nm,1.4s,mb5.4
RJF *e*MLR MLR
comp=Z,2μm,21.8s,MS5.3
RJF Les Rejaudoux 90.78 315 *e*P **P 05 50 06.8 -0.3**
RJF pmax pmax
comp=Z,28nm,1.4s,mb5.4
RJF MLR MLR
comp=Z,2μm,21.8s,MS5.6
RJF Les Rejaudoux 90.78 315 *e*P **P 05 50 06.8 -0.3**
comp=Z,28nm,1.4s,mb5.4
RJF LR LR
comp=Z,2μm,21.8s,MS5.6
LFF La Frestale 91.36 315 *e*P **P 05 50 09.7 -0.1**
LDF La Druitiere 91.58 319 *e*P **P 05 50 10.3 -0.5**
comp=Z,56nm,1.0s,mb5.6
LDF La Druitiere 91.58 319 *e*P **P 05 50 10.3 -0.5**
LDF pmax pmax
comp=Z,28nm,1.0s,mb5.5
LDF La Druitiere 91.58 319 *e*P **P 05 50 10.3 -0.5**
comp=Z,28nm,1.0s,mb5.5
FLN La Foliniere 91.80 319 *e*P **P 05 50 11.1 -0.7**
comp=Z,78nm,1.0s,mb5.7
FLN *e*MLR MLR
comp=Z,4μm,22.8s,MS5.5
FLN La Foliniere 91.80 319 *e*P **P 05 50 11.1 -0.7**
FLN pmax pmax
comp=Z,39nm,1.0s,mb5.7
FLN MLR MLR
comp=Z,4μm,22.8s,MS5.8
FLN La Foliniere 91.80 319 *e*P **P 05 50 11.1 -0.7**
comp=Z,39nm,1.0s,mb5.7
FLN LR LR
comp=Z,4μm,22.8s,MS5.8
MFF Saint Martin d 91.81 317 *e*P **P 05 50 11.2 -0.7**
comp=Z,64nm,1.2s,mb5.5
MFF Saint Martin d 91.81 317 *e*P **P 05 50 11.2 -0.7**
MFF pmax pmax
comp=Z,32nm,1.2s,mb5.5
MFF Saint Martin d 91.81 317 *e*P **P 05 50 11.2 -0.7**
comp=Z,32nm,1.2s,mb5.5
EPF Esparros 91.83 313 *e*P **P 05 50 10.0 -2.1**
GRR Gorron 92.09 318 *e*P **P 05 50 12.7 -0.4**
comp=Z,156nm,1.5s,mb5.8
GRR Gorron 92.09 318 *e*P **P 05 50 12.7 -0.4**
GRR pmax pmax
comp=Z,78nm,1.5s,mb5.8
GRR Gorron 92.09 318 *e*P **P 05 50 12.7 -0.4**
comp=Z,78nm,1.5s,mb5.8
EKA Eskdalemuir Ar 92.57 326 P **P 05 50 14.8 -0.4**
comp=Z,4.4nm,0.8s,mb5.0,baz=91,slow=4.6,SNR=7.2
QSPA South Pole Qui 92.83 180 P **P 05 50 16.5 +0.6**
comp=Z,5.5nm,1.0s,mb5.0,baz=345,slow=0.8,SNR=13
SJPF Ste Jean 92.96 313 *e*P **P 05 50 16.1 -1.2**
comp=Z,43nm,1.1s,mb5.5
SJPF Ste Jean 92.96 313 *e*P **P 05 50 16.1 -1.2**
SJPF pmax pmax
comp=Z,21nm,1.1s,mb5.5
SJPF Ste Jean 92.96 313 *e*P **P 05 50 16.1 -1.2**
comp=Z,21nm,1.1s,mb5.5
TORD Torodi Ar. Bea 93.07 283 P **P 05 50 18.0 -0.3**
comp=Z,1.1nm,0.6s,baz=115,slow=5.1,SNR=5.5
TORD PKKPbc PKKPbc 06 07 27.5 +0.2
comp=Z,0.8nm,0.6s,baz=298,slow=3.0,SNR=10
TORD LR LR 06 32 36.0
comp=Z,5μm,18.4s,MS6.0,baz=80,slow=36
AFI Afiamalu 93.31 104 LR LR 06 30 18.9
comp=Z,1μm,20.2s,MS5.3,baz=267,slow=34
QUIF Quistinic 93.69 318 *e*P **P 05 50 18.7 -1.8**
comp=Z,96nm,1.5s,mb5.7
QUIF Quistinic 93.69 318 *e*P **P 05 50 18.7 -1.8**
QUIF pmax pmax
comp=Z,48nm,1.5s,mb5.7
QUIF Quistinic 93.69 318 *e*P **P 05 50 18.7 -1.8**
comp=Z,48nm,1.5s,mb5.7
ROSF Rostrenen 93.70 319 *e*P **P 05 50 18.5 -2.0**
comp=Z,44nm,1.2s,mb5.5
ROSF Rostrenen 93.70 319 *e*P **P 05 50 18.5 -2.0**
ROSF pmax pmax
comp=Z,22nm,1.2s,mb5.5
ROSF Rostrenen 93.70 319 *e*P **P 05 50 18.5 -2.0**
comp=Z,22nm,1.2s,mb5.5
ESDC Sonseca Array 95.45 310 P **P 05 50 28.5 -0.3**
comp=Z,0.4nm,0.5s,baz=90,slow=1.7,SNR=3.1
ESDC LR LR 06 36 46.0
comp=Z,2μm,18.8s,MS5.5,baz=125,slow=38
DBIC Dimbokro 99.95 277 LR LR 06 32 55.7
comp=Z,4μm,20.1s,MS5.9,baz=62,slow=34
HYT Haines Junctio 104.51 24 *e*Pdif Pdif 05 51 08.3 -0.6
SCHQ Schefferville 120.64 348 PKP PKPdf 05 55 54.1 -1.4
comp=Z,3.5nm,0.7s,baz=262,slow=4.9,SNR=5.6
NEW Newport 121.64 25 *e*PKIKP PKPdf 05 55 58.1 +0.4
NEW *e* 05 56 08.8
HAWA Hanford 121.98 28 *e*PKPdf PKPdf 05 55 59.2 +0.8
HUMO Hull Mountain 122.92 33 *e*PKPdf PKPdf 05 56 01.7 +1.4
LNOR Lincton Mounta 122.95 28 *e*PKIKP PKPdf 05 56 02.6 +2.4
LNOR Lincton Mounta 122.95 28 *e*PKPdf PKPdf 05 56 01.2 +0.9
MSO Missoula 124.10 24 *e*PKPdf PKPdf 05 56 02.4 0.0
MOD Modoc 124.83 32 *e*PKPdf PKPdf 05 56 05.4 +1.4
WVOR Wild Horse Val 125.32 31 *e*PKIKP PKPdf 05 56 07.2 +2.3
DLMT Dillon 125.83 24 *e*PKPdf PKPdf 05 56 06.1 +0.3
ULM Ulm Le Bonnet 126.16 PKP PKPdf 05 56 06.7 +0.4
comp=Z,9.5nm,0.8s,baz=314,slow=4.3,SNR=7.8
PAHR Pah Rah Range 126.87 33 *e*PKPdf PKPdf 05 56 09.9 +1.9
LAO LASA Array 127.03 19 *e*PKPdf PKPdf 05 56 08.1 0.0
RRI2 Red Ridge 128.01 25 *e*PKPdf PKPdf 05 56 11.2 +1.2
SNOW Snow King Moun 128.15 24 *e*PKPdf PKPdf 05 56 11.2 +0.9
REDW Red Top Meadow 128.19 24 *e*PKPdf PKPdf 05 56 11.4 +1.0
ELK Elko 128.28 30 *e*PKIKP PKPdf 05 56 12.7 +2.1
ELK *e* 05 56 23.2
ELK Elko 128.28 30 *e*PKPdf PKPdf 05 56 11.9 +1.3
NVAR Mina Array Bea 128.36 34 PKP PKPdf 05 56 11.0 +0.2
comp=Z,5.9nm,0.9s,baz=265,slow=2.0,SNR=8.8
PDAR Pinedale Array 129.21 24 PKP PKPdf 05 56 12.8 +0.5
comp=Z,2.1nm,0.5s,baz=93,slow=3.9,SNR=10
PDAR PP PP 05 58 22.1 +2.2
comp=Z,1.8nm,0.8s,baz=350,slow=2.7,SNR=3.8
DUG Dugway 129.88 28 *e*PKIKP PKPdf 05 56 16.2 +2.5
KSU1 Kansas State U 136.74 14 *e*PKPdf PKPdf 05 56 18.9 -7.7
LPA La Plata 139.72 215 *ce*P Pdif 05 53 41.0 -4.4
PLCA Paso Flores 140.29 197 PKP PKPdf 05 56 34.3 +1.3
comp=Z,2.7nm,0.8s,baz=181,slow=7.4,SNR=6.2
WVT Waverly 141.05 4 PKIKP PKPdf 05 56 28.2 -6.4
WVT Waverly 141.05 4 *e*PKPdf PKPdf 05 56 27.9 -6.7
MIAR Mount Ida 141.79 12 *e*PKIKP PKPdf 05 56 29.8 -6.2
BDFB Brasilia 141.93 248 PKP PKPdf 05 56 38.4 +1.8
comp=Z,4.8nm,0.6s,baz=64,slow=4.8,SNR=5.4
TXAR Lajitas Array 143.05 29 PKP PKPdf 05 56 36.3 -2.1
comp=Z,3.7nm,0.6s,baz=315,slow=1.0,SNR=15
TXAR PP PP 05 59 51.1 +4.0
comp=Z,2.2nm,0.8s,baz=328,slow=1.0,SNR=3.6
JCT Junction City 143.73 23 *e*PKIKP PKPdf 05 56 37.7 -1.8
LRAL Lakeview Retre 144.19 4 *e*PKPdf PKPdf 05 56 37.2 -3.0
NATX Nacogdoches 144.20 15 *e*PKPdf PKPdf 05 56 40.5 +0.2
VBMS Vicksburg 144.61 9 *e*PKPdf PKPdf 05 56 40.0 -1.0
CPUP Villa Florida 145.05 226 PKPbc PKPbc 05 56 42.0 +0.7
comp=Z,20nm,0.9s,baz=95,slow=3.4,SNR=14
CPUP Villa Florida 145.05 226 PKIKP PKPdf 05 56 42.0 +0.1
CPUP pmax pmax
comp=Z,21nm,0.9s
CPUP Villa Florida 145.05 226 *e*PKPdf PKPdf 05 56 40.5 -1.4
HKT Hockley 145.58 18 PKP2 PKPab 05 56 42.9 -0.2
HKT Hockley 145.58 18 *e*PKPbc PKPbc 05 56 42.7 -0.2
BRAL Brewton 146.19 4 *e*PKPbc PKPbc 05 56 45.4 +0.6
FCH Farellones 146.94 202 *e*P PKPbc 05 56 49.2 +2.3
DWPF Disney 149.03 355 *e*PKPbc PKPbc 05 56 52.8 +0.2
TLL Tololo Astrono 149.94 204 *e*P PKPbc 05 56 53.3 -1.5
LCO Las Campanas 150.91 205 *e*PKPdf PKPdf 05 56 52.1 +0.7
LCO *e*PKPbc PKPbc 05 56 57.8 +0.7
LPAZ La Paz 159.12 229 PKP PKPdf 05 57 04.5 +1.6
comp=Z,4.4nm,1.0s,baz=106,slow=2.7,SNR=5.6
LPAZ PKPab PKPab 05 57 40.4 +0.7
comp=Z,8.0nm,1.1s,baz=137,slow=2.6,SNR=4.1
LPAZ La Paz 159.12 229 *e*PKPdf PKPdf 05 57 04.7 +1.7
ROSC El Rosal 167.26 307 PKP PKPdf 05 57 10.8 0.0
comp=Z,1.7nm,0.4s,baz=90,slow=20,SNR=3.1
OTAV Otavalo 173.21 297 *e*PKPdf PKPdf 05 57 15.3 +1.1
OTAV *e*PKPab PKPab 05 58 42.1 +0.1

*ISCJB **29** 05:53:39.6±0.3, 4148N±003×14201E±004, h70km±3km, mb4.0/12, Error ellipse: s-maj=5.6km s-min=3.5km az=34.9*
*NEIC **29** 05:53:39.9, 4148N×14201E, h64km, MG3.8(JMA), After JMA.*
NEIC Recorded [1 JMA] in Aomori and Iwate Prefectures, Honshu.
*JMA **29** 05:53:39.9±0.1, 4148N×14201E, h64km±2km, M3.8 Broadband fault plane solution: P waves. NP1: φs184.00000°, δ15.00000°, λ82.00000°. NP2:φs13.00000°, δ75.00000°, λ92.00000°. Principal axes: T Plg60.0000°, Azm286.0000°; N Plg2.0000°, Azm192.0000°; P Plg30.0000°, Azm101.0000°;*
JMA Felt I J1.
*MOS **29** 05:53:39.8±0.7, 4147N×14236E, h61km, mb4.0/5 Error ellipse: s-maj=17.0km s-min=11.1km az=73.2*
*IDC **29** 05:53:41.4±1.7, 4149N×14214E, h78km±15km, mb3.9/12, mb1 3.9/14, mb1mx3.8/25, mbtmp3.9/14, MS3.4/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=23.5km s-min=12.9km az=99.0*

ISC 29 05:53:40.5±0.3, 4148N±003×14201E±004, h64km±3km, n44, σ0§85/65, mb4.1/12, 1C-8D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOT	**Ohata**	**0.73**	**263**	⇓P	**Pn**	**05 53 54.8**	**-0.4**
JOT				S	**Sn**	**05 54 06.1**	**0.0**
JKB	**Kayabe**	**0.83**	**300**	P	**Pn**	**05 53 55.9**	**-0.6**
JKB				*e*S	**Sn**	**05 54 07.9**	**-0.5**
JNBK	**Urakawa-nobuka**	**0.98**	**35**	P	**Pn**	**05 53 57.6**	**-0.7**
JNBK				*e*S	**Sn**	**05 54 11.9**	**+0.3**
JTM	**Tenmabayashi**	**0.99**	**226**	⇓P	**Pn**	**05 53 58.5**	**0.0**
JTM				S	**Sn**	**05 54 11.7**	**-0.1**
ERM	**Erimo**	**1.01**	**58**	⇓Pg	**Pn**	**05 53 58.1**	**-0.7**
ERM				eSn	**Sn**	**05 54 12.6**	**+0.2**
JEM	**Erimo**	**1.01**	**58**	⇑P	**Pn**	**05 53 58.1**	**-0.7**
JEM				*e*S	**Sn**	**05 54 11.9**	**-0.5**
JANG	**Nango**	**1.17**	**199**	P	**Pn**	**05 54 00.2**	**-0.6**
JANG				S	**Sn**	**05 54 14.8**	**-1.1**
JSR	**Shiriuchi**	**1.19**	**273**	⇓P	**Pn**	**05 54 01.0**	**-0.1**
JSR				*e*S	**Sn**	**05 54 16.4**	**-0.2**
JNB	**Noboribetsu**	**1.22**	**324**	⇓P	**Pn**	**05 54 00.7**	**-0.8**
JNB				*e*S	**Sn**	**05 54 16.5**	**-0.8**
JBT2	**Biratori 2**	**1.33**	**11**	P	**Pn**	**05 54 03.3**	**+0.4**
JBT2				*e*S	**Sn**	**05 54 21.0**	**+1.3**
JEW	**Eniwo**	**1.42**	**343**	⇓P	**Pn**	**05 54 04.0**	**-0.2**
JEW				*e*S	**Sn**	**05 54 21.7**	**-0.3**
JCH	**Churui**	**1.52**	**41**	⇓P	**Pn**	**05 54 05.6**	**+0.1**
JCH				*e*S	**Sn**	**05 54 25.3**	**+1.0**
JFR	**Furan**	**1.74**	**14**	P	**Pn**	**05 54 08.1**	**-0.3**
JFR				*e*S	**Sn**	**05 54 31.0**	**+1.4**
JOSM	**Okushiri--Mats**	**1.99**	**289**	P	**Pn**	**05 54 11.1**	**-0.6**
JOSM				*e*S	**Sn**	**05 54 35.7**	**+0.1**
JOM	**Ohasama**	**2.08**	**195**	⇓P	**Pn**	**05 54 13.2**	**+0.2**
JOM				S	**Sn**	**05 54 38.6**	**+0.8**
ASAJ	**Asahikawa**	**2.67**	**9**	P	**Pn**	**05 54 21.9**	**+0.8**
	16nm,0.3s,baz=221,slow=11,SNR=30						
ASAJ				S	**Sn**	**05 54 53.6**	**+1.3**
	13nm,0.3s,baz=21,slow=30,SNR=9.2						
ASAJ				LR	LR	05 55 57.0	
	comp=Z,740nm,19.1s,baz=342,slow=51						
ASAJ	**Asahikawa**	**2.67**	**9**	P	**Pn**	**05 54 21.9**	**+0.8**
ASAJ				S	**Sn**	**05 54 53.6**	**+1.3**
ASAJ				pmax	pmax		
	comp=Z,17nm,0.3s						
ASAJ				smax			
	comp=N,13nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.82**	**47**	*e*P	**Pn**	**05 54 35.4**	**-1.3**
YUK				*e*S	**Sn**	**05 55 17.0**	**-3.3**
YUK				pmax	pmax		
	comp=N,190nm,0.5s						
YUK				pmax	pmax		
	comp=Z,380nm,0.5s						
YUK				smax			
	comp=N,770nm,0.5s						
YUK				smax			
	comp=E,380nm,0.4s						
YUK				smax			
	comp=N,5μm,2.0s						
YUK				smax			
	comp=E,2μm,3.0s						
MAJO	**Matsushiro**	**5.75**	**212**	*e*P	**Pn**	**05 55 05.9**	**+2.7**
MAJO				pmax	pmax		
	comp=Z,14nm,0.6s						
MAJO	**Matsushiro**	**5.75**	**212**	*e*Pn	**Pn**	**05 55 05.9**	**+2.8**
	comp=Z,14nm,0.6s						
MAT	**Matsushiro**	**5.75**	**212**	P	**Pn**	**05 55 04.9**	**+1.7**
MAT				S	**Sn**	**05 56 11.6**	**+3.9**
MJAR	**Matsushiro Arr**	**5.75**	**212**	P	**Pn**	**05 55 05.9**	**+2.7**
	comp=Z,1.4nm,0.3s,baz=68,slow=14,SNR=9.5						
KSRS	**Korea Array**	**11.60**	**254**	P	**Pn**	**05 56 28.5**	**+5.4**
	comp=Z,1.0nm,0.3s,baz=62,slow=14,SNR=17						
KSRS				S	**Sn**	**05 58 39.1**	**+8.2**
	comp=Z,0.5nm,0.3s,baz=67,slow=23,SNR=6.9						
KSRS	**Korea Array**	**11.60**	**254**	P	**Pn**	**05 56 28.5**	**+5.4**
KSRS				S	**Sn**	**05 58 39.1**	**+8.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				smax			
	comp=N,1.0nm,0.3s						
SONM	**Songino Array**	**25.95**	**296**	P	**P**	**05 59 07.2**	**+0.5**
	comp=N,3.0nm,0.7s,mb4.0,baz=84,slow=8.3,SNR=12						
ZAA0	**Zalesovo Array**	**39.38**	**308**	*e*P	**P**	**06 01 03.6**	**+0.1**
ZALV	**Zalesovo Beam**	**39.38**	**308**	P	**P**	**06 01 03.8**	**+0.2**
	comp=N,2.7nm,0.3s,mb4.4,baz=85,slow=7.7,SNR=9.3						
ZALV				PcP	PcP	06 03 10.8	+0.3
	comp=N,1.1nm,0.3s,baz=76,slow=3.6,SNR=3.2						
MK31	**Makanchi Array**	**42.29**	**298**	*e*P	**P**	**06 01 27.8**	**+0.3**
MKAR	**Makanchi Array**	**42.29**	**298**	P	**P**	**06 01 27.8**	**+0.2**
	comp=N,5.1nm,0.8s,mb4.2,baz=82,slow=8.9,SNR=14						
MKAR				ScP	ScP	06 07 01.9	-3.2
	comp=N,0.2nm,0.5s,baz=158,slow=4.2,SNR=2.3						
CMAR	**Chiang Mai Arr**	**43.22**	**251**	P	**P**	**06 01 34.3**	**-1.1**
	comp=N,0.7nm,0.4s,mb3.8,baz=46,slow=10,SNR=2.6						
KURK	**Kurchatov**	**43.67**	**305**	P	**P**	**06 01 39.1**	**+0.4**
	comp=N,6.7nm,0.6s,mb4.5,baz=78,slow=8.6,SNR=11						
WRA	**Warramunga Arr**	**61.52**	**188**	P	**P**	**06 03 49.7**	**-0.9**
	comp=N,0.7nm,0.4s,mb4.2,baz=6.1,slow=6.8,SNR=5.0						
WRA	**Warramunga Arr**	**61.52**	**188**	P	**P**	**06 03 49.7**	**-1.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**65.25**	**188**	P	**P**	**06 04 14.8**	**-0.4**
	comp=Z,0.7nm,0.8s,mb3.8,baz=13,slow=6.8,SNR=6.6						
ASAR	**Alice Springs**	**65.25**	**188**	P	**P**	**06 04 14.9**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HFS	**Hagfors**	**70.24**	**335**	P	**P**	**06 04 45.9**	**-0.4**
	comp=Z,1.1nm,0.5s,mb4.1,baz=46,slow=6.4,SNR=7.4						
HFS	**Hagfors**	**70.24**	**335**	P	**P**	**06 04 45.9**	**-0.4**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**70.28**	**337**	P	**P**	**06 04 46.1**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.9,baz=36,slow=6.2						
NOA	**NORSAR Array B**	**70.28**	**337**	P	**P**	**06 04 46.2**	**-0.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=38,slow=6.2,SNR=5.5						
NOA	**NORSAR Array B**	**70.28**	**337**	P	**P**	**06 04 46.2**	**-0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**71.08**	**322**	P	**P**	**06 04 51.0**	**-0.6**
	comp=Z,2.2nm,0.5s,mb4.4,baz=44,slow=5.7,SNR=11						
AKASG	**Malin Array Be**	**71.08**	**322**	P	**P**	**06 04 51.0**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PDAR	**Pinedale Array**	**74.25**	**47**	P	**P**	**06 05 09.8**	**-0.7**
	comp=Z,0.5nm,0.8s,mb3.5,baz=35,slow=6.6,SNR=3.0						
MMAI	**Mount Meron Ar**	**79.78**	**305**	P	**P**	**06 05 42.7**	**+0.9**
	comp=Z,1.1nm,0.4s,mb4.1,baz=44,slow=8.6,SNR=3.4						

*ISCJB **29** 05:55:54.8±0.6, 3907N±003×22236E±004, h33km±6km, Error ellipse: s-maj=6.1km s-min=5.2km az=137.4*
*ATH **29** 05:55:54.4, 39.12N×2241E, h29km±2km, MD2.7/4*
*THE **29** 05:55:55.6, 39.10N×2239E, h12km, ML2.8*
*CSEM **29** 05:55:55.6±0.1, 39.10N×2240E, h15km, ML2.8, Error ellipse: s-maj=3.4km s-min=3.0km az=165.0*

ISC 29 05:55:54.9±0.5, 3907N±004×2239E±005, h27km±5km, n9, σ1§10/18, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGG	**Agios Georgios**	**0.07**	**219**	*e*Pg	**Pb**	**05 55 58.4**	**-1.2**
AGG				*e*Sg	**Sb**	**05 56 01.0**	**-1.7**
EVR	**Evrytania**	**0.47**	**251**	*e*PN	**Pb**	**05 56 05.3**	**+0.6**
EVR				*e*SN	**Sb**	**05 56 13.2**	**+1.8**
THL	**Klokotos Trika**	**0.57**	**330**	*e*Pg	**Pb**	**05 56 05.9**	**-0.4**
THL				*e*Sg	**Sb**	**05 56 13.8**	**-0.2**
THL	**Klokotos Trika**	**0.57**	**330**	*e*PN	**Pn**	**05 56 05.8**	**-1.4**
THL				*e*SN	**Sb**	**05 56 13.9**	**-0.1**
LKR	**Lokris**	**0.64**	**131**	*e*Pg	**Pb**	**05 56 07.7**	**+0.2**
LKR				*e*Sg	**Sb**	**05 56 17.7**	**+1.7**
LKR	**Lokris**	**0.64**	**131**	*e*PN	**Pn**	**05 56 07.6**	**-0.6**
LKR				*e*SN	**Sn**	**05 56 17.5**	**+0.1**
NEO	**Neokhori**	**0.69**	**70**	*e*PN	**Pn**	**05 56 07.9**	**-1.0**
NEO				*e*SN	**Sn**	**05 56 17.6**	**-1.1**
XOR	**Xorichti**	**0.69**	**65**	*e*Pg	**Pb**	**05 56 08.1**	**-0.3**
XOR				*e*Sg	**Sb**	**05 56 18.7**	**+1.1**
LIT	**Litokhoron**	**1.03**	**5**	*e*Pg	**Pn**	**05 56 14.3**	**+0.7**
LIT				*e*Sg	**Sb**	**05 56 29.3**	**+2.1**

*ISCJB **29** 05:56:26.8±0.7, 3906N±004×22238E±004, h31km±6km, Error ellipse: s-maj=6.6km s-min=5.6km az=169.7*
*ATH **29** 05:56:26.5, 39.12N×2241E, h30km±1km, MD2.8/4*
*CSEM **29** 05:56:27.6±0.2, 39.10N×2241E, h15km±3km, ML3.0, Error ellipse: s-maj=3.4km s-min=2.8km az=11.0*
*THE **29** 05:56:27.5, 3909N×2241E, h14km, ML3.0*

ISC 29 05:56:26.7±0.6, 3907N±005×2240E±005, h26km±5km, n8, σ1§06/16, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGG	**Agios Georgios**	**0.07**	**231**	*e*Pg	**Pb**	**05 56 30.3**	**-1.0**
AGG				*e*Sg	**Sb**	**05 56 33.1**	**-1.3**
EVR	**Evrytania**	**0.49**	**252**	*e*PN	**Pb**	**05 56 37.3**	**+0.6**
EVR				*e*SN	**Sb**	**05 56 45.5**	**+2.0**
THL	**Klokotos Trika**	**0.58**	**329**	*e*Pg	**Pb**	**05 56 38.1**	**-0.2**
THL				*e*Sg	**Sb**	**05 56 46.7**	**+0.5**
THL	**Klokotos Trika**	**0.58**	**329**	*e*PN	**Pn**	**05 56 37.9**	**-1.4**
THL				*e*SN	**Sn**	**05 56 46.2**	**-1.8**
LKR	**Lokris**	**0.62**	**132**	*e*PN	**Pn**	**05 56 39.7**	**-0.2**
LKR				*e*SN	**Sn**	**05 56 49.5**	**+0.5**
NEO	**Neokhori**	**0.68**	**69**	*e*PN	**Pn**	**05 56 40.1**	**-0.6**
NEO				*e*SN	**Sn**	**05 56 49.5**	**-0.9**
XOR	**Xorichti**	**0.68**	**64**	*e*Pg	**Pb**	**05 56 40.4**	**+0.4**
XOR				*e*Sg	**Sb**	**05 56 50.2**	**+1.1**
LIT	**Litokhoron**	**1.03**	**4**	*e*Pg	**Pn**	**05 56 46.0**	**+0.5**
LIT				*e*Sg	**Sn**	**05 57 01.0**	**+1.9**

*SZGRF **29** 05:59:49.3, 46.13N×153.28E, h33km, mb4.6, Kuril Islands, Russia*
*ISCJB **29** 05:59:50.8±0.8, 4646N±006×15269E±009, h46km±6km, mb4.6/39, Error ellipse: s-maj=14.1km s

mb1 4.1/21,mb1mx4.1/27,mbtmp4.0/21,Error ellipse: s-maj=17.6km s-min=13.7km az=145.0

ISC 29 05:59:53.5±0.7,**4647N**×006×**15268E**×009,**h54**km±5km, **n118**,σ1°**31**/119,**mb4.6**/39,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KUR	**Kuril'sk**	**3.58**	**252**	*e*P		**Pn**	**06 00 44.5**	**-2.0**
KUR				*e*S		**Sn**	**06 01 26.5**	**-1.0**
KUR				A			06 01 35.0	
	722nm,0.5s							
KUR				A			06 01 35.0	
	281nm,0.5s							
SKR	**Severo-Kuril's**	**4.80**	**27**	*e*PN		**Pn**	**06 01 02.8**	**-0.3**
SKR				pmax	pmax			
	comp=Z,80nm,0.5s							
SKR				pmax	pmax			
	comp=N,80nm,0.5s							
SKR				pmax	pmax			
	comp=E,150nm,0.5s							
SKR	**Severo-Kuril's**	**4.80**	**27**	*e*P		**Pn**	**06 01 02.8**	**-0.3**
SKR				AMB	AMB		06 01 04.5	
	comp=E,60nm,0.5s							
SKR				AMB	AMB		06 01 04.5	
	comp=E,80nm,0.5s							
SKR				*e*S		**Sn**	**06 01 51.0**	**-6.3**
SKR				A			06 01 59.0	
	comp=E,80nm,0.5s							
SKR				A			06 01 59.0	
	comp=E,150nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**5.39**	**246**	*e*P		**Pn**	**06 01 12.9**	**+1.6**
YUK				AMB	AMB		06 01 13.0	
	comp=E,190nm,0.5s							
YUK				A			06 02 30.5	
	comp=E,580nm,0.5s							
YUK				A			06 02 30.5	
	comp=E,490nm,0.5s							
YUK				A			06 02 42.5	
	comp=E,1μm,1.0s							
NEM2	**Nemuro 2**	**5.82**	**240**	P		**Pn**	**06 01 16.9**	**-0.2**
NEM2				*e*S		**Sn**	**06 02 20.1**	**-2.4**
JRA	**Rausu**	**5.91**	**247**	P		**Pn**	**06 01 20.9**	**+2.5**
JNK	**Nakash**	**6.33**	**246**	P		**Pn**	**06 01 26.1**	**+1.9**
JNK				*e*S		**Sn**	**06 02 33.8**	**-1.3**
JAK	**Akkeshi**	**6.66**	**241**	P		**Pn**	**06 01 28.7**	**0.0**
JTKR	**Abashiri--Toko**	**6.68**	**251**	P		**Pn**	**06 01 31.6**	**+2.7**
YSS	**Yuzh-Sakhalins**	**6.84**	**278**	*e*P		**Pn**	**06 01 32.7**	**+1.6**
YSS				*e*LQ			06 06 53.0	
YSS	**Yuzh-Sakhalins**	**6.84**	**278**	Pn		**Pn**	**06 01 33.6**	**+2.5**
	comp=E,37nm,0.8s							
JMP	**Maruseppu**	**7.03**	**253**	P		**Pn**	**06 01 36.8**	**+3.2**
JAR	**Ashorobuto**	**7.08**	**247**	P		**Pn**	**06 01 36.4**	**+2.0**
JAR				*e*S		**Sn**	**06 02 54.8**	**+1.4**
JOB	**Onbets**	**7.24**	**244**	P		**Pn**	**06 01 37.3**	**+0.7**
JOB				*e*S		**Sn**	**06 02 56.2**	**-1.2**
PETK	**Petropavlovsk-**	**7.40**	**24**	P		**Pn**	**06 01 37.5**	**-1.1**
	comp=E,0.6nm,0.3s,baz=179,slow=12,SNR=6.8							
JKK2	**Kamakawa 2**	**7.48**	**253**	P		**Pn**	**06 01 43.0**	**+3.1**
ASAJ	**Asahikawa**	**7.49**	**255**	P		**Pn**	**06 01 43.4**	**+3.3**
	comp=E,2.4nm,0.3s,baz=92,slow=17,SNR=15							
ASAJ	**Asahikawa**	**7.49**	**255**	P		**Pn**	**06 01 43.7**	**+3.7**
ASAJ	**Asahikawa**	**7.49**	**255**	PN		**Pn**	**06 01 43.4**	**+3.4**
ASAJ				pmax	pmax			
	comp=Z,2.0nm,0.3s							
PET	**Petropavlovsk**	**7.62**	**28**	*e*PN		**Pn**	**06 01 47.3**	**+5.6**
PET				*e*S		**Sn**	**06 03 07.6**	**+1.1**
PET				pmax	pmax			
	comp=Z,43nm,1.1s							
PET				smax				
	comp=E,84nm,1.3s							
PET				MLR	MLR			
	comp=Z,2μm,19.0s							
JCH	**Churui**	**7.69**	**243**	P		**Pn**	**06 01 43.3**	**+0.6**
JCH				*e*S		**Sn**	**06 03 05.4**	**-3.0**
TYV	**Tymovskoe**	**7.96**	**307**	*e*P		**Pn**	**06 01 47.0**	**+0.6**
JEM	**Erimo**	**8.16**	**240**	P		**Pn**	**06 01 49.7**	**+0.6**
JNBK	**Urakawa-nobuka**	**8.25**	**243**	P		**Pn**	**06 01 50.0**	**-0.4**
JNB	**Noboribetsu**	**9.23**	**249**	P		**Pn**	**06 02 04.0**	**+0.1**
JNB				*e*S		**Sn**	**06 03 44.1**	**-2.1**
JKB	**Kayabe**	**9.54**	**246**	P		**Pn**	**06 02 07.5**	**-0.5**
JKB				*e*S		**Sn**	**06 03 48.7**	**-5.0**
JYM2	**Yakumo 2**	**9.84**	**248**	P		**Pn**	**06 02 12.7**	**+0.6**
JANG	**Nango**	**10.15**	**237**	P		**Pn**	**06 02 14.0**	**-2.4**
JANG				*e*S		**Sn**	**06 03 59.1**	**-10**
JTM	**Tenmabayashi**	**10.15**	**240**	P		**Pn**	**06 02 15.0**	**-1.4**
JTH	**Tanohata**	**10.24**	**234**	P		**Pn**	**06 02 15.5**	**-2.1**
JTH				*e*S		**Sn**	**06 04 01.8**	**-9.0**
JOSM	**Okushiri--Mats**	**10.43**	**250**	P		**Pn**	**06 02 20.6**	**+0.3**
OFUJ	**Ofunato**	**10.95**	**232**	P		**Pn**	**06 02 24.8**	**-2.5**
JRG	**Rokugo**	**11.30**	**236**	P		**Pn**	**06 02 31.0**	**-1.1**
MAT	**Matsushiro**	**14.67**	**233**	P		**Pn**	**06 03 19.6**	**+1.9**
MJAR	**Matsushiro Arr**	**14.67**	**233**	P		**Pn**	**06 03 16.7**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=35,slow=11,SNR=4.6							
YAK	**Yakutsk**	**20.40**	**328**	*e*P		**P**	**06 04 28.1**	**+2.5**
YAK				pmax	pmax			
	comp=Z,15nm,1.0s							
YAK				pmax	pmax			
	comp=E,7.0nm,0.9s							
KSRS	**Korea Array**	**20.43**	**253**	P		**P**	**06 04 28.4**	**+2.4**
	comp=E,4.9nm,0.6s,baz=59,slow=9.9,SNR=13							
KSRS	**Korea Array**	**20.43**	**253**	P		**P**	**06 04 28.5**	**+2.4**
KSRS				pmax	pmax			
	comp=Z,5.0nm,0.6s							
NJ2	**Nanjing**	**29.63**	**253**	*e*P		**P**	**06 05 54.0**	**+0.4**
NJ2				AMB	AMB			
	comp=Z,20nm,1.0s,mb4.8							
SONM	**Songino Array**	**31.15**	**290**	P		**P**	**06 06 05.4**	**-1.5**
	comp=Z,0.9nm,0.7s,mb3.7,baz=75,slow=9.9,SNR=3.8							
WHN	**Wuhan**	**33.57**	**255**	P		**P**	**06 06 33.0**	**+4.8**
CD2	**Chengdu**	**40.56**	**265**	*e*P		**P**	**06 07 28.3**	**+0.8**
CD2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.5							
CD2				AMB	AMB			
	comp=Z,30nm,6.0s							
ZALV	**Zalesovo Beam**	**42.54**	**306**	P		**P**	**06 07 41.5**	**-1.9**
	comp=Z,1.8nm,0.4s,mb4.1,baz=60,slow=6.5,SNR=5.6							
ZALV				PcP	PcP		06 09 35.0	0.0
	comp=Z,1.5nm,0.6s,baz=47,slow=2.6,SNR=6.6							
ZALV	**Zalesovo Beam**	**42.54**	**306**	P		**P**	**06 07 41.5**	**-1.9**
ZALV				PcP	PcP		06 09 35.0	0.0
MK31	**Makanchi Array**	**46.81**	**297**	*e*P		**P**	**06 08 16.3**	**-1.2**
MK31				*e*			06 09 49.7	
MKAR	**Makanchi Array**	**46.81**	**297**	P		**P**	**06 08 15.4**	**-2.1**
	comp=Z,1.5nm,0.5s,mb4.2,baz=64,slow=6.8,SNR=14							
MKAR				PcP	PcP		06 09 49.9	+0.2
	comp=Z,1.8nm,0.8s,baz=62,slow=5.3,SNR=6.6							
MKAR	**Makanchi Array**	**46.81**	**297**	P		**P**	**06 08 15.4**	**-2.1**
MKAR				PcP	PcP		06 09 49.9	+0.2
KURK	**Kurchatov**	**47.27**	**304**	P		**P**	**06 08 19.9**	**-1.2**
	comp=Z,1.8nm,0.5s,mb4.3,baz=69,slow=8.5,SNR=11							
LSA	**Lhasa**	**49.99**	**273**	*e*P		**P**	**06 08 44.1**	**+1.9**
LSA				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.8							
LSA	**Lhasa**	**49.99**	**273**	*e*P		**P**	**06 08 44.1**	**+1.9**
	comp=Z,6.1nm,0.6s,mb4.8							
YKA	**Yellowknife Ar**	**51.33**	**36**	P		**P**	**06 08 50.9**	**-0.9**
	comp=Z,3.5nm,0.9s,mb4.3,baz=325,slow=6.3,SNR=3.4							
CHTO	**Chiang Mai**	**51.76**	**257**	*e*P		**P**	**06 08 56.4**	**+0.8**
CHTO				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.3							
CHTO	**Chiang Mai**	**51.76**	**257**	*e*P		**P**	**06 08 56.4**	**+0.8**
	comp=Z,4.1nm,0.9s,mb4.4							
CMAR	**Chiang Mai Arr**	**52.01**	**256**	P		**P**	**06 08 58.2**	**+0.8**
	comp=Z,2.1nm,0.4s,mb4.4,baz=35,slow=7.2,SNR=9.4							
TAPN	**Taplejung**	**53.82**	**273**	*e*P		**P**	**06 09 13.0**	**+2.3**
ODAN	**Odare**	**54.35**	**273**	*e*P		**P**	**06 09 17.2**	**+2.6**
	comp=Z,5.4nm,0.3s,mb5.0							
JIRN	**Jiri**	**54.67**	**274**	*e*P		**P**	**06 09 18.5**	**+1.6**
	comp=Z,38nm,0.6s,mb5.6							
GUN	**Gumba**	**54.73**	**275**	*e*P		**P**	**06 09 18.3**	**+1.0**
	comp=Z,11nm,0.4s,mb5.3							
RAMN	**Ramite**	**54.84**	**274**	*e*P		**P**	**06 09 19.2**	**+1.1**
	comp=Z,44nm,0.7s,mb5.6							
KKN	**Kakani**	**55.22**	**275**	*e*P		**P**	**06 09 21.9**	**+1.1**
	comp=Z,33nm,0.6s,mb5.5							
DMN	**Daman**	**55.45**	**275**	*e*P		**P**	**06 09 23.8**	**+1.3**
	comp=Z,36nm,0.7s,mb5.5							
GKN	**Gorkha**	**55.53**	**276**	*e*P		**P**	**06 09 24.1**	**+1.0**
	comp=Z,35nm,0.6s,mb5.6							
KOLN	**Koldanda**	**56.39**	**276**	*e*P		**P**	**06 09 29.1**	**-0.1**
	comp=Z,28nm,0.7s,mb5.4							
ARCES	**ARCESS Array B**	**58.02**	**341**	P		**P**	**06 09 38.5**	**-1.6**
	comp=Z,2.3nm,0.8s,mb4.3,baz=30,slow=9.8,SNR=4.9							
PDAR	**Pinedale Array**	**65.16**	**54**	P		**P**	**06 10 28.5**	**-0.1**
	comp=Z,0.8nm,0.9s,mb3.7,baz=304,slow=2.1,SNR=3.3							
ULM	**Lac du Bonnet**	**66.93**	**41**	P		**P**	**06 10 37.5**	**-2.4**
	comp=Z,1.0nm,0.4s,mb4.2,baz=126,slow=8.1,SNR=3.1							
ULM	**Lac du Bonnet**	**66.93**	**41**	P		**P**	**06 10 37.5**	**-2.4**
WRA	**Warramunga Arr**	**68.15**	**199**	P		**P**	**06 10 47.7**	**0.0**
	comp=Z,0.4nm,0.3s,mb3.9,baz=9.4,slow=6.3,SNR=4.6							
WRA	**Warramunga Arr**	**68.15**	**199**	P		**P**	**06 10 47.7**	**0.0**
NB2	**NORSAR Subarra**	**68.40**	**341**	P		**P**	**06 10 47.6**	**-1.3**
	comp=Z,2.4nm,0.5s,mb4.5,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**68.40**	**341**	P		**P**	**06 10 47.8**	**-1.1**
	comp=Z,3.0nm,0.5s,mb4.6,baz=28,slow=6.3,SNR=18							
HFS	**Hagfors**	**68.62**	**339**	P		**P**	**06 10 49.0**	**-1.3**
	comp=Z,5.2nm,0.4s,mb4.8,baz=55,slow=6.0,SNR=46							
AKASG	**Malin Array Be**	**71.62**	**326**	P		**P**	**06 11 07.4**	**-1.4**
	comp=Z,7.2nm,0.5s,mb4.9,baz=34,slow=6.2,SNR=19							
ASAR	**Alice Springs**	**71.84**	**198**	P		**P**	**06 11 12.2**	**+1.9**
	comp=Z,1.3nm,0.7s,mb4.0,baz=10,slow=5.7,SNR=28							
STHS	**Stebnicka Huta**	**75.61**	**330**	*e*P		**P**	**06 11 32.6**	**+0.3**
STHS				pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.4							
STHS	**Stebnicka Huta**	**75.61**	**330**	*e*P		**P**	**06 11 32.6**	**+0.3**
	comp=Z,4.8nm,1.1s,mb4.3							
DPC	**Dobruska-Polom**	**76.44**	**333**	*e*P		**P**	**06 11 36.6**	**-0.4**
CLL	**Collm**	**76.60**	**335**	*i* P		**P**	**06 11 36.7**	**-1.1**
	comp=Z,8.0nm,0.6s,mb4.8							
VYHS	**Vyhne**	**77.23**	**331**	*e*P		**P**	**06 11 41.0**	**-0.4**
PRU	**Pruhonice**	**77.31**	**334**	*e*P		**P**	**06 11 41.2**	**-0.7**
TXAR	**Lajitas Array**	**77.89**	**60**	P		**P**	**06 11 45.7**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=298,slow=4.5,SNR=8.7							
KHC	**Kasperske Hory**	**78.36**	**334**	*e*P		**P**	**06 11 45.4**	**-2.3**
KHC				*ex*		x	06 11 47.5	
KHC	**Kasperske Hory**	**78.36**	**334**	*e*P		**P**	**06 11 47.5**	**-0.2**
UMR	**Umm Al-Rimmam**	**78.52**	**301**	*e*P		**P**	**06 11 48.7**	**-0.2**
UMR				AMb	AMB		06 11 49.4	
	comp=Z,30nm,0.9s,mb5.2							
GRF	**Grafenberg Arr**	**78.56**	**336**	*e*P		**P**	**06 11 48.6**	**-0.2**
GRF				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
GRF	**Grafenberg Arr**	**78.56**	**336**	*e*P		**P**	**06 11 48.6**	**-0.2**
	comp=Z,5.0nm,0.9s,mb4.4							
MIB	**Mutribah**	**78.56**	**301**	*e*P		**P**	**06 11 48.7**	**-0.4**
MIB				AMb	AMB		06 11 50.0	
	comp=Z,34nm,0.7s,mb5.4							
GERES	**GERESS Array B**	**78.58**	**334**	P		**P**	**06 11 48.5**	**-0.4**
	comp=Z,1.6nm,0.5s,mb4.2,baz=29,slow=5.6,SNR=10							
GERES	**GERESS Array B**	**78.58**	**334**	P		**P**	**06 11 48.5**	**-0.4**
GERES				pmax	pmax			
	comp=Z,2.0nm,0.5s							
CDF	**Champ du Feu**	**80.81**	**337**	*e*P		**P**	**06 12 00.7**	**-0.3**
	comp=Z,11nm,0.9s,mb4.5							
CDF	**Champ du Feu**	**80.81**	**337**	*e*P		**P**	**06 12 00.7**	**-0.3**
CDF				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
CDF	**Champ du Feu**	**80.81**	**337**	*e*P		**P**	**06 12 00.7**	**-0.3**
	comp=Z,5.4nm,0.9s,mb4.5							
MEZF	**Maizieres J'vi**	**81.30**	**339**	*e*P		**P**	**06 12 03.3**	**-0.3**
HAU	**Haudompre**	**81.42**	**338**	*e*P		**P**	**06 12 03.9**	**-0.4**
ASF	**Jabal al Asfar**	**82.65**	**310**	P		**P**	**06 12 11.2**	**+0.2**
	comp=Z,1.8nm,0.6s,mb4.3,baz=246,slow=12,SNR=3.1							
MMAI	**Mount Meron Ar**	**82.78**	**311**	P		**P**	**06 12 12.5**	**+0.8**
	comp=Z,6.2nm,0.6s,mb4.8,baz=36,slow=7.8,SNR=12							
AVF	**Avril sur Loir**	**83.31**	**339**	*e*P		**P**	**06 12 14.1**	**0.0**
	comp=Z,4.0nm,0.7s,mb4.3							
AVF	**Avril sur Loir**	**83.31**	**339**	*e*P		**P**	**06 12 14.1**	**0.0**
AVF				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.3							
AVF	**Avril sur Loir**	**83.31**	**339**	*e*P		**P**	**06 12 14.1**	**0.0**
	comp=Z,2.0nm,0.7s,mb4.3							
SMF	**Signal de Mont**	**83.33**	**339**	*e*P		**P**	**06 12 14.1**	**-0.1**
	comp=Z,21nm,1.1s,mb4.8							
SMF	**Signal de Mont**	**83.33**	**339**	*e*P		**P**	**06 12 14.1**	**-0.1**
SMF				pmax	pmax			
	comp=Z,10.0nm,1.1s,mb4.8							
SMF	**Signal de Mont**	**83.33**	**339**	*e*P		**P**	**06 12 14.1**	**-0.1**
	comp=Z,10nm,1.1s,mb4.8							
LPL	**La Plagne**	**83.62**	**337**	*e*P		**P**	**06 12 16.2**	**+0.5**
	comp=Z,5.3nm,0.7s,mb4.5							
LPL	**La Plagne**	**83.62**	**337**	*e*P		**P**	**06 12 16.2**	**+0.5**
LPL				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.5							
LPL	**La Plagne**	**83.62**	**337**	*e*P		**P**	**06 12 16.2**	**+0.5**
	comp=Z,2.7nm,0.7s,mb4.5							
LPG	**La Plagne**	**83.63**	**337**	*e*P		**P**	**06 12 16.4**	**+0.6**
MBDF	**Montbardon**	**84.33**	**336**	*e*P		**P**	**06 12 19.7**	**+0.3**
TORD	**Torodi Ar. Bea**	**115.18**	**329**	PKP	PKiKP		06 18 27.6	-1.4
	comp=Z,0.3nm,0.5s,baz=27,slow=1.6,SNR=4.3							
BDFB	**Brasilia**	**144.75**	**36**	PKP	PKPdf		06 19 23.7	-0.6
	comp=Z,5.1nm,0.7s,baz=265,slow=1.1,SNR=8.6							
BDFB	**Brasilia**	**144.75**	**36**	PKIKP	PKPdf		06 19 23.7	-0.6
BDFB				pmax	pmax			
	comp=Z,5.0nm,0.7s							
PLCA	**Paso Flores**	**148.48**	**95**	PKPbc	PKPbc		06 19 32.4	-1.1
	comp=Z,1.7nm,0.9s,baz=249,slow=7.9,SNR=3.9							
PLCA	**Paso Flores**	**148.48**	**95**	PKP2	PKPbc		06 19 32.4	-1.1
PLCA				pmax	pmax			
	comp=Z,2.0nm,0.9s							
CPUP	**Villa Florida**	**148.87**	**60**	PKPbc	PKPbc		06 19 35.0	+0.1
	comp=Z,1.2nm,0.6s,baz=243,slow=2.9,SNR=8.0							
CPUP	**Villa Florida**	**148.87**	**60**	PKP2	PKPbc		06 19 35.1	+0.2
CPUP				pmax	pmax			
	comp=Z,1.0nm,0.6s							
SNAA	**Sanae**	**152.20**	**196**	*e*PKPdf	PKPbc		06 19 41.5	0.0
SNAA				*e*			06 19 56.9	
SNAA				*e*			06 20 07.6	
VNA2	**Neumayer--Watz**	**153.65**	**195**	*e*PKPdf	PKPbc		06 19 45.0	+0.3
	baz=81,slow=1.2							
VNA2				*e*			06 20 00.8	
VNA2				*e*			06 20 13.9	
VNA3	**Neumayer Olymp**	**153.75**	**193**	*e*PKPdf	PKPbc		06 19 45.6	+0.7
VNA3				*e*			06 19 58.9	
VNA3				*e*			06 20 13.9	
VNA1	**Neumayer--Stat**	**154.04**	**194**	*e*PKPdf	PKPbc		06 19 46.3	+0.8
VNA1				*e*			06 20 00.8	
VNA1				*e*			06 20 15.8	

BJI **29** *06:42:32.8,556N×12768E,h51km,mB5.5,mb5.4,Ms5.1, Msz5.0*

ISCJB **29** *06:42:34.1±0.1,597N±002×12752E±003,h34km, mb5.6/146,MS5.1/205,Error ellipse: s-maj=4.0km s-min=2.9km az=148.2*

NEIC **29** *06:42:34.6±0.1,598N×12747E,mb5.6/79,MS5.2/172, Error ellipse: s-maj=4.7km s-min=3.2km az=70.0*

GCMT **29** *06:42:34.6±0.2,6.15N×12767E,h19km,MW5.5/96, Moment Tensor Solution. s76,c122; s96,c188; Duration: 1s4 Moment tensor: Scale 10^17Nm; Mrr=2.02±.05; Mθθ=0.61±.03; Mφφ=1.42±.04; Mrθ=0.65±.06; Mrφ=-0.95±.02; Mθφ=-0.71±.07; Best double couple: M=2.24900×10^17 NP1=φ150.00000°, δ33.00000°, λ=-84.00000°. NP2=φ323.00000°, δ58.00000°, λ=-94.00000°. Principal axes: T 2.2580, Plg13.0000°, Azm56.0000°; N -0.0110, Plg3.0000°, Azm325.0000°; P -2.2400, Plg77.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS **29** *06:42:34.4±0.9,603N×12744E,h33km,mb5.9/49, MS5.0/35 Error ellipse: s-maj=9.7km s-min=4.5km az=115.5*

MAN **29** *06:42:36,643N×12754E,h1km,mb5.9,ML5.0,MS5.5*

IDC **29** *06:42:40.0±1.5,591N×12743E,h68km±12km,mb5.1/20, mb1 5.1/23,mb1mx5.1/24,mbtmp5.1/23,MS4.8/23, Ms1 4.8/23,ms1mx4.7/36,Error ellipse: s-maj=13.3km s-min=8.1km az=79.0*

DJA **29** *06:42:43,582N×12754E,h89km,Mw5.5/23*

ISC 29 06:42:36.3±0.1,**595N**±002×**12751E**±003,**h38**km, **h38**km±2.4km**:pP-P,n612,**σ1°**06**/437,**mb5.6**/146,**MS5.1**/205, **32C-31D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MATI	**Mati**	**1.59**	**309**	*e*P		**Pn**	**06 43 01.7**	**-0.3**
MATI				*e*S		**Sn**	**06 43 21.1**	**-0.3**
DAV	**Davao City (W)**	**2.22**	**300**	P		**Pn**	**06 43 12.9**	**+2.3**
	235nm,0.3s,baz=240,slow=3.0,SNR=27							
DAV				S		**Sn**	**06 43 41.0**	**+4.2**
	636nm,0.3s,baz=119,slow=24,SNR=29							
DAV				LR	LR		06 44 22.8	
	comp=Z,18μm,21.4s,baz=283,slow=47							
DAV	**Davao City (W)**	**2.22**	**300**	⇑*e*P		**Pn**	**06 43 13.9**	**+3.3**
DMPH	**Davao City--Mi**	**2.29**	**300**	⇑*i* P		**Pn**	**06 43 13.9**	**+2.3**
DMPH				*i* S		**Sn**	**06 43 29.3**	**-9.2**
BIPH	**Bislig**	**2.50**	**333**	⇑*e*P		**Pn**	**06 43 12.6**	**-1.9**
BIPH				*e*S		**Sn**	**06 43 33.0**	**-11**
GSPH	**General Santos**	**2.55**	**273**	⇑*e*P		**Pn**	**06 43 15.3**	**+0.2**
GSPH				*e*S		**Sn**	**06 43 46.1**	**+1.1**
BUKP	**Musuan**	**3.10**	**308**	*e*P		**Pn**	**06 43 24.3**	**+1.6**
CTBH	**Cotabato--PC H**	**3.48**	**292**	*e*P		**Pn**	**06 43 29.6**	**+1.6**
CTBH				*i* S		**Sn**	**06 44 09.5**	**+1.5**
BUTP	**Butuan**	**3.54**	**328**	*e*P		**Pn**	**06 43 30.5**	**+1.7**
CGP	**Cagayan de Oro**	**3.74**	**312**	*e*P		**Pn**	**06 43 35.2**	**+3.6**
CGP				*i* S		**Sn**	**06 44 19.0**	**+4.6**
PAGZ	**Pagadian**	**4.51**	**295**	*e*P		**Pn**	**06 43 45.0**	**+2.8**
DCPH	**Dipolog City**	**4.88**	**303**	⇑*e*P		**Pn**	**06 43 49.9**	**+2.6**
MSLP	**Maasin**	**4.92**	**328**	*e*P		**Pn**	**06 43 52.0**	**+4.2**
TBP	**Tagbilaran**	**5.18**	**316**	*e*P		**Pn**	**06 43 51.4**	**0.0**
IPIL	**Ipil**	**5.23**	**291**	*e*P		**Pn**	**06 43 56.5**	**+4.4**
LLP	**Lapu-Lapu**	**5.58**	**321**	⇑*e*P		**Pn**	**06 43 58.3**	**+1.4**
PLP	**Palo**	**5.76**	**334**	⇓*e*P		**Pn**	**06 44 02.3**	**+3.0**
PLP				*e*S		**Sn**	**06 44 55.0**	**-9.1**
RCP	**Roxas**	**7.30**	**320**	⇓*e*P		**Pn**	**06 44 25.9**	**+5.4**
KALP	**Kalibo**	**7.65**	**318**	*e*P		**Pn**	**06 44 35.1**	**+10**
KKM	**Kota Kinabalu**	**11.23**	**271**	Pn		**Pn**	**06 45 13.2**	**-1.3**
KKM				*e*Sn		**Sn**	**06 47 18.0**	**-0.8**
KAPI	**Kappang**	**13.36**	**216**	P		**Pn**	**06 45 44.1**	**+0.6**
	1.6nm,0.3s,baz=26,slow=7.9,SNR=27							
KAPI				LR	LR		06 51 58.8	
	comp=Z,7μm,18.7s,baz=55,slow=42							
KAPI	**Kappang**	**13.36**	**216**	*e*Pn		**Pn**	**06 45 42.5**	**-1.1**
BATI	**Baumata**	**16.50**	**193**	P		**Pn**	**06 46 24.8**	**-0.2**
	1.7nm,0.3s,baz=73,slow=19,SNR=2.2							
BATI				LR	LR		06 54 25.2	
	comp=Z,2μm,18.6s,baz=218,slow=43							
KSM	**Kuching**	**17.73**	**256**	*e*Pn		**Pn**	**06 46 42.5**	**+2.1**
GUMO	**Guam**	**18.71**	**65**	LR		LR	06 53 10.9	
	comp=Z,3μm,18.1s,baz=226,slow=34							
GUMO	**Guam**	**18.71**	**65**	*e*P		**Pn**	**06 46 51.9**	**-0.5**
GUMO				pmax	pmax			
	comp=Z,187nm,1.2s							
GUMO	**Guam**	**18.71**	**65**	*e*P		**Pn**	**06 46 51.9**	**-0.4**
	comp=Z,187nm,1.2s							
KAKA	**Kakadu**	**19.17**	**165**	*e*P		**Pn**	**06 46 55.6**	**-2.3**
	comp=Z,113nm,0.7s							
KAKA				*e*S		**S**	**06 50 29.8**	**-2.4**
YHNB	**Yeheng**	**19.52**	**343**	*e*P		**Pn**	**06 47 01.8**	**-0.3**
	comp=Z,56nm,1.1s							
QZH	**Quanzhou**	**20.73**	**337**	P		**P**	**06 47 19.0**	**+5.3**
QZH				S		**S**	**06 51 04.3**	**+1.0**
QZH				LR	LR			
	comp=N,5μm,16.4s,MS5.1							
QZH				LR	LR			
	comp=E,2μm,12.2s,MS5.1							
QZH				LR	LR			
	comp=Z,8μm,17.0s,MS5.2							
JOW	**Kunigami**	**20.78**	**2**	P		**P**	**06 47 15.1**	**+0.8**
	comp=Z,227nm,0.9s,baz=183,slow=8.9,SNR=25							
JOW				LR	LR		06 55 41.0	
	comp=Z,3μm,19.1s,MS4.7,baz=9.8,slow=38							
QIZ	**Qiongzhong**	**21.57**	**309**	P		**P**	**06 47 23.5**	**+0.7**
QIZ				S		**S**	**06 51 21.0**	**+1.2**
QIZ				AMB	AMB			
	comp=Z,37nm,1.1s,mb4.7							
QIZ				LR	LR			
	comp=N,2μm,16.9s,MS4.8							
QIZ				LR	LR			
	comp=E,3μm,16.9s,MS4.8							
QIZ				LR	LR			
	comp=Z,5μm,16.9s,MS5.0							
QIZ	**Qiongzhong**	**21.57**	**309**	*e*P		**P**	**06 47 23.1**	**+0.4**

GYA S **S** **06 53 15.8 +2.5**
GYA XS sS 06 53 33.5 +2.5
GYA SS SS 06 54 41.5 -33
GYA AMB AMB
comp=Z,160nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,1μm,8.4s
GYA LR LR
comp=Z,31μm,17.4s,MS6.0
NST Nakhon Sawan 28.54 292 P **P** **06 48 26.5 -2.2**
NANT Nan 29.08 298 ⇑P **P** **06 48 33.0 -0.4**
comp=Z,175nm,1.0s,mb5.7
JHJ Hachijo jima 2 29.35 21 LR LR 07 00 02.8
comp=Z,4μm,18.5s,MS5.0,baz=84,slow=35
ASAR Alice Springs 30.09 168 P **P** **06 48 42.4 +0.1**
comp=Z,65nm,0.7s,mb5.5,baz=353,slow=7.4,SNR=466
ASAR PcP PcP 06 51 44.0 +0.4
comp=Z,6.1nm,0.3s,baz=355,slow=2.2,SNR=6.6
ASAR S **S** **06 53 38.5 +0.1**
comp=Z,9.4nm,1.1s,baz=1.0,slow=24,SNR=4.5
KMI Kunming 30.44 311 ⇓P **P** **06 48 46.0 +0.6**
KMI AP pP 06 48 57.3 +1.2
KMI XP sP 06 49 00.5 -0.2
KMI PP PP 06 49 47.8 -6.8
KMI PCP PcP 06 51 45.0 +0.5
KMI S **S** **06 53 43.5 -0.5**
KMI XS sS 06 54 02.5 +0.8
KMI SS SS 06 55 27.5 -27
KMI AMB AMB
comp=Z,23nm,1.4s,mb4.7
KMI AMB AMB
comp=Z,546nm,10.9s
KMI LR LR
comp=N,1μm,18.1s,MS4.8
KMI LR LR
comp=E,2μm,16.7s,MS4.8
KMI LR LR
comp=Z,2μm,17.1s,MS4.8
KMI Kunming 30.44 311 ⇓P **P** **06 48 45.9 +0.5**
KMI *PP pP 06 48 57.2 +1.1
KMI *SP sP 06 49 00.4 -0.3
KMI 06 49 47.8
KMI PPP 06 50 00.4
KMI 06 51 45.1
KMI S **S** **06 53 43.5 -0.5**
KMI *SS sS 06 54 02.6 +0.9
KMI SS SS 06 55 27.5 -27
KMI SSS 06 55 47.7
KMI 06 59 20.2
KMI pmax pmax
comp=Z,23nm,1.4s,mb4.7
KMI MLR MLR
comp=Z,2μm,17.1s,MS4.8
KMI Kunming 30.44 311 ⇓P **P** **06 48 45.9 +0.5**
comp=Z,23nm,1.4s,mb4.7
KMI pP pP 06 48 57.2 +1.1
KMI sP sP 06 49 00.4 -0.3
KMI PP PP 06 49 47.8 -6.8
KMI PPP 06 50 00.4
KMI PcP PcP 06 51 45.1 +0.6
KMI S **S** **06 53 43.5 -0.5**
KMI sS sS 06 54 02.6 +0.9
KMI SS SS 06 55 27.5 -27
KMI SSS 06 55 47.7
KMI ScS ScS 06 59 20.2 -0.2
KMI LR LR
comp=Z,2μm,17.1s,MS4.8
CM31 Chiang Mai Arr 30.50 297 PFAKE 06 49 00.0 +14
CM31 LR LR
comp=Z,2μm,19.0s,MS4.8
CMAR Chiang Mai Arr 30.50 297 P **P** **06 48 46.0 -0.1**
comp=Z,12nm,0.9s,mb4.7,baz=128,slow=7.8,SNR=41
CMAR PcP PcP 06 51 45.5 +0.7
comp=Z,6.8nm,0.8s,baz=128,slow=2.5,SNR=7.7
CMAR ScP ScP 06 55 22.6 -1.8
comp=Z,1.0nm,0.4s,baz=106,slow=2.0,SNR=3.3
CMAR LR LR 07 01 16.3
comp=Z,3μm,20.2s,MS4.9,baz=113,slow=37
CMAR Chiang Mai Arr 30.50 297 P **P** **06 48 46.0 -0.1**
CMAR 06 51 45.5
CMAR 06 55 22.7
CHG Chiang Mai 30.63 297 ⇑P **P** **06 48 47.5 +0.3**
comp=Z,28nm,0.8s,mb5.1
CHTO Chiang Mai 30.63 297 *eP* **P** **06 48 47.2 0.0**
comp=Z,18nm,0.9s,mb4.9
CHTO LR LR
comp=Z,2μm,20.0s,MS4.8
KS15 Wonju Array Si 31.35 1 *eP* **P** **06 48 52.9 -0.4**
KSRS Korea Array 31.36 1 P **P** **06 48 53.7 +0.3**
comp=Z,23nm,0.8s,mb5.1,baz=174,slow=11,SNR=55
KSRS PcP PcP 06 51 47.0 +0.4
comp=Z,5.3nm,0.8s,baz=193,slow=2.8,SNR=6.1
KSRS LR LR 07 01 33.9
comp=Z,2μm,18.2s,MS4.7,baz=176,slow=36
KSRS Korea Array 31.36 1 P **P** **06 48 53.7 +0.3**
KSRS 06 51 47.1
KSRS pmax pmax
comp=Z,23nm,0.8s,mb5.1
KSRS MLR MLR
comp=Z,2μm,18.2s,MS4.7
INCN Inchon 31.40 359 *eP* **P** **06 48 53.7 -0.1**
comp=Z,10nm,0.4s,mb5.0
INCN LR LR
comp=Z,2μm,19.0s,MS4.8
TIA Tai'an 31.59 344 ⇑P **P** **06 48 55.0 -0.4**
TIA AMB AMB
comp=Z,27nm,0.9s,mb5.1
CTA Charters Tower 31.77 145 *eP* **P** **06 48 57.9 +0.7**
comp=Z,19nm,1.0s,mb4.9
CTA *e* 06 49 13.8
CTA *eS* **S** **06 53 57.5 -7.3**
CTA Charters Tower 31.77 145 PcP PcP 06 51 48.7 +0.6
comp=Z,12nm,0.9s,baz=299,slow=4.2,SNR=3.1
CTA Charters Tower 31.77 145 *eP* **P** **06 48 57.9 +0.7**
CTA *e* 06 49 13.8
CTA *eS* **S** **06 53 57.5 -7.3**
CTA pmax pmax
comp=Z,19nm,1.0s
CTAO Charters Tower 31.77 145 *eP* **P** **06 48 57.8 +0.6**
comp=Z,44nm,0.9s,mb5.3
CTAO *e*PcP PcP 06 51 50.2 +2.2
CTAO LR LR
comp=Z,2μm,19.0s,MS4.8
MJAR Matsushiro Arr 31.99 16 P **P** **06 48 58.4 -0.6**
comp=Z,16nm,1.1s,mb4.8,baz=195,slow=8.9,SNR=21
MJAR PcP PcP 06 51 48.5 +0.2
comp=Z,8.7nm,0.9s,baz=178,slow=2.9,SNR=7.7
MJAR LR LR 07 01 38.6
comp=Z,3μm,19.2s,MS5.0,baz=205,slow=36
MJAR Matsushiro Arr 31.99 16 P **P** **06 48 58.4 -0.5**
MJAR 06 51 48.6
MAJO Matsushiro 31.99 16 *eP* **P** **06 48 57.9 -1.0**
MAJO pmax pmax
comp=Z,240nm,2.0s,mb5.7
MAJO Matsushiro 31.99 16 *eP* **P** **06 48 57.5 -1.4**
comp=Z,242nm,2.0s,mb5.7
MAJO LR LR
comp=Z,3μm,20.0s,MS5.0
MAT Matsushiro 31.99 16 P **P** **06 48 57.7 -1.2**
MAT S **S** **06 54 12.0 +4.0**
XAN Xi'an 32.83 331 P **P** **06 49 05.0 -1.4**
XAN AP pP 06 49 15.3 -1.8
XAN AMB AMB
comp=Z,68nm,1.0s,mb5.5
XAN LR LR
comp=E,1μm,19.6s
XAN LR LR
comp=Z,2μm,18.3s,MS4.9
DL2 Dalian 33.24 352 P **P** **06 49 10.0 +0.2**
DL2 *eS* **S** **06 54 28.5 +1.1**
DL2 AMB AMB
comp=Z,70nm,1.0s,mb5.5
DL2 AMB AMB
comp=Z,450nm,3.9s
DL2 LR LR
comp=N,700nm,19.8s,MS4.5
DL2 LR LR
comp=E,660nm,18.3s,MS4.5
DL2 LR LR
comp=Z,720nm,17.5s,MS4.4
CD2 Chengdu 33.37 321 ⇓*iP* **P** **06 49 10.5 -0.6**
CD2 AP pP 06 49 21.8 -0.1
CD2 XP sP 06 49 26.0 -0.4
CD2 PP PP 06 50 22.8 -4.3
CD2 PCP PcP 06 51 51.5 -0.8
CD2 S **S** **06 54 28.5 -1.1**
CD2 PCS PcS 06 55 36.5 -1.5
CD2 SCS ScS 06 59 31.8 -3.1
CD2 AMB AMB
comp=Z,50nm,1.0s,mb5.4
CD2 AMB AMB
comp=Z,180nm,7.2s
CD2 LR LR
comp=N,2μm,16.8s,MS5.1
CD2 LR LR
comp=E,2μm,15.6s,MS5.1
CD2 LR LR
comp=Z,3μm,15.6s,MS5.0
BJT Baijiatuau 35.42 345 *eP* **P** **06 49 28.5 -0.2**
BJT *e* 06 51 59.2
BJT pmax pmax
comp=Z,120nm,1.0s
BJT MLR MLR
comp=Z,395nm,10.9s
BJT Baijiatuau 35.42 345 *eP* **P** **06 49 28.5 -0.2**
comp=Z,120nm,1.0s,mb5.8
BJT *e*PcP PcP 06 51 59.2 +1.2
BJT LR LR
comp=Z,395nm,10.9s,MS4.4
COCO West Island 35.42 239 PFAKE 06 49 40.0 +11
COCO LR LR
comp=Z,545nm,19.0s
BJI Beijing 35.44 345 P **P** **06 49 28.5 -0.4**
BJI AMB AMB
comp=Z,109nm,1.0s,mb5.7
BJI AMB AMB
comp=Z,502nm,3.6s
BJI Beijing 35.44 345 P **P** **06 49 28.4 -0.5**
BJI pmax pmax
comp=Z,109nm,1.0s,mb5.7
BJI Beijing 35.44 345 P **P** **06 49 28.4 -0.5**
comp=Z,109nm,1.0s,mb5.7
HNR Honiara 35.76 115 P **P** **06 49 32.8 +0.9**
comp=Z,110nm,0.8s,mb5.8,baz=238,slow=5.0,SNR=2.6
HNR LR LR 07 01 39.0
comp=Z,993nm,21.6s,MS4.5,baz=101,slow=32
SNY Shenyang 35.90 355 ⇓P **P** **06 49 33.0 +0.2**
SNY AMB AMB
comp=Z,115nm,1.2s,mb5.7
FORT Forrest 36.52 179 ⇓*iP* **P** **06 49 38.7 +0.5**
comp=Z,127nm,0.6s,mb5.9
FORT *eS* **S** **06 55 16.6 -1.4**
LZH Lanzhou 37.03 327 ⇓P **P** **06 49 43.3 +0.7**
LZH AP pP 06 49 52.0 -1.4
LZH XP sP 06 49 57.3 -0.7
LZH PP PP 06 51 10.5 +3.0
LZH S **S** **06 55 26.3 +0.5**
LZH SS SS 06 57 57.0 -12
LZH AMB AMB
comp=Z,118nm,1.0s,mb5.7
LZH AMB AMB
comp=Z,523nm,5.4s
LZH LR LR
comp=E,2μm,15.5s
LZH LR LR
comp=Z,3μm,16.1s,MS5.1
LZH Lanzhou 37.03 327 ⇓P **P** **06 49 43.2 +0.6**
LZH *PP pP 06 49 52.0 -1.4
LZH *SP sP 06 49 57.3 -0.7
LZH 06 51 10.5
LZH S **S** **06 55 26.3 +0.5**
LZH *SS sS 06 55 43.0 -0.7
LZH SS SS 06 57 57.0 -12
LZH pmax pmax
comp=Z,118nm,1.0s,mb5.7
LZH MLR MLR
comp=Z,3μm,16.1s,MS5.1
LZH Lanzhou 37.03 327 ⇓P **P** **06 49 43.2 +0.6**
comp=Z,118nm,1.0s,mb5.7
LZH pP pP 06 49 52.0 -1.4
LZH sP sP 06 49 57.3 -0.7
LZH PP PP 06 51 10.5 +3.0
LZH S **S** **06 55 26.3 +0.5**
LZH sS sS 06 55 43.0 -0.7
LZH SS SS 06 57 57.0 -12
LZH LR LR
comp=Z,3μm,16.1s,MS5.1
VLA Vladivostok 37.22 5 ⇑*iP* **P** **06 49 45.3 +1.2**
HHC Hu-ho-hao-te 37.57 340 ⇓P **P** **06 49 47.3 +0.2**
HHC AP pP 06 49 58.8 +0.9
HHC XP sP 06 50 03.3 +0.8
HHC PP PP 06 51 16.5 +3.2
HHC PCP PcP 06 52 05.0 +0.5
HHC S **S** **06 55 34.8 +1.0**
HHC SCP ScP 06 55 48.0 -1.0
HHC PCS PcS 06 55 52.3 -0.6
HHC SS SS 06 58 11.0 -8.7
HHC SCS ScS 06 59 54.8 -2.6
HHC AMB AMB
comp=Z,72nm,1.1s,mb5.3
HHC AMB AMB
comp=Z,676nm,6.2s
HHC LR LR
comp=N,2μm,13.6s,MS5.1
HHC LR LR
comp=E,786nm,13.9s,MS5.1
HHC LR LR
comp=Z,2μm,12.3s,MS5.0
CN2 Changchun 37.74 358 *eP* **P** **06 49 49.0 +0.5**
CN2 *e*AP pP 06 50 03.0 +3.7
CN2 *eS* **S** **06 55 37.8 +1.4**
CN2 AMB AMB
comp=Z,20nm,1.2s,mb4.7
CN2 AMB AMB
comp=Z,500nm,8.0s
CN2 LR LR
comp=N,1μm,18.0s,MS4.9
CN2 LR LR
comp=E,1μm,18.0s,MS4.9
CN2 LR LR
comp=Z,1μm,21.0s,MS4.6
KLBR Kellerberrin 38.47 193 *eP* **P** **06 49 55.5 +0.8**
comp=Z,70nm,0.9s,mb5.4
ERM Erimo 38.52 19 PFAKE 06 50 10.0 +15
ERM LR LR
comp=Z,3μm,20.0s,MS5.1
MDJ Mudanjiang 38.56 2 P **P** **06 49 56.0 +0.7**
MDJ PP PP 06 51 24.5 +0.4
MDJ PCP PcP 06 52 08.0 +0.6
MDJ S **S** **06 55 51.8 +3.1**
MDJ AMB AMB
comp=Z,100nm,1.3s,mb5.4
MDJ AMB AMB
comp=Z,656nm,9.6s
MDJ LR LR
comp=N,560nm,18.1s,MS4.6
MDJ LR LR
comp=E,615nm,19.9s,MS4.6
MDJ LR LR
comp=Z,1μm,21.2s,MS4.7
MDJ Mudanjiang 38.56 2 *eP* **P** **06 49 56.2 +0.9**
comp=Z,106nm,1.1s,mb5.5
MDJ LR LR
comp=Z,1μm,19.0s,MS4.8
MUN Mundaring 39.22 195 *eP* **P** **06 50 02.1 +1.1**
MUN *eS* **S** **06 55 46.6 -12**
SHL Shillong 39.24 304 *ex* x 06 49 47.3
SHL AMb AMB 06 49 49.8
comp=Z,117nm,0.3s,mb6.1
NWAO Narrogin (SRO) 39.87 194 P **P** **06 50 08.6 +2.2**
SNR=6.7
NWAO Narrogin (SRO) 39.87 194 LR LR 07 06 19.1
comp=Z,467nm,19.4s,baz=153,slow=36
NWAO Narrogin (SRO) 39.87 194 P **P** **06 50 07.9 +1.5**
NWAO pmax pmax
comp=Z,160nm,1.1s
NWAO Narrogin (SRO) 39.87 194 *eP* **P** **06 50 06.1 -0.3**
comp=Z,162nm,1.1s,mb5.7
NWAO LR LR
comp=Z,553nm,19.0s,MS4.4
STKA Stephens Creek 39.94 161 *eP* **P** **06 50 07.1 +0.1**
comp=Z,114nm,0.9s,mb5.6
STKA *e* 06 50 21.4
STKA *eS* **S** **06 56 06.3 -3.4**
STKA Stephens Creek 39.94 161 P **P** **06 50 07.3 +0.3**
comp=Z,132nm,1.0s,mb5.6,baz=338,slow=7.8,SNR=87
STKA LR LR 07 09 02.5
comp=Z,976nm,18.6s,MS4.7,baz=337,slow=40
LSA Lhasa 41.61 309 P **P** **06 50 22.0 +1.1**
LSA Lhasa 41.61 309 *eP* **P** **06 50 22.0 +1.1**
LSA pmax pmax
comp=Z,101nm,1.3s,mb5.3
LSA MLR MLR
comp=Z,1μm,19.0s,MS4.7
LSA Lhasa 41.61 309 *eP* **P** **06 50 22.0 +1.1**
comp=Z,101nm,1.3s,mb5.3
LSA LR LR
comp=Z,1μm,19.0s,MS4.7
GTA Gaotai 41.63 327 *eP* **P** **06 50 21.0 +0.1**
GTA AP pP 06 50 31.3 -0.6
GTA XP sP 06 50 35.5 -0.9
GTA PCP PcP 06 52 18.8 +1.4
GTA S **S** **06 56 34.8 0.0**
GTA XS sS 06 56 54.0 +1.1
GTA SS SS 06 59 34.3 -6.8
GTA AMB AMB
comp=Z,48nm,1.0s,mb5.1
GTA AMB AMB
comp=Z,487nm,4.2s
GTA LR LR
comp=N,832nm,17.7s,MS4.9
GTA LR LR
comp=E,1μm,17.1s,MS4.9
GTA LR LR
comp=Z,2μm,18.3s,MS5.0
HABR Khabarovsk 42.86 7 ⇓*iP* **P** **06 50 32.1 +1.4**
HABR *e* pP 06 50 43.9 +2.2
HABR *e* 06 52 09.9
HABR *e* 06 52 20.7
HABR *eS* **S** **06 56 56.4 +3.8**
HABR *e* 06 57 11.5
HABR *e* 07 00 30.9
HABR *e* 07 00 42.7
HABR pmax pmax
comp=Z,412nm,2.0s,mb5.8
YSS Yuzh-Sakhalins 42.91 15 ⇓*eP* **P** **06 50 30.4 -0.8**
YSS *e* 06 50 46.9
YSS *eS* **S** **06 56 52.0 -1.4**
YSS pmax pmax
comp=Z,110nm,1.1s,mb5.5
YSS MLR MLR
comp=Z,2μm,18.0s,MS4.9
YSS MLR MLR
comp=N,1μm,17.0s,MS5.0
YSS MLR MLR
comp=E,1μm,19.0s,MS5.0
YSS Yuzh-Sakhalins 42.91 15 *eP* **P** **06 50 32.2 +1.0**
comp=E,167nm,1.3s,mb5.6
YSS LR LR
comp=Z,566nm,20.0s,MS4.5
ARMA Armidale 42.91 149 *eP* **P** **06 50 32.0 +0.6**
ARMA *e* 06 50 47.8
ARMA *e* 06 51 09.0
ARMA *eS* **S** **06 56 56.7 +2.8**
KLR Kul'dur 43.28 4 *eP* **P** **06 50 31.2 -2.9**
KLR *eS* **S** **06 56 52.5 -6.3**
KLR pmax pmax
comp=Z,180nm,1.4s,mb5.6
ODAN Odare 43.47 303 *eP* **P** **06 50 35.8 -0.2**
comp=Z,203nm,1.0s,mb5.8
HIA Hailar 43.67 353 *eP* **P** **06 50 37.1 -0.1**
HIA pmax pmax
comp=Z,25nm,0.9s
HIA MLR MLR
comp=Z,990nm,19.0s
HIA Hailar 43.67 353 *eP* **P** **06 50 37.1 -0.1**
comp=Z,25nm,0.9s,mb5.0
HIA *e*ScP ScP 06 56 19.7 +7.0
HIA LR LR
comp=Z,990nm,19.0s,MS4.7
RAMN Ramite 44.16 303 *eP* **P** **06 50 41.5 -0.1**
comp=Z,279nm,1.1s,mb5.9
VIS Vishakhapatnam 44.68 289 *eP* **P** **06 50 44.6 -1.3**
VIS AMb AMB 06 50 48.2
comp=Z,49nm,1.0s,mb5.3
JIRN Jiri 44.75 304 *eP* **P** **06 50 46.3 0.0**
comp=Z,268nm,1.1s,mb6.0
GUN Gumba 45.10 304 *eP* **P** **06 50 48.8 -0.3**
comp=Z,277nm,1.1s,mb6.0
ULN Ulaanbaatar 45.28 341 P **P** **06 50 50.7 +0.5**
SNR=27
ULN Ulaanbaatar 45.28 341 P **P** **06 50 50.5 +0.3**
ULN pmax pmax
comp=Z,63nm,1.0s,mb5.4
ULN Ulaanbaatar 45.28 341 *eP* **P** **06 50 50.4 +0.3**
comp=Z,63nm,0.9s,mb5.5
ULN *e*PcP PcP 06 52 29.1 -0.5
ULN LR LR
comp=Z,2μm,19.0s,MS5.0
PKIN Phulchoki 45.38 303 *eP* **P** **06 50 50.7 -0.6**
comp=Z,149nm,1.3s,mb5.7
SONM Songino Array 45.47 340 P **P** **06 50 51.6 -0.1**
comp=Z,22nm,1.0s,mb5.0,baz=159,slow=8.5,SNR=82
SONM PcP PcP 06 52 29.6 -0.6
comp=Z,13nm,0.9s,baz=153,slow=4.6,SNR=7.0
SONM LR LR 07 13 07.0
comp=Z,982nm,18.2s,MS4.8,baz=264,slow=40
SONM Songino Array 45.47 340 P **P** **06 50 51.6 -0.1**
SONM 06 52 29.6
KKN Kakani 45.55 303 *eP* **P** **06 50 52.0 -0.7**
comp=Z,152nm,1.1s,mb5.8
DMN Daman 45.63 303 *eP* **P** **06 50 52.7 -0.6**
comp=Z,193nm,1.1s,mb5.9
CAN Canberra 45.76 155 P **P** **06 50 55.7 +1.6**
CAN Canberra 45.76 155 *eP* **P** **06 50 54.6 +0.5**
CNB Canberra Magne 45.91 155 *eP* **P** **06 50 56.5 +1.2**
GKN Gorkha 46.16 303 *eP* **P** **06 50 56.5 -1.0**
comp=Z,146nm,1.1s,mb5.8
TOO Toolangi 46.43 160 *eP* **P** **06 51 01.0 +1.7**
TOO *e* 06 52 49.1
PALK Pallekele 46.50 274 PFAKE 06 51 10.0 +10
PALK LR LR
comp=Z,754nm,19.0s,MS4.7
KOLN Koldanda 46.94 303 *eP* **P** **06 51 03.1 -0.5**
comp=Z,198nm,0.9s,mb6.0
DANN Dangsing 47.00 304 *eP* **P** **06 51 03.7 -0.4**
comp=Z,209nm,0.8s,mb6.1
DZM Mont Dzumac 47.22 127 *eP* **P** **06 51 06.9 +1.1**
DZM Mont Dzumac 47.22 127 *eP* **P** **06 51 06.2 +0.5**
ZAK Zakamensk 48.72 340 *eP* **P** **06 51 16.1 -0.8**
ZAK *e* 06 52 41.1
ZAK pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
HYB Hyderabad 49.14 288 *iP* **P** **06 51 20.5 -0.3**
HYB Hyderabad 49.14 288 *eP* **P** **06 51 20.5 -0.3**
NGP Nagpur 49.26 293 *eP* **P** **06 51 20.0 -1.6**
NGP AMb AMB 06 51 21.8
comp=Z,76nm,1.2s,mb5.6
KOD Kodaikanal 49.69 278 *eP* **P** **06 51 25.2 +0.2**
TLY Talaya 49.69 341 P **P** **06 51 24.6 +0.2**
comp=Z,198nm,1.0s,mb6.1,SNR=6.0
TLY Talaya 49.69 341 P **P** **06 51 25.2 +0.8**
SNR=10.0
TLY Talaya 49.69 341 *eP* **P** **06 51 24.6 +0.2**
TLY pmax pmax
comp=Z,45nm,1.0s,mb5.5
TLY MLR MLR
comp=Z,741nm,17.0s,MS4.8
TLY Talaya 49.69 341 *eP* **P** **06 51 24.7 +0.4**
comp=Z,56nm,1.3s,mb5.4
TLY LR LR
comp=Z,947nm,20.0s,MS4.8
IRK Irkutsk 49.97 342 ⇑*iP* **P** **06 51 26.4 -0.1**
IRK pmax pmax
comp=Z,73nm,1.8s,mb5.4
TRD Trivandrum 50.19 276 *eP* **P** **06 51 27.8 -1.0**
TRD AMb AMB 06 51 33.5
comp=Z,57nm,1.5s,mb5.4
PTH Pithoragarh 50.33 304 *eP* **P** **06 51 29.9 +0.3**
MOY Mondy 50.59 339 *eP* **P** **06 51 31.5 +0.3**
MOY pmax pmax
comp=Z,96nm,2.0s,mb5.4
CLNS Chul'man 50.80 358 *eP* **P** **06 51 33.0 +0.4**
CLNS *e* 06 52 48.5
CLNS *e* 06 53 30.5
CLNS pmax pmax
comp=Z,63nm,0.9s,mb5.5
CLNS pmax pmax
comp=N,47nm,1.0s
CLNS pmax pmax
comp=E,14nm,1.1s
CLNS MLR MLR
comp=Z,832nm,18.0s,MS4.8
CLNS MLR MLR
comp=N,509nm,18.0s,MS4.7

CLNS MLR MLR
comp=E,382nm,14.0s,MS4.7
AKL Akola 51.05 292 *e*P **P 06 51 35.2 0.0**
AKL AMb AMB 06 51 36.9
comp=Z,143nm,0.8s,mb6.0
WMQ Urumqi 51.39 324 P **P 06 51 37.5 +0.2**
WMQ AP pP 06 51 47.5 -1.0
WMQ XP sP 06 51 51.5 -1.5
WMQ PCP PcP 06 52 52.0 +0.4
WMQ PP PP 06 53 35.0 +0.3
WMQ *e*S **S 06 58 53.0 -1.3**
WMQ SCS ScS 07 01 22.0 -2.8
WMQ AMB AMB
comp=Z,32nm,1.3s,mb5.1
WMQ AMB AMB
comp=Z,621nm,5.1s
WMQ LR LR
comp=N,5μm,16.8s,MS5.7
WMQ LR LR
comp=E,3μm,15.0s,MS5.7
WMQ LR LR
comp=Z,4μm,18.3s,MS5.5
TAU Tasmania Unive 51.85 162 *e*P **P 06 51 41.6 +0.9**
TAU pmax pmax
comp=Z,85nn,1.3s,mb5.5
TAU Tasmania Unive 51.85 162 *e*P **P 06 51 41.6 +0.9**
comp=Z,85nn,1.3s,mb5.5
NDI New Delhi 52.59 302⇑ *i*P **P 06 51 44.0 -2.6**
BOD Bodaibo 52.80 351 *e*P **P 06 51 47.2 -0.4**
BOD pmax pmax
comp=Z,80nm,1.1s,mb5.6
PEA0B Petropavlovsk- 53.10 22 *e*P **P 06 51 50.8 +0.9**
PETK Petropavlovsk- 53.10 22 P **P 06 51 51.4 +1.6**
comp=Z,59nn,0.8s,mb5.5,baz=188,slow=1.4,SNR=60
PETK Petropavlovsk- 53.10 22 P **P 06 51 51.4 +1.6**
KAD Karad 53.27 287 *e*P **P 06 51 50.9 -0.9**
KAD AMb AMB 06 51 52.9
comp=Z,60nm,1.1s,mb5.4
SMLA Simla 53.32 305 *i* P **P 06 51 52.2 +0.2**
comp=Z,79nm,0.3s,mb6.1
SMLA *ex* x 06 51 53.8
comp=Z,81nm,0.3s
SMLA *i* x x 06 59 25.4
PET Petropavlovsk 53.40 23 *e*P **P 06 51 48.5 -3.6**
PET *e*S **S 06 59 17.3 -4.2**
PET pmax pmax
comp=Z,109nm,0.9s,mb5.8
PET pmax pmax
comp=Z,900nm,6.1s
PET Petropavlovsk 53.40 23 P **P 06 51 49.9 -2.2**
comp=Z,85nn,1.1s,mb5.6
POO Poona 53.72 289 *e*P **P 06 51 54.4 -0.7**
POO AMb AMB 06 52 09.0
comp=Z,59nn,1.1s,mb5.5
AJM Ajmer 54.28 298 *i* P **P 06 51 58.0 -1.0**
DLH Dalhousie 54.72 306 *e*P **P 06 52 00.0 -2.1**
THN Thein Dam 54.89 306 *e*P **P 06 52 01.7 -1.6**
YAK Yakutsk 55.99 1 *e*P **P 06 52 10.6 -0.1**
YAK pmax pmax
comp=E,13nm,1.5s
YAK pmax pmax
comp=Z,136nm,0.9s,mb6.0
YAK pmax pmax
comp=N,66nm,1.0s
YAK Yakutsk 55.99 1 *e*P **P 06 52 10.7 +0.1**
comp=N,109nm,0.8s,mb5.9
YAK LR LR
comp=Z,1μm,19.0s,MS4.9
MK31 Makanchi Array 56.21 324 P **P 06 52 12.7 +0.2**
MK31 Makanchi Array 56.21 324 *e*P **P 06 52 12.5 0.0**
MKAR Makanchi Array 56.21 324 P **P 06 52 12.5 -0.1**
comp=Z,31nm,0.7s,mb5.4,baz=116,slow=8.2,SNR=157
MKAR LR LR 07 19 02.4
comp=Z,826nm,19.6s,MS4.8,baz=119,slow=39
KSH Kashi 57.05 314 P **P 06 52 20.0 +1.3**
KSH *e*AP pP 06 52 30.0 0.0
KSH *e*XP sP 06 52 34.3 -0.2
KSH *e*PCP PcP 06 53 15.0 +1.6
KSH *e*PP PP 06 54 27.0 +1.2
KSH *e*SCP ScP 06 57 10.3 0.0
KSH *e*PCS PcS 06 57 14.0 -0.3
KSH *e*S **S 07 00 08.0 -2.9**
KSH *e*SCS ScS 07 02 03.0 -2.2
KSH *e*SS SS 07 03 58.0 -2.1
KSH AMB AMB
comp=Z,828nm,3.2s
KSH LR LR
comp=N,2μm,14.6s,MS5.5
KSH LR LR
comp=E,2μm,12.3s,MS5.5
KSH LR LR
comp=Z,796nm,14.8s,MS5.0
ULHL Ulahol 57.92 317 P **P 06 52 25.0 +0.2**
SNR=12
BHJ Bhuj 58.19 294 *e*P **P 06 52 26.3 -0.7**
BHJ AMb AMB 06 52 29.2
comp=Z,107nm,0.7s,mb6.0
KZA Kyzart 58.53 316 P **P 06 52 30.7 +1.7**
SNR=16
TKM2 Tokmak 2 58.63 317 *e*P **P 06 52 29.9 +0.2**
TKM2 pmax pmax
comp=Z,39nn,1.1s,mb5.3
TKM2 MLR MLR
comp=Z,2μm,21.0s,MS5.2
TKM2 Tokmak 2 58.63 317 P **P 06 52 30.1 +0.4**
SNR=27
TKM2 Tokmak 2 58.63 317 *e*P **P 06 52 29.9 +0.2**
comp=Z,39nn,1.1s,mb5.3
TKM2 LR LR
comp=Z,2μm,21.0s,MS5.2
KBK Karagaybulak 58.96 317 P **P 06 52 32.6 +0.6**
SNR=12
ZAA0 Zalesovo Array 58.99 332 *e*P **P 06 52 31.0 -1.0**
ZALV Zalesovo Beam 58.99 332 P **P 06 52 31.0 -0.9**
comp=Z,17nn,0.4s,mb5.5,baz=114,slow=6.6,SNR=95
ZALV LR LR 07 20 05.1
comp=Z,621nm,18.5s,MS4.8,baz=24,slow=38
ZALV PKP2bc 07 22 15.2
comp=Z,1.1nm,0.5s,baz=308,slow=4.9,SNR=4.2
ZALV Zalesovo Beam 58.99 332 P **P 06 52 31.0 -1.0**
ZALV LR LR 07 20 05.1
ZALV ⇑*e* 07 22 15.2
UCH Uchtor 59.10 316 P **P 06 52 33.8 +0.8**
SNR=48
UCH Uchtor 59.10 316 *e*P **P 06 52 34.0 +1.0**
comp=Z,56nm,0.9s,mb5.6
UCH *e*pP pP 06 52 40.5 -3.8
CHMS Chumysh 59.23 317 P **P 06 52 33.7 -0.1**
SNR=12
FRU Bishkek 59.26 317 *e*P **P 06 52 33.0 -1.1**
FRU pmax pmax
comp=Z,70nm,2.0s,mb5.3
AAK Ala-Archa 59.26 317 P **P 06 52 34.5 +0.4**
SNR=13
USP Ospenovka 59.50 317 P **P 06 52 35.8 0.0**
SNR=43
AML Almayashu 59.63 316 P **P 06 52 37.3 +0.6**
SNR=16
AML Almayashu 59.63 316 *e*P **P 06 52 37.1 +0.5**
comp=Z,2.3nm,1.6s
AML LR LR
comp=Z,2μm,20.0s,MS5.2
SEY Seymchan 59.71 13⇑ *e*P **P 06 52 37.3 +0.5**
EKS2 Erkin-Say 59.77 316 P **P 06 52 38.1 +0.6**
SNR=27
EKS2 Erkin-Say 59.77 316 *e*P **P 06 52 38.0 +0.4**
comp=Z,33nm,0.8s,mb5.4
EKS2 LR LR
comp=Z,815nm,20.0s,MS4.9
NVS Novosibirsk 60.27 332⇓ *i*P **P 06 52 39.0 -1.8**
NVS *e*S **S 07 00 47.6 -4.6**
NVS pmax pmax
comp=N,83nm,1.3s
NVS pmax pmax
comp=E,98nm,1.3s
NVS pmax pmax
comp=Z,149nm,1.3s,mb5.9
NVS smax
comp=N,91nm,2.9s
NVS smax
comp=E,63nm,2.9s
KURK Kurchatov 60.31 327 P **P 06 52 41.6 +0.4**
comp=E,1μm,0.9s
KURK Kurchatov 60.31 327 LR LR 07 23 57.4
comp=E,521nm,18.4s,MS4.7,baz=40,slow=41
KURK Kurchatov 60.31 327 *e*P **P 06 52 41.0 -0.2**
KURK pmax pmax
comp=Z,225nm,1.1s,mb6.1
KURK MLR MLR
comp=Z,619nm,19.0s,MS4.8
KURK Kurchatov 60.31 327 *e*P **P 06 52 41.0 -0.2**
comp=Z,225nm,1.1s,mb6.1
KURK LR LR
comp=Z,619nm,19.0s,MS4.8
KBL Kabul 60.82 306 *e*P **P 06 52 44.6 -0.3**
KBL pmax pmax
comp=Z,66nm,1.0s,mb5.7
KBL Kabul 60.82 306 *e*P **P 06 52 44.6 -0.3**
comp=Z,66nm,1.0s,mb5.7
KK31 Karatay Array 62.17 316 *i* P **P 06 52 53.0 -0.9**
KK31 pmax pmax
comp=Z,117nm,1.4s,mb5.8
AFI Afiamalu 63.39 109 PFAKE 06 53 20.0 +18
AFI LR LR
comp=Z,1μm,19.0s,MS5.0
SNZO South Karori 63.80 142 PFAKE 06 53 20.0 +15
SNZO LR LR
comp=Z,977nm,19.0s,MS5.0
ADK Adak 64.71 35 PFAKE 06 53 20.0 +10
ADK LR LR
comp=Z,1μm,21.0s,MS5.0
TIXI Tiksi 65.63 0 *e*P **P 06 53 15.0 -1.1**
comp=Z,86nm,1.3s,mb5.6
TIXI LR LR
comp=Z,945nm,20.0s,MS5.0
BVA0 Borovoye Array 65.91 326 *i* P **P 06 53 17.7 -0.5**
BVA0 pmax pmax
comp=Z,53nm,1.3s,mb5.4
BVAR Borovoye Array 65.91 326 LR LR 07 25 16.0
comp=Z,634nm,18.8s,MS4.8,baz=105,slow=39
BRVK Borovoye 65.98 326 P **P 06 53 18.3 -0.4**
comp=Z,2μm,0.9s,SNR=64
BRVK Borovoye 65.98 326 P **P 06 53 18.8 +0.1**
SNR=68
BRVK Borovoye 65.98 326 *e*P **P 06 53 18.5 -0.2**
BRVK pmax pmax
comp=Z,301nm,1.0s,mb6.3
BRVK MLR MLR
comp=Z,1μm,19.0s,MS5.1
BRVK Borovoye 65.98 326 *e*P **P 06 53 18.5 -0.2**
comp=Z,301nm,1.0s,mb6.3
BRVK LR LR
comp=Z,1μm,19.0s,MS5.1
BILL Bilibino 67.23 15κ *i*P **P 06 53 26.4 0.0**
BILL *e* 06 53 34.3
BILL *e* 06 53 53.5
BILL pmax pmax
comp=Z,78nm,2.0s,mb5.4
BILL MLR MLR
comp=Z,800nm,19.0s,MS5.0
BILL Bilibino 67.23 15 *e*P **P 06 53 26.5 +0.1**
comp=Z,74nm,1.4s,mb5.5
BILL LR LR
comp=Z,885nm,21.0s,MS5.0
JMDO Jabal Madar 68.73 292 P **P 06 53 36.5 -0.2**
SNR=7.5
BIDO Bidbid 68.75 293 P **P 06 53 36.9 +0.1**
SNR=19
SMDO Samad 68.81 292 P **P 06 53 37.0 -0.1**
SNR=5.6
HOQ Hoqain 69.50 293 P **P 06 53 41.4 -0.1**
SNR=13
NIKO Nikolski 69.57 35 *e*P **P 06 53 41.8 +0.4**
comp=Z,170nm,1.1s,mb5.9
NIKO *e*pP pP 06 53 49.1 -3.8
ABKT Ailbek 70.13 308 P **P 06 53 45.8 +0.7**
comp=Z,436nm,0.9s,mb6.4,SNR=16
BANOM Banah 70.53 295 P **P 06 53 48.5 +0.8**
SNR=6.4
HATD Hatta, Dubai 70.63 294 P **P 06 53 48.4 0.0**
SNR=8.8
AB31 Akbulak array 70.94 320⇑ *e*P **P 06 53 49.3 -0.5**
UNV Unalaska Valle 71.17 35 *e*P **P 06 53 51.3 +0.2**
comp=Z,215nm,1.0s,mb6.0
AKUT Akutan 71.67 35 *e*P **P 06 53 54.5 +0.5**
comp=Z,360nm,1.1s,mb6.2
RBK Rabkut 72.33 286 P **P 06 53 58.9 +0.1**
SNR=5.1
AKTO Aktyubinsk 72.42 321 P **P 06 53 58.1 -0.6**
AKTO pmax pmax
comp=Z,23nm,1.1s,mb5.0
SVE Sverdlovsk 72.50 328⇑ *e*P **P 06 53 58.6 -0.4**
SVE pmax pmax
comp=Z,210nm,1.2s,mb5.9
MSEY Mahe Island 72.69 263 PFAKE 06 54 10.0 +9.0
MSEY LR LR
comp=Z,707nm,19.0s,MS5.0
WHFO Wadi Hawf 72.74 287 P **P 06 54 01.0 -0.2**
SNR=7.3
CASY Casey 73.10 187⇓ *i*P **P 06 54 03.2 +0.9**
ARU Arti 73.50 327 P **P 06 54 04.7 -0.2**
comp=Z,650nm,1.2s,mb6.4,SNR=25
ARU Arti 73.50 327 *e*P **P 06 54 03.9 -1.0**
ARU pmax pmax
comp=Z,121nm,1.0s,mb5.8
ARU MLR MLR
comp=Z,504nm,19.0s,MS4.8
ARU Arti 73.50 327 *e*P **P 06 54 03.9 -1.0**
comp=Z,121nm,1.0s,mb5.8
ARU LR LR
comp=Z,504nm,19.0s,MS4.8
SDPT Sand Point 74.94 34 *e*P **P 06 54 13.8 +0.5**
comp=Z,242nm,0.9s,mb6.1
RAR Rarotonga 76.19 113 LR LR 07 24 47.5
comp=Z,501nm,18.6s,MS4.8,baz=88,slow=33
MIR Mirnyy 76.48 193⇓ *i*P **P 06 54 23.0 +1.2**
MIR *i* pP 06 54 37.0 +3.5
MIR pmax pmax
comp=Z,300nm,1.0s,mb6.2
UMR Umm Al-Rimmam 78.22 299 *e*P **P 06 54 31.7 -0.8**
baz=299
UMR AMb AMB 06 54 33.2
comp=Z,175nm,1.1s,mb5.9,baz=299
RDF Al-Radifah 78.37 298 *e*P **P 06 54 32.3 -1.1**
baz=298
RDF AMb AMB 06 54 34.0
comp=Z,166nm,1.1s,mb5.9,baz=298
SVW2 Sparrevohn 78.50 29 *e*P **P 06 54 35.1 +1.8**
MIB Mutribah 78.55 299 *e*P **P 06 54 33.4 -0.9**
baz=299
MIB AMb AMB 06 54 35.0
comp=Z,243nm,0.9s,mb6.1,baz=299
TTA Tatalina 78.59 27 *e*P **P 06 54 35.3 +1.5**
NAY Al-Naaiem 78.64 299 *e*P **P 06 54 33.4 -1.3**
baz=299
NAY AMb AMB 06 54 35.4
comp=Z,102nm,1.0s,mb5.7,baz=299
MAK Makhachkala 78.66 312 *e*P **P 06 54 34.1 -0.5**
MAK *e* pP 06 54 44.1 -2.2
MAK *i* S 07 04 28.1 -1.0
MAK *e* 07 04 52.8
MAK *e*SS SS 07 09 33.6 0.0
MAK pmax pmax
comp=Z,31nm,0.3s,mb5.7
MAK MLR MLR
comp=Z,617nm,18.0s,MS5.0
RST Umm Al-Ruwaisa 78.85 299 *e*P **P 06 54 34.6 -1.3**
baz=299
RST AMb AMB 06 54 36.3
comp=Z,224nm,0.9s,mb6.1,baz=299
KDAK Kodiak Island 79.61 32 P **P 06 54 40.5 +1.0**
comp=Z,727nm,0.8s,SNR=7.4
KDAK Kodiak Island 79.61 32 *e*P **P 06 54 39.4 -0.1**
comp=Z,123nm,0.9s,mb5.8
KDAK LR LR
comp=Z,263nm,20.0s,MS4.6
DGRG David-gareji 80.20 311 P **P 06 54 43.7 +0.7**
MTA Mtatsminda 80.64 311 P **P 06 54 45.3 0.0**
GNI Garni 80.67 310 *e*P **P 06 54 46.4 +0.8**
GNI Garni 80.67 310 *e*P **P 06 54 46.2 +0.6**
GNI pmax pmax
comp=Z,172nm,1.4s
GNI MLR MLR
comp=Z,418nm,21.0s
GNI Garni 80.67 310 *e*P **P 06 54 46.2 +0.6**
comp=Z,172nm,1.4s,mb5.8
GNI LR LR
comp=Z,418nm,21.0s,MS4.8
TBLG Delisi 80.68 311 *e*P **P 06 54 45.8 +0.2**
TBLG Delisi 80.68 311 P **P 06 54 45.8 +0.2**
KTH Kantishna Hill 80.95 27 *e*P **P 06 54 45.9 -0.6**
comp=Z,102nm,1.1s,mb5.7
BPAW Bear Paw Mtn. 80.97 26 *e*P **P 06 54 47.4 +0.7**
comp=Z,6μm,1.2s
BPAW *e*PP PP 06 57 46.1 -5.4
SLKM Skilak Lake 81.05 30 P **P 06 54 47.6 +0.5**
SLKM Skilak Lake 81.05 30 *e*P **P 06 54 47.2 0.0**
GOR Gori 81.15 311 P **P 06 54 49.1 +1.0**
CLDR Caldiran 81.31 309 *e*P **P 06 54 50.0 +1.0**
RC01 Rabbit Creek A 81.32 29 *e*P **P 06 54 48.5 -0.1**
comp=Z,75nm,1.1s,mb5.5
SEW Seward 81.41 30 *e*P **P 06 54 49.6 +0.6**
HAKT HAKKARI 81.50 307 *i* P **P 06 54 47.7 -2.3**
COLD Coldfoot 81.56 23 *e*P **P 06 54 51.3 +1.5**
comp=Z,121nm,0.9s,mb5.8
ONI Oni 81.64 312 P **P 06 54 51.2 +0.6**
PMR Palmer 81.64 29 *e*P **P 06 54 48.9 -1.4**
PMR pmax pmax
comp=Z,166nm,1.1s,mb5.9
PMR Palmer 81.64 29 *e*P **P 06 54 48.9 -1.4**
comp=Z,166nm,1.1s,mb5.9
VANB Van 81.73 308 *e*P **P 06 54 51.7 +0.4**
KARS Kars 81.93 310 *e*P **P 06 54 53.2 +1.0**
AGRB Hanur-Agry 82.02 309 *e*P **P 06 54 53.5 +0.7**
KIV Kislovodsk 82.18 313 P **P 06 54 54.5 +1.0**
SNR=5.6
KIV Kislovodsk 82.18 313 *d i*P **P 06 54 53.7 +0.2**
KIV *e**PP pP 06 55 02.0 -3.3
KIV *e**SP sP 06 55 09.1 -0.5
KIV *i* 07 05 05.7
KIV *e* 07 05 11.6
KIV pmax pmax
comp=Z,114nm,1.3s,mb5.6
KIV Kislovodsk 82.18 313⇓ *i*P **P 06 54 53.4 -0.1**
KIV Kislovodsk 82.18 313 *e*P **P 06 54 53.4 -0.1**
comp=Z,71nm,0.9s,mb5.6
KIV LR LR
comp=Z,632nm,19.0s,MS5.0
COLA College 82.37 25 PFAKE 06 55 10.0 +16
COLA LR LR
comp=Z,631nm,21.0s,MS5.0
ABPO Ambohimpanom 82.79 250 *e*P **P 06 54 57.8 +0.7**
comp=Z,42nm,0.9s,mb5.5
ABPO LR LR
comp=Z,659nm,20.0s,MS5.0
ARTV Artvin 82.80 311 *i* P **P 06 54 51.3 -5.5**
BCA Borcka 83.02 311 *e*P **P 06 54 57.2 -0.7**
EYAK Cordova Ski Ar 83.26 30 *e*P **P 06 54 55.4 -3.3**
comp=Z,178nm,1.4s,mb5.9
ERZM Erzurum 83.27 309 *i* P **P 06 55 00.9 +1.7**
EZM Erzurum 83.27 309 *e*P **P 06 55 00.7 +1.5**
BEST Besiri 83.42 307 *i* P **P 06 55 02.3 +2.2**
MARD Mardin 83.84 307 *i* P **P 06 55 02.9 +0.7**
KLMR Klimovskoe 83.87 331 *i* P **P 06 55 01.2 -0.6**
KLMR pmax pmax
comp=Z,326nm,1.3s,mb6.3
VOR Voronezh 84.33 321 *e*P **P 06 55 03.0 -1.4**
VOR pmax pmax
comp=Z,300nm,1.2s,mb6.3
SOC Sochi 84.34 313 *d i*P **P 06 55 03.6 -1.1**
SOC *e**SP sP 06 55 19.2 -1.6
SOC *e* 06 58 15.8
SOC *e*S S 07 05 24.6 -3.3
VSR Storozhevoye 84.37 321 *e*P **P 06 55 03.9 -0.7**
VSR pmax pmax
comp=Z,30nm,1.0s,mb5.4
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=E,70nm,0.9s
EZC Erzincan 84.47 309 *e*P **P 06 55 08.1 +2.7**
GUMT Gumushane 84.68 310 *e*P **P 06 55 07.3 +0.8**
PTK Pertek 84.84 308 *e*P **P 06 55 08.3 +1.0**
SVRC Sivrice-ELAZID 84.94 308 *e*P **P 06 55 08.3 +0.5**
MOS Moscow 85.06 325 *e*P **P 06 55 06.1 -1.9**
MOS *e* 06 58 25.2
MOS *e*PPP 07 00 19.3
MOS *e*S S 07 05 27.8 -6.8
MOS pmax pmax
comp=Z,241nm,1.2s,mb6.2
ELZG Elazig 85.19 308 *i* P **P 06 55 04.3 -4.8**
URFA Urfa 85.39 307 *e*P **P 06 55 10.8 +0.8**
GRSN GIRESUNGRSN 85.58 311 *i* P **P 06 55 10.3 -0.6**
LVZ Lovozero 85.61 338 PFAKE 06 55 20.0 +9.5
LVZ LR LR
comp=Z,645nm,20.0s,MS5.0
MALT Malatya 85.64 308 *e*P **P 06 55 12.2 +0.9**
MALT Malatya 85.64 308 *e*P **P 06 55 11.6 +0.3**
MALT pmax pmax
comp=Z,94nm,1.2s,mb5.9
MALT MLR MLR
comp=Z,395nm,19.0s,MS4.8
MALT Malatya 85.64 308⇑ *i*P **P 06 55 11.8 +0.5**
MALT Malatya 85.64 308 *e*P **P 06 55 11.6 +0.3**
comp=Z,94nm,1.2s,mb5.9
MALT LR LR
comp=Z,395nm,19.0s,MS4.8
MYA Malataya 85.64 308 *e*P **P 06 55 12.3 +1.0**
OBN Obninsk 85.71 325 P **P 06 55 10.5 -0.7**
comp=Z,758nm,0.7s,SNR=7.2
OBN Obninsk 85.71 325 *d i*P **P 06 55 10.6 -0.6**
OBN *i**SP sP 06 55 24.6 -2.8
OBN pmax pmax
comp=Z,248nm,1.4s,mb6.2
OBN MLR MLR
comp=Z,600nm,19.0s,MS5.0
OBN Obninsk 85.71 325 *e*P **P 06 55 10.9 -0.3**
comp=Z,183nm,1.1s,mb6.2
OBN LR LR
comp=Z,812nm,21.0s,MS5.1
ATAB Bozova 85.80 307 *i* P **P 06 55 12.9 +0.8**
ANN Anapa 85.91 314 *e*P **P 06 55 10.5 -2.0**
ANN *e*S S 07 05 32.9 -10
ANN pmax pmax
comp=Z,232nm,1.4s,mb6.2
TBI Tubuai 85.97 114 *e*P **P 06 55 15.2 +2.0**
comp=Z,158nm,1.0s,mb6.2
AKCD Akcadag 86.03 308 *i* P **P 06 55 12.5 -0.7**
DAWY Dawson 86.06 26 *e*P **P 06 55 12.6 -0.2**
DARE Darende-Malaty 86.07 309 *e*P **P 06 55 15.8 +2.4**
MAW Mawson 86.09 200 *e*P **P 06 55 13.5 +0.7**
comp=Z,11nm,1.0s,mb5.0
MAW Mawson 86.09 200 P **P 06 55 13.9 +1.1**
comp=Z,10.0nm,1.0s,mb5.0,baz=68,slow=6.3,SNR=10.0
MAW LR LR 07 27 08.3
comp=Z,289nm,20.5s,MS4.7,baz=33,slow=31
APA Apatity 86.12 337⇓ *i*P **P 06 55 12.6 -0.4**
APA *e*S S 07 05 43.0 -1.5
APA pmax pmax
comp=Z,54nm,1.1s,mb5.7
APA MLR MLR
comp=Z,900nm,16.0s,MS5.3
RSDY Resadiye-TOKAT 86.33 310 *e*P **P 06 55 14.5 -0.2**
PMOR Pomariorio Ree 86.33 105 *e*P **P 06 55 17.6 +2.5**
comp=Z,391nm,1.5s,mb6.4
GZT Gaziantep 86.39 307 *i* P **P 06 55 15.7 +0.7**
SBA Scott Base 86.41 172 P **P 06 55 15.4 +1.2**
SBA pmax pmax
comp=Z,70nm,1.4s,mb5.7
SBA Scott Base 86.41 172 *e*P **P 06 55 15.3 +1.0**
comp=Z,70nm,1.4s,mb5.7
SBA LR LR
comp=Z,466nm,19.0s,MS4.9
MEH Mehetia 86.53 108 *e*P **P 06 55 18.0 +2.0**
comp=Z,3μm,1.4s
VAH Vaihoa 86.61 106 *e*P **P 06 55 18.7 +2.2**
comp=Z,120nm,1.2s,mb6.0
SVSK Karacayir 86.62 310 *e*P **P 06 55 16.5 +0.4**
PINB Pinarbasi 87.19 308 *i* P **P 06 55 19.4 +0.5**
HYT Haines Junctio 87.29 29 P **P 06 55 19.1 +0.2**
ANDN Andirin 87.34 307 *i* P **P 06 55 19.7 +0.1**
COBT Iskenderun 87.51 306 *i* P **P 06 55 22.2 +1.7**
JOF Joensuu 87.57 333 *ep* **P 06 55 18.5 -1.7**
comp=Z,22nm,0.6s,mb5.6
JOF Joensuu 87.57 333 *e*P **P 06 55 18.5 -1.7**
JOF pmax pmax
comp=Z,22nm,0.6s,mb5.6
YURE YUREGIR 87.98 307 *i* P **P 06 55 24.4 +1.7**
KEV Kevo 88.09 340 PFAKE 06 55 30.0 +7.5
KEV LR LR
comp=Z,657nm,20.0s,MS5.0
CTKT Corum 88.23 310 *i* P **P 06 55 23.7 -0.2**
AVNT Avonos 88.38 309 *i* P **P 06 55 22.2 -2.4**
ARCES ARCESS Array B 88.65 340 P **P 06 55 24.0 -1.2**
comp=Z,27nm,0.8s,mb5.6,baz=84,slow=5.1,SNR=49
ARCES PKKP PKKPbc 07 13 06.4 -2.3
comp=Z,3.6nm,0.8s,baz=222,slow=1.6,SNR=7.0

SIT Sitka 88.95 33 PFAKE 06 55 40.0 +13
SIT LR LR
comp=Z,1µm,19.0s,MS5.3
KBS Kingsbay 88.97 350 PFAKE 06 55 40.0 +13
KBS LR LR
comp=Z,797nm,19.0s,MS5.2
BALT Daday 89.18 312 *i* P **P 06 55 28.3 0.0**
MEST Erdemli 89.19 307 *i* P **P 06 55 28.8 +0.3**
BR131 Keskin Array S 89.21 310 *eP* **P 06 55 27.5 -1.0**
comp=Z,10.0nm,0.9s,mb5.2
BR131 LR LR
comp=Z,316nm,20.0s,MS4.7
ANTO Ankara 89.84 310 P **P 06 55 31.5 +0.1**
SNR=5.2
ANTO Ankara 89.84 310 PFAKE 06 55 40.0 +8.6
ANTO LR LR
comp=Z,382nm,20.0s,MS4.8
KAF Kangasniemi 90.00 333 *ep* **P 06 55 30.6 -1.1**
comp=Z,8.0nm,0.7s,mb5.2,baz=72,slow=4.3
KAF Kangasniemi 90.00 333 *eP* **P 06 55 30.6 -1.1**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb5.2
CSS Prodhromos 90.05 305 *eP* **P 06 55 32.2 -0.3**
comp=Z,20nm,0.8s,mb5.5
KMBO Kilima Mbogo 90.37 269 P **P 06 55 34.1 -0.3**
comp=Z,15nm,1.0s,mb5.3,baz=56,slow=6.4,SNR=15
KMBO LR LR 07 33 37.9
comp=Z,231nm,18.3s,MS4.7,baz=353,slow=34
KMBO Kilima Mbogo 90.37 269⇑ *eP* **P 06 55 36.0 +1.6**
KMBO Kilima Mbogo 90.37 269 *eP* **P 06 55 35.3 +0.9**
comp=Z,50nm,1.4s,mb5.7
KMBO LR LR
comp=Z,500nm,20.0s,MS4.9
AKASG Malin Array Be 90.67 321 P **P 06 55 33.6 -1.4**
comp=Z,19nm,0.9s,mb5.5,baz=70,slow=3.9,SNR=59
AKASG LR LR 07 41 26.8
comp=Z,652nm,19.8s,MS5.1,baz=0.0,slow=39
AKBB Malin Array Si 90.67 321 P **P 06 55 34.0 -1.0**
AKBB Malin Array Si 90.67 321 *eP* **P 06 55 33.4 -1.7**
WRAK Wrangell Islan 90.68 33 PFAKE 06 55 50.0 +15
WRAK LR LR
comp=Z,839nm,21.0s,MS5.2
KIEV Kiev 90.68 321 *eP* **P 06 55 33.4 -1.7**
comp=Z,36nm,1.1s,mb5.6
KIEV LR LR
comp=Z,611nm,19.0s,MS5.1
HENT Hendek 91.14 311 *i* P **P 06 55 37.1 -0.3**
DLBC Dease Lake 91.46 31 *eP* **P 06 55 38.2 -0.3**
ISP Isparta 91.90 308 PFAKE 06 55 50.0 +9.0
ISP LR LR
comp=Z,408nm,19.0s,MS4.9
TIRR Tirgusor 92.34 315⇑ *iP* **P 06 55 42.0 -0.9**
TIRR Tirgusor 92.34 315 *eP* **P 06 55 41.6 -1.3**
comp=Z,7.5nm,0.8s,mb5.1
ULDT Uludag 92.58 311 *i* P **P 06 55 43.5 -0.6**
SUW Suwalki 93.57 325 *eP* **P 06 55 47.5 -0.8**
SUW Suwalki 93.57 325 *eP* **P 06 55 47.5 -0.8**
MLR Muntele Rosu 93.85 316 ⇓ *iP* **P 06 55 48.9 -0.9**
MLR Muntele Rosu 93.85 316 ⇓ *P* **P 06 55 48.9 -0.9**
BURAR Bucovina Array 93.87 319⇑ *iP* **P 06 55 49.3 -0.6**
BURAR Bucovina Array 93.87 319⇑ *P* **P 06 55 49.3 -0.6**
BUR08 Bucovina Ar. S 93.87 319 *eP* **P 06 55 49.7 -0.2**
LVV L'vov 94.11 321 *eP* **P 06 55 49.0 -2.0**
SYO Syowa Base 94.76 201⇑ *eP* **P 06 55 52.6 -0.8**
KWP Kalwaria 94.99 321 *eP* **P 06 55 55.1 +0.1**
KWP Kalwaria 94.99 321 P **P 06 55 54.9 -0.1**
KWP pmax pmax
comp=Z,50nm,1.1s,mb5.9
KWP Kalwaria 94.99 321 ⇓ *iP* **P 06 55 54.3 -0.7**
DAG Danmarks Havn 95.17 353⇑ *eP* **P 06 55 54.0 -1.3**
DAG pmax pmax
comp=Z,36nm,1.2s,mb5.7
DAG Danmarks Havn 95.17 353⇑ *iP* **P 06 55 54.0 -1.3**
comp=Z,36nm,1.2s,mb5.7
DAG Danmarks Havn 95.17 353⇑⇑ *eP* **P 06 55 54.0 -1.3**
comp=Z,36nm,1.2s,mb5.7
KOLS Kolonicke sedl 95.45 320 *eP* **P 06 55 57.0 -0.1**
UZH Uzhgorod 95.52 320 *d iP* **P 06 55 56.0 -1.4**
DRGR 95.73 318⇑ *iP* **P 06 55 58.4 0.0**
DRGR 95.73 318⇑⇑ *P* **P 06 55 58.4 -0.1**
STHS Stebnicka Huta 95.97 321 *eP* **P 06 55 59.3 -0.2**
STHS pmax pmax
comp=Z,13nm,1.4s,mb5.2
STHS Stebnicka Huta 95.97 321 *eP* **P 06 55 59.3 -0.2**
comp=Z,13nm,1.4s,mb5.2
CRVS Cervenica-Dubn 95.97 320 *eP* **P 06 55 59.1 -0.4**
SANT Santorini 96.13 307 PFAKE 06 56 10.0 +9.5
SANT LR LR
comp=Z,269nm,22.0s,MS4.7
BZS Buzias 96.77 317⇑ *iP* **P 06 56 02.4 -0.8**
BZS Buzias 96.77 317⇑⇑ *P* **P 06 56 02.4 -0.8**
NOA NORSAR Array B 97.16 334 P **P 06 56 02.9 -1.7**
comp=Z,5.4nm,0.8s,mb5.0,baz=64,slow=4.7,SNR=13
NOA LR LR 07 45 16.3
comp=Z,580nm,20.2s,MS5.1,baz=25,slow=39
NOA NORSAR Array B 97.16 334 P **P 06 56 02.9 -1.7**
NOA LR LR 07 45 16.2
YKA Yellowknife Ar 97.17 24 P **P 06 56 05.0 +0.4**
comp=Z,5.7nm,0.8s,mb5.0,baz=302,slow=4.4,SNR=5.2
YKA Yellowknife Ar 97.17 24 P **P 06 56 05.0 +0.4**
YKA pmax pmax
comp=Z,6.0nm,0.9s
VAY Valandovo 97.21 313 *eP* **P 06 56 02.0 -3.3**
PSZ Piszkesteto 97.26 320 ⇓ *iP* **P 06 56 05.2 -0.1**
PSZ Piszkesteto 97.26 320 *eP* **P 06 56 04.5 -0.8**
comp=Z,6.1nm,1.0s,mb5.0
PSZ LR LR
comp=Z,470nm,20.0s,MS5.0
VYHS Vyhne 97.76 321 *eP* **P 06 56 06.3 -1.3**
OKC Ostrava-Krasne 97.76 322 *eP* **P 06 56 07.5 -0.1**
OKC AMS AMS 07 43 50.0
comp=Z,500nm,15.0s
SKO Skopje 97.86 314 *eP* **P 06 56 06.5 -1.7**
NLWA Neilton Lookou 98.07 41 PFAKE 06 56 20.0 +11
NLWA LR LR
comp=Z,1µm,19.0s,MS5.4
MORC Moravsky Berou 98.15 322 ⇓ *iP* **P 06 56 08.8 -0.5**
MORC Moravsky Berou 98.15 322 *eP* **P 06 56 08.7 -0.6**
comp=Z,5.4nm,1.1s,mb5.0
KSP Ksiaz 98.55 323 *eP* **P 06 56 11.2 +0.2**
KSP Ksiaz 98.55 323 *eP* **P 06 56 10.5 -0.6**
KSP *ep* pP pP 06 56 24.9 +1.9
DPC Dobruska-Polom 98.70 323 *eP* **P 06 56 11.7 -0.1**
DPC *ex* x 06 56 27.7
DPC AMS AMS 07 44 30.0
comp=Z,500nm,17.4s
MODS Modra-Piesok 98.78 321 PDIF **P 06 56 09.9 -2.3**
MODS Modra-Piesok 98.78 321 *eP* **P 06 56 09.9 -2.3**
UPC Upice 98.83 323 *eP* **P 06 56 11.5 -0.8**
UPC *ex* x 06 56 28.3
VRAC Vranov 98.89 322⇑ *iP* **P 06 56 12.4 -0.2**
VRAC Vranov 98.89 322⇑⇑ *P* **P 06 56 12.4 -0.3**
ZST Bratislava 98.95 321 *eP* **P 06 56 12.3 -0.6**
ZST pmax pmax
comp=Z,35nm,2.1s,mb5.5
ZST Bratislava 98.95 321 PDIF **P 06 56 12.3 -0.6**
ZST Bratislava 98.95 321 *eP* **P 06 56 12.3 -0.6**
comp=Z,35nm,2.1s,mb5.5
JCW Jim Creek 99.05 39 *eP* **P 06 56 14.0 +0.7**
TIR Tirane 99.16 313 PFAKE 06 56 30.0 +16
TIR LR LR
comp=Z,429nm,21.0s,MS4.9
COR Corvallis 99.30 43 PFAKE 06 56 30.0 +15
COR LR LR
comp=Z,971nm,19.0s,MS5.3
TREC Trest 99.58 322 *e*PDIF Pdif 06 56 15.5 0.0
TREC *ex* x 06 56 31.6
TREC AMS AMS 07 49 30.0
comp=Z,500nm,16.7s
PVCC Panska Ves 99.68 323 *e*PDIF Pdif 06 56 16.3 +0.3
PVCC AMS AMS 07 44 50.0
comp=Z,600nm,16.4s
PRU Pruhonice 99.90 323 *e*PDIF Pdif 06 56 16.4 -0.6
PRU AMS AMS 07 44 40.0
comp=Z,700nm,19.2s
BRG Berggiesshubel 99.92 324 *eP* Pdif 06 56 16.4 -0.7
BRG *e* 06 56 32.5
BRG pmax pmax
comp=Z,8.0nm,1.2s,mb5.0
BRG MLR MLR
comp=N,405nm,18.0s
BRG MLR MLR
comp=E,383nm,25.0s
BRG MLR MLR
comp=Z,258nm,19.7s,MS4.7
BRG Berggiesshubel 99.92 324 *e*Pdiff Pdif 06 56 16.6 -0.5
BRG Berggiesshubel 99.92 324 *e*PDIF Pdif 06 56 16.4 -0.7
comp=Z,14nm,1.2s
BRG *e* 06 56 32.5
comp=Z,20nm,1.6s
BRG
comp=N,676nm,18.0s
BRG
comp=E,640nm,25.0s
BRG
comp=Z,431nm,19.7s
BRG Berggiesshubel 99.92 324 *e*Pdif Pdif 06 56 16.4 -0.7
comp=Z,8.2nm,1.2s
BRG *e* 06 56 32.5
BRG LR LR
comp=Z,260nm,19.7s,MS4.7
HUMO Hull Mountain 100.15 45 PFAKE 06 56 30.0 +12
HUMO LR LR
comp=Z,840nm,19.0s,MS5.3
CLL Collm 100.30 325 *eP* Pdif 06 56 19.0 +0.2
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL MLR MLR
comp=Z,600nm,20.5s,MS5.1
CLL Collm 100.30 325 *e*Pdiff Pdif 06 56 18.4 -0.4
CLL Collm 100.30 325 *e*Pdif Pdif 06 56 19.0 +0.2
comp=Z,6.0nm,0.9s
CLL LmV 06 47 00.0
comp=Z,600nm,20.5s
CLL *ex* x 06 56 34.0
CLL *ex* x 06 59 29.0
CLL Collm 100.30 325 *e*Pdif Pdif 06 56 19.0 +0.2
comp=Z,6.0nm,0.9s
CLL LR LR
comp=Z,600nm,20.5s,MS5.1
LSZ Lusaka 100.51 256 PFAKE 06 56 30.0 +10
LSZ LR LR
comp=Z,967nm,20.0s,MS5.3
YBH Yreka Blue Hor 100.59 46 PFAKE 06 56 30.0 +10
YBH LR LR
comp=Z,754nm,21.0s,MS5.2
KHC Kasperske Hory 100.80 322 *e*PDIF Pdif 06 56 21.3 +0.3
KHC *ex* x 06 56 37.1
KHC AMS AMS 07 45 50.0
comp=Z,600nm,18.8s
GEC2 GERESS Array S 100.83 322 P Pdif 06 56 21.4 +0.3
GEC2 GERESS Array S 100.83 322 *e*Pdiff Pdif 06 56 20.6 -0.5
GERES GERESS Array B 100.83 322 P Pdif 06 56 21.4 +0.2
comp=Z,5.5nm,1.0s,baz=66,slow=4.5,SNR=21
TANN Tannenbergstha 100.97 324 *e*Pdiff Pdif 06 56 21.6 -0.1
NKC Novy Kostel 101.05 324 *e*PDIF Pdif 06 56 22.4 +0.3
NKC *ex* x 06 56 38.4
WDC Whiskeytown Da 101.06 47 PFAKE 06 56 30.0 +7.9
WDC LR LR
comp=Z,1µm,19.0s,MS5.4
HOPS Hopland 101.14 49 PFAKE 06 56 30.0 +7.5
HOPS LR LR
comp=Z,1µm,19.0s,MS5.5
HAWA Hanford 101.20 41 PFAKE 06 56 30.0 +7.2
HAWA LR LR
comp=Z,889nm,19.0s,MS5.3
MANZ Manzenberg 101.35 324 *e*Pdiff Pdif 06 56 23.5 +0.1
ROTZ Rotzenmuhle 101.38 323 *e*Pdiff Pdif 06 56 24.0 +0.5
MCCM Marconi Confer 101.53 49 PFAKE 06 56 40.0 +16
MCCM LR LR
comp=Z,1µm,19.0s,MS5.4
CLZ Clausthal 101.58 326 *e*Pdiff Pdif 06 56 24.7 +0.3
RJOB Jochberg 101.82 321 *e*Pdiff Pdif 06 56 25.1 -0.4
GRA1 Grafenberg Arr 102.00 323 *e*Pdif Pdif 06 56 26.2 -0.1
GRF Grafenberg Arr 102.00 323 *e*Pdiff Pdif 06 56 26.2 -0.1
NEW Newport 102.02 38 PFAKE 06 56 40.0 +14
NEW LR LR
comp=Z,936nm,20.0s,MS5.3
TIP Timpagrande 102.07 312 PFAKE 06 56 40.0 +13
TIP LR LR
comp=Z,342nm,20.0s,MS4.9
MOD Modoc 102.24 45 PFAKE 06 56 40.0 +13
MOD LR LR
comp=Z,1µm,19.0s,MS5.4
CUC Castrocucco 102.51 313 PFAKE 06 56 40.0 +11
CUC LR LR
comp=Z,504nm,20.0s,MS5.0
SAO San Andreas Ge 103.03 50 PFAKE 06 56 40.0 +9.1
SAO LR LR
comp=Z,711nm,20.0s,MS5.2
WVOR Wild Horse Val 103.22 44 *eP* Pdif 06 56 33.4 +1.7
WVOR pmax pmax
comp=Z,22nm,1.7s
WVOR MLR MLR
comp=Z,918nm,19.0s,MS5.3
WVOR Wild Horse Val 103.22 44 *e*Pdif Pdif 06 56 33.4 +1.7
comp=Z,22nm,1.7s
WVOR LR LR
comp=Z,918nm,19.0s,MS5.3
BMO Blue Mountains 103.22 41 P Pdif 06 56 34.1 +2.4
BMO pmax pmax
comp=Z,5.0nm,1.2s
BMO Blue Mountains 103.22 41 *e*Pdif Pdif 06 56 32.4 +0.7
comp=Z,4.5nm,1.2s
BMO LR LR
comp=Z,1µm,19.0s,MS5.4
CMB Columbia Colle 103.44 49 PFAKE 06 56 40.0 +7.3
CMB LR LR
comp=Z,1µm,21.0s,MS5.4
WALA Waterton Lakes 103.62 36 *e*Pdif Pdif 06 56 34.8 +1.3
comp=Z,21nm,1.7s
BFO Black Forest 104.30 323 PFAKE 06 56 50.0 +13
BFO LR LR
comp=Z,652nm,21.0s,MS5.1
TUE Stuetta 104.48 321 PFAKE 06 56 50.0 +13
TUE LR LR
comp=Z,603nm,20.0s,MS5.1
MSO Missoula 104.57 39 PFAKE 06 56 50.0 +12
MSO LR LR
comp=Z,660nm,20.0s,MS5.2
VLC Villacollemand 104.77 319 PFAKE 06 56 50.0 +11
VLC LR LR
comp=Z,508nm,21.0s,MS5.0
NVAR Mina Array Bea 104.86 48 Pdiff Pdif 06 56 41.1 +2.1
comp=Z,3.6nm,0.8s,baz=251,slow=3.8,SNR=9.2
NVAR PKKPbc PKKPbc 07 12 24.7 +1.2
comp=Z,1.5nm,0.8s,baz=113,slow=3.5,SNR=6.1
NVAR PKKPbc PKKPbc 07 12 38.2 +15
comp=Z,0.9nm,0.7s,baz=112,slow=7.8,SNR=3.7
BMN Battle Mountai 104.93 46 PFAKE 06 56 50.0 +11
BMN LR LR
comp=Z,1µm,20.0s,MS5.4
WLF Walferdange 104.96 325 PFAKE 06 56 50.0 +11
WLF LR LR
comp=Z,942nm,20.0s,MS5.3
SNCC San Nicolas Is 105.61 53 PFAKE 07 01 10.0 +14
SNCC LR LR
comp=Z,866nm,20.0s,MS5.3
HLID Hailey 105.64 42 *e*Pdif Pdif 06 56 43.4 +0.9
comp=Z,2.5nm,1.0s
HLID LR LR
comp=Z,1µm,19.0s,MS5.4
ISA Isabella 105.66 51 PFAKE 07 01 10.0 +14
ISA LR LR
comp=Z,816nm,19.0s,MS5.3
TPH Tonopah 105.78 48 PFAKE 07 01 10.0 +14
TPH LR LR
comp=Z,899nm,19.0s,MS5.3
DAC Darwin (Calif) 106.13 50 PFAKE 07 01 10.0 +13
DAC LR LR
comp=Z,1µm,19.0s,MS5.4
ELK Elko 106.21 45 PFAKE 07 01 10.0 +13
ELK LR LR
comp=Z,1µm,19.0s,MS5.4
MWC Mount Wilson 106.46 52 PFAKE 07 01 10.0 +12
MWC LR LR
comp=Z,1µm,20.0s,MS5.4
ESK Eskdalemuir 106.64 333 PFAKE 07 01 10.0 +13
ESK LR LR
comp=Z,644nm,20.0s,MS5.2
BNI Bardonecchia 106.78 321 PFAKE 07 01 10.0 +12
BNI LR LR
comp=Z,694nm,20.0s,MS5.2
TPNV Topopah Spring 106.90 49 PFAKE 07 01 10.0 +12
TPNV LR LR
comp=Z,2µm,19.0s,MS5.6
FFC Flin Flon 106.92 27 PFAKE 07 01 10.0 +12
FFC LR LR
comp=Z,694nm,20.0s,MS5.2
GSC Goldstone 107.06 50 PFAKE 07 01 10.0 +11
GSC LR LR
comp=Z,1µm,20.0s,MS5.4
SFJD Kangerlussuaq 107.22 359 PFAKE 07 01 10.0 +12
SFJD LR LR
comp=Z,646nm,20.0s,MS5.2
VSL Villasalto 107.32 314 PFAKE 07 01 10.0 +11
VSL LR LR
comp=Z,375nm,20.0s,MS4.9
YMR Madison River 107.40 40 PFAKE 07 01 10.0 +11
YMR LR LR
comp=Z,2µm,20.0s,MS5.6
SNAA Sanae 107.54 195 *e*PKiKP PP 07 01 16.5 -1.9
DCID1 Drake Creek 107.75 41 *e*Pdif Pdif 06 56 54.9 +3.0
comp=Z,13nm,0.4s
LKWY Lake 107.81 39 PFAKE 07 01 10.0 +10
LKWY LR LR
comp=Z,1µm,19.0s,MS5.5
PFO Pinyon Flat Ob 107.92 52 PFAKE 07 01 10.0 +10
PFO LR LR
comp=Z,710nm,19.0s,MS5.2
BAR Barrett 108.06 53 PFAKE 07 01 10.0 +9.3
BAR LR LR
comp=Z,886nm,19.0s,MS5.3
DUG Dugway 108.13 44 PFAKE 07 01 10.0 +9.4
DUG LR LR
comp=Z,990nm,19.0s,MS5.4
AHID Auburn Hatcher 108.18 41 PFAKE 07 01 10.0 +9.4
AHID LR LR
comp=Z,883nm,19.0s,MS5.3
RLMT Red Lodge 108.25 39 PFAKE 07 01 10.0 +9.3
RLMT LR LR
comp=Z,1µm,20.0s,MS5.5
HWUT Hardware Ranch 108.38 43 PFAKE 07 01 10.0 +9.0
HWUT LR LR
comp=Z,994nm,19.0s,MS5.4
MPU Maple Canyon 109.02 44 PFAKE 07 01 10.0 +7.7
MPU LR LR
comp=Z,2µm,22.0s,MS5.6
VNA2 Neumayer--Watz 109.15 194 *e*PKiKP PKiKP 07 01 01.4 -0.2
baz=2.0,slow=0.4
VNA2 *e* 07 01 17.9
BW06 Boulder Array 109.19 41 PFAKE 07 01 10.0 +7.5
BW06 LR LR
comp=Z,1µm,19.0s,MS5.4
PDAR Pinedale Array 109.19 41 PKiKP PKiKP 07 01 01.4 -1.1
comp=Z,0.6nm,0.9s,baz=326,slow=2.7,SNR=3.5
PDAR PKKPab PKKPab 07 12 20.9 -1.4
comp=Z,2.9nm,0.9s,baz=122,slow=5.6,SNR=17
MVU Marysvale 109.25 46 PFAKE 07 01 10.0 +7.3
MVU LR LR
comp=Z,1µm,20.0s,MS5.5
LAO LASA Array 109.30 36 PFAKE 07 01 10.0 +7.4
LAO LR LR
comp=Z,738nm,20.0s,MS5.2
GLA Glamis 109.39 52 PFAKE 07 01 20.0 +17
GLA LR LR
comp=Z,994nm,21.0s,MS5.4
VNA3 Neumayer Olymp 109.47 193 *e*PKiKP PKiKP 07 01 02.4 +0.2
VNA3 *e* 07 01 17.5
DGMT Dagmar 109.48 34 PFAKE 07 01 10.0 +7.1
DGMT LR LR
comp=Z,486nm,20.0s,MS5.1
VNA1 Neumayer--Stat 109.55 194 *e*PKiKP PKiKP 07 01 02.9 +0.6
VNA1 *e* 07 01 18.7
WUAZ Wupatki 111.09 48 PFAKE 07 01 20.0 +14
WUAZ LR LR
comp=Z,807nm,19.0s,MS5.3
RSSD Black Hills 111.97 37 *e*PKIKP PKiKP 07 01 07.6 -0.1
RSSD MLR MLR
comp=Z,857nm,19.0s,MS5.4
MVCO Mesa Verde 112.46 46 PFAKE 07 01 20.0 +11
MVCO LR LR
comp=Z,860nm,19.0s,MS5.4
ULM Lac du Bonnet 112.66 29 PFAKE 07 01 20.0 +11
ULM LR LR
comp=Z,784nm,19.0s,MS5.3
TUC Tucson 112.83 51 PFAKE 07 01 20.0 +10
TUC LR LR
comp=Z,599nm,22.0s,MS5.1
ISCO Idaho Springs 113.22 42 PFAKE 07 01 20.0 +10
ISCO LR LR
comp=Z,875nm,19.0s,MS5.4
AGMN Agassiz Refuge 113.97 30 PFAKE 07 01 20.0 +8.6
AGMN LR LR
comp=Z,639nm,19.0s,MS5.2
SDCO Great Sand Dun 114.31 44 PFAKE 07 01 20.0 +7.6
SDCO LR LR
comp=Z,801nm,19.0s,MS5.3
OGNE Ogallala 114.95 39 PFAKE 07 01 30.0 +16
OGNE LR LR
comp=Z,779nm,19.0s,MS5.3
ANMO Albuquerque 114.96 47 *e*PKIKP PKiKP 07 01 14.3 +0.6
ANMO MLR MLR
comp=Z,576nm,20.0s
BNM Barren Site 115.20 48 *e*PKPdf PKiKP 07 01 15.6 +1.4
ESLA Sonseca Array 116.29 320 PFAKE 07 01 30.0 +14
ESLA LR LR
comp=Z,2µm,20.0s,MS5.7
EYMN Ely 116.33 28 PFAKE 07 01 30.0 +14
EYMN LR LR
comp=Z,653nm,20.0s,MS5.2
ECSD EROS,Sioux Fal 116.53 34 PFAKE 07 01 30.0 +14
ECSD LR LR
comp=Z,720nm,19.0s,MS5.3
PAB San Pablo 116.61 320 PFAKE 07 01 30.0 +13
PAB LR LR
comp=Z,419nm,20.0s,MS5.0
CBKS Cedar Bluff 117.60 40 PFAKE 07 01 30.0 +11
CBKS LR LR
comp=Z,819nm,19.0s,MS5.4
MTE Manteigas 118.11 322 PFAKE 07 01 30.0 +10
MTE LR LR
comp=Z,664nm,20.0s,MS5.3
SCHQ Schefferville 118.27 9 PKP PKPdf 07 01 19.3 -0.1
comp=Z,6.9nm,0.6s,baz=332,slow=2.0,SNR=11
SCHQ Schefferville 118.27 9 *e*PKPdf PKPdf 07 01 19.0 -0.5
SCHQ LR LR
comp=Z,694nm,21.0s,MS5.3
AMTX Amarillo 118.42 45 PFAKE 07 01 30.0 +10
AMTX LR LR
comp=Z,851nm,19.0s,MS5.4
COWI Conover 118.78 28 *e*PKPdf PKPdf 07 01 21.0 +0.2
COWI LR LR
comp=Z,572nm,20.0s,MS5.2
KSU1 Kansas State U 119.41 38 *e*PKPdf PKPdf 07 01 22.6 +0.4
KSU1 LR LR
comp=Z,669nm,21.0s,MS5.2
SFS San Fernando 119.55 318 PFAKE 07 01 30.0 +7.5
SFS LR LR
comp=Z,718nm,22.0s,MS5.3
SCIA State Center 119.62 34 PFAKE 07 01 30.0 +7.5
SCIA LR LR
comp=Z,759nm,19.0s,MS5.3
TXAR Lajitas Array 119.63 51 PKP PKPdf 07 01 23.4 +0.5
comp=Z,2.4nm,0.9s,baz=253,slow=0.8,SNR=17
TXAR PKKPab PKKPab 07 11 35.0 -1.3
comp=Z,0.8nm,0.8s,baz=132,slow=6.1,SNR=8.3
WMOK Wichita Mounta 120.51 44 PFAKE 07 01 40.0 +16
WMOK LR LR
comp=Z,567nm,19.0s,MS5.2
JFWS Jewell Farm 120.53 31 *e*PKIKP PKPdf 07 01 23.5 -0.7
JFWS MLR MLR
comp=Z,653nm,20.0s,MS5.3
RTC Rabat Centre 121.38 316 PFAKE 07 01 40.0 +14
RTC LR LR
comp=Z,479nm,19.0s,MS5.2
GLMI Grayling 121.81 26 PFAKE 07 01 40.0 +13
GLMI LR LR
comp=Z,705nm,19.0s,MS5.3
JCT Junction City 122.03 48 *e*PKIKP PKPdf 07 01 27.8 +0.4
JCT MLR MLR
comp=Z,483nm,21.0s,MS5.1
HDIL Hopedale 122.70 33 *e*PKPdf PKPdf 07 01 28.4 -0.1
HDIL LR LR
comp=Z,739nm,19.0s,MS5.4
TOA0 Torodi Ar. Sit 122.94 290 *e*PKPdf PKPdf 07 01 29.1 -0.5
TORD Torodi Ar. Bea 122.94 290 PKP PKPdf 07 01 28.9 -0.6
comp=Z,16nm,0.8s,baz=48,slow=1.8,SNR=66
TORD PKKPab PKKPab 07 11 22.5 +0.6
comp=Z,2.5nm,0.9s,baz=269,slow=3.3,SNR=11
CCM Cathedral Cave 123.31 36 *e*PKIKP PKPdf 07 01 29.3 -0.4
CCM MLR MLR
comp=Z,489nm,19.0s,MS5.2
FVM French Village 123.84 36 *e*PKIKP PKPdf 07 01 30.7 0.0
MIAR Mount Ida 124.11 41 *e*PKIKP PKPdf 07 01 31.6 +0.3

MIAR				*e*		07 03 13.8	
MIAR				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.5						
OLIL	**Olney**	**124.64**	**34**	*e*PKPdf	PKPdf	07 01 32.6	+0.4
SIUC	**Southern Illin**	**124.72**	**35**	*e*PKPdf	PKPdf	07 01 32.9	+0.5
SIUC				*e*PP	PP	07 03 16.1	-3.1
UALR	**University of**	**124.76**	**40**	*e*PKPdf	PKPdf	07 01 33.1	+0.5
KVTX	**Kingsville**	**124.94**	**50**	PFAKE		07 01 40.0	+6.9
KVTX				LR	LR		
	comp=Z,1μm,19.0s,MS5.6						
NATX	**Nacogdoches**	**125.04**	**44**	*e*PKPdf	PKPdf	07 01 34.5	+1.3
PARMO	**Parma**	**125.13**	**37**	*e*PKPdf	PKPdf	07 01 33.8	+0.5
BLO	**Bloomington**	**125.17**	**32**	*e*PKIKP	PKPdf	07 01 33.7	+0.5
HKT	**Hockley**	**125.22**	**47**	PFAKE		07 01 50.0	+16
HKT				LR	LR		
	comp=Z,675nm,19.0s,MS5.3						
HBAR	**Harrisburg**	**125.32**	**38**	*e*PKPdf	PKPdf	07 01 32.8	-0.8
USIN	**University of**	**125.42**	**34**	*e*PKPdf	PKPdf	07 01 34.1	+0.3
HALT	**Halls**	**125.88**	**37**	*e*PKPdf	PKPdf	07 01 34.7	0.0
LONY	**Lake Ozonia**	**125.89**	**19**	PFAKE		07 01 50.0	+16
LONY				LR	LR		
	comp=Z,726nm,19.0s,MS5.4						
WCI	**Wyandotte Cave**	**125.98**	**33**	*e*PKIKP	PKPdf	07 01 34.9	+0.1
WCI				MLR	MLR		
	comp=Z,438nm,21.0s,MS5.1						
ERPA	**Erie**	**125.99**	**25**	PFAKE		07 01 50.0	+15
ERPA				LR	LR		
	comp=Z,499nm,20.0s,MS5.2						
ACSO	**Alum Creek Sta**	**126.16**	**29**	*e*PKPdf	PKPdf	07 01 35.3	+0.3
ACSO				LR	LR		
	comp=Z,481nm,19.0s,MS5.2						
NCB	**Newcomb**	**126.58**	**19**	*e*PKPdf	PKPdf	07 01 35.9	+0.1
NCB				LR	LR		
	comp=Z,508nm,19.0s,MS5.2						
WVT	**Waverly**	**126.62**	**36**	*e*PKIKP	PKPdf	07 01 36.3	+0.2
WVT				MLR	MLR		
	comp=Z,522nm,21.0s,MS5.2						
OXF	**Oxford**	**126.78**	**38**	PFAKE		07 01 50.0	+14
OXF				LR	LR		
	comp=Z,439nm,20.0s,MS5.1						
PKME	**Peaks-Kenny Pk**	**126.84**	**15**	PFAKE		07 01 50.0	+14
PKME				LR	LR		
	comp=Z,774nm,19.0s,MS5.4						
MDV	**Middlebury**	**126.89**	**19**	*e*PKPdf	PKPdf	07 01 36.1	-0.2
LBNH	**Lisbon**	**127.06**	**17**	PFAKE		07 01 50.0	+13
LBNH				LR	LR		
	comp=Z,650nm,20.0s,MS5.3						
HNH	**Hanover**	**127.44**	**18**	*e*PKPdf	PKPdf	07 01 38.0	+0.6
BINY	**Binghamton**	**127.52**	**22**	PFAKE		07 01 50.0	+12
BINY				LR	LR		
	comp=Z,779nm,19.0s,MS5.4						
VBMS	**Vicksburg**	**127.56**	**41**	PFAKE		07 01 50.0	+12
VBMS				LR	LR		
	comp=Z,577nm,19.0s,MS5.3						
MCWV	**Mont Chateau**	**128.07**	**27**	PFAKE		07 01 50.0	+11
MCWV				LR	LR		
	comp=Z,689nm,19.0s,MS5.4						
SSPA	**Standing Stone**	**128.10**	**25**	*e*PKPdf	PKPdf	07 01 38.5	-0.3
SSPA				LR	LR		
	comp=Z,519nm,19.0s,MS5.2						
SWET	**Sewanee**	**128.36**	**35**	*e*PKPdf	PKPdf	07 01 39.0	-0.5
TZTN	**Tazewell**	**128.70**	**32**	*e*PKPdf	PKPdf	07 01 40.5	+0.5
TZTN				LR	LR		
	comp=Z,465nm,20.0s,MS5.2						
HRV	**Adam Dziewonsk**	**128.75**	**18**	PFAKE		07 01 50.0	+10
HRV				LR	LR		
	comp=Z,695nm,19.0s,MS5.4						
WES	**Weston**	**128.93**	**18**	PFAKE		07 01 50.0	+10
WES				LR	LR		
	comp=Z,551nm,19.0s,MS5.3						
CPCT	**Cooper Cave**	**128.98**	**34**	*e*PKPdf	PKPdf	07 01 41.0	+0.4
TKL	**Tuckaleechee C**	**129.24**	**33**	*e*PKIKP	PKPdf	07 01 41.8	+0.7
LRAL	**Lakeview Retre**	**129.25**	**38**	*e*PKPdf	PKPdf	07 01 41.5	+0.3
LRAL				LR	LR		
	comp=Z,611nm,19.0s,MS5.3						
USHA	**Ushuaia**	**129.59**	**168**	PKP	PKPdf	07 01 41.3	+0.2
	comp=Z,6.2nm,0.8s,baz=273,slow=6.1,SNR=4.3						
ELN	**Prospectdale**	**129.59**	**29**	*e*PKPdf	PKPdf	07 01 41.7	0.0
BLA	**Blacksburg**	**129.77**	**29**	PFAKE		07 01 50.0	+7.9
BLA				LR	LR		
	comp=Z,572nm,20.0s,MS5.3						
CBN	**Corbin**	**130.36**	**26**	*e*PKPdf	PKPdf	07 01 43.7	+0.5
CBN				LR	LR		
	comp=Z,459nm,20.0s,MS5.2						
BRAL	**Brewton**	**130.58**	**40**	PFAKE		07 02 00.0	+16
BRAL				LR	LR		
	comp=Z,607nm,20.0s,MS5.3						
KIC	**Kosan Boka**	**130.80**	**284**	*e*PKIKP	PKPdf	07 01 45.6	+1.0
	comp=Z,69nm,0.9s						
DBIC	**Dimbokro**	**130.84**	**284**	PKP	PKPdf	07 01 45.0	+0.3
	comp=Z,10nm,0.8s,baz=337,slow=1.7,SNR=6.9						
DBIC	**Dimbokro**	**130.84**	**284**	PKP	PKPdf	07 01 45.0	+0.3
DBIC				LR	LR		
	comp=Z,455nm,21.0s,MS5.2						
TIC	**Toumodi**	**131.00**	**284**	*e*PKIKP	PKPdf	07 01 45.9	+0.9
	comp=Z,64nm,0.9s						
GOGA	**Godfrey**	**131.07**	**35**	PFAKE		07 02 00.0	+15
GOGA				LR	LR		
	comp=Z,556nm,20.0s,MS5.3						
LIC	**Lamto**	**131.11**	**284**	*e*PKIKP	PKPdf	07 01 46.1	+0.9
	comp=Z,51nm,0.9s						
CNNC	**Cliffs of the**	**132.56**	**28**	PFAKE		07 02 00.0	+13
CNNC				LR	LR		
	comp=Z,572nm,19.0s,MS5.3						
NHSC	**New Hope**	**133.11**	**32**	PFAKE		07 02 00.0	+12
NHSC				LR	LR		
	comp=Z,694nm,21.0s,MS5.3						
DWPF	**Disney**	**136.11**	**38**	PFAKE		07 02 10.0	+16
DWPF				LR	LR		
	comp=Z,498nm,19.0s,MS5.3						
TEIG	**Tepich**	**136.25**	**53**	PFAKE		07 02 10.0	+15
TEIG				LR	LR		
	comp=Z,359nm,19.0s,MS5.1						
BBSR	**BB Station**	**140.16**	**16**	PFAKE		07 02 10.0	+8.4
BBSR				LR	LR		
	comp=Z,369nm,20.0s,MS5.1						
TGUH	**Tegucigalpa,Un**	**140.17**	**60**	PFAKE		07 02 10.0	+8.0
TGUH				LR	LR		
	comp=Z,405nm,19.0s,MS5.2						
PLCA	**Paso Flores**	**141.77**	**158**	PKhKP		07 01 58.7	
	comp=Z,3.4nm,0.7s,baz=231,slow=4.4,SNR=11						
PLCA				PKP	PKPdf	07 02 03.9	-0.3
	comp=Z,15nm,1.0s,baz=185,slow=5.8,SNR=16						
PLCA	**Paso Flores**	**141.77**	**158**	PKP	PKPdf	07 02 03.9	-0.3
ASCN	**Ascension**	**142.10**	**265**	PFAKE		07 02 20.0	+14
ASCN				LR	LR		
	comp=Z,902nm,19.0s,MS5.5						
JTS	**JuntasAbangare**	**143.87**	**64**	PFAKE		07 02 20.0	+11
JTS				LR	LR		
	comp=Z,252nm,20.0s,MS5.0						
NICH	**Los Niches**	**146.31**	**152**	*e*P	PKPdf	07 02 13.6	+1.3
TRQA	**Tornquist**	**146.89**	**166**	*e*PKPbc	PKPbc	07 02 15.5	+0.4
LMEL	**Las Melosas**	**147.74**	**152**	*e*P	PKPbc	07 02 17.6	+0.1
FCH	**Farellones**	**148.13**	**151**	*e*P	PKPdf	07 02 13.4	-2.0
BCIP	**Isla Barro Col**	**148.88**	**61**	*e*PKPbc	PKPbc	07 02 21.5	+0.4
BCIP				*e*PKPab	PKPab	07 02 26.3	+1.3
BCIP				LR	LR		
	comp=Z,383nm,19.0s,MS5.2						
CFAA	**Coronel Fontan**	**150.52**	**152**	PKP	PKPdf	07 02 19.9	+0.6
	comp=Z,6.9nm,0.8s,baz=231,slow=3.2,SNR=16						
CFAA				PKPbc	PKPbc	07 02 25.2	+0.5
	comp=Z,6.9nm,0.8s,baz=239,slow=3.3,SNR=66						
CFAA	**Coronel Fontan**	**150.52**	**152**	PKP	PKPdf	07 02 19.9	+0.6
CFAA				PKPbc	PKPbc	07 02 25.2	+0.5
LCO	**Las Campanas**	**151.32**	**145**	*e*PKPdf	PKPdf	07 02 22.1	+1.5
LCO				*e*PKPbc	PKPbc	07 02 28.0	+1.4
SJG	**San Juan**	**152.56**	**29**	PFAKE		07 02 30.0	+7.3
SJG				LR	LR		
	comp=Z,339nm,19.0s,MS5.2						
OTAV	**Otavalo**	**153.37**	**78**	*e*PKPdf	PKPdf	07 02 25.2	+1.1
OTAV				*e*PKPab	PKPab	07 02 44.5	+0.8
OTAV				LR	LR		
	comp=Z,329nm,22.0s,MS5.1						
NNA	**Nana**	**155.22**	**106**	PKP	PKPdf	07 02 26.3	-0.3
	comp=Z,14nm,1.0s,baz=241,slow=6.9,SNR=3.5						
ROSC	**El Rosal**	**155.70**	**64**	PKP	PKPdf	07 02 27.9	+0.6
	comp=Z,6.1nm,0.7s,baz=114,slow=19,SNR=12						
ROSC				PKPab	PKPab	07 02 56.3	+2.7
	comp=Z,28nm,1.1s,baz=358,slow=0.8,SNR=12						
ROSC	**El Rosal**	**155.70**	**64**	*e*PKPdf	PKPdf	07 02 28.8	+1.5
ROSC				*e*PKPab	PKPab	07 02 57.0	+3.3
SDV	**Santo Domingo**	**156.67**	**51**	PKP	PKPdf	07 02 28.5	0.0
	comp=Z,37nm,0.8s,baz=36,slow=20,SNR=15						
SDV	**Santo Domingo**	**156.67**	**51**	*e*PKPdf	PKPdf	07 02 29.0	+0.4
SDV				LR	LR		
	comp=Z,133nm,19.0s,MS4.8						
LVC	**Limon Verde**	**157.07**	**138**	PKP	PKPdf	07 02 29.6	+0.8
	comp=Z,4.5nm,0.8s,baz=292,slow=10,SNR=4.6						
LVC				PKPbc	PKPdf	07 02 41.1	+12
	comp=Z,4.7nm,0.9s,baz=248,slow=0.8,SNR=3.6						
LVC				PKPab	PKPab	07 03 01.7	+2.5
	comp=Z,7.7nm,0.9s,baz=118,slow=2.0,SNR=4.5						
LVC	**Limon Verde**	**157.07**	**138**	PKP	PKPdf	07 02 29.6	+0.8
LVC				PKPbc	PKPdf	07 02 41.1	+12
LVC				PKPab	PKPab	07 03 01.7	+2.5
CPUP	**Villa Florida**	**159.21**	**168**	PKP	PKPdf	07 02 32.3	+1.0
	comp=Z,3.0nm,0.9s,baz=300,slow=0.5,SNR=8.8						
CPUP				PKPab	PKPab	07 03 09.3	+1.1
	comp=Z,14nm,0.9s,baz=189,slow=4.1,SNR=11						
CPUP	**Villa Florida**	**159.21**	**168**	*e*PKPdf	PKPdf	07 02 31.8	+0.5
CPUP				*e*PKPab	PKPab	07 03 09.4	+1.2
GRGR	**Grenville**	**159.86**	**27**	PFAKE		07 02 40.0	+7.6
GRGR				LR	LR		
	comp=Z,299nm,19.0s,MS5.2						
LPAZ	**La Paz**	**161.55**	**125**	PKP	PKPdf	07 02 36.0	+1.9
	comp=Z,10nm,0.9s,baz=10,slow=1.1,SNR=30						
LPAZ				PKPab	PKPab	07 03 22.1	+3.2
	comp=Z,7.5nm,0.8s,baz=206,slow=4.8,SNR=9.2						
LPAZ	**La Paz**	**161.55**	**125**	*e*PKPdf	PKPdf	07 02 35.5	+1.4
LPAZ				*e*PKPab	PKPab	07 03 21.8	+3.0
LPAZ				LR	LR		
	comp=Z,344nm,22.0s						
SIV	**San Ignacio**	**166.94**	**141**	PKP	PKPdf	07 02 39.7	+0.7
	comp=Z,14nm,0.9s,baz=189,slow=1.3						
SIV				PKPab	PKPab	07 03 44.2	+1.7
	comp=Z,5.4nm,0.9s,baz=196,slow=4.3,SNR=3.1						
BDFB	**Brasilia**	**169.41**	**204**	PKP	PKPdf	07 02 40.5	-0.1
	comp=Z,5.5nm,1.0s,baz=292,slow=1.7,SNR=5.2						
BDFB	**Brasilia**	**169.41**	**204**	PKP	PKPdf	07 02 40.5	-0.1
BDFB				LR	LR		
	comp=Z,556nm,19.0s						

NNC ***29*** *07:19:55.1±1.0, 5002N×7877E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=8.3km s-min=5.8km az=74.0*

IDC ***29*** *07:19:56.0±1.0, 5003N×7872E, h0km, mb1 2.8/2, mb1mx2.8/24, mbtmp2.8/2, ML2.6/2*

ISC 29 07:19:53.5±2.9, 5002N±004×780E±04, h10km, n6, σ1°05/10, 3C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**0.69**	**29**	⇑P		**Pg**	**07 20 07.4**	**+0.6**
	1.5nm,0.2s,baz=167,slow=18						
KURBB				⇑S		**Sg**	**07 20 16.3**	**+0.5**
	1.7nm,0.3s						
KURK	**Kurchatov**	**0.80**	**29**	⇓P		**Pg**	**07 20 08.7**	**-0.2**
	5.7nm,0.4s						
KURK				⇓S		**Sg**	**07 20 18.5**	**-0.8**
	11nm,0.7s,baz=306,slow=18						
KURK	**Kurchatov**	**0.80**	**29**	Pg		**Pg**	**07 20 07.5**	**-1.5**
	1.6nm,0.3s,baz=166,slow=19,SNR=20						
KURK				Lg		07 20 15.8	
	1.8nm,0.3s,baz=154,slow=16,SNR=15						
MK31	**Makanchi Array**	**4.30**	**137**	⇑Pg		**Pb**	**07 21 08.6**	**-0.6**
	0.8nm,0.5s,baz=335,slow=7.7,SNR=4.9						
MK31				⇓Lg		07 22 00.5	
	1.8nm,0.4s,baz=343,slow=28,SNR=7.7						
MKAR	**Makanchi Array**	**4.30**	**137**	Pn		**Pn**	**07 20 59.9**	**+0.9**
	0.2nm,0.3s,baz=323,slow=13,SNR=2.5						
MKAR				Pg		**Pb**	**07 21 06.5**	**-2.7**
	0.5nm,0.3s,baz=320,slow=15,SNR=5.1						
MKAR				Sn		**Sn**	**07 21 50.1**	**+0.9**
	0.3nm,0.3s,baz=340,slow=25,SNR=2.6						
MKAR				Lg		07 21 59.3	
	1.3nm,0.3s,baz=332,slow=26,SNR=9.1						
ZALV	**Zalesovo Beam**	**5.76**	**44**	Pn		**Pn**	**07 21 19.8**	**+0.9**
	0.3nm,0.3s,baz=230,slow=15,SNR=4.1						
ZALV				Lg		07 22 51.2	
	0.2nm,0.3s,baz=223,slow=28,SNR=2.1						

IDC 29 07:55:16.7±1.4, 265S×3609E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.5/20, mbtmp3.8/3, Error ellipse: s-maj=40.1km s-min=14.8km az=131.0, Tanzania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**1.91**	**38**	Pg	Pg	07 55 52.3	-1.0
	85nm,0.3s,baz=212,slow=15,SNR=323						
KMBO				Lg		07 56 16.1	
	153nm,0.3s,baz=44,slow=22,SNR=5.6						
BOSA	**Boshof**	**27.81**	**201**	P	P	08 01 07.6	-0.2
	3.1nm,0.9s,baz=32,slow=11,SNR=4.5						
TORD	**Torodi Ar. Bea**	**37.57**	**296**	P	P	08 02 32.8	-0.4
	0.3nm,0.9s,baz=116,slow=9.8,SNR=2.6						
MKAR	**Makanchi Array**	**63.79**	**34**	P	P	08 05 51.4	+0.8
	0.5nm,0.4s,baz=232,slow=7.1,SNR=5.5						

NEIC ***29*** *08:03:34.3, 1933N×6870W, h137km, MD3.7(RSPR), After RSPR.*

RSPR 29 08:03:34.3, 1933N×6870W, h137km±9km, MD3.7/6, MD3.7/6, 6C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**1.73**	**119**	⇑*e*P		Pn	08 04 05.3	-0.2
AGPR				*e*S		Sn	08 04 29.4	+0.1
CRPR	**Cabo Rojo, PR**	**2.00**	**131**	⇑*e*P		Pn	08 04 08.0	-0.7
CRPR				*e*S		Sn	08 04 35.5	+0.5
AOPR	**Arecibo Observ**	**2.09**	**118**	⇑*e*P		Pn	08 04 09.5	-0.2
AOPR				*e*S		Sn	08 04 37.8	+1.0
CPD	**Cerro la Pandu**	**2.94**	**116**	⇑*e*P		Pn	08 04 21.3	+1.0
HUMP	**Col San Antoni**	**2.95**	**113**	*e*S		Sn	08 04 56.1	0.0
HUMP	**Col San Antoni**	**2.95**	**113**	⇑*e*P		Pn	08 04 20.2	-0.3
HUMP				*e*S		Sn	08 04 56.1	0.0
MTP	**Monte Pirata**	**3.23**	**112**	⇑*e*P		Pn	08 04 24.7	+0.6

NEIC ***29*** *08:05:43.3±1.0, 1002S×11289E, h10km, mb3.8/1, Error ellipse: s-maj=49.2km s-min=10.3km az=52.0*

IDC ***29*** *08:05:43.2±1.9, 964S×11323E, h0km, mb4.0/8, mb1 4.1/9, mb1mx4.0/17, mbtmp4.0/9, ML3.7/1, Error ellipse: s-maj=65.2km s-min=18.9km az=51.0*

ISCJB ***29*** *08:05:44.0±1.1, 1005S±02×1129E±02, h33km, mb3.9/9, Error ellipse: s-maj=40.8km s-min=10.9km az=146.2*

DJA ***29*** *08:05:50, 959S×11317E, h119km, MLv4.2/8*

ISC 29 08:05:46.9±1.1, 99S±02×1130E±02, h35km, n14, σ1°12/13, mb3.9/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBWA	**Marble Bar**	**12.89**	**151**	*e*Pn		**Pn**	**08 08 46.1**	**-1.5**
MBWA				*e*Sn		**Sn**	**08 10 57.4**	**-12**
FITZ	**Fitzroy Crossi**	**14.67**	**125**	Pn		**Pn**	**08 09 11.5**	**-0.5**
	0.2nm,0.3s,baz=312,slow=12,SNR=9.2						
FITZ				Sn		**Sn**	**08 11 43.0**	**-10**
	0.1nm,0.3s,baz=148,slow=15,SNR=3.8						
WRA	**Warramunga Arr**	**22.83**	**118**	P		**P**	**08 10 48.2**	**+1.2**
	0.6nm,0.6s,mb3.2,baz=295,slow=11,SNR=5.2						
WRAB	**Tennant Creek**	**22.84**	**118**	*e*P		**P**	**08 10 47.4**	**+0.3**
	3.6nm,1.0s,mb3.8						
ASAR	**Alice Springs**	**24.15**	**127**	P		**P**	**08 11 01.7**	**+1.9**
	0.6nm,0.6s,mb3.2,baz=304,slow=9.1,SNR=12						
CMAR	**Chiang Mai Arr**	**31.45**	**334**	P		**P**	**08 12 06.7**	**+1.5**
	1.0nm,0.3s,mb4.1,baz=170,slow=7.8,SNR=4.4						
KSRS	**Korea Array**	**49.16**	**16**	P		**P**	**08 14 31.2**	**-0.1**
	3.5nm,0.8s,mb4.4,baz=207,slow=7.9,SNR=7.4						
MJAR	**Matsushiro Arr**	**51.94**	**26**	P		**P**	**08 14 50.3**	**-2.1**
	1.7nm,0.6s,mb4.2,baz=207,slow=7.9,SNR=6.4						
SONM	**Songino Array**	**57.81**	**355**	P		**P**	**08 15 34.8**	**+0.2**
	1.7nm,0.5s,mb4.3,baz=175,slow=9.3,SNR=11						
MKAR	**Makanchi Array**	**62.79**	**337**	P		**P**	**08 16 08.8**	**+0.1**
	0.7nm,0.4s,mb4.1,baz=146,slow=7.4,SNR=7.0						
ZALV	**Zalesovo Beam**	**67.98**	**342**	P		**P**	**08 16 41.3**	**-0.9**
	0.8nm,0.4s,mb4.1,baz=108,slow=4.8,SNR=4.4						
REDW	**Red Top Meadow**	**129.43**	**41**	*e*PKPdf	PKPdf	08 24 51.8	-0.2
PV10	**Paradox Valley**	**132.90**	**46**	*e*PKPdf	PKPdf	08 25 01.8	+3.0
TKL	**Tuckaleechee C**	**150.17**	**28**	*e*PKPbc	PKPbc	08 25 35.9	+1.4

ISK ***29*** *08:43:34.4, 3963N×2952E, h8km, MD2.8*

CSEM ***29*** *08:43:34.6±0.1, 3963N×2951E, h10km, MD2.8, Error ellipse: s-maj=2.5km s-min=1.6km az=127.0*

ISCJB ***29*** *08:43:35.7±0.5, 3968N±003×2948E±003, h8km±5km, Error ellipse: s-maj=4.7km s-min=3.8km az=157.6*

ISC 29 08:43:36.2±0.4, 3968N±003×2948E±003, h12km±4km, n30, σ0°93/39, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULDT	**Uludag**	**0.53**	**330**	*i* P		**Pg**	**08 43 46.1**	**-0.5**
ULDT				*i* S		**Sg**	**08 43 54.0**	**+0.3**
GDZ	**Gediz**	**0.59**	**180**	*i* P		**Pg**	**08 43 46.7**	**-0.9**
GDZ	**Gediz**	**0.59**	**180**	*i* P		**Pg**	**08 43 46.7**	**-0.9**
GDZ				*i* S		**Sg**	**08 43 56.2**	**+0.8**
CAVI	**Cavuskoy**	**0.59**	**28**	*e*PG		**Pg**	**08 43 47.6**	**-0.1**
DST	**Dursunbey**	**0.66**	**264**	*e*PG		**Pg**	**08 43 48.1**	**-0.9**
DST				*e*SG		**Sg**	**08 43 58.5**	**+0.8**
BORA	**Eskisehir**	**0.78**	**75**	*i* P		**Pg**	**08 43 50.7**	**-0.5**
BORA	**Eskisehir**	**0.78**	**75**	*i* P		**Pg**	**08 43 50.7**	**-0.5**
BORA				*i* S		**Sg**	**08 44 03.2**	**+1.8**
ADVT	**Abdulvahap**	**0.78**	**15**	*e*PG		**Pg**	**08 43 50.7**	**-0.5**
ADVT				*e*SG		**Sg**	**08 44 02.3**	**+0.8**
DURS	**Dursunbey**	**0.78**	**265**	*i* P		**Pg**	**08 43 50.1**	**-1.2**
DURS	**Dursunbey**	**0.78**	**265**	*i* P		**Pg**	**08 43 50.1**	**-1.2**
DURS				*i* S		**Sg**	**08 44 02.8**	**+1.3**
GEMT	**Gemlik**	**0.79**	**344**	*e*PG		**Pg**	**08 43 50.7**	**-0.7**
DEMI	**Demirci**	**0.87**	**223**	*i* P		**Pg**	**08 43 52.1**	**-0.8**
DEMI	**Demirci**	**0.87**	**223**	*i* P		**Pg**	**08 43 52.1**	**-0.8**
DEMI				*i* S		**Sg**	**08 44 09.1**	**+4.8**
GPA	**Golpazari**	**0.88**	**46**	*e*PG		**Pg**	**08 43 52.0**	**-1.2**
YLV	**Yalova**	**0.89**	**355**	*e*PG		**Pg**	**08 43 53.6**	**+0.2**
KCT	**Karacabey**	**1.04**	**305**	*e*PN		**Pn**	**08 43 55.4**	**-1.3**
ESKT	**Eskisehir**	**1.07**	**98**	*i* P		**Pb**	**08 43 57.1**	**+0.4**
SEYT	**Eskypehyr**	**1.07**	**98**	*i* P		**Pb**	**08 43 57.1**	**+0.5**
SEYT				*i* S		**Sg**	**08 44 12.2**	**+1.5**
GULT	**Gulveren**	**1.09**	**46**	*e*PN		**Pn**	**08 43 56.0**	**-1.4**
HRT	**Hereke**	**1.15**	**7**	*e*PN		**Pn**	**08 43 57.7**	**-0.4**
BALB	**Balikesir**	**1.24**	**269**	*e*PN		**Pn**	**08 43 59.0**	**-0.3**
KULA	**Kula-Manisa**	**1.33**	**209**	*e*PN		**Pn**	**08 43 59.2**	**-1.3**
BNT	**Bandirma**	**1.38**	**300**	*e*PN		**Pn**	**08 44 01.3**	**0.0**
BALY	**Balya**	**1.44**	**273**	*i* P		**Pn**	**08 44 02.3**	**+0.3**
BALY	**Balya**	**1.44**	**273**	*i* P		**Pn**	**08 44 02.3**	**+0.2**
BALY				*i* S		**Sn**	**08 44 23.2**	**+2.3**
SILT	**Sile**	**1.48**	**5**	*e*PN		**Pn**	**08 44 02.3**	**-0.4**
KLYT	**Kilyos**	**1.61**	**348**	*e*PN		**Pn**	**08 44 04.5**	**+0.1**
CTKS	**Kestanelik-??a**	**1.72**	**335**	*e*PN		**Pn**	**08 44 06.5**	**+0.5**
MFT	**Murefte**	**2.01**	**304**	*e*PN		**Pn**	**08 44 10.8**	**+0.8**
RKY	**Sarkoy-Tekirda**	**2.03**	**300**	*e*PN		**Pn**	**08 44 11.1**	**+0.9**

NIED ***29*** *08:51:00, 2480N×12540E, h47km, Mw4.2 Best double couple: M0 1.95000×10^15 NP1:φs56.00000°, δ80.00000°, λ93.00000°. NP2:φs218.00000°, δ11.00000°, λ71.00000°.*

ISCJB ***29*** *08:51:11.9±0.4, 2485N±007×12540E±005, h55km±4km, mb3.9/11, Error ellipse: s-maj=13.6km s-min=4.2km az=154.3*

JMA ***29*** *08:51:12.5±0.1, 2482N×12540E, h50km±1km, M4.2*

JMA Felt II J1.

IDC ***29*** *08:51:12.4±8.2, 2528N×12510E, h75km±90km, mb3.0/3, mb1 3.3/4, mb1mx3.2/22, mbtmp3.1/4, ML3.4/1, Error ellipse: s-maj=63.6km s-min=24.0km az=64.0*

NEIC ***29*** *08:51:13.8±0.9, 2489N×12540E, h56km±9km, MG4.2(JMA), Error ellipse: s-maj=12.4km s-min=10.2km az=168.0*

NEIC Recorded [2 JMA] on Miyako-jima.

ISC 29 08:51:12.8±0.4, 2483N±007×12540E±005, h49km±4km, n34, σ0°86/44, mb3.9/11, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.07**	**177**	P		**Pn**	**08 51 20.1**	**-0.3**
JOGS				S		**Sn**	**08 51 25.9**	**+0.2**
JMJ	**Miyako jima 2**	**0.10**	**264**	P		**Pn**	**08 51 20.2**	**-0.3**
JMJ				S		**Sn**	**08 51 25.7**	**-0.2**
JTJ	**Tarama**	**0.66**	**254**	P		**Pn**	**08 51 25.7**	**-0.3**
JTJ				S		**Sn**	**08 51 35.5**	**-0.1**
JIJ	**Ishigaki jima**	**1.24**	**248**	P		**Pn**	**08 51 33.4**	**-0.3**
JIJ				*e*S		**Sn**	**08 51 49.8**	**+0.5**
JKRS	**Kuro-shima**	**1.40**	**246**	P		**Pn**	**08 51 36.4**	**+0.5**
JKRS				*e*S		**Sn**	**08 51 54.2**	**+1.0**
IRIF	**Iriomote-Funau**	**1.60**	**253**	P		**Pn**	**08 51 38.1**	**-0.6**
IRIF				*e*S		**Sn**	**08 51 58.0**	**-0.2**

*DDA **29** 09:19:45.6, 3872N×3544E, h7km±1km, Md2.8*
*CSEM **29** 09:19:46.8±0.1, 3887N×3560E, h10km, MD2.8, Error ellipse: s-maj=2.7km s-min=1.5km az=52.0*
*ISCJB **29** 09:19:47.3±0.7, 3883N±005×3553E±005, h10km, Error ellipse: s-maj=7.2km s-min=4.5km az=26.5*
*ISK **29** 09:19:47.0, 3887N×3558E, h6km, MD2.8*

ISC 29 09:19:47.1±0.7, 3882N±005×3551E±004, h2km±8km, n9, σ0§80/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.26**	**83**	*e*PG	**Pg**	**09 19 51.6**	**-0.5**
AVNT	**Avonos**	**0.51**	**266**	*i* P	**Pg**	**09 19 54.9**	**-2.0**
AVNT				*i* S	**Sg**	**09 20 04.3**	**+0.8**
PINB	**Pinarbasi**	**0.71**	**101**	*i* P	**Pg**	**09 20 00.1**	**-0.6**
PINB				*i* S	**Sg**	**09 20 11.3**	**+1.3**
YOZ	**Yozgat**	**0.83**	**350**	*e*PG	**Pg**	**09 20 02.9**	**-0.1**
YOZ				*e*SG	**Sg**	**09 20 14.1**	**+0.3**
CDAG	**Cicekdag**	**1.19**	**313**	*i* P	**Pg**	**09 20 09.5**	**-0.5**
CDAG				*i* S	**Sg**	**09 20 26.4**	**+1.0**
KOZT	**Kozan**	**1.36**	**169**	*e*PN	**Pn**	**09 20 13.7**	**+0.6**
KAMT	**Kaman**	**1.50**	**292**	*e*PN	**Pn**	**09 20 15.3**	**+0.3**
CORM	**Corum**	**1.52**	**334**	*e*PN	**Pn**	**09 20 15.3**	**+0.1**
CORM				*e*SN	**Sn**	**09 20 35.4**	**-0.2**
SVSK	**Karacayir**	**1.59**	**46**	*e*PN	**Pn**	**09 20 15.4**	**-0.8**

*IDC **29** 09:33:47.9±1.3, 253N×12726E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/17, mbtmp3.8/6, MS3.5/1, Ms1 3.5/1, ms1mx2.4/26, Error ellipse: s-maj=91.1km s-min=18.4km az=69.0*
*ISCJB **29** 09:33:51.4±1.2, 24N±02×1268E±05, h33km, mb3.7/6, Error ellipse: s-maj=81.5km s-min=14.7km az=158.0*
*NEIC **29** 09:33:53.2±1.0, 245N×127.16E, h35km, mb3.8/1, Error ellipse: s-maj=65.4km s-min=12.0km az=69.0*

ISC 29 09:33:53.2±1.2, 25N±02×1272E±05, h35km, n10, σ0§62/9, mb3.7/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.48**	**184**	P	**P**	**09 38 28.2**	**+0.1**
	0.8nm,0.4s,baz=14,slow=12,SNR=7.2						
WRAB	**Tennant Creek**	**23.34**	**163**	*e*P	**P**	**09 38 59.3**	**+0.6**
	1.2nm,0.4s,mb3.7						
WRA	**Warramunga Arr**	**23.34**	**163**	P	**P**	**09 38 57.3**	**-1.4**
	0.9nm,0.4s,mb3.5,baz=343,slow=11,SNR=18						
WB2	**Warramunga Arr**	**23.35**	**163**	*e*P	**P**	**09 38 58.5**	**-0.3**
ASAR	**Alice Springs**	**26.78**	**166**	P	**P**	**09 39 30.3**	**+0.3**
	0.2nm,0.4s,mb3.0,baz=349,slow=7.9,SNR=11						
ASAR				PcP	PcP	09 42 53.2	+0.6
	0.2nm,0.5s,baz=357,slow=2.4,SNR=4.3						
MJAR	**Matsushiro Arr**	**35.43**	**15**	LR	LR	09 53 35.7	
	comp=Z,78nm,21.9s,baz=210,slow=34						
STKA	**Stephens Creek**	**36.79**	**159**	P	**P**	**09 40 58.5**	**+0.8**
	1.1nm,0.4s,mb4.0,baz=334,slow=9.5,SNR=4.4						
MKAR	**Makanchi Array**	**58.84**	**326**	P	**P**	**09 43 48.4**	**+0.1**
	0.5nm,0.4s,mb3.9,baz=114,slow=6.5,SNR=3.4						
MKAR	**Makanchi Array**	**58.84**	**326**	P	**P**	**09 43 48.4**	**+0.1**
KURK	**Kurchatov**	**63.04**	**328**	P	**P**	**09 44 16.6**	**-0.2**
	0.7nm,0.5s,mb4.1,baz=128,slow=5.8,SNR=5.5						

CASC 29 09:34:10.0±1.5, 1336N×8961W, h61km±10km, MD4.0, ML3.7, 3C-6D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.47**	**359**	*e*P	x	09 34 22.0	
SBLS				⇑*i*P	x	09 34 22.1	
SBLS				*e*S	x	09 34 31.5	
BOQS	**Boqueron**	**0.49**	**41**	⇑*i*P	x	09 34 22.3	
BOQS				*i* P	x	09 34 22.3	
BOQS				*e*S	x	09 34 31.8	
BOQS				*e*S	x	09 34 32.0	
BOQS				AML	x	09 34 33.6	
	comp=Z,2μm,0.7s						
SNET	**Serv Nac Est T**	**0.49**	**49**	⇓*i*P	x	09 34 22.0	
SNET				*e*S	x	09 34 31.0	
SNET				*i*		09 34 34.1	
	comp=Z,6μm,0.2s						
SNJE	**San Jose**	**0.50**	**1**	⇑*i*P	x	09 34 22.3	
SNJE				*e*S	x	09 34 31.8	
RTR	**El Retiro**	**0.53**	**356**	*e*P	x	09 34 22.6	
RTR				*e*S	x	09 34 33.1	
LFRS	**El Faro**	**0.59**	**64**	⇓*e*P	x	09 34 23.1	
LFRS				*e*S	x	09 34 33.9	
LFU	**La Fuente**	**0.62**	**52**	*e*P	x	09 34 23.5	
LFU				*e*S	x	09 34 34.1	
LBRS	**Las Brisas**	**0.67**	**56**	⇓*e*P	x	09 34 23.9	
LBRS				*e*S	x	09 34 35.5	
RBDL	**Robledal**	**0.75**	**354**	⇓*e*P	x	09 34 24.8	
SNVI	**San Vicente**	**0.79**	**72**	*e*P	x	09 34 25.6	
SNVI				*e*S	x	09 34 38.4	
MTO2	**Montecristo 2**	**1.06**	**13**	⇓*e*P	x	09 34 28.6	
VSM	**San Miguel**	**1.30**	**87**	*e*P	x	09 34 32.3	
VSM				*e*S	x	09 34 50.5	
BLLM	**Bellamira**	**1.34**	**86**	*e*P	x	09 34 32.5	
BLLM				*e*S	x	09 34 51.2	
NBG	**Las Nubes**	**1.41**	**330**	*e*P	Pn	09 34 35.2	+1.7
NBG				*e*S	Sn	09 34 51.2	0.0
CAHU	**Cacacuatique**	**1.42**	**73**	⇓*e*P	x	09 34 33.5	
FUG	**Fuego 3**	**1.61**	**312**	*e*P	Pn	09 34 37.5	+1.3
FUG				*e*S	Sn	09 34 58.0	+2.0
FG6		**1.71**	**314**	*e*S	Sn	09 35 01.4	+2.9
CNCH	**Conchagua**	**1.73**	**93**	*e*P	x	09 34 38.1	
LEON	**Leon**	**2.81**	**109**	*e*P	Pn	09 34 53.0	+0.4
CNGN	**Cerro Negro**	**2.97**	**106**	*e*P	Pn	09 34 54.5	-0.2
CNGN				AML	AML	09 35 39.6	
	comp=N,194nm,0.4s						
MIRN	**Miramar**	**2.97**	**108**	*e*P	Pn	09 34 54.6	-0.1
COPN	**Copaltepe**	**3.17**	**111**	*e*P	Pn	09 34 58.0	+0.5
COPN				*e*P		09 34 58.1	
COPN				*e*S	Sn	09 35 35.9	+1.8
CSAN		**3.32**	**110**	*e*P	Pn	09 34 59.6	+0.1
APYN	**Apoyeque**	**3.37**	**109**	*e*P	Pn	09 35 00.2	0.0

*MEX **29** 10:08:57.2±0.7, 1328N×9168W, h37km±140km, MD4.2*
*NEIC **29** 10:08:57.2, 1328N×9168W, h37km, MD4.2(MEX), After MEX.*

CASC 29 10:08:55.4±1.9, 1363N×9108W, h37km±9km, MD4.1, ML3.9, 5C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.85**	**16**	*e*P	Pn	10 09 11.6	+0.7
JAT	**Jato**	**0.88**	**322**	*e*P	Pn	10 09 12.3	+1.1
JAT				*e*S	Sn	10 09 21.1	-1.7
PCG	**Pacaya**	**0.89**	**31**	*e*P	Pn	10 09 12.2	+0.8
FG6		**0.95**	**11**	*e*P	Pn	10 09 12.9	+0.7
NBG	**Las Nubes**	**1.19**	**36**	*e*P	Pn	10 09 17.1	+1.6
NBG				*e*S	Sn	10 09 33.2	+2.7
RTR	**El Retiro**	**1.42**	**79**	⇓*e*P	x	10 09 18.9	
RTR				*e*S	x	10 09 36.5	
SBLS	**San Blas**	**1.43**	**81**	⇓*e*P	x	10 09 18.7	
SBLS				*e*S	x	10 09 37.1	
RBDL	**Robledal**	**1.44**	**70**	*e*P	x	10 09 19.4	
SNJE	**San Jose**	**1.45**	**80**	⇓*e*P	x	10 09 19.1	
SNJE				*e*S	x	10 09 37.8	
THIG		**1.72**	**318**	*i* P	Pn	10 09 22.9	0.0
THIG				*i* S	Sn	10 09 43.3	-0.2
BOQS	**Boqueron**	**1.75**	**86**	⇑*e*P	x	10 09 23.4	
BOQS				*e*S	x	10 09 45.9	
BOQS				AML	x	10 09 48.0	
	comp=Z,904nm,0.5s						
SNET	**Serv Nac Est T**	**1.79**	**88**	*e*P	x	10 09 23.8	
SNET				*e*S	x	10 09 45.5	
SNET				*i*		10 09 48.0	
	comp=Z,3μm,0.3s						
MTO2	**Montecristo 2**	**1.83**	**65**	*e*P	x	10 09 25.1	
MTO2				*e*S	x	10 09 47.8	
LFRS	**El Faro**	**1.96**	**90**	*e*P	x	10 09 26.6	
LFRS				*e*S	x	10 09 50.1	
LBRS	**Las Brisas**	**1.98**	**86**	*e*P	x	10 09 27.0	
LBRS				*e*S	x	10 09 51.4	
SNVI	**San Vicente**	**2.18**	**90**	⇑*e*P	x	10 09 30.0	
SNVI				*e*S	x	10 09 56.0	
VSM	**San Miguel**	**2.73**	**94**	⇑*e*P	x	10 09 37.6	
VSM				*e*S	x	10 10 11.2	
BLLM	**Bellamira**	**2.77**	**93**	*e*P	x	10 09 37.8	
BLLM				*e*S	x	10 10 10.8	
CAHU	**Cacacuatique**	**2.79**	**87**	⇑*e*P	x	10 09 38.1	
CCIG	**Comitan**	**2.83**	**339**	*i* P	Pn	10 09 41.7	+3.5
CCIG				*i* S	Sn	10 10 14.9	+3.8
CNCH	**Conchagua**	**3.17**	**96**	⇑*e*P	x	10 09 43.4	
CNCH				*e*S	x	10 10 21.8	
SCX	**San Cristobal**	**3.44**	**334**	*i* P	Pn	10 09 50.1	+3.6
SCX				*i* S	Sn	10 10 29.9	+3.8
TGIG		**3.71**	**328**	*i* P	Pn	10 09 50.8	+0.7
TGIG				*i* S	Sn	10 10 34.2	+1.6
TGUH	**Tegucigalpa,Un**	**3.72**	**83**	*e*P	Pn	10 09 50.9	+0.5
TGUH				*e*S	Sn	10 10 33.1	+0.1
TGUH	**Tegucigalpa,Un**	**3.72**	**83**	*e*Pn	Pn	10 09 58.8	+8.4
TGUH				*e*Sn	Sn	10 10 50.8	+18
LEON	**Leon**	**4.25**	**106**	*e*P	Pn	10 09 58.5	+0.8
LEON				*e*S	Sn	10 10 48.0	+1.9
COPN	**Copaltepe**	**4.60**	**108**	*e*P	Pn	10 10 02.9	+0.3
COPN				*e*S	Sn	10 10 54.9	+0.1
CSAN		**4.76**	**107**	*e*P	Pn	10 10 05.0	+0.3
APYN	**Apoyeque**	**4.81**	**106**	*e*P	Pn	10 10 05.0	-0.4
VHO	**Vista Hermosa**	**6.44**	**303**	*i* P	Pn	10 10 26.6	-1.2
VHO				*i* S	Sn	10 11 34.4	-5.7
TEIG	**Tepich**	**7.09**	**22**	*e*Pn	Pn	10 10 38.6	+1.9
	comp=Z,45nm,0.8s						
PNIG	**Pinotepa**	**7.35**	**293**	*e*P	Pn	10 10 38.0	-2.2
PNIG				*i* S	Sn	10 11 52.2	-10
PPM	**Popocatepetl**	**9.04**	**308**	*e*P	Pn	10 11 04.1	+0.6
PPM				*i* S	Sn	10 12 38.6	-5.5

*ISCJB **29** 10:31:20.4±1.9, 125N±0.1×1436E±02, h86km±19km, mb4.0/10, Error ellipse: s-maj=26.6km s-min=17.5km az=178.1*
*IDC **29** 10:31:21.7±2.0, 1251N×14360E, h81km±19km, mb3.9/11, mb1 4.0/11, mb1mx3.9/20, mbtmp3.9/11, Error ellipse: s-maj=21.2km s-min=14.7km az=89.0*
*NEIC **29** 10:31:23.7±1.4, 1251N×14398E, h116km±22km, Error ellipse: s-maj=44.0km s-min=12.5km az=82.0*

ISC 29 10:31:22.4±1.7, 125N±01×1437E±02, h91km±17km, n14, σ0§68/14, mb4.0/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.59**	**47**	P	**Pn**	**10 31 49.6**	**+0.3**
	57nm,0.3s,baz=185,slow=3.6,SNR=62						
GUMO				S	**Sn**	**10 32 09.5**	**-0.2**
	447nm,0.3s,baz=67,slow=22,SNR=79						
JOW	**Kunigami**	**20.32**	**317**	P	**P**	**10 35 52.4**	**+1.2**
	11nm,0.4s,baz=143,slow=14,SNR=7.2						
MJAR	**Matsushiro Arr**	**24.45**	**349**	P	**P**	**10 36 31.4**	**-1.2**
	0.7nm,0.4s,mb3.4,baz=167,slow=9.9,SNR=5.4						
KSRS	**Korea Array**	**28.58**	**333**	P	**P**	**10 37 08.8**	**-1.1**
	1.5nm,0.6s,mb3.8,baz=141,slow=9.1,SNR=6.4						
WRA	**Warramunga Arr**	**33.52**	**196**	P	**P**	**10 37 53.0**	**-0.3**
	2.7nm,0.6s,mb4.3,baz=20,slow=9.6,SNR=50						
ASAR	**Alice Springs**	**37.19**	**195**	P	**P**	**10 38 24.7**	**-0.1**
	0.5nm,0.6s,mb3.6,baz=22,slow=12,SNR=12						
ASAR				PcP	PcP	10 40 44.6	+1.4
	0.1nm,0.6s,baz=27,slow=2.3,SNR=4.8						
SONM	**Songino Array**	**46.97**	**326**	P	**P**	**10 39 44.8**	**+0.7**
	2.3nm,0.5s,mb4.1,baz=149,slow=7.9,SNR=15						
MKAR	**Makanchi Array**	**61.48**	**317**	P	**P**	**10 41 29.8**	**+0.3**
	0.8nm,0.5s,mb4.0,baz=96,slow=9.9,SNR=6.8						
ZALV	**Zalesovo Beam**	**61.84**	**325**	P	**P**	**10 41 31.5**	**-0.3**
	1.4nm,0.5s,mb4.2,baz=102,slow=6.5,SNR=6.2						
ZALV	**Zalesovo Beam**	**61.84**	**325**	P	**P**	**10 41 31.5**	**-0.3**
YKA	**Yellowknife Ar**	**84.36**	**27**	P	**P**	**10 43 44.7**	**+0.4**
	1.3nm,0.5s,mb4.0,baz=287,slow=5.1,SNR=4.7						
ARCES	**ARCESS Array B**	**87.77**	**342**	P	**P**	**10 44 00.5**	**-0.4**
	2.3nm,0.6s,mb4.4,baz=262,slow=5.7,SNR=7.8						
NVAR	**Mina Array Bea**	**88.51**	**51**	P	**P**	**10 44 05.9**	**+0.8**
	2.3nm,0.6s,mb4.4,baz=262,slow=5.7,SNR=7.8						
LPAZ	**La Paz**	**148.97**	**101**	PKPbc	PKPbc	10 51 03.3	+2.5
	0.7nm,0.4s,baz=343,slow=2.6,SNR=4.9						

*ISCJB **29** 10:38:57.7±0.8, 1045N±005×6259W±002, h7km±5km, Error ellipse: s-maj=7.8km s-min=3.3km az=171.9*
*NEIC **29** 10:38:57.6, 1062N×6255W, h5km, MD3.1(TRN), After TRN.*
*FUNV **29** 10:38:58.5, 1043N×6255W, h2km, MW3.0*
*TRN **29** 10:38:58.3, 1064N×6254W, h14km, MD3.1*

ISC 29 10:38:57.9±0.7, 1043N±005×6258W±002, h4km±5km, n15, σ0§91/30, 1C-3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.41**	**59**	⇑*i*P	**Pg**	**10 39 06.1**	**+0.3**
GUIV				*e*S	**Sg**	**10 39 12.1**	**+0.9**
CRUV	**Carupano**	**0.69**	**290**	⇓*e*P	**Pg**	**10 39 11.0**	**-0.2**
CRUV				*e*S	**Sg**	**10 39 21.1**	**+1.0**
TCE	**Chacachacare**	**0.85**	**72**	*e*P	**Pg**	**10 39 13.3**	**-1.0**
TCE				*e*S	**Sg**	**10 39 24.9**	**-0.5**
ITEV	**Isla Los Testi**	**1.06**	**329**	⇓*e*P	**Pg**	**10 39 18.4**	**0.0**
ITEV				*e*S	**Sg**	**10 39 33.4**	**+1.2**
TPP	**Pointe-a-Pierr**	**1.11**	**96**	*e*P	**Pg**	**10 39 19.3**	**-0.1**
TPP				*e*S	**Sg**	**10 39 35.5**	**+1.7**
TRN	**Trinidad (W)**	**1.18**	**79**	*e*P	**Pg**	**10 39 18.8**	**-1.7**
TRN				*e*S	**Sg**	**10 39 35.4**	**-0.4**
TBH	**Brigand Hill**	**1.49**	**88**	*e*P	**Pn**	**10 39 26.2**	**+0.7**
ORIV	**Oritupano**	**1.58**	**211**	⇓*i*P	**Pn**	**10 39 26.6**	**-0.2**
ORIV				*e*S	**Sn**	**10 39 48.6**	**+1.0**
TPR	**Prospect**	**1.92**	**67**	*e*P	**Pn**	**10 39 31.5**	**+0.1**
TPR				*e*S	**Sn**	**10 39 57.4**	**+1.4**
PCRV	**Puerto La Cruz**	**2.04**	**263**	*e*P	**Pn**	**10 39 33.5**	**+0.5**
PCRV				*e*S	**Sn**	**10 39 58.7**	**-0.2**
TOSP	**Speyside**	**2.18**	**67**	*e*P	**Pn**	**10 39 33.3**	**-1.7**
TOSP				*e*S	**Sn**	**10 40 02.5**	**0.0**
TOSP				*e*S	**Sn**	**10 40 02.7**	**+0.2**
SVB	**Belmont**	**3.11**	**25**	*e*P	**Pg**	**10 39 56.4**	**-1.1**
SVB				*e*S	**Sg**	**10 40 33.9**	**-3.9**
CUPV	**Cœpira**	**3.18**	**264**	*e*P	**Pn**	**10 39 49.2**	**+0.5**
CUPV				*e*S	**Sn**	**10 40 26.6**	**-0.5**
BIRV	**Birongo**	**3.63**	**271**	*e*P	**Pn**	**10 39 55.3**	**+0.4**
BIRV				*e*S	**Sn**	**10 40 37.0**	**-1.2**
BAUV	**El Baul**	**5.59**	**255**	*e*P	**Pn**	**10 40 21.4**	**-0.4**
BAUV				*e*S	**Sn**	**10 41 22.8**	**-3.7**

*ISCJB **29** 10:40:19.0±0.3, 5552N±003×11031E±005, h10km, Error ellipse: s-maj=5.4km s-min=2.6km az=139.0*
*MOS **29** 10:40:19.3±1.0, 5570N×11023E, h7km, mb4.4/1, Error ellipse: s-maj=14.5km s-min=8.5km az=58.4*
*BYKL **29** 10:40:20.3±0.3, 5572N×11021E, h3km±16km*
*IDC **29** 10:40:23.3±8.5, 5560N×10982E, h0km, mb3.4/1, mb1 3.5/5, mb1mx3.3/27, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=115.8km s-min=32.1km az=78.0*

ISC 29 10:40:20.8±0.3, 5559N±003×11032E±004, h10km, n46, σ1§49/79, 6C-5D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.48**	**293**	*e*PG	**Pg**	**10 40 28.2**	**-2.0**
NIZ				*e*		10 40 35.0	
NIZ				pmax	pmax		
	comp=Z,327nm,0.7s						
NIZ				smax			
	comp=N,1μm,1.1s						
KMO	**Kumora**	**0.58**	**58**	*e*PG	**Pg**	**10 40 30.6**	**-1.4**
KMO				*e*		10 40 37.7	
KMO				pmax	pmax		
	comp=Z,81nm,0.1s						
KMO				smax			
	comp=E,1μm,1.3s						
KMO	**Kumora**	**0.58**	**58**	⇓*i*Pg	**Pg**	**10 40 30.6**	**-1.4**
KMO				*i* Sg	**Sg**	**10 40 38.2**	**-1.4**
KMO				Pmax			
	comp=E,186nm,0.4s						
KMO				Smax			
	comp=E,1μm,1.1s						
YLYR	**Ulyunkhan**	**0.86**	**146**	⇑*i*PG	**Pg**	**10 40 37.8**	**+0.5**
YLYR				*e*		10 40 50.3	
YLYR				pmax	pmax		
	comp=Z,212nm,0.2s						
YLYR				smax			
	comp=N,1μm,0.2s						
YLYR	**Ulyunkhan**	**0.86**	**146**	⇑*i*Pg	**Pg**	**10 40 37.8**	**+0.5**
YLYR				*e*Sg	**Sg**	**10 40 51.3**	**+2.8**
YLYR				Pmax			
	comp=N,233nm,0.7s						
YLYR				Smax			
	comp=N,573nm,0.4s						
YOA	**Uoyan**	**0.96**	**55**	⇓*i*PG	**Pg**	**10 40 38.2**	**-1.1**
YOA				*e*		10 40 50.8	
YOA				pmax	pmax		
	comp=Z,203nm,0.2s						
YOA				smax			
	comp=N,1μm,0.4s						
YOA	**Uoyan**	**0.96**	**55**	*e*Pg	**Pg**	**10 40 38.2**	**-1.1**
YOA				*i* Sg	**Sg**	**10 40 51.0**	**-0.8**
YOA				Pmax			
	comp=N,113nm,0.2s						
YOA				Smax			
	comp=N,1μm,0.6s						
SYVR	**Suvo**	**1.94**	**186**	*e*PN	**Pg**	**10 40 57.2**	**-0.8**
SYVR				*e*		10 41 24.8	
SYVR				pmax	pmax		
	comp=Z,148nm,0.4s						
SYVR				smax			
	comp=N,580nm,0.5s						
SYVR	**Suvo**	**1.94**	**186**	*e*Pg	**Pg**	**10 40 57.2**	**-0.8**
SYVR				*e*Sg	**Sg**	**10 41 24.7**	**+1.6**
SYVR				Pmax			
	comp=N,146nm,0.4s						
SYVR				Smax			
	comp=N,572nm,0.5s						
MXMB	**Maximikha**	**2.50**	**202**	*e*Pn	**Pn**	**10 41 03.1**	**+1.6**
MXMB				*e*Pg	**Pg**	**10 41 06.4**	**-2.4**
MXMB				*e*Sg	**Sg**	**10 41 42.1**	**+0.9**
MXMB				Pmax			
	comp=N,54nm,0.5s						
MXMB				Smax			
	comp=N,407nm,0.9s						
OGRR	**Ongureny**	**2.51**	**220**	*e*PN	**Pn**	**10 41 04.0**	**+2.4**
OGRR				*e*		10 41 07.7	
OGRR				*e*		10 41 39.5	
OGRR				pmax	pmax		
	comp=Z,34nm,0.6s						
OGRR				smax			
	comp=E,199nm,1.0s						
OGRR	**Ongureny**	**2.51**	**220**	*e*Pn	**Pn**	**10 41 04.1**	**+2.5**
OGRR				*e*Pg	**Pg**	**10 41 06.4**	**-2.5**
OGRR				*e*Sn	**Sn**	**10 41 35.6**	**+3.4**
OGRR				*e*Sg	**Sg**	**10 41 39.7**	**-1.7**
OGRR				Pmax			
	comp=E,34nm,0.7s						
OGRR				Smax			
	comp=E,246nm,1.3s						
BOD	**Bodaibo**	**3.02**	**41**	*e*PN	**Pb**	**10 41 13.6**	**-1.0**
BOD				*e*		10 41 50.9	
BOD				pmax	pmax		
	comp=Z,23nm,0.4s						
BOD				smax			
	comp=N,187nm,0.7s						
BOD	**Bodaibo**	**3.02**	**41**	⇑*i*Pn	**Pn**	**10 41 09.3**	**+0.7**
BOD				*e*Pg	**Pg**	**10 41 13.7**	**-4.9**
BOD				*e*		10 41 45.1	
BOD				*e*Sg	**Sg**	**10 41 51.9**	**-5.8**
BOD				Pmax			
	comp=N,23nm,0.4s						
BOD				Smax			
	comp=N,184nm,0.6s						
NLYR	**Nelyaty**	**3.15**	**71**	*e*PN	**Pn**	**10 41 11.0**	**+0.6**
NLYR				*e*		10 41 17.9	
NLYR				*e*		10 41 57.2	
NLYR				pmax	pmax		
	comp=Z,86nm,0.7s						
NLYR				smax			
	comp=E,283nm,1.0s						
NLYR	**Nelyaty**	**3.15**	**71**	⇓*i*Pn	**Pn**	**10 41 11.3**	**+0.9**
NLYR				*e*		10 41 20.7	
NLYR				*e*Sg	**Sg**	**10 41 57.6**	**-4.3**
NLYR				max			
	comp=E,87nm,0.6s						
NLYR				Smax			
	comp=E,286nm,0.8s						
TRG	**Tyrgan**	**3.67**	**221**	⇑*i*Pn	**Pn**	**10 41 19.5**	**+2.0**
TRG				*e*Sn	**Sn**	**10 42 02.3**	**+1.5**
TRG				*i* Sg	**Sg**	**10 42 17.4**	**-1.2**
TRG				max			
	comp=E,25nm,0.5s						
TRG				Smax			
	comp=E,113nm,1.0s						
CIT	**Chita**	**4.05**	**150**	*e*Sg	**Sg**	**10 42 30.0**	**-0.8**
CIT				Smax			
	comp=E,253nm,0.6s						
HRMR	**Khuramsha**	**4.44**	**208**	*e*Pn	**Pn**	**10 41 30.3**	**+2.1**
HRMR				*e*Pg	**Pg**	**10 41 42.6**	**-3.3**
HRMR				*i* Sg	**Sg**	**10 42 40.9**	**-2.5**
HRMR				Pmax			
	comp=E,29nm,0.6s						
HRMR				Smax			
	comp=E,212nm,0.9s						
CRS	**Chara**	**4.62**	**70**	*e*PN	**Pn**	**10 41 32.1**	**+1.5**
CRS				*e*		10 41 45.7	
CRS				*e*		10 42 43.7	
CRS				pmax	pmax		
	comp=Z,54nm,1.2s						
CRS				smax			
	comp=E,170nm,1.2s						
CRS	**Chara**	**4.62**	**70**	⇑*i*Pn	**Pn**	**10 41 31.9**	**+1.3**
CRS				*e*Pg	**Pg**	**10 41 42.6**	**-6.7**
CRS				*e*		10 41 45.9	
CRS				*i* Sg	**Sg**	**10 42 43.2**	**-5.9**
CRS				max			
	comp=E,35nm,0.7s						
CRS				Smax			
	comp=E,171nm,1.4s						
LSTR	**Listvyanka**	**4.95**	**223**	*e*Pn	**Pn**	**10 41 35.6**	**+0.5**
LSTR				*e*		10 41 49.6	
LSTR				*e*Sn	**Sn**	**10 42 31.4**	**-0.9**
LSTR				*e*Sg	**Sg**	**10 42 53.7**	**-5.9**
LSTR				max			
	comp=E,11nm,0.6s						
LSTR				Smax			
	comp=E,96nm,1.4s						
TLY	**Talaya**	**5.58**	**228**	*e*PN	**Pn**	**10 41 43.3**	**-0.4**
TLY				*e*		10 42 00.4	
TLY				*e*S	**Sn**	**10 42 47.4**	**-0.3**
TLY				*e*		10 43 13.3	
TLY				pmax	pmax		
	comp=Z,13nm,0.6s						
TLY				smax			
	comp=N,57nm,1.0s						
TLY	**Talaya**	**5.58**	**228**	*e*Pn	**Pn**	**10 41 44.1**	**+0.4**
TLY				*e*Pg	**Pg**	**10 42 01.1**	**-6.4**
TLY				*e*Sn	**Sn**	**10 42 47.2**	**-0.5**
TLY				*e*Sg	**Sg**	**10 43 13.2**	**-6.4**
TLY				Pmax			
	comp=N,11nm,0.7s						
TLY				Smax			
	comp=N,57nm,0.8s						
TUP	**Tupik**	**5.66**	**98**	*e*PN	**Pg**	**10 42 03.7**	**-5.5**
TUP				*e*		10 43 18.2	
TUP				pmax	pmax		
	comp=Z,18nm,0.8s						
TUP				smax			
	comp=N,242nm,1.2s						
TUP	**Tupik**	**5.66**	**98**	⇓*i*Pn	**Pn

ZAK	**Zakamensk**	**6.72 222**	*e*Sn	**Sn**	**10 43 02.5**	**-14**
ZAK			*e*Sg	**Sg**	**10 43 49.7**	**-6.8**
ZAK			Smax			
	comp=E,37nm,1.3s					
MOY	**Mondy**	**6.80 239**	*e*Pn	**Pn**	**10 42 02.8**	**+2.4**
MOY			*e*		10 42 24.7	
MOY			*e*S	**Sn**	**10 43 17.2**	**-0.6**
MOY			*e*		10 43 52.5	
MOY			pmax	pmax		
	comp=Z,8.0nm,0.4s					
MOY			smax			
	comp=E,74nm,1.7s					
MOY	**Mondy**	**6.80 239**	*e*Pn	**Pn**	**10 42 03.4**	**+3.0**
MOY			*e*		10 43 17.9	
MOY			*e*Sg	**Sg**	**10 43 52.0**	**-6.7**
MOY			max			
	comp=E,41nm,1.0s					
MOY			Smax			
	comp=E,73nm,1.9s					
ORL	**Orlik**	**6.90 248**	*e*PN	**Pn**	**10 42 03.3**	**+1.4**
ORL			*e*		10 42 24.7	
ORL			*e*S	**Sn**	**10 43 19.6**	**-0.7**
ORL			*e*		10 43 51.7	
ORL			pmax	pmax		
	comp=Z,10.0nm,1.1s					
ORL			smax			
	comp=N,73nm,1.4s					
ORL	**Orlik**	**6.90 248**⇓	*i*Pn	**Pn**	**10 42 03.8**	**+1.9**
ORL			*e*		10 43 19.9	
ORL			*e*Sg	**Sg**	**10 43 51.4**	**-11**
ORL			max			
	comp=N,15nm,1.0s					
ORL			Smax			
	comp=N,73nm,1.0s					
SONM	**Songino Array**	**8.14 199**	Pn	**Pn**	**10 42 21.6**	**+2.8**
	comp=N,0.2nm,0.3s,baz=9.8,slow=12,SNR=3.0					
SONM			Lg		10 44 39.4	
	comp=N,0.9nm,0.3s,baz=13,slow=27,SNR=14					
IENR	**Iengra**	**8.20 80**	*e*Sg	Sx	10 44 35.7	
TNDR	**Tynda**	**8.22 87**	*e*Sg	Sx	10 44 36.1	
CLNS	**Chul'man**	**8.22 75**	*e*Sg	Sx	10 44 34.6	
HIA	**Hailar**	**8.55 134**	*e*Sg	Sx	10 44 49.3	
ZALV	**Zalesovo Beam**	**14.79 274**	Pn	**Pn**	**10 43 49.2**	**-0.4**
	comp=N,0.1nm,0.3s,baz=72,slow=9.3,SNR=3.9					
KURK	**Kurchatov**	**19.52 269**	P	**Pn**	**10 44 50.5**	**+1.2**
	comp=N,0.1nm,0.3s,baz=67,slow=11,SNR=12					
MKAR	**Makanchi Array**	**19.53 255**	P	**Pn**	**10 44 49.6**	**+0.2**
	comp=N,0.2nm,0.3s,baz=63,slow=11,SNR=11					
BVAR	**Borovoye Array**	**23.22 280**	P	**P**	**10 45 28.1**	**+0.4**
	comp=N,0.9nm,0.6s,baz=76,slow=6.1,SNR=4.2					
BVAR	**Borovoye Array**	**23.22 280**	P	**P**	**10 45 28.1**	**+0.4**
BVAR			pmax	pmax		
	comp=Z,1.0nm,0.6s					
SDKM	**Sandakan**	**50.11 171**	⇑P	**P**	**10 49 16.4**	**+0.5**

MOS ***29*** *10:46:41.6±1.1, 924N×12678E, h33km, mb5.0/11, Error ellipse: s-maj=25.2km s-min=8.0km az=113.5*

ISCJB ***29*** *10:46:42.7±0.3, 935N±003×12695E±003, h40km, mb4.7/54, MS3.9/15, Error ellipse: s-maj=4.5km s-min=3.7km az=172.8*

MAN ***29*** *10:46:45, 935N×12677E, h27km, mb5.1, ML4.0, MS4.1*

DJA ***29*** *10:46:46, 954N×12718E, h44km, mb4.9/11*

IDC ***29*** *10:46:46.3±3.7, 930N×12678E, h54km±33km, mb4.2/16, mb1 4.3/18, mb1mx4.1/26, mbtmp4.2/18, ML4.7/2, MS3.8/12, Ms1 3.8/12, ms1mx3.5/33, Error ellipse: s-maj=36.6km s-min=11.2km az=72.0*

BJI ***29*** *10:46:47.6, 947N×12681E, h68km, mB5.0, mb4.7, Ms4.7, Msz4.2*

NEIC ***29*** *10:46:48.8±2.5, 930N×12683E, h78km±22km, mb4.9/13, Error ellipse: s-maj=20.2km s-min=5.9km az=69.0*

ISC 29 10:46:44.9±0.3,**934N**±003×**12689E**±003,**h42**km, **h42**km±14km;**pP-P,n128,**σ1§**15**/138,**mb4.7**/54,**MS3.9**/15, **12C-7D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BIPH	**Bislig**	**1.27**	**204**⇑	*e*P		**Pn**	**10 47 02.5**	**-3.7**
BIPH				*e*S		**Sn**	**10 47 16.7**	**-5.3**
BUTP	**Butuan**	**1.30**	**254**	*e*P		**Pn**	**10 47 05.1**	**-1.6**
BUTP				*e*S		**Sn**	**10 47 24.8**	**+1.8**
MSLP	**Maasin**	**2.15**	**292**	*e*P		**Pn**	**10 47 18.4**	**+0.1**
MSLP				*e*S		**Sn**	**10 47 51.0**	**+7.2**
BUKP	**Musuan**	**2.32**	**231**	*e*P		**Pn**	**10 47 20.9**	**+0.3**
BUKP				*e*S		**Sn**	**10 47 52.8**	**+4.8**
CGP	**Cagayan de Oro**	**2.34**	**248**	*e*P		**Pn**	**10 47 17.2**	**-3.8**
CGP				*e*S		**Sn**	**10 47 47.8**	**-0.6**
MATI	**Mati**	**2.46**	**195**	*e*P		**Pn**	**10 47 23.5**	**+0.8**
DAV	**Davao City (W)**	**2.60**	**210**	P		**Pn**	**10 47 26.4**	**+1.8**
	42nm,0.3s,baz=84,slow=9.2,SNR=2.5							
DAV				S		**Sn**	**10 47 58.1**	**+3.1**
	134nm,0.3s,baz=264,slow=22,SNR=4.5							
DAV				LR		LR	10 48 32.6	
	comp=Z,3μm,21.3s,baz=168,slow=42							
DAV	**Davao City (W)**	**2.60**	**210**	P		**Pn**	**10 47 24.9**	**+0.3**
PLP	**Palo**	**2.61**	**314**⇓	*e*P		**Pn**	**10 47 23.8**	**-0.8**
PLP				*e*S		**Sn**	**10 47 53.4**	**-1.7**
DMPH	**Davao City--Mi**	**2.63**	**211**⇑	*e*P		**Pn**	**10 47 25.9**	**+1.0**
BESP	**Borongan**	**2.66**	**328**	*e*P		**Pn**	**10 47 26.4**	**+1.1**
OCLP	**Ormoc**	**2.81**	**307**	*e*P		**Pn**	**10 47 28.6**	**+1.2**
TBP	**Tagbilaran**	**3.00**	**277**	*e*P		**Pn**	**10 47 30.0**	**-0.1**
TBP				*e*S		**Sn**	**10 48 05.0**	**+0.2**
LLP	**Lapu-Lapu**	**3.04**	**289**	*e*P		**Pn**	**10 47 31.0**	**+0.5**
LLP				*e*S		**Sn**	**10 48 04.1**	**-1.5**
CTBH	**Cotabato--PC H**	**3.36**	**231**⇑	*e*P		**Pn**	**10 47 34.9**	**-0.1**
CTBH				*i* S		**Sn**	**10 48 09.5**	**-4.1**
DCPH	**Dipolog City**	**3.57**	**258**⇓	*e*P		**Pn**	**10 47 37.4**	**-0.5**
DCPH				*e*S		**Sn**	**10 48 18.6**	**-0.3**
PAGZ	**Pagadian**	**3.77**	**247**	*e*P		**Pn**	**10 47 41.8**	**+1.2**
CNP	**Catarman**	**3.83**	**325**	*e*P		**Pn**	**10 47 41.9**	**+0.5**
CNP				*e*S		**Sn**	**10 48 26.8**	**+1.5**
GUIM	**Jordan**	**4.42**	**287**	*e*P		**Pn**	**10 47 51.0**	**+1.5**
RCP	**Roxas**	**4.63**	**299**⇑	*e*P		**Pn**	**10 47 52.8**	**+0.3**
PVCP	**Virac**	**5.00**	**328**	*e*P		**Pn**	**10 47 59.3**	**+1.7**
KALP	**Kalibo**	**5.04**	**298**	*e*P		**Pn**	**10 48 05.0**	**+6.9**
KKM	**Kota Kinabalu**	**11.07**	**254**	Pn		**Pn**	**10 49 24.2**	**+3.4**
SBUM	**Sibu**	**16.11**	**246**	⇑P		**Pn**	**10 50 33.7**	**+5.1**
GUMO	**Guam**	**18.12**	**75**	LR		LR	10 58 12.6	
	comp=Z,239nm,18.4s,baz=268,slow=38							
KSM	**Kuching**	**18.25**	**246**	⇓P		**Pn**	**10 50 58.6**	**+3.4**
KSM	**Kuching**	**18.25**	**246**	*e*Pn		**Pn**	**10 50 56.1**	**+0.8**
QIZ	**Qiongzhong**	**19.11**	**302**	P		**Pn**	**10 51 02.8**	**-2.7**
QIZ				S		**S**	**10 54 37.5**	**-1.5**
QIZ				LR		LR		
	comp=N,280nm,15.2s							
QIZ				LR		LR		
	comp=Z,394nm,15.0s							
BATI	**Baumata**	**19.68**	**189**	P		**Pn**	**10 51 11.3**	**-1.1**
	comp=Z,8.5nm,0.3s,baz=314,slow=2.9,SNR=6.9							
KAKA	**Kakadu**	**22.59**	**166**	*e*P		**P**	**10 51 42.6**	**+0.6**
	comp=Z,37nm,0.8s,mb4.9							
NJ2	**Nanjing**	**23.79**	**343**	*e*P		**P**	**10 51 54.5**	**+0.7**
NJ2				AMB		AMB		
	comp=Z,20nm,0.8s,mb4.6							
KTGM	**Kuala Trenggan**	**23.89**	**262**	⇑P		**P**	**10 51 56.6**	**+1.6**
MYKOM	**Kota Tinggi**	**24.11**	**253**	⇑P		**P**	**10 51 58.3**	**+1.4**
WHN	**Wuhan**	**24.12**	**333**	⇓P		**P**	**10 51 58.3**	**+1.4**
KGM	**Kluang**	**24.54**	**254**	⇓P		**P**	**10 52 02.2**	**+1.3**
GYA	**Guiyang**	**25.62**	**314**	P		**P**	**10 52 11.8**	**+1.2**
GYA				AP		pP	10 52 23.8	+1.8
GYA				PP			10 52 53.3	
GYA				S		**S**	**10 56 36.8**	**+0.8**
GYA				XS		sS	10 56 55.0	-0.1
GYA				SS			10 57 40.3	
GYA				SCP		ScP	10 59 18.0	+1.0
GYA				AMB		AMB		
	comp=Z,20nm,1.0s,mb4.6							
GYA				AMB		AMB		
	comp=Z,120nm,8.0s							
GYA				LR		LR		
	comp=N,560nm,16.9s,MS4.3							
GYA				LR		LR		
	comp=E,430nm,15.8s,MS4.3							
GYA				LR		LR		
	comp=Z,460nm,17.7s,MS4.0							
FRIM	**Kepong**	**25.82**	**258**	⇓P		**P**	**10 52 13.8**	**+1.3**
IPM	**Ipoh**	**26.12**	**261**	⇑P		**P**	**10 52 16.7**	**+1.5**
JHJ	**Hachijo jima 2**	**26.48**	**25**	LR		LR	11 02 06.2	
	comp=Z,210nm,20.0s,MS3.7,baz=303,slow=35							
FITZ	**Fitzroy Crossi**	**27.30**	**183**	*e*P		**P**	**10 52 26.3**	**+0.6**
	comp=Z,4.0nm,0.5s,mb4.2							
FITZ	**Fitzroy Crossi**	**27.30**	**183**	P		**P**	**10 52 25.6**	**-0.2**
	comp=Z,2.1nm,0.4s,mb4.0,baz=10,slow=13,SNR=14							
KMI	**Kunming**	**27.82**	**307**	P		**P**	**10 52 36.3**	**+5.9**
KMI				AMB		AMB		
	comp=Z,6.0nm,1.1s,mb4.1							
KSRS	**Korea Array**	**28.00**	**2**	P		**P**	**10 52 32.2**	**+0.4**
	comp=Z,2.3nm,0.6s,mb4.0,baz=176,slow=10,SNR=11							
KSRS				LR		LR	11 05 06.2	
	comp=Z,242nm,18.9s,MS3.8,baz=171,slow=39							
CMAR	**Chiang Mai Arr**	**28.56**	**292**	P		**P**	**10 52 36.5**	**-0.5**
	comp=Z,1.4nm,0.5s,mb3.9,baz=101,slow=7.3,SNR=8.4							
WRAB	**Tennant Creek**	**30.01**	**166**	*e*P		**P**	**10 52 47.7**	**-2.1**
WRA	**Warramunga Arr**	**30.01**	**166**	P		**P**	**10 52 48.2**	**-1.6**
	comp=Z,2.6nm,0.8s,mb4.0,baz=346,slow=9.4,SNR=17							
WB2	**Warramunga Arr**	**30.02**	**166**	*e*P		**P**	**10 52 49.8**	**-0.1**
CD2	**Chengdu**	**30.40**	**318**	P		**P**	**10 52 54.5**	**+1.2**
CD2				PP		PP	10 53 54.0	-8.4
CD2				S		**S**	**10 57 51.5**	**+0.3**
CD2				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.6							
CD2				AMB		AMB		
	comp=Z,30nm,4.8s							
CD2				LR		LR		
	comp=N,350nm,18.0s,MS4.2							
CD2				LR		LR		
	comp=E,350nm,16.8s,MS4.2							
CD2				LR		LR		
	comp=Z,370nm,15.6s,MS4.1							
MBWA	**Marble Bar**	**31.12**	**193**	*e*P		**P**	**10 52 59.2**	**-0.4**
	comp=Z,14nm,0.8s,mb4.8							
MBWA				*e*pP		pP	10 53 11.0	-0.1
MBWA				*e*sP		sP	10 53 16.2	+0.1
BJI	**Beijing**	**32.02**	**344**	P		**P**	**10 53 06.5**	**-0.9**
BJI				AMB		AMB		
	comp=Z,28nm,1.4s,mb4.9							
BJI				AMB		AMB		
	comp=Z,128nm,3.5s							
BJI	**Beijing**	**32.02**	**344**	P		**P**	**10 53 06.5**	**-0.9**
	comp=Z,28nm,1.4s,mb4.9							
ASAR	**Alice Springs**	**33.52**	**168**	P		**P**	**10 53 19.7**	**-0.9**
	comp=Z,1.5nm,0.6s,mb4.1,baz=343,slow=7.4,SNR=25							
ASAR				PcP		PcP	10 56 00.5	-0.4
	comp=Z,1.1nm,0.8s,baz=5.6,slow=2.7,SNR=4.1							
LZH	**Lanzhou**	**33.88**	**325**	*e*P		**P**	**10 53 26.0**	**+2.3**
LZH				AP		pP	10 53 38.0	+2.8
LZH				PP		PP	10 54 40.5	-0.5
LZH				*e*S		**S**	**10 58 47.0**	**+1.7**
LZH				XS		sS	10 59 07.5	+2.9
LZH				AMB		AMB		
	comp=Z,19nm,1.5s,mb4.8							
LZH				AMB		AMB		
	comp=Z,108nm,5.2s							
LZH				LR		LR		
	comp=N,865nm,14.6s							
LZH				LR		LR		
	comp=Z,1μm,15.7s,MS4.8							
LZH	**Lanzhou**	**33.88**	**325**	*e*P		**P**	**10 53 26.0**	**+2.3**
LZH				*PP		pP	10 53 38.0	+2.8
LZH				*SP		sP	10 53 43.0	+2.7
LZH							10 54 40.4	
LZH				*e*S		**S**	**10 58 47.1**	**+1.8**
LZH				*SS		sS	10 59 07.4	+2.8
LZH				pmax		pmax		
	comp=Z,19nm,1.5s,mb4.8							
LZH				MLR		MLR		
	comp=Z,1μm,15.7s,MS4.8							
LZH	**Lanzhou**	**33.88**	**325**	*e*P		**P**	**10 53 26.0**	**+2.3**
	comp=Z,19nm,1.5s,mb4.8							
LZH				pP		pP	10 53 38.0	+2.8
LZH				sP		sP	10 53 43.0	+2.7
LZH				PP		PP	10 54 40.4	-0.6
LZH				*e*S		**S**	**10 58 47.1**	**+1.8**
LZH				sS		sS	10 59 07.4	+2.8
LZH				LR		LR		
	comp=Z,1μm,15.7s,MS4.8							
HHC	**Hu-ho-hao-te**	**34.19**	**339**	*e*P		**P**	**10 53 25.5**	**-0.8**
HHC				PP		PP	10 54 41.5	-2.9
HHC				PCP		PcP	10 56 01.3	-1.3
HHC				S		**S**	**10 58 48.8**	**-1.2**
HHC				SCP		ScP	10 59 41.3	-3.1
HHC				PCS		PcS	10 59 46.3	-2.4
HHC				SS		SS	11 01 00.3	-19
HHC				SCS		ScS	11 03 41.8	-4.7
HHC				AMB		AMB		
	comp=Z,10.0nm,0.6s,mb4.9							
HHC				AMB		AMB		
	comp=Z,95nm,5.8s							
HHC				LR		LR		
	comp=N,219nm,13.4s,MS4.2							
HHC				LR		LR		
	comp=E,170nm,13.8s,MS4.2							
HHC				LR		LR		
	comp=Z,172nm,13.9s,MS3.9							
CN2	**Changchun**	**34.35**	**358**	P		**P**	**10 53 30.8**	**+3.2**
MDJ	**Mudanjiang**	**35.22**	**3**	P		**P**	**10 53 36.5**	**+1.4**
MDJ				PP		PP	10 54 57.8	+2.1
MDJ				PCP		PcP	10 56 07.5	+2.1
MDJ				S		**S**	**10 59 07.5**	**+1.8**
MDJ				SCP		ScP	10 59 46.0	-1.9
MDJ				PCS		PcS	10 59 53.0	+0.8
MDJ				AMB		AMB		
	comp=Z,10.0nm,1.3s,mb4.6							
MDJ				AMB		AMB		
	comp=Z,120nm,4.1s							
MDJ				LR		LR		
	comp=Z,52nm,20.6s,MS3.3							
HNR	**Honiara**	**37.83**	**119**	LR		LR	11 06 51.5	
	comp=Z,117nm,18.3s,MS3.7,baz=127,slow=32							
LSA	**Lhasa**	**39.06**	**306**	P		**P**	**10 54 07.5**	**-0.5**
FORT	**Forrest**	**39.91**	**178**	*e*P		**P**	**10 54 16.4**	**+1.5**
	comp=Z,16nm,0.6s,mb4.9							
ODAN	**Odare**	**41.17**	**300**	*e*P		**P**	**10 54 24.6**	**-0.9**
	comp=Z,33nm,0.7s,mb5.1							
KLBR	**Kellerberrin**	**41.63**	**192**	*e*P		**P**	**10 54 29.3**	**+0.2**
	comp=Z,53nm,1.9s,mb4.8							
RAMN	**Ramite**	**41.87**	**300**	*e*P		**P**	**10 54 30.1**	**-1.1**
	comp=Z,25nm,0.8s,mb4.9							
ULN	**Ulaanbaatar**	**41.90**	**340**⇑	*e*P		**P**	**10 54 32.4**	**+1.3**
SONM	**Songino Array**	**42.09**	**339**	P		**P**	**10 54 33.5**	**+0.7**
	comp=Z,1.4nm,0.6s,mb3.8,baz=156,slow=11,SNR=11							
SONM				LR		LR	11 14 39.3	
	comp=Z,82nm,19.8s,MS3.6,baz=295,slow=40							
MUN	**Mundaring**	**42.34**	**194**	*e*P		**P**	**10 54 34.3**	**-0.6**
JIRN	**Jiri**	**42.42**	**301**	*e*P		**P**	**10 54 34.8**	**-1.0**
	comp=Z,28nm,0.6s,mb5.1							
GUN	**Gumba**	**42.76**	**301**	*e*P		**P**	**10 54 37.6**	**-0.9**
	comp=Z,68nm,0.9s,mb5.4							
NWAO	**Narrogin (SRO)**	**43.03**	**192**	P		**P**	**10 54 40.8**	**+0.3**
	comp=Z,9.8nm,0.7s,mb4.7,baz=12,slow=8.5							
PKIN	**Phulchoki**	**43.07**	**301**	*e*P		**P**	**10 54 39.2**	**-1.8**
KKN	**Kakani**	**43.23**	**301**	*e*P		**P**	**10 54 40.5**	**-1.8**
	comp=Z,30nm,0.9s,mb5.0							
DMN	**Daman**	**43.33**	**300**	*e*P		**P**	**10 54 41.7**	**-1.4**
STKA	**Stephens Creek**	**43.34**	**162**	P		**P**	**10 54 43.0**	**0.0**
	comp=Z,4.4nm,0.9s,mb4.2,baz=326,slow=11,SNR=4.0							
DANN	**Dangsing**	**44.68**	**301**	*e*P		**P**	**10 54 52.2**	**-1.7**
	comp=Z,18nm,0.4s,mb5.2							
BOD	**Bodaibo**	**49.37**	**351**	*e*P		**P**	**10 55 30.9**	**+0.9**
BOD				pmax		pmax		
	comp=Z,9.0nm,1.3s,mb4.6							
PETK	**Petropavlovsk-**	**50.23**	**24**	LR		LR	11 16 11.3	
	comp=Z,83nm,18.5s,MS3.8,baz=145,slow=35							
YAK	**Yakutsk**	**52.63**	**2**⇑	*e*P		**P**	**10 55 56.2**	**+1.8**
YAK				pmax		pmax		
	comp=Z,25nm,1.5s,mb4.9							
MK31	**Makanchi Array**	**53.13**	**323**	*e*P		**P**	**10 55 58.4**	**0.0**
MK31				*e*PP		pP	10 56 09.5	-1.0
MK31				*e*			10 57 06.3	
MKAR	**Makanchi Array**	**53.13**	**323**	P		**P**	**10 55 58.4**	**-0.1**
	comp=Z,7.4nm,0.7s,mb4.7,baz=120,slow=8.6,SNR=54							
MKAR				PcP		PcP	10 57 06.6	+0.4
	comp=Z,2.9nm,0.8s,baz=115,slow=5.5,SNR=4.0							
ULHL	**Ulahol**	**55.06**	**316**	P		**P**	**10 56 12.6**	**0.0**
	SNR=6.2							
ZAA0	**Zalesovo Array**	**55.73**	**331**	*e*P		**P**	**10 56 16.2**	**-0.9**
ZAA0				*e*pP		pP	10 56 27.6	-1.6
ZALV	**Zalesovo Beam**	**55.73**	**331**	P		**P**	**10 56 16.4**	**-0.7**
	comp=Z,2.6nm,0.6s,mb4.4,baz=123,slow=6.7,SNR=9.8							
ZALV				LR		LR	11 23 07.7	
	comp=Z,37nm,20.5s,MS3.5,baz=78,slow=39							
TKM2	**Tokmak 2**	**55.75**	**316**	*e*P		**P**	**10 56 17.6**	**+0.1**
TKM2				*e*SP		sP	10 56 32.6	-2.0
TKM2				pmax		pmax		
	comp=Z,5.0nm,0.7s,mb4.7							
TKM2	**Tokmak 2**	**55.75**	**316**	P		**P**	**10 56 17.7**	**+0.2**
	SNR=8.4							
TKM2	**Tokmak 2**	**55.75**	**316**	*e*P		**P**	**10 56 17.6**	**+0.1**
	comp=Z,4.9nm,0.7s,mb4.7							
TKM2				*e*sP		sP	10 56 32.5	-2.0
UCH	**Uchtor**	**56.26**	**315**	P		**P**	**10 56 22.0**	**+0.8**
	SNR=26							
USP	**Ospenovka**	**56.62**	**316**	P		**P**	**10 56 23.6**	**-0.1**
	SNR=5.1							
AML	**Almayashu**	**56.80**	**315**	*e*P		**P**	**10 56 25.7**	**+0.7**
	comp=Z,10nm,0.6s,mb5.0							
AML				*e*pP		pP	10 56 36.7	-0.5
EKS2	**Erkin-Say**	**56.91**	**315**	P		**P**	**10 56 26.3**	**+0.4**
	SNR=9.7							
EKS2	**Erkin-Say**	**56.91**	**315**	*e*P		**P**	**10 56 26.2**	**+0.4**
	comp=Z,11nm,0.8s,mb4.9							
EKS2				*e*pP		pP	10 56 37.1	-0.9
NVS	**Novosibirsk**	**57.00**	**332**	*e*P		**P**	**10 56 22.9**	**-3.3**
KURK	**Kurchatov**	**57.17**	**326**	P		**P**	**10 56 27.1**	**-0.3**
	comp=Z,8.1nm,0.7s,mb4.9,baz=126,slow=6.7,SNR=39							
TIXI	**Tiksi**	**62.26**	**1**⇑	*e*P		**P**	**10 57 03.1**	**+0.9**
TIXI				pmax		pmax		
	comp=Z,7.0nm,1.3s,mb4.6							
TIXI	**Tiksi**	**62.26**	**1**	*e*P		**P**	**10 57 03.5**	**+1.3**
	comp=Z,7.2nm,0.8s,mb4.8							
BVA0	**Borovoye Array**	**62.77**	**325**	*i* P		**P**	**10 57 05.3**	**-0.6**
BVA0				pmax		pmax		
	comp=Z,1.0nm,0.7s,mb4.0							
BVAR	**Borovoye Array**	**62.77**	**325**	P		**P**	**10 57 05.8**	**0.0**
	comp=Z,5.7nm,0.8s,mb4.8,baz=120,slow=8.8,SNR=25							
BVAR				LR		LR	11 23 44.9	
	comp=Z,71nm,19.7s,MS3.8,baz=343,slow=35							
BRVK	**Borovoye**	**62.84**	**326**	*e*P		**P**	**10 57 05.9**	**-0.4**
BRVK				pmax		pmax		
	comp=Z,19nm,0.9s,mb5.2							
BRVK	**Borovoye**	**62.84**	**326**	*e*P		**P**	**10 57 05.9**	**-0.5**
	comp=Z,19nm,0.9s,mb5.2							
BILL	**Bilibino**	**64.13**	**15**	*e*P		**P**	**10 57 20.3**	**+5.7**
BILL				pmax		pmax		
	comp=Z,16nm,1.2s,mb4.9							
AB31	**Akbulak array**	**67.97**	**319**	*i* P		**P**	**10 57 38.7**	**-0.9**
AB31				pmax		pmax		
	comp=Z,1.0nm,0.4s,mb4.2							
SVE	**Sverdlovsk**	**69.31**	**327**	*e*P		**P**	**10 57 45.7**	**-2.1**
SVE				pmax		pmax		
	comp=Z,24nm,1.0s,mb5.1							
AKTK	**Aktyubinsk**	**69.42**	**320**	P		**P**	**10 57 48.1**	**-0.5**
AKTO	**Aktyubinsk**	**69.42**	**320**	P		**P**	**10 57 48.1**	**-0.5**
	comp=Z,1.9nm,0.7s,mb4.2,baz=100,slow=5.0,SNR=6.7							
ARU	**Arti**	**70.33**	**327**	*d i* P		**P**	**10 57 53.7**	**-0.4**
ARU				*e*			10 58 15.4	
ARU				*e*			11 00 28.7	
ARU				pmax		pmax		
	comp=Z,13nm,1.0s,mb4.8							
ARU	**Arti**	**70.33**	**327**	*e*P		**P**	**10 57 53.8**	**-0.3**
	comp=Z,6.4nm,0.6s,mb4.7							
ARU				*e*pP		pP	10 58 04.8	-1.7
CASY	**Casey**	**76.37**	**187**	*e*P		**P**	**10 58 29.5**	**+0.2**
MIB	**Mutribah**	**76.39**	**298**	*e*P		**P**	**10 58 28.8**	**-1.6**
	baz=300							
MIB				AMb		AMB	10 58 29.8	
	comp=Z,29nm,0.7s,mb5.3,baz=300							
MIB	**Mutribah**	**76.39**	**298**	*e*P		**P**	**10 58 28.6**	**-1.7**
	baz=298							
MIB				AMb		AMB	10 58 29.8	
	comp=Z,29nm,0.7s,mb5.3,baz=298							
NAY	**Al-Naaiem**	**76.50**	**298**	*e*P		**P**	**10 58 29.2**	**-1.8**
	baz=299							
NAY				AMb		AMB	10 58 30.4	
	comp=Z,12nm,0.9s,mb4.8,baz=299							
NAY	**Al-Naaiem**	**76.50**	**298**	*e*P		**P**	**10 58 29.2**	**-1.8**
	baz=298							
NAY				AMb		AMB	10 58 30.4	
	comp=Z,12nm,0.9s,mb4.8,baz=298							
RST	**Umm Al-Ruwaisa**	**76.70**	**298**	*e*P		**P**	**10 58 30.1**	**-2.0**
	baz=299							
RST				AMb		AMB	10 58 31.4	
	comp=Z,23nm,1.1s,mb5.0,baz=299							
RST	**Umm Al-Ruwaisa**	**76.70**	**298**	*e*P		**P**	**10 58 30.0**	**-2.1**
	baz=298							
RST				AML		AML	10 58 31.4	
	comp=Z,23nm,1.1s,baz=298							
RST				AMb		AMB	10 58 45.3	
	comp=Z,23nm,0.9s,mb5.1,baz=298							
KIV	**Kislovodsk**	**79.42**	**313**	P		**P**	**10 58 47.0**	**+0.1**
KIV				*e*		pP	10 58 58.4	-1.2
KIV				pmax		pmax		
	comp=Z,10.0nm,1.2s,mb4.6							
KLMR	**Klimovskoe**	**80.63**	**330**	*e*P		**P**	**10 58 52.6**	**-0.5**
KLMR				pmax		pmax		
	comp=Z,19nm,0.9s,mb5.0							
OBN	**Obninsk**	**82.60**	**325**⇑	*e*P		**P**	**10 59 01.1**	**-2.5**
OBN				*e*		pP	10 59 14.7	-1.6
OBN				pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.6							
JOF	**Joensuu**	**84.29**	**333**	*e*p		**P**	**10 59 11.9**	**-0.2**
	comp=Z,1.5nm,0.4s,mb4.5							
**SP

CTCH	**Constitucion**	**0.88**	**71**	*eP*		**Pb**	**10 57 14.4**	**+0.1**
CTCH				*i* S		**Sb**	**10 57 26.0**	**+0.5**
CCHI	**Chillan**	**1.46**	**132**	*eP*		**Pn**	**10 57 22.3**	**-0.6**
CCHI				*i* S		**Sn**	**10 57 41.1**	**-0.1**
TALC	**Talca**	**1.48**	**82**⇑	*iP*		**Pn**	**10 57 29.5**	**+6.5**
TALC				*i* S		**Sn**	**10 57 48.6**	**+7.0**
TALC				AML	AML		10 57 49.8	
	comp=E,8μm,0.5s							
NICH	**Los Niches**	**1.90**	**72**	*eP*		**Pn**	**10 57 28.6**	**-0.2**
NICH				*i* S		**Sn**	**10 57 52.3**	**+0.2**
SFDO	**San Fernando**	**2.22**	**64**⇑	*iP*		**Pn**	**10 57 33.2**	**0.0**
CACH	**El Canelo**	**2.77**	**58**	*eP*		**Pn**	**10 57 41.4**	**+0.6**
CICH	**Cipreses**	**2.79**	**63**	*eP*		**Pn**	**10 57 41.3**	**+0.3**
CICH				*i* S		**Sn**	**10 58 14.1**	**+0.1**
CHCH	**Chadas Angostu**	**2.84**	**54**	*eP*		**Pn**	**10 57 41.7**	**0.0**
CHCH				*i* S		**Sn**	**10 58 15.5**	**+0.3**
TACH	**Talagante**	**2.84**	**47**	*eP*		**Pn**	**10 57 41.1**	**-0.7**
RCDM	**Rinconada Maip**	**3.03**	**46**⇑	*iP*		**Pn**	**10 57 43.8**	**-0.6**
RCDM				*i* S		**Sn**	**10 58 19.5**	**-0.6**
RCDM				AML	AML		10 58 19.8	
	comp=E,533nm,0.8s							
PCH	**Pirque**	**3.12**	**51**⇑	*iP*		**Pn**	**10 57 45.4**	**-0.2**
SAN	**Santiago**	**3.14**	**47**	*i* S		**Sn**	**10 58 22.4**	**-0.4**
SAN				AML	AML		10 58 26.4	
	comp=E,462nm,0.8s							
TMU	**Temuco**	**3.17**	**168**	*eP*		**Pn**	**10 57 45.9**	**-0.4**
LMEL	**Las Melosas**	**3.19**	**57**	*eP*		**Pn**	**10 57 46.7**	**+0.1**
LMEL				*i* S		**Sn**	**10 58 24.2**	**+0.3**
LMEL				AML	AML		10 58 35.7	
	comp=N,356nm,0.7s							
LMEL	**Las Melosas**	**3.19**	**57**	*eP*		**Pn**	**10 57 46.7**	**+0.1**
LMEL				*i* S		**Sn**	**10 58 24.2**	**+0.3**
CLCH	**Cerro Calan**	**3.26**	**48**⇓	*iP*		**Pn**	**10 57 47.2**	**-0.3**
CLCH				*i* S		**Sn**	**10 58 25.7**	**0.0**
CLCH				AML	AML		10 58 35.2	
	comp=N,679nm,0.5s							
PEL	**Peldehue**	**3.35**	**43**⇓	*iP*		**Pn**	**10 57 49.0**	**+0.2**
PEL				*i* S		**Sn**	**10 58 27.8**	**-0.1**
PEL				AML	AML		10 58 28.8	
	comp=E,808nm,0.5s							
FCH	**Farellones**	**3.46**	**49**⇓	*iP*		**Pn**	**10 57 50.1**	**-0.2**
FCH				AML	AML		10 58 32.7	
	comp=E,363nm,0.6s							
PLCA	**Paso Flores**	**5.58**	**157**	Pn		**Pn**	**10 58 20.4**	**+1.1**
	comp=E,0.6nm,0.3s,baz=325,slow=9.9,SNR=11							
PLCA				Lg			10 59 53.9	
	comp=E,1.1nm,0.3s,baz=238,slow=20,SNR=3.2							
CFAA	**Coronel Fontan**	**5.90**	**49**	Pn		**Pn**	**10 58 24.0**	**+0.2**
	comp=E,1.2nm,0.3s,baz=220,slow=11,SNR=66							
CFAA				Sn		**Sn**	**10 59 30.5**	**-0.2**
	comp=E,1.3nm,0.3s,baz=147,slow=22,SNR=6.9							
CFAA	**Coronel Fontan**	**5.90**	**49**	Pn		**Pn**	**10 58 24.0**	**+0.2**
CFAA				Sn		**Sn**	**10 59 30.5**	**-0.2**
LPAZ	**La Paz**	**19.83**	**15**	P		**Pn**	**11 01 30.2**	**+1.5**
	comp=E,0.2nm,0.3s,baz=173,slow=11,SNR=11							
SIV	**San Ignacio**	**22.45**	**33**	P		**P**	**11 01 55.0**	**-0.3**
	comp=E,3.9nm,0.6s,mb4.0,baz=212,slow=13,SNR=21							
QSPA	**South Pole Qui**	**54.62**	**180**	P		**P**	**11 06 25.0**	**+1.0**
	comp=E,0.7nm,0.4s,mb4.0,baz=90,slow=0.9,SNR=15							
TXAR	**Lajitas Array**	**70.61**	**332**	P		**P**	**11 08 12.0**	**+0.7**
	comp=E,0.8nm,0.7s,mb3.8,baz=152,slow=8.6,SNR=11							
DBIC	**Dimbokro**	**76.77**	**72**	P		**P**	**11 08 48.4**	**+0.5**
	comp=E,5.8nm,1.1s,mb4.4,baz=220,slow=9.8,SNR=5.1							
TORD	**Torodi Ar. Bea**	**85.83**	**71**	P		**P**	**11 09 35.6**	**-0.3**
	comp=E,1.6nm,1.1s,mb4.1,baz=251,slow=4.5,SNR=4.7							
ULM	**Lac du Bonnet**	**87.78**	**346**	P		**P**	**11 09 42.3**	**-2.2**
	comp=E,2.7nm,0.7s,mb4.6,baz=150,slow=4.4,SNR=3.1							
WRA	**Warramunga Arr**	**118.79**	**210**	PKP		PKPdf	11 15 43.7	-1.1
	comp=E,0.4nm,0.9s,baz=169,slow=1.4,SNR=4.1							
BVAR	**Borovoye Array**	**149.24**	**44**	PKPbc		PKPbc	11 16 44.6	+0.7
	comp=E,2.0nm,0.5s,baz=298,slow=3.2,SNR=9.1							
KURK	**Kurchatov**	**154.84**	**45**	PKPbc		PKPbc	11 16 57.0	+0.3
	comp=E,0.5nm,0.6s,baz=289,slow=2.5,SNR=3.2							
ZALV	**Zalesovo Beam**	**156.21**	**33**	PKP		PKPdf	11 16 49.2	-0.6
	comp=E,0.7nm,0.4s,baz=212,slow=5.3,SNR=3.6							
ZALV				PKPbc		PKPdf	11 16 59.1	+9.3
	comp=E,0.9nm,0.6s,baz=339,slow=3.7,SNR=4.5							
ZALV				PKPab		PKPab	11 17 18.3	+0.6
	comp=E,2.5nm,0.7s,baz=297,slow=5.6,SNR=6.8							
MKAR	**Makanchi Array**	**158.68**	**51**	PKP		PKPdf	11 16 53.6	+0.5
	comp=E,0.2nm,0.3s,baz=252,slow=2.4,SNR=3.7							
MKAR				PKPab		PKPab	11 17 28.9	+0.2
	comp=E,0.2nm,0.3s,baz=294,slow=3.9,SNR=3.7							
SONM	**Songino Array**	**167.80**	**1**	PKPab		PKPab	11 18 09.2	+0.7
	comp=E,0.4nm,0.7s,baz=336,slow=3.3,SNR=4.2							

KRSC 29 11:38:07.6±0.3, 5589N×16441E, h5km±5km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.95**	**290**	*eP*		Pg	11 38 26.4	+0.6
KBTR				*eS*		Sg	11 38 39.9	+1.9
SRKR	**Sorokina**	**1.96**	**294**	S		Sn	11 39 07.8	+1.3
ZLN	**Zelenaya**	**2.03**	**275**	P		Pn	11 38 43.0	+0.6
ZLN				S		Sn	11 39 09.7	+1.6
KLY	**Klyuchi**	**2.15**	**283**	*eP*		Pn	11 38 44.1	+0.1
KLY				S		Sn	11 39 10.5	-0.5
KRSR	**Krestovskiy**	**2.18**	**280**	P		Pn	11 38 45.6	+1.1
KRSR				S		Sn	11 39 12.5	+0.7
BZMR	**Bezymyannaya**	**2.21**	**273**	P		Pn	11 38 46.2	+1.4
BZMR				S		Sn	11 39 14.4	+1.9
KPT	**Kopyto**	**2.36**	**274**	P		Pn	11 38 48.9	+2.0
KOZ	**Kozyrevsk**	**2.56**	**276**	P		Pn	11 38 50.5	+0.9
KOZ				S		Sn	11 39 22.0	+1.0
SRDR	**Sredinnyy**	**2.66**	**281**	P		Pn	11 38 53.1	+2.0
SRDR				S		Sn	11 39 26.2	+2.5
SPN	**Mys Shipunski**	**3.79**	**224**	S		Sn	11 39 52.3	+0.8
AVH	**Avacha**	**4.22**	**234**	P		Pn	11 39 15.2	+2.7
AVH				S		Sn	11 40 03.9	+1.8
GNL	**Ganaly**	**4.34**	**242**	P		Pn	11 39 16.6	+2.5
GNL				S		Sn	11 40 06.3	+1.2
RUS	**Russkaya**	**4.90**	**227**	P		Pn	11 39 23.9	+2.1
RUS				S		Sn	11 40 18.8	0.0

*ISCJB **29** 11:45:02.8±0.5, 3158S×003×68.12W×006, h113km±6km, mb3.2/2, Error ellipse: s-maj=8.4km s-min=4.9km az=11.5*
*GUC **29** 11:45:03.0±0.7, 3161S×6830W, h150km, MD3.6, ML3.5*
*NEIC **29** 11:45:03.0, 3161S×6830W, h150km, MD3.6(GUC), After GUC.*
*IDC **29** 11:45:03.8±0.7, 3154S×68.14W, h104km±7km, mb3.1/2, mb1 3.3/6, mb1mx3.3/18, mbtmp3.2/6, Error ellipse: s-maj=31.4km s-min=20.1km az=99.0*

ISC 29 11:45:03.9±0.5, 3158S±003×6811W±006, h107km±6km, n29, σ0°71/41, mb3.2/2, 5C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**0.11**	**258**	P		**Pn**	**11 45 18.8**	**+0.1**
	43nm,0.3s,baz=139,slow=0.5,SNR=3037							
CFAA				S		**Sn**	**11 45 30.4**	**+0.6**
	62nm,0.3s,baz=157,slow=23,SNR=160							
CFAA	**Coronel Fontan**	**0.11**	**258**	P		**Pn**	**11 45 18.8**	**+0.1**
CFAA				S		**Sn**	**11 45 30.4**	**+0.6**
FCH	**Farellones**	**2.53**	**226**⇑	*iP*		**Pn**	**11 45 44.2**	**+0.5**
FCH				*i* S		**Sn**	**11 46 15.4**	**+1.2**
FCH				AML	AML		11 46 17.0	
	comp=E,111nm,0.4s							
PEL	**Peldehue**	**2.68**	**234**⇓	*iP*		**Pn**	**11 45 45.0**	**-0.5**
PEL				*i* S		**Sn**	**11 46 17.0**	**-0.6**
PEL				AML	AML		11 46 17.9	
	comp=N,302nm,0.4s							
TLL	**Tololo Astrono**	**2.71**	**301**	*eP*		**Pn**	**11 45 46.8**	**+0.8**
TLL				*i* S		**Sn**	**11 46 19.5**	**+1.1**
TLL				AML	AML		11 46 25.0	
	comp=N,120nm,0.4s							
TLL	**Tololo Astrono**	**2.71**	**301**	*eP*		**Pn**	**11 45 46.8**	**+0.8**
TLL				*i* S		**Sn**	**11 46 19.5**	**+1.1**
CLCH	**Cerro Calan**	**2.73**	**228**⇑	*iP*		**Pn**	**11 45 46.3**	**0.0**
CLCH				*i* S		**Sn**	**11 46 18.8**	**0.0**
CLCH				AML	AML		11 46 20.8	
	comp=E,220nm,0.5s							
LMEL	**Las Melosas**	**2.87**	**217**⇑	*iP*		**Pn**	**11 45 48.3**	**+0.3**
LMEL				*i* S		**Sn**	**11 46 22.0**	**0.0**
LMEL				AML	AML		11 46 31.6	
	comp=N,64nm,0.3s							
LMEL	**Las Melosas**	**2.87**	**217**⇑	*iP*		**Pn**	**11 45 48.3**	**+0.3**
LMEL				*i* S		**Sn**	**11 46 22.0**	**0.0**
PCH	**Pirque**	**2.87**	**224**	*eP*		**Pn**	**11 45 47.9**	**-0.2**
RCDM	**Rinconada Maip**	**2.97**	**229**	*eP*		**Pn**	**11 45 49.1**	**-0.3**
RCDM				*i* S		**Sn**	**11 46 23.9**	**-0.5**
RCDM				AML	AML		11 46 25.4	
	comp=E,193nm,0.4s							
RCDM	**Rinconada Maip**	**2.97**	**229**	*eP*		**Pn**	**11 45 49.1**	**-0.3**
RCDM				*i* S		**Sn**	**11 46 23.9**	**-0.5**
TACH	**Talagante**	**3.15**	**228**	*eP*		**Pn**	**11 45 50.9**	**-1.0**
CHCH	**Chadas Angostu**	**3.17**	**222**	*eP*		**Pn**	**11 45 51.8**	**-0.3**
CHCH				*i* S		**Sn**	**11 46 28.6**	**-0.7**
CACH	**El Canelo**	**3.28**	**219**	*eP*		**Pn**	**11 45 53.8**	**+0.2**
CICH	**Cipreses**	**3.35**	**215**	*eP*		**Pn**	**11 45 54.3**	**-0.1**
LCO	**Las Campanas**	**3.40**	**318**⇑	*iP*		**Pn**	**11 45 55.5**	**+0.3**
LCO				*i* S		**Sn**	**11 46 35.4**	**+0.6**
VACH	**Vallenar**	**3.77**	**322**	*i* S		**Sn**	**11 46 43.2**	**-0.5**
SFDO	**San Fernando**	**3.88**	**218**⇓	*iP*		**Pn**	**11 46 00.4**	**-1.2**
TRQA	**Tornquist**	**8.19**	**144**	*ePn*		**Pn**	**11 47 00.9**	**+1.0**
LVC	**Limon Verde**	**8.96**	**355**	P		**Pn**	**11 47 10.0**	**-0.5**
	comp=E,2.4nm,0.3s,baz=157,slow=9.0,SNR=32							
LVC				S		**Sn**	**11 48 48.1**	**-1.5**
	comp=E,0.6nm,0.3s,baz=37,slow=20,SNR=3.2							
CPUP	**Villa Florida**	**10.79**	**64**	P		**Pn**	**11 47 34.0**	**-1.3**
	comp=E,0.5nm,0.3s,baz=225,slow=8.6,SNR=3.2							
CPUP	**Villa Florida**	**10.79**	**64**	*ePn*		**Pn**	**11 47 34.4**	**-0.9**
LPAZ	**La Paz**	**15.23**	**360**	P		**Pn**	**11 48 32.5**	**-0.7**
	comp=E,0.1nm,0.3s,baz=178,slow=15,SNR=2.9							
SIV	**San Ignacio**	**16.80**	**24**	P		**Pn**	**11 48 53.5**	**+0.9**
	comp=E,0.2nm,0.3s,baz=213,slow=12,SNR=5.4							
TXAR	**Lajitas Array**	**69.37**	**327**	P		**P**	**11 56 00.8**	**+0.8**
	comp=E,0.1nm,0.4s,mb3.0,baz=160,slow=7.4,SNR=4.8							
TORD	**Torodi Ar. Bea**	**80.26**	**68**	P		**P**	**11 57 04.1**	**+1.0**
	comp=E,0.3nm,0.5s,mb3.4,baz=251,slow=7.5,SNR=3.1							
WRA	**Warramunga Arr**	**124.43**	**206**	PKP		PKPdf	12 03 49.6	-1.3
	comp=E,0.4nm,1.1s,baz=158,slow=1.6,SNR=6.2							
ZALV	**Zalesovo Beam**	**150.41**	**33**	PKPbc		PKPbc	12 04 42.3	+0.1
	comp=E,0.8nm,0.4s,baz=301,slow=3.1,SNR=3.7							

KRSC 29 11:46:00.7±1.1, 5361N×16207E, h20km±20km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**1.33**	**248**	*eP*		Pn	11 46 25.5	+1.4
SPN				*eS*		Sn	11 46 44.0	+2.8
NLC	**Nalytchevo**	**1.69**	**256**	*eS*		Sn	11 46 52.2	+2.2
AVH	**Avacha**	**2.02**	**262**	*eP*		Pn	11 46 35.9	+2.3
AVH				*eS*		Sn	11 47 01.4	+3.1
PET	**Petropavlovsk**	**2.13**	**255**	*eP*		Pn	11 46 36.1	+1.0
PET				*eS*		Sn	11 47 01.9	+1.0
KMNR	**Kamenistaya**	**2.40**	**334**	*eP*		Pn	11 46 41.0	+2.2
KMNR				*eS*		Sn	11 47 10.2	+2.7
RUS	**Russkaya**	**2.45**	**243**	*eP*		Pn	11 46 41.1	+1.6
RUS				*eS*		Sn	11 47 10.4	+1.6
GNL	**Ganaly**	**2.46**	**274**	*eP*		Pn	11 46 42.5	+2.9
BZMR	**Bezymyannaya**	**2.50**	**339**	*eP*		Pn	11 46 41.3	+1.1
BZMR				*eS*		Sn	11 47 10.9	+0.8
ZLN	**Zelenaya**	**2.52**	**344**	*eP*		Pn	11 46 41.8	+1.4
ZLN				*eS*		Sn	11 47 11.8	+1.3
KBTR	**Krutoberegovo**	**2.64**	**9**	*eP*		Pn	11 46 45.3	+3.2
KBTR				*eS*		Sn	11 47 17.2	+3.7
KRSR	**Krestovskiy**	**2.75**	**342**	*eP*		Pn	11 46 45.3	+1.7
KRSR				*eS*		Sn	11 47 18.3	+2.0
KOZ	**Kozyrevsk**	**2.76**	**334**	*eP*		Pn	11 46 45.8	+2.0
KOZ				*eS*		Sn	11 47 18.3	+1.8
KLY	**Klyuchi**	**2.83**	**344**	*eS*		Sn	11 47 21.1	+3.0
SRDR	**Sredinnyy**	**3.03**	**334**	*eP*		Pn	11 46 49.4	+1.9
MIPR	**Malaya Ipel'ka**	**3.48**	**250**	*eP*		Pn	11 46 54.3	+0.7

IDC 29 11:47:28.4±10.0, 255N×9542E, h0km, mb3.8/3, mb1 3.8/4, mb1mx3.5/21, mbtmp3.7/4, Error ellipse: s-maj=210.4km s-min=113.2km az=150.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.18**	**12**	Pn		Pn	11 51 17.4	0.0
	baz=203,slow=10,SNR=4.3							
MKAR	**Makanchi Array**	**45.53**	**347**	P		P	11 55 49.8	+0.1
	0.4nm,0.6s,baz=163,slow=7.8,SNR=6.4							
SONM	**Songino Array**	**46.10**	**10**	P		P	11 55 54.2	+0.1
	0.4nm,0.6s,baz=188,slow=8.7,SNR=2.7							
ZALV	**Zalesovo Beam**	**51.97**	**352**	P		P	11 56 39.0	-0.1
	1.1nm,0.6s,baz=184,slow=7.9,SNR=6.4							

*ISCJB **29** 11:48:21.3±0.4, 657N±005×12580E±006, h157km±3km, mb4.0/14, Error ellipse: s-maj=10.1km s-min=7.6km az=167.8*
*MAN **29** 11:48:21, 664N×12596E, h156km, mb4.5, ML3.4, MS3.3*
*NEIC **29** 11:48:22.8±0.8, 655N×12563E, h156km±8km, mb4.4/5, Error ellipse: s-maj=26.8km s-min=9.0km az=81.0*
*IDC **29** 11:48:22.6±0.5, 654N×12564E, h153km±3km, mb3.6/10, mb1 3.7/10, mb1mx3.6/19, mbtmp3.6/10, Error ellipse: s-maj=37.0km s-min=11.6km az=83.0*

ISC 29 11:48:22.5±0.4, 657N±005×12578E±006, h153km±3km, n32, σ0°86/39, mb4.0/14, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.53**	**338**	P		**Pn**	**11 48 45.0**	**+0.7**
	364nm,0.3s,baz=264,slow=4.8,SNR=24							
DAV				S		**Sn**	**11 49 02.5**	**+1.5**
	610nm,0.3s,baz=127,slow=20,SNR=31							
DAV	**Davao City (W)**	**0.53**	**338**	P		**Pn**	**11 48 45.0**	**+0.7**
DAV				S		**Sn**	**11 49 02.5**	**+1.5**
DMPH	**Davao City--Mi**	**0.57**	**332**⇑	*iP*		**Pn**	**11 48 45.0**	**+0.5**
DMPH				*i* S		**Sn**	**11 49 00.6**	**-0.8**
MATI	**Mati**	**0.60**	**52**	*eP*		**Pn**	**11 48 44.4**	**-0.4**
MATI				*eS*		**Sn**	**11 49 01.5**	**-0.1**
GSPH	**General Santos**	**0.95**	**240**	*eP*		**Pn**	**11 48 47.0**	**-0.2**
GSPH				*eS*		**Sn**	**11 49 05.8**	**-0.2**
BUKP	**Musuan**	**1.48**	**331**	*eP*		**Pn**	**11 48 53.0**	**+0.9**
BUKP				*eS*		**Sn**	**11 49 16.4**	**+1.6**
CTBH	**Cotabato--PC H**	**1.65**	**293**⇓	*eP*		**Pn**	**11 48 53.5**	**-0.4**
CTBH				*i* S		**Sn**	**11 49 17.1**	**-0.8**
BIPH	**Bislig**	**1.70**	**20**⇓	*iP*		**Pn**	**11 48 53.9**	**-0.6**
BIPH				*i* S		**Sn**	**11 49 17.6**	**-1.4**
CGP	**Cagayan de Oro**	**2.16**	**330**⇓	*eP*		**Pn**	**11 48 57.7**	**-2.0**
CGP				*eS*		**Sn**	**11 49 28.1**	**-0.2**
PAGZ	**Pagadian**	**2.69**	**298**	*eP*		**Pn**	**11 49 07.5**	**+1.3**
DCPH	**Dipolog City**	**3.13**	**310**⇑	*iP*		**Pn**	**11 49 12.2**	**+0.6**
DCPH				*i* S			11 49 14.7	
IPIL	**Ipil**	**3.40**	**291**	*eP*		**Pn**	**11 49 14.5**	**-0.6**
KAKA	**Kakadu**	**20.27**	**161**	*eP*		**P**	**11 52 46.9**	**+0.6**
	12nm,0.5s							
FITZ	**Fitzroy Crossi**	**24.52**	**180**	*eP*		**P**	**11 53 27.8**	**-0.2**
	1.8nm,0.3s,mb4.1							
FITZ	**Fitzroy Crossi**	**24.52**	**180**	P		**P**	**11 53 28.3**	**+0.3**
	1.1nm,0.3s,mb3.9,baz=4.0,slow=10.0,SNR=20							
COEN	**Coen**	**26.73**	**140**	*eP*		**P**	**11 53 49.9**	**+1.9**
	4.7nm,0.7s,mb4.2							
WRAB	**Tennant Creek**	**27.66**	**162**	*eP*		**P**	**11 53 55.7**	**-0.5**
	4.3nm,0.5s,mb4.4							
WRA	**Warramunga Arr**	**27.66**	**162**	P		**P**	**11 53 55.8**	**-0.4**
	0.3nm,0.3s,mb3.5,baz=331,slow=10,SNR=12							
WB2	**Warramunga Arr**	**27.67**	**162**	*eP*		**P**	**11 53 55.5**	**-0.8**
KSRS	**Korea Array**	**30.80**	**3**	P		**P**	**11 54 24.9**	**+1.0**
	1.0nm,0.5s,mb3.9,baz=189,slow=10,SNR=5.2							
ASAR	**Alice Springs**	**31.09**	**165**	P		**P**	**11 54 26.3**	**-0.2**
	1.5nm,0.5s,mb4.0,baz=341,slow=6.9,SNR=38							
ASAR				PcP		PcP	11 57 18.9	+0.5
	0.7nm,0.6s,baz=348,slow=2.9,SNR=5.6							
MJAR	**Matsushiro Arr**	**31.92**	**19**	P		**P**	**11 54 32.7**	**-1.0**
	0.5nm,0.5s,mb3.5,baz=199,slow=9.9,SNR=5.2							
FORT	**Forrest**	**37.20**	**177**	*eP*		**P**	**11 55 19.2**	**+0.1**
	11nm,0.5s,mb4.8							
KLBR	**Kellerberrin**	**38.72**	**191**⇑	*iP*		**P**	**11 55 31.6**	**-0.2**
	7.4nm,0.3s,mb4.8							
MUN	**Mundaring**	**39.41**	**193**	*eP*		**P**	**11 55 37.5**	**0.0**
SONM	**Songino Array**	**44.32**	**341**	P		**P**	**11 56 17.0**	**-0.2**
	0.3nm,0.3s,mb3.4,baz=161,slow=9.7,SNR=4.3							
SONM				PcP		PcP	11 57 58.3	-0.3
	0.5nm,0.5s,baz=151,slow=4.6,SNR=4.8							
PETK	**Petropavlovsk-**	**53.19**	**23**	P		**P**	**11 57 26.7**	**+1.9**
	3.5nm,0.8s,mb4.2,baz=247,slow=3.0,SNR=4.1							
MKAR	**Makanchi Array**	**54.70**	**325**	P		**P**	**11 57 35.6**	**-0.3**
	0.7nm,0.4s,mb3.8,baz=124,slow=8.3,SNR=6.2							
MAW	**Mawson**	**86.08**	**200**	P		**P**	**12 00 45.4**	**-0.3**
	0.8nm,0.7s,mb3.6,baz=69,slow=8.6,SNR=3.5							
ARCES	**ARCESS Array B**	**87.47**	**340**	P		**P**	**12 00 51.7**	**-0.8**
	4.5nm,0.9s,mb4.3,baz=78,slow=5.2,SNR=8.7							
TXAR	**Lajitas Array**	**120.57**	**50**	PKP		PKPdf	12 06 57.4	+0.5
	0.2nm,0.7s,baz=49,slow=1.8,SNR=2.8							
TORD	**Torodi Ar. Bea**	**121.11**	**290**	PKP		PKPdf	12 06 57.2	-0.9
	0.5nm,0.4s,baz=74,slow=1.3,SNR=11							

IDC 29 12:14:47.6±1.2, 2408S×6658W, h196km±17km, mb3.2/1, mb1 3.0/6, mb1mx2.9/19, mbtmp2.9/6, Error ellipse: s-maj=25.9km s-min=19.0km az=57.0, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.59**	**304**	P		Pn	12 15 34.2	+1.9
	9.4nm,0.3s,baz=121,slow=6.7,SNR=294							
LVC				S		Sn	12 16 07.4	+0.3
	11nm,0.3s,baz=164,slow=5.7,SNR=7.1							
CFAA	**Coronel Fontan**	**7.64**	**191**	P		Pn	12 16 36.1	0.0
	0.1nm,0.3s,baz=18,slow=13,SNR=5.0							
CFAA				S		Sn	12 17 56.8	-5.7
	0.1nm,0.3s,baz=91,slow=14,SNR=6.0							
LPAZ	**La Paz**	**7.88**	**349**	P		Pn	12 16 40.9	+1.5
	0.4nm,0.3s,baz=186,slow=7.4,SNR=7.0							
LPAZ				S		Sn	12 18 08.5	+0.2
	0.1nm,0.3s,baz=263,slow=22,SNR=3.6							
CPUP	**Villa Florida**	**8.67**	**107**	P		Pn	12 16 49.7	+0.1
	0.2nm,0.3s,baz=272,slow=11,SNR=5.1							
SIV	**San Ignacio**	**9.56**	**34**	P		Pn	12 17 01.1	-0.2
	0.1nm,0.3s,baz=224,slow=17,SNR=4.0							
PLCA	**Paso Flores**	**16.94**	**190**	P		Pn	12 18 38.2	+5.0
	0.2nm,0.3s,baz=3.1,slow=12,SNR=5.2							
TORD	**Torodi Ar. Bea**	**76.24**	**69**	P		P	12 26 14.1	-0.8
	0.5nm,0.5s,baz=256,slow=4.5,SNR=4.6							
MKAR	**Makanchi Array**	**146.34**	**40**	PKPbc		PKPbc	12 34 05.1	0.0
	0.6nm,0.4s,baz=308,slow=2.6,SNR=5.9							

*PGC **29** 12:23:17.6, 5191N×126.49W, h1km, ML3.5, 55km Sse of Bella Coola, Bc British Columbia*
*NEIC **29** 12:23:17.6, 5191N×126.49W, h1km, ML3.5(PGC), After PGC.*
*ISCJB **29** 12:23:18.2±0.6, 5193N±003×12667W±006, h10km, Error ellipse: s-maj=5.8km s-min=4.1km az=150.4*
*IDC **29** 12:23:19.2±0.9, 5194N×12661W, h0km, mb3.1/1, mb1 3.9/4, mb1mx3.6/23, mbtmp3.4/4, ML3.4/3, MS3.0/1, Ms1 2.9/1, ms1mx2.3/13, Error ellipse: s-maj=14.5km s-min=6.5km az=16.0*

ISC 29 12:23:18.6±0.6, 5193N±003×12666W±006, h10km, n27, σ1°20/40, 19D, British Columbia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**0.94**	**286**	Pg		**Pg**	**12 23 36.3**	**-0.3**
	55nm,0.3s,baz=104,slow=14,SNR=329							
BBB				Lg			12 23 50.1	
	121nm,0.3s,baz=197,slow=19,SNR=35							
BBB	**Bella Bella**	**0.94**	**286**	⇑P		**Pg**	**12 23 36.1**	**-0.5**
BBB				⇓S		**Sg**	**12 23 49.9**	**+1.1**
PHC	**Port Hardy**	**1.32**	**202**	⇓P		**Pn**	**12 23 41.5**	**-1.6**
PHC				⇓S		**Sb**	**12 23 59.5**	**-0.8**
MAYB	**Maynard**	**1.57**	**192**	⇓Pn		**Pn**	**12 23 45.7**	**-0.8**
MAYB				⇓Sn		**Sn**	**12 24 06.6**	**-0.1**
NCRB	**Newcastle Ridg**	**1.58**	**166**	⇓Pn		**Pn**	**12 23

mb4.7/49,MS4.0/11,Error ellipse: s-maj=8.5km s-min=5.6km az=148.2
*DJA **29** 12:35:13,750S×13070E,h26km,Mw5.3/7*
*NEIC **29** 12:35:13.3±0.2,727S×13061E,h35km,mb4.8/18,Error ellipse: s-maj=8.6km s-min=4.6km az=59.0*
ISC 29 12:35:14.0±0.7,741S±004×13068E±005,h45km±7km,
h8km±7.6km:pP-P,n130,σ1936/137,mb4.7/49,MS4.0/11,
6C-5D,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
AAI	**Ambon**	**4.45**	**326**	P	**Pn**	**12 36 17.5**	**-1.5**
	0.0nm,0.0s						
AAI	**Ambon**	**4.45**	**326**	P	**Pn**	**12 36 17.5**	**-1.5**
	0.0nm,0.0s						
KAKA	**Kakadu**	**5.54**	**162**	↓*i*P	**Pn**	**12 36 34.4**	**+0.4**
	298nm,0.5s						
KAKA				*e*S	**Sn**	**12 37 36.4**	**-0.1**
SWI	**Sorong**	**6.53**	**5**	P	**Pn**	**12 36 52.1**	**+4.5**
	130nm,0.7s						
LBMI	**Labuha**	**7.44**	**335**	P	**Pn**	**12 37 03.0**	**+3.0**
	304nm,0.9s						
BATI	**Baumata**	**7.47**	**248**	P	**Pn**	**12 37 01.8**	**+1.4**
	173nm,0.9s						
BATI	**Baumata**	**7.47**	**248**	Pn	**Pn**	**12 37 01.3**	**+0.9**
	36nm,0.3s,baz=132,slow=2.2,SNR=55						
BATI				Sn	**Sn**	**12 38 23.3**	**-0.5**
	25nm,0.3s,baz=8.3,slow=21,SNR=5.7						
BBSI	**Bau Bau**	**8.28**	**283**	P	**Pn**	**12 37 14.6**	**+3.1**
	232nm,1.1s						
KDI	**Kendari**	**8.72**	**293**	P	**Pn**	**12 37 20.8**	**+3.2**
	55nm,1.0s						
KAPI	**Kappang**	**11.12**	**282**	Pn	**Pn**	**12 37 52.2**	**+1.7**
	2.5nm,0.3s,baz=113,slow=8.5,SNR=11						
KAPI				LR	LR	12 41 45.1	
	comp=Z,586nm,21.0s,baz=113,slow=37						
KAPI	**Kappang**	**11.12**	**282**	*e*Pn	**Pn**	**12 37 52.0**	**+1.5**
FITZ	**Fitzroy Crossi**	**11.70**	**204**	*e*P	**Pn**	**12 37 54.6**	**-3.8**
	31nm,0.3s						
FITZ				*e*S	**Sn**	**12 39 57.0**	**-11**
FITZ	**Fitzroy Crossi**	**11.70**	**204**	Pn	**Pn**	**12 37 55.4**	**-3.0**
	3.4nm,0.3s,baz=33,slow=12,SNR=63						
FITZ				Sn	**Sn**	**12 39 57.3**	**-10**
	9.0nm,0.3s,baz=90,slow=20,SNR=11						
FITZ				LR	LR	12 43 05.1	
	comp=Z,260nm,21.4s,baz=149,slow=40						
WRAB	**Tennant Creek**	**12.95**	**164**	*e*Pn	**Pn**	**12 38 12.3**	**-3.0**
WRAB				*e*Sn	**Sn**	**12 40 27.8**	**-10**
WRA	**Warramunga Arr**	**12.95**	**164**	Pn	**Pn**	**12 38 12.0**	**-3.4**
	4.5nm,0.3s,baz=346,slow=13,SNR=124						
WRA				Sn	**Sn**	**12 40 31.1**	**-7.2**
	8.8nm,0.3s,baz=337,slow=23,SNR=12						
WB2	**Warramunga Arr**	**12.96**	**164**	*e*P	**Pn**	**12 38 11.2**	**-4.3**
WB2				*e*S	**Sn**	**12 40 28.9**	**-9.4**
COEN	**Coen**	**13.89**	**119**	*e*Pn	**Pn**	**12 38 27.5**	**-0.8**
	14nm,0.6s						
COEN				*e*Sn	**Sn**	**12 40 56.2**	**-5.0**
BBKI	**Banjar Baru**	**16.24**	**283**	P	**Pn**	**12 39 03.2**	**+4.0**
	396nm,1.2s						
PMG	**Port Moresby**	**16.43**	**98**	↑*e*P	**Pn**	**12 39 04.6**	**+3.1**
PMG	**Port Moresby**	**16.43**	**98**	*e*Pn	**Pn**	**12 39 03.1**	**+1.6**
ASAR	**Alice Springs**	**16.45**	**170**	Pn	**Pn**	**12 38 59.4**	**-2.4**
	3.2nm,0.3s,baz=353,slow=10,SNR=133						
ASAR				Sn	**Sn**	**12 41 55.2**	**-8.3**
	1.8nm,0.3s,baz=352,slow=26,SNR=11						
MBWA	**Marble Bar**	**17.28**	**217**	*e*P	**Pn**	**12 39 09.0**	**-3.2**
MBWA				*e*Sn	**Sn**	**12 42 09.7**	**-14**
SJI	**Sawahan**	**18.75**	**268**	P	**Pn**	**12 39 29.0**	**-1.1**
	80nm,0.7s						
PBKI	**Pangkalan Bun**	**19.50**	**283**	P	**Pn**	**12 39 39.8**	**+0.7**
	334nm,1.0s						
CTA	**Charters Tower**	**19.66**	**131**	*e*P	**Pn**	**12 39 44.0**	**+3.0**
	13nm,0.9s						
CTA	**Charters Tower**	**19.66**	**131**	P	**Pn**	**12 39 43.2**	**+2.2**
	0.4nm,0.3s,baz=306,slow=12,SNR=9.5						
CTA				S	**S**	**12 43 28.2**	**+9.3**
	0.9nm,0.3s,baz=241,slow=13,SNR=2.5						
CTA				LR	LR	12 47 49.0	
	comp=Z,322nm,20.4s,baz=102,slow=38						
CTA	**Charters Tower**	**19.66**	**131**	*e*P	**Pn**	**12 39 44.0**	**+3.0**
CTA				pmax	pmax		
	comp=Z,13nm,0.9s						
CTAO	**Charters Tower**	**19.66**	**131**	*e*P	**Pn**	**12 39 42.6**	**+1.6**
CTAO				*e*S	**S**	**12 43 27.3**	**+8.4**
KKM	**Kota Kinabalu**	**19.67**	**312**	Pn	**Pn**	**12 39 39.6**	**-1.6**
STKI	**Sintang**	**20.54**	**290**	P	**P**	**12 39 48.3**	**-0.6**
	comp=Z,51nm,0.9s						
KSM	**Kuching**	**22.16**	**293**	*e*P	**P**	**12 40 06.0**	**-0.3**
LEM	**Lembang**	**22.89**	**270**	P	**P**	**12 40 18.2**	**+4.2**
	comp=Z,44nm,0.9s,mb4.9						
FORT	**Forrest**	**23.37**	**186**	*e*P	**P**	**12 40 19.7**	**+0.9**
	comp=Z,27nm,0.6s,mb4.9						
CBJI	**Citeko**	**23.67**	**271**	P	**P**	**12 40 28.2**	**+6.4**
	comp=Z,230nm,1.0s,mb5.6						
PPBI	**Pangkal Pinang**	**25.00**	**281**	P	**P**	**12 40 39.6**	**+5.7**
	comp=Z,46nm,0.8s,mb5.1						
STKA	**Stephens Creek**	**26.38**	**159**	↓*i*P	**P**	**12 40 47.9**	**+1.7**
	comp=Z,13nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**26.38**	**159**	P	**P**	**12 40 48.0**	**+1.8**
	comp=Z,4.4nm,0.3s,mb4.4,baz=341,slow=7.7,SNR=32						
STKA				LR	LR	12 52 47.1	
	comp=Z,500nm,18.1s,MS4.1,baz=4.5,slow=40						
KLBR	**Kellerberrin**	**26.91**	**205**	↓*i*P	**P**	**12 40 51.8**	**+0.8**
	comp=Z,19nm,0.7s,mb4.7						
MUN	**Mundaring**	**27.91**	**207**	*e*P	**P**	**12 41 00.7**	**+0.8**
NWAO	**Narrogin (SRO)**	**28.29**	**204**	P	**P**	**12 41 03.9**	**+0.6**
	comp=Z,8.1nm,0.8s,mb4.4,baz=70,slow=14,SNR=6.6						
HNR	**Honiara**	**29.02**	**96**	LR	LR	12 53 17.5	
	comp=Z,191nm,20.4s,MS3.7,baz=271,slow=37						
CAN	**Canberra**	**32.47**	**151**	*e*P	**P**	**12 41 43.5**	**+3.3**
TOO	**Toolangi**	**32.90**	**158**	*e*P	**P**	**12 41 47.3**	**+3.4**
CBIJ	**Chichi jima**	**36.07**	**18**	LR	LR	12 56 15.3	
	comp=Z,53nm,18.7s,MS3.3,baz=131,slow=35						
NANT	**Nan**	**39.40**	**312**	P	**P**	**12 42 37.2**	**-2.5**
	comp=Z,125nm,1.0s,mb5.6						
CMAR	**Chiang Mai Arr**	**40.51**	**310**	P	**P**	**12 42 46.3**	**-2.6**
	comp=Z,3.2nm,0.8s,mb4.0,baz=141,slow=7.2,SNR=16						
CMAR				PcP	PcP	12 44 52.5	+1.6
	comp=Z,2.1nm,0.8s,baz=169,slow=3.1,SNR=6.8						
CMAR				ScP	ScP	12 48 39.9	+3.0
	comp=Z,0.4nm,0.3s,baz=134,slow=2.6,SNR=6.1						
CMAR				LR	LR	12 59 47.2	
	comp=Z,138nm,19.3s,MS3.8,baz=142,slow=37						
CMAR	**Chiang Mai Arr**	**40.51**	**310**	P	**P**	**12 42 46.3**	**-2.6**
CMAR						12 44 52.6	
CHTO	**Chiang Mai**	**40.72**	**310**	*e*P	**P**	**12 42 49.1**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
CHTO	**Chiang Mai**	**40.72**	**310**	*e*P	**P**	**12 42 49.1**	**-1.6**
	comp=Z,10nm,1.0s,mb4.4						
WHN	**Wuhan**	**40.86**	**338**	↓P	**P**	**12 42 57.0**	**+5.4**
GYA	**Guiyang**	**40.95**	**326**	P	**P**	**12 42 54.0**	**+1.6**
GYA				PP	PP	12 44 33.5	+5.9
GYA				PcP	PcP	12 44 55.3	+3.1
GYA				ScP	ScP	12 48 44.5	+6.0
GYA				S	**S**	**12 49 07.3**	**+5.9**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
GYA				AMB	AMB		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,590nm,16.0s,MS4.7						
GYA				LR	LR		
	comp=E,480nm,15.6s,MS4.7						
GYA				LR	LR		
	comp=Z,490nm,17.2s,MS4.4						
KMI	**Kunming**	**42.26**	**321**	P	**P**	**12 43 03.3**	**+0.1**
KMI				AMB	AMB		
	comp=Z,9.0nm,1.7s,mb4.1						
KMI	**Kunming**	**42.26**	**321**	P	**P**	**12 43 03.2**	**0.0**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.1						
KMI	**Kunming**	**42.26**	**321**	P	**P**	**12 43 03.2**	**0.0**
	comp=Z,9.0nm,1.7s,mb4.1						
MJAR	**Matsushiro Arr**	**44.29**	**9**	P	**P**	**12 43 17.5**	**-1.9**
	comp=Z,3.9nm,0.8s,mb4.2,baz=187,slow=9.6,SNR=9.3						
MAJO	**Matsushiro**	**44.29**	**9**	*e*P	**P**	**12 43 19.0**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
MAJO	**Matsushiro**	**44.29**	**9**	*e*P	**P**	**12 43 19.0**	**-0.4**
	comp=Z,6.9nm,0.7s,mb4.5						
MAT	**Matsushiro**	**44.29**	**9**	P	**P**	**12 43 17.8**	**-1.6**
KSRS	**Korea Array**	**44.71**	**357**	P	**P**	**12 43 21.6**	**-1.1**
	comp=Z,0.7nm,0.6s,mb3.7,baz=174,slow=8.8,SNR=3.7						
KSRS				LR	LR	13 00 35.0	
	comp=Z,66nm,20.7s,MS3.5,baz=350,slow=34						
CD2	**Chengdu**	**46.01**	**327**	P	**P**	**12 43 34.8**	**+1.6**
CD2				AP	pP	12 43 39.3	-6.2
CD2				XP	sP	12 43 42.0	-8.7
CD2				PP	PP	12 45 23.0	+1.2
CD2				S	**S**	**12 50 18.8**	**+3.5**
CD2				XS	sS	12 50 26.0	-10
CD2				SS	SS	12 53 35.5	-5.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				AMB	AMB		
	comp=Z,30nm,4.2s						
CD2				LR	LR		
	comp=N,200nm,10.8s						
CD2				LR	LR		
	comp=Z,200nm,8.4s						
BJI	**Beijing**	**49.08**	**345**	P	**P**	**12 43 53.3**	**-3.5**
BJI				S	**S**	**12 51 03.5**	**+4.9**
BJI				SS	SS	12 54 30.5	+0.1
BJI				AMB	AMB		
	comp=Z,7.0nm,0.5s,mb5.0						
BJI				AMB	AMB		
	comp=Z,163nm,4.1s						
BJI				LR	LR		
	comp=N,282nm,6.6s						
BJI				LR	LR		
	comp=E,237nm,5.8s						
BJI	**Beijing**	**49.08**	**345**	P	**P**	**12 43 53.2**	**-3.6**
BJI				S	**S**	**12 51 03.6**	**+5.0**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
BJI				MLR	MLR		
	comp=Z,40nm,22.0s,MS3.4						
BJI	**Beijing**	**49.08**	**345**	P	**P**	**12 43 53.2**	**-3.6**
	comp=Z,7.0nm,0.5s,mb5.0						
BJI				S	**S**	**12 51 03.6**	**+5.0**
BJI				SS	SS	12 54 30.5	+0.1
BJI				LR	LR		
	comp=Z,40nm,22.0s,MS3.4						
LZH	**Lanzhou**	**50.08**	**332**	*e*P	**P**	**12 44 07.3**	**+2.8**
LZH				AP	pP	12 44 12.5	-4.5
LZH				XP	sP	12 44 14.0	-8.2
LZH				PP	PP	12 46 03.5	+3.4
LZH				AMB	AMB		
	comp=Z,18nm,1.4s,mb4.9						
LZH				AMB	AMB		
	comp=Z,85nm,4.6s						
LZH				LR	LR		
	comp=E,345nm,15.8s						
LZH				LR	LR		
	comp=Z,542nm,16.9s,MS4.6						
LZH	**Lanzhou**	**50.08**	**332**	*e*P	**P**	**12 44 07.3**	**+2.8**
	comp=Z,18nm,1.4s,mb4.9						
LZH				pP	pP	12 44 12.5	-4.5
LZH				sP	sP	12 44 14.1	-8.1
LZH				PP	PP	12 46 03.5	+3.4
LZH				LR	LR		
	comp=Z,540nm,16.9s,MS4.6						
RPZ	**Rata Peaks**	**50.50**	**142**	P	**P**	**12 44 10.3**	**+2.7**
	comp=Z,22nm,0.8s,mb5.2,baz=80,slow=18,SNR=4.2						
HHC	**Hu-ho-hao-te**	**51.14**	**341**	*e*P	**P**	**12 44 12.8**	**+0.4**
HHC				AP	pP	12 44 15.8	-9.2
HHC				PCP	PcP	12 45 27.8	+0.3
HHC				PP	PP	12 46 10.8	+1.1
HHC				SCP	ScP	12 49 22.0	+1.5
HHC				PCS	PcS	12 49 24.0	-1.1
HHC				S	**S**	**12 51 29.8**	**+2.5**
HHC				SCS	ScS	12 54 00.3	+1.0
HHC				SS	SS	12 55 03.5	+0.1
HHC				AMB	AMB		
	comp=Z,17nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,145nm,7.0s						
HHC				LR	LR		
	comp=N,148nm,15.6s,MS4.2						
HHC				LR	LR		
	comp=E,124nm,16.8s,MS4.2						
HHC				LR	LR		
	comp=Z,99nm,16.1s,MS3.9						
CN2	**Changchun**	**51.19**	**355**	*e*P	**P**	**12 44 16.8**	**+4.0**
URZ	**Urewera**	**51.89**	**134**	P	**P**	**12 44 19.8**	**+1.6**
	comp=Z,2.3nm,0.5s,mb4.3,baz=276,slow=10,SNR=3.6						
ASAJ	**Asahikawa**	**52.41**	**11**	P	**P**	**12 44 21.6**	**-0.2**
	comp=Z,6.8nm,0.8s,mb4.6,baz=236,slow=16,SNR=6.5						
LSA	**Lhasa**	**52.96**	**316**	P	**P**	**12 44 24.5**	**-1.7**
GTA	**Gaotai**	**54.66**	**331**	*e*P	**P**	**12 44 38.0**	**-0.4**
GTA				S	**S**	**12 52 17.0**	**+1.7**
GTA				XS	sS	12 52 25.0	-11
GTA				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.3						
GTA				AMB	AMB		
	comp=Z,131nm,5.1s						
GTA				LR	LR		
	comp=N,165nm,13.8s,MS4.3						
GTA				LR	LR		
	comp=E,90nm,14.1s,MS4.3						
GTA				LR	LR		
	comp=Z,99nm,13.8s,MS4.0						
ULN	**Ulaanbaatar**	**58.86**	**342**	↑*e*P	**P**	**12 45 08.2**	**+0.1**
ULN	**Ulaanbaatar**	**58.86**	**342**	*e*P	**P**	**12 45 08.0**	**-0.1**
	comp=Z,6.4nm,1.0s,mb4.6						
SONM	**Songino Array**	**59.05**	**341**	P	**P**	**12 45 09.1**	**-0.2**
	comp=Z,1.5nm,0.6s,mb4.2,baz=159,slow=7.3,SNR=8.8						
ZAK	**Zakamensk**	**62.27**	**341**	*e*P	**P**	**12 45 35.1**	**+3.8**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.4						
WMQ	**Urumqi**	**64.11**	**327**	*e*P	**P**	**12 45 43.8**	**+0.2**
WMQ				AMB	AMB		
	comp=Z,14nm,0.8s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,130nm,4.3s						
WMQ				LR	LR		
	comp=Z,154nm,20.8s,MS4.2						
PETK	**Petropavlovsk-**	**64.51**	**18**	P	**P**	**12 45 45.9**	**-0.1**
	comp=Z,4.2nm,0.8s,mb4.5,baz=183,slow=4.3,SNR=5.0						
BOD	**Bodaibo**	**66.41**	**350**	*e*P	**P**	**12 45 57.6**	**-0.6**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.3						
MKAR	**Makanchi Array**	**68.94**	**327**	P	**P**	**12 46 13.6**	**-0.8**
	comp=Z,6.8nm,0.5s,mb4.9,baz=121,slow=8.7,SNR=39						
MKAR	**Makanchi Array**	**68.94**	**327**	*i* P	**P**	**12 46 13.8**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
YAK	**Yakutsk**	**69.24**	**359**	*e*P	**P**	**12 46 14.9**	**-1.0**
YAK				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
YAK	**Yakutsk**	**69.24**	**359**	*e*P	**P**	**12 46 16.0**	**+0.1**
TKM2	**Tokmak 2**	**70.73**	**320**	*e*P	**P**	**12 46 25.6**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
TKM2	**Tokmak 2**	**70.73**	**320**	P	**P**	**12 46 25.5**	**0.0**
	SNR=6.3						
TKM2	**Tokmak 2**	**70.73**	**320**	*e*P	**P**	**12 46 25.6**	**+0.1**
	comp=Z,40nm,0.8s,mb5.4						
UCH	**Uchtor**	**71.08**	**319**	P	**P**	**12 46 28.6**	**+1.0**
	SNR=9.7						
UCH	**Uchtor**	**71.08**	**319**	*e*P	**P**	**12 46 28.5**	**+0.9**
	comp=Z,9.8nm,1.0s,mb4.7						
AAK	**Ala-Archa**	**71.29**	**320**	P	**P**	**12 46 29.2**	**+0.3**
	SNR=7.0						
AML	**Almayashu**	**71.56**	**319**	*e*P	**P**	**12 46 31.1**	**+0.5**
	comp=Z,17nm,1.0s,mb4.9						
USP	**Ospenovka**	**71.60**	**320**	P	**P**	**12 46 30.5**	**-0.3**
	SNR=11						
EKS2	**Erkin-Say**	**71.76**	**319**	P	**P**	**12 46 32.1**	**+0.3**
	SNR=6.7						
EKS2	**Erkin-Say**	**71.76**	**319**	*e*P	**P**	**12 46 31.9**	**+0.2**
	comp=Z,13nm,0.9s,mb4.9						
SEY	**Seymchan**	**72.09**	**10**	↑*e*P	**P**	**12 46 35.7**	**+2.5**
ZAA0	**Zalesovo Array**	**72.25**	**334**	*e*P	**P**	**12 46 33.1**	**-1.3**
ZALV	**Zalesovo Beam**	**72.25**	**334**	P	**P**	**12 46 33.0**	**-1.4**
	comp=Z,1.4nm,0.4s,mb4.2,baz=136,slow=4.2,SNR=6.4						
KURK	**Kurchatov**	**73.22**	**328**	P	**P**	**12 46 39.2**	**-1.0**
	comp=Z,2.8nm,0.6s,mb4.3,baz=128,slow=4.9,SNR=15						
NVS	**Novosibirsk**	**73.53**	**334**	*e*P	**P**	**12 46 40.4**	**-1.6**
MAW	**Mawson**	**74.81**	**202**	*e*P	**P**	**12 46 51.2**	**+1.9**
	comp=Z,5.1nm,1.0s,mb4.4						
MAW	**Mawson**	**74.81**	**202**	P	**P**	**12 46 51.0**	**+1.7**
	comp=Z,5.8nm,0.9s,mb4.5,baz=61,slow=9.1,SNR=12						
MAW	**Mawson**	**74.81**	**202**	*e*P	**P**	**12 46 51.2**	**+1.9**
MAW				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TBI	**Tubuai**	**77.82**	**112**	*e*LR	LR	13 11 48.8	
	comp=Z,79nm,31.8s						
PPT	**Papeete**	**78.06**	**106**	*e*LR	LR	13 12 07.9	
	comp=Z,82nm,26.0s						
BVAR	**Borovoye Array**	**78.77**	**328**	P	**P**	**12 47 10.7**	**-1.1**

*IDC **29** 12:35:08.2±0.5,724S×130.44E,h0km,mb4.4/17,*
mb1 4.5/19,mb1mx4.5/22,mbtmp4.5/19,ML4.7/1,MS3.8/8,
Ms1 3.8/8,ms1mx3.3/30,Error ellipse: s-maj=20.8km
s-min=10.2km az=63.0
*BJI **29** 12:35:09.9,730S×13060E,h15km,mB5.1,mb4.8,Ms4.9,*
Msz4.6
*MOS **29** 12:35:11.7±1.1,725S×130.44E,h33km,mb4.9/13,Error*
ellipse: s-maj=15.1km s-min=8.1km az=116.9
*ISCJB **29** 12:35:11.2±0.9,741S±004×13068E±005,h36km±8km,*

comp=Z,2.0nm,0.8s,mb4.1,baz=140,slow=9.4,SNR=7.9
BRVK Borovoye 78.84 328 *e*P **P 12 47 12.6 +0.4**
BRVK pmax pmax
comp=Z,11nm,0.9s,mb4.8
BRVK Borovoye 78.84 328 *e*P **P 12 47 12.6 +0.5**
comp=Z,11nm,0.9s,mb4.8
TIXI Tiksi 78.91 359⇑ *e*P **P 12 47 11.9 -0.3**
TIXI pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
TIXI Tiksi 78.91 359 *e*P **P 12 47 12.3 +0.1**
comp=Z,70nm,2.5s,mb5.2
QSPA South Pole Qui 82.57 180 P **P 12 47 33.3 +1.6**
comp=Z,2.7nm,0.7s,mb4.4,baz=332,slow=1.9,SNR=17
QSPA South Pole Qui 82.57 180 P **P 12 47 33.3 +1.6**
AKTK Aktyubinsk 84.81 322 P **P 12 47 43.5 -0.1**
AKTO Aktyubinsk 84.81 322 P **P 12 47 43.5 -0.1**
comp=Z,1.8nm,0.5s,mb4.5,baz=114,slow=4.3,SNR=5.2
SVE Sverdlovsk 85.47 329 *e*P **P 12 47 46.9 +0.1**
SVE pmax pmax
comp=Z,14nm,1.3s,mb4.9
ARU Arti 86.41 328 *d i*P **P 12 47 50.9 -0.6**
ARU *e* 12 51 08.3
ARU *e*S S 12 58 14.2 -10
ARU *e*SS SS 13 04 00.3 -4.4
ARU pmax pmax
comp=Z,17nm,2.5s,mb4.8
ARU Arti 86.41 328 *e*P **P 12 47 51.5 0.0**
comp=Z,7.0nm,1.0s,mb4.8
NAY Al-Naaiem 87.89 300 *e*P **P 12 47 58.0 -1.3**
baz=300
NAY AMb AMB 12 48 10.6
comp=Z,13nm,1.5s,mb4.9,baz=300
MIB Mutribah 87.90 300 *e*P **P 12 47 58.0 -1.3**
baz=300
MIB AMb AMB 12 48 01.0
comp=Z,23nm,1.7s,mb5.1,baz=300
RST Umm Al-Ruwaisa 88.14 300 *e*P **P 12 47 59.1 -1.4**
baz=300
RST AMb AMB 12 48 00.4
comp=Z,18nm,1.1s,mb5.2,baz=300
GNI Garni 91.63 310⇑ *e*P **P 12 48 17.3 +0.8**
GNI pmax pmax
comp=Z,21nm,1.4s
KIV Kislovodsk 93.64 314 P **P 12 48 28.0 +2.3**
KIV pmax pmax
comp=Z,10.0nm,1.3s,mb5.1
SNAA Sanae 95.42 193 *e*P **P 12 48 33.3 -0.1**
ANN Anapa 97.47 314 *e*P **P 12 48 42.6 -0.6**
ARCES ARCESS Array B 102.20 340 P Pdif 12 49 05.2 +1.2
comp=Z,3.9nm,0.9s,baz=79,slow=5.6,SNR=6.2
GERES GERESS Array B 113.17 320 PKiKP PKiKP 12 53 46.9 +0.3
comp=Z,0.5nm,0.4s,baz=66,slow=3.6,SNR=2.6
PDAR Pinedale Array 116.70 46 PKP PKPdf 12 53 53.9 +0.3
comp=Z,0.4nm,0.8s,baz=280,slow=5.4,SNR=2.6
ANMO Albuquerque 121.01 54⇑ *i*PKIKP PKPdf 12 54 04.4 +2.3
TXAR Lajitas Array 124.56 59 PKP PKPdf 12 54 10.2 +1.0
comp=Z,0.4nm,0.7s,baz=177,slow=1.7,SNR=6.1
TORD Torodi Ar. Bea 129.55 281 PKP PKPdf 12 54 19.2 +0.2
comp=Z,1.8nm,0.7s,baz=68,slow=1.9,SNR=11
CPUP Villa Florida 145.57 167 PKPbc PKPbc 12 54 50.6 +2.3
comp=Z,4.9nm,0.7s,baz=204,slow=2.9,SNR=11
LPAZ La Paz 149.98 142 PKPbc PKPbc 12 55 03.9 +3.3
comp=Z,2.8nm,0.7s,baz=297,slow=2.3,SNR=14

MOS 29 12:46:18.8±2.2, 4425N×4237E, h9km, mb4.0/1, 4C-2D, Error ellipse: s-maj=22.2km s-min=7.6km az=125.4, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIV	**Kislovodsk**	**0.37**	**142**	*c i*P	Pg	12 46 26.4	+0.3
KIV				*i*		12 46 32.5	
KIV				pmax	pmax		
	comp=Z,31nm,0.7s						
KIV				smax			
	comp=N,274nm,0.6s						
BEYR	**Belyy Ugol+**	**0.40**	**126**	⇓ *i*P	Pg	12 46 26.9	+0.3
BEYR				*i* S	Sg	12 46 33.2	+1.3
PYA	**Pyatigorsk**	**0.54**	**113**⇑	*e*PG	Pg	12 46 29.1	-0.2
PYA				*i* S	Sg	12 46 37.3	+0.9
SHAR	**Shatzhatmas**	**0.55**	**157**	⇓ *i*PG	Pg	12 46 30.0	+0.6
SHAR				*i* S	Sg	12 46 38.8	+2.2
KUBR	**Kubataba**	**0.88**	**121**	*c i*PG	Pg	12 46 31.7	-3.9
DOMR	**Dombai**	**1.10**	**210**⇑	*e*PG	Pg	12 46 39.2	-0.7
DOMR				*i* S	Sg	12 46 54.0	-0.1
LSNR	**Lesken**	**1.43**	**132**	*e*PG	Pg	12 46 46.5	+0.3
LSNR				*e*S	Sn	12 47 06.8	+3.0
KMSR	**Komsomolskaya**	**1.65**	**122**	*e*PN	Pn	12 46 51.0	+3.1
KMSR				*e*S	Sn	12 47 14.6	+5.5
KORR	**Kora**	**1.69**	**133**	*e*PN	Pn	12 46 51.0	+2.5
KORR				*e*S	Sn	12 47 14.5	+4.2
ARNR	**Ardon**	**1.74**	**127**	*e*PN	Pn	12 46 52.4	+3.2
ARNR				*e*S	Sn	12 47 16.8	+5.3
ZEI	**Tsey**	**1.85**	**143**	*e*PN	Pn	12 46 52.0	+1.3
ZEI				*e*S	Sn	12 47 16.1	+1.9
LACR	**Lac**	**2.00**	**135**	*e*PN	Pn	12 46 55.0	+2.3
LACR				*e*S	Sn	12 47 21.5	+3.7

*BJI **29** 13:09:10.9, 2187N×14360E, h279km, mB4.7, mb4.3*
*ISCJB **29** 13:09:12.7±0.6, 2187N±003×143.10E±007, h265km±5km, mb4.3/55, Error ellipse: s-maj=10.8km s-min=4.9km az=175.4*
*MOS **29** 13:09:14.2±1.0, 2197N×14321E, h282km, mb4.3/14, Error ellipse: s-maj=15.8km s-min=6.9km az=114.5*
*NEIC **29** 13:09:16.0±0.9, 2191N×14293E, h279km±9km, mb4.4/13, Error ellipse: s-maj=10.0km s-min=4.2km az=77.0*
*JMA **29** 13:09:15.7±0.2, 2215N×14332E, h284km, M5.2*
*IDC **29** 13:09:15.3±1.0, 2187N×14285E, h269km±8km, mb4.0/21, mb1 4.1/26, mb1mx4.1/33, mbtmp4.1/26, Error ellipse: s-maj=12.6km s-min=6.3km az=82.0*
*DJA **29** 13:09:20, 2175N×143.17E, h322km, mb4.9/19*
ISC 29 13:09:14.7±0.5, 2196N±003×14311E±007, h269km±5km, h290km±4.6km; pP-P, n135, σ0s99/149, mb4.3/55, 7C-1D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**4.72**	**350**	P	**Pn**	**13 10 28.2**	**+0.4**
JHHJ				S	**S**	**13 11 23.7**	**-2.5**
CBIJ	**Chichi jima**	**5.18**	**351**	P	**Pn**	**13 10 33.1**	**-0.1**
	189nm,0.3s,baz=209,slow=4.1,SNR=130						
CBIJ				S	**S**	**13 11 33.9**	**-2.2**
	220nm,0.3s,baz=285,slow=23,SNR=17						
CBIJ	**Chichi jima**	**5.18**	**351**	P	**Pn**	**13 10 33.3**	**+0.1**
CBIJ				S	**S**	**13 11 33.6**	**-2.5**
GUMO	**Guam**	**8.49**	**168**	P	**Pn**	**13 11 16.0**	**+1.7**
	11nm,0.3s,baz=255,slow=3.3,SNR=22						
GUMO				S	**S**	**13 13 09.3**	**+18**
	2.9nm,0.3s,baz=66,slow=19,SNR=2.1						
GUMO	**Guam**	**8.49**	**168**	*e*Pn	**Pn**	**13 11 16.2**	**+1.8**
JHJ	**Hachijo jima 2**	**11.50**	**346**	P	**Pn**	**13 11 51.9**	**+0.2**
	27nm,0.3s,baz=76,slow=22,SNR=5.3						
JKO	**Kozu shima**	**12.67**	**345**	P	**Pn**	**13 12 06.3**	**+0.3**
BSO1	**Boso 1**	**12.78**	**352**	P	**Pn**	**13 12 07.7**	**+0.3**
BSO3	**Boso 3**	**12.99**	**350**	P	**Pn**	**13 12 09.9**	**-0.1**
BSO3				*e*S	**S**	**13 14 32.2**	**-1.9**
BSO4	**Boso 4**	**13.21**	**350**	P	**Pn**	**13 12 11.7**	**-0.8**
BSO4				*e*S	**S**	**13 14 40.0**	**+1.1**
JWZ	**Kozaga**	**13.25**	**332**	P	**Pn**	**13 12 13.8**	**+0.7**
JIE	**Ise**	**13.61**	**337**	P	**Pn**	**13 12 18.3**	**+0.9**
JKN2	**Miekihoku**	**13.63**	**335**	P	**Pn**	**13 12 17.7**	**0.0**
HMMJ	**Hamamatsu 2**	**13.69**	**341**	P	**Pn**	**13 12 18.3**	**-0.1**
JOD2	**Odawara 2**	**13.71**	**346**	P	**Pn**	**13 12 19.2**	**+0.5**
JOD2				*e*S	**S**	**13 14 46.6**	**-3.7**
JNY	**Yasuok**	**14.12**	**342**	P	**Pn**	**13 12 23.7**	**+0.2**
JTO	**Tosashimizu**	**14.19**	**322**	P	**Pn**	**13 12 25.8**	**+1.3**
JAO	**Obara**	**14.21**	**340**	P	**Pn**	**13 12 25.2**	**+0.5**
JHU	**Hanno**	**14.24**	**347**	P	**Pn**	**13 12 24.6**	**-0.4**
JHU				*e*S	**S**	**13 14 59.2**	**-2.9**
JOW	**Kunigami**	**14.36**	**293**	P	**Pn**	**13 12 25.8**	**-0.8**
	1.8nm,0.3s,baz=85,slow=19,SNR=5.2						
JEG	**Eigenji**	**14.39**	**337**	P	**Pn**	**13 12 28.0**	**+1.2**
JYT	**Yasato**	**14.44**	**350**	P	**Pn**	**13 12 26.7**	**-0.7**
JYT				S	**S**	**13 15 07.6**	**+0.9**
JRY	**Ryogami san**	**14.48**	**346**	P	**Pn**	**13 12 27.6**	**-0.3**
JRY				*e*S	**S**	**13 15 03.9**	**-3.6**
JAG	**Ashikaga**	**14.76**	**348**	P	**Pn**	**13 12 30.5**	**-0.7**
JAG				*e*S	**S**	**13 15 09.6**	**-3.8**
JHO	**Hitachi**	**14.76**	**352**	P	**Pn**	**13 12 31.7**	**+0.4**
JHO				*e*S	**S**	**13 15 13.7**	**+0.2**
MJAR	**Matsushiro Arr**	**15.14**	**345**	P	**Pn**	**13 12 34.9**	**-0.8**
	7.4nm,0.3s,baz=235,slow=11,SNR=84						
MJAR				S	**S**	**13 15 21.3**	**+0.2**
	0.5nm,0.3s,baz=169,slow=25,SNR=5.9						
MAJO	**Matsushiro**	**15.14**	**345**	*e*P	**Pn**	**13 12 35.5**	**-0.3**
MAT	**Matsushiro**	**15.14**	**345**	P	**Pn**	**13 12 35.3**	**-0.5**
MAT				S	**S**	**13 15 18.7**	**-2.5**
MAT	**Matsushiro**	**15.14**	**345**	P	**Pn**	**13 12 36.3**	**+0.5**
MAT				*e*S	**S**	**13 15 17.6**	**-3.6**
JFK	**Kawauchi**	**15.47**	**353**	P	**Pn**	**13 12 40.2**	**+0.5**
JFK				S	**S**	**13 15 27.9**	**+0.1**
JHS	**Saijyo**	**15.67**	**328**	P	**Pn**	**13 12 43.1**	**+1.0**
ERM	**Erimo**	**19.99**	**0**	*e*P	**P**	**13 13 29.9**	**+2.6**
KSRS	**Korea Array**	**20.27**	**323**	P	**P**	**13 13 28.4**	**-1.9**
	16nm,0.6s,baz=143,slow=7.4,SNR=51						
KSRS				S	**S**	**13 17 04.6**	**+2.8**
	3.5nm,1.0s,baz=149,slow=17,SNR=5.3						
KSRS				ScP	ScP	13 20 42.0	-0.2
	2.1nm,0.9s,baz=134,slow=3.5,SNR=6.2						
KS15	**Wonju Array Si**	**20.28**	**323**	*e*P	**P**	**13 13 29.6**	**-0.8**
ASAJ	**Asahikawa**	**22.10**	**359**	P	**P**	**13 13 49.5**	**+1.6**
	24nm,0.8s,mb4.6,baz=239,slow=11,SNR=19						
NJ2	**Nanjing**	**23.79**	**300**	*e*P	**P**	**13 14 05.5**	**+2.1**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.6						
MDJ	**Mudanjiang**	**25.20**	**337**	P	**P**	**13 14 16.0**	**+0.1**
MDJ				AP	pP	13 15 08.0	+1.9
MDJ				XP	sP	13 15 44.0	+4.8
MDJ				PCP	PcP	13 17 39.5	-2.3
MDJ				S	**S**	**13 18 20.3**	**-0.4**
MDJ				SCP	ScP	13 20 50.5	-4.6
MDJ				PCS	PcS	13 21 21.3	-0.9
MDJ				SCS	ScS	13 24 41.0	-2.9
MDJ				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,95nm,5.1s						
KLR	**Kul'dur**	**28.67**	**344**	*e*P	**P**	**13 14 43.9**	**-2.9**
MYLDM	**Lahad Datu**	**29.09**	**239**	⇑P	**P**	**13 14 57.1**	**+6.2**
SDKM	**Sandakan**	**29.86**	**241**	⇑P	**P**	**13 14 58.7**	**+0.9**
HIA	**Hailar**	**32.95**	**331**	*e*P	**P**	**13 15 24.8**	**+0.6**
GYA	**Guiyang**	**33.47**	**285**	P	**P**	**13 15 30.3**	**+1.3**
GYA				AP	pP	13 16 29.8	+7.5
GYA				XP	sP	13 17 02.5	+9.1
GYA				PCP	PcP	13 18 03.8	+0.4
GYA				S	**S**	**13 20 30.5**	**+0.1**
GYA				SCP	ScP	13 21 19.3	-2.7
GYA				PCS	PcS	13 21 49.5	-0.2
GYA				SCS	ScS	13 25 19.8	-4.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
KAPI	**Kappang**	**35.24**	**223**	P	**P**	**13 15 43.1**	**-1.2**
	comp=Z,30nm,0.7s,mb5.0,baz=68,slow=2.7,SNR=18						
SBUM	**Sibu**	**35.74**	**241**	⇑P	**P**	**13 15 52.4**	**+3.8**
CD2	**Chengdu**	**36.20**	**293**	P	**P**	**13 15 52.8**	**+0.6**
CD2				AP	pP	13 16 50.5	+4.4
CD2				PP	PP	13 17 23.0	+2.2
CD2				S	**S**	**13 21 11.3**	**-0.6**
CD2				XS	sS	13 22 53.5	+4.8
CD2				SS	SS	13 23 57.5	-5.1
CD2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
CD2				AMB	AMB		
	comp=Z,20nm,5.4s						
LZH	**Lanzhou**	**36.85**	**301**	*e*P	**P**	**13 15 59.3**	**+1.6**
LZH				AP	pP	13 16 57.0	+5.3
LZH				XP	sP	13 17 29.5	+6.9
LZH				AMB	AMB		
	comp=Z,19nm,1.5s,mb4.3						
LZH				AMB	AMB		
	comp=Z,98nm,4.9s						
LZH	**Lanzhou**	**36.85**	**301**	*e*P	**P**	**13 15 59.2**	**+1.5**
LZH				pP	pP	13 16 57.0	+5.3
LZH				sP	sP	13 17 29.5	+6.9
KMI	**Kunming**	**37.05**	**283**	P	**P**	**13 16 02.3**	**+2.8**
KMI				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb3.7						
BATI	**Baumata**	**37.23**	**213**	P	**P**	**13 15 59.7**	**-1.3**
	comp=Z,32nm,0.5s,mb5.0,baz=31,slow=1.9,SNR=6.5						
KSM	**Kuching**	**37.86**	**242**	⇑P	**P**	**13 16 06.8**	**+0.4**
ULN	**Ulaanbaatar**	**38.72**	**321**	*e*P	**P**	**13 16 13.5**	**+0.5**
ULN				*e*pP	pP	13 17 25.3	+18
SONM	**Songino Array**	**39.09**	**320**	P	**P**	**13 16 16.4**	**+0.2**
	comp=Z,3.3nm,0.4s,mb4.1,baz=130,slow=7.4,SNR=37						
SONM				ScP	ScP	13 21 42.7	+0.2
	comp=Z,1.0nm,0.8s,baz=121,slow=2.7,SNR=4.6						
GTA	**Gaotai**	**40.67**	**305**	*e*P	**P**	**13 16 29.3**	**+0.2**
GTA				S	**S**	**13 22 18.0**	**-0.5**
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb3.9						
GTA				LR	LR		
	comp=N,122nm,15.3s						
GTA				LR	LR		
	comp=E,76nm,14.1s						
GTA				LR	LR		
	comp=Z,129nm,16.8s						
YAK	**Yakutsk**	**41.10**	**350**	*e*P	**P**	**13 16 31.3**	**-1.0**
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.2						
YAK	**Yakutsk**	**41.10**	**350**	*e*P	**P**	**13 16 32.0**	**-0.3**
	comp=Z,19nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	**41.49**	**273**	P	**P**	**13 16 35.9**	**-0.2**
	comp=Z,1.8nm,0.7s,mb3.4,baz=69,slow=6.9,SNR=6.7						
CMAR	**Chiang Mai Arr**	**41.49**	**273**	*i* P	**P**	**13 16 36.9**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CTAO	**Charters Tower**	**41.91**	**176**	*e*P	**P**	**13 16 38.4**	**-0.8**
	comp=Z,12nm,0.9s,mb4.1						
ZAK	**Zakamensk**	**42.10**	**322**	*e*P	**P**	**13 16 40.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.6						
WRAB	**Tennant Creek**	**42.51**	**192**	*c i*P	**P**	**13 16 43.7**	**-0.5**
WRAB	**Tennant Creek**	**42.51**	**192**	*e*P	**P**	**13 16 43.9**	**-0.2**
	comp=Z,19nm,0.7s,mb4.4						
TLY	**Talaya**	**42.51**	**324**	*e*P	**P**	**13 16 44.4**	**+0.6**
TLY	**Talaya**	**42.51**	**324**	*e*P	**P**	**13 16 44.6**	**+0.7**
TLY				*e*pP	pP	13 18 01.5	+22
WB2	**Warramunga Arr**	**42.52**	**192**	*e*P	**P**	**13 16 43.8**	**-0.4**
WRA	**Warramunga Arr**	**42.52**	**192**	P	**P**	**13 16 43.6**	**-0.6**
	comp=Z,14nm,0.6s,mb4.3,baz=12,slow=8.4,SNR=55						
WRA				ScP	ScP	13 21 57.3	+0.9
	comp=Z,0.8nm,0.7s,baz=10,slow=4.5,SNR=4.9						
WRA				S	**S**	**13 22 43.7**	**-2.3**
	comp=Z,4.5nm,1.1s,baz=12,slow=14,SNR=7.2						
FITZ	**Fitzroy Crossi**	**43.34**	**205**	*e*P	**P**	**13 16 50.4**	**-0.4**
	comp=Z,19nm,0.7s,mb4.4						
FITZ	**Fitzroy Crossi**	**43.34**	**205**	P	**P**	**13 16 49.9**	**-0.8**
	comp=Z,12nm,0.7s,mb4.2,baz=22,slow=12,SNR=14						
ASAR	**Alice Springs**	**46.23**	**192**	P	**P**	**13 17 12.5**	**-0.9**
	comp=Z,3.7nm,0.6s,mb3.9,baz=12,slow=9.7,SNR=23						
ASAR				ScP	ScP	13 22 12.7	+1.2
	comp=Z,0.7nm,0.8s,baz=29,slow=4.9,SNR=4.1						
ASAR				S	**S**	**13 23 36.2**	**-2.9**
	comp=Z,0.7nm,0.9s,baz=11,slow=16,SNR=5.2						
LSA	**Lhasa**	**47.08**	**291**	*e*P	**P**	**13 17 20.2**	**+0.1**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.2						
LSA	**Lhasa**	**47.08**	**291**	*e*P	**P**	**13 17 20.2**	**+0.1**
	comp=Z,7.2nm,0.6s,mb4.2						
BILL	**Bilibino**	**48.27**	**11**	P	**P**	**13 17 29.0**	**+0.4**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.8						
MBWA	**Marble Bar**	**48.56**	**210**	*e*P	**P**	**13 17 30.9**	**-0.4**
	comp=Z,19nm,0.8s,mb4.5						
KRAR	**Krasnoyarsk**	**50.13**	**326**	*e*P	**P**	**13 17 43.4**	**+0.7**
KRAR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
WMQ	**Urumqi**	**50.36**	**309**	*e*P	**P**	**13 17 45.8**	**+1.1**
WMQ				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.1						
WMQ				AMB	AMB		
	comp=Z,176nm,3.8s						
TIXI	**Tiksi**	**50.38**	**354**	*e*P	**P**	**13 17 43.9**	**-0.5**
ODAN	**Odare**	**50.64**	**287**	*e*P	**P**	**13 17 47.0**	**-0.1**
	comp=Z,28nm,0.6s,mb4.8						
RAMN	**Ramnie**	**51.33**	**288**	*e*P	**P**	**13 17 52.1**	**-0.1**
	comp=Z,18nm,0.6s,mb4.6						
JIRN	**Jiri**	**51.61**	**288**	*e*P	**P**	**13 17 54.7**	**+0.5**
	comp=Z,58nm,0.5s,mb5.1						
GUN	**Gumba**	**51.85**	**289**	*e*P	**P**	**13 17 56.2**	**+0.2**
	comp=Z,20nm,0.4s,mb4.8						
PKIN	**Phulchoki**	**52.31**	**289**	*e*P	**P**	**13 17 59.0**	**-0.4**
	comp=Z,19nm,0.5s,mb4.7						
KKN	**Kakani**	**52.39**	**289**	*e*P	**P**	**13 17 59.6**	**-0.3**
DMN	**Daman**	**52.57**	**289**	*e*P	**P**	**13 18 00.9**	**-0.3**
	comp=Z,20nm,0.6s,mb4.7						
GKN	**Gorkha**	**52.93**	**289**	*e*P	**P**	**13 18 03.5**	**-0.4**
	comp=Z,19nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**53.55**	**182**	P	**P**	**13 18 07.5**	**-0.6**
	comp=Z,3.0nm,0.4s,mb4.0,baz=350,slow=7.9,SNR=4.6						
DANN	**Dangsing**	**53.65**	**290**	*e*P	**P**	**13 18 09.6**	**+0.5**
	comp=Z,210nm,0.5s						
ZAA0	**Zalesovo Array**	**53.96**	**322**	*e*P	**P**	**13 18 11.3**	**+0.4**
ZALV	**Zalesovo Beam**	**53.96**	**322**	P	**P**	**13 18 10.9**	**0.0**
	comp=Z,4.7nm,0.3s,mb4.2,baz=101,slow=7.0,SNR=16						
FORT	**Forrest**	**54.40**	**196**	⇓ *i*P	**P**	**13 18 14.1**	**-0.1**
	comp=Z,34nm,0.5s,mb4.9						
MK31	**Makanchi Array**	**54.47**	**313**	*e*P	**P**	**13 18 15.3**	**+0.6**
MKAR	**Makanchi Array**	**54.47**	**313**	P	**P**	**13 18 15.0**	**+0.3**
	comp=Z,3.0nm,0.5s,mb3.9,baz=91,slow=8.9,SNR=16						
MKAR				ScP	ScP	13 22 46.3	-0.4
	comp=Z,0.7nm,0.7s,baz=106,slow=5.1,SNR=3.4						
MKAR				S	**S**	**13 25 31.1**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=95,slow=15,SNR=4.4						
CHGN	**Chignik**	**54.60**	**36**	*e*P	**P**	**13 18 12.9**	**-2.5**
CHGN				*e*pP	pP	13 19 27.0	+13
NVS	**Novosibirsk**	**55.06**	**322**	*e*P	**P**	**13 18 17.8**	**-0.9**
NVS				*e*	pP	13 19 14.8	-2.5
KURK	**Kurchatov**	**57.24**	**317**	P	**P**	**13 18 34.7**	**+0.5**
	comp=Z,23nm,0.5s,mb4.9,baz=94,slow=7.8,SNR=36						
KURK	**Kurchatov**	**57.24**	**317**	P	**P**	**13 18 34.7**	**+0.5**
KLBR	**Kellerberrin**	**58.53**	**205**	*e*P	**P**	**13 18 42.4**	**-0.9**
	comp=Z,11nm,0.7s,mb4.4						
TKM2	**Tokmak 2**	**59.13**	**308**	*e*P	**P**	**13 18 47.7**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
TKM2	**Tokmak 2**	**59.13**	**308**	*e*P	**P**	**13 18 47.7**	**+0.3**
	comp=Z,2.1nm,0.6s,mb3.7						
NWAO	**Narrogin (SRO)**	**59.92**	**205**	P	**P**	**13 18 52.1**	**-0.6**
	comp=Z,6.0nm,0.5s,mb4.4,baz=48,slow=7.5,SNR=7.2						
AML	**Almayashu**	**60.58**	**307**	*e*P	**P**	**13 18 56.3**	**-0.9**
	comp=Z,4.9nm,0.8s,mb4.1						
BVAR	**Borovoye Array**	**62.43**	**319**	P	**P**	**13 19 09.5**	**+0.2**
	comp=Z,15nm,0.4s,mb5.0,baz=95,slow=8.2,SNR=52						
BVAR				S	**S**	**13 27 12.9**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=92,slow=7.2,SNR=3.9						
BRVK	**Borovoye**	**62.49**	**319**	*e*P	**P**	**13 19 09.8**	**+0.1**
KBL	**Kabul**	**65.15**	**299**	*e*P	**P**	**13 19 27.2**	**-0.2**
	comp=Z,11nm,0.8s,mb4.5						
SVE	**Sverdlovsk**	**67.83**	**324**	*e*P	**P**	**13 19 44.5**	**+0.7**
SVE				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
ARU	**Arti**	**69.01**	**324**	*c i*P	**P**	**13 19 51.1**	**0.0**
ARU				*e*		13 22 25.6	
ARU				*e*S	S	13 28 33.4	-0.2
ARU				*e*SS	SS	13 33 05.4	+0.8
ARU				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
ARU	**Arti**	**69.01**	**324**	*e*P	**P**	**13 19 51.0**	**-0.2**
YKA	**Yellowknife Ar**	**76.25**	**28**	P	**P**	**13 20 34.4**	**+0.9**
	comp=Z,1.7nm,0.7s,mb3.8,baz=292,slow=6.0,SNR=3.0						
ARCES	**ARCESS Array B**	**78.65**	**341**	P	**P**	**13 20 47.4**	**+0.8**
	comp=Z,4.7nm,0.5s,mb4.5,baz=78,slow=8.3,SNR=23						
ARCES	**ARCESS Array B**	**78.65**	**341**	P	**P**	**13 20 47.4**	**+0.8**
ARE0	**ARCESS Array S**	**78.65**	**341**	*e*P	**P**	**13 20 47.1**	**+0.5**
YBH	**Yreka Blue Hor**	**78.70**	**50**	P	**P**	**13 20 49.6**	**+2.2**
	comp=Z,1.8nm,1.0s,mb3.8,baz=308,slow=4.5,SNR=2.5						
JOF	**Joensuu**	**80.05**	**334**	*e*p	**P**	**13 20 53.9**	**-0.3**
	comp=Z,10.0nm,0.5s,mb4.8						
OBN	**Obninsk**	**81.23**	**326**	P	**P**	**13 21 01.0**	**+0.4**
KIV	**Kislovodsk**	**82.19**	**314**⇑	*e*P	**P**	**13 21 07.4**	**+1.5**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
GNI	**Garni**	**82.23**	**310**	*e*P	**P**	**13 21 07.1**	**+0.9**
GNI				pmax	pmax		
	comp=Z,11nm,1.3s						
KAF	**Kangasniemi**	**82.45**	**335**	*e*p	**P**	**13 21 06.1**	**-0.8**
	comp=Z,3.7nm,0.6s,mb4.3						
KAF	**Kangasniemi**	**82.45**	**335**	*e*P	**P**	**13 21 06.1**	**-0.8**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
NVAR	**Mina Array Bea**	**83.03**	**51**	P	**P**	**13 21 12.6**	**+2.3**
	comp=Z,1.3nm,0.7s,mb3.9,baz=254,slow=6.8,SNR=14						
MIB	**Mutribah**	**84.11**	**300**	*e*P	**P**	**13 21 15.6**	**-0.3**
	baz=324						
MIB				AMb	AMB	13 21 16.8	
	comp=Z,56nm,0.7s,baz=324						
NAY	**Al-Naaiem**	**84.39**	**299**	*e*P	**P**	**13 21 16.8**	**-0.5**
	baz=324						
NAY				AMb	AMB	13 21 18.1	
	comp=Z,25nm,0.7s,mb5.2,baz=324						
RST	**Umm Al-Ruwaisa**	**84.50**	**299**	*e*P	**P**	**13 21 16.8**	**-1.1**
	baz=324						
RST				AMb	AMB	13 21 18.4	
	comp=Z,24nm,0.6s,mb5.2,baz=324						
AKASG	**Malin Array Be**	**87.25**	**324**	P	**P**	**13 21 29.2**	**-1

DAV				Lg			13 11 17.5	
CNP	**Catarman**	**3.22**	**326**	*e*P		**Pn**	**13 10 30.7**	**-1.6**
CNP				*e*S		**Sn**	**13 11 09.4**	**-0.1**
PAGZ	**Pagadian**	**3.68**	**238**	*e*P		**Pn**	**13 10 39.5**	**+0.9**
GUIM	**Jordan**	**3.95**	**282**	*e*P		**Pn**	**13 10 43.9**	**+1.5**
RCP	**Roxas**	**4.09**	**295**⇓	*e*P		**Pn**	**13 10 45.2**	**+0.9**
PVCP	**Virac**	**4.40**	**328**	*e*P		**Pn**	**13 10 49.0**	**+0.5**
IPIL	**Ipil**	**4.41**	**243**	*e*P		**Pn**	**13 10 51.7**	**+3.1**
OTRP	**Ödiongan**	**5.08**	**300**	*e*P		**Pn**	**13 10 59.6**	**+1.8**
BUSP	**Coron**	**6.58**	**290**	*e*P		**Pn**	**13 11 17.2**	**-1.2**
KAPI	**Kappang**	**16.23**	**205**	LR	LR		13 20 27.8	
	comp=Z,170nm,18.3s,baz=239,slow=40							
GUMO	**Guam**	**18.34**	**77**	LR		LR	13 19 37.7	
	comp=Z,118nm,20.5s,baz=270,slow=32							
BATI	**Baumata**	**20.12**	**188**	P		**P**	**13 14 15.1**	**+1.1**
	73nm,0.9s,baz=47,slow=3.2,SNR=8.8							
KAKA	**Kakadu**	**23.16**	**165**	*e*P		**P**	**13 14 39.2**	**-7.4**
	33nm,0.8s,mb4.8							
NST	**Nakhon Sawan**	**26.37**	**285**	P		**P**	**13 15 17.0**	**+1.0**
NANT	**Nan**	**26.53**	**292**	⇑P		**P**	**13 15 16.5**	**-0.9**
	88nm,1.0s,mb5.2							
KSRS	**Korea Array**	**27.52**	**2**	P		**P**	**13 15 26.2**	**+0.1**
	3.0nm,0.9s,mb3.9,baz=178,slow=11,SNR=4.3							
FITZ	**Fitzroy Crossi**	**27.78**	**182**	*e*P		**P**	**13 15 29.2**	**+0.7**
	17nm,1.0s,mb4.6							
FITZ	**Fitzroy Crossi**	**27.78**	**182**	P		**P**	**13 15 29.2**	**+0.7**
	12nm,0.9s,mb4.5,baz=12,slow=13,SNR=17							
CMAR	**Chiang Mai Arr**	**28.05**	**291**	P		**P**	**13 15 30.1**	**-1.0**
	3.8nm,1.1s,mb4.0,baz=104,slow=7.1,SNR=14							
CHTO	**Chiang Mai**	**28.14**	**292**	*e*P		**P**	**13 15 28.8**	**-3.0**
CHTO				pmax		pmax		
	comp=Z,6.0nm,1.3s,mb4.1							
CHTO	**Chiang Mai**	**28.14**	**292**	*e*P		**P**	**13 15 28.8**	**-3.1**
	comp=Z,6.5nm,1.3s,mb4.1							
XAN	**Xi'an**	**29.00**	**329**	P		**P**	**13 15 38.0**	**-1.3**
XAN				AP		pP	13 15 49.0	-3.2
XAN				AMB		AMB		
	comp=Z,13nm,1.0s,mb4.6							
WRA	**Warramunga Arr**	**30.58**	**165**	P		**P**	**13 15 52.3**	**-1.1**
	comp=Z,1.1nm,0.9s,mb3.7,baz=347,slow=9.0,SNR=11							
WB2	**Warramunga Arr**	**30.58**	**165**	*e*P		**P**	**13 15 52.0**	**-1.4**
ASAR	**Alice Springs**	**34.07**	**168**	P		**P**	**13 16 23.3**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.8,baz=353,slow=7.3,SNR=16							
CTA	**Charters Tower**	**35.52**	**147**	*e*P		**P**	**13 16 38.3**	**+1.8**
	comp=Z,7.9nm,0.8s,mb4.7							
CTA	**Charters Tower**	**35.52**	**147**	P		**P**	**13 16 37.6**	**+1.1**
	comp=Z,10nm,0.8s,mb4.8,baz=335,slow=9.9,SNR=13							
CTA				LR		LR	13 31 18.1	
	comp=Z,386nm,21.1s,MS4.1,baz=35,slow=36							
CTA	**Charters Tower**	**35.52**	**147**	*e*P		**P**	**13 16 38.3**	**+1.8**
	comp=Z,7.9nm,0.8s,mb4.7							
ASAJ	**Asahikawa**	**36.89**	**19**	P		**P**	**13 16 50.2**	**+2.4**
	comp=Z,4.0nm,0.7s,mb4.3,baz=229,slow=11,SNR=2.9							
ASAJ				LR		LR	13 29 52.3	
	comp=Z,104nm,18.7s,MS3.6,baz=178,slow=33							
SONM	**Songino Array**	**41.51**	**340**	P		**P**	**13 17 26.4**	**0.0**
	comp=Z,3.7nm,0.9s,mb4.0,baz=162,slow=8.9,SNR=9.7							
SONM				LR		LR	13 34 42.3	
	comp=Z,55nm,18.9s,MS3.5,baz=303,slow=36							
MUN	**Mundaring**	**42.73**	**193**	*e*P		**P**	**13 17 37.0**	**+0.4**
NWAO	**Narrogin (SRO)**	**43.44**	**191**	P		**P**	**13 17 43.1**	**+0.8**
	comp=Z,27nm,0.8s,mb5.2,baz=22,slow=9.0,SNR=15							
NWAO	**Narrogin (SRO)**	**43.44**	**191**	*e*P		**P**	**13 17 42.3**	**0.0**
NWAO				pmax		pmax		
	comp=Z,44nm,1.1s							
NWAO	**Narrogin (SRO)**	**43.44**	**191**	*e*P		**P**	**13 17 42.3**	**+0.1**
	comp=Z,44nm,1.1s,mb5.1							
STKA	**Stephens Creek**	**43.91**	**161**	*e*P		**P**	**13 17 46.4**	**+0.3**
	comp=Z,2.8nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**43.91**	**161**	P		**P**	**13 17 47.1**	**+1.1**
	comp=Z,1.8nm,0.4s,mb4.1,baz=354,slow=14,SNR=3.7							
BOD	**Bodaibo**	**48.83**	**351**	*e*P		**P**	**13 18 24.9**	**+0.6**
BOD				pmax		pmax		
	comp=Z,8.0nm,1.5s,mb4.5							
PETK	**Petropavlovsk-**	**49.92**	**24**	P		**P**	**13 18 34.7**	**+2.0**
	comp=Z,3.4nm,0.8s,mb4.4,baz=142,slow=1.7,SNR=4.0							
PETK	**Petropavlovsk-**	**49.92**	**24**	P		**P**	**13 18 34.7**	**+2.0**
MK31	**Makanchi Array**	**52.52**	**323**	*e*P		**P**	**13 18 51.4**	**-0.9**
MKAR	**Makanchi Array**	**52.52**	**323**	P		**P**	**13 18 52.1**	**-0.3**
	comp=Z,3.5nm,0.6s,mb4.5,baz=122,slow=8.3,SNR=10							
ZALV	**Zalesovo Beam**	**55.12**	**331**	P		**P**	**13 19 10.3**	**-0.9**
	comp=Z,1.1nm,0.4s,mb4.2,baz=122,slow=5.2,SNR=3.7							
ZALV	**Zalesovo Beam**	**55.12**	**331**	P		**P**	**13 19 10.3**	**-0.9**
KURK	**Kurchatov**	**56.56**	**326**	P		**P**	**13 19 20.9**	**-0.7**
	comp=Z,3.1nm,0.7s,mb4.4,baz=122,slow=6.2,SNR=5.5							
ARCES	**ARCESS Array B**	**84.68**	**340**	P		**P**	**13 22 11.7**	**-0.6**
	comp=Z,4.0nm,0.7s,mb4.7,baz=86,slow=6.7,SNR=6.2							
AKASG	**Malin Array Be**	**87.06**	**321**	P		**P**	**13 22 24.1**	**-0.4**
	comp=Z,0.4nm,0.3s,mb4.1,baz=60,slow=5.3,SNR=5.9							
MAW	**Mawson**	**89.38**	**200**	P		**P**	**13 22 35.1**	**+0.2**
	comp=Z,4.4nm,1.2s,mb4.7,baz=29,slow=5.6,SNR=4.1							
KMBO	**Kilima Mbogo**	**89.47**	**269**	P		**P**	**13 22 37.0**	**+0.3**
	comp=Z,2.0nm,0.8s,mb4.5,baz=51,slow=8.5,SNR=3.5							
NOA	**NORSAR Array B**	**93.25**	**334**	P		**P**	**13 22 52.6**	**-0.6**
	comp=Z,0.9nm,0.8s,mb4.2,baz=65,slow=4.9,SNR=3.3							
YKA	**Yellowknife Ar**	**94.05**	**24**	P		**P**	**13 22 58.1**	**+1.3**
	comp=Z,2.5nm,0.7s,mb4.8,baz=293,slow=4.1,SNR=3.6							
GERES	**GERESS Array B**	**97.19**	**322**	P		**P**	**13 23 11.2**	**-0.3**
	comp=Z,0.3nm,0.2s,mb4.3,baz=57,slow=4.9,SNR=3.7							
TXAR	**Lajitas Array**	**117.92**	**49**	PKP		PKPdf	13 28 27.6	+1.7
	comp=Z,0.2nm,0.7s,baz=172,slow=0.6,SNR=4.3							
PLCA	**Paso Flores**	**145.71**	**157**	PKPbc		PKPbc	13 29 20.1	+2.2
	comp=Z,3.1nm,0.9s,baz=180,slow=6.1,SNR=5.0							

*IDC **29** 13:12:36.6±1.2,3764S×17698E,h0km,mb4.3/6, mb1 4.4/7,mb1mx4.2/17,mbtmp4.2/7,MS4.0/14, Ms1 4.0/14,ms1mx3.7/32,Error ellipse: s-maj=33.1km s-min=9.2km az=70.0*

*ISCJB **29** 13:12:38.6±0.5,3775S±003×17679E±004,h19km±4km, mb4.3/7,MS4.0/14,Error ellipse: s-maj=6.0km s-min=5.1km az=27.6*

*NEIC **29** 13:12:38.7,3778S×17683E,h2km,mb5.0/2,ML4.7(WEL), After WEL.*

ISC 29 13:12:38.9±0.5,3774S±003×17678E±004,h12km±3km, h12km±.4km:pP-P,n60,σ0§89/46,mb4.3/7,MS4.0/14,2C-1D, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.26**	**198**	⇑P		**Pg**	**13 12 44.1**	**-0.2**
MARZ				S		**Sg**	**13 12 47.4**	**-0.5**
EDRZ	**Edgecumbe**	**0.37**	**185**	P		**Pg**	**13 12 45.9**	**-0.3**
EDRZ				S		**Sg**	**13 12 50.4**	**-0.8**
WIZ	**White Island**	**0.39**	**57**	P		**Pg**	**13 12 46.7**	**+0.1**
WIZ				S		**Sg**	**13 12 52.6**	**+0.8**
LIRZ	**Lichensteins R**	**0.41**	**230**	P		**Pg**	**13 12 47.6**	**+0.6**
TGRZ	**Tauranga**	**0.41**	**271**	⇑P		**Pg**	**13 12 47.9**	**+0.9**
MKRZ	**Makatiti**	**0.47**	**212**	P		**Pg**	**13 12 48.8**	**+0.7**
KARZ	**Kaharoa**	**0.51**	**236**	⇓P		**Pg**	**13 12 49.4**	**+0.6**
TAZ	**Tarawera**	**0.54**	**203**	P		**Pg**	**13 12 49.7**	**+0.3**
URZ	**Urewera**	**0.58**	**153**	Pg		**Pg**	**13 12 49.3**	**-0.9**
	2µm,0.3s,baz=338,slow=16,SNR=7544							
URZ				Lg			13 12 57.2	
	2µm,0.3s,baz=337,slow=18,SNR=24							
URZ				LR		LR	13 12 59.1	
	comp=Z,28µm,18.3s,baz=0.0,slow=36							
URZ	**Urewera**	**0.58**	**153**	P		**Pg**	**13 12 49.3**	**-0.9**
UTU	**Utuhina**	**0.64**	**227**	P		**Pg**	**13 12 52.0**	**+0.8**
TOZ	**Tahuroa Road**	**1.01**	**270**	P		**Pb**	**13 12 57.4**	**-0.9**
MXZ	**Matakaoa Point**	**1.23**	**82**	P		**Pn**	**13 13 00.4**	**-1.4**
HATZ	**Hinemaiaia**	**1.27**	**205**	P		**Pn**	**13 13 01.2**	**-1.2**
KUZ	**Kuaotunu**	**1.30**	**319**	P		**Pn**	**13 13 01.0**	**-1.9**
RATZ	**Rangitukua**	**1.38**	**215**	P		**Pn**	**13 13 03.4**	**-0.5**
MKAZ	**Moumakai**	**1.43**	**296**	P		**Pn**	**13 13 03.3**	**-1.3**
BKZ	**Black Stump Fm**	**1.44**	**189**	P		**Pn**	**13 13 03.2**	**-1.6**
KNZ	**Kokohu**	**1.46**	**151**	P		**Pn**	**13 13 04.7**	**-0.3**
HIZ	**Hauiti**	**1.70**	**242**	P		**Pn**	**13 13 07.5**	**-0.8**
KAAZ	**Kauri Point**	**1.89**	**298**	P		**Pn**	**13 13 10.9**	**0.0**
WTAZ	**Waiatarua**	**1.93**	**294**	P		**Pn**	**13 13 11.1**	**-0.4**
VRZ	**Vera Road**	**2.10**	**228**	P		**Pn**	**13 13 13.9**	**0.0**
TSZ	**Takapari Road**	**2.40**	**195**	P		**Pn**	**13 13 18.4**	**+0.4**
WCZ	**Waipu Caves**	**2.65**	**312**	P		**Pn**	**13 13 20.7**	**-0.7**
MRZ	**Mangatainoka R**	**3.06**	**197**	P		**Pn**	**13 13 26.4**	**-0.6**
OUZ	**Omahuta**	**3.59**	**313**	P		**Pn**	**13 13 34.0**	**-0.3**
SNZO	**South Karori**	**3.91**	**204**	*e*Pn		**Pn**	**13 13 40.8**	**+2.1**
THZ	**Tophouse**	**5.00**	**215**	P		**Pn**	**13 13 53.2**	**-0.5**
RPZ	**Rata Peaks**	**7.38**	**214**	Pn		**Pn**	**13 14 27.6**	**+1.2**
	0.7nm,0.3s,baz=124,slow=7.3,SNR=2.6							
RAR	**Rarotonga**	**26.12**	**57**	LR		LR	13 26 38.9	
	comp=Z,288nm,18.2s,MS3.9,baz=248,slow=32							
STKA	**Stephens Creek**	**29.36**	**271**	LR		LR	13 30 24.0	
	comp=Z,176nm,18.2s,MS3.7,baz=120,slow=36							
PPT	**Papeete**	**35.67**	**65**	LR		LR	13 30 46.1	
	comp=Z,192nm,19.2s,MS3.9,baz=251,slow=31							
ASAR	**Alice Springs**	**39.11**	**278**	P		**P**	**13 20 07.5**	**+1.4**
	3.3nm,1.0s,mb4.0,baz=121,slow=7.8,SNR=14							
WRA	**Warramunga Arr**	**40.79**	**284**	P		**P**	**13 20 21.3**	**+1.2**
	5.4nm,1.1s,mb4.1,baz=124,slow=8.0,SNR=8.3							
WRA				LR		LR	13 38 40.0	
	comp=Z,169nm,18.5s,MS3.9,baz=100,slow=38							
FITZ	**Fitzroy Crossi**	**48.60**	**279**	P		**P**	**13 21 22.9**	**+0.5**
	1.9nm,0.9s,mb4.1,baz=135,slow=13,SNR=3.7							
FITZ				LR		LR	13 42 10.1	
	comp=Z,99nm,18.2s,MS3.8,baz=288,slow=36							
QSPA	**South Pole Qui**	**52.38**	**180**	P		**P**	**13 21 51.8**	**+1.6**
	6.9nm,1.1s,mb4.5,baz=17,slow=4.5,SNR=12							
GUMO	**Guam**	**59.20**	**323**	LR		LR	13 45 21.8	
	comp=Z,73nm,18.6s,MS3.8,baz=118,slow=33							
KAPI	**Kappang**	**61.13**	**287**	LR		LR	13 49 53.6	
	comp=Z,141nm,18.6s,MS4.1,baz=60,slow=36							
MAW	**Mawson**	**63.90**	**203**	*e*P		**P**	**13 23 11.1**	**+0.1**
	5.7nm,1.5s,mb4.4							
MAW	**Mawson**	**63.90**	**203**	P		**P**	**13 23 10.7**	**-0.4**
	4.8nm,1.0s,mb4.5,baz=122,slow=6.4,SNR=6.2							
MAW				LR		LR	13 49 53.6	
	comp=Z,140nm,19.9s,MS4.1,baz=250,slow=35							
MAW	**Mawson**	**63.90**	**203**	*e*P		**P**	**13 23 11.0**	**0.0**
	16nm,1.4s,mb4.8							
SNAA	**Sanae**	**70.89**	**180**	*e*Pdiff		**P**	**13 23 55.1**	**-0.1**
SNAA				*e*		pP	13 23 58.6	-0.5
SNAA				*e*			13 24 01.6	
SNAA	**Sanae**	**70.89**	**180**	*e*P		**P**	**13 23 54.4**	**-0.8**
	12nm,1.3s,mb4.7							
VNA3	**Neumayer Olymp**	**71.22**	**178**	*e*Pdiff		**P**	**13 23 57.4**	**+0.2**
VNA3				*e*		pP	13 24 00.8	-0.3
VNA3				*e*			13 24 03.6	
VNA2	**Neumayer--Watz**	**71.60**	**179**	*e*Pdiff		**P**	**13 23 59.8**	**+0.3**
	baz=182,slow=5.6							
VNA2				*e*		pP	13 24 03.6	+0.2
VNA2				*e*			13 24 06.2	
VNA2				*e*			13 24 10.8	
VNA1	**Neumayer--Stat**	**71.86**	**178**	*e*Pdiff		**P**	**13 24 02.1**	**+1.1**
VNA1				*e*		pP	13 24 05.3	+0.3
VNA1				*e*			13 24 07.8	
VNA1				*e*			13 24 11.5	
PLCA	**Paso Flores**	**80.56**	**135**	P		**P**	**13 24 52.2**	**+1.1**
	2.1nm,1.1s,mb4.0,baz=225,slow=4.3,SNR=3.6							
MJAR	**Matsushiro Arr**	**82.08**	**330**	LR		LR	13 57 42.4	
	comp=Z,105nm,20.1s,MS4.2,baz=225,slow=33							
ASAJ	**Asahikawa**	**87.16**	**336**	LR		LR	14 03 03.9	
	comp=Z,107nm,19.1s,MS4.3,baz=350,slow=35							
KSRS	**Korea Array**	**87.36**	**323**	LR		LR	13 57 10.6	
	comp=Z,48nm,21.2s,MS3.9,baz=48,slow=31							
CMAR	**Chiang Mai Arr**	**91.91**	**292**	LR		LR	14 07 08.4	
	comp=Z,62nm,18.0s,MS4.1,baz=351,slow=36							
PETK	**Petropavlovsk-**	**91.98**	**349**	LR		LR	14 01 46.7	
	comp=Z,56nm,19.3s,MS4.0,baz=104,slow=32							
LPAZ	**La Paz**	**98.80**	**118**	LR		LR	13 58 49.5	
	comp=Z,108nm,22.0s,MS4.3,baz=171,slow=28							
ARCES	**ARCESS Array B**	**144.59**	**343**	PKP		PKPdf	13 32 12.2	-1.9
	6.9nm,1.1s,baz=47,slow=5.3,SNR=3.0							
LIC	**Lamto**	**148.59**	**177**	*e*PKIKP		PKPdf	13 32 24.7	+2.1
	60nm,1.6s							
KIC	**Kosan Boka**	**148.73**	**177**	*e*PKIKP		PKPdf	13 32 24.7	+1.9
	69nm,1.2s							
TIC	**Toumodi**	**149.00**	**177**	*e*PKIKP		PKPdf	13 32 25.2	+1.9
	89nm,1.4s							
DBIC	**Dimbokro**	**149.03**	**177**	PKPbc		PKPbc	13 32 25.5	-1.9
	4.9nm,1.0s,baz=135,slow=2.9,SNR=3.5							
TORD	**Torodi Ar. Bea**	**155.12**	**191**	PKPbc		PKPdf	13 32 40.5	+8.2
	1.3nm,1.0s,baz=171,slow=2.2,SNR=4.4							
TORD				PKPab		PKPab	13 32 55.6	-1.1
	2.6nm,1.0s,baz=164,slow=4.0,SNR=7.0							

NEIC 29 13:13:21.6,3779S×17683E,h2km,ML4.5(WEL),After WEL.,North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.23**	**212**	P		**Pg**	**13 13 26.7**	**+0.6**
WIZ	**White Island**	**0.39**	**48**	P		**Pg**	**13 13 29.6**	**+0.6**
LIRZ	**Lichensteins R**	**0.41**	**239**	P		**Pg**	**13 13 30.2**	**+0.7**
MKRZ	**Makatiti**	**0.45**	**219**	P		**Pg**	**13 13 32.1**	**+1.8**
TGRZ	**Tauranga**	**0.46**	**277**	P		**Pg**	**13 13 30.7**	**+0.4**
KARZ	**Kaharoa**	**0.52**	**243**	P		**Pg**	**13 13 32.1**	**+0.6**
URZ	**Urewera**	**0.52**	**155**	P		**Pg**	**13 13 32.0**	**+0.4**
UTU	**Utuhina**	**0.64**	**232**	P		**Pg**	**13 13 34.7**	**+0.9**
TOZ	**Tahuroa Road**	**1.05**	**273**	P		**Pg**	**13 13 41.7**	**-0.1**
MXZ	**Matakaoa Point**	**1.19**	**80**	P		**Pg**	**13 13 46.3**	**+1.8**
KUZ	**Kuaotunu**	**1.37**	**319**	P		**Pn**	**13 13 48.3**	**+0.6**

*IDC **29** 13:20:53.0±1.1,1197N×124.14E,h0km,mb3.5/5, mb1 3.6/5,mb1mx3.4/19,mbtmp3.5/5,Error ellipse: s-maj=77.4km s-min=18.1km az=78.0*

*ISCJB **29** 13:20:57.0±0.6,1223N±004×12438E±003,h30km±6km, mb3.6/6,Error ellipse: s-maj=6.7km s-min=5.4km az=28.4*

*MAN **29** 13:20:56,1226N×12442E,h21km,mb4.8,ML3.7,MS3.7*

ISC 29 13:20:56.1±0.8,1220N±004×12438E±003,h14km±6km, n21,σ1§31/29,mb3.6/6,2C-4D,Samar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CNP	**Catarman**	**0.41**	**41**	*e*P		**Pg**	**13 21 05.5**	**+1.1**
CNP				*e*S		**Sg**	**13 21 13.4**	**+3.4**
MMPH	**Masbate**	**0.76**	**282**	⇓*i*P		**Pg**	**13 21 10.0**	**-0.9**
MMPH				*i* S		**Sg**	**13 21 21.0**	**+0.1**
OCLP	**Ormoc**	**1.16**	**169**	*e*P		**Pb**	**13 21 17.3**	**-0.7**
OCLP				*e*S		**Sb**	**13 21 34.8**	**+1.9**
PLP	**Palo**	**1.18**	**150**⇓	*e*P		**Pn**	**13 21 16.6**	**-1.6**
PLP				*e*S		**Sb**	**13 21 32.4**	**-1.1**
BESP	**Borongan**	**1.19**	**120**	*e*P		**Pn**	**13 21 16.6**	**-1.8**
BESP				*e*S		**Sb**	**13 21 35.2**	**+1.4**
PVCP	**Virac**	**1.41**	**351**	*e*P		**Pn**	**13 21 20.4**	**-0.9**
RCP	**Roxas**	**1.73**	**249**⇑	*e*P		**Pn**	**13 21 25.8**	**+0.1**
RCP				*e*S		**Sn**	**13 21 49.0**	**+1.5**
LLP	**Lapu-Lapu**	**1.92**	**192**⇓	*e*P		**Pn**	**13 21 30.1**	**+1.8**
LLP				*e*S		**Sn**	**13 21 53.4**	**+1.2**
AUQP	**San Andres**	**2.01**	**304**	*e*P		**Pn**	**13 21 30.4**	**+0.8**
KALP	**Kalibo**	**2.07**	**256**⇑	*e*P		**Pn**	**13 21 32.4**	**+2.0**
MSLP	**Maasin**	**2.10**	**167**	*e*P		**Pn**	**13 21 32.5**	**+1.5**
OTRP	**Odiongan**	**2.31**	**274**	*e*P		**Pn**	**13 21 33.7**	**-0.1**
GUIM	**Jordan**	**2.35**	**229**	*e*P		**Pn**	**13 21 32.6**	**-1.8**
GQP	**Guinayangan**	**2.54**	**312**⇓	*e*P		**Pn**	**13 21 36.8**	**-0.1**
GQP				*e*S		**Sg**	**13 22 17.2**	**-0.6**
TBP	**Tagbilaran**	**2.54**	**192**	*e*P		**Pn**	**13 21 35.0**	**-2.0**
BATI	**Baumata**	**22.27**	**182**	P		**P**	**13 25 48.4**	**-4.6**
	19nm,0.4s,mb4.8,baz=59,slow=6.9,SNR=4.5							
KSRS	**Korea Array**	**25.35**	**7**	P		**P**	**13 26 23.6**	**+1.0**
	0.9nm,0.6s,mb3.5,baz=180,slow=9.7,SNR=4.3							
WRA	**Warramunga Arr**	**33.41**	**163**	P		**P**	**13 27 32.2**	**-2.3**
	0.2nm,0.6s,mb3.2,baz=345,slow=9.4,SNR=2.8							
ASAR	**Alice Springs**	**36.84**	**165**	P		**P**	**13 28 02.5**	**-1.5**
	0.3nm,0.5s,mb3.4,baz=346,slow=7.1,SNR=9.1							
SONM	**Songino Array**	**38.59**	**341**	P		**P**	**13 28 19.0**	**+0.4**
	0.2nm,0.3s,mb3.3,baz=168,slow=7.6,SNR=4.5							
KURK	**Kurchatov**	**53.44**	**325**	P		**P**	**13 30 15.1**	**-0.5**
	0.3nm,0.5s,mb3.5,baz=121,slow=7.8,SNR=4.2							

*IDC **29** 13:40:18.7±1.2,4558S×7704W,h0km,mb4.1/6,mb1 4.2/7, mb1mx4.1/17,mbtmp4.0/7,ML3.7/1,MS3.7/5,Ms1 3.7/5, ms1mx3.5/20,Error ellipse: s-maj=47.9km s-min=20.1km az=102.0*

*ISCJB **29** 13:40:22.6±0.7,4553S±007×766W±02,h33km,mb4.1/8, MS3.8/3,Error ellipse: s-maj=21.8km s-min=9.0km az=10.3*

*NEIC **29** 13:40:23.5±0.8,4556S×7662W,h30km,mb4.5/3,Error ellipse: s-maj=25.4km s-min=12.1km az=108.0*

ISC 29 13:40:24.7±0.7,4554S±007×766W±02,h35km,n22, σ1§10/22,mb4.1/8,MS3.8/3,Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**6.54**	**45**	Pn		**Pn**	**13 41 59.7**	**+1.4**
	0.3nm,0.3s,baz=227,slow=12,SNR=14							
PLCA				LR		LR	13 44 36.8	
	comp=Z,1µm,21.5s,baz=209,slow=38							
PLCA	**Paso Flores**	**6.54**	**45**	Pn		**Pn**	**13 41 59.7**	**+1.4**
PLCA				LR		LR	13 44 36.8	
FCH	**Farellones**	**13.13**	**24**	*e*P		**Pn**	**13 43 27.1**	**-1.5**
TRQA	**Tornquist**	**13.23**	**61**	*e*Pn		**Pn**	**13 43 28.2**	**-1.7**
	7.4nm,0.9s							
CFAA	**Coronel Fontan**	**15.37**	**28**	Pn		**Pn**	**13 43 55.4**	**-3.4**
	0.1nm,0.3s,baz=208,slow=8.4,SNR=7.8							
CFAA				LR		LR	13 50 19.5	
	comp=Z,34nm,20.9s,baz=197,slow=39							
CFAA	**Coronel Fontan**	**15.37**	**28**	Pn		**Pn**	**13 43 55.4**	**-3.4**
CFAA				LR		LR	13 50 19.5	
LVC	**Limon Verde**	**23.72**	**18**	P		**P**	**13 45 34.4**	**+0.9**
	10nm,0.7s,mb4.4,baz=203,slow=9.5,SNR=9.1							
LVC				LR		LR	13 54 29.7	
	comp=Z,112nm,21.5s,MS3.3,baz=195,slow=36							
LVC	**Limon Verde**	**23.72**	**18**	*e*P		**P**	**13 45 33.9**	**+0.5**
	16nm,0.8s,mb4.5							
CPUP	**Villa Florida**	**24.61**	**45**	P		**P**	**13 45 42.2**	**+0.6**
	11nm,0.9s,mb4.4,baz=202,slow=9.4,SNR=22							
CPUP				LR		LR	13 56 15.9	
	comp=Z,370nm,19.6s,MS3.9,baz=200,slow=38							
CPUP	**Villa Florida**	**24.61**	**45**	*e*P		**P**	**13 45 42.0**	**+0.4**
LPAZ	**La Paz**	**30.02**	**16**	P		**P**	**13 46 31.6**	**+1.5**
	1.0nm,0.7s,mb3.7,baz=186,slow=6.8,SNR=4.3							
VNA3	**Neumayer Olymp**	**40.35**	**153**	*e*		**P**	**13 47 58.3**	**0.0**
VNA3				*e*			13 48 00.7	
VNA1	**Neumayer--Stat**	**40.79**	**152**	*e*		**P**	**13 48 03.1**	**+1.1**
VNA1				*e*			13 48 04.8	
VNA2	**Neumayer--Watz**	**41.08**	**152**	*e*		**P**	**13 48 05.2**	**+0.8**
	baz=271,slow=7.8							
VNA2				*e*			13 48 07.6	
SNAA	**Sanae**	**42.53**	**153**	*e*		**P**	**13 48 16.6**	**+0.4**
SNAA				*e*			13 48 18.7	
SNAA	**Sanae**	**42.53**	**153**	*e*P		**P**	**13 48 15.7**	**-0.5**
	20nm,1.4s,mb4.7							
QSPA	**South Pole Qui**	**44.71**	**180**	P		**P**	**13 48 32.8**	**-0.8**
	1.8nm,0.9s,mb3.9,baz=138,slow=2.8,SNR=5.1							
QSPA	**South Pole Qui**	**44.71**	**180**	P		**P**	**13 48 32.8**	**-0.8**
OTAV	**Otavalo**	**45.61**	**357**	*e*P		**P**	**13 48 42.5**	**+1.0**
	3.1nm,0.9s,mb4.2							
MAW	**Mawson**	**63.11**	**164**	P		**P**	**13 50 48.0**	**-0.1**
	2.3nm,1.0s,mb4.3,baz=215,slow=5.6,SNR=4.8							
MAW				LR		LR	14 16 55.3	
	comp=Z,191nm,18.9s,MS4.3,baz=236,slow=35							
CASY	**Casey**	**68.38**	**183**	*e*P		**P**	**13 51 21.0**	**-1.0**
	688nm,1.2s							
TXAR	**Lajitas Array**	**78.47**	**336**	P		**P**	**13 52 20.6**	**-1.2**
	0.5nm

Error ellipse: s-maj=16.7km s-min=5.9km az=69.0
ISC 29 14:01:17.8±0.8,987N±003×12664E±005,h38km±7km,n97,
σ1ᵗ814/102,mb4.5/37,12C-10D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.14**	**266**	*e*P	**Pn**	**14 01 33.7**	**-3.5**
SCPH				*e*S	**Sn**	**14 01 45.8**	**-5.8**
BUTP	**Butuan**	**1.34**	**228**	*e*P	**Pn**	**14 01 37.6**	**-2.5**
BUTP				*e*S	**Sn**	**14 01 56.5**	**-0.3**
BIPH	**Bislig**	**1.69**	**189**	↑*e*P	**Pn**	**14 01 43.2**	**-1.7**
BIPH				*e*S	**Sn**	**14 02 04.6**	**-0.8**
MSLP	**Maasin**	**1.77**	**279**	*e*P	**Pn**	**14 01 44.6**	**-1.4**
PLP	**Palo**	**2.08**	**308**	↓*e*P	**Pn**	**14 01 49.5**	**-0.7**
PLP				*e*S	**Sn**	**14 02 17.6**	**+2.7**
BESP	**Borongan**	**2.09**	**326**	*e*P	**Pn**	**14 01 50.3**	**0.0**
BESP				*e*S	**Sn**	**14 02 22.4**	**+7.3**
OCLP	**Ormoc**	**2.32**	**301**	*e*P	**Pn**	**14 01 54.6**	**+1.1**
BUKP	**Musuan**	**2.52**	**218**	*e*P	**Pn**	**14 01 57.0**	**+0.8**
BUKP				*e*S	**Sn**	**14 02 30.5**	**+4.8**
LLP	**Lapu-Lapu**	**2.67**	**280**	↑*e*P	**Pn**	**14 01 58.3**	**-0.1**
LLP				*e*S	**Sn**	**14 02 30.6**	**+1.1**
TBP	**Tagbilaran**	**2.74**	**267**	*e*P	**Pn**	**14 01 58.5**	**-0.8**
TBP				*e*S	**Sn**	**14 02 32.2**	**+1.0**
MATI	**Mati**	**2.93**	**187**	*e*P	**Pn**	**14 02 06.9**	**+5.0**
DAV	**Davao City (W)**	**2.97**	**201**	P	**Pn**	**14 02 05.9**	**+3.5**
	26nm,0.3s,baz=323,slow=5.1,SNR=2.1						
DAV	**Davao City (W)**	**2.97**	**201**	P	**Pn**	**14 02 05.9**	**+3.5**
CNP	**Catarman**	**3.27**	**324**	*e*P	**Pn**	**14 02 06.0**	**-0.5**
CNP				*e*S	**Sn**	**14 02 42.3**	**-1.9**
DCPH	**Dipolog City**	**3.49**	**249**	↑*e*P	**Pn**	**14 02 08.6**	**-1.0**
DCPH				*e*S	**Sn**	**14 02 48.5**	**-1.2**
GUIM	**Jordan**	**4.06**	**281**	*e*P	**Pn**	**14 02 18.3**	**+0.9**
RCP	**Roxas**	**4.18**	**294**	↓*e*P	**Pn**	**14 02 19.9**	**+0.8**
PVCP	**Virac**	**4.43**	**327**	*e*P	**Pn**	**14 02 23.2**	**+0.6**
KALP	**Kalibo**	**4.59**	**293**	↑*e*P	**Pn**	**14 02 28.7**	**+3.9**
SDKM	**Sandakan**	**10.26**	**247**	↑P	**Pn**	**14 03 49.6**	**+7.1**
BTM	**Bintulu**	**15.00**	**245**	↑P	**Pn**	**14 04 48.5**	**+1.2**
SBUM	**Sibu**	**16.11**	**244**	↓P	**Pn**	**14 05 04.7**	**+3.1**
KAPI	**Kappang**	**16.30**	**205**	LR	LR	14 12 23.8	
	comp=Z,120nm,18.9s,baz=252,slow=41						
GUMO	**Guam**	**18.23**	**77**	LR	LR	14 11 10.7	
	comp=Z,87nm,19.1s,baz=61,slow=32						
KSM	**Kuching**	**18.25**	**244**	↑P	**Pn**	**14 05 29.8**	**+1.5**
BATI	**Baumata**	**20.16**	**189**	P	**P**	**14 05 51.0**	**+2.0**
	73nm,0.6s,baz=310,slow=1.7,SNR=11						
KAKA	**Kakadu**	**23.16**	**165**	*e*P	**P**	**14 06 20.6**	**-0.5**
	23nm,0.6s,mb4.8						
NJ2	**Nanjing**	**23.22**	**343**	*e*P	**P**	**14 06 21.0**	**-0.7**
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.7						
WHN	**Wuhan**	**23.55**	**333**	↑P	**P**	**14 06 25.5**	**+0.6**
KTGM	**Kuala Trenggan**	**23.72**	**261**	↓P	**P**	**14 06 28.4**	**+1.7**
MYKOM	**Kota Tinggi**	**24.03**	**252**	↓P	**P**	**14 06 30.0**	**+0.5**
KGM	**Kluang**	**24.45**	**253**	↑P	**P**	**14 06 33.3**	**-0.1**
FRIM	**Kepong**	**25.69**	**257**	↓P	**P**	**14 06 44.6**	**-0.1**
IPM	**Ipoh**	**25.96**	**260**	↑P	**P**	**14 06 48.0**	**+1.0**
NST	**Nakhon Sawan**	**26.47**	**285**	P	**P**	**14 06 53.1**	**+1.5**
NANT	**Nan**	**26.62**	**292**	P	**P**	**14 06 51.1**	**-1.9**
	comp=Z,94nm,1.0s,mb5.3						
KSRS	**Korea Array**	**27.49**	**2**	P	**P**	**14 07 01.7**	**+1.1**
	comp=Z,2.6nm,0.8s,mb3.8,baz=180,slow=9.5,SNR=9.0						
FITZ	**Fitzroy Crossi**	**27.81**	**182**	*e*P	**P**	**14 07 03.3**	**-0.2**
	comp=Z,22nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**27.81**	**182**	P	**P**	**14 07 03.8**	**+0.3**
	comp=Z,17nm,0.9s,mb4.7,baz=14,slow=12,SNR=23						
CMAR	**Chiang Mai Arr**	**28.15**	**291**	P	**P**	**14 07 05.2**	**-1.4**
	comp=Z,3.1nm,1.0s,mb3.9,baz=105,slow=7.6,SNR=13						
CMAR	**Chiang Mai Arr**	**28.15**	**291**	P	**P**	**14 07 05.2**	**-1.4**
XAN	**Xi'an**	**29.04**	**329**	P	**P**	**14 07 12.5**	**-1.9**
XAN				AP	pP	14 07 24.0	-1.1
XAN				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**30.57**	**166**	*i* P	**P**	**14 07 23.4**	**-4.6**
WRA	**Warramunga Arr**	**30.57**	**166**	P	**P**	**14 07 27.4**	**-0.7**
	comp=Z,0.8nm,0.6s,mb3.7,baz=346,slow=9.3,SNR=6.0						
WB2	**Warramunga Arr**	**30.58**	**166**	*e*P	**P**	**14 07 27.1**	**-1.0**
BJI	**Beijing**	**31.46**	**345**	P	**P**	**14 07 36.8**	**+1.1**
BJI				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.7						
BJI	**Beijing**	**31.46**	**345**	P	**P**	**14 07 36.7**	**+1.0**
ASAR	**Alice Springs**	**34.08**	**168**	P	**P**	**14 07 58.4**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=356,slow=7.0,SNR=12						
ASAR				PcP	PcP	14 10 36.7	+0.9
	comp=Z,0.9nm,0.6s,baz=352,slow=2.6,SNR=8.0						
CTA	**Charters Tower**	**35.48**	**147**	↓*i* P	**P**	**14 08 12.8**	**+1.9**
	comp=Z,5.2nm,0.6s,mb4.6						
CTA	**Charters Tower**	**35.48**	**147**	P	**P**	**14 08 12.9**	**+2.0**
	comp=Z,6.1nm,0.7s,mb4.7,baz=340,slow=10,SNR=9.7						
CTA	**Charters Tower**	**35.48**	**147**	↓*i* P	**P**	**14 08 12.8**	**+1.9**
CTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTAO	**Charters Tower**	**35.48**	**147**	*e*P	**P**	**14 08 12.0**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
CTAO	**Charters Tower**	**35.48**	**147**	*e*P	**P**	**14 08 12.0**	**+1.1**
	comp=Z,14nm,1.0s,mb4.8						
GTA	**Gaotai**	**37.92**	**325**	*e*P	**P**	**14 08 30.8**	**-0.7**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb4.2						
FORT	**Forrest**	**40.43**	**178**	*e*P	**P**	**14 08 52.5**	**-0.1**
	comp=Z,17nm,0.6s,mb5.0						
ULN	**Ulaanbaatar**	**41.32**	**340**	*d* iP	**P**	**14 09 00.7**	**+1.0**
ULN	**Ulaanbaatar**	**41.32**	**340**	*e*P	**P**	**14 09 00.2**	**+0.5**
	comp=Z,7.4nm,0.8s,mb4.4						
SONM	**Songino Array**	**41.52**	**339**	P	**P**	**14 09 02.1**	**+0.7**
	comp=Z,3.2nm,0.7s,mb4.1,baz=156,slow=9.5,SNR=24						
SONM				PcP	PcP	14 10 59.0	+0.7
	comp=Z,0.3nm,0.6s,baz=143,slow=1.6,SNR=4.0						
KLBR	**Kellerberrin**	**42.09**	**191**	*e*P	**P**	**14 09 06.1**	**-0.1**
	comp=Z,22nm,0.9s,mb4.8						
MUN	**Mundaring**	**42.79**	**193**	*e*P	**P**	**14 09 12.0**	**+0.2**
NWAO	**Narrogin (SRO)**	**43.49**	**192**	P	**P**	**14 09 18.1**	**+0.6**
	comp=Z,34nm,0.8s,mb5.1,baz=22,slow=6.9,SNR=15						
STKA	**Stephens Creek**	**43.91**	**162**	*e*P	**P**	**14 09 21.4**	**+0.5**
	comp=Z,3.7nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**43.91**	**162**	P	**P**	**14 09 21.1**	**+0.3**
	comp=Z,4.9nm,0.7s,mb4.3,baz=322,slow=6.6,SNR=12						
ZAK	**Zakamensk**	**44.77**	**339**	*e*P	**P**	**14 09 27.8**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
TLY	**Talaya**	**45.73**	**340**	*e*P	**P**	**14 09 36.0**	**+0.8**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
TLY	**Talaya**	**45.73**	**340**	*e*P	**P**	**14 09 36.0**	**+0.8**
	comp=Z,9.7nm,0.8s,mb4.8						
BOD	**Bodaibo**	**48.82**	**351**	*e*P	**P**	**14 10 00.1**	**+1.0**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
PETK	**Petropavlovsk-**	**49.85**	**24**	P	**P**	**14 10 09.7**	**+2.6**
	comp=Z,4.1nm,0.6s,mb4.6,baz=128,slow=0.5,SNR=7.2						
YAK	**Yakutsk**	**52.12**	**2**	*e*P	**P**	**14 10 24.1**	**+0.2**
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
MK31	**Makanchi Array**	**52.57**	**323**	*e*P	**P**	**14 10 26.6**	**-1.0**
MKAR	**Makanchi Array**	**52.57**	**323**	P	**P**	**14 10 26.6**	**-1.0**
	comp=Z,5.0nm,0.8s,mb4.5,baz=122,slow=8.5,SNR=49						
MKAR				PcP	PcP	14 11 36.5	-0.9
	comp=Z,1.4nm,0.7s,baz=118,slow=4.5,SNR=2.5						
ZAA0	**Zalesovo Array**	**55.15**	**331**	*e*P	**P**	**14 10 44.9**	**-1.4**
ZALV	**Zalesovo Beam**	**55.15**	**331**	P	**P**	**14 10 44.9**	**-1.4**
	comp=Z,1.6nm,0.7s,mb4.2,baz=119,slow=6.6,SNR=8.8						
ZALV	**Zalesovo Beam**	**55.15**	**331**	P	**P**	**14 10 44.9**	**-1.4**
UCH	**Uchtor**	**55.71**	**315**	*e*P	**P**	**14 10 50.3**	**-0.3**
	comp=Z,4.3nm,0.9s,mb4.5						
SEY	**Seymchan**	**56.12**	**14**	*i* P	**P**	**14 10 55.0**	**+1.9**
EKS2	**Erkin-Say**	**56.37**	**315**	*e*P	**P**	**14 10 54.0**	**-1.3**
	comp=Z,2.5nm,0.8s,mb4.3						
KURK	**Kurchatov**	**56.60**	**326**	*e*P	**P**	**14 10 55.7**	**-1.1**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
KURK	**Kurchatov**	**56.60**	**326**	*e*P	**P**	**14 10 55.7**	**-1.1**
	comp=Z,8.6nm,1.0s,mb4.7						
TIXI	**Tiksi**	**61.75**	**1**	↑*i* P	**P**	**14 11 32.5**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
TIXI	**Tiksi**	**61.75**	**1**	*e*P	**P**	**14 11 32.7**	**+0.7**
	comp=Z,3.9nm,0.7s,mb4.7						
ARU	**Arti**	**69.76**	**327**	*c i*P	**P**	**14 12 22.6**	**-1.3**
ARU				*e*S	S	14 21 30.7	+0.5
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
ARU	**Arti**	**69.76**	**327**	*e*P	**P**	**14 12 22.4**	**-1.6**
	comp=Z,4.2nm,0.6s,mb4.5						
JOF	**Joensuu**	**83.71**	**333**	*e*p	**P**	**14 13 42.2**	**-0.3**
	comp=Z,2.6nm,0.5s,mb4.6						
ARCES	**ARCESS Array B**	**84.70**	**340**	P	**P**	**14 13 47.7**	**+0.3**
	comp=Z,5.2nm,0.7s,mb4.8,baz=90,slow=6.1,SNR=17						
KAF	**Kangasniemi**	**86.15**	**332**	*e*p	**P**	**14 13 53.7**	**-1.1**
	comp=Z,3.6nm,0.6s,mb4.8						
KAF	**Kangasniemi**	**86.15**	**332**	*e*P	**P**	**14 13 53.7**	**-1.1**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.8						
AKASG	**Malin Array Be**	**87.11**	**321**	P	**P**	**14 13 59.0**	**-0.7**
	comp=Z,0.9nm,0.5s,mb4.3,baz=71,slow=3.5,SNR=5.7						
NB2	**NORSAR Subarra**	**93.28**	**334**	P	**P**	**14 14 27.0**	**-1.3**
	comp=Z,1.1nm,0.7s,mb4.4,baz=66,slow=4.6						
NOA	**NORSAR Array B**	**93.28**	**334**	P	**P**	**14 14 26.9**	**-1.4**
	comp=Z,1.9nm,0.8s,mb4.6,baz=64,slow=4.6,SNR=5.2						
YKA	**Yellowknife Ar**	**93.98**	**24**	P	**P**	**14 14 33.4**	**+1.9**
	comp=Z,1.3nm,0.8s,mb4.4,baz=300,slow=4.6,SNR=5.0						
YKA	**Yellowknife Ar**	**93.98**	**24**	*i* P	**P**	**14 14 35.5**	**+4.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**93.98**	**24**	P	**P**	**14 14 33.4**	**+1.9**
GERES	**GERESS Array B**	**97.23**	**322**	P	**P**	**14 14 46.0**	**-0.7**
	comp=Z,0.4nm,0.5s,mb4.1,baz=71,slow=7.4,SNR=3.8						
TXAR	**Lajitas Array**	**117.81**	**49**	PKP	PKPdf	14 20 02.5	+1.7
	comp=Z,0.2nm,0.5s,baz=179,slow=0.3,SNR=4.4						
TORD	**Torodi Ar. Bea**	**120.75**	**292**	PKP	PKPdf	14 20 06.2	-0.6
	comp=Z,0.5nm,0.8s,baz=27,slow=2.6,SNR=2.9						
PLCA	**Paso Flores**	**145.69**	**157**	PKPbc	PKPbc	14 20 54.3	+1.4
	comp=Z,4.2nm,0.8s,baz=234,slow=0.7,SNR=10						

*ISCJB **29** 14:04:26.8±0.6,4598N±002×1626E±005,h5km±4km,*
Error ellipse: s-maj=5.4km s-min=4.0km az=160.7
*VIE **29** 14:04:26.7±0.3,4594N×1626E,h8km±2km,mb2.0/4,*
ML2.3/4, Error ellipse: s-maj=1.7km s-min=1.4km
az=113.0 25 km NE of Zagreb
*CSEM **29** 14:04:27.8±0.1,4592N×1615E,h12km,ML2.7/5, Error*
ellipse: s-maj=2.5km s-min=1.7km az=66.0
*PRU **29** 14:04:31.4,4617N×1611E,h0km*
ISC 29 14:04:27.7±0.6,4595N±003×1627E±005,h6km±4km,n21,
σ0ᵗ89/39,8C-6D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISC	**Sisak**	**0.48**	**171**	*e*Pg	**Pg**	**14 04 37.5**	**+0.5**
SISC				Sg	**Sg**	**14 04 44.3**	**+1.0**
SISC	**Sisak**	**0.48**	**171**	*e*Pg	**Pg**	**14 04 37.4**	**+0.4**
SISC				Sg	**Sg**	**14 04 44.3**	**+1.0**
KOGS	**Kog**	**0.50**	**359**	*i* Pg	**Pg**	**14 04 38.5**	**+1.2**
CRES	**Cresnjev**	**0.58**	**258**	*i* Pg	**Pg**	**14 04 37.6**	**-1.2**
PDKS	**Podkum**	**0.89**	**278**	*i* Pg	**Pg**	**14 04 43.5**	**-1.3**
PERS	**Pernice**	**1.05**	**311**	*i* Pg	**Pg**	**14 04 47.2**	**-0.6**
SOKA	**Soboth**	**1.12**	**311**	↑*i* Pg	**Pg**	**14 04 48.4**	**-0.8**
SOKA				↑*i* Sg	**Sg**	**14 05 03.4**	**-0.4**
	11nm,0.4s						
OBKA	**Obir**	**1.32**	**296**	↓*i* Pg	**Pg**	**14 04 52.1**	**-0.8**
OBKA				↑*i* Sg	**Sg**	**14 05 10.0**	**0.0**
	21nm,0.3s						
RHK3	**Tenkes**	**1.39**	**92**	↓*e*Pn	**Pn**	**14 04 53.4**	**-0.1**
RHK3				*e*Sn	**Sn**	**14 05 11.6**	**-0.4**
ARSA	**Arzberg**	**1.40**	**339**	↑*i* Pg	**Pg**	**14 04 53.6**	**-0.9**
ARSA				↑*i* Sg	**Sg**	**14 05 13.7**	**+1.1**
	7.8nm,0.2s						
PKS9	**Tamasi**	**1.53**	**65**	↓*e*Pn	**Pn**	**14 05 01.6**	**+6.1**
PKS9				*e*Sn	**Sn**	**14 05 22.5**	**+6.8**
VOY	**Vojsko**	**1.66**	**274**	*e*Pn	**Pn**	**14 04 58.7**	**+1.5**
VOY				*e*Sn	**Sn**	**14 05 20.0**	**+1.3**
PKSM	**Moragy**	**1.67**	**80**	*e*Pn	**Pn**	**14 05 01.5**	**+4.1**
PKSM				*e*Sn	**Sn**	**14 05 25.0**	**+5.9**
NVLJ	**Novalja**	**1.70**	**216**	*e*Pn	**Pn**	**14 04 57.8**	**0.0**
NVLJ				Sn	**Sn**	**14 05 19.9**	**+0.1**
NVLJ	**Novalja**	**1.70**	**216**	*e*Pn	**Pn**	**14 04 57.7**	**-0.1**
NVLJ				Sn	**Sn**	**14 05 19.9**	**+0.1**
CONA	**Conrad Observa**	**2.00**	**352**	↑*i* Pn	**Pn**	**14 05 01.1**	**-0.8**
CONA				↓*i* Sg	**Sg**	**14 05 33.3**	**+1.5**
	3.0nm,0.3s						
MOA	**Molln**	**2.34**	**325**	↓*i* Pn	**Pn**	**14 05 05.9**	**-0.7**
MOA				↓*i* Pg	**Pg**	**14 05 11.6**	**-0.9**
MOA				↑*i* Sn	**Sn**	**14 05 35.9**	**+0.2**
MOA				↑*i* Sg	**Sg**	**14 05 44.3**	**+1.4**
	4.2nm,0.5s						
VYHS	**Vyhne**	**3.09**	**34**	*e*PN	**Pn**	**14 05 16.9**	**+0.1**
VYHS				*e*SN	**Sn**	**14 05 53.2**	**-0.8**
VYHS	**Vyhne**	**3.09**	**34**	*e*Pn	**Pn**	**14 05 16.9**	**+0.1**
VYHS				*e*Sn	**Sn**	**14 05 53.2**	**-0.8**
KHC	**Kasperske Hory**	**3.67**	**331**	*e*PN	**Pn**	**14 05 25.9**	**+1.1**
KHC				*e*SN	**Sn**	**14 06 07.8**	**-0.5**
PRU	**Pruhonice**	**4.20**	**345**	*e*PN	**Pn**	**14 05 31.4**	**-0.8**

*IDC **29** 14:09:11.4±2.1,5095×1568E,h0km,mb3.9/7,mb1 4.0/7,*
mb1mx3.8/16,mbtmp3.9/7, Error ellipse: s-maj=69.0km
s-min=22.4km az=116.0
*ISCJB **29** 14:09:15.1±2.2,5058×0215E±04,h33km,mb3.9/8,*
Error ellipse: s-maj=65.1km s-min=16.9km az=26.0
*NEIC **29** 14:09:16.7±1.3,5135×1526E,h35km,mb4.3/2, Error*
ellipse: s-maj=43.8km s-min=13.3km az=120.0
ISC 29 14:09:16.9±2.2,51S×026×1526E±04,h35km,n13,σ0ᵗ77/11,
mb3.9/8,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**21.30**	**248**	*e*P	**P**	**14 14 00.6**	**-0.1**
	9.8nm,0.5s,mb4.4						
WB2	**Warramunga Arr**	**23.09**	**229**	*e*P	**P**	**14 14 19.8**	**0.0**
WB2	**Warramunga Arr**	**23.09**	**229**	*e*P	**P**	**14 14 19.3**	**-0.5**
WRA	**Warramunga Arr**	**23.10**	**229**	P	**P**	**14 14 19.8**	**-0.1**
	0.7nm,0.4s,mb3.4,baz=52,slow=9.5,SNR=11						
ASAR	**Alice Springs**	**25.79**	**223**	P	**P**	**14 14 45.5**	**+0.7**
	0.5nm,0.5s,mb3.3,baz=59,slow=8.7,SNR=11						
FITZ	**Fitzroy Crossi**	**29.35**	**242**	*e*P	**P**	**14 15 16.3**	**-0.4**
	1.7nm,0.4s,mb4.1						
FITZ	**Fitzroy Crossi**	**29.35**	**242**	P	**P**	**14 15 16.1**	**-0.6**
	1.7nm,0.8s,mb3.8,baz=68,slow=11,SNR=6.9						
CMAR	**Chiang Mai Arr**	**57.84**	**295**	P	**P**	**14 19 05.5**	**0.0**
	1.1nm,0.5s,mb4.2,baz=117,slow=5.4,SNR=7.7						
PETK	**Petropavlovsk-**	**58.16**	**4**	P	**P**	**14 19 06.4**	**-0.7**
	5.6nm,1.0s,mb4.5,baz=157,slow=7.3,SNR=4.2						
MKAR	**Makanchi Array**	**80.43**	**319**	P	**P**	**14 21 27.1**	**+2.0**
	0.2nm,0.2s,mb3.6,baz=99,slow=7.4,SNR=2.9						
ZALV	**Zalesovo Beam**	**81.30**	**326**	P	**P**	**14 21 28.9**	**-0.6**
	0.4nm,0.3s,mb3.8,baz=82,slow=4.9,SNR=3.4						
GERES	**GERESS Array B**	**124.22**	**328**	PKP	PKPdf	14 28 12.7	+0.6
	0.3nm,0.5s,baz=106,slow=4.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**150.22**	**288**	PKPbc	PKPbc	14 29 04.7	-0.7
	0.7nm,0.3s,baz=90,slow=2.1,SNR=12						

NEIC 29 14:28:04.0,3779S×17682E,h1km,ML4.1(WEL),After
WEL.,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.23**	**210**	P	Pg	14 28 09.5	+1.1
MARZ				S	Sg	14 28 12.3	+1.0
EDRZ	**Edgecumbe**	**0.32**	**192**	P	Pg	14 28 11.3	+1.1
WIZ	**White Island**	**0.39**	**48**	P	Pg	14 28 12.6	+1.1
WIZ				S	Sg	14 28 17.5	+0.9
TGRZ	**Tauranga**	**0.45**	**277**	P	Pg	14 28 13.6	+1.0
TAZ	**Tarawera**	**0.51**	**209**	P	Pg	14 28 15.3	+1.6
URZ	**Urewera**	**0.52**	**154**	P	Pg	14 28 14.7	+0.7
KUZ	**Kuaotunu**	**1.36**	**320**	P	Pg	14 28 28.7	-1.4
MKAZ	**Moumakai**	**1.48**	**297**	P	Pn	14 28 32.0	+0.3

*MOS **29** 14:43:26.1±1.4,5569N×11015E,h14km,mb4.2/1, Error*
ellipse: s-maj=25.0km s-min=12.7km az=67.7
BYKL 29 14:43:25.3±0.4,5572N×11017E,4C,Lake Baykal
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMO	**Kumora**	**0.60**	**74**	↑*i* Pg	Pg	14 43 36.0	-0.9
KMO				*i* Sg	Sg	14 43 43.9	-0.8
KMO				Pmax			
	133nm,0.1s						
KMO				Smax			
	317nm,1.3s						
YOA	**Uoyan**	**0.97**	**64**	*e*PG	Pg	14 43 43.1	-0.7
YOA				*i*		14 43 56.9	
YOA				pmax	pmax		
	comp=Z,115nm,0.2s						
YOA				smax			
	comp=N,526nm,0.4s						
YOA	**Uoyan**	**0.97**	**64**	*e*Pg	Pg	14 43 43.1	-0.7
YOA				*e*Sg	Sg	14 43 57.1	+0.8
YOA				Pmax			
	comp=N,95nm,0.2s						
YOA				Smax			
	comp=N,538nm,0.5s						
YLYR	**Ulyunkhan**	**1.02**	**146**	*e*PG	Pg	14 43 43.2	-1.6
YLYR				*e*		14 43 55.7	
YLYR				pmax	pmax		
	comp=Z,94nm,0.2s						
YLYR				smax			
	comp=N,241nm,0.2s						
YLYR	**Ulyunkhan**	**1.02**	**146**	↑*i* Pg	Pg	14 43 43.2	-1.6
YLYR				*e*Sg	Sg	14 43 56.3	-1.7
YLYR				Pmax			
	comp=N,86nm,0.5s						
YLYR				Smax			
	comp=N,265nm,0.4s						
UKT	**Uakit**	**1.98**	**95**	*e*PN	Pn	14 44 00.5	+0.6
UKT				*e*		14 44 26.1	
UKT				pmax	pmax		
	comp=Z,55nm,0.3s						
UKT				smax			
	comp=N,177nm,0.3s						
UKT	**Uakit**	**1.98**	**95**	*e*Pg	Pg	14 44 00.6	-2.5
UKT				*e*		14 44 02.5	
UKT				*i* Sg	Sg	14 44 26.3	-2.4
UKT				max			
	comp=N,55nm,0.6s						
UKT				Smax			
	comp=N,184nm,0.6s						
SYVR	**Suvo**	**2.07**	**183**	*e*PN	Pn	14 44 02.3	+1.1
SYVR				*e*		14 44 30.5	
SYVR				pmax	pmax		
	comp=Z,60nm,0.5s						
SYVR				smax			
	comp=E,321nm,0.6s						
SYVR	**Suvo**	**2.07**	**183**	*e*Pg	Pg	14 44 02.3	-2.6
SYVR				*e*Sg	Sg	14 44 29.7	-2.0
SYVR				Pmax			
	comp=E,60nm,0.5s						
SYVR				Smax			
	comp=E,312nm,0.7s						
OGRR	**Ongureny**	**2.56**	**217**	*e*PN	Pn	14 44 08.9	+0.9
OGRR				*e*		14 44 12.7	
OGRR				*e*		14 44 44.7	
OGRR				pmax	pmax		
	comp=Z,21nm,0.6s						
OGRR				smax			
	comp=E,244nm,0.4s						
OGRR	**Ongureny**	**2.56**	**217**	*e*Pn	Pn	14 44 08.9	+0.9
OGRR				*e*		14 44 09.4	
OGRR				*e*Pg	Pg	14 44 11.4	-3.0
OGRR				*e*		14 44 41.2	
OGRR				*i* Sg	Sg	14 44 44.9	-2.6
OGRR				Pmax			
	comp=E,14nm,0.2s						
OGRR				Smax			
	comp=E,244nm,0.3s						
MXMB	**Maximikha**	**2.60**	**199**	*e*Pn	Pn	14 44 07.5	-1.0
MXMB				*e*		14 44 12.4	
MXMB				*e*Sg	Sg	14 44 47.6	-1.1
MXMB				max			
	comp=E,28nm,0.6s						
MXMB				Smax			
	comp=E,233nm,0.3s						
BOD	**Bodaibo**	**2.98**	**43**	*e*Pn	Pn	14 44 14.5	+0.8
BOD				*e*Pg	Pg	14 44 18.1	-4.3
BOD				*e*		14 44 51.0	
BOD				*e*Sg	Sg	14 44 57.0	-3.9
BOD				Pmax			
	comp=E,34nm,4.0s						
BOD				Smax			
	comp=E,49nm,0.7s						
NLYR	**Nelyaty**	**3.19**	**74**	*e*Pn	Pn	14 44 17.8	+1.1
NLYR				*e*Pg	Pg	14 44 22.0	-4.5
NLYR				*e*Sg	Sg	14 45 04.2	-3.6
NLYR				Pmax			
	comp=E,30nm,0.6s						
NLYR				Smax			
	comp=E,83nm,1.0s						
TRG	**Tyrgan**	**3.72**	**219**	*e*Pn	Pn	14 44 25.0	+1.1
TRG				*e*Pg

ORL	**Orlik**	**6.87 247**		*e*PN		Pn	14 45 09.0	+1.8
ORL				*e*			14 45 30.5	
ORL				*e*			14 46 58.4	
ORL					pmax	pmax		
	comp=Z,3.0nm,0.6s							
ORL					smax			
	comp=N,26nm,0.9s							
ORL	**Orlik**	**6.87 247**	⇑	*i*Pn		Pn	14 45 08.9	+1.7
ORL				*e*			14 46 25.6	
ORL				*e*Sg		Sg	14 46 58.8	-7.0
ORL					Smax			
	comp=N,43nm,1.2s							
IENR	**Iengra**	**8.26 80**		*e*Sg		Sg	14 47 41.2	-9.1

*IDC **29** 14:52:24.2±4.1,343S×10024E,h0km,mb3.6/5,mb1 3.7/5, mb1mx3.5/19,mbtmp3.6/5,Error ellipse: s-maj=175.8km s-min=21.9km az=55.0*

*ISCJB **29** 14:52:26.4±3.9,355S±06×1000E±0.9,h33km,mb3.6/6, Error ellipse: s-maj=156.9km s-min=17.4km az=144.7*

*NEIC **29** 14:52:28.9±3.4,351S×10008E,h35km,mb3.6/1,Error ellipse: s-maj=141.0km s-min=15.6km az=54.0*

ISC 29 14:52:28.8±3.8,36S±06×1000E±09,h35km,n8,σ0ŝ72/7, mb3.6/6,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.20 119**		P		**P**	**14 59 36.1**	**-0.9**
	0.2nm,0.4s,mb3.3,baz=307,slow=8.5,SNR=3.7							
WRAB	**Tennant Creek**	**37.21 119**		*e*P		**P**	**14 59 38.3**	**+1.3**
	0.6nm,0.6s,mb3.6							
ASAR	**Alice Springs**	**38.33 125**		P		**P**	**14 59 46.2**	**-0.3**
	0.4nm,0.5s,mb3.4,baz=302,slow=7.5,SNR=5.0							
SONM	**Songino Array**	**51.47 5**		P		**P**	**15 01 30.6**	**0.0**
	0.7nm,0.6s,mb3.8,baz=185,slow=9.9,SNR=6.7							
MKAR	**Makanchi Array**	**52.52 345**		P		**P**	**15 01 39.0**	**+0.6**
	0.7nm,0.6s,mb3.8,baz=143,slow=7.9,SNR=8.0							
ZALV	**Zalesovo Beam**	**58.68 350**		P		**P**	**15 02 22.0**	**-0.6**
	0.3nm,0.3s,mb3.8,baz=160,slow=9.0,SNR=2.3							
ZALV	**Zalesovo Beam**	**58.68 350**		P		**P**	**15 02 22.0**	**-0.6**
TXAR	**Lajitas Array**	**145.89 39**		PKPbc		PKPbc	15 12 05.8	+0.6
	0.5nm,0.5s,baz=206,slow=0.4,SNR=8.8							

*ISCJB **29** 15:20:02.3±0.6,691S±007×15575E±009,h46km, mb4.5/19,MS3.5/3, Error ellipse: s-maj=12.6km s-min=10.0km az=12.6*

*IDC **29** 15:20:02.7±0.9,703S×15599E,h45km±4km,mb4.3/12, mb1 4.4/13,mb1mx4.3/18,mbtmp4.3/13,MS3.6/4, Ms1 3.6/4,ms1mx3.0/33,Error ellipse: s-maj=28.0km s-min=15.5km az=103.0*

*BJI **29** 15:20:06.8,700S×15580E,h80km,mB5.2,mb4.3*

*NEIC **29** 15:20:06.8±0.9,700S×15583E,h80km±9km,mb4.6/11, Error ellipse: s-maj=9.3km s-min=7.4km az=146.0*

*DJA **29** 15:20:14,702S×15582E,h132km,mb4.8/8*

ISC 29 15:20:04.3±0.6,693S±007×15574E±009,h48km, h48km±1.6km:pP-P,n47,σ0ŝ90/36,mb4.5/19,MS3.5/3, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**4.84 121**		P		**Pn**	**15 21 15.8**	**+1.1**
	11nm,0.3s,baz=227,slow=2.0,SNR=12							
PMG	**Port Moresby**	**8.85 253**		*e*Pn		**Pn**	**15 22 12.3**	**+2.7**
	128nm,0.6s							
CTA	**Charters Tower**	**15.99 214**		*e*P		**Pn**	**15 23 47.9**	**+1.8**
	11nm,0.8s							
CTA	**Charters Tower**	**15.99 214**		P		**Pn**	**15 23 47.2**	**+1.1**
	0.7nm,0.3s,baz=31,slow=14,SNR=23							
CTA					LR	LR	15 29 03.0	
	comp=Z,283nm,21.4s,baz=50,slow=34							
CTAO	**Charters Tower**	**15.99 214**		*e*Pn		**Pn**	**15 23 47.7**	**+1.6**
	16nm,0.8s							
GUMO	**Guam**	**23.07 332**		LR		LR	15 33 30.9	
	comp=Z,55nm,19.0s,MS3.0,baz=98,slow=35							
KAKA	**Kakadu**	**23.66 254**		*e*P		**P**	**15 25 11.4**	**-0.2**
	21nm,0.6s,mb4.7							
WRAB	**Tennant Creek**	**24.45 236**		*e*P		**P**	**15 25 18.8**	**0.0**
	14nm,0.8s,mb4.4							
WB2	**Warramunga Arr**	**24.45 236**		*e*P		**P**	**15 25 12.4**	**-6.5**
WB2	**Warramunga Arr**	**24.45 236**		*e*P		**P**	**15 25 18.8**	**-0.1**
WRA	**Warramunga Arr**	**24.46 236**		P		**P**	**15 25 19.1**	**+0.2**
	7.1nm,0.7s,mb4.2,baz=62,slow=9.4,SNR=41							
WRA					PcP	PcP	15 28 56.5	-0.4
	3.0nm,1.0s,baz=56,slow=1.9,SNR=5.8							
WRA					pPcP		15 29 10.0	
	0.7nm,0.3s,baz=65,slow=2.8,SNR=5.0							
WRA					LR	LR	15 34 47.1	
	comp=Z,156nm,18.3s,MS3.5,baz=60,slow=36							
ASAR	**Alice Springs**	**26.77 229**		P		**P**	**15 25 39.2**	**-0.6**
	2.2nm,0.4s,mb4.1,baz=60,slow=9.2,SNR=61							
ASAR					PcP	PcP	15 29 01.8	-0.4
	1.2nm,0.5s,baz=67,slow=2.7,SNR=6.1							
ASAR					pPcP		15 29 15.7	
	0.8nm,0.4s,baz=59,slow=1.9,SNR=4.5							
STKA	**Stephens Creek**	**28.11 206**		*e*P		**P**	**15 25 50.9**	**-0.8**
	2.6nm,0.6s,mb4.0							
STKA				*e*		pP	15 26 05.5	+1.2
STKA	**Stephens Creek**	**28.11 206**		P		**P**	**15 25 51.0**	**-0.7**
	3.7nm,0.6s,mb4.2,baz=33,slow=12,SNR=7.2							
STKA					LR	LR	15 36 55.2	
	comp=Z,225nm,18.9s,MS3.8,baz=282,slow=36							
STKA	**Stephens Creek**	**28.11 206**		*e*P		**P**	**15 25 51.0**	**-0.7**
	5.8nm,0.8s,mb4.3							
FITZ	**Fitzroy Crossi**	**31.36 246**		*e*P		**P**	**15 26 20.4**	**-0.3**
	25nm,0.6s,mb5.2							
FITZ				*e*		pP	15 26 32.8	-0.5
FITZ	**Fitzroy Crossi**	**31.36 246**		P		**P**	**15 26 20.4**	**-0.2**
	15nm,0.6s,mb5.0,baz=86,slow=9.3,SNR=61							
FORT	**Forrest**	**35.15 224**		*e*P		**P**	**15 26 52.8**	**-0.7**
	26nm,0.6s,mb5.3							
KAPI	**Kappang**	**35.84 271**		P		**P**	**15 26 58.9**	**-0.9**
	7.7nm,0.9s,mb4.7,baz=196,slow=5.6,SNR=3.6							
KLBR	**Kellerberrin**	**43.09 230**		*e*P		**P**	**15 27 59.0**	**-0.9**
	9.5nm,0.7s,mb4.6							
KLBR				*e*		pP	15 28 11.4	-1.5
KSM	**Kuching**	**46.10 279**		*e*P		**P**	**15 28 24.3**	**+0.1**
MJAR	**Matsushiro Arr**	**46.27 340**		P		**P**	**15 28 24.2**	**-0.9**
	1.0nm,0.8s,mb3.8,baz=163,slow=7.8,SNR=4.0							
MJAR	**Matsushiro Arr**	**46.27 340**		P		**P**	**15 28 24.2**	**-0.9**
KSRS	**Korea Array**	**51.23 332**		P		**P**	**15 29 04.1**	**+0.9**
	1.2nm,0.9s,mb3.8,baz=159,slow=11,SNR=4.6							
KSRS					pP	pP	15 29 15.2	-1.2
	2.0nm,0.6s,baz=146,slow=7.6,SNR=5.9							
NANT	**Nan**	**59.97 296**		P		**P**	**15 30 07.0**	**+0.7**
	121nm,1.0s							
CMAR	**Chiang Mai Arr**	**61.43 295**		P		**P**	**15 30 17.2**	**+1.0**
	4.7nm,0.7s,mb4.7,baz=121,slow=5.3,SNR=30							
CMAR					pP	pP	15 30 29.8	0.0
	12nm,0.9s,baz=115,slow=5.0,SNR=27							
CHTO	**Chiang Mai**	**61.54 296**		*e*P		**P**	**15 30 17.5**	**+0.5**
	13nm,1.1s,mb5.0							
CHTO				*e*		pP	15 30 29.8	-0.8
GTA	**Gaotai**	**69.20 317**		*e*P		**P**	**15 31 07.0**	**+0.9**
GTA					AMB	AMB		
	comp=Z,3.0nm,0.6s,mb4.4							
ULN	**Ulaanbaatar**	**69.35 327**		*e*P		**P**	**15 31 07.5**	**+0.6**
	comp=Z,8.9nm,1.1s,mb4.6							
SONM	**Songino Array**	**69.69 327**		P		**P**	**15 31 09.9**	**+1.0**
	comp=Z,6.7nm,0.9s,mb4.6,baz=142,slow=7.3,SNR=31							
SONM					pP	pP	15 31 22.5	-0.3
	comp=Z,1.8nm,0.5s,baz=143,slow=5.0,SNR=7.3							
LSA	**Lhasa**	**71.85 304**		P		**P**	**15 31 21.5**	**-1.0**
MK31	**Makanchi Array**	**83.85 319**		*e*P		**P**	**15 32 28.6**	**-0.2**
MK31				*e*		pP	15 32 42.4	-0.6
MKAR	**Makanchi Array**	**83.85 319**		P		**P**	**15 32 28.9**	**0.0**
	comp=Z,7.1nm,0.7s,mb4.9,baz=103,slow=5.9,SNR=51							
MKAR					pP	pP	15 32 43.2	+0.2
	comp=Z,1.8nm,0.5s,baz=95,slow=6.1,SNR=5.5							
ZAA0	**Zalesovo Array**	**84.55 326**		*e*P		**P**	**15 32 30.5**	**-1.7**
ZALV	**Zalesovo Beam**	**84.55 326**		P		**P**	**15 32 31.3**	**-0.9**
	comp=Z,2.0nm,0.5s,mb4.5,baz=120,slow=6.2,SNR=10							
ZALV					pP	pP	15 32 46.0	-0.3
	comp=Z,1.8nm,0.4s,baz=121,slow=5.6,SNR=6.4							
MAW	**Mawson**	**84.74 203**		*e*P		**P**	**15 32 32.1**	**-0.9**
	comp=Z,3.8nm,0.8s,mb4.6							
MAW	**Mawson**	**84.74 203**		P		**P**	**15 32 31.8**	**-1.2**
	comp=Z,4.2nm,0.7s,mb4.7,baz=72,slow=7.4,SNR=14							
ARCES	**ARCESS Array B**	**109.74 343**		PKiKP		PKiKP	15 38 28.1	-1.4
	comp=Z,3.7nm,1.0s,baz=67,slow=2.3,SNR=3.6							
ARCES					pPKiKP		15 38 41.4	
	comp=Z,1.9nm,0.8s,baz=352,slow=2.5,SNR=1.3							
AKASG	**Malin Array Be**	**117.92 325**		PKP		PKPdf	15 38 44.1	-1.5
	comp=Z,0.2nm,0.3s,baz=48,slow=2.4,SNR=5.8							
AKASG					pPKP	pPKPdf	15 38 58.3	-2.1
	comp=Z,1.0nm,0.5s,baz=54,slow=2.3,SNR=3.7							
NOA	**NORSAR Array B**	**119.89 341**		PKP		PKPdf	15 38 47.3	-1.8
	comp=Z,0.8nm,0.8s,baz=44,slow=1.9,SNR=3.4							
BOSA	**Boshof**	**120.64 231**		PKP		PKPdf	15 38 50.4	-1.2
	comp=Z,3.8nm,0.7s,baz=146,slow=4.3,SNR=6.0							
CLL	**Collm**	**126.11 332**		*e*PKPdf		PKPdf	15 39 00.0	-1.3
GERES	**GERESS Array B**	**127.38 329**		PKP		PKPdf	15 39 03.6	-0.2
	comp=Z,1.4nm,0.7s,baz=85,slow=1.6,SNR=12							
GERES					pPKP	pPKPdf	15 39 17.1	-1.4
	comp=Z,1.0nm,0.6s,baz=86,slow=1.5,SNR=6.0							
TAM	**Tamanrasset**	**147.29 302**		*e*PKPbc		PKPbc	15 39 42.8	-0.6
TORD	**Torodi Ar. Bea**	**153.73 286**		PKP		PKPdf	15 39 49.2	-2.0
	comp=Z,0.6nm,0.8s,baz=71,slow=1.0,SNR=3.2							
TORD					PKPbc	PKPbc	15 39 57.5	-1.6
	comp=Z,3.0nm,0.8s,baz=89,slow=2.0,SNR=12							
TORD					PKPab	PKPab	15 40 10.8	-1.2
	comp=Z,2.0nm,0.8s,baz=82,slow=3.2,SNR=5.2							
TORD					pPKPab	pPKPab	15 40 24.1	-2.2
	comp=Z,10nm,1.2s,baz=71,slow=3.8,SNR=8.5							
TORD	**Torodi Ar. Bea**	**153.73 286**		PKP		PKPdf	15 39 49.2	-2.0
TORD					PKPbc	PKPbc	15 39 57.5	-1.6
TORD					PKPab	PKPab	15 40 10.8	-1.2
TORD					pPKPab	pPKPab	15 40 24.1	-2.2
DBIC	**Dimbokro**	**160.73 270**		PKPab		PKPab	15 40 42.1	-0.2
	comp=Z,5.6nm,0.7s,baz=75,slow=6.1,SNR=7.0							

*IDC **29** 15:33:41.3±3.0,2126S×16941E,h0km,mb3.9/5, mb1 4.2/5,mb1mx3.9/16,mbtmp4.0/5,Error ellipse: s-maj=164.0km s-min=26.1km az=159.0*

*ISCJB **29** 15:33:45.8±1.0,214S±03×169.17E±0.10,h33km,mb3.9/5, Error ellipse: s-maj=38.5km s-min=11.4km az=170.0*

*NEIC **29** 15:33:49.7±9.7,2261S×16906E,h35km,Error ellipse: s-maj=207.0km s-min=21.8km az=225.0*

ISC 29 15:33:48.0±1.2,216S±03×16917E±010,h35km,n12, σ1ŝ02/11,mb3.9/5,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.58 259**		*e*P		**Pn**	**15 34 26.7**	**-0.5**
DZM				*e*S		**Sn**	**15 34 56.5**	**-0.9**
DZM	**Mont Dzumac**	**2.58 259**		*e*Pn		**Pn**	**15 34 26.6**	**-0.6**
CTA	**Charters Tower**	**21.47 270**		P		**P**	**15 38 35.4**	**+1.8**
	3.7nm,0.9s,mb3.7,baz=92,slow=12,SNR=4.7							
ASAR	**Alice Springs**	**32.57 260**		P		**P**	**15 40 16.4**	**+0.3**
	1.6nm,0.8s,mb4.0,baz=85,slow=9.0,SNR=15							
WRA	**Warramunga Arr**	**32.57 267**		P		**P**	**15 40 16.3**	**+0.1**
	0.6nm,0.8s,mb3.5,baz=94,slow=8.2,SNR=6.7							
MCQ	**Macquarie Isla**	**33.74 191**		P		**P**	**15 40 18.5**	**-7.4**
FITZ	**Fitzroy Crossi**	**41.00 267**		P		**P**	**15 41 28.3**	**+0.4**
	2.6nm,0.8s,mb3.9,baz=111,slow=14,SNR=7.3							
VNA3	**Neumayer Olymp**	**87.40 180**		*e*		**P**	**15 46 30.8**	**-0.4**
VNA3				*e*			15 46 34.5	
VNA3				*e*			15 46 37.2	
VNA2	**Neumayer--Watz**	**87.69 181**		*e*		**P**	**15 46 33.1**	**+0.5**
	baz=189,slow=4.1							
VNA2				*e*			15 46 36.5	
VNA2				*e*			15 46 39.0	
NVAR	**Mina Array Bea**	**90.41 49**		P		**P**	**15 46 43.3**	**-2.6**
	1.0nm,0.7s,mb4.2,baz=229,slow=8.1,SNR=5.5							
EKA	**Eskdalemuir Ar**	**145.84 352**		PKPbc		PKPbc	15 53 20.2	-2.9
	2.7nm,0.7s,baz=345,slow=2.2,SNR=9.5							
GERES	**GERESS Array B**	**146.52 330**		PKPbc		PKPbc	15 53 23.7	-1.8
	0.5nm,0.5s,baz=60,slow=3.2,SNR=6.4							

*LDG **29** 15:36:42.1±0.3,2141S×16907E,h10km,Mb5.7/3,Ms5.3/9, Error ellipse: s-maj=37.8km s-min=5.1km az=158.0*

*IDC **29** 15:36:43.0±0.5,2121S×16927E,h0km,mb5.1/22, mb1 5.2/25,mb1mx5.2/26,mbtmp5.2/25,ML4.8/2,MS5.2/22, Ms1 5.2/22,ms1mx5.0/30,Error ellipse: s-maj=15.9km s-min=13.3km az=131.0*

*ISCJB **29** 15:36:43.2±0.1,2121S±004×16927E±003,h10km, mb5.4/82,MS5.3/98,Error ellipse: s-maj=5.3km s-min=3.4km az=162.3*

*BJI **29** 15:36:43.2,2095S×16946E,h8km,mB5.7,mb5.3,Ms5.5, Ms2.2*

*GCMT **29** 15:36:44.5±0.1,2118S×16928E,h15km,MW5.6/111, Moment Tensor Solution. s88,c155; s111,c234; Duration: 1ŝ6 Moment tensor: Scale 10^17^Nm; Mrr-1.22±.04; Mθθ-1.30±.04; Mϕϕ2.52±.04; Mrθ1.43±.14; Mθϕ2.10±.03; Mrϕ0.95±.13; Best double couple: Ms3.37300×10^17^ NP1:ϕs341.00000°,δ53.00000°, λ-165.00000°. NP2:ϕs242.00000°,δ78.00000°, λ-38.00000°. Principal axes: T 3.8730, Plg16.0000°, Azm296.0000°; N -0.9990, Plg51.0000°, Azm47.0000°; P -2.8730, Plg35.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **29** 15:36:44.5±0.2,2116S×16924E,h10km,mb5.5/40, MS5.4/57,MW5.7 Error ellipse: s-maj=6.9km s-min=5.6km az=144.0,Moment Tensor Solution. s29 Moment tensor: Scale 10^17^Nm; Mrr0.58; Mθθ-4.07; Mϕϕ3.49; Mrθ0.69; Mθϕ2.35; Mrϕ1.02; Best double couple: Ms4.60000×10^17^ NP1:ϕ62.00000°,δ81.00000°,λ15.00000°. NP2: ϕs330.00000°,δ75.00000°,λ171.00000°. Principal axes: T 4.5100, Plg16.0000°, Azm286.0000°; N 0.2600, Plg72.0000°, Azm91.0000°; P -4.7700, Plg4.0000°, Azm195.0000°;*

*MOS **29** 15:36:47.1±1.2,2120S×169.19E,h33km,mb5.8/35, MS5.4/30 Error ellipse: s-maj=8.6km s-min=7.9km az=121.2*

*SZGRF **29** 15:36:47.2,2128S×16999E,h33km,mb5.3,Southeast of Loyalty Islands*

*DJA **29** 15:36:50,2139S×169.11E,h43km,Mw5.8/16*

ISC 29 15:36:44.7±0.1,2120S±003×16931E±003,h10km, (h32km±1.2km:pP-P),n728,σ0ŝ84/390,mb5.4/82,MS5.3/98, 121C-127D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.81 252**		*e*P		**Pn**	**15 37 28.1**	**-1.6**
DZM				*e*S		**Sn**	**15 38 00.6**	**-3.0**
DZM	**Mont Dzumac**	**2.81 252**		*e*Pn		**Pn**	**15 37 27.9**	**-1.8**
DZM				*e*Sn		**Sn**	**15 38 01.5**	**-2.0**
RAO	**Raoul Island**	**14.05 127**		LR		LR	15 44 15.5	
	comp=Z,19μm,21.3s,baz=287,slow=32							
HNR	**Honiara**	**14.77 321**		Pn		**Pn**	**15 40 14.2**	**+0.3**
	7.8nm,0.3s,baz=225,slow=5.3,SNR=19							
HNR					LR	LR	15 45 11.9	
	comp=Z,10μm,19.2s,baz=136,slow=34							
HNR	**Honiara**	**14.77 321**	⇑	*e*P		**Pn**	**15 40 14.7**	**+0.9**
HNR					pmax	pmax		
	comp=Z,1μm,1.3s							
HNR	**Honiara**	**14.77 321**	⇑	*e*Pn		**Pn**	**15 40 14.7**	**+0.8**
	comp=Z,1μm,1.4s							
FUNA	**Funafuti**	**15.80 39**		*e*Pn		**Pn**	**15 40 23.6**	**-3.8**
	comp=Z,1μm,1.7s							
URZ	**Urewera**	**18.29 160**		P		**Pn**	**15 40 59.4**	**+0.9**
	comp=Z,1.8nm,0.3s,baz=344,slow=6.3,SNR=50							
URZ					LR	LR	15 46 55.3	
	comp=Z,4μm,18.6s,baz=143,slow=34							
ARMA	**Armidale**	**18.36 236**		*e*P		**Pn**	**15 41 01.1**	**+1.6**
ARMA				*e*S		**Sn**	**15 44 31.3**	**+6.7**
PUZ	**Puketiti**	**18.50 157**		P		**Pn**	**15 41 04.1**	**+2.9**
AFI	**Afiamalu**	**19.42 71**		P		**Pn**	**15 41 11.7**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=280,slow=11,SNR=9.9							
AFI					LR	LR	15 47 18.7	
	comp=Z,6μm,20.7s,baz=246,slow=33							
AFI	**Afiamalu**	**19.42 71**		*e*P		**Pn**	**15 41 11.4**	**-1.1**
AFI					pmax	pmax		
	comp=Z,300nm,1.1s							
AFI	**Afiamalu**	**19.42 71**		*e*P		**Pn**	**15 41 11.4**	**-1.1**
	comp=Z,295nm,1.1s							
MRZ	**Mangatainoka R**	**20.12 166**		P		**P**	**15 41 19.6**	**+0.9**
SNZO	**South Karori**	**20.56 168**		*e*P		**P**	**15 41 23.4**	**-0.2**
	comp=Z,518nm,1.5s							
CTA	**Charters Tower**	**21.61 269**	⇓	*i*P		**P**	**15 41 35.8**	**+0.8**
	comp=Z,65nm,0.9s,mb5.1							
CTA				*e*S		**S**	**15 45 35.7**	**+1.2**
CTA	**Charters Tower**	**21.61 269**		P		**P**	**15 41 36.0**	**+0.9**
	comp=Z,58nm,0.9s,mb5.0,baz=90,slow=12,SNR=34							
CTA					LR	LR	15 49 18.1	
	comp=Z,10μm,20.0s,MS5.2,baz=94,slow=35							
CTA	**Charters Tower**	**21.61 269**	⇓	*i*P		**P**	**15 41 35.8**	**+0.8**
CTA				*e*S		**S**	**15 45 35.7**	**+1.2**
CTA					pmax	pmax		
	comp=E,65nm,0.9s							
CTAO	**Charters Tower**	**21.61 269**		*e*P		**P**	**15 41 35.3**	**+0.3**
	comp=Z,146nm,1.1s,mb5.3							
CTAO					LR	LR		
	comp=Z,9μm,20.0s,MS5.2							
CNB	**Canberra Magne**	**22.45 227**		*e*P		**P**	**15 41 45.8**	**+1.9**
CNB				*e*S		**S**	**15 45 57.2**	**+6.6**
RPZ	**Rata Peaks**	**22.50 177**		P		**P**	**15 41 43.4**	**-0.9**
	comp=Z,65nm,1.1s,mb5.0,baz=308,slow=3.2,SNR=6.2							
RPZ					LR	LR	15 49 45.0	
	comp=Z,13μm,18.0s,MS5.4,baz=261,slow=35							
CAN	**Canberra**	**22.70 227**	⇓	*e*P		**P**	**15 41 47.7**	**+1.2**
LBZ	**Lake Benmore**	**23.13 178**		P		**P**	**15 41 54.0**	**+3.0**
PMG	**Port Moresby**	**24.34 295**		*e*P		**P**	**15 42 02.3**	**-0.6**
TUZ	**Tuapeka**	**24.69 179**		*e*P		**P**	**15 42 06.8**	**+1.0**
COEN	**Coen**	**25.91 282**		*e*P		**P**	**15 42 16.7**	**-0.6**
	comp=Z,48nm,1.2s,mb4.9							
TOO	**Toolangi**	**26.29 226**		*e*P		**P**	**15 42 21.7**	**+1.3**
STKA	**Stephens Creek**	**26.91 241**	⇓	*i*P		**P**	**15 42 26.6**	**+0.5**
	comp=Z,59nm,1.3s,mb5.0							
STKA	**Stephens Creek**	**26.91 241**		P		**P**	**15 42 26.7**	**+0.6**
	comp=Z,57nm,1.0s,mb5.1,baz=66,slow=8.4,SNR=36							
STKA					LR	LR	15 53 11.8	
	comp=Z,9μm,19.0s,MS5.3,baz=68,slow=37							
TAU	**Tasmania Unive**	**28.41 215**		*e*P		**P**	**15 42 40.3**	**+0.9**
TAU					pmax	pmax		
	comp=Z,200nm,1.3s,mb5.6							
TAU	**Tasmania Unive**	**28.41 215**		*e*P		**P**	**15 42 40.3**	**+1.0**
	comp=Z,197nm,1.3s,mb5.6							
RAR	**Rarotonga**	**28.80 96**		LR		LR	15 51 39.3	
	comp=Z,4μm,20.4s,MS5.0,baz=254,slow=31							
WB2	**Warramunga Arr**	**32.72 266**	⇓	*i*P		**P**	**15 43 15.6**	**-2.1**
WB2				*e*S		**S**	**15 48 27.5**	**-6.9**
WRAB	**Tennant Creek**	**32.72 266**		*e*P		**P**	**15 43 15.6**	**-2.1**
WRA	**Warramunga Arr**	**32.73 266**		P		**P**	**15 43 15.9**	**-1.9**
	comp=Z,28nm,1.1s,mb5.1,baz=98,slow=8.2,SNR=16							
WRA					ScP	ScP	15 49 49.6	+1.9
	comp=Z,3.3nm,1.1s,baz=91,slow=3.2,SNR=6.4							
WRA					LR	LR	15 56 34.4	
	comp=Z,8μm,18.5s,MS5.5,baz=100,slow=36							
ASAR	**Alice Springs**	**32.77 259**		P		**P**	**15 43 17.1**	**-1.1**
	comp=Z,20nm,0.7s,mb5.2,baz=87,slow=9.1,SNR=132							
KAKA	**Kakadu**	**36.20 277**		*e*P		**P**	**15 43 46.8**	**-1.1**
	comp=Z,22nm,0.9s,mb5.1							
FORT	**Forrest**	**38.11 247**	⇓	*i*P		**P**	**15 44 03.1**	**-0.9**
	comp=Z,34nm,0.7s,mb5.2							
TBI	**Tubuai**	**38.12 101**		*e*S		**S**	**15 49 59.5**	**+2.1**
	comp=Z,2μm,20.8s							
TBI					eLQ		15 52 50.0	
	comp=Z,7μm,29.8s							
TBI					eLR	LR	15 54 35.1	
	comp=Z,9μm,28.2s,baz=266							
PPT	**Papeete**	**38.87 92**		*e*S		**S**	**15 50 10.2**	**+1.3**
	comp=Z,2μm,24.2s							
PPT					eLQ		15 53 18.2	
	comp=Z,8μm,29.2s							
PPT					eLR	LR	15 55 11.8	
	comp=Z,11μm,27.8s,baz=257							
PPT	**Papeete**	**38.87 92**		LR		LR	15 56 18.1	
	comp=Z,3μm,20.2s,MS5.1,baz=253,slow=30							
XMAS	**Kiritimati**	**39.90 59**		PFAKE			15 44 30.0	+11
XMAS					LR	LR		
	comp=Z,3μm,20.0s,MS5.1							
FITZ	**Fitzroy Crossi**	**41.15 266**	⇓	*i*P		**P**	**15 44 28.9**	**-0.6**
	comp=Z,57nm,0.7s,mb5.3							
FITZ				*e*S		**S**	**15 50 40.9**	**-2.1**
FITZ	**Fitzroy Crossi**	**41.15 266**		P		**P**	**15 44 28.9**	**-0.6**
	comp=Z,32nm,0.7s,mb5.1,baz=114,slow=10.0,SNR=96							
FITZ					LR	LR	16 01 37.2	
	comp=Z,6μm,18.9s,MS5.5,baz=101,slow=36							
GUMO	**Guam**	**42.09 323**		P		**P**	**15 44 37.7**	**+0.6**
	comp=Z,40nm,0.8s,mb5.1,baz=198,slow=6.5,SNR=4.9							
GUMO					LR	LR	16 01 18.4	
	comp=Z,3μm,18.5s,MS5.2,baz=252,slow=35							
GUMO	**Guam**	**42.09 323**		*e*P		**P**	**15 44 37.9**	**+0.8**
BATI	**Baumata**	**45.14 277**		P		**P**	**15 45 01.6**	**-0.2**
	comp=Z,23nm,0.8s,mb5.1,baz=281,slow=9.6,SNR=5.1							
MBWA	**Marble Bar**	**46.07 261**		*e*P		**P**	**15 45 08.5**	**-0.7**
KLBR	**Kellerberrin**	**46.96 246**	⇓	*i*P		**P**	**15 45 14.6**	**-1.4**
	comp=Z,48nm,0.9s,mb5.4							
NWAO	**Narrogin (S

SSE LR LR
comp=Z,931nm,23.4s,MS5.0
SSE Sheshan 69.54 317 ⇑P **P 15 47 54.9 +1.0**
comp=Z,39nm,1.3s,mb5.2
SSE pP pP 15 48 04.0 +6.9
SSE PcP PcP 15 48 17.6 +0.6
SSE PP PP 15 50 29.1 +1.2
SSE S S 15 57 01.5 -0.4
SSE sS sS 15 57 18.2 +11
SSE ScS ScS 15 57 56.5 +0.9
SSE LR LR
comp=Z,930nm,23.4s,MS5.0
GZH Guangzhou 70.08 306 P **P 15 48 00.5 +3.1**
GZH S S 15 57 15.0 +6.5
GZH LR LR
comp=N,617nm,20.4s,MS5.1
GZH LR LR
comp=E,1μm,21.3s,MS5.1
GZH LR LR
comp=Z,2μm,20.4s,MS5.2
KSRS Korea Array 70.16 326 P **P 15 47 58.0 +0.4**
comp=Z,3.6nm,0.9s,mb4.3,baz=146,slow=6.8,SNR=13
KSRS LR LR 16 18 13.3
comp=Z,1μm,19.0s,MS5.1,baz=134,slow=36
QIZ Qiongzhong 70.61 300 P **P 15 48 01.0 +0.3**
QIZ S S 15 57 13.8 -1.1
QIZ AMB AMB
comp=Z,363nm,5.4s
QIZ LR LR
comp=E,706nm,17.6s
QIZ LR LR
comp=Z,946nm,27.4s
INCN Inchon 70.86 325 *e*P **P 15 48 03.3 +1.4**
comp=Z,336nm,2.1s,mb5.9
INCN LR LR
comp=Z,1μm,19.0s,MS5.2
NJ2 Nanjing 71.67 316 *e*P **P 15 48 07.0 +0.2**
NJ2 AP pP 15 48 17.5 +7.4
NJ2 XP sP 15 48 21.5 +10
NJ2 PP PP 15 50 48.0 +1.8
NJ2 S S 15 57 21.0 -5.6
NJ2 XS sS 15 57 33.0 +1.0
NJ2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
NJ2 AMB AMB
comp=Z,160nm,12.0s
NJ2 LR LR
comp=N,710nm,24.0s
NJ2 LR LR
comp=E,520nm,16.0s
NJ2 LR LR
comp=Z,730nm,22.0s,MS4.9
YSS Yuzh-Sakhalins 71.95 341 ⇑*i*P **P 15 48 08.6 +0.4**
YSS *e*S S 15 57 30.0 +0.7
YSS pmax pmax
comp=Z,190nm,1.2s,mb5.9
YSS MLR MLR
comp=N,2μm,18.0s,MS5.4
YSS MLR MLR
comp=E,900nm,18.0s,MS5.4
YSS MLR MLR
comp=Z,2μm,18.0s,MS5.4
YSS Yuzh-Sakhalins 71.95 341 *e*P **P 15 48 08.8 +0.6**
comp=Z,143nm,1.1s,mb5.8
VLA Vladivostok 72.68 332*d i*P **P 15 48 13.6 +1.0**
VLA pmax pmax
comp=Z,50nm,1.7s,mb5.2
VLA Vladivostok 72.68 332 *i* P **P 15 48 13.7 +1.1**
UBT Ubonrachathani 72.74 294 ⇓P **P 15 48 10.5 -3.1**
WHN Wuhan 73.72 313 ⇑P **P 15 48 19.5 +0.4**
WHN S S 15 57 52.0 +1.9
WHN AMB AMB
comp=Z,148nm,1.4s,mb5.7
WHN AMB AMB
comp=Z,1μm,5.2s
WHN LR LR
comp=N,3μm,19.3s
WHN LR LR
comp=E,1μm,14.0s
WHN LR LR
comp=Z,2μm,19.9s,MS5.5
ADK Adak 73.80 9 PFAKE 15 48 30.0 +11
ADK LR LR
comp=Z,3μm,21.0s,MS5.6
PET Petropavlovsk 74.49 353 *e*P **P 15 48 29.8 +6.8**
PET *e*S S 15 58 03.3 +5.5
PET pmax pmax
comp=Z,100nm,9.2s
PET Petropavlovsk 74.49 353 *e*P **P 15 48 23.8 +0.8**
DL2 Dalian 74.62 323 P **P 15 48 24.5 +0.4**
DL2 S S 15 58 02.5 +2.6
DL2 SS SS 16 02 46.5 -1.1
DL2 AMB AMB
comp=Z,40nm,1.1s,mb5.3
DL2 AMB AMB
comp=Z,300nm,4.7s
DL2 LR LR
comp=N,290nm,23.3s,MS4.8
DL2 LR LR
comp=E,410nm,21.5s,MS4.8
DL2 LR LR
comp=Z,740nm,26.6s
PETK Petropavlovsk- 74.68 353 P **P 15 48 24.9 +0.7**
comp=Z,22nm,1.0s,mb5.0,baz=140,slow=5.8,SNR=17
PETK LR LR 16 17 00.9
comp=Z,2μm,19.3s,MS5.5,baz=160,slow=32
MDJ Mudanjiang 74.87 332 P **P 15 48 26.5 +1.0**
MDJ AP pP 15 48 36.3 +7.5
MDJ XP sP 15 48 39.5 +10
MDJ PP PP 15 51 14.5 +1.2
MDJ S S 15 58 03.0 +0.5
MDJ SCS ScS 15 58 36.8 -0.6
MDJ SS SS 16 02 49.5 -1.8
MDJ AMB AMB
comp=Z,44nm,1.8s,mb5.1
MDJ AMB AMB
comp=Z,492nm,6.3s
MDJ LR LR
comp=N,1μm,20.1s,MS5.3
MDJ LR LR
comp=E,877nm,18.9s,MS5.3
MDJ LR LR
comp=Z,2μm,21.2s,MS5.3
MDJ Mudanjiang 74.87 332 *e*P **P 15 48 25.9 +0.4**
comp=Z,41nm,1.1s,mb5.3
KKTK Khon Kaen 75.11 294 P **P 15 48 28.0 +0.5**
comp=Z,247nm,0.9s,mb6.1
TIA Tai'an 75.45 319 *e*P **P 15 48 30.0 +1.0**
SNY Shenyang 75.65 326 ⇑P **P 15 48 31.3 +1.3**
SNY S S 15 58 14.0 +2.8
SNY AMB AMB
comp=Z,14nm,0.5s,mb5.2
SNY AMB AMB
comp=Z,673nm,6.5s
SNY LR LR
comp=N,889nm,20.2s,MS5.1
SNY LR LR
comp=E,571nm,19.6s,MS5.1
SNY LR LR
comp=Z,986nm,18.6s,MS5.1
HABR Khabarovsk 75.83 337 ⇓*i*P **P 15 48 30.4 -0.4**
HABR *e* 15 48 40.6
HABR *e* 15 48 42.2
HABR *e* 15 48 43.6
HABR *e* 15 51 19.6
HABR *e*S S 15 58 10.8 -2.1
HABR *e* 15 58 41.6
HABR *e* 16 03 03.2
HABR pmax pmax
comp=Z,221nm,1.8s,mb5.8
CN2 Changchun 76.16 329 *e*P **P 15 48 34.0 +1.1**
CN2 *e*AP pP 15 48 43.0 +6.8
CN2 *e*S S 15 58 15.5 -1.4
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,17.0s,MS5.1
CN2 LR LR
comp=E,700nm,17.0s,MS5.1
CN2 LR LR
comp=Z,800nm,16.0s,MS5.1
MAW Mawson 76.65 202 ⇓*i*P **P 15 48 35.6 +0.2**
comp=Z,18nm,0.9s,mb5.0
MAW Mawson 76.65 202 P **P 15 48 35.7 +0.3**
comp=Z,29nm,1.1s,mb5.1,baz=104,slow=8.3,SNR=38
MAW LR LR 16 18 25.1
comp=Z,2μm,19.8s,MS5.5,baz=81,slow=33
MAW Mawson 76.65 202 P **P 15 48 35.6 +0.2**
MAW pmax pmax
comp=Z,58nm,1.2s
GYA Guiyang 77.00 305 ⇓*i*P **P 15 48 38.0 0.0**
GYA AP pP 15 48 48.0 +6.7
GYA XP sP 15 48 52.0 +9.5
GYA S S 15 58 26.0 -0.7
GYA AMB AMB
comp=Z,90nm,1.2s,mb5.6
GYA AMB AMB
comp=Z,400nm,6.6s
GYA LR LR
comp=N,840nm,18.2s,MS5.3
GYA LR LR
comp=E,940nm,19.1s,MS5.3
GYA LR LR
comp=Z,1μm,18.9s,MS5.3
NST Nakhon Sawan 77.12 293 P **P 15 48 39.5 +0.6**
KLR Kul'dur 77.68 336 *e*P **P 15 48 38.6 -2.7**
KLR *e*S S 15 58 32.0 -1.1
KLR pmax pmax
comp=E,92nm,1.8s
KLR pmax pmax
comp=Z,380nm,1.8s,mb6.0
NANT Nan 78.04 296 ⇓P **P 15 48 45.0 +1.0**
comp=Z,275nm,0.8s,mb6.2
BJI Beijing 78.50 321 P **P 15 48 47.3 +1.2**
BJI PP PP 15 51 44.0 0.0
BJI S S 15 58 43.5 +1.1
BJI SS SS 16 03 47.3 +0.9
BJI AMB AMB
comp=Z,34nm,1.6s,mb5.0
BJI AMB AMB
comp=Z,504nm,4.2s
BJI LR LR
comp=N,1μm,21.6s,MS5.3
BJI LR LR
comp=E,800nm,20.4s,MS5.3
BJI LR LR
comp=Z,937nm,19.1s,MS5.1
BJI Beijing 78.50 321 P **P 15 48 47.3 +1.2**
comp=Z,34nm,1.6s,mb5.0
BJI PP PP 15 51 44.1 +0.1
BJI S S 15 58 43.4 +1.0
BJI SS SS 16 03 47.3 +0.9
BJI LR LR
comp=Z,940nm,19.1s,MS5.1
BDT Bhumibol Dam 78.78 293 P **P 15 48 49.0 +0.9**
CHRT Chiangrai 79.30 296 ⇓P **P 15 48 52.0 +1.1**
comp=Z,276nm,1.1s,mb6.1
TIY Taiyuan 79.32 317 *e*P **P 15 48 54.8 +4.2**
TIY S S 15 58 56.8 +5.6
TIY SKS 15 59 03.5
TIY LR LR
comp=N,670nm,16.0s,MS5.2
TIY LR LR
comp=E,413nm,14.7s,MS5.2
TIY LR LR
comp=Z,1μm,21.9s
KMI Kunming 79.37 302 ⇓P **P 15 48 52.5 +1.3**
KMI PCP PcP 15 49 01.0 +1.7
KMI AP pP 15 49 02.5 +8.0
KMI XP sP 15 49 06.5 +11
KMI PP PP 15 51 52.0 +0.5
KMI S S 15 58 51.3 -1.0
KMI SKS 15 59 02.3
KMI XS sS 15 59 06.8 +9.0
KMI AMB AMB
comp=Z,74nm,1.4s,mb5.4
KMI AMB AMB
comp=Z,548nm,3.2s
KMI LR LR
comp=N,512nm,20.4s,MS5.1
KMI LR LR
comp=E,735nm,22.3s,MS5.1
KMI LR LR
comp=Z,1μm,23.3s,MS5.1
KMI Kunming 79.37 302 ⇓P **P 15 48 52.5 +1.3**
KMI 15 49 01.1
KMI *PP pP 15 49 02.6 +8.1
KMI *SP sP 15 49 06.5 +11
KMI 15 51 51.9
KMI PPP 15 53 45.5
KMI S S 15 58 51.3 -1.0
KMI 15 59 02.3
KMI *SS sS 15 59 06.7 +8.9
KMI SS SS 16 03 59.5 -0.4
KMI SSS 16 07 21.2
KMI pmax pmax
comp=Z,74nm,1.4s,mb5.4
KMI MLR MLR
comp=Z,1μm,23.3s,MS5.1
KMI Kunming 79.37 302 ⇓P **P 15 48 52.5 +1.3**
comp=Z,74nm,1.4s,mb5.4
KMI PcP PcP 15 49 01.1 +1.8
KMI pP pP 15 49 02.6 +8.1
KMI sP sP 15 49 06.5 +11
KMI PP PP 15 51 51.9 +0.4
KMI PPP 15 53 45.5
KMI S S 15 58 51.3 -1.0
KMI SKS 15 59 02.3
KMI sS sS 15 59 06.7 +8.9
KMI SS SS 16 03 59.5 -0.4
KMI SSS 16 07 21.2
KMI LR LR
comp=Z,1μm,23.3s,MS5.1
CM31 Chiang Mai Arr 79.37 295 *e*P **P 15 48 51.8 +0.4**
comp=Z,4.5nm,0.6s,mb4.6
CMAR Chiang Mai Arr 79.37 295 P **P 15 48 52.3 +0.9**
comp=Z,25nm,1.0s,mb5.1,baz=132,slow=3.9,SNR=54
CMAR LR LR 16 21 17.1
comp=Z,706nm,21.3s,MS5.0,baz=292,slow=34
XAN Xi'an 79.48 313 P **P 15 48 51.8 +0.2**
XAN AP pP 15 48 58.8 +3.9
XAN AMB AMB
comp=Z,47nm,1.6s,mb5.2
XAN AMB AMB
comp=Z,709nm,6.5s
CHG Chiang Mai 79.53 295 ⇓P **P 15 48 52.9 +0.7**
comp=Z,66nm,1.0s,mb5.5
CHG S S 15 58 57.3 +3.1
CHTO Chiang Mai 79.53 295 *e*P **P 15 48 52.7 +0.5**
CHTO pmax pmax
comp=Z,70nm,1.1s,mb5.5
CHTO Chiang Mai 79.53 295 *e*P **P 15 48 52.7 +0.5**
comp=Z,70nm,1.1s,mb5.5
CD2 Chengdu 81.48 308 ⇑*i*P **P 15 49 03.0 +0.5**
CD2 AP pP 15 49 13.5 +7.7
CD2 PP PP 15 52 12.3 +3.3
CD2 S S 15 59 12.5 -1.8
CD2 XS sS 15 59 29.8 +10
CD2 AMB AMB
comp=Z,50nm,1.6s,mb5.2
CD2 AMB AMB
comp=Z,610nm,9.6s
CD2 LR LR
comp=N,930nm,15.6s
CD2 LR LR
comp=E,1μm,24.0s
CD2 LR LR
comp=Z,1μm,24.0s
HHC Hu-ho-hao-te 81.75 320 *e*P **P 15 49 05.3 +1.7**
HHC AP pP 15 49 15.3 +8.4
HHC PP PP 15 52 15.3 +4.3
HHC S S 15 59 15.3 -1.3
HHC SKS 15 59 18.5
HHC XS sS 15 59 32.0 +10
HHC AMB AMB
comp=Z,37nm,1.3s,mb5.2
HHC AMB AMB
comp=Z,625nm,7.9s
HHC LR LR
comp=N,489nm,16.6s,MS5.2
HHC LR LR
comp=E,839nm,17.0s,MS5.2
HHC LR LR
comp=Z,1μm,16.2s,MS5.3
BTO Baotou 82.55 319 *e*P **P 15 49 08.8 +1.0**
HIA Hailar 82.83 330 *e*P **P 15 49 08.2 -0.9**
HIA pmax pmax
comp=Z,70nm,1.8s
HIA Hailar 82.83 330 *e*P **P 15 49 08.2 -0.9**
comp=Z,70nm,1.8s,mb5.4
SYO Syowa Base 83.08 196 ⇑*e*P **P 15 49 07.8 -2.4**
LZH Lanzhou 84.09 312 ⇑P **P 15 49 17.0 +1.1**
LZH AP pP 15 49 27.5 +8.3
LZH PP PP 15 52 33.3 +3.0
LZH SKS 15 59 36.0
LZH S S 15 59 41.5 +0.9
LZH XS sS 15 59 56.0 +10
LZH AMB AMB
comp=Z,160nm,1.5s,mb5.9
LZH AMB AMB
comp=Z,420nm,5.4s
LZH LR LR
comp=E,1μm,14.3s
LZH LR LR
comp=Z,2μm,16.3s,MS5.5
LZH Lanzhou 84.09 312 ⇑P **P 15 49 17.0 +1.1**
LZH *PP pP 15 49 27.5 +8.3
LZH *SP sP 15 49 31.4 +11
LZH 15 52 33.3
LZH 15 59 36.1
LZH S S 15 59 41.6 +1.0
LZH SS SS 16 05 11.0 +1.1
LZH pmax pmax
comp=Z,160nm,1.5s,mb5.9
LZH MLR MLR
comp=Z,2μm,16.3s,MS5.5
LZH Lanzhou 84.09 312 ⇑P **P 15 49 17.0 +1.1**
comp=Z,160nm,1.5s,mb5.9
LZH pP pP 15 49 27.5 +8.3
LZH sP sP 15 49 31.4 +11
LZH PP PP 15 52 33.3 +3.0
LZH SKS 15 59 36.1
LZH S S 15 59 41.6 +1.0
LZH sS sS 15 59 56.0 +10
LZH SS SS 16 05 11.0 +1.1
LZH LR LR
comp=Z,2μm,16.3s,MS5.5
KDAK Kodiak Island 84.85 19 P **P 15 49 19.5 +0.3**
comp=Z,22nm,0.9s,mb5.2,baz=348,slow=2.6,SNR=6.2
KDAK Kodiak Island 84.85 19 P **P 15 49 19.5 +0.3**
SEY Seymchan 84.91 352 ⇑*e*P **P 15 49 20.2 +0.8**
CLNS Chul'man 86.22 337*c i*P **P 15 49 27.7 +1.7**
CLNS *e**PP pP 15 49 37.3 +7.9
CLNS *e*S S 15 59 48.3 -12
CLNS pmax pmax
comp=Z,188nm,1.8s,mb6.0
CLNS pmax pmax
comp=E,32nm,1.5s
CLNS pmax pmax
comp=N,152nm,1.8s
CLNS smax
comp=N,205μm,12.6s
CLNS smax
comp=E,278μm,15.0s
MAIT Maitri 86.93 187 *e*P **P 15 49 29.2 -0.4**
KCPM Cahto Peak 87.05 45 *e*P **P 15 49 29.6 -0.9**
KIPM Iron Peak 87.18 45 *e*P **P 15 49 31.3 +0.1**
SNAA Sanae 87.22 182 *e*P **P 15 49 29.9 -1.0**
SNAA *e* pP 15 49 31.8 -2.4
SNAA *e* 15 49 39.2
SNAA *e* 15 49 43.5
SNAA *e* 15 55.3
SNAA Sanae 87.22 182 *e*P **P 15 49 29.7 -1.2**
SNAA pmax pmax
comp=Z,76nm,1.0s
SNAA Sanae 87.22 182 *e*P **P 15 49 29.7 -1.2**
comp=Z,76nm,1.0s,mb5.9
PACP Pacheco Peak 87.29 49 ⇑P **P 15 49 32.0 +0.2**
baz=88
PKD Parkfield 87.30 50 ⇓P **P 15 49 31.7 -0.1**
baz=88
U04C Hernandez Rese 87.33 49 ⇑P **P 15 49 32.1 +0.1**
baz=88
JCC Jacoby Creek 87.33 44 ⇓P **P 15 49 32.6 +0.7**
baz=88
PTRM Twissleman Ran 87.40 50 *e*P **P 15 49 32.6 +0.3**
CIT Chita 87.61 329 *e*P **P 15 49 34.2 +1.3**
CIT *e* 15 49 43.5
CIT pmax pmax
comp=Z,155nm,2.0s,mb5.9
GASB Alder Springs 87.61 46 ⇓P **P 15 49 33.9 +0.7**
baz=88,SNR=8.8
VNA3 Neumayer Olymp 87.80 180 *e*P **P 15 49 32.9 -0.8**
VNA3 *e* pP 15 49 34.6 -2.5
VNA3 *e* 15 49 41.8
N02C Big Bar 87.81 45 ⇑P **P 15 49 34.4 +0.3**
baz=88
O02C Red Bluff 87.82 45 ⇓P **P 15 49 34.7 +0.4**
baz=88,SNR=14
VNA2 Neumayer--Watz 88.09 181 *e*P **P 15 49 34.8 -0.3**
baz=175,slow=4.9
VNA2 *e* pP 15 49 36.2 -2.3
VNA2 *e* 15 49 43.7
VNA2 *e* 15 49 53.0
WDC Whiskeytown Da 88.19 45 *e*P **P 15 49 35.8 -0.2**
WDC pmax pmax
comp=Z,89nm,1.6s,mb5.8
WDC Whiskeytown Da 88.19 45 ⇓P **P 15 49 36.1 +0.1**
baz=88,SNR=11
WDC Whiskeytown Da 88.19 45 *e*P **P 15 49 35.8 -0.2**
comp=Z,89nm,1.6s,mb5.8
OHCM Honcut 88.28 46 *e*P **P 15 49 35.6 -0.9**
MWC Mount Wilson 88.31 52 *e*P **P 15 49 36.9 +0.2**
ORV Oroville 88.38 46 ⇓P **P 15 49 35.3 -1.6**
baz=89,SNR=7.8
VNA1 Neumayer--Stat 88.38 181 *e*P **P 15 49 36.3 -0.2**
VNA1 *e* pP 15 49 38.1 -1.8
VNA1 *e* 15 49 44.8
VNA1 *e* 15 49 48.0
M02C Callahan 88.39 44 ⇑P **P 15 49 37.2 +0.3**
baz=89,SNR=20
T06C Millerton Lake 88.40 49 ⇑P **P 15 49 36.5 -0.6**
baz=89,SNR=16
CMB Columbia Colle 88.41 48 ⇓P **P 15 49 36.7 -0.4**
baz=89,SNR=13
CMB Columbia Colle 88.41 48 *e*P **P 15 49 36.9 -0.2**
CMB LR LR
comp=Z,2μm,21.0s,MS5.4
ULN Ulaanbaatar 88.47 323 ⇑*e*P **P 15 49 36.9 -0.2**
LAVA Lava Cap Winer 88.51 47 ⇑P **P 15 49 36.9 -0.7**
baz=89,SNR=6.7
GTA Gaotai 88.52 313 *e*P **P 15 49 37.8 +0.2**
GTA AP pP 15 49 48.0 +7.1
GTA XP sP 15 49 52.0 +10
GTA PP PP 15 53 09.0 +2.9
GTA SKS 16 00 05.0
GTA S S 16 00 25.3 +1.6
GTA AMB AMB
comp=Z,15nm,1.8s,mb5.0
GTA AMB AMB
comp=Z,428nm,6.0s
GTA LR LR
comp=N,827nm,16.8s,MS5.3
GTA LR LR
comp=E,846nm,20.7s,MS5.3
GTA LR LR
comp=Z,1μm,20.1s,MS5.3
BFSC Mount Baldy St 88.61 52 ⇑P **P 15 49 38.7 +0.6**
baz=89
LAMM Antelope Mount 88.65 44 P **P 15 49 39.3 +1.1**
BAR Barrett 88.65 54 PFAKE 15 49 50.0 +12
BAR LR LR
comp=Z,1μm,19.0s,MS5.3
EDW2 Edwards Air Fo 88.65 52 ⇓P **P 15 49 37.9 -0.4**
baz=89,SNR=10
YBH Yreka Blue Hor 88.65 44 ⇑P **P 15 49 38.0 -0.2**
baz=89,SNR=9.8
YBH Yreka Blue Hor 88.65 44 *e*P **P 15 49 38.7 +0.5**
ISA Isabella 88.66 51 ⇓P **P 15 49 38.2 -0.2**
baz=89,SNR=12
ISA Isabella 88.66 51 *e*P **P 15 49 38.8 +0.4**
S06C San Francisco 88.71 48 ⇓P **P 15 49 37.9 -0.6**
baz=89,SNR=15
HELL Mitchell Peak 88.73 50 ⇑P **P 15 49 38.3 -0.4**
baz=89,SNR=11
YAK Yakutsk 88.75 342*ce*P **P 15 49 38.2 +0.1**
YAK *e**PP pP 15 49 47.3 +5.8
YAK *e* 15 53 12.9
YAK *e*S S 16 00 07.2 -18
YAK *e**SS sS 16 00 23.9 -6.5
YAK *e*SS SS 16 06 09.1 -8.2
YAK *e*SSS 16 09 45.8

YAK pmax pmax
comp=E,18nm,1.8s
YAK pmax pmax
comp=Z,48nm,1.0s,mb5.8
YAK pmax pmax
comp=N,25nm,1.4s
YAK pmax pmax
comp=Z,286nm,4.9s
YAK MLR MLR
comp=Z,2µm,19.0s,MS5.4
YAK MLR MLR
comp=E,584nm,15.0s
YAK MLR MLR
comp=N,1µm,22.0s
YAK Yakutsk 88.75 342⇑ *eP* **P 15 49 38.3 +0.2**
M03C McCloud 88.81 45 ⇓P **P 15 49 39.3 +0.4**
baz=89
KCC Kaiser Creek 88.82 49 ⇑P **P 15 49 38.8 -0.2**
baz=89,SNR=14
SONM Songino Array 88.82 323 P **P 15 49 38.7 -0.1**
comp=N,9.7nm,1.0s,mb5.1,baz=138,slow=3.2,SNR=39
SONM LR LR 16 30 27.8
comp=N,1µm,19.3s,MS5.3,baz=122,slow=36
P05C Yuba Gap, Truc 88.86 47 ⇑P **P 15 49 39.7 +0.5**
baz=89,SNR=10.0
MONP Monument Peak 88.94 54 ⇓P **P 15 49 39.9 +0.2**
baz=89
HUMO Hull Mountain 88.94 43 ⇓P **P 15 49 40.0 +0.5**
baz=89,SNR=6.9
HUMO Hull Mountain 88.94 43 *eP* **P 15 49 40.5 +1.0**
R05C Kirkwood Meado 88.94 48 ⇑P **P 15 49 39.8 +0.2**
baz=89,SNR=8.5
BILL Bilibino 89.00 359*j iP* **P 15 49 39.8 +0.6**
BILL *e* 15 49 48.5
BILL *e* 15 49 58.4
BILL pmax pmax
comp=Z,73nm,1.7s,mb5.7
BILL Bilibino 89.00 359 *eP* **P 15 49 39.5 +0.3**
BILL LR LR
comp=Z,1µm,19.0s,MS5.3
O04C Chester 89.03 46 ⇑P **P 15 49 40.3 +0.3**
baz=89,SNR=7.4
LBCM Butte Creek Ri 89.10 45 P **P 15 49 40.4 +0.1**
LRMC Laurel Mountai 89.14 51 ⇑P **P 15 49 40.9 +0.3**
baz=89,SNR=16
PFO Pinyon Flat Ob 89.22 53 *eP* **P 15 49 40.1 -1.0**
PFO *e* 15 53 10.4
PFO pmax pmax
comp=Z,76nm,1.8s,mb5.7
PFO Pinyon Flat Ob 89.22 53 ⇓P **P 15 49 41.0 0.0**
baz=89
PFO Pinyon Flat Ob 89.22 53 *eP* **P 15 49 40.1 -1.0**
comp=Z,76nm,1.8s,mb5.7
PFO *e*PP PP 15 53 10.4 -1.4
R06C Coleville 89.29 48 ⇑P **P 15 49 41.6 +0.4**
baz=90
WAKR Walker 89.29 48 *eP* **P 15 49 41.6 +0.3**
CWC Cottonwood Cre 89.30 50 ⇑P **P 15 49 41.6 +0.3**
baz=90,SNR=7.4
BEKR Beckwourth 89.30 46 P **P 15 49 41.3 +0.1**
baz=90,SNR=18
MTUM Tungsten Hills 89.37 49 *eP* **P 15 49 42.3 +0.7**
L04A Klamath Falls 89.41 44 ⇓P **P 15 49 42.2 +0.5**
baz=90
MPMC Manual Prospec 89.55 51 ⇑P **P 15 49 42.6 +0.1**
baz=90,SNR=20
DAC Darwin (Calif) 89.57 51 PFAKE 15 49 50.0 +7.4
DAC LR LR
comp=Z,1µm,20.0s,MS5.3
GSC Goldstone 89.71 52 *eP* **P 15 49 44.1 +0.8**
GSC pmax pmax
comp=Z,76nm,1.6s,mb5.8
GSC MLR MLR
comp=Z,996nm,20.0s,MS5.2
GSC Goldstone 89.71 52 ⇓P **P 15 49 43.6 +0.3**
baz=90,SNR=13
GSC Goldstone 89.71 52 *eP* **P 15 49 44.1 +0.8**
comp=Z,76nm,1.6s,mb5.8
GSC LR LR
comp=Z,996nm,20.0s,MS5.2
S08C White Mtn Res 89.71 49 ⇑P **P 15 49 43.9 +0.7**
baz=90,SNR=18
COR Corvallis 89.72 41 PFAKE 15 49 50.0 +6.9
COR LR LR
comp=Z,2µm,21.0s,MS5.4
BELC Belle Mtn. 89.74 53 ⇓P **P 15 49 43.9 +0.4**
baz=90
H03A Soap Creek Ran 89.77 41 ⇑P **P 15 49 43.8 +0.5**
baz=90
J04A Umpqua Nationa 89.79 43 ⇓P **P 15 49 43.4 -0.1**
baz=90
O06A Flanigan 89.80 46 ⇓P **P 15 49 43.9 +0.4**
baz=90
HEC Hector,Ludlow 89.85 52 ⇓P **P 15 49 44.6 +0.6**
baz=90
M06C Likely Place G 89.86 45 ⇓P **P 15 49 44.5 +0.6**
baz=90,SNR=5.9
I04A Tendick Farm, 89.88 42 ⇓P **P 15 49 43.4 -0.4**
baz=90
PAHR Pah Rah Range 89.89 47 *eP* **P 15 49 45.1 +1.1**
BC3 Big Chuckw Mtn 90.00 54 ⇓P **P 15 49 44.5 -0.2**
baz=90
L05A Lakeview 90.03 44 ⇓P **P 15 49 44.0 -0.6**
baz=90,SNR=8.0
NVAR Mina Array Bea 90.04 48 P **P 15 49 44.9 +0.1**
comp=Z,9.7nm,0.8s,mb5.2,baz=226,slow=8.4,SNR=42
GRAC Grapevine Rang 90.06 50 ⇓P **P 15 49 44.4 -0.5**
baz=90,SNR=16
N06A Buffalo Meadow 90.07 46 ⇑P **P 15 49 45.1 +0.2**
baz=90,SNR=13
FURC Furnace Creek, 90.19 51 ⇓P **P 15 49 45.7 +0.2**
baz=90
GLA Glamis 90.21 55 ⇓P **P 15 49 45.7 0.0**
baz=90,SNR=7.0
GLA Glamis 90.21 55 *eP* **P 15 49 46.2 +0.6**
FRIS Frissel Point 90.28 42 P **P 15 49 46.2 +0.5**
MOD Modoc 90.31 45 ⇓P **P 15 49 45.9 0.0**
baz=91,SNR=10
MOD Modoc 90.31 45 *eP* **P 15 49 45.5 -0.4**
comp=Z,34nm,1.4s,mb5.5
K05A Summer Lake 90.32 44 ⇑P **P 15 49 46.4 +0.4**
baz=91,SNR=7.4
GMRC Granite Mounta 90.33 53 ⇓P **P 15 49 46.1 -0.1**
baz=90
SHOC Shoshone 90.36 51 ⇑P **P 15 49 46.8 +0.5**
baz=91
J05A Fort Rock 90.37 43 ⇓P **P 15 49 46.3 +0.1**
baz=91
TUQ Turquoise Moun 90.42 52 ⇑P **P 15 49 46.7 +0.1**
baz=91,SNR=9.0
IRM Iron Mountain 90.44 53 ⇑P **P 15 49 46.6 -0.1**
baz=91,SNR=11
O07A Toulon 90.44 47 ⇑P **P 15 49 45.9 -0.7**
baz=91,SNR=14
H04A Detroit Lake 90.46 42 ⇓P **P 15 49 45.8 -0.7**
baz=91
S09A Goldfield 90.48 49 ⇑P **P 15 49 45.2 -1.6**
baz=91,SNR=8.6
Q08A Gabbs 90.50 48 ⇑P **P 15 49 46.5 -0.4**
baz=91,SNR=13
U10A Ash Meadows, A 90.55 51 ⇓P **P 15 49 47.4 +0.2**
baz=91,SNR=9.1
BKCOR Black Crater 90.57 42 P **P 15 49 47.8 +0.7**
LSA Lhasa 90.61 302 *eP* **P 15 49 47.9 +0.3**
LSA pmax pmax
comp=Z,15nm,0.9s,mb5.3
LSA Lhasa 90.61 302 *eP* **P 15 49 47.9 +0.3**
comp=Z,15nm,0.9s,mb5.3
TPH Tonopah 90.64 49 *eP* **P 15 49 47.7 +0.1**
TPH pmax pmax
comp=Z,66nm,1.5s,mb5.7
TPH Tonopah 90.64 49 *eP* **P 15 49 47.7 +0.1**
comp=Z,66nm,1.5s,mb5.7
N07B Gerlach 90.67 46 ⇓P **P 15 49 47.3 -0.3**
baz=91,SNR=12
Y12C Blythe 90.74 54 ⇓P **P 15 49 47.4 -0.7**
baz=91
K06A Valley Falls 90.77 44 ⇑P **P 15 49 48.1 +0.1**
baz=91,SNR=7.8
P08A Dixie Valley 90.77 47 ⇓P **P 15 49 48.3 +0.1**
baz=91
I05A Bend 90.78 42 ⇓P **P 15 49 47.4 -0.6**
baz=91
M07A Soldier Meadow 90.81 46 ⇓P **P 15 49 48.0 -0.3**
baz=91,SNR=17
R09A Tonopah 90.82 49 ⇓P **P 15 49 48.1 -0.3**
baz=91,SNR=6.3
TPNV Topopah Spring 90.84 51 *eP* **P 15 49 48.5 0.0**
TPNV pmax pmax
comp=Z,29nm,1.0s,mb5.6
TPNV Topopah Spring 90.84 51 ⇑P **P 15 49 48.8 +0.3**
baz=91
TPNV Topopah Spring 90.84 51 *eP* **P 15 49 48.5 -0.1**
comp=Z,29nm,1.0s,mb5.6
LDFC Landfair 90.86 53 *eP* **P 15 49 49.5 +0.8**
113A Mohawk Valley, 90.90 55 ⇑P **P 15 49 49.3 +0.4**
baz=91
V11A Goodsprings 90.95 52 ⇑P **P 15 49 49.1 +0.1**
baz=91
O08A Rochester Mine 90.99 47 P **P 15 49 49.4 +0.2**
baz=91,SNR=17
L07A Adell 91.00 45 ⇑P **P 15 49 49.3 +0.2**
baz=91,SNR=16
S10A Tonopah Range, 91.02 50 ⇑P **P 15 49 49.3 0.0**
baz=91,SNR=15
J06A Christmas Vall 91.05 44 ⇑P **P 15 49 48.9 -0.4**
baz=91,SNR=7.5
BOD Bodaibo 91.12 334 *eP* **P 15 49 46.5 -2.8**
BOD pmax pmax
comp=Z,32nm,2.0s,mb5.3
W12A Cal Nev Ari 91.14 52 ⇓P **P 15 49 49.9 -0.1**
baz=91
N08A GE Springer Mi 91.23 46 ⇑P **P 15 49 49.0 -1.2**
baz=92,SNR=18
PDMCI Parker Dam,Lak 91.26 54 ⇓P **P 15 49 50.4 -0.2**
baz=92,SNR=7.4
G05A Wamic 91.27 41 ⇑P **P 15 49 50.4 +0.1**
baz=92
Y13A Salome 91.29 54 ⇓P **P 15 49 50.5 -0.2**
baz=92,SNR=14
214A Organ Pipe Nat 91.30 56 ⇓P **P 15 49 50.6 -0.2**
baz=92
V12A Nelson 91.33 52 ⇓P **P 15 49 50.3 -0.6**
baz=92,SNR=6.5
I06A Prineville 91.34 43 ⇑P **P 15 49 50.5 -0.2**
baz=92,SNR=8.1
VIPM Ingram Point 91.35 42 P **P 15 49 51.6 +0.9**
K07A Rock Creek Ran 91.37 44 ⇓P **P 15 49 50.5 -0.3**
baz=92,SNR=14
M08A Happy Creek Ra 91.37 46 ⇓P **P 15 49 50.5 -0.4**
baz=92
R10A Warm Springs 91.39 49 ⇑P **P 15 49 51.0 0.0**
baz=92,SNR=17
SHPR Sheep Range 91.44 51 *eP* **P 15 49 52.7 +1.4**
S11A Rachel 91.50 50 ⇑P **P 15 49 51.0 -0.5**
baz=92
GNW Green Mountain 91.51 39 *eP* **P 15 49 52.8 +1.4**
Q10A Clear Creek Ra 91.55 49 ⇑P **P 15 49 51.5 -0.3**
baz=92,SNR=6.9
X13A Yucca 91.61 53 ⇓P **P 15 49 51.3 -0.9**
baz=92,SNR=12
H06A Lindquist Farm 91.64 42 ⇑P **P 15 49 50.4 -1.6**
baz=92,SNR=14
E05A Radle 91.64 40 ⇑P **P 15 49 51.9 -0.1**
baz=92
WVOR Wild Horse Val 91.65 45 *eP* **P 15 49 52.3 +0.2**
WVOR pmax pmax
comp=Z,27nm,1.3s,mb5.4
WVOR Wild Horse Val 91.65 45 *eP* **P 15 49 52.3 +0.1**
comp=Z,27nm,1.3s,mb5.4
BMN Battle Mountai 91.69 47 *eP* **P 15 49 52.5 +0.1**
BMN pmax pmax
comp=Z,29nm,1.3s,mb5.5
BMN MLR MLR
comp=Z,2µm,22.0s,MS5.4
BMN Battle Mountai 91.69 47 *eP* **P 15 49 52.5 +0.1**
comp=Z,28nm,1.3s,mb5.4
BMN LR LR
comp=Z,2µm,22.0s,MS5.4
T11A Corn Creek, Al 91.71 51 ⇑P **P 15 49 52.5 -0.1**
baz=92,SNR=16
L08A Fields 91.73 45 ⇑P **P 15 49 52.8 +0.2**
baz=92,SNR=14
W13A Hualapai Mount 91.78 53 ⇑P **P 15 49 52.5 -0.5**
baz=92,SNR=9.8
I07A Izee 91.85 43 ⇓P **P 15 49 53.2 +0.2**
baz=92,SNR=11
COLA College 91.89 17 *eP* **P 15 49 52.2 -0.5**
COLA College 91.89 17 PFAKE 15 50 00.0 +7.3
COLA LR LR
comp=Z,1µm,19.0s,MS5.4
R11A Troy Canyon, C 91.92 49 ⇓P **P 15 49 53.1 -0.3**
baz=92,SNR=8.2
ZAK Zakamensk 91.92 324⇑ *i*P **P 15 49 53.0 -0.2**
ZAK pmax pmax
comp=Z,21nm,1.7s,mb5.2
Y14A Wickenburg 91.97 54 ⇓P **P 15 49 53.8 0.0**
baz=92,SNR=7.0
H07A Lands Inn, Kim 92.05 43 ⇓P **P 15 49 53.8 -0.1**
baz=92,SNR=14
Q11A Duckwater 92.09 49 ⇑P **P 15 49 54.3 +0.1**
baz=92,SNR=12
O10A Cortez Mining, 92.13 47 ⇓P **P 15 49 54.3 -0.1**
baz=92
S12A Delamar Landin 92.13 50 ⇓P **P 15 49 54.9 +0.4**
baz=92,SNR=22
J08A Circle Bar Ran 92.18 44 ⇓P **P 15 49 54.3 -0.2**
baz=92,SNR=14
X14A Yava 92.27 54 ⇑P **P 15 49 55.1 -0.1**
baz=92,SNR=17
U13A Pakoon Wash 92.27 52 ⇓P **P 15 49 54.9 -0.3**
baz=92
B05A Bryant 92.29 39 ⇑P **P 15 49 55.5 +0.6**
baz=93
G07A Ruggs Ranch, H 92.30 42 ⇓P **P 15 49 55.7 +0.6**
baz=93,SNR=5.4
K09A Rome 92.37 45 ⇓P **P 15 49 55.3 -0.2**
baz=93,SNR=12
IRK Irkutsk 92.37 326 *eP* **P 15 49 54.2 -1.0**
IRK *e* 15 53 40.1
IRK pmax pmax
comp=Z,38nm,2.0s,mb5.4
TLY Talaya 92.41 325 *eP* **P 15 49 54.8 -0.6**
TLY *eS* S 16 00 47.0 -12
TLY *e* 16 02 17.2
TLY pmax pmax
comp=Z,30nm,1.7s,mb5.3
TLY Talaya 92.41 325⇑ *i*P **P 15 49 56.2 +0.8**
116A Eloy 92.41 56 ⇑P **P 15 49 56.0 +0.1**
baz=93,SNR=8.7
W14A Seligman 92.43 53 ⇓P **P 15 49 56.3 +0.4**
baz=93,SNR=9.1
Y15A Casa Rosa Ranc 92.48 55 ⇑P **P 15 49 55.8 -0.4**
baz=93,SNR=14
T13A Saint George 92.56 51 ⇓P **P 15 49 56.6 +0.1**
baz=93,SNR=7.4
V14A Boquillas Ranc 92.58 53 ⇑P **P 15 49 57.0 +0.4**
baz=93,SNR=17
H08A Prairie City 92.59 43 ⇓P **P 15 49 57.2 +0.8**
baz=93
R12A Pony Springs, 92.61 50 ⇓P **P 15 49 57.5 +0.8**
baz=93
O11A Cowboy Ranch, 92.64 48 ⇑P **P 15 49 57.1 +0.3**
baz=93,SNR=7.2
M10A I.L. Ranch, Tu 92.64 46 ⇓P **P 15 49 57.4 +0.7**
baz=93,SNR=13
J09A Fry Pan Ranch, 92.64 44 P **P 15 49 56.8 +0.1**
baz=93,SNR=14
Q12A Willow Creek R 92.75 49 ⇑P **P 15 49 57.2 -0.1**
baz=93,SNR=6.2
G08A Pilot Rock 92.76 42 P **P 15 49 57.2 +0.1**
baz=93,SNR=8.2
X15A Humboldt 92.77 54 ⇑P **P 15 49 57.8 +0.3**
baz=93,SNR=13
217A Green Valley 92.79 57 ⇓P **P 15 49 56.7 -1.0**
baz=93,SNR=5.8
S13A Holt Ranch, En 92.83 51 ⇑P **P 15 49 57.8 +0.1**
baz=93,SNR=8.0
U14A Mt Trumbull 92.85 52 ⇓P **P 15 49 57.3 -0.6**
baz=93,SNR=5.5
P12A McGill 92.88 49 ⇑P **P 15 49 57.4 -0.5**
baz=93
HAWA Hanford 92.92 41 *eP* **P 15 49 58.5 +0.6**
comp=Z,24nm,1.5s,mb5.4
L10A Juniper Basin 92.93 46 ⇑P **P 15 49 57.1 -1.0**
baz=93
K10A MacKenzie Ranc 92.97 45 ⇓P **P 15 49 57.3 -0.9**
baz=93
R13A O'Grain Ranch, 93.00 50 ⇓P **P 15 49 56.8 -1.7**
baz=93
ETW Entiat 93.00 40 *eP* **P 15 49 59.0 +0.7**
TUC Tucson 93.02 57 *eP* **P 15 49 58.3 -0.4**
TUC pmax pmax
comp=Z,20nm,1.4s,mb5.3
TUC Tucson 93.02 57 *eP* **P 15 49 58.3 -0.4**
comp=Z,20nm,1.4s,mb5.4
W15A Williams 93.03 53 ⇑P **P 15 49 58.5 -0.1**
baz=93
A06A Chilliwack 93.05 38 ⇓P **P 15 49 59.4 +0.9**
baz=93
Y16A Circle Bar Ran 93.10 55 ⇓P **P 15 49 59.1 +0.1**
baz=93,SNR=12
M11A Holland Ranch, 93.11 47 ⇓P **P 15 49 59.0 +0.2**
baz=93
117A Oracle 93.16 56 ⇓P **P 15 49 59.1 -0.3**
baz=93,SNR=7.3
CCUT Cedar City 93.18 51 *eP* **P 15 50 00.2 +0.8**
ELK Elko 93.19 47 *eP* **P 15 49 59.5 +0.2**
ELK pmax pmax
comp=Z,8.0nm,1.0s
ELK Elko 93.19 47 *eP* **P 15 49 59.5 +0.2**
comp=Z,8.0nm,1.0s,mb5.1
Q13A Wheeler Ranch, 93.29 49 ⇓P **P 15 49 59.2 -0.6**
baz=94
H09A Durkee 93.29 43 ⇓P **P 15 49 59.2 -0.5**
baz=94
O12A Currie 93.33 48 ⇑P **P 15 49 59.3 -0.7**
baz=94
V15A Kaibab Nationa 93.35 53 ⇓P **P 15 49 59.3 -0.9**
baz=94,SNR=7.7
L11A Cat Creek Ranc 93.45 46 ⇑P **P 15 49 59.0 -1.4**
baz=94,SNR=6.3
218A Dragoon 93.47 57 ⇓P **P 15 50 00.7 -0.1**
baz=94,SNR=6.9
P13A Bates Ranch, G 93.50 49 ⇓P **P 15 50 00.5 -0.3**
baz=94,SNR=7.1
U15A North Rim 93.51 52 ⇑P **P 15 50 00.5 -0.4**
baz=94,SNR=9.8
B07A Winthrop 93.53 39 ⇓P **P 15 50 00.2 -0.5**
baz=94
BMO Blue Mountains 93.61 43 PFAKE 15 50 10.0 +8.9
BMO LR LR
comp=Z,1µm,20.0s,MS5.4
DGAR Diego Garcia 93.70 261 PFAKE 15 50 10.0 +7.7
DGAR LR LR
comp=Z,4µm,20.0s,MS5.8
118A Homack Ranch, 93.78 57 ⇓P **P 15 50 01.5 -0.7**
baz=94,SNR=6.1
DAWY Dawson 93.80 20 *eP* **P 15 50 01.6 0.0**
Q14A Sevier Lake (B 93.83 50 ⇑P **P 15 50 01.0 -1.3**
baz=94
H10A Noah's Angus R 93.85 43 ⇓P **P 15 50 01.8 -0.4**
baz=94,SNR=8.0
G10A Bishop Farm, J 93.92 43 ⇓P **P 15 50 01.2 -1.3**
baz=94
MFID Camas Ranch 93.93 45 ⇓P **P 15 50 02.3 -0.4**
baz=94
N13A Wendover, West 93.95 48 ⇑P **P 15 50 02.1 -0.7**
baz=94
219A White Tail Can 94.09 57 ⇓P **P 15 50 03.4 -0.2**
baz=94
F10A Beach Ranch, E 94.15 42 ⇑P **P 15 50 03.2 -0.4**
baz=94
Y18A Canyon Day Jun 94.17 55 ⇑P **P 15 50 03.1 -0.9**
baz=94,SNR=8.9
U16A Tuba City 94.26 53 ⇓P **P 15 50 03.1 -1.2**
baz=94,SNR=6.7
J12A Stokes Ranch, 94.35 45 ⇓P **P 15 50 04.0 -0.6**
baz=95
119A Ashpeak Ranch, 94.35 57 ⇓P **P 15 50 03.7 -1.1**
baz=94
H11A Donnelly 94.37 44 ⇓P **P 15 50 03.5 -1.1**
baz=95
MSU Marysvale 94.42 50 *eP* **P 15 50 07.1 +2.1**
G11A Walters Elk Ra 94.51 43 ⇑P **P 15 50 05.5 +0.3**
baz=95
I12A Atlanta 94.55 45 ⇑P **P 15 50 05.7 +0.2**
baz=95
HLID Hailey 94.93 45 ⇓P **P 15 50 07.1 -0.2**
baz=95
HLID Hailey 94.93 45 *eP* **P 15 50 07.6 +0.4**
comp=Z,2.8nm,0.8s,mb4.7
HLID LR LR
comp=Z,1µm,20.0s,MS5.4
J13A Cove Ranch, Pi 95.02 45 ⇑P **P 15 50 07.4 -0.2**
baz=95
H12A Diamond D Ranc 95.05 44 ⇑P **P 15 50 07.4 -0.4**
baz=95
D11A Klaveano Farm, 95.17 41 ⇓P **P 15 50 07.6 -0.7**
baz=95
A10A Northport 95.28 39 ⇑P **P 15 50 09.0 +0.3**
baz=96
F12A Elk City 95.30 43 ⇓P **P 15 50 08.3 -0.5**
baz=96
Q16A Castle Valley 95.31 50 ⇑P **P 15 50 09.3 +0.2**
baz=96
T18A Mexican Hat 95.57 52 ⇑P **P 15 50 09.2 -1.2**
baz=96
L15A Malad City 95.66 47 ⇓P **P 15 50 09.8 -0.8**
baz=96
D12A Red Ives Fores 95.79 42 ⇑P **P 15 50 10.0 -1.0**
baz=96
F13A Darby 95.90 43 ⇓P **P 15 50 11.1 -0.5**
baz=96
H14A Leadore 96.05 44 ⇑P **P 15 50 11.5 -0.8**
baz=96
O17A Robinson Place 96.11 49 ⇑P **P 15 50 10.6 -2.1**
baz=96
MCMT McKenzie Canyo 96.47 44 *eP* **P 15 50 14.8 +0.6**
H15A Lima 96.52 45 ⇑P **P 15 50 13.9 -0.6**
baz=97
TIXI Tiksi 96.67 348⇑ *eP* **P 15 50 13.9 -0.6**
J16A Bone 96.69 46 ⇓P **P 15 50 14.8 -0.5**
baz=97
AHID Auburn Hatcher 96.84 47 PFAKE 15 50 30.0 +14
AHID LR LR
comp=Z,752nm,22.0s,MS5.1
PLCA Paso Flores 97.03 139 P **P 15 50 21.6 +4.6**
comp=Z,2.9nm,0.9s,mb4.7,baz=236,slow=8.7,SNR=4.8
PLCA LR LR 16 23 41.7
comp=Z,596nm,20.9s,MS5.0,baz=234,slow=29
ANMO Albuquerque 97.35 55⇑ *eP* **P 15 50 18.5 0.0**
ANMO Albuquerque 97.35 55 PFAKE 15 50 30.0 +12
ANMO LR LR
comp=Z,1µm,19.0s,MS5.3
TXAR Lajitas Array 97.64 62 P **P 15 50 20.6 +0.7**
comp=Z,0.8nm,0.8s,mb4.3,baz=238,slow=5.5,SNR=7.6
TXAR PKKPbc PKKPbc 16 06 56.0 -0.3
comp=Z,0.5nm,0.9s,baz=101,slow=2.9,SNR=3.5
TXAR LR LR 16 27 19.4
comp=Z,1µm,18.9s,MS5.4,baz=20,slow=31
BW06 Boulder Array 97.89 47 PFAKE 15 50 30.0 +9.3
BW06 LR LR
comp=Z,780nm,19.0s,MS5.2
PDAR Pinedale Array 97.89 47 P **P 15 50 22.8 +2.1**
comp=Z,0.9nm,0.5s,mb4.5,baz=209,slow=2.7,SNR=5.3
PDAR PKKPbc PKKPbc 16 06 59.7 +3.5
comp=Z,0.8nm,0.8s,baz=111,slow=2.0,SNR=4.6
PDAR LR LR 16 33 29.0
comp=Z,528nm,18.0s,MS5.1,baz=265,slow=35
WMQ Urumqi 98.61 314 *eP* **P 15 50 27.3 +3.4**
WMQ PP PP 15 54 31.0 +6.0
WMQ SKS 16 01 01.0
WMQ S S 16 01 52.0 -1.1
WMQ AMB AMB
comp=Z,11nm,0.6s,mb5.6
WMQ AMB AMB
comp=Z,201nm,6.2s
WMQ LR LR
comp=N,1µm,19.7s,MS5.6
WMQ LR LR
comp=E,2µm,20.4s,MS5.6
WMQ LR LR
comp=Z,2µm,25.0s,MS5.4
AMTX Amarillo 101.03 57 PFAKE 15 50 50.0 +15
AMTX LR LR
comp=Z,998nm,20.0s,MS5.3
MK31 Makanchi Array 103.18 315 *eP* Pdif 15 50 45.2 +1.0
MKAR Makanchi Array 103.18 315 Pdiff Pdif 15 50 44.1 -0.1
comp=Z,0.6nm,0.4s,baz=98,slow=6.1,SNR=7.0
MKAR PP PP 15 54 59.9 +0.4
comp=Z,0.3nm,0.4s,baz=110,slow=5.6,SNR=5.4
MKAR PKKPbc PKKPbc 16 06 46.3 +5.2
comp=Z,0.2nm,0.3s,baz=294,slow=1.2,SNR=3.9
MKAR Makanchi Array 103.18 315 P Pdif 15 50 44.2 0.0
MKAR 15 54 59.9
CBKS Cedar Bluff 103.68 54 PFAKE 15 51 00.0 +14
CBKS LR LR
comp=Z,714nm,20.0s,MS5.2
ZALV Zalesovo Beam 103.71 323 Pdiff Pdif 15 50 46.2 -0.4
comp=Z,0.3nm,0.3s,baz=354,slow=6.0,SNR=3.1

ZALV PP PP 15 55 02.0 -1.3
comp=Z,0.4nm,0.5s,baz=107,slow=9.2,SNR=3.4
ZALV Zalesovo Beam 103.71 323 Pdif Pdif 15 50 46.2 -0.4
ZALV PP PP 15 55 02.0 -1.3
KURK Kurchatov 106.54 318 Pdiff Pdif 15 51 00.9 +1.7
comp=Z,0.3nm,0.7s,baz=100,slow=3.1,SNR=2.8
KURK PKiKP PKiKP 15 55 09.4 -0.3
comp=Z,1.2nm,1.0s,baz=111,slow=2.6,SNR=3.9
ECSD EROS,Sioux Fal 107.20 49 PFAKE 15 55 20.0 +8.8
ECSD LR LR
comp=Z,1μm,20.0s,MS5.4
AML Almayashu 107.95 309 PFAKE 15 55 20.0 +7.3
AML LR LR
comp=Z,767nm,22.0s,MS5.2
AGMN Agassiz Refuge 108.67 45 PFAKE 15 55 30.0 +16
AGMN LR LR
comp=Z,2μm,20.0s,MS5.6
CCM Cathedral Cave 109.97 56 PFAKE 15 55 30.0 +13
CCM LR LR
comp=Z,943nm,20.0s,MS5.4
ABPO Ambohimpanom 110.64 239 PFAKE 15 55 30.0 +12
ABPO LR LR
comp=Z,2μm,19.0s,MS5.7
HDIL Hopedale 111.92 54 PFAKE 15 55 30.0 +10
HDIL LR LR
comp=Z,1μm,20.0s,MS5.5
BVAR Borovoye Array 111.96 320 PKiKP PKiKP 15 55 18.5 -1.4
comp=Z,0.8nm,0.5s,baz=202,slow=1.6,SNR=5.3
BRVK Borovoye 112.03 320⇑*e*PKiKP PKiKP 15 55 18.6 -1.4
BRVK MLR MLR
comp=Z,1μm,19.0s,MS5.6
LPAZ La Paz 112.46 119 PFAKE 15 55 30.0 +8.0
LPAZ LR LR
comp=Z,565nm,20.0s,MS5.2
BCIP Isla Barro Col 112.63 89 PFAKE 15 55 30.0 +7.7
BCIP LR LR
comp=Z,511nm,19.0s,MS5.1
GOGA Godfrey 115.35 62 PFAKE 15 55 40.0 +13
GOGA LR LR
comp=Z,887nm,19.0s,MS5.4
GLMI Grayling 115.88 49 PFAKE 15 55 40.0 +12
GLMI LR LR
comp=Z,1μm,20.0s,MS5.5
DWPF Disney 116.12 68 PFAKE 15 55 40.0 +11
DWPF LR LR
comp=Z,548nm,19.0s,MS5.2
ARU Arti 118.86 324 *i* PKIKP PKPdf 15 55 31.1 -1.9
ARU 16 02 22.3
ARU SS SS 16 13 02.2 -9.0
ARU MLR MLR
comp=Z,1μm,22.0s,MS5.4
ARU Arti 118.86 324⇑*e*PKP PKPdf 15 55 31.4 -1.6
ARU LR LR
comp=Z,972nm,20.0s,MS5.4
AKTK Aktyubinsk 119.55 317 PKP PKPdf 15 55 33.6 -0.9
AKTO Aktyubinsk 119.55 317 PKP PKPdf 15 55 33.6 -0.9
comp=Z,1.2nm,0.5s,baz=30,slow=3.5,SNR=5.3
CBN Corbin 120.82 57 PFAKE 15 55 50.0 +13
CBN LR LR
comp=Z,1μm,20.0s,MS5.5
KBS Kingsbay 121.28 355 PFAKE 15 55 50.0 +13
KBS LR LR
comp=Z,811nm,19.0s,MS5.4
SPITS Spitsbergen Ar 121.55 354 PKP PKPdf 15 55 35.7 -2.0
comp=Z,8.6nm,0.8s,baz=352,slow=5.1,SNR=5.9
BINY Binghamton 122.03 53 PFAKE 15 55 50.0 +10
BINY LR LR
comp=Z,1μm,20.0s,MS5.5
SUMG Summit 126.27 10 *e*PKPdf PKPdf 15 55 45.4 -1.4
KEV Kevo 126.45 345 PFAKE 15 56 00.0 +13
KEV LR LR
comp=Z,1μm,22.0s,MS5.6
ARCES ARCESS Array B 126.97 345 PKP PKPdf 15 55 47.7 -0.6
comp=Z,3.4nm,0.5s,baz=73,slow=1.4,SNR=28
ARCES ARCESS Array B 126.97 345 PKP PKPdf 15 55 47.7 -0.6
MAK Makhachkala 127.24 308 PKIKP PKPdf 15 55 49.3 -0.2
MAK *e* 16 02 57.4
MAK MLR MLR
comp=Z,750nm,21.0s,MS5.3
KLMR Klimovskoe 127.29 332 *e*PKIKP PKPdf 15 55 47.6 -1.5
KLMR pmax pmax
comp=Z,23nm,1.5s
MIB Mutribah 127.39 292 *e*P PKPdf 15 55 50.1 -0.1
baz=292
MIB AMb AMB 15 55 54.1
comp=Z,23nm,1.2s,baz=292
NAY Al-Naaiem 127.43 291 *e*P PKPdf 15 55 50.3 0.0
baz=291
NAY AMb AMB 15 55 54.1
comp=Z,11nm,1.4s,baz=291
RST Umm Al-Ruwaisa 127.66 291 *e*P PKPdf 15 55 50.2 -0.6
baz=291
RST AMb AMB 15 55 54.4
comp=Z,31nm,1.4s,baz=291
KMBO Kilima Mbogo 128.17 251 *e*PKIKP PKPdf 15 55 52.7 +0.5
GNI Garni 129.55 305 PFAKE 15 56 10.0 +16
GNI LR LR
comp=Z,532nm,21.0s,MS5.2
JOF Joensuu 129.57 337 *ep* PKPdf 15 55 52.9 -0.5
comp=Z,1.1nm,0.4s
JOF Joensuu 129.57 337 *e*PKIKP PKPdf 15 55 52.9 -0.5
JOF pmax pmax
comp=Z,1.0nm,0.4s
GRGR Grenville 130.53 92 PFAKE 15 56 10.0 +13
GRGR LR LR
comp=Z,648nm,20.0s,MS5.3
KIV Kislovodsk 130.60 310 *i* PKIKP PKPdf 15 55 56.0 +0.1
KIV 15 58 18.0
KIV PS PS 16 08 28.0 +4.5
KIV pmax pmax
comp=Z,18nm,1.2s
KIV MLR MLR
comp=Z,600nm,20.0s,MS5.3
KIV Kislovodsk 130.60 310 PFAKE 15 56 10.0 +14
KIV LR LR
comp=Z,670nm,21.0s,MS5.3
BBSR BB Station 130.97 65 PFAKE 15 56 10.0 +13
BBSR LR LR
comp=Z,492nm,21.0s,MS5.2
OBN Obninsk 131.16 326⇓*i* PKIKP PKPdf 15 55 57.7 +1.1
OBN 15 58 16.0
OBN pmax pmax
comp=Z,29nm,1.5s
OBN MLR MLR
comp=Z,1μm,19.0s,MS5.6
OBN Obninsk 131.16 326⇑*e*PKP PKPdf 15 55 57.2 +0.6
KAF Kangasniemi 131.89 338 *ep* PKPdf 15 55 57.6 -0.2
comp=Z,1.1nm,0.4s
KAF Kangasniemi 131.89 338 *e*PKIKP PKPdf 15 55 57.6 -0.2
KAF pmax pmax
comp=Z,1.0nm,0.4s
BBGH Gun Hill 132.78 92 PFAKE 15 56 10.0 +9.1
BBGH LR LR
comp=Z,1μm,19.0s,MS5.7
MALT Malatya 134.62 303⇓*i*P PKPdf 15 56 02.1 -1.6
MALT Malatya 134.62 303 ⇓P PKPdf 15 56 02.1 -1.6
AKASG Malin Array Be 137.11 323 PKP PKPdf 15 56 07.3 -0.6
comp=Z,0.7nm,0.4s,baz=59,slow=1.4,SNR=7.8
AKASG SKPbc SKPbc 15 59 40.9 -0.3
comp=Z,0.8nm,0.6s,baz=45,slow=3.7,SNR=7.0
KIEV Kiev 137.12 323 PFAKE 15 56 20.0 +12
KIEV LR LR
comp=Z,833nm,20.0s,MS5.5
NB2 NORSAR Subarra137.35 344 PKPdf PKPdf 15 55 57.5 -11
comp=Z,6.1nm,1.2s,baz=27,slow=1.8
NOA NORSAR Array B137.35 344 PKP PKPdf 15 56 07.3 -0.7
comp=Z,1.4nm,0.8s,baz=30,slow=2.0,SNR=4.5
NOA SKPbc SKPbc 15 59 38.7 -2.8
comp=Z,1.7nm,0.9s,baz=16,slow=4.3,SNR=3.7
NOA NORSAR Array B137.35 344 PKP PKPdf 15 56 07.3 -0.7
NOA SKPbc SKPbc 15 59 38.7 -2.8
HFS Hagfors 137.45 342 SKPbc SKPbc 15 59 39.6 -2.2
comp=Z,2.6nm,0.8s,baz=149,slow=3.5,SNR=4.2
BR131 Keskin Array S 138.05 306 *e*PKPdf PKPdf 15 56 11.0 +1.0
BR131 LR LR
comp=Z,530nm,20.0s,MS5.3
EIL Elat 138.15 291 PKP PKPdf 15 56 10.0 -0.5
comp=Z,5.7nm,0.9s,baz=39,slow=7.6,SNR=5.3
EIL Elat 138.15 291 PKP PKPdf 15 56 10.0 -0.5
KIS Kishinev 139.02 318 *e*PKIKP PKPdf 15 56 16.0 +4.5
KIS *e* 15 59 10.0
KIS MLR MLR
comp=Z,800nm,22.0s,MS5.4
KIS MLR MLR
comp=Z,600nm,22.0s

LVV L'vov 140.42 325 *e*PKIKP PKPdf 15 56 13.6 -0.4
MLR Muntele Rosu 141.47 318⇓*i*P PKPdf 15 56 13.2 -2.8
MLR Muntele Rosu 141.47 318 ⇓P PKPdf 15 56 13.2 -2.9
KOLS Kolonicke sedl 141.87 324 *e*PKP PKPdf 15 56 17.5 +0.9
UZH Uzhgorod 142.03 324 *de*PKIKP PKPdf 15 56 13.0 -3.9
UZH *e* 15 56 26.0
CRVS Cervenica-Dubn 142.32 325 *e*PKP PKPdf 15 56 14.5 -2.9
OJC Ojcow 142.38 328 *e*PKIKP PKPdf 15 56 21.6 +4.1
NIE Niedzica 142.62 326 *e*PKP PKPdf 15 56 19.5 +1.6
DRGR 142.80 321⇑*i*P PKPdf 15 56 14.1 -4.2
DRGR 142.80 321 P PKPdf 15 56 16.5 -1.9
KDZ Kurdzhali 143.42 312 P PKPdf 15 56 15.8 -3.8
OKC Ostrava-Krasne 143.44 328 *e*PKP PKPdf 15 56 18.9 -0.5
OKC AMS AMS 17 01 10.0
comp=Z,600nm,17.3s
GZR Gura Zlata 143.48 319⇑*i*P PKPdf 15 56 17.8 -1.8
GZR Gura Zlata 143.48 319 P PKPdf 15 56 16.7 -2.9
RDO Rodhopi 143.53 311 *e*P PKPdf 15 56 16.5 -3.4
KSP Ksiaz 143.64 331 *e*PKP PKPdf 15 56 16.2 -3.5
KSP LR LR
comp=Z,2μm,29.9s,MS5.7
PLD Plovdiv 143.73 313 *e*P PKPdf 15 56 16.4 -3.7
PSZ Piszkesteto 143.75 325⇑*e*PKP PKPdf 15 56 18.4 -1.6
PSZ Piszkesteto 143.75 325⇑*i*P PKPdf 15 56 17.8 -2.2
PSZ Piszkesteto 143.75 325 P PKPdf 15 56 19.3 -0.7
PSZ LR LR
comp=Z,1μm,20.0s,MS5.6
MORC Moravsky Berou 143.78 329⇑*i*P PKPdf 15 56 14.1 -5.9
MORC Moravsky Berou 143.78 329 *e*PKPdf PKPdf 15 56 16.5 -3.5
RZN Rozhen 143.89 313 P PKPdf 15 56 17.4 -3.0
PGB Panagyurishte 143.91 314 P PKPdf 15 56 17.8 -2.7
VYHS Vyhne 143.96 326 *e*PKP PKPdf 15 56 17.6 -2.7
DPC Dobruska-Polom 143.97 330 *e*PKP PKPdf 15 56 17.5 -2.8
DPC AMS AMS 16 57 40.0
comp=Z,1μm,25.8s
UPC Upice 144.00 331 *e*PKIKP PKPdf 15 56 17.0 -3.3
BZS Buzias 144.06 320⇓*i*P PKPdf 15 56 19.6 -1.0
BZS Buzias 144.06 320 P PKPdf 15 56 19.7 -0.9
CHOS Chios island 144.09 307 *e*P PKPdf 15 56 18.8 -2.1
LOS Limnos 144.30 310 *e*P PKPdf 15 56 18.5 -2.7
BUD Budapest 144.48 325⇑*e*PKP PKPdf 15 56 20.5 -0.8
VTS Vitosha 144.53 315 P PKPdf 15 56 20.8 -0.7
VTS Vitosha 144.53 315 P PKPdf 15 56 20.0 -1.5
VRAC Vranov 144.55 329 PKP PKPdf 15 56 18.9 -2.4
comp=Z,5.7nm,0.7s,baz=70,slow=6.1,SNR=9.1
VRAC Vranov 144.55 329⇑*i*P PKPdf 15 56 19.6 -1.7
VRAC Vranov 144.55 329 P PKPdf 15 56 21.0 -0.3
EBH Black Hill 144.60 353 *e*P PKPdf 15 56 18.3 -2.9
MMB Musomiste 144.61 313 P PKPdf 15 56 19.4 -2.3
NVR Nevrokopi 144.62 312 *e*P PKPdf 15 56 19.4 -2.4
PVCC Panska Ves 144.63 332 *e*PKP PKPdf 15 56 19.4 -2.0
PVCC AMS AMS 17 02 40.0
comp=Z,1μm,17.5s
BRG Berggiesshubel 144.65 333 *e*PKPbc PKPdf 15 56 19.3 -2.2
BRG Berggiesshubel 144.65 333 *i* PKP PKPdf 15 56 19.3 -2.1
comp=Z,14nm,0.8s
BRG *i* 15 56 20.9
comp=Z,82nm,1.2s
BRG Berggiesshubel 144.65 333 SS SS 16 18 40.0 +15
CLL Collm 144.71 334 *i* PKIKP PKPdf 15 56 19.4 -2.2
CLL pmax pmax
comp=Z,11nm,0.6s
CLL MLR MLR
comp=Z,900nm,24.2s,MS5.5
CLL Collm 144.71 334 *e*PKPbc PKPdf 15 56 19.3 -2.3
CLL Collm 144.71 334 *i* PKPdf PKPdf 15 56 19.4 -2.2
comp=Z,11nm,0.6s
CLL *e*PKPdfmax 15 56 21.0
comp=Z,109nm,1.4s
CLL *e*PP PP 15 59 41.0 +3.0
CLL *e*SS SS 16 18 30.0 +4.4
EAB Aberfoyle 144.74 354 *e*P PKPdf 15 56 19.7 -1.8
MODS Modra-Piesok 144.83 327 *e*PKP PKPdf 15 56 21.0 -0.9
ZKR Zakros 144.85 301 *e*P PKPdf 15 56 21.1 -1.2
NRDL Niedersach Rie 144.87 338 *e*PKPbc PKPdf 15 56 20.2 -1.6
APE Apeiranthos 144.88 305 *e*P PKPdf 15 56 20.0 -2.3
APE Apeiranthos 144.88 305 *e*P PKPdf 15 56 20.8 -1.5
APE Apeiranthos 144.88 305⇓*i*P PKPdf 15 56 21.2 -1.1
KKB Krupnik 144.93 314 P PKPdf 15 56 21.8 -0.4
EAU Auchinoon 144.99 353 *e*P PKPdf 15 56 19.6 -2.3
EBL Broad Law 145.01 352 *e*P PKPbc 15 56 19.4 -1.8
PRU Pruhonice 145.03 331 *e*PKP PKPdf 15 56 20.5 -1.7
PRU *ex* x 16 18 41.5
PRU AMS AMS 16 59 50.0
comp=Z,1μm,20.4s
ZST Bratislava 145.04 327 *e*PKP PKPdf 15 56 21.9 -0.3
ZST LR LR
comp=Z,400nm,19.3s,MS5.2
TREC Trest 145.09 330 *e*PKP PKPdf 15 56 20.6 -1.7
TREC AMS AMS 17 04 10.0
comp=Z,900nm,20.2s
SANT Santorini 145.13 304 *e*P PKPbc 15 56 20.3 -2.0
PGBU Gleniefferbaes 145.13 354 *e*P PKPbc 15 56 18.0 -3.6
THR3 Thira Island, 145.16 304 *e*P PKPbc 15 56 21.0 -1.4
SOH Sokhos 145.18 312 *e*P PKPbc 15 56 20.7 -1.6
THR6 Thira Island, 145.18 304 *e*P PKPbc 15 56 20.2 -2.2
NPS Neapolis 145.29 302 *e*P PKPbc 15 56 22.5 -0.4
PLG Polygyros 145.29 311 *e*P PKPbc 15 56 20.6 -2.1
PLG Polygyros 145.29 311 *e*P PKPbc 15 56 22.7 0.0
PAIG Paliouri 145.30 310 *e*P PKPbc 15 56 20.9 -1.8
CLZ Clausthal 145.31 337 *e*PKPbc PKPbc 15 56 22.0 -0.3
KNT Kendrikon 145.35 313 *e*P PKPbc 15 56 21.2 -1.7
HORT Hortiatis 145.45 312 *e*P PKPbc 15 56 21.1 -2.1
PKSM Moragy 145.45 323⇑*i*P PKPbc 15 56 22.4 -0.6
PKSM Moragy 145.45 323 P PKPbc 15 56 22.4 -0.5
EKA Eskdalemuir Ar 145.45 352 PKPbc PKPbc 15 56 20.8 -1.9
comp=Z,22nm,0.6s,baz=352,slow=2.3,SNR=66
ESK Eskdalemuir 145.47 352 *e*P PKPdf 15 56 20.8 -1.9
ESK Eskdalemuir 145.47 352 *e*PKPdf PKPdf 15 56 20.9 -1.8
VAY Valandovo 145.51 313 *e*P PKPdf 15 56 20.2 -3.0
VAY Valandovo 145.51 313 *e*PKP PKPdf 15 56 21.0 -2.3
THE Thessaloniki 145.53 312 *e*P PKPdf 15 56 21.4 -1.9
ECK Cauldkaine Hil 145.60 352 *e*P PKPdf 15 56 19.5 -3.5
TANN Tannenbergstha 145.62 334 *e*PKPbc PKPbc 15 56 23.1 -0.3
NKC Novy Kostel 145.76 333 *e*PKP PKPdf 15 56 22.8 -0.6
NKC AMS AMS 17 04 20.0
comp=Z,1μm,20.3s
NKC Novy Kostel 145.76 333 *e*PKP PKPdf 15 56 22.8 -0.6
GRG Griva 145.78 313 *e*P PKPdf 15 56 23.9 +0.2
MOX Moxa 145.78 335 *e*PKP PKPdf 15 56 22.6 -0.8
MOX *e* 15 56 25.3
comp=Z,277nm,2.0s
MOX
comp=Z,500nm,21.0s
MOX Moxa 145.78 335 *e*PKPbc PKPbc 15 56 23.5 -0.4
IBBN Ibbenburen 145.82 340 *e*PKPbc PKPbc 15 56 23.1 -0.8
PTL Penteli 145.84 307 *e*P PKPdf 15 56 23.0 -0.9
CONA Conrad Observa 145.84 328⇑*i*P PKPdf 15 56 24.3 +0.7
comp=Z,109nm,1.3s,SNR=60
CSNA Conrad Observa 145.84 328⇑*i*P PKPdf 15 56 24.2 +0.6
comp=Z,98nm,1.2s
DIVS Divibare 145.85 319 *e*P PKPdf 15 56 22.8 -0.9
IDI Anoyia 145.86 302 PKPbc PKPbc 15 56 25.3 +0.6
comp=Z,20nm,0.8s,baz=110,slow=7.7,SNR=14
NEO Neokhori 145.86 310 *e*P PKPdf 15 56 24.3 +0.4
XOR Xorichti 145.86 310 *e*P PKPdf 15 56 22.6 -1.4
ATH Athens Observa 145.97 307 *e*P PKPdf 15 56 23.3 -0.8
SKO Skopje 145.98 315 *e*P PKPdf 15 56 24.5 +0.5
SKO Skopje 145.98 315 *e*PKP PKPdf 15 56 23.4 -0.7
LIT Litokhoron 146.07 311 *e*P PKPdf 15 56 23.1 -1.1
GAL1 Galloway 146.09 354 *e*P PKPdf 15 56 21.7 -2.1
KHC Kasperske Hory 146.09 331 *e*PKIKP PKPdf 15 56 23.1 -0.9
KHC *e* 15 56 30.0
KHC MLR MLR
comp=Z,1μm,24.3s,MS5.6
KHC Kasperske Hory 146.09 331 *e*PKP PKPdf 15 56 23.1 -0.9
KHC *ep*PKP pPKPdf 15 56 30.0 +2.6
KHC *ex* x 16 18 55.5
KHC AMS AMS 16 59 30.0
comp=Z,1μm,24.3s
MANZ Manzenberg 146.09 333 *e*PKPbc PKPbc 15 56 24.3 -0.5
ROTZ Rotzenmuhle 146.21 333 *e*PKPbc PKPbc 15 56 25.2 0.0
GEC2 GERESS Array S 146.24 331 *e*PKPbc PKPbc 15 56 24.8 -0.5
GEC2 GERESS Array S 146.24 331 *e*PKPdf PKPdf 15 56 24.3 0.0
GERES GERESS Array B 146.24 331 PKPbc PKPbc 15 56 24.6 -0.7
comp=Z,5.5nm,0.6s,baz=42,slow=2.2,SNR=48
GERES SKPbc SKPbc 16 00 03.9 -0.7
comp=Z,1.5nm,0.8s,baz=42,slow=2.2,SNR=4.9
LKR Lokris 146.26 309 *e*P PKPdf 15 56 24.6 0.0
LKR Lokris 146.26 309 *e*P PKPdf 15 56 25.2 +0.6
UBBA Unterbreizbach 146.27 336 *e*PKPbc PKPbc 15 56 25.0 -0.4
VAM Vamos 146.37 302 *e*P PKPbc 15 56 27.0 +0.8

KRUS Krusevo 146.38 314 *e*PKP PKPdf 15 56 24.7 -0.1
WET Wettzell 146.39 332 *e*PKPbc PKPbc 15 56 25.4 -0.4
WTSB Winterswijk 146.42 340 *e*PKP PKPdf 15 56 20.7 -3.7
comp=Z,159nm,2.1s
ARSA Arzberg 146.46 327⇑*i*P PKPdf 15 56 24.2 -0.5
comp=Z,40nm,2.2s,SNR=8.9
DID Didima 146.49 307 *e*P PKPdf 15 56 23.7 -1.3
KZN Kozani 146.49 312 *e*P PKPdf 15 56 25.8 +0.8
LTK Loutraki 146.51 308 *e*P PKPdf 15 56 25.8 +0.7
FNA Florina 146.56 310 *e*P PKPdf 15 56 25.0 -0.1
AGG Agios Georgios 146.61 310 *e*P PKPdf 15 56 24.9 -0.3
KOGS Kog 146.61 325 *e*PKPdf PKPdf 15 56 24.5 -0.4
THL Klokotos Trika 146.62 311 *e*P PKPdf 15 56 24.1 -1.1
GIM North Isle of 146.63 353 *e*P PKPdf 15 56 24.0 -0.7
GRF Grafenberg Arr 146.68 334 *e*PKPbc PKPbc 15 56 26.2 -0.4
GRF *e*SS SS 16 19 03.1 +15
GRF *e*L 17 02 20.5
comp=Z,585nm,21.7s
BUG Bochum--Univer 146.72 339 *e*PKPbc PKPbc 15 56 26.1 -0.5
WIM Isle of Man 146.79 354 *e*P PKPdf 15 56 26.6 +1.6
OHR Ohrid 146.80 314 *e*PKP PKPdf 15 56 22.8 -2.6
PUK Puka 146.96 316 *e*PN PKPdf 15 56 28.4 +2.7
VLI Veliai 146.97 305 *e*P PKPdf 15 56 24.3 -1.6
LHO Holmfirth 147.01 350 *e*P PKPdf 15 56 27.0 +1.6
EVR Evrytania 147.03 310 *e*P PKPdf 15 56 20.6 -5.3
KBN Korca 147.03 313 *e*PN PKPdf 15 56 28.5 +2.6
PERS Pernice 147.08 327 *e*PKPdf PKPdf 15 56 25.4 -0.4
SOKA Soboth 147.10 327⇑*i*P PKPdf 15 56 23.6 -2.2
comp=Z,41nm,1.5s
SISC Sisak 147.16 324 P PKPdf 15 56 25.4 -0.6
VLX Vlachokerasia 147.17 307 *e*P PKPdf 15 56 28.1 +1.9
KBI1 Birley Grange 147.24 350 *e*P PKPdf 15 56 26.8 +1.0
GCIS Gornji Cirnik 147.31 325 *e*PKPdf PKPdf 15 56 26.4 +0.3
TIR Tirane 147.31 315 *e*PN PKPdf 15 56 28.0 +1.7
TIR Tirane 147.31 315 *e*PKPab PKPbc 15 56 28.5 -0.2
TNS Taunus Mts 147.34 337 *e*PKPbc PKPbc 15 56 28.4 0.0
JAN Janina 147.41 311 *e*P PKPdf 15 56 28.5 +2.0
WME Myndd Eilian 147.49 353 *e*P PKPbc 15 56 28.5 -0.3
KWE Weaver Farm 147.52 350 *e*P PKPdf 15 56 27.8 +1.6
ITM Ithomi 147.58 307 *e*P PKPdf 15 56 28.2 +1.3
WPM1 Penmaenmawr 147.58 352 *e*P PKPbc 15 56 28.8 -0.2
RLS Riolos of Patr 147.60 308 *e*P PKPbc 15 56 29.4 +2.5
YRC Rhoscolyn 147.66 353 *e*P PKPbc 15 56 27.3 +0.8
KBA Koelnbreinsper 147.66 329⇓*i*P PKPdf 15 56 28.7 +2.0
comp=Z,41nm,1.2s,SNR=8.9
CWF Charnwood Fore 147.70 349 *e*P PKPdf 15 56 27.7 +1.2
YLL Llanberis 147.72 353 *e*P PKPbc 15 56 28.9 -0.5
HGN Heimansgroeve 147.73 340 *e*PKP PKPdf 15 56 25.1 -1.6
comp=Z,132nm,1.7s
BOJS Bojanci 147.75 325 *e*PKPdf PKPdf 15 56 27.5 +0.6
LJU Ljubljana 147.78 326 *e*PKPdf PKPdf 15 56 27.0 0.0
BEBN Eben Emael 147.79 340 PKPbc PKPbc 15 56 30.7 +1.1
DLF Lyons Farm 147.80 355⇑*i*P PKPdf 15 56 27.9 +1.2
DCN Croghan 147.81 356⇑*i*P PKPdf 15 56 28.1 +1.4
IGT Igoumenitsa 147.82 312 *e*P PKPdf 15 56 29.1 +1.9
MEM Membach 147.84 340 PKPbc PKPbc 15 56 30.1 +0.3
SRN Sarande 147.90 312 *e*PN PKPdf 15 56 22.3 -5.0
STON Ston 147.91 319 P PKPdf 15 56 22.3 -5.0
LKD Levkas 147.94 310 *e*P PKPbc 15 56 30.3 -0.2
VOY Vojsko 148.12 327 *e*PKPdf PKPbc 15 56 28.6 -2.1
VOY *e* 15 56 32.3
VOY *e* 15 56 38.5
VOY *e* 15 56 47.8
VOY *e* 15 57 00.2
UCC Uccle 148.18 342 PKP PKPdf 15 56 26.7 -0.7
UCC PKPbc PKPbc 15 56 30.7 0.0
VLS Valsamata 148.19 309 *e*P PKPbc 15 56 30.3 -0.8
STU Stuttgart 148.23 335 *e*PKPbc PKPbc 15 56 30.4 -0.5
STU Stuttgart 148.23 335 *e*PKPab PKPbc 15 56 31.5 +0.6
BCLA Clavier 148.23 340 PKPbc PKPbc 15 56 30.9 +0.1
ABTA Abfaltersbach 148.30 329⇑*i*P PKPdf 15 56 27.3 -0.5
comp=Z,27nm,1.4s,SNR=6.0
SNF Seneffe 148.46 342 PKPbc PKPbc 15 56 32.7 +1.3
MOTA Mooslm 148.52 331⇑*i*P PKPdf 15 56 26.5 -1.6
comp=Z,36nm,1.0s,SNR=7.4
NVLJ Novalja 148.56 324 P PKPdf 15 56 26.9 -1.4
RETA Reutte 148.57 332⇓*i*P PKPbc 15 56 30.3 -1.5
comp=Z,40nm,1.6s,SNR=9.0
RETA Reutte 148.57 332⇓*i*pPKPdf PKPbc 15 56 30.3 -1.5
comp=Z,40nm,1.6s,SNR=9.0
LANF Langenberg 148.60 336 PKP PKPbc 15 56 31.9 +0.1
WLF Walferdange 148.61 339 PKP PKPdf 15 56 29.1 +0.9
WLF Walferdange 148.61 339 *e*PKPbc PKPbc 15 56 31.6 -0.3
WLF Walferdange 148.61 339 *e*PKPdf PKPdf 15 56 28.7 +0.6
GIVF Givet 148.66 341 *e*PKP1 PKPbc 15 56 29.7 -2.3
MCH1 Michaelchurch 148.69 351 *e*P PKPdf 15 56 29.3 +1.1
DOU Dourbes 148.74 341 PKPbc PKPbc 15 56 31.0 -1.2
BAIF Baives 148.88 341 *e*PKP1 PKPbc 15 56 30.5 -2.0
comp=Z,112nm,1.2s
BFO Black Forest 148.93 335 *e*PKPbc PKPbc 15 56 32.5 -0.2
BFO LR LR
comp=Z,880nm,20.0s,MS5.5
FETA Feichten 148.93 331⇑*i*P PKPbc 15 56 32.1 -0.6
comp=Z,45nm,1.1s,SNR=9.0
SWN1 Swindon 148.96 349 *e*P PKPbc 15 56 31.8 -0.8
DAVA Damuels 149.11 332⇓*i*P PKPbc 15 56 31.2 -2.0
comp=Z,73nm,1.4s,SNR=11
DAVA Damuels 149.11 332⇓*i*pPKPdf PKPbc 15 56 31.2 -2.0
comp=Z,73nm,1.4s,SNR=11
CDF Champ du Feu 149.26 336 *e*PKP1 PKPbc 15 56 31.1 -2.5
comp=Z,221nm,1.6s
ECH Echery 149.47 336 PKP PKPbc 15 56 32.3 -1.8
ECH Echery 149.47 336 *e*PKPbc PKPbc 15 56 32.7 -1.4
DAVOX Davos/Dischmat 149.50 332 PKPbc PKPbc 15 56 33.5 -0.7
comp=Z,14nm,0.6s,baz=340,slow=4.0,SNR=19
MOF Molkenrain 149.78 336 PKP PKPdf 15 56 32.5 +2.4
HINF Hinteralfeld 149.91 336 *e*PKP1 PKPbc 15 56 32.7 -2.5
comp=Z,276nm,1.9s
HAU Haudompre 149.95 337 *e*PKP1 PKPbc 15 56 32.8 -2.4
comp=Z,170nm,1.4s
HAU *e*MLR MLR
comp=Z,829nm,20.2s,MS5.2
HAU Haudompre 149.95 337 *e*PKP PKPbc 15 56 32.8 -2.4
HAU LR LR
comp=Z,830nm,20.3s,MS5.5
TUE Stuetta 149.97 332 *e*PKPbc PKPbc 15 56 34.5 -0.9
MEZF Maizieres J'vi 149.98 339 *e*PKP1 PKPbc 15 56 33.3 -2.0
comp=Z,352nm,1.4s
LOMF Lomont 150.31 336 PKP PKPdf 15 56 33.0 +2.0
DYA Yadsworthy 150.34 351 *e*P PKPbc 15 56 34.4 -1.7
TIP Timpagrande 150.44 313 *e*PKPdf PKPdf 15 56 31.9 +0.4
CSA1 St Austell 150.55 352 *e*P PKPbc 15 56 35.0 -1.6
CUC Castrocucco 150.66 316 *e*PKPdf PKPdf 15 56 30.4 -1.4
CUC LR LR
comp=Z,1μm,20.0s,MS5.7
CCA1 Carnmenellis 150.75 353 *e*P PKPbc 15 56 34.5 -2.6
CABF La Chapelle 151.21 336 *e*PKP1 PKPbc 15 56 36.2 -2.1
comp=Z,204nm,1.3s
FLN La Foliniere 151.31 346 *e*PKP1 PKPbc 15 56 35.5 -3.0
comp=Z,143nm,1.2s
FLN *e*MLR MLR
comp=Z,1μm,21.2s,MS5.4
FLN La Foliniere 151.31 346 *e*PKP PKPdf 15 56 35.5 +3.0
FLN LR LR
comp=Z,1μm,21.3s,MS5.7
LDF La Druitiere 151.39 345 *e*PKP1 PKPbc 15 56 35.6 -3.0
comp=Z,256nm,1.7s
LOR Lormes 151.45 339 *e*PKP1 PKPbc 15 56 36.2 -2.6
comp=Z,303nm,1.7s
LOR *e*MLR MLR
comp=Z,916nm,23.0s,MS5.2
LOR Lormes 151.45 339 *e*PKP PKPdf 15 56 36.2 +3.5
LOR LR LR
comp=Z,920nm,23.0s,MS5.5
CEL Celeste 151.48 312 PFAKE 15 56 40.0 +6.9
CEL LR LR
comp=Z,31μm,22.0s
SSF Saint Saulge 151.75 339 *e*PKP1 PKPbc 15 56 37.0 -2.5
comp=Z,183nm,1.4s
GRR Gorron 151.75 346 *e*PKP1 PKPbc 15 56 36.6 -2.9
comp=Z,143nm,1.1s
HYF Humbligny 151.84 341 *e*PKP1 PKPbc 15 56 37.6 -2.1
LPL La Plagne 151.84 334 *e*PKP1 PKPbc 15 56 37.8 -2.0
comp=Z,101nm,1.1s
LPG La Plagne 151.85 333 *e*PKP1 PKPbc 15 56 37.9 -1.9
comp=Z,89nm,1.1s
SMF Signal de Mont 152.00 338 *e*PKP1 PKPbc 15 56 37.3 -2.8
comp=Z,496nm,1.8s
AVF Avril sur Loir 152.04 339 *e*PKP1 PKPbc 15 56 37.4 -2.8
comp=Z,414nm,1.8s
SGMF Saint Gilles 152.23 348 *e*PKP1 PKPbc 15 56 37.5 -3.1
comp=Z,288nm,1.4s
BNI Bardonecchia 152.24 333 *e*PKIKP PKPdf 15 56 34.4 +0.4

BNI				MLR	MLR			
	comp=Z,865nm,20.0s,MS5.6							
ROSF	**Rostrenen**	**152.28**	**349**	*e*PKP1	PKPbc	15 56 37.5	-3.2	
	comp=Z,150nm,1.3s							
BGF	**Bois d'Agland**	**152.41**	**340**	*e*PKP1	PKPbc	15 56 38.3	-2.7	
MBDF	**Montbardon**	**152.46**	**332**	*e*PKP1	PKPbc	15 56 38.7	-2.5	
PLDF	**La Plantade**	**152.66**	**338**	PKP	PKPbc	15 56 42.2	+0.6	
QUIF	**Quistinic**	**152.67**	**349**	*e*PKP1	PKPbc	15 56 38.4	-3.2	
	comp=Z,126nm,1.4s							
ORIF	**Oris-en-Rattie**	**152.68**	**334**	*e*PKP1	PKPbc	15 56 39.2	-2.5	
	comp=Z,38nm,0.8s							
ORIF				*e*MLR	MLR			
	comp=Z,1µm,21.2s,MS5.4							
AGO	**Saint Agoulin**	**152.76**	**339**	PKP	PKPbc	15 56 42.0	+0.2	
SBF	**Sospel**	**152.84**	**330**	*e*PKP1	PKPbc	15 56 39.2	-2.9	
	comp=Z,55nm,0.8s							
TCF	**Toulx Ste Croi**	**152.85**	**340**	*e*PKP1	PKPbc	15 56 39.3	-2.7	
	comp=Z,294nm,1.7s							
SSB	**Saint Sauveur**	**152.91**	**336**	*e*PKIKP	PKPdf	15 56 35.2	+0.2	
PGF	**Pioggiola**	**153.06**	**327**	*e*PKP1	PKPbc	15 56 39.9	-2.7	
	comp=Z,61nm,1.0s							
PYM	**Petit Puy Mans**	**153.06**	**339**	PKP	PKPbc	15 56 41.1	-1.4	
VIVF	**Saint-Julien-l**	**153.22**	**335**	*e*PKP1	PKPbc	15 56 40.3	-2.6	
MFF	**Saint Martin d**	**153.25**	**344**	*e*PKP1	PKPbc	15 56 40.2	-2.7	
LBL	**Lubilhac**	**153.43**	**338**	PKP	PKPbc	15 56 44.3	+1.0	
FRF	**La Foret Royal**	**153.44**	**331**	*e*PKP1	PKPbc	15 56 40.5	-2.9	
	comp=Z,89nm,1.5s							
SMRF	**Simiane la Rot**	**153.57**	**333**	*e*PKP1	PKPbc	15 56 41.4	-2.3	
	comp=Z,132nm,1.8s							
LMR	**La Mourre**	**153.68**	**331**	*e*PKP1	PKPbc	15 56 41.1	-2.8	
	comp=Z,198nm,1.8s							
RJF	**Les Rejaudoux**	**153.95**	**340**	*e*PKP1	PKPbc	15 56 41.7	-2.8	
	comp=Z,238nm,1.7s							
RJF				*e*MLR	MLR			
	comp=Z,1µm,20.8s,MS5.5							
RJF	**Les Rejaudoux**	**153.95**	**340**	*e*PKP	PKPbc	15 56 41.7	-2.8	
RJF				LR	LR			
	comp=Z,1µm,20.8s,MS5.8							
CAF	**Calviac**	**154.10**	**339**	*e*PKP1	PKPbc	15 56 42.3	-2.5	
LASF	**Ste Croix**	**154.19**	**335**	*e*PKP1	PKPbc	15 56 42.5	-2.5	
LFF	**La Frestale**	**154.52**	**341**	*e*PKP1	PKPbc	15 56 42.9	-2.8	
	comp=Z,205nm,1.5s							
MTLF	**Montolieu**	**155.44**	**337**	*e*PKP1	PKPdf	15 56 43.7	+5.1	
EPF	**Esparros**	**156.36**	**340**	*e*PKP1	PKPdf	15 56 37.3	-2.5	
KEST	**Kesra**	**157.27**	**314**	PKPab	PKPab	15 57 11.5	-0.7	
	comp=Z,1.6nm,0.8s,baz=247,slow=6.1,SNR=4.8							
PVRL	**Vila Real**	**159.83**	**353**	*e*PKPab	PKPab	15 57 22.0	-1.0	
MVO	**Moncorvo**	**159.86**	**352**	*e*PKPab	PKPab	15 57 23.6	+0.5	
PVIS	**Viseu**	**160.40**	**354**	*e*PKPab	PKPab	15 57 25.1	-0.4	
MTE	**Manteigas**	**160.68**	**353**	*e*PKPab	PKPab	15 57 26.4	-0.3	
ESDC	**Sonseca Array**	**160.71**	**344**	PKPab	PKPab	15 57 26.1	-0.8	
	comp=Z,4.9nm,0.9s,baz=38,slow=2.5,SNR=13							
ESLA	**Sonseca Array**	**160.71**	**344**	PFAKE		15 57 00.0	+15	
ESLA				LR	LR			
	comp=Z,4µm,20.0s							
PMRV	**Marv??o**	**161.62**	**352**	*e*PKPab	PKPab	15 57 28.6	-2.2	
PESTR	**Estremoz**	**162.19**	**352**	*e*PKPab	PKPab	15 57 28.0	-5.4	
PBAR	**Barrancos**	**162.79**	**350**	*e*PKPab	PKPab	15 57 36.1	+0.1	
PVAQ	**Vaqueiros**	**163.65**	**352**	*e*PKPab	PKPab	15 57 41.2	+1.4	
MORF	**Marmelete**	**163.85**	**354**	*e*PKPab	PKPab	15 57 42.9	+2.2	
LIC	**Lamto**	**164.13**	**201**	*e*PKIKP	PKPdf	15 56 47.2	-2.2	
	comp=Z,40nm,1.4s							
LIC				*e*MLR	MLR			
	comp=Z,2µm,20.2s							
LIC	**Lamto**	**164.13**	**201**	*e*P	PKPab	15 57 42.1	-0.4	
	comp=Z,110nm,1.3s							
LIC	**Lamto**	**164.13**	**201**	*e*PKPdf	PKPdf	15 56 47.2	-2.2	
LIC				LR	LR			
	comp=Z,1µm,20.3s							
KIC	**Kosan Boka**	**164.16**	**202**	*e*P	PKPab	15 57 42.3	-0.3	
	comp=Z,287nm,1.6s							
DBIC	**Dimbokro**	**164.49**	**202**	PKPab	PKPab	15 57 44.2	+0.2	
	comp=Z,15nm,0.9s,baz=138,slow=5.6,SNR=8.0							
DBIC	**Dimbokro**	**164.49**	**202**	PFAKE		15 57 00.0	+10	
DBIC				LR	LR			
	comp=Z,1µm,19.0s							
TIC	**Toumodi**	**164.52**	**202**	*e*P	PKPab	15 57 44.0	-0.2	
	comp=Z,216nm,1.3s							
TAM	**Tamanrasset**	**164.88**	**279**	*e*PKIKP	PKPdf	15 56 51.3	+1.6	
TOA0	**Torodi Ar. Sit**	**165.72**	**238**	*e*PKPdf	PKPdf	15 56 49.9	-0.8	
TORD	**Torodi Ar. Bea**	**165.72**	**238**	PKP	PKPdf	15 56 48.9	-1.8	
	comp=Z,1.7nm,0.8s,baz=22,slow=1.4,SNR=10.0							
TORD				PKPab	PKPab	15 57 48.2	-1.5	
	comp=Z,2.6nm,1.0s,baz=139,slow=3.0,SNR=4.3							
TORD				PP	PP	16 01 33.6	-2.9	
	comp=Z,3.3nm,1.1s,baz=96,slow=4.8,SNR=7.4							
TORD	**Torodi Ar. Bea**	**165.72**	**238**	PKP	PKPdf	15 56 48.9	-1.8	
TORD				PKPab	PKPab	15 57 48.2	-1.5	
TORD				PP	PP	16 01 33.6	-2.9	
MDT	**Midelt**	**167.23**	**336**	PKP	PKPdf	15 56 52.6	+1.2	
	comp=Z,1.8nm,0.9s,baz=49,slow=2.2,SNR=5.2							
MDT				PKPab	PKPab	15 57 56.3	+0.6	
	comp=Z,2.0nm,0.7s,baz=23,slow=7.4,SNR=7.0							

*NEIC **29** 15:40:44.2, 29.13S×7120W, h66km, MD3.9(GUC), After GUC.*

GUC 29 15:40:44.2±0.7, 2913S×7120W, h66km±6km, ML3.9, 5C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.45**	**75**	*e*Pn	Pn	15 40 56.7	+0.5
LCO				*e*Sn	Sn	15 41 06.4	+1.5
VACH	**Vallenar**	**0.67**	**35**	⇓*i*P	Pn	15 40 58.9	+0.4
VACH				*i* S	Sn	15 41 09.5	+0.6
VACH				AML	AML	15 41 09.9	
	comp=N,16µm,0.1s						
VACH	**Vallenar**	**0.67**	**35**	⇓*i*P	Pn	15 40 58.9	+0.4
VACH				*i* S	Sn	15 41 09.5	+0.6
LSCH	**La Serena**	**0.78**	**183**	⇑*i*P	Pn	15 41 00.0	+0.3
LSCH				*i* S	Sn	15 41 11.9	+0.7
TLL	**Tololo Astrono**	**1.09**	**162**	⇑*i*P	Pn	15 41 04.8	+1.2
TLL				*i* S	Sn	15 41 20.2	+2.1
TLL				AML	AML	15 41 21.3	
	comp=E,1µm,0.3s						
TLL	**Tololo Astrono**	**1.09**	**162**	⇑*i*P	Pn	15 41 04.8	+1.2
TLL				*i* S	Sn	15 41 20.2	+2.1
OVCH	**Ovalle**	**1.47**	**180**	*e*P	Pn	15 41 08.8	+0.2
OVCH				*i* S	Sn	15 41 27.3	+0.2
OVCH				AML	AML	15 41 28.5	
	comp=N,733nm,0.3s						
OVCH	**Ovalle**	**1.47**	**180**	*e*P	Pn	15 41 08.8	+0.2
OVCH				*i* S	Sn	15 41 27.3	+0.2
CHNG	**Los Chungos**	**2.76**	**185**	⇑*i*P	Pn	15 41 25.6	-0.4
CHNG				*i* S	Sn	15 41 57.6	-0.6
PEL	**Peldehue**	**4.03**	**174**	⇓*i*P	Pn	15 41 44.1	+0.7
PEL				*i* S	Sn	15 42 29.8	+0.6
PEL				AML	AML	15 42 52.5	
	comp=E,130nm,0.3s						
FCH	**Farellones**	**4.26**	**170**	*e*P	Pn	15 41 47.5	+1.0
FCH				*i* S	Sn	15 42 36.2	+1.3
FCH				AML	AML	15 43 04.9	
	comp=E,44nm,0.2s						
RCDM	**Rinconada Maip**	**4.36**	**176**	*e*P	Pn	15 41 48.6	+0.7
RCDM				*i* S	Sn	15 42 37.2	-0.2
RCDM				AML	AML	15 42 39.4	
	comp=E,70nm,0.1s						
RCDM	**Rinconada Maip**	**4.36**	**176**	*e*P	Pn	15 41 48.6	+0.7
RCDM				*i* S	Sn	15 42 37.2	-0.2
PCH	**Pirque**	**4.52**	**173**	*e*P	Pn	15 41 51.1	+1.0
TACH	**Talagante**	**4.52**	**177**	⇑*i*P	Pn	15 41 50.6	+0.6
LMEL	**Las Melosas**	**4.78**	**170**	*e*P	Pn	15 41 55.1	+1.4
LMEL				*e*S	Sn	15 42 48.4	+0.7
LMEL				AML	AML	15 42 51.2	
	comp=N,49nm,0.5s						
LMEL	**Las Melosas**	**4.78**	**170**	*e*P	Pn	15 41 55.1	+1.4
LMEL				*e*S	Sn	15 42 48.4	+0.7

*ISCJB **29** 15:43:21.6±0.5, 5143N±003×16.13E±003, h0km, Error ellipse: s-maj=3.9km s-min=2.1km az=21.5*
*NEIC **29** 15:43:22.6±0.4, 5156N×1622E, h10km, ML2.8(BRA), ML2.9(SZGRF), Error ellipse: s-maj=5.6km s-min=4.2km az=223.0*
*IPEC **29** 15:43:22.3±0.3, 5156N×1621E, h0km, ML2.5/4, Error ellipse: s-maj=2.1km s-min=1.3km az=23.0*
*IDC **29** 15:43:23.8±1.0, 5151N×1600E, h0km, mb1 3.5/5, mb1mx3.3/25, mbtmp3.3/5, ML3.2/5, Error ellipse: s-maj=19.5km s-min=8.3km az=94.0*
*CSEM **29** 15:43:24.3±0.2, 5145N×1609E, h4km, ML3.3/10, Error ellipse: s-maj=3.3km s-min=1.8km az=26.0*

*PRU **29** 15:43:24.6, 5143N×1608E, h0km*
*WAR **29** 15:43:24, 5147N×1610E, ML2.8, Mining Induced*
*VIE **29** 15:43:25.5±0.5, 51.30N×16.12E, h0km, mb2.5/4, ML2.9/4, Error ellipse: s-maj=2.8km s-min=2.6km az=172.0 66 km WNW of Breslau Suspected Mining induced.*

ISC 29 15:43:22.5±0.4, 5150N±002×1612E±003, h0km, n51, σ0§93/98, 3C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**170**	*e*Pg	Pg	15 43 36.3	+1.0
KSP				*e*Sg	Sg	15 43 45.9	+2.0
KSP	**Ksiaz**	**0.67**	**170**	⇓*i*Pg	Pg	15 43 36.2	+0.9
KSP				*e*Sg	Sg	15 43 44.6	+0.6
KSP	**Ksiaz**	**0.67**	**170**	⇓*i*Pg	Pg	15 43 36.2	+0.9
KSP				*e*Sg	Sg	15 43 44.6	+0.6
KSP				*e*		15 43 50.3	
UPC	**Upice**	**1.00**	**184**	*e*PG	Pg	15 43 42.2	+0.6
DPC	**Dobruska-Polom**	**1.16**	**174**	*e*PG	Pg	15 43 45.0	+0.3
DPC				*e*SG	Sg	15 43 59.6	-0.1
	comp=Z,38nm,0.4s						
PVCC	**Panska Ves**	**1.38**	**226**	*e*PG	Pg	15 43 49.2	+0.2
PVCC				*e*SG	Sg	15 44 07.3	+0.5
	comp=Z,196nm,0.2s						
BRG	**Berggiesshubel**	**1.51**	**246**	PN	Pn	15 43 50.3	-0.4
BRG				PG	Pg	15 43 51.9	+0.5
BRG				SG	Sg	15 44 11.3	+0.4
	comp=Z,87nm,0.3s						
RUE	**Ruedersdorf**	**1.75**	**305**	*e*Pn	Pn	15 43 52.6	-1.4
RUE				*e*Sn	Sn	15 44 17.8	+0.9
RUE	**Ruedersdorf**	**1.75**	**305**	*e*Pn	Pn	15 43 52.6	-1.4
RUE				*e*Sn	Sn	15 44 17.8	+0.9
PRU	**Pruhonice**	**1.82**	**214**	*e*PN	Pn	15 43 55.0	0.0
PRU				*e*PG	Pg	15 43 56.8	-0.5
PRU				*e*SG	Sg	15 44 19.1	-1.7
	comp=Z,30nm,0.4s						
RAC	**Raciborz**	**1.94**	**136**	*e*Pg	Pg	15 44 00.2	+0.6
RAC				*e*Sg	Sg	15 44 24.4	-0.3
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Pn	Pn	15 43 57.1	+0.3
MORC				*e*Sn	Sn	15 43 57.4	-1.4
MORC				*e*Sg	Sg	15 44 23.8	-1.3
	comp=Z,25nm,0.4s						
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Pn	Pn	15 43 56.8	-0.1
MORC				*e*Sn	Sn	15 44 23.4	+1.5
CLL	**Collm**	**1.96**	**266**	*i* Pn	Pn	15 43 56.7	-0.3
CLL				*e*Pg	Pg	15 43 59.0	-1.1
CLL				*ex*	x	15 44 02.0	
CLL				*e*(Sn)	Sn	15 44 15.0	-7.2
CLL				*e*Sg	Sg	15 44 26.0	+0.5
	comp=Z,29nm,0.5s						
CLL	**Collm**	**1.96**	**266**	*i* Pn	Pn	15 43 56.7	-0.3
CLL				*e*Pg	Pg	15 43 59.0	-1.1
CLL				*e*Sg	Sg	15 44 26.0	+0.5
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*Pg	Pg	15 44 02.6	-0.3
OKC				*e*Sg	Sg	15 44 29.1	-1.1
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*PG	Pg	15 44 02.6	-0.3
OKC				*e*SG	Sg	15 44 29.0	-1.2
VRAC	**Vranov**	**2.22**	**172**	Pn	Pn	15 44 01.9	+1.4
	comp=Z,3.2nm,0.3s,baz=355,slow=15,SNR=5.1						
VRAC				Lg		15 44 32.8	
	comp=Z,5.8nm,0.3s,baz=260,slow=23,SNR=7.6						
VRAC	**Vranov**	**2.22**	**172**	Pn	Pn	15 44 01.9	+1.4
VRAC				*e*Sg	Sg	15 44 33.0	-0.7
	comp=Z,18nm,0.3s						
TREC	**Trest**	**2.25**	**191**	*e*PN	Pn	15 44 01.7	+0.8
TREC				*e*PG	Pg	15 44 04.8	-0.7
KRUC	**Moravsky**	**2.45**	**176**	*e*Pn	Pn	15 44 04.6	+0.9
KRUC				*e*Sg	Sg	15 44 40.8	-0.3
	comp=Z,20nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**243**	*e*PN	Pn	15 44 07.4	+1.0
NKC				*e*PG	Pg	15 44 12.3	-1.0
NKC				*e*SG	Sg	15 44 47.9	+0.3
	comp=Z,46nm,0.3s						
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	Pg	15 44 13.8	+0.3
OJC				*e*Sg	Sg	15 44 49.3	+1.3
JAVC	**Velka Javorina**	**2.83**	**159**	*e*Sg	Sg	15 44 54.3	+1.0
	comp=Z,24nm,0.7s						
KHC	**Kasperske Hory**	**2.88**	**215**	*e*PN	Pn	15 44 10.4	+0.8
KHC				*e*PG	Pg	15 44 16.1	-1.5
KHC				*e*SN	Sn	15 44 44.3	-0.5
KHC				*e*SG	Sg	15 44 52.8	-2.1
	comp=Z,15nm,0.4s						
MOX	**Moxa**	**2.97**	**255**	*e*PN	Pn	15 44 11.2	+0.4
MOX				*e*PG	Pg	15 44 19.7	+0.4
MOX				*e*SG	Sg	15 44 59.4	+1.6
GEC2	**GERESS Array S**	**3.08**	**211**	*e*Pn	Pn	15 44 13.9	+1.6
GERES	**GERESS Array B**	**3.08**	**211**	Pn	Pn	15 44 13.2	+0.9
	comp=Z,1.4nm,0.3s,baz=26,slow=12,SNR=34						
GERES				Pg	Pg	15 44 19.7	-1.8
	comp=Z,3.8nm,0.3s,baz=28,slow=17,SNR=38						
GERES				Lg		15 44 59.8	
	comp=Z,5.2nm,0.3s,baz=27,slow=29,SNR=11						
GERES	**GERESS Array B**	**3.08**	**211**	Pg	Pg	15 44 19.7	-1.8
WET	**Wettzell**	**3.14**	**223**	*e*Pn	Pn	15 44 13.6	+0.4
MODS	**Modra-Piesok**	**3.22**	**166**	*e*Pg	Pg	15 44 24.0	-0.2
MODS				*e*Sg	Sg	15 45 04.4	-1.5
MODS	**Modra-Piesok**	**3.22**	**166**	*e*Pg	Pg	15 44 24.0	-0.2
MODS				*e*Sg	Sg	15 45 04.4	-1.5
ZST	**Bratislava**	**3.37**	**169**	*e*Pg	Pg	15 44 26.0	-1.1
ZST				*e*Sg	Sg	15 45 11.6	+0.9
NIE	**Niedzica**	**3.40**	**126**	*e*P	Pg	15 44 26.6	-1.0
NIE				*e*S	Sg	15 45 11.1	-0.4
VYHS	**Vyhne**	**3.48**	**149**	*e*Pg	Pg	15 44 29.4	+0.2
VYHS				*e*Sg	Sg	15 45 13.9	-0.5
CONA	**Conrad Observa**	**3.58**	**183**	⇓*i*Pn	Pn	15 44 20.2	+1.0
CONA				⇑*i*Sg	Sg	15 45 17.0	-0.5
	comp=Z,15nm,0.4s						
GRA1	**Grafenberg Arr**	**3.61**	**242**	*e*Pn	Pn	15 44 20.4	+0.8
GRA1				*e*Sg	Sg	15 45 18.2	-0.1
GRF	**Grafenberg Arr**	**3.61**	**242**	*e*Pn	Pn	15 44 20.4	+0.8
GRF				*e*Sg	Sg	15 45 18.2	-0.1
MOA	**Molln**	**3.85**	**199**	⇑*i*Pn	Pn	15 44 23.6	+0.7
MOA				⇑*i*Sg	Sg	15 45 26.7	+0.6
	comp=Z,19nm,0.5s						
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*PG	Pg	15 44 37.6	+0.7
STHS				*e*SG	Sg	15 45 28.0	+0.8
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*Pg	Pg	15 44 37.6	+0.7
STHS				*e*Sg	Sg	15 45 28.0	+0.8
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*Pg	Pg	15 44 37.6	+0.7
STHS				*e*Sg	Sg	15 45 28.0	+0.8
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*PG	Pg	15 44 44.3	-0.7
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*Pg	Pg	15 44 44.3	-0.7
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*Pg	Pg	15 44 44.3	-0.7
BFO	**Black Forest**	**5.95**	**241**	*e*Pn	Pn	15 44 59.2	+7.4
BFO				*e*S	Sn	15 46 11.7	+11
HFS	**Hagfors**	**8.76**	**352**	Pn	Pn	15 45 29.2	-1.0
	comp=Z,0.1nm,0.3s,baz=161,slow=14,SNR=5.0						
NOA	**NORSAR Array B**	**9.94**	**346**	Pn	Pn	15 45 44.5	-1.9
	comp=Z,0.2nm,0.3s,baz=172,slow=13,SNR=3.8						
NOA	**NORSAR Array B**	**9.94**	**346**	Pn	Pn	15 45 44.5	-1.9
ARCES	**ARCESS Array B**	**18.63**	**10**	Pn	Pn	15 47 37.9	-3.5
	comp=Z,0.3nm,0.3s,baz=167,slow=14,SNR=9.0						
ARCES	**ARCESS Array B**	**18.63**	**10**	Pn	Pn	15 47 37.9	-3.5

*IDC **29** 15:44:05.5±2.1, 2098S×16924E, h0km, mb4.0/5, mb1 4.3/5, mb1mx4.0/15, mbtmp4.0/5, Error ellipse: s-maj=108.7km s-min=27.4km az=153.0*
*ISCJB **29** 15:44:06.2±5.7, 2075S±05×169.1E±03, h12km±37km, mb3.9/5, Error ellipse: s-maj=93.5km s-min=16.6km az=146.8*
*NEIC **29** 15:44:06.3±0.7, 2109S×16930E, h10km, Error ellipse: s-maj=36.2km s-min=12.4km az=163.0*

ISC 29 15:44:07.2±7.0, 2095±05×1691E±03, h9km±45km, n9, σ0§79/8, mb3.9/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.79**	**244**	*e*P	Pn	15 44 52.9	+0.8
DZM				*e*S	Sn	15 45 25.7	-0.1
DZM	**Mont Dzumac**	**2.79**	**244**	*e*Pn	Pn	15 44 51.0	-1.0
STKA	**Stephens Creek**	**26.94**	**240**	P	P	15 49 49.2	+0.2
	2.7nm,0.8s,mb3.8,baz=79,slow=10,SNR=3.9						
WRA	**Warramunga Arr**	**32.59**	**265**	P	P	15 50 38.5	-0.7
	1.0nm,1.0s,mb3.7,baz=100,slow=7.2,SNR=4.5						
ASAR	**Alice Springs**	**32.68**	**258**	P	P	15 50 40.0	0.0
	1.4nm,0.7s,mb4.0,baz=85,slow=9.1,SNR=9.1						
FITZ	**Fitzroy Crossi**	**41.01**	**266**	P	P	15 51 51.8	+0.8
	4.2nm,1.0s,mb4.0,baz=123,slow=13,SNR=6.2						
NVAR	**Mina Array Bea**	**89.93**	**49**	P	P	15 57 06.8	-0.2
	0.8nm,0.6s,mb4.2,baz=234,slow=7.2,SNR=4.0						
EKA	**Eskdalemuir Ar**	**145.08**	**352**	PKPbc	PKPbc	16 03 43.3	-0.9
	1.9nm,0.6s,baz=350,slow=2.4,SNR=8.6						
GERES	**GERESS Array B**	**145.85**	**331**	PKPbc	PKPbc	16 03 47.4	+0.5
	0.5nm,0.6s,baz=40,slow=2.3,SNR=3.8						

*ISCJB **29** 15:49:51.2±4.1, 2120S±008×16926E±006, h0km±25km, mb4.8/31, MS5.0/6, Error ellipse: s-maj=13.8km s-min=8.4km az=152.7*
*IDC **29** 15:49:52.3±1.0, 2127S×16938E, h0km, mb4.6/12, mb1 4.7/12, mb1mx4.6/18, mbtmp4.6/12, Error ellipse: s-maj=31.9km s-min=19.2km az=139.0*
*BJI **29** 15:49:53.9, 2099S×16934E, h13km, mB5.1, mb4.9, Ms5.2, Msz5.0*
*MOS **29** 15:49:54.9±2.1, 2106S×16935E, h33km, mb5.0/12, Error ellipse: s-maj=13.8km s-min=10.6km az=174.7*
*NEIC **29** 15:49:54.0±0.4, 2114S×16928E, h10km, mb4.9/18, MS5.0/1, Error ellipse: s-maj=15.2km s-min=8.6km az=152.0*
*LDG **29** 15:49:54.0±0.3, 2114S×16886E, h10km, Mb4.8/2, Error ellipse: s-maj=27.6km s-min=3.2km az=150.0*

ISC 29 15:49:54.0±4.5, 2122S±008×16928E±006, h8km±28km, h19km±6.6km:pP-P, n111, σ1§20/71, mb4.8/31, MS5.0/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.77**	**252**	*e*P	Pn	15 50 39.0	+0.3
DZM				*e*S	Sn	15 51 11.4	-0.9
DZM	**Mont Dzumac**	**2.77**	**252**	*e*Pn	Pn	15 50 37.2	-1.5
DZM				*e*Sn	Sn	15 51 11.4	-1.0
AFI	**Afiamalu**	**19.46**	**71**	*e*P	Pn	15 54 21.2	-1.3
AFI				pmax	pmax		
	comp=Z,50nm,1.2s						
AFI	**Afiamalu**	**19.46**	**71**	*e*P	Pn	15 54 21.2	-1.2
	comp=Z,50nm,1.2s						
CTA	**Charters Tower**	**21.57**	**269**	*e*P	P	15 54 45.8	+1.6
	comp=Z,10nm,0.9s,mb4.2						
CTA	**Charters Tower**	**21.57**	**269**	P	P	15 54 45.8	+1.6
	comp=Z,11nm,0.8s,mb4.3,baz=90,slow=14,SNR=12						
CTA	**Charters Tower**	**21.57**	**269**	*e*P	P	15 54 45.8	+1.6
CTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CTAO	**Charters Tower**	**21.57**	**269**	*e*P	P	15 54 45.4	+1.2
CNB	**Canberra Magne**	**22.41**	**227**	*e*P	P	15 54 55.5	+2.4
CAN	**Canberra**	**22.66**	**227**	*e*P	P	15 54 57.4	+1.6
PMG	**Port Moresby**	**24.31**	**296**	*e*P	P	15 55 09.4	-2.8
PMG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PMG	**Port Moresby**	**24.31**	**296**	*e*P	P	15 55 09.4	-2.8
	comp=Z,10nm,0.8s,mb4.3						
TOO	**Toolangi**	**26.25**	**226**	*e*P	P	15 55 31.2	+1.5
STKA	**Stephens Creek**	**26.87**	**241**	*e*P	P	15 55 36.4	+1.0
	comp=Z,10nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**26.87**	**241**	P	P	15 55 36.3	+0.9
	comp=Z,12nm,0.8s,mb4.5,baz=74,slow=8.0,SNR=15						
WB2	**Warramunga Arr**	**32.69**	**266**	*e*P	P	15 56 25.8	-1.2
WRAB	**Tennant Creek**	**32.69**	**266**	*e*P	P	15 56 25.6	-1.4
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
WRAB	**Tennant Creek**	**32.69**	**266**	*e*P	P	15 56 25.6	-1.4
	comp=Z,6.5nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**32.70**	**266**	P	P	15 56 26.1	-1.0
	comp=Z,4.7nm,0.9s,mb4.4,baz=95,slow=8.9,SNR=20						
ASAR	**Alice Springs**	**32.74**	**259**	P	P	15 56 26.9	-0.6
	comp=Z,8.4nm,0.7s,mb4.8,baz=83,slow=9.2,SNR=60						
ASAR				PcP	PcP	15 59 12.4	-0.6
	comp=Z,1.2nm,0.9s,baz=98,slow=2.5,SNR=4.6						
FORT	**Forrest**	**38.07**	**247**	*e*P	P	15 57 13.1	-0.2
	comp=Z,10nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**41.12**	**266**	*e*P	P	15 57 38.9	+0.1
	comp=Z,26nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**41.12**	**266**	P	P	15 57 38.7	-0.2
	comp=Z,16nm,0.8s,mb4.7,baz=120,slow=8.7,SNR=47						
MBWA	**Marble Bar**	**46.04**	**261**	*e*P	P	15 58 17.9	-0.6

CD2				SS	SS	16 17 40.8	-0.1	
CD2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.8							
CD2				LR	LR			
	comp=N,920nm,13.2s,MS5.4							
CD2				LR	LR			
	comp=E,660nm,15.6s,MS5.4							
CD2				LR	LR			
	comp=Z,750nm,16.8s,MS5.1							
HHC	**Hu-ho-hao-te**	**81.74**	**320**	*e*P	**P**	**16 02 13.0**	**-0.2**	
HHC				AP	pP	16 02 23.8	+7.9	
HHC				XP	sP	16 02 28.0	+11	
HHC				PP	PP	16 05 22.3	+1.8	
HHC				S	S	16 12 22.5	-3.8	
HHC				SKS		16 12 25.8		
HHC				XS	sS	16 12 39.5	+8.7	
HHC				SS	SS	16 17 43.5	-1.1	
HHC				AMB	AMB			
	comp=Z,17nm,0.7s,mb5.1							
HHC				AMB	AMB			
	comp=Z,111nm,6.4s							
HHC				LR	LR			
	comp=N,348nm,16.0s,MS5.0							
HHC				LR	LR			
	comp=E,485nm,17.2s,MS5.0							
HHC				LR	LR			
	comp=Z,303nm,16.3s,MS4.7							
LZH	**Lanzhou**	**84.07**	**312**	*e*P	**P**	**16 02 25.0**	**-0.4**	
LZH				AP	pP	16 02 35.5	+7.4	
LZH				XP	sP	16 02 39.5	+10	
LZH				PP	PP	16 05 41.0	+1.2	
LZH				AMB	AMB			
	comp=Z,28nm,1.5s,mb5.2							
LZH				AMB	AMB			
	comp=Z,142nm,4.6s							
LZH				LR	LR			
	comp=N,325nm,17.9s							
LZH				LR	LR			
	comp=Z,652nm,18.8s,MS5.0							
LZH	**Lanzhou**	**84.07**	**312**	*e*P	**P**	**16 02 25.0**	**-0.4**	
LZH				*PP	pP	16 02 35.5	+7.4	
LZH				*SP	sP	16 02 39.6	+11	
LZH						16 05 41.0		
LZH				pmax	pmax			
	comp=Z,28nm,1.5s,mb5.2							
LZH				MLR	MLR			
	comp=Z,650nm,18.8s,MS5.0							
LZH	**Lanzhou**	**84.07**	**312**	*e*P	**P**	**16 02 25.0**	**-0.4**	
	comp=Z,28nm,1.5s,mb5.2							
LZH				pP	pP	16 02 35.5	+7.4	
LZH				sP	sP	16 02 39.6	+11	
LZH				PP	PP	16 05 41.0	+1.2	
LZH				LR	LR			
	comp=Z,650nm,18.8s,MS5.0							
CLNS	**Chul'man**	**86.22**	**337**	*e*P	**P**	**16 02 32.8**	**-2.9**	
CLNS				pmax	pmax			
	comp=Z,11nm,0.8s,mb5.1							
CLNS				pmax	pmax			
	comp=E,9.0nm,0.9s							
CLNS				pmax	pmax			
	comp=N,11nm,0.9s							
SNAA	**Sanae**	**87.20**	**182**	*e*P	**P**	**16 02 39.6**	**-0.9**	
SNAA				*e*	pP	16 02 43.1	-0.1	
SNAA				*e*		16 02 47.5		
SNAA	**Sanae**	**87.20**	**182**	*e*P	**P**	**16 02 39.2**	**-1.2**	
VNA3	**Neumayer Olymp**	**87.79**	**180**	*e*P	**P**	**16 02 42.3**	**-1.0**	
VNA3				*e*	pP	16 02 45.7	-0.3	
VNA3				*e*		16 02 50.0		
VNA2	**Neumayer--Watz**	**88.08**	**181**	*e*P	**P**	**16 02 44.2**	**-0.5**	
	baz=180,slow=4.8							
VNA2				*e*	pP	16 02 47.5	+0.1	
VNA2				*e*		16 02 51.8		
VNA1	**Neumayer--Stat**	**88.37**	**181**	*e*P	**P**	**16 02 46.0**	**-0.1**	
VNA1				*e*	pP	16 02 49.2	+0.4	
VNA1				*e*		16 02 53.3		
CMB	**Columbia Colle**	**88.44**	**48**	*e*P	**P**	**16 02 46.7**	**-0.2**	
ULN	**Ulaanbaatar**	**88.46**	**323**	*e*P	**P**	**16 02 47.1**	**+0.4**	
ULN				pmax	pmax			
	comp=Z,8.0nm,1.4s,mb4.8							
ULN	**Ulaanbaatar**	**88.46**	**323**	*e*P	**P**	**16 02 47.1**	**+0.4**	
	comp=Z,8.1nm,1.4s,mb4.8							
SONM	**Songino Array**	**88.81**	**323**	P	**P**	**16 02 48.8**	**+0.5**	
	comp=Z,1.2nm,0.8s,mb4.3,baz=122,slow=3.4,SNR=7.8							
PAHR	**Pah Rah Range**	**89.92**	**47**	*e*P	**P**	**16 02 54.7**	**+1.0**	
	comp=Z,15nm,1.4s,mb5.1							
NVAR	**Mina Array Bea**	**90.08**	**48**	P	**P**	**16 02 54.1**	**-0.4**	
	comp=Z,3.1nm,0.8s,mb4.7,baz=227,slow=8.0,SNR=14							
TPNV	**Topopah Spring**	**90.87**	**51**	*e*P	**P**	**16 02 58.3**	**0.0**	
TPNV				pmax	pmax			
	comp=Z,9.0nm,1.1s,mb5.0							
TPNV	**Topopah Spring**	**90.87**	**51**	*e*P	**P**	**16 02 58.3**	**0.0**	
	comp=Z,9.2nm,1.1s,mb5.0							
ZAK	**Zakamensk**	**91.91**	**324**	*e*P	**P**	**16 03 03.1**	**+0.3**	
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.6							
WMQ	**Urumqi**	**98.59**	**314**	*e*P	**P**	**16 03 35.8**	**+2.4**	
WMQ				AMB	AMB			
	comp=Z,8.0nm,0.9s,mb5.2							
WMQ				LR	LR			
	comp=Z,504nm,19.2s,MS5.0							
ARCES	**ARCESS Array B**	**126.98**	**345**	PKP	PKPdf	16 08 56.3	-1.5	
	comp=Z,4.1nm,1.0s,baz=67,slow=3.2,SNR=3.9							
DPC	**Dobruska-Polom**	**143.96**	**330**	*e*PKP	PKPdf	16 09 28.3	-1.6	
UPC	**Upice**	**144.00**	**331**	*e*PKHKP		16 09 23.4		
PVCC	**Panska Ves**	**144.63**	**332**	*e*PKP	PKPdf	16 09 29.7	-1.4	
BRG	**Berggiesshubel**	**144.64**	**333**	*e*PKP	PKPdf	16 09 29.2	-1.9	
	comp=Z,12nm,1.2s							
CLL	**Collm**	**144.71**	**334**	*e*PKPdf	PKPdf	16 09 30.0	-1.2	
CLL				*ep*PKiKP		16 09 36.0		
PRU	**Pruhonice**	**145.03**	**331**	*e*PKP	PKPdf	16 09 30.6	-1.2	
TREC	**Trest**	**145.09**	**330**	*e*PKP	PKPdf	16 09 30.7	-1.2	
EKA	**Eskdalemuir Ar**	**145.46**	**352**	PKPbc	PKPbc	16 09 30.6	-1.8	
	comp=Z,7.1nm,0.7s,baz=348,slow=2.2,SNR=24							
KHC	**Kasperske Hory**	**146.08**	**331**	*e*PKP	PKPdf	16 09 34.1	+0.5	
KHC				*ep*PKP	pPKPdf	16 09 40.5	+4.1	
GEC2	**GERESS Array S**	**146.23**	**331**	*e*PKP2	PKPab	16 09 34.4	-1.2	
GERES	**GERESS Array B**	**146.23**	**331**	PKPbc	PKPbc	16 09 34.4	-0.5	
	comp=Z,2.2nm,0.8s,baz=29,slow=3.0,SNR=12							
GIVF	**Givet**	**148.66**	**341**	*e*PKP1	PKPbc	16 09 40.7	-0.9	
BAIF	**Baives**	**148.89**	**341**	*e*PKP1	PKPbc	16 09 41.3	-0.9	
CDF	**Champ du Feu**	**149.26**	**336**	*e*PKP1	PKPbc	16 09 42.2	-1.0	
	comp=Z,20nm,1.2s							
HINF	**Hinteralfeld**	**149.91**	**336**	*e*PKP1	PKPbc	16 09 43.6	-1.2	
HAU	**Haudompre**	**149.95**	**337**	*e*PKP1	PKPbc	16 09 43.9	-1.0	
MEZF	**Maizieres J'vi**	**149.98**	**339**	*e*PKP1	PKPbc	16 09 44.4	-0.5	
	comp=Z,42nm,1.3s							
CABF	**La Chapelle**	**151.21**	**336**	*e*PKP1	PKPbc	16 09 47.3	-0.6	
	comp=Z,63nm,1.5s							
FLN	**La Foliniere**	**151.32**	**346**	*e*PKP1	PKPbc	16 09 46.8	-1.3	
	comp=Z,18nm,1.0s							
LDF	**La Druitiere**	**151.39**	**345**	*e*PKP1	PKPbc	16 09 46.9	-1.4	
LOR	**Lormes**	**151.45**	**339**	*e*PKP1	PKPbc	16 09 47.3	-1.2	
SSF	**Saint Saulge**	**151.75**	**339**	*e*PKP1	PKPbc	16 09 48.2	-1.0	
	comp=Z,28nm,1.3s							
GRR	**Gorron**	**151.75**	**346**	*e*PKP1	PKPbc	16 09 47.9	-1.2	
LPL	**La Plagne**	**151.84**	**333**	*e*PKP1	PKPbc	16 09 48.8	-0.6	
LPG	**La Plagne**	**151.85**	**333**	*e*PKP1	PKPbc	16 09 49.0	-0.4	
	comp=Z,13nm,0.8s							
SMF	**Signal de Mont**	**152.00**	**338**	*e*PKP1	PKPbc	16 09 48.5	-1.2	
AVF	**Avril sur Loir**	**152.04**	**339**	*e*PKP1	PKPbc	16 09 48.6	-1.2	
SGMF	**Saint Gilles**	**152.24**	**348**	*e*PKP1	PKPbc	16 09 48.6	-1.6	
	comp=Z,57nm,1.4s							
MBDF	**Montbardon**	**152.46**	**332**	*e*PKP1	PKPbc	16 09 49.8	-1.0	
ORIF	**Oris-en-Rattie**	**152.68**	**334**	*e*PKP1	PKPbc	16 09 50.3	-1.0	
SBF	**Sospel**	**152.84**	**330**	*e*PKP1	PKPbc	16 09 50.5	-1.2	
TCF	**Toulx Ste Croi**	**152.85**	**340**	*e*PKP1	PKPbc	16 09 50.4	-1.3	
PGF	**Pioggiola**	**153.05**	**327**	*e*PKP1	PKPbc	16 09 51.0	-1.2	
	comp=Z,48nm,1.1s							
VIVF	**Saint-Julien-l**	**153.22**	**335**	*e*PKP1	PKPbc	16 09 51.8	-0.7	
MFF	**Saint Martin d**	**153.25**	**344**	*e*PKP1	PKPbc	16 09 51.3	-1.2	
FRF	**La Foret Royal**	**153.43**	**331**	*e*PKP1	PKPbc	16 09 51.9	-1.1	
LMR	**La Mourre**	**153.67**	**331**	*e*PKP1	PKPbc	16 09 52.6	-1.0	
LFF	**La Frestale**	**154.52**	**341**	*e*PKP1	PKPbc	16 09 54.5	-0.8	
MTLF	**Montolieu**	**155.44**	**337**	*e*PKP1	PKPdf	16 09 57.3	+9.1	
LIC	**Lamto**	**164.11**	**201**	*e*PKP2	PKPab	16 10 52.5	+0.5	
	comp=Z,15nm,0.8s							
TORD	**Torodi Ar. Bea**	**165.69**	**238**	PKPab	PKPab	16 10 58.2	-0.9	
	comp=Z,0.7nm,1.0s,baz=123,slow=5.4,SNR=2.6							

*ISCJB **29** 15:56:06.5±0.9, 5149N±005×1605E±004, h0km, Error ellipse: s-maj=6.9km s-min=3.5km az=19.0*
*WAR **29** 15:56:08.7, 5149N×1609E, ML2.6, Mining Induced*

*PRU **29** 15:56:09.2, 5146N×1605E, h0km*
ISC 29 15:56:07.3±1.1, 5152N±005×1610E±005, h0km, n13, σ0s85/25, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.69**	**170**	*e*Pg	**Pg**	**15 56 20.7**	**+0.3**
KSP				*e*Sg	**Sg**	**15 56 30.0**	**+0.7**
UPC	**Upice**	**1.01**	**183**	*e*PG	**Pg**	**15 56 26.8**	**+0.1**
DPC	**Dobruska-Polom**	**1.18**	**173**	*e*PG	**Pg**	**15 56 29.6**	**-0.2**
DPC				*e*SG	**Sg**	**15 56 44.7**	**-0.4**
	comp=Z,20nm,0.4s						
PVCC	**Panska Ves**	**1.38**	**225**	*e*PG	**Pg**	**15 56 33.9**	**+0.1**
PVCC				*e*SG	**Sg**	**15 56 52.0**	**+0.3**
	comp=Z,109nm,0.3s						
BRG	**Berggiesshubel**	**1.50**	**245**	PN	**Pn**	**15 56 36.1**	**+0.7**
BRG				PG	**Pg**	**15 56 36.6**	**+0.6**
BRG				SG	**Sg**	**15 56 56.2**	**+0.7**
	comp=Z,78nm,0.4s						
PRU	**Pruhonice**	**1.82**	**213**	*e*PG	**Pg**	**15 56 40.4**	**-1.8**
PRU				*e*SG	**Sg**	**15 57 05.6**	**-0.2**
	comp=Z,21nm,0.4s						
CLL	**Collm**	**1.95**	**265**	*i* Pn	**Pn**	**15 56 41.1**	**-0.5**
CLL				*e*Pg	**Pg**	**15 56 44.0**	**-0.6**
CLL				*ex*	x	15 56 49.0	
CLL				*e*Sg	**Sg**	**15 57 10.0**	**+0.1**
	comp=Z,22nm,0.6s						
TREC	**Trest**	**2.26**	**190**	*e*PN	**Pn**	**15 56 46.6**	**+0.8**
TREC				*e*PG	**Pg**	**15 56 49.4**	**-1.2**
NKC	**Novy Kostel**	**2.65**	**242**	*e*SG	**Sg**	**15 57 32.9**	**+0.7**
	comp=Z,36nm,0.4s						
KHC	**Kasperske Hory**	**2.88**	**215**	*e*PG	**Pg**	**15 57 00.4**	**-2.1**
KHC				*e*SG	**Sg**	**15 57 38.5**	**-1.4**
	comp=Z,17nm,0.6s						
MOX	**Moxa**	**2.96**	**255**	*e*PG	**Pg**	**15 57 03.7**	**-0.3**
MOX				*e*SG	**Sg**	**15 57 43.5**	**+1.2**
MODS	**Modra-Piesok**	**3.24**	**166**	*e*SG	**Sg**	**15 57 52.7**	**+1.4**
STHS	**Stebnicka Huta**	**3.90**	**121**	*e*PG	**Pg**	**15 57 22.3**	**+0.3**
STHS				*e*SG	**Sg**	**15 58 17.2**	**+4.6**

*IDC **29** 16:07:21.9±0.9, 2829S×17655W, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.1/16, mbtmp4.0/8, Error ellipse: s-maj=25.7km s-min=22.9km az=149.0*
*ISCJB **29** 16:07:27.0±2.8, 286S±02×1765W±02, h58km±20km, mb4.1/11, Error ellipse: s-maj=27.9km s-min=24.9km az=135.2*
*NEIC **29** 16:07:26.7±0.9, 2848S×17654W, h35km, mb4.4/3, Error ellipse: s-maj=21.6km s-min=18.8km az=196.0*
ISC 29 16:07:26.9±3.1, 286S±02×1765W±02, h44km±24km, n19, σ0s69/20, mb4.1/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.42**	**243**	Pn	**Pn**	**16 07 50.3**	**+0.1**
	348nm,0.3s,baz=72,slow=13,SNR=20						
RAO				Sn	**Sn**	**16 08 07.7**	**0.0**
	686nm,0.3s,baz=90,slow=20,SNR=14						
RAO	**Raoul Island**	**1.42**	**243**	Pn	**Pn**	**16 07 50.3**	**+0.1**
RAO				Sn	**Sn**	**16 08 07.7**	**0.0**
URZ	**Urewera**	**11.01**	**207**	Pn	**Pn**	**16 09 55.9**	**-5.8**
	0.3nm,0.3s,baz=162,slow=20,SNR=4.1						
URZ				Sn	**Sn**	**16 11 57.8**	**-5.6**
	1.4nm,0.3s,baz=258,slow=22,SNR=6.3						
DZM	**Mont Dzumac**	**16.76**	**289**	*e*Pn	**Pn**	**16 11 18.3**	**-0.2**
CTA	**Charters Tower**	**34.90**	**276**	P	**P**	**16 14 15.2**	**+0.9**
	1.5nm,0.4s,mb4.3,baz=118,slow=9.8,SNR=6.1						
STKA	**Stephens Creek**	**36.22**	**254**	P	**P**	**16 14 26.4**	**+0.8**
	1.9nm,0.5s,mb4.2,baz=112,slow=13,SNR=5.7						
ASAR	**Alice Springs**	**44.58**	**264**	P	**P**	**16 15 34.9**	**+0.1**
	1.2nm,0.6s,mb3.9,baz=95,slow=6.9,SNR=17						
ASAR				PcP	PcP	16 17 19.4	+2.1
	0.5nm,0.5s,baz=112,slow=4.0,SNR=6.3						
WB2	**Warramunga Arr**	**45.40**	**270**	*e*P	**P**	**16 15 41.0**	**-0.4**
WRAB	**Tennant Creek**	**45.40**	**270**	*e*P	**P**	**16 15 40.7**	**-0.7**
	5.5nm,1.2s,mb4.3						
WRA	**Warramunga Arr**	**45.41**	**270**	P	**P**	**16 15 41.3**	**-0.1**
	1.7nm,0.6s,mb4.0,baz=105,slow=8.0,SNR=29						
CASY	**Casey**	**57.33**	**207**	*e*P	**P**	**16 17 08.6**	**-1.4**
	8.8nm,1.1s,mb4.7						
QSPA	**South Pole Qui**	**61.49**	**180**	P	**P**	**16 17 42.8**	**+4.3**
	1.2nm,1.1s,mb4.0,baz=356,slow=4.1,SNR=2.4						
QSPA	**South Pole Qui**	**61.49**	**180**	P	**P**	**16 17 42.8**	**+4.3**
MAW	**Mawson**	**74.44**	**200**	P	**P**	**16 19 03.6**	**+3.7**
	1.6nm,0.8s,mb4.0,baz=108,slow=9.6,SNR=4.6						
MJAR	**Matsushiro Arr**	**77.56**	**324**	P	**P**	**16 19 18.1**	**0.0**
	1.7nm,0.8s,mb4.0,baz=156,slow=6.7,SNR=5.3						
SNAA	**Sanae**	**79.89**	**178**	*e*P	**P**	**16 19 31.1**	**+0.6**
	1.5nm,0.6s,mb4.1						
NVAR	**Mina Array Bea**	**86.03**	**42**	P	**P**	**16 20 02.5**	**-0.1**
	0.3nm,0.5s,mb3.8,baz=251,slow=8.5,SNR=2.8						
AKASG	**Malin Array Be**	**150.64**	**326**	PKPbc	PKPbc	16 27 15.8	+2.2
	1.3nm,0.6s,baz=46,slow=2.1,SNR=5.6						
TORD	**Torodi Ar. Bea**	**164.51**	**173**	PKPab	PKPab	16 28 23.0	+1.9
	0.4nm,0.8s,baz=207,slow=5.5,SNR=2.4						

*IDC **29** 16:10:01.2±0.5, 2846S×17681W, h0km, mb5.0/18, mb1 5.0/18, mb1mx5.0/20, mbtmp5.0/18, MS4.7/15, Ms1 4.7/15, ms1mx4.5/24, Error ellipse: s-maj=17.4km s-min=13.8km az=138.0*
*ISCJB **29** 16:10:05.5±0.2, 2864S±006×17701W±006, h36km, mb5.1/46, MS4.8/21, Error ellipse: s-maj=9.5km s-min=6.1km az=150.1*
*MOS **29** 16:10:06.1±2.0, 2846S×17702W, h33km, mb5.2/26, MS4.7/7, Error ellipse: s-maj=11.1km s-min=9.0km az=136.0*
*BJI **29** 16:10:06.0, 2768S×17648W, h28km, mB5.6, mb5.2, Ms5.3, Msz5.0*
*NEIC **29** 16:10:06.7±0.3, 2852S×17697W, h35km, mb5.1/22, Error ellipse: s-maj=12.8km s-min=6.7km az=149.0*
*GCMT **29** 16:10:06.7±0.2, 2851S×17636W, h22km, MW5.2/83, Moment Tensor Solution. s57,c75; s83,c134; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr 0.74±.03; Mθθ -0.08±.02; Mφφ -0.65±.02; Mrθ 0.14±.04; Mθφ -0.19±.01; Mφr 0.56±.03; Best double couple: M0 0.92700×10^17 NP1: ϕs 15.0000°, δ64.00000°, λ89.00000°. Principal axes: T 0.9380, Plg71.0000°, Azm283.0000°; N -0.0220, Plg1.0000°, Azm15.0000°; P -0.9150, Plg19.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DJA **29** 16:10:36, 2960S×17863W, h217km, mb4.9/17*
ISC 29 16:10:07.4±0.2, 2861S±006×17696W±006, h38km, h38km±2.2km: pP-P, n290, σ1s92/135, mb5.1/46, MS4.8/21, 17C-21D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.06**	**233**	Pn	**Pn**	**16 10 27.5**	**+1.8**
	2μm,0.3s,baz=137,slow=2.5,SNR=20						
RAO				Sn	**Sn**	**16 10 45.0**	**+5.9**
	5μm,0.3s,baz=90,slow=20,SNR=20						
URZ	**Urewera**	**10.82**	**206**	Pn	**Pn**	**16 12 33.8**	**-5.9**
	2.6nm,0.3s,baz=111,slow=8.6,SNR=4.8						
URZ				Sn	**Sn**	**16 14 32.8**	**-6.6**
	11nm,0.3s,baz=334,slow=20,SNR=8.2						
AFI	**Afiamalu**	**15.40**	**19**	Pn	**Pn**	**16 13 30.9**	**-11**
	2.6nm,0.3s,baz=258,slow=10,SNR=3.7						
AFI				Sn	Sn	16 16 06.9	-25
	0.5nm,0.3s,baz=281,slow=16,SNR=2.3						
DZM	**Mont Dzumac**	**16.35**	**290**	*e*P	**Pn**	**16 14 01.4**	**+7.3**
DZM	**Mont Dzumac**	**16.35**	**290**	*e*P	**Pn**	**16 13 59.1**	**+5.0**
RAR	**Rarotonga**	**17.23**	**69**	P	**Pn**	**16 13 54.7**	**-11**
	1.5nm,0.3s,baz=148,slow=3.6,SNR=4.4						
RAR				S	Sn	16 16 47.6	-28
	1.7nm,0.3s,baz=110,slow=15,SNR=2.6						
RAR				LR	LR	16 18 16.3	
	comp=Z,2μm,19.3s,baz=251,slow=29						
RAR	**Rarotonga**	**17.23**	**69**	*e*P	**Pn**	**16 13 55.6**	**-10**
RAR				pmax	pmax		
	comp=Z,107nm,1.1s						
RAR	**Rarotonga**	**17.23**	**69**	*e*Pn	**Pn**	**16 13 55.6**	**-10**
	comp=Z,107nm,1.1s						
RAR				S	Sn	16 16 47.6	-28
RAR				LR	LR	16 18 16.2	
RPZ	**Rata Peaks**	**17.88**	**209**	P	**Pn**	**16 14 11.0**	**-2.1**
	comp=Z,7.3nm,0.3s,baz=355,slow=2.6,SNR=10						
RPZ				S	**Sn**	**16 17 11.3**	**-20**
	comp=Z,0.8nm,0.3s,baz=295,slow=8.3,SNR=3.5						
TBI	**Tubuai**	**25.24**	**84**	*e*LQ		16 20 12.3	
	comp=Z,1μm,29.2s						
TBI				*e*LR	LR	16 21 34.5	
	comp=Z,3μm,28.5s,baz=248						
ARMA	**Armidale**	**27.35**	**258**	*e*P	**P**	**16 15 51.7**	**+2.7**
PPT	**Papeete**	**27.42**	**72**	*e*LQ		16 21 03.2	
	comp=Z,2μm,25.0s						
PPT				*e*LR	LR	16 22 28.6	
	comp=Z,3μm,26.8s,baz=243						
PPT	**Papeete**	**27.42**	**72**	LR	LR	16 23 54.6	
	comp=Z,814nm,18.8s,MS4.3,baz=247,slow=31						
HNR	**Honiara**	**28.89**	**307**	P	**P**	**16 16 02.0**	**-0.8**
	comp=Z,43nm,0.8s,mb5.2,baz=66,slow=20,SNR=6.7						
HNR				LR	LR	16 25 09.7	
	comp=Z,738nm,18.6s,MS4.3,baz=308,slow=31						
HNR	**Honiara**	**28.89**	**307**	P	**P**	**16 16 02.0**	**-0.8**
HNR				pmax	pmax		
	comp=Z,43nm,0.8s,mb5.2						
HNR				MLR	MLR		
	comp=Z,738nm,18.6s,MS4.3						
CNB	**Canberra Magne**	**29.25**	**248**	*e*P	**P**	**16 16 08.4**	**+2.6**
CAN	**Canberra**	**29.55**	**248**	*e*P	**P**	**16 16 09.2**	**+0.8**
TOO	**Toolangi**	**32.53**	**244**	*e*P	**P**	**16 16 37.1**	**+2.4**
CTA	**Charters Tower**	**34.46**	**276**	*e*P	**P**	**16 16 52.9**	**+1.2**
	comp=Z,16nm,0.9s,mb4.9						
CTA	**Charters Tower**	**34.46**	**276**	P	**P**	**16 16 52.8**	**+1.1**
	comp=Z,19nm,0.8s,mb5.1,baz=105,slow=12,SNR=24						
CTA				LR	LR	16 29 31.7	
	comp=Z,3μm,18.6s,MS5.1,baz=104,slow=34						
CTA	**Charters Tower**	**34.46**	**276**	*e*P	**P**	**16 16 52.9**	**+1.2**
CTA				pmax	pmax		
	comp=Z,16nm,0.9s						
CTAO	**Charters Tower**	**34.46**	**276**	*e*P	**P**	**16 16 53.0**	**+1.3**
CTAO				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
CTAO	**Charters Tower**	**34.46**	**276**	*e*P	**P**	**16 16 53.0**	**+1.3**
	comp=Z,28nm,1.0s,mb5.1						
STKA	**Stephens Creek**	**35.80**	**254**	⇓ *i*P	**P**	**16 17 04.0**	**+0.9**
	comp=Z,22nm,0.9s,mb5.1						
STKA	**Stephens Creek**	**35.80**	**254**	P	**P**	**16 17 03.9**	**+0.8**
	comp=Z,35nm,1.0s,mb5.2,baz=90,slow=9.0,SNR=35						
STKA				LR	LR	16 31 35.0	
	comp=Z,2μm,18.5s,MS4.9,baz=68,slow=36						
STKA	**Stephens Creek**	**35.80**	**254**	*e*P	**P**	**16 17 03.5**	**+0.4**
	comp=Z,37nm,1.0s,mb5.3						
RKT	**Rikitea**	**38.03**	**92**	*e*LR	LR	16 27 14.9	
	comp=Z,1μm,25.0s,baz=252						
COEN	**Coen**	**39.70**	**283**	*e*P	**P**	**16 17 34.0**	**-2.3**
	comp=Z,5.5nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**44.15**	**265**	P	**P**	**16 18 12.2**	**-0.2**
	comp=Z,23nm,0.9s,mb4.9,baz=111,slow=7.7,SNR=109						
ASAR				PcP	PcP	16 19 57.0	-0.1
	comp=Z,6.0nm,0.9s,baz=117,slow=4.3,SNR=5.8						
ASAR	**Alice Springs**	**44.15**	**265**	P	**P**	**16 18 12.3**	**-0.2**
ASAR						16 19 57.0	
ASAR				pmax	pmax		
	comp=Z,23nm,0.9s						
ASAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WB2	**Warramunga Arr**	**44.96**	**270**	⇑ *i*P	**P**	**16 18 18.3**	**-0.8**
WB2				*e*PCP	PcP	16 20 00.3	+0.4
WB2				*e*S	**S**	**16 24 55.3**	**+0.3**
WRAB	**Tennant Creek**	**44.97**	**270**	P	**P**	**16 18 18.0**	**-1.1**
	comp=Z,256nm,0.9s,mb6.0,SNR=17						
WRAB	**Tennant Creek**	**44.97**	**270**	*e*P	**P**	**16 18 18.4**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.2						
WRAB	**Tennant Creek**	**44.97**	**270**	*e*P	**P**	**16 18 18.4**	**-0.6**
	comp=Z,41nm,1.0s,mb5.2						
WRA	**Warramunga Arr**	**44.98**	**270**	P	**P**	**16 18 18.4**	**-0.7**
	comp=Z,35nm,0.9s,mb5.2,baz=106,slow=7.8,SNR=93						
WRA				PcP	PcP	16 20 00.3	+0.4
	comp=Z,16nm,0.9s,baz=107,slow=3.5,SNR=12						
WRA				LR	LR	16 36 16.8	
	comp=Z,551nm,18.0s,MS4.5,baz=110,slow=35						
WRA	**Warramunga Arr**	**44.98**	**270**	P	**P**	**16 18 18.4**	**-0.7**
WRA						16 20 00.3	
WRA				pmax	pmax		
	comp=Z,35nm,0.9s						
WRA				MLR	MLR		
	comp=Z,551nm,18.0s						
FORT	**Forrest**	**47.41**	**253**	*e*P	**P**	**16 18 36.7**	**-1.5**
	comp=Z,69nm,0.6s,mb5.8						
FORT				*e*PCP	PcP	16 20 08.2	-0.1
KAKA	**Kakadu**	**49.55**	**278**	*e*P	**P**	**16 18 53.7**	**-1.2**
	comp=Z,7.7nm,0.5s,mb5.0						
KAKA	**Kakadu**	**49.55**	**278**	*e*P	**P**	**16 18 53.4**	**-1.5**
SBA	**Scott Base**	**49.88**	**184**	*e*P	**P**	**16 18 59.7**	**+3.2**
FITZ	**Fitzroy Crossi**	**53.30**	**268**	*e*P	**P**	**16 19 22.2**	**-0.7**
	comp=Z,27nm,1.2s,mb5.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,22nm,1.0s						
PLCA	**Paso Flores**	**83.06**	**133**	P	**P**	**16 22 28.6**	**-0.4**
	comp=Z,4.9nm,1.1s,mb4.5,baz=222,slow=4.7,SNR=5.1						
PLCA	**Paso Flores**	**83.06**	**133**	P	**P**	**16 22 28.6**	**-0.4**
PLCA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
YSS	**Yuzh-Sakhalins**	**83.55**	**334**	⇑*e*P	**P**	**16 22 31.5**	**+0.4**
YSS				pmax	pmax		
	comp=Z,74nm,1.8s,mb5.5						
YSS	**Yuzh-Sakhalins**	**83.55**	**334**	*e*P	**P**	**16 22 32.0**	**+0.9**
KSRS	**Korea Array**	**83.59**	**319**	P	**P**	**16 22 32.1**	**+0.5**
	comp=Z,12nm,1.0s,mb5.0,baz=142,slow=5.9,SNR=23						
KSRS				LR	LR	16 57 54.6	
	comp=Z,261nm,18.4s,MS4.6,baz=324,slow=34						
KSRS	**Korea Array**	**83.59**	**319**	P	**P**	**16 22 32.1**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0						
KSRS				MLR	MLR		
	comp=Z,261nm,18.4s,MS4.6						
PETK	**Petropavlovsk-**	**84.32**	**345**	P	**P**	**16 22 34.6**	**-0.3**
	comp=Z,23nm,0.9s,mb5.3,baz=122,slow=6.8,SNR=14						
PETK				LR	LR	16 59 09.9	
	comp=Z,187nm,18.1s,MS4.5,baz=58,slow=35						
ISA	**Isabella**	**84.39**	**44**	*e*P	**P**	**16 22 35.8**	**+0.1**
CMB	**Columbia Colle**	**84.83**	**41**	*e*P	**P**	**16 22 37.3**	**-0.6**
OHCM	**Honcut**	**85.08**	**40**	*e*P	**P**	**16 22 37.7**	**-1.4**
GSC	**Goldstone**	**85.19**	**45**	*e*P	**P**	**16 22 32.7**	**-7.1**
WDC	**Whiskeytown Da**	**85.35**	**38**	*e*P	**P**	**16 22 40.3**	**-0.2**
WDC				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.2						
WDC	**Whiskeytown Da**	**85.35**	**38**	*e*P	**P**	**16 22 40.3**	**-0.1**
	comp=Z,27nm,1.5s,mb5.2						
MTUM	**Tungsten Hills**	**85.45**	**43**	*e*P	**P**	**16 22 40.7**	**-0.3**
WAKR	**Walker**	**85.69**	**42**	*e*P	**P**	**16 22 42.3**	**+0.1**
NJ2	**Nanjing**	**85.78**	**310**	*e*P	**P**	**16 22 43.3**	**+0.5**
NJ2				AP	pP	16 22 53.8	-0.7
NJ2				XP	sP	16 22 57.8	-1.0
NJ2				PP	PP	16 26 04.0	+1.1
NJ2				S	S	16 33 12.0	-1.1
NJ2				XS	sS	16 33 24.0	-8.5
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,80nm,6.1s						
NJ2				LR	LR		
	comp=N,290nm,28.0s						
NJ2				LR	LR		
	comp=E,290nm,18.0s						
NJ2				LR	LR		
	comp=Z,400nm,26.0s,MS4.7						
YBH	**Yreka Blue Hor**	**86.07**	**38**	LR	LR	16 53 39.3	
	comp=Z,431nm,18.6s,MS4.9,baz=308,slow=30						
YBH	**Yreka Blue Hor**	**86.07**	**38**	*e*P	**P**	**16 22 45.6**	**+1.6**
YBH				pmax	pmax		
	comp=Z,19nm,1.4s						
YBH	**Yreka Blue Hor**	**86.07**	**38**	*e*P	**P**	**16 22 45.6**	**+1.7**
	comp=Z,18nm,1.4s,mb5.1						
LDFC	**Landfair**	**86.12**	**46**	*e*P	**P**	**16 22 44.1**	**-0.3**
NVAR	**Mina Array Bea**	**86.31**	**42**	P	**P**	**16 22 44.8**	**-0.5**
	comp=Z,8.2nm,1.1s,mb4.9,baz=222,slow=8.1,SNR=15						
HUMO	**Hull Mountain**	**86.55**	**37**	*e*P	**P**	**16 22 47.0**	**+0.7**
	comp=Z,18nm,1.4s,mb5.1						
TPNV	**Topopah Spring**	**86.59**	**44**	*e*P	**P**	**16 22 46.7**	**0.0**
TPNV				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.1						
TPNV	**Topopah Spring**	**86.59**	**44**	*e*P	**P**	**16 22 46.7**	**0.0**
	comp=Z,14nm,1.1s,mb5.1						
TPH	**Tonopah**	**86.72**	**43**	*e*P	**P**	**16 22 47.8**	**+0.5**
TPH				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
TPH	**Tonopah**	**86.72**	**43**	*e*P	**P**	**16 22 47.8**	**+0.5**
	comp=Z,8.9nm,0.8s,mb5.0						
SHPR	**Sheep Range**	**86.98**	**45**	*e*P	**P**	**16 22 49.6**	**+1.0**
TUC	**Tucson**	**87.28**	**51**	*e*P	**P**	**16 22 50.5**	**+0.3**
TUC				pmax	pmax		
	comp=Z,29nm,1.7s,mb5.2						
TUC	**Tucson**	**87.28**	**51**	*e*P	**P**	**16 22 50.5**	**+0.3**
	comp=Z,29nm,1.7s,mb5.2						
MDJ	**Mudanjiang**	**87.68**	**325**	P	**P**	**16 22 52.3**	**+0.6**
MDJ				AMB	AMB		
	comp=Z,17nm,1.1s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,320nm,13.3s						
MDJ	**Mudanjiang**	**87.68**	**325**	*e*P	**P**	**16 22 51.9**	**+0.1**
	comp=Z,18nm,0.9s,mb5.3						
WHN	**Wuhan**	**88.01**	**306**	⇓P	**P**	**16 22 54.3**	**+0.6**
WHN				AMB	AMB		
	comp=Z,42nm,1.0s,mb5.6						
CN2	**Changchun**	**89.28**	**322**	*e*P	**P**	**16 22 58.5**	**-0.8**
CN2				*e*XP	sP	16 23 15.0	-0.3
CN2				*e*S	S	16 33 44.0	-2.0
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.3						
CN2				AMB	AMB		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=N,300nm,16.0s,MS5.0						
CN2				LR	LR		
	comp=E,400nm,16.0s,MS5.0						
CN2				LR	LR		
	comp=Z,600nm,17.0s,MS5.1						
KLR	**Kul'dur**	**89.96**	**329**	*e*P	**P**	**16 23 05.2**	**+2.8**
TXAR	**Lajitas Array**	**90.66**	**57**	P	**P**	**16 23 06.0**	**-0.2**
	comp=Z,4.7nm,1.2s,mb4.7,baz=205,slow=5.1,SNR=12						
TXAR				LR	LR	16 58 19.8	
	comp=Z,427nm,18.2s,MS4.9,baz=45,slow=32						
TXAR	**Lajitas Array**	**90.66**	**57**	P	**P**	**16 23 06.0**	**-0.1**
TXAR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TXAR				MLR	MLR		
	comp=Z,427nm,18.2s						
TXAR	**Lajitas Array**	**90.66**	**57**	P	**P**	**16 23 06.0**	**-0.2**
TXAR				LR	LR	16 58 19.8	
RSW	**Rattlesnake Hi**	**90.90**	**36**	*e*P	**P**	**16 23 06.9**	**+0.1**
HAWA	**Hanford**	**90.93**	**36**	*e*P	**P**	**16 23 07.1**	**+0.1**
LAZ	**Ladron**	**90.98**	**51**	*e*P	**P**	**16 23 07.4**	**-0.1**
BMO	**Blue Mountains**	**91.08**	**38**	*e*P	**P**	**16 23 07.3**	**-0.4**
BMO				pmax	pmax		
	comp=Z,28nm,2.1s,mb5.2						
BMO	**Blue Mountains**	**91.08**	**38**	*e*P	**P**	**16 23 07.3**	**-0.4**
	comp=Z,28nm,2.1s,mb5.2						
TMUT	**Trail Mountain**	**91.16**	**45**	*e*P	**P**	**16 23 09.2**	**+1.0**
ETW	**Entiat**	**91.34**	**34**	*e*P	**P**	**16 23 08.3**	**-0.5**
GYA	**Guiyang**	**91.46**	**299**	P	**P**	**16 23 10.5**	**+0.6**
GYA				AP	pP	16 23 21.0	-0.7
GYA				XP	sP	16 23 25.5	-0.4
GYA				PP	PP	16 26 50.5	+2.1
GYA				SKS		16 33 38.5	
GYA				S	S	16 34 02.5	-4.4
GYA				XS	sS	16 34 20.5	-5.9
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,120nm,8.6s						
GYA				LR	LR		
	comp=N,320nm,18.0s,MS5.0						
GYA				LR	LR		
	comp=E,310nm,17.4s,MS5.0						
GYA				LR	LR		
	comp=Z,380nm,18.0s,MS4.9						
ANMO	**Albuquerque**	**91.75**	**51**	*e*P	**P**	**16 23 10.7**	**-0.4**
HLID	**Hailey**	**91.86**	**40**	*e*P	**P**	**16 23 11.2**	**-0.2**
BJI	**Beijing**	**92.30**	**315**	P	**P**	**16 23 14.8**	**+1.3**
BJI				AMB	AMB		
	comp=Z,18nm,0.6s,mb5.6						
BJI	**Beijing**	**92.30**	**315**	P	**P**	**16 23 14.7**	**+1.2**
RRI2	**Red Ridge**	**93.51**	**42**	*e*P	**P**	**16 23 18.7**	**-0.2**
MCMT	**McKenzie Canyo**	**93.53**	**40**	*e*P	**P**	**16 23 17.4**	**-1.6**
CMAR	**Chiang Mai Arr**	**93.67**	**289**	P	**P**	**16 23 21.2**	**+0.9**
	comp=Z,2.7nm,1.0s,mb4.6,baz=141,slow=2.5,SNR=12						
CMAR	**Chiang Mai Arr**	**93.67**	**289**	P	**P**	**16 23 21.2**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DCID1	**Drake Creek**	**93.74**	**42**	*e*P	**P**	**16 23 21.6**	**+1.5**
XAN	**Xi'an**	**93.76**	**307**	P	**P**	**16 23 20.5**	**+0.1**
XAN				AP	pP	16 23 32.8	+0.7
XAN				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb5.0						
REDW	**Red Top Meadow**	**93.80**	**42**	*e*P	**P**	**16 23 20.4**	**+0.1**
	comp=Z,8.5nm,1.1s,mb5.1						
TPAW	**Teton Pass**	**93.81**	**42**	*e*P	**P**	**16 23 21.3**	**+1.0**
	comp=Z,11nm,1.3s,mb5.1						
KMI	**Kunming**	**93.83**	**296**	P	**P**	**16 23 21.5**	**+0.6**
KMI				AP	pP	16 23 33.3	+0.6
KMI				XP	sP	16 23 37.5	+0.6
KMI				PP	PP	16 27 10.5	+3.4
KMI				SKS		16 33 54.0	
KMI				S	S	16 34 22.5	-5.6
KMI				XS	sS	16 34 44.5	-3.2
KMI				SS	SS	16 40 50.0	+1.9
KMI				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb5.0						
KMI				AMB	AMB		
	comp=Z,611nm,14.3s						
KMI				LR	LR		
	comp=N,285nm,13.8s,MS5.0						
KMI				LR	LR		
	comp=E,200nm,15.8s,MS5.0						
KMI				LR	LR		
	comp=Z,351nm,18.7s,MS4.8						
KMI	**Kunming**	**93.83**	**296**	P	**P**	**16 23 21.5**	**+0.6**
KMI				*PP	pP	16 23 33.3	+0.6
KMI				*SP	sP	16 23 37.4	+0.5
KMI						16 27 10.5	
KMI						16 33 54.1	
KMI				S	S	16 34 22.5	-5.6
KMI				SS	SS	16 40 49.9	+1.8
KMI	**Kunming**	**93.83**	**296**	P	**P**	**16 23 21.5**	**+0.6**
KMI				pP	pP	16 23 33.3	+0.6
KMI				sP	sP	16 23 37.4	+0.5
KMI				PP	PP	16 27 10.5	+3.4
KMI				SKS		16 33 54.1	
KMI				S	S	16 34 22.5	-5.6
KMI				sS	sS	16 34 44.5	-3.2
KMI				SS	SS	16 40 49.9	+1.8
CHTO	**Chiang Mai**	**93.84**	**289**	*e*P	**P**	**16 23 22.2**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**93.84**	**289**	*e*P	**P**	**16 23 22.2**	**+1.1**
	comp=Z,5.9nm,1.0s,mb5.0						
LOHW	**Long Hollow**	**94.09**	**42**	*e*P	**P**	**16 23 21.6**	**0.0**
	comp=Z,7.6nm,1.2s,mb5.0						
PDAR	**Pinedale Array**	**94.21**	**43**	P	**P**	**16 23 21.3**	**-0.9**
	comp=Z,0.4nm,0.3s,mb4.3,baz=225,slow=1.7,SNR=4.8						
QLMT	**Earthquake Lak**	**94.33**	**41**	*e*P	**P**	**16 23 23.5**	**+0.8**
SEY	**Seymchan**	**94.45**	**346**	⇑*e*P	**P**	**16 23 21.3**	**-1.5**
CD2	**Chengdu**	**95.91**	**302**	⇓*i*P	**P**	**16 23 31.8**	**+1.5**
CD2				PP	PP	16 27 26.8	+3.6
CD2				SKS		16 34 06.3	
CD2				S	S	16 34 46.5	+0.6
CD2				SS	SS	16 41 21.3	+3.8
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.6						
CD2				AMB	AMB		
	comp=Z,30nm,5.8s						
CD2				LR	LR		
	comp=N,160nm,16.4s						
CD2				LR	LR		
	comp=Z,180nm,18.2s,MS4.6						
RSSD	**Black Hills**	**98.31**	**44**	*e*P	**P**	**16 23 40.3**	**-0.5**
LZH	**Lanzhou**	**98.39**	**306**	*e*P	**P**	**16 23 45.0**	**+3.6**
LZH				AP	pP	16 23 55.5	+2.4
LZH				XP	sP	16 24 00.0	+2.6
LZH				PP	PP	16 27 48.0	+5.8
LZH				AMB	AMB		
	comp=Z,19nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,117nm,6.1s						
LZH	**Lanzhou**	**98.39**	**306**	*e*P	**P**	**16 23 45.0**	**+3.6**
LZH				pP	pP	16 23 55.6	+2.5
LZH				sP	sP	16 24 00.1	+2.7
LZH				PP	PP	16 27 48.0	+5.8
SONM	**Songino Array**	**102.43**	**318**	P	Pdif	16 23 59.8	+0.5
	comp=Z,0.6nm,0.7s,baz=145,slow=3.6,SNR=4.2						
SONM	**Songino Array**	**102.43**	**318**	P	Pdif	16 23 59.8	+0.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GTA	**Gaotai**	**102.76**	**308**	*e*P	Pdif	16 24 02.3	+1.5
GTA				AP		16 24 09.0	
GTA				XP		16 24 12.5	
WMQ	**Urumqi**	**112.83**	**309**	*e*PKP	PKiKP	16 28 41.0	+1.1
WMQ				LR	LR		
	comp=Z,480nm,19.8s,MS5.1						
ZALV	**Zalesovo Beam**	**117.30**	**319**	PKP	PKPdf	16 28 46.0	-2.2
	comp=Z,2.1nm,0.9s,baz=194,slow=0.6,SNR=7.9						
ZALV	**Zalesovo Beam**	**117.30**	**319**	PKIKP	PKPdf	16 28 46.0	-2.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**117.30**	**319**	PKP	PKPdf	16 28 46.0	-2.2
MK31	**Makanchi Array**	**117.31**	**311**	*e*PKIKP	PKPdf	16 28 46.1	-2.3
MKAR	**Makanchi Array**	**117.31**	**311**	PKP	PKPdf	16 28 47.0	-1.5
	comp=Z,2.7nm,0.8s,baz=64,slow=2.8,SNR=18						
MKAR	**Makanchi Array**	**117.31**	**311**	PKIKP	PKPdf	16 28 47.0	-1.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOSA	**Boshof**	**119.26**	**202**	PKP	PKPdf	16 28 52.7	-0.2
	comp=Z,3.2nm,0.9s,baz=207,slow=4.5,SNR=2.8						
BOSA	**Boshof**	**119.26**	**202**	PKIKP	PKPdf	16 28 52.7	-0.2
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOSA	**Boshof**	**119.26**	**202**	PKP	PKPdf	16 28 52.7	-0.2
KURK	**Kurchatov**	**120.46**	**314**	*e*PKIKP	PKPdf	16 28 52.5	-1.9
TKM2	**Tokmak 2**	**121.12**	**305**	P	PKPdf	16 28 55.2	-0.7
	SNR=5.7						
TKM2	**Tokmak 2**	**121.12**	**305**	*e*PKPdf	PKPdf	16 28 52.9	-3.0
UCH	**Uchtor**	**121.77**	**304**	P	PKPdf	16 28 57.6	+0.4
	SNR=8.6						
UCH	**Uchtor**	**121.77**	**304**	*e*PKPdf	PKPdf	16 28 57.0	-0.2
USP	**Ospenovka**	**121.98**	**305**	P	PKPdf	16 28 56.8	-0.8
	SNR=6.2						
AML	**Almayashu**	**122.35**	**304**	P	PKPdf	16 28 58.5	+0.2
	SNR=8.7						
AML	**Almayashu**	**122.35**	**304**	*e*PKPdf	PKPdf	16 28 56.5	-1.8
EKS2	**Erkin-Say**	**122.39**	**304**	P	PKPdf	16 28 58.0	-0.3
	SNR=6.1						
EKS2	**Erkin-Say**	**122.39**	**304**	*e*PKPdf	PKPdf	16 28 56.3	-2.1
KBL	**Kabul**	**124.34**	**294**	*e*PKIKP	PKPdf	16 29 02.0	-0.4
BRVK	**Borovoye**	**125.81**	**317**	*e*PKIKP	PKPdf	16 29 03.0	-1.6
ARU	**Arti**	**132.27**	**322**	PKIKP	PKPdf	16 29 15.1	-1.7
ARU	**Arti**	**132.27**	**322**	*e*PKPdf	PKPdf	16 29 13.9	-2.9
ARCES	**ARCESS Array B**	**137.03**	**349**	PKhKP		16 29 20.9	
	comp=Z,4.8nm,1.0s,baz=333,slow=1.4,SNR=4.6						
ARCES	**ARCESS Array B**	**137.03**	**349**	PKIKP	PKPdf	16 29 20.9	-4.4
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JOF	**Joensuu**	**141.08**	**340**	*e*p	PKPdf	16 29 31.0	-1.9
	comp=Z,0.7nm,0.4s						
JOF	**Joensuu**	**141.08**	**340**	*e*PKIKP	PKPdf	16 29 31.0	-1.9
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
RDF	**Al-Radifah**	**141.16**	**282**	*e*P	PKPdf	16 29 29.2	-4.9
	baz=282						
RDF				AMb	AMB	16 29 37.6	
	comp=Z,39nm,1.0s,baz=282						
NAY	**Al-Naaiem**	**141.48**	**282**	*e*P	PKPdf	16 29 29.3	-5.4
	baz=282						
NAY				AMb	AMB	16 29 38.5	
	comp=Z,7.0nm,1.0s,baz=282						
MIB	**Mutribah**	**141.49**	**283**	*e*P	PKPdf	16 29 29.2	-5.5
	baz=283						
MIB				AMb	AMB	16 29 31.2	
	comp=Z,19nm,0.9s,baz=283						
RST	**Umm Al-Ruwaisa**	**141.74**	**282**	*e*P	PKPdf	16 29 29.8	-5.3
	baz=282						
RST				AMb	AMB	16 29 38.3	
	comp=Z,19nm,1.0s,baz=282						
KAF	**Kangasniemi**	**143.15**	**342**	*e*p	PKPdf	16 29 33.2	-3.4
	comp=Z,1.0nm,0.4s						
KAF	**Kangasniemi**	**143.15**	**342**	*e*PKIKP	PKPdf	16 29 33.2	-3.4
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DGRG	**David-gareji**	**143.40**	**302**	P	PKPdf	16 29 35.1	-2.6
OBN	**Obninsk**	**144.19**	**327**	*c i*PKIKP	PKPdf	16 29 35.6	-3.0
OBN				*e*		16 29 46.7	
OBN				pmax	pmax		
	comp=Z,41nm,1.2s						
OBN				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.9						
ONI	**Oni**	**144.65**	**304**	P	PKPdf	16 29 38.6	-1.2
KIV	**Kislovodsk**	**144.93**	**307**	⇑*i*PKIKP	PKPdf	16 29 39.0	-1.3
KIV	**Kislovodsk**	**144.93**	**307**	⇑*i*P	PKPdf	16 29 39.3	-1.0
KIV	**Kislovodsk**	**144.93**	**307**	⇑P	PKPdf	16 29 39.3	-1.0
HAKT	**HAKKARI**	**145.00**	**295**	*i* P	PKPbc	16 29 38.1	-1.9
DIGO	**Kars**	**145.02**	**300**	*i* P	PKPbc	16 29 38.5	-1.5
VSU	**Vasula**	**145.94**	**338**	*i* PKIKP	PKPdf	16 29 40.8	-0.7
ARTV	**Artvin**	**146.00**	**302**	*i* P	PKPdf	16 29 42.6	+0.3
DBOC	**Borcka**	**146.17**	**302**	*i* P	PKPdf	16 29 43.6	+1.1
ERZM	**Erzurum**	**146.61**	**300**	*i* P	PKPdf	16 29 44.1	+0.8
BEST	**Besiri**	**146.91**	**296**	*i* P	PKPdf	16 29 46.2	+2.3
SOC	**Sochi**	**147.11**	**307**	*i* PKP2	PKPab	16 29 45.0	-2.8
SOC				*e*PPP		16 36 38.6	
SOC				*e*SS	SS	16 52 13.6	+3.3
SOC				pmax	pmax		
	comp=Z,627nm,0.6s						
NB2	**NORSAR Subarra**	**147.11**	**353**	PKP	PKPdf	16 29 43.7	+0.3
	comp=Z,18nm,0.9s,baz=12,slow=2.9						
NOA	**NORSAR Array B**	**147.11**	**353**	PKPbc	PKPbc	16 29 44.3	-1.3
	comp=Z,11nm,0.8s,baz=14,slow=4.4,SNR=18						
NOA	**NORSAR Array B**	**147.11**	**353**	PKIKP	PKPdf	16 29 44.3	+0.9
NOA				pmax	pmax		
	comp=Z,11nm,0.8s						
KOPT	**Kop Dagi**	**147.26**	**300**	*i* P	PKPdf	16 29 45.0	+0.6
NAO01	**NORSAR Array S**	**147.34**	**353**	*e*PKPdf	PKPdf	16 29 42.8	-1.0
MARD	**Mardin**	**147.34**	**295**	*i* P	PKPdf	16 29 43.4	-1.2
ANN	**Anapa**	**148.33**	**310**	*i* PKP2	PKPbc	16 29 48.2	-1.2
ANN				pmax	pmax		
	comp=Z,45nm,1.1s						
IDID	**Didziasalis**	**148.33**	**334**	*e*P	PKPdf	16 29 47.5	+1.9
MNK	**Minsk**	**148.49**	**332**	*e*PKIKP	PKPdf	16 29 47.0	+1.1
IIGN	**Ignalina**	**148.50**	**335**	*e*P	PKPbc	16 29 48.3	-1.2
GRSN	**GIRESUNGRSN**	**148.77**	**303**	*i* P	PKPdf	16 29 41.9	-4.9
MALT	**Malatya**	**149.09**	**298**	⇓*i*P	PKPbc	16 29 51.6	0.0
MALT	**Malatya**	**149.09**	**298**	⇓P	PKPbc	16 29 51.6	0.0
GZT	**Gaziantep**	**149.89**	**296**	*i* P	PKPbc	16 29 52.6	-1.0
AKASG	**Malin Array Be**	**150.39**	**325**	PKPbc	PKPbc	16 29 53.4	-1.0
	comp=Z,28nm,0.9s,baz=48,slow=2.6,SNR=67						
AKASG	**Malin Array Be**	**150.39**	**325**	PKIKP	PKPbc	16 29 53.4	-1.0
AKASG				pmax	pmax		
	comp=Z,28nm,0.9s						
AKBB	**Malin Array Si**	**150.39**	**325**	*e*PKIKP	PKPbc	16 29 52.9	-1.5
KIEV	**Kiev**	**150.40**	**325**	*e*PKIKP	PKPbc	16 29 52.5	-1.9
SUW	**Suwalki**	**150.66**	**335**	*e*PKP	PKPbc	16 29 54.4	-0.5
SUW	**Suwalki**	**150.66**	**335**	*e*PKP	PKPbc	16 29 54.4	-0.5
COBT	**Iskenderun**	**151.03**	**294**	*i* P	PKPbc	16 29 55.6	-0.7
CTKT	**Corum**	**151.41**	**303**	*i* P	PKPbc	16 29 56.0	-1.1
AVNT	**Avonos**	**151.78**	**299**	*i* P	PKPbc	16 29 55.0	-3.0
CDAG	**Cicekdag**	**151.96**	**301**	*i* P	PKPbc	16 29 57.0	-1.4
GULE	**Gulek**	**152.10**	**296**	*i* P	PKPdf	16 29 44.2	-8.0
BR131	**Keskin Array S**	**152.49**	**302**	*e*PKPbc	PKPbc	16 29 58.7	-0.8
MEST	**Erdemli**	**152.70**	**295**	*i* P	PKPbc	16 29 59.6	-0.6
ANTO	**Ankara**	**153.08**	**302**	⇑*i*P	PKPbc	16 30 00.7	-0.2
ANTO	**Ankara**	**153.08**	**302**	⇑P	PKPbc	16 30 00.7	-0.2
LVV	**L'vov**	**153.47**	**329**	*e*PKIKP	PKPbc	16 30 00.6	-0.8
CSS	**Prodhromos**	**153.55**	**292**	*e*PKPbc	PKPbc	16 30 00.2	-1.9
CSS				*e*PKPab	PKPab	16 30 14.2	-0.5
BSEG	**Bad Segeberg**	**154.14**	**350**	*e*PKPab	PKPab	16 30 15.1	-1.3
BUR08	**Bucovina Ar. S**	**154.37**	**324**	*e*PKPbc	PKPbc	16 30 03.4	0.0
BUR08				*e*PKPab	PKPab	16 30 16.3	-1.3
BURAR	**Bucovina Array**	**154.38**	**324**	⇓*i*P	PKPab	16 30 17.9	+0.2
BURAR	**Bucovina Array**	**154.38**	**324**	⇓P	PKPab	16 30 17.9	+0.2
VRI	**Vrincioaia**	**154.61**	**319**	⇓*i*P	PKPab	16 30 19.6	+0.9
VRI	**Vrincioaia**	**154.61**	**319**	⇓P	PKPab	16 30 19.6	+0.9
KOLS	**Kolonicke sedl**	**154.90**	**329**	*e*PKP	PKPbc	16 30 03.9	-0.6
KOLS				*e*		16 30 15.9	
STHS	**Stebnicka Huta**	**154.99**	**331**	*e*PKP	PKPab	16 30 20.5	+0.3
MLR	**Muntele Rosu**	**155.27**	**319**	⇓*i*P	PKPab	16 30 22.7	+1.1
MLR	**Muntele Rosu**	**155.27**	**319**	⇓P	PKPab	16 30 22.7	+1.1
CRVS	**Cervenica-Dubn**	**155.28**	**330**	*e*PKP	PKPab	16 30 21.1	-0.4
ISP	**Isparta**	**155.32**	**299**	*e*PKP2	PKPab	16 30 21.0	-1.1
NIE	**Niedzica**	**155.38**	**332**	*e*PKP	PKPab	16 30 21.9	0.0
KSP	**Ksiaz**	**155.64**	**339**	*e*PKP	PKPab	16 30 22.8	-0.1
KSP	**Ksiaz**	**155.64**	**339**	*e*PKPab	PKPab	16 30 22.6	-0.3
ULDT	**Uludag**	**155.67**	**305**	*i* P	PKPdf	16 30 06.2	+9.1
OKC	**Ostrava-Krasne**	**155.88**	**336**	*e*PKPab	PKPab	16 30 23.6	-0.4
UPC	**Upice**	**156.02**	**339**	*e*PKPab	PKPab	16 30 24.6	0.0
DPC	**Dobruska-Polom**	**156.06**	**339**	*e*PKPab	PKPab	16 30 24.8	0.0
DPC				*e*pPKP	pPKPab	16 30 35.6	-1.0
CLL	**Collm**	**156.12**	**344**	*i* PKP2	PKPab	16 30 24.2	-0.8
CLL				pmax	pmax		
	comp=Z,13nm,1.2s						
CLL	**Collm**	**156.12**	**344**	*e*PKPab	PKPab	16 30 23.7	-1.3
CLL	**Collm**	**156.12**	**344**	*i* PKPab	PKPab	16 30 24.2	-0.8
	comp=Z,13nm,1.2s						
CLL				*e*(PP)		16 34 10.0	
MORC	**Moravsky Berou**	**156.14**	**336**	⇓*i*P	PKPab	16 30 25.0	-0.1
MORC	**Moravsky Berou**	**156.14**	**336**	⇓P	PKPab	16 30 25.0	-0.1
DRGR		**156.21**	**325**	⇑*i*P	PKPab	16 30 25.5	0.0
DRGR		**156.21**	**325**	⇑P	PKPab	16 30 25.5	-0.1
BRG	**Berggiesshubel**	**156.29**	**343**	*e*PKPab	PKPab	16 30 25.1	-0.6
BRG	**Berggiesshubel**	**156.29**	**343**	*e*PKP	PKPdf	16 29 56.4	-1.1
	comp=Z,14nm,1.8s						
BRG				*e*		16 30 24.8	
	comp=Z,7.2nm,1.0s						
BRG				*e*		16 30 37.4	
	comp=Z,7.3nm,1.0s						
PVCC	**Panska Ves**	**156.43**	**341**	*e*PKPab	PKPab	16 30 25.9	-0.4
PVCC				*e*pPKP	pPKPab	16 30 37.7	-0.4
VYHS	**Vyhne**	**156.71**	**333**	*e*PKP	PKPab	16 30 27.1	-0.5
PSZ	**Piszkesteto**	**156.71**	**330**	⇑*i*P	PKPab	16 30 27.9	+0.3
PSZ	**Piszkesteto**	**156.71**	**330**	⇑P	PKPab	16 30 27.9	+0.3
VRAC	**Vranov**	**156.87**	**337**	⇓*i*P	PKPab	16 30 28.5	+0.2
PRU	**Pruhonice**	**156.92**	**341**	*e*PKPab	PKPab	16 30 28.3	-0.2
MOX	**Moxa**	**157.06**	**346**	*e*PKP	PKPab	16 30 28.6	-0.4
MOX	**Moxa**	**157.06**	**346**	*e*PKPab	PKPab	16 30 28.1	-0.9
TANN	**Tannenbergstha**	**157.08**	**344**	*e*PKPab	PKPab	16 30 28.4	-0.7
TREC	**Trest**	**157.25**	**339**	*e*PKPab	PKPab	16 30 29.5	-0.4
TREC				*e*pPKP	pPKPab	16 30 40.3	-1.4
NKC	**Novy Kostel**	**157.25**	**344**	*e*PKPab	PKPab	16 30 28.9	-1.0
MODS	**Modra-Piesok**	**157.41**	**335**	*e*PKP	PKPab	16 30 30.8	+0.2
BZS	**Buzias**	**157.56**	**324**	⇓*i*P	PKPab	16 30 31.2	-0.2
MANZ	**Manzenberg**	**157.56**	**345**	*e*PKPab	PKPab	16 30 30.3	-0.9
ZST	**Bratislava**	**157.62**	**335**	*e*PKP	PKPab	16 30 31.0	-0.5
KHC	**Kasperske Hory**	**157.97**	**341**	*e*PKPab	PKPab	16 30 32.7	-0.3
KHC				*e*pPKP	pPKPab	16 30 43.0	-1.8
TNS	**Taunus Mts**	**158.03**	**351**	*e*PKPab	PKPab	16 30 32.4	-0.8
GRF	**Grafenberg Arr**	**158.04**	**346**	*e*PKPab	PKPab	16 30 32.6	-0.7
WET	**Wettzell**	**158.15**	**342**	*e*PKPab	PKPab	16 30 33.0	-0.8
GERES	**GERESS Array B**	**158.19**	**341**	PKPab	PKPab	16 30 33.4	-0.5
	comp=Z,1.7nm,0.9s,baz=336,slow=2.9,SNR=7.8						
GERES	**GERESS Array B**	**158.19**	**341**	PKP2	PKPab	16 30 33.4	-0.6
GERES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CONA	**Conrad Observa**	**158.30**	**336**	⇓*i*P	PKPab	16 30 34.5	0.0
	comp=Z,14nm,1.1s						
CONA	**Conrad Observa**	**158.30**	**336**	⇓*i*PKPab	PKPab	16 30 33.8	-0.7
	comp=Z,14nm,1.1s						
CSNA	**Conrad Observa**	**158.30**	**336**	⇓*i*P	PKPab	16 30 34.6	+0.1
	comp=Z,13nm,1.1s						
CSNA	**Conrad Observa**	**158.30**	**336**	⇓*i*PKPab	PKPab	16 30 33.8	-0.7
	comp=Z,13nm,1.1s						
RJOB	**Jochberg**	**159.45**	**341**	*e*PKPab	PKPab	16 30 39.3	-0.2
SOKA	**Soboth**	**159.66**	**336**	⇓*i*P	PKPab	16 30 39.8	-0.6
	comp=Z,8.9nm,0.9s						
FLN	**La Foliniere**	**159.70**	**7**	*e*PKP2	PKPab	16 30 38.3	-2.2
	comp=Z,109nm,1.6s						
BFO	**Black Forest**	**159.89**	**350**	*e*PKPab	PKPab	16 30 43.5	+2.2
GRR	**Gorron**	**160.02**	**8**	*e*PKP2	PKPab	16 30 39.9	-2.0
	comp=Z,16nm,1.0s						
WTTA	**Wattenberg**	**160.21**	**343**	⇑*i*P	PKPab	16 30 42.8	+0.1
	comp=Z,11nm,0.9s						
WTTA	**Wattenberg**	**160.21**	**343**	⇓*i*PKPab	PKPab	16 30 42.2	-0.6
	comp=Z,11nm,0.9s						
LOR	**Lormes**	**161.36**	**358**	*e*PKP2	PKPab	16 30 45.8	-2.0
	comp=Z,11nm,1.1s						
SSF	**Saint Saulge**	**161.58**	**359**	*e*PKP2	PKPab	16 30 46.7	-2.0
	comp=Z,8.3nm,1.0s						
AVF	**Avril sur Loir**	**161.85**	**359**	*e*PKP2	PKPab	16 30 47.7	-2.2
	comp=Z,11nm,1.2s						
MFF	**Saint Martin d**	**161.87**	**7**	*e*PKP2	PKPab	16 30 47.9	-2.1
	comp=Z,43nm,1.4s						
SMF	**Signal de Mont**	**161.99**	**358**	*e*PKP2	PKPab	16 30 48.5	-2.0
	comp=Z,30nm,1.3s						
ORIF	**Oris-en-Rattie**	**163.57**	**353**	*e*PKP2	PKPab	16 30 56.6	-0.9
	comp=Z,23nm,1.2s						
TORD	**Torodi Ar. Bea**	**164.56**	**175**	PKP	PKPdf	16 30 06.5	-1.3
	comp=Z,1.1nm,0.9s,baz=67,slow=1.2,SNR=3.5						
TORD				PKPab	PKPab	16 31 02.0	-0.6
	comp=Z,2.9nm,0.9s,baz=179,slow=4.3,SNR=5.0						
FRF	**La Foret Royal**	**164.80**	**350**	*e*PKP2	PKPab	16 31 01.0	-2.0
	comp=Z,40nm,1.2s						
ESDC	**Sonseca Array**	**167.54**	**26**	PKPab	PKPab	16 31 13.8	-1.4
	comp=Z,0.8nm,0.6s,baz=323,slow=6.8,SNR=5.0						

IDC 29 16:26:25.6±2.2**, 543S**×**15318E, h0**km**, mb3.3**/3**, mb1 3.4**/3**, mb1mx3.3**/16**, mbtmp3.3**/3**, Error ellipse: s-maj=72.3km s-min=46.9km az=138.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.32**	**230**	P	P	16 31 35.7	+0.2
	0.4nm,0.8s,baz=56,slow=10.0,SNR=4.3						

ASAR	**Alice Springs**	**25.95**	**224**	P	P	16 31 59.6	-0.2	
	0.1nm,0.3s,baz=61,slow=8.9,SNR=3.0							
QSPA	**South Pole Qui**	**84.54**	**180**	P	P	16 39 00.7	+0.7	
	0.4nm,0.6s,baz=316,slow=6.3,SNR=6.2							
TORD	**Torodi Ar. Bea**	**150.85**	**287**	PKPbc	PKPbc	16 46 20.9	-0.3	
	0.6nm,0.7s,baz=72,slow=2.4,SNR=4.0							

*IDC **29** 16:34:35.4±0.7, 2838S×17675W, h0km, mb4.2/7, mb1 4.4/8, mb1mx4.2/16, mbtmp4.3/8, ML4.3/1, MS4.1/1, Ms1 4.0/1, ms1mx3.3/23, Error ellipse: s-maj=23.1km s-min=17.3km az=135.0*

*ISCJB **29** 16:34:38.7±0.6, 283S±0.1×1768W±0.1, h33km, mb4.5/11, Error ellipse: s-maj=17.8km s-min=8.9km az=143.1*

*NEIC **29** 16:34:40.4±0.4, 2846S×17675W, h35km, mb4.6/4, Error ellipse: s-maj=14.4km s-min=8.2km az=155.0*

ISC 29 16:34:36.0±5.5, 284S±01×1768W±01, h3km±35km, n24, σ0§85/21, mb4.5/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.35**	**229**	Pn	**Pn**	**16 35 02.3**	**+0.5**
	464nm,0.3s,baz=91,slow=23,SNR=25						
RAO				Sn	**Sn**	**16 35 21.2**	**+1.0**
	1µm,0.3s,baz=106,slow=20,SNR=22						
URZ	**Urewera**	**11.12**	**206**	Pn	**Pn**	**16 37 07.1**	**-8.8**
	0.6nm,0.3s,baz=337,slow=11,SNR=7.1						
URZ				Sn	**Sn**	**16 39 07.3**	**-13**
	4.0nm,0.3s,baz=334,slow=23,SNR=11						
AFI	**Afiamalu**	**15.11**	**19**	Sn	**Sn**	**16 40 50.1**	**-8.3**
	1.0nm,0.3s,baz=32,slow=23,SNR=3.6						
RAR	**Rarotonga**	**16.97**	**69**	Pn	**Pn**	**16 38 34.7**	**+0.2**
	1.0nm,0.3s,baz=263,slow=15,SNR=2.2						
HNR	**Honiara**	**28.89**	**306**	P	**P**	**16 40 36.4**	**+0.2**
	20nm,0.4s,mb5.2,baz=162,slow=20,SNR=3.8						
CTA	**Charters Tower**	**34.62**	**275**	*e*P	**P**	**16 41 28.1**	**+1.6**
	2.2nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**36.04**	**254**	P	**P**	**16 41 38.5**	**-0.2**
	4.4nm,1.1s,mb4.3,baz=107,slow=10,SNR=6.0						
STKA				LR	LR	16 53 57.9	
	comp=Z,268nm,19.4s,baz=28,slow=32						
ASAR	**Alice Springs**	**44.35**	**264**	P	**P**	**16 42 47.0**	**-0.7**
	2.7nm,0.7s,mb4.1,baz=95,slow=7.0,SNR=30						
ASAR				PcP	PcP	16 44 31.9	+0.1
	0.7nm,0.5s,baz=117,slow=3.7,SNR=6.6						
WB2	**Warramunga Arr**	**45.15**	**269**	*e*P	**P**	**16 42 53.6**	**-0.5**
WRA	**Warramunga Arr**	**45.16**	**269**	P	**P**	**16 42 53.7**	**-0.5**
	5.0nm,1.0s,mb4.3,baz=106,slow=8.0,SNR=24						
WRA				PcP	PcP	16 44 34.6	-0.1
	2.3nm,0.9s,baz=108,slow=3.6,SNR=8.7						
FORT	**Forrest**	**47.65**	**253**	*e*P	**P**	**16 43 11.8**	**-1.9**
	10.0nm,0.6s,mb5.0						
SBA	**Scott Base**	**50.14**	**184**	*e*P	**P**	**16 43 38.3**	**+6.2**
	9.0nm,1.0s,mb4.8						
QSPA	**South Pole Qui**	**61.74**	**180**	P	**P**	**16 44 55.4**	**+0.2**
	2.2nm,0.9s,mb4.3,baz=14,slow=3.6,SNR=7.4						
MAW	**Mawson**	**74.59**	**200**	P	**P**	**16 46 15.8**	**-0.1**
	2.3nm,0.6s,mb4.3,baz=129,slow=8.3,SNR=14						
MAW	**Mawson**	**74.59**	**200**	*e*P	**P**	**16 46 14.4**	**-1.6**
	3.6nm,0.7s,mb4.4						
MJAR	**Matsushiro Arr**	**77.21**	**324**	P	**P**	**16 46 31.4**	**+0.2**
	2.8nm,0.9s,mb4.2,baz=166,slow=6.3,SNR=6.3						
PAF	**Port-aux-Franc**	**82.41**	**217**	*e*P	**P**	**16 46 58.4**	**-1.0**
NVAR	**Mina Array Bea**	**86.01**	**42**	P	**P**	**16 47 18.8**	**+1.1**
	1.1nm,0.8s,mb4.2,baz=224,slow=8.1,SNR=5.8						
PV10	**Paradox Valley**	**91.69**	**47**	*e*P	**P**	**16 47 45.1**	**+0.4**
MKAR	**Makanchi Array**	**117.29**	**311**	PKP	PKPdf	16 53 22.0	-0.6
	0.2nm,0.3s,baz=48,slow=3.7,SNR=3.1						
KURK	**Kurchatov**	**120.42**	**314**	PKP	PKPdf	16 53 27.7	-0.7
	0.3nm,0.6s,baz=109,slow=2.0,SNR=4.3						
NOA	**NORSAR Array B**	**146.89**	**353**	PKPbc	PKPbc	16 54 18.7	-0.4
	1.3nm,0.8s,baz=13,slow=4.5,SNR=3.5						
AKASG	**Malin Array Be**	**150.29**	**326**	PKPbc	PKPbc	16 54 27.5	-0.7
	2.6nm,0.7s,baz=47,slow=2.5,SNR=7.6						
TORD	**Torodi Ar. Bea**	**164.79**	**174**	PKPab	PKPab	16 55 36.4	-1.2
	0.3nm,0.5s,baz=219,slow=2.4,SNR=2.8						

IDC 29 16:51:18.2±5.5, 2290N×9339E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.3/22, mbtmp3.3/3, ML3.3/1, Error ellipse: s-maj=140.8km s-min=98.4km az=27.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.82**	**129**	Pn	Pn	16 52 59.9	+0.3
	0.1nm,0.3s,baz=305,slow=13,SNR=6.3						
WRA	**Warramunga Arr**	**58.40**	**134**	P	P	17 01 15.4	-0.3
	0.4nm,0.5s,baz=321,slow=7.4,SNR=12						
ASAR	**Alice Springs**	**60.77**	**137**	P	P	17 01 32.4	+0.4
	0.4nm,0.7s,baz=321,slow=6.9,SNR=8.8						

*BJI **29** 17:06:36.3, 2122S×17000E, h15km, mB5.2, mb4.7, Ms5.1, Msz4.8*

*NEIC **29** 17:06:37.8±0.4, 2144S×16956E, h10km, mb4.8/17, Error ellipse: s-maj=17.9km s-min=8.1km az=159.0*

*IDC **29** 17:06:37.3±0.7, 2118S×16938E, h0km, mb4.4/13, mb1 4.6/13, mb1mx4.5/17, mbtmp4.4/13, MS4.0/7, Ms1 4.0/7, ms1mx3.6/38, Error ellipse: s-maj=24.1km s-min=19.3km az=126.0*

*ISCJB **29** 17:06:37.3±0.4, 2127S±008×16945E±007, h9km, mb4.7/32, MS4.6/11, Error ellipse: s-maj=11.5km s-min=9.2km az=147.4*

*BGS **29** 17:06:37.7±2.8, 2144S×16956E, h10km, mb4.8(NEIC)*

*LDG **29** 17:06:38.9±0.4, 2090S×16890E, h10km, Mb4.9/3, Error ellipse: s-maj=37.6km s-min=6.5km az=148.0*

*MOS **29** 17:06:40.9±1.6, 2139S×16945E, h33km, mb5.0/12, Error ellipse: s-maj=14.2km s-min=11.6km az=7.1*

*SZGRF **29** 17:06:44.9, 2006S×17028E, h33km, Vanuatu Islands*

ISC 29 17:06:39.7±0.4, 2129S±007×16948E±007, h15km, h15km±1.9km:pP-P, n136, σ1§15/72, mb4.7/32, MS4.6/11, 3C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.93**	**254**	*e*P	**Pn**	**17 07 23.8**	**-2.0**
DZM				*e*S	**Sn**	**17 07 54.2**	**-6.6**
DZM	**Mont Dzumac**	**2.93**	**254**	*e*Pn	**Pn**	**17 07 22.9**	**-2.9**
HNR	**Honiara**	**14.94**	**321**	LR	LR	17 14 17.8	
	comp=Z,170nm,20.5s,baz=127,slow=31						
HNR	**Honiara**	**14.94**	**321**	*e*P	**Pn**	**17 10 13.8**	**+3.2**
HNR				pmax	pmax		
	comp=Z,35nm,0.4s						
HNR	**Honiara**	**14.94**	**321**	*e*Pn	**Pn**	**17 10 13.8**	**+3.2**
	comp=Z,34nm,0.4s						
URZ	**Urewera**	**18.15**	**160**	P	**Pn**	**17 10 55.8**	**+4.6**
	comp=Z,0.7nm,0.3s,baz=137,slow=16,SNR=5.7						
URZ				LR	LR	17 16 15.0	
	comp=Z,219nm,20.5s,baz=155,slow=32						
AFI	**Afiamalu**	**19.30**	**71**	LR	LR	17 17 01.5	
	comp=Z,328nm,20.8s,baz=226,slow=32						
AFI	**Afiamalu**	**19.30**	**71**	*e*P	**Pn**	**17 11 03.3**	**-2.1**
AFI				pmax	pmax		
	comp=Z,51nm,1.1s						
AFI	**Afiamalu**	**19.30**	**71**	*e*Pn	**Pn**	**17 11 03.3**	**-2.1**
	comp=Z,51nm,1.1s						
CTA	**Charters Tower**	**21.76**	**269**	*e*P	**P**	**17 11 32.4**	**+1.4**
	comp=Z,8.1nm,0.8s,mb4.2						
CTA	**Charters Tower**	**21.76**	**269**	P	**P**	**17 11 32.2**	**+1.2**
	comp=Z,11nm,0.9s,mb4.3,baz=98,slow=12,SNR=9.7						
CTA				LR	LR	17 19 14.3	
	comp=Z,542nm,18.9s,MS4.0,baz=89,slow=35						
CTA	**Charters Tower**	**21.76**	**269**	*e*P	**P**	**17 11 32.4**	**+1.4**
CTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CTAO	**Charters Tower**	**21.76**	**269**	*e*P	**P**	**17 11 31.7**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
CTAO	**Charters Tower**	**21.76**	**269**	*e*P	**P**	**17 11 31.7**	**+0.7**
	comp=Z,17nm,1.0s,mb4.4						
RPZ	**Rata Peaks**	**22.40**	**177**	LR	LR	17 19 26.8	
	comp=Z,570nm,18.3s,MS4.0,baz=249,slow=34						
CNB	**Canberra Magne**	**22.50**	**227**	*e*P	**P**	**17 11 41.9**	**+3.1**
CAN	**Canberra**	**22.75**	**228**	P	**P**	**17 11 41.0**	**-0.4**
STKA	**Stephens Creek**	**27.00**	**241**	*e*P	**P**	**17 12 22.3**	**+1.1**
	comp=Z,8.3nm,1.0s,mb4.2						
STKA	**Stephens Creek**	**27.00**	**241**	P	**P**	**17 12 22.3**	**+1.1**
	comp=Z,21nm,1.2s,mb4.5,baz=124,slow=5.7,SNR=7.4						
STKA				LR	LR	17 22 13.4	
	comp=Z,552nm,19.6s,MS4.1,baz=277,slow=35						
WB2	**Warramunga Arr**	**32.87**	**266**	*e*P	**P**	**17 13 13.7**	**+0.4**
WRAB	**Tennant Creek**	**32.87**	**266**	P	**P**	**17 13 12.4**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
WRAB	**Tennant Creek**	**32.87**	**266**	P	**P**	**17 13 12.4**	**-1.0**
	comp=Z,4.0nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**32.88**	**266**	P	**P**	**17 13 11.1**	**-2.4**
	comp=Z,2.4nm,0.9s,mb4.1,baz=100,slow=8.0,SNR=11						
WRA				PcP	PcP	17 15 58.1	0.0
	comp=Z,0.3nm,0.8s,baz=95,slow=3.6,SNR=7.0						
ASAR	**Alice Springs**	**32.91**	**259**	P	**P**	**17 13 12.5**	**-1.1**
	comp=Z,3.9nm,0.7s,mb4.4,baz=84,slow=9.3,SNR=43						
ASAR				PcP	PcP	17 15 57.1	-0.9
	comp=Z,1.9nm,1.0s,baz=89,slow=2.6,SNR=6.1						
TBI	**Tubuai**	**37.95**	**101**	*e*LR	LR	17 24 30.3	
	comp=Z,133nm,26.2s						
PPT	**Papeete**	**38.71**	**92**	*e*LR	LR	17 24 54.4	
	comp=Z,223nm,25.6s						
FITZ	**Fitzroy Crossi**	**41.30**	**266**	*e*P	**P**	**17 14 24.3**	**-0.7**
	comp=Z,12nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**41.30**	**266**	P	**P**	**17 14 24.3**	**-0.7**
	comp=Z,12nm,1.0s,mb4.5,baz=117,slow=11,SNR=20						
MBWA	**Marble Bar**	**46.22**	**261**	*e*P	**P**	**17 15 03.8**	**-0.7**
	comp=Z,13nm,0.9s,mb4.9						
RKT	**Rikitea**	**51.20**	**103**	*e*LR	LR	17 30 42.2	
	comp=Z,163nm,33.0s						
SBA	**Scott Base**	**56.62**	**181**	*e*P	**P**	**17 16 23.2**	**+1.5**
SBA				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
SBA	**Scott Base**	**56.62**	**181**	*e*P	**P**	**17 16 23.2**	**+1.5**
	comp=Z,16nm,1.2s,mb4.9						
MJAR	**Matsushiro Arr**	**64.66**	**332**	P	**P**	**17 17 15.1**	**-1.9**
	comp=Z,3.1nm,0.9s,mb4.3,baz=170,slow=7.3,SNR=8.8						
MJAR	**Matsushiro Arr**	**64.66**	**332**	P	**P**	**17 17 15.1**	**-1.9**
MAJO	**Matsushiro**	**64.67**	**332**	P	**P**	**17 17 12.0**	**-5.0**
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
MAJO	**Matsushiro**	**64.67**	**332**	P	**P**	**17 17 12.0**	**-5.0**
	comp=Z,9.3nm,1.0s,mb4.8						
QSPA	**South Pole Qui**	**68.77**	**180**	P	**P**	**17 17 43.7**	**+1.0**
	comp=Z,12nm,1.0s,mb4.8,baz=8.8,slow=2.5,SNR=22						
KSRS	**Korea Array**	**70.32**	**326**	P	**P**	**17 17 52.4**	**-0.4**
	comp=Z,1.3nm,0.9s,mb3.9,baz=135,slow=7.6,SNR=4.5						
NJ2	**Nanjing**	**71.84**	**316**	*e*P	**P**	**17 18 04.0**	**+1.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
PETK	**Petropavlovsk-**	**74.79**	**353**	P	**P**	**17 18 19.4**	**+0.4**
	comp=Z,9.0nm,1.1s,mb4.6,baz=103,slow=6.4,SNR=3.3						
PETK	**Petropavlovsk-**	**74.79**	**353**	P	**P**	**17 18 19.4**	**+0.4**
MDJ	**Mudanjiang**	**75.03**	**332**	P	**P**	**17 18 23.3**	**+2.7**
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.9s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,120nm,4.1s						
CN2	**Changchun**	**76.32**	**329**	*e*P	**P**	**17 18 27.5**	**-0.5**
MAW	**Mawson**	**76.63**	**202**	P	**P**	**17 18 30.0**	**+0.5**
	comp=Z,3.3nm,1.1s,mb4.2,baz=92,slow=7.0,SNR=4.8						
MAW	**Mawson**	**76.63**	**202**	P	**P**	**17 18 26.6**	**-2.9**
MAW				pmax	pmax		
	comp=Z,13nm,1.4s						
MAW	**Mawson**	**76.63**	**202**	P	**P**	**17 18 26.6**	**-2.9**
	comp=Z,13nm,1.4s,mb4.7						
GYA	**Guiyang**	**77.18**	**305**	P	**P**	**17 18 33.8**	**+0.5**
GYA				PP	PP	17 21 29.8	+2.4
GYA				S	S	17 28 21.5	-0.9
GYA				SKS		17 28 39.8	
GYA				SS	SS	17 33 23.5	+2.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,80nm,5.4s						
GYA				LR	LR		
	comp=N,420nm,17.8s,MS4.9						
GYA				LR	LR		
	comp=E,310nm,18.2s,MS4.9						
GYA				LR	LR		
	comp=Z,370nm,18.7s,MS4.7						
KLR	**Kul'dur**	**77.83**	**336**	*e*P	**P**	**17 18 32.3**	**-4.0**
KMI	**Kunming**	**79.55**	**302**	P	**P**	**17 18 47.5**	**+1.1**
KMI				AP	pP	17 18 50.8	-0.5
KMI				XP	sP	17 18 52.0	-1.0
KMI				S	S	17 28 50.3	+2.4
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
KMI				AMB	AMB		
	comp=Z,150nm,3.1s						
KMI				LR	LR		
	comp=N,310nm,17.5s,MS4.9						
KMI				LR	LR		
	comp=E,414nm,17.5s,MS4.9						
KMI				LR	LR		
	comp=Z,351nm,26.7s						
KMI	**Kunming**	**79.55**	**302**	P	**P**	**17 18 47.4**	**+1.0**
KMI				*SP	sP	17 18 51.9	-1.1
KMI				S	S	17 28 50.3	+2.4
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KMI				MLR	MLR		
	comp=Z,350nm,26.7s,MS4.6						
KMI	**Kunming**	**79.55**	**302**	P	**P**	**17 18 47.4**	**+1.0**
	comp=Z,10.0nm,1.0s,mb4.7						
KMI				pP	pP	17 18 50.7	-0.6
KMI				sP	sP	17 18 51.9	-1.1
KMI				S	S	17 28 50.3	+2.4
KMI				LR	LR		
	comp=Z,350nm,26.7s,MS4.6						
CMAR	**Chiang Mai Arr**	**79.55**	**294**	P	**P**	**17 18 46.9**	**+0.3**
	comp=Z,5.0nm,0.9s,mb4.4,baz=132,slow=3.9,SNR=19						
CHTO	**Chiang Mai**	**79.71**	**295**	*e*P	**P**	**17 18 47.6**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
CHTO	**Chiang Mai**	**79.71**	**295**	*e*P	**P**	**17 18 47.6**	**+0.2**
	comp=Z,7.2nm,1.0s,mb4.6						
CD2	**Chengdu**	**81.66**	**308**	P	**P**	**17 18 58.5**	**+0.9**
CD2				AP	pP	17 19 03.3	+0.8
CD2				XP	sP	17 19 05.8	+1.6
CD2				PP	PP	17 22 08.3	+3.6
CD2				S	S	17 29 10.8	+1.0
CD2				XS	sS	17 29 18.8	+0.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,6.2s						
CD2				LR	LR		
	comp=N,200nm,16.2s,MS4.7						
CD2				LR	LR		
	comp=E,130nm,14.8s,MS4.7						
CD2				LR	LR		
	comp=Z,160nm,15.4s,MS4.5						
HHC	**Hu-ho-hao-te**	**81.92**	**320**	*e*P	**P**	**17 18 59.0**	**+0.3**
HHC				AP	pP	17 19 02.5	-1.1
HHC				XP	sP	17 19 04.0	-1.4
HHC				PP	PP	17 22 09.5	+2.9
HHC				S	S	17 29 13.0	+0.9
HHC				SKS		17 29 15.3	
HHC				SS	SS	17 34 36.5	+5.2
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.0						
HHC				AMB	AMB		
	comp=Z,132nm,7.5s						
HHC				LR	LR		
	comp=N,392nm,17.4s,MS5.0						
HHC				LR	LR		
	comp=E,380nm,16.9s,MS5.0						
HHC				LR	LR		
	comp=Z,388nm,16.9s,MS4.8						
LZH	**Lanzhou**	**84.27**	**312**	*e*P	**P**	**17 19 11.5**	**+0.5**
LZH				AP	pP	17 19 22.5	+6.6
LZH				XP	sP	17 19 26.0	+8.4
LZH				PP	PP	17 22 30.0	+4.0
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,73nm,4.3s						
LZH	**Lanzhou**	**84.27**	**312**	*e*P	**P**	**17 19 11.6**	**+0.6**
LZH				*PP	pP	17 19 22.5	+6.6
LZH				*SP	sP	17 19 26.0	+8.4
LZH						17 22 30.0	
LZH				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.0						
LZH	**Lanzhou**	**84.27**	**312**	*e*P	**P**	**17 19 11.6**	**+0.6**
	comp=Z,18nm,1.3s,mb5.0						
LZH				pP	pP	17 19 22.5	+6.6
LZH				sP	sP	17 19 26.0	+8.4
LZH				PP	PP	17 22 30.0	+4.0
CLNS	**Chul'man**	**86.36**	**337**	*e*P	**P**	**17 19 20.4**	**-0.6**
CLNS				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.2						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.8s						
CLNS				pmax	pmax		
	comp=N,13nm,1.1s						
SNAA	**Sanae**	**87.13**	**182**	*e*P	**P**	**17 19 24.5**	**-0.2**
SNAA				*e*		17 19 26.5	
SNAA				*e*	pP	17 19 29.7	+0.1
SNAA	**Sanae**	**87.13**	**182**	*e*P	**P**	**17 19 23.5**	**-1.2**
SNAA				pmax	pmax		
	comp=Z,13nm,1.1s						
SNAA	**Sanae**	**87.13**	**182**	*e*P	**P**	**17 19 23.5**	**-1.2**
	comp=Z,13nm,1.1s,mb5.1						
VNA3	**Neumayer Olymp**	**87.71**	**180**	*e*P	**P**	**17 19 27.2**	**-0.3**
VNA3				*e*		17 19 29.2	
VNA3				*e*	pP	17 19 32.7	+0.3
VNA2	**Neumayer--Watz**	**88.01**	**181**	*e*P	**P**	**17 19 29.1**	**+0.2**
	baz=188,slow=4.6						
VNA2				*e*		17 19 30.8	
VNA2				*e*	pP	17 19 34.4	+0.6
VNA1	**Neumayer--Stat**	**88.30**	**181**	*e*P	**P**	**17 19 30.7**	**+0.4**
VNA1				*e*		17 19 32.6	
CMB	**Columbia Colle**	**88.35**	**48**	*e*P	**P**	**17 19 30.0**	**-1.0**
CMB				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.8						
CMB	**Columbia Colle**	**88.35**	**48**	*e*P	**P**	**17 19 30.0**	**-1.0**
	comp=Z,7.1nm,1.1s,mb4.8						
YBH	**Yreka Blue Hor**	**88.61**	**44**	P	**P**	**17 19 32.7**	**+0.6**
	comp=Z,2.1nm,0.9s,mb4.5,baz=176,slow=2.8,SNR=4.4						
GTA	**Gaotai**	**88.69**	**313**	*e*P	**P**	**17 19 33.0**	**+0.4**
GTA				AP	pP	17 19 36.0	-1.5
GTA				XP	sP	17 19 39.0	-0.3
GTA				SKS		17 30 00.5	
GTA				S	S	17 30 20.3	+1.2
GTA				XS	sS	17 30 27.8	+0.6
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.8						
GTA				AMB	AMB		
	comp=Z,48nm,3.8s						
GTA				LR	LR		
	comp=N,350nm,14.1s,MS5.2						
GTA				LR	LR		
	comp=E,490nm,13.2s,MS5.2						
GTA				LR	LR		
	comp=Z,320nm,17.4s,MS4.8						
YAK	**Yakutsk**	**88.89**	**342**	*e*P	**P**	**17 19 31.0**	**-2.0**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
YAK	**Yakutsk**	**88.89**	**342**	P	**P**	**17 19 31.3**	**-1.6**
	comp=Z,15nm,0.9s,mb5.3						
SONM	**Songino Array**	**88.99**	**323**	P	**P**	**17 19 33.7**	**-0.1**
	comp=Z,1.6nm,0.9s,mb4.3,baz=141,slow=5.2,SNR=9.5						
MTUM	**Tungsten Hills**	**89.31**	**49**	*e*P	**P**	**17 19 35.8**	**+0.2**
NVAR	**Mina Array Bea**	**89.98**	**48**	P	**P**	**17 19 39.2**	**+0.5**
	comp=Z,2.6nm,0.7s,mb4.7,baz=227,slow=8.5,SNR=13						
BMO	**Blue Mountains**	**93.56**	**43**	P	**P**	**17 19 50.0**	**-5.1**
ANMO	**Albuquerque**	**97.27**	**55**	LR	LR	17 53 59.7	
	comp=Z,242nm,20.1s,MS4.7,baz=247,slow=29						
WMQ	**Urumqi**	**98.78**	**314**	*e*P	**P**	**17 20 19.8**	**+0.9**
WMQ				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,121nm,4.6s						
WMQ				LR	LR		
	comp=Z,381nm,21.6s,MS4.9						
ARCES	**ARCESS Array B**	**127.10**	**345**	PKP	PKPdf	17 25 41.4	-1.3
	comp=Z,7.1nm,1.1s,baz=69,slow=4.0,SNR=5.4						
STHS	**Stebnicka Huta**	**142.30**	**326**	*e*PKP	PKPdf	17 26 11.4	-0.2
VYHS	**Vyhne**	**144.12**	**326**	*e*PKP	PKPdf	17 26 13.0	-1.8
BRG	**Berggiesshubel**	**144.80**	**333**	*e*PKPbc	PKPdf	17 26 14.1	-1.8
BRG	**Berggiesshubel**	**144.80**	**333**	*e*PKP	PKPdf	17 26 14.2	-1.7
	comp=Z,6.8nm,0.8s						
CLL	**Collm**	**144.86**	**334**	*e*PKPdf	PKPdf	17 26 14.0	-2.0
	comp=Z,8.0nm,1.1s						
CLL				*e*(PKiKP)		17 26 18.0	
	comp=Z,9.0nm,1.2s						
MODS	**Modra-Piesok**	**144.99**	**327**	*e*PKP	PKPdf	17 26 16.5	+0.2
EAU	**Auchinoon**	**145.09**	**353**	*e*P	PKPbc	17 26 14.0	-1.7
EBL	**Broad Law**	**145.12**	**353**	*e*P	PKPbc	17 26 14.0	-1.8
PGBU	**Glenifferbraes**	**145.24**	**354**	*e*P	PKPbc	17 26 14.3	-1.9
XSO	**Sourhope Farm**	**145.29**	**352**	*e*P	PKPdf	17 26 09.7	-6.9
CLZ	**Clausthal**	**145.45**	**337**	*e*PKPbc	PKPbc	17 26 16.7	-0.3
ESK	**Eskdalemuir**	**145.58**	**353**	*e*P	PKPdf	17 26 14.7	-2.5
ESK	**Eskdalemuir**	**145.58**	**353**	*e*PKPdf	PKPdf	17 26 15.8	-1.3
ECK	**Cauldkaine Hil**	**145.71**	**352**	*e*P	PKPdf	17 26 11.2	-6.1
TANN	**Tannenbergstha**	**145.76**	**334**	*e*PKPbc	PKPbc	17 26 17.6	-0.4
XAL	**Allendale**	**145.90**	**351**	*e*P	PKPdf	17 26 16.1	-1.6
IBBN	**Ibbenburen**	**145.96**	**340**	*e*PKPbc	PKPbc	17 26 17.9	-0.7
CONA	**Conrad Observa**	**146.00**	**328**	⇑*i*P	PKPbc	17 26 18.7	-0.1
	comp=Z,16nm,1.4s						
CSNA	**Conrad Observa**	**146.00**	**328**	⇑*i*P	PKPbc	17 26 18.8	-0.1
	comp=Z,15nm,1.4s						
KHC	**Kasperske Hory**	**146.24**	**331**	*e*P	PKPbc	17 26 19.5	0.0
GEC2	**GERESS Array S**	**146.39**	**331**	*e*PKPbc	PKPbc	17 26 19.7	-0.3
GERES	**GERESS Array B**	**146.39**	**331**	PKPbc	PKPbc	17 26 17.8	-2.2
	comp=Z,2.4nm,0.7s,baz=29,slow=3.0,SNR=20						
GRA1	**Grafenberg Arr**	**146.83**	**334**	*e*PKPbc	PKPbc	17 26 20.8	-0.4
GRA1				LR	LR		
	comp=Z,600nm,21.1s,MS5.3						
GRF	**Grafenberg

h13km±.1km**:pP-P,n47,**σ0°**89**/31**,mb4.3**/16**,1D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.74**	**253**	*eP*	**Pn**		**17 17 17.3**	**+0.2**
DZM				*eS*	**Sn**		**17 17 50.2**	**-0.1**
DZM	**Mont Dzumac**	**2.74**	**253**	*ePn*	**Pn**		**17 17 17.1**	**0.0**
DZM				*eSn*	**Sn**		**17 17 51.7**	**+1.4**
CTA	**Charters Tower**	**21.56**	**269**	*eP*	**P**		**17 21 24.9**	**+2.1**
	5.3nm,0.9s,mb4.0							
CTA	**Charters Tower**	**21.56**	**269**	P	**P**		**17 21 25.1**	**+2.2**
	6.4nm,0.8s,mb4.1,baz=99,slow=14,SNR=8.5							
CTAO	**Charters Tower**	**21.56**	**269**	*eP*	**P**		**17 21 24.7**	**+1.9**
	8.9nm,0.9s,mb4.2							
STKA	**Stephens Creek**	**26.84**	**241**	*eP*	**P**		**17 22 15.2**	**+1.5**
	3.7nm,0.6s,mb4.1							
STKA	**Stephens Creek**	**26.84**	**241**	P	**P**		**17 22 14.4**	**+0.7**
	5.2nm,0.8s,mb4.1,baz=60,slow=6.8,SNR=4.5							
STKA	**Stephens Creek**	**26.84**	**241**	P	**P**		**17 22 14.4**	**+0.7**
STKA				*eP*			17 22 14.8	
WB2	**Warramunga Arr**	**32.67**	**266**	*eP*	**P**		**17 23 05.1**	**-0.5**
WRAB	**Tennant Creek**	**32.67**	**266**	*eP*	**P**		**17 23 04.3**	**-1.3**
	4.8nm,1.0s,mb4.4							
WRA	**Warramunga Arr**	**32.68**	**266**	P	**P**		**17 23 04.7**	**-1.0**
	2.6nm,0.9s,mb4.2,baz=98,slow=8.0,SNR=23							
ASAR	**Alice Springs**	**32.72**	**259**	P	**P**		**17 23 05.8**	**-0.1**
	4.6nm,0.7s,mb4.5,baz=82,slow=9.3,SNR=73							
FITZ	**Fitzroy Crossi**	**41.11**	**267**	⇓*iP*			**17 24 17.7**	**+0.3**
	14nm,0.6s,mb4.8							
FITZ	**Fitzroy Crossi**	**41.11**	**267**	P	**P**		**17 24 18.2**	**+0.7**
	8.4nm,0.7s,mb4.5,baz=131,slow=12,SNR=41							
MBWA	**Marble Bar**	**46.02**	**261**	*eP*	**P**		**17 24 56.0**	**-1.0**
	7.5nm,0.7s,mb4.7							
KLBR	**Kellerberrin**	**46.89**	**246**	*eP*	**P**		**17 25 03.3**	**-0.5**
	15nm,1.1s,mb4.8							
NWAO	**Narrogin (SRO)**	**47.34**	**244**	P	**P**		**17 25 06.3**	**-0.9**
SBA	**Scott Base**	**56.64**	**181**	*eP*	**P**		**17 26 16.8**	**+1.0**
	5.4nm,1.0s,mb4.5							
SBA				*e*			17 26 24.6	
MJAR	**Matsushiro Arr**	**64.56**	**333**	P	**P**		**17 27 09.7**	**-0.7**
	1.5nm,0.9s,mb4.0,baz=165,slow=7.5,SNR=4.5							
QSPA	**South Pole Qui**	**68.79**	**180**	P	**P**		**17 27 37.4**	**+0.6**
	3.3nm,0.9s,mb4.2,baz=11,slow=3.5,SNR=12							
CMAR	**Chiang Mai Arr**	**79.36**	**295**	P	**P**		**17 28 41.0**	**+1.4**
	2.3nm,0.8s,mb4.2,baz=137,slow=4.3,SNR=20							
CHTO	**Chiang Mai**	**79.52**	**295**	*eP*	**P**		**17 28 40.3**	**-0.2**
	4.3nm,0.8s,mb4.4							
SNAA	**Sanae**	**87.14**	**182**	*e*	**P**		**17 29 18.4**	**-0.5**
SNAA				*e*	pP		17 29 22.5	+0.6
SNAA				*e*			17 29 26.2	
VNA3	**Neumayer Olymp**	**87.73**	**180**	*e*	**P**		**17 29 20.9**	**-0.8**
VNA3				*e*	pP		17 29 24.9	+0.1
VNA3				*e*			17 29 29.1	
VNA2	**Neumayer--Watz**	**88.02**	**181**	*e*	**P**		**17 29 22.8**	**-0.3**
	baz=189,slow=5.2							
VNA2				*e*	pP		17 29 26.8	+0.6
VNA2				*e*			17 29 30.4	
VNA1	**Neumayer--Stat**	**88.31**	**181**	*e*	**P**		**17 29 24.2**	**-0.3**
VNA1				*e*	pP		17 29 28.4	+0.9
VNA1				*e*			17 29 31.7	
YBH	**Yreka Blue Hor**	**88.74**	**44**	P	**P**		**17 29 28.9**	**+2.0**
	0.4nm,0.3s,mb4.2,baz=304,slow=7.3,SNR=3.2							
SONM	**Songino Array**	**88.86**	**323**	P	**P**		**17 29 27.0**	**-0.2**
	0.6nm,0.8s,mb4.0,baz=161,slow=5.8,SNR=4.5							
NVAR	**Mina Array Bea**	**90.12**	**48**	P	**P**		**17 29 33.3**	**-0.1**
	1.0nm,0.8s,mb4.2,baz=240,slow=7.0,SNR=5.0							
ARCES	**ARCESS Array B**	**127.03**	**345**	PKP	PKPdf		17 35 34.9	-1.7
	3.1nm,0.9s,baz=48,slow=1.3,SNR=4.0							
ARCES	**ARCESS Array B**	**127.03**	**345**	PKP	PKPdf		17 35 34.9	-1.7
CLL	**Collm**	**144.76**	**334**	*ePKPdf*	PKPdf		17 36 10.0	0.0
KHC	**Kasperske Hory**	**146.13**	**331**	*ePKiKP*	PKiKP		17 36 20.0	+3.4
GERES	**GERESS Array B**	**146.28**	**331**	PKPbc	PKPbc		17 36 13.1	-0.6
	1.0nm,0.7s,baz=33,slow=3.2,SNR=7.8							
DAVOX	**Davos/Dischmat**	**149.54**	**331**	PKPbc	PKPbc		17 36 24.8	+2.2
	2.0nm,0.6s,baz=228,slow=9.2,SNR=3.6							
HINF	**Hinteralfeld**	**149.96**	**336**	*ePKP1*	PKPbc		17 36 22.2	-1.4
MEZF	**Maizieres J'vi**	**150.03**	**339**	*ePKP1*	PKPbc		17 36 22.8	-1.0
CABF	**La Chapelle**	**151.25**	**335**	*ePKP1*	PKPbc		17 36 25.9	-0.8
FLN	**La Foliniere**	**151.37**	**346**	*ePKP1*	PKPbc		17 36 25.5	-1.4
SSF	**Saint Saulge**	**151.80**	**339**	*ePKP1*	PKPbc		17 36 26.8	-1.2
	8.6nm,1.0s							
LPL	**La Plagne**	**151.89**	**333**	*ePKP1*	PKPbc		17 36 27.8	-0.4
	10nm,1.0s							
SMF	**Signal de Mont**	**152.05**	**338**	*ePKP1*	PKPbc		17 36 26.6	-1.9
AVF	**Avril sur Loir**	**152.09**	**339**	*ePKP1*	PKPbc		17 36 26.9	-1.7
ORIF	**Oris-en-Rattie**	**152.73**	**334**	*ePKP1*	PKPbc		17 36 28.8	-1.3
	3.4nm,0.6s							
TCF	**Toulx Ste Croi**	**152.90**	**340**	*ePKP1*	PKPbc		17 36 29.3	-1.2
PGF	**Pioggiola**	**153.10**	**327**	*ePKP1*	PKPbc		17 36 28.4	-2.6
	31nm,1.0s							
DBIC	**Dimbokro**	**164.41**	**202**	PKPdf	PKPdf		17 36 35.8	-2.1

ISCJB ***29*** *17:21:43.4±1.0,140N±02×1447E±04,h162km±.9km, mb3.6/5,Error ellipse: s-maj=59.4km s-min=27.9km az=7.3*

IDC ***29*** *17:21:44.0±0.8,1403N×14485E,h156km±4km,mb3.4/5, mb1 3.6/5,mb1mx3.3/19,mbtmp3.4/5,Error ellipse: s-maj=44.2km s-min=19.5km az=93.0*

ISC 29 17:21:44.5±1.0,140N±02×1448E±04,h160km±8km,n6, σ0°**77/7,mb3.6/5,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
GUMO	**Guam**	**0.45**	**172**	P	**Pn**		**17 22 07.1**	**+0.3**
	615nm,0.3s,baz=333,slow=2.6,SNR=681							
GUMO				S	**Sn**		**17 22 23.6**	**-0.2**
	192nm,0.3s,baz=59,slow=23,SNR=28							
WRA	**Warramunga Arr**	**35.30**	**197**	P	**P**		**17 28 24.4**	**0.0**
	1.0nm,0.6s,mb3.6,baz=22,slow=9.6,SNR=9.3							
ASAR	**Alice Springs**	**38.95**	**196**	P	**P**		**17 28 55.0**	**-0.1**
	0.3nm,0.4s,mb3.2,baz=19,slow=13,SNR=10							
MKAR	**Makanchi Array**	**61.13**	**316**	P	**P**		**17 31 42.6**	**+0.7**
	0.3nm,0.3s,mb3.6,baz=85,slow=9.3,SNR=3.4							
ARCES	**ARCESS Array B**	**86.64**	**342**	P	**P**		**17 34 08.5**	**-1.2**
	3.0nm,1.0s,mb4.1,baz=70,slow=7.9,SNR=2.7							
NVAR	**Mina Array Bea**	**86.70**	**51**	P	**P**		**17 34 11.0**	**+0.4**
	0.6nm,0.6s,mb3.6,baz=280,slow=5.4,SNR=3.6							

NEIC ***29*** *17:24:58.6±0.2,2110S×16927E,h10km,mb5.3/44, MS5.4/9,Error ellipse: s-maj=8.7km s-min=7.2km az=156.0*

BGS ***29*** *17:24:58.6±6.0,2110S×16927E,h10km,mb5.3(NEIC)*

SZGRF ***29*** *17:24:58.7,2195S×17145E,h33km,mb5.3,Southeast of Loyalty Islands*

ISCJB ***29*** *17:24:58.5±0.2,2116S±004×16920E±004,h16km, mb5.2/77,MS5.3/50,Error ellipse: s-maj=6.2km s-min=4.8km az=158.7*

GCMT ***29*** *17:24:58.6±0.1,2115S×16922E,h16km,MW5.7/111, Moment Tensor Solution. s93,c168; s111,c220; Duration: 1§6 Moment tensor: Scale 10^17Nm; Mrr=0.82±.04; Mθθ-2.59±.04; Mϕϕ3.41±.04; Mrθ0.79±.12; Mθϕ1.34±.03; Mϕr1.86±.15; Best double couple: Ms3.70900×10^17 NP1:ϕs324.00000°,δ65.00000°, λ175.00000°. NP2:ϕs56.00000°,δ85.00000°,λ25.00000°. Principal axes: T 4.4470, Plg21.0000°, Azm283.0000°; N -1.4710, Plg65.0000°, Azm66.0000°; P -2.9720, Plg14.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

LDG ***29*** *17:24:58.0±0.2,2113S×16895E,h10km,Mb5.4/3,Ms5.4/9 Error ellipse: s-maj=22.5km s-min=4.3km az=153.0*

BJI ***29*** *17:24:59.2,2052S×16945E,h13km,mB5.5,mb5.0,Ms5.5, Msz5.2*

IDC ***29*** *17:24:60.0±2.0,2109S×16915E,h12km±11km,mb4.8/22, mb1 4.9/25,mb1mx4.9/26,mbtmp4.9/25,ML3.8/3,MS5.2/22, Ms1 5.2/22,ms1mx5.1/30,Error ellipse: s-maj=15.0km s-min=11.8km az=155.0*

DJA ***29*** *17:25:00,2143S×16909E,h4km,Mw5.6/10*

MOS ***29*** *17:25:02.2±1.8,2110S×16913E,h33km,mb5.5/33, MS5.4/21,Error ellipse: s-maj=9.6km s-min=8.4km az=30.5*

ISC 29 17:25:00.3±0.2,2114S±004×16923E±004,h17km,
h17km±1.6km**:pP-P,n429,**σ1§**18**/196**,mb5.2**/77**,MS5.3**/50**,**
39C-22D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.75**	**250**	*eP*	**Pn**		**17 25 42.4**	**-1.4**
DZM				*eS*	**Sn**		**17 26 13.9**	**-2.8**
RAO	**Raoul Island**	**14.15**	**127**	LR	LR		17 32 30.7	
	comp=Z,17μm,20.9s,baz=310,slow=32							
HNR	**Honiara**	**14.68**	**321**	Pn	**Pn**		**17 28 26.9**	**-0.5**
	0.9nm,0.3s,baz=169,slow=3.8,SNR=12							
HNR				LR	LR		17 32 57.2	
	comp=Z,11μm,18.6s,baz=142,slow=33							
HNR	**Honiara**	**14.68**	**321**	*eP*	**P**		**17 28 26.9**	**-0.5**
HNR				pmax	pmax			
	comp=Z,1μm,1.1s							
HNR	**Honiara**	**14.68**	**321**	⇑*ePn*	**Pn**		**17 28 26.9**	**-0.4**
	comp=Z,1μm,1.1s							
FUNA	**Funafuti**	**15.80**	**39**	Pn	**Pn**		**17 28 44.5**	**+2.3**
ARMA	**Armidale**	**18.33**	**236**	*eP*	**Pn**		**17 29 18.5**	**+4.6**
ARMA				*eS*	**Sn**		**17 32 41.6**	**+3.3**
ARMA	**Armidale**	**18.33**	**236**	*ePn*	**Pn**		**17 29 15.9**	**+2.0**
	comp=Z,3.7nm,1.4s							
URZ	**Urewera**	**18.37**	**160**	P	**Pn**		**17 29 14.7**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=347,slow=6.2,SNR=37							
URZ				LR	LR		17 34 32.1	
	comp=Z,6μm,21.3s,baz=148,slow=31							
URZ	**Urewera**	**18.37**	**160**	P	**Pn**		**17 29 14.7**	**+0.4**
URZ				LR	LR		17 34 32.1	
AFI	**Afiamalu**	**19.47**	**71**	P	**Pn**		**17 29 27.7**	**-0.1**
	comp=Z,2.0nm,0.3s,baz=327,slow=8.2,SNR=9.0							
AFI	**Afiamalu**	**19.47**	**71**	*eP*	**Pn**		**17 29 26.8**	**-1.0**
AFI				pmax	pmax			
	comp=Z,97nm,0.9s							
AFI	**Afiamalu**	**19.47**	**71**	*ePn*	**Pn**		**17 29 26.8**	**-1.0**
	comp=Z,97nm,0.9s							
SNZO	**South Karori**	**20.64**	**168**	P	**P**		**17 29 39.0**	**-0.1**
	comp=Z,113nm,1.0s							
CTA	**Charters Tower**	**21.53**	**269**	*eP*	**P**		**17 29 50.3**	**+1.4**
	comp=Z,72nm,1.0s,mb5.1							
CTA				*eS*	**S**		**17 33 51.7**	**+4.6**
CTA	**Charters Tower**	**21.53**	**269**	P	**P**		**17 29 49.6**	**+0.7**
	comp=Z,30nm,0.9s,mb4.7,baz=89,slow=12,SNR=22							
CTA				S	**S**		**17 33 52.1**	**+5.0**
	comp=Z,4.9nm,1.0s,baz=227,slow=19,SNR=3.8							
CTA				LR	LR		17 37 22.5	
	comp=Z,15μm,20.9s,MS5.4,baz=96,slow=35							
CTA	**Charters Tower**	**21.53**	**269**	P	**P**		**17 29 49.7**	**+0.8**
CTA				S	**S**		**17 33 52.1**	**+5.0**
CTA	**Charters Tower**	**21.53**	**269**	P	**P**		**17 29 49.6**	**+0.7**
CTA				S	**S**		**17 33 52.1**	**+5.0**
CTA				LR	LR		17 37 22.5	
CTAO	**Charters Tower**	**21.53**	**269**	⇑*iP*	**P**		**17 29 50.1**	**+1.2**
CTAO				pmax	pmax			
	comp=Z,114nm,1.0s,mb5.3							
CTAO	**Charters Tower**	**21.53**	**269**	⇑*iP*	**P**		**17 29 50.1**	**+1.2**
	comp=Z,114nm,1.0s,mb5.3							
CNB	**Canberra Magne**	**22.43**	**227**	*eP*	**P**		**17 30 00.3**	**+1.9**
CNB				*eS*	**S**		**17 34 09.2**	**+4.8**
RPZ	**Rata Peaks**	**22.56**	**177**	P	**P**		**17 29 59.9**	**+0.2**
	comp=Z,26nm,0.9s,mb4.7,baz=114,slow=6.9,SNR=5.1							
RPZ				LR	LR		17 38 09.7	
	comp=Z,14μm,18.8s,MS5.4,baz=358,slow=35							
CAN	**Canberra**	**22.68**	**227**	⇑*eP*	**P**		**17 30 03.5**	**+2.4**
PMG	**Port Moresby**	**24.24**	**295**	⇑*iP*	**P**		**17 30 16.3**	**-0.3**
PMG				pmax	pmax			
	comp=Z,137nm,1.1s							
PMG	**Port Moresby**	**24.24**	**295**	⇑*iP*	**P**		**17 30 16.3**	**-0.3**
	comp=Z,137nm,1.1s,mb5.3							
COEN	**Coen**	**25.83**	**282**	⇑*iP*	**P**		**17 30 31.6**	**+0.5**
	comp=Z,58nm,1.4s,mb4.9							
TOO	**Toolangi**	**26.28**	**226**	*eP*	**P**		**17 30 36.2**	**+1.3**
STKA	**Stephens Creek**	**26.87**	**241**	*eP*	**P**		**17 30 41.3**	**+0.9**
	comp=Z,31nm,0.8s,mb4.9							
STKA				*eS*	**S**		**17 35 17.5**	**+1.1**
STKA	**Stephens Creek**	**26.87**	**241**	P	**P**		**17 30 41.8**	**+1.4**
	comp=Z,32nm,0.8s,mb4.9,baz=76,slow=8.3,SNR=38							
STKA				LR	LR		17 40 35.2	
	comp=Z,11μm,18.6s,MS5.5,baz=69,slow=35							
STKA	**Stephens Creek**	**26.87**	**241**	*eP*	**P**		**17 30 41.6**	**+1.2**
	comp=Z,49nm,0.9s,mb5.0							
RAR	**Rarotonga**	**28.88**	**96**	LR	LR		17 39 54.2	
	comp=Z,5μm,20.6s,MS5.1,baz=260,slow=31							
WB2	**Warramunga Arr**	**32.65**	**266**	*eP*	**P**		**17 31 30.5**	**-1.2**
WB2				*eS*	**S**		**17 36 44.6**	**-2.7**
WB2	**Warramunga Arr**	**32.65**	**266**	*eP*	**P**		**17 31 30.0**	**-1.7**
WRAB	**Tennant Creek**	**32.65**	**266**	P	**P**		**17 31 30.0**	**-1.7**
	comp=Z,152nm,1.1s,mb5.8,SNR=7.0							
WRAB	**Tennant Creek**	**32.65**	**266**	*eP*	**P**		**17 31 30.2**	**-1.5**
WRAB				pmax	pmax			
	comp=Z,43nm,1.3s,mb5.2							
WRAB	**Tennant Creek**	**32.65**	**266**	*eP*	**P**		**17 31 30.1**	**-1.6**
	comp=Z,42nm,1.3s,mb5.2							
WRA	**Warramunga Arr**	**32.66**	**266**	P	**P**		**17 31 30.2**	**-1.6**
	comp=Z,11nm,0.8s,mb4.8,baz=98,slow=8.5,SNR=43							
WRA				S	**S**		**17 36 47.3**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=109,slow=16,SNR=3.2							
WRA				LR	LR		17 44 58.8	
	comp=Z,12μm,18.1s,MS5.6,baz=90,slow=37							
WRA	**Warramunga Arr**	**32.66**	**266**	P	**P**		**17 31 30.2**	**-1.6**
WRA				S	**S**		**17 36 47.3**	**-0.2**
ASAR	**Alice Springs**	**32.71**	**259**	P	**P**		**17 31 31.4**	**-0.8**
	comp=Z,16nm,0.8s,mb5.0,baz=86,slow=8.9,SNR=73							
ASAR				PcP	PcP		17 34 18.9	+1.0
	comp=Z,5.7nm,1.0s,baz=98,slow=4.1,SNR=4.2							
ASAR				P3KPbc			18 02 55.0	
	comp=Z,0.3nm,0.7s,baz=278,slow=4.0,SNR=6.2							
ASAR	**Alice Springs**	**32.71**	**259**	P	**P**		**17 31 31.4**	**-0.8**
ASAR				S			17 34 18.9	
ASAR	**Alice Springs**	**32.71**	**259**	P	**P**		**17 31 31.4**	**-0.8**
ASAR				PcP	PcP		17 34 18.9	+1.0
ASAR				*e*			18 02 55.0	
KAKA	**Kakadu**	**36.11**	**277**	*eP*	**P**		**17 32 01.1**	**-0.7**
	comp=Z,18nm,1.1s,mb4.9							
KAKA	**Kakadu**	**36.11**	**277**	*eP*	**P**		**17 32 00.5**	**-1.3**
	comp=Z,51nm,1.0s,mb5.4							
FORT	**Forrest**	**38.06**	**247**	*eP*	**P**		**17 32 17.4**	**-0.8**
	comp=Z,30nm,0.7s,mb5.1							
FORT	**Forrest**	**38.06**	**247**	*eP*	**P**		**17 32 18.2**	**0.0**
	comp=Z,3.8nm,0.6s,mb4.3							
TBI	**Tubuai**	**38.21**	**101**	*eS*	**S**		**17 38 09.6**	**-3.1**
	comp=Z,2μm,27.2s							
TBI				*eLQ*			17 40 57.2	
	comp=Z,7μm,29.8s							
TBI				*eLR*	LR		17 42 49.6	
	comp=Z,10μm,27.5s,baz=266							
PPT	**Papeete**	**38.95**	**92**	*eS*	**S**		**17 38 17.3**	**-6.7**
	comp=Z,1μm,25.5s							
PPT				*eLQ*			17 41 18.9	
	comp=Z,4μm,29.5s							
PPT				*eLR*	LR		17 43 12.9	
	comp=Z,14μm,27.5s,baz=256							
PPT	**Papeete**	**38.95**	**92**	LR	LR		17 44 33.3	
	comp=Z,3μm,21.8s,MS5.1,baz=249,slow=30							
FITZ	**Fitzroy Crossi**	**41.08**	**266**	⇑*iP*	**P**		**17 32 43.2**	**-0.3**
	comp=Z,72nm,0.7s,mb5.4							
FITZ				*eS*	**S**		**17 38 54.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**41.08**	**266**	P	**P**		**17 32 43.4**	**-0.2**
	comp=Z,44nm,0.8s,mb5.2,baz=118,slow=9.8,SNR=58							
FITZ				S	**S**		**17 38 55.4**	**-0.5**
	comp=Z,2.6nm,1.0s,baz=31,slow=20,SNR=3.9							
FITZ	**Fitzroy Crossi**	**41.08**	**266**	*eP*	**P**		**17 32 42.8**	**-0.7**
	comp=Z,76nm,0.8s,mb5.4							
GUMO	**Guam**	**42.00**	**323**	LR	LR		17 47 58.9	
	comp=Z,3μm,20.9s,MS5.2,baz=285,slow=33							
GUMO	**Guam**	**42.00**	**323**	P	**P**		**17 32 50.9**	**-0.1**
GUMO				pmax	pmax			
	comp=Z,300nm,1.6s,mb5.7							
GUMO	**Guam**	**42.00**	**323**	P	**P**		**17 32 50.9**	**0.0**
	comp=Z,300nm,1.6s,mb5.7							
BATI	**Baumata**	**45.05**	**277**	P	**P**		**17 33 16.3**	**+0.5**
	comp=Z,13nm,0.4s,mb5.1,baz=240,slow=4.7,SNR=4.5							
MBWA	**Marble Bar**	**46.01**	**261**	*eP*	**P**		**17 33 22.7**	**-0.5**
	comp=Z,36nm,0.8s,mb5.3							
KLBR	**Kellerberrin**	**46.92**	**246**	*eP*	**P**		**17 33 28.9**	**-1.3**
	comp=Z,46nm,0.7s,mb5.5							
NWAO	**Narrogin (SRO)**	**47.36**	**244**	P	**P**		**17 33 33.1**	**-0.6**
	comp=Z,30nm,0.9s,mb5.2,baz=87,slow=6.3,SNR=14							
NWAO	**Narrogin (SRO)**	**47.36**	**244**	*eP*	**P**		**17 33 33.7**	**0.0**
NWAO				pmax	pmax			
	comp=Z,20nm,0.9s							
NWAO	**Narrogin (SRO)**	**47.36**	**244**	*eP*	**P**		**17 33 33.7**	**0.0**
	comp=Z,20nm,0.9s,mb5.0							
MUN	**Mundaring**	**48.23**	**246**	*eP*	**P**		**17 33 41.6**	**+1.1**
DRV	**Dumont d'Urvil**	**49.20**	**195**	P	**P**		**17 33 53.0**	**+5.7**
DRV	**Dumont d'Urvil**	**49.20**	**195**	PP	PP		17 35 57.0	+16
DRV				S	**S**		**17 40 59.0**	**+6.9**
DRV				SS	SS		17 44 37.0	+14
DRV				R			17 48 00.0	
TAOE	**Nuku Hiva Isla**	**50.20**	**84**	*eS*	**S**		**17 41 03.5**	**-3.9**
	comp=Z,5μm,25.6s							
TAOE				*eLR*	LR		17 48 11.5	
	comp=Z,30μm,28.2s							
KAPI	**Kappang**	**50.55**	**281**	P	**P**		**17 33 57.5**	**-1.0**
	comp=Z,28nm,0.9s,mb5.2,baz=144,slow=7.3,SNR=5.1							
KAPI				LR	LR		17 55 55.4	
	comp=Z,1μm,20.2s,MS5.0,baz=45,slow=37							
DAV	**Davao City (W)**	**51.21**	**298**	LR	LR		17 56 26.2	
	comp=Z,2μm,18.1s,MS5.3,baz=119,slow=37							
RKT	**Rikitea**	**51.46**	**103**	*eS*	**S**		**17 41 22.4**	**-2.3**
	comp=Z,2μm,28.5s							
RKT				*eSS*	SS		17 44 55.9	-4.8
	comp=Z,776nm,27.5s							
RKT				*eLQ*			17 46 18.9	
	comp=Z,2μm,27.2s							
RKT				*eLR*	LR		17 48 42.0	
	comp=Z,5μm,27.5s,baz=260							
CBIJ	**Chichi jima**	**54.64**	**330**	P	**P**		**17 34 28.1**	**-0.2**
	comp=Z,53nm,0.8s,mb5.7,baz=148,slow=6.8,SNR=5.8							
TSM	**Tawau**	**56.31**	**291**	⇓*iP*	**P**		**17 34 43.8**	**+3.1**
SBA	**Scott Base**	**56.77**	**181**	*eP*	**P**		**17 34 43.0**	**-0.1**
SBA				pmax	pmax			
	comp=Z,45nm,1.0s,mb5.5							
SBA	**Scott Base**	**56.77**	**181**	*eP*	**P**		**17 34 43.0**	**-0.1**
	comp=Z,45nm,1.0s,mb5.5							
SDKM	**Sandakan**	**57.55**	**292**	⇑P	**P**		**17 34 49.7**	**+0.1**
CASY	**Casey**	**58.39**	**204**	*eP*	**P**		**17 34 53.5**	**-1.1**
CASY	**Casey**	**58.39**	**204**	*eP*	**P**		**17 34 53.3**	**-1.3**
	comp=Z,59nm,1.3s,mb5.5							
KSM	**Kuching**	**61.80**	**284**	⇓P	**P**		**17 35 20.9**	**+2.0**
KSM	**Kuching**	**61.80**	**284**	*eP*	**P**		**17 35 18.1**	**-0.7**
MJAR	**Matsushiro Arr**	**64.42**	**333**	P	**P**		**17 35 34.7**	**-1.1**
	comp=Z,12nm,1.0s,mb4.9,baz=170,slow=7.2,SNR=24							
MJAR				LR	LR		17 59 56.1	
	comp=Z,2μm,19.7s,MS5.2,baz=175,slow=33							
MJAR	**Matsushiro Arr**	**64.42**	**333**	P	**P**		**17 35 34.7**	**-1.1**
MJAR				LR	LR		17 59 56.1	
MAJO	**Matsushiro**	**64.43**	**333**	*eP*	**P**		**17 35 34.0**	**-1.7**
MAJO				pmax	pmax			
	comp=Z,35nm,1.0s,mb5.3							
MAJO	**Matsushiro**	**64.43**	**333**	*eP*	**P**		**17 35 34.0**	**-1.7**
	comp=Z,35nm,1.0s,mb5.3							
MAT	**Matsushiro**	**64.43**	**333**	P	**P**		**17 35 34.7**	**-1.0**
MAT				S	**S**		**17 44 12.0**	**-1.8**
YHNB	**Yeheng**	**65.10**	**312**	*eP*	**P**		**17 35 37.6**	**-2.8**
	comp=Z,81nm,1.4s,mb5.6							
MIR	**Mirnyy**	**65.32**	**205**	⇑*iP*	**P**		**17 35 41.0**	**-0.2**
MIR				pmax	pmax			
	comp=Z,100nm,1.5s,mb5.6							
QZH	**Quanzhou**	**67.23**	**310**	P	**P**		**17 35 52.8**	**-1.3**
QZH				S	S		17 44 52.0	+3.6
QZH				LR	LR			
	comp=Z,3μm,15.5s,MS5.6							
ASAJ	**Asahikawa**	**69.37**	**340**	P	**P**		**17 36 07.5**	**+0.4**
	comp=Z,31nm,0.8s,mb5.3,baz=246,slow=10,SNR=14							
SSE	**Sheshan**	**69.44**	**317**	*eP*	**P**		**17 36 07.3**	**-0.5**
SSE				AP	pP		17 36 10.5	-2.7
SSE				S	S		17 45 15.3	+0.7
SSE				XS	sS		17 45 20.5	-3.0
SSE				SCS	ScS		17 46 07.8	-0.8
SSE				AMB	AMB			
	comp=Z,24nm,0.7s,mb5.2							
SSE				AMB	AMB			
	comp=Z,208nm,7.7s							
SSE				LR	LR			
	comp=N,628nm,20.7s,MS5.2							
SSE				LR	LR			
	comp=E,1μm,20.7s,MS5.2							
SSE				LR	LR			
	comp=Z,1μm,24.4s,MS5.0							
SSE	**Sheshan**	**69.44**	**317**	*eP*	**P**		**17 36 07.2**	**-0.6**
	comp=Z,24nm,0.7s,mb5.2							
SSE				p

comp=Z,73nm,1.8s,mb5.3
KKTK Khon Kaen 75.02 294 P **P** **17 36 41.5 0.0**
comp=Z,309nm,0.8s,mb6.3
TIA Tai'an 75.36 319 *e*P **P** **17 36 43.0 0.0**
HABR Khabarovsk 75.74 337⇓ *e*P **P** **17 36 43.8 -1.1**
HABR *e* 17 39 33.8
HABR *e* 17 41 20.5
HABR *e*S S 17 46 24.8 -1.0
HABR *e* 17 46 55.9
HABR *e* 17 51 18.3
CN2 Changchun 76.07 329 *e*P **P** **17 36 44.8 -2.1**
CN2 *e*XP sP 17 36 51.0 -3.3
CN2 *e*S S 17 46 28.3 -1.4
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,800nm,21.0s,MS5.2
CN2 LR LR
comp=E,900nm,21.0s,MS5.2
CN2 LR LR
comp=Z,1μm,22.0s,MS5.2
MAW Mawson 76.68 202 *e*P **P** **17 36 50.0 -0.1**
comp=Z,12nm,0.9s,mb4.8
MAW Mawson 76.68 202 P **P** **17 36 50.2 +0.1**
comp=Z,15nm,0.9s,mb4.9,baz=112,slow=8.8,SNR=21
MAW Mawson 76.68 202 *e*P **P** **17 36 49.6 -0.5**
MAW pmax pmax
comp=Z,24nm,1.0s
MAW Mawson 76.68 202 *e*P **P** **17 36 49.6 -0.5**
comp=Z,24nm,1.0s,mb5.1
GYA Guiyang 76.90 305⇑ *i*P **P** **17 36 52.3 +0.3**
GYA PP PP 17 39 46.0 +0.6
GYA S S 17 46 42.5 +3.0
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,320nm,6.0s
GYA LR LR
comp=N,630nm,18.1s,MS5.0
GYA LR LR
comp=E,410nm,19.4s,MS5.0
GYA LR LR
comp=Z,490nm,17.8s,MS4.9
NST Nakhon Sawan 77.02 293 P **P** **17 36 54.6 +1.7**
KLR Kul'dur 77.59 336 *e*P **P** **17 36 51.0 -4.4**
KLR *e*S S 17 46 45.5 -0.6
KLR pmax pmax
comp=E,28nm,1.6s
KLR pmax pmax
comp=Z,100nm,1.6s,mb5.5
NANT Nan 77.95 296⇑ P **P** **17 36 58.7 +0.7**
comp=Z,350nm,0.8s,mb6.3
BJI Beijing 78.41 321 P **P** **17 37 04.5 +4.4**
BJI PP PP 17 39 58.8 +1.0
BJI S S 17 46 58.0 +2.8
BJI SS SS 17 51 58.3 -0.6
BJI AMB AMB
comp=Z,11nm,0.9s,mb4.8
BJI AMB AMB
comp=Z,316nm,5.1s
BJI LR LR
comp=N,2μm,18.1s,MS5.5
BJI LR LR
comp=E,407nm,19.1s,MS5.5
BJI Beijing 78.41 321 P **P** **17 37 04.4 +4.3**
comp=E,11nm,0.9s,mb4.8
BJI PP PP 17 39 58.7 +0.9
BJI S S 17 46 57.9 +2.7
BJI SS SS 17 51 58.3 -0.6
BJI LR LR
comp=Z,950nm,41.2s,MS4.8
CHRT Chiangrai 79.21 296⇑ P **P** **17 37 06.5 +1.5**
comp=Z,313nm,0.9s,mb6.2
TIY Taiyuan 79.22 318 *e*P **P** **17 37 07.3 +2.6**
TIY S S 17 47 08.3 +4.2
TIY SKS 17 47 16.5
TIY LR LR
comp=N,1μm,18.5s,MS5.3
TIY LR LR
comp=E,562nm,16.0s,MS5.3
TIY LR LR
comp=Z,1μm,20.0s,MS5.2
KMI Kunming 79.27 302⇑ P **P** **17 37 06.8 +1.6**
KMI AP pP 17 37 10.3 -0.4
KMI XP sP 17 37 11.3 -1.4
KMI PCP PcP 17 37 15.5 +2.1
KMI PP PP 17 40 09.0 +3.7
KMI S S 17 47 04.0 -1.1
KMI XS sS 17 47 12.0 -2.1
KMI SKS 17 47 18.5
KMI SCS ScS 17 47 27.3 -0.4
KMI SS SS 17 52 12.5 +0.1
KMI AMB AMB
comp=Z,30nm,1.4s,mb5.0
KMI AMB AMB
comp=Z,322nm,4.5s
KMI LR LR
comp=N,631nm,18.0s,MS5.2
KMI LR LR
comp=E,848nm,19.8s,MS5.2
KMI LR LR
comp=Z,1μm,19.2s,MS5.3
KMI Kunming 79.27 302⇑ P **P** **17 37 06.8 +1.6**
KMI 17 37 15.4
KMI 17 40 09.0
KMI PPP 17 41 59.3
KMI S S 17 47 04.1 -1.0
KMI *SS sS 17 47 12.1 -2.0
KMI 17 47 18.6
KMI PS 17 47 52.1
KMI SS SS 17 52 12.4 0.0
KMI SSS 17 55 31.4
KMI pmax pmax
comp=Z,30nm,1.4s,mb5.0
KMI MLR MLR
comp=Z,1μm,19.2s,MS5.3
KMI Kunming 79.27 302⇑ P **P** **17 37 06.8 +1.6**
comp=Z,30nm,1.4s,mb5.0
KMI pP pP 17 37 10.2 -0.5
KMI sP sP 17 37 11.3 -1.4
KMI PcP PcP 17 37 15.4 +2.0
KMI PP PP 17 40 09.0 +3.7
KMI PPP 17 41 59.3
KMI S S 17 47 04.1 -1.0
KMI sS sS 17 47 12.1 -2.0
KMI SKS 17 47 18.6
KMI ScS ScS 17 47 27.2 -0.5
KMI PS 17 47 52.1
KMI SS SS 17 52 12.4 0.0
KMI SSS 17 55 31.4
KMI LR LR
comp=Z,1μm,19.2s,MS5.3
CM31 Chiang Mai Arr 79.28 295 *e*P **P** **17 37 06.3 +0.9**
CMAR Chiang Mai Arr 79.28 295 P **P** **17 37 06.6 +1.2**
comp=Z,19nm,0.8s,mb5.0,baz=135,slow=4.3,SNR=56
CMAR LR LR 18 10 57.3
comp=Z,705nm,18.5s,MS5.0,baz=299,slow=35
XAN Xi'an 79.39 313 P **P** **17 37 05.8 +0.1**
XAN AP pP 17 37 11.5 +0.4
XAN AMB AMB
comp=Z,18nm,1.9s,mb4.7
XAN AMB AMB
comp=Z,393nm,8.1s
CHG Chiang Mai 79.44 295⇑ P **P** **17 37 07.3 +1.1**
comp=Z,40nm,0.9s,mb5.3
CHTO Chiang Mai 79.44 295 *e*P **P** **17 37 07.0 +0.8**
CHTO pmax pmax
comp=Z,31nm,0.8s,mb5.3
CHTO Chiang Mai 79.44 295 *e*P **P** **17 37 07.0 +0.7**
comp=Z,31nm,0.8s,mb5.3
CD2 Chengdu 81.39 308⇓ *i*P **P** **17 37 17.3 +0.8**
CD2 AP pP 17 37 22.0 0.0
CD2 XP sP 17 37 24.5 +0.6
CD2 PP PP 17 40 26.0 +3.2
CD2 S S 17 47 27.5 +0.4
CD2 XS sS 17 47 35.5 -0.7
CD2 AMB AMB
comp=Z,20nm,1.4s,mb4.8
CD2 AMB AMB
comp=Z,290nm,7.2s
CD2 LR LR
comp=N,970nm,20.4s
CD2 LR LR
comp=Z,1μm,22.8s,MS5.2
HHC Hu-ho-hao-te 81.65 320 *e*P **P** **17 37 18.0 +0.3**
HHC AP pP 17 37 21.0 -2.1
HHC XP sP 17 37 23.0 -2.1
HHC PP PP 17 40 27.3 +2.5
HHC S S 17 47 29.0 -0.5
HHC SKS 17 47 33.5
HHC XS sS 17 47 35.8 -2.7
HHC SS SS 17 52 49.5 +2.0
HHC AMB AMB
comp=Z,11nm,0.7s,mb4.9
HHC AMB AMB
comp=Z,317nm,6.6s
HHC LR LR
comp=N,609nm,17.4s,MS5.3
HHC LR LR
comp=E,1μm,16.3s,MS5.3
HHC LR LR
comp=Z,1μm,16.2s,MS5.3
BTO Baotou 82.45 319 *e*P **P** **17 37 23.3 +1.4**
SYO Syowa Base 83.12 196⇑ *e*P **P** **17 37 22.2 -2.8**
SYO Syowa Base 83.12 196⇓ *e*pP pP 17 37 28.6 -1.8
LZH Lanzhou 83.99 312⇑ P **P** **17 37 31.3 +1.4**
LZH AP pP 17 37 37.3 +1.9
LZH XP sP 17 37 39.5 +2.1
LZH PP PP 17 40 48.0 +3.9
LZH *e*SKS 17 47 50.3
LZH S S 17 47 55.0 +1.5
LZH XS sS 17 48 05.0 +2.4
LZH AMB AMB
comp=Z,23nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,120nm,5.8s
LZH LR LR
comp=E,910nm,16.2s
LZH LR LR
comp=Z,1μm,18.3s,MS5.3
LZH Lanzhou 83.99 312⇑ P **P** **17 37 31.3 +1.4**
LZH *SP sP 17 37 39.4 +2.0
LZH 17 40 48.0
LZH 17 47 50.3
LZH *e* 17 47 55.0 +1.5
LZH S S
LZH pmax pmax
comp=Z,23nm,1.0s,mb5.3
LZH MLR MLR
comp=Z,1μm,18.3s,MS5.3
LZH Lanzhou 83.99 312⇑ P **P** **17 37 31.3 +1.4**
comp=Z,23nm,1.0s,mb5.3
LZH pP pP 17 37 37.2 +1.8
LZH sP sP 17 37 39.4 +2.0
LZH PP PP 17 40 48.0 +3.9
LZH *e*SKS 17 47 50.3
LZH S S 17 47 55.0 +1.5
LZH sS sS 17 48 05.1 +2.5
LZH SS SS 17 53 32.0 +10
LZH LR LR
comp=Z,1μm,18.3s,MS5.3
SEY Seymchan 84.84 352⇑ *e*P **P** **17 37 34.4 +0.8**
PMSA Palmer Station 85.14 160 LR LR 18 09 00.1
comp=Z,1μm,21.9s,MS5.3,baz=235,slow=31
CLNS Chul'man 86.13 337 *e*P **P** **17 37 42.8 +2.6**
CLNS *e*PP pP 17 37 51.5 +5.8
CLNS *e*S S 17 48 05.3 -8.5
CLNS *e* 17 49 31.8
CLNS *e*SS SS 17 53 46.0 -7.1
CLNS pmax pmax
comp=Z,76nm,1.7s,mb5.7
CLNS pmax pmax
comp=N,44nm,1.4s
CLNS pmax pmax
comp=E,6.0nm,0.8s
CLNS smax
comp=N,140μm,10.0s
CLNS smax
comp=E,211μm,13.6s
CLNS MLR MLR
comp=Z,901nm,19.0s,MS5.2
CLNS MLR MLR
comp=N,646nm,20.0s,MS5.1
CLNS MLR MLR
comp=E,436nm,20.0s,MS5.1
SNAA Sanae 87.27 183⇓ *e*P **P** **17 37 43.3 -2.4**
SNAA Sanae 87.27 183 *e*P **P** **17 37 44.0 -1.8**
comp=E,50nm,1.1s,mb5.7
VNA3 Neumayer Olymp 87.86 180 *e*P **P** **17 37 47.2 -1.4**
VNA3 *e* 17 37 49.7
VNA3 *e* pP 17 37 53.6 -0.5
VNA3 *e* 17 37 58.6
VNA2 Neumayer--Watz 88.15 181 *e*P **P** **17 37 49.0 -1.0**
baz=172,slow=4.1
VNA2 *e* 17 37 51.5
VNA2 *e* pP 17 37 55.3 -0.2
VNA2 *e* 17 38 00.4
WDC Whiskeytown Da 88.20 45 *e*P **P** **17 37 50.6 0.0**
WDC pmax pmax
comp=Z,28nm,1.4s,mb5.3
WDC Whiskeytown Da 88.20 45 *e*P **P** **17 37 50.6 +0.1**
comp=Z,28nm,1.4s,mb5.3
OHCM Honcut 88.30 47 *e*P **P** **17 37 52.3 +1.2**
ULN Ulaanbaatar 88.38 323 *c i*P **P** **17 37 51.0 -0.2**
ULN Ulaanbaatar 88.38 323 *e*P **P** **17 37 50.8 -0.5**
comp=Z,43nm,1.4s,mb5.5
GTA Gaotai 88.42 313 *e*P **P** **17 37 52.0 +0.3**
GTA AP pP 17 37 56.0 -1.2
GTA XP sP 17 37 58.0 -1.2
GTA PP PP 17 41 23.0 +3.1
GTA SKS 17 48 18.3
GTA S S 17 48 37.5 +0.9
GTA XS sS 17 48 45.5 -0.3
GTA AMB AMB
comp=Z,3.0nm,1.1s,mb4.4
GTA AMB AMB
comp=Z,63nm,3.9s
GTA LR LR
comp=N,971nm,17.1s,MS5.4
GTA LR LR
comp=E,879nm,20.7s,MS5.4
GTA LR LR
comp=Z,1μm,20.4s,MS5.3
CMB Columbia Colle 88.42 48 *e*P **P** **17 37 50.9 -0.8**
CMB pmax pmax
comp=Z,17nm,1.2s,mb5.2
CMB Columbia Colle 88.42 48 *e*P **P** **17 37 50.9 -0.8**
comp=Z,17nm,1.2s,mb5.1
VNA1 Neumayer--Stat 88.44 181 *e*P **P** **17 37 50.8 -0.5**
VNA1 *e* 17 37 52.8
VNA1 *e* pP 17 37 56.8 -0.1
YBH Yreka Blue Hor 88.66 44 P **P** **17 37 53.8 +1.1**
comp=Z,2.4nm,0.8s,mb4.6,baz=31,slow=2.7,SNR=8.1
YBH Yreka Blue Hor 88.66 44 *e*P **P** **17 37 51.8 -0.9**
YBH pmax pmax
comp=Z,14nm,1.3s
YBH Yreka Blue Hor 88.66 44 *e*P **P** **17 37 51.8 -0.9**
comp=Z,14nm,1.3s,mb5.1
YAK Yakutsk 88.67 343 *e*P **P** **17 37 50.9 -1.4**
YAK *e*PP pP 17 38 02.3 +4.5
YAK *e*S S 17 48 19.2 -19
YAK *e*SS sS 17 48 35.6 -12
YAK *e*SS SS 17 54 33.0 +3.0
YAK pmax pmax
comp=Z,35nm,1.0s,mb5.6
YAK pmax pmax
comp=N,12nm,1.5s
YAK pmax pmax
comp=E,6.0nm,1.4s
YAK MLR MLR
comp=Z,2μm,18.0s,MS5.7
YAK MLR MLR
comp=N,2μm,20.0s,MS5.7
YAK MLR MLR
comp=E,1μm,16.0s,MS5.7
YAK Yakutsk 88.67 343 *e*P **P** **17 37 50.9 -1.4**
comp=E,46nm,0.9s,mb5.8
ISA Isabella 88.68 51 *e*P **P** **17 37 52.8 -0.2**
ISA pmax pmax
comp=Z,50nm,1.5s,mb5.6
ISA Isabella 88.68 51 *e*P **P** **17 37 52.8 -0.2**
comp=Z,50nm,1.5s,mb5.6
SONM Songino Array 88.73 323 P **P** **17 37 52.6 -0.2**
comp=Z,6.3nm,0.8s,mb5.0,baz=149,slow=2.5,SNR=22
SONM LR LR 18 18 10.6
comp=Z,806nm,18.5s,MS5.2,baz=122,slow=36
BILL Bilibino 88.94 359^K *i*P **P** **17 37 54.8 +1.4**
BILL pmax pmax
comp=Z,24nm,1.0s,mb5.5
BILL Bilibino 88.94 359 *e*P **P** **17 37 53.0 -0.5**
comp=Z,10nm,0.8s,mb5.2
HUMO Hull Mountain 88.94 43 *e*P **P** **17 37 54.0 0.0**
comp=Z,35nm,1.5s,mb5.5
MTUM Tungsten Hills 89.39 49 *e*P **P** **17 37 56.4 +0.2**
GSC Goldstone 89.73 52 *e*P **P** **17 37 56.5 -1.4**
GSC pmax pmax
comp=Z,51nm,1.8s,mb5.5
GSC Goldstone 89.73 52 *e*P **P** **17 37 56.5 -1.4**
comp=Z,51nm,1.8s,mb5.6
USHA Ushuaia 89.80 151 LR LR 18 08 33.4
comp=Z,782nm,21.0s,MS5.1,baz=205,slow=29
CAL Calcutta 90.01 294 *e*x x 17 38 25.4
CAL *e*x x 17 48 37.4
NVAR Mina Array Bea 90.06 48 P **P** **17 37 59.3 -0.1**
comp=Z,3.6nm,0.7s,mb4.8,baz=229,slow=7.7,SNR=20
GLA Glamis 90.24 55 *e*P **P** **17 38 01.5 +1.1**
GLA pmax pmax
comp=Z,18nm,0.9s,mb5.4
GLA Glamis 90.24 55 *e*P **P** **17 38 01.5 +1.1**
comp=Z,18nm,0.9s,mb5.4
MOD Modoc 90.32 45 *e*P **P** **17 37 58.9 -1.6**
comp=Z,22nm,1.4s,mb5.3
LSA Lhasa 90.52 302 P **P** **17 38 03.0 +1.3**
LSA Lhasa 90.52 302 *e*P **P** **17 38 02.7 +1.0**
LSA pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
LSA Lhasa 90.52 302 *e*P **P** **17 38 02.7 +1.0**
comp=Z,6.4nm,0.8s,mb5.0
TPH Tonopah 90.66 49 P **P** **17 38 06.1 +3.9**
TPH pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
TPH Tonopah 90.66 49 P **P** **17 38 06.1 +3.9**
comp=Z,5.9nm,0.7s,mb5.0
TPNV Topopah Spring 90.86 51 *e*P **P** **17 38 02.6 -0.5**
TPNV pmax pmax
comp=Z,22nm,1.1s,mb5.4
TPNV Topopah Spring 90.86 51 *e*P **P** **17 38 02.6 -0.6**
comp=Z,22nm,1.1s,mb5.4
BOD Bodaibo 91.03 334 *e*P **P** **17 38 02.1 -1.3**
BOD pmax pmax
comp=Z,13nm,1.5s,mb5.0
BBB Bella Bella 91.06 33 LR LR 18 10 57.3
comp=Z,1μm,20.2s,MS5.3,baz=256,slow=30
WVOR Wild Horse Val 91.66 45 *e*P **P** **17 38 07.8 +1.1**
WVOR pmax pmax
comp=Z,18nm,1.3s,mb5.2
WVOR Wild Horse Val 91.66 45 *e*P **P** **17 38 07.8 +1.1**
comp=Z,18nm,1.3s,mb5.2
BMN Battle Mountai 91.71 47 P **P** **17 38 11.1 +4.1**
ZAK Zakamensk 91.83 324⇑ *i*P **P** **17 38 06.5 -0.8**
ZAK pmax pmax
comp=Z,15nm,1.4s,mb5.1
IRK Irkutsk 92.28 326 *e*P **P** **17 38 14.2 +4.9**
IRK pmax pmax
comp=Z,22nm,2.3s,mb5.1
TLY Talaya 92.31 325 *e*P **P** **17 38 10.9 +1.4**
TLY *e* 17 48 45.0
TLY *e* 17 49 09.2
TLY *e*PS PS 17 50 25.4 +0.6
TLY *e*SS SS 17 55 24.5 +1.4
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
TLY MLR MLR
comp=Z,947nm,21.0s,MS5.2
TLY Talaya 92.31 325 *e*P **P** **17 38 09.8 +0.3**
comp=Z,11nm,1.1s,mb5.1
TUC Tucson 93.05 57 *e*P **P** **17 38 14.6 +1.2**
TUC pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
TUC Tucson 93.05 57 *e*P **P** **17 38 14.6 +1.2**
comp=Z,2.8nm,0.8s,mb4.7
BMO Blue Mountains 93.61 43 P **P** **17 38 18.7 +3.0**
PLCA Paso Flores 97.12 139 P **P** **17 38 33.2 +1.2**
comp=Z,3.2nm,1.1s,mb4.7,baz=234,slow=9.6,SNR=4.4
PLCA PKKPbc PKKPbc 17 55 11.4 -0.8
comp=Z,1.3nm,0.9s,baz=220,slow=2.1,SNR=2.9
PLCA Paso Flores 97.12 139 P **P** **17 38 33.2 +1.2**
PLCA PKKPbc PKKPbc 17 55 11.4 -0.8
TXAR Lajitas Array 97.67 62 P **P** **17 38 34.5 -0.1**
comp=Z,0.8nm,0.8s,mb4.3,baz=206,slow=5.5,SNR=5.6
TXAR LR LR 18 15 32.1
comp=Z,908nm,19.2s,MS5.3,baz=275,slow=31
PDAR Pinedale Array 97.91 47 P **P** **17 38 36.5 +1.2**
comp=Z,0.3nm,0.5s,mb4.1,baz=175,slow=3.3,SNR=3.1
PDAR PKKPbc PKKPbc 17 55 08.8 -1.9
comp=Z,0.6nm,0.8s,baz=75,slow=6.9,SNR=3.5
PDAR LR LR 18 20 08.9
comp=Z,351nm,18.4s,MS4.9,baz=257,slow=34
WMQ Urumqi 98.51 314 *e*P **P** **17 38 38.0 0.0**
WMQ AP pP 17 38 42.8 -0.7
WMQ XP sP 17 38 46.0 +0.5
WMQ PP PP 17 42 42.0 +3.2
WMQ SKS 17 49 14.0
WMQ S S 17 50 03.0 -3.1
WMQ SS SS 17 56 53.0 +1.5
WMQ AMB AMB
comp=Z,16nm,0.6s,mb5.7
WMQ AMB AMB
comp=Z,213nm,4.5s
WMQ LR LR
comp=N,2μm,19.3s,MS5.7
WMQ LR LR
comp=E,2μm,19.4s,MS5.7
WMQ LR LR
comp=Z,2μm,20.8s,MS5.6
MKAR Makanchi Array 103.08 315 Pdiff Pdif 17 38 60.0 +1.6
comp=Z,1.1nm,0.7s,baz=103,slow=5.9,SNR=5.1
MKAR PP PP 17 43 05.8 -7.5
comp=Z,0.2nm,0.2s,baz=91,slow=7.2,SNR=2.3
MKAR PKKPbc PKKPbc 17 54 55.3 -0.6
comp=Z,0.5nm,0.9s,baz=318,slow=3.9,SNR=3.0
ZALV Zalesovo Beam 103.62 323 Pdiff Pdif 17 39 01.6 +0.9
comp=Z,0.4nm,0.2s,baz=64,slow=3.4,SNR=3.3
KURK Kurchatov 106.44 318 PP PP 17 43 23.9 -14
comp=Z,0.5nm,0.6s,baz=99,slow=5.1,SNR=4.2
BVAR Borovoye Array 111.86 320 PKiKP PKiKP 17 43 31.9 -2.3
comp=Z,0.6nm,0.6s,baz=112,slow=2.3,SNR=2.7
BVAR PP PP 17 44 10.5 -7.0
comp=Z,0.8nm,0.8s,baz=126,slow=2.0,SNR=3.8
AKTK Aktyubinsk 119.45 317 PKP PKPdf 17 43 48.9 0.0
AKTO Aktyubinsk 119.45 317 PKP PKPdf 17 43 48.9 0.0
comp=Z,0.8nm,0.5s,baz=312,slow=4.1,SNR=4.5
SPITS Spitsbergen Ar 121.48 354 PKP PKPdf 17 43 51.7 -0.4
comp=Z,7.2nm,0.9s,baz=328,slow=6.9,SNR=3.8
APA Apatity 126.02 341⇓ *i*PKIKP PKPdf 17 44 06.0 +5.0
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,2μm,22.0s,MS5.8
ARCES ARCESS Array B 126.89 345 PKP PKPdf 17 44 01.6 -1.0
comp=Z,5.8nm,0.8s,baz=81,slow=2.1,SNR=11
MAK Makhachkala 127.14 308 *e*P Pdif 17 40 42.7 -2.6
MAK *e* 17 46 04.0
MAK *e* 17 51 04.4
KLMR Klimovskoe 127.20 332 PKIKP PKPdf 17 44 03.0 -0.4
LSZ Lusaka 127.35 230 PKP PKPdf 17 44 06.3 +1.2
comp=Z,3.1nm,0.8s,baz=166,slow=4.0,SNR=6.9
KMBO Kilima Mbogo 128.12 251 PKP PKPdf 17 44 08.4 +1.8
comp=Z,2.6nm,1.0s,baz=51,slow=5.8,SNR=3.9
ANN Anapa 134.01 312 *i* PKIKP PKPdf 17 44 20.8 +4.0
ANN pmax pmax
comp=Z,48nm,1.1s
MALT Malatya 134.53 303⇓ *i*P PKPdf 17 44 20.6 +2.6
MALT Malatya 134.53 303⇓ P PKPdf 17 44 20.6 +2.6
AKASG Malin Array Be 137.01 323 PKP PKPdf 17 44 20.9 -1.3
comp=Z,1.4nm,0.7s,baz=69,slow=1.2,SNR=3.8
AKASG SKPbc SKPbc 17 47 54.6 0.0
comp=Z,2.3nm,0.8s,baz=48,slow=3.4,SNR=5.4
AKASG Malin Array Be 137.01 323 PKP PKPdf 17 44 20.9 -1.3
AKASG SKPbc SKPbc 17 47 54.6 0.0
NOA NORSAR Array B 137.27 344 PKhKP 17 44 18.0
comp=Z,0.5nm,0.7s,baz=32,slow=1.9,SNR=2.7
NOA SKPbc SKPbc 17 47 54.6 -0.4
comp=Z,3.1nm,1.0s,baz=18,slow=4.2,SNR=4.4
NOA NORSAR Array B 137.27 344 PKP PKPdf 17 44 18.0 -4.4
NOA SKPbc SKPbc 17 47 54.6 -0.4
KOLS Kolonicke sedl 141.78 324 *e*PKP PKPdf 17 44 33.3 +2.3
UZH Uzhgorod 141.94 324 *e*PKHKP 17 44 24.4
UZH *e* 17 51 36.0
UZH *e*SS SS 18 06 11.0 +2.9
UZH MLR MLR
comp=N,450nm,18.0s,MS5.4
UZH MLR MLR
comp=E,410nm,18.0s,MS5.4

UZH MLR MLR
comp=Z,400nm,18.0s,MS5.2
STHS Stebnicka Huta 142.04 326 *e*PKIKP PKPdf 17 44 36.8 +5.4
STHS Stebnicka Huta 142.04 326 *e* PKiKP 17 44 36.8 +2.4
CRVS Cervenica-Dubn 142.23 325 *e*PKP PKPdf 17 44 31.8 0.0
DRGR 142.70 321 ⇑*i*P PKPdf 17 44 35.0 +2.3
DRGR 142.70 321 ⇑P PKPdf 17 44 35.0 +2.3
OKC Ostrava-Krasne 143.35 328 AMS AMS 18 45 10.0
comp=Z,800nm,26.2s
BSEG Bad Segeberg 143.53 339 *e*PKPbc PKPdf 17 44 29.8 -4.1
KSP Ksiaz 143.55 331 *e*PKP PKPdf 17 44 32.3 -1.8
KSP Ksiaz 143.55 331 *e*PKP PKPdf 17 44 31.9 -2.1
KSP *e* 17 44 42.1
KSP LR LR
comp=Z,3μm,29.7s,MS5.9
PSZ Piszkesteto 143.65 325⇓ *e*PKP PKPdf 17 44 31.5 -2.8
PSZ Piszkesteto 143.65 325 *e*PKPdf PKPdf 17 44 31.2 -3.2
MORC Moravsky Berou 143.69 329 ⇑*i*P PKPdf 17 44 32.4 -1.9
MORC Moravsky Berou 143.69 329 ⇑P PKPdf 17 44 32.4 -2.0
PGB Panagyurishte 143.81 314 P PKPdf 17 44 32.6 -2.2
VYHS Vyhne 143.86 326 *e*PKP PKPdf 17 44 32.5 -2.2
DPC Dobruska-Polom 143.88 330 *e*PKP PKPdf 17 44 31.4 -3.2
DPC *ex* x 17 44 44.0
DPC AMS AMS 18 45 50.0
comp=Z,1μm,23.8s
UPC Upice 143.91 331 *e*PKP PKPdf 17 44 32.1 -2.6
UPC *ex* x 17 44 43.8
BZS Buzias 143.97 320 ⇑*i*P PKPdf 17 44 34.2 -0.8
BZS Buzias 143.97 320 ⇑P PKPdf 17 44 34.2 -0.8
KOLL Kolacno 144.03 327 *e*PKP PKPdf 17 44 34.7 -0.3
KAR1 Arisaig 144.08 355 *e*P PKPdf 17 44 33.1 -1.6
LOS Limnos 144.20 310 *e*P PKPdf 17 44 31.6 -4.0
BUD Budapest 144.39 325 *e*PKP PKPdf 17 44 34.2 -1.4
VTS Vitosha 144.43 315 P PKPdf 17 44 34.5 -1.4
VRAC Vranov 144.46 329⇓ *i*P PKPdf 17 44 35.9 +0.2
VRAC Vranov 144.46 329 ⇓P PKPdf 17 44 35.9 +0.2
MMB Musomiste 144.51 313 P PKPdf 17 44 34.0 -2.0
NVR Nevrokopi 144.52 313 *e*P PKPdf 17 44 33.0 -3.1
PVCC Panska Ves 144.54 332 *e*PKP PKPdf 17 44 33.9 -1.9
PVCC AMS AMS 18 47 20.0
comp=Z,2μm,22.6s
BRG Berggiesshubel 144.56 333 *e*PKPbc PKPdf 17 44 33.7 -2.1
BRG Berggiesshubel 144.56 333 *i* PKP PKPdf 17 44 33.7 -2.1
comp=Z,15nm,1.2s
BRG *i* 17 44 35.8
comp=Z,32nm,0.9s
BRG *e* 17 48 14.7
comp=Z,50nm,2.0s
BRG
comp=N,568nm,20.1s
BRG
comp=E,464nm,21.0s
BRG
comp=Z,903nm,21.0s
BRG Berggiesshubel 144.56 333 *i* PKP PKPdf 17 44 33.7 -2.1
BRG *i* 17 44 35.8
BRG *e* 17 48 14.7
BRG LR LR
comp=Z,540nm,21.0s,MS5.3
CLL Collm 144.62 334 *e*PKIKP PKPdf 17 44 35.0 -0.9
CLL pmax pmax
comp=Z,46nm,1.0s
CLL Collm 144.62 334 *e*PKPbc PKPdf 17 44 33.6 -2.3
CLL Collm 144.62 334 *i* PKPdf PKPdf 17 44 35.0 -0.9
comp=Z,46nm,1.0s
CLL *e*PKiKP PKiKP 17 44 40.0 +0.4
CLL *ex* x 17 44 43.0
CLL *i* sPKiKP 17 44 45.7
CLL *e*SKPbc SKPbc 17 48 14.0 -0.5
EAB Aberfoyle 144.68 354 *e*P PKPdf 17 44 33.8 -2.1
MODS Modra-Piesok 144.74 327 *e*PKIKP PKPdf 17 44 35.0 -1.2
MODS *e* 17 44 47.9
MODS Modra-Piesok 144.74 327 *e*PKP PKPdf 17 44 35.0 -1.2
MODS *e* 17 44 47.9
MODS *e* 17 44 54.6
APE Apeiranthos 144.78 305⇓ *i*P PKPdf 17 44 36.4 -0.3
APE Apeiranthos 144.78 305 ⇓P PKPdf 17 44 36.4 -0.3
NRDL Niedersach Rie 144.79 338 *e*PKPbc PKPdf 17 44 34.3 -1.9
KKB Krupnik 144.83 314 P PKPdf 17 44 35.4 -1.2
EAU Auchinoon 144.91 353 *e*P PKPdf 17 44 34.3 -1.9
EBL Broad Law 144.94 352 *e*P PKPdf 17 44 34.3 -2.0
PRU Pruhonice 144.94 331 *e*PKP PKPdf 17 44 35.0 -1.5
PRU *ex* x 17 44 46.9
PRU AMS AMS 18 47 50.0
comp=Z,1μm,24.8s
ZST Bratislava 144.95 327 *e*PKIKP PKPdf 17 44 36.1 -0.5
ZST *e* 17 44 48.0
ZST Bratislava 144.95 327 *e*PKP PKPdf 17 44 36.1 -0.5
ZST *e* 17 44 48.0
ZST *e* 17 44 55.3
ZST Bratislava 144.95 327 *e*PKP PKPdf 17 44 36.1 -0.5
ZST *e* 17 44 48.0
ZST *e* 17 44 55.3
ZST LR LR
comp=Z,500nm,19.0s,MS5.3
TREC Trest 145.00 330 *e*PKP PKPdf 17 44 35.5 -1.1
TREC *ex* x 17 44 47.0
TREC AMS AMS 18 45 10.0
comp=Z,1μm,27.3s
SANT Santorini 145.03 304 *e*PKPdf PKPdf 17 44 35.2 -1.9
SOH Sokhos 145.08 312 *e*P PKPbc 17 44 35.1 -1.4
NPS Neapolis 145.19 302 *e*P PKPbc 17 44 34.0 -3.0
PLG Polygyros 145.20 311 *e*P PKPbc 17 44 35.7 -1.2
PAIG Paliouri 145.20 310 *e*P PKPbc 17 44 34.1 -2.9
CLZ Clausthal 145.22 337 *e*PKPbc PKPbc 17 44 36.1 -0.5
KNT Kendrikon 145.26 313 *e*P PKPbc 17 44 36.2 -0.9
LAST Lasithi 145.33 302 *e*P PKPbc 17 44 37.4 -0.1
HORT Hortiatis 145.35 312 *e*P PKPbc 17 44 35.7 -1.7
PKSM Moragy 145.36 323⇓ *i*P PKPbc 17 44 36.8 -0.4
PKSM Moragy 145.36 323 ⇓P PKPbc 17 44 36.8 -0.4
ESK Eskdalemuir 145.40 352 *e*PKHKP 17 44 34.1
VAY Valandovo 145.41 313 *e*PKP PKPdf 17 44 37.7 +0.1
TANN Tannenbergstha 145.53 334 *e*PKPbc PKPbc 17 44 37.2 -0.4
ECK Cauldkaine Hil 145.53 352 *e*P PKPdf 17 44 35.3 -2.0
NKC Novy Kostel 145.67 333 *e*PKP PKPdf 17 44 38.1 +0.4
NKC *ex* x 17 44 49.5
MOX Moxa 145.69 335 *e*PKP PKPdf 17 44 38.3 +0.5
comp=Z,89nm,2.0s
MOX
comp=Z,800nm,20.0s
MOX Moxa 145.69 335 *e*PKPbc PKPbc 17 44 37.6 -0.5
PTL Penteli 145.74 307 *e*P PKPdf 17 44 39.0 +0.7
IBBN Ibbenburen 145.74 340 *e*PKPbc PKPbc 17 44 37.3 -0.9
CONA Conrad Observa 145.75 328⇓ *i*PKPdf PKPdf 17 44 38.8 +0.8
comp=Z,32nm,0.8s,SNR=21
CONA Conrad Observa 145.75 328⇓ *i*PKPdf PKPdf 17 44 38.8 +0.8
comp=Z,32nm,0.8s,SNR=21
CSNA Conrad Observa 145.75 328⇓ *i*P PKPdf 17 44 38.7 +0.7
comp=Z,29nm,0.8s
CSNA Conrad Observa 145.75 328⇓ *i*PKPdf PKPdf 17 44 38.8 +0.8
comp=Z,29nm,0.8s
DIVS Divibare 145.75 319 *e*P PKPdf 17 44 38.2 +0.2
NEO Neokhori 145.76 310 *e*P PKPdf 17 44 39.0 +0.7
XOR Xorichti 145.76 310 *e*P PKPdf 17 44 38.1 -0.1
ATH Athens Observa 145.87 307 *e*P PKPdf 17 44 39.4 +0.8
SKO Skopje 145.88 315 *e*P PKPdf 17 44 38.4 +0.1
SKO Skopje 145.88 315 *e*PKP PKPbc 17 44 40.5 +1.5
LIT Litokhoron 145.98 311 *e*P PKPdf 17 44 37.8 -0.8
KHC Kasperske Hory 146.00 331 *e*PKP PKPdf 17 44 38.7 +0.4
KHC *ex* x 17 44 58.3
KHC AMS AMS 18 48 10.0
comp=Z,1μm,21.6s
MANZ Manzenberg 146.00 333 *e*PKPbc PKPbc 17 44 39.1 0.0
ROTZ Rotzenmuhle 146.12 333 *e*PKPbc PKPbc 17 44 39.8 +0.3
GEC2 GERESS Array S 146.15 331 *e*PKPbc PKPbc 17 44 39.2 -0.4
GEC2 GERESS Array S 146.15 331 *e*PKPdf PKPdf 17 44 40.1 +0.4
GEC2 *e*PKPbc PKPbc 17 44 39.2 -0.4
GERES GERESS Array B 146.15 331 PKPbc PKPbc 17 44 39.2 -0.4
comp=Z,9.5nm,0.8s,baz=34,slow=2.8,SNR=63
GERES SKP 17 48 15.9
comp=Z,2.3nm,0.8s,baz=54,slow=2.3,SNR=5.5
GERES SKPbc SKPbc 17 48 19.6 +1.5
comp=Z,2.4nm,0.8s,baz=64,slow=2.3,SNR=11
LKR Lokris 146.17 309 *e*P PKPdf 17 44 39.9 +0.9
LKR Lokris 146.17 309 *e*P PKPdf 17 44 38.9 -0.1
UBBA Unterbreizbach 146.19 336 *e*PKPbc PKPbc 17 44 39.2 -0.4
VAM Vamos 146.28 303 *e*P PKPdf 17 44 39.6 +0.3
KRUS Krusevo 146.29 314 *e*PKP PKPdf 17 44 38.8 -0.3
WET Wettzell 146.30 332 *e*PKPbc PKPbc 17 44 40.1 +0.1
ARSA Arzberg 146.37 327⇑ *i*P PKPbc 17 44 41.8 +1.5
comp=Z,10nm,1.2s,SNR=7.6
ARSA Arzberg 146.37 327⇑ *i*PKPbc PKPbc 17 44 41.8 +1.5
comp=Z,10nm,1.2s,SNR=7.6
DID Didima 146.39 307 *e*P PKPdf 17 44 40.0 +0.6
KZN Kozani 146.39 312 *e*P PKPdf 17 44 37.1 -2.2
FNA Florina 146.46 313 *e*P PKPdf 17 44 39.2 -0.2
THL Klokotos Trika 146.53 311 *e*P PKPdf 17 44 39.6 +0.1
GRA1 Grafenberg Arr 146.59 334 *e*PKPbc PKPbc 17 44 41.5 +0.6
GRF Grafenberg Arr 146.59 334 *e*PKPbc PKPbc 17 44 41.5 +0.6
GRF *e*L 17 50 22.2
comp=Z,573nm,21.1s
BUG Bochum--Univer 146.64 339 *e*PKPbc PKPbc 17 44 40.1 -0.8
OHR Ohrid 146.71 314 *e*PKP PKPdf 17 44 40.6 +0.8
VLI Velia 146.87 305 *e*P PKPdf 17 44 40.1 -0.1
EVR Evrytania 146.93 310 *e*P PKPdf 17 44 34.5 -5.7
LHO Holmfirth 146.94 350 *e*P PKPdf 17 44 41.4 +1.7
PERS Pernice 146.99 326 *e*PKPdf PKPbc 17 44 42.2 +0.2
VLX Vlachokerasia 147.08 307 *e*P PKPdf 17 44 42.3 +1.7
KBI1 Birley Grange 147.16 350 *e*P PKPdf 17 44 41.8 +1.6
TNS Taunus Mts 147.25 337 *e*PKPbc PKPbc 17 44 42.2 -0.5
RJOB Jochberg 147.37 330 *e*PKPbc PKPbc 17 44 44.2 +1.1
KWE Weaver Farm 147.45 350 *e*P PKPbc 17 44 43.4 +0.2
ITM Ithomi 147.48 307 *e*P PKPdf 17 44 39.4 -1.9
RLS Riolos of Patr 147.50 308 *e*P PKPdf 17 44 38.1 -3.2
WPM1 Penmaenmawr 147.51 352 *e*P PKPbc 17 44 42.8 -0.5
VNDS Vrh nad Dolski 147.56 326 *e*PKPdf PKPbc 17 44 44.0 +0.2
YRC Rhoscolyn 147.59 353 *e*P PKPdf 17 44 41.0 +0.2
HGN Heimansgroeve 147.65 340 *e*PKP PKPbc 17 44 44.1 +0.3
comp=Z,42nm,2.1s
YLL Llanberis 147.66 353 *e*P PKPbc 17 44 43.2 -0.5
BEBN Eben Emael 147.70 340 PKPab PKPab 17 44 45.5 -0.7
DLF Lyons Farm 147.74 355⇑ *i*P PKPbc 17 44 44.1 +0.2
FUR Furstenfeldbru 147.74 332 *e*PKPbc PKPbc 17 44 46.0 +1.9
DCN Croghan 147.74 356⇑ *i*P PKPbc 17 44 44.3 +0.4
MEM Membach 147.76 340 PKPbc PKPbc 17 44 44.8 +0.7
SBD1 Bryn Du 147.77 351 *e*P PKPbc 17 44 44.0 -0.1
YRE Yr Eifl 147.84 353 *e*P PKPbc 17 44 45.9 +1.7
CADS Cadrg 147.97 327 *e*PKPdf PKPdf 17 44 40.0 -1.7
VOY Vojsko 148.02 327 *e*PKPdf PKPbc 17 44 45.2 +0.2
VOY *e* 17 44 57.5
VOY *e* 17 45 09.5
VLS Valsamata 148.10 309 *e*P PKPab 17 44 50.3 +2.1
STU Stuttgart 148.14 335 *e*PKPbc PKPbc 17 44 47.3 +2.1
STU Stuttgart 148.14 335 *e*PKPdf PKPdf 17 44 41.5 -0.4
BCLA Clavier 148.15 340 PKPab PKPab 17 44 47.7 -0.3
SNF Seneffe 148.38 342 PKPbc PKPbc 17 44 46.3 +0.5
MOTA Moosalm 148.43 331⇑ *i*P PKPbc 17 44 46.1 +0.1
comp=Z,13nm,0.9s,SNR=7.9
WLF Walferdange 148.53 339 PKPbc PKPbc 17 44 46.3 +0.1
WLF Walferdange 148.53 339 *e*PKPbc PKPbc 17 44 48.8 +2.7
WLF Walferdange 148.53 339 *e*PKPdf PKPbc 17 44 45.7 -0.5
HTR Trewern Hill 148.57 351 *e*P PKPbc 17 44 46.1 -0.1
GIVF Givet 148.58 341 *e*PKP1 PKPbc 17 44 44.8 -1.5
DOU Dourbes 148.65 341 PKPbc PKPbc 17 44 47.3 +0.8
BAIF Baives 148.80 341 *e*PKP1 PKPbc 17 44 45.6 -1.2
comp=Z,37nm,1.0s
BFO Black Forest 148.84 335 *e*PKPbc PKPbc 17 44 49.9 +2.9
BFO Black Forest 148.84 335 *e*PKPdf PKPdf 17 44 46.5 +3.4
BFO *e*PKPbc PKPbc 17 44 49.9 +2.9
FETA Feichten 148.84 331⇑ *i*P PKPbc 17 44 47.7 +0.7
comp=Z,40nm,1.6s,SNR=9.2
HGH Gray Hill 148.93 350 *e*P PKPdf 17 44 43.9 +0.8
CDF Champ du Feu 149.18 336 *e*PKP1 PKPbc 17 44 46.3 -1.5
comp=Z,97nm,1.3s
ECH Echery 149.38 336 *e*PKHKP PKPbc 17 44 46.4 -2.0
DAVOS Davos 149.40 332 PKHKP PKPbc 17 44 47.0 -1.5
DAVOX Davos/Dischmat 149.41 332 PKPbc PKPbc 17 44 47.0 -1.5
comp=Z,13nm,0.7s,baz=54,slow=3.1,SNR=18
HINF Hinteralfeld 149.83 336 *e*PKP1 PKPbc 17 44 48.0 -1.5
comp=Z,74nm,1.5s
HAU Haudompre 149.86 337 *e*PKP1 PKPbc 17 44 48.0 -1.5
comp=Z,94nm,1.2s
HAU *e*MLR MLR
comp=Z,929nm,21.0s,MS5.3
HAU Haudompre 149.86 337 *e*PKP PKPbc 17 44 48.0 -1.5
HAU LR LR
comp=Z,930nm,21.0s,MS5.6
TUE Stuetta 149.88 332 *e*PKPbc PKPbc 17 44 50.2 +0.6
MEZF Maizieres J'vi 149.90 339 *e*PKP1 PKPbc 17 44 48.5 -1.1
TIP Timpagrande 150.35 313 *e*PKPbc PKPbc 17 44 51.2 +0.1
CABF La Chapelle 151.12 336 *e*PKP1 PKPbc 17 44 51.5 -1.1
comp=Z,41nm,0.9s
FLN La Foliniere 151.24 346 *e*PKP1 PKPbc 17 44 50.9 -1.9
FLN *e*MLR MLR
comp=Z,1μm,20.8s,MS5.3
FLN La Foliniere 151.24 346 *e*PKP PKPbc 17 44 50.9 -1.9
FLN LR LR
comp=Z,1μm,20.8s,MS5.6
LDF La Druitiere 151.31 345 *e*PKP1 PKPbc 17 44 51.0 -2.0
comp=Z,63nm,1.2s
LOR Lormes 151.37 339 *e*PKP1 PKPbc 17 44 51.5 -1.6
comp=Z,100nm,1.5s
LOR *e*MLR MLR
comp=Z,1μm,22.5s,MS5.3
LOR Lormes 151.37 339 *e*PKP PKPbc 17 44 51.5 -1.6
LOR LR LR
comp=Z,1μm,22.5s,MS5.6
SSF Saint Saulge 151.66 339 *e*PKP1 PKPbc 17 44 52.3 -1.5
comp=Z,43nm,1.0s
GRR Gorron 151.67 346 *e*PKP1 PKPbc 17 44 52.0 -1.8
comp=Z,56nm,0.9s
LPL La Plagne 151.75 333 *e*PKP1 PKPbc 17 44 53.0 -1.1
comp=Z,24nm,0.8s
LPG La Plagne 151.76 333 *e*PKP1 PKPbc 17 44 53.2 -0.9
comp=Z,35nm,0.8s
SMF Signal de Mont 151.91 338 *e*PKP1 PKPbc 17 44 52.9 -1.5
AVF Avril sur Loir 151.95 339 *e*PKP1 PKPbc 17 44 53.5 -1.0
BNI Bardonecchia 152.15 333 *e*PKIKP PKPbc 17 44 54.7 -0.3
SGMF Saint Gilles 152.15 348 *e*PKP1 PKPbc 17 44 53.7 -1.2
comp=Z,71nm,1.1s
ROSF Rostrenen 152.21 349 *e*PKP1 PKPbc 17 44 53.9 -1.1
comp=Z,51nm,1.0s
BGF Bois d'Agland 152.32 340 *e*PKP1 PKPbc 17 44 53.7 -1.6
MBDF Montbardon 152.37 332 *e*PKP1 PKPbc 17 44 53.8 -1.7
comp=Z,16nm,0.9s
QUIF Quistinic 152.59 349 *e*PKP1 PKPbc 17 44 54.5 -1.4
ORIF Oris-en-Rattie 152.59 334 *e*PKP1 PKPbc 17 44 54.5 -1.5
comp=Z,17nm,0.7s
ORIF *e*MLR MLR
comp=Z,1μm,20.8s,MS5.4
SBF Sospel 152.75 330 *e*PKP1 PKPbc 17 44 54.6 -1.8
TCF Toulx Ste Croi 152.77 340 *e*PKP1 PKPbc 17 44 54.6 -1.7
comp=Z,43nm,1.2s
SSB Saint Sauveur 152.83 336 *e*PKIKP PKPbc 17 44 52.6 -3.9
SSB *e* 17 45 07.8
PGF Pioggiola 152.97 327 *e*PKP1 PKPbc 17 44 55.2 -1.7
comp=Z,34nm,0.9s
VIVF Saint-Julien-l 153.13 335 *e*PKP1 PKPbc 17 44 55.7 -1.5
comp=Z,55nm,1.3s
MFF Saint Martin d 153.17 344 *e*PKP1 PKPbc 17 44 55.3 -1.9
comp=Z,22nm,0.9s
SMRF Simiane la Rot 153.49 333 *e*PKP1 PKPbc 17 44 56.7 -1.3
comp=Z,19nm,0.9s
RJF Les Rejaudoux 153.86 340 *e*PKP1 PKPbc 17 44 57.2 -1.6
RJF *e*MLR MLR
comp=Z,1μm,20.8s,MS5.5
LASF Ste Croix 154.10 335 *e*PKP1 PKPbc 17 44 57.8 -1.5
LFF La Frestale 154.43 341 *e*PKP1 PKPbc 17 44 58.4 -1.6
KEST Kesra 157.17 314 PKPab PKPab 17 45 27.7 +1.4
comp=Z,1.9nm,1.0s,baz=344,slow=9.5,SNR=4.2
PVRL Vila Real 159.76 353 *e*PKPab PKPab 17 45 38.1 +0.9
MVO Moncorvo 159.79 352 *e*PKPdf PKPdf 17 44 58.8 +0.2
MVO Moncorvo 159.79 352 *e*PKPab PKPab 17 45 38.1 +0.8
MVO Moncorvo 159.79 352 *i* LQ 18 41 27.0
MVO *e*LR LR 18 49 25.2
comp=Z,846nm,20.0s
PVIS Viseu 160.33 353 *e*PKPab PKPab 17 45 39.0 -0.7
MTE Manteigas 160.61 353 *e*PKPab PKPab 17 45 41.4 +0.5
MTE Manteigas 160.61 353 *e*LQ 18 37 31.8
MTE *e*LR LR 18 40 17.5
comp=Z,654nm,20.0s
ESDC Sonseca Array 160.63 344 PKPab PKPab 17 45 40.2 -0.8
comp=Z,3.8nm,0.8s,baz=18,slow=4.0,SNR=10
PCBR Castelo Branco 161.15 352 *e*PKPdf PKPdf 17 44 56.8 -3.3
PCBR Castelo Branco 161.15 352 *e*PKPab PKPab 17 45 42.3 -1.0
PTOM Tomar 161.47 354 *e*PKPab PKPab 17 45 45.4 +0.7
PMRV Marv??o 161.54 352 *e*LR LR 18 46 22.4
comp=Z,623nm,18.0s
PESTR Estremoz 162.12 352 *e*PKPab PKPab 17 45 46.5 -1.1
PESTR Estremoz 162.12 352 *i* LQ 18 33 45.6
PESTR *e*LR LR 18 42 25.7
comp=Z,815nm,16.0s
PBAR Barrancos 162.72 350 *e*LR LR 18 48 54.6
comp=Z,867nm,20.0s
PBEJ Beja 162.99 352 *e*PKPab PKPab 17 45 50.8 -0.6
PVAQ Vaqueiros 163.58 351 *e*PKPab PKPab 17 45 47.9 -6.1
PVAQ Vaqueiros 163.58 351 *e*LR LR 18 41 33.4
comp=Z,743nm,20.0s
PBDV Barranco-do-Ve 163.77 352 *e*LR LR 18 42 02.0
comp=Z,934nm,20.0s
MORF Marmelete 163.79 354 *e*LR LR 18 43 36.8
comp=Z,762nm,20.0s
MORF *i* LQ 18 45 19.7
PFVI Vila Bisbo 163.97 354 *e*LR LR 18 42 25.8
comp=Z,691nm,18.0s
LIC Lamto 164.16 201 *e*PKIKP PKPdf 17 44 59.9 -4.0
LIC *e*MLR MLR
comp=Z,3μm,21.5s
LIC Lamto 164.16 201 *e*PKP1 PKPab 17 45 57.0 -0.2
comp=Z,68nm,1.0s
LIC Lamto 164.16 201 *e*PKPdf PKPdf 17 44 59.9 -4.0
LIC LR LR
comp=Z,1μm,21.5s
KIC Kosan Boka 164.19 203 *e*PKP1 PKPab 17 45 57.0 -0.3
comp=Z,97nm,1.1s
DBIC Dimbokro 164.52 203 PKPab PKPab 17 45 59.4 +0.7
comp=Z,13nm,1.0s,baz=159,slow=7.1,SNR=9.6
DBIC Dimbokro 164.52 203 *e*PKPab PKPab 17 45 57.2 -1.6
TIC Toumodi 164.55 202 *e*PKP1 PKPab 17 45 56.2 -2.7
comp=Z,88nm,1.1s
TOA0 Torodi Ar. Sit 165.69 238 *e*PKPdf PKPdf 17 45 05.1 -0.1
TORD Torodi Ar. Bea 165.69 238 PKP PKPdf 17 45 05.4 +0.3
comp=Z,1.3nm,0.9s,baz=336,slow=1.2,SNR=6.2
TORD PKPab PKPab 17 46 04.3 +0.3
comp=Z,4.2nm,1.2s,baz=118,slow=2.1,SNR=5.1
TORD Torodi Ar. Bea 165.69 238 PKP PKPdf 17 45 05.4 +0.3
TORD PKPab PKPab 17 46 04.3 +0.2

DJA ***29*** *17:26:55,443N×94.71E,h30km,MLv4.8/4*
MOS ***29*** *17:26:58.1±0.9,468N×9508E,h64km,mb5.0/10,Error ellipse: s-maj=15.5km s-min=7.9km az=106.2*
ISCJB ***29*** *17:26:60.0±1.8,461N±007×9507E±007,h81km±16km, mb4.6/47,Error ellipse: s-maj=13.5km s-min=9.0km az=39.9*
IDC ***29*** *17:26:59.3±6.8,460N×9498E,h56km±60km,mb4.2/15, mb1 4.3/16,mb1mx4.1/26,mbtmp4.2/16,ML4.9/1,MS5.2/1, Ms1 5.2/1,ms1mx3.6/33,Error ellipse: s-maj=27.8km s-min=15.4km az=52.0*
BJI ***29*** *17:27:01.3,476N×95.10E,h87km,mB4.8,mb5.0,Ms4.2, Msz3.8*
NEIC ***29*** *17:27:03.4±1.5,460N×9493E,h98km±13km,mb4.7/14, Error ellipse: s-maj=10.5km s-min=6.9km az=46.0*
NEIC Felt [III] at Banda Aceh.

ISC 29 17:27:01.3±1.6,460N±007×9504E±007,h76km±14km,n90, σ0°91/88,mb4.6/47,2C-1D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
SNG	**Songkhla**	**6.11**	**65**	P	**Pn**	**17 28 28.0**	**-1.0**
	200nm,0.9s						
CM31	**Chiang Mai Arr**	**14.29**	**15**	*e*Pn	**Pn**	**17 30 27.6**	**+7.6**
	16nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.29**	**15**	P	**Pn**	**17 30 20.8**	**+0.8**
	1.7nm,0.3s,baz=209,slow=11,SNR=38						
PALK	**Pallekele**	**14.50**	**281**	P	**Pn**	**17 30 21.3**	**-1.5**
PALK				pmax	pmax		
	comp=Z,27nm,1.0s						
PALK	**Pallekele**	**14.50**	**281**	Pn	**Pn**	**17 30 21.3**	**-1.5**
	comp=Z,27nm,1.0s						
PALK				*e*Sn	**Sn**	**17 32 44.7**	**-18**
CHG	**Chiang Mai**	**14.63**	**15**	⇑P	**Pn**	**17 30 28.2**	**+3.8**
	comp=Z,20nm,0.7s						
CHTO	**Chiang Mai**	**14.63**	**15**	*e*P	**Pn**	**17 30 28.0**	**+3.6**
CHTO				pmax	pmax		
	comp=Z,21nm,1.1s						
CHTO	**Chiang Mai**	**14.63**	**15**	*e*Pn	**Pn**	**17 30 28.0**	**+3.6**
	comp=Z,21nm,1.1s						
KSM	**Kuching**	**15.56**	**101**	*e*Pn	**Pn**	**17 30 40.4**	**+4.0**
ODAN	**Odare**	**23.31**	**343**	*e*P	**P**	**17 32 02.8**	**+0.1**
	comp=Z,18nm,0.6s,mb4.6						
RAMN	**Ramite**	**23.64**	**341**	*e*P	**P**	**17 32 06.4**	**+0.7**
	comp=Z,22nm,0.5s,mb4.7						
JIRN	**Jiri**	**24.43**	**341**	*e*P	**P**	**17 32 13.5**	**+0.6**
	comp=Z,18nm,0.5s,mb4.6						
DMN	**Daman**	**24.76**	**339**	*e*P	**P**	**17 32 16.6**	**+0.7**
	comp=Z,14nm,0.6s,mb4.6						
GUN	**Gumba**	**24.77**	**340**	*e*P	**P**	**17 32 16.9**	**+0.9**
	comp=Z,20nm,0.4s,mb4.9						
KKN	**Kakani**	**24.86**	**339**	*e*P	**P**	**17 32 16.4**	**-0.5**
	comp=Z,12nm,0.5s,mb4.6						
LSA	**Lhasa**	**25.23**	**352**	P	**P**	**17 32 21.0**	**+0.8**
LSA	**Lhasa**	**25.23**	**352**	*e*P	**P**	**17 32 19.9**	**-0.3**
LSA				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.5						
LSA	**Lhasa**	**25.23**	**352**	*e*P	**P**	**17 32 19.9**	**-0.3**
	comp=Z,13nm,0.6s,mb4.5						
GKN	**Gorkha**	**25.29**	**338**	*e*P	**P**	**17 32 20.9**	**+0.2**
	comp=Z,41nm,0.9s,mb4.9						
KOLN	**Koldanda**	**25.49**	**336**	*e*P	**P**	**17 32 21.8**	**-0.7**
	comp=Z,28nm,0.5s,mb4.9						
DANN	**Dangsing**	**25.94**	**337**	*e*P	**P**	**17 32 26.8**	**+0.2**
	comp=Z,50nm,0.6s,mb5.1						
CD2	**Chengdu**	**27.43**	**16**	*e*P	**P**	**17 32 38.5**	**-1.5**
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.7						
WHN	**Wuhan**	**31.58**	**33**	⇓P	**P**	**17 33 17.8**	**+1.0**
XAN	**Xi'an**	**32.01**	**22**	P	**P**	**17 33 19.3**	**-1.2**
XAN				AMB	AMB		
	comp=Z,44nm,0.8s,mb5.2						
XAN				AMB	AMB		
	comp=Z,104nm,8.7s						
LZH	**Lanzhou**	**32.37**	**13**	*e*P	**P**	**17 33 22.8**	**-0.8**
LZH				AMB	AMB		
	comp=Z,17nm,1.2s,mb4.7						
LZH				AMB	AMB		
	comp=Z,86nm,5.0s						
LZH	**Lanzhou**	**32.37**	**13**	*e*P	**P**	**17 33 22.8**	**-0.8**
	comp=Z,17nm,1.2s,mb4.7						
LZH				pP	pP	17 33 30.2	-11
LZH				sP	sP	17 33 34.0	-16
GTA	**Gaotai**	**34.92**	**6**	⇑P	**P**	**17 33 45.3**	**-0.4**
GTA				AP	pP	17 34 03.5	-0.3
GTA				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.8						
JOW	**Kunigami**	**38.67**	**52**	P	**P**	**17 34 18.9**	**+1.2**
	comp=Z,13nm,0.4s,mb5.1,baz=253,slow=9.7,SNR=11						
BJT	**Baijiatuau**	**40.08**	**25**	*e*P	**P**	**17 34 30.6**	**+1.3**
UCH	**Uchtor**	**41.69**	**337**	P	**P**	**17 34 43.9**	**+1.4**
	SNR=18						
UCH	**Uchtor**	**41.69**	**337**	*e*P	**P**	**17 34 43.2**	**+0.7**
	comp=Z,13nm,0.7s,mb4.8						
TKM2	**Tokmak 2**	**41.88**	**339**	*e*P	**P**	**17 34 44.8**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.7						
TKM2	**Tokmak 2**	**41.88**	**339**	P	**P**	**17 34 45.8**	**+1.8**
	SNR=12						
TKM2	**Tokmak 2**	**41.88**	**339**	*e*P	**P**	**17 34 44.8**	**+0.8**
	comp=Z,5.3nm,0.3s,mb4.8						
KBK	**Karagaybulak**	**41.89**	**338**	P	**P**	**17 34 45.8**	**+1.7**
	SNR=22						
AML	**Almayashu**	**41.94**	**336**	P	**P**	**17 34 46.0**	**+1.5**
	SNR=10						
AML	**Almayashu**	**41.94**	**336**	*e*P	**P**	**17 34 45.5**	**+0.9**
	comp=Z,120nm,0.6s,mb5.8						
AAK	**Ala-Archa**	**42.04**	**337**	P	**P**	**17 34 48.4**	**+3.0**
	SNR=12						
EKS2	**Erkin-Say**	**42.35**	**337**	P	**P**	**17 34 50.3**	**+2.4**
	SNR=12						
EKS2	**Erkin-Say**	**42.35**	**337**	*e*P	**P**	**17 34 48.1**	**+0.2**
	comp=Z,9.7nm,0.5s,mb4.8						
USP	**Ospenovka**	**42.58**	**338**	P	**P**	**17 34 51.5**	**+1.8**
	SNR=9.9						
MK31	**Makanchi Array**	**43.45**	**347**	*e*P	**P**	**17 34 56.4**	**-0.3**
MKAR	**Makanchi Array**	**43.45**	**347**	P	**P**	**17 34 56.6**	**-0.1**
	comp=Z,14nm,0.6s,mb4.9,baz=166,slow=8.0,SNR=149						
KK31	**Karatay Array**	**44.07**	**334**	P	**P**	**17 35 01.9**	**+0.1**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2					

ASAR	**Alice Springs**	**47.17**	**128**	P		**P**		**17 35 26.6**	**+0.1**
	comp=Z,1.2nm,0.5s,mb3.9,baz=302,slow=7.7,SNR=12								
KURK	**Kurchatov**	**47.98**	**346**	P		**P**		**17 35 32.0**	**-0.3**
	comp=Z,12nm,0.8s,mb4.8,baz=169,slow=6.9,SNR=71								
KURK	**Kurchatov**	**47.98**	**346**	*eP*		**P**		**17 35 32.5**	**+0.2**
KURK				pmax		pmax			
	comp=Z,49nm,1.4s,mb5.1								
KURK	**Kurchatov**	**47.98**	**346**	*eP*		**P**		**17 35 32.5**	**+0.2**
	comp=Z,49nm,1.4s,mb5.2								
HIA	**Hailar**	**49.20**	**21**	*eP*		**P**		**17 35 41.4**	**-0.3**
HIA				pmax		pmax			
	comp=Z,6.0nm,0.6s								
HIA	**Hailar**	**49.20**	**21**	*eP*		**P**		**17 35 41.4**	**-0.3**
	comp=Z,6.3nm,0.6s,mb4.7								
ZAA0	**Zalesovo Array**	**49.90**	**352**	*eP*		**P**		**17 35 46.5**	**-0.4**
ZALV	**Zalesovo Beam**	**49.90**	**352**	P		**P**		**17 35 46.7**	**-0.2**
	comp=Z,12nm,0.5s,mb5.1,baz=182,slow=6.9,SNR=68								
ZALV	**Zalesovo Beam**	**49.90**	**352**	P		**P**		**17 35 46.7**	**-0.2**
MDJ	**Mudanjiang**	**50.05**	**32**	*eP*		**P**		**17 35 49.1**	**+0.9**
CBIJ	**Chichi jima**	**50.17**	**58**	LR		LR		17 54 51.1	
	comp=Z,3µm,21.6s,baz=134,slow=33								
NVS	**Novosibirsk**	**50.99**	**351**	*eP*		**P**		**17 35 53.4**	**-1.8**
NVS				*e*				17 37 50.7	
NVS				pmax		pmax			
	comp=Z,8.0nm,0.9s,mb4.8								
NVS				pmax		pmax			
	comp=N,15nm,1.1s								
NVS				pmax		pmax			
	comp=E,11nm,0.9s								
VOSK	**Vostochnaya**	**51.91**	**342**	P		**P**		**17 36 01.4**	**-0.7**
VOSK				pmax		pmax			
	comp=Z,13nm,0.6s,mb5.1								
BVA0	**Borovoye Array**	**52.35**	**341**	*i* P		**P**		**17 36 04.7**	**-0.7**
BVAR	**Borovoye Array**	**52.35**	**341**	P		**P**		**17 36 05.2**	**-0.2**
	comp=Z,9.8nm,0.7s,mb4.9,baz=138,slow=9.1,SNR=39								
BRVK	**Borovoye**	**52.42**	**341**	*eP*		**P**		**17 36 05.3**	**-0.5**
BRVK				pmax		pmax			
	comp=Z,7.0nm,0.5s,mb5.0								
BRVK	**Borovoye**	**52.42**	**341**	*eP*		**P**		**17 36 05.3**	**-0.5**
	comp=Z,7.4nm,0.5s,mb5.0								
AB31	**Akbulak array**	**53.52**	**332**	*i* P		**P**		**17 36 13.9**	**-0.1**
AB31				pmax		pmax			
	comp=Z,2.0nm,0.3s,mb4.6								
BOD	**Bodaibo**	**55.12**	**12**	*eP*		**P**		**17 36 24.9**	**-0.6**
BOD				pmax		pmax			
	comp=Z,3.0nm,1.0s,mb4.3								
AKTK	**Aktyubinsk**	**55.23**	**332**	P		**P**		**17 36 26.3**	**-0.1**
AKTO	**Aktyubinsk**	**55.23**	**332**	P		**P**		**17 36 26.3**	**-0.1**
	comp=Z,1.8nm,0.4s,mb4.4,baz=113,slow=13,SNR=10								
STKA	**Stephens Creek**	**57.23**	**133**	P		**P**		**17 36 41.0**	**+0.1**
	comp=Z,7.1nm,1.0s,mb4.7								
ARU	**Arti**	**59.23**	**337**	*eP*		**P**		**17 36 53.1**	**-1.4**
ARU				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.5								
ARU	**Arti**	**59.23**	**337**	*eP*		**P**		**17 36 53.1**	**-1.4**
	comp=Z,3.9nm,0.8s,mb4.5								
YAK	**Yakutsk**	**62.81**	**18**	*eP*		**P**		**17 37 16.7**	**-1.9**
YAK				pmax		pmax			
	comp=Z,15nm,1.0s,mb4.9								
YAK	**Yakutsk**	**62.81**	**18**	P		**P**		**17 37 17.3**	**-1.4**
	comp=Z,9.8nm,0.8s,mb4.8								
BR131	**Keskin Array S**	**65.24**	**312**	*eP*		**P**		**17 37 34.0**	**-1.0**
	comp=Z,1.5nm,0.6s,mb4.0								
TIXI	**Tiksi**	**70.25**	**11**	*eP*		**P**		**17 38 04.7**	**-1.2**
TIXI				pmax		pmax			
	comp=Z,7.0nm,0.5s,mb4.8								
TIXI	**Tiksi**	**70.25**	**11**	*eP*		**P**		**17 38 04.7**	**-1.2**
	comp=Z,7.5nm,0.5s,mb4.8								
AKASG	**Malin Array Be**	**71.26**	**322**	P		**P**		**17 38 11.3**	**-1.2**
	comp=Z,1.5nm,0.5s,mb4.1,baz=90,slow=5.7,SNR=7.3								
JOF	**Joensuu**	**74.17**	**335**	*ep*		**P**		**17 38 29.7**	**+0.3**
	comp=Z,1.2nm,0.4s,mb4.0								
BOSA	**Boshof**	**74.64**	**239**	P		**P**		**17 38 33.2**	**+0.4**
	comp=Z,4.2nm,1.0s,mb4.1,baz=116,slow=17,SNR=3.5								
KAF	**Kangasniemi**	**76.09**	**333**	*ep*		**P**		**17 38 40.0**	**-0.5**
	comp=Z,1.0nm,0.4s,mb3.9								
KAF	**Kangasniemi**	**76.09**	**333**	*eP*		**P**		**17 38 40.0**	**-0.5**
KAF				pmax		pmax			
	comp=Z,1.0nm,0.4s,mb3.9								
ARCES	**ARCESS Array B**	**78.63**	**340**	P		**P**		**17 38 54.9**	**+0.3**
	comp=Z,1.7nm,0.4s,mb4.2,baz=97,slow=6.7,SNR=28								
GERES	**GERESS Array B**	**80.85**	**319**	P		**P**		**17 39 07.8**	**+0.8**
	comp=Z,1.1nm,0.7s,mb3.8,baz=98,slow=6.9,SNR=11								
DAVOX	**Davos/Dischmat**	**83.36**	**316**	P		**P**		**17 39 21.1**	**+0.9**
	comp=Z,1.3nm,0.4s,mb4.1,baz=170,slow=17,SNR=4.3								
DAVOS	**Davos**	**83.41**	**316**	P		**P**		**17 39 21.1**	**+0.7**
WTSB	**Winterswijk**	**85.32**	**322**	*e*PKP		PKiKP		17 44 38.4	-2.1
	comp=Z,54nm,1.7s								
PDAR	**Pinedale Array**	**127.85**	**23**	PKP		PKPdf		17 45 58.9	+0.4
	comp=Z,0.3nm,0.5s,baz=80,slow=1.1,SNR=3.2								

KRSC 29 17:49:02.2±2.0, 4937N×15833E, h30km±30km, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**2.33**	**311**	P		17 49 41.7	+3.2
RUS	**Russkaya**	**3.07**	**2**	P		17 49 49.8	+1.2
RUS				*e*S		17 50 24.5	+0.3
SPN	**Mys Shipunski**	**3.88**	**15**	S		17 50 47.3	+3.1
AVH	**Avacha**	**3.91**	**4**	*eP*		17 50 03.8	+3.7
AVH				S		17 50 48.3	+3.4
GNL	**Ganaly**	**4.34**	**357**	P		17 50 09.8	+3.8

*IDC **29** 17:57:50.5±2.4, 3532S×10755W, h0km, mb3.8/3, mb1 4.3/3, mb1mx3.8/16, mbtmp3.8/3, MS4.1/1, Ms1 4.1/1, ms1mx3.4/19, Error ellipse: s-maj=108.5km s-min=71.5km az=93.0*

*ISCJB **29** 17:57:52.5±2.3, 3505S±05×107W±, h10km, mb3.7/3, MS4.1/1, Error ellipse: s-maj=283.4km s-min=18.8km az=167.1*

ISC 29 17:57:54.4±2.3, 3505S±05×107W±, h10km, (h6km±3km; pP-P), n9, σ1§14/6, mb3.7/3, MS4.1/1, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**50.22**	**45**	LR	LR	18 24 40.1	
	comp=Z,173nm,18.5s,MS4.1,baz=210,slow=32						
VNA3	**Neumayer Olymp**	**59.60**	**158**	*e*	**P**	**18 07 57.6**	**-0.3**
VNA3				*e*	pP	18 07 59.6	-1.5
VNA1	**Neumayer--Stat**	**60.24**	**158**	*e*	**P**	**18 08 02.5**	**+0.2**
VNA1				*e*	pP	18 08 04.3	-1.2
VNA2	**Neumayer--Watz**	**60.41**	**158**	*e*	**P**	**18 08 03.6**	**+0.2**
	baz=271,slow=5.9						
VNA2				*e*	pP	18 08 05.3	-1.4
TXAR	**Lajitas Array**	**64.08**	**3**	P	**P**	**18 08 29.1**	**+0.7**
	0.3nm,0.6s,mb3.5,baz=187,slow=7.4,SNR=4.5						
NVAR	**Mina Array Bea**	**73.80**	**351**	P	**P**	**18 09 29.5**	**+0.8**
	0.9nm,0.8s,mb3.7,baz=166,slow=8.4,SNR=4.4						
PDAR	**Pinedale Array**	**77.43**	**358**	P	**P**	**18 09 47.8**	**-1.7**
	1.8nm,1.0s,mb4.0,baz=162,slow=5.8,SNR=8.0						
AKASG	**Malin Array Be**	**144.91**	**50**	PKPbc	PKPdf	18 17 29.2	-2.0
	1.1nm,0.5s,baz=295,slow=2.9,SNR=6.0						
SONM	**Songino Array**	**152.04**	**308**	PKPbc	PKPbc	18 17 47.1	-2.4
	1.2nm,0.9s,baz=64,slow=1.2,SNR=6.0						

MAN 29 18:00:38, 920N×12605E, h3km, mb3.8, ML2.6, MS2.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.48**	**242**	*eP*	Pg	18 00 48.1	+0.8
BUTP				*eS*	Sg	18 00 53.3	-0.4
BUKP	**Musuan**	**1.64**	**217**	*eP*	Pn	18 01 07.7	-0.1
BUKP				*eS*	Sn	18 01 30.4	+1.0

IDC 29 18:06:30.5±13.0, 570S×12918E, h212km±139km, mb2.9/1, mb1 3.0/5, mb1mx2.8/16, mbtmp2.9/5, Error ellipse: s-maj=153.7km s-min=27.1km az=50.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**7.07**	**230**	P	Pn	18 08 12.1	+0.4
	4.2nm,0.3s,baz=88,slow=2.0,SNR=6.4						
FITZ	**Fitzroy Crossi**	**12.81**	**195**	P	Pn	18 09 24.4	-0.8
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=3.5						
FITZ				S	S	18 11 38.1	-10
	0.1nm,0.3s,baz=330,slow=20,SNR=2.7						
WRA	**Warramunga Arr**	**15.02**	**161**	P	Pn	18 09 52.8	+0.3
	0.1nm,0.3s,baz=334,slow=13,SNR=5.4						
ASAR	**Alice Springs**	**18.44**	**166**	P	P	18 10 30.4	+0.1
	0.1nm,0.3s,baz=345,slow=12,SNR=23						
MKAR	**Makanchi Array**	**66.70**	**327**	P	P	18 16 58.6	+0.1
	0.2nm,0.5s,baz=114,slow=8.8,SNR=2.5						

*ISCJB **29** 18:06:53.6±1.7, 62N±02×1279E±02, h33km, mb3.4/3, Error ellipse: s-maj=45.4km s-min=9.6km az=39.6*

*IDC **29** 18:06:54.0±2.1, 532N×12585E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, Error ellipse: s-maj=158.6km s-min=26.8km az=65.0*

ISC 29 18:06:57.3±1.7, 61N±03×1278E±03, h35km, n5, σ1§70/7, mb3.4/3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.74**	**301**	*eP*	**Pn**	**18 07 27.2**	**+2.2**
MATI				*eS*	**Sn**	**18 07 43.9**	**-2.0**
BUKP	**Musuan**	**3.23**	**304**	*eP*	**Pn**	**18 07 48.1**	**+2.5**
BUKP				*eS*	**Sn**	**18 08 23.1**	**+0.1**
WRA	**Warramunga Arr**	**26.63**	**166**	P	**P**	**18 12 34.0**	**+1.2**
	0.7nm,0.5s,mb3.5,baz=343,slow=10,SNR=7.6						
ASAR	**Alice Springs**	**30.14**	**169**	P	**P**	**18 13 02.5**	**-1.6**
	0.2nm,0.4s,mb3.2,baz=341,slow=7.6,SNR=11						
MKAR	**Makanchi Array**	**56.27**	**324**	P	**P**	**18 16 32.7**	**-1.6**
	0.2nm,0.4s,mb3.5,baz=123,slow=7.3,SNR=5.0						

*NEIC **29** 18:13:18.9, 1157N×5999W, h45km, MD3.6(TRN), After TRN.*

TRN 29 18:13:18.7, 1157N×5998W, h43km, MD3.6, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOSP	**Speyside**	**0.61**	**244**	*eP*	Pn	18 13 32.2	+1.2
TOSP				*eS*	Sn	18 13 42.0	+2.2
BOT	**Bacolet**	**0.83**	**241**	*eS*	Sn	18 13 48.8	+3.7
TPR	**Prospect**	**0.87**	**244**	*eP*	Pn	18 13 35.8	+1.2
TPR				*eS*	Sn	18 13 48.6	+2.5
TBH	**Brigand Hill**	**1.52**	**225**	*eP*	Pn	18 13 45.1	+1.6
TRN	**Trinidad (W)**	**1.67**	**237**	*eP*	Pn	18 13 46.5	+0.9
TRN				*eS*	Sn	18 14 06.6	+0.8
GRCU	**Cariacou**	**1.70**	**302**	*eP*	Pn	18 13 48.4	+2.5
GRCU				*eS*	Sn	18 14 08.1	+1.6
GRIC	**Isle de Caille**	**1.73**	**295**	*eP*	Pn	18 13 48.0	+1.6
GRW	**Mount Saint Ca**	**1.75**	**290**	*eP*	Pn	18 13 48.0	+1.4
GRSS	**Sisters**	**1.76**	**295**	*eP*	Pn	18 13 48.4	+1.7
TCE	**Chacachacare**	**1.95**	**244**	*eP*	Pn	18 13 51.8	+2.5
TCE				*eS*	Sn	18 14 14.2	+1.6
SVB	**Belmont**	**2.10**	**324**	*eP*	Pn	18 13 51.9	+0.4
SVB				*eS*	Sn	18 14 17.7	+1.4
SSV	**Crater Summit**	**2.11**	**326**	*eP*	Pn	18 13 52.8	+1.2
SSV				*eS*	Sn	18 14 18.2	+1.5
SVV	**Soufriere Volc**	**2.12**	**325**	*eP*	Pn	18 13 53.2	+1.5
SVV				*eS*	Sn	18 14 18.4	+1.6
SLB	**Belfond**	**2.47**	**335**	*eS*	Sn	18 14 27.2	+1.7
BIM	**Bigot**	**3.12**	**340**	*eP*	Pn	18 14 06.0	+0.6
BIM				*eS*	Sn	18 14 42.3	+0.8
FDF	**Fort de France**	**3.35**	**340**	*eP*	Pn	18 14 10.0	+1.4
FDF				*eS*	Sn	18 14 47.4	+0.3

IDC 29 18:48:07.2±3.3, 578S×15246E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/16, mbtmp3.4/3, Error ellipse: s-maj=126.7km s-min=46.3km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.55**	**230**	P	P	18 53 09.4	+0.3
	0.3nm,0.4s,baz=54,slow=9.7,SNR=6.0						
ASAR	**Alice Springs**	**25.20**	**223**	P	P	18 53 34.1	-0.6
	0.2nm,0.4s,baz=54,slow=9.3,SNR=11						
FITZ	**Fitzroy Crossi**	**28.90**	**243**	P	P	18 54 08.4	+0.2
	0.5nm,0.3s,baz=57,slow=13,SNR=9.6						
TORD	**Torodi Ar. Bea**	**150.27**	**286**	PKPbc	PKPbc	19 08 01.4	-0.1
	0.4nm,0.9s,baz=78,slow=2.1,SNR=8.9						

*ISCJB **29** 18:54:05.2±0.4, 3975N±002×2773E±002, h5km±3km, Error ellipse: s-maj=3.1km s-min=2.4km az=25.2*

*ISK **29** 18:54:05.2, 3976N×2774E, h7km, ML3.6*

*CSEM **29** 18:54:05.0±0.0, 3976N×2775E, h5km, ML3.8, Error ellipse: s-maj=1.1km s-min=0.9km az=42.0*

*ATH **29** 18:54:05.1, 3967N×2798E, h67km±19km*

*DDA **29** 18:54:05.6, 3975N×2777E, h7km±1km, Md3.6, Ml3.8*

*NEIC **29** 18:54:06.6±0.5, 3966N×2772E, h10km, ML3.1(ATH), ML3.6(ISK), Error ellipse: s-maj=6.8km s-min=6.1km az=60.0*

*THE **29** 18:54:07.9, 3965N×2768E, h10km, ML4.0*

*SOF **29** 18:54:07.4, 3989N×2759E, h5km, MD3.2*

ISC 29 18:54:06.0±0.3, 3975N±002×2775E±002, h4km±3km, n112, σ0§83/130, 3C-17D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALY	**Balya**	**0.10**	**266**	*i* P	**Pg**	**18 54 08.3**	**+0.4**
BALY				*i* S	**Sg**	**18 54 10.5**	**+1.2**
BALB	**Balikesir**	**0.15**	**136**	PG	**Pg**	**18 54 08.8**	**-0.1**
DURS	**Dursunbey**	**0.58**	**104**	*i* P	**Pg**	**18 54 16.3**	**-0.8**
DURS				*i* S	**Sg**	**18 54 25.0**	**+0.3**
EDC	**Edincik**	**0.61**	**9**	PG	**Pg**	**18 54 17.3**	**-0.3**
EDC				*e*SG	**Sg**	**18 54 25.7**	**+0.2**
BNT	**Bandirma**	**0.62**	**12**	PG	**Pg**	**18 54 17.6**	**-0.4**
BNT				*e*SG	**Sg**	**18 54 26.5**	**+0.4**
DST	**Dursunbey**	**0.69**	**101**	PG	**Pg**	**18 54 18.5**	**-0.8**
DST				*e*SG	**Sg**	**18 54 29.3**	**+0.9**
KCT	**Karacabey**	**0.70**	**42**	*e*PG	**Pg**	**18 54 19.0**	**-0.4**
MRMT	**Marmara Adasi**	**0.86**	**352**	*e*PG	**Pg**	**18 54 22.0**	**-0.6**
AKS	**Akhisar**	**0.87**	**177**	*e*PG	**Pg**	**18 54 22.5**	**-0.2**
AYVA	**Ayvalik**	**0.93**	**242**	*i* P	**Pg**	**18 54 24.1**	**+0.4**
AYVA				*i* S	**Sg**	**18 54 39.5**	**+3.7**
LPK	**Lapseki**	**0.98**	**310**	*e*PG	**Pg**	**18 54 24.4**	**-0.5**
DEMI	**Demirci**	**1.03**	**133**	*i* P	**Pg**	**18 54 25.6**	**-0.2**
DEMI				*i* S	**Sg**	**18 54 39.4**	**+0.3**
DEMI	**Demirci**	**1.03**	**133**	*i* P	**Pg**	**18 54 25.5**	**-0.2**
DEMI				*i* S	**Sg**	**18 54 39.4**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.03**	**335**	*e*PG	**Pg**	**18 54 25.5**	**-0.3**
SART	**Tekirdag**	**1.04**	**335**	*i* P	**Pg**	**18 54 25.5**	**-0.3**
SART				*i* S	**Sg**	**18 54 40.3**	**+1.0**
EZN	**Ezine**	**1.10**	**275**	*e*PN	**Pn**	**18 54 26.2**	**-1.9**
MFT	**Murefte**	**1.10**	**341**	*e*PN	**Pn**	**18 54 26.9**	**-1.2**
PRK	**Paraskevi**	**1.25**	**247**	*e*Pg	**Pg**	**18 54 28.4**	**-0.5**
PRK				*e*Sg	**Sg**	**18 54 45.1**	**-0.9**
PRK	**Paraskevi**	**1.25**	**247**	*e*P	**Pg**	**18 54 29.4**	**-0.5**
PRK				*e*S	**Sg**	**18 54 47.3**	**+1.3**
PRK	**Paraskevi**	**1.25**	**247**	*e*Pg	**Pg**	**18 54 29.4**	**-0.5**
PRK				*e*Sg	**Sg**	**18 54 45.1**	**-0.9**
PRK				S	**Sg**	**18 54 47.3**	**+1.3**
TKR	**Tekirdag**	**1.25**	**353**	*e*PN	**Pn**	**18 54 29.7**	**-0.6**
GEMT	**Gemlik**	**1.30**	**58**	*e*PN	**Pn**	**18 54 29.9**	**-1.0**
CRLT	**Corlu**	**1.38**	**360**	*e*PN	**Pn**	**18 54 32.0**	**-0.1**
KULA	**Kula-Manisa**	**1.42**	**150**	*e*PN	**Pn**	**18 54 32.6**	**0.0**
BLCB	**Balcova**	**1.47**	**202**	*e*PN	**Pn**	**18 54 32.6**	**-0.7**
GADA	**Gvkgeada**	**1.49**	**288**	*e*PN	**Pn**	**18 54 33.4**	**-0.1**
YLV	**Yalova**	**1.49**	**56**	*e*PN	**Pn**	**18 54 32.8**	**-0.8**
CTT	**Catalca**	**1.49**	**20**	*e*PN	**Pn**	**18 54 32.4**	**-1.2**
SLVT	**Silivri**	**1.52**	**13**	*e*PN	**Pn**	**18 54 33.5**	**-0.6**
ENEZ	**Enez**	**1.57**	**310**	*e*PN	**Pn**	**18 54 33.8**	**-0.8**
CTKS	**Kestanelik-??a**	**1.60**	**21**	*e*PN	**Pn**	**18 54 34.0**	**-1.0**
BGKT	**Bogazkoy**	**1.63**	**28**	*e*PN	**Pn**	**18 54 34.6**	**-0.9**
CAVI	**Cavuskoy**	**1.67**	**74**	*e*PN	**Pn**	**18 54 36.1**	**0.0**
ADVT	**Abdulvahap**	**1.68**	**65**	*e*PN	**Pn**	**18 54 36.3**	**+0.2**
ALN	**Alexandroupoli**	**1.73**	**312**	*e*Pb	**Pb**	**18 54 36.8**	**-1.6**
ALN				*e*Sb	**Sb**	**18 55 00.1**	**-0.4**
CTYL	**Yal??k??y-??at**	**1.77**	**13**	*e*PN	**Pn**	**18 54 36.4**	**-1.1**
KLYT	**Kilyos**	**1.80**	**33**	*e*PN	**Pn**	**18 54 37.1**	**-0.7**
HRT	**Hereke**	**1.82**	**53**	*e*PN	**Pn**	**18 54 37.2**	**-0.9**
CHOS	**Chios island**	**1.89**	**225**	*e*Pb	**Pb**	**18 54 38.4**	**-2.7**
CHOS				*e*Sb	**Sb**	**18 55 00.6**	**-4.5**
ALT	**Altintas**	**1.96**	**110**	*e*PN	**Pn**	**18 54 39.7**	**-0.3**
KHL	**Karahalli**	**1.98**	**135**	*e*PN	**Pn**	**18 54 40.5**	**+0.2**
SILT	**Sile**	**2.02**	**45**	*e*PN	**Pn**	**18 54 39.8**	**-1.0**
GPA	**Golpazari**	**2.04**	**74**	*e*PN	**Pn**	**18 54 41.6**	**+0.5**
LOS	**Limnos**	**2.06**	**276**	*e*Pn	**Pn**	**18 54 41.3**	**-0.1**
SMG	**Samos**	**2.16**	**200**	P	**Pn**	**18 54 48.1**	**+5.4**
RDO	**Rodhopi**	**2.19**	**310**	*e*P	**Pn**	**18 54 43.4**	**+0.2**
EDRB	**Edirne**	**2.23**	**340**	*e*PN	**Pn**	**18 54 43.4**	**-0.4**
GULT	**Gulveren**	**2.23**	**71**	*e*PN	**Pn**	**18 54 44.1**	**+0.4**
MLSB	**Milas**	**2.45**	**179**	*e*PN	**Pn**	**18 54 46.7**	**-0.1**
SHUT	**Suhut-Afyon**	**2.49**	**118**	*e*PN	**Pn**	**18 54 47.7**	**+0.5**
KDZ	**Kurdzhali**	**2.60**	**318**	P	**Pn**	**18 54 49.2**	**+0.4**
YER	**Yerkesik**	**2.64**	**171**	*e*PN	**Pn**	**18 54 48.9**	**-0.5**
BODT	**Bodrum**	**2.70**	**187**	*e*PN	**Pn**	**18 54 50.2**	**0.0**
MDU	**Mudurnu**	**2.75**	**74**	*e*PN	**Pn**	**18 54 51.6**	**+0.6**
DIM	**Dimitrovgrad**	**2.85**	**325**	P	**Pn**	**18 54 52.3**	**+0.1**
JMB	**Yambol**	**2.85**	**342**	*e*Pn	**Pn**	**18 54 53.7**	**+1.3**
ISP	**Isparta**	**2.88**	**130**	*e*PN	**Pn**	**18 54 53.6**	**+0.9**
ISP	**Isparta**	**2.88**	**130**	*e*Pn	**Pn**	**18 54 52.6**	**0.0**
ISP	**Isparta**	**2.88**	**130**	*e*Pn	**Pn**	**18 54 52.7**	**+0.1**
ISP				*e*Pg	**Pg**	**18 55 01.4**	**+0.3**
OUR	**Ouranopolis**	**2.95**	**283**	*e*Pn	**Pn**	**18 54 53.2**	**-0.4**
RZN	**Rozhen**	**3.01**	**311**	P	**Pn**	**18 54 54.9**	**+0.5**
PAIG	**Paliouri**	**3.14**	**275**	*e*Pn	**Pn**	**18 54 55.5**	**-0.7**
BCK	**Bucak**	**3.19**	**135**	*e*PN	**Pn**	**18 54 57.4**	**+0.4**
APE	**Apeiranthos**	**3.19**	**214**	*e*Pn	**Pn**	**18 54 55.0**	**-1.9**
APE	**Apeiranthos**	**3.19**	**214**	*e*P	**Pn**	**18 54 55.5**	**-1.4**
KDZE	**Karadeniz Ereo**	**3.22**	**60**	*e*PN	**Pn**	**18 54 58.1**	**+0.7**
PLD	**Plovdiv**	**3.30**	**317**	*e*Pn	**Pn**	**18 54 58.8**	**+0.4**
KIZT	**Kizilcal**	**3.32**	**104**	*e*PN	**Pn**	**18 54 59.5**	**+0.8**
PLG	**Polygyros**	**3.36**	**282**	*e*Pn	**Pn**	**18 54 59.1**	**-0.2**
PLG	**Polygyros**	**3.36**	**282**	*e*P	**Pn**	**18 54 59.5**	**+0.3**
NVR	**Nevrokopi**	**3.36**	**300**	*e*P	**Pn**	**18 54 59.5**	**+0.2**
ELL	**Elmali**	**3.44**	**150**	*e*PN	**Pn**	**18 55 01.1**	**+0.7**
SOH	**Sokhos**	**3.53**	**289**	*e*Pn	**Pn**	**18 55 01.7**	**+0.1**
MMB	**Musomiste**	**3.57**	**302**	P	**Pn**	**18 55 02.1**	**0.0**
HORT	**Hortiatis**	**3.66**	**285**	*e*Pn	**Pn**	**18 55 03.5**	**+0.1**
LOD	**Lodumlu**	**3.87**	**86**	*e*PN	**Pn**	**18 55 07.5**	**+1.3**
ANTO	**Ankara**	**3.89**	**87**	*e*PN	**Pn**	**18 55 08.2**	**+1.7**
ANTO	**Ankara**	**3.89**	**87**	⇓*i*P	**Pb**	**18 55 18.6**	**+3.5**
ANTO	**Ankara**	**3.89**	**87**	⇓P	**Pb**	**18 55 18.6**	**+3.5**
PCIB	**Panagyurishte**	**3.89**	**317**	P	**Pn**	**18 55 06.6**	**0.0**
LADK	**Ladik-KONYA**	**3.92**	**112**	*e*PN	**Pn**	**18 55 07.3**	**+0.4**
LADK	**Ladik-KONYA**	**3.92**	**112**	*e*Pn	**Pn**	**18 55 07.3**	**+0.4**
KNT	**Kendrikon**	**3.96**	**292**	*e*Pn	**Pn**	**18 55 07.9**	**+0.4**
KONT	**Konya--Tatoy**	**4.03**	**115**	*e*PN	**Pn**	**18 55 09.3**	**+0.9**
SAFT	**Safranbolu**	**4.05**	**67**	*e*PN	**Pn**	**18 55 10.1**	**+1.3**
KKB	**Krupnik**	**4.12**	**302**	P	**Pn**	**18 55 10.2**	**+0.5**
VTS	**Vitosha**	**4.45**	**311**	⇓*i*P	**Pn**	**18 55 15.1**	**+0.9**
VTS	**Vitosha**	**4.45**	**311**	P	**Pn**	**18 55 15.5**	**+1.3**
VTS	**Vitosha**	**4.45**	**311**	⇓P	**Pn**	**18 55 15.1**	**+0.8**
BR131	**Keskin Array S**	**4.54**	**88**	*e*Pn	**Pn**	**18 55 15.2**	**-0.3**
BR131	**Keskin Array S**	**4.54**	**88**	*e*Pg	**Pg**	**18 55 31.6**	**-1.4**
BR131	**Keskin Array S**	**4.54**	**88**	*e*Pn	**Pn**	**18 55 15.2**	**-0.3**
BR131				*e*Pg	**Pg**	**18 55 31.6**	**-1.4**
BR131				*e*Sn	**Sn**	**18 56 07.7**	**-1.1**
TIRR	**Tirgusor**	**4.73**	**6**	⇓*i*P	**Pn**	**18 55 17.5**	**-0.6**
KRUS	**Krusevo**	**5.21**	**290**	*e*Pn	**Pn**	**18 55 25.9**	**+1.3**
BARS	**Barje**	**5.42**	**306**	⇓*i*Pn	**Pn**	**18 55 28.5**	**+1.0**
MLR	**Muntele Rosu**	**5.89**	**348**	⇓*i*P	**Pn**	**18 55 36.2**	**+2.2**
MLR	**Muntele Rosu**	**5.89**	**348**	⇓P	**Pn**	**18 55 36.2**	**+2.1**
BOLS	**Boljevac**	**5.95**	**315**	⇓*i*Pn	**P

CHOS					*e*Sb	**Sb**	19 17 51.6	-3.9
ALT	**Altintas**	1.94	110		*e*PN	**Pn**	19 17 29.5	-0.8
KHL	**Karahalli**	1.97	135		*e*PN	**Pn**	19 17 30.9	+0.3
SILT	**Sile**	2.02	45		*e*PN	**Pn**	19 17 30.6	-0.7
GPA	**Golpazari**	2.04	73		*e*PN	**Pn**	19 17 31.5	-0.1
LOS	**Limnos**	2.07	276		*e*Pn	**Pn**	19 17 32.0	-0.1
LOS	**Limnos**	2.07	276		P	**Pn**	19 17 35.2	+3.2
LOS	**Limnos**	2.07	276		P	**Pn**	19 17 35.2	+3.2
RDO	**Rodhopi**	2.21	310		*e*P	**Pn**	19 17 33.9	0.0
RDO					*e*S	**Sn**	19 18 04.8	+3.1
GULT	**Gulveren**	2.23	71		*e*PN	**Pn**	19 17 34.0	-0.1
EDRB	**Edirne**	2.25	340		*e*PN	**Pn**	19 17 34.1	-0.4
MLSB	**Milas**	2.44	180		*e*PN	**Pn**	19 17 36.8	-0.2
SHUT	**Suhut-Afyon**	2.47	118		*e*PN	**Pn**	19 17 37.5	0.0
KDZ	**Kurdzhali**	2.62	318		P	**Pn**	19 17 39.7	+0.2
YER	**Yerkesik**	2.63	171		*e*PN	**Pn**	19 17 39.5	-0.1
BODT	**Bodrum**	2.69	188		*e*PN	**Pn**	19 17 40.2	-0.3
MDU	**Mudurnu**	2.75	73		*e*PN	**Pn**	19 17 41.4	0.0
ISP	**Isparta**	2.86	130		*e*PN	**Pn**	19 17 43.6	+0.7
ISP	**Isparta**	2.86	130		*e*PN	**Pn**	19 17 43.2	+0.3
DIM	**Dimitrovgrad**	2.86	325		P	**Pn**	19 17 43.0	+0.1
JMB	**Yambol**	2.87	342		*e*Pn	**Pn**	19 17 43.4	+0.3
JMB					*e*Sn	**Sn**	19 18 17.9	-0.1
OUR	**Ouranopolis**	2.96	283		*e*Pn	**Pn**	19 17 43.9	-0.4
OUR	**Ouranopolis**	2.96	283		P	**Pg**	19 17 53.2	0.0
RZN	**Rozhen**	3.03	311		P	**Pn**	19 17 45.5	+0.3
PAIG	**Paliouri**	3.15	275		*e*Pn	**Pn**	19 17 46.4	-0.5
BCK	**Bucak**	3.17	135		*e*PN	**Pn**	19 17 47.7	+0.5
APE	**Apeiranthos**	3.19	214		*e*Pn	**Pn**	19 17 45.8	-1.5
APE					*e*Sn	**Sn**	19 18 22.7	-3.1
KIZT	**Kizilcal**	3.31	104		*e*PN	**Pn**	19 17 50.0	+1.0
PLD	**Plovdiv**	3.31	317		*e*Pn	**Pn**	19 17 49.4	+0.3
PLD	**Plovdiv**	3.31	317		P	**Pn**	19 17 49.3	+0.2
PLD	**Plovdiv**	3.31	317		P	**Pn**	19 17 51.1	+2.0
PLG	**Polygyros**	3.37	282		*e*Pn	**Pn**	19 17 49.7	-0.2
PLG	**Polygyros**	3.37	282		*e*P	**Pn**	19 17 49.8	-0.1
NVR	**Nevrokopi**	3.38	300		*e*P	**Pn**	19 17 50.1	+0.1
ELL	**Elmali**	3.43	150		*e*PN	**Pn**	19 17 51.0	+0.3
MMB	**Musomiste**	3.58	302		P	**Pn**	19 17 52.8	0.0
HORT	**Hortiatis**	3.67	285		*e*Pn	**Pn**	19 17 54.1	0.0
SZH	**Strazhica**	3.79	339		P	**Pn**	19 17 55.5	-0.1
ANTO	**Ankara**	3.88	86		*e*PN	**Pn**	19 17 58.1	+1.2
ANTO	**Ankara**	3.88	86	⇓	*i*P	**Pg**	19 18 08.6	-2.1
LADK	**Ladik-KONYA**	3.90	112		*e*PN	**Pn**	19 17 58.5	+1.3
PGB	**Panagyurishte**	3.91	317		P	**Pn**	19 17 57.1	-0.2
KNT	**Kendrikon**	3.98	293		*e*Pn	**Pn**	19 17 58.8	+0.6
KNT	**Kendrikon**	3.98	293		P	**Pn**	19 18 00.8	+2.6
KNT	**Kendrikon**	3.98	293		P	**Pn**	19 18 00.8	+2.6
KONT	**Konya--Tatoy**	4.01	115		*e*PN	**Pn**	19 17 59.7	+1.0
SAFT	**Safranbolu**	4.05	67		*e*PN	**Pn**	19 18 00.0	+0.8
KKB	**Krupnik**	4.14	302		P	**Pn**	19 18 01.8	+1.3
THL	**Klokotos Trika**	4.44	270		*e*P	**Pn**	19 18 05.3	+0.7
VTS	**Vitosha**	4.47	311	⇑	*i*P	**Pn**	19 18 06.9	+1.9
VTS	**Vitosha**	4.47	311		P	**Pn**	19 18 07.0	+2.0
VTS	**Vitosha**	4.47	311	⇑	P	**Pn**	19 18 06.9	+2.0
BR131	**Keskin Array S**	4.53	88		*e*Pg	**Pg**	19 18 20.0	-3.2
BR131	**Keskin Array S**	4.53	88		*e*Pn	**Pn**	19 18 06.1	+0.2
BR131					*e*Pg	**Pg**	19 18 20.0	-3.3
TIRR	**Tirgusor**	4.75	6	⇑	*i*P	**Pn**	19 18 08.2	-0.6
KRUS	**Krusevo**	5.22	290		*e*Pn	**Pn**	19 18 17.0	+1.7
KRUS	**Krusevo**	5.22	290		*e*Pn	**Pn**	19 18 16.9	+1.6
BARS	**Barje**	5.43	306		*e*Pn	**Pn**	19 18 19.0	+0.7
TLCR		5.50	8	⇑	*i*P	**Pn**	19 18 20.9	+1.7
TLCR		5.50	8	⇑	P	**Pn**	19 18 20.9	+1.7
MLR	**Muntele Rosu**	5.91	347	⇓	*i*P	**Pn**	19 18 26.8	+2.1
MLR	**Muntele Rosu**	5.91	347	⇓	P	**Pn**	19 18 26.8	+2.1
BOLS	**Boljevac**	5.96	315	⇓	*i*Pn	**Pn**	19 18 25.7	+0.2
PLOR	**Plostina**	6.17	353	⇓	*i*P	**Pn**	19 18 30.5	+2.2
GRUS	**Gruza**	6.70	311	⇑	*i*Pn	**Pn**	19 18 34.8	-0.9
DIVS	**Divibare**	7.25	309	⇓	*i*Pn	**Pn**	19 18 43.1	-0.1
BZS	**Buzias**	7.42	324	⇓	*i*P	**Pn**	19 18 46.0	+0.5
BZS	**Buzias**	7.42	324	⇓	P	**Pn**	19 18 46.0	+0.5
BURAR	**Bucovina Array**	8.09	348	⇓	*i*P	**Pn**	19 18 56.2	+1.5
BUR08	**Bucovina Ar. S**	8.12	348		*e*Pn	**Pn**	19 18 56.2	+1.1

IDC 29 19:32:40.6±52.0**,1590S**×**17384W**,**h0**km**,mb4.0**/3**, mb1 4.2**/3**,mb1mx3.8**/16**,mbtmp4.0**/3**,Error ellipse: s-maj=1001.0km s-min=181.6km az=79.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**43.42**	**240**	P		P 19 40 46.1	+0.8
	2.5nm,0.9s,baz=90,slow=10,SNR=4.6						
WRA	**Warramunga Arr**	**49.32**	**257**	P		P 19 41 31.2	-0.7
	0.4nm,0.5s,baz=97,slow=7.1,SNR=8.3						
ASAR	**Alice Springs**	**49.56**	**252**	P		P 19 41 33.5	-0.1
	3.3nm,0.6s,baz=89,slow=7.9,SNR=111						

*CSEM **29** 19:33:08.6,3922N*×*4106E,h4*km*,MD2.8,After ISK*
*ISK **29** 19:33:08.6,3922N*×*4106E,h4*km*,MD2.8*
*ISCJB **29** 19:33:09.7*±*1.2,3925N*±*005*×*410E*±*0.1,h4*km*±14*km*,Error ellipse: s-maj=14.0km s-min=8.4km az=14.5*

ISC 29 19:33:10.7±1.2**,3926N**±006×**411E**±01**,h11**km±12km**,n8,** σ**0**§**59/10,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EZM	**Erzurum**	**0.69**	**21**	*e*PG	**Pg**	**19 33 22.9**	**-1.0**
EZM				*e*SG	**Sg**	**19 33 33.8**	**+0.9**
PTK	**Pertek**	**1.34**	**255**	*e*PN	**Pn**	19 33 34.4	-0.9
PTK				*e*SN	**Sn**	**19 33 53.5**	**+0.3**
BEST	**Besiri**	**1.38**	**173**	*i* P	**Pn**	19 33 36.3	+0.4
DIYA	**Diyarbakir**	**1.52**	**209**	*i* P	**Pg**	19 33 46.5	+6.6
AGRB	**Hanur-Agry**	**1.54**	**78**	*e*PN	**Pn**	19 33 37.7	-0.3
SVRC	**Sivrice-ELAZID**	**1.62**	**238**	*e*PN	**Pn**	19 33 39.2	+0.1
GUMT	**Gumushane**	**1.70**	**315**	*e*PN	**Pn**	19 33 40.5	+0.3
MARD	**Mardin**	**1.96**	**186**	*i* P	**Pg**	19 33 48.4	+0.2

*DJA **29** 19:37:42,243S*×*10104E,h500*km*,MLv4.3/5*
*ISCJB **29** 19:37:52.2*±*0.4,386S*±*007×10178E*±*007,h33*km*, mb4.4/26,Error ellipse: s-maj=12.1km s-min=7.3km az=141.1*
*MOS **29** 19:37:52.2*±*1.4,381S*×*10191E,h33*km*,mb4.8/7,Error ellipse: s-maj=15.2km s-min=9.6km az=107.4*
*NEIC **29** 19:37:54.5*±*1.4,381S*×*10183E,h37*km*±14*km*,mb4.6/11, Error ellipse: s-maj=12.3km s-min=6.0km az=54.0*
*IDC **29** 19:37:56.2*±*0.9,371S*×*10193E,h46*km*±5*km*,mb4.0/17, mb1 4.2/17,mb1mx4.0/23,mbtmp4.0/17,Error ellipse: s-maj=32.3km s-min=11.7km az=50.0*

ISC 29 19:37:54.5±0.4**,385S**±006×**10180E**±008**,h35**km**, (h48**km**±2.2km**:pP-P),n59,**σ1§**01/54,mb4.4/26,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMBI	**JAMBI**	**2.87**	**40**	P	**Pn**	**19 38 41.3**	**+3.5**
	0.0nm,0.0s						
RGRI	**Rengat**	**3.52**	**9**	P	**Pn**	**19 38 50.2**	**+3.5**
	0.0nm,0.0s						
PPI	**Padang Panjang**	**3.65**	**337**	P	**Pn**	**19 38 54.5**	**+6.0**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.35**	**40**	P	**Pn**	**19 39 01.3**	**+3.1**
	0.0nm,0.0s						
CBJI	**Citeko**	**5.64**	**117**	P	**Pn**	**19 39 26.6**	**+11**
	0.0nm,0.0s						
LEM	**Lembang**	**6.51**	**117**	P	**Pn**	**19 39 39.2**	**+11**
	0.0nm,0.0s						
COCO	**West Island**	**9.63**	**210**	*e*P	**Pn**	**19 40 10.7**	**0.0**
COCO				pmax	pmax		
	comp=Z,80nm,0.8s						
COCO	**West Island**	**9.63**	**210**	*e*Pn	**Pn**	**19 40 10.7**	**0.0**
	comp=Z,80nm,0.8s						
CMAR	**Chiang Mai Arr**	**22.34**	**353**	P	**P**	**19 42 50.0**	**+0.6**
	comp=Z,2.1nm,0.7s,mb3.7,baz=184,slow=8.8,SNR=16						
BATI	**Baumata**	**22.59**	**107**	P	**P**	**19 42 52.0**	**-0.2**
	comp=Z,7.7nm,0.6s,mb4.3,baz=283,slow=18,SNR=3.9						
BATI				S	**S**	**19 46 51.6**	**-6.5**
	comp=Z,9.0nm,0.7s,baz=279,slow=18,SNR=3.9						
CHTO	**Chiang Mai**	**22.69**	**353**	P	**P**	**19 42 52.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**27.30**	**123**	*e*P	**P**	**19 43 36.5**	**+0.4**
	comp=Z,4.3nm,0.7s,mb4.1						
FITZ	**Fitzroy Crossi**	**27.30**	**123**	P	**P**	**19 43 36.3**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.4,baz=319,slow=11,SNR=4.6						
LSA	**Lhasa**	**34.88**	**344**	*e*P	**P**	**19 44 43.5**	**+0.8**
LSA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
LSA	**Lhasa**	**34.88**	**344**	*e*P	**P**	**19 44 43.5**	**+0.8**
	comp=Z,7.6nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**35.52**	**119**	P	**P**	**19 44 48.4**	**0.0**
	comp=Z,1.7nm,0.4s,mb4.3,baz=302,slow=9.0,SNR=27						
WRAB	**Tennant Creek**	**35.53**	**119**	*e*P	**P**	**19 44 47.8**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.8						
WRAB	**Tennant Creek**	**35.53**	**119**	*e*P	**P**	**19 44 47.8**	**-0.7**
	comp=Z,20nm,1.6s,mb4.8						
WB2	**Warramunga Arr**	**35.53**	**119**	*e*P	**P**	**19 44 49.0**	**+0.5**
ASAR	**Alice Springs**	**36.72**	**125**	P	**P**	**19 44 59.0**	**+0.4**
	comp=Z,1.5nm,0.5s,mb4.1,baz=299,slow=8.2,SNR=60						
PMG	**Port Moresby**	**45.37**	**99**	P	**P**	**19 46 05.9**	**-4.0**
PMG				pmax	pmax		
	comp=Z,14nm,0.9s						
PMG	**Port Moresby**	**45.37**	**99**	P	**P**	**19 46 05.9**	**-4.0**
	comp=Z,14nm,0.9s,mb4.8						
CTA	**Charters Tower**	**46.20**	**114**	P	**P**	**19 46 15.9**	**-0.5**
	comp=Z,6.1nm,0.9s,mb4.5,baz=314,slow=7.1,SNR=5.6						
CTAO	**Charters Tower**	**46.20**	**114**	*e*P	**P**	**19 46 15.9**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
CTAO	**Charters Tower**	**46.20**	**114**	*e*P	**P**	**19 46 15.9**	**-0.5**
	comp=Z,6.3nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**46.59**	**131**	*e*P	**P**	**19 46 20.6**	**+1.3**
	comp=Z,4.7nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**46.59**	**131**	P	**P**	**19 46 20.7**	**+1.4**
	comp=Z,5.9nm,0.6s,mb4.7,baz=319,slow=6.8,SNR=14						
STKA	**Stephens Creek**	**46.59**	**131**	*e*P	**P**	**19 46 20.1**	**+0.8**
	comp=Z,6.1nm,0.6s,mb4.7						
KSRS	**Korea Array**	**47.74**	**28**	P	**P**	**19 46 27.6**	**-0.5**
	comp=Z,2.1nm,0.8s,mb4.2,baz=224,slow=7.8,SNR=7.9						
KBL	**Kabul**	**49.07**	**324**	P	**P**	**19 46 38.8**	**+0.3**
SONM	**Songino Array**	**51.62**	**4**	P	**P**	**19 46 58.0**	**+0.5**
	comp=Z,5.4nm,0.7s,mb4.6,baz=183,slow=9.3,SNR=43						
SONM				pP	pP	19 47 10.9	+2.9
	comp=Z,1.0nm,0.5s,baz=188,slow=9.6,SNR=4.7						
SONM				sP	sP	19 47 16.2	+4.0
	comp=Z,1.9nm,0.7s,baz=187,slow=9.4,SNR=4.6						
SONM	**Songino Array**	**51.62**	**4**	P	**P**	**19 46 58.0**	**+0.5**
SONM				*PP	pP	19 47 10.9	+2.9
ULN	**Ulaanbaatar**	**51.70**	**5**	P	**P**	**19 46 58.2**	**+0.1**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**51.70**	**5**	P	**P**	**19 46 58.2**	**+0.1**
	comp=Z,2.9nm,0.8s,mb4.3						
AML	**Almayashu**	**52.40**	**334**	*e*P	**P**	**19 47 03.4**	**0.0**
	comp=Z,3.4nm,0.7s,mb4.4						
EKS2	**Erkin-Say**	**52.79**	**334**	*e*P	**P**	**19 47 06.7**	**+0.4**
	comp=Z,4.6nm,0.8s,mb4.5						
MK31	**Makanchi Array**	**53.29**	**343**	*e*P	**P**	**19 47 09.4**	**-0.5**
MKAR	**Makanchi Array**	**53.29**	**343**	P	**P**	**19 47 09.4**	**-0.4**
	comp=Z,5.9nm,0.7s,mb4.6,baz=150,slow=8.2,SNR=48						
MKAR				pP	pP	19 47 21.1	+0.7
	comp=Z,1.7nm,0.7s,baz=137,slow=7.6,SNR=4.5						
MKAR				sP	sP	19 47 27.7	+3.2
	comp=Z,2.8nm,0.6s,baz=144,slow=8.0,SNR=5.7						
KURK	**Kurchatov**	**57.88**	**343**	*e*P	**P**	**19 47 41.9**	**-0.9**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
KURK	**Kurchatov**	**57.88**	**343**	*e*P	**P**	**19 47 41.9**	**-0.9**
	comp=Z,4.3nm,0.8s,mb4.5						
ZAA0	**Zalesovo Array**	**59.31**	**348**	*e*P	**P**	**19 47 51.5**	**-1.2**
ZALV	**Zalesovo Beam**	**59.31**	**348**	P	**P**	**19 47 51.8**	**-0.9**
	comp=Z,9.6nm,0.6s,mb5.0,baz=172,slow=5.1,SNR=58						
ZALV				pP	pP	19 48 05.5	+2.2
	comp=Z,3.8nm,0.7s,baz=164,slow=4.8,SNR=5.2						
YSS	**Yuzh-Sakhalins**	**62.12**	**31**	P	**P**	**19 48 10.2**	**-1.8**
YAK	**Yakutsk**	**69.08**	**14**	*e*P	**P**	**19 48 54.0**	**-2.6**
YAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
YAK	**Yakutsk**	**69.08**	**14**	*e*P	**P**	**19 48 54.5**	**-2.2**
	comp=Z,13nm,0.9s,mb4.9						
MMAI	**Mount Meron Ar**	**72.57**	**306**	P	**P**	**19 49 20.3**	**+1.9**
	comp=Z,0.6nm,0.4s,mb3.9,baz=111,slow=8.0,SNR=3.2						
PETK	**Petropavlovsk-**	**73.50**	**31**	P	**P**	**19 49 21.3**	**-2.2**
	comp=Z,3.3nm,0.8s,mb4.3,baz=239,slow=4.2,SNR=3.4						
BR131	**Keskin Array S**	**75.89**	**312**	P	**P**	**19 49 37.0**	**-0.7**
	comp=Z,0.6nm,0.4s,mb3.9						
AKASG	**Malin Array Be**	**82.03**	**322**	P	**P**	**19 50 10.3**	**-0.7**
	comp=Z,1.1nm,0.6s,mb4.0,baz=89,slow=4.8,SNR=4.7						
MLR	**Muntele Rosu**	**82.87**	**317**	P	**P**	**19 50 16.5**	**+0.9**
	comp=Z,1.4nm,0.5s,mb4.2,baz=178,slow=8.4,SNR=5.4						
BUR08	**Bucovina Ar. S**	**83.84**	**319**	*e*P	**P**	**19 50 21.5**	**+1.0**
ARCES	**ARCESS Array B**	**88.81**	**340**	P	**P**	**19 50 44.5**	**+0.1**
	comp=Z,4.2nm,0.9s,mb4.8,baz=92,slow=6.3,SNR=4.7						
GERES	**GERESS Array B**	**91.61**	**319**	P	**P**	**19 50 58.8**	**+0.9**
	comp=Z,0.7nm,1.0s,mb3.9,baz=58,slow=5.0,SNR=4.2						
ANMO	**Albuquerque**	**139.46**	**37**	*e*PKIKP	PKPdf	19 57 18.8	0.0
SCIA	**State Center**	**139.80**	**17**	*e*PKPdf	PKPdf	19 57 18.9	-0.2
CPUP	**Villa Florida**	**143.83**	**213**	PKP	PKPdf	19 57 26.4	-0.4
	comp=Z,0.4nm,0.4s,baz=214,slow=6.2,SNR=3.0						
WCI	**Wyandotte Cave**	**144.99**	**11**	*e*PKIKP	PKPdf	19 57 26.5	-2.0
TXAR	**Lajitas Array**	**145.00**	**41**	PKP	PKPdf	19 57 28.1	-0.7
	comp=Z,3.9nm,0.7s,baz=288,slow=1.0,SNR=44						
TXAR				pPKP	pPKPdf	19 57 43.1	+2.8
	comp=Z,0.8nm,0.5s,baz=253,slow=1.3,SNR=5.2						
JCT	**Junction City**	**146.57**	**35**	*e*PKP2	PKPab	19 57 31.9	-2.1

*IDC **29** 19:48:08.0*±*3.4,2163S*×*16953E,h0*km*,mb3.8/4, mb1 4.1/4,mb1mx3.8/15,mbtmp3.8/4,MS3.0/1,Ms1 3.0/1, ms1mx2.7/25,Error ellipse: s-maj=203.0km s-min=30.9km az=160.0*
*ISCJB **29** 19:48:09.7*±*2.2,209S*±*07×1692E*±*04,h10*km*,mb3.9/4, Error ellipse: s-maj=110.3km s-min=13.7km az=150.3*

ISC 29 19:48:10.8±2.8**,21S**±1×**1693E**±05**,h10**km**,n7,**σ**0**§**68/6, mb3.9/4,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.80**	**250**	*e*P	**Pn**	**19 48 56.1**	**+0.5**
DZM				*e*S	**Sn**	**19 49 29.1**	**-0.4**
HNR	**Honiara**	**14.72**	**321**	LR	LR	19 56 12.9	
	comp=Z,58nm,18.4s,baz=168,slow=32						
WRA	**Warramunga Arr**	**32.71**	**266**	P	**P**	**19 54 43.2**	**-0.5**
	0.7nm,0.9s,mb3.6,baz=100,slow=8.6,SNR=3.7						
ASAR	**Alice Springs**	**32.76**	**259**	P	**P**	**19 54 44.2**	**+0.1**
	1.2nm,0.8s,mb3.9,baz=85,slow=9.6,SNR=11						
FITZ	**Fitzroy Crossi**	**41.13**	**266**	P	**P**	**19 55 56.2**	**+0.8**
	2.3nm,0.8s,mb3.9,baz=117,slow=11,SNR=7.7						
NVAR	**Mina Array Bea**	**90.03**	**48**	P	**P**	**20 01 10.4**	**-0.4**
	0.7nm,0.6s,mb4.1,baz=231,slow=8.0,SNR=4.4						
GERES	**GERESS Array B**	**146.18**	**331**	PKPbc	PKPbc	20 07 51.4	+0.2
	0.6nm,0.5s,baz=40,slow=4.4,SNR=6.2						

*IDC **29** 19:49:19.1*±*0.5,285N*×*9564E,h0*km*,mb4.4/19, mb1 4.5/20,mb1mx4.4/25,mbtmp4.4/20,ML4.7/1,MS4.1/10, Ms1 4.1/10,ms1mx3.8/36,Error ellipse: s-maj=17.5km s-min=12.3km az=45.0*
*MOS **29** 19:49:21.6*±*0.9,284N*×*9561E,h33*km*,mb5.0/25,MS4.5/4, Error ellipse: s-maj=11.5km s-min=6.6km az=94.4*
*DJA **29** 19:49:23,279N*×*9559E,h20*km*,MLv4.8/5*
*BJI **29** 19:49:23.3,286N*×*9566E,h46*km*,mB5.1,mb5.0,Ms4.6, Msz4.5*
*NEIC **29** 19:49:24.7*±*2.0,287N*×*9566E,h44*km*±17*km*,mb4.7/39, Error ellipse: s-maj=10.6km s-min=5.5km az=52.0*
*ISCJB **29** 19:49:24.1*±*0.7,287N*±*004×9562E*±*004,h51*km*±6*km*, mb4.8/82,MS4.3/23,Error ellipse: s-maj=7.1km s-min=5.3km az=138.6*

ISC 29 19:49:27.3±0.7**,288N**±004×**9567E**±004**,h63**km±6km**, h64**km±2.4km**:pP-P,n179,**σ**1§03/191,mb4.8/82,16C-9D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSI	**Banda Aceh**	**2.62**	**352**	P	**Pn**	**19 50 02.9**	**-4.4**
	0.0nm,0.0s						
TSI	**Tuntungan**	**2.95**	**78**	P	**Pn**	**19 50 11.5**	**-0.3**
	0.0nm,0.0s						
IPM	**Ipoh**	**5.57**	**73**	⇓	P	**Pn**	**19 50 46.8**	**-0.9**
PPI	**Padang Panjang**	**5.77**	**125**	P	**Pn**	**19 50 48.5**	**-1.9**
	124nm,0.9s						
FRIM	**Kepong**	**5.95**	**86**	⇑	P	**Pn**	**19 50 51.8**	**-1.1**
SNG	**Songkhla**	**6.52**	**49**	P	**Pn**	**19 50 59.0**	**-1.6**
	220nm,0.9s						
KGM	**Kluang**	**7.69**	**96**	⇑	P	**Pn**	**19 51 16.6**	**0.0**
KTGM	**Kuala Trenggan**	**7.83**	**72**	⇓	P	**Pn**	**19 51 18.6**	**+0.1**
MYKOM	**Kota Tinggi**	**8.24**	**97**	⇓	P	**Pn**	**19 51 23.9**	**-0.3**
KSI	**Kapahiang**	**9.48**	**133**	P		P **Pn**	**19 51 44.9**	**+3.7**
	140nm,0.7s						
KSM	**Kuching**	**14.69**	**95**	*e*Pn		P **Pn**	**19 52 54.6**	**+2.9**
UBT	**Ubonrachathani**	**15.36**	**36**	⇑	P	**Pn**	**19 53 05.0**	**+4.7**
PALK	**Pallekele**	**15.53**	**287**	P		P **Pn**	**19 53 05.4**	**+2.8**
PALK				pmax	pmax		
	comp=Z,27nm,1.1s						
PALK	**Pallekele**	**15.53**	**287**	P		P **Pn**	**19 53 05.3**	**+2.7**
	comp=Z,27nm,1.1s						
CM31	**Chiang Mai Arr**	**15.81**	**11**	*e*Pn	**Pn**	**19 53 05.5**	**-0.5**
	comp=Z,6.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**15.81**	**11**	Pn	**Pn**	**19 53 04.1**	**-1.9**
	comp=Z,1.1nm,0.3s,baz=201,slow=12,SNR=78						
CMAR				LR	LR	19 59 03.3	
	comp=Z,472nm,20.0s,baz=198,slow=37						
STKI	**Sintang**	**16.04**	**100**	P	**Pn**	**19 53 11.0**	**+1.9**
	comp=Z,79nm,1.2s						
CHG	**Chiang Mai**	**16.16**	**11**	⇓	P	**Pn**	**19 53 10.2**	**-0.2**
	comp=Z,26nm,0.9s						
CHTO	**Chiang Mai**	**16.16**	**11**	*e*P	**Pn**	**19 53 08.0**	**-2.4**
CHTO				pmax	pmax		
	comp=Z,34nm,1.1s						
CHTO	**Chiang Mai**	**16.16**	**11**	*e*Pn	**Pn**	**19 53 08.0**	**-2.4**
	comp=Z,34nm,1.1s						
SBUM	**Sibu**	**16.54**	**91**	⇑	P	**Pn**	**19 53 17.6**	**+2.3**
NANT	**Nan**	**16.57**	**17**	P		P **Pn**	**19 53 15.8**	**+0.2**
	comp=Z,180nm,1.0s						
PBKI	**Pangkalan Bun**	**16.93**	**109**	P	**Pn**	**19 53 21.1**	**+1.0**
	comp=Z,118nm,1.1s						
BBKI	**Banjar Baru**	**20.17**	**108**	P	**P**	**19 53 59.9**	**+3.1**
	comp=Z,69nm,0.9s						
KKM	**Kota Kinabalu**	**20.72**	**81**	⇑	P	**P**	**19 54 05.6**	**+2.8**
KKM	**Kota Kinabalu**	**20.72**	**81**	*e*P	**P**	**19 53 58.9**	**-3.8**
QIZ	**Qiongzhong**	**21.21**	**40**	P	**P**	**19 54 07.3**	**-0.6**
QIZ				XP	sP	19 54 28.3	-1.1
QIZ				S	**S**	**19 58 00.3**	**0.0**
QIZ				AMB	AMB		
	comp=Z,22nm,1.1s,mb4.4						
QIZ				LR	LR		
	comp=N,897nm,16.2s						
QIZ				LR	LR		
	comp=Z,598nm,18.0s						
QIZ	**Qiongzhong**	**21.21**	**40**	P	**P**	**19 54 07.2**	**-0.7**
	comp=Z,43nm,1.2s,mb4.7						
KDM	**Kudat**	**21.46**	**78**	⇑	P	**P**	**19 54 12.0**	**+1.3**
SDKM	**Sandakan**	**21.64**	**82**	⇓	P	**P**	**19 54 13.4**	**+0.8**
TSM	**Tawau**	**22.20**	**86**	⇑	P	**P**	**19 54 20.2**	**+1.6**
KMI	**Kunming**	**23.14**	**16**	P		P **P**	**19 54 28.5**	**+0.2**
KMI				PP			19 55 01.0	
KMI				PCP	PcP		19 58 17.0	+1.8
KMI				S	**S**		**19 58 32.3**	**-2.6**
KMI				SS			19 59 22.5	
KMI				SCP	ScP		20 01 47.8	-0.1
KMI				PCS	PcS		20

comp=Z,71nm,0.8s,mb5.7
MBWA Marble Bar 33.56 136 P **P** **19 56 01.8 +0.4**
comp=Z,26nm,1.3s,mb5.0
LZH Lanzhou 33.89 12 *e*P **P** **19 56 03.8 -0.4**
LZH AP pP 19 56 18.8 -0.8
LZH XP sP 19 56 26.0 -1.0
LZH PP PP 19 57 19.0 -3.0
LZH *e*S **S** **20 01 24.0 -0.2**
LZH XS sS 20 01 49.0 -1.6
LZH *e*SS SS 20 03 32.0 -21
LZH AMB AMB
comp=Z,23nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,200nm,5.6s
LZH LR LR
comp=E,1μm,14.6s
LZH LR LR
comp=Z,1μm,15.7s
LZH Lanzhou 33.89 12 *e*P **P** **19 56 03.7 -0.5**
LZH *PP pP 19 56 18.8 -0.8
LZH 19 57 19.0
LZH *e*S **S** **20 01 24.0 -0.2**
LZH *e*SS SS 20 03 32.0 -21
LZH pmax pmax
comp=Z,23nm,1.2s,mb5.0
LZH MLR MLR
comp=Z,1μm,15.7s
LZH Lanzhou 33.89 12 *e*P **P** **19 56 03.7 -0.5**
comp=Z,23nm,1.2s,mb5.0
LZH pP pP 19 56 18.8 -0.8
LZH sP sP 19 56 26.0 -1.0
LZH PP PP 19 57 19.0 -3.0
LZH *e*S **S** **20 01 24.0 -0.2**
LZH sS sS 20 01 49.0 -1.6
LZH *e*SS SS 20 03 32.0 -21
LZH LR LR
comp=Z,1μm,15.7s
FITZ Fitzroy Crossi 36.15 126 *e*P **P** **19 56 22.8 -1.0**
comp=Z,8.8nm,0.7s,mb4.8
FITZ Fitzroy Crossi 36.15 126 P **P** **19 56 22.9 -0.8**
comp=Z,4.5nm,0.7s,mb4.5,baz=317,slow=6.7,SNR=12
FITZ LR LR 20 11 06.7
comp=Z,133nm,19.4s,baz=100,slow=36
NJ2 Nanjing 36.29 34 *e*P **P** **19 56 25.8 +0.9**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
GTA Gaotai 36.55 5 *e*P **P** **19 56 26.3 -0.7**
GTA AP pP 19 56 43.5 +0.9
GTA XP sP 19 56 49.8 -0.1
GTA S **S** **20 02 02.8 -2.2**
GTA XS sS 20 02 26.5 -5.0
GTA AMB AMB
comp=Z,14nm,0.9s,mb4.8
GTA AMB AMB
comp=Z,131nm,5.7s
GTA LR LR
comp=N,250nm,12.3s
GTA LR LR
comp=E,120nm,18.6s
GTA LR LR
comp=Z,222nm,13.5s
TIA Tai'an 38.63 28 *e*P **P** **19 56 44.8 +0.2**
KAKA Kakadu 39.66 114 *e*P **P** **19 56 51.7 -1.8**
comp=Z,8.8nm,0.7s,mb4.6
KBL Kabul 40.08 325 P **P** **19 56 54.9 -1.8**
KBL pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
KBL Kabul 40.08 325 P **P** **19 56 54.9 -1.8**
comp=Z,3.5nm,0.8s,mb4.1
HHC Hu-ho-hao-te 40.43 19 *e*P **P** **19 57 00.5 +1.1**
HHC PP PP 19 58 39.0 +5.4
HHC PCP PcP 19 59 02.5 +1.1
HHC SCP ScP 20 02 45.0 -0.5
HHC PCS PcS 20 02 52.0 +0.1
HHC S **S** **20 03 04.5 +1.1**
HHC SS SS 20 06 01.3 -3.5
HHC SCS ScS 20 06 58.0 -1.6
HHC AMB AMB
comp=Z,49nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,263nm,5.8s
HHC LR LR
comp=N,674nm,15.9s
HHC LR LR
comp=E,518nm,15.7s
HHC LR LR
comp=Z,547nm,15.3s
BJT Baijiatuau 41.37 24 *e*P **P** **19 57 07.7 +0.5**
BJT *e* 19 57 15.3
BJT pmax pmax
comp=Z,60nm,0.8s
BJT Baijiatuau 41.37 24 *e*P **P** **19 57 07.7 +0.4**
comp=Z,60nm,0.8s,mb5.3
BJT *e* 19 57 15.3
WMQ Urumqi 41.38 351⇑*i*P **P** **19 57 07.8 +0.6**
WMQ AP pP 19 57 24.3 +1.3
WMQ PP PP 19 58 48.0 +4.1
WMQ *e*S **S** **20 03 18.0 +0.6**
WMQ AMB AMB
comp=Z,15nm,1.7s,mb4.3
WMQ AMB AMB
comp=Z,202nm,4.3s
WMQ LR LR
comp=N,233nm,15.8s
WMQ LR LR
comp=E,441nm,12.5s
WMQ LR LR
comp=Z,216nm,24.2s
BJI Beijing 41.39 24 P **P** **19 57 08.8 +1.4**
BJI AMB AMB
comp=Z,121nm,0.8s,mb5.6
BJI LR LR
comp=N,216nm,17.9s
BJI LR LR
comp=E,275nm,14.7s
BJI LR LR
comp=Z,131nm,22.1s
BJI Beijing 41.39 24 P **P** **19 57 08.7 +1.3**
comp=Z,121nm,0.8s,mb5.6
BJI S **S** **20 03 02.3 -15**
BJI LR LR
comp=Z,130nm,22.1s
DL2 Dalian 42.95 30⇓P **P** **19 57 21.5 +1.4**
DL2 AMB AMB
comp=Z,40nm,0.7s,mb5.3
UCH Uchtor 43.51 337 P **P** **19 57 25.7 +1.1**
SNR=11
UCH Uchtor 43.51 337 *e*P **P** **19 57 25.5 +0.9**
comp=Z,12nm,0.9s,mb4.6
TKM2 Tokmak 2 43.70 339 *e*P **P** **19 57 26.0 -0.1**
TKM2 pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
TKM2 Tokmak 2 43.70 339 P **P** **19 57 26.9 +0.8**
SNR=5.8
TKM2 Tokmak 2 43.70 339 *e*P **P** **19 57 26.0 -0.1**
comp=Z,2.9nm,0.6s,mb4.2
KBK Karagaybulak 43.71 338 P **P** **19 57 27.7 +1.5**
SNR=8.0
AML Almayashu 43.76 336 P **P** **19 57 27.6 +1.0**
SNR=10
AML Almayashu 43.76 336 *e*P **P** **19 57 27.1 +0.6**
comp=Z,12nm,0.8s,mb4.7
EKS2 Erkin-Say 44.17 337 P **P** **19 57 30.9 +1.1**
SNR=9.6
EKS2 Erkin-Say 44.17 337 *e*P **P** **19 57 30.5 +0.7**
comp=Z,68nm,0.6s,mb5.5
WRA Warramunga Arr 44.22 123 P **P** **19 57 30.2 -0.4**
comp=Z,8.3nm,0.7s,mb4.6,baz=299,slow=9.3,SNR=50
WRAB Tennant Creek 44.22 123 *e*P **P** **19 57 29.7 -0.9**
WRAB pmax pmax
comp=Z,13nm,1.0s,mb4.6
WRAB Tennant Creek 44.22 123 *e*P **P** **19 57 29.6 -1.0**
comp=Z,13nm,1.0s,mb4.6
WB2 Warramunga Arr 44.23 123 *e*P **P** **19 57 30.1 -0.6**
USP Ospenovka 44.41 338 P **P** **19 57 32.4 +0.6**
SNR=17
MK31 Makanchi Array 45.26 347 *e*P **P** **19 57 38.4 -0.1**
MKAR Makanchi Array 45.26 347 P **P** **19 57 38.7 +0.2**
comp=Z,33nm,0.7s,mb5.3,baz=163,slow=8.0,SNR=270
MKAR LR LR 20 19 22.3
comp=Z,131nm,20.4s,baz=161,slow=40
KSRS Korea Array 45.38 37 P **P** **19 57 39.5 -0.1**
comp=Z,2.6nm,0.7s,mb4.2,baz=222,slow=10.0,SNR=12
KSRS LR LR 20 19 19.2
comp=Z,234nm,18.1s,baz=230,slow=40
ASAR Alice Springs 45.62 127 P **P** **19 57 41.5 -0.2**
comp=Z,2.8nm,0.8s,mb4.3,baz=302,slow=7.8,SNR=42
ASAR PcP PcP 19 59 20.0 +0.8
comp=Z,1.3nm,0.7s,baz=308,slow=3.6,SNR=6.2
SONM Songino Array 45.73 10 P **P** **19 57 42.4 +0.3**
comp=Z,17nm,0.8s,mb5.0,baz=190,slow=8.9,SNR=92
SONM PcP PcP 19 59 20.5 +1.5
comp=Z,4.7nm,0.7s,baz=196,slow=3.2,SNR=8.0
SONM LR LR 20 18 39.1
comp=Z,266nm,20.9s,baz=189,slow=38
SONM Songino Array 45.73 10 P **P** **19 57 42.4 +0.3**
SONM 19 59 20.5
ULN Ulaanbaatar 45.88 11 *e*P **P** **19 57 43.0 -0.3**
ULN *e* 19 59 20.3
ULN pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ULN Ulaanbaatar 45.88 11 *e*P **P** **19 57 43.0 -0.3**
comp=Z,7.1nm,0.9s,mb4.6
ULN *e*PcP PcP 19 59 20.2 +0.7
ZAK Zakamensk 47.77 7 *e*P **P** **19 57 57.8 -0.2**
ZAK pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
CN2 Changchun 48.54 29⇑P **P** **19 58 04.8 +0.7**
CN2 *e*AP pP 19 58 22.0 +1.7
CN2 *e*S **S** **20 05 01.0 0.0**
CN2 AMB AMB
comp=Z,20nm,0.9s,mb5.2
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,17.0s
CN2 LR LR
comp=E,300nm,17.0s
CN2 LR LR
comp=Z,300nm,18.0s
TLY Talaya 49.09 7 *e*P **P** **19 58 08.9 +0.7**
TLY *e* 20 00 01.6
TLY pmax pmax
comp=Z,15nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,199nm,17.0s
TLY Talaya 49.09 7 *e*P **P** **19 58 08.3 +0.2**
comp=Z,14nm,0.8s,mb5.0
IRK Irkutsk 49.71 7 *e*P **P** **19 58 13.3 +0.4**
IRK pmax pmax
comp=Z,32nm,1.9s,mb5.0
HIA Hailar 50.57 20 *e*P **P** **19 58 19.9 +0.4**
HIA pmax pmax
comp=Z,12nm,0.8s
HIA Hailar 50.57 20 *e*P **P** **19 58 19.9 +0.4**
comp=Z,12nm,0.8s,mb4.9
MDJ Mudanjiang 51.18 31 P **P** **19 58 24.3 +0.2**
MDJ AP pP 19 58 40.5 +0.1
MDJ XP sP 19 58 46.8 -0.8
MDJ PCP PcP 19 59 37.5 -1.3
MDJ PP PP 20 00 21.5 0.0
MDJ SCP ScP 20 03 27.8 -2.2
MDJ PCS PcS 20 03 37.8 +1.4
MDJ S **S** **20 05 43.0 +5.2**
MDJ SCS ScS 20 08 11.0 +2.0
MDJ SS SS 20 09 15.8 +1.8
MDJ AMB AMB
comp=Z,13nm,1.2s,mb4.7
MDJ AMB AMB
comp=Z,130nm,5.8s
MDJ LR LR
comp=N,162nm,15.1s
MDJ LR LR
comp=E,287nm,19.3s
MDJ LR LR
comp=Z,214nm,14.3s
MDJ Mudanjiang 51.18 31 *e*P **P** **19 58 25.7 +1.5**
comp=Z,6.3nm,0.8s,mb4.6
MDJ *e* 19 58 32.3
MAJO Matsushiro 51.52 44 P **P** **19 58 26.0 -0.8**
MAJO pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MAJO Matsushiro 51.52 44 P **P** **19 58 26.0 -0.9**
comp=Z,3.9nm,0.8s,mb4.4
MJAR Matsushiro Arr 51.52 44 P **P** **19 58 27.7 +0.9**
comp=Z,0.7nm,0.5s,mb3.8,baz=244,slow=8.2,SNR=6.6
MJAR PcP PcP 19 59 41.4 +1.1
comp=Z,2.6nm,0.9s,baz=228,slow=3.1,SNR=6.4
MJAR LR LR 20 20 25.5
comp=Z,227nm,20.9s,baz=20,slow=36
MJAR Matsushiro Arr 51.52 44 P **P** **19 58 27.7 +0.9**
MJAR 19 59 41.4
ZAA0 Zalesovo Array 51.68 352 *e*P **P** **19 58 27.7 0.0**
ZAA0 *e* 19 58 35.2
ZALV Zalesovo Beam 51.68 352 P **P** **19 58 27.9 +0.2**
comp=Z,34nm,0.6s,mb5.5,baz=180,slow=7.2,SNR=212
OPO Ambohidratompo 52.26 244 P **P** **19 58 32.9 +0.3**
comp=Z,1.4nm,0.5s,mb4.2,baz=273,slow=12,SNR=5.2
RDF Al-Radifah 52.52 305 *e*P **P** **19 58 34.3 -0.1**
baz=305
RDF AMb AMB 19 58 36.3
comp=Z,20nm,1.0s,mb5.0,baz=305
UMR Umm Al-Rimmam 52.61 305 *e*P **P** **19 58 34.7 -0.3**
baz=305
UMR AMb AMB 19 58 43.8
comp=Z,15nm,0.5s,mb5.2,baz=305
PMG Port Moresby 52.73 104⇑*e*P **P** **19 58 35.2 -1.0**
PMG Port Moresby 52.73 104 *e*P **P** **19 58 35.6 -0.5**
PMG *e* 19 58 43.2
NVS Novosibirsk 52.78 351 *e*P **P** **19 58 34.6 -1.2**
NVS *e* 19 58 41.4
NVS pmax pmax
comp=Z,18nm,0.8s,mb5.0
NVS pmax pmax
comp=N,20nm,0.9s
NVS pmax pmax
comp=E,8.0nm,0.7s
NAY Al-Naaiem 52.89 305 *e*P **P** **19 58 37.0 -0.1**
baz=305
NAY AMb AMB 19 58 38.8
comp=Z,11nm,1.2s,mb4.7,baz=305
RST Umm Al-Ruwaisa 53.17 305 *e*P **P** **19 58 38.3 -0.9**
baz=305
RST AMb AMB 19 58 52.8
comp=Z,13nm,1.2s,mb4.7,baz=305
BRVK Borovoye 54.24 341 *e*P **P** **19 58 46.2 -0.3**
BRVK *e* 19 58 54.5
BRVK pmax pmax
comp=Z,16nm,0.8s,mb5.0
BRVK Borovoye 54.24 341 *e*P **P** **19 58 46.2 -0.3**
comp=Z,16nm,0.8s,mb5.0
BRVK *e* 19 58 54.5
CTA Charters Tower 54.62 117 *e*P **P** **19 58 50.4 +0.5**
comp=Z,5.7nm,0.8s,mb4.7
CTA Charters Tower 54.62 117 P **P** **19 58 50.7 +0.8**
comp=Z,7.0nm,0.8s,mb4.7,baz=279,slow=11,SNR=5.8
CTA Charters Tower 54.62 117 *e*P **P** **19 58 50.4 +0.5**
CTA pmax pmax
comp=Z,6.0nm,0.8s
CTAO Charters Tower 54.62 117 *e*P **P** **19 58 49.8 -0.1**
CTAO pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
CTAO Charters Tower 54.62 117 *e*P **P** **19 58 49.8 -0.1**
comp=Z,7.8nm,0.8s,mb4.8
KLR Kul'dur 55.47 28 *e*P **P** **19 58 52.1 -3.4**
STKA Stephens Creek 55.61 132 P **P** **19 58 58.0 +1.2**
comp=Z,1.3nm,0.4s,mb4.3,baz=319,slow=9.3,SNR=2.3
STKA Stephens Creek 55.61 132 P **P** **19 58 57.8 +1.0**
comp=Z,7.2nm,1.1s,mb4.6
HABR Khabarovsk 56.56 30 *e*P **P** **19 59 00.8 -2.6**
HABR *e* 20 01 06.7
HABR *e*S **S** **20 06 52.3 +1.9**
HABR *e* 20 07 08.7
HABR *e* 20 08 47.1
HABR *e* 20 10 41.0
BOD Bodaibo 56.66 12 *e*P **P** **19 59 04.2 +0.3**
BOD pmax pmax
comp=Z,12nm,1.0s,mb4.9
KMBO Kilima Mbogo 58.54 267 P **P** **19 59 18.9 +1.0**
comp=Z,2.0nm,1.0s,mb4.1,baz=32,slow=9.5,SNR=3.2
KMBO LR LR 20 21 57.8
comp=Z,273nm,19.4s,baz=99,slow=34
KMBO Kilima Mbogo 58.54 267 P **P** **19 59 19.1 +1.2**
KMBO pmax pmax
comp=Z,3.0nm,0.9s
KMBO Kilima Mbogo 58.54 267 P **P** **19 59 19.1 +1.2**
comp=Z,2.8nm,0.9s,mb4.3
YSS Yuzh-Sakhalins 59.85 35⇑*e*P **P** **19 59 26.2 -0.1**
YSS pmax pmax
comp=Z,31nm,1.6s,mb5.1
SVE Sverdlovsk 60.58 339⇓*e*P **P** **19 59 31.2 +0.1**
SVE pmax pmax
comp=Z,22nm,0.9s,mb5.3
ARU Arti 61.05 337*c i*P **P** **19 59 33.8 -0.6**
ARU *e* 20 00 14.3
ARU *e* 20 01 44.9
ARU *e*PPP 20 03 13.0
ARU *e*S **S** **20 07 53.4 +5.1**
ARU *e*SS SS 20 11 48.5 -0.5
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ARU Arti 61.05 337 *e*P **P** **19 59 33.4 -1.0**
comp=Z,7.0nm,0.8s,mb4.8
KIV Kislovodsk 62.05 319 P **P** **19 59 48.0 +6.7**
KIV pmax pmax
comp=Z,14nm,1.1s,mb5.0
KIV Kislovodsk 62.05 319 P **P** **19 59 40.0 -1.3**
comp=Z,30nm,1.4s,mb5.2
MALT Malatya 62.88 312 P **P** **19 59 44.9 -2.1**
MALT pmax pmax
comp=Z,10.0nm,1.7s,mb4.7
MALT Malatya 62.88 312 P **P** **19 59 44.9 -2.1**
comp=Z,10nm,1.7s,mb4.7
YAK Yakutsk 64.25 17*c i*P **P** **19 59 55.2 -0.4**
YAK pmax pmax
comp=Z,51nm,1.0s,mb5.5
YAK pmax pmax
comp=N,10.0nm,1.0s
YAK pmax pmax
comp=E,10.0nm,0.9s
YAK MLR MLR
comp=E,165nm,15.0s
YAK MLR MLR
comp=N,188nm,14.0s
YAK MLR MLR
comp=Z,332nm,17.0s
YAK Yakutsk 64.25 17 *e*P **P** **19 59 55.0 -0.6**
comp=Z,57nm,0.9s,mb5.6
CASY Casey 69.83 174 *e*P **P** **20 00 30.1 -0.6**
comp=Z,6.6nm,1.2s,mb4.4
OBN Obninsk 70.40 328 P **P** **20 00 34.0 -0.5**
OBN *e* 20 00 42.1
OBN *e* pP 20 00 48.0 -3.6
OBN pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
PETK Petropavlovsk- 71.20 34 LR LR 20 34 13.7
comp=Z,121nm,19.0s,baz=146,slow=38
TIXI Tiksi 71.81 11⇓*e*P **P** **20 00 42.4 -0.4**
TIXI pmax pmax
comp=Z,33nm,2.1s,mb4.9
TIXI Tiksi 71.81 11 *e*P **P** **20 00 42.1 -0.7**
comp=Z,2.5nm,0.4s,mb4.5
SEY Seymchan 72.83 24⇑*e*P **P** **20 00 49.5 +0.5**
AKASG Malin Array Be 73.00 322 P **P** **20 00 49.4 -0.9**
comp=Z,1.8nm,0.6s,mb4.2,baz=93,slow=5.2,SNR=9.2
LBTB Lobatse 73.27 243 P **P** **20 00 51.6 -0.8**
comp=Z,5.0nm,0.9s,mb4.4,baz=229,slow=3.0,SNR=4.9
LBTB Lobatse 73.27 243 P **P** **20 00 51.3 -1.1**
LBTB pmax pmax
comp=Z,14nm,1.2s,mb4.8
LBTB Lobatse 73.27 243 P **P** **20 00 51.3 -1.1**
comp=Z,14nm,1.2s,mb4.8
BOSA Boshof 74.30 239 LR LR 20 29 33.8
comp=Z,145nm,20.5s,baz=250,slow=32
BUR08 Bucovina Ar. S 74.78 319 *e*P **P** **20 01 01.0 +0.2**
ARCES ARCESS Array B 80.45 340 P **P** **20 01 32.4 +0.5**
comp=Z,3.9nm,0.8s,mb4.4,baz=88,slow=5.6,SNR=12
ARCES LR LR 20 40 36.6
comp=Z,115nm,18.6s,baz=242,slow=38
GERES GERESS Array B 82.55 319 P **P** **20 01 43.9 +0.5**
comp=Z,0.8nm,0.7s,mb3.9,baz=104,slow=4.5,SNR=7.8
NB2 NORSAR Subarra 84.80 331 P **P** **20 01 54.0 -0.7**
comp=Z,3.7nm,1.0s,mb4.5,baz=97,slow=5.1
NOA NORSAR Array B 84.80 331 P **P** **20 01 52.5 -2.2**
comp=Z,1.6nm,0.8s,mb4.2,baz=94,slow=5.1,SNR=3.7
CDF Champ du Feu 86.80 318 *e*P **P** **20 02 04.6 -0.2**
HINF Hinteralfeld 87.09 318 *e*P **P** **20 02 05.7 -0.6**
LPL La Plagne 87.22 315 *e*P **P** **20 02 06.3 -0.7**
comp=Z,3.5nm,0.8s,mb4.3
LPL La Plagne 87.22 315 *e*P **P** **20 02 06.3 -0.7**
LPL pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
LPL La Plagne 87.22 315 *e*P **P** **20 02 06.3 -0.7**
comp=Z,1.8nm,0.8s,mb4.3
HAU Haudompre 87.43 318 *e*P **P** **20 02 07.1 -0.8**
CABF La Chapelle 87.64 316 *e*P **P** **20 02 08.0 -1.0**
comp=Z,19nm,1.2s,mb4.9
CABF La Chapelle 87.64 316 *e*P **P** **20 02 08.0 -1.0**
CABF pmax pmax
comp=Z,9.0nm,1.2s,mb4.9
CABF La Chapelle 87.64 316 *e*P **P** **20 02 08.0 -1.0**
comp=Z,9.4nm,1.2s,mb4.9
MEZF Maizieres J'vi 88.28 318 *e*P **P** **20 02 10.8 -1.1**
comp=Z,8.0nm,1.8s,mb5.3
MEZF Maizieres J'vi 88.28 318 *e*P **P** **20 02 10.8 -1.1**
comp=Z,8.0nm,1.8s,mb5.7
LOR Lormes 89.14 317 *e*P **P** **20 02 14.9 -1.1**
QSPA South Pole Qui 92.81 180 P **P** **20 02 34.2 +1.8**
comp=Z,1.0nm,1.0s,mb4.2,baz=82,slow=7.1,SNR=4.4
TORD Torodi Ar. Bea 93.22 283 P **P** **20 02 36.4 +0.7**
comp=Z,0.5nm,0.9s,mb3.9,baz=94,slow=4.5,SNR=2.3
PDAR Pinedale Array 129.16 24 PKP PKPdf 20 08 29.8 +1.2
comp=Z,0.3nm,0.3s,baz=355,slow=2.2,SNR=2.0
TXAR Lajitas Array 142.99 29 PKhKP 20 08 52.2
comp=Z,0.7nm,0.7s,baz=293,slow=2.1,SNR=7.3
TXAR PKP PKPdf 20 08 56.1 +1.4
comp=Z,1.0nm,0.8s,baz=304,slow=0.5,SNR=6.0
TXAR Lajitas Array 142.99 29 PKP PKPdf 20 08 52.2 -2.5
TXAR PKP PKPdf 20 08 56.1 +1.4
CPUP Villa Florida 145.15 225 *e*PKIKP PKPdf 20 08 58.3 -0.2

*NEIC **29** 19:51:42.3, 3250S×7174W, h28km, ML2.8(GUC), After GUC.*

GUC 29 19:51:42.3±0.7, 3250S×7174W, h28km±2km, MD3.9, ML2.8, 5C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PACH	**Papudo**	**0.26**	**99**	*e*P		Pb	19 51 49.1	+0.2
PACH				*i* S		Sb	19 51 53.9	+0.4
IHA	**Instituto Hidr**	**0.53**	**171**	*e*P		Pb	19 51 52.5	-0.7
IHA				*i* S		Sb	19 52 01.1	+0.5
CHNG	**Los Chungos**	**0.65**	**18**⇓	*i* P		Pb	19 51 54.6	-0.5
CHNG				*i* S		Sb	19 52 03.7	0.0
PTCH	**Petorca**	**0.72**	**71**⇑	*i* P		Pb	19 51 55.9	-0.4
PTCH				*i* S		Sb	19 52 06.3	+0.4
PTCH					AML	AML	19 52 11.1	
	comp=E,402nm,0.3s							
PTCH	**Petorca**	**0.72**	**71**⇑	*i* P		Pb	19 51 55.9	-0.4
PTCH				*i* S		Sb	19 52 06.3	+0.4
PEL	**Peldehue**	**1.09**	**126**⇑	*i* P		Pn	19 52 01.9	+0.2
PEL				*i* S		Sn	19 52 16.6	+0.7
PEL					AML	AML	19 52 18.4	
	comp=E,1μm,1.1s							
RCDM	**Rinconada Maip**	**1.26**	**142**⇓	*i* P		Pn	19 52 04.2	+0.2
RCDM				*i* S		Sn	19 52 20.4	+0.4
RCDM					AML	AML	19 52 21.1	
	comp=E,410nm,0.2s							
RCDM	**Rinconada Maip**	**1.26**	**142**⇓	*i* P		Pn	19 52 04.2	+0.2
RCDM				*i* S		Sn	19 52 20.4	+0.4
SAN	**Santiago**	**1.31**	**137**	*i* S		Sn	19 52 22.4	+1.1
SAN					AML	AML	19 52 22.9	
	comp=E,388nm,0.3s							
TACH	**Talagante**	**1.33**	**150**	*e*P		Pn	19 52 05.5	+0.4
TACH				*i* S		Sn	19 52 23.3	+1.4
CLCH	**Cerro Calan**	**1.35**	**132**⇑	*i* P		Pn	19 52 05.6	+0.3
CLCH				*i* S		Sn	19 52 23.4	+1.2
CLCH					AML	AML	19 52 28.6	
	comp=N,268nm,0.5s							
ANTU	**Antumapu**	**1.41**	**139**	*e*P		Pn	19 52 06.7	+0.5
ANTU				*i* S		Sn	19 52 25.5	+1.6
ANTU					AML	AML	19 52 25.9	
	comp=E,305nm,0.3s							
FCH	**Farellones**	**1.47**	**125**⇓	*i* P		Pn	19 52 07.6	+0.6
FCH				*i* S		Sn	19 52 27.2	+1.9
FCH					AML	AML	19 52 27.9	
	comp=N,184nm,0.4s							
LNV	**Longovilo**	**1.48**	**169**	*i* S		Sn	19 52 26.3	+0.8
PCH	**Pirque**	**1.52**	**138**⇓	*i* P		Pn	19 52 08.5	+0.9
PCH				*i* S		Sn	19 52 28.4	+1.9
LMEL	**Las Melosas**	**1.86**	**137**	*e*P		Pn	19 52 14.1	+1.7
LMEL				*i* S		Sn	19 52 38.0	+3.0
LMEL					AML	AML	19 52 43.6	
	comp=N,176nm,0.3s							
LMEL	**Las Melosas**	**1.86**	**137**	*e*P		Pn	19 52 14.1	+1.7
LMEL				*i* S		Sn	19 52 38.0	+3.0

CACH	El Canelo	1.87	150	⇑*i*P	Pn	19 52 15.3 +2.8
CICH	Cipreses	2.12	149	*e*P	Pn	19 52 17.9 +1.9
SFDO	San Fernando	2.19	164	*e*P	Pn	19 52 18.2 +1.3
TLL	Tololo Astrono	2.46	19	*e*P	Pn	19 52 21.9 +1.4

IDC 29 20:02:07.9±2.6, 422S×15287E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/15, mbtmp3.9/3, Error ellipse: s-maj=90.7km s-min=41.1km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	Warramunga Arr	23.87	228	*e*P	P	20 07 23.5	+0.2
WRA	Warramunga Arr	23.88	228	P	P	20 07 23.2	-0.2
	1.6nm,0.3s,baz=55,slow=10,SNR=27						
ASAR	Alice Springs	26.62	222	P	P	20 07 49.0	+0.6
	0.4nm,0.4s,baz=55,slow=9.0,SNR=12						
STKA	Stephens Creek	29.48	200	P	P	20 08 14.2	+0.5
	1.7nm,0.7s,baz=36,slow=14,SNR=3.1						
TORD	Torodi Ar. Bea	150.18	289	PKPbc	PKPbc	20 22 01.1	-0.9
	0.3nm,0.3s,baz=85,slow=2.5,SNR=12						

NEIC 29 20:06:41.3, 3132S×6891W, h157km, MD3.6(GUC), After GUC.

GUC 29 20:06:41.3±0.8, 3132S×6891W, h157km±19km, MD3.6, ML3.7, 4C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTCH	Petorca	1.96	241	*e*P	Pn	20 07 16.4	0.0
PTCH				*i* S	Sn	20 07 43.6	+0.3
PTCH				AML	AML	20 07 47.6	
	comp=E,207nm,0.2s						
PTCH	Petorca	1.96	241	*e*P	Pn	20 07 16.4	0.0
PTCH				*i* S	Sn	20 07 43.6	+0.3
TLL	Tololo Astrono	1.99	305	*e*P	Pn	20 07 18.1	+1.3
TLL				*i* S	Sn	20 07 45.3	+1.3
TLL				AML	AML	20 07 47.8	
	comp=N,191nm,0.2s						
TLL	Tololo Astrono	1.99	305	*e*P	Pn	20 07 18.1	+1.3
TLL				*i* S	Sn	20 07 45.3	+1.3
OVCH	Ovalle	2.09	289	*e*P	Pn	20 07 18.3	+0.4
OVCH				*i* S	Sn	20 07 46.4	+0.4
CHNG	Los Chungos	2.28	255	*e*P	Pn	20 07 20.7	+0.6
CHNG				*i* S	Sn	20 07 47.5	-2.4
FCH	Farellones	2.32	210	⇑*i*P	Pn	20 07 21.4	+0.9
FCH				*i* S	Sn	20 07 52.9	+2.0
FCH				AML	AML	20 07 55.8	
	comp=E,104nm,0.1s						
PEL	Peldehue	2.36	219	*e*P	Pn	20 07 22.0	+1.0
PEL				*i* S	Sn	20 07 52.6	+0.9
PEL				AML	AML	20 07 55.2	
	comp=E,657nm,0.5s						
CLCH	Cerro Calan	2.48	213	*e*P	Pn	20 07 23.8	+1.2
CLCH				*i* S	Sn	20 07 55.0	+0.6
SAN	Santiago	2.59	214	*i* S	Sn	20 07 57.1	+0.4
SAN				AML	AML	20 08 05.1	
	comp=N,475nm,0.5s						
PCH	Pirque	2.66	210	*i* P	Pn	20 07 25.9	+1.2
ANTU	Antumapu	2.67	212	⇑*i*P	Pn	20 07 25.6	+0.8
ANTU				*i* S	Sn	20 07 59.3	+0.8
ANTU				AML	AML	20 08 09.1	
	comp=E,263nm,0.6s						
ANTU	Antumapu	2.67	212	⇑*i*P	Pn	20 07 25.6	+0.8
ANTU				*i* S	Sn	20 07 59.3	+0.8
RCDM	Rinconada Maip	2.69	216	*e*P	Pn	20 07 25.7	+0.6
RCDM				*i* S	Sn	20 07 59.8	+0.8
RCDM				AML	AML	20 08 03.0	
	comp=E,329nm,0.1s						
RCDM	Rinconada Maip	2.69	216	*e*P	Pn	20 07 25.7	+0.6
RCDM				*i* S	Sn	20 07 59.8	+0.8
LMEL	Las Melosas	2.75	203	*e*P	Pn	20 07 26.4	+0.7
LMEL				AML	AML	20 08 21.6	
	comp=N,195nm,0.8s						
TACH	Talagante	2.89	216	*e*P	Pn	20 07 27.8	+0.3
TACH				*i* S	Sn	20 08 03.6	+0.3
CHCH	Chadas Angostu	2.99	209	*e*P	Pn	20 07 29.3	+0.5
CICH	Cipreses	3.25	203	⇑*i*P	Pn	20 07 33.1	+1.0
TRQA	Tornquist	8.82	142	*e*Pn	Pn	20 08 42.1	-3.3
TRQA				*e*Sn	Sn	20 10 14.5	-8.9

NEIC 29 20:07:38.0±4.8, 3082N×6969E, h35km, mb3.5/1, Error ellipse: s-maj=69.0km s-min=20.1km az=53.0

ISC 29 20:07:37.3±2.3, 309N±02×6990E±009, h10km±11, σ1§08/16, 2C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	3.69	349	*e*Pn	Pn	20 08 33.5	-0.8
KBL				*e*Sn	Sg	20 09 30.2	-5.6
THN	Thein Dam	5.19	72	*e*P	Pn	20 09 00.7	+5.7
THN				*e*S	Sg	20 10 23.7	-0.2
SMLA	Simla	6.24	86	*i* P	Pn	20 09 17.4	+8.0
SMLA				*i* S	Sb	20 10 40.7	-0.1
SMLA				*ex*	x	20 10 44.4	
	comp=N,192nm,0.3s						
SMLA				*ex*	x	20 10 45.3	
	comp=E,226nm,0.4s						
AML	Almayashu	11.60	14	*e*Pn	Pn	20 10 23.4	+0.5
	comp=E,10nm,0.5s						
UCH	Uchtor	11.88	17	*e*Pn	Pn	20 10 27.9	+1.2
	comp=E,6.2nm,0.6s						
UCH				*e*Sn	Sn	20 12 52.4	+13
EKS2	Erkin-Say	12.13	14	*e*Pn	Pn	20 10 29.8	-0.3
	comp=E,2.8nm,0.6s						
KK31	Karatay Array	12.18	2	⇓P	Pn	20 10 27.2	-3.5
	comp=E,0.5nm,0.5s,baz=184,slow=12,SNR=19						
KK31				⇑S	Sn	20 12 51.3	+4.7
	comp=E,1.5nm,0.7s,baz=186,slow=21,SNR=8.7						
TKM2	Tokmak 2	12.82	19	⇑P	Pn	20 10 40.7	+1.2
	comp=E,5.5nm,0.9s						
TKM2	Tokmak 2	12.82	19	*e*Pn	Pn	20 10 41.0	+1.5
	comp=E,3.0nm,0.6s						
LSA	Lhasa	18.39	88	*e*P	Pn	20 11 52.9	+0.5
	comp=E,2.5nm,0.8s						
MK31	Makanchi Array	18.53	28	*e*Pn	Pn	20 11 51.7	-2.2

IDC 29 20:11:38.6±2.7, 357S×10007E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/21, mbtmp3.7/8, Error ellipse: s-maj=112.8km s-min=16.4km az=55.0

ISCJB 29 20:11:41.2±1.0, 35S±0.1×1002E±0.2, h33km, mb4.0/10, Error ellipse: s-maj=28.7km s-min=11.7km az=140.9

NEIC 29 20:11:43.4±0.9, 355S×100.11E, h35km, mb4.5/2, Error ellipse: s-maj=27.2km s-min=11.3km az=51.0

ISC 29 20:11:43.3±1.0, 36S±01×1001E±02, h35km, n15, σ0§98/14, mb4.0/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	Kuching	11.35	64	P	Pn	20 14 23.0	-0.1
CMAR	Chiang Mai Arr	21.91	357	P	P	20 16 32.5	-1.2
	1.5nm,0.6s,mb3.6,baz=186,slow=9.7,SNR=12						
FITZ	Fitzroy Crossi	28.87	122	P	P	20 17 39.0	+0.1
	1.0nm,0.9s,mb3.6,baz=72,slow=20,SNR=2.1						
LSA	Lhasa	34.17	346	P	P	20 18 25.9	+0.6
	7.9nm,1.2s,mb4.5						
WRA	Warramunga Arr	37.12	119	P	P	20 18 51.5	+0.6
	0.5nm,0.4s,mb3.7,baz=307,slow=9.0,SNR=9.0						
WRAB	Tennant Creek	37.13	119	*e*P	P	20 18 49.2	-1.7
	12nm,1.4s,mb4.5						
ASAR	Alice Springs	38.26	125	P	P	20 19 01.1	+0.7
	1.0nm,0.5s,mb3.8,baz=302,slow=7.8,SNR=21						
SONM	Songino Array	51.48	5	P	P	20 20 47.0	+1.8
	1.5nm,0.9s,mb3.9,baz=188,slow=9.1,SNR=10						
ULN	Ulaanbaatar	51.57	6	P	P	20 20 46.8	+0.8
MK31	Makanchi Array	52.56	345	*e*P	P	20 20 51.8	-1.5
MKAR	Makanchi Array	52.56	345	P	P	20 20 54.1	+0.9
	1.6nm,0.8s,mb4.0,baz=153,slow=9.4,SNR=10						
KURK	Kurchatov	57.13	344	P	P	20 21 25.9	-0.4
	0.7nm,0.9s,mb3.7,baz=172,slow=7.1,SNR=3.0						
KURK	Kurchatov	57.13	344	*e*P	P	20 21 25.4	-0.9
ZALV	Zalesovo Beam	58.72	349	P	P	20 21 37.1	-0.2
	1.1nm,0.4s,mb4.2,baz=168,slow=7.6,SNR=9.9						
TXAR	Lajitas Array	145.85	39	PKPbc	PKPbc	20 31 21.5	+1.8
	0.4nm,0.5s,baz=288,slow=0.5,SNR=9.1						

IDC 29 20:47:16.6±5.9, 2127S×16918E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/14, mbtmp3.4/2, MS3.4/3, Ms1 3.4/3, ms1mx3.0/15, Error ellipse: s-maj=265.4km s-min=44.7km az=151.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.66	252	*e*P	Pn	20 48 03.4	+2.6
DZM				*e*S	Sn	20 48 36.5	+2.7
AFI	Afiamalu	19.57	71	LR	LR	20 57 36.4	
	comp=Z,57nm,21.3s,baz=198,slow=32						
CTA	Charters Tower	21.48	269	LR	LR	20 58 58.2	
	comp=Z,120nm,18.2s,baz=46,slow=33						
STKA	Stephens Creek	26.76	241	LR	LR	21 02 55.2	
	comp=Z,136nm,20.3s,baz=27,slow=35						
WRA	Warramunga Arr	32.60	266	P	P	20 53 49.8	-0.3
	0.4nm,0.8s,baz=97,slow=8.1,SNR=3.8						
ASAR	Alice Springs	32.63	259	P	P	20 53 50.5	+0.1
	0.5nm,0.7s,baz=88,slow=9.0,SNR=8.9						
EKA	Eskdalemuir Ar	145.50	352	PKPbc	PKPbc	21 06 55.0	-1.5
	1.8nm,0.9s,baz=336,slow=1.8,SNR=3.6						
GERES	GERESS Array B	146.23	330	PKPbc	PKPbc	21 06 59.2	+0.3
	0.9nm,1.0s,baz=5.7,slow=4.9,SNR=2.2						

NNC 29 21:15:27.8±1.4, 4144N×7892E, h0km±12km, mb3.8, mpv3.4, Error ellipse: s-maj=17.4km s-min=7.0km az=165.0

BJI 29 21:15:29.2, 4153N×7895E, h11km, ML2.9

ISCJB 29 21:15:31.1±1.8, 4150N±006×7905E±010, h23km±14km, Error ellipse: s-maj=14.0km s-min=8.3km az=36.9

ISC 29 21:15:32.5±2.5, 4151N±007×790E±01, h16km±17km, n13, σ1§33/17, 6C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	2.17	291	P	Pn	21 16 04.0	-3.9
	SNR=12						
KNDC	Almaty	2.27	320	⇑Pn	Pn	21 16 07.5	-1.8
	39nm,0.4s						
KNDC				⇓Sn	Sn	21 16 37.3	+0.4
	88nm,0.6s						
TKM2	Tokmak 2	2.88	301	⇓Pn	Pn	21 16 14.8	-2.9
	13nm,0.4s						
TKM2				⇑Sn	Sn	21 16 51.5	-0.5
	30nm,0.5s						
TKM2	Tokmak 2	2.88	301	P	Pn	21 16 15.4	-2.2
	SNR=21						
KSH	Kashi	3.03	230	*e*P	Pn	21 16 20.5	+0.7
KSH				S	Sn	21 16 55.0	-0.7
KSH				Smax			
	comp=N,122nm,0.6s						
KSH				Smax			
	comp=E,183nm,0.6s						
KBK	Karagaybulak	3.21	292	P	Pn	21 16 23.0	+0.8
	SNR=11						
UCH	Uchtor	3.41	284	P	Pn	21 16 26.2	+1.2
	SNR=9.0						
AAK	Ala-Archa	3.52	290	P	Pn	21 16 30.0	+3.5
	SNR=6.5						
USP	Ospenovka	3.75	299	P	Pn	21 16 32.8	+3.1
	SNR=5.8						
AML	Almayashu	4.00	281	P	Pn	21 16 37.3	+4.3
	SNR=6.5						
EKS2	Erkin-Say	4.04	288	P	Pb	21 16 39.5	-3.8
	SNR=7.2						
MK31	Makanchi Array	5.80	23	Pn	Pn	21 16 56.9	-0.9
	comp=E,0.2nm,0.3s,baz=233,slow=11,SNR=14						
MK31				⇑Sn	Sn	21 18 04.6	+0.7
	comp=E,1.8nm,0.7s						
MK31				⇑Lg		21 18 33.5	
	comp=E,3.4nm,0.7s						
KK31	Karatay Array	6.47	287	⇑Pg	Pb	21 17 25.0	+0.3
	comp=E,2.0nm,0.8s,baz=102,slow=16,SNR=11						
KK31				⇑Lg		21 18 52.7	
	comp=E,2.1nm,0.5s,baz=104,slow=28,SNR=5.9						

TEH 29 21:51:42.0, 3761N×4889E, h4km, ML4.2

IDC 29 21:52:16.1±1.3, 3742N×4878E, h0km, mb3.7/6, mb1 3.8/10, mb1mx3.6/27, mbtmp3.6/10, ML3.8/3, MS2.9/2, Ms1 2.9/2, ms1mx2.3/41, Error ellipse: s-maj=24.9km s-min=12.7km az=15.0

ISCJB 29 21:52:17.6±0.2, 3756N±003×4888E±003, h10km, mb3.8/9, Error ellipse: s-maj=4.7km s-min=2.5km az=43.0

THR 29 21:52:17.5±0.7, 3738N×4857E, h14km±8km, ML4.2

NEIC 29 21:52:18.0, 3760N×4890E, h4km, mb4.1/2, MN4.2(TEH), After TEH.

CSEM 29 21:52:18.5±0.1, 3753N×4887E, h20km, mb3.8/6, Error ellipse: s-maj=2.0km s-min=1.2km az=36.0

MOS 29 21:52:20.3±2.2, 3771N×4881E, h33km, mb4.0/6, Error ellipse: s-maj=18.2km s-min=14.1km az=89.5

NNC 29 21:52:26.3±4.2, 3827N×4915E, h13km±42km, mb3.7, Error ellipse: s-maj=44.8km s-min=25.5km az=88.0

ISC 29 21:52:18.6±0.2, 3756N±002×4883E±003, h10km, n110, σ1§26/126, mb3.8/9, 3C-3D, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZNJK	Zanjan	0.89	188	*e*Pg	Pg	21 52 31.4	-4.4
ZNJK				*e*Sg	Sg	21 52 41.3	-6.1
ISRB	Sarab	0.96	287	Pg	Pg	21 52 35.2	-1.9
ISRB				Sg	Sg	21 52 48.8	-0.9
ISRB	Sarab	0.96	287	*e*Pg	Pg	21 52 35.2	-1.9
ISRB				*e*Sg	Sg	21 52 48.8	-0.9
ISRB				*e*		21 52 56.8	
GRMI	Germi	1.45	330	*e*Pg	Pg	21 52 45.4	-1.1
GRMI				*e*Sg	Sg	21 53 06.3	+0.9
GRMI				AML	AML	21 53 09.9	
	comp=E,2μm,0.8s						
GRMI	Germi	1.45	330	*e*Pg	Pg	21 52 45.4	-1.1
	SNR=90						
GRMI				*e*Sg	Sg	21 53 06.3	+0.9
	SNR=90						
IBST	Bostanabad	1.55	276	*e*Pn	Pn	21 52 45.0	-1.2
IBST				*e*		21 53 08.1	
IHRS	Heris	1.61	299	*e*Pn	Pn	21 52 47.1	+0.1
IHRS				*e*		21 52 52.3	
IHRS	Heris	1.61	299	Pn	Pn	21 52 47.0	0.0
GLBA	Clilabad	1.72	349	P	Pn	21 52 49.3	+0.8
	SNR=110						
ITBZ	Tabriz	2.23	288	*e*Pn	Pn	21 52 56.7	+1.1
IAZR	Azarshahr	2.27	274	*e*Pn	Pn	21 52 56.8	+0.7
IAZR				*e*Sn	Sn	21 53 26.2	+2.1
IAZR	Azarshahr	2.27	274	*e*Pn	Pn	21 52 56.8	+0.7
IAZR				*e*Sn	Sn	21 53 26.2	+2.1
IAZR				*e*		21 53 35.0	
IAZR	Azarshahr	2.27	274	Pn	Pn	21 52 56.1	+0.6
IAZR				Sn	Sn	21 53 26.1	+2.0
THKV	Tehran--Karaj	2.32	134	*e*Pn	Pn	21 52 57.7	+0.9
THKV				AML	AML	21 53 35.6	
	comp=E,2μm,0.6s						
IRAZ	Razeghan	2.32	157	*e*Pn	Pn	21 52 55.8	-1.0
IRAZ				*e*		21 53 30.3	
IRAZ	Razeghan	2.32	157	Pn	Pn	21 52 55.7	-1.1
IMHD	Mahdasht	2.38	141	*e*Pn	Pn	21 52 57.9	+0.3
IMHD				*e*		21 53 35.9	
ALIB	Ii-Bayraml	2.40	3	P	Pn	21 52 59.6	+1.7
	SNR=3.5						
CHTH	Charan	2.47	131	*e*Pn	Pn	21 53 00.2	+1.3
ISHB	Shabestar	2.65	287	*e*Pn	Pn	21 53 02.5	+1.2
ISHB				*e*		21 53 10.1	
IMRD	Marand	2.73	296	*e*Pn	Pn	21 53 03.4	+1.0
IMRD				*e*		21 53 13.2	
IAFJ	Afjeh	2.87	125	Pn	Pn	21 53 05.0	+0.6
IAFJ	Afjeh	2.87	125	*e*Pn	Pn	21 53 05.1	+0.7
IAFJ				*e*		21 53 10.4	
BRDA	Brd	3.00	335	P	Pn	21 53 09.1	+3.0
	SNR=4.4						
IPRN	Peran	3.10	114	*e*Pn	Pn	21 53 06.4	-1.1
IPRN				*e*		21 53 48.3	
IPRN	Peran	3.10	114	Pn	Pn	21 53 06.3	-1.2
ASAO	Ashtian	3.15	162	*e*Pn	Pn	21 53 08.0	-0.3
ASAO				*e*Sg	Sg	21 53 53.4	-6.5
DAMV	Damavand	3.17	126	*e*Pn	Pn	21 53 10.5	+1.9
DAMV				AML	AML	21 53 58.0	
	comp=E,633nm,0.6s						
DAMV				AML	AML	21 54 00.3	
	comp=N,420nm,0.7s						
PQL	Pirkuli	3.23	357	P	Pn	21 53 08.6	-0.8
	SNR=6.6						
IDMV	Damavand	3.25	127	*e*Pn	Pn	21 53 10.3	+0.8
IDMV				*e*		21 53 59.4	
IDMV	Damavand	3.25	127	Pn	Pn	21 53 10.2	+0.7
IVIS	Veis	3.42	209	*e*Pn	Pn	21 53 12.8	+0.8
IVIS				*e*		21 53 29.1	
IVIS	Veis	3.42	209	Pn	Pn	21 53 12.7	+0.7
IVRN	Varamin	3.46	137	*e*Pn	Pn	21 53 12.8	+0.3
IVRN				*e*		21 54 13.2	
IVRN	Varamin	3.46	137	Pn	Pn	21 53 12.7	+0.2
IALA	Alasht	3.51	114	*e*Pn	Pn	21 53 11.6	-1.6
IALA				*e*		21 54 09.8	
SIZA	Siyzn	3.52	1	P	Pn	21 53 14.7	+1.5
	SNR=5.4						
IKOM	Komasi	3.54	198	*e*Pn	Pn	21 53 14.6	+1.0
IKOM				*e*		21 54 14.4	
IKOM	Komasi	3.54	198	Pn	Pn	21 53 14.5	+0.9
GANJ	Ganja	3.65	328	P	Pn	21 53 16.7	+1.6
	SNR=10						
GHVR	GHOM	3.66	146	*e*Pn	Pn	21 53 15.2	0.0
GHVR				AML	AML	21 54 14.9	
	comp=E,393nm,0.7s						
GHVR				AML	AML	21 54 25.6	
	comp=N,380nm,0.6s						
GHVR	GHOM	3.66	146	*e*Pn	Pn	21 53 15.2	-0.1
	SNR=52						
IFIR	Firoozkooh	3.69	120	*e*Pn	Pn	21 53 17.0	+1.4
IFIR				*e*		21 54 18.5	
IFIR	Firoozkooh	3.69	120	Pn	Pn	21 53 16.9	+1.3
IGHG	Ghaleghazi	3.71	210	*e*Pn	Pn	21 53 16.5	+0.6
IGHG				*e*		21 53 31.6	
SEKA	Sheki	3.86	341	P	Pn	21 53 19.7	+1.7
	SNR=14						
ILAS	Lasjerd	3.97	122	*e*Pn	Pn	21 53 19.7	+0.2
ILAS				*e*		21 53 34.9	
ISHM	Shahmirzad	3.99	115	*e*Pn	Pn	21 53 20.0	+0.3
ISHM	Shahmirzad	3.99	115	*e*Pn	Pn	21 53 20.3	+0.6
ISHM				*e*		21 54 24.7	
ISHM	Shahmirzad	3.99	115	Pn	Pn	21 53 20.2	+0.5
GNI	Garni	4.11	310	Pn	Pn	21 53 23.6	+2.2
	comp=N,0.2nm,0.3s,baz=275,slow=23,SNR=4.4						
GNI				Pg	Pg	21 53 33.6	-3.7
	comp=N,4.2nm,0.3s,baz=165,slow=8.6,SNR=52						
GNI				Lg		21 54 28.4	
	comp=N,1.8nm,0.3s,baz=62,slow=9.5,SNR=1.5						
GNI				LR	LR	21 55 21.0	
	comp=N,181nm,18.9s,baz=125,slow=44						
GNI	Garni	4.11	310	Pg	Pg	21 53 33.7	-3.6
IKIA	Kiasar	4.12	108	*e*Pn	Pn	21 53 21.1	-0.4
IKIA				*e*		21 54 13.7	
IKIA	Kiasar	4.12	108	Pn	Pn	21 53 21.0	-0.5
IGLO	Ghaloghah	4.13	103	*e*Pn	Pn	21 53 21.0	-0.8
IGLO				*e*		21 54 21.2	
ISFB	Sefidab	4.23	138	*e*Pn	Pn	21 53 23.1	+0.1
ISFB				*e*		21 53 36.0	
IANJ	Anjilo	4.59	115	*e*Pn	Pn	21 53 28.1	0.0
IANJ				*e*		21 53 43.9	
IANJ	Anjilo	4.59	115	Pn	Pn	21 53 28.0	-0.1
DGRG	David-gareji	4.72	327	P	Pb	21 53 42.8	+1.4
DGRG				S	Sg	21 54 56.9	+6.7
MSL	Mosul	4.77	256	*ex*	x	21 53 29.0	
MSL				*ex*	x	21 53 41.0	
MSL				*ex*	x	21 53 49.0	
MSL				*ex*	x	21 54 25.0	
MSL				*ex*	x	21 54 56.0	
IKLH	Kolahrood	4.79	151	*e*Pn	Pn	21 53 31.5	+0.8
IKLH				*e*		21 53 44.0	
IKLH	Kolahrood	4.79	151	Pn	Pn	21 53 31.4	+0.7
IPIR	Pirpir	5.14	160	*e*Pn	Pn	21 53 36.5	+0.8
IPIR				*e*		21 54 46.7	
IPIR	Pirpir	5.14	160	Pn	Pn	21 53 36.4	+0.7
MTA	Mtatsminda	5.18	324	P	Pb	21 53 49.1	+0.4
MTA				S	Sg	21 55 01.5	-3.3
TBLG	Delisi	5.23	324	*e*P	Pb	21 53 51.4	+1.3
TBLG	Delisi	5.23	324	P	Pb	21 53 51.5	+1.4
TBLG				S	Sg	21 55 04.0	-2.5
IZEF	Zefreh	5.46	147	*e*Pn	Pn	21 53 40.2	+0.2
IZEF	Zefreh	5.46	147	*e*Pn	Pn	21 53 40.4	+0.4
IZEF				*e*		21 54 01.5	
IZEF	Zefreh	5.46	147	Pn	Pn	21 53 40.3	+0.3
GOR	Gori	5.73	322	P	Pb	21 53 59.3	+0.7
GOR				S	Sg	21 55 21.6	-0.8
IGAR	Gharneh	5.78	152	*e*Pn	Pn	21 53 44.3	0.0
ONI	Oni	6.50	322	P	Pg	21 54 14.9	-8.0
ONI				S	Sg	21 55 47.1	0.0
ICHK	Chekchek	7.00	138	*e*Pn	Pn	21 54 00.5	-0.7
ICHK				*e*		21 54 12.4	
ICHK	Chekchek	7.00	138	Pn	Pn	21 54 00.4	-0.8
IEMG	Emamgholi	7.81	88	*e*Pn	Pn	21 54 10.5	-1.7
IEMG				*e*		21 54 18.0	
MIB	Mutribah	7.83	190	*e*P	Pn	21 54 10.5	-2.1
	baz=190						
MIB				AML	AML	21 55 36.0	
	comp=Z,8.0nm,0.6s,baz=190						
NAY	Al-Naaiem	8.39	190	*e*P	Pn	21 54 17.8	-2.5
	baz=190						
NAY				AML	AML	21 55 52.8	
	comp=Z,4.0nm,0.6s,baz=190						
RDF	Al-Radifah	8.67	187	*e*P	Pn	21 54 21.9	-2.2
	baz=188						
RDF				AML	AML	21 55 55.8	
	comp=Z,6.0nm,0.6s,baz=188						
ASF	Jabal al Asfar	11.18	245	LR	LR	21 59 56.6	
	comp=Z,48nm,19.2s,baz=258,slow=42						
AB31	Akbulak array	14.19	31	⇑P	Pn	21 55 35.6	-3.9
	comp=Z,1.4nm,0.6s,baz=220,slow=9.1,SNR=18						
AB31				⇑S	Sn	21 58 06.6	-10
	comp=Z,0.7nm,0.5s,baz=219,slow=22,SNR=4.0						
AKTK	Aktyubinsk	14.46	24	Pn	Pn	21 55 39.6	-3.5
AKTK	Aktyubinsk	14.46	24	Pn	Pn	21 55 39.6	-3.4
AKTK				Sn	Sn	21 58 12.5	-11
AKTO	Aktyubinsk	14.46	24	⇓P	Pn	21 55 41.1	-2.0
	comp=Z,0.6nm,0.6s						
AKTO				⇓S	Sn	21 58 13.8	-10
	comp=Z,0.8nm,0.8s						
AKTO	Aktyubinsk	14.46	24	Pn	Pn	21 55 39.6	-3.4
	comp=Z,0.6nm,0.3s,baz=194,slow=8.4,SNR=8.5						
AKTO				Sn	Sn	21 58 12.5	-11
	comp=Z,0.2nm,0.3s,baz=1.0,slow=19,SNR=3.7						
AKTO	Aktyubinsk	14.46	24	P	Pn	21 55 39.6	-3.5
AKTO						21 58 12.5	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KK31	Karatay Array	17.42	65	⇓P	Pn	21 56 22.9	+1.3
	comp=Z,4.9nm,0.8s,baz=257,slow=13,SNR=36						
MLR	Muntele Rosu	18.84	302	P	Pn	21 56 36.3	-2.7
	comp=Z,0.0nm,0.3s,baz=140,slow=6.6,SNR=3.4						
AKASG	Malin Array Be	19.18	319	P	Pn	21 56 40.4	-2.7
	com

comp=Z,1.0nm,0.5s
TORD Torodi Ar. Bea 48.41 253 P **P** **22 00 59.2 -1.9**
comp=Z,0.6nm,1.1s,mb3.5,baz=47,slow=5.0,SNR=4.3

NIED ***29*** *21:58:00, 3590N×14150E, h23km, Mw3.9 Best double couple: M₀9.14000×10¹⁴ NP1:φ₈14.00000°, δ75.00000°, λ86.00000°. NP2:φ₈210.00000°, δ16.00000°, λ106.00000°.*
IDC ***29*** *21:58:27.9±1.9, 3585N×14183E, h0km, mb4.0/7, mb1 3.9/11,mb1mx3.8/28,mbtmp4.0/11,ML3.9/4,MS3.1/5, Ms1 3.1/5,ms1mx2.8/38,Error ellipse: s-maj=44.7km s-min=24.1km az=88.0*
ISCJB ***29*** *21:58:29.9±1.7, 3593N±004×14175E±009, h23km±10km, mb3.9/8,MS3.1/2,Error ellipse: s-maj=12.8km s-min=7.3km az=8.2*
BJI ***29*** *21:58:32.8, 3590N×14150E, h34km, mB4.9,mb4.2*
NEIC ***29*** *21:58:33.0, 3590N×14152E, h34km, MG3.6(JMA), After JMA.*
JMA ***29*** *21:58:33.0±0.3, 3590N×14152E, h34km±3km, M3.6*
ISC 29 21:58:30.8±1.6,3587N±004×14169E±008,h17km±8km, n26,σ0°78/30,mb3.9/8,MS3.1/2,1C-1D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHOJ	**Chosi**	**0.69**	**256**	P		**Pg**	**21 58 44.4**	**0.0**
CHOJ				*e*S		**Sg**	**21 58 53.4**	**-0.2**
JHO	**Hitachi**	**1.17**	**310**	⇓P		**Pn**	**21 58 51.5**	**-0.9**
JYT	**Yasato**	**1.26**	**287**	P		**Pn**	**21 58 52.6**	**-1.0**
BSO1	**Boso 1**	**1.34**	**206**	P		**Pn**	**21 58 55.2**	**+0.4**
BSO1				S		**Sn**	**21 59 13.5**	**+1.2**
BSO4	**Boso 4**	**1.41**	**232**	P		**Pn**	**21 58 56.1**	**+0.4**
BSO3	**Boso 3**	**1.44**	**222**	P		**Pn**	**21 58 56.4**	**+0.3**
JFK	**Kawauchi**	**1.63**	**337**	⇑P		**Pn**	**21 58 58.8**	**+0.1**
JAG	**Ashikaga**	**1.89**	**288**	P		**Pn**	**21 59 01.5**	**-0.8**
MJAR	**Matsushiro Arr**	**2.89**	**284**	Pn		**Pn**	**21 59 16.9**	**+0.9**
	13nm,0.3s,baz=98,slow=8.5,SNR=102							
MJAR				LR		LR	22 00 27.9	
	comp=Z,341nm,18.6s,baz=110,slow=40							
MAJO	**Matsushiro**	**2.89**	**284**	*e*Pn		**Pn**	**21 59 16.1**	**0.0**
MAT	**Matsushiro**	**2.89**	**284**	P		**Pn**	**21 59 16.8**	**+0.7**
MAT				S		**Sn**	**21 59 50.2**	**-0.3**
JHJ	**Hachijo jima 2**	**3.16**	**210**	Pn		**Pn**	**21 59 19.8**	**0.0**
	35nm,0.3s,baz=263,slow=22,SNR=7.2							
JHJ				Sn		**Sn**	**21 59 54.6**	**-2.5**
	70nm,0.3s,baz=67,slow=23,SNR=13							
ASAJ	**Asahikawa**	**8.27**	**5**	Pn		**Pn**	**22 00 30.4**	**+0.5**
	1.3nm,0.3s,baz=190,slow=20,SNR=8.9							
ASAJ				Sn		**Sn**	**22 02 01.4**	**-1.4**
	0.7nm,0.3s,baz=176,slow=33,SNR=4.0							
ASAJ				LR		LR	22 04 34.9	
	comp=Z,79nm,19.3s,baz=153,slow=44							
CBIJ	**Chichi jima**	**8.76**	**177**	Pn		**Pn**	**22 00 35.2**	**-1.4**
	5.7nm,0.3s,baz=279,slow=19,SNR=11							
CBIJ				Sn		**Sn**	**22 02 05.8**	**-9.2**
	4.2nm,0.3s,baz=145,slow=22,SNR=4.0							
KSRS	**Korea Array**	**11.17**	**282**	LR		LR	22 05 13.3	
	comp=Z,96nm,20.1s,baz=163,slow=36							
SONM	**Songino Array**	**28.63**	**306**	P		**P**	**22 04 27.1**	**+0.9**
	0.9nm,0.6s,mb3.7,baz=110,slow=8.8,SNR=7.0							
SONM				LR		LR	22 16 21.8	
	comp=Z,56nm,19.5s,MS3.2,baz=353,slow=37							
GTA	**Gaotai**	**33.13**	**289**	*e*P		**P**	**22 05 06.0**	**0.0**
GTA				AMB		AMB		
	comp=Z,3.0nm,1.1s,mb4.1							
CMAR	**Chiang Mai Arr**	**41.43**	**257**	LR		LR	22 24 50.6	
	comp=Z,21nm,21.0s,MS3.0,baz=60,slow=38							
ZALV	**Zalesovo Beam**	**42.87**	**313**	P		**P**	**22 06 28.6**	**+0.7**
	comp=Z,1.3nm,0.5s,mb3.9,baz=82,slow=7.4,SNR=8.2							
MK31	**Makanchi Array**	**44.93**	**303**	*e*P		**P**	**22 06 44.5**	**-0.1**
MKAR	**Makanchi Array**	**44.93**	**303**	P		**P**	**22 06 44.7**	**+0.1**
	comp=Z,0.7nm,0.5s,mb3.7,baz=88,slow=10,SNR=8.3							
MKAR	**Makanchi Array**	**44.93**	**303**	P		**P**	**22 06 44.7**	**+0.1**
KURK	**Kurchatov**	**46.83**	**309**	P		**P**	**22 07 00.5**	**+1.0**
	comp=Z,2.2nm,0.5s,mb4.4,baz=83,slow=7.9,SNR=18							
BVAR	**Borovoye Array**	**51.52**	**313**	P		**P**	**22 07 36.1**	**+0.7**
	comp=Z,0.9nm,0.6s,mb3.9,baz=86,slow=6.4,SNR=5.5							
BVAR				PcP		PcP	22 08 50.1	+0.8
	comp=Z,1.0nm,0.8s,baz=72,slow=4.8,SNR=4.1							
AKTO	**Aktyubinsk**	**59.62**	**313**	P		**P**	**22 08 33.8**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.9,baz=27,slow=16,SNR=3.7							
AKASG	**Malin Array Be**	**75.35**	**323**	P		**P**	**22 10 12.9**	**-0.2**
	comp=Z,0.7nm,0.5s,mb3.9,baz=46,slow=5.9,SNR=4.1							

NEIC ***29*** *22:11:42.4, 3729N×1394W, h0km, MG3.9(MDD), After MDD.*
CSEM ***29*** *22:11:42.9±0.3, 3717N×1410W, h10km, ML3.3/9, Error ellipse: s-maj=8.0km s-min=5.3km az=122.0*
MDD ***29*** *22:11:42.1±2.1, 3723N×1397W, h0km, mb4.2/5, Error ellipse: s-maj=19.4km s-min=17.2km az=59.0, PRIMO*
INMG ***29*** *22:11:45.5±2.1, 3707N×1416W, h10km, Mb4.2, ML2.4, Error ellipse: s-maj=15.1km s-min=13.0km az=52.0*
ISC 29 22:11:46.2±0.9,3734N±005×1360W±006,h10km,n49, σ0°97/94,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PFVI	**Vila Bisbo**	**3.81**	**92**	*e*Pn		**Pn**	**22 12 44.2**	**-0.8**
PFVI				*e*Sn		**Sn**	**22 13 28.1**	**-1.7**
PFVI				A			22 13 46.5	
	10nm,0.8s							
PFVI	**Vila Bisbo**	**3.81**	**92**	*e*Pn		**Pn**	**22 12 44.2**	**-0.8**
PFVI				*e*Sn		**Sn**	**22 13 28.1**	**-1.7**
	10nm,0.8s							
PTEO	**Sao Teotonio**	**3.88**	**86**	*e*Pn		**Pn**	**22 12 45.8**	**-0.1**
PTEO				*e*Sn		**Sn**	**22 13 30.5**	**-1.1**
PTEO				A			22 13 33.5	
	8.1nm,1.0s							
PTEO	**Sao Teotonio**	**3.88**	**86**	*e*Pn		**Pn**	**22 12 45.8**	**-0.1**
PTEO				*e*Sn		**Sn**	**22 13 30.5**	**-1.1**
	8.1nm,1.0s							
MORF	**Marmelete**	**3.94**	**89**	*e*Pn		**Pn**	**22 12 46.7**	**0.0**
MOE	**Montemor**	**4.31**	**73**	*e*Pn		**Pn**	**22 12 51.9**	**+0.1**
PBDV	**Barranco-do-Ve**	**4.52**	**90**	*e*Pn		**Pn**	**22 12 55.1**	**+0.4**
PBDV				*e*Sn		**Sn**	**22 13 49.0**	**+1.8**
	3.9nm,0.5s							
PBDV	**Barranco-do-Ve**	**4.52**	**90**	*e*Pn		**Pn**	**22 12 55.1**	**+0.4**
PBDV				*e*Sn		**Sn**	**22 13 49.0**	**+1.8**
	3.9nm,0.5s							
EVO	**Evora**	**4.57**	**73**	*e*Pn		**Pn**	**22 12 55.6**	**+0.2**
EVO				*e*Sn		**Sn**	**22 13 50.6**	**+2.1**
EVO				A			22 13 55.5	
	3.2nm,0.3s							
EVO				A			22 13 55.8	
	2.8nm,0.1s							
EVO	**Evora**	**4.57**	**73**	*e*Pn		**Pn**	**22 12 55.6**	**+0.2**
EVO				*e*Sn		**Sn**	**22 13 50.6**	**+2.1**
	2.8nm,0.1s							
PBEJ	**Beja**	**4.60**	**80**	*e*Pn		**Pn**	**22 12 56.2**	**+0.5**
PBEJ				*e*Sn		**Sn**	**22 13 50.3**	**+1.1**
PTOM	**Tomar**	**4.66**	**59**	*e*Pn		**Pn**	**22 12 57.0**	**+0.4**
PTOM				*e*Sn		**Sn**	**22 13 53.2**	**+2.5**
PTOM				A			22 13 57.9	
	5.9nm,0.3s							
PTOM	**Tomar**	**4.66**	**59**	*e*Pn		**Pn**	**22 12 57.0**	**+0.4**
PTOM				*e*Sn		**Sn**	**22 13 53.2**	**+2.5**
	5.9nm,0.3s							
PVAQ	**Vaqueiros**	**4.68**	**87**	*e*Pn		**Pn**	**22 12 56.9**	**0.0**
PVAQ				*e*Sn		**Sn**	**22 13 50.3**	**-1.0**
PVAQ				A			22 14 03.0	
	4.3nm,0.6s							
PVAQ	**Vaqueiros**	**4.68**	**87**	*e*Pn		**Pn**	**22 12 56.9**	**0.0**
PVAQ				*e*Sn		**Sn**	**22 13 50.3**	**-1.0**
	4.3nm,0.6s							
EGRO	**El Granado**	**4.87**	**86**	P		**Pn**	**22 12 59.4**	**-0.1**
	0.5nm,0.1s,SNR=7.9							
EGRO				S		**Sn**	**22 13 55.1**	**-0.7**
	4.6nm,0.2s,SNR=7.9							
EGRO	**El Granado**	**4.87**	**86**	P		**Pn**	**22 12 59.4**	**-0.1**
	0.5nm,0.1s,SNR=7.9							
PESTR	**Estremoz**	**4.97**	**70**	*e*Pn		**Pn**	**22 13 01.5**	**+0.6**
PESTR				*e*Sn		**Sn**	**22 13 59.2**	**+0.7**
PESTR				A			22 14 05.3	
	2.1nm,0.4s							
PESTR	**Estremoz**	**4.97**	**70**	*e*Pn		**Pn**	**22 13 01.5**	**+0.6**
PESTR				*e*Sn		**Sn**	**22 13 59.2**	**+0.7**
	2.1nm,0.4s							
PBAR	**Barrancos**	**5.26**	**79**	*e*Pn		**Pn**	**22 13 05.3**	**+0.4**
PBAR				*e*Sn		**Sn**	**22 14 07.3**	**+1.7**
PBAR				A			22 14 12.4	
	2.2nm,0.5s							
PBAR	**Barrancos**	**5.26**	**79**	Pn		**Pn**	**22 13 05.3**	**+0.4**
PBAR				Sn		**Sn**	**22 14 07.3**	**+1.7**
	1.1nm,0.5s							
PMRV	**Marv??o**	**5.30**	**65**	*e*Pn		**Pn**	**22 13 05.8**	**+0.4**
PMRV				*e*Sn		**Sn**	**22 14 07.0**	**+0.5**
PMRV				A			22 14 11.9	
	3.5nm,0.3s							
PMRV	**Marv??o**	**5.30**	**65**	*e*Pn		**Pn**	**22 13 05.8**	**+0.4**
PMRV				*e*Sn		**Sn**	**22 14 07.0**	**+0.5**
	3.5nm,0.3s							
EBAD	**Badajoz**	**5.38**	**73**	P		**Pn**	**22 13 06.9**	**+0.3**
	1.3nm,0.2s,SNR=8.4							
EBAD				S		**Sn**	**22 14 07.7**	**-0.8**
	1.4nm,0.1s,SNR=7.9							
PCBR	**Castelo Branco**	**5.40**	**61**	*e*Pn		**Pn**	**22 13 07.0**	**+0.2**
PCBR				*e*Sn		**Sn**	**22 14 11.8**	**+2.8**
PCBR				A			22 14 16.0	
	1.8nm,0.4s							
PCBR	**Castelo Branco**	**5.40**	**61**	*e*Pn		**Pn**	**22 13 07.0**	**+0.2**
PCBR				*e*Sn		**Sn**	**22 14 11.8**	**+2.8**
	1.8nm,0.4s							
EMIN	**Mina Concepcio**	**5.52**	**83**	P		**Pn**	**22 13 07.1**	**-1.3**
	0.2nm,0.1s,SNR=7.9							
EMIN				S		**Sn**	**22 14 11.5**	**-0.3**
	0.4nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**5.52**	**83**	P		**Pn**	**22 13 07.8**	**-0.6**
EMIN				S		**Sn**	**22 14 11.6**	**-0.3**
PVIS	**Viseu**	**5.57**	**51**	*e*Sn		**Sn**	**22 14 13.2**	**0.0**
PCAB	**Cabril**	**6.13**	**43**	*e*Pn		**Pn**	**22 13 18.4**	**+1.6**
PCAB				*e*Sn		**Sn**	**22 14 26.7**	**-0.2**
PCAB				A			22 14 33.4	
	2.5nm,0.3s							
PCAB	**Cabril**	**6.13**	**43**	*e*Pn		**Pn**	**22 13 18.4**	**+1.6**
PCAB				*e*Sn		**Sn**	**22 14 26.7**	**-0.2**
	2.5nm,0.3s							
ESPR	**Espera**	**6.20**	**92**	P		**Pn**	**22 13 18.2**	**+0.4**
	1.1nm,0.2s,SNR=7.9							
ESPR				S		**Sn**	**22 14 28.6**	**-0.2**
	3.7nm,0.3s,SNR=7.9							
ESPR	**Espera**	**6.20**	**92**	P		**Pn**	**22 13 18.0**	**+0.2**
ESPR				S		**Sn**	**22 14 28.4**	**-0.4**
ELOB	**Lobios**	**6.22**	**42**	P		**Pn**	**22 13 17.9**	**-0.1**
	0.1nm,0.1s,SNR=7.9							
ELOB				S		**Sn**	**22 14 26.9**	**-2.2**
	2.8nm,0.2s,SNR=7.9							
MVO	**Moncorvo**	**6.37**	**51**	*e*Pn		**Pn**	**22 13 19.6**	**-0.4**
MVO				*e*Sn		**Sn**	**22 14 33.0**	**+0.2**
MVO				A			22 14 35.9	
	3.7nm,0.5s							
MVO	**Moncorvo**	**6.37**	**51**	*e*Pn		**Pn**	**22 13 19.6**	**-0.4**
MVO				*e*Sn		**Sn**	**22 14 33.0**	**+0.2**
	3.7nm,0.5s							
ECAL	**Calabor**	**7.01**	**47**	P		**Pn**	**22 13 28.3**	**-0.5**
	1.7nm,0.2s,SNR=7.9							
ECAL				S		**Sn**	**22 14 46.8**	**-1.7**
	3.9nm,0.2s,SNR=7.9							
ECAL	**Calabor**	**7.01**	**47**	P		**Pn**	**22 13 28.3**	**-0.5**
ECAL				S		**Sn**	**22 14 46.0**	**-2.5**
EADA	**Adamuz**	**7.19**	**81**	P		**Pn**	**22 13 31.0**	**-0.4**
	0.6nm,0.1s,SNR=7.9							
EADA				S		**Sn**	**22 14 52.4**	**-0.8**
	0.9nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**7.19**	**81**	P		**Pn**	**22 13 31.1**	**-0.3**
EADA				S		**Sn**	**22 14 51.6**	**-1.6**
EPON	**Pontenova**	**7.74**	**37**	P		**Pn**	**22 13 37.2**	**-1.7**
	0.7nm,0.2s,SNR=7.9							
EPON				S		**Sn**	**22 15 02.0**	**-4.6**
	2.2nm,0.2s,SNR=7.9							
EPON	**Pontenova**	**7.74**	**37**	P		**Pn**	**22 13 37.1**	**-1.8**
EPON				S		**Sn**	**22 15 02.0**	**-4.6**
ESDC	**Sonseca Array**	**7.90**	**70**	P		**Pn**	**22 13 40.9**	**-0.2**
	3.4nm,0.2s,baz=255,slow=13,SNR=25							
ESDC				S		**Sn**	**22 15 09.6**	**-1.0**
	0.5nm,0.1s,baz=256,slow=23,SNR=4.0							
EQES	**Quesada**	**8.37**	**84**	P		**Pn**	**22 13 47.5**	**0.0**
	0.2nm,0.4s,SNR=4.0							
EQES				S		**Sn**	**22 15 21.7**	**-0.4**
	0.2nm,0.2s,SNR=7.9							
EQES	**Quesada**	**8.37**	**84**	P		**Pn**	**22 13 47.3**	**-0.3**
EQES				S		**Sn**	**22 15 21.1**	**-1.0**
EARI	**Arriondas**	**8.74**	**44**	P		**Pn**	**22 13 53.5**	**+0.9**
	0.3nm,0.3s,SNR=4.0							
EARI				S		**Sn**	**22 15 26.5**	**-4.6**
	0.3nm,0.3s,SNR=4.0							
EARI	**Arriondas**	**8.74**	**44**	P		**Pn**	**22 13 52.8**	**+0.2**
EARI				S		**Sn**	**22 15 26.5**	**-4.6**
ETOR	**Torete**	**9.62**	**65**	P		**Pn**	**22 14 05.5**	**+0.8**
	3.2nm,0.6s,SNR=6.4							
ETOR				S		**Sn**	**22 15 53.3**	**+0.5**
	2.2nm,0.2s,SNR=4.0							
ETOR	**Torete**	**9.62**	**65**	P		**Pn**	**22 14 05.5**	**+0.8**
ETOR				S		**Sn**	**22 15 53.0**	**+0.2**

IDC ***29*** *22:12:13.4±4.0, 2094S×16906E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.9/14, mbtmp3.9/4, Error ellipse: s-maj=123.6km s-min=44.3km az=137.0*
ISC 29 22:12:15.5±6.6,213S±03×1693E±01,h20km±42km,n9, σ0°63/9,mb3.9/3,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**2.72**	**254**	*e*P		**Pn**	**22 12 57.9**	**-0.1**
DZM				*e*S		**Sn**	**22 13 30.3**	**-0.1**
STKA	**Stephens Creek**	**26.80**	**241**	P		**P**	**22 17 55.8**	**+1.4**
	1.7nm,0.7s,mb3.7,baz=78,slow=13,SNR=4.2							
WRA	**Warramunga Arr**	**32.67**	**266**	P		**P**	**22 18 45.7**	**-0.9**
	0.5nm,0.5s,mb3.7,baz=95,slow=8.5,SNR=4.3							
ASAR	**Alice Springs**	**32.70**	**259**	P		**P**	**22 18 46.6**	**-0.2**
	2.0nm,0.7s,mb4.2,baz=84,slow=9.1,SNR=26							
CMAR	**Chiang Mai Arr**	**79.38**	**295**	P		**P**	**22 24 21.1**	**+0.5**
	0.3nm,0.4s,baz=117,slow=4.1,SNR=4.7							
SNAA	**Sanae**	**87.08**	**182**	*e*		**P**	**22 24 59.2**	**-0.2**
VNA3	**Neumayer Olymp**	**87.67**	**180**	*e*		**P**	**22 25 01.7**	**-0.6**
VNA3				*e*		pP	22 25 08.6	-0.2
VNA3				*e*			22 25 12.6	
VNA2	**Neumayer--Watz**	**87.96**	**181**	*e*		**P**	**22 25 03.9**	**+0.2**
	baz=191,slow=3.5							
VNA2				*e*		pP	22 25 10.5	+0.3
VNA2				*e*			22 25 14.3	
GERES	**GERESS Array B**	**146.33**	**330**	PKPbc		PKPbc	22 31 53.3	-1.4
	0.6nm,0.8s,baz=38,slow=5.0,SNR=3.2							

IDC ***29*** *22:15:20.2±5.4, 3630N×7077E, h164km±51km, mb3.5/10, mb1 3.6/14,mb1mx3.5/26, mbtmp3.5/14, Error ellipse: s-maj=26.6km s-min=15.8km az=26.0*
BJI ***29*** *22:15:21.7, 3642N×7090E, h218km, mb4.2*
ISCJB ***29*** *22:15:22.8±0.5, 3647N±003×7099E±006, h202km±7km, mb3.8/13, Error ellipse: s-maj=7.8km s-min=3.9km az=155.7*
MOS ***29*** *22:15:23.6±0.8, 3653N×7083E, h207km, mb3.9/8, Error ellipse: s-maj=16.3km s-min=8.8km az=84.0*
NEIC ***29*** *22:15:24.2±0.7, 3652N×7086E, h198km±7km, mb4.1/7, Error ellipse: s-maj=9.6km s-min=7.9km az=117.0*
NNC ***29*** *22:15:29.2±3.9, 3700N×7082E, h190km±34km, mb2.8, mpv3.9, Error ellipse: s-maj=41.7km s-min=19.3km az=37.0*
ISC 29 22:15:23.5±0.5,3647N±003×7097E±006,h195km±6km, n78,σ1°92/92,mb3.8/13,1C-4D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KBL	**Kabul**	**2.48**	**220**	*e*PN		**Pn**	**22 16 08.5**	**+1.6**
KSH	**Kashi**	**4.99**	**51**	P		**Pn**	**22 16 39.0**	**+1.5**
KSH				S		**Sn**	**22 17 34.0**	**-1.9**
KSH				Smax				
	comp=N,535nm,0.4s							
KSH				Smax				
	comp=E,510nm,0.4s							
THN	**Thein Dam**	**5.62**	**134**	*e*P		**Pn**	**22 16 46.4**	**+0.6**
THN				*e*S		**Sn**	**22 17 49.4**	**-1.3**
DLH	**Dalhousie**	**5.69**	**132**	*e*P		**Pn**	**22 16 48.0**	**+1.3**
DLH				*e*S		**Sn**	**22 17 51.0**	**-1.3**
AML	**Almayashu**	**6.03**	**20**	P		**Pn**	**22 16 51.3**	**+0.3**
	SNR=11							
AML	**Almayashu**	**6.03**	**20**	*e*Pn		**Pn**	**22 16 51.3**	**+0.3**
	comp=E,22nm,0.5s							
PONG	**Pong**	**6.11**	**136**	*e*P		**Pn**	**22 16 55.0**	**+2.9**
UCH	**Uchtor**	**6.37**	**24**	P		**Pn**	**22 16 55.8**	**+0.5**
	SNR=8.6							
UCH	**Uchtor**	**6.37**	**24**	*e*Pn		**Pn**	**22 16 56.0**	**+0.6**
	comp=E,6.6nm,0.4s							
EKS2	**Erkin-Say**	**6.55**	**18**	P		**Pn**	**22 16 58.5**	**+0.8**
	SNR=16							
EKS2	**Erkin-Say**	**6.55**	**18**	*e*Pn		**Pn**	**22 16 58.2**	**+0.5**
	comp=E,3.8nm,0.6s							
KK31	**Karatay Array**	**6.63**	**357**	⇓P		**Pn**	**22 16 58.1**	**-0.7**
	comp=E,5.0nm,0.3s,baz=188,slow=13,SNR=178							
KK31				S		**Sn**	**22 18 07.7**	**-6.6**
	comp=E,26nm,0.5s,baz=193,slow=18,SNR=19							
AAK	**Ala-Archa**	**6.73**	**23**	P		**Pn**	**22 17 00.6**	**+0.6**
	SNR=7.2							
SDNR	**Sundarnagar**	**7.03**	**133**	*e*P		**Pn**	**22 17 01.6**	**-2.5**
SDNR				*e*S		**Sn**	**22 18 17.0**	**-6.8**
TKM2	**Tokmak 2**	**7.36**	**28**	⇓P		**Pn**	**22 17 08.6**	**+0.4**
	comp=E,6.1nm,0.8s							
TKM2	**Tokmak 2**	**7.36**	**28**	*e*PN		**Pn**	**22 17 08.7**	**+0.4**
TKM2				pmax		pmax		
	comp=Z,7.0nm,0.6s							
TKM2	**Tokmak 2**	**7.36**	**28**	P		**Pn**	**22 17 08.9**	**+0.6**
	SNR=7.5							
TKM2	**Tokmak 2**	**7.36**	**28**	*e*Pn		**Pn**	**22 17 08.7**	**+0.4**
	comp=Z,6.9nm,0.6s							
SMLA	**Simla**	**7.42**	**134**	*i* P		**Pn**	**22 17 09.9**	**+0.8**
SMLA				*i* S		**Sn**	**22 18 30.6**	**-2.3**
SMLA				*i* S		**Sn**	**22 18 30.8**	**-2.1**
JOSI	**Joshimath**	**9.29**	**127**	*e*P		**Pn**	**22 17 34.4**	**+0.9**
JOSI				*e*S		**Sn**	**22 19 11.8**	**-5.6**
JOSI				AML		AML	22 19 19.6	
	comp=E,216nm,0.4s							
JOSI				AML		AML	22 19 20.7	
	comp=N,127nm,0.4s							
KHET	**Khetri**	**9.32**	**153**	*e*S		**Sn**	**22 19 10.7**	**-7.6**
KHET				AML		AML	22 19 15.1	
	comp=E,77nm,0.6s							
KHET				AML		AML	22 19 15.3	
	comp=N,67nm,0.5s							
NDI	**New Delhi**	**9.38**	**144**	*e*P		**Pn**	**22 17 33.5**	**-1.3**
NDI				*e*S		**Sn**	**22 19 11.5**	**-8.3**
SONA	**Sohna**	**9.69**	**146**	*e*P		**Pn**	**22 17 39.0**	**+0.2**
SONA				*e*S		**Sn**	**22 19 20.0**	**-7.1**
SONA				AML		AML	22 19 23.6	
	comp=E,50nm,0.5s							
SONA				AML		AML	22 19 23.7	
	comp=N,29nm,0.3s							
MK31	**Makanchi Array**	**13.33**	**36**	P		**Pn**	**22 18 27.8**	**+2.7**
	comp=N,0.3nm,0.3s,baz=221,slow=13,SNR=6.4							
MK31	**Makanchi Array**	**13.33**	**36**	*e*Pn		**Pn**	**22 18 25.9**	**+0.8**
MKAR	**Makanchi Array**	**13.33**	**36**	P		**Pn**	**22 18 24.8**	**-0.3**
	comp=N,0.3nm,0.3s,baz=224,slow=13,SNR=6.8							
DANN	**Dangsing**	**13.50**	**123**	*e*P		**Pn**	**22 18 26.9**	**-0.4**
	comp=N,62nm,0.4s							
KOLN	**Koldanda**	**13.77**	**125**	*e*P		**Pn**	**22 18 29.1**	**-1.7**
	comp=N,23nm,0.5s							
GKN	**Gorkha**	**14.31**	**122**	*e*P		**Pn**	**22 18 37.6**	**+0.1**
	comp=N,61nm,0.5s							
DMN	**Daman**	**14.88**	**122**	*e*P		**Pn**	**22 18 44.2**	**-0.3**
	comp=N,22nm,0.3s							
KKN	**Kakani**	**14.89**	**121**	*e*P		**Pn**	**22 18 45.0**	**+0.5**
	comp=N,76nm,0.5s							
AB31	**Akbulak array**	**15.10**	**331**	P		**Pn**	**22 18 45.3**	**-1.5**
	comp=N,2.3nm,0.5s,baz=147,slow=12,SNR=49							
AB31				⇓S		**S**	**22 21 30.1**	**-4.2**
	comp=N,1.4nm,0.5s,baz=151,slow=23,SNR=3.7							
KURBB	**Kurchatov Arra**	**15.16**	**19**	⇓P		**Pn**	**22 18 47.5**	**-0.1**
GUN	**Gumba**	**15.23**	**120**	*e*P		**Pn**	**22 18 49.9**	**+1.2**
	comp=N,24nm,0.3s							
KURK	**Kurchatov**	**15.27**	**19**	P		**Pn**	**22 18 48.4**	**-0.5**
	comp=N,0.1nm,0.3s,baz=208,slow=10,SNR=8.9							
JIRN	**Jiri**	**15.60**	**120**	*e*P		**Pn**	**22 18 54.3**	**+1.1**
	comp=N,86nm,0.4s							
VOSK	**Vostochnaya**	**16.25**	**0**	⇑P		**Pn**	**22 18 59.5**	**-1.3**
	comp=N,2.2nm,0.9s							
RAMN	**Ramite**	**16.32**	**121**	*e*P		**Pn**	**22 19 02.2**	**+0.2**
	comp=N,38nm,0.5s							
BVA0	**Borovoye Array**	**16.56**	**359**	P		**Pn**	**22 19 04.2**	**-0.3**
	comp=N,0.4nm,0.6s,baz=173,slow=11,SNR=20							
BVAR	**Borovoye Array**	**16.56**	**359**	P		**Pn**	**22 19 04.1**	**-0.4**
	comp=N,0.9nm,0.3s,baz=151,slow=13,SNR=17							
BVAR				S		**S**	**22 22 02.3**	**-4.2**
	comp=N,0.2nm,0.3s,baz=165,slow=19,SNR=5.2							
BVAR	**Borovoye Array**	**16.56**	**359**	P		**Pn**	**22 19 04.1**	**-0.3**
BVAR				S		**S**	**22 22 02.3**	**-4.2**
BVAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
BRVK	**Borovoye**	**16.59**	**359**	*e*P		**Pn**	**22 19 04.2**	**-0.7**
BRVK				pmax		p

comp=Z,1.5nm,0.5s,mb3.9,baz=351,slow=5.4,SNR=5.7
ASAR Alice Springs 84.26 125 P **P** **22 27 33.0 -0.4**
comp=Z,0.8nm,0.6s,mb3.6,baz=315,slow=4.6,SNR=4.5
ASAR Alice Springs 84.26 125 P **P** **22 27 33.0 -0.3**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
MWC Mount Wilson 109.17 8 *e*PKP PKiKP 22 33 34.5 +4.4
CFAA Coronel Fontan 146.03 266 PKPbc PKPbc 22 34 40.8 +0.4
comp=Z,0.3nm,0.5s,baz=0.0,slow=1.0,SNR=4.7

ISK ***29*** *22:16:32.7, 4036N×3566E, h3km, MD3.1*
ISCJB ***29*** *22:16:33.5±0.6, 4035N±003×3568E±003, h4km±5km, Error ellipse: s-maj=4.4km s-min=4.4km az=30.6*
CSEM ***29*** *22:16:33.0±0.1, 4036N×3566E, h5km, MD3.1, Error ellipse: s-maj=1.5km s-min=1.3km az=119.0*
DDA ***29*** *22:16:34.5, 4029N×3557E, h32km±2km, Md3.2*
ISC 29 22:16:34.1±0.6**, 4035N**±003×**3568E**±003**, h5**km±5km**, n26,** σ0**72/35, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOKT	**Tokat**	**0.67**	**93**	*e*PG	**Pg**	**22 16 46.8**	**0.0**
TOKT				*e*SG	**Sg**	**22 16 56.7**	**+1.2**
CTKT	**Corum**	**0.73**	**292**	*i* P	**Pg**	**22 16 47.4**	**-0.6**
CTKT				*i* S	**Sg**	**22 16 58.6**	**+1.1**
YOZ	**Yozgat**	**0.76**	**201**	*e*PG	**Pg**	**22 16 48.3**	**-0.5**
YOZ				*e*SG	**Sg**	**22 16 59.5**	**+0.9**
KVT	**Kavak**	**0.78**	**21**	*e*PG	**Pg**	**22 16 48.5**	**-0.6**
KVT				*e*SG	**Sg**	**22 17 00.1**	**+1.0**
CORM	**Corum**	**0.82**	**258**	*e*PG	**Pg**	**22 16 48.8**	**-1.0**
SVSK	**Karacayir**	**1.10**	**113**	*e*PN	**Pn**	**22 16 54.7**	**-1.4**
CDAG	**Cicekdag**	**1.24**	**234**	*i* P	**Pg**	**22 16 56.8**	**-1.1**
CDAG				*i* S	**Sg**	**22 17 14.2**	**+0.3**
RSDY	**Resadiye-TOKAT**	**1.26**	**88**	*e*PN	**Pn**	**22 16 57.8**	**-0.5**
BYBT	**Boyabat**	**1.31**	**329**	*e*PN	**Pn**	**22 16 58.0**	**-1.0**
DIKM	**Dikmen**	**1.33**	**346**	*e*PN	**Pn**	**22 16 58.9**	**-0.5**
TOS	**Tosya**	**1.43**	**299**	*e*PN	**Pn**	**22 17 00.3**	**-0.4**
BNN	**Bunyan**	**1.51**	**175**	*e*PN	**Pn**	**22 17 01.8**	**+0.1**
CANT	**Cankiri**	**1.59**	**280**	*e*PN	**Pn**	**22 17 02.4**	**-0.5**
ILGA	**Ilgaz**	**1.65**	**296**	*i* P	**Pn**	**22 17 04.1**	**+0.4**
ILGA				*i* S	**Sn**	**22 17 26.1**	**+1.0**
AVNT	**Avonos**	**1.70**	**202**	*i* P	**Pn**	**22 17 02.7**	**-1.6**
AVNT				*i* S	**Sn**	**22 17 27.1**	**+0.7**
KAMT	**Kaman**	**1.80**	**238**	*e*PN	**Pn**	**22 17 06.2**	**+0.4**
BZK	**Bozkurt**	**2.04**	**322**	*e*PN	**Pn**	**22 17 08.8**	**-0.3**
BALT	**Daday**	**2.10**	**305**	*i* P	**Pn**	**22 17 10.3**	**+0.5**
BALT				*i* S	**Sn**	**22 17 36.5**	**+0.3**
BALT	**Daday**	**2.10**	**305**	*i* P	**Pn**	**22 17 10.3**	**+0.5**
BALT				*i* S	**Sn**	**22 17 36.5**	**+0.2**
ANTO	**Ankara**	**2.26**	**259**	*e*PN	**Pn**	**22 17 12.3**	**+0.2**
LOD	**Lodumlu**	**2.28**	**259**	*e*PN	**Pn**	**22 17 12.5**	**+0.2**
ESPY	**Espiye-Giresun**	**2.39**	**75**	*e*PN	**Pn**	**22 17 14.1**	**+0.3**
NIG	**Nigde**	**2.39**	**201**	*e*PN	**Pn**	**22 17 13.8**	**0.0**
SAFT	**Safranbolu**	**2.44**	**292**	*e*PN	**Pn**	**22 17 14.4**	**-0.1**
KOZT	**Kozan**	**2.87**	**178**	*e*PN	**Pn**	**22 17 21.1**	**+0.6**
KARA	**Karaisali**	**3.13**	**189**	*e*PN	**Pn**	**22 17 24.8**	**+0.8**

CSEM ***29*** *22:17:45.5±0.1, 3864N×3129E, h2km, MD3.0, Error ellipse: s-maj=3.0km s-min=2.1km az=149.0*
ISCJB ***29*** *22:17:46.3±0.6, 3864N±004×3129E±003, h2km±8km, Error ellipse: s-maj=6.4km s-min=4.5km az=11.8*
ISK ***29*** *22:17:46.4, 3866N×3129E, h6km, MD3.0*
DDA ***29*** *22:17:47.9, 3891N×3162E, h19km±2km, Md3.0*
ISC 29 22:17:46.9±0.6**, 3865N**±004×**3129E**±004**, h5**km±7km**, n18,** σ0**60/24, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIZT	**Kizilcal**	**0.52**	**63**	*e*PG	**Pg**	**22 17 57.0**	**+0.1**
KIZT				*e*SG	**Sg**	**22 18 04.2**	**+0.6**
SHUT	**Suhut-Afyon**	**0.59**	**261**	*e*PG	**Pg**	**22 17 58.5**	**+0.4**
SHUT				*e*SG	**Sg**	**22 18 06.8**	**+1.0**
KDHN	**Kadinhani**	**0.66**	**101**	*i* P	**Pg**	**22 17 59.0**	**-0.7**
KDHN				*i* S	**Sg**	**22 18 08.3**	**+0.1**
KDHN	**Kadinhani**	**0.66**	**101**	*i* S	**Sg**	**22 18 08.3**	**+0.1**
KDHN	**Kadinhani**	**0.66**	**101**	*i* P	**Pg**	**22 17 59.0**	**-0.6**
ESKT	**Eskisehir**	**0.94**	**339**	*i* P	**Pg**	**22 18 04.0**	**-0.9**
ESKT				*i* S	**Sg**	**22 18 16.7**	**-0.4**
SEYT	**Eskypehyr**	**0.94**	**339**	*i* S	**Sg**	**22 18 16.7**	**-0.4**
SEYT	**Eskypehyr**	**0.94**	**339**	*i* P	**Pg**	**22 18 04.0**	**-0.9**
LADK	**Ladik-KONYA**	**0.96**	**118**	*e*PG	**Pg**	**22 18 05.7**	**+0.5**
ALT	**Altintas**	**1.01**	**294**	*e*PG	**Pg**	**22 18 05.5**	**-0.7**
ISP	**Isparta**	**1.01**	**218**	*e*PG	**Pg**	**22 18 06.2**	**-0.1**
KONT	**Konya--Tatoy**	**1.10**	**129**	*e*PN	**Pn**	**22 18 07.5**	**-1.4**
BORA	**Eskisehir**	**1.39**	**332**	*i* P	**Pn**	**22 18 13.3**	**+0.3**
BORA				*i* S	**Sb**	**22 18 31.6**	**+0.2**
BORA	**Eskisehir**	**1.39**	**332**	*i* P	**Pn**	**22 18 13.3**	**+0.3**
BORA				*i* S	**Sb**	**22 18 31.6**	**+0.2**
KHL	**Karahalli**	**1.42**	**257**	*e*PN	**Pn**	**22 18 13.0**	**-0.4**
GULT	**Gulveren**	**1.88**	**342**	*e*PN	**Pn**	**22 18 20.2**	**+0.5**
HDMB	**Hadim**	**1.93**	**150**	*e*PN	**Pn**	**22 18 20.4**	**+0.1**
KAMT	**Kaman**	**2.02**	**68**	*e*PN	**Pn**	**22 18 22.4**	**+0.8**

ISCJB ***29*** *22:19:26.7±3.0, 689S±0.10×15499E±007, h31km±21km, mb4.8/17, MS4.0/10, Error ellipse: s-maj=16.5km s-min=11.4km az=163.4*
IDC ***29*** *22:19:30.1±3.2, 702S×15503E, h47km±30km, mb4.5/13, mb1 4.6/15, mb1mx4.5/20, mbtmp4.5/15, ML3.9/2, MS4.0/11, Ms1 4.0/11, ms1mx3.7/25, Error ellipse: s-maj=23.3km s-min=16.2km az=139.0*
NEIC ***29*** *22:19:31.1±1.1, 704S×15503E, h60km±11km, mb4.7/8, Error ellipse: s-maj=13.5km s-min=7.4km az=156.0*
ISC 29 22:19:30.6±1.4**, 70S**±01×**15501E**±007**, h53**km±13km**, n48,** σ0**89/33, mb4.8/17, MS4.0/10, 1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.46**	**117**	P	**Pn**	**22 20 49.5**	**+0.2**
	4.4nm,0.3s,baz=221,slow=3.8,SNR=6.3						
HNR				LR	LR	22 22 45.1	
	comp=Z,2μm,21.0s,baz=280,slow=36						
PMG	**Port Moresby**	**8.13**	**252**	*e*Pn	**Pn**	**22 21 26.1**	**+0.1**
	57nm,0.7s						
COEN	**Coen**	**13.53**	**238**	*e*Pn	**Pn**	**22 22 41.5**	**+1.6**
	14nm,0.8s						
CTA	**Charters Tower**	**15.54**	**212**	*e*P	**Pn**	**22 23 05.7**	**-0.7**
	14nm,0.9s						
CTA	**Charters Tower**	**15.54**	**212**	P	**Pn**	**22 23 04.7**	**-1.7**
	0.3nm,0.3s,baz=34,slow=17,SNR=4.6						
CTAO	**Charters Tower**	**15.54**	**212**	*e*Pn	**Pn**	**22 23 05.8**	**-0.6**
	32nm,1.0s						
KAKA	**Kakadu**	**22.94**	**254**	*e*P	**P**	**22 24 29.9**	**-0.6**
	66nm,1.2s,mb4.9						
ARMA	**Armidale**	**23.52**	**187**	*e*P	**P**	**22 24 40.4**	**+4.4**
WRAB	**Tennant Creek**	**23.81**	**235**	*e*P	**P**	**22 24 38.5**	**-0.3**
	31nm,0.8s,mb4.8						
WB2	**Warramunga Arr**	**23.82**	**235**	*e*P	**P**	**22 24 38.5**	**-0.4**
WB2				*e*S	**S**	**22 28 58.2**	**+7.2**
WRA	**Warramunga Arr**	**23.83**	**235**	P	**P**	**22 24 38.7**	**-0.2**
	31nm,0.8s,mb4.8,baz=60,slow=9.7,SNR=17						
WRA				PcP	PcP	22 28 21.4	+0.2
	3.1nm,0.8s,baz=59,slow=2.3,SNR=6.1						
WRA				LR	LR	22 33 26.9	
	comp=Z,330nm,20.4s,MS3.8,baz=55,slow=35						
ASAR	**Alice Springs**	**26.18**	**229**	P	**P**	**22 24 59.8**	**-0.6**
	6.1nm,0.8s,mb4.2,baz=61,slow=8.6,SNR=50						
STKA	**Stephens Creek**	**27.74**	**205**	*e*P	**P**	**22 25 14.4**	**+0.2**
	13nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**27.74**	**205**	P	**P**	**22 25 13.9**	**-0.3**
	16nm,0.8s,mb4.7,baz=20,slow=12,SNR=18						
FITZ	**Fitzroy Crossi**	**30.67**	**246**	*e*P	**P**	**22 25 40.2**	**-0.2**
	8.6nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**30.67**	**246**	LR	LR	22 37 22.7	
	comp=Z,225nm,19.6s,MS3.8,baz=260,slow=35						
AFI	**Afiamalu**	**33.35**	**105**	LR	LR	22 38 38.7	
	comp=Z,344nm,18.9s,MS4.1,baz=39,slow=34						
RAR	**Rarotonga**	**45.90**	**113**	LR	LR	22 42 03.0	
	comp=Z,191nm,20.2s,MS4.0,baz=89,slow=30						
KSRS	**Korea Array**	**50.94**	**332**	LR	LR	22 46 52.8	
	comp=Z,88nm,21.1s,MS3.8,baz=338,slow=32						
ASAJ	**Asahikawa**	**52.10**	**349**	LR	LR	22 48 36.2	
	comp=Z,142nm,18.4s,MS4.0,baz=160,slow=34						
PPT	**Papeete**	**54.98**	**106**	*e*S	**S**	**22 36 38.2**	**+2.7**
	68nm,25.8s						
PPT				*e*LR	LR	22 45 18.1	
	95nm,23.8s						
TBI	**Tubuai**	**55.67**	**113**	*e*LQ		22 43 08.5	
	411nm,31.2s						
TBI				*e*LR	LR	22 45 37.1	
	185nm,32.2s						
NST	**Nakhon Sawan**	**58.82**	**293**	P	**P**	**22 29 25.4**	**+1.3**
PETK	**Petropavlovsk-**	**59.91**	**2**	P	**P**	**22 29 30.7**	**-0.2**
	13nm,0.9s,mb5.0,baz=130,slow=4.7,SNR=6.3						
BDT	**Bhumibol Dam**	**60.35**	**294**	⇓P	**P**	**22 29 31.0**	**-3.6**
CMAR	**Chiang Mai Arr**	**60.80**	**296**	P	**P**	**22 29 39.1**	**+1.5**
	19nm,0.8s,mb5.3,baz=122,slow=5.8,SNR=34						
RKT	**Rikitea**	**68.93**	**112**	*e*LR	LR	22 51 37.8	
	236nm,25.2s						
SONM	**Songino Array**	**69.34**	**327**	P	**P**	**22 30 32.9**	**+0.4**
	6.0nm,0.8s,mb4.6,baz=131,slow=6.0,SNR=5.4						
SONM				LR	LR	22 58 53.2	
	comp=Z,68nm,20.1s,MS3.9,baz=126,slow=34						
RC01	**Rabbit Creek A**	**80.26**	**24**	*e*P	**P**	**22 31 33.4**	**-1.9**
	23nm,0.6s,mb5.3						
MKAR	**Makanchi Array**	**83.41**	**319**	LR	LR	23 10 39.1	
	comp=Z,54nm,19.3s,MS3.9,baz=110,slow=37						
MAW	**Mawson**	**84.40**	**203**	*e*P	**P**	**22 31 57.4**	**+0.4**
	6.2nm,0.9s,mb4.7						
MAW	**Mawson**	**84.40**	**203**	P	**P**	**22 31 57.5**	**+0.5**
	6.8nm,0.8s,mb4.8,baz=93,slow=6.3,SNR=16						
MAW				LR	LR	23 08 04.8	
	comp=Z,96nm,18.4s,MS4.2,baz=250,slow=34						
YBH	**Yreka Blue Hor**	**88.88**	**48**	P	**P**	**22 32 20.1**	**+0.8**
	2.0nm,0.9s,mb4.5,baz=245,slow=3.0,SNR=5.0						
YBH				LR	LR	23 08 33.6	
	comp=Z,163nm,18.1s,MS4.5,baz=202,slow=33						
NVAR	**Mina Array Bea**	**91.71**	**52**	P	**P**	**22 32 33.2**	**+0.6**
	3.3nm,0.9s,mb4.7,baz=250,slow=6.6,SNR=12						
NVAR	**Mina Array Bea**	**91.71**	**52**	P	**P**	**22 32 33.2**	**+0.6**
PFO	**Pinyon Flat Ob**	**92.61**	**57**	P	**P**	**22 32 36.0**	**-0.9**
	4.3nm,0.9s,mb4.9,baz=271,slow=5.2,SNR=5.3						
ELK	**Elko**	**94.32**	**50**	P	**P**	**22 32 44.3**	**-0.3**
	1.6nm,0.9s,mb4.4,baz=330,slow=3.1,SNR=5.0						
YKA	**Yellowknife Ar**	**96.33**	**28**	P	**P**	**22 32 53.0**	**-0.2**
	4.8nm,0.8s,mb5.0,baz=262,slow=4.5,SNR=8.2						
YKA	**Yellowknife Ar**	**96.33**	**28**	P	**P**	**22 32 53.0**	**-0.2**
PDAR	**Pinedale Array**	**98.69**	**48**	P	**P**	**22 33 03.8**	**-0.6**
	0.7nm,0.4s,mb4.5,baz=186,slow=3.0,SNR=4.4						
NOA	**NORSAR Array B**	**119.70**	**341**	PKP	PKPdf	22 38 13.4	-0.9
	0.6nm,0.9s,baz=70,slow=0.5,SNR=3.4						
GERES	**GERESS Array B**	**127.06**	**329**	PKP	PKPdf	22 38 29.6	+0.7
	1.2nm,0.7s,baz=96,slow=1.3,SNR=14						
LPAZ	**La Paz**	**131.45**	**119**	PKP	PKPdf	22 38 39.4	+1.2
	3.9nm,1.0s,baz=338,slow=5.4,SNR=10.0						
CPUP	**Villa Florida**	**134.37**	**138**	PKP	PKPdf	22 38 43.9	+0.4
	2.2nm,0.7s,baz=264,slow=3.6,SNR=8.9						
SIV	**San Ignacio**	**137.60**	**123**	PKP	PKPdf	22 38 49.8	+0.1
	3.1nm,1.0s,baz=259,slow=3.8,SNR=8.7						
BDFB	**Brasilia**	**147.97**	**135**	PKPbc	PKPbc	22 39 11.1	0.0
	8.8nm,0.8s,baz=208,slow=5.3,SNR=6.4						
TORD	**Torodi Ar. Bea**	**153.04**	**285**	PKP	PKPdf	22 39 15.0	-0.9
	0.8nm,0.8s,baz=38,slow=1.3,SNR=5.1						
TORD				PKPbc	PKPbc	22 39 22.8	-0.4
	5.0nm,0.8s,baz=53,slow=2.0,SNR=22						
DBIC	**Dimbokro**	**160.00**	**270**	PKPab	PKPab	22 40 05.1	+0.3
	3.1nm,0.9s,baz=84,slow=4.4,SNR=3.0						

NEIC ***29*** *22:21:38.6±0.1, 2134N×14448E, mb4.8/48, Error ellipse: s-maj=4.6km s-min=4.1km az=121.0*
ISCJB ***29*** *22:21:38.3±0.2, 2128N±003×14445E±002, h106km, mb4.9/118, Error ellipse: s-maj=4.6km s-min=3.2km az=8.7*
IDC ***29*** *22:21:38.6±0.6, 2135N×14451E, h97km±4km, mb4.5/32, mb1 4.6/35, mb1mx4.5/38, mbtmp4.5/35, MS3.5/8, Ms1 3.6/8, ms1mx3.1/35, Error ellipse: s-maj=11.1km s-min=7.8km az=82.0*
BJI ***29*** *22:21:39.3, 2143N×14454E, h118km, mB5.0, mb5.1*
MOS ***29*** *22:21:42.0±1.0, 2137N×14436E, h139km, mb4.7/29, Error ellipse: s-maj=9.8km s-min=5.9km az=111.4*
DJA ***29*** *22:21:44, 2134N×14478E, h152km, mb5.3/20*
ISC 29 22:21:40.0±0.2**, 2129N**±003×**14450E**±002**, h108**km**,**
h108km±4.1km**:pP-P, n452,** σ0**70/455, mb4.9/118,**
109C-95D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**6.15**	**340**	P	**Pn**	**22 23 07.0**	**-1.4**
	30nm,0.3s,baz=104,slow=17,SNR=22						
CBIJ				S	**Sn**	**22 24 13.5**	**-3.9**
	103nm,0.3s,baz=272,slow=23,SNR=8.4						
CBIJ	**Chichi jima**	**6.15**	**340**	P	**Pn**	**22 23 07.1**	**-1.3**
CBIJ				*e*S	**Sn**	**22 24 13.4**	**-4.0**
GUMO	**Guam**	**7.67**	**177**	P	**Pn**	**22 23 30.2**	**+1.1**
	2.0nm,0.3s,baz=15,slow=20,SNR=7.0						
GUMO	**Guam**	**7.67**	**177**	*e*Pn	**Pn**	**22 23 31.6**	**+2.5**
JMZ	**Minamidaito 2**	**12.99**	**293**	P	**Pn**	**22 24 46.8**	**+6.3**
JOD2	**Odawara 2**	**14.71**	**342**	P	**Pn**	**22 25 01.2**	**-1.4**
JRY	**Ryogami san**	**15.47**	**343**	P	**Pn**	**22 25 11.5**	**-0.7**
JMN	**Monobe**	**15.55**	**325**	P	**Pn**	**22 25 17.0**	**+3.8**
JOW	**Kunigami**	**15.81**	**294**	P	**Pn**	**22 25 18.8**	**+2.3**
	12nm,0.3s,baz=117,slow=13,SNR=35						
JOW				LR	LR	22 30 24.3	
	comp=Z,189nm,20.4s,baz=135,slow=33						
JOW	**Kunigami**	**15.81**	**294**	P	**Pn**	**22 25 19.5**	**+3.0**
JWT	**Wachi**	**16.07**	**332**	P	**Pn**	**22 25 22.3**	**+2.7**
MJAR	**Matsushiro Arr**	**16.16**	**341**	P	**Pn**	**22 25 20.8**	**+0.1**
	2.5nm,0.3s,baz=148,slow=22,SNR=23						
MAJO	**Matsushiro**	**16.16**	**341**	*e*P	**Pn**	**22 25 21.0**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,29nm,0.5s						
MAJO	**Matsushiro**	**16.16**	**341**	*e*Pn	**Pn**	**22 25 21.0**	**+0.2**
	comp=Z,28nm,0.5s						
MAT	**Matsushiro**	**16.16**	**341**	P	**Pn**	**22 25 20.6**	**-0.1**
MAT				S	**S**	**22 28 21.0**	**-4.7**
MAT	**Matsushiro**	**16.16**	**341**	P	**Pn**	**22 25 22.1**	**+1.4**
JSU	**Suzuyama**	**16.17**	**312**	P	**Pn**	**22 25 25.8**	**+4.9**
JAD	**Aida**	**16.35**	**328**	P	**Pn**	**22 25 25.5**	**+2.3**
JMM	**Marumori**	**16.83**	**350**	P	**Pn**	**22 25 29.6**	**+0.7**
JNU	**Nakatsue**	**16.88**	**317**	P	**Pn**	**22 25 32.3**	**+2.6**
JHS	**Saijyo**	**16.93**	**326**	P	**Pn**	**22 25 31.4**	**+1.2**
JSD	**Sado**	**17.54**	**343**	P	**Pn**	**22 25 38.5**	**+0.9**
JYA	**Atsumi**	**17.73**	**348**	P	**Pn**	**22 25 42.4**	**+2.5**
JFU	**Fukue jima 2**	**18.01**	**312**	P	**P**	**22 25 43.4**	**+1.0**
JOM	**Ohasama**	**18.33**	**352**	P	**P**	**22 25 48.7**	**+2.9**
JTM	**Tenmabayashi**	**19.65**	**352**	P	**P**	**22 26 09.1**	**+8.9**
ERM	**Erimo**	**20.69**	**357**	*d* iP	**P**	**22 26 12.3**	**+0.9**
ERM	**Erimo**	**20.69**	**357**	*e*P	**P**	**22 26 11.9**	**+0.5**
	comp=Z,48nm,1.0s						
JEM	**Erimo**	**20.69**	**357**	P	**P**	**22 26 12.5**	**+1.1**
YHNB	**Yeheng**	**21.55**	**283**	*e*P	**P**	**22 26 20.9**	**+0.1**
	comp=Z,40nm,0.8s,mb4.8						
KSRS	**Korea Array**	**21.58**	**322**	P	**P**	**22 26 21.6**	**+0.7**
	comp=Z,48nm,0.5s,mb5.1,baz=144,slow=8.4,SNR=84						
KSRS				S	**S**	**22 30 16.4**	**+2.5**
	comp=Z,2.2nm,0.8s,baz=145,slow=14,SNR=5.2						
KSRS				ScP	ScP	22 33 44.7	-1.4
	comp=Z,3.5nm,0.7s,baz=116,slow=2.1,SNR=10						
KSRS				LR	LR	22 34 01.2	
	comp=Z,52nm,20.4s,baz=130,slow=34						
KS15	**Wonju Array Si**	**21.60**	**322**	*e*P	**P**	**22 26 21.5**	**+0.4**
JEW	**Eniwo**	**21.64**	**354**	P	**P**	**22 26 21.8**	**+0.3**
INCN	**Inchon**	**22.36**	**320**	*e*P	**P**	**22 26 28.9**	**-0.2**
	comp=Z,52nm,1.1s,mb4.8						
JMP	**Maruseppu**	**22.67**	**358**	P	**P**	**22 26 33.8**	**+1.4**
ASAJ	**Asahikawa**	**22.82**	**356**	P	**P**	**22 26 34.5**	**+0.7**
	comp=Z,11nm,0.6s,mb4.4,baz=251,slow=26,SNR=9.3						
ASAJ				LR	LR	22 35 16.2	
	comp=Z,47nm,18.6s,baz=154,slow=36						
DAV	**Davao City (W)**	**23.12**	**235**	LR	LR	22 33 35.8	
	comp=Z,191nm,20.9s,baz=179,slow=31						
NJ2	**Nanjing**	**25.24**	**300**	*e*P	**P**	**22 26 57.5**	**+1.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
YSS	**Yuzh-Sakhalins**	**25.64**	**357**	⇑*e*P	**P**	**22 27 02.4**	**+3.0**
YSS				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.3						
MDJ	**Mudanjiang**	**26.33**	**336**	P	**P**	**22 27 05.5**	**-0.1**
MDJ				AP	pP	22 27 31.5	+2.2
MDJ				XP	sP	22 27 45.0	+3.0
MDJ				PCP	PcP	22 30 29.5	+0.6
MDJ				S	**S**	**22 31 30.0**	**-0.5**
MDJ				SCP	ScP	22 33 57.8	-1.1
MDJ				PCS	PcS	22 34 10.8	+0.9
MDJ				SCS	ScS	22 37 47.5	-1.5
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,21nm,3.6s						
DL2	**Dalian**	**26.34**	**317**	⇑P	**P**	**22 27 07.0**	**+1.2**
DL2				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.0						
TIA	**Tai'an**	**28.11**	**308**	*e*P	**P**	**22 27 20.8**	**-0.9**
TIA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
HABR	**Khabarovsk**	**28.16**	**347**	*e*P	**P**	**22 27 31.4**	**+9.5**
WHN	**Wuhan**	**28.57**	**295**	⇓P	**P**	**22 27 27.0**	**+1.2**
KLR	**Kul'dur**	**29.67**	**343**	*e*P	**P**	**22 27 31.3**	**-4.0**
MYLDM	**Lahad Datu**	**29.87**	**241**	⇓P	**P**	**22 27 43.1**	**+5.6**
BJT	**Baijiatuan**	**30.50**	**314**	*e*P	**P**	**22 27 42.3**	**-0.5**
BJI	**Beijing**	**30.51**	**314**	P	**P**	**22 27 41.8**	**-1.1**
BJI				S	**S**	**22 32 35.8**	**-0.6**
BJI				AMB	AMB		
	comp=Z,11nm,0.5s,mb4.8						
BJI				AMB	AMB		
	comp=Z,53nm,3.1s						
PETK	**Petropavlovsk-**	**33.34**	**15**	P	**P**	**22 28 08.4**	**+0.9**
	comp=Z,4.5nm,0.6s,mb4.5,baz=187,slow=7.0,SNR=20						
HHC	**Hu-ho-hao-te**	**34.01**	**312**	*e*P	**P**	**22 28 13.3**	**-0.2**
HHC				AP	pP	22 28 40.3	+2.6
HHC				XP	sP	22 28 54.8	+4.6
HHC				PP	PP	22 29 31.0	-1.5
HHC				PCP	PcP	22 30 49.0	0.0
HHC				S	**S**	**22 33 28.0**	**-2.8**
HHC				XS	sS	22 34 15.0	+2.1
HHC				SCP	ScP	22 34 21.3	-2.8
HHC				PCS	PcS	22 34 34.3	-0.8
HHC				SS	SS	22 35 43.0	-19
HHC				SCS	ScS	22 38 22.0	-4.2
HHC				AMB	AMB		
	comp=Z,18nm,0.6s,mb5.1						
HHC				AMB	AMB		
	comp=Z,73nm,6.3s						
HHC				LR	LR		
	comp=N,117nm,13.3s						
HHC				LR	LR		
	comp=E,140nm,13.8s						
HHC				LR	LR		
	comp=Z,88nm,12.5s						
GYA	**Guiyang**	**34.90**	**286**	⇑*i*P	**P**	**22 28 22.0**	**+0.7**
GYA				XP	sP	22 29 04.5	+6.4
GYA				PP	PP	22 29 43.0	+0.5
GYA				PCP	PcP	22 30 54.0	+2.1
GYA				S	**S**	**22 33 45.0**	**+0.2**
GYA				XS	sS	22 34 29.0	+2.0
GYA				SS	SS	22 36 01.3	-19
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
GYA				AMB	AMB		
	comp=Z,80nm,4.5s						
GYA				LR	LR		
	comp=N,280nm,10.1s						
GYA				LR	LR		
	comp=E,230nm,10.0s						
GYA				LR	LR		
	comp=Z,400nm,11.1s						
BTO	**Baotou**	**34.98**	**311**	*e*P	**P**	**22 28 20.5**	**-1.4**
KAPI	**Kappang**	**35.67**	**226**	P	**P**	**22 28 28.3**	**+0.2**
	comp=Z,34nm,0.7s,mb5.4,baz=43,slow=3.7,SNR=11						
KAKA	**Kakadu**	**35.81**	**200**	*e*P	**P**	**22 28 28.9**	**-0.2**
	comp=Z,19nm,0.8s,mb5.1						
SBUM	**Sibu**	**36.58**	**244**	⇓P	**P**	**22 28 40.3**	**+4.5**
BATI	**Baumata**	**37.40**	**215**	P	**P**	**22 28 42.3**	**-0.4**
	comp=Z,53nm,0.6s,mb5.7,baz=75,slow=0.3,SNR=17						
BATI				ScP	ScP	22 34 36.5	-0.3
	comp=Z,5.1nm,0.3s,baz=319,slow=2.6,SNR=3.7						
CD2	**Chengdu**	**37.65**	**293**	P	**P**	**22 28 44.3**	**-0.4**
CD2				AP	pP	22 29 12.3	+3.1
CD2				XP	sP	22 29 27.0	+5.4
CD2				PP	PP	22 30 16.8	+4.1
CD2				S	**S**	**22 34 23.8**	**-2.8**
CD2				XS	sS	22 35 11.5	+2.4
CD2				SS	SS	22 37 02.5	-14
CD2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.3						
CD2				AMB	AMB		
	comp=Z,150nm,4.2s						
CD2				LR	LR		
	comp=N,200nm,10.8s						
CD2				LR	LR		

YAK smax
comp=E,13µm,1.0s
GTA Gaotai 42.11 306 ⇓P **P 22 29 21.5 +0.1**
GTA AP pP 22 29 49.5 +3.1
GTA XP sP 22 30 04.8 +6.1
GTA PP PP 22 31 02.3 +1.4
GTA PCP PcP 22 31 17.3 +3.1
GTA SCP ScP 22 34 56.0 +1.2
GTA S **S 22 35 26.0 -7.0**
GTA XS sS 22 36 14.5 -1.5
GTA SCS ScS 22 39 09.0 -3.7
GTA AMB AMB
comp=Z,24nm,0.7s,mb5.0
GTA AMB AMB
comp=Z,122nm,4.5s
WRAB Tennant Creek 42.16 194 *e*P **P 22 29 22.5 +0.5**
WB2 Warramunga Arr 42.17 194 *e*P **P 22 29 22.2 +0.2**
WB2 *e*pP pP 22 29 47.3 +0.3
WRA Warramunga Arr 42.17 194 P **P 22 29 22.9 +0.8**
comp=Z,24nm,0.5s,mb5.2,baz=17,slow=9.1,SNR=57
WRA pP pP 22 29 45.9 -1.2
comp=Z,6.9nm,0.5s,baz=14,slow=9.0,SNR=3.8
WRA ScP ScP 22 34 56.5 +1.3
comp=Z,1.7nm,0.9s,baz=11,slow=4.5,SNR=5.0
BOD Bodaibo 42.69 336 *e*P **P 22 29 24.1 -1.8**
BOD pmax pmax
comp=Z,4.0nm,1.9s,mb3.8
CHTO Chiang Mai 42.76 275 *e*P **P 22 29 27.3 +0.3**
CMAR Chiang Mai Arr 42.83 275 P **P 22 29 28.8 +1.2**
comp=Z,12nm,0.6s,mb4.8,baz=85,slow=6.1,SNR=79
CMAR LR LR 22 45 09.2
comp=Z,46nm,20.5s,baz=110,slow=33
FITZ Fitzroy Crossi 43.29 207 *e*P **P 22 29 31.4 +0.2**
comp=Z,32nm,0.8s,mb5.1
FITZ *e*pP pP 22 29 56.2 0.0
ZAK Zakamensk 43.41 322⇑ *i*P **P 22 29 31.1 -0.7**
ZAK pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
ASAR Alice Springs 45.86 194 P **P 22 29 51.5 0.0**
comp=Z,5.7nm,0.5s,mb4.6,baz=9.7,slow=7.4,SNR=62
LSA Lhasa 48.53 291 *e*P **P 22 30 13.4 +1.1**
LSA pmax pmax
comp=Z,29nm,0.6s,mb5.4
LSA Lhasa 48.53 291 *e*P **P 22 30 13.4 +1.1**
comp=Z,29nm,0.6s,mb5.4
BILL Bilibino 48.68 11 *de*P **P 22 30 13.5 +0.7**
BILL 22 32 03.0
BILL pmax pmax
comp=Z,17nm,1.0s,mb4.9
BILL MLR MLR
comp=Z,500nm,19.0s
BILL Bilibino 48.68 11 *e*P **P 22 30 13.1 +0.3**
comp=Z,12nm,0.6s,mb5.0
UNV Unalaska Valle 49.20 36 *e*P **P 22 30 17.2 +0.2**
KRAR Krasnoyarsk 51.41 326 *e*P **P 22 30 31.6 -2.0**
KRAR pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
WMQ Urumqi 51.78 310⇓ *i*P **P 22 30 37.3 +0.7**
WMQ AP pP 22 31 06.0 +3.5
WMQ XP sP 22 31 20.5 +5.9
WMQ PCP PcP 22 31 51.0 +2.6
WMQ *e*S **S 22 37 47.0 -3.4**
WMQ XS sS 22 38 39.0 +4.2
WMQ AMB AMB
comp=Z,38nm,0.7s,mb5.5
WMQ AMB AMB
comp=Z,191nm,5.8s
WMQ LR LR
comp=N,223nm,22.8s
WMQ LR LR
comp=E,201nm,25.4s
WMQ LR LR
comp=Z,198nm,22.6s
ODAN Odare 52.08 288 *e*P **P 22 30 39.0 -0.1**
comp=Z,75nm,0.8s,mb5.8
RAMN Ramite 52.77 288 *e*P **P 22 30 43.9 -0.3**
comp=Z,50nm,0.8s,mb5.6
STKA Stephens Creek 52.94 183 *e*P **P 22 30 45.4 +0.2**
comp=Z,2.1nm,0.4s,mb4.5
STKA Stephens Creek 52.94 183 P **P 22 30 44.9 -0.3**
comp=Z,2.0nm,0.4s,mb4.5,baz=11,slow=11,SNR=15
JIRN Jiri 53.04 289 *e*P **P 22 30 46.7 +0.5**
comp=Z,54nm,0.6s,mb5.7
GUN Gumba 53.29 290 *e*P **P 22 30 48.4 +0.4**
comp=Z,51nm,0.6s,mb5.8
PKIN Phulchoki 53.75 289 *e*P **P 22 30 52.0 +0.6**
comp=Z,17nm,0.4s,mb5.4
KKN Kakani 53.83 289 *e*P **P 22 30 51.7 -0.3**
comp=Z,39nm,0.8s,mb5.5
DMN Daman 54.01 289 *e*P **P 22 30 52.8 -0.4**
comp=Z,44nm,0.8s,mb5.5
FORT Forrest 54.13 197 *e*P **P 22 30 54.3 +0.4**
comp=Z,17nm,0.4s,mb5.4
GKN Gorkha 54.37 290 *e*P **P 22 30 55.6 -0.3**
comp=Z,33nm,0.3s,mb5.8
CHGN Chignik 54.39 35 *e*P **P 22 30 54.6 -0.9**
DANN Dangsing 55.09 290 *e*P **P 22 31 01.6 +0.5**
comp=Z,331nm,0.6s
ZAA0 Zalesovo Array 55.29 322 *e*P **P 22 31 01.1 -1.0**
ZALV Zalesovo Beam 55.29 322 P **P 22 31 00.9 -1.2**
comp=Z,17nm,0.6s,mb5.2,baz=104,slow=7.4,SNR=87
ZALV pP pP 22 31 25.0 -3.1
comp=Z,11nm,0.6s,baz=104,slow=8.1,SNR=4.7
KOLN Koldanda 55.31 290 *e*P **P 22 31 02.0 -0.7**
comp=Z,43nm,0.7s,mb5.6
AFI Afiamalu 55.37 125 LR LR 22 52 04.8
comp=Z,68nm,19.7s,baz=321,slow=33
MK31 Makanchi Array 55.87 313 *e*P **P 22 31 06.4 0.0**
MKAR Makanchi Array 55.87 313 P **P 22 31 06.3 0.0**
comp=Z,14nm,0.5s,mb5.2,baz=90,slow=9.3,SNR=152
MKAR PcP PcP 22 32 03.5 -0.4
comp=Z,3.0nm,0.4s,baz=68,slow=4.1,SNR=6.1
MKAR Makanchi Array 55.87 313 P **P 22 31 06.3 -0.1**
MKAR PcP PcP 22 32 03.5 -0.4
NVS Novosibirsk 56.37 322 *e*P **P 22 31 08.3 -1.5**
NVS pmax pmax
comp=E,11nm,0.5s
NVS pmax pmax
comp=Z,12nm,0.5s,mb5.2
SVW2 Sparrevohn 57.14 30 *e*P **P 22 31 15.3 +0.3**
KDAK Kodiak Island 57.84 34 P **P 22 31 19.8 -0.2**
comp=Z,20nm,0.5s,mb5.4,baz=40,slow=10,SNR=26
KLBR Kellerberrin 58.50 207 *e*P **P 22 31 24.6 -0.3**
comp=Z,6.7nm,0.7s,mb4.8
KURK Kurchatov 58.61 317 P **P 22 31 25.4 -0.1**
comp=Z,48nm,0.6s,mb5.7,baz=92,slow=7.5,SNR=88
KURK pP pP 22 31 48.1 -3.8
comp=Z,10.0nm,0.8s,baz=95,slow=7.5,SNR=2.2
MUN Mundaring 59.50 208 *e*P **P 22 31 31.8 0.0**
SLKM Skilak Lake 59.55 31 *e*P **P 22 31 31.2 -0.7**
SEW Seward 59.86 32 *e*P **P 22 31 33.1 -0.9**
TKM2 Tokmak 2 60.56 308 P **P 22 31 40.0 +0.9**
SNR=30
TKM2 Tokmak 2 60.56 308 *e*P **P 22 31 39.2 +0.1**
COLD Coldfoot 61.04 24 *e*P **P 22 31 42.3 +0.4**
comp=Z,15nm,1.0s,mb5.0
KBK Karagaybulak 61.05 308 P **P 22 31 43.2 +0.8**
SNR=25
CHMS Chumysh 61.18 308 P **P 22 31 43.6 +0.3**
SNR=9.2
USP Ospenovka 61.35 309 P **P 22 31 44.7 +0.3**
SNR=16
AAK Ala-Archa 61.39 308 P **P 22 31 45.1 +0.5**
SNR=13
UCH Uchtor 61.40 307 P **P 22 31 46.4 +1.7**
SNR=30
UCH Uchtor 61.40 307 *e*P **P 22 31 46.2 +1.5**
comp=Z,29nm,0.6s,mb5.5
COLA College 61.45 27 *d i*P **P 22 31 45.3 +0.6**
COLA College 61.45 27 *e*P **P 22 31 45.0 +0.3**
comp=Z,22nm,0.9s,mb5.2
EYAK Cordova Ski Ar 61.75 32 *e*P **P 22 31 46.6 -0.1**
EKS2 Erkin-Say 61.91 308 P **P 22 31 48.8 +0.6**
SNR=11
EKS2 Erkin-Say 61.91 308 *e*P **P 22 31 48.5 +0.2**
comp=Z,15nm,0.8s,mb5.1
AML Almayashu 62.01 307 P **P 22 31 50.2 +1.4**
SNR=19
AML Almayashu 62.01 307 *e*P **P 22 31 49.8 +1.0**
comp=Z,129nm,0.6s,mb6.1
VOSK Vostochnaya 63.42 319 P **P 22 31 56.8 -1.2**
VOSK pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
BVA0 Borovoye Array 63.77 320 *i*P **P 22 31 59.8 -0.5**
BVA0 pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
BVAR Borovoye Array 63.77 320 P **P 22 31 59.9 -0.5**
comp=Z,44nm,0.6s,mb5.5,baz=91,slow=7.5,SNR=167
BVAR pP pP 22 32 24.0 -3.0
comp=Z,12nm,0.7s,baz=86,slow=6.1,SNR=2.2
BRVK Borovoye 63.84 320 *e*P **P 22 32 00.5 -0.3**
BRVK pmax pmax
comp=Z,65nm,0.8s,mb5.5
BRVK Borovoye 63.84 320 *e*P **P 22 32 00.5 -0.3**
comp=Z,66nm,0.8s,mb5.5
KK31 Karatay Array 64.27 309 *i*P **P 22 32 03.9 +0.1**
KK31 pmax pmax
comp=Z,14nm,0.4s,mb5.1
DAWY Dawson 65.00 28 *e*P **P 22 32 04.9 -3.2**
KBL Kabul 66.61 299 *e*P **P 22 32 18.7 -0.3**
KBL pmax pmax
comp=Z,35nm,0.8s,mb5.2
KBL Kabul 66.61 299 *e*P **P 22 32 18.7 -0.3**
comp=Z,35nm,0.8s,mb5.2
SVE Sverdlovsk 69.12 324⇓ *e*P **P 22 32 34.1 -0.2**
SVE *e*S S 22 41 53.6 +23
SVE pmax pmax
comp=Z,11nm,0.9s,mb4.7
DLBC Dease Lake 69.77 34 P **P 22 32 38.7 +0.4**
baz=281,slow=7.8
ARU Arti 70.31 324 *c i*P **P 22 32 40.4 -1.3**
ARU *e* 22 35 15.7
ARU *e*PPP 22 37 03.4
ARU *e*S S 22 41 41.6 -3.4
ARU pmax pmax
comp=Z,24nm,1.7s,mb4.8
ARU Arti 70.31 324 *e*P **P 22 32 40.5 -1.1**
comp=Z,13nm,0.4s,mb5.1
AB31 Akbulak array 70.69 316 *i*P **P 22 32 43.3 -0.8**
AB31 pmax pmax
comp=Z,20nm,0.5s,mb5.2
AKTK Aktyubinsk 71.69 318 P **P 22 32 49.0 -1.2**
AKTO Aktyubinsk 71.69 318 P **P 22 32 49.0 -1.2**
comp=Z,8.1nm,0.6s,mb4.7,baz=91,slow=8.4,SNR=23
BBB Bella Bella 71.90 40 P **P 22 32 50.7 -0.6**
comp=Z,15nm,0.8s,mb4.9,baz=254,slow=15,SNR=2.7
BBB Bella Bella 71.90 40 P **P 22 32 50.7 -0.6**
YKA Yellowknife Ar 76.24 28 P **P 22 33 15.7 -0.6**
comp=Z,7.4nm,0.5s,mb4.7,baz=291,slow=5.9,SNR=22
YKA LR LR 23 07 50.2
comp=Z,22nm,18.9s,baz=300,slow=36
YKA Yellowknife Ar 76.24 28 P **P 22 33 15.7 -0.6**
YKA LR LR 23 07 50.1
GNW Green Mountain 76.34 44 *e*P **P 22 33 18.2 +1.0**
comp=Z,23nm,0.9s,mb4.9
JCW Jim Creek 76.73 43 *e*P **P 22 33 20.3 +0.9**
J02A Umpqua 77.05 48⇑P **P 22 33 21.3 +0.1**
baz=77
FL2 Flat Top 2 77.05 45 P **P 22 33 22.4 +1.2**
F04A Amboy 77.08 46⇓P **P 22 33 21.2 -0.2**
baz=77,SNR=5.5
TDL Tradedollar La 77.09 45 P **P 22 33 22.4 +0.9**
LON Longmire 77.24 45 *e*P **P 22 33 23.0 +0.7**
LON pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
LON Longmire 77.24 45 *e*P **P 22 33 23.0 +0.7**
comp=Z,5.4nm,0.8s,mb4.3
K02A Glendale 77.28 49⇓P **P 22 33 22.6 0.0**
baz=77
E05A Randle 77.33 45⇓P **P 22 33 22.6 -0.2**
baz=77
A07A Ashnola River, 77.46 42⇓P **P 22 33 23.4 0.0**
baz=77,SNR=6.9
H04A Detroit Lake 77.61 47⇑P **P 22 33 24.0 -0.3**
baz=78
HUMO Hull Mountain 77.70 49 *e*P **P 22 33 25.6 +0.6**
comp=Z,5.2nm,0.8s,mb4.3
I04A Tendick Farm, 77.72 48⇑P **P 22 33 24.7 -0.3**
baz=78
D06A Cle Elum 77.73 44⇑P **P 22 33 24.7 -0.3**
baz=78
TWW Teanaway 77.74 44 P **P 22 33 25.9 +0.9**
IRO Indian Ridge 77.77 47 P **P 22 33 25.9 +0.6**
B07A Winthrop 77.81 43⇓P **P 22 33 25.2 -0.2**
baz=78
E06A Yakima 77.85 45⇓P **P 22 33 25.5 -0.2**
baz=78
TBM Tatie Mountain 77.90 44 P **P 22 33 26.4 +0.5**
ETW Entiat 77.94 44 *e*P **P 22 33 26.5 +0.3**
N02C Big Bar 77.99 51⇑P **P 22 33 26.8 +0.2**
baz=78,SNR=6.0
J04A Umpqua Nationa 78.10 48⇓P **P 22 33 27.1 -0.1**
baz=78,SNR=5.2
YBH Yreka Blue Hor 78.14 50 P **P 22 33 27.5 +0.1**
comp=Z,9.2nm,0.9s,mb4.5,baz=355,slow=1.8,SNR=16
YBH Yreka Blue Hor 78.14 50 *e*P **P 22 33 27.8 +0.4**
YBH pmax pmax
comp=Z,16nm,1.2s
YBH Yreka Blue Hor 78.14 50⇓P **P 22 33 27.7 +0.3**
baz=78,SNR=7.0
YBH Yreka Blue Hor 78.14 50 *e*P **P 22 33 27.8 +0.4**
comp=Z,16nm,1.2s,mb4.6
M02C Callahan 78.14 50⇑P **P 22 33 27.3 -0.1**
baz=78
A08A Turner Farm, O 78.18 42⇓P **P 22 33 27.4 -0.1**
baz=78
BUOR Burton Butte 78.31 49 P **P 22 33 29.0 +0.8**
B08A Colville Reser 78.33 43⇑P **P 22 33 28.5 +0.2**
baz=78,SNR=9.1
O02C Red Bluff 78.57 51⇑P **P 22 33 30.1 +0.4**
baz=78
E07A Sunnyside 78.58 44⇑P **P 22 33 29.6 -0.1**
baz=78
L04A Klamath Falls 78.59 49⇓P **P 22 33 30.1 +0.3**
baz=78
A09A Danville 78.60 42⇑P **P 22 33 29.9 +0.2**
baz=78,SNR=7.2
WDC Whiskeytown Da 78.62 51 *e*P **P 22 33 30.5 +0.4**
WDC pmax pmax
comp=Z,19nm,1.5s,mb4.7
WDC Whiskeytown Da 78.62 51⇑P **P 22 33 30.0 0.0**
baz=78
WDC Whiskeytown Da 78.62 51 *e*P **P 22 33 30.5 +0.4**
comp=Z,19nm,1.5s,mb4.7
J05A Fort Rock 78.69 48⇑P **P 22 33 30.6 +0.2**
baz=79,SNR=12
C08A Higginbotham F 78.70 43⇓P **P 22 33 30.3 -0.1**
baz=79
M03C McCloud 78.70 50⇓P **P 22 33 30.7 +0.2**
baz=79,SNR=5.3
VIPM Ingram Point 78.73 47 P **P 22 33 31.4 +0.8**
M04C Macdoel 78.75 50⇑P **P 22 33 31.0 +0.2**
baz=79,SNR=10
GASB Alder Springs 78.78 52⇑P **P 22 33 31.1 +0.1**
baz=79
RSW Rattlesnake Hi 78.81 45 *e*P **P 22 33 31.7 +0.7**
H06A Lindquist Farm 78.85 46 P **P 22 33 31.6 +0.4**
baz=79,SNR=8.5
K05A Summer Lake 79.11 48⇓P **P 22 33 33.2 +0.5**
baz=79,SNR=13
G07A Ruggs Ranch, H 79.12 46⇑P **P 22 33 32.7 0.0**
baz=79
KEV Kevo 79.13 342 *ep* **P 22 33 31.2 -1.1**
comp=Z,2.1nm,0.4s,mb4.3
KEV Kevo 79.13 342 *e*P **P 22 33 31.2 -1.1**
KEV pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
FARB Farallon Islan 79.19 54⇓P **P 22 33 32.8 -0.4**
baz=79
A10A Northport 79.24 42⇑P **P 22 33 33.0 -0.2**
baz=79,SNR=7.1
L05A Lakeview 79.37 49⇑P **P 22 33 34.6 +0.5**
baz=79,SNR=5.7
M05C Lookout 79.38 50⇑P **P 22 33 33.9 -0.3**
baz=79,SNR=6.9
LBCM Butte Creek Ri 79.40 50 P **P 22 33 34.5 +0.2**
H07A Lands Inn, Kim 79.41 46⇓P **P 22 33 34.1 -0.2**
baz=79
D09A Jones Farm, Ri 79.42 44⇓P **P 22 33 34.3 0.0**
baz=79,SNR=6.7
J06A Christmas Vall 79.45 48⇓P **P 22 33 34.6 +0.1**
baz=79,SNR=6.2
K06A Valley Falls 79.53 48 P **P 22 33 35.2 +0.2**
baz=79,SNR=8.1
F08A Pendleton 79.54 45⇑P **P 22 33 35.5 +0.6**
baz=79,SNR=9.8
G08A Pilot Rock 79.59 45⇑P **P 22 33 35.1 -0.1**
baz=80,SNR=10.0
I07A Izee 79.62 47⇓P **P 22 33 35.5 +0.1**
baz=80
ARCES ARCESS Array B 79.69 342 P **P 22 33 34.8 -0.6**
comp=Z,5.1nm,0.5s,mb4.6,baz=71,slow=8.3,SNR=62
ARCES pP pP 22 33 59.6 -3.5
comp=Z,7.9nm,0.9s,baz=66,slow=8.1,SNR=2.6
ORV Oroville 79.70 52⇑P **P 22 33 35.9 -0.1**
baz=80,SNR=7.1
E09A Wood Farm, Sta 79.71 44⇓P **P 22 33 36.0 +0.1**
baz=80,SNR=7.0
NEW Newport 79.76 42 *e*P **P 22 33 36.2 +0.1**
NEW pmax pmax
comp=Z,15nm,1.0s
NEW Newport 79.76 42 *e*P **P 22 33 36.2 +0.1**
comp=Z,15nm,1.0s,mb4.8
O04C Chester 79.76 51⇑P **P 22 33 36.1 -0.2**
baz=80,SNR=12
MOD Modoc 79.80 49⇓P **P 22 33 36.0 -0.4**
baz=80,SNR=8.3
MOD Modoc 79.80 49 *e*P **P 22 33 36.7 +0.3**
comp=Z,18nm,1.2s,mb4.8
ELFS Eagle Lake Fie 79.92 50⇓P **P 22 33 36.5 -0.6**
baz=80,SNR=7.0
A11A Hall Mountain, 79.98 41⇑P **P 22 33 37.2 -0.1**
baz=80,SNR=7.8
J07A Hines 79.99 47⇑P **P 22 33 37.5 +0.1**
baz=80,SNR=6.7
H08A Prairie City 80.04 46⇓P **P 22 33 38.0 +0.3**
baz=80,SNR=6.6
B11A Sandpoint 80.17 42⇑P **P 22 33 38.2 -0.1**
baz=80,SNR=6.6
K07A Rock Creek Ran 80.27 48⇑P **P 22 33 38.8 -0.1**
baz=80,SNR=18
I08A Drewsey 80.32 47⇑P **P 22 33 39.1 -0.1**
baz=80,SNR=5.2
G09A Cove 80.37 45⇓P **P 22 33 39.5 0.0**
baz=80,SNR=6.6
A12A Yaak River Ran 80.43 41⇓P **P 22 33 40.2 +0.6**
baz=80,SNR=6.9
L07A Adell 80.43 49⇑P **P 22 33 39.9 0.0**
baz=80,SNR=19
BEKR Beckwourth 80.43 51⇑P **P 22 33 39.6 -0.3**
baz=80,SNR=16
C11A Tepee Creek (N 80.45 42⇑P **P 22 33 39.3 -0.5**
baz=80,SNR=6.5
F10A Beach Ranch, E 80.49 44⇑P **P 22 33 40.1 0.0**
baz=80
N06A Buffalo Meadow 80.51 50⇓P **P 22 33 40.1 -0.2**
baz=80,SNR=7.4
LAVA Lava Cap Winer 80.53 52⇑P **P 22 33 40.2 -0.2**
baz=80,SNR=6.2
J08A Circle Bar Ran 80.57 47⇑P **P 22 33 40.7 +0.1**
baz=80,SNR=13
D11A Klaveano Farm, 80.69 43⇓P **P 22 33 40.8 -0.2**
baz=80,SNR=8.9
O06A Flanigan 80.72 51⇑P **P 22 33 41.4 0.0**
baz=81,SNR=14
M07A Soldier Meadow 80.77 49⇓P **P 22 33 41.7 0.0**
baz=81,SNR=7.8
K08A Mann Creek Ran 80.78 48⇑P **P 22 33 41.4 -0.3**
baz=81,SNR=7.6
G10A Bishop Farm, J 80.80 45⇑P **P 22 33 41.3 -0.5**
baz=81,SNR=13
BMO Blue Mountains 80.84 45 *e*P **P 22 33 42.2 +0.3**
BMO pmax pmax
comp=Z,13nm,1.1s,mb4.7
BMO Blue Mountains 80.84 45 *e*P **P 22 33 42.2 +0.3**
comp=Z,13nm,1.1s,mb4.7
E11A Bogner Ranch, 81.02 44⇓P **P 22 33 42.4 -0.5**
baz=81,SNR=6.8
CMB Columbia Colle 81.03 53 *e*P **P 22 33 43.2 +0.1**
CMB pmax pmax
comp=Z,30nm,1.3s,mb5.0
CMB Columbia Colle 81.03 53⇓P **P 22 33 43.1 0.0**
baz=81,SNR=17
CMB Columbia Colle 81.03 53 *e*P **P 22 33 43.2 +0.1**
comp=Z,30nm,1.3s,mb5.0
J09A Fry Pan Ranch, 81.07 47⇓P **P 22 33 43.2 0.0**
baz=81,SNR=11
L08A Fields 81.07 48⇑P **P 22 33 43.5 +0.3**
baz=81,SNR=15
N07B Gerlach 81.12 50⇑P **P 22 33 43.5 0.0**
baz=81,SNR=8.5
JOF Joensuu 81.21 335 *ep* **P 22 33 41.4 -2.1**
comp=Z,7.0nm,0.4s,mb4.8
F11A Grangeville 81.22 44⇑P **P 22 33 43.6 -0.4**
baz=81,SNR=7.4
H10A Noah's Angus R 81.30 46⇓P **P 22 33 43.6 -0.8**
baz=81,SNR=9.3
D12A Red Ives Fores 81.31 43⇑P **P 22 33 44.0 -0.4**
baz=81
K09A Rome 81.32 48⇑P **P 22 33 44.3 -0.3**
baz=81,SNR=9.1
G11A Walters Elk Ra 81.33 45⇑P **P 22 33 44.1 -0.4**
baz=81,SNR=16
B13A Whitefish 81.37 41⇑P **P 22 33 44.4 -0.3**
baz=81,SNR=7.2
O07A Toulon 81.40 50⇓P **P 22 33 44.4 -0.6**
baz=81,SNR=6.8
E12A Beaver Dam Sad 81.41 44⇑P **P 22 33 44.5 -0.4**
baz=81,SNR=8.1
WALA Waterton Lakes 81.45 41 *e*P **P 22 33 45.8 +0.7**
comp=Z,16nm,1.3s,mb4.7
S06C San Francisco 81.48 53⇓P **P 22 33 45.3 -0.2**
baz=81
R06C Coleville 81.56 52⇑P **P 22 33 45.7 -0.2**
baz=81
N08A GE Springer Mi 81.71 50⇑P **P 22 33 46.4 -0.2**
baz=82,SNR=8.5
H11A Donnelly 81.75 45⇓P **P 22 33 46.4 -0.3**
baz=82,SNR=11
A14A Double T Ranch 81.78 41⇓P **P 22 33 46.3 -0.6**
baz=82
F12A Elk City 81.86 44⇓P **P 22 33 47.1 -0.2**
baz=82
D13A Huson 81.86 43⇑P **P 22 33 47.1 -0.2**
baz=82
O08A Rochester Mine 81.87 50⇓P **P 22 33 47.3 -0.2**
baz=82,SNR=9.5
K10A MacKenzie Ranc 81.88 47⇑P **P 22 33 47.6 +0.1**
baz=82,SNR=8.6
T06C Millerton Lake 81.89 54⇑P **P 22 33 47.3 -0.3**
baz=82,SNR=15
R07C Lee Vining 82.00 52⇑P **P 22 33 48.5 +0.2**
baz=82,SNR=9.1
C14A Swan Lake 82.05 42⇑P **P 22 33 47.9 -0.4**
baz=82
KCC Kaiser Creek 82.07 53⇓P **P 22 33 47.8 -0.8**
baz=82,SNR=6.9
B14A Marquette Ranc 82.11 41⇑P **P 22 33 48.1 -0.5**
baz=82,SNR=6.8
N09A Rock Creek Ran 82.12 49⇑P **P 22 33 48.3 -0.5**
baz=82
A15A Johnson Ranch, 82.19 40⇓P **P 22 33 48.3 -0.7**
baz=82,SNR=7.7
E13A Victor 82.28 43⇑P **P 22 33 49.3 -0.2**
baz=82
MFID Camas Ranch 82.35 46⇓P **P 22 33 50.1 +0.1**
baz=82,SNR=8.7
L10A Juniper Basin 82.41 48⇑P **P 22 33 50.2 -0.1**
baz=82,SNR=5.0
NVAR Mina Array Bea 82.43 52 P **P 22 33 51.0 +0.6**
comp=Z,9.9nm,0.7s,mb4.8,baz=278,slow=5.7,SNR=27
F13A Darby 82.44 44⇓P **P 22 33 49.6 -0.7**
baz=82,SNR=7.9
K11A Parker Ranch, 82.45 47⇑P **P 22 33 50.0 -0.5**
baz=82
OBN Obninsk 82.50 327⇑ *e*P **P 22 33 49.9 -0.6**
OBN 22 44 00.0
OBN pmax pmax
comp=Z,9.0nm,1.3s,mb4.4
HELL Mitchell Peak 82.52 54⇑P **P 22 33 50.5 -0.5**
baz=82,SNR=6.8
Q08A Gabbs 82.55 51⇑P **P 22 33 50.7 -0.4**
baz=82
B15A Bradely Ranch, 82.56 41⇑P **P 22 33 50.1 -0.8**
baz=82,SNR=6.4
M10A I.L. Ranch, Tu 82.57 48⇑P **P 22 33 51.3 +0.2**
baz=82
H12A Diamond D Ranc 82.57 45⇓P **P 22 33 50.5 -0.6**
baz=82,SNR=5.7
O09A Fish Creek Ran 82.61 50⇓P **P 22 33 51.2 -0.1**
baz=82,SNR=5.9
MTUM Tungsten Hills 82.62 53 *e*P **P 22 33 52.0 +0.5**
I12A Atlanta 82.68 46⇑P **P 22 33 51.7 +0.1**
baz=82
C15A Salmond Ranch, 82.75 42⇓P **P 22 33 51.9 0.0**
baz=83,SNR=6.5
G13A Cobalt 82.77 44⇑P **P 22 33 51.6 -0.5**
baz=83,SNR=16
VSR Storozhevoye 82.79 322 *e*P **P 22 33 50.8 -1.2**
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8

VSR					pmax	pmax			
	comp=N,6.0nm,0.9s								
VSR					pmax	pmax			
	comp=E,10.0nm,0.8s								
S08C	**White Mtn Res**	**82.86**	**53**	⇑P	**P**		**22 33 53.1**	**+0.4**	
	baz=83,SNR=11								
L11A	**Cat Creek Ranc**	**82.87**	**48**	⇑P	**P**		**22 33 52.7**	**0.0**	
	baz=83								
A16A	**West Butte Ran**	**82.89**	**40**	⇓P	**P**		**22 33 52.4**	**-0.2**	
	baz=83,SNR=9.1								
B16A	**M & M Farms, S**	**83.04**	**41**	⇓P	**P**		**22 33 53.5**	**0.0**	
	baz=83								
HLID	**Hailey**	**83.25**	**46**	⇑P	**P**		**22 33 54.7**	**+0.1**	
	baz=83,SNR=6.3								
HLID	**Hailey**	**83.25**	**46**	*e*P	**P**		**22 33 54.8**	**+0.2**	
	comp=E,7.1nm,1.3s,mb4.3								
C16A	**Fuhringer Ranc**	**83.27**	**41**	⇓P	**P**		**22 33 54.4**	**-0.2**	
	baz=83,SNR=6.9								
E15A	**Deer Lodge**	**83.27**	**43**	⇓P	**P**		**22 33 54.2**	**-0.4**	
	baz=83,SNR=6.4								
L12A	**House Creek Ra**	**83.39**	**47**	⇑P	**P**		**22 33 55.8**	**+0.5**	
	baz=83,SNR=5.7								
R09A	**Tonopah**	**83.40**	**52**	⇑P	**P**		**22 33 55.6**	**+0.1**	
	baz=83,SNR=10								
J13A	**Cove Ranch, Pi**	**83.47**	**46**	⇓P	**P**		**22 33 55.6**	**-0.1**	
	baz=83,SNR=5.6								
S09A	**Goldfield**	**83.48**	**52**	⇑P	**P**		**22 33 55.9**	**0.0**	
	baz=83,SNR=9.0								
H14A	**Leadore**	**83.53**	**45**	⇑P	**P**		**22 33 56.0**	**0.0**	
	baz=83,SNR=6.2								
KIV	**Kislovodsk**	**83.58**	**315**	*ce*P	**P**		**22 33 57.6**	**+1.3**	
KIV							22 43 53.0		
KIV				*e*SSS			22 53 04.4		
KIV				pmax	pmax				
	comp=Z,16nm,0.8s,mb4.9								
KIV	**Kislovodsk**	**83.58**	**315**	*e*P	**P**		**22 33 56.5**	**+0.2**	
	comp=Z,31nm,1.0s,mb5.1								
F15A	**Butte**	**83.60**	**43**	⇑P	**P**		**22 33 56.4**	**+0.1**	
	baz=83,SNR=9.5								
KAF	**Kangasniemi**	**83.60**	**335**	*e*p	**P**		**22 33 53.6**	**-2.4**	
	comp=Z,3.0nm,4.0s,mb4.5,baz=54,slow=4.8								
KAF	**Kangasniemi**	**83.60**	**335**	*e*P	**P**		**22 33 53.6**	**-2.4**	
KAF				pmax	pmax				
	comp=Z,3.0nm,0.4s,mb4.5								
GNI	**Garni**	**83.65**	**311**	P	**P**		**22 33 58.4**	**+1.7**	
	comp=Z,7.1nm,0.8s,mb4.6,baz=22,slow=5.2,SNR=5.7								
HRY	**Holter Researc**	**83.67**	**42**	*e*P	**P**		**22 33 56.9**	**+0.3**	
Q10A	**Clear Creek Ra**	**83.67**	**51**	⇑P	**P**		**22 33 56.5**	**-0.3**	
	baz=84								
O11A	**Cowboy Ranch,**	**83.71**	**49**	⇓P	**P**		**22 33 57.2**	**+0.2**	
	baz=84								
D16A	**Dana Ranch, Ca**	**83.71**	**42**	⇓P	**P**		**22 33 56.9**	**+0.1**	
	baz=84								
DLMT	**Dillon**	**83.73**	**44**	*e*P	**P**		**22 33 57.2**	**+0.2**	
	comp=Z,4.1nm,1.0s,mb4.2								
I14A	**Mackay**	**83.74**	**45**	⇑P	**P**		**22 33 57.7**	**+0.5**	
	baz=84,SNR=7.2								
ELK	**Elko**	**83.77**	**49**	P	**P**		**22 33 57.8**	**+0.5**	
	comp=Z,4.1nm,0.6s,mb4.4,baz=297,slow=4.7,SNR=14								
ELK	**Elko**	**83.77**	**49**	*e*P	**P**		**22 33 57.7**	**+0.4**	
ELK				pmax	pmax				
	comp=Z,16nm,1.4s								
ELK	**Elko**	**83.77**	**49**	*e*P	**P**		**22 33 57.7**	**+0.4**	
	comp=Z,16nm,1.4s,mb4.7								
MCMT	**McKenzie Canyo**	**83.78**	**44**	*e*P	**P**		**22 33 57.7**	**+0.4**	
E16A	**East Helena**	**83.84**	**42**	⇓P	**P**		**22 33 57.1**	**-0.4**	
	baz=84								
S10A	**Tonopah Range,**	**83.87**	**52**	⇓P	**P**		**22 33 58.2**	**+0.3**	
	baz=84,SNR=11								
G15A	**Dillon**	**83.88**	**44**	⇓P	**P**		**22 33 57.0**	**-0.7**	
	baz=84								
MPMC	**Manual Prospec**	**83.90**	**54**	⇓P	**P**		**22 33 58.0**	**-0.1**	
	baz=84,SNR=10								
J14A	**Carey**	**83.94**	**46**	⇓P	**P**		**22 33 58.6**	**+0.5**	
	baz=84,SNR=9.9								
C17A	**Wharram Farm,**	**83.94**	**41**	⇑P	**P**		**22 33 57.5**	**-0.6**	
	baz=84								
LRMC	**Laurel Mountai**	**83.96**	**54**	⇑P	**P**		**22 33 58.4**	**0.0**	
	baz=84,SNR=9.9								
H15A	**Lima**	**84.00**	**44**	⇑P	**P**		**22 33 58.6**	**+0.2**	
	baz=84								
FURC	**Furnace Creek,**	**84.22**	**53**	⇑P	**P**		**22 33 59.1**	**-0.6**	
	baz=84,SNR=6.9								
M13A	**Montello**	**84.28**	**48**	⇓P	**P**		**22 34 00.3**	**+0.4**	
	baz=84,SNR=7.2								
G16A	**Moss Hill, Enn**	**84.29**	**44**	⇓P	**P**		**22 33 59.4**	**-0.5**	
	baz=84								
O12A	**Currie**	**84.30**	**49**	⇓P	**P**		**22 33 59.7**	**-0.3**	
	baz=84,SNR=6.6								
E17A	**Martinsdale**	**84.38**	**42**	⇑P	**P**		**22 34 00.2**	**-0.1**	
	baz=84								
R11A	**Troy Canyon, C**	**84.44**	**51**	⇓P	**P**		**22 34 00.5**	**-0.2**	
	baz=84,SNR=6.9								
TPNV	**Topopah Spring**	**84.49**	**53**	*e*P	**P**		**22 34 01.3**	**+0.3**	
TPNV				pmax	pmax				
	comp=Z,6.0nm,0.5s,mb4.7								
TPNV	**Topopah Spring**	**84.49**	**53**	⇑P	**P**		**22 34 01.1**	**0.0**	
	baz=84,SNR=8.1								
TPNV	**Topopah Spring**	**84.49**	**53**	*e*P	**P**		**22 34 01.3**	**+0.2**	
	comp=Z,6.3nm,0.5s,mb4.7								
P12A	**McGill**	**84.50**	**50**	⇓P	**P**		**22 34 01.4**	**+0.4**	
	baz=84								
S11A	**Rachel**	**84.59**	**52**	⇑P	**P**		**22 34 01.7**	**+0.1**	
	baz=84								
U10A	**Ash Meadows, A**	**84.63**	**53**	⇓P	**P**		**22 34 02.1**	**+0.3**	
	baz=84,SNR=6.6								
J15A	**Blackfoot**	**84.63**	**45**	⇑P	**P**		**22 34 00.8**	**-0.8**	
	baz=84,SNR=14								
L14A	**Malta**	**84.64**	**47**	⇓P	**P**		**22 34 01.9**	**+0.2**	
	baz=84,SNR=5.6								
GSC	**Goldstone**	**84.70**	**54**	*e*P	**P**		**22 34 02.1**	**0.0**	
GSC				pmax	pmax				
	comp=Z,4.0nm,0.6s,mb4.5								
GSC	**Goldstone**	**84.70**	**54**	⇓P	**P**		**22 34 01.9**	**-0.2**	
	baz=85,SNR=6.5								
GSC	**Goldstone**	**84.70**	**54**	*e*P	**P**		**22 34 02.1**	**0.0**	
	comp=Z,3.8nm,0.6s,mb4.5								
QLMT	**Earthquake Lak**	**84.70**	**44**	*e*P	**P**		**22 34 02.8**	**+0.8**	
Q12A	**Willow Creek R**	**84.72**	**50**	⇑P	**P**		**22 34 01.9**	**-0.2**	
	baz=85								
M14A	**Sheep Mountain**	**84.78**	**48**	⇑P	**P**		**22 34 02.8**	**+0.4**	
	baz=85,SNR=8.6								
H16A	**Russell Place,**	**84.87**	**44**	⇓P	**P**		**22 34 03.2**	**+0.4**	
	baz=85,SNR=7.4								
E18A	**Harlowton**	**84.92**	**42**	⇑P	**P**		**22 34 03.3**	**+0.3**	
	baz=85								
YMR	**Madison River**	**85.07**	**44**	*e*P	**P**		**22 34 04.8**	**+1.0**	
	comp=Z,34nm,0.4s,mb5.6								
P13A	**Bates Ranch, G**	**85.14**	**50**	⇓P	**P**		**22 34 04.4**	**+0.1**	
	baz=85,SNR=8.3								
T11A	**Corn Creek, Al**	**85.14**	**52**	⇑P	**P**		**22 34 04.3**	**0.0**	
	baz=85,SNR=5.5								
N14A	**Grayback Hills**	**85.16**	**48**	⇑P	**P**		**22 34 04.3**	**0.0**	
	baz=85								
R12A	**Pony Springs,**	**85.16**	**51**	⇓P	**P**		**22 34 04.3**	**0.0**	
	baz=85,SNR=5.3								
J16A	**Bone**	**85.23**	**45**	⇓P	**P**		**22 34 04.3**	**-0.3**	
	baz=85,SNR=7.7								
L15A	**Malad City**	**85.24**	**47**	⇓P	**P**		**22 34 04.6**	**-0.1**	
	baz=85,SNR=5.4								
TUQ	**Turquoise Moun**	**85.31**	**54**	⇑P	**P**		**22 34 05.3**	**+0.1**	
	baz=85								
F18A	**Big Timber**	**85.33**	**42**	⇓P	**P**		**22 34 04.8**	**-0.3**	
	baz=85								
UMR	**Umm Al-Rimmam**	**85.35**	**300**	*e*P	**P**		**22 34 05.1**	**-0.4**	
	baz=305								
UMR				AMb	AMB		22 34 06.3		
	comp=Z,62nm,0.7s,mb5.7,baz=305								
UMR	**Umm Al-Rimmam**	**85.35**	**300**	*e*P	**P**		**22 34 04.9**	**-0.6**	
	baz=300								
UMR				AMb	AMB		22 34 06.3		
	comp=Z,63nm,0.7s,mb5.7,baz=300								
RRI2	**Red Ridge**	**85.39**	**45**	*e*P	**P**		**22 34 06.0**	**+0.6**	
	comp=Z,6.0nm,0.6s,mb4.7								
FFC	**Flin Flon**	**85.52**	**32**	*e*P	**P**		**22 34 06.0**	**+0.2**	
FFC				pmax	pmax				
	comp=Z,18nm,1.0s,mb5.0								
FFC	**Flin Flon**	**85.52**	**32**	*e*P	**P**		**22 34 06.0**	**+0.2**	
	comp=Z,18nm,1.0s,mb4.9								
MIB	**Mutribah**	**85.56**	**300**	*e*P	**P**		**22 34 06.0**	**-0.5**	
	baz=305								
MIB				AMb	AMB		22 34 07.1		
	comp=Z,187nm,0.6s,baz=305								
MIB	**Mutribah**	**85.56**	**300**	*e*P	**P**		**22 34 05.9**	**-0.6**	
	baz=300								
MIB				AMb	AMB		22 34 07.1		
	comp=Z,187nm,0.6s,baz=300								
TPAW	**Teton Pass**	**85.58**	**45**	*e*P	**P**		**22 34 07.2**	**+0.8**	
	comp=Z,3.2nm,0.6s,mb4.4								
PFO	**Pinyon Flat Ob**	**85.61**	**56**	P	**P**		**22 34 05.8**	**-0.9**	
	comp=Z,3.0nm,0.6s,mb4.4,baz=234,slow=4.3,SNR=5.3								
PFO	**Pinyon Flat Ob**	**85.61**	**56**	⇑P	**P**		**22 34 06.0**	**-0.7**	
	baz=86								
R13A	**O'Grain Ranch,**	**85.68**	**51**	⇑P	**P**		**22 34 07.4**	**+0.4**	
	baz=86								
DUG	**Dugway**	**85.69**	**49**	*e*P	**P**		**22 34 07.1**	**+0.2**	
DUG				pmax	pmax				
	comp=Z,5.0nm,0.6s,mb4.6								
DUG	**Dugway**	**85.69**	**49**	⇓P	**P**		**22 34 07.0**	**0.0**	
	baz=86,SNR=13								
DUG	**Dugway**	**85.69**	**49**	*e*P	**P**		**22 34 07.1**	**+0.2**	
	comp=Z,5.3nm,0.6s,mb4.7								
RDF	**Al-Radifah**	**85.71**	**299**	*e*P	**P**		**22 34 06.5**	**-0.8**	
	baz=304								
RDF				AMb	AMB		22 34 08.6		
	comp=Z,47nm,0.6s,mb5.6,baz=304								
RDF	**Al-Radifah**	**85.71**	**299**	*e*P	**P**		**22 34 06.3**	**-1.0**	
	baz=299								
RDF				AMb	AMB		22 34 08.6		
	comp=Z,47nm,0.6s,mb5.6,baz=299								
P14A	**Drum Mountains**	**85.75**	**49**	⇑P	**P**		**22 34 07.1**	**-0.2**	
	baz=86,SNR=9.8								
LOHW	**Long Hollow**	**85.75**	**45**	*e*P	**P**		**22 34 07.5**	**+0.3**	
	comp=Z,2.9nm,0.6s,mb4.4								
GMRC	**Granite Mounta**	**85.77**	**54**	⇓P	**P**		**22 34 07.3**	**-0.2**	
	baz=86								
BELC	**Belle Mtn.**	**85.81**	**55**	⇓P	**P**		**22 34 07.0**	**-0.6**	
	baz=86								
NAY	**Al-Naaiem**	**85.84**	**300**	*e*P	**P**		**22 34 07.3**	**-0.6**	
	baz=305								
NAY				AMb	AMB		22 34 08.4		
	comp=Z,73nm,0.6s,mb5.8,baz=305								
NAY	**Al-Naaiem**	**85.84**	**300**	*e*P	**P**		**22 34 07.1**	**-0.8**	
	baz=300								
NAY				AMb	AMB		22 34 08.4		
	comp=Z,73nm,0.6s,mb5.8,baz=300								
Q14A	**Sevier Lake (B**	**85.85**	**50**	⇓P	**P**		**22 34 07.5**	**-0.3**	
	baz=86,SNR=15								
RST	**Umm Al-Ruwaisa**	**85.95**	**300**	*e*P	**P**		**22 34 07.3**	**-1.1**	
	baz=305								
RST				AMb	AMB		22 34 08.7		
	comp=Z,78nm,0.6s,mb5.8,baz=305								
RST	**Umm Al-Ruwaisa**	**85.95**	**300**	*e*P	**P**		**22 34 07.1**	**-1.3**	
	baz=300								
RST				AMb	AMB		22 34 08.7		
	comp=Z,78nm,0.6s,mb5.8,baz=300								
RLMT	**Red Lodge**	**85.96**	**43**	*e*P	**P**		**22 34 09.0**	**+0.8**	
	comp=Z,8.8nm,0.6s,mb4.9								
S13A	**Holt Ranch, En**	**86.00**	**51**	⇑P	**P**		**22 34 08.8**	**+0.3**	
	baz=86								
V12A	**Nelson**	**86.00**	**53**	⇑P	**P**		**22 34 08.3**	**-0.3**	
	baz=86,SNR=6.1								
T13A	**Saint George**	**86.19**	**52**	⇑P	**P**		**22 34 08.9**	**-0.6**	
	baz=86,SNR=5.1								
ARUT	**Antelope Range**	**86.22**	**51**	*e*P	**P**		**22 34 10.3**	**+0.7**	
BC3	**Big Chuckw Mtn**	**86.36**	**55**	⇑P	**P**		**22 34 09.8**	**-0.6**	
	baz=86,SNR=6.0								
U13A	**Pakoon Wash**	**86.39**	**52**	⇓P	**P**		**22 34 10.2**	**-0.3**	
	baz=86,SNR=7.7								
JLU	**Jordanelle**	**86.46**	**48**	*e*P	**P**		**22 34 10.8**	**0.0**	
V13A	**Grand Canyon W**	**86.60**	**53**	⇑P	**P**		**22 34 11.1**	**-0.5**	
	baz=87,SNR=5.3								
DAU	**Daniels Canyon**	**86.68**	**48**	*e*P	**P**		**22 34 12.6**	**+0.8**	
PDAR	**Pinedale Array**	**86.81**	**45**	P	**P**		**22 34 12.3**	**-0.1**	
	comp=Z,1.0nm,0.4s,mb4.1,baz=246,slow=1.5,SNR=6.9								
PDAR				PKKPbc	PKKPbc		22 52 06.2	-0.2	
	comp=Z,0.4nm,0.2s,baz=29,slow=3.4,SNR=4.3								
MSU	**Marysvale**	**86.83**	**50**	*e*P	**P**		**22 34 13.1**	**+0.5**	
U14A	**Mt Trumbull**	**86.97**	**52**	⇑P	**P**		**22 34 13.2**	**-0.1**	
	baz=87								
W13A	**Hualapai Mount**	**86.98**	**54**	⇓P	**P**		**22 34 13.5**	**+0.2**	
	baz=87								
GLA	**Glamis**	**87.08**	**56**	⇓P	**P**		**22 34 13.4**	**-0.6**	
	baz=87								
O17A	**Robinson Place**	**87.13**	**48**	P	**P**		**22 34 14.3**	**+0.3**	
	baz=87,SNR=7.3								
X13A	**Yucca**	**87.22**	**54**	⇓P	**P**		**22 34 14.8**	**+0.2**	
	baz=87,SNR=5.4								
V14A	**Boquillas Ranc**	**87.34**	**53**	⇓P	**P**		**22 34 15.4**	**+0.2**	
	baz=87,SNR=7.8								
Q16A	**Castle Valley**	**87.37**	**49**	⇑P	**P**		**22 34 15.6**	**+0.4**	
	baz=87								
W14A	**Seligman**	**87.53**	**53**	⇓P	**P**		**22 34 16.8**	**+0.7**	
	baz=87,SNR=7.9								
Y13A	**Salome**	**87.54**	**55**	⇓P	**P**		**22 34 16.5**	**+0.4**	
	baz=87								
SRU	**San Rafael**	**87.75**	**49**	*e*P	**P**		**22 34 17.3**	**+0.3**	
SRU				pmax	pmax				
	comp=Z,4.0nm,0.4s,mb4.8								
SRU	**San Rafael**	**87.75**	**49**	⇑P	**P**		**22 34 16.7**	**-0.3**	
	baz=88								
SRU	**San Rafael**	**87.75**	**49**	*e*P	**P**		**22 34 17.3**	**+0.3**	
	comp=Z,4.3nm,0.4s,mb4.8								
X14A	**Yava**	**87.98**	**54**	⇑P	**P**		**22 34 19.0**	**+0.8**	
	baz=88,SNR=6.9								
113A	**Mohawk Valley,**	**88.01**	**56**	⇓P	**P**		**22 34 17.7**	**-0.7**	
	baz=88								
Y14A	**Wickenburg**	**88.11**	**54**	⇑P	**P**		**22 34 18.5**	**-0.3**	
	baz=88,SNR=18								
Z14A	**Wintersburg**	**88.40**	**55**	⇑P	**P**		**22 34 20.2**	**0.0**	
	baz=88								
X15A	**Humboldt**	**88.47**	**54**	⇓P	**P**		**22 34 20.9**	**+0.4**	
	baz=88,SNR=9.9								
AKASG	**Malin Array Be**	**88.55**	**325**	P	**P**		**22 34 18.6**	**-1.9**	
	comp=Z,0.9nm,0.4s,mb4.2,baz=50,slow=5.0,SNR=9.3								
RWWY	**Rawlins**	**88.85**	**45**	*e*P	**P**		**22 34 22.6**	**+0.5**	
	comp=Z,24nm,0.8s,mb5.3								
MALT	**Malatya**	**88.87**	**311**	*e*P	**P**		**22 34 21.5**	**-0.8**	
MALT				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.5								
MALT	**Malatya**	**88.87**	**311**	*e*P	**P**		**22 34 21.5**	**-0.8**	
	comp=Z,4.1nm,0.8s,mb4.5								
115A	**Sonoran Desert**	**89.22**	**55**	⇓P	**P**		**22 34 24.1**	**0.0**	
	baz=89								
SUW	**Suwalki**	**89.70**	**330**	*e*P	**P**		**22 34 24.2**	**-1.6**	
NB2	**NORSAR Subarra**	**89.76**	**339**	P	**P**		**22 34 23.8**	**-2.2**	
	comp=Z,3.0nm,0.8s,mb4.5,baz=43,slow=5.1								
NOA	**NORSAR Array B**	**89.76**	**339**	P	**P**		**22 34 24.1**	**-1.9**	
	comp=Z,1.1nm,0.7s,mb4.1,baz=48,slow=4.6,SNR=8.0								
ISCO	**Idaho Springs**	**90.81**	**46**	*e*P	**P**		**22 34 32.1**	**+0.8**	
ISCO				pmax	pmax				
	comp=Z,8.0nm,1.3s,mb4.7								
ISCO	**Idaho Springs**	**90.81**	**46**	*e*P	**P**		**22 34 32.1**	**+0.7**	
	comp=Z,7.9nm,1.3s,mb4.7								
218A	**Dragoon**	**91.20**	**55**	⇓P	**P**		**22 34 33.5**	**+0.2**	
	baz=91								
318A	**Bisbee**	**91.47**	**55**	⇑P	**P**		**22 34 35.0**	**+0.5**	
	baz=91								
BR131	**Keskin Array S**	**91.51**	**314**	*e*P	**P**		**22 34 33.9**	**-0.7**	
	comp=Z,2.1nm,0.6s,mb4.5								
219A	**White Tail Can**	**91.79**	**55**	⇑P	**P**		**22 34 35.9**	**-0.1**	
	baz=92								
ANMO	**Albuquerque**	**92.52**	**51**	*e*P	**P**		**22 34 38.9**	**-0.5**	
ANMO				pmax	pmax				
	comp=Z,3.0nm,1.0s								
ANMO	**Albuquerque**	**92.52**	**51**	*e*P	**P**		**22 34 38.9**	**-0.5**	
	comp=Z,3.2nm,1.0s,mb4.6								
KWP	**Kalwaria**	**92.59**	**326**	*e*P	**P**		**22 34 38.7**	**-0.6**	
KWP	**Kalwaria**	**92.59**	**326**	*e*P	**P**		**22 34 38.7**	**-0.6**	
ASF	**Jabal al Asfar**	**92.75**	**306**	P	**P**		**22 34 38.5**	**-2.0**	
	comp=Z,0.6nm,0.4s,mb4.3,baz=256,slow=4.2,SNR=2.7								
MMAI	**Mount Meron Ar**	**93.47**	**307**	P	**P**		**22 34 43.6**	**-0.2**	
	comp=Z,1.1nm,0.5s,mb4.5,baz=44,slow=6.1,SNR=6.0								
TXAR	**Lajitas Array**	**97.29**	**55**	P	**P**		**22 35 01.4**	**+0.1**	
	comp=Z,0.3nm,0.5s,mb4.0,baz=282,slow=2.8,SNR=7.5								
TXAR				PKKPbc	PKKPbc		22 51 40.2	+0.8	
	comp=Z,0.5nm,0.8s,baz=130,slow=5.6,SNR=5.7								
TXAR				LR	LR		23 13 59.1		
	comp=Z,110nm,18.9s,baz=160,slow=32								
GERES	**GERESS Array B**	**97.56**	**330**	P	**P**		**22 35 01.0**	**-1.0**	
	comp=Z,0.4nm,0.7s,mb4.1,baz=12,slow=6.8,SNR=4.3								
LSZ	**Lusaka**	**119.57**	**264**	*e*PKIKP	PKPdf		22 40 17.9	+0.1	
BOSA	**Boshof**	**124.93**	**249**	PKP	PKPdf		22 40 27.9	+0.1	
	comp=Z,7.6nm,1.1s,baz=64,slow=4.2,SNR=5.3								
SNAA	**Sanae**	**126.22**	**192**	*e*PKPdf	PKPdf		22 40 29.3	+0.3	
SNAA				*e*			22 40 31.4		
SNAA				*e*			22 40 59.2		
VNA2	**Neumayer--Watz**	**127.69**	**191**	*e*PKPdf	PKPdf		22 40 32.8	+1.0	
	baz=195,slow=0.8								
VNA2				*e*			22 40 35.0		
VNA2				*e*			22 41 03.4		
VNA3	**Neumayer Olymp**	**127.82**	**190**	*e*PKPdf	PKPdf		22 40 31.7	-0.4	
VNA3				*e*			22 40 33.7		
VNA3				*e*			22 41 02.8		
TORD	**Torodi Ar. Bea**	**129.95**	**310**	SKPbc			22 43 48.9		
	comp=Z,2.2nm,0.7s,baz=27,slow=3.1,SNR=8.5								
DBIC	**Dimbokro**	**139.06**	**309**	SKPbc	SKPbc		22 44 18.7	-1.5	
	comp=Z,3.2nm,0.7s,baz=52,slow=8.3,SNR=7.9								
PLCA	**Paso Flores**	**144.57**	**131**	PKP	PKPdf		22 41 03.0	-0.9	
	comp=Z,11nm,0.7s,baz=234,slow=3.1,SNR=25								
PLCA				SKPbc	SKPbc		22 44 35.0	+1.7	
	comp=Z,1.7nm,0.7s,baz=263,slow=3.6,SNR=4.0								
LCO	**Las Campanas**	**147.31**	**111**	*e*PKPbc	PKPbc		22 41 11.7	+0.2	
LPAZ	**La Paz**	**148.74**	**86**	PKPbc	PKPbc		22 41 15.9	+0.4	
	comp=Z,4.9nm,0.5s,baz=20,slow=5.9,SNR=15								
LPAZ	**La Paz**	**148.74**	**86**	*e*PKPbc	PKPbc		22 41 16.6	+1.1	
CFAA	**Coronel Fontan**	**149.04**	**116**	PKPbc	PKPbc		22 41 16.4	+0.5	
	comp=Z,0.6nm,0.4s,baz=258,slow=2.9,SNR=6.9								
SIV	**San Ignacio**	**155.22**	**82**	PKPab	PKPab		22 41 45.0	-1.7	
	comp=Z,0.8nm,0.6s,baz=259,slow=3.4,SNR=3.7								

IDC 29 22:28:54.7±1.9, 2012S×6877W, h108km±17km, mb3.3/2, mb1 3.5/6, mb1mx3.3/20, mbtmp3.4/6, Error ellipse: s-maj=44.0km s-min=14.0km az=104.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**2.48**	**183**	P		Pn	22 29 34.1	+0.3
	19nm,0.3s,baz=0.2,slow=9.3,SNR=65							
LVC				S		Sn	22 30 04.6	+0.8
	52nm,0.3s,baz=136,slow=21,SNR=29							
LPAZ	**La Paz**	**3.86**	**9**	P		Pn	22 29 53.2	+1.0
	1.4nm,0.3s,baz=192,slow=7.9,SNR=44							
SIV	**San Ignacio**	**8.39**	**62**	P		Pn	22 30 53.4	-0.1
	1.1nm,0.3s,baz=268,slow=9.9,SNR=16							
CPUP	**Villa Florida**	**12.20**	**123**	P		Pn	22 31 46.0	+1.3
	1.2nm,0.3s,baz=284,slow=11,SNR=13							
PLCA	**Paso Flores**	**20.60**	**184**	P		P	22 33 26.9	+1.8
	2.1nm,1.1s,baz=359,slow=14,SNR=5.0							
TORD	**Torodi Ar. Bea**	**76.77**	**71**	P		P	22 40 34.4	-0.5
	0.5nm,0.6s,baz=258,slow=5.1,SNR=9.3							

IDC 29 22:30:08.6±2.8, 5445S×15275E, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.0/17, mbtmp4.0/8, MS3.8/1, Ms1 3.8/1, ms1mx2.7/29, Error ellipse: s-maj=79.0km s-min=25.2km az=112.0
ISCJB 29 22:30:13.6±0.7, 53S±0.1×15243E±0.09, h33km, mb4.0/10, Error ellipse: s-maj=15.0km s-min=12.9km az=15.6
NEIC 29 22:30:15.9±2.2, 5.35S×152.38E, h38km±23km, mb4.1/4, Error ellipse: s-maj=18.8km s-min=10.6km az=156.0
ISC 29 22:30:15.9±3.1, 54S±02×1524E±01, h36km±33km, n17, σ0s71/15, mb4.0/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**8.51**	**119**	*e*Pn		**Pn**	**22 32 16.7**	**0.0**
CTAO	**Charters Tower**	**15.81**	**202**	*e*Pn		**Pn**	**22 33 55.8**	**-0.1**
	8.9nm,1.3s							
KAKA	**Kakadu**	**21.00**	**248**	*e*P		**P**	**22 34 55.3**	**-1.2**
	10nm,0.4s,mb4.5							
WRAB	**Tennant Creek**	**22.75**	**229**	*e*P		**P**	**22 35 15.5**	**+0.3**
	3.3nm,0.6s,mb3.9							
WB2	**Warramunga Arr**	**22.76**	**229**	*e*P		**P**	**22 35 16.0**	**+0.7**
WRA

KHL	**Karahalli**	**1.98**	**135**	*e*PN	**Pn**	**22 35 44.5**	**+0.2**
SILT	**Sile**	**2.02**	**45**	*e*PN	**Pn**	**22 35 44.6**	**-0.2**
GPA	**Golpazari**	**2.04**	**74**	*e*PN	**Pn**	**22 35 45.5**	**+0.3**
LOS	**Limnos**	**2.06**	**276**	*e*Pn	**Pn**	**22 35 45.4**	**0.0**
SMG	**Samos**	**2.15**	**200**	*e*PB	**Pb**	**22 35 47.3**	**-2.2**
RDO	**Rodhopi**	**2.19**	**310**	*e*PB	**Pb**	**22 35 47.5**	**-2.7**
GULT	**Gulveren**	**2.23**	**71**	*e*PN	**Pn**	**22 35 47.4**	**-0.4**
EDRB	**Edirne**	**2.23**	**340**	*e*PN	**Pn**	**22 35 47.6**	**-0.2**
MLSB	**Milas**	**2.44**	**179**	*e*PN	**Pn**	**22 35 50.2**	**-0.5**
SHUT	**Suhut-Afyon**	**2.48**	**118**	*e*PN	**Pn**	**22 35 51.4**	**+0.2**
KDZ	**Kurdzhali**	**2.60**	**318**	P	**Pn**	**22 35 53.2**	**+0.4**
YER	**Yerkesik**	**2.64**	**171**	*e*PN	**Pn**	**22 35 53.4**	**+0.1**
BODT	**Bodrum**	**2.70**	**187**	*e*PN	**Pn**	**22 35 54.2**	**0.0**
MDU	**Mudurnu**	**2.76**	**74**	*e*PN	**Pn**	**22 35 55.7**	**+0.8**
DIM	**Dimitrovgrad**	**2.85**	**325**	P	**Pn**	**22 35 56.4**	**+0.1**
DIM				Pg	**Pg**	**22 36 02.2**	**-2.4**
JMB	**Yambol**	**2.86**	**342**	*e*Pn	**Pn**	**22 35 56.4**	**+0.1**
JMB				*e*Sn	**Sn**	**22 36 30.9**	**-0.3**
JMB	**Yambol**	**2.86**	**342**	*e*Sn	**Sn**	**22 36 30.9**	**-0.3**
ISP	**Isparta**	**2.87**	**130**	*e*PN	**Pn**	**22 35 56.7**	**+0.1**
ISP	**Isparta**	**2.87**	**130**	*e*Pn	**Pn**	**22 35 56.6**	**0.0**
ISP	**Isparta**	**2.87**	**130**	*e*Pn	**Pn**	**22 35 56.7**	**+0.1**
OUR	**Ouranopolis**	**2.95**	**283**	*e*Pn	**Pn**	**22 35 57.3**	**-0.3**
RZN	**Rozhen**	**3.01**	**311**	P	**Pn**	**22 35 59.0**	**+0.5**
PAIG	**Paliouri**	**3.14**	**275**	*e*Pn	**Pn**	**22 35 59.9**	**-0.3**
BCK	**Bucak**	**3.19**	**135**	*e*PN	**Pn**	**22 36 01.5**	**+0.6**
APE	**Apeiranthos**	**3.19**	**214**	*e*Pn	**Pn**	**22 35 59.4**	**-1.5**
APE				*e*Sn	**Sn**	**22 36 36.4**	**-3.0**
APE	**Apeiranthos**	**3.19**	**214**	*e*Pn	**Pn**	**22 35 59.8**	**-1.1**
APE				*e*Sn	**Sn**	**22 36 36.4**	**-3.0**
KDZE	**Karadeniz Ereo**	**3.22**	**60**	*e*PN	**Pn**	**22 36 02.0**	**+0.6**
PLD	**Plovdiv**	**3.30**	**317**	*e*Pn	**Pn**	**22 36 02.8**	**+0.4**
PLD	**Plovdiv**	**3.30**	**317**	P	**Pn**	**22 36 02.7**	**+0.3**
KIZT	**Kizilcal**	**3.32**	**104**	*e*PN	**Pn**	**22 36 03.2**	**+0.5**
PLG	**Polygyros**	**3.36**	**282**	*e*Pn	**Pn**	**22 36 03.2**	**-0.1**
PLG	**Polygyros**	**3.36**	**282**	*e*PN	**Pn**	**22 36 03.3**	**0.0**
NVR	**Nevrokopi**	**3.37**	**300**	*e*PN	**Pn**	**22 36 03.5**	**+0.1**
ELL	**Elmali**	**3.44**	**150**	*e*PN	**Pn**	**22 36 05.2**	**+0.8**
PRD	**Provadia**	**3.46**	**356**	P	**Pn**	**22 36 04.4**	**-0.3**
PRD				Pg	**Pg**	**22 36 15.9**	**-0.4**
NEO	**Neokhori**	**3.52**	**264**	P	**Pn**	**22 36 06.5**	**+1.0**
SOH	**Sokhos**	**3.53**	**289**	*e*Pn	**Pn**	**22 36 05.8**	**+0.2**
ARG	**Arkhangelos**	**3.54**	**175**	*e*PN	**Pn**	**22 36 07.7**	**+2.0**
XOR	**Xorichti**	**3.54**	**265**	*e*Pn	**Pn**	**22 36 05.4**	**-0.4**
MMB	**Musomiste**	**3.57**	**302**	P	**Pn**	**22 36 06.1**	**0.0**
ANTB	**Antalya**	**3.65**	**140**	*e*PN	**Pn**	**22 36 08.0**	**+0.8**
HORT	**Hortiatis**	**3.66**	**285**	*e*Pn	**Pn**	**22 36 07.5**	**+0.1**
SZH	**Strazhica**	**3.77**	**339**	*e*P	**Pn**	**22 36 09.3**	**+0.3**
LOD	**Lodumlu**	**3.87**	**86**	*e*PN	**Pn**	**22 36 11.4**	**+1.1**
ANTO	**Ankara**	**3.89**	**87**	*e*PN	**Pn**	**22 36 11.8**	**+1.2**
ANTO	**Ankara**	**3.89**	**87**	⇓*i*P	**Pb**	**22 36 22.7**	**+3.6**
PGB	**Panagyurishte**	**3.89**	**317**	P	**Pn**	**22 36 10.3**	**-0.3**
PVL	**Pavlikeni**	**3.92**	**333**	P	**Pn**	**22 36 11.0**	**+0.1**
LADK	**Ladik-KONYA**	**3.92**	**112**	*e*PN	**Pn**	**22 36 11.9**	**+1.0**
PSN	**Preselentsi**	**3.95**	**5**	P	**Pn**	**22 36 10.4**	**-1.0**
KNT	**Kendrikon**	**3.96**	**293**	*e*Pn	**Pn**	**22 36 12.4**	**+0.9**
KONT	**Konya--Tatoy**	**4.03**	**115**	*e*PN	**Pn**	**22 36 13.5**	**+1.0**
SAFT	**Safranbolu**	**4.05**	**67**	*e*PN	**Pn**	**22 36 13.8**	**+1.1**
KKB	**Krupnik**	**4.13**	**302**	P	**Pn**	**22 36 14.0**	**+0.2**
VAY	**Valandovo**	**4.25**	**293**	*e*Pn	**Pn**	**22 36 14.4**	**+1.0**
VAY	**Valandovo**	**4.25**	**293**	*e*Pn	**Pn**	**22 36 16.2**	**+0.7**
VAY				*e*Sn	**Sn**	**22 37 04.4**	**-1.1**
VAY	**Valandovo**	**4.25**	**293**	*e*Pn	**Pn**	**22 36 16.4**	**+0.9**
VAY				*e*Sn	**Sn**	**22 37 04.4**	**-1.1**
GRG	**Griva**	**4.26**	**288**	*e*Pn	**Pn**	**22 36 16.4**	**+0.8**
THL	**Klokotos Trika**	**4.43**	**270**	*e*PN	**Pn**	**22 36 18.4**	**+0.5**
VTS	**Vitosha**	**4.45**	**311**	P	**Pn**	**22 36 19.0**	**+0.7**
BR131	**Keskin Array S**	**4.54**	**88**	*e*Pn	**Pn**	**22 36 19.8**	**+0.3**
BR131	**Keskin Array S**	**4.54**	**88**	*e*Sn	**Sn**	**22 37 10.4**	**-2.4**
BR131	**Keskin Array S**	**4.54**	**88**	*e*Pn	**Pn**	**22 36 19.8**	**+0.2**
BR131				*e*Sn	**Sn**	**22 37 10.4**	**-2.4**
CANT	**Cankiri**	**4.58**	**77**	*e*PN	**Pn**	**22 36 20.4**	**+0.4**
HDMB	**Hadim**	**4.64**	**125**	*e*PN	**Pn**	**22 36 22.3**	**+1.4**
STIP	**Stip**	**4.65**	**297**	*e*Pn	**Pn**	**22 36 22.2**	**+1.2**
STIP	**Stip**	**4.65**	**297**	*e*Pn	**Pn**	**22 36 21.8**	**+0.7**
STIP				*e*Sn	**Sn**	**22 37 10.7**	**-4.8**
STIP	**Stip**	**4.65**	**297**	*e*Pn	**Pn**	**22 36 22.2**	**+1.2**
STIP				*e*Sn	**Sn**	**22 37 10.6**	**-4.9**
TIRR	**Tirgusor**	**4.74**	**6**	⇑*i*P	**Pn**	**22 36 21.7**	**-0.5**
TIRR	**Tirgusor**	**4.74**	**6**	P	**Pn**	**22 36 21.8**	**-0.4**
TIRR	**Tirgusor**	**4.74**	**6**	P	**Pn**	**22 36 21.8**	**-0.4**
FNA	**Florina**	**4.98**	**284**	*e*Pn	**Pn**	**22 36 26.7**	**+1.1**
BARS	**Barje**	**5.42**	**306**	⇓*i*Pn	**Pn**	**22 36 32.6**	**+1.0**
TLCR		**5.50**	**8**	⇓*i*P	**Pn**	**22 36 33.2**	**+0.6**
TLCR		**5.50**	**8**	P	**Pn**	**22 36 34.4**	**+1.8**
TLCR		**5.50**	**8**	P	**Pn**	**22 36 34.4**	**+1.8**
MLR	**Muntele Rosu**	**5.89**	**348**	⇓*i*P	**Pn**	**22 36 39.6**	**+1.5**
MLR	**Muntele Rosu**	**5.89**	**348**	P	**Pn**	**22 36 40.9**	**+2.8**
MLR	**Muntele Rosu**	**5.89**	**348**	P	**Pn**	**22 36 40.9**	**+2.8**
BOLS	**Boljevac**	**5.95**	**315**	⇓*i*Pn	**Pn**	**22 36 39.2**	**+0.4**
ODB	**Odobesti**	**6.05**	**355**	⇑*i*P	**Pn**	**22 36 41.6**	**+1.4**
ODB	**Odobesti**	**6.05**	**355**	⇑*i*P	**Pn**	**22 36 41.6**	**+1.4**
PLOR	**Plostina**	**6.16**	**353**	⇓*i*P	**Pn**	**22 36 42.9**	**+1.2**
VRI	**Vrincioaia**	**6.17**	**353**	P	**Pn**	**22 36 43.2**	**+1.4**
VRI	**Vrincioaia**	**6.17**	**353**	P	**Pn**	**22 36 43.1**	**+1.4**
GRUS	**Gruza**	**6.69**	**311**	*e*Pn	**Pn**	**22 36 49.0**	**0.0**
DIVS	**Divibare**	**7.24**	**309**	⇑*i*Pn	**Pn**	**22 36 56.8**	**+0.3**
BZS	**Buzias**	**7.40**	**324**	⇑*i*P	**Pn**	**22 36 57.9**	**-0.9**
BZS	**Buzias**	**7.40**	**324**	P	**Pn**	**22 36 58.1**	**-0.7**
BZS	**Buzias**	**7.40**	**324**	P	**Pn**	**22 36 58.1**	**-0.7**
BBLS	**Lazići**	**7.47**	**306**	⇓*i*Pn	**Pn**	**22 37 00.9**	**+1.2**
BURAR	**Bucovina Array**	**8.08**	**348**	⇓*i*P	**Pn**	**22 37 09.6**	**+1.6**
BURAR	**Bucovina Array**	**8.08**	**348**	P	**Pn**	**22 37 09.9**	**+1.9**
BURAR	**Bucovina Array**	**8.08**	**348**	P	**Pn**	**22 37 09.8**	**+1.8**
BUR08	**Bucovina Ar. S**	**8.11**	**348**	*e*Pn	**Pn**	**22 37 09.7**	**+1.2**
BUR08	**Bucovina Ar. S**	**8.11**	**348**	*e*Pn	**Pn**	**22 37 09.7**	**+1.3**
PKSM	**Moragy**	**9.29**	**317**	⇓*i*P	**Pn**	**22 37 24.2**	**-0.4**
PKSM	**Moragy**	**9.29**	**317**	P	**Pn**	**22 37 24.5**	**-0.1**
PKSM	**Moragy**	**9.29**	**317**	P	**Pn**	**22 37 24.6**	**-0.1**

*NEIC **29** 22:38:00.8, 34.14S×71.49W, h42km, MG2.9(GUC), After GUC.*

GUC 29 22:38:00.8±0.7, 34.14S×71.49W, h42km±2km, MD3.7, ML2.9, 7C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNV	**Longovilo**	**0.20**	**20**	⇑*i*P	Pn	22 38 08.1	-0.2
LNV				*i* S	Sn	22 38 14.2	+0.7
SFDO	**San Fernando**	**0.62**	**140**	⇑*i*P	Pn	22 38 13.6	+0.4
SFDO				*i* S	Sn	22 38 23.2	+1.2
TACH	**Talagante**	**0.67**	**44**	⇑*i*P	Pn	22 38 14.3	+0.4
TACH				*i* S	Sn	22 38 24.2	+0.9
CHCH	**Chadas Angostu**	**0.73**	**74**	⇑*i*P	Pn	22 38 15.4	+0.8
CHCH				*i* S	Sn	22 38 26.3	+1.6
CACH	**El Canelo**	**0.74**	**88**	⇓*i*P	Pn	22 38 16.0	+1.2
CACH				*i* S	Sn	22 38 27.7	+2.7
RCDM	**Rinconada Maip**	**0.87**	**42**	*e*P	Pn	22 38 16.8	+0.3
RCDM				*i* S	Sn	22 38 29.0	+1.0
RCDM				AML	AML	22 38 29.7	
	comp=N,2µm,0.1s						
RCDM	**Rinconada Maip**	**0.87**	**42**	*e*P	Pn	22 38 16.8	+0.3
RCDM				*i* S	Sn	22 38 29.0	+1.0
NICH	**Los Niches**	**0.89**	**166**	⇑*i*P	Pn	22 38 17.3	+0.5
NICH				*i* S	Sn	22 38 29.5	+1.1
ANTU	**Antumapu**	**0.92**	**52**	⇑*i*P	Pn	22 38 18.0	+0.8
ANTU				*i* S	Sn	22 38 31.1	+1.9
ANTU				AML	AML	22 38 31.7	
	comp=E,999nm,0.5s						
PCH	**Pirque**	**0.97**	**58**	*e*P	Pn	22 38 18.7	+0.8
PCH				*i* S	Sn	22 38 32.3	+1.8
SAN	**Santiago**	**0.98**	**45**	⇓*i*P	Pn	22 38 18.5	+0.5
SAN				*i* S	Sn	22 38 32.3	+1.6
SAN				AML	AML	22 38 33.7	
	comp=N,341nm,0.6s						
SAN	**Santiago**	**0.98**	**45**	⇓*i*P	Sn	22 38 18.5	+0.5
SAN				*i* S	Sn	22 38 32.3	+1.6
SJCH	**San Jose de Ma**	**1.07**	**63**	*e*P	Pn	22 38 19.5	+0.2
SJCH				*i* S	Sn	22 38 34.8	+1.8
SJCH				AML	AML	22 38 36.8	
	comp=N,329nm,0.3s						
SJCH	**San Jose de Ma**	**1.07**	**63**	*e*P	Pn	22 38 19.5	+0.2
SJCH				*i* S	Sn	22 38 34.8	+1.8
CLCH	**Cerro Calan**	**1.09**	**47**	⇓*i*P	Pn	22 38 20.5	+0.9
CLCH				*i* S	Sn	22 38 35.5	+2.0
CLCH				AML	AML	22 38 37.6	
	comp=E,395nm,0.2s						
LMEL	**Las Melosas**	**1.11**	**75**	⇓*i*P	Pn	22 38 20.8	+1.0
LMEL				*i* S	Sn	22 38 36.2	+2.2
LMEL				AML	AML	22 38 37.4	
	comp=N,805nm,0.2s						
LMEL	**Las Melosas**	**1.11**	**75**	⇓*i*P	Pn	22 38 20.8	+1.0
LMEL				*i* S	Sn	22 38 36.2	+2.2
PEL	**Peldehue**	**1.20**	**34**	⇑*i*P	Pn	22 38 22.5	+1.4
PEL				*i* S	Sn	22 38 38.7	+2.4
PEL				AML	AML	22 38 40.1	
	comp=E,442nm,0.5s						
YECH	**El Yeso**	**1.27**	**68**	*i* S	Sn	22 38 41.0	+3.2
YECH				AML	AML	22 38 48.2	
	comp=N,173nm,0.4s						
FCH	**Farellones**	**1.29**	**51**	⇓*i*P	Pn	22 38 23.3	+1.0
FCH				*i* S	Sn	22 38 40.5	+2.1
FCH				AML	AML	22 38 43.2	
	comp=N,270nm,0.6s						

*NIED **29** 22:49:00, 36.70N×141.40E, h29km, Mw3.7 Best double couple: M0 3.67000×10^14 NP1:φ=217.00000°, δ=78.00000°, λ=-97.00000°. NP2:φ=68.00000°, δ=14.00000°, λ=-59.00000°.*

*IDC **29** 22:49:28.0±1.2, 36.61N×141.64E, h0km, mb3.7/5, mb1 3.8/9, mb1mx3.7/24, mbtmp3.9/9, ML3.6/4, MS3.0/3, Ms1 3.0/3, ms1mx2.4/33, Error ellipse: s-maj=31.7km s-min=18.0km az=78.0*

*ISCJB **29** 22:49:30.9±1.1, 36.65N±005×141.54E±007, h35km±12km, mb3.6/5, Error ellipse: s-maj=10.1km s-min=8.0km az=2.0*

*JMA **29** 22:49:33.3±0.1, 36.68N×141.32E, h48km±2km, M3.8*

JMA Felt I J1.

*NEIC **29** 22:49:33.4, 36.68N×141.32E, h48km, MG3.8(JMA), After JMA.*

NEIC Recorded [1 JMA] in Fukushima and Tochigi Prefectures.

ISC 29 22:49:30.8±1.2, 36.63N±005×141.48E±006, h15km±6km, n18, σ0°92/23, mb3.6/5, 3C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.72**	**311**	⇑P	**Pg**	**22 49 45.4**	**+0.5**
ONAJ				*e*S	**Sg**	**22 49 54.1**	**-0.4**
JHO	**Hitachi**	**0.73**	**269**	⇑P	**Pg**	**22 49 45.7**	**+0.6**
JHO				S	**Sg**	**22 49 54.4**	**-0.5**
JFK	**Kawauchi**	**0.88**	**327**	⇓P	**Pb**	**22 49 47.6**	**-0.2**
JYT	**Yasato**	**1.11**	**249**	⇑P	**Pb**	**22 49 51.4**	**-0.3**
JYT				S	**Sb**	**22 50 04.8**	**-1.2**
JAG	**Ashikaga**	**1.65**	**264**	S	**Sn**	**22 50 18.4**	**-1.6**
MJAR	**Matsushiro Arr**	**2.64**	**269**	Pn	**Pn**	**22 50 13.3**	**+0.6**
	11nm,0.3s,baz=112,slow=11,SNR=92						
MJAR				Sn	**Sn**	**22 50 44.2**	**-0.2**
	10nm,0.3s,baz=84,slow=15,SNR=8.3						
MJAR				LR	LR	22 51 34.4	
	comp=Z,236nm,18.2s,baz=145,slow=46						
MAJO	**Matsushiro**	**2.64**	**269**	*e*Pn	**Pn**	**22 50 13.6**	**+0.9**
MAT	**Matsushiro**	**2.64**	**269**	P	**Pn**	**22 50 14.2**	**+1.5**
MAT				S	**Sn**	**22 50 45.5**	**+1.1**
JHJ	**Hachijo jima 2**	**3.77**	**202**	Pn	**Pn**	**22 50 29.3**	**+1.0**
	7.6nm,0.3s,baz=73,slow=19,SNR=4.7						
JHJ				Sn	**Sn**	**22 51 13.4**	**+1.0**
	26nm,0.3s,baz=246,slow=20,SNR=3.8						
ASAJ	**Asahikawa**	**7.53**	**6**	Pn	**Pn**	**22 51 19.2**	**-0.7**
	0.6nm,0.3s,baz=195,slow=31,SNR=6.3						
CBIJ	**Chichi jima**	**9.52**	**176**	Pn	**Pn**	**22 51 45.8**	**-1.6**
	3.0nm,0.3s,baz=282,slow=20,SNR=3.0						
CBIJ				Sn	**Sn**	**22 53 25.1**	**-9.0**
	3.9nm,0.3s,baz=300,slow=20,SNR=3.6						
CBIJ				LR	LR	22 55 01.7	
	comp=Z,820nm,19.9s,baz=81,slow=35						
KSRS	**Korea Array**	**10.87**	**278**	LR	LR	22 56 06.4	
	comp=Z,800nm,19.4s,baz=130,slow=36						
SONM	**Songino Array**	**28.06**	**305**	P	**P**	**22 55 23.1**	**+1.7**
	1.8nm,0.6s,mb3.9,baz=105,slow=8.9,SNR=15						
ZALV	**Zalesovo Beam**	**42.23**	**313**	P	**P**	**22 57 22.2**	**-0.7**
	0.4nm,0.3s,mb3.5,baz=79,slow=7.5,SNR=3.2						
MKAR	**Makanchi Array**	**44.38**	**302**	P	**P**	**22 57 40.4**	**-0.1**
	0.2nm,0.3s,mb3.4,baz=85,slow=9.4,SNR=4.4						
WRA	**Warramunga Arr**	**56.67**	**188**	P	**P**	**22 59 12.4**	**-1.0**
	0.4nm,0.5s,mb3.7,baz=5.8,slow=7.5,SNR=2.8						
ASAR	**Alice Springs**	**60.39**	**188**	P	**P**	**22 59 39.1**	**-0.2**
	0.4nm,0.7s,mb3.6,baz=12,slow=6.7,SNR=4.6						
LPAZ	**La Paz**	**146.85**	**60**	PKPbc	PKPbc	23 09 12.9	+0.2
	0.5nm,0.5s,baz=63,slow=6.8,SNR=4.7						

IDC 29 23:05:53.1±66.0, 2190S×17456W, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.8/17, mbtmp4.1/3, Error ellipse: s-maj=1236.0km s-min=203.6km az=86.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.12**	**246**	P	P	23 13 30.7	-0.1
	2.9nm,1.0s,baz=45,slow=11,SNR=3.0						
ASAR	**Alice Springs**	**47.34**	**257**	P	P	23 14 28.9	-0.2
	1.0nm,0.6s,baz=94,slow=7.4,SNR=18						
WRA	**Warramunga Arr**	**47.60**	**263**	P	P	23 14 31.3	+0.2
	1.3nm,0.3s,baz=101,slow=8.2,SNR=5.3						

*NEIC **29** 23:12:55.5, 37.36S×178.49E, h12km, ML4.1(WEL), After WEL.*

*IDC **29** 23:12:58.8±3.6, 37.24S×177.04E, h0km, mb4.0/4, mb1 4.2/5, mb1mx4.0/16, mbtmp4.0/5, ML3.4/1, Error ellipse: s-maj=79.8km s-min=21.1km az=57.0*

ISC 29 23:12:53.1±1.7, 37.34S±008×178.8E±02, h45km±14km, n26, σ1°33/29, mb3.9/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.61**	**235**	Pn	**Pn**	**23 13 20.6**	**+1.6**
	39nm,0.3s,baz=275,slow=2.0,SNR=164						
URZ				Sn	**Sn**	**23 13 39.4**	**+0.8**
	325nm,0.3s,baz=143,slow=22,SNR=69						
URZ	**Urewera**	**1.61**	**235**	P	**Pn**	**23 13 20.6**	**+1.5**
EDRZ	**Edgecumbe**	**1.79**	**244**	P	**Pn**	**23 13 23.4**	**+1.9**
EDRZ				S	**Sn**	**23 13 41.8**	**-1.2**
KNZ	**Kokohu**	**1.89**	**207**	P	**Pn**	**23 13 24.8**	**+1.9**
TAZ	**Tarawera**	**2.01**	**243**	P	**Pn**	**23 13 26.7**	**+2.2**
TGRZ	**Tauranga**	**2.04**	**258**	P	**Pn**	**23 13 25.1**	**+0.2**
KUZ	**Kuaotunu**	**2.52**	**283**	P	**Pn**	**23 13 30.1**	**-1.4**
KUZ				S	**Sn**	**23 13 55.6**	**-5.3**
BKZ	**Black Stump Fm**	**2.56**	**224**	P	**Pn**	**23 13 33.9**	**+1.8**
TOZ	**Tahuroa Road**	**2.63**	**260**	P	**Pn**	**23 13 33.1**	**0.0**
MKAZ	**Moumakai**	**2.89**	**273**	P	**Pn**	**23 13 36.3**	**-0.3**
OTAZ	**Otara**	**3.10**	**276**	P	**Pn**	**23 13 38.2**	**-1.3**
MOVZ	**Moawhango**	**3.15**	**228**	P	**Pn**	**23 13 41.4**	**+1.2**
WCZ	**Waipu Caves**	**3.83**	**290**	P	**Pn**	**23 13 49.4**	**-0.1**
WAZ	**Wanganui**	**3.83**	**230**	P	**Pn**	**23 13 51.1**	**+1.6**
MRZ	**Mangatainoka R**	**4.15**	**216**	P	**Pn**	**23 13 53.0**	**-0.9**
MTW	**Mount Morrison**	**4.58**	**213**	P	**Pn**	**23 13 58.3**	**-1.6**
OUZ	**Omahuta**	**4.69**	**295**	P	**Pn**	**23 14 01.7**	**+0.4**
BSWZ	**Blackbirch Sta**	**5.78**	**219**	P	**Pn**	**23 14 15.6**	**-0.7**
THZ	**Tophouse**	**6.33**	**224**	P	**Pn**	**23 14 21.9**	**-2.0**
KHZ	**Kahutara**	**6.48**	**217**	P	**Pn**	**23 14 24.8**	**-1.0**
RPZ	**Rata Peaks**	**8.67**	**220**	Pn	**Pn**	**23 14 53.2**	**-2.6**
	0.6nm,0.3s,baz=200,slow=5.9,SNR=2.8						
RPZ				Sn	**Sn**	**23 16 20.8**	**-11**
	2.8nm,0.3s,baz=75,slow=20,SNR=17						
ODZ	**Otahua Downs**	**9.84**	**216**	P	**Pn**	**23 15 09.0**	**-2.8**
STKA	**Stephens Creek**	**30.95**	**269**	P	**P**	**23 19 06.9**	**+1.1**
	1.0nm,0.5s,mb3.9,baz=102,slow=9.3,SNR=3.5						
ASAR	**Alice Springs**	**40.63**	**277**	P	**P**	**23 20 28.7**	**0.0**
	1.9nm,0.6s,mb3.9,baz=122,slow=8.1,SNR=35						
WRA	**Warramunga Arr**	**42.26**	**282**	P	**P**	**23 20 42.0**	**-0.1**
	1.4nm,0.5s,mb3.8,baz=123,slow=7.1,SNR=5.9						
QSPA	**South Pole Qui**	**52.79**	**180**	P	pP	23 22 16.2	+0.5
	0.4nm,0.4s,baz=187,slow=4.9,SNR=8.8						

*BJI **29** 23:37:57.9, 21.20S×171.20E, h9km, mB5.1, mb5.0, Ms5.2, Msz5.1*

*NEIC **29** 23:38:01.2±0.4, 21.46S×170.96E, h10km, mb5.1/11, Error ellipse: s-maj=13.5km s-min=10.2km az=146.0*

*LDG **29** 23:38:03.9±0.4, 20.67S×169.23E, h10km, Mb4.6/1, Error ellipse: s-maj=63.5km s-min=36.1km az=35.0*

*SZGRF **29** 23:38:04.0, 21.89S×170.80E, h33km, Southeast of Loyalty Islands*

*MOS **29** 23:38:05.3±1.4, 21.53S×170.58E, h33km, mb5.1/4, Error ellipse: s-maj=15.1km s-min=12.7km az=1.2*

*ISCJB **29** 23:38:17.1±1.5, 21.51S±007×170.59E±009, h151km±12km, mb4.7/23, Error ellipse: s-maj=13.7km s-min=11.4km az=148.3*

*IDC **29** 23:38:20.4±2.3, 21.66S×170.39E, h153km±20km, mb4.3/9, mb1 4.4/11, mb1mx4.2/18, mbtmp4.4/11, MS3.7/3, Ms1 3.7/3, ms1mx3.0/28, Error ellipse: s-maj=18.2km s-min=16.5km az=61.0*

*DJA **29** 23:38:32, 22.04S×170.14E, h246km, mb4.9/12*

ISC 29 23:38:17.1±1.7, 21.50S±008×170.65E±010, h139km±13km, h6km±7.7km: pP-P, n117, σ1°97/60, mb4.7/23, 4C-7D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.95**	**261**	*e*P	**Pn**	**23 39 16.7**	**+0.2**
DZM				*e*S	**Sn**	**23 40 01.6**	**-1.0**
HNR	**Honiara**	**15.81**	**318**	P	**Pn**	**23 41 54.1**	**+1.9**
	10nm,0.3s,baz=226,slow=1.3,SNR=16						
HNR	**Honiara**	**15.81**	**318**	*e*P	**Pn**	**23 41 46.5**	**-5.7**
HNR				pmax	pmax		
	comp=Z,297nm,0.9s						
HNR	**Honiara**	**15.81**	**318**	*e*Pn	**Pn**	**23 41 46.5**	**-5.7**
	comp=Z,297nm,0.9s						
URZ	**Urewera**	**17.61**	**163**	P	**Pn**	**23 42 14.4**	**+0.6**
	comp=Z,2.9nm,0.3s,baz=350,slow=5.4,SNR=26						
EIDS	**Eidsvold**	**18.37**	**254**	*e*P	**P**	**23 42 28.3**	**+7.1**
ARMA	**Armidale**	**19.25**	**239**	*e*P	**P**	**23 42 33.0**	**+2.2**
RPZ	**Rata Peaks**	**22.16**	**179**	P	**P**	**23 43 01.9**	**+0.3**
	comp=Z,23nm,0.9s,mb4.6,baz=332,slow=8.9,SNR=7.1						
CTA	**Charters Tower**	**22.85**	**269**	*e*P	**P**	**23 43 09.1**	**+0.5**
	comp=Z,12nm,0.6s,mb4.5						
CTA	**Charters Tower**	**22.85**	**269**	P	**P**	**23 43 09.2**	**+0.6**
	comp=Z,15nm,0.7s,mb4.5,baz=96,slow=12,SNR=19						
CTA	**Charters Tower**	**22.85**	**269**	*e*P	**P**	**23 43 09.1**	**+0.5**
CTA				pmax	pmax		
	comp=Z,12nm,0.6s						
CTAO	**Charters Tower**	**22.85**	**269**	*e*P	**P**	**23 43 08.6**	**0.0**
CTAO				pmax	pmax		
	comp=Z,36nm,1.2s,mb4.7						
CTAO	**Charters Tower**	**22.85**	**269**	*e*P	**P**	**23 43 08.6**	**0.0**
	comp=Z,36nm,1.2s,mb4.7						
CNB	**Canberra Magne**	**23.18**	**229**	*e*P	**P**	**23 43 12.2**	**+0.8**
CAN	**Canberra**	**23.43**	**229**	*e*P	**P**	**23 43 14.4**	**+0.6**
PMG	**Port Moresby**	**25.59**	**294**	*e*P	**P**	**23 43 28.9**	**-4.7**
TOO	**Toolangi**	**27.01**	**228**	*e*P	**P**	**23 43 46.4**	**+0.4**
STKA	**Stephens Creek**	**27.87**	**242**	*e*P	**P**	**23 43 54.1**	**+0.3**
	comp=Z,25nm,0.7s,mb5.0						
STKA	**Stephens Creek**	**27.87**	**242**	P	**P**	**23 43 54.2**	**+0.5**
	comp=Z,28nm,0.8s,mb5.1,baz=83,slow=9.9,SNR=40						
STKA				LR	LR	23 54 50.6	
	comp=Z,76nm,19.7s,baz=59,slow=36						
ASAR	**Alice Springs**	**33.94**	**259**	P	**P**	**23 44 46.8**	**-0.5**
	comp=Z,17nm,0.8s,mb4.9,baz=97,slow=9.4,SNR=166						
ASAR				PcP	PcP	23 47 22.8	+0.3
	comp=Z,1

LZH				pP	pP	23 50 43.6	-30	
LZH				sP	sP	23 50 45.6	-42	
LZH				PP	PP	23 53 57.8	-0.1	
NSHM	**Saint Helena R**	**86.42**	**46**	*eP*	**P**	**23 50 41.5**	**-2.5**	
SNAA	**Sanae**	**86.97**	**182**	*eP*	**P**	**23 50 45.4**	**-0.7**	
SNAA				pmax	pmax			
	comp=Z,13nm,1.4s							
SNAA	**Sanae**	**86.97**	**182**	*eP*	**P**	**23 50 45.4**	**-0.8**	
	comp=Z,13nm,1.4s,mb4.6							
BILL	**Bilibino**	**89.33**	**358**	*d iP*	**P**	**23 50 51.0**	**-6.1**	
ULN	**Ulaanbaatar**	**89.46**	**323**	*eP*	**P**	**23 50 58.7**	**+0.6**	
SONM	**Songino Array**	**89.81**	**323**	P	**P**	**23 51 01.4**	**+1.6**	
	comp=Z,1.2nm,0.8s,mb3.9,baz=129,slow=4.1,SNR=6.2							
PV10	**Paradox Valley**	**95.86**	**51**	*eP*	**P**	**23 51 26.7**	**-1.2**	
TIXI	**Tiksi**	**97.22**	**348**	*eP*	**P**	**23 51 29.3**	**-4.0**	
ARCES	**ARCESS Array B**	**127.58**	**345**	PKP	PKPdf	23 57 05.0	0.0	
	comp=Z,3.1nm,0.9s,baz=48,slow=2.3,SNR=6.8							
MLR	**Muntele Rosu**	**142.53**	**318**	*ij iP*	PKPdf	23 57 33.9	+0.4	
DRGR		**143.81**	**322**	*ij iP*	PKPdf	23 57 35.2	-0.5	
OKC	**Ostrava-Krasne**	**144.34**	**329**	*e*PKP	PKPdf	23 57 36.3	-0.2	
KSP	**Ksiaz**	**144.49**	**332**	*e*PKIKP	PKPdf	23 57 37.3	+0.6	
MORC	**Moravsky Berou**	**144.67**	**330**	*ij iP*	PKPdf	23 57 38.5	+1.4	
PSZ	**Piszkesteto**	**144.71**	**325**	*ij iP*	PKPdf	23 57 37.7	+0.5	
PSZ	**Piszkesteto**	**144.71**	**325**	*e*PKPdf	PKPdf	23 57 37.7	+0.5	
DPC	**Dobruska-Polom**	**144.83**	**331**	*e*PKP	PKPdf	23 57 38.5	+1.2	
DPC				*ex*	x	23 57 46.9		
UPC	**Upice**	**144.86**	**332**	*e*PKP	PKPdf	23 57 38.5	+1.1	
BZS	**Buzias**	**145.09**	**321**	*ij iP*	PKPbc	23 57 38.5	+0.8	
VRAC	**Vranov**	**145.44**	**330**	*⇑ iP*	PKPbc	23 57 40.6	+1.9	
PVCC	**Panska Ves**	**145.47**	**333**	*e*PKP	PKPdf	23 57 40.2	+1.8	
PVCC				*ex*	x	23 57 47.8		
BRG	**Berggiesshubel**	**145.47**	**334**	*e*PKIKP	PKPbc	23 57 40.4	+1.7	
BRG				pmax	pmax			
	comp=Z,8.0nm,1.2s							
BRG	**Berggiesshubel**	**145.47**	**334**	*e*PKPbc	PKPbc	23 57 40.1	+1.4	
BRG	**Berggiesshubel**	**145.47**	**334**	*e*PKP	PKPbc	23 57 40.4	+1.6	
	comp=Z,13nm,1.1s							
CLL	**Collm**	**145.51**	**335**	*⇑ i*PKP2	PKPab	23 57 40.2	+1.0	
CLL				pmax	pmax			
	comp=Z,10.0nm,1.0s							
CLL	**Collm**	**145.51**	**335**	*e*PKPbc	PKPbc	23 57 40.2	+1.4	
CLL	**Collm**	**145.51**	**335**	*⇑ i*PKPdf	PKPdf	23 57 40.2	+1.7	
	comp=Z,10.0nm,1.0s							
PRU	**Pruhonice**	**145.88**	**332**	*e*PKP	PKPbc	23 57 41.5	+1.5	
TREC	**Trest**	**145.97**	**331**	*e*PKP	PKPbc	23 57 41.5	+1.2	
TANN	**Tannenbergstha**	**146.43**	**335**	*e*PKPbc	PKPbc	23 57 43.1	+1.5	
PKSM	**Moragy**	**146.43**	**324**	*ij iP*	PKPbc	23 57 42.7	+0.9	
MOX	**Moxa**	**146.58**	**336**	*e*PKPbc	PKPbc	23 57 43.2	+1.2	
MANZ	**Manzenberg**	**146.90**	**334**	*e*PKPbc	PKPbc	23 57 44.4	+1.4	
KHC	**Kasperske Hory**	**146.94**	**332**	*e*PKP	PKPbc	23 57 44.6	+1.5	
ROTZ	**Rotzenmuhle**	**147.03**	**334**	*e*PKPbc	PKPbc	23 57 44.9	+1.5	
GEC2	**GERESS Array S**	**147.10**	**332**	*e*PKPbc	PKPbc	23 57 44.9	+1.3	
GERES	**GERESS Array B**	**147.10**	**332**	*e*PKPbc	PKPbc	23 57 44.9	+1.4	
	comp=Z,2.3nm,0.7s,baz=35,slow=2.7,SNR=25							
WET	**Wettzell**	**147.23**	**333**	*e*PKPbc	PKPbc	23 57 45.2	+1.3	
GRF	**Grafenberg Arr**	**147.49**	**335**	*e*PKPbc	PKPbc	23 57 45.3	+0.7	
STU	**Stuttgart**	**149.02**	**336**	*e*PKPbc	PKPbc	23 57 50.0	+1.4	
WLF	**Walferdange**	**149.32**	**340**	*e*PKPbc	PKPbc	23 57 51.4	+2.1	
GIVF	**Givet**	**149.34**	**342**	*e*PKP1	PKPbc	23 57 49.9	+0.5	
BAIF	**Baives**	**149.55**	**343**	*e*PKP1	PKPbc	23 57 50.8	+0.9	
BFO	**Black Forest**	**149.71**	**336**	*e*PKPbc	PKPbc	23 57 52.1	+1.8	
CDF	**Champ du Feu**	**150.02**	**338**	*e*PKP1	PKPbc	23 57 51.5	+0.4	
	comp=Z,41nm,1.4s							
HINF	**Hinteralfeld**	**150.68**	**337**	*e*PKP1	PKPbc	23 57 52.9	+0.2	
	comp=Z,18nm,1.3s							
MEZF	**Maizieres J'vi**	**150.69**	**340**	*e*PKP1	PKPbc	23 57 53.6	+0.9	
	comp=Z,33nm,1.2s							
HAU	**Haudompre**	**150.70**	**338**	*e*PKP1	PKPbc	23 57 53.1	+0.4	
	comp=Z,12nm,0.9s							
TUE	**Stuetta**	**150.81**	**333**	*e*PKPbc	PKPbc	23 57 53.9	+0.9	
FLN	**La Foliniere**	**151.89**	**348**	*e*PKP1	PKPbc	23 57 55.5	+0.1	
	comp=Z,17nm,1.0s							
LDF	**La Druitiere**	**151.97**	**347**	*e*PKP1	PKPbc	23 57 55.7	+0.1	
CABF	**La Chapelle**	**151.98**	**337**	*e*PKP1	PKPbc	23 57 56.4	+0.7	
	comp=Z,6.1nm,0.7s							
VLC	**Villacollemand**	**152.11**	**329**	*e*PKPdf	PKPdf	23 57 46.0	-3.4	
LOR	**Lormes**	**152.16**	**341**	*e*PKP1	PKPbc	23 57 56.3	+0.2	
GRR	**Gorron**	**152.32**	**348**	*e*PKP1	PKPbc	23 57 57.9	+1.5	
SSF	**Saint Saulge**	**152.45**	**341**	*e*PKP1	PKPbc	23 57 57.2	+0.5	
	comp=Z,15nm,1.2s							
LPL	**La Plagne**	**152.65**	**335**	*e*PKP1	PKPbc	23 57 58.0	+0.8	
SMF	**Signal de Mont**	**152.72**	**340**	*e*PKP1	PKPbc	23 57 57.9	+0.6	
AVF	**Avril sur Loir**	**152.74**	**341**	*e*PKP1	PKPbc	23 57 57.4	0.0	
ORIF	**Oris-en-Rattie**	**153.49**	**335**	*e*PKP1	PKPbc	23 57 58.7	-0.4	
TCF	**Toulx Ste Croi**	**153.54**	**342**	*e*PKP1	PKPbc	23 58 00.0	+0.9	
LFF	**La Frestale**	**155.19**	**343**	*e*PKP1	PKPdf	23 58 03.7	+10	
DBIC	**Dimbokro**	**164.63**	**197**	PKPab	PKPab	23 59 01.2	+0.3	
	comp=Z,6.3nm,0.9s,baz=142,slow=8.4,SNR=7.3							
TORD	**Torodi Ar. Bea**	**166.59**	**234**	PKP	PKPdf	23 58 06.4	-0.4	
	comp=Z,0.8nm,1.1s,baz=64,slow=3.4,SNR=3.5							
TORD				PKPab	PKPab	23 59 09.4	-0.3	
	comp=Z,1.8nm,0.9s,baz=125,slow=4.9,SNR=9.5							

*ISCJB **29** 23:46:03.6±0.6, 36.38N±004×2396E±005, h107km±8km, Error ellipse: s-maj=8.0km s-min=4.1km az=139.4*
*CSEM **29** 23:46:04.8±0.2, 36.45N×2401E, h72km±3km, MD3.1, Error ellipse: s-maj=3.0km s-min=1.8km az=35.0*
*HLW **29** 23:46:04.9, 36.44N×2478E, h33km, Mb3.3*
*ATH **29** 23:46:05.6, 36.43N×2409E, h54km, MD3.1/5*
*NEIC **29** 23:46:05.6, 36.43N×2409E, h54km, MD3.1(ATH), After ATH.*

*THE **29** 23:46:06.2, 36.41N×2397E, h72km, ML2.8*
ISC 29 23:46:04.8±0.7, 36.38N±003×2396E±005, h96km±11km, n27, σ0°90/40, 2D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KYTH	**Kithira**	**0.75**	**263**	*eP*	**Pn**	**23 46 22.7**	**+0.4**
VLI	**Veliai**	**0.89**	**293**	*eP*	**Pn**	**23 46 23.5**	**-0.2**
VAM	**Vamos**	**0.99**	**169**	*eP*	**Pn**	**23 46 26.0**	**+1.3**
VAM				*eS*	**Sn**	**23 46 38.3**	**-1.4**
THR5	**Thira Island,**	**1.12**	**87**	*ePg*	**Pn**	**23 46 26.6**	**+0.4**
THR6	**Thira Island,**	**1.16**	**91**	*ePg*	**Pn**	**23 46 26.6**	**-0.1**
THR6	**Thira Island,**	**1.16**	**91**	*ePg*	**Pn**	**23 46 26.5**	**-0.2**
THR4	**Thira Island,**	**1.16**	**85**	*ePg*	**Pn**	**23 46 26.7**	**0.0**
THR3	**Thira Island,**	**1.16**	**88**	*ePg*	**Pn**	**23 46 27.1**	**+0.4**
DID	**Didima**	**1.27**	**333**	*ePg*	**Pn**	**23 46 27.1**	**-0.8**
DID				*eSg*	**Sn**	**23 46 43.6**	**-1.9**
DID	**Didima**	**1.27**	**333**	*ePg*	**Pn**	**23 46 27.1**	**-0.9**
DID				*eSg*	**Sn**	**23 46 43.6**	**-1.9**
APE	**Apeiranthos**	**1.44**	**61**	*ePg*	**Pn**	**23 46 29.3**	**-0.7**
APE				*eSg*	**Sn**	**23 46 49.5**	**+0.3**
SIVA	**Sivas**	**1.52**	**153**	*ePg*	**Pn**	**23 46 32.9**	**+1.8**
SIVA				*eSg*	**Sn**	**23 46 51.1**	**+0.1**
GVD	**Gavdhos**	**1.54**	**176**	*eP*	**Pn**	**23 46 32.0**	**+0.7**
VLX	**Vlachokerasia**	**1.61**	**309**	*ePg*	**Pn**	**23 46 32.5**	**+0.3**
VLX				*eSg*	**Sn**	**23 46 52.5**	**-0.5**
LAST	**Lasithi**	**1.73**	**134**	*ePb*	**Pn**	**23 46 34.4**	**+0.7**
LAST				*eSb*	**Sn**	**23 46 55.6**	**-0.1**
NPS	**Neapolis**	**1.74**	**129**	*eP*	**Pn**	**23 46 33.7**	**-0.1**
LTK	**Loutraki**	**1.82**	**335**	*ePb*	**Pn**	**23 46 34.6**	**-0.3**
LTK				*eSb*	**Sn**	**23 46 57.0**	**-0.8**
PYL	**PYLOS**	**1.86**	**287**	*ePb*	**Pn**	**23 46 36.0**	**+0.7**
PYL				*eSb*	**Sn**	**23 46 59.6**	**+1.0**
ZKR	**Zakros**	**2.23**	**124**	*ePn*	**Pn**	**23 46 41.4**	**+1.3**
ZKR				*eSn*	**Sn**	**23 47 07.7**	**+0.5**
ZKR	**Zakros**	**2.23**	**124**	*ePn*	**Pn**	**23 46 41.3**	**+1.2**
ZKR				*eSn*	**Sn**	**23 47 07.7**	**+0.6**
LKR	**Lokris**	**2.40**	**342**	*ePn*	**Pn**	**23 46 42.2**	**-0.1**
AGG	**Agios Georgios**	**2.94**	**334**	*ePn*	**Pn**	**23 46 50.3**	**+0.7**
AGG				*eSn*	**Sn**	**23 47 25.2**	**+1.1**
XOR	**Xorichti**	**3.05**	**349**	*ePn*	**Pn**	**23 46 51.0**	**0.0**
SLUM		**4.98**	**168**	P	**Pn**	**23 47 17.2**	**0.0**
SLUM				S	**Sn**	**23 48 10.0**	**-3.6**
HMAT	**Matruh**	**5.88**	**153**	*ij* P	**Pn**	**23 47 27.3**	**-2.1**
AWBH		**9.05**	**151**	*ij* P	**Pn**	**23 48 11.0**	**-1.5**
HFRF	**Wahat Farafira**	**9.91**	**157**	P	**Pn**	**23 48 23.2**	**-1.1**

*MAN **29** 23:56:46, 20.20N×121.17E, h84km, mb4.8, ML3.8, MS3.8*
*BJI **29** 23:56:47.5, 1998N×12138E, h28km, mB4.7, mb4.5, ML4.0, Ms4.1, Msz4.1*
*MOS **29** 23:56:48.2±0.9, 1994N×12134E, h33km, mb4.8/21, Error ellipse: s-maj=13.0km s-min=6.1km az=120.6*
*IDC **29** 23:56:49.2±4.9, 1989N×12137E, h32km±36km, mb4.4/23, mb1 4.5/25, mb1mx4.5/29, mbtmp4.4/25, ML4.7/2, MS3.8/14, Ms1 3.8/14, ms1mx3.5/33, Error ellipse: s-maj=16.3km s-min=10.5km az=71.0*

*ISCJB **29** 23:56:50.3±0.7, 1992N±003×12138E±005, h55km±6km, mb4.7/63, MS3.8/14, Error ellipse: s-maj=8.2km s-min=5.3km az=169.4*
*NEIC **29** 23:56:51.0±1.0, 1992N×12141E, h47km±9km, mb4.8/32, Error ellipse: s-maj=6.9km s-min=5.0km az=68.0*
*DJA **29** 23:57:03, 1972N×12146E, h159km, mb4.8/7*
ISC 29 23:56:51.8±0.5, 1994N±003×12137E±005, h53km±5km, n183, σ0°95/178, mb4.7/63, MS3.8/14, 17C-5D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGCP	**Mt. Cagua**	**1.80**	**159**	*eP*	**Pn**	**23 57 20.6**	**+0.2**
APYP	**Conner**	**2.07**	**183**	*eP*	**Pn**	**23 57 23.3**	**-0.8**
APYP				*eS*	**Sn**	**23 57 51.7**	**+3.0**
ABRA	**Dolores**	**2.36**	**196**	*eP*	**Pn**	**23 57 27.7**	**-0.5**
CAUP	**Cauayan**	**3.01**	**172**	*eP*	**Pn**	**23 57 38.3**	**+1.3**
PALP	**Palanan**	**3.03**	**161**	*eP*	**Pn**	**23 57 38.6**	**+1.4**
BOLP	**Bolinao**	**3.80**	**202**	*eP*	**Pn**	**23 57 46.4**	**-1.5**
BALP	**Baler**	**4.18**	**177**	*eP*	**Pn**	**23 57 53.6**	**+0.5**
SCZP	**Santa Cruz**	**4.37**	**199**	*eP*	**Pn**	**23 57 59.3**	**+3.7**
TATO	**Taipei**	**5.01**	**1**	*e*Pn	**Pn**	**23 58 04.9**	**+0.5**
	137nm,0.8s						
POLP	**Polilio Island**	**5.21**	**174**	*eP*	**Pn**	**23 58 07.9**	**+0.7**
GQP	**Guinayangan**	**6.09**	**170**	*⇑ eP*	**Pn**	**23 58 19.0**	**-0.2**
GQP				*eS*	**Sn**	**23 59 27.5**	**-0.1**
JOW	**Kunigami**	**9.34**	**41**	Pn	**Pn**	**23 59 01.4**	**-2.3**
	22nm,0.3s,baz=197,slow=13,SNR=47						
JOW				LR	LR	00 02 51.7	
	comp=Z,414nm,20.8s,baz=174,slow=39						
WHN	**Wuhan**	**12.32**	**330**	P	**Pn**	**23 59 46.0**	**+1.5**
WHN				LR	LR		
	comp=N,1μm,12.8s						
WHN				LR	LR		
	comp=E,1μm,12.2s						
WHN				LR	LR		
	comp=Z,2μm,13.4s						
DAV	**Davao City (W)**	**13.43**	**162**	LR	LR	00 05 37.4	
	comp=Z,530nm,21.3s,baz=343,slow=40						
KSRS	**Korea Array**	**18.36**	**17**	P	**Pn**	**00 01 01.2**	**-1.3**
	comp=Z,1.8nm,0.3s,baz=198,slow=12,SNR=16						
KSRS				LR	LR	00 09 12.2	
	comp=Z,112nm,19.3s,baz=180,slow=40						
CD2	**Chengdu**	**19.27**	**308**	P	**Pn**	**00 01 11.8**	**-1.8**
CD2				AP	pP	00 01 18.3	-5.7
CD2				XP	sP	00 01 22.0	-8.6
CD2				PP		00 01 30.5	
CD2				S	**S**	**00 04 47.0**	**-0.6**
CD2				XS	sS	00 04 57.8	-8.9
CD2				AMB	AMB		
	comp=Z,40nm,1.1s						
CD2				AMB	AMB		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=N,570nm,13.8s						
CD2				LR	LR		
	comp=E,570nm,15.0s						
CD2				LR	LR		
	comp=Z,700nm,15.0s						
CBIJ	**Chichi jima**	**20.35**	**66**	P	**P**	**00 01 23.6**	**-0.3**
	comp=Z,44nm,0.7s,baz=163,slow=23,SNR=6.3						
BJI	**Beijing**	**20.53**	**349**	P	**P**	**00 01 25.5**	**-0.2**
BJI				AMB	AMB		
	comp=Z,28nm,1.0s						
BJI				LR	LR		
	comp=N,244nm,17.3s,MS3.7						
BJI				LR	LR		
	comp=E,158nm,21.1s,MS3.7						
BJI				LR	LR		
	comp=Z,157nm,20.7s,MS3.4						
BJI	**Beijing**	**20.53**	**349**	P	**P**	**00 01 25.6**	**-0.1**
	comp=Z,28nm,1.0s						
BJI				LR	LR		
	comp=Z,160nm,20.7s,MS3.4						
CHTO	**Chiang Mai**	**21.19**	**271**	*eP*	**P**	**00 01 32.6**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.0						
CHTO	**Chiang Mai**	**21.19**	**271**	*eP*	**P**	**00 01 32.6**	**-0.4**
	comp=Z,8.3nm,0.9s,mb4.1						
CMAR	**Chiang Mai Arr**	**21.23**	**270**	P	**P**	**00 01 33.5**	**0.0**
	comp=Z,1.7nm,0.3s,mb3.9,baz=71,slow=9.1,SNR=18						
CMAR				PcP	PcP	00 05 38.3	+1.2
	comp=Z,1.0nm,0.4s,baz=144,slow=0.2,SNR=6.0						
CMAR				LR	LR	00 10 56.0	
	comp=Z,129nm,18.1s,MS3.4,baz=95,slow=40						
CMAR	**Chiang Mai Arr**	**21.23**	**270**	P	**P**	**00 01 33.5**	**0.0**
CMAR						00 05 38.3	
MAJO	**Matsushiro**	**22.16**	**38**	*eP*	**P**	**00 01 43.9**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
MAJO	**Matsushiro**	**22.16**	**38**	*eP*	**P**	**00 01 43.9**	**+0.6**
	comp=Z,13nm,0.9s,mb4.4						
MAT	**Matsushiro**	**22.16**	**38**	P	**P**	**00 01 43.9**	**+0.7**
MJAR	**Matsushiro Arr**	**22.16**	**38**	P	**P**	**00 01 43.5**	**+0.3**
	comp=Z,7.1nm,0.8s,mb4.2,baz=227,slow=7.6,SNR=25						
LZH	**Lanzhou**	**22.26**	**320**	*eP*	**P**	**00 01 44.0**	**-0.3**
LZH				AP		00 01 49.3	
LZH				XP	sP	00 01 52.0	-11
LZH				PP		00 02 15.0	
LZH				S	**S**	**00 05 50.0**	**+3.5**
LZH				XS	sS	00 06 01.0	-5.2
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,155nm,4.5s						
LZH				LR	LR		
	comp=N,605nm,14.8s						
LZH				LR	LR		
	comp=Z,823nm,15.8s,MS4.2						
LZH	**Lanzhou**	**22.26**	**320**	*eP*	**P**	**00 01 44.0**	**-0.3**
LZH				*SP	sP	00 01 52.0	-11
LZH						00 02 15.0	
LZH				S	**S**	**00 05 50.0**	**+3.5**
LZH				*SS	sS	00 06 01.0	-5.2
LZH				*eSS		00 06 37.0	
LZH				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.7						
LZH				MLR	MLR		
	comp=Z,820nm,15.8s,MS4.2						
LZH	**Lanzhou**	**22.26**	**320**	*eP*	**P**	**00 01 44.0**	**-0.3**
	comp=Z,30nm,1.0s,mb4.7						
LZH				pP		00 01 49.2	
LZH				sP	sP	00 01 52.0	-11
LZH				PP		00 02 15.0	
LZH				S	**S**	**00 05 50.0**	**+3.5**
LZH				sS	sS	00 06 01.0	-5.2
LZH				*eSS		00 06 37.0	
LZH				LR	LR		
	comp=Z,820nm,15.8s,MS4.2						
GUMO	**Guam**	**23.35**	**102**	P	**P**	**00 01 55.2**	**-0.6**
	comp=Z,16nm,0.3s,mb4.9,baz=197,slow=6.5,SNR=4.7						
GUMO				LR	LR	00 08 37.8	
	comp=Z,209nm,20.2s,MS3.6,baz=270,slow=30						
KAPI	**Kappang**	**24.85**	**184**	P	**P**	**00 02 08.9**	**-0.5**
	comp=Z,14nm,0.7s,mb4.6,baz=11,slow=13,SNR=6.1						
KAPI				LR	LR	00 12 25.5	
	comp=Z,182nm,18.0s,MS3.6,baz=280,slow=38						
KAPI	**Kappang**	**24.85**	**184**	P	**P**	**00 02 08.9**	**-0.5**
KAPI				LR	LR	00 12 25.5	
ASAJ	**Asahikawa**	**29.91**	**32**	P	**P**	**00 02 54.1**	**-0.4**
	comp=Z,8.6nm,0.4s,mb4.8,baz=209,slow=13,SNR=11						
BATI	**Baumata**	**30.04**	**175**	P	**P**	**00 02 54.4**	**-1.5**
	comp=Z,25nm,0.5s,mb5.2,baz=19,slow=3.6,SNR=7.4						
BATI				LR	LR	00 17 47.1	
	comp=Z,187nm,18.2s,MS3.8,baz=212,slow=42						
ULN	**Ulaanbaatar**	**30.18**	**341**	*eP*	**P**	**00 02 55.2**	**-1.7**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**30.18**	**341**	*eP*	**P**	**00 02 55.1**	**-1.8**
	comp=Z,4.6nm,0.8s,mb4.3						
SONM	**Songino Array**	**30.37**	**340**	P	**P**	**00 02 59.0**	**+0.4**
	comp=Z,2.5nm,0.6s,mb4.1,baz=157,slow=9.3,SNR=13						
SONM				LR	LR	00 17 13.3	
	comp=Z,215nm,18.6s,MS3.8,baz=148,slow=40						
KLR	**Kul'dur**	**30.39**	**13**	*eP*	**P**	**00 02 54.0**	**-4.7**
YSS	**Yuzh-Sakhalins**	**32.10**	**28**	*eP*	**P**	**00 03 11.8**	**-2.1**
YSS				*e*	pP	00 03 22.0	-5.3
YSS	**Yuzh-Sakhalins**	**32.10**	**28**	*eP*	**P**	**00 03 13.6**	**-0.2**
	comp=Z,116nm,2.3s,mb5.3						
FITZ	**Fitzroy Crossi**	**38.03**	**173**	*eP*	**P**	**00 04 05.8**	**+0.7**
	comp=Z,3.4nm,0.5s,mb4.3						
MK31	**Makanchi Array**	**41.58**	**319**	*eP*	**P**	**00 04 35.1**	**+0.8**
MKAR	**Makanchi Array**	**41.58**	**319**	P	**P**	**00 04 34.8**	**+0.4**
	comp=Z,3.7nm,0.8s,mb4.1,baz=111,slow=9.9,SNR=32						
MKAR				PcP	PcP	00 06 30.4	-0.3
	comp=Z,1.5nm,0.7s,baz=98,slow=3.5,SNR=2.9						
MKAR				LR	LR	00 24 45.1	
	comp=Z,108nm,18.1s,MS3.8,baz=349,slow=40						
MKAR	**Makanchi Array**	**41.58**	**319**	P	**P**	**00 04 34.8**	**+0.5**
MKAR						00 06 30.4	
WRA	**Warramunga Arr**	**41.62**	**161**	P	**P**	**00 04 33.3**	**-1.6**
	comp=Z,17nm,0.4s,mb5.0,baz=343,slow=9.0,SNR=51						
WRA				PcP	PcP	00 06 31.2	0.0
	comp=Z,2.3nm,0.7s,baz=343,slow=3.7,SNR=5.1						
WB2	**Warramunga Arr**	**41.62**	**161**	*eP*	**P**	**00 04 33.0**	**-1.9**
PEA0B	**Petropavlovsk-**	**43.33**	**31**	*eP*	**P**	**00 04 49.1**	**+0.6**
PETK	**Petropavlovsk-**	**43.33**	**31**	P	**P**	**00 04 48.3**	**-0.2**
	comp=Z,7.6nm,0.5s,mb4.7,baz=212,slow=4.1,SNR=27						
PET	**Petropavlovsk**	**43.75**	**32**	*eP*	**P**	**00 04 58.3**	**+6.4**
PET				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.9						
PET	**Petropavlovsk**	**43.75**	**32**	*eP*	**P**	**00 04 58.3**	**+6.4**
	comp=Z,16nm,0.7s,mb4.8						
ZAA0	**Zalesovo Array**	**43.93**	**330**	*eP*	**P**	**00 04 53.1**	**-0.2**
ZALV	**Zalesovo Beam**	**43.93**	**330**	P	**P**	**00 04 53.0**	**-0.3**
	comp=Z,3.6nm,0.7s,mb4.2,baz=113,slow=7.4,SNR=21						
ZALV				LR	LR	00 24 33.6	
	comp=Z,101nm,18.7s,MS3.8,baz=190,slow=38						
TKM2	**Tokmak 2**	**44.60**	**311**	*eP*	**P**	**00 05 02.0**	**+3.2**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
TKM2	**Tokmak 2**	**44.60**	**311**	*eP*	**P**	**00 05 02.0**	**+3.1**
	comp=Z,4.0nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**45.03**	**164**	P	**P**	**00 05 01.6**	**-0.8**
	comp=Z,10nm,0.6s,mb4.9,baz=349,slow=6.8,SNR=100						
UCH	**Uchtor**	**45.19**	**310**	*eP*	**P**	**00 05 07.1**	**+3.6**
	comp=Z,8.8nm,1.3s,mb4.4						
NVS	**Novosibirsk**	**45.21**	**330**	*eP*	**P**	**00 05 02.4**	**-1.1**
KURK	**Kurchatov**	**45.51**	**323**	P	**P**	**00 05 06.2**	**+0.3**
	comp=Z,5.2nm,0.8s,mb4.5,baz=124,slow=7.3,SNR=46						
AML	**Almayashu**	**45.76**	**310**	*eP*	**P**	**00 05 11.3**	**+3.3**
	comp=Z,5.1nm,0.9s,mb4.5						
EKS2	**Erkin-Say**	**45.83**	**311**	*eP*	**P**	**00 05 11.0**	**+2.4**
	comp=Z,1.3nm,0.6s,mb4.0						
HNR	**Honiara**	**47.89**	**124**	LR	LR	00 22 11.7	
	comp=Z,102nm,20.8s,MS3.8,baz=350,slow=32						
KBL	**Kabul**	**48.25**	**299**	*eP*	**P**	**00 05 35.3**	**+7.7**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KBL	**Kabul**	**48.25**	**299**	*eP*	**P**	**00 05 35.3**	**+7.8**
	comp=Z,3.3nm,0.6s,mb4.5						
FORT	**Forrest**	**50.83**	**173**	*eP*	**P**	**00 05 46.8**	**-0.3**
	comp=Z,23nm,0.5s,mb5.4						
BVAR	**Borovoye Array**	**51.10**	**323**	P	**P**	**00 05 49.3**	**+0.3**
	comp=Z,1.0nm,0.5s,mb4.0,baz=109,slow=11,SNR=6.7						
BVAR				PcP	PcP	00 07 03.7	-0.4
	comp=Z,3.9nm,0.6s,baz=118,slow=4.7,SNR=8.1						
BRVK	**Borovoye**	**51.18**	**323**	*eP*	**P**	**00 05 49.3**	**-0.2**
KLBR	**Kellerberrin**	**51.35**	**184**	*eP*	**P**	**00 05 50.0**	**-1.0**
	comp=Z,18nm,1.1s,mb4.9						
MUN	**Mundaring**	**51.86**	**186**	*eP*	**P**	**00 05 54.2**	**-0.6**
TIXI	**Tiksi**	**51.90**	**3**	*eP*	**P**	**00 05 53.1**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
TIXI	**Tiksi**	**51.90**	**3**	*eP*	**P**	**00 05 53.1**	**-1.6**
	comp=Z,7.8nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**55.05**	**159**	*eP*	**P**	**00 06 17.3**	**-0.9**
	comp=Z,4.0nm,0.6s,mb4.6						

BUR08	**Bucovina Ar. S**	**79.55**	**317**	*e*P		**P**	**00 08 53.5**	**+0.3**
BUR08				*e*PcP		PcP	00 09 05.5	+4.6
MLR	**Muntele Rosu**	**79.73**	**315**	⇑*i*P		**P**	**00 08 55.0**	**+0.9**
MLR	**Muntele Rosu**	**79.73**	**315**	⇓P		**P**	**00 08 54.5**	**+0.4**
KWP	**Kalwaria**	**80.48**	**319**	⇓*i*P		**P**	**00 08 58.6**	**+0.5**
KWP	**Kalwaria**	**80.48**	**319**	*e*P		**P**	**00 08 58.4**	**+0.3**
	comp=Z,14nm,0.9s,mb4.9							
DRGR		**81.44**	**317**	⇓*i*P		**P**	**00 09 03.8**	**+0.6**
DRGR		**81.44**	**317**	⇑P		**P**	**00 09 03.3**	**+0.1**
NIE	**Niedzica**	**82.02**	**320**	*e*P		**P**	**00 09 07.0**	**+0.7**
OJC	**Ojcow**	**82.04**	**321**	*e*P		**P**	**00 09 06.6**	**+0.3**
NB2	**NORSAR Subarra**	**82.05**	**333**	P		**P**	**00 09 04.8**	**-1.4**
	comp=Z,2.2nm,0.7s,mb4.2,baz=63,slow=5.3							
NOA	**NORSAR Array B**	**82.05**	**333**	P		**P**	**00 09 05.5**	**-0.6**
	comp=Z,3.6nm,0.8s,mb4.3,baz=62,slow=5.1,SNR=11							
NOA				LR		LR	00 49 30.6	
	comp=Z,150nm,18.1s,MS4.4,baz=50,slow=38							
DLBC	**Dease Lake**	**82.50**	**30**	*e*P		**P**	**00 09 15.3**	**+6.7**
DLBC				*e*PcP		PcP	00 09 20.0	+6.4
VTS	**Vitosha**	**82.54**	**313**	⇑*i*P		**P**	**00 09 09.7**	**+0.6**
VTS	**Vitosha**	**82.54**	**313**	⇑P		**P**	**00 09 09.7**	**+0.6**
BZS	**Buzias**	**82.56**	**316**	⇑*i*P		**P**	**00 09 07.6**	**-1.6**
VYHS	**Vyhne**	**83.27**	**319**	*e*P		**P**	**00 09 13.5**	**+0.7**
MORC	**Moravsky Berou**	**83.55**	**321**	*e*P		**P**	**00 09 15.0**	**+0.8**
MORC					pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5							
MORC	**Moravsky Berou**	**83.55**	**321**	⇑*i*P		**P**	**00 09 14.4**	**+0.2**
MORC	**Moravsky Berou**	**83.55**	**321**	*e*P		**P**	**00 09 15.0**	**+0.8**
	comp=Z,2.5nm,0.7s,mb4.5							
KSP	**Ksiaz**	**83.86**	**322**	⇑*e*P		**P**	**00 09 16.0**	**+0.2**
DPC	**Dobruska-Polom**	**84.04**	**322**	*e*P		**P**	**00 09 17.3**	**+0.6**
UPC	**Upice**	**84.16**	**322**	*e*P		**P**	**00 09 17.2**	**-0.1**
PKSM	**Moragy**	**84.27**	**317**	⇑*i*P		**P**	**00 09 18.4**	**+0.5**
PKSM	**Moragy**	**84.27**	**317**	⇑P		**P**	**00 09 18.4**	**+0.5**
MODS	**Modra-Piesok**	**84.27**	**319**	*e*P		**P**	**00 09 18.9**	**+1.0**
VRAC	**Vranov**	**84.31**	**321**	⇓*i*P		**P**	**00 09 19.0**	**+0.9**
TREC	**Trest**	**84.97**	**321**	*e*P		**P**	**00 09 21.2**	**-0.2**
PVCC	**Panska Ves**	**84.99**	**322**	*e*P		**P**	**00 09 22.2**	**+0.7**
BRG	**Berggiesshubel**	**85.20**	**323**	*e*P		**P**	**00 09 22.8**	**+0.3**
BRG					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5							
BRG	**Berggiesshubel**	**85.20**	**323**	*e*P		**P**	**00 09 22.8**	**+0.3**
	comp=Z,5.2nm,0.8s,mb4.7							
PRU	**Pruhonice**	**85.24**	**322**	*e*P		**P**	**00 09 22.9**	**+0.2**
CLL	**Collm**	**85.54**	**323**	*i* P		**P**	**00 09 23.6**	**-0.6**
	comp=Z,6.0nm,0.8s,mb4.9							
KHC	**Kasperske Hory**	**86.17**	**321**	*e*P		**P**	**00 09 28.1**	**+0.7**
GERES	**GERESS Array B**	**86.23**	**321**	P		**P**	**00 09 27.1**	**-0.5**
	comp=Z,0.8nm,0.6s,mb4.2,baz=68,slow=5.4,SNR=12							
SUMG	**Summit**	**86.72**	**354**	*e*P		**P**	**00 09 30.3**	**+0.7**
	comp=Z,1.7nm,0.5s,mb4.5							
YKA	**Yellowknife Ar**	**86.80**	**23**	P		**P**	**00 09 30.3**	**+0.2**
	comp=Z,11nm,0.6s,mb5.2,baz=308,slow=4.6,SNR=45							
YKA	**Yellowknife Ar**	**86.80**	**23**	P		**P**	**00 09 30.3**	**+0.2**
CABF	**La Chapelle**	**91.80**	**321**	*e*P		**P**	**00 09 55.0**	**+0.9**
LPG	**La Plagne**	**91.99**	**320**	*e*P		**P**	**00 09 55.7**	**+0.7**
LPL	**La Plagne**	**91.99**	**320**	*e*P		**P**	**00 09 54.8**	**-0.2**
	comp=Z,12nm,1.1s,mb4.8							
LPL	**La Plagne**	**91.99**	**320**	*e*P		**P**	**00 09 54.8**	**-0.2**
LPL					pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.8							
LPL	**La Plagne**	**91.99**	**320**	*e*P		**P**	**00 09 54.8**	**-0.2**
	comp=Z,5.8nm,1.1s,mb4.8							
LOR	**Lormes**	**92.74**	**323**	*e*P		**P**	**00 09 58.1**	**-0.3**
SMF	**Signal de Mont**	**93.09**	**322**	*e*P		**P**	**00 09 59.9**	**-0.1**
AVF	**Avril sur Loir**	**93.29**	**323**	*e*P		**P**	**00 10 00.0**	**-0.9**
	comp=Z,18nm,1.2s,mb5.1							
AVF	**Avril sur Loir**	**93.29**	**323**	*e*P		**P**	**00 10 00.0**	**-0.9**
AVF					pmax	pmax		
	comp=Z,9.0nm,1.2s,mb5.1							
AVF	**Avril sur Loir**	**93.29**	**323**	*e*P		**P**	**00 10 00.0**	**-0.9**
	comp=Z,9.0nm,1.2s,mb5.1							
BGF	**Bois d'Agland**	**93.71**	**323**	*e*P		**P**	**00 10 03.4**	**+0.5**
	comp=Z,26nm,1.3s,mb5.2							
BGF	**Bois d'Agland**	**93.71**	**323**	*e*P		**P**	**00 10 03.4**	**+0.5**
BGF					pmax	pmax		
	comp=Z,13nm,1.3s,mb5.2							
BGF	**Bois d'Agland**	**93.71**	**323**	*e*P		**P**	**00 10 03.4**	**+0.5**
	comp=Z,13nm,1.3s,mb5.2							
TCF	**Toulx Ste Croi**	**94.23**	**323**	*e*P		**P**	**00 10 04.7**	**-0.6**
HLID	**Hailey**	**98.73**	**37**	*e*P		**P**	**00 10 31.5**	**+5.8**
	comp=Z,27nm,2.8s,mb5.3							
NVAR	**Mina Array Bea**	**99.39**	**43**	P		**P**	**00 10 29.6**	**+0.7**
	comp=Z,1.0nm,0.7s,mb4.5,baz=280,slow=4.2,SNR=5.2							
TORD	**Torodi Ar. Bea**	**112.16**	**294**	PKiKP		PKiKP	00 15 21.1	-1.3
	comp=Z,0.5nm,0.7s,baz=56,slow=1.1,SNR=7.6							
TXAR	**Lajitas Array**	**114.53**	**43**	PKP		PKiKP	00 15 27.0	+0.4
	comp=Z,0.8nm,0.7s,baz=299,slow=0.7,SNR=10							
TXAR	**Lajitas Array**	**114.53**	**43**	PKP		PKiKP	00 15 27.0	+0.4
DBIC	**Dimbokro**	**120.88**	**291**	PKP		PKPdf	00 15 38.3	-0.8
	comp=Z,4.6nm,1.0s,baz=300,slow=2.5,SNR=3.1							
OTAV	**Otavalo**	**152.08**	**46**	*e*PKPdf		PKPdf	00 16 35.7	+0.1
PLCA	**Paso Flores**	**156.90**	**156**	PKPab		PKPab	00 17 12.4	+1.0
	comp=Z,2.7nm,0.7s,baz=210,slow=4.7,SNR=8.3							
LPAZ	**La Paz**	**170.26**	**70**	PKP		PKPdf	00 16 55.6	+1.1
LPAZ				*e*PKPdf		PKPdf	00 16 56.4	+1.8
LPAZ				*e*PKPab		PKPab	00 18 11.7	+0.8
CPUP	**Villa Florida**	**173.53**	**190**	PKP		PKPdf	00 16 55.9	0.0
	comp=Z,0.3nm,0.5s,baz=12,slow=15,SNR=3.1							

*IPEC **30** 00:16:45.2±0.3, 5153N×1632E, h0km, ML2.0/4, Error ellipse: s-maj=2.0km s-min=1.3km az=25.0*
*ISCJB **30** 00:16:45.5±0.6, 5137N±003×1619E±003, h0km, Error ellipse: s-maj=4.7km s-min=2.4km az=21.0*
*PRU **30** 00:16:47.9, 5140N×1615E, h0km*
*WAR **30** 00:16:47.2, 5144N×1620E, ML2.6, Mining Induced*
*CSEM **30** 00:16:48.3±0.3, 5140N×1619E, h2km, ML3.0/10, Error ellipse: s-maj=4.8km s-min=3.2km az=14.0*
*VIE **30** 00:16:48.7±0.5, 5126N×1624E, h0km, mb2.0/3, ML2.5/4, Error ellipse: s-maj=3.0km s-min=2.8km az=174.0 56 km WNW of Breslau Suspected Mining induced.*

ISC 30 00:16:46.5±0.7, 5143N±003×1618E±003, h0km, n30, σ0s85/55, 3C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.59**	**173**	*e*P	**Pg**	**00 16 58.3**	**+0.4**
KSP				*e*Sg	**Sg**	**00 17 06.2**	**+0.7**
UPC	**Upice**	**0.93**	**186**	*e*PG	**Pg**	**00 17 04.7**	**+0.4**
DPC	**Dobruska-Polom**	**1.09**	**175**	Pg	**Pg**	**00 17 07.2**	**-0.1**
DPC				*e*Sg	**Sg**	**00 17 21.3**	**-0.1**
DPC	**Dobruska-Polom**	**1.09**	**175**	*e*PG	**Pg**	**00 17 07.2**	**-0.1**
DPC				*e*SG	**Sg**	**00 17 21.4**	**0.0**
	comp=Z,20nm,0.5s						
PVCC	**Panska Ves**	**1.36**	**229**	*e*Pn	**Pn**	**00 17 12.8**	**+0.1**
PVCC	**Panska Ves**	**1.36**	**229**	Pg	**Pg**	**00 17 12.9**	**+0.3**
PVCC				Sg	**Sg**	**00 17 31.4**	**+1.2**
	comp=Z,104nm,0.4s						
PVCC	**Panska Ves**	**1.36**	**229**	*e*PG	**Pg**	**00 17 12.9**	**+0.3**
PVCC				*e*SG	**Sg**	**00 17 31.4**	**+1.2**
	comp=Z,104nm,0.4s						
BRG	**Berggiesshubel**	**1.51**	**249**	PN	**Pn**	**00 17 13.8**	**-1.0**
BRG				PG	**Pg**	**00 17 15.6**	**+0.1**
BRG				SG	**Sg**	**00 17 36.0**	**+0.9**
	comp=Z,26nm,0.5s						
PRU	**Pruhonice**	**1.78**	**216**	*e*PN	**Pn**	**00 17 18.5**	**0.0**
PRU				*e*PG	**Pg**	**00 17 19.8**	**-0.8**
PRU				*e*SG	**Sg**	**00 17 43.5**	**-0.1**
	comp=Z,27nm,0.8s						
MORC	**Moravsky Berou**	**1.87**	**152**	*e*Sg	**Sg**	**00 17 45.7**	**-0.9**
	comp=Z,4.6nm,0.2s						
CLL	**Collm**	**1.99**	**268**	*e*Pn	**Pn**	**00 17 21.0**	**-0.4**
CLL				*e*Pg	**Pg**	**00 17 24.0**	**-0.7**
CLL				*ex*	x	00 17 25.0	
CLL				*ex*	x	00 17 27.0	
CLL				*e*Sg	**Sg**	**00 17 51.0**	**+0.5**
	comp=Z,13nm,0.7s						
OKC	**Ostrava-Krasne**	**2.03**	**141**	*e*Sg	**Sg**	**00 17 49.9**	**-1.8**
VRAC	**Vranov**	**2.14**	**173**	*e*Pn	**Pn**	**00 17 23.5**	**0.0**
VRAC				*e*Sg	**Sg**	**00 17 54.7**	**-0.6**
	comp=Z,8.0nm,0.4s						
TREC	**Trest**	**2.18**	**192**	*e*PN	**Pn**	**00 17 24.1**	**+0.1**
TREC				*e*PG	**Pg**	**00 17 27.3**	**-1.1**
KRUC	**Moravsky**	**2.38**	**177**	*e*Pn	**Pn**	**00 17 27.0**	**+0.3**
KRUC				*e*Sg	**Sg**	**00 18 02.7**	**-0.1**
	comp=Z,7.0nm,0.5s						
OJC	**Ojcow**	**2.60**	**116**	*e*Pg	**Pg**	**00 17 36.8**	**+0.5**
OJC				*e*Sg	**Sg**	**00 18 10.9**	**+1.0**
NKC	**Novy Kostel**	**2.65**	**245**	*e*PN	**Pn**	**00 17 30.4**	**-0.1**
NKC				*e*PG	**Pg**	**00 17 36.8**	**-0.5**
NKC				*e*SG	**Sg**	**00 18 12.7**	**+1.1**
	comp=Z,14nm,0.3s						
JAVC	**Velka Javorina**	**2.75**	**159**	*e*Sg	**Sg**	**00 18 16.7**	**+1.9**
	comp=Z,10nm,0.9s						
KHC	**Kasperske Hory**	**2.84**	**217**	*e*PN	**Pn**	**00 17 33.5**	**+0.4**
KHC				*e*PG	**Pg**	**00 17 39.1**	**-1.9**
KHC				*e*SN	**Sn**	**00 18 06.2**	**-1.8**
KHC				*e*SG	**Sg**	**00 18 17.1**	**-0.7**
	comp=Z,7.9nm,0.4s						
MOX	**Moxa**	**2.98**	**256**	*e*PG	**Pg**	**00 17 43.5**	**-0.2**
MOX				*e*SG	**Sg**	**00 18 23.4**	**+1.0**
MODS	**Modra-Piesok**	**3.14**	**166**	*e*Sg	**Sg**	**00 18 27.0**	**-0.4**
KOLL	**Kolacno**	**3.20**	**152**	*e*SG	**Sg**	**00 18 29.2**	**+0.1**
KOLL	**Kolacno**	**3.20**	**152**	*e*Sg	**Sg**	**00 18 29.2**	**+0.1**
ZST	**Bratislava**	**3.29**	**169**	*e*Sg	**Sg**	**00 18 31.6**	**-0.7**
NIE	**Niedzica**	**3.33**	**126**	*e*P	**Pg**	**00 17 49.2**	**-1.0**
NIE				*e*S	**Sg**	**00 18 32.5**	**-0.8**
VYHS	**Vyhne**	**3.41**	**149**	*e*Sg	**Sg**	**00 18 37.4**	**+1.6**
CONA	**Conrad Observa**	**3.51**	**183**	⇑*i*Pn	**Pn**	**00 17 42.5**	**+0.2**
CONA				⇑*i*Sg	**Sg**	**00 18 38.9**	**-0.4**
	comp=Z,6.5nm,0.4s						
MOA	**Molln**	**3.79**	**200**	⇑*i*Pn	**Pn**	**00 17 46.7**	**+0.5**
MOA				⇓*i*Sg	**Sg**	**00 18 49.3**	**+1.0**
	comp=Z,7.2nm,0.5s						
MOA	**Molln**	**3.79**	**200**	Pn	**Pn**	**00 17 46.7**	**+0.5**
MOA				Sg	**Sg**	**00 18 49.3**	**+1.0**
	comp=Z,7.2nm,0.5s						
STHS	**Stebnicka Huta**	**3.82**	**120**	*e*Sg	**Sg**	**00 18 51.0**	**+1.9**

*ISCJB **30** 00:28:01.9±0.7, 2081S±005×687W±0.1, h119km±7km, mb4.5/7, Error ellipse: s-maj=19.3km s-min=7.8km az=8.3*
*IDC **30** 00:28:02.6±0.8, 2078S×6875W, h107km±6km, mb3.9/5, mb1 3.8/9, mb1mx3.7/19, mbtmp3.7/9, Error ellipse: s-maj=22.9km s-min=8.0km az=100.0*
*NEIC **30** 00:28:03.3±1.0, 2088S×6857W, h93km±18km, mb3.9/1, Error ellipse: s-maj=21.0km s-min=9.4km az=112.0*

ISC 30 00:28:03.1±0.7, 2082S±005×687W±0.1, h112km±7km, n18, σ0s94/21, mb4.5/7, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.80**	**187**	P	**Pn**	**00 28 33.7**	**0.0**
	104nm,0.3s,baz=1.0,slow=7.3,SNR=266						
LVC				S	**Sn**	**00 28 57.3**	**+0.3**
	231nm,0.3s,baz=255,slow=20,SNR=34						
LPAZ	**La Paz**	**4.54**	**7**	P	**Pn**	**00 29 11.0**	**+1.2**
	1.5nm,0.3s,baz=191,slow=8.1,SNR=29						
LPAZ				S	**Sn**	**00 30 01.4**	**-0.2**
	3.8nm,0.3s,baz=260,slow=15,SNR=3.7						
LPAZ	**La Paz**	**4.54**	**7**	P	**Pn**	**00 29 11.0**	**+1.2**
LPAZ				S	**Sn**	**00 30 01.4**	**-0.2**
LCO	**Las Campanas**	**8.36**	**192**	Pn	**Pn**	**00 30 01.5**	**0.0**
	4.1nm,0.6s						
SIV	**San Ignacio**	**8.67**	**58**	P	**Pn**	**00 30 04.9**	**-0.9**
	1.5nm,0.3s,baz=247,slow=12,SNR=29						
CFAA	**Coronel Fontan**	**10.75**	**178**	P	**Pn**	**00 30 31.6**	**-2.2**
	0.1nm,0.3s,baz=346,slow=14,SNR=10						
CFAA				S	**Sn**	**00 32 20.9**	**-11**
	0.1nm,0.3s,baz=260,slow=7.9,SNR=3.8						
CPUP	**Villa Florida**	**11.76**	**120**	P	**Pn**	**00 30 47.1**	**-0.2**
	0.7nm,0.3s,baz=84,slow=1.0,SNR=4.5						
PLCA	**Paso Flores**	**19.91**	**184**	P	**P**	**00 32 27.6**	**+1.7**
	0.1nm,0.3s,baz=358,slow=13,SNR=5.6						
BDFB	**Brasilia**	**20.29**	**79**	P	**P**	**00 32 31.2**	**+1.1**
	3.4nm,0.3s,baz=249,slow=14,SNR=12						
BDFB	**Brasilia**	**20.29**	**79**	*e*P	**P**	**00 32 31.1**	**+0.9**
	2.8nm,0.5s						
TXAR	**Lajitas Array**	**60.20**	**325**	P	**P**	**00 37 58.2**	**-1.1**
	0.1nm,0.3s,mb3.3,baz=148,slow=4.3,SNR=4.3						
LIC	**Lamto**	**67.99**	**74**	*e*P	**P**	**00 38 49.1**	**-1.7**
	5.5nm,0.2s,mb5.1						
TIC	**Toumodi**	**68.18**	**74**	*e*P	**P**	**00 38 52.1**	**+0.2**
	6.0nm,0.2s,mb5.0						
KIC	**Kosan Boka**	**68.31**	**74**	*e*P	**P**	**00 38 53.1**	**+0.4**
	25nm,0.7s,mb5.1						
DBIC	**Dimbokro**	**68.34**	**74**	P	**P**	**00 38 53.4**	**+0.5**
	4.9nm,0.7s,mb4.5,baz=219,slow=3.3,SNR=14						
TORD	**Torodi Ar. Bea**	**76.93**	**70**	P	**P**	**00 39 43.8**	**+0.1**
	2.0nm,0.3s,mb4.3,baz=256,slow=5.1,SNR=58						
TORD				pP	pP	00 40 11.5	-0.6
	1.6nm,0.6s,baz=253,slow=5.0,SNR=3.3						
TORD				sP	sP	00 40 23.1	-1.0
	1.5nm,0.7s,baz=253,slow=5.1,SNR=2.9						
BOSA	**Boshof**	**83.58**	**118**	P	**P**	**00 40 19.8**	**+0.5**
	2.3nm,0.6s,mb4.2,baz=261,slow=4.5,SNR=3.2						
MKAR	**Makanchi Array**	**144.96**	**35**	PKP	PKPdf	00 47 27.3	+0.3
	1.3nm,0.6s,baz=320,slow=4.6,SNR=8.7						
MKAR				pPKP	pPKPdf	00 47 56.4	-1.1
	1.7nm,0.8s,baz=306,slow=2.7,SNR=4.7						

*MOS **30** 00:30:17.5±1.9, 4189N×4392E, h9km, mb3.7/1, Error ellipse: s-maj=36.8km s-min=13.3km az=86.8*
*CSEM **30** 00:30:17.5, 4189N×4392E, h9km, mb3.7, After OBN*

ISC 30 00:30:16.2±1.6, 4192N±005×4356E±009, h2km±26km, n11, σ0s73/21, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOR	**Gori**	**0.42**	**80**	P	**Pg**	**00 30 24.6**	**+0.5**
GOR				S	**Sg**	**00 30 29.9**	**+0.3**
ONI	**Oni**	**0.67**	**353**	P	**Pg**	**00 30 29.2**	**+0.2**
ONI				S	**Sg**	**00 30 37.8**	**+0.1**
ZEI	**Tsey**	**0.89**	**16**	*i* Pg	**Pg**	**00 30 32.9**	**-0.3**
ZEI				*i* Sg	**Sg**	**00 30 44.4**	**-0.3**
TBLG	**Delisi**	**0.90**	**102**	*e*Pg	**Pg**	**00 30 33.4**	**0.0**
TBLG				*e*Sg	**Sg**	**00 30 45.0**	**-0.1**
TBLG	**Delisi**	**0.90**	**102**	P	**Pg**	**00 30 33.4**	**0.0**
TBLG				S	**Sg**	**00 30 45.0**	**-0.1**
MTA	**Mtatsminda**	**0.95**	**103**	P	**Pg**	**00 30 34.1**	**-0.2**
MTA				S	**Sg**	**00 30 46.9**	**+0.2**
LACR	**Lac**	**1.06**	**31**	*i* Pg	**Pg**	**00 30 35.1**	**-1.4**
LACR				*i* Sg	**Sg**	**00 30 48.0**	**-2.2**
KORR	**Kora**	**1.23**	**18**	*i* Pg	**Pg**	**00 30 39.3**	**-0.4**
KORR				*i* Sg	**Sg**	**00 30 55.8**	**+0.2**
LSNR	**Lesken**	**1.37**	**8**	*i* Pg	**Pg**	**00 30 42.4**	**0.0**
LSNR				*i* Sg	**Sg**	**00 31 00.9**	**+0.7**
DGRG	**David-gareji**	**1.44**	**108**	P	**Pb**	**00 30 43.7**	**0.0**
BTKR	**Batakoyurt**	**1.62**	**26**	*e*Pg	**Pg**	**00 30 48.2**	**+0.9**
BTKR				*e*Sg	**Sg**	**00 31 09.8**	**+1.4**

*ATH **30** 00:50:40.7, 3553N×2572E, h17km±4km, MD3.2/5*
*NEIC **30** 00:50:40.7, 3553N×2572E, h17km, MD3.2(ATH), After ATH.*
*ISCJB **30** 00:50:41.7±0.5, 3546N±002×2573E±005, h19km±6km, Error ellipse: s-maj=6.5km s-min=4.2km az=4.3*
*THE **30** 00:50:41.6, 3546N×2571E, h13km, ML3.0*
*CSEM **30** 00:50:41.8±0.1, 3547N×2573E, h20km, MD3.2, Error ellipse: s-maj=3.4km s-min=2.3km az=86.0*

ISC 30 00:50:41.5±0.5, 3549N±002×2572E±005, h12km±5km, n18, σ0s75/31, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**0.24**	**202**	*e*PB	**Pg**	**00 50 46.6**	**0.0**
NPS				*e*SB	**Sg**	**00 50 50.3**	**+0.4**
LAST	**Lasithi**	**0.38**	**212**	*e*Pg	**Pg**	**00 50 48.4**	**-0.7**
LAST				*e*Sg	**Sg**	**00 50 54.3**	**+0.1**
ZKR	**Zakros**	**0.55**	**132**	*e*Pg	**Pg**	**00 50 52.2**	**-0.1**
ZKR				*e*Sg	**Sg**	**00 51 00.4**	**+0.8**
SIVA	**Sivas**	**0.88**	**238**	*e*Pg	**Pg**	**00 50 57.9**	**-0.6**
SIVA				*e*Sg	**Sg**	**00 51 09.7**	**-0.3**
THR6	**Thira Island,**	**0.91**	**343**	*e*Pg	**Pg**	**00 50 58.7**	**-0.4**
THR1	**Thera Island**	**0.91**	**347**	*e*Pg	**Pg**	**00 50 59.1**	**0.0**
THR1				*e*Sg	**Sg**	**00 51 11.7**	**+0.7**
SANT	**Santorini**	**0.91**	**347**	*e*Pg	**Pg**	**00 50 58.8**	**-0.4**
SANT				*e*Sg	**Sg**	**00 51 12.1**	**+1.1**
THR3	**Thira Island,**	**0.96**	**344**	*e*Pg	**Pg**	**00 50 59.2**	**-0.8**
THR3				*e*Sg	**Sg**	**00 51 13.4**	**+0.8**
THR3	**Thira Island,**	**0.96**	**344**	*e*Pg	**Pg**	**00 50 59.2**	**-0.8**
THR3				*e*Sg	**Sg**	**00 51 13.4**	**+0.9**
THR5	**Thira Island,**	**0.98**	**342**	*e*Pg	**Pg**	**00 50 59.5**	**-0.9**
THR5				*e*Sg	**Sg**	**00 51 13.4**	**+0.2**
THR5	**Thira Island,**	**0.98**	**342**	*e*Pg	**Pg**	**00 50 59.5**	**-0.9**
THR5				*e*Sg	**Sg**	**00 51 13.4**	**+0.2**
KARP	**Karpathos**	**1.18**	**87**	*e*PN	**Pn**	**00 51 03.1**	**-0.7**
VAM	**Vamos**	**1.24**	**267**	*e*PN	**Pn**	**00 51 04.3**	**-0.4**
VAM				*e*SN	**Sn**	**00 51 21.7**	**+0.3**
GVD	**Gavdhos**	**1.48**	**245**	*e*PN	**Pn**	**00 51 10.0**	**+2.0**
APE	**Apeiranthos**	**1.59**	**355**	*e*Pg	**Pg**	**00 51 08.2**	**-3.8**
APE				*e*Sg	**Sg**	**00 51 29.0**	**-3.7**
APE	**Apeiranthos**	**1.59**	**355**	*e*Pn	**Pn**	**00 51 09.6**	**+0.2**
APE				*e*Sg	**Sg**	**00 51 29.0**	**-3.7**
DID	**Didima**	**2.84**	**316**	*e*Pn	**Pn**	**00 51 26.1**	**-0.6**
DID	**Didima**	**2.84**	**316**	*e*Pn	**Pn**	**00 51 26.0**	**-0.7**

IDC 30 00:58:18.2±3.8, 542S×15271E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/15, mbtmp3.7/2, Error ellipse: s-maj=180.2km s-min=47.1km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.97**	**229**	P	P	01 03 23.7	-0.9
	0.5nm,0.3s,baz=53,slow=9.9,SNR=5.3						
ASAR	**Alice Springs**	**25.64**	**223**	P	P	01 03 50.2	+0.5
	0.9nm,0.5s,baz=59,slow=8.9,SNR=24						
TORD	**Torodi Ar. Bea**	**150.41**	**287**	PKPbc	PKPbc	01 18 12.7	-0.2
	0.5nm,1.0s,baz=85,slow=1.9,SNR=2.6						

IDC 30 01:02:54.3±6.0, 699S×1120W, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.7/21, mbtmp3.9/4, ML2.9/1, MS3.7/10, Ms1 3.7/10, ms1mx3.4/26, Error ellipse: s-maj=272.8km s-min=95.2km az=129.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**14.97**	**25**	Pn	Pn	01 06 27.6	+0.1
	0.1nm,0.3s,baz=183,slow=16,SNR=1.9						
DBIC				LR	LR	01 11 03.1	
	comp=Z,264nm,20.6s,baz=174,slow=33						
TORD	**Torodi Ar. Bea**	**23.76**	**33**	P	P	01 08 08.7	0.0
	2.5nm,0.8s,baz=216,slow=11,SNR=13						
TORD				LR	LR	01 16 12.7	
	comp=Z,249nm,20.4s,baz=215,slow=34						
BOSA	**Boshof**	**40.57**	**127**	LR	LR	01 24 55.7	
	comp=Z,101nm,19.1s,baz=335,slow=33						
KEST	**Kesra**	**46.69**	**23**	LR	LR	01 31 24.3	
	comp=Z,89nm,19.0s,baz=195,slow=37						
ESDC	**Sonseca Array**	**46.91**	**8**	LR	LR	01 30 04.1	
	comp=Z,35nm,21.2s,baz=170,slow=35						
CPUP	**Villa Florida**	**47.88**	**241**	LR	LR	01 28 45.5	
	comp=Z,133nm,20.2s,baz=260,slow=32						
GERES	**GERESS Array B**	**59.73**	**19**	P	P	01 13 00.9	+0.1
	1.0nm,0.7s,baz=193,slow=5.5,SNR=10						
GERES				LR	LR	01 38 35.2	
	comp=Z,77nm,18.6s,baz=101,slow=36						
ROSC	**El Rosal**	**64.09**	**279**	LR	LR	01 39 38.5	
	comp=Z,62nm,20.0s,baz=189,slow=34						
AKASG	**Malin Array Be**	**67.22**	**27**	P	P	01 13 50.3	0.0
	0.3nm,0.3s,baz=226,slow=7.3,SNR=9.4						
NOA	**NORSAR Array B**	**70.06**	**11**	LR	LR	01 42 18.4	
	comp=Z,36nm,18.9s,baz=75,slow=34						
ARCES	**ARCESS Array B**	**80.40**	**12**	LR	LR	01 48 40.0	
	comp=Z,49nm,18.5s,baz=206,slow=34						

*IDC **30** 01:15:09.3±2.0, 2486N×10940W, h0km, mb1 4.0/4, mb1mx3.7/22, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=42.2km s-min=17.9km az=129.0*
*NEIC **30** 01:15:10.4±1.3, 2472N×10925W, h10km, mb3.7/2, Error ellipse: s-maj=21.8km s-min=12.8km az=138.0*
*ISCJB **30** 01:15:11.6±1.4, 247N±0.1×1092W±0

KIC **Kosan Boka** 67.32 72 *e*PKIKP P 01 59 21.3 -0.8
20nm,0.5s,mb5.2
DBIC **Dimbokro** 67.37 71 P P 01 59 21.6 -0.9
3.8nm,0.5s,mb4.5,baz=211,slow=5.3,SNR=14
319A **Douglas** 68.51 321 ⇑P P 01 59 29.6 +0.4
baz=69,SNR=5.3
219A **White Tail Can** 68.96 322 ⇓P P 01 59 32.5 +0.5
baz=69
318A **Bisbee** 68.97 321 ⇓P P 01 59 32.3 +0.3
baz=69,SNR=9.3
218A **Dragoon** 69.39 321 ⇓P P 01 59 34.5 -0.1
baz=70
119A **Ashpeak Ranch,** 69.56 322 ⇓P P 01 59 35.5 -0.1
baz=70
LAZ **Ladron** 69.63 325 *e*P P 01 59 36.6 +0.6
217A **Green Valley** 69.69 321 ⇑P P 01 59 36.0 -0.5
baz=70,SNR=8.5
ANMO **Albuquerque** 69.70 326 *e*P P 01 59 36.6 +0.2
8.7nm,1.3s,mb4.3
118A **Homack Ranch,** 69.84 322 ⇑P P 01 59 37.3 0.0
baz=70
117A **Oracle** 70.23 321 ⇓P P 01 59 39.5 -0.2
baz=70
216A **Three Points,** 70.23 320 ⇑P P 01 59 40.4 +0.7
baz=70
Y19A **Nutrioso** 70.42 323 ⇑P P 01 59 39.7 -1.2
baz=71
214A **Organ Pipe Nat** 70.99 319 ⇓P P 01 59 44.8 +0.5
baz=71
Y17A **Roosevelt** 71.11 322 ⇓P P 01 59 45.4 +0.4
baz=71,SNR=9.2
Z16A **Peralta Trail,** 71.19 321 ⇑P P 01 59 46.1 +0.7
baz=72
X18A **Snowflake** 71.23 323 ⇓P P 01 59 46.3 +0.6
baz=72
Y16A **Circle Bar Ran** 71.61 322 ⇑P P 01 59 48.9 +0.9
baz=72
X16A **Lo Mia Camp, P** 71.98 322 ⇑P P 01 59 50.7 +0.5
baz=72
V18A **Ganado** 72.11 324 ⇓P P 01 59 50.0 -0.9
baz=72
113A **Mohawk Valley,** 72.14 319 ⇑P P 01 59 50.3 -0.9
baz=72
Y15A **Casa Rosa Ranc** 72.15 321 ⇓P P 01 59 51.9 +0.7
baz=72
T19A **Beclabito** 72.47 325 ⇑P P 01 59 53.4 +0.4
baz=73
X15A **Humboldt** 72.48 322 ⇓P P 01 59 53.6 +0.5
baz=73
MVCO **Mesa Verde** 72.49 326 ⇑P P 01 59 53.4 +0.3
baz=73
Y14A **Wickenburg** 72.52 321 ⇑P P 01 59 53.4 0.0
baz=73
W16A **Flagstaff** 72.53 323 ⇓P P 01 59 54.2 +0.8
baz=73
ECSD **EROS,Sioux Fal** 72.74 338 *e*P P 01 59 53.2 -1.2
18nm,1.1s,mb4.7
WUAZ **Wupatki** 72.75 323 ⇑P P 01 59 54.4 -0.3
baz=73
X14A **Yava** 72.84 321 ⇓P P 01 59 55.7 +0.5
baz=73
T18A **Mexican Hat** 73.15 325 ⇓P P 01 59 57.5 +0.5
baz=73
Y12C **Blythe** 73.28 320 ⇑P P 01 59 58.1 +0.3
baz=74
V15A **Kaibab Nationa** 73.41 323 ⇑P P 01 59 59.5 +0.9
baz=74
X13A **Yucca** 73.47 321 ⇑P P 01 59 59.0 +0.1
baz=74
S18A **Hurst Farm, Bl** 73.63 325 ⇓P P 02 00 00.0 +0.2
baz=74
BC3 **Big Chuckw Mtn** 73.77 319 ⇑P P 02 00 01.0 +0.3
baz=74
V14A **Boquillas Ranc** 73.80 322 ⇑P P 02 00 01.3 +0.5
baz=74
U15A **North Rim** 73.92 323 ⇑P P 02 00 02.2 +0.7
baz=74,SNR=6.4
BELC **Belle Mtn.** 74.33 319 ⇓P P 02 00 04.3 +0.3
baz=75
U14A **Mt Trumbull** 74.41 322 ⇑P P 02 00 04.3 -0.1
baz=75,SNR=5.2
V13A **Grand Canyon W** 74.45 322 ⇑P P 02 00 04.4 -0.2
baz=75
S16A **Weppner Ranch,** 74.49 324 ⇑P P 02 00 05.4 +0.6
baz=75
R17A **Hanksville Air** 74.55 325 ⇓P P 02 00 04.9 -0.2
baz=75
GMRC **Granite Mounta** 74.67 320 ⇓P P 02 00 06.8 +0.9
baz=75
T14A **Hurricane** 74.82 323 ⇑P P 02 00 06.5 -0.2
baz=75
V12A **Nelson** 74.86 321 ⇑P P 02 00 06.7 -0.2
baz=75
O19A **Miners Draw (B** 75.17 328 ⇑P P 02 00 08.6 0.0
baz=76
U12A **Valley of Fire** 75.18 322 ⇑P P 02 00 09.0 +0.2
baz=76
MSU **Marysvale** 75.39 325 *e*P P 02 00 10.6 +0.7
S13A **Holt Ranch, En** 75.62 323 ⇓P P 02 00 12.5 +1.2
baz=76
N19A **John Jarvie Ra** 75.65 328 ⇑P P 02 00 11.6 +0.3
baz=76
RSSD **Black Hills** 75.90 333 *e*P P 02 00 12.4 -0.3
3.0nm,0.8s,mb4.0
TOA0 **Torodi Ar. Sit** 76.13 69 *e*P P 02 00 13.9 -0.7
TORD **Torodi Ar. Bea** 76.13 69 P P 02 00 14.1 -0.6
5.4nm,0.7s,mb4.3,baz=256,slow=5.9,SNR=114
T11A **Corn Creek, Al** 76.14 322 ⇑P P 02 00 15.1 +0.8
baz=76
Q14A **Sevier Lake (B** 76.32 324 ⇓P P 02 00 16.0 +0.8
baz=77
N17A **Moffit Pass** 76.50 327 ⇑P P 02 00 17.1 +0.9
baz=77
TPNV **Topopah Spring** 76.52 321 ⇓P P 02 00 17.4 +1.0
baz=77
FURC **Furnace Creek,** 76.54 320 ⇓P P 02 00 17.1 +0.6
baz=77
MPMC **Manual Prospec** 76.63 320 ⇓P P 02 00 16.8 -0.2
baz=77
P14A **Drum Mountains** 76.65 325 ⇓P P 02 00 18.0 +0.9
baz=77
ISA **Isabella** 76.95 319 ⇑P P 02 00 19.1 +0.3
baz=77
DUG **Dugway** 76.96 325 ⇑P P 02 00 19.1 +0.4
baz=77
P13A **Bates Ranch, G** 77.05 324 ⇑P P 02 00 20.0 +0.7
baz=77
R11A **Troy Canyon, C** 77.12 322 ⇑P P 02 00 20.8 +1.1
baz=77
Q12A **Willow Creek R** 77.20 323 ⇑P P 02 00 21.1 +1.0
baz=78
PDAR **Pinedale Array** 77.27 329 P P 02 00 20.4 0.0
1.2nm,0.6s,mb3.7,baz=132,slow=7.4,SNR=10
TSUM **Tsumeb** 77.28 105 P P 02 00 21.0 -0.1
3.6nm,0.9s,mb4.0,baz=121,slow=11,SNR=5.0
S10A **Tonopah Range,** 77.39 322 ⇓P P 02 00 21.8 +0.5
baz=78
Q11A **Duckwater** 77.51 323 ⇓P P 02 00 22.6 +0.8
baz=78
N14A **Grayback Hills** 77.63 326 ⇓P P 02 00 22.1 -0.3
baz=78
M15A **Larsen Ranch,** 77.70 326 ⇑P P 02 00 23.0 +0.2
baz=78
R09A **Tonopah** 77.88 322 ⇓P P 02 00 24.5 +0.6
baz=78
HELL **Mitchell Peak** 77.96 319 ⇓P P 02 00 24.7 +0.3
baz=78
O12A **Currie** 78.03 324 ⇓P P 02 00 25.4 +0.8
baz=78
L15A **Malad City** 78.07 327 ⇑P P 02 00 24.9 +0.1
baz=78,SNR=6.5
M14A **Sheep Mountain** 78.19 326 ⇑P P 02 00 26.0 +0.5
baz=78
ULM **Lac du Bonnet** 78.26 341 P P 02 00 24.6 -1.1
5.3nm,0.6s,mb4.4,baz=163,slow=6.7,SNR=13
K16A **Soda Springs** 78.30 328 P P 02 00 27.4 +1.3
baz=79,SNR=10
SCHQ **Schefferville** 78.40 360 P P 02 00 25.6 -0.8
2.9nm,0.6s,mb4.1,baz=172,slow=3.8,SNR=5.4
LOHW **Long Hollow** 78.41 329 *e*P P 02 00 26.9 +0.2
2.2nm,0.6s,mb4.0
O11A **Cowboy Ranch,** 78.42 324 ⇑P P 02 00 28.2 +1.3
baz=79
L14A **Malta** 78.52 326 ⇓P P 02 00 27.3 -0.1
baz=79
RRI2 **Red Ridge** 78.55 328 *e*P P 02 00 27.8 +0.4
18nm,1.4s,mb4.5
K15A **Arbon** 78.65 327 ⇓P P 02 00 27.3 -0.7
baz=79
NVAR **Mina Array Bea** 78.72 321 P P 02 00 28.6 +0.1
0.6nm,0.6s,mb3.4,baz=136,slow=5.8,SNR=6.2
Q08A **Gabbs** 78.80 322 ⇓P P 02 00 28.9 0.0
baz=79
L13A **Double Diamond** 78.92 326 ⇓P P 02 00 30.2 +0.7
baz=79
M12A **Wells** 78.94 325 ⇑P P 02 00 29.0 -0.6
baz=79
I16A **Newdale** 79.03 329 ⇓P P 02 00 30.5 +0.5
baz=79
J15A **Blackfoot** 79.13 328 ⇑P P 02 00 30.9 +0.3
baz=79,SNR=7.4
K13A **Stover Farm, H** 79.40 326 ⇓P P 02 00 32.8 +0.7
baz=80
M11A **Holland Ranch,** 79.41 325 ⇑P P 02 00 32.8 +0.7
baz=80
L12A **House Creek Ra** 79.51 326 ⇑P P 02 00 33.6 +0.8
baz=80
J14A **Carey** 79.61 327 ⇓P P 02 00 33.2 +0.1
baz=80
F18A **Big Timber** 79.76 331 ⇑P P 02 00 33.9 0.0
baz=80
K12A **Draper Farm, C** 79.81 326 ⇓P P 02 00 34.3 0.0
baz=80,SNR=5.7
O08A **Rochester Mine** 79.90 322 ⇓P P 02 00 34.4 -0.4
baz=80
L11A **Cat Creek Ranc** 79.91 325 ⇓P P 02 00 34.3 -0.6
baz=80
J13A **Cove Ranch, Pi** 79.99 327 ⇓P P 02 00 35.0 -0.2
baz=80
I14A **Mackay** 80.02 328 ⇑P P 02 00 35.0 -0.4
baz=80,SNR=5.4
G16A **Moss Hill, Enn** 80.20 329 ⇓P P 02 00 36.1 -0.2
baz=80
HLID **Hailey** 80.23 327 ⇑P P 02 00 36.5 0.0
baz=80,SNR=13
HLID **Hailey** 80.23 327 *e*P P 02 00 37.5 +1.0
8.1nm,1.0s,mb4.3
L10A **Juniper Basin** 80.23 325 ⇓P P 02 00 35.9 -0.6
baz=80,SNR=8.9
I13A **Wildhorse Cree** 80.34 327 ⇓P P 02 00 37.1 0.0
baz=81,SNR=6.5
J12A **Stokes Ranch,** 80.35 326 ⇓P P 02 00 37.1 -0.1
baz=81,SNR=7.1
MCMT **McKenzie Canyo** 80.39 329 *e*P P 02 00 38.3 +0.9
BOSA **Boshof** 80.40 117 P P 02 00 37.9 -0.1
2.2nm,0.8s,mb3.9,baz=124,slow=11,SNR=4.7
H14A **Leadore** 80.48 328 ⇓P P 02 00 38.1 +0.2
baz=81,SNR=5.2
K11A **Parker Ranch,** 80.49 325 ⇓P P 02 00 38.2 +0.2
baz=81
DLMT **Dillon** 80.67 329 *e*P P 02 00 39.1 +0.3
9.0nm,1.2s,mb4.3
N07B **Gerlach** 80.69 322 ⇓P P 02 00 38.6 -0.5
baz=81
E17A **Martinsdale** 80.70 331 ⇑P P 02 00 38.2 -0.7
baz=81
H13A **Challis** 80.88 328 ⇓P P 02 00 39.2 -0.7
baz=81,SNR=14
K10A **MacKenzie Ranc** 80.93 325 ⇑P P 02 00 38.6 -1.7
baz=81
F15A **Butte** 80.97 329 ⇓P P 02 00 41.0 +0.6
baz=81,SNR=5.2
E16A **East Helena** 81.12 330 ⇓P P 02 00 41.7 +0.5
baz=81
N06A **Buffalo Meadow** 81.16 322 ⇑P P 02 00 41.1 -0.4
baz=81
H12A **Diamond D Ranc** 81.16 327 ⇓P P 02 00 41.3 -0.1
baz=82
M07A **Soldier Meadow** 81.22 323 ⇑P P 02 00 41.2 -0.6
baz=82
G13A **Cobalt** 81.25 328 ⇑P P 02 00 42.7 +0.8
baz=82,SNR=28
O05C **Quincy** 81.25 321 ⇓P P 02 00 40.8 -1.2
baz=82
ORV **Oroville** 81.33 320 ⇑P P 02 00 41.2 -1.3
baz=82
K09A **Rome** 81.33 324 ⇓P P 02 00 42.1 -0.3
baz=82
MAW **Mawson** 81.41 163 P P 02 00 42.6 0.0
1.7nm,0.7s,mb3.8,baz=243,slow=8.4,SNR=4.9
D16A **Dana Ranch, Ca** 81.44 331 ⇓P P 02 00 42.3 -0.5
baz=82
E15A **Deer Lodge** 81.48 330 ⇓P P 02 00 42.4 -0.7
baz=82
C17A **Wharram Farm,** 81.55 332 ⇑P P 02 00 42.2 -1.2
baz=82
F13A **Darby** 81.81 328 ⇓P P 02 00 44.8 0.0
baz=82,SNR=20
M06C **Hickely Place G** 81.82 322 ⇑P P 02 00 43.9 -1.1
baz=82
E14A **Clinton** 81.87 329 ⇑P P 02 00 45.2 +0.1
baz=82
D15A **Lincoln** 81.89 330 ⇓P P 02 00 45.3 +0.1
baz=82
LBTB **Lobatse** 82.04 114 P P 02 00 47.1 +0.4
1.5nm,0.5s,mb3.9,baz=280,slow=12,SNR=5.5
GASB **Alder Springs** 82.11 320 ⇓P P 02 00 45.8 -0.7
baz=82
C16A **Fuhringer Ranc** 82.11 331 ⇑P P 02 00 45.5 -0.8
baz=82
H10A **Noah's Angus R** 82.14 326 ⇓P P 02 00 46.3 -0.3
baz=82
K07A **Rock Creek Ran** 82.14 324 ⇓P P 02 00 45.9 -0.7
baz=82
J08A **Circle Bar Ran** 82.18 325 ⇓P P 02 00 47.5 +0.7
baz=82
MOD **Modoc** 82.19 323 ⇓P P 02 00 46.8 -0.1
baz=82
E13A **Victor** 82.21 329 ⇑P P 02 00 47.4 +0.5
baz=82,SNR=11
I09A **Lost Marbles R** 82.22 325 ⇑P P 02 00 47.6 +0.6
baz=82
F12A **Elk City** 82.23 328 ⇑P P 02 00 46.8 -0.2
baz=82
G11A **Walters Elk Ra** 82.47 327 ⇓P P 02 00 48.2 -0.1
baz=83,SNR=6.9
C15A **Salmond Ranch,** 82.47 331 ⇑P P 02 00 48.4 +0.2
baz=83,SNR=7.4
O02C **Red Bluff** 82.48 320 ⇑P P 02 00 47.2 -1.2
baz=83
L05A **Lakeview** 82.58 322 ⇑P P 02 00 48.4 -0.5
baz=83
BMO **Blue Mountains** 82.61 326 *e*P P 02 00 48.8 -0.2
2.7nm,1.0s,mb3.9
K06A **Valley Falls** 82.76 323 ⇓P P 02 00 49.5 -0.3
baz=83
F11A **Grangeville** 82.76 328 ⇑P P 02 00 49.2 -0.6
baz=83,SNR=6.0
D13A **Huson** 82.82 329 ⇓P P 02 00 49.2 -0.8
baz=83
E12A **Beaver Dam Sad** 82.85 328 ⇓P P 02 00 50.2 0.0
baz=83,SNR=5.6
A16A **West Butte Ran** 82.91 332 ⇓P P 02 00 49.8 -0.6
baz=83,SNR=10
M04C **Madoel** 82.97 322 ⇓P P 02 00 50.6 -0.4
baz=83
J06A **Christmas Vall** 83.01 324 ⇑P P 02 00 50.7 -0.3
baz=83
K05A **Summer Lake** 83.06 323 ⇓P P 02 00 52.0 +0.6
baz=83
E11A **Bogner Ranch,** 83.12 328 ⇑P P 02 00 51.0 -0.6
baz=83
G09A **Cove** 83.14 326 ⇓P P 02 00 50.9 -0.9
baz=83
D12A **Red Ives Fores** 83.21 329 ⇑P P 02 00 51.8 -0.2
baz=84
F10A **Beach Ranch, E** 83.35 327 ⇑P P 02 00 52.6 -0.1
baz=84
E10A **Myers Farm, Un** 83.65 328 ⇓P P 02 00 54.4 +0.1
baz=84
G08A **Pilot Rock** 83.76 326 ⇓P P 02 00 54.5 -0.4
baz=84
D10A **Wagner Farm, O** 84.14 328 ⇓P P 02 00 56.0 -0.7
baz=84
HUMO **Hull Mountain** 84.14 322 ⇓P P 02 00 54.2 -2.7
baz=84
A13A **Flathead Natio** 84.14 331 ⇑P P 02 00 56.8 +0.1
baz=84
B12A **Libby** 84.34 330 ⇓P P 02 00 57.4 -0.3
baz=85
A12A **Yaak River Ran** 84.70 330 ⇓P P 02 00 59.5 0.0
baz=85
D08A **Wollman Farm,** 84.95 327 ⇑P P 02 01 00.9 +0.2
baz=85
A11A **Hall Mountain,** 85.05 330 ⇓P P 02 01 00.5 -0.7
baz=85
B09A **Rice** 85.51 328 ⇑P P 02 01 03.0 -0.5
baz=86
C07A **Waterville** 85.94 327 ⇓P P 02 01 05.3 -0.4
baz=86
ESDC **Sonseca Array** 86.03 43 P P 02 01 06.9 +0.6
0.5nm,0.7s,mb3.3,baz=250,slow=4.9,SNR=3.8
ESDC **Sonseca Array** 86.03 43 P P 02 01 06.9 +0.5
A09A **Danville** 86.10 329 ⇑P P 02 01 03.9 -2.6
baz=86
A08A **Turner Farm, O** 86.42 328 ⇓P P 02 01 07.2 -0.7
baz=87
B07A **Winthrop** 86.50 328 ⇓P P 02 01 07.4 -1.0
baz=87
A07A **Ashnola River,** 87.02 328 ⇓P P 02 01 09.4 -1.5
baz=87
LSZ **Lusaka** 88.13 106 P P 02 01 17.0 0.0
2.3nm,0.8s,mb4.0,baz=226,slow=1.8,SNR=4.7
YKA **Yellowknife Ar** 94.17 340 P P 02 01 43.1 -0.7
2.1nm,0.6s,mb4.5,baz=140,slow=4.8,SNR=11
ASAR **Alice Springs** 128.73 204 PKP PKPdf 02 07 31.9 -0.7
1.9nm,0.7s,baz=149,slow=2.1,SNR=13
WRA **Warramunga Arr** 131.91 207 PKP PKPdf 02 07 38.4 -0.4
1.3nm,0.6s,baz=158,slow=1.5,SNR=6.0
WRA SKPbc SKPbc 02 10 45.1 -1.9
2.2nm,1.0s,baz=145,slow=3.5,SNR=5.6
PETK **Petropavlovsk-** 135.78 323 PKP PKPdf 02 07 45.0 +0.2
4.0nm,0.8s,baz=97,slow=1.8,SNR=6.8
ZALV **Zalesovo Beam** 143.10 28 PKP PKPdf 02 07 55.3 -2.8
2.9nm,0.7s,baz=303,slow=4.5,SNR=16
BATI **Baumata** 144.68 198 PKP PKPdf 02 07 59.5 -2.7
12nm,0.5s,baz=251,slow=1.8,SNR=5.0
MKAR **Makanchi Array** 146.17 40 PKPbc PKPbc 02 08 04.0 -1.0
4.2nm,0.6s,baz=315,slow=2.6,SNR=30
SONM **Songino Array** 155.45 12 PKPab PKPab 02 08 44.3 0.0
1.1nm,0.6s,baz=308,slow=3.9,SNR=6.5
CD2 **Chengdu** 168.90 49 *e*PKP PKPdf 02 08 30.0 -1.9
GYA **Guiyang** 173.33 66 *e*PKP PKPdf 02 08 33.0 -1.2
GYA APKP 02 09 25.3
GYA XPKP 02 09 44.5
GYA PKP2 PKPab 02 10 05.8 +2.1
GYA PKS 02 12 04.8
GYA PP PP 02 13 57.5 +1.5
GYA PP PP
comp=Z,70nm,8.4s

*CRAAG **30** 02:00:15.7, 3653N×472E, Ml3.3*
*CSEM **30** 02:00:15.2±0.1, 3651N×486E, h8km, ML3.3, Error ellipse: s-maj=3.1km s-min=2.1km az=38.0*
*MDD **30** 02:00:17.0±0.6, 3653N×484E, h0km, mb4.1/4, Error ellipse: s-maj=8.1km s-min=4.7km az=38.0, PRIMO*
*ISCJB **30** 02:00:19.8±2.6, 3651N±006×488E±006, h15km±23km, Error ellipse: s-maj=11.3km s-min=7.7km az=21.5*
*NEIC **30** 02:00:20.9, 3666N×458E, h0km, MG3.6(MDD), After MDD.*

ISC 30 02:00:17.1±0.7, 3650N±007×479E±006, h5km±9km, n37, σ1°05/48, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKF	**Akfadou**	0.22	306	P	Pg	02 00 20.8	-0.6
SET	**Setif**	0.58	121	P	Pg	02 00 27.0	-1.3
ATAF	**Djebel Tarf**	0.75	213	P	Pg	02 00 32.8	+1.2
CKHR	**Kef el Ahmar**	0.76	129	P	Pg	02 00 30.5	-1.2
AKET	**Djebel Ketaf**	0.86	238	P	Pg	02 00 33.9	+0.2
DFRA	**Djebel Bou Aff**	0.88	87	P	Pg	02 00 35.5	+1.5
ADJB	**Djebel Djouab**	1.14	253	P	Pg	02 00 38.3	-0.7
CASM	**Ain Smara**	1.40	100	P	Pn	02 00 39.0	-4.2
ABA	**Alger-Bouzarea**	1.44	282	P	Pn	02 00 43.8	-0.1
EMHD	**Djebel Mahouad**	1.51	259	P	Pn	02 00 43.9	-1.0
ETOS	**Mallorca**	3.61	335	P	Pn	02 01 14.5	+0.8
	0.5nm,0.1s,SNR=7.6						
ETOS				S	Sn	02 01 53.8	-2.9
	2.7nm,0.3s,SNR=5.6						
ETOS	**Mallorca**	3.61	335	P	Pn	02 01 14.5	+0.8
	1.7nm,0.2s,SNR=7.6						
ETOS				S	Sn	02 01 52.6	-4.1
	4.8nm,0.3s,SNR=5.6						
ETOS	**Mallorca**	3.61	335	P	Pn	02 01 14.6	+0.8
ETOS				S	Sn	02 01 52.6	-4.2
EIBI	**Ibiza**	3.71	314	P	Pn	02 01 14.8	-0.4
	0.7nm,0.1s,SNR=7.9						
EIBI				S	Sn	02 01 58.2	-1.0
	3.4nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	3.71	314	P	Pn	02 01 14.8	-0.3
	0.7nm,0.1s,SNR=7.9						
EIBI				S	Sn	02 01 55.6	-3.7
	3.4nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	3.71	314	P	Pn	02 01 14.8	-0.4
EIBI				S	Sn	02 01 55.6	-3.6
EBEN	**Beniarda**	4.55	300	P	Pn	02 01 26.0	-0.5
	0.1nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	4.55	300	P	Pn	02 01 26.0	-0.6
	1.0nm,0.3s,SNR=7.9						
EMUR	**La Murta**	5.00	287	P	Pn	02 01 33.0	+0.3
	2.8nm,0.5s,SNR=7.9						
EMUR	**La Murta**	5.00	287	P	Pn	02 01 32.1	-0.7
	0.7nm,0.3s,SNR=7.9						
EMUR	**La Murta**	5.00	287	P	Pn	02 01 32.1	-0.6
ETOB	**Tobarra**	5.47	295	P	Pn	02 01 40.2	+1.0
	3.9nm,0.4s,SNR=5.1						
ETOB	**Tobarra**	5.47	295	P	Pn	02 01 40.2	+1.0
	3.9nm,0.4s,SNR=5.1						
EPOB	**Poblet**	5.64	330	P	Pn	02 01 42.4	+0.8
	0.3nm,0.1s,SNR=7.9						
EPOB				S	Sn	02 02 41.8	-5.0
	0.8nm,0.3s,SNR=7.9						
EPOB	**Poblet**	5.64	330	P	Pn	02 01 41.8	+0.2
	0.2nm,0.1s,SNR=7.9						
EPOB				S	Sn	02 02 41.1	-5.6
	0.8nm,0.3s,SNR=7.9						
EPOB	**Poblet**	5.64	330	P	Pn	02 01 41.8	+0.2
EPOB				S	Sn	02 02 41.1	-5.6
EMOS	**Mosqueruela**	5.65	315	P	Pn	02 01 42.2	+0.5
	0.1nm,0.0s,SNR=7.9						
EMOS	**Mosqueruela**	5.65	315	P	Pn	02 01 41.7	0.0
	0.7nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	5.65	315	P	Pn	02 01 41.7	0.0
EMIR	**Miracle**	5.97	336	P	Pn	02 01 47.6	+1.5
	5.8nm,0.3s,SNR=14						
EMIR				S	Sn	02 02 50.8	-4.0
	15nm,0.5s,SNR=4.9						
EMIR	**Miracle**	5.97	336	P	Pn	02 01 47.6	+1.5
	5.8nm,0.3s,SNR=14						
EMIR				S	Sn	02 02 50.8	-4.0
	15nm,0.5s,SNR=4.9						
EJON	**La Jonquera**	6.12	347	P	Pn	02 01 48.1	0.0
	1.1nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	6.12	347	P	Pn	02 01 48.1	0.0
	1.1nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	6.12	347	P	Pn	02 01 48.1	-0.1
EQES	**Quesada**	6.41	284	P	Pn	02 01 54.3	+2.1
	0.0nm,0.0s,SNR=4.0						
EQES	**Quesada**	6.41	284	P	Pn	02 01 54.3	+2.1
	0.3nm,0.3s,SNR=7.9						
EQES	**Quesada**	6.41	284	P	Pn	02 01 54.3	+2.1

IDC 30 02:00:46.8±3.7, 323S×10040E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.6/4, Error ellipse: s-maj=152.6km s-min=23.0km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	21.59	356	P	P	02 05 39.4	+0.9
	0.7nm,0.4s,baz=184,slow=11,SNR=6.4						
WRA	**Warramunga Arr**	37.04	119	P	P	02 07 58.2	-0.5
	0.3nm,0.3s,baz=301,slow=9.1,SNR=3.4						
ASAR	**Alice Springs**	38.22	125	P	P	02 08 09.1	+0.4
	0.4nm,0.5s,baz=296,slow=7.8,SNR=6.0						
MKAR	**Makanchi Array**	52.31	344	P	P	02 09 59.5	-0.6
	0.4nm,0.5s,baz=169,slow=8.8,SNR=2.6						
TXAR	**Lajitas Array**	145.41	39	PKPbc	PKPbc	02 20 27.3	-0.2
	0.2nm,0.6s,baz=326,slow=0.3,SNR=3.6						

*BJI **30** 02:08:28.7, 1058N×146.12E, h27km, mB6.9, mb6.3, Ms6.9, Msz6.8*
*IDC **30** 02:08:28.0±0.3, 1046N×14578E, h0km, mb5.9/36, mb1 5.8/37, mb1mx5.8/37, mbtmp5.8/37, ML5.0/1, MS6.9/29, Ms1 6.9/29, ms1mx6.6/38, Error ellipse: s-maj=8.0km s-min=6.0km az=94.0*
*ISCJB **30** 02:08:29.5±0.1, 1053N±002×14575E±001, h17km,*

mb6.4/249,MS7.0/272,Error ellipse: s-maj=3.0km s-min=2.0km az=177.0

GCMT **30** *02:08:30.2±0.1, 1051N×14568E, h14km, MW7.0/120, Moment Tensor Solution. s120,c301; s120,c561; Duration: 7?3 Moment tensor: Scale 10^19Nm; Mrr0.84±.01; Mθθ1.39±.01; Mϕϕ-2.22±.01; Mrθ0.72±.04; Mθϕ2.62±.01; Mrϕ0.27±.04; Best double couple: M○3.31600×10^19 NP1:ϕs16.00000°,δ76.00000°, λ167.00000°. NP2:ϕs109.00000°,δ77.00000°,λ15.00000°. Principal axes: T 3.0340, Plg19.0000°, Azm333.0000°; N 0.5710, Plg71.0000°, Azm149.0000°; P -3.5990, Plg1.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC **30** *02:08:30.2±0.1, 1045N×14572E, h14km, mb6.4/175, ME7.7,MS7.1/216,MW6.9 Error ellipse: s-maj=3.7km s-min=3.6km az=190.0,Moment Tensor Solution. s56 Moment tensor: Scale 10^19Nm; Mrr0.17; Mθθ0.96; Mϕϕ-1.13; Mrθ-0.21; Mθϕ2.23; Mϕr-0.18; Best double couple: M○2.50000×10^19 NP1:ϕs192.00000°,δ86.00000°, λ174.00000°. NP2:ϕs283.00000°,δ84.00000°,λ4.00000°. Principal axes: T 2.4100, Plg6.0000°, Azm147.0000°; N 0.1400, Plg82.0000°, Azm335.0000°; P -2.5500, Plg0.0000°, Azm237.0000°; Broadband fault plane solution: P waves. NP1:ϕs290.00000°,δ85.00000°, λ2.00000°. NP2:ϕs200.00000°,δ88.00000°,λ175.00000°. Principal axes: T Plg5.0000°, Azm155.0000°; N Plg0.0000°, Azm0.0000°; P Plg2.0000°, Azm245.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC *Felt [IV] at Barrigada and Hagatna; [III] at Santa Rita and Yigo, Guam. Also felt on Saipan.*

IGIL **30** *02:08:30.4, 1049N×14563E, h10km, MS7.1*

DJA **30** *02:08:31, 1060N×146.11E, h29km, Mw7.3/47*

MOS **30** *02:08:32.1±1.1, 1067N×14570E, h33km, mb6.7/90, MS7.0/107, Error ellipse: s-maj=8.0km s-min=6.0km az=118.4*

ISC 30 02:08:31.2±0.1,1054N±002×14580E±001, h18km, h18km±2.2km:pP-P,n1740,○0°88/1165,mb6.5/247, MS7.0/272,273C-202D,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.17**	**343**	Pn	**Pn**	**02 09 16.2**	**-4.0**
	1μm,0.3s,baz=161,slow=5.6,SNR=268						
GUMO				Sn	**Sn**	**02 09 57.3**	**-0.2**
	7μm,0.3s,baz=272,slow=22,SNR=11						
GUMO	**Guam**	**3.17**	**343**	*e*Pn	**Pn**	**02 09 16.8**	**-3.3**
JAY	**Jayapura**	**13.92**	**202**	P	**Pn**	**02 11 49.8**	**+2.1**
CBIJ	**Chichi jima**	**16.82**	**349**	Pn	**Pn**	**02 12 25.2**	**-0.7**
	23nm,0.3s,baz=261,slow=20,SNR=16						
CBIJ				Sn	**Sn**	**02 15 35.8**	**+3.4**
	17nm,0.3s,baz=279,slow=23,SNR=2.8						
SWI	**Sorong**	**18.37**	**233**	P	**Pn**	**02 12 46.9**	**+1.7**
BIPH	**Bislig**	**19.32**	**265**	⇓*i*P	**Pn**	**02 12 55.7**	**-1.0**
BIPH				*e*S	**Sn**	**02 16 34.0**	**+0.9**
MMPI	**Merauke**	**19.63**	**196**	P	**Pn**	**02 13 02.8**	**+2.4**
MATI	**Mati**	**19.64**	**261**	*e*P	**Pn**	**02 13 00.6**	**+0.1**
PMG	**Port Moresby**	**19.86**	**176**	*i* P	**Pn**	**02 13 01.2**	**-1.9**
PMG	**Port Moresby**	**19.86**	**176**	*e*P	**Pn**	**02 12 59.6**	**-3.5**
SCPH	**Surigao**	**20.01**	**270**	*e*P	**P**	**02 13 03.4**	**+0.3**
DAV	**Davao City (W)**	**20.27**	**262**	P	**P**	**02 13 05.9**	**-0.1**
	3μm,0.9s,baz=71,slow=3.2,SNR=40						
DAV				S	**S**	**02 16 55.6**	**+2.7**
	101nm,0.4s,baz=22,slow=12,SNR=1.6						
DAV	**Davao City (W)**	**20.27**	**262**	*e*P	**P**	**02 13 03.6**	**-2.4**
DMPH	**Davao City--Mi**	**20.34**	**262**	*e*P	**P**	**02 13 07.9**	**+1.2**
PLP	**Palo**	**20.46**	**274**	⇓*e*P	**P**	**02 13 08.5**	**+0.5**
MSLP	**Maasin**	**20.61**	**271**	*e*P	**P**	**02 13 11.0**	**+1.3**
BUKP	**Musuan**	**20.64**	**264**	*e*P	**P**	**02 13 09.1**	**-0.8**
CNP	**Catarman**	**20.80**	**277**	*e*P	**P**	**02 13 15.0**	**+3.3**
OCLP	**Ormoc**	**20.82**	**273**	*e*P	**P**	**02 13 15.2**	**+3.2**
CGP	**Cagayan de Oro**	**20.92**	**266**	*e*P	**P**	**02 13 12.7**	**-0.4**
GSPH	**General Santos**	**21.09**	**260**	⇑*e*P	**P**	**02 13 11.0**	**-4.0**
PVCP	**Virac**	**21.38**	**280**	*e*P	**P**	**02 13 19.4**	**+1.4**
LLP	**Lapu-Lapu**	**21.48**	**271**	*e*P	**P**	**02 13 19.3**	**+0.3**
LLP				*e*S	**S**	**02 17 15.9**	**-0.7**
CTBH	**Cotabato--PC H**	**21.55**	**263**	*e*P	**P**	**02 13 19.7**	**0.0**
PAGZ	**Pagadian**	**22.29**	**265**	*e*P	**P**	**02 13 29.5**	**+1.8**
AAI	**Ambon**	**22.51**	**232**	P	**P**	**02 13 29.3**	**-0.8**
RCP	**Roxas**	**22.65**	**275**	⇑*e*P	**P**	**02 13 31.6**	**0.0**
MNI	**Manado**	**22.70**	**248**	P	**P**	**02 13 33.0**	**+0.9**
AUQP	**San Andres**	**22.79**	**279**	*e*P	**P**	**02 13 37.7**	**+4.7**
GUIM	**Jordan**	**22.82**	**272**	*e*P	**P**	**02 13 34.7**	**+1.4**
KALP	**Kalibo**	**23.05**	**275**	⇑*e*P	**P**	**02 13 42.6**	**+6.8**
GQP	**Guinayangan**	**23.07**	**281**	⇓*e*P	**P**	**02 13 37.4**	**+1.4**
JHJ	**Hachijo jima 2**	**23.15**	**347**	P	**P**	**02 13 37.5**	**+0.9**
	2μm,0.8s,mb6.5,baz=172,slow=8.1,SNR=11						
JHJ				S	**S**	**02 17 52.8**	**+5.6**
	422nm,0.2s,baz=64,slow=23,SNR=3.9						
JHJ				LR	LR	02 21 24.2	
	comp=Z,324μm,20.8s,MS6.8,baz=167,slow=33						
JOW	**Kunigami**	**23.15**	**317**	P	**P**	**02 13 37.6**	**+0.8**
	718nm,0.8s,mb6.2,baz=135,slow=12,SNR=27						
JOW				S	**S**	**02 17 53.4**	**+6.0**
	50nm,0.9s,baz=319,slow=10.0,SNR=3.2						
JOW				LR	LR	02 20 51.4	
	comp=Z,145μm,21.6s,MS6.4,baz=136,slow=32						
OTRP	**Odiongan**	**23.37**	**277**	*e*P	**P**	**02 13 40.2**	**+1.0**
PALP	**Palanan**	**23.59**	**289**	*e*P	**P**	**02 13 41.9**	**+0.5**
POLP	**Polilio Island**	**23.65**	**283**	*e*P	**P**	**02 13 43.1**	**+1.3**
ZMPH	**Zamboanga City**	**23.72**	**263**	⇓*e*P	**P**	**02 13 44.8**	**+2.2**
CAUP	**Cauayan**	**24.13**	**288**	*e*P	**P**	**02 13 48.4**	**+2.2**
SJMP	**San Jose**	**24.26**	**277**	*e*P	**P**	**02 13 51.4**	**+4.0**
CVP	**Callao Caves**	**24.30**	**290**	⇑*i*P	**P**	**02 13 49.3**	**+1.4**
HNR	**Honiara**	**24.32**	**144**	P	**P**	**02 13 46.9**	**-1.1**
	98nm,0.7s,baz=123,slow=8.0,SNR=3.6						
HNR				S	**S**	**02 18 13.7**	**+7.1**
	112nm,0.5s,baz=173,slow=13,SNR=2.9						
HNR	**Honiara**	**24.32**	**144**	*e*P	**P**	**02 13 48.8**	**+0.8**
	9μm,1.5s,mb7.0						
HNR				LR	LR		
	comp=Z,216μm,21.0s,MS6.6						
CUYO	**Cuyo Island**	**24.35**	**273**	*e*P	**P**	**02 13 51.8**	**+3.5**
COEN	**Coen**	**24.47**	**186**	*e*P	**P**	**02 13 47.3**	**-2.0**
	comp=Z,942nm,1.4s,mb6.0						
PCPH	**Palayan**	**24.57**	**284**	⇓*e*P	**P**	**02 13 50.6**	**+0.3**
APYP	**Conner**	**24.88**	**290**	*e*P	**P**	**02 13 53.5**	**+0.4**
NBP	**Mount Natib**	**25.11**	**282**	⇑*e*P	**P**	**02 13 57.0**	**+1.7**
BUSP	**Coron**	**25.15**	**276**	*e*P	**P**	**02 13 56.8**	**+1.2**
BCPH	**Baguio City Da**	**25.19**	**286**	⇓*e*P	**P**	**02 13 56.7**	**+0.7**
ABRA	**Dolores**	**25.32**	**289**	*e*P	**P**	**02 13 58.3**	**+1.2**
PIP	**Pasuquin**	**25.56**	**291**	⇓*e*P	**P**	**02 13 58.0**	**-1.3**
SCZP	**Santa Cruz**	**25.73**	**284**	*e*P	**P**	**02 14 03.1**	**+2.2**
BOLP	**Bolinao**	**25.82**	**286**	*e*P	**P**	**02 14 01.6**	**-0.1**
ENPP	**El Nido**	**25.91**	**274**	*e*P	**P**	**02 14 03.2**	**+0.7**
KAKA	**Kakadu**	**26.63**	**210**	*e*P	**P**	**02 14 06.2**	**-2.8**
	comp=Z,660nm,0.7s,mb6.3						
PPR	**Puerto Princes**	**26.65**	**271**	⇓*e*P	**P**	**02 14 11.0**	**+1.8**
NACB	**Ninganchiao**	**26.73**	**304**	*e*P	**P**	**02 14 07.9**	**-1.9**
	comp=Z,3μm,1.0s,mb6.8						
MJAR	**Matsushiro Arr**	**26.79**	**346**	P	**P**	**02 14 09.3**	**-0.9**
	comp=Z,246nm,1.2s,mb5.6,baz=169,slow=7.5,SNR=98						
MJAR				S	**S**	**02 18 54.7**	**+9.3**
	comp=Z,8.7nm,1.0s,baz=264,slow=35,SNR=2.3						
MJAR				LR	LR	02 24 31.5	
	comp=Z,299μm,18.3s,MS6.9,baz=175,slow=36						
MJAR				P3KPbc		02 46 55.5	
	comp=Z,3.7nm,1.0s,baz=334,slow=4.3,SNR=4.4						
MJAR	**Matsushiro Arr**	**26.79**	**346**	P	**P**	**02 14 09.3**	**-0.9**
MJAR				S	**S**	**02 18 54.7**	**+9.3**
MJAR				LR	LR	02 24 31.5	
MJAR				*e*		02 46 55.5	
MAJO	**Matsushiro**	**26.79**	**346**	*e*P	**P**	**02 14 08.3**	**-1.9**
	comp=Z,6μm,1.4s,mb6.9						
MAJO				LR	LR		
	comp=Z,252μm,22.0s,MS6.7						
MAT	**Matsushiro**	**26.79**	**346**	P	**P**	**02 14 07.6**	**-2.6**
MAT				S	**S**	**02 18 45.0**	**-0.4**
YHNB	**Yeheng**	**27.13**	**304**	*e*P	**P**	**02 14 11.3**	**-2.1**
	comp=Z,2μm,1.0s,mb6.5						
YHNB				LR	LR		
	comp=Z,191μm,20.0s,MS6.7						
TATO	**Taipei**	**27.18**	**305**	⇓P	**P**	**02 14 14.0**	**+0.2**
	SNR=11						
TATO	**Taipei**	**27.18**	**305**	*e*P	**P**	**02 14 12.7**	**-1.2**
	comp=Z,1μm,1.1s,mb6.3						
TATO				LR	LR		
	comp=Z,224μm,22.0s,MS6.7						

MYLDM	**Lahad Datu**	**27.55**	**261**	⇑P	**P**	**02 14 19.7**	**+2.3**
BATP	**Bataraza**	**27.65**	**269**	*e*P	**P**	**02 14 20.7**	**+2.5**
PCI	**Palu**	**28.22**	**248**	P	**P**	**02 14 25.7**	**+2.4**
TSM	**Tawau**	**28.36**	**259**	⇓P	**P**	**02 14 26.4**	**+1.8**
TARA	**Tarawa**	**28.45**	**107**	P	**P**	**02 14 30.5**	**+5.2**
SDKM	**Sandakan**	**28.72**	**263**	⇑P	**P**	**02 14 29.3**	**+1.5**
KDM	**Kudat**	**28.85**	**265**	⇑P	**P**	**02 14 29.8**	**+0.9**
QZH	**Quanzhou**	**29.53**	**303**	⇑*i*P	**P**	**02 14 36.3**	**+1.5**
QZH				S	**S**	**02 19 24.0**	**-4.9**
QZH				AMB	AMB		
	comp=Z,680nm,1.0s,mb6.3						
QZH				AMB	AMB		
	comp=Z,23μm,9.8s						
QZH				LR	LR		
	comp=N,55μm,11.9s						
QZH				LR	LR		
	comp=E,303μm,21.9s						
QZH				LR	LR		
	comp=Z,253μm,28.2s						
KKM	**Kota Kinabalu**	**29.60**	**264**	⇓P	**P**	**02 14 37.3**	**+1.7**
KKM	**Kota Kinabalu**	**29.60**	**264**	*e*P	**P**	**02 14 34.3**	**-1.3**
KKM				LR	LR		
	comp=Z,188μm,22.0s,MS6.7						
BATI	**Baumata**	**30.15**	**228**	P	**P**	**02 14 39.5**	**-1.0**
	comp=Z,1μm,0.9s,mb6.5,baz=168,slow=1.3,SNR=67						
BATI				S	**S**	**02 19 39.8**	**+0.9**
	comp=Z,49nm,0.9s,baz=235,slow=21,SNR=2.1						
KAPI	**Kappang**	**30.19**	**240**	P	**P**	**02 14 39.9**	**-0.9**
	comp=Z,2μm,1.2s,mb6.7,SNR=27						
KAPI	**Kappang**	**30.19**	**240**	⇑P	**P**	**02 14 39.9**	**-0.9**
	SNR=34						
KAPI	**Kappang**	**30.19**	**240**	P	**P**	**02 14 39.5**	**-1.3**
	comp=Z,350nm,1.1s,mb6.0,baz=61,slow=5.0,SNR=39						
KAPI				S	**S**	**02 19 40.9**	**+1.5**
	comp=Z,22nm,1.1s,baz=268,slow=11,SNR=1.3						
KAPI				LR	LR	02 24 39.8	
	comp=Z,210μm,22.0s,MS6.7,baz=56,slow=32						
KAPI	**Kappang**	**30.19**	**240**	*e*P	**P**	**02 14 38.0**	**-2.8**
	comp=Z,592nm,1.3s,mb6.2						
KAPI				LR	LR		
	comp=Z,164μm,21.0s,MS6.7						
CTA	**Charters Tower**	**30.43**	**179**	⇑*i*P	**P**	**02 14 41.0**	**-1.8**
	comp=Z,258nm,0.9s,mb6.0						
CTA				*e*S	S	02 19 13.1	-30
CTA	**Charters Tower**	**30.43**	**179**	P	**P**	**02 14 41.1**	**-1.7**
	comp=Z,70nm,0.7s,mb5.5,baz=356,slow=9.5,SNR=25						
CTA				S	**S**	**02 19 47.7**	**+4.7**
	comp=Z,11nm,0.8s,baz=173,slow=18,SNR=3.1						
CTA				LR	LR	02 25 11.3	
	comp=Z,239μm,21.9s,MS6.8,baz=1.0,slow=33						
CTA	**Charters Tower**	**30.43**	**179**	P	**P**	**02 14 41.1**	**-1.7**
CTA				S	**S**	**02 19 47.7**	**+4.7**
CTA				pmax	pmax		
	comp=Z,70nm,0.7s						
CTA				smax			
	comp=N,11nm,0.8s						
CTAO	**Charters Tower**	**30.43**	**179**	*e*P	**P**	**02 14 41.2**	**-1.6**
CTAO				pmax	pmax		
	comp=Z,530nm,1.0s,mb6.2						
CTAO	**Charters Tower**	**30.43**	**179**	*e*P	**P**	**02 14 40.2**	**-2.6**
	comp=Z,526nm,1.0s,mb6.2						
CTAO				LR	LR		
	comp=Z,211μm,21.0s,MS6.8						
SSE	**Sheshan**	**30.65**	**316**	P	**P**	**02 14 44.8**	**+0.1**
SSE				S	**S**	**02 19 45.3**	**-1.1**
SSE				AMB	AMB		
	comp=Z,156nm,1.5s,mb5.6						
SSE				AMB	AMB		
	comp=Z,4μm,9.2s						
SSE				LR	LR		
	comp=N,128μm,25.0s,MS6.6						
SSE				LR	LR		
	comp=E,135μm,25.0s,MS6.6						
SSE				LR	LR		
	comp=E,111μm,16.3s						
SSE	**Sheshan**	**30.65**	**316**	P	**P**	**02 14 44.7**	**0.0**
	comp=E,156nm,1.5s,mb5.6						
SSE				sP	sP	02 14 49.1	-3.5
SSE				S	**S**	**02 19 45.3**	**-1.1**
SSE				sS	sS	02 19 50.8	-4.9
KSRS	**Korea Array**	**31.26**	**332**	P	**P**	**02 14 49.1**	**-0.8**
	comp=E,211nm,0.8s,mb6.0,baz=146,slow=10.0,SNR=93						
KSRS				PcP	PcP	02 17 46.2	+1.9
	comp=E,134nm,1.2s,baz=167,slow=1.7,SNR=8.3						
KSRS				S	**S**	**02 19 58.4**	**+2.6**
	comp=E,8.9nm,0.8s,baz=142,slow=9.1,SNR=2.6						
KSRS				ScS	ScS	02 25 22.9	-1.0
	comp=E,2.9nm,0.7s,baz=184,slow=0.9,SNR=6.6						
KSRS				LR	LR	02 26 51.8	
	comp=E,186μm,19.6s,MS6.8,baz=134,slow=35						
KSRS				P3KPbc		02 46 34.9	
	comp=E,0.4nm,0.4s,baz=239,slow=39,SNR=3.5						
KSRS	**Korea Array**	**31.26**	**332**	P	**P**	**02 14 49.2**	**-0.8**
KSRS						02 17 46.2	
KSRS				S	**S**	**02 19 58.4**	**+2.6**
KSRS						02 25 22.9	
KSRS				pmax	pmax		
	comp=Z,211nm,0.8s,mb6.0						
KSRS				smax			
	comp=N,9.0nm,0.9s						
KSRS				MLR	MLR		
	comp=Z,186μm,19.6s,MS6.8						
KS15	**Wonju Array Si**	**31.27**	**332**	*e*P	**P**	**02 14 49.5**	**-0.5**
ERM	**Erimo**	**31.44**	**356**	P	**P**	**02 14 52.4**	**+0.9**
	comp=Z,923nm,0.8s,mb6.7,SNR=18						
ERM	**Erimo**	**31.44**	**356**	*e*P	**P**	**02 14 50.6**	**-0.9**
ERM				pmax	pmax		
	comp=Z,310nm,1.1s,mb6.0						
ERM				MLR	MLR		
	comp=Z,286μm,21.0s,MS6.9						
ERM	**Erimo**	**31.44**	**356**	*e*P	**P**	**02 14 50.5**	**-0.9**
	comp=Z,310nm,1.1s,mb6.0						
ERM				LR	LR		
	comp=Z,286μm,21.0s,MS6.9						
INCN	**Inchon**	**31.90**	**330**	P	**P**	**02 14 55.7**	**+0.2**
	SNR=41						
INCN	**Inchon**	**31.90**	**330**	*e*P	**P**	**02 14 55.5**	**-0.1**
	comp=Z,189nm,0.7s,mb6.0						
INCN				LR	LR		
	comp=Z,168μm,19.0s,MS6.7						
WRAB	**Tennant Creek**	**32.31**	**200**	P	**P**	**02 14 57.0**	**-2.3**
	comp=Z,6μm,1.7s,mb7.2,SNR=75						
WRAB	**Tennant Creek**	**32.31**	**200**	*e*P	**P**	**02 14 57.1**	**-2.2**
WRAB	**Tennant Creek**	**32.31**	**200**	*e*P	**P**	**02 14 56.7**	**-2.6**
	comp=Z,2μm,1.3s,mb6.8						
WRAB				LR	LR		
	comp=Z,221μm,20.0s,MS6.8						
WB2	**Warramunga Arr**	**32.31**	**200**	⇑*i*P	**P**	**02 14 56.8**	**-2.6**
WB2				*e*S	**S**	**02 20 08.9**	**-3.5**
WRA	**Warramunga Arr**	**32.32**	**200**	P	**P**	**02 14 57.4**	**-2.0**
	comp=Z,454nm,0.9s,mb6.3,baz=19,slow=8.7,SNR=85						
WRA				S	**S**	**02 20 15.6**	**+3.1**
	comp=Z,16nm,1.1s,baz=13,slow=24,SNR=3.5						
WRA				LR	LR	02 27 12.2	
	comp=Z,194μm,20.3s,MS6.8,baz=45,slow=35						
WRA				P3KPbc		02 46 29.8	
	comp=Z,3.0nm,1.1s,baz=208,slow=3.6,SNR=6.4						
WRA	**Warramunga Arr**	**32.32**	**200**	P	**P**	**02 14 57.4**	**-2.0**
WRA				S	**S**	**02 20 15.6**	**+3.1**
WRA				pmax	pmax		
	comp=Z,454nm,0.9s						
WRA				smax			
	comp=N,16nm,1.1s						
WRA				MLR	MLR		
	comp=Z,194μm,20.3s						
WRA	**Warramunga Arr**	**32.32**	**200**	P	**P**	**02 14 57.4**	**-2.0**
WRA				S	**S**	**02 20 15.6**	**+3.1**
WRA				LR	LR	02 27 12.2	
WRA				*e*		02 46 29.8	
HKC	**Hong Kong Obse**	**32.44**	**295**	⇑*i*P	**P**	**02 15 04.0**	**+3.5**
NJ2	**Nanjing**	**32.83**	**315**	*e*P	**P**	**02 15 04.5**	**+0.7**
NJ2				AP	pP	02 15 09.0	-0.5
NJ2				XP	sP	02 15 11.5	-0.3
NJ2				PP	PP	02 16 13.5	-4.6
NJ2				S	**S**	**02 20 23.0**	**+2.7**
NJ2				XS	sS	02 20 31.0	+1.4
NJ2				SS	SS	02 22 14.5	-27
NJ2				AMB	AMB		
	comp=Z,320nm,1.1s,mb6.2						
NJ2				AMB	AMB		
	comp=Z,4μm,9.1s						
NJ2				LR	LR		
	comp=N,41μm,18.6s,MS6.6						
NJ2				LR	LR		
	comp=E,115μm,22.2s,MS6.6						
NJ2				LR	LR		

	comp=Z,114μm,22.2s,MS6.5						
BTM	**Bintulu**	**33.26**	**260**	⇓P	**P**	**02 15 08.5**	**+0.6**
YUK	**Yuzh-Kuril'sk**	**33.38**	**0**	*e*P	**P**	**02 15 07.0**	**-1.4**
YUK				*e*		02 16 14.0	
YUK				*e*PPP		02 16 30.0	
YUK				*e*SSS		02 22 36.0	
YUK				pmax	pmax		
	comp=Z,3μm,1.6s,mb7.0						
YUK				pmax	pmax		
	comp=N,370nm,0.8s						
YUK				pmax	pmax		
	comp=E,650nm,1.0s						
YUK				pmax	pmax		
	comp=E,4μm,6.0s						
YUK				pmax	pmax		
	comp=Z,12μm,6.0s						
YUK				pmax	pmax		
	comp=N,18μm,5.0s						
YUK				pmax	pmax		
	comp=Z,5μm,8.0s						
YUK				pmax	pmax		
	comp=N,8μm,6.0s						
YUK				pmax	pmax		
	comp=E,5μm,6.0s						
GZH	**Guangzhou**	**33.39**	**296**	P	**P**	**02 15 08.8**	**-0.1**
GZH				S	**S**	**02 20 26.5**	**-2.8**
GZH				AMB	AMB		
	comp=Z,22μm,12.3s						
GZH				LR	LR		
	comp=N,195μm,25.3s,MS6.8						
GZH				LR	LR		
	comp=E,54μm,20.7s,MS6.8						
GZH				LR	LR		
	comp=Z,84μm,20.7s,MS6.4						
ASAJ	**Asahikawa**	**33.57**	**356**	P	**P**	**02 15 11.1**	**+1.0**
	comp=Z,154nm,0.9s,mb5.9,baz=220,slow=13,SNR=11						
ASAJ				S	**S**	**02 20 30.8**	**-0.8**
	comp=Z,5.3nm,0.7s,baz=107,slow=32,SNR=1.7						
ASAJ	**Asahikawa**	**33.57**	**356**	P	**P**	**02 15 11.1**	**+1.0**
ASAJ				S	**S**	**02 20 30.8**	**-0.7**
ASAJ				pmax	pmax		
	comp=Z,154nm,0.9s						
ASAJ				smax			
	comp=N,5.0nm,0.7s						
SBUM	**Sibu**	**34.29**	**259**	⇑P	**P**	**02 15 18.5**	**+1.7**
VLA	**Vladivostok**	**34.65**	**342**	*di* P	**P**	**02 15 20.5**	**+1.0**
VLA				pmax	pmax		
	comp=Z,2μm,1.7s,mb6.8						
VLA				MLR	MLR		
	comp=Z,180μm,16.0s,MS6.9						
VLA	**Vladivostok**	**34.65**	**342**	*i* P	**P**	**02 15 20.5**	**+1.0**
FITZ	**Fitzroy Crossi**	**34.73**	**215**	*e*P	**P**	**02 15 18.8**	**-1.6**
	comp=Z,235nm,0.9s,mb6.1						
FITZ				*e*S	**S**	**02 20 55.7**	**+5.8**
FITZ	**Fitzroy Crossi**	**34.73**	**215**	P	**P**	**02 15 19.9**	**-0.5**
	comp=Z,143nm,1.0s,mb5.8,baz=45,slow=10,SNR=42						
FITZ				S	**S**	**02 20 52.1**	**+2.2**
	comp=Z,12nm,0.9s,baz=134,slow=19,SNR=3.0						
FITZ				LR	LR	02 29 56.9	
	comp=Z,78μm,19.9s,MS6.5,baz=218,slow=37						
FITZ				PKP2ab		02 50 09.3	
	comp=Z,2.3nm,0.4s,baz=357,slow=3.4,SNR=6.4						
WHN	**Wuhan**	**35.35**	**309**	⇑P	**P**	**02 15 25.5**	**-0.3**
WHN				AP	pP	02 15 30.3	-1.2
WHN				S	**S**	**02 20 58.0**	**-1.4**
WHN				LR	LR		
	comp=N,242μm,19.0s						
WHN				LR	LR		
	comp=E,64μm,9.7s						
WHN				LR	LR		
	comp=Z,469μm,25.6s						
DL2	**Dalian**	**35.55**	**327**	⇑*i*P	**P**	**02 15 27.0**	**-0.3**
DL2				S	**S**	**02 21 00.0**	**-2.2**
DL2				AMB	AMB		
	comp=Z,570nm,0.9s,mb6.5						
DL2				AMB	AMB		
	comp=Z,14μm,6.4s						
DL2				LR	LR		
	comp=N,74μm,22.7s,MS6.5						
DL2				LR	LR		
	comp=E,50μm,24.2s,MS6.5						
DL2				LR	LR		
	comp=Z,96μm,27.1s,MS6.4						
QIZ	**Qiongzhong**	**35.72**	**288**	P	**P**	**02 15 30.5**	**+1.5**
QIZ				S	**S**	**02 21 04.0**	**-1.3**
QIZ				AMB	AMB		
	comp=Z,760nm,1.4s,mb6.4						
QIZ				LR	LR		
	comp=N,170μm,21.7s						
QIZ				LR	LR		
	comp=Z,74μm,28.8s						
QIZ	**Qiongzhong**	**35.72**	**288**	*e*P	**P**	**02 15 28.7**	**-0.4**
	comp=Z,1μm,1.3s,mb6.7						
QIZ				LR	LR		
	comp=Z,70μm,22.0s,MS6.4						
ASAR	**Alice Springs**	**35.93**	**199**	P	**P**	**02 15 28.4**	**-2.3**
	comp=Z,97nm,0.9s,mb5.7,baz=21,slow=6.3,SNR=166						
ASAR				P3KPbc		02 46 12.6	
	comp=Z,1.4nm,1.0s,baz=202,slow=3.7,SNR=4.7						
ASAR	**Alice Springs**	**35.93**	**199**	P	**P**	**02 15 28.4**	**-2.3**
ASAR				*e*		02 46 12.6	
KSM	**Kuching**	**36.39**	**258**	⇓P	**P**	**02 15 34.6**	**-0.3**
KSM	**Kuching**	**36.39**	**258**	*e*P	**P**	**02 15 33.9**	**-1.0**
YSS	**Yuzh-Sakhalins**	**36.39**	**356**	⇓*e*P	**P**	**02 15 31.5**	**-2.9**
YSS				*e*PPP		02 17 20.0	
YSS				*e*		02 18 00.0	
YSS				*i* S	**S**	**02 21 06.0**	**-8.8**
YSS				pmax	pmax		
	comp=Z,140nm,1.2s,mb5.8						
YSS				pmax	pmax		
	comp=N,90nm,1.5s						
YSS				pmax	pmax		
	comp=E,120nm,1.5s						
YSS				smax			
	comp=N,23μm,16.0s						
YSS				smax			
	comp=E,39μm,22.0s						
YSS				MLR	MLR		
	comp=Z,208μm,20.0s,MS6.9						
YSS				MLR	MLR		
	comp=N,136μm,18.0s						
YSS	**Yuzh-Sakhalins**	**36.39**	**356**	*e*P	**P**	**02 15 33.5**	**-0.9**
	comp=N,211nm,0.9s,

DZM	**Mont Dzumac**	**38.21**	**148**	*e*P		**P**	**02 15 48.9**	**-1.3**
DZM	**Mont Dzumac**	**38.21**	**148**	*e*P		**P**	**02 15 48.7**	**-1.4**
FUNA	**Funafuti**	**38.25**	**118**	*e*P		**P**	**02 15 51.1**	**+0.5**
	comp=Z,849nm,1.1s,mb6.4							
FUNA				LR	LR			
	comp=Z,138µm,19.0s,MS6.8							
MIDW	**Midway**	**38.74**	**58**	*e*P		**P**	**02 15 54.4**	**-0.2**
	comp=Z,982nm,1.1s,mb6.5							
MIDW				LR	LR			
	comp=Z,175µm,21.0s,MS6.9							
HABR	**Khabarovsk**	**38.88**	**349**⇑	*i*P		**P**	**02 15 55.6**	**+0.2**
HABR				*e*			02 16 03.3	
HABR				*e*			02 16 07.7	
HABR				*e*S		**S**	**02 21 52.3**	**-0.2**
HABR				*e*			02 22 05.9	
HABR				*e*			02 24 39.4	
HABR				*e*			02 26 01.2	
HABR				pmax	pmax			
	comp=Z,1µm,1.5s,mb6.4							
HABR				MLR	MLR			
	comp=Z,155µm,21.8s,MS6.8							
ENH	**Enshi**	**39.05**	**306**	PFAKE			02 16 10.0	+13
ENH				LR	LR			
	comp=Z,3.0nm,20.0s							
BJT	**Baijiatuan**	**39.40**	**323**	*e*P		**P**	**02 15 59.3**	**-0.6**
BJT				pmax	pmax			
	comp=Z,686nm,0.8s							
BJT				MLR	MLR			
	comp=Z,127µm,20.0s							
BJT	**Baijiatuan**	**39.40**	**323**	*e*P		**P**	**02 15 59.3**	**-0.6**
	comp=Z,686nm,0.8s,mb6.4							
BJT				LR	LR			
	comp=Z,127µm,20.0s,MS6.8							
BJI	**Beijing**	**39.41**	**323**	P		**P**	**02 16 00.0**	**0.0**
BJI				PP	PP		02 17 29.3	-1.3
BJI				AMB	AMB			
	comp=Z,626nm,1.2s,mb6.2							
BJI				AMB	AMB			
	comp=Z,20µm,6.8s							
BJI				LR	LR			
	comp=E,116µm,23.6s,MS6.7							
BJI				LR	LR			
	comp=N,102µm,26.4s,MS6.7							
BJI				LR	LR			
	comp=Z,197µm,34.6s							
BJI	**Beijing**	**39.41**	**323**	P		**P**	**02 16 00.1**	**+0.1**
	comp=Z,626nm,1.2s,mb6.2							
BJI				PP	PP		02 17 29.2	-1.4
BJI				S	**S**		**02 22 09.8**	**+9.0**
BJI				SS	SS		02 25 26.1	+31
BJI				LR	LR			
	comp=Z,198µm,34.6s,MS6.7							
UBT	**Ubonrachathani**	**39.98**	**281**	⇓P		**P**	**02 16 07.5**	**+2.3**
	comp=Z,833nm,0.8s,mb6.5							
GYA	**Guiyang**	**40.16**	**299**	P		**P**	**02 16 06.3**	**-0.2**
GYA				PP	PP		02 17 43.5	+4.5
GYA				S	**S**		**02 22 13.0**	**+0.5**
GYA				SS	SS		02 25 04.0	-6.6
GYA				AMB	AMB			
	comp=Z,240nm,1.0s,mb5.9							
GYA				AMB	AMB			
	comp=Z,4µm,3.2s							
GYA				LR	LR			
	comp=N,85µm,22.3s,MS6.7							
GYA				LR	LR			
	comp=E,89µm,23.3s,MS6.7							
GYA				LR	LR			
	comp=Z,85µm,20.4s,MS6.6							
KLR	**Kul'dur**	**40.31**	**346**	*e*P		**P**	**02 16 02.4**	**-5.0**
KLR				*e*S		**S**	**02 22 09.0**	**-5.1**
KLR				pmax	pmax			
	comp=N,880nm,2.0s							
KLR				pmax	pmax			
	comp=E,920nm,2.0s							
KLR				pmax	pmax			
	comp=Z,3µm,2.0s,mb6.7							
TIY	**Taiyuan**	**40.36**	**318**	*e*P		**P**	**02 16 10.0**	**+2.0**
TIY				PP	PP		02 17 45.5	+4.5
TIY				S	**S**		**02 22 17.5**	**+2.3**
TIY				SS	SS		02 25 13.0	-1.3
TIY				LR	LR			
	comp=N,108µm,20.4s,MS6.8							
TIY				LR	LR			
	comp=E,31µm,15.6s,MS6.8							
TIY				LR	LR			
	comp=Z,91µm,22.2s							
MBWA	**Marble Bar**	**40.60**	**219**	P		**P**	**02 16 10.7**	**+0.7**
	SNR=88							
MBWA	**Marble Bar**	**40.60**	**219**	*e*P		**P**	**02 16 08.4**	**-1.7**
	comp=Z,3µm,1.8s,mb6.7							
MBWA				LR	LR			
	comp=Z,112µm,20.0s,MS6.7							
SKR	**Severo-Kuril's**	**40.92**	**10**	*e*P		**P**	**02 16 06.0**	**-6.4**
SKR				*e*			02 16 16.5	
SKR				*e*PPP			02 18 14.0	
SKR				*e*S		**S**	**02 22 23.0**	**-0.1**
SKR				*e*SS	SS		02 25 18.0	-7.0
SKR				*e*			02 25 57.0	
SKR				pmax	pmax			
	comp=E,180nm,1.0s							
SKR				pmax	pmax			
	comp=Z,220nm,1.0s,mb5.7							
SKR				smax				
	comp=N,30µm,14.0s							
SKR				smax				
	comp=E,76µm,14.0s							
SKR				MLR	MLR			
	comp=Z,71µm,18.0s,MS6.6							
SKR				MLR	MLR			
	comp=N,50µm,16.0s,MS6.7							
SKR				MLR	MLR			
	comp=E,65µm,16.0s,MS6.7							
XAN	**Xi'an**	**41.03**	**311**	P		**P**	**02 16 12.5**	**-1.0**
XAN				AP	pP		02 16 21.5	+2.2
XAN				SS	SS		02 25 22.8	-4.9
XAN				LR	LR			
	comp=N,18µm,29.5s,MS6.5							
XAN				LR	LR			
	comp=E,95µm,25.6s,MS6.5							
XAN				LR	LR			
	comp=Z,190µm,23.6s,MS6.9							
ARMA	**Armidale**	**41.10**	**172**⇑	*i*P		**P**	**02 16 12.5**	**-1.6**
ARMA				*e*S		**S**	**02 22 08.0**	**-18**
STKA	**Stephens Creek**	**42.36**	**185**⇑	*i*P		**P**	**02 16 26.1**	**+1.7**
	comp=Z,260nm,0.9s,mb5.9							
STKA				*e*S		S	02 22 19.2	-26
STKA	**Stephens Creek**	**42.36**	**185**	P		**P**	**02 16 23.1**	**-1.3**
	comp=Z,70nm,0.8s,baz=3.0,slow=9.5,SNR=39							
STKA				S		**S**	**02 22 45.9**	**+1.0**
	comp=Z,18nm,1.1s,baz=64,slow=23,SNR=2.2							
STKA				LR	LR		02 34 18.0	
	comp=Z,265µm,18.6s,MS7.2,baz=0.2,slow=37							
STKA	**Stephens Creek**	**42.36**	**185**	*e*P		**P**	**02 16 21.2**	**-3.1**
	comp=Z,732nm,1.2s,mb6.2							
STKA				*e*S		S	02 22 19.2	-26
KTGM	**Kuala Trenggan**	**42.54**	**266**⇑	P		**P**	**02 16 27.8**	**+1.6**
MYKOM	**Kota Tinggi**	**42.55**	**261**⇓	P		**P**	**02 16 27.5**	**+1.2**
HHC	**Hu-ho-hao-te**	**42.69**	**321**	*e*P		**P**	**02 16 26.8**	**-0.2**
HHC				PP	PP		02 18 08.5	+2.4
HHC				PCP	PcP		02 18 18.8	+0.1
HHC				SCP	ScP		02 22 08.3	-0.6
HHC				PCS	PcS		02 22 10.0	-0.7
HHC				S	**S**		**02 22 49.5**	**-0.1**
HHC				SS	SS		02 25 54.3	-6.0
HHC				SCS	ScS		02 26 25.8	-1.8
HHC				AMB	AMB			
	comp=Z,79nm,1.2s							
HHC				AMB	AMB			
	comp=Z,21µm,5.9s							
HHC				LR	LR			
	comp=N,116µm,20.1s,MS6.9							
HHC				LR	LR			
	comp=E,83µm,18.2s,MS6.9							
HHC				LR	LR			
	comp=Z,169µm,19.0s,MS7.0							
KGM	**Kluang**	**43.02**	**262**⇑	P		**P**	**02 16 31.2**	**+1.1**
KMI	**Kunming**	**43.28**	**295**	P		**P**	**02 16 33.3**	**+1.2**
KMI				AP	pP		02 16 36.5	-1.3
KMI				PP	PP		02 18 16.0	+3.2
KMI				PCP	PcP		02 18 23.0	+2.0
KMI				S	**S**		**02 22 59.8**	**+1.0**
KMI				SS	SS		02 26 05.8	-6.6
KMI				AMB	AMB			
	comp=Z,1µm,1.1s,mb6.6							
KMI				AMB	AMB			
	comp=Z,14µm,8.5s							
KMI				LR	LR			
	comp=N,149µm,22.6s,MS6.9							
KMI				LR	LR			
	comp=E,64µm,20.3s,MS6.9							
KMI				LR	LR			
	comp=Z,60µm,24.5s,MS6.4							
KMI	**Kunming**	**43.28**	**295**	P		**P**	**02 16 33.3**	**+1.2**
KMI							02 18 16.0	
KMI							02 18 23.1	
KMI				PPP			02 18 50.9	
KMI				S		**S**	**02 22 59.7**	**+0.9**
KMI				SS	SS		02 26 05.8	-6.6
KMI				SSS			02 26 54.9	
	comp=Z,1µm,1.1s,mb6.6							
KMI	**Kunming**	**43.28**	**295**	P		**P**	**02 16 33.3**	**+1.2**
	comp=Z,1µm,1.1s,mb6.6							
KMI				PP	PP		02 18 16.0	+3.2
KMI				PcP	PcP		02 18 23.1	+2.1
KMI				PPP			02 18 50.9	
KMI				S	**S**		**02 22 59.7**	**+0.9**
KMI				sS	sS		02 23 04.8	-3.5
KMI				SS	SS		02 26 05.8	-6.6
KMI				SSS			02 26 54.9	
BTO	**Baotou**	**43.52**	**320**	*e*P		**P**	**02 16 33.5**	**-0.2**
BTO				S		**S**	**02 23 00.5**	**-1.3**
BTO				AMB	AMB			
	comp=Z,271nm,1.3s,mb5.8							
PEA0B	**Petropavlovsk-**	**43.53**	**10**	*e*P		**P**	**02 16 34.6**	**+1.0**
PETK	**Petropavlovsk-**	**43.53**	**10**	P		**P**	**02 16 34.2**	**+0.6**
	comp=Z,81nm,1.1s,baz=156,slow=4.0,SNR=28							
PETK				PcP	PcP		02 18 22.9	+1.7
	comp=Z,92nm,0.8s,baz=103,slow=3.2,SNR=3.6							
PETK				LR	LR		02 32 12.0	
	comp=Z,98µm,20.6s,MS6.7,baz=198,slow=33							
PETK	**Petropavlovsk-**	**43.53**	**10**	P		**P**	**02 16 34.2**	**+0.6**
PETK				PcP	PcP		02 18 22.9	+1.7
PETK				LR	LR		02 32 11.9	
PET	**Petropavlovsk**	**43.62**	**11***c*	*i*P		**P**	**02 16 34.4**	**0.0**
PET				*e*			02 18 24.3	
PET				*i* S		**S**	**02 23 01.8**	**-1.1**
PET				pmax	pmax			
	comp=Z,306nm,1.9s,mb5.7							
PET				pmax	pmax			
	comp=Z,12µm,6.6s							
PET				smax				
	comp=E,78µm,20.4s							
PET				smax				
	comp=E,46µm,16.8s							
PET				smax				
	comp=N,65µm,24.5s							
PET				MLR	MLR			
	comp=Z,122µm,19.0s,MS6.8							
PET				MLR	MLR			
	comp=Z,112µm,17.0s							
PET	**Petropavlovsk**	**43.62**	**11**	*e*P		**P**	**02 16 34.1**	**-0.2**
	comp=Z,770nm,1.5s,mb6.2							
PET				LR	LR			
	comp=Z,110µm,19.0s,MS6.8							
CD2	**Chengdu**	**43.90**	**304**⇑	*i*P		**P**	**02 16 36.3**	**-0.7**
CD2				AP	pP		02 16 40.8	-2.0
CD2				PP	PP		02 18 20.0	+0.6
CD2				S	**S**		**02 23 06.0**	**-1.7**
CD2				SS	SS		02 26 12.3	-12
CD2				SCS	ScS		02 26 32.8	-2.8
CD2				AMB	AMB			
	comp=Z,2µm,1.1s,mb6.8							
CD2				AMB	AMB			
	comp=Z,22µm,10.8s							
CD2				LR	LR			
	comp=N,76µm,18.0s,MS6.8							
CD2				LR	LR			
	comp=E,78µm,21.6s,MS6.8							
CD2				LR	LR			
	comp=Z,71µm,19.2s,MS6.6							
HIA	**Hailar**	**44.28**	**336**	*e*P		**P**	**02 16 38.5**	**-1.2**
HIA				pmax	pmax			
	comp=Z,891nm,0.9s							
HIA				MLR	MLR			
	comp=Z,216µm,19.0s							
HIA	**Hailar**	**44.28**	**336**	*e*P		**P**	**02 16 38.5**	**-1.2**
	comp=Z,891nm,0.9s,mb6.5							
HIA				LR	LR			
	comp=Z,216µm,19.0s,MS7.1							
NANT	**Nan**	**44.30**	**286**	⇑P		**P**	**02 16 38.0**	**-2.3**
	comp=Z,2µm,1.0s,mb6.7							
FRIM	**Kepong**	**44.41**	**264**	⇑P		**P**	**02 16 42.0**	**+0.7**
FORT	**Forrest**	**44.47**	**202**	*e*P		**P**	**02 16 39.5**	**-1.9**
	comp=Z,940nm,0.6s,mb6.7							
FORT				*e*S		**S**	**02 23 21.8**	**+6.0**
NST	**Nakhon Sawan**	**44.70**	**282**	P		**P**	**02 16 45.0**	**+1.4**
	comp=Z,683nm,1.3s,mb6.3							
SNG	**Songkhla**	**44.74**	**270**	P		**P**	**02 16 45.0**	**+1.1**
	comp=Z,2µm,1.0s,mb6.8							
IPM	**Ipoh**	**44.76**	**266**	⇓P		**P**	**02 16 45.4**	**+1.3**
XMIS	**Christmas Isla**	**45.05**	**244**	*e*P		**P**	**02 16 45.2**	**-1.1**
NNT	**Nongplab**	**45.13**	**277**	⇑P		**P**	**02 16 49.0**	**+1.9**
	comp=Z,3µm,1.2s,mb7.0							
CHRT	**Chiangrai**	**45.24**	**288**	⇑P		**P**	**02 16 49.0**	**+1.1**
	comp=Z,3µm,1.1s,mb7.0							
LZH	**Lanzhou**	**45.66**	**311**	⇓P		**P**	**02 16 51.8**	**+0.8**
LZH				AP	pP		02 16 56.3	-0.5
LZH				XP	sP		02 16 59.0	0.0
LZH				PP	PP		02 18 39.0	+1.0
LZH				S	**S**		**02 23 32.0**	**-1.1**
LZH				XS	sS		02 23 43.0	+0.4
LZH				SS	SS		02 26 48.0	-10
LZH				AMB	AMB			
	comp=Z,3µm,1.2s,mb7.1							
LZH				AMB	AMB			
	comp=Z,8µm,5.6s							
LZH				LR	LR			
	comp=N,87µm,13.1s							
LZH				LR	LR			
	comp=Z,216µm,16.3s,MS7.2							
LZH	**Lanzhou**	**45.66**	**311**	⇓P		**P**	**02 16 51.7**	**+0.7**
LZH				*SP	sP		02 16 58.9	-0.1
LZH							02 18 39.0	
LZH				S	**S**		**02 23 32.1**	**-1.0**
LZH				*SS	sS		02 23 43.0	+0.4
LZH				SS	SS		02 26 48.0	-10
LZH				pmax	pmax			
	comp=Z,3µm,1.2s,mb7.1							
LZH				MLR	MLR			
	comp=Z,216µm,16.3s,MS7.2							
LZH	**Lanzhou**	**45.66**	**311**	⇓P		**P**	**02 16 51.7**	**+0.7**
	comp=Z,3µm,1.2s,mb7.1							
LZH				pP	pP		02 16 56.2	-0.6
LZH				sP	sP		02 16 58.9	-0.1
LZH				PP	PP		02 18 39.0	+1.0
LZH				S	**S**		**02 23 32.1**	**-1.0**
LZH				sS	sS		02 23 43.0	+0.4
LZH				SS	SS		02 26 48.0	-10
LZH				LR	LR			
	comp=Z,216µm,16.3s,MS7.2							
CAN	**Canberra**	**45.70**	**176**	*e*P		**P**	**02 16 49.7**	**-1.5**
CNB	**Canberra Magne**	**45.72**	**176**	*e*P		**P**	**02 16 49.6**	**-1.7**
CNB				*e*S		**S**	**02 23 23.0**	**-11**
BDT	**Bhumibol Dam**	**45.83**	**284**	⇓P		**P**	**02 16 54.0**	**+1.5**
	comp=Z,222nm,1.2s,mb6.0							
CM31	**Chiang Mai Arr**	**45.94**	**285**	PFAKE			02 17 00.0	+6.6
CM31				LR	LR			
	comp=Z,54µm,19.0s,MS6.5							
CMAR	**Chiang Mai Arr**	**45.94**	**285**	P		**P**	**02 16 53.1**	**-0.3**
	comp=Z,299nm,1.0s,mb6.2,baz=90,slow=5.3,SNR=214							
CMAR				S		**S**	**02 23 39.4**	**+1.9**
	comp=Z,1.5nm,0.3s,baz=165,slow=15,SNR=2.2							
CMAR				LR	LR		02 35 18.7	
	comp=Z,64µm,20.0s,MS6.6,baz=268,slow=35							
CMAR	**Chiang Mai Arr**	**45.94**	**285**⇑	*e*P		**P**	**02 16 53.0**	**-0.4**
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.3s							
CHG	**Chiang Mai**	**45.96**	**286**	⇑P		**P**	**02 16 54.3**	**+0.8**
	comp=Z,404nm,1.3s,mb6.2							
CHTO	**Chiang Mai**	**45.96**	**286**	⇑P		**P**	**02 16 54.4**	**+0.9**
	SNR=114							
CHTO	**Chiang Mai**	**45.96**	**286**	*e*P		**P**	**02 16 53.5**	**0.0**
CHTO				pmax	pmax			
	comp=Z,470nm,1.2s,mb6.3							
CHTO				MLR	MLR			
	comp=Z,56µm,20.0s,MS6.5							
CHTO	**Chiang Mai**	**45.96**	**286**	*e*P		**P**	**02 16 53.5**	**0.0**
	comp=Z,470nm,1.2s,mb6.3							
CHTO				LR	LR			
	comp=Z,56µm,20.0s,MS6.5							
TOO	**Toolangi**	**47.85**	**180**	*e*P		**P**	**02 17 06.7**	**-1.2**
TOO				*e*S		**S**	**02 24 02.9**	**-1.2**
SMY	**Shemya**	**47.87**	**23**	*e*P		**P**	**02 17 09.1**	**+1.1**
SMY				pmax	pmax			
	comp=Z,3µm,1.7s,mb7.0							
SMY				MLR	MLR			
	comp=Z,183µm,23.0s,MS7.0							
SMY	**Shemya**	**47.87**	**23**	*e*P		**P**	**02 17 09.1**	**+1.1**
	comp=Z,3µm,1.7s,mb7.0							
SMY				LR	LR			
	comp=Z,183µm,23.0s,MS7.0							
AFI	**Afiamalu**	**48.59**	**119**	P		**P**	**02 17 14.3**	**+0.3**
	comp=Z,156nm,1.0s,mb6.0,baz=195,slow=5.2,SNR=8.6							
AFI				LR	LR		02 36 36.7	
	comp=Z,102µm,18.2s,MS6.8,baz=298,slow=35							
AFI	**Afiamalu**	**48.59**	**119**	*e*P		**P**	**02 17 15.4**	**+1.4**
	comp=Z,742nm,1.0s,mb6.7							
AFI				LR	LR			
	comp=Z,91µm,20.0s,MS6.8							
CIT	**Chita**	**48.95**	**334**	*e*P		**P**	**02 17 16.9**	**+0.6**
CIT				*e*S		**S**	**02 24 34.0**	**+15**
CIT				pmax	pmax			
	comp=Z,3µm,2.2s,mb7.0							
CLNS	**Chul'man**	**48.96**	**345**	*e*P		**P**	**02 17 16.3**	**+0.1**
CLNS				*e**PP		pP	02 17 27.1	+5.0
CLNS				*e*			02 18 40.9	
CLNS				*e*			02 19 08.8	
CLNS				*e*PPP			02 19 59.1	
CLNS				*e*S		**S**	**02 24 17.1**	**-2.2**
CLNS				*e*SS		ScS	02 26 56.3	-11
CLNS				pmax	pmax			
	comp=N,489nm,1.3s							
CLNS				pmax	pmax			
	comp=Z,420nm,1.0s,mb6.4							
CLNS				pmax	pmax			
	comp=E,119nm,1.1s							
AMKA	**Amchitka**	**49.04**	**27**	*e*P		**P**	**02 17 18.8**	**+1.8**
	comp=E,533nm,1.0s,mb6.5							
AMKA				LR	LR			
	comp=Z,400nm,18.0s							
ULN	**Ulaanbaatar**	**49.40**	**326**	P		**P**	**02 17 20.2**	**+0.4**
	SNR=415							
ULN	**Ulaanbaatar**	**49.40**	**326**	*e*P		**P**	**02 17 19.8**	**-0.1**
	comp=Z,771nm,1.0s,mb6.7							
ULN				LR	LR			
	comp=Z,135µm,20.0s,MS6.9							
SONM	**Songino Array**	**49.75**	**326**	P		**P**	**02 17 22.7**	**+0.2**
	comp=Z,165nm,0.8s,mb6.1,baz=135,slow=6.5,SNR=191							
SONM				S		**S**	**02 24 36.1**	**+5.4**
	comp=Z,6.1nm,1.2s,baz=74,slow=28,SNR=2.5							
SONM				LR	LR		02 39 40.4	
	comp=Z,141µm,19.0s,MS7.0,baz=127,slow=38							
SONM				PKPPKP			02 48 10.1	
	comp=Z,3.5nm,1.2s,baz=280,slow=0.9,SNR=4.9							
SONM	**Songino Array**	**49.75**	**326**	P		**P**	**02 17 22.7**	**+0.3**
SONM				S		**S**	**02 24 36.2**	**+5.5**
SONM				pmax	pmax			
	comp=Z,165nm,0.8s							
SONM				smax				
	comp=N,6.0nm,1.2s							
SONM				MLR	MLR			
	comp=Z,141µm,19.0s							
SONM	**Songino Array**	**49.75**	**326**	P		**P**	**02 17 22.7**	**+0.2**
SONM				S		**S**	**02 24 36.1**	**+5.4**
SONM				LR	LR		02 39 40.4	
SONM				P'P'			02 48 10.1	
KLBR	**Kellerberrin**	**49.76**	**212**	*e*P		**P**	**02 17 20.0**	**-2.8**
	comp=Z,2µm,1.6s,mb6.8							
GTA	**Gaotai**	**49.89**	**313**	P		**P**	**02 17 24.0**	**+0.3**
GTA				AP	pP		02 17 28.0	-1.6
GTA				PP	PP		02 19 20.0	+1.4
GTA				S	**S**		**02 24 35.3**	**+2.2**
GTA				SS	SS		02 28 02.0	-4.0
GTA				AMB	AMB			
	comp=Z,211nm,1.4s,mb6.0							
GTA				AMB	AMB			
	comp=Z,8µm,4.8s							
GTA				LR	LR			
	comp=N,55µm,20.7s,MS6.8							
GTA				LR	LR			
	comp=E,82µm,20.1s,MS6.8							
GTA				LR	LR			
	comp=Z,121µm,21.6s,MS6.9							
MUN	**Mundaring**	**50.88**	**213**	*e*P		**P**	**02 17 28.2**	**-3.0**
MUN				*e*S		**S**	**02 24 52.0**	**+5.2**
NWAO	**Narrogin (SRO)**	**51.09**	**211**	P		**P**	**02 17 33.1**	**+0.3**
	SNR=29							
NWAO	**Narrogin (SRO)**	**51.09**	**211**	P		**P**	**02 17 32.5**	**-0.3**
	comp=Z,263nm,1.2s,mb6.0,baz=40,slow=8.0,SNR=27							
NWAO				S		**S**	**02 24 55.9**	**+6.1**
	comp=Z,14nm,1.1s,baz=320,slow=16,SNR=1.5							
NWAO				LR	LR		02 40 19.7	
	comp=Z,68µm,19.6s,MS6.7,baz=34,slow=38							
NWAO	**Narrogin (SRO)**	**51.09**	**211**	*e*P		**P**	**02 17 32.3**	**-0.5**
	comp=Z,648nm,1.4s,mb6.4							
NWAO				LR	LR			
	comp=Z,107µm,22.0s,MS6.8							
IMP	**Imphal**	**51.12**	**293**	*i* P		**P**	**02 17 31.0**	**-2.2**
IMP				*ex*	x		02 22 52.0	
ADK	**Adak**	**51.24**	**29**	*e*P		**P**	**02 17 34.5**	**+0.8**
	comp=Z,1µm,1.1s,mb6.8							
ADK				LR	LR			
	comp=Z,117µm,20.0s,MS6.9							
PBA	**Port Blair**	**52.02**	**277**	*ex*	x		02 18 15.8	
PBA				*ex*	x		02 24 08.5	
SEY	**Seymchan**	**52.52**	**4***c*	*i*P		**P**	**02 17 43.4**	**+0.4**
SEY	**Seymchan**	**52.52**	**4**⇑	*i*P		**P**	**02 17 43.5**	**+0.5**
YAK	**Yakutsk**	**52.73**	**351***c*	*e*P		**P**	**02 17 43.3**	**-1.3**
YAK				*e**PP		pP	02 17 53.5	+3.1
YAK				*e*			02 18 53.4	
YAK				*e*			02 19 40.9	
YAK				*e*S		**S**	**02 25 09.3**	**-2.2**
YAK				*e*			02 27 32.8	
YAK				pmax	pmax			
	comp=E,259nm,1.4s							
YAK				pmax	pmax			
	comp=Z,2µm,1.0s,mb6.9							
YAK				pmax	pmax			
	comp=N,691nm,1.2s							
YAK				pmax	pmax			
	comp=Z,1µm,3.0s							
YAK				pmax	pmax			
	comp=N,1µm,2.6s							
YAK				pmax	pmax			
	comp=E,664nm,2.2s							
YAK	**Yakutsk**	**52.73**	**351**	*e*P		**P**	**02 17 42.8**	**-1.7**
YAK				LR	LR			
	comp=Z,162µm,21.0s,MS7.0							
RAO	**Raoul Island**	**52.81**	**140**	P		**P**	**02 17 46.3**	**+0.6**
	comp=Z,205nm,0.8s,mb6.1,baz=267,slow=20,SNR=2.4							
RAO				LR	LR		02 37 27.6	
	comp=Z,292µm,19.2s,MS7.3,baz=135,slow=33							
RAO	**Raoul Island**	**52.81**	**140**	*e*P		**P**	**02 17 45.2**	**-0.5**
RAO				pmax	pmax			
	comp=Z,836nm,0.9s,mb6.7							
RAO				MLR	MLR			
	comp=Z,291µm,19.0s,MS7.3							
RAO	**Raoul Island**	**52.81**	**140**	*e*P		**P**	**02 17 45.2**	**-0.5**
	comp=Z,836nm,0.9s,mb6.7							
RAO				LR	LR			
	comp=Z,291nm,19.0s,MS7.3							
ZAK	**Zakamensk**	**52.87**	**327**⇓	*i*P		**P**	**02 17 46.3**	**+0.4**
ZAK				pmax	pmax			
	comp=Z,855nm,1.4s,mb6.5							
BOD	**Bodaibo**	**53.08**	**339**	*e*P		**P**	**02 17 46.6**	**-0.6**
BOD				pmax	pmax			
	comp=Z,432nm,1.1s,mb6.3							
TAU	**Tasmania Unive**	**53.20**	**179**	P		**P**	**02 17 49.4**	**+1.1**
	comp=Z,3µm,1.0s,mb7.2,SNR=5.4							
TAU	**Tasmania Unive**	**53.20**	**179**	*e*P		**P**	**02 17 47.9**	**-0.4**
TAU				pmax	pmax			
	comp=Z,627nm,1.1s,mb6.5							
TAU				MLR	MLR	

TLY eS **S** **02 25 22.6 +1.5**
TLY pmax pmax
comp=Z,2μm,1.3s,mb6.8
TLY pmax pmax
comp=Z,1μm,1.1s,mb6.7
TLY MLR MLR
comp=Z,67μm,19.0s,MS6.7
TLY Talaya 53.41 329 *e*P **P** **02 17 49.7 -0.1**
comp=Z,687nm,0.9s,mb6.6
TLY LR LR
comp=Z,78μm,19.0s,MS6.8
IRK Irkutsk 53.42 329⇓ *i*P **P** **02 17 49.6 -0.3**
IRK *e* 02 19 54.2
IRK *e* 02 20 59.0
IRK eS **S** **02 25 32.6 +11**
IRK pmax pmax
comp=Z,1μm,2.1s,mb6.5
COCO West Island 53.62 246 P **P** **02 17 58.4 +6.5**
comp=Z,2μm,1.3s,mb6.8,SNR=5.0
COCO West Island 53.62 246 *e*P **P** **02 17 51.3 -0.6**
comp=Z,286nm,1.0s,mb6.2
COCO LR LR
comp=Z,28μm,22.0s,MS6.3
LSA Lhasa 54.23 299 P **P** **02 17 57.0 +0.8**
LSA AP pP 02 18 06.5 +4.4
LSA XP sP 02 18 10.3 +6.0
LSA PP PP 02 20 01.3 +3.2
LSA S **S** **02 25 32.0 -0.9**
LSA AMB AMB
comp=Z,140nm,1.8s,mb5.6
LSA LR LR
comp=N,100μm,46.3s
LSA LR LR
comp=E,73μm,36.6s
LSA LR LR
comp=Z,49μm,24.7s
LSA Lhasa 54.23 299 *e*P **P** **02 17 57.4 +1.2**
LSA pmax pmax
comp=Z,1μm,1.2s,mb6.7
LSA MLR MLR
comp=Z,55μm,22.0s,MS6.6
LSA Lhasa 54.23 299 *e*P **P** **02 17 57.4 +1.2**
comp=Z,1μm,1.2s,mb6.7
LSA LR LR
comp=Z,55μm,22.0s,MS6.6
MOY Mondy 54.78 328 *e*P **P** **02 18 00.5 +0.7**
MOY pmax pmax
comp=Z,1μm,2.2s,mb6.5
KIP Kipapa 54.84 71⇑ *i*P **P** **02 18 01.4 +0.6**
KIP Kipapa 54.84 71 *e*P **P** **02 18 01.9 +1.1**
comp=Z,183nm,0.9s,mb6.1
KIP LR LR
comp=Z,136μm,20.0s,MS7.0
HON Honolulu 54.85 71 *e*P **P** **02 18 00.9 +0.1**
NIKO Nikolski 55.76 31 *e*P **P** **02 18 06.4 -0.4**
comp=Z,1μm,0.9s,mb6.9
CAL Calcutta 56.07 290 *e*P **P** **02 18 08.6 -1.0**
CAL AMb AMB 02 18 14.9
comp=Z,2μm,1.4s,mb7.0
CAL *ex* x 02 25 59.5
GTK Gangtok 56.15 296 *ex* x 02 18 07.0
SLGI Shiliguri 56.26 295 *ex* x 02 18 14.0
HKL Haleakala 56.46 72 *e*P **P** **02 18 11.8 -0.6**
URZ Urewera 56.68 151 S **S** **02 26 09.9 +4.7**
comp=Z,10nm,1.0s,baz=44,slow=7.1,SNR=2.3
URZ LR LR 02 40 23.4
comp=Z,94μm,20.0s,MS6.9,baz=137,slow=34
URZ Urewera 56.68 151 P **P** **02 18 16.7 +3.2**
SHBG Sahibganj 56.82 293 *e*P **P** **02 18 15.8 +0.8**
XMAS Kiritimati 56.96 94 *e*P **P** **02 18 16.5 +0.4**
comp=Z,435nm,1.0s,mb6.4
XMAS LR LR
comp=Z,124μm,22.0s,MS7.0
KHU Kahuku 57.06 74 *e*P **P** **02 18 16.8 +0.1**
POHA Pohakuloa 57.14 73 *e*P **P** **02 18 18.3 +1.1**
comp=Z,660nm,1.3s,mb6.5
POHA LR LR
comp=Z,112μm,20.0s,MS7.0
ODAN Odare 57.19 295 *e*P **P** **02 18 17.9 +0.4**
comp=Z,4μm,1.3s,mb7.3
UNV Unalaska Valle 57.42 31 *e*P **P** **02 18 18.4 -0.3**
comp=Z,635nm,1.0s,mb6.6
STCH Steam Cracks 57.52 74 *e*P **P** **02 18 20.6 +0.7**
THZ Tophouse 57.70 156 P **P** **02 18 19.1 -1.6**
RAMN Ramite 57.90 295 *e*P **P** **02 18 23.0 +0.5**
comp=Z,4μm,1.3s,mb7.3
AKUT Akutan 57.94 31 *e*P **P** **02 18 23.1 +0.8**
comp=Z,2μm,1.4s,mb6.8
AKUT LR LR
comp=Z,132μm,20.0s,MS7.0
SNZO South Karori 58.06 155 *e*P **P** **02 18 22.9 -0.3**
comp=Z,699nm,1.1s,mb6.6
SNZO LR LR
comp=Z,104μm,21.0s,MS6.9
JIRN Jiri 58.32 296 *e*P **P** **02 18 26.3 +0.8**
comp=Z,4μm,1.2s,mb7.3
LTZ Lake Taylor 58.32 157 P **P** **02 18 23.7 -1.4**
BOK Bokaro 58.37 291 *i*P **P** **02 18 26.2 +0.4**
BOK *i* x x 02 26 33.2
BWNR Bhubaneshwar 58.38 287 *e*P **P** **02 18 26.0 0.0**
BWNR *ex* x 02 26 22.0
GUN Gumba 58.62 296 *e*P **P** **02 18 27.4 -0.1**
BILL Bilibino 59.01 9*c i*P **P** **02 18 28.6 -0.9**
BILL pmax pmax
comp=Z,1μm,1.4s,mb6.7
BILL MLR MLR
comp=Z,76μm,20.0s,MS6.8
BILL Bilibino 59.01 9 *e*P **P** **02 18 28.6 -0.9**
comp=Z,1μm,1.3s,mb6.7
BILL LR LR
comp=Z,98μm,22.0s,MS6.9
PKIN Phulchoki 59.02 296 *e*P **P** **02 18 30.4 +0.1**
comp=Z,2μm,1.2s,mb7.1
KKN Kakani 59.14 296 *e*P **P** **02 18 31.4 +0.3**
comp=Z,2μm,1.0s,mb7.2
DMN Daman 59.28 296 *e*P **P** **02 18 32.6 +0.5**
comp=Z,2μm,0.9s,mb7.2
FALS False Pass 59.49 31 *e*P **P** **02 18 33.6 +0.5**
GKN Gorkha 59.72 296 *e*P **P** **02 18 35.4 +0.2**
WMQ Urumqi 59.91 315⇓ *i*P **P** **02 18 36.8 +0.7**
WMQ AP pP 02 18 41.3 -0.8
WMQ XP sP 02 18 44.0 -0.3
WMQ PCP PcP 02 19 23.0 +0.6
WMQ PP PP 02 20 50.0 +1.7
WMQ PCS PcS 02 23 21.0 -3.5
WMQ S **S** **02 26 48.0 +0.7**
WMQ SCS ScS 02 28 23.0 -2.9
WMQ AMB AMB
comp=Z,937nm,1.3s,mb6.7
WMQ AMB AMB
comp=Z,10μm,4.9s
WMQ LR LR
comp=N,81μm,20.2s,MS7.0
WMQ LR LR
comp=E,72μm,16.8s,MS7.0
WMQ LR LR
comp=Z,95μm,22.0s
DANN Dangsing 60.52 297 *e*P **P** **02 18 40.5 -0.1**
comp=Z,2μm,0.8s,mb7.2
KOLN Koldanda 60.62 296 *e*P **P** **02 18 41.5 +0.2**
comp=Z,2μm,0.9s,mb7.2
VIS Vishakhapatnam 60.78 284 *e*P **P** **02 18 43.0 +0.5**
VIS AMb AMB 02 18 48.3
comp=Z,948nm,1.2s,mb6.8
KRAR Krasnoyarsk 61.10 329⇑ *i*P **P** **02 18 44.3 +0.2**
KRAR pmax pmax
comp=Z,648nm,1.6s,mb6.5
SDPT Sand Point 61.22 32 *e*P **P** **02 18 44.6 -0.3**
TIXI Tiksi 61.95 354⇓ *i*P **P** **02 18 48.1 -1.4**
TIXI pmax pmax
comp=Z,243nm,1.0s,mb6.3
TIXI MLR MLR
comp=Z,61μm,17.0s,MS6.8
TIXI Tiksi 61.95 354 *e*P **P** **02 18 47.1 -2.4**
comp=Z,188nm,0.9s,mb6.2
TIXI LR LR
comp=Z,60μm,19.0s,MS6.8
RAR Rarotonga 62.07 121 P **P** **02 18 51.4 +0.3**
comp=Z,52nm,1.0s,mb5.6,baz=258,slow=8.9,SNR=2.9
RAR Rarotonga 62.07 121 P **P** **02 18 51.4 +0.2**
RAR pmax pmax
comp=Z,52nm,1.0s
RAR Rarotonga 62.07 121 *e*P **P** **02 18 52.6 +1.5**
comp=Z,222nm,1.0s,mb6.2
RAR LR LR
comp=Z,47μm,21.0s,MS6.6

ALBI Allahabad 62.13 293 *e*P **P** **02 18 52.0 +0.4**
CHGN Chignik 62.68 31 *e*P **P** **02 18 54.1 -0.5**
TNA Tin City 63.39 20 *e*P **P** **02 18 59.6 +0.4**
comp=Z,211nm,1.1s,mb6.2
VJD Vijayawada 63.40 283 *ex* x 02 19 02.0
PTH Pithoragarh 63.68 298 *e*P **P** **02 19 02.1 +0.2**
PTH *ex* x 02 27 39.1
JBP Jabalpur 63.78 291 *e*P **P** **02 19 03.2 +0.6**
JBP eS **S** **02 27 39.1 +2.0**
MDRS Chennai 64.06 279 *e*P **P** **02 19 05.5 +0.9**
MDRS AMb AMB 02 19 09.2
comp=Z,423nm,1.1s,mb6.4
MDRS eS **S** **02 27 38.0 -2.8**
PALK Pallekele 64.30 273⇓ P **P** **02 19 07.5 +1.3**
SNR=11
PALK Pallekele 64.30 273 *e*P **P** **02 19 07.0 +0.8**
comp=Z,235nm,1.3s,mb6.1
PALK LR LR
comp=Z,43μm,22.0s,MS6.6
MK31 Makanchi Array 64.32 317 *e*P **P** **02 19 04.6 -1.1**
MKAR Makanchi Array 64.32 317 P **P** **02 19 04.6 -1.1**
comp=Z,143nm,0.9s,mb6.0,baz=94,slow=8.6,SNR=107
MKAR S **S** **02 27 48.5 +5.6**
comp=Z,4.2nm,1.0s,baz=280,slow=2.1,SNR=3.0
MKAR PKPPKP 02 47 50.3
comp=Z,5.0nm,1.0s,baz=289,slow=3.7,SNR=5.8
MKAR LR LR 02 49 01.4
comp=Z,52μm,20.2s,MS6.7,baz=101,slow=38
MKAR Makanchi Array 64.32 317 P **P** **02 19 04.6 -1.1**
MKAR S **S** **02 27 48.5 +5.6**
MKAR pmax pmax
comp=Z,143nm,0.9s
MKAR smax
comp=N,4.0nm,1.0s
MKAR MLR MLR
comp=Z,52μm,20.2s
ZAA0 Zalesovo Array 64.63 325 *e*P **P** **02 19 05.8 -1.8**
ZALV Zalesovo Beam 64.63 325 P **P** **02 19 06.8 -0.8**
comp=Z,88nm,0.6s,mb6.0,baz=104,slow=6.6,SNR=58
ZALV S **S** **02 27 51.3 +4.8**
comp=Z,0.6nm,0.4s,baz=195,slow=39,SNR=2.0
ZALV LR LR 02 46 47.1
comp=Z,45μm,18.8s,MS6.7,baz=111,slow=36
ZALV PKPPKP 02 47 55.1
comp=Z,3.7nm,0.8s,baz=299,slow=3.1,SNR=4.9
ZALV Zalesovo Beam 64.63 325 P **P** **02 19 06.8 -0.8**
ZALV S **S** **02 27 51.3 +4.8**
ZALV pmax pmax
comp=Z,88nm,0.6s,mb6.0
ZALV smax
comp=N,1.0nm,0.4s
ZALV MLR MLR
comp=Z,45μm,18.8s,MS6.7
HYB Hyderabad 65.34 284 *e*P **P** **02 19 13.0 +0.1**
HYB eS S 02 27 50.0 -6.5
HYB pmax pmax
comp=Z,620nm,1.0s,mb6.6
HYB Hyderabad 65.34 284 *i*P **P** **02 19 13.0 +0.1**
comp=Z,620nm,1.0s,mb6.6
HYB eS S 02 27 56.0 -0.5
HYB LR LR 02 43 42.0
comp=Z,38nm,26.0s
HYB Hyderabad 65.34 284 *e*P **P** **02 19 13.0 +0.1**
comp=Z,620nm,1.0s,mb6.6
HYB eS S 02 27 50.0 -6.5
HYB *e* 02 43 42.0
DDI Dehra Dun 65.59 298 *e*P **P** **02 19 12.8 -1.5**
OHAK Old Harbor 65.64 31 *e*P **P** **02 19 14.4 +0.3**
comp=Z,2μm,1.7s,mb6.8
OHAK LR LR
comp=Z,166μm,20.0s,MS7.2
MCQ Macquarie Isla 65.73 172 *e*P **P** **02 19 17.2 +2.6**
MCQ eS S 02 28 16.2 +16
MCQ Macquarie Isla 65.73 172 *e*P **P** **02 19 12.2 -2.3**
MCQ eS S 02 28 16.2 +16
NVS Novosibirsk 65.78 326⇓ *i*P **P** **02 19 13.9 -1.1**
NVS eS S 02 28 01.8 +1.2
NVS pmax pmax
comp=N,371nm,1.4s
NVS pmax pmax
comp=E,980nm,1.4s
NVS pmax pmax
comp=Z,1μm,1.4s,mb6.7
NVS smax
comp=N,2μm,3.3s
NVS smax
comp=E,2μm,3.4s
SVW2 Sparrevohn 65.95 27 *e*P **P** **02 19 16.0 0.0**
KDAK Kodiak Island 66.18 31 P **P** **02 19 18.0 +0.4**
comp=E,2μm,1.0s,mb7.1,SNR=9.7
KDAK Kodiak Island 66.18 31 P **P** **02 19 17.9 +0.3**
comp=E,34nm,0.8s,mb5.5,baz=186,slow=5.5,SNR=16
KDAK S S 02 28 10.4 +5.0
comp=E,9.4nm,1.0s,baz=131,slow=21,SNR=1.8
KDAK LR LR 02 46 35.9
comp=E,128μm,19.6s,MS7.1,baz=250,slow=34
KDAK Kodiak Island 66.18 31 *e*P **P** **02 19 16.8 -0.8**
comp=E,363nm,0.9s,mb6.4
KDAK LR LR
comp=Z,33μm,20.0s,MS6.5
NDI New Delhi 66.28 297 *e*P **P** **02 19 15.5 -3.3**
NDI eS S 02 28 04.0 -3.7
SMLA Simla 66.38 299 *i*P **P** **02 19 19.4 0.0**
SMLA eS S 02 28 09.8 +1.0
TTA Tatalina 66.50 25 *e*P **P** **02 19 19.2 -0.3**
TTA Tatalina 66.50 25 *e*P **P** **02 19 20.4 +0.9**
SDNR Sundarnagar 66.56 300 *e*P **P** **02 19 19.0 -1.5**
SDNR eS S 02 28 10.0 -0.9
AKL Akola 66.61 288 *e*P **P** **02 19 21.6 +0.6**
AKL AMb AMB 02 19 26.1
comp=Z,595nm,0.0s
BHK Bhakra 67.03 300 *ex* x 02 19 26.2
KOD Kodaikanal 67.08 277 *e*P **P** **02 19 23.6 -0.6**
KOD AMb AMB 02 19 27.9
comp=Z,367nm,3.1s
LATR Latur 67.17 286 *e*P **P** **02 19 24.5 -0.1**
PONG Pong 67.44 300 *e*P **P** **02 19 24.0 -2.1**
DLH Dalhousie 67.44 301 *e*P **P** **02 19 28.0 +1.9**
AAA Alma-Ata 67.47 312 *e*P **P** **02 19 26.4 +0.3**
AAA eS S 02 28 21.8 +0.3
AAA pmax pmax
comp=Z,16μm,7.9s
AAA smax
comp=E,32μm,17.5s
AAA MLR MLR
comp=Z,50μm,22.0s,MS6.7
KURK Kurchatov 67.50 321 P **P** **02 19 26.7 +0.6**
comp=Z,6μm,1.3s,mb7.5
KURK Kurchatov 67.50 321 P **P** **02 19 24.8 -1.3**
comp=Z,139nm,0.5s,mb6.2,baz=106,slow=6.0,SNR=61
KURK S S 02 28 30.1 +8.5
comp=Z,1.5nm,1.0s,baz=225,slow=51,SNR=2.7
KURK LR LR 02 50 35.1
comp=Z,111μm,19.1s,MS7.1,baz=125,slow=37
THN Thein Dam 67.65 301 *e*P **P** **02 19 26.0 -1.4**
THN *ex* x 02 28 05.2
TRD Trivandrum 67.80 275 *e*P **P** **02 19 29.8 +1.1**
TRD AMb AMB 02 19 33.9
comp=Z,495nm,1.3s,mb6.4
KSH Kashi 67.82 308⇑ *i*P **P** **02 19 30.5 +2.1**
KSH *e*AP pP 02 19 35.0 +0.9
KSH *e*XP sP 02 19 37.5 +0.9
KSH *e*PCP PcP 02 19 56.0 +1.0
KSH *e*PP PP 02 22 02.0 +4.0
KSH *e*SCP 02 23 58.0
KSH *e*PCS 02 23 59.5
KSH *e*S S 02 28 27.0 +1.1
KSH *e*SCS ScS 02 29 24.0 -2.5
KSH *e*SS SS 02 32 50.0 +2.5
KSH AMB AMB
comp=Z,10μm,3.2s
KSH LR LR
comp=N,91μm,15.2s,MS7.2
KSH LR LR
comp=E,45μm,13.0s,MS7.2
KSH LR LR
comp=Z,85μm,17.7s,MS7.0
ULHL Ulahol 67.87 311 P **P** **02 19 33.3 +4.7**
SNR=36
PPLA Purkeypile 68.11 26 *e*P **P** **02 19 30.2 +0.5**
comp=Z,94μm,0.9s
SLKM Skilak Lake 68.20 29 *e*P **P** **02 19 29.5 -0.8**
TKM2 Tokmak 2 68.41 312 *e*P **P** **02 19 31.6 -0.4**
TKM2 pmax pmax
comp=Z,216nm,0.5s,mb6.4

TKM2 MLR MLR
comp=Z,58μm,21.0s,MS6.8
TKM2 Tokmak 2 68.41 312 P **P** **02 19 32.5 +0.5**
SNR=70
TKM2 Tokmak 2 68.41 312 *e*P **P** **02 19 31.6 -0.4**
comp=Z,216nm,0.5s,mb6.4
TKM2 LR LR
comp=Z,58μm,21.0s,MS6.8
FIB Fire Island 68.43 28 *e*P **P** **02 19 32.3 +0.6**
FIB pmax pmax
comp=Z,784nm,0.8s,mb6.8
FIB Fire Island 68.43 28 *e*P **P** **02 19 32.3 +0.5**
comp=Z,784nm,0.8s,mb6.8
SEW Seward 68.45 29 *e*P **P** **02 19 32.0 +0.1**
AJM Ajmer 68.58 294 *e*P **P** **02 19 32.8 -0.5**
KZA Kyzart 68.59 311 P **P** **02 19 35.2 +2.1**
SNR=34
RC01 Rabbit Creek A 68.61 28 *e*P **P** **02 19 31.8 -1.0**
comp=Z,12nm,0.7s
IMA2 Indian Mountai 68.70 22 *e*P **P** **02 19 33.7 +0.4**
KBK Karagaybulak 68.86 312 P **P** **02 19 35.3 +0.5**
SNR=54
KTH Kantishna Hill 68.87 25 *e*P **P** **02 19 32.9 -1.6**
comp=Z,422nm,1.0s,mb6.3
BPAW Bear Paw Mtn. 69.03 25 *e*P **P** **02 19 34.4 -1.1**
comp=Z,818nm,1.5s,mb6.4
PMR Palmer 69.04 28 *e*P **P** **02 19 34.5 -1.0**
PMR pmax pmax
comp=Z,637nm,1.5s,mb6.3
PMR MLR MLR
comp=Z,85μm,22.0s,MS6.9
PMR Palmer 69.04 28 *e*P **P** **02 19 34.5 -1.0**
comp=Z,637nm,1.5s,mb6.3
PMR LR LR
comp=Z,85μm,22.0s,MS6.9
CHMS Chumysh 69.04 312 P **P** **02 19 36.0 +0.1**
SNR=51
FRU Bishkek 69.12 312⇑ *i*P **P** **02 19 37.0 +0.6**
FRU eS S 02 28 42.0 +0.8
FRU pmax pmax
comp=Z,2μm,2.2s,mb6.6
FRU pmax pmax
comp=Z,10μm,11.0s
FRU MLR MLR
comp=E,64μm,18.0s
FRU MLR MLR
comp=Z,58μm,18.0s,MS6.9
UCH Uchtor 69.15 311 P **P** **02 19 38.0 +1.4**
SNR=109
UCH Uchtor 69.15 311 *e*P **P** **02 19 36.2 -0.4**
comp=Z,658nm,1.2s,mb6.4
UCH LR LR
comp=Z,48μm,19.0s,MS6.8
AAK Ala-Archa 69.19 312 P **P** **02 19 37.0 +0.1**
SNR=81
USP Ospenovka 69.25 312 P **P** **02 19 37.0 -0.2**
SNR=43
KAD Karad 69.51 285 *e*P **P** **02 19 38.3 -1.1**
KAD AMb AMB 02 19 43.6
comp=Z,760nm,1.6s,mb6.4
PPT Papeete 69.67 113 *e*P **P** **02 19 41.0 +0.8**
comp=Z,322nm,1.4s,mb6.0
PPT eS S 02 28 46.7 -1.6
comp=Z,121μm,26.8s
PPT *e*LQ 02 37 21.6
comp=Z,402μm,31.0s
PPT *e*LR LR 02 40 35.2
comp=Z,169μm,27.5s,baz=292
PPT Papeete 69.67 113 P **P** **02 19 40.9 +0.7**
comp=Z,43nm,1.0s,baz=241,slow=7.0,SNR=4.9
PPT LR LR 02 44 59.3
comp=Z,51μm,18.6s,MS6.8,baz=285,slow=32
PAE Paea 69.69 113 *e*P **P** **02 19 40.9 +0.5**
comp=Z,2μm,1.1s,mb7.0
PAE Paea 69.69 113 *e*P **P** **02 19 40.9 +0.5**
PAE pmax pmax
comp=Z,2μm,1.1s,mb7.0
EKS2 Erkin-Say 69.72 312 P **P** **02 19 40.6 +0.4**
SNR=50
EKS2 Erkin-Say 69.72 312 *e*P **P** **02 19 39.6 -0.6**
comp=Z,595nm,1.5s,mb6.3
EKS2 LR LR
comp=Z,62μm,22.0s,MS6.8
POO Poona 69.73 286 *e*P **P** **02 19 39.9 -0.8**
POO AMb AMB 02 19 45.1
comp=Z,1μm,0.9s,mb6.8
POO *i* PCP PcP 02 20 03.5 +0.1
POO eS S 02 28 49.0 -0.2
POO *i* SCS ScS 02 29 41.5 -0.7
AML Almayashu 69.75 311 P **P** **02 19 41.5 +1.1**
SNR=68
AML Almayashu 69.75 311 *e*P **P** **02 19 40.6 +0.3**
comp=Z,333nm,1.0s,mb6.2
AML LR LR
comp=Z,65μm,20.0s,MS6.9
TIAR Tiarei 69.87 113 *e*P **P** **02 19 42.1 +0.6**
comp=Z,3μm,0.8s,mb7.2
GOA Goa 70.03 283⇑ *i*P **P** **02 19 41.2 -1.3**
GOA AMb AMB 02 19 47.9
comp=Z,586nm,0.9s,mb6.5
GOA *i* x x 02 28 44.8
TVO Taravao 70.03 113 *e*P **P** **02 19 43.5 +1.1**
comp=Z,4μm,0.9s,mb7.3
TVO *e*P'P' 02 47 48.0
EYAK Cordova Ski Ar 70.34 29 *e*P **P** **02 19 43.8 +0.2**
comp=Z,2μm,1.5s,mb6.8
PMOR Pomariorio Ree 70.42 110 *e*P **P** **02 19 45.2 +0.3**
comp=Z,737nm,1.0s,mb6.6
COLA College 70.57 25*c i*P **P** **02 19 44.4 -0.5**
COLA College 70.57 25 *e*P **P** **02 19 43.4 -1.5**
comp=Z,244nm,0.9s,mb6.1
COLA LR LR
comp=Z,107μm,20.0s,MS7.1
BOM Bombay 70.68 286 *e*P **P** **02 19 45.5 -1.0**
BOM *ex* x 02 19 45.9
comp=Z,653nm,1.5s
BOM *ex* x 02 29 06.3
VAH Vaihoa 70.73 110 *e*P **P** **02 19 46.9 +0.1**
comp=Z,264nm,0.9s,mb6.2
BHV Bhavnagar 71.08 289 *e*P **P** **02 19 48.0 -0.9**
MEH Mehetia 71.13 113 *e*P **P** **02 19 49.9 +0.8**
comp=Z,8μm,1.0s,mb7.6
TBI Tubuai 71.69 119 *e*P **P** **02 19 53.4 +0.9**
comp=Z,283nm,0.9s,mb6.2
TBI *e*S S 02 29 11.7 -0.1
comp=Z,72μm,31.0s
TBI *e*LQ 02 38 19.1
comp=Z,192μm,38.2s
TBI *e*LR LR 02 41 39.0
comp=Z,68μm,25.2s,baz=301
TBI Tubuai 71.69 119 *e*P **P** **02 19 53.4 +0.9**
comp=Z,283nm,0.9s,mb6.2
TBI *e*S S 02 29 11.7 -0.1
TBI *e*LQ 02 38 19.1
KK31 Karatay Array 72.15 312 *i*P **P** **02 19 54.4 -0.5**
KK31 pmax pmax
comp=Z,1μm,1.6s,mb6.6
KK31 Karatay Array 72.15 312 *i*P **P** **02 19 54.5 -0.4**
BVA0 Borovoye Array 72.88 322 *i*P **P** **02 19 58.3 -0.7**
BVAR Borovoye Array 72.88 322 P **P** **02 19 58.2 -0.9**
comp=Z,73nm,0.5s,mb5.9,baz=101,slow=7.7,SNR=149
BVAR S S 02 29 29.4 +4.9
comp=Z,5.0nm,1.2s,baz=293,slow=32,SNR=2.7
BVAR PKPPKP 02 47 36.7
comp=Z,2.5nm,1.0s,baz=284,slow=1.2,SNR=3.7
BVAR LR LR 02 51 40.3
comp=Z,141μm,21.6s,MS7.2,baz=97,slow=36
BVAR Borovoye Array 72.88 322 P **P** **02 19 58.2 -0.8**
BVAR S S 02 29 29.4 +4.9
BVAR pmax pmax
comp=Z,73nm,0.5s
BVAR smax
comp=N,5.0nm,1.2s
BVAR MLR MLR
comp=Z,141μm,21.6s
BRVK Borovoye 72.95 322 P **P** **02 19 59.6 +0.2**
comp=Z,6μm,1.2s,mb7.4
BRVK Borovoye 72.95 322 P **P** **02 19 59.0 -0.4**
SNR=313
BRVK Borovoye 72.95 322 *e*P **P** **02 19 58.6 -0.8**
BRVK pmax pmax
comp=Z,1μm,1.0s,mb6.7
BRVK MLR MLR
comp=Z,222μm,21.0s,MS7.4
BRVK Borovoye 72.95 322 *e*P **P** **02 19 58.6 -0.8**
comp=Z,1μm,1.0s,mb6.7
BRVK LR LR

comp=Z,222µm,21.0s,MS7.4
KBL Kabul 73.23 303 *e*P **P 02 20 00.5 -1.0**
KBL pmax pmax
comp=Z,975nm,1.0s,mb6.7
KBL Kabul 73.23 303 *e*P **P 02 20 00.5 -1.0**
comp=Z,975nm,1.0s,mb6.7
BHJ Bhuj 73.27 291 *e*P **P 02 20 03.1 +1.2**
BHJ AMb AMB 02 20 07.9
comp=Z,2µm,1.4s,mb6.8
PNL Peninsula 73.30 31 *e*P **P 02 20 01.6 +0.2**
comp=Z,441nm,1.4s,mb6.2
DAWY Dawson 73.95 26 *e*P **P 02 20 05.2 +0.1**
HYT Haines Junctio 74.38 30 *e*P **P 02 20 08.4 +0.7**
DGAR Diego Garcia 75.16 259 PFAKE 02 20 20.0 +6.9
DGAR LR LR
comp=Z,23µm,20.0s,MS6.5
SIT Sitka 75.18 34 *e*P **P 02 20 14.2 +1.8**
SIT pmax pmax
comp=Z,2µm,2.5s,mb6.7
SIT MLR MLR
comp=Z,101µm,22.0s,MS7.1
SIT Sitka 75.18 34 *e*P **P 02 20 14.2 +1.8**
comp=Z,2µm,2.5s,mb6.7
SIT LR LR
comp=Z,101µm,22.0s,MS7.1
SKAG Skagway 75.34 31 *e*P **P 02 20 14.1 +0.8**
comp=Z,1µm,1.7s,mb6.5
SKAG LR LR
comp=Z,64µm,18.0s,MS7.0
CRAG Craig 76.34 35 *e*P **P 02 20 19.8 +0.7**
comp=Z,402nm,1.7s,mb6.1
CRAG LR LR
comp=Z,133µm,19.0s,MS7.3
WRAK Wrangell Islan 76.79 34 *e*P **P 02 20 22.9 +1.3**
comp=Z,647nm,1.2s,mb6.4
WRAK LR LR
comp=Z,103µm,19.0s,MS7.2
DRV Dumont d'Urvil 77.11 182 P **P 02 20 28.0 +5.0**
DRV S S 02 30 21.0 +10
DRV SS SS 02 35 10.0 +1.3
DRV L 02 40 00.0
DRV R 02 46 00.0
DLBC Dease Lake 78.05 32 *e*P **P 02 20 28.9 +0.3**
SVE Sverdlovsk 78.62 326⇓ *e*P **P 02 20 32.3 +0.5**
SVE *e* 02 23 30.5
SVE *e*S S 02 30 34.8 +7.1
SVE *e*SS SS 02 35 26.0 -5.3
SVE pmax pmax
comp=Z,518nm,1.2s,mb6.3
SVE pmax pmax
comp=Z,7µm,10.2s
SVE MLR MLR
comp=Z,60µm,19.0s,MS7.0
AB31 Akbulak array 79.41 318 *i* P **P 02 20 35.2 -1.1**
AB31 pmax pmax
comp=Z,249nm,1.0s,mb6.1
AB31 Akbulak array 79.41 318⇑ *e*P **P 02 20 35.3 -1.0**
ARU Arti 79.78 326 P **P 02 20 38.3 +0.1**
comp=Z,2µm,1.1s,mb6.9,SNR=63
ARU Arti 79.78 326 *c i*P **P 02 20 37.5 -0.7**
ARU *e* 02 23 37.6
ARU *e*PPP 02 25 25.3
ARU *e*S S 02 30 40.5 +0.4
ARU pmax pmax
comp=Z,224nm,1.7s,mb5.8
ARU pmax pmax
comp=Z,7µm,9.9s
ARU smax
comp=N,3µm,8.5s
ARU Arti 79.78 326 *e*P **P 02 20 36.7 -1.4**
comp=N,303nm,0.9s,mb6.2
ARU LR LR
comp=Z,57µm,20.0s,MS6.9
AKTK Aktyubinsk 80.56 320 P **P 02 20 41.3 -1.2**
AKTK S S 02 30 54.2 +5.7
AKTO Aktyubinsk 80.56 320 P **P 02 20 41.3 -1.2**
comp=Z,36nm,0.7s,baz=82,slow=7.5,SNR=51
AKTO S S 02 30 54.2 +5.7
comp=Z,1.9nm,0.8s,baz=229,slow=18,SNR=2.1
AKTO Aktyubinsk 80.56 320 P **P 02 20 41.8 -0.7**
AKTO pmax pmax
comp=Z,50nm,1.0s
CASY Casey 80.87 194 *e*P **P 02 20 41.9 -1.8**
CASY *e*PP PP 02 23 48.0 -0.3
CASY *e*S S 02 30 53.3 +2.4
ABKT Ailbek 81.80 307 P **P 02 20 49.6 +0.2**
comp=Z,5µm,1.1s,mb7.3
NLWA Neilton Lookou 82.56 43⇑P **P 02 20 53.7 +0.6**
baz=83,SNR=9.7
NLWA Neilton Lookou 82.56 43 *e*P **P 02 20 53.9 +0.7**
comp=Z,593nm,1.2s,mb6.5
NLWA LR LR
comp=Z,72µm,21.0s,MS7.0
D03A Wishkah Elem. 82.67 44⇓P **P 02 20 53.8 +0.1**
baz=83
PGC Sidney 82.68 42 *e*P **P 02 20 54.6 +0.9**
comp=Z,800nm,1.3s,mb6.6
B04A Port Angeles 82.72 43⇓P **P 02 20 55.0 +1.0**
baz=83
K01A Sixes 82.74 48⇓P **P 02 20 54.7 +0.5**
baz=83
H02A Toledo 82.83 46⇓P **P 02 20 55.4 +0.8**
baz=83
KEBM Edson Butte 82.83 48 *e*P **P 02 20 55.7 +1.0**
E03A Lebam 82.88 44⇑P **P 02 20 55.8 +1.0**
baz=83,SNR=18
HEBO Mount Hebo 82.93 45 *e*P **P 02 20 55.9 +0.8**
comp=Z,451nm,1.0s,mb6.5
F03A Seaside 82.97 45⇑P **P 02 20 55.4 +0.1**
baz=83
KBO Bosley Butte 83.00 48 *e*P **P 02 20 57.2 +1.7**
I02A Mapleton 83.04 47⇑P **P 02 20 55.8 0.0**
baz=83
BMW Boistfort Moun 83.12 44 *e*P **P 02 20 56.9 +0.8**
C04A Brinnon 83.12 43⇑P **P 02 20 57.1 +1.0**
baz=83,SNR=18
M01C Crescent City 83.12 49⇑P **P 02 20 56.8 +0.6**
baz=83,SNR=8.5
WBK Wadi Bani Khal 83.12 292⇓P **P 02 20 56.6 +0.1**
SNR=140
A04A Legoe Bay, Lum 83.16 42⇑P **P 02 20 56.3 +0.1**
baz=83
GNW Green Mountain 83.24 43 *e*P **P 02 20 57.6 +0.9**
comp=Z,470nm,1.1s,mb6.4
G03A Yamhill 83.25 45⇑P **P 02 20 56.9 +0.2**
baz=83
KSXB Camp Six Broad 83.31 49 P **P 02 20 59.1 +1.9**
J02A Umpqua 83.31 47⇓P **P 02 20 57.9 +0.7**
baz=83,SNR=11
KRMB Red Mountain 83.33 49 *e*P **P 02 20 58.2 +1.0**
H03A Soap Creek Ran 83.33 46⇓P **P 02 20 57.3 +0.1**
baz=83,SNR=25
COR Corvallis 83.33 46 *e*P **P 02 20 58.1 +0.9**
COR pmax pmax
comp=Z,543nm,1.3s,mb6.4
COR MLR MLR
comp=Z,139µm,21.0s,MS7.3
COR Corvallis 83.33 46 *e*P **P 02 20 58.1 +0.9**
comp=Z,543nm,1.3s,mb6.4
COR LR LR
comp=Z,139µm,21.0s,MS7.3
JCC Jacoby Creek 83.34 50⇑P **P 02 20 57.9 +0.5**
baz=83,SNR=9.4
I03A Eugene 83.44 47⇓P **P 02 20 58.5 +0.7**
baz=84,SNR=11
K02A Glendale 83.46 48⇑P **P 02 20 58.8 +0.9**
baz=84
L02A Cave Junction 83.46 48⇑P **P 02 20 58.2 +0.3**
baz=84,SNR=17
A05A Maple Falls 83.52 41⇓P **P 02 20 58.9 +0.8**
baz=84,SNR=17
O01C Eel River Cons 83.59 50⇓P **P 02 20 59.4 +0.7**
baz=84,SNR=13
B05A Bryant 83.63 42⇑P **P 02 20 59.3 +0.6**
baz=84,SNR=14
JCW Jim Creek 83.75 42 *e*P **P 02 20 59.7 +0.5**
F04A Amboy 83.76 45 P **P 02 20 59.6 +0.2**
baz=84,SNR=14
BIDO Bidbid 83.76 293⇑P **P 02 21 00.2 +0.4**
SNR=86
G04A Mulino 83.82 45⇑P **P 02 20 60.0 +0.2**
baz=84,SNR=18
KCPM Cahto Peak 83.84 51 *e*P **P 02 21 00.7 +0.8**
D05A Enumclaw 83.86 43⇑P **P 02 21 00.1 +0.3**
baz=84,SNR=14
HUMO Hull Mountain 83.87 48⇓P **P 02 21 00.4 +0.3**
baz=84,SNR=37
HUMO Hull Mountain 83.87 48 *e*P **P 02 21 00.6 +0.6**
comp=Z,374nm,1.1s,mb6.4
HUMO LR LR
comp=Z,48µm,19.0s,MS6.9
N02C Big Bar 83.88 50 P **P 02 21 00.5 +0.4**
baz=84,SNR=35
SSOR Sweet Springs 83.89 46 P **P 02 21 01.2 +1.1**
KIPM Iron Peak 83.90 51 *e*P **P 02 21 00.9 +0.7**
SMDO Samad 83.90 292⇑P **P 02 21 00.4 -0.2**
SNR=61
A06A Chilliwack 83.90 41⇓P **P 02 21 00.3 +0.3**
baz=84
JMDO Jabal Madar 83.95 292⇓P **P 02 21 00.4 -0.5**
SNR=67
RPW Rockport 83.98 42 *e*P **P 02 21 00.9 +0.5**
C05A Tolt Reservoir 83.98 43⇓P **P 02 21 00.7 +0.3**
baz=84,SNR=14
B06A Marblemount 83.99 42⇓P **P 02 21 00.5 0.0**
baz=84,SNR=20
LON Longmire 84.05 44 *e*P **P 02 21 00.8 0.0**
LON pmax pmax
comp=Z,162nm,1.1s,mb6.1
LON Longmire 84.05 44 *e*P **P 02 21 00.8 0.0**
comp=Z,162nm,1.1s,mb6.1
I04A Tendick Farm, 84.09 47⇑P **P 02 21 00.8 -0.3**
baz=84,SNR=26
H04A Detroit Lake 84.11 46⇑P **P 02 21 00.8 -0.4**
baz=84,SNR=17
E05A Randle 84.11 44⇓P **P 02 21 00.5 -0.6**
baz=84,SNR=13
M02C Callahan 84.13 49⇑P **P 02 21 01.8 +0.4**
baz=84,SNR=33
YBH Yreka Blue Hor 84.19 49 LR LR 02 50 28.3
comp=Z,132µm,21.8s,MS7.3,baz=318,slow=30
YBH Yreka Blue Hor 84.19 49 *e*P **P 02 21 02.0 +0.4**
YBH pmax pmax
comp=Z,379nm,1.3s
YBH MLR MLR
comp=Z,33µm,19.0s
YBH Yreka Blue Hor 84.19 49⇓P **P 02 21 02.1 +0.4**
baz=84,SNR=84
YBH Yreka Blue Hor 84.19 49 *e*P **P 02 21 02.0 +0.4**
comp=Z,379nm,1.3s,mb6.4
YBH LR LR
comp=Z,33µm,19.0s,MS6.7
HOPS Hopland 84.33 52⇑P **P 02 21 02.2 -0.2**
baz=84,SNR=12
HOPS Hopland 84.33 52 *e*P **P 02 21 02.8 +0.3**
comp=Z,470nm,1.3s,mb6.5
HOPS LR LR
comp=Z,73µm,20.0s,MS7.1
RKT Rikitea 84.36 115 *e*S S 02 31 26.4 -2.0
comp=Z,44µm,27.8s
RKT *e*SS SS 02 36 59.0 +0.1
RKT *e*LQ 02 43 58.8
comp=Z,33µm,31.2s
RKT *e*LR LR 02 47 11.7
comp=Z,85µm,29.2s
comp=Z,74µm,24.2s,baz=292
RKT Rikitea 84.36 115 *e*P **P 02 21 02.1 -0.7**
RKT *e*S S 02 31 26.4 -2.0
RKT *e*SS SS 02 36 59.0 +0.1
RKT *e*LQ 02 43 58.8
comp=Z,180nm,1.1s,mb6.1
RKT pmax pmax
comp=Z,180nm,1.1s,mb6.1
RKT Rikitea 84.36 115 *e*P **P 02 21 02.1 -0.7**
RKT *e*S S 02 31 26.4 -2.0
RKT *e*SS SS 02 36 59.0 +0.1
RKT *e*LQ 02 43 58.8
O02C Red Bluff 84.37 50⇑P **P 02 21 03.5 +0.8**
baz=84,SNR=65
J04A Umpqua Nationa 84.39 47⇓P **P 02 21 03.0 +0.3**
baz=84,SNR=18
F05A White Salmon 84.43 45⇑P **P 02 21 03.4 +0.6**
baz=84,SNR=16
C06A Tall Timber Ra 84.47 42⇑P **P 02 21 02.6 -0.4**
baz=84,SNR=14
HOQ Hoqain 84.49 293⇓P **P 02 21 03.6 +0.1**
SNR=73
WDC Whiskeytown Da 84.49 50 *e*P **P 02 21 03.4 +0.2**
WDC pmax pmax
comp=Z,468nm,1.3s,mb6.5
WDC MLR MLR
comp=Z,34µm,19.0s,MS6.8
WDC Whiskeytown Da 84.49 50⇑P **P 02 21 03.1 -0.1**
baz=85,SNR=104
WDC Whiskeytown Da 84.49 50 *e*P **P 02 21 03.4 +0.2**
comp=Z,468nm,1.3s,mb6.5
WDC LR LR
comp=Z,34µm,19.0s,MS6.8
GASB Alder Springs 84.50 51⇑P **P 02 21 03.6 +0.3**
baz=85,SNR=26
FARB Farallon Islan 84.59 53⇑P **P 02 21 04.2 +0.4**
baz=85
MCCM Marconi Confer 84.61 52⇓P **P 02 21 03.3 -0.6**
baz=85
MCCM Marconi Confer 84.61 52 *e*P **P 02 21 04.4 +0.5**
comp=Z,306nm,1.1s,mb6.3
A07A Ashnola River, 84.62 41⇑P **P 02 21 04.1 +0.4**
baz=85,SNR=31
TWW Teanaway 84.62 43 P **P 02 21 04.9 +1.2**
D06A Cle Elum 84.63 43⇑P **P 02 21 03.5 -0.3**
baz=85,SNR=16
G05A Wamic 84.63 45⇑P **P 02 21 04.1 +0.3**
baz=85,SNR=13
E06A Yakima 84.65 44⇓P **P 02 21 03.3 -0.5**
baz=85,SNR=31
M03C McCloud 84.69 49⇓P **P 02 21 03.9 -0.3**
baz=85,SNR=34
L04A Klamath Falls 84.72 48⇑P **P 02 21 04.3 -0.1**
baz=85,SNR=36
BSY Bisya 84.72 292⇑P **P 02 21 04.8 +0.1**
SNR=67
K04A Chilquin 84.76 48⇑P **P 02 21 04.6 0.0**
baz=85,SNR=12
NSHM Saint Helena R 84.77 52 *e*P **P 02 21 05.1 +0.4**
H05A Madras 84.79 46⇑P **P 02 21 04.1 -0.6**
baz=85,SNR=30
M04C Macdoel 84.82 49 P **P 02 21 05.2 +0.3**
baz=85,SNR=42
MNRC McLaughlin Nat 84.84 52⇑P **P 02 21 05.4 +0.4**
baz=85,SNR=24
I05A Bend 84.84 46⇓P **P 02 21 05.2 +0.3**
baz=85,SNR=12
HOG Hogback Mounta 84.84 48 P **P 02 21 06.0 +1.0**
EBG Ellensburg 84.86 43 P **P 02 21 04.9 0.0**
B07A Winthrop 84.89 42⇓P **P 02 21 04.9 -0.1**
baz=85,SNR=12
ETW Entiat 84.90 43 *e*P **P 02 21 05.7 +0.5**
CVS Carmenet Viney 84.91 52⇓P **P 02 21 05.3 -0.1**
baz=85,SNR=19
F06A Goldendale 84.91 45⇓P **P 02 21 05.6 +0.3**
baz=85,SNR=22
J05A Fort Rock 85.01 47⇑P **P 02 21 06.1 +0.3**
baz=85,SNR=58
BANOM Banah 85.03 295⇓P **P 02 21 06.9 +0.7**
SNR=59
C07A Waterville 85.07 43⇑P **P 02 21 05.1 -0.9**
baz=85,SNR=19
G06A Carlson Farm, 85.11 45⇑P **P 02 21 05.9 -0.3**
baz=85,SNR=14
YKA Yellowknife Ar 85.14 27 P **P 02 21 05.4 -0.6**
comp=Z,9.2nm,0.6s,baz=285,slow=4.5,SNR=26
YKA S S 02 31 30.9 -3.7
comp=Z,3.0nm,0.7s,baz=300,slow=29,SNR=2.7
YKA LR LR 02 58 07.6
comp=Z,22µm,19.8s,MS6.5,baz=150,slow=35
YKA Yellowknife Ar 85.14 27 P **P 02 21 05.4 -0.6**
YKA S S 02 31 31.0 -3.7
YKA pmax pmax
comp=Z,9.0nm,0.6s
YKA smax
comp=N,3.0nm,0.7s
YKA MLR MLR
comp=Z,22µm,19.8s
YKA Yellowknife Ar 85.14 27 P **P 02 21 05.4 -0.6**
YKA S S 02 31 30.9 -3.7
YKA LR LR 02 58 07.6
Q03C Winters 85.21 52⇑P **P 02 21 07.2 +0.4**
baz=85,SNR=11
D07A Quincy 85.22 43⇓P **P 02 21 07.6 +0.9**
baz=85,SNR=16
HATD Hatta, Dubai 85.35 294⇓P **P 02 21 08.1 +0.2**
SNR=116
K05A Summer Lake 85.35 48 P **P 02 21 08.0 +0.5**
baz=85,SNR=39
A08A Turner Farm, O 85.36 41 P **P 02 21 07.2 -0.1**
baz=85,SNR=36
H06A Lindquist Farm 85.40 46 P **P 02 21 07.4 -0.3**
baz=86,SNR=44
M05C Lookout 85.40 49⇓P **P 02 21 07.3 -0.5**
baz=86,SNR=33
E07A Sunnyside 85.41 44⇑P **P 02 21 07.4 -0.2**
baz=86,SNR=20
B08A Colville Reser 85.43 42⇓P **P 02 21 07.2 -0.5**
baz=86,SNR=37
BDM Black Diamond 85.44 52⇑P **P 02 21 08.0 0.0**
baz=86
ORV Oroville 85.45 51 P **P 02 21 07.7 -0.4**
baz=86,SNR=120
F07A Phinny Hill Vi 85.48 44⇓P **P 02 21 07.9 -0.2**
baz=86,SNR=14
OHCM Honcut 85.50 51 *e*P **P 02 21 08.1 -0.2**
L05A Lakeview 85.52 48⇑P **P 02 21 08.2 -0.1**
baz=86,SNR=41
WENL Wente Vineyard 85.58 53⇑P **P 02 21 08.5 -0.3**
baz=86,SNR=9.9
RSW Rattlesnake Hi 85.62 44 *e*P **P 02 21 09.4 +0.7**
O04C Chester 85.63 50⇓P **P 02 21 08.7 -0.3**
baz=86,SNR=68
I06A Prineville 85.63 46⇑P **P 02 21 08.9 0.0**
baz=86,SNR=37
HAWA Hanford 85.66 44 *e*P **P 02 21 08.9 -0.1**
comp=Z,283nm,1.3s,mb6.3
HAWA LR LR
comp=Z,66µm,20.0s,MS7.0
Q04C Lincoln 85.66 51⇓P **P 02 21 09.0 -0.1**
baz=86,SNR=10
C08A Higginbotham F 85.72 42⇓P **P 02 21 08.5 -0.7**
baz=86,SNR=16
G07A Ruggs Ranch, H 85.77 45⇑P **P 02 21 09.3 -0.2**
baz=86,SNR=30
J06A Christmas Vall 85.80 47 P **P 02 21 09.8 +0.1**
baz=86,SNR=40
A09A Danville 85.80 41⇑P **P 02 21 09.4 -0.2**
baz=86,SNR=43
K06A Valley Falls 85.81 47 P **P 02 21 09.9 +0.1**
baz=86,SNR=52
O05C Quincy 85.82 50⇓P **P 02 21 09.7 -0.1**
baz=86,SNR=17
ELFS Eagle Lake Fie 85.84 50⇑P **P 02 21 10.2 +0.2**
baz=86,SNR=15
MIR Mirnyy 85.90 199α *i*P **P 02 21 09.0 -0.6**
MIR *i* 02 21 26.0
MIR pmax pmax
comp=Z,300nm,1.5s,mb6.3
MIR pmax pmax
comp=Z,2µm,3.0s
MIR MLR MLR
comp=Z,64µm,20.0s,MS7.0
M06C Likely Place G 85.93 49⇑P **P 02 21 10.5 +0.1**
baz=86,SNR=48
MOD Modoc 85.93 48⇓P **P 02 21 10.2 -0.2**
baz=86,SNR=43
MOD Modoc 85.93 48 *e*P **P 02 21 10.6 +0.2**
comp=Z,358nm,1.3s,mb6.4
MOD LR LR
comp=Z,21µm,19.0s,MS6.5
D08A Wollman Farm, 85.95 43⇑P **P 02 21 10.5 +0.2**
baz=86,SNR=27
E08A Dider Farm, El 85.96 44⇑P **P 02 21 09.9 -0.6**
baz=86,SNR=9.7
H07A Lands Inn, Kim 85.97 46⇓P **P 02 21 09.9 -0.6**
baz=86,SNR=27
OD2 Odessa Site #2 86.02 43 *e*P **P 02 21 10.6 -0.1**
PACP Pacheco Peak 86.05 53⇓P **P 02 21 10.9 -0.2**
baz=86,SNR=24
R04C Big Horse Ranc 86.11 52⇑P **P 02 21 10.8 -0.6**
baz=86,SNR=11
I07A Izee 86.11 46⇓P **P 02 21 11.1 -0.1**
baz=86,SNR=23
LAVA Lava Cap Winer 86.17 51 P **P 02 21 11.5 -0.1**
baz=86,SNR=95
P05C Yuba Gap, Truc 86.17 51⇑P **P 02 21 11.8 +0.2**
baz=86,SNR=42
B09A Rice 86.19 42⇑P **P 02 21 11.3 -0.2**
baz=86,SNR=34
ALE Alert 86.20 4 P **P 02 21 11.0 0.0**
comp=Z,1µm,1.0s,mb7.0,SNR=19
C09A Chrisman Ranch 86.23 42⇓P **P 02 21 11.3 -0.4**
baz=86,SNR=14
BEKR Beckwourth 86.26 50⇓P **P 02 21 11.9 -0.1**
baz=86,SNR=98
G08A Pilot Rock 86.26 45⇓P **P 02 21 11.3 -0.6**
baz=86,SNR=36
V03C Hunter Liggett 86.27 54⇑P **P 02 21 12.6 +0.5**
baz=86,SNR=12
F08A Pendleton 86.29 44 P **P 02 21 11.8 -0.2**
baz=86,SNR=57
D09A Jones Farm, Ri 86.36 43 P **P 02 21 12.1 -0.3**
baz=86,SNR=58
J07A Hines 86.38 47⇓P **P 02 21 12.7 +0.1**
baz=86,SNR=25
A10A Northport 86.46 41⇓P **P 02 21 12.7 -0.2**
baz=86,SNR=42
N06A Buffalo Meadow 86.49 49 P **P 02 21 13.4 +0.2**
baz=87,SNR=50
K07A Rock Creek Ran 86.55 47 P **P 02 21 13.4 0.0**
baz=87,SNR=66
U04C Hernandez Rese 86.56 54⇑P **P 02 21 14.1 +0.4**
baz=87,SNR=28
CMB Columbia Colle 86.57 52 *e*P **P 02 21 13.5 -0.1**
CMB pmax pmax
comp=Z,514nm,1.3s,mb6.6
CMB MLR MLR
comp=Z,35µm,19.0s,MS6.8
CMB Columbia Colle 86.57 52⇑P **P 02 21 13.2 -0.4**
baz=87,SNR=47
CMB Columbia Colle 86.57 52 *e*P **P 02 21 13.5 -0.2**
comp=Z,514nm,1.3s,mb6.6
CMB LR LR
comp=Z,35µm,19.0s,MS6.8
E09A Wood Farm, Sta 86.58 43⇓P **P 02 21 13.1 -0.3**
baz=87
O06A Flanigan 86.60 50⇑P **P 02 21 13.8 +0.1**
baz=87,SNR=52
LNOR Lincton Mounta 86.61 44 *e*P **P 02 21 13.6 -0.1**
H08A Prairie City 86.61 46 P **P 02 21 13.5 -0.2**
baz=87,SNR=31
L07A Adell 86.61 48⇑P **P 02 21 14.3 +0.5**
baz=87,SNR=99
P06A Stead Airport, 86.64 50⇑P **P 02 21 14.0 +0.1**
baz=87,SNR=17
R05C Kirkwood Meado 86.69 51 P **P 02 21 14.4 +0.2**
baz=87,SNR=70
S05C Merced 86.74 53⇓P **P 02 21 14.1 -0.4**
baz=87,SNR=30
I08A Drewsey 86.80 46⇓P **P 02 21 14.1 -0.5**
baz=87,SNR=13
B10A Chitwood Farm, 86.82 42⇑P **P 02 21 14.2 -0.5**
baz=87,SNR=18
WCN Washoe City 86.82 51⇓P **P 02 21 15.0 +0.2**
baz=87,SNR=36
PKD Parkfield 86.83 54⇓P **P 02 21 14.9 -0.1**
baz=87,SNR=41
M07A Soldier Meadow 86.86 49⇑P **P 02 21 14.8 -0.2**
baz=87,SNR=54
C10A Spilker Farm, 86.87 42⇑P **P 02 21 14.4 -0.5**
baz=87,SNR=18
NEW Newport 86.89 42 *e*P **P 02 21 14.5 -0.5**
NEW pmax pmax
comp=Z,282nm,0.9s
NEW MLR MLR
comp=Z,69µm,22.0s
NEW Newport 86.89 42 *e*P **P 02 21 14.5 -0.5**
comp=Z,282nm,0.9s,mb6.5
NEW LR LR
comp=Z,69µm,22.0s,MS7.0
F09A S2 Ranch, Elgi 86.90 44⇓P **P 02 21 14.5 -0.6**
baz=87,SNR=13
SHAO Shalim 86.96 288⇑P **P 02 21 15.8 -0.1**
SNR=20
J08A Circle Bar Ran 86.98 47⇑P **P 02 21 15.4 -0.1**
baz=87,SNR=46
S06C San Francisco 87.02 52⇓P **P 02 21 15.5 -0.3**
baz=87,SNR=42
PAHR Pah Rah Range 87.03 50 *e*P **P 02 21 15.8 0.0**
comp=Z,721nm,1.4s,mb6.7
WVOR Wild Horse Val 87.05 48 *e*P **P 02 21 15.4 -0.5**
WVOR pmax pmax
comp=Z,487nm,1.3s,mb6.6
WVOR MLR MLR
comp=Z,62µm,19.0s,MS7.0
WVOR Wild Horse Val 87.05 48 *e*P **P 02 21 15.4 -0.5**

comp=Z,487nm,1.3s,mb6.6
WVOR LR LR
comp=Z,62µm,19.0s,MS7.0
D10A Wagner Farm, O 87.05 43 ⇑P **P 02 21 15.1 -0.7**
baz=87,SNR=34
G09A Cove 87.08 45 ⇑P **P 02 21 15.6 -0.3**
baz=87,SNR=49
K08A Mann Creek Ran 87.09 47 ⇑P **P 02 21 16.1 0.0**
baz=87,SNR=28
N07B Gerlach 87.13 49 ⇓P **P 02 21 16.4 +0.1**
baz=87,SNR=14
SPITS Spitsbergen Ar 87.19 351 P **P 02 21 15.0 -0.9**
comp=Z,163nm,1.0s,mb6.2,baz=7.8,slow=6.7,SNR=23
SPITS Spitsbergen Ar 87.19 351 P **P 02 21 15.0 -0.9**
SPITS pmax pmax
comp=Z,163nm,1.0s
SPB4 Spitsbergen Ar 87.20 351 *e*P **P 02 21 15.7 -0.2**
R06C Coleville 87.20 52 ⇑P **P 02 21 17.1 +0.4**
baz=87
A11A Hall Mountain, 87.24 41 ⇑P **P 02 21 16.9 +0.3**
baz=87,SNR=71
E10A Myers Farm, Un 87.28 43 ⇓P **P 02 21 16.3 -0.6**
baz=87,SNR=25
H09A Durkee 87.28 45 P **P 02 21 16.6 -0.3**
baz=87,SNR=26
T06C Millerton Lake 87.29 53 ⇓P **P 02 21 16.6 -0.6**
baz=87,SNR=74
L08A Fields 87.31 48 ⇑P **P 02 21 17.2 +0.1**
baz=87,SNR=110
F10A Beach Ranch, E 87.31 44 ⇓P **P 02 21 16.7 -0.4**
baz=87,SNR=29
O07A Toulon 87.32 50 ⇓P **P 02 21 17.2 -0.1**
baz=87,SNR=52
KBS Kingsbay 87.33 352 *e*P **P 02 21 17.0 +0.4**
KBS *e*pP pP 02 21 21.4 -1.4
KBS *e*SS SS 02 37 41.4 +1.9
KBS AMS AMS 02 56 19.9
comp=Z,31µm,23.3s,MS6.7
KBS Kingsbay 87.33 352 *e*P **P 02 21 16.4 -0.2**
comp=Z,203nm,0.9s,mb6.3
KBS LR LR
comp=Z,38µm,20.0s,MS6.8
B11A Sandpoint 87.35 41 ⇓P **P 02 21 17.1 -0.1**
baz=87,SNR=17
V05C Boulder Hill, 87.36 54 ⇑P **P 02 21 17.8 +0.3**
baz=87,SNR=9.6
I09A Lost Marbles R 87.37 46 ⇑P **P 02 21 17.0 -0.5**
baz=87,SNR=14
SMMC Simmler 87.39 55 ⇓P **P 02 21 17.7 0.0**
baz=88,SNR=13
M08A Happy Creek Ra 87.43 48 ⇑P **P 02 21 18.0 +0.2**
baz=88
P07A Fallon 87.43 50 ⇑P **P 02 21 18.0 +0.2**
baz=88,SNR=10
BMO Blue Mountains 87.49 45 *e*P **P 02 21 17.4 -0.6**
BMO pmax pmax
comp=Z,458nm,1.1s,mb6.6
BMO MLR MLR
comp=Z,132µm,22.0s,MS7.3
BMO Blue Mountains 87.49 45 *e*P **P 02 21 17.4 -0.6**
comp=Z,458nm,1.1s,mb6.6
BMO LR LR
comp=Z,132µm,22.0s,MS7.3
J09A Fry Pan Ranch, 87.50 47 P **P 02 21 18.0 0.0**
baz=88,SNR=76
G10A Bishop Farm, J 87.53 45 P **P 02 21 17.8 -0.4**
baz=88,SNR=54
KCC Kaiser Creek 87.54 53 P **P 02 21 18.1 -0.2**
baz=88,SNR=56
C11A Tepee Creek (N 87.55 42 ⇓P **P 02 21 17.9 -0.3**
baz=88,SNR=30
R07C Lee Vining 87.60 52 ⇑P **P 02 21 18.9 +0.3**
baz=88,SNR=21
PKM Peak Mountain 87.61 55 ⇑P **P 02 21 19.0 +0.3**
baz=88,SNR=25
K09A Rome 87.65 47 P **P 02 21 18.6 -0.1**
baz=88,SNR=87
D11A Klaveano Farm, 87.68 43 ⇑P **P 02 21 18.2 -0.6**
baz=88,SNR=43
A12A Yaak River Ran 87.70 41 ⇑P **P 02 21 19.1 +0.3**
baz=88,SNR=40
N08A GE Springer Mi 87.75 49 ⇓P **P 02 21 19.3 0.0**
baz=88,SNR=35
SBC Santa Barbara 87.78 56 ⇑P **P 02 21 19.7 +0.1**
baz=88
RCTC Rector, Farmer 87.80 54 ⇑P **P 02 21 18.8 -0.8**
baz=88,SNR=10
O08A Rochester Mine 87.83 50 ⇑P **P 02 21 19.9 +0.2**
baz=88,SNR=91
L09A Wilkinson Ranc 87.84 48 ⇓P **P 02 21 20.0 +0.3**
baz=88,SNR=16
B12A Libby 87.85 41 ⇑P **P 02 21 19.7 +0.1**
baz=88,SNR=16
MLAC Mammoth Lakes 87.85 52 ⇑P **P 02 21 20.2 +0.4**
baz=88,SNR=15
HELL Mitchell Peak 87.90 53 P **P 02 21 19.6 -0.5**
baz=88,SNR=49
E11A Bogner Ranch, 87.92 43 ⇑P **P 02 21 19.1 -0.9**
baz=88,SNR=72
BSC Santa Cruz Isl 87.94 56 ⇑P **P 02 21 20.2 -0.1**
baz=88
H10A Noah's Angus R 87.94 45 P **P 02 21 19.4 -0.7**
baz=88,SNR=65
I10A Payette 88.01 46 P **P 02 21 20.5 0.0**
baz=88,SNR=29
P08A Dixie Valley 88.01 50 ⇓P **P 02 21 20.8 +0.2**
baz=88,SNR=13
VES Vestal, Richgr 88.02 54 ⇓P **P 02 21 20.0 -0.7**
baz=88,SNR=36
LVZ Lovozero 88.06 339 PFAKE 02 21 30.0 +10
LVZ LR LR
comp=Z,44µm,20.0s,MS6.9
F11A Grangeville 88.06 44 ⇑P **P 02 21 19.3 -1.3**
baz=88,SNR=21
EDM Edmonton 88.06 36 *e*P **P 02 21 20.1 -0.4**
G11A Walters Elk Ra 88.09 44 P **P 02 21 19.9 -0.9**
baz=88,SNR=65
C12B Naegeli Ranch, 88.10 42 ⇓P **P 02 21 20.6 -0.2**
baz=88,SNR=19
NVAR Mina Array Bea 88.10 51 P **P 02 21 21.4 +0.3**
comp=Z,34nm,0.6s,mb5.7,baz=266,slow=5.0,SNR=112
NVAR S S 02 31 55.3 -9.2
comp=Z,0.6nm,0.7s,baz=52,slow=5.8,SNR=2.4
NVAR PKKPbc PKKPbc 02 39 08.9 +2.3
comp=Z,0.9nm,0.7s,baz=189,slow=1.2,SNR=3.9
NVAR PKP2bc 02 46 49.9
comp=Z,0.3nm,0.6s,baz=85,slow=1.6,SNR=3.7
NVAR Mina Array Bea 88.10 51 P **P 02 21 21.4 +0.3**
NVAR S S 02 31 55.3 -9.2
NVAR PKKPbc PKKPbc 02 39 08.9 +2.3
NVAR ⇑*e* 02 46 49.9
M09A Marrel Ranch, 88.12 48 ⇓P **P 02 21 21.4 +0.4**
baz=88,SNR=39
MTUM Tungsten Hills 88.12 53 *e*P **P 02 21 21.3 +0.1**
SNCC San Nicolas Is 88.17 57 ⇓P **P 02 21 21.6 +0.1**
baz=88
SNCC San Nicolas Is 88.17 57 *e*P **P 02 21 22.2 +0.7**
comp=Z,411nm,1.2s,mb6.5
SNCC LR LR
comp=Z,164µm,22.0s,MS7.4
J10A Berg Farm, Mel 88.18 46 ⇑P **P 02 21 21.1 -0.2**
baz=88,SNR=23
N09A Rock Creek Ran 88.19 49 ⇓P **P 02 21 21.7 +0.3**
baz=88,SNR=94
K10A MacKenzie Ranc 88.25 47 P **P 02 21 21.8 +0.2**
baz=88,SNR=98
R08A Mina 88.27 51 ⇑P **P 02 21 22.0 +0.1**
baz=88,SNR=15
Q08A Gabbs 88.30 51 P **P 02 21 22.2 +0.2**
baz=88,SNR=42
D12A Red Ives Fores 88.33 43 ⇑P **P 02 21 21.6 -0.3**
baz=88
E12A Beaver Dam Sad 88.33 43 ⇑P **P 02 21 21.6 -0.3**
baz=88,SNR=50
ARVC Arvin 88.36 55 ⇑P **P 02 21 21.7 -0.6**
baz=88,SNR=16
BLG Laguna Peak 88.38 56 ⇓P **P 02 21 21.7 -0.7**
baz=88
RBK Rabkut 88.39 287 ⇑P **P 02 21 21.8 -1.0**
SNR=51
S08C White Mtn Res 88.40 52 ⇓P **P 02 21 22.8 +0.3**
baz=88,SNR=50
H11A Donnelly 88.43 45 ⇓P **P 02 21 21.7 -0.8**
baz=88,SNR=57
TIN Tinemaha 88.44 53 ⇑P **P 02 21 22.9 +0.2**
baz=88,SNR=18
A13A Flathead Natio 88.49 41 ⇑P **P 02 21 22.3 -0.3**
baz=88
BMN Battle Mountai 88.50 49 *e*P **P 02 21 23.6 +0.7**
BMN pmax pmax
comp=Z,379nm,1.3s,mb6.6
BMN MLR MLR
comp=Z,63µm,20.0s,MS7.0
BMN Battle Mountai 88.50 49 *e*P **P 02 21 23.6 +0.8**
comp=Z,379nm,1.3s,mb6.6
BMN LR LR
comp=Z,63µm,20.0s,MS7.0
ISA Isabella 88.54 54 *e*P **P 02 21 22.7 -0.5**
ISA pmax pmax
comp=Z,186nm,1.3s,mb6.3
ISA MLR MLR
comp=Z,111µm,19.0s,MS7.3
ISA Isabella 88.54 54 ⇓P **P 02 21 22.3 -0.8**
baz=89,SNR=25
ISA Isabella 88.54 54 *e*P **P 02 21 22.7 -0.5**
comp=Z,186nm,1.3s,mb6.3
ISA LR LR
comp=Z,111µm,19.0s,MS7.3
O09A Fish Creek Ran 88.58 50 P **P 02 21 23.6 +0.4**
baz=89,SNR=76
B13A Whitefish 88.59 41 ⇑P **P 02 21 22.9 -0.2**
baz=89,SNR=50
APA Apatity 88.63 339 ⇑*i*P **P 02 21 21.0 -1.9**
APA *i* pP 02 21 26.4 -2.7
APA *i* 02 24 47.0
APA *i* 02 31 45.0
APA *i*S S 02 32 00.0 -8.3
I11A Placerville 88.64 46 ⇑P **P 02 21 23.0 -0.5**
baz=89,SNR=85
KLMR Klimovskoe 88.66 332 ⇓*i*P **P 02 21 21.6 -1.5**
KLMR pmax pmax
comp=Z,788nm,1.5s,mb6.8
CWC Cottonwood Cre 88.69 53 ⇓P **P 02 21 23.8 -0.1**
baz=89,SNR=33
L10A Juniper Basin 88.69 48 P **P 02 21 24.0 +0.3**
baz=89,SNR=108
F12A Elk City 88.70 44 ⇑P **P 02 21 22.9 -0.8**
baz=89,SNR=50
WHFO Wadi Hawf 88.72 288 P **P 02 21 24.2 -0.1**
SNR=28
P09A Austin 88.75 50 ⇓P **P 02 21 24.0 -0.1**
baz=89,SNR=8.2
M10A I.L. Ranch, Tu 88.77 48 ⇓P **P 02 21 24.3 +0.2**
baz=89,SNR=42
WALA Waterton Lakes 88.78 40 *e*P **P 02 21 24.7 +0.7**
comp=Z,655nm,1.4s,mb6.8
MFID Camas Ranch 88.85 46 ⇑P **P 02 21 24.2 -0.3**
baz=89,SNR=177
K11A Parker Ranch, 88.85 47 ⇑P **P 02 21 24.5 0.0**
baz=89,SNR=97
Q09A Carvers 88.88 51 ⇑P **P 02 21 24.7 +0.1**
baz=89,SNR=17
MAK Makhachkala 88.90 313 *e*P **P 02 21 25.4 +0.7**
MAK *i* 02 24 57.3
MAK *e*S S 02 31 51.5 -20
MAK *e* 02 32 00.5
MAK *i* PS 02 33 10.9
MAK *e*SS SS 02 38 00.0 -4.0
MAK pmax pmax
comp=E,432nm,1.5s
MAK pmax pmax
comp=N,309nm,1.6s
MAK pmax pmax
comp=Z,273nm,1.1s,mb6.5
D13A Huson 88.91 42 ⇓P **P 02 21 23.4 -1.2**
baz=89,SNR=19
DECC Green Verdugo 88.94 56 ⇑P **P 02 21 24.5 -0.6**
baz=89
BJO Bjornoya 89.01 348 *e* **P 02 21 33.0 +8.4**
BJO *e* 02 32 12.4
BJO AMS AMS 03 04 42.7
comp=Z,72µm,22.3s,MS7.0
TPH Tonopah 89.01 52 *e*P **P 02 21 25.6 +0.3**
TPH pmax pmax
comp=Z,480nm,1.3s,mb6.7
TPH MLR MLR
comp=Z,109µm,21.0s,MS7.2
TPH Tonopah 89.01 52 *e*P **P 02 21 25.6 +0.3**
comp=Z,480nm,1.3s,mb6.7
TPH LR LR
comp=Z,109µm,21.0s,MS7.2
SBA Scott Base 89.03 176 *e*P **P 02 21 24.4 -0.1**
SBA pmax pmax
comp=Z,474nm,1.6s,mb6.6
SBA MLR MLR
comp=Z,27µm,21.0s,MS6.7
SBA Scott Base 89.03 176 *e*P **P 02 21 24.4 0.0**
comp=Z,474nm,1.6s,mb6.6
SBA LR LR
comp=Z,27µm,21.0s,MS6.7
BJO1 Bjornoya 89.05 348 *e*P **P 02 21 33.0 +8.2**
BJO1 LR LR
comp=Z,72µm,22.3s,MS7.0
CIS Catalina Islan 89.06 56 ⇑P **P 02 21 24.8 -0.9**
baz=89
O10A Cortez Mining, 89.07 49 ⇑P **P 02 21 26.0 +0.4**
baz=89,SNR=42
FMP Fort Macarthur 89.08 56 ⇑P **P 02 21 25.3 -0.5**
baz=89
S09A Goldfield 89.08 52 ⇑P **P 02 21 25.7 0.0**
baz=89,SNR=107
EDW2 Edwards Air Fo 89.09 55 P **P 02 21 25.7 -0.1**
baz=89,SNR=32
R09A Tonopah 89.09 51 ⇓P **P 02 21 25.6 -0.1**
baz=89,SNR=104
DAC Darwin (Calif) 89.11 53 PFAKE 02 21 40.0 +14
DAC LR LR
comp=Z,93nm,19.0s,MS7.2
A14A Double T Ranch 89.11 40 ⇑P **P 02 21 25.0 -0.5**
baz=89,SNR=43
GRAC Grapevine Rang 89.13 53 ⇑P **P 02 21 25.9 0.0**
baz=89,SNR=24
PTCN Pitcairn Islan 89.14 116 PFAKE 02 21 40.0 +14
PTCN LR LR
comp=Z,42nm,19.0s,MS6.9
MWC Mount Wilson 89.17 55 *e*P **P 02 21 25.9 -0.3**
MWC pmax pmax
comp=Z,517nm,1.3s,mb6.7
MWC MLR MLR
comp=Z,173µm,20.0s,MS7.5
MWC Mount Wilson 89.17 55 *e*P **P 02 21 25.9 -0.3**
comp=Z,516nm,1.3s,mb6.7
MWC LR LR
comp=Z,173µm,20.0s,MS7.5
L11A Cat Creek Ranc 89.19 47 ⇑P **P 02 21 26.2 +0.1**
baz=89,SNR=72
LRMC Laurel Mountai 89.20 54 ⇑P **P 02 21 26.4 +0.1**
baz=89,SNR=44
C14A Swan Lake 89.21 42 ⇑P **P 02 21 25.1 -0.9**
baz=89
MPMC Manual Prospec 89.23 54 P **P 02 21 26.5 +0.1**
baz=89,SNR=78
P10A Eureka 89.25 50 P **P 02 21 26.7 +0.3**
baz=89,SNR=30
I12A Atlanta 89.25 46 ⇑P **P 02 21 26.0 -0.4**
baz=89
E13A Victor 89.26 43 ⇓P **P 02 21 25.2 -1.1**
baz=89,SNR=24
ABTO Aybut 89.26 287 ⇑P **P 02 21 26.4 -0.5**
SNR=38
H12A Diamond D Ranc 89.27 45 ⇓P **P 02 21 26.1 -0.3**
baz=89,SNR=55
F13A Darby 89.32 44 ⇓P **P 02 21 25.6 -1.0**
baz=89,SNR=43
MSO Missoula 89.32 43 *e*P **P 02 21 25.7 -0.9**
comp=Z,38nm,1.0s,mb5.7
MSO LR LR
comp=Z,47µm,22.0s,MS6.9
M11A Holland Ranch, 89.33 48 P **P 02 21 27.4 +0.6**
baz=89,SNR=65
B14A Marquette Ranc 89.37 41 ⇓P **P 02 21 26.6 -0.2**
baz=89,SNR=41
J12A Stokes Ranch, 89.41 46 P **P 02 21 27.2 +0.1**
baz=90,SNR=126
Q10A Clear Creek Ra 89.47 51 ⇓P **P 02 21 27.6 +0.1**
baz=90,SNR=31
BFSC Mount Baldy St 89.49 55 ⇓P **P 02 21 26.7 -0.9**
baz=90,SNR=15
N11A Elko Archery C 89.52 49 ⇑P **P 02 21 27.9 +0.3**
baz=90,SNR=26
S10A Tonopah Range, 89.53 52 P **P 02 21 28.1 +0.4**
baz=90,SNR=143
D14A Greenough 89.55 42 ⇑P **P 02 21 26.8 -0.8**
baz=90,SNR=12
A15A Johnson Ranch, 89.55 40 ⇑P **P 02 21 27.3 -0.3**
baz=90,SNR=56
G13A Cobalt 89.56 44 ⇓P **P 02 21 27.0 -0.7**
baz=90,SNR=77
FURC Furnace Creek, 89.64 53 ⇑P **P 02 21 28.3 0.0**
baz=90,SNR=40
R10A Warm Springs 89.67 51 P **P 02 21 28.9 +0.5**
baz=90,SNR=42
H13A Challis 89.68 45 P **P 02 21 28.2 -0.1**
baz=90,SNR=63
KEV Kevo 89.69 342 *e*p **P 02 21 26.2 -1.6**
comp=Z,70nm,0.8s,mb6.0
KEV Kevo 89.69 342 *e*P **P 02 21 26.2 -1.6**
KEV pmax pmax
comp=Z,70nm,0.8s,mb6.0
K12A Draper Farm, C 89.69 47 P **P 02 21 28.6 +0.2**
baz=90,SNR=61
E14A Clinton 89.73 43 ⇑P **P 02 21 27.9 -0.6**
baz=90,SNR=13
L12A House Creek Ra 89.73 47 ⇑P **P 02 21 29.1 +0.5**
baz=90,SNR=47
O11A Cowboy Ranch, 89.74 49 P **P 02 21 29.0 +0.3**
baz=90,SNR=47
CHMT Chamberlain Mo 89.76 42 *e*P **P 02 21 28.2 -0.4**
P11A Circle Ranch, 89.80 50 ⇑P **P 02 21 29.2 +0.2**
baz=90,SNR=26
HLID Hailey 89.81 46 P **P 02 21 29.1 +0.2**
baz=90,SNR=116
HLID Hailey 89.81 46 *e*P **P 02 21 29.2 +0.3**
comp=Z,6µm,1.2s,mb7.8
HLID LR LR
comp=Z,77µm,20.0s,MS7.1
B15A Bradely Ranch, 89.84 41 P **P 02 21 28.1 -0.8**
baz=90,SNR=50
RRX Edison Barstow 89.88 55 ⇓P **P 02 21 29.4 -0.1**
baz=90
ELK Elko 89.90 49 *e*P **P 02 21 29.6 +0.2**
ELK pmax pmax
comp=Z,601nm,1.1s
ELK MLR MLR
comp=Z,101µm,20.0s
ELK Elko 89.90 49 *e*P **P 02 21 29.6 +0.2**
comp=Z,601nm,1.1s,mb6.8
ELK LR LR
comp=Z,101µm,20.0s,MS7.2
I13A Wildhorse Cree 89.94 45 P **P 02 21 29.9 +0.3**
baz=90,SNR=72
GSC Goldstone 89.94 54 *e*P **P 02 21 29.8 0.0**
GSC pmax pmax
comp=Z,1µm,1.9s,mb6.9
GSC MLR MLR
comp=Z,139µm,19.0s,MS7.4
GSC Goldstone 89.94 54 ⇑P **P 02 21 29.6 -0.2**
baz=90,SNR=35
GSC Goldstone 89.94 54 *e*P **P 02 21 29.8 +0.1**
comp=Z,1µm,1.9s,mb6.9
GSC LR LR
comp=Z,139µm,19.0s,MS7.4
C15A Salmond Ranch, 89.95 41 ⇑P **P 02 21 28.8 -0.7**
baz=90,SNR=33
F14A Wisdom 89.97 43 ⇓P **P 02 21 29.2 -0.4**
baz=90,SNR=10
M12A Wells 89.98 48 P **P 02 21 30.3 +0.5**
baz=90,SNR=110
MURC Murrieta 90.00 56 ⇑P **P 02 21 29.2 -0.9**
baz=90,SNR=12
TPNV Topopah Spring 90.02 53 *e*P **P 02 21 30.1 0.0**
TPNV pmax pmax
comp=Z,425nm,1.2s,mb6.7
TPNV MLR MLR
comp=Z,49µm,21.0s,MS6.9
TPNV Topopah Spring 90.02 53 ⇑P **P 02 21 30.1 +0.1**
baz=90,SNR=82
TPNV Topopah Spring 90.02 53 *e*P **P 02 21 30.1 +0.1**
comp=Z,425nm,1.2s,mb6.7
TPNV LR LR
comp=Z,49µm,21.0s,MS6.9
N12A Clover Valley, 90.02 48 ⇑P **P 02 21 30.3 +0.3**
baz=90,SNR=88
J13A Cove Ranch, Pi 90.03 46 ⇓P **P 02 21 30.3 +0.3**
baz=90,SNR=44
Q11A Duckwater 90.04 51 P **P 02 21 30.2 +0.1**
baz=90,SNR=98
G14A Jackson 90.05 44 ⇑P **P 02 21 29.2 -0.9**
baz=90,SNR=12
U10A Ash Meadows, A 90.07 53 ⇑P **P 02 21 30.6 +0.2**
baz=90,SNR=44
R11A Troy Canyon, C 90.20 51 P **P 02 21 31.3 +0.4**
baz=90,SNR=160
D15A Lincoln 90.21 42 ⇓P **P 02 21 30.1 -0.6**
baz=90,SNR=24
SHOC Shoshone 90.23 54 ⇑P **P 02 21 30.8 -0.3**
baz=90,SNR=37
109C Camp Elliot, M 90.23 57 ⇓P **P 02 21 30.6 -0.6**
baz=90,SNR=12
S11A Rachel 90.25 52 ⇓P **P 02 21 31.3 +0.2**
baz=90,SNR=31
ARCES ARCESS Array B 90.25 342 P **P 02 21 29.7 -0.8**
comp=Z,20nm,0.6s,mb5.7,baz=47,slow=3.3,SNR=30
ARCES S S 02 32 06.4 -17
comp=Z,1.9nm,0.8s,baz=8.6,slow=9.0,SNR=2.7
ARCES PKKPbc PKKPbc 02 39 02.2 -0.1
comp=Z,4.2nm,0.9s,baz=258,slow=3.6,SNR=6.2
ARCES LR LR 03 06 36.2
comp=Z,68µm,19.6s,MS7.1,baz=314,slow=39
ARE0 ARCESS Array S 90.25 342 *e*P **P 02 21 29.8 -0.6**
K13A Stover Farm, H 90.28 47 ⇑P **P 02 21 31.6 +0.5**
baz=90,SNR=38
H14A Leadore 90.28 45 ⇓P **P 02 21 31.2 +0.1**
baz=90,SNR=66
A16A West Butte Ran 90.28 40 ⇑P **P 02 21 30.4 -0.6**
baz=90,SNR=23
E15A Deer Lodge 90.29 43 P **P 02 21 30.8 -0.4**
baz=90,SNR=57
B16A M & M Farms, S 90.36 41 ⇑P **P 02 21 30.5 -0.9**
baz=90
O12A Currie 90.38 49 ⇑P **P 02 21 31.7 0.0**
baz=90,SNR=76
I14A Mackay 90.40 45 P **P 02 21 32.1 +0.4**
baz=90,SNR=58
HEC Hector,Ludlow 90.43 55 ⇑P **P 02 21 31.7 -0.4**
baz=90,SNR=74
P12A McGill 90.45 50 P **P 02 21 32.5 +0.4**
baz=90,SNR=70
C16A Fuhringer Ranc 90.50 41 ⇑P **P 02 21 31.4 -0.7**
baz=90
J14A Carey 90.51 46 P **P 02 21 32.8 +0.5**
baz=91,SNR=75
L13A Double Diamond 90.52 47 P **P 02 21 32.9 +0.6**
baz=91,SNR=44
M13A Montello 90.54 48 ⇑P **P 02 21 32.5 +0.1**
baz=91,SNR=17
F15A Butte 90.55 43 P **P 02 21 32.0 -0.3**
baz=91,SNR=33
MCMT McKenzie Canyo 90.58 44 *e*P **P 02 21 32.4 -0.1**
PFO Pinyon Flat Ob 90.60 56 P **P 02 21 33.0 +0.1**
comp=Z,778nm,1.2s,mb6.9,SNR=13
PFO Pinyon Flat Ob 90.60 56 S S 02 32 12.3 -16
comp=Z,1.0nm,0.6s,baz=262,slow=18,SNR=2.6
PFO Pinyon Flat Ob 90.60 56 *e*P **P 02 21 32.6 -0.3**
PFO pmax pmax
comp=Z,191nm,1.2s,mb6.3
PFO MLR MLR
comp=Z,140µm,22.0s,MS7.3
PFO Pinyon Flat Ob 90.60 56 ⇓P **P 02 21 32.0 -0.9**
baz=91,SNR=15
PFO Pinyon Flat Ob 90.60 56 *e*P **P 02 21 32.6 -0.2**
comp=Z,191nm,1.2s,mb6.3
PFO LR LR
comp=Z,140µm,22.0s,MS7.3
DLMT Dillon 90.61 44 *e*P **P 02 21 32.7 +0.1**
comp=Z,119nm,1.1s,mb6.1
Q12A Willow Creek R 90.61 50 ⇓P **P 02 21 33.3 +0.5**
baz=91,SNR=135
TUQ Turquoise Moun 90.62 54 ⇑P **P 02 21 32.9 0.0**
baz=91,SNR=21
VRHR Novokhopersk 90.62 322 *e*P **P 02 21 30.4 -2.2**
VRHR *e* 02 25 07.3
VRHR *e*S S 02 32 05.9 -22
VRHR *e*PS PS 02 33 39.7 +3.0
VRHR *e*SS SS 02 38 36.0 +7.6
VRHR pmax pmax
comp=Z,280nm,1.5s,mb6.4
VRHR pmax pmax
comp=N,60nm,0.9s
VRHR pmax pmax
comp=E,170nm,1.5s
VRHR pmax pmax
comp=Z,1µm,3.0s

VRHR pmax pmax
comp=N,820nm,4.5s
VRHR pmax pmax
comp=E,680nm,1.5s
VRHR MLR MLR
comp=Z,76µm,22.0s,MS7.1
VRHR MLR MLR
comp=N,41µm,18.0s,MS7.1
VRHR MLR MLR
comp=E,62µm,23.0s,MS7.1
BAR Barrett 90.63 57 *e*P **P 02 21 32.9 -0.1**
BAR LR LR
comp=Z,210nm,1.1s,mb6.4
comp=Z,150µm,22.0s,MS7.4
N13A Wendover, West 90.64 48 ⇑P **P 02 21 32.9 0.0**
baz=91,SNR=22
G15A Dillon 90.73 44 ⇓P **P 02 21 32.8 -0.4**
baz=91,SNR=38
T11A Corn Creek, Al 90.75 52 ⇓P **P 02 21 33.3 -0.2**
baz=91,SNR=62
HRY Holter Researc 90.75 42 *e*P **P 02 21 33.2 0.0**
H15A Lima 90.78 44 ⇓P **P 02 21 33.4 0.0**
baz=91,SNR=16
MONP Monument Peak 90.79 56 ⇑P **P 02 21 32.9 -0.9**
baz=91,SNR=26
DGRG David-gareji 90.80 312 P **P 02 21 33.3 -0.3**
DGRG S S 02 33 03.5 +34
U11A Corn Creek 90.81 53 ⇓P **P 02 21 34.0 +0.2**
baz=91,SNR=15
D16A Dana Ranch, Ca 90.85 42 ⇑P **P 02 21 33.4 -0.3**
baz=91
BELC Belle Mtn. 90.89 55 ⇓P **P 02 21 33.5 -0.6**
baz=91,SNR=19
E16A East Helena 90.91 42 ⇑P **P 02 21 33.7 -0.3**
baz=91
V11A Goodsprings 90.91 53 ⇓P **P 02 21 34.1 -0.1**
baz=91,SNR=8.8
S12A Delamar Landin 90.95 52 ⇓P **P 02 21 34.9 +0.5**
baz=91,SNR=53
K14A Jones Ranch, D 90.95 47 ⇑P **P 02 21 34.4 +0.1**
baz=91,SNR=96
R12A Pony Springs, 90.96 51 P **P 02 21 34.9 +0.5**
baz=91,SNR=137
GMRC Granite Mounta 90.98 55 ⇑P **P 02 21 34.4 -0.2**
baz=91,SNR=34
L14A Malta 91.04 47 ⇑P **P 02 21 34.7 0.0**
baz=91,SNR=78
I15A Monteview 91.05 45 ⇑P **P 02 21 34.8 0.0**
baz=91,SNR=28
M14A Sheep Mountain 91.10 48 ⇓P **P 02 21 34.8 -0.2**
baz=91,SNR=62
DVTC Desert V Tower 91.11 57 ⇓P **P 02 21 35.1 -0.2**
baz=91,SNR=31
P13A Bates Ranch, G 91.13 50 P **P 02 21 35.5 +0.3**
baz=91,SNR=117
MSEY Mahe Island 91.16 265 PFAKE 02 21 50.0 +14
MSEY LR LR
comp=Z,23µm,22.0s,MS6.6
MTA Mtatsminda 91.16 313 P **P 02 21 34.5 -0.8**
MTA S S 02 32 16.4 -16
G16A Moss Hill, Enn 91.18 44 ⇓P **P 02 21 35.0 -0.4**
baz=91
TBLG Delisi 91.19 313 P **P 02 21 36.8 +1.4**
C17A Wharram Farm, 91.19 41 P **P 02 21 34.3 -1.0**
baz=91,SNR=40
KTK1 Kautokeino 91.22 342 *e* **P 02 21 40.1 +5.1**
Q13A Wheeler Ranch, 91.25 50 ⇓P **P 02 21 35.8 +0.1**
baz=91,SNR=46
J15A Blackfoot 91.25 46 ⇑P **P 02 21 36.2 +0.6**
baz=91,SNR=107
T12A Moapa 91.26 52 ⇓P **P 02 21 36.4 +0.5**
baz=91,SNR=13
SWSC Sam W. Stewart 91.29 56 ⇓P **P 02 21 35.6 -0.4**
baz=91,SNR=9.8
LDFC Landfair 91.35 54 *e*P **P 02 21 37.1 +0.8**
comp=Z,459nm,1.2s,mb6.7
MOS Moscow 91.36 327 *e*P **P 02 21 32.5 -3.4**
MOS *e* 02 25 12.9
MOS *i* 02 32 07.6
MOS *i* S S 02 32 32.4 -1.6
MOS *i* SS SS 02 38 40.0 +1.3
MOS *i* SSS 02 42 18.9
MOS pmax pmax
comp=Z,488nm,1.2s,mb6.7
MOS MLR MLR
comp=Z,85µm,18.0s,MS7.2
K15A Arbon 91.37 46 ⇓P **P 02 21 36.7 +0.4**
baz=91,SNR=31
N14A Grayback Hills 91.38 48 P **P 02 21 36.4 +0.1**
baz=91,SNR=85
V12A Nelson 91.40 53 P **P 02 21 36.6 +0.1**
baz=92,SNR=92
BC3 Big Chuckw Mtn 91.41 56 ⇑P **P 02 21 36.4 -0.2**
baz=92,SNR=42
JOF Joensuu 91.44 335 *e*p **P 02 21 33.4 -2.7**
comp=Z,126nm,1.0s,mb6.2
JOF Joensuu 91.44 335 *e*P **P 02 21 34.3 -1.8**
JOF pmax pmax
comp=Z,132nm,1.0s,mb6.2
HVU Hansel Valley 91.44 47 *e*P **P 02 21 37.1 +0.5**
HVU pmax pmax
comp=Z,698nm,1.6s,mb6.7
HVU Hansel Valley 91.44 47 *e*P **P 02 21 37.1 +0.5**
comp=Z,698nm,1.6s,mb6.7
E17A Martinsdale 91.47 42 ⇓P **P 02 21 36.2 -0.4**
baz=92
U12A Valley of Fire 91.47 53 ⇓P **P 02 21 37.3 +0.5**
baz=92,SNR=11
BGU Big Grassy Mou 91.48 48 *e*P **P 02 21 37.9 +1.1**
R13A O'Grain Ranch, 91.48 51 ⇓P **P 02 21 37.5 +0.6**
baz=92,SNR=105
W12A Cal Nev Ari 91.48 54 ⇑P **P 02 21 37.1 +0.2**
baz=92
IRM Iron Mountain 91.53 55 P **P 02 21 36.9 -0.2**
baz=92,SNR=68
QLMT Earthquake Lak 91.55 44 *e*P **P 02 21 37.7 +0.7**
GOR Gori 91.58 313 P **P 02 21 38.0 +0.8**
GNI Garni 91.60 311 *e*P **P 02 21 37.5 +0.2**
GNI Garni 91.60 311 P **P 02 21 36.9 -0.4**
SNR=45
GNI Garni 91.60 311 P **P 02 21 36.6 -0.7**
comp=Z,32nm,0.9s,mb5.7,baz=191,slow=3.5,SNR=14
GNI Garni 91.60 311 *e*P **P 02 21 35.8 -1.6**
GNI pmax pmax
comp=Z,117nm,0.9s
GNI MLR MLR
comp=Z,30µm,20.0s
GNI Garni 91.60 311 *e*P **P 02 21 35.8 -1.5**
comp=Z,117nm,0.9s,mb6.2
GNI LR LR
comp=Z,30µm,20.0s,MS6.7
L15A Malad City 91.66 47 ⇑P **P 02 21 37.4 -0.2**
baz=92,SNR=35
H16A Russell Place, 91.71 44 ⇓P **P 02 21 38.4 +0.6**
baz=92,SNR=39
S13A Holt Ranch, En 91.71 51 ⇑P **P 02 21 38.4 +0.5**
baz=92,SNR=54
M15A Larsen Ranch, 91.76 47 ⇓P **P 02 21 37.9 -0.2**
baz=92,SNR=55
I16A Newdale 91.78 45 ⇓P **P 02 21 38.7 +0.6**
baz=92,SNR=72
UMR Umm Al-Rimmam 91.80 300 *e*P **P 02 21 36.5 -2.0**
baz=300
UMR AMb AMB 02 21 42.2
comp=Z,471nm,1.4s,mb6.6,baz=300
P14A Drum Mountains 91.80 49 ⇓P **P 02 21 38.3 0.0**
baz=92,SNR=61
Q14A Sevier Lake (B 91.80 50 P **P 02 21 38.5 +0.2**
baz=92,SNR=127
SPUT South Promonto 91.80 48 *e*P **P 02 21 38.7 +0.4**
NEE2 Needles Airpor 91.81 54 ⇓P **P 02 21 38.6 +0.2**
baz=92
T13A Saint George 91.82 52 P **P 02 21 39.1 +0.7**
baz=92,SNR=93
DUG Dugway 91.83 49 *e*P **P 02 21 38.7 +0.3**
DUG pmax pmax
comp=Z,594nm,1.0s,mb6.9
DUG MLR MLR
comp=Z,83µm,20.0s,MS7.2
DUG Dugway 91.83 49 P **P 02 21 38.5 +0.1**
baz=92,SNR=85
DUG Dugway 91.83 49 *e*P **P 02 21 38.7 +0.2**
comp=Z,594nm,1.0s,mb6.9
DUG LR LR
comp=Z,83µm,20.0s,MS7.2
J16A Bone 91.86 45 P **P 02 21 39.1 +0.6**
baz=92,SNR=35

VOR Voronezh 91.86 323 *e*P **P 02 21 36.0 -2.3**
VOR pmax pmax
comp=Z,400nm,2.0s,mb6.4
N15A Stansbury Isla 91.86 48 ⇓P **P 02 21 38.4 -0.2**
baz=92
ONI Oni 91.88 314 P **P 02 21 38.3 -0.3**
ONI S S 02 32 22.1 -17
KBD Kabd 91.90 300 *e*P **P 02 21 37.3 -1.7**
baz=300
KBD AMb AMB 02 21 42.8
comp=Z,211nm,1.4s,mb6.3,baz=300
YMR Madison River 91.91 44 *e*P **P 02 21 39.8 +1.1**
comp=Z,187nm,0.9s,mb6.4
YMR LR LR
comp=Z,162µm,22.0s,MS7.4
U13A Pakoon Wash 91.92 53 P **P 02 21 39.4 +0.5**
baz=92,SNR=70
ARUT Antelope Range 91.98 51 *e*P **P 02 21 39.7 +0.5**
K16A Soda Springs 92.00 46 ⇑P **P 02 21 39.6 +0.5**
baz=92,SNR=64
KIV Kislovodsk 92.03 315 P **P 02 21 38.8 -0.5**
comp=Z,1µm,0.7s,mb7.3,SNR=12
KIV Kislovodsk 92.03 315 ⇑P **P 02 21 38.2 -1.1**
SNR=22
KIV Kislovodsk 92.03 315 ⇑ *i*P **P 02 21 37.4 -1.9**
KIV pmax pmax
comp=Z,149nm,0.9s,mb6.3
KIV Kislovodsk 92.03 315 *e*P **P 02 21 37.2 -2.0**
comp=Z,208nm,0.9s,mb6.5
KIV LR LR
comp=Z,59µm,19.0s,MS7.0
RRI2 Red Ridge 92.04 45 *e*P **P 02 21 39.7 +0.3**
comp=Z,50nm,0.6s,mb6.0
V13A Grand Canyon W 92.05 53 P **P 02 21 39.9 +0.3**
baz=92,SNR=58
VSR Storozhevoye 92.05 323 *e*P **P 02 21 36.5 -2.7**
VSR *e* 02 25 20.9
VSR *e*PS PS 02 33 51.4 -1.1
VSR *e*SS SS 02 38 47.7 -1.3
VSR pmax pmax
comp=Z,20nm,1.5s
VSR pmax pmax
comp=N,10.0nm,1.9s
VSR pmax pmax
comp=E,20nm,1.7s
VSR pmax pmax
comp=Z,490nm,4.2s
VSR pmax pmax
comp=N,160nm,1.8s
VSR pmax pmax
comp=E,310nm,1.3s
VSR MLR MLR
comp=Z,26µm,23.0s,MS6.6
VSR MLR MLR
comp=N,17µm,16.0s
VSR MLR MLR
comp=E,21µm,21.0s
GLA Glamis 92.06 56 *e*P **P 02 21 40.0 +0.4**
GLA pmax pmax
comp=Z,242nm,1.3s,mb6.4
GLA MLR MLR
comp=Z,94µm,22.0s,MS7.2
GLA Glamis 92.06 56 ⇑P **P 02 21 39.7 +0.1**
baz=92,SNR=15
GLA Glamis 92.06 56 *e*P **P 02 21 40.0 +0.4**
comp=Z,242nm,1.3s,mb6.4
GLA LR LR
comp=Z,94µm,22.0s,MS7.2
MIB Mutribah 92.06 301 *e*P **P 02 21 37.5 -2.2**
baz=301
MIB AMb AMB 02 21 43.4
comp=Z,659nm,1.3s,mb6.8,baz=301
E18A Harlowton 92.06 42 ⇑P **P 02 21 39.6 +0.2**
baz=92
O15A The Old Anders 92.06 49 ⇑P **P 02 21 39.7 +0.2**
baz=92
DCID1 Drake Creek 92.07 45 *e*P **P 02 21 41.4 +2.0**
comp=Z,187nm,1.0s,mb6.4
RDF Al-Radifah 92.08 300 *e*P **P 02 21 37.3 -2.5**
baz=300
RDF AMb AMB 02 21 43.4
comp=Z,374nm,1.4s,mb6.5,baz=300
TRO Tromso 92.09 344 *e* **P 02 21 38.3 -0.7**
TRO AMb AMB 02 22 02.8
comp=Z,192nm,1.3s,mb6.3
TRO *e*PP PP 02 25 22.9 +4.6
TRO *e* 02 32 16.9
TRO AMS AMS 03 09 21.0
comp=Z,45µm,19.3s,MS6.9
TRO Tromso 92.09 344 *e*P **P 02 21 38.6 -0.4**
TRO pmax pmax
comp=Z,192nm,1.3s,mb6.3
TRO MLR MLR
comp=Z,45µm,19.3s,MS6.9
TRO Tromso 92.09 344 *e*P **P 02 21 38.6 -0.4**
comp=Z,192nm,1.3s,mb6.3
TRO LR LR
comp=Z,45µm,19.3s,MS6.9
YNR Norris Junctio 92.09 44 *e*P **P 02 21 41.4 +1.9**
CCUT Cedar City 92.10 51 *e*P **P 02 21 40.0 +0.3**
Y12C Blythe 92.14 55 P **P 02 21 39.5 -0.4**
baz=92,SNR=22
OBN Obninsk 92.14 327 P **P 02 21 38.7 -0.8**
comp=Z,2µm,1.1s,mb7.2,SNR=21
OBN Obninsk 92.14 327 *d i*P **P 02 21 37.6 -1.9**
OBN *e**PP pP 02 21 49.0 +3.3
OBN *e* 02 25 24.2
OBN *e*S SKSac 02 32 09.0 -2.8
OBN *e*PS PS 02 33 54.1 +0.7
OBN *e*SS SS 02 38 51.1 +1.0
OBN pmax pmax
comp=Z,458nm,1.2s,mb6.7
OBN MLR MLR
comp=Z,59µm,16.0s,MS7.1
OBN Obninsk 92.14 327 *e*P **P 02 21 38.0 -1.5**
comp=Z,462nm,1.3s,mb6.7
OBN LR LR
comp=Z,74µm,21.0s,MS7.1
R14A James Farms, M 92.17 51 ⇓P **P 02 21 40.4 +0.3**
baz=92
S14A Cedar City 92.20 51 ⇓P **P 02 21 40.6 +0.4**
baz=92,SNR=20
NOQ North Oquirrh 92.22 48 *e*P **P 02 21 40.6 +0.4**
comp=Z,348nm,1.3s,mb6.5
NOQ *e*PP PP 02 25 22.5 +2.1
TPAW Teton Pass 92.26 45 *e*P **P 02 21 41.2 +0.8**
comp=Z,68nm,0.9s,mb6.0
TPAW *e*PP PP 02 25 23.2 +2.6
NAY Al-Naaiem 92.27 300 *e*P **P 02 21 38.3 -2.4**
baz=300
NAY AMb AMB 02 21 44.2
comp=Z,463nm,1.3s,mb6.7,baz=300
PDMCI Parker Dam,Lak 92.31 55 ⇑P **P 02 21 40.6 -0.1**
baz=92,SNR=9.1
W13A Hualapai Mount 92.32 54 ⇓P **P 02 21 40.9 +0.1**
baz=92,SNR=36
LKWY Lake 92.33 44 *e*P **P 02 21 43.0 +2.4**
LKWY pmax pmax
comp=Z,177nm,1.3s,mb6.2
LKWY MLR MLR
comp=Z,127µm,22.0s,MS7.3
LKWY Lake 92.33 44 *e*P **P 02 21 43.0 +2.4**
comp=Z,177nm,1.3s,mb6.2
LKWY LR LR
comp=Z,127µm,22.0s,MS7.3
MOOW Moose Ponds 92.33 45 *e*P **P 02 21 41.3 +0.6**
comp=Z,66nm,0.9s,mb6.0
MOOW *e*PP PP 02 25 22.7 +1.6
L16A Fish Haven 92.34 47 ⇑P **P 02 21 40.9 +0.1**
baz=92,SNR=29
HWUT Hardware Ranch 92.36 47 *e*P **P 02 21 40.9 +0.1**
comp=Z,366nm,1.3s,mb6.5
HWUT LR LR
comp=Z,139µm,21.0s,MS7.4
AHID Auburn Hatcher 92.36 46 *e*P **P 02 21 41.5 +0.7**
comp=Z,312nm,1.3s,mb6.5
AHID LR LR
comp=Z,97µm,22.0s,MS7.2
REDW Red Top Meadow 92.37 45 *e*P **P 02 21 41.5 +0.6**
comp=Z,142nm,1.3s,mb6.1
REDW *e*PP PP 02 25 23.9 +2.5
112A Yuma 92.38 56 ⇑P **P 02 21 41.2 +0.1**
baz=92
F18A Big Timber 92.39 43 ⇑P **P 02 21 41.0 +0.2**
baz=92
P15A Leamington 92.39 49 ⇓P **P 02 21 41.2 +0.2**
baz=92,SNR=27

I17A Pilgram Creek 92.40 45 ⇓P **P 02 21 41.5 +0.5**
baz=92
SNOW Snow King Moun 92.41 45 *e*P **P 02 21 41.7 +0.7**
comp=Z,75nm,1.0s,mb6.0
SNOW *e*PP PP 02 25 28.1 +6.4
RST Umm Al-Ruwaisa 92.42 300 *e*P **P 02 21 39.9 -1.5**
baz=300
RST AMb AMB 02 21 44.6
comp=Z,561nm,1.3s,mb6.7,baz=300
NLU North Lily Min 92.44 49 *e*P **P 02 21 41.6 +0.3**
NLU *e*PP PP 02 25 21.7 -0.4
T14A Hurricane 92.44 52 ⇑P **P 02 21 41.8 +0.4**
baz=92,SNR=59
GCMT Greycliff 92.46 43 *e*P **P 02 21 41.5 +0.3**
LOHW Long Hollow 92.47 45 *e*P **P 02 21 41.5 +0.2**
comp=Z,116nm,1.3s,mb6.0
LOHW *e*PP PP 02 25 24.4 +2.2
Q15A Fillmore 92.47 50 ⇓P **P 02 21 41.4 0.0**
baz=92,SNR=22
CTU Camp Tracy 92.48 48 *e*P **P 02 21 42.5 +1.1**
comp=Z,218nm,1.1s,mb6.4
CLDR Caldiran 92.48 310 *e*P **P 02 21 41.4 -0.1**
X13A Yucca 92.49 54 ⇓P **P 02 21 41.6 0.0**
baz=93,SNR=26
DIGO Kars 92.54 312 *i*P **P 02 21 38.0 -3.6**
U14A Mt Trumbull 92.54 52 P **P 02 21 42.4 +0.6**
baz=93,SNR=99
DYDN Diyadin 92.54 311 *i*P **P 02 21 40.3 -1.4**
N16A Rees Ranch, Co 92.65 48 ⇓P **P 02 21 42.4 +0.2**
baz=93,SNR=20
Y13A Salome 92.68 55 ⇓P **P 02 21 42.4 -0.1**
baz=93,SNR=14
KARS Kars 92.69 312 *e*P **P 02 21 42.8 +0.4**
JLU Jordanelle 92.72 48 *e*P **P 02 21 42.8 +0.3**
MVU Marysvale 92.73 50 PFAKE 02 21 50.0 +7.4
MVU LR LR
comp=Z,79µm,22.0s,MS7.1
MSU Marysvale 92.75 50 *e*P **P 02 21 43.2 +0.5**
R15A Junction 92.76 51 ⇑P **P 02 21 43.4 +0.6**
baz=93,SNR=12
O16A Springville 92.79 48 ⇑P **P 02 21 43.1 +0.2**
baz=93,SNR=15
V14A Boquillas Ranc 92.80 53 P **P 02 21 43.6 +0.6**
baz=93,SNR=51
S15A Panguitch 92.84 51 ⇓P **P 02 21 44.1 +1.0**
baz=93,SNR=10
P16A Fountain Green 92.84 49 ⇑P **P 02 21 42.9 -0.2**
baz=93,SNR=13
DAU Daniels Canyon 92.92 48 *e*P **P 02 21 44.3 +0.9**
W14A Seligman 92.92 54 ⇑P **P 02 21 43.9 +0.3**
baz=93,SNR=31
RLMT Red Lodge 92.93 43 *e*P **P 02 21 43.9 +0.5**
comp=Z,40nm,1.2s,mb5.7
RLMT LR LR
comp=Z,64µm,22.0s,MS7.0
113A Mohawk Valley, 92.99 56 ⇓P **P 02 21 43.2 -0.8**
baz=93,SNR=6.9
T15A Red Dirt Ranch 93.00 52 ⇑P **P 02 21 44.1 +0.2**
baz=93,SNR=30
VANB Van 93.02 310 *e*P **P 02 21 45.0 +1.0**
TVAN Van 93.03 310 *i*P **P 02 21 46.8 +2.8**
HKR Hakkari 93.03 309 *e*P **P 02 21 46.0 +1.9**
AGRB Hanur-Agry 93.05 311 *e*P **P 02 21 43.4 -0.7**
HAKT HAKKARI 93.06 309 *i*P **P 02 21 39.9 -4.3**
N17A Moffit Pass 93.08 48 ⇑P **P 02 21 43.7 -0.4**
baz=93,SNR=14
U15A North Rim 93.22 52 P **P 02 21 45.7 +0.8**
baz=93,SNR=52
TMUT Trail Mountain 93.27 49 *e*P **P 02 21 46.2 +1.1**
X14A Yava 93.27 54 ⇑P **P 02 21 45.6 +0.5**
baz=93,SNR=26
PUL Pulkko 93.29 333 ⇓P **P 02 21 43.9 -0.8**
Y14A Wickenburg 93.31 55 ⇑P **P 02 21 45.4 0.0**
baz=93,SNR=13
R16A Teasdale 93.34 50 ⇑P **P 02 21 46.1 +0.6**
baz=93,SNR=30
O17A Robinson Place 93.36 48 ⇓P **P 02 21 45.4 -0.1**
baz=93,SNR=27
ARTV Artvin 93.37 313 *i*P **P 02 21 41.3 -4.3**
Q16A Castle Valley 93.40 50 ⇑P **P 02 21 46.0 +0.3**
baz=94,SNR=52
S16A Weppner Ranch, 93.41 51 ⇓P **P 02 21 46.1 +0.3**
baz=94,SNR=43
BW06 Boulder Array 93.45 46 *e*P **P 02 21 45.9 +0.1**
comp=Z,36nm,2.4s
BW06 LR LR
comp=Z,101µm,22.0s,MS7.2
PDAR Pinedale Array 93.45 46 P **P 02 21 46.1 +0.3**
comp=Z,2.8nm,0.7s,baz=270,slow=2.8,SNR=18
PDAR PP PP 02 25 30.8 +0.9
comp=Z,5.7nm,0.9s,baz=345,slow=4.6,SNR=3.2
PDAR S SKSac 02 32 18.7 -0.9
comp=Z,1.3nm,1.0s,baz=96,slow=7.6,SNR=3.4
PDAR PKKPbc PKKPbc 02 38 54.8 +1.5
comp=Z,5.8nm,1.0s,baz=126,slow=2.1,SNR=7.9
PDAR PKPPKP 02 47 09.2
comp=Z,2.4nm,1.1s,baz=96,slow=1.5,SNR=5.6
PDAR LR LR 02 56 31.5
comp=Z,81µm,21.5s,MS7.2,baz=306,slow=31
V15A Kaibab Nationa 93.48 53 P **P 02 21 46.9 +0.8**
baz=94,SNR=50
Z14A Wintersburg 93.51 55 ⇑P **P 02 21 46.2 -0.2**
baz=94,SNR=10
DBOC Borcka 93.51 313 *i*P **P 02 21 41.7 -4.4**
BCA Borcka 93.51 313 *e*P **P 02 21 44.7 -1.5**
P17A Butcher Ranch, 93.56 49 ⇑P **P 02 21 46.4 -0.1**
baz=94,SNR=20
W15A Williams 93.58 53 ⇓P **P 02 21 47.4 +0.8**
baz=94,SNR=30
BHD Baghdad 93.67 305 *ex* x 02 21 45.0
BHD *ex* x 02 21 55.0
T16A Glen Canyon Da 93.68 52 ⇓P **P 02 21 47.6 +0.5**
baz=94
X15A Humboldt 93.78 54 ⇓P **P 02 21 47.9 +0.3**
baz=94,SNR=31
SRU San Rafael 93.83 49 *e*P **P 02 21 47.6 -0.1**
SRU pmax pmax
comp=Z,82nm,0.9s,mb6.2
SRU San Rafael 93.83 49 ⇓P **P 02 21 47.4 -0.3**
baz=94,SNR=16
SRU San Rafael 93.83 49 *e*P **P 02 21 47.6 -0.1**
comp=Z,82nm,0.9s,mb6.2
MSL Mosul 93.84 308 *ex* x 02 21 46.0
MSL *ex* x 02 21 56.0
MSL *ex* x 02 21 59.0
MSL *ex* x 02 25 34.0
MSL *ex* x 02 32 17.0
MSL *ex* x 02 32 54.0
KAF Kangasniemi 93.86 336 *ep* **P 02 21 44.4 -2.9**
comp=Z,119nm,1.0s,mb6.3,baz=56,slow=4.2
KAF Kangasniemi 93.86 336 *e*P **P 02 21 45.0 -2.3**
KAF pmax pmax
comp=Z,124nm,1.1s,mb6.2
KAF Kangasniemi 93.86 336 *e*P **P 02 21 45.0 -2.3**
comp=Z,124nm,1.1s,mb6.2
O18A Roosevelt 93.87 48 ⇓P **P 02 21 47.7 -0.1**
baz=94,SNR=29
P18A Preston Nutter 93.89 49 ⇑P **P 02 21 47.8 -0.1**
baz=94,SNR=12
FFC Flin Flon 93.89 33 P **P 02 21 47.3 -0.3**
comp=Z,727nm,1.1s,mb7.0,SNR=7.2
FFC Flin Flon 93.89 33 *e*P **P 02 21 46.6 -1.0**
FFC pmax pmax
comp=Z,182nm,1.1s,mb6.4
FFC MLR MLR
comp=Z,110µm,21.0s,MS7.3
FFC Flin Flon 93.89 33 *e*P **P 02 21 46.6 -1.0**
comp=Z,182nm,1.1s,mb6.4
FFC LR LR
comp=Z,110µm,21.0s,MS7.3
R17A Hanksville Air 93.89 50 ⇓P **P 02 21 47.9 -0.1**
baz=94,SNR=11
N18A Larsen Ranch, 93.91 47 ⇓P **P 02 21 47.3 -0.7**
baz=94,SNR=20
214A Organ Pipe Nat 93.98 57 ⇑P **P 02 21 48.1 -0.5**
baz=94,SNR=15
S17A Black Ridge (B 94.04 51 ⇓P **P 02 21 48.0 -0.6**
baz=94
SIRT Sirnak 94.05 309 *e*P **P 02 21 50.5 +1.8**
PZAR Pazar-Rize 94.11 313 *e*P **P 02 21 58.4 +9.4**
Q18A Rafter H Ranch 94.12 49 ⇓P **P 02 21 48.1 -0.9**
baz=94,SNR=26
ERZM Erzurum 94.16 312 *i*P **P 02 21 48.6 -0.5**
EZM Erzurum 94.16 312 *e*P **P 02 21 48.7 -0.5**
W16A Flagstaff 94.18 53 ⇑P **P 02 21 50.1 +0.7**
baz=94,SNR=13

WUAZ **Wupatki** 94.19 53 ⇓P P 02 21 49.8 +0.4
baz=94,SNR=68
WUAZ **Wupatki** 94.19 53 *e*P P 02 21 50.2 +0.8
comp=Z,329nm,1.2s,mb6.6
WUAZ LR LR
comp=Z,84µm,19.0s,MS7.2
SOC **Sochi** 94.20 316*c* *i*P P 02 21 49.5 +0.2
SOC *i* *SP sP 02 22 00.7 +3.1
SOC *e* 02 25 37.4
SOC *e*PPP 02 27 41.8
SOC *e*S SKSac 02 32 21.2 -2.4
SOC *e* 02 33 01.0
SOC *e*SS SS 02 39 11.5 -8.6
SOC pmax pmax
comp=Z,3µm,1.3s,mb7.6
SOC pmax pmax
comp=Z,5µm,4.4s
U16A **Tuba City** 94.21 52 ⇑P P 02 21 50.0 +0.6
baz=94,SNR=23
T17A **Navajo Res., N** 94.22 51 ⇓P P 02 21 49.6 +0.1
baz=94,SNR=20
115A **Sonoran Desert** 94.26 56 ⇓P P 02 21 49.6 -0.2
baz=94
N19A **John Jarvie Ra** 94.29 47 ⇓P P 02 21 49.5 -0.3
baz=94,SNR=26
LAO **LASA Array** 94.43 41 *e*P P 02 21 50.2 0.0
comp=Z,285nm,1.0s,mb6.7
LAO *e*PP PP 02 25 36.2 -1.2
LAO LR LR
comp=Z,64µm,20.0s,MS7.1
X16A **Lo Mia Camp, P** 94.44 54 ⇑P P 02 21 51.0 +0.5
baz=94,SNR=12
U17A **Shonto** 94.44 52 P P 02 21 51.1 +0.6
baz=94,SNR=24
O19A **Miners Draw (B** 94.51 48 ⇑P P 02 21 50.1 -0.7
baz=95,SNR=37
R18A **Canyonlands Na** 94.51 50 ⇑P P 02 21 50.3 -0.5
baz=95,SNR=7.0
Y16A **Circle Bar Ran** 94.55 54 ⇑P P 02 21 51.3 +0.2
baz=95,SNR=32
S18A **Hurst Farm, Bl** 94.64 50 ⇑P P 02 21 51.0 -0.5
baz=95,SNR=21
116A **Eloy** 94.72 56 ⇓P P 02 21 51.6 -0.4
baz=95
KOPT **Kop Dagi** 94.76 312 *i* P P 02 21 49.5 -2.4
Q19A **Hogan Spring (** 94.81 49 ⇑P P 02 21 51.7 -0.5
baz=95,SNR=17
W17A **Winslow** 94.83 53 ⇓P P 02 21 52.4 +0.1
baz=95,SNR=14
T18A **Mexican Hat** 94.89 51 ⇓P P 02 21 52.1 -0.5
baz=95,SNR=16
X17A **Forest Lakes** 94.96 54 ⇑P P 02 21 53.9 +0.9
baz=95,SNR=26
KTUT **Trabzon** 94.99 313 *e*P P 02 21 52.3 -0.6
MACK **Trabzon** 95.00 313 *i* P P 02 21 50.0 -3.0
DGMT **Dagmar** 95.07 39 *e*P P 02 21 52.2 -1.0
comp=Z,216nm,1.0s,mb6.5
DGMT LR LR
comp=Z,72µm,21.0s,MS7.1
216A **Three Points,** 95.08 56 ⇓P P 02 21 53.3 -0.3
baz=95,SNR=8.3
U18A **Rough Rock, Ch** 95.10 52 ⇑P P 02 21 53.9 +0.3
baz=95,SNR=17
Y17A **Roosevelt** 95.11 55 ⇑P P 02 21 53.5 -0.2
baz=95,SNR=14
PV10 **Paradox Valley** 95.15 50 *e*P P 02 21 54.8 +1.0
V18A **Ganado** 95.26 52 ⇑P P 02 21 54.8 +0.5
baz=95,SNR=26
EZC **Erzincan** 95.34 312 *e*P P 02 21 54.3 -0.3
GUMT **Gumushane** 95.36 313 *e*P P 02 21 53.7 -1.0
MARD **Mardin** 95.37 309 *i* P P 02 21 48.6 -6.2
RWWY **Rawlins** 95.44 46 *e*P P 02 21 55.3 +0.3
comp=Z,132nm,1.2s,mb6.2
RWWY *e*PP PP 02 25 48.8 +3.3
117A **Oracle** 95.51 56 ⇓P P 02 21 55.5 -0.1
baz=96,SNR=10.0
VSU **Vasula** 95.54 333*c* *i*P P 02 21 53.4 -1.7
TUC **Tucson** 95.54 56 *e*P P 02 21 56.2 +0.5
TUC *e* 02 25 47.7
TUC pmax pmax
comp=Z,81nm,1.4s,mb6.0
TUC MLR MLR
comp=Z,116µm,22.0s,MS7.3
TUC **Tucson** 95.54 56 *e*P P 02 21 56.2 +0.5
comp=Z,81nm,1.4s,mb6.0
TUC *e*PP PP 02 25 47.7 +1.1
TUC LR LR
comp=Z,116µm,22.0s,MS7.3
PV01 **Paradox Valley** 95.58 50 *e*P P 02 21 55.9 +0.2
PV01 *e*PP PP 02 25 48.5 +1.8
W18A **Petrified Fore** 95.59 53 ⇑P P 02 21 56.0 +0.2
baz=96,SNR=12
X18A **Snowflake** 95.59 54 ⇓P P 02 21 56.1 +0.2
baz=96,SNR=16
T19A **Beclabito** 95.63 51 ⇓P P 02 21 56.1 +0.1
baz=96,SNR=33
217A **Green Valley** 95.66 56 ⇑P P 02 21 56.3 +0.1
baz=96,SNR=24
DIYA **Diyarbakir** 95.68 310 *i* P P 02 21 53.7 -2.5
Y18A **Canyon Day Jun** 95.73 54 ⇓P P 02 21 56.8 +0.3
baz=96,SNR=18
ESPY **Espiye-Giresun** 95.75 313 *e*P P 02 21 55.0 -1.4
W19A **Sanders** 95.86 53 ⇑P P 02 21 57.4 +0.3
baz=96,SNR=14
MVCO **Mesa Verde** 95.92 51 ⇑P P 02 21 57.0 -0.2
baz=96,SNR=23
MVCO **Mesa Verde** 95.92 51 *e*P P 02 21 57.9 +0.6
comp=Z,274nm,1.4s,mb6.5
MVCO LR LR
comp=Z,49µm,19.0s,MS7.0
PTK **Pertek** 95.92 311 *e*P P 02 21 57.2 -0.1
Z18A **Geronimo** 95.93 55 ⇓P P 02 21 57.8 +0.4
baz=96
V19A **Window Rock** 95.95 52 ⇑P P 02 21 57.3 -0.1
baz=96,SNR=11
118A **Homack Ranch,** 96.11 55 ⇑P P 02 21 58.6 +0.3
baz=96,SNR=13
X19A **St. Johns** 96.14 53 ⇓P P 02 21 58.9 +0.5
baz=96,SNR=14
SVRC **Sivrice-ELAZID** 96.15 311 *e*P P 02 21 57.8 -0.5
218A **Dragoon** 96.24 56 ⇓P P 02 21 59.0 +0.2
baz=96,SNR=16
Y19A **Nutrioso** 96.31 54 ⇑P P 02 21 59.8 +0.7
baz=96,SNR=8.5
ELZG **Elazig** 96.35 311 *i* P P 02 21 52.3 -6.9
318A **Bisbee** 96.43 56 ⇓P P 02 21 59.4 -0.4
baz=96,SNR=14
Z19A **T-Link Ranch,** 96.49 55 ⇑P P 02 22 00.1 +0.1
baz=97
119A **Ashpeak Ranch,** 96.61 55 P P 02 22 00.8 +0.2
baz=97,SNR=16
RSSD **Black Hills** 96.78 43 *e*P P 02 22 01.2 +0.1
RSSD *e* 02 25 55.7
RSSD pmax pmax
comp=Z,20nm,0.8s,mb5.6
RSSD MLR MLR
comp=Z,53µm,22.0s,MS7.0
RSSD **Black Hills** 96.78 43 *e*P P 02 22 01.1 +0.1
comp=Z,20nm,0.8s,mb5.6
RSSD *e*PP PP 02 25 55.7 0.0
RSSD LR LR
comp=Z,53µm,22.0s,MS7.0
URFA **Urfa** 96.81 310 *e*P P 02 22 00.9 -0.4
PHWY **Pilot Hill** 96.81 46 *e*P P 02 22 01.8 +0.5
comp=Z,64nm,1.1s,mb6.0
MYA **Malataya** 96.82 311 *e*P P 02 22 01.4 0.0
JMIC **Jan Mayen** 96.82 352 PP PP 02 25 56.5 +1.4
comp=Z,56nm,0.8s,baz=102,slow=6.2,SNR=3.4
JMIC **Jan Mayen** 96.82 352 *e* pP 02 22 09.6 +2.8
JMIC *e*PP PP 02 25 55.0 -0.2
JMIC *e*SS SS 02 39 59.1 +3.4
JMIC AMS AMS 03 00 18.3
comp=Z,8µm,28.0s,MS6.1
JMIC **Jan Mayen** 96.82 352 *e*P pP 02 22 11.1 +4.3
JMIC LR LR
comp=Z,8µm,28.0s,MS6.1
MALT **Malatya** 96.82 311 *e*P P 02 21 59.5 -1.9
MALT **Malatya** 96.82 311 *e*P P 02 22 00.0 -1.4
MALT pmax pmax
comp=Z,135nm,1.3s,mb6.2
MALT MLR MLR
comp=Z,57µm,19.0s,MS7.1
MALT **Malatya** 96.82 311 ⇓*i*P P 02 22 00.5 -0.9
MALT **Malatya** 96.82 311 *e*P P 02 22 00.0 -1.3
comp=Z,135nm,1.3s,mb6.2
MALT LR LR
comp=Z,57µm,19.0s,MS7.1
219A **White Tail Can** 96.87 56 ⇑P P 02 22 01.5 -0.3
baz=97,SNR=8.2
RSDY **Resadiye-TOKAT** 96.93 313 *e*P P 02 22 01.3 -0.5
MAW **Mawson** 96.97 203 *e*P P 02 22 01.2 -0.1
comp=Z,32nm,1.4s,mb5.6
MAW *e*PP PP 02 25 43.7 -13
MAW *e*S S 02 33 06.9 -16
MAW **Mawson** 96.97 203 P P 02 22 00.4 -0.8
comp=Z,53nm,1.2s,mb5.8,baz=65,slow=6.6,SNR=16
MAW PKKPbc PKKPbc 02 38 48.3 +3.3
comp=Z,14nm,0.9s,baz=268,slow=5.4,SNR=14
MAW LR LR 03 03 49.0
comp=Z,89µm,20.8s,MS7.2,baz=74,slow=34
MNK **Minsk** 96.97 329 ⇑*i*P P 02 22 00.0 -1.7
MNK *e* 02 25 52.0
MNK *e*S S 02 33 24.0 +0.6
MNK *e*PS PS 02 34 46.0 -0.5
MNK pmax pmax
comp=Z,270nm,1.6s,mb6.4
MNK MLR MLR
comp=E,185µm,20.0s
MNK MLR MLR
comp=Z,176µm,18.0s,MS7.6
SUMG **Summit** 97.02 1 *e*P P 02 22 04.8 +3.2
comp=Z,31nm,1.1s,mb5.7
319A **Douglas** 97.03 56 ⇓P P 02 22 01.9 -0.5
baz=97,SNR=12
DARE **Darende-Malaty** 97.07 312 *e*P P 02 22 05.4 +2.9
IDID **Didziasalis** 97.12 330 *e*P P 02 22 04.5 +2.2
ATAB **Bozova** 97.20 310 *i* P P 02 22 01.5 -1.6
AKCD **Akcadag** 97.20 311 *i* P P 02 22 02.9 -0.2
ISCO **Idaho Springs** 97.22 47 *e*P P 02 22 03.4 +0.3
ISCO *e* 02 25 59.6
ISCO pmax pmax
comp=Z,44nm,1.0s,mb5.8
ISCO MLR MLR
comp=Z,91µm,20.0s,MS7.3
ISCO **Idaho Springs** 97.22 47 *e*P P 02 22 03.4 +0.2
comp=Z,44nm,1.0s,mb5.8
ISCO *e*PP PP 02 25 59.6 +0.3
ISCO LR LR
comp=Z,91µm,20.0s,MS7.3
SVSK **Karacayir** 97.33 313 *e*P P 02 22 03.1 -0.5
IIGN **Ignalina** 97.36 330 *e*P P 02 22 05.0 +1.6
SIM **Simferopol'** 97.48 318 P P 02 22 02.0 -2.2
SIM *e* 02 26 05.0
SIM *e*S S 02 33 15.0 -13
SIM *e*PS PS 02 34 51.0 -1.4
SIM pmax pmax
comp=Z,60nm,1.0s,mb6.0
NSS **Namsos** 97.51 342 *e*P P 02 22 03.8 -0.1
NSS *e* 02 32 41.9
NSS *e* 02 33 27.6
NSS AMS AMS 03 11 28.4
comp=Z,55µm,21.6s,MS7.0
NSS **Namsos** 97.51 342 ⇓*i*P P 02 22 12.0 +8.1
NSS LR LR
comp=Z,55µm,21.6s,MS7.0
KVT **Kavak** 97.60 314 *e*P P 02 22 03.5 -1.3
LAZ **Ladron** 97.84 53 *e*P P 02 22 06.8 +0.8
DIKM **Dikmen** 97.95 315 *e*P P 02 22 04.7 -1.7
SDCO **Great Sand Dun** 98.00 49 *e*P P 02 22 07.4 +0.7
comp=Z,134nm,1.8s,mb6.2
SDCO LR LR
comp=Z,97µm,22.0s,MS7.2
AKASG **Malin Array Be** 98.02 325 P P 02 22 04.0 -2.4
comp=Z,26nm,0.9s,mb5.7,baz=52,slow=4.5,SNR=21
AKASG PP PP 02 26 06.8 +1.8
comp=Z,28nm,0.9s,baz=54,slow=8.0,SNR=5.7
AKASG S SKSac 02 32 39.5 -3.9
comp=Z,0.2nm,0.3s,baz=349,slow=1.0,SNR=2.5
AKASG PKKPbc PKKPbc 02 38 44.9 +3.5
comp=Z,1.7nm,0.6s,baz=260,slow=3.2,SNR=7.2
AKASG LR LR 03 10 12.3
comp=Z,73µm,19.8s,MS7.2,baz=55,slow=38
AKASG **Malin Array Be** 98.02 325 P P 02 22 04.1 -2.4
AKASG 02 26 06.8
AKASG S SKSac 02 32 39.6 -3.8
AKASG pmax pmax
comp=Z,26nm,0.9s
AKBB **Malin Array Si** 98.02 325 *e*P P 02 22 04.5 -2.0
KIEV **Kiev** 98.03 325 *e*P P 02 22 04.8 -1.7
KIEV pmax pmax
comp=Z,79nm,1.3s,mb6.1
KIEV MLR MLR
comp=Z,72µm,20.0s,MS7.2
KIEV **Kiev** 98.03 325 *e*P P 02 22 04.8 -1.8
comp=Z,79nm,1.3s,mb6.1
KIEV LR LR
comp=Z,72µm,20.0s,MS7.2
LENM **Lemitar** 98.04 53 *e*P P 02 22 08.7 +1.7
GAZ **Gaziantep** 98.11 310 *e*P P 02 22 06.7 -0.5
ANMO **Albuquerque** 98.19 52 *e*P P 02 22 07.6 0.0
ANMO pmax pmax
comp=Z,60nm,1.1s
ANMO MLR MLR
comp=Z,84µm,19.0s
ANMO **Albuquerque** 98.19 52 *e*P P 02 22 07.6 0.0
comp=Z,60nm,1.1s,mb6.0
ANMO LR LR
comp=Z,84µm,19.0s,MS7.2
PINB **Pinarbasi** 98.20 312 *i* P P 02 22 01.0 -6.5
KMRS **Kahramanmaras** 98.23 311 *e*P P 02 22 07.1 -0.6
LPM **Los Pinos Moun** 98.27 53 *e*P P 02 22 09.2 +1.2
BNM **Barren Site** 98.32 53 *e*P P 02 22 09.1 +0.9
BYBT **Boyabat** 98.36 315 *e*P P 02 22 07.0 -1.2
BNN **Bunyan** 98.54 312 *e*P P 02 22 08.5 -0.6
BZK **Bozkurt** 98.70 316 *e*P P 02 22 10.7 +1.0
CORM **Corum** 98.94 314 *e*P P 02 22 08.9 -1.9
KOZT **Kozan** 99.04 311 *e*P P 02 22 13.0 +1.6
TOS **Tosya** 99.04 315 *e*P P 02 22 11.1 -0.2
COBT **Iskenderun** 99.05 310 *i* P P 02 22 10.2 -1.2
ULM **Lac du Bonnet** 99.22 35 P P 02 22 11.0 -0.9
comp=Z,4.4nm,1.0s,baz=38,slow=4.7,SNR=4.7
ULM PP PP 02 26 12.1 -2.0
comp=Z,31nm,1.3s,baz=314,slow=7.2,SNR=3.9
ULM S SKSac 02 32 51.3 +1.8
comp=Z,3.0nm,0.9s,baz=190,slow=16,SNR=1.8
ULM LR LR 03 00 37.6
comp=Z,121µm,22.0s,MS7.3,baz=308,slow=32
ULM **Lac du Bonnet** 99.22 35 *e*P P 02 22 11.7 -0.2
comp=Z,128nm,1.8s,mb6.2
ULM *e*PP PP 02 26 12.8 -1.4
ULM LR LR
comp=Z,154µm,22.0s,MS7.5
CEYT **Ceyhan** 99.27 310 *e*P P 02 22 11.7 -0.7
HTY **Hatay** 99.28 309 *e*P P 02 22 11.7 -0.8
AVNT **Avonos** 99.29 312 *i* P P 02 22 08.8 -3.6
CDAG **Cicekdag** 99.33 313 *i* P P 02 22 10.2 -2.4
OGNE **Ogallala** 99.35 45 *e*P P 02 22 12.7 0.0
comp=Z,122nm,1.5s,mb6.2
OGNE *e*PP PP 02 26 14.9 -0.6
OGNE LR LR
comp=Z,99µm,21.0s,MS7.3
CANT **Cankiri** 99.49 314 *e*P P 02 22 13.1 -0.2
SUW **Suwalki** 99.57 330 *e*P P 02 22 14.3 +1.0
SUW *e* 02 22 22.9
SUW *e*PP PP 02 26 15.3 -1.3
SUW *e*SKS 02 32 59.3
SUW *e*S S 02 33 48.8 +3.4
SUW *e*PS PS 02 35 22.3 +7.8
SUW LMZ 03 07 37.3
comp=Z,67µm,22.7s
SUW **Suwalki** 99.57 330 *e*P P 02 22 14.3 +1.0
SUW *e* 02 22 22.9
SUW *e* 02 26 15.3
SUW *e*S S 02 33 48.8 +3.4
SUW MLR MLR
comp=Z,67µm,22.7s,MS7.1
SUW **Suwalki** 99.57 330 *e*P P 02 22 14.3 +1.0
SUW *e* 02 22 22.9
SUW *e*PP PP 02 26 15.3 -1.3
SUW *e*SKS 02 32 59.3
SUW *e*S S 02 33 48.8 +3.4
SUW *e*PS PS 02 35 22.3 +7.8
KARA **Karaisali** 99.69 311 *e*P Pdif 02 22 13.0 -0.9
NIG **Nigde** 99.72 312 *e*P Pdif 02 22 15.3 +1.4
BR131 **Keskin Array S** 99.81 314 *e*P Pdif 02 22 12.9 -1.5
comp=Z,25nm,0.9s
BR131 LR LR
comp=Z,19µm,20.0s,MS6.6
SAFT **Safranbolu** 99.89 315 *e*P Pdif 02 22 13.2 -1.5
KAMT **Kaman** 99.90 313 *e*P Pdif 02 22 13.4 -1.4
KIS **Kishinev** 99.96 322 *e*PPP 02 30 15.0
KIS *i* SKS SKSac 02 33 03.0 +10
KIS **Kishinev** 99.96 322 *i* PS PS 02 35 28.0 +8.9
KIS LRM 03 08 02.0
comp=Z,72µm,24.0s
ASF **Jabal al Asfar** 100.02 305 P Pdif 02 22 14.3 -1.0
comp=Z,58nm,1.1s,baz=309,slow=0.6,SNR=20
ASF PP PP 02 26 22.2 +1.3
comp=Z,30nm,1.1s,baz=311,slow=4.3,SNR=4.0
ASF S SKSac 02 33 00.1 +5.9
comp=Z,1.5nm,0.8s,baz=68,slow=16,SNR=1.7
ASF **Jabal al Asfar** 100.02 305 P Pdif 02 22 14.3 -1.0
ASF 02 26 22.2
ASF pmax pmax
comp=Z,58nm,1.1s
ASF pmax pmax
comp=Z,30nm,1.1s
HWQ **Hawqa** 100.06 308 *e*P Pdif 02 22 13.5 -1.9
AGMN **Agassiz Refuge** 100.17 37 *e*Pdif Pdif 02 22 16.3 +0.4
comp=Z,18nm,0.9s
AGMN LR LR
comp=Z,150µm,22.0s,MS7.5
NB2 **NORSAR Subarra** 100.21 339 P Pdif 02 22 14.8 -1.3
comp=Z,52nm,1.2s,baz=42,slow=4.6
NB2 **NORSAR Subarra** 100.21 339 P Pdif 02 22 18.0 +1.9
NOA **NORSAR Array B** 100.21 339 P Pdif 02 22 14.2 -1.9
comp=Z,3.4nm,1.0s,baz=156,slow=21,SNR=4.6
NOA PP PP 02 26 21.3 +0.1
comp=Z,20nm,0.9s,baz=45,slow=7.8,SNR=6.6
NOA PKKPbc PKKPbc 02 38 36.6 +1.1
comp=Z,4.4nm,0.9s,baz=226,slow=3.0,SNR=5.2
NOA **NORSAR Array B** 100.21 339 P Pdif 02 22 14.2 -1.9
NOA 02 26 21.3
NOA pmax pmax
comp=Z,3.0nm,1.0s
NOA pmax pmax
comp=Z,20nm,1.0s
MERS **Mersin** 100.23 311 *e*P Pdif 02 22 17.9 +1.7
MOL **Molde** 100.30 342 *e* Pdif 02 22 26.1 +10
MOL *e*PP PP 02 26 31.2 +9.4
MOL AMS AMS 03 10 50.2
comp=Z,36µm,21.2s,MS6.9
MOL **Molde** 100.30 342 ⇓*i*P Pdif 02 22 26.4 +10
MOL LR LR
comp=Z,36µm,21.2s,MS6.9
ANTO **Ankara** 100.36 314 *e*P Pdif 02 22 16.6 -0.2
ANTO **Ankara** 100.36 314 P Pdif 02 22 16.3 -0.5
SNR=20
ANTO **Ankara** 100.36 314 ⇓*i*P Pdif 02 22 15.8 -1.0
ANTO **Ankara** 100.36 314 *e*Pdif Pdif 02 22 16.7 0.0
comp=Z,82nm,1.3s
ANTO LR LR
comp=Z,33µm,20.0s,MS6.8
LOD **Lodumlu** 100.37 314 *e*P Pdif 02 22 17.0 +0.2
BHL **Bhannes** 100.42 307 *e*P Pdif 02 22 16.3 -0.7
NAO01 **NORSAR Array S** 100.46 339 *e*Pdif Pdif 02 22 16.8 -0.5
comp=Z,12nm,0.9s
NAO01 LR LR
comp=Z,55µm,20.0s,MS7.1
IAS **Iasi** 100.63 322 ⇑*i*P Pdif 02 22 17.0 -1.0
IAS **Iasi** 100.63 322 ⇑P Pdif 02 22 17.0 -1.0
KDZE **Karadeniz Ereo** 100.72 316 *e*P Pdif 02 22 17.6 -0.8
TLCR 100.78 320 ⇑*i*P Pdif 02 22 19.4 +0.7
TLCR 100.78 320 ⇑P Pdif 02 22 19.4 +0.7
MMAI **Mount Meron Ar** 100.92 307 P Pdif 02 22 17.8 -1.5
comp=Z,88nm,1.0s,baz=56,slow=6.5,SNR=34
MMAI PP PP 02 26 24.8 -2.9
comp=Z,26nm,1.1s,baz=77,slow=8.7,SNR=4.4
EREN **Erenkoy** 100.98 309 *e*P Pdif 02 22 18.1 -1.5
IKL **Isikli** 101.09 310 *e*P Pdif 02 22 20.0 -0.1
MDU **Mudurnu** 101.23 315 *e*P Pdif 02 22 21.0 +0.4
LADK **Ladik-KONYA** 101.32 313 *e*P Pdif 02 22 18.7 -2.3
LVV **L'vov** 101.36 326 *e*P Pdif 02 22 21.0 -0.2
LVV *e* 02 26 33.0
LVV *e* 02 33 03.0
LVV *e*S Sdif 02 34 00.0 -0.3
TIRR **Tirgusor** 101.37 320 ⇓*i*P Pdif 02 22 17.7 -3.6
TIRR **Tirgusor** 101.37 320 *e*Pdif Pdif 02 22 21.3 0.0
comp=Z,28nm,1.1s
KDHN **Kadinhani** 101.37 313 *i* P Pdif 02 22 17.6 -3.7
OPO **Ambohidratompo** 101.37 253 PP PP 02 26 32.6 +0.8
comp=Z,4.8nm,0.9s,baz=80,slow=13,SNR=2.2
ABPO **Ambohimpanom** 101.39 253 *e*Pdif Pdif 02 22 23.5 +2.1
comp=Z,26nm,1.0s
ABPO LR LR
comp=Z,12µm,20.0s,MS6.4
KIZT **Kizilcal** 101.40 313 *e*P Pdif 02 22 20.4 -1.0
KONT **Konya--Tatoy** 101.42 312 *e*P Pdif 02 22 23.3 +1.8
LFK **Lefkose** 101.56 309 *e*P Pdif 02 22 18.8 -3.3
WAR **Warsaw** 101.63 329 *e*P Pdif 02 22 21.8 -0.7
WAR *e*PP PP 02 26 46.9 +15
WAR LMZ 03 08 55.9
comp=Z,86µm,22.6s
WAR **Warsaw** 101.63 329 *e*P Pdif 02 22 21.7 -0.8
WAR *e*PP PP 02 26 46.8 +15
WAR LR LR
comp=Z,86µm,22.6s,MS7.2
HDMB **Hadim** 101.71 311 *e*P Pdif 02 22 22.9 +0.1
GULT **Gulveren** 101.73 315 *e*P Pdif 02 22 21.5 -1.4
SFJD **Kangerlussuaq** 101.75 7 P Pdif 02 22 24.3 +1.3
comp=Z,6.0nm,0.7s,baz=206,slow=2.4,SNR=3.0
SFJD PP PP 02 26 33.0 +0.4
comp=Z,26nm,1.2s,baz=322,slow=7.5,SNR=4.0
SFJD **Kangerlussuaq** 101.75 7 P Pdif 02 22 24.3 +1.3
SFJD 02 26 33.0
SFJD pmax pmax
comp=Z,6.0nm,0.7s
SFJD pmax pmax
comp=Z,26nm,1.2s
SFJD **Kangerlussuaq** 101.75 7 *i* P 02 22 32.0
comp=Z,61nm,1.3s
SFJD *i* 02 26 33.6
SFJD *i* 02 34 03.9
SFJD **Kangerlussuaq** 101.75 7 *e*Pdif Pdif 02 22 24.7 +1.7
comp=Z,11nm,0.8s
SFJD *i* 02 26 33.6
SFJD *i* 02 34 03.9
SFJD LR LR
comp=Z,31µm,22.0s,MS6.8
VRI **Vrincioaia** 101.77 321 P Pdif 02 22 23.3 +0.3
VRI **Vrincioaia** 101.77 321 ⇑*i*P Pdif 02 22 23.7 +0.7
VRI **Vrincioaia** 101.77 321 ⇑P Pdif 02 22 23.7 +0.6
KONO **Kongsberg** 101.77 339 *e* Pdif 02 22 23.8 +0.8
KONO *e*SKS 02 33 11.4
KONO *e*SS SS 02 41 06.8 +1.6
KONO AMS AMS 03 12 14.9
comp=Z,64µm,21.3s,MS7.1
BUR08 **Bucovina Ar. S** 101.81 324 *e*Pdif Pdif 02 22 22.8 -0.5
CBKS **Cedar Bluff** 101.81 47 PFAKE 02 22 40.0 +17
CBKS LR LR
comp=Z,86µm,21.0s,MS7.2
BURAR **Bucovina Array** 101.81 323 ⇑*i*P Pdif 02 22 22.8 -0.5
BURAR **Bucovina Array** 101.81 323 ⇑P Pdif 02 22 22.8 -0.4
PLOR **Plostina** 101.82 321 ⇑*i*P Pdif 02 22 25.8 +2.5
ECSD **EROS,Sioux Fal** 101.83 41 *e*Pdif Pdif 02 22 24.1 +0.8
comp=Z,25nm,1.2s
ECSD *e*PP PP 02 26 36.0 +1.9
ECSD LR LR
comp=Z,75µm,21.0s,MS7.2
CSS **Prodhromos** 101.83 309 *e*P Pdif 02 22 22.4 -0.9
PSN **Preselentsi** 101.87 319 *e*P Pdif 02 22 26.7 +3.2
AMTX **Amarillo** 101.90 51 *e*Pdif Pdif 02 22 24.9 +1.3
comp=Z,40nm,0.9s
AMTX LR LR
comp=Z,99µm,21.0s,MS7.3
SILT **Sile** 102.02 316 *e*P Pdif 02 22 25.0 +0.8
LEF **Lefka** 102.11 309 *e*P Pdif 02 22 25.1 +0.5
HRT **Hereke** 102.15 316 *e*P Pdif 02 22 23.5 -1.2
KWP **Kalwaria** 102.19 326 *e*P Pdif 02 22 24.7 -0.2
KWP *e* 02 22 35.3
KWP *e*PP PP 02 26 51.8 +15
KWP *e*SKS 02 33 13.7
KWP LMZ 03 12 03.6
comp=Z,93µm,20.0s
KWP **Kalwaria** 102.19 326 ⇑*i*P Pdif 02 22 24.6 -0.3
KWP **Kalwaria** 102.19 326 *e*P Pdif 02 22 24.7 -0.2
KWP *e* 02 22 35.3
KWP *e*PP PP 02 26 51.8 +15
KWP *e*SKS 02 33 13.7
ADVT **Abdulvahap** 102.26 315 *e*P Pdif 02 22 24.2 -1.1
TXAR **Lajitas Array** 102.28 57 P Pdif 02 22 26.5 +1.2
comp=Z,1.0nm,0.6s,baz=247,slow=2.6,SNR=9.2
TXAR PKiKP PKiKP 02 26 44.3 -3.6
comp=Z,3.7nm,0.9s,baz=270,slow=3.8,SNR=4.2

TXAR S SKSac 02 33 10.6 +5.4
comp=Z,1.0nm,0.9s,baz=22,slow=1.3,SNR=2.0
TXAR PKKPbc PKKPbc 02 38 28.4 -0.2
comp=Z,2.6nm,1.0s,baz=166,slow=1.0,SNR=4.8
TXAR Lajitas Array 102.28 57 P Pdif 02 22 26.5 +1.2
TXAR *i* 02 26 44.3
TXAR pmax pmax
comp=Z,1.0nm,0.6s
CAVI Cavuskoy 102.29 315 *e*P Pdif 02 22 24.7 -0.7
KLYT Kilyos 102.39 316 *e*P Pdif 02 22 32.5 +6.7
EIL Elat 102.42 304 P Pdif 02 22 26.1 +0.2
comp=Z,40nm,1.0s,baz=39,slow=2.4,SNR=23
EIL PP PP 02 26 36.6 -2.5
comp=Z,34nm,1.1s,baz=145,slow=4.0,SNR=3.6
MLR Muntele Rosu 102.43 321 P Pdif 02 22 25.6 -0.4
MLR Muntele Rosu 102.43 321 ⇑*i*P Pdif 02 22 26.2 +0.2
MLR Muntele Rosu 102.43 321 ⇑P Pdif 02 22 26.2 +0.2
YLV Yalova 102.46 316 *e*P Pdif 02 22 26.1 0.0
SHUT Suhut-Afyon 102.48 313 *e*P Pdif 02 22 24.7 -1.6
ALT Altintas 102.59 314 *e*P Pdif 02 22 26.6 -0.1
PRD Provadia 102.60 319 P Pdif 02 22 26.5 -0.2
BGKT Bogazkoy 102.60 316 *e*P Pdif 02 22 30.2 +3.4
GEMT Gemlik 102.64 316 *e*P Pdif 02 22 29.1 +2.2
BER Bergen 102.65 341 *e* 02 22 37.1
BER *e*PP PP 02 26 40.5 +0.9
BER *e*SKS 02 33 07.4
BER *e*SS SS 02 41 24.7 +7.3
BER Bergen 102.65 341 *e*P 02 22 37.3
CTKS Kestanelik-??a 102.75 317 *e*P Pdif 02 22 29.6 +2.2
CTYL Yal??k??y-??at 102.80 317 *e*P Pdif 02 22 29.9 +2.3
ISP Isparta 102.80 313 *e*P Pdif 02 22 27.7 +0.1
ISP Isparta 102.80 313 *e*P Pdif 02 22 25.9 -1.8
ISP Isparta 102.80 313 ⇑*i*P Pdif 02 22 29.5 +1.8
ISP Isparta 102.80 313 P Pdif 02 22 25.9 -1.8
ISP LR LR
comp=Z,25µm,21.0s,MS6.7
KOLS Kolonicke sedl 102.80 326 *e*P Pdif 02 22 26.9 -0.8
KOLS *e* 02 26 39.5
KOLS *e*SP SP 02 35 47.8 +1.4
KOLS *e*SS SS 02 41 37.4 +17
KOLS Kolonicke sedl 102.80 326 PDIF Pdif 02 22 26.9 -0.8
KOLS *e* 02 25 31.7
KOLS *e*PP PP 02 26 39.5 -1.7
KOLS *e*SP SP 02 35 47.8 +1.4
KOLS *e*SS SS 02 41 37.4 +17
KOLS Kolonicke sedl 102.80 326 *e*Pdif Pdif 02 22 26.9 -0.8
KOLS *e* 02 25 31.7
KOLS *e*PP PP 02 26 39.5 -1.7
KOLS *e*SP SP 02 35 47.8 +1.4
KOLS *e*SS SS 02 41 37.4 +17
ULDT Uludag 102.81 315 *i* P Pdif 02 22 26.3 -1.3
EYMN Ely 102.87 35 PFAKE 02 22 40.0 +12
EYMN LR LR
comp=Z,123µm,21.0s,MS7.4
GKP Gorka Klasztor 102.88 331 *e*P Pdif 02 22 30.3 +2.3
GKP *e* 02 22 38.6
GKP *e*PP PP 02 26 55.7 +14
GKP *e*S Sdif 02 34 21.7 +8.7
GKP *e*PS PS 02 35 54.7 +4.8
GKP LMZ 03 10 07.8
comp=Z,78µm,24.4s
GKP Gorka Klasztor 102.88 331 *e*P Pdif 02 22 30.3 +2.3
GKP *e* 02 22 38.6
GKP *e*PP PP 02 26 55.7 +14
GKP *e*S Sdif 02 34 21.7 +8.7
GKP *e*PS PS 02 35 54.7 +4.8
GKP LR LR
comp=Z,78µm,24.4s,MS7.1
BCK Bucak 102.90 312 *e*P Pdif 02 22 28.0 -0.1
UZH Uzhgorod 102.96 325 *e*P Pdif 02 22 28.0 -0.3
UZH *e* 02 26 48.0
UZH *e*S Sdif 02 34 10.0 -3.6
UZH *e*SS SS 02 41 27.0 +4.6
UZH MLR MLR
comp=N,25µm,22.0s,MS7.0
UZH MLR MLR
comp=E,41µm,22.0s,MS7.0
UZH MLR MLR
comp=Z,30µm,22.0s,MS6.8
UZH Uzhgorod 102.96 325 *e*P Pdif 02 22 27.0 -1.3
SLVT Silivri 102.96 317 *e*P Pdif 02 22 27.0 -1.4
VOIR 103.00 322 ⇑*i*P Pdif 02 22 25.4 -3.1
VOIR 103.00 322 ⇑P Pdif 02 22 25.4 -3.2
ANTB Antalya 103.08 312 *e*P Pdif 02 22 30.1 +1.1
STHS Stebnicka Huta 103.10 326 PDIF Pdif 02 22 29.8 +0.8
STHS *e* 02 38 38.4
STHS Stebnicka Huta 103.10 326 *e*Pdif Pdif 02 22 29.8 +0.8
STHS *e* 02 38 38.4
CRVS Cervenica-Dubn 103.27 326 *e*P Pdif 02 22 29.7 0.0
CRVS *e* 02 26 45.5
CRVS *e*SP SP 02 35 51.6 +0.3
CRVS Cervenica-Dubn 103.27 326 PDIF Pdif 02 22 29.7 0.0
CRVS pPDIF 02 22 33.7
CRVS *e* 02 25 39.7
CRVS *e*PP PP 02 26 45.5 +0.8
CRVS *e*SP SP 02 35 51.6 +0.3
CRVS *e* 02 38 32.1
CRVS *e*SS SS 02 41 51.9 +25
CRVS Cervenica-Dubn 103.27 326 *e*Pdif Pdif 02 22 29.7 0.0
CRVS *e* 02 22 33.7
CRVS *e* 02 25 39.7
CRVS *e*PP PP 02 26 45.5 +0.8
CRVS *e*SP SP 02 35 51.6 +0.3
CRVS *e* 02 38 32.1
CRVS *e*SS SS 02 41 51.9 +25
CRLT Corlu 103.32 317 *e*P Pdif 02 22 31.4 +1.4
OJC Ojcow 103.42 328 *e*P Pdif 02 22 28.8 -1.6
OJC *e* 02 26 43.8
OJC *e* 02 33 12.1
OJC *e*SP SP 02 35 50.8 -2.0
OJC *e*SS SS 02 41 29.9 +1.2
OJC MLR MLR
comp=Z,86µm,22.4s,MS7.2
COP Copenhagen 103.46 335 *i* P Pdif 02 22 32.3 +1.7
COP pmax pmax
comp=Z,87nm,1.2s
COP Copenhagen 103.46 335 *i* P Pdif 02 22 32.3 +1.7
comp=Z,87nm,1.2s
COP *i* 02 22 39.9
COP *e* 02 26 39.8
COP *i* 02 33 18.2
JMB Yambol 103.47 318 *e*P Pdif 02 22 30.4 -0.3
SZH Strazhica 103.51 319 P Pdif 02 22 31.0 +0.2
TKR Tekirdag 103.52 317 *e*P Pdif 02 22 28.8 -2.0
DEMI Demirci 103.57 314 *i* P Pdif 02 22 25.9 -5.2
NIE Niedzica 103.61 327 *e*Pdiff Pdif 02 22 31.4 +0.2
EDRB Edirne 103.66 318 *e*P Pdif 02 22 28.2 -3.2
ZIMR 103.69 320 ⇑*i*P Pdif 02 22 31.8 +0.2
ZIMR 103.69 320 ⇑P Pdif 02 22 31.8 +0.2
ELL Elmali 103.69 312 *e*P Pdif 02 22 31.4 -0.2
DRGR 103.70 324 ⇓*i*P Pdif 02 22 31.1 -0.6
DRGR 103.70 324 ⇓P Pdif 02 22 31.1 -0.5
MFT Murefte 103.79 317 *e*P Pdif 02 22 32.8 +0.8
KULA Kula-Manisa 103.84 314 *e*P Pdif 02 22 32.3 0.0
RGN Rugen 103.84 334 *e*Pdif Pdif 02 22 32.4 +0.1
BALB Balikesir 103.89 315 *e*P Pdif 02 22 30.1 -2.4
RKY Sarkoy-Tekirda 103.90 317 *e*P Pdif 02 22 35.0 +2.5
KSU1 Kansas State U 103.90 45 *e*Pdif Pdif 02 22 32.9 +0.3
comp=Z,26nm,0.9s
KSU1 LR LR
comp=Z,115µm,22.0s,MS7.4
AKAS Kas 104.13 312 *i* P Pdif 02 22 33.7 +0.1
WMOK Wichita Mounta 104.16 50 *e*P Pdif 02 22 34.5 +0.8
WMOK *e* 02 26 49.7
WMOK pmax pmax
comp=Z,25nm,1.3s
WMOK MLR MLR
comp=Z,64µm,20.0s,MS7.2
WMOK Wichita Mounta 104.16 50 *e*Pdif Pdif 02 22 34.5 +0.8
comp=Z,25nm,1.3s
WMOK *e*PP PP 02 26 49.6 -2.2
WMOK LR LR
comp=Z,64µm,20.0s,MS7.2
MUD Monsted U'grnd 104.23 337 *e*P 02 22 44.0
MUD *e* 02 26 52.8
MUD *i* 02 36 05.3
MUD pmax pmax
comp=Z,52nm,1.4s
MUD Monsted U'grnd 104.23 337 *i* P 02 22 44.0
comp=Z,52nm,1.4s
MUD *e* 02 26 52.8
MUD *i* 02 36 05.3
MUD Monsted U'grnd 104.23 337 *e*P 02 22 44.0
MUD *e* 02 26 52.8
MUD *i* 02 36 05.3
BORG Borgarnes 104.31 354 PFAKE
BORG LR LR
comp=Z,21µm,20.0s,MS6.7
RAC Raciborz 104.34 328 *e*P Pdif 02 22 35.4 +0.9
RAC *e* 02 26 51.9
RAC *e* 02 33 10.4
RAC MLR MLR
comp=Z,100µm,19.0s,MS7.4
DIM Dimitrovgrad 104.36 318 P Pdif 02 22 35.5 +0.9
GZR Gura Zlata 104.40 322 P Pdif 02 22 35.1 +0.3
GZR Gura Zlata 104.40 322 ⇓*i*P Pdif 02 22 33.9 -0.9
GZR Gura Zlata 104.40 322 ⇓P Pdif 02 22 33.9 -0.9
OKC Ostrava-Krasne 104.51 328 *e*PDIF Pdif 02 22 34.1 -1.1
OKC *ex* x 02 25 50.3
OKC *e*SKS 02 33 26.0
OKC *e*SP SP 02 36 10.6 +6.4
OKC AMS AMS 03 13 00.0
comp=Z,100µm,18.5s
OKC Ostrava-Krasne 104.51 328 *e*Pdif Pdif 02 22 34.1 -1.1
OKC *e* 02 25 50.3
OKC *e*SKS 02 33 26.0
OKC *e*SP SP 02 36 10.6 +6.4
ALN Alexandroupoli 104.56 317 *e*P Pdif 02 22 35.0 +0.4
ENEZ Emez 104.57 317 *e*P Pdif 02 22 37.2 +1.7
KDZ Kurdzhali 104.62 318 P Pdif 02 22 38.3 +2.5
PSZ Piszkesteto 104.69 326 *e*P Pdif 02 22 35.5 -0.5
PSZ pmax pmax
comp=Z,58nm,1.3s
PSZ MLR MLR
comp=Z,57µm,19.0s,MS7.1
PSZ Piszkesteto 104.69 326 ⇑*e*P Pdif 02 22 34.7 -1.3
PSZ Piszkesteto 104.69 326 ⇑*i*P Pdif 02 22 36.2 +0.2
PSZ Piszkesteto 104.69 326 *e*Pdif Pdif 02 22 35.5 -0.6
comp=Z,58nm,1.3s
PSZ LR LR
comp=Z,57µm,19.0s,MS7.1
YER Yerkesik 104.71 313 *e*P Pdif 02 22 36.8 +0.7
KSP Ksiaz 104.84 330 *e*P Pdif 02 22 39.6 +2.9
KSP *e* 02 22 47.2
KSP *e*PP PP 02 27 10.4 +14
KSP *e*PS PS 02 36 22.0 +12
KSP *e*SP SP 02 36 22.9 +15
KSP LMZ 03 11 17.5
comp=Z,117µm,24.0s
KSP Ksiaz 104.84 330 *e*P Pdif 02 22 34.9 -1.8
KSP *e* 02 26 56.0
KSP *e* 02 33 11.0
KSP *e*SP SP 02 36 06.0 -1.6
KSP *e*SS SS 02 42 00.0 +12
KSP MLR MLR
comp=Z,146µm,22.4s,MS7.5
KSP Ksiaz 104.84 330 *e*P 02 22 47.1
KSP *e* 02 25 35.5
KSP *e*PP PP 02 26 56.0 -0.2
KSP *e*SKS 02 33 11.0
KSP *e*SP SP 02 36 06.0 -1.6
KSP *e*SS SS 02 42 00.0 +12
KSP LR LR
comp=Z,146µm,22.4s,MS7.5
MORC Moravsky Berou 104.86 328 *e*P Pdif 02 22 37.0 +0.2
MORC pmax pmax
comp=Z,76nm,1.8s
MORC Moravsky Berou 104.86 328 ⇑*i*P Pdif 02 22 38.6 +1.8
MORC Moravsky Berou 104.86 328 *e*Pdif Pdif 02 22 37.0 +0.2
comp=Z,76nm,1.8s
PLD Plovdiv 104.87 319 *e*P Pdif 02 22 35.8 -1.1
PLD Plovdiv 104.87 319 P Pdif 02 22 37.2 +0.4
EZN Ezine 104.88 316 *e*P Pdif 02 22 37.3 +0.4
SCIA State Center 104.89 41 *e*PKP PKiKP 02 26 53.6 +1.2
SCIA LR LR
comp=Z,55µm,22.0s,MS7.0
VYHS Vyhne 104.93 327 *e*P Pdif 02 22 37.2 +0.1
VYHS *e*SP SP 02 36 10.3 +1.6
VYHS *e*SS SS 02 42 06.4 +17
VYHS Vyhne 104.93 327 PDIF Pdif 02 22 37.2 +0.1
VYHS *e* 02 25 53.8
VYHS *e*SP SP 02 36 10.3 +1.6
VYHS *e* 02 38 22.2
VYHS *e*SS SS 02 42 06.4 +17
VYHS Vyhne 104.93 327 *e*Pdif Pdif 02 22 37.2 +0.1
VYHS *e* 02 25 53.8
VYHS *e*SP SP 02 36 10.3 +1.6
VYHS *e* 02 38 22.2
VYHS *e*SS SS 02 42 06.4 +17
BZS Buzias 104.97 323 P Pdif 02 22 36.5 -0.8
BZS Buzias 104.97 323 ⇓*i*P Pdif 02 22 36.8 -0.5
BZS Buzias 104.97 323 ⇓P Pdif 02 22 36.8 -0.5
GADA Gvkgeada 105.00 317 *e*P Pdif 02 22 37.7 +0.3
MLSB Milas 105.00 313 *e*P Pdif 02 22 39.0 +1.6
JCT Junction City 105.01 54 *e*P Pdif 02 22 38.6 +1.1
JCT *e* 02 26 57.1
JCT pmax pmax
comp=Z,108nm,1.6s
JCT MLR MLR
comp=Z,75µm,19.0s,MS7.2
JCT Junction City 105.01 54 *e*Pdif Pdif 02 22 38.5 +1.1
comp=Z,108nm,1.6s
JCT *e*PP PP 02 26 57.1 -1.3
JCT LR LR
comp=Z,75µm,19.0s,MS7.2
BLCB Balcova 105.04 314 *e*P Pdif 02 22 37.7 +0.1
RZN Rozhen 105.06 318 P Pdif 02 22 38.1 +0.4
KOLL Kolacno 105.12 327 *e*P Pdif 02 22 39.4 +1.5
KOLL *e* 02 27 01.4
KOLL Kolacno 105.12 327 PDIF Pdif 02 22 39.4 +1.5
KOLL *e*PP PP 02 27 01.4 +3.0
KOLL *e* 02 27 22.0
KOLL Kolacno 105.12 327 *e*Pdif Pdif 02 22 39.4 +1.5
KOLL *e*PP PP 02 27 01.4 +3.0
KOLL *e* 02 27 22.0
DPC Dobruska-Polom 105.13 329 *e*PDIF Pdif 02 22 38.2 +0.2
DPC *ex* x 02 25 49.3
DPC *e*SKS SKSac 02 33 28.0 +10
DPC *e*SP SP 02 36 18.9 +8.3
DPC AMS AMS 03 11 50.0
comp=Z,55µm,22.5s
UPC Upice 105.19 329 *e*PDIF Pdif 02 22 37.6 -0.7
UPC *ex* x 02 25 48.4
COWI Conover 105.23 36 PFAKE 02 27 00.0 +7.1
COWI LR LR
comp=Z,129µm,21.0s,MS7.4
JAVC Velka Javorina 105.34 327 P Pdif 02 22 40.9 +2.0
BUD Budapest 105.42 326 *e*P Pdif 02 22 39.1 -0.2
BODT Bodrum 105.44 313 *e*P Pdif 02 22 48.0 +8.6
BSEG Bad Segeberg 105.55 335 *e*Pdiff Pdif 02 22 39.2 -0.7
BSEG *e* 02 25 58.1
BSEG *e*PS PS 02 36 16.0 -1.7
VTS Vitosha 105.58 320 P Pdif 02 22 40.3 +0.3
VTS Vitosha 105.58 320 ⇓*i*P Pdif 02 22 39.8 -0.2
VTS Vitosha 105.58 320 ⇓P Pdif 02 22 40.5 +0.5
VTS Vitosha 105.58 320 ⇓P Pdif 02 22 39.8 -0.2
VRAC Vranov 105.64 328 Pdiff Pdif 02 22 39.0 -1.3
comp=Z,4.2nm,0.7s,baz=31,slow=5.9,SNR=6.2
VRAC PP PP 02 27 01.0 -1.2
comp=Z,17nm,1.0s,baz=76,slow=6.6,SNR=4.0
VRAC Vranov 105.64 328 P Pdif 02 22 40.7 +0.5
VRAC Vranov 105.64 328 ⇓*i*P Pdif 02 22 40.2 0.0
VRAC Vranov 105.64 328 ⇓P Pdif 02 22 40.2 -0.1
CHOS Chios island 105.73 315 *e*P Pdif 02 22 38.0 -2.6
MMB Musomiste 105.76 319 P Pdif 02 22 40.0 -0.8
MODS Modra-Piesok 105.84 327 *e*P Pdif 02 22 42.1 +0.9
MODS *e* 02 27 04.7
MODS *e*SP SP 02 36 21.5 +3.4
MODS Modra-Piesok 105.84 327 PDIF Pdif 02 22 42.1 +0.9
MODS *e* 02 25 54.7
MODS *e*PP PP 02 27 04.7 +1.0
MODS *e*SP SP 02 36 21.5 +3.4
MODS *e*SS SS 02 42 23.7 +22
MODS Modra-Piesok 105.84 327 *e*Pdif Pdif 02 22 42.1 +0.9
MODS *e* 02 25 54.7
MODS *e*PP PP 02 27 04.7 +1.0
MODS *e*SP SP 02 36 21.5 +3.4
MODS *e*SS SS 02 42 23.7 +22
PVCC Panska Ves 105.89 330 *e*PDIF Pdif 02 22 41.5 +0.1
PVCC *e*SP SP 02 36 26.7 +8.2
PVCC AMS AMS 03 15 50.0
comp=Z,73µm,19.9s
BRG Berggiesshubel 105.97 331 *e*P Pdif 02 22 41.0 -0.8
BRG pmax pmax
comp=Z,26nm,1.7s
BRG Berggiesshubel 105.97 331 *e*Pdiff Pdif 02 22 40.9 -0.9
BRG *e*PPP 02 29 23.6
BRG *e*PS PS 02 36 20.8 -1.5
BRG Berggiesshubel 105.97 331 *e*PDIF Pdif 02 22 41.0 -0.8
comp=Z,43nm,1.7s
BRG Berggiesshubel 105.97 331 PP PP 02 27 05.0 +0.4
BRG SKS SKSac 02 33 26.0 +4.7
BRG PS PS 02 36 26.0 +3.7
BRG SS SS 02 42 05.0 +1.5
BRG
comp=N,57µm,19.1s
BRG
comp=E,19µm,18.9s
BRG
comp=Z,74µm,18.1s
KKB Krupnik 106.03 319 P Pdif 02 22 44.4 +2.4
ZST Bratislava 106.04 327 *e*P Pdif 02 22 42.3 +0.2
ZST *e* 02 27 02.8
ZST *e*SP SP 02 36 22.4 +2.2
ZST Bratislava 106.04 327 PDIF Pdif 02 22 42.3 +0.2
ZST *e* 02 25 58.7
ZST *e*PP PP 02 27 02.8 -2.4
ZST *e*SP SP 02 36 22.4 +2.2
ZST Bratislava 106.04 327 *e*Pdif Pdif 02 22 42.3 +0.2
ZST *e* 02 25 58.7
ZST *e*PP PP 02 27 02.8 -2.4
ZST *e*SP SP 02 36 22.4 +2.2
ZST LR LR
comp=Z,40µm,19.5s,MS7.0
CLL Collm 106.14 331 *e*P Pdif 02 22 42.0 -0.5
CLL *e* 02 33 21.0
CLL pmax pmax
comp=Z,41nm,1.3s
CLL MLR MLR
comp=Z,78µm,20.2s,MS7.2
CLL Collm 106.14 331 *e*Pdiff Pdif 02 22 41.7 -0.8
CLL *e* 02 26 04.6
CLL *e*PPP 02 29 24.0
CLL *e*PS PS 02 36 22.5 -1.4
CLL Collm 106.14 331 *e*Pdif Pdif 02 22 42.0 -0.5
comp=Z,41nm,1.3s
CLL LmV 02 14 00.0
comp=Z,78µm,20.2s
CLL *ex* x 02 26 05.0
CLL *ex* x 02 26 15.0
CLL *e*PP PP 02 27 06.0 +0.2
comp=N,2µm,23.4s
CLL *e*PP PP 02 27 06.0 +0.2
comp=E,2µm,23.0s
CLL *e*PP PP 02 27 06.0 +0.2
comp=Z,3µm,12.3s
CLL *ex* x 02 27 12.0
CLL *ex* x 02 27 26.0
CLL *e*PPP 02 29 19.0
CLL *ex* x 02 30 19.0
CLL *e*PPPP 02 31 06.0
CLL *e*SKSac SKSac 02 33 21.0 -1.0
CLL *e*PS PS 02 36 21.0 -2.9
CLL *e*PPS 02 37 15.0
CLL *e*PKKPbc PKKPbc 02 38 14.0 -3.7
CLL *e*pPKKPbc 02 38 18.0
CLL *e*pPKKPdf 02 38 30.0
CLL *e*SS SS 02 42 15.0 +9.3
CLL *e*SSS 02 46 12.0
OUR Ouranopolis 106.21 317 *e*P Pdif 02 22 43.1 +0.3
TREC Trest 106.21 329 *e*PDIF Pdif 02 22 42.3 -0.5
TREC AMS AMS 03 11 40.0
comp=Z,85µm,23.6s
PRU Pruhonice 106.25 330 *e*PDIF Pdif 02 22 41.1 -1.9
PRU *ex* x 02 26 01.4
PRU *e*SKS SKSac 02 33 25.2 +2.7
PRU *e*SP SP 02 36 30.2 +8.0
PRU AMS AMS 03 16 20.0
comp=Z,58µm,18.4s
JFWS Jewell Farm 106.28 39 PFAKE 02 27 10.0 +15
JFWS LR LR
comp=Z,64µm,21.0s,MS7.2
BARS Barje 106.35 321 P Pdif 02 22 44.2 +0.8
PKSM Moragy 106.36 325 ⇑*i*P Pdif 02 22 44.0 +0.5
PKSM Moragy 106.36 325 ⇑P Pdif 02 22 44.0 +0.5
SOH Sokhos 106.39 318 *e*P Pdif 02 22 41.8 -1.7
KNT Kendrikon 106.51 319 *e*P Pdif 02 22 43.3 -0.9
PLG Polygyros 106.55 318 *e*P Pdif 02 22 41.8 -2.5
PAIG Paliouri 106.61 317 *e*P Pdif 02 22 43.0 -1.6
VAY Valandovo 106.64 319 *e*P Pdif 02 22 43.1 -1.6
VAY Valandovo 106.64 319 *i* P Pdif 02 22 43.4 -1.3
SOP Sopron 106.64 327 *e* Pdif 02 22 44.9 +0.2
HORT Hortiatis 106.67 318 *e*P Pdif 02 22 46.0 +1.2
STIP Stip 106.70 319 *i* P Pdif 02 22 43.5 -1.5
APP Apeiranthos 106.70 314 *e*P Pdif 02 22 44.0 -0.1
THE Thessaloniki 106.74 318 *e*P Pdif 02 22 43.4 -1.7
DIVS Divibare 106.77 322 *e*P Pdif 02 22 45.0 -0.3
CONA Conrad Observa 106.87 327 ⇑*i*Pdiff Pdif 02 22 46.2 +0.4
comp=Z,47nm,1.3s
CONA ⇑*i*pPKiKP 02 27 00.2
CSNA Conrad Observa 106.87 327 ⇑*i*Pdiff Pdif 02 22 46.2 +0.4
comp=Z,43nm,1.2s
CSNA ⇑*i*pPKiKP 02 27 00.2
GRG Griva 106.94 319 *e*P Pdif 02 22 47.6 +1.5
CLZ Clausthal 106.99 333 *e*Pdiff Pdif 02 22 46.1 -0.2
CLZ *e* 02 26 09.8
CLZ *e*PPP 02 29 32.1
CLZ *e*PS PS 02 36 33.9 +1.3
TANN Tannenbergstha 106.99 331 *e*Pdiff Pdif 02 22 45.6 -0.7
TANN *e*PPP 02 29 31.8
TANN *e*PS PS 02 36 29.8 -2.9
SKO Skopje 107.03 320 *i* P Pdif 02 22 46.2 -0.2
SANT Santorini 107.08 313 PFAKE 02 27 10.0 +13
SANT LR LR
comp=Z,17µm,19.0s,MS6.6
NKC Novy Kostel 107.11 331 *e*PDIF Pdif 02 22 46.9 +0.1
NKC *ex* x 02 26 11.0
NKC AMS AMS 03 14 20.0
comp=Z,83µm,20.0s
NKC Novy Kostel 107.11 331 *e*Pdif Pdif 02 22 46.9 +0.1
NKC *e* 02 26 11.0
MOX Moxa 107.23 331 *e*PDIFF Pdif 02 22 46.4 -1.0
MOX *e* 02 26 22.1
MOX *e* 02 27 17.7
MOX
comp=Z,42µm,22.0s
MOX Moxa 107.23 331 *e*Pdiff Pdif 02 22 46.8 -0.6
MOX *e*PS PS 02 36 31.7 -3.5
KHC Kasperske Hory 107.28 329 *e*P Pdif 02 22 47.0 -0.6
KHC *e* 02 27 15.5
KHC MLR MLR
comp=Z,78µm,17.6s,MS7.3
KHC Kasperske Hory 107.28 329 *e*PDIF Pdif 02 22 47.0 -0.6
KHC *ex* x 02 26 05.5
KHC *ex* x 02 26 12.4
KHC *ex* x 02 26 19.0
KHC *ex* x 02 27 03.5
KHC *e*PP PP 02 27 15.5 +1.2
KHC *ex* x 02 27 23.5
KHC *ex* x 02 27 33.5
KHC *e*SKS SKSac 02 33 34.8 +7.7
KHC *e*SP SP 02 36 41.5 +8.6
KHC AMS AMS 03 16 50.0
comp=Z,78µm,17.6s
LIT Litokhoron 107.32 318 *e*P Pdif 02 22 45.4 -2.4
GEC2 GERESS Array S 107.41 329 *e*Pdiff Pdif 02 22 47.7 -0.4
GEC2 *e* 02 26 10.2
GEC2 *e*PS PS 02 36 34.0 -3.1
GERES GERESS Array B 107.41 329 Pdiff Pdif 02 22 46.9 -1.2
comp=Z,2.8nm,1.0s,baz=42,slow=6.2,SNR=18
GERES PKiKP PKiKP 02 26 57.4 +0.6
comp=Z,7.0nm,0.9s,baz=57,slow=7.2,SNR=3.6
GERES PP PP 02 27 05.5 -10
comp=Z,10nm,0.8s,baz=66,slow=1.6,SNR=9.4
GERES PKKPbc PKKPbc 02 38 13.6 -0.2
comp=Z,3.2nm,1.0s,baz=203,slow=2.8,SNR=5.0
ARSA Arzberg 107.46 327 ⇑*i*P Pdif 02 22 48.5 +0.2
comp=Z,32nm,1.1s
KRUS Krusevo 107.47 319 *i* P Pdif 02 22 47.7 -0.7
NPS Neapolis 107.47 312 *e*P PKiKP 02 27 04.0 +6.6
ROTZ Rotzenmuhle 107.54 330 *e*Pdiff Pdif 02 22 48.4 -0.3
ROTZ *e* 02 26 11.3
ROTZ *e*PS PS 02 36 37.5 -0.9
BIA Bitola 107.60 319 *i* P Pdif 02 22 46.4 -2.6
LAST Lasithi 107.61 312 *e*P Pdif 02 22 51.1 +2.0
WET Wettzell 107.62 330 *e*Pdiff Pdif 02 22 48.7 -0.4

WET e 02 26 11.7
WET ePS PS 02 36 38.2 -1.1
KVTX Kingsville 107.66 57 PFAKE 02 27 10.0 +12
KVTX LR LR
comp=Z,96µm,22.0s,MS7.3
BCI Bajram Curri 107.68 321 eP Pdif 02 22 52.6 +3.3
FNA Florina 107.69 319 eP Pdif 02 22 50.9 +1.5
LKR Lokris 107.70 316 eP Pdif 02 22 50.0 +0.5
MOA Molln 107.75 328 ĥ iP Pdif 02 22 50.9 +1.2
comp=Z,18nm,1.6s
MOA Molln 107.75 328 ĥ iPdiff Pdif 02 22 49.6 -0.1
comp=Z,18nm,1.6s
IBBN Ibbenburen 107.80 334 ePdiff Pdif 02 22 49.3 -0.6
IBBN e 02 26 13.2
IBBN ePPP 02 29 36.4
IBBN ePS PS 02 36 40.2 -0.7
PHP Peshkopia 107.81 320 eP Pdif 02 22 51.3 +1.4
UBBA Unterbreizbach 107.86 332 ePdiff Pdif 02 22 49.5 -0.7
UBBA ePS PS 02 36 43.7 +2.0
OHR Ohrid 107.89 319 eP Pdif 02 22 51.7 +1.4
OHR Ohrid 107.89 319 i P Pdif 02 22 43.9 -6.4
THL Klokotos Trika 107.91 318 eP Pdif 02 22 50.5 +0.1
PUK Puka 107.96 321 eP Pdif 02 22 52.0 +1.4
AGG Agios Georgios 107.97 317 eP Pdif 02 22 51.1 +0.4
IDI Anoyia 107.99 312 Pdiff Pdif 02 22 56.9 +6.2
comp=Z,6.4nm,0.9s,baz=359,slow=19,SNR=2.5
IDI PP PP 02 27 22.9 +2.9
comp=Z,33nm,0.9s,baz=85,slow=8.6,SNR=5.2
PERS Pernice 108.06 327 i Pdiff Pdif 02 22 53.6 +2.5
PERS i pPdiff 02 23 01.6
PERS ePP PP 02 27 26.2 +6.2
PERS eSKSac SKSac 02 33 43.3 +13
GRA1 Grafenberg Arr 108.06 331 ePdif Pdif 02 22 50.7 -0.4
GRA1 e 02 26 14.5
GRA1 ePPP 02 29 35.0
GRA1 ePS PS 02 36 43.0 -0.8
GRA1 LR LR
comp=Z,59µm,21.0s,MS7.1
GRF Grafenberg Arr 108.06 331 eP Pdif 02 22 50.7 -0.4
GRF ePPP 02 29 35.0
GRF ePS PS 02 36 43.0 -0.8
GRF Grafenberg Arr 108.06 331 ePdiff Pdif 02 22 50.7 -0.4
GRF e 02 26 14.5
GRF ePPP 02 29 35.0
GRF ePS PS 02 36 43.0 -0.8
GRF eL 03 17 05.6
comp=Z,59µm,21.0s
SISC Sisak 108.08 325 P Pdif 02 22 51.8 +0.6
SOKA Soboth 108.08 327 ĥ iP Pdif 02 22 51.3 +0.2
comp=Z,39nm,1.2s
DID Didima 108.11 315 eP Pdif 02 22 50.5 -0.8
CCM Cathedral Cave 108.11 44 PFAKE 02 27 10.0 +12
CCM LR LR
comp=Z,60µm,21.0s,MS7.1
MIAR Mount Ida 108.12 48 eP Pdif 02 22 51.4 +0.1
MIAR pmax pmax
comp=Z,16nm,1.0s
MIAR MLR MLR
comp=Z,89µm,20.0s,MS7.3
MIAR Mount Ida 108.12 48 ePdif Pdif 02 22 51.4 +0.1
comp=Z,16nm,1.0s
MIAR LR LR
comp=Z,89µm,20.0s,MS7.3
HDIL Hopedale 108.13 41 PFAKE 02 27 10.0 +12
HDIL LR LR
comp=Z,85µm,21.0s,MS7.3
KBN Korca 108.16 319 eP Pdif 02 22 53.5 +2.0
TIR Tirane 108.36 320 eP Pdif 02 22 54.9 +2.6
TIR Tirane 108.36 320 eP Pdif 02 22 53.3 +0.9
HKT Hockley 108.38 54 ePKP PKiKP 02 26 59.6 +0.4
HKT LR LR
comp=Z,53µm,19.0s,MS7.1
KMBO Kilima Mbogo 108.44 272 PP PP 02 27 30.1 +5.7
comp=Z,20nm,1.1s,baz=51,slow=7.1,SNR=5.8
KMBO Kilima Mbogo 108.44 272 PFAKE 02 27 10.0 +10
KMBO LR LR
comp=Z,17µm,21.0s,MS6.6
WTSB Winterswijk 108.45 335 ePKP PKiKP 02 27 03.5 +4.8
comp=Z,97nm,1.9s
WTSB Winterswijk 108.45 335 ePP PP 02 27 25.3 +2.7
comp=Z,140nm,1.4s
NATX Nacogdoches 108.53 51 PFAKE 02 27 10.0 +11
NATX LR LR
comp=Z,65µm,19.0s,MS7.2
GLMI Grayling 108.56 35 PFAKE 02 27 10.0 +11
GLMI LR LR
comp=Z,76µm,22.0s,MS7.2
BUG Bochum--Univer 108.63 334 ePPP 02 29 43.1
BUG ePS PS 02 36 48.8 -0.7
BOJS Bojanci 108.69 326 i Pdiff Pdif 02 22 53.7 -0.1
BOJS i pPdiff 02 23 04.8
BOJS ePP PP 02 27 32.8 +8.1
BOJS eSKSac SKSac 02 33 43.9 +11
BOJS eSP SP 02 36 52.8 +5.3
LJU Ljubljana 108.75 326 i Pdiff Pdif 02 22 55.5 +1.4
LJU i pPdiff 02 23 04.5
LJU eP PP 02 27 30.6 +5.5
LJU eSKSac SKSac 02 33 39.1 +5.6
LJU eSdiff Sdif 02 34 26.7 -35
LJU eSP SP 02 36 49.2 +1.1
LJU ePS PS 02 37 00.2 +9.2
LJU eSS SS 02 43 19.1 +38
STON Ston 108.84 322 P Pdif 02 22 50.6 -3.9
KYTH Kithira 108.84 314 eP PKiKP 02 27 06.0 +6.1
TNS Taunus Mts 108.99 333 ePdiff Pdif 02 22 55.0 -0.2
TNS ePPP 02 29 43.6
TNS ePS PS 02 36 52.5 -0.6
SRN Sarande 109.06 319 eP Pdif 02 22 58.7 +3.2
FUR Furstenfeldbru 109.07 330 ePdiff Pdif 02 22 55.2 -0.3
FUR ePS PS 02 36 53.1 -0.9
VOY Vojsko 109.10 327 ePdiff Pdif 02 22 54.5 -1.2
VOY e 02 22 58.8
VOY e 02 23 15.5
VOY Vojsko 109.10 327 ePdif Pdif 02 22 54.5 -1.2
VOY e 02 22 58.8
VOY e 02 23 15.5
VOY e 02 23 23.7
VOY e 02 26 34.9
MRKH Merkhyat 109.14 291 i P PP 02 27 42.8 +14
MRKH AMS AMS 02 37 42.4
comp=N,2µm,20.0s
MRKH i S PKKPdf 02 38 21.3 -1.5
LKD Levkas 109.26 317 eP 02 23 06.9
SCHQ Schefferville 109.33 19 PKKPbc PKKPbc 02 38 12.6 +4.8
comp=N,9.9nm,0.9s,baz=72,slow=4.5,SNR=4.3
SCHQ Schefferville 109.33 19 PFAKE 02 27 10.0 +10
SCHQ LR LR
comp=Z,67µm,20.0s,MS7.2
ESK Eskdalemuir 109.44 342 PFAKE 02 27 10.0 +10
ESK LR LR
comp=Z,41µm,21.0s,MS7.0
PYL PYLOS 109.44 315 eP Pdif 02 22 58.4 +1.2
NVLJ Novalja 109.48 325 P Pdif 02 22 53.4 -4.0
WTTA Wattenberg 109.49 329 Pdif 02 23 00.0 +2.6
STU Stuttgart 109.66 331 ePdiff Pdif 02 22 57.7 -0.5
STU e 02 26 21.7
STU ePS PS 02 37 00.4 +0.4
STU Stuttgart 109.66 331 ePdif Pdif 02 22 58.9 +0.7
HGN Heimansgroeve 109.70 334 ePKP 02 27 13.4
comp=Z,61nm,1.9s
HGN Heimansgroeve 109.70 334 ePP PP 02 27 34.5 +2.8
comp=Z,80nm,1.0s
HGN Heimansgroeve 109.70 334 eSKS SKSac 02 33 48.5 +11
HGN Heimansgroeve 109.70 334 ePS PS 02 37 02.6 +2.2
HGN Heimansgroeve 109.70 334 eSS SS 02 43 00.8 +7.1
MEM Membach 109.79 334 P Pdif 02 23 02.1 +3.4
comp=Z,16nm,2.5s
MEM PP PP 02 27 35.1 +2.8
BEBN Eben Emael 109.79 334 PP PP 02 27 35.0 +2.7
OLIL Olney 109.88 42 ePKP PKiKP 02 27 01.4 -0.4
OLIL ePP PP 02 27 37.5 +3.9
BCLA Clavier 110.23 334 PP PP 02 27 37.2 +1.7
UCC Uccle 110.34 335 P Pdif 02 23 11.3 +10
BFO Black Forest 110.38 331 ePdiff Pdif 02 23 00.4 -1.0
BFO e 02 26 25.1
BFO ePS PS 02 37 05.4 -1.6
WLF Walferdange 110.42 333 P Pdif 02 23 04.8 +3.3
WLF PP PP 02 27 40.5 +3.5
WLF Walferdange 110.42 333 ePdiff Pdif 02 23 01.5 0.0
WLF e 02 26 26.2
WLF ePS PS 02 37 07.6 +0.3
WLF Walferdange 110.42 333 ePdif Pdif 02 23 02.5 +1.0
WLF LR LR
comp=Z,79µm,20.0s,MS7.3
FGMS Monte Sant'Ang 110.57 322 P Pdif 02 23 05.7 +3.5
SNF Seneffe 110.59 335 PP PP 02 27 38.0 -0.2
MSAG Monte S. Angel 110.59 322 P Pdif 02 23 05.1 +2.8
GIVF Givet 110.67 334 eP Pdif 02 23 01.0 -1.6
SGRT San Giovanni R 110.67 322 P Pdif 02 23 03.7 +1.1
DOU Dourbes 110.77 334 P Pdif 02 23 09.4 +6.3
DOU PP Pdif 02 27 41.9 +2.4
RGNG Rignano Grg 110.81 322 P Pdif 02 23 04.0 +0.7
CING Cingoli 111.17 325 P Pdif 02 23 06.3 +1.5
TUE Stuetta 111.18 329 ePdif Pdif 02 23 07.1 +2.2
TUE LR LR
comp=Z,83µm,19.0s,MS7.3
FSSB Fossombrone 111.20 325 P Pdif 02 23 05.7 +0.7
PTRP Pietrapertosa 111.20 321 P Pdif 02 23 08.1 +3.1
FG5 Orsara di Pugl 111.24 322 P Pdif 02 23 09.4 +4.2
WCI Wyandotte Cave 111.34 42 ePKIKP PKiKP 02 27 06.4 +1.9
WCI e 02 27 43.6
WCI MLR MLR
comp=Z,48µm,19.0s,MS7.1
SNTG Esanatoglia 111.39 325 P Pdif 02 23 06.9 +1.1
TERO Teramo 111.40 324 P Pdif 02 23 09.4 +3.5
MENF Mencas 111.42 336 eP PKiKP 02 27 04.2 -0.1
WVT Waverly 111.44 44 ePKIKP PKiKP 02 27 06.4 +1.6
WVT e 02 27 46.7
WVT MLR MLR
comp=Z,52µm,22.0s,MS7.1
HINF Hinteralfeld 111.44 332 eP Pdif 02 23 05.4 -0.7
VBMS Vicksburg 111.46 49 ePKP PKiKP 02 27 05.2 +0.3
VBMS ePP PP 02 27 46.2 +0.9
VBMS LR LR
comp=Z,94µm,19.0s,MS7.4
TIP Timpagrande 111.54 320 ePdif Pdif 02 23 07.3 +0.8
TIP ePKP PKiKP 02 27 08.1 +3.2
TIP LR LR
comp=Z,52µm,20.0s,MS7.1
HAU Haudompre 111.54 332 eP Pdif 02 23 06.0 -0.5
NRCA Norcia 111.55 324 P Pdif 02 23 08.0 +1.4
SFI Santa Sofia 111.58 326 P Pdif 02 23 09.6 +2.9
INTR Introdacqua 111.61 323 P Pdif 02 23 10.0 +3.2
BADI Badiali 111.61 325 P Pdif 02 23 08.6 +1.8
MURB Monte Urbino 111.62 325 P Pdif 02 23 09.3 +2.5
MIDA Miranda 111.63 323 P Pdif 02 23 08.6 +1.7
RNI2 Rionero Sannit 111.65 323 P Pdif 02 23 09.2 +2.2
CDCA Citt' di Caste 111.65 325 P Pdif 02 23 09.4 +2.4
CUC Castrocucco 111.66 321 ePdif Pdif 02 23 06.8 -0.3
CUC ePKP PKiKP 02 27 03.5 -1.6
CUC LR LR
comp=Z,66µm,22.0s,MS7.2
ASS Assisi 111.67 325 P Pdif 02 23 09.0 +1.9
AQU L'Aquila 111.69 324 P Pdif 02 23 09.3 +2.1
DMUB Kingscourt 111.76 343 eP PP 02 27 45.8 -0.5
FNVD Fontana Vidola 111.80 327 P Pdif 02 23 10.5 +2.8
SDI San Donato 111.85 323 P Pdif 02 23 08.8 +0.9
PTQR Pietraquaria 111.90 324 P Pdif 02 23 09.3 +1.2
FIAM Fiamignano 111.91 324 P Pdif 02 23 08.8 +0.7
DLF Lyons Farm 112.18 342 eP PP 02 27 49.4 +0.1
VLC Villacollemand 112.21 327 PFAKE 02 27 20.0 +14
VLC LR LR
comp=Z,54µm,20.0s,MS7.1
ACSO Alum Creek Sta 112.28 38 ePKP PKiKP 02 27 09.2 +2.9
ACSO ePP PP 02 27 49.0 -1.8
ACSO LR LR
comp=Z,111µm,22.0s,MS7.4
DCN Croghan 112.36 343 eP PP 02 27 50.6 0.0
LATE Laterza 112.44 325 P Pdif 02 23 11.6 +1.1
RDP Rocca di Papa 112.46 324 P Pdif 02 23 12.0 +1.4
SOI Samo 112.62 319 P Pdif 02 23 13.5 +2.2
ERPA Erie 112.88 35 ePKP PKiKP 02 27 09.9 +2.6
ERPA ePP PP 02 27 51.8 -3.1
ERPA LR LR
comp=Z,93µm,20.0s,MS7.4
LOR Lormes 113.22 333 eP Pdif 02 23 13.5 -0.5
comp=Z,82nm,1.9s
SWET Sewanee 113.23 44 ePKP PKiKP 02 27 10.5 +2.2
NVL N'lazarevskaya 113.43 195 PKIKP PKiKP 02 27 04.0 -3.5
NVL S SP 02 37 32.5 +1.2
NVL pmax pmax
comp=Z,33nm,1.9s
NVL MLR MLR
comp=N,24µm,21.0s,MS7.0
NVL MLR MLR
comp=E,29µm,21.0s,MS7.0
NVL MLR MLR
comp=Z,61µm,21.0s,MS7.2
MAIT Maitri 113.45 195 ePdif PKiKP 02 27 11.5 +4.0
BNI Bardonecchia 113.51 330 ePKIKP PKiKP 02 27 11.0 +2.5
BNI MLR MLR
comp=Z,76µm,20.0s,MS7.3
SSF Saint Saulge 113.54 333 eP Pdif 02 23 15.2 -0.2
comp=Z,15nm,1.3s
LRAL Lakeview Retre 113.63 47 ePKP PKiKP 02 27 10.4 +1.4
LRAL LR LR
comp=Z,119µm,21.0s,MS7.5
CPCT Cooper Cave 114.06 43 ePKP PKiKP 02 27 07.9 -1.9
CPCT ePP PP 02 28 03.5 -0.1
LONY Lake Ozonia 114.07 30 ePKP PKiKP 02 27 08.9 -0.6
LONY LR LR
comp=Z,61µm,21.0s,MS7.2
TZTN Tazewell 114.09 42 PFAKE 02 27 20.0 +10
TZTN LR LR
comp=Z,68µm,21.0s,MS7.2
SSB Saint Sauveur 114.39 331 ePKIKP PKiKP 02 27 12.4 +2.3
TKL Tuckaleechee C 114.45 43 ePKIKP PKiKP 02 27 10.9 +0.3
MCWV Mont Chateau 114.53 37 ePKP PKiKP 02 27 09.1 -1.5
MCWV ePP PP 02 28 05.1 -1.6
MCWV LR LR
comp=Z,137µm,22.0s,MS7.5
BRAL Brewton 114.62 49 PFAKE 02 27 20.0 +9.0
BRAL LR LR
comp=Z,88µm,22.0s,MS7.3
STOF St-Etienne Org 114.65 329 eP PKiKP 02 27 14.1 +3.4
TCF Toulx Ste Croi 114.70 333 eP Pdif 02 23 16.6 -4.0
NCB Newcomb 114.71 31 ePKP PKiKP 02 27 11.5 +0.7
NCB LR LR
comp=Z,70µm,21.0s,MS7.2
TAVF Tavernes 114.84 329 eP PKiKP 02 27 13.1 +2.0
VILF Villemus 114.85 329 eP PKiKP 02 27 11.5 +0.4
BINY Binghamton 115.04 33 ePKP PKiKP 02 27 11.9 +0.5
BINY ePP PP 02 28 11.4 +1.2
BINY LR LR
comp=Z,118µm,20.0s,MS7.5
SSPA Standing Stone 115.04 35 ePKP PKiKP 02 27 15.0 +3.5
SSPA ePP PP 02 28 11.9 +1.6
SSPA LR LR
comp=Z,98µm,20.0s,MS7.4
PUYF Puyloubier 115.09 329 eP PKiKP 02 27 12.4 +0.9
PRAF Pradon 115.16 330 eP PKiKP 02 27 13.1 +1.4
TREF Trevaresse 115.18 329 eP PKiKP 02 27 13.3 +1.6
MDV Middlebury 115.21 30 ePKPdf PKiKP 02 27 10.0 -1.8
BERF Bertagne 115.25 329 eP PKiKP 02 27 12.4 +0.5
GELF Grande-Etoile 115.33 329 eP PKiKP 02 27 13.1 +1.1
ACCN Adirondack Com 115.41 31 ePKPdf PKPdf 02 27 12.9 +0.7
ACCN ePP PP 02 28 10.9 -1.8
ELN Prospectdale 115.49 40 ePKP PKPdf 02 27 12.7 +0.2
ELN ePP PP 02 28 14.4 +0.8
LBNH Lisbon 115.64 29 PFAKE 02 27 20.0 +7.4
LBNH LR LR
comp=Z,86µm,21.0s,MS7.3
BLA Blacksburg 115.71 40 ePKIKP PKPdf 02 27 16.5 +3.6
BLA MLR MLR
comp=Z,60µm,20.0s,MS7.2
VSL Villasalto 115.86 324 ePKPdf PKPdf 02 27 15.8 +2.7
VSL LR LR
comp=Z,30µm,20.0s,MS6.9
HNH Hanover 115.86 30 ePKPdf PKPdf 02 27 15.5 +2.4
GOGA Godfrey 115.92 45 ePKIKP PKPdf 02 27 13.5 0.0
GOGA e 02 28 15.1
GOGA MLR MLR
comp=Z,91µm,20.0s,MS7.4
SNAA Sanae 115.98 191 ePKPdf PKPdf 02 27 11.6 -0.8
SNAA e 02 27 15.3
SNAA e 02 27 20.7
SNAA e 02 28 16.7
SNAA e 02 37 42.8
SNAA e 02 37 47.8
SNAA Sanae 115.98 191 ePKPdf PKPdf 02 27 11.2 -1.2
PKME Peaks-Kenny Pk 116.08 27 PFAKE 02 27 20.0 +6.6
PKME LR LR
comp=Z,63µm,20.0s,MS7.2
SDMD Soldier's Deli 116.46 36 ePKPdf PKPdf 02 27 16.3 +2.0
QUA2 Belchertown 116.88 31 ePKPdf PKPdf 02 27 14.4 -0.7
JSC Jenkinsville 116.93 43 ePKIKP PKPdf 02 27 19.3 +3.9
CBN Corbin 116.94 37 ePKPdf PKPdf 02 27 14.9 -0.4
CBN LR LR
comp=Z,121µm,20.0s,MS7.5
PAL Palisades 116.99 33 ePKIKP PKPdf 02 27 15.6 +0.3
PAL e 02 28 21.6
HRV Adam Dziewonsk 117.11 30 ePKIKP PKPdf 02 27 15.1 -0.4
HRV MLR MLR
comp=Z,57µm,20.0s,MS7.2
CPNY Central Park 117.11 33 ePKPdf PKPdf 02 27 15.9 +0.3
URVA University of 117.26 38 ePKPdf PKPdf 02 27 14.7 -1.2
URVA ePP PP 02 28 24.4 -1.5
EJON La Jonquera 117.29 330 PKP PKPdf 02 27 21.9 +6.1
WES Weston 117.32 30 ePKIKP PKPdf 02 27 19.4 +3.5
WES MLR MLR
comp=Z,40µm,20.0s,MS7.0
VNA2 Neumayer--Watz 117.39 190 ePKPdf PKPdf 02 27 14.2 -0.9
baz=88,slow=0.8
VNA2 e 02 27 18.7
VNA2 e 02 27 24.4
VNA2 e 02 28 26.9
VNA2 e 02 37 40.0
VNA2 e 02 37 47.4
VNA3 Neumayer Olymp 117.47 189 ePKPdf PKPdf 02 27 13.9 -1.4
VNA3 e 02 27 18.4
VNA3 e 02 27 24.1
VNA3 e 02 28 27.6
VNA3 e 02 37 42.1
VNA3 e 02 37 47.4
MLS Moulis 117.77 331 eP PKPdf 02 27 16.4 -0.3
VNA1 Neumayer--Stat 117.78 189 ePKPdf PKPdf 02 27 13.9 -2.0
VNA1 e 02 27 17.2
VNA1 e 02 27 23.6
VNA1 e 02 28 30.2
VNA1 e 02 37 41.6
VNA1 e 02 37 46.1
RESF Ens 118.24 332 eP PKPdf 02 27 21.6 +4.0
KEST Kesra 118.31 320 PKP PKPdf 02 27 19.2 +1.2
comp=Z,22nm,1.1s,baz=187,slow=1.7,SNR=12
KEST PP PP 02 28 32.5 -0.7
comp=Z,9.8nm,1.0s,baz=200,slow=4.0,SNR=2.2
NHSC New Hope 118.35 43 PFAKE 02 27 30.0 +12
NHSC LR LR
comp=Z,61µm,20.0s,MS7.2
EMIR Miracle 118.36 330 PKP PKPdf 02 27 21.9 +4.1
EBIE Bielsa 118.42 332 PKP PKPdf 02 27 19.9 +2.0
CNNC Cliffs of the 118.54 40 ePKPdf PKPdf 02 27 17.7 -0.8
CNNC LR LR
comp=Z,117µm,20.0s,MS7.5
TEIG Tepich 118.64 60 PKP PKPdf 02 27 20.7 +1.7
comp=Z,16nm,1.1s,baz=28,slow=2.1,SNR=4.5
TEIG Tepich 118.64 60 ePKPdf PKPdf 02 27 14.9 -4.2
TEIG PKP PKPdf 02 27 20.7 +1.7
TEIG LR LR
comp=Z,59µm,22.0s,MS7.2
EALK Alkurruntz 118.75 333 PKP PKPdf 02 27 21.0 +2.4
ELIZ Elizondo 118.81 333 PKIKP PKPdf 02 27 19.7 +1.0
CMAH Djebel Manchou 118.91 322 P PKPdf 02 27 23.5 +4.4
EPOB Poblet 119.00 330 PKP PKPdf 02 27 18.8 -0.3
CAEH 'Ain El Ouahch 119.15 323 P PKPdf 02 27 24.0 +4.4
LSZ Lusaka 119.17 258 ePKIKP PKPdf 02 27 19.5 -0.6
LSZ MLR MLR
comp=Z,14µm,20.0s,MS6.6
ETOS Mallorca 119.31 328 PKP PKPdf 02 27 25.8 +6.1
ESAC San Casrasio 119.46 331 PKP PKPdf 02 27 19.7 -0.3
CKFL Kef-Lekhel 119.48 323 P PKPdf 02 27 25.0 +4.8
ELAN Lanestosa 119.58 335 PKP PKPdf 02 27 23.1 +2.9
ERTA Horta de San J 119.67 330 PKP PKPdf 02 27 18.2 -2.2
ECRI Cripan 119.68 333 PKIKP PKPdf 02 27 20.7 +0.3
CASM Ain Smara 119.71 323 P PKPdf 02 27 26.0 +5.3
DFRA Djebel Bou Aff 119.88 323 P PKPdf 02 27 25.0 +4.0
CTEI Djebel Teioual 119.90 323 P PKPdf 02 27 26.0 +5.0
EARI Arriondas 120.25 336 PKP PKPdf 02 27 24.3 +2.8
DWPF Disney 120.31 49 PFAKE 02 27 30.0 +7.9
DWPF LR LR
comp=Z,71µm,20.0s,MS7.3
SET Setif 120.40 323 P PKPdf 02 27 25.0 +3.0
CKHR Kef el Ahmar 120.46 323 P PKPdf 02 27 26.5 +4.4
EMOS Mosqueruela 120.51 330 PKP PKPdf 02 27 23.4 +1.3
AKF Akfadou 120.59 324 P PKPdf 02 27 27.5 +5.2
ETOR Torete 120.91 332 PKIKP PKPdf 02 27 19.6 -3.2
EPON Pontenova 120.99 337 PKP PKPdf 02 27 22.4 -0.5
ATAF Djebel Tarf 121.28 324 P PKPdf 02 27 26.9 +3.2
ABA Alger-Bouzarea 121.34 325 P PKPdf 02 27 28.1 +4.3
AKET Djebel Ketaf 121.39 324 P PKPdf 02 27 27.1 +3.2
ADJB Djebel Djouab 121.57 325 P PKPdf 02 27 26.1 +1.9
EBEN Beniarda 121.66 329 PKP PKPdf 02 27 27.8 +3.5
LBTB Lobatse 121.68 247 ePKIKP PKPdf 02 27 25.2 +0.5
LBTB MLR MLR
comp=Z,16µm,20.0s,MS6.7
BOSA Boshof 121.73 243 PKP PKPdf 02 27 25.6 +0.9
comp=Z,30nm,1.1s,baz=45,slow=1.0,SNR=12
BOSA PKKPbc PKKPbc 02 37 24.8 +0.9
comp=Z,3.7nm,0.9s,baz=290,slow=4.8,SNR=2.8
BOSA Boshof 121.73 243 ePKPdf PKPdf 02 27 25.0 +0.3
BOSA LR LR
comp=Z,17µm,20.0s,MS6.7
ERUA La Rua 121.78 337 PKIKP PKPdf 02 27 26.1 +1.6
EMHD Djebel Mahouad 121.81 325 P PKPdf 02 27 25.6 +0.9
SOR Soroa 121.85 55 eP PKPdf 02 27 29.1 +3.9
STS Santiago 121.89 338 PKIKP PKPdf 02 27 23.9 -0.8
TGUH Tegucigalpa,Un 121.97 66 ePKPdf PKPdf 02 27 29.4 +3.9
TGUH LR LR
comp=Z,35µm,20.0s,MS7.0
PMSA Palmer Station 121.98 165 PFAKE 02 27 40.0 +16
PMSA LR LR
comp=Z,37µm,21.0s,MS7.0
EMAZ Mazaricos 122.00 338 PKP PKPdf 02 27 27.9 +3.0
GUD Guadarrama 122.00 333 PKIKP PKPdf 02 27 25.3 +0.4
ECAL Calabor 122.01 336 PKP PKPdf 02 27 23.8 -1.2
PBRG Braganca 122.12 336 ePKPdf PKPdf 02 27 28.6 +3.5
ETOB Tobarra 122.37 330 PKP PKPdf 02 27 25.8 +0.1
EBNR Beni Rached 122.54 326 P PKPdf 02 27 29.5 +3.4
ELOB Lobios 122.59 337 PKP PKPdf 02 27 24.5 -1.5
ESDC Sonseca Array 122.70 332 PKP PKPdf 02 27 26.6 +0.3
comp=Z,10nm,0.8s,baz=1.5,slow=2.7,SNR=16
ESDC PP PP 02 29 02.3 -0.5
comp=Z,31nm,1.0s,baz=28,slow=6.9,SNR=9.1
ESDC PKKPbc PKKPbc 02 37 23.7 +3.0
comp=Z,4.1nm,1.0s,baz=219,slow=3.7,SNR=6.3
ESDC Sonseca Array 122.70 332 PKP PKPdf 02 27 25.5 -0.8
ESLA Sonseca Array 122.70 332 ePKPdf PKPdf 02 27 28.7 +2.3
ESLA ePP PP 02 28 56.4 -6.4
ESLA LR LR
comp=Z,296µm,20.0s,MS7.9
PCAB Cabril 122.71 337 ePKPdf PKPdf 02 27 29.1 +2.8
ECHA Ech Chlef 122.73 326 P PKPdf 02 27 29.2 +2.7
MVO Moncorvo 122.78 336 ePKPdf PKPdf 02 27 27.6 +1.2
MVO Moncorvo 122.78 336 eLQ 03 01 59.2
MVO eLR LR 03 07 39.9
comp=Z,31µm,20.0s
EMUR La Murta 122.84 329 PKP PKPdf 02 27 26.5 -0.1
EVIA Vianos 122.84 331 PKIKP PKPdf 02 27 26.1 -0.5
CART Cartagena 122.91 329 ePKPdf PKPdf 02 27 25.5 -1.3
PVRL Vila Real 122.96 336 ePKPdf PKPdf 02 27 29.5 +2.7
PVRL Vila Real 122.96 336 ePP PP 02 29 08.3 +3.8
PAB San Pablo 122.97 333 ePKIKP PKPdf 02 27 26.3 -0.5
PAB MLR MLR
comp=Z,42µm,21.0s,MS7.1
EANR 'Ain N'Sour 123.03 326 P PKPdf 02 27 29.0 +1.9
ETRT Tiaret 123.33 325 P PKPdf 02 27 28.5 +0.9
PAYG Puerto Ayora 123.42 84 PFAKE 02 27 40.0 +12
PAYG LR LR
comp=Z,50µm,21.0s,MS7.2
PVIS Viseu 123.51 336 ePKPdf PKPdf 02 27 27.2 -0.6
PVIS Viseu 123.51 336 ePP PP 02 29 08.5 +0.3
EHUE Huescar 123.53 330 PKIKP PKPdf 02 27 26.7 -1.3
MTE Manteigas 123.64 336 ePKPdf PKPdf 02 27 25.9 -2.2
MTE i P 02 29 30.8
MTE Manteigas 123.64 336 eLQ 03 01 05.1
MTE eLR LR 03 08 14.1
comp=Z,45µm,20.0s
MTE Manteigas 123.64 336 ePKPdf PKPdf 02 27 29.5 +1.4
MTE LR LR
comp=Z,44µm,20.0s,MS7.1
EQES Quesada 123.77 330 PKP PKPdf 02 27 28.8 +0.3
EBAN Banos Encina 123.83 331 PKIKP PKPdf 02 27 27.5 -1.0
ENIJ Nijar 124.00 329 PKIKP PKPdf 02 27 27.5 -1.4
PCBR Castelo Branco 124.08 335 ePKPdf PKPdf 02 27 28.5 -0.5
PCBR Castelo Branco 124.08 335 ePP PP 02 29 13.0 +0.9
EADA Adamuz 124.19 332 PKP PKPdf 02 27 30.4 +1.2

PMRV	**Marv??o**	**124.39**	**335**	*e*PKPdf	PKPdf	02 27 30.9	+1.3
PMRV	**Marv??o**	**124.39**	**335**	*e*PP	PP	02 29 22.0	+7.8
PMRV	**Marv??o**	**124.39**	**335**	*e*LQ		03 02 03.7	
PMRV				*e*LR	LR	03 08 59.8	
	comp=Z,30µm,20.0s						
EBER	**Berja**	**124.40**	**330**	PKP	PKPdf	02 27 31.2	+1.6
ECOG	**Cogollos-Vega**	**124.43**	**330**	PKIKP	PKPdf	02 27 27.6	-2.1
ELUQ	**Luque**	**124.54**	**331**	PKIKP	PKPdf	02 27 29.7	-0.2
MGV	**Manicaragua**	**124.61**	**54**	*e*P	PKPdf	02 27 30.7	+0.2
PTOM	**Tomar**	**124.65**	**336**	*e*PKPdf	PKPdf	02 27 30.9	+0.8
PTOM	**Tomar**	**124.65**	**336**	*e*PP	PP	02 29 14.9	-1.0
ERON	**Agron**	**124.75**	**330**	PKP	PKPdf	02 27 31.3	+0.9
EGUA	**Guajares**	**124.78**	**330**	PKIKP	PKPdf	02 27 31.0	+0.6
EBAD	**Badajoz**	**124.80**	**334**	PKP	PKPdf	02 27 30.2	-0.1
ELOJ	**Sierra Loja**	**124.81**	**331**	PKIKP	PKPdf	02 27 30.5	0.0
PESTR	**Estremoz**	**124.95**	**335**	*e*PKPdf	PKPdf	02 27 33.0	+2.3
PESTR	**Estremoz**	**124.95**	**335**	*e*PP	PP	02 29 16.9	-1.0
PESTR	**Estremoz**	**124.95**	**335**	*e*LQ		03 02 42.7	
PESTR				*e*LR	LR	03 08 26.6	
	comp=Z,31µm,18.0s						
SUR	**Sutherland**	**125.02**	**238**	*e*PKPdf	PKPdf	02 27 32.7	+1.7
SUR				LR	LR		
	comp=Z,30µm,21.0s,MS6.9						
ALMR	**Almeirim**	**125.11**	**336**	*e*P	PKPdf	02 27 31.2	+0.3
EALB	**Alboran**	**125.22**	**329**	PKP	PKPdf	02 27 30.2	-1.1
PBAR	**Barrancos**	**125.29**	**334**	*e*PKPdf	PKPdf	02 27 33.2	+1.9
PBAR	**Barrancos**	**125.29**	**334**	*e*PP	PP	02 29 22.6	+2.3
PBAR	**Barrancos**	**125.29**	**334**	*e*LQ		03 02 21.9	
PBAR				*e*LR	LR	03 08 53.0	
	comp=Z,33µm,18.0s						
EVO	**Evora**	**125.41**	**335**	*e*PKIKP	PKPdf	02 27 31.6	+0.1
	comp=Z,158nm,1.0s						
EVO	**Evora**	**125.41**	**335**	*e*PKPdf	PKPdf	02 27 26.0	-5.5
EVO	**Evora**	**125.41**	**335**	*e*PP	PP	02 29 24.5	+3.5
JTS	**JuntasAbangare**	**125.45**	**69**	PFAKE		02 27 40.0	+7.7
JTS				LR	LR		
	comp=Z,33µm,22.0s,MS7.0						
EMIN	**Mina Concepcio**	**125.47**	**333**	PKP	PKPdf	02 27 30.9	-0.8
PMAFR	**Mafra**	**125.56**	**336**	*e*PKPdf	PKPdf	02 27 30.1	-1.7
PMAFR	**Mafra**	**125.56**	**336**	*e*PP	PP	02 29 22.8	+0.8
PMAFR	**Mafra**	**125.56**	**336**	*e*LR	LR	03 03 27.8	
	comp=Z,22µm,20.0s						
EMIJ	**Mijas**	**125.58**	**331**	PKP	PKPdf	02 27 28.5	-3.4
LIS	**Lisbon**	**125.72**	**336**	*e*PP	PP	02 29 25.0	+2.0
LIS				*e*SS	SS	02 46 24.3	+2.6
LIS				AMS	AMS	03 28 28.8	
	comp=E,42µm,17.7s						
LIS	**Lisbon**	**125.72**	**336**	*e*PP	PP	02 29 25.0	+2.0
PBEJ	**Beja**	**125.77**	**334**	*e*PKPdf	PKPdf	02 27 33.4	+1.1
PBEJ	**Beja**	**125.77**	**334**	*e*PP	PP	02 29 26.7	+3.3
ESPR	**Espera**	**125.84**	**332**	PKP	PKPdf	02 27 32.3	-0.1
EJIF	**Jimena Fronter**	**126.00**	**331**	PKIKP	PKPdf	02 27 32.2	-0.5
EGRO	**El Granado**	**126.02**	**334**	PKP	PKPdf	02 27 31.8	-1.0
PVAQ	**Vaqueiros**	**126.23**	**334**	*e*PKPdf	PKPdf	02 27 33.5	+0.3
PVAQ	**Vaqueiros**	**126.23**	**334**	*e*PP	PP	02 29 27.8	+1.3
PVAQ	**Vaqueiros**	**126.23**	**334**	*e*LQ		03 03 46.6	
PVAQ				*e*LR	LR	03 09 27.3	
	comp=E,41µm,18.0s						
SFS	**San Fernando**	**126.33**	**332**	PFAKE		02 27 40.0	+6.6
SFS				LR	LR		
	comp=Z,67µm,21.0s,MS7.3						
PBDV	**Barranco-do-Ve**	**126.46**	**334**	*e*PKPdf	PKPdf	02 27 32.3	-1.3
PBDV	**Barranco-do-Ve**	**126.46**	**334**	*e*PP	PP	02 29 29.6	+1.6
PBDV	**Barranco-do-Ve**	**126.46**	**334**	*e*LQ		03 03 47.4	
PBDV				*e*LR	LR	03 09 58.6	
	comp=Z,57µm,18.0s						
PTEO	**Sao Teotonio**	**126.54**	**335**	*e*PKPdf	PKPdf	02 27 32.9	-0.8
PTEO	**Sao Teotonio**	**126.54**	**335**	*e*PP	PP	02 29 27.2	-1.3
MORF	**Marmelete**	**126.71**	**335**	*e*PKPdf	PKPdf	02 27 32.1	-2.0
MORF	**Marmelete**	**126.71**	**335**	*e*PP	PP	02 29 29.9	+0.2
MORF	**Marmelete**	**126.71**	**335**	*e*LQ		03 04 55.8	
MORF				*e*LR	LR	03 10 38.0	
	comp=Z,28µm,22.0s						
PFVI	**Vila Bisbo**	**126.93**	**335**	*e*PKPdf	PKPdf	02 27 36.7	+2.2
PFVI	**Vila Bisbo**	**126.93**	**335**	*e*PP	PP	02 29 29.3	-1.8
PFVI	**Vila Bisbo**	**126.93**	**335**	*e*LQ		03 03 14.0	
PFVI				*e*LR	LR	03 09 04.1	
	comp=Z,32µm,20.0s						
LMGC	**Las Mercedes**	**128.04**	**54**	*e*P	PKPdf	02 27 34.3	-2.8
BBSR	**BB Station**	**128.33**	**33**	*e*PKPdf	PKPdf	02 27 37.4	+0.1
BBSR				LR	LR		
	comp=Z,43µm,20.0s,MS7.1						
RTC	**Rabat Centre**	**128.66**	**331**	PFAKE		02 27 50.0	+12
RTC				LR	LR		
	comp=Z,21µm,22.0s,MS6.8						
TAM	**Tamanrasset**	**128.90**	**311**	*e*PKIKP	PKPdf	02 27 39.5	+0.9
TSUM	**Tsumeb**	**129.37**	**254**	*e*PKPdf	PKPdf	02 27 39.3	-0.2
TSUM				LR	LR		
	comp=Z,17µm,22.0s,MS6.7						
MASC	**Masc**	**130.17**	**52**	*e*P	PKPdf	02 27 44.1	+3.0
BCIP	**Isla Barro Col**	**130.55**	**68**	*e*PKPdf	PKPdf	02 27 41.1	-0.9
BCIP				LR	LR		
	comp=Z,47µm,21.0s,MS7.2						
CMLA	**Cha da Macela**	**131.27**	**351**	*e*Pdif	Pdif	02 24 48.3	+14
CMLA	**Cha da Macela**	**131.27**	**351**	*e*SS	SS	02 47 31.1	+1.2
CMLA	**Cha da Macela**	**131.27**	**351**	*e*LQ		03 02 52.7	
CMLA				*e*LR	LR	03 09 43.9	
CMLA	**Cha da Macela**	**131.27**	**351**	PFAKE		02 27 50.0	+7.2
CMLA				LR	LR		
	comp=Z,24µm,22.0s,MS6.9						
PDA	**Ponta Delgada**	**131.31**	**351**	*e*PP	PP	02 30 09.0	+10
PDA	**Ponta Delgada**	**131.31**	**351**	*e*P	PS	02 40 19.0	+5.2
PDA	**Ponta Delgada**	**131.31**	**351**	*e*LQ		03 03 58.0	
PDA				*e*LR	LR	03 10 26.0	
PMAR	**Madeira**	**133.93**	**340**	*e*PKPdf	PKPdf	02 27 52.4	+4.5
OTAV	**Otavalo**	**134.72**	**79**	*e*PKPdf	PKPdf	02 27 50.5	+0.6
OTAV				LR	LR		
	comp=Z,60µm,21.0s,MS7.3						
EFAM	**Famara**	**135.81**	**334**	PKP	PKPdf	02 27 52.0	+0.5
PLCA	**Paso Flores**	**136.05**	**140**	PKhKP		02 27 45.0	
	comp=Z,4.2nm,1.1s,baz=180,slow=4.7,SNR=4.7						
PLCA	**Paso Flores**	**136.05**	**140**	PKP	PKPdf	02 27 45.0	-6.5
PLCA				*e*PKPdf	PKPdf	02 27 51.6	+0.1
PLCA				LR	LR		
	comp=Z,30µm,20.0s,MS7.0						
AGPR	**Aguadilla, PR**	**136.58**	**49**	*e*PKPdf	PKPdf	02 27 50.9	-2.3
CFTV	**Fuerteventura**	**136.67**	**334**	PKP	PKPdf	02 27 55.1	+1.9
ROSC	**El Rosal**	**137.22**	**71**	PKhKP		02 27 49.3	
	comp=Z,6.8nm,0.7s,baz=267,slow=22,SNR=7.8						
ROSC	**El Rosal**	**137.22**	**71**	PKP	PKPdf	02 27 49.3	-5.3
ROSC				*e*PKPdf	PKPdf	02 27 56.1	+1.6
TOA0	**Torodi Ar. Sit**	**137.30**	**303**	*e*PKPpre		02 27 43.1	
TOA0				*e*PKPdf	PKPdf	02 27 53.8	-0.8
TOA0				*e*PP	PP	02 30 37.2	-1.9
TORD	**Torodi Ar. Bea**	**137.30**	**303**	PKhKP		02 27 45.4	
	comp=Z,16nm,1.2s,baz=54,slow=2.3,SNR=33						
TORD				PP	PP	02 30 41.8	+2.7
	comp=Z,144nm,1.1s,baz=54,slow=4.5,SNR=16						
EBAJ	**Bajamar**	**137.49**	**336**	PKP	PKPdf	02 27 56.6	+1.9
SJG	**San Juan**	**137.51**	**48**	*e*PKIKP	PKPdf	02 27 52.8	-2.1
SJG				MLR	MLR		
	comp=Z,49µm,22.0s						
EOSO	**Osorio**	**137.59**	**335**	PKP	PKPdf	02 27 57.4	+2.6
CCAN	**Las Canadas**	**137.88**	**337**	PKP	PKPdf	02 27 55.9	+0.5
MTP	**Monte Pirata**	**137.96**	**48**	*e*PKPdf	PKPdf	02 27 53.3	-2.5
EHIG	**Higuera**	**138.03**	**338**	PKP	PKPdf	02 27 57.6	+2.0
EGOM	**La Gomera**	**138.17**	**337**	PKP	PKPdf	02 27 56.8	+0.8
NNA	**Nana**	**138.18**	**96**	*e*PKPdf	PKPdf	02 27 55.7	-0.5
NNA				LR	LR		
	comp=Z,43µm,21.0s,MS7.2						
CHIE	**El Hierro**	**138.84**	**338**	PKP	PKPdf	02 27 55.3	-1.9
SDV	**Santo Domingo**	**138.93**	**63**	PKhKP		02 27 54.0	
	comp=Z,7.5nm,0.3s,baz=187,slow=23,SNR=4.7						
SDV	**Santo Domingo**	**138.93**	**63**	PKP	PKPdf	02 27 54.0	-3.7
SDV				*e*PKPdf	PKPdf	02 27 59.3	+1.6
SDV				LR	LR		
	comp=Z,11µm,22.0s,MS6.6						
CLCH	**Cerro Calan**	**139.66**	**130**	*e*P	PKPdf	02 27 57.2	-1.2
LMEL	**Las Melosas**	**139.71**	**131**	*e*P	PKPdf	02 27 53.4	-5.1
FCH	**Farellones**	**139.88**	**130**	*e*P	PKPdf	02 27 55.5	-3.3
TLL	**Tololo Astrono**	**140.76**	**125**	*e*P	PKPdf	02 27 58.9	-1.7
ANWB	**Willy Bob**	**140.91**	**44**	*e*PKPdf	PKPdf	02 28 00.9	-0.2
LCO	**Las Campanas**	**141.26**	**124**	*e*P	PKPdf	02 27 59.5	-1.9
LCO	**Las Campanas**	**141.26**	**124**	*e*PKPdf	PKPdf	02 28 00.9	-0.5
LCO				LR	LR		
	comp=Z,34µm,20.0s,MS7.1						
CFAA	**Coronel Fontan**	**142.19**	**129**	PKP	PKPdf	02 28 00.2	-2.8
	comp=Z,1.3nm,0.5s,baz=245,slow=3.0,SNR=1.9						
TRQA	**Tornquist**	**142.97**	**142**	*e*PKPpre		02 27 59.5	
TRQA				*e*PKPdf	PKPdf	02 28 03.8	-0.4
TRQA				LR	LR		
	comp=Z,42µm,20.0s,MS7.2						
ARE	**Arequipa**	**143.31**	**103**	*e*PKIKP	PKPdf	02 28 03.0	-2.4
FDF	**Fort de France**	**143.34**	**47**	*e*PKIKP	PKPdf	02 28 05.9	+0.4
PCRV	**Puerto La Cruz**	**143.40**	**57**	PKP	PKPdf	02 28 03.8	-1.9
	comp=Z,18nm,0.9s,baz=353,slow=13,SNR=5.5						
SLB	**Belfond**	**144.02**	**48**	*e*P	PKPdf	02 28 09.1	+2.4
SSV	**Crater Summit**	**144.23**	**49**	*e*P	PKPdf	02 28 05.7	-1.4
GRGR	**Grenville**	**144.63**	**51**	*e*PKPdf	PKPdf	02 28 08.1	+0.3
GRGR				LR	LR		
	comp=Z,58µm,21.0s,MS7.3						
LVC	**Limon Verde**	**144.73**	**114**	PKP	PKPdf	02 28 06.0	-1.8
	comp=Z,127nm,0.8s,baz=256,slow=3.7,SNR=2.9						
LVC	**Limon Verde**	**144.73**	**114**	*e*PKPdf	PKPdf	02 28 06.9	-0.9
LVC				LR	LR		
	comp=Z,33µm,21.0s,MS7.1						
BBGH	**Gun Hill**	**145.55**	**48**	*e*PKPbc	PKPbc	02 28 10.4	+0.9
BBGH				LR	LR		
	comp=Z,83µm,22.0s,MS7.5						
BBSP	**Saint Philip**	**145.65**	**47**	*e*	PKPdf	02 28 07.8	-1.7
TRN	**Trinidad (W)**	**145.73**	**53**	*e*P	PKPdf	02 28 09.8	+0.1
TPP	**Pointe-a-Pierr**	**145.89**	**53**	*e*P	PKPbc	02 28 12.5	+1.9
TPR	**Prospect**	**145.89**	**52**	*e*P	PKPdf	02 28 10.7	+0.7
TBH	**Brigand Hill**	**146.09**	**53**	*e*P	PKPdf	02 28 12.2	+1.8
DBIC	**Dimbokro**	**146.15**	**299**	PKPbc	PKPbc	02 28 10.1	-1.3
	comp=Z,135nm,0.8s,baz=42,slow=3.6,SNR=48						
DBIC	**Dimbokro**	**146.15**	**299**	PKP2	PKPab	02 28 10.1	-2.0
DBIC				pmax	pmax		
	comp=Z,135nm,0.8s						
DBIC	**Dimbokro**	**146.15**	**299**	*e*PKPbc	PKPbc	02 28 10.3	-1.1
DBIC				LR	LR		
	comp=Z,28µm,20.0s,MS7.0						
KIC	**Kosan Boka**	**146.20**	**299**	*e*PKIKP	PKPbc	02 28 15.0	+3.4
	comp=Z,2µm,0.9s						
TIC	**Toumodi**	**146.30**	**299**	*e*PKIKP	PKPbc	02 28 15.2	+3.3
	comp=Z,2µm,0.9s						
LIC	**Lamto**	**146.52**	**299**	*e*PKIKP	PKPdf	02 28 10.9	-0.2
	comp=Z,1µm,0.8s						
LIC	**Lamto**	**146.52**	**299**	*e*PKIKP	PKPbc	02 28 15.0	+2.5
	comp=Z,2µm,0.8s						
LPAZ	**La Paz**	**146.53**	**104**	PKPbc	PKPbc	02 28 12.4	0.0
	comp=Z,172nm,1.2s,baz=333,slow=1.8,SNR=87						
LPAZ	**La Paz**	**146.53**	**104**	*e*PKPbc	PKPbc	02 28 11.3	-1.1
LPAZ				LR	LR		
	comp=Z,24µm,20.0s,MS7.0						
TRIS	**Tristan da Cun**	**147.02**	**213**	PFAKE		02 28 20.0	+8.7
TRIS				LR	LR		
	comp=Z,29µm,22.0s,MS7.0						
LPA	**La Plata**	**147.50**	**142**	*ce*PKP	PKPdf	02 28 05.0	-7.1
LPA				PKIKP	PKPdf	02 28 15.7	+3.6
LPA				*e*SKKS	SKKSac	02 38 31.0	-0.8
LPA							
	comp=Z,42µm,19.0s						
BBTS	**Babate**	**149.45**	**325**	PKPbc	PKPbc	02 28 17.6	-2.6
SHEL	**Horse Pasture**	**151.80**	**256**	*e*PKPbc	PKPbc	02 28 25.5	-0.3
SHEL				LR	LR		
	comp=Z,18µm,20.0s,MS6.9						
CPUP	**Villa Florida**	**153.09**	**129**	PKP	PKPdf	02 28 21.8	+0.7
	comp=Z,24nm,1.2s,baz=298,slow=2.9,SNR=14						
CPUP	**Villa Florida**	**153.09**	**129**	*e*PKPdf	PKPdf	02 28 20.2	-0.9
CPUP				LR	LR		
	comp=Z,5µm,19.0s,MS6.4						
SIV	**San Ignacio**	**153.30**	**105**	PKP	PKPdf	02 28 21.8	+0.1
	comp=Z,26nm,1.1s,baz=242,slow=1.1,SNR=23						
ASCN	**Ascension**	**160.25**	**276**	PFAKE		02 28 40.0	+9.3
ASCN				LR	LR		
	comp=Z,21µm,21.0s						
SPB	**Sao Paulo**	**161.89**	**137**	*e*PKPdf	PKPdf	02 28 33.1	+1.0
BDFB	**Brasilia**	**165.62**	**112**	PKP	PKPdf	02 28 38.0	+2.2
	comp=Z,32nm,1.0s,baz=344,slow=3.5,SNR=13						
BDFB	**Brasilia**	**165.62**	**112**	PKP	PKPdf	02 28 38.0	+2.2
BDFB				LR	LR		
	comp=Z,67µm,21.0s						

JMA 30 02:11:00.1±0.2, 2638N×12771E, h20km±4km, M3.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NAH1	**Naha**	**0.18**	**186**	P	Pb	02 11 04.5	-0.4
NAH1				S	Sb	02 11 07.7	-0.5
JJT2	**Tamagusuku 2**	**0.24**	**172**	P	Pb	02 11 05.8	-0.1
JJT2				S	Sb	02 11 09.9	+0.1
JAGN	**Aguni-jima**	**0.47**	**296**	P	Pb	02 11 09.6	-0.1
JAGN				S	Sb	02 11 16.5	+0.3
JOW	**Kunigami**	**0.68**	**48**	P	Pb	02 11 13.1	-0.1
JOW				S	Sb	02 11 21.5	-0.7
JIH	**Iheya**	**0.69**	**19**	P	Pb	02 11 13.3	-0.2
JIH				S	Sb	02 11 22.7	+0.1
JKE	**Kume jima 2**	**0.83**	**266**	P	Pb	02 11 14.9	-0.9
JKE				S	Sb	02 11 25.4	-1.2
JTK	**Tokunoshima**	**1.78**	**38**	P	Pn	02 11 30.6	+0.8
JTK				S	Sn	02 11 53.1	+1.2

*NEIC **30** 02:15:41.9, 3305S×7183W, h30km, ML2.8(GUC), After GUC.*

GUC 30 02:15:41.9±0.7, 3305S×7183W, h30km±4km, MD3.5, ML2.8, 9C-11D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHA	**Instituto Hidr**	**0.16**	**83**	↓*i*P	Pb	02 15 47.9	+0.2
IHA				*i* S	Sb	02 15 51.7	+0.1
PACH	**Papudo**	**0.61**	**33**	↓*i*P	Pb	02 15 54.1	0.0
PACH				*i* S	Sb	02 16 02.9	+0.6
TACH	**Talagante**	**0.96**	**129**	↑*i*P	Pn	02 15 59.2	-0.2
TACH				*i* S	Sn	02 16 11.4	-0.7
RCDM	**Rinconada Maip**	**0.97**	**118**	↑*i*P	Pn	02 15 58.9	-0.5
RCDM				AML	AML	02 16 18.3	
	comp=N,559nm,0.1s						
PEL	**Peldehue**	**0.97**	**96**	↑*i*P	Pn	02 15 59.6	+0.2
PEL				*e*S	Sn	02 16 12.6	+0.5
PEL				AML	AML	02 16 14.5	
	comp=N,927nm,0.3s						
LNV	**Longovilo**	**0.97**	**159**	↑*i*P	Pn	02 15 59.3	-0.2
LNV				*i* S	Sn	02 16 11.9	-0.4
SAN	**Santiago**	**1.06**	**113**	↓*i*P	Pn	02 16 00.8	+0.1
SAN				AML	AML	02 16 16.7	
	comp=E,428nm,0.3s						
PTCH	**Petorca**	**1.09**	**44**	↑*i*P	Pn	02 16 01.5	+0.4
PTCH				*i* S	Sn	02 16 16.1	+0.9
PTCH				AML	AML	02 16 17.7	
	comp=E,911nm,0.6s						
PTCH	**Petorca**	**1.09**	**44**	↑*i*P	Pn	02 16 01.5	+0.4
PTCH				*i* S	Sn	02 16 16.1	+0.9
JACH	**Jahuel**	**1.10**	**71**	*e*P	Pn	02 16 01.5	+0.2
JACH				*i* S	Sn	02 16 16.4	+0.9
ANTU	**Antumapu**	**1.13**	**118**	↑*i*P	Pn	02 16 01.9	+0.4
ANTU				AML	AML	02 16 23.2	
	comp=E,305nm,0.2s						
CLCH	**Cerro Calan**	**1.14**	**108**	↓*i*P	Pn	02 16 02.3	+0.5
CLCH				*i* S	Sn	02 16 17.5	+1.1
CLCH				AML	AML	02 16 19.6	
	comp=E,350nm,0.2s						
CHNG	**Los Chungos**	**1.19**	**14**	↓*i*P	Pn	02 16 02.8	+0.3
CHNG				*i* S	Sn	02 16 18.0	+0.2
CHNG				AML	AML	02 16 22.9	
	comp=N,93nm,0.4s						
PCH	**Pirque**	**1.24**	**118**	↓*i*P	Pn	02 16 03.9	+0.6
PCH				*i* S	Sn	02 16 20.7	+1.8
FCH	**Farellones**	**1.32**	**103**	↓*i*P	Pn	02 16 05.2	+0.8
FCH				*i* S	Sn	02 16 23.3	+2.4
FCH				AML	AML	02 16 27.4	
	comp=E,315nm,0.2s						
CHCH	**Chadas Angostu**	**1.32**	**132**	↓*i*P	Pn	02 16 05.2	+0.8
CHCH				*i* S	Sn	02 16 22.5	+1.5
SJCH	**San Jose de Ma**	**1.37**	**116**	↓*i*P	Pn	02 16 05.3	+0.3
SJCH				*i* S	Sn	02 16 23.0	+0.9
SJCH				AML	AML	02 16 24.3	
	comp=E,218nm,0.4s						
SJCH	**San Jose de Ma**	**1.37**	**116**	↓*i*P	Pn	02 16 05.3	+0.3
SJCH				*i* S	Sn	02 16 23.0	+0.9
CACH	**El Canelo**	**1.48**	**136**	↑*i*P	Pn	02 16 08.1	+1.6
CACH				*i* S	Sn	02 16 28.2	+3.4
LMEL	**Las Melosas**	**1.58**	**121**	*e*P	Pn	02 16 09.4	+1.6
LMEL				*i* S	Sn	02 16 30.6	+3.3
LMEL				AML	AML	02 16 34.1	
	comp=N,577nm,0.2s						
LMEL	**Las Melosas**	**1.58**	**121**	*e*P	Pn	02 16 09.4	+1.6
LMEL				*i* S	Sn	02 16 30.6	+3.3
YECH	**El Yeso**	**1.59**	**113**	*i* P	Pn	02 16 10.3	+2.4
YECH				*i* S	Sn	02 16 31.5	+4.1
YECH				AML	AML	02 16 33.2	
	comp=N,192nm,0.5s						
SFDO	**San Fernando**	**1.71**	**157**	↑*i*P	Pn	02 16 11.3	+1.7
SFDO				*i* S	Sn	02 16 32.8	+2.4
CICH	**Cipreses**	**1.73**	**138**	↓*i*P	Pn	02 16 11.7	+1.7

IDC 30 02:19:46.5±6.0, 1053N×14547E, h0km, mb4.0/6, mb1 4.1/7, mb1mx4.0/21, mbtmp4.0/7, ML4.6/1, Error ellipse: s-maj=181.9km s-min=44.9km az=96.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.09**	**349**	Pn	Pn	02 20 35.9	-0.7
	72nm,0.3s,baz=43,slow=0.0,SNR=3.2						
GUMO				Sn	Sn	02 21 13.4	-0.9
	120nm,0.3s,baz=233,slow=0.0,SNR=3.9						
MJAR	**Matsushiro Arr**	**26.71**	**347**	P	P	02 25 28.1	+0.5
	0.9nm,0.4s,baz=171,slow=10,SNR=2.8						
KSRS	**Korea Array**	**31.11**	**332**	P	P	02 26 07.0	+0.3
	1.3nm,0.7s,baz=139,slow=11,SNR=3.1						
SONM	**Songino Array**	**49.56**	**326**	P	P	02 28 41.1	+1.9
	0.7nm,0.5s,baz=137,slow=6.5,SNR=4.3						
MKAR	**Makanchi Array**	**64.10**	**317**	P	P	02 30 23.0	+0.5
	2.7nm,1.1s,baz=98,slow=6.1,SNR=2.7						
KURK	**Kurchatov**	**67.29**	**321**	P	P	02 30 42.4	-0.7
	1.1nm,0.7s,baz=105,slow=6.0,SNR=4.5						
BVAR	**Borovoye Array**	**72.68**	**322**	P	P	02 31 14.9	-1.2
	0.7nm,0.5s,baz=138,slow=5.2,SNR=3.4						

IDC 30 02:23:38.6±3.0, 1050N×14616E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.9/19, mbtmp3.8/6, Error ellipse: s-maj=96.7km s-min=22.8km az=83.0, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.41**	**201**	P	P	02 30 10.4	0.0
	0.9nm,0.8s,baz=25,slow=10.0,SNR=3.6						
ASAR	**Alice Springs**	**36.01**	**199**	P	P	02 30 41.5	0.0
	0.6nm,0.5s,baz=26,slow=6.9,SNR=6.7						
CMAR	**Chiang Mai Arr**	**46.29**	**285**	P	P	02 32 06.3	-0.1
	0.8nm,0.3s,baz=81,slow=5.6,SNR=2.8						
SONM	**Songino Array**	**49.98**	**326**	P	P	02 32 34.2	-0.3
	0.4nm,0.4s,baz=140,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	**64.59**	**317**	P	P	02 34 18.5	+0.7
	0.5nm,0.6s,baz=101,slow=7.8,SNR=3.4						
KURK	**Kurchatov**	**67.76**	**321**	P	P	02 34 38.1	0.0
	1.3nm,0.7s,baz=109,slow=6.0,SNR=5.4						

*IDC **30** 02:23:54.0±2.8, 1065N×14786E, h0km, mb4.0/9, mb1 4.1/9, mb1mx4.1/20, mbtmp4.0/9, MS4.9/1, Ms1 4.9/1, ms1mx4.1/39, Error ellipse: s-maj=94.0km s-min=20.1km az=88.0*

*ISCJB **30** 02:23:57.0±2.2, 106N±0.1×1479E±05, h33km, mb4.0/10, Error ellipse: s-maj=73.2km s-min=16.1km az=178.3*

*NEIC **30** 02:23:58.7±2.9, 1061N×14697E, h10km, mb4.2/1, Error ellipse: s-maj=119.0km s-min=12.3km az=88.0*

ISC 30 02:23:59.4±2.2, 106N±01×1478E±05, h35km, n12, σ0§48/11, mb4.0/10, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.14**	**316**	LR	LR	02 26 22.7	
	comp=Z,16µm,19.8s,baz=135,slow=36						
MJAR	**Matsushiro Arr**	**27.23**	**343**	P	**P**	**02 29 41.1**	**+1.0**
	0.8nm,0.4s,mb3.6,baz=164,slow=10,SNR=4.5						
KSRS	**Korea Array**	**32.17**	**329**	P	**P**	**02 30 23.8**	**-0.1**
	0.4nm,0.3s,mb3.8,baz=137,slow=8.9,SNR=4.2						
WRA	**Warramunga Arr**	**33.16**	**204**	P	**P**	**02 30 32.9**	**+0.1**
	0.9nm,0.7s,mb3.8,baz=25,slow=9.5,SNR=2.3						
ASAR	**Alice Springs**	**36.71**	**202**	P	**P**	**02 31 03.3**	**0.0**
	0.8nm,

15nm,1.0s,mb4.5
KAKA Kakadu 26.57 210 *e*P **S** 02 46 54.9 **-4.5**
10nm,0.9s
KAKA Kakadu 26.57 210 *e*P **P** 02 42 26.0 **-0.9**
35nm,1.0s,mb4.8
MJAR Matsushiro Arr 26.86 346 P **P** 02 42 27.5 **-1.8**
3.9nm,0.8s,mb4.0,baz=167,slow=9.8,SNR=10
MAJO Matsushiro 26.87 346 *e*P **P** 02 42 27.6 **-1.8**
MAJO pmax pmax
comp=Z,40nm,1.4s,mb4.8
MAJO Matsushiro 26.87 346 *e*P **P** 02 42 27.6 **-1.8**
comp=Z,40nm,1.4s,mb4.8
MAT Matsushiro 26.87 346 P **P** 02 42 29.0 **-0.4**
BATI Baumata 30.11 228 P **P** 02 42 58.4 **-0.1**
comp=Z,37nm,0.9s,mb5.1,baz=180,slow=2.8,SNR=6.6
KSRS Korea Array 31.34 332 P **P** 02 43 08.3 **-0.7**
comp=Z,3.4nm,0.8s,mb4.2,baz=144,slow=9.4,SNR=12
WRAB Tennant Creek 32.24 201 *e*P **P** 02 43 16.8 **-0.4**
WRAB pmax pmax
comp=Z,25nm,1.4s,mb4.8
WRAB Tennant Creek 32.24 201 *e*P **P** 02 43 16.8 **-0.4**
comp=Z,25nm,1.4s,mb4.9
WB2 Warramunga Arr 32.25 201 *e*P **P** 02 43 17.4 **+0.2**
WRA Warramunga Arr 32.25 201 P **P** 02 43 16.9 **-0.4**
comp=Z,6.0nm,0.8s,mb4.5,baz=19,slow=9.6,SNR=17
FITZ Fitzroy Crossi 34.67 215 *e*P **P** 02 43 29.6 **-8.8**
comp=Z,6.4nm,1.0s,mb4.5
FITZ Fitzroy Crossi 34.67 215 P **P** 02 43 37.7 **-0.7**
comp=Z,4.3nm,0.9s,mb4.4,baz=140,slow=5.1,SNR=4.5
ASAR Alice Springs 35.86 199 P **P** 02 43 48.8 **+0.2**
comp=Z,6.3nm,0.9s,mb4.5,baz=26,slow=7.1,SNR=38
KSM Kuching 36.38 258 *e*P **P** 02 43 53.2 **0.0**
CD2 Chengdu 43.95 304 *e*P **P** 02 44 55.8 **0.0**
CD2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
CMAR Chiang Mai Arr 45.97 286 P **P** 02 45 13.0 **+1.0**
comp=Z,12nm,0.9s,mb4.8,baz=86,slow=6.1,SNR=30
ULN Ulaanbaatar 49.47 326 *e*P **P** 02 45 39.2 **+0.5**
ULN pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
ULN Ulaanbaatar 49.47 326 *e*P **P** 02 45 39.2 **+0.5**
comp=Z,5.8nm,0.9s,mb4.6
SONM Songino Array 49.82 326 P **P** 02 45 42.0 **+0.6**
comp=Z,3.6nm,0.7s,mb4.5,baz=139,slow=8.8,SNR=18
GTA Gaotai 49.95 313 *e*P **P** 02 45 43.0 **+0.4**
GTA AP pP 02 45 48.3 -4.7
GTA XP sP 02 45 51.3 -5.9
GTA AMB AMB
comp=Z,6.0nm,1.0s,mb4.6
ZAK Zakamensk 52.94 327⇑ *i*P **P** 02 46 04.9 **+0.2**
ZAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
BILL Bilibino 59.09 9 *e*P **P** 02 46 48.9 **+0.5**
BILL pmax pmax
comp=Z,11nm,1.3s,mb4.7
MK31 Makanchi Array 64.38 317 *e*P **P** 02 47 24.7 **+0.3**
MKAR Makanchi Array 64.38 317 P **P** 02 47 24.9 **+0.5**
comp=Z,3.4nm,0.7s,mb4.5,baz=93,slow=7.8,SNR=13
ZAA0 Zalesovo Array 64.70 325 *e*P **P** 02 47 26.0 **-0.3**
ZALV Zalesovo Beam 64.70 325 P **P** 02 47 25.9 **-0.4**
comp=Z,1.4nm,0.5s,mb4.2,baz=109,slow=6.0,SNR=5.9
KURK Kurchatov 67.57 321 P **P** 02 47 44.5 **-0.3**
comp=Z,6.8nm,0.7s,mb4.8,baz=105,slow=6.0,SNR=23
KURK Kurchatov 67.57 321 *e*P **P** 02 47 45.2 **+0.4**
KURK pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KURK Kurchatov 67.57 321 *e*P **P** 02 47 45.2 **+0.4**
comp=Z,8.8nm,0.7s,mb4.9
TKM2 Tokmak 2 68.47 312 *e*P **P** 02 47 50.7 **0.0**
TKM2 pmax pmax
comp=Z,168nm,2.0s,mb5.7
TKM2 Tokmak 2 68.47 312 *e*P **P** 02 47 50.6 **0.0**
comp=Z,168nm,2.0s,mb5.7
CHUM Lake Minchumin 68.47 25 *e*P **P** 02 47 45.8 **-4.5**
comp=Z,37nm,1.2s,mb5.3
SEW Seward 68.51 29 *e*P **P** 02 47 50.8 **+0.3**
RC01 Rabbit Creek A 68.67 28 *e*P **P** 02 47 50.4 **-1.2**
comp=Z,46nm,1.5s,mb5.2
FRU Bishkek 69.18 312 *e*P **P** 02 47 49.5 **-5.6**
FRU pmax pmax
comp=Z,370nm,2.4s
BVAR Borovoye Array 72.95 322 P **P** 02 48 17.6 **-0.1**
comp=Z,5.3nm,0.7s,mb4.6,baz=103,slow=6.7,SNR=13
BRVK Borovoye 73.01 322 *e*P **P** 02 48 18.6 **+0.5**
BRVK pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
BRVK Borovoye 73.01 322 *e*P **P** 02 48 18.6 **+0.5**
comp=Z,7.9nm,0.6s,mb4.8
AKTK Aktyubinsk 80.63 320 P **P** 02 49 02.2 **+1.2**
AKTO Aktyubinsk 80.63 320 P **P** 02 49 02.2 **+1.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=153,slow=4.1,SNR=3.7
NVAR Mina Array Bea 88.14 51 P **P** 02 49 42.0 **+2.6**
comp=Z,1.8nm,1.0s,mb4.3,baz=263,slow=6.1,SNR=5.9
DBIC Dimbokro 146.20 299 PKPbc PKPbc 02 56 30.5 +0.8
comp=Z,4.8nm,0.8s,baz=352,slow=7.1,SNR=6.5
KIC Kosan Boka 146.25 298 *e*P PKPdf 02 56 30.2 +1.4
comp=Z,47nm,1.0s
TIC Toumodi 146.35 299 *e*P PKPdf 02 56 27.9 -1.0
comp=Z,7.4nm,0.2s
LPAZ La Paz 146.50 104 PKPbc PKPbc 02 56 33.7 +3.2
comp=Z,1.7nm,1.0s,baz=248,slow=2.0,SNR=5.4
LPAZ La Paz 146.50 104 PKPbc PKPbc 02 56 33.7 +3.2
LIC Lamto 146.56 298 *e*P PKPdf 02 56 31.1 +1.8
comp=Z,40nm,1.1s

IDC ***30*** *02:41:25.1±2.3, 1047N×14624E, h0km, mb4.1/8, mb1 4.3/9, mb1mx4.1/20, mbtmp4.1/9, ML4.4/1, Error ellipse: s-maj=78.4km s-min=18.9km az=87.0*
NEIC ***30*** *02:41:27.2±1.2, 1052N×146.11E, h10km, mb4.3/2, Error ellipse: s-maj=47.8km s-min=10.2km az=82.0*
ISCJB ***30*** *02:41:28.3±1.3, 1055N±009×1461E±04, h33km, mb4.1/9, Error ellipse: s-maj=52.2km s-min=8.9km az=169.4*
ISC 30 02:41:30.3±1.4, 1052N±009×1462E±04, h35km, n14, σ1§17/15, mb4.1/9, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.31**	**337**	Pn	**Pn**	**02 42 17.0**	**-2.6**
	35nm,0.3s,SNR=7.4						
GUMO				Sn	**Sn**	**02 42 54.7**	**-3.0**
	268nm,0.3s,SNR=13						
PMG	**Port Moresby**	**19.82**	**177**	*e*P	**Pn**	**02 45 58.7**	**-1.1**
	10nm,0.8s						
MJAR	**Matsushiro Arr**	**26.89**	**346**	P	**P**	**02 47 07.6**	**-0.4**
	2.1nm,0.8s,mb3.7,baz=166,slow=9.4,SNR=4.4						
KSRS	**Korea Array**	**31.45**	**331**	P	**P**	**02 47 48.2**	**-0.3**
	1.9nm,0.8s,mb4.0,baz=144,slow=9.4,SNR=6.5						
WB2	**Warramunga Arr**	**32.43**	**201**	*e*P	**P**	**02 48 03.1**	**+5.8**
WRA	**Warramunga Arr**	**32.44**	**201**	P	**P**	**02 47 56.4**	**-0.9**
	1.0nm,0.8s,mb3.7,baz=28,slow=9.3,SNR=4.4						
ASAR	**Alice Springs**	**36.03**	**199**	P	**P**	**02 48 28.0**	**-0.4**
	1.8nm,0.9s,mb4.0,baz=23,slow=7.0,SNR=6.4						
CMAR	**Chiang Mai Arr**	**46.30**	**285**	P	**P**	**02 49 53.2**	**+0.3**
	4.4nm,0.8s,mb4.5,baz=87,slow=5.9,SNR=12						
ULN	**Ulaanbaatar**	**49.62**	**326**	*e*P	**P**	**02 50 19.0**	**+0.8**
	2.2nm,0.6s,mb4.4						
SONM	**Songino Array**	**49.97**	**326**	P	**P**	**02 50 22.5**	**+1.6**
	1.7nm,0.6s,mb4.2,baz=139,slow=7.3,SNR=11						
MK31	**Makanchi Array**	**64.58**	**317**	*e*P	**P**	**02 52 04.2**	**+0.1**
MKAR	**Makanchi Array**	**64.58**	**317**	P	**P**	**02 52 05.5**	**+1.4**
	1.3nm,0.7s,mb4.1,baz=99,slow=8.7,SNR=4.8						
KURK	**Kurchatov**	**67.75**	**321**	P	**P**	**02 52 25.2**	**+0.9**
	baz=106,slow=6.1						
BVAR	**Borovoye Array**	**73.12**	**322**	P	**P**	**02 52 58.3**	**+1.2**
	2.2nm,0.5s,mb4.3,baz=100,slow=7.6,SNR=10						

IDC ***30*** *03:23:49.1±0.9, 1045N×14570E, h0km, mb4.0/10, mb1 4.2/11, mb1mx4.1/21, mbtmp4.0/11, ML4.3/1, Error ellipse: s-maj=31.7km s-min=17.5km az=83.0*
NEIC ***30*** *03:23:50.4±0.7, 1047N×14572E, h10km, mb4.3/2, Error ellipse: s-maj=27.1km s-min=11.0km az=88.0*
ISCJB ***30*** *03:23:52.0±0.9, 1050N±006×1456E±02, h33km, mb4.0/12, Error ellipse: s-maj=33.0km s-min=8.5km az=176.3*
ISC 30 03:23:54.1±0.9, 1052N±006×1457E±02, h35km, n16, σ1§31/16, mb4.0/12, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.15**	**346**	Pn	**Pn**	**03 24 39.1**	**-2.1**
	31nm,0.3s,SNR=13						
GUMO				Sn	**Sn**	**03 25 15.9**	**-1.6**
	114nm,0.3s,SNR=7.5						
MJAR	**Matsushiro Arr**	**26.77**	**347**	P	**P**	**03 29 29.8**	**-0.8**
	1.0nm,0.8s,mb3.4,baz=70,slow=25,SNR=4.1						
KSRS	**Korea Array**	**31.22**	**332**	P	**P**	**03 30 10.1**	**-0.1**
	0.9nm,0.4s,mb3.9,baz=143,slow=10,SNR=3.6						
WRAB	**Tennant Creek**	**32.25**	**200**	*e*P	**P**	**03 30 18.1**	**-1.3**
	1.4nm,0.5s,mb4.0						
WB2	**Warramunga Arr**	**32.26**	**200**	*e*P	**P**	**03 30 19.3**	**-0.2**
WRA	**Warramunga Arr**	**32.27**	**200**	P	**P**	**03 30 18.7**	**-0.8**
	1.0nm,0.7s,mb3.7,baz=26,slow=9.3,SNR=7.0						
ASAR	**Alice Springs**	**35.88**	**199**	P	**P**	**03 30 49.5**	**-1.3**
	0.5nm,0.5s,mb3.7,baz=25,slow=8.0,SNR=17						
LZH	**Lanzhou**	**45.58**	**311**	*e*P	**P**	**03 32 15.0**	**+4.2**
	19nm,1.2s,mb4.9						
LZH				pP	pP	03 32 20.5	-0.7
LZH				sP	sP	03 32 23.1	-2.3
CMAR	**Chiang Mai Arr**	**45.82**	**285**	P	**P**	**03 32 14.2**	**+1.1**
	1.4nm,0.6s,mb4.1,baz=88,slow=6.0,SNR=7.3						
SONM	**Songino Array**	**49.69**	**326**	P	**P**	**03 32 45.1**	**+2.6**
	0.9nm,0.6s,mb4.0,baz=116,slow=6.7,SNR=6.6						
MKAR	**Makanchi Array**	**64.25**	**317**	P	**P**	**03 34 26.2**	**+0.6**
	0.2nm,0.3s,mb3.7,baz=109,slow=7.3,SNR=3.6						
KURK	**Kurchatov**	**67.43**	**321**	P	**P**	**03 34 47.6**	**+1.5**
	1.4nm,0.5s,mb4.3,baz=106,slow=6.4,SNR=6.0						
KURK	**Kurchatov**	**67.43**	**321**	*e*P	**P**	**03 34 47.0**	**+0.9**
	2.6nm,0.7s,mb4.4						
BVAR	**Borovoye Array**	**72.81**	**322**	P	**P**	**03 35 20.9**	**+1.8**
	1.4nm,0.6s,mb4.1,baz=114,slow=8.4,SNR=6.0						
NVAR	**Mina Array Bea**	**88.21**	**51**	P	**P**	**03 36 42.9**	**+1.0**
	1.9nm,0.6s,mb4.5,baz=273,slow=5.4,SNR=16						
LPAZ	**La Paz**	**146.65**	**104**	PKPbc	PKPbc	03 43 34.6	+1.6
	1.3nm,0.5s,baz=312,slow=3.1,SNR=12						

IDC ***30*** *03:30:51.0±0.9, 2016N×14392E, h0km, mb4.0/10, mb1 4.1/11, mb1mx4.0/22, mbtmp4.0/11, ML3.5/1, Error ellipse: s-maj=31.1km s-min=19.2km az=77.0*
NEIC ***30*** *03:30:52.4±0.7, 2015N×14395E, h10km, mb4.7/2, Error ellipse: s-maj=25.2km s-min=13.2km az=81.0*
ISCJB ***30*** *03:30:55.9±5.0, 202N±01×1438E±02, h47km±43km, mb4.1/13, Error ellipse: s-maj=35.1km s-min=18.9km az=172.9*
ISC 30 03:30:56.4±4.2, 202N±01×1439E±02, h35km±37km, n14, σ0§82/14, mb4.1/13, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**17.07**	**344**	P	**Pn**	**03 34 52.1**	**-0.2**
	0.2nm,0.3s,baz=164,slow=12,SNR=5.0						
KSRS	**Korea Array**	**22.16**	**324**	P	**P**	**03 35 49.4**	**+0.2**
	2.7nm,0.7s,mb3.8,baz=144,slow=8.7,SNR=12						
WRA	**Warramunga Arr**	**40.95**	**194**	P	**P**	**03 38 35.1**	**-0.6**
	1.1nm,0.6s,mb3.6,baz=12,slow=8.8,SNR=5.0						
SONM	**Songino Array**	**40.97**	**321**	P	**P**	**03 38 36.1**	**+0.5**
	0.7nm,0.7s,mb3.4,baz=125,slow=7.0,SNR=4.1						
ASAR	**Alice Springs**	**44.64**	**193**	P	**P**	**03 39 05.8**	**+0.3**
	0.4nm,0.7s,mb3.3,baz=12,slow=8.3,SNR=8.4						
ZALV	**Zalvo Beam**	**55.85**	**322**	P	**P**	**03 40 30.4**	**+0.3**
	1.2nm,0.6s,mb4.1,baz=93,slow=6.4,SNR=5.7						
MKAR	**Makanchi Array**	**56.25**	**313**	P	**P**	**03 40 33.5**	**+0.4**
	0.3nm,0.3s,mb3.8,baz=86,slow=8.9,SNR=7.1						
KURK	**Kurchatov**	**59.07**	**318**	P	**P**	**03 40 52.7**	**-0.3**
	2.5nm,0.7s,mb4.4,baz=96,slow=8.1,SNR=7.9						
BVAR	**Borovoye Array**	**64.29**	**320**	P	**P**	**03 41 27.0**	**-1.0**
	2.9nm,0.5s,mb4.6,baz=91,slow=7.6,SNR=15						
BRVK	**Borovoye**	**64.36**	**320**	*e*P	**P**	**03 41 28.6**	**+0.2**
	2.0nm,0.3s,mb4.6						
KBL	**Kabul**	**66.70**	**300**	*e*P	**P**	**03 41 45.3**	**+1.3**
	2.3nm,0.4s,mb4.6						
YKA	**Yellowknife Ar**	**77.48**	**28**	P	**P**	**03 42 47.6**	**-0.4**
	2.3nm,0.8s,mb4.2,baz=291,slow=4.8,SNR=4.3						
JOF	**Joensuu**	**82.00**	**335**	*ep*	**P**	**03 43 10.2**	**-2.2**
	2.2nm,0.6s,mb4.3						
NVAR	**Mina Array Bea**	**83.55**	**52**	P	**P**	**03 43 22.2**	**+1.2**
	2.1nm,0.8s,mb4.3,baz=263,slow=5.7,SNR=14						

IDC 30 03:35:48.9±11.0, 2010N×14378E, h103km±109km, mb3.4/5, mb1 3.6/5, mb1mx3.3/21, mbtmp3.4/5, MS4.6/1, Ms1 4.6/1, ms1mx3.1/40, Error ellipse: s-maj=54.2km s-min=28.1km az=78.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**6.56**	**171**	LR	LR	03 39 43.1	
	comp=Z,4μm,19.4s,baz=315,slow=36						
KSRS	**Korea Array**	**22.12**	**325**	P	P	03 40 36.2	+0.2
	0.6nm,0.4s,baz=144,slow=8.4,SNR=3.4						
WRA	**Warramunga Arr**	**40.86**	**194**	P	P	03 43 20.8	0.0
	0.4nm,0.6s,baz=16,slow=8.9,SNR=2.5						
KURK	**Kurchatov**	**59.02**	**318**	P	P	03 45 37.9	0.0
	0.8nm,0.6s,baz=98,slow=8.0,SNR=4.0						
BVAR	**Borovoye Array**	**64.24**	**320**	P	P	03 46 13.2	+0.3
	1.3nm,0.5s,baz=90,slow=8.6,SNR=4.7						
NVAR	**Mina Array Bea**	**83.70**	**52**	P	P	03 48 06.9	+0.4
	0.5nm,0.6s,baz=250,slow=4.7,SNR=4.5						

ISCJB ***30*** *03:49:48.6±0.5, 1761N±005×9562W±003, h111km±8km, mb3.1/2, Error ellipse: s-maj=8.3km s-min=3.9km az=16.3*
NEIC ***30*** *03:49:49.9, 1766N×9562W, h120km, MD4.0(MEX), After MEX.*
MEX ***30*** *03:49:50.0±1.2, 1767N×9563W, h118km±14km, MD4.0*
IDC ***30*** *03:50:00.7±7.7, 1809N×9493W, h217km±65km, mb3.0/2, mb1 3.4/4, mb1mx3.0/22, mbtmp2.9/4, Error ellipse: s-maj=117.1km s-min=44.5km az=8.0*
ISC 30 03:49:49.8±0.5, 1761N±005×9562W±003, h103km±8km, n19, σ1§05/35, mb3.1/2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**1.19**	**244**	*i* P	**Pn**	**03 50 13.4**	**+0.8**
VHO				*i* S	**Sn**	**03 50 31.4**	**+1.6**
TUIG	**Tuzandepetl**	**1.22**	**69**	*i* P	**Pn**	**03 50 13.0**	**0.0**
TUIG				*i* S	**Sn**	**03 50 29.8**	**-0.6**
TPIG	**Tehuac#an**	**1.84**	**296**	*i* P	**Pn**	**03 50 20.5**	**-0.1**
TPIG				*i* S	**Sn**	**03 50 43.3**	**-0.7**
HUIG	**Huatulco**	**1.89**	**194**	*i* P	**Pn**	**03 50 21.6**	**+0.4**
HUIG				*i* S	**Sn**	**03 50 45.7**	**+0.7**
UTMO	**Huajuapan**	**2.09**	**276**	*i* P	**Pn**	**03 50 23.0**	**-0.7**
UTMO				*i* S	**Sn**	**03 50 48.9**	**-0.8**
TGIG		**2.53**	**109**	*i* P	**Pn**	**03 50 30.2**	**+0.8**
TGIG				*i* S	**Sn**	**03 50 59.0**	**-0.8**
PNIG	**Pinotepa**	**2.69**	**244**	*i* P	**Pn**	**03 50 29.6**	**-1.9**
PNIG				*i* S	**Sn**	**03 51 02.6**	**-0.9**
SCX	**San Cristobal**	**2.98**	**106**	*e*P	**Pn**	**03 50 36.2**	**+0.8**
SCX				*i* S	**Sn**	**03 51 10.1**	**-0.5**
PPM	**Popocatepetl**	**3.20**	**297**	*i* P	**Pn**	**03 50 40.7**	**+2.3**
PPM				*i* S	**Sn**	**03 51 16.0**	**+0.1**
IIO	**Organos**	**3.54**	**304**	*e*P	**Pn**	**03 50 44.1**	**+1.2**
IIO				*i* S	**Sn**	**03 51 25.3**	**+1.3**
CCIG	**Comitan**	**3.58**	**111**	*i* P	**Pn**	**03 50 43.3**	**-0.2**
CCIG				*i* S	**Sn**	**03 51 25.7**	**+0.7**
CCIG	**Comitan**	**3.58**	**111**	*i* P	**Pn**	**03 50 43.3**	**-0.2**
CCIG				*i* S	**Sn**	**03 51 22.3**	**-2.7**
MZVM		**3.77**	**295**	*e*P	**Pn**	**03 50 44.5**	**-1.4**
MZVM				*i* S	**Sn**	**03 51 21.8**	**-7.7**
THIG		**4.19**	**129**	*e*P	**Pn**	**03 50 51.5**	**-0.2**
THIG				*i* S	**Sn**	**03 51 40.6**	**+0.8**
CAIG	**El Cayaco**	**4.47**	**264**	*i* P	**Pn**	**03 50 52.7**	**-2.8**
CAIG				*i* S	**Sn**	**03 51 42.2**	**-4.2**
TEIG	**Tepich**	**7.42**	**68**	P	**Pn**	**03 51 35.8**	**+0.3**
	1.3nm,0.3s,baz=89,slow=21,SNR=24						
TEIG				S	**Sn**	**03 52 53.7**	**-4.5**
	4.3nm,0.3s,baz=322,slow=23,SNR=16						
TXAR	**Lajitas Array**	**13.80**	**329**	P	**Pn**	**03 53 06.8**	**+5.7**
	0.1nm,0.3s,baz=150,slow=12,SNR=13						
PDAR	**Pinedale Array**	**27.74**	**338**	P	P	**03 55 27.8**	**-0.8**
	0.5nm,0.8s,mb3.1,baz=123,slow=9.7,SNR=3.4						
NVAR	**Mina Array Bea**	**28.69**	**321**	P	**P**	**03 55 38.3**	**+1.2**
	0.4nm,0.8s,mb3.1,baz=123,slow=9.4,SNR=4.9						

BJI ***30*** *03:59:20.3, 1062N×14579E, h8km, mB4.8, mb4.8*
IDC ***30*** *03:59:21.2±0.8, 1052N×14571E, h0km, mb4.3/12, mb1 4.5/13, mb1mx4.3/20, mbtmp4.3/13, ML4.9/1, Error ellipse: s-maj=32.1km s-min=15.5km az=82.0*
NEIC ***30*** *03:59:22.4±0.5, 1053N×14574E, h10km, mb4.7/8, Error ellipse: s-maj=20.3km s-min=7.4km az=84.0*
ISCJB ***30*** *03:59:23.1±0.9, 1054N±006×1460E±02, h33km, mb4.5/25, Error ellipse: s-maj=34.2km s-min=8.4km az=173.5*
MOS ***30*** *03:59:23.0±2.2, 1051N×14571E, h33km, mb4.9/11, Error ellipse: s-maj=22.2km s-min=9.8km az=111.3*
ISC 30 03:59:25.6±0.8, 1051N±006×1459E±02, h35km, (h26km±8.0km:pP-P), n39, σ0§93/37, mb4.5/25, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.22**	**342**	Pn	**Pn**	**04 00 10.4**	**-3.3**
	125nm,0.3s,SNR=44						
GUMO				Sn	**Sn**	**04 00 45.8**	**-5.1**
	296nm,0.3s,SNR=9.7						
COEN	**Coen**	**24.46**	**186**	*e*P	**P**	**04 04 41.1**	**-0.3**
	4.8nm,1.0s,mb3.9						
MJAR	**Matsushiro Arr**	**26.84**	**346**	P	**P**	**04 05 01.7**	**-1.1**
	1.9nm,0.6s,mb3.8,baz=162,slow=9.2,SNR=6.9						
MAJO	**Matsushiro**	**26.84**	**346**	*e*P	**P**	**04 05 01.5**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.3						
MAJO	**Matsushiro**	**26.84**	**346**	*e*P	**P**	**04 05 01.5**	**-1.3**
	comp=Z,5.7nm,0.6s,mb4.3						
KSRS	**Korea Array**	**31.33**	**332**	P	**P**	**04 05 42.6**	**-0.1**
	comp=Z,4.7nm,0.9s,mb4.3,baz=145,slow=9.3,SNR=13						
WRAB	**Tennant Creek**	**32.32**	**201**	*e*P	**P**	**04 05 51.1**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**32.32**	**201**	*e*P	**P**	**04 05 51.1**	**-0.4**
	comp=Z,6.2nm,0.8s,mb4.5						
WB2	**Warramunga Arr**	**32.33**	**201**	*e*P	**P**	**04 05 51.3**	**-0.3**
WRA	**Warramunga Arr**	**32.33**	**201**	P	**P**	**04 05 50.0**	**-1.7**
	comp=Z,2.5nm,0.8s,mb4.1,baz=22,slow=9.6,SNR=8.2						
ASAR	**Alice Springs**	**35.93**	**199**	P	**P**	**04 06 22.8**	**-0.1**
	comp=Z,1.7nm,0.8s,mb4.0,baz=20,slow=6.9,SNR=16						
GYA	**Guiyang**	**40.26**	**299**	P	**P**	**04 07 00.5**	**+1.1**
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
STKA	**Stephens Creek**	**42.34**	**185**	P	**P**	**04 07 17.4**	**+1.0**
	comp=Z,0.9nm,0.3s,mb3.8,baz=45,slow=6.7,SNR=3.0						
CD2	**Chengdu**	**43.99**	**304**	P	**P**	**04 07 26.3**	**-3.5**
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,80nm,5.8s						
LZH	**Lanzhou**	**45.75**	**311**	*e*P	**P**	**04 07 44.0**	**+0.3**
LZH				AP	pP	04 07 48.5	-5.6
LZH				XP	sP	04 07 50.0	-8.3
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,72nm,4.3s						
LZH	**Lanzhou**	**45.75**	**311**	*e*P	**P**	**04 07 44.0**	**+0.3**
	comp=Z,18nm,1.3s,mb4.8						
LZH				pP	pP	04 07 48.6	-5.5
LZH				sP	sP	04 07 50.1	-8.2
CMAR	**Chiang Mai Arr**	**46.04**	**285**	P	**P**	**04 07 47.2**	**+1.0**
	comp=Z,5.2nm,0.8s,mb4.5,baz=85,slow=6.1,SNR=17						
ULN	**Ulaanbaatar**	**49.48**	**326**	*e*P	**P**	**04 08 12.6**	**+0.1**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	**49.48**	**326**	*e*P	**P**	**04 08 12.6**	**+0.2**
	comp=Z,5.1nm,0.8s,mb4.6						
SONM	**Songino Array**	**49.82**	**326**	P	**P**	**04 08 15.8**	**+0.8**
	comp=Z,4.3nm,0.6s,mb4.6,baz=139,slow=6.8,SNR=17						
GTA	**Gaotai**	**49.98**	**313**	*e*P	**P**	**04 08 17.0**	**+0.5**
GTA				AP	pP	04 08 26.0	-0.9
GTA				XP	sP	04 08 30.3	-0.8
GTA				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
ZAK	**Zakamensk**	**52.95**	**327**	*e*P	**P**	**04 08 38.1**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
TLY	**Talaya**	**53.49**	**329**	*e*P	**P**	**04 08 43.5**	**+1.1**
TLY				*e*	pP	04 08 53.3	+0.4
TLY				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
BILL	**Bilibino**	**59.02**	**9**	*e*P	**P**	**04 09 16.8**	**-4.8**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
MK31	**Makanchi Array**	**64.40**	**317**	*e*P	**P**	**04 09 58.6**	**+0.4**
MKAR	**Makanchi Array**	**64.40**	**317**	P	**P**	**04 09 58.8**	**+0.6**
	comp=Z,2.8nm,0.6s,mb4.5,baz=94,slow=8.8,SNR=20						
ZALV	**Zalesovo Beam**	**64.70**	**325**	P	**P**	**04 09 59.8**	**-0.2**
	comp=Z,2.4nm,0.6s,mb4.4,baz=104,slow=7.2,SNR=11						
KURK	**Kurchatov**	**67.58**	**321**	P	**P**	**04 10 18.2**	**-0.4**
	comp=Z,8.5nm,0.6s,mb4.9,baz=106,slow=6.2,SNR=22						
KURK	**Kurchatov**	**67.58**	**321**	*e*P	**P**	**04 10 18.5**	**-0.1**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
KURK	**Kurchatov**	**67.58**	**321**	*e*P	**P**	**04 10 18.5**	**-0.1**
	comp=Z,9.8nm,0.6s,mb5.0						
BRVK	**Borovoye**	**73.03**	**322**	*e*P	**P**	**04 10 51.1**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
BRVK	**Borovoye**	**73.03**	**322**	*e*P	**P**	**04 10 51.1**	**-0.7**
	comp=Z,9.7nm,0.6s,mb4.9						
KBL	**Kabul**	**73.33**	**303**	*e*P	**P**	**04 10 53.7**	**-0.3**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KBL	**Kabul**	**73.33**	**303**	*e*P	**P**	**04 10 53.7**	**-0.3**
	comp=Z,3.5nm,0.5s,mb4.5						
NVAR	**Mina Array Bea**	**88.05**	**51**	P	**P**	**04 12 15.0**	**+2.

NACB	**Ninganchiao**	**7.12**	**12**	*e*Pn	**Pn**	**04 05 32.7 +1.4**		
NACB				*e*Sn	**Sn**	**04 06 53.0 +2.0**		
YHNB	**Yeheng**	**7.56**	**10**	*e*Pn	**Pn**	**04 05 40.0 +2.6**		
	60nm,0.8s							
YHNB				*e*Sn	**Sn**	**04 07 02.5 +0.6**		
JOW	**Kunigami**	**12.31**	**37**	Pn	**Pn**	**04 06 43.0 +0.6**		
	1.2nm,0.3s,baz=165,slow=20,SNR=5.6							
NJ2	**Nanjing**	**14.84**	**356**	*e*P	**Pn**	**04 07 17.0 +0.2**		
NJ2				AP	pP	04 07 24.5 -6.7		
NJ2				XP	sP	04 07 29.5 -6.2		
NJ2				S	**Sn**	**04 10 04.0 +4.0**		
NJ2				XS	sS	04 10 16.0 -16		
NJ2				AMB	AMB			
	comp=Z,20nm,0.9s							
NJ2				AMB	AMB			
	comp=Z,790nm,7.0s							
NJ2				LR	LR			
	comp=N,860nm,18.7s							
NJ2				LR	LR			
	comp=E,2μm,16.8s							
NJ2				LR	LR			
	comp=Z,2μm,16.8s							
XAN	**Xi'an**	**19.48**	**332**	P	**Pn**	**04 08 16.5 +1.6**		
XAN				AP	pP	04 08 27.3 +4.6		
XAN				AMB	AMB			
	comp=Z,8.0nm,1.7s							
CMAR	**Chiang Mai Arr**	**20.04**	**277**	P	**P**	**04 08 21.9 +2.1**		
	comp=Z,6.8nm,0.8s,baz=96,slow=8.2,SNR=14							
CMAR				PcP	PcP	04 12 35.7 +0.8		
	comp=Z,0.7nm,0.3s,baz=64,slow=2.1,SNR=5.1							
CHTO	**Chiang Mai**	**20.05**	**278**	*e*P	**P**	**04 08 22.0 +2.2**		
CHTO				pmax	pmax			
	comp=Z,6.0nm,0.8s							
CHTO	**Chiang Mai**	**20.05**	**278**	*e*P	**P**	**04 08 22.0 +2.2**		
	comp=Z,6.1nm,0.8s							
CD2	**Chengdu**	**20.10**	**316**	P	**P**	**04 08 21.5 +1.2**		
CD2				AMB	AMB			
	comp=Z,20nm,0.7s							
CD2				AMB	AMB			
	comp=Z,60nm,5.8s							
KSRS	**Korea Array**	**21.38**	**18**	P	**P**	**04 08 32.6 -1.4**		
	comp=Z,12nm,0.8s,mb4.3,baz=203,slow=11,SNR=41							
KAPI	**Kappang**	**22.06**	**181**	P	**P**	**04 08 40.9 -0.6**		
	comp=Z,22nm,1.0s,mb4.5,baz=121,slow=8.4,SNR=6.2							
CBIJ	**Chichi jima**	**22.80**	**61**	P	**P**	**04 08 47.4 -2.0**		
	comp=Z,58nm,0.7s,mb5.1,baz=258,slow=18,SNR=5.3							
BJT	**Baijiatuan**	**22.99**	**353**	*e*P	**P**	**04 08 52.3 +1.1**		
BJT				pmax	pmax			
	comp=Z,23nm,0.9s							
BJT	**Baijiatuan**	**22.99**	**353**	*e*P	**P**	**04 08 52.3 +1.1**		
	comp=Z,23nm,0.9s,mb4.6							
BJI	**Beijing**	**23.01**	**353**	P	**P**	**04 08 52.8 +1.4**		
BJI				AMB	AMB			
	comp=Z,19nm,1.0s,mb4.5							
BJI	**Beijing**	**23.01**	**353**	P	**P**	**04 08 52.7 +1.3**		
BJI				pmax	pmax			
	comp=Z,19nm,1.0s,mb4.5							
BJI	**Beijing**	**23.01**	**353**	P	**P**	**04 08 52.7 +1.3**		
	comp=Z,19nm,1.0s,mb4.5							
LZH	**Lanzhou**	**23.64**	**326**	*e*P	**P**	**04 09 00.5 +2.8**		
LZH				AP		04 09 06.5		
LZH				XP	sP	04 09 09.0 -2.7		
LZH				AMB	AMB			
	comp=Z,22nm,1.0s,mb4.5							
LZH				AMB	AMB			
	comp=Z,87nm,4.5s							
LZH	**Lanzhou**	**23.64**	**326**	*e*P	**P**	**04 09 00.5 +2.8**		
	comp=Z,22nm,1.0s,mb4.5							
LZH				pP		04 09 06.4		
LZH				sP	sP	04 09 08.9 -2.8		
SNY	**Shenyang**	**24.76**	**6**	⇑P	**P**	**04 09 07.3 -0.5**		
SNY				AMB	AMB			
	comp=Z,28nm,1.1s,mb4.7							
SNY				LR	LR			
	comp=N,2μm,13.5s							
SNY				LR	LR			
	comp=E,2μm,21.6s							
SNY				LR	LR			
	comp=Z,2μm,29.4s							
MAJO	**Matsushiro**	**25.16**	**36**	*e*P	**P**	**04 09 10.9 -0.7**		
MJAR	**Matsushiro Arr**	**25.16**	**36**	P	**P**	**04 09 10.0 -1.6**		
	comp=Z,6.6nm,0.7s,mb3.9,baz=223,slow=9.0,SNR=11							
KAKA	**Kakadu**	**32.17**	**157**	*e*P	**P**	**04 10 11.5 -2.7**		
	comp=Z,10nm,1.0s,mb4.6							
ULN	**Ulaanbaatar**	**32.38**	**344**	⇑*e*P	**P**	**04 10 17.3 +1.5**		
ULN	**Ulaanbaatar**	**32.38**	**344**	*e*P	**P**	**04 10 16.6 +0.9**		
	comp=Z,16nm,0.5s,mb4.1							
SONM	**Songino Array**	**32.53**	**343**	P	**P**	**04 10 18.4 +1.3**		
	comp=Z,1.8nm,0.7s,mb4.1,baz=162,slow=9.5,SNR=6.2							
KLR	**Kul'dur**	**33.37**	**14**	*e*P	**P**	**04 10 20.6 -3.8**		
FITZ	**Fitzroy Crossi**	**35.51**	**171**	*e*P	**P**	**04 10 40.5 -2.7**		
	comp=Z,8.0nm,0.7s,mb4.8							
FITZ	**Fitzroy Crossi**	**35.51**	**171**	P	**P**	**04 10 40.7 -2.5**		
	comp=Z,4.8nm,0.8s,mb4.5,baz=8.5,slow=11,SNR=8.6							
FITZ				PcP	PcP	04 13 12.0 -0.2		
	comp=Z,1.4nm,0.8s,baz=284,slow=4.2,SNR=3.0							
ZAK	**Zakamensk**	**35.72**	**342**	*e*P	**P**	**04 10 44.8 +0.1**		
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.2							
TLY	**Talaya**	**36.77**	**343**	*i* P	**P**	**04 10 54.8 +1.1**		
MBWA	**Marble Bar**	**38.11**	**180**	*e*P	**P**	**04 11 03.4 -1.9**		
	comp=Z,13nm,0.8s,mb4.7							
WRAB	**Tennant Creek**	**39.51**	**158**	*e*P	**P**	**04 11 13.8 -3.2**		
WRAB				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.4							
WRAB	**Tennant Creek**	**39.51**	**158**	*e*P	**P**	**04 11 13.8 -3.2**		
	comp=Z,7.0nm,0.8s,mb4.4							
WRA	**Warramunga Arr**	**39.51**	**158**	P	**P**	**04 11 14.5 -2.6**		
	comp=Z,7.2nm,0.8s,mb4.5,baz=340,slow=8.9,SNR=97							
WRA				PcP	PcP	04 13 24.2 -0.2		
	comp=Z,2.3nm,0.8s,baz=350,slow=3.3,SNR=8.6							
WB2	**Warramunga Arr**	**39.51**	**158**	*e*P	**P**	**04 11 14.5 -2.6**		
ASAR	**Alice Springs**	**42.83**	**161**	P	**P**	**04 11 41.9 -2.4**		
	comp=Z,6.3nm,0.7s,mb4.5,baz=340,slow=6.9,SNR=64							
ASAR				PcP	PcP	04 13 34.8 -0.4		
	comp=Z,1.0nm,0.9s,baz=346,slow=2.8,SNR=4.1							
MK31	**Makanchi Array**	**42.84**	**322**	*e*P	**P**	**04 11 45.6 +1.4**		
MKAR	**Makanchi Array**	**42.84**	**322**	P	**P**	**04 11 45.7 +1.5**		
	comp=Z,2.5nm,0.9s,mb4.0,baz=112,slow=9.3,SNR=9.2							
MKAR				PcP	PcP	04 13 34.2 -0.6		
	comp=Z,3.5nm,0.7s,baz=95,slow=4.4,SNR=6.5							
MKAR	**Makanchi Array**	**42.84**	**322**	P	**P**	**04 11 45.7 +1.5**		
MKAR				PcP	PcP	04 13 34.2 -0.6		
CTA	**Charters Tower**	**45.16**	**144**	*e*P	**P**	**04 12 00.9 -2.2**		
	comp=Z,6.7nm,0.8s,mb4.5							
CTA	**Charters Tower**	**45.16**	**144**	P	**P**	**04 12 01.4 -1.7**		
	comp=Z,9.0nm,0.7s,mb4.7,baz=331,slow=9.5,SNR=8.7							
CTA	**Charters Tower**	**45.16**	**144**	*e*P	**P**	**04 12 00.9 -2.2**		
CTA				pmax	pmax			
	comp=Z,7.0nm,0.8s							
CTAO	**Charters Tower**	**45.16**	**144**	*e*P	**P**	**04 12 00.7 -2.4**		
CTAO				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.7							
CTAO	**Charters Tower**	**45.16**	**144**	*e*P	**P**	**04 12 00.7 -2.4**		
	comp=Z,10nm,0.8s,mb4.7							
ZALV	**Zalesovo Beam**	**45.66**	**332**	P	**P**	**04 12 06.3 -0.3**		
	comp=Z,2.7nm,0.8s,mb4.3,baz=116,slow=6.8,SNR=9.7							
ZALV				PcP	PcP	04 13 43.1 -1.3		
	comp=Z,1.6nm,0.6s,baz=114,slow=5.6,SNR=3.2							
PETK	**Petropavlovsk-**	**46.37**	**31**	P	**P**	**04 12 11.3 -1.0**		
	comp=Z,6.2nm,1.0s,mb4.5,baz=215,slow=8.8,SNR=3.7							
PETK	**Petropavlovsk-**	**46.37**	**31**	P	**P**	**04 12 11.3 -1.0**		
KURK	**Kurchatov**	**46.92**	**325**	P	**P**	**04 12 17.6 +0.9**		
	comp=Z,3.6nm,0.7s,mb4.4,baz=121,slow=8.4,SNR=14							
KURK				pP	pP	04 12 26.9 -0.1		
	comp=Z,3.9nm,0.8s,baz=120,slow=8.5,SNR=7.0							
KURK	**Kurchatov**	**46.92**	**325**	*e*P	**P**	**04 12 17.0 +0.4**		
KURK				*PP	pP	04 12 26.9 -0.1		
KURK				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.7							
KURK	**Kurchatov**	**46.92**	**325**	*e*P	**P**	**04 12 17.0 +0.4**		
	comp=Z,7.9nm,0.8s,mb4.7							
KURK				pP	pP	04 12 26.9 -0.1		
FORT	**Forrest**	**48.32**	**171**	*e*P	**P**	**04 12 25.6 -2.1**		
	comp=Z,14nm,0.7s,mb5.1							
FORT	**Forrest**	**48.32**	**171**	*e*P	**P**	**04 12 25.3 -2.4**		
	comp=Z,3.7nm,0.7s,mb4.5							
NWAO	**Narrogin (SRO)**	**49.90**	**183**	P	**P**	**04 12 39.0 -0.7**		
	comp=Z,17nm,0.8s,mb5.1,baz=8.0,slow=7.0,SNR=8.1							
NWAO	**Narrogin (SRO)**	**49.90**	**183**	P	**P**	**04 12 39.0 -0.7**		
SEY	**Seymchan**	**50.93**	**18**	⇑*e*P	**P**	**04 12 47.3 +0.1**		
BRVK	**Borovoye**	**52.59**	**325**	*e*P	**P**	**04 13 00.4 +0.7**		
BRVK				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.7							
BRVK	**Borovoye**	**52.59**	**325**	*e*P	**P**	**04 13 00.4 +0.7**		
	comp=Z,8.5nm,0.9s,mb4.7							

STKA	**Stephens Creek**	**53.02**	**157**	*e*P	**P**	**04 13 01.5 -1.6**		
	comp=Z,6.6nm,0.9s,mb4.6							
STKA	**Stephens Creek**	**53.02**	**157**	P	**P**	**04 13 01.9 -1.2**		
	comp=Z,6.6nm,0.7s,mb4.7,baz=338,slow=7.9,SNR=9.1							
TIXI	**Tiksi**	**54.71**	**3**	⇓*e*P	**P**	**04 13 12.9 -2.1**		
TIXI				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.7							
BILL	**Bilibino**	**58.64**	**19**	*e*P	**P**	**04 13 41.9 -1.0**		
BILL				pmax	pmax			
	comp=Z,23nm,0.7s,mb5.3							
BILL	**Bilibino**	**58.64**	**19**	*e*P	**P**	**04 13 42.0 -0.9**		
	comp=Z,20nm,0.6s,mb5.3							
SVE	**Sverdlovsk**	**59.10**	**327**	⇑*e*P	**P**	**04 13 46.9 +0.6**		
SVE				pmax	pmax			
	comp=Z,15nm,0.9s,mb5.0							
ARU	**Arti**	**60.10**	**326**	*c i*P	**P**	**04 13 52.6 -0.6**		
ARU				*e*		04 16 03.3		
ARU				*e*S	**S**	**04 22 06.3 +2.5**		
ARU				*e*SS	SS	04 25 58.8 -2.0		
ARU				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.7							
KIV	**Kislovodsk**	**69.19**	**311**	*e*P	**P**	**04 14 53.1 +0.4**		
KIV				pmax	pmax			
	comp=Z,11nm,0.6s,mb5.0							
KIV	**Kislovodsk**	**69.19**	**311**	*e*P	**P**	**04 14 53.1 +0.4**		
	comp=Z,11nm,0.6s,mb5.0							
OBN	**Obninsk**	**72.32**	**323**	*e*P	**P**	**04 15 10.8 -0.8**		
OBN				pmax	pmax			
	comp=Z,33nm,1.8s,mb5.0							
MALT	**Malatya**	**73.01**	**306**	*e*P	**P**	**04 15 16.4 +0.4**		
MALT				*e*	pP	04 15 27.1 +0.2		
MALT				pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.0							
MALT	**Malatya**	**73.01**	**306**	*e*P	**P**	**04 15 16.4 +0.3**		
	comp=Z,1.8nm,0.9s,mb4.0							
MALT				*e*	pP	04 15 27.1 +0.2		
JOF	**Joensuu**	**74.25**	**332**	*e*p	**P**	**04 15 20.2 -2.6**		
	comp=Z,11nm,0.8s,mb4.8							
JOF	**Joensuu**	**74.25**	**332**	*e*P	**P**	**04 15 21.7 -1.1**		
KEV	**Kevo**	**75.04**	**339**	*e*p	**P**	**04 15 23.3 -4.0**		
	comp=Z,4.6nm,0.8s,mb4.5							
KEV	**Kevo**	**75.04**	**339**	*e*P	**P**	**04 15 23.3 -4.0**		
KEV				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.5							
ARCES	**ARCESS Array B**	**75.59**	**339**	P	**P**	**04 15 30.2 -0.2**		
	comp=Z,5.2nm,0.8s,mb4.5,baz=75,slow=5.1,SNR=7.5							
KAF	**Kangasniemi**	**76.67**	**331**	*e*p	**P**	**04 15 35.0 -1.7**		
	comp=Z,10nm,0.8s,mb4.8,baz=74,slow=5.3							
KAF	**Kangasniemi**	**76.67**	**331**	*e*P	**P**	**04 15 35.0 -1.7**		
KAF				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8							
KAF	**Kangasniemi**	**76.67**	**331**	*e*P	**P**	**04 15 35.6 -1.1**		
KAF				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.6							
AKASG	**Malin Array Be**	**77.35**	**319**	P	**P**	**04 15 39.4 -1.4**		
	comp=Z,3.3nm,0.8s,mb4.3,baz=62,slow=6.6,SNR=12							
AKASG				pP	pP	04 15 49.5 -2.1		
	comp=Z,5.1nm,0.8s,baz=65,slow=5.7,SNR=8.3							
AKASG	**Malin Array Be**	**77.35**	**319**	*i* P		**04 15 39.5 -1.3**		
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.8s							
VRI	**Vrincioaia**	**80.06**	**315**	⇓*i*P	**P**	**04 15 56.5 +0.7**		
VRI	**Vrincioaia**	**80.06**	**315**	⇓P	**P**	**04 15 56.5 +0.7**		
PLOR	**Plostina**	**80.12**	**315**	⇑*i*P	**P**	**04 15 56.2 +0.1**		
SUW	**Suwalki**	**80.18**	**324**	*e*P	**P**	**04 15 55.2 -1.0**		
SUW	**Suwalki**	**80.18**	**324**	*e*P	**P**	**04 15 55.2 -1.0**		
BURAR	**Bucovina Array**	**80.63**	**317**	⇑*i*P	**P**	**04 15 59.0 +0.2**		
BURAR	**Bucovina Array**	**80.63**	**317**	⇑P	**P**	**04 15 59.0 +0.2**		
BUR08	**Bucovina Ar. S**	**80.63**	**317**	*e*P	**P**	**04 15 58.3 -0.5**		
BUR08				*e*pP	pP	04 16 09.4 -0.3		
MLR	**Muntele Rosu**	**80.69**	**315**	⇓*i*P	**P**	**04 15 59.6 +0.4**		
MLR	**Muntele Rosu**	**80.69**	**315**	⇓P	**P**	**04 15 59.6 +0.4**		
KWP	**Kalwaria**	**81.68**	**319**	*e*P	**P**	**04 16 04.6 +0.3**		
KWP	**Kalwaria**	**81.68**	**319**	⇓*i*P	**P**	**04 16 04.3 0.0**		
KWP	**Kalwaria**	**81.68**	**319**	*e*P	**P**	**04 16 04.6 +0.3**		
DRGR		**82.50**	**317**	⇑*i*P	**P**	**04 16 08.8 +0.1**		
DRGR		**82.50**	**317**	⇑P	**P**	**04 16 08.8 +0.1**		
STHS	**Stebnicka Huta**	**82.65**	**319**	*e*P	**P**	**04 16 09.3 -0.1**		
STHS				*e*	pP	04 16 20.3 -0.1		
STHS				pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.2							
STHS	**Stebnicka Huta**	**82.65**	**319**	*e*P	**P**	**04 16 09.3 -0.1**		
	comp=Z,2.4nm,0.9s,mb4.2							
STHS				*e*	pP	04 16 20.3 -0.1		
CRVS	**Cervenica-Dubn**	**82.67**	**319**	*e*P	**P**	**04 16 09.4 -0.2**		
CASY	**Casey**	**83.51**	**184**	*e*P	**P**	**04 16 13.2 -0.2**		
	comp=Z,3.6nm,1.0s,mb4.5							
NB2	**NORSAR Subarra**	**83.85**	**332**	P	**P**	**04 16 13.9 -1.5**		
	comp=Z,5.0nm,0.7s,mb4.8,baz=66,slow=5.1							
NOA	**NORSAR Array B**	**83.85**	**332**	P	**P**	**04 16 14.2 -1.2**		
	comp=Z,4.1nm,0.6s,mb4.7,baz=65,slow=4.8,SNR=27							
NOA				pP	pP	04 16 24.1 -2.3		
	comp=Z,4.2nm,0.6s,baz=65,slow=4.8,SNR=11							
MORC	**Moravsky Berou**	**84.81**	**321**	*e*P	**P**	**04 16 19.7 -0.8**		
MORC				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.5							
MORC	**Moravsky Berou**	**84.81**	**321**	*e*P	**P**	**04 16 19.7 -0.8**		
	comp=Z,4.0nm,1.1s,mb4.5							
KSP	**Ksiaz**	**85.18**	**322**	*e*P	**P**	**04 16 22.5 +0.2**		
KSP	**Ksiaz**	**85.18**	**322**	*e*P	**P**	**04 16 22.2 -0.1**		
KSP				*e*pP	pP	04 16 32.9 -0.4		
DPC	**Dobruska-Polom**	**85.34**	**321**	*e*P	**P**	**04 16 23.1 0.0**		
PKSM	**Moragy**	**85.35**	**317**	⇑*i*P	**P**	**04 16 22.0 -1.2**		
PKSM	**Moragy**	**85.35**	**317**	⇑P	**P**	**04 16 22.0 -1.3**		
UPC	**Upice**	**85.47**	**322**	*e*P	**P**	**04 16 23.8 0.0**		
VRAC	**Vranov**	**85.56**	**320**	⇑*i*P	**P**	**04 16 24.7 +0.5**		
VRAC	**Vranov**	**85.56**	**320**	⇑P	**P**	**04 16 24.7 +0.5**		
PVCC	**Panska Ves**	**86.32**	**322**	*e*P	**P**	**04 16 27.7 -0.3**		
PRU	**Pruhonice**	**86.54**	**321**	*e*P	**P**	**04 16 28.9 -0.2**		
CLL	**Collm**	**86.92**	**323**	*e*pP	pP	04 16 31.3 -11		
GERES	**GERESS Array B**	**87.49**	**321**	P	**P**	**04 16 33.7 0.0**		
	comp=Z,0.5nm,0.6s,mb3.9,baz=72,slow=4.3,SNR=6.8							
GERES				pP	pP	04 16 43.4 -1.3		
	comp=Z,0.6nm,0.6s,baz=81,slow=4.2,SNR=4.9							
YKA	**Yellowknife Ar**	**89.85**	**22**	P	**P**	**04 16 44.0 -0.5**		
	comp=Z,1.9nm,0.7s,mb4.5,baz=311,slow=4.6,SNR=5.4							
YKA	**Yellowknife Ar**	**89.85**	**22**	P	**P**	**04 16 44.0 -0.5**		
CDF	**Champ du Feu**	**91.52**	**322**	*e*P	**P**	**04 16 51.9 -0.7**		
LPG	**La Plagne**	**93.22**	**320**	*e*P	**P**	**04 17 00.3 -0.2**		
LPL	**La Plagne**	**93.22**	**320**	*e*P	**P**	**04 17 00.2 -0.3**		
	comp=Z,9.3nm,0.9s,mb4.9							
LPL	**La Plagne**	**93.22**	**320**	*e*P	**P**	**04 17 00.2 -0.3**		
LPL				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.9							
LPL	**La Plagne**	**93.22**	**320**	*e*P	**P**	**04 17 00.2 -0.3**		
	comp=Z,4.7nm,0.9s,mb4.9							
ORIF	**Oris-en-Rattie**	**94.03**	**319**	*e*P	**P**	**04 17 05.0 +0.7**		
	comp=Z,4.8nm,0.8s,mb4.7							
ORIF	**Oris-en-Rattie**	**94.03**	**319**	*e*P	**P**	**04 17 05.0 +0.7**		
ORIF				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.6							
ORIF	**Oris-en-Rattie**	**94.03**	**319**	*e*P	**P**	**04 17 05.0 +0.7**		
	comp=Z,2.4nm,0.8s,mb4.7							
AVF	**Avril sur Loir**	**94.63**	**322**	*e*P	**P**	**04 17 05.6 -1.4**		
TCF	**Toulx Ste Croi**	**95.56**	**322**	*e*P	**P**	**04 17 10.5 -0.8**		
NVAR	**Mina Array Bea**	**102.31**	**43**	Pdiff	Pdif	04 17 43.4 +2.0		
	comp=Z,0.7nm,0.8s,baz=269,slow=7.2,SNR=4.8							
TORD	**Torodi Ar. Bea**	**111.99**	**292**	PKKPab	PKKPab	04 33 22.5 -1.2		
	comp=Z,0.8nm,1.0s,baz=260,slow=4.3,SNR=5.2							
TXAR	**Lajitas Array**	**117.46**	**43**	PKP	PKPdf	04 22 32.0 -0.3		
	comp=Z,1.0nm,0.7s,baz=262,slow=0.2,SNR=13							
VNA2	**Neumayer--Watz**	**117.90**	**197**	*e*PKPdf	PKPdf	04 22 27.1 -4.7		
	baz=41,slow=1.0							
VNA2				*e*		04 22 32.0		
VNA2				*e*		04 22 42.4		
VNA3	**Neumayer Olymp**	**118.36**	**196**	*e*PKPdf	PKPdf	04 22 26.8 -5.8		
VNA3				*e*		04 22 32.3		
VNA3				*e*		04 22 42.7		
DBIC	**Dimbokro**	**120.54**	**289**	PKP	PKPdf	04 22 37.5 -1.0		
	comp=Z,1.6nm,0.6s,baz=79,slow=5.2,SNR=3.4							
SDV	**Santo Domingo**	**152.06**	**23**	*e*PKPbc	PKPbc	04 23 41.3 -0.9		
ROSC	**El Rosal**	**153.95**	**34**	PKP	PKPdf	04 23 39.1 +0.7		
	comp=Z,1.3nm,0.3s,baz=112,slow=19,SNR=3.5							
ROSC				PKPbc	PKPbc	04 23 47.2 +0.8		
	comp=Z,2.2nm,0.4s,baz=112,slow=21,SNR=5.1							
PLCA	**Paso Flores**	**154.84**	**161**	PKPab	PKPab	04 24 02.0 -0.5		
	comp=Z,1.9nm,0.8s,baz=276,slow=3.6,SNR=5.3							
CPUP	**Villa Florida**	**170.56**	**195**	PKPab	PKPab	04 25 11.5 -0.1		
	comp=Z,1.1nm,0.8s,baz=158,slow=5.0,SNR=4.4							
LPAZ	**La Paz**	**172.21**	**85**	PKP	PKPdf	04 23 56.5 +0.9		
	comp=Z,1.4nm,0.9s,baz=87,slow=4.2,SNR=6.0							
LPAZ				PKPab	PKPab	04 25 20.3 +0.8		
	comp=Z,1.6nm,0.8s,baz=353,slow=0.5,SNR=6.5							
SIV	**San Ignacio**	**178.46**	**40**	PKP	PKPdf	04 23 56.6 -0.7		
	comp=Z,2.0nm,0.9s,baz=179,slow=0.9,SNR=8.1							
SIV				pPKP	pPKPdf	04 24 07.2 -1.5		
	comp=Z,1.3nm,0.9s,baz=301,slow=2.0,SNR=3.8							

*BJI **30** 04:06:55.6, 1027N×14577E, h10km, mB5.2, mb4.7*
*DJA **30** 04:06:59, 1086N×14666E, h10km, mb4.8/7*
*IDC **30** 04:06:59.0±0.9, 1054N×14558E, h0km, mb4.3/10, mb1 4.5/11, mb1mx4.4/20, mbtmp4.3/11, ML4.7/1, MS4.2/1, Ms1 4.2/1, ms1mx3.0/34, Error ellipse: s-maj=33.0km s-min=17.1km az=84.0*
*NEIC **30** 04:07:00.6±0.5, 1059N×14561E, h10km, mb4.7/12, Error ellipse: s-maj=20.8km s-min=7.3km az=86.0*
*ISCJB **30** 04:07:02.4±0.6, 1059N±004×1455E±02, h33km, mb4.5/23, Error ellipse: s-maj=23.8km s-min=6.2km az=177.0*
*MOS **30** 04:07:02.6±1.3, 1057N×14541E, h33km, mb5.1/9, Error ellipse: s-maj=22.4km s-min=9.4km az=106.5*

ISC 30 04:07:04.5±0.6, 1057N±005×1455E±02, h35km, n42, σ1°05/42, mb4.5/23, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.07**	**348**	Pn	**Pn**	**04 07 47.8**	**-2.8**
	92nm,0.3s,SNR=24						
GUMO				Sn	**Sn**	**04 08 24.5**	**-1.6**
	337nm,0.3s,SNR=5.8						
GUMO				LR	LR	04 08 56.2	
	comp=Z,4μm,19.0s,baz=135,slow=38						
GUMO	**Guam**	**3.07**	**348**	P	**Pn**	**04 07 47.8**	**-2.8**
GUMO						04 08 24.5	
GUMO	**Guam**	**3.07**	**348**	Pn	**Pn**	**04 07 47.8**	**-2.8**
GUMO				Sn	**Sn**	**04 08 24.5**	**-1.6**
GUMO				LR	LR	04 08 56.2	
PMG	**Port Moresby**	**19.91**	**175**	*e*P	**Pn**	**04 11 33.3**	**-1.8**
PMG				pmax	pmax		
	comp=Z,19nm,0.9s						
PMG	**Port Moresby**	**19.91**	**175**	*e*P	**Pn**	**04 11 33.3**	**-1.8**
	comp=Z,19nm,0.9s						
COEN	**Coen**	**24.48**	**186**	*e*P	**P**	**04 12 20.8**	**+0.3**
	comp=Z,5.8nm,0.8s,mb4.1						
KAKA	**Kakadu**	**26.54**	**210**	*e*P	**P**	**04 12 38.1**	**-1.1**
	comp=Z,16nm,1.0s,mb4.5						
MJAR	**Matsushiro Arr**	**26.70**	**347**	P	**P**	**04 12 41.1**	**+0.7**
	comp=Z,11nm,1.2s,mb4.2,baz=170,slow=9.7,SNR=11						
MAJO	**Matsushiro**	**26.70**	**347**	*e*P	**P**	**04 12 41.3**	**+0.9**
MAJO				pmax	pmax		
	comp=Z,52nm,1.4s,mb4.9						
MAJO	**Matsushiro**	**26.70**	**347**	*e*P	**P**	**04 12 41.3**	**+0.9**
	comp=Z,52nm,1.4s,mb4.9						
KSRS	**Korea Array**	**31.12**	**332**	P	**P**	**04 13 20.1**	**+0.4**
	comp=Z,2.7nm,0.8s,mb4.1,baz=143,slow=10,SNR=8.6						
WRAB	**Tennant Creek**	**32.25**	**200**	*e*P	**P**	**04 13 30.1**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	**32.25**	**200**	*e*P	**P**	**04 13 30.1**	**+0.2**
	comp=

TPIG				*i* S	Sn	04 35 44.7	-3.3
ZIIG	**Zihuatanejo**	**3.02**	**305**	*i* P	Pn	04 35 12.9	-1.9
ZIIG				*i* S	Sn	04 35 46.1	-4.6
ZIIG	**Zihuatanejo**	**3.02**	**305**	*e*P	Pn	04 35 13.5	-1.3
ZIIG				*i* S	Sn	04 35 42.4	-8.3
PPM	**Popocatepetl**	**3.18**	**4**	*i* P	Pn	04 35 12.9	-4.1
PPM				*i* S	Sn	04 35 51.4	-3.2
PPM	**Popocatepetl**	**3.18**	**4**	*i* P	Pn	04 35 20.8	+3.8
PPM				*i* S	Sn	04 36 05.0	+10
MZVM		**3.31**	**354**	*i* P	Pn	04 35 12.7	-6.0
IIO	**Organos**	**3.70**	**2**	*i* P	Pn	04 35 26.5	+2.4
IIO	**Organos**	**3.70**	**2**	*i* P	Pn	04 35 30.0	+5.9
IIO				*i* S	Sn	04 36 16.4	+9.1
PTVM	**Pico Tres Padr**	**3.70**	**356**	*e*P	Pn	04 35 14.8	-9.4
PTVM				*i* S	Sn	04 36 04.5	-3.0

*IDC **30** 04:40:33.8±1.9, 968N×12777E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/19, mbtmp3.7/5, MS3.6/1, Ms1 3.6/1, ms1mx2.6/38, Error ellipse: s-maj=128.0km s-min=21.8km az=73.0*
*ISCJB **30** 04:40:38.0±0.9, 939N±009×12697E±007, h33km, mb3.6/5, Error ellipse: s-maj=14.0km s-min=8.1km az=34.3*
ISC 30 04:40:37.9±3.7, 938N±010×12693E±008, h19km±24km, n12, σ1°23/16, mb3.6/5, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.32**	**205**	*i* P	**Pn**	**04 40 59.2**	**-2.1**
BIPH				*i* S	**Sn**	**04 41 12.7**	**-5.6**
BUTP	**Butuan**	**1.36**	**252**	*e*P	**Pn**	**04 41 00.7**	**-1.1**
BUTP				*e*S	**Sn**	**04 41 25.4**	**+6.1**
SCPH	**Surigao**	**1.48**	**286**	*e*P	**Pn**	**04 41 03.1**	**-0.3**
SCPH				*e*S	**Sn**	**04 41 20.6**	**-1.6**
BUKP	**Musuan**	**2.38**	**231**	*e*P	**Pn**	**04 41 17.5**	**+1.7**
BUKP				*e*S	**Sn**	**04 41 53.0**	**+8.5**
PLP	**Palo**	**2.61**	**313**	*e*P	**Pn**	**04 41 18.8**	**-0.3**
DAV	**Davao City (W)**	**2.66**	**210**	LR	LR	04 43 09.5	
	comp=Z,843nm,21.0s,baz=63,slow=46						
TBP	**Tagbilaran**	**3.04**	**276**	*e*P	**Pn**	**04 41 26.4**	**+1.5**
TBP				*e*S	**Sn**	**04 42 01.8**	**+0.9**
FITZ	**Fitzroy Crossi**	**27.34**	**183**	P	**P**	**04 46 24.4**	**+2.6**
	1.3nm,0.8s,mb3.5,baz=0.0,slow=14,SNR=3.5						
WRA	**Warramunga Arr**	**30.04**	**166**	P	**P**	**04 46 45.3**	**-0.6**
	0.2nm,0.5s,mb3.1,baz=346,slow=8.5,SNR=4.0						
ASAR	**Alice Springs**	**33.55**	**168**	P	**P**	**04 47 16.2**	**-0.4**
	0.2nm,0.3s,mb3.5,baz=348,slow=7.0,SNR=6.5						
MKAR	**Makanchi Array**	**53.12**	**323**	P	**P**	**04 49 55.1**	**+0.8**
	0.3nm,0.4s,mb3.6,baz=124,slow=7.7,SNR=3.0						
ARCES	**ARCESS Array B**	**85.25**	**340**	P	**P**	**04 53 12.4**	**-0.5**
	2.1nm,0.9s,mb4.3,baz=82,slow=6.6,SNR=3.7						

*BJI **30** 04:45:22.2, 1025N×14595E, h17km, mB5.3, mb4.9*
*IDC **30** 04:45:23.1±0.6, 1045N×14584E, h0km, mb4.5/18, mb1 4.6/19, mb1mx4.6/25, mbtmp4.5/19, ML5.0/1, MS3.5/1, Ms1 3.5/1, ms1mx3.2/32, Error ellipse: s-maj=21.6km s-min=12.0km az=79.0*
*NEIC **30** 04:45:24.4±0.3, 1045N×14588E, h10km, mb4.7/17, Error ellipse: s-maj=14.0km s-min=6.0km az=82.0*
*MOS **30** 04:45:25.3±1.0, 1048N×14601E, h33km, mb5.0/14, Error ellipse: s-maj=19.9km s-min=8.0km az=109.4*
*ISCJB **30** 04:45:26.4±0.5, 1047N±004×1458E±01, h33km, mb4.6/34, Error ellipse: s-maj=17.9km s-min=5.7km az=174.3*
ISC 30 04:45:28.5±0.5, 1048N±004×1458E±01, h35km, n70, σ1°02/65, mb4.6/34, 2C-1D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.22**	**344**	Pn	**Pn**	**04 46 14.4**	**-2.2**
	169nm,0.3s,SNR=71						
GUMO				Sn	**Sn**	**04 46 51.7**	**-2.0**
	896nm,0.3s,SNR=10						
GUMO				LR	LR	04 47 11.5	
	comp=Z,671nm,18.3s,baz=315,slow=33						
GUMO	**Guam**	**3.22**	**344**	P	**Pn**	**04 46 14.4**	**-2.2**
GUMO						04 46 51.7	
PMG	**Port Moresby**	**19.80**	**176**	*e*P	**Pn**	**04 49 54.0**	**-3.8**
PMG				pmax	pmax		
	comp=Z,31nm,1.1s						
PMG	**Port Moresby**	**19.80**	**176**	*e*P	**Pn**	**04 49 54.0**	**-3.8**
	comp=Z,31nm,1.1s						
JOW	**Kunigami**	**23.18**	**317**	P	**P**	**04 50 32.4**	**+0.1**
	comp=Z,20nm,0.8s,mb4.6,baz=145,slow=18,SNR=4.8						
COEN	**Coen**	**24.41**	**186**	*e*P	**P**	**04 50 43.8**	**-0.1**
	comp=Z,8.6nm,1.1s,mb4.1						
MJAR	**Matsushiro Arr**	**26.84**	**346**	P	**P**	**04 51 04.6**	**-1.1**
	comp=Z,5.7nm,0.8s,mb4.2,baz=176,slow=11,SNR=17						
MAJO	**Matsushiro**	**26.84**	**346**	*e*P	**P**	**04 51 04.7**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.8						
MAJO	**Matsushiro**	**26.84**	**346**	*e*P	**P**	**04 51 04.7**	**-1.0**
	comp=Z,31nm,1.0s,mb4.8						
MAT	**Matsushiro**	**26.84**	**346**	P	**P**	**04 51 04.1**	**-1.6**
CTA	**Charters Tower**	**30.38**	**179**	*e*P	**P**	**04 51 37.6**	**+0.3**
	comp=Z,4.4nm,0.8s,mb4.2						
CTA	**Charters Tower**	**30.38**	**179**	P	**P**	**04 51 37.6**	**+0.2**
	comp=Z,5.9nm,0.8s,mb4.4,baz=353,slow=9.9,SNR=6.1						
CTA	**Charters Tower**	**30.38**	**179**	*e*P	**P**	**04 51 37.6**	**+0.3**
CTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CTAO	**Charters Tower**	**30.38**	**179**	*e*P	**P**	**04 51 37.4**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
CTAO	**Charters Tower**	**30.38**	**179**	*e*P	**P**	**04 51 37.4**	**+0.1**
	comp=Z,5.3nm,0.7s,mb4.4						
KSRS	**Korea Array**	**31.30**	**332**	P	**P**	**04 51 45.3**	**-0.1**
	comp=Z,13nm,0.8s,mb4.8,baz=142,slow=9.4,SNR=35						
KSRS	**Korea Array**	**31.30**	**332**	P	**P**	**04 51 45.3**	**-0.1**
KSRS				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**32.24**	**200**	*e*P	**P**	**04 51 53.3**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**32.24**	**200**	*e*P	**P**	**04 51 53.3**	**-0.5**
	comp=Z,7.7nm,0.8s,mb4.6						
WB2	**Warramunga Arr**	**32.25**	**200**	*e*P	**P**	**04 51 53.5**	**-0.4**
WRA	**Warramunga Arr**	**32.26**	**200**	P	**P**	**04 51 53.4**	**-0.5**
	comp=Z,5.6nm,0.7s,mb4.5,baz=27,slow=9.7,SNR=31						
WRA				PcP	PcP	04 54 42.7	+0.8
	comp=Z,0.7nm,0.7s,baz=14,slow=3.3,SNR=3.7						
FITZ	**Fitzroy Crossi**	**34.67**	**215**	P	**P**	**04 52 13.0**	**-1.9**
	comp=Z,2.5nm,1.0s,mb4.1,baz=27,slow=9.0,SNR=2.7						
WHN	**Wuhan**	**35.37**	**309**	⇑P	**P**	**04 52 21.8**	**+0.8**
ASAR	**Alice Springs**	**35.87**	**199**	P	**P**	**04 52 25.1**	**-0.1**
	comp=Z,4.8nm,0.5s,mb4.7,baz=20,slow=7.6,SNR=111						
MDJ	**Mudanjiang**	**36.77**	**341**	P	**P**	**04 52 33.3**	**+0.6**
MDJ				AMB	AMB		
	comp=Z,18nm,1.1s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,634nm,9.6s						
MDJ	**Mudanjiang**	**36.77**	**341**	*e*P	**P**	**04 52 33.8**	**+1.0**
	comp=Z,4.9nm,0.5s,mb4.6						
CN2	**Changchun**	**37.59**	**336**	⇑P	**P**	**04 52 40.0**	**+0.3**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
BJI	**Beijing**	**39.44**	**323**	P	**P**	**04 52 55.5**	**+0.2**
BJI				AMB	AMB		
	comp=Z,17nm,0.7s,mb4.9						
BJI	**Beijing**	**39.44**	**323**	P	**P**	**04 52 55.4**	**+0.1**
BJI				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.9						
BJI	**Beijing**	**39.44**	**323**	P	**P**	**04 52 55.4**	**+0.1**
	comp=Z,17nm,0.7s,mb4.9						
KLR	**Kul'dur**	**40.36**	**346**	*e*P	**P**	**04 53 00.0**	**-2.8**
MBWA	**Marble Bar**	**40.54**	**219**	*e*P	**P**	**04 53 04.3**	**-0.3**
	comp=Z,13nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**42.30**	**185**	*e*P	**P**	**04 53 17.1**	**-1.8**
	comp=Z,3.4nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**42.30**	**185**	P	**P**	**04 53 18.1**	**-0.9**
	comp=Z,4.9nm,0.7s,mb4.3,baz=350,slow=10,SNR=12						
CD2	**Chengdu**	**43.91**	**304**	⇓*i*P	**P**	**04 53 32.3**	**+0.2**
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
CD2				AMB	AMB		
	comp=Z,50nm,4.8s						
HIA	**Hailar**	**44.32**	**336**	*e*P	**P**	**04 53 35.7**	**+0.7**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HIA	**Hailar**	**44.32**	**336**	*e*P	**P**	**04 53 35.7**	**+0.7**
	comp=Z,9.9nm,0.6s,mb4.7						
FORT	**Forrest**	**44.41**	**202**	*e*P	**P**	**04 53 36.1**	**+0.2**
	comp=Z,3.3nm,0.7s,mb4.2						

LZH	**Lanzhou**	**45.69**	**311**	*e*P	**P**	**04 53 47.5**	**+1.4**
LZH				AP	pP	04 53 55.0	-1.5
LZH				XP	sP	04 53 58.3	-2.4
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,125nm,4.8s						
LZH	**Lanzhou**	**45.69**	**311**	*e*P	**P**	**04 53 47.5**	**+1.4**
	comp=Z,25nm,1.0s,mb5.1						
LZH				pP	pP	04 53 55.1	-1.4
LZH				sP	sP	04 53 58.3	-2.4
CMAR	**Chiang Mai Arr**	**45.93**	**286**	P	**P**	**04 53 50.1**	**+1.8**
	comp=Z,9.6nm,0.7s,mb4.8,baz=87,slow=6.0,SNR=28						
ULN	**Ulaanbaatar**	**49.44**	**326**	*e*P	**P**	**04 54 15.9**	**+0.8**
ULN				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
ULN	**Ulaanbaatar**	**49.44**	**326**	*e*P	**P**	**04 54 15.9**	**+0.8**
	comp=Z,21nm,1.2s,mb5.0						
SONM	**Songino Array**	**49.78**	**326**	P	**P**	**04 54 18.7**	**+1.0**
	comp=Z,6.1nm,0.7s,mb4.8,baz=141,slow=8.1,SNR=41						
GTA	**Gaotai**	**49.92**	**313**	*e*P	**P**	**04 54 20.0**	**+1.1**
GTA				AP	pP	04 54 25.0	-4.3
GTA				XP	sP	04 54 28.3	-5.2
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
BILL	**Bilibino**	**59.07**	**9**	*e*P	**P**	**04 55 28.1**	**+3.2**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
MK31	**Makanchi Array**	**64.35**	**317**	*e*P	**P**	**04 56 01.3**	**+0.5**
MKAR	**Makanchi Array**	**64.35**	**317**	P	**P**	**04 56 01.6**	**+0.8**
	comp=Z,3.2nm,0.6s,mb4.5,baz=94,slow=8.6,SNR=23						
ZALV	**Zalesovo Beam**	**64.66**	**325**	P	**P**	**04 56 02.2**	**-0.5**
	comp=Z,2.5nm,0.6s,mb4.4,baz=102,slow=6.6,SNR=10						
ZALV	**Zalesovo Beam**	**64.66**	**325**	P	**P**	**04 56 02.2**	**-0.5**
NVS	**Novosibirsk**	**65.81**	**326**	*e*P	**P**	**04 56 08.9**	**-1.2**
KURK	**Kurchatov**	**67.53**	**321**	P	**P**	**04 56 21.9**	**+0.7**
	comp=Z,8.2nm,0.6s,mb4.9,baz=106,slow=6.2,SNR=18						
KURK	**Kurchatov**	**67.53**	**321**	*e*P	**P**	**04 56 21.2**	**0.0**
KURK				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
KURK	**Kurchatov**	**67.53**	**321**	*e*P	**P**	**04 56 21.2**	**0.0**
	comp=Z,11nm,0.7s,mb5.0						
BVAR	**Borovoye Array**	**72.91**	**322**	P	**P**	**04 56 54.6**	**+0.5**
	comp=Z,6.1nm,0.6s,mb4.7,baz=104,slow=8.2,SNR=25						
BRVK	**Borovoye**	**72.98**	**322**	*e*P	**P**	**04 56 54.8**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
BRVK	**Borovoye**	**72.98**	**322**	*e*P	**P**	**04 56 54.8**	**+0.3**
	comp=Z,20nm,1.1s,mb5.0						
KBL	**Kabul**	**73.25**	**303**	*e*P	**P**	**04 56 56.6**	**+0.1**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
KBL	**Kabul**	**73.25**	**303**	*e*P	**P**	**04 56 56.6**	**+0.2**
	comp=Z,5.4nm,0.6s,mb4.7						
AKTK	**Aktyubinsk**	**80.59**	**320**	P	**P**	**04 57 37.5**	**0.0**
AKTO	**Aktyubinsk**	**80.59**	**320**	P	**P**	**04 57 37.5**	**0.0**
	comp=Z,2.1nm,0.9s,mb4.1,baz=194,slow=4.7,SNR=4.4						
YKA	**Yellowknife Ar**	**85.20**	**27**	P	**P**	**04 58 01.1**	**0.0**
	comp=Z,1.3nm,0.7s,mb4.1,baz=275,slow=4.4,SNR=3.5						
NVAR	**Mina Array Bea**	**88.16**	**51**	P	**P**	**04 58 18.0**	**+1.9**
	comp=Z,3.1nm,0.7s,mb4.7,baz=269,slow=5.5,SNR=29						
PDAR	**Pinedale Array**	**93.50**	**46**	P	**P**	**04 58 41.7**	**+0.8**
	comp=Z,0.4nm,0.8s,mb3.9,baz=258,slow=2.7,SNR=3.0						
DBIC	**Dimbokro**	**146.16**	**299**	PKPbc	PKPbc	05 05 06.2	+0.1
	comp=Z,3.7nm,0.8s,baz=64,slow=1.1,SNR=6.3						
LPAZ	**La Paz**	**146.54**	**104**	PKPbc	PKPbc	05 05 09.6	+2.4
	comp=Z,0.8nm,0.5s,baz=30,slow=2.5,SNR=5.7						
LPAZ	**La Paz**	**146.54**	**104**	PKPbc	PKPbc	05 05 09.6	+2.4
CPUP	**Villa Florida**	**153.07**	**129**	PKPab	PKPab	05 05 31.9	-2.7
	comp=Z,0.3nm,0.5s,baz=333,slow=2.3,SNR=3.4						
CPUP	**Villa Florida**	**153.07**	**129**	PKPab	PKPab	05 05 31.9	-2.7
SIV	**San Ignacio**	**153.31**	**105**	PKPab	PKPab	05 05 33.2	-2.7
	comp=Z,1.1nm,0.9s,baz=243,slow=1.2,SNR=5.4						

*IDC **30** 04:50:11.3±1.9, 1074N×14591E, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.0/20, mbtmp4.0/9, Error ellipse: s-maj=70.0km s-min=30.3km az=33.0*
*NEIC **30** 04:50:12.2±1.3, 1057N×14585E, h10km, mb4.3/1, Error ellipse: s-maj=49.5km s-min=22.6km az=212.0*
ISC 30 04:50:18.2±2.4, 110N±05×1459E±03, h35km, n13, σ0°70/11, mb4.0/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**26.37**	**346**	P	**P**	**04 55 51.6**	**+0.4**
	2.2nm,0.8s,mb3.7,baz=166,slow=10.0,SNR=4.3						
KSRS	**Korea Array**	**30.91**	**331**	P	**P**	**04 56 30.6**	**-1.0**
	2.6nm,0.9s,mb4.1,baz=141,slow=7.9,SNR=8.7						
SONM	**Songino Array**	**49.42**	**326**	P	**P**	**04 59 05.9**	**+1.3**
	1.1nm,0.6s,mb4.1,baz=141,slow=9.2,SNR=5.5						
MKAR	**Makanchi Array**	**64.04**	**317**	P	**P**	**05 00 48.8**	**+0.3**
	0.5nm,0.4s,mb3.9,baz=98,slow=8.2,SNR=3.7						
ZALV	**Zalesovo Beam**	**64.31**	**325**	P	**P**	**05 00 49.9**	**-0.1**
	0.6nm,0.4s,mb4.0,baz=77,slow=7.6,SNR=3.2						
KURK	**Kurchatov**	**67.20**	**321**	P	**P**	**05 01 08.8**	**0.0**
	1.4nm,0.6s,mb4.2,baz=105,slow=6.2,SNR=4.2						
KURK	**Kurchatov**	**67.20**	**321**	*e*P	**P**	**05 01 07.1**	**-1.7**
	1.1nm,0.5s,mb4.1						
BVAR	**Borovoye Array**	**72.57**	**322**	P	**P**	**05 01 41.7**	**0.0**
	1.6nm,0.5s,mb4.2,baz=117,slow=5.2,SNR=5.4						
YKA	**Yellowknife Ar**	**84.71**	**27**	P	**P**	**05 02 47.9**	**-0.4**
	1.3nm,0.8s,mb4.1,baz=283,slow=11,SNR=3.1						
NVAR	**Mina Array Bea**	**87.77**	**51**	P	**P**	**05 03 04.2**	**+0.3**
	0.6nm,0.8s,mb3.9,baz=267,slow=5.2,SNR=3.6						
NVAR	**Mina Array Bea**	**87.77**	**51**	P	**P**	**05 03 04.2**	**+0.3**
LPAZ	**La Paz**	**146.57**	**103**	PKPbc	PKPbc	05 09 55.0	-2.0
	0.4nm,0.7s,baz=219,slow=6.5,SNR=2.7						
LPAZ	**La Paz**	**146.57**	**103**	PKPbc	PKPbc	05 09 55.0	-2.0

IDC 30 04:58:38.5±17.0, 1838S×17372W, h0km, mb4.2/5, mb1 4.3/5, mb1mx3.9/19, mbtmp4.2/5, Error ellipse: s-maj=333.2km s-min=146.0km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.77**	**261**	P	P	05 05 57.5	+0.9
	3.1nm,0.4s,baz=96,slow=11,SNR=10						
STKA	**Stephens Creek**	**42.34**	**243**	P	P	05 06 34.9	+0.4
	2.1nm,0.9s,baz=117,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**48.92**	**259**	P	P	05 07 26.2	-0.6
	0.9nm,0.3s,baz=97,slow=8.3,SNR=8.8						
ASAR	**Alice Springs**	**48.95**	**254**	P	P	05 07 26.1	-0.8
	2.4nm,0.8s,baz=86,slow=9.0,SNR=16						
FITZ	**Fitzroy Crossi**	**57.34**	**260**	P	P	05 08 28.8	0.0
	1.3nm,0.6s,baz=68,slow=11,SNR=3.6						

*BJI **30** 05:01:38.1, 821N×13841E, h31km, mB4.5, mb4.8*
*ISCJB **30** 05:01:43.6±0.6, 846N±008×1380E±02, h46km, mb4.5/22, Error ellipse: s-maj=23.0km s-min=11.2km az=168.1*
*MOS **30** 05:01:44.2±0.9, 877N×13786E, h33km, mb5.0/5, Error ellipse: s-maj=34.5km s-min=12.7km az=120.4*
*IDC **30** 05:01:45.9±0.6, 846N×13784E, h46km±4km, mb4.2/13, mb1 4.3/13, mb1mx4.2/19, mbtmp4.2/13, MS4.7/1, Ms1 4.7/1, ms1mx3.8/37, Error ellipse: s-maj=23.3km s-min=13.1km az=69.0*
*NEIC **30** 05:01:45.8±0.3, 846N×13790E, mb4.8/5, Error ellipse: s-maj=14.2km s-min=7.3km az=74.0*
ISC 30 05:01:45.8±0.6, 846N±008×1380E±02, h48km, h48km±1.5km: pP-P, n39, σ0°61/31, mb4.5/22, 1C, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**27.96**	**0**	P	**P**	**05 07 30.8**	**-1.0**
	1.1nm,0.8s,mb3.5,baz=172,slow=8.9,SNR=5.3						
WRA	**Warramunga Arr**	**28.45**	**187**	P	**P**	**05 07 35.4**	**-0.8**
	1.1nm,0.6s,mb3.6,baz=6.9,slow=9.7,SNR=8.6						
WRA				LR	LR	05 19 21.3	
	comp=Z,2μm,18.9s,baz=235,slow=37						
WRA	**Warramunga Arr**	**28.45**	**187**	P	**P**	**05 07 35.4**	**-0.8**
WRA				LR	LR	05 19 21.3	
ASAR	**Alice Springs**	**32.17**	**187**	P	**P**	**05 08 09.2**	**+0.1**
	3.3nm,0.5s,mb4.4,baz=18,slow=12,SNR=31						
BJI	**Beijing**	**36.98**	**332**	P	**P**	**05 08 50.5**	**-0.1**
BJI				AMB	AMB		
	comp=Z,23nm,1.0s,mb5.0						
BJI	**Beijing**	**36.98**	**332**	P	**P**	**05 08 50.5**	**-0.1**
	comp=Z,23nm,1.0s,mb5.0						
CD2	**Chengdu**	**38.93**	**310**	⇑*i*P	**P**	**05 09 07.3**	**+0.1**
CD2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
CD2				AMB	AMB		
	comp=Z,50nm,6.2s						
CMAR	**Chiang Mai Arr**	**39.15**	**289**	P	**P**	**05 09 08.6**	**-0.6**
	comp=Z,3.5nm,0.8s,mb4.2,baz=96,slow=6.7,SNR=17						
STKA	**Stephens Creek**	**40.26**	**175**	P	**P**	**05 09 18.5**	**+0.4**
	comp=Z,7.0nm,1.2s,mb4.3,baz=17,slow=7.0,SNR=3.9						
KLR	**Kul'dur**	**40.97**	**354**	*e*P	**P**	**05 09 19.8**	**-4.0**
LZH	**Lanzhou**	**41.49**	**317**	*e*P	**P**	**05 09 29.0**	**+0.7**
LZH				AP	pP	05 09 34.5	-6.7
LZH				XP	sP	05 09 37.0	-10
LZH				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,65nm,4.1s						
LZH	**Lanzhou**	**41.49**	**317**	*e*P	**P**	**05 09 29.0**	**+0.7**
	comp=Z,16nm,1.3s,mb4.5						
LZH				pP	pP	05 09 34.5	-6.7
LZH				sP	sP	05 09 37.0	-10
GTA	**Gaotai**	**45.97**	**318**	*e*P	**P**	**05 10 04.5**	**+0.3**
GTA				AP	pP	05 10 09.0	-8.3
GTA				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.3						
ULN	**Ulaanbaatar**	**47.19**	**332**	*e*P	**P**	**05 10 13.7**	**0.0**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
ULN	**Ulaanbaatar**	**47.19**	**332**	*e*P	**P**	**05 10 13.7**	**0.0**
	comp=Z,7.5nm,1.0s,mb4.6						
PETK	**Petropavlovsk-**	**47.32**	**16**	P	**P**	**05 10 14.2**	**-0.4**
	comp=Z,4.1nm,0.9s,mb4.4,baz=204,slow=3.3,SNR=3.6						
SONM	**Songino Array**	**47.48**	**331**	P	**P**	**05 10 16.4**	**+0.5**
	comp=Z,6.8nm,1.0s,mb4.5,baz=140,slow=7.4,SNR=23						
WMQ	**Urumqi**	**56.05**	**318**	P	**P**	**05 11 20.5**	**+0.6**
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
MK31	**Makanchi Array**	**60.70**	**319**	*e*P	**P**	**05 11 52.7**	**+0.4**
MKAR	**Makanchi Array**	**60.70**	**319**	P	**P**	**05 11 52.7**	**+0.4**
	comp=Z,9.5nm,0.7s,mb5.0,baz=103,slow=8.7,SNR=72						
MKAR				pP	pP	05 12 05.3	-0.4
	comp=Z,4.0nm,0.7s,baz=98,slow=9.0,SNR=5.8						
MKAR	**Makanchi Array**	**60.70**	**319**	P	**P**	**05 11 52.7**	**+0.4**
MKAR				pP	pP	05 12 05.3	-0.4
ZALV	**Zalesovo Beam**	**62.06**	**328**	P	**P**	**05 12 00.6**	**-0.7**
	comp=Z,5.2nm,0.6s,mb4.8,baz=110,slow=5.8,SNR=22						
ZALV				pP	pP	05 12 14.2	-0.7
	comp=Z,1.6nm,0.6s,baz=110,slow=6.7,SNR=3.1						
KURK	**Kurchatov**	**64.31**	**323**	P	**P**	**05 12 15.8**	**-0.6**
	comp=Z,7.6nm,0.5s,mb5.0,baz=111,slow=5.5,SNR=35						
KURK				pP	pP	05 12 29.9	-0.1
	comp=Z,3.2nm,0.5s,baz=117,slow=5.5,SNR=7.6						
BVAR	**Borovoye Array**	**69.86**	**324**	P	**P**	**05 12 51.5**	**0.0**
	comp=Z,11nm,0.6s,mb5.0,baz=110,slow=8.0,SNR=51						
BVAR				pP	pP	05 13 04.7	-0.5
	comp=Z,4.4nm,0.6s,baz=110,slow=8.4,SNR=7.5						
BRVK	**Borovoye**	**69.93**	**324**	*e*P	**P**	**05 12 51.9**	**0.0**
BRVK				*e**PP	pP	05 13 05.1	-0.6
BRVK				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
BRVK	**Borovoye**	**69.93**	**324**	*e*P	**P**	**05 12 51.9**	**+0.1**
	comp=Z,39nm,1.0s,mb5.3						
BRVK				*e*pP	pP	05 13 05.1	-0.6
ARU	**Arti**	**77.14**	**326**	*e*P	**P**	**05 13 33.6**	**-0.6**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ARU	**Arti**	**77.14**	**326**	*e*P	**P**	**05 13 33.6**	**-0.6**
	comp=Z,9.8nm,0.9s,mb4.7						
OBN	**Obninsk**	**89.58**	**326**	*e*P	**P**	**05 14 41.8**	**+3.6**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
ARCES	**ARCESS Array B**	**89.78**	**341**	P	**P**	**05 14 38.8**	**0.0**
	comp=Z,2.5nm,0.9s,mb4.5,baz=54,slow=9.1,SNR=3.6						
NVAR	**Mina Array Bea**	**95.39**	**50**	P	**P**	**05 15 06.4**	**+1.0**
	comp=Z,0.4nm,0.8s,mb3.9,baz=281,slow=5.1,SNR=2.7						
NVAR				pP	pP	05 15 19.8	+0.2
	comp=Z,1.0nm,0.8s,baz=260,slow=5.8,SNR=6.4	

Also felt at Christchurch.
*DJA **30** 05:23:35, 49.39S×164.39E, h10km, Mw7.6/52*
*MOS **30** 05:23:37.3±1.4, 49.31S×163.90E, h37km, mb6.1/24, MS7.3/82, Error ellipse: s-maj=12.9km s-min=7.9km az=101.6*
ISC 30 05:23:34.7±0.2,**4925S**±003×**16419E**±004,**h10**km, **(h16**km±1.9km**:pP-P),n1661,**σt**33/333,mb6.3**/70, **MS7.2**/172,**282C-257D,Auckland Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WHZ	**Wether Hill Ro**	**4.21**	**39**	P	**Pn**	**05 24 37.0**	**-1.8**
WHZ				S	**Sn**	**05 25 27.8**	**-0.1**
DCZ	**Deep Cove**	**4.27**	**29**	P	**Pn**	**05 24 38.0**	**-1.7**
MLZ	**Mavora Lakes**	**4.75**	**36**	P	**Pn**	**05 24 45.0**	**-1.2**
TUZ	**Tuapeka**	**4.94**	**50**	P	**Pn**	**05 24 47.1**	**-1.7**
MSZ	**Milford Sound**	**5.24**	**31**	P	**Pn**	**05 24 53.4**	**+0.4**
EAZ	**Earnscleugh**	**5.32**	**43**	P	**Pn**	**05 24 52.0**	**-2.0**
WKZ	**Wanaka**	**5.51**	**39**	P	**Pn**	**05 24 55.8**	**-0.9**
JCZ	**Jackson Bay**	**6.05**	**33**	P	**Pn**	**05 25 04.3**	**+0.2**
ODZ	**Otahua Downs**	**6.08**	**49**	P	**Pn**	**05 25 01.9**	**-2.6**
MCQ	**Macquarie Isla**	**6.18**	**210**	*e*P	**Pn**	**05 25 02.7**	**-3.1**
MCQ	**Macquarie Isla**	**6.18**	**210**	*e*P	**Pn**	**05 25 02.8**	**-3.0**
LBZ	**Lake Benmore**	**6.36**	**42**	P	**Pn**	**05 25 05.1**	**-3.3**
FOZ	**Fox Glacier**	**6.83**	**36**	P	**Pn**	**05 25 15.1**	**+0.2**
RPZ	**Rata Peaks**	**7.28**	**43**	Pn	**Pn**	**05 25 17.0**	**-4.0**
	32nm,0.3s,baz=206,slow=5.0,SNR=55						
RPZ				Sn	**Sn**	**05 26 46.7**	**+3.1**
	451nm,0.3s,baz=33,slow=19,SNR=6.2						
WVZ	**Waitaha Valley**	**7.66**	**39**	P	**Pn**	**05 25 25.1**	**-1.1**
MQZ	**McQueen's Vall**	**8.04**	**50**	P	**Pn**	**05 25 29.3**	**-2.2**
CRLZ	**Canterbury Las**	**8.12**	**49**	P	**Pn**	**05 25 30.7**	**-1.9**
LTZ	**Lake Taylor**	**8.56**	**44**	P	**Pn**	**05 25 35.2**	**-3.4**
DSZ	**Denniston Nort**	**9.20**	**38**	P	**Pn**	**05 25 44.4**	**-3.0**
KHZ	**Kahutara**	**9.44**	**47**	P	**Pn**	**05 25 48.9**	**-1.7**
THZ	**Tophouse**	**9.66**	**42**	P	**Pn**	**05 25 50.9**	**-2.7**
BSWZ	**Blackbirch Sta**	**10.14**	**46**	P	**Pn**	**05 26 00.1**	**-0.1**
QRZ	**Quartz Range**	**10.27**	**38**	P	**Pn**	**05 26 00.3**	**-1.7**
NNZ	**Nelson**	**10.31**	**42**	P	**Pn**	**05 26 01.4**	**-1.1**
TCW	**Tory Channel**	**10.72**	**45**	P	**Pn**	**05 26 08.0**	**-0.1**
SNZO	**South Karori**	**10.85**	**47**	*e*Pn	**Pn**	**05 26 12.9**	**+3.0**
SNZO				*e*Sn	**Sn**	**05 28 10.0**	**-1.2**
PAWZ	**Paruwai Farm**	**11.14**	**49**	P	**Pn**	**05 26 14.7**	**+0.8**
MTW	**Mount Morrison**	**11.35**	**49**	P	**Pn**	**05 26 17.6**	**+0.9**
MRZ	**Mangatainoka R**	**11.77**	**47**	P	**Pn**	**05 26 18.9**	**-3.5**
NEZ	**North Egmont**	**12.23**	**39**	P	**Pn**	**05 26 30.4**	**+1.6**
PKE	**Pukeiti**	**12.25**	**39**	P	**Pn**	**05 26 28.2**	**-0.8**
WPVZ	**Whakapapa**	**12.91**	**43**	P	**Pn**	**05 26 42.7**	**+4.7**
HIZ	**Hauiti**	**13.18**	**40**	P	**Pn**	**05 26 40.1**	**-1.7**
TAU	**Tasmania Unive**	**13.30**	**292**	Pn	**Pn**	**05 26 41.6**	**-1.8**
	6μm,0.5s,SNR=58						
TAU	**Tasmania Unive**	**13.30**	**292**	*e*P	**Pn**	**05 26 41.3**	**-2.1**
TAU	**Tasmania Unive**	**13.30**	**292**	*e*Pn	**Pn**	**05 26 40.0**	**-3.5**
TAU				*e*Sn	**Sn**	**05 29 06.1**	**-5.2**
BKZ	**Black Stump Fm**	**13.37**	**46**	P	**Pn**	**05 26 47.9**	**+3.5**
URZ	**Urewera**	**14.39**	**45**	Pn	**Pn**	**05 26 58.6**	**+0.3**
	11nm,0.3s,baz=194,slow=5.7,SNR=17						
URZ				Sn	**Sn**	**05 29 35.7**	**-2.1**
	9.3nm,0.3s,baz=120,slow=20,SNR=4.0						
MKAZ	**Moumakai**	**14.51**	**37**	P	**Pn**	**05 26 58.8**	**-1.1**
WCZ	**Waipu Caves**	**15.23**	**33**	P	**Pn**	**05 27 09.7**	**0.0**
OUZ	**Omahuta**	**15.63**	**30**	P	**Pn**	**05 27 15.1**	**+0.2**
CNB	**Canberra Magne**	**17.68**	**316**	*e*P	**Pn**	**05 27 40.9**	**0.0**
CNB				*e*S	**Sn**	**05 31 01.9**	**+4.1**
CNB				*e*T		05 44 36.3	
CAN	**Canberra**	**17.84**	**316**	*e*P	**Pn**	**05 27 44.1**	**+1.2**
TOO	**Toolangi**	**17.86**	**304**	*e*P	**Pn**	**05 27 44.0**	**+1.0**
TOO				*e*S	Sn	05 31 22.7	+21
TOO				*e*T		05 45 00.8	
ARMA	**Armidale**	**21.08**	**329**	*e*P	**P**	**05 28 24.7**	**+5.7**
ARMA				*e*S	**S**	**05 32 24.9**	**+11**
ARMA				*e*T		05 48 58.6	
ARMA	**Armidale**	**21.08**	**329**	*e*P	**P**	**05 28 21.0**	**+2.0**
ARMA				*e*S	**S**	**05 32 24.9**	**+11**
ARMA				*e*S	**S**	**05 32 29.9**	**+16**
ARMA				*e*		05 48 58.6	
DRV	**Dumont d'Urvil**	**21.41**	**207**	P	**P**	**05 28 31.0**	**+8.7**
DRV				S	**S**	**05 32 33.0**	**+13**
DRV				R		05 33 00.0	
RAO	**Raoul Island**	**24.19**	**41**	P	**P**	**05 28 51.7**	**+0.6**
	120nm,0.3s,mb5.8,baz=94,slow=21,SNR=4.4						
RAO				LR	LR	05 38 05.5	
	comp=Z,446μm,20.4s,MS6.9,baz=200,slow=36						
RAO	**Raoul Island**	**24.19**	**41**	P	**P**	**05 28 51.7**	**+0.6**
RAO				pmax	pmax		
	comp=Z,120nm,0.3s,mb5.8						
RAO				MLR	MLR		
	comp=Z,446μm,20.4s,MS6.9						
RAO	**Raoul Island**	**24.19**	**41**	P	**P**	**05 28 53.4**	**+2.3**
	comp=Z,93nm,0.3s						
RAO				LR	LR		
	comp=Z,425μm,20.0s,MS6.9						
STKA	**Stephens Creek**	**24.26**	**307**	*e*P	**P**	**05 28 52.1**	**+0.4**
	comp=Z,277nm,2.0s						
STKA				*e*S	**S**	**05 33 18.4**	**+8.1**
STKA				*e*T		05 48 08.2	
STKA	**Stephens Creek**	**24.26**	**307**	P	**P**	**05 28 51.0**	**-0.7**
	comp=Z,111nm,1.0s,baz=136,slow=10,SNR=49						
STKA				LR	LR	05 37 38.6	
	comp=Z,1027μm,18.3s,MS7.3,baz=142,slow=35						
DZM	**Mont Dzumac**	**27.18**	**5**	*e*P	**P**	**05 29 20.0**	**+1.8**
SBA	**Scott Base**	**28.73**	**179**	*e*P	**P**	**05 29 32.4**	**+0.7**
	comp=Z,2μm,1.8s,mb6.5						
SBA				*e*S	**S**	**05 34 30.1**	**+10**
SBA				LR	LR		
	comp=Z,163μm,19.0s,MS6.7						
CASY	**Casey**	**32.02**	**218**	*e*P	**P**	**05 29 59.4**	**-1.3**
CASY				*e*S	**S**	**05 35 18.0**	**+6.0**
CTA	**Charters Tower**	**32.45**	**327**	*e*P	**P**	**05 30 05.0**	**+0.1**
	comp=Z,272nm,1.5s,mb5.9						
CTA				*e*PP	PP	05 31 21.8	+3.6
CTA				*e*S	**S**	**05 35 28.6**	**+9.1**
CTA	**Charters Tower**	**32.45**	**327**	P	**P**	**05 30 04.3**	**-0.6**
	comp=Z,91nm,1.0s,baz=154,slow=8.6,SNR=28						
CTA				S	**S**	**05 35 23.5**	**+4.1**
	comp=Z,7.9nm,1.0s,baz=342,slow=19,SNR=1.4						
CTA				LR	LR	05 41 22.8	
	comp=Z,549μm,19.8s,MS7.2,baz=154,slow=33						
CTA	**Charters Tower**	**32.45**	**327**	*e*P	**P**	**05 30 05.0**	**+0.1**
CTA				pmax	pmax		
	comp=Z,272nm,1.5s						
CTAO	**Charters Tower**	**32.45**	**327**	*e*P	**P**	**05 30 05.0**	**+0.1**
	comp=Z,670nm,1.3s,mb6.3						
CTAO				LR	LR		
	comp=Z,503μm,20.0s,MS7.2						
FORT	**Forrest**	**32.85**	**291**	*e*P	**P**	**05 30 07.6**	**-0.8**
	comp=Z,329nm,1.3s,mb6.1						
FORT				*e*S	**S**	**05 35 17.1**	**-8.5**
FORT				*e*T		06 06 18.1	
FORT	**Forrest**	**32.85**	**291**	*e*P	**P**	**05 30 07.6**	**-0.8**
	comp=Z,329nm,1.3s,mb6.1						
FORT				*e*S	**S**	**05 35 17.1**	**-8.5**
ASAR	**Alice Springs**	**34.88**	**306**	P	**P**	**05 30 25.4**	**-0.8**
	comp=Z,39nm,0.9s,baz=136,slow=8.4,SNR=162						
ASAR				PcP	PcP	05 32 59.5	+0.6
	comp=Z,45nm,1.1s,baz=128,slow=3.6,SNR=2.4						
WB2	**Warramunga Arr**	**37.73**	**310**	*e*P	**P**	**05 30 48.7**	**-1.8**
WB2				*e*PP	PP	05 32 23.4	+6.8
WB2				*e*S	**S**	**05 36 33.0**	**-7.8**
WRA	**Warramunga Arr**	**37.74**	**310**	P	**P**	**05 30 48.8**	**-1.7**
	comp=Z,46nm,1.2s,baz=153,slow=8.3,SNR=66						
WRA				PcP	PcP	05 33 08.0	+0.5
	comp=Z,48nm,0.8s,baz=144,slow=2.7,SNR=4.9						
WRA				S	**S**	**05 36 27.8**	**-13**
	comp=Z,5.2nm,0.9s,baz=153,slow=12,SNR=2.5						
WRA				LR	LR	05 46 37.7	
	comp=Z,632μm,19.5s,MS7.4,baz=165,slow=37						
WRA	**Warramunga Arr**	**37.74**	**310**	P	**P**	**05 30 48.8**	**-1.8**
WRA						05 33 08.0	
WRA				S	**S**	**05 36 27.8**	**-13**
WRA				smax			
	comp=N,5.0nm,0.9s						
WRA				MLR	MLR		
	comp=Z,632μm,19.5s						
WRAB	**Tennant Creek**	**37.74**	**310**	P	**P**	**05 30 49.4**	**-1.2**
	comp=Z,2μm,0.8s,mb6.8,SNR=25						
WRAB	**Tennant Creek**	**37.74**	**310**	*e*P	**P**	**05 30 49.0**	**-1.6**
	comp=Z,336nm,1.0s,mb6.0						
WRAB				*e*S	**S**	**05 36 40.3**	**-0.7**
WRAB				LR	LR		
	comp=Z,848μm,19.0s						
NWAO	**Narrogin (SRO)**	**38.30**	**277**	P	**P**	**05 30 54.2**	**-0.9**
	comp=Z,87nm,1.1s,baz=129,slow=6.9,SNR=20						
NWAO				S	**S**	**05 36 40.8**	**-8.4**
	comp=Z,12nm,1.0s,baz=122,slow=15,SNR=1.6						
NWAO				LR	LR	05 44 07.2	
	comp=Z,933μm,18.3s,baz=303,slow=32						
NWAO	**Narrogin (SRO)**	**38.30**	**277**	P	**P**	**05 30 54.3**	**-0.9**
NWAO				S	**S**	**05 36 40.8**	**-8.4**
NWAO				pmax	pmax		
	comp=Z,87nm,1.1s						
NWAO				smax			
	comp=N,12nm,1.0s						
NWAO	**Narrogin (SRO)**	**38.30**	**277**	*e*P	**P**	**05 30 54.0**	**-1.1**
	comp=N,870nm,1.6s,mb6.2						
NWAO				*e*S	**S**	**05 36 50.6**	**+1.4**
NWAO				LR	LR		
	comp=Z,734μm,20.0s						
KLBR	**Kellerberrin**	**38.82**	**279**	*e*P	**P**	**05 30 58.2**	**-1.4**
	comp=Z,623nm,1.2s,mb6.2						
KLBR				*e*T		06 08 15.5	
MIR	**Mirnyy**	**39.03**	**217**	*ce*P	**P**	**05 31 00.0**	**-0.9**
MIR				pmax	pmax		
	comp=Z,200nm,1.0s,mb5.8						
MIR				pmax	pmax		
	comp=N,19μm,8.0s						
COEN	**Coen**	**39.20**	**327**	*e*P	**P**	**05 31 02.9**	**0.0**
	comp=Z,737nm,1.6s,mb6.2						
MUN	**Mundaring**	**39.57**	**278**	*e*P	**P**	**05 31 05.2**	**-0.6**
MUN				*e*PP	PP	05 32 50.1	+14
MUN				*e*S	**S**	**05 37 07.2**	**-1.2**
HNR	**Honiara**	**39.84**	**353**	P	**P**	**05 31 06.9**	**-1.3**
	comp=Z,434nm,0.8s,mb6.2,baz=86,slow=1.6,SNR=7.1						
HNR				S	**S**	**05 37 22.4**	**+10**
	comp=Z,50nm,0.4s,baz=18,slow=6.6,SNR=2.5						
HNR				LR	LR	05 45 29.6	
	comp=Z,201μm,18.7s,MS7.0,baz=174,slow=33						
HNR	**Honiara**	**39.84**	**353**	*e*P	**P**	**05 31 08.6**	**+0.4**
HNR				pmax	pmax		
	comp=Z,3μm,1.2s,mb6.9						
HNR				MLR	MLR		
	comp=Z,161μm,22.0s,MS6.8						
HNR	**Honiara**	**39.84**	**353**	*e*P	**P**	**05 31 08.6**	**+0.4**
	comp=Z,3μm,1.2s,mb6.9						
HNR				LR	LR		
	comp=Z,161μm,22.0s,MS6.8						
RAR	**Rarotonga**	**39.99**	**59**	P	**P**	**05 31 09.4**	**0.0**
	comp=Z,62nm,1.2s,baz=42,slow=18,SNR=2.0						
RAR				LR	LR	05 45 32.3	
	comp=Z,317μm,20.8s,MS7.1,baz=214,slow=33						
RAR	**Rarotonga**	**39.99**	**59**	*e*P	**P**	**05 31 11.2**	**+1.8**
RAR				pmax	pmax		
	comp=Z,3μm,2.5s						
RAR				MLR	MLR		
	comp=Z,283μm,20.0s						
RAR	**Rarotonga**	**39.99**	**59**	*e*P	**P**	**05 31 11.2**	**+1.8**
	comp=Z,3μm,2.5s,mb6.6						
RAR				*e*		05 36 56.5	
RAR				LR	LR		
	comp=Z,283μm,20.0s,MS7.1						
AFI	**Afiamalu**	**40.39**	**38**	P	**P**	**05 31 12.2**	**-0.6**
	comp=Z,343nm,1.1s,mb6.0,baz=263,slow=5.3,SNR=12						
AFI				S	**S**	**05 37 34.3**	**+13**
	comp=Z,27nm,0.9s,baz=29,slow=19,SNR=2.0						
AFI				LR	LR	05 46 47.2	
	comp=Z,74μm,20.5s,MS6.5,baz=195,slow=34						
AFI	**Afiamalu**	**40.39**	**38**	P	**P**	**05 31 12.2**	**-0.6**
AFI				S	**S**	**05 37 23.7**	**+2.9**
AFI				S	**S**	**05 37 34.3**	**+13**
AFI				LR	LR	05 46 47.2	
QSPA	**South Pole Qui**	**40.88**	**180**	P	**P**	**05 31 17.2**	**+1.1**
	comp=Z,226nm,1.1s,baz=20,slow=3.5,SNR=100						
QSPA				S	**S**	**05 37 36.4**	**+9.5**
	comp=Z,16nm,1.1s,baz=277,slow=19,SNR=2.1						
QSPA				LR	LR	05 45 43.6	
	comp=Z,71μm,18.0s,MS6.6,baz=219,slow=32						
QSPA	**South Pole Qui**	**40.88**	**180**	P	**P**	**05 31 17.2**	**+1.1**
QSPA				S	**S**	**05 37 36.4**	**+9.5**
QSPA				LR	LR	05 45 43.6	
PMG	**Port Moresby**	**42.19**	**335**	*i*P	**P**	**05 31 29.1**	**+1.5**
PMG	**Port Moresby**	**42.19**	**335**	*e*P	**P**	**05 31 28.6**	**+1.1**
	comp=Z,873nm,1.4s,mb6.2						
PMG				*e*S	**S**	**05 37 46.0**	**-1.6**
PMG				LR	LR		
	comp=Z,357μm,22.0s,MS7.2						
FUNA	**Funafuti**	**42.49**	**22**	*e*P	**P**	**05 31 32.3**	**+2.3**
	comp=Z,1μm,1.9s,mb6.2						
FUNA				LR	LR		
	comp=Z,163μm,19.0s,MS6.9						
FITZ	**Fitzroy Crossi**	**43.89**	**301**	*e*P	**P**	**05 31 40.5**	**-0.8**
	comp=Z,400nm,0.9s,mb6.2						
FITZ				*e*PP	PP	05 33 37.5	+14
FITZ				*e*S	**S**	**05 38 15.8**	**+3.3**
FITZ	**Fitzroy Crossi**	**43.89**	**301**	P	**P**	**05 31 40.1**	**-1.2**
	comp=Z,23nm,0.6s,baz=163,slow=8.8,SNR=48						
FITZ				S	**S**	**05 38 14.8**	**+2.3**
	comp=Z,6.8nm,0.9s,baz=343,slow=20,SNR=3.3						
FITZ				LR	LR	05 49 19.6	
	comp=Z,1177μm,20.4s,baz=148,slow=35						
TBI	**Tubuai**	**44.48**	**72**	*e*P	**P**	**05 31 48.7**	**+2.6**
	comp=Z,353nm,1.0s,mb6.1						
TBI				*e*S	**S**	**05 38 20.3**	**-0.8**
	comp=Z,244μm,31.0s						
TBI				*e*LR	LR	05 44 12.8	
	comp=Z,953μm,32.0s						
TBI	**Tubuai**	**44.48**	**72**	*e*P	**P**	**05 31 48.7**	**+2.6**
	comp=Z,353nm,1.0s,mb6.0						
TBI				*e*S	**S**	**05 38 20.3**	**-0.8**
KAKA	**Kakadu**	**44.85**	**313**	*i*P	**P**	**05 31 48.0**	**-1.0**
	comp=Z,1μm,1.5s,mb6.5						
MBWA	**Marble Bar**	**44.96**	**292**	*e*P	**P**	**05 31 48.6**	**-1.3**
	comp=Z,1μm,1.2s,mb6.6						
MBWA				*e*S	**S**	**05 38 26.0**	**-2.1**
MBWA				LR	LR		
	comp=Z,426μm,20.0s,MS7.4						
PAE	**Paea**	**48.70**	**66**	*e*P	**P**	**05 32 22.0**	**+2.9**
	comp=Z,2μm,1.2s,mb7.1						
PAE	**Paea**	**48.70**	**66**	*e*P	**P**	**05 32 22.0**	**+2.9**
PAE				pmax	pmax		
	comp=Z,2μm,1.2s,mb7.1						
PPT	**Papeete**	**48.77**	**66**	*e*P	**P**	**05 32 22.6**	**+2.9**
	comp=Z,210nm,1.2s,mb6.0						
PPT				*e*S	**S**	**05 39 22.9**	**+0.3**
	comp=Z,354μm,28.0s						
PPT				*e*LR	LR	05 46 20.5	
	comp=Z,1635μm,31.8s						
PPT	**Papeete**	**48.77**	**66**	P	**P**	**05 32 20.4**	**+0.7**
	comp=Z,133nm,1.2s,mb5.8,baz=209,slow=2.6,SNR=8.3						
PPT				LR	LR	05 48 06.9	
	comp=Z,220μm,21.8s,MS7.1,baz=229,slow=30						
TVO	**Taravao**	**48.80**	**67**	*e*P	**P**	**05 32 23.1**	**+3.2**
	comp=Z,6μm,1.5s,mb7.4						
TVO	**Taravao**	**48.80**	**67**	*e*P	**P**	**05 32 23.1**	**+3.2**
TVO				pmax	pmax		
	comp=Z,6μm,1.5s,mb7.4						
TIAR	**Tiarei**	**48.92**	**67**	*e*P	**P**	**05 32 23.9**	**+3.1**
	comp=Z,5μm,1.0s						
MEH	**Mehetia**	**49.45**	**68**	*e*P	**P**	**05 32 27.9**	**+3.0**
	comp=Z,11μm,1.6s						
MAW	**Mawson**	**49.58**	**210**	*e*P	**P**	**05 32 24.3**	**-1.0**
	comp=Z,98nm,1.1s,mb5.8						
MAW				*e*		05 34 29.8	
MAW				*e*S	**S**	**05 39 43.8**	**+11**
MAW	**Mawson**	**49.58**	**210**	P	**P**	**05 32 26.7**	**+1.4**
	comp=Z,84nm,1.2s,baz=109,slow=8.5,SNR=14						
MAW				LR	LR	05 51 54.0	
	comp=Z,307μm,19.2s,MS7.3,baz=112,slow=34						
JAY	**Jayapura**	**50.70**	**329**	P	**P**	**05 32 36.1**	**+1.7**
BATI	**Baumata**	**51.44**	**305**	P	**P**	**05 32 39.5**	**-0.5**
	comp=Z,66nm,0.9s,baz=115,slow=5.1,SNR=11						
BATI				S	**S**	**05 40 06.1**	**+6.2**
	comp=Z,21nm,0.8s,baz=270,slow=20,SNR=2.2						
BATI				LR	LR	05 53 56.3	
	comp=Z,1004μm,21.7s,baz=171,slow=36						
VAH	**Vaihoa**	**51.75**	**66**	*e*P	**P**	**05 32 44.9**	**+2.6**
	comp=Z,635nm,1.2s,mb6.4						
PMOR	**Pomariorio Ree**	**51.77**	**66**	*e*P	**P**	**05 32 45.4**	**+2.9**
RKT	**Rikitea**	**53.92**	**84**	*e*P	**P**	**05 33 01.7**	**+3.4**
	comp=Z,149nm,1.2s,mb5.8						
RKT				*e*S	**S**	**05 40 33.0**	**-0.6**
	comp=Z,346μm,31.2s						
RKT				*e*SS	SS	05 44 17.8	+3.3
	comp=Z,100μm,27.8s						
RKT				*e*LR	LR	05 48 39.0	
	comp=Z,1258μm,34.5s						
RKT	**Rikitea**	**53.92**	**84**	*e*P	**P**	**05 33 01.7**	**+3.4**
	comp=Z,149nm,1.2s,mb5.8						
RKT				*e*S	**S**	**05 40 33.0**	**-0.6**
RKT				*e*SS	SS	05 44 17.8	+3.3
SYO	**Syowa Base**	**55.22**	**201**	*i*PcP	PcP	05 34 05.2	-2.7
PTCN	**Pitcairn Islan**	**55.75**	**90**	PFAKE		05 33 20.0	+8.5
PTCN				LR	LR		
	comp=Z,319μm,22.0s,MS7.4						
PAF	**Port-aux-Franc**	**57.20**	**231**	P	**P**	**05 33 19.9**	**-1.6**
KAPI	**Kappang**	**57.88**	**305**	P	**P**	**05 33 25.4**	**-1.3**
	comp=Z,2μm,1.7s,mb6.8,SNR=26						
KAPI	**Kappang**	**57.88**	**305**	P	**P**	**05 33 27.5**	**+0.8**
	SNR=30						
KAPI	**Kappang**	**57.88**	**305**	P	**P**	**05 33 25.3**	**-1.4**
	comp=Z,108nm,1.1s,mb5.8,baz=184,slow=4.6,SNR=16						
KAPI				S	**S**	**05 41 27.5**	**+1.0**
	comp=Z,7.6nm,0.9s,baz=144,slow=17,SNR=1.7						
KAPI				LR	LR	05 58 53.6	
	comp=Z,394μm,20.0s,baz=166,slow=37						
KAPI	**Kappang**	**57.88**	**305**	*e*P	**P**	**05 33 25.5**	**-1.2**
	comp=Z,759nm,1.6s,mb6.5						
KAPI				*e*S	**S**	**05 41 27.9**	**+1.5**
KAPI				LR	LR		
	comp=Z,534μm,21.0s						
NVL	**N'lazarevskaya**	**58.65**	**190**	P	**P**	**05 33 29.0**	**-2.4**
NVL				S	**S**	**05 41 42.0**	**+6.8**
NVL				pmax	pmax		
	comp=Z,533nm,1.7s,mb6.3						
MAIT	**Maitri**	**58.65**	**190**	*e*P	**P**	**05 33 34.4**	**+3.0**
MAIT				*e*S	**S**	**05 41 52.7**	**+17**
SNAA	**Sanae**	**59.04**	**185**	*e*P	**P**	**05 33 32.7**	**-1.3**
SNAA				*e*	pP	05 33 36.4	-0.9
SNAA				*e*		05 33 44.7	
SNAA				*e*		05 33 54.2	
SNAA	**Sanae**	**59.04**	**185**	*i* P	**P**	**05 33 33.1**	**-0.9**
SNAA	**Sanae**	**59.04**	**185**	*e*P	**P**	**05 33 32.5**	**-1.6**
	comp=Z,719nm,1.4s,mb6.5						
VNA3	**Neumayer Olymp**	**59.74**	**182**	*e*P	**P**	**05 33 37.8**	**-1.1**
VNA3				*e*	pP	05 33 41.2	-0.9
VNA3				*e*		05 33 51.2	
VNA3				*e*		05 33 58.2	
VNA2	**Neumayer--Watz**	**59.99**	**183**	*e*P	**P**	**05 33 39.7**	**-0.9**
VNA2				*e*	pP	05 33 43.2	-0.6
VNA2				*e*		05 33 52.7	
VNA2				*e*		05 34 00.5	
VNA1	**Neumayer--Stat**	**60.29**	**183**	*e*P	**P**	**05 33 42.0**	**-0.7**
VNA1				*e*	pP	05 33 45.6	-0.3
VNA1				*e*		05 33 54.5	
VNA1				*e*		05 34 03.0	
PMSA	**Palmer Station**	**60.30**	**158**	P	**P**	**05 33 44.3**	**+1.5**
	comp=Z,110nm,1.1s,mb5.8,baz=205,slow=12,SNR=5.0						
PMSA				LR	LR	05 54 44.4	
	comp=Z,197μm,21.1s,MS7.2,baz=216,slow=31						
PMSA	**Palmer Station**	**60.30**	**158**	*e*P	**P**	**05 33 42.5**	**-0.3**
	comp=Z,934nm,1.5s,mb6.6						
PMSA				LR	LR		
	comp=Z,219μm,22.0s,MS7.2						
XMAS	**Kiritimati**	**60.87**	**45**	*e*P	**P**	**05 33 48.3**	**+1.0**
	comp=Z,2μm,1.9s,mb6.8						
XMAS				LR	LR		
	comp=Z,95μm,20.0s,MS6.9						
XMIS	**Christmas Isla**	**61.78**	**288**	*e*P	**P**	**05 33 52.0**	**-1.5**
XMIS				*e*S	**S**	**05 42 18.4**	**+1.7**
GSPH	**General Santos**	**64.84**	**316**	*i*P	**P**	**05 34 14.0**	**+0.2**
GUMO	**Guam**	**64.85**	**339**	P	**P**	**05 34 12.6**	**-1.2**
	comp=Z,206nm,1.1s,mb6.1,baz=245,slow=0.0,SNR=5.4						
GUMO				LR	LR	05 58 50.4	
	comp=Z,27μm,21.5s,MS6.4,baz=315,slow=33						
GUMO	**Guam**	**64.85**	**339**	*e*P	**P**	**05 34 13.8**	**+0.1**
GUMO	**Guam**	**64.85**	**339**	*e*P	**P**	**05 34 13.3**	**-0.4**
	comp=Z,654nm,1.2s,mb6.5						
GUMO				LR	LR		
	comp=Z,38μm,19.0s,MS6.6						
DAV	**Davao City (W)**	**65.43**	**317**	P	**P**	**05 34 17.1**	**-0.5**
	comp=Z,96nm,0.4s,mb6.2,baz=225,slow=1.4,SNR=2.6						
DAV	**Davao City (W)**	**65.43**	**317**	*e*P	**P**	**05 34 17.2**	**-0.3**
BIPH	**Bislig**	**66.07**	**318**	*i*P	**P**	**05 34 19.4**	**-2.4**
COCO	**West Island**	**66.10**	**279**	*e*P	**P**	**05 34 19.0**	**-3.0**
	comp=Z,392nm,1.8s,mb6.1						
COCO				*e*S	S	05 43 15.4	+5.0
COCO				LR	LR		
	comp=Z,212μm,20.0s,MS7.3						
BUKP	**Musuan**	**66.38**	**317**	*e*P	**P**	**05 34 23.6**	**0.0**
TSM	**Tawau**	**66.72**	**308**	P	**P**	**05 34 26.8**	**+0.9**
CGP	**Cagayan de Oro**	**67.05**	**317**	*e*P	**P**	**05 34 27.0**	**-1.0**
PAGZ	**Pagadian**	**67.11**	**315**	*e*P	**P**	**05 34 28.5**	**+0.1**
MYLDM	**Lahad Datu**	**67.16**	**309**	P	**P**	**05 34 29.4**	**+0.7**
USHA	**Ushuaia**	**67.30**	**150**	P	**P**	**05 34 29.7**	**+0.6**
	comp=Z,74nm,1.3s,baz=198,slow=11,SNR=6.3						
USHA				S	S	05 43 36.7	+13
	comp=Z,

comp=Z,131µm,21.0s,MS7.3
TATO Taipei 83.11 322 *e*P **P 05 35 58.1 -2.3**
comp=Z,134nm,1.0s,mb5.9
TATO LR LR
comp=Z,107µm,22.0s,MS7.2
QIZ Qiongzhong 83.31 309 P **P 05 36 02.8 +1.3**
QIZ PP PP 05 39 14.5 +1.0
QIZ S S 05 46 24.3 +2.1
QIZ SS SS 05 51 51.0 +3.2
QIZ AMB AMB
comp=Z,21µm,8.8s
QIZ LR LR
comp=N,69µm,22.9s,MS7.1
QIZ LR LR
comp=E,58µm,24.0s,MS7.1
QIZ LR LR
comp=Z,135µm,24.1s,MS7.2
QIZ Qiongzhong 83.31 309 *e*P **P 05 36 02.0 +0.5**
comp=Z,594nm,1.8s,mb6.3
QIZ *e*S S 05 46 34.1 +12
QIZ LR LR
comp=Z,101µm,22.0s,MS7.2
NNT Nongplab 83.56 298 P **P 05 36 03.2 +0.3**
TRQA Tornquist 83.95 145 *e*P **P 05 36 04.1 -0.6**
comp=Z,180nm,1.2s,mb6.1
TRQA *e*S S 05 46 22.8 -5.6
TRQA LR LR
comp=Z,180µm,22.0s,MS7.4
HKC Hong Kong Obse 83.98 314 *i* P **P 05 36 00.0 -4.9**
LMEL Las Melosas 84.19 137 *e*P **P 05 36 06.3 +0.2**
QZH Quanzhou 84.29 319⇑ *i*P **P 05 36 07.0 +0.6**
QZH AMB AMB
comp=Z,2µm,2.0s,mb6.9
QZH AMB AMB
comp=Z,69µm,11.3s
QZH LR LR
comp=N,70µm,21.2s,MS7.2
QZH LR LR
comp=E,75µm,16.7s,MS7.2
QZH LR LR
comp=Z,253µm,30.1s
CLCH Cerro Calan 84.42 137⇑ *i*P **P 05 36 05.9 -1.3**
PEL Peldehue 84.56 136 *e*P **P 05 36 05.0 -3.0**
FCH Farellones 84.59 137 *e*P **P 05 36 04.0 -4.1**
KKTK Khon Kaen 84.82 302 P **P 05 36 10.0 +0.7**
comp=Z,648nm,0.6s,mb6.9
JHJ Hachijo jima 2 84.83 340 P **P 05 36 08.5 -0.5**
comp=Z,133nm,0.7s,mb6.2,baz=72,slow=16,SNR=3.6
GZH Guangzhou 85.04 314 P **P 05 36 13.3 +3.1**
GZH S S 05 46 41.8 +2.4
GZH AMB AMB
comp=Z,32µm,9.9s
GZH LR LR
comp=N,52µm,25.6s,MS7.0
GZH LR LR
comp=E,47µm,24.4s,MS7.0
GZH LR LR
comp=Z,199µm,43.5s
RER Riviere de l'E 85.56 243 *e*P **P 05 36 12.8 -0.3**
DGAR Diego Garcia 85.58 264 P **P 05 36 13.8 +0.5**
DGAR pmax pmax
comp=Z,1µm,1.5s,mb6.9
DGAR MLR MLR
comp=Z,180µm,20.0s
DGAR Diego Garcia 85.58 264 P **P 05 36 13.8 +0.5**
comp=Z,1µm,1.5s,mb6.9
DGAR LR LR
comp=Z,180µm,20.0s
NST Nakhon Sawan 85.79 300 P **P 05 36 14.0 -0.2**
comp=Z,150nm,1.4s,mb6.0
JSG Sagara 86.69 339 P **P 05 36 21.5 +3.3**
JIE Ise 86.79 338 P **P 05 36 20.7 +2.1**
JMN Monobe 86.90 335 P **P 05 36 19.4 +0.2**
CFAA Coronel Fontan 86.96 137 P **P 05 36 19.0 -0.9**
comp=Z,8.5nm,1.0s,baz=226,slow=4.4,SNR=62
CFAA S S 05 46 54.2 -4.2
comp=Z,0.1nm,0.5s,baz=217,slow=20,SNR=2.0
CFAA PKPPKP 06 02 19.4
comp=Z,0.3nm,0.8s,baz=40,slow=4.4,SNR=4.5
CFAA LR LR 06 07 27.6
comp=Z,10µm,21.9s,MS6.2,baz=216,slow=30
CFAA Coronel Fontan 86.96 137 P **P 05 36 19.0 -0.9**
CFAA S S 05 46 54.2 -4.2
CFAA P'P' 06 02 19.4
CFAA LR LR 06 07 27.6
TLL Tololo Astrono 87.01 135 *e*P **P 05 36 20.3 +0.2**
JOD2 Odawara 2 87.05 340 P **P 05 36 20.6 +0.7**
BDT Bhumibol Dam 87.69 300⇓ P **P 05 36 24.0 +0.6**
comp=Z,153nm,1.1s,mb6.1
JGF Kuroka 87.78 338 P **P 05 36 24.9 +1.5**
JRY Ryogami san 87.81 340 P **P 05 36 24.6 +1.1**
JWT Wachi 87.96 337 P **P 05 36 24.1 -0.2**
JAD Aida 87.97 336 P **P 05 36 26.3 +2.0**
NANT Nan 87.99 302⇑ P **P 05 36 22.0 -2.8**
comp=Z,1µm,1.0s,mb7.0
LCO Las Campanas 88.03 134 *e*P **P 05 36 25.5 +0.4**
LCO Las Campanas 88.03 134 *e*P **P 05 36 24.7 -0.4**
comp=Z,597nm,1.4s,mb6.6
LCO *e*S S 05 47 09.7 +0.9
LCO LR LR
comp=Z,60µm,21.0s,MS7.0
LPA La Plata 88.23 147 *ce*P **P 05 36 25.0 -0.9**
LPA *es*P sP 05 36 33.0 +2.5
LPA *e*PP PP 05 39 50.0 -2.2
LPA *e*PS 05 48 17.0
LPA
comp=Z,119µm,20.0s
JHS Saijyo 88.31 335 P **P 05 36 27.3 +1.4**
MJAR Matsushiro Arr 88.47 339 P **P 05 36 26.6 0.0**
comp=Z,57nm,1.1s,baz=174,slow=5.6,SNR=51
MJAR PP PP 05 40 12.2 +17
comp=Z,7.6nm,1.1s,baz=182,slow=6.5,SNR=4.7
MAJO Matsushiro 88.47 339 *e*P **P 05 36 26.9 +0.2**
MAJO pmax pmax
comp=Z,479nm,1.5s,mb6.5
MAJO MLR MLR
comp=Z,56µm,22.0s,MS6.9
MAJO Matsushiro 88.47 339 *e*P **P 05 36 26.9 +0.2**
comp=Z,478nm,1.5s,mb6.5
MAJO LR LR
comp=Z,56µm,22.0s,MS6.9
MAT Matsushiro 88.47 339 P **P 05 36 26.8 +0.1**
MAT S S 05 47 04.0 -8.1
MAT Matsushiro 88.47 339 P **P 05 36 28.4 +1.7**
SSE Sheshan 88.69 324 P **P 05 36 29.5 +1.7**
SSE AP pP 05 36 36.0 +4.8
SSE PP PP 05 39 57.8 +0.8
SSE S S 05 47 15.3 +1.0
SSE XS sS 05 47 27.5 +7.6
SSE SS SS 05 53 09.0 +2.4
SSE AMB AMB
comp=Z,74nm,1.0s,mb6.0
SSE AMB AMB
comp=Z,5µm,8.2s
SSE LR LR
comp=N,24µm,23.4s,MS7.2
SSE LR LR
comp=E,95µm,23.3s,MS7.2
SSE LR LR
comp=Z,135µm,17.4s
SSE Sheshan 88.69 324 P **P 05 36 29.4 +1.6**
comp=Z,74nm,1.0s,mb6.0
SSE pP pP 05 36 36.1 +4.9
SSE PP PP 05 39 57.8 +0.8
SSE S S 05 47 15.2 +0.9
SSE sS sS 05 47 27.5 +7.6
SSE SS SS 05 53 08.9 +2.3
SSE LR LR
comp=Z,135µm,17.4s,MS7.4
CM31 Chiang Mai Arr 88.70 300 PFAKE 05 36 40.0 +12
CM31 LR LR
comp=Z,220µm,20.0s
CMAR Chiang Mai Arr 88.70 300 P **P 05 36 28.2 0.0**
comp=Z,66nm,1.0s,mb5.9,baz=159,slow=3.5,SNR=124
CMAR PP PP 05 40 10.4 +13
comp=Z,8.9nm,1.0s,baz=151,slow=5.3,SNR=4.1
CMAR S S 05 47 00.8 -14
comp=Z,1.7nm,0.5s,baz=159,slow=4.4,SNR=4.0
CMAR LR LR 06 16 41.0
comp=Z,253µm,19.9s,baz=155,slow=36
CMAR Chiang Mai Arr 88.70 300⇑ *e*P **P 05 36 28.7 +0.5**
CHG Chiang Mai 88.98 301⇑ P **P 05 36 29.6 +0.1**
comp=Z,419nm,1.2s,mb6.6
CHTO Chiang Mai 88.98 301 P **P 05 36 30.0 +0.5**
SNR=93

CHTO Chiang Mai 88.98 301 *e*P **P 05 36 29.6 +0.1**
CHTO *e* 05 40 02.7
CHTO *e*S S 05 47 13.1 -4.5
CHTO pmax pmax
comp=Z,561nm,1.5s,mb6.7
CHTO MLR MLR
comp=Z,235µm,20.0s
CHTO Chiang Mai 88.98 301 *e*P **P 05 36 29.6 +0.1**
comp=Z,561nm,1.5s,mb6.7
CHTO *e*PP PP 05 40 02.7 +3.2
CHTO *e*S S 05 47 13.1 -4.6
CHTO LR LR
comp=Z,235µm,20.0s
JMM Marumori 89.18 342 P **P 05 36 32.5 +2.6**
CHRT Chiangrai 89.36 302⇑ P **P 05 36 31.5 +0.3**
comp=Z,1µm,1.1s,mb7.2
JSD Sado 89.89 340 P **P 05 36 35.4 +2.1**
JYA Atsumi 90.11 341 P **P 05 36 35.9 +1.6**
NJ2 Nanjing 90.44 323 *e*P **P 05 36 36.8 +0.8**
NJ2 AP pP 05 36 41.5 +2.1
NJ2 XP sP 05 36 43.8 +3.3
NJ2 PP PP 05 40 13.5 +2.5
NJ2 AMB AMB
comp=Z,50nm,1.0s,mb5.8
NJ2 AMB AMB
comp=Z,7µm,10.2s
NJ2 LR LR
comp=N,50µm,26.7s,MS7.1
NJ2 LR LR
comp=E,86µm,25.3s,MS7.1
NJ2 LR LR
comp=Z,88µm,27.3s,MS7.1
JOM Ohasama 90.63 342 P **P 05 36 37.5 +0.8**
WHN Wuhan 90.99 319⇑ P **P 05 36 39.0 +0.4**
WHN XP sP 05 36 50.0 +6.9
WHN PP PP 05 40 21.0 +5.6
WHN LR LR
comp=N,80µm,15.9s,MS7.3
WHN LR LR
comp=E,81µm,20.9s,MS7.3
WHN LR LR
comp=Z,144µm,20.0s,MS7.4
GYA Guiyang 91.11 311 P **P 05 36 39.3 0.0**
GYA AP pP 05 36 45.3 +2.7
GYA PP PP 05 40 21.3 +4.9
GYA SKS 05 47 12.0
GYA S S 05 47 36.5 -0.5
GYA SS SS 05 53 43.5 +1.7
GYA AMB AMB
comp=Z,330nm,1.0s,mb6.6
GYA AMB AMB
comp=Z,9µm,9.4s
GYA LR LR
comp=N,63µm,27.4s,MS7.1
GYA LR LR
comp=E,83µm,27.9s,MS7.1
GYA LR LR
comp=Z,57µm,25.8s,MS6.9
PALK Pallekele 91.22 280 P **P 05 36 41.6 +1.4**
SNR=8.1
PALK Pallekele 91.22 280 *e*P **P 05 36 39.7 -0.4**
comp=Z,344nm,1.5s,mb6.5
PALK *e*S S 05 47 40.3 +1.6
PALK LR LR
comp=Z,323µm,20.0s
JTM Tenmabayashi 91.94 343 P **P 05 36 45.5 +2.8**
KMI Kunming 92.01 307 P **P 05 36 46.0 +2.5**
KMI AP pP 05 36 48.8 +2.0
KMI XP sP 05 36 50.3 +2.3
KMI PP PP 05 40 28.3 +4.8
KMI SKS 05 47 17.5
KMI S S 05 47 46.3 +1.1
KMI XS sS 05 47 51.5 +0.7
KMI AMB AMB
comp=Z,196nm,2.0s,mb6.1
KMI AMB AMB
comp=Z,21µm,7.6s
KMI LR LR
comp=N,79µm,32.8s,MS7.1
KMI LR LR
comp=E,64µm,29.4s,MS7.1
KMI LR LR
comp=Z,261µm,29.4s
KMI Kunming 92.01 307 P **P 05 36 45.9 +2.4**
KMI 05 40 28.3
KMI PPP 05 42 30.5
KMI 05 47 17.6
KMI S S 05 47 46.3 +1.1
KMI PS PS 05 49 02.0 +5.6
KMI SS SS 05 54 00.3 +5.5
KMI pmax pmax
comp=Z,196nm,2.0s,mb6.1
KMI Kunming 92.01 307 P **P 05 36 45.9 +2.4**
comp=Z,196nm,2.0s,mb6.1
KMI pP pP 05 36 48.7 +1.9
KMI sP sP 05 36 50.3 +2.3
KMI PP PP 05 40 28.3 +4.8
KMI PPP 05 42 30.5
KMI SKS 05 47 17.6
KMI S S 05 47 46.3 +1.1
KMI sS sS 05 47 51.5 +0.7
KMI PS PS 05 49 02.0 +5.6
KMI SS SS 05 54 00.3 +5.5
KMI SSS 05 57 38.5
KMI LR LR
comp=Z,261µm,29.4s
ABPO Ambohimpanom 92.09 238 *e*P **P 05 36 44.8 +0.6**
comp=Z,307nm,1.3s,mb6.5
ABPO LR LR
comp=Z,143µm,20.0s,MS7.4
KSRS Korea Array 92.12 332 P **P 05 36 43.8 +0.2**
comp=Z,38nm,1.0s,baz=151,slow=5.1,SNR=48
KSRS PP PP 05 40 37.8 +14
comp=Z,9.0nm,1.0s,baz=178,slow=9.5,SNR=4.3
KSRS LR LR 06 16 27.1
comp=Z,72µm,21.4s,MS7.1,baz=168,slow=34
SUR Sutherland 92.44 210 P **P 05 36 44.4 -1.2**
comp=Z,705nm,1.0s,mb7.0,SNR=9.4
SUR Sutherland 92.44 210 P **P 05 36 44.5 -1.1**
comp=Z,33nm,0.8s,baz=84,slow=3.5,SNR=15
SUR LR LR 06 11 09.2
comp=Z,66µm,21.3s,MS7.0,baz=155,slow=31
SUR Sutherland 92.44 210 *e*P **P 05 36 44.6 -0.9**
comp=Z,396nm,1.4s,mb6.5
SUR LR LR
comp=Z,71µm,20.0s,MS7.1
OPO Ambohidratompo 92.47 238 P **P 05 36 44.9 -1.0**
comp=Z,19nm,0.9s,baz=109,slow=6.5,SNR=13
INCN Inchon 92.55 331 P **P 05 36 48.1 +2.5**
SNR=7.9
INCN Inchon 92.55 331 *e*P **P 05 36 47.2 +1.6**
comp=Z,155nm,1.4s,mb6.2
INCN *e*PP PP 05 40 35.0 +7.4
INCN LR LR
comp=Z,86µm,21.0s,MS7.2
ERM Erimo 92.74 344 P **P 05 36 51.5 +5.1**
comp=Z,216nm,1.4s,mb6.4,SNR=5.5
ERM Erimo 92.74 344 *d i*P **P 05 36 46.2 -0.2**
ERM Erimo 92.74 344 *i* P **P 05 36 46.3 -0.1**
ERM LR LR
comp=Z,63µm,22.0s,MS7.0
JEM Erimo 92.75 344 P **P 05 36 51.0 +4.6**
JSH Shimam 93.93 342 P **P 05 36 55.3 +3.4**
TRIS Tristan da Cun 94.01 183 P **P 05 36 56.5 +3.8**
comp=Z,263nm,1.3s,mb6.5
TRIS LR LR
comp=Z,89µm,20.0s,MS7.2
YUK Yuzh-Kuril'sk 94.27 347 *e*P **P 05 36 56.0 +2.6**
YUK *e* 05 48 06.0
YUK *e*SS SS 05 54 31.0 +4.2
YUK pmax pmax
comp=N,13µm,9.0s
YUK pmax pmax
comp=E,5µm,9.0s
YUK pmax pmax
comp=Z,26µm,9.0s
BOSA Boshof 94.28 215 P **P 05 36 52.7 -1.4**
comp=Z,22nm,0.8s,baz=162,slow=5.5,SNR=17
BOSA LR LR 06 12 58.6
comp=Z,69µm,20.6s,MS7.1,baz=157,slow=32
BOSA Boshof 94.28 215 *e*P **P 05 36 52.3 -1.8**
comp=Z,113nm,1.1s,mb6.2
BOSA LR LR
comp=Z,67µm,20.0s,MS7.1
LVC Limon Verde 94.29 132 P **P 05 36 54.6 +0.3**

comp=Z,25nm,0.9s,baz=239,slow=4.1,SNR=9.2
LVC S S 05 47 40.8 -25
comp=Z,1.4nm,0.7s,baz=134,slow=17,SNR=2.3
LVC LR LR 06 10 10.1
comp=Z,44µm,19.9s,MS6.9,baz=215,slow=30
LVC Limon Verde 94.29 132 *e*P **P 05 36 54.6 +0.3**
comp=Z,156nm,1.6s,mb6.2
LVC LR LR
comp=Z,39µm,20.0s,MS6.9
TRD Trivandrum 94.57 278 *e*P **P 05 36 55.0 -0.6**
TIA Tai'an 94.78 324 *e*P **P 05 36 56.3 +0.4**
TIA PP PP 05 40 48.5 +3.4
TIA AMB AMB
comp=Z,11µm,8.0s
TIA LR LR
comp=N,56µm,20.0s,MS7.2
TIA LR LR
comp=E,53µm,21.0s,MS7.2
ASAJ Asahikawa 94.88 345 P **P 05 36 54.6 -1.6**
comp=E,5.7nm,0.9s,baz=49,slow=20,SNR=1.7
ASAJ Asahikawa 94.88 345 P **P 05 36 54.6 -1.6**
ASAJ pmax pmax
comp=Z,6.0nm,0.9s
DL2 Dalian 95.50 328 *i* P **P 05 37 02.8 +3.6**
DL2 PP PP 05 40 56.5 +5.8
DL2 AMB AMB
comp=Z,50nm,1.1s,mb5.9
DL2 AMB AMB
comp=Z,8µm,8.6s
DL2 LR LR
comp=N,32µm,25.2s,MS6.7
DL2 LR LR
comp=E,11µm,25.8s,MS6.7
DL2 LR LR
comp=Z,61µm,29.7s,MS6.9
KOD Kodaikanal 95.54 279 *e*P **P 05 36 59.9 0.0**
KOD AMb AMB 05 37 14.3
comp=Z,133nm,0.9s,mb6.4
MDRS Chennai 95.88 283 *e*P **P 05 37 01.4 0.0**
MDRS *ex* x 05 47 46.0
CPUP Villa Florida 96.15 143 P **P 05 37 03.0 +0.2**
comp=Z,12nm,0.8s,baz=196,slow=3.8,SNR=22
CPUP PKPPKP 06 02 05.4
comp=Z,1.2nm,0.8s,baz=314,slow=3.0,SNR=3.5
CPUP LR LR 06 13 51.8
comp=Z,128µm,21.3s,MS7.4,baz=188,slow=31
CPUP Villa Florida 96.15 143 *e*P **P 05 37 01.7 -1.0**
comp=Z,395nm,1.4s,mb6.7
CPUP LR LR
comp=Z,26µm,22.0s,MS6.7
CD2 Chengdu 96.21 311⇓ *i*P **P 05 37 03.5 +0.9**
CD2 AP pP 05 37 10.5 +4.5
CD2 XP sP 05 37 13.5 +6.3
CD2 PP PP 05 40 59.8 +3.5
CD2 SKS 05 47 37.5
CD2 S S 05 48 19.3 -2.6
CD2 XS sS 05 48 29.8 +2.4
CD2 SS SS 05 54 51.0 -3.7
CD2 AMB AMB
comp=Z,140nm,1.8s,mb6.1
CD2 AMB AMB
comp=Z,15µm,9.6s
CD2 LR LR
comp=N,96µm,21.6s,MS7.3
CD2 LR LR
comp=E,55µm,18.0s,MS7.3
CD2 LR LR
comp=Z,129µm,21.6s,MS7.4
VLA Vladivostok 96.25 337 *i* P **P 05 36 59.8 -2.7**
VLA MLR MLR
comp=Z,35µm,20.0s,MS6.8
XAN Xi'an 96.36 317 P **P 05 37 04.0 +0.8**
XAN AP pP 05 37 10.5 +3.9
XAN PP PP 05 41 00.5 +3.1
XAN AMB AMB
comp=Z,38nm,1.0s,mb5.8
XAN LR LR
comp=N,25µm,27.0s,MS6.8
XAN LR LR
comp=E,35µm,27.0s,MS6.8
XAN LR LR
comp=Z,147µm,30.8s,MS7.3
IMP Imphal 96.53 301 *e*P **P 05 37 03.0 -1.2**
IMP *ex* x 05 40 58.0
LBTB Lobatse 97.37 217 P **P 05 37 06.8 -1.4**
comp=Z,7.2nm,0.9s,baz=132,slow=6.8,SNR=8.4
LBTB S SKSac 05 47 51.0 +5.2
comp=Z,1.4nm,0.9s,baz=338,slow=3.3,SNR=2.2
LBTB Lobatse 97.37 217 P **P 05 37 06.8 -1.4**
LBTB S SKSac 05 47 51.0 +5.2
LBTB LR LR
comp=Z,80µm,21.0s,MS7.2
VIS Vishakhapatnam 97.43 288 *e*P **P 05 37 07.1 -1.3**
YSS Yuzh-Sakhalins 97.61 345⇑ *i*P **P 05 37 09.0 +0.5**
YSS *e* 05 41 16.0
YSS *e*PPP 05 43 24.0
YSS *e* 05 47 46.0
YSS *e*S S 05 48 24.0 -9.1
YSS *e*SS SS 05 55 22.0 +8.0
YSS *e* 05 59 02.0
YSS pmax pmax
comp=Z,14µm,10.0s
YSS MLR MLR
comp=Z,83µm,22.0s,MS7.2
YSS MLR MLR
comp=N,61µm,24.0s
YSS Yuzh-Sakhalins 97.61 345 *e*P **P 05 37 10.6 +2.1**
YSS LR LR
comp=Z,24µm,20.0s,MS6.7
TIY Taiyuan 97.96 321 *e*P **P 05 37 10.5 +0.2**
TIY PP PP 05 41 07.5 -2.1
TIY SKS 05 47 45.0
TIY S S 05 48 28.3 -8.2
TIY XS sS 05 48 43.5 +1.4
TIY SS SS 05 55 13.8 -5.4
TIY LR LR
comp=N,30µm,16.3s
TIY LR LR
comp=E,45µm,23.0s
TIY LR LR
comp=Z,109µm,29.1s
CAL Calcutta 98.04 295 *e*P **P 05 37 12.1 +1.0**
CAL *ex* x 05 48 05.9
ARE Arequipa 98.15 127 *e*P **P 05 37 13.0 +1.1**
VJD Vijayawada 98.21 286 *ex* x 05 40 43.0
MDJ Mudanjiang 98.25 336 P **P 05 37 13.8 +2.3**
MDJ PP PP 05 41 14.0 +2.2
MDJ S S 05 48 43.5 +4.9
MDJ SS SS 05 55 28.0 +4.9
MDJ AMB AMB
comp=Z,11µm,11.2s
MDJ LR LR
comp=N,83µm,42.8s
MDJ LR LR
comp=E,27µm,50.0s
MDJ LR LR
comp=Z,91µm,50.0s
MDJ Mudanjiang 98.25 336 PFAKE 05 37 20.0 +8.5
MDJ LR LR
comp=Z,42µm,21.0s,MS6.9
SHL Shillong 98.30 300 *ex* x 05 36 58.4
SHL *ex* x 05 47 47.0
BJT Baijiatuau 98.47 325 PFAKE 05 37 20.0 +7.4
BJT LR LR
comp=Z,112µm,22.0s,MS7.3
MSEY Mahe Island 98.54 253 PFAKE 05 37 20.0 +6.3
MSEY LR LR
comp=Z,192µm,21.0s
CN2 Changchun 98.68 333 *e*P **P 05 37 15.5 +2.1**
CN2 *e*XP sP 05 37 22.3 +4.4
CN2 SKS 05 47 52.5
CN2 *e*S S 05 48 42.5 +0.2
CN2 AMB AMB
comp=Z,20nm,1.1s
CN2 AMB AMB
comp=Z,4µm,9.0s
CN2 LR LR
comp=Z,43µm,27.0s,MS6.8
NNA Nana 98.90 120 P **P 05 37 15.6 +0.3**
comp=Z,6.3nm,0.7s,baz=135,slow=4.3,SNR=3.1
NNA LR LR 06 12 33.3
comp=Z,83µm,20.6s,MS7.2,baz=218,slow=30
NNA Nana 98.90 120 *e*P **P 05 37 15.7 +0.4**
comp=Z,144nm,1.8s,mb6.2
NNA LR LR

comp=Z,108µm,22.0s,MS7.3
PAYG Puerto Ayora 99.58 102 PFAKE 05 37 30.0 +12
PAYG LR LR
comp=Z,52µm,22.0s,MS7.0
SKR Severo-Kuril's 99.79 355 *e*P Pdif 05 37 26.0 +6.9
SKR *e* 05 47 50.0
SKR *e* 05 51 14.0
SKR *e*SS SS 05 55 50.0 +5.5
SKR pmax pmax
comp=Z,11µm,12.0s
SKR pmax pmax
comp=E,3µm,10.0s
SKR MLR MLR
comp=N,23µm,20.0s,MS7.0
SKR MLR MLR
comp=E,45µm,20.0s,MS7.0
SKR MLR MLR
comp=Z,41µm,20.0s,MS6.9
LPAZ La Paz 100.03 129 P Pdif 05 37 21.9 +1.7
comp=Z,7.8nm,1.1s,baz=136,slow=2.1,SNR=20
LPAZ PP PP 05 41 35.3 +10
comp=Z,54nm,1.4s,baz=191,slow=4.8,SNR=9.1
LPAZ La Paz 100.03 129 *e*P Pdif 05 37 21.3 +1.2
LPAZ pmax pmax
comp=Z,112nm,1.4s
LPAZ MLR MLR
comp=Z,45µm,22.0s
LPAZ La Paz 100.03 129 *e*Pdif Pdif 05 37 21.3 +1.2
comp=Z,112nm,1.4s
LPAZ LR LR
comp=Z,45µm,22.0s,MS6.9
HYB Hyderabad 100.20 285 *i* P Pdif 05 37 22.0 +1.1
HYB Hyderabad 100.20 285 *e*P Pdif 05 37 22.0 +1.1
HYB *e*SKS 05 48 00.0
LZH Lanzhou 100.39 314 ⇑P Pdif 05 37 22.5 +0.7
LZH AP 05 37 27.5
LZH PP PP 05 41 32.5 +4.3
LZH SKS 05 47 58.0
LZH S Sdif 05 48 53.0 -5.0
LZH XS 05 49 05.0
LZH AMB AMB
comp=Z,8µm,8.2s
LZH LR LR
comp=E,105µm,19.6s
LZH LR LR
comp=Z,144µm,20.0s
LZH Lanzhou 100.39 314 ⇑P Pdif 05 37 22.4 +0.6
LZH 05 41 32.5
LZH 05 47 58.0
LZH S Sdif 05 48 53.0 -5.0
LZH SS SS 05 55 57.0 +3.7
LZH pmax pmax
comp=Z,1µm,1.0s
LZH MLR MLR
comp=Z,144µm,20.0s
LZH Lanzhou 100.39 314 ⇑P Pdif 05 37 22.4 +0.6
comp=Z,1µm,1.0s
LZH pP 05 37 27.5
LZH sP 05 37 29.0
LZH PP PP 05 41 32.5 +4.3
LZH SKS 05 47 58.0
LZH S Sdif 05 48 53.0 -5.0
LZH sS 05 49 05.0
LZH SS SS 05 55 57.0 +3.7
LZH LR LR
comp=Z,144µm,20.0s
BOK Bokaro 100.45 294 *e*P Pdif 05 37 19.9 -2.1
HABR Khabarovsk 100.54 341 *e*P Pdif 05 37 20.8 -1.6
HABR *e* 05 41 26.9
HABR *e* 05 43 34.8
HABR *e* 05 48 55.1
HABR *e* 05 50 27.4
HABR *e* 05 55 54.1
HABR *e* 05 59 44.4
BTO Baotou 101.40 321 *e*P Pdif 05 37 31.5 +5.3
GOA Goa 101.80 280 ⇓*i*P Pdif 05 37 27.1 -0.9
GOA *i* x x 05 48 15.0
LSA Lhasa 101.89 302 P Pdif 05 37 26.5 -1.9
LSA LR LR
comp=N,99µm,45.4s,MS7.1
LSA LR LR
comp=E,100µm,45.4s,MS7.1
LSA LR LR
comp=Z,68µm,45.4s,MS6.8
LSA Lhasa 101.89 302 PFAKE 05 37 40.0 +12
LSA LR LR
comp=Z,132µm,22.0s,MS7.4
SMY Shemya 101.95 6 PFAKE 05 37 40.0 +11
SMY LR LR
comp=Z,93µm,21.0s,MS7.3
KLR Kul'dur 102.00 339 *e*P Pdif 05 37 31.0 +2.1
KLR *e* 05 48 08.0
PET Petropavlovsk 102.00 357 *e*P Pdif 05 37 33.2 +4.3
PET *e* 05 41 43.8
PET *e*PPP 05 43 59.6
PET *e*SS SS 05 56 20.7 +5.5
PET *e*SSS 06 00 13.0
PET pmax pmax
comp=Z,8µm,12.4s
PET pmax pmax
comp=Z,9µm,13.2s
PET pmax pmax
comp=Z,13µm,9.3s
PET pmax pmax
comp=Z,12µm,10.7s
PET MLR MLR
comp=Z,52µm,20.0s,MS7.0
PET MLR MLR
comp=Z,38µm,20.0s
PET Petropavlovsk 102.00 357 PFAKE 05 37 40.0 +11
PET LR LR
comp=Z,42µm,20.0s,MS7.0
ADK Adak 102.06 12 PFAKE 05 37 40.0 +11
ADK LR LR
comp=Z,80µm,21.0s,MS7.2
PETK Petropavlovsk- 102.13 356 P Pdif 05 37 27.7 -1.8
comp=Z,0.8nm,0.4s,baz=132,slow=8.0,SNR=2.4
PETK PKiKP PKiKP 05 41 50.5 -0.1
comp=Z,13nm,1.1s,baz=114,slow=1.7,SNR=3.7
PETK Petropavlovsk- 102.13 356 P Pdif 05 37 27.7 -1.8
KAD Karad 102.91 281 *e*P Pdif 05 37 33.9 +0.9
JBP Jabalpur 103.57 290 *ex* x 05 36 18.8
JBP *ex* x 05 48 28.7
AKL Akola 103.61 286 *e*P Pdif 05 37 35.9 -0.2
AKL AMb AMB 05 37 48.7
comp=Z,57nm,2.4s
SIV San Ignacio 103.70 135 Pdiff Pdif 05 37 36.4 -0.1
comp=Z,4.7nm,0.9s,baz=216,slow=5.4,SNR=12
SIV PKiKP PKiKP 05 41 54.6 -0.2
comp=Z,9.0nm,1.2s,baz=212,slow=9.2,SNR=6.6
SIV PKKPbc PKKPbc 05 53 28.5 +2.5
comp=Z,3.2nm,0.9s,baz=21,slow=3.5,SNR=4.7
POO Poona 104.02 282 *e*P Pdif 05 37 36.5 -1.4
POO *ex* x 05 40 06.5
POO *i* S SKSac 05 48 15.0 -2.8
LSZ Lusaka 104.91 224 Pdiff Pdif 05 37 42.6 +0.8
comp=Z,1.3nm,0.7s,baz=90,slow=14,SNR=1.6
LSZ PKKPbc PKKPbc 05 53 24.2 +1.8
comp=Z,8.3nm,1.0s,baz=25,slow=4.1,SNR=4.1
LSZ Lusaka 104.91 224 *e*P Pdif 05 37 42.4 +0.6
LSZ pmax pmax
comp=Z,33nm,1.4s
LSZ MLR MLR
comp=Z,141µm,21.0s
LSZ Lusaka 104.91 224 *e*Pdif Pdif 05 37 42.4 +0.6
comp=Z,33nm,1.4s
LSZ LR LR
comp=Z,141µm,21.0s
GTA Gaotai 104.96 314 *e*P Pdif 05 37 41.6 -0.5
GTA AP 05 37 48.4
GTA PP PP 05 42 05.8 +3.3
GTA SKS 05 48 20.4
GTA S Sdif 05 49 33.8 -2.3
GTA XS 05 49 42.5
GTA PP PP
comp=Z,5µm,9.3s
GTA LR LR
comp=N,65µm,21.3s,MS7.3
GTA LR LR
comp=E,67µm,22.5s,MS7.3
GTA LR LR
comp=Z,84µm,21.0s,MS7.3
BOM Bombay 104.96 282 *ex* x 05 37 44.8
BOM *ex* x 05 37 53.1
comp=Z,73nm,1.3s
BOM *ex* x 05 42 15.1
HIA Hailar 105.32 332 PFAKE 05 42 10.0 +13
HIA LR LR
comp=Z,67µm,21.0s,MS7.2
TSUM Tsumeb 105.67 213 Pdiff Pdif 05 37 45.4 +0.1
comp=Z,1.7nm,0.8s,baz=262,slow=14,SNR=2.3
TSUM PKiKP PKiKP 05 42 00.1 +1.7
comp=Z,13nm,1.2s,baz=140,slow=9.0,SNR=3.7
TSUM PKKPbc PKKPbc 05 53 22.6 +2.4
comp=Z,6.4nm,1.0s,baz=183,slow=5.5,SNR=3.9
TSUM Tsumeb 105.67 213 Pdif Pdif 05 37 45.4 +0.1
TSUM PKPdif PKiKP 05 42 00.1 +1.7
TSUM PKKPbc PKKPbc 05 53 22.6 +2.4
TSUM LR LR
comp=Z,73µm,21.0s,MS7.2
SNCC San Nicolas Is 106.38 58 ⇓P Pdif 05 37 52.6 +4.3
baz=107
SNCC San Nicolas Is 106.38 58 PFAKE 05 42 10.0 +11
SNCC LR LR
comp=Z,115µm,20.0s,MS7.4
SCI San Clemente I 106.72 59 ⇓P Pdif 05 37 53.4 +3.5
baz=107
BSC Santa Cruz Isl 106.87 57 ⇑P Pdif 05 37 54.5 +4.0
baz=107
CIS Catalina Islan 107.12 59 ⇓P Pdif 05 37 55.8 +4.1
baz=108
SBC Santa Barbara 107.16 57 ⇓P Pdif 05 37 57.4 +5.5
baz=108
BLG Laguna Peak 107.27 58 ⇓P Pdif 05 38 00.9 +8.5
baz=108
FMP Fort Macarthur 107.41 59 ⇑P Pdif 05 37 57.0 +4.1
baz=108
PKM Peak Mountain 107.44 57 ⇑P Pdif 05 37 56.4 +3.3
baz=108
109C Camp Elliot, M 107.47 60 ⇓P Pdif 05 37 57.1 +3.9
baz=108
V03C Hunter Liggett 107.51 55 ⇑P Pdif 05 38 02.1 +8.7
baz=108
BAR Barrett 107.56 60 *e*Pdif Pdif 05 37 55.0 +1.3
SMMC Simmler 107.65 56 ⇑P Pdif 05 38 04.9 +11
baz=108
OTAV Otavalo 107.71 111 *e*Pdif Pdif 05 37 57.9 +3.6
comp=Z,146nm,2.5s
OTAV LR LR
comp=Z,52µm,21.0s,MS7.1
DECC Green Verdugo 107.78 58 ⇓P Pdif 05 38 03.5 +8.8
baz=108
PKD Parkfield 107.83 56 ⇑P Pdif 05 38 03.5 +8.7
baz=108
FARB Farallon Islan 107.83 53 ⇓P Pdif 05 38 02.3 +7.4
baz=108
OSI Osito Adit 107.84 58 ⇑P Pdif 05 37 55.9 +1.0
baz=108
MONP Monument Peak 107.86 60 ⇑P Pdif 05 38 00.6 +5.6
baz=108
DVTC Desert V Tower 107.87 61 ⇓P Pdif 05 38 06.1 +11
baz=108
MWC Mount Wilson 107.92 58 *e*PKPdf PKiKP 05 42 05.9 +4.0
MWC LR LR
comp=Z,116µm,20.0s,MS7.4
MURC Murrieta 107.94 59 ⇓P Pdif 05 38 03.7 +8.4
baz=108
SAO San Andreas Ge 107.95 54 PFAKE 05 42 10.0 +8.1
SAO LR LR
comp=Z,106µm,19.0s,MS7.4
U04C Hernandez Rese 108.01 55 ⇓P Pdif 05 38 03.0 +7.4
baz=108
JRSC Jasper Ridge 108.01 53 ⇑P Pdif 05 38 05.2 +10
baz=108
PTH Pithoragarh 108.10 294 *ex* x 05 42 01.8
V05C Boulder Hill, 108.12 56 ⇓P Pdif 05 38 04.9 +8.8
baz=109
BFSC Mount Baldy St 108.15 59 ⇑P Pdif 05 38 06.7 +10
baz=109
ARVC Arvin 108.16 57 ⇓P Pdif 05 37 57.4 +1.1
baz=109
PACP Pacheco Peak 108.22 54 ⇑P Pdif 05 38 06.4 +10
baz=108
MCCM Marconi Confer 108.23 53 ⇓P Pdif 05 37 57.1 +0.5
baz=109
MCCM Marconi Confer 108.23 53 PFAKE 05 42 10.0 +7.6
MCCM LR LR
comp=Z,94µm,19.0s,MS7.4
SWSC Sam W. Stewart 108.25 61 ⇑P Pdif 05 38 03.4 +6.7
baz=109
PFO Pinyon Flat Ob 108.37 60 ⇑P Pdif 05 38 04.5 +7.3
baz=109
PFO Pinyon Flat Ob 108.37 60 PFAKE 05 42 10.0 +7.2
PFO LR LR
comp=Z,104µm,19.0s,MS7.4
WENL Wente Vineyard 108.43 54 ⇑P Pdif 05 37 58.3 +0.8
baz=109
EDW2 Edwards Air Fo 108.44 58 ⇓P Pdif 05 38 03.4 +5.8
baz=109
VES Vestal, Richgr 108.55 57 ⇑P Pdif 05 38 03.2 +5.2
baz=109
BBRC Big Bear Sol-O 108.58 59 ⇑P Pdif 05 37 59.8 +1.7
baz=109
CVS Carmenet Viney 108.60 53 ⇑P Pdif 05 38 00.3 +2.1
baz=109
ULN Ulaanbaatar 108.60 323 *e*P Pdif 05 38 01.7 +3.4
ULN pmax pmax
comp=Z,25nm,1.6s
ULN MLR MLR
comp=Z,66µm,20.0s,MS7.2
ULN Ulaanbaatar 108.60 323 *e*Pdif Pdif 05 38 01.7 +3.4
comp=Z,25nm,1.6s
ULN LR LR
comp=Z,66µm,20.0s,MS7.2
BDM Black Diamond 108.62 53 ⇑P Pdif 05 38 00.8 +2.5
baz=109
112A Yuma 108.65 62 ⇓P Pdif 05 37 58.2 -0.2
baz=109
ISA Isabella 108.75 57 *e*P Pdif 05 38 00.0 +1.1
ISA pmax pmax
comp=Z,6.0nm,1.2s
ISA MLR MLR
comp=Z,98µm,20.0s,MS7.4
ISA Isabella 108.75 57 ⇑P Pdif 05 37 59.3 +0.4
baz=109
ISA Isabella 108.75 57 *e*Pdif Pdif 05 38 00.0 +1.1
comp=Z,6.3nm,1.2s
ISA *e*PKPdf PKiKP 05 42 03.8 +0.3
ISA LR LR
comp=Z,98µm,20.0s,MS7.4
HOPS Hopland 108.77 52 ⇓P Pdif 05 38 06.2 +7.2
baz=109
HOPS Hopland 108.77 52 PFAKE 05 42 10.0 +6.6
HOPS LR LR
comp=Z,123µm,22.0s,MS7.4
RCTC Rector, Farmer 108.81 56 ⇓P Pdif 05 38 07.0 +7.9
baz=109
SONM Songino Array 108.84 323 Pdiff Pdif 05 38 02.4 +3.1
comp=Z,0.8nm,0.9s,baz=132,slow=2.2,SNR=4.6
SONM PKiKP PKiKP 05 42 05.3 +2.1
comp=Z,3.9nm,1.0s,baz=162,slow=5.1,SNR=4.8
SONM PP PP 05 42 36.0 +5.2
comp=Z,5.9nm,1.1s,baz=145,slow=5.3,SNR=3.8
SONM PKKPbc PKKPbc 05 53 11.6 +0.4
comp=Z,2.6nm,0.9s,baz=259,slow=1.5,SNR=4.5
GLA Glamis 108.89 61 ⇑P Pdif 05 38 05.9 +6.4
baz=109
GLA Glamis 108.89 61 PFAKE 05 42 20.0 +16
GLA LR LR
comp=Z,98µm,21.0s,MS7.3
BELC Belle Mtn. 108.91 60 ⇓P Pdif 05 38 03.8 +4.2
baz=109
BC3 Big Chuckw Mtn 108.97 60 ⇓P Pdif 05 38 01.8 +1.9
baz=109
S05C Merced 108.98 55 ⇓P Pdif 05 38 02.3 +2.4
baz=110
RRX Edison Barstow 108.99 59 ⇑P Pdif 05 38 02.3 +2.3
baz=109
MNRC McLaughlin Nat 109.01 52 ⇓P Pdif 05 38 02.4 +2.3
baz=110
LRMC Laurel Mountai 109.04 58 ⇓P Pdif 05 38 03.7 +3.5
baz=110
Q03C Winters 109.05 53 ⇑P Pdif 05 38 02.0 +1.8
baz=110
T06C Millerton Lake 109.06 55 ⇑P Pdif 05 38 02.5 +2.1
baz=110
HELL Mitchell Peak 109.20 56 ⇑P Pdif 05 37 59.3 -1.6
baz=110
O01C Eel River Cons 109.25 51 ⇑P Pdif 05 38 05.8 +4.7
baz=110
214A Organ Pipe Nat 109.26 63 ⇓P Pdif 05 38 01.5 +0.3
baz=110
NDI New Delhi 109.29 292 *e*P Pdif 05 38 02.0 +0.7
NDI *ex* x 05 44 40.0
AJM Ajmer 109.29 288 *e*P Pdif 05 37 59.7 -1.6
113A Mohawk Valley, 109.29 62 ⇑P Pdif 05 37 59.0 -2.3
baz=110
HEC Hector,Ludlow 109.33 59 ⇓P Pdif 05 38 05.9 +4.4
baz=110
R04C Big Horse Ranc 109.33 54 ⇓P Pdif 05 38 06.8 +5.3
baz=110
BDFB Brasilia 109.38 147 PFAKE 05 42 20.0 +15
BDFB LR LR
comp=Z,83µm,20.0s,MS7.3
GSC Goldstone 109.41 58 ⇑P Pdif 05 38 08.6 +6.8
baz=110
GSC Goldstone 109.41 58 *e*Pdif Pdif 05 38 03.9 +2.1
GSC LR LR
comp=Z,131µm,19.0s
GASB Alder Springs 109.45 52 ⇓P Pdif 05 38 07.5 +5.4
baz=110
CMB Columbia Colle 109.46 54 ⇑P Pdif 05 38 10.9 +8.8
baz=110
CMB Columbia Colle 109.46 54 PFAKE 05 42 20.0 +15
CMB LR LR
comp=Z,89µm,19.0s,MS7.4
IRM Iron Mountain 109.51 60 ⇑P Pdif 05 38 02.4 +0.1
baz=110
KCC Kaiser Creek 109.51 55 ⇑P Pdif 05 37 57.4 -4.9
baz=110
CWC Cottonwood Cre 109.53 57 ⇑P Pdif 05 38 01.2 -1.2
baz=110
Q04C Lincoln 109.53 53 ⇑P Pdif 05 38 04.6 +2.2
baz=110
Y12C Blythe 109.57 61 ⇓P Pdif 05 38 04.6 +2.1
baz=110
MPMC Manual Prospec 109.58 57 ⇓P Pdif 05 38 03.4 +0.8
baz=110
S06C San Francisco 109.64 55 ⇓P Pdif 05 38 02.7 -0.2
baz=110
JCC Jacoby Creek 109.65 50 ⇓P Pdif 05 38 11.2 +8.3
baz=110
GMRC Granite Mounta 109.67 59 ⇑P Pdif 05 38 06.5 +3.5
baz=110
DAC Darwin (Calif) 109.68 57 PFAKE 05 42 20.0 +15
DAC LR LR
comp=Z,138µm,20.0s
O02C Red Bluff 109.80 51 ⇓P Pdif 05 38 10.7 +7.1
baz=110
LAVA Lava Cap Winer 109.81 53 ⇑P Pdif 05 38 10.2 +6.6
baz=110
TIN Tinemaha 109.90 56 ⇓P Pdif 05 38 13.4 +9.3
baz=110
MTUM Tungsten Hills 109.94 56 *e*PKPdf PKiKP 05 42 07.3 +1.7
MLAC Mammoth Lakes 109.99 55 ⇑P Pdif 05 38 09.7 +5.3
baz=110
TUQ Turquoise Moun 110.00 59 ⇑P Pdif 05 38 10.1 +5.7
baz=110
ORV Oroville 110.00 52 ⇓P Pdif 05 38 09.8 +5.3
baz=110
Y13A Salome 110.01 61 ⇓P Pdif 05 38 08.4 +3.9
baz=110
N02C Big Bar 110.02 50 ⇓P Pdif 05 38 09.0 +4.4
baz=110
216A Three Points, 110.09 64 ⇓P Pdif 05 38 07.7 +2.8
baz=110
R05C Kirkwood Meado 110.12 54 ⇑P Pdif 05 38 10.4 +5.4
baz=111
BHJ Bhuj 110.14 282 *ex* x 05 38 06.2
SHOC Shoshone 110.14 58 ⇑P Pdif 05 38 10.8 +5.7
baz=111
115A Sonoran Desert 110.14 63 ⇓P Pdif 05 38 05.3 +0.2
baz=111
PDMCI Parker Dam,Lak 110.19 61 ⇓P Pdif 05 38 12.2 +6.9
baz=111
Z14A Wintersburg 110.20 62 ⇑P Pdif 05 38 10.9 +5.5
baz=111
R07C Lee Vining 110.22 55 ⇑P Pdif 05 38 12.7 +7.3
baz=111
WDC Whiskeytown Da 110.23 51 *e*PKIKP PKiKP 05 42 06.6 +0.6
WDC MLR MLR
comp=Z,96µm,22.0s,MS7.3
WDC Whiskeytown Da 110.23 51 ⇓P Pdif 05 38 09.3 +3.9
baz=111
FURC Furnace Creek, 110.23 57 ⇓P Pdif 05 38 13.1 +7.6
baz=111
NEE2 Needles Airpor 110.25 60 ⇑P Pdif 05 38 10.6 +5.0
baz=111
S08C White Mtn Res 110.26 56 ⇓P Pdif 05 38 11.9 +6.3
baz=111
P05C Yuba Gap, Truc 110.28 53 ⇓P Pdif 05 38 14.5 +8.8
baz=111
217A Green Valley 110.31 65 ⇓P Pdif 05 38 11.9 +6.1
baz=111
R06C Coleville 110.32 54 ⇓P Pdif 05 38 13.3 +7.4
baz=111
GRAC Grapevine Rang 110.33 57 ⇑P Pdif 05 38 12.9 +6.9
baz=111
116A Eloy 110.35 64 ⇓P Pdif 05 38 12.9 +6.8
baz=111
M01C Crescent City 110.38 49 ⇓P Pdif 05 38 11.3 +5.2
baz=111
U10A Ash Meadows, A 110.48 58 ⇑P Pdif 05 38 08.9 +2.3
baz=111
W12A Cal Nev Ari 110.49 60 ⇓P Pdif 05 38 10.6 +4.0
baz=111
318A Bisbee 110.56 66 ⇑P Pdif 05 38 09.4 +2.5
baz=111
V11A Goodsprings 110.56 59 ⇓P Pdif 05 38 08.9 +1.9
baz=111
X13A Yucca 110.57 61 ⇑P Pdif 05 38 07.9 +0.9
baz=111
Y14A Wickenburg 110.58 62 ⇑P Pdif 05 38 16.3 +9.2
baz=111
KBO Bosley Butte 110.60 49 *e*PKPdf PKiKP 05 42 11.3 +4.6
O05C Quincy 110.60 52 ⇑P Pdif 05 38 06.2 -0.9
baz=111
Z15A Gila River Ind 110.60 63 ⇓P Pdif 05 38 12.5 +5.4
baz=111
CLNS Chul'man 110.63 338 *e*P Pdif 05 38 07.4 +0.1
CLNS pmax pmax
comp=E,166nm,13.9s
CLNS pmax pmax
comp=N,395nm,11.1s
CLNS pmax pmax
comp=Z,2µm,12.0s
M02C Callahan 110.67 50 ⇑P Pdif 05 38 07.2 -0.2
baz=111
TUC Tucson 110.71 64 PFAKE 05 42 20.0 +13
TUC LR LR
comp=Z,51µm,19.0s,MS7.1
WCN Washoe City 110.73 54 ⇓P Pdif 05 38 09.5 +1.8
baz=111
O04C Chester 110.78 52 ⇓P Pdif 05 38 12.5 +4.6
baz=111
V12A Nelson 110.81 59 ⇓P Pdif 05 38 11.3 +3.2
baz=111
BEKR Beckwourth 110.83 53 ⇑P Pdif 05 38 08.0 -0.1
baz=111
L02A Cave Junction 110.86 49 ⇑P Pdif 05 38 09.3 +1.0
baz=111
NVAR Mina Array Bea 110.86 55 Pdiff Pdif 05 38 17.2 +8.8
comp=Z,0.2nm,0.5s,baz=215,slow=7.7,SNR=2.7
NVAR PKiKP PKiKP 05 42 08.7 +1.4
comp=Z,13nm,1.2s,baz=205,slow=4.6,SNR=11
NVAR PP PP 05 42 54.3 +8.6
comp=Z,6.8nm,1.0s,baz=217,slow=1.5,SNR=4.6
NVAR PKKPbc PKKPbc 05 53 06.2 +1.8
comp=Z,6.6nm,0.9s,baz=64,slow=3.6,SNR=13
NVAR PKKP PKKPbc 05 53 19.9 +16
comp=Z,17nm,1.1s,baz=73,slow=5.1,SNR=5.3
NVAR Mina Array Bea 110.86 55 PKPdf PKiKP 05 42 08.7 +1.4
NVAR PP PP 05 42 54.3 +8.6
NVAR PKKPbc PKKPbc 05 53 06.2 +1.8
NVAR PKKP PKKPbc 05 53 19.9 +16
W13A Hualapai Mount 110.91 60 ⇓P Pdif 05 38 10.0 +1.5
baz=111
218A Dragoon 110.91 65 ⇓P Pdif 05 38 10.7 +2.2
baz=111
TPNV Topopah Spring 110.91 58 ⇓P Pdif 05 38 10.5 +2.0
baz=111
TPNV Topopah Spring 110.91 58 PFAKE 05 42 20.0 +13
TPNV LR LR
comp=Z,133µm,20.0s
R08A Mina 110.91 55 ⇓P Pdif 05 38 16.8 +8.3
baz=111
117A Oracle 110.92 64 ⇑P Pdif 05 38 09.1 +0.5
baz=111
K01A Sixes 110.92 48 ⇑P Pdif 05 38 12.3 +3.7

baz=111
P06A Stead Airport, 110.93 53 ⇓P Pdif 05 38 14.7 +6.1
baz=111
S09A Goldfield 110.94 56 ⇑P Pdif 05 38 12.0 +3.4
baz=111
319A Douglas 110.94 66 ⇓P Pdif 05 38 13.6 +5.0
baz=111
M03C McCloud 110.95 51 ⇓P Pdif 05 38 13.6 +4.8
baz=111
Q07A Schurz 110.97 54 ⇓P Pdif 05 38 13.8 +5.0
baz=111
Y15A Casa Rosa Ranc 110.98 62 ⇑P Pdif 05 38 09.9 +1.1
baz=111
YBH Yreka Blue Hor 110.99 50 PFAKE 05 42 20.0 +13
YBH LR LR
comp=Z,64µm,21.0s,MS7.2
U11A Corn Creek 111.01 58 ⇓P Pdif 05 38 12.2 +3.2
baz=112
X14A Yava 111.02 61 ⇑P Pdif 05 38 08.1 -1.0
baz=112
Z16A Peralta Trail, 111.07 63 ⇓P Pdif 05 38 15.1 +5.9
baz=112
ELFS Eagle Lake Fie 111.19 52 ⇑P Pdif 05 38 18.3 +8.6
baz=112
TPH Tonopah 111.19 56 *e*PKPdf PKiKP 05 42 08.3 +0.3
TPH *e*SKPdf SKPdf 05 45 37.4 -5.8
TPH LR LR
comp=Z,57µm,20.0s,MS7.2
PAHR Pah Rah Range 111.22 54 *e*PKPdf PKiKP 05 42 06.6 -1.4
O06A Flanigan 111.32 53 ⇑P Pdif 05 38 19.3 +8.9
baz=112
P07A Fallon 111.36 54 ⇑P Pdif 05 38 19.6 +9.1
baz=112
K02A Glendale 111.37 49 ⇓P Pdif 05 38 19.6 +9.1
baz=112
Q08A Gabbs 111.38 55 ⇑P Pdif 05 38 13.1 +2.5
baz=112
Q08A ⇑PKiKP PKiKP 05 42 10.0 +1.7
baz=112,SNR=6.8
V13A Grand Canyon W 111.39 60 ⇑P Pdif 05 38 16.7 +6.1
baz=112
R09A Tonopah 111.39 56 ⇑P Pdif 05 38 16.0 +5.4
baz=112
219A White Tail Can 111.39 66 ⇑P Pdif 05 38 14.8 +4.1
baz=112
X15A Humboldt 111.41 62 ⇓P Pdif 05 38 15.8 +5.0
baz=112
Y16A Circle Bar Ran 111.42 63 ⇓P Pdif 05 38 15.8 +5.0
baz=112
S10A Tonopah Range, 111.42 57 ⇑P Pdif 05 38 13.2 +2.4
baz=112
118A Homack Ranch, 111.43 65 ⇑P Pdif 05 38 14.8 +4.0
baz=112
W14A Seligman 111.44 61 ⇑P Pdif 05 38 18.3 +7.4
baz=112
M04C Macdoel 111.47 51 ⇓P Pdif 05 38 12.6 +1.6
baz=112
U12A Valley of Fire 111.49 59 ⇓P Pdif 05 38 17.2 +6.0
baz=112
M05C Lookout 111.51 51 ⇑P Pdif 05 38 17.5 +6.3
baz=112
HUMO Hull Mountain 111.52 49 ⇑P Pdif 05 38 19.9 +8.7
baz=112
HUMO Hull Mountain 111.52 49 *e*PKPdf PKiKP 05 42 08.8 +0.4
HUMO LR LR
comp=Z,72µm,19.0s,MS7.3
Z17A San Carlos Hig 111.60 64 ⇑P Pdif 05 38 18.8 +7.2
baz=112
T12A Moapa 111.60 59 ⇑P Pdif 05 38 20.5 +8.9
baz=112
Y17A Roosevelt 111.66 63 ⇑P Pdif 05 38 20.6 +8.7
baz=112
S11A Rachel 111.69 57 ⇓P Pdif 05 38 20.9 +8.9
baz=112
T11A Corn Creek, Al 111.69 58 ⇓P Pdif 05 38 11.3 -0.7
baz=112
Z18A Geronimo 111.70 64 ⇓P Pdif 05 38 17.5 +5.5
baz=112
L04A Klamath Falls 111.73 50 ⇑P Pdif 05 38 12.8 +0.6
baz=112
V14A Boquillas Ranc 111.73 60 ⇓P Pdif 05 38 07.3 -4.8
baz=112
M06C Likely Place G 111.74 52 ⇑P Pdif 05 38 16.8 +4.5
baz=112
N06A Buffalo Meadow 111.74 53 ⇓P Pdif 05 38 16.4 +4.2
baz=112
Q09A Carvers 111.76 56 ⇑P Pdif 05 38 17.1 +4.8
baz=112
J02A Umpqua 111.77 48 ⇑P Pdif 05 38 21.9 +9.5
baz=112
U13A Pakoon Wash 111.80 59 ⇑P Pdif 05 38 16.2 +3.7
baz=112
O07A Toulon 111.82 54 ⇑P Pdif 05 38 16.6 +4.0
baz=112
X16A Lo Mia Camp, P 111.83 62 ⇑P Pdif 05 38 14.2 +1.6
baz=112
W15A Williams 111.89 61 ⇓P Pdif 05 38 17.6 +4.8
baz=112
P08A Dixie Valley 111.90 54 ⇓P Pdif 05 38 14.1 +1.1
baz=112
119A Ashpeak Ranch, 111.91 65 ⇑P Pdif 05 38 11.3 -1.7
baz=112
ZAK Zakamensk 112.10 323 *e*P Pdif 05 38 14.6 +0.8
ZAK pmax pmax
comp=Z,6.0nm,1.3s
I02A Mapleton 112.12 48 ⇑P Pdif 05 38 17.5 +3.6
baz=113
X17A Forest Lakes 112.14 63 ⇑P Pdif 05 38 17.1 +3.1
baz=113
S12A Delamar Landin 112.16 58 ⇓P Pdif 05 38 13.5 -0.6
baz=113
L05A Lakeview 112.17 51 ⇓P Pdif 05 38 17.6 +3.4
baz=113
Q10A Clear Creek Ra 112.18 56 ⇓P Pdif 05 38 18.2 +4.1
baz=113
Y18A Canyon Day Jun 112.19 64 ⇓P Pdif 05 38 16.5 +2.3
baz=113
N07B Gerlach 112.22 53 ⇓P Pdif 05 38 19.0 +4.7
baz=113
SEY Seymchan 112.22 354 ⇑*i*PKIKP PKiKP 05 42 09.8 +0.7
SEY Seymchan 112.22 354 ⇑*e*PKP PKiKP 05 42 09.9 +0.8
U14A Mt Trumbull 112.25 60 ⇑P Pdif 05 38 15.7 +1.2
baz=113
W16A Flagstaff 112.25 62 ⇑P Pdif 05 38 17.0 +2.5
baz=113
T13A Saint George 112.27 59 ⇓P Pdif 05 38 21.1 +6.5
baz=113
KMBO Kilima Mbogo 112.27 240 Pdiff Pdif 05 38 12.5 -2.1
comp=Z,1.6nm,0.9s,baz=288,slow=19,SNR=2.3
KMBO Kilima Mbogo 112.27 240 Pdif Pdif 05 38 12.5 -2.1
KMBO LR LR
comp=Z,128µm,21.0s
R11A Troy Canyon, C 112.28 57 ⇓P Pdif 05 38 16.1 +1.5
baz=113
O08A Rochester Mine 112.29 54 ⇓P Pdif 05 38 16.8 +2.1
baz=113
O08A PKiKP PKiKP 05 42 12.9 +3.0
baz=113,SNR=6.9
P09A Austin 112.30 55 ⇓P Pdif 05 38 22.2 +7.4
baz=113
Z19A T-Link Ranch, 112.31 65 ⇑P Pdif 05 38 19.4 +4.7
baz=113
MOD Modoc 112.34 51 ⇓P Pdif 05 38 16.2 +1.4
baz=113
MOD Modoc 112.34 51 *e*PKPdf PKiKP 05 42 10.2 +0.2
MOD LR LR
comp=Z,102µm,21.0s,MS7.4
I03A Eugene 112.37 48 ⇓P Pdif 05 38 17.0 +2.0
baz=113
V15A Kaibab Nationa 112.40 61 ⇑P Pdif 05 38 16.9 +1.8
baz=113
J04A Umpqua Nationa 112.41 49 ⇑P Pdif 05 38 18.4 +3.2
baz=113
KDAK Kodiak Island 112.46 23 PFAKE 05 42 20.0 +10
KDAK LR LR
comp=Z,29µm,21.0s,MS6.8
M07A Soldier Meadow 112.55 52 ⇑P Pdif 05 38 19.6 +3.8
baz=113
Q11A Duckwater 112.60 56 ⇑P Pdif 05 38 22.0 +6.0
baz=113
TGUH Tegucigalpa,Un 112.61 95 PFAKE 05 42 20.0 +8.7
TGUH LR LR
comp=Z,55µm,21.0s,MS7.1
K05A Summer Lake 112.64 50 ⇑P Pdif 05 38 11.5 -4.7
baz=113
WUAZ Wupatki 112.64 62 ⇓P Pdif 05 38 22.8 +6.5
baz=113
WUAZ Wupatki 112.64 62 PFAKE 05 42 20.0 +9.2
WUAZ LR LR
comp=Z,91µm,20.0s,MS7.4
N08A GE Springer Mi 112.66 54 ⇓P Pdif 05 38 24.2 +7.9
baz=113
I04A Tendick Farm, 112.66 49 ⇓P Pdif 05 38 17.2 +0.9
baz=113
S13A Holt Ranch, En 112.69 58 ⇑P Pdif 05 38 25.2 +8.8
baz=113
P10A Eureka 112.71 55 ⇑P Pdif 05 38 18.3 +1.7
baz=113
W17A Winslow 112.72 62 ⇓P Pdif 05 38 18.5 +2.0
baz=113
O09A Fish Creek Ran 112.72 55 ⇑P Pdif 05 38 16.3 -0.3
baz=113
O09A PKiKP PKiKP 05 42 13.5 +2.7
baz=113,SNR=8.6
T14A Hurricane 112.76 59 ⇓P Pdif 05 38 20.7 +3.9
baz=113
U15A North Rim 112.76 60 ⇑P Pdif 05 38 19.0 +2.2
baz=113
X18A Snowflake 112.77 63 ⇑P Pdif 05 38 18.3 +1.5
baz=113
Y19A Nutrioso 112.78 64 ⇓P Pdif 05 38 27.7 +11
baz=113
COR Corvallis 112.81 48 *e*PKIKP PKiKP 05 42 10.3 -0.5
COR MLR MLR
comp=Z,126µm,20.0s
R12A Pony Springs, 112.81 57 ⇓P Pdif 05 38 20.1 +3.1
baz=113
THN Thein Dam 112.86 293 *ex* x 05 42 05.2
J05A Fort Rock 112.87 50 ⇓P Pdif 05 38 15.9 -1.3
baz=113
H03A Soap Creek Ran 112.88 48 ⇓P Pdif 05 38 18.6 +1.3
baz=113
BMN Battle Mountai 112.89 54 PFAKE 05 42 20.0 +8.9
BMN LR LR
comp=Z,91µm,20.0s,MS7.4
L07A Adell 112.92 52 ⇓P Pdif 05 38 23.4 +5.9
baz=113
TXAR Lajitas Array 112.92 71 Pdiff Pdif 05 38 26.1 +8.6
comp=Z,0.3nm,0.9s,baz=185,slow=8.8,SNR=3.5
TXAR PKiKP PKiKP 05 42 11.3 -0.3
comp=Z,5.8nm,1.1s,baz=190,slow=3.8,SNR=11
TXAR PKKPbc PKKPbc 05 52 57.3 0.0
comp=Z,2.4nm,0.8s,baz=74,slow=3.8,SNR=7.2
TXAR Lajitas Array 112.92 71 *i*P Pdif 05 38 26.1 +8.6
TXAR *i* 05 42 11.3
TXAR Lajitas Array 112.92 71 PKPdf PKiKP 05 42 11.3 -0.3
TXAR PKKPbc PKKPbc 05 52 57.3 0.0
CCUT Cedar City 112.95 59 *e*PKPdf PKiKP 05 42 12.4 +1.1
TLY Talaya 112.98 324 *e*P Pdif 05 38 24.3 +6.6
TLY *e* 05 43 02.5
TLY *e*SS SS 05 58 59.4 +15
TLY *e* 06 02 52.9
TLY pmax pmax
comp=Z,34nm,1.4s
TLY Talaya 112.98 324 ⇓*i*PKP PKiKP 05 42 10.4 -0.5
TLY LR LR
comp=Z,71µm,22.0s,MS7.2
M08A Happy Creek Ra 113.01 53 ⇑P Pdif 05 38 18.8 +1.0
baz=114
K06A Valley Falls 113.02 51 ⇓P Pdif 05 38 13.5 -4.4
baz=114
N09A Rock Creek Ran 113.03 54 ⇓P Pdif 05 38 19.5 +1.6
baz=114
N09A PKiKP PKiKP 05 42 14.0 +2.7
baz=114,SNR=5.7
P11A Circle Ranch, 113.05 56 ⇑P Pdif 05 38 26.2 +8.2
baz=114
R13A O'Grain Ranch, 113.06 58 ⇓P Pdif 05 38 07.9 -10
baz=114
ARUT Antelope Range 113.07 59 *e*PKIKP PKiKP 05 42 09.3 -2.2
ARUT *e* 05 43 04.0
X19A St. Johns 113.09 64 ⇓P Pdif 05 38 09.2 -9.0
baz=114
T15A Red Dirt Ranch 113.12 60 ⇓P Pdif 05 38 15.7 -2.7
baz=114
O10A Cortez Mining, 113.17 55 ⇓P Pdif 05 38 22.8 +4.2
baz=114
O10A PKiKP PKiKP 05 42 14.2 +2.6
baz=114,SNR=5.3
IRK Irkutsk 113.19 325 *e*PKIKP PKiKP 05 42 12.4 +1.1
IRK pmax pmax
comp=Z,87nm,1.9s
Q12A Willow Creek R 113.19 57 ⇑P Pdif 05 38 16.5 -2.2
baz=114
U16A Tuba City 113.22 61 ⇑P Pdif 05 38 17.5 -1.3
baz=114
W18A Petrified Fore 113.31 63 ⇑P Pdif 05 38 25.4 +6.2
baz=114
J06A Christmas Vall 113.39 50 ⇑P Pdif 05 38 22.6 +3.0
baz=114
H04A Detroit Lake 113.42 48 ⇑P Pdif 05 38 22.0 +2.3
baz=114
K07A Rock Creek Ran 113.45 51 ⇑P Pdif 05 38 25.0 +5.2
baz=114
P12A McGill 113.45 56 ⇓P Pdif 05 38 19.3 -0.5
baz=114
M09A Marvel Ranch, 113.48 53 ⇓P Pdif 05 38 30.1 +10
baz=114
M09A PKiKP PKiKP 05 42 13.0 +0.8
baz=114,SNR=6.2
I05A Bend 113.50 49 ⇑P Pdif 05 38 29.8 +10
baz=114
W19A Sanders 113.51 63 ⇑P Pdif 05 38 26.1 +6.0
baz=114
O11A Cowboy Ranch, 113.51 55 ⇑P Pdif 05 38 23.1 +3.0
baz=114
O11A ⇓PKiKP PKiKP 05 42 12.6 +0.3
baz=114,SNR=7.7
L08A Fields 113.56 52 ⇑P Pdif 05 38 29.6 +9.3
baz=114
Q13A Wheeler Ranch, 113.58 57 ⇑P Pdif 05 38 29.9 +10
baz=114
WVOR Wild Horse Val 113.58 52 *e*PKIKP PKiKP 05 42 05.7 -6.7
WVOR MLR MLR
comp=Z,76nm,20.0s,MS7.3
S15A Panguitch 113.60 59 ⇑P Pdif 05 38 26.9 +6.5
baz=114
T16A Glen Canyon Da 113.60 60 ⇑P Pdif 05 38 22.6 +2.1
baz=114
V18A Ganado 113.61 62 ⇑P Pdif 05 38 25.9 +5.4
baz=114
G04A Mulino 113.66 48 ⇑P Pdif 05 38 30.1 +9.4
baz=114
R14A James Farms, M 113.67 58 ⇓P Pdif 05 38 26.7 +6.0
baz=114
F03A Seaside 113.67 47 ⇓P Pdif 05 38 31.5 +11
baz=114
BCIP Isla Barro Col 113.76 104 PFAKE 05 42 20.0 +6.4
BCIP LR LR
comp=Z,64µm,20.0s,MS7.2
L09A Wilkinson Ranc 113.79 53 ⇓P Pdif 05 38 32.0 +11
baz=114
U17A Shonto 113.81 61 ⇑P Pdif 05 38 24.7 +3.2
baz=114
ROSC El Rosal 113.86 112 Pdiff Pdif 05 38 29.3 +7.6
comp=Z,3.8nm,0.3s,baz=87,slow=17,SNR=2.3
ROSC PKP PKiKP 05 42 23.0 +9.2
comp=Z,2.3nm,0.4s,baz=275,slow=21,SNR=4.9
ROSC PKKPbc PKKPbc 05 52 55.1 +1.3
comp=Z,11nm,0.9s,baz=114,slow=14,SNR=5.4
I06A Prineville 113.86 50 ⇓P Pdif 05 38 31.5 +10
baz=114
H05A Madras 113.87 49 ⇑P Pdif 05 38 29.2 +7.5
baz=114
K08A Mann Creek Ran 113.87 52 ⇑P Pdif 05 38 20.2 -1.5
baz=114
J07A Hines 113.91 51 ⇑P Pdif 05 38 29.3 +7.4
baz=114
P13A Bates Ranch, G 113.93 57 ⇓P Pdif 05 38 22.9 +1.0
baz=114
N11A Elko Archery C 113.96 55 ⇑P Pdif 05 38 24.7 +2.6
baz=114
T17A Navajo Res., N 114.01 61 ⇓P Pdif 05 38 23.7 +1.4
baz=114
Q14A Sevier Lake (B 114.01 58 ⇑P Pdif 05 38 27.7 +5.4
baz=114
R15A Junction 114.02 59 ⇓P Pdif 05 38 28.4 +6.1
baz=114
M10A I.L. Ranch, Tu 114.03 54 ⇓P Pdif 05 38 24.8 +2.4
baz=114
S16A Weppner Ranch, 114.06 60 ⇑P Pdif 05 38 24.5 +1.9
baz=114
O12A Currie 114.10 56 ⇓P Pdif 05 38 29.3 +6.5
baz=115
E03A Lebam 114.12 46 ⇓P Pdif 05 38 29.3 +6.6
baz=115
V19A Window Rock 114.13 63 ⇑P Pdif 05 38 27.3 +4.4
baz=115
U18A Rough Rock, Ch 114.14 62 ⇑P Pdif 05 38 29.0 +6.1
baz=115
U18A PKiKP PKiKP 05 42 15.0 +1.3
baz=115,SNR=10
ELK Elko 114.17 55 *e*PKIKP PKiKP 05 42 14.2 +0.7
ELK MLR MLR
comp=Z,120µm,19.0s
F04A Amboy 114.22 47 ⇓P Pdif 05 38 30.9 +7.6
baz=115
WMQ Urumqi 114.23 309 *e*PKP PKiKP 05 42 14.3 +0.7
WMQ PP PP 05 43 15.0 +5.4
WMQ PKS 05 45 49.5
WMQ SKS SKSdf 05 49 24.0 -1.3
WMQ SKKS SKKSac 05 50 06.0 -4.3
WMQ SS SS 05 59 00.0 -0.9
WMQ PP PP
comp=Z,16µm,8.8s
WMQ LR LR
comp=N,124µm,29.6s
WMQ LR LR
comp=E,114µm,26.0s
WMQ LR LR
comp=Z,139µm,27.9s,MS7.4
K09A Rome 114.24 52 ⇓P Pdif 05 38 31.6 +8.2
baz=115
G05A Wamic 114.25 48 ⇓P Pdif 05 38 32.3 +8.9
baz=115
MVU Marysvale 114.26 59 *e*Pdif Pdif 05 38 18.1 -5.3
MVU LR LR
comp=Z,95µm,19.0s,MS7.4
LENM Lemitar 114.28 65 *e*PKPdf PKiKP 05 42 15.5 +1.6
MSU Marysvale 114.29 59 *e*PKIKP PKiKP 05 42 14.7 +0.9
YAK Yakutsk 114.30 343 *e*PKIKP PKiKP 05 42 14.8 +1.7
YAK *e* 05 42 25.6
YAK *e* 05 43 14.7
YAK *e*PS PS 05 52 39.4 -7.2
YAK pmax pmax
comp=E,142nm,5.6s
YAK pmax pmax
comp=N,291nm,9.0s
YAK pmax pmax
comp=Z,1µm,8.7s
YAK Yakutsk 114.30 343 *e*PKP PKiKP 05 42 13.6 +0.5
YAK LR LR
comp=Z,42µm,22.0s,MS7.0
I07A Izee 114.32 50 ⇓P Pdif 05 38 31.0 +7.4
baz=115
J08A Circle Bar Ran 114.33 51 ⇓P Pdif 05 38 33.4 +10
baz=115
LAZ Ladron 114.34 65 *e*PKPdf PKiKP 05 42 14.9 +0.8
N12A Clover Valley, 114.36 55 ⇓P Pdif 05 38 35.1 +11
baz=115
N12A PKiKP PKiKP 05 42 17.1 +3.2
baz=115,SNR=10
M11A Holland Ranch, 114.36 54 ⇑P Pdif 05 38 33.1 +9.2
baz=115
M11A PKiKP PKiKP 05 42 16.8 +2.9
baz=115,SNR=7.4
H06A Lindquist Farm 114.37 49 ⇑P Pdif 05 38 31.5 +7.6
baz=115
BOD Bodaibo 114.43 333 *e*PKIKP PKiKP 05 42 12.4 -1.1
BOD pmax pmax
comp=Z,29nm,1.3s
S17A Black Ridge (B 114.45 60 ⇓P Pdif 05 38 32.9 +8.6
baz=115
L10A Juniper Basin 114.46 53 ⇓P Pdif 05 38 34.0 +10
baz=115
L10A PKiKP PKiKP 05 42 15.0 +0.9
baz=115,SNR=12
BNM Barren Site 114.47 66 *e*PKPdf PKiKP 05 42 15.8 +1.5
SHEL Horse Pasture 114.48 191 PFAKE 05 42 30.0 +15
SHEL LR LR
comp=Z,103µm,20.0s,MS7.4
Q15A Fillmore 114.52 58 ⇑P Pdif 05 38 28.4 +3.8
baz=115
R16A Teasdale 114.52 59 ⇓P Pdif 05 38 34.7 +10
baz=115
P14A Drum Mountains 114.55 57 ⇑P Pdif 05 38 34.4 +10
baz=115
G06A Carlson Farm, 114.58 49 ⇑P Pdif 05 38 35.2 +10
baz=115
LPM Los Pinos Moun 114.58 66 *e*PKPdf PKiKP 05 42 15.7 +1.2
NLWA Neilton Lookou 114.59 45 ⇓P Pdif 05 38 33.9 +9.0
baz=115
NLWA Neilton Lookou 114.59 45 PFAKE 05 42 30.0 +16
NLWA LR LR
comp=Z,118µm,20.0s
T18A Mexican Hat 114.64 61 ⇑P Pdif 05 38 31.9 +6.8
baz=115
T18A ⇓PKiKP PKiKP 05 42 14.9 +0.4
baz=115,SNR=9.9
F05A White Salmon 114.64 48 ⇓P Pdif 05 38 34.0 +8.9
baz=115
H07A Lands Inn, Kim 114.65 50 ⇓P Pdif 05 38 32.4 +7.2
baz=115
SVW2 Sparrevohn 114.65 20 *e*PKPdf PKiKP 05 42 12.7 -1.1
I08A Drewsey 114.67 51 ⇑P Pdif 05 38 33.0 +7.8
baz=115
J09A Fry Pan Ranch, 114.69 52 ⇑P Pdif 05 38 33.1 +7.8
baz=115
K10A MacKenzie Ranc 114.74 53 ⇑P Pdif 05 38 35.2 +10
baz=115
N13A Wendover, West 114.81 56 ⇓P Pdif 05 38 36.3 +10
baz=115
M12A Wells 114.82 55 ⇓P Pdif 05 38 34.3 +8.4
baz=115
M12A ⇑PKiKP PKiKP 05 42 16.0 +1.3
baz=115,SNR=12
F06A Goldendale 114.89 48 ⇑P Pdif 05 38 33.2 +6.9
baz=115
L11A Cat Creek Ranc 114.90 54 ⇓P Pdif 05 38 36.1 +10
baz=115
L11A ⇑PKiKP PKiKP 05 42 14.3 -0.6
baz=115,SNR=9.6
T19A Beclabito 114.92 62 ⇑P Pdif 05 38 35.8 +9.4
baz=115
T19A ⇓PKiKP PKiKP 05 42 15.5 +0.4
baz=115,SNR=6.7
S18A Hurst Farm, Bl 114.95 61 ⇓P Pdif 05 38 35.9 +9.4
baz=115
S18A ⇓PKiKP PKiKP 05 42 16.5 +1.3
baz=115,SNR=9.3
P15A Leamington 114.97 58 ⇓P Pdif 05 38 30.9 +4.3
baz=115
E05A Randle 114.99 47 ⇓P Pdif 05 38 36.3 +10
baz=116
H08A Prairie City 115.05 50 ⇓P Pdif 05 38 36.8 +10
baz=116
R17A Hanksville Air 115.05 60 ⇓P Pdif 05 38 31.7 +4.8
baz=116
R17A ⇓PKiKP PKiKP 05 42 11.9 -3.4
baz=116,SNR=5.8
G07A Ruggs Ranch, H 115.08 49 ⇓P Pdif 05 38 31.5 +4.4
baz=116
DUG Dugway 115.11 57 *e*PKIKP PKiKP 05 42 15.6 +0.2
DUG MLR MLR
comp=Z,92µm,20.0s,MS7.4
DUG Dugway 115.11 57 ⇓P Pdif 05 38 30.5 +3.3
baz=116
ANMO Albuquerque 115.13 65 ⇑*i*PKIKP PKiKP 05 42 16.3 +0.7
ANMO Albuquerque 115.13 65 *e*PKPdf PKiKP 05 42 14.2 -1.4
ANMO LR LR
comp=Z,88µm,21.0s,MS7.3
I09A Lost Marbles R 115.14 51 ⇑P Pdif 05 38 34.6 +7.3
baz=116
Q16A Castle Valley 115.14 59 ⇓P Pdif 05 38 31.2 +3.9
baz=116
K11A Parker Ranch, 115.18 53 ⇓P Pdif 05 38 29.7 +2.2
baz=116
K11A ⇑PKiKP PKiKP 05 42 15.6 +0.1
baz=116,SNR=10
M13A Montello 115.18 55 ⇑P Pdif 05 38 29.0 +1.5
baz=116
GNW Green Mountain 115.20 46 *e*PKPdf PKiKP 05 42 15.3 0.0
J10A Berg Farm, Mel 115.25 52 ⇓P Pdif 05 38 37.8 +10
baz=116
L12A House Creek Ra 115.28 54 ⇓P Pdif 05 38 37.9 +10
baz=116
L12A ⇓PKiKP PKiKP 05 42 16.4 +0.8
baz=116,SNR=7.7
KVTX Kingsville 115.31 77 PFAKE 05 42 30.0 +14
KVTX LR LR
comp=Z,79µm,19.0s,MS7.3
D05A Enumclaw 115.33 46 ⇓P Pdif 05 38 38.3 +10

baz=116
P16A Fountain Green 115.34 58 ⇑P Pdif 05 38 37.6 +9.4
baz=116
E06A Yakima 115.35 47 ⇑P Pdif 05 38 38.4 +10
baz=116
NLU North Lily Min 115.35 58 *e*PKPdf PKPdf 05 42 16.4 +0.6
O15A The Old Anders 115.36 57 ⇓P Pdif 05 38 36.3 +8.0
baz=116
N14A Grayback Hills 115.36 56 ⇑P Pdif 05 38 37.3 +9.0
baz=116
N14A PKiKP PKiKP 05 42 16.2 +0.4
baz=116,SNR=21
TMUT Trail Mountain 115.38 59 *e*PKPpre 05 42 10.1
TMUT *e*PKPdf PKPdf 05 42 21.6 +5.7
F07A Phinny Hill Vi 115.40 49 ⇓P Pdif 05 38 35.1 +6.6
baz=116
SLKM Skilak Lake 115.43 23 *e*PKIKP PKPdf 05 42 14.7 -0.6
G08A Pilot Rock 115.45 50 ⇑P Pdif 05 38 34.9 +6.2
baz=116
MVCO Mesa Verde 115.48 62 ⇑P Pdif 05 38 38.9 +10
baz=116
MVCO ⇓PKiKP PKiKP 05 42 17.5 +1.3
baz=116,SNR=14
MVCO Mesa Verde 115.48 62 *e*PKPdf PKPdf 05 42 16.9 +0.7
MVCO LR LR
comp=Z,91µm,20.0s,MS7.4
S19A Harvey Farm, M 115.48 61 ⇑P Pdif 05 38 37.9 +9.0
baz=116
S19A PKiKP PKiKP 05 42 16.7 +0.5
baz=116,SNR=21
R18A Canyonlands Na 115.49 60 ⇓P Pdif 05 38 32.2 +3.3
baz=116
R18A PKiKP PKiKP 05 42 16.7 +0.5
baz=116,SNR=12
SRU San Rafael 115.63 59 *e*PKIKP PKPdf 05 42 17.7 +1.3
SRU San Rafael 115.63 59 ⇑P Pdif 05 38 33.5 +4.0
baz=116
SRU ⇑PKiKP PKiKP 05 42 17.3 +0.9
baz=116,SNR=12
MPU Maple Canyon 115.64 58 *e*PKPdf PKPdf 05 42 16.9 +0.5
MPU LR LR
comp=Z,122µm,19.0s
H09A Durkee 115.66 51 ⇑P Pdif 05 38 37.3 +7.6
baz=116
K12A Draper Farm, C 115.68 54 ⇓P Pdif 05 38 37.0 +7.2
baz=116
I10A Payette 115.70 52 ⇑P Pdif 05 38 35.7 +5.9
baz=116
M14A Sheep Mountain 115.72 56 ⇓P Pdif 05 38 30.7 +0.8
baz=116
MFID Camas Ranch 115.73 53 ⇑P Pdif 05 38 30.7 +0.8
baz=116
MFID ⇓PKiKP PKiKP 05 42 17.1 +0.6
baz=116,SNR=6.8
N15A Stansbury Isla 115.75 57 ⇓P Pdif 05 38 31.4 +1.4
baz=116
P17A Butcher Ranch, 115.76 59 ⇓P Pdif 05 38 31.7 +1.7
baz=116
NOQ North Oquirrh 115.81 57 *e*PKPdf PKPdf 05 42 18.7 +2.0
L13A Double Diamond 115.81 55 ⇑P Pdif 05 38 29.9 -0.4
baz=116
L13A ⇓PKiKP PKiKP 05 42 17.2 +0.6
baz=116,SNR=12
C05A Tolt Reservoir 115.83 46 ⇓P Pdif 05 38 37.0 +6.6
baz=116
O16A Springville 115.84 58 ⇑P Pdif 05 38 39.6 +9.1
baz=116
O16A ⇑PKiKP PKiKP 05 42 18.0 +1.2
baz=116,SNR=8.1
Q18A Rafter H Ranch 115.85 60 ⇓P Pdif 05 38 38.9 +8.4
baz=116
D06A Cle Elum 115.88 47 ⇑P Pdif 05 38 38.7 +8.1
baz=116
F08A Pendleton 115.90 49 ⇓P Pdif 05 38 39.1 +8.4
baz=116
E07A Sunnyside 115.91 48 ⇑P Pdif 05 38 39.1 +8.4
baz=116
RSW Rattlesnake Hi 115.92 48 *e*PKPdf PKPdf 05 42 18.1 +1.4
HAWA Hanford 115.95 48 *e*PKPdf PKPdf 05 42 16.8 0.0
HAWA LR LR
comp=Z,73µm,21.0s,MS7.3
PV10 Paradox Valley 115.97 61 *e*PKPdf PKPdf 05 42 17.3 +0.2
BMO Blue Mountains 115.98 51 *e*PKIKP PKPdf 05 42 16.0 -0.9
BMO MLR MLR
comp=Z,101µm,22.0s,MS7.4
J12A Stokes Ranch, 116.00 53 ⇓P Pdif 05 38 39.3 +8.1
baz=116
J12A ⇑PKiKP PKiKP 05 42 16.7 -0.3
baz=116,SNR=16
I11A Placerville 116.01 52 ⇑P Pdif 05 38 37.3 +6.1
baz=116
G09A Cove 116.03 50 ⇓P Pdif 05 38 38.0 +6.7
baz=116
CTU Camp Tracy 116.04 57 *e*PKPdf PKPdf 05 42 22.6 +5.4
RC01 Rabbit Creek A 116.05 23 *e*PKPdf PKPdf 05 42 17.4 +0.9
JCW Jim Creek 116.08 46 *e*PKPdf PKPdf 05 42 17.4 +0.4
PV01 Paradox Valley 116.08 61 *e*PKPdf PKPdf 05 42 17.8 +0.5
H10A Noah's Angus R 116.08 51 ⇑P Pdif 05 38 39.7 +8.3
baz=117
SPUT South Promonto 116.08 56 *e*PKPdf PKPdf 05 42 17.6 +0.4
A04A Legoe Bay, Lum 116.09 45 ⇑P Pdif 05 38 35.8 +4.2
baz=117
DAU Daniels Canyon 116.12 58 *e*PKIKP PKPdf 05 42 17.3 0.0
K13A Stover Farm, H 116.12 54 ⇓P Pdif 05 38 35.8 +4.1
baz=117
JCT Junction City 116.13 73 *e*PKIKP PKPdf 05 42 16.2 -1.4
JCT MLR MLR
comp=Z,108µm,21.0s,MS7.4
JLU Jordanelle 116.14 58 *e*PKPdf PKPdf 05 42 18.8 +1.5
P18A Preston Nutter 116.14 59 ⇓P Pdif 05 38 34.8 +3.0
baz=117
L14A Malta 116.15 55 ⇑P Pdif 05 38 35.5 +3.7
baz=117
M15A Larsen Ranch, 116.19 56 ⇑P Pdif 05 38 33.6 +1.6
baz=117
TTA Tatalina 116.19 19 *e*PKIKP PKPdf 05 42 16.1 -0.6
LNOR Lincton Mounta 116.20 49 *e*PKIKP PKPdf 05 42 17.8 +0.5
HVU Hansel Valley 116.22 56 *e*PKIKP PKPdf 05 42 17.6 +0.1
Q19A Hogan Spring (116.24 60 ⇑P Pdif 05 38 35.7 +3.4
baz=117
E08A Dider Farm, El 116.25 49 ⇑P Pdif 05 38 38.8 +6.5
baz=117
O17A Robinson Place 116.26 58 ⇑P Pdif 05 38 35.7 +3.4
baz=117
F09A S2 Ranch, Elgi 116.27 50 ⇑P Pdif 05 38 39.8 +7.4
baz=117
N16A Rees Ranch, Co 116.34 57 ⇓P Pdif 05 38 41.6 +8.9
baz=117
I12A Atlanta 116.36 53 ⇓P Pdif 05 38 41.3 +8.5
baz=117
C06A Tall Timber Ra 116.37 46 ⇑P Pdif 05 38 42.7 +10
baz=117
G10A Bishop Farm, J 116.38 51 ⇓P Pdif 05 38 40.7 +7.8
baz=117
ETW Entiat 116.42 47 *e*PKPdf PKPdf 05 42 18.3 +0.7
TEIG Tepich 116.42 89 PFAKE 05 42 30.0 +12
TEIG LR LR
comp=Z,119µm,22.0s
RPW Rockport 116.45 46 *e*PKPdf PKPdf 05 42 18.2 +0.5
B06A Marblemount 116.52 46 ⇓P Pdif 05 38 41.6 +8.2
baz=117
M16A Huntsville 116.53 57 ⇑P Pdif 05 38 39.2 +5.7
baz=117
H11A Donnelly 116.53 52 ⇓P Pdif 05 38 37.3 +3.8
baz=117
K14A Jones Ranch, D 116.53 55 ⇑P Pdif 05 38 37.6 +4.1
baz=117
HLID Hailey 116.58 53 ⇓P Pdif 05 38 36.3 +2.6
baz=117
HLID Hailey 116.58 53 *e*PKPdf PKPdf 05 42 18.6 +0.5
HLID LR LR
comp=Z,83µm,19.0s,MS7.4
J13A Cove Ranch, Pi 116.59 54 ⇓P Pdif 05 38 37.0 +3.3
baz=117
L15A Malad City 116.59 56 ⇑P Pdif 05 38 34.4 +0.6
baz=117
L15A ⇑PKiKP PKiKP 05 42 18.2 +0.1
baz=117,SNR=15
WBK Wadi Bani Khal 116.60 274 ⇑P PKPdf 05 42 20.7 +1.9
SNR=5.7
C07A Waterville 116.61 47 ⇓P Pdif 05 38 43.4 +10
baz=117
PMR Palmer 116.64 23 *e*PKIKP PKPdf 05 42 18.4 +0.8
PMR MLR MLR
comp=Z,37µm,17.0s,MS7.1
D08A Wollman Farm, 116.71 48 ⇓P Pdif 05 38 29.0 -5.4
baz=117
O18A Roosevelt 116.71 59 ⇑P Pdif 05 38 42.6 +8.3
baz=117
E09A Wood Farm, Sta 116.72 49 ⇓P Pdif 05 38 32.3 -2.0
baz=117
N17A Moffit Pass 116.72 58 ⇑P Pdif 05 38 36.6 +2.3
baz=117
N17A ⇑PKiKP PKiKP 05 42 20.1 +1.7
baz=117,SNR=20
HWUT Hardware Ranch 116.77 57 *e*PKPdf PKPdf 05 42 17.9 -0.6
HWUT LR LR
comp=Z,120µm,20.0s
F10A Beach Ranch, E 116.80 50 ⇓P Pdif 05 38 44.5 +10
baz=117
G11A Walters Elk Ra 116.88 51 ⇓P Pdif 05 38 43.0 +7.9
baz=117
J14A Carey 116.89 54 ⇓P Pdif 05 38 39.3 +4.2
baz=117
A06A Chilliwack 116.93 45 ⇓P Pdif 05 38 39.7 +4.4
baz=117
BILL Bilibino 116.97 1 ⇓ *i* P Pdif 05 38 46.5 +11
BILL *i* 05 42 19.7
BILL *e* 05 42 33.6
BILL *e* 05 43 33.0
BILL *e* 05 49 07.2
BILL *e*PS PS 05 53 15.6 +4.8
BILL *e*SS SS 05 59 43.9 +8.0
BILL pmax pmax
comp=Z,2µm,12.0s
BILL MLR MLR
comp=Z,74µm,24.0s,MS7.2
BILL Bilibino 116.97 1 *e*PKPdf PKPdf 05 42 19.3 +1.3
BILL LR LR
comp=Z,65µm,22.0s,MS7.2
I13A Wildhorse Cree 116.97 53 ⇓P Pdif 05 38 33.8 -1.7
baz=117
I13A ⇓PKiKP PKiKP 05 42 19.7 +0.9
baz=117,SNR=12
K15A Arbon 116.98 55 ⇓P Pdif 05 38 36.4 +0.9
baz=117
PPLA Purkeypile 117.01 21 *e*PKPdf PKPdf 05 42 18.2 -0.1
D09A Jones Farm, Ri 117.02 49 ⇑P Pdif 05 38 36.5 +0.9
baz=118
H12A Diamond D Ranc 117.03 52 ⇓P Pdif 05 38 42.9 +7.2
baz=118
H12A ⇑PKiKP PKiKP 05 42 17.7 -1.3
baz=118,SNR=7.9
OD2 Odessa Site #2 117.05 48 P PKPdf 05 42 19.9 +1.0
L16A Fish Haven 117.12 56 ⇓P Pdif 05 38 43.4 +7.3
baz=118
B07A Winthrop 117.12 46 ⇓P Pdif 05 38 38.8 +2.6
baz=118
SIT Sitka 117.14 32 PFAKE 05 42 30.0 +11
SIT LR LR
comp=Z,99µm,20.0s,MS7.4
C08A Higginbotham F 117.16 48 ⇑P Pdif 05 38 40.2 +3.8
baz=118
E10A Myers Farm, Un 117.21 50 ⇓P Pdif 05 38 38.9 +2.4
baz=118
O19A Miners Draw (B 117.23 59 ⇑P Pdif 05 38 38.9 +2.3
baz=118
O19A PKiKP PKiKP 05 42 20.1 +0.7
baz=118,SNR=32
F11A Grangeville 117.28 51 ⇓P Pdif 05 38 38.7 +1.9
baz=118
F11A PKiKP PKiKP 05 42 21.2 +1.9
baz=118,SNR=21
I14A Mackay 117.33 54 ⇑P Pdif 05 38 36.8 -0.3
baz=118
I14A PKiKP PKiKP 05 42 20.6 +1.1
baz=118,SNR=11
H13A Challis 117.35 53 ⇑P Pdif 05 38 35.8 -1.3
baz=118
N18A Larsen Ranch, 117.38 58 ⇓P Pdif 05 38 38.5 +1.2
baz=118
A07A Ashnola River, 117.41 46 ⇑P Pdif 05 38 47.7 +10
baz=118
B08A Colville Reser 117.42 47 ⇑P Pdif 05 38 42.7 +5.2
baz=118
SMDO Samad 117.52 274 ⇑P PKPdf 05 42 22.3 +1.8
SNR=9.8
J15A Blackfoot 117.52 55 ⇑P Pdif 05 38 42.8 +4.9
baz=118
D10A Wagner Farm, O 117.52 49 ⇑P Pdif 05 38 45.5 +7.6
baz=118
D10A PKiKP PKiKP 05 42 20.5 +0.7
baz=118,SNR=20
C09A Chrisman Ranch 117.55 48 ⇓P Pdif 05 38 43.2 +5.2
baz=118
E11A Bogner Ranch, 117.57 50 ⇑P Pdif 05 38 44.9 +6.8
baz=118
K16A Soda Springs 117.59 56 ⇓P Pdif 05 38 40.6 +2.4
baz=118
SDCO Great Sand Dun 117.59 63 *e*PKPdf PKPdf 05 42 20.9 +0.7
SDCO LR LR
comp=Z,43µm,21.0s,MS7.0
N19A John Jarvie Ra 117.61 59 ⇓P Pdif 05 38 47.3 +9.0
baz=118
F12A Elk City 117.65 51 ⇑P Pdif 05 38 49.4 +11
baz=118
G13A Cobalt 117.72 52 ⇑P Pdif 05 38 47.6 +8.8
baz=118
WRAK Wrangell Islan 117.73 34 *e*PKPdf PKPdf 05 42 20.4 +0.6
WRAK *e*PP PP 05 43 39.3 +5.4
WRAK LR LR
comp=Z,47µm,21.0s,MS7.1
AHID Auburn Hatcher 117.81 56 *e*PKPdf PKPdf 05 42 20.7 +0.3
AHID LR LR
comp=Z,94µm,19.0s,MS7.4
H14A Leadore 117.85 53 ⇓P Pdif 05 38 48.1 +8.8
baz=118
A08A Turner Farm, O 117.87 46 ⇓P Pdif 05 38 47.2 +7.7
baz=118
KTH Kantishna Hill 117.87 21 *e*PKPdf PKPdf 05 42 19.1 -0.8
J16A Bone 117.87 55 ⇑P Pdif 05 38 45.8 +6.3
baz=118
I15A Monteview 117.90 54 ⇑P Pdif 05 38 48.2 +8.6
baz=118
E12A Beaver Dam Sad 117.94 51 ⇑P Pdif 05 38 45.0 +5.2
baz=118
AMTX Amarillo 117.96 68 *e*PKPdf PKPdf 05 42 22.3 +1.3
AMTX LR LR
comp=Z,123µm,22.0s
D11A Klaveano Farm, 117.98 50 ⇑P Pdif 05 38 47.1 +7.1
baz=118
D11A PKiKP PKiKP 05 42 21.2 +0.6
baz=118,SNR=11
C10A Spilker Farm, 118.03 48 ⇑P Pdif 05 38 44.5 +4.3
baz=118
C10A PKiKP PKiKP 05 42 21.6 +0.8
baz=118,SNR=7.6
B09A Rice 118.04 47 ⇓P Pdif 05 38 46.5 +6.3
baz=118
RRI2 Red Ridge 118.08 55 *e*PKPdf PKPdf 05 42 21.6 +0.6
RRI2 *e*PP PP 05 43 40.2 +3.5
F13A Darby 118.14 52 ⇑P Pdif 05 38 49.7 +9.0
baz=119
F13A ⇓PKiKP PKiKP 05 42 21.2 +0.2
baz=119,SNR=7.3
A09A Danville 118.21 47 ⇑P Pdif 05 38 48.8 +7.9
baz=119
G14A Jackson 118.22 53 ⇑P Pdif 05 38 52.2 +11
baz=119
H15A Lima 118.23 54 ⇑P Pdif 05 38 49.5 +8.5
baz=119
MCMT McKenzie Canyo 118.26 53 *e*PKPdf PKPdf 05 42 22.1 +0.8
HKT Hockley 118.27 76 *e*PKIKP PKPdf 05 42 23.5 +1.7
HKT MLR MLR
comp=Z,104µm,19.0s
DCID1 Drake Creek 118.32 55 *e*PKPdf PKPdf 05 42 22.9 +1.4
DCID1 *e*PP PP 05 43 45.3 +7.0
REDW Red Top Meadow 118.34 56 *e*PKPdf PKPdf 05 42 21.4 -0.1
I16A Newdale 118.34 55 ⇑P Pdif 05 38 49.4 +7.8
baz=119
KBL Kabul 118.35 291 *e*PKIKP PKPdf 05 42 21.8 0.0
TPAW Teton Pass 118.37 55 *e*PKPdf PKPdf 05 42 22.3 +0.7
B10A Chitwood Farm, 118.40 48 ⇑P Pdif 05 38 50.5 +8.7
baz=119
NEW Newport 118.43 48 *e*PKIKP PKPdf 05 42 21.7 +0.2
NEW MLR MLR
comp=Z,113µm,20.0s
SNOW Snow King Moun 118.46 56 *e*PKPdf PKPdf 05 42 23.6 +1.9
D12A Red Ives Fores 118.48 50 ⇑P Pdif 05 38 49.3 +7.2
baz=119
C11A Tepee Creek (N 118.56 49 ⇑P Pdif 05 38 52.5 +10
baz=119
C11A PKiKP PKiKP 05 42 22.5 +0.7
baz=119,SNR=10
LOHW Long Hollow 118.64 56 *e*PKPdf PKPdf 05 42 22.4 +0.3
BW06 Boulder Array 118.65 57 *e*PKPdf PKPdf 05 42 22.0 -0.1
BW06 LR LR
comp=Z,107µm,20.0s
PDAR Pinedale Array 118.65 57 Pdiff Pdif 05 39 03.7 +21
comp=Z,0.2nm,0.5s,baz=225,slow=1.9,SNR=3.7
PDAR PKP PKPdf 05 42 22.2 +0.2
comp=Z,5.6nm,0.9s,baz=164,slow=2.6,SNR=14
PDAR PKKPbc PKKPbc 05 52 38.2 +0.6
comp=Z,2.8nm,0.9s,baz=48,slow=2.2,SNR=4.7
PDAR Pinedale Array 118.65 57 PKP PKPdf 05 42 22.2 +0.2
PDAR PKKPbc PKKPbc 05 52 38.2 +0.6
F14A Wisdom 118.65 52 ⇓P Pdif 05 38 48.0 +5.1
baz=119
E13A Victor 118.66 51 ⇓P Pdif 05 38 46.7 +3.7
baz=119
MOOW Moose Ponds 118.66 55 *e*PKPdf PKPdf 05 42 21.4 -0.7
G15A Dillon 118.68 53 ⇑P Pdif 05 38 41.0 -2.0
baz=119
A10A Northport 118.70 47 ⇓P Pdif 05 38 37.4 -5.7
baz=119
DLMT Dillon 118.75 53 *e*PKPdf PKPdf 05 42 22.8 +0.6
C12B Naegeli Ranch, 118.86 49 ⇑P Pdif 05 38 45.4 +1.5
baz=119
I17A Pilgram Creek 118.86 55 ⇓P Pdif 05 38 39.4 -4.5
baz=119
ISCO Idaho Springs 118.90 62 *e*PKIKP PKPdf 05 42 22.7 0.0
ISCO MLR MLR
comp=Z,109µm,22.0s,MS7.4
B11A Sandpoint 118.91 48 ⇑P Pdif 05 38 41.2 -2.9
baz=119
D13A Huson 118.96 51 ⇓P Pdif 05 38 39.6 -4.7
baz=119
SKAG Skagway 118.98 31 *e*P PKPdf 05 42 23.9 +1.7
SKAG LR LR
comp=Z,87µm,20.0s,MS7.4
E14A Clinton 119.00 52 ⇑P Pdif 05 38 44.0 -0.5
baz=120
E14A PKiKP PKiKP 05 42 22.8 +0.1
baz=120,SNR=30
QLMT Earthquake Lak 119.01 54 *e*PKPdf PKPdf 05 42 23.7 +1.0
H16A Russell Place, 119.03 54 ⇑P Pdif 05 38 48.4 +3.8
baz=120
MK31 Makanchi Array 119.04 309 *e*PKIKP PKPdf 05 42 21.4 -1.3
MKAR Makanchi Array 119.04 309 Pdiff Pdif 05 39 01.8 +17
comp=Z,0.9nm,0.7s,baz=123,slow=4.5,SNR=5.9
MKAR PKP PKPdf 05 42 21.5 -1.2
comp=Z,11nm,0.9s,baz=122,slow=1.6,SNR=20
MKAR PKKPbc PKKPbc 05 52 39.4 +3.1
comp=Z,6.1nm,1.1s,baz=345,slow=2.9,SNR=5.7
MKAR Makanchi Array 119.04 309 PKP PKPdf 05 42 21.5 -1.2
MKAR PKKPbc PKKPbc 05 52 39.4 +3.1
MSO Missoula 119.04 51 *e*PKPdf PKPdf 05 42 23.2 +0.5
MSO LR LR
comp=Z,67µm,20.0s,MS7.3
G16A Moss Hill, Enn 119.08 54 ⇑P Pdif 05 38 50.8 +6.0
baz=120
F15A Butte 119.13 53 ⇓P Pdif 05 38 50.6 +5.5
baz=120
F15A ⇑PKiKP PKiKP 05 42 23.3 +0.4
baz=120,SNR=18
YMR Madison River 119.15 54 *e*PKPdf PKPdf 05 42 24.0 +1.0
YMR LR LR
comp=Z,83µm,19.0s,MS7.4
MENT Mentasta 119.18 24 *e*P PKPdf 05 42 24.2 +1.8
A11A Hall Mountain, 119.27 48 ⇓P Pdif 05 38 48.2 +2.5
baz=120
SDV Santo Domingo 119.27 112 PKKPbc PKKPbc 05 52 36.5 +1.7
comp=Z,7.0nm,0.6s,baz=354,slow=20,SNR=4.2
SDV Santo Domingo 119.27 112 PFAKE 05 42 40.0 +16
SDV LR LR
comp=Z,19µm,20.0s,MS6.7
B12A Libby 119.32 49 ⇑P Pdif 05 38 56.0 +10
baz=120
HYT Haines Junctio 119.32 29 *e*PKPdf PKPdf 05 42 22.6 -0.2
YNR Norris Junctio 119.34 55 *e*PKPdf PKPdf 05 42 29.7 +6.3
LKWY Lake 119.39 55 *e*PKIKP PKPdf 05 42 16.0 -7.4
LKWY MLR MLR
comp=Z,131µm,20.0s
IMA2 Indian Mountai 119.43 18 *e*P PKPdf 05 42 22.8 0.0
D14A Greenough 119.43 51 ⇑P Pdif 05 38 50.5 +4.1
baz=120
E15A Deer Lodge 119.44 52 ⇓P Pdif 05 38 52.8 +6.4
baz=120
LCCM Lewis and Clar 119.45 53 P PKPdf 05 42 24.5 +1.0
CHMT Chamberlain Mo 119.45 51 *e*PKPdf PKPdf 05 42 23.3 -0.2
A12A Yaak River Ran 119.60 48 ⇓P Pdif 05 38 49.2 +2.0
baz=120
WMOK Wichita Mounta 119.63 70 *e*PKIKP PKPdf 05 42 23.5 -0.8
WMOK MLR MLR
comp=Z,165µm,22.0s
COLA College 119.71 21 *i* PKIKP PKPdf 05 42 21.7 -1.7
COLA College 119.71 21 *e*PKPdf PKPdf 05 42 19.5 -3.9
COLA LR LR
comp=Z,78µm,20.0s,MS7.3
C14A Swan Lake 119.77 50 ⇓P Pdif 05 38 45.8 -2.1
baz=120
B13A Whitefish 119.81 49 ⇓P Pdif 05 38 40.9 -7.2
baz=120
B13A PKiKP PKiKP 05 42 23.4 -0.9
baz=120,SNR=41
D15A Lincoln 119.91 52 ⇑P Pdif 05 38 50.7 +2.2
baz=120
D15A PKiKP PKiKP 05 42 24.9 +0.5
baz=120,SNR=31
PHWY Pilot Hill 119.98 60 *e*PKPdf PKPdf 05 42 25.3 +0.6
PHWY *e*PP PP 05 43 49.1 -0.7
E16A East Helena 120.01 52 ⇓P Pdif 05 38 54.9 +5.9
baz=120
TKM2 Tokmak 2 120.05 302 P PKPdf 05 42 26.4 +1.6
SNR=7.0
TKM2 Tokmak 2 120.05 302 *e*PKPdf PKPdf 05 42 23.7 -1.1
TKM2 LR LR
comp=Z,72µm,22.0s,MS7.3
DLBC Dease Lake 120.07 34 *e*PKPdf PKPdf 05 42 23.8 -0.5
UCH Uchtor 120.20 301 P PKPdf 05 42 24.3 -0.8
SNR=8.3
UCH Uchtor 120.20 301 *e*PKPdf PKPdf 05 42 24.6 -0.5
UCH LR LR
comp=Z,108µm,22.0s,MS7.4
A13A Flathead Natio 120.21 49 ⇓P Pdif 05 38 58.3 +8.5
baz=121
NATX Nacogdoches 120.23 75 *e*PKPdf PKPdf 05 42 26.2 +0.7
NATX LR LR
comp=Z,67µm,20.0s,MS7.3
C15A Salmond Ranch, 120.35 51 ⇓P Pdif 05 38 52.9 +2.4
baz=121
C15A PKiKP PKiKP 05 42 25.1 -0.2
baz=121,SNR=34
RLMT Red Lodge 120.36 55 *e*PKPdf PKPdf 05 42 27.4 +2.2
RLMT LR LR
comp=Z,69µm,19.0s,MS7.3
E17A Martinsdale 120.39 53 ⇑P Pdif 05 38 50.6 0.0
baz=121
B14A Marquette Ranc 120.40 50 ⇑P Pdif 05 38 52.3 +1.6
baz=121
B14A PKiKP PKiKP 05 42 24.8 -0.5
baz=121,SNR=62
D16A Dana Ranch, Ca 120.41 52 ⇓P Pdif 05 38 53.7 +2.9
baz=121
KRAR Krasnoyarsk 120.47 322 *i* PKIKP PKPdf 05 42 24.8 -0.3
AAK Ala-Archa 120.48 301 P PKPdf 05 42 20.0 -5.6
SNR=8.0
FRU Bishkek 120.54 301 *i* PKIKP PKPdf 05 42 26.0 +0.3
FRU *i* 05 43 59.0
FRU *e* 05 49 26.0
FRU *e*PPS 05 55 10.0
FRU pmax pmax
comp=Z,220nm,2.1s
WALA Waterton Lakes 120.54 49 *e*PKPdf PKPdf 05 42 25.0 -0.5
CHMS Chumysh 120.57 302 P PKPdf 05 42 23.9 -1.8
SNR=6.4
GCMT Greycliff 120.58 54 *e*PKPdf PKPdf 05 42 27.7 +2.0
AML Almayashu 120.60 300 P PKPdf 05 42 28.7 +2.8
SNR=14
AML Almayashu 120.60 300 *e*PKPdf PKPdf 05 42 25.5 -0.3
AML LR LR
comp=Z,127µm,21.0s
F18A Big Timber 120.63 54 ⇓P Pdif 05 38 46.4 -5.3
baz=121
A14A Double T Ranch 120.73 49 ⇑P Pdif 05 38 50.3 -1.9
baz=121
A14A ⇓PKiKP PKiKP 05 42 25.2 -0.8
baz=121,SNR=23
B15A Bradely Ranch, 120.73 50 ⇑P Pdif 05 38 48.6 -3.5
baz=121

B15A PKiKP PKiKP 05 42 25.3 -0.7
baz=121,SNR=80
C16A Fuhringer Ranc 120.81 51 ⇓P Pdif 05 38 55.5 +2.9
baz=121
USP Ospenovka 120.88 302 P PKPdf 05 42 25.5 -0.9
SNR=10
EKS2 Erkin-Say 120.90 301 P PKPdf 05 42 28.9 +2.5
SNR=12
EKS2 Erkin-Say 120.90 301 *e*PKPdf PKPdf 05 42 25.9 -0.5
EKS2 LR LR
comp=Z,158μm,22.0s
E18A Harlowton 120.95 53 ⇑P Pdif 05 38 56.4 +3.2
baz=121
A15A Johnson Ranch, 121.07 50 ⇓P Pdif 05 38 58.3 +4.6
baz=122
A15A PKiKP PKiKP 05 42 25.6 -1.1
baz=122,SNR=61
C17A Wharram Farm, 121.20 52 ⇓P Pdif 05 38 55.2 +0.9
baz=122
B16A M & M Farms, S 121.22 51 ⇑P Pdif 05 38 53.2 -1.1
baz=122
DAWY Dawson 121.26 25 *e*PKPpre 05 42 23.0
DAWY *e*PKPdf PKPdf 05 42 26.1 -0.4
A16A West Butte Ran 121.63 50 ⇑P Pdif 05 38 52.7 -3.5
baz=122
A16A PKiKP PKiKP 05 42 27.3 -0.5
baz=122,SNR=39
CBKS Cedar Bluff 121.71 66 *e*PKIKP PKPdf 05 42 28.6 +0.5
CBKS MLR MLR
comp=Z,97μm,22.0s,MS7.4
OGNE Ogallala 121.72 63 *e*PKPdf PKPdf 05 42 28.2 +0.1
OGNE LR LR
comp=Z,83μm,19.0s,MS7.4
ZAA0 Zalesovo Array 122.54 316 *e*PKPdf PKPdf 05 42 26.5 -2.7
ZALV Zalesovo Beam 122.54 316 PKP PKPdf 05 42 27.1 -2.1
comp=Z,10nm,0.8s,baz=136,slow=2.2,SNR=18
ZALV PKKPbc PKKPbc 05 52 25.3 +2.1
comp=Z,2.4nm,0.9s,baz=320,slow=3.8,SNR=3.2
ZALV Zalesovo Beam 122.54 316 PKP PKPdf 05 42 27.1 -2.1
ZALV PKKPbc PKKPbc 05 52 25.3 +2.1
RSSD Black Hills 122.59 59 *e*PKIKP PKPdf 05 42 27.7 -1.9
RSSD MLR MLR
comp=Z,126μm,19.0s
MIAR Mount Ida 122.75 74 *e*PKIKP PKPdf 05 42 29.1 -1.2
MIAR *e* 05 44 17.3
MIAR MLR MLR
comp=Z,90μm,22.0s,MS7.4
LAO LASA Array 123.00 55 *e*PKPpre 05 42 25.1
LAO *e*PKPdf PKPdf 05 42 30.5 +0.1
LAO LR LR
comp=Z,61μm,21.0s,MS7.2
KK31 Karatay Array 123.03 299 *i* PKIKP PKPdf 05 42 29.0 -1.5
KK31 pmax pmax
comp=Z,161nm,1.3s
ASCN Ascension 123.05 182 PFAKE 05 42 40.0 +8.4
ASCN LR LR
comp=Z,71μm,22.0s,MS7.3
TIXI Tiksi 123.17 347 *i* PKIKP PKPdf 05 42 28.2 -1.7
TIXI MLR MLR
comp=Z,78μm,24.0s,MS7.3
TIXI Tiksi 123.17 347 *e*PKPdf PKPdf 05 42 28.4 -1.5
TIXI LR LR
comp=Z,57μm,22.0s,MS7.2
VBMS Vicksburg 123.18 78 *e*PKPdf PKPdf 05 42 33.1 +2.0
VBMS LR LR
comp=Z,50μm,22.0s,MS7.1
MGV Manicaragua 123.19 94 *e*P PKPdf 05 42 28.9 -2.6
KURK Kurchatov 123.43 311 PKP PKPdf 05 42 29.1 -1.9
comp=Z,27nm,1.0s,baz=139,slow=1.4,SNR=34
KURK PKKPbc PKKPbc 05 52 29.8 +10
comp=Z,1.5nm,0.9s,baz=294,slow=3.1,SNR=3.5
KURK Kurchatov 123.43 311 PKP PKPdf 05 42 29.1 -1.9
KURK PKKPbc PKKPbc 05 52 29.8 +10
KURK LR LR
comp=Z,108μm,22.0s
EDM Edmonton 123.49 46 *e*PKIKP PKPdf 05 42 29.6 -1.4
UALR University of 123.67 74 *e*PKPdf PKPdf 05 42 31.1 -0.9
KSU1 Kansas State U 123.78 68 *e*PKPdf PKPdf 05 42 31.5 -0.6
KSU1 LR LR
comp=Z,102μm,21.0s
NVS Novosibirsk 123.82 317 *e*PKIKP PKPdf 05 42 29.5 -2.1
NVS pmax pmax
comp=Z,105nm,1.1s
NVS pmax pmax
comp=N,43nm,1.4s
NVS pmax pmax
comp=E,96nm,1.9s
PCRV Puerto La Cruz 123.87 117 PKP PKPdf 05 42 32.9 -0.1
comp=E,5.5nm,0.8s,baz=260,slow=8.5,SNR=3.0
PCRV PP PP 05 44 24.2 +8.2
comp=E,45nm,1.3s,baz=347,slow=3.1,SNR=9.4
BRAL Brewton 124.62 81 *e*PKPdf PKPdf 05 42 35.3 +1.3
BRAL LR LR
comp=Z,36μm,22.0s,MS7.0
DGMT Dagmar 125.17 54 *e*PKPdf PKPdf 05 42 33.6 -0.8
DGMT LR LR
comp=Z,62μm,20.0s,MS7.3
HBAR Harrisburg 125.23 74 *e*PKPdf PKPdf 05 42 34.7 -0.3
OXF Oxford 125.36 76 *e*PKIKP PKPdf 05 42 33.9 -1.4
OXF MLR MLR
comp=Z,43μm,20.0s,MS7.1
MOAC Moa 125.42 99 *e*P PKPdf 05 42 31.2 -4.6
MASC Masc 125.54 100 *e*P PKPdf 05 42 43.3 +7.3
GNAR Gosnell 125.89 75 *e*PKPdf PKPdf 05 42 35.5 -0.7
LRAL Lakeview Retre 125.97 79 *e*PKPdf PKPdf 05 42 35.6 -0.9
LRAL LR LR
comp=Z,44μm,22.0s,MS7.1
TRN Trinidad (W) 126.11 120 *e*P PKPdf 05 42 41.2 +3.9
DWPF Disney 126.36 88 PFAKE 05 42 50.0 +13
DWPF LR LR
comp=Z,86μm,22.0s,MS7.4
PVMO Portageville 126.38 74 *e*PKPdf PKPdf 05 42 37.3 +0.1
CCM Cathedral Cave 126.42 72 *e*PKIKP PKPdf 05 42 35.7 -1.5
CCM MLR MLR
comp=Z,128μm,21.0s
PARMO Parma 126.50 74 *e*PKPdf PKPdf 05 42 36.1 -1.2
PARMO *e*PP PP 05 44 33.4 -0.5
GLAT Glass 126.55 75 *e*PKPdf PKPdf 05 42 37.2 -0.2
GLAT *e*PP PP 05 44 33.7 -0.5
ECSD EROS,Sioux Fal 126.60 63 *e*PKPdf PKPdf 05 42 35.9 -1.4
ECSD LR LR
comp=Z,84μm,19.0s,MS7.4
UTMT University of 126.86 75 *e*PKPdf PKPdf 05 42 37.7 -0.4
UTMT *e*PP PP 05 44 32.2 -4.1
FVM French Village 126.89 72 *e*PKIKP PKPdf 05 42 36.9 -1.2
GRGR Grenville 127.17 118 PFAKE 05 42 50.0 +11
GRGR LR LR
comp=Z,42μm,21.0s,MS7.1
WVT Waverly 127.38 76 *e*PKPdf PKPdf 05 42 37.1 -1.9
WVT *e*PP PP 05 44 35.8 -3.9
WVT LR LR
comp=Z,77μm,22.0s,MS7.3
SLM Saint Louis 127.40 72 *e*PKIKP PKPdf 05 42 37.8 -1.2
SIUC Southern Illin 127.48 73 *e*PKPdf PKPdf 05 42 38.2 -1.0
SCIA State Center 127.54 67 *e*PKPdf PKPdf 05 42 38.4 -0.7
SCIA *e*PP PP 05 44 45.1 +4.4
SCIA LR LR
comp=Z,112μm,21.0s
SWET Sewanee 128.03 78 *e*PKPdf PKPdf 05 42 39.0 -1.4
SWET *e*PP PP 05 44 44.3 +0.3
RDF Al-Radifah 128.40 271 *e*P PKPdf 05 42 40.4 -0.8
baz=271
RDF AMb AMB 05 42 54.5
comp=Z,464nm,1.6s,baz=271
VOSK Vostochnaya 128.46 309 PKIKP PKPdf 05 42 39.2 -1.3
VOSK pmax pmax
comp=Z,151nm,1.2s
GOGA Godfrey 128.49 81 *e*PKIKP PKPdf 05 42 40.2 -1.1
GOGA *e* 05 44 54.5
GOGA MLR MLR
comp=Z,60μm,22.0s,MS7.2
YKA Yellowknife Ar 128.50 36 PKP PKPdf 05 42 38.9 -1.4
comp=Z,25nm,1.1s,baz=227,slow=1.8,SNR=20
YKA PP PP 05 44 53.0 +6.5
comp=Z,5.3nm,1.1s,baz=242,slow=6.2,SNR=3.9
YKA SKKPbc 05 55 52.3
comp=Z,4.8nm,1.0s,baz=38,slow=5.7,SNR=4.1
YKA Yellowknife Ar 128.50 36 PKIKP PKPdf 05 42 38.9 -1.4
YKA 05 44 53.0
YKA pmax pmax
comp=Z,25nm,1.1s
YKA pmax pmax
comp=Z,5.0nm,1.1s
SLAT Slait 128.54 247 *i* P PKPdf 05 42 46.8 +5.0
SLAT *i* S SKSac 05 49 53.1 +3.4
SLAT AMS AMS 06 08 02.3
comp=E,14μm,18.3s
USIN University of 128.61 74 *e*PKPdf PKPdf 05 42 40.5 -0.8
USIN *e*PP PP 05 44 56.0 +8.2
MRKH Merkhyat 128.61 247 *i* P PKPdf 05 42 47.0 +5.0
MRKH *i* S SKSac 05 49 52.8 +2.9
OLIL Olney 128.80 73 *e*PKPdf PKPdf 05 42 40.0 -1.7
OLIL *e*PP PP 05 44 57.9 +8.9
NAY Al-Naaiem 128.81 271 *e*P PKPdf 05 42 40.6 -1.4
baz=272
NAY AMb AMB 05 42 54.1
comp=Z,107nm,1.8s,baz=272
BVA0 Borovoye Array 128.92 309 *i* PKIKP PKPdf 05 42 40.6 -0.8
BVAR Borovoye Array 128.92 309 PKP PKPdf 05 42 40.2 -1.2
comp=Z,15nm,0.8s,baz=126,slow=3.8,SNR=24
BRVK Borovoye 128.99 309 ⇑P PKPdf 05 42 43.1 +1.5
SNR=29
BRVK Borovoye 128.99 309 *e*PKPdf PKPdf 05 42 40.7 -0.8
BRVK LR LR
comp=Z,188μm,22.0s
CPCT Cooper Cave 129.08 79 *e*PKPdf PKPdf 05 42 41.7 -0.6
MIB Mutribah 129.11 272 *e*P PKPdf 05 42 41.4 -1.2
baz=272
MIB AMb AMB 05 43 07.2
comp=Z,213nm,1.2s,baz=272
HDIL Hopedale 129.13 70 *e*PKPdf PKPdf 05 42 41.4 -0.9
HDIL *e*PP PP 05 44 57.2 +6.0
HDIL *e*SKPdf SKPdf 05 46 17.0 -0.3
HDIL LR LR
comp=Z,84μm,20.0s,MS7.4
SJG San Juan 129.13 109 *e*PKIKP PKPdf 05 42 41.7 -1.2
SJG *e* 05 45 00.1
SJG MLR MLR
comp=Z,45μm,20.0s
SJG San Juan 129.13 109 *e*PKPdf PKPdf 05 42 41.7 -1.2
SJG *e*PP PP 05 45 00.1 +9.0
SJG *e*SKPdf SKPdf 05 46 02.0 -16
SJG LR LR
comp=Z,45μm,20.0s,MS7.2
RST Umm Al-Ruwaisa 129.14 271 *e*P PKPdf 05 42 41.6 -1.0
baz=272
RST AMb AMB 05 42 54.8
comp=Z,258nm,1.7s,baz=272
BBGH Gun Hill 129.18 120 PFAKE 05 42 50.0 +6.9
BBGH LR LR
comp=Z,56μm,20.0s,MS7.2
BIM Bigot 129.41 117 *e*P PKPdf 05 42 42.7 -0.9
MTP Monte Pirata 129.49 110 *e*PKPdf PKPdf 05 42 43.2 -0.4
FDF Fort de France 129.53 117 *e*P PKPdf 05 42 44.0 +0.2
AGMN Agassiz Refuge 129.63 59 *e*PKPdf PKPdf 05 42 36.6 -6.4
AGMN LR LR
comp=Z,90μm,19.0s
WCI Wyandotte Cave 129.63 75 *e*PKIKP PKPdf 05 42 42.0 -1.3
WCI *e* 05 45 01.5
WCI MLR MLR
comp=Z,61μm,21.0s,MS7.3
TKL Tuckaleechee C 129.69 79 *e*PKIKP PKPdf 05 42 43.6 +0.1
TKL *e* 05 45 01.9
FFC Flin Flon 129.84 49 *e*PKIKP PKPdf 05 42 42.3 -0.8
FFC MLR MLR
comp=Z,51μm,19.0s,MS7.2
JFWS Jewell Farm 129.91 67 *e*PKIKP PKPdf 05 42 42.2 -1.5
JFWS MLR MLR
comp=Z,96μm,21.0s
BLO Bloomington 130.05 73 *e*PKIKP PKPdf 05 42 43.2 -0.8
BLO *e* 05 45 05.7
COW Cow Castle Cre 130.26 83 *e*PKPdf PKPdf 05 42 46.4 +1.8
TZTN Tazewell 130.37 78 *e*PKPdf PKPdf 05 42 44.1 -0.7
TZTN *e*PP PP 05 45 03.3 +4.0
TZTN LR LR
comp=Z,87μm,22.0s,MS7.4
NHSC New Hope 130.43 84 *e*PKPdf PKPdf 05 42 45.5 +0.5
NHSC LR LR
comp=Z,54μm,22.0s,MS7.2
JSC Jenkinsville 130.46 82 *e*PKIKP PKPdf 05 42 45.0 0.0
ULM Lac du Bonnet 130.67 56 PKP PKPdf 05 42 44.1 -0.7
comp=Z,48nm,1.2s,baz=238,slow=2.0,SNR=6.2
ULM Lac du Bonnet 130.67 56 *e*PKPdf PKPdf 05 42 39.4 -5.4
ULM PKP PKPdf 05 42 44.1 -0.7
ULM *e*PP PP 05 45 03.5 +2.5
ULM LR LR
comp=Z,77μm,20.0s,MS7.4
BPA Boggy Peak 130.93 114 *e* PKPdf 05 42 48.2 +1.8
BPA Boggy Peak 130.93 114 *e* PP 05 45 09.2 +6.5
ANWB Willy Bob 131.46 114 *e*PKPdf PKPdf 05 42 47.6 +0.2
EYMN Ely 131.92 61 *e*PKPdf PKPdf 05 42 45.6 -1.7
EYMN LR LR
comp=Z,83μm,21.0s,MS7.4
COWI Conover 132.32 64 *e*PKPdf PKPdf 05 42 42.0 -6.1
COWI *e*PP PP 05 45 12.9 +1.2
COWI LR LR
comp=Z,101μm,19.0s
AB31 Akbulak array 132.56 300 PKIKP PKPdf 05 42 45.5 -3.0
AB31 pmax pmax
comp=Z,40nm,1.2s
ELN Prospectdale 132.57 79 *e*PKPdf PKPdf 05 42 48.9 0.0
BLA Blacksburg 132.78 79 *e*PKIKP PKPdf 05 42 49.0 -0.3
BLA MLR MLR
comp=Z,73μm,20.0s,MS7.4
ACSO Alum Creek Sta 132.89 74 *e*PKPdf PKPdf 05 42 48.6 -0.8
ACSO LR LR
comp=Z,76μm,22.0s,MS7.4
CNNC Cliffs of the 133.24 83 *e*PKPdf PKPdf 05 42 51.4 +1.2
CNNC LR LR
comp=Z,80μm,22.0s,MS7.4
AKTK Aktyubinsk 134.22 301 PKP PKPdf 05 42 52.2 +0.7
AKTO Aktyubinsk 134.22 301 PKhKP 05 42 44.0
comp=Z,4.5nm,0.8s,baz=263,slow=3.9,SNR=7.2
AKTO PKP PKPdf 05 42 52.2 +0.7
comp=Z,11nm,1.0s,baz=142,slow=3.7,SNR=9.0
GLMI Grayling 134.37 68 *e*PKPdf PKPdf 05 42 52.5 +0.5
GLMI LR LR
comp=Z,112μm,22.0s
MCWV Mont Chateau 134.56 77 *e*PKPdf PKPdf 05 42 51.5 -1.1
MCWV *e*PP PP 05 45 26.0 -0.1
MCWV LR LR
comp=Z,79nm,19.0s
URVA University of 134.85 81 *e*PKPdf PKPdf 05 42 52.0 -1.2
CBN Corbin 135.32 80 *e*PKPdf PKPdf 05 42 54.3 +0.2
CBN LR LR
comp=Z,67μm,22.0s,MS7.3
ALLY Alegheny Colle 135.46 74 *e*PKPdf PKPdf 05 42 53.0 -1.2
SVE Sverdlovsk 135.68 310 *i* PKIKP PKPdf 05 42 48.1 -5.9
SVE *e* 05 45 37.7
SVE pmax pmax
comp=Z,178nm,1.5s
SVE MLR MLR
comp=Z,141μm,22.0s
ERPA Erie 135.81 74 *e*PKPdf PKPdf 05 42 52.2 -2.6
ERPA LR LR
comp=Z,125μm,20.0s
LIC Lamto 136.17 196 *e*PKIKP PKPdf 05 42 56.1 -0.3
comp=Z,349nm,1.1s
LIC *e*MLR MLR
comp=Z,93μm,21.5s,MS7.2
LIC Lamto 136.17 196 *e*P PKPdf 05 42 56.1 -0.3
comp=Z,411nm,1.1s
LIC Lamto 136.17 196 *e*PKPdf PKPdf 05 42 56.1 -0.3
LIC LR LR
comp=Z,46μm,21.5s,MS7.2
KIC Kosan Boka 136.25 196 *e*P PKPdf 05 42 58.6 +2.0
comp=Z,863nm,1.0s
HAKT HAKKARI 136.28 278 *i* P PKPdf 05 42 53.1 -2.7
SDMD Soldier's Deli 136.34 79 *e*PKPdf PKPdf 05 42 54.1 -1.8
SSPA Standing Stone 136.34 77 *e*PKPdf PKPdf 05 42 52.9 -2.9
SSPA *e*PP PP 05 45 38.0 +0.6
SSPA LR LR
comp=Z,86μm,22.0s,MS7.4
ARU Arti 136.56 309 *i* PKIKP PKPdf 05 42 54.8 -0.9
ARU 05 45 33.5
ARU Arti 136.56 309 *e*PKPdf PKPdf 05 42 55.4 -0.3
ARU *e*PP PP 05 45 43.3 +4.8
ARU LR LR
comp=Z,83μm,20.0s
DBIC Dimbokro 136.57 196 PKhKP 05 42 49.3
comp=Z,16nm,1.1s,baz=93,slow=2.2,SNR=7.7
DBIC PKP PKPdf 05 42 57.4 +0.2
comp=Z,25nm,0.8s,baz=153,slow=3.4,SNR=18
DBIC Dimbokro 136.57 196 *e*PKPdf PKPdf 05 42 56.1 -1.1
DBIC *e*PP PP 05 45 34.3 -3.4
DBIC LR LR
comp=Z,60μm,20.0s,MS7.3
TIC Toumodi 136.58 196 *e*P PKPdf 05 42 58.4 +1.2
comp=Z,531nm,1.2s
MAK Makhachkala 136.80 287 *i* PKIKP PKPdf 05 43 02.8 +6.2
MAK *e* 05 45 46.4
MAK *e*SS SS 06 03 38.2 -6.2
MAK pmax pmax
comp=Z,357nm,1.7s
MAK MLR MLR
comp=N,65μm,22.0s,MS7.4
MAK MLR MLR
comp=Z,68μm,20.0s,MS7.4
MAK MLR MLR
comp=E,54μm,21.0s,MS7.4
GNI Garni 137.06 282 P PKPdf 05 42 58.5 +1.3
SNR=21
GNI Garni 137.06 282 PKP PKPdf 05 42 57.3 +0.1
comp=E,5.3nm,0.4s,baz=165,slow=7.2
GNI Garni 137.06 282 ⇓*i* PKIKP PKPdf 05 42 57.8 +0.6
GNI Garni 137.06 282 *e*PKPdf PKPdf 05 42 57.6 +0.4
GNI LR LR
comp=Z,104μm,22.0s
EIL Elat 137.12 262 PKP PKPdf 05 42 56.6 -1.0
comp=Z,8.8nm,0.8s,baz=52,slow=3.5,SNR=6.9
DGRG David-gareji 137.36 284 P PKPdf 05 42 59.3 +1.6
DYDN Diyadin 137.41 280 *i* P PKPdf 05 43 01.9 +4.0
ASF Jabal al Asfar 137.48 267 PKP PKPdf 05 42 57.5 -0.8
comp=Z,9.9nm,1.0s,baz=73,slow=1.4,SNR=6.7
ASF Jabal al Asfar 137.48 267 PKIKP PKPdf 05 42 57.5 -0.7
ASF pmax pmax
comp=Z,10.0nm,1.0s
MTA Mtatsminda 137.86 283 P PKPdf 05 43 01.8 +3.2
TBLG Delisi 137.91 284 *e*PKIKP PKPdf 05 42 59.3 +0.6
TBLG Delisi 137.91 284 P PKPdf 05 42 59.4 +0.7
MARD Mardin 138.04 275 *i* P PKPdf 05 42 53.1 -6.0
BINY Binghamton 138.39 76 *e*PKPdf PKPdf 05 42 56.7 -2.9
BINY *e*PP PP 05 45 58.6 +8.5
BINY LR LR
comp=Z,86μm,21.0s
GOR Gori 138.44 283 P PKPdf 05 42 58.9 -0.8
BRNJ Basking Ridge 138.50 79 *e*PKPdf PKPdf 05 42 57.7 -2.2
BNGL BINGOL 138.72 278 *i* P PKPdf 05 42 59.7 -0.6
DIYA Diyarbakir 138.82 276 *i* P PKPdf 05 42 54.2 -6.3
CPNY Central Park 138.95 79 *e*PKPdf PKPdf 05 42 57.3 -3.3
MMAI Mount Meron Ar 138.99 266 PKhKP 05 42 53.0
comp=Z,9.0nm,0.9s,baz=120,slow=3.3,SNR=8.3
MMAI PKP PKPdf 05 43 02.0 +1.1
comp=Z,25nm,0.9s,baz=78,slow=3.8,SNR=7.4
PAL Palisades 139.09 79 *e*PKIKP PKPdf 05 43 02.8 +1.9
ERZM Erzurum 139.11 279 *i* P PKPdf 05 42 58.6 -2.4
BHL Bhannes 139.37 268 *e*P PKPdf 05 42 55.0 -6.7
DBAD Bademkaya 139.49 281 *i* P PKPdf 05 42 49.9 -12
KOPT Kop Dagi 139.73 279 *i* P PKPdf 05 42 52.0 -10
ELZG Elazig 139.88 276 *i* P PKPdf 05 42 57.5 -4.9
BBSR BB Station 140.09 96 *e*PKPdf PKPdf 05 43 01.6 -1.5
BBSR LR LR
comp=Z,58μm,21.0s,MS7.3
MALT Malatya 140.14 275 ⇓*i* P PKPdf 05 42 56.4 -6.5
MALT Malatya 140.14 275 *e*PKPdf PKPdf 05 42 56.3 -6.6
MALT *e*PP PP 05 46 09.9 +8.9
MALT LR LR
comp=Z,98μm,20.0s
GZT Gaziantep 140.17 273 *i* P PKPdf 05 42 57.5 -5.5
KIV Kislovodsk 140.34 285 ⇓P PKPdf 05 43 05.0 +1.9
SNR=20
KIV Kislovodsk 140.34 285 *e*PKIKP PKPdf 05 42 58.9 -4.2
KIV *i* 05 43 02.0
KIV *e* 05 45 57.7
KIV *e*SS SS 06 04 21.3 -4.8
KIV *e*SSS 06 09 32.4
KIV Kislovodsk 140.34 285 ⇓*i* PKIKP PKPdf 05 43 02.1 -1.0
KIV *e*PKPdf PKPdf 05 43 05.1 +2.1
KIV LR LR
comp=Z,55μm,22.0s,MS7.3
NCB Newcomb 140.39 75 *e*PKPpre 05 42 56.1
NCB *e*PKPdf PKPdf 05 43 04.0 +0.8
NCB LR LR
comp=Z,100μm,20.0s
AKCD Akcadag 140.46 275 *i* P PKPdf 05 42 58.6 -4.9
LONY Lake Ozonia 140.47 74 *e*PKPdf PKPdf 05 42 58.9 -4.3
LONY LR LR
comp=Z,158μm,22.0s
QUA2 Belchertown 140.75 78 *e*PKPpre 05 42 58.1
DARE Darende-Malaty 140.90 276 *e*P PKPdf 05 42 58.0 -6.3
MDV Middlebury 141.06 75 *e*PKPpre 05 42 55.4
BRYW Bryant College 141.09 79 *e*PKPpre 05 43 00.1
YURE YUREGIR 141.13 271 *i* P PKPdf 05 42 59.7 -5.0
FRNY Flat Rock 141.20 74 *e*PKPdf PKPdf 05 43 03.8 -0.8
TORD Torodi Ar. Sit 141.22 208 *e*PKPdf PKPdf 05 42 57.2 -8.3
TORD Torodi Ar. Bea 141.22 208 PKhKP 05 42 57.3
comp=Z,11nm,1.0s,baz=146,slow=1.4,SNR=43
EREN Erenkoy 141.33 268 *e*P PKPdf 05 42 56.5 -8.6
ESPY Espiye-Giresun 141.35 279 *e*P PKPdf 05 42 58.0 -7.0
HRV Adam Dziewonsk 141.37 78 *e*PKIKP PKPdf 05 43 03.0 -2.0
HRV MLR MLR
comp=Z,79μm,20.0s
WES Weston 141.46 79 *e*PKIKP PKPdf 05 43 00.7 -4.4
WES MLR MLR
comp=Z,49μm,20.0s,MS7.3
HNH Hanover 141.49 76 *e*PKPdf PKPdf 05 43 04.8 -0.3
CSS Prodhromos 141.54 267 PFAKE 05 43 20.0 +14
CSS LR LR
comp=Z,161μm,21.0s
GRSN GIRESUNGRSN 141.65 279 *i* P PKPdf 05 43 08.5 +2.9
PINB Pinarbasi 141.67 274 *i* P PKPdf 05 42 59.7 -5.9
KARA Karaisali 141.76 271 *e*P PKPdf 05 42 57.5 -8.3
FFD Franklin Falls 141.78 77 *e*PKPdf PKPdf 05 43 03.1 -2.6
MERS Mersin 141.88 270 *e*P PKPdf 05 42 58.5 -7.6
LEF Lefka 141.92 267 *e*P PKPdf 05 42 57.6 -8.6
SVSK Karacayir 141.95 276 *e*P PKPdf 05 42 57.7 -8.4
MEST Erdemli 141.97 270 *i* P PKPdf 05 43 00.8 -5.5
LBNH Lisbon 141.97 76 *e*PKIKP PKPdf 05 43 06.3 +0.3
LBNH MLR MLR
comp=Z,101μm,20.0s
SOC Sochi 142.04 283*c i*PKIKP PKPdf 05 43 03.8 -2.3
SOC *e* 05 43 10.2
SOC *e*SSS 06 10 03.6
SOC pmax pmax
comp=Z,1μm,0.9s
IKL Isikli 142.06 269 *e*P PKPdf 05 42 57.7 -8.8
BNN Bunyan 142.13 274 *e*P PKPdf 05 42 58.1 -8.4
AVNT Avonos 142.74 273 *i* P PKPdf 05 43 00.8 -6.7
KVT Kavak 143.17 277 *e*P PKPdf 05 42 59.6 -8.6
HDMB Hadim 143.27 269 *e*P PKPdf 05 43 03.0 -5.5
CDAG Cicekdag 143.51 274 *i* P PKPdf 05 43 03.0 -5.9
CORM Corum 143.63 275 *e*P PKPdf 05 43 03.1 -6.0
CTKT Corum 143.76 276 *i* P PKPdf 05 43 06.3 -3.0
KAMT Kaman 143.80 273 *e*P PKPdf 05 43 06.4 -3.0
KONT Konya--Tatoy 143.91 270 *e*P PKPdf 05 43 05.4 -4.2
VRHR Novokhopersk 143.97 295 *e*PKIKP PKPdf 05 43 06.0 -3.3
VRHR pmax pmax
comp=Z,130nm,1.0s
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,40nm,1.0s
VRHR MLR MLR
comp=Z,63μm,22.0s,MS7.3
VRHR MLR MLR
comp=N,63μm,20.0s,MS7.4
VRHR MLR MLR
comp=E,37μm,23.0s,MS7.4
DIKM Dikmen 143.97 278 *e*P PKPdf 05 43 04.8 -4.8
BR131 Keskin Array S 144.04 274 *e*PKPdf PKPdf 05 43 06.7 -3.1
BR131 LR LR
comp=Z,95μm,21.0s
LADK Ladik-KONYA 144.05 271 *e*P PKPdf 05 43 04.9 -4.9
PKME Peaks-Kenny Pk 144.11 76 *e*PKPdf PKPdf 05 43 07.7 -2.0
PKME LR LR
comp=Z,136μm,22.0s
KDHN Kadinhani 144.39 271 *i* P PKPdf 05 43 05.2 -5.3
ANTB Antalya 144.43 268 *e*P PKPdf 05 43 05.5 -5.1
TOS Tosya 144.47 276 *e*P PKPdf 05 43 08.1 -2.4
CANT Cankiri 144.51 275 *e*P PKPdf 05 43 07.6 -3.0
ANTO Ankara 144.67 273 *e*P PKPdf 05 43 08.1 -2.8
ANTO Ankara 144.67 273 ⇓P PKPdf 05 43 11.4 +0.5
SNR=187
ANTO Ankara 144.67 273 ⇑*i* P PKPdf 05 43 11.0 +0.1
ANTO Ankara 144.67 273 *e*PKPdf PKPdf 05 43 08.9 -2.0
ANTO LR LR
comp=Z,71μm,20.0s,MS7.4
ILGA Ilgaz 144.68 276 *i* P PKPdf 05 43 07.4 -3.5
LOD Lodumlu 144.70 273 *e*P PKPdf 05 43 09.1 -1.9
AKAS Kas 144.73 266 *i* P PKPdf 05 43 08.5 -2.7
KIZT Kizilcal 144.74 271 *e*P PKPdf 05 43 07.9 -3.1
BCK Bucak 144.80 268 *e*P PKPdf 05 43 07.2 -4.0

ELL	**Elmali**	**144.83 267**	*e*P		PKPdf	05 43 09.1	-2.2
BZK	**Bozkurt**	**144.94 277**	*e*P		PKPdf	05 43 09.2	-2.1
ISP	**Isparta**	**145.06 269**	*e*P		PKPbc	05 43 08.6	-2.5
ISP	**Isparta**	**145.06 269**	*e*P		PKPbc	05 43 08.9	-2.3
ISP	**Isparta**	**145.06 269**	⇑*i*PKIKP		PKPdf	05 43 11.0	-0.7
ISP	**Isparta**	**145.06 269**	⇑*i*P		PKPbc	05 43 10.9	-0.2
BALT	**Daday**	**145.13 276**	*i* P		PKPbc	05 43 10.6	-0.6
GOLH	**Golhisar**	**145.34 267**	*i* P		PKPbc	05 43 10.6	-1.4
SHUT	**Suhut-Afyon**	**145.43 270**	*e*P		PKPdf	05 43 11.1	-1.1
SAFT	**Safranbolu**	**145.44 275**	*e*P		PKPdf	05 43 10.5	-1.7
VSR	**Storozhevoye**	**145.47 295**	*e*PKIKP		PKPdf	05 43 10.1	-1.8
VSR			*e*PPS			05 59 03.1	
VSR			pmax	pmax			
	comp=E,120nm,0.8s						
VSR			pmax	pmax			
	comp=Z,160nm,0.8s						
VSR			pmax	pmax			
	comp=N,30nm,1.0s						
BBTS	**Babate**	**145.51 179**	PKPbc	PKPbc		05 43 12.9	-0.2
	comp=N,376nm,1.2s,baz=272,slow=0.3,SNR=22						
VOR	**Voronezh**	**145.61 296**	⇑*i*PKIKP		PKPdf	05 43 11.0	-1.1
VOR			pmax	pmax			
	comp=Z,6μm,2.0s						
ARG	**Arkhangelos**	**145.69 264**	*e*P		PKPdf	05 43 12.4	-0.3
ESKT	**Eskisehir**	**145.76 271**	*i* P		PKPdf	05 43 11.7	-1.0
TURN	**Turunc**	**145.76 266**	*i* P		PKPdf	05 43 12.8	-0.1
KARP	**Karpathos**	**145.92 263**	*e*P		PKPdf	05 43 12.3	-0.9
DNZL	**Cakiroluk**	**145.94 267**	*i* P		PKPdf	05 43 12.8	-0.3
KHL	**Karahalli**	**145.98 269**	*e*P		PKPdf	05 43 12.8	-0.4
ALT	**Altintas**	**145.99 270**	*e*P		PKPdf	05 43 12.1	-1.1
MDU	**Mudurnu**	**146.01 273**	*e*P		PKPdf	05 43 12.7	-0.5
YER	**Yerkesik**	**146.12 266**	*e*P		PKPdf	05 43 13.4	0.0
BORA	**Eskisehir**	**146.21 272**	*i* P		PKPdf	05 43 11.7	-1.8
SIM	**Simferopol'**	**146.25 282**	*c i* PKP2		PKPab	05 43 13.0	-2.4
SIM			*e*			05 46 46.0	
KDZE	**Karadeniz Ereo**	**146.29 275**	*e*P		PKPdf	05 43 11.4	-2.2
HENT	**Hendek**	**146.40 273**	*i* P		PKPdf	05 43 12.8	-1.0
GDZ	**Gediz**	**146.42 270**	*i* P		PKPdf	05 43 15.0	+1.1
GULT	**Gulveren**	**146.45 273**	*e*P		PKPdf	05 43 11.5	-2.5
MLSB	**Milas**	**146.54 266**	*e*P		PKPdf	05 43 13.5	-0.7
BDRM	**Kayabasi**	**146.63 265**	*i* P		PKPdf	05 43 15.0	+0.7
KULA	**Kula-Manisa**	**146.65 268**	*e*P		PKPdf	05 43 14.4	+0.1
AYDN	**Tasoluk**	**146.68 266**	*i* P		PKPdf	05 43 16.1	+1.7
BODT	**Bodrum**	**146.71 265**	*e*P		PKPdf	05 43 14.8	+0.3
NPS	**Neapolis**	**146.75 261**	*e*P		PKPdf	05 43 16.1	+1.5
CAVI	**Cavuskoy**	**146.77 272**	*e*P		PKPdf	05 43 14.1	-0.4
DEMI	**Demirci**	**146.90 269**	*i* P		PKPdf	05 43 12.8	-1.9
ADVT	**Abdulvahap**	**146.96 272**	*e*P		PKPdf	05 43 13.8	-1.0
GCAM	**G?zelcaml?**	**147.13 266**	*i* P		PKPdf	05 43 13.9	-1.2
HRT	**Hereke**	**147.21 273**	*e*P		PKPdf	05 43 16.9	+1.8
ULDT	**Uludag**	**147.21 271**	*i* P		PKPdf	05 43 16.1	+0.9
IDI	**Anoyia**	**147.23 260**	PKPbc	PKPbc		05 43 17.6	-0.1
	comp=Z,258nm,0.8s,baz=127,slow=5.0,SNR=36						
KLMR	**Klimovskoe**	**147.26 312**	*e*PKIKP		PKPdf	05 43 13.9	-0.7
KLMR			pmax	pmax			
	comp=Z,2.0nm,1.5s						
YLV	**Yalova**	**147.27 272**	*e*P		PKPdf	05 43 13.6	-1.7
GEMT	**Gemlik**	**147.32 272**	*e*P		PKPdf	05 43 13.4	-2.0
DURS	**Dursunbey**	**147.36 270**	*i* P		PKPdf	05 43 13.9	-1.6
SILT	**Sile**	**147.39 273**	*e*P		PKPdf	05 43 15.4	-0.1
SMG	**Samos**	**147.39 266**	*e*P		PKPdf	05 43 17.1	+1.5
KDAG	**Bornova**	**147.50 267**	*i* P		PKPdf	05 43 15.0	-0.7
SANT	**Santorini**	**147.51 262**	*e*P		PKPdf	05 43 17.7	+1.9
THR1	**Thera Island**	**147.51 262**	*e*P		PKPdf	05 43 16.7	+0.8
MOS	**Moscow**	**147.54 302**	*e*PKIKP		PKPdf	05 43 14.1	-1.1
MOS			*e*			05 46 47.5	
MOS			*i* SSS			06 11 26.0	
MOS			pmax	pmax			
	comp=Z,1μm,1.6s						
MOS			MLR	MLR			
	comp=N,85μm,21.0s						
MOS			MLR	MLR			
	comp=Z,87μm,21.0s						
THR3	**Thira Island,**	**147.58 262**	*e*P		PKPdf	05 43 17.9	+1.9
THR5	**Thira Island,**	**147.62 262**	*e*P		PKPdf	05 43 17.7	+1.7
BLCB	**Balcova**	**147.64 267**	*e*P		PKPdf	05 43 15.4	-0.6
VAM	**Vamos**	**147.75 260**	*e*P		PKPdf	05 43 19.3	+3.0
BALB	**Balikesir**	**147.77 269**	*e*P		PKPdf	05 43 14.5	-1.6
KLYT	**Kilyos**	**147.83 273**	*e*P		PKPdf	05 43 14.8	-1.5
APE	**Apeiranthos**	**147.88 263**	*e*P		PKPbc	05 43 18.6	-0.8
APE	**Apeiranthos**	**147.88 263**	*e*P		PKPdf	05 43 17.8	+1.4
APE	**Apeiranthos**	**147.88 263**	⇓*i*P		PKPdf	05 43 18.1	+1.7
URLA	**Izmir**	**147.91 266**	*i* P		PKPdf	05 43 17.2	+0.8
BGKT	**Bogazkoy**	**147.97 273**	*e*P		PKPdf	05 43 14.4	-2.1
BALY	**Balya**	**147.99 269**	*i* P		PKPdf	05 43 16.1	-0.4
OBN	**Obninsk**	**148.00 301**	⇓*i*PKIKP		PKPdf	05 43 14.4	-1.6
OBN			*e*			05 43 24.1	
OBN			*e*			05 46 45.1	
OBN						05 50 18.1	
OBN			pmax	pmax			
	comp=Z,263nm,1.3s						
OBN			MLR	MLR			
	comp=Z,55μm,17.0s,MS7.4						
OBN	**Obninsk**	**148.00 301**	*e*PKPdf		PKPdf	05 43 15.1	-1.0
OBN			*e*PKPbc	PKPbc		05 43 19.0	-0.1
OBN			LR	LR			
	comp=Z,62μm,22.0s,MS7.3						
CTKS	**Kestanelik-??a**	**148.17 272**	*e*P		PKPdf	05 43 15.4	-1.4
ELBA	**Catalca**	**148.18 272**	*i* P		PKPdf	05 43 13.9	-2.9
CHOS	**Chios island**	**148.28 266**	*e*P		PKPdf	05 43 14.8	-2.2
SLVT	**Silivri**	**148.36 272**	*e*P		PKPdf	05 43 15.3	-1.8
AYVA	**Ayvalik**	**148.37 268**	*i* P		PKPdf	05 43 19.4	+2.2
KBS	**Kingsbay**	**148.56 350**	*ep*PKP		pPKPdf	05 43 22.0	+2.2
KBS			*e*SS	SS		06 06 02.3	+3.7
KBS	**Kingsbay**	**148.56 350**	*i* PKP2		PKPab	05 43 20.5	-3.1
KBS	**Kingsbay**	**148.56 350**	*e*PKPbc	PKPbc		05 43 20.2	+0.2
KBS			LR	LR			
	comp=Z,73μm,22.0s,MS7.4						
SPB4	**Spitsbergen Ar**	**148.59 348**	*e*PKPdf		PKPdf	05 43 16.2	-0.2
SPB4			*e*PKPbc	PKPbc		05 43 20.2	+0.1
PRK	**Paraskevi**	**148.61 268**	*e*P		PKPdf	05 43 16.4	-1.1
SCHQ	**Schefferville**	**148.71 60**	PKP	PKPdf		05 43 16.4	-0.8
	comp=Z,78nm,1.2s,baz=42,slow=5.0,SNR=6.0						
SCHQ			PKPbc	PKPbc		05 43 21.6	+0.6
	comp=Z,111nm,1.1s,baz=2.5,slow=1.8,SNR=9.2						
SCHQ	**Schefferville**	**148.71 60**	*e*PKPdf		PKPdf	05 43 16.5	-0.7
SCHQ			*e*PKPbc	PKPbc		05 43 21.1	+0.1
SCHQ			LR	LR			
	comp=Z,162μm,20.0s						
MFT	**Murefte**	**148.75 271**	*e*P		PKPdf	05 43 15.6	-2.2
SART	**Tekirdag**	**148.77 271**	*i* P		PKPdf	05 43 11.7	-6.0
EZN	**Ezine**	**148.88 269**	*e*P		PKPdf	05 43 16.0	-2.0
LVZ	**Lovozero**	**148.99 325**	PFAKE			05 43 30.0	+13
LVZ			LR	LR			
	comp=Z,56μm,20.0s,MS7.4						
VLI	**Veliai**	**149.35 261**	*e*P		PKPdf	05 43 16.1	-2.8
PSN	**Preselentsi**	**149.53 276**	P		PKPdf	05 43 16.2	-2.7
ATH	**Athens Observa**	**149.58 263**	*e*P		PKPdf	05 43 17.2	-2.0
ALN	**Alexandroupoli**	**149.62 270**	*e*P		PKPdf	05 43 16.6	-2.5
DID	**Didima**	**149.62 262**	*e*P		PKPdf	05 43 17.3	-1.9
EDRB	**Edirne**	**149.63 272**	*e*P		PKPdf	05 43 16.2	-2.9
TIRR	**Tirgusor**	**149.72 278**	⇓*i*P		PKPbc	05 43 22.4	-1.5
TIRR	**Tirgusor**	**149.72 278**	*e*PKPdf		PKPdf	05 43 18.4	-0.7
TIRR			*e*PKPbc	PKPbc		05 43 22.7	-1.2
LOS	**Limnos**	**149.75 268**	*e*P		PKPbc	05 43 23.1	-1.0
JMB	**Yambol**	**150.03 273**	*e*P		PKPdf	05 43 18.0	-1.7
RDO	**Rodhopi**	**150.07 270**	*e*P		PKPdf	05 43 17.7	-2.1
LTK	**Loutraki**	**150.09 263**	*e*P		PKPdf	05 43 17.8	-2.2
VLX	**Vlachokerasia**	**150.10 261**	*e*P		PKPdf	05 43 19.0	-1.0
PYL	**PYLOS**	**150.23 260**	*e*P		PKPdf	05 43 18.7	-1.6
ITM	**Ithomi**	**150.28 260**	*e*P		PKPdf	05 43 18.4	-1.9
LKR	**Lokris**	**150.42 264**	*e*P		PKPdf	05 43 18.1	-2.3
LKR	**Lokris**	**150.42 264**	*e*P		PKPdf	05 43 18.3	-2.1
KIS	**Kishinev**	**150.45 283**	*α i*PKIKP		PKPdf	05 43 18.0	-2.2
KIS			pmax	pmax			
	comp=Z,2μm,2.0s						
KIS			pmax	pmax			
	comp=Z,15μm,8.0s						
KIS			pmax	pmax			
	comp=Z,9μm,6.0s						
KIS	**Kishinev**	**150.45 283**	⇑*i*PKIKP		PKPdf	05 43 18.0	-2.2
KIS			M			05 43 34.0	
	comp=Z,15μm,8.0s						
KIS			*i* SS	SS		06 06 26.0	+4.5
KIS			LRM			06 44 20.0	
	comp=Z,33μm,24.0s						
NEO	**Neokhori**	**150.64 265**	*e*P		PKPdf	05 43 19.6	-1.2
PAIG	**Paliouri**	**150.67 267**	*e*P		PKPdf	05 43 18.3	-2.5
BJO	**Bjornoya**	**150.68 342**	*ep*PKP		pPKPdf	05 43 23.5	+0.3
BJO			AMb	AMB		05 43 50.8	
	comp=Z,1μm,1.6s						
BJO			*e*SS	SS		06 06 26.1	+3.8
OUR	**Ouranopolis**	**150.68 268**	*e*P		PKPbc	05 43 24.4	-1.9
XOR	**Xorichti**	**150.69 265**	*e*P		PKPdf	05 43 20.6	-0.2
BJO1	**Bjornoya**	**150.72 342**	*e*P		PKPbc	05 43 24.5	-0.9
RZN	**Rozhen**	**150.88 270**	P		PKPdf	05 43 26.4	+5.3
PLG	**Polygyros**	**151.05 267**	*e*P		PKPdf	05 43 18.4	-3.0
PLG	**Polygyros**	**151.05 267**	*e*P		PKPdf	05 43 20.6	-0.8
AGG	**Agios Georgios**	**151.06 264**	*e*P		PKPdf	05 43 19.1	-2.3
PLD	**Plovdiv**	**151.09 271**	*e*P		PKPdf	05 43 17.6	-3.7
RLS	**Riolos of Patr**	**151.09 261**	*e*P		PKPdf	05 43 20.7	-0.9
KEV	**Kevo**	**151.10 331**	*ep*		PKPbc	05 43 24.9	-1.5
	comp=Z,528nm,1.0s						
KEV	**Kevo**	**151.10 331**	*e*PKPdf		PKPdf	05 43 20.0	-0.6
KEV			*e*PKPbc	PKPbc		05 43 26.0	-0.4
KEV			LR	LR			
	comp=Z,91μm,22.0s						
JOF	**Joensuu**	**151.13 316**	*ep*		PKPdf	05 43 24.0	+3.2
	comp=Z,363nm,1.1s						
JOF	**Joensuu**	**151.13 316**	*e*PKIKP		PKPdf	05 43 24.0	+3.2
JOF			pmax	pmax			
	comp=Z,363nm,1.1s						
JOF	**Joensuu**	**151.13 316**	*e*P		PKPbc	05 43 25.9	-0.7
PVL	**Pavlikeni**	**151.19 274**	P		PKPdf	05 43 21.6	+0.1
NVR	**Nevrokopi**	**151.27 269**	*e*P		PKPdf	05 43 19.4	-2.3
AKASG	**Malin Array Be**	**151.34 290**	PKP		PKPdf	05 43 20.3	-1.2
	comp=Z,20nm,1.0s,baz=73,slow=1.2,SNR=30						
AKASG			PKPbc	PKPbc		05 43 25.5	-2.0
	comp=Z,99nm,0.7s,baz=84,slow=2.5,SNR=62						
AKASG	**Malin Array Be**	**151.34 290**	PKIKP		PKPdf	05 43 20.3	-1.2
AKASG						05 43 25.5	
AKASG			pmax	pmax			
	comp=Z,20nm,1.0s						
AKASG			pmax	pmax			
	comp=Z,99nm,0.7s						
AKBB	**Malin Array Si**	**151.34 290**	*e*PKIKP		PKPdf	05 43 20.3	-1.2
AKBB			*e*			05 43 26.3	
SOH	**Sokhos**	**151.34 268**	*e*P		PKPdf	05 43 18.5	-3.3
EVR	**Evrytania**	**151.35 263**	*e*P		PKPdf	05 43 20.6	-1.3
KIEV	**Kiev**	**151.35 290**	*e*PKIKP		PKPdf	05 43 20.6	-0.9
KIEV			*e*			05 43 26.2	
KIEV			MLR	MLR			
	comp=Z,58μm,21.0s,MS7.4						
ZIMR		**151.36 275**	⇓*i*P		PKPbc	05 43 26.8	-1.0
VRI	**Vrincioaia**	**151.38 280**	PKIKP		PKPbc	05 43 26.8	-1.0
VRI	**Vrincioaia**	**151.38 280**	⇑*i*P		PKPbc	05 43 27.0	-0.8
HORT	**Hortiatis**	**151.40 267**	*e*P		PKPdf	05 43 19.0	-2.9
PLOR	**Plostina**	**151.42 280**	⇓*i*P		PKPbc	05 43 26.8	-1.1
MMB	**Musomiste**	**151.48 270**	P		PKPdf	05 43 26.0	+4.0
THE	**Thessaloniki**	**151.50 267**	*e*P		PKPdf	05 43 19.3	-2.7
LIT	**Litokhoron**	**151.54 266**	*e*P		PKPdf	05 43 19.0	-3.2
KFL	**Anninata**	**151.56 261**	*e*P		PKPdf	05 43 26.9	+4.7
THL	**Klokotos Trika**	**151.56 265**	*e*P		PKPdf	05 43 19.3	-2.9
THL	**Klokotos Trika**	**151.56 265**	*e*P		PKPdf	05 43 20.1	-2.1
PGB	**Panagyurishte**	**151.65 272**	P		PKPdf	05 43 26.4	+4.2
ARCES	**ARCESS Array B**	**151.67 331**	PKP		PKPdf	05 43 20.2	-1.2
	comp=Z,14nm,1.1s,baz=54,slow=5.2,SNR=9.9						
ARCES			PKPbc	PKPbc		05 43 26.5	-1.2
	comp=Z,158nm,0.8s,baz=85,slow=1.9,SNR=75						
ARCES	**ARCESS Array B**	**151.67 331**	PKIKP		PKPdf	05 43 20.2	-1.2
ARCES						05 43 26.5	
ARCES			pmax	pmax			
	comp=Z,14nm,1.1s						
ARE0	**ARCESS Array S**	**151.67 331**	*e*PKPbc		PKPbc	05 43 27.7	0.0
VLS	**Valsamata**	**151.72 261**	*e*P		PKPdf	05 43 21.1	-1.4
VLS	**Valsamata**	**151.72 261**	*e*P		PKPdf	05 43 22.3	-0.2
MLR	**Muntele Rosu**	**151.74 278**	PKP		PKPdf	05 43 21.8	-0.4
	comp=Z,10nm,1.2s,baz=298,slow=2.4,SNR=12						
MLR			PKPbc	PKPbc		05 43 27.7	-0.9
	comp=Z,92nm,0.9s,baz=171,slow=2.3,SNR=44						
MLR	**Muntele Rosu**	**151.74 278**	PKIKP		PKPdf	05 43 21.8	-0.5
MLR						05 43 27.7	
MLR			pmax	pmax			
	comp=Z,10.0nm,1.2s						
MLR	**Muntele Rosu**	**151.74 278**	⇓*i*P		PKPbc	05 43 27.9	-0.7
MLR	**Muntele Rosu**	**151.74 278**	P		PKPdf	05 43 23.0	+0.7
KNT	**Kendrikon**	**151.81 268**	*e*P		PKPdf	05 43 27.4	+4.9
LKD	**Levkas**	**151.98 262**	*e*P		PKPdf	05 43 21.1	-1.7
GRG	**Griva**	**152.03 267**	*e*P		PKPdf	05 43 20.3	-2.6
KKB	**Krupnik**	**152.03 270**	P		PKPdf	05 43 27.7	+4.9
VAY	**Valandovo**	**152.10 268**	*e*P		PKPdf	05 43 19.8	-3.2
VAY	**Valandovo**	**152.10 268**	*i* PKP		PKPdf	05 43 26.5	+3.5
KZN	**Kozani**	**152.11 266**	*e*P		PKPdf	05 43 20.5	-2.5
MEV	**Metsovon**	**152.19 264**	*e*P		PKPdf	05 43 23.6	+0.5
VTS	**Vitosha**	**152.29 271**	⇓*i*P		PKPdf	05 43 25.3	+2.1
VTS	**Vitosha**	**152.29 271**	P		PKPbc	05 43 29.6	-0.4
VTS	**Vitosha**	**152.29 271**	⇓P		PKPdf	05 43 25.3	+2.1
VOIR		**152.30 278**	⇓*i*P		PKPdf	05 43 24.3	+1.2
DAG	**Danmarks Havn**	**152.35 1**	⇑*i*PKIKP		PKPbc	05 43 28.0	-1.1
DAG			pmax	pmax			
	comp=Z,390nm,1.4s						
DAG			MLR	MLR			
	comp=Z,98μm,23.0s						
DAG	**Danmarks Havn**	**152.35 1**	*α i*P		PKPbc	05 43 28.0	-1.1
	comp=Z,386nm,1.4s						
DAG							
	comp=Z,98μm,23.0s						
JAN	**Janina**	**152.37 264**	*e*P		PKPdf	05 43 22.2	-1.2
STIP	**Stip**	**152.54 269**	*e*P		PKPdf	05 43 23.4	-0.1
STIP	**Stip**	**152.54 269**	*i* PKP		PKPdf	05 43 28.3	+4.8
FNA	**Florina**	**152.62 266**	*e*P		PKPdf	05 43 21.1	-2.6
IGT	**Igoumenitsa**	**152.64 263**	*e*P		PKPdf	05 43 19.9	-3.9
CRAR	**CRAIOVA**	**152.66 275**	⇑*i*P		PKPdf	05 43 26.6	+2.9
BIA	**Bitola**	**152.77 267**	*e*P		PKPdf	05 43 23.4	-0.5
BIA	**Bitola**	**152.77 267**	*i* PKP		PKPdf	05 43 28.2	+4.3
MNK	**Minsk**	**152.89 298**	*e*PKIKP		PKPdf	05 43 21.0	-2.7
MNK			*e*PPP			05 50 30.0	
MNK			pmax	pmax			
	comp=Z,420nm,1.5s						
MNK			pmax	pmax			
	comp=Z,51μm,6.0s						
KBN	**Korca**	**152.92 265**	*e*P		PKPdf	05 43 26.3	+2.1
BURAR	**Bucovina Array**	**152.96 282**	⇑*i*P		PKPdf	05 43 27.3	+3.3
BURAR	**Bucovina Array**	**152.96 282**	P		PKPdf	05 43 27.1	+3.2
BUR08	**Bucovina Ar. S**	**152.98 282**	*e*PKPdf		PKPdf	05 43 23.0	-1.1
BUR08			*e*PKPbc	PKPbc		05 43 33.7	+2.4
KRUS	**Krusevo**	**152.99 267**	*i* PKP		PKPdf	05 43 30.4	+6.1
SRN	**Sarande**	**153.04 263**	*e*P		PKPdf	05 43 25.3	+0.9
KEK	**Kerkira**	**153.09 263**	*e*P		PKPdf	05 43 22.1	-2.3
OHR	**Ohrid**	**153.16 266**	*e*P		PKPdf	05 43 21.8	-2.7
OHR	**Ohrid**	**153.16 266**	*i* PKP		PKPdf	05 43 31.2	+6.7
SKO	**Skopje**	**153.16 269**	*e*P		PKPdf	05 43 22.2	-2.2
SKO	**Skopje**	**153.16 269**	*i* PKP		PKPbc	05 43 31.2	-0.7
KAF	**Kangasniemi**	**153.54 315**	*ep*		PKPbc	05 43 30.3	-1.8
	comp=Z,183nm,1.0s						
KAF	**Kangasniemi**	**153.54 315**	*e*PKIKP		PKPbc	05 43 30.3	-1.8
KAF			pmax	pmax			
	comp=Z,183nm,1.0s						
IDID	**Didziasalis**	**153.61 300**	*e*P		PKPbc	05 43 32.4	-0.1
IDID			*e*PP	PP		05 47 29.4	+9.4
TRO	**Tromso**	**153.65 333**	⇓*i*P		PKPdf	05 43 24.8	+0.5
TRO			AMb	AMB		05 44 04.0	
	comp=Z,396nm,2.1s						
TRO			*e*SS	SS		06 06 56.5	+1.2
TRO	**Tromso**	**153.65 333**	*e*P		PKPdf	05 43 24.9	+0.6
PHP	**Peshkopia**	**153.68 267**	*e*P		PKPdf	05 43 26.2	+1.0
GZR	**Gura Zlata**	**153.76 276**	⇑*i*P		PKPdf	05 43 25.8	+0.6
GZR	**Gura Zlata**	**153.76 276**	P		PKPdf	05 43 24.8	-0.4
TIR	**Tirane**	**153.89 266**	*e*P		PKPdf	05 43 27.0	+1.5
TIR	**Tirane**	**153.89 266**	*e*PKPdf		PKPdf	05 43 26.8	+1.2
TIR			*e*PKPbc	PKPbc		05 43 35.7	+2.2
TIR			LR	LR			
	comp=Z,97μm,22.0s						
IIGN	**Ignalina**	**153.90 300**	*e*P		PKPbc	05 43 32.6	-0.4
IIGN			*e*PP	PP		05 47 28.9	+7.2
BMR	**Baia Mare**	**154.09 282**	⇑*i*P		PKPbc	05 43 35.3	+1.3
PUK	**Puka**	**154.21 267**	*e*P		PKPdf	05 43 26.0	0.0
BCI	**Bajram Curri**	**154.25 268**	*e*P		PKPdf	05 43 30.0	+4.0
DRGR		**154.30 279**	⇓*i*P		PKPdf	05 43 27.3	+1.4
DRGR		**154.30 279**	P		PKPdf	05 43 25.3	-0.6
LVV	**L'vov**	**154.34 287**	*i* PKIKP		PKPdf	05 43 25.0	-0.9
LVV			*e*			05 47 19.0	
LVV			*e*SS			06 07 55.0	
PVY	**Plav**	**154.41 269**	⇑*i*PKP		PKPdf	05 43 25.8	-0.4
SUMG	**Summit**	**154.48 16**	*e*PKPdf		PKPdf	05 43 25.7	+0.2
SUMG			*e*PKPbc	PKPbc		05 43 34.0	+0.2
IVA	**Berane**	**154.59 269**	⇑*i*PKP		PKPdf	05 43 26.0	-0.5
ULC	**Ulcinj**	**154.59 267**	⇑*i*PKP		PKPdf	05 43 24.7	-1.8
BZS	**Buzias**	**154.60 276**	⇓*i*P		PKPdf	05 43 25.2	-1.2
BZS	**Buzias**	**154.60 276**	P		PKPdf	05 43 25.3	-1.1
TIP	**Timpagrande**	**154.76 259**	*e*PKPdf		PKPdf	05 43 26.3	-0.5
TIP			*e*PKPbc	PKPbc		05 43 34.5	-0.9
TIP			LR	LR			
	comp=Z,51μm,20.0s,MS7.3						
CEL	**Celeste**	**154.78 256**	PFAKE			05 43 40.0	+13
CEL			LR	LR			
	comp=Z,42μm,22.0s,MS7.2						
TTG	**Podgorica**	**154.80 268**	⇑*i*PKP		PKPdf	05 43 23.7	-3.1
SFJD	**Kangerlussuaq**	**154.96 32**	PKP		PKPdf	05 43 24.8	-1.4
	comp=Z,14nm,0.8s,baz=302,slow=2.8,SNR=3.9						
SFJD			PKPbc	PKPbc		05 43 33.9	-1.0
	comp=Z,55nm,1.0s,baz=283,slow=1.6,SNR=4.8						
SFJD	**Kangerlussuaq**	**154.96 32**	*i* PKIKP		PKPdf	05 43 25.6	-0.6
SFJD			pmax	pmax			
	comp=Z,110nm,1.1s						
SFJD			MLR	MLR			
	comp=Z,48μm,20.0s,MS7.3						
SFJD	**Kangerlussuaq**	**154.96 32**	*i* P		PKPdf	05 43 25.6	-0.6
	comp=Z,112nm,1.1s						
SFJD			*i*			05 47 53.7	
SFJD			*e*			05 53 59.5	
SFJD							
	comp=Z,48μm,20.0s						
BUM	**Brajici-Budva**	**154.98 267**	⇑*i*PKP		PKPdf	05 43 26.2	-0.8
PLE	**Pljevlja**	**155.12 270**	⇑*i*PKP		PKPdf	05 43 28.1	+0.9
KWP	**Kalwaria**	**155.13 286**	*e*PKP		PKPdf	05 43 27.1	+0.1
KWP			*e*			05 44 01.1	
KWP			*e*PP	PP		05 47 32.5	+3.7
KWP	**Kalwaria**	**155.13 286**	*e*PKP		PKPdf	05 43 27.1	+0.1
KWP			*e*			05 44 01.1	
KWP			*e*PP	PP		05 47 32.4	+3.6
UZH	**Uzhgorod**	**155.14 283**	*i* PKIKP		PKPdf	05 43 26.0	-1.0
UZH			*e*			05 43 36.4	
UZH			*e*			05 43 46.0	
UZH			*e*			05 47 36.0	
UZH			*e*SS			06 07 52.0	
NKY	**Niksic**	**155.15 268**	⇑*i*PKP		PKPdf	05 43 25.3	-2.0
KOLS	**Kolonicke sedl**	**155.23 284**	*e*PKIKP		PKPdf	05 43 28.9	+1.8
KOLS			*e*			05 43 52.1	
KOLS			*e*SS			06 07 57.4	
KOLS	**Kolonicke sedl**	**155.23 284**	*e*PKP		PKPdf	05 43 28.9	+1.8
KOLS			*e*			05 43 52.1	
KOLS			*e*			05 44 08.0	
KOLS	**Kolonicke sedl**	**155.23 284**	*e*PKP		PKPdf	05 43 28.9	+1.8
KOLS			*e*			05 43 52.1	
KOLS			*e*			05 44 08.0	
KOLS			*e*SS			06 07 57.4	
VAE	**Valguarnera**	**155.25 253**	PKP		PKPdf	05 43 27.3	-0.2
	comp=Z,4.7nm,0.4s,baz=122,slow=2.1,SNR=4.9						
VAE			PKPbc	PKPdf		05 43 34.6	+7.0
	comp=Z,7.4nm,0.5s,baz=170,slow=2.3,SNR=7.7

NSS eSS SS 06 07 50.9 +0.9
NSS AMS AMS 06 58 32.4
comp=Z,82µm,22.6s
EOSO Osorio 158.85 181 PKP PKPdf 05 43 33.6 +1.1
EGOM La Gomera 158.92 177 PKP PKPdf 05 43 34.0 +1.5
CMAH Djebel Manchou 158.93 242 P PKPdf 05 43 39.0 +6.7
VRAC Vranov 158.94 283 P PKPdf 05 43 31.5 -0.3
comp=Z,15nm,1.2s,baz=226,slow=3.5,SNR=4.0
VRAC Vranov 158.94 283 ⇓ *i* P PKPdf 05 43 31.1 -0.7
CCAN Las Canadas 159.00 178 PKP PKPdf 05 43 35.3 +2.6
GKP Gorka Klasztor 159.05 294 ePKP PKPdf 05 43 30.0 -1.8
GKP *e* 05 44 17.8
GKP ePP PP 05 48 00.4 +10
GKP Gorka Klasztor 159.05 294 ePKP PKPdf 05 43 30.0 -1.8
GKP *e* 05 44 17.8
GKP ePP PP 05 48 00.4 +10
CTEI Djebel Teioual 159.11 239 P PKPdf 05 43 45.0 +12
ARSA Arzberg 159.12 276 *i* P PKPdf 05 43 30.5 -1.6
comp=Z,88nm,1.3s,SNR=8.7
CFTV Fuerteventura 159.16 184 PKP PKPdf 05 43 33.3 +0.5
CKFL Kef-Lekhel 159.17 240 P PKPdf 05 43 44.0 +11
PERS Pernice 159.19 275 ePKPdf PKPdf 05 43 29.8 -2.4
PERS ePKPab PKPab 05 44 18.8 +9.3
PERS ePP PP 05 47 54.8 +3.5
CASM Ain Smara 159.20 240 P PKPdf 05 43 34.0 +1.4
SOKA Soboth 159.26 275 ⇑ *i* P PKPdf 05 43 30.7 -1.6
comp=Z,142nm,1.4s
EHIG Higuera 159.28 175 PKP PKPdf 05 43 34.3 +1.4
DPC Dobruska-Polom 159.31 285 ePKPDF PKPdf 05 43 31.0 -1.2
DPC ePKPAB PKPab 05 44 10.6 +0.7
DPC *ex* x 05 48 04.3
DPC *ex* x 05 58 22.1
DPC *ex* x 06 08 59.7
DPC AMS AMS 06 59 10.0
comp=Z,73µm,30.8s
EBAJ Bajamar 159.32 179 PKP PKPdf 05 43 33.5 +0.5
CAEH 'Ain El Ouahch 159.37 241 P PKPdf 05 43 45.0 +12
LJU Ljubljana 159.38 273 ePKPdf PKPdf 05 43 30.6 -1.8
LJU ePKPab PKPab 05 44 21.1 +11
LJU ePP PP 05 47 55.6 +3.4
LJU eSKSac 05 54 52.0
KSP Ksiaz 159.41 287 ePKP PKPdf 05 43 29.7 -2.7
KSP *e* 05 44 24.7
KSP ePP PP 05 48 04.8 +12
KSP Ksiaz 159.41 287 ePKIKP PKPdf 05 43 29.8 -2.5
KSP *e* 05 44 08.9
KSP *e* 05 47 52.0
KSP Ksiaz 159.41 287 ePKPdf PKPdf 05 43 29.8 -2.5
KSP ePKPab PKPab 05 44 08.9 -1.4
KSP ePP PP 05 47 52.0 -0.3
KSP eSKKS SKKSac 05 54 43.0 +2.9
KSP eSKSP 05 58 12.0
KSP eSS SS 06 08 07.0 +8.5
KSP eSSS 06 13 54.0
KSP LR LR
comp=Z,180µm,27.5s
UPC Upice 159.53 286 ePKPDF PKPdf 05 43 30.8 -1.7
UPC ePKPAB PKPab 05 44 12.1 +1.3
CKHR Kef el Ahmar 159.58 238 P PKPdf 05 43 43.0 +10
VSL Villasalto 159.61 251 PFAKE 05 43 40.0 +7.0
VSL LR LR
comp=Z,45µm,21.0s,MS7.3
TREC Trest 159.65 282 ePKPDF PKPdf 05 43 31.3 -1.4
TREC *ex* x 05 43 52.5
TREC *ex* x 05 48 02.8
TREC AMS AMS 06 55 00.0
comp=Z,64µm,21.6s
DFRA Djebel Bou Aff 159.75 239 P PKPdf 05 43 39.0 +5.8
SET Setif 159.77 238 P PKPdf 05 43 38.0 +4.7
VOY Vojsko 159.79 272 ePKPdf PKPdf 05 43 30.0 -2.9
VOY *e* 05 43 35.8
VOY *e* 05 43 44.5
VOY *e* 05 44 41.0
EFAM Famara 159.83 186 PKP PKPdf 05 43 35.9 +2.4
ATAF Djebel Tarf 160.15 235 P PKPdf 05 43 37.7 +4.0
PRU Pruhonice 160.38 284 ePKPDF PKPdf 05 43 33.9 +0.4
PRU *ex* x 05 43 52.4
PRU ePKPAB PKPab 05 44 16.4 +1.9
PRU *ex* x 05 48 09.1
PRU *ex* x 06 09 08.1
PRU AMS AMS 06 55 40.0
comp=Z,62µm,25.9s
PVCC Panska Ves 160.45 285 ePKPDF PKPdf 05 43 32.3 -1.2
PVCC ePKPAB PKPab 05 44 15.7 +0.9
PVCC *ex* x 05 48 09.9
PVCC *ex* x 06 09 08.9
PVCC AMS AMS 06 59 00.0
comp=Z,94µm,23.4s
PVCC Panska Ves 160.45 285 ePKP PKPdf 05 43 32.3 -1.2
PVCC *e* 05 44 15.7
PVCC ePP PP 05 48 09.9 +12
PVCC LR LR
comp=Z,94µm,23.4s
AKET Djebel Ketaf 160.49 235 P PKPdf 05 43 46.2 +12
AKF Akfadou 160.55 237 P PKPdf 05 43 37.9 +3.8
GEC2 GERESS Array S 160.70 280 ePKIKP PKPdf 05 43 32.2 -1.7
GEC2 *e* 05 44 14.2
GERES GERESS Array B 160.70 280 PKP PKPdf 05 43 31.6 -2.3
comp=Z,3.9nm,1.0s,baz=132,slow=2.0,SNR=21
GERES PKPab PKPab 05 44 14.9 -1.1
comp=Z,34nm,0.7s,baz=114,slow=3.0,SNR=24
GERES GERESS Array B 160.70 280 PKIKP PKPdf 05 43 31.6 -2.3
GERES 05 44 14.9
GERES pmax pmax
comp=Z,4.0nm,1.0s
GERES pmax pmax
comp=Z,34nm,0.7s
NB2 NORSAR Subarra160.73 318 PKP PKPab 05 44 17.0 +1.3
comp=Z,308nm,1.2s,baz=65,slow=4.4
NB2 NORSAR Subarra160.73 318 PKP PKPab 05 44 17.0 +1.3
baz=65,slow=4.4
NOA NORSAR Array B160.73 318 PKP PKPdf 05 43 32.2 -1.2
comp=Z,4.4nm,1.1s,baz=67,slow=0.9,SNR=3.4
NOA PKPab PKPab 05 44 16.6 +0.9
comp=Z,16nm,0.8s,baz=65,slow=4.5,SNR=16
NOA NORSAR Array B160.73 318 PKIKP PKPdf 05 43 32.3 -1.2
NOA 05 44 16.6
NOA pmax pmax
comp=Z,4.0nm,1.1s
ADJB Djebel Djouab 160.81 234 P PKPdf 05 43 48.1 +14
KHC Kasperske Hory 160.84 281 ePKIKP PKPdf 05 43 32.3 -1.7
KHC *e* 05 43 38.0
KHC *e* 05 44 15.9
KHC *e* 05 48 04.2
KHC eSS SS 06 09 11.4 +58
KHC Kasperske Hory 160.84 281 ePKPDF PKPdf 05 43 32.3 -1.7
KHC *ex* x 05 43 38.0
KHC *ex* x 05 43 54.2
KHC ePKPAB PKPab 05 44 15.9 -0.7
KHC *ex* x 05 44 23.5
KHC ePP PP 05 48 04.2 +4.1
KHC *ex* x 05 54 57.7
KHC *ex* x 06 09 11.4
KHC AMS AMS 06 59 00.0
comp=Z,94µm,27.9s
BRG Berggiesshubel 160.89 286 ePKIKP PKPdf 05 43 34.5 +0.5
BRG SS SS 06 09 02.0 +48
BRG pmax pmax
comp=Z,24nm,2.0s
BRG MLR MLR
comp=N,38µm,21.6s
BRG MLR MLR
comp=Z,65µm,26.1s
BRG Berggiesshubel 160.89 286 ePKP PKPdf 05 43 34.5 +0.5
comp=Z,40nm,2.0s
BRG *i* 05 44 26.5
comp=Z,498nm,1.8s
BRG *i* 05 44 40.0
comp=Z,561nm,2.0s
BRG PP PP 05 48 15.0 +15
BRG *i* 05 55 00.0
BRG Berggiesshubel 160.89 286 ePKP PKPdf 05 43 34.5 +0.5
BRG *i* 05 44 26.5
BRG *i* 05 44 40.0
BRG PP PP 05 48 15.0 +15
BRG *i* 05 55 00.0
BRG SS SS 06 09 02.0 +48
BRG LR LR
comp=Z,65µm,29.1s
ABTA Abfaltersbach 160.93 273 ⇑ *i* P PKPdf 05 43 31.7 -2.5
comp=Z,49nm,1.4s
OSPF L'Ospedale 160.95 256 PKP PKPdf 05 43 29.2 -5.2

NAO01 NORSAR Array S 160.96 318 ePKPdf PKPdf 05 43 28.8 -4.9
NAO01 LR LR
comp=Z,106µm,21.0s
EMHD Djebel Mahouad 161.10 233 P PKPdf 05 43 33.4 -1.3
RUE Ruedersdorf 161.11 291 ePKPdf PKPdf 05 43 33.5 -0.7
CORF Corte 161.31 258 PKP PKPdf 05 43 36.8 +2.1
ETRT Tiaret 161.31 229 P PKPdf 05 43 36.0 +1.0
VLC Villacollemand 161.37 264 ePKPdf PKPdf 05 43 33.8 -0.9
VLC LR LR
comp=Z,53µm,21.0s
MOL Molde 161.46 325 eP PKPdf 05 43 35.4 +1.1
MOL AMS AMS 06 51 27.9
comp=Z,26µm,22.4s
CLL Collm 161.52 287 ePKIKP PKPdf 05 43 35.0 +0.4
CLL *i* 05 44 18.7
CLL pmax pmax
comp=Z,1µm,3.4s
CLL pmax pmax
comp=Z,604nm,2.3s
CLL MLR MLR
comp=Z,88µm,25.8s
CLL Collm 161.52 287 ePKPdf PKPdf 05 43 35.0 +0.4
comp=Z,1µm,3.4s
CLL ePKPdfmax 05 43 44.0
comp=Z,19µm,13.5s
CLL *i* PKPdiff 05 43 57.0
CLL *i* PKPab PKPab 05 44 18.7 -0.8
CLL *i* PKPabmax 05 44 29.4
comp=Z,604nm,2.3s
CLL ePP PP 05 48 06.0 +2.3
CLL ePPmax 05 48 25.0
comp=E,5µm,14.0s
CLL ePPmax 05 48 25.0
comp=Z,16µm,15.9s
CLL ePPP 05 51 54.0
CLL eSKKSac SKKSac 05 54 57.0 +6.0
CLL eSKSP 05 58 31.0
CLL ePPS 06 01 33.0
CLL eSS SS 06 08 31.0 +10
CLL ePSS 06 09 20.0
CLL eSSS 06 14 30.0
PGF Pioggiola 161.53 258 ePKIKP PKPdf 05 43 34.4 -0.6
MDT Midelt 161.58 211 PKP PKPdf 05 43 34.8 -0.6
comp=Z,6.9nm,1.0s,baz=161,slow=0.6,SNR=9.1
MDT PKPab PKPab 05 44 19.8 -0.3
comp=Z,16nm,0.8s,baz=148,slow=6.2,SNR=8.5
MDT PP PP 05 48 03.9 +0.6
comp=Z,11nm,1.2s,baz=207,slow=6.3,SNR=2.7
WTTA Wattenberg 161.66 274 ⇑ *i* P PKPdf 05 43 33.2 -1.7
comp=Z,133nm,1.3s,SNR=14
COP Copenhagen 161.71 301 *i* PKIKP PKPdf 05 43 31.6 -3.1
COP *i* 05 48 05.4
COP pmax pmax
comp=Z,74nm,1.1s
COP MLR MLR
comp=Z,45µm,20.0s
COP Copenhagen 161.71 301 *i* P PKPdf 05 43 31.6 -3.1
comp=Z,74nm,1.1s
COP *e* 05 44 23.5
COP *i* 05 48 05.4
COP
comp=Z,45µm,20.0s
WATA Walderalm 161.71 274 ⇓ *i* P PKPdf 05 43 32.4 -2.6
comp=Z,34nm,1.2s
NKC Novy Kostel 161.75 284 ePKPDF PKPdf 05 43 33.7 -1.2
NKC *ex* x 05 55 05.0
NKC AMS AMS 06 59 30.0
comp=Z,99µm,22.6s
NKC Novy Kostel 161.75 284 ePKP PKPdf 05 43 33.7 -1.2
NKC *e* 05 55 05.0
EANR 'Ain N'Sour 161.85 229 P PKPdf 05 43 37.8 +2.3
ECHA Ech Chlef 161.87 230 P PKPdf 05 43 42.0 +6.5
EBNR Beni Rached 161.90 231 P PKPdf 05 43 40.0 +4.4
MOTA Moosalm 162.03 274 ⇓ *i* P PKPdf 05 43 33.1 -2.2
comp=Z,82nm,1.0s,SNR=13
KONO Kongsberg 162.05 315 ePKPdf PKPdf 05 43 34.7 -0.2
KONO eSS SS 06 08 28.8 +3.4
KONO Kongsberg 162.05 315 eP PKPdf 05 43 32.3 -2.6
MOX Moxa 162.33 285 ePKP PKPdf 05 43 35.7 +0.2
comp=Z,180nm,2.0s
MOX *e* 05 44 33.1
MOX
comp=Z,44µm,20.0s
GRA1 Grafenberg Arr 162.46 282 ePKP PKPdf 05 43 33.8 -1.9
GRA1 ePP PP 05 48 12.4 +3.7
GRA1 LR LR
comp=Z,88µm,25.6s
GRF Grafenberg Arr 162.46 282 ePKIKP PKPdf 05 43 33.8 -1.9
GRF *e* 05 48 12.4
GRF Grafenberg Arr 162.46 282 ePKP PKPdf 05 43 33.8 -1.9
GRF ePP PP 05 48 12.4 +3.7
GRF eL 06 58 58.9
comp=Z,88µm,25.6s
DAVOX Davos/Dischmat 162.66 272 PKP PKPdf 05 43 34.1 -1.9
comp=Z,3.9nm,0.9s,baz=276,slow=4.4,SNR=6.7
DAVOX PKPab PKPab 05 44 23.7 -0.9
comp=Z,20nm,0.8s,baz=124,slow=7.2,SNR=4.6
DAVOS Davos 162.74 272 PKIKP PKPdf 05 43 34.1 -1.9
DAVOS 05 44 23.7
DAVA Damuels 162.81 273 *i* P PKPdf 05 43 34.8 -1.3
comp=Z,75nm,1.3s,SNR=6.4
HDH Heidenheim-Cha 162.91 278 P PKPdf 05 43 35.7 -0.4
TUE Stuetta 162.92 270 ePKPdf PKPdf 05 43 34.6 -1.7
TUE LR LR
comp=Z,64µm,22.0s
REVF Revere 163.15 260 PKP PKPdf 05 43 33.0 -3.5
SBF Sospel 163.16 260 ePKIKP PKPdf 05 43 35.6 -0.9
comp=Z,760nm,1.7s
AUTN L'Aution 163.22 261 PKP PKPdf 05 43 33.5 -3.1
LUCF Luceram 163.23 260 PKP PKPdf 05 43 33.9 -2.7
MUD Monsted U'grnd 163.34 305 *i* PKIKP PKPdf 05 43 36.6 +0.3
MUD *i* 05 48 13.4
MUD pmax pmax
comp=Z,41nm,1.4s
MUD MLR MLR
comp=Z,79µm,21.0s
MUD Monsted U'grnd 163.34 305 *i* P PKPdf 05 43 36.6 +0.3
comp=Z,41nm,1.4s
MUD *e* 05 44 36.7
MUD *i* 05 48 11.7
MUD *i* 05 48 13.4
MUD *e* 05 54 24.5
MUD
comp=Z,79µm,21.0s
MUD Monsted U'grnd 163.34 305 *i* P PKPdf 05 43 36.6 +0.3
MUD *e* 05 44 36.7
MUD *i* 05 48 11.7
MUD *i* 05 48 13.4
MUD *e* 05 54 24.5
TOUF Mont Tournerai 163.35 260 PKP PKPdf 05 43 33.4 -3.3
RTC Rabat Centre 163.37 207 PFAKE 05 43 50.0 +13
RTC LR LR
comp=Z,146µm,21.0s
PMAR Madeira 163.47 177 ePKPdf PKPdf 05 43 38.8 +1.6
LMR La Mourre 163.51 257 ePKIKP PKPdf 05 43 36.0 -0.9
comp=Z,411nm,1.7s
FRF La Foret Royal 163.53 258 ePKIKP PKPdf 05 43 36.0 -0.9
comp=Z,504nm,1.5s
BER Bergen 163.57 321 ⇓ *i* P PKPdf 05 43 38.3 +1.9
BER *e* PP PP 05 48 17.1 +3.1
BER eSS SS 06 08 51.0 +10
BER Bergen 163.57 321 eP PKPdf 05 43 38.0 +1.7
STU Stuttgart 163.61 278 ePKIKP PKPdf 05 43 32.5 -4.3
STU *e* 05 44 28.5
ETOS Mallorca 163.72 241 PKP PKPdf 05 43 37.8 +0.6
SPAK Spaichingen-Ko 163.73 275 PKP PKPdf 05 43 34.3 -2.6
EALB Alboran 163.75 220 PKP PKPdf 05 43 37.2 -0.1
OG22 Abries 163.89 263 PKP PKPdf 05 43 34.4 -2.8
TAVF Tavernes 163.93 258 PKP PKPdf 05 43 36.9 -0.4
MBDF Montbardon 163.96 262 ePKIKP PKPdf 05 43 36.7 -0.6
comp=Z,687nm,1.6s
TOD Tromm 164.00 281 PKIKP PKPdf 05 43 34.8 -2.3
BFO Black Forest 164.08 276 ePKIKP PKPdf 05 43 36.2 -1.0
BFO *e* 05 44 30.0
BFO MLR MLR
comp=Z,54µm,22.0s
BNI Bardonecchia 164.16 263 ePKIKP PKPdf 05 43 36.7 -0.7
BNI MLR MLR
comp=Z,104µm,22.0s
BORG Borgarnes 164.18 9 PKP PKPdf 05 43 35.6 -1.2
comp=Z,5.0nm,0.7s,baz=270,slow=14,SNR=2.0
BORG PKPab PKPab 05 44 30.6 -0.1
comp=Z,28nm,0.9s,baz=108,slow=4.9,SNR=4.5
BORG Borgarnes 164.18 9 PKP PKPdf 05 43 35.6 -1.2

BORG PKPab PKPab 05 44 30.6 -0.1
BORG LR LR
comp=Z,77µm,21.0s
FELD Feldberg im Sc 164.19 274 PKP PKPdf 05 43 36.3 -1.1
STOF St-Etienne Org 164.21 259 PKP PKPdf 05 43 37.4 -0.1
ENIJ Nijar 164.25 224 PKIKP PKPdf 05 43 37.7 -0.1
LPG La Plagne 164.28 265 ePKIKP PKPdf 05 43 37.2 -0.3
comp=Z,546nm,1.7s
LPL La Plagne 164.30 265 ePKIKP PKPdf 05 43 36.7 -0.8
comp=Z,424nm,1.7s
TREF Trevaresse 164.37 257 PKP PKPdf 05 43 38.9 +1.2
BBS Basel-Blauen 164.41 272 PKIKP PKPdf 05 43 33.7 -3.9
SMRF Simiane la Rot 164.41 258 ePKIKP PKPdf 05 43 37.2 -0.5
comp=Z,241nm,1.4s
EBER Berja 164.49 222 PKP PKPdf 05 43 38.6 +0.5
EMUR La Murta 164.49 228 PKP PKPdf 05 43 35.5 -2.5
LIBD Limburg 164.51 275 PKIKP PKPdf 05 43 35.8 -1.8
LANF Langenberg 164.55 278 PKP PKPdf 05 43 36.1 -1.5
PRAF Pradon 164.59 257 PKP PKPdf 05 43 38.0 +0.1
OG01 Vacheresse 164.62 268 PKP PKPdf 05 43 33.8 -4.0
ORIF Oris-en-Rattie 164.62 262 ePKIKP PKPdf 05 43 36.9 -0.9
comp=Z,329nm,1.8s
ORIF eMLR MLR
comp=Z,138µm,21.5s
EBEN Beniarda 164.64 233 PKP PKPdf 05 43 35.9 -2.2
EGUA Guajares 164.73 220 PKIKP PKPdf 05 43 38.3 +0.1
MOF Molkenrain 164.75 273 PKP PKPdf 05 43 36.5 -1.4
CDF Champ du Feu 164.78 276 ePKIKP PKPdf 05 43 36.2 -1.7
comp=Z,92nm,1.5s
ECH Echery 164.82 275 PKP PKPdf 05 43 36.3 -1.6
ECH Echery 164.82 275 P PKPdf 05 43 41.1 +3.2
ECH ePKPab PKPab 05 44 33.1 -1.0
ABH Alteburg 164.84 281 PKP PKPdf 05 43 34.8 -3.1
HINF Hinteralfeld 164.93 273 ePKIKP PKPdf 05 43 36.2 -1.8
ERON Agron 164.99 220 PKP PKPdf 05 43 38.3 -0.1
EMIJ Mijas 164.99 217 PKP PKPdf 05 43 36.2 -2.2
CABF La Chapelle 165.10 268 ePKIKP PKPdf 05 43 37.3 -0.9
comp=Z,480nm,1.8s
ECOG Cogollos-Vega 165.10 221 PKIKP PKPdf 05 43 40.2 +1.7
EHUE Huescar 165.11 225 PKIKP PKPdf 05 43 38.9 +0.4
RUP Ruppelstein 165.13 280 PKIKP PKPdf 05 43 34.8 -3.3
EJIF Jimena Fronter 165.15 214 PKIKP PKPdf 05 43 38.9 +0.3
ELOJ Sierra Loja 165.24 219 PKIKP PKPdf 05 43 38.5 -0.2
ETOB Tobarra 165.27 229 PKP PKPdf 05 43 39.4 +0.8
HAU Haudompre 165.30 274 ePKIKP PKPdf 05 43 36.9 -1.4
HAU eMLR MLR
comp=Z,75µm,21.0s
EQES Quesada 165.32 224 PKP PKPdf 05 43 37.9 -0.8
EJON La Jonquera 165.32 249 PKP PKPdf 05 43 36.2 -2.3
VIVF Saint-Julien-l 165.38 260 ePKIKP PKPdf 05 43 37.6 -0.9
comp=Z,426nm,1.6s
WTSB Winterswijk 165.40 289 ePKiKP PKPdf 05 43 41.4 +3.1
comp=Z,369nm,6.5s
WTSB Winterswijk 165.40 289 ePKPab PKPab 05 44 41.9 +5.4
comp=Z,380nm,3.9s
SFS San Fernando 165.43 212 PFAKE 05 43 50.0 +11
SFS LR LR
comp=Z,212µm,21.0s
LASF Ste Croix 165.55 256 ePKIKP PKPdf 05 43 37.8 -0.9
comp=Z,283nm,1.6s
THEF They Montfort 165.59 274 PKP PKPdf 05 43 37.4 -1.2
SSB Saint Sauveur 165.63 262 PKP PKPdf 05 43 29.6 -9.1
SSB Saint Sauveur 165.63 262 ePKPdf PKPdf 05 43 38.3 -0.4
ELUQ Luque 165.64 220 PKIKP PKPdf 05 43 38.7 -0.3
ESPR Espera 165.67 214 PKP PKPdf 05 43 40.9 +1.8
WLF Walferdange 165.72 280 E 05 43 44.5
WLF PKPab PKPab 05 44 38.6 +0.7
WLF Walferdange 165.72 280 ePKPdf PKPdf 05 43 37.9 -0.7
WLF ePKPab PKPab 05 44 38.4 +0.4
WLF LR LR
comp=Z,84µm,20.0s
EVIA Vianos 165.73 227 PKIKP PKPdf 05 43 37.7 -1.3
EPOB Poblet 165.75 243 PKP PKPdf 05 43 38.4 -0.5
EMIR Miracle 165.84 245 PKP PKPdf 05 43 39.9 +0.9
MEM Membach 165.89 284 PKPdf PKPdf 05 43 41.6 +2.9
MEM E 05 44 45.5
ERTA Horta de San J 165.93 240 PKP PKPdf 05 43 38.1 -1.0
EBAN Banos Encina 165.94 223 PKIKP PKPdf 05 43 37.3 -1.9
HGN Heimansgroeve 165.94 284 ePKiKP PKPdf 05 43 41.6 +2.8
comp=Z,327nm,6.0s
HGN Heimansgroeve 165.94 284 ePKPab PKPab 05 44 44.3 +5.4
comp=Z,356nm,5.2s
HGN Heimansgroeve 165.94 284 ePP PP 05 48 32.3 +5.3
CARF Carcanieres 165.95 249 PKP PKPdf 05 43 46.1 +7.1
EMOS Mosqueruela 165.97 236 PKP PKPdf 05 43 40.3 +1.2
MTLF Montolieu 166.22 251 ePKIKP PKPdf 05 43 38.1 -1.1
comp=Z,246nm,1.9s
LRW Lerwick 166.24 328 ⇑ eP PKPdf 05 43 34.6 -4.1
LRW AMb AMB 05 43 39.5
comp=Z,132nm,1.8s
LRW *e* 05 48 33.4
MEZF Maizieres J'vi 166.25 275 ePKIKP PKPdf 05 43 37.9 -1.2
comp=Z,285nm,1.6s
EADA Adamuz 166.28 220 PKP PKPdf 05 43 38.5 -1.0
BCLA Clavier 166.33 283 PKPdf PKPdf 05 43 39.6 +0.5
BCLA PKPab PKPab 05 44 40.2 -0.5
LBL Lubilhac 166.45 260 PKP PKPdf 05 43 36.1 -3.3
PDA Ponta Delgada 166.48 145 *i* P PKPdf 05 43 46.0 +6.4
PDA Ponta Delgada 166.48 145 *i* LQ 06 32 30.0
PDA eLR LR 06 41 20.0
PLDF La Plantade 166.49 263 PKP PKPdf 05 43 36.1 -3.3
CMLA Cha da Macela 166.54 145 ePKP PKPdf 05 43 44.4 +4.7
CMLA Cha da Macela 166.54 145 *i* PP PP 05 48 44.8 +15
CMLA Cha da Macela 166.54 145 eSS SS 06 09 14.9 +3.7
CMLA eP 06 11 31.1
CMLA Cha da Macela 166.54 145 eLQ 06 33 03.7
CMLA eLR LR 06 41 47.1
CMLA eP 06 44 45.4
CMLA Cha da Macela 166.54 145 PFAKE 05 43 50.0 +10
CMLA LR LR
comp=Z,55µm,21.0s
SMF Signal de Mont 166.58 266 ePKIKP PKPdf 05 43 38.3 -1.1
comp=Z,187nm,1.6s
GIVF Givet 166.61 281 ePKIKP PKPdf 05 43 38.2 -1.1
PBDV Barranco-do-Ve 166.71 208 ePKPdf PKPdf 05 43 40.7 +0.9
PBDV Barranco-do-Ve 166.71 208 ePP PP 05 48 23.8 -6.4
LOR Lormes 166.75 269 ePKIKP PKPdf 05 43 38.4 -1.1
comp=Z,328nm,1.9s
LOR eMLR MLR
comp=Z,167µm,22.8s
LOR Lormes 166.75 269 ePKPdf PKPdf 05 43 38.4 -1.1
LOR LR LR
comp=Z,167µm,22.8s
DOU Dourbes 166.76 281 PKPdf PKPdf 05 43 43.6 +4.2
DOU PKPab PKPab 05 44 42.5 -0.1
EMIN Mina Concepcio 166.76 213 PKP PKPdf 05 43 39.3 -0.6
PVAQ Vaqueiros 166.79 209 ePKPdf PKPdf 05 43 41.6 +1.7
PVAQ Vaqueiros 166.79 209 ePP PP 05 48 32.3 +1.7
PYM Petit Puy Mans 166.81 262 PKP PKPdf 05 43 37.7 -1.9
EGRO El Granado 166.83 210 PKP PKPdf 05 43 40.7 +0.8
PFVI Vila Bisbo 166.87 205 ePKPdf PKPdf 05 43 42.8 +2.8
PFVI Vila Bisbo 166.87 205 ePP PP 05 48 32.4 +1.4
ESAC San Caprasio 166.88 241 PKP PKPdf 05 43 40.2 +0.4
SSF Saint Saulge 166.92 268 ePKIKP PKPdf 05 43 38.5 -1.1
comp=Z,199nm,1.6s
AVF Avril sur Loir 166.94 266 ePKIKP PKPdf 05 43 38.3 -1.4
comp=Z,261nm,1.9s
MORF Marmelete 166.99 206 ePKPdf PKPdf 05 43 41.9 +1.9
MORF Marmelete 166.99 206 ePP PP 05 48 31.3 -0.3
BAIF Baives 167.00 281 ePKIKP PKPdf 05 43 38.3 -1.3
comp=Z,194nm,1.6s
RESF Ens 167.08 246 PKP PKPdf 05 43 39.7 -0.2
CAF Calviac 167.08 257 ePKIKP PKPdf 05 43 39.2 -0.6
comp=Z,130nm,1.4s
EBIE Bielsa 167.12 245 PKP PKPdf 05 43 40.5 +0.5
ETOR Torete 167.15 234 PKIKP PKPdf 05 43 39.0 -1.0
BGF Bois d'Agland 167.20 265 ePKIKP PKPdf 05 43 39.1 -0.8
comp=Z,648nm,1.8s
EPF Esparros 167.20 247 ePKIKP PKPdf 05 43 39.5 -0.5
comp=Z,750nm,1.9s
PTEO Sao Teotonio 167.23 206 ePKPdf PKPdf 05 43 46.1 +5.9
PTEO Sao Teotonio 167.23 206 ePP PP 05 48 36.5 +3.7
ESDC Sonseca Array 167.24 226 PKP PKPdf 05 43 40.0 -0.2
comp=Z,3.4nm,0.9s,baz=4.2,slow=0.3,SNR=14
ESDC PKPab PKPab 05 44 45.2 +0.3
comp=Z,8.5nm,0.9s,baz=156,slow=4.1,SNR=6.3
ESDC PP PP 05 48 32.6 -0.7
comp=Z,0.7nm,0.4s,baz=125,slow=6.9,SNR=5.1
ESDC Sonseca Array 167.24 226 PKP PKPdf 05 43 39.9 -0.2
ESLA Sonseca Array 167.24 226 ePKPdf PKPdf 05 43 42.0 +1.9
ESLA ePKPab PKPab 05 44 48.1 +3.2
ESLA LR LR
comp=Z,457µm,21.0s

PBAR	**Barrancos**	**167.26 213**	*e*PKPdf	PKPdf	05 43 41.5	+1.3
PBAR	**Barrancos**	**167.26 213**	*e*PP	PP	05 48 28.4	-4.7
VIEF	**Viey**	**167.31 246**	PKP	PKPdf	05 43 41.2	+1.1
PAB	**San Pablo**	**167.32 224**	*e*PKIKP	PKPdf	05 43 39.8	-0.4
PAB			*e*		05 44 43.9	
PAB			MLR	MLR		
	comp=Z,93μm,21.0s					
PBEJ	**Beja**	**167.41 210**	*e*PKPdf	PKPdf	05 43 43.0	+2.7
PBEJ	**Beja**	**167.41 210**	*e*PP	PP	05 48 32.5	-1.3
TCF	**Toulx Ste Croi**	**167.52 263**	*e*PKIKP	PKPdf	05 43 39.2	-0.9
	comp=Z,158nm,1.4s					
RJF	**Les Rejaudoux**	**167.59 258**	*e*PKIKP	PKPdf	05 43 39.5	-0.7
	comp=Z,381nm,1.9s					
RJF			*e*MLR	MLR		
	comp=Z,107μm,20.8s					
ETSF	**Etsaut**	**167.66 245**	*e*PKIKP	PKPdf	05 43 40.2	-0.1
	comp=Z,93nm,1.1s					
REYF	**Montagne du Re**	**167.67 246**	PKP	PKPdf	05 43 40.4	+0.1
EBAD	**Badajoz**	**167.76 214**	PKP	PKPdf	05 43 38.7	-1.9
ATE	**Arette**	**167.86 245**	PKP	PKPdf	05 43 48.1	+7.6
EVO	**Evora**	**167.91 211**	*e*PKIKP	PKPdf	05 43 40.2	-0.5
	comp=Z,205nm,1.2s					
EVO			*e*MLR	MLR		
	comp=Z,92μm,21.8s					
EVO	**Evora**	**167.91 211**	*e*PKPdf	PKPdf	05 43 40.3	-0.4
EVO	**Evora**	**167.91 211**	*e*PP	PP	05 48 38.4	+2.0
LFF	**La Frestale**	**167.93 255**	*e*PKIKP	PKPdf	05 43 39.7	-0.7
	comp=Z,489nm,1.8s					
PESTR	**Estremoz**	**168.07 213**	*e*PKPdf	PKPdf	05 43 42.3	+1.5
PESTR	**Estremoz**	**168.07 213**	*e*PP	PP	05 48 36.5	-0.7
GUD	**Guadarrama**	**168.09 228**	PKIKP	PKPdf	05 43 40.1	-0.6
SJPF	**Ste Jean**	**168.19 244**	*e*PKIKP	PKPdf	05 43 40.4	-0.3
	comp=Z,228nm,1.3s					
OSSF	**Osses**	**168.29 245**	PKP	PKPdf	05 43 40.1	-0.7
ELIZ	**Elizondo**	**168.40 244**	PKIKP	PKPdf	05 43 40.6	-0.2
EALK	**Alkurruntz**	**168.41 244**	PKP	PKPdf	05 43 41.2	+0.3
LIS	**Lisbon**	**168.44 207**	*e*P	PKPdf	05 43 40.7	-0.3
PMRV	**Marv??o**	**168.49 215**	*e*PKPdf	PKPdf	05 43 40.9	-0.1
PMRV	**Marv??o**	**168.49 215**	*e*PP	PP	05 48 41.6	+2.2
ECRI	**Cripan**	**168.62 239**	PKIKP	PKPdf	05 43 41.6	+0.6
PMAFR	**Mafra**	**168.70 207**	*e*PKPdf	PKPdf	05 43 42.6	+1.4
PMAFR	**Mafra**	**168.70 207**	*e*PP	PP	05 48 42.8	+2.5
MCD	**Coleburn Disti**	**168.80 323**	*e*P	PKPdf	05 43 37.1	-3.5
PCBR	**Castelo Branco**	**168.88 215**	*e*PKPdf	PKPdf	05 43 43.5	+2.2
PCBR	**Castelo Branco**	**168.88 215**	*e*PP	PP	05 48 43.9	+2.5
PTOM	**Tomar**	**169.02 211**	*e*PKPdf	PKPdf	05 43 43.6	+2.2
PTOM	**Tomar**	**169.02 211**	*e*PP	PP	05 48 48.7	+6.7
MFF	**Saint Martin d**	**169.16 262**	*e*PKIKP	PKPdf	05 43 40.1	-1.1
	comp=Z,353nm,1.8s					
MDO	**Dochfour**	**169.33 325**	*e*P	PKPdf	05 43 36.6	-4.4
MTE	**Manteigas**	**169.39 217**	*e*PKPdf	PKPdf	05 43 43.0	+1.4
MTE	**Manteigas**	**169.39 217**	*e*PP	PP	05 48 38.3	-5.7
MTE	**Manteigas**	**169.39 217**	PFAKE		05 43 50.0	+8.4
MTE			LR	LR		
	comp=Z,67μm,21.0s					
ELAN	**Lanestosa**	**169.54 240**	PKP	PKPdf	05 43 40.4	-1.2
LDF	**La Druitiere**	**169.65 272**	*e*PKIKP	PKPdf	05 43 39.8	-1.6
	comp=Z,322nm,1.7s					
PVIS	**Viseu**	**169.80 216**	*e*PKPdf	PKPdf	05 43 46.1	+4.3
PVIS	**Viseu**	**169.80 216**	*e*PP	PP	05 48 51.5	+5.5
MVO	**Moncorvo**	**169.82 221**	*e*PKPdf	PKPdf	05 43 42.2	+0.4
MVO	**Moncorvo**	**169.82 221**	*e*PP	PP	05 48 36.0	-10
EDI	**Edinburgh**	**169.83 316**⍰	*e*P	PKPdf	05 43 37.4	-3.9
EDI			AMb	AMB	05 43 37.6	
	comp=Z,52nm,1.3s					
EDI			*e*		05 48 42.2	
EDI			AMS	AMS	05 49 46.4	
	comp=Z,15μm,16.9s					
KPL	**Plockton**	**169.88 327**⍰	*e*P	PKPdf	05 43 37.3	-4.0
KPL			AMb	AMB	05 43 38.5	
	comp=Z,55nm,1.5s					
KPL			*e*		05 48 46.6	
KPL			AMS	AMS	05 49 45.5	
	comp=Z,8μm,17.6s					
FLN	**La Foliniere**	**169.91 273**	*e*PKIKP	PKPdf	05 43 40.0	-1.6
	comp=Z,258nm,1.3s					
FLN			*e*MLR	MLR		
	comp=Z,111μm,22.8s					
FLN	**La Foliniere**	**169.91 273**	*e*PKPdf	PKPdf	05 43 40.0	-1.6
FLN			LR	LR		
	comp=Z,111μm,22.8s					
GRR	**Gorron**	**170.10 271**	*e*PKIKP	PKPdf	05 43 40.3	-1.4
	comp=Z,271nm,1.6s					
EKA	**Eskdalemuir Ar**	**170.15 313**	PKP	PKPdf	05 43 41.2	-0.2
	comp=Z,1.7nm,0.9s,baz=241,slow=1.5,SNR=2.9					
EKA			PKPab	PKPdf	05 44 58.0	+0.6
	comp=Z,20nm,1.1s,baz=36,slow=3.5,SNR=3.9					
EKA	**Eskdalemuir Ar**	**170.15 313**	PKIKP	PKPdf	05 43 41.3	-0.2
EKA					05 44 58.0	
EKA			pmax	pmax		
	comp=Z,2.0nm,0.9s					
ESK	**Eskdalemuir**	**170.18 313**	PFAKE		05 43 50.0	+8.5
ESK			LR	LR		
	comp=Z,88μm,22.0s					
PVRL	**Vila Real**	**170.21 219**	*e*PKPdf	PKPdf	05 43 47.3	+5.3
PVRL	**Vila Real**	**170.21 219**	*e*PP	PP	05 48 50.6	+2.5
PBRG	**Braganca**	**170.22 224**	*e*PKPdf	PKPdf	05 43 46.1	+4.1
PBRG	**Braganca**	**170.22 224**	*e*PP	PP	05 48 48.1	-0.2
WOL	**Wolverton**	**170.44 288**⍰	*e*P	PKPdf	05 43 38.6	-3.2
WOL			AMb	AMB	05 43 54.8	
	comp=Z,136nm,1.8s					
PGBU	**Glenifferbraes**	**170.48 318**⍰	*e*P	PKPdf	05 43 37.2	-4.5
PGBU			AMb	AMB	05 43 38.5	
	comp=Z,85nm,1.6s					
PGBU			*e*		05 48 47.5	
PGBU			AMS	AMS	05 49 49.6	
	comp=Z,17μm,17.1s					
STNC	**Stoke**	**170.63 299**⍰	*e*P	PKPdf	05 43 38.2	-3.6
STNC			AMb	AMB	05 44 02.3	
	comp=Z,187nm,1.7s					
STNC			*e*		05 48 47.5	
STNC			AMS	AMS	05 51 16.0	
	comp=Z,11μm,17.7s					
PCAB	**Cabril**	**170.70 219**	*e*PKPdf	PKPdf	05 43 43.1	+0.8
PCAB	**Cabril**	**170.70 219**	*e*PP	PP	05 48 51.7	+1.1
SWN1	**Swindon**	**170.77 290**⍰	*e*P	PKPdf	05 43 38.7	-3.3
SWN1			AMb	AMB	05 43 48.9	
	comp=Z,134nm,1.4s					
SWN1			AMS	AMS	05 51 16.5	
	comp=Z,9μm,19.1s					
ELOB	**Lobios**	**170.84 219**	PKP	PKPdf	05 43 42.7	+0.3
ERUA	**La Rua**	**170.86 225**	PKIKP	PKPdf	05 43 42.3	0.0
GAL1	**Galloway**	**171.15 314**⍰	*e*P	PKPdf	05 43 36.9	-5.1
GAL1			AMb	AMB	05 43 45.5	
	comp=Z,46nm,2.0s					
GAL1			*e*		05 48 53.7	
GAL1			AMS	AMS	05 50 01.7	
	comp=Z,20μm,16.3s					
SGMF	**Saint Gilles**	**171.19 269**	*e*PKIKP	PKPdf	05 43 40.7	-1.6
	comp=Z,216nm,1.6s					
MCH1	**Michaelchurch**	**171.40 294**⍰	*e*P	PKPdf	05 43 38.1	-4.2
MCH1			AMb	AMB	05 43 46.7	
	comp=Z,84nm,1.7s					
MCH1			*e*		05 48 48.4	
MCH1			AMS	AMS	05 51 03.3	
	comp=Z,11μm,18.2s					
QUIF	**Quistinic**	**171.51 266**	*e*PKIKP	PKPdf	05 43 41.0	-1.5
WIM	**Isle of Man**	**171.52 310**	*e*P	PKPdf	05 43 39.2	-3.1
ROSF	**Rostrenen**	**171.67 268**	*e*PKIKP	PKPdf	05 43 40.9	-1.6
	comp=Z,199nm,1.8s					
WLF1	**Llynfaes**	**171.78 304**⍰	*e*P	PKPdf	05 43 38.3	-4.1
HTL	**Hartland**	**172.51 288**⍰	*e*P	PKPdf	05 43 39.8	-3.0
HTL			AMb	AMB	05 43 51.6	
	comp=Z,67nm,1.6s					
HTL			*e*		05 49 03.4	
HTL			AMS	AMS	05 51 09.1	
	comp=Z,13μm,18.0s					
CSA1	**St Austell**	**172.85 283**	*e*P	PKPdf	05 43 40.1	-2.9
CMA1	**Manaccan**	**173.02 281**	*e*P	PKPdf	05 43 41.0	-2.0
CCA1	**Carnmenellis**	**173.07 282**	*e*P	PKPdf	05 43 38.8	-4.2

*CSEM **30** 05:27:28.8±0.1, 3974N×2778E, h4km, MD2.7, Error ellipse: s-maj=2.0km s-min=1.9km az=30.0*
*ISCJB **30** 05:27:29.6±0.5, 3976N±003×2777E±003, h2km±5km, Error ellipse: s-maj=4.4km s-min=3.6km az=0.7*
*DDA **30** 05:27:29.6, 3976N×2777E, h4km±2km, Md2.7*
*ISK **30** 05:27:29.4, 3974N×2778E, h7km, MD2.9*

ISC 30 05:27:30.1±0.4, 3976N±003×2777E±003, h5km±4km, n28, σ0§70/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.12**	**260**	*i* P	**Pg**	**05 27 32.3**	**-0.2**
BALY				*i* S	**Sg**	**05 27 34.5**	**+0.3**
BALB	**Balikesir**	**0.15**	**145**	PG	**Pg**	**05 27 32.7**	**-0.4**
BALB				*e*SG	**Sg**	**05 27 34.9**	**-0.1**
DURS	**Dursunbey**	**0.57**	**106**	*i* P	**Pg**	**05 27 40.2**	**-0.8**
DURS				*i* S	**Sg**	**05 27 48.6**	**+0.3**
EDC	**Edincik**	**0.59**	**7**	*e*PG	**Pg**	**05 27 41.5**	**0.0**
DST	**Dursunbey**	**0.68**	**103**	*e*PG	**Pg**	**05 27 42.8**	**-0.4**
DST				*e*SG	**Sg**	**05 27 52.2**	**+0.2**
AKS	**Akhisar**	**0.88**	**178**	*e*PG	**Pg**	**05 27 46.5**	**-0.5**
AKS				*e*SG	**Sg**	**05 27 58.8**	**+0.4**
AYVA	**Ayvalik**	**0.95**	**242**	*i* P	**Pg**	**05 27 48.5**	**+0.2**
AYVA				*i* S	**Sg**	**05 28 02.9**	**+2.3**
DEMI	**Demirci**	**1.02**	**134**	*i* P	**Pg**	**05 27 49.4**	**-0.4**
DEMI				*i* S	**Sg**	**05 28 03.1**	**+0.1**
MFT	**Murefte**	**1.09**	**340**	*e*PN	**Pn**	**05 27 51.8**	**-0.2**
EZN	**Ezine**	**1.11**	**274**	*e*PN	**Pn**	**05 27 51.2**	**-1.1**
ULDT	**Uludag**	**1.12**	**70**	*i* P	**Pg**	**05 27 51.0**	**-0.5**
ULDT				*i* S	**Sg**	**05 28 06.5**	**+0.4**
ULDT	**Uludag**	**1.12**	**70**	*i* P	**Pg**	**05 27 51.0**	**-0.5**
ULDT				*i* S	**Sg**	**05 28 06.4**	**+0.4**
TKR	**Tekirdag**	**1.24**	**352**	*e*PN	**Pn**	**05 27 53.7**	**-0.3**
GEMT	**Gemlik**	**1.28**	**58**	*e*PN	**Pn**	**05 27 53.8**	**-0.8**
KDAG	**Bornova**	**1.41**	**196**	*i* P	**Pn**	**05 27 55.0**	**-1.3**
KDAG				*i* S	**Sb**	**05 28 15.0**	**-0.1**
KULA	**Kula-Manisa**	**1.42**	**151**	*e*PN	**Pn**	**05 27 55.5**	**-1.0**
YLV	**Yalova**	**1.47**	**56**	*e*PN	**Pn**	**05 27 56.6**	**-0.6**
BLCB	**Balcova**	**1.48**	**203**	*e*PN	**Pn**	**05 27 57.5**	**+0.1**
GDZ	**Gediz**	**1.48**	**116**	*i* P	**Pn**	**05 27 58.0**	**+0.6**
GDZ				*i* S	**Sn**	**05 28 17.9**	**+0.8**
GADA	**Gykgeada**	**1.50**	**287**	*e*PN	**Pn**	**05 27 57.2**	**-0.4**
SLVT	**Silivri**	**1.51**	**13**	*e*PN	**Pn**	**05 27 58.4**	**+0.7**
ENEZ	**Enez**	**1.57**	**309**	*e*PN	**Pn**	**05 27 58.5**	**-0.1**
CTKS	**Kestanelik-??a**	**1.58**	**21**	*e*PN	**Pn**	**05 27 59.0**	**+0.3**
BGKT	**Bogazkoy**	**1.61**	**28**	*e*PN	**Pn**	**05 27 59.4**	**+0.2**
ADVT	**Abdulvahap**	**1.65**	**65**	*e*PN	**Pn**	**05 27 59.9**	**+0.2**
CAVI	**Cavuskoy**	**1.65**	**74**	*e*PN	**Pn**	**05 28 00.5**	**+0.8**
BORA	**Eskisehir**	**2.07**	**86**	*i* P	**Pn**	**05 28 08.0**	**+2.6**
BORA				*i* S	**Sn**	**05 28 36.7**	**+5.1**
GULT	**Gulveren**	**2.21**	**71**	*e*PN	**Pn**	**05 28 07.4**	**0.0**

*ISCJB **30** 05:27:38.2±2.2, 22S±07×125W±06, h10km, mb4.1/3, Error ellipse: s-maj=139.1km s-min=12.2km az=139.7*
*IDC **30** 05:27:39.3±2.8, 208S×1268W, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/24, mbtmp3.9/5, ML3.2/1, MS3.9/1, Ms1 3.9/1, ms1mx3.7/45, Error ellipse: s-maj=162.3km s-min=20.9km az=138.0*

ISC 30 05:27:40.6±2.2, 22S±07×126W±06, h10km, n8, σ0§79/8, mb4.1/3, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**11.29**	**42**	*e*P	**Pn**	**05 30 23.0**	**+0.9**
	41nm,1.1s						
KIC	**Kosan Boka**	**11.58**	**43**	*e*P	**Pn**	**05 30 25.0**	**-1.1**
	76nm,1.2s						
TIC	**Toumodi**	**11.60**	**41**	*e*P	**Pn**	**05 30 27.0**	**+0.6**
	11nm,0.2s						
DBIC	**Dimbokro**	**11.73**	**41**	Pn	**Pn**	**05 30 28.9**	**+0.8**
	0.2nm,0.3s,baz=213,slow=16,SNR=3.7						
DBIC				LR	LR	05 34 12.8	
	comp=Z,662nm,20.3s,baz=269,slow=34						
TORD	**Torodi Ar. Bea**	**20.84**	**43**	P	**P**	**05 32 21.4**	**-1.3**
	3.6nm,0.7s,baz=225,slow=11,SNR=14						
CPUP	**Villa Florida**	**49.15**	**237**	P	**P**	**05 36 29.6**	**+0.6**
	1.0nm,0.6s,mb4.0,baz=59,slow=9.0,SNR=6.0						
SIV	**San Ignacio**	**49.63**	**251**	P	**P**	**05 36 32.4**	**-0.4**
	1.4nm,0.8s,mb4.1,baz=95,slow=10,SNR=8.7						
GERES	**GERESS Array B**	**55.73**	**21**	P	**P**	**05 37 17.2**	**-0.1**
	1.4nm,0.7s,mb4.1,baz=191,slow=6.4,SNR=16						

IDC 30 05:29:48.7±2.1, 4842S×16436E, h0km, mb4.5/2, mb1 4.8/2, mb1mx4.4/11, mbtmp4.5/2, Error ellipse: s-maj=158.5km s-min=52.6km az=38.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**34.49**	**305**	P	P	05 36 38.4	+0.1
	6.6nm,0.8s,baz=143,slow=8.6,SNR=5.9						
WRA	**Warramunga Arr**	**37.30**	**309**	P	P	05 37 02.1	-0.2
	6.8nm,0.9s,baz=142,slow=8.1,SNR=4.0						
ARCES	**ARCESS Array B**	**151.00**	**331**	PKPbc	PKPbc	05 49 42.2	+0.3
	16nm,0.7s,baz=45,slow=1.9,SNR=7.3						
AKASG	**Malin Array Be**	**151.14**	**292**	PKPbc	PKPbc	05 49 41.8	-1.0
	10nm,0.7s,baz=86,slow=2.5,SNR=7.8						
GERES	**GERESS Array B**	**160.65**	**282**	PKPab	PKPab	05 50 31.8	+0.3
	2.8nm,0.9s,baz=95,slow=2.2,SNR=3.5						

*IDC **30** 05:31:55.6±1.0, 4936S×16391E, h0km, mb4.5/8, mb1 4.6/8, mb1mx4.5/14, mbtmp4.5/8, Error ellipse: s-maj=55.7km s-min=23.3km az=40.0*
*ISCJB **30** 05:31:56.1±1.2, 493S±03×1638E±04, h10km, mb4.5/8, Error ellipse: s-maj=51.0km s-min=23.0km az=42.6*
*NEIC **30** 05:31:56.9±0.7, 4926S×16401E, h10km, Error ellipse: s-maj=36.2km s-min=15.5km az=220.0*

ISC 30 05:31:57.6±1.1, 493S±03×1638E±04, h10km, n14, σ0§70/10, mb4.5/8, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.40**	**328**	P	**P**	**05 38 26.7**	**-0.7**
	7.3nm,0.7s,mb4.6,baz=166,slow=9.6,SNR=5.0						
ASAR	**Alice Springs**	**34.74**	**307**	P	**P**	**05 38 47.7**	**-0.1**
	5.2nm,0.9s,mb4.4,baz=133,slow=7.7,SNR=4.4						
WRA	**Warramunga Arr**	**37.62**	**311**	P	**P**	**05 39 11.8**	**-0.7**
	4.0nm,0.8s,mb4.2,baz=147,slow=8.4,SNR=5.1						
NWAO	**Narrogin (SRO)**	**38.07**	**278**	P	**P**	**05 39 16.3**	**+0.1**
	9.6nm,0.8s,mb4.6,baz=102,slow=9.1,SNR=3.9						
NWAO	**Narrogin (SRO)**	**38.07**	**278**	P	**P**	**05 39 16.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**43.73**	**302**	P	**P**	**05 40 02.9**	**-0.1**
	3.9nm,0.6s,mb4.3,baz=190,slow=14,SNR=3.7						
PLCA	**Paso Flores**	**78.34**	**141**	P	**P**	**05 43 57.2**	**-0.6**
	1.6nm,0.8s,mb4.0,baz=216,slow=6.0,SNR=2.8						
PLCA	**Paso Flores**	**78.34**	**141**	P	**P**	**05 43 57.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**88.54**	**301**	P	**P**	**05 44 51.1**	**+0.8**
	3.4nm,0.4s,mb5.0,baz=158,slow=4.0,SNR=7.4						
KSRS	**Korea Array**	**92.09**	**332**	P	**P**	**05 45 07.8**	**+1.4**
	0.8nm,0.4s,mb4.4,baz=159,slow=3.8,SNR=2.3						
SPITS	**Spitsbergen Ar**	**148.64**	**348**	PKPbc	PKPbc	05 51 42.2	-0.9
	6.7nm,0.7s,baz=90,slow=1.9,SNR=4.5						
AKASG	**Malin Array Be**	**151.14**	**290**	PKPbc	PKPbc	05 51 49.0	-1.0
	5.4nm,0.7s,baz=88,slow=2.6,SNR=9.8						
ARCES	**ARCESS Array B**	**151.63**	**331**	PKPbc	PKPbc	05 51 49.9	-0.6
	3.7nm,0.7s,baz=243,slow=0.3,SNR=4.1						
ARCES	**ARCESS Array B**	**151.63**	**331**	PKPbc	PKPbc	05 51 49.9	-0.7

IDC 30 05:32:09.2±2.3, 4963S×16395E, h0km, mb4.5/4, mb1 4.7/4, mb1mx4.5/12, mbtmp4.5/4, Error ellipse: s-maj=95.1km s-min=57.6km az=40.0, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**34.98**	**307**	P	P	05 39 03.3	+0.3
	3.3nm,0.8s,baz=135,slow=8.0,SNR=4.1						
WRA	**Warramunga Arr**	**37.87**	**311**	P	P	05 39 27.5	-0.2
	8.5nm,1.0s,baz=140,slow=8.9,SNR=7.6						
MJAR	**Matsushiro Arr**	**88.78**	**340**	P	P	05 45 03.4	-0.9
	1.8nm,0.7s,baz=172,slow=4.9,SNR=4.6						
KSRS	**Korea Array**	**92.38**	**332**	P	P	05 45 22.1	+1.1
	1.8nm,0.7s,baz=145,slow=6.6,SNR=4.3						
AKASG	**Malin Array Be**	**151.32**	**290**	PKPbc	PKPbc	05 52 03.8	+0.2
	0.8nm,0.3s,baz=86,slow=2.5,SNR=4.5						
GERES	**GERESS Array B**	**160.61**	**279**	PKPab	PKPab	05 52 50.9	-0.8
	3.5nm,0.9s,baz=113,slow=2.6,SNR=4.7						

*IDC **30** 05:34:23.9±1.1, 4926S×16404E, h0km, mb4.5/8, mb1 4.6/8, mb1mx4.4/14, mbtmp4.5/8, Error ellipse: s-maj=66.3km s-min=26.1km az=42.0*
*ISCJB **30** 05:34:25.0±1.2, 492S±03×1639E±04, h10km, mb4.5/8, Error ellipse: s-maj=51.1km s-min=23.3km az=42.5*
*NEIC **30** 05:34:25.4±1.0, 4925S×16407E, h10km, Error ellipse: s-maj=54.0km s-min=21.6km az=222.0*

ISC 30 05:34:26.5±1.2, 493S±03×1639E±04, h10km, n12, σ0§83/9, mb4.5/8, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.36**	**328**	P	**P**	**05 40 56.7**	**+0.8**
	4.5nm,0.8s,mb4.4,baz=168,slow=11,SNR=2.8						
CTA	**Charters Tower**	**32.36**	**328**	P	**P**	**05 40 56.7**	**+0.8**
ASAR	**Alice Springs**	**34.73**	**306**	P	**P**	**05 41 16.0**	**-0.6**
	1.9nm,0.6s,mb4.2,baz=143,slow=7.8,SNR=4.3						
WRA	**Warramunga Arr**	**37.60**	**311**	P	**P**	**05 41 39.5**	**-1.7**
	26nm,1.0s,mb4.9,baz=140,slow=8.8,SNR=9.4						
NWAO	**Narrogin (SRO)**	**38.10**	**278**	P	**P**	**05 41 45.9**	**+0.6**
	9.1nm,0.8s,mb4.6,baz=136,slow=11,SNR=3.7						
FITZ	**Fitzroy Crossi**	**43.73**	**302**	P	**P**	**05 42 31.7**	**-0.1**
	3.8nm,0.5s,mb4.4,baz=160,slow=9.1,SNR=3.8						
PLCA	**Paso Flores**	**78.37**	**141**	P	**P**	**05 46 26.4**	**-0.5**
	2.1nm,0.9s,mb4.0,baz=207,slow=4.5,SNR=4.3						
CMAR	**Chiang Mai Arr**	**88.53**	**301**	P	**P**	**05 47 20.3**	**+1.1**
	3.9nm,0.6s,mb4.9,baz=156,slow=4.8,SNR=4.0						
KSRS	**Korea Array**	**92.04**	**332**	P	**P**	**05 47 35.4**	**+0.3**
	2.2nm,0.9s,mb4.5,baz=153,slow=5.4,SNR=4.0						
AKASG	**Malin Array Be**	**151.16**	**290**	PKPbc	PKPbc	05 54 16.7	-2.2
	2.8nm,0.6s,baz=84,slow=2.2,SNR=4.4						
MLR	**Muntele Rosu**	**151.54**	**279**	PKPbc	PKPbc	05 54 18.6	-1.4
	6.5nm,0.9s,baz=216,slow=8.7,SNR=1.9						
ARCES	**ARCESS Array B**	**151.59**	**331**	PKPbc	PKPbc	05 54 17.6	-1.8
	8.9nm,0.9s,baz=86,slow=0.8,SNR=6.0						

*ISCJB **30** 05:36:19.8±1.1, 495S±04×1634E±05, h10km, mb4.3/7, Error ellipse: s-maj=74.6km s-min=19.5km az=35.4*
*IDC **30** 05:36:19.1±1.0, 4918S×16388E, h0km, mb4.4/7, mb1 4.6/7, mb1mx4.4/12, mbtmp4.4/7, Error ellipse: s-maj=102.7km s-min=26.3km az=40.0*
*NEIC **30** 05:36:20.8±0.8, 4919S×16381E, h10km, Error ellipse: s-maj=67.1km s-min=17.0km az=213.0*

ISC 30 05:36:21.2±1.1, 493S±04×1636E±05, h10km, n16, σ0§98/8, mb4.3/7, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAU	**Tasmania Unive**	**12.99**	**294**	P	**Pn**	**05 39 25.7**	**0.0**
	800nm,0.5s						
STKA	**Stephens Creek**	**24.01**	**308**	P	**P**	**05 41 37.2**	**+1.2**
	9.5nm,0.8s,mb4.3,baz=135,slow=8.5,SNR=4.0						
ASAR	**Alice Springs**	**34.63**	**307**	P	**P**	**05 43 10.6**	**+0.1**
	5.9nm,0.9s,mb4.5,baz=141,slow=9.0,SNR=4.9						
WRA	**Warramunga Arr**	**37.51**	**311**	P	**P**	**05 43 34.7**	**-0.5**
	6.6nm,0.8s,mb4.4,baz=145,slow=8.0,SNR=6.3						
WRA				PcP	PcP	05 45 52.5	-0.8
	2.8nm,0.8s,baz=136,slow=2.9,SNR=4.5						
FITZ	**Fitzroy Crossi**	**43.61**	**302**	P	**P**	**05 44 23.5**	**-2.1**
	9.3nm,1.0s,mb4.5,baz=169,slow=1.6,SNR=4.1						
PLCA	**Paso Flores**	**78.43**	**141**	P	**P**	**05 48 21.8**	**-0.2**
	2.2nm,1.0s,mb4.0,baz=211,slow=10,SNR=3.2						
CMAR	**Chiang Mai Arr**	**88.42**	**301**	P	**P**	**05 49 14.9**	**+1.5**
	3.8nm,0.3s,mb4.4,baz=162,slow=2.5,SNR=3.6						
KSRS	**Korea Array**	**92.02**	**332**	P	**P**	**05 49 29.4**	**-0.3**
	0.5nm,0.3s,mb4.3,baz=160,slow=5.6,SNR=4.4						
KURK	**Kurchatov**	**123.20**	**311**	PKhKP		05 55 06.5	
	6.5nm,1.2s,baz=109,slow=4.4,SNR=3.6						
KURK				PKP	PKPdf	05 55 15.0	-2.1
	2.5nm,0.9s,baz=281,slow=6.3,SNR=3.5						
KURK	**Kurchatov**	**123.20**	**311**	PKP		05 55 06.5	
KURK				PKP	PKPdf	05 55 15.0	-2.1
SPITS	**Spitsbergen Ar**	**148.60**	**348**	PKPbc	PKPbc	05 56 05.0	-1.7
	6.9nm,0.8s,baz=11,slow=6.0,SNR=4.2						
AKASG	**Malin Array Be**	**151.01**	**290**	PKPbc	PKPbc	05 56 12.9	-0.4
	6.4nm,0.7s,baz=85,slow=2.4,SNR=9.6						
MLR	**Muntele Rosu**	**151.37**	**279**	PKPbc	PKPbc	05 56 14.9	+0.5
	5.9nm,0.9s,baz=170,slow=2.1,SNR=3.6						
ARCES	**ARCESS Array B**	**151.56**	**330**	PKPbc	PKPbc	05 56 13.4	-0.6
	8.3nm,0.8s,baz=70,slow=1.4,SNR=5.5						
NB2	**NORSAR Subarra**	**160.54**	**317**	PKP	PKPab	05 57 01.4	0.0
	comp=Z,3.6nm,1.0s,baz=65,slow=4.4						
NOA	**NORSAR Array B**	**160.54**	**317**	PKPab	PKPab	05 57 00.5	-0.9
	comp=Z,1.5nm,0.8s,baz=62,slow=4.3,SNR=3.7						

*IDC **30** 05:37:02.0

1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.79**	**161**	*e*P	Pg	05 38 30.2	+1.1
PVCP				*e*S	Sg	05 38 40.1	+0.6
GQP	**Guinayangan**	**1.46**	**253**↓	*e*P	Pn	05 38 40.6	-1.0
GQP				*e*S	Sg	05 38 57.5	-3.5
AUQP	**San Andres**	**1.55**	**229**	*e*P	Pn	05 38 43.0	+0.2
POLP	**Polilio Island**	**1.92**	**282**	*e*P	Pn	05 38 49.4	+1.6
POLP				*e*S	Sn	05 39 14.4	+1.8
CNP	**Catarman**	**1.98**	**157**	*e*P	Pn	05 38 50.6	+2.0
BALP	**Baler**	**2.62**	**302**	*e*P	Pn	05 38 58.1	+0.5
OTRP	**Odiongan**	**2.68**	**223**	*e*P	Pn	05 39 01.4	+3.1
PCPH	**Palayan**	**2.95**	**295**↓	*e*P	Pn	05 39 03.2	+1.2
PCPH				*e*S	Sn	05 39 36.9	-1.3
RCP	**Roxas**	**2.98**	**202**	*e*P	Pn	05 39 04.4	+1.9
CAUP	**Cauayan**	**3.26**	**323**	*e*P	Pn	05 39 08.9	+2.7
NBP	**Mount Natib**	**3.38**	**277**↑	*e*P	Pn	05 39 10.0	+2.1
APYP	**Conner**	**4.32**	**324**	*e*P	Pn	05 39 22.8	+2.0

*ISCJB **30** 05:42:23.3±0.5, 4895S×006×1644E±0.1, h10km, mb4.7/15, Error ellipse: s-maj=11.7km s-min=7.2km az=36.9*
*IDC **30** 05:42:24.0±0.8, 49.12S×164.03E, h0km, mb4.7/10, mb1 4.8/10, mb1mx4.7/15, mbtmp4.6/10, Error ellipse: s-maj=38.7km s-min=18.5km az=56.0*
*MOS **30** 05:42:25.5±3.2, 4938S×164.15E, h31km, mb4.9/1, Error ellipse: s-maj=56.7km s-min=22.9km az=109.7*
*NEIC **30** 05:42:25.0±0.4, 4895S×16434E, h10km, mb4.9/3, Error ellipse: s-maj=12.2km s-min=9.4km az=110.0*

ISC 30 05:42:25.5±0.5, 4895S±006×1643E±01, h10km, n60, σ1§11/25, mb4.7/15, 8C-4D, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**6.48**	**209**	*e*Pn	**Pn**	**05 44 02.0**	**+1.2**
	0.2nm,1.9s						
RPZ	**Rata Peaks**	**7.00**	**44**	Pn	**Pn**	**05 44 05.9**	**-2.1**
	6.2nm,0.3s,baz=297,slow=14,SNR=3.4						
RPZ				Sn	**Sn**	**05 45 27.5**	**-0.1**
	23nm,0.3s,baz=259,slow=23,SNR=5.6						
URZ	**Urewera**	**14.12**	**46**	Pn	**Pn**	**05 45 45.8**	**+0.4**
	0.3nm,0.3s,baz=145,slow=19,SNR=2.5						
SBA	**Scott Base**	**29.03**	**179**	*e*P	**P**	**05 48 25.7**	**+0.6**
SBA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SBA	**Scott Base**	**29.03**	**179**	*e*P	**P**	**05 48 25.6**	**+0.6**
	comp=Z,24nm,1.2s,mb4.8						
CTA	**Charters Tower**	**32.24**	**327**	P	**P**	**05 48 55.2**	**+1.2**
	comp=Z,5.8nm,0.8s,mb4.5,baz=81,slow=22,SNR=3.9						
CTA	**Charters Tower**	**32.24**	**327**	P	**P**	**05 48 55.2**	**+1.2**
CASY	**Casey**	**32.31**	**218**	*e*P	**P**	**05 48 51.6**	**-2.5**
	comp=Z,19nm,1.3s,mb4.8						
ASAR	**Alice Springs**	**34.78**	**306**	P	**P**	**05 49 16.1**	**+0.1**
	comp=Z,7.5nm,0.7s,mb4.8,baz=137,slow=7.9,SNR=26						
ASAR				PcP	PcP	05 51 47.8	-1.5
	comp=Z,1.1nm,0.7s,baz=134,slow=5.3,SNR=3.7						
WB2	**Warramunga Arr**	**37.61**	**310**	*e*P	**P**	**05 49 39.9**	**-0.4**
	comp=Z,17nm,0.6s,mb5.0						
WRA	**Warramunga Arr**	**37.62**	**310**	P	**P**	**05 49 39.8**	**-0.5**
	comp=Z,6.1nm,0.6s,mb4.5,baz=137,slow=8.0,SNR=15						
WRA				PcP	PcP	05 51 57.2	-0.7
	comp=Z,3.5nm,0.9s,baz=146,slow=2.6,SNR=6.8						
NWAO	**Narrogin (SRO)**	**38.35**	**277**	P	**P**	**05 49 44.8**	**-1.7**
	comp=Z,18nm,1.2s,mb4.7,baz=129,slow=4.0,SNR=4.2						
QSPA	**South Pole Qui**	**41.17**	**180**	P	**P**	**05 50 08.0**	**-1.4**
	comp=Z,18nm,1.0s,mb4.6,baz=357,slow=4.6,SNR=14						
FITZ	**Fitzroy Crossi**	**43.81**	**301**	P	**P**	**05 50 31.9**	**+0.4**
	comp=Z,5.8nm,0.5s,mb4.6,baz=225,slow=17,SNR=8.2						
KAKA	**Kakadu**	**44.71**	**313**	*e*P	**P**	**05 50 39.0**	**+0.2**
	comp=Z,45nm,0.7s,mb5.4						
MBWA	**Marble Bar**	**44.93**	**292**	*e*P	**P**	**05 50 39.8**	**-0.6**
	comp=Z,32nm,1.4s,mb5.0						
MAW	**Mawson**	**49.88**	**209**	P	**P**	**05 51 18.0**	**-0.4**
	comp=Z,4μm,1.2s						
MAIT	**Maitri**	**58.96**	**190**	*e*P	**P**	**05 52 24.2**	**-0.2**
PLCA	**Paso Flores**	**78.43**	**141**	P	**P**	**05 54 28.0**	**+1.8**
	comp=Z,8.0nm,1.1s,mb4.6,baz=217,slow=5.0,SNR=7.7						
PLCA	**Paso Flores**	**78.43**	**141**	P	**P**	**05 54 28.0**	**+1.8**
MJAR	**Matsushiro Arr**	**88.23**	**339**	P	**P**	**05 55 16.9**	**+0.6**
	comp=Z,2.7nm,0.9s,mb4.5,baz=166,slow=6.4,SNR=5.5						
CMAR	**Chiang Mai Arr**	**88.62**	**300**	P	**P**	**05 55 18.6**	**0.0**
	comp=Z,1.5nm,0.4s,mb4.7,baz=151,slow=2.7,SNR=5.1						
CMAR	**Chiang Mai Arr**	**88.62**	**300**↑	*e*P	**P**	**05 55 21.3**	**+2.7**
KSRS	**Korea Array**	**91.89**	**332**	P	**P**	**05 55 35.0**	**+1.6**
	comp=Z,1.9nm,0.7s,mb4.6,baz=134,slow=5.6,SNR=5.7						
MKAR	**Makanchi Array**	**118.92**	**309**	PKP	PKPdf	06 01 11.5	-1.8
	comp=Z,0.5nm,0.5s,baz=177,slow=2.7,SNR=2.8						
KURK	**Kurchatov**	**123.30**	**311**	PKP	PKPdf	06 01 20.2	-1.4
	comp=Z,0.9nm,0.2s,baz=89,slow=1.6,SNR=4.3						
ECSD	**EROS,Sioux Fal**	**126.39**	**63**	*e*PKPdf	PKPdf	06 01 27.1	-0.7
TORD	**Torodi Ar. Bea**	**141.52**	**208**	PKhKP		06 01 48.1	
	comp=Z,0.6nm,0.6s,baz=176,slow=2.2,SNR=4.7						
BR131	**Keskin Array S**	**144.11**	**274**	*e*PKPdf	PKPdf	06 01 57.6	-3.2
ANTO	**Ankara**	**144.74**	**274**↑	*i*P	PKPdf	06 02 00.0	-1.9
IDI	**Anoyia**	**147.37**	**261**	PKPbc	PKPbc	06 02 08.6	-0.4
	comp=Z,14nm,0.8s,baz=44,slow=4.5,SNR=6.0						
OBN	**Obninsk**	**147.93**	**301**↓	*e*PKP2	PKPbc	06 02 10.5	+0.7
OBN				pmax	pmax		
	comp=Z,11nm,0.4s						
SPITS	**Spitsbergen Ar**	**148.32**	**348**	PKPbc	PKPbc	06 02 10.5	+0.2
	comp=Z,14nm,0.7s,baz=328,slow=9.2,SNR=6.3						
TAM	**Tamanrasset**	**148.96**	**220**	*e*PKPbc	PKPbc	06 02 13.3	-0.2
KEV	**Kevo**	**150.88**	**331**	*e*p	PKPbc	06 02 15.9	-0.8
	comp=Z,9.3nm,0.6s						
KEV	**Kevo**	**150.88**	**331**	*e*PKIKP	PKPbc	06 02 15.9	-0.8
KEV				pmax	pmax		
	comp=Z,9.0nm,0.6s						
JOF	**Joensuu**	**150.97**	**316**	*e*p	PKPbc	06 02 15.1	-2.0
	comp=Z,6.3nm,0.7s						
JOF	**Joensuu**	**150.97**	**316**	*e*PKIKP	PKPbc	06 02 15.1	-2.0
JOF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKASG	**Malin Array Be**	**151.31**	**291**	PKPbc	PKPbc	06 02 17.1	-1.2
	comp=Z,5.8nm,0.6s,baz=82,slow=2.6,SNR=23						
VRI	**Vrincioaia**	**151.41**	**280**↑	*i*P	PKPbc	06 02 17.6	-1.1
ARCES	**ARCESS Array B**	**151.45**	**331**	PKPbc	PKPbc	06 02 18.1	+0.1
	comp=Z,14nm,0.8s,baz=62,slow=2.9,SNR=15						
MLR	**Muntele Rosu**	**151.78**	**279**	PKPbc	PKPbc	06 02 18.8	-0.7
	comp=Z,5.3nm,0.6s,baz=189,slow=1.6,SNR=10						
MLR	**Muntele Rosu**	**151.78**	**279**↓	*i*P	PKPbc	06 02 18.5	-1.0
VOIR		**152.34**	**278**↑	*i*P	PKPbc	06 02 17.7	-3.1
VTS	**Vitosha**	**152.37**	**272**↓	*i*P	PKPab	06 02 29.9	-1.3
BURAR	**Bucovina Array**	**152.98**	**283**↑	*i*P	PKPab	06 02 36.9	+3.3
KAF	**Kangasniemi**	**153.39**	**315**	*e*p	PKPbc	06 02 21.3	-1.3
	comp=Z,2.5nm,0.7s						
KAF	**Kangasniemi**	**153.39**	**315**	*e*PKIKP	PKPbc	06 02 21.3	-1.3
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DRGR		**154.34**	**280**↑	*i*P	PKPab	06 02 39.1	-0.3
BZS	**Buzias**	**154.65**	**277**↑	*i*P	PKPab	06 02 40.0	-0.7
KWP	**Kalwaria**	**155.13**	**286**↓	*i*P	PKPab	06 02 42.8	+0.1
STHS	**Stebnicka Huta**	**156.01**	**285**	*e*PKP	PKPab	06 02 45.7	-0.8
PKSM	**Moragy**	**156.81**	**276**↑	*i*P	PKPab	06 02 48.8	-1.2
KEST	**Kesra**	**157.40**	**244**	PKPab	PKPab	06 02 53.0	+0.2
	comp=Z,2.6nm,0.8s,baz=55,slow=22,SNR=6.4						
MODS	**Modra-Piesok**	**158.32**	**281**	*e*PKP	PKPab	06 02 55.9	-0.5
MODS				*e*		06 03 00.8	
NB2	**NORSAR Subarra**	**160.57**	**319**	PKP	PKPab	06 03 05.0	-0.8
	comp=Z,2.9nm,0.9s,baz=65,slow=4.4						
NOA	**NORSAR Array B**	**160.57**	**319**	PKPab	PKPab	06 03 05.2	-0.6
	comp=Z,1.8nm,0.8s,baz=64,slow=4.5,SNR=4.5						
GERES	**GERESS Array B**	**160.74**	**281**	PKPab	PKPab	06 03 06.1	-0.8
	comp=Z,5.4nm,0.8s,baz=108,slow=4.3,SNR=28						
KHC	**Kasperske Hory**	**160.87**	**282**	*e*PKPAB	PKPab	06 03 06.5	-1.0
CLL	**Collm**	**161.51**	**288**	*e*PKPab	PKPab	06 03 09.0	-1.3

*DJA **30** 05:48:19, 206S×10170E, h10km, MLv4.8/2*
*MOS **30** 05:48:30.2±0.8, 210S×10096E, h33km, mb5.0/7, Error ellipse: s-maj=19.1km s-min=9.5km az=116.9*
*NEIC **30** 05:48:31.7±0.2, 225S×10094E, h35km, mb4.7/3, Error ellipse: s-maj=11.0km s-min=6.1km az=50.0*
*IDC **30** 05:48:34.6±0.8, 2.17S×10095E, h59km±6km, mb4.2/25, mb1 4.3/26, mb1mx4.3/30, mbtmp4.2/26, Error ellipse: s-maj=17.1km s-min=9.7km az=45.0*
*ISCJB **30** 05:48:36.6±1.0, 2.17S±007×10095E±007, h92km±8km, mb4.7/42, Error ellipse: s-maj=14.1km s-min=8.1km az=139.6*

ISC 30 05:48:37.7±1.0, 220S±007×10094E±007, h87km±8km, h60km±4.5km: pP-P, n87, σ0§82/79, mb4.7/42, 8C-6D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.82**	**343**	P	**Pn**	**05 49 04.5**	**-3.0**
	0.0nm,0.0s						
KSI	**Kapahiang**	**2.19**	**131**	P	**Pn**	**05 49 12.9**	**+0.5**
	0.0nm,0.0s						
RGRI	**Rengat**	**2.31**	**37**	P	**Pn**	**05 49 13.7**	**-0.2**
	0.0nm,0.0s						
DSRI	**Dabo**	**4.02**	**65**	P	**Pn**	**05 49 36.7**	**-0.3**
	0.0nm,0.0s						
KGM	**Kluang**	**4.82**	**30**↑	P	**Pn**	**05 49 48.2**	**+0.3**
MYKOM	**Kota Tinggi**	**4.92**	**36**↓	P	**Pn**	**05 49 49.8**	**+0.5**
FRIM	**Kepong**	**5.45**	**7**↑	P	**Pn**	**05 49 56.3**	**-0.1**
IPM	**Ipoh**	**6.64**	**1**↓	P	**Pn**	**05 50 14.0**	**+1.3**
KTGM	**Kuala Trenggan**	**7.79**	**16**↑	P	**Pn**	**05 50 29.2**	**+0.7**
XMIS	**Christmas Isla**	**9.46**	**151**	*e*Pn	**Pn**	**05 50 43.0**	**-8.2**
XMIS				*e*Sn	**Sn**	**05 52 21.4**	**-15**
SDKM	**Sandakan**	**18.00**	**64**↑	P	**Pn**	**05 52 43.5**	**+1.0**
KAPI	**Kappang**	**18.98**	**99**	P	**Pn**	**05 52 51.2**	**-2.9**
	3.2nm,0.3s,baz=277,slow=7.0,SNR=5.7						
CMAR	**Chiang Mai Arr**	**20.62**	**355**	P	**P**	**05 53 07.8**	**-2.4**
	4.9nm,0.7s,baz=186,slow=10,SNR=13						
ODAN	**Odare**	**31.71**	**337**	*e*P	**P**	**05 54 54.1**	**+0.7**
	112nm,0.6s,mb5.7						
RAMN	**Ramite**	**32.12**	**335**	*e*P	**P**	**05 54 57.9**	**+1.0**
	28nm,0.5s,mb5.3						
JIRN	**Jiri**	**32.91**	**335**	*e*P	**P**	**05 55 04.7**	**+0.8**
	187nm,0.9s,mb5.9						
PKIN	**Phulchoki**	**33.18**	**334**	*e*P	**P**	**05 55 06.4**	**+0.2**
	16nm,0.6s,mb5.0						
GUN	**Gumba**	**33.26**	**335**	*e*P	**P**	**05 55 07.7**	**+0.8**
DMN	**Daman**	**33.33**	**334**	*e*P	**P**	**05 55 08.2**	**+0.7**
KKN	**Kakani**	**33.41**	**334**	*e*P	**P**	**05 55 08.5**	**+0.3**
GKN	**Gorkha**	**33.88**	**334**	*e*P	**P**	**05 55 12.5**	**+0.2**
	33nm,0.3s,mb5.6						
KOLN	**Koldanda**	**34.16**	**332**	*e*P	**P**	**05 55 15.1**	**+0.4**
	46nm,0.7s,mb5.4						
DANN	**Dangsing**	**34.57**	**333**	*e*P	**P**	**05 55 18.6**	**+0.3**
	62nm,0.4s,mb5.8						
WRA	**Warramunga Arr**	**37.08**	**121**	P	**P**	**05 55 39.0**	**-0.9**
	4.2nm,0.4s,mb4.7,baz=308,slow=9.7,SNR=84						
WRA				PcP	PcP	05 57 58.9	0.0
	1.6nm,0.6s,baz=305,slow=2.3,SNR=5.7						
WRA	**Warramunga Arr**	**37.08**	**121**	P	**P**	**05 55 39.0**	**-0.9**
WRA				PcP	PcP	05 57 58.9	0.0
ASAR	**Alice Springs**	**38.37**	**127**	P	**P**	**05 55 50.5**	**-0.2**
	13nm,0.6s,mb4.9,baz=302,slow=7.9,SNR=99						
ASAR				PcP	PcP	05 58 03.2	+0.4
	2.6nm,0.6s,baz=305,slow=2.5,SNR=7.3						
ASAR				S	**S**	**06 01 42.0**	**+2.7**
	3.2nm,0.9s,baz=297,slow=15,SNR=7.7						
KSRS	**Korea Array**	**46.72**	**30**	P	**P**	**05 56 57.5**	**-0.7**
	1.5nm,0.5s,mb4.0,baz=223,slow=9.2,SNR=6.9						
CTA	**Charters Tower**	**47.66**	**115**	P	**P**	**05 57 05.5**	**-0.2**
	3.1nm,0.6s,mb4.3,baz=296,slow=13,SNR=6.5						
STKA	**Stephens Creek**	**48.31**	**132**	P	**P**	**05 57 11.2**	**+0.5**
	6.2nm,0.6s,mb4.6,baz=317,slow=8.6,SNR=8.4						
SONM	**Songino Array**	**50.06**	**5**	P	**P**	**05 57 23.9**	**+0.4**
	5.4nm,0.7s,mb4.6,baz=185,slow=8.4,SNR=9.8						
MK31	**Makanchi Array**	**51.48**	**344**	*e*P	**P**	**05 57 33.8**	**-0.5**
MK31				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb5.2						
MKAR	**Makanchi Array**	**51.48**	**344**	P	**P**	**05 57 34.0**	**-0.3**
	comp=Z,24nm,0.6s,mb5.4,baz=158,slow=9.0,SNR=57						
MJAR	**Matsushiro Arr**	**51.84**	**38**	P	**P**	**05 57 36.9**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=264,slow=10,SNR=4.6						
KK31	**Karatay Array**	**52.77**	**332**	P	**P**	**05 57 43.2**	**-0.7**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KURK	**Kurchatov**	**56.07**	**343**	P	**P**	**05 58 06.8**	**-0.9**
	comp=Z,9.5nm,0.8s,mb4.9,baz=164,slow=7.3,SNR=20						
ZALV	**Zalesovo Beam**	**57.54**	**349**	P	**P**	**05 58 17.2**	**-0.8**
	comp=Z,26nm,0.7s,mb5.4,baz=176,slow=5.8,SNR=52						
RDF	**Al-Radifah**	**59.73**	**305**	*e*P	**P**	**05 58 33.1**	**-0.7**
	baz=306						
RDF				AMb	AMB	05 58 33.9	
	comp=Z,37nm,0.8s,mb5.5,baz=306						
UMR	**Umm Al-Rimmam**	**59.83**	**306**	*e*P	**P**	**05 58 33.7**	**-0.8**
	baz=306						
UMR				AMb	AMB	05 58 34.6	
	comp=Z,33nm,0.9s,mb5.4,baz=306						
NAY	**Al-Naaiem**	**60.10**	**306**	*e*P	**P**	**05 58 35.5**	**-0.8**
	baz=306						
NAY				AMb	AMB	05 58 36.2	
	comp=Z,16nm,0.8s,mb5.1,baz=306						
BVAR	**Borovoye Array**	**60.70**	**339**	P	**P**	**05 58 38.7**	**-1.2**
	comp=Z,4.1nm,0.6s,mb4.7,baz=143,slow=9.2,SNR=10						
BVAR				pP	pP	05 58 56.4	-5.3
	comp=Z,4.2nm,0.6s,baz=146,slow=8.7,SNR=6.4						
AB31	**Akbulak array**	**62.27**	**331**	P	**P**	**05 58 49.5**	**-1.0**
AB31				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.1						
AKTK	**Aktyubinsk**	**63.99**	**331**	P	**P**	**05 59 00.5**	**-1.3**
AKTO	**Aktyubinsk**	**63.99**	**331**	P	**P**	**05 59 00.5**	**-1.3**
	comp=Z,2.4nm,0.5s,mb4.3,baz=110,slow=6.4,SNR=7.5						
ASF	**Jabal al Asfar**	**69.47**	**305**	P	**P**	**05 59 38.0**	**+0.8**
	comp=Z,3.8nm,0.8s,mb4.3,baz=329,slow=2.5,SNR=5.7						
EIL	**Elat**	**70.42**	**302**	P	**P**	**05 59 43.8**	**+0.8**
	comp=Z,5.9nm,0.7s,mb4.5,baz=112,slow=4.8,SNR=6.8						
MMAI	**Mount Meron Ar**	**70.92**	**306**	P	**P**	**05 59 46.3**	**+0.4**
	comp=Z,1.3nm,0.3s,mb4.2,baz=111,slow=16,SNR=6.0						
MMAI				pP	pP	06 00 02.8	-5.6
	comp=Z,0.8nm,0.3s,baz=99,slow=9.2,SNR=2.3						
PETK	**Petropavlovsk-**	**72.55**	**32**	P	**P**	**05 59 55.7**	**+0.4**
	comp=Z,3.1nm,0.8s,mb4.2,baz=197,slow=4.5,SNR=2.7						
LBTB	**Lobatse**	**75.79**	**245**	P	**P**	**06 00 14.7**	**-0.2**
	comp=Z,3.1nm,1.0s,mb4.0,baz=149,slow=5.9,SNR=2.6						
BOSA	**Boshof**	**76.39**	**241**	P	**P**	**06 00 17.8**	**-0.3**
	comp=Z,2.0nm,0.9s,mb3.9,baz=20,slow=12,SNR=3.0						
OBN	**Obninsk**	**77.46**	**328**	*e*P	**P**	**06 00 23.2**	**-0.3**
OBN				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
IDI	**Anoyia**	**79.92**	**306**	P	**P**	**06 00 37.9**	**+0.4**
	comp=Z,5.8nm,0.7s,mb4.5,baz=59,slow=9.1,SNR=6.3						
AKASG	**Malin Array Be**	**80.22**	**322**	P	**P**	**06 00 39.1**	**+0.4**
	comp=Z,0.8nm,0.5s,mb3.8,baz=91,slow=4.6,SNR=3.2						
MLR	**Muntele Rosu**	**81.09**	**317**	P	**P**	**06 00 43.2**	**-0.3**
	comp=Z,5.1nm,0.9s,mb4.4,baz=167,slow=4.3,SNR=5.4						
MLR	**Muntele Rosu**	**81.09**	**317**↓	*i*P	**P**	**06 00 44.1**	**+0.6**
MLR	**Muntele Rosu**	**81.09**	**317**↓	P	**P**	**06 00 44.1**	**+0.6**
BURAR	**Bucovina Array**	**82.03**	**319**↓	*i*P	**P**	**06 00 49.7**	**+1.3**
BURAR	**Bucovina Array**	**82.03**	**319**↓	P	**P**	**06 00 49.7**	**+1.3**
BUR08	**Bucovina Ar. S**	**82.05**	**319**	*e*P	**P**	**06 00 49.0**	**+0.5**
JOF	**Joensuu**	**82.80**	**334**	*e*p	**P**	**06 00 50.9**	**-1.2**
	comp=Z,2.9nm,0.6s,mb4.3						
JOF	**Joensuu**	**82.80**	**334**	*e*P	**P**	**06 00 52.2**	**+0.1**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
BZS	**Buzias**	**84.10**	**316**↑	*i*P	**P**	**06 00 59.2**	**0.0**
BZS	**Buzias**	**84.10**	**316**↑	P	**P**	**06 00 59.2**	**+0.1**
KOLS	**Kolonicke sedl**	**84.22**	**319**	*e*P	**P**	**06 01 00.4**	**+0.7**
KAF	**Kangasniemi**	**84.79**	**333**	*e*p	**P**	**06 01 01.8**	**-0.5**
	comp=Z,5.0nm,0.6s,mb4.6						
KAF	**Kangasniemi**	**84.79**	**333**	*e*P	**P**	**06 01 02.3**	**0.0**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
KAF	**Kangasniemi**	**84.79**	**333**	*e*P	**P**	**06 01 02.3**	**0.0**
	comp=Z,5.0nm,0.6s,mb4.6						
STHS	**Stebnicka Huta**	**84.96**	**320**	*i*P	**P**	**06 01 04.8**	**+1.4**
STHS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
STHS	**Stebnicka Huta**	**84.96**	**320**	*i*P	**P**	**06 01 04.8**	**+1.4**
	comp=Z,4.3nm,0.8s,mb4.4						
PKSM	**Moragy**	**86.25**	**316**↑	*i*P	**P**	**06 01 09.7**	**-0.1**
PKSM	**Moragy**	**86.25**	**316**↑	P	**P**	**06 01 09.7**	**-0.1**
KEV	**Kevo**	**86.53**	**340**	*e*p	**P**	**06 01 10.2**	**-0.5**
ARCES	**ARCESS Array B**	**86.98**	**340**	P	**P**	**06 01 13.2**	**+0.2**
	comp=Z,1.8nm,0.4s,mb4.4,baz=100,slow=5.2,SNR=33						
ARCES				pP	pP	06 01 27.7	-8.4
	comp=Z,2.0nm,0.6s,baz=103,slow=5.2,SNR=1.9						
BRG	**Berggiesshubel**	**89.79**	**321**	*e*P	**P**	**06 01 27.4**	**+0.7**
	comp=Z,4.5nm,0.9s,mb4.6						
BRG				*e*		06 03 07.4	
	comp=Z,5.2nm,0.9s						
GERES	**GERESS Array B**	**89.82**	**319**	P	**P**	**06 01 27.2**	**+0.4**
	comp=Z,1.5nm,0.9s,mb4.1,baz=108,slow=4.3,SNR=6.0						
NB2	**NORSAR Subarra**	**91.78**	**331**	P	**P**	**06 01 35.2**	**-0.4**
	comp=Z,0.2nm,0.7s,mb3.5,baz=95,slow=5.3						
NOA	**NORSAR Array B**	**91.78**	**331**	P	**P**	**06 01 35.5**	**-0.1**
	comp=Z,1.7nm,0.8s,mb4.3,baz=95,slow=4.5,SNR=4.1						
NOA	**NORSAR Array B**	**91.78**	**331**	P	**P**	**06 01 35.5**	**-0.2**
ULM	**Lac du Bonnet**	**130.04**	**14**	PKP	PKPdf	06 07 37.3	-0.3
	comp=Z,3.6nm,0.6s,baz=16,slow=9.4,SNR=5.9						
PDAR	**Pinedale Array**	**131.29**	**30**	PKP	PKPdf	06 07 39.5	-0.7
	comp=Z,0.3nm,0.6s,baz=194,slow=3.3,SNR=2.9						
TXAR	**Lajitas Array**	**144.28**	**39**	PKP	PKPdf	06 08 03.7	-0.7
	comp=Z,7.7nm,0.7s,baz=322,slow=1.2,SNR=94						
TXAR	**Lajitas Array**	**144.28**	**39**	PKP	PKPdf	06 08 03.7	-0.7
CPUP	**Villa Florida**	**144.71**	**215**	PKP	PKPdf	06 08 04.8	-0.4
	comp=Z,5.5nm,0.7s,baz=135,slow=2.4,SNR=25						
CPUP	**Villa Florida**	**144.71**	**215**	PKP	PKPdf	06 08 04.8	-0.4
CFAA	**Coronel Fontan**	**144.84**	**196**	PKP	PKPdf	06 08 05.4	+0.1
	comp=Z,1.0nm,0.7s,baz=155,slow=2.9,SNR=14						
JCT	**Junction City**	**145.69**	**33**	*e*PKP2	PKPab	06 08 07.5	-0.2
LVC	**Limon Verde**	**153.42**	**201**	PKPbc	PKPbc	06 08 28.2	+1.3
	comp=Z,3.0nm,0.8s,baz=128,slow=4.0,SNR=3.8						
SIV	**San Ignacio**	**154.65**	**224**	PKPbc	PKPbc	06 08 29.8	+0.1
	comp=Z,1.1nm,0.8s,baz=188,slow=0.5,SNR=5.8						

*NEIC **30** 05:50:06.7±0.9, 4940S×16408E, h10km, Error ellipse: s-maj=69.3km s-min=24.2km az=216.0*

IDC 30 05:50:05.5±1.3, 4935S×16405E, h0km, mb4.4/6, mb1 4.6/6, mb1mx4.4/11, mbtmp4.4/6, Error ellipse: s-maj=77.6km s-min=37.6km az=37.0, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**24.25**	**308**	P	P	05 55 25.5	+1.6
	7.7nm,1.0s,baz=82,slow=5.2,SNR=3.5						
ASAR	**Alice Springs**	**34.87**	**306**	P	P	05 56 58.3	0.0
	3.7nm,0.6s,baz=138,slow=8.1,SNR=10						
WRA	**Warramunga Arr**	**37.73**	**310**	P	P	05 57 21.8	-1.1
	1.5nm,0.6s,baz=136,slow=8.0,SNR=8.4						
MJAR	**Matsushiro Arr**	**88.54**	**339**	P	P	06 02 58.9	-0.5
	0.8nm,0.5s,baz=177,slow=4.9,SNR=4.8						
CMAR	**Chiang Mai Arr**	**88.67**	**301**	P	P	06 03 00.1	-0.3
	1.7nm,0.3s,baz=151,slow=5.5,SNR=7.2						
KSRS	**Korea Array**	**92.16**	**332**	P	P	06 03 16.8	+0.4
	0.6nm,0.3s,baz=151,slow=4.1,SNR=4.5						
MKAR	**Makanchi Array**	**119.03**	**309**	PKP	PKPdf	06 08 55.2	0.0
	0.4nm,0.4s,baz=164,slow=1.0,SNR=4.2						
KURK	**Kurchatov**	**123.42**	**311**	PKP	PKPdf	06 09 02.9	-0.6
	0.4nm,0.7s,baz=112,slow=1.4,SNR=3.1						
SPITS	**Spitsbergen Ar**	**148.67**	**348**	PKPbc	PKPbc	06 09 52.6	-0.2
	8.2nm,0.9s,

WRA	**Warramunga Arr**	**37.73 311**	P	P	06 03 24.2	-0.9
	1.8nm,0.6s,baz=139,slow=8.9,SNR=8.3						
CMAR	**Chiang Mai Arr**	**88.62 301**	P	P	06 09 03.7	+1.2
	1.1nm,0.3s,baz=154,slow=3.4,SNR=4.4						
KSRS	**Korea Array**	**92.25 332**	P	P	06 09 19.8	+0.9
	0.4nm,0.3s,baz=148,slow=7.2,SNR=4.7						
SPITS	**Spitsbergen Ar**	**148.81 348**	PKPbc	PKPbc	06 15 54.3	-1.1
	12nm,1.1s,baz=339,slow=6.3,SNR=3.6						
AKASG	**Malin Array Be**	**151.20 290**	PKPbc	PKPbc	06 16 00.6	-1.4
	1.8nm,0.6s,baz=79,slow=2.4,SNR=6.2						
ARCES	**ARCESS Array B 151.79 330**		PKPbc	PKPbc	06 16 02.9	+0.2
	2.8nm,0.7s,baz=90,slow=1.2,SNR=5.9						
GERES	**GERESS Array B 160.50 279**		PKPab	PKPab	06 16 50.0	+0.2
	1.6nm,0.7s,baz=108,slow=4.3,SNR=14						

IDC 30 05:59:11.8±4.1, 4947S×16555E, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.7/12, mbtmp3.7/2, Error ellipse: s-maj=425.0km s-min=64.6km az=43.0, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**35.73**	**305**	P		P	P	06 06 11.6	-0.5
	0.7nm,0.6s,baz=142,slow=7.6,SNR=4.7								
WRA	**Warramunga Arr**	**38.56**	**309**	P		P	P	06 06 36.5	+0.4
	0.7nm,0.7s,baz=140,slow=8.0,SNR=3.6								
AKASG	**Malin Array Be**	**152.25**	**289**	PKPbc		PKPbc	PKPbc	06 19 08.3	-0.1
	0.4nm,0.3s,baz=79,slow=1.5,SNR=5.1								

IDC 30 06:00:09.8±2.2, 4895S×16461E, h0km, mb4.2/3, mb1 4.4/3, mb1mx4.1/11, mbtmp4.2/3, Error ellipse: s-maj=224.1km s-min=54.1km az=37.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**6.87**	**43**	Sn		Sn	Sn	06 03 19.1	+8.5
	2.8nm,0.3s,baz=345,slow=23,SNR=2.7								
ASAR	**Alice Springs**	**34.93**	**305**	P		P	P	06 07 03.1	-0.1
	1.7nm,0.6s,baz=139,slow=7.4,SNR=8.2								
WRA	**Warramunga Arr**	**37.76**	**309**	P		P	P	06 07 27.0	-0.3
	1.1nm,0.6s,baz=137,slow=7.6,SNR=6.2								
CMAR	**Chiang Mai Arr**	**88.78**	**300**	P		P	P	06 13 06.2	+0.8
	1.3nm,0.3s,baz=150,slow=2.0,SNR=5.5								
TORD	**Torodi Ar. Bea**	**141.61**	**207**	PKhKP				06 19 36.1	
	0.9nm,0.9s,baz=158,slow=0.5,SNR=3.2								
AKASG	**Malin Array Be**	**151.49**	**291**	PKPbc		PKPbc	PKPbc	06 20 03.7	-1.0
	2.4nm,0.7s,baz=88,slow=2.4,SNR=8.9								
ARCES	**ARCESS Array B 151.54**	**331**		PKPbc		PKPbc	PKPbc	06 20 04.7	+0.4
	4.0nm,0.9s,baz=29,slow=2.8,SNR=4.4								

IDC 30 06:04:10.0±1.0, 4904S×16428E, h0km, mb4.1/8, mb1 4.3/8, mb1mx4.2/14, mbtmp4.1/8, Error ellipse: s-maj=63.7km s-min=18.4km az=48.0, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**7.09**	**44**	Sn		Sn	Sn	06 07 15.4	-0.8
	6.2nm,0.3s,baz=356,slow=24,SNR=6.3								
STKA	**Stephens Creek**	**24.18**	**307**	P		P	P	06 09 29.3	+1.4
	5.7nm,1.0s,baz=128,slow=12,SNR=3.6								
ASAR	**Alice Springs**	**34.81**	**306**	P		P	P	06 11 02.3	-0.1
	1.9nm,0.6s,baz=139,slow=8.3,SNR=10.0								
WRA	**Warramunga Arr**	**37.65**	**310**	P		P	P	06 11 25.8	-1.0
	2.4nm,0.7s,baz=138,slow=7.7,SNR=7.6								
QSPA	**South Pole Qui**	**41.08**	**180**	P		P	P	06 11 55.1	+0.4
	2.8nm,1.0s,baz=346,slow=6.0,SNR=3.7								
FITZ	**Fitzroy Crossi**	**43.83**	**301**	P		P	P	06 12 17.7	-0.1
	2.4nm,0.5s,baz=173,slow=8.1,SNR=4.2								
PLCA	**Paso Flores**	**78.38**	**141**	P		P	P	06 16 12.8	+0.7
	1.7nm,1.1s,baz=211,slow=12,SNR=2.8								
CFAA	**Coronel Fontan**	**87.08**	**137**	P		P	P	06 16 57.0	-0.5
	0.2nm,1.0s,baz=180,slow=9.1								
CMAR	**Chiang Mai Arr**	**88.64**	**300**	P		P	P	06 17 05.9	+0.9
	0.9nm,0.3s,baz=178,slow=3.8,SNR=5.0								
TORD	**Torodi Ar. Bea**	**141.43**	**208**	PKhKP				06 23 35.4	
	0.6nm,0.9s,baz=142,slow=2.5,SNR=2.5								
AKASG	**Malin Array Be**	**151.32**	**291**	PKPbc		PKPbc	PKPbc	06 24 03.5	-1.0
	1.3nm,0.5s,baz=85,slow=2.5,SNR=9.5								
ARCES	**ARCESS Array B 151.52**	**331**		PKPbc		PKPbc	PKPbc	06 24 04.8	+0.3
	4.0nm,0.8s,baz=83,slow=2.8,SNR=9.5								
GERES	**GERESS Array B 160.72**	**281**		PKPab		PKPab	PKPab	06 24 52.8	-0.3
	1.5nm,0.8s,baz=108,slow=4.3,SNR=13								

*NEIC **30** 06:06:34.4, 1720N×10000W, h45km, MD4.0(MEX), After MEX.*

MEX 30 06:06:33.6±0.8, 1721N×10000W, h50km±10km, MD4.0, 1C, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.30**	**239**	*i* P		Pn	Pn	06 06 41.5	-1.3
CAIG				*i* S		Sn	Sn	06 06 48.1	-1.2
ACX	**Acapulco**	**0.34**	**167**	*i* P		Pn	Pn	06 06 41.3	-1.9
ACX				*i* S		Sn	Sn	06 06 48.2	-1.9
PLIG	**Platanillo**	**1.27**	**22**	*i* P		Pn	Pn	06 06 54.1	-0.9
PLIG				*i* S		Sn	Sn	06 07 08.1	-2.9
PLIG	**Platanillo**	**1.27**	**22**	*i* P		Pn	Pn	06 06 54.1	-0.9
PLIG				*i* S		Sn	Sn	06 07 07.0	-4.0
ZIIG	**Zihuatanejo**	**1.46**	**286**	*i* P		Pn	Pn	06 06 55.5	-2.0
ZIIG				*i* S		Sn	Sn	06 07 13.3	-2.2
ZIIG	**Zihuatanejo**	**1.46**	**286**	*i* P		Pn	Pn	06 06 55.5	-2.0
ZIIG				*i* S		Sn	Sn	06 07 10.5	-5.0
YAIG	**Yautepec**	**1.87**	**28**	*e*P		Pn	Pn	06 07 02.4	-0.8
YAIG				*i* S		Sn	Sn	06 07 23.4	-2.3
PNIG	**Pinotepa**	**1.96**	**114**	*i* P		Pn	Pn	06 07 03.6	-0.8
PNIG				*i* S		Sn	Sn	06 07 25.4	-2.6
PNIG	**Pinotepa**	**1.96**	**114**	*i* P		Pn	Pn	06 07 03.6	-0.8
PNIG				*i* S		Sn	Sn	06 07 30.8	+2.8
MZVM		**2.10**	**20**	*i* P		Pn	Pn	06 07 08.2	+1.8
MZVM				*i* S		Sn	Sn	06 07 38.2	+6.9
UTMO	**Huajuapan**	**2.18**	**73**	*i* P		Pn	Pn	06 07 07.1	-0.4
UTMO				*i* S		Sn	Sn	06 07 32.4	-1.0
SZVM	**Salazar**	**2.19**	**15**	*i* P		Pn	Pn	06 07 09.0	+1.5
SZVM				*i* S		Sn	Sn	06 07 31.1	-2.3
UNM	**Universidad Na**	**2.25**	**20**	*e*P		Pn	Pn	06 07 07.0	-1.4
UNM				*i* S		Sn	Sn	06 07 33.0	-2.0
PPM	**Popocatepetl**	**2.26**	**35**	*e*P		Pn	Pn	06 07 05.9	-2.7
PPM				*i* S		Sn	Sn	06 07 33.2	-2.1
PBVM	**Pinon**	**2.39**	**21**	*i* P		Pn	Pn	06 07 16.9	+6.6
PBVM				*i* S		Sn	Sn	06 07 44.8	+6.5
PTVM	**Pico Tres Padr**	**2.52**	**19**	*i* P		Pn	Pn	06 07 19.3	+7.2
PTVM				*i* S		Sn	Sn	06 07 46.9	+5.3
IIO	**Organos**	**2.66**	**27**	*i* P		Pn	Pn	06 07 13.6	-0.5
IIO				*i* S		Sn	Sn	06 07 44.8	-0.3
TPIG	**Tehuac#an**	**2.79**	**64**	*i* P		Pn	Pn	06 07 15.2	-0.6
TPIG				*i* S		Sn	Sn	06 07 47.1	-1.0
VHO	**Vista Hermosa**	**3.12**	**92**	*i* P		Pn	Pn	06 07 20.6	+0.3
VHO				*i* S		Sn	Sn	06 07 55.5	-0.9

IDC 30 06:08:18.0±1.0, 4863S×16452E, h0km, mb4.2/5, mb1 4.3/6, mb1mx4.2/13, mbtmp4.2/6, ML3.7/1, Error ellipse: s-maj=35.3km s-min=24.3km az=21.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**6.69**	**45**	Pn		Pn	Pn	06 09 56.8	-0.5
	1.5nm,0.3s,baz=196,slow=21,SNR=4.8								
RPZ				Sn		Sn	Sn	06 11 15.2	+1.0
	7.5nm,0.3s,baz=63,slow=7.5,SNR=3.4								
STKA	**Stephens Creek**	**24.07**	**306**	P		P	P	06 13 36.4	+1.5
	4.4nm,0.8s,baz=136,slow=8.8,SNR=5.4								
ASAR	**Alice Springs**	**34.70**	**305**	P		P	P	06 15 09.5	+0.1
	1.7nm,0.8s,baz=137,slow=7.9,SNR=8.0								
ASAR				PcP		PcP	PcP	06 17 42.8	-0.6
	1.0nm,0.8s,baz=135,slow=3.3,SNR=4.6								
WRA	**Warramunga Arr**	**37.51**	**309**	P		P	P	06 15 32.9	-0.6
	4.2nm,0.9s,baz=144,slow=8.2,SNR=8.5								
WRA				PcP		PcP	PcP	06 17 51.7	-0.1
	1.6nm,0.7s,baz=141,slow=2.8,SNR=7.2								
QSPA	**South Pole Qui**	**41.49**	**180**	PcP		PcP	PcP	06 18 02.9	-0.5
	1.8nm,0.8s,baz=314,slow=1.4,SNR=5.4								
FITZ	**Fitzroy Crossi**	**43.76**	**300**	P		P	P	06 16 24.2	-0.9
	1.3nm,0.4s,baz=158,slow=4.8,SNR=3.7								
PLCA	**Paso Flores**	**78.60**	**141**	P		P	P	06 20 21.6	+0.4
	0.5nm,0.5s,baz=201,slow=5.4,SNR=4.2								
MKAR	**Makanchi Array**	**118.82**	**309**	PKP		PKPdf	PKPdf	06 27 06.5	-0.8
	0.3nm,0.5s,baz=85,slow=3.0,SNR=3.8								
TORD	**Torodi Ar. Bea**	**141.87**	**208**	PKhKP				06 27 45.2	
	0.5nm,0.6s,baz=138,slow=2.3,SNR=4.1								
JOF	**Joensuu**	**150.83**	**317**	*ep*		PKPbc		06 28 09.9	-1.1
	3.6nm,0.6s								
ARCES	**ARCESS Array B 151.23**	**331**		PKPbc		PKPbc		06 28 12.8	+1.1
	7.2nm,0.8s,baz=70,slow=1.4,SNR=13								
AKASG	**Malin Array Be**	**151.32**	**291**	PKPbc		PKPbc		06 28 12.0	-0.5
	4.4nm,0.6s,baz=82,slow=2.6,SNR=3.2								
NOA	**NORSAR Array B 160.41**	**319**		PKPab		PKPab		06 28 59.1	-0.2
	1.2nm,0.8s,baz=2.4,slow=5.7,SNR=3.3								
GERES	**GERESS Array B 160.80**	**282**		PKPab		PKPab		06 29 00.7	-0.7
	1.0nm,1.0s,baz=99,slow=5.1,SNR=6.0								

*ISCJB **30** 06:13:33.6±1.1, 492S±0.1×164.6E±0.2, h10km, mb4.4/4, Error ellipse: s-maj=24.4km s-min=10.9km az=137.9*
*IDC **30** 06:13:33.5±1.1, 492.0S×164.66E, h0km, mb4.1/4, mb1 4.3/5, mb1mx4.1/14, mbtmp4.1/5, ML3.7/1, MS5.5/1, Ms1 5.5/1, ms1mx5.0/33, Error ellipse: s-maj=32.0km s-min=25.8km az=81.0*
*NEIC **30** 06:13:34.9±0.7, 492.0S×164.64E, h10km, Error ellipse: s-maj=21.2km s-min=17.0km az=128.0*

ISC 30 06:13:35.5±1.0, 492S±01×1646E±02, h10km, n9, σ0§98/6, mb4.4/4, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**7.09**	**42**	Pn		**Pn**		**06 15 18.2**	**-0.9**
	1.3nm,0.3s,baz=19,slow=22,SNR=1.9								
RPZ				Sn		**Sn**		**06 16 40.2**	**+0.6**
	5.2nm,0.3s,baz=56,slow=20,SNR=3.9								
RPZ				LR		LR		06 17 44.3	
	comp=Z,33μm,18.9s,baz=231,slow=36								
ASAR	**Alice Springs**	**35.05**	**306**	P		**P**		**06 20 27.4**	**-0.9**
	1.8nm,0.7s,mb4.1,baz=138,slow=7.7,SNR=12								
WRA	**Warramunga Arr**	**37.89**	**310**	P		**P**		**06 20 53.6**	**+0.9**
	13nm,0.9s,mb4.7,baz=138,slow=8.1,SNR=11								
QSPA	**South Pole Qui**	**40.92**	**180**	P		**P**		**06 21 17.5**	**+0.2**
	6.3nm,1.1s,mb4.2,baz=12,slow=4.3,SNR=8.7								
CMAR	**Chiang Mai Arr**	**88.88**	**300**	P		**P**		**06 26 29.9**	**+0.1**
	1.0nm,0.3s,mb4.6,baz=152,slow=7.9,SNR=2.4								
MKAR	**Makanchi Array**	**119.19**	**309**	PKP		PKPdf		06 32 22.2	-1.6
	0.3nm,0.8s,baz=153,slow=4.8,SNR=2.7								
AKASG	**Malin Array Be**	**151.54**	**290**	PKPbc		PKPbc		06 33 27.8	-1.0
	0.3nm,0.4s,baz=92,slow=2.7,SNR=2.8								
ARCES	**ARCESS Array B 151.74**	**331**		PKPbc		PKPbc		06 33 29.0	+0.3
	1.7nm,0.8s,baz=79,slow=2.6,SNR=5.6								
GERES	**GERESS Array B 160.93**	**280**		PKPab		PKPab		06 34 19.4	+1.6
	0.1nm,0.4s,baz=323,slow=4.2,SNR=3.6								

IDC 30 06:16:07.5±3.8, 4859S×16453E, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.9/12, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=89.5km s-min=32.0km az=162.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**6.65**	**45**	Pn		Pn	Pn	06 17 47.2	+0.8
	1.4nm,0.3s,baz=323,slow=9.1,SNR=2.3								
RPZ				Sn		Sn	Sn	06 19 02.8	-0.1
	2.4nm,0.3s,baz=44,slow=13,SNR=3.0								
ASAR	**Alice Springs**	**34.68**	**305**	P		P	P	06 22 59.4	+0.6
	0.7nm,0.8s,baz=139,slow=8.8,SNR=4.3								
WRA	**Warramunga Arr**	**37.49**	**309**	P		P	P	06 23 22.5	-0.4
	0.9nm,0.8s,baz=149,slow=7.7,SNR=3.5								
ARCES	**ARCESS Array B 151.20**	**331**		PKPbc		PKPbc	PKPbc	06 36 00.9	-0.3
	3.8nm,0.9s,baz=45,slow=1.4,SNR=3.8								

IDC 30 06:17:09.3±2.2, 4871S×16460E, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.8/11, mbtmp3.9/2, Error ellipse: s-maj=149.7km s-min=53.7km az=39.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**6.71**	**44**	Sn		Sn	Sn	06 20 18.3	+12
	0.9nm,0.3s,baz=12,slow=14,SNR=1.7								
ASAR	**Alice Springs**	**34.79**	**305**	P		P	P	06 24 01.9	+0.4
	1.1nm,0.6s,baz=137,slow=7.7,SNR=11								
WRA	**Warramunga Arr**	**37.60**	**309**	P		P	P	06 24 25.2	-0.4
	1.1nm,0.7s,baz=137,slow=7.8,SNR=6.3								
ARCES	**ARCESS Array B 151.32**	**331**		PKPbc		PKPbc	PKPbc	06 37 04.1	+0.8
	2.2nm,0.7s,baz=90,slow=3.2,SNR=4.7								
AKASG	**Malin Array Be**	**151.40**	**291**	PKPbc		PKPbc	PKPbc	06 37 03.3	-0.8
	0.9nm,0.6s,baz=82,slow=2.5,SNR=5.8								
GERES	**GERESS Array B 160.87**	**281**		PKPab		PKPab	PKPab	06 37 52.5	-0.6
	1.0nm,0.9s,baz=104,slow=5.6,SNR=6.9								

IDC 30 06:23:55.4±5.3, 4842S×16408E, h0km, mb3.9/3, mb1 4.2/4, mb1mx4.0/12, mbtmp4.0/4, ML3.9/1, Error ellipse: s-maj=129.4km s-min=39.7km az=167.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**6.76**	**48**	Pn		Pn	Pn	06 25 35.9	+0.2
	2.5nm,0.3s,baz=17,slow=13,SNR=5.7								
RPZ				Sn		Sn	Sn	06 26 50.7	-2.7
	1.8nm,0.3s,baz=259,slow=22,SNR=3.5								
ASAR	**Alice Springs**	**34.34**	**305**	P		P	P	06 30 43.7	-0.1
	0.4nm,0.6s,baz=136,slow=8.0,SNR=5.5								
WRA	**Warramunga Arr**	**37.16**	**309**	P		P	P	06 31 08.0	+0.1
	0.8nm,0.8s,baz=138,slow=7.9,SNR=3.2								
CMAR	**Chiang Mai Arr**	**88.22**	**300**	P		P	P	06 36 48.3	-0.1
	1.0nm,0.3s,baz=182,slow=4.0,SNR=4.3								

*ISCJB **30** 06:24:45.5±6.0, 489.8S±0.09×164.5E±0.1, h15km±45km, mb4.2/8, Error ellipse: s-maj=17.6km s-min=12.7km az=44.0*
*IDC **30** 06:24:46.2±0.9, 490.6S×164.34E, h0km, mb4.3/7, mb1 4.5/8, mb1mx4.4/14, mbtmp4.3/8, ML4.0/1, Error ellipse: s-maj=36.6km s-min=20.4km az=51.0*
*NEIC **30** 06:24:48.0±0.7, 49.12S×164.26E, h10km, mb4.2/1, Error ellipse: s-maj=16.6km s-min=13.9km az=106.0*

ISC 30 06:24:48.2±6.5, 4900S±009×1645E±01, h13km±41km, n19, σ0§57/15, mb4.2/8, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**3.98**	**29**	P		**Pn**		**06 25 53.9**	**+5.2**
RPZ	**Rata Peaks**	**6.98**	**43**	Pn		**Pn**		**06 26 30.3**	**+0.2**
	2.8nm,0.3s,baz=233,slow=12,SNR=3.0								
RPZ				Sn		**Sn**		**06 27 48.9**	**-0.3**
	5.1nm,0.3s,baz=18,slow=22,SNR=7.2								
STKA	**Stephens Creek**	**24.25**	**306**	P		**P**		**06 30 05.3**	**+0.7**
	6.3nm,0.8s,mb4.1,baz=124,slow=10,SNR=7.2								
STKA	**Stephens Creek**	**24.25**	**306**	P		**P**		**06 30 05.3**	**+0.7**
SBA	**Scott Base**	**28.98**	**179**	*e*P		**P**		**06 30 46.5**	**-0.4**
	5.4nm,1.2s,mb4.2								
ASAR	**Alice Springs**	**34.88**	**305**	P		**P**		**06 31 38.9**	**-0.2**
	3.8nm,0.7s,mb4.4,baz=138,slow=8.0,SNR=30								
WRA	**Warramunga Arr**	**37.71**	**310**	P		**P**		**06 32 02.8**	**-0.6**
	2.7nm,0.7s,mb4.1,baz=138,slow=7.8,SNR=17								
QSPA	**South Pole Qui**	**41.12**	**180**	P		**P**		**06 32 30.8**	**-0.4**
	3.7nm,1.0s,mb4.0,baz=19,slow=5.6,SNR=7.0								
QSPA	**South Pole Qui**	**41.12**	**180**	P		**P**		**06 32 30.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**43.91**	**301**	P		**P**		**06 32 53.8**	**-0.7**
	2.7nm,0.7s,mb4.1,baz=163,slow=9.8,SNR=5.1								
PLCA	**Paso Flores**	**78.34**	**141**	P		**P**		**06 36 48.5**	**+0.6**
	2.1nm,0.9s,mb4.1,baz=251,slow=20,SNR=4.7								
PLCA	**Paso Flores**	**78.34**	**141**	P		**P**		**06 36 48.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**88.72**	**300**	P		**P**		**06 37 42.3**	**+1.1**
	1.4nm,0.3s,mb4.8,baz=174,slow=4.3,SNR=4.9								
CMAR	**Chiang Mai Arr**	**88.72**	**300**	P		**P**		**06 37 42.3**	**+1.1**
TORD	**Torodi Ar. Bea**	**141.52**	**208**	PKhKP				06 44 14.7	
	0.2nm,0.5s,baz=141,slow=3.4,SNR=3.4								
AKASG	**Malin Array Be**	**151.41**	**291**	PKPbc		PKPbc	PKPbc	06 44 40.4	-0.2
	1.3nm,0.6s,baz=82,slow=2.5,SNR=5.3								
AKASG	**Malin Array Be**	**151.41**	**291**	PKPbc		PKPbc	PKPbc	06 44 40.4	-0.2
ARCES	**ARCESS Array B 151.53**	**331**		PKPbc		PKPbc	PKPbc	06 44 41.3	+0.9
	2.8nm,0.7s,baz=112,slow=1.3,SNR=7.4								
GERES	**GERESS Array B 160.83**	**281**		PKPab		PKPab	PKPab	06 45 28.8	-0.7
	1.1nm,0.8s,baz=116,slow=3.1,SNR=9.2								

KRSC 30 06:25:28.0±1.0, 5383N×16329E, h10km±10km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.17**	**309**	*e*P		Pb		06 25 50.8	+0.5
MKZ				*i* S		Sb		06 26 08.0	+2.5
SPN	**Mys Shipunski**	**2.09**	**251**	*e*P		Pn		06 26 04.1	+1.1
SPN				*e*S		Sn		06 26 30.2	+1.2
NLC	**Nalytchevo**	**2.45**	**256**	*e*P		Pn		06 26 09.1	+1.2
NLC				*i* S		Sn		06 26 38.5	+0.6
KMNR	**Kamenistaya**	**2.62**	**319**	P		Pn		06 26 10.3	0.0
KMNR				*i* S		Sn		06 26 41.5	-0.5
BZMR	**Bezymyannaya**	**2.66**	**324**	P		Pn		06 26 13.7	+2.9
AVH	**Avacha**	**2.77**	**260**	P		Pn		06 26 14.3	+1.9
AVH				*i* S		Sn		06 26 48.8	+2.9
KPT	**Kopyto**	**2.78**	**322**	P		Pn		06 26 14.7	+2.2
GNL	**Ganaly**	**3.18**	**270**	P		Pn		06 26 20.4	+2.4
RUS	**Russkaya**	**3.20**	**246**	P		Pn		06 26 19.5	+1.2
RUS				*i* S		Sn		06 26 56.3	-0.1
SRDR	**Sredinnyy**	**3.23**	**322**	P		Pn		06 26 19.1	+0.4

IDC 30 06:33:00.7±13.0, 4900S×16489E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.8/13, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=268.6km s-min=32.0km az=157.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**6.79**	**41**	Pn		Pn	Pn	06 34 41.3	-0.1
	0.9nm,0.3s,baz=13,slow=17,SNR=2.4								
RPZ				Sn		Sn	Sn	06 36 01.7	+2.4
	1.2nm,0.3s,baz=17,slow=20,SNR=1.8								
STKA	**Stephens Creek**	**24.48**	**306**	P		P	P	06 38 20.1	-1.2
	2.2nm,0.8s,baz=117,slow=11,SNR=3.1								
ASAR	**Alice Springs**	**35.11**	**305**	P		P	P	06 39 56.8	+1.1
	0.6nm,0.6s,baz=137,slow=7.0,SNR=6.4								
WRA	**Warramunga Arr**	**37.94**	**309**	P		P	P	06 40 19.6	-0.2
	0.7nm,1.0s,baz=141,slow=9.6,SNR=3.6								

*IDC **30** 06:35:08.2±0.8, 4905S×164.33E, h0km, mb4.3/9, mb1 4.4/10, mb1mx4.3/15, mbtmp4.3/10, ML4.1/1, Error ellipse: s-maj=34.4km s-min=20.4km az=57.0*
*NEIC **30** 06:35:09.6±0.5, 49.12S×164.29E, h10km, mb4.7/2, Error ellipse: s-maj=12.8km s-min=7.7km az=129.0*
*MOS **30** 06:35:10.0±1.1, 49.18S×164.19E, h24km, mb4.8/1, Error ellipse: s-maj=36.4km s-min=16.5km az=85.3*
*ISCJB **30** 06:35:11.2±0.6, 49.10S±0.008×164.4E±0.1, h33km, mb4.3/11, Error ellipse: s-maj=13.8km s-min=8.6km az=40.2*

ISC 30 06:35:10.8±3.6, 4910S±007×1644E±01, h17km±23km, n28, σ1§25/22, mb4.3/11, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**4.09**	**29**	P		**Pn**		**06 36 12.2**	**-0.3**
MSZ	**Milford Sound**	**5.06**	**30**	P		**Pn**		**06 36 27.1**	**+1.3**
WKZ	**Wanaka**	**5.33**	**38**	P		**Pn**		**06 36 30.9**	**+1.4**
JCZ	**Jackson Bay**	**5.87**	**33**	P		**Pn**		**06 36 38.9**	**+2.0**
ODZ	**Otahua Downs**	**5.90**	**49**	P		**Pn**		**06 36 36.4**	**-1.0**
MCQ	**Macquarie Isla**	**6.36**	**210**	*e*P		**Pn**		**06 36 42.2**	**-1.5**
RPZ	**Rata Peaks**	**7.10**	**43**	Pn		**Pn**		**06 36 51.9**	**-1.9**
	3.3nm,0.3s,baz=40,slow=24,SNR=8.1								
RPZ				Sn		**Sn**		**06 38 11.7**	**-2.3**
	7.9nm,0.3s,baz=333,slow=22,SNR=3.5								
STKA	**Stephens Creek**	**24.26**	**307**	P		**P**		**06 40 27.9**	**+1.0**
	4.4nm,0.7s,mb4.0,baz=135,slow=5.0,SNR=6.4								
CTA	**Charters Tower**	**32.38**	**327**	P		**P**		**06 41 40.0**	**+0.6**
	5.9nm,0.9s,mb4.4,baz=142,slow=12,SNR=3.5								
ASAR	**Alice Springs**	**34.88**	**306**	P		**P**		**06 42 00.7**	**-0.5**
	3.3nm,0.7s,mb4.4,baz=136,slow=7.7,SNR=33								
ASAR				PcP		PcP		06 44 32.9	-1.0
	1.2nm,0

*ISCJB **30** 06:38:14.0±0.8, 491S±0.1×1645E±0.1, h10km, mb4.0/8, Error ellipse: s-maj=16.8km s-min=11.0km az=140.9*
*IDC **30** 06:38:14.4±1.0, 4932S×16405E, h0km, mb4.3/7, mb1 4.5/7, mb1mx4.2/14, mbtmp4.3/7, Error ellipse: s-maj=58.1km s-min=20.3km az=55.0*
*NEIC **30** 06:38:15.9±0.8, 4930S×16409E, h10km, Error ellipse: s-maj=43.3km s-min=14.4km az=55.0*

ISC 30 06:38:15.7±0.8, 491S±01×1644E±01, h10km, n17, σ0°85/11, mb4.0/8, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**7.12**	**43**	Sn		**Sn**		**06 41 20.6**	**-0.2**
	baz=44,slow=13,SNR=2.2								
STKA	**Stephens Creek**	**24.30**	**307**	P		**P**		**06 43 33.4**	**+0.2**
	3.1nm,0.9s,mb3.7,baz=145,slow=14,SNR=3.9								
CTA	**Charters Tower**	**32.42**	**327**	P		**P**		**06 44 47.3**	**+1.5**
	4.8nm,0.9s,mb4.3,baz=134,slow=8.6,SNR=4.1								
ASAR	**Alice Springs**	**34.92**	**306**	P		**P**		**06 45 06.7**	**-0.8**
	2.6nm,0.9s,mb4.2,baz=148,slow=8.1,SNR=6.6								
ASAR				PcP		PcP		06 47 39.6	-0.4
	1.8nm,1.1s,baz=119,slow=2.7,SNR=4.3								
WRA	**Warramunga Arr**	**37.77**	**310**	P		**P**		**06 45 30.4**	**-1.4**
	2.5nm,1.0s,mb3.9,baz=146,slow=8.0,SNR=5.4								
WRA				PcP		PcP		06 47 48.3	-0.3
	2.4nm,1.1s,baz=150,slow=2.8,SNR=5.4								
QSPA	**South Pole Qui**	**40.98**	**180**	P		**P**		**06 45 57.8**	**-0.2**
	3.6nm,0.9s,mb4.0,baz=329,slow=7.8,SNR=3.0								
QSPA	**South Pole Qui**	**40.98**	**180**	P		**P**		**06 45 57.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**43.94**	**301**	P		**P**		**06 46 22.4**	**-0.3**
	3.2nm,0.7s,mb4.2,baz=176,slow=11,SNR=5.5								
CFAA	**Coronel Fontan**	**86.96**	**137**	P		**P**		**06 51 01.0**	**+0.1**
	0.2nm,0.9s,mb3.4,baz=31,slow=3.0,SNR=3.5								
CFAA	**Coronel Fontan**	**86.96**	**137**	P		**P**		**06 51 01.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**88.75**	**300**	P		**P**		**06 51 10.7**	**+1.2**
	1.9nm,0.5s,mb4.7,baz=158,slow=3.4,SNR=9.2								
KURK	**Kurchatov**	**123.45**	**311**	PKP		PKPdf		06 57 11.6	-0.6
	0.2nm,0.4s,baz=153,slow=1.4,SNR=4.6								
TORD	**Torodi Ar. Bea**	**141.37**	**208**	PKhKP				06 57 41.4	
	1.5nm,1.2s,baz=157,slow=4.2,SNR=3.0								
SPITS	**Spitsbergen Ar**	**148.52**	**348**	PKPbc		PKPbc		06 58 01.9	+0.9
	3.4nm,0.8s,baz=335,slow=11,SNR=2.7								
AKASG	**Malin Array Be**	**151.41**	**290**	PKPbc		PKPbc		06 58 07.8	-0.9
	3.1nm,0.8s,baz=92,slow=2.2,SNR=7.6								
AKASG	**Malin Array Be**	**151.41**	**290**	PKPbc		PKPbc		06 58 07.8	-0.9
GERES	**GERESS Array B**	**160.80**	**280**	PKPab		PKPab		06 58 56.0	-1.5
	0.9nm,0.9s,baz=96,slow=8.2,SNR=5.8								

*ISCJB **30** 06:42:38.7±0.7, 4917S±008×1643E±0.1, h10km, mb4.3/11, Error ellipse: s-maj=13.5km s-min=9.3km az=143.3*
*IDC **30** 06:42:39.1±0.8, 4929S×16407E, h0km, mb4.3/10, mb1 4.5/11, mb1mx4.4/17, mbtmp4.3/11, ML4.0/1, Error ellipse: s-maj=31.0km s-min=19.9km az=50.0*
*NEIC **30** 06:42:40.4±0.5, 4929S×16416E, h10km, mb4.5/3, Error ellipse: s-maj=15.3km s-min=11.4km az=53.0*

ISC 30 06:42:40.6±0.6, 4922S±008×1642E±01, h10km, n28, σ1°16/19, mb4.3/11, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**7.24**	**43**	Pn		**Pn**		**06 44 27.2**	**+0.8**
	2.4nm,0.3s,baz=80,slow=15,SNR=3.9								
RPZ				Sn		**Sn**		**06 45 47.6**	**-1.0**
	4.7nm,0.3s,baz=337,slow=21,SNR=4.3								
CAN	**Canberra**	**17.83**	**315**	*e*Pn		**Pn**		**06 46 51.4**	**+2.8**
STKA	**Stephens Creek**	**24.26**	**307**	P		**P**		**06 47 58.6**	**+0.9**
	6.9nm,0.9s,mb4.1,baz=147,slow=9.7,SNR=6.4								
CTA	**Charters Tower**	**32.43**	**327**	*e*P		**P**		**06 49 11.8**	**+1.1**
	6.1nm,1.2s,mb4.3								
CTA	**Charters Tower**	**32.43**	**327**	P		**P**		**06 49 12.2**	**+1.5**
	6.4nm,0.8s,mb4.5,baz=165,slow=10,SNR=6.7								
ASAR	**Alice Springs**	**34.88**	**306**	P		**P**		**06 49 31.6**	**-0.4**
	5.2nm,1.0s,mb4.4,baz=144,slow=8.5,SNR=18								
ASAR				PcP		PcP		06 52 04.2	-0.6
	1.6nm,1.0s,baz=166,slow=4.3,SNR=5.4								
WB2	**Warramunga Arr**	**37.73**	**310**	*e*P		**P**		**06 49 55.2**	**-1.2**
WRA	**Warramunga Arr**	**37.74**	**310**	P		**P**		**06 49 55.2**	**-1.3**
	4.2nm,0.8s,mb4.2,baz=146,slow=8.0,SNR=16								
WRA				PcP		PcP		06 52 13.0	-0.3
	3.2nm,1.0s,baz=136,slow=2.6,SNR=7.7								
WRAB	**Tennant Creek**	**37.74**	**310**	*e*P		**P**		**06 49 55.7**	**-0.8**
	572nm,3.1s								
NWAO	**Narrogin (SRO)**	**38.31**	**277**	P		**P**		**06 50 00.1**	**-1.2**
	21nm,1.2s,mb4.8,baz=186,slow=5.2,SNR=4.5								
QSPA	**South Pole Qui**	**40.91**	**180**	P		**P**		**06 50 23.0**	**+0.7**
	3.7nm,1.0s,mb4.0,baz=34,slow=2.2,SNR=6.2								
FITZ	**Fitzroy Crossi**	**43.89**	**301**	*e*P		**P**		**06 50 45.9**	**-1.3**
	4.8nm,0.8s,mb4.3								
FITZ	**Fitzroy Crossi**	**43.89**	**301**	P		**P**		**06 50 46.1**	**-1.1**
	2.2nm,0.6s,mb4.1,baz=155,slow=12,SNR=6.0								
FITZ				PcP		PcP		06 52 33.2	-0.2
	2.8nm,0.8s,baz=203,slow=5.6,SNR=3.5								
SNAA	**Sanae**	**59.07**	**185**	*e*P		**P**		**06 52 39.4**	**-0.9**
	12nm,1.4s,mb4.7								
CFAA	**Coronel Fontan**	**86.97**	**137**	P		**P**		**06 55 26.0**	**+0.1**
	0.5nm,1.1s,mb3.6,baz=245,slow=7.4,SNR=5.4								
CFAA	**Coronel Fontan**	**86.97**	**137**	P		**P**		**06 55 26.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**88.77**	**300**	P		**P**		**06 55 34.9**	**+0.7**
	5.6nm,0.9s,mb4.9,baz=160,slow=3.7,SNR=16								
KSRS	**Korea Array**	**92.10**	**332**	P		**P**		**06 55 51.6**	**+2.1**
	0.5nm,0.3s,mb4.3,baz=239,slow=26,SNR=4.2								
KURK	**Kurchatov**	**123.42**	**311**	PKP		PKPdf		07 01 35.8	-1.2
	0.7nm,0.8s,baz=138,slow=1.5,SNR=5.3								
BVAR	**Borovoye Array**	**128.92**	**309**	PKP		PKPdf		07 01 47.7	+0.3
	0.8nm,0.7s,baz=71,slow=6.4,SNR=4.0								
TORD	**Torodi Ar. Bea**	**141.26**	**208**	PKhKP				07 02 05.9	
	1.0nm,0.9s,baz=112,slow=1.0,SNR=4.3								
SPITS	**Spitsbergen Ar**	**148.57**	**348**	PKPbc		PKPbc		07 02 25.1	-0.9
	3.3nm,0.7s,baz=248,slow=4.4,SNR=2.6								
TAM	**Tamanrasset**	**148.72**	**220**	*e*PKPbc		PKPbc		07 02 27.9	-0.1
AKASG	**Malin Array Be**	**151.35**	**290**	PKPbc		PKPbc		07 02 32.6	-0.8
	4.6nm,0.7s,baz=85,slow=2.4,SNR=18								
ARCES	**ARCESS Array B**	**151.65**	**331**	PKPbc		PKPbc		07 02 34.2	+0.6
	4.7nm,0.8s,baz=70,slow=1.4,SNR=8.6								
ARCES	**ARCESS Array B**	**151.65**	**331**	PKPbc		PKPbc		07 02 34.2	+0.6
GERES	**GERESS Array B**	**160.72**	**280**	PKPab		PKPab		07 03 21.4	-0.6
	1.6nm,1.0s,baz=106,slow=4.3,SNR=9.8								
NOA	**NORSAR Array B**	**160.72**	**318**	PKPab		PKPab		07 03 21.1	-0.5
	1.4nm,0.9s,baz=64,slow=4.4,SNR=3.3								

*ISCJB **30** 06:45:31.8±0.8, 495S±0.1×1638E±02, h10km, mb3.6/5, Error ellipse: s-maj=19.9km s-min=17.8km az=178.6*
*IDC **30** 06:45:31.6±0.7, 4952S×16374E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.9/14, mbtmp3.9/6, ML4.0/1, Error ellipse: s-maj=37.2km s-min=21.5km az=56.0*
*NEIC **30** 06:45:33.1±0.4, 4953S×16370E, h10km, Error ellipse: s-maj=14.5km s-min=13.1km az=79.0*

ISC 30 06:45:33.6±0.8, 495S±01×1637E±02, h10km, n14, σ0°47/8, mb3.6/5, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**7.68**	**44**	Pn		**Pn**		**06 47 25.6**	**+0.2**
	2.0nm,0.3s,baz=325,slow=18,SNR=2.3								
RPZ				Sn		**Sn**		**06 48 43.8**	**-8.6**
	3.0nm,0.3s,baz=73,slow=17,SNR=3.1								
ASAR	**Alice Springs**	**34.80**	**307**	P		**P**		**06 52 24.8**	**+0.5**
	0.9nm,0.7s,mb3.8,baz=139,slow=8.0,SNR=7.1								
ASAR				PcP		PcP		06 54 56.7	-0.9
	0.6nm,0.9s,baz=134,slow=4.0,SNR=4.7								
WRA	**Warramunga Arr**	**37.69**	**311**	P		**P**		**06 52 48.5**	**-0.5**
	1.5nm,0.8s,mb3.8,baz=137,slow=8.0,SNR=8.2								
WRA				PcP		PcP		06 55 05.2	-1.0
	1.8nm,0.9s,baz=153,slow=2.8,SNR=7.2								
QSPA	**South Pole Qui**	**40.61**	**180**	P		**P**		**06 53 13.2**	**+0.4**
	1.4nm,0.9s,mb3.6,baz=349,slow=9.1,SNR=2.6								
QSPA	**South Pole Qui**	**40.61**	**180**	P		**P**		**06 53 13.2**	**+0.4**
PLCA	**Paso Flores**	**78.24**	**141**	P		**P**		**06 57 33.4**	**+0.2**
	1.4nm,0.8s,mb3.9,baz=237,slow=7.2,SNR=3.3								
CFAA	**Coronel Fontan**	**86.97**	**138**	P		**P**		**06 58 18.1**	**-0.8**
	0.1nm,0.8s,mb3.1,baz=241,slow=8.5,SNR=3.3								
MKAR	**Makanchi Array**	**118.98**	**309**	PKP		PKPdf		07 04 20.2	-1.3
	0.5nm,0.7s,baz=116,slow=3.4,SNR=3.1								
KURK	**Kurchatov**	**123.38**	**311**	PKP		PKPdf		07 04 28.6	-1.3
	0.4nm,0.6s,baz=130,slow=1.8,SNR=2.7								
BVAR	**Borovoye Array**	**128.86**	**309**	PKP		PKPdf		07 04 40.2	-0.1
	0.6nm,0.5s,baz=226,slow=43,SNR=2.6								
TORD	**Torodi Ar. Bea**	**140.84**	**208**	PKhKP				07 04 57.1	
	0.8nm,1.0s,baz=139,slow=1.7,SNR=3.4								
SPITS	**Spitsbergen Ar**	**148.79**	**348**	PKPbc		PKPbc		07 05 19.1	-0.4
	21nm,1.2s,baz=17,slow=3.5,SNR=3.4								
AKASG	**Malin Array Be**	**151.15**	**290**	PKPbc		PKPbc		07 05 25.1	-0.9
	1.8nm,0.6s,baz=85,slow=2.4,SNR=10								
ARCES	**ARCESS Array B**	**151.75**	**330**	PKPbc		PKPbc		07 05 26.6	-0.2
	2.7nm,0.7s,baz=66,slow=4.1,SNR=6.4								

*ISCJB **30** 06:46:38.9±0.5, 3976N±003×2777E±003, h5km±4km, Error ellipse: s-maj=5.0km s-min=4.0km az=8.7*
*ISK **30** 06:46:38.2, 3973N×2775E, h7km, MD2.8*
*DDA **30** 06:46:38.9, 3975N×2776E, h7km±2km, Md2.8*
*CSEM **30** 06:46:38.1±0.1, 3974N×2776E, h5km, MD2.8, Error ellipse: s-maj=1.7km s-min=1.7km az=47.0*

ISC 30 06:46:39.1±0.4, 3974N±003×2774E±003, h9km±4km, n22, σ0°74/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.10**	**270**	*i* P			**Pg**	**06 46 41.5**	**-0.1**
BALY				*i* S			**Sg**	**06 46 43.1**	**+0.2**
BALB	**Balikesir**	**0.15**	**133**	*e*PG			**Pg**	**06 46 42.0**	**-0.4**
BALB				*e*SG			**Sg**	**06 46 44.4**	**-0.2**
DURS	**Dursunbey**	**0.58**	**104**	*i* P			**Pg**	**06 46 49.6**	**-0.8**
DURS				*i* S			**Sg**	**06 46 58.7**	**+0.7**
EDC	**Edincik**	**0.61**	**9**	*e*PG			**Pg**	**06 46 50.3**	**-0.7**
BNT	**Bandirma**	**0.63**	**12**	*e*PG			**Pg**	**06 46 50.7**	**-0.7**
DST	**Dursunbey**	**0.70**	**101**	*e*PG			**Pg**	**06 46 51.0**	**-1.6**
DST				*e*SG			**Sg**	**06 47 01.5**	**-0.1**
KCT	**Karacabey**	**0.70**	**42**	*e*PG			**Pg**	**06 46 52.1**	**-0.6**
KCT				*e*SG			**Sg**	**06 47 02.9**	**+0.9**
AYVA	**Ayvalik**	**0.92**	**242**	*i* P			**Pg**	**06 46 58.6**	**+1.8**
AYVA				*i* S			**Sg**	**06 47 12.7**	**+3.9**
DEMI	**Demirci**	**1.03**	**132**	*i* P			**Pg**	**06 46 58.8**	**-0.1**
DEMI				*i* S			**Sg**	**06 47 12.3**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.04**	**336**	*e*PG			**Pg**	**06 46 59.0**	**-0.1**
EZN	**Ezine**	**1.09**	**275**	*e*PN			**Pn**	**06 46 59.6**	**-1.0**
ULDT	**Uludag**	**1.14**	**69**	*i* P			**Pb**	**06 47 00.9**	**-0.1**
ULDT				*i* S			**Sg**	**06 47 18.4**	**+2.4**
GEMT	**Gemlik**	**1.31**	**58**	*e*PN			**Pn**	**06 47 03.2**	**-0.3**
KULA	**Kula-Manisa**	**1.42**	**149**	*e*PN			**Pn**	**06 47 04.9**	**-0.1**
BLCB	**Balcova**	**1.46**	**202**	*e*PN			**Pn**	**06 47 05.5**	**-0.1**
GADA	**Gvkgeada**	**1.49**	**288**	*e*PN			**Pn**	**06 47 06.2**	**+0.2**
YLV	**Yalova**	**1.50**	**56**	*e*PN			**Pn**	**06 47 06.3**	**+0.2**
ENEZ	**Enez**	**1.57**	**310**	*e*PN			**Pn**	**06 47 07.1**	**0.0**
CTKS	**Kestanelik-??a**	**1.60**	**21**	*e*PN			**Pn**	**06 47 07.5**	**-0.1**
BGKT	**Bogazkoy**	**1.64**	**28**	*e*PN			**Pn**	**06 47 08.4**	**+0.3**
ADVT	**Abdulvahap**	**1.68**	**65**	*e*PN			**Pn**	**06 47 08.8**	**+0.2**
ALT	**Altintas**	**1.96**	**110**	*e*PN			**Pn**	**06 47 13.2**	**+0.7**

*ISCJB **30** 07:00:48.3±1.1, 205S±0.1×178.1W±0.1, h520km±16km, mb4.3/16, Error ellipse: s-maj=19.6km s-min=12.3km az=143.6*
*IDC **30** 07:00:49.0±1.9, 2041S×17805W, h516km±22km, mb3.6/10, mb1 3.9/13, mb1mx3.8/19, mbtmp3.7/13, Error ellipse: s-maj=17.7km s-min=13.8km az=140.0*
*NEIC **30** 07:00:49.3±0.7, 2045S×17805W, h524km±9km, mb4.6/7, Error ellipse: s-maj=13.5km s-min=8.2km az=148.0*

ISC 30 07:00:49.4±1.0, 205S±01×1781W±01, h520km±14km, n36, σ0°75/29, mb4.3/16, 1C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**8.76**	**179**	P		**P**		**07 02 53.7**	**-0.2**
	32nm,0.3s,baz=83,slow=21,SNR=2.7								
AFI	**Afiamalu**	**8.86**	**44**	P		**P**		**07 02 54.9**	**-0.3**
	4.6nm,0.3s,baz=214,slow=7.3,SNR=4.8								
AFI				S		**S**		**07 04 31.4**	**-7.1**
	2.6nm,0.3s,baz=9.9,slow=23,SNR=5.2								
AFI	**Afiamalu**	**8.86**	**44**	P		**P**		**07 02 54.9**	**-0.3**
AFI				S		**S**		**07 04 31.4**	**-7.1**
DZM	**Mont Dzumac**	**14.53**	**261**	*e*P		**P**		**07 03 55.7**	**+1.4**
DZM	**Mont Dzumac**	**14.53**	**261**	*e*P		**P**		**07 03 55.6**	**+1.3**
URZ	**Urewera**	**18.22**	**192**	P		**P**		**07 04 29.8**	**-0.7**
	1.7nm,0.3s,baz=317,slow=9.7,SNR=7.7								
URZ				S		**S**		**07 07 23.6**	**-7.2**
	1.0nm,0.3s,baz=167,slow=22,SNR=7.2								
ARMA	**Armidale**	**29.03**	**244**	*e*P		**P**		**07 06 08.6**	**+1.5**
CTAO	**Charters Tower**	**33.43**	**264**	*e*P		**P**		**07 06 45.4**	**+0.5**
	37nm,0.8s,mb5.0								
STKA	**Stephens Creek**	**37.75**	**244**	*e*P		**P**		**07 07 21.2**	**+0.5**
	5.1nm,0.5s,mb4.3								
STKA	**Stephens Creek**	**37.75**	**244**	P		**P**		**07 07 21.2**	**+0.6**
	6.5nm,0.5s,mb4.4,baz=96,slow=10,SNR=23								
ASAR	**Alice Springs**	**44.46**	**257**	P		**P**		**07 08 14.2**	**0.0**
	30nm,0.5s,mb5.1,baz=94,slow=7.5,SNR=468								
WB2	**Warramunga Arr**	**44.53**	**262**	*i* P		**P**		**07 08 14.0**	**-0.7**
WRAB	**Tennant Creek**	**44.53**	**262**	*e*P		**P**		**07 08 14.0**	**-0.8**
	8.6nm,0.5s,mb4.5								
WRA	**Warramunga Arr**	**44.54**	**262**	P		**P**		**07 08 14.1**	**-0.7**
	15nm,0.3s,mb5.0,baz=96,slow=7.5,SNR=315								
KAKA	**Kakadu**	**47.91**	**271**	*e*P		**P**		**07 08 39.7**	**-0.8**
	20nm,0.2s,mb5.3								
FORT	**Forrest**	**49.25**	**247**	*e*P		**P**		**07 08 49.5**	**-0.8**
	17nm,0.5s,mb4.8								
FITZ	**Fitzroy Crossi**	**52.97**	**262**	*e*P		**P**		**07 09 17.2**	**-0.2**
	7.2nm,0.5s,mb4.3								
KLBR	**Kellerberrin**	**58.01**	**245**	*e*P		**P**		**07 09 51.7**	**-0.7**
	30nm,1.2s,mb4.4								
MUN	**Mundaring**	**59.28**	**244**	*e*P		**P**		**07 10 00.5**	**-0.4**
QSPA	**South Pole Qui**	**69.61**	**180**	P		**P**		**07 11 06.6**	**+1.1**
	2.1nm,0.6s,mb3.8,baz=350,slow=1.1,SNR=16								
MJAR	**Matsushiro Arr**	**70.14**	**324**	P		**P**		**07 11 08.6**	**-0.7**
	2.7nm,0.4s,mb4.1,baz=116,slow=8.9,SNR=23								
KSRS	**Korea Array**	**76.81**	**319**	P		**P**		**07 11 48.5**	**+1.1**
	1.1nm,0.5s,mb3.5,baz=108,slow=4.2,SNR=3.6								
NVAR	**Mina Array Bea**	**81.04**	**43**	P		**P**		**07 12 09.3**	**-0.5**
	1.2nm,0.8s,mb3.4,baz=227,slow=11,SNR=8.1								
TXAR	**Lajitas Array**	**87.09**	**57**	P		**P**		**07 12 40.8**	**+0.9**
	0.5nm,0.7s,mb3.2,baz=224,slow=5.2,SNR=6.4								
PDAR	**Pinedale Array**	**88.98**	**43**	P		**P**		**07 12 48.5**	**+0.1**
	0.6nm,0.6s,mb3.6,baz=191,slow=3.1,SNR=6.4								
CMAR	**Chiang Mai Arr**	**90.04**	**290**	P		**P**		**07 12 54.5**	**+0.6**
	3.0nm,0.8s,mb4.2,baz=121,slow=3.2,SNR=9.8								
ARCES	**ARCESS Array B**	**128.87**	**350**	PKP		PKPdf		07 18 55.3	-1.6
	1.6nm,0.8s,baz=20,slow=1.4,SNR=5.6								
AKASG	**Malin Array Be**	**142.95**	**331**	PKhKP				07 19 19.6	
	2.9nm,0.5s,baz=43,slow=4.2,SNR=18								
BUR08	**Bucovina Ar. S**	**146.98**	**331**	*e*PKPbc		PKPbc		07 19 34.1	+0.8
STHS	**Stebnicka Huta**	**147.25**	**336**	*e*PKP		PKPab		07 19 38.8	+1.4
STHS	**Stebnicka Huta**	**147.25**	**336**	*e*P		PKPab		07 19 38.8	+1.4
KSP	**Ksiaz**	**147.63**	**343**	*e*P		PKPbc		07 19 35.0	+0.1
CLL	**Collm**	**148.01**	**347**	*e*PKPbc		PKPbc		07 19 36.0	+0.1
	comp=Z,8.0nm,0.9s								
BRG	**Berggiesshubel**	**148.21**	**346**	*e*P		PKPbc		07 19 36.3	0.0
	comp=Z,3.5nm,0.7s								
BRG				*e*				07 19 40.9	
	comp=Z,2.8nm,0.8s								
KHC	**Kasperske Hory**	**149.91**	**345**	*e*PKP		PKPbc		07 19 40.0	-0.6
GERES	**GERESS Array B**	**150.14**	**344**	PKP		PKPdf		07 19 35.1	-0.3
	comp=Z,0.4nm,0.7s,baz=253,slow=36,SNR=3.2								
GERES				PKPbc		PKPbc		07 19 40.5	-0.6
	comp=Z,1.5nm,0.8s,baz=33,slow=3.2,SNR=12								

*NEIC **30** 07:10:32.9, 3275S×7086W, h75km, MD3.3(GUC), After GUC.*

GUC 30 07:10:32.9±0.6, 3275S×7086W, h75km±2km, MD3.3, ML3.5, 18C-12D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**0.42**	**160**	*i* P			Pn	07 10 45.8	+0.2
PEL				*i* S			Sn	07 10 55.8	+1.0
PEL				AML		AML		07 10 56.4	
	comp=N,5μm,0.3s								
PTCH	**Petorca**	**0.48**	**353**	*i* P			Pn	07 10 46.6	+0.6
PTCH				*i* S			Sn	07 10 56.7	+1.0
PTCH				AML		AML		07 10 58.3	
	comp=E,2μm,0.1s								
PTCH	**Petorca**	**0.48**	**353**	*i* P			Pn	07 10 46.6	+0.6
PTCH				*i* S			Sn	07 10 56.7	+1.0
PACH	**Papudo**	**0.53**	**293**	*i* P			Pn	07 10 47.0	+0.5
CLCH	**Cerro Calan**	**0.70**	**158**	*i* P			Pn	07 10 48.6	+0.4
CLCH				*i* S			Sn	07 11 00.6	+1.0
CLCH				AML		AML		07 11 01.9	
	comp=E,4μm,0.4s								
CLCH				AML		AML		07 11 02.8	
	comp=N,4μm,0.3s								
IHA	**Instituto Hidr**	**0.72**	**247**	*i* P			Pn	07 10 48.9	+0.5
IHA				*i* S			Sn	07 10 60.0	+0.2
SAN	**Santiago**	**0.72**	**167**	*i* P			Pn	07 10 48.9	+0.4
SAN				*i* S			Sn	07 11 00.8	+0.8
SAN				AML		AML		07 11 02.0	
	comp=E,2μm,0.5s								
SAN	**Santiago**	**0.72**	**167**	*i* P			Pn	07 10 48.9	+0.4
SAN				*i* S			Sn	07 11 00.8	+0.8
RCDM	**Rinconada Maip**	**0.74**	**177**	*i* P			Pn	07 10 49.0	+0.3
RCDM				*i* S			Sn	07 11 01.2	+0.9
RCDM				AML		AML		07 11 03.5	
	comp=E,4μm,0.1s								
RCDM	**Rinconada Maip**	**0.74**	**177**	*i* P			Pn	07 10 49.0	+0.3
RCDM				*i* S			Sn	07 11 01.2	+0.9
FCH	**Farellones**	**0.75**	**141**	*i* P			Pn	07 10 49.6	+0.9
FCH				*i* S			Sn	07 11 02.6	+2.1
FCH				AML		AML		07 11 03.4	
	comp=E,3μm,0.2s								
FSR	**Penalolen**	**0.78**	**159**	*i* P			Pn	07 10 49.6	+0.5
FSR				*i* S			Sn	07 11 01.9	+0.8
ANTU	**Antumapu**	**0.84**	**167**	*i* P			Pn	07 10 50.2	+0.4
ANTU				*i* S			Sn	07 11 03.3	+1.0
ANTU				AML		AML		07 11 03.7	
	comp=E,3μm,0.3s								
ANTU	**Antumapu**	**0.84**	**167**	*i* P			Pn	07 10 50.2	+0.4
ANTU				*i* S			Sn	07 11 03.3	+1.0
TACH	**Talagante**	**0.91**	**184**	*i* P			Pn	07 10 50.8	+0.3
TACH				*i* S			Sn	07 11 04.5	+0.8
PCH	**Pirque**	**0.92**	**162**	*i* P			Pn	07 10 51.0	+0.3
PCH				*i* S			Sn	07 11 04.8	+0.9
SJCH	**San Jose de Ma**	**0.99**	**155**	*i* P			Pn	07 10 51.6	+0.1
SJCH				*i* S			Sn	07 11 06.2	+0.8
SJCH				AML		AML		07 11 07.4	
	comp=N,897nm,0.2s								
SJCH	**San Jose de Ma**	**0.99**	**155**	*i* P			Pn	07 10 51.6	+0.1
SJCH				*i* S			Sn	07 11 06.2	+0.8
CHNG	**Los Chungos**	**1.02**	**327**	*i* P			Pn	07 10 52.9	+1.0
CHNG				*i* S			Sn	07 11 07.6	+1.6
CHNG				AML		AML		07 11 07.9	
	comp=E,2μm,0.4s								
YECH	**El Yeso**	**1.12**	**145**	*i* P			Pn	07 10 54.5	+1.4
YECH				*i* S			Sn	07 11 10.8	+2.4
YECH				AML		AML		07 11 11.8	
	comp=N,3μm,0.5s								
CHCH	**Chadas Angostu**	**1.20**	**172**	*i* P			Pn	07 10 54.5	+0.4
CHCH				*i* S			Sn	07 11 10.9	+0.9
LMEL	**Las Melosas**	**1.23**	**154**	*i* P			Pn	07 10 55.6	+1.0
LMEL				*i* S			Sn	07 11 12.5	+1.8
LMEL				AML		AML		07 11 13.5	
	comp=N,3μm,0.4s								
LMEL	**Las Melosas**	**1.23**	**154**	*i* P			Pn	07 10 55.6	+1.0
LMEL				*i* S			Sn	07 11 12.

of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**35.16**	**303**	P	P	07 29 34.9	-0.1
	1.0nm,0.7s,baz=138,slow=7.5,SNR=8.2						
WRA	**Warramunga Arr**	**37.94**	**307**	P	P	07 29 59.0	+0.3
	0.8nm,0.8s,baz=136,slow=6.9,SNR=4.8						
FITZ	**Fitzroy Crossi**	**44.27**	**299**	P	P	07 30 50.4	-0.4
	1.4nm,0.7s,baz=170,slow=12,SNR=5.8						
AKASG	**Malin Array Be**	**151.90**	**291**	PKPbc	PKPbc	07 42 35.4	0.0
	0.2nm,0.3s,baz=81,slow=2.7,SNR=5.9						

IDC 30 07:25:09.2±3.5, 4779S×16617E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.7/12, mbtmp3.6/2, Error ellipse: s-maj=357.0km s-min=63.8km az=38.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**35.16**	**302**	P	P	07 32 04.3	-0.3
	0.8nm,0.7s,baz=137,slow=7.8,SNR=9.7						
WRA	**Warramunga Arr**	**37.87**	**306**	P	P	07 32 28.1	+0.2
	0.6nm,0.7s,baz=139,slow=7.9,SNR=4.3						
AKASG	**Malin Array Be**	**152.03**	**292**	PKPbc	PKPbc	07 45 05.4	-0.1
	1.1nm,0.6s,baz=89,slow=2.5,SNR=7.6						

IDC 30 07:26:25.9±3.1, 4928S×16411E, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.8/12, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=76.7km s-min=41.3km az=167.0, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**7.34**	**43**	Pn	Pn	07 28 14.9	+0.6
	1.7nm,0.3s,baz=196,slow=20,SNR=2.5						
RPZ				Sn	Sn	07 29 29.3	-8.9
	0.8nm,0.3s,baz=227,slow=23,SNR=5.2						
ASAR	**Alice Springs**	**34.86**	**306**	P	P	07 33 19.8	+1.1
	0.6nm,0.6s,baz=137,slow=7.8,SNR=5.6						
WRA	**Warramunga Arr**	**37.72**	**310**	P	P	07 33 42.3	-0.9
	1.7nm,0.8s,baz=137,slow=8.0,SNR=7.3						
AKASG	**Malin Array Be**	**151.30**	**290**	PKPbc	PKPbc	07 46 20.0	-0.4
	0.8nm,0.6s,baz=104,slow=2.0,SNR=4.6						

IDC 30 07:29:38.7±3.0, 4820S×16579E, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.7/13, mbtmp3.8/3, ML3.5/1, Error ellipse: s-maj=75.9km s-min=40.3km az=165.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**5.79**	**41**	Pn	Pn	07 31 06.0	+0.2
	1.2nm,0.3s,baz=354,slow=16,SNR=3.2						
RPZ				Sn	Sn	07 32 41.6	+29
	3.1nm,0.3s,baz=18,slow=17,SNR=3.0						
ASAR	**Alice Springs**	**35.16**	**303**	P	P	07 36 34.2	+0.1
	0.9nm,0.7s,baz=137,slow=7.7,SNR=7.7						
WRA	**Warramunga Arr**	**37.91**	**307**	P	P	07 36 57.4	-0.2
	1.1nm,0.8s,baz=145,slow=8.0,SNR=5.2						
AKASG	**Malin Array Be**	**151.95**	**292**	PKPbc	PKPbc	07 49 34.6	-0.1
	1.3nm,0.6s,baz=79,slow=2.4,SNR=6.2						

*JMA **30** 07:34:39.3±0.3, 2499N×12194E, h29km, M2.4*
*ISCJB **30** 07:34:40.5±0.3, 2447N±002×12192E±002, h16km±5km, Error ellipse: s-maj=4.0km s-min=2.8km az=30.9*
*TAP **30** 07:34:40.2, 2448N×12186E, h22km, ML3.2, B*
ISC 30 07:34:40.4±0.3, 2447N±002×12191E±002, h15km±2km, n40, σ0s83/67, 1C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.15**	**339**	⇓*i* P	**Pg**	**07 34 45.0**	**+0.7**
	baz=356						
TWC				S	**Sg**	**07 34 47.8**	**+0.9**
	baz=356						
ENA	**Nanau**	**0.16**	**254**	⇑*i* P	**Pg**	**07 34 44.7**	**+0.3**
	baz=245						
ENA				*e*S	**Sg**	**07 34 47.6**	**+0.5**
	baz=245						
EHP	**Heping Village**	**0.22**	**223**	*e*P	**Pg**	**07 34 45.4**	**0.0**
	baz=219						
ILA	**Ilan**	**0.33**	**334**	*e*P	**Pg**	**07 34 47.5**	**+0.2**
	baz=333						
ILA				*i* S	**Sg**	**07 34 52.7**	**+0.9**
	baz=333						
TWE	**Neicheng**	**0.33**	**319**	*i* P	**Pg**	**07 34 47.5**	**+0.2**
	baz=324						
TWE				S	**Sg**	**07 34 52.0**	**+0.1**
	baz=324						
ENTT	**Nioudou**	**0.35**	**299**	⇓*i* P	**Pg**	**07 34 47.7**	**0.0**
	baz=302						
ENTT				S	**Sg**	**07 34 52.4**	**-0.2**
	baz=302						
EGS		**0.37**	**4**	*i* P	**Pg**	**07 34 48.6**	**+0.6**
	baz=9.0						
EGS				S	**Sg**	**07 34 53.5**	**+0.3**
	baz=9.0						
TWD	**Chiawan**	**0.48**	**216**	P	**Pg**	**07 34 49.5**	**-0.5**
	baz=216						
TWD				*e*S	**Sg**	**07 34 56.5**	**+0.1**
	baz=216						
NNS	**Nan Shan**	**0.49**	**267**	P	**Pg**	**07 34 49.7**	**-0.4**
	baz=267						
NNS				S	**Sg**	**07 34 56.0**	**-0.7**
	baz=267						
NSK	**Sanguang**	**0.54**	**292**	⇓*i* P	**Pg**	**07 34 50.7**	**-0.4**
	baz=295						
NSK				S	**Sg**	**07 34 57.2**	**-1.1**
	baz=295						
TWB1	**Santiao Chiao**	**0.54**	**8**	*i* P	**Pg**	**07 34 51.1**	**0.0**
	baz=6.0						
TWB1				*i* S	**Sg**	**07 34 58.3**	**-0.1**
	baz=6.0						
HWA	**Hwalien**	**0.56**	**209**	*e*P	**Pg**	**07 34 52.3**	**+0.8**
	baz=208						
TWA	**Mucha**	**0.59**	**330**	*e*P	**Pg**	**07 34 52.0**	**+0.1**
	baz=328						
TWA				*e*S	**Sg**	**07 34 58.9**	**-0.9**
	baz=328						
NWF	**Wu-fen Shan**	**0.61**	**349**	P	**Pg**	**07 34 52.8**	**+0.4**
	baz=348						
NWF				S	**Sg**	**07 35 00.2**	**-0.3**
	baz=348						
TAP1	**Taipei**	**0.67**	**328**	*e*P	**Pg**	**07 34 53.9**	**+0.5**
	baz=331						
WHF	**Hehuan Shan**	**0.67**	**241**	P	**Pg**	**07 34 52.8**	**-0.7**
	baz=240						
WHF				*e*S	**Sg**	**07 35 01.8**	**-0.6**
	baz=240						
TWT	**Tachien**	**0.70**	**252**	*e*P	**Pg**	**07 34 53.1**	**-1.0**
	baz=254						
TWT				*e*S	**Sg**	**07 35 03.0**	**-0.3**
	baz=254						
TWS1	**Kuangyinshan**	**0.77**	**325**	*e*P	**Pg**	**07 34 55.4**	**0.0**
	baz=327						
TWS1				*e*S	**Sg**	**07 35 06.5**	**+1.0**
	baz=327						
ESL	**Shilin**	**0.78**	**214**	*e*P	**Pg**	**07 34 54.9**	**-0.8**
	baz=218						
ESL				*e*S	**Sg**	**07 35 06.5**	**+0.5**
	baz=218						
NCU	**National Centr**	**0.82**	**307**	*e*P	**Pb**	**07 34 57.0**	**+0.6**
	baz=309						
NSTT	**Nanjuang**	**0.84**	**281**	*e*P	**Pb**	**07 34 56.0**	**-0.7**
	baz=277						
NSTT				S	**Sb**	**07 35 06.4**	**-1.4**
	baz=277						
TWY	**Chenhua**	**0.85**	**341**	P	**Pb**	**07 34 56.5**	**-0.3**
	baz=343						
TWY				*e*S	**Sb**	**07 35 07.8**	**-0.3**
	baz=343						
YOJ	**Yonaguni jima**	**1.01**	**90**	P	**Pb**	**07 34 59.0**	**-0.5**
YOJ				*e*S	**Sb**	**07 35 13.4**	**+0.8**
YOJ	**Yonaguni jima**	**1.01**	**90**	*e*P	**Pb**	**07 34 59.6**	**0.0**
	baz=90						
TWQ1	**Liyutan**	**1.04**	**264**	*e*P	**Pb**	**07 34 59.6**	**-0.5**
	baz=279						
SMLT	**Sun Moon Lake**	**1.09**	**238**	*e*P	**Pb**	**07 35 00.1**	**-0.8**
	baz=243						
EHY	**Hungye**	**1.10**	**209**	*e*P	**Pb**	**07 35 00.3**	**-0.8**
	baz=208						
TYC	**Yuchr**	**1.11**	**240**	P	**Pb**	**07 35 00.3**	**-1.0**
	baz=244						
TYC				*e*S	**Sb**	**07 35 16.1**	**+0.5**
	baz=244						
TWF1	**Yuli**	**1.25**	**207**	*e*P	**Pn**	**07 35 02.3**	**-0.9**
	baz=218						
YUS	**Yu-Shan**	**1.31**	**222**	*e*P	**Pn**	**07 35 03.3**	**-0.8**
	baz=210						
ALS	**Alishan**	**1.39**	**227**	*e*P	**Pn**	**07 35 05.6**	**+0.3**
	baz=216						
ALS				*e*S	**Sn**	**07 35 26.0**	**+2.7**
	baz=216						
CHN5	**Tsauling**	**1.42**	**233**	*e*P	**Pn**	**07 35 06.3**	**+0.6**
	baz=234						
CHN5				*e*S	**Sn**	**07 35 26.6**	**+2.5**
	baz=234						
CHN4	**Tsaushan**	**1.64**	**227**	*e*P	**Pn**	**07 35 09.3**	**+0.6**
	baz=216						
CHN4				*e*S	**Sn**	**07 35 32.6**	**+3.1**
	baz=216						
STYT	**Tauyuan**	**1.67**	**219**	*e*P	**Pn**	**07 35 08.2**	**-0.9**
	baz=220						
WTP	**Ta-pu**	**1.70**	**224**	*e*P	**Pn**	**07 35 10.3**	**+0.8**
	baz=214						
WTP				*e*S	**Sn**	**07 35 34.4**	**+3.4**
	baz=214						
TWK	**Hsinying**	**1.77**	**228**	*e*P	**Pn**	**07 35 11.8**	**+1.4**
	baz=229						
CHN1	**Nanshi**	**1.80**	**225**	*e*P	**Pn**	**07 35 11.2**	**+0.3**
	baz=227						
CHN1				*e*S	**Sn**	**07 35 36.7**	**+3.3**
	baz=227						
SGST	**Jiashian**	**1.84**	**222**	*e*P	**Pn**	**07 35 10.9**	**-0.5**
	baz=223						
JKRS	**Kuro-shima**	**1.93**	**96**	P	**Pn**	**07 35 12.8**	**+0.1**
JKRS				*e*S	**Sn**	**07 35 36.0**	**-0.7**
JIJ	**Ishigaki jima**	**2.04**	**93**	P	**Pn**	**07 35 13.9**	**-0.3**
JIJ				*e*S	**Sn**	**07 35 38.1**	**-1.3**

IDC 30 07:34:58.9±4.2, 4827S×16552E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.6/12, mbtmp3.5/2, Error ellipse: s-maj=496.8km s-min=66.5km az=41.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**35.05**	**303**	P	P	07 41 52.5	-0.8
	0.3nm,0.5s,baz=135,slow=7.0,SNR=4.8						
WRA	**Warramunga Arr**	**37.81**	**307**	P	P	07 42 17.6	+0.6
	1.1nm,1.1s,baz=146,slow=8.8,SNR=5.8						
AKASG	**Malin Array Be**	**151.81**	**292**	PKPbc	PKPbc	07 54 54.5	-0.1
	0.3nm,0.3s,baz=81,slow=2.8,SNR=6.3						

IDC 30 07:48:23.3±3.6, 4843S×16728E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.7/12, mbtmp3.7/2, Error ellipse: s-maj=386.5km s-min=65.3km az=38.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**36.13**	**301**	P	P	07 55 26.5	-0.6
	0.7nm,0.6s,baz=137,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**38.86**	**305**	P	P	07 55 50.7	+0.5
	0.7nm,0.7s,baz=135,slow=8.0,SNR=8.3						
AKASG	**Malin Array Be**	**152.96**	**291**	PKPbc	PKPbc	08 08 21.6	0.0
	0.6nm,0.5s,baz=142,slow=0.6,SNR=6.9						

*IDC **30** 07:53:17.1±3.4, 271S×13906E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.7/14, mbtmp3.9/4, ML4.1/1, Error ellipse: s-maj=114.4km s-min=18.1km az=91.0*
*ISCJB **30** 07:53:21.0±1.3, 28S±0.1×1387E±0.1, h33km, mb3.9/2, Error ellipse: s-maj=18.1km s-min=14.7km az=155.3*
*NEIC **30** 07:53:24.1±2.7, 282S×13863E, h36km±27km, mb3.8/3, Error ellipse: s-maj=23.6km s-min=17.2km az=159.0*
ISC 30 07:53:24.4±2.3, 28S±01×1386E±01, h41km±23km, n11, σ0s79/14, mb3.9/2, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**10.70**	**128**	*e*Pn	**Pn**	**07 55 54.7**	**-0.4**
	9.6nm,0.9s						
KAKA	**Kakadu**	**11.56**	**212**	*e*P	**Pn**	**07 56 08.0**	**+1.1**
	12nm,0.4s						
WRAB	**Tennant Creek**	**17.49**	**193**	*e*Pn	**Pn**	**07 57 25.2**	**-0.1**
	6.7nm,0.8s						
WB2	**Warramunga Arr**	**17.50**	**193**	*e*P	**Pn**	**07 57 24.2**	**-1.2**
WB2	**Warramunga Arr**	**17.50**	**193**	*e*Pn	**Pn**	**07 57 25.9**	**+0.5**
WRA	**Warramunga Arr**	**17.50**	**194**	P	**Pn**	**07 57 24.1**	**-1.3**
	0.7nm,0.3s,baz=17,slow=13,SNR=14						
WRA				S	**S**	**08 00 33.5**	**-13**
	0.1nm,0.3s,baz=157,slow=19,SNR=3.2						
CTAO	**Charters Tower**	**18.69**	**157**	*e*P	**Pn**	**07 57 40.9**	**+1.0**
	5.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.80**	**219**	*e*P	**Pn**	**07 57 52.0**	**-1.2**
	2.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.80**	**219**	P	**Pn**	**07 57 52.5**	**-0.7**
	1.5nm,0.7s,baz=45,slow=10,SNR=4.0						
FITZ				S	**S**	**08 01 32.5**	**+0.1**
	2.2nm,0.9s,baz=34,slow=22,SNR=3.1						
ASAR	**Alice Springs**	**21.20**	**192**	P	**P**	**07 58 07.2**	**+0.6**
	2.2nm,0.6s,mb3.6,baz=17,slow=11,SNR=25						
ASAR				S	**S**	**08 02 07.3**	**+7.3**
	0.7nm,0.7s,baz=17,slow=25,SNR=4.2						
MKAR	**Makanchi Array**	**69.84**	**322**	P	**P**	**08 04 30.9**	**+0.1**
	1.0nm,0.4s,mb4.1,baz=109,slow=8.0,SNR=11						

*DDA **30** 07:56:05.6, 3665N×2609E, h5km±1km, Md2.8*
*ATH **30** 07:56:07.7, 3671N×2626E, h4km, MD3.3/3*
*NEIC **30** 07:56:07.7, 3671N×2626E, h4km, MD3.3(ATH), After ATH.*
*CSEM **30** 07:56:08.2±0.1, 3672N×2632E, h2km, ML3.4, Error ellipse: s-maj=3.3km s-min=1.6km az=154.0*
*ISCJB **30** 07:56:08.5±0.5, 3677N±003×2623E±003, h6km±7km, Error ellipse: s-maj=6.6km s-min=3.6km az=147.7*
*ISK **30** 07:56:08.3, 3675N×2623E, h10km, MD3.0*
*THE **30** 07:56:08.3, 3675N×2627E, h9km, ML3.4*
ISC 30 07:56:09.2±0.4, 3677N±004×2622E±004, h13km±6km, n22, σ1s13/39, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APE	**Apeiranthos**	**0.63**	**298**	*e*Pg	**Pg**	**07 56 21.5**	**+0.1**
APE				*e*Sg	**Sg**	**07 56 31.1**	**+1.4**
APE	**Apeiranthos**	**0.63**	**298**	*e*PB	**Pb**	**07 56 21.1**	**-1.0**
APE				*e*SG	**Sg**	**07 56 30.5**	**+0.8**
APE	**Apeiranthos**	**0.63**	**298**	*e*Pg	**Pg**	**07 56 21.5**	**0.0**
APE				*e*Sg	**Sg**	**07 56 31.1**	**+1.4**
SANT	**Santorini**	**0.73**	**237**	*e*Pg	**Pg**	**07 56 22.3**	**-1.2**
SANT				*e*Sg	**Sg**	**07 56 33.9**	**+0.9**
SANT	**Santorini**	**0.73**	**237**	*e*Pg	**Pg**	**07 56 22.3**	**-1.2**
SANT				*e*Sg	**Sg**	**07 56 32.9**	**-0.2**
SANT	**Santorini**	**0.73**	**237**	*e*Pg	**Pg**	**07 56 22.1**	**-1.4**
SANT				*e*Sg	**Sg**	**07 56 32.9**	**-0.2**
THR1	**Thera Island**	**0.73**	**237**	*e*Pg	**Pg**	**07 56 22.4**	**-1.1**
THR1				*e*Sg	**Sg**	**07 56 33.6**	**+0.5**
THR4	**Thira Island,**	**0.73**	**245**	*e*Pg	**Pg**	**07 56 23.3**	**-0.1**
THR4				*e*Sg	**Sg**	**07 56 34.3**	**+1.3**
THR3	**Thira Island,**	**0.75**	**241**	*e*Pg	**Pg**	**07 56 23.0**	**-0.8**
THR3				*e*Sg	**Sg**	**07 56 34.8**	**+1.1**
THR6	**Thira Island,**	**0.78**	**238**	*e*Pg	**Pg**	**07 56 23.5**	**-0.9**
THR6				*e*Sg	**Sg**	**07 56 35.5**	**+0.9**
THR5	**Thira Island,**	**0.79**	**243**	*e*Pg	**Pg**	**07 56 23.8**	**-0.7**
THR5				*e*Sg	**Sg**	**07 56 36.0**	**+1.2**
BODT	**Bodrum**	**0.92**	**71**	*e*PG	**Pg**	**07 56 26.5**	**-0.5**
BODT				*e*SG	**Sg**	**07 56 39.6**	**+0.6**
BDRM	**Kayabasi**	**1.02**	**73**	*i* P	**Pb**	**07 56 27.9**	**-0.9**
BDRM				*i* S	**Sb**	**07 56 44.8**	**+2.6**
SMG	**Samos**	**1.05**	**28**	*e*PG	**Pg**	**07 56 28.5**	**-1.1**
SMG				*e*SG	**Sg**	**07 56 43.5**	**+0.2**
GCAM	**G?zelcaml?**	**1.23**	**41**	*i* P	**Pn**	**07 56 32.1**	**0.0**
GCAM				*i* S	**Sb**	**07 56 50.3**	**+2.2**
MLSB	**Milas**	**1.35**	**67**	*e*PN	**Pn**	**07 56 33.8**	**0.0**
KARP	**Karpathos**	**1.44**	**148**	*e*PB	**Pb**	**07 56 33.3**	**-2.7**
AYDN	**Tasoluk**	**1.59**	**56**	*i* P	**Pn**	**07 56 38.3**	**+1.2**
AYDN				*i* S	**Sn**	**07 57 02.2**	**+4.6**
CHOS	**Chios island**	**1.62**	**355**	*e*Pb	**Pb**	**07 56 36.1**	**-2.8**
CHOS				*e*Sb	**Sb**	**07 56 57.4**	**-1.9**
YER	**Yerkesik**	**1.69**	**77**	*e*PN	**Pn**	**07 56 38.8**	**+0.3**
BLCB	**Balcova**	**1.74**	**22**	*e*PN	**Pn**	**07 56 39.8**	**+0.6**
KULA	**Kula-Manisa**	**2.60**	**47**	*e*PN	**Pn**	**07 56 51.7**	**+0.7**

*IDC **30** 08:05:53.1±1.7, 4933S×16417E, h0km, mb4.2/5, mb1 4.4/6, mb1mx4.2/14, mbtmp4.2/6, ML3.7/1, Error ellipse: s-maj=53.2km s-min=35.0km az=5.0*
*NEIC **30** 08:05:54.4±2.1, 4930S×16429E, h10km, mb4.6/1, Error ellipse: s-maj=47.0km s-min=10.0km az=156.0*
ISC 30 08:05:54.5±2.9, 493S±04×1643E±03, h10km, n17, σ1s18/15, mb4.2/5, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**4.21**	**37**	P	**Pn**	**08 06 58.0**	**-0.7**
DCZ	**Deep Cove**	**4.29**	**28**	P	**Pn**	**08 07 00.3**	**+0.5**
WKZ	**Wanaka**	**5.52**	**38**	P	**Pn**	**08 07 17.5**	**+0.9**
JCZ	**Jackson Bay**	**6.06**	**32**	P	**Pn**	**08 07 25.7**	**+1.6**
ODZ	**Otahua Downs**	**6.07**	**48**	P	**Pn**	**08 07 22.6**	**-1.7**
LBZ	**Lake Benmore**	**6.36**	**42**	P	**Pn**	**08 07 26.4**	**-1.9**
RPZ	**Rata Peaks**	**7.28**	**42**	Pn	**Pn**	**08 07 42.2**	**+1.4**
	1.4nm,0.3s,baz=224,slow=4.4,SNR=6.2						
RPZ				Sn	**Sn**	**08 08 58.4**	**-5.0**
	2.4nm,0.3s,baz=7.9,slow=22,SNR=3.8						
STKA	**Stephens Creek**	**24.34**	**307**	P	**P**	**08 11 13.0**	**+0.7**
	3.4nm,0.7s,mb3.9,baz=110,slow=12,SNR=2.9						
ASAR	**Alice Springs**	**34.96**	**306**	P	**P**	**08 12 46.5**	**-0.2**
	3.1nm,0.7s,mb4.4,baz=135,slow=7.8,SNR=29						
WB2	**Warramunga Arr**	**37.81**	**310**	*e*P	**P**	**08 13 10.0**	**-1.0**
WRA	**Warramunga Arr**	**37.81**	**310**	P	**P**	**08 13 09.7**	**-1.3**
	2.9nm,0.7s,mb4.1,baz=138,slow=8.0,SNR=26						
WRA				PcP	PcP	08 15 27.3	-0.3
	0.8nm,0.8s,baz=138,slow=2.5,SNR=4.9						
FITZ	**Fitzroy Crossi**	**43.96**	**301**	*e*P	**P**	**08 14 01.9**	**+0.1**
	5.7nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**43.96**	**301**	P	**P**	**08 14 01.6**	**-0.2**
	2.8nm,0.6s,mb4.2,baz=155,slow=12,SNR=14						
CMAR	**Chiang Mai Arr**	**88.77**	**300**	P	**P**	**08 18 50.1**	**+1.8**
	0.5nm,0.3s,mb4.3,baz=152,slow=4.1,SNR=4.6						
AKASG	**Malin Array Be**	**151.41**	**290**	PKPbc	PKPbc	08 25 46.7	-0.8
	0.3nm,0.2s,baz=77,slow=3.3,SNR=5.1						
ARCES	**ARCESS Array B**	**151.74**	**331**	PKPbc	PKPbc	08 25 47.5	-0.3
	1.8nm,0.7s,baz=66,slow=3.3,SNR=8.4						
GERES	**GERESS Array B**	**160.77**	**280**	PKPab	PKPab	08 26 36.2	+0.1
	1.5nm,0.8s,baz=102,slow=4.4,SNR=11						

IDC 30 08:11:07.0±3.8, 4778S×16588E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/12, mbtmp3.7/3, Error ellipse: s-maj=325.3km s-min=68.4km az=37.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**34.99**	**302**	P	P	08 18 00.6	-0.4
	0.5nm,0.6s,baz=137,slow=7.5,SNR=6.4						
WRA	**Warramunga Arr**	**37.71**	**306**	P	P	08 18 24.8	+0.5
	0.9nm,0.9s,baz=135,slow=8.3,SNR=4.4						
FITZ	**Fitzroy Crossi**	**44.14**	**298**	P	P	08 19 16.8	-0.5
	1.7nm,0.7s,baz=186,slow=7.8,SNR=5.2						
AKASG	**Malin Array Be**	**151.85**	**292**	PKPbc	PKPbc	08 31 02.8	-0.1
	0.5nm,0.5s,baz=82,slow=2.8,SNR=4.0						

*IDC **30** 08:17:15.1±3.0, 4930S×16498E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.8/14, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=67.4km s-min=32.3km az=155.0*
*NEIC **30** 08:17:16.8±2.1, 4945S×16474E, h10km, Error ellipse: s-maj=44.8km s-min=11.3km az=153.0*
ISC 30 08:17:18.3±1.8, 493S±02×1646E±02, h10km, n13, σ1s02/15, mb3.7/3, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**4.06**	**35**	P	**Pn**	**08 18 20.1**	**-0.3**
MLZ	**Mavora Lakes**	**4.61**	**33**	P	**Pn**	**08 18 28.3**	**+0.3**
TUZ	**Tuapeka**	**4.74**	**47**	P	**Pn**	**08 18 31.0**	**+1.3**
MSZ	**Milford Sound**	**5.13**	**27**	P	**Pn**	**08 18 35.1**	**0.0**
MSZ				S	**Sn**	**08 19 39.3**	**+5.0**
WKZ	**Wanaka**	**5.37**	**35**	P	**Pn**	**08 18 39.6**	**+1.3**
ODZ	**Otahua Downs**	**5.89**	**46**	P	**Pn**	**08 18 45.6**	**+0.1**
JCZ	**Jackson Bay**	**5.93**	**30**	P	**Pn**	**08 18 47.0**	**+0.9**
JCZ				S	**Sn**	**08 19 54.0**	**0.0**
LBZ	**Lake Benmore**	**6.20**	**40**	P	**Pn**	**08 18 48.1**	**-1.7**
RPZ	**Rata Peaks**	**7.11**	**41**	Pn	**Pn**	**08 18 59.5**	**-2.8**
	2.1nm,0.3s,baz=151,slow=18,SNR=6.8						
RPZ				Sn	**Sn**	**08 20 19.1**	**-3.9**
	6.9nm,0.3s,baz=16,slow=17,SNR=7.9						
ASAR	**Alice Springs**	**35.14**	**305**	P	**P**	**08 24 12.2**	**+0.2**
	0.7nm,0.8s,mb3.6,baz=136,slow=7.8,SNR=5.7						
WRA	**Warramunga Arr**	**37.99**	**310**	P	**P**	**08 24 35.4**	**-0.9**
	1.7nm,1.0s,mb3.7,baz=139,slow=6.7,SNR=4.7						
FITZ	**Fitzroy Crossi**	**44.16**	**301**	P	**P**	**08 25 27.6**	**+0.5**
	1.4nm,0.8s,mb3.7,baz=139,slow=11,SNR=3.0						
AKASG	**Malin Array Be**	**151.63**	**290**	PKPbc	PKPbc	08 37 10.4	-1.4
	0.9nm,0.5s,baz=87,slow=2.4,SNR=5.7						

*ISCJB **30** 08:20:13.5±0.6, 2347N±002×12202E±002, h14km±3km, Error ellipse: s-maj=5.3km s-min=3.0km az=42.0*
*JMA **30** 08:20:13.7±0.2, 2341N×12207E, h20km, M2.7*
*TAP **30** 08:20:14.4, 2349N×12197E, h15km, ML3.4, C*
ISC 30 08:20:13.4±0.6, 2349N±002×12202E±002, h14km±3km, n39, σ0s59/64, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.62**	**322**	*e*P	**Pg**	**08 20 26.1**	**+0.5**
	baz=325						
ESL	**Shilin**	**0.63**	**302**	⇑*i* P	**Pg**	**08 20 25.7**	**0.0**
	baz=303						
ESL				S	**Sg**	**08 20 34.0**	**0.0**
	baz=303						
EHY	**Hungye**	**0.64**	**272**	*i* P	**Pg**	**08 20 26.1**	**+0.3**
	baz=272						
EHY				S	**Sg**	**08 20 34.7**	**+0.3**
	baz=272						
TWF1	**Yuli**	**0.67**	**259**	P	**Pg**	**08 20 26.8**	**+0.2**
	baz=258						
TWF1				*e*S	**Sg**	**08 20 36.0**	**+0.5**
	baz=258						
TWD	**Chiawan**	**0.71**	**327**	*e*P	**Pg**	**08 20 27.5**	**+0.3**
	baz=329						
TWD				*e*S	**Sg**	**08 20 36.7**	**+0.2**
	baz=329						
CHKT	**Chengkung**	**0.71**	**237**	*e*P	**Pg**	**08 20 26.7**	**-0.6**
	baz=223						
CHKT				*e*S	**Sg**	**08 20 36.0**	**-0.7**
	baz=223		

CHN5	**Tsauling**	**1.23 275**	*e*P		**Pn**	**08 20 36.7**	**+0.5**
	baz=276							
TWE	**Neicheng**	**1.27 346**	*e*P		**Pn**	**08 20 36.8**	**0.0**
	baz=347							
TWE			*e*S		**Sb**	**08 20 52.7**	**-0.7**
	baz=347							
WTP	**Ta-pu**	**1.31 260**	*e*P		**Pn**	**08 20 37.9**	**+0.6**
	baz=259							
WTP			*e*S		**Sb**	**08 20 55.5**	**+1.0**
	baz=259							
CHN4	**Tsaushan**	**1.31 264**	*e*P		**Pn**	**08 20 38.0**	**+0.6**
	baz=264							
CHN4			*e*S		**Sb**	**08 20 55.0**	**+0.4**
	baz=264							
NSK	**Sanguang**	**1.33 333**	*e*P		**Pn**	**08 20 37.5**	**0.0**
	baz=334							
NSK			*e*S		**Sb**	**08 20 53.4**	**-1.7**
	baz=334							
YOJ	**Yonaguni jima**	**1.33 43**	P		**Pn**	**08 20 37.8**	**+0.2**
YOJ			*e*S		**Sb**	**08 20 55.4**	**+0.3**
EGS		**1.35 357**	*e*P		**Pn**	**08 20 38.0**	**+0.1**
	baz=14							
SGST	**Jiashian**	**1.38 253**	*e*P		**Pn**	**08 20 38.6**	**+0.4**
	baz=241							
CHN1	**Nanshi**	**1.40 258**	*e*P		**Pn**	**08 20 38.7**	**+0.2**
	baz=258							
CHN1			*e*S		**Sn**	**08 20 57.8**	**+1.0**
	baz=258							
TWK	**Hsinying**	**1.42 261**	*e*P		**Pn**	**08 20 39.6**	**+0.8**
	baz=261							
TWK			*e*S		**Sn**	**08 20 57.5**	**+0.1**
	baz=261							
TWQ1	**Liyutan**	**1.43 307**	*e*P		**Pn**	**08 20 39.2**	**+0.3**
	baz=308							
NSTT	**Nanjuang**	**1.47 321**	*e*P		**Pn**	**08 20 39.8**	**+0.3**
	baz=322							
NSTT			*e*S		**Sn**	**08 20 58.7**	**+0.2**
	baz=322							
EAST	**Anshuo**	**1.54 225**	*e*P		**Pn**	**08 20 39.4**	**-1.0**
	baz=224							
TWA	**Mucha**	**1.54 345**	*e*P		**Pn**	**08 20 41.3**	**+0.8**
	baz=331							
TWA			*e*S		**Sn**	**08 21 00.4**	**+0.1**
	baz=331							
TWM1	**Shoushan**	**1.61 246**	*e*P		**Pn**	**08 20 41.5**	**+0.1**
	baz=246							
SCZT	**Fangliau**	**1.70 230**	*e*P		**Pn**	**08 20 43.5**	**+0.8**
	baz=218							
HATJ	**Hateruma jima**	**1.73 71**	*e*S		**Sn**	**08 21 04.4**	**-0.7**
IRIF	**Iriomote-Funau**	**1.78 61**	P		**Pn**	**08 20 44.1**	**+0.3**
IRIF			*e*S		**Sn**	**08 21 06.5**	**+0.3**
JKRS	**Kuro-shima**	**1.97 67**	P		**Pn**	**08 20 46.9**	**+0.5**
JKRS			*e*S		**Sn**	**08 21 11.1**	**+0.2**
JIJ	**Ishigaki jima**	**2.13 65**	P		**Pn**	**08 20 49.0**	**+0.4**
JIJ			*e*S		**Sn**	**08 21 13.7**	**-1.2**
JTJ	**Tarama**	**2.71 64**	*e*S		**Sn**	**08 21 29.7**	**+0.5**

BJI ***30*** *08:35:05.6, 1060N×14589E, h12km, mB5.5, mb5.3, Ms5.1, Msz4.9*
IDC ***30*** *08:35:06.6±0.5, 1057N×14553E, h0km, mb4.9/28, mb1 4.9/30, mb1mx4.9/32, mbtmp4.9/30, ML4.2/2, MS5.0/7, Ms1 5.0/7, ms1mx4.5/33, Error ellipse: s-maj=16.8km s-min=10.2km az=95.0*
ISCJB ***30*** *08:35:06.6±0.2, 1055N±003×14556E±004, h10km, mb5.3/126, MS5.0/24, Error ellipse: s-maj=5.3km s-min=4.0km az=173.0*
NEIC ***30*** *08:35:08.2±0.2, 1053N×14555E, h10km, mb5.3/48, Error ellipse: s-maj=5.9km s-min=4.0km az=95.0*
MOS ***30*** *08:35:09.9±1.1, 1053N×14546E, h33km, mb5.5/46, MS4.8/11, Error ellipse: s-maj=10.4km s-min=5.5km az=105.1*
DJA ***30*** *08:35:10, 1063N×14577E, h10km, Mw5.8/10*
ISC 30 08:35:07.5±1.3, 1057N±003×14559E±004, h4km±7km, **h20**km±2.1km**:pP-P, n258,** σ1º**04**/259, **mb5.3**/126, **MS5.0**/24, **21C-9D, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.08**	**347**	Pn	**Pn**	**08 35 55.6**	**-1.3**
	267nm,0.3s,SNR=345						
GUMO				Sn	**Sn**	**08 36 32.6**	**-1.6**
	766nm,0.3s,SNR=7.9						
GUMO				LR	LR	08 37 04.2	
	comp=Z,10μm,21.1s,baz=135,slow=38						
GUMO	**Guam**	**3.08**	**347**	*e*Pn	**Pn**	**08 35 55.8**	**-1.1**
GUMO				*e*Sn	**Sn**	**08 36 31.5**	**-2.7**
CBIJ	**Chichi jima**	**16.75**	**349**	Pn	**Pn**	**08 39 01.4**	**-1.7**
	1.2nm,0.3s,baz=185,slow=8.1,SNR=3.0						
PMG	**Port Moresby**	**19.91**	**175**	*i* P	**Pn**	**08 39 39.3**	**-2.5**
PMG	**Port Moresby**	**19.91**	**175**	*e*P	**Pn**	**08 39 39.5**	**-2.3**
MSLP	**Maasin**	**20.40**	**271**	*e*P	**P**	**08 39 47.4**	**+1.8**
BUKP	**Musuan**	**20.44**	**264**	*e*P	**P**	**08 39 47.3**	**+1.3**
PVCP	**Virac**	**21.18**	**280**	*e*P	**P**	**08 39 58.2**	**+4.2**
TBP	**Tagbilaran**	**21.41**	**270**	*e*P	**P**	**08 39 56.6**	**0.0**
JOW	**Kunigami**	**22.99**	**317**	P	**P**	**08 40 12.5**	**-0.8**
	48nm,0.8s,mb5.0,baz=140,slow=11,SNR=9.0						
CAUP	**Cauayan**	**23.93**	**288**	*e*P	**P**	**08 40 28.5**	**+5.7**
COEN	**Coen**	**24.49**	**186**	*e*P	**P**	**08 40 28.3**	**+0.4**
	46nm,1.2s,mb4.8						
KAKA	**Kakadu**	**26.56**	**210**	*e*P	**P**	**08 40 45.0**	**-1.7**
	96nm,0.8s,mb5.4						
MJAR	**Matsushiro Arr**	**26.71**	**347**	P	**P**	**08 40 45.7**	**-2.1**
	25nm,1.0s,mb4.7,baz=174,slow=9.1,SNR=32						
MJAR				LR	LR	08 50 12.8	
	comp=Z,2μm,20.9s,MS4.6,baz=165,slow=34						
MAJO	**Matsushiro**	**26.71**	**347**	*e*P	**P**	**08 40 46.7**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,155nm,1.3s,mb5.4						
MAJO	**Matsushiro**	**26.71**	**347**	*e*P	**P**	**08 40 46.7**	**-1.1**
	comp=Z,154nm,1.3s,mb5.4						
MAT	**Matsushiro**	**26.71**	**347**	P	**P**	**08 40 46.2**	**-1.6**
MAT				S	**S**	**08 45 31.0**	**+7.1**
YHNB	**Yeheng**	**26.94**	**305**	*e*P	**P**	**08 40 50.0**	**-0.1**
	comp=Z,125nm,1.1s,mb5.3						
BATI	**Baumata**	**30.03**	**227**	P	**P**	**08 41 17.9**	**+0.2**
	comp=Z,45nm,0.8s,mb5.3,baz=152,slow=2.5,SNR=3.2						
KAPI	**Kappang**	**30.03**	**240**	P	**P**	**08 41 18.6**	**+0.9**
	comp=Z,252nm,0.9s,mb6.0,SNR=5.9						
KAPI	**Kappang**	**30.03**	**240**	P	**P**	**08 41 16.8**	**-1.0**
	comp=Z,28nm,0.6s,mb5.2,baz=73,slow=5.0,SNR=22						
KAPI	**Kappang**	**30.03**	**240**	*e*P	**P**	**08 41 16.7**	**-1.1**
	comp=Z,26nm,0.8s,mb5.0						
CTA	**Charters Tower**	**30.47**	**179**	*e*P	**P**	**08 41 20.5**	**-1.0**
	comp=Z,17nm,1.1s,mb4.7						
CTA	**Charters Tower**	**30.47**	**179**	P	**P**	**08 41 20.6**	**-0.9**
	comp=Z,16nm,1.0s,mb4.7,baz=343,slow=9.3,SNR=7.8						
CTA	**Charters Tower**	**30.47**	**179**	*e*P	**P**	**08 41 20.5**	**-1.0**
CTA				pmax	pmax		
	comp=Z,17nm,1.1s						
CTAO	**Charters Tower**	**30.47**	**179**	*e*P	**P**	**08 41 21.2**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,64nm,1.3s,mb5.2						
CTAO	**Charters Tower**	**30.47**	**179**	*e*P	**P**	**08 41 21.2**	**-0.3**
	comp=Z,64nm,1.3s,mb5.2						
KSRS	**Korea Array**	**31.14**	**332**	P	**P**	**08 41 26.4**	**-0.8**
	comp=Z,29nm,0.9s,mb5.1,baz=145,slow=9.8,SNR=64						
KSRS				PcP	PcP	08 44 22.4	-0.1
	comp=Z,0.7nm,0.3s,baz=159,slow=6.4,SNR=4.0						
WRAB	**Tennant Creek**	**32.27**	**200**	P	**P**	**08 41 38.0**	**+0.6**
	comp=Z,816nm,0.7s,SNR=21						
WRAB	**Tennant Creek**	**32.27**	**200**	‖*e*P	**P**	**08 41 36.5**	**-0.9**
WRAB	**Tennant Creek**	**32.27**	**200**	*e*P	**P**	**08 41 36.8**	**-0.6**
	comp=Z,83nm,0.7s,mb5.7						
WB2	**Warramunga Arr**	**32.28**	**200**	*e*P	**P**	**08 41 36.2**	**-1.2**
WRA	**Warramunga Arr**	**32.28**	**200**	P	**P**	**08 41 36.3**	**-1.1**
	comp=Z,29nm,0.7s,mb5.2,baz=22,slow=9.5,SNR=127						
WRA				PcP	PcP	08 44 26.4	+0.5
	comp=Z,4.7nm,0.9s,baz=16,slow=3.2,SNR=4.7						
NJ2	**Nanjing**	**32.66**	**315**	*e*P	**P**	**08 41 39.5**	**-1.2**
NJ2				AP	pP	08 41 43.8	+1.7
NJ2				XP	sP	08 41 46.5	+3.9
NJ2				PP	PP	08 42 48.0	-6.5
NJ2				S	**S**	**08 46 57.5**	**0.0**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,320nm,8.0s						
NJ2				LR	LR		
	comp=N,530nm,16.8s						
NJ2				LR	LR		
	comp=E,1μm,22.2s						
NJ2				LR	LR		
	comp=Z,1μm,22.2s						
VLA	**Vladivostok**	**34.55**	**342**	*d* P	**P**	**08 41 57.5**	**+0.4**
VLA				*i*		08 43 13.2	
VLA				*i*		08 44 31.3	
VLA				pmax	pmax		
	comp=Z,142nm,1.6s,mb5.7						
VLA				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.8						
FITZ	**Fitzroy Crossi**	**34.64**	**215**	*e*P	**P**	**08 41 57.2**	**-0.9**
	comp=Z,22nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**34.64**	**215**	P	**P**	**08 41 58.1**	**0.0**
	comp=Z,12nm,0.9s,mb4.8,baz=42,slow=14,SNR=13						
WHN	**Wuhan**	**35.17**	**309**	⇑P	**P**	**08 42 03.8**	**+1.2**
WHN				AP	pP	08 42 12.0	+8.0
WHN				AMB	AMB		
	comp=Z,170nm,1.0s,mb5.9						
DL2	**Dalian**	**35.41**	**327**	P	**P**	**08 42 03.5**	**-1.0**
DL2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3						
ASAR	**Alice Springs**	**35.90**	**198**	P	**P**	**08 42 07.8**	**-1.1**
	comp=Z,26nm,0.8s,mb5.2,baz=23,slow=5.9,SNR=101						
KSM	**Kuching**	**36.20**	**258**	*e*P	**P**	**08 42 11.5**	**-0.1**
TIA	**Tai'an**	**36.27**	**319**	*e*P	**P**	**08 42 11.5**	**-0.5**
YSS	**Yuzh-Sakhalins**	**36.34**	**357**	⇑*e*P	**P**	**08 42 12.2**	**-0.2**
YSS				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.0						
MDJ	**Mudanjiang**	**36.62**	**341**	P	**P**	**08 42 15.5**	**+0.7**
MDJ				AMB	AMB		
	comp=Z,73nm,1.1s,mb5.4						
MDJ				AMB	AMB		
	comp=Z,986nm,15.6s						
MDJ	**Mudanjiang**	**36.62**	**341**	*e*P	**P**	**08 42 15.6**	**+0.8**
	comp=Z,108nm,1.3s,mb5.5						
SNY	**Shenyang**	**36.64**	**332**	⇑P	**P**	**08 42 15.3**	**+0.3**
SNY				AMB	AMB		
	comp=Z,32nm,1.5s,mb4.9						
SNY				LR	LR		
	comp=N,717nm,17.4s,MS4.8						
SNY				LR	LR		
	comp=E,1μm,17.1s,MS4.8						
SNY				LR	LR		
	comp=Z,2μm,19.2s,MS4.8						
CN2	**Changchun**	**37.43**	**336**	⇑P	**P**	**08 42 22.0**	**+0.3**
CN2				*e*XP	sP	08 42 29.5	+5.9
CN2				*e*S	**S**	**08 48 10.0**	**-0.6**
CN2				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.2						
CN2				AMB	AMB		
	comp=Z,900nm,10.0s						
CN2				LR	LR		
	comp=N,1μm,16.0s,MS4.8						
CN2				LR	LR		
	comp=E,700nm,16.0s,MS4.8						
CN2				LR	LR		
	comp=Z,2μm,18.0s,MS4.9						
DZM	**Mont Dzumac**	**38.35**	**148**	*e*P	**P**	**08 42 30.5**	**+0.8**
DZM	**Mont Dzumac**	**38.35**	**148**	*e*P	**P**	**08 42 29.3**	**-0.4**
HABR	**Khabarovsk**	**38.80**	**349**	‖*e*P	**P**	**08 42 31.8**	**-1.4**
HABR				*e*		08 44 41.8	
HABR				*e*S	**S**	**08 48 30.8**	**-0.4**
HABR				*e*		08 51 19.1	
HABR				*e*		08 52 42.4	
HABR				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.1						
HABR				MLR	MLR		
	comp=Z,2μm,18.8s,MS4.9						
BJI	**Beijing**	**39.26**	**323**	P	**P**	**08 42 37.5**	**+0.3**
BJI				S	**S**	**08 48 36.8**	**-1.6**
BJI				AMB	AMB		
	comp=Z,39nm,1.2s,mb5.0						
BJI				LR	LR		
	comp=N,1μm,16.9s,MS4.8						
BJI				LR	LR		
	comp=E,642nm,16.9s,MS4.8						
BJI	**Beijing**	**39.26**	**323**	P	**P**	**08 42 37.4**	**+0.2**
	comp=E,39nm,1.2s,mb5.0						
BJI				S	**S**	**08 48 36.8**	**-1.6**
BJI				LR	LR		
	comp=Z,1μm,63.9s						
GYA	**Guiyang**	**39.96**	**299**	P	**P**	**08 42 45.5**	**+2.2**
GYA				PP	PP	08 44 19.8	+4.7
GYA				PCP	PcP	08 44 51.8	+3.1
GYA				SCP	ScP	08 48 37.5	-1.2
GYA				S	**S**	**08 48 49.0**	**-0.4**
GYA				SS	SS	08 51 38.3	-7.8
GYA				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,130nm,5.2s						
GYA				LR	LR		
	comp=N,660nm,18.3s,MS4.6						
GYA				LR	LR		
	comp=E,500nm,19.3s,MS4.6						
GYA				LR	LR		
	comp=Z,480nm,18.4s,MS4.4						
KLR	**Kul'dur**	**40.23**	**346**	‖*i* P	**P**	**08 42 41.2**	**-3.9**
KLR				pmax	pmax		
	comp=E,50nm,2.0s						
KLR				pmax	pmax		
	comp=Z,150nm,2.0s,mb5.4						
MBWA	**Marble Bar**	**40.50**	**219**	*e*P	**P**	**08 42 47.0**	**-0.7**
	comp=Z,71nm,0.8s,mb5.5						
XAN	**Xi'an**	**40.85**	**311**	P	**P**	**08 42 50.8**	**+0.3**
XAN				AP	pP	08 42 57.5	+5.6
XAN				AMB	AMB		
	comp=Z,34nm,1.1s,mb4.9						
ARMA	**Armidale**	**41.16**	**172**	*e*P	**P**	**08 42 53.8**	**+0.8**
KKTK	**Khon Kaen**	**41.93**	**283**	P	**P**	**08 43 02.0**	**+2.4**
	comp=Z,309nm,0.5s,mb6.2						
STKA	**Stephens Creek**	**42.38**	**185**	*e*P	**P**	**08 43 00.7**	**-2.2**
	comp=Z,13nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**42.38**	**185**	P	**P**	**08 43 00.9**	**-2.0**
	comp=Z,9.7nm,0.9s,mb4.5,baz=354,slow=9.4,SNR=12						
HHC	**Hu-ho-hao-te**	**42.53**	**321**	*e*P	**P**	**08 43 03.0**	**-1.2**
HHC				AP	pP	08 43 06.0	+0.4
HHC				PP	PP	08 44 44.5	+1.8
HHC				PCP	PcP	08 44 56.5	-0.3
HHC				SCP	ScP	08 48 45.0	-3.6
HHC				PCS	PcS	08 48 47.0	-1.7
HHC				S	**S**	**08 49 24.8**	**-2.3**
HHC				SS	SS	08 52 28.0	-8.7
HHC				SCS	ScS	08 53 02.5	-4.4
HHC				AMB	AMB		
	comp=Z,18nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,340nm,5.5s						
HHC				LR	LR		
	comp=N,766nm,12.3s,MS5.0						
HHC				LR	LR		
	comp=E,857nm,13.9s,MS5.0						
HHC				LR	LR		
	comp=Z,2μm,12.8s,MS5.2						
KMI	**Kunming**	**43.08**	**295**	P	**P**	**08 43 11.0**	**+2.1**
KMI				AP	pP	08 43 18.8	+8.5
KMI				XP	sP	08 43 21.8	+11
KMI				S	**S**	**08 49 36.0**	**+0.3**
KMI				SS	SS	08 52 45.5	-2.5
KMI				AMB	AMB		
	comp=Z,66nm,1.2s,mb5.2						
KMI				AMB	AMB		
	comp=Z,388nm,4.3s						
KMI	**Kunming**	**43.08**	**295**	P	**P**	**08 43 11.1**	**+2.2**
KMI				*SP	sP	08 43 21.8	+11
KMI				S	**S**	**08 49 36.1**	**+0.4**
KMI				pmax	pmax		
	comp=Z,66nm,1.2s,mb5.2						
KMI	**Kunming**	**43.08**	**295**	P	**P**	**08 43 11.1**	**+2.2**
	comp=Z,66nm,1.2s,mb5.2						
KMI				pP	pP	08 43 18.8	+8.5
KMI				sP	sP	08 43 21.8	+11
KMI				S	**S**	**08 49 36.1**	**+0.4**
KMI				SS	SS	08 52 45.5	-2.5
KMI				LR	LR		
	comp=Z,2μm,69.7s						
BTO	**Baotou**	**43.36**	**320**	*e*P	**P**	**08 43 11.0**	**+0.1**
PETK	**Petropavlovsk-**	**43.53**	**11**	P	**P**	**08 43 11.3**	**-0.8**
	comp=Z,18nm,1.1s,mb4.7,baz=204,slow=3.3,SNR=5.4						
PETK	**Petropavlovsk-**	**43.53**	**11**	P	**P**	**08 43 11.3**	**-0.8**
PET	**Petropavlovsk**	**43.63**	**11**	*i* P	**P**	**08 43 12.4**	**-0.4**
CD2	**Chengdu**	**43.71**	**304**	⇑*i* P	**P**	**08 43 14.5**	**+0.6**
CD2				AP	pP	08 43 19.0	+3.7
CD2				XP	sP	08 43 21.8	+6.0
CD2				PP	PP	08 44 58.3	+2.7
CD2				PCS	PcS	08 48 52.5	-1.4
CD2				S	**S**	**08 49 43.5**	**-1.3**
CD2				XS	sS	08 49 51.8	+4.7
CD2				SS	SS	08 52 52.5	-7.7
CD2				SCS	ScS	08 53 10.5	-4.1
CD2				AMB	AMB		
	comp=Z,160nm,0.7s,mb5.9						
CD2				AMB	AMB		
	comp=Z,140nm,5.8s						
CD2				LR	LR		
	comp=N,910nm,15.6s,MS5.0						
CD2				LR	LR		
	comp=E,1μm,16.7s,MS5.0						
CD2				LR	LR		
	comp=Z,1μm,15.6s,MS5.0						
HIA	**Hailar**	**44.16**	**336**	*e*P	**P**	**08 43 17.7**	**+0.5**
HIA				pmax	pmax		
	comp=Z,53nm,0.9s						
HIA	**Hailar**	**44.16**	**336**	*e*P	**P**	**08 43 17.7**	**+0.5**
	comp=Z,53nm,0.9s,mb5.3						
FORT	**Forrest**	**44.43**	**202**	*e*P	**P**	**08 43 19.7**	**+0.2**
	comp=Z,91nm,0.6s,mb5.7						
NST	**Nakhon Sawan**	**44.50**	**282**	P	**P**	**08 43 22.0**	**+1.6**
XMIS	**Christmas Isla**	**44.89**	**243**	*e*P	**P**	**08 43 22.3**	**-1.2**
NNT	**Nongplab**	**44.93**	**277**	P	**P**	**08 43 26.2**	**+2.3**
LZH	**Lanzhou**	**45.49**	**311**	⇑P	**P**	**08 43 29.5**	**+1.5**
LZH				AP	pP	08 43 35.0	+5.6
LZH				XP	sP	08 43 37.3	+7.4
LZH				PP	PP	08 45 17.0	+2.6
LZH				S	**S**	**08 50 10.0**	**-0.4**
LZH				XS	sS	08 50 23.0	+10
LZH				*e*SS	SS	08 53 25.0	-9.3
LZH				AMB	AMB		
	comp=Z,194nm,1.2s,mb5.8						
LZH				AMB	AMB		
	comp=Z,919nm,6.0s						
LZH				LR	LR		
	comp=E,2μm,15.0s						
LZH				LR	LR		
	comp=Z,3μm,16.0s,MS5.4						
LZH	**Lanzhou**	**45.49**	**311**	⇑P	**P**	**08 43 29.5**	**+1.5**
LZH				*SP	sP	08 43 37.3	+7.4
LZH						08 45 17.0	
LZH				S	**S**	**08 50 10.0**	**-0.4**
LZH				*SS	sS	08 50 23.0	+10
LZH				*e*SS	SS	08 53 25.0	-9.3
LZH				pmax	pmax		
	comp=Z,194nm,1.2s,mb5.8						
LZH				MLR	MLR		
	comp=Z,3μm,16.0s,MS5.4						
LZH	**Lanzhou**	**45.49**	**311**	⇑P	**P**	**08 43 29.5**	**+1.5**
	comp=Z,194nm,1.2s,mb5.8						
LZH				pP	pP	08 43 35.0	+5.6
LZH				sP	sP	08 43 37.3	+7.4
LZH				PP	PP	08 45 17.0	+2.6
LZH				S	**S**	**08 50 10.0**	**-0.4**
LZH				sS	sS	08 50 23.0	+10
LZH				*e*SS	SS	08 53 25.0	-9.3
LZH				LR	LR		
	comp=Z,3μm,16.0s,MS5.4						
BDT	**Bhumibol Dam**	**45.62**	**284**	P	**P**	**08 43 31.0**	**+1.7**
	comp=Z,22nm,1.0s,mb5.0						
CMAR	**Chiang Mai Arr**	**45.73**	**285**	P	**P**	**08 43 31.1**	**+0.9**
	comp=Z,29nm,0.8s,mb5.2,baz=87,slow=6.1,SNR=66						
CHG	**Chiang Mai**	**45.75**	**286**	‖P	**P**	**08 43 30.7**	**+0.4**
	comp=Z,32nm,1.0s,mb5.2						
CHTO	**Chiang Mai**	**45.75**	**286**	*e*P	**P**	**08 43 29.4**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
CHTO	**Chiang Mai**	**45.75**	**286**	*e*P	**P**	**08 43 29.4**	**-0.9**
	comp=Z,36nm,1.1s,mb5.2						
CAN	**Canberra**	**45.75**	**176**	*e*P	**P**	**08 43 29.8**	**-0.2**
CNB	**Canberra Magne**	**45.77**	**176**	*e*P	**P**	**08 43 30.8**	**+0.6**
TOO	**Toolangi**	**47.89**	**180**	*e*P	**P**	**08 43 46.1**	**-0.6**
AFI	**Afiamalu**	**48.78**	**119**	LR	LR	09 01 19.0	
	comp=Z,2μm,19.2s,MS5.1,baz=23,slow=32						
CIT	**Chita**	**48.83**	**334**	*e*P	**P**	**08 43 51.0**	**-2.8**
CIT				*e*		08 43 58.6	
CIT				*e*		08 44 08.2	
CIT				pmax	pmax		
	comp=Z,183nm,1.8s,mb5.8						
CLNS	**Chul'man**	**48.87**	**345**	*e*P	**P**	**08 43 52.8**	**-1.2**
CLNS				*e*PP	pP	08 44 01.8	+6.4
CLNS				*e*		08 45 17.4	
CLNS				*e*PPP		08 46 41.1	
CLNS				*e*S	**S**	**08 50 58.4**	**+0.4**
CLNS				*e*SS	SS	08 54 15.4	-13
CLNS				pmax	pmax		
	comp=N,16nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.3						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.7s						
CLNS				smax			
	comp=N,218μm,17.3s						
CLNS				smax			
	comp=E,249μm,15.1s						
CLNS				MLR	MLR		
	comp=N,504nm,16.0s,MS4.7						
CLNS				MLR	MLR		
	comp=Z,419nm,13.0s,MS4.6						
CLNS				MLR	MLR		
	comp=E,240nm,12.0s,MS4.7						
ULN	**Ulaanbaatar**	**49.26**	**326**	P	**P**	**08 43 58.5**	**+1.3**
	SNR=32						
ULN	**Ulaanbaatar**	**49.26**	**326**	*c i*P	**P**	**08 43 58.2**	**+1.0**
ULN	**Ulaanbaatar**	**49.26**	**326**	*e*P	**P**	**08 43 58.3**	**+1.1**
	comp=E,50nm,1.0s,mb5.5						
SONM	**Songino Array**	**49.60**	**326**	P	**P**	**08 44 00.3**	**+0.5**
	comp=E,20nm,0.9s,mb5.1,baz=136,slow=9.4,SNR=78						
SONM				LR	LR	09 07 00.3	
	comp=E,2μm,18.2s,MS5.1,baz=78,slow=39						
KLBR	**Kellerberrin**	**49.69**	**212**	*e*P	**P**	**08 43 59.7**	**-0.9**
	comp=E,23nm,0.8s,mb5.2						
GTA	**Gaotai**	**49.72**	**313**	⇑*i*P	**P**	**08 44 02.0**	**+1.1**
GTA				AP	pP	08 44 05.8	+3.5
GTA				XP	sP	08 44 08.5	+5.7
GTA				S	**S**	**08 51 11.8**	**+1.2**
GTA				XS	sS	08 51 17.0	+4.1
GTA				SS	SS	08 54 40.5	-2.5
GTA				AMB	AMB		
	comp=Z,59nm,1.1s,mb5.5						
GTA				AMB	AMB		
	comp=Z,762nm,4.8s						
GTA				LR	LR		
	comp=N,780nm,16.8s,MS5.0						
GTA				LR	LR		
	comp=E,897nm,15.6s,MS5.0						
GTA				LR	LR		
	comp=Z,2μm,20.7s						
MUN	**Mundaring**	**50.80**	**213**	*e*P	**P**	**08 44 07.9**	**-1.2**
NWAO	**Narrogin (SRO)**	**51.02**	**211**	P	**P**	**08 44 10.2**	**-0.5**
	comp=Z,6.5nm,0.8s,mb4.6,baz=67,slow=15,SNR=3.2						
SEY	**Seymchan**	**52.50**		‖*e*P	**P**	**08 44 21.8**	**+0.5**
YAK	**Yakutsk**	**52.66**	**351**	*c i*P	**P**	**08 44 21.9**	**-0.6**
YAK				*e*PP	pP	08 44 28.7	+4.7
YAK				*e*		08 45 27.0	
YAK				*e*S	**S**	**08 51 53.6**	**+3.1**
YAK				pmax	pm

TLY Talaya 53.28 329 *c iP* **P** **08 44 28.0 +0.7**
TLY *i* 08 45 35.0
TLY *i* 08 46 28.5
TLY pmax pmax
comp=Z,62nm,1.0s,mb5.5
TLY MLR MLR
comp=Z,1μm,25.0s,MS4.9
TLY Talaya 53.28 329 *e*P **P** **08 44 28.0 +0.8**
comp=Z,83nm,1.3s,mb5.5
IRK Irkutsk 53.29 330 *e*P **P** **08 44 26.9 -0.4**
IRK *e* 08 45 28.4
IRK pmax pmax
comp=Z,81nm,1.3s,mb5.5
LSA Lhasa 54.03 299 P **P** **08 44 33.0 -0.2**
LSA Lhasa 54.03 299 *e*P **P** **08 44 35.0 +1.8**
LSA pmax pmax
comp=Z,39nm,0.8s,mb5.4
LSA Lhasa 54.03 299 *e*P **P** **08 44 35.0 +1.8**
comp=Z,38nm,0.8s,mb5.4
MOY Mondy 54.65 328 *e*P **P** **08 44 37.8 +0.5**
MOY pmax pmax
comp=Z,87nm,2.8s,mb5.3
ODAN Odare 56.99 295 *e*P **P** **08 44 55.4 +0.8**
comp=Z,216nm,1.4s,mb6.0
RAMN Ramite 57.70 295 *e*P **P** **08 45 00.3 +0.7**
comp=Z,125nm,1.0s,mb5.9
JIRN Jiri 58.12 296 *e*P **P** **08 45 03.5 +0.9**
comp=Z,85nm,0.8s,mb5.8
GUN Gumba 58.42 296 *e*P **P** **08 45 05.6 +1.0**
comp=Z,192nm,0.8s,mb6.2
RPZ Rata Peaks 58.79 159 LR LR 09 05 56.7
comp=Z,2μm,18.5s,MS5.4,baz=337,slow=32
PKIN Phulchoki 58.82 296 *e*P **P** **08 45 07.6 +0.2**
comp=Z,38nm,0.7s,mb5.5
KKN Kakani 58.94 296 *e*P **P** **08 45 08.7 +0.5**
comp=Z,74nm,0.8s,mb5.8
BILL Bilibino 59.01 9⇑ *e*P **P** **08 45 07.9 -0.1**
BILL pmax pmax
comp=Z,46nm,1.3s,mb5.3
BILL Bilibino 59.01 9 *e*P **P** **08 45 07.9 -0.1**
comp=Z,13nm,0.6s,mb5.1
DMN Daman 59.08 296 *e*P **P** **08 45 09.8 +0.6**
comp=Z,99nm,0.8s,mb5.9
GKN Gorkha 59.52 296 *e*P **P** **08 45 12.7 +0.4**
comp=Z,124nm,0.9s,mb6.0
WMQ Urumqi 59.74 315⇑ *i*P **P** **08 45 14.5 +1.0**
WMQ AP pP 08 45 19.0 +4.1
WMQ XP sP 08 45 22.0 +6.6
WMQ PCP PcP 08 46 03.0 +2.7
WMQ PP PP 08 47 28.0 +2.8
WMQ *e*S **S** **08 53 25.0 -0.1**
WMQ AMB AMB
comp=Z,61nm,1.3s,mb5.5
WMQ AMB AMB
comp=Z,570nm,8.0s
WMQ LR LR
comp=N,1μm,23.6s,MS5.2
WMQ LR LR
comp=E,1μm,24.2s,MS5.2
WMQ LR LR
comp=Z,1μm,22.3s,MS5.0
DANN Dangsing 60.32 297 *e*P **P** **08 45 18.4 +0.6**
comp=Z,196nm,0.8s,mb6.2
KOLN Koldanda 60.42 296 *e*P **P** **08 45 19.1 +0.6**
comp=Z,99nm,0.7s,mb5.9
KRAR Krasnoyarsk 60.97 329⇑ *e*P **P** **08 45 22.4 +0.7**
KRAR pmax pmax
comp=Z,24nm,0.8s,mb5.4
TIXI Tiksi 61.89 354⇓ *e*P **P** **08 45 26.8 -0.8**
TIXI pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
TIXI MLR MLR
comp=Z,800nm,19.0s,MS4.9
TIXI Tiksi 61.89 354 *e*P **P** **08 45 26.4 -1.2**
comp=Z,10nm,0.9s,mb5.0
PTH Pithoragarh 63.49 298 *e*P **P** **08 45 40.9 +1.8**
PTH *ex* x 08 48 19.6
JOSI Joshimath 64.11 299 *e*P **P** **08 45 43.6 +0.5**
MK31 Makanchi Array 64.16 317 *i*P **P** **08 45 43.7 +0.6**
MK31 pmax pmax
comp=Z,49nm,1.2s,mb5.4
MK31 Makanchi Array 64.16 317 *e*P **P** **08 45 43.9 +0.7**
MKAR Makanchi Array 64.16 317 P **P** **08 45 43.0 -0.1**
comp=Z,16nm,1.0s,mb5.0,baz=94,slow=8.5,SNR=48
MKAR PKPPKP 09 14 35.8
comp=Z,0.2nm,0.2s,baz=318,slow=1.6,SNR=4.8
ZAA0 Zalesovo Array 64.48 325 *e*P **P** **08 45 44.9 -0.2**
ZALV Zalesovo Beam 64.48 325 P **P** **08 45 44.9 -0.2**
comp=Z,7.9nm,0.8s,mb4.8,baz=111,slow=5.7,SNR=24
ZALV Zalesovo Beam 64.48 325 P **P** **08 45 44.9 -0.2**
HYB Hyderabad 65.14 284 *i*P **P** **08 45 50.0 -0.1**
HYB Hyderabad 65.14 284 *e*P **P** **08 45 50.0 -0.1**
AGRA Agra 65.42 295 *e*P **P** **08 45 51.1 -0.7**
AGRA AMb AMB 08 45 59.4
comp=Z,88nm,1.1s,mb5.7
ASOR Ausora 65.60 297 *e*P **P** **08 45 52.1 -0.8**
NVS Novosibirsk 65.64 326⇑ *i*P **P** **08 45 51.2 -1.4**
NVS *e*S S 08 54 38.8 0.0
NVS pmax pmax
comp=Z,76nm,1.4s,mb5.5
NVS pmax pmax
comp=N,20nm,1.3s
NVS pmax pmax
comp=E,63nm,1.5s
NVS smax
comp=N,55nm,2.8s
NVS smax
comp=E,47nm,2.9s
NDI New Delhi 66.08 297 *e*P **P** **08 45 55.0 -1.0**
AYAN Aya Nagar 66.16 296 *e*P **P** **08 45 55.4 -1.1**
AYAN AMb AMB 08 45 57.0
comp=Z,28nm,1.6s,mb5.1
SMLA Simla 66.19 299 *i*P **P** **08 45 57.4 +0.8**
SONA Sohna 66.20 296 *e*P **P** **08 45 55.9 -0.8**
SONA AMb AMB 08 45 58.9
comp=Z,47nm,1.3s,mb5.4
KDAK Kodiak Island 66.26 31 P **P** **08 45 57.6 +1.0**
comp=Z,4.5nm,0.6s,mb4.7,baz=222,slow=7.7,SNR=2.7
KKR Kurukshetra 66.45 298 *e*P **P** **08 45 58.5 +0.1**
KUDL Kundal 66.72 296 *e*P **P** **08 45 59.4 -0.7**
KUDL AMb AMB 08 46 02.0
comp=Z,72nm,1.2s,mb5.6
KHET Khetri 67.32 296 *e*P **P** **08 46 03.5 -0.5**
KHET AMb AMB 08 46 05.7
comp=Z,35nm,1.5s,mb5.2
KURK Kurchatov 67.34 321 P **P** **08 46 03.7 +0.1**
comp=Z,3.1nm,0.4s,mb4.7,baz=105,slow=6.2,SNR=31
THN Thein Dam 67.46 301 *e*P **P** **08 46 02.7 -2.1**
KSH Kashi 67.64 308 *e*P **P** **08 46 08.0 +2.2**
KSH *e*AP pP 08 46 12.0 +4.8
KSH *e*XP sP 08 46 15.3 +7.5
KSH *e*PCP PcP 08 46 34.0 +1.2
KSH *e*PP PP 08 48 39.0 +4.2
KSH *e*SCP 08 50 36.0
KSH *e*PCS 08 50 38.0
KSH *e*S S 08 55 03.0 -0.7
KSH *e*XS sS 08 55 12.0 +5.9
KSH *e*SCS ScS 08 56 02.0 -3.3
KSH *e*SS SS 08 59 26.0 +1.5
KSH AMB AMB
comp=Z,608nm,2.8s,mb6.1
KSH LR LR
comp=N,1μm,9.2s
KSH LR LR
comp=E,660nm,6.9s
KSH LR LR
comp=Z,930nm,11.8s,MS5.2
TKM2 Tokmak 2 68.24 312 *e*P **P** **08 46 10.3 +0.8**
TKM2 pmax pmax
comp=Z,25nm,1.2s,mb5.1
TKM2 Tokmak 2 68.24 312 *e*P **P** **08 46 10.3 +0.8**
comp=Z,25nm,1.2s,mb5.1
AJM Ajmer 68.38 294 *e*P **P** **08 46 09.0 -1.7**
CHUM Lake Minchumin 68.46 25 *e*P **P** **08 46 11.0 +0.6**
comp=Z,24nm,1.2s,mb5.1
KTH Kantishna Hill 68.93 25 *e*P **P** **08 46 12.7 -0.6**
comp=Z,2μm,0.8s
FRU Bishkek 68.95 312 *e*P **P** **08 46 14.0 +0.1**
FRU pmax pmax
comp=Z,80nm,2.1s,mb5.3
UCH Uchtor 68.97 311 *e*P **P** **08 46 15.6 +1.6**
KAD Karad 69.31 285 *e*P **P** **08 46 16.2 -0.4**
POO Poona 69.53 286 *ex* x 08 46 05.5
EKS2 Erkin-Say 69.55 312 *e*P **P** **08 46 18.0 +0.4**
comp=Z,68nm,0.6s,mb5.8

AML Almayashu 69.57 311 *e*P **P** **08 46 19.2 +1.4**
comp=Z,46nm,1.3s,mb5.2
COLD Coldfoot 70.46 22 *e*P **P** **08 46 22.9 +0.2**
comp=Z,110nm,1.2s,mb5.7
COLA College 70.62 25 *e*P **P** **08 46 23.2 -0.5**
COLA pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
COLA College 70.62 25 *e*P **P** **08 46 23.2 -0.5**
comp=Z,8.4nm,0.9s,mb4.7
KK31 Karatay Array 71.97 312 *i*P **P** **08 46 32.4 0.0**
KK31 pmax pmax
comp=Z,24nm,0.9s,mb5.1
VOSK Vostochnaya 72.34 322 P **P** **08 46 33.5 -0.9**
VOSK pmax pmax
comp=Z,31nm,1.8s,mb4.9
BVA0 Borovoye Array 72.73 322 *i*P **P** **08 46 36.7 0.0**
BVA0 pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BVAR Borovoye Array 72.73 322 P **P** **08 46 36.9 +0.3**
comp=Z,18nm,0.8s,mb5.1,baz=101,slow=7.7,SNR=79
BRVK Borovoye 72.79 322 P **P** **08 46 37.5 +0.4**
comp=Z,329nm,0.8s,mb6.3,SNR=7.9
BRVK Borovoye 72.79 322 P **P** **08 46 37.6 +0.5**
SNR=23
BRVK Borovoye 72.79 322 *e*P **P** **08 46 37.4 +0.3**
BRVK pmax pmax
comp=Z,93nm,1.2s,mb5.6
BRVK Borovoye 72.79 322 *e*P **P** **08 46 37.4 +0.3**
comp=Z,93nm,1.2s,mb5.6
KBL Kabul 73.04 303 *e*P **P** **08 46 39.0 +0.1**
KBL pmax pmax
comp=Z,28nm,0.9s,mb5.2
KBL Kabul 73.04 303 *e*P **P** **08 46 39.0 +0.1**
comp=Z,28nm,0.9s,mb5.2
DAWY Dawson 74.01 26 *e*P **P** **08 46 44.3 +0.3**
HYT Haines Junctio 74.45 30 *e*P **P** **08 46 47.5 +0.9**
SVE Sverdlovsk 78.48 326 *e*P **P** **08 47 10.1 +0.5**
SVE pmax pmax
comp=Z,24nm,1.1s,mb5.0
AB31 Akbulak array 79.25 318 *i*P **P** **08 47 13.0 -1.0**
AB31 pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
ARU Arti 79.64 326 *c iP* **P** **08 47 15.4 -0.5**
ARU *e* 08 50 17.0
ARU *e*S S 08 57 21.5 +2.8
ARU *e*SS SS 09 02 25.3 -1.2
ARU pmax pmax
comp=Z,29nm,1.7s,mb4.9
ARU Arti 79.64 326 *e*P **P** **08 47 15.8 -0.2**
comp=Z,29nm,1.1s,mb5.1
AKTK Aktyubinsk 80.40 320 P **P** **08 47 18.9 -1.3**
AKTO Aktyubinsk 80.40 320 P **P** **08 47 18.9 -1.3**
comp=Z,6.5nm,0.9s,mb4.5,baz=80,slow=7.4,SNR=14
ABKT Ailbek 81.61 307 P **P** **08 47 27.8 +0.8**
comp=Z,279nm,1.0s,mb6.1,SNR=8.1
WBK Wadi Bani Khal 82.92 292 P **P** **08 47 35.0 +0.9**
SNR=9.3
BMW Boistfort Moun 83.24 44 *e*P **P** **08 47 37.4 +2.2**
BIDO Bidbid 83.56 293⇑ P **P** **08 47 38.2 +0.8**
SNR=10
HUMO Hull Mountain 84.00 48 *e*P **P** **08 47 38.8 -0.4**
comp=Z,30nm,1.4s,mb5.2
HOQ Hoqain 84.29 293⇑ P **P** **08 47 41.8 +0.7**
SNR=8.0
YBH Yreka Blue Hor 84.31 49 P **P** **08 47 41.5 +0.6**
comp=Z,4.7nm,1.1s,mb4.5,baz=349,slow=2.1,SNR=3.9
YKA Yellowknife Ar 85.20 27 P **P** **08 47 43.7 -1.2**
comp=Z,1.7nm,0.6s,mb4.3,baz=284,slow=5.0,SNR=6.5
YKA Yellowknife Ar 85.20 27 P **P** **08 47 43.7 -1.2**
MIR Mirnyy 85.87 199 *e*P **P** **08 47 48.0 0.0**
MIR pmax pmax
comp=Z,100nm,1.0s,mb6.0
MOD Modoc 86.06 48 *e*P **P** **08 47 50.2 +0.6**
comp=Z,7.4nm,0.9s,mb4.9
CMB Columbia Colle 86.71 52 *e*P **P** **08 47 53.1 +0.2**
CMB pmax pmax
comp=Z,12nm,0.9s,mb5.1
CMB Columbia Colle 86.71 52 *e*P **P** **08 47 53.1 +0.2**
comp=Z,12nm,0.9s,mb5.1
NEW Newport 87.00 42 *e*P **P** **08 47 54.1 0.0**
NEW pmax pmax
comp=Z,22nm,1.3s
NEW Newport 87.00 42 *e*P **P** **08 47 54.1 0.0**
comp=Z,22nm,1.3s,mb5.2
SPITS Spitsbergen Ar 87.13 351 P **P** **08 47 52.5 -1.7**
comp=Z,8.4nm,0.9s,mb5.0,baz=352,slow=9.6,SNR=8.0
BMO Blue Mountains 87.61 45 *e*P **P** **08 47 56.9 -0.2**
BMO pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
BMO Blue Mountains 87.61 45 *e*P **P** **08 47 56.9 -0.2**
comp=Z,8.6nm,1.0s,mb4.9
NVAR Mina Array Bea 88.24 51 P **P** **08 48 01.2 +1.0**
comp=Z,4.4nm,0.7s,mb4.8,baz=260,slow=5.1,SNR=28
KLMR Klimovskoe 88.53 332 *e*P **P** **08 48 00.0 -1.1**
KLMR pmax pmax
comp=Z,18nm,0.9s,mb5.4
MWC Mount Wilson 89.31 55 *e*P **P** **08 48 01.8 -3.6**
MWC pmax pmax
comp=Z,29nm,1.4s,mb5.4
MWC Mount Wilson 89.31 55 *e*P **P** **08 48 01.8 -3.6**
comp=Z,29nm,1.4s,mb5.4
KEV Kevo 89.59 342 *ep* **P** **08 48 00.2 -5.8**
HLID Hailey 89.94 46 *e*P **P** **08 48 08.7 +0.6**
comp=Z,7.7nm,1.0s,mb5.0
ELK Elko 90.03 49 *e*P **P** **08 48 09.6 +1.0**
ELK pmax pmax
comp=Z,14nm,1.0s
ELK Elko 90.03 49 *e*P **P** **08 48 09.6 +1.0**
comp=Z,14nm,1.0s,mb5.3
GSC Goldstone 90.09 54 *e*P **P** **08 48 08.8 -0.2**
GSC pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
GSC Goldstone 90.09 54 *e*P **P** **08 48 08.8 -0.2**
comp=Z,8.8nm,1.0s,mb5.0
TPNV Topopah Spring 90.15 52 *e*P **P** **08 48 10.1 +0.8**
TPNV pmax pmax
comp=Z,17nm,1.0s,mb5.3
TPNV Topopah Spring 90.15 52 *e*P **P** **08 48 10.1 +0.8**
comp=Z,17nm,1.0s,mb5.3
ARCES ARCESS Array B 90.16 342 P **P** **08 48 08.0 -0.6**
comp=Z,3.6nm,0.8s,mb4.7,baz=77,slow=5.4,SNR=6.6
ARCES ARCESS Array B 90.16 342 P **P** **08 48 08.0 -0.6**
MCMT McKenzie Canyo 90.69 44 *e*P **P** **08 48 12.7 +1.1**
PFO Pinyon Flat Ob 90.75 56 P **P** **08 48 13.8 +1.6**
comp=Z,3.0nm,0.8s,mb4.7,baz=352,slow=2.7,SNR=4.9
PFO Pinyon Flat Ob 90.75 56 P **P** **08 48 13.8 +1.6**
JOF Joensuu 91.32 335 *ep* **P** **08 48 11.7 -2.4**
comp=Z,8.9nm,0.9s,mb5.1
JOF Joensuu 91.32 335 *e*P **P** **08 48 11.7 -2.4**
JOF pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
GNI Garni 91.42 311⇑ *e*P **P** **08 48 16.4 +1.3**
GNI pmax pmax
comp=Z,3.0nm,0.6s
GNI MLR MLR
comp=Z,600nm,25.0s
KIV Kislovodsk 91.87 315 *e*P **P** **08 48 21.5 +4.4**
KIV pmax pmax
comp=Z,19nm,1.0s,mb5.4
KIV MLR MLR
comp=Z,466nm,19.0s,MS5.0
DUG Dugway 91.96 49 *e*P **P** **08 48 17.7 +0.1**
DUG pmax pmax
comp=Z,15nm,1.2s,mb5.2
DUG Dugway 91.96 49 *e*P **P** **08 48 17.6 0.0**
comp=Z,15nm,1.2s,mb5.2
OBN Obninsk 92.00 327⇓ *e*P **P** **08 48 16.5 -1.0**
OBN *e* 08 48 29.7
OBN *e* 08 51 58.6
OBN *e*SS SKSac 08 58 46.3 -5.0
OBN pmax pmax
comp=Z,6.0nm,0.5s,mb5.2
OBN MLR MLR
comp=Z,500nm,23.0s,MS4.9
NAY Al-Naaiem 92.08 300 *e*P **P** **08 48 16.8 -1.6**
NAY AMb AMB 08 48 25.3
comp=Z,35nm,0.9s,mb5.7
ARUT Antelope Range 92.12 51 *e*P **P** **08 48 20.0 +1.6**
RST Umm Al-Ruwaisa 92.23 300 *e*P **P** **08 48 16.9 -2.2**
RST AMb AMB 08 48 26.2
comp=Z,28nm,1.2s,mb5.5
JLU Jordanelle 92.85 48 *e*P **P** **08 48 22.6 +0.9**
MSU Marysvale 92.89 50 *e*P **P** **08 48 22.8 +0.9**
DAU Daniels Canyon 93.04 48 *e*P **P** **08 48 22.3 -0.3**
PDAR Pinedale Array 93.57 45 P **P** **08 48 26.1 +1.2**
comp=Z,0.2nm,0.5s,baz=239,slow=11,SNR=3.0

KAF Kangasniemi 93.75 336 *ep* **P** **08 48 21.8 -3.5**
comp=Z,8.6nm,0.9s,mb5.2
KAF Kangasniemi 93.75 336 *e*P **P** **08 48 21.8 -3.5**
KAF pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
SRU San Rafael 93.96 49 *e*P **P** **08 48 27.2 +0.3**
SRU pmax pmax
comp=Z,9.0nm,1.1s,mb5.1
SRU San Rafael 93.96 49 *e*P **P** **08 48 27.2 +0.3**
comp=Z,8.7nm,1.1s,mb5.1
WUAZ Wupatki 94.33 53 *e*P **P** **08 48 30.1 +1.5**
comp=Z,14nm,1.0s,mb5.3
PV01 Paradox Valley 95.71 50 *e*P **P** **08 48 35.1 +0.2**
MAW Mawson 96.93 203 P **P** **08 48 40.0 +0.3**
comp=Z,1.6nm,0.9s,mb4.5,baz=117,slow=6.8,SNR=2.4
AKASG Malin Array Be 97.88 325 P **P** **08 48 41.1 -3.3**
comp=Z,0.1nm,0.2s,baz=49,slow=5.7,SNR=6.6
AKASG PP PP 08 52 39.4 -2.9
comp=Z,0.2nm,0.2s,baz=55,slow=7.8,SNR=4.5
ULM Lac du Bonnet 99.31 35 LR LR 09 31 00.3
comp=Z,894nm,18.8s,MS5.3,baz=349,slow=34
NOA NORSAR Array B 100.11 339 PP PP 08 53 05.2 +6.3
comp=Z,2.5nm,1.0s,baz=48,slow=7.7,SNR=3.5
TXAR Lajitas Array 102.43 57 P Pdif 08 49 05.7 +1.1
comp=Z,0.2nm,0.7s,baz=222,slow=1.2,SNR=3.3
TXAR PP PP 08 53 19.7 +2.0
comp=Z,0.3nm,0.8s,baz=269,slow=6.3,SNR=3.4
TXAR Lajitas Array 102.43 57 P Pdif 08 49 05.7 +1.1
TXAR PP PP 08 53 19.7 +2.0
CLL Collm 106.01 331 *e*PP PP 08 53 43.0 -0.3
KHC Kasperske Hory 107.15 329 *e*PKP PKiKP 08 53 32.5 -2.5
KHC *e*PP PP 08 53 49.5 -2.3
GERES GERESS Array B 107.27 329 PP PP 08 53 54.4 +1.7
comp=Z,0.6nm,0.8s,baz=46,slow=6.1,SNR=4.1
GRF Grafenberg Arr 107.94 331 *e*PP PP 08 53 52.1 -5.4
ESDC Sonseca Array 122.57 332 PP PP 08 55 39.2 -1.3
comp=Z,0.7nm,0.6s,baz=17,slow=5.8,SNR=4.3
TORD Torodi Ar. Bea 137.11 303 PKP PKPdf 08 54 33.1 +0.2
comp=Z,1.7nm,0.8s,baz=23,slow=1.4,SNR=6.0
TORD PP PP 08 57 15.2 -1.2
comp=Z,5.4nm,1.2s,baz=56,slow=5.7,SNR=7.5
DBIC Dimbokro 145.96 299 PKPbc PKPbc 08 54 48.6 -0.8
comp=Z,9.4nm,0.7s,baz=68,slow=2.9,SNR=13
KIC Kosan Boka 146.01 298 *e*PKP1 PKPbc 08 54 49.0 -0.6
comp=Z,194nm,1.2s
TIC Toumodi 146.11 299 *e*PKP1 PKPbc 08 54 49.5 -0.4
comp=Z,113nm,1.0s
LIC Lamto 146.32 298 *e*PKP1 PKPbc 08 54 50.1 -0.5
comp=Z,88nm,0.9s
LPAZ La Paz 146.74 104 PKPbc PKPbc 08 54 51.9 +0.3
comp=Z,8.2nm,0.6s,baz=287,slow=3.3,SNR=32
CPUP Villa Florida 153.27 129 PKPbc PKPbc 08 55 08.0 +0.5
comp=Z,0.8nm,0.4s,baz=227,slow=3.4,SNR=5.9

BJI 30 08:39:39.0, 2530N×10188E, h16km, ML3.7, 1C, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**0.80**	**103**	PG	Pg	08 39 53.0	-1.6
KMI				SG	Sg	08 40 04.3	-0.8
KMI				Smax			
	comp=N,1μm,0.5s						
KMI				Smax			
	comp=E,989nm,0.5s						
GYA	**Guiyang**	**4.46**	**74**	P	Pn	08 40 47.3	+1.3
GYA				Smax			
	comp=N,20nm,0.7s						
GYA				Smax			
	comp=E,30nm,0.7s						
CHRT	**Chiangrai**	**5.74**	**200**	P	Pg	08 41 29.0	0.0
	comp=E,158nm,1.0s						
CD2	**Chengdu**	**5.83**	**16**	*e*P	Pn	08 41 06.3	+1.5
CD2				S	Sn	08 42 12.3	+1.0
CD2				SG	Sg	08 42 42.0	-4.1
CD2				Smax			
	comp=N,60nm,1.1s						
CD2				Smax			
	comp=E,40nm,1.6s						
NANT	**Nan**	**6.56**	**190**	⇑P	Pg	08 41 40.0	-4.6
	comp=E,565nm,1.0s						

IDC 30 08:45:45.7±4.2, 4895S×16466E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.9/13, mbtmp3.9/3, MS4.8/2, Ms1 4.8/2, ms1mx4.0/26, Error ellipse: s-maj=375.7km s-min=67.2km az=42.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**13.96**	**45**	LR	LR	08 53 36.2	
	comp=Z,4μm,21.2s,baz=194,slow=34						
ASAR	**Alice Springs**	**34.96**	**305**	P	P	08 52 39.6	+0.3
	1.1nm,0.8s,baz=134,slow=8.1,SNR=9.2						
WRA	**Warramunga Arr**	**37.79**	**309**	P	P	08 53 03.3	-0.3
	1.1nm,0.8s,baz=153,slow=10,SNR=7.6						
FITZ	**Fitzroy Crossi**	**44.00**	**300**	P	P	08 53 54.6	-0.1
	1.7nm,0.6s,baz=179,slow=9.3,SNR=6.0						
CBIJ	**Chichi jima**	**78.33**	**340**	LR	LR	09 26 49.2	
	comp=Z,482nm,20.8s,baz=264,slow=31						
AKASG	**Malin Array Be**	**151.52**	**291**	PKPbc	PKPbc	09 05 40.5	-0.2
	0.8nm,0.5s,baz=100,slow=1.9,SNR=4.3						

*IDC **30** 08:50:59.5±0.9, 2142S×16948E, h0km, mb4.1/10, mb1 4.3/10, mb1mx4.1/16, mbtmp4.1/10, MS4.9/1, Ms1 4.9/1, ms1mx3.4/32, Error ellipse: s-maj=29.9km s-min=22.5km az=140.0*
*ISCJB **30** 08:51:03.0±0.9, 215S±02×1695E±0.1, h33km, mb4.0/10, Error ellipse: s-maj=26.9km s-min=11.4km az=158.4*
*NEIC **30** 08:51:06.8±1.0, 2069S×16857E, h10km, Error ellipse: s-maj=44.5km s-min=17.2km az=140.0*

ISC 30 08:51:05.0±0.8, 214S±02×1695E±01, h35km, n33, σ1§26/13, mb4.0/10, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.91**	**257**	*e*P	**Pn**	**08 51 47.6**	**-1.2**
DZM				*e*S	**Sn**	**08 52 24.2**	**+1.6**
DZM	**Mont Dzumac**	**2.91**	**257**	*e*Pn	**Pn**	**08 51 46.5**	**-2.3**
STKA	**Stephens Creek**	**26.95**	**241**	P	P	**08 56 43.8**	**+0.5**
	2.4nm,0.8s,mb3.8,baz=48,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**32.88**	**266**	P	P	**08 57 34.5**	**-1.5**
	0.6nm,0.8s,mb3.6,baz=96,slow=8.4,SNR=9.9						
ASAR	**Alice Springs**	**32.90**	**259**	P	P	**08 57 35.0**	**-1.1**
	1.3nm,0.8s,mb3.9,baz=85,slow=9.6,SNR=13						
FITZ	**Fitzroy Crossi**	**41.31**	**267**	P	P	**08 58 47.0**	**-0.5**
	1.5nm,0.6s,mb3.8,baz=133,slow=13,SNR=7.8						
KAPI	**Kappang**	**50.85**	**281**	LR	LR	09 19 16.4	
	comp=Z,1μm,21.1s,baz=247,slow=33						
MJAR	**Matsushiro Arr**	**64.78**	**332**	P	P	**09 01 38.0**	**-2.0**
	1.5nm,0.9s,mb4.0,baz=166,slow=8.9,SNR=4.7						
QSPA	**South Pole Qui**	**68.65**	**180**	P	P	**09 02 04.4**	**+0.2**
	1.3nm,1.0s,mb3.8,baz=77,slow=0.6,SNR=9.2						
PETK	**Petropavlovsk-**	**74.91**	**353**	P	P	**09 02 43.5**	**+1.5**
	6.7nm,1.6s,mb4.5,baz=4.8,slow=8.9,SNR=4.2						
CMAR	**Chiang Mai Arr**	**79.62**	**295**	P	P	**09 03 11.1**	**+1.9**
	0.6nm,0.3s,mb4.0,baz=160,slow=5.8,SNR=4.5						
SONM	**Songino Array**	**89.10**	**323**	P	P	**09 03 57.0**	**+0.5**
	0.6nm,0.6s,mb4.1,baz=100,slow=1.7,SNR=4.1						
NVAR	**Mina Array Bea**	**90.06**	**48**	P	P	**09 04 01.4**	**+0.2**
	2.0nm,0.7s,mb4.6,baz=225,slow=8.5,SNR=15						
ARCES	**ARCESS Array B**	**127.22**	**345**	PKP	PKPdf	09 10 04.2	-0.8
	3.5nm,0.9s,baz=48,slow=1.8,SNR=6.2						
BRG	**Berggiesshubel**	**144.91**	**333**	*e*P	PKPdf	09 10 37.4	-0.8
	3.5nm,0.8s						
CLL	**Collm**	**144.98**	**334**	*e*(PKP)	PKPdf	09 10 37.0	-1.3
	comp=Z,5.0nm,0.9s						
KHC	**Kasperske Hory**	**146.35**	**331**	*e*PKP	PKPbc	09 10 42.5	+0.6
GEC2	**GERESS Array S**	**146.51**	**331**	*e*PKPbc	PKPbc	09 10 43.2	+0.8
GERES	**GERESS Array B**	**146.51**	**331**	PKPbc	PKPbc	09 10 42.2	-0.2
	comp=Z,1.1nm,0.5s,baz=29,slow=2.7,SNR=12						
GRA1	**Grafenberg Arr**	**146.95**	**334**	*e*PKP	PKPbc	09 10 43.7	+0.1
GRF	**Grafenberg Arr**	**146.95**	**334**	*e*PKP	PKPbc	09 10 43.7	+0.1
CDF	**Champ du Feu**	**149.53**	**336**	*e*PKP1	PKPbc	09 10 50.3	-0.2
	comp=Z,9.3nm,1.0s						
HINF	**Hinteralfeld**	**150.18**	**336**	*e*PKP1	PKPbc	09 10 51.6	-0.5
HAU	**Haudompre**	**150.21**	**337**	*e*PKP1	PKPbc	09 10 52.0	-0.1
MEZF	**Maizieres J'vi**	**150.24**	**339**	*e*PKP1	PKPbc	09 10 52.3	+0.1
CABF	**La Chapelle**	**151.47**	**336**	*e*PKP1	PKPbc	09 10 55.6	+0.4
	comp=Z,2.6nm,0.5s						
LOR	**Lormes**	**151.71**	**339**	*e*PKP1	PKPbc	09 10 55.4	-0.3
GRR	**Gorron**	**152.00**	**346**	*e*PKP1	PKPbc	09 10 56.1	-0.2
SSF	**Saint Saulge**	**152.01**	**339**	*e*PKP1	PKPbc	09 10 56.4	0.0
LPL	**La Plagne**	**152.11**	**334**	*e*PKP1	PKPbc	09 10 57.2	+0.5
AVF	**Avril sur Loir**	**152.29**	**339**	*e*PKP1	PKPbc	09 10 56.5	-0.5

BGF	**Bois d'Agland**	**152.67**	**340**	*e*PKP1	PKPbc	09 10 58.4	+0.5
	comp=Z,6.7nm,0.6s							
ORIF	**Oris-en-Rattie**	**152.95**	**334**	*e*PKP1	PKPbc	09 10 58.8	+0.3

NEIC ***30*** *08:51:47.1, 31.39S×69.55W, h137km, MD3.5(GUC), After GUC.*

GUC 30 08:51:47.1±0.7, 31.39S×69.55W, h137km±8km, MD3.5, ML3.5, 15C-8D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTCH	**Petorca**	**1.46**	**233**	⇑*i*P	Pn	08 52 15.8	+0.5
PTCH				*i* S	Sn	08 52 37.0	+0.2
PTCH				AML	AML	08 52 40.6	
	comp=E,616nm,0.1s						
PTCH	**Petorca**	**1.46**	**233**	⇑*i*P	Pn	08 52 15.8	+0.5
PTCH				*i* S	Sn	08 52 37.0	+0.2
OVCH	**Ovalle**	**1.62**	**298**	⇓*i*P	Pn	08 52 17.9	+0.8
OVCH				*i* S	Sn	08 52 40.9	+1.0
OVCH				AML	AML	08 52 41.7	
	comp=N,860nm,0.2s						
OVCH	**Ovalle**	**1.62**	**298**	⇓*i*P	Pn	08 52 17.9	+0.8
OVCH				*i* S	Sn	08 52 40.9	+1.0
TLL	**Tololo Astrono**	**1.63**	**318**	⇑*i*P	Pn	08 52 18.4	+1.2
TLL				*i* S	Sn	08 52 41.6	+1.5
TLL				AML	AML	08 52 46.6	
	comp=E,339nm,0.7s						
TLL	**Tololo Astrono**	**1.63**	**318**	⇑*i*P	Pn	08 52 18.4	+1.2
TLL				*i* S	Sn	08 52 41.6	+1.5
CHNG	**Los Chungos**	**1.74**	**253**	⇑*i*P	Pn	08 52 19.0	+0.7
CHNG				*i* S	Sn	08 52 42.6	+0.3
CHNG				AML	AML	08 52 52.4	
	comp=E,225nm,0.2s						
PACH	**Papudo**	**1.97**	**234**	⇑*i*P	Pn	08 52 21.5	+0.4
PACH				*i* S	Sn	08 52 47.6	+0.5
PEL	**Peldehue**	**2.00**	**209**	⇓*i*P	Pn	08 52 22.1	+0.7
PEL				*i* S	Sn	08 52 48.3	+0.6
PEL				AML	AML	08 52 49.5	
	comp=E,280nm,0.3s						
FCH	**Farellones**	**2.03**	**198**	⇑*i*P	Pn	08 52 23.0	+1.2
FCH				*i* S	Sn	08 52 50.4	+1.9
FCH				AML	AML	08 52 56.7	
	comp=E,167nm,0.2s						
LSCH	**La Serena**	**2.08**	**315**	⇑*i*P	Pn	08 52 23.1	+0.6
LSCH				*i* S	Sn	08 52 49.6	+0.1
LSCH				AML	AML	08 52 50.4	
	comp=N,156nm,0.3s						
LSCH	**La Serena**	**2.08**	**315**	⇑*i*P	Pn	08 52 23.1	+0.6
LSCH				*i* S	Sn	08 52 49.6	+0.1
CLCH	**Cerro Calan**	**2.17**	**202**	*i* P	Pn	08 52 24.1	+0.7
CLCH				*i* S	Sn	08 52 52.2	+0.8
CLCH				AML	AML	08 53 04.1	
	comp=E,169nm,0.6s						
RCDM	**Rinconada Maip**	**2.35**	**207**	⇑*i*P	Pn	08 52 26.1	+0.4
RCDM				*i* S	Sn	08 52 55.7	+0.4
RCDM				AML	AML	08 52 59.8	
	comp=E,319nm,0.1s						
RCDM	**Rinconada Maip**	**2.35**	**207**	⇑*i*P	Pn	08 52 26.1	+0.4
RCDM				*i* S	Sn	08 52 55.7	+0.4
ANTU	**Antumapu**	**2.36**	**203**	⇓*i*P	Pn	08 52 26.3	+0.5
ANTU				*i* S	Sn	08 52 56.2	+0.7
ANTU				AML	AML	08 52 59.5	
	comp=E,172nm,0.4s						
ANTU	**Antumapu**	**2.36**	**203**	⇓*i*P	Pn	08 52 26.3	+0.5
ANTU				*i* S	Sn	08 52 56.2	+0.7
PCH	**Pirque**	**2.37**	**200**	⇓*i*P	Pn	08 52 26.6	+0.7
PCH				*i* S	Sn	08 52 56.6	+0.8
LMEL	**Las Melosas**	**2.51**	**193**	*e*P	Pn	08 52 28.6	+0.9
LMEL				*i* S	Sn	08 53 00.2	+1.2
LMEL				AML	AML	08 53 07.8	
	comp=N,125nm,0.2s						
LMEL	**Las Melosas**	**2.51**	**193**	*e*P	Pn	08 52 28.6	+0.9
LMEL				*i* S	Sn	08 53 00.2	+1.2
TACH	**Talagante**	**2.54**	**207**	⇑*i*P	Pn	08 52 28.3	+0.2
TACH				*i* S	Sn	08 53 00.1	+0.4
LCO	**Las Campanas**	**2.58**	**337**	⇓*i*P	Pn	08 52 29.5	+0.9
LCO				*i* S	Sn	08 53 01.8	+1.4
CHCH	**Chadas Angostu**	**2.70**	**200**	*i* P	Pn	08 52 30.6	+0.5
CHCH				*i* S	Sn	08 53 03.8	+0.5
CACH	**El Canelo**	**2.86**	**198**	*i* P	Pn	08 52 33.7	+1.6
CACH				*i* S	Sn	08 53 08.2	+1.3
VACH	**Vallenar**	**3.00**	**339**	⇑*i*P	Pn	08 52 34.4	+0.4
VACH				*i* S	Sn	08 53 10.2	+0.1
VACH				AML	AML	08 53 11.9	
	comp=E,548nm,0.2s						
VACH	**Vallenar**	**3.00**	**339**	⇑*i*P	Pn	08 52 34.4	+0.4
VACH				*i* S	Sn	08 53 10.2	+0.1
LNV	**Longovilo**	**3.00**	**211**	⇑*i*P	Pn	08 52 33.2	-0.8
LNV				*i* S	Sn	08 53 09.4	-0.8
CICH	**Cipreses**	**3.01**	**194**	⇓*i*P	Pn	08 52 35.1	+1.0
CICH				*i* S	Sn	08 53 11.1	+0.7

IDC ***30*** *08:54:32.2±2.0, 48.94S×164.61E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.8/13, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=54.8km s-min=30.7km az=164.0*

NEIC ***30*** *08:54:32.9±1.5, 49.25S×164.54E, h10km, Error ellipse: s-maj=36.6km s-min=9.9km az=154.0*

ISC 30 08:54:31.9±3.6, 494S±05×1646E±03, h10km, n13, σ0§83/11, mb3.7/3, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**4.16**	**34**	P	**Pn**	**08 55 35.2**	**-0.1**
MLZ	**Mavora Lakes**	**4.71**	**32**	P	**Pn**	**08 55 43.3**	**+0.4**
TUZ	**Tuapeka**	**4.83**	**47**	P	**Pn**	**08 55 45.1**	**+0.6**
MSZ	**Milford Sound**	**5.23**	**27**	P	**Pn**	**08 55 51.3**	**+1.3**
EAZ	**Earnscleugh**	**5.24**	**39**	P	**Pn**	**08 55 50.4**	**+0.2**
ODZ	**Otahua Downs**	**5.98**	**46**	P	**Pn**	**08 56 00.3**	**0.0**
RPZ	**Rata Peaks**	**7.20**	**41**	Pn	**Pn**	**08 56 14.8**	**-2.3**
	1.2nm,0.3s,baz=101,slow=12,SNR=6.1						
RPZ				Sn	**Sn**	**08 57 33.3**	**-5.6**
	1.9nm,0.3s,baz=67,slow=20,SNR=4.7						
ASAR	**Alice Springs**	**35.17**	**306**	P	**P**	**09 01 25.5**	**-0.3**
	0.6nm,0.6s,mb3.7,baz=141,slow=7.9,SNR=14						
WRA	**Warramunga Arr**	**38.03**	**310**	P	**P**	**09 01 49.7**	**-0.4**
	1.2nm,0.8s,mb3.6,baz=137,slow=8.2,SNR=7.3						
WRA				PcP	PcP	09 04 06.7	+1.2
	0.5nm,0.9s,baz=135,slow=2.8,SNR=7.5						
FITZ	**Fitzroy Crossi**	**44.18**	**301**	P	**P**	**09 02 41.3**	**+0.4**
	0.8nm,0.5s,mb3.7,baz=166,slow=12,SNR=4.4						
AKASG	**Malin Array Be**	**151.63**	**290**	PKPbc	PKPbc	09 14 26.5	+1.1
	0.8nm,0.5s,baz=84,slow=2.6,SNR=6.8						
AKASG	**Malin Array Be**	**151.63**	**290**	PKPbc	PKPbc	09 14 26.5	+1.1
ARCES	**ARCESS Array B**	**151.91**	**331**	PKPbc	PKPbc	09 14 26.8	+1.3
	3.9nm,0.8s,baz=35,slow=4.4,SNR=6.9						

ISCJB ***30*** *09:00:54.0±3.8, 177S±02×1784W±0.1, h537km±45km, mb3.6/7, Error ellipse: s-maj=34.4km s-min=17.7km az=157.4*

IDC ***30*** *09:00:55.5±3.3, 1768S×17833W, h540km±37km, mb3.2/7, mb1 3.5/7, mb1mx3.3/17, mbtmp3.2/7, Error ellipse: s-maj=30.0km s-min=14.2km az=154.0*

NEIC ***30*** *09:00:55.9±4.6, 1764S×17838W, h548km±52km, Error ellipse: s-maj=27.5km s-min=20.5km az=155.0*

ISC 30 09:00:55.1±3.8, 177S±02×1783W±01, h538km±44km, n16, σ0§46/13, mb3.6/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.79**	**241**	P	**P**	**09 07 34.3**	**+0.5**
	1.6nm,0.6s,mb3.8,baz=86,slow=13,SNR=5.6						
STKA	**Stephens Creek**	**38.79**	**241**	*e*P	**P**	**09 07 34.0**	**+0.2**
WB2	**Warramunga Arr**	**44.74**	**259**	*e*P	**P**	**09 08 20.4**	**-0.4**
WRAB	**Tennant Creek**	**44.74**	**259**	P	**P**	**09 08 20.8**	**-0.1**
WRA	**Warramunga Arr**	**44.75**	**259**	P	**P**	**09 08 20.7**	**-0.2**
	0.5nm,0.4s,mb3.4,baz=91,slow=6.8,SNR=23						
WRA				PcP	PcP	09 09 51.9	+0.2
	1.0nm,0.7s,baz=90,slow=3.7,SNR=6.3						
ASAR	**Alice Springs**	**44.92**	**254**	P	**P**	**09 08 22.5**	**+0.3**
	11nm,0.5s,mb4.6,baz=89,slow=8.2,SNR=228						
ASAR				PcP	PcP	09 09 52.4	+0.2
	1.4nm,0.6s,baz=103,slow=3.7,SNR=12						
ASAR				S	**S**	**09 14 21.6**	**+0.3**
	0.7nm,1.1s,baz=80,slow=14,SNR=4.1						
QSPA	**South Pole Qui**	**72.33**	**180**	P	**P**	**09 11 26.5**	**+0.7**
	0.6nm,0.5s,mb3.2,baz=97,slow=7.8,SNR=9.9						
NVAR	**Mina Array Bea**	**79.23**	**44**	P	**P**	**09 12 04.5**	**-0.1**
	1.2nm,0.8s,mb3.3,baz=224,slow=9.0,SNR=6.8						
TXAR	**Lajitas Array**	**85.83**	**58**	P	**P**	**09 12 38.8**	**+0.8**
	0.7nm,0.7s,mb3.4,baz=218,slow=5.8,SNR=9.6						
PDAR	**Pinedale Array**	**87.16**	**43**	P	**P**	**09 12 43.7**	**-0.3**
	0.6nm,0.7s,mb3.3,baz=5.7,slow=1.5,SNR=4.0						
VNA3	**Neumayer Olymp**	**90.92**	**176**	*e*	**P**	**09 13 00.6**	**-0.5**
VNA3				*e*		09 13 02.6	
VNA2	**Neumayer--Watz**	**91.36**	**177**	*e*	**P**	**09 13 02.4**	**-0.7**
	baz=191,slow=5.6						
VNA2				*e*		09 13 04.8	
ARCES	**ARCESS Array B**	**126.15**	**350**	PKP	PKPdf	09 18 55.3	-0.4
	3.7nm,1.1s,baz=45,slow=1.9,SNR=3.8						
CLL	**Collm**	**145.30**	**347**	*i* PKPbc	PKPbc	09 19 32.2	-0.4
	comp=Z,4.0nm,0.7s						
GERES	**GERESS Array B**	**147.46**	**345**	PKPbc	PKPbc	09 19 38.5	0.0
	comp=Z,1.4nm,0.7s,baz=31,slow=2.6,SNR=9.5						
DAVOX	**Davos/Dischmat**	**150.24**	**349**	PKPbc	PKPbc	09 19 45.3	-0.1
	comp=Z,1.7nm,0.5s,baz=260,slow=6.1,SNR=6.5						

UCR ***30*** *09:06:17.9, 9.44N×81.89W, h21km, MD4.1*

CASC 30 09:06:19.1±1.8, 942N×8199W, h20km±21km, MD4.1, 2C-2D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIO	**Limon**	**1.18**	**299**	*e*P	Pn	09 06 39.8	-0.7
LIO				*e*S	Sb	09 06 57.7	+2.0
BAR1		**1.31**	**262**	*e*P	Pn	09 06 41.8	-0.6
BAR1				*e*S	Sn	09 07 01.0	+1.6
ACR	**Cerro Adams**	**1.39**	**237**	‖*e*P	Pn	09 06 43.2	-0.2
BUS	**Buena Vista**	**1.75**	**274**	‖*e*P	Pn	09 06 48.4	+0.1
BUS				*e*S	Sn	09 07 11.3	+1.2
PRS1	**Puriscal**	**2.35**	**284**	⇑*e*P	Pn	09 06 57.6	+0.9
CGA2	**Cerro Gallo 2**	**2.51**	**284**	‖*e*P	Pn	09 06 59.8	+1.0
JCR	**Jicaral**	**3.10**	**278**	*e*P	Pn	09 07 08.3	+1.3

ISCJB ***30*** *09:14:51.7±0.5, 32.72N±002×117.19W±002, h12km±3km, Error ellipse: s-maj=4.1km s-min=2.3km az=43.7*

NEIC ***30*** *09:14:52.0, 32.69N×117.15W, h10km, ML3.0(PAS), After PAS.*

NEIC Felt [III] at Chula Vista, Coronado, El Cajon, La Mesa, Lemon Grove, San Diego and Spring Valley; [II] at Imperial Beach, Jamul, Lakeside, La Jolla, Santee, San Ysidro and Yorba Linda. Felt at Alpine, Bonita, Cardiff-by-the-Sea, Escondido, National City, Poway, San Marcos, Tecate and Vista.

ECX ***30*** *09:14:53.7±0.5, 32.70N×117.14W, h7km±3km, MD3.0, ML3.2*

ISC 30 09:14:51.8±0.4, 3271N±002×11718W±002, h12km±2km, n58, σ1§05/86, 30C-32D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
109C	**Camp Elliot, M**	**0.19**	**19**	⇑P	**Pg**	**09 14 57.0**	**+1.1**
	baz=0.2,SNR=1000						
109C				⇑S	**Sg**	**09 15 00.0**	**+1.2**
	baz=0.2						
EML	**El Monte Cty P**	**0.33**	**57**	‖*e*P	**Pg**	**09 14 59.3**	**+0.8**
DPP	**Dos Picos Cty**	**0.35**	**34**	‖*e*P	**Pg**	**09 14 59.9**	**+1.1**
CBX	**Cerro Bola**	**0.59**	**132**	⇑*i*P	**Pg**	**09 15 03.5**	**+0.3**
CBX				*e*S	**Sg**	**09 15 11.2**	**+0.3**
MONP	**Monument Peak**	**0.66**	**74**	⇓P	**Pg**	**09 15 04.8**	**+0.2**
	baz=0.6,SNR=274						
MONP				⇓S	**Sg**	**09 15 13.3**	**-0.1**
	baz=0.6						
PLM	**Palomar**	**0.69**	**22**	‖*e*P	**Pg**	**09 15 05.9**	**+0.7**
MURC	**Murrieta**	**0.89**	**359**	⇓P	**Pg**	**09 15 08.7**	**-0.2**
	baz=0.9,SNR=104						
DVTC	**Desert V Tower**	**0.91**	**93**	⇓P	**Pg**	**09 15 09.1**	**-0.2**
	baz=0.9,SNR=411						
DVTC				⇑S	**Sg**	**09 15 20.5**	**-0.6**
	baz=0.9						
ENX	**Ensenada**	**0.93**	**152**	⇑*e*P	**Pg**	**09 15 09.5**	**-0.2**
ENX				*e*S	**Sg**	**09 15 21.6**	**-0.3**
ENX				*e*		09 15 24.8	
	comp=E,790nm,0.3s						
RMX	**La Rumorosa**	**0.93**	**96**	‖*e*P	**Pg**	**09 15 09.7**	**-0.1**
RMX				*e*S	**Sg**	**09 15 21.7**	**-0.3**
PBX	**Punta Banda**	**1.04**	**158**	*e*P	**Pb**	**09 15 11.5**	**-0.1**
PBX				*e*S	**Sb**	**09 15 24.8**	**-0.4**
PBX				*e*		09 15 27.5	
	comp=E,542nm,0.5s						
YUH	**Yuha Desert**	**1.06**	**93**	⇑*e*P	**Pb**	**09 15 11.8**	**-0.1**
PFO	**Pinyon Flat Ob**	**1.08**	**34**	‖P	**Pb**	**09 15 12.0**	**-0.4**
	baz=1.1,SNR=942						
PFO	**Pinyon Flat Ob**	**1.08**	**34**	‖*i*P	**Pb**	**09 15 12.9**	**+0.6**
PFO				*e*S	**Sb**	**09 15 27.1**	**+0.6**
ECNX	**Esteban Cantu**	**1.16**	**155**	*e*P	**Pb**	**09 15 13.4**	**-0.3**
ECNX				⇑*e*P		09 15 09.7	
ECNX				*e*S	**Sb**	**09 15 21.8**	**-6.9**
ECNX				*e*S	**Sb**	**09 15 28.6**	**0.0**
SCI	**San Clemente I**	**1.19**	**284**	⇑P	**Pn**	**09 15 14.0**	**-0.1**
	baz=1.2,SNR=42						
SWSC	**Sam W. Stewart**	**1.19**	**78**	⇑Pg	**Pg**	**09 15 14.5**	**0.0**
	baz=1.1,SNR=96						
SWSC				⇑S	**Sb**	**09 15 28.5**	**-0.9**
	baz=1.1						
CIS	**Catalina Islan**	**1.24**	**304**	⇑P	**Pn**	**09 15 14.7**	**-0.2**
	baz=1.3,SNR=113						
CIS				⇑S	**Sb**	**09 15 31.3**	**+0.2**
	baz=1.3						
RDX	**Rancho Dowling**	**1.30**	**126**	⇑*e*P	**Pn**	**09 15 15.5**	**-0.1**
RDX				*e*S	**Sb**	**09 15 32.8**	**+0.1**
RDX				⇓*e*		09 15 36.1	
	comp=E,530nm,0.4s						
FMP	**Fort Macarthur**	**1.37**	**317**	⇓S	**Sn**	**09 15 34.0**	**-0.7**
	baz=1.4						
BBRC	**Big Bear Sol-O**	**1.56**	**8**	⇓Pb	**Pb**	**09 15 20.7**	**+0.1**
	baz=1.6,SNR=80						
BFSC	**Mount Baldy St**	**1.58**	**345**	⇑Pn	**Pn**	**09 15 18.9**	**-0.6**
	baz=1.6						
CPBX	**Cerro Prieto**	**1.61**	**100**	*e*S	**Sn**	**09 15 44.7**	**+4.1**
BELC	**Belle Mtn.**	**1.62**	**37**	⇑Pb	**Pb**	**09 15 20.7**	**-0.9**
	baz=1.6,SNR=47						
BELC				⇓Pg	**Pg**	**09 15 22.6**	**-0.3**
	baz=1.6						
MWC	**Mount Wilson**	**1.68**	**334**	*e*Pn	**Pn**	**09 15 21.5**	**+0.5**
MWC				*e*Sn	**Sn**	**09 15 43.3**	**+0.9**
MWC				*e*Sg	**Sg**	**09 15 45.9**	**+0.1**
BC3	**Big Chuckw Mtn**	**1.73**	**56**	⇓Pb	**Pb**	**09 15 22.4**	**-0.9**
	baz=1.7,SNR=9.3						
BC3				⇑Sn	**Sn**	**09 15 42.1**	**-1.4**
	baz=1.7						
DECC	**Green Verdugo**	**1.81**	**328**	⇓Pg	**Pg**	**09 15 26.8**	**+0.3**
	baz=1.8						
DECC				⇓Sn	**Sn**	**09 15 45.2**	**-0.5**
	baz=1.8						
GLA	**Glamis**	**2.01**	**80**	⇓Pb	**Pb**	**09 15 26.4**	**-1.8**
	baz=2.0,SNR=13						
GLA				⇑Sn	**Sn**	**09 15 48.8**	**-1.6**
	baz=2.0						
GLA	**Glamis**	**2.01**	**80**	*e*Pn	**Pn**	**09 15 25.8**	**+0.4**
GLA				*e*Sn	**Sn**	**09 15 49.7**	**-0.7**
BLG	**Laguna Peak**	**2.11**	**312**	⇓Pn	**Pn**	**09 15 26.4**	**-0.4**
	baz=2.1,SNR=12						
BLG				⇑Sn	**Sn**	**09 15 52.6**	**-0.4**
	baz=2.1						
RRX	**Edison Barstow**	**2.17**	**4**	⇓Pn	**Pn**	**09 15 27.0**	**-0.7**
	baz=2.2						
112A	**Yuma**	**2.20**	**94**	⇑Pb	**Pb**	**09 15 28.7**	**-2.7**
	baz=2.2,SNR=31						
112A				⇑Sn	**Sn**	**09 15 53.9**	**-1.2**
	baz=2.2						
SPX	**San Pedro Mart**	**2.21**	**138**	*e*P	**Pn**	**09 15 30.7**	**+2.5**
SPX				*e*S	**Sn**	**09 15 58.7**	**+3.3**
IRM	**Iron Mountain**	**2.23**	**49**	⇑Pn	**Pn**	**09 15 27.4**	**-1.0**
	baz=2.2,SNR=20						
HEC	**Hector,Ludlow**	**2.23**	**18**	⇑Pb	**Pb**	**09 15 30.5**	**-1.5**
	baz=2.2						
EDW2	**Edwards Air Fo**	**2.27**	**343**	⇓Pb	**Pb**	**09 15 31.7**	**-0.9**
	baz=2.3,SNR=92						
EDW2				⇓Sb	**Sb**	**09 16 02.3**	**+1.6**
	baz=2.3						
OSI	**Osito Adit**	**2.30**	**326**	⇓Sn	**Sn**	**09 15 57.4**	**-0.2**
	baz=2.3						
OSI	**Osito Adit**	**2.30**	**326**	*e*Pg	**Pg**	**09 15 35.5**	**-0.3**
GMRC	**Granite Mounta**	**2.42**	**31**	⇓Pb	**Pb**	**09 15 33.2**	**-2.0**
	baz=2.4						
GSC	**Goldstone**	**2.60**	**7**	*e*Pn	**Pn**	**09 15 34.0**	**+0.3**
GSC				*e*Pg	**Pg**	**09 15 39.9**	**-1.8**
GSC				*e*Sg	**Sg**	**09 16 14.5**	**-0.9**
ARVC	**Arvin**	**2.77**	**331**	⇑Sn	**Sn**	**09 16 08.8**	**-0.6**
	baz=2.8						
113A	**Mohawk Valley,**	**2.87**	**88**	⇓Pn	**Pn**	**09 15 37.0**	**-0.4**
	baz=2.8,SNR=5.3						
Y13A	**Salome**	**3.01**	**68**	⇓Sb	**Sb**	**09 16 22.9**	**+0.8**
	baz=3.0						
ISA	**Isabella**	**3.14**	**340**	⇓Sn	**Sn**	**09 16 18.3**	**0.0**
	baz=3.1						
ISA	**Isabella**	**3.14**	**340**	*e*Pn	**Pn**	**09 15 42.8**	**+1.9**
ISA				*e*Sg	**Sg**	**09 16 30.3**	**-2.1**
MPMC	**Manual Prospec**	**3.35**	**356**	⇑Sb	**Sb**	**09 16 33.3**	**+1.5**
	baz=3.4						
SMMC	**Simmler**	**3.50**	**319**	⇓Sn	**Sn**	**09 16 27.1**	**-0.1**
	baz=3.5						
V12A	**Nelson**	**3.57**	**32**	⇑Pn	**Pn**	**09 15 48.5**	**+1.5**
	baz=3.6,SNR=11						
Z14A	**Wintersburg**	**3.61**	**78**	⇓Sb	**Sb**	**09 16 41.5**	**+2.2**
	baz=3.6						
W13A	**Hualapai Mount**	**3.63**	**48**	⇑Pn	**Pn**	**09 15 48.8**	**+1.1**
	baz=3.6,SNR=7.0						
214A	**Organ Pipe Nat**	**3.77**	**100**	⇑Pn	**Pn**	**09 15 49.5**	**-0.2**
	baz=3.7,SNR=7.1						
V14A	**Boquillas Ranc**	**4.46**	**48**	⇑Pn	**Pn**	**09 16 01.9**	**+2.7**
	baz=4.4,SNR=7.6						
X15A	**Humboldt**	**4.49**	**65**	⇓Pn	**Pn**	**09 16 02.1**	**+2.6**
	baz=4.4,SNR=8.7						
U13A	**Pakoon Wash**	**4.55**	**35**	⇓Pn	**Pn**	**09 16 03.3**	**+2.9**
	baz=4.5,SNR=18						
T11A	**Corn Creek, Al**	**4.80**	**19**	⇑Pn	**Pn**	**09 16 07.6**	**+3.9**
	baz=4.8						

ISCJB ***30*** *09:22:22.7±0.9, 488S±01×1645E±02, h10km, mb3.8/3, Error ellipse: s-maj=22.2km s-min=8.8km az=141.9*

IDC ***30*** *09:22:22.8±2.4, 4863S×16460E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/13, mbtmp3.9/4, ML3.5/1, Error ellipse: s-maj=60.5km s-min=30.4km az=164.0*

NEIC ***30*** *09:22:24.6±0.8, 4875S×16448E, h10km, Error ellipse: s-maj=24.0km s-min=9.2km az=143.0*

ISC 30 09:22:24.9±0.9, 487S±01×1645E±02, h10km, n16, σ1§34/16, mb3.8/3, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**3.66**	**41**	P	**Pn**	**09 23 22.1**	**+0.6**
MLZ	**Mavora Lakes**	**4.19**	**38**	P	**Pn**	**09 23 30.5**	**+1.7**
MSZ	**Milford Sound**	**4.67**	**31**	P	**Pn**	**09 23 37.6**	**+2.2**
MSZ				S	Sn	09 23 43.6	-46
EAZ	**Earnscleugh**	**4.78**	**45**	P	**Pn**	**09 23 37.7**	**+0.8**
WKZ	**Wanaka**	**4.96**	**40**	P	**Pn**	**09 23 41.8**	**+2.4**
ODZ	**Otahua Downs**	**5.58**	**51**	P	**Pn**	**09 23 47.8**	**0.0**
LBZ	**Lake Benmore**	**5.83**	**44**	P	**Pn**	**09 23 51.3**	**0.0**
RPZ	**Rata Peaks**	**6.75**	**45**	Pn	**Pn**	**09 24 02.5**	**-1.4**
	1.0nm,0.3s,baz=213,slow=5.1,SNR=7.9						
RPZ				Sn	**Sn**	**09 25 18.5**	**-2.2**
	5.0nm,0.3s,baz=34,slow=20,SNR=5.7						
RPZ	**Rata Peaks**	**6.75**	**45**	Pn	**Pn**	**09 24 02.5**	**-1.4**
RPZ				Sn	**Sn**	**09 25 18.6**	**-2.2**
MCQ	**Macquarie Isla**	**6.75**	**209**	P	**Pn**	**09 24 03.9**	**0.0**
SNZO	**South Karori**	**10.33**	**48**	*e*P	**Pn**	**09 24 50.8**	**-2.2**
ASAR	**Alice Springs**	**34.74**	**305**	P	**P**	**09 29 14.9**	**-0.2**
	0.8nm,0.7s,mb3.8,baz=136,slow=7.6,SNR=17						
WRA	**Warramunga Arr**	**37.56**	**309**	P	**P**	**09 29 37.8**	**-1.5**
	1.8nm,0.9s,mb3.8,baz=145,slow=8.0,SNR=9.6						
FITZ	**Fitzroy Crossi**	**43.79**	**300**	P	**P**	**09 30 31.0**	**+0.2**
	1.9nm,0.8s,mb3.9,baz=157,slow=8.2,SNR=4.2						
ARCES	**ARCESS Array B**	**151.30**	**331**	PKPbc	PKPbc	09 42 17.0	-0.1
	2.4nm,1.0s,baz=54,slow=4.6,SNR=3.7						
AKASG	**Malin Array Be**	**151.34**	**291**	PKPbc	PKPbc	09 42 16.6	-1.1
	0.5nm,0.5s,baz=89,slow=2.3,SNR=6.9						

MOS ***30*** *09:29:31.3±1.0, 1051S×16489E, h33km, mb5.3/16, Error ellipse: s-maj=10.9km s-min=9.6km az=67.7*

ISCJB ***30*** *09:29:34.0±0.3, 1060S±004×164.94E±005, h59km, mb5.0/51, MS4.9/4, Error ellipse: s-maj=7.2km s-min=5.8km az=3.3*

IDC ***30*** *09:29:35.2±0.6, 1058S×16496E, h58km±5km, mb4.5/21, mb1 4.6/21, mb1mx4.5/23, mbtmp4.5/21, MS3.9/1, Ms1 3.9/1, ms1mx3.4/34, Error ellipse: s-maj=15.1km s-min=12.4km az=108.0*

NEIC ***30*** *09:29:35.1±0.3, 1053S×16500E, mb4.9/19, Error ellipse: s-maj=8.7km s-min=6.8km az=126.0*

BJI ***30*** *09:29:38.0, 1027S×16507E, h89km, mB5.0, mb5.0, Ms5.4, Msz4.8*

DJA ***30*** *09:29:45, 1081S×16488E, h132km, Mw5.9/5*

ISC 30 09:29:35.7±0.3, 1059S±004×16499E±005, h61km, h61km±1.8km: pP-P, n145, σ1§03/121, mb5.0/51, 5C-7D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.09**	**283**	P	**Pn**	**09 30 51.4**	**+1.8**
	96nm,0.3s,baz=140,slow=5.9,SNR=31						
HNR				S	**Sn**	**09 31 50.5**	**+3.4**
	19nm,0.3s,baz=298,slow=8.2,SNR=3.7						

FITZ PcP PcP 09 39 05.6 +0.3
comp=Z,4.1nm,0.8s,baz=51,slow=5.3,SNR=4.3
FORT Forrest 39.70 234 *eP* **P 09 37 01.8 -0.5**
comp=Z,28nm,0.8s,mb5.0
BATI Baumata 40.62 267 P **P 09 37 07.9 -2.2**
comp=Z,78nm,1.0s,mb5.3,baz=270,slow=5.7,SNR=3.9
KAPI Kappang 45.12 273 *eP* **P 09 37 45.5 -1.0**
KLBR Kellerberrin 48.32 237 *eP* **P 09 38 10.2 -1.2**
comp=Z,12nm,0.9s,mb4.9
NWAO Narrogin (SRO) 49.10 235 P **P 09 38 16.8 -0.5**
comp=Z,8.7nm,0.8s,mb4.8,baz=65,slow=8.5,SNR=4.3
MUN Mundaring 49.70 237 *eP* **P 09 38 21.8 0.0**
MJAR Matsushiro Arr 53.23 333 P **P 09 38 47.0 -1.0**
comp=Z,2.7nm,0.7s,mb4.3,baz=166,slow=8.7,SNR=7.7
MJAR pP pP 09 39 02.8 -1.2
comp=Z,1.2nm,0.4s,baz=156,slow=7.6,SNR=4.8
MAT Matsushiro 53.23 333 P **P 09 38 47.4 -0.6**
KSM Kuching 55.69 279 *eP* **P 09 39 05.4 -1.0**
KSRS Korea Array 59.08 326 P **P 09 39 30.1 +0.2**
comp=Z,2.0nm,0.7s,mb4.3,baz=141,slow=7.7,SNR=9.7
NJ2 Nanjing 61.17 316 *eP* **P 09 39 44.5 +0.3**
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
PETK Petropavlovsk- 63.75 355 P **P 09 40 01.9 +1.0**
comp=Z,3.7nm,0.9s,mb4.4,baz=172,slow=5.8,SNR=5.0
PETK Petropavlovsk- 63.75 355 P **P 09 40 01.9 +1.0**
HABR Khabarovsk 64.48 338 *eP* **P 09 40 04.6 -1.3**
HABR *e* 09 40 37.2
HABR *e* 09 49 54.0
HABR *e* 09 52 55.1
CN2 Changchun 64.97 329 *eP* **P 09 40 12.0 +2.8**
KLR Kul'dur 66.34 337 *eP* **P 09 40 14.4 -3.5**
CASY Casey 66.53 201 *eP* **P 09 40 18.9 0.0**
CASY *e* pP 09 40 35.4 0.0
SBA Scott Base 67.26 180 *eP* **P 09 40 25.1 +1.7**
SBA pmax pmax
comp=Z,36nm,0.9s,mb5.4
SBA Scott Base 67.26 180 *eP* **P 09 40 25.1 +1.8**
comp=Z,36nm,0.9s,mb5.4
GYA Guiyang 67.54 304 P **P 09 40 26.8 +0.8**
GYA AP pP 09 40 52.5 +10
GYA XP sP 09 41 03.3 +14
GYA PP PP 09 42 59.0 +3.3
GYA SCP 09 44 47.5
GYA S S 09 49 15.3 -3.0
GYA SKS 09 50 13.5
GYA SS SS 09 53 39.8 -0.4
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,90nm,5.7s
GYA LR LR
comp=N,610nm,19.3s
GYA LR LR
comp=E,560nm,20.3s
GYA LR LR
comp=Z,490nm,19.4s
KMI Kunming 70.25 302 P **P 09 40 44.5 +1.7**
KMI AP pP 09 41 03.5 +4.0
KMI AMB AMB
comp=Z,26nm,1.0s,mb5.1
KMI Kunming 70.25 302 P **P 09 40 44.6 +1.8**
KMI *PP pP 09 41 03.4 +3.9
KMI pmax pmax
comp=Z,26nm,1.0s,mb5.1
KMI Kunming 70.25 302 P **P 09 40 44.6 +1.8**
comp=Z,26nm,1.0s,mb5.1
KMI pP pP 09 41 03.4 +3.9
CHRT Chiangrai 70.95 295 ⇑P **P 09 40 48.0 +0.8**
comp=Z,210nm,1.0s,mb6.0
HHC Hu-ho-hao-te 71.00 320 *eP* **P 09 40 48.0 +0.9**
HHC AP pP 09 41 13.0 +9.3
HHC XP sP 09 41 23.5 +13
HHC PP PP 09 43 28.8 +3.4
HHC S S 09 49 54.0 -4.6
HHC SKS 09 50 37.0
HHC XS sS 09 50 38.0 +11
HHC SCS ScS 09 50 39.5 -6.6
HHC SS SS 09 54 31.8 -1.2
HHC AMB AMB
comp=Z,23nm,0.7s,mb5.2
HHC AMB AMB
comp=Z,424nm,7.5s
HHC LR LR
comp=N,3μm,19.9s
HHC LR LR
comp=E,2μm,19.0s
HHC LR LR
comp=Z,1μm,18.0s
CMAR Chiang Mai Arr 71.25 294 P **P 09 40 49.6 +0.6**
comp=Z,14nm,0.7s,mb5.0,baz=122,slow=4.7,SNR=50
CMAR Chiang Mai Arr 71.25 294 *i* P **P 09 40 50.2 +1.2**
CMAR pmax pmax
comp=Z,14nm,0.7s
CHG Chiang Mai 71.36 294 ⇑P **P 09 40 50.1 +0.4**
comp=Z,17nm,0.9s,mb5.0
CHTO Chiang Mai 71.36 294 *eP* **P 09 40 50.0 +0.3**
CHTO pmax pmax
comp=Z,33nm,1.4s,mb5.1
CHTO Chiang Mai 71.36 294 *eP* **P 09 40 50.0 +0.3**
comp=Z,33nm,1.4s,mb5.1
HIA Hailar 71.61 331⇓ *eP* **P 09 40 51.5 +0.9**
CD2 Chengdu 71.73 308⇓ *i* P **P 09 40 52.5 +0.8**
CD2 AP pP 09 41 17.5 +9.1
CD2 XP sP 09 41 28.3 +13
CD2 PP PP 09 43 35.0 +3.2
CD2 S S 09 50 03.5 -3.9
CD2 XS sS 09 50 46.8 +11
CD2 SS SS 09 54 43.5 -1.1
CD2 AMB AMB
comp=Z,120nm,6.8s
CD2 LR LR
comp=N,1μm,12.0s
CD2 LR LR
comp=Z,2μm,12.0s
LZH Lanzhou 73.90 312 *eP* **P 09 41 06.5 +2.0**
LZH AP pP 09 41 31.5 +10
LZH XP sP 09 41 42.5 +15
LZH PP PP 09 43 54.5 +4.3
LZH *eS* S 09 50 27.3 -4.6
LZH *eSS* SS 09 55 18.0 +0.5
LZH AMB AMB
comp=Z,30nm,1.1s,mb5.1
LZH AMB AMB
comp=Z,150nm,4.6s
LZH Lanzhou 73.90 312 *eP* **P 09 41 06.4 +1.9**
LZH 09 43 54.5
LZH *eS* S 09 50 27.2 -4.7
LZH *eSS* SS 09 55 18.0 +0.5
LZH pmax pmax
comp=Z,30nm,1.1s,mb5.1
LZH Lanzhou 73.90 312 *eP* **P 09 41 06.4 +1.9**
comp=Z,30nm,1.1s,mb5.1
LZH pP pP 09 41 31.5 +10
LZH sP sP 09 41 42.4 +14
LZH PP PP 09 43 54.5 +4.3
LZH *eS* S 09 50 27.2 -4.7
LZH sS sS 09 51 15.0 +15
LZH *eSS* SS 09 55 18.0 +0.5
SEY Seymchan 73.94 354⇓ *eP* **P 09 41 04.2 +0.1**
CLNS Chul'man 74.88 338 *eP* **P 09 41 09.6 -0.1**
CLNS pmax pmax
comp=Z,13nm,1.2s,mb4.7
CLNS pmax pmax
comp=N,8.0nm,1.0s
CLNS pmax pmax
comp=E,3.0nm,1.0s
YAK Yakutsk 77.45 344 *eP* **P 09 41 23.3 -0.9**
YAK *e* pP 09 41 38.1 -2.9
YAK pmax pmax
comp=Z,26nm,0.9s,mb5.2
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.1s
ULN Ulaanbaatar 77.50 324 *eP* **P 09 41 25.1 +0.4**
ULN *e* pP 09 41 41.5 -0.1
ULN pmax pmax
comp=Z,29nm,1.0s,mb5.2
ULN Ulaanbaatar 77.50 324*c* *i* P **P 09 41 25.5 +0.8**
ULN Ulaanbaatar 77.50 324 *eP* **P 09 41 25.1 +0.4**
comp=Z,29nm,1.0s,mb5.2
ULN *e* pP 09 41 41.5 -0.1

SONM Songino Array 77.86 324 P **P 09 41 26.9 +0.2**
comp=Z,11nm,0.9s,mb4.8,baz=142,slow=7.5,SNR=46
SONM pP pP 09 41 43.2 -0.4
comp=Z,5.1nm,1.0s,baz=148,slow=5.0,SNR=5.7
GTA Gaotai 78.20 314 *eP* **P 09 41 30.3 +1.4**
GTA AP pP 09 41 55.5 +10
GTA XP sP 09 42 07.0 +15
GTA AMB AMB
comp=Z,25nm,1.0s,mb5.1
BILL Bilibino 78.43 0⇓ *eP* **P 09 41 29.8 +0.3**
BILL pmax pmax
comp=Z,35nm,1.3s,mb5.1
QSPA South Pole Qui 79.41 180 P **P 09 41 35.7 +0.9**
comp=Z,24nm,0.8s,mb5.1,baz=356,slow=1.4,SNR=130
BOD Bodaibo 79.80 335 *eP* **P 09 41 36.1 -1.1**
BOD pmax pmax
comp=Z,5.0nm,1.6s,mb4.2
ZAK Zakamensk 80.90 325⇓ *iP* **P 09 41 42.3 -1.0**
ZAK *e* pP 09 41 59.1 -1.1
ZAK pmax pmax
comp=Z,11nm,1.1s,mb4.7
TLY Talaya 81.33 326 *eP* **P 09 41 45.6 +0.1**
TLY *e* pP 09 42 02.3 -0.2
TLY pmax pmax
comp=Z,12nm,0.8s,mb4.9
TLY Talaya 81.33 326 *eP* **P 09 41 45.7 +0.1**
comp=Z,11nm,0.8s,mb4.8
TLY *e* pP 09 42 00.3 -2.2
COLA College 83.09 18 *i* P **P 09 41 53.4 -1.0**
COLA College 83.09 18 *eP* **P 09 41 53.3 -1.1**
comp=Z,5.6nm,0.9s,mb4.6
ODAN Odare 83.88 299 *eP* **P 09 41 59.9 +0.5**
comp=Z,77nm,0.7s,mb6.0
RAMN Ramite 84.58 299 *eP* **P 09 42 03.3 +0.4**
comp=Z,20nm,0.7s,mb5.4
MAW Mawson 84.86 202 *eP* **P 09 42 03.8 +0.3**
comp=Z,5.7nm,0.9s,mb4.7
MAW Mawson 84.86 202 P **P 09 42 03.9 +0.4**
comp=Z,11nm,0.7s,mb5.1,baz=104,slow=6.1,SNR=35
MAW Mawson 84.86 202 *eP* **P 09 42 03.8 +0.3**
MAW pmax pmax
comp=Z,6.0nm,0.9s
JIRN Jiri 85.11 299 *eP* **P 09 42 05.9 +0.3**
MWC Mount Wilson 85.32 54 *eP* **P 09 42 06.6 +0.2**
MWC pmax pmax
comp=Z,15nm,1.3s,mb5.0
MWC Mount Wilson 85.32 54 *eP* **P 09 42 06.6 +0.1**
comp=Z,15nm,1.3s,mb5.0
ISA Isabella 85.39 53 *eP* **P 09 42 07.3 +0.5**
DAWY Dawson 85.40 21 *eP* **P 09 42 05.9 -0.3**
DAWY *e* pP 09 42 23.5 +0.3
GUN Gumba 85.44 299 *eP* **P 09 42 07.8 +0.6**
comp=Z,68nm,0.9s,mb5.8
WAKR Walker 85.47 50 *eP* **P 09 42 07.7 +0.6**
TIXI Tiksi 85.50 349⇑ *eP* **P 09 42 05.7 -0.8**
TIXI pmax pmax
comp=Z,15nm,1.1s,mb5.1
TIXI Tiksi 85.50 349 *eP* **P 09 42 05.4 -1.1**
comp=Z,15nm,1.1s,mb5.1
PKIN Phulchoki 85.78 299 *eP* **P 09 42 09.4 +0.5**
comp=Z,38nm,0.7s,mb5.8
KKN Kakani 85.93 299 *eP* **P 09 42 09.9 +0.3**
DMN Daman 86.03 299 *eP* **P 09 42 10.5 +0.3**
comp=Z,108nm,1.0s,mb6.0
NVAR Mina Array Bea 86.30 50 P **P 09 42 11.1 -0.1**
comp=Z,2.9nm,0.9s,mb4.5,baz=243,slow=6.8,SNR=15
NVAR pP pP 09 42 26.9 -1.5
comp=Z,0.9nm,0.8s,baz=232,slow=8.1,SNR=3.3
GKN Gorkha 86.53 299 *eP* **P 09 42 12.0 -0.6**
DANN Dangsing 87.36 299 *eP* **P 09 42 15.9 -0.7**
KOLN Koldanda 87.37 299 *eP* **P 09 42 16.0 -0.7**
comp=Z,10nm,0.6s,mb5.2
WMQ Urumqi 88.25 315 *eP* **P 09 42 20.5 0.0**
WMQ AMB AMB
comp=Z,19nm,0.9s,mb5.3
WMQ AMB AMB
comp=Z,288nm,5.6s
ARUT Antelope Range 89.84 52 *eP* **P 09 42 27.8 -0.3**
MSU Marysvale 90.98 51 *eP* **P 09 42 34.5 +1.1**
DLMT Dillon 92.18 44 *eP* **P 09 42 39.1 +0.3**
MK31 Makanchi Array 92.68 317 *eP* **P 09 42 40.7 -0.4**
MKAR Makanchi Array 92.68 317 P **P 09 42 40.9 -0.2**
comp=Z,14nm,0.7s,mb5.5,baz=95,slow=6.2,SNR=104
MKAR pP pP 09 42 57.2 -1.1
comp=Z,2.6nm,0.7s,baz=104,slow=5.1,SNR=3.2
ZAA0 Zalesovo Array 92.75 324 *eP* **P 09 42 40.0 -1.2**
ZALV Zalesovo Beam 92.75 324 P **P 09 42 39.6 -1.6**
comp=Z,8.8nm,0.8s,mb5.3,baz=113,slow=4.6,SNR=29
PDAR Pinedale Array 93.79 47 P **P 09 42 45.7 -0.6**
comp=Z,0.8nm,0.8s,mb4.2,baz=210,slow=1.2,SNR=7.4
PDAR pP pP 09 43 03.0 -0.5
comp=Z,0.6nm,0.7s,baz=242,slow=3.2,SNR=3.6
TXAR Lajitas Array 96.27 61 P **P 09 42 57.6 -0.3**
comp=Z,0.2nm,0.7s,baz=218,slow=9.8,SNR=3.1
TKM2 Tokmak 2 96.67 312 *eP* **P 09 42 59.1 -0.3**
TKM2 pmax pmax
comp=Z,1.0nm,0.6s,mb4.4
TKM2 Tokmak 2 96.67 312 *eP* **P 09 42 59.1 -0.3**
comp=Z,1.5nm,0.6s,mb4.6
SNAA Sanae 97.52 184 *eP* **P 09 43 03.6 +0.8**
SNAA Sanae 97.52 184 *i* P **P 09 43 01.2 -1.6**
SNAA Sanae 97.52 184 *eP* **P 09 43 01.1 -1.7**
comp=Z,6.4nm,1.1s,mb5.1
VNA3 Neumayer Olymp 98.28 182 *eP* **P 09 43 05.2 -1.0**
VNA3 *e* 09 43 12.9
VNA2 Neumayer--Watz 98.51 183 *eP* **P 09 43 06.6 -0.6**
VNA2 *e* 09 43 14.0
BRVK Borovoye 101.20 322 P Pdif 09 43 18.6 -0.9
ARCES ARCESS Array B 115.71 345 PKP PKPdf 09 48 09.0 -1.6
comp=Z,1.6nm,0.7s,baz=53,slow=1.9,SNR=12
ARCES ARCESS Array B 115.71 345 PKP PKPdf 09 48 09.0 -1.6
JOF Joensuu 118.23 338 *ep* PKPdf 09 48 13.0 -2.7
comp=Z,1.1nm,0.6s
OBN Obninsk 120.03 329 *e*PKIKP PKPdf 09 48 17.7 -1.6
OBN pmax pmax
comp=Z,6.0nm,0.8s
KAF Kangasniemi 120.55 339 *ep* PKPdf 09 48 18.4 -1.7
comp=Z,0.9nm,0.5s
LPAZ La Paz 121.05 116 PKP PKPdf 09 48 23.1 +0.6
comp=Z,0.6nm,0.5s,baz=295,slow=3.2,SNR=7.6
CPUP Villa Florida 124.89 133 PKP PKPdf 09 48 28.5 -1.1
comp=Z,0.7nm,0.4s,baz=276,slow=1.2,SNR=7.1
CPUP Villa Florida 124.89 133 PKP PKPdf 09 48 28.5 -1.1
BOSA Boshof 124.93 224 PKP PKPdf 09 48 29.9 +0.2
comp=Z,2.8nm,0.6s,baz=124,slow=4.5,SNR=10
AKASG Malin Array Be 126.07 327 *i* PKIKP PKPdf 09 48 29.5 -1.6
comp=Z,0.9nm,0.7s,baz=107,slow=0.6,SNR=4.3
AKASG Malin Array Be 126.07 327 *i* PKIKP PKPdf 09 48 32.0 +0.9
KMBO Kilima Mbogo 126.73 261 *i* PKIKP PKPdf 09 48 39.2 +5.7
CLL Collm 133.39 336 *e*PKPdf PKPdf 09 48 46.0 +1.0
KHC Kasperske Hory 134.81 334 *i* PKIKP PKPdf 09 48 48.6 +0.9
GERES GERESS Array B 134.97 333 PKP PKPdf 09 48 47.4 -0.6
comp=Z,1.4nm,1.0s,baz=4.1,slow=1.9,SNR=6.6
GERES pPKP pPKPdf 09 49 05.7 -0.1
comp=Z,0.9nm,0.9s,baz=84,slow=4.2,SNR=2.9
PGF Pioggiola 141.88 331 *e*PKP1 PKPdf 09 49 02.4 +1.5
MFF Saint Martin d 141.95 343 *e*PKP1 PKPdf 09 49 00.1 -0.8
comp=Z,25nm,1.1s
FRF La Foret Royal 142.15 334 *e*PKP1 PKPdf 09 49 00.7 -0.6
comp=Z,51nm,1.2s
MTLF Montolieu 144.09 338⇑ *i*PKP1 PKPdf 09 49 03.0 -1.8
comp=Z,74nm,1.1s
ETSF Etsaut 145.43 341 *e*PKP1 PKPbc 09 49 07.8 +0.7
comp=Z,31nm,1.0s
SJPF Ste Jean 145.44 342 *e*PKP1 PKPbc 09 49 07.2 0.0
comp=Z,37nm,1.2s
KEST Kesra 146.60 322 PKPbc PKPbc 09 49 11.0 +0.1
comp=Z,11nm,1.0s,baz=264,slow=3.7,SNR=16
ESDC Sonseca Array 149.41 343 PKPbc PKPbc 09 49 17.9 -0.3
comp=Z,0.4nm,0.3s,baz=9.5,slow=2.7,SNR=9.4
ESDC PKPab PKPab 09 49 23.7 +0.6
comp=Z,3.2nm,0.6s,baz=8.5,slow=4.5,SNR=19
TORD Torodi Ar. Bea 163.45 280 PKP PKPdf 09 49 31.8 -0.8
comp=Z,2.5nm,1.0s,baz=63,slow=1.2,SNR=11
TORD PKPab PKPab 09 50 23.9 -0.1
comp=Z,5.4nm,1.1s,baz=74,slow=4.1,SNR=12
TORD PP PP 09 54 06.3 -3.4
comp=Z,1.2nm,1.2s,baz=90,slow=4.4,SNR=4.0
TORD Torodi Ar. Bea 163.45 280 PKP PKPdf 09 49 31.8 -0.8
TORD PKPab PKPab 09 50 23.9 -0.1
TORD PP PP 09 54 06.3 -3.4
DBIC Dimbokro 169.23 250 PKP PKPdf 09 49 35.6 -1.5
comp=Z,5.2nm,0.9s,baz=190,slow=6.1,SNR=5.4

IDC ***30*** *09:47:41.7±1.1, 4952S×164.17E, h0km, mb4.7/5, mb1 4.9/5, mb1mx4.6/14, mbtmp4.7/5, ML5.5/2, Error ellipse: s-maj=28.4km s-min=21.8km az=71.0*
ISCJB ***30*** *09:47:44.8±3.8, 4954S±0.009×1639E±0.1, h24km±29km, mb4.7/6, Error ellipse: s-maj=16.4km s-min=12.2km az=21.9*

ISC 30 09:47:44.6±3.8, 4945S±010×1640E±01, h10km±26km, n36, σ1§48/36, mb4.7/6, 1C, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**5.94**	**210**	*eP*	**Pn**	**09 49 09.3**	**-3.2**
MCQ				*e*		09 50 26.9	
MCQ	**Macquarie Isla**	**5.94**	**210**	*e*Pn	**Pn**	**09 49 08.9**	**-3.7**
MCQ				*e*Sn	**Sn**	**09 50 26.9**	**+6.3**
RPZ	**Rata Peaks**	**7.51**	**43**	Pn	**Pn**	**09 49 31.1**	**-3.0**
	86nm,0.3s,baz=202,slow=3.1,SNR=87						
TAU	**Tasmania Unive**	**13.28**	**293**	Pn	**Pn**	**09 50 53.0**	**-0.1**
	6μm,0.5s,SNR=6.7						
TAU	**Tasmania Unive**	**13.28**	**293**	*e*Pn	**Pn**	**09 50 52.9**	**-0.2**
TAU				*e*Sn	**Sn**	**09 53 19.1**	**-1.6**
URZ	**Urewera**	**14.62**	**45**	Pn	**Pn**	**09 51 10.8**	**-0.5**
	16nm,0.3s,baz=233,slow=8.0,SNR=39						
CNB	**Canberra Magne**	**17.75**	**317**	*eP*	**Pn**	**09 51 54.4**	**+2.7**
CNB	**Canberra Magne**	**17.75**	**317**	*eS*	**Sn**	**09 55 06.2**	**-3.3**
TOO	**Toolangi**	**17.88**	**305**	*eP*	**Pn**	**09 51 56.1**	**+2.8**
ARMA	**Armidale**	**21.20**	**329**	*eS*	**S**	**09 56 26.9**	**+1.1**
STKA	**Stephens Creek**	**24.30**	**308**	*eP*	**P**	**09 53 03.5**	**+1.5**
	17nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**24.30**	**308**	P	**P**	**09 53 03.0**	**+1.0**
	11nm,0.8s,mb4.3,baz=136,slow=9.4,SNR=11						
RAO	**Raoul Island**	**24.42**	**41**	P	**P**	**09 53 03.5**	**+0.4**
EIDS	**Eidsvold**	**26.07**	**333**	*eP*	**P**	**09 53 15.0**	**-3.2**
CTA	**Charters Tower**	**32.56**	**328**	P	**P**	**09 54 17.1**	**+1.3**
	44nm,0.8s,mb5.4,baz=161,slow=9.9,SNR=25						
CTA				*e*S	**S**	**09 59 18.8**	**-12**
CTA	**Charters Tower**	**32.56**	**328**	*eP*	**P**	**09 54 17.1**	**+1.2**
	35nm,0.8s,mb5.3						
CTA	**Charters Tower**	**32.56**	**328**	*e*S	**S**	**09 59 18.8**	**-12**
CTAO	**Charters Tower**	**32.56**	**328**	*eP*	**P**	**09 54 17.4**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,290nm,1.9s,mb5.9						
CTAO	**Charters Tower**	**32.56**	**328**	*eP*	**P**	**09 54 17.0**	**+1.1**
	comp=Z,3μm,1.9s						
FORT	**Forrest**	**32.81**	**291**	*eP*	**P**	**09 54 19.4**	**+1.4**
ASAR	**Alice Springs**	**34.91**	**307**	P	**P**	**09 54 36.4**	**0.0**
	comp=Z,7.5nm,0.7s,mb4.8,baz=140,slow=7.6,SNR=73						
WB2				*e*S	**S**	**10 00 40.0**	**-12**
WB2				*e*SS	SS	10 03 19.3	-18
WB2	**Warramunga Arr**	**37.78**	**311**	*eP*	**P**	**09 55 00.0**	**-0.9**
WB2				*e*SS	SS	10 03 19.3	-18
WB2	**Warramunga Arr**	**37.78**	**311**	*e*S	**S**	**10 00 40.0**	**-12**
WRA	**Warramunga Arr**	**37.79**	**311**	P	**P**	**09 54 58.9**	**-2.0**
	comp=Z,6.3nm,0.6s,mb4.5,baz=139,slow=7.7,SNR=50						
COEN	**Coen**	**39.31**	**327**	*eP*	**P**	**09 55 14.8**	**+1.1**
	comp=Z,2μm,1.8s						
HNR	**Honiara**	**40.04**	**354**	P	**P**	**09 55 20.4**	**+0.6**
	comp=Z,183nm,0.7s,baz=194,slow=1.5,SNR=10						
QSPA	**South Pole Qui**	**40.67**	**180**	P	**P**	**09 55 23.8**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=296,slow=9.7,SNR=15						
PMG	**Port Moresby**	**42.33**	**335**	*eP*	**P**	**09 55 40.9**	**+2.2**
FITZ	**Fitzroy Crossi**	**43.90**	**302**	*eP*	**P**	**09 55 51.7**	**+0.3**
	comp=Z,9.6nm,1.2s,mb4.4						
KAKA	**Kakadu**	**44.91**	**314**	*eP*	**P**	**09 56 00.7**	**+1.2**
	comp=Z,277nm,1.4s						
KAPI	**Kappang**	**57.90**	**305**	P	**P**	**09 57 34.9**	**-2.0**
	comp=Z,4.4nm,0.6s,mb4.6,baz=157,slow=13,SNR=3.8						
SDKM	**Sandakan**	**68.26**	**309**	⇑P	**P**	**09 58 46.6**	**+1.0**
YKA	**Yellowknife Ar**	**128.73**	**36**	PKP	PKPdf	10 06 47.0	-3.8
	comp=Z,1.7nm,0.8s,baz=233,slow=3.5,SNR=3.9						
LIC	**Lamto**	**135.94**	**196**	*e*PKP1	PKPdf	10 07 02.5	-3.5
	comp=Z,539nm,2.1s						
LIC				*eP*			
	comp=Z,539nm,2.1s						
KIC	**Kosan Boka**	**136.02**	**196**	*e*PKP1	PKPdf	10 07 02.8	-3.3
	comp=Z,472nm,1.3s						
KIC				*eP*			
	comp=Z,472nm,1.3s						
TIC	**Toumodi**	**136.35**	**196**	*e*PKP1	PKPdf	10 07 03.8	-2.9
	comp=Z,1μm,2.1s						
TIC				*eP*			
	comp=Z,1μm,2.1s						

BGS ***30*** *09:47:48.2±3.9, 4861S×16375E, h10km, MS6.2, mb6.6(NEIC)*
IGIL ***30*** *09:47:49.9, 4941S×16327E, h10km, MS7.3*
DJA ***30*** *09:47:50, 4957S×16492E, h10km, Mw7.3/52*
BJI ***30*** *09:47:50.8, 4903S×16425E, h14km, mB6.9, mb6.3, Ms6.5, Msz6.3*
IDC ***30*** *09:47:50.4±0.3, 4930S×16409E, h0km, mb6.1/31, mb1 6.0/32, mb1mx6.0/32, mbtmp6.1/32, ML6.3/1, MS6.8/2, Ms1 6.8/2, ms1mx5.5/7, Error ellipse: s-maj=12.9km s-min=8.0km az=38.0*
ISCJB ***30*** *09:47:51.7±0.2, 4911S±003×16450E±004, h18km, mb6.3/79, MS6.6/224, Error ellipse: s-maj=5.1km s-min=3.1km az=149.8*
NEIC ***30*** *09:47:52.0±0.1, 4914S×16411E, h18km, mb6.6/50, ME6.8, MS6.7/200, MW6.5, Error ellipse: s-maj=6.0km s-min=3.3km az=140.0, Moment Tensor Solution. s15 Moment tensor: Scale 1018Nm; Mrr2.89; Mθθ2.79; Mφφ-5.69; Mrθ4.98; Mθφ2.84; Mφr-0.90; Best double couple: M☐7.60000×1018 NP1:φs19.00000°, δ47.00000°, λ156.00000°. NP2:φs125.00000°, δ73.00000°, λ45.00000°. Principal axes: T 7.9600, Plg43.0000°, Azm351.0000°; N -0.7700, Plg42.0000°, Azm141.0000°; P -7.2000, Plg15.0000°, Azm246.0000°; Broadband fault plane solution: P waves. NP1:φs31.00000°, δ48.00000°, λ153.00000°. NP2:φs140.00000°, δ70.00000°, λ45.00000°. Principal axes: T Plg45.0000°, Azm5.0000°; N Plg0.0000°, Azm0.0000°; P Plg13.0000°, Azm261.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [III] at Dunedin, Invercargill and Queenstown on the South Island. Also felt at Alexandra, Balclutha and Gore.
GCMT ***30*** *09:47:52.0±0.1, 4936S×16401E, h31km, MW6.6/15, Moment Tensor Solution. s115,c257; s113,c406; Duration: 4s9 Moment tensor: Scale 1019Nm; Mrr0.56±.01; Mθθ0.37±.01; Mφφ-0.92±.01; Mrθ0.55±.01; Mθφ0.23±.01; Mφr-0.11±.01; Best double couple: M☐1.01100×1019 NP1:φs23.00000°, δ50.00000°, λ146.00000°. NP2:φs137.00000°, δ64.00000°, λ46.00000°. Principal axes: T 1.0240, Plg50.0000°, Azm357.0000°; N -0.0260, Plg39.0000°, Azm160.0000°; P -0.9980, Plg9.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*
MOS ***30*** *09:47:53.9±1.3, 4931S×16396E, h29km, mb6.5/19, MS6.6/73 Error ellipse: s-maj=14.0km s-min=8.9km az=91.5*

ISC 30 09:47:53.4±0.2, 4917S±003×16442E±004, h18km, (h16km±2.8km: pP-P), n1914, σ1§36/339, mb6.4/78, MS6.6/224, 567C-355D, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**4.13**	**28**	P	**Pn**	**09 48 52.6**	**-3.0**
RPZ	**Rata Peaks**	**7.12**	**42**	Pn	**Pn**	**09 49 35.8**	**-0.8**
	759nm,0.3s,baz=225,slow=8.0,SNR=286						
RPZ				Sn	**Sn**	**09 50 55.1**	**-1.9**
	786nm,0.3s,baz=92,slow=16,SNR=11						
RPZ	**Rata Peaks**	**7.12**	**42**	Pn	**Pn**	**09 49 35.8**	**-0.8**
RPZ				Sn	**Sn**	**09 50 55.1**	**-1.9**
BSWZ	**Blackbirch Sta**	**9.98**	**45**	P	**Pn**	**09 50 15.3**	**-0.5**
CMWZ	**Cape Campbell**	**10.11**	**46**	P	**Pn**	**09 50 19.6**	**+2.0**
NNZ	**Nelson**	**10.15**	**42**	P	**Pn**	**09 50 15.9**	**-2.2**
TCW	**Tory Channel**	**10.56**	**45**	P	**Pn**	**09 50 22.8**	**-0.9**
SNZO	**South Karori**	**10.68**	**46**	P	**Pn**	**09 50 25.1**	**-0.3**
BHW	**Baring Head**	**10.69**	**47**	P	**Pn**	**09 50 23.6**	**-1.9**
WEL	**Wellington**	**10.73**	**47**	P	**Pn**	**09 50 26.2**	**+0.1**
MSWZ	**Moikau Station**	**10.87**	**49**	P	**Pn**	**09 50 27.2**	**-0.7**
PAWZ	**Paruwai Farm**	**10.98**	**49**	P	**Pn**	**09 50 28.8**	**-0.7**
KIW	**Kapiti Island**	**11.13**	**46**	P	**Pn**	**09 50 30.9**	**-0.6**
MTW	**Mount Morrison**	**11.19**	**48**	P	**Pn**	**09 50 31.5**	**-0.8**
MRZ	**Mangatainoka R**	**11.60**	**47**	P	**Pn**	**09 50 35.9**	**-2.1**
NRZ	**Ngariki Road**	**11.95**	**38**	P	**Pn**	**09 50 44.0**	**+1.2**
NWEZ	**Newall Road**	**11.98**	**38**	P	**Pn**	**09 50 42.9**	**-0.2**

WAZ Wanganui 12.05 43 P **Pn** 09 50 43.1 -1.0
NEZ North Egmont 12.07 39 P **Pn** 09 50 43.6 -0.8
PKE Pukeiti 12.10 38 P **Pn** 09 50 41.7 -3.0
RAEZ Rainy Point 12.18 40 P **Pn** 09 50 44.7 -1.2
TSZ Takapari Road 12.26 46 P **Pn** 09 50 45.0 -1.9
VRZ Vera Road 12.47 40 P **Pn** 09 50 46.6 -3.3
WNVZ Wahianoa 12.67 43 P **Pn** 09 50 53.3 +0.7
MOVZ Moawhango 12.68 44 P **Pn** 09 50 50.4 -2.3
FWVZ Far West T-bar 12.71 43 P **Pn** 09 50 53.7 +0.6
WPVZ Whakapapa 12.75 43 P **Pn** 09 50 53.4 -0.3
NGZ Ngauruhoe 12.80 43 P **Pn** 09 50 55.0 +0.7
TWVZ Taurewa 12.81 42 P **Pn** 09 50 51.6 -2.9
WTVZ West Tongariro 12.84 43 P **Pn** 09 50 53.2 -1.7
KATZ Kakaramea 13.00 43 P **Pn** 09 50 57.2 +0.1
RITZ Rihia Road 13.07 43 P **Pn** 09 50 57.7 -0.4
RATZ Rangitukua 13.13 43 P **Pn** 09 50 58.1 -0.7
WATZ Wairara 13.24 42 P **Pn** 09 50 59.6 -0.8
HATZ Hinemaiaia 13.25 44 P **Pn** 09 51 00.1 -0.4
TOZ Tahuroa Road 13.96 39 P **Pn** 09 51 08.7 -1.5
URZ Urewera 14.23 45 Pn **Pn** 09 51 16.6 +2.8
136nm,0.3s,baz=222,slow=8.5,SNR=68
URZ Urewera 14.23 45 Pn **Pn** 09 51 16.6 +2.8
WTAZ Waiatarua 14.29 35 P **Pn** 09 51 12.5 -2.2
MKAZ Moumakai 14.36 37 P **Pn** 09 51 12.3 -3.4
OTAZ Otara 14.41 36 P **Pn** 09 51 16.8 +0.5
KAAZ Kauri Point 14.43 35 P **Pn** 09 51 16.0 -0.6
KUZ Kuaotunu 14.90 38 P **Pn** 09 51 22.0 -1.0
WCZ Waipu Caves 15.09 32 P **Pn** 09 51 23.1 -2.4
OUZ Omahuta 15.49 29 P **Pn** 09 51 32.9 +2.1
CNB Canberra Magne 17.73 316 *e* **Pn** 09 52 02.2 +3.0
CAN Canberra 17.89 315 *eP* **Pn** 09 51 56.7 -4.5
TOO Toolangi 17.94 303 *e* **Pn** 09 52 05.1 +3.3
ARMA Armidale 21.10 328 *e* **P** 09 52 39.7 +2.9
ARMA Armidale 21.10 328 *eP* **P** 09 52 33.3 -3.5
DRV Dumont d'Urvil 21.55 207 P **P** 09 52 43.0 +1.7
DRV S **S** 09 56 45.0 +5.9
DRV R 09 58 00.0
RAO Raoul Island 24.03 41 P **P** 09 53 08.2 +1.0
141nm,0.3s,mb5.8,baz=94,slow=23,SNR=4.6
RAO Raoul Island 24.03 41 P **P** 09 53 08.2 +1.0
RAO LR LR
comp=Z,264µm,21.0s,MS6.7
STKA Stephens Creek 24.34 307 P **P** 09 53 09.9 0.0
comp=Z,218nm,0.9s,mb5.6,baz=136,slow=11,SNR=76
STKA P3KPbc 10 26 24.6
comp=Z,21nm,1.1s,baz=328,slow=5.9,SNR=12
STKA *e*PCP PcP 09 56 50.0 +0.8
STKA *e*S **S** 09 57 30.1 +1.8
STKA Stephens Creek 24.34 307 *e* **P** 09 53 11.6 +1.6
EIDS Eidsvold 25.94 332 *ep* **P** 09 53 25.6 +1.0
DZM Mont Dzumac 27.09 4 *eP* **P** 09 53 35.5 +0.5
DZM Mont Dzumac 27.09 4 *eP*n **P** 09 53 35.3 +0.3
SBA Scott Base 28.80 179 *eP* **P** 09 53 49.9 +0.1
SBA pmax pmax
comp=Z,870nm,2.0s,mb6.1
SBA Scott Base 28.80 179 P **P** 09 53 44.4 -5.4
comp=Z,870nm,2.0s
CASY Casey 32.17 218 *eP* **P** 09 54 19.8 +0.2
CASY Casey 32.17 218 P **P** 09 54 10.9 -8.7
comp=Z,272nm,1.5s
CASY *e*S **S** 09 59 21.6 -10
CASY Casey 32.17 218 *eS* **S** 09 59 21.6 -10
CTA Charters Tower 32.46 327 *e* **P** 09 54 23.5 +0.9
CTA Charters Tower 32.46 327 P **P** 09 54 23.2 +0.6
comp=Z,151nm,0.9s,mb5.8,baz=153,slow=10.0,SNR=69
CTA PcP PcP 09 57 10.2 +0.8
comp=Z,133nm,0.9s,baz=216,slow=2.5,SNR=10
CTA Charters Tower 32.46 327 P **P** 09 54 23.2 +0.6
CTA *e* 09 57 10.6
CTA pmax pmax
comp=Z,350nm,0.8s
CTA Charters Tower 32.46 327 P **P** 09 54 23.2 +0.6
comp=Z,35nm,0.8s
CTA PcP PcP 09 57 10.2 +0.8
CTA *e*PcP PcP 09 57 10.6 +1.2
CTA Charters Tower 32.46 327 *e*PCP PcP 09 57 10.6 +1.2
CTAO Charters Tower 32.46 327 *e*PcP PcP 09 57 10.2 +0.8
CTAO LR LR
comp=Z,137µm,19.0s,MS6.7
FORT Forrest 32.96 290 *eP* **P** 09 54 26.7 -0.2
comp=Z,143nm,1.0s,mb5.8
FORT *e*PCP PcP 09 57 26.1 +15
FORT *e*S **S** 09 59 43.8 -0.3
FORT Forrest 32.96 290 *e* **P** 09 54 27.1 +0.2
FORT *e*PcP PcP 09 57 26.1 +15
FORT *e*S **S** 09 59 43.8 -0.3
ASAR Alice Springs 34.96 306 P **P** 09 54 43.8 -0.6
comp=Z,474nm,1.2s,mb6.3,baz=146,slow=8.5,SNR=101
ASAR PcP PcP 09 57 16.9 +0.4
comp=Z,83nm,1.0s,baz=144,slow=3.5,SNR=8.1
ASAR PKiKP PKiKP 10 04 38.0 -0.5
comp=Z,2.4nm,0.9s,baz=137,slow=1.5,SNR=5.6
ASAR P3KPbc 10 25 38.7
comp=Z,5.6nm,1.0s,baz=336,slow=5.0,SNR=28
ASAR Alice Springs 34.96 306 P **P** 09 54 43.8 -0.6
ASAR PcP PcP 09 57 16.9 +0.4
WB2 Warramunga Arr 37.80 310 *e* **P** 09 55 07.0 -1.6
WB2 *e*PcP PcP 09 57 25.7 +0.7
WB2 Warramunga Arr 37.80 310 *eP* **P** 09 55 07.0 -1.6
WB2 *e*PcP PcP 09 57 25.7 +0.7
WRA Warramunga Arr 37.81 310 P **P** 09 55 07.6 -1.0
comp=Z,514nm,1.1s,mb6.2,baz=144,slow=8.0,SNR=150
WRA PcP PcP 09 57 24.4 -0.7
comp=Z,215nm,1.0s,baz=145,slow=2.7,SNR=21
WRA S **S** 10 01 00.0 +1.4
comp=Z,12nm,1.4s,baz=150,slow=12,SNR=5.1
WRA PKiKP PKiKP 10 04 37.5 -3.3
comp=Z,4.5nm,1.1s,baz=274,slow=0.4,SNR=4.5
WRA P3KPbc 10 25 26.3
comp=Z,7.1nm,1.0s,baz=340,slow=4.3,SNR=27
WRA Warramunga Arr 37.81 310 P **P** 09 55 07.6 -1.0
WRA PcP PcP 09 57 24.4 -0.7
WRA S **S** 10 01 00.0 +1.4
WRAB Tennant Creek 37.81 310 P **P** 09 55 07.0 -1.7
comp=Z,5µm,1.3s,mb7.1,SNR=76
WRAB Tennant Creek 37.81 310 *eP* **P** 09 55 07.0 -1.7
WRAB LR LR
comp=Z,101µm,20.0s,MS6.6
NWAO Narrogin (SRO) 38.44 277 P **P** 09 55 12.4 -1.4
comp=Z,78nm,0.9s,mb5.4,baz=129,slow=10,SNR=14
NWAO PcP PcP 09 57 27.2 +0.3
comp=Z,58nm,0.9s,baz=143,slow=2.9,SNR=5.6
NWAO Narrogin (SRO) 38.44 277 P **P** 09 55 12.4 -1.5
NWAO 09 57 27.2
NWAO pmax pmax
comp=Z,78nm,1.0s
NWAO Narrogin (SRO) 38.44 277 P **P** 09 55 09.9 -4.0
NWAO LR LR
comp=Z,43µm,19.0s
KLBR Kellerberrin 38.95 279 *eP* **P** 09 55 18.0 -0.2
comp=Z,341nm,1.5s,mb5.9
KLBR *e*PCP PcP 09 57 28.9 +0.4
MIR Mirnyy 39.18 217 *i* **P** 09 55 21.0 +1.3
MIR *i* 09 55 30.0
MIR *i* PPP 09 57 25.0
MIR *i* S **S** 10 01 18.0 -0.5
MIR pmax pmax
comp=Z,100nm,1.5s
MIR pmax pmax
comp=Z,3µm,3.0s
MIR MLR MLR
comp=Z,52µm,18.0s
MIR Mirnyy 39.18 217K *i*P **P** 09 55 16.0 -3.7
MUN Mundaring 39.71 277 *eP* **P** 09 55 24.4 -0.1
MUN *e*PCP PcP 09 57 29.7 -1.2
MUN *e*S **S** 10 01 21.9 -5.3
HNR Honiara 39.79 353 P **P** 09 55 25.1 -0.2
comp=Z,183nm,0.7s,mb5.9,baz=179,slow=0.5,SNR=11
HNR Honiara 39.79 353 P **P** 09 55 25.1 -0.2
HNR pmax pmax
comp=Z,422nm,1.5s,mb6.0
HNR MLR MLR
comp=Z,92µm,20.0s,MS6.6
HNR Honiara 39.79 353 P **P** 09 55 25.1 -0.2
comp=Z,422nm,1.5s,mb6.0
HNR LR LR
comp=Z,92µm,20.0s,MS6.6
RAR Rarotonga 39.82 58 P **P** 09 55 28.0 +2.5
comp=Z,299nm,1.0s,mb6.0,baz=227,slow=7.7,SNR=28
RAR Rarotonga 39.82 58 P **P** 09 55 28.0 +2.5
RAR pmax pmax
comp=Z,299nm,1.0s
RAR Rarotonga 39.82 58 *eP* **P** 09 55 27.3 +1.8
comp=Z,5µm,2.5s,mb6.8

RAR LR LR
comp=Z,101µm,19.0s,MS6.7
AFI Afiamalu 40.24 37 P **P** 09 55 31.5 +2.5
comp=Z,2µm,1.0s,mb6.7,baz=265,slow=2.8,SNR=77
AFI Afiamalu 40.24 37 P **P** 09 55 31.5 +2.5
AFI LR LR
comp=Z,41µm,21.0s,MS6.2
QSPA South Pole Qui 40.95 180 P **P** 09 55 34.1 -0.1
comp=Z,48nm,0.9s,baz=17,slow=2.4,SNR=30
QSPA PcP PcP 09 57 33.9 -0.2
comp=Z,98nm,1.0s,baz=359,slow=3.6,SNR=5.3
QSPA South Pole Qui 40.95 180 P **P** 09 55 34.1 -0.1
QSPA PcP PcP 09 57 33.9 -0.2
PMG Port Moresby 42.19 334‖ *eP* **P** 09 55 41.1 -3.9
PMG Port Moresby 42.19 334 *e* **P** 09 55 47.2 +2.2
PMG LR LR
comp=Z,119µm,20.0s,MS6.8
FUNA Funafuti 42.37 22 *eP* **P** 09 55 46.5 0.0
comp=Z,4µm,2.1s,mb6.6
FUNA LR LR
comp=Z,61µm,20.0s,MS6.5
FITZ Fitzroy Crossi 43.98 301 *e* **P** 09 55 57.4 -2.1
FITZ *e*PCP PcP 09 57 46.0 +0.9
FITZ *e*S **S** 10 02 30.8 +0.3
FITZ *e*SS SS 10 05 30.6 -17
FITZ Fitzroy Crossi 43.98 301 P **P** 09 55 58.5 -1.0
comp=Z,50nm,1.0s,baz=166,slow=9.7,SNR=12
FITZ PcP PcP 09 57 46.2 +1.1
comp=Z,141nm,1.1s,baz=187,slow=3.4,SNR=4.1
FITZ S **S** 10 02 30.0 -0.5
comp=Z,3.7nm,1.0s,baz=223,slow=22,SNR=2.9
FITZ Fitzroy Crossi 43.98 301 P **P** 09 55 57.1 -2.4
comp=Z,9.6nm,1.2s
FITZ *e*PcP PcP 09 57 46.0 +0.9
FITZ *e*S **S** 10 02 30.8 +0.3
FITZ *e*SS SS 10 05 30.6 -17
TBI Tubuai 44.32 71 *eP* **P** 09 56 04.3 +2.1
comp=Z,2µm,1.2s,mb6.7
TBI *e*S **S** 10 02 40.2 +4.8
comp=Z,43µm,30.2s
TBI *e*SS SS 10 06 07.2 +13
comp=Z,88µm,31.2s
TBI *e*LR LR 10 07 55.7
comp=Z,68µm,22.8s,baz=217
TBI Tubuai 44.32 71 *eP* **P** 09 56 04.3 +2.1
comp=Z,2µm,1.2s,mb6.7
TBI *e*S **S** 10 02 40.2 +4.8
TBI *e*SS SS 10 06 07.2 +13
KAKA Kakadu 44.91 313 *e* **P** 09 56 07.1 +0.1
KAKA *e*PCP PcP 09 57 49.0 +0.7
MBWA Marble Bar 45.07 292 P **P** 09 56 03.8 -4.4
comp=Z,429nm,1.4s
MBWA LR LR
comp=Z,60µm,19.0s
PAE Paea 48.53 66 *eP* **P** 09 56 37.5 +2.2
comp=Z,7µm,1.3s,mb7.5
PPT Papeete 48.60 66 *eP* **P** 09 56 38.3 +2.4
comp=Z,796nm,1.4s,mb6.5
PPT *e*S **S** 10 03 39.9 +3.0
comp=Z,65µm,28.8s
PPT *e*LR LR 10 10 19.3
comp=Z,109µm,24.5s,baz=230
PPT Papeete 48.60 66 P **P** 09 56 37.9 +2.0
comp=Z,434nm,1.1s,mb6.4,baz=180,slow=3.9,SNR=53
PPT Papeete 48.60 66 P **P** 09 56 37.9 +2.0
PPT LR LR
comp=Z,5µm,19.0s
TVO Taravao 48.63 67 *eP* **P** 09 56 38.7 +2.6
comp=Z,18µm,1.4s
TIAR Tiarei 48.75 66 *eP* **P** 09 56 39.6 +2.6
comp=Z,13µm,1.1s
MEH Mehetia 49.28 68 *eP* **P** 09 56 43.3 +2.2
comp=Z,29µm,1.4s
MAW Mawson 49.72 209 *eP* **P** 09 56 40.8 -3.0
comp=Z,48nm,1.4s
MAW *e*S **S** 10 03 45.0 -6.5
MAW Mawson 49.72 209 P **P** 09 56 40.9 -2.9
comp=Z,4.6nm,0.6s,baz=138,slow=3.1,SNR=8.2
MAW Mawson 49.72 209 *eP* **P** 09 56 40.8 -3.0
MAW *e*S **S** 10 03 45.0 -6.5
MAW pmax pmax
comp=Z,44nm,1.5s
MAW MLR MLR
comp=Z,115µm,20.0s
MAW Mawson 49.72 209 *eP* **P** 09 56 40.8 -3.0
comp=Z,44nm,1.5s
MAW *e*S **S** 10 03 45.0 -6.5
MAW LR LR
comp=Z,115µm,20.0s
JAY Jayapura 50.71 329 P **P** 09 56 52.2 +0.2
BATI Baumata 51.52 305 P **P** 09 56 57.6 -0.5
comp=Z,431nm,1.1s,mb6.3,baz=156,slow=2.6,SNR=40
BATI S **S** 10 04 21.1 +3.4
comp=Z,9.3nm,0.3s,baz=79,slow=23,SNR=2.1
BATI LR LR 10 18 11.8
comp=Z,102µm,20.1s,MS6.8,baz=180,slow=35
VAH Vaihoa 51.58 66 *eP* **P** 09 57 00.4 +1.9
comp=Z,2µm,1.3s,mb6.8
PMOR Pomariorio Ree 51.61 66 *eP* **P** 09 57 01.0 +2.3
comp=Z,3µm,1.3s,mb7.1
RKT Rikitea 53.76 84 *eP* **P** 09 57 16.4 +1.8
comp=Z,252nm,1.4s,mb6.0
RKT *e*S **S** 10 04 50.8 +2.7
comp=Z,46µm,31.8s
RKT *e*SS SS 10 08 36.2 +7.4
comp=Z,23µm,27.0s
RKT *e*LR LR 10 12 21.9
comp=Z,47µm,24.2s,baz=221
RKT Rikitea 53.76 84 *eP* **P** 09 57 16.4 +1.8
comp=Z,252nm,1.4s,mb6.0
RKT *e*S **S** 10 04 50.8 +2.7
RKT *e*SS SS 10 08 36.2 +7.4
KAPI Kappang 57.96 304 P **P** 09 57 44.3 -0.5
comp=Z,3µm,1.4s,mb7.1,SNR=43
KAPI Kappang 57.96 304 ⇑P **P** 09 57 45.1 +0.4
SNR=68
KAPI Kappang 57.96 304 P **P** 09 57 44.4 -0.3
comp=Z,326nm,1.1s,mb6.2,baz=168,slow=5.1,SNR=62
KAPI S **S** 10 05 44.9 +0.7
comp=Z,1.9nm,0.5s,baz=87,slow=21,SNR=2.4
KAPI Kappang 57.96 304 *eP* **P** 09 57 43.5 -1.2
KAPI S **S** 10 05 44.9 +0.7
KAPI LR LR
comp=Z,58µm,19.0s,MS6.7
NVL N'lazarevskaya 58.75 190*c i*P **P** 09 57 47.5 -2.0
NVL *e*S **S** 10 05 50.3 -2.9
NVL SS SS 10 09 47.3 +1.9
NVL pmax pmax
comp=Z,224nm,1.4s,mb6.0
SNAA Sanae 59.12 185 *e* **P** 09 57 50.8 -1.3
SNAA *e* 09 57 53.4
SNAA *e* 09 57 58.6
SNAA Sanae 59.12 185 *i* **P** 09 57 46.3 -5.8
SNAA Sanae 59.12 185 *eP* **P** 09 57 44.6 -7.5
comp=Z,288nm,1.3s
SNAA Sanae 59.12 185 *eP* **P** 09 57 46.4 -5.7
VNA3 Neumayer Olymp 59.82 182 *eP* **P** 09 57 51.4 -5.5
VNA3 *e* pP 09 57 55.9 -6.8
VNA3 *e* pP 09 57 58.0 -4.7
VNA3 *e* 09 58 03.5
VNA2 Neumayer--Watz 60.07 183 *e* **P** 09 57 57.9 -0.7
VNA2 *e* 09 58 00.9
VNA2 *e* 09 58 05.7
VNA2 Neumayer--Watz 60.07 183 *eP* **P** 09 57 53.4 -5.2
PMSA Palmer Station 60.32 158 P **P** 09 58 01.5 +1.1
comp=Z,65nm,1.0s,mb5.6,baz=193,slow=10.0,SNR=5.5
PMSA Palmer Station 60.32 158 P **P** 09 58 01.5 +1.1
PMSA LR LR
comp=Z,47µm,22.0s,MS6.6
VNA1 Neumayer--Stat 60.37 183 *e* **P** 09 58 00.2 -0.5
VNA1 *e* 09 58 02.5
VNA1 *e* 09 58 07.9
VNA1 Neumayer--Stat 60.37 183 *eP* **P** 09 57 56.6 -4.1
XMAS Kiritimati 60.71 45 *eP* **P** 09 58 05.4 +1.7
comp=Z,3µm,2.1s,mb7.1
XMAS LR LR
comp=Z,30µm,20.0s,MS6.4
GUMO Guam 64.83 339 P **P** 09 58 31.1 0.0
GUMO pmax pmax
comp=Z,4µm,1.3s,mb7.3
GUMO Guam 64.83 339 P **P** 09 58 30.2 -0.9
comp=Z,195nm,1.3s,mb6.0
GUMO LR LR
comp=Z,15µm,19.0s,MS6.2
DAV Davao City (W) 65.47 317 P **P** 09 58 34.6 -0.7
comp=Z,106nm,0.4s,mb6.2,baz=243,slow=19,SNR=8.6

DAV Davao City (W) 65.47 317⇑ *i*P **P** 09 58 34.3 -1.1
BIPH Bislig 66.12 318⇑ *e*P **P** 09 58 37.6 -1.8
COCO West Island 66.24 279 P **P** 09 58 40.9 +0.6
comp=Z,1µm,2.6s,mb6.6,SNR=5.8
COCO West Island 66.24 279 ⇑P **P** 09 58 41.1 +0.7
SNR=5.5
COCO West Island 66.24 279 *eP* **P** 09 58 38.5 -1.8
comp=Z,152nm,1.1s,mb5.9
COCO LR LR
comp=Z,9µm,20.0s,MS6.0
BUKP Musuan 66.42 317 *eP* **P** 09 58 41.2 -0.2
TSM Tawau 66.80 308‖ P **P** 09 58 43.8 0.0
PAGZ Pagadian 67.16 315 *eP* **P** 09 58 46.0 -0.2
MYLDM Lahad Datu 67.23 309⇑ P **P** 09 58 46.6 0.0
USHA Ushuaia 67.29 150 P **P** 09 58 47.5 +1.0
comp=Z,76nm,1.0s,mb5.7,baz=209,slow=8.3,SNR=14
RPN Rapa Nui 67.64 106 P **P** 09 58 52.0 +2.9
comp=Z,7µm,1.3s,mb7.5,SNR=22
RPN Rapa Nui 67.64 106 P **P** 09 58 50.1 +1.0
comp=Z,3658µm,1.1s,baz=235,slow=2.7,SNR=37
SBUM Sibu 68.29 302‖ P **P** 09 58 53.3 0.0
BTM Bintulu 68.44 303‖ P **P** 09 58 53.3 -0.9
TBP Tagbilaran 68.57 316 *eP* **P** 09 58 52.4 -2.5
KSM Kuching 68.57 300‖ P **P** 09 58 53.3 -1.8
KSM Kuching 68.57 300 *eP* **P** 09 58 49.9 -5.2
LLP Lapu-Lapu 69.07 317 *eP* **P** 09 58 57.6 -0.5
KKM Kota Kinabalu 69.14 307‖ P **P** 09 58 53.3 -5.3
KKM Kota Kinabalu 69.14 307 *eP* **P** 09 58 55.2 -3.4
KKM LR LR
comp=Z,18µm,19.0s
OCLP Ormoc 69.44 318 *eP* **P** 09 59 01.4 +1.1
KDM Kudat 69.56 309⇑ P **P** 09 59 01.6 +0.4
CNP Catarman 70.71 319 *eP* **P** 09 59 06.6 -1.6
PVCP Virac 71.90 319 *eP* **P** 09 59 14.3 -1.0
SJMP San Jose 72.25 315 *eP* **P** 09 59 17.7 +0.2
KGM Kluang 73.11 294‖ P **P** 09 59 22.6 -0.1
LUBP Lubang 73.77 315 *eP* **P** 09 59 25.2 -1.3
BALP Baler 74.93 317 *eP* **P** 09 59 32.4 -0.8
PCPH Palayan 74.99 317‖ *eP* **P** 09 59 33.0 -0.5
FRIM Kepong 75.09 293⇑ P **P** 09 59 34.2 -0.1
KTGM Kuala Trenggan 75.86 296⇑ P **P** 09 59 34.2 -4.5
CAUP Cauayan 75.88 318 *eP* **P** 09 59 38.4 -0.2
IPM Ipoh 76.44 294‖ P **P** 09 59 42.0 0.0
CVP Callao Caves 76.56 318⇑ *eP* **P** 09 59 42.1 -0.3
KHU Kahuku 76.82 39 P **P** 09 59 46.6 +2.7
KHU Kahuku 76.82 39 P **P** 09 59 39.8 -4.1
KKH Kailua Kona 77.02 38 P **P** 09 59 48.1 +3.1
KKH Kailua Kona 77.02 38 *eP* **P** 09 59 46.6 +1.6
STCH Steam Cracks 77.14 39 *eP* **P** 09 59 45.8 +0.1
POHA Pohakuloa 77.31 38 *eP* **P** 09 59 48.0 +1.3
comp=Z,3µm,1.1s,mb7.1
POHA LR LR
comp=Z,24µm,20.0s,MS6.5
HON Honolulu 77.75 36 P **P** 09 59 51.9 +2.9
HON Honolulu 77.75 36 *eP* **P** 09 59 51.6 +2.6
KIP Kipapa 77.83 36 P **P** 09 59 50.8 +1.3
KIP pmax pmax
comp=Z,2µm,1.3s,mb7.0
KIP Kipapa 77.83 36*c i*P **P** 09 59 51.4 +1.9
KIP Kipapa 77.83 36 *eP* **P** 09 59 50.5 +1.0
comp=Z,2µm,1.4s,mb6.9
KIP LR LR
comp=Z,16µm,21.0s,MS6.3
HKL Haleakala 77.87 37 *eP* **P** 09 59 51.9 +2.1
PLCA Paso Flores 78.22 141 P **P** 09 59 51.7 0.0
comp=Z,85nm,1.0s,mb5.6,baz=212,slow=6.0,SNR=108
PLCA Paso Flores 78.22 141 P **P** 09 59 51.7 +0.1
PLCA pmax pmax
comp=Z,85nm,1.0s
PLCA Paso Flores 78.22 141 *eP* **P** 09 59 50.8 -0.8
comp=Z,1µm,1.9s,mb6.5
PLCA LR LR
comp=Z,19µm,22.0s,MS6.4
CBIJ Chichi jima 78.48 340 P **P** 09 59 51.2 -1.7
comp=Z,745nm,1.0s,mb6.6,baz=149,slow=3.4,SNR=14
CBIJ Chichi jima 78.48 340 P **P** 09 59 52.3 -0.7
MIDW Midway 78.73 16 *eP* **P** 09 59 55.9 +1.6
comp=Z,2µm,1.6s,mb6.8
MIDW LR LR
comp=Z,31µm,21.0s,MS6.6
SNG Songkhla 78.82 295 P **P** 09 59 55.0 -0.2
comp=Z,400nm,1.2s,mb6.2
JMZ Minamidaito 2 80.32 330 P **P** 10 00 05.0 +2.0
CCHI Chillan 81.00 137⇑ *i*P **P** 10 00 00.9 -5.9
YOJ Yonaguni jima 82.07 323 P **P** 10 00 14.0 +1.6
JOW Kunigami 82.25 328 P **P** 10 00 13.8 +0.5
comp=Z,280nm,1.1s,mb6.1,baz=157,slow=3.5
JOW PP PP 10 03 23.9 +1.7
comp=Z,13nm,0.8s,baz=126,slow=18,SNR=4.4
JOW Kunigami 82.25 328 P **P** 10 00 14.8 +1.5
NACB Ninganchiao 82.39 321 *eP* **P** 10 00 12.4 -1.7
comp=Z,244nm,1.0s,mb6.1
NICH Los Niches 82.71 137⇑ *i*P **P** 10 00 14.3 -1.6
YHNB Yeheng 82.92 321 P **P** 10 00 12.9 -3.9
comp=Z,177nm,1.3s,mb5.9
YHNB LR LR
comp=Z,27µm,22.0s,MS6.6
TATO Taipei 83.15 321 *eP* **P** 10 00 16.2 -1.8
comp=Z,494nm,1.4s,mb6.3
TATO LR LR
comp=Z,20µm,22.0s,MS6.5
JAM Amami Oshima 83.25 330 P **P** 10 00 19.8 +1.4
QIZ Qiongzhong 83.38 309 P **P** 10 00 16.3 -3.0
QIZ PP PP 10 03 26.5 -5.1
QIZ S S 10 10 36.5 -2.9
QIZ SS SS 10 16 01.8 -3.7
QIZ AMB AMB
comp=Z,296nm,2.0s,mb6.0
QIZ LR LR
comp=N,6µm,21.0s,MS6.2
QIZ LR LR
comp=E,9µm,20.8s,MS6.2
QIZ LR LR
comp=Z,9µm,22.8s,MS6.1
QIZ Qiongzhong 83.38 309 *eP* **P** 10 00 18.3 -1.0
comp=Z,1µm,1.8s,mb6.6
QIZ *e*PP PP 10 03 28.7 -2.9
QIZ LR LR
comp=Z,10µm,22.0s,MS6.1
NNT Nongplab 83.65 297 P **P** 10 00 20.0 -0.8
TRQA Tornquist 83.92 145 *eP* **P** 10 00 20.6 -1.5
comp=Z,249nm,1.3s,mb6.2
TRQA LR LR
comp=Z,25µm,20.0s,MS6.6
LMEL Las Melosas 84.14 137⇑ *i*P **P** 10 00 21.8 -1.4
QZH Quanzhou 84.33 319⇑ *i*P **P** 10 00 24.0 -0.1
QZH PP PP 10 03 36.8 -2.6
QZH S S 10 10 51.8 +3.0
QZH SS SS 10 16 14.3 -5.3
QZH AMB AMB
comp=Z,1µm,1.4s,mb6.9
QZH AMB AMB
comp=Z,15µm,3.5s
QZH LR LR
comp=N,9µm,17.2s,MS6.6
QZH LR LR
comp=E,21µm,21.5s,MS6.6
QZH LR LR
comp=Z,36µm,23.4s,MS6.7
FCH Farellones 84.54 137⇑ *i*P **P** 10 00 23.8 -1.5
JHJ2 Mitsune 84.80 339 P **P** 10 00 26.1 -0.1
JHJ Hachijo jima 2 84.81 339 P **P** 10 00 25.9 -0.4
comp=Z,638nm,0.9s,mb6.8,baz=182,slow=3.2,SNR=7.1
JHJ PP PP 10 03 43.8 +0.5
comp=Z,225nm,0.9s,baz=62,slow=9.7,SNR=2.3
KKTK Khon Kaen 84.91 302 P **P** 10 00 26.0 -1.1
comp=Z,926nm,0.7s,mb7.0
GZH Guangzhou 85.09 314 P **P** 10 00 30.5 +2.6
GZH PP PP 10 03 48.3 +2.7
GZH S S 10 11 02.5 +6.0
GZH SS SS 10 16 33.5 +2.7
GZH AMB AMB
comp=Z,471nm,1.9s,mb6.3
GZH LR LR
comp=N,4µm,22.5s,MS6.0
GZH LR LR
comp=E,6µm,19.4s,MS6.0
GZH LR LR
comp=Z,12µm,17.6s,MS6.3
DGAR Diego Garcia 85.74 264 *i*P **P** 10 00 30.9 -0.6
DGAR Diego Garcia 85.74 264 *i*P **P** 10 00 30.0 -1.5
DGAR LR LR
comp=Z,12µm,19.0s,MS6.3
JSU Suzuyama 85.84 331 P **P** 10 00 32.4 +1.0
NST Nakhon Sawan 85.89 300 P **P** 10 00 29.0 -3.0

comp=Z,250nm,2.0s,mb6.1
JWZ Kozaga 86.21 336 P **P** **10 00 33.9 +0.7**
JSG Sagara 86.68 339 P **P** **10 00 37.0 +1.5**
JIE Ise 86.77 337 P **P** **10 00 37.8 +1.8**
JMN Monobe 86.90 335 P **P** **10 00 37.1 +0.5**
CFAA Coronel Fontan 86.92 137 P **P** **10 00 36.2 -0.9**
comp=Z,25nm,1.1s,mb5.3,baz=220,slow=4.1,SNR=27
CFAA Coronel Fontan 86.92 137 P **P** **10 00 36.2 -0.9**
TLL Tololo Astrono 86.96 135⇑*iP* **P** **10 00 34.2 -3.1**
JOD2 Odawara 2 87.03 339 P **P** **10 00 37.9 +0.7**
PBA Port Blair 87.10 291 *ex* x 10 01 14.3
JNU Nakatsue 87.21 332 P **P** **10 00 38.2 +0.1**
JFU Fukue jima 2 87.44 330 P **P** **10 00 39.6 +0.3**
JYT Yasato 87.71 341 P **P** **10 00 42.0 +1.6**
JRY Ryogami san 87.79 340 P **P** **10 00 41.4 +0.5**
JWT Wachi 87.95 337 P **P** **10 00 42.2 +0.6**
JAD Aida 87.96 336 P **P** **10 00 42.1 +0.4**
LCO Las Campanas 87.98 134⇑*iP* **P** **10 00 42.0 -0.3**
LCO Las Campanas 87.98 134 *eP* **P** **10 00 42.0 -0.2**
comp=Z,1μm,1.6s,mb6.9
LCO LR LR
comp=Z,6μm,21.0s,MS6.0
LPA La Plata 88.21 146*deP* **P** **10 00 42.0 -1.3**
LPA *e*PP pP 10 00 45.0 -4.3
LPA *e*PP PP 10 04 13.0 +3.4
LPA *e*SKS 10 11 11.0
LPA *e*SKKS SKKSac 10 11 23.0 +1.5
LPA *e*S S 10 11 27.0 +0.2
LPA *e*SP 10 12 30.0
LPA *e*SS SS 10 17 17.0 +2.7
LPA
comp=Z,26μm,18.0s
JHS Saijyo 88.30 335 P **P** **10 00 44.5 +1.2**
MJAR Matsushiro Arr 88.46 339 P **P** **10 00 44.0 0.0**
comp=Z,85nm,1.3s,mb5.8,baz=169,slow=5.7,SNR=19
MAJO Matsushiro 88.46 339 *eP* **P** **10 00 41.1 -2.9**
MAJO pmax pmax
comp=Z,4μm,1.8s,mb7.4
MAJO MLR MLR
comp=Z,11μm,20.0s,MS6.3
MAJO Matsushiro 88.46 339 *eP* **P** **10 00 41.0 -3.0**
comp=Z,4μm,1.8s,mb7.4
MAJO LR LR
comp=Z,11μm,20.0s,MS6.3
MAT Matsushiro 88.46 339 P **P** **10 00 44.3 +0.3**
MAT S S 10 11 15.0 -13
SSE Sheshan 88.71 324 P **P** **10 00 45.8 +0.4**
SSE XP sP 10 00 50.3 -3.2
SSE PP PP 10 04 13.3 -1.4
SSE S S 10 11 30.8 -0.3
SSE XS sS 10 11 37.0 -4.1
SSE SS SS 10 17 21.3 -2.4
SSE AMB AMB
comp=Z,736nm,1.3s,mb6.8
SSE AMB AMB
comp=Z,6μm,8.2s
SSE LR LR
comp=N,12μm,18.4s,MS6.4
SSE LR LR
comp=E,8μm,18.4s,MS6.4
SSE LR LR
comp=Z,19μm,16.6s,MS6.6
SSE Sheshan 88.71 324 P **P** **10 00 45.8 +0.4**
comp=Z,736nm,1.3s,mb6.8
SSE sP sP 10 00 50.3 -3.2
SSE PP PP 10 04 13.3 -1.4
SSE S S 10 11 30.8 -0.3
SSE sS sS 10 11 37.1 -4.0
SSE SS SS 10 17 21.2 -2.5
SSE LR LR
comp=Z,19μm,16.6s,MS6.6
CM31 Chiang Mai Arr 88.79 300 PFAKE 10 00 50.0 +4.0
CM31 LR LR
comp=Z,16μm,20.0s,MS6.4
CMAR Chiang Mai Arr 88.79 300 P **P** **10 00 45.1 -0.9**
comp=Z,138nm,0.9s,mb6.3,baz=154,slow=3.5,SNR=24
CMAR PKKPbc PKKPbc 10 18 23.6 -0.6
comp=Z,10nm,0.9s,baz=305,slow=3.7,SNR=4.1
CMAR PKPPKP 10 26 39.6
comp=Z,1.1nm,0.3s,baz=294,slow=4.0,SNR=5.4
JTU Tsushima 88.96 332 P **P** **10 00 48.1 +1.7**
CHG Chiang Mai 89.07 300⇑P **P** **10 00 46.1 -1.2**
comp=Z,373nm,1.4s,mb6.5
CHTO Chiang Mai 89.07 300 P **P** **10 00 48.1 +0.8**
SNR=84
CHTO Chiang Mai 89.07 300 *eP* **P** **10 00 46.5 -0.8**
CHTO *e* 10 04 13.4
CHTO pmax pmax
comp=Z,3μm,2.2s,mb7.2
CHTO MLR MLR
comp=Z,18μm,19.0s,MS6.5
CHTO Chiang Mai 89.07 300 *eP* **P** **10 00 46.5 -0.8**
comp=Z,3μm,2.2s,mb7.2
CHTO *e*PP PP 10 04 13.4 -4.4
CHTO LR LR
comp=Z,18μm,19.0s,MS6.5
JMM Marumori 89.16 342 P **P** **10 00 48.2 +0.9**
JSD Sado 89.87 340 P **P** **10 00 51.4 +0.8**
JYA Atsumi 90.08 341 P **P** **10 00 52.9 +1.3**
NJ2 Nanjing 90.47 323 *eP* **P** **10 00 53.5 -0.1**
NJ2 AP pP 10 00 58.3 -1.3
NJ2 XP sP 10 01 00.5 -1.2
NJ2 PP PP 10 04 29.0 +0.2
NJ2 SKS 10 11 21.0
NJ2 S S 10 11 42.0 -5.5
NJ2 AMB AMB
comp=Z,400nm,1.0s,mb6.7
NJ2 AMB AMB
comp=Z,3μm,6.0s
NJ2 LR LR
comp=N,8μm,21.2s,MS6.4
NJ2 LR LR
comp=E,14μm,21.2s,MS6.4
NJ2 LR LR
comp=Z,14μm,21.2s,MS6.4
JOM Ohasama 90.60 342 P **P** **10 00 55.0 +1.0**
WHN Wuhan 91.04 319⇓P **P** **10 00 56.5 +0.3**
WHN XP sP 10 01 07.8 +3.4
WHN SKS 10 11 23.5
WHN S S 10 11 51.3 -1.4
WHN AMB AMB
comp=Z,2μm,1.5s,mb7.1
WHN AMB AMB
comp=Z,11μm,11.9s
WHN LR LR
comp=N,6μm,15.0s
WHN LR LR
comp=E,22μm,22.8s
WHN LR LR
comp=Z,23μm,20.0s,MS6.6
GYA Guiyang 91.17 311 P **P** **10 00 56.5 -0.5**
GYA PP PP 10 04 38.5 +4.1
GYA SKS 10 11 30.5
GYA S S 10 11 53.0 -1.1
GYA SS SS 10 17 53.5 -5.9
GYA AMB AMB
comp=Z,280nm,1.8s,mb6.3
GYA AMB AMB
comp=Z,4μm,8.6s
GYA LR LR
comp=N,6μm,22.3s,MS6.2
GYA LR LR
comp=E,8μm,20.6s,MS6.2
GYA LR LR
comp=Z,8μm,19.8s,MS6.2
PALK Pallekele 91.36 279 P **P** **10 00 58.5 +0.3**
SNR=11
PALK Pallekele 91.36 279 *eP* **P** **10 00 53.8 -4.4**
comp=Z,466nm,1.7s
PALK LR LR
comp=Z,16μm,20.0s
JTM Tenmabayashi 91.92 342 P **P** **10 01 01.7 +1.7**
KMI Kunming 92.08 307 P **P** **10 01 00.0 -1.2**
KMI AP pP 10 01 03.3 -3.9
KMI PP PP 10 04 40.0 -1.6
KMI SKS 10 11 30.8
KMI S S 10 11 57.5 -4.9
KMI SS SS 10 18 06.5 -6.1
KMI AMB AMB
comp=Z,319nm,2.0s,mb6.3
KMI AMB AMB
comp=Z,5μm,8.8s
KMI LR LR
comp=N,4μm,22.1s,MS6.2
KMI LR LR
comp=E,9μm,20.2s,MS6.2
KMI LR LR
comp=Z,12μm,21.2s,MS6.3
KMI Kunming 92.08 307 P **P** **10 01 00.1 -1.1**
KMI 10 04 40.1
KMI 10 06 41.2
KMI PPP 10 11 30.8
KMI S S 10 11 57.5 -4.9
KMI PS PS 10 13 10.7 -4.2
KMI SS SS 10 18 06.5 -6.1
KMI SSS 10 21 43.6
KMI pmax pmax
comp=Z,319nm,2.0s,mb6.3
KMI MLR MLR
comp=Z,12μm,21.2s,MS6.3
KMI Kunming 92.08 307 P **P** **10 01 00.1 -1.1**
comp=Z,319nm,2.0s,mb6.3
KMI pP pP 10 01 03.3 -3.9
KMI PP PP 10 04 40.1 -1.5
KMI PPP 10 06 41.2
KMI SKS 10 11 30.8
KMI S S 10 11 57.5 -4.9
KMI sS sS 10 12 02.3 -10
KMI PS PS 10 13 10.7 -4.2
KMI SS SS 10 18 06.5 -6.1
KMI SSS 10 21 43.6
KMI LR LR
comp=Z,12μm,21.2s,MS6.3
KSRS Korea Array 92.12 332 P **P** **10 01 02.1 +1.0**
comp=Z,17nm,0.9s,mb5.4,baz=150,slow=4.8,SNR=11
KSRS Korea Array 92.12 332 P **P** **10 01 02.1 +1.0**
KSRS pmax pmax
comp=Z,17nm,0.9s,mb5.4
ABPO Ambohimpanom 92.26 237 *eP* **P** **10 01 01.8 -0.6**
comp=Z,542nm,1.8s,mb6.6
ABPO LR LR
comp=Z,15μm,19.0s,MS6.5
JOT Ohata 92.49 343 P **P** **10 01 04.7 +2.0**
INCN Inchon 92.55 331 P **P** **10 01 04.8 +1.8**
SNR=38
INCN Inchon 92.55 331 *eP* **P** **10 01 02.8 -0.2**
comp=Z,2μm,1.8s,mb7.2
INCN *e*PP PP 10 04 45.2 0.0
INCN LR LR
comp=Z,24μm,20.0s,MS6.6
SUR Sutherland 92.58 210 PFAKE 10 01 10.0 +6.3
SUR LR LR
comp=Z,20μm,21.0s,MS6.5
ERM Erimo 92.71 344 P **P** **10 01 06.4 +2.7**
comp=Z,869nm,1.8s,mb6.9,SNR=26
ERM Erimo 92.71 344 *e* **P** **10 01 06.1 +2.4**
ERM *e* 10 04 43.1
ERM pmax pmax
comp=Z,877nm,1.8s,mb6.9
ERM MLR MLR
comp=Z,31μm,20.0s,MS6.8
ERM Erimo 92.71 344 *e* **P** **10 01 06.1 +2.4**
ERM *e*PP PP 10 04 43.1 -3.2
ERM LR LR
comp=Z,31μm,20.0s,MS6.8
ERM Erimo 92.71 344 *eP* **P** **10 01 01.2 -2.5**
ERM Erimo 92.71 344 *eP* **P** **10 01 01.2 -2.5**
comp=Z,877nm,1.8s
JEM Erimo 92.71 344 P **P** **10 01 06.1 +2.4**
CEN1 Los Morros 92.94 131⇓*iP* **P** **10 01 04.3 -1.2**
JEW Eniwo 93.82 343 P **P** **10 01 10.3 +1.5**
JSH Shimam 93.91 342 P **P** **10 01 11.1 +1.9**
TRIS Tristan da Cun 94.09 183 PFAKE 10 01 20.0 +9.5
TRIS LR LR
comp=Z,22μm,20.0s,MS6.6
LVC Limon Verde 94.23 132 P **P** **10 01 13.1 +1.6**
comp=Z,51nm,0.9s,mb5.9,baz=228,slow=3.7,SNR=42
LVC PKKPbc PKKPbc 10 18 13.8 +4.1
comp=Z,11nm,1.1s,baz=16,slow=7.4,SNR=6.2
LVC Limon Verde 94.23 132 *eP* **P** **10 01 11.9 +0.5**
comp=Z,383nm,1.6s,mb6.6
LVC LR LR
comp=Z,6μm,20.0s,MS6.1
YUK Yuzh-Kuril'sk 94.23 347⇑*iP* **P** **10 01 13.0 +2.4**
YUK *e*SP sP 10 01 22.0 +3.2
YUK *e*S SKSac 10 11 46.0 +1.9
YUK pmax pmax
comp=Z,8μm,3.0s
YUK pmax pmax
comp=N,2μm,4.0s
YUK pmax pmax
comp=E,8μm,3.0s
BOSA Boshof 94.43 215 P **P** **10 01 11.0 -1.2**
comp=E,18nm,1.0s,mb5.5,baz=172,slow=3.1,SNR=13
BOSA PKKPbc PKKPbc 10 18 11.5 +2.2
comp=E,18nm,1.0s,baz=341,slow=1.0,SNR=9.9
BOSA Boshof 94.43 215 P **P** **10 01 11.0 -1.2**
BOSA PKKPbc PKKPbc 10 18 11.5 +2.2
BOSA LR LR
comp=Z,22μm,20.0s,MS6.6
JMP Maruseppu 94.61 345 P **P** **10 01 15.2 +2.8**
TRD Trivandrum 94.71 277 *eP* **P** **10 01 09.7 -3.9**
TIA Tai'an 94.81 323 *eP* **P** **10 01 12.8 -0.7**
TIA PP PP 10 05 03.0 +0.2
TIA AMB AMB
comp=Z,216nm,1.4s,mb6.4
TIA AMB AMB
comp=Z,3μm,5.0s
TIA LR LR
comp=N,8μm,20.0s,MS6.3
TIA LR LR
comp=E,3μm,15.0s,MS6.3
ASAJ Asahikawa 94.85 344 P **P** **10 01 15.3 +1.8**
comp=E,54nm,0.9s,mb6.0,baz=239,slow=11,SNR=13
ASAJ LR LR 10 38 45.3
comp=E,42μm,21.9s,MS6.9,baz=201,slow=32
ASAJ Asahikawa 94.85 344 P **P** **10 01 16.7 +3.2**
DL2 Dalian 95.52 328⇑*iP* **P** **10 01 17.0 +0.3**
DL2 PP PP 10 05 10.0 +1.7
DL2 SKS 10 11 49.8
DL2 AMB AMB
comp=Z,110nm,1.0s,mb6.2
DL2 AMB AMB
comp=Z,2μm,8.8s
DL2 LR LR
comp=N,6μm,20.5s,MS6.1
DL2 LR LR
comp=E,5μm,21.5s,MS6.1
DL2 LR LR
comp=Z,9μm,20.5s,MS6.2
KOD Kodaikanal 95.67 279 *eP* **P** **10 01 15.6 -2.4**
MDRS Chennai 96.00 283 *eP* **P** **10 01 16.9 -2.6**
CPUP Villa Florida 96.12 143 P **P** **10 01 19.6 -0.5**
comp=Z,40nm,1.0s,mb5.8,baz=200,slow=3.6,SNR=56
CPUP PKKPbc PKKPbc 10 18 06.4 +1.6
comp=Z,8.2nm,0.9s,baz=49,slow=3.9,SNR=16
CPUP PKPPKP 10 26 16.6
comp=Z,2.5nm,0.9s,baz=354,slow=2.6,SNR=5.7
CPUP Villa Florida 96.12 143 P **P** **10 01 16.6 -3.4**
comp=Z,296nm,1.2s,mb6.6
CPUP LR LR
comp=Z,3μm,21.0s,MS5.8
VLA Vladivostok 96.24 337*diP* **P** **10 01 20.3 +0.5**
VLA pmax pmax
comp=Z,278nm,2.0s,mb6.3
VLA MLR MLR
comp=Z,9μm,18.0s,MS6.3
VLA Vladivostok 96.24 337 *iP* **P** **10 01 20.4 +0.6**
CD2 Chengdu 96.27 311⇓*iP* **P** **10 01 20.3 0.0**
CD2 AP pP 10 01 25.0 -1.4
CD2 XP sP 10 01 27.8 -0.7
CD2 PP PP 10 05 15.8 +1.5
CD2 SKS 10 11 54.8
CD2 S S 10 12 35.5 -3.4
CD2 XS sS 10 12 43.3 -5.6
CD2 SS SS 10 19 11.3 -1.0
CD2 AMB AMB
comp=Z,200nm,1.4s,mb6.3
CD2 AMB AMB
comp=Z,4μm,12.0s
CD2 LR LR
comp=N,9μm,16.8s,MS6.4
CD2 LR LR
comp=E,7μm,19.2s,MS6.4
CD2 LR LR
comp=Z,8μm,21.6s,MS6.2
XAN Xi'an 96.41 316 P **P** **10 01 20.3 -0.6**
XAN AP pP 10 01 28.5 +1.6
XAN PP PP 10 05 14.5 -0.8
XAN S S 10 12 34.3 -5.7
XAN AMB AMB
comp=Z,149nm,2.6s,mb6.0
XAN AMB AMB
comp=Z,4μm,13.0s
XAN LR LR
comp=N,3μm,24.6s
XAN LR LR
comp=E,10μm,32.2s
XAN LR LR
comp=Z,20μm,24.7s,MS6.5
IMP Imphal 96.62 300 *eP* **P** **10 01 21.0 -1.1**
IMP *ex* x 10 05 07.0
SNY Shenyang 97.48 330⇑P **P** **10 01 26.5 +1.0**
SNY PP PP 10 05 21.8 -1.6
SNY S S 10 12 49.5 +0.7
SNY AMB AMB
comp=Z,91nm,2.4s,mb5.8
SNY LR LR
comp=N,9μm,21.6s,MS6.2
SNY LR LR
comp=E,3μm,24.9s,MS6.2
SNY LR LR
comp=Z,17μm,21.8s,MS6.5
LBTB Lobatse 97.53 217 PFAKE 10 01 40.0 +14
LBTB LR LR
comp=Z,12μm,21.0s,MS6.3
VIS Vishakhapatnam 97.55 288⇓*eP* **P** **10 01 24.4 -2.0**
YSS Yuzh-Sakhalins 97.57 345α*iP* **P** **10 01 26.0 +0.2**
YSS *e* 10 11 59.0
YSS *e*PS PS 10 14 16.0 +1.4
YSS *e*PPS 10 14 58.0
YSS *e*SSS 10 23 16.0
YSS pmax pmax
comp=Z,810nm,1.8s,mb7.0
YSS pmax pmax
comp=Z,4μm,16.0s
YSS Yuzh-Sakhalins 97.57 345 *eP* **P** **10 01 27.2 +1.5**
comp=Z,965nm,2.1s,mb7.0
YSS LR LR
comp=Z,7μm,20.0s,MS6.2
TIY Taiyuan 97.99 321⇑P **P** **10 01 30.8 +2.9**
TIY PP PP 10 05 27.8 +0.4
TIY S S 10 12 54.3 +1.0
TIY XS sS 10 13 03.3 -0.1
TIY SS SS 10 19 37.0 +0.6
TIY LR LR
comp=N,6μm,17.6s,MS6.2
TIY LR LR
comp=E,3μm,18.5s,MS6.2
TIY LR LR
comp=Z,16μm,22.2s,MS6.5
ARE Arequipa 98.08 127 *eP* **P** **10 01 31.0 +2.0**
CAL Calcutta 98.15 295 *eP* **P** **10 01 25.9 -3.1**
CAL *ex* x 10 13 08.4
MDJ Mudanjiang 98.24 336 P **P** **10 01 29.3 +0.5**
MDJ PP PP 10 05 29.0 -0.2
MDJ S S 10 12 57.3 +2.2
MDJ AMB AMB
comp=Z,54nm,2.0s,mb5.7
MDJ AMB AMB
comp=Z,3μm,11.1s
MDJ LR LR
comp=N,5μm,20.8s,MS6.3
MDJ LR LR
comp=E,8μm,20.8s,MS6.3
MDJ LR LR
comp=Z,11μm,20.7s,MS6.3
MDJ Mudanjiang 98.24 336 *eP* **P** **10 01 28.8 -0.1**
comp=Z,354nm,2.1s,mb6.5
MDJ LR LR
comp=Z,10μm,21.0s,MS6.3
SHL Shillong 98.39 299 *ex* x 10 01 18.5
BJT Baijiatuan 98.49 325 *eP* **P** **10 01 27.9 -2.2**
BJT pmax pmax
comp=Z,121nm,1.5s
BJT MLR MLR
comp=Z,20μm,20.0s
BJT Baijiatuan 98.49 325 *eP* **P** **10 01 27.9 -2.2**
comp=Z,121nm,1.5s,mb6.2
BJT LR LR
comp=Z,20μm,20.0s,MS6.6
BJI Beijing 98.51 325 P **P** **10 01 30.8 +0.6**
BJI PP PP 10 05 27.3 -4.0
BJI SKS 10 12 10.5
BJI S S 10 12 57.3 -0.3
BJI AMB AMB
comp=Z,74nm,1.8s,mb5.9
BJI AMB AMB
comp=Z,3μm,11.6s
BJI LR LR
comp=N,18μm,20.7s,MS6.6
BJI LR LR
comp=E,11μm,21.3s,MS6.6
BJI LR LR
comp=Z,19μm,26.6s
BJI Beijing 98.51 325 P **P** **10 01 30.8 +0.6**
comp=Z,74nm,1.8s,mb5.9
BJI PP PP 10 05 27.3 -4.0
BJI SKS 10 12 10.4
BJI S S 10 12 57.2 -0.4
BJI PS PS 10 14 24.4 -0.6
BJI SS SS 10 19 45.9 +2.4
BJI LR LR
comp=Z,19μm,26.6s,MS6.5
CN2 Changchun 98.68 333 *eP* **P** **10 01 31.5 +0.7**
CN2 *e*XP sP 10 01 39.3 +0.3
CN2 *e*PP PP 10 05 33.0 +0.4
CN2 *e*S S 10 12 57.5 -1.4
CN2 AMB AMB
comp=Z,90nm,1.4s,mb6.1
CN2 AMB AMB
comp=Z,2μm,9.0s
CN2 LR LR
comp=N,7μm,20.0s,MS6.2
CN2 LR LR
comp=E,3μm,20.0s,MS6.2
CN2 LR LR
comp=Z,5μm,22.0s,MS6.0
MSEY Mahe Island 98.70 252 PFAKE 10 01 40.0 +8.2
MSEY LR LR
comp=Z,16μm,20.0s,MS6.5
NNA Nana 98.80 120 P **P** **10 01 31.9 -0.4**
comp=Z,12nm,0.8s,mb5.5,baz=237,slow=9.3,SNR=10
NNA Nana 98.80 120 *eP* **P** **10 01 31.0 -1.2**
comp=Z,159nm,1.8s,mb6.2
NNA LR LR
comp=Z,11μm,21.0s,MS6.3
PAYG Puerto Ayora 99.45 102 PFAKE 10 01 50.0 +15
PAYG LR LR
comp=Z,12μm,19.0s,MS6.4
SKR Severo-Kuril's 99.73 355 *eP* Pdif 10 01 34.0 -2.2
SKR *e* 10 05 38.0
SKR S SKSac 10 12 13.0 +0.8
SKR *e*PS PS 10 14 40.0 +2.2
SKR pmax pmax
comp=Z,3μm,10.0s
SKR pmax pmax
comp=E,3μm,12.0s
SKR MLR MLR
comp=N,14μm,20.0s,MS6.5
SKR MLR MLR
comp=E,9μm,20.0s,MS6.5
SKR MLR MLR
comp=Z,22μm,20.0s,MS6.7
LPAZ La Paz 99.96 129 P Pdif 10 01 39.0 +1.8
comp=Z,29nm,1.2s,baz=195,slow=2.6,SNR=61
LPAZ PP PP 10 05 45.0 +3.2
comp=Z,7.9nm,1.3s,baz=212,slow=9.1,SNR=4.3
LPAZ La Paz 99.96 129 P Pdif 10 01 39.1 +1.8
LPAZ 10 05 45.0
LPAZ pmax pmax
comp=Z,29nm,1.2s
LPAZ pmax pmax
comp=Z,8.0nm,1.3s
LPAZ La Paz 99.96 129 *eP*dif Pdif 10 01 38.1 +0.8
comp=Z,177nm,1.7s
LPAZ *eP*P PP 10 05 43.3 +1.5
LPAZ LR LR
comp=Z,6μm,19.0s,MS6.1
HYB Hyderabad 100.33 285 *i* P Pdif 10 01 37.0 -1.9
HYB Hyderabad 100.33 285 *eP* Pdif 10 01 37.0 -1.9
LZH Lanzhou 100.44 314⇑P Pdif 10 01 40.3 +0.9
LZH AP 10 01 46.5
LZH XP 10 01 48.8

LZH PP PP 10 05 49.0 +2.9
LZH SKS 10 12 18.0
LZH S Sdif 10 13 12.0 -2.9
LZH XS 10 13 20.0
LZH AMB AMB
comp=Z,326nm,1.3s
LZH AMB AMB
comp=Z,4µm,8.1s
LZH LR LR
comp=E,7µm,17.1s
LZH LR LR
comp=Z,15µm,18.0s,MS6.5
LZH Lanzhou 100.44 314 ⇑P Pdif 10 01 40.2 +0.8
LZH 10 05 49.0
LZH 10 12 18.0
LZH S Sdif 10 13 12.1 -2.8
LZH SS SS 10 20 14.0 +3.2
LZH pmax pmax
comp=Z,326nm,1.3s
LZH MLR MLR
comp=Z,15µm,18.0s,MS6.5
LZH Lanzhou 100.44 314 ⇑P Pdif 10 01 40.2 +0.8
comp=Z,326nm,1.3s
LZH pP 10 01 46.6
LZH sP 10 01 48.7
LZH PP PP 10 05 49.0 +2.9
LZH SKS 10 12 18.0
LZH S Sdif 10 13 12.1 -2.8
LZH sS 10 13 20.0
LZH SS SS 10 20 14.0 +3.2
LZH LR LR
comp=Z,15µm,18.0s,MS6.5
HABR Khabarovsk 100.52 341 ⇓*e*P Pdif 10 01 36.0 -3.7
HABR *e*S Sdif 10 13 10.3 -5.3
HABR *e* 10 14 46.8
HABR *e* 10 20 09.6
HABR *e* 10 23 59.1
HABR pmax pmax
comp=Z,101nm,1.8s
HABR MLR MLR
comp=Z,4µm,20.0s,MS6.0
BOK Bokaro 100.56 294 *e*P Pdif 10 01 37.9 -2.0
HHC Hu-ho-hao-te 101.01 322 *e*P Pdif 10 01 37.3 -4.6
HHC PP PP 10 05 48.5 -1.8
HHC SKS 10 12 14.8
HHC S Sdif 10 13 11.8 -7.9
HHC SS SS 10 20 15.5 -3.0
HHC AMB AMB
comp=Z,8.0nm,0.8s
HHC AMB AMB
comp=Z,2µm,7.6s
HHC LR LR
comp=N,10µm,20.9s,MS6.4
HHC LR LR
comp=E,9µm,20.0s,MS6.4
HHC LR LR
comp=Z,15µm,20.7s,MS6.5
BTO Baotou 101.44 321 *e*P Pdif 10 01 43.3 -0.5
SMY Shemya 101.85 6 PFAKE 10 01 50.0 +4.3
SMY LR LR
comp=Z,21µm,20.0s,MS6.7
PET Petropavlovsk 101.94 356*c i*P Pdif 10 01 46.9 +0.9
PET *i* 10 05 57.5
PET *e*PPP 10 08 08.6
PET *e* 10 12 21.3
PET *i* PS PS 10 15 09.3 +7.9
PET *e*SS SS 10 20 38.4 +7.5
PET pmax pmax
comp=Z,3µm,14.4s
PET pmax pmax
comp=Z,3µm,15.2s
PET pmax pmax
comp=Z,117nm,2.4s
PET MLR MLR
comp=Z,14µm,20.0s,MS6.5
PET MLR MLR
comp=Z,13µm,20.0s
PET Petropavlovsk 101.94 356 PFAKE 10 01 50.0 +4.0
PET LR LR
comp=Z,25µm,22.0s,MS6.7
GOA Goa 101.94 280 *ex* x 10 01 37.4
ADK Adak 101.96 12 PFAKE 10 02 00.0 +14
ADK LR LR
comp=Z,26µm,20.0s,MS6.8
LSA Lhasa 101.98 302 PFAKE 10 02 00.0 +14
LSA LR LR
comp=Z,11µm,20.0s,MS6.4
PETK Petropavlovsk- 102.06 356 P Pdif 10 01 45.6 -1.0
comp=Z,21nm,1.0s,baz=140,slow=7.4,SNR=10
PETK PP PP 10 05 59.1 +1.0
comp=Z,8.4nm,0.9s,baz=150,slow=6.7,SNR=4.5
KAD Karad 103.04 281 *e*P Pdif 10 01 49.1 -1.9
SIV San Ignacio 103.65 135 Pdiff Pdif 10 01 53.4 -0.3
comp=Z,15nm,1.0s,baz=224,slow=5.3,SNR=44
SIV PP PP 10 06 04.8 -4.6
comp=Z,2.0nm,1.0s,baz=222,slow=11,SNR=6.2
AKL Akola 103.73 286 *e*P Pdif 10 01 53.0 -1.0
POO Poona 104.16 282 *e*P Pdif 10 01 53.1 -2.8
GTA Gaotai 105.01 314 P Pdif 10 01 59.7 0.0
GTA AP 10 02 04.1
GTA PP PP 10 06 22.5 +2.1
GTA SKS 10 12 37.5
GTA S Sdif 10 13 52.6 -0.5
GTA PP PP
comp=Z,1µm,8.1s
GTA LR LR
comp=N,4µm,21.6s,MS6.2
GTA LR LR
comp=E,7µm,20.4s,MS6.2
GTA LR LR
comp=Z,9µm,20.4s,MS6.3
LSZ Lusaka 105.06 224 PKKPbc PKKPbc 10 17 43.1 +3.8
baz=48,slow=4.5
LSZ Lusaka 105.06 224 PFAKE 10 02 10.0 +10
LSZ LR LR
comp=Z,27µm,20.0s,MS6.8
HIA Hailar 105.33 331*c i*P Pdif 10 02 01.1 0.0
HIA Hailar 105.33 331 *e*Pdif Pdif 10 02 00.8 -0.3
comp=Z,38nm,0.1s
HIA LR LR
comp=Z,15µm,21.0s,MS6.5
TSUM Tsumeb 105.82 212 PFAKE 10 06 30.0 +14
TSUM LR LR
comp=Z,26µm,19.0s,MS6.8
SNCC San Nicolas Is 106.21 58 PFAKE 10 06 30.0 +14
SNCC LR LR
comp=Z,38µm,19.0s,MS7.0
CIS Catalina Islan 106.95 59 ⇓P PKiKP 10 06 18.0 +0.4
baz=108
SBC Santa Barbara 106.99 57 ⇓P PP 10 06 35.4 +0.4
baz=108
BLG Laguna Peak 107.11 58 ⇓P PP 10 06 36.7 +0.8
baz=108
FMP Fort Macarthur 107.24 58 ⇑P PP 10 06 37.5 +0.7
baz=108
PKM Peak Mountain 107.27 57 ⇑P PP 10 06 38.0 +0.9
baz=108
V03C Hunter Liggett 107.34 55 ⇑P PP 10 06 39.0 +1.4
baz=108
SMMC Simmler 107.48 56 ⇑P PKiKP 10 06 18.8 +0.3
baz=108
SMMC ⇑P PP 10 06 40.5 +1.9
baz=108
OTAV Otavalo 107.60 111 PFAKE 10 06 30.0 +11
OTAV LR LR
comp=Z,5µm,19.0s,MS6.1
DECC Green Verdugo 107.62 58 ⇓P PKiKP 10 06 20.2 +1.5
baz=109
DECC ⇑P PP 10 06 40.3 +0.7
baz=109
PKD Parkfield 107.66 55 ⇑P PKiKP 10 06 19.1 +0.4
baz=109
PKD ⇑P PP 10 06 40.8 +0.9
baz=109
OSI Osito Adit 107.67 57 ⇓P PKiKP 10 06 20.3 +1.5
baz=109
OSI ⇓P PP 10 06 40.4 +0.4
baz=109
OSI Osito Adit 107.67 57 *e*PKiKP PKiKP 10 06 20.9 +2.1
FARB Farallon Islan 107.67 53 ⇓P PP 10 06 40.0 0.0
baz=109
MONP Monument Peak 107.69 60 ⇑P PKiKP 10 06 18.1 -0.8
baz=109
MONP ⇑P PP 10 06 40.9 +0.7
baz=109

DVTC Desert V Tower 107.70 61 ⇑P PKiKP 10 06 19.6 +0.6
baz=109
DVTC ⇑P PP 10 06 41.3 +1.0
baz=109
MWC Mount Wilson 107.75 58 *e*PKiKP PKiKP 10 06 20.5 +1.5
MWC LR LR
comp=Z,38µm,19.0s,MS7.0
MURC Murrieta 107.77 59 ⇑P PP 10 06 41.4 +0.7
baz=109
U04C Hernandez Rese 107.84 55 ⇑P PP 10 06 42.8 +1.6
baz=109
JRSC Jasper Ridge 107.85 53 ⇑P PP 10 06 42.8 +1.6
baz=109
V05C Boulder Hill, 107.95 56 ⇓P PP 10 06 43.9 +1.8
baz=109
BFSC Mount Baldy St 107.98 58 ⇓P PKiKP 10 06 20.1 +0.7
baz=109
BFSC ⇑P PP 10 06 42.2 -0.1
baz=109
ARVC Arvin 107.99 57 ⇓P PP 10 06 42.7 +0.3
baz=109
PACP Pacheco Peak 108.06 54 ⇑P PP 10 06 44.9 +2.1
baz=109
MCCM Marconi Confer 108.07 52 ⇓P PP 10 06 44.5 +1.6
baz=109
MCCM Marconi Confer 108.07 52 PFAKE 10 06 30.0 +11
MCCM LR LR
comp=Z,18µm,22.0s,MS6.6
SWSC Sam W. Stewart 108.08 61 ⇑P PP 10 06 43.3 +0.2
baz=109
PFO Pinyon Flat Ob 108.20 60 Pdiff Pdif 10 02 16.4 +2.5
comp=Z,2.0nm,0.4s,baz=247,slow=6.0,SNR=7.6
PFO PKiKP PKiKP 10 06 21.1 +1.2
comp=Z,9.1nm,1.0s,baz=283,slow=1.2,SNR=7.5
PFO Pinyon Flat Ob 108.20 60 ⇑P PP 10 06 44.3 +0.4
baz=109
PFO Pinyon Flat Ob 108.20 60 *e*Pdif Pdif 10 02 15.2 +1.3
comp=Z,8.5nm,1.1s
PFO PKPdf PKiKP 10 06 21.1 +1.2
PFO LR LR
comp=Z,33µm,19.0s,MS6.9
PTH Pithoragarh 108.21 294 *ex* x 10 06 10.9
WENL Wente Vineyard 108.26 53 ⇓P PP 10 06 46.5 +2.2
baz=109
EDW2 Edwards Air Fo 108.27 58 ⇓P PKiKP 10 06 20.9 +0.9
baz=109
EDW2 ⇓P PP 10 06 44.9 +0.5
baz=109
VES Vestal, Richgr 108.38 56 ⇑P PKiKP 10 06 20.9 +0.7
baz=109
VES ⇑P PP 10 06 44.7 -0.5
baz=109
BBRC Big Bear Sol-O 108.41 59 ⇓P PP 10 06 46.8 +1.3
baz=109
CVS Carmenet Viney 108.44 52 ⇑P PP 10 06 47.3 +1.7
baz=109
BDM Black Diamond 108.45 53 ⇓P PP 10 06 47.7 +2.0
baz=110
112A Yuma 108.49 62 ⇑P PP 10 06 48.2 +2.2
baz=110
NSHM Saint Helena R 108.49 52 *e*PKiKP PKiKP 10 06 21.3 +1.1
ISA Isabella 108.58 57 P Pdif 10 02 18.0 +2.4
ISA Isabella 108.58 57 ⇑P PKiKP 10 06 20.0 -0.5
baz=110
ISA ⇑P PP 10 06 47.9 +1.3
baz=110
ISA Isabella 108.58 57 *e*Pdif Pdif 10 02 17.1 +1.6
comp=Z,14nm,1.1s
ISA *e*PKiKP PKiKP 10 06 19.4 -1.1
ISA LR LR
comp=Z,23µm,19.0s,MS6.8
HOPS Hopland 108.61 52 ⇓PP PP 10 06 48.4 +1.6
baz=110
HOPS Hopland 108.61 52 PFAKE 10 06 30.0 +10
HOPS LR LR
comp=Z,25µm,20.0s,MS6.8
ULN Ulaanbaatar 108.63 323 P Pdif 10 02 17.2 +1.4
ULN pmax pmax
comp=Z,36nm,1.6s
ULN Ulaanbaatar 108.63 323 *e*Pdif Pdif 10 02 16.0 +0.2
comp=Z,36nm,1.6s
ULN *e*PKKPbc PKKPbc 10 17 29.7 +0.4
ULN *e*PKKPab PKKPab 10 17 43.4 +4.2
ULN LR LR
comp=Z,16µm,20.0s,MS6.6
RCTC Rector, Farmer 108.64 56 ⇓P PKiKP 10 06 21.1 +0.5
baz=110
GLA Glamis 108.72 61 P Pdif 10 02 22.5 +6.3
GLA Glamis 108.72 61 ⇑PP PP 10 06 50.3 +2.6
baz=110
GLA Glamis 108.72 61 PKiKP PKiKP 10 06 18.4 -2.4
GLA LR LR
comp=Z,26µm,20.0s,MS6.8
BELC Belle Mtn. 108.74 60 ⇑P PKiKP 10 06 21.5 +0.7
baz=110
BELC ⇓PP PP 10 06 50.7 +2.9
baz=110
BC3 Big Chuckw Mtn 108.80 60 ⇑PP PP 10 06 50.4 +2.2
baz=110
S05C Merced 108.82 55 ⇓P PKiKP 10 06 21.3 +0.4
baz=110
S05C ⇓PP PP 10 06 49.6 +1.3
baz=110
RRX Edison Barstow 108.82 58 ⇓PP PP 10 06 50.9 +2.5
baz=110
MNRC McLaughlin Nat 108.84 52 ⇑PP PP 10 06 51.4 +2.8
baz=110
KCPM Cahto Peak 108.86 51 *e*PKiKP PKiKP 10 06 19.7 -1.2
SONM Songino Array 108.87 323 Pdiff Pdif 10 02 15.9 -0.9
comp=Z,1.6nm,1.0s,baz=313,slow=43,SNR=11
SONM PKiKP PKiKP 10 06 20.9 +0.3
comp=Z,6.6nm,1.1s,baz=162,slow=7.2,SNR=3.6
SONM PP PP 10 06 39.5 -9.0
comp=Z,8.1nm,1.1s,baz=52,slow=2.5,SNR=5.0
SONM PKKPbc PKKPbc 10 17 30.6 +2.1
comp=Z,15nm,1.2s,baz=300,slow=2.6,SNR=17
LRMC Laurel Mountai 108.88 57 ⇑PP PP 10 06 49.8 +1.0
baz=110
Q03C Winters 108.88 53 ⇑PP PP 10 06 51.8 +3.0
baz=110
T06C Millerton Lake 108.90 55 ⇑PP PP 10 06 50.6 +1.7
baz=110
KIPM Iron Peak 109.01 51 *e*PKiKP PKiKP 10 06 23.0 +1.8
HELL Mitchell Peak 109.03 56 ⇓P PKiKP 10 06 21.1 -0.2
baz=110
HELL ⇓PP PP 10 06 51.3 +1.4
baz=110
O01C Eel River Cons 109.08 50 ⇓PP PP 10 06 52.6 +2.4
baz=110
214A Organ Pipe Nat 109.09 63 ⇑P PKiKP 10 06 21.8 +0.2
baz=110,SNR=7.7
214A ⇓PP PP 10 06 52.6 +2.2
baz=110
113A Mohawk Valley, 109.12 62 ⇑PP PP 10 06 52.7 +2.1
baz=110
HEC Hector,Ludlow 109.16 59 ⇓P PKiKP 10 06 21.7 +0.1
baz=110
HEC ⇓PP PP 10 06 52.8 +1.9
baz=110
R04C Big Horse Ranc 109.17 53 ⇓PP PP 10 06 52.0 +1.1
baz=110
GSC Goldstone 109.24 58 ⇑P PKiKP 10 06 22.1 +0.3
baz=110
GSC ⇓PP PP 10 06 53.3 +1.9
baz=110
GSC Goldstone 109.24 58 *e*PKiKP PKiKP 10 06 22.8 +1.1
GSC *e*PP PP 10 06 53.3 +1.8
GSC LR LR
comp=Z,36µm,19.0s,MS7.0
GASB Alder Springs 109.28 51 ⇓PP PP 10 06 55.1 +3.4
baz=110
CMB Columbia Colle 109.30 54 P Pdif 10 02 20.3 +1.5
CMB Columbia Colle 109.30 54 ⇓PP PP 10 06 53.9 +2.0
baz=110
CMB Columbia Colle 109.30 54 *e*Pdif Pdif 10 02 17.6 -1.1
CMB *e*PKiKP PKiKP 10 06 21.6 -0.2
CMB LR LR
comp=Z,13µm,20.0s,MS6.5
IRM Iron Mountain 109.34 60 ⇑PP PP 10 06 54.4 +2.2
baz=110
KCC Kaiser Creek 109.34 55 ⇑PP PP 10 06 54.0 +1.8
baz=110
BDFB Brasilia 109.36 147 PKKPbc PKKPbc 10 17 28.5 +2.4
comp=Z,2.5nm,0.5s,baz=30,slow=5.2,SNR=6.8
BDFB Brasilia 109.36 147 PFAKE 10 06 30.0 +7.3
BDFB LR LR
comp=Z,11µm,19.0s,MS6.5

CWC Cottonwood Cre 109.37 57 ⇑P PKiKP 10 06 22.9 +1.0
baz=110
CWC ⇑PP PP 10 06 54.8 +2.5
baz=110
Q04C Lincoln 109.37 53 ⇓PP PP 10 06 54.0 +1.7
baz=110
Y12C Blythe 109.40 61 ⇑P PKiKP 10 06 23.0 +0.9
baz=110,SNR=5.8
Y12C ⇑PP PP 10 06 54.5 +1.8
baz=110
AJM Ajmer 109.41 288 *ex* x 10 01 59.0
MPMC Manual Prospec 109.41 57 ⇓PP PP 10 06 55.3 +2.6
baz=110
S06C San Francisco 109.47 54 ⇓P PKiKP 10 06 22.5 +0.4
baz=110
S06C ⇑PP PP 10 06 55.0 +1.9
baz=110
JCC Jacoby Creek 109.49 50 ⇓PP PP 10 06 54.2 +1.1
baz=110
GMRC Granite Mounta 109.50 59 ⇓P PKiKP 10 06 22.4 +0.1
baz=110
GMRC ⇑PP PP 10 06 54.3 +0.9
baz=110
DAC Darwin (Calif) 109.51 57 PFAKE 10 06 30.0 +7.8
DAC LR LR
comp=Z,40µm,19.0s,MS7.0
O02C Red Bluff 109.64 51 ⇑P PKiKP 10 06 23.4 +1.1
baz=111
O02C ⇓PP PP 10 06 57.4 +3.2
baz=111
LAVA Lava Cap Winer 109.64 53 ⇑P PKiKP 10 06 23.2 +0.9
baz=111,SNR=5.9
LAVA ⇓PP PP 10 06 56.6 +2.3
baz=111
OHCM Honcut 109.68 52 *e*PKiKP PKiKP 10 06 23.3 +0.9
TIN Tinemaha 109.74 56 ⇑PP PP 10 06 57.6 +2.6
baz=111
MLAC Mammoth Lakes 109.83 55 ⇑P PKiKP 10 06 24.6 +1.8
baz=111
MLAC ⇑PP PP 10 06 58.6 +2.9
baz=111
TUQ Turquoise Moun 109.83 59 ⇓PP PP 10 06 57.4 +1.6
baz=111
ORV Oroville 109.83 52 ⇓P PKiKP 10 06 23.4 +0.7
baz=111
ORV ⇓PP PP 10 06 58.2 +2.5
baz=111
Y13A Salome 109.84 61 ⇓P PKiKP 10 06 23.8 +0.9
baz=111,SNR=7.9
Y13A ⇑PP PP 10 06 57.8 +1.9
baz=111
N02C Big Bar 109.85 50 ⇑PP PP 10 06 58.2 +2.4
baz=111
216A Three Points, 109.92 64 ⇓P PKiKP 10 06 24.6 +1.4
baz=111,SNR=6.1
216A ⇑P PP 10 06 59.2 +2.7
baz=111,SNR=8.6
R05C Kirkwood Meado 109.95 54 ⇑P PKiKP 10 06 23.2 +0.2
baz=111
R05C ⇑P PP 10 06 58.9 +2.3
baz=111,SNR=5.3
SHOC Shoshone 109.97 58 ⇓P PKiKP 10 06 24.1 +1.0
baz=111
SHOC ⇓PP PP 10 06 58.5 +1.8
baz=111
115A Sonoran Desert 109.97 63 ⇓P PKiKP 10 06 23.2 0.0
baz=111
115A ⇓PP PP 10 06 58.9 +2.1
baz=111
PDMCI Parker Dam,Lak 110.02 61 ⇑P PKiKP 10 06 24.2 +0.9
baz=111,SNR=5.3
PDMCI ⇑PP PP 10 06 59.0 +1.9
baz=111
LDFC Landfair 110.03 59 *e*PKiKP PKiKP 10 06 25.2 +2.0
Z14A Wintersburg 110.03 62 ⇑PP PP 10 06 59.0 +1.8
baz=111
R07C Lee Vining 110.05 55 ⇓P PKiKP 10 06 24.0 +0.8
baz=111
R07C ⇓PP PP 10 06 59.9 +2.6
baz=111
FURC Furnace Creek, 110.06 57 ⇑P PKiKP 10 06 24.2 +1.0
baz=111
FURC ⇓PP PP 10 06 59.5 +2.1
baz=111
WDC Whiskeytown Da 110.06 51 ⇑P PKiKP 10 06 23.2 +0.1
baz=111
WDC ⇓PP PP 10 06 59.9 +2.6
baz=111
WDC Whiskeytown Da 110.06 51 *e*PKiKP PKiKP 10 06 23.1 0.0
WDC LR LR
comp=Z,26µm,19.0s,MS6.8
KRMB Red Mountain 110.08 49 *e*PKiKP PKiKP 10 06 22.5 -0.6
NEE2 Needles Airpor 110.08 60 ⇑PP PP 10 06 59.1 +1.5
baz=111
S08C White Mtn Res 110.09 56 ⇓P PKiKP 10 06 24.5 +1.2
baz=111
S08C ⇓PP PP 10 07 00.8 +3.2
baz=111
P05C Yuba Gap, Truc 110.11 53 ⇑P PKiKP 10 06 24.9 +1.7
baz=111
P05C ⇑PP PP 10 06 59.6 +1.8
baz=111
217A Green Valley 110.14 65 ⇑P PKiKP 10 06 24.8 +1.3
baz=111,SNR=5.1
217A ⇓P PP 10 07 00.0 +2.0
baz=111,SNR=7.3
R06C Coleville 110.15 54 ⇓PP PP 10 07 00.5 +2.5
baz=111
GRAC Grapevine Rang 110.16 57 ⇓PP PP 10 07 00.5 +2.4
baz=111
116A Eloy 110.18 63 ⇑P PP 10 07 00.5 +2.2
baz=111,SNR=6.9
M01C Crescent City 110.21 49 ⇓PP PP 10 07 01.4 +3.0
baz=111
BHJ Bhuj 110.27 282 *ex* x 10 01 24.9
BHJ AMb AMB 10 02 23.2
comp=Z,42nm,1.0s
U10A Ash Meadows, A 110.32 58 ⇑P PKiKP 10 06 23.7 0.0
baz=111
U10A ⇓PP PP 10 07 01.2 +2.0
baz=111
W12A Cal Nev Ari 110.32 59 ⇑PP PP 10 07 01.2 +1.9
baz=111
318A Bisbee 110.39 65 ⇑P PP 10 07 02.2 +2.3
baz=111,SNR=5.6
V11A Goodsprings 110.40 59 ⇑P PP 10 07 01.8 +1.9
baz=111
X13A Yucca 110.41 61 ⇓P PKiKP 10 06 24.9 +0.9
baz=111,SNR=8.2
X13A ⇑P PP 10 07 01.8 +1.9
baz=111
Y14A Wickenburg 110.41 62 ⇓P PKiKP 10 06 24.1 +0.1
baz=111,SNR=6.8
Y14A ⇓P PP 10 07 01.8 +1.8
baz=111
Z15A Gila River Ind 110.44 63 ⇓P PKiKP 10 06 24.7 +0.7
baz=111
Z15A ⇓PP PP 10 07 02.7 +2.5
baz=111
O05C Quincy 110.44 52 ⇓P PKiKP 10 06 24.1 +0.3
baz=111
O05C ⇓PP PP 10 07 01.9 +1.8
baz=111
M02C Callahan 110.51 50 ⇓P PKiKP 10 06 24.5 +0.5
baz=112
M02C ⇓P PP 10 07 03.6 +3.1
baz=112,SNR=8.2
TUC Tucson 110.54 64 *e*PKiKP PKiKP 10 06 25.3 +1.0
TUC *e* 10 07 00.5
TUC MLR MLR
comp=Z,29µm,19.0s,MS6.9
WCN Washoe City 110.56 53 ⇓PP PP 10 07 03.3 +2.4
baz=112
O04C Chester 110.61 52 ⇑P PKiKP 10 06 24.5 +0.3
baz=112
O04C ⇓PP PP 10 07 03.4 +2.1
baz=112
V12A Nelson 110.64 59 ⇓P PKiKP 10 06 24.7 +0.3
baz=112,SNR=8.4
V12A ⇑PP PP 10 07 03.5 +1.9
baz=112
BEKR Beckwourth 110.66 53 ⇓PP PP 10 07 03.9 +2.3
baz=112
NVAR Mina Array Bea 110.70 55 Pdiff Pdif 10 02 28.1 +3.1
comp=Z,0.7nm,0.7s,baz=209,slow=8.2,SNR=6.1
NVAR PKiKP PKiKP 10 06 26.6 +2.2
comp=Z,12nm,0.9s,baz=203,slow=3.9,SNR=26
NVAR PKKPbc PKKPbc 10 17 25.7 +3.4

comp=Z,7.8nm,1.0s,baz=77,slow=3.8,SNR=14
NVAR Mina Array Bea 110.70 55 Pdif Pdif 10 02 28.1 +3.1
NVAR PKPdf PKiKP 10 06 26.6 +2.2
NVAR PKKPbc PKKPbc 10 17 25.7 +3.4
L02A Cave Junction 110.70 49 ⇑P PKiKP 10 06 24.6 +0.4
baz=112
L02A ⇑PP PP 10 07 04.0 +2.1
baz=112
W13A Hualapai Mount 110.74 60 ⇑P PKiKP 10 06 24.5 -0.1
baz=112,SNR=11
W13A ⇑PP PP 10 07 04.5 +2.2
baz=112
218A Dragoon 110.74 65 ⇓P PKiKP 10 06 24.7 0.0
baz=112,SNR=5.9
218A ⇓P PP 10 07 04.9 +2.6
baz=112,SNR=6.7
TPNV Topopah Spring 110.74 57 P Pdif 10 02 28.1 +2.9
TPNV Topopah Spring 110.74 57 ⇑P PKiKP 10 06 25.5 +1.0
baz=112
TPNV ⇓PP PP 10 07 04.5 +2.2
baz=112
TPNV Topopah Spring 110.74 57 *e*Pdif Pdif 10 02 26.5 +1.3
TPNV *e*PKiKP PKiKP 10 06 24.9 +0.3
TPNV LR LR
comp=Z,31μm,19.0s,MS6.9
R08A Mina 110.75 55 ⇑P PKiKP 10 06 26.3 +1.9
baz=112
R08A ⇓PP PP 10 07 04.7 +2.4
baz=112
117A Oracle 110.75 64 ⇓P PP 10 07 04.9 +2.5
baz=112,SNR=11
K01A Sixes 110.76 48 ⇑PP PP 10 07 05.5 +3.2
baz=112
P06A Stead Airport, 110.76 53 ⇑PP PP 10 07 04.7 +2.3
baz=112
319A Douglas 110.77 66 P PKiKP 10 06 26.8 +2.0
baz=112,SNR=6.2
319A ⇑PP PP 10 07 05.2 +2.7
baz=112
S09A Goldfield 110.77 56 ⇑P PKiKP 10 06 25.0 +0.4
baz=112
S09A ⇑PP PP 10 07 04.4 +1.9
baz=112
M03C McCloud 110.79 51 ⇑PP PP 10 07 05.0 +2.4
baz=112
Q07A Schurz 110.80 54 ⇓PP PP 10 07 05.3 +2.6
baz=112
Y15A Casa Rosa Ranc 110.81 62 ⇑P PKiKP 10 06 26.3 +1.5
baz=112
Y15A ⇑PP PP 10 07 04.8 +2.0
baz=112
YBH Yreka Blue Hor 110.83 50 Pdiff Pdif 10 02 32.6 +7.0
comp=Z,1.2nm,0.8s,baz=180,slow=11,SNR=3.7
YBH PKiKP PKiKP 10 06 25.4 +0.9
comp=Z,12nm,1.0s,baz=159,slow=1.2,SNR=34
YBH PP PP 10 07 05.5 +2.6
comp=Z,31nm,1.2s,baz=190,slow=3.4,SNR=12
YBH Yreka Blue Hor 110.83 50 PKiKP PKiKP 10 06 26.5 +2.0
YBH Yreka Blue Hor 110.83 50 ⇑P PKiKP 10 06 25.1 +0.6
baz=112
YBH ⇑P PP 10 07 05.1 +2.2
baz=112,SNR=5.9
YBH Yreka Blue Hor 110.83 50 Pdif Pdif 10 02 32.5 +7.0
YBH *e*PKiKP PKiKP 10 06 23.8 -0.8
YBH *e*PP PP 10 07 05.1 +2.2
YBH LR LR
comp=Z,17μm,19.0s,MS6.6
U11A Corn Creek 110.84 58 ⇑PP PP 10 07 04.8 +1.8
baz=112
X14A Yava 110.86 61 ⇑P PKiKP 10 06 24.7 -0.1
baz=112,SNR=6.7
X14A ⇓PP PP 10 07 04.9 +1.7
baz=112
Z16A Peralta Trail, 110.90 63 ⇓P PKiKP 10 06 25.6 +0.7
baz=112
Z16A ⇑PP PP 10 07 05.2 +1.7
baz=112
ELFS Eagle Lake Fie 111.02 52 ⇑PP PP 10 07 05.5 +1.2
baz=112
TPH Tonopah 111.03 56 *e*PKIKP PKiKP 10 06 26.7 +1.7
TPH MLR MLR
comp=Z,18μm,19.0s,MS6.7
PAHR Pah Rah Range 111.05 53 *e*PKiKP PKiKP 10 06 26.9 +1.8
PAHR *e*PP PP 10 07 05.5 +1.0
O06A Flanigan 111.16 53 ⇑P PKiKP 10 06 25.7 +0.5
baz=112
O06A ⇓PP PP 10 07 07.4 +2.2
baz=112
SMLA Simla 111.17 293 *ex* x 10 02 27.5
P07A Fallon 111.19 54 ⇓PP PP 10 07 08.3 +2.8
baz=112
K02A Glendale 111.21 49 ⇓P PKiKP 10 06 24.4 -0.8
baz=112
K02A ⇓PP PP 10 07 07.2 +1.7
baz=112
Q08A Gabbs 111.21 55 ⇑P PKiKP 10 06 26.2 +0.9
baz=112
Q08A ⇓P PP 10 07 08.1 +2.4
baz=112,SNR=5.9
V13A Grand Canyon W 111.22 60 ⇓P PKiKP 10 06 25.8 +0.4
baz=112,SNR=7.0
V13A ⇓PP PP 10 07 07.5 +1.8
baz=112
219A White Tail Can 111.23 65 ⇑P PKiKP 10 06 25.8 +0.2
baz=112,SNR=6.8
219A ⇑PP PP 10 07 08.4 +2.5
baz=112
R09A Tonopah 111.23 56 ⇓PP PP 10 07 07.8 +2.1
baz=112
X15A Humboldt 111.25 62 ⇑P PKiKP 10 06 26.7 +1.1
baz=112,SNR=7.1
X15A ⇓PP PP 10 07 07.9 +1.9
baz=112
Y16A Circle Bar Ran 111.25 63 ⇑PP PP 10 07 07.9 +1.9
baz=112
S10A Tonopah Range, 111.26 56 ⇑P PKiKP 10 06 26.7 +1.2
baz=112
S10A ⇓PP PP 10 07 08.2 +2.2
baz=112
118A Homack Ranch, 111.26 65 ⇓P PKiKP 10 06 25.5 -0.2
baz=112,SNR=5.9
118A ⇑PP PP 10 07 08.4 +2.4
baz=112
W14A Seligman 111.28 61 ⇓PP PP 10 07 08.5 +2.3
baz=112
M04C Macdoel 111.31 50 ⇑PP PP 10 07 08.0 +1.7
baz=112
U12A Valley of Fire 111.32 59 ⇓P PKiKP 10 06 25.6 0.0
baz=112,SNR=7.3
U12A ⇓PP PP 10 07 08.3 +1.8
baz=112
M05C Lookout 111.35 51 ⇑PP PP 10 07 07.8 +1.2
baz=112
HUMO Hull Mountain 111.36 49 ⇑P PKiKP 10 06 26.1 +0.6
baz=112
HUMO ⇑PP PP 10 07 07.8 +1.2
baz=112
HUMO Hull Mountain 111.36 49 *e*PKiKP PKiKP 10 06 24.8 -0.7
HUMO LR LR
comp=Z,18μm,19.0s,MS6.7
Z17A San Carlos Hig 111.43 64 ⇓PP PP 10 07 09.9 +2.6
baz=112
T12A Moapa 111.44 58 ⇓PP PP 10 07 08.8 +1.5
baz=112
Y17A Roosevelt 111.49 63 ⇓P PKiKP 10 06 24.1 -2.0
baz=112,SNR=7.3
Y17A ⇓PP PP 10 07 10.0 +2.3
baz=112
S11A Rachel 111.52 57 ⇑P PKiKP 10 06 23.8 -2.2
baz=112,SNR=7.9
S11A ⇑PP PP 10 07 10.1 +2.2
baz=112
T11A Corn Creek, Al 111.52 58 ⇓PP PP 10 07 10.4 +2.5
baz=112
Z18A Geronimo 111.53 64 ⇓PP PP 10 07 10.7 +2.6
baz=112
V14A Boquillas Ranc 111.56 60 ⇓P PKiKP 10 06 26.5 +0.4
baz=113,SNR=7.9
V14A ⇑P PP 10 07 10.5 +2.2
baz=113,SNR=6.1
L04A Klamath Falls 111.57 50 ⇑PP PP 10 07 09.0 +0.9
baz=113
N06A Buffalo Meadow 111.58 52 ⇑P PKiKP 10 06 25.1 -0.9
baz=113
N06A ⇑PP PP 10 07 10.5 +2.2
baz=113
M06C Likely Place G 111.58 52 ⇑P PKiKP 10 06 25.9 -0.1
baz=113
M06C ⇑PP PP 10 07 09.9 +1.7
baz=113
Q09A Carvers 111.59 55 ⇓PP PP 10 07 10.5 +2.1
baz=113
J02A Umpqua 111.61 48 ⇑PP PP 10 07 11.1 +2.6
baz=113
U13A Pakoon Wash 111.64 59 ⇑P PKiKP 10 06 27.0 +0.8
baz=113,SNR=7.3
U13A ⇓PP PP 10 07 10.9 +2.1
baz=113
O07A Toulon 111.65 53 ⇓PP PP 10 07 11.2 +2.4
baz=113
X16A Lo Mia Camp, P 111.66 62 ⇓P PKiKP 10 06 26.9 +0.5
baz=113,SNR=7.1
X16A ⇑PP PP 10 07 10.9 +2.0
baz=113
R10A Warm Springs 111.68 56 ⇓P PKiKP 10 06 26.1 -0.2
baz=113
R10A ⇓PP PP 10 07 11.5 +2.5
baz=113
W15A Williams 111.72 61 ⇑P PKiKP 10 07 11.9 +45
baz=113,SNR=6.1
P08A Dixie Valley 111.73 54 ⇓PP PP 10 07 12.2 +2.8
baz=113
119A Ashpeak Ranch, 111.74 65 ⇓P PKiKP 10 06 26.6 0.0
baz=113,SNR=11
119A ⇑PP PP 10 07 12.2 +2.6
baz=113
I02A Mapleton 111.96 48 ⇑PP PP 10 07 13.5 +2.5
baz=113
X17A Forest Lakes 111.97 63 ⇑P PKiKP 10 06 26.0 -0.9
baz=113,SNR=5.8
X17A ⇑PP PP 10 07 13.8 +2.6
baz=113
K04A Chilquin 111.97 50 ⇑PP PP 10 07 12.6 +1.6
baz=113
S12A Delamar Landin 111.99 58 ⇓P PKiKP 10 06 26.5 -0.4
baz=113,SNR=9.6
S12A ⇑PP PP 10 07 14.1 +2.8
baz=113
L05A Lakeview 112.01 51 ⇓P PKiKP 10 06 27.5 +0.8
baz=113
L05A ⇑PP PP 10 07 13.0 +1.7
baz=113
Q10A Clear Creek Ra 112.01 56 ⇑P PKiKP 10 06 26.9 +0.1
baz=113,SNR=7.1
Q10A ⇑PP PP 10 07 13.9 +2.5
baz=113
Y18A Canyon Day Jun 112.03 64 ⇑P PKiKP 10 06 27.4 +0.3
baz=113
Y18A ⇑P PP 10 07 13.9 +2.3
baz=113,SNR=7.1
N07B Gerlach 112.05 53 ⇓P PKiKP 10 06 27.6 +0.7
baz=113
N07B ⇑PP PP 10 07 14.2 +2.6
baz=113
U14A Mt Trumbull 112.08 60 ⇑P PKiKP 10 06 28.1 +1.0
baz=113,SNR=8.4
U14A ⇑PP PP 10 07 14.0 +2.1
baz=113
W16A Flagstaff 112.08 62 ⇓PP PP 10 07 14.3 +2.3
baz=113
T13A Saint George 112.10 59 ⇑P PKiKP 10 06 27.7 +0.6
baz=113,SNR=9.0
T13A ⇓PP PP 10 07 14.0 +2.0
baz=113
R11A Troy Canyon, C 112.12 57 ⇑P PKiKP 10 06 27.7 +0.7
baz=113,SNR=18
R11A ⇑PP PP 10 07 14.3 +2.2
baz=113
O08A Rochester Mine 112.13 54 ⇓P PKiKP 10 06 27.4 +0.3
baz=113
O08A ⇑PP PP 10 07 14.6 +2.5
baz=113
ZAK Zakamensk 112.13 323 *e*P Pdif 10 02 28.7 -2.7
ZAK pmax pmax
comp=Z,7.0nm,1.8s
P09A Austin 112.14 55 ⇑PP PP 10 07 14.4 +2.1
baz=113
Z19A T-Link Ranch, 112.14 64 ⇓PP PP 10 07 14.6 +2.3
baz=113
SEY Seymchan 112.16 354 ⇓*e*PKiKP PKiKP 10 06 26.5 +0.1
MOD Modoc 112.18 51 ⇑P PKiKP 10 06 27.0 0.0
baz=113
MOD ⇓PP PP 10 07 13.9 +1.4
baz=113
MOD Modoc 112.18 51 *e*PKiKP PKiKP 10 06 27.3 +0.2
MOD LR LR
comp=Z,24μm,22.0s,MS6.8
I03A Eugene 112.20 48 ⇓PP PP 10 07 15.1 +2.4
baz=113
V15A Kaibab Nationa 112.23 61 ⇑P PKiKP 10 06 26.3 -1.1
baz=113,SNR=7.9
V15A ⇓PP PP 10 07 15.4 +2.4
baz=113
J04A Umpqua Nationa 112.24 49 ⇓PP PP 10 07 15.7 +2.7
baz=113
KDAK Kodiak Island 112.33 23 PKiKP PKiKP 10 06 28.4 +1.6
comp=Z,21nm,1.0s,baz=316,slow=5.6,SNR=4.5
KDAK Kodiak Island 112.33 23 PKPdf PKiKP 10 06 28.4 +1.6
KDAK LR LR
comp=Z,6μm,21.0s,MS6.2
M07A Soldier Meadow 112.39 52 ⇑P PKiKP 10 06 27.0 -0.5
baz=113
M07A ⇑PP PP 10 07 16.6 +2.5
baz=113
Q11A Duckwater 112.43 56 ⇑P PKiKP 10 06 28.4 +0.7
baz=113,SNR=23
Q11A ⇑P PP 10 07 16.6 +2.2
baz=113
KMBO Kilima Mbogo 112.44 240 PKiKP PKiKP 10 06 29.6 +1.0
comp=Z,2.4nm,0.8s,baz=319,slow=1.6,SNR=7.3
KMBO Kilima Mbogo 112.44 240 PKPdf PKiKP 10 06 29.6 +1.0
KMBO LR LR
comp=Z,15μm,19.0s,MS6.6
TGUH Tegucigalpa,Un 112.47 94 PFAKE
TGUH LR LR
comp=Z,12μm,21.0s,MS6.5
WUAZ Wupatki 112.47 61 ⇑P PKiKP 10 06 28.8 +1.0
baz=114
WUAZ ⇑P PP 10 07 17.3 +2.5
baz=114,SNR=6.3
WUAZ Wupatki 112.47 61 *e*PKiKP PKiKP 10 06 29.1 +1.3
WUAZ LR LR
comp=Z,28μm,19.0s,MS6.9
K05A Summer Lake 112.47 50 ⇓P PKiKP 10 06 25.2 -2.4
baz=114
K05A ⇓PP PP 10 07 15.6 +0.9
baz=114
N08A GE Springer Mi 112.49 53 ⇓P PP 10 07 17.3 +2.5
baz=114,SNR=6.9
I04A Tendick Farm, 112.50 49 ⇓P PKiKP 10 06 26.4 -1.2
baz=114
I04A ⇑PP PP 10 07 17.0 +2.2
baz=114
S13A Holt Ranch, En 112.52 58 ⇑P PKiKP 10 06 28.9 +1.0
baz=114,SNR=5.3
S13A ⇑P PP 10 07 17.4 +2.3
baz=114
P10A Eureka 112.55 55 ⇑P PKiKP 10 06 29.4 +1.5
baz=114,SNR=7.6
P10A ⇑PP PP 10 07 17.1 +1.9
baz=114
W17A Winslow 112.55 62 ⇑P PP 10 07 17.7 +2.4
baz=114,SNR=7.5
O09A Fish Creek Ran 112.55 54 ⇑P PKiKP 10 06 29.2 +1.3
baz=114,SNR=10
O09A ⇑PP PP 10 07 17.4 +2.2
baz=114
T14A Hurricane 112.59 59 ⇑P PKiKP 10 06 27.6 -0.4
baz=114,SNR=8.7
T14A ⇑PP PP 10 07 17.8 +2.2
baz=114
U15A North Rim 112.59 60 ⇑P PKiKP 10 06 28.2 +0.2
baz=114,SNR=5.8
U15A ⇑P PP 10 07 18.1 +2.5
baz=114,SNR=8.6
X18A Snowflake 112.61 63 ⇑P PKiKP 10 06 29.3 +1.1
baz=114,SNR=13
X18A ⇑P PP 10 07 18.1 +2.4
baz=114,SNR=11
Y19A Nutrioso 112.61 64 ⇑P PKiKP 10 06 29.7 +1.5
baz=114,SNR=9.0
Y19A ⇓P PP 10 07 18.7 +2.9
baz=114,SNR=7.4
R12A Pony Springs, 112.64 57 ⇑P PKiKP 10 06 29.6 +1.5
baz=114,SNR=13
R12A ⇑P PP 10 07 18.5 +2.6
baz=114,SNR=5.8
COR Corvallis 112.64 48 PFAKE 10 06 40.0 +12
COR LR LR
comp=Z,40μm,19.0s,MS7.0
J05A Fort Rock 112.71 50 ⇑P PKiKP 10 06 28.1 0.0
baz=114
J05A ⇑PP PP 10 07 18.9 +2.5
baz=114
BMN Battle Mountai 112.72 54 PKIKP PKiKP 10 06 27.8 -0.4
BMN MLR MLR
comp=Z,17μm,19.0s,MS6.7
L07A Adell 112.75 52 ⇑P PKiKP 10 06 28.6 +0.4
baz=114
L07A ⇑PP PP 10 07 18.4 +1.7
baz=114
TXAR Lajitas Array 112.76 71 Pdiff Pdif 10 02 40.2 +6.0
comp=Z,0.4nm,0.8s,baz=316,slow=7.6,SNR=4.8
TXAR PKiKP PKiKP 10 06 29.3 +0.7
comp=Z,10nm,0.9s,baz=201,slow=3.4,SNR=32
TXAR PKKPbc PKKPbc 10 17 16.2 +1.0
comp=Z,2.6nm,0.9s,baz=90,slow=3.8,SNR=5.5
TXAR Lajitas Array 112.76 71 P Pdif 10 02 40.2 +6.1
TXAR 10 06 29.3
TXAR Lajitas Array 112.76 71 Pdif Pdif 10 02 40.2 +6.0
TXAR PKPdf PKiKP 10 06 29.3 +0.7
TXAR PKKPbc PKKPbc 10 17 16.2 +1.0
M08A Happy Creek Ra 112.84 53 ⇑PP PP 10 07 19.4 +2.1
baz=114
K06A Valley Falls 112.85 51 ⇓P PKiKP 10 06 28.9 +0.6
baz=114
K06A ⇑PP PP 10 07 19.7 +2.4
baz=114
N09A Rock Creek Ran 112.86 54 ⇓P PKiKP 10 06 29.2 +0.7
baz=114,SNR=11
N09A ⇓PP PP 10 07 19.4 +2.0
baz=114
P11A Circle Ranch, 112.88 56 ⇑P PKiKP 10 06 27.4 -1.1
baz=114,SNR=16
P11A ⇓PP PP 10 07 19.5 +1.9
baz=114
R13A O'Grain Ranch, 112.89 58 ⇑PP PP 10 07 20.1 +2.4
baz=114
ARUT Antelope Range 112.91 58 PKIKP PKiKP 10 06 32.7 +4.1
X19A St. Johns 112.92 64 ⇑P PKiKP 10 06 29.3 +0.5
baz=114,SNR=7.8
X19A ⇑P PP 10 07 20.4 +2.4
baz=114,SNR=8.7
T15A Red Dirt Ranch 112.96 60 ⇓P PKiKP 10 06 29.1 +0.4
baz=114,SNR=11
T15A ⇓P PP 10 07 20.5 +2.3
baz=114,SNR=5.4
THN Thein Dam 112.97 293 *e*P PKiKP 10 06 27.9 -1.0
O10A Cortez Mining, 113.01 55 ⇑P PKiKP 10 06 28.8 +0.1
baz=114,SNR=9.1
O10A ⇓PP PP 10 07 20.6 +2.1
baz=114
TLY Talaya 113.01 324 *e*P Pdif 10 02 34.7 -0.6
TLY *i* 10 06 28.5
TLY *e* 10 07 14.7
TLY *e*SS SS 10 23 00.0 -1.2
TLY pmax pmax
comp=Z,49nm,1.5s
TLY MLR MLR
comp=Z,16μm,22.0s,MS6.6
TLY Talaya 113.01 324 *i* PKP PKiKP 10 06 28.7 +0.4
TLY LR LR
comp=Z,15μm,21.0s,MS6.6
Q12A Willow Creek R 113.02 57 ⇓P PKiKP 10 06 27.9 -0.9
baz=114,SNR=14
Q12A ⇓PP PP 10 07 20.6 +2.0
baz=114
S14A Cedar City 113.04 59 ⇑P PKiKP 10 06 28.5 -0.4
baz=114,SNR=6.8
S14A ⇓PP PP 10 07 21.2 +2.5
baz=114
U16A Tuba City 113.06 61 ⇓P PKiKP 10 06 29.5 +0.6
baz=114,SNR=15
U16A ⇑PP PP 10 07 20.9 +2.1
baz=114
W18A Petrified Fore 113.14 63 ⇑P PKiKP 10 06 29.9 +0.7
baz=114,SNR=10
W18A ⇓PP PP 10 07 21.7 +2.1
baz=114
G03A Yamhill 113.19 47 ⇓PP PP 10 07 21.7 +2.0
baz=114
IRK Irkutsk 113.21 325 *e*PKIKP PKiKP 10 06 28.2 -0.5
IRK pmax pmax
comp=Z,121nm,1.7s
J06A Christmas Vall 113.23 50 ⇓PP PP 10 07 22.1 +2.1
baz=114
H04A Detroit Lake 113.26 48 ⇑PP PP 10 07 22.2 +2.0
baz=114
K07A Rock Creek Ran 113.29 51 ⇑P PKiKP 10 06 28.8 -0.4
baz=114,SNR=9.8
K07A ⇑PP PP 10 07 22.5 +2.1
baz=114
M09A Marrel Ranch, 113.31 53 ⇑P PKiKP 10 06 29.0 -0.2
baz=114,SNR=11
M09A ⇑PP PP 10 07 23.1 +2.5
baz=114
I05A Bend 113.33 49 ⇑P PKiKP 10 06 29.2 0.0
baz=114,SNR=8.1
I05A ⇓PP PP 10 07 23.4 +2.7
baz=114
W19A Sanders 113.34 63 ⇑P PKiKP 10 06 28.7 -0.9
baz=114,SNR=7.4
W19A ⇑PP PP 10 07 23.5 +2.5
baz=114
O11A Cowboy Ranch, 113.35 55 ⇑P PKiKP 10 06 30.1 +0.7
baz=114,SNR=15
O11A ⇓PP PP 10 07 22.9 +2.0
baz=114
L08A Fields 113.39 52 ⇓P PKiKP 10 06 29.0 -0.4
baz=114,SNR=17
L08A ⇑PP PP 10 07 23.0 +1.8
baz=114
Q13A Wheeler Ranch, 113.41 57 ⇑P PKiKP 10 06 28.0 -1.5
baz=114,SNR=6.0
Q13A ⇓PP PP 10 07 23.0 +1.7
baz=114
WVOR Wild Horse Val 113.42 52 PKIKP PKiKP 10 06 30.2 +0.8
WVOR Wild Horse Val 113.42 52 *e*PKiKP PKiKP 10 06 29.7 +0.3
WVOR LR LR
comp=Z,18μm,20.0s,MS6.7
S15A Panguitch 113.43 59 ⇑PP PP 10 07 24.8 +3.2
baz=114
T16A Glen Canyon Da 113.43 60 ⇓PP PP 10 07 23.9 +2.4
baz=114
V18A Ganado 113.44 62 ⇑P PKiKP 10 06 28.5 -1.3
baz=114,SNR=11
V18A ⇑PP PP 10 07 23.9 +2.3
baz=114
G04A Mulino 113.50 48 ⇑PP PP 10 07 24.0 +2.1
baz=114
R14A James Farms, M 113.50 58 ⇑P PKiKP 10 06 30.0 +0.3
baz=114,SNR=13
R14A ⇓PP PP 10 07 24.3 +2.3
baz=114
L09A Wilkinson Ranc 113.62 53 ⇑P PKiKP 10 06 30.2 +0.4
baz=115,SNR=8.9
L09A ⇑PP PP 10 07 25.4 +2.6
baz=115
BCIP Isla Barro Col 113.63 104 PFAKE 10 06 40.0 +9.3
BCIP LR LR
comp=Z,11μm,21.0s,MS6.4
U17A Shonto 113.64 61 ⇑P PKiKP 10 06 30.5 +0.4
baz=115,SNR=14
U17A ⇑P PP 10 07 25.5 +2.4
baz=115,SNR=8.5
I06A Prineville 113.70 50 ⇓P PKiKP 10 06 31.0 +1.0
baz=115,SNR=6.4
I06A ⇓PP PP 10 07 25.8 +2.5
baz=115
H05A Madras 113.70 49 ⇑PP PP 10 07 25.6 +2.2
baz=115
K08A Mann Creek Ran 113.71 52 ⇑P PKiKP 10 06 30.8 +0.8
baz=115,SNR=7.9
K08A ⇑PP PP 10 07 25.9 +2.5
baz=115
J07A Hines 113.75 51 ⇑P PKiKP 10 06 29.6 -0.4
baz=115,SNR=13
J07A ⇑PP PP 10 07 25.9 +2.3
baz=115
ROSC El Rosal 113.75 111 PKiKP PKiKP 10 06 32.1 +1.0
comp=Z,6.9nm,0.8s,baz=93,slow=23,SNR=7.0
ROSC PKKPbc PKKPbc 10 17 15.9 +4.3
comp=Z,16nm,0.8s,baz=106,slow=10,SNR=11

ROSC **El Rosal** 113.75 111 *e*PKiKP PKiKP 10 06 31.3 +0.3
P13A **Bates Ranch, G** 113.76 57 ⇓P PKiKP 10 06 29.9 -0.3
baz=115,SNR=13
P13A ⇑PP PP 10 07 26.0 +2.1
baz=115
N11A **Elko Archery C** 113.79 55 ⇑PP PP 10 07 26.0 +2.0
baz=115
T17A **Navajo Res., N** 113.84 61 ⇓P PKiKP 10 06 29.8 -0.6
baz=115,SNR=12
T17A ⇓P PP 10 07 27.0 +2.5
baz=115,SNR=5.3
Q14A **Sevier Lake (B** 113.84 58 ⇓PP PP 10 07 27.0 +2.5
baz=115
R15A **Junction** 113.86 59 ⇑P PKiKP 10 06 30.9 +0.5
baz=115,SNR=14
R15A ⇑P PP 10 07 27.3 +2.7
baz=115,SNR=6.0
M10A **I.L. Ranch, Tu** 113.86 54 ⇑P PKiKP 10 06 30.9 +0.6
baz=115,SNR=5.7
M10A ⇑PP PP 10 07 27.3 +2.8
baz=115
S16A **Weppner Ranch,** 113.90 60 ⇑P PKiKP 10 06 29.1 -1.4
baz=115,SNR=6.4
S16A ⇓P PP 10 07 27.1 +2.2
baz=115,SNR=7.1
VIPM **Ingram Point** 113.90 49 PKiKP PKiKP 10 06 32.0 +1.7
O12A **Currie** 113.94 56 ⇑PP PP 10 07 27.2 +2.1
baz=115
V19A **Window Rock** 113.96 63 ⇓PP PP 10 07 27.5 +2.1
baz=115
U18A **Rough Rock, Ch** 113.98 62 ⇓P PKiKP 10 06 30.7 0.0
baz=115,SNR=18
U18A ⇑P PP 10 07 27.5 +2.1
baz=115,SNR=8.7
ELK **Elko** 114.01 55 PKP PKiKP 10 06 32.1 +1.5
comp=Z,15nm,1.0s,baz=202,slow=1.8,SNR=26
ELK PKKPbc PKKPbc 10 17 14.1 +2.8
comp=Z,4.5nm,1.1s,baz=16,slow=5.3,SNR=4.3
ELK **Elko** 114.01 55 PKP PKiKP 10 06 32.1 +1.5
ELK PKKPbc PKKPbc 10 17 14.1 +2.8
ELK LR LR
comp=Z,19μm,20.0s,MS6.7
MOY **Mondy** 114.04 322 *e*PKIKP PKiKP 10 06 31.9 +1.6
F04A **Amboy** 114.06 47 ⇑P PKiKP 10 06 30.4 -0.1
baz=115,SNR=6.2
K09A **Rome** 114.08 52 ⇓P PKiKP 10 06 30.7 0.0
baz=115,SNR=7.0
K09A ⇑PP PP 10 07 27.1 +1.1
baz=115
Y22D **IRIS PASSCAL I** 114.08 65 ⇓PP PP 10 07 29.4 +3.2
baz=115
G05A **Wamic** 114.09 48 ⇓PP PP 10 07 27.4 +1.3
baz=115
MVU **Marysvale** 114.10 59 PFAKE 10 06 40.0 +9.1
MVU LR LR
comp=Z,28μm,19.0s,MS6.9
LENM **Lemitar** 114.11 65 *e*PKiKP PKiKP 10 06 32.3 +1.3
LENM *e*PP PP 10 07 28.2 +1.8
MSU **Marysvale** 114.12 59 *e*PKIKP PKiKP 10 06 30.8 -0.1
MSU *e* 10 07 27.9
I07A **Izee** 114.15 50 ⇑P PKiKP 10 06 31.4 +0.6
baz=115,SNR=12
I07A ⇑P PP 10 07 29.0 +2.4
baz=115,SNR=6.9
J08A **Circle Bar Ran** 114.16 51 ⇑P PKiKP 10 06 31.6 +0.8
baz=115,SNR=13
J08A ⇓P PP 10 07 29.0 +2.4
baz=115,SNR=5.3
LAZ **Ladron** 114.17 65 *e*PKiKP PKiKP 10 06 31.8 +0.6
N12A **Clover Valley,** 114.19 55 ⇓P PKiKP 10 06 32.3 +1.4
baz=115,SNR=25
N12A ⇑PP PP 10 07 29.1 +2.2
baz=115
M11A **Holland Ranch,** 114.19 54 ⇓P PKiKP 10 06 31.7 +0.8
baz=115,SNR=12
M11A ⇓PP PP 10 07 29.4 +2.4
baz=115
H06A **Lindquist Farm** 114.21 49 ⇑P PKiKP 10 06 28.6 -2.2
baz=115,SNR=8.1
H06A ⇑PP PP 10 07 28.5 +1.6
baz=115
YAK **Yakutsk** 114.27 343 *i* PKiKP PKiKP 10 06 30.3 -0.1
YAK *e* 10 07 24.6
YAK *e*PS PS 10 17 01.7 -2.2
YAK *e*SS SS 10 23 15.3 -2.1
YAK pmax pmax
comp=Z,73nm,1.0s
YAK pmax pmax
comp=N,13nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK MLR MLR
comp=Z,9μm,20.0s,MS6.4
YAK MLR MLR
comp=E,2μm,21.0s,MS6.2
YAK MLR MLR
comp=N,7μm,19.0s,MS6.2
YAK **Yakutsk** 114.27 343 *e*PKiKP PKiKP 10 06 28.8 -1.7
YAK LR LR
comp=Z,16μm,22.0s,MS6.6
S17A **Black Ridge (B** 114.29 60 ⇓P PKiKP 10 06 31.3 0.0
baz=115,SNR=9.4
S17A ⇑P PP 10 07 29.5 +1.9
baz=115,SNR=12
L10A **Juniper Basin** 114.29 53 ⇑P PKiKP 10 06 31.3 +0.2
baz=115,SNR=19
L10A ⇓PP PP 10 07 29.3 +1.7
baz=115
WMQ **Urumqi** 114.30 309 PKP PKiKP 10 06 30.5 -0.6
WMQ PP PP 10 07 30.0 +2.4
WMQ PKS 10 10 05.0
WMQ SKS SKSdf 10 13 39.0 -2.9
WMQ SKKS SKKSac 10 14 21.0 -6.3
WMQ SS SS 10 23 15.0 -3.5
WMQ PP PP
comp=Z,1μm,5.4s
WMQ LR LR
comp=N,10μm,20.3s,MS6.6
WMQ LR LR
comp=E,8μm,16.9s,MS6.6
WMQ LR LR
comp=Z,11μm,22.6s
BNM **Barren Site** 114.31 65 *e*PKiKP PKiKP 10 06 31.7 +0.3
BNM *e*PP PP 10 07 29.9 +2.1
Q15A **Fillmore** 114.35 58 ⇓P PKiKP 10 06 32.2 +0.9
baz=115,SNR=14
Q15A ⇓PP PP 10 07 29.9 +1.9
baz=115
R16A **Teasdale** 114.35 59 ⇓P PKiKP 10 06 32.6 +1.3
baz=115,SNR=14
R16A ⇓P PP 10 07 30.8 +2.7
baz=115,SNR=8.8
P14A **Drum Mountains** 114.38 57 ⇓P PKiKP 10 06 32.1 +0.7
baz=115
P14A ⇑PP PP 10 07 30.3 +2.0
baz=115
LPM **Los Pinos Moun** 114.41 65 *e*PKiKP PKiKP 10 06 31.2 -0.4
G06A **Carlson Farm,** 114.42 49 ⇑P PKiKP 10 06 29.0 -2.3
baz=115,SNR=6.4
G06A ⇑PP PP 10 07 30.3 +1.9
baz=115
BOD **Bodaibo** 114.43 333 *e*P Pdif 10 02 43.7 +2.1
NLWA **Neilton Lookou** 114.43 45 PFAKE 10 06 40.0 +8.8
NLWA LR LR
comp=Z,34μm,21.0s,MS6.9
T18A **Mexican Hat** 114.47 61 ⇑P PKiKP 10 06 31.8 +0.2
baz=116,SNR=20
T18A ⇓P PP 10 07 30.7 +1.8
baz=116,SNR=11
F05A **White Salmon** 114.48 48 ⇑PP PP 10 07 29.9 +1.0
baz=116
H07A **Lands Inn, Kim** 114.49 50 ⇑P PKiKP 10 06 30.6 -0.8
baz=116,SNR=8.6
H07A ⇑PP PP 10 07 30.7 +1.8
baz=116
I08A **Drewsey** 114.50 51 ⇑P PKiKP 10 06 30.9 -0.6
baz=116,SNR=26
I08A ⇓P PP 10 07 31.1 +2.0
baz=116,SNR=5.9
J09A **Fry Pan Ranch,** 114.52 52 ⇓P PKiKP 10 06 31.3 -0.2
baz=116,SNR=13
J09A ⇓PP PP 10 07 31.4 +2.2
baz=116
SVW2 **Sparrevohn** 114.53 20 *e*PKiKP PKiKP 10 06 29.8 -1.2
K10A **MacKenzie Ranc** 114.58 53 ⇓P PKiKP 10 06 31.0 -0.6
baz=116,SNR=15
K10A ⇑PP PP 10 07 30.9 +1.3
baz=116
SHEL **Horse Pasture** 114.58 190 PFAKE 10 06 40.0 +7.4
SHEL LR LR
comp=Z,55μm,20.0s,MS7.2
N13A **Wendover, West** 114.64 56 ⇑PP PP 10 07 31.9 +1.8
baz=116
M12A **Wells** 114.65 55 ⇑P PKiKP 10 06 32.6 +0.8
baz=116,SNR=22
M12A ⇑PP PP 10 07 32.2 +2.1
baz=116
F06A **Goldendale** 114.73 48 ⇑P PKiKP 10 06 32.3 +0.5
baz=116,SNR=11
F06A ⇓PP PP 10 07 31.8 +1.2
baz=116
L11A **Cat Creek Ranc** 114.73 54 ⇑P PKiKP 10 06 31.7 -0.2
baz=116,SNR=16
L11A ⇑PP PP 10 07 32.1 +1.4
baz=116
T19A **Beclabito** 114.75 62 ⇑P PKiKP 10 06 33.0 +0.8
baz=116,SNR=21
T19A ⇑P PP 10 07 33.0 +2.1
baz=116,SNR=6.9
S18A **Hurst Farm, Bl** 114.79 61 ⇓P PKiKP 10 06 32.0 -0.2
baz=116,SNR=25
S18A ⇑P PP 10 07 33.6 +2.5
baz=116,SNR=9.0
P15A **Leamington** 114.80 58 ⇓P PKiKP 10 06 32.5 +0.3
baz=116,SNR=6.3
P15A ⇑PP PP 10 07 33.3 +2.1
baz=116
E05A **Randle** 114.83 47 ⇑P PKiKP 10 06 31.3 -0.7
baz=116,SNR=7.7
R17A **Hanksville Air** 114.88 60 ⇑P PKiKP 10 06 30.6 -1.8
baz=116,SNR=19
R17A ⇓PP PP 10 07 33.2 +1.4
baz=116
H08A **Prairie City** 114.89 50 ⇓P PKiKP 10 06 31.8 -0.4
baz=116,SNR=6.9
H08A ⇓P PP 10 07 33.5 +1.8
baz=116,SNR=6.4
G07A **Ruggs Ranch, H** 114.92 49 ⇑P PKiKP 10 06 30.7 -1.6
baz=116,SNR=9.1
G07A ⇑PP PP 10 07 33.5 +1.6
baz=116
LON **Longmire** 114.94 47 PKIKP PKiKP 10 06 33.0 +0.8
LON **Longmire** 114.94 47 *e*PKPdf PKiKP 10 06 31.2 -0.9
DUG **Dugway** 114.94 57 ⇑P PKiKP 10 06 32.3 -0.1
baz=116,SNR=23
DUG ⇑PP PP 10 07 33.9 +1.7
baz=116
DUG **Dugway** 114.94 57 *e*PKPdf PKiKP 10 06 32.2 -0.3
DUG LR LR
comp=Z,28μm,19.0s,MS6.9
ANMO **Albuquerque** 114.96 65 ⇓*i*P Pdif 10 02 46.4 +2.5
ANMO *i* 10 06 33.0
ANMO **Albuquerque** 114.96 65 PKPdf PKiKP 10 06 31.4 -1.2
ANMO *e*PP PP 10 07 34.7 +2.3
ANMO LR LR
comp=Z,47μm,19.0s,MS7.1
Q16A **Castle Valley** 114.97 59 ⇑P PKiKP 10 06 33.2 +0.7
baz=116,SNR=13
Q16A ⇑P PP 10 07 34.5 +2.1
baz=116,SNR=6.3
I09A **Lost Marbles R** 114.97 51 ⇓P PKiKP 10 06 32.4 0.0
baz=116,SNR=9.9
I09A ⇑P PP 10 07 33.9 +1.6
baz=116,SNR=5.7
K11A **Parker Ranch,** 115.01 53 ⇑P PKiKP 10 06 31.0 -1.4
baz=116,SNR=18
K11A ⇓PP PP 10 07 33.7 +1.1
baz=116
M13A **Montello** 115.02 55 ⇓P PKiKP 10 06 30.9 -1.7
baz=116,SNR=15
M13A ⇓PP PP 10 07 34.3 +1.6
baz=116
GNW **Green Mountain** 115.04 46 *e*PKPdf PKiKP 10 06 33.4 +1.0
RCS **Mount Rainier-** 115.06 47 P PKiKP 10 06 34.4 +2.0
J10A **Berg Farm, Mel** 115.09 52 ⇑PP PP 10 07 35.0 +1.8
baz=116
L12A **House Creek Ra** 115.11 54 ⇓P PKiKP 10 06 33.1 +0.4
baz=116,SNR=7.7
L12A ⇓PP PP 10 07 34.8 +1.4
baz=116
KVTX **Kingsville** 115.15 76 PFAKE 10 06 40.0 +6.8
KVTX LR LR
comp=Z,13μm,20.0s,MS6.5
SEW **Seward** 115.16 24 *e*PKPdf PKiKP 10 06 29.6 -2.6
D05A **Enumclaw** 115.17 46 ⇑P PKiKP 10 06 31.7 -0.9
baz=116,SNR=10
D05A ⇑PP PP 10 07 35.4 +1.8
baz=116
P16A **Fountain Green** 115.17 58 ⇑P PKiKP 10 06 33.4 +0.5
baz=116,SNR=8.2
P16A ⇓PP PP 10 07 36.3 +2.5
baz=116
NLU **North Lily Min** 115.18 58 *e*PKPdf PKiKP 10 06 32.5 -0.4
E06A **Yakima** 115.19 47 ⇑P PKiKP 10 06 30.8 -1.9
baz=116,SNR=5.6
E06A ⇓PP PP 10 07 35.8 +1.9
baz=116
O15A **The Old Anders** 115.19 57 ⇑P PKiKP 10 06 33.0 +0.1
baz=116,SNR=6.8
O15A ⇓PP PP 10 07 36.4 +2.4
baz=116
N14A **Grayback Hills** 115.19 56 ⇑P PKiKP 10 06 33.2 +0.3
baz=116,SNR=42
N14A ⇓PP PP 10 07 35.5 +1.5
baz=116
TMUT **Trail Mountain** 115.21 59 *e*PKPdf PKiKP 10 06 34.2 +1.3
F07A **Phinny Hill Vi** 115.24 48 ⇑PP PP 10 07 35.9 +1.7
baz=116
G08A **Pilot Rock** 115.29 49 ⇑P PKPdf 10 06 31.8 -1.1
baz=116,SNR=30
G08A ⇓P PP 10 07 36.2 +1.7
baz=116
SLKM **Skilak Lake** 115.30 23 PKIKP PKPdf 10 06 32.2 -0.2
SLKM **Skilak Lake** 115.30 23 *e*PKPdf PKPdf 10 06 31.7 -0.7
MVCO **Mesa Verde** 115.31 62 ⇓P PKPdf 10 06 32.6 -0.6
baz=116
MVCO ⇓PP PP 10 07 36.6 +1.7
baz=116
MVCO **Mesa Verde** 115.31 62 *e*PKPdf PKPdf 10 06 32.1 -1.2
MVCO LR LR
comp=Z,26μm,21.0s,MS6.8
S19A **Harvey Farm, M** 115.32 61 ⇓P PKPdf 10 06 32.8 -0.4
baz=116
S19A ⇑PP PP 10 07 36.9 +2.0
baz=116
R18A **Canyonlands Na** 115.32 60 ⇑P PKPdf 10 06 32.3 -1.0
baz=116,SNR=24
R18A ⇓P PP 10 07 36.9 +2.0
baz=116,SNR=5.3
SRU **San Rafael** 115.47 59 PKIKP PKPdf 10 06 34.5 +1.0
SRU **San Rafael** 115.47 59 ⇓P PKPdf 10 06 33.5 +0.1
baz=116,SNR=18
SRU ⇑PP PP 10 07 37.7 +1.8
baz=116
SRU **San Rafael** 115.47 59 *e*PKPdf PKPdf 10 06 34.7 +1.2
MPU **Maple Canyon** 115.47 58 PKPdf PKPdf 10 06 31.6 -1.9
MPU LR LR
comp=Z,36μm,19.0s,MS7.0
H09A **Durkee** 115.50 51 ⇑P PKPdf 10 06 33.4 +0.1
baz=116,SNR=11
K12A **Draper Farm, C** 115.51 54 ⇑P PKPdf 10 06 32.6 -0.8
baz=116,SNR=29
K12A ⇓PP PP 10 07 37.8 +1.6
baz=116
I10A **Payette** 115.53 52 ⇑P PKPdf 10 06 33.9 +0.4
baz=116,SNR=7.2
I10A ⇓PP PP 10 07 38.4 +2.1
baz=116
M14A **Sheep Mountain** 115.56 56 ⇓P PKPdf 10 06 32.1 -1.5
baz=117,SNR=11
M14A ⇑P PP 10 07 37.8 +1.2
baz=117
MFID **Camas Ranch** 115.57 53 ⇑P PKPdf 10 06 32.9 -0.6
baz=117,SNR=44
MFID ⇑PP PP 10 07 37.9 +1.4
baz=117
N15A **Stansbury Isla** 115.58 57 ⇑PP PP 10 07 38.5 +1.8
baz=117
P17A **Butcher Ranch,** 115.59 59 ⇑P PKPdf 10 06 34.2 +0.5
baz=117,SNR=15
P17A ⇑PP PP 10 07 38.5 +1.7
baz=117
NOQ **North Oquirrh** 115.64 57 *e*PKPdf PKPdf 10 06 34.9 +1.1
L13A **Double Diamond** 115.64 55 ⇓P PKPdf 10 06 33.3 -0.4
baz=117,SNR=19
L13A ⇓PP PP 10 07 38.6 +1.5
baz=117
EBG **Ellensburg** 115.65 47 P PKPdf 10 06 34.9 +1.4
C05A **Tolt Reservoir** 115.67 46 ⇑P PKPdf 10 06 34.1 +0.5
baz=117,SNR=8.3
O16A **Springville** 115.67 58 ⇓P PKPdf 10 06 33.7 -0.1
baz=117
O16A ⇓PP PP 10 07 38.7 +1.3
baz=117
Q18A **Rafter H Ranch** 115.68 59 ⇑PP PP 10 07 39.0 +1.6
baz=117
D06A **Cle Elum** 115.72 47 ⇑P PKPdf 10 06 33.8 +0.1
baz=117,SNR=13
D06A ⇑PP PP 10 07 39.0 +1.5
baz=117
F08A **Pendleton** 115.74 49 ⇑P PKPdf 10 06 33.4 -0.3
baz=117,SNR=20
E07A **Sunnyside** 115.74 48 ⇓P PKPdf 10 06 34.1 +0.3
baz=117,SNR=12
E07A ⇓PP PP 10 07 39.1 +1.3
baz=117
RSW **Rattlesnake Hi** 115.76 48 *e*PKPdf PKPdf 10 06 34.6 +0.8
SNIWA **Snively Ranch** 115.77 48 P PKPdf 10 06 35.7 +1.9
HAWA **Hanford** 115.78 48 *e*PKPdf PKPdf 10 06 31.2 -2.7
HAWA LR LR
comp=Z,23μm,19.0s,MS6.8
PV10 **Paradox Valley** 115.80 61 *e*PKPdf PKPdf 10 06 34.4 +0.2
BMO **Blue Mountains** 115.81 51 PFAKE 10 06 40.0 +6.1
BMO LR LR
comp=Z,29μm,19.0s,MS6.9
YPT **Yellepit** 115.82 49 P PKPdf 10 06 35.1 +1.2
MDW **Midway** 115.83 48 PKIKP PKPdf 10 06 35.6 +1.7
J12A **Stokes Ranch,** 115.83 53 ⇓P PKPdf 10 06 33.6 -0.4
baz=117,SNR=32
J12A ⇑PP PP 10 07 39.6 +1.1
baz=117
I11A **Placerville** 115.85 52 ⇓P PKPdf 10 06 32.6 -1.4
baz=117,SNR=17
I11A ⇑PP PP 10 07 40.1 +1.6
baz=117
G09A **Cove** 115.87 50 ⇓P PKPdf 10 06 32.9 -1.2
baz=117,SNR=14
G09A ⇑PP PP 10 07 40.2 +1.5
baz=117
B05A **Bryant** 115.89 45 ⇑P PKPdf 10 06 33.9 -0.1
baz=117,SNR=19
PV01 **Paradox Valley** 115.91 61 *e*PKPdf PKPdf 10 06 33.2 -1.1
PV01 *e*PP PP 10 07 39.7 +0.7
SPUT **South Promonto** 115.91 56 *e*PKPdf PKPdf 10 06 36.2 +2.0
H10A **Noah's Angus R** 115.91 51 ⇓P PKPdf 10 06 33.2 -1.0
baz=117,SNR=23
H10A ⇑PP PP 10 07 40.3 +1.3
baz=117
JCW **Jim Creek** 115.92 46 *e*PKPdf PKPdf 10 06 34.9 +0.9
RC01 **Rabbit Creek A** 115.93 23 *e*PKPdf PKPdf 10 06 33.4 -0.2
DAU **Daniels Canyon** 115.95 58 *e*PKIKP PKPdf 10 06 34.1 -0.3
DAU *e* 10 07 39.2
K13A **Stover Farm, H** 115.95 54 ⇑P PKPdf 10 06 34.5 +0.2
baz=117,SNR=11
K13A ⇑PP PP 10 07 40.4 +1.1
baz=117
JCT **Junction City** 115.96 73 *e*PKIKP PKPdf 10 06 34.7 0.0
JCT MLR MLR
comp=Z,41μm,19.0s,MS7.1
JLU **Jordanelle** 115.97 57 *e*PKPdf PKPdf 10 06 34.1 -0.3
JLU *e*PP PP 10 07 41.6 +2.2
P18A **Preston Nutter** 115.98 59 ⇑PP PP 10 07 41.5 +2.0
baz=117
L14A **Malta** 115.98 55 ⇑P PKPdf 10 06 35.3 +1.0
baz=117,SNR=28
L14A ⇑PP PP 10 07 41.8 +2.3
baz=117
M15A **Larsen Ranch,** 116.02 56 ⇑P PKPdf 10 06 35.2 +0.8
baz=117,SNR=7.7
M15A ⇓PP PP 10 07 40.8 +1.0
baz=117
LNOR **Lincton Mounta** 116.03 49 PKIKP PKPdf 10 06 35.3 +1.0
LNOR **Lincton Mounta** 116.03 49 *e*PKPdf PKPdf 10 06 34.1 -0.3
HVU **Hansel Valley** 116.06 56 PKIKP PKPdf 10 06 36.0 +1.5
HVU **Hansel Valley** 116.06 56 *e*PKPdf PKPdf 10 06 33.8 -0.8
LOCW **Locke Island** 116.06 48 P PKPdf 10 06 36.1 +1.7
TTA **Tatalina** 116.06 19 *e*PKIKP PKPdf 10 06 35.2 +1.4
Q19A **Hogan Spring (** 116.07 60 ⇑P PKPdf 10 06 34.9 +0.3
baz=117
Q19A ⇑PP PP 10 07 42.0 +1.8
baz=117
BBB **Bella Bella** 116.08 39 PKP PKPdf 10 06 35.2 +1.0
comp=Z,35nm,1.1s,baz=198,slow=6.8,SNR=3.1
BBB **Bella Bella** 116.08 39 PKP PKPdf 10 06 35.2 +1.0
E08A **Dider Farm, El** 116.09 48 ⇓P PKPdf 10 06 34.5 +0.1
baz=117
O17A **Robinson Place** 116.09 58 ⇑P PKPdf 10 06 34.1 -0.5
baz=117
O17A ⇑PP PP 10 07 41.5 +1.2
baz=117
F09A **S2 Ranch, Elgi** 116.11 50 ⇑P PKPdf 10 06 34.3 -0.1
baz=117,SNR=16
D07A **Quincy** 116.14 47 ⇓P PKPdf 10 06 33.8 -0.7
baz=117,SNR=12
N16A **Rees Ranch, Co** 116.18 57 ⇓P PKPdf 10 06 34.7 -0.1
baz=117,SNR=5.3
N16A ⇑PP PP 10 07 42.5 +1.6
baz=117
I12A **Atlanta** 116.19 53 ⇓P PKPdf 10 06 33.1 -1.6
baz=117
I12A ⇑PP PP 10 07 43.1 +2.1
baz=117
C06A **Tall Timber Ra** 116.21 46 ⇓P PKPdf 10 06 33.7 -0.9
baz=117,SNR=6.3
G10A **Bishop Farm, J** 116.21 50 ⇓P PKPdf 10 06 33.1 -1.6
baz=117,SNR=20
G10A ⇓P PP 10 07 42.8 +1.8
baz=117,SNR=5.4
RBK **Rabkut** 116.23 267 ⇑P PKPdf 10 06 34.8 -0.8
SNR=8.5
ETW **Entiat** 116.25 47 P PKPdf 10 06 35.9 +1.2
TEIG **Tepich** 116.27 89 PFAKE 10 06 50.0 +14
TEIG LR LR
comp=Z,12μm,19.0s,MS6.5
RPW **Rockport** 116.29 46 *e*PKPdf PKPdf 10 06 34.8 0.0
B06A **Marblemount** 116.36 46 ⇑P PKPdf 10 06 33.5 -1.4
baz=117,SNR=10
B06A ⇑PP PP 10 07 41.9 -0.1
baz=117
M16A **Huntsville** 116.36 57 ⇓PP PP 10 07 43.1 +0.9
baz=117
H11A **Donnelly** 116.37 52 ⇓P PKPdf 10 06 33.2 -1.8
baz=117,SNR=23
H11A ⇑PP PP 10 07 43.7 +1.5
baz=117
K14A **Jones Ranch, D** 116.37 55 ⇑P PKPdf 10 06 33.8 -1.3
baz=117,SNR=14
K14A ⇑PP PP 10 07 44.0 +1.8
baz=117
TNA **Tin City** 116.37 12 *e*PKPdf PKPdf 10 06 35.6 +1.2
HLID **Hailey** 116.41 53 ⇓P PKPdf 10 06 35.8 +0.6
baz=117,SNR=15
HLID ⇓PP PP 10 07 43.8 +1.3
baz=117
HLID **Hailey** 116.41 53 *e*PKPdf PKPdf 10 06 36.5 +1.3
HLID LR LR
comp=Z,19μm,19.0s,MS6.7
A05A **Maple Falls** 116.42 45 ⇓P PKPdf 10 06 34.7 -0.3
baz=117,SNR=18
L15A **Malad City** 116.42 56 ⇓P PKPdf 10 06 34.6 -0.6
baz=117,SNR=46
L15A ⇑PP PP 10 07 44.1 +1.5
baz=117
J13A **Cove Ranch, Pi** 116.42 54 ⇓P PKPdf 10 06 34.6 -0.6
baz=117
J13A ⇓PP PP 10 07 44.6 +2.1
baz=117
C07A **Waterville** 116.44 47 ⇑P PKPdf 10 06 33.8 -1.3
baz=117,SNR=21
PMR **Palmer** 116.51 23 *e*PKIKP PKPdf 10 06 34.8 +0.1
PMR MLR MLR
comp=Z,17μm,20.0s,MS6.7
EYAK **Cordova Ski Ar** 116.53 25 *e*PKPdf PKPdf 10 06 35.2 +0.4
EYAK *e*PP PP 10 07 40.1 -2.9
O18A **Roosevelt** 116.55 59 ⇓P PKPdf 10 06 36.5 +1.0
baz=118,SNR=15
O18A ⇑PP PP 10 07 46.0 +2.5
baz=118
N17A **Moffit Pass** 116.55 57 ⇓P PKPdf 10 06 36.0 +0.6
baz=118,SNR=34
N17A ⇑PP PP 10 07 44.9 +1.4

	baz=118								
D08A	**Wollman Farm,**	**116.55**	**48**	⇓P		PKPdf	10 06 35.0	-0.3	
	baz=118,SNR=19								
D08A				⇑PP		PP	10 07 44.3	+0.9	
	baz=118								
E09A	**Wood Farm, Sta**	**116.55**	**49**	⇓P		PKPdf	10 06 34.4	-0.9	
	baz=118								
E09A				⇓PP		PP	10 07 44.0	+0.6	
	baz=118								
CRAG	**Craig**	**116.57**	**34**	*e*P		PKPdf	10 06 35.7	+0.7	
CRAG				LR		LR			
	comp=Z,16µm,19.0s,MS6.6								
NLW	**Nelson Butte**	**116.59**	**46**	P		PKPdf	10 06 36.4	+1.1	
HWUT	**Hardware Ranch**	**116.60**	**57**	*e*PKPdf		PKPdf	10 06 35.5	-0.1	
HWUT				LR		LR			
	comp=Z,24µm,19.0s,MS6.8								
F10A	**Beach Ranch, E**	**116.63**	**50**	⇓P		PKPdf	10 06 36.0	+0.6	
	baz=118,SNR=12								
F10A				⇓PP		PP	10 07 43.6	-0.4	
	baz=118								
G11A	**Walters Elk Ra**	**116.72**	**51**	⇓P		PKPdf	10 06 36.0	+0.4	
	baz=118,SNR=30								
G11A				⇓PP		PP	10 07 45.8	+1.2	
	baz=118								
J14A	**Carey**	**116.72**	**54**	⇓P		PKPdf	10 06 35.3	-0.5	
	baz=118,SNR=19								
J14A				⇓PP		PP	10 07 47.5	+2.8	
	baz=118								
A06A	**Chilliwack**	**116.77**	**45**	⇑P		PKPdf	10 06 36.4	+0.8	
	baz=118,SNR=5.8								
A06A				⇓PP		PP	10 07 46.7	+1.8	
	baz=118								
I13A	**Wildhorse Cree**	**116.81**	**53**	⇑P		PKPdf	10 06 35.7	-0.1	
	baz=118,SNR=42								
I13A				⇓PP		PP	10 07 47.9	+2.7	
	baz=118								
K15A	**Arbon**	**116.81**	**55**	⇑P		PKPdf	10 06 35.9	0.0	
	baz=118,SNR=21								
K15A				⇓PP		PP	10 07 46.5	+1.2	
	baz=118								
D09A	**Jones Farm, Ri**	**116.85**	**48**	⇑P		PKPdf	10 06 35.5	-0.4	
	baz=118,SNR=16								
D09A				⇑PP		PP	10 07 46.3	+0.8	
	baz=118								
H12A	**Diamond D Ranc**	**116.86**	**52**	⇑P		PKPdf	10 06 34.4	-1.5	
	baz=118,SNR=29								
H12A				⇑PP		PP	10 07 47.2	+1.6	
	baz=118								
PPLA	**Purkeypile**	**116.89**	**21**	*e*PKPdf		PKPdf	10 06 35.4	0.0	
OD2	**Odessa Site #2**	**116.89**	**48**	*e*PKPdf		PKPdf	10 06 35.6	-0.3	
BILL	**Bilibino**	**116.89**	**1**	⇑*i*PKIKP		PKPdf	10 06 35.7	+0.4	
BILL	**Bilibino**	**116.89**	**1**	*e*PKPdf		PKPdf	10 06 34.9	-0.4	
BILL				LR		LR			
	comp=Z,22µm,22.0s,MS6.7								
L16A	**Fish Haven**	**116.95**	**56**	⇓PP		PP	10 07 47.1	+0.8	
	baz=118								
B07A	**Winthrop**	**116.96**	**46**	⇑P		PKPdf	10 06 35.2	-0.8	
	baz=118,SNR=24								
B07A				⇑PP		PP	10 07 46.2	0.0	
	baz=118								
SIT	**Sitka**	**117.00**	**32**	*e*PKIKP		PKPdf	10 06 36.5	+0.7	
SIT				MLR		MLR			
	comp=Z,20µm,20.0s,MS6.7								
C08A	**Higginbotham F**	**117.00**	**47**	⇑P		PKPdf	10 06 35.6	-0.5	
	baz=118,SNR=14								
C08A				⇓PP		PP	10 07 47.7	+1.2	
	baz=118								
E10A	**Myers Farm, Un**	**117.05**	**49**	P		PKPdf	10 06 36.6	+0.4	
	baz=118,SNR=10								
O19A	**Miners Draw (B**	**117.06**	**59**	⇑P		PKPdf	10 06 35.8	-0.7	
	baz=118								
O19A				⇑PP		PP	10 07 47.0	-0.1	
	baz=118								
F11A	**Grangeville**	**117.11**	**50**	⇓P		PKPdf	10 06 35.8	-0.6	
	baz=118,SNR=42								
F11A				⇓PP		PP	10 07 47.7	+0.3	
	baz=118								
JMDO	**Jabal Madar**	**117.14**	**273**	⇑P		PKPdf	10 06 36.7	-0.5	
	SNR=9.6								
I14A	**Mackay**	**117.17**	**54**	⇑P		PKPdf	10 06 35.2	-1.4	
	baz=118,SNR=32								
I14A				⇑PP		PP	10 07 50.6	+2.8	
	baz=118								
H13A	**Challis**	**117.18**	**53**	⇑P		PKPdf	10 06 36.0	-0.6	
	baz=118,SNR=25								
H13A				⇑PP		PP	10 07 49.5	+1.6	
	baz=118								
N18A	**Larsen Ranch,**	**117.22**	**58**	⇓P		PKPdf	10 06 37.3	+0.5	
	baz=118								
N18A				⇑PP		PP	10 07 48.4	+0.3	
	baz=118								
A07A	**Ashnola River,**	**117.25**	**46**	⇑P		PKPdf	10 06 36.2	-0.3	
	baz=118,SNR=30								
B08A	**Colville Reser**	**117.26**	**47**	P		PKPdf	10 06 35.5	-1.1	
	baz=118,SNR=53								
J15A	**Blackfoot**	**117.35**	**55**	⇓P		PKPdf	10 06 36.5	-0.5	
	baz=118,SNR=30								
J15A				⇓PP		PP	10 07 50.9	+1.9	
	baz=118								
D10A	**Wagner Farm, O**	**117.36**	**49**	⇓P		PKPdf	10 06 36.0	-0.8	
	baz=118,SNR=66								
C09A	**Chrisman Ranch**	**117.38**	**48**	⇓P		PKPdf	10 06 37.1	+0.3	
	baz=118,SNR=16								
E11A	**Bogner Ranch,**	**117.41**	**50**	⇓P		PKPdf	10 06 36.7	-0.2	
	baz=118,SNR=36								
K16A	**Soda Springs**	**117.42**	**56**	⇑P		PKPdf	10 06 38.0	+0.9	
	baz=118,SNR=19								
K16A				⇓PP		PP	10 07 51.1	+1.5	
	baz=118								
SDCO	**Great Sand Dun**	**117.42**	**63**	*e*PKPdf		PKPdf	10 06 37.1	-0.2	
SDCO				LR		LR			
	comp=Z,13µm,21.0s,MS6.5								
N19A	**John Jarvie Ra**	**117.44**	**58**	⇑P		PKPdf	10 06 37.0	-0.2	
	baz=118								
N19A				⇑PP		PP	10 07 49.7	0.0	
	baz=118								
F12A	**Elk City**	**117.48**	**51**	⇑P		PKPdf	10 06 36.7	-0.4	
	baz=118,SNR=24								
F12A				⇓PP		PP	10 07 50.9	+1.0	
	baz=118								
G13A	**Cobalt**	**117.55**	**52**	⇓P		PKPdf	10 06 35.7	-1.5	
	baz=118,SNR=45								
G13A				⇓PP		PP	10 07 51.9	+1.5	
	baz=118								
WRAK	**Wrangell Islan**	**117.58**	**34**	*e*PKPdf		PKPdf	10 06 37.6	+0.7	
WRAK				LR		LR			
	comp=Z,17µm,20.0s,MS6.7								
AHID	**Auburn Hatcher**	**117.64**	**56**	*e*PKPdf		PKPdf	10 06 37.8	+0.3	
AHID				LR		LR			
	comp=Z,14µm,22.0s,MS6.5								
SMDO	**Samad**	**117.66**	**274**	⇑P		PKPdf	10 06 37.7	-0.5	
	SNR=11								
KSH	**Kashi**	**117.67**	**299**	PKP		PKPdf	10 06 37.0	-0.7	
KSH				PP		PP	10 07 50.3	-1.0	
KSH				PKS			10 10 14.3		
KSH				SKS		SKSdf	10 13 46.3	-2.3	
KSH				PP		PP			
	comp=Z,8µm,5.6s								
KSH				LR		LR			
	comp=N,7µm,17.2s,MS6.5								
KSH				LR		LR			
	comp=E,5µm,13.5s,MS6.5								
KSH				LR		LR			
	comp=Z,10µm,22.6s								
H14A	**Leadore**	**117.68**	**53**	⇓P		PKPdf	10 06 38.4	+0.8	
	baz=119,SNR=18								
H14A				⇓PP		PP	10 07 53.3	+1.9	
	baz=119								
A08A	**Turner Farm, O**	**117.70**	**46**	⇓P		PKPdf	10 06 36.5	-1.0	
	baz=119,SNR=40								
J16A	**Bone**	**117.71**	**55**	⇑P		PKPdf	10 06 36.2	-1.4	
	baz=119								
J16A				⇓PP		PP	10 07 51.9	+0.4	
	baz=119								
CHUM	**Lake Minchumin**	**117.71**	**20**	*e*PKPdf		PKPdf	10 06 36.5	-0.5	
I15A	**Monteview**	**117.73**	**54**	⇑P		PKPdf	10 06 38.1	+0.5	
	baz=119,SNR=23								
I15A				⇑PP		PP	10 07 54.2	+2.5	
	baz=119								
KTH	**Kantishna Hill**	**117.75**	**21**	*e*PKPdf		PKPdf	10 06 35.7	-1.3	
E12A	**Beaver Dam Sad**	**117.77**	**50**	⇑P		PKPdf	10 06 36.8	-0.9	
	baz=119,SNR=24								
E12A				⇑PP		PP	10 07 52.3	+0.4	
	baz=119								
AMTX	**Amarillo**	**117.79**	**68**	*e*PKPdf		PKPdf	10 06 37.8	-0.3	
AMTX				LR		LR			
	comp=Z,44µm,19.0s,MS7.1								
D11A	**Klaveano Farm,**	**117.82**	**49**	⇓P		PKPdf	10 06 36.9	-0.9	
	baz=119,SNR=64								
C10A	**Spilker Farm,**	**117.87**	**48**	⇑P		PKPdf	10 06 37.4	-0.4	
	baz=119,SNR=27								
C10A				⇓PP		PP	10 07 53.3	+0.8	
	baz=119								
B09A	**Rice**	**117.88**	**47**	⇑P		PKPdf	10 06 37.6	-0.2	
	baz=119,SNR=35								
RRI2	**Red Ridge**	**117.91**	**55**	*e*PKPdf		PKPdf	10 06 36.5	-1.5	
BIDO	**Bidbid**	**117.93**	**274**	⇑P		PKPdf	10 06 38.5	-0.2	
	SNR=8.2								
F13A	**Darby**	**117.98**	**52**	⇑P		PKPdf	10 06 36.4	-1.7	
	baz=119								
F13A				⇑PP		PP	10 07 55.0	+1.6	
	baz=119								
BSY	**Bisya**	**118.00**	**273**	⇓P		PKPdf	10 06 38.0	-0.9	
	SNR=12								
A09A	**Danville**	**118.05**	**47**	⇓P		PKPdf	10 06 37.3	-0.8	
	baz=119								
G14A	**Jackson**	**118.06**	**52**	⇓P		PKPdf	10 06 38.0	-0.3	
	baz=119								
G14A				⇑PP		PP	10 07 55.7	+1.8	
	baz=119								
H15A	**Lima**	**118.06**	**53**	⇑P		PKPdf	10 06 38.6	+0.3	
	baz=119								
H15A				⇑PP		PP	10 07 56.3	+2.3	
	baz=119								
MCMT	**McKenzie Canyo**	**118.10**	**53**	*e*PKPdf		PKPdf	10 06 39.6	+1.2	
HKT	**Hockley**	**118.11**	**76**	PKIKP		PKPdf	10 06 38.8	-0.1	
HKT	**Hockley**	**118.11**	**76**	*e*PKPdf		PKPdf	10 06 38.1	-0.7	
HKT				LR		LR			
	comp=Z,18µm,20.0s,MS6.7								
DCID1	**Drake Creek**	**118.15**	**55**	PKPdf		PKPdf	10 06 37.3	-1.2	
REDW	**Red Top Meadow**	**118.17**	**55**	*e*PKPdf		PKPdf	10 06 39.2	+0.7	
I16A	**Newdale**	**118.18**	**55**	⇓P		PKPdf	10 06 38.5	0.0	
	baz=119								
I16A				⇑PP		PP	10 07 57.6	+2.8	
	baz=119								
BPAW	**Bear Paw Mtn.**	**118.20**	**20**	*e*PKPdf		PKPdf	10 06 36.7	-1.2	
TPAW	**Teton Pass**	**118.21**	**55**	*e*PKPdf		PKPdf	10 06 37.6	-1.0	
NEW	**Newport**	**118.26**	**48**	PKIKP		PKPdf	10 06 38.4	-0.1	
NEW	**Newport**	**118.26**	**48**	*e*PKPdf		PKPdf	10 06 37.9	-0.6	
NEW				LR		LR			
	comp=Z,32µm,22.0s,MS6.9								
SNOW	**Snow King Moun**	**118.30**	**55**	*e*PKPdf		PKPdf	10 06 37.3	-1.5	
D12A	**Red Ives Fores**	**118.32**	**50**	⇓P		PKPdf	10 06 38.0	-0.7	
	baz=119								
D12A				⇓PP		PP	10 07 55.9	+0.2	
	baz=119								
C11A	**Tepee Creek (N**	**118.40**	**49**	⇑P		PKPdf	10 06 38.5	-0.4	
	baz=119								
C11A				⇑PP		PP	10 07 56.6	+0.4	
	baz=119								
KBL	**Kabul**	**118.47**	**291**	*e*PKIKP		PKPdf	10 06 38.1	-1.3	
LOHW	**Long Hollow**	**118.48**	**55**	*e*PKPdf		PKPdf	10 06 38.2	-0.9	
BW06	**Boulder Array**	**118.48**	**57**	PFAKE			10 06 50.0	+11	
BW06				LR		LR			
	comp=Z,27µm,19.0s,MS6.9								
PDAR	**Pinedale Array**	**118.48**	**57**	PKP		PKPdf	10 06 40.2	+1.0	
	comp=Z,16nm,0.9s,baz=174,slow=2.6,SNR=47								
PDAR				PP		PP	10 07 55.6	-1.3	
	comp=Z,20nm,1.3s,baz=194,slow=2.4,SNR=3.6								
F14A	**Wisdom**	**118.49**	**52**	⇑P		PKPdf	10 06 38.5	-0.6	
	baz=120								
F14A				⇓PP		PP	10 07 58.8	+1.9	
	baz=120								
E13A	**Victor**	**118.49**	**51**	⇓P		PKPdf	10 06 39.9	+0.9	
	baz=120								
E13A				⇓PP		PP	10 07 57.6	+0.7	
	baz=120								
MOOW	**Moose Ponds**	**118.49**	**55**	*e*PKPdf		PKPdf	10 06 38.1	-1.1	
HOQ	**Hoqain**	**118.51**	**274**	⇑P		PKPdf	10 06 39.3	-0.5	
	SNR=7.5								
G15A	**Dillon**	**118.51**	**53**	⇑P		PKPdf	10 06 38.7	-0.4	
	baz=120								
G15A				⇓PP		PP	10 07 59.1	+2.0	
	baz=120								
A10A	**Northport**	**118.54**	**47**	⇓P		PKPdf	10 06 38.1	-1.0	
	baz=120								
DLMT	**Dillon**	**118.59**	**53**	*e*PKPdf		PKPdf	10 06 38.5	-0.7	
I17A	**Pilgram Creek**	**118.70**	**55**	⇑P		PKPdf	10 06 39.2	-0.3	
	baz=120								
C12B	**Naegeli Ranch,**	**118.70**	**49**	⇑P		PKPdf	10 06 37.0	-2.4	
	baz=120								
C12B				⇑PP		PP	10 07 58.6	+0.3	
	baz=120								
ISCO	**Idaho Springs**	**118.73**	**61**	PKIKP		PKPdf	10 06 40.4	+0.7	
ISCO				*e*			10 07 59.5		
ISCO				MLR		MLR			
	comp=Z,38µm,19.0s,MS7.0								
B11A	**Sandpoint**	**118.75**	**48**	⇓P		PKPdf	10 06 37.9	-1.6	
	baz=120								
D13A	**Huson**	**118.79**	**50**	⇑P		PKPdf	10 06 38.9	-0.7	
	baz=120								
E14A	**Clinton**	**118.83**	**51**	⇓P		PKPdf	10 06 40.5	+0.8	
	baz=120								
E14A				⇓PP		PP	10 07 60.0	+0.7	
	baz=120								
SKAG	**Skagway**	**118.84**	**30**	*e*P		PKPdf	10 06 39.6	+0.3	
SKAG				LR		LR			
	comp=Z,28µm,20.0s,MS6.9								
QLMT	**Earthquake Lak**	**118.85**	**54**	*e*PKPdf		PKPdf	10 06 41.2	+1.4	
H16A	**Russell Place,**	**118.86**	**54**	⇓P		PKPdf	10 06 39.1	-0.7	
	baz=120								
H16A				⇑PP		PP	10 08 02.3	+2.8	
	baz=120								
MSO	**Missoula**	**118.88**	**51**	*e*PKPdf		PKPdf	10 06 38.6	-1.2	
MSO				LR		LR			
	comp=Z,19µm,19.0s,MS6.7								
G16A	**Moss Hill, Enn**	**118.92**	**53**	⇓P		PKPdf	10 06 41.6	+1.7	
	baz=120								
G16A				⇓PP		PP	10 08 01.3	+1.4	
	baz=120								
F15A	**Butte**	**118.96**	**52**	⇓P		PKPdf	10 06 39.2	-0.7	
	baz=120								
F15A				⇓PP		PP	10 08 02.2	+2.0	
	baz=120								
YMR	**Madison River**	**118.99**	**54**	*e*PKPdf		PKPdf	10 06 39.9	-0.1	
YMR				LR		LR			
	comp=Z,23µm,19.0s,MS6.8								
MENT	**Mentasta**	**119.05**	**24**	*e*P		PKPdf	10 06 40.4	+0.8	
A11A	**Hall Mountain,**	**119.11**	**48**	⇑P		PKPdf	10 06 40.4	+0.3	
	baz=120								
A11A				⇑PP		PP	10 08 02.5	+1.4	
	baz=120								
MK31	**Makanchi Array**	**119.11**	**309**	*i* PKIKP		PKPdf	10 06 38.1	-2.1	
MK31				pmax		pmax			
	comp=Z,304nm,1.5s								
MK31	**Makanchi Array**	**119.11**	**309**	*e*PKPdf		PKPdf	10 06 34.3	-5.9	
MKAR	**Makanchi Array**	**119.11**	**309**	Pdiff		Pdif	10 03 01.6	-0.8	
	comp=Z,0.4nm,0.6s,baz=121,slow=4.5,SNR=6.0								
MKAR				PKP		PKPdf	10 06 38.1	-2.1	
	comp=Z,42nm,0.9s,baz=182,slow=1.8,SNR=48								
MKAR				PKKPbc		PKKPbc	10 16 55.3	+1.9	
	comp=Z,16nm,1.0s,baz=320,slow=3.2,SNR=20								
MKAR	**Makanchi Array**	**119.11**	**309**	P		Pdif	10 03 01.6	-0.8	
MKAR							10 06 38.1		
B12A	**Libby**	**119.16**	**49**	⇑P		PKPdf	10 06 39.4	-0.8	
	baz=120								
SDV	**Santo Domingo**	**119.16**	**112**	PKKPbc		PKKPbc	10 16 53.0	+0.4	
	comp=Z,4.5nm,0.4s,baz=70,slow=3.8,SNR=7.3								
SDV	**Santo Domingo**	**119.16**	**112**	*e*Pdif		Pdif	10 02 59.9	-2.7	
SDV				*e*PKPdf		PKPdf	10 06 40.9	-0.4	
SDV				LR		LR			
	comp=Z,3µm,19.0s,MS6.0								
YNR	**Norris Junctio**	**119.17**	**54**	*e*PKPdf		PKPdf	10 06 43.0	+2.6	
HYT	**Haines Junctio**	**119.18**	**28**	*e*PKPdf		PKPdf	10 06 39.3	-0.6	
HYT				*e*PP		PP	10 08 00.6	-0.8	
LKWY	**Lake**	**119.22**	**55**	*e*PKIKP		PKPdf	10 06 40.6	+0.1	
LKWY				MLR		MLR			
	comp=Z,26µm,20.0s,MS6.8								
D14A	**Greenough**	**119.27**	**51**	⇓P		PKPdf	10 06 40.1	-0.4	
	baz=120								
D14A				⇑PP		PP	10 08 02.5	+0.2	
	baz=120								
E15A	**Deer Lodge**	**119.28**	**52**	⇓P		PKPdf	10 06 40.5	-0.1	
	baz=120								
E15A				⇑PP		PP	10 08 03.9	+1.6	
	baz=120								
CHMT	**Chamberlain Mo**	**119.29**	**51**	*e*PKPdf		PKPdf	10 06 36.4	-4.1	
IMA2	**Indian Mountai**	**119.31**	**18**	*e*P		PKPdf	10 06 41.7	+1.7	
ULHL	**Ulahol**	**119.33**	**302**	P		PKPdf	10 06 40.8	0.0	
	SNR=12								
A12A	**Yaak River Ran**	**119.44**	**48**	⇑P		PKPdf	10 06 40.1	-0.7	
	baz=120								
WMOK	**Wichita Mounta**	**119.47**	**70**	PKIKP		PKPdf	10 06 40.2	-1.1	
WMOK	**Wichita Mounta**	**119.47**	**70**	*e*PKPdf		PKPdf	10 06 39.6	-1.8	
WMOK				LR		LR			
	comp=Z,57µm,19.0s,MS7.2								
COLA	**College**	**119.59**	**21**	*c i*PKIKP		PKPdf	10 06 39.8	-0.8	
COLA	**College**	**119.59**	**21**	PFAKE			10 06 50.0	+9.4	
COLA				LR		LR			
	comp=Z,25µm,20.0s,MS6.8								
C14A	**Swan Lake**	**119.61**	**50**	⇓P		PKPdf	10 06 39.1	-2.0	
	baz=121								
C14A				⇓PP		PP	10 08 04.0	-0.6	
	baz=121								
B13A	**Whitefish**	**119.65**	**49**	⇓P		PKPdf	10 06 40.1	-1.1	
	baz=121								
B13A				⇓PP		PP	10 08 04.6	-0.2	
	baz=121								
D15A	**Lincoln**	**119.75**	**51**	⇑P		PKPdf	10 06 39.7	-1.7	
	baz=121								
D15A				⇓PP		PP	10 08 06.8	+1.3	
	baz=121								
PHWY	**Pilot Hill**	**119.81**	**60**	*e*PKPdf		PKPdf	10 06 40.8	-1.0	
E16A	**East Helena**	**119.85**	**52**	⇑P		PKPdf	10 06 40.5	-1.2	
	baz=121								
E16A				⇓PP		PP	10 08 06.5	+0.2	
	baz=121								
DLBC	**Dease Lake**	**119.92**	**34**	*e*PKPdf		PKPdf	10 06 39.1	-2.3	
A13A	**Flathead Natio**	**120.05**	**49**	⇑P		PKPdf	10 06 39.2	-2.8	
	baz=121								
A13A				⇑PP		PP	10 08 08.8	+1.2	
	baz=121								
NATX	**Nacogdoches**	**120.07**	**75**	*e*PKPdf		PKPdf	10 06 41.4	-1.2	
NATX				LR		LR			
	comp=Z,16µm,19.0s,MS6.7								
TKM2	**Tokmak 2**	**120.14**	**302**	P		PKPdf	10 06 42.8	+0.4	
	SNR=16								
TKM2	**Tokmak 2**	**120.14**	**302**	*e*PKPdf		PKPdf	10 06 38.9	-3.5	
TKM2				LR		LR			
	comp=Z,7µm,22.0s,MS6.2								
HATD	**Hatta, Dubai**	**120.14**	**274**	P		PKPdf	10 06 42.6	-0.4	
	SNR=11								
C15A	**Salmond Ranch,**	**120.19**	**51**	⇑P		PKPdf	10 06 40.4	-1.8	
	baz=121								
C15A				⇑PP		PP	10 08 09.9	+1.4	
	baz=121								
RLMT	**Red Lodge**	**120.19**	**55**	*e*PKPdf		PKPdf	10 06 40.3	-2.1	
RLMT				LR		LR			
	comp=Z,11µm,22.0s,MS6.5								
E17A	**Martinsdale**	**120.23**	**53**	⇑P		PKPdf	10 06 40.6	-1.8	
	baz=121								
E17A				⇓PP		PP	10 08 10.9	+2.0	
	baz=121								
B14A	**Marquette Ranc**	**120.23**	**50**	⇓P		PKPdf	10 06 39.7	-2.6	
	baz=121								
B14A				⇓PP		PP	10 08 09.2	+0.3	
	baz=121								
D16A	**Dana Ranch, Ca**	**120.24**	**52**	⇓P		PKPdf	10 06 41.1	-1.3	
	baz=121								
D16A				⇓PP		PP	10 08 10.6	+1.6	
	baz=121								
UCH	**Uchtor**	**120.29**	**301**	P		PKPdf	10 06 44.3	+1.7	
	SNR=29								
UCH	**Uchtor**	**120.29**	**301**	*e*PKPdf		PKPdf	10 06 41.4	-1.2	
KBK	**Karagaybulak**	**120.33**	**301**	P		PKPdf	10 06 43.8	+1.1	
	SNR=15								
WALA	**Waterton Lakes**	**120.38**	**49**	*e*PKPdf		PKPdf	10 06 41.6	-1.0	
GCMT	**Greycliff**	**120.42**	**54**	*e*PKPdf		PKPdf	10 06 41.3	-1.4	
F18A	**Big Timber**	**120.46**	**54**	⇓P		PKPdf	10 06 42.2	-0.7	
	baz=122								
F18A				⇑PP		PP	10 08 12.4	+1.9	
	baz=122								
KRAR	**Krasnoyarsk**	**120.50**	**322**	⇓*i*PKIKP		PKPdf	10 06 42.1	-0.5	
KRAR				MLR		MLR			
	comp=Z,16µm,28.0s,MS6.5								
B15A	**Bradely Ranch,**	**120.56**	**50**	⇑P		PKPdf	10 06 39.7	-3.2	
	baz=122								
A14A	**Double T Ranch**	**120.56**	**49**	⇓P		PKPdf	10 06 40.1	-2.8	
	baz=122								
AAK	**Ala-Archa**	**120.57**	**301**	P		PKPdf	10 06 44.8	+1.7	
	SNR=19								
FRU	**Bishkek**	**120.63**	**301**	*i* PKIKP		PKPdf	10 06 43.0	-0.3	
FRU				*e*			10 24 36.0		
FRU				pmax		pmax			
	comp=Z,410nm,2.1s								
C16A	**Fuhringer Ranc**	**120.64**	**51**	⇓P		PKPdf	10 06 40.1	-3.0	
	baz=122								
C16A				⇓PP		PP	10 08 12.8	+1.1	
	baz=122								
CHMS	**Chumysh**	**120.66**	**301**	P		PKPdf	10 06 44.0	+0.7	
	SNR=18								
AML	**Almayashu**	**120.69**	**300**	P		PKPdf	10 06 45.0	+1.5	
	SNR=22								
AML	**Almayashu**	**120.69**	**300**	*e*PKPdf		PKPdf	10 06 41.2	-2.3	
AML				LR		LR			
	comp=Z,11µm,22.0s,MS6.4								
E18A	**Harlowton**	**120.79**	**53**	⇓P		PKPdf	10 06 40.4	-3.0	
	baz=122								
E18A				⇑PP		PP	10 08 15.3	+2.6	
	baz=122								
A15A	**Johnson Ranch,**	**120.91**	**50**	⇓P		PKPdf	10 06 40.3	-3.3	
	baz=122								
USP	**Ospenovka**	**120.97**	**302**	P		PKPdf	10 06 44.7	+0.8	
	SNR=24								
EKS2

KURK	**Kurchatov**	**123.49**	**311**	PKP	PKPdf	10 06 46.1	-2.4		
KURK				PKKPbc	PKKPbc	10 16 38.9	+2.1		
UALR	**University of**	**123.51**	**74**	*e*PKPdf	PKPdf	10 06 47.7	-1.4		
KSU1	**Kansas State U**	**123.61**	**67**	*e*PKPdf	PKPdf	10 06 47.9	-1.3		
KSU1				LR	LR				
	comp=Z,31µm,19.0s,MS7.0								
NVS	**Novosibirsk**	**123.87**	**316**	*i* PKIKP	PKPdf	10 06 45.6	-3.5		
NVS				pmax	pmax				
	comp=Z,247nm,1.9s								
NVS				pmax	pmax				
	comp=N,63nm,1.3s								
NVS				pmax	pmax				
	comp=E,70nm,1.5s								
BRAL	**Brewton**	**124.46**	**81**	*e*PKPdf	PKPdf	10 06 45.7	-5.4		
BRAL				LR	LR				
	comp=Z,7µm,19.0s,MS6.4								
DGMT	**Dagmar**	**125.00**	**54**	*e*PKPdf	PKPdf	10 06 49.6	-1.8		
DGMT				LR	LR				
	comp=Z,13µm,20.0s,MS6.6								
HBAR	**Harrisburg**	**125.07**	**74**	*e*PKPdf	PKPdf	10 06 52.1	+0.1		
OXF	**Oxford**	**125.20**	**76**	*e*PKIKP	PKPdf	10 06 49.1	-3.2		
OXF				MLR	MLR				
	comp=Z,17µm,21.0s,MS6.7								
MET	**Memphis--Engin**	**125.25**	**75**	*e*PKPdf	PKPdf	10 06 52.5	+0.1		
GNAR	**Gosnell**	**125.73**	**74**	*e*PKPdf	PKPdf	10 06 52.3	-1.0		
LRAL	**Lakeview Retre**	**125.80**	**79**	*e*PKPdf	PKPdf	10 06 51.7	-1.9		
LRAL				*e*PP	PP	10 08 45.3	-1.4		
LRAL				LR	LR				
	comp=Z,14µm,20.0s,MS6.6								
HALT	**Halls**	**126.12**	**75**	*e*PKPdf	PKPdf	10 06 53.1	-0.9		
PVMO	**Portageville**	**126.21**	**74**	*e*PKPdf	PKPdf	10 06 54.4	+0.2		
DWPF	**Disney**	**126.21**	**88**	PFAKE		10 07 10.0	+16		
DWPF				LR	LR				
	comp=Z,10µm,21.0s,MS6.5								
CCM	**Cathedral Cave**	**126.26**	**72**	*e*PKIKP	PKPdf	10 06 50.7	-3.5		
CCM				MLR	MLR				
	comp=Z,50µm,20.0s,MS7.2								
PARMO	**Parma**	**126.33**	**74**	*e*PKPdf	PKPdf	10 06 52.9	-1.6		
GLAT	**Glass**	**126.38**	**74**	*e*PKPdf	PKPdf	10 06 53.6	-0.9		
ECSD	**EROS,Sioux Fal**	**126.43**	**63**	*e*PKPdf	PKPdf	10 06 49.5	-4.8		
ECSD				LR	LR				
	comp=Z,17µm,19.0s,MS6.7								
UTMT	**University of**	**126.69**	**75**	*e*PKPdf	PKPdf	10 06 54.1	-1.1		
FVM	**French Village**	**126.72**	**72**	*e*PKIKP	PKPdf	10 06 52.9	-2.2		
FVM				*e*		10 08 50.4			
GRGR	**Grenville**	**127.07**	**118**	*e*PKPdf	PKPdf	10 06 54.9	-1.6		
GRGR				LR	LR				
	comp=Z,5µm,19.0s,MS6.2								
WVT	**Waverly**	**127.22**	**76**	*e*PKIKP	PKPdf	10 06 52.3	-3.9		
WVT				MLR	MLR				
	comp=Z,23µm,19.0s,MS6.9								
SLM	**Saint Louis**	**127.24**	**72**	PKIKP	PKPdf	10 06 56.5	+0.4		
SLM	**Saint Louis**	**127.24**	**72**	*e*PKPdf	PKPdf	10 06 55.1	-1.0		
SIUC	**Southern Illin**	**127.31**	**73**	*e*PKPdf	PKPdf	10 06 54.1	-2.2		
SCIA	**State Center**	**127.37**	**67**	*e*PKPdf	PKPdf	10 06 54.4	-1.8		
SCIA				LR	LR				
	comp=Z,46µm,19.0s,MS7.2								
SWET	**Sewanee**	**127.86**	**78**	*e*PKPdf	PKPdf	10 06 55.0	-2.5		
GOGA	**Godfrey**	**128.32**	**81**	PKIKP	PKPdf	10 06 58.1	-0.3		
GOGA	**Godfrey**	**128.32**	**81**	*e*PKPdf	PKPdf	10 06 57.8	-0.6		
GOGA				LR	LR				
	comp=Z,8µm,21.0s,MS6.4								
YKA	**Yellowknife Ar**	**128.34**	**36**	PKP	PKPdf	10 06 56.8	-0.6		
	comp=Z,55nm,0.9s,baz=232,slow=2.4,SNR=18								
YKA				PP	PP	10 09 03.0	0.0		
	comp=Z,11nm,1.1s,baz=236,slow=6.3,SNR=4.5								
YKA	**Yellowknife Ar**	**128.34**	**36**	PKIKP	PKPdf	10 06 56.8	-0.6		
YKA						10 09 03.0			
YKA				pmax	pmax				
	comp=Z,55nm,0.9s								
YKA				pmax	pmax				
	comp=Z,11nm,1.1s								
YKA	**Yellowknife Ar**	**128.34**	**36**	PKP	PKPdf	10 06 56.9	-0.6		
YKA				PP	PP	10 09 03.0	0.0		
USIN	**University of**	**128.44**	**74**	*e*PKPdf	PKPdf	10 06 56.9	-1.5		
VOSK	**Vostochnaya**	**128.52**	**309**	PKIKP	PKPdf	10 06 55.2	-2.9		
VOSK				pmax	pmax				
	comp=Z,264nm,1.4s								
OLIL	**Olney**	**128.63**	**73**	*e*PKPdf	PKPdf	10 06 55.1	-3.6		
AGPR	**Aguadilla, PR**	**128.69**	**108**	*e*PKPdf	PKPdf	10 06 58.2	-1.2		
CPCT	**Cooper Cave**	**128.91**	**78**	*e*PKPdf	PKPdf	10 06 57.1	-2.3		
HDIL	**Hopedale**	**128.97**	**70**	*e*PKPdf	PKPdf	10 06 57.4	-1.9		
HDIL				LR	LR				
	comp=Z,44µm,19.0s,MS7.2								
BVAR	**Borovoye Array**	**128.99**	**309**	PKP	PKPdf	10 06 59.6	+0.7		
	comp=Z,43nm,0.9s,baz=132,slow=2.2,SNR=9.6								
SJG	**San Juan**	**129.02**	**109**	PKIKP	PKPdf	10 06 58.5	-1.6		
SJG	**San Juan**	**129.02**	**109**	*e*PKPdf	PKPdf	10 06 56.8	-3.3		
SJG				LR	LR				
	comp=Z,10µm,20.0s,MS6.5								
BRVK	**Borovoye**	**129.06**	**309**	⇑P	PKPdf	10 06 59.0	-0.1		
	SNR=50								
BRVK	**Borovoye**	**129.06**	**309**	PKIKP	PKPdf	10 06 57.8	-1.3		
BRVK				pmax	pmax				
	comp=Z,443nm,1.5s								
BRVK	**Borovoye**	**129.06**	**309**	*e*PKPdf	PKPdf	10 06 54.6	-4.5		
BRVK				⇑*i*PKP	PKPdf	10 06 58.4	-0.7		
BRVK				LR	LR				
	comp=Z,12µm,20.0s,MS6.6								
BBGH	**Gun Hill**	**129.09**	**119**	*e*PKPdf	PKPdf	10 07 01.2	+0.9		
BBGH				LR	LR				
	comp=Z,9µm,19.0s,MS6.5								
BIM	**Bigot**	**129.31**	**117**	*e*P	PKPdf	10 07 00.1	-0.6		
MTP	**Monte Pirata**	**129.38**	**110**	*e*PKPdf	PKPdf	10 06 58.8	-2.0		
FDF	**Fort de France**	**129.43**	**117**	⇑*e*P	PKPdf	10 07 00.8	-0.2		
FDF	**Fort de France**	**129.43**	**117**	*e*PKPdf	PKPdf	10 07 00.4	-0.6		
AGMN	**Agassiz Refuge**	**129.46**	**58**	*e*PKPdf	PKPdf	10 06 58.9	-1.1		
AGMN				LR	LR				
	comp=Z,29µm,19.0s,MS7.0								
WCI	**Wyandotte Cave**	**129.47**	**74**	*e*PKIKP	PKPdf	10 06 58.0	-2.4		
WCI				MLR	MLR				
	comp=Z,27µm,20.0s,MS6.9								
TKL	**Tuckaleechee C**	**129.52**	**79**	SKPbc		10 10 23.5			
	comp=Z,9.9nm,1.1s,baz=98,slow=14,SNR=21								
TKL	**Tuckaleechee C**	**129.52**	**79**	*e*PKIKP	PKPdf	10 06 59.7	-0.9		
FFC	**Flin Flon**	**129.68**	**49**	*e*PKIKP	PKPdf	10 06 56.2	-4.0		
FFC				MLR	MLR				
	comp=Z,18µm,19.0s,MS6.8								
JFWS	**Jewell Farm**	**129.74**	**67**	*e*PKIKP	PKPdf	10 06 58.7	-2.0		
JFWS				MLR	MLR				
	comp=Z,36µm,19.0s,MS7.1								
BLO	**Bloomington**	**129.88**	**73**	*e*PKIKP	PKPdf	10 06 58.7	-2.4		
TZTN	**Tazewell**	**130.21**	**78**	PFAKE		10 07 10.0	+8.2		
TZTN				LR	LR				
	comp=Z,21µm,20.0s,MS6.8								
NHSC	**New Hope**	**130.27**	**84**	PFAKE		10 07 10.0	+7.9		
NHSC				LR	LR				
	comp=Z,10µm,19.0s,MS6.5								
JSC	**Jenkinsville**	**130.30**	**82**	PKIKP	PKPdf	10 07 01.3	-0.8		
JSC	**Jenkinsville**	**130.30**	**82**	*e*PKPdf	PKPdf	10 07 00.2	-1.9		
ULM	**Lac du Bonnet**	**130.50**	**56**	PKhKP		10 06 51.2			
	comp=Z,4.4nm,0.9s,baz=82,slow=4.8,SNR=3.9								
ULM				PKP	PKPdf	10 07 01.3	-0.6		
	comp=Z,86nm,1.0s,baz=252,slow=6.5,SNR=36								
ULM				PP	PP	10 09 17.8	+0.4		
	comp=Z,24nm,1.2s,baz=225,slow=5.1,SNR=7.8								
ULM	**Lac du Bonnet**	**130.50**	**56**	PKP		10 06 51.2			
ULM				*e*PKPdf	PKPdf	10 06 57.1	-4.9		
ULM				PKP	PKPdf	10 07 01.3	-0.6		
ULM				PP	PP	10 09 17.8	+0.4		
ULM				LR	LR				
	comp=Z,16µm,19.0s,MS6.7								
ANWB	**Willy Bob**	**131.35**	**114**	*e*PKPdf	PKPdf	10 07 03.1	-1.5		
EYMN	**Ely**	**131.75**	**61**	*e*PKPdf	PKPdf	10 07 00.2	-4.2		
EYMN				LR	LR				
	comp=Z,27µm,20.0s,MS7.0								
COWI	**Conover**	**132.15**	**64**	*e*PKPdf	PKPdf	10 07 00.9	-4.3		
COWI				LR	LR				
	comp=Z,32µm,19.0s,MS7.0								
ELN	**Prospectdale**	**132.41**	**79**	*e*PKPdf	PKPdf	10 07 04.2	-1.7		
BLA	**Blacksburg**	**132.61**	**79**	*e*PKIKP	PKPdf	10 07 04.2	-2.2		
BLA				MLR	MLR				
	comp=Z,18µm,20.0s,MS6.8								
ACSO	**Alum Creek Sta**	**132.72**	**74**	*e*PKPdf	PKPdf	10 07 06.1	-0.4		
ACSO				LR	LR				
	comp=Z,27µm,20.0s,MS7.0								
CNNC	**Cliffs of the**	**133.08**	**83**	*e*PKPdf	PKPdf	10 07 06.4	-0.9		
CNNC				LR	LR				
	comp=Z,11µm,20.0s,MS6.5								
GLMI	**Grayling**	**134.20**	**68**	*e*PKPdf	PKPdf	10 07 04.5	-4.6		
GLMI				LR	LR				
	comp=Z,32µm,20.0s,MS7.0								
AKTK	**Aktyubinsk**	**134.31**	**301**	PKP		10 06 58.0			
AKTK				PKP	PKPdf	10 07 08.1	-1.0		
AKTK				PP	PP	10 09 40.9	-1.0		
AKTO	**Aktyubinsk**	**134.31**	**301**	PKhKP		10 06 58.0			
	comp=Z,3.6nm,0.7s,baz=122,slow=2.0,SNR=11								
AKTO				PKP	PKPdf	10 07 08.1	-1.0		
	comp=Z,11nm,0.7s,baz=116,slow=4.8,SNR=25								
AKTO				PP	PP	10 09 40.9	-1.0		
	comp=Z,12nm,1.1s,baz=124,slow=9.6,SNR=8.9								
MCWV	**Mont Chateau**	**134.39**	**77**	*e*PKPdf	PKPdf	10 07 08.1	-1.5		
MCWV				*e*PP	PP	10 09 41.5	-1.0		
MCWV				LR	LR				
	comp=Z,35µm,19.0s,MS7.1								
URVA	**University of**	**134.69**	**81**	*e*PKPdf	PKPdf	10 07 05.0	-5.3		
CBN	**Corbin**	**135.16**	**80**	PFAKE		10 07 20.0	+8.9		
CBN				LR	LR				
	comp=Z,20µm,19.0s,MS6.9								
ALLY	**Alegheny Colle**	**135.30**	**74**	*e*PKPdf	PKPdf	10 07 08.0	-3.2		
ERPA	**Erie**	**135.64**	**74**	*e*PKPdf	PKPdf	10 07 04.8	-7.0		
ERPA				LR	LR				
	comp=Z,37µm,20.0s,MS7.1								
SVE	**Sverdlovsk**	**135.74**	**310**	*i* PKIKP	PKPdf	10 07 11.2	-0.4		
SVE				*e*PPP		10 12 56.5			
SVE				*e*SSS		10 32 54.2			
SVE				pmax	pmax				
	comp=Z,172nm,1.4s								
SVE				pmax	pmax				
	comp=Z,2µm,12.5s								
SVE				MLR	MLR				
	comp=Z,9µm,22.0s,MS6.5								
SDMD	**Soldier's Deli**	**136.18**	**79**	*e*PKPpre		10 06 59.2			
SSPA	**Standing Stone**	**136.18**	**77**	PFAKE		10 07 20.0	+7.1		
SSPA				LR	LR				
	comp=Z,20µm,20.0s,MS6.8								
LIC	**Lamto**	**136.28**	**195**	*e*PKIKP	PKPdf	10 07 13.6	-0.4		
	comp=Z,144nm,1.1s								
LIC				*e*MLR	MLR				
	comp=Z,28µm,20.5s,MS6.7								
LIC	**Lamto**	**136.28**	**195**	*e*PKPdf	PKPdf	10 07 13.6	-0.4		
LIC				LR	LR				
	comp=Z,14µm,20.5s,MS6.7								
HAKT	**HAKKARI**	**136.42**	**278**	*i* P	PKPdf	10 07 12.1	-1.4		
ARU	**Arti**	**136.63**	**309**	*i* PKIKP	PKPdf	10 07 12.4	-0.8		
ARU	**Arti**	**136.63**	**309**	*e*PKPdf	PKPdf	10 07 02.2	-11		
ARU				*i* PKP	PKPdf	10 07 12.5	-0.7		
ARU				LR	LR				
	comp=Z,12µm,21.0s,MS6.6								
DBIC	**Dimbokro**	**136.69**	**196**	PKhKP		10 07 05.6			
	comp=Z,12nm,0.9s,baz=122,slow=3.9,SNR=9.1								
DBIC				PKP	PKPdf	10 07 14.6	-0.1		
	comp=Z,28nm,0.8s,baz=137,slow=4.2,SNR=20								
DBIC	**Dimbokro**	**136.69**	**196**	*e*PKPpre		10 07 01.1			
DBIC				PKP	PKPdf	10 07 05.6	-9.2		
DBIC				PKP	PKPdf	10 07 14.6	-0.1		
DBIC				LR	LR				
	comp=Z,16µm,19.0s,MS6.8								
MAK	**Makhachkala**	**136.92**	**287**	*c* PKIKP	PKPdf	10 07 13.7	-0.5		
MAK				*e*		10 09 52.6			
MAK				*e*		10 14 26.3			
MAK				pmax	pmax				
	comp=Z,292nm,1.5s								
GNI	**Garni**	**137.19**	**281**	P	PKPdf	10 07 15.4	+0.6		
	SNR=39								
GNI	**Garni**	**137.19**	**281**	*i* PKIKP	PKPdf	10 07 12.4	-2.4		
GNI				MLR	MLR				
	comp=Z,8µm,25.0s								
GNI	**Garni**	**137.19**	**281**	*e*PKPpre		10 07 11.4			
GNI				LR	LR				
	comp=Z,7µm,20.0s,MS6.4								
VANB	**Van**	**137.21**	**279**	*e*P	PKPdf	10 07 14.0	-0.9		
DGRG	**David-gareji**	**137.49**	**283**	P	PKPdf	10 07 16.0	+0.7		
DYDN	**Diyadin**	**137.54**	**280**	*i* P	PKPdf	10 07 15.2	-0.3		
MTA	**Mtatsminda**	**137.99**	**283**	P	PKPdf	10 07 15.5	-0.7		
AGRB	**Hanur-Agry**	**138.01**	**280**	*e*P	PKPdf	10 07 16.4	0.0		
TBLG	**Delisi**	**138.04**	**283**	*e*PKIKP	PKPdf	10 07 15.1	-1.2		
TBLG	**Delisi**	**138.04**	**283**	P	PKPdf	10 07 15.2	-1.2		
MARD	**Mardin**	**138.19**	**275**	*i* P	PKPdf	10 07 14.6	-2.2		
DIGO	**Kars**	**138.22**	**281**	*i* P	PKPdf	10 07 16.1	-0.6		
BINY	**Binghamton**	**138.22**	**76**	*e*PKPpre		10 07 04.5			
BINY				LR	LR				
	comp=Z,25µm,20.0s,MS7.0								
BRNJ	**Basking Ridge**	**138.34**	**79**	*e*PKPdf	PKPdf	10 07 16.8	-0.1		
GOR	**Gori**	**138.57**	**283**	P	PKPdf	10 07 16.7	-0.6		
CPNY	**Central Park**	**138.78**	**79**	*e*PKPpre		10 07 06.9			
PAL	**Palisades**	**138.93**	**79**	*e*PKHKP		10 07 06.9			
DIYA	**Diyarbakir**	**138.96**	**276**	*i* P	PKPdf	10 07 16.6	-1.6		
ERZM	**Erzurum**	**139.24**	**279**	*i* P	PKPdf	10 07 18.7	+0.1		
EZM	**Erzurum**	**139.25**	**279**	*e*P	PKPdf	10 07 18.9	+0.2		
ONI	**Oni**	**139.30**	**284**	P	PKPdf	10 07 17.0	-1.6		
BHL	**Bhannes**	**139.53**	**267**	*e*P	PKPdf	10 07 10.5	-8.9		
URFA	**Urfa**	**139.54**	**274**	*e*P	PKPdf	10 07 11.5	-7.8		
ARTV	**Artvin**	**139.56**	**281**	*i* P	PKPdf	10 07 09.8	-9.4		
DBOC	**Borcka**	**139.81**	**281**	*i* P	PKPdf	10 07 19.1	-0.5		
KOPT	**Kop Dagi**	**139.87**	**279**	*i* P	PKPdf	10 07 10.9	-8.9		
ATAB	**Bozova**	**139.90**	**274**	*i* P	PKPdf	10 07 13.1	-6.8		
BBSR	**BB Station**	**139.95**	**96**	*e*PKPpre		10 07 14.4			
BBSR				LR	LR				
	comp=Z,9µm,19.0s,MS6.5								
PTK	**Pertek**	**139.98**	**276**	*e*P	PKPdf	10 07 15.5	-4.5		
ELZG	**Elazig**	**140.03**	**276**	*i* P	PKPdf	10 07 11.2	-8.9		
NCB	**Newcomb**	**140.22**	**75**	*e*PKPpre		10 07 10.4			
NCB				LR	LR				
	comp=Z,32µm,20.0s,MS7.1								
MALT	**Malatya**	**140.29**	**275**	⇑*i*P	PKPdf	10 07 15.3	-5.3		
MALT	**Malatya**	**140.29**	**275**	*e*PKPpre		10 07 10.3			
MALT				LR	LR				
	comp=Z,9µm,20.0s,MS6.5								
ACCN	**Adirondack Com**	**140.29**	**76**	*e*PKPpre		10 07 10.8			
MYA	**Malataya**	**140.29**	**275**	*e*P	PKPdf	10 07 20.8	+0.2		
LONY	**Lake Ozonia**	**140.31**	**73**	*e*PKPpre		10 07 13.8			
LONY				LR	LR				
	comp=Z,41µm,20.0s,MS7.2								
GZT	**Gaziantep**	**140.31**	**273**	*i* P	PKPdf	10 07 15.1	-5.6		
GAZ	**Gaziantep**	**140.44**	**273**	*e*P	PKPdf	10 07 12.5	-8.4		
KIV	**Kislovodsk**	**140.46**	**285**	⇑P	PKPdf	10 07 20.2	-0.5		
	SNR=13								
KIV	**Kislovodsk**	**140.46**	**285**	*e*PKHKP		10 07 13.3			
KIV				*i*		10 07 19.7			
KIV				*e*SS	SS	10 28 37.5	-6.7		
KIV				*e*SSS		10 33 51.4			
KIV				pmax	pmax				
	comp=Z,113nm,1.1s								
KIV	**Kislovodsk**	**140.46**	**285**	⇑*i*P	PKPdf	10 07 16.5	-4.2		
KIV	**Kislovodsk**	**140.46**	**285**	*e*PKPpre		10 07 12.1			
KIV				⇑*e*PKP	PKPdf	10 07 19.7	-1.0		
KIV				LR	LR				
	comp=Z,6µm,21.0s,MS6.3								
QUA2	**Belchertown**	**140.59**	**78**	*e*PKPpre		10 07 13.4			
AKCD	**Akcadag**	**140.61**	**275**	*i* P	PKPdf	10 07 15.2	-5.9		
GUMT	**Gumushane**	**140.76**	**279**	*e*P	PKPdf	10 07 21.2	-0.2		
MACK	**Trabzon**	**140.83**	**279**	*i* P	PKPdf	10 07 14.4	-7.0		
MDV	**Middlebury**	**140.90**	**75**	*e*PKPpre		10 07 13.4			
BRYW	**Bryant College**	**140.93**	**79**	*e*PKPpre		10 07 16.4			
FRNY	**Flat Rock**	**141.03**	**74**	*e*PKPpre		10 07 14.7			
HRV	**Adam Dziewonsk**	**141.21**	**78**	*e*PKHKP		10 07 14.4			
HRV				MLR	MLR				
	comp=Z,24µm,20.0s,MS6.9								
ANDN	**Andirin**	**141.24**	**273**	*i* P	PKPdf	10 07 10.9	-11		
YURE	**YUREGIR**	**141.28**	**271**	*i* P	PKPdf	10 07 14.7	-7.7		
WES	**Weston**	**141.30**	**78**	*e*PKIKP	PKPdf	10 07 18.0	-4.2		
WES				MLR	MLR				
	comp=Z,15µm,20.0s,MS6.7								
CEYT	**Ceyhan**	**141.31**	**271**	*e*P	PKPdf	10 07 14.5	-8.0		
HNH	**Hanover**	**141.33**	**76**	*e*PKPpre		10 07 16.3			
TOA0	**Torodi Ar. Sit**	**141.36**	**208**	*e*PKPpre		10 07 13.6			
TORD	**Torodi Ar. Bea**	**141.36**	**208**	PKhKP		10 07 16.1			
	comp=Z,5.3nm,0.6s,baz=135,slow=2.3,SNR=17								
TORD				PKP	PKPdf	10 07 23.6	+0.4		
	comp=Z,35nm,0.9s,baz=192,slow=1.5,SNR=26								
KOZT	**Kozan**	**141.52**	**272**	*e*P	PKPdf	10 07 15.5	-7.3		
FFD	**Franklin Falls**	**141.62**	**77**	*e*PKPpre		10 07 17.6			
CSS	**Prodhromos**	**141.69**	**267**	*e*PKPpre		10 07 16.7			
CSS				LR	LR				
	comp=Z,8µm,22.0s,MS6.5								
LFK	**Lefkose**	**141.75**	**268**	*e*P	PKPdf	10 07 15.9	-7.4		
LBNH	**Lisbon**	**141.81**	**75**	*e*PKHKP		10 07 18.8			
LBNH				MLR	MLR				
	comp=Z,21µm,20.0s,MS6.9								
PINB	**Pinarbasi**	**141.81**	**274**	*i* P	PKPdf	10 07 16.2	-7.1		
KARA	**Karaisali**	**141.91**	**271**	*e*P	PKPdf	10 07 13.9	-10		
LEF	**Lefka**	**142.08**	**267**	*e*P	PKPdf	10 07 15.9	-8.0		
SVSK	**Karacayir**	**142.09**	**276**	*e*P	PKPdf	10 07 15.5	-8.2		
SOC	**Sochi**	**142.17**	**283**	*de*P	Pdif	10 04 40.4	-4.5		
SOC				*e*SS	SS	10 28 57.6	-6.5		
SOC				pmax	pmax				
	comp=Z,1µm,0.7s								
SOC				MLR	MLR				
	comp=Z,15µm,18.0s,MS6.8								
IKL	**Isikli**	**142.22**	**269**	*e*P	PKPdf	10 07 15.2	-8.9		
BNN	**Bunyan**	**142.27**	**274**	*e*P	PKPdf	10 07 15.2	-8.9		
NIG	**Nigde**	**142.67**	**272**	*e*P	PKPdf	10 07 20.6	-4.2		
AVNT	**Avonos**	**142.88**	**273**	*i* P	PKPdf	10 07 19.6	-5.6		
KVT	**Kavak**	**143.31**	**277**	*e*P	PKPdf	10 07 21.8	-4.1		
HDMB	**Hadim**	**143.42**	**269**	*e*P	PKPdf	10 07 21.4	-4.8		
CDAG	**Cicekdag**	**143.65**	**274**	*i* P	PKPdf	10 07 19.6	-6.9		
CORM	**Corum**	**143.77**	**275**	*e*P	PKPdf	10 07 22.5	-4.2		
CTKT	**Corum**	**143.90**	**276**	*i* P	PKPdf	10 07 23.8	-3.2		
PKME	**Peaks-Kenny Pk**	**143.95**	**75**	*e*PKPdf	PKPdf	10 07 24.4	-2.4		
PKME				LR	LR				
	comp=Z,40µm,20.0s,MS7.2								
KONT	**Konya--Tatoy**	**144.06**	**270**	*e*P	PKPdf	10 07 24.0	-3.3		
DIKM	**Dikmen**	**144.11**	**278**	*e*P	PKPdf	10 07 23.6	-3.6		
BR131	**Keskin Array S**	**144.19**	**274**	*e*PKPpre		10 07 19.3			
BR131				LR	LR				
	comp=Z,5µm,19.0s,MS6.3								
ANN	**Anapa**	**144.19**	**284**	⇑*i*PKHKP		10 07 21.4			
LADK	**Ladik-KONYA**	**144.20**	**271**	*e*P	PKPdf	10 07 23.3	-4.2		
BOYT	**Boyabat**	**144.23**	**277**	*i* P	PKPdf	10 07 25.9	-1.5		
BYBT	**Boyabat**	**144.34**	**277**	*e*P	PKPdf	10 07 25.3	-2.3		
KDHN	**Kadinhani**	**144.54**	**271**	*i* P	PKPdf	10 07 23.6	-4.5		
ANTB	**Antalya**	**144.59**	**267**	*e*P	PKPdf	10 07 25.8	-2.4		
TOS	**Tosya**	**144.61**	**276**	*e*P	PKPdf	10 07 26.2	-1.9		
CANT	**Cankiri**	**144.66**	**275**	*e*P	PKPdf	10 07 26.8	-1.4		
ELDT	**Eldivan**	**144.72**	**275**	*i* P	PKPdf	10 07 26.8	-1.6		
ANTO	**Ankara**	**144.81**	**273**	*e*P	PKPdf	10 07 24.9	-3.7		
ANTO	**Ankara**	**144.81**	**273**	⇑P	PKPdf	10 07 26.8	-1.7		
	SNR=223								
ANTO	**Ankara**	**144.81**	**273**	⇑*i*P	PKPdf	10 07 27.5	-1.0		
ANTO	**Ankara**	**144.81**	**273**	P	PKPdf	10 07 26.9	-1.6		
ANTO				LR	LR				
	comp=Z,5µm,20.0s,MS6.3								
ILGA	**Ilgaz**	**144.82**	**276**	*i* P	PKPdf	10 07 24.9	-3.6		
LOD	**Lodumlu**	**144.84**	**273**	*e*P	PKPdf	10 07 26.9	-1.7		
AKAS	**Kas**	**144.89**	**266**	*i* P	PKPdf	10 07 21.8	-7.0		
BCK	**Bucak**	**144.95**	**268**	*e*P	PKPdf	10 07 25.9	-3.0		
ELL	**Elmali**	**144.99**	**267**	*e*P	PKPdf	10 07 28.0	-1.0		
BZK	**Bozkurt**	**145.08**	**277**	*e*P	PKPbc	10 07 27.5	-0.9		
ISP	**Isparta**	**145.22**	**269**	*e*P	PKPbc	10 07 25.8	-3.2		
ISP	**Isparta**	**145.22**	**269**	*e*P	PKPbc	10 07 25.2	-3.8		
ISP	**Isparta**	**145.22**	**269**	⇓*i*P	PKPbc	10 07 29.0	0.0		
ISP	**Isparta**	**145.22**	**269**

SPITS	**Spitsbergen Ar**	**148.55**	**348**	PKP	PKPdf	10 07 33.1	-0.6
SPITS				PKPbc	PKPbc	10 07 37.2	-0.2
SPB4	**Spitsbergen Ar**	**148.55**	**348**	*e*PKPdf	PKPdf	10 07 30.7	-3.1
SPB4				*e*PKPbc	PKPbc	10 07 34.6	-2.9
SPB4				*e*PKPab	PKPab	10 07 38.2	-2.8
PRK	**Paraskevi**	**148.76**	**267**	*e*P	PKPdf	10 07 34.0	-1.2
PRK	**Paraskevi**	**148.76**	**267**	*e*P	PKPdf	10 07 33.8	-1.4
TAM	**Tamanrasset**	**148.84**	**220**	*e*PKIKP	PKPdf	10 07 34.5	-1.3
TKR	**Tekirdag**	**148.84**	**271**	*e*P	PKPdf	10 07 34.0	-1.3
MFT	**Murefte**	**148.90**	**271**	*e*P	PKPdf	10 07 33.4	-2.0
SART	**Tekirdag**	**148.92**	**271**	*i* P	PKPdf	10 07 32.0	-3.4
RKY	**Sarkoy-Tekirda**	**148.92**	**271**	*e*P	PKPdf	10 07 34.9	-0.5
LVZ	**Lovozero**	**149.01**	**326**	PFAKE		10 07 40.0	+5.3
LVZ				LR	LR		
	comp=Z,8μm,20.0s,MS6.5						
EZN	**Ezine**	**149.03**	**268**	*e*P	PKPdf	10 07 33.8	-1.8
GADA	**Gvkgeada**	**149.50**	**269**	*e*P	PKPdf	10 07 33.2	-3.1
VLI	**Veliai**	**149.52**	**261**	*e*P	PKPdf	10 07 32.1	-4.4
ENEZ	**Enez**	**149.62**	**270**	*e*P	PKPdf	10 07 39.4	+2.9
PSN	**Preselentsi**	**149.67**	**276**	P	PKPdf	10 07 35.2	-1.3
ATH	**Athens Observa**	**149.73**	**263**	*e*P	PKPdf	10 07 35.5	-1.3
ALN	**Alexandroupoli**	**149.77**	**270**	*e*P	PKPdf	10 07 33.6	-3.2
EDRB	**Edirne**	**149.77**	**272**	*e*P	PKPdf	10 07 34.6	-2.1
DID	**Didima**	**149.78**	**262**	*e*P	PKPdf	10 07 34.1	-2.8
TIRR	**Tirgusor**	**149.85**	**278**	⇑*i*P	PKPdf	10 07 41.6	+4.8
TIRR	**Tirgusor**	**149.85**	**278**	*e*PKPbc	PKPbc	10 07 36.1	-5.5
TIRR				*e*PKPab	PKPab	10 07 41.7	-5.6
TLCR		**149.89**	**279**	⇓*i*P	PKPbc	10 07 42.1	+0.4
TLCR		**149.89**	**279**	P	PKPdf	10 07 36.7	-0.1
JMB	**Yambol**	**150.17**	**273**	*e*P	PKPdf	10 07 35.7	-1.6
JMB	**Yambol**	**150.17**	**273**	P	PKPdf	10 07 35.8	-1.5
RDO	**Rodhopi**	**150.22**	**270**	*e*P	PKPdf	10 07 35.5	-1.9
LTK	**Loutraki**	**150.25**	**263**	*e*P	PKPdf	10 07 33.9	-3.7
VLX	**Vlachokerasia**	**150.26**	**261**	*e*P	PKPdf	10 07 36.5	-1.2
HARR	**Harsova**	**150.26**	**278**	PKHKP		10 07 38.8	
PYL	**PYLOS**	**150.39**	**260**	*e*P	PKPdf	10 07 35.6	-2.3
ITM	**Ithomi**	**150.44**	**260**	*e*P	PKPdf	10 07 35.9	-2.1
KIS	**Kishinev**	**150.58**	**283**α	*i* PKIKP	PKPdf	10 07 35.0	-2.8
KIS				*i*		10 07 50.0	
KIS				pmax	pmax		
	comp=Z,200nm,2.0s						
KIS				pmax	pmax		
	comp=Z,6μm,3.0s						
KIS	**Kishinev**	**150.58**	**283**	⇑*i*P	PKPbc	10 07 44.5	+1.3
KIS	**Kishinev**	**150.58**	**283**	⇑*i*PKP	PKPdf	10 07 35.0	-2.8
KIS				M		10 07 44.0	
	comp=Z,3μm,2.0s						
KIS	**Kishinev**	**150.58**	**283**	*i* PsP		10 07 50.0	
KIS				*i* SKP		10 11 12.0	
KIS	**Kishinev**	**150.58**	**283**	⇑P	PKPbc	10 07 44.5	+1.2
LKR	**Lokris**	**150.58**	**264**	*e*P	PKPdf	10 07 35.2	-2.9
LKR	**Lokris**	**150.58**	**264**	*e*P	PKPdf	10 07 35.5	-2.6
BJO	**Bjornoya**	**150.65**	**342**	*e*P	PKPdf	10 07 37.0	-0.1
BJO				AMb	AMB	10 07 45.6	
	comp=Z,3μm,2.8s						
BJO				AMS	AMS	11 14 02.7	
	comp=Z,8μm,24.0s,MS6.4						
BJO1	**Bjornoya**	**150.69**	**342**	*e*P	PKPdf	10 07 37.0	-0.2
BJO1				LR	LR		
	comp=Z,8μm,24.0s,MS6.4						
NEO	**Neokhori**	**150.79**	**265**	*e*P	PKPdf	10 07 36.5	-1.9
PAIG	**Paliouri**	**150.82**	**267**	*e*P	PKPdf	10 07 35.9	-2.6
OUR	**Ouranopolis**	**150.84**	**267**	*e*P	PKPdf	10 07 35.8	-2.6
XOR	**Xorichti**	**150.84**	**265**	*e*P	PKPdf	10 07 35.3	-3.2
SZH	**Strazhica**	**150.96**	**274**	P	PKPdf	10 07 37.2	-1.3
KEV	**Kevo**	**151.10**	**331**	*e*pkp	PKPdf	10 07 35.6	-2.3
	comp=Z,816nm,0.9s						
KEV	**Kevo**	**151.10**	**331**	*e*PKP	PKPdf	10 07 35.6	-2.3
KEV				*e*PKP	PKPdf	10 07 41.9	+4.0
JOF	**Joensuu**	**151.18**	**316**	*e*pkp	PKPdf	10 07 35.9	-2.3
	comp=Z,524nm,1.1s						
JOF	**Joensuu**	**151.18**	**316**	*e*PKIKP	PKPdf	10 07 37.7	-0.5
JOF				pmax	pmax		
	comp=Z,120nm,0.8s						
JOF	**Joensuu**	**151.18**	**316**	*e*PKP	PKPdf	10 07 35.0	-3.2
JOF				*e*PKP	PKPdf	10 07 37.7	-0.5
PLG	**Polygyros**	**151.21**	**267**	*e*P	PKPdf	10 07 36.0	-3.1
PLG	**Polygyros**	**151.21**	**267**	*e*P	PKPdf	10 07 36.9	-2.2
AGG	**Agios Georgios**	**151.22**	**264**	*e*P	PKPdf	10 07 36.7	-2.4
PLD	**Plovdiv**	**151.23**	**271**	*e*P	PKPdf	10 07 36.7	-2.3
RLS	**Riolos of Patr**	**151.25**	**261**	*e*P	PKPdf	10 07 38.5	-0.6
ODB	**Odobesti**	**151.26**	**280**	⇑*i*P	PKPdf	10 07 46.4	+7.5
ISR	**Istrita**	**151.34**	**278**	⇑*i*P	PKPbc	10 07 45.9	+0.8
ISR	**Istrita**	**151.34**	**278**	⇑P	PKPbc	10 07 45.9	+0.8
BUC1	**Bucharest**	**151.36**	**273**	⇓*i*P	PKPbc	10 07 44.7	-1.5
BUC1	**Bucharest**	**151.36**	**276**	P	PKPbc	10 07 44.6	-0.6
NVR	**Nevrokopi**	**151.42**	**269**	*e*P	PKPdf	10 07 37.3	-2.0
AKASG	**Malin Array Be**	**151.45**	**290**	PKP	PKPdf	10 07 36.1	-2.9
	comp=Z,40nm,1.1s,baz=76,slow=1.1,SNR=39						
AKASG				PKPbc	PKPbc	10 07 44.1	-1.0
	comp=Z,189nm,0.9s,baz=83,slow=2.5,SNR=93						
AKASG				PP	PP	10 11 24.4	-0.9
	comp=Z,0.4nm,0.4s,baz=107,slow=3.3,SNR=4.1						
AKASG	**Malin Array Be**	**151.45**	**290**	PKP	PKPdf	10 07 36.1	-2.9
AKASG				PKPbc	PKPbc	10 07 44.1	-1.0
AKASG				PP	PP	10 11 24.4	-1.0
AKBB	**Malin Array Si**	**151.45**	**290**	*e*PKIKP	PKPdf	10 07 36.1	-2.9
IAS	**Iasi**	**151.45**	**283**	⇓*i*P	PKPbc	10 07 44.5	-0.8
IAS	**Iasi**	**151.45**	**283**	⇓P	PKPbc	10 07 44.5	-0.8
KIEV	**Kiev**	**151.46**	**290**	*e*PKIKP	PKPdf	10 07 36.2	-2.8
KIEV				MLR	MLR		
	comp=Z,14μm,21.0s,MS6.7						
SOH	**Sokhos**	**151.50**	**268**	*e*P	PKPdf	10 07 36.2	-3.3
ZIMR		**151.50**	**275**	⇑*i*P	PKPbc	10 07 46.6	+1.1
ZIMR		**151.50**	**275**	P	PKPdf	10 07 38.8	-0.5
EVR	**Evrytania**	**151.50**	**263**	*e*P	PKPdf	10 07 38.1	-1.4
VRI	**Vrincioaia**	**151.51**	**280**	⇓*i*P	PKPbc	10 07 45.8	+0.3
VRI	**Vrincioaia**	**151.51**	**280**	P	PKPdf	10 07 38.3	-1.0
HORT	**Hortiatis**	**151.55**	**267**	*e*P	PKPdf	10 07 37.6	-1.9
PLOR	**Plostina**	**151.56**	**280**	PKIKP	PKPdf	10 07 37.5	-1.8
PLOR	**Plostina**	**151.56**	**280**	⇓*i*P	PKPbc	10 07 44.3	-1.3
MMB	**Musomiste**	**151.63**	**270**	P	PKPdf	10 07 37.7	-1.8
THE	**Thessaloniki**	**151.65**	**267**	*e*P	PKPdf	10 07 37.6	-2.0
ARCES	**ARCESS Array B**	**151.67**	**331**	PKP	PKPdf	10 07 37.2	-1.6
	comp=Z,28nm,1.0s,baz=36,slow=2.3,SNR=31						
ARCES				PKPbc	PKPbc	10 07 45.7	+0.6
	comp=Z,597nm,0.8s,baz=77,slow=1.9,SNR=210						
ARCES				PP	PP	10 11 24.1	-1.9
	comp=Z,32nm,1.1s,baz=73,slow=4.1,SNR=4.6						
ARCES	**ARCESS Array B**	**151.67**	**331**	PKP	PKPdf	10 07 37.2	-1.6
ARCES				PKPbc	PKPbc	10 07 45.7	+0.6
ARCES				PP	PP	10 11 24.1	-1.9
ARE0	**ARCESS Array S**	**151.67**	**331**	*e*PKPdf	PKPdf	10 07 37.0	-1.7
ARE0				*e*PKPbc	PKPbc	10 07 46.2	+1.1
LIT	**Litokhoron**	**151.69**	**266**	*e*P	PKPdf	10 07 36.0	-3.7
KFL	**Anninata**	**151.72**	**261**	*e*P	PKPdf	10 07 38.5	-1.4
THL	**Klokotos Trika**	**151.72**	**264**	*e*P	PKPdf	10 07 37.4	-2.4
THL	**Klokotos Trika**	**151.72**	**264**	*e*P	PKPdf	10 07 38.0	-1.8
PGB	**Panagyurishte**	**151.79**	**272**	P	PKPdf	10 07 35.8	-4.0
MLR	**Muntele Rosu**	**151.87**	**278**	PKP	PKPdf	10 07 37.8	-2.0
	comp=Z,16nm,0.9s,baz=347,slow=1.6,SNR=43						
MLR				PKPbc	PKPbc	10 07 45.5	-0.8
	comp=Z,110nm,0.8s,baz=144,slow=3.0,SNR=58						
MLR	**Muntele Rosu**	**151.87**	**278**	PKIKP	PKPdf	10 07 37.8	-2.0
MLR						10 07 45.5	
MLR				pmax	pmax		
	comp=Z,17nm,0.9s						
MLR	**Muntele Rosu**	**151.87**	**278**	⇓*i*P	PKPbc	10 07 46.2	-0.1
MLR	**Muntele Rosu**	**151.87**	**278**	P	PKPdf	10 07 38.5	-1.3
VLS	**Valsamata**	**151.88**	**261**	*e*P	PKPdf	10 07 38.4	-1.7
VLS	**Valsamata**	**151.88**	**261**	*e*P	PKPdf	10 07 38.7	-1.4
KNT	**Kendrikon**	**151.96**	**268**	*e*P	PKPdf	10 07 37.6	-2.6
LKD	**Levkas**	**152.14**	**262**	*e*P	PKPdf	10 07 36.5	-4.0
KKB	**Krupnik**	**152.19**	**270**	P	PKPdf	10 07 37.8	-2.6
GRG	**Griva**	**152.19**	**267**	*e*P	PKPdf	10 07 38.5	-2.0
VAY	**Valandovo**	**152.26**	**268**	*e*P	PKPdf	10 07 36.3	-4.3
VAY	**Valandovo**	**152.26**	**268**	⇑*i*PKP	PKPdf	10 07 37.3	-3.3
DAG	**Danmarks Havn**	**152.27**	**2***j*	*i*P	PKPdf	10 07 38.1	-1.4
	comp=Z,220nm,1.4s						
DAG							
	comp=Z,16μm,19.0s						
DAG	**Danmarks Havn**	**152.27**	**2**	*i* P	PKPdf	10 07 38.1	-1.4
DAG				LR	LR		
	comp=Z,16μm,19.0s,MS6.8						
KZN	**Kozani**	**152.27**	**266**	*e*P	PKPdf	10 07 39.0	-1.6
MEV	**Metsovon**	**152.35**	**264**	*e*P	PKPdf	10 07 40.1	-0.6
VOIR		**152.44**	**278**	⇑*i*P	PKPbc	10 07 47.3	-0.3
VOIR		**152.44**	**278**	P	PKPdf	10 07 39.7	-1.0
VTS	**Vitosha**	**152.44**	**271**	⇓*i*P	PKPbc	10 07 47.9	+0.2
VTS	**Vitosha**	**152.44**	**271**	P	PKPdf	10 07 39.2	-1.6
VTS	**Vitosha**	**152.44**	**271**	P	PKPdf	10 07 39.3	-1.5
JAN	**Janina**	**152.53**	**264**	*e*P	PKPdf	10 07 40.0	-1.0
STIP	**Stip**	**152.69**	**269**	*i* PKP	PKPdf	10 07 38.5	-2.7
FNA	**Florina**	**152.77**	**266**	*e*P	PKPdf	10 07 38.5	-2.8
IGT	**Igoumenitsa**	**152.80**	**263**	*e*P	PKPdf	10 07 39.9	-1.6
CRAR	**CRAIOVA**	**152.81**	**275**	PKIKP	PKPdf	10 07 41.0	-0.3
CRAR	**CRAIOVA**	**152.81**	**275**	⇓*i*P	PKPbc	10 07 48.8	+0.4
BIA	**Bitola**	**152.93**	**267**	*e*P	PKPdf	10 07 38.9	-2.7
BIA	**Bitola**	**152.93**	**267**	*i* PKP	PKPdf	10 07 38.9	-2.7
MNK	**Minsk**	**152.99**	**298**	⇓*i*PKIKP	PKPdf	10 07 37.0	-4.2
MNK				*e*		10 07 45.0	
MNK				*e*		10 11 30.0	
MNK				*e*PPP		10 14 58.0	
MNK				*e*SS	SS	10 31 00.0	-5.8
MNK				pmax	pmax		
	comp=E,1μm,2.0s						
MNK				pmax	pmax		
	comp=Z,990nm,1.8s						
MNK	**Minsk**	**152.99**	**298**	*e*PKP	PKPdf	10 07 37.0	-4.2
KBN	**Korca**	**153.08**	**265**	*e*P	PKPdf	10 07 41.6	-0.2
BURAR	**Bucovina Array**	**153.09**	**282**	⇓*i*P	PKPbc	10 07 50.4	+1.4
BURAR	**Bucovina Array**	**153.09**	**282**	P	PKPdf	10 07 41.1	-0.4
BUR08	**Bucovina Ar. S**	**153.11**	**282**	*e*PKPbc	PKPbc	10 07 41.2	-7.8
BUR08				*e*PKPab	PKPab	10 07 49.7	-11
MDB	**Medias**	**153.13**	**279**	⇑*i*P	PKPbc	10 07 50.8	+1.7
KRUS	**Krusevo**	**153.15**	**267**	*i* PKP	PKPdf	10 07 40.2	-1.7
SRN	**Sarande**	**153.20**	**263**	*e*P	PKPdf	10 07 39.8	-2.2
KEK	**Kerkira**	**153.25**	**263**	*e*P	PKPdf	10 07 40.0	-2.0
SKO	**Skopje**	**153.31**	**268**	⇑*i*PKP	PKPdf	10 07 40.4	-1.7
OHR	**Ohrid**	**153.31**	**266**	*e*P	PKPdf	10 07 40.0	-2.1
OHR	**Ohrid**	**153.31**	**266**	⇑*i*PKP	PKPdf	10 07 39.9	-2.2
KAF	**Kangasniemi**	**153.59**	**315**	*e*pkp	PKPdf	10 07 39.5	-2.3
	comp=Z,189nm,1.0s,baz=68,slow=2.1						
KAF	**Kangasniemi**	**153.59**	**315**	*e*PKIKP	PKPdf	10 07 41.6	-0.2
KAF				pmax	pmax		
	comp=Z,59nm,0.9s						
KAF	**Kangasniemi**	**153.59**	**315**	*e*PKP	PKPdf	10 07 39.5	-2.3
KAF				*e*PKP	PKPdf	10 07 41.6	-0.2
TRO	**Tromso**	**153.65**	**333**	⇑*i*P	PKPdf	10 07 37.8	-3.9
TRO				*e*PP	PP	10 11 29.2	-7.9
TRO				*e*SS	SS	10 31 10.3	-1.5
TRO				AMS	AMS	11 11 40.1	
	comp=Z,5μm,27.4s,MS6.2						
IDID	**Didziasalis**	**153.70**	**300**	*e*P	PKPdf	10 07 41.2	-0.9
VSU	**Vasula**	**153.76**	**307***c*	*i* PKIKP	PKPbc	10 07 49.3	-0.7
GZR	**Gura Zlata**	**153.90**	**276**	⇑*i*P	PKPdf	10 07 42.5	-0.3
GZR	**Gura Zlata**	**153.90**	**276**	P	PKPdf	10 07 41.7	-1.1
IIGN	**Ignalina**	**154.00**	**300**	*e*P	PKPdf	10 07 42.1	-0.5
IIGN				*e*PP	PP	10 11 38.6	-1.1
TIR	**Tirane**	**154.04**	**266**	*e*P	PKPdf	10 07 41.8	-1.3
TIR	**Tirane**	**154.04**	**266**	*e*P	PKPdf	10 07 40.8	-2.3
PUK	**Puka**	**154.36**	**267**	*e*P	PKPdf	10 07 42.3	-1.3
SUMG	**Summit**	**154.37**	**16**	*e*PKPdf	PKPdf	10 07 41.7	-1.0
BCI	**Bajram Curri**	**154.40**	**268**	*e*P	PKPdf	10 07 42.5	-1.1
DRGR		**154.44**	**279**	⇑*i*P	PKPdf	10 07 43.4	-0.1
DRGR		**154.44**	**279**	P	PKPdf	10 07 42.6	-0.9
LVV	**L'vov**	**154.47**	**287**	*i* PKIKP	PKPdf	10 07 41.2	-2.2
LVV				*e*		10 07 49.3	
LVV				*e*		10 08 02.7	
LVV				*i*		10 11 41.1	
PVY	**Plav**	**154.57**	**269**	⇓*i*PKP	PKPdf	10 07 42.4	-1.4
BZS	**Buzias**	**154.74**	**276**	⇓*i*P	PKPdf	10 07 42.8	-1.2
BZS	**Buzias**	**154.74**	**276**	P	PKPdf	10 07 43.0	-1.0
IVA	**Berane**	**154.74**	**269**	⇓*i*PKP	PKPdf	10 07 43.2	-0.9
ULC	**Ulcinj**	**154.75**	**267**	⇓*i*PKP	PKPdf	10 07 43.2	-0.9
SFJD	**Kangerlussuaq**	**154.82**	**32**	PKP	PKPdf	10 07 42.9	-0.5
	comp=Z,52nm,1.0s,baz=147,slow=1.9,SNR=13						
SFJD				PKPab	PKPab	10 08 08.3	+1.0
	comp=Z,158nm,0.9s,baz=250,slow=3.4,SNR=20						
SFJD				PP	PP	10 11 39.9	-3.8
	comp=Z,24nm,1.1s,baz=305,slow=9.6,SNR=3.6						
SFJD	**Kangerlussuaq**	**154.82**	**32**	*i* P	PKPdf	10 07 39.6	-3.8
SFJD				PKP	PKPdf	10 07 42.9	-0.5
SFJD				PKPab	PKPab	10 08 08.3	+0.9
SFJD				*i*		10 11 39.0	
SFJD				PP	PP	10 11 39.9	-3.8
TIP	**Timpagrande**	**154.92**	**259**	*e*PKPdf	PKPdf	10 07 41.7	-2.8
TIP				LR	LR		
	comp=Z,12μm,20.0s,MS6.7						
TTG	**Podgorica**	**154.96**	**268**	⇓*i*PKP	PKPdf	10 07 42.5	-1.9
BUM	**Brajici-Budva**	**155.13**	**267**	⇓*i*PKP	PKPdf	10 07 43.2	-1.4
DIVS	**Divibare**	**155.21**	**272**	*e*P	PKPdf	10 07 41.6	-3.1
KWP	**Kalwaria**	**155.26**	**286**	*e*PKPdf	PKPdf	10 07 43.6	-1.0
KWP				*e*PKiKP	PKiKP	10 07 53.9	+0.4
KWP				*e*PKPab	PKPab	10 08 10.6	+0.8
KWP				*e*PP	PP	10 11 44.8	-2.1
KWP	**Kalwaria**	**155.26**	**286**	*e*PKIKP	PKPdf	10 07 43.6	-0.9
KWP				*e*		10 07 53.9	
KWP				*e*		10 11 44.8	
KWP				MLR	MLR		
	comp=Z,16μm,21.0s,MS6.8						
KWP	**Kalwaria**	**155.26**	**286**	⇑*i*P	PKPdf	10 07 44.4	-0.1
KWP	**Kalwaria**	**155.26**	**286**	*e*PKPdf	PKPdf	10 07 43.6	-0.9
KWP				*e*PKPdf	PKPdf	10 07 53.9	+9.4
KWP				*e*PKPab	PKPab	10 08 10.6	+0.8
KWP				*e*PP	PP	10 11 44.8	-2.1
KWP				LR	LR		
	comp=Z,16μm,21.0s,MS6.8						
UZH	**Uzhgorod**	**155.27**	**283**	*i* PKIKP	PKPdf	10 07 42.0	-2.6
UZH				*e*		10 07 53.8	
UZH				*e*		10 11 48.0	
UZH				*i* SS	SS	10 31 32.0	+1.1
PLE	**Pljevlja**	**155.28**	**270**	⇓*i*PKP	PKPdf	10 07 44.0	-0.8
NKY	**Niksic**	**155.31**	**268**	⇓*i*PKP	PKPdf	10 07 44.1	-0.7
KOLS	**Kolonicke sedl**	**155.36**	**284**	*e*PKP	PKPdf	10 07 43.2	-1.5
KOLS				*e*		10 08 09.9	
KOLS				*e*PP	PP	10 11 46.7	-0.8
KOLS				*e*SS	SS	10 31 26.2	-5.7
HCY	**Herceg Novi**	**155.47**	**267**	⇓*i*PKP	PKPdf	10 07 43.7	-1.4
UPM	**Unac-Piva**	**155.54**	**269**	⇓*i*PKP	PKPdf	10 07 43.9	-1.2
BRY	**Bratogost**	**155.64**	**268**	⇓*i*PKP	PKPdf	10 07 43.0	-2.3
SUW	**Suwalki**	**155.66**	**296**	*e*PKPdf	PKPdf	10 07 42.7	-2.3
SUW				*e*pPKP	pPKPdf	10 07 54.3	+3.1
SUW				*e*PKPab	PKPab	10 08 11.7	+0.3
SUW				*e*PP	PP	10 11 48.5	-0.5
SUW				*e*SS	SS	10 31 28.6	-6.2
SUW	**Suwalki**	**155.66**	**296**	*e*PKIKP	PKPdf	10 07 42.7	-2.2
SUW				*e*		10 07 54.3	
SUW				*e*		10 11 48.5	
SUW				*e*SS	SS	10 31 28.6	-6.2
SUW	**Suwalki**	**155.66**	**296**	*e*PKPdf	PKPdf	10 07 42.7	-2.2
SUW				*e*pPKP	pPKPdf	10 07 54.3	+3.2
SUW				*e*PKPab	PKPab	10 08 11.7	+0.3
SUW				*e*PP	PP	10 11 48.5	-0.5
SUW				*e*SS	SS	10 31 28.6	-6.2
CRVS	**Cervenica-Dubn**	**155.87**	**284**	*e*PKP	PKPdf	10 07 43.3	-2.1
CRVS				*e*		10 08 03.9	
CRVS				*e*		10 08 13.4	
CRVS				*e*PP	PP	10 11 53.6	+3.3
CRVS				*e*SS	SS	10 31 31.6	-5.8
CUC	**Castrocucco**	**155.98**	**259**	*e*PKPdf	PKPdf	10 07 42.1	-3.8
LOF	**Lofoten**	**156.11**	**333**	*e*	PKPab	10 08 15.1	+2.2
STHS	**Stebnicka Huta**	**156.13**	**285**	*e*PKP	PKPdf	10 07 45.7	0.0
STHS				*e*		10 08 15.0	
STON	**Ston**	**156.18**	**267**	P	PKPdf	10 07 42.5	-3.5
PSZ	**Piszkesteto**	**156.61**	**280**	*e*PKP	PKPdf	10 07 44.7	-1.7
PSZ	**Piszkesteto**	**156.61**	**280**	⇓*i*P	PKPdf	10 07 44.8	-1.6
PSZ	**Piszkesteto**	**156.61**	**280**	*e*PKPdf	PKPdf	10 07 43.6	-2.8
PSZ				LR	LR		
	comp=Z,12μm,19.0s,MS6.7						
NIE	**Niedzica**	**156.72**	**284**	*e*PKPdf	PKPdf	10 07 46.1	-0.4
NIE				*e*PKPab	PKPab	10 08 15.5	-0.6
WAR	**Warsaw**	**156.78**	**292**	*e*PKPdf	PKPdf	10 07 45.5	-1.0
WAR				*e*pPKP	pPKPdf	10 07 57.3	+4.6
WAR				*e*PKPab	PKPab	10 08 17.4	+1.1
WAR				*e*SS	SS	10 31 50.1	+3.1
WAR	**Warsaw**	**156.78**	**292**	*e*PKIKP	PKPdf	10 07 45.5	-1.0
WAR				*e*		10 07 57.3	
WAR	**Warsaw**	**156.78**	**292**	*e*PKPdf	PKPdf	10 07 45.5	-1.0
WAR				*e*pPKP	pPKPdf	10 07 57.3	+4.7
WAR				*e*PKPab	PKPab	10 08 17.4	+1.2
WAR				*e*SS	SS	10 31 50.1	+3.1
PKSM	**Moragy**	**156.89**	**276**	⇓*i*P	PKPdf	10 07 45.7	-1.1
PKSM	**Moragy**	**156.89**	**276**	P	PKPdf	10 07 45.1	-1.7
MOR8	**Moi Rana**	**156.97**	**329**	*e*P	PKPdf	10 07 43.9	-2.4
MOR8				*e*		10 08 15.7	
BUD	**Budapest**	**157.05**	**279**	*e*PKP	PKPdf	10 07 45.0	-2.0
OJC	**Ojcow**	**157.22**	**286**	*e*PKPdf	PKPdf	10 07 45.5	-1.6
OJC				*e*PKPab	PKPab	10 08 18.0	-0.2
OJC				*e*PP	PP	10 11 58.0	+0.2
OJC				*e*SS	SS	10 31 50.5	-1.3
OJC				LR	LR		
	comp=Z,10μm,23.2s,MS6.6						
FLOS	**Flostrand**	**157.24**	**330**	*e*	PKPab	10 08 17.9	+0.1
STOK	**Stokkvaagen**	**157.35**	**330**	*e*	PKPab	10 08 18.4	+0.1
KEST	**Kesra**	**157.36**	**243**	PKP	PKPdf	10 07 47.3	-0.5
	comp=Z,5.5nm,1.0s,baz=183,slow=2.8,SNR=14						
KEST				PKPab	PKPab	10 08 19.6	+0.4
	comp=Z,41nm,1.0s,baz=158,slow=0.7,SNR=16						
VYHS	**Vyhne**	**157.45**	**281**	*e*PKP	PKPdf	10 07 43.9	-3.5
VYHS				*e*		10 08 18.6	
VYHS				*e*PP	PP	10 11 56.8	-2.3
VYHS				*e*SS	SS	10 31 48.4	-5.9
VYHS	**Vyhne**	**157.45**	**281**	*e*PKP	PKPdf	10 07 43.9	-3.5
VYHS				*e*		10 08 18.6	
VYHS				*e*PP	PP	10 11 56.8	-2.3
VYHS				*e*SS	SS	10 31 48.5	-5.8
KOLL	**Kolacno**	**157.75**	**281**	*e*PKP	PKPdf	10 07 47.6	-0.2
KOLL				*e*		10 08 21.0	
KOLL				*e*PP	PP	10 11 58.3	-2.4
KOLL	**Kolacno**	**157.75**	**281**	*e*PKP	PKPdf	10 07 47.6	-0.2
KOLL				*e*		10 08 21.1	
KOLL				*e*PP	PP	10 11 58.3	-2.4
JNW	**Jan Mayen West**	**157.81**	**354**	*i*	PKPab	10 08 23.5	+3.4
JMIC	**Jan Mayen**	**157.86**	**354**	PKP	PKPdf	10 07 46.2	-1.1
	comp=Z,41nm,0.8s,baz=175,slow=12,SNR=2.9						
JMIC				PKPab	PKPab	10 08 21.4	+1.1
	comp=Z,484nm,1.1s,baz=104,slow=3.0,SNR=20						
JMIC				PP	PP	10 11 59.2	-1.1
	comp=Z,19nm,0.5s,baz=92,slow=7.5,SNR=7.6						
JMIC	**Jan Mayen**	**157.86**	**354**	⇑*i*P	PKPdf	10 07 46.4	-0.9
JMIC				*e*PP	PP	10 12 00.5	+0.2
SISC	**Sisak**	**158.12**	**272**	P	PKPdf	10 07 46.3	-2.0
OKC	**Ostrava-Krasne**	**158.19**	**285**	*e*PKPDF	PKPdf	10 07 47.3	-1.0
OKC				*e*PP	PP	10 11 59.8	-3.3
OKC				*e*x	x	10 25 24.0	
OKC				*e*SS	SS	10 32 00.1	-2.1
OKC				AMS	AMS	11 28 20.

VSL	**Villasalto**	**159.78**	**251**	PFAKE			10 08 00.0	+9.5
VSL				LR	LR			
	comp=Z,16µm,21.0s,MS6.8							
DFRA	**Djebel Bou Aff**	**159.92**	**239**	P		PKPdf	10 07 50.6	-0.2
EFAM	**Famara**	**159.92**	**185**	PKP		PKPdf	10 07 50.7	-0.4
SET	**Setif**	**159.94**	**238**	P		PKPdf	10 07 50.0	-0.8
VOY	**Vojsko**	**159.94**	**272**	*e*PKPdf		PKPdf	10 07 48.1	-2.4
VOY				*e*PKPab		PKPab	10 08 28.3	-1.9
VOY				*e*			10 08 36.6	
VOY				*e*			10 09 06.0	
VOY				*e*			10 09 18.7	
HFS	**Hagfors**	**160.00**	**314**	PKP		PKPdf	10 07 47.1	-3.0
	comp=Z,4.7nm,0.9s,baz=273,slow=8.6,SNR=2.9							
HFS				PKPab		PKPab	10 08 27.9	-2.1
	comp=Z,126nm,0.9s,baz=83,slow=6.1,SNR=28							
MOA	**Molln**	**160.24**	**278**	*i* PKPdf		PKPdf	10 07 48.0	-2.7
	comp=Z,1µm,4.6s,SNR=28							
MOA				⇑*i*PKPab		PKPab	10 08 30.1	-1.3
MYKA	**Terra Mystica**	**160.30**	**274**	⇑*i*PKPdf		PKPdf	10 07 48.6	-2.3
	comp=Z,28µm,4.1s							
MYKA				⇑*i*PKPab		PKPab	10 08 30.8	-0.9
ATAF	**Djebel Tarf**	**160.31**	**235**	P		PKPdf	10 07 52.3	+1.0
PRU	**Pruhonice**	**160.51**	**284**	*e*PKIKP		PKPdf	10 07 48.9	-2.1
PRU				*e*			10 08 31.8	
PRU				*e*			10 12 12.0	
PRU				*e*			10 25 36.9	
PRU				*e*SS	SS		10 32 25.2	-1.6
PRU				MLR	MLR			
	comp=Z,16µm,20.8s							
PRU	**Pruhonice**	**160.51**	**284**	*e*PKPDF		PKPdf	10 07 48.9	-2.1
PRU				*e*PKPAB		PKPab	10 08 31.8	-0.7
PRU				*e*PP		PP	10 12 12.0	-3.7
PRU				*ex*	x		10 17 55.9	
PRU				*ex*	x		10 25 36.9	
PRU				*e*SS	SS		10 32 25.2	-1.6
PRU				AMS	AMS		11 27 50.0	
	comp=Z,16µm,20.8s							
PVCC	**Panska Ves**	**160.57**	**285**	*e*PKPDF		PKPdf	10 07 49.4	-1.6
PVCC				*e*PKPAB		PKPab	10 08 33.4	+0.6
PVCC				*e*PP		PP	10 12 13.3	-2.8
PVCC				*e*SS	SS		10 32 16.8	-11
PVCC				AMS	AMS		11 26 20.0	
	comp=Z,17µm,20.7s							
KBA	**Koelnbreinsper**	**160.63**	**275**	⇓*i*PKPdf		PKPdf	10 07 48.5	-2.7
	comp=Z,909nm,3.6s,SNR=19							
KBA				⇑*i*PKPab		PKPab	10 08 31.6	-1.5
KBA	**Koelnbreinsper**	**160.63**	**275**	P		PKPdf	10 07 49.5	-1.7
AKET	**Djebel Ketaf**	**160.65**	**235**	P		PKPdf	10 07 52.1	+0.5
AKF	**Akfadou**	**160.72**	**237**	P		PKPdf	10 07 51.9	+0.2
NB2	**NORSAR Subarra**	**160.77**	**318**	PKP		PKPab	10 08 32.4	-0.9
	comp=Z,572nm,1.2s,baz=65,slow=4.4							
NB2	**NORSAR Subarra**	**160.77**	**318**	PKP		PKPab	10 08 32.4	-0.9
	baz=65,slow=4.4							
NOA	**NORSAR Array B**	**160.77**	**318**	PKP		PKPdf	10 07 49.1	-1.8
	comp=Z,14nm,1.0s,baz=64,slow=1.0,SNR=11							
NOA				PKPab		PKPab	10 08 31.7	-1.6
	comp=Z,96nm,0.9s,baz=62,slow=4.6,SNR=71							
NOA				PP		PP	10 12 21.6	+5.0
	comp=Z,13nm,1.2s,baz=47,slow=5.7,SNR=4.0							
GEC2	**GERESS Array S**	**160.84**	**280**	*e*PKP2		PKPab	10 08 32.8	-1.2
GEC2				*e*			10 12 13.2	
GEC2	**GERESS Array S**	**160.84**	**280**	*e*PKPdf		PKPdf	10 07 48.5	-2.9
GEC2				*e*PKPab		PKPab	10 08 32.8	-1.2
GEC2				*e*PP		PP	10 12 13.2	-4.3
GERES	**GERESS Array B**	**160.84**	**280**	PKP		PKPdf	10 07 49.7	-1.7
	comp=Z,18nm,1.1s,baz=124,slow=1.9,SNR=45							
GERES				PKPab		PKPab	10 08 33.0	-1.0
	comp=Z,68nm,0.9s,baz=114,slow=3.3,SNR=34							
GERES				PP		PP	10 12 15.6	-1.9
	comp=Z,9.6nm,1.1s,baz=125,slow=6.7,SNR=4.9							
ADJB	**Djebel Djouab**	**160.97**	**234**	P		PKPdf	10 07 52.5	+0.5
KHC	**Kasperske Hory**	**160.97**	**281**	*e*PKIKP		PKPdf	10 07 49.3	-2.2
KHC				*e*			10 08 33.7	
KHC				*e*			10 12 15.4	
KHC				*e*SS	SS		10 32 30.4	-1.3
KHC				MLR	MLR			
	comp=Z,19µm,24.6s							
KHC	**Kasperske Hory**	**160.97**	**281**	*e*PKPDF		PKPdf	10 07 49.3	-2.2
KHC				*e*PKPAB		PKPab	10 08 33.7	-0.9
KHC				*ex*	x		10 08 48.0	
KHC				*ex*	x		10 12 10.0	
KHC				*e*PP	PP		10 12 15.4	-2.9
KHC				*e*SS	SS		10 32 30.4	-1.3
KHC				AMS	AMS		11 21 10.0	
	comp=Z,19µm,24.6s							
NAO01	**NORSAR Array S**	**161.00**	**318**	PKPdf		PKPdf	10 07 47.0	-4.2
NAO01				LR	LR			
	comp=Z,13µm,20.0s							
BRG	**Berggiesshubel**	**161.01**	**286**	*e*PKPdf		PKPdf	10 07 49.0	-2.5
BRG				*e*PKPab		PKPab	10 08 33.8	-0.9
BRG	**Berggiesshubel**	**161.01**	**286**	*i* PKP		PKPdf	10 07 49.1	-2.4
	comp=Z,842nm,2.8s							
BRG				*i*			10 08 34.4	
	comp=Z,436nm,1.6s							
BRG				*i*			10 08 38.0	
BRG				*i*			10 08 49.5	
	comp=Z,116nm,1.6s							
BRG				PP		PP	10 12 17.6	-0.8
	comp=Z,324nm,2.4s							
BRG				SS		SS	10 32 34.0	+2.0
BRG								
	comp=N,18µm,23.3s							
BRG								
	comp=E,13µm,22.3s							
BRG								
	comp=Z,18µm,23.2s							
BRG	**Berggiesshubel**	**161.01**	**286**	*i* PKP		PKPdf	10 07 49.1	-2.4
BRG				*i*			10 08 34.4	
BRG				*i*			10 08 38.0	
BRG				*i*			10 08 49.5	
BRG				PP		PP	10 12 17.6	-0.8
BRG				SS		SS	10 32 34.0	+2.0
BRG				LR	LR			
	comp=Z,10µm,23.2s							
ABTA	**Abfaltersbach**	**161.07**	**273**	⇑*i*PKPdf		PKPdf	10 07 49.2	-2.5
	comp=Z,833nm,3.4s,SNR=21							
ABTA				⇑*i*PKPab		PKPab	10 08 34.1	-1.0
OSPF	**L'Ospedale**	**161.12**	**256**	PKP		PKPdf	10 07 50.6	-1.3
RUE	**Ruedersdorf**	**161.22**	**291**	*e*PKPdf		PKPdf	10 07 49.2	-2.5
RUE				*e*PKPab		PKPab	10 08 34.7	-0.9
RUE				*e*PP		PP	10 12 16.6	-2.9
RUE	**Ruedersdorf**	**161.22**	**291**	*e*PKPdf		PKPdf	10 07 46.1	-5.5
EMHD	**Djebel Mahouad**	**161.26**	**233**	P		PKPdf	10 07 52.7	+0.4
FBE	**Freiberg**	**161.38**	**286**	*e*PKPdf		PKPdf	10 07 49.5	-2.4
FBE				*e*PKPab		PKPab	10 08 35.2	-1.1
WET	**Wettzell**	**161.43**	**281**	*e*PKP2		PKPab	10 08 35.5	-1.1
WET				*e*			10 12 18.7	
WET	**Wettzell**	**161.43**	**281**	*e*PKPdf		PKPdf	10 07 49.4	-2.6
WET				*e*PKPab		PKPab	10 08 35.5	-1.1
WET				*e*PP		PP	10 12 18.7	-2.0
RGN	**Rugen**	**161.44**	**298**	*e*PP		PP	10 12 20.8	+0.3
CORF	**Corte**	**161.47**	**258**	PKP		PKPdf	10 07 50.5	-1.8
ETRT	**Tiaret**	**161.47**	**228**	P		PKPdf	10 07 53.0	+0.5
MOL	**Molde**	**161.48**	**325**	⇑*i*P		PKPdf	10 07 48.2	-3.4
MOL				*e*PP		PP	10 12 17.6	-2.7
MOL				*e*SS		SS	10 32 35.0	-0.7
VLC	**Villacollemand**	**161.53**	**264**	PFAKE			10 08 00.0	+7.7
VLC				LR	LR			
	comp=Z,18µm,22.0s							
CLL	**Collm**	**161.64**	**288**	*e*PKPdf		PKPdf	10 07 49.3	-2.9
CLL				*e*PKPab		PKPab	10 08 36.3	-1.1
CLL	**Collm**	**161.64**	**288**	⇑*i*PKPdf		PKPdf	10 07 49.9	-2.3
	comp=Z,753nm,2.7s							
CLL				*e*PKPlp			10 07 51.0	
	comp=Z,4µm,15.6s							
CLL				*e*PKPdiff			10 08 03.0	
CLL				*i* PKPab		PKPab	10 08 36.6	-0.8
	comp=Z,350nm,1.7s							
CLL				*e*PP		PP	10 12 16.0	-5.8
	comp=Z,392nm,2.8s							
CLL				*e*PPlp			10 12 17.0	
	comp=E,1µm,14.6s							
CLL				*e*PPlp			10 12 17.0	
	comp=Z,3µm,18.9s							
CLL				*e*SKSP			10 22 45.0	
CLL				*e*PPS			10 25 46.0	
CLL				LmV			10 28 00.0	
	comp=Z,15µm,21.9s							
CLL				*e*SS		SS	10 32 33.0	-5.6
CLL				*e*SKSSKSac			10 33 12.0	
CLL				*e*(SSS)			10 38 30.0	
PGF	**Pioggiola**	**161.69**	**258**	⇑*i*PKIKP		PKPdf	10 07 51.0	-1.5
	comp=Z,507nm,1.9s							
WTTA	**Wattenberg**	**161.80**	**274**	⇑*i*PKPdf		PKPdf	10 07 50.4	-2.1
	comp=Z,2µm,2.8s,SNR=14							
WTTA				⇑*i*PKPab		PKPab	10 08 37.0	-1.3
WTTA	**Wattenberg**	**161.80**	**274**	P		PKPdf	10 07 51.3	-1.2
COP	**Copenhagen**	**161.80**	**302**	*i* P		PKPdf	10 07 48.5	-3.7
COP				*i*			10 08 38.4	
COP				*i*			10 12 22.2	
OJGS	**Djebel Guires**	**161.83**	**227**	P		PKPdf	10 07 55.0	+2.1
WATA	**Walderalm**	**161.86**	**275**	⇑*i*PKPdf		PKPdf	10 07 50.1	-2.4
	comp=Z,413nm,2.4s,SNR=14							
WATA				⇓*i*PKPab		PKPab	10 08 36.7	-1.8
NKC	**Novy Kostel**	**161.88**	**284**	*e*PKIKP		PKPdf	10 07 50.5	-1.9
NKC				*e*			10 08 37.8	
NKC				*e*			10 12 18.9	
NKC				*e*SS		SS	10 32 35.6	-5.5
NKC	**Novy Kostel**	**161.88**	**284**	*e*PKPDF		PKPdf	10 07 50.5	-1.9
NKC				*e*PKPAB		PKPab	10 08 37.8	-0.7
NKC				*e*PP		PP	10 12 18.9	-4.2
NKC				*ex*	x		10 17 55.7	
NKC				*e*SS		SS	10 32 35.6	-5.5
NKC				AMS		AMS	11 25 10.0	
	comp=Z,14µm,22.6s							
NKC	**Novy Kostel**	**161.88**	**284**	*e*PKP		PKPdf	10 07 50.5	-1.9
NKC				*e*			10 08 37.8	
NKC				*e*PP		PP	10 12 18.9	-4.2
NKC				*e*			10 12 55.7	
NKC				*e*SS		SS	10 32 35.6	-5.5
TANN	**Tannenbergstha**	**161.89**	**285**	*e*PKPdf		PKPdf	10 07 50.1	-2.3
TANN				*e*PKPab		PKPab	10 08 37.5	-1.1
TANN				*e*PP		PP	10 12 19.1	-4.1
WERN	**Wernitzgruen**	**161.93**	**284**	*e*PKPdf		PKPdf	10 07 50.2	-2.3
WERN				*e*PKPab		PKPab	10 08 37.9	-0.8
ROTZ	**Rotzenmuhle**	**161.97**	**282**	*e*PKPdf		PKPdf	10 07 50.0	-2.5
ROTZ				*e*PKPab		PKPab	10 08 37.9	-1.0
ROTZ				*e*PP		PP	10 12 21.6	-2.0
GUNZ	**Gunzen**	**161.97**	**284**	*e*PKPdf		PKPdf	10 07 50.1	-2.4
GUNZ				*e*PKPab		PKPab	10 08 38.3	-0.6
WERD	**Werda**	**162.00**	**285**	*e*PKPdf		PKPdf	10 07 49.8	-2.7
WERD				*e*PKPab		PKPab	10 08 38.5	-0.5
EANR	**'Ain N'Sour**	**162.01**	**229**	P		PKPdf	10 07 54.0	+0.9
ECHA	**Ech Chlef**	**162.04**	**230**	P		PKPdf	10 07 53.7	+0.6
MANZ	**Manzenberg**	**162.06**	**283**	*e*PKPdf		PKPdf	10 07 50.1	-2.5
MANZ				*e*PKPab		PKPab	10 08 38.6	-0.7
MANZ				*e*PP		PP	10 12 22.1	-2.0
EBNR	**Beni Rached**	**162.06**	**231**	P		PKPdf	10 07 53.4	+0.3
OJBR	**Djebel Berber**	**162.09**	**227**	P		PKPdf	10 07 54.0	+0.8
KONO	**Kongsberg**	**162.10**	**315**	⇑*i*P		PKPdf	10 07 49.4	-2.9
KONO				*e*PP		PP	10 12 21.0	-2.7
KONO				AMS		AMS	11 18 38.4	
	comp=Z,7µm,22.1s							
KONO	**Kongsberg**	**162.10**	**315**	*d i*PKP2		PKPab	10 08 38.9	-0.2
MOTA	**Moosalm**	**162.17**	**274**	⇑*i*PKPdf		PKPdf	10 07 50.3	-2.5
	comp=Z,446nm,2.5s,SNR=21							
MOTA				⇑*i*PKPab		PKPab	10 08 38.5	-1.4
FUR	**Furstenfeldbru**	**162.26**	**277**	*e*PKP2		PKPab	10 08 39.2	-1.1
FUR				*e*			10 12 21.6	
FUR	**Furstenfeldbru**	**162.26**	**277**	*e*PKPdf		PKPdf	10 07 50.1	-2.8
FUR				*e*PKPab		PKPab	10 08 39.2	-1.1
FUR				*e*PP		PP	10 12 21.6	-3.6
OKGL	**Djebel Kef Gue**	**162.31**	**228**	P		PKPdf	10 07 54.0	+0.6
FETA	**Feichten**	**162.32**	**273**	⇑*i*PKPdf		PKPdf	10 07 50.9	-2.1
	comp=Z,2µm,3.8s,SNR=25							
FETA				⇑*i*PKPab		PKPab	10 08 39.7	-0.8
RETA	**Reutte**	**162.43**	**275**	⇑*i*PKPdf		PKPdf	10 07 50.6	-2.5
	comp=Z,2µm,5.3s,SNR=23							
RETA				⇑*i*PKPab		PKPab	10 08 40.0	-1.0
MOX	**Moxa**	**162.46**	**285**	*e*PKP		PKPdf	10 07 51.1	-1.9
	comp=Z,376nm,2.4s							
MOX				*e*			10 08 40.9	
MOX				*e*			10 12 16.9	
MOX								
	comp=Z,10µm,21.0s							
MOX	**Moxa**	**162.46**	**285**	*e*PKPdf		PKPdf	10 07 50.3	-2.7
MOX				*e*PKPab		PKPab	10 08 40.1	-0.9
MOX				*e*PP		PP	10 12 23.3	-2.8
FUORN	**Ofenpass-Fuorn**	**162.51**	**271**	⇑*i*PKPdf		PKPdf	10 07 50.8	-2.4
	comp=Z,362nm,2.3s							
GRA1	**Grafenberg Arr**	**162.59**	**282**	*e*PKPdf		PKPdf	10 07 50.5	-2.7
GRA1				*e*PKPab		PKPab	10 08 41.1	-0.5
GRA1				*e*PP		PP	10 12 24.2	-2.7
GRA1				LR		LR		
	comp=Z,17µm,21.7s							
GRF	**Grafenberg Arr**	**162.59**	**282**	*e*PKP2		PKPab	10 08 41.1	-0.5
GRF				*e*			10 12 24.2	
GRF	**Grafenberg Arr**	**162.59**	**282**	*e*PKPdf		PKPdf	10 07 50.5	-2.7
GRF				*e*PKPab		PKPab	10 08 41.1	-0.5
GRF				*e*PP		PP	10 12 24.2	-2.7
GRF				*e*L			11 26 40.6	
	comp=Z,17µm,21.7s							
GRFO	**Grafenberg**	**162.59**	**282**	PKIKP		PKPdf	10 07 51.7	-1.5
BERNI	**Berninapass**	**162.60**	**271**	⇑*i*PKPdf		PKPdf	10 07 51.2	-2.1
	comp=Z,302nm,2.1s							
DAVOX	**Davos/Dischmat**	**162.81**	**272**	PKP		PKPdf	10 07 52.0	-1.4
	comp=Z,32nm,1.3s,baz=92,slow=0.8,SNR=32							
DAVOX				PKPab		PKPab	10 08 40.9	-1.8
	comp=Z,31nm,0.9s,baz=171,slow=5.3,SNR=10							
DAVOX				PP		PP	10 12 24.6	-3.5
	comp=Z,7.6nm,1.0s,baz=106,slow=4.5,SNR=6.7							
DAVOX	**Davos/Dischmat**	**162.81**	**272**	⇑*i*PKPdf		PKPdf	10 07 51.3	-2.2
	comp=Z,409nm,2.8s							
HYA	**Hoyanger**	**162.82**	**323**	*e*P		PKPdf	10 07 52.5	-0.6
HYA				AMb		AMB	10 07 54.7	
	comp=Z,90nm,2.1s							
HYA				*e*			10 08 42.5	
DAVOS	**Davos**	**162.88**	**272**	PKIKP		PKPdf	10 07 52.0	-1.6
DAVOS							10 08 40.9	
DAVOS							10 12 24.6	
DAVA	**Damuels**	**162.96**	**273**	⇑*i*PKPdf		PKPdf	10 07 51.4	-2.2
	comp=Z,2µm,4.2s,SNR=24							
DAVA				⇑*i*PKPab		PKPab	10 08 42.4	-0.9
DAVA	**Damuels**	**162.96**	**273**	P		PKPdf	10 07 52.4	-1.2
VDL	**Val di Lei**	**163.00**	**270**	⇑*i*PKPdf		PKPdf	10 07 51.4	-2.3
	comp=Z,316nm,2.3s							
TUE	**Stuetta**	**163.07**	**270**	*e*PKPdf		PKPdf	10 07 50.8	-3.0
MUGIO	**Muggio**	**163.09**	**268**	⇑*i*PKPdf		PKPdf	10 07 51.5	-2.3
	comp=Z,494nm,2.8s							
LIENZ	**Kamor/St.Gall**	**163.21**	**273**	⇑*i*PKPdf		PKPdf	10 07 51.4	-2.5
	comp=Z,451nm,2.4s							
PLONS	**Plons/SG**	**163.22**	**272**	⇑*i*PKPdf		PKPdf	10 07 51.5	-2.4
	comp=Z,457nm,2.2s							
BSEG	**Bad Segeberg**	**163.25**	**296**	*e*PKP2		PKPab	10 08 44.0	-0.4
BSEG	**Bad Segeberg**	**163.25**	**296**	*e*PKPdf		PKPdf	10 07 51.2	-2.5
BSEG				*e*PKPab		PKPab	10 08 44.0	-0.4
SAOF	**Saorge**	**163.30**	**261**	PKP		PKPdf	10 07 51.7	-2.4
CLZ	**Clausthal**	**163.31**	**289**	*e*PKP2		PKPab	10 08 43.7	-1.0
CLZ	**Clausthal**	**163.31**	**289**	*e*PKPdf		PKPdf	10 07 51.5	-2.3
CLZ				*e*PKPab		PKPab	10 08 43.7	-1.0
REVF	**Revere**	**163.31**	**260**	PKP		PKPdf	10 07 52.5	-1.6
ODD1	**Odda**	**163.31**	**318**	*e*P		PKPdf	10 07 50.8	-2.7
ODD1				*e*			10 08 44.1	
SBF	**Sospel**	**163.32**	**260**	⇑*i*PKIKP		PKPdf	10 07 52.3	-1.8
	comp=Z,959nm,1.8s							
AUTN	**L'Aution**	**163.38**	**261**	PKP		PKPdf	10 07 52.8	-1.3
LUCF	**Luceram**	**163.39**	**260**	PKP		PKPdf	10 07 53.0	-1.1
LLS	**Linth-Limmern**	**163.40**	**271**	⇑*i*PKPdf		PKPdf	10 07 51.6	-2.5
	comp=Z,386nm,2.8s							
MUD	**Monsted U'grnd**	**163.42**	**305**	*i* PKIKP		PKPdf	10 07 49.5	-4.2
MUD				*i*			10 08 45.4	
MUD				*i*			10 12 37.2	
MUD	**Monsted U'grnd**	**163.42**	**305**	*i* P		PKPdf	10 07 49.5	-4.2
MUD				*i*			10 08 45.4	
MUD				*e*			10 12 31.0	
MUD				*i*			10 12 37.2	
NRDL	**Niedersach Rie**	**163.47**	**291**	*e*PKPdf		PKPdf	10 07 51.5	-2.4
NRDL				*e*PKPab		PKPab	10 08 44.7	-0.7
RTC	**Rabat Centre**	**163.51**	**206**	PFAKE			10 08 00.0	+5.4
RTC				LR	LR			
	comp=Z,29µm,21.0s							
TOUF	**Mont Tournerai**	**163.51**	**260**	PKP		PKPdf	10 07 53.2	-1.1
FUSIO	**Fusio**	**163.51**	**270**	⇑*i*PKPdf		PKPdf	10 07 51.7	-2.5
	comp=Z,431nm,2.1s							
MVIF	**Mont Vial**	**163.52**	**260**	PKP		PKPdf	10 07 52.8	-1.5
WEIN	**Weingarten**	**163.60**	**274**	⇑*i*PKPdf		PKPdf	10 07 51.6	-2.6
	comp=Z,286nm,2.8s							
BER	**Bergen**	**163.61**	**321**	*e*P		PKPdf	10 07 49.0	-4.8
BER				⇑*i*P			10 07 51.1	
BER				AMb		AMB	10 07 52.7	
	comp=Z,150nm,1.7s							
BER				*e*			10 08 42.9	
BER				AMS		AMS	11 15 37.8	
	comp=Z,4µm,23.3s							
BER	**Bergen**	**163.61**	**321**	⇑*i*P		PKPdf	10 07 51.1	-2.7
BER				*e*			10 08 42.9	
BER				LR	LR			
	comp=Z,4µm,23.3s							
CALN	**Calern**	**163.62**	**259**	PKP		PKPdf	10 07 52.7	-1.7
WILA	**Wila**	**163.63**	**273**	⇑*i*PKPdf		PKPdf	10 07 51.6	-2.6
	comp=Z,329nm,2.4s							
BLS5	**Blasjo**	**163.63**	**317**	*e*P		PKPdf	10 07 53.2	-0.7
BLS5				*e*			10 08 46.4	
LMR	**La Mourre**	**163.67**	**257**	⇑*i*PKIKP		PKPdf	10 07 52.9	-1.5
	comp=Z,696nm,1.9s							
MUO	**Muotathal**	**163.68**	**271**	⇑*i*PKPdf		PKPdf	10 07 51.8	-2.5
	comp=Z,396nm,2.1s							
FRF	**La Foret Royal**	**163.69**	**258**	⇑*i*PKIKP		PKPdf	10 07 52.9	-1.5
	comp=Z,771nm,1.7s							
EGD	**Espegrend**	**163.72**	**321**	*e*		PKPab	10 08 43.9	-2.3
STEIN	**Stein am Rhein**	**163.72**	**274**	⇑*i*PKPdf		PKPdf	10 07 51.7	-2.6
	comp=Z,347nm,2.9s							
STU	**Stuttgart**	**163.74**	**278**	*e*PKPdf		PKPdf	10 07 51.5	-2.8
STU				*e*PKPab		PKPab	10 08 45.5	-1.2
STU				*e*PP		PP	10 12 28.0	-5.0
STU	**Stuttgart**	**163.74**	**278**	*e*PKPdf		PKPdf	10 07 51.5	-2.8
ZUR	**Degenried**	**163.83**	**273**	⇑*i*PKPdf		PKPdf	10 07 51.9	-2.5
	comp=Z,356nm,2.5s							
MMK	**Mattmark**	**163.84**	**268**	⇑*i*PKPdf		PKPdf	10 07 52.2	-2.3
	comp=Z,564nm,2.2s							
SPAK	**Spaichingen-Ko**	**163.87**	**275**	PKP		PKPdf	10 07 51.4	-3.0
ETOS	**Mallorca**	**163.89**	**241**	PKP		PKPdf	10 07 54.7	0.0
FLACH	**Flaach**	**163.89**	**273**	⇑*i*PKPdf		PKPdf	10 07 52.0	-2.5
	comp=Z,293nm,3.0s							
EALB	**Alboran**	**163.90**	**219**	PKP		PKPdf	10 07 50.7	-4.2
HASLI	**Hasliberg/Brie**	**163.94**	**270**	⇑*i*PKPdf		PKPdf	10 07 52.3	-2.3
	comp=Z,312nm,2.4s							
SLE	**Schleitheim**	**163.99**	**274**	⇑*i*PKPdf		PKPdf	10 07 52.2	-2.4
	comp=Z,215nm,2.6s							
OG22	**Abries**	**164.05**	**263**	PKP		PKPdf	10 07 52.5	-2.2
BORG	**Borgarnes**	**164.08**	**9**	PKP		PKPdf	10 07 52.4	-1.7
	comp=Z,16nm,0.9s,baz=274,slow=8.0,SNR=3.5							
BORG				PKPab		PKPab	10 08 48.7	+1.1
	comp=Z,251nm,1.1s,baz=353,slow=1.9,SNR=20							
BORG				PP		PP	10 12 34.5	+0.8
	comp=Z,151nm,1.4s,baz=341,slow=3.5,SNR=8.1							
BORG	**Borgarnes**	**164.08**	**9**	PKP		PKPdf	10 07 52.4	-1.7
BORG				PKPab		PKPab	10 08 48.7	+1.1
BORG				PP		PP	10 12 34.5	+0.8
BORG				LR	LR			
	comp=Z,16µm,19.0s							
TAVF	**Tavernes**	**164.10**	**258**	PKP		PKPdf	10 07 53.6	-1.2
MBDF	**Montbardon**	**164.12**	**262**	⇑*i*PKIKP		PKPdf	10 07 53.3	-1.5
	comp=Z,838nm,1.8s							
TOD	**Tromm**	**164.13**	**281**	PKIKP		PKPdf	10 07 52.1	-2.5
LKBD	**Leukerbad**	**164.17**	**269**	⇑*i*PKPdf		PKPdf	10 07 52.6	-2.2
	comp=Z,270nm,3.0s							
SULZ	**Cheisacher**	**164.18**	**273**	⇑*i*PKPdf		PKPdf	10 07 52.3	-2.4
	comp=Z,269nm,2.9s							
BERF	**Bertagne**	**164.19**	**256**	PKP		PKPdf	10 07 53.8	-1.1
EIBI	**Ibiza**	**164.21**	**236**	PKP		PKPdf	10 07 54.1	-1.0
DIX	**Grande Dixence**	**164.21**	**267**	⇑*i*PKPdf		PKPdf	10 07 52.8	-2.0
	comp=Z,372nm,2.3s							
BFO	**Black Forest**	**164.22**	**276**	*e*PKP2		PKPab	10 08 47.2	-1.7
BFO				*e*			10 12 30.5	
BFO	**Black Forest**	**164.22**	**276**	*e*PKPdf		PKPdf	10 07 51.8	-3.0
BFO				*e*PKPab		PKPab	10 08 47.2	-1.7
BFO				*e*PP		PP	10 12 30.5	-5.0
BFO	**Black Forest**	**164.22**	**276**	*e*PKPdf		PKPdf	10 07 51.8	-3.0
BFO				*e*PKPab		PKPab	10 08 47.

comp=Z,643nm,1.8s
SFS San Fernando 165.58 212 PFAKE 10 08 10.0 +14
SFS LR LR
comp=Z,35µm,20.0s
THEF They Montfort 165.73 274 PKP PKPdf 10 07 52.9 -3.2
FILF Fillols 165.76 249 PKP PKPdf 10 07 55.0 -1.3
SSB Saint Sauveur 165.79 262 PKP PKPdf 10 07 54.6 -1.6
SSB Saint Sauveur 165.79 262 *e*PKPdf PKPdf 10 07 54.0 -2.2
SSB *e*PKPab PKPab 10 08 53.1 -2.7
ELUQ Luque 165.80 219 PKIKP PKPdf 10 07 54.1 -2.4
ESPR Espera 165.81 214 PKP PKPdf 10 07 56.5 0.0
WLF Walferdange 165.85 280 PKPdf PKPdf 10 07 55.0 -1.0
WLF APKPab 10 08 55.7
WLF Walferdange 165.85 280 *e*PKPdf PKPdf 10 07 53.9 -2.2
WLF *e*PKPab PKPab 10 08 54.7 -1.3
WLF *e*PP PP 10 12 36.4 -7.6
WLF Walferdange 165.85 280 *e*PKPdf PKPdf 10 07 55.1 -1.0
WLF LR LR
comp=Z,18µm,20.0s
ECHE Chera 165.85 233 PKIKP PKPdf 10 07 54.7 -1.8
EVIA Vianos 165.89 227 PKIKP PKPdf 10 07 54.9 -1.6
EPOB Poblet 165.92 243 PKP PKPdf 10 07 55.8 -0.6
LRDF Laroque-de-Fa 165.98 250 PKP PKPdf 10 07 54.4 -2.0
VALF Valcebollere 166.00 248 PKP PKPdf 10 07 55.0 -1.5
EMIR Miracle 166.01 245 PKP PKPdf 10 07 55.1 -1.4
MEM Membach 166.02 284 PKPdf PKPdf 10 07 54.0 -2.2
MEM APKPab 10 08 56.1
HGN Heimansgroeve 166.07 285 *e*PKIKP PKPdf 10 07 52.5 -3.8
comp=Z,104nm,2.3s
HGN Heimansgroeve 166.07 285 *e*PKPab PKPab 10 08 56.5 -0.4
comp=Z,132nm,2.3s
HGN Heimansgroeve 166.07 285 *e*SS SS 10 33 19.3 -4.9
EBAN Banos Encina 166.10 222 PKIKP PKPdf 10 07 55.2 -1.5
ERTA Horta de San J 166.10 240 PKP PKPdf 10 07 55.4 -1.2
CARF Carcanieres 166.12 249 PKP PKPdf 10 07 54.2 -2.4
EMOS Mosqueruela 166.14 236 PKP PKPdf 10 07 57.3 +0.7
BEBN Eben Emael 166.23 285 PKPdf PKPdf 10 07 54.1 -2.3
BEBN APKPab 10 08 57.6
LRW Lerwick 166.25 328 *e*P PKPdf 10 07 53.0 -3.1
LRW AMb AMB 10 07 57.3
comp=Z,217nm,1.9s
LRW *e* 10 08 55.0
LRW AMS AMS 10 17 25.1
comp=Z,3µm,18.9s
WAL1 Walls 166.31 329 *e*P PKPdf 10 07 53.5 -2.6
WAL1 *e* 10 08 57.1
MTLF Montolieu 166.39 251⇑*i*PKIKP PKPdf 10 07 54.8 -1.9
comp=Z,377nm,1.9s
MEZF Maizieres J'vi 166.40 275⇑*i*PKIKP PKPdf 10 07 54.7 -1.9
comp=Z,580nm,1.9s
EADA Adamuz 166.44 220 PKP PKPdf 10 07 54.4 -2.6
PDA Ponta Delgada 166.45 144 *e*PKP PKPdf 10 07 59.0 +2.0
PDA Ponta Delgada 166.45 144 *e*LR LR 11 07 52.0
BCLA Clavier 166.46 283 PKP PKPdf 10 07 54.4 -2.2
BCLA APKPab 10 08 58.0
CMLA Cha da Macela 166.52 144 *e*PKP PKPdf 10 07 56.3 -0.7
CMLA Cha da Macela 166.52 144 *e*PP PP 10 12 42.4 -4.3
CMLA *e*P 10 14 56.0
CMLA Cha da Macela 166.52 144 *e*SS SS 10 32 34.1 -53
CMLA Cha da Macela 166.52 144 *e*LQ 10 57 25.8
CMLA *e*LR LR 11 06 21.9
CMLA Cha da Macela 166.52 144 PFAKE 10 08 10.0 +13
CMLA LR LR
comp=Z,16µm,20.0s
LBL Lubilhac 166.61 260 PKP PKPdf 10 07 55.6 -1.3
PLDF La Plantade 166.65 263 PKP PKPdf 10 07 55.2 -1.7
SMF Signal de Mont 166.73 266⇑*i*PKIKP PKPdf 10 07 54.9 -2.0
comp=Z,378nm,1.9s
GIVF Givet 166.75 282⇑*i*PKIKP PKPdf 10 07 54.6 -2.2
comp=Z,372nm,1.9s
PBDV Barranco-do-Ve 166.85 208 *i* PKPdf PKPdf 10 07 57.2 -0.1
PBDV Barranco-do-Ve 166.85 208 *e*PKPab PKPab 10 09 06.2 +5.6
PBDV Barranco-do-Ve 166.85 208 *e*PP PP 10 12 45.5 -2.8
PBDV *e*SKS SKKSac 10 19 28.6 -6.2
PBDV Barranco-do-Ve 166.85 208 *e*LQ 11 07 25.0
PBDV Barranco-do-Ve 166.85 208 *e*LR LR 11 17 39.8
comp=Z,22µm,24.6s
MLS Moulis 166.87 248 PKP PKPdf 10 07 55.4 -1.7
DOU Dourbes 166.89 282 PKP PKPdf 10 07 54.6 -2.3
DOU APKPab 10 08 59.0
LOR Lormes 166.90 269⇑*i*PKIKP PKPdf 10 07 55.1 -1.9
comp=Z,371nm,1.9s
LOR *e*MLR MLR
comp=Z,21µm,22.8s
LOR Lormes 166.90 269⇑*i*PKPdf PKPdf 10 07 55.1 -1.9
LOR LR LR
comp=Z,21µm,22.8s
EMIN Mina Concepcio 166.91 213 PKP PKPdf 10 07 57.6 +0.2
PVAQ Vaqueiros 166.93 209 *i* PKPdf PKPdf 10 07 56.9 -0.5
PVAQ Vaqueiros 166.93 209 *e*PKPab PKPab 10 08 59.3 -1.6
PVAQ Vaqueiros 166.93 209 *e*PP PP 10 12 40.9 -7.8
PVAQ *e*SKS SKKSac 10 19 26.2 -9.0
PVAQ Vaqueiros 166.93 209 *e*LQ 11 08 12.9
PVAQ *e*LR LR 11 17 53.7
comp=Z,20µm,17.8s
PYM Petit Puy Mans 166.97 262 PKP PKPdf 10 07 55.6 -1.5
EGRO El Granado 166.97 210 PKP PKPdf 10 07 56.7 -0.7
AGO Saint Agoulin 167.00 263 PKP PKPdf 10 07 55.6 -1.5
PFVI Vila Bisbo 167.01 205 *i* PKPdf PKPdf 10 07 57.2 -0.2
PFVI Vila Bisbo 167.01 205 *e*PKPab PKPab 10 08 54.9 -6.4
PFVI Vila Bisbo 167.01 205 *e*PP PP 10 12 47.6 -1.5
PFVI *e*SKS SKKSac 10 19 34.4 -1.1
PFVI Vila Bisbo 167.01 205 *e*LQ 11 07 59.2
PFVI *e*LR LR 11 15 25.0
comp=Z,23µm,25.3s
MELF Melles 167.03 247 PKP PKPdf 10 07 56.2 -1.1
ESAC San Caprasio 167.05 241 PKP PKPdf 10 07 55.3 -2.0
UCC Uccle 167.07 285 APKPab PKPab 10 09 00.9 -0.4
SSF Saint Saulge 167.07 268⇑*i*PKIKP PKPdf 10 07 55.1 -2.0
comp=Z,459nm,1.9s
AVF Avril sur Loir 167.10 267⇑*i*PKIKP PKPdf 10 07 55.0 -2.2
comp=Z,270nm,1.9s
SNF Seneffe 167.11 283 PKPdf PKPdf 10 07 55.6 -1.4
SNF APKPab 10 09 00.7
MORF Marmelete 167.12 206 *i* PKPdf PKPdf 10 07 57.2 -0.3
MORF Marmelete 167.12 206 *e*PP PP 10 12 52.2 +2.5
MORF *e*SKS SKKSac 10 19 41.0 +4.9
MORF Marmelete 167.12 206 *e*LQ 11 10 32.5
MORF *e*LR LR 11 16 52.1
comp=Z,22µm,23.9s
BAIF Baives 167.14 281⇑*i*PKIKP PKPdf 10 07 54.9 -2.2
comp=Z,111nm,1.4s
RESF Ens 167.25 246 PKP PKPdf 10 07 56.4 -1.0
CAF Calviac 167.25 257 *e*PKIKP PKPdf 10 07 55.9 -1.4
EBIE Bielsa 167.29 245 PKP PKPdf 10 07 54.9 -2.6
ETOR Torete 167.31 234 PKIKP PKPdf 10 07 56.0 -1.5
BGF Bois d'Agland 167.35 265⇑*i*PKIKP PKPdf 10 07 55.7 -1.7
comp=Z,935nm,1.9s
PTEO Sao Teotonio 167.36 206 *e*PKPdf PKPdf 10 07 58.3 +0.6
EPF Esparros 167.37 247⇑*i*PKIKP PKPdf 10 07 56.2 -1.3
comp=Z,714nm,1.9s
PBAR Barrancos 167.40 212 *e*PKPdf PKPdf 10 07 57.1 -0.6
PBAR Barrancos 167.40 212 *e*PKPab PKPab 10 08 58.8 -4.2
PBAR Barrancos 167.40 212 *e*PP PP 10 12 46.5 -4.7
PBAR *e*SKS SKKSac 10 19 37.3 -0.2
PBAR Barrancos 167.40 212 *e*LQ 11 07 34.7
PBAR *e*LR LR 11 14 51.9
comp=Z,17µm,22.2s
ESLA Sonseca Array 167.40 225 *e*PKPdf PKPdf 10 07 55.1 -2.6
ESLA LR LR
comp=Z,108µm,21.0s
ESDC Sonseca Array 167.40 225 PKP PKPdf 10 07 56.3 -1.4
comp=Z,22nm,1.3s,baz=28,slow=0.8,SNR=30
ESDC Sonseca Array 167.40 225 PKP PKPdf 10 07 57.6 0.0
PAB San Pablo 167.48 224 *e*PKIKP PKPdf 10 07 56.4 -1.3
PAB MLR MLR
comp=Z,16µm,19.0s
VIEF Viey 167.48 246 PKP PKPdf 10 07 56.4 -1.2
PBEJ Beja 167.55 209 *e*PKPdf PKPdf 10 07 57.4 -0.4
PBEJ Beja 167.55 209 *e*PKPab PKPab 10 09 10.4 +6.8
PBEJ Beja 167.55 209 *e*PP PP 10 12 47.9 -4.0
TCF Toulx Ste Croi 167.68 263⇑*i*PKIKP PKPdf 10 07 55.9 -1.7
comp=Z,470nm,1.9s
HYF Humbligny 167.70 268 *e*PKIKP PKPdf 10 07 55.8 -1.8
RJF Les Rejaudoux 167.76 258⇑*i*PKIKP PKPdf 10 07 56.2 -1.5
comp=Z,492nm,1.9s
RJF *e*MLR MLR
comp=Z,26µm,21.5s
RJF Les Rejaudoux 167.76 258⇑*i*PKPdf PKPdf 10 07 56.2 -1.5
RJF LR LR
comp=Z,26µm,21.5s
ETSF Etsaut 167.83 245⇑*i*PKIKP PKPdf 10 07 56.8 -1.0
comp=Z,325nm,1.9s
REYF Montagne du Re 167.83 246 PKP PKPdf 10 07 56.8 -1.0
EBAD Badajoz 167.91 214 PKP PKPdf 10 07 56.4 -1.7
ATE Arette 168.03 245 PKP PKPdf 10 07 56.2 -1.8
EVO Evora 168.05 210⇑*i*PKIKP PKPdf 10 07 57.1 -1.0
comp=Z,540nm,1.7s
EVO *e*MLR MLR
comp=Z,45µm,23.0s
EVO Evora 168.05 210 *i* PKPdf PKPdf 10 07 57.5 -0.6
EVO Evora 168.05 210 *e*PKPab PKPab 10 09 05.0 -0.9
EVO Evora 168.05 210 *e*PP PP 10 12 51.7 -2.8
LFF La Frestale 168.10 255⇑*i*PKIKP PKPdf 10 07 56.5 -1.4
comp=Z,797nm,1.9s
LARF Larrau 168.17 244 PKP PKPdf 10 07 57.0 -1.1
PESTR Estremoz 168.21 212 *i* PKPdf PKPdf 10 07 57.1 -1.1
PESTR Estremoz 168.21 212 *e*PKPab PKPab 10 09 05.8 -0.8
PESTR Estremoz 168.21 212 *e*PP PP 10 12 51.6 -3.8
PESTR *e*SKS SKKSac 10 19 40.3 -1.2
PESTR Estremoz 168.21 212 *e*LQ 11 08 28.3
PESTR Estremoz 168.21 212 *e*LR LR 11 18 30.4
comp=Z,15µm,21.8s
ORDF Ordiarp 168.24 245 PKP PKPdf 10 07 56.2 -1.9
GUD Guadarrama 168.25 228 PKIKP PKPdf 10 07 57.6 -0.6
SJPF Ste Jean 168.35 244⇑*i*PKIKP PKPdf 10 07 57.1 -1.1
comp=Z,402nm,1.6s
MLA1 Latheron 168.36 326⇑*e*P PKPdf 10 07 55.0 -2.7
MLA1 *e* 10 09 06.3
OSSF Osses 168.46 245 PKP PKPdf 10 07 56.2 -2.0
MENF Mencas 168.47 284 PKP PKPdf 10 07 55.6 -2.4
ELIZ Elizondo 168.56 244 PKIKP PKPdf 10 07 57.1 -1.2
LIS Lisbon 168.57 206 *e*P PKPdf 10 07 56.7 -1.8
LIS *e*SS SS 10 33 42.7 -5.2
LIS *e*SS SS 10 33 42.8 -5.1
LIS AMS AMS 11 29 53.9
comp=Z,28µm,13.2s
LIS Lisbon 168.57 206 A 11 29 53.9
comp=Z,28µm,13.2s
EALK Alkurruntz 168.58 244 PKP PKPdf 10 07 56.2 -2.2
PMRV Marv??o 168.64 214 *i* PKPdf PKPdf 10 07 57.5 -1.0
PMRV Marv??o 168.64 214 *e*PKPab PKPab 10 08 55.0 -13
PMRV Marv??o 168.64 214 *e*PP PP 10 12 55.2 -2.4
PMRV *e*SKS SKKSac 10 19 38.9 -4.7
PMRV Marv??o 168.64 214 *e*LQ 11 06 33.5
PMRV Marv??o 168.64 214 *e*LR LR 11 17 01.5
comp=Z,22µm,19.7s
ECRI Cripan 168.78 239 PKIKP PKPdf 10 07 58.5 0.0
MCD Coleburn Disti 168.83 324⇑*e*P PKPdf 10 07 55.0 -3.0
MCD *e* 10 09 07.8
PMAFR Mafra 168.84 206 *e*PKPdf PKPdf 10 07 58.0 -0.6
PMAFR Mafra 168.84 206 *e*PP PP 10 13 00.5 +2.1
PMAFR *e*SKS SKKSac 10 19 34.1 -10
PMAFR Mafra 168.84 206 *e*LQ 11 09 43.0
PMAFR *e*LR LR 11 15 35.3
comp=Z,16µm,19.4s
MME1 Meikle Cairn 168.90 322⇑*e*P PKPdf 10 07 54.8 -3.3
MME1 *e* 10 09 08.5
MVH1 Achvaich 168.93 327⇑*e*P PKPdf 10 07 54.7 -3.4
MVH1 *e* 10 09 08.5
RSC Scourie 168.95 330⇑*e*P PKPdf 10 07 54.9 -3.2
RSC *e* 10 09 07.9
PCBR Castelo Branco 169.03 215 *e*PKPdf PKPdf 10 07 57.0 -1.7
PCBR Castelo Branco 169.03 215 *e*PP PP 10 13 05.5 +5.9
REB Eisgbhrachaidh 169.16 330⇑*e*P PKPdf 10 07 55.1 -3.1
REB *e* 10 09 08.6
PTOM Tomar 169.17 211 *e*PKPdf PKPdf 10 07 57.9 -0.9
PTOM Tomar 169.17 211 *e*PKPab PKPab 10 09 08.8 -2.0
PTOM Tomar 169.17 211 *e*PP PP 10 13 02.7 +2.5
RTO Tolsta 169.25 333⇑*e*P PKPdf 10 07 54.7 -3.5
RTO *e* 10 09 09.6
MFF Saint Martin d 169.32 262⇑*i*PKIKP PKPdf 10 07 56.7 -2.0
comp=Z,500nm,1.9s
MDO Dochfour 169.35 325⇑*e*P PKPdf 10 07 55.1 -3.2
MDO *e* 10 09 09.9
MTE Manteigas 169.54 216 *i* PKPdf PKPdf 10 07 57.4 -1.6
MTE Manteigas 169.54 216 *e*PP PP 10 13 01.5 -0.7
MTE Manteigas 169.54 216 *e*LQ 11 17 00.5
MTE Manteigas 169.54 216 *e*PKPdf PKPdf 10 07 58.0 -1.1
MTE LR LR
comp=Z,23µm,20.0s
RRR Rubha Reidh 169.54 330⇑*e*P PKPdf 10 07 55.1 -3.3
RRR *e* 10 09 10.6
ESY Stoneypath 169.62 316⇑*e*P PKPdf 10 07 55.6 -2.9
ESY *e* 10 09 11.9
KAC Achnashellach 169.65 328⇑*e*P PKPdf 10 07 53.9 -4.6
KAC *e* 10 09 11.7
XSO Sourhope Farm 169.69 313⇑*e*P PKPdf 10 07 55.2 -3.4
XSO *e* 10 09 10.7
ELAN Lanestosa 169.70 239 PKP PKPdf 10 07 58.7 -0.3
RRH Rhenigidale 169.77 332⇑*e*P PKPdf 10 07 54.7 -3.9
RRH *e* 10 09 10.9
LDF La Druitiere 169.80 273⇑*i*PKIKP PKPdf 10 07 56.6 -2.3
comp=Z,231nm,1.6s
EBH Black Hill 169.82 319⇑*e*P PKPdf 10 07 55.7 -2.9
EBH *e* 10 09 12.6
EDI Edinburgh 169.88 317 *e*P PKPdf 10 07 52.5 -6.1
EDI AMb AMB 10 08 01.2
comp=Z,148nm,2.3s
EDI *e* 10 09 13.3
EDI AMS AMS 10 13 46.7
comp=Z,4µm,17.0s
KPL Plockton 169.90 328⇑*e*P PKPdf 10 07 54.7 -4.0
KPL AMb AMB 10 07 59.9
comp=Z,243nm,2.1s
KPL *e* 10 09 13.4
KPL AMS AMS 10 13 46.2
comp=Z,2µm,19.8s
EBL Broad Law 169.90 316⇑*e*P PKPdf 10 07 56.3 -2.4
EBL *e* 10 09 13.5
KSB Sheil Bridge 169.91 327 *e*P PKPdf 10 07 55.5 -3.2
KSB *e* 10 09 12.0
PVIS Viseu 169.95 216 *e*PKPdf PKPdf 10 07 59.4 +0.1
PVIS Viseu 169.95 216 *e*PKPab PKPab 10 09 10.8 -3.4
PVIS Viseu 169.95 216 *e*PP PP 10 13 10.9 +6.7
MVO Moncorvo 169.98 220 *i* PKPdf PKPdf 10 07 58.0 -1.3
MVO Moncorvo 169.98 220 *e*PKPab PKPab 10 09 00.9 -13
MVO Moncorvo 169.98 220 *e*PP PP 10 13 02.4 -2.0
MVO *e*SKS SKKSac 10 19 18.7 -31
MVO Moncorvo 169.98 220 *e*LR LR 11 09 50.1
XAL Allendale 169.99 310⇑*e*P PKPdf 10 07 55.4 -3.4
XAL *e* 10 09 13.8
EAU Auchinoon 170.04 317 *e*P PKPdf 10 07 54.8 -4.0
EAU *e* 10 09 14.1
FLN La Foliniere 170.06 273⇑*i*PKIKP PKPdf 10 07 56.8 -2.2
comp=Z,329nm,1.5s
FLN *e*MLR MLR
comp=Z,24µm,21.0s
FLN La Foliniere 170.06 273⇑*i*PKPdf PKPdf 10 07 56.8 -2.2
FLN LR LR
comp=Z,24µm,21.0s
KSK Scoval 170.15 331 *e*P PKPdf 10 07 54.3 -4.5
KSK *e* 10 09 14.1
EKA Eskdalemuir Ar 170.21 314 PKP PKPdf 10 07 56.5 -2.4
comp=Z,8.0nm,1.2s,baz=336,slow=1.6,SNR=4.0
EKA PKPab PKPab 10 09 13.7 -1.3
comp=Z,62nm,1.1s,baz=63,slow=3.8,SNR=26
EKA PP PP 10 13 07.7 +2.0
comp=Z,2.8nm,1.0s,baz=353,slow=5.9,SNR=4.3
EAB Aberfoyle 170.21 320⇑*e*P PKPdf 10 07 55.9 -3.0
EAB *e* 10 09 14.7
ESK Eskdalemuir 170.24 314 *e*P PKPdf 10 07 54.4 -4.5
ESK AMb AMB 10 08 00.4
comp=Z,104nm,2.0s
ESK *e* 10 09 12.5
ESK Eskdalemuir 170.24 314 *e*PKP2 PKPab 10 09 13.3 -1.9
ESK MLR MLR
comp=Z,22µm,21.0s
GRR Gorron 170.25 271⇑*i*PKIKP PKPdf 10 07 57.0 -2.2
comp=Z,318nm,1.7s
ECK Cauldkaine Hil 170.28 313⇑*e*P PKPdf 10 07 56.3 -2.6
ECK *e* 10 09 13.2
KAR1 Arisaig 170.28 327⇑*e*P PKPdf 10 07 56.0 -2.9
KAR1 *e* 10 09 14.9
KBI1 Birley Grange 170.28 300 *e*P PKPdf 10 07 56.3 -2.7
KBI1 *e* 10 09 14.4
PVRL Vila Real 170.36 218 *e*PKPdf PKPdf 10 07 58.2 -1.3
LHO Holmfirth 170.37 302 *e*P PKPdf 10 07 53.1 -5.9
LHO *e* 10 09 15.5
PBRG Braganca 170.38 223 *e*PKPdf PKPdf 10 07 58.1 -1.4
PBRG Braganca 170.38 223 *e*PP PP 10 13 06.7 +0.2
ECAL Calabor 170.48 224 PKP PKPdf 10 07 58.3 -1.2
PGBU Glenifferbraes 170.52 319 *e*P PKPdf 10 07 53.9 -5.2
PGBU AMb AMB 10 07 59.4
comp=Z,140nm,1.8s
PGBU *e* 10 09 16.1
PGBU AMS AMS 10 13 49.6
comp=Z,5µm,17.1s
KWE Weaver Farm 170.54 299⇑*e*P PKPdf 10 07 56.9 -2.2
KWE *e* 10 09 16.0
WOL Wolverton 170.55 289⇑*e*P PKPdf 10 07 56.2 -3.0
WOL AMb AMB 10 08 01.9
comp=Z,309nm,1.6s
WOL *e* 10 09 15.5
WOL AMS AMS 10 18 08.2
comp=Z,2µm,21.5s
STNC Stoke 170.72 300 P PKPdf 10 07 55.5 -3.8
STNC AMb AMB 10 08 04.1
comp=Z,236nm,1.9s
STNC Stoke 170.72 300 AMS AMS 10 18 09.2
comp=Z,3µm,18.7s
STNC Stoke 170.72 300 *e*P PKPdf 10 07 55.5 -3.8
STNC AMb AMB 10 08 04.1
comp=Z,236nm,1.9s
STNC AMS AMS 10 18 09.2
comp=Z,3µm,18.7s
EARI Arriondas 170.73 235 PKP PKPdf 10 07 59.5 -0.1
PCAB Cabril 170.85 218 *i* PKPdf PKPdf 10 07 59.5 -0.2
PCAB Cabril 170.85 218 *e*PP PP 10 13 05.3 -3.5
SWN1 Swindon 170.88 290 *e*P PKPdf 10 07 53.6 -5.7
SWN1 AMb AMB 10 08 01.3
comp=Z,414nm,1.7s
SWN1 AMS AMS 10 17 57.9
comp=Z,3µm,19.6s
ELOB Lobios 171.00 219 PKP PKPdf 10 07 59.6 -0.1
ERUA La Rua 171.02 224 PKIKP PKPdf 10 07 59.1 -0.7
GAL1 Galloway 171.21 315⇑*e*P PKPdf 10 07 53.9 -5.6
GAL1 AMb AMB 10 08 00.9
comp=Z,124nm,2.0s
GAL1 *e* 10 09 19.2
GAL1 AMS AMS 10 13 53.1
comp=Z,5µm,17.3s
SGMF Saint Gilles 171.34 269⇑*i*PKIKP PKPdf 10 07 57.2 -2.5
comp=Z,353nm,1.8s
GIM North Isle of 171.41 311 *e*P PKPdf 10 07 54.3 -5.2
GIM *e* 10 09 17.4
MCH1 Michaelchurch 171.51 294⇑*e*P PKPdf 10 07 55.6 -4.1
MCH1 AMb AMB 10 08 01.3
comp=Z,225nm,2.0s
MCH1 AMS AMS 10 17 59.7
comp=Z,3µm,18.8s
WIM Isle of Man 171.59 310 *e*P PKPdf 10 07 57.6 -2.1
WPM1 Penmaenmawr 171.61 304 *e*P PKPdf 10 07 56.6 -3.1
WPM1 *e* 10 09 20.7
QUIF Quistinic 171.67 266⇑*i*PKIKP PKPdf 10 07 57.8 -2.1
comp=Z,818nm,1.9s
WME Myndd Eilian 171.76 305 *e*P PKPdf 10 07 56.7 -3.1
WME *e* 10 09 21.8
YLL Llanberis 171.80 303 *e*P PKPdf 10 07 57.0 -2.8
YLL *e* 10 09 21.9
ROSF Rostrenen 171.82 269⇑*i*PKIKP PKPdf 10 07 57.7 -2.3
comp=Z,108nm,1.4s
WLF1 Llynfaes 171.86 305 *e*P PKPdf 10 07 56.1 -3.7
WLF1 *e* 10 09 22.6
YRC Rhoscolyn 171.97 305 *e*P PKPdf 10 07 57.0 -2.8
YRC *e* 10 09 22.9
STS Santiago 172.04 220 PKIKP PKPdf 10 08 00.6 +0.3
EMAZ Mazaricos 172.27 219 PKP PKPdf 10 08 00.1 -0.3
HTL Hartland 172.63 289 *e*P PKPdf 10 07 56.5 -3.8
HTL AMb AMB 10 08 03.2
comp=Z,243nm,1.8s
HTL *e* 10 09 24.4
HTL AMS AMS 10 18 02.5
comp=Z,3µm,17.1s
DLF Lyons Farm 172.98 309⇑*i*P PKPdf 10 07 57.7 -2.6
CMA1 Manaccan 173.15 282 *e*P PKPdf 10 07 59.0 -1.5
CCA1 Carnmenellis 173.21 283 *e*P PKPdf 10 07 58.0 -2.5
DCN Croghan 173.32 312⇑*i*P PKPdf 10 07 57.7 -2.7

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*ISCJB **30** 10:05:55.2±1.2,39.38N±004×14157E±0.10,h113km±8km, Error ellipse: s-maj=12.4km s-min=6.0km az=10.3*
*JMA **30** 10:05:56.0±0.1,39.38N×14157E,h111km±1km,M3.6*
JMA Felt I J1.
ISC 30 10:05:55.6±1.2,**3938N**±004×**14158E**±010,**h113**km±7km,
n13,σ0**59**/26,**Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JOM	**Ohasama**	**0.24**	**293**	P	P	**Pn**	**10 06 11.5**	**+0.1**
JOM				S	S	**Pn**	**10 06 23.2**	**-0.1**
MIYJ	**Miyakonagasawa**	**0.27**	**43**	P	P	**Pn**	**10 06 11.9**	**+0.4**
MIYJ				S	S	**Sn**	**10 06 23.5**	**0.0**
OFUJ	**Ofunato**	**0.30**	**167**	P	P	**Pn**	**10 06 12.1**	**+0.4**
OFUJ				eS	S	**Sn**	**10 06 23.8**	**+0.1**
JMK	**Ichinoseki**	**0.51**	**214**	P	P	**Pn**	**10 06 12.8**	**0.0**
JMK				S	S	**Sn**	**10 06 25.4**	**-0.2**
JIO	**Ouri**	**0.94**	**191**	P	P	**Pn**	**10 06 16.3**	**-0.1**
JIO				S	S	**Sn**	**10 06 31.4**	**-0.6**
JANG	**Nango**	**1.00**	**357**	P	P	**Pn**	**10 06 16.6**	**-0.3**
JANG				S	S	**Sn**	**10 06 32.1**	**-1.0**
JYK	**Kaneyama**	**1.05**	**245**	P	P	**Pn**	**10 06 18.0**	**+0.5**
JYK				S	S	**Sn**	**10 06 34.6**	**+0.5**
JAH	**Hinai**	**1.09**	**318**	P	P	**Pn**	**10 06 18.3**	**+0.4**
JAH				S	S	**Sn**	**10 06 35.1**	**+0.3**
JOU	**Okura**	**1.24**	**216**	P	P	**Pn**	**10 06 19.9**	**+0.4**
JOU				S	S	**Sn**	**10 06 38.5**	**+0.9**
JTM	**Tenmabayashi**	**1.46**	**345**	P	P	**Pn**	**10 06 22.0**	**-0.1**
JTM				S	S	**Sn**	**10 06 41.7**	**-0.5**
JMM	**Marumori**	**1.63**	**202**	P	P	**Pn**	**10 06 23.9**	**-0.2**
JMM				S	S	**Sn**	**10 06 45.2**	**-0.6**
JYA	**Atsumi**	**1.65**	**242**	P	P	**Pn**	**10 06 24.8**	**+0.5**
JYA				eS	S	**Sn**	**10 06 46.2**	**0.0**
MAT	**Matsushiro**	**3.89**	**224**	P	P	**Pn**	**10 06 54.1**	**+0.7**
MAT				eS	S	**Sn**	**10 07 35.8**	**-2.5**

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*NEIC **30** 10:23:35.4±1.9,4973S×164.14E,h10km,mb4.3/1,Error ellipse: s-maj=38.2km s-min=11.2km az=159.0*
*IDC **30** 10:23:36.4±2.6,4912S×164.18E,h0km,mb3.9/2, mb1 4.2/3,mb1mx3.9/12,mbtmp4.0/3,ML4.1/1,Error ellipse: s-maj=67.8km s-min=31.4km az=166.0*
ISC 30 10:23:37.4±1.9,**494S**±02×**1641E**±02,**h10**km,**n19**,
σ1**s29**/20,**mb4.0**/3,**Auckland Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**4.36**	**38**	P	P	**Pn**	**10 24 44.3**	**+0.7**
WHZ				S	S	**Sn**	**10 25 34.0**	**-0.4**
MLZ	**Mavora Lakes**	**4.90**	**36**	P	P	**Pn**	**10 24 50.4**	**-0.6**
TUZ	**Tuapeka**	**5.07**	**49**	P	P	**Pn**	**10 24 54.1**	**+0.7**
MSZ	**Milford Sound**	**5.40**	**30**	P	P	**Pn**	**10 25 01.2**	**+3.4**
EAZ	**Earnscleugh**	**5.46**	**42**	P	P	**Pn**	**10 24 59.2**	**+0.5**
WKZ	**Wanaka**	**5.67**	**38**	P	P	**Pn**	**10 25 03.0**	**+1.5**
JCZ	**Jackson Bay**	**6.21**	**33**	P	P	**Pn**	**10 25 11.8**	**+2.9**
ODZ	**Otahua Downs**	**6.22**	**48**	P	P	**Pn**	**10 25 09.0**	**-0.2**
LBZ	**Lake Benmore**	**6.51**	**42**	P	P	**Pn**	**10 25 11.9**	**-1.2**
RPZ	**Rata Peaks**	**7.43**	**43**	Pn	Pn	**Pn**	**10 25 22.1**	**-3.6**
	3.2nm,0.3s,baz=165,slow=8.0,SNR=7.8							
RPZ				Sn	Sn	**Sn**	**10 26 48.3**	**-1.6**
	8.9nm,0.3s,baz=171,slow=21,SNR=12							
RPZ	**Rata Peaks**	**7.43**	**43**	Pn	Pn	**Pn**	**10 25 22.1**	**-3.6**
RPZ				Sn	Sn	**Sn**	**10 26 48.3**	**-1.6**
WVZ	**Waitaha Valley**	**7.81**	**38**	P	P	**Pn**	**10 25 35.6**	**+4.6**
CAN	**Canberra**	**17.91**	**316**	P	P	**Pn**	**10 27 49.0**	**+2.6**
ASAR	**Alice Springs**	**34.93**	**306**	P	P	**P**	**10 30 29.1**	**-0.1**
	1.3nm,0.7s,mb4.0,baz=138,slow=8.2,SNR=18							
WB2	**Warramunga Arr**	**37.79**	**310**	*e*P	P	**P**	**10 30 52.4**	**-1.3**
WRA	**Warramunga Arr**	**37.80**	**310**	P	P	**P**	**10 30 52.7**	**-1.1**
	1.6nm,0.7s,mb3.9,baz=138,slow=8.0,SNR=15							
WRAB	**Tennant Creek**	**37.80**	**310**	P	P	**P**	**10 30 53.2**	**-0.5**
	5.7nm,1.1s,mb4.2							
SPITS	**Spitsbergen Ar**	**148.73**	**348**	PKPbc	PKPbc		10 43 22.9	-0.2
	6.4nm,0.9s,baz=13,slow=12,SNR=3.3							
ARCES	**ARCESS Array B**	**151.77**	**331**	PKPbc	PKPbc		10 43 30.6	0.0
	1.7nm,0.6s,baz=29,slow=2.1,SNR=5.2							

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*ISCJB **30** 10:25:06.2±0.9,338N±0.1×75.1E±0.3,h10km,Error ellipse: s-maj=37.8km s-min=5.6km az=155.4*
*NDI **30** 10:25:07.6±3.6,3382N×7521E,h15km±305km,ML3.2*
ISC 30 10:25:10.4±1.6,**3386N**±007×**755E**±02,**h27**km±13km,**n9**,
σ1**s09**/16,**1C**,**Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DLH	**Dalhousie**	**1.36**	**164**	*e*P	P	**Pn**	**10 25 34.0**	**+0.4**

DLH				*e*S		**Sn**	**10 25 52.0**	**+1.2**	
THN	**Thein Dam**	**1.43**	**173**	*e*P		**Pn**	**10 25 33.1**	**-1.4**	
THN				*e*S		**Sn**	**10 25 52.1**	**-0.3**	
BHK	**Bhakra**	**2.55**	**162**	*ex*		**Sn**	**10 26 25.2**	**+5.2**	
SDNR	**Sundarnagar**	**2.65**	**152**	*e*P		**Pb**	**10 25 56.0**	**-1.1**	
SDNR				*e*S		**Sb**	**10 26 30.0**	**+0.8**	
SMLA	**Simla**	**3.06**	**152**	*i* P		**Pn**	**10 25 58.0**	**+1.1**	
SMLA				*i* x		**Sn**	**10 26 41.9**	**+9.3**	
SMLA				*ex*		x	10 26 44.1		
	comp=N,423nm,0.4s								
SMLA				*ex*		x	10 26 45.8		
	comp=E,401nm,0.3s								
JOSI	**Joshimath**	**4.75**	**133**	*ex*		**Pn**	**10 26 12.3**	**-7.9**	
JOSI				*e*S		**Sn**	**10 27 13.7**	**-0.7**	
JOSI				AML		AML	10 27 41.3		
	comp=E,68nm,0.7s								
JOSI				AML		AML	10 27 45.1		
	comp=N,78nm,0.4s								
SONA	**Sohna**	**5.75**	**166**	*e*S		**Sn**	**10 27 34.6**	**-4.4**	
SONA				AML		AML	10 28 17.8		
	comp=E,13nm,0.2s								
SONA				AML		AML	10 28 17.8		
	comp=N,9.7nm,0.3s								
KUDL	**Kundal**	**5.75**	**171**	*e*P		**Pn**	**10 26 33.3**	**-0.7**	
KUDL				*e*S		**Sn**	**10 27 33.3**	**-5.8**	
KUDL				AML		AML	10 28 09.9		
	comp=N,6.6nm,0.4s								
KK31	**Karatay Array**	**10.03**	**338**	Pn		**Pn**	**10 27 35.0**	**+2.4**	
	comp=N,0.6nm,0.5s,baz=148,slow=13,SNR=9.3								
KK31				⇑Sn		**Sn**	**10 29 23.2**	**-0.9**	
	comp=N,0.5nm,0.4s,baz=147,slow=22,SNR=5.0								

NEIC 30 10:33:33.5, 4503S×16684E, h19km, ML3.9 (WEL), After WEL., Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**0.50**	**154**	P	Pg	10 33 43.8	+0.2
DCZ				S	Sg	10 33 49.8	-0.6
MSZ	**Milford Sound**	**0.85**	**66**	P	Pb	10 33 49.5	-0.2
MSZ				S	Sb	10 33 59.4	-1.3
WKZ	**Wanaka**	**1.56**	**83**	P	Pn	10 33 59.6	-0.6
JCZ	**Jackson Bay**	**1.67**	**56**	P	Pn	10 34 02.7	+1.0
JCZ				S	Sn	10 34 23.8	+1.2
LBZ	**Lake Benmore**	**2.47**	**76**	P	Pn	10 34 11.2	-1.5
FOZ	**Fox Glacier**	**2.52**	**55**	P	Pn	10 34 13.8	+0.5
RPZ	**Rata Peaks**	**3.29**	**68**	P	Pn	10 34 22.1	-1.9
WVZ	**Waitaha Valley**	**3.42**	**57**	P	Pn	10 34 24.0	-1.8
MQZ	**McQueen's Vall**	**4.37**	**74**	P	Pn	10 34 35.9	-2.9
CRLZ	**Canterbury Las**	**4.40**	**73**	P	Pn	10 34 36.7	-2.5
LTZ	**Lake Taylor**	**4.52**	**62**	P	Pn	10 34 38.3	-2.6
DSZ	**Denniston Nort**	**4.88**	**50**	P	Pn	10 34 45.0	-0.9
THZ	**Tophouse**	**5.49**	**56**	P	Pn	10 34 52.3	-1.9
QRZ	**Quartz Range**	**5.92**	**47**	P	Pn	10 34 59.2	-0.9
NNZ	**Nelson**	**6.12**	**54**	P	Pn	10 35 03.7	+0.9

*NEIC **30** 10:43:45.8, 1907N×6462W, h92km, MD3.6(RSPR), After RSPR.*
*RSPR **30** 10:43:45.8, 1907N×6462W, h92km±3km, MD3.6/7, MD3.6/7*
ISC 30 10:43:45.3±1.6, 190N±03×646W±01, h95km±23km, n16, σ0§33/30, 16C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABV	**Anegada**	**0.38**	**142**	⇑*e*P		**Pn**	**10 43 59.8**	**+0.1**
ABV				*e*S		**Sn**	**10 44 10.5**	**+0.1**
TBVI	**Tortola**	**0.61**	**183**	⇑*e*P		**Pn**	**10 44 01.6**	**+0.1**
TBVI				*e*S		**Sn**	**10 44 13.3**	**-0.1**
MTP	**Monte Pirata**	**1.31**	**225**	⇑*e*P		**Pn**	**10 44 09.3**	**+0.4**
MTP				*e*S		**Sn**	**10 44 26.9**	**+0.2**
CBYP	**Canovanas**	**1.43**	**238**	⇑*e*P		**Pn**	**10 44 09.5**	**-0.8**
CBYP				*e*S		**Sn**	**10 44 29.3**	**0.0**
HUMP	**Col San Antoni**	**1.49**	**234**	⇑*e*P		**Pn**	**10 44 10.9**	**-0.2**
HUMP				*e*S		**Sn**	**10 44 30.9**	**+0.2**
CPD	**Cerro la Pandu**	**1.61**	**232**	⇑*e*P		**Pn**	**10 44 12.3**	**-0.2**
CPD				*e*S		**Sn**	**10 44 33.5**	**+0.2**
CPD	**Cerro la Pandu**	**1.61**	**232**	⇑*e*P		**Pn**	**10 44 12.3**	**-0.2**
CPD				*e*S		**Sn**	**10 44 33.0**	**-0.3**
SJG	**San Juan**	**1.75**	**239**	⇑*e*P		**Pn**	**10 44 13.7**	**-0.7**
SJG	**San Juan**	**1.75**	**239**	⇑*e*P		**Pn**	**10 44 14.3**	**-0.1**
SJG				*e*S		**Sn**	**10 44 35.8**	**-0.7**
SJG	**San Juan**	**1.75**	**239**	⇑*e*P		**Pn**	**10 44 14.3**	**-0.1**
SJG				*e*S		**Sn**	**10 44 35.8**	**-0.7**
SJG				*e*S		**Sn**	**10 44 36.5**	**0.0**
SJG	**San Juan**	**1.75**	**239**	⇑*e*P		**Pn**	**10 44 13.7**	**-0.7**
SJG				*e*S		**Sn**	**10 44 36.0**	**-0.4**
CELP	**Cerrillos**	**2.12**	**244**	⇑*e*P		**Pn**	**10 44 19.6**	**+0.4**
CELP				*e*S		**Sn**	**10 44 45.4**	**+0.3**
AOPR	**Arecibo Observ**	**2.17**	**252**	⇑*e*P		**Pn**	**10 44 19.9**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.61**	**247**	⇑*e*P		**Pn**	**10 44 26.0**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.61**	**247**	⇑*e*P		**Pn**	**10 44 26.2**	**+0.6**
CRPR				*e*S		**Sn**	**10 44 56.8**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.61**	**247**	⇑*e*P		**Pn**	**10 44 26.0**	**+0.4**
CRPR				*e*S		**Sn**	**10 44 56.8**	**+0.1**

NDI 30 10:45:43.1±3.0, 3263N×7183E, h10km, ML3.5, 2C, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**3.29**	**92**	*e*P	Pn	10 46 19.2	-15
THN				*e*S	Sn	10 46 58.0	-16
DLH	**Dalhousie**	**3.49**	**90**	*e*P	Pb	10 46 38.0	-7.0
DLH				*ex*	Pg	10 46 56.0	+6.0
SMLA	**Simla**	**4.78**	**107**	*i* x	Pg	10 47 07.8	-6.8
SMLA				*i* S	Sn	10 47 46.3	-4.2
SMLA				*ex*	x	10 47 46.7	
	comp=N,180nm,0.3s						
SMLA				*ex*	x	10 47 49.3	
	comp=E,373nm,0.3s						
SONA	**Sohna**	**6.29**	**133**	*e*S	Sn	10 48 23.3	-4.5
SONA				AML	AML	10 49 19.4	
	comp=E,17nm,0.3s						
SONA				AML	AML	10 49 19.4	
	comp=N,7.8nm,0.4s						
JOSI	**Joshimath**	**6.91**	**105**	*e*S	Sn	10 48 37.9	-5.1
JOSI				AML	AML	10 48 44.5	
	comp=N,56nm,0.3s						
JOSI				AML	AML	10 48 44.7	
	comp=E,65nm,0.6s						
KK31	**Karatay Array**	**10.51**	**355**	⇑Pn	Pn	10 48 38.3	+25
	comp=E,0.4nm,0.5s,baz=150,slow=13,SNR=5.5						
KK31				⇑Sn	Sn	10 50 28.8	+17
	comp=E,0.6nm,0.7s,baz=146,slow=22,SNR=4.1						

IDC 30 10:51:30.8±2.5, 4922S×16378E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.6/11, mbtmp3.4/2, Error ellipse: s-maj=271.3km s-min=56.3km az=37.0, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**34.64**	**307**	P	P	10 58 21.8	+0.1
	0.4nm,0.7s,baz=139,slow=8.2,SNR=5.1						
WRA	**Warramunga Arr**	**37.51**	**311**	P	P	10 58 46.2	-0.1
	0.7nm,1.1s,baz=136,slow=8.2,SNR=3.6						
AKASG	**Malin Array Be**	**151.07**	**290**	PKPbc	PKPbc	11 11 24.1	-0.7
	0.1nm,0.2s,baz=96,slow=2.3,SNR=4.0						
ARCES	**ARCESS Array B**	**151.51**	**331**	PKPbc	PKPbc	11 11 25.4	+0.2
	1.4nm,0.7s,baz=56,slow=5.1,SNR=5.7						

*IDC **30** 10:53:11.1±0.9, 4911S×16427E, h0km, mb4.5/8, mb1 4.6/9, mb1mx4.4/15, mbtmp4.4/9, ML4.0/1, Error ellipse: s-maj=29.0km s-min=22.1km az=65.0*
*NEIC **30** 10:53:12.1±0.5, 4926S×16418E, h10km, mb4.7/7, Error ellipse: s-maj=11.4km s-min=8.1km az=134.0*
*ISCJB **30** 10:53:15.0±2.2, 4915S±0.1×16435E±02, h43km±22km, mb4.5/13, Error ellipse: s-maj=18.2km s-min=16.2km az=33.7*
*MOS **30** 10:53:21.0±2.5, 4950S×16203E, h33km, mb4.9/3, Error ellipse: s-maj=37.8km s-min=13.8km az=105.4*
ISC 30 10:53:13.3±3.6, 4922S±008×1642E±01, h17km±24km, n40, σ1§15/31, mb4.5/13, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHZ	**Wether Hill Ro**	**4.17**	**39**	P	**Pn**	**10 54 16.1**	**0.0**
MLZ	**Mavora Lakes**	**4.71**	**36**	P	**Pn**	**10 54 24.3**	**+0.7**
EAZ	**Earnscleugh**	**5.28**	**43**	P	**Pn**	**10 54 31.4**	**0.0**
WKZ	**Wanaka**	**5.48**	**39**	P	**Pn**	**10 54 36.1**	**+2.0**
MCQ	**Macquarie Isla**	**6.21**	**210**	*e*P	**Pn**	**10 54 41.4**	**-2.8**
RPZ	**Rata Peaks**	**7.24**	**43**	Pn	**Pn**	**10 54 56.5**	**-1.8**
	2.3nm,0.3s,baz=270,slow=3.3,SNR=4.7						
RPZ				Sn	**Sn**	**10 56 18.6**	**-1.5**
	8.3nm,0.3s,baz=2.7,slow=19,SNR=9.2						
RPZ	**Rata Peaks**	**7.24**	**43**	Pn	**Pn**	**10 54 56.5**	**-1.8**
RPZ				Sn	**Sn**	**10 56 18.6**	**-1.5**
CAN	**Canberra**	**17.83**	**315**	*e*P	**Pn**	**10 57 21.1**	**+0.6**
STKA	**Stephens Creek**	**24.26**	**307**	*e*P	**P**	**10 58 30.9**	**+1.6**
	5.0nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**24.26**	**307**	P	**P**	**10 58 30.6**	**+1.3**
	7.6nm,0.9s,mb4.1,baz=138,slow=9.4,SNR=7.5						
STKA	**Stephens Creek**	**24.26**	**307**	*e*P	**P**	**10 58 30.5**	**+1.2**
	9.4nm,0.9s,mb4.2						
CTA	**Charters Tower**	**32.43**	**327**	P	**P**	**10 59 43.5**	**+1.1**
	9.6nm,0.8s,mb4.7,baz=141,slow=9.9,SNR=7.0						
CTAO	**Charters Tower**	**32.43**	**327**	*e*P	**P**	**10 59 43.3**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
CTAO	**Charters Tower**	**32.43**	**327**	*e*P	**P**	**10 59 43.3**	**+0.9**
	comp=Z,11nm,0.9s,mb4.7						
ASAR	**Alice Springs**	**34.88**	**306**	P	**P**	**11 00 03.5**	**-0.2**
	comp=Z,6.3nm,0.9s,mb4.5,baz=136,slow=8.2,SNR=24						
ASAR				PcP	PcP	11 02 36.3	-0.1
	comp=Z,2.3nm,1.1s,baz=141,slow=3.1,SNR=5.3						
MTSU	**Mount Surprise**	**34.93**	**326**	*e*P	**P**	**11 00 05.1**	**+1.0**
	comp=Z,52nm,1.0s,mb5.4						
WB2	**Warramunga Arr**	**37.73**	**310**	*e*P	**P**	**11 00 27.1**	**-1.0**
WB2	**Warramunga Arr**	**37.73**	**310**	*e*P	**P**	**11 00 27.0**	**-1.0**
WRA	**Warramunga Arr**	**37.74**	**310**	P	**P**	**11 00 26.9**	**-1.3**
	comp=Z,5.3nm,0.9s,mb4.3,baz=138,slow=7.7,SNR=23						
WRA				PcP	PcP	11 02 44.8	-0.1
	comp=Z,2.2nm,1.0s,baz=154,slow=2.5,SNR=7.6						
WRAB	**Tennant Creek**	**37.74**	**310**	*e*P	**P**	**11 00 27.0**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**37.74**	**310**	*e*P	**P**	**11 00 27.0**	**-1.1**
	comp=Z,8.7nm,1.0s,mb4.4						
QSPA	**South Pole Qui**	**40.91**	**180**	P	**P**	**11 00 55.8**	**+1.8**
	comp=Z,6.3nm,1.0s,mb4.2,baz=359,slow=4.9,SNR=11						
FITZ	**Fitzroy Crossi**	**43.89**	**301**	P	**P**	**11 01 18.1**	**-0.8**
	comp=Z,4.0nm,0.8s,mb4.2,baz=165,slow=13,SNR=9.0						
KAKA	**Kakadu**	**44.85**	**313**	*e*P	**P**	**11 01 26.2**	**-0.4**
	comp=Z,8.0nm,0.8s,mb4.6						
MBWA	**Marble Bar**	**44.97**	**292**	*e*P	**P**	**11 01 26.8**	**-0.7**
	comp=Z,11nm,1.1s,mb4.6						
SNAA	**Sanae**	**59.07**	**185**	*e*P	**P**	**11 03 12.0**	**+0.2**
SNAA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SNAA	**Sanae**	**59.07**	**185**	*e*P	**P**	**11 03 12.0**	**+0.2**
	comp=Z,8.0nm,1.2s,mb4.6						
CMAR	**Chiang Mai Arr**	**88.70**	**300**	P	**P**	**11 06 07.2**	**+1.5**
	comp=Z,5.8nm,0.9s,mb4.9,baz=164,slow=3.9,SNR=19						
KSRS	**Korea Array**	**92.10**	**332**	P	**P**	**11 06 21.8**	**+0.8**
	comp=Z,1.3nm,0.9s,mb4.2,baz=144,slow=6.5,SNR=5.6						
MKAR	**Makanchi Array**	**119.03**	**309**	PKP	PKPdf	11 11 59.9	-0.3
	comp=Z,0.3nm,0.6s,baz=173,slow=3.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**141.25**	**208**	PKhKP		11 12 36.1	
	comp=Z,0.5nm,0.6s,baz=137,slow=2.8,SNR=4.2						
BR131	**Keskin Array S**	**144.06**	**274**	*e*PKP	PKPdf	11 12 45.4	-1.9
OBN	**Obninsk**	**148.01**	**301**	*e*PKIKP	PKPbc	11 12 57.9	+1.2
OBN				pmax	pmax		
	comp=Z,21nm,1.3s						
TAM	**Tamanrasset**	**148.72**	**220**	*e*PKIKP	PKPbc	11 13 00.8	+1.3
JOF	**Joensuu**	**151.12**	**316**	*ep*	PKPbc	11 13 02.9	-1.2
	comp=Z,7.3nm,1.1s						
AKASG	**Malin Array Be**	**151.34**	**290**	PKPbc	PKPbc	11 13 04.8	-0.2
	comp=Z,3.9nm,0.6s,baz=88,slow=2.3,SNR=21						
AKASG	**Malin Array Be**	**151.34**	**290**	PKPbc	PKPbc	11 13 04.8	-0.2
KIEV	**Kiev**	**151.35**	**290**	*e*PKIKP	PKPbc	11 13 04.8	-0.2
KIEV				*e*		11 13 12.9	
ARCES	**ARCESS Array B**	**151.65**	**331**	PKPbc	PKPbc	11 13 05.9	+0.8
	comp=Z,7.3nm,0.8s,baz=107,slow=2.1,SNR=22						
GERES	**GERESS Array B**	**160.72**	**280**	PKPab	PKPab	11 13 53.8	+0.2
	comp=Z,1.3nm,0.8s,baz=123,slow=4.9,SNR=7.7						

*ISCJB **30** 10:58:35.6±1.7, 206S±02×1773W±02, h473km±28km, mb3.8/8, Error ellipse: s-maj=29.9km s-min=20.5km az=139.7*
*NEIC **30** 10:58:37.4±1.5, 2053S×17728W, h482km±24km, mb4.1/4, Error ellipse: s-maj=24.4km s-min=17.3km az=143.0*
*IDC **30** 10:58:43.4±2.6, 1882S×17792W, h526km±32km, mb3.3/6, mb1 3.5/7, mb1mx3.2/19, mbtmp3.3/7, Error ellipse: s-maj=93.3km s-min=18.6km az=156.0*
ISC 30 10:58:37.3±1.7, 205S±02×1773W±02, h479km±28km, n18, σ0§87/20, mb3.8/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.43**	**40**	P	**P**	**11 00 37.8**	**-0.1**
	3.0nm,0.3s,baz=337,slow=23,SNR=4.8						
AFI				S	**S**	**11 02 09.5**	**-7.4**
	1.1nm,0.3s,baz=36,slow=20,SNR=2.4						
AFI	**Afiamalu**	**8.43**	**40**	*e*P	**P**	**11 00 37.9**	**0.0**
AFI				S	**S**	**11 02 09.5**	**-7.4**
WKZ	**Wanaka**	**26.76**	**202**	P	**P**	**11 03 36.4**	**-0.9**
MSZ	**Milford Sound**	**27.02**	**204**	S	**P**	**11 03 40.2**	**+0.6**
CTA	**Charters Tower**	**34.14**	**264**	*e*P	**P**	**11 04 42.6**	**+1.2**
	4.5nm,0.6s,mb4.1						
CTA	**Charters Tower**	**34.14**	**264**	P	**P**	**11 04 42.7**	**+1.2**
	5.0nm,0.5s,mb4.2,baz=99,slow=13,SNR=8.9						
CTAO	**Charters Tower**	**34.14**	**264**	*e*P	**P**	**11 04 42.4**	**+0.9**
	5.8nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**38.37**	**244**	*e*P	**P**	**11 05 21.6**	**+5.2**
	4.8nm,1.6s,mb3.7						
STKA	**Stephens Creek**	**38.37**	**244**	P	**P**	**11 05 21.0**	**+4.6**
	2.9nm,0.7s,mb3.8,baz=83,slow=11,SNR=7.2						
STKA	**Stephens Creek**	**38.37**	**244**	*e*P	**P**	**11 05 21.5**	**+5.1**
ASAR	**Alice Springs**	**45.15**	**257**	P	**P**	**11 06 12.0**	**+1.7**
	5.0nm,0.7s,mb4.1,baz=87,slow=8.5,SNR=60						
WB2	**Warramunga Arr**	**45.23**	**262**	*e*P	**P**	**11 06 11.2**	**+0.2**
WB2	**Warramunga Arr**	**45.23**	**262**	*e*P	**P**	**11 06 11.0**	**0.0**
WRAB	**Tennant Creek**	**45.23**	**262**	*e*P	**P**	**11 06 10.5**	**-0.6**
	2.5nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**45.24**	**262**	P	**P**	**11 06 11.3**	**+0.1**
	2.8nm,0.6s,mb3.9,baz=96,slow=7.7,SNR=71						
KAKA	**Kakadu**	**48.62**	**271**	*e*P	**P**	**11 06 35.4**	**-1.4**
	3.7nm,0.5s,mb4.0						
FITZ	**Fitzroy Crossi**	**53.67**	**262**	P	**P**	**11 07 12.6**	**-0.9**
	0.5nm,0.4s,mb3.2,baz=127,slow=10,SNR=4.6						
TXAR	**Lajitas Array**	**86.52**	**57**	P	**P**	**11 10 29.3**	**+0.3**
	0.4nm,0.7s,mb3.3,baz=212,slow=6.8,SNR=6.1						

*ISCJB **30** 11:13:25.2±0.5, 5798S±008×24.1W±02, h10km, mb4.2/10, Error ellipse: s-maj=15.0km s-min=9.2km az=150.5*
*IDC **30** 11:13:25.8±0.8, 5792S×24.11W, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.1/18, mbtmp4.2/9, Error ellipse: s-maj=25.2km s-min=19.1km az=176.0*
*NEIC **30** 11:13:30.7±0.4, 5798S×24.15W, h35km, mb4.4/4, Error ellipse: s-maj=12.3km s-min=10.1km az=215.0*
ISC 30 11:13:25.5±0.6, 5841S±006×240W±02, h10km, n23, σ1§05/25, mb4.2/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.95**	**158**	*e*P	**Pn**	**11 16 50.0**	**+7.1**
VNA1				*e*		11 16 52.1	
VNA1				*e*		11 17 02.3	
VNA1				*e*S	**Sn**	**11 19 18.9**	**+1.3**
VNA1				*e*		11 19 22.7	
VNA3	**Neumayer Olymp**	**14.18**	**161**	*e*P	**Pn**	**11 16 52.6**	**+6.5**
VNA3				*e*		11 16 54.2	
VNA3				*e*		11 17 04.3	
VNA3				*e*S	**Sn**	**11 19 23.4**	**+0.2**
VNA3				*e*		11 19 27.3	
VNA2	**Neumayer--Watz**	**14.35**	**158**	*e*P	**Pn**	**11 16 54.8**	**+6.5**
	baz=323,slow=14						
VNA2				*e*		11 16 56.8	
VNA2				*e*		11 17 07.8	
VNA2				*e*S	**Sn**	**11 19 26.0**	**-1.2**
VNA2				*e*		11 19 30.6	
SNAA	**Sanae**	**15.87**	**155**	*e*P	**Pn**	**11 17 15.7**	**+7.1**
SNAA				*e*		11 17 18.2	
SNAA				*e*		11 17 28.4	
SNAA				*e*S	**Sn**	**11 20 02.2**	**-2.0**
SNAA				*e*		11 20 07.1	
SNAA	**Sanae**	**15.87**	**155**	*e*P	**Pn**	**11 17 16.0**	**+7.4**
SNAA				*e*S	**Sn**	**11 19 56.8**	**-7.4**
USHA	**Ushuaia**	**24.37**	**259**	P	**P**	**11 18 45.2**	**+1.9**
	6.0nm,0.6s,mb4.2,baz=6.2,slow=20,SNR=4.9						
QSPA	**South Pole Qui**	**31.84**	**180**	P	**P**	**11 19 56.7**	**+6.9**
	0.8nm,0.9s,mb3.6,baz=199,slow=7.3,SNR=8.5						
PLCA	**Paso Flores**	**34.14**	**280**	P	**P**	**11 20 10.3**	**+0.1**
	2.3nm,0.8s,mb4.2,baz=121,slow=5.7,SNR=6.1						
PLCA	**Paso Flores**	**34.14**	**280**	*e*P	**P**	**11 20 09.2**	**-1.0**
	5.4nm,1.2s,mb4.3						
CPUP	**Villa Florida**	**39.67**	**309**	P	**P**	**11 20 55.5**	**-2.0**
	0.7nm,0.4s,mb3.7,baz=142,slow=11,SNR=6.9						
CPUP	**Villa Florida**	**39.67**	**309**	*e*P	**P**	**11 20 56.2**	**-1.2**
BOSA	**Boshof**	**44.99**	**70**	P	**P**	**11 21 41.3**	**+0.6**
	3.4nm,0.5s,mb4.4,baz=239,slow=5.4,SNR=11						
BOSA	**Boshof**	**44.99**	**70**	*e*P	**P**	**11 21 41.3**	**+0.5**
	3.8nm,0.6s,mb4.4						
SIV	**San Ignacio**	**50.45**	**311**	P	**P**	**11 22 22.5**	**-0.7**
	0.7nm,0.5s,mb4.0,baz=193,slow=9.1,SNR=7.4						
LPAZ	**La Paz**	**53.15**	**303**	P	**P**	**11 22 44.2**	**+0.9**
	2.0nm,0.6s,mb4.2,baz=143,slow=5.1,SNR=9.2						
LPAZ	**La Paz**	**53.15**	**303**	P	**P**	**11 22 43.7**	**+0.4**
	2.5nm,0.6s,mb4.3						
LSZ	**Lusaka**	**57.71**	**64**	*e*P	**P**	**11 23 17.1**	**+0.9**
	3.6nm,0.6s,mb4.6						
DBIC	**Dimbokro**	**66.68**	**21**	P	**P**	**11 24 15.5**	**-0.7**
	2.4nm,0.6s,mb4.4,baz=177,slow=8.1,SNR=6.1						
DBIC	**Dimbokro**	**66.68**	**21**	P	**P**	**11 24 15.5**	**-0.7**
TORD	**Torodi Ar. Bea**	**74.34**	**26**	P	**P**	**11 25 03.0**	**+0.1**
	1.8nm,0.5s,mb4.3,baz=204,slow=6.1,SNR=20						
AKASG	**Malin Array Be**	**117.11**	**35**	PKP	PKPdf	11 32 10.6	+1.2
	0.5nm,0.4s,baz=96,slow=6.4,SNR=4.5						
PDAR	**Pinedale Array**	**123.04**	**299**	PKhKP		11 32 16.6	
	0.3nm,0.4s,baz=211,slow=1.7,SNR=4.8						
SONM	**Songino Array**	**149.10**	**88**	PKPbc	PKPbc	11 33 14.2	+1.4
	0.5nm,0.7s,baz=236,slow=3.2,SNR=2.9						

*ISCJB **30** 11:25:12.1±0.8, 3148N±008×7004E±007, h33km, mb3.6/3, Error ellipse: s-maj=12.9km s-min=6.9km az=25.0*
*NNC **30** 11:25:12.4±14.0, 3240N×7164E, h0km, mb3.2, Error ellipse: s-maj=260.2km s-min=107.7km az=101.0*
*IDC **30** 11:25:15.8±1.1, 2746N×6874E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/23, mbtmp3.5/4, Error ellipse: s-maj=41.4km s-min=30.8km az=11.0*
ISC 30 11:25:14.4±0.8, 3169N±009×7013E±008, h35km, n15, σ1§28/22, mb3.6/3, 3C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**4.80**	**80**	*e*P	**Pn**	**11 26 27.4**	**+3.2**
THN				*ex*	x	11 27 40.6	
DLH	**Dalhousie**	**5.02**	**79**	*e*S	**Sn**	**11 27 28.0**	**+4.0**
SMLA	**Simla**	**6.04**	**94**	*i* P	**Pn**	**11 26 42.8**	**+1.5**
SMLA				*i* S	**Sn**	**11 27 51.1**	**+2.0**
SMLA				*ex*	x	11 27 52.1	
	comp=E,91nm,0.4s						
SMLA				*ex*	x	11 27 55.4	
	comp=N,185nm,0.3s						
KHET	**Khetri**	**6.10**	**125**	*e*P	**Pn**	**11 26 42.6**	**+0.5**
KHET				*e*S	**Sn**	**11 27 50.6**	**-0.2**
KHET				AML	AML	11 28 44.0	
	comp=N,11nm,0.4s						
KHET				AML	AML	11 28 46.1	
	comp=E,11nm,0.6s						
KUDL	**Kundal**	**6.55**	**121**	*e*P	**Pn**	**11 26 47.8**	**-0.4**
KUDL				*e*S	**Sn**	**11 27 59.9**	**-1.9**
AYAN	**Aya Nagar**	**6.85**	**116**	*e*P	**Pn**	**11 26 51.9**	**-0.5**
AYAN				*e*S	**Sn**	**11 28 09.1**	**0.0**
AYAN				AML	AML	11 28 59.5	
	comp=Z,13nm,0.5s						
SONA	**Sohna**	**6.94**	**118**	*e*P	**Pn**	**11 26 53.8**	**+0.2**
SONA				*e*S	**Sn**	**11 28 11.0**	**-0.2**
SONA				AML	AML	11 29 16.2	
	comp=E,17nm,0.2s						
SONA				AML	AML	11 29 17.0	
	comp=N,15nm,0.4s						
AGRA	**Agra**	**8.13**	**121**	*ex*	**Sn**	**11 28 33.5**	**-7.2**
AGRA				AML	AML	11 29 54.6	
	comp=E,48nm,0.3s						
AGRA				AML	AML	11 29 54.8	
	comp=N,39nm,0.3s						
JOSI	**Joshimath**	**8.16**	**96**	*e*P	**Pn**	**11 27 13.4**	**+3.0**
JOSI				*e*S	**Sn**	**11 28 39.8**	**-1.5**
JOSI				AML	AML	11 29 53.1	
	comp=N,46nm,0.5s						
JOSI				AML	AML	11 29 54.

*CSEM **30** 11:36:35.7±1.4, 1590N×4212E, h10km, ML4.3, Error ellipse: s-maj=39.8km s-min=14.6km az=66.0*
*DHMR **30** 11:36:36.3±1.3, 1598N×4230E, h4km±16km, ML4.3*
*SGS **30** 11:36:38.6, 1604N×4198E, h4km*
ISC 30 11:36:36.5±1.8,**1595N**±006×**420E**±01,**h10**km,**n10,** σ0°**66**/14,**2D, Red Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FRSS	**Farasan al Kab**	**0.80**	**11**	P		**Pg**	**11 36 52.6**	**+0.7**
JAZS	**Jizan**	**1.44**	**39**	P		**Pn**	**11 37 02.5**	**-0.2**
JAZS	**Jizan**	**1.44**	**39**	P		**Pn**	**11 37 02.5**	**-0.2**
JAZS				S		**Sn**	**11 37 20.4**	**-1.3**
HAJJ	**Hajjah**	**1.60**	**99**	⇓*i* P		**Pn**	**11 36 59.2**	**-5.6**
HAJJ				*i* S		**Sn**	**11 37 19.2**	**-6.4**
HAJJ				AML	AML		11 37 20.6	
	comp=Z,6μm,0.5s							
DJNS	**Zahran al Janu**	**2.31**	**41**	S		**Sn**	**11 37 44.5**	**+1.3**
DJNS	**Zahran al Janu**	**2.31**	**41**	P		**Pn**	**11 37 14.4**	**-0.3**
DHBB	**Dhamar BB**	**2.72**	**120**	*i* P		**Pn**	**11 37 19.8**	**-0.4**
DHBB				*i* S		**Sn**	**11 37 52.9**	**-0.3**
WBHS	**Wadi 'Ibn Hash**	**2.74**	**15**	P		**Pn**	**11 37 20.3**	**-0.2**
LBOS		**3.79**	**123**	⇓*i* P		**Pn**	**11 37 35.4**	**+0.3**
LBOS				*i* S		**Sn**	**11 38 20.2**	**+0.5**
BDHA	**Al Bayda'**	**4.00**	**119**	*i* S		**Sn**	**11 38 25.0**	**+0.1**

*NEIC **30** 11:37:40.9±0.7, 734S×15591E, h35km, mb4.4/1, Error ellipse: s-maj=17.3km s-min=14.2km az=187.0*
IDC 30 11:37:55.7±2.3,**841S**×**15717E, h241**km±29km,**mb3.4**/5, **mb1 3.5**/6,**mb1mx3.3**/16,**mbtmp3.4**/6,**Error ellipse: s-maj=46.5km s-min=21.8km az=136.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.92**	**110**	P		Pn	11 38 46.8	0.0
	26nm,0.3s,baz=213,slow=3.6,SNR=15							
WRAB	**Tennant Creek**	**24.88**	**240**	*e*P		P	11 42 56.4	-0.3
	12nm,1.1s							
WB2	**Warramunga Arr**	**24.88**	**240**	*e*P		P	11 42 55.8	-0.9
WB2	**Warramunga Arr**	**24.88**	**240**	*e*P		P	11 42 55.9	-0.8
WRA	**Warramunga Arr**	**24.89**	**240**	P		P	11 42 56.4	-0.4
	8.7nm,1.2s,baz=63,slow=9.7,SNR=21							
ASAR	**Alice Springs**	**26.95**	**233**	P		P	11 43 15.8	+0.6
	0.6nm,0.9s,baz=63,slow=8.7,SNR=7.9							
SONM	**Songino Array**	**71.69**	**327**	P		P	11 48 51.2	-0.1
	0.4nm,0.5s,baz=101,slow=4.7,SNR=4.1							
MK31	**Makanchi Array**	**85.89**	**318**	*e*P		P	11 50 08.8	+0.4
MKAR	**Makanchi Array**	**85.89**	**318**	P		P	11 50 09.5	+1.1
	1.2nm,0.6s,baz=97,slow=6.8,SNR=8.2							
ZALV	**Zalesovo Beam**	**86.56**	**326**	P		P	11 50 11.1	-0.4
	0.9nm,0.5s,baz=117,slow=8.2,SNR=4.2							
ZALV	**Zalesovo Beam**	**86.56**	**326**	P		P	11 50 11.1	-0.4
PLCA	**Paso Flores**	**114.29**	**142**	PKP		PKiKP	11 56 06.8	-0.2
	1.3nm,0.9s,baz=214,slow=3.8,SNR=3.0							
AKASG	**Malin Array Be**	**119.94**	**325**	PKP		PKPdf	11 56 17.1	-0.3
	0.8nm,0.4s,baz=76,slow=12,SNR=6.2							

*DHMR **30** 11:39:16.4±1.2, 1598N×4226E, h6km±15km, ML4.3*
*CSEM **30** 11:39:16.2±1.5, 1597N×4217E, h5km, ML4.3, Error ellipse: s-maj=46.5km s-min=13.2km az=67.0*
*SGS **30** 11:39:18.2, 1602N×4188E, h5km*
ISC 30 11:39:17.1±1.9,**1599N**±006×**420E**±01,**h10**km,**n11,** σ0°**75**/17,**1C-2D, Red Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FRSS	**Farasan al Kab**	**0.76**	**10**	P		**Pg**	**11 39 33.4**	**+1.6**
JAZS	**Jizan**	**1.40**	**40**	P		**Pn**	**11 39 42.6**	**-0.2**
HAJJ	**Hajjah**	**1.59**	**100**	⇓*i* P		**Pn**	**11 39 40.0**	**-5.2**
HAJJ				*i* S		**Sn**	**11 40 00.6**	**-5.2**
HAJJ				AML	AML		11 40 01.2	
	comp=Z,7μm,0.5s							
HAJJ	**Hajjah**	**1.59**	**100**	⇓*i* P		**Pn**	**11 39 40.0**	**-5.3**
HAJJ				*i* S		**Sn**	**11 40 00.6**	**-5.2**
	comp=Z,3μm,0.5s							
DJNS	**Zahran al Janu**	**2.27**	**41**	S		**Sn**	**11 40 23.1**	**+0.3**
DJNS	**Zahran al Janu**	**2.27**	**41**	P		**Pn**	**11 39 55.0**	**+0.3**
WBHS	**Wadi 'Ibn Hash**	**2.70**	**15**	P		**Pn**	**11 40 00.8**	**+0.2**
WBHS	**Wadi 'Ibn Hash**	**2.70**	**15**	P		**Pn**	**11 40 00.8**	**+0.2**
WBHS				S		**Sn**	**11 40 31.5**	**-1.9**
DHBB	**Dhamar BB**	**2.72**	**121**	⇑*i* P		**Pn**	**11 40 00.4**	**-0.5**
DHBB				*i* S		**Sn**	**11 40 33.8**	**0.0**
LBOS		**3.80**	**123**	*i* P		**Pn**	**11 40 15.7**	**0.0**
LBOS				*i* S		**Sn**	**11 41 01.0**	**+0.5**
BDHA	**Al Bayda'**	**4.00**	**120**	*i* P		**Pn**	**11 40 18.0**	**-0.6**
BDHA				*i* S		**Sn**	**11 41 05.7**	**+0.1**

*CSEM **30** 11:41:04.7, 1597N×4196E, h3km, ML4.1, After DHMR*
DHMR 30 11:41:04.7±2.0,**1597N**×**4196E, h3**km±32km,**ML4.1,2C, Red Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HAJJ	**Hajjah**	**1.60**	**100**	⇑*i* P		Pn	11 41 32.9	-0.9
HAJJ				*i* S		Sn	11 41 57.9	+2.9
HAJJ				AML	AML		11 41 59.1	
	comp=Z,3μm,0.5s							
HAJJ	**Hajjah**	**1.60**	**100**	⇑*i* P		Pn	11 41 32.9	-0.9
HAJJ				*i* S		Sn	11 41 57.9	+2.9
	comp=Z,2μm,0.5s							
DHBB	**Dhamar BB**	**2.73**	**120**	*i* P		Pn	11 41 52.9	+3.5
DHBB				*i* S		Sn	11 42 29.0	+6.2
LBOS		**3.80**	**123**	*i* P		Pn	11 42 07.6	+3.4
LBOS				*i* S		Sn	11 42 55.1	+5.7

*IDC **30** 11:48:14.0±0.8, 1862S×6691W, h235km±7km, mb3.2/8, mb1 3.6/13, mb1mx3.5/21, mbtmp3.4/13, Error ellipse: s-maj=17.4km s-min=9.2km az=85.0*
*ISCJB **30** 11:48:15.0±0.6, 1862S±005×6712W±0.10, h252km±6km, mb3.4/8, Error ellipse: s-maj=15.3km s-min=7.5km az=176.5*
*NEIC **30** 11:48:15.3±0.7, 1859S×6699W, h249km±8km, Error ellipse: s-maj=13.4km s-min=10.8km az=82.0*
ISC 30 11:48:15.5±0.6,**1864S**±005×**6704W**±008,**h244**km±6km, **n24,** σ0°**95**/28,**mb3.4**/8,**2C, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.56**	**336**	P		**Pn**	**11 49 03.6**	**+0.6**
	43nm,0.3s,baz=128,slow=5.6,SNR=1246							
LPAZ				S		**S**	**11 49 39.9**	**-0.6**
	4.0nm,0.3s,baz=37,slow=24,SNR=8.5							
LPAZ	**La Paz**	**2.56**	**336**	⇑*i* Pn		**Pn**	**11 49 04.1**	**+1.1**
LPAZ				*e*S		**S**	**11 49 39.6**	**-0.8**
LVC	**Limon Verde**	**4.32**	**204**	P		**Pn**	**11 49 23.3**	**+0.5**
	20nm,0.3s,baz=24,slow=8.8,SNR=19!							
LVC				S		**S**	**11 50 14.8**	**-1.5**
	11nm,0.3s,baz=116,slow=22,SNR=16							
LVC	**Limon Verde**	**4.32**	**204**	⇑*i* Pn		**Pn**	**11 49 23.2**	**+0.4**
LVC				*e*S		**S**	**11 50 06.3**	**-10**
ARE	**Arequipa**	**4.76**	**296**	*e*P		**Pn**	**11 49 28.0**	**-0.2**
ARE				*e*S		**S**	**11 50 21.0**	**-5.1**
SIV	**San Ignacio**	**6.28**	**66**	P		**Pn**	**11 49 48.2**	**+1.1**
	2.6nm,0.3s,baz=261,slow=10,SNR=55							
LCO	**Las Campanas**	**10.85**	**197**	P		**Pn**	**11 50 46.3**	**+1.5**
LCO				*e*S		**S**	**11 52 38.0**	**-8.2**
NNA	**Nana**	**11.53**	**304**	P		**Pn**	**11 50 52.8**	**-0.7**
	2.0nm,0.3s,baz=145,slow=14,SNR=4.1							
NNA				S		**S**	**11 53 02.6**	**+0.2**
	2.1nm,0.3s,baz=245,slow=14,SNR=5.7							
NNA	**Nana**	**11.53**	**304**	P		**Pn**	**11 50 52.8**	**-0.7**
NNA				S		**S**	**11 53 02.6**	**+0.2**
CFAA	**Coronel Fontan**	**12.95**	**185**	P		**Pn**	**11 51 11.3**	**+0.4**
	0.1nm,0.3s,baz=1.3,slow=11,SNR=20							
CFAA				S		**S**	**11 53 30.9**	**-4.0**
	0.1nm,0.3s,baz=238,slow=13,SNR=4.6							
BDFB	**Brasilia**	**18.43**	**84**	P		**P**	**11 52 10.2**	**-3.0**
	0.5nm,0.3s,baz=48,slow=2.1,SNR=12							
PLCA	**Paso Flores**	**22.22**	**187**	P		**P**	**11 52 51.5**	**-0.3**
	2.9nm,1.0s,mb3.8,baz=39,slow=5.6,SNR=4.7							
TXAR	**Lajitas Array**	**59.36**	**323**	P		**P**	**11 57 51.8**	**-0.4**
	0.4nm,0.6s,mb3.2,baz=146,slow=7.0,SNR=7.9							
PDAR	**Pinedale Array**	**72.56**	**329**	P		**P**	**11 59 16.4**	**+0.5**
	0.3nm,0.4s,mb3.2,baz=119,slow=9.1,SNR=3.6							
ULM	**Lac du Bonnet**	**73.16**	**341**	P		**P**	**11 59 18.4**	**-0.9**
	1.7nm,0.6s,mb3.9,baz=127,slow=5.1,SNR=2.8							
NVAR	**Mina Array Bea**	**74.37**	**320**	P		**P**	**11 59 27.4**	**+0.9**
	0.4nm,0.7s,mb3.2,baz=106,slow=5.2,SNR=2.7							
TORD	**Torodi Ar. Bea**	**74.74**	**70**	P		**P**	**11 59 28.0**	**-1.1**
	0.3nm,0.5s,mb3.2,baz=263,slow=5.8,SNR=4.0							
MAW	**Mawson**	**86.54**	**163**	P		**P**	**12 00 31.9**	**+1.2**
	0.7nm,0.7s,mb3.5,baz=281,slow=3.1,SNR=3.1							
YKA	**Yellowknife Ar**	**89.10**	**340**	P		**P**	**12 00 42.9**	**+0.3**
	0.5nm,0.7s,mb3.5,baz=315,slow=38,SNR=3.5							
ASAR	**Alice Springs**	**133.25**	**207**	PKP		PKPdf	12 07 03.5	+0.6
	0.4nm,0.8s,baz=150,slow=1.9,SNR=2.8							
WRA	**Warramunga Arr**	**136.29**	**210**	PKP		PKPdf	12 07 10.0	+1.3
	0.5nm,0.8s,baz=155,slow=1.9,SNR=4.1							
ZALV	**Zalesovo Beam**	**138.63**	**25**	PKP		PKPdf	12 07 08.8	-3.1
	0.7nm,0.4s,baz=312,slow=2.4,SNR=2.9							
MKAR	**Makanchi Array**	**142.30**	**35**	PKP		PKPdf	12 07 17.7	-1.1
	0.2nm,0.2s,baz=305,slow=2.5,SNR=2.2							
SONM	**Songino Array**	**150.39**	**9**	PKPbc		PKPbc	12 07 35.2	-2.7
	0.5nm,0.6s,baz=343,slow=4.4,SNR=4.2							

*ISCJB **30** 12:06:15.0±1.3, 3481N±008×2538E±005, h14km±6km, Error ellipse: s-maj=13.1km s-min=6.0km az=170.3*
*THE **30** 12:06:14.1, 3479N×2540E, h0km*
*ATH **30** 12:06:15.6, 3486N×2534E, h17km±4km, MD3.5/4*
*NEIC **30** 12:06:15.6, 3486N×2534E, h17km, MD3.5(ATH), After ATH.*
ISC 30 12:06:15.2±1.4,**3481N**±009×**2536E**±005,**h12**km±8km,**n8,** σ1°**04**/13,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LAST	**Lasithi**	**0.36**	**15**	*e*Pg		**Pg**	**12 06 21.8**	**-0.7**
LAST				*e*Sg		**Sg**	**12 06 27.9**	**+0.4**
NPS	**Neapolis**	**0.50**	**24**	*e*PB		**Pg**	**12 06 24.3**	**-0.7**
NPS				*e*SB		**Sg**	**12 06 31.0**	**-0.6**
SIVA	**Sivas**	**0.50**	**295**	*e*Pg		**Pg**	**12 06 24.6**	**-0.4**
SIVA				*e*Sg		**Sg**	**12 06 33.8**	**+2.1**
ZKR	**Zakros**	**0.77**	**66**	*e*Pg		**Pg**	**12 06 28.6**	**-1.5**
ZKR				*e*Sg		**Sg**	**12 06 41.0**	**+0.9**
GVD	**Gavdhos**	**1.05**	**272**	*e*PN		**Pn**	**12 06 35.0**	**-0.8**
VAM	**Vamos**	**1.13**	**302**	*e*PN		**Pn**	**12 06 36.9**	**+0.1**
VAM				*e*SN		**Sn**	**12 06 51.2**	**-1.0**
SANT	**Santorini**	**1.56**	**3**	*e*P		**Pn**	**12 06 43.6**	**+0.8**
KARP	**Karpathos**	**1.65**	**63**	*e*PN		**Pn**	**12 06 45.9**	**+1.9**

*BJI **30** 12:10:54.7, 295N×90.32E, h25km, mB5.0, mb4.7, Ms4.8, Msz4.5*
*IDC **30** 12:10:56.9±0.6, 359N×9023E, h0km, mb4.2/20, mb1 4.3/21, mb1mx4.3/26, mbtmp4.2/21, ML4.3/1, Error ellipse: s-maj=22.3km s-min=13.0km az=47.0*
*ISCJB **30** 12:10:56.3±0.3, 352N±004×90.19E±004, h10km, mb4.7/71, MS4.7/4, Error ellipse: s-maj=6.5km s-min=4.9km az=20.8*
*MOS **30** 12:11:00.3±1.2, 363N×9022E, h33km, mb4.9/25, Error ellipse: s-maj=11.3km s-min=6.5km az=103.1*
*NEIC **30** 12:11:02.0±0.3, 361N×9023E, h35km, mb4.7/27, Error ellipse: s-maj=9.6km s-min=6.4km az=220.0*
*DJA **30** 12:11:07, 564N×9041E, h123km, mb4.9/10*
ISC 30 12:10:56.7±1.8,**352N**±004×**9018E**±004,**h0**km±11km,**n156,** σ1°**12**/160,**mb4.7**/71,**MS4.7**/4,**7C-2D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**8.47**	**17**	*e*P		x	12 13 13.1	
PBA				*e*S		x	12 14 36.4	
PALK	**Pallekele**	**10.14**	**292**	*e*P		**Pn**	**12 13 22.2**	**-1.4**
PALK				pmax	pmax			
	comp=Z,61nm,0.8s							
PALK	**Pallekele**	**10.14**	**292**	*e*Pn		**Pn**	**12 13 22.2**	**-1.4**
	comp=Z,61nm,0.8s							
PALK				*e*Sn		**Sn**	**12 15 01.0**	**-17**
SNG	**Songkhla**	**11.01**	**70**	P		**Pn**	**12 13 35.0**	**-0.6**
	comp=Z,140nm,1.0s							
NNT	**Nongplab**	**13.06**	**46**	P		**Pn**	**12 14 04.4**	**+0.8**
TRD	**Trivandrum**	**14.04**	**291**	*e*P		**Pn**	**12 14 16.4**	**-0.6**
TRD				AMb	AMB		12 14 17.5	
	comp=Z,43nm,1.0s							
TRD				*ex*		x	12 16 38.9	
KOD	**Kodaikanal**	**14.27**	**299**	*e*P		**Pn**	**12 14 18.6**	**-1.5**
KOD				AMb	AMB		12 14 32.6	
	comp=Z,61nm,0.1s							
NST	**Nakhon Sawan**	**15.55**	**38**	P		**Pn**	**12 14 36.0**	**-1.4**
	comp=Z,75nm,0.7s							
VIS	**Vishakhapatnam**	**15.63**	**335**	*e*P		**Pn**	**12 14 36.5**	**-1.9**
VIS				AMb	AMB		12 14 37.4	
	comp=Z,137nm,0.6s							
VIS				*ex*		**Sn**	**12 17 13.7**	**-19**
BDT	**Bhumibol Dam**	**16.16**	**32**	P		**Pn**	**12 14 45.0**	**-0.3**
	comp=Z,11nm,1.0s							
CM31	**Chiang Mai Arr**	**17.15**	**29**	*e*Pn		**Pn**	**12 14 57.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**17.15**	**29**	P		**Pn**	**12 14 57.5**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=223,slow=13,SNR=34							
BWNR	**Bhubaneshwar**	**17.21**	**346**	*e*P		**Pn**	**12 14 56.0**	**-2.6**
BWNR				*ex*		Sn	12 17 49.0	-22
CHG	**Chiang Mai**	**17.45**	**29**	⇑P		**Pn**	**12 15 05.0**	**+3.3**
	comp=Z,15nm,0.9s							
CHTO	**Chiang Mai**	**17.45**	**29**	*e*P		**Pn**	**12 15 00.7**	**-1.0**
CHTO				pmax	pmax			
	comp=Z,6.0nm,0.7s							
CHTO	**Chiang Mai**	**17.45**	**29**	*e*P		**Pn**	**12 15 00.7**	**-0.9**
	comp=Z,6.4nm,0.7s							
KKTK	**Khon Kaen**	**17.80**	**43**	⇓P		**Pn**	**12 15 08.0**	**+2.0**
	comp=Z,389nm,0.6s							
HYB	**Hyderabad**	**17.91**	**321**	*i* P		**Pn**	**12 15 06.0**	**-1.3**
HYB				*e*S		**Sn**	**12 18 29.5**	**+1.7**
HYB	**Hyderabad**	**17.91**	**321**	*e*P		**Pn**	**12 15 06.0**	**-1.3**
HYB				*e*S		**Sn**	**12 18 24.5**	**-3.3**
NANT	**Nan**	**18.35**	**33**	⇑P		**Pn**	**12 15 11.0**	**-1.7**
	comp=Z,194nm,1.0s							
CHRT	**Chiangrai**	**18.76**	**29**	⇑P		**Pn**	**12 15 17.0**	**-0.8**
KSM	**Kuching**	**20.21**	**95**	*e*P		**P**	**12 15 34.7**	**+1.3**
BOK	**Bokaro**	**20.58**	**349**	*e*P		**P**	**12 15 39.4**	**+2.2**
BOK				AMb	AMB		12 15 42.3	
	comp=Z,95nm,1.8s							
BOK				*ex*		**S**	**12 19 16.5**	**-12**
KAD	**Karad**	**20.83**	**312**	*e*P		**P**	**12 15 41.0**	**+1.0**
KAD				AMb	AMB		12 15 54.0	
	comp=Z,67nm,0.9s							
KAD				*ex*		**S**	**12 19 22.3**	**-11**
IMP	**Imphal**	**21.45**	**9**	*ex*		x	12 16 03.0	
POO	**Poona**	**21.86**	**314**	*e*P		**P**	**12 15 51.7**	**+0.6**
POO				AMb	AMB		12 16 00.7	
	comp=Z,21nm,1.3s,mb4.4							
ODAN	**Odare**	**23.36**	**354**	*e*P		**P**	**12 16 08.9**	**+1.9**
	comp=Z,106nm,1.3s,mb5.2							
RAMN	**Ramite**	**23.55**	**352**	*e*P		**P**	**12 16 09.8**	**+0.8**
	comp=Z,110nm,1.3s,mb5.2							
JIRN	**Jiri**	**24.31**	**351**	*e*P		**P**	**12 16 17.4**	**+1.4**
	comp=Z,90nm,1.1s,mb5.2							
PKIN	**Phulchoki**	**24.36**	**350**	*e*P		**P**	**12 16 17.2**	**+0.8**
DMN	**Daman**	**24.44**	**349**	*e*P		**P**	**12 16 19.1**	**+1.9**
	comp=Z,79nm,1.1s,mb5.2							
KKN	**Kakani**	**24.58**	**350**	*e*P		**P**	**12 16 20.4**	**+1.9**
GUN	**Gumba**	**24.60**	**351**	*e*P		**P**	**12 16 20.6**	**+2.0**
QIZ	**Qiongzhong**	**24.64**	**50**	*e*P		**P**	**12 16 18.6**	**-0.5**
	comp=Z,242nm,1.6s,mb5.7							
KMI	**Kunming**	**24.65**	**28**	P		**P**	**12 16 20.5**	**+1.4**
KMI				PP			12 16 58.0	
KMI				AMB	AMB			
	comp=Z,15nm,1.0s,mb4.7							
KMI	**Kunming**	**24.65**	**28**	P		**P**	**12 16 20.6**	**+1.5**
KMI				pmax	pmax		12 16 58.1	
	comp=Z,15nm,1.0s,mb4.7							
KMI	**Kunming**	**24.65**	**28**	P		**P**	**12 16 20.6**	**+1.5**
	comp=Z,15nm,1.0s,mb4.7							
KMI				PP			12 16 58.1	
GKN	**Gorkha**	**24.91**	**348**	*e*P		**P**	**12 16 22.8**	**+1.3**
KOLN	**Koldanda**	**24.92**	**346**	*e*P		**P**	**12 16 23.2**	**+1.7**
	comp=Z,38nm,0.7s,mb5.2							
DANN	**Dangsing**	**25.44**	**347**	*e*P		**P**	**12 16 27.4**	**+1.1**
	comp=Z,65nm,0.9s,mb5.4							
LSA	**Lhasa**	**26.05**	**2**	P		**P**	**12 16 32.5**	**+0.7**
LSA				S		**S**	**12 21 08.0**	**+4.0**
LSA				AMB	AMB			
	comp=Z,20nm,1.1s,mb4.7							
LSA	**Lhasa**	**26.05**	**2**	*e*P		**P**	**12 16 31.1**	**-0.7**
LSA				pmax	pmax			
	comp=Z,54nm,0.8s,mb5.2							
LSA	**Lhasa**	**26.05**	**2**	*e*P		**P**	**12 16 31.1**	**-0.8**
	comp=Z,54nm,0.8s,mb5.2							
KKM	**Kota Kinabalu**	**26.07**	**83**	P		**P**	**12 16 31.7**	**-0.5**
GYA	**Guiyang**	**27.75**	**33**	P		**P**	**12 16 48.0**	**+0.8**
GYA				PP			12 17 38.0	
GYA				S		**S**	**12 21 31.5**	**+0.7**
GYA				AMB	AMB			
	comp=Z,20nm,0.9s,mb5.0							
GYA				AMB	AMB			
	comp=Z,110nm,4.9s							
GYA				LR	LR			
	comp=N,510nm,17.3s,MS4.3							
GYA				LR	LR			
	comp=E,460nm,18.3s,MS4.3							
GYA				LR	LR			
	comp=Z,590nm,19.4s,MS4.2							
CD2	**Chengdu**	**30.11**	**24**	P		**P**	**12 17 08.3**	**+0.2**
CD2				AP			12 17 12.5	
CD2				XP	sP		12 17 15.5	+7.4
CD2				PP	PP		12 18 07.0	-9.0
CD2				S	**S**		**12 22 05.8**	**-2.1**
CD2				SS	SS		12 23 44.0	-32
CD2				AMB	AMB			
	comp=Z,30nm,0.7s,mb5.2							
CD2				LR	LR			
	comp=N,960nm,18.0s,MS4.8							
CD2				LR	LR			
	comp=E,2μm,18.0s,MS4.8							
CD2				LR	LR			
	comp=Z,2μm,18.0s,MS4.7							
LZH	**Lanzhou**	**34.78**	**20**	*e*P		**P**	**12 17 49.0**	**0.0**
LZH				AP			12 17 56.5	
LZH				XP	sP		12 17 58.0	+9.0
LZH				PP	PP		12 19 09.0	+1.2
LZH				AMB	AMB			
	comp=Z,12nm,1.1s,mb4.7							
LZH				AMB	AMB			
	comp=Z,65nm,4.9s							
LZH				LR	LR			
	comp=E,1μm,14.0s							
LZH				LR	LR			
	comp=Z,2μm,15.8s,MS4.9							
LZH	**Lanzhou**	**34.78**	**20**	*e*P		**P**	**12 17 49.0**	**0.0**
	comp=Z,12nm,1.1s,mb4.7							
LZH				pP			12 17 56.4	
LZH				sP	sP		12 17 58.1	+9.1
LZH				PP	PP		12 19 09.1	+1.3
LZH				LR	LR			
	comp=Z,2μm,15.8s,MS4.9							
XAN	**Xi'an**	**35.03**	**28**	P		**P**	**12 17 50.0**	**-1.2**
XAN				AP			12 18 00.5	
XAN				AMB	AMB			
	comp=Z,12nm,0.8s,mb4.9							
WHN	**Wuhan**	**35.27**	**38**	P		**P**	**12 17 54.0**	**+0.7**
GTA	**Gaotai**	**36.78**	**13**	⇑P		**P**	**12 18 06.8**	**+0.7**
GTA				AP			12 18 10.3	
GTA				AMB	AMB			
	comp=Z,16nm,0.8s,mb4.8							
MBWA	**Marble Bar**	**37.95**	**132**	P		**P**	**12 18 15.3**	**-1.0**
WMQ	**Urumqi**	**40.19**	**357**	*e*P		**P**	**12 18 34.5**	**-0.2**
WMQ				AMB	AMB			
	comp=Z,10.0nm,1.3s,mb4.3							
FITZ	**Fitzroy Crossi**	**41.03**	**123**	P		**P**	**12 18 41.7**	**-0.3**
	comp=Z,2.9nm,1.1s,mb3.9,baz=294,slow=7.4,SNR=3.7							
AML	**Almayashu**	**41.17**	**341**	*e*P		**P**	**12 18 44.0**	**+1.1**
	comp=Z,15nm,0.8s,mb4.8							
TKM2	**Tokmak 2**	**41.33**	**344**	*e*P		**P**	**12 18 44.5**	**+0.4**
TKM2				pmax	pmax			
	comp=Z,15nm,1.3s,mb4.6							
TKM2	**Tokmak 2**	**41.33**	**344**	*e*P		**P**	**12 18 44.5**	**+0.4**
	comp=Z,15nm,1.3s,mb4.6							
EKS2	**Erkin-Say**	**41.63**	**342**	*e*P		**P**	**12 18 47.5**	**+0.9**
	comp=Z,11nm,0.8s,mb4.7							
HHC	**Hu-ho-hao-te**	**41.86**	**24**	*e*P		**P**	**12 18 46.8**	**-1.7**
HHC				PP	PP		12 20 27.5	+2.2
HHC				PCP	PcP		12 20 42.8	-1.7
HHC				SCP	ScP		12 24 31.5	-4.8
HHC				PCS	PcS		12 24 33.3	-2.6
HHC				S	**S**		**12 25 04.5**	**-3.0**
HHC				SS	SS		12 28 05.3	-8.4
HHC				SCS	ScS		12 28 47.0	-6.2
HHC				AMB	AMB			
	comp=Z,18nm,0.5s,mb5.1							
HHC				LR	LR			
	comp=N,670nm,14.2s,MS4.8							
HHC				LR	LR			
	comp=E,489nm,14.4s,MS4.8							
HHC				LR	LR			
	comp=Z,947nm,14.9s,MS4.8							
KK31	**Karatay Array**	**43.12**	**339**	*e*P		**P**	**12 18 58.7**	**0.0**
KK31				pmax	pmax			
	comp=Z,14nm,0.9s,mb4.7							
BJI	**Beijing**	**43.30**	**29**	P		**P**	**12 19 00.8**	**+0.6**
BJI				AMB	AMB			
	comp=Z,19nm,0.8s,mb4.9							
BJI	**Beijing**	**43.30**	**29**	P		**P**	**12 19 00.8**	**+0.6**
	comp=Z,19nm,0.8s,mb4.9							
MK31	**Makanchi Array**	**43.65**	**352**	*e*P		**P**	**12 19 02.0**	**-0.9**
MKAR	**Makanchi Array**	**43.65**	**352**	P		**P**	**12 19 02.5**	**-0.4**
	comp=Z,2.9nm,0.7s,mb4.1,baz=170,slow=8.2,SNR=25							
KAKA	**Kakadu**	**44.97**	**112**	*e*P		**P**	**12 19 13.3**	**-0.

BOD	**Bodaibo**	**57.31**	**15**	*e*P		**P**	**12 20 45.5**	**-0.6**
BOD					pmax	pmax			
	comp=Z,7.0nm,1.4s,mb4.5								
KLR	**Kul'dur**	**57.62**	**31**	*e*P		**P**	**12 20 44.2**	**-4.3**
KIV	**Kislovodsk**	**58.04**	**321**	*e*P		**P**	**12 20 52.4**	**+0.8**
KIV					pmax	pmax			
	comp=Z,22nm,1.1s,mb5.1								
SVE	**Sverdlovsk**	**58.11**	**341**	*e*P		**P**	**12 20 52.0**	**+0.3**
SVE					pmax	pmax			
	comp=Z,16nm,1.0s,mb5.0								
MALT	**Malatya**	**58.41**	**314**	*e*P		**P**	**12 20 53.7**	**-0.6**
MALT					pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.7								
MALT	**Malatya**	**58.41**	**314**	*e*P		**P**	**12 20 53.7**	**-0.5**
	comp=Z,7.5nm,1.1s,mb4.6								
CTA	**Charters Tower**	**59.82**	**116**	P		**P**	**12 21 04.2**	**-0.2**
	comp=Z,3.2nm,0.6s,mb4.5,baz=334,slow=9.2,SNR=3.4								
STKA	**Stephens Creek**	**60.16**	**130**	*e*P		**P**	**12 21 07.0**	**+0.5**
	comp=Z,5.5nm,0.8s,mb4.6								
STKA	**Stephens Creek**	**60.16**	**130**	P		**P**	**12 21 07.2**	**+0.7**
	comp=Z,6.7nm,0.8s,mb4.7,baz=289,slow=6.1,SNR=8.5								
BR131	**Keskin Array S**	**62.40**	**313**	*e*P		**P**	**12 21 21.4**	**-0.1**
	comp=Z,0.9nm,0.4s,mb4.3								
YAK	**Yakutsk**	**65.36**	**19**	*e*P		**P**	**12 21 48.1**	**+7.5**
YAK					pmax	pmax			
	comp=Z,13nm,0.9s,mb5.2								
YAK					pmax	pmax			
	comp=N,5.0nm,1.2s								
YAK					pmax	pmax			
	comp=E,2.0nm,0.8s								
OBN	**Obninsk**	**67.04**	**330**	*e*P		**P**	**12 21 54.4**	**+2.9**
OBN					pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.7								
AKASG	**Malin Array Be**	**69.19**	**324**	P		**P**	**12 22 06.4**	**+1.3**
	comp=Z,1.5nm,0.5s,mb4.4,baz=100,slow=4.5,SNR=7.5								
BUR08	**Bucovina Ar. S**	**70.70**	**320**	*e*P		**P**	**12 22 14.5**	**0.0**
TIXI	**Tiksi**	**72.27**	**12**	*e*P		**P**	**12 22 21.7**	**-1.8**
TIXI					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.8								
TIXI	**Tiksi**	**72.27**	**12**	P		**P**	**12 22 20.6**	**-2.9**
	comp=Z,12nm,0.8s,mb5.1								
JOF	**Joensuu**	**73.12**	**336**	*e*p		**P**	**12 22 27.8**	**-0.9**
	comp=Z,2.6nm,0.7s,mb4.5								
JOF	**Joensuu**	**73.12**	**336**	*e*P		**P**	**12 22 29.5**	**+0.8**
JOF					pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.5								
KAF	**Kangasniemi**	**74.90**	**334**	*e*p		**P**	**12 22 38.6**	**-0.5**
	comp=Z,5.5nm,0.8s,mb4.6								
KAF	**Kangasniemi**	**74.90**	**334**	*e*P		**P**	**12 22 39.9**	**+0.8**
KAF					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.6								
DPC	**Dobruska-Polom**	**77.02**	**321**	*e*P		**P**	**12 22 54.6**	**+3.1**
ARCES	**ARCESS Array B**	**78.04**	**341**	P		**P**	**12 22 55.2**	**-1.6**
	comp=Z,3.6nm,0.9s,mb4.5,baz=36,slow=6.3,SNR=8.3								
ARCES	**ARCESS Array B**	**78.04**	**341**	P		**P**	**12 22 55.2**	**-1.6**
GEC2	**GERESS Array S**	**78.46**	**319**	*e*P		**P**	**12 22 59.0**	**-0.6**
GERES	**GERESS Array B**	**78.46**	**319**	P		**P**	**12 22 59.9**	**+0.3**
	comp=Z,3.4nm,0.7s,mb4.6,baz=102,slow=6.2,SNR=24								
KHC	**Kasperske Hory**	**78.58**	**319**	*e*P		**P**	**12 23 03.5**	**+3.3**
BRG	**Berggiesshubel**	**78.60**	**321**	*e*P		**P**	**12 23 08.9**	**+8.6**
BRG					pmax	pmax			
	comp=Z,10.0nm,1.8s,mb4.5								
BRG	**Berggiesshubel**	**78.60**	**321**	*e*P		**P**	**12 23 08.9**	**+8.6**
	comp=Z,16nm,1.8s,mb4.8								
CLL	**Collm**	**79.25**	**321**	*i* P		**P**	**12 23 06.4**	**+2.6**
CLL					pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.6								
CLL	**Collm**	**79.25**	**321**	*i* (P)		**P**	**12 23 06.4**	**+2.6**
	comp=Z,6.0nm,1.0s,mb4.6								
GRA1	**Grafenberg Arr**	**80.18**	**320**	*e*P		**P**	**12 23 11.4**	**+2.5**
	comp=Z,4.0nm,1.1s,mb4.3								
GRF	**Grafenberg Arr**	**80.18**	**320**	*e*P		**P**	**12 23 11.4**	**+2.5**
GRF					pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.3								
GRF	**Grafenberg Arr**	**80.18**	**320**	*e*P		**P**	**12 23 11.4**	**+2.5**
GRF					pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.3								
GRF	**Grafenberg Arr**	**80.18**	**320**	*e*P		**P**	**12 23 11.4**	**+2.5**
	comp=Z,4.0nm,1.1s,mb4.3								
NOA	**NORSAR Array B**	**81.59**	**331**	P		**P**	**12 23 15.2**	**-1.0**
	comp=Z,0.4nm,0.7s,mb3.7,baz=241,slow=21,SNR=2.5								
NOA	**NORSAR Array B**	**81.59**	**331**	P		**P**	**12 23 15.2**	**-1.0**
KONO	**Kongsberg**	**82.21**	**330**	*e*P		**P**	**12 23 23.7**	**+4.2**
CDF	**Champ du Feu**	**82.67**	**318**	*e*P		**P**	**12 23 22.3**	**+0.2**
MBDF	**Montbardon**	**82.85**	**314**	*e*P		**P**	**12 23 23.0**	**-0.2**
	comp=Z,7.1nm,0.7s,mb4.7								
MBDF	**Montbardon**	**82.85**	**314**	*e*P		**P**	**12 23 23.0**	**-0.2**
MBDF					pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.8								
MBDF	**Montbardon**	**82.85**	**314**	*e*P		**P**	**12 23 23.0**	**-0.2**
	comp=Z,3.5nm,0.7s,mb4.7								
LPG	**La Plagne**	**82.89**	**315**	*e*P		**P**	**12 23 22.0**	**-1.4**
	comp=Z,12nm,0.7s,mb5.0								
LPG	**La Plagne**	**82.89**	**315**	*e*P		**P**	**12 23 22.0**	**-1.4**
LPG					pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.9								
LPG	**La Plagne**	**82.89**	**315**	*e*P		**P**	**12 23 22.0**	**-1.4**
	comp=Z,6.2nm,0.7s,mb5.0								
LPL	**La Plagne**	**82.91**	**315**	*e*P		**P**	**12 23 21.4**	**-2.1**
	comp=Z,18nm,0.9s,mb5.0								
LPL	**La Plagne**	**82.91**	**315**	*e*P		**P**	**12 23 21.4**	**-2.1**
LPL					pmax	pmax			
	comp=Z,9.0nm,0.9s,mb5.0								
LPL	**La Plagne**	**82.91**	**315**	*e*P		**P**	**12 23 21.4**	**-2.1**
	comp=Z,9.3nm,0.9s,mb5.0								
HINF	**Hinteralfeld**	**82.92**	**318**	*e*P		**P**	**12 23 22.6**	**-0.9**
HAU	**Haudompre**	**83.27**	**318**	*e*P		**P**	**12 23 24.0**	**-1.3**
CABF	**La Chapelle**	**83.39**	**316**	*e*P		**P**	**12 23 25.5**	**-0.5**
VIVF	**Saint-Julien-l**	**84.35**	**315**	*e*P		**P**	**12 23 30.3**	**-0.6**
	comp=Z,10nm,0.9s,mb4.8								
VIVF	**Saint-Julien-l**	**84.35**	**315**	*e*P		**P**	**12 23 30.3**	**-0.6**
VIVF					pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.7								
VIVF	**Saint-Julien-l**	**84.35**	**315**	*e*P		**P**	**12 23 30.3**	**-0.6**
	comp=Z,5.1nm,0.9s,mb4.8								
SMF	**Signal de Mont**	**84.94**	**316**	*e*P		**P**	**12 23 32.9**	**-0.9**
SSF	**Saint Saulge**	**85.17**	**317**	*e*P		**P**	**12 23 33.8**	**-1.2**
TORD	**Torodi Ar. Bea**	**87.73**	**283**	P		**P**	**12 23 47.8**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=147,slow=36,SNR=2.7								
ESDC	**Sonseca Array**	**90.96**	**310**	P		**P**	**12 24 05.2**	**+2.2**
	comp=Z,0.9nm,0.8s,mb4.2,baz=235,slow=28,SNR=4.1								
PDAR	**Pinedale Array**	**130.59**	**19**	PKP		PKPdf	12 30 11.2	+1.3
	comp=Z,0.3nm,0.7s,baz=100,slow=1.7,SNR=2.3								
NVAR	**Mina Array Bea**	**130.64**	**30**	PKP		PKPdf	12 30 11.7	+1.5
	comp=Z,0.6nm,0.6s,baz=281,slow=2.0,SNR=3.6								
TXAR	**Lajitas Array**	**144.74**	**21**	PKP		PKPdf	12 30 36.0	-0.3
	comp=Z,0.7nm,0.7s,baz=160,slow=0.7,SNR=10								
JCT	**Junction City**	**144.87**	**15**	*e*PKIKP		PKPdf	12 30 36.6	+0.1

*NEIC **30** 12:11:49.9, 31.12S×69.58W, h160km, mb3.5/1, MD3.8(GUC), After GUC.*

GUC 30 12:11:49.9±0.7, 3112S×6958W, h160km±7km, MD3.8, ML3.8, 8C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	**1.42**	**312**	*i*P	Pn	12 12 20.4	+1.0
TLL				*i* S	Sn	12 12 43.1	+1.1
OVCH	**Ovalle**	**1.49**	**290**	*i* P	Pn	12 12 20.7	+0.6
OVCH				*i* S	Sn	12 12 43.5	+0.4
OVCH				AML	AML	12 12 44.4	
	comp=N,482nm,0.1s						
OVCH	**Ovalle**	**1.49**	**290**	*i* P	Pn	12 12 20.7	+0.6
OVCH				*i* S	Sn	12 12 43.5	+0.4
PTCH	**Petorca**	**1.62**	**225**	*i* P	Pn	12 12 21.9	+0.5
PTCH				*i* S	Sn	12 12 45.9	+0.3
PTCH				AML	AML	12 12 48.5	
	comp=E,631nm,0.2s						
PTCH	**Petorca**	**1.62**	**225**	*i* P	Pn	12 12 21.9	+0.5
PTCH				*i* S	Sn	12 12 45.9	+0.3
JACH	**Jahuel**	**1.78**	**209**	*i*P	Pn	12 12 23.8	+0.7
JACH				*i* S	Sn	12 12 49.6	+0.8
CHNG	**Los Chungos**	**1.81**	**245**	*e*P	Pn	12 12 23.8	+0.4
CHNG				*i* S	Sn	12 12 49.5	+0.3
LSCH	**La Serena**	**1.88**	**310**	*i*P	Pn	12 12 24.6	+0.3
LSCH				*i* S	Sn	12 12 50.7	+0.1
PACH	**Papudo**	**2.12**	**228**	*i* P	Pn	12 12 27.2	+0.2
PACH				*i* S	Sn	12 12 56.0	+0.5
ROCH	**El Roble**	**2.21**	**213**	*i*P	Pn	12 12 28.4	+0.4
ROCH				*i* S	Sn	12 12 58.3	+0.9
PEL	**Peldehue**	**2.22**	**205**	*i* P	Pn	12 12 28.5	+0.4
PEL				*i* S	Sn	12 12 58.2	+0.5
PEL				AML	AML	12 13 00.5	
	comp=E,420nm,0.2s						

FCH	**Farellones**	**2.28**	**195**	*i* P		Pn	12 12 30.0	+1.1
FCH				*i* S		Sn	12 13 00.5	+1.5
FCH				AML		AML	12 13 05.1	
	comp=N,344nm,0.2s							
LCO	**Las Campanas**	**2.32**	**335**	*e*Pn		Pn	12 12 29.9	+0.5
LCO				*e*Sn		Sn	12 13 00.1	+0.4
CLCH	**Cerro Calan**	**2.41**	**199**	*i*P		Pn	12 12 31.1	+0.8
CLCH				*i* S		Sn	12 13 02.7	+1.0
CLCH				AML		AML	12 13 04.7	
	comp=E,332nm,0.3s							
CLCH				AML		AML	12 13 11.3	
	comp=E,381nm,0.4s							
RCDM	**Rinconada Maip**	**2.58**	**203**	*i* P		Pn	12 12 33.1	+0.7
RCDM				*i* S		Sn	12 13 06.0	+0.7
RCDM				AML		AML	12 13 07.0	
	comp=E,548nm,0.2s							
SJCH	**San Jose de Ma**	**2.60**	**194**	AML		AML	12 13 10.3	
	comp=N,162nm,0.2s							
ANTU	**Antumapu**	**2.60**	**200**	*i* P		Pn	12 12 33.7	+1.1
ANTU				*i* S		Sn	12 13 06.6	+0.8
ANTU				AML		AML	12 13 08.9	
	comp=N,349nm,0.5s							
ANTU	**Antumapu**	**2.60**	**200**	*i* P		Pn	12 12 33.7	+1.1
ANTU				*i* S		Sn	12 13 06.6	+0.8
PCH	**Pirque**	**2.62**	**197**	*i*P		Pn	12 12 34.0	+1.2
PCH				*i* S		Sn	12 13 06.4	+0.3
VACH	**Vallenar**	**2.74**	**338**	*i* P		Pn	12 12 33.9	-0.5
VACH				*i* S		Sn	12 13 08.2	-0.5
LMEL	**Las Melosas**	**2.77**	**191**	*e*P		Pn	12 12 35.6	+0.9
LMEL				*i* S		Sn	12 13 10.8	+1.3
LMEL				AML		AML	12 13 17.1	
	comp=N,306nm,0.2s							
LMEL	**Las Melosas**	**2.77**	**191**	*e*P		Pn	12 12 35.6	+0.9
LMEL				*i* S		Sn	12 13 10.8	+1.3
TACH	**Talagante**	**2.77**	**204**	*i*P		Pn	12 12 35.2	+0.4
TACH				*i* S		Sn	12 13 10.1	+0.5
CHCH	**Chadas Angostu**	**2.95**	**198**	*i*P		Pn	12 12 37.5	+0.6
CHCH				*i* S		Sn	12 13 14.0	+0.6
CACH	**El Canelo**	**3.11**	**196**	*i*P		Pn	12 12 40.5	+1.5
CACH				*i* S		Sn	12 13 18.6	+1.6
LNV	**Longovilo**	**3.22**	**208**	*i* P		Pn	12 12 40.0	-0.3
LNV				*i* S		Sn	12 13 18.9	-0.7
CICH	**Cipreses**	**3.27**	**192**	*i*P		Pn	12 12 41.9	+0.9
CICH				*i* S		Sn	12 13 21.2	+0.5
SFDO	**San Fernando**	**3.69**	**199**	*i*P		Pn	12 12 46.6	+0.3
SFDO				*i* S		Sn	12 13 30.0	-0.2
TRQA	**Tornquist**	**9.33**	**140**	*e*P		Pn	12 13 58.6	-2.2
TRQA				*e*S		Sn	12 15 33.1	-11
LPAZ	**La Paz**	**14.82**	**5**	*e*P		Pn	12 15 15.3	+3.5
	comp=N,1.8nm,0.8s							

*NEIC **30** 12:28:19.5±3.2, 18.35S×167.81E, h402km±30km, Error ellipse: s-maj=32.4km s-min=19.2km az=76.0*

IDC 30 12:28:18.8±4.3, 1833S×16783E, h393km±44km, mb3.4/3, mb1 3.6/4, mb1mx3.2/15, mbtmp3.6/4, Error ellipse: s-maj=37.1km s-min=23.6km az=60.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**11.69**	**318**	P	Pn	12 30 55.2	-1.4
	12nm,0.3s,baz=166,slow=20,SNR=11						
HNR	**Honiara**	**11.69**	**318**	*e*P	Pn	12 30 55.9	-0.7
RPZ	**Rata Peaks**	**25.46**	**175**	P	P	12 33 12.8	0.0
	9.3nm,0.5s,baz=13,slow=14,SNR=2.8						
WRA	**Warramunga Arr**	**31.66**	**262**	P	P	12 34 07.5	-0.1
	0.6nm,0.8s,baz=92,slow=8.0,SNR=5.1						
ASAR	**Alice Springs**	**32.07**	**255**	P	P	12 34 11.2	+0.1
	2.1nm,0.4s,baz=82,slow=8.7,SNR=118						
ARCES	**ARCESS Array B**	**123.85**	**345**	PKP	PKPdf	12 46 29.2	-0.8
	1.9nm,0.8s,baz=57,slow=2.5,SNR=4.6						
ARCES	**ARCESS Array B**	**123.85**	**345**	PKP	PKPdf	12 46 29.2	-0.8
NOA	**NORSAR Array B**	**134.22**	**344**	PKP	PKPdf	12 46 50.8	+0.9
	0.8nm,0.8s,baz=24,slow=1.9,SNR=2.7						
GERES	**GERESS Array B**	**143.06**	**331**	PKP	PKPdf	12 47 06.1	-0.3
	0.7nm,0.7s,baz=37,slow=1.9,SNR=5.5						

*IDC **30** 12:37:28.4±1.1, 540S×152.51E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.9/17, mbtmp4.0/10, ML4.3/1, Error ellipse: s-maj=31.8km s-min=19.6km az=106.0*

*ISCJB **30** 12:37:31.8±2.5, 54S±0.1×152.7E±0.1, h38km±26km, mb4.0/13, Error ellipse: s-maj=24.5km s-min=15.2km az=148.3*

*NEIC **30** 12:37:35.3±1.5, 552S×152.65E, h56km±15km, mb4.2/3, Error ellipse: s-maj=16.4km s-min=10.0km az=150.0*

ISC 30 12:37:35.2±2.0, 55S±0.1×152.6E±0.1, h53km±22km, n22, σ0s89/20, mb4.0/13, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.68**	**234**	*e*Pn	**Pn**	**12 39 11.3**	**+0.6**
	1.7nm,0.6s						
HNR	**Honiara**	**8.23**	**119**	Pn	**Pn**	**12 39 31.5**	**-0.5**
	3.9nm,0.3s,baz=333,slow=16,SNR=3.1						
KAKA	**Kakadu**	**21.18**	**249**	*e*P	**P**	**12 42 14.6**	**-1.8**
	11nm,0.9s,mb4.2						
WRAB	**Tennant Creek**	**22.85**	**229**	*e*P	**P**	**12 42 35.1**	**+1.0**
	5.7nm,0.8s,mb4.0						
WB2	**Warramunga Arr**	**22.86**	**229**	*e*P	**P**	**12 42 35.4**	**+1.2**
WB2	**Warramunga Arr**	**22.86**	**229**	*e*P	**P**	**12 42 34.1**	**0.0**
WRA	**Warramunga Arr**	**22.87**	**229**	P	**P**	**12 42 35.1**	**+0.8**
	2.4nm,0.7s,mb3.8,baz=53,slow=9.8,SNR=12						
ASAR	**Alice Springs**	**25.53**	**223**	P	**P**	**12 42 59.0**	**-0.1**
	1.1nm,0.7s,mb3.5,baz=57,slow=8.8,SNR=14						
STKA	**Stephens Creek**	**28.20**	**200**	P	**P**	**12 43 23.0**	**+0.1**
	1.0nm,0.5s,mb3.7,baz=45,slow=17,SNR=4.3						
STKA	**Stephens Creek**	**28.20**	**200**	*e*P	**P**	**12 43 22.9**	**0.0**
BATI	**Baumata**	**29.07**	**259**	P	**P**	**12 43 27.2**	**-3.7**
	10nm,0.3s,mb5.0,baz=240,slow=0.7,SNR=3.0						
FITZ	**Fitzroy Crossi**	**29.19**	**242**	*e*P	**P**	**12 43 31.0**	**-0.9**
	2.8nm,0.4s,mb4.3						
FITZ	**Fitzroy Crossi**	**29.19**	**242**	P	**P**	**12 43 30.4**	**-1.5**
	1.8nm,0.6s,mb4.0,baz=98,slow=9.8,SNR=10						
CMAR	**Chiang Mai Arr**	**58.03**	**296**	P	**P**	**12 47 22.1**	**-1.1**
	0.5nm,0.4s,mb3.9,baz=109,slow=7.2,SNR=3.3						
PETK	**Petropavlovsk-**	**58.55**	**4**	P	**P**	**12 47 26.5**	**+0.4**
	1.2nm,0.6s,mb4.1,baz=158,slow=7.0,SNR=4.6						
PETK	**Petropavlovsk-**	**58.55**	**4**	P	**P**	**12 47 26.5**	**+0.4**
SONM	**Songino Array**	**66.83**	**328**	P	**P**	**12 48 22.0**	**+0.6**
	0.7nm,0.6s,mb3.9,baz=129,slow=4.9,SNR=3.7						
MKAR	**Makanchi Array**	**80.75**	**319**	P	**P**	**12 49 43.6**	**+0.6**
	0.5nm,0.6s,mb3.6,baz=94,slow=7.4,SNR=4.9						
ZALV	**Zalesovo Beam**	**81.65**	**326**	P	**P**	**12 49 46.9**	**-0.6**
	0.6nm,0.5s,mb3.8,baz=110,slow=5.8,SNR=3.0						
KURK	**Kurchatov**	**84.22**	**322**	P	**P**	**12 50 01.7**	**+0.8**
	2.5nm,0.9s,mb4.3						
TOA0	**Torodi Ar. Sit**	**150.37**	**287**	*e*PKPdf	PKPdf	12 57 16.4	-0.1
TORD	**Torodi Ar. Bea**	**150.37**	**287**	PKPbc	PKPbc	12 57 21.5	-0.3
	1.5nm,0.7s,baz=87,slow=2.3,SNR=6.7						
TORD				PKPab	PKPab	12 57 28.4	+0.2
	1.1nm,0.5s,baz=76,slow=3.7,SNR=13						

*IDC **30** 12:46:35.2±0.9, 627S×130.93E, h0km, mb4.2/5, mb1 4.5/9, mb1mx4.2/17, mbtmp4.4/9, ML4.6/4, Error ellipse: s-maj=38.5km s-min=19.3km az=72.0*

*ISCJB **30** 12:46:38.4±0.6, 648S±005×130.69E±0.07, h33km, mb4.2/7, Error ellipse: s-maj=9.8km s-min=6.6km az=161.6*

*NEIC **30** 12:46:40.8±0.4, 638S×130.71E, h35km, mb4.0/5, Error ellipse: s-maj=13.1km s-min=7.7km az=70.0*

*DJA **30** 12:46:46, 650S×130.85E, h160km, MLv4.6/4*

ISC 30 12:46:46.5±1.9, 679S±009×13069E±008, h104km±21km, n24, σ1s26/30, mb4.1/7, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.13**	**164**	*e*P	**Pn**	**12 48 17.9**	**+3.4**
	95nm,0.1s						
KAKA				*e*S	**Sn**	**12 49 25.4**	**+2.1**
BATI	**Baumata**	**7.73**	**244**	Pn	**Pn**	**12 48 37.0**	**+0.6**
	2.1nm,0.3s,baz=334,slow=13,SNR=2.1						
BATI				Sn	**Sn**	**12 50 01.6**	**-0.8**
	3.0nm,0.3s,baz=146,slow=12,SNR=2.3						
FITZ	**Fitzroy Crossi**	**12.27**	**203**	*i*P	**Pn**	**12 49 37.3**	**-0.4**
	10nm,0.3s						
FITZ				*e*S	**Sn**	**12 51 46.0**	**-6.7**
FITZ	**Fitzroy Crossi**	**12.27**	**203**	Pn	**Pn**	**12 49 38.8**	**+1.1**
	2.4nm,0.3s,baz=32,slow=13,SNR=68						
FITZ				Sn	**Sn**	**12 51 49.1**	**-3.6**
	3.2nm,0.3s,baz=214,slow=20,SNR=9.8						
FITZ	**Fitzroy Crossi**	**12.27**	**203**	*e*Pn	**Pn**	**12 49 37.7**	**0.0**
FITZ				*e*Sn	**Sn**	**12 51 42.6**	**-10**

WRA	**Warramunga Arr**	**13.54**	**165**	Pn		**Pn**	**12 49 53.7**	**-0.7**
	5.5nm,0.3s,baz=349,slow=13,SNR=83								
WRA				Sn		**Sn**	**12 52 21.4**	**-2.0**
	4.1nm,0.3s,baz=335,slow=22,SNR=6.2								
WB2	**Warramunga Arr**	**13.54**	**165**	*e*P		**Pn**	**12 49 53.8**	**-0.6**
WB2				*e*S		**Sn**	**12 52 19.8**	**-3.7**
WB2	**Warramunga Arr**	**13.54**	**165**	*e*Pn		**Pn**	**12 49 53.6**	**-0.8**
COEN	**Coen**	**14.19**	**121**	*e*Pn		**Pn**	**12 50 01.8**	**-1.0**
	8.4nm,0.5s								
COEN				*e*Sn		**Sn**	**12 52 27.8**	**-11**
ASAR	**Alice Springs**	**17.06**	**170**	P		**Pn**	**12 50 42.5**	**+3.8**
	2.6nm,0.3s,baz=349,slow=8.3,SNR=185								
ASAR				S		**S**	**12 53 49.7**	**+0.6**
	0.9nm,0.3s,baz=349,slow=24,SNR=7.4								
MBWA	**Marble Bar**	**17.79**	**216**	*e*P		**Pn**	**12 50 50.5**	**+3.0**
	2.8nm,0.6s								
CTA	**Charters Tower**	**20.07**	**133**	P		**P**	**12 51 14.2**	**+2.5**
	4.9nm,0.8s,baz=319,slow=9.2,SNR=4.5								
FORT	**Forrest**	**23.99**	**186**	*e*P		**P**	**12 52 01.3**	**+10**
	12nm,0.7s,mb4.3								
STKA	**Stephens Creek**	**26.95**	**159**	*e*P		**P**	**12 52 22.7**	**+4.4**
	4.2nm,1.6s,mb3.7								
ULN	**Ulaanbaatar**	**58.28**	**341**	*e*P		**P**	**12 56 30.2**	**0.0**
	1.2nm,0.7s,mb4.0								
SONM	**Songino Array**	**58.47**	**341**	P		**P**	**12 56 31.7**	**+0.2**
	0.4nm,0.5s,mb3.7,baz=150,slow=6.4,SNR=3.3								
MK31	**Makanchi Array**	**68.43**	**326**	*e*P		**P**	**12 57 37.3**	**+0.1**
MKAR	**Makanchi Array**	**68.43**	**326**	P		**P**	**12 57 37.4**	**+0.2**
	6.2nm,0.4s,mb4.8,baz=114,slow=8.1,SNR=71								
ZALV	**Zalesovo Beam**	**71.70**	**333**	P		**P**	**12 57 56.1**	**-0.9**
	1.0nm,0.6s,mb3.8,baz=120,slow=5.3,SNR=4.6								
KURK	**Kurchatov**	**72.70**	**328**	P		**P**	**12 58 02.7**	**-0.3**
	1.7nm,0.5s,mb4.2,baz=127,slow=4.8,SNR=7.8								
KURK	**Kurchatov**	**72.70**	**328**	*e*P		**P**	**12 58 02.7**	**-0.4**
	2.2nm,0.8s,mb4.0								
TORD	**Torodi Ar. Bea**	**129.44**	**281**	PKP		PKPdf	13 05 45.6	+1.6
	0.3nm,0.3s,baz=86,slow=2.0,SNR=11								
LPAZ	**La Paz**	**150.45**	**141**	PKPbc		PKPbc	13 06 29.8	+2.8
	0.7nm,0.4s,baz=317,slow=1.4,SNR=8.4								
LPAZ	**La Paz**	**150.45**	**141**	*e*PKPbc		PKPbc	13 06 30.7	+3.8

IDC 30 12:56:52.3±82.0, 2063S×17865E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/15, mbtmp3.6/3, Error ellipse: s-maj=1450.0km s-min=158.5km az=82.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.92**	**244**	P	P	13 03 45.6	-0.2
	1.1nm,0.6s,baz=90,slow=8.1,SNR=3.3						
ASAR	**Alice Springs**	**41.44**	**257**	P	P	13 04 41.0	0.0
	0.4nm,0.5s,baz=91,slow=8.5,SNR=13						
WRA	**Warramunga Arr**	**41.48**	**263**	P	P	13 04 41.3	+0.1
	0.3nm,0.3s,baz=95,slow=7.8,SNR=5.4						

JMA 30 13:10:14.3±0.2, 2960N×13168E, h50km, M3.5, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	**Tanegashima 3**	**1.21**	**330**	P	Pn	13 10 35.2	+0.3
JTN				S	Sn	13 10 51.1	+0.9
JKC	**Kuchinoerabu**	**1.55**	**304**	P	Pn	13 10

s-maj=184.5km s-min=88.4km az=83.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.42**	**252**	*e*P	Pn	13 23 16.1	+1.3
CTA	**Charters Tower**	**21.24**	**269**	P	P	13 27 22.2	+0.5
	5.5nm,1.0s,baz=82,slow=16,SNR=3.6						
STKA	**Stephens Creek**	**26.53**	**241**	P	P	13 28 13.8	+0.4
	1.9nm,0.9s,baz=74,slow=7.4,SNR=3.6						
WB2	**Warramunga Arr**	**32.35**	**266**	*e*P	P	13 29 04.3	-0.9
WRA	**Warramunga Arr**	**32.36**	**266**	P	P	13 29 04.6	-0.8
	0.6nm,0.5s,baz=98,slow=8.0,SNR=17						
ASAR	**Alice Springs**	**32.39**	**259**	P	P	13 29 05.5	-0.1
	1.0nm,0.5s,baz=96,slow=10,SNR=29						
FITZ	**Fitzroy Crossi**	**40.78**	**267**	*e*P	P	13 30 17.9	+0.7
	4.5nm,1.3s						
FITZ	**Fitzroy Crossi**	**40.78**	**267**	P	P	13 30 16.9	-0.3
	1.5nm,0.9s,baz=159,slow=14,SNR=6.5						
BATI	**Baumata**	**44.79**	**277**	P	P	13 30 50.5	+0.7
	6.8nm,0.3s,baz=87,slow=22,SNR=6.9						

IDC ***30*** *13:25:17.3±3.3, 1054N×14622E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/19, mbtmp3.7/7, ML4.3/1, MS3.5/3, Ms1 3.5/3, ms1mx3.2/33, Error ellipse: s-maj=108.0km s-min=20.0km az=84.0*

NEIC ***30*** *13:25:18.9±2.0, 1051N×146.16E, h10km, mb4.2/2, Error ellipse: s-maj=69.5km s-min=10.7km az=84.0*

ISCJB ***30*** *13:25:20.4±2.1, 1055N±0.10×146.1E±0.5, h33km, mb3.8/8, Error ellipse: s-maj=71.7km s-min=9.2km az=171.2*

ISC 30 13:25:22.9±2.1, 1056N±010×1461E±05, h35km, n14, σ1♦03/14, mb3.8/8, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.23**	**339**	Pn	**Pn**	**13 26 09.2**	**-1.9**
	34nm,0.3s,baz=202,slow=0.0,SNR=58						
GUMO				LR	LR	13 26 47.0	
	comp=Z,224nm,18.4s,baz=135,slow=27						
GUMO				Sn	**Sn**	**13 26 47.5**	**-0.9**
	48nm,0.3s,SNR=5.1						
GUMO	**Guam**	**3.23**	**339**	*e*Pn	**Pn**	**13 26 09.2**	**-1.9**
GUMO				LR	LR	13 26 47.0	
GUMO				Sn	**Sn**	**13 26 47.5**	**-0.9**
CBIJ	**Chichi jima**	**16.85**	**348**	LR	LR	13 33 36.8	
	comp=Z,185nm,21.4s,baz=276,slow=30						
KSRS	**Korea Array**	**31.36**	**332**	P	**P**	**13 31 39.7**	**-0.6**
	0.8nm,0.8s,mb3.6,baz=148,slow=9.8,SNR=4.1						
WB2	**Warramunga Arr**	**32.42**	**201**	*e*P	**P**	**13 31 48.4**	**-1.4**
WRA	**Warramunga Arr**	**32.43**	**201**	P	**P**	**13 31 49.1**	**-0.7**
	0.6nm,0.7s,mb3.5,baz=11,slow=8.7,SNR=6.0						
ASAR	**Alice Springs**	**35.03**	**199**	P	**P**	**13 32 20.8**	**-0.2**
	0.5nm,0.6s,mb3.6,baz=19,slow=7.4,SNR=15						
PETK	**Petropavlovsk-**	**43.46**	**10**	LR	LR	13 47 50.1	
	comp=Z,198nm,21.2s,baz=171,slow=31						
CMAR	**Chiang Mai Arr**	**46.17**	**285**	P	**P**	**13 33 45.4**	**+0.7**
	0.8nm,0.6s,mb3.8,baz=94,slow=6.3,SNR=5.2						
ULN	**Ulaanbaatar**	**49.52**	**326**	*e*P	**P**	**13 34 11.1**	**+1.0**
	1.5nm,0.8s,mb4.1						
SONM	**Songino Array**	**49.87**	**326**	P	**P**	**13 34 14.1**	**+1.4**
	0.8nm,0.6s,mb3.9,baz=130,slow=5.9,SNR=8.9						
MK31	**Makanchi Array**	**64.47**	**317**	P	**P**	**13 35 56.8**	**+0.8**
MKAR	**Makanchi Array**	**64.47**	**317**	P	**P**	**13 35 57.0**	**+1.0**
	0.3nm,0.3s,mb3.8,baz=91,slow=9.7,SNR=6.7						
KURK	**Kurchatov**	**67.64**	**321**	P	**P**	**13 36 17.1**	**+0.8**
	1.8nm,0.6s,mb4.3						

IDC ***30*** *13:40:25.2±1.8, 4906S×16435E, h0km, mb4.0/4, mb1 4.2/5, mb1mx4.0/12, mbtmp4.0/5, ML3.7/1, Error ellipse: s-maj=48.2km s-min=30.5km az=162.0*

NEIC ***30*** *13:40:27.0±2.2, 4899S×16435E, h10km, mb4.1/1, Error ellipse: s-maj=52.1km s-min=17.9km az=165.0*

ISC 30 13:40:25.5±4.9, 496S±06×1647E±05, h35km, n12, σ0♦65/11, mb4.0/5, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**7.30**	**39**	Pn	**Pn**	**13 42 09.5**	**0.0**
	1.3nm,0.3s,baz=294,slow=20,SNR=2.9						
RPZ				Sn	**Sn**	**13 43 31.1**	**0.0**
	4.2nm,0.3s,baz=103,slow=18,SNR=4.2						
SNZO	**South Karori**	**10.83**	**44**	*e*P	**Pn**	**13 42 51.2**	**-6.8**
STKA	**Stephens Creek**	**24.74**	**307**	P	**P**	**13 45 44.3**	**+0.8**
	3.4nm,0.8s,mb3.9,baz=149,slow=6.9,SNR=4.8						
STKA	**Stephens Creek**	**24.74**	**307**	*e*P	**P**	**13 45 45.0**	**+1.4**
ASAR	**Alice Springs**	**35.36**	**306**	P	**P**	**13 47 17.8**	**+0.2**
	1.4nm,0.6s,mb4.0,baz=137,slow=7.8,SNR=41						
ASAR				PcP	PcP	13 49 50.5	+3.4
	0.5nm,1.0s,baz=156,slow=2.9,SNR=3.9						
ASAR	**Alice Springs**	**35.36**	**306**	P	**P**	**13 47 17.8**	**+0.2**
ASAR				PcP	PcP	13 49 50.5	+3.3
WB2	**Warramunga Arr**	**38.22**	**310**	*e*P	**P**	**13 47 41.3**	**-0.6**
WRA	**Warramunga Arr**	**38.22**	**310**	P	**P**	**13 47 41.5**	**-0.4**
	1.2nm,0.7s,mb3.7,baz=136,slow=7.8,SNR=16						
WRA				PcP	PcP	13 49 59.0	+3.2
	0.8nm,0.8s,baz=124,slow=3.1,SNR=6.1						
WRAB	**Tennant Creek**	**38.23**	**310**	*e*P	**P**	**13 47 41.5**	**-0.4**
	2.9nm,0.8s,mb4.1						
MJAR	**Matsushiro Arr**	**88.91**	**339**	P	**P**	**13 53 19.6**	**+3.9**
	1.7nm,0.9s,mb4.4,baz=161,slow=4.9,SNR=3.6						
AKASG	**Malin Array Be**	**151.78**	**290**	PKPbc	PKPbc	14 00 19.3	+4.0
	2.1nm,0.6s,baz=83,slow=3.0,SNR=9.5						
GERES	**GERESS Array B**	**161.10**	**279**	PKPab	PKPab	14 01 08.6	+3.9
	1.2nm,0.8s,baz=127,slow=4.0,SNR=12						

IDC 30 14:18:18.4±47.0, 1798S×17659W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=876.6km s-min=161.7km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.11**	**242**	P	P	14 25 56.6	+0.6
	2.2nm,0.8s,baz=90,slow=19,SNR=4.5						
WRA	**Warramunga Arr**	**46.32**	**259**	P	P	14 26 46.3	-0.1
	0.5nm,0.4s,baz=98,slow=7.4,SNR=26						
ASAR	**Alice Springs**	**46.44**	**254**	P	P	14 26 46.8	-0.5
	0.7nm,0.4s,baz=87,slow=8.4,SNR=41						

ISCJB ***30*** *14:52:15.6±1.1, 2444N±006×9885E±03, h10km, mb3.4/3, MS3.4/2, Error ellipse: s-maj=37.8km s-min=7.8km az=173.3*

IDC ***30*** *14:52:16.6±1.4, 2465N×9911E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/23, mbtmp3.3/4, ML3.2/1, MS3.5/2, Ms1 3.5/2, ms1mx3.0/33, Error ellipse: s-maj=47.9km s-min=21.5km az=74.0*

ISC 30 14:52:18.1±1.1, 2457N±006×990E±03, h10km, n8, σ1♦00/8, mb3.4/3, MS3.4/2, 1C, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHRT	**Chiangrai**	**4.74**	**171**	PG	**Pg**	**14 53 48.5**	**-0.4**
CHRT				SG	**Sg**	**14 54 50.5**	**+0.2**
CHG	**Chiang Mai**	**5.73**	**181**	⇑P	**Sg**	**14 55 22.6**	**+0.3**
	23nm,0.6s						
CMAR	**Chiang Mai Arr**	**6.09**	**181**	Pn	**Pn**	**14 53 50.1**	**+1.9**
	0.1nm,0.3s,baz=357,slow=14,SNR=4.3						
CMAR				Pg	**Pg**	**14 54 12.5**	**-2.3**
	0.3nm,0.3s,baz=356,slow=18,SNR=11						
CMAR				Lg		14 55 32.1	
	1.0nm,0.3s,baz=356,slow=30,SNR=14						
MKAR	**Makanchi Array**	**25.89**	**333**	P	**P**	**14 57 50.1**	**-0.1**
	0.6nm,0.8s,mb3.2,baz=144,slow=8.7,SNR=5.4						
ZALV	**Zalesovo Beam**	**31.20**	**344**	LR	LR	15 11 06.3	
	comp=Z,21nm,18.0s,MS2.9,baz=58,slow=36						
ASAJ	**Asahikawa**	**40.37**	**50**	LR	LR	15 16 00.1	
	comp=Z,172nm,18.1s,MS3.9,baz=15,slow=35						
WRA	**Warramunga Arr**	**56.04**	**139**	P	**P**	**15 01 57.1**	**-0.3**
	0.7nm,0.9s,mb3.7,baz=326,slow=7.5,SNR=5.3						
ASAR	**Alice Springs**	**58.69**	**142**	P	**P**	**15 02 16.3**	**+0.3**
	0.3nm,0.8s,mb3.4,baz=339,slow=7.4,SNR=3.6						

SKHL 30 14:53:45.8±0.6, 5576N×13446E, h7km±2km, mb3.9/3, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKMR	**Ekimchan**	**2.84**	**199**	*e*Pn	Pn	14 54 32.4	+1.0
EKMR				pPn		14 54 34.6	
EKMR				*e*Pg	Pg	14 54 36.5	-3.6
EKMR				AMB	AMB	14 54 37.9	
	14nm,0.3s						
EKMR				AMB	AMB	14 54 37.9	
	5.0nm,0.3s						
EKMR				AMB	AMB	14 54 37.9	
	16nm,0.3s						
EKMR				*e*Sg	Sg	14 55 13.3	-3.5
EKMR				A		14 55 16.3	
	51nm,0.5s						
EKMR				A		14 55 16.3	
	69nm,0.5s						
EKMR				A		14 55 16.3	
	28nm,0.5s						
BMKR	**Bomnak**	**3.38**	**254**	*e*Pn	Pn	14 54 40.0	+1.0
BMKR				*e*Pg	Pg	14 54 47.0	-3.6
BMKR				AMB	AMB	14 54 48.8	
	11nm,0.5s						
BMKR				AMB	AMB	14 54 48.8	
	34nm,0.5s						
BMKR				AMB	AMB	14 54 48.8	
	35nm,0.5s						
BMKR				pPg		14 54 50.0	
BMKR				*e*Sn	Sn	14 55 19.3	0.0
BMKR				*e*Sg	Sg	14 55 31.4	-3.0
BMKR				A		14 55 35.2	
	54nm,0.3s						
BMKR				A		14 55 35.2	
	85nm,0.3s						
BMKR				A		14 55 35.2	
	35nm,0.3s						
NKL	**Nikolayevsk**	**4.47**	**123**	*e*Sg	Sg	14 56 06.2	-3.1
NKL				A		14 56 13.9	
	20nm,0.9s						
KROS	**Kirovskiy**	**4.50**	**256**	*e*rx	rx	14 55 04.3	
KROS				*e*Pg	Pg	14 55 06.8	-5.2
KROS				AMB	AMB	14 55 07.6	
	7.0nm,0.5s						
KROS				AMB	AMB	14 55 07.6	
	6.0nm,0.5s						
KROS				pPg		14 55 09.9	
KROS				*e*Sg	Sg	14 56 06.5	-3.8
KROS				A		14 56 10.1	
	24nm,0.5s						
KROS				A		14 56 10.1	
	12nm,0.5s						
KROS				A		14 56 10.1	
	8.0nm,0.5s						
ZEA	**Zeya**	**4.64**	**247**	*e*Sg	Sg	14 56 09.5	-5.2
GRNR	**Gornyy**	**5.14**	**166**	*e*Sg	Sg	14 56 26.2	-4.4
GRNR				A		14 56 29.1	
	10.0nm,0.4s						
CLNS	**Chul'man**	**5.44**	**285**	*e*rx	rx	14 55 29.7	
CLNS				*e*Sg	Sg	14 56 36.3	-3.9
TUP	**Tupik**	**8.43**	**267**	*e*rx	rx	14 55 53.6	
TUP				*e*Sg	Sn	14 58 09.8	+46

IDC ***30*** *15:02:14.3±0.3, 1047N×14563E, h0km, mb5.6/29, mb1 5.5/31, mb1mx5.5/33, mbtmp5.5/31, ML4.5/2, MS4.7/27, Ms1 4.7/27, ms1mx4.6/40, Error ellipse: s-maj=14.1km s-min=9.6km az=83.0*

ISCJB ***30*** *15:02:14.0±0.9, 1050N±003×14561E±002, h6km±5km, mb5.7/187, MS5.0/222, Error ellipse: s-maj=4.3km s-min=3.5km az=172.7*

DJA ***30*** *15:02:16, 1053N×14574E, h14km, Mw6.0/40*

BJI ***30*** *15:02:16.7, 1053N×14587E, h33km, mB5.9, mb5.7, Ms5.0, Msz4.8*

MOS ***30*** *15:02:17.8±1.0, 1052N×14551E, h33km, mb6.0/74, MS4.9/54, Error ellipse: s-maj=8.6km s-min=4.8km az=103.1*

GCMT ***30*** *15:02:18.3±0.2, 1048N×14570E, h12km, MW5.5/100, Moment Tensor Solution. s63,c83; s100,c171; Duration: 1♦3 Moment tensor: Scale 10^17 Nm; Mrr 1.66±.03; Mθθ 0.28±.03; Mφφ -1.38±.03; Mrθ -0.00±.10; Mθφ 0.75±.02; Mφr 0.94±.09; Best double couple: M0 1.95700×10^17 NP1:φs 140.00000°, δ33.00000°, λ68.00000°. NP2:φs 346.00000°, δ59.00000°, λ104.00000°. Principal axes: T 1.9500, Plg72.0000°, Azm289.0000°; N 0.0170, Plg12.0000°, Azm159.0000°; P -1.9630, Plg13.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***30*** *15:02:18.3±0.1, 1052N×14559E, mb5.8/119, MS5.1/180, MW5.4 Error ellipse: s-maj=3.7km s-min=3.3km az=103.0, Moment Tensor Solution. s14 Moment tensor: Scale 10^17 Nm; Mrr 1.01; Mθθ 0.29; Mφφ -1.30; Mrθ -0.10; Mθφ 0.58; Mφr 0.49; Best double couple: M0 1.40000×10^17 NP1: φs 157.00000°, δ34.00000°, λ82.00000°. NP2: φs 346.00000°, δ56.00000°, λ95.00000°. Principal axes: T 1.1100, Plg78.0000°, Azm275.0000°; N 0.4700, Plg4.0000°, Azm163.0000°; P -1.5800, Plg10.0000°, Azm72.0000°;*

NEIC Felt at Yigo, Guam.

ISC 30 15:02:17.1±1.0, 1050N±003×14565E±002, h16km±5km, h22km±2.2km: pP-P, n723, σ0♦94/511, mb5.7/186, MS5.0/222, 54C-29D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.17**	**346**	Pn	**Pn**	**15 03 04.4**	**-1.9**
	276nm,0.3s,SNR=258						
GUMO				Sn	**Sn**	**15 03 40.3**	**-3.6**
	2μm,0.3s,SNR=10						
GUMO				LR	LR	15 03 45.8	
	comp=Z,3μm,19.7s,baz=315,slow=29						
GUMO	**Guam**	**3.17**	**346**	⇑*i*Pn	**Pn**	**15 03 04.2**	**-2.2**
GUMO				*e*Sn	**Sn**	**15 03 34.5**	**-9.4**
CBIJ	**Chichi jima**	**16.83**	**349**	Pn	**Pn**	**15 06 11.9**	**-0.3**
	2.9nm,0.3s,baz=236,slow=16,SNR=4.2						
CBIJ				Sn	**Sn**	**15 09 14.6**	**-4.4**
	1.6nm,0.3s,baz=270,slow=20,SNR=2.6						
BIPH	**Bislig**	**19.17**	**265**	‖*e*P	**Pn**	**15 06 39.9**	**-1.3**
MATI	**Mati**	**19.48**	**261**	*e*P	**Pn**	**15 06 44.5**	**-0.5**
PMG	**Port Moresby**	**19.83**	**176**	*c i*P	**Pn**	**15 06 47.1**	**-1.9**
PMG	**Port Moresby**	**19.83**	**176**	⇑*i*P	**Pn**	**15 06 47.0**	**-2.0**
	452nm,1.2s						
SCPH	**Surigao**	**19.86**	**270**	*e*P	**Pn**	**15 06 48.4**	**-0.9**
DAV	**Davao City (W)**	**20.12**	**262**	P	**P**	**15 06 51.4**	**+0.8**
	572nm,0.9s,baz=123,slow=2.9,SNR=12						
DAV				LR	LR	15 14 24.3	
	comp=Z,1μm,20.3s,baz=301,slow=36						
DAV	**Davao City (W)**	**20.12**	**262**	⇑*e*P	**P**	**15 06 47.8**	**-2.8**
PLP	**Palo**	**20.31**	**274**	‖*e*P	**P**	**15 06 53.4**	**+0.7**
MSLP	**Maasin**	**20.45**	**271**	*e*P	**P**	**15 06 54.9**	**+0.6**
BUKP	**Musuan**	**20.48**	**264**	*e*P	**P**	**15 06 55.4**	**+0.8**
CNP	**Catarman**	**20.66**	**278**	*e*P	**P**	**15 06 57.9**	**+1.5**
CGP	**Cagayan de Oro**	**20.76**	**266**	*e*P	**P**	**15 06 57.9**	**+0.3**
GSPH	**General Santos**	**20.94**	**260**	‖*e*P	**P**	**15 06 57.9**	**-1.7**
PVCP	**Virac**	**21.24**	**280**	*e*P	**P**	**15 07 03.8**	**+1.1**
LLP	**Lapu-Lapu**	**21.32**	**271**	*e*P	**P**	**15 07 03.9**	**+0.2**
TBP	**Tagbilaran**	**21.46**	**270**	*e*P	**P**	**15 07 04.6**	**-0.6**
PAGZ	**Pagadian**	**22.13**	**265**	*e*P	**P**	**15 07 13.5**	**+1.1**
RCP	**Roxas**	**22.50**	**275**	⇑*e*P	**P**	**15 07 16.2**	**0.0**
GUIM	**Jordan**	**22.67**	**272**	*e*P	**P**	**15 07 19.5**	**+1.5**
KALP	**Kalibo**	**22.90**	**275**	⇑*e*P	**P**	**15 07 24.9**	**+4.4**
JOW	**Kunigami**	**23.08**	**317**	P	**P**	**15 07 21.8**	**-0.5**
	139nm,0.8s,mb5.4,baz=149,slow=10,SNR=26						
JOW				LR	LR	15 14 31.2	
	comp=Z,1μm,21.8s,baz=88,slow=32						
JHJ	**Hachijo jima 2**	**23.15**	**347**	P	**P**	**15 07 22.9**	**-0.1**
	356nm,0.8s,mb5.8,baz=114,slow=12,SNR=4.6						
JHJ				LR	LR	15 16 37.1	
	comp=Z,2μm,18.1s,MS4.5,baz=196,slow=37						
OTRP	**Odiongan**	**23.23**	**277**	*e*P	**P**	**15 07 23.9**	**0.0**
PALP	**Palanan**	**23.46**	**289**	*e*P	**P**	**15 07 26.8**	**+0.4**
POLP	**Polilio Island**	**23.51**	**283**	*e*P	**P**	**15 07 28.3**	**+1.4**
CAUP	**Cauayan**	**24.00**	**288**	*e*P	**P**	**15 07 32.9**	**+1.5**
BALP	**Baler**	**24.00**	**285**	*e*P	**P**	**15 07 30.2**	**-1.3**
SJMP	**San Jose**	**24.11**	**277**	*e*P	**P**	**15 07 34.8**	**+2.4**
HNR	**Honiara**	**24.38**	**144**	P	**P**	**15 07 35.1**	**+0.3**
	102nm,1.0s,mb5.2,baz=325,slow=12,SNR=3.6						
HNR	**Honiara**	**24.38**	**144**	*e*P	**P**	**15 07 36.6**	**+1.7**
HNR				pmax	pmax		
	comp=Z,429nm,1.2s,mb5.8						
HNR				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.5						
HNR	**Honiara**	**24.38**	**144**	*e*P	**P**	**15 07 36.6**	**+1.7**
	comp=Z,429nm,1.2s,mb5.8						
HNR				LR	LR		
	comp=Z,2μm,19.0s,MS4.5						
COEN	**Coen**	**24.42**	**186**	*e*P	**P**	**15 07 34.5**	**-0.6**
	comp=Z,104nm,1.1s,mb5.2						
PCPH	**Palayan**	**24.43**	**284**	‖*e*P	**P**	**15 07 34.8**	**-0.6**
LUBP	**Lubang**	**25.04**	**280**	*e*P	**P**	**15 07 41.5**	**+0.6**
ABRA	**Dolores**	**25.19**	**289**	*e*P	**P**	**15 07 44.3**	**+2.0**
SCZP	**Santa Cruz**	**25.59**	**285**	*e*P	**P**	**15 07 46.4**	**+0.5**
ENPP	**El Nido**	**25.76**	**274**	*e*P	**P**	**15 07 48.4**	**+1.0**
KAKA	**Kakadu**	**26.52**	**210**	*e*P	**P**	**15 07 53.1**	**-1.2**
	comp=Z,295nm,1.0s,mb5.8						
NACB	**Ninganchiao**	**26.62**	**304**	*e*P	**P**	**15 07 54.2**	**-1.0**
MJAR	**Matsushiro Arr**	**26.79**	**347**	P	**P**	**15 07 54.4**	**-2.1**
	comp=Z,55nm,1.0s,mb5.0,baz=176,slow=10,SNR=63						
MJAR				PcP	PcP	15 11 19.4	+0.1
	comp=Z,8.7nm,1.0s,baz=165,slow=2.4,SNR=4.6						
MJAR				S	**S**	**15 12 36.5**	**+4.5**
	comp=Z,2.4nm,0.4s,baz=198,slow=16,SNR=13						
MJAR				LR	LR	15 18 39.0	
	comp=Z,800nm,18.2s,baz=165,slow=37						
MJAR	**Matsushiro Arr**	**26.79**	**347**	P	**P**	**15 07 54.4**	**-2.1**
MJAR						15 11 19.5	
MJAR				S	**S**	**15 12 36.5**	**+4.5**
MAJO	**Matsushiro**	**26.79**	**347**	P	**P**	**15 07 54.7**	**-1.8**
MAJO				pmax	pmax		
	comp=Z,430nm,1.3s,mb5.8						
MAJO	**Matsushiro**	**26.79**	**347**	*e*P	**P**	**15 07 54.4**	**-2.1**
	comp=Z,430nm,1.3s,mb5.8						
MAJO				LR	LR		
	comp=Z,2μm,22.0s,MS4.7						
MAT	**Matsushiro**	**26.79**	**347**	P	**P**	**15 07 54.5**	**-2.0**
MAT				S	**S**	**15 12 25.0**	**-7.0**
YHNB	**Yeheng**	**27.02**	**305**	*e*P	**P**	**15 07 58.4**	**-0.4**
	comp=Z,101nm,0.6s,mb5.5						
YHNB				LR	LR		
	comp=Z,2μm,19.0s,MS4.7						
TATO	**Taipei**	**27.07**	**305**	PFAKE		15 08 10.0	+11
TATO				LR	LR		
	comp=Z,2μm,22.0s,MS4.7						
MYLDM	**Lahad Datu**	**27.39**	**261**	‖P	**P**	**15 08 03.1**	**+0.8**
TSM	**Tawau**	**28.21**	**259**	‖P	**P**	**15 08 10.4**	**+0.9**
SDKM	**Sandakan**	**28.57**	**263**	⇑P	**P**	**15 08 13.0**	**+0.2**
KKM	**Kota Kinabalu**	**29.45**	**264**	‖P	**P**	**15 08 21.0**	**+0.4**
KKM	**Kota Kinabalu**	**29.45**	**264**	PFAKE		15 08 30.0	+9.4
KKM				LR	LR		
	comp=Z,3μm,21.0s,MS4.8						
BATI	**Baumata**	**30.02**	**227**	P	**P**	**15 08 24.6**	**-0.9**
	comp=Z,415nm,0.9s,mb6.2,baz=45,slow=0.2,SNR=39						
BATI				LR	LR	15 21 11.7	
	comp=Z,1μm,19.0s,MS4.6,baz=266,slow=38						
KAPI	**Kappang**	**30.04**	**240**	P	**P**	**15 08 24.9**	**-0.9**
	comp=Z,636nm,1.1s,mb6.3,SNR=12						
KAPI	**Kappang**	**30.04**	**240**	P	**P**	**15 08 25.0**	**-0.8**
	SNR=9.9						
KAPI	**Kappang**	**30.04**	**240**	P	**P**	**15 08 24.8**	**-1.0**
	comp=Z,92nm,1.0s,mb5.5,baz=70,slow=5.6,SNR=23						
KAPI	**Kappang**	**30.04**	**240**	*e*P	**P**	**15 08 24.4**	**-1.4**
	comp=Z,207nm,1.4s,mb5.7						
KAPI				LR	LR		
	comp=Z,2μm,20.0s,MS4.8						
CTA	**Charters Tower**	**30.40**	**179**	⇑*i*P	**P**	**15 08 28.6**	**-0.2**
	comp=Z,78nm,0.9s,mb5.4						
CTA	**Charters Tower**	**30.40**	**179**	LR	LR	15 19 26.9	
	comp=Z,786nm,19.8s,MS4.4,baz=0.4,slow=34						
CTA	**Charters Tower**	**30.40**	**179**	⇑*i*P	**P**	**15 08 28.6**	**-0.2**
CTA				pmax	pmax		
	comp=Z,78nm,0.9s						
CTAO	**Charters Tower**	**30.40**	**179**	P	**P**	**15 08 28.7**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,140nm,1.0s,mb5.7						
CTAO	**Charters Tower**	**30.40**	**179**	*e*P	**P**	**15 08 28.4**	**-0.4**
	comp=Z,140nm,1.0s,mb5.7						
CTAO				LR	LR		
	comp=Z,1μm,21.0s,MS4.5						
SSE	**Sheshan**	**30.57**	**316**	P	**P**	**15 08 29.8**	**-0.5**
SSE				S	**S**	**15 13 30.3**	**-1.4**
SSE				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
SSE				AMB	AMB		
	comp=Z,416nm,4.5s						
SSE				LR	LR		
	comp=N,674nm,18.2s,MS4.5						
SSE				LR	LR		
	comp=E,836nm,18.2s,MS4.5						
SSE				LR	LR		
	comp=Z,838nm,14.6s,MS4.5						
SSE	**Sheshan**	**30.57**	**316**	P	**P**	**15 08 29.7**	**-0.6**
	comp=Z,30nm,0.9s,mb5.1						
SSE				pP	pP	15 08 32.7	-2.4
SSE				S	**S**	**15 13 30.2**	**-1.5**
SSE				sS	sS	15 13 35.7	-3.9
SSE				SS	SS	15 15 40.0	-2.3
SSE				LR	LR		
	comp=Z,840nm,14.6s,MS4.5						
KSRS	**Korea Array**	**31.23**	**332**	P	**P**	**15 08 35.3**	**-0.7**
	comp=Z,82nm,0.9s,mb5.6,baz=146,slow=9.7,SNR=164						
KSRS				PcP	PcP	15 11 31.6	+1.1
	comp=Z,24nm,1.0s,baz=164,slow=2.8,SNR=20						
ERM	**Erimo**	**31.47**	**356**	*i*P	**P**	**15 08 39.4**	**+1.3**
ERM	**Erimo**	**31.47**	**356**	P	**P**	**15 08 38.6**	**+0.5**
	comp=Z,49nm,1.4s,mb5.1						
ERM				LR	LR		
	comp=Z,2μm,21.0s,MS4.7						
INCN	**Inchon**	**31.86**	**331**	⇑P	**P**	**15 08 42.6**	**+1.1**
	SNR=6.1						
INCN	**Inchon**	**31.86**	**331**	*e*P	**P**	**15 08 39.8**	**-1.7**
	comp=Z,50nm,1.1s,mb5.2						
INCN				LR	LR		
	comp=Z,1μm,19.0s,MS4.6						
WRAB	**Tennant Creek**	**32.22**	**200**	P	**P**	**15 08 44.0**	**-0.8**
	comp=Z,2μm,1.0s,SNR=87						
WRAB	**Tennant Creek**	**32.22**	**200**	*c i*P	**P**	**15 08 44.2**	**-0.6**
WRAB	**Tennant Creek**	**32.22**	**200**	⇑*i*P	**P**	**15 08 44.0**	**-0.8**
	comp=Z,315nm,1.0s,mb6.1						
WRAB				*e*PcP	PcP	15 11 33.8	+0.4
WRAB				LR	LR		
	comp=Z,981nm,20.0s,MS4.5						
WB2	**Warramunga Arr**	**32.23**	**200**	*e*P	**P**

WHN LR LR
comp=E,2μm,11.1s,MS5.2
WHN LR LR
comp=Z,2μm,16.3s
DL2 Dalian 35.50 327 ⇑ *i*P **P** **15 09 13.5 +0.3**
DL2 PCP PcP 15 11 42.8 +0.3
DL2 S **S** **15 14 47.5 -0.6**
DL2 AMB AMB
comp=Z,100nm,0.9s,mb5.8
DL2 AMB AMB
comp=Z,300nm,3.8s
DL2 LR LR
comp=N,650nm,16.7s,MS4.5
DL2 LR LR
comp=E,310nm,13.4s,MS4.5
DL2 LR LR
comp=Z,560nm,16.6s,MS4.4
QIZ Qiongzhong 35.59 288 P **P** **15 09 13.5 -0.7**
QIZ S **S** **15 14 51.5 +1.6**
QIZ AMB AMB
comp=Z,1μm,5.2s
QIZ LR LR
comp=N,1μm,21.4s
QIZ LR LR
comp=Z,2μm,27.9s
QIZ Qiongzhong 35.59 288 *e*P **P** **15 09 15.8 +1.6**
comp=Z,489nm,1.7s,mb6.2
ASAR Alice Springs 35.84 199 P **P** **15 09 15.7 -0.6**
comp=Z,112nm,0.9s,mb5.8,baz=14,slow=7.5,SNR=623
ASAR PP PP 15 10 42.9 +4.9
comp=Z,27nm,1.1s,baz=25,slow=9.8,SNR=4.2
ASAR PcP PcP 15 11 42.7 -1.0
comp=Z,17nm,0.9s,baz=34,slow=3.1,SNR=6.3
KSM Kuching 36.23 258 ⇓P **P** **15 09 20.6 +0.8**
KSM Kuching 36.23 258 *e*P **P** **15 09 19.2 -0.6**
TIA Tai'an 36.36 319 ⇑P **P** **15 09 20.8 +0.2**
TIA AMB AMB
comp=Z,44nm,1.2s,mb5.3
YSS Yuzh-Sakhalins 36.42 357 ⇓ *i*P **P** **15 09 18.8 -2.1**
YSS *e* 15 09 26.0
YSS *e*S **S** **15 14 58.0 -3.9**
YSS *e*SS SS 15 17 48.0 +6.9
YSS pmax pmax
comp=Z,100nm,1.3s,mb5.6
YSS pmax pmax
comp=N,50nm,1.2s
YSS MLR MLR
comp=Z,1μm,18.0s,MS4.6
YSS Yuzh-Sakhalins 36.42 357 *e*P **P** **15 09 19.8 -1.2**
comp=Z,54nm,1.1s,mb5.4
YSS LR LR
comp=Z,410nm,22.0s
MDJ Mudanjiang 36.71 341 P **P** **15 09 24.0 +0.5**
MDJ PP PP 15 10 46.5 -0.7
MDJ S **S** **15 15 06.0 -0.4**
MDJ AMB AMB
comp=Z,198nm,1.2s,mb5.8
MDJ AMB AMB
comp=Z,578nm,3.4s
MDJ LR LR
comp=N,442nm,14.0s,MS4.7
MDJ LR LR
comp=E,815nm,12.8s,MS4.7
MDJ LR LR
comp=Z,1μm,13.4s,MS4.8
MDJ Mudanjiang 36.71 341 *e*P **P** **15 09 23.6 +0.1**
comp=Z,378nm,1.4s,mb6.0
MDJ LR LR
comp=Z,864nm,22.0s,MS4.5
SNY Shenyang 36.73 332 ⇑P **P** **15 09 23.8 +0.1**
SNY PP PP 15 10 45.0 -2.5
SNY S **S** **15 14 59.0 -7.8**
SNY AMB AMB
comp=Z,74nm,1.5s,mb5.3
CN2 Changchun 37.52 336 ⇑P **P** **15 09 30.5 +0.1**
CN2 *e*PP PP 15 10 56.5 +0.4
CN2 *e*S **S** **15 15 20.5 +1.7**
CN2 AMB AMB
comp=Z,20nm,1.1s,mb4.8
CN2 AMB AMB
comp=Z,1μm,7.0s
CN2 LR LR
comp=N,1μm,16.0s,MS4.9
CN2 LR LR
comp=E,900nm,16.0s,MS4.9
CN2 LR LR
comp=Z,1μm,18.0s,MS4.7
DZM Mont Dzumac 38.26 148 *e*P **P** **15 09 36.7 -0.2**
FUNA Funafuti 38.37 118 PFAKE 15 09 50.0 +12
FUNA LR LR
comp=Z,4μm,20.0s,MS5.2
HABR Khabarovsk 38.88 349 ⇓ *i*P **P** **15 09 39.5 -2.3**
HABR *e* 15 11 08.8
HABR *e* 15 11 49.6
HABR *e*S **S** **15 15 38.7 -0.6**
HABR *e* 15 19 49.7
HABR pmax pmax
comp=Z,130nm,1.3s,mb5.5
MIDW Midway 38.88 58 PFAKE 15 09 50.0 +7.9
MIDW LR LR
comp=Z,2μm,19.0s,MS4.9
BJT Baijiatuau 39.34 323 *e*P **P** **15 09 45.5 -0.2**
BJT pmax pmax
comp=Z,225nm,1.3s
BJT MLR MLR
comp=Z,1μm,19.0s
BJT Baijiatuau 39.34 323 *e*P **P** **15 09 45.5 -0.2**
comp=Z,225nm,1.3s,mb5.7
BJT LR LR
comp=Z,1μm,19.0s,MS4.7
BJI Beijing 39.35 323 P **P** **15 09 45.8 0.0**
BJI PP PP 15 11 16.8 +0.6
BJI S **S** **15 15 45.0 -1.5**
BJI AMB AMB
comp=Z,121nm,1.3s,mb5.5
BJI AMB AMB
comp=Z,1μm,4.0s
BJI LR LR
comp=N,2μm,23.1s,MS4.9
BJI LR LR
comp=E,1μm,20.7s,MS4.9
BJI LR LR
comp=Z,707nm,17.9s,MS4.5
BJI Beijing 39.35 323 P **P** **15 09 45.8 0.0**
comp=Z,121nm,1.3s,mb5.5
BJI PP PP 15 11 16.7 +0.5
BJI S **S** **15 15 45.0 -1.5**
BJI SS SS 15 18 42.4 +1.9
BJI LR LR
comp=Z,710nm,17.9s,MS4.5
UBT Ubonrachathani 39.84 281 ⇓P **P** **15 09 52.5 +2.2**
GYA Guiyang 40.04 299 P **P** **15 09 52.5 +0.7**
GYA PP PP 15 11 27.0 +3.0
GYA S **S** **15 16 02.0 +4.6**
GYA AMB AMB
comp=Z,260nm,1.0s,mb5.9
GYA AMB AMB
comp=Z,1μm,4.3s
GYA LR LR
comp=N,5μm,12.6s,MS5.6
GYA LR LR
comp=E,4μm,15.0s,MS5.6
GYA LR LR
comp=Z,6μm,12.0s,MS5.7
TIY Taiyuan 40.29 318 ⇑P **P** **15 09 56.3 +2.6**
TIY XP sP 15 10 02.5 +2.0
TIY PP PP 15 11 32.0 +5.5
TIY S **S** **15 16 05.5 +4.8**
TIY AMB AMB
comp=Z,1μm,6.0s
TIY LR LR
comp=N,955nm,13.3s,MS4.9
TIY LR LR
comp=E,309nm,11.7s,MS4.9
TIY LR LR
comp=Z,762nm,15.7s,MS4.7
KLR Kul'dur 40.31 346 ⇓ *i*P **P** **15 09 49.4 -4.3**
KLR *e*S **S** **15 15 52.5 -8.2**
KLR *e*SS SS 15 18 44.5 -15
KLR *e* 15 19 55.5
KLR pmax pmax
comp=E,74nm,1.6s
KLR pmax pmax
comp=Z,250nm,1.6s,mb5.7
KLR MLR MLR
comp=Z,1μm,13.0s,MS4.9

MBWA Marble Bar 40.47 219 ⇓P **P** **15 09 56.3 +0.9**
SNR=26
MBWA Marble Bar 40.47 219 *e*P **P** **15 09 55.1 -0.2**
comp=Z,268nm,1.3s,mb5.8
MBWA LR LR
comp=Z,637nm,19.0s,MS4.5
SKR Severo-Kuril's 40.98 10 *e*P **P** **15 09 51.8 -7.4**
ARMA Armidale 41.08 172 ⇑ *i*P **P** **15 10 00.1 -0.2**
KKTK Khon Kaen 42.00 283 ⇑P **P** **15 10 09.0 +0.9**
comp=Z,1μm,0.5s
STKA Stephens Creek 42.31 185 *e*P **P** **15 10 08.8 -1.5**
comp=Z,71nm,0.9s,mb5.3
STKA Stephens Creek 42.31 185 P **P** **15 10 08.9 -1.4**
comp=Z,92nm,0.9s,mb5.4,baz=352,slow=7.9,SNR=115
STKA LR LR 15 28 18.4
comp=Z,2μm,18.1s,MS5.1,baz=1.6,slow=37
MYKOM Kota Tinggi 42.40 261 ⇑P **P** **15 10 11.3 0.0**
HHC Hu-ho-hao-te 42.62 321 *e*P **P** **15 10 13.0 +0.2**
HHC PP PP 15 11 55.0 +3.3
HHC PCP PcP 15 12 05.8 +0.9
HHC SCP ScP 15 15 54.8 -0.6
HHC PCS PcS 15 15 56.8 0.0
HHC S **S** **15 16 35.5 +0.3**
HHC SS SS 15 19 39.5 -6.0
HHC SCS ScS 15 20 11.8 -2.1
HHC AMB AMB
comp=Z,67nm,0.9s,mb5.4
HHC AMB AMB
comp=Z,825nm,5.8s
HHC LR LR
comp=N,851nm,12.5s,MS5.0
HHC LR LR
comp=E,711nm,12.9s,MS5.0
HHC LR LR
comp=Z,1μm,12.8s,MS5.0
KGM Kluang 42.86 262 ⇓P **P** **15 10 14.7 -0.5**
KMI Kunming 43.16 296 P **P** **15 10 19.5 +2.1**
KMI AP pP 15 10 27.3 +5.0
KMI XP sP 15 10 30.8 +6.5
KMI PP PP 15 12 02.5 +4.7
KMI PCP PcP 15 12 08.5 +1.5
KMI S **S** **15 16 45.0 +1.4**
KMI XS sS 15 16 58.0 +6.3
KMI SS SS 15 19 51.3 -5.3
KMI AMB AMB
comp=Z,261nm,1.2s,mb5.8
KMI AMB AMB
comp=Z,1μm,4.5s
KMI LR LR
comp=N,1μm,21.3s,MS4.8
KMI LR LR
comp=E,705nm,22.7s,MS4.8
KMI LR LR
comp=Z,942nm,18.4s,MS4.7
KMI Kunming 43.16 296 P **P** **15 10 19.5 +2.1**
KMI *SP sP 15 10 30.7 +6.4
KMI 15 12 02.4
KMI 15 12 08.6
KMI PPP 15 12 37.9
KMI S **S** **15 16 44.9 +1.3**
KMI *SS sS 15 16 58.1 +6.4
KMI SS SS 15 19 51.2 -5.4
KMI SSS 15 20 41.5
KMI pmax pmax
comp=Z,261nm,1.2s,mb5.8
KMI MLR MLR
comp=Z,940nm,18.4s,MS4.7
KMI Kunming 43.16 296 P **P** **15 10 19.5 +2.1**
comp=Z,261nm,1.2s,mb5.8
KMI pP pP 15 10 27.2 +4.9
KMI sP sP 15 10 30.7 +6.4
KMI PP PP 15 12 02.4 +4.6
KMI PcP PcP 15 12 08.6 +1.6
KMI PPP 15 12 37.9
KMI S **S** **15 16 44.9 +1.3**
KMI sS sS 15 16 58.1 +6.4
KMI SS SS 15 19 51.2 -5.4
KMI SSS 15 20 41.5
KMI LR LR
comp=Z,940nm,18.4s,MS4.7
BTO Baotou 43.45 320 *e*P **P** **15 10 20.0 +0.5**
BTO AMB AMB
comp=Z,47nm,1.2s,mb5.1
PETK Petropavlovsk- 43.59 11 P **P** **15 10 20.7 +0.2**
comp=Z,40nm,1.1s,mb5.0,baz=163,slow=6.2,SNR=11
PETK PcP PcP 15 12 07.5 -0.3
comp=Z,17nm,0.8s,baz=173,slow=2.8,SNR=8.2
PETK LR LR 15 29 31.3
comp=Z,611nm,18.8s,MS4.5,baz=197,slow=38
PETK Petropavlovsk- 43.59 11 P **P** **15 10 20.7 +0.2**
PETK PcP PcP 15 12 07.5 -0.3
PETK LR LR 15 29 31.3
PET Petropavlovsk 43.69 11 *e*P **P** **15 10 20.1 -1.1**
PET *e* 15 12 08.0
PET *e*S **S** **15 16 49.6 -0.9**
PET pmax pmax
comp=Z,51nm,1.2s,mb5.1
PET MLR MLR
comp=Z,900nm,21.0s,MS4.7
PET MLR MLR
comp=Z,1μm,22.0s
PET Petropavlovsk 43.69 11 P **P** **15 10 20.6 -0.6**
comp=Z,56nm,1.1s,mb5.2
PET LR LR
comp=Z,736nm,20.0s,MS4.6
CD2 Chengdu 43.80 304 ⇑ *i*P **P** **15 10 22.5 0.0**
CD2 PP PP 15 12 06.5 +2.0
CD2 PCS PcS 15 16 01.3 -0.7
CD2 S **S** **15 16 51.5 -1.3**
CD2 SS SS 15 20 00.5 -8.4
CD2 SCS ScS 15 20 19.5 -2.1
CD2 AMB AMB
comp=Z,540nm,0.9s,mb6.3
CD2 AMB AMB
comp=Z,860nm,8.4s
CD2 LR LR
comp=N,1μm,15.6s,MS5.2
CD2 LR LR
comp=E,1μm,12.0s,MS5.2
CD2 LR LR
comp=Z,1μm,14.4s,MS5.0
NANT Nan 44.16 286 ⇑P **P** **15 10 23.5 -2.1**
comp=Z,1μm,1.0s
HIA Hailar 44.25 336 *e*P **P** **15 10 26.0 +0.2**
HIA pmax pmax
comp=Z,326nm,1.3s
HIA MLR MLR
comp=Z,1μm,20.0s
HIA Hailar 44.25 336 *e*P **P** **15 10 26.0 +0.2**
comp=Z,326nm,1.3s,mb5.9
HIA LR LR
comp=Z,1μm,20.0s,MS4.8
FRIM Kepong 44.25 264 ⇓P **P** **15 10 25.1 -1.3**
FORT Forrest 44.38 202 *e*P **P** **15 10 26.8 -0.2**
comp=Z,288nm,0.7s,mb6.1
NST Nakhon Sawan 44.56 282 P **P** **15 10 30.0 +1.2**
comp=Z,183nm,1.2s,mb5.8
SNG Songkhla 44.59 270 P **P** **15 10 30.0 +0.9**
comp=Z,340nm,0.9s,mb6.2
IPM Ipoh 44.60 266 ⇓P **P** **15 10 28.1 -1.1**
XMIS Christmas Isla 44.90 244 *e*P **P** **15 10 30.2 -1.3**
XMIS *e* pP 15 10 35.5 -0.9
NNT Nongplab 44.99 277 ⇑P **P** **15 10 34.6 +2.4**
comp=Z,658nm,1.0s,mb6.4
CHRT Chiangrai 45.11 288 ⇑P **P** **15 10 34.5 +1.4**
comp=Z,632nm,1.0s,mb6.4
LZH Lanzhou 45.57 311 ⇑P **P** **15 10 37.8 +1.2**
LZH AP pP 15 10 42.0 +0.5
LZH PP PP 15 12 26.0 +2.6
LZH *e*S **S** **15 17 18.5 +0.1**
LZH *e*SS SS 15 20 35.0 -7.6
LZH AMB AMB
comp=Z,210nm,1.1s,mb6.0
LZH AMB AMB
comp=Z,865nm,4.0s
LZH LR LR
comp=N,4μm,14.1s
LZH LR LR
comp=Z,4μm,16.6s,MS5.5
LZH Lanzhou 45.57 311 ⇑P **P** **15 10 37.8 +1.2**
LZH *SP sP 15 10 44.1 +0.7
LZH 15 12 26.0
LZH *e*S **S** **15 17 18.5 +0.1**
LZH *SS sS 15 17 25.0 -1.5
LZH *e*SS SS 15 20 35.0 -7.6
LZH pmax pmax
comp=Z,210nm,1.1s,mb6.0
LZH MLR MLR
comp=Z,4μm,16.6s,MS5.5
LZH Lanzhou 45.57 311 ⇑P **P** **15 10 37.8 +1.2**
comp=Z,210nm,1.1s,mb6.0
LZH pP pP 15 10 42.1 +0.6
LZH sP sP 15 10 44.1 +0.7
LZH PP PP 15 12 26.0 +2.6
LZH *e*S **S** **15 17 18.5 +0.1**
LZH sS sS 15 17 25.0 -1.5
LZH *e*SS SS 15 20 35.0 -7.6
LZH LR LR
comp=Z,4μm,16.6s,MS5.5
CAN Canberra 45.68 176 P **P** **15 10 37.1 -0.2**
CAN Canberra 45.68 176 *e*P **P** **15 10 36.8 -0.4**
CNB Canberra Magne 45.70 176 *e*P **P** **15 10 37.1 -0.3**
CM31 Chiang Mai Arr 45.80 286 PFAKE 15 10 50.0 +11
CM31 LR LR
comp=Z,897nm,22.0s,MS4.7
CMAR Chiang Mai Arr 45.80 286 P **P** **15 10 40.1 +1.5**
comp=Z,194nm,0.9s,mb6.0,baz=86,slow=6.1,SNR=612
CMAR LR LR 15 26 30.1
comp=Z,635nm,21.5s,MS4.5,baz=318,slow=32
CHG Chiang Mai 45.82 286 ⇓P **P** **15 10 38.9 +0.1**
comp=Z,66nm,1.1s,mb5.5
CHTO Chiang Mai 45.82 286 ⇑P **P** **15 10 38.0 -0.8**
SNR=17
CHTO Chiang Mai 45.82 286 *e*P **P** **15 10 39.4 +0.6**
CHTO pmax pmax
comp=Z,105nm,1.4s,mb5.6
CHTO MLR MLR
comp=Z,828nm,22.0s,MS4.6
CHTO Chiang Mai 45.82 286 *e*P **P** **15 10 39.4 +0.6**
comp=Z,105nm,1.4s,mb5.6
CHTO LR LR
comp=Z,828nm,22.0s,MS4.6
TOO Toolangi 47.81 180 *e*P **P** **15 10 54.2 +0.2**
SMY Shemya 47.97 23 PFAKE 15 11 10.0 +15
SMY LR LR
comp=Z,3μm,20.0s,MS5.2
AFI Afiamalu 48.70 119 LR LR 15 29 48.4
comp=Z,629nm,18.2s,MS4.6,baz=300,slow=34
CIT Chita 48.91 334 *e*P **P** **15 11 03.2 +0.8**
CIT *e* 15 11 16.5
CIT *e* 15 12 24.7
CIT pmax pmax
comp=Z,570nm,1.7s,mb6.3
CLNS Chul'man 48.95 345 *c i*P **P** **15 11 02.3 -0.3**
CLNS *e**PP pP 15 11 08.8 +1.3
CLNS *e* 15 12 26.6
CLNS *e* 15 12 54.0
CLNS *e*PPP 15 13 47.2
CLNS *e*S **S** **15 18 03.3 -2.6**
CLNS *e*SS SS 15 21 36.5 -0.3
CLNS pmax pmax
comp=Z,113nm,1.0s,mb5.8
CLNS pmax pmax
comp=N,68nm,1.0s
CLNS pmax pmax
comp=E,32nm,1.0s
CLNS smax
comp=E,337μm,12.0s
CLNS smax
comp=N,131μm,12.8s
CLNS MLR MLR
comp=Z,616nm,15.0s,MS4.7
CLNS MLR MLR
comp=N,632nm,14.0s,MS4.8
CLNS MLR MLR
comp=E,276nm,15.0s,MS4.8
ULN Ulaanbaatar 49.35 326 P **P** **15 11 07.0 +1.3**
SNR=88
ULN Ulaanbaatar 49.35 326 P **P** **15 11 06.6 +0.8**
ULN pmax pmax
comp=Z,160nm,1.0s,mb6.0
ULN Ulaanbaatar 49.35 326 *e*P **P** **15 11 06.5 +0.8**
comp=Z,163nm,0.9s,mb6.1
ULN LR LR
comp=Z,1μm,19.0s,MS4.9
KLBR Kellerberrin 49.65 212 *e*P **P** **15 11 07.2 -1.0**
comp=Z,80nm,1.1s,mb5.7
KLBR *epP pP 15 11 15.7 +2.5
SONM Songino Array 49.69 326 P **P** **15 11 09.2 +0.8**
comp=Z,60nm,0.8s,mb5.7,baz=142,slow=7.9,SNR=453
SONM PcP PcP 15 12 29.7 +0.2
comp=Z,30nm,1.0s,baz=154,slow=4.1,SNR=4.0
GTA Gaotai 49.81 313 ⇑P **P** **15 11 10.5 +1.1**
GTA AP pP 15 11 15.5 +1.1
GTA XP sP 15 11 19.0 +2.7
GTA PCP PcP 15 12 31.5 +1.4
GTA PP PP 15 13 06.3 +2.1
GTA S **S** **15 18 19.5 +1.0**
GTA SS SS 15 21 47.0 -4.2
GTA AMB AMB
comp=Z,181nm,0.9s,mb6.1
GTA AMB AMB
comp=Z,885nm,4.8s
GTA LR LR
comp=N,849nm,16.2s,MS4.9
GTA LR LR
comp=E,783nm,19.8s,MS4.9
GTA LR LR
comp=Z,1μm,18.0s,MS4.9
MUN Mundaring 50.76 213 *e*P **P** **15 11 16.0 -0.7**
MUN *epP pP 15 11 24.5 +2.9
NWAO Narrogin (SRO) 50.98 211 LR LR 15 33 20.5
comp=Z,2μm,18.0s,MS5.2,baz=8.0,slow=37
NWAO Narrogin (SRO) 50.98 211 PFAKE 15 11 30.0 +12
NWAO LR LR
comp=Z,2μm,19.0s,MS5.1
IMP Imphal 51.00 293 *e*P **P** **15 11 17.0 -1.7**
ADK Adak 51.35 29 P **P** **15 11 21.1 +0.3**
ADK pmax pmax
comp=Z,240nm,1.2s,mb6.0
ADK Adak 51.35 29 *e*P **P** **15 11 20.9 0.0**
comp=Z,242nm,1.2s,mb6.0
ADK LR LR
comp=Z,793nm,20.0s,MS4.7
SEY Seymchan 52.57 4 ⇑ *e*P **P** **15 11 28.3 -1.4**
SEY Seymchan 52.57 4 ⇑ *e*P **P** **15 11 28.4 -1.3**
YAK Yakutsk 52.74 351 *c i*P **P** **15 11 30.1 -0.9**
YAK *e**PP pP 15 11 38.3 +2.3
YAK *e* 15 12 36.6
YAK *e* 15 13 28.1
YAK *i* S **S** **15 18 52.8 -5.5**
YAK *e* 15 21 16.4
YAK *e*SS SS 15 22 28.4 -8.5
YAK *e*SSS 15 24 22.7
YAK pmax pmax
comp=Z,269nm,0.9s,mb6.2
YAK pmax pmax
comp=N,161nm,1.2s
YAK pmax pmax
comp=E,45nm,1.2s
YAK smax
comp=E,292μm,3.0s
YAK smax
comp=N,135μm,2.8s
YAK MLR MLR
comp=Z,612nm,16.0s,MS4.7
YAK MLR MLR
comp=N,550nm,14.0s,MS4.8
YAK MLR MLR
comp=E,185nm,14.0s,MS4.8
YAK Yakutsk 52.74 351 *e*P **P** **15 11 30.0 -1.0**
comp=E,354nm,0.9s,mb6.3
YAK LR LR
comp=Z,901nm,21.0s,MS4.8
ZAK Zakamensk 52.82 327 ⇓ *i*P **P** **15 11 31.9 +0.1**
ZAK pmax pmax
comp=Z,191nm,1.1s,mb5.9
RAO Raoul Island 52.88 139 LR LR 15 31 16.3
comp=Z,1μm,18.9s,MS5.1,baz=350,slow=33
RAO Raoul Island 52.88 139 PFAKE 15 11 50.0 +17
RAO LR LR
comp=Z,2μm,20.0s,MS5.2
SHL Shillong 52.93 294 *e*x x 15 11 20.2
SHL AMb AMB 15 11 21.8
comp=Z,333nm,1.6s,mb6.0
BOD Bodaibo 53.06 339 ⇓ *i*P **P** **15 11 32.6 -0.8**
BOD pmax pmax
comp=Z,92nm,1.1s,mb5.6
TAU Tasmania Unive 53.17 178 *e*P **P** **15 11 34.4 0.0**
TAU pmax pmax

comp=Z,204nm,1.3s,mb5.9
TAU Tasmania Unive 53.17 178 *e*P P **15 11 34.4 0.0**
comp=Z,204nm,1.3s,mb5.9
TLY Talaya 53.37 329 P P **15 11 36.9 +1.1**
comp=Z,1μm,0.8s,SNR=34
TLY Talaya 53.37 329 P P **15 11 36.8 +1.0**
SNR=88
TLY Talaya 53.37 329*c i*P P **15 11 36.4 +0.6**
TLY pmax pmax
comp=Z,267nm,1.2s,mb6.0
TLY MLR MLR
comp=Z,600nm,17.0s,MS4.7
TLY Talaya 53.37 329 *e*P P **15 11 36.2 +0.4**
comp=Z,194nm,0.9s,mb6.0
TLY LR LR
comp=Z,530nm,21.0s,MS4.6
IRK Irkutsk 53.38 330⇑*i*P P **15 11 35.4 -0.5**
IRK *e*S S **15 19 09.0 +1.7**
IRK pmax pmax
comp=Z,244nm,1.4s,mb5.9
COCO West Island 53.47 246 PFAKE 15 11 50.0 +13
COCO LR LR
comp=Z,649nm,21.0s,MS4.7
LSA Lhasa 54.11 299 P P **15 11 43.3 +1.6**
LSA AMB AMB
comp=Z,120nm,1.2s,mb5.7
LSA Lhasa 54.11 299 *e*P P **15 11 43.3 +1.6**
LSA pmax pmax
comp=Z,181nm,1.1s,mb5.9
LSA MLR MLR
comp=Z,402nm,20.0s,MS4.5
LSA Lhasa 54.11 299 *e*P P **15 11 43.3 +1.6**
comp=Z,181nm,1.1s,mb5.9
LSA LR LR
comp=Z,402nm,20.0s,MS4.5
KIP Kipapa 55.00 71 PFAKE 15 12 00.0 +12
KIP LR LR
comp=Z,2μm,21.0s,MS5.2
URZ Urewera 56.72 151 P P **15 11 59.7 -0.5**
comp=Z,22nm,1.0s,mb5.1,baz=324,slow=8.6,SNR=3.8
URZ LR LR 15 33 31.7
comp=Z,435nm,18.6s,MS4.6,baz=204,slow=33
ODAN Odare 57.07 295 *e*P P **15 12 03.7 +0.7**
comp=Z,1μm,1.5s
XMAS Kiritimati 57.11 94 PFAKE 15 12 20.0 +17
XMAS LR LR
comp=Z,2μm,20.0s,MS5.1
POHA Pohakuloa 57.29 73 PFAKE 15 12 20.0 +15
POHA LR LR
comp=Z,1μm,19.0s,MS5.0
UNV Unalaska Valle 57.53 31 *e*P P **15 12 04.9 -0.8**
RAMN Ramite 57.78 295 *e*P P **15 12 08.6 +0.6**
comp=Z,976nm,1.3s
AKUT Akutan 58.05 31 *e*P P **15 12 09.5 +0.1**
JIRN Jiri 58.20 296 *e*P P **15 12 12.0 +1.0**
comp=Z,686nm,1.1s
BOK Bokaro 58.24 291 *e*P P **15 12 11.5 +0.2**
BOK AMb AMB 15 12 14.0
comp=Z,455nm,0.9s
GUN Gumba 58.50 296 *e*P P **15 12 14.0 +1.0**
comp=Z,1μm,1.0s
RPZ Rata Peaks 58.70 159 P P **15 12 13.0 -1.0**
comp=Z,124nm,1.0s,mb5.9,baz=3.6,slow=10,SNR=10
RPZ LR LR 15 35 28.9
comp=Z,1μm,19.3s,MS5.1,baz=324,slow=34
PKIN Phulchoki 58.90 296 *e*P P **15 12 16.3 +0.5**
comp=Z,475nm,1.2s,mb6.4
KKN Kakani 59.02 296 *e*P P **15 12 17.0 +0.4**
comp=Z,929nm,1.3s
BILL Bilibino 59.07 9*c i*P P **15 12 15.8 -0.5**
BILL pmax pmax
comp=Z,192nm,1.2s,mb6.0
BILL Bilibino 59.07 9 *e*P P **15 12 15.0 -1.3**
comp=Z,227nm,1.3s,mb6.0
BILL LR LR
comp=Z,549nm,19.0s,MS4.7
DMN Daman 59.16 296 *e*P P **15 12 18.2 +0.6**
comp=Z,894nm,1.1s
GKN Gorkha 59.60 296 *e*P P **15 12 21.0 +0.3**
comp=Z,1μm,1.2s
WMQ Urumqi 59.83 315⇑*i*P P **15 12 23.0 +1.1**
WMQ AP pP 15 12 27.5 +0.5
WMQ PCP PcP 15 13 09.5 +1.0
WMQ PP PP 15 14 36.5 +2.5
WMQ PCS PcS 15 17 08.5 -2.0
WMQ S **S** **15 20 34.0 +1.1**
WMQ XS sS 15 20 50.0 +8.8
WMQ SCS ScS 15 22 08.0 -4.0
WMQ SS SS 15 24 31.0 +1.9
WMQ AMB AMB
comp=Z,149nm,1.3s,mb5.9
WMQ AMB AMB
comp=Z,1μm,4.1s
WMQ LR LR
comp=Z,7μm,20.4s,MS5.8
DANN Dangsing 60.40 297 *e*P P **15 12 26.8 +0.7**
comp=Z,722nm,0.8s
KOLN Koldanda 60.50 296 *e*P P **15 12 27.3 +0.4**
comp=Z,461nm,0.9s
VIS Vishakhapatnam 60.64 284 *e*P P **15 12 28.3 +0.4**
VIS AMb AMB 15 12 30.5
comp=Z,223nm,0.6s
KRAR Krasnoyarsk 61.06 329⇓*e*P P **15 12 30.3 +0.2**
KRAR pmax pmax
comp=Z,184nm,1.7s,mb5.9
KRAR MLR MLR
comp=Z,300nm,15.0s,MS4.6
SDPT Sand Point 61.33 32 *e*P P **15 12 31.0 -1.0**
comp=Z,504nm,1.2s
TIXI Tiksi 61.97 354*c i*P P **15 12 34.3 -1.7**
TIXI pmax pmax
comp=Z,51nm,1.5s,mb5.4
TIXI MLR MLR
comp=Z,700nm,22.0s,MS4.8
TIXI Tiksi 61.97 354 *e*P P **15 12 34.0 -2.0**
comp=Z,40nm,1.1s,mb5.5
TIXI LR LR
comp=Z,476nm,19.0s,MS4.7
PTH Pithoragarh 63.57 298 *e*P P **15 12 48.2 +0.8**
PALK Pallekele 64.15 273 PFAKE 15 13 00.0 +8.4
PALK LR LR
comp=Z,821nm,21.0s,MS4.9
MK31 Makanchi Array 64.24 317 P P **15 12 52.2 +0.6**
MK31 Makanchi Array 64.24 317 *e*P P **15 12 52.0 +0.4**
MKAR Makanchi Array 64.24 317 P P **15 12 52.1 +0.5**
comp=Z,47nm,0.8s,mb5.6,baz=94,slow=8.5,SNR=446
MKAR PKP2bc 15 41 44.5
comp=Z,2.0nm,0.9s,baz=306,slow=2.9,SNR=3.8
MKAR LR LR 15 43 36.8
comp=Z,361nm,18.4s,MS4.6,baz=107,slow=39
MKAR Makanchi Array 64.24 317 P P **15 12 52.1 +0.5**
MKAR ⇑*e* 15 41 44.5
MKAR LR LR 15 43 36.8
ZAA0 Zalesovo Array 64.57 325 *e*P P **15 12 52.9 -0.6**
ZALV Zalesovo Beam 64.57 325 P P **15 12 53.1 -0.4**
comp=Z,36nm,0.7s,mb5.5,baz=104,slow=6.4,SNR=170
ZALV PKPPKP 15 41 40.5
comp=Z,0.4nm,0.4s,baz=270,slow=3.0,SNR=4.7
ZALV LR LR 15 42 30.3
comp=Z,414nm,18.4s,MS4.7,baz=284,slow=37
HYB Hyderabad 65.21 284 *i*P P **15 12 59.0 +0.6**
HYB Hyderabad 65.21 284 *e*P P **15 12 58.0 -0.4**
DDI Dehra Dun 65.47 299 *ex* x 15 12 58.7
NVS Novosibirsk 65.72 326 *i*P P **15 13 00.1 -0.9**
NVS *i*S S 15 21 45.1 -1.5
NVS pmax pmax
comp=N,79nm,1.6s
NVS pmax pmax
comp=Z,297nm,1.6s,mb6.1
NVS pmax pmax
comp=E,195nm,1.4s
NVS smax
comp=N,124nm,2.4s
NVS smax
comp=E,14nm,1.7s
OHAK Old Harbor 65.75 31 *e*P P **15 13 00.9 -0.2**
SVW2 Sparrevohn 66.05 27 *e*P P **15 13 03.2 +0.2**
SMLA Simla 66.27 299 *i*P P **15 13 05.6 +0.6**
SMLA *ex* x 15 13 06.9
comp=Z,488nm,1.1s
SMLA *i*S S 15 21 55.9 +1.8
KDAK Kodiak Island 66.30 31 P P **15 13 05.1 +0.5**
comp=Z,39nm,0.9s,mb5.4,baz=258,slow=3.3,SNR=11
KDAK Kodiak Island 66.30 31 *e*P P **15 13 04.5 -0.1**
comp=Z,133nm,1.4s,mb5.8
KDAK LR LR
comp=Z,316nm,19.0s,MS4.5
AKL Akola 66.48 288 *e*P P **15 13 06.6 0.0**
AKL AMb AMB 15 13 08.2
comp=Z,162nm,1.0s,mb6.0
TTA Tatalina 66.60 25 *e*P P **15 13 06.1 -0.4**
TTA pmax pmax
comp=Z,142nm,1.6s,mb5.8
TTA Tatalina 66.60 25 *e*P P **15 13 06.1 -0.4**
comp=Z,142nm,1.6s,mb5.8
KOD Kodaikanal 66.93 277 *e*P P **15 13 10.3 +0.8**
KOD AMb AMB 15 13 13.6
comp=Z,134nm,1.3s,mb5.8
KURK Kurchatov 67.43 321 P P **15 13 12.7 +0.7**
comp=Z,1μm,0.7s
KURK Kurchatov 67.43 321 P P **15 13 10.9 -1.2**
comp=Z,95nm,0.7s,mb5.9,baz=104,slow=6.3,SNR=308
KURK Kurchatov 67.43 321 P P **15 13 10.9 -1.2**
KURK LR LR
comp=Z,776nm,20.0s,MS4.9
THN Thein Dam 67.54 301 *e*P P **15 13 11.7 -1.4**
TRD Trivandrum 67.66 275 *e*P P **15 13 13.1 -1.0**
TRD AMb AMB 15 13 18.4
comp=Z,124nm,1.2s,mb5.8
KSH Kashi 67.73 308⇑*i*P P **15 13 16.0 +1.9**
KSH *e*AP pP 15 13 23.3 +4.1
KSH *e*XP sP 15 13 27.5 +6.4
KSH *e*PCP PcP 15 13 41.3 +0.4
KSH *e*PP PP 15 15 49.0 +5.5
KSH *e*SCP 15 17 42.3
KSH *e*PCS 15 17 45.0
KSH *e*S S 15 22 12.8 +1.4
KSH *e*XS sS 15 22 27.3 +7.5
KSH *e*SCS ScS 15 23 10.3 -2.2
KSH AMB AMB
comp=Z,3μm,3.0s
KSH LR LR
comp=N,1μm,10.3s
KSH LR LR
comp=E,953nm,9.2s
KSH LR LR
comp=Z,853nm,7.0s
PPLA Purkeypile 68.21 26 *e*P P **15 13 16.4 -0.2**
comp=Z,91nm,1.2s,mb5.7
SLKM Skilak Lake 68.31 29 P P **15 13 17.0 -0.4**
SLKM Skilak Lake 68.31 29 *e*P P **15 13 16.9 -0.5**
TKM2 Tokmak 2 68.33 312 *e*P P **15 13 18.3 +0.5**
TKM2 pmax pmax
comp=Z,87nm,1.4s,mb5.6
TKM2 MLR MLR
comp=Z,403nm,20.0s,MS4.7
TKM2 Tokmak 2 68.33 312 P P **15 13 18.6 +0.8**
SNR=34
TKM2 Tokmak 2 68.33 312 *e*P P **15 13 18.3 +0.5**
comp=Z,87nm,1.4s,mb5.6
TKM2 LR LR
comp=Z,403nm,20.0s,MS4.7
AJM Ajmer 68.46 294 *e*P P **15 13 18.4 -0.5**
AJM AMb AMB 15 13 20.6
comp=Z,387nm,1.2s,mb6.3
KZA Kyzart 68.50 311 P P **15 13 20.8 +1.9**
SNR=42
CHUM Lake Minchumin 68.51 25 *e*P P **15 13 18.3 -0.2**
comp=Z,81nm,1.1s,mb5.6
SEW Seward 68.56 29 *e*P P **15 13 18.6 -0.4**
RC01 Rabbit Creek A 68.71 28 *e*P P **15 13 19.0 -0.9**
comp=Z,299nm,1.5s,mb6.0
KBK Karagaybulak 68.78 312 P P **15 13 21.2 +0.6**
SNR=26
IMA2 Indian Mountai 68.79 22 *e*P P **15 13 20.1 -0.2**
CHMS Chumysh 68.95 312 P P **15 13 22.0 +0.3**
SNR=26
KTH Kantishna Hill 68.97 25 *e*P P **15 13 20.5 -0.9**
comp=Z,107nm,1.1s,mb5.7
FRU Bishkek 69.03 312 *i*P P **15 13 22.0 -0.3**
FRU pmax pmax
comp=Z,270nm,2.1s,mb5.8
UCH Uchtor 69.06 311 P P **15 13 24.8 +2.3**
SNR=6.6
UCH Uchtor 69.06 311 *e*P P **15 13 23.5 +1.0**
comp=Z,74nm,1.1s,mb5.5
AAK Ala-Archa 69.11 312 P P **15 13 23.3 +0.6**
SNR=22
BPAW Bear Paw Mtn. 69.13 25 *e*P P **15 13 21.6 -0.8**
comp=Z,129nm,1.5s,mb5.6
PMR Palmer 69.14 28 *e*P P **15 13 21.3 -1.2**
PMR pmax pmax
comp=Z,57nm,1.1s,mb5.4
PMR MLR MLR
comp=Z,750nm,19.0s,MS5.0
PMR Palmer 69.14 28 *e*P P **15 13 21.3 -1.2**
comp=Z,57nm,1.1s,mb5.4
PMR LR LR
comp=Z,750nm,19.0s,MS5.0
USP Ospenovka 69.16 312 P P **15 13 23.3 +0.3**
SNR=32
KAD Karad 69.38 285 *e*P P **15 13 24.4 -0.4**
KAD AMb AMB 15 13 26.4
comp=Z,168nm,1.8s,mb5.7
POO Poona 69.59 286⇑*i*P P **15 13 25.0 -1.2**
comp=Z,310nm,1.0s,mb6.2
POO *e*P 15 13 25.6
POO AMb AMB 15 13 27.5
comp=Z,240nm,1.5s,mb5.9
EKS2 Erkin-Say 69.64 312 P P **15 13 26.7 +0.7**
SNR=26
EKS2 Erkin-Say 69.64 312 *e*P P **15 13 26.2 +0.2**
comp=Z,96nm,1.5s,mb5.5
EKS2 LR LR
comp=Z,720nm,21.0s,MS4.9
AML Almayashu 69.66 311 P P **15 13 27.4 +1.2**
SNR=36
AML Almayashu 69.66 311 *e*P P **15 13 27.1 +1.0**
comp=Z,286nm,1.7s,mb5.9
AML LR LR
comp=Z,500nm,20.0s,MS4.8
PPT Papeete 69.79 113 *e*P P **15 13 29.1 +1.8**
comp=Z,38nm,1.2s,mb5.2
PPT *e*S S 15 22 35.3 -1.2
comp=Z,2μm,27.5s
PPT *e*LQ 15 30 59.9
comp=Z,2μm,30.5s
PPT *e*LR LR 15 34 30.5
comp=Z,3μm,29.2s,baz=296
PPT Papeete 69.79 113 LR LR 15 39 06.4
comp=Z,435nm,18.2s,MS4.7,baz=279,slow=32
PPT Papeete 69.79 113 *e*P P **15 13 29.1 +1.8**
PPT *e*S S 15 22 35.3 -1.2
PPT pmax pmax
comp=Z,38nm,1.2s
PPT Papeete 69.79 113 *e*P P **15 13 29.1 +1.8**
comp=Z,38nm,1.2s,mb5.2
PPT *e*S S 15 22 35.3 -1.2
PPT *e*LQ 15 30 59.9
PAE Paea 69.81 113 *e*P P **15 13 29.1 +1.6**
comp=Z,346nm,1.1s,mb6.2
PAE Paea 69.81 113 *e*P P **15 13 29.1 +1.6**
PAE pmax pmax
comp=Z,346nm,1.1s,mb6.2
GOA Goa 69.89 283 *e*P P **15 13 27.6 -0.3**
GOA AMb AMB 15 13 29.6
comp=Z,134nm,1.2s,mb5.8
TIAR Tiarei 69.99 113 *e*P P **15 13 30.4 +1.8**
comp=Z,430nm,1.0s,mb6.3
TVO Taravao 70.15 113 *e*P P **15 13 31.5 +2.0**
comp=Z,832nm,1.2s
TVO Taravao 70.15 113 *e*P P **15 13 31.5 +2.0**
TVO pmax pmax
comp=Z,832nm,1.2s
COLD Coldfoot 70.51 22 *e*P P **15 13 30.3 -0.6**
comp=Z,47nm,1.1s,mb5.3
COLA College 70.67 25⇑*e*P P **15 13 30.6 -1.2**
COLA College 70.67 25 *e*P P **15 13 30.4 -1.5**
comp=Z,30nm,1.0s,mb5.2
COLA LR LR
comp=Z,741nm,21.0s,MS4.9
MEH Mehetia 71.25 113 *e*P P **15 13 37.9 +1.7**
comp=Z,2μm,1.0s
TBI Tubuai 71.81 119 *e*S S 15 22 58.0 -1.8
comp=Z,409nm,28.5s
TBI *e*LQ 15 32 00.1
comp=Z,804nm,36.5s
TBI *e*LR LR 15 35 04.2
comp=Z,1μm,34.2s,baz=293
KK31 Karatay Array 72.06 312 *i*P P **15 13 40.8 +0.1**
KK31 pmax pmax
comp=Z,158nm,1.3s,mb5.8
BVA0 Borovoye Array 72.82 322 *i*P P **15 13 45.1 +0.1**
BVA0 pmax pmax
comp=Z,33nm,1.0s,mb5.2
BVAR Borovoye Array 72.82 322 P P **15 13 45.2 +0.2**
comp=Z,92nm,0.7s,mb5.8,baz=105,slow=7.5,SNR=542
BRVK Borovoye 72.88 322 P P **15 13 45.3 -0.1**
comp=Z,2μm,0.8s,SNR=92
BRVK Borovoye 72.88 322 P P **15 13 45.9 +0.5**
SNR=92
BRVK Borovoye 72.88 322 P P **15 13 45.6 +0.2**
BRVK pmax pmax
comp=Z,250nm,1.0s,mb6.1
BRVK Borovoye 72.88 322 *e*P P **15 13 45.4 0.0**
comp=Z,252nm,0.9s,mb6.2
BRVK LR LR
comp=Z,2μm,22.0s,MS5.3
KBL Kabul 73.12 303 *e*P P **15 13 47.1 -0.1**
KBL pmax pmax
comp=Z,181nm,1.0s,mb6.0
KBL Kabul 73.12 303 *e*P P **15 13 47.0 -0.2**
comp=Z,181nm,1.0s,mb6.0
BHJ Bhuj 73.14 291 *e*P P **15 13 47.4 -0.1**
BHJ AMb AMB 15 13 50.3
comp=Z,317nm,2.1s,mb5.9
DAWY Dawson 74.05 26 *e*P P **15 13 52.4 +0.3**
HYT Haines Junctio 74.49 30 *e*P P **15 13 55.4 +0.7**
SIT Sitka 75.29 34 PFAKE 15 14 10.0 +11
SIT LR LR
comp=Z,1μm,20.0s,MS5.3
SKAG Skagway 75.45 31 *e*P P **15 14 00.5 +0.3**
comp=Z,91nm,1.2s,mb5.6
WRAK Wrangell Islan 76.91 34 *e*P P **15 14 08.7 +0.1**
comp=Z,113nm,1.4s,mb5.6
WRAK LR LR
comp=Z,865nm,19.0s,MS5.1
DLBC Dease Lake 78.17 32 P P **15 14 16.6 +0.9**
baz=251,slow=5.1
DLBC Dease Lake 78.17 32 *e*P P **15 14 16.1 +0.4**
SVE Sverdlovsk 78.57 326⇓*e*P P **15 14 18.0 +0.1**
SVE *e*S S 15 24 10.6 -3.2
SVE *e*SSS 15 32 30.9
SVE pmax pmax
comp=Z,122nm,1.4s,mb5.6
SVE MLR MLR
comp=Z,967nm,21.0s,MS5.1
AB31 Akbulak array 79.34 318 *i*P P **15 14 21.9 -0.4**
AB31 pmax pmax
comp=Z,60nm,0.9s,mb5.5
ARU Arti 79.73 326 P P **15 14 24.5 +0.3**
comp=Z,356nm,0.8s,mb6.3,SNR=26
ARU Arti 79.73 326 *e*P P **15 14 23.9 -0.3**
ARU pmax pmax
comp=Z,124nm,1.3s,mb5.7
ARU MLR MLR
comp=Z,415nm,21.0s,MS4.8
ARU Arti 79.73 326 *e*P P **15 14 23.9 -0.3**
comp=Z,124nm,1.3s,mb5.7
ARU LR LR
comp=Z,415nm,21.0s,MS4.8
AKTK Aktyubinsk 80.49 320 *i*P P **15 14 27.0 -1.5**
AKTO Aktyubinsk 80.49 320 P P **15 14 27.9 -0.6**
AKTO pmax pmax
comp=Z,20nm,1.1s,mb5.0
CASY Casey 80.80 194 *e*P P **15 14 29.1 -0.5**
CASY *e* 15 17 30.7
CASY Casey 80.80 194 *e*P P **15 14 29.1 -0.5**
CASY *e* 15 17 30.7
CASY LR LR
comp=Z,468nm,21.0s,MS4.8
ABKT Ailbek 81.70 307 P P **15 14 36.3 +1.1**
comp=Z,773nm,1.3s,SNR=64
NLWA Neilton Lookou 82.70 43 PFAKE 15 14 50.0 +10
NLWA LR LR
comp=Z,707nm,21.0s,MS5.0
KEBM Edson Butte 82.97 48 P P **15 14 42.5 +0.8**
WBK Wadi Bani Khal 83.00 292 P P **15 14 42.9 +0.6**
SNR=49
HDW Hoodsport 83.21 43 P P **15 14 44.2 +1.4**
GNW Green Mountain 83.37 43 *e*P P **15 14 44.4 +0.7**
comp=Z,103nm,1.5s,mb5.6
KRMB Red Mountain 83.47 49 *e*P P **15 14 45.5 +1.2**
COR Corvallis 83.47 46 PFAKE 15 15 00.0 +16
COR LR LR
comp=Z,2μm,20.0s,MS5.4
BIDO Bidbid 83.63 293 P P **15 14 46.2 +0.7**
SNR=53
SMDO Samad 83.77 292 P P **15 14 46.5 +0.2**
SNR=20
JMDO Jabal Madar 83.83 292 P P **15 14 46.2 -0.3**
SNR=23
JCW Jim Creek 83.88 42 *e*P P **15 14 46.8 +0.5**
KCPM Cahto Peak 83.98 51 *e*P P **15 14 47.7 +0.7**
HUMO Hull Mountain 84.01 48 *e*P P **15 14 47.6 +0.5**
comp=Z,93nm,1.4s,mb5.7
HUMO LR LR
comp=Z,900nm,21.0s,MS5.1
KIPM Iron Peak 84.04 51 *e*P P **15 14 47.9 +0.6**
RPW Rockport 84.11 42 *e*P P **15 14 47.1 -0.4**
BBOR Butler Butte 84.17 48 P P **15 14 48.9 +1.0**
YBH Yreka Blue Hor 84.32 49 P P **15 14 49.4 +0.7**
comp=Z,29nm,1.1s,mb5.3,baz=222,slow=2.8,SNR=25
YBH Yreka Blue Hor 84.32 49 *e*P P **15 14 49.3 +0.6**
YBH pmax pmax
comp=Z,72nm,1.4s
YBH MLR MLR
comp=Z,1μm,22.0s
YBH Yreka Blue Hor 84.32 49 *e*P P **15 14 49.3 +0.6**
comp=Z,72nm,1.4s,mb5.6
YBH LR LR
comp=Z,1μm,22.0s,MS5.2
HOQ Hoqain 84.36 293 P P **15 14 49.6 +0.4**
SNR=27
LAMM Antelope Mount 84.41 49 P P **15 14 50.2 +1.1**
HOPS Hopland 84.47 52 *e*P P **15 14 49.5 0.0**
comp=Z,80nm,1.2s,mb5.7
HOPS LR LR
comp=Z,1μm,21.0s,MS5.3
RKT Rikitea 84.48 115 *e*S S 15 25 14.8 -1.5
comp=Z,458nm,35.5s
RKT Rikitea 84.48 115 *e*LR LR 15 40 52.0
comp=Z,1μm,28.5s,baz=294
BUOR Burton Butte 84.58 48 P P **15 14 51.0 +1.1**
BSY Bisya 84.59 292 P P **15 14 50.4 -0.1**
SNR=26
WDC Whiskeytown Da 84.63 50 *e*P P **15 14 50.3 0.0**
WDC pmax pmax
comp=Z,74nm,1.4s,mb5.6
WDC MLR MLR
comp=Z,869nm,21.0s,MS5.1
WDC Whiskeytown Da 84.63 50 *e*P P **15 14 50.3 0.0**
comp=Z,74nm,1.4s,mb5.6
WDC LR LR
comp=Z,869nm,21.0s,MS5.1
MCCM Marconi Confer 84.76 52 PFAKE 15 15 00.0 +9.0
MCCM LR LR
comp=Z,862nm,21.0s,MS5.1
BANOM Banah 84.91 295⇑P P **15 14 52.4 +0.4**
SNR=25
NSHM Saint Helena R 84.91 52 *e*P P **15 14 52.0 +0.2**
TBM Table Mountain 84.93 43 P P **15 14 51.9 +0.3**
ETW Entiat 85.03 43 *e*P P **15 14 52.0 -0.1**
HATD Hatta, Dubai 85.23 294 P P **15 14 54.0 +0.4**
SNR=28
YKA Yellowknife Ar 85.24 27 P P **15 14 52.4 -0.4**
comp=Z,12nm,0.8s,mb5.0,baz=286,slow=5.3,SNR=23
YKA LR LR 15 50 57.5
comp=Z,234nm,18.5s,MS4.6,baz=160,slow=34
YKA Yellowknife Ar 85.24 27 P P **15 14 52.4 -0.4**
YKA LR LR 15 50 57.5
EPH Ephrata 85.57 43 P P **15 14 55.2 +0.4**
OHCM Honcut 85.64 51 *e*P P **15 14 55.5 +0.1**
RSW Rattlesnake Hi 85.75 44 *e*P P **15 14 56.2 +0.5**
HAWA Hanford 85.79 44 *e*P P **15 14 55.4 -0.6**
comp=Z,78nm,1.5s,mb5.7
HAWA LR LR
comp=Z,1μm,22.0s,MS5.2
MIR Mirnyy 85.81 199⇑*i*P P **15 14 55.0 -0.5**
MIR *i* 15 15 04.0
MIR pmax pmax
comp=Z,300nm,1.0s
MOD Modoc 86.07 48 *e*P P **15 14 58.0 +0.5**
comp=Z,64nm,1.3s,mb5.7
MOD LR LR
comp=Z,694nm,22.0s,MS5.0
SAO San Andreas Ge 86.11 54 PFAKE 15 15 10.0 +12
SAO LR LR

comp=Z,826nm,19.0s,MS5.2
OD2 Odessa Site #2 86.15 43 P **P** **15 14 58.0 +0.2**
ALE Alert 86.25 4 P **P** **15 14 57.6 0.0**
comp=Z,194nm,0.8s,mb6.4,SNR=9.4
CMB Columbia Colle 86.72 52 *eP* **P** **15 15 00.6 -0.1**
CMB pmax pmax
comp=Z,109nm,1.4s,mb5.9
CMB MLR MLR
comp=Z,982nm,21.0s,MS5.2
CMB Columbia Colle 86.72 52 *eP* **P** **15 15 00.6 -0.1**
comp=Z,109nm,1.4s,mb5.9
CMB LR LR
comp=Z,982nm,21.0s,MS5.2
LNOR Lincton Mounta 86.74 44 *eP* **P** **15 15 01.1 +0.4**
SHAO Shalim 86.83 288 P **P** **15 15 01.4 -0.3**
SNR=7.1
NEW Newport 87.02 42 *eP* **P** **15 15 01.7 -0.3**
NEW pmax pmax
comp=Z,88nm,1.4s
NEW MLR MLR
comp=Z,796nm,22.0s
NEW Newport 87.02 42 *eP* **P** **15 15 01.7 -0.3**
comp=Z,88nm,1.4s,mb5.8
NEW LR LR
comp=Z,796nm,22.0s,MS5.1
PAHR Pah Rah Range 87.17 50 *eP* **P** **15 15 01.7 -1.2**
comp=Z,91nm,1.5s,mb5.8
WVOR Wild Horse Val 87.18 48 *eP* **P** **15 15 03.1 +0.2**
WVOR pmax pmax
comp=Z,153nm,1.6s,mb6.0
WVOR MLR MLR
comp=Z,596nm,22.0s,MS5.0
WVOR Wild Horse Val 87.18 48 *eP* **P** **15 15 03.1 +0.2**
comp=Z,153nm,1.6s,mb6.0
WVOR LR LR
comp=Z,596nm,22.0s,MS5.0
SPB4 Spitsbergen Ar 87.21 351 *eP* **P** **15 15 01.9 -0.4**
PTRM Twissleman Ran 87.30 54 *eP* **P** **15 15 04.4 +0.8**
KBS Kingsbay 87.35 352 *eP* **P** **15 15 02.8 -0.2**
KBS pmax pmax
comp=Z,72nm,1.3s,mb5.7
KBS MLR MLR
comp=Z,368nm,21.0s,MS4.8
KBS Kingsbay 87.35 352 *eP* **P** **15 15 02.8 -0.2**
comp=Z,72nm,1.3s,mb5.7
KBS LR LR
comp=Z,368nm,21.0s,MS4.8
BMO Blue Mountains 87.63 45 P **P** **15 15 04.9 -0.1**
BMO pmax pmax
comp=Z,88nm,1.3s,mb5.8
BMO Blue Mountains 87.63 45 *eP* **P** **15 15 04.6 -0.4**
comp=Z,88nm,1.4s,mb5.8
BMO LR LR
comp=Z,940nm,21.0s,MS5.2
LVZ Lovozero 88.04 339 PFAKE 15 15 20.0 +14
LVZ LR LR
comp=Z,479nm,20.0s,MS4.9
EDM Edmonton 88.18 36 *eP* **P** **15 15 07.4 0.0**
NVAR Mina Array Bea 88.25 51 P **P** **15 15 08.7 +0.6**
comp=Z,28nm,0.8s,mb5.6,baz=262,slow=6.5,SNR=112
RBK Rabkut 88.25 287 P **P** **15 15 08.6 +0.1**
SNR=20
MTUM Tungsten Hills 88.27 52 *eP* **P** **15 15 08.6 +0.4**
SNCC San Nicolas Is 88.32 57 PFAKE 15 15 20.0 +11
SNCC LR LR
comp=Z,2μm,22.0s,MS5.4
WHFO Wadi Hawf 88.58 288 P **P** **15 15 09.7 -0.3**
SNR=10
APA Apatity 88.61 339 ⇑*iP* **P** **15 15 08.2 -1.0**
APA pmax pmax
comp=Z,29nm,1.2s,mb5.5
APA MLR MLR
comp=Z,700nm,17.0s,MS5.2
KLMR Klimovskoe 88.62 332 *i* P **P** **15 15 07.9 -1.4**
KLMR pmax pmax
comp=Z,162nm,1.4s,mb6.2
BMN Battle Mountai 88.64 49 *eP* **P** **15 15 10.1 +0.2**
BMN pmax pmax
comp=Z,64nm,1.3s,mb5.8
BMN MLR MLR
comp=Z,686nm,20.0s,MS5.1
BMN Battle Mountai 88.64 49 *eP* **P** **15 15 10.1 +0.2**
comp=Z,64nm,1.3s,mb5.8
BMN LR LR
comp=Z,686nm,20.0s,MS5.1
ISA Isabella 88.68 54 *eP* **P** **15 15 09.5 -0.7**
ISA pmax pmax
comp=Z,40nm,1.3s,mb5.6
ISA MLR MLR
comp=Z,994nm,19.0s,MS5.2
ISA Isabella 88.68 54 *eP* **P** **15 15 09.5 -0.7**
comp=Z,40nm,1.3s,mb5.6
ISA LR LR
comp=Z,994nm,19.0s,MS5.2
OSI Osito Adit 88.70 55 *eP* **P** **15 15 11.1 +0.8**
comp=Z,72nm,1.2s,mb5.9
MAK Makhachkala 88.81 313 *eP* **P** **15 15 04.4 -6.3**
MAK *e* 15 15 12.7
MAK *e* 15 18 35.9
MAK *e*PPP 15 20 32.5
MAK *e*S S 15 25 29.6 -28
MAK pmax pmax
comp=Z,215nm,1.6s,mb6.2
WALA Waterton Lakes 88.91 40 *eP* **P** **15 15 11.3 +0.4**
comp=Z,127nm,1.5s,mb6.0
SBA Scott Base 89.00 176 *eP* **P** **15 15 11.3 +0.6**
SBA pmax pmax
comp=Z,60nm,1.5s,mb5.7
SBA Scott Base 89.00 176 *eP* **P** **15 15 11.2 +0.5**
comp=Z,60nm,1.5s,mb5.7
ABTO Aybut 89.13 287 P **P** **15 15 12.5 -0.1**
SNR=11
TPH Tonopah 89.15 52 *eP* **P** **15 15 13.0 +0.6**
TPH pmax pmax
comp=Z,197nm,1.7s,mb6.2
TPH MLR MLR
comp=Z,912nm,21.0s,MS5.2
TPH Tonopah 89.15 52 *eP* **P** **15 15 12.9 +0.6**
comp=Z,197nm,1.7s,mb6.2
TPH LR LR
comp=Z,912nm,21.0s,MS5.2
DAC Darwin (Calif) 89.25 53 PFAKE 15 15 20.0 +7.1
DAC LR LR
comp=Z,1μm,19.0s,MS5.3
MWC Mount Wilson 89.31 55 *eP* **P** **15 15 12.9 -0.3**
MWC pmax pmax
comp=Z,102nm,1.3s,mb6.0
MWC MLR MLR
comp=Z,1μm,21.0s,MS5.3
MWC Mount Wilson 89.31 55 *eP* **P** **15 15 12.9 -0.3**
comp=Z,102nm,1.3s,mb6.0
MWC LR LR
comp=Z,1μm,21.0s,MS5.3
MSO Missoula 89.45 42 PFAKE 15 15 20.0 +6.4
MSO LR LR
comp=Z,447nm,20.0s,MS4.9
KEV Kevo 89.68 342 *eP* **P** **15 15 12.3 -1.8**
KEV pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
KEV MLR MLR
comp=Z,519nm,20.0s,MS5.0
KEV Kevo 89.68 342 *eP* **P** **15 15 12.3 -1.8**
comp=Z,7.2nm,0.7s,mb5.1
KEV LR LR
comp=Z,519nm,20.0s,MS5.0
CHMT Chamberlain Mo 89.89 42 *eP* **P** **15 15 14.8 -0.8**
HLID Hailey 89.95 46 *eP* **P** **15 15 16.0 0.0**
comp=Z,63nm,1.4s,mb5.8
HLID LR LR
comp=Z,824nm,22.0s,MS5.1
ELK Elko 90.04 49 *eP* **P** **15 15 17.0 +0.5**
ELK pmax pmax
comp=Z,124nm,1.3s
ELK MLR MLR
comp=Z,928nm,20.0s
ELK Elko 90.04 49 *eP* **P** **15 15 17.0 +0.6**
comp=Z,124nm,1.3s,mb6.1
ELK LR LR
comp=Z,928nm,20.0s,MS5.2
GSC Goldstone 90.09 54 *eP* **P** **15 15 17.0 +0.2**
GSC pmax pmax
comp=Z,56nm,1.3s,mb5.7
GSC MLR MLR
comp=Z,1μm,20.0s,MS5.3
GSC Goldstone 90.09 54 *eP* **P** **15 15 17.0 +0.2**
comp=Z,56nm,1.3s,mb5.7
GSC LR LR
comp=Z,1μm,20.0s,MS5.3
TPNV Topopah Spring 90.16 52 *eP* **P** **15 15 17.5 +0.4**
TPNV pmax pmax
comp=Z,94nm,1.3s,mb6.0
TPNV MLR MLR
comp=Z,608nm,19.0s,MS5.0
TPNV Topopah Spring 90.16 52 *eP* **P** **15 15 17.5 +0.4**
comp=Z,94nm,1.3s,mb6.0
TPNV LR LR
comp=Z,608nm,19.0s,MS5.0
ARCES ARCESS Array B 90.24 342 P **P** **15 15 15.8 -1.0**
comp=Z,11nm,0.8s,mb5.2,baz=64,slow=5.5,SNR=26
ARCES LR LR 16 00 13.9
comp=Z,499nm,18.5s,MS5.0,baz=66,slow=38
ARCES ARCESS Array B 90.24 342 P **P** **15 15 15.8 -1.0**
ARCES LR LR 16 00 13.9
ARE0 ARCESS Array S 90.24 342 *eP* **P** **15 15 15.1 -1.7**
DLMT Dillon 90.74 44 *eP* **P** **15 15 19.1 -0.6**
comp=Z,33nm,1.4s,mb5.5
PFO Pinyon Flat Ob 90.75 56 P **P** **15 15 20.0 +0.1**
comp=Z,118nm,1.2s,mb6.1,SNR=11
PFO Pinyon Flat Ob 90.75 56 LR LR 15 47 27.4
comp=Z,772nm,21.0s,MS5.1,baz=310,slow=30
PFO Pinyon Flat Ob 90.75 56 P **P** **15 15 19.8 -0.1**
PFO pmax pmax
comp=Z,50nm,1.4s,mb5.7
PFO Pinyon Flat Ob 90.75 56 *eP* **P** **15 15 19.6 -0.4**
comp=Z,50nm,1.4s,mb5.7
PFO LR LR
comp=Z,886nm,19.0s,MS5.2
MSEY Mahe Island 91.00 265 PFAKE
MSEY LR LR 15 15 30.0 +8.5
comp=Z,282nm,22.0s,MS4.7
MTA Mtatsminda 91.07 313 P **P** **15 15 20.2 -1.1**
LCCM Lewis and Clar 91.10 43 P **P** **15 15 21.7 +0.5**
TBLG Delisi 91.10 313 *eP* **P** **15 15 20.4 -1.0**
TBLG Delisi 91.10 313 P **P** **15 15 20.5 -0.9**
MOS Moscow 91.31 327 ⇓*iP* **P** **15 15 19.9 -2.1**
MOS *e* 15 18 59.4
MOS *e* 15 25 52.4
MOS pmax pmax
comp=Z,142nm,1.3s,mb6.1
MOS MLR MLR
comp=Z,1μm,19.0s,MS5.3
MOS Moscow 91.31 327 *eP* **P** **15 15 19.6 -2.4**
JOF Joensuu 91.41 335 *ep* **P** **15 15 19.3 -3.0**
comp=Z,30nm,0.8s,mb5.7
JOF Joensuu 91.41 335 *eP* **P** **15 15 19.4 -2.9**
JOF pmax pmax
comp=Z,17nm,0.7s,mb5.5
LDFC Landfair 91.49 54 *eP* **P** **15 15 23.9 +0.6**
comp=Z,132nm,1.2s,mb6.1
GNI Garni 91.51 311 P **P** **15 15 23.6 +0.3**
SNR=9.4
GNI Garni 91.51 311 P **P** **15 15 23.1 -0.2**
GNI pmax pmax
comp=Z,100nm,1.4s
GNI Garni 91.51 311 *eP* **P** **15 15 22.6 -0.7**
comp=Z,104nm,1.4s,mb6.0
GNI LR LR
comp=Z,268nm,19.0s,MS4.7
HVU Hansel Valley 91.58 47 *eP* **P** **15 15 24.2 +0.6**
HVU pmax pmax
comp=Z,137nm,1.5s,mb6.1
HVU Hansel Valley 91.58 47 *eP* **P** **15 15 24.2 +0.6**
comp=Z,137nm,1.5s,mb6.1
BGU Big Grassy Mou 91.62 48 *eP* **P** **15 15 23.9 +0.1**
QLMT Earthquake Lak 91.68 44 *eP* **P** **15 15 24.8 +0.8**
UMR Umm Al-Rimmam 91.69 300 *eP* **P** **15 15 22.8 -1.5**
baz=300
UMR AMb AMB 15 15 24.3
comp=Z,92nm,1.2s,mb6.0,baz=300
ONI Oni 91.80 314 P **P** **15 15 23.6 -1.0**
SPUT South Promonto 91.94 48 *eP* **P** **15 15 26.3 +1.0**
MIB Mutribah 91.95 301 *eP* **P** **15 15 23.8 -1.7**
baz=301
MIB AMb AMB 15 15 26.0
comp=Z,146nm,1.2s,mb6.2,baz=301
KIV Kislovodsk 91.95 315 P **P** **15 15 24.2 -1.1**
comp=Z,302nm,0.9s,SNR=6.7
KIV Kislovodsk 91.95 315 ⇓P **P** **15 15 25.1 -0.2**
SNR=6.6
KIV Kislovodsk 91.95 315 *eP* **P** **15 15 23.0 -2.3**
KIV *e* 15 19 03.8
KIV *e* 15 25 56.8
KIV pmax pmax
comp=Z,46nm,1.0s,mb5.8
KIV pmax pmax
comp=Z,118nm,6.2s
KIV Kislovodsk 91.95 315 ⇑*iP* **P** **15 15 23.8 -1.5**
KIV Kislovodsk 91.95 315 *eP* **P** **15 15 23.9 -1.4**
comp=Z,46nm,0.9s,mb5.8
KIV LR LR
comp=Z,396nm,19.0s,MS4.9
RDF Al-Radifah 91.97 300 *eP* **P** **15 15 23.8 -1.8**
baz=300
RDF AMb AMB 15 15 27.9
comp=Z,102nm,1.4s,mb6.0,baz=300
DUG Dugway 91.97 49 *eP* **P** **15 15 25.7 +0.3**
DUG pmax pmax
comp=Z,85nm,1.3s,mb5.9
DUG MLR MLR
comp=Z,622nm,20.0s,MS5.0
DUG Dugway 91.97 49 *eP* **P** **15 15 25.7 +0.2**
comp=Z,85nm,1.3s,mb5.9
DUG LR LR
comp=Z,622nm,20.0s,MS5.0
VSR Storozhevoye 91.99 323 *eP* **P** **15 15 22.8 -2.5**
VSR *e* 15 19 05.1
VSR pmax pmax
comp=E,20nm,1.1s
VSR pmax pmax
comp=N,8.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
YMR Madison River 92.05 44 *eP* **P** **15 15 26.6 +0.9**
comp=Z,66nm,1.4s,mb5.8
OBN Obninsk 92.09 327 *c iP* **P** **15 15 24.1 -1.6**
OBN *e* 15 15 40.0
OBN *e* 15 19 04.9
OBN *e*S SKSac 15 25 51.5 -6.7
OBN *e*PS PS 15 27 38.2 -0.9
OBN pmax pmax
comp=Z,161nm,1.6s,mb6.1
OBN MLR MLR
comp=Z,600nm,17.0s,MS5.1
OBN Obninsk 92.09 327 *eP* **P** **15 15 23.9 -1.7**
comp=Z,138nm,1.4s,mb6.1
OBN LR LR
comp=Z,792nm,20.0s,MS5.2
ARUT Antelope Range 92.13 51 *eP* **P** **15 15 26.7 +0.5**
NAY Al-Naaiem 92.16 300 *eP* **P** **15 15 24.3 -2.2**
baz=300
NAY AMb AMB 15 15 26.2
comp=Z,115nm,1.1s,mb6.1,baz=300
RRI2 Red Ridge 92.18 45 *eP* **P** **15 15 26.6 +0.3**
comp=Z,58nm,1.4s,mb5.7
DCID1 Drake Creek 92.20 45 *eP* **P** **15 15 27.3 +0.9**
GLA Glamis 92.20 56 *eP* **P** **15 15 26.1 -0.6**
GLA pmax pmax
comp=Z,45nm,1.3s,mb5.6
GLA MLR MLR
comp=Z,686nm,21.0s,MS5.1
GLA Glamis 92.20 56 *eP* **P** **15 15 26.1 -0.6**
comp=Z,45nm,1.3s,mb5.6
GLA LR LR
comp=Z,686nm,21.0s,MS5.1
YNR Norris Junctio 92.23 44 *eP* **P** **15 15 28.5 +2.0**
CCUT Cedar City 92.25 51 *eP* **P** **15 15 27.9 +1.1**
RST Umm Al-Ruwaisa 92.31 300 *eP* **P** **15 15 24.9 -2.3**
baz=300
RST AMb AMB 15 15 26.8
comp=Z,128nm,1.1s,mb6.2,baz=300
NOQ North Oquirrh 92.36 48 *eP* **P** **15 15 28.0 +0.8**
comp=Z,48nm,1.1s,mb5.7
TPAW Teton Pass 92.40 45 *eP* **P** **15 15 27.7 +0.4**
comp=Z,33nm,1.5s,mb5.5
DAG Danmarks Havn 92.40 356 ⇑*iP* **P** **15 15 25.4 -1.3**
DAG pmax pmax
comp=Z,13nm,0.8s,mb5.3
DAG Danmarks Havn 92.40 356 ⇑*iP* **P** **15 15 25.4 -1.3**
comp=Z,13nm,0.8s,mb5.3
LKWY Lake 92.46 44 PFAKE
LKWY LR LR 15 15 40.0 +12
comp=Z,912nm,21.0s,MS5.2
MOOW Moose Ponds 92.46 45 *eP* **P** **15 15 27.4 -0.2**
comp=Z,14nm,1.2s,mb5.2
HWUT Hardware Ranch 92.50 47 *eP* **P** **15 15 27.8 0.0**
comp=Z,81nm,1.4s,mb5.9
HWUT LR LR
comp=Z,1μm,20.0s,MS5.3
AHID Auburn Hatcher 92.50 46 *eP* **P** **15 15 27.5 -0.3**
comp=Z,74nm,1.5s,mb5.8
AHID LR LR
comp=Z,669nm,20.0s,MS5.1
REDW Red Top Meadow 92.50 45 *eP* **P** **15 15 28.5 +0.7**
comp=Z,37nm,1.4s,mb5.6
NLU North Lily Min 92.58 49 *eP* **P** **15 15 28.2 0.0**
GCMT Greycliff 92.59 43 *eP* **P** **15 15 28.9 +0.8**
JLU Jordanelle 92.86 48 *eP* **P** **15 15 29.4 -0.1**
MVU Marysvale 92.87 50 PFAKE 15 15 40.0 +10
MVU LR LR
comp=Z,748nm,21.0s,MS5.1
MPU Maple Canyon 92.89 49 *eP* **P** **15 15 30.2 +0.5**
comp=Z,60nm,1.3s,mb5.9
MPU LR LR
comp=Z,979nm,20.0s,MS5.3
MSU Marysvale 92.90 50 *eP* **P** **15 15 30.6 +0.8**
DAU Daniels Canyon 93.06 48 *eP* **P** **15 15 31.1 +0.7**
RLMT Red Lodge 93.06 43 *eP* **P** **15 15 31.3 +0.9**
comp=Z,79nm,1.9s,mb5.8
RLMT LR LR
comp=Z,601nm,20.0s,MS5.0
TMUT Trail Mountain 93.41 49 *eP* **P** **15 15 32.6 +0.5**
BW06 Boulder Array 93.58 46 PFAKE 15 15 40.0 +7.2
BW06 LR LR
comp=Z,692nm,21.0s,MS5.1
PDAR Pinedale Array 93.58 46 P **P** **15 15 32.8 -0.1**
comp=Z,3.1nm,1.0s,mb4.7,baz=270,slow=2.5,SNR=14
PDAR PKKPbc PKKPbc 15 32 37.8 -1.5
comp=Z,1.6nm,0.8s,baz=103,slow=4.7,SNR=7.8
PDAR LR LR 15 52 26.4
comp=Z,502nm,20.1s,MS5.0,baz=314,slow=32
KAF Kangasniemi 93.83 336 *ep* **P** **15 15 30.3 -3.2**
comp=Z,29nm,0.9s,mb5.7,baz=54,slow=4.3
KAF Kangasniemi 93.83 336 *eP* **P** **15 15 30.3 -3.2**
KAF pmax pmax
comp=Z,29nm,0.9s,mb5.7
KAF Kangasniemi 93.83 336 *eP* **P** **15 15 30.2 -3.3**
comp=Z,12nm,0.8s,mb5.4
SRU San Rafael 93.97 49 *eP* **P** **15 15 34.4 -0.3**
SRU pmax pmax
comp=Z,27nm,1.2s,mb5.5
SRU San Rafael 93.97 49 *eP* **P** **15 15 34.4 -0.2**
comp=Z,28nm,1.2s,mb5.6
FFC Flin Flon 94.00 33 P **P** **15 15 34.2 -0.3**
FFC pmax pmax
comp=Z,27nm,1.2s,mb5.5
FFC Flin Flon 94.00 33 *eP* **P** **15 15 33.3 -1.1**
comp=Z,27nm,1.3s,mb5.5
FFC LR LR
comp=Z,753nm,21.0s,MS5.1
SOC Sochi 94.12 316 *eP* **P** **15 15 33.2 -2.1**
SOC *e* 15 19 20.9
SOC *e*PPP 15 21 22.1
SOC *e*S SKSac 15 26 08.4 -1.5
SOC *e* 15 26 41.8
SOC pmax pmax
comp=Z,443nm,0.7s
WUAZ Wupatki 94.33 53 *eP* **P** **15 15 37.3 +0.8**
comp=Z,70nm,1.2s,mb6.0
WUAZ LR LR
comp=Z,921nm,20.0s,MS5.2
LAO LASA Array 94.56 41 *eP* **P** **15 15 37.0 -0.2**
comp=Z,128nm,1.5s,mb6.1
LAO LR LR
comp=Z,495nm,20.0s,MS5.0
DGMT Dagmar 95.19 39 PFAKE 15 15 50.0 +10
DGMT LR LR
comp=Z,574nm,21.0s,MS5.0
PV10 Paradox Valley 95.30 50 *eP* **P** **15 15 40.6 -0.2**
VSU Vasula 95.50 332 ⇑*iP* **P** **15 15 39.8 -1.5**
TUC Tucson 95.69 56 *eP* **P** **15 15 42.9 +0.2**
TUC pmax pmax
comp=Z,15nm,1.4s,mb5.2
TUC MLR MLR
comp=Z,793nm,22.0s,MS5.2
TUC Tucson 95.69 56 *eP* **P** **15 15 42.9 +0.2**
comp=Z,16nm,1.4s,mb5.2
TUC LR LR
comp=Z,793nm,22.0s,MS5.2
PV01 Paradox Valley 95.72 50 *eP* **P** **15 15 42.5 -0.2**
MVCO Mesa Verde 96.06 51 *eP* **P** **15 15 44.1 -0.2**
comp=Z,62nm,1.4s,mb5.8
MVCO LR LR
comp=Z,744nm,20.0s,MS5.2
MALT Malatya 96.73 311 *eP* **P** **15 15 45.7 -1.6**
MALT pmax pmax
comp=Z,24nm,1.1s,mb5.5
MALT MLR MLR
comp=Z,374nm,20.0s,MS4.9
MALT Malatya 96.73 311 ⇓*iP* **P** **15 15 45.9 -1.4**
MALT Malatya 96.73 311 *eP* **P** **15 15 45.7 -1.6**
comp=Z,24nm,1.1s,mb5.5
MALT LR LR
comp=Z,374nm,20.0s,MS4.9
MAW Mawson 96.88 203 *eP* **P** **15 15 46.5 -0.7**
comp=Z,6.9nm,1.1s,mb5.0
MAW *e* 15 19 31.7
MAW Mawson 96.88 203 P **P** **15 15 46.1 -1.1**
comp=Z,8.0nm,1.0s,mb5.1,baz=78,slow=5.7,SNR=14
MAW PP PP 15 19 38.1 -4.5
comp=Z,12nm,1.0s,baz=81,slow=9.5,SNR=9.4
MAW PKKPbc PKKPbc 15 32 29.3 -2.4
comp=Z,2.3nm,0.8s,baz=290,slow=7.9,SNR=7.3
MAW LR LR 15 59 44.6
comp=Z,346nm,18.8s,MS4.9,baz=68,slow=36
MAW Mawson 96.88 203 P **P** **15 15 46.6 -0.6**
MAW pmax pmax
comp=Z,16nm,1.2s
ISCO Idaho Springs 97.36 47 *eP* **P** **15 15 50.4 +0.3**
ISCO pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
ISCO MLR MLR
comp=Z,754nm,20.0s,MS5.2
ISCO Idaho Springs 97.36 47 *eP* **P** **15 15 50.4 +0.3**
comp=Z,9.8nm,1.1s,mb5.2
ISCO LR LR
comp=Z,754nm,20.0s,MS5.2
AKASG Malin Array Be 97.97 325 P **P** **15 15 50.7 -1.9**
comp=Z,8.7nm,0.9s,mb5.3,baz=52,slow=4.7,SNR=33
AKASG PP PP 15 19 50.9 0.0
comp=Z,5.3nm,0.9s,baz=50,slow=8.1,SNR=7.8
AKASG LR LR 16 03 08.8
comp=Z,612nm,20.1s,MS5.1,baz=60,slow=37
AKASG Malin Array Be 97.97 325 P **P** **15 15 50.7 -1.9**
AKASG 15 19 50.9
AKASG Malin Array Be 97.97 325 P **P** **15 15 50.7 -1.9**
AKASG PP PP 15 19 50.9 0.0
AKASG LR LR 16 03 08.8
KIEV Kiev 97.98 325 PFAKE 15 16 00.0 +7.3
KIEV LR LR
comp=Z,689nm,22.0s,MS5.1
LAZ Ladron 97.98 53 *eP* **P** **15 15 53.8 +0.7**
SDCO Great Sand Dun 98.14 49 PFAKE 15 16 10.0 +16
SDCO LR LR
comp=Z,714nm,20.0s,MS5.2
ANMO Albuquerque 98.34 52 *eP* **P** **15 15 55.0 +0.4**
ANMO pmax pmax
comp=Z,20nm,1.4s
ANMO MLR MLR
comp=Z,643nm,20.0s
ANMO Albuquerque 98.34 52 *eP* **P** **15 15 55.0 +0.4**
comp=Z,20nm,1.4s,mb5.5
ANMO LR LR
comp=Z,643nm,20.0s,MS5.1
ULM Lac du Bonnet 99.34 35 LR LR 15 54 18.1
comp=Z,858nm,21.4s,MS5.2,baz=116,slow=31
ULM Lac du Bonnet 99.34 35 PFAKE 15 16 10.0 +11
ULM LR LR
comp=Z,1μm,21.0s,MS5.4
OGNE Ogallala 99.49 45 PFAKE 15 16 10.0 +10
OGNE LR LR
comp=Z,930nm,21.0s,MS5.3
BR131 Keskin Array S 99.73 313 *eP* Pdif 15 15 60.0 -0.4
comp=Z,1.0nm,0.5s
BR131 LR LR
comp=Z,250nm,19.0s,MS4.7
HFS Hagfors 99.92 338 LR LR 16 03 47.9
comp=Z,305nm,20.8s,MS4.8,baz=42,slow=37
NOA NORSAR Array B 100.19 339 P Pdif 15 16 00.1 -2.3
comp=Z,4.5nm,1.1s,baz=49,slow=4.8,SNR=5.0

NOA PP PP 15 20 00.1 -7.3
comp=Z,4.3nm,1.0s,baz=45,slow=8.1,SNR=6.0
ANTO Ankara 100.28 314 PFAKE 15 16 10.0 +7.2
ANTO LR LR
comp=Z,258nm,19.0s,MS4.8
AGMN Agassiz Refuge 100.29 37 PFAKE 15 16 10.0 +7.2
AGMN LR LR
comp=Z,1µm,22.0s,MS5.4
ABPO Ambohimpanom 101.23 253 PFAKE 15 16 20.0 +13
ABPO LR LR
comp=Z,365nm,19.0s,MS4.9
LVV L'vov 101.31 326 *e*P Pdif 15 16 06.3 -1.1
LVV *i* S Sdif 15 27 44.7 -1.8
CSS Prodhromos 101.74 309 *e*Pdif Pdif 15 16 08.0 -1.3
comp=Z,18nm,0.9s
BUR08 Bucovina Ar. S 101.75 323 *e*Pdif Pdif 15 16 08.6 -0.8
BURAR Bucovina Array 101.75 323 ⇑*i*P Pdif 15 16 08.8 -0.6
BURAR Bucovina Array 101.75 323 ⇑P Pdif 15 16 08.8 -0.5
CBKS Cedar Bluff 101.95 47 PFAKE 15 16 20.0 +10
CBKS LR LR
comp=Z,760nm,20.0s,MS5.2
ECSD EROS,Sioux Fal 101.96 41 PFAKE 15 16 20.0 +10
ECSD LR LR
comp=Z,552nm,22.0s,MS5.0
AMTX Amarillo 102.04 51 PFAKE 15 16 20.0 +9.4
AMTX LR LR
comp=Z,971nm,20.0s,MS5.3
KWP Kalwaria 102.13 326 PFAKE 15 16 20.0 +9.0
KWP LR LR
comp=Z,477nm,21.0s,MS5.0
TXAR Lajitas Array 102.42 57 P Pdif 15 16 13.0 +0.7
comp=Z,1.3nm,1.0s,baz=266,slow=4.8,SNR=7.2
TXAR PP PP 15 20 25.2 -0.3
comp=Z,0.6nm,0.9s,baz=285,slow=6.3,SNR=4.0
TXAR PKKPbc PKKPbc 15 32 13.7 -0.9
comp=Z,0.6nm,0.9s,baz=147,slow=7.0,SNR=4.3
TXAR Lajitas Array 102.42 57 P Pdif 15 16 13.0 +0.7
TXAR 15 20 25.3
ISP Isparta 102.72 313 PFAKE 15 16 30.0 +16
ISP LR LR
comp=Z,275nm,22.0s,MS4.7
KOLS Kolonicke sedl 102.75 326 PDIF Pdif 15 16 13.2 -0.6
KOLS *e*PP PP 15 20 27.8 +0.7
KOLS Kolonicke sedl 102.75 326 *e*Pdif Pdif 15 16 13.2 -0.6
KOLS *e*PP PP 15 20 27.8 +0.7
UZH Uzhgorod 102.90 325 *e*P Pdif 15 16 14.0 -0.5
UZH *e*S Sdif 15 27 56.0 -3.8
EYMN Ely 102.99 35 PFAKE 15 16 30.0 +15
EYMN LR LR
comp=Z,930nm,21.0s,MS5.3
STHS Stebnicka Huta 103.05 326 PDIF Pdif 15 16 15.8 +0.7
STHS Stebnicka Huta 103.05 326 *e*Pdif Pdif 15 16 15.8 +0.7
CRVS Cervenica-Dubn 103.22 326 PDIF Pdif 15 16 15.8 -0.1
CRVS *e* 15 19 40.4
CRVS *e*PP PP 15 20 35.7 +5.1
CRVS Cervenica-Dubn 103.22 326 *e*Pdif Pdif 15 16 15.8 -0.1
CRVS *e* 15 19 40.4
CRVS *e*PP PP 15 20 35.7 +5.1
OJC Ojcow 103.37 328 *e*P Pdif 15 16 15.7 -0.9
NIE Niedzica 103.55 327 *e*P Pdif 15 16 17.2 -0.2
DRGR 103.64 324 ⇑*i*P Pdif 15 16 17.2 -0.6
DRGR 103.64 324 ⇑P Pdif 15 16 17.2 -0.5
KSU1 Kansas State U 104.04 45 PFAKE 15 16 30.0 +10
KSU1 LR LR
comp=Z,981nm,22.0s,MS5.3
WMOK Wichita Mounta 104.30 50 PFAKE 15 16 30.0 +9.3
WMOK LR LR
comp=Z,592nm,20.0s,MS5.1
OKC Ostrava-Krasne 104.46 328 *e*PKP PKiKP 15 20 38.6 +0.9
OKC AMS AMS 16 06 10.0
comp=Z,700nm,17.5s
PSZ Piszkesteto 104.63 326 PFAKE 15 16 30.0 +7.8
PSZ LR LR
comp=Z,547nm,19.0s,MS5.1
KSP Ksiaz 104.80 330 *e*P Pdif 15 16 22.4 -0.5
KSP *e* 15 20 41.0
KSP MLR MLR
comp=Z,1µm,16.4s,MS5.5
VYHS Vyhne 104.88 327 PDIF Pdif 15 16 23.2 -0.1
VYHS *e* 15 19 39.5
VYHS *e*PP PP 15 20 38.5 -4.5
VYHS Vyhne 104.88 327 *e*Pdif Pdif 15 16 23.2 -0.1
VYHS *e* 15 19 39.5
VYHS *e*PP PP 15 20 38.5 -4.5
SCIA State Center 105.02 41 PFAKE 15 20 50.0 +11
SCIA LR LR
comp=Z,668nm,19.0s,MS5.2
DPC Dobruska-Polom 105.09 329 *e*PKP PKiKP 15 20 42.8 +3.9
UPC Upice 105.15 329 *e*PKP PKiKP 15 20 41.1 +2.1
JCT Junction City 105.16 54 PFAKE 15 20 50.0 +10
JCT LR LR
comp=Z,586nm,19.0s,MS5.2
COWI Conover 105.35 36 PFAKE 15 20 50.0 +11
COWI LR LR
comp=Z,997nm,20.0s,MS5.4
MODS Modra-Piesok 105.79 327 PDIF Pdif 15 16 27.7 +0.4
MODS *e*PP PP 15 20 43.6 -6.1
MODS Modra-Piesok 105.79 327 *e*Pdif Pdif 15 16 27.7 +0.4
MODS *e*PP PP 15 20 43.6 -6.1
BRG Berggiesshubel 105.93 331 *e*P Pdif 15 16 27.1 -0.8
BRG *i* 15 20 46.3
BRG pmax pmax
comp=Z,4.0nm,1.3s
BRG MLR MLR
comp=Z,300nm,16.4s,MS4.9
BRG Berggiesshubel 105.93 331 *e*P Pdif 15 16 27.1 -0.9
comp=Z,6.8nm,1.3s
BRG *e* 15 20 11.6
comp=Z,25nm,1.9s
BRG *i* 15 20 46.3
comp=Z,15nm,1.2s
BRG
comp=N,257nm,17.3s
BRG
comp=E,404nm,18.8s
BRG
comp=Z,506nm,16.4s
BRG Berggiesshubel 105.93 331 *e*P Pdif 15 16 27.1 -0.9
comp=Z,4.1nm,1.3s
BRG *e* 15 20 11.6
BRG *i* 15 20 46.3
BRG LR LR
comp=Z,300nm,16.4s,MS4.9
CLL Collm 106.10 331 ⇓*i*P Pdif 15 16 28.2 -0.5
CLL *e* 15 20 51.0
CLL pmax pmax
comp=Z,10.0nm,1.3s
CLL MLR MLR
comp=Z,400nm,21.2s,MS4.9
CLL Collm 106.10 331 ⇓*i*Pdif Pdif 15 16 28.2 -0.5
comp=Z,10.0nm,1.3s
CLL *e*PKiKP PKiKP 15 20 41.0 +0.3
comp=Z,9.0nm,1.1s
CLL *e*PP PP 15 20 51.0 -0.8
comp=Z,16nm,1.4s
CLL *e*Sdif Sdif 15 28 28.0 +1.5
comp=N,200nm,11.0s
CLL *e*Sdif Sdif 15 28 28.0 +1.5
CLL LmV 16 06 00.0
comp=Z,400nm,21.2s
CLL Collm 106.10 331 ⇓*i*Pdif Pdif 15 16 28.2 -0.5
comp=Z,10.0nm,1.3s
CLL *e*PP PP 15 20 51.0 -0.8
CLL *e*Sdif Sdif 15 28 28.0 +1.5
CLL LR LR
comp=Z,400nm,21.2s,MS4.9
TREC Trest 106.17 329 *e*PKP PKiKP 15 20 41.3 +0.4
PRU Pruhonice 106.21 330 *e*PKP PKiKP 15 20 36.5 -4.4
PRU *ex* x 15 20 45.3
PRU AMS AMS 16 10 00.0
comp=Z,500nm,17.2s
PKSM Moragy 106.31 325 ⇓*i*P Pdif 15 16 29.1 -0.5
PKSM Moragy 106.31 325 ⇓P Pdif 15 16 29.1 -0.5
JFWS Jewell Farm 106.40 39 PFAKE 15 20 50.0 +8.5
JFWS LR LR
comp=Z,521nm,21.0s,MS5.1
SANT Santorini 106.99 313 PFAKE 15 20 50.0 +7.2
SANT LR LR
comp=Z,194nm,20.0s,MS4.7
NKC Novy Kostel 107.07 331 *e*PKP PP 15 20 52.2 -6.8
NKC *ex* x 15 21 00.0
MOX Moxa 107.19 331 *e*PKP PP 15 20 56.8 -3.1
comp=Z,36nm,1.5s
KHC Kasperske Hory 107.24 329 *e*PKP PKiKP 15 20 42.8 -0.1
KHC *ex* x 15 20 53.0
KHC AMS AMS 16 10 20.0
comp=Z,600nm,14.9s
GERES GERESS Array B 107.36 329 Pdiff Pdif 15 16 33.8 -0.5
comp=Z,0.9nm,0.9s,baz=57,slow=4.9,SNR=5.6
GERES PKiKP PKiKP 15 20 43.0 -0.1
comp=Z,1.1nm,0.7s,baz=75,slow=1.5,SNR=8.2
GERES PP 15 21 00.7 -0.4
comp=Z,5.3nm,1.1s,baz=54,slow=5.3,SNR=7.1
GERES PKKPbc PKKPbc 15 31 58.1 -2.1
comp=Z,1.1nm,1.0s,baz=197,slow=2.8,SNR=6.4
GERES GERESS Array B 107.36 329 P Pdif 15 16 33.8 -0.5
GERES 15 21 00.7
KVTX Kingsville 107.81 57 PFAKE 15 21 00.0 +15
KVTX LR LR
comp=Z,783nm,19.0s,MS5.3
GRA1 Grafenberg Arr 108.03 331 *e*PKP PKiKP 15 20 44.3 0.0
GRF Grafenberg Arr 108.03 331 *e*PKP PKiKP 15 20 44.3 0.0
CCM Cathedral Cave 108.24 44 PFAKE 15 21 00.0 +15
CCM LR LR
comp=Z,671nm,22.0s,MS5.2
HDIL Hopedale 108.25 41 PFAKE 15 21 00.0 +15
HDIL LR LR
comp=Z,777nm,21.0s,MS5.2
MIAR Mount Ida 108.26 48 PFAKE 15 21 00.0 +15
MIAR LR LR
comp=Z,648nm,20.0s,MS5.2
KMBO Kilima Mbogo 108.29 272 PFAKE 15 21 00.0 +14
KMBO LR LR
comp=Z,289nm,21.0s,MS4.8
TIR Tirane 108.29 320 PFAKE 15 21 00.0 +15
TIR LR LR
comp=Z,345nm,20.0s,MS4.9
HKT Hockley 108.52 54 PFAKE 15 21 00.0 +14
HKT LR LR
comp=Z,597nm,19.0s,MS5.2
GLMI Grayling 108.68 35 PFAKE 15 21 00.0 +14
GLMI LR LR
comp=Z,565nm,19.0s,MS5.2
SCHQ Schefferville 109.41 19 PFAKE 15 21 00.0 +13
SCHQ LR LR
comp=Z,880nm,20.0s,MS5.3
ESK Eskdalemuir 109.43 342 PFAKE 15 21 00.0 +13
ESK LR LR
comp=Z,384nm,20.0s,MS5.0
BFO Black Forest 110.34 331 PFAKE 15 21 00.0 +11
BFO LR LR
comp=Z,356nm,19.0s,MS5.0
WLF Walferdange 110.38 333 PFAKE 15 21 00.0 +11
WLF LR LR
comp=Z,563nm,19.0s,MS5.2
CDF Champ du Feu 110.78 332 *e*PKIKP PKiKP 15 20 49.5 -0.1
comp=Z,10nm,1.0s
BAIF Baives 110.93 335 *e*PKIKP PKiKP 15 20 50.1 +0.3
TUE Stuetta 111.14 329 PFAKE 15 21 00.0 +10
TUE LR LR
comp=Z,583nm,20.0s,MS5.2
OXF Oxford 111.29 47 PFAKE 15 21 00.0 +9.1
OXF LR LR
comp=Z,523nm,19.0s,MS5.1
HINF Hinteralfeld 111.41 332 *e*PKIKP PKiKP 15 20 50.7 -0.1
comp=Z,23nm,1.1s
WCI Wyandotte Cave 111.47 42 PFAKE 15 21 00.0 +8.8
WCI LR LR
comp=Z,470nm,22.0s,MS5.0
HAU Haudompre 111.50 332 *e*PKIKP PKiKP 15 20 50.9 0.0
HAU *e*MLR MLR
comp=Z,309nm,20.2s,MS4.6
HAU Haudompre 111.50 332 *e*PKPdf PKiKP 15 20 50.9 0.0
HAU LR LR
comp=Z,310nm,20.3s,MS4.9
WVT Waverly 111.57 44 PFAKE 15 21 00.0 +8.6
WVT LR LR
comp=Z,506nm,19.0s,MS5.1
CUC Castrocucco 111.60 321 PFAKE 15 21 00.0 +8.6
CUC LR LR
comp=Z,354nm,20.0s,MS5.0
VBMS Vicksburg 111.60 49 PFAKE 15 21 00.0 +8.4
VBMS LR LR
comp=Z,895nm,19.0s,MS5.4
MEZF Maizieres J'vi 111.73 333 *e*PKIKP PKiKP 15 20 52.1 +0.8
VLC Villacollemand 112.16 327 PFAKE 15 21 00.0 +7.7
VLC LR LR
comp=Z,426nm,19.0s,MS5.0
ACSO Alum Creek Sta 112.41 38 PFAKE 15 21 00.0 +7.1
ACSO LR LR
comp=Z,996nm,22.0s,MS5.4
CEL Celeste 112.55 319 PFAKE 15 21 00.0 +6.8
CEL LR LR
comp=Z,22µm,22.0s
CABF La Chapelle 112.64 331 *e*PKIKP PKiKP 15 20 53.8 +0.7
comp=Z,31nm,1.1s
ERPA Erie 113.00 35 PFAKE 15 21 10.0 +16
ERPA LR LR
comp=Z,253nm,22.0s,MS4.8
LPL La Plagne 113.11 330 *e*PKIKP PKiKP 15 20 54.6 +0.5
comp=Z,32nm,1.3s
LPG La Plagne 113.11 330 *e*PKIKP PKiKP 15 20 54.7 +0.6
comp=Z,33nm,1.4s
LOR Lormes 113.19 333 *e*PKIKP PKiKP 15 20 54.3 +0.1
comp=Z,30nm,1.4s
LOR *e*MLR MLR
comp=Z,411nm,22.8s,MS4.7
LOR Lormes 113.19 333 *e*PKPdf PKiKP 15 20 54.3 +0.1
LOR LR LR
comp=Z,410nm,22.8s,MS5.0
BNI Bardonecchia 113.47 330 *e*PKIKP PKiKP 15 20 55.0 +0.2
BNI MLR MLR
comp=Z,507nm,19.0s,MS5.1
SSF Saint Saulge 113.50 333 *e*PKIKP PKiKP 15 20 55.0 +0.2
comp=Z,47nm,1.4s
SMF Signal de Mont 113.66 332 *e*PKIKP PKiKP 15 20 55.2 +0.1
comp=Z,33nm,1.3s
LRAL Lakeview Retre 113.77 47 PFAKE 15 21 10.0 +14
LRAL LR LR
comp=Z,1µm,20.0s,MS5.4
AVF Avril sur Loir 113.77 333 *e*PKIKP PKiKP 15 20 57.0 +1.7
comp=Z,38nm,1.6s
ORIF Oris-en-Rattie 113.96 330 *e*PKIKP PKiKP 15 20 55.8 +0.1
comp=Z,7.7nm,0.8s
ORIF *e*MLR MLR
comp=Z,409nm,20.8s,MS4.7
PGF Pioggiola 113.99 326 *e*PKIKP PKiKP 15 20 56.0 +0.2
comp=Z,50nm,1.1s
LONY Lake Ozonia 114.18 30 PFAKE 15 21 10.0 +14
LONY LR LR
comp=Z,723nm,20.0s,MS5.3
TZTN Tazewell 114.22 42 PFAKE 15 21 10.0 +14
TZTN LR LR
comp=Z,614nm,20.0s,MS5.2
VIVF Saint-Julien-l 114.59 330 *e*PKIKP PKiKP 15 20 57.1 +0.2
comp=Z,19nm,1.1s
MCWV Mont Chateau 114.66 37 PFAKE 15 21 10.0 +13
MCWV LR LR
comp=Z,1µm,20.0s,MS5.5
TCF Toulx Ste Croi 114.67 333 *e*PKIKP PKiKP 15 20 57.1 +0.1
comp=Z,50nm,1.5s
BRAL Brewton 114.77 49 PFAKE 15 21 10.0 +12
BRAL LR LR
comp=Z,840nm,20.0s,MS5.3
SMRF Simiane la Rot 114.79 329 *e*PKIKP PKiKP 15 20 57.8 +0.5
comp=Z,19nm,0.8s
NCB Newcomb 114.82 31 PFAKE 15 21 10.0 +13
NCB LR LR
comp=Z,642nm,22.0s,MS5.2
BINY Binghamton 115.16 33 PFAKE 15 21 10.0 +12
BINY LR LR
comp=Z,1µm,21.0s,MS5.4
SSPA Standing Stone 115.16 35 PFAKE 15 21 10.0 +12
SSPA LR LR
comp=Z,827nm,21.0s,MS5.3
ROSF Rostrenen 115.29 338 *e*PKIKP PKPdf 15 20 59.4 +1.2
LBNH Lisbon 115.75 29 PFAKE 15 21 10.0 +11
LBNH LR LR
comp=Z,969nm,21.0s,MS5.4
CAF Calviac 115.77 332 *e*PKIKP PKPdf 15 20 59.6 +0.4
VSL Villasalto 115.80 324 PFAKE 15 21 10.0 +11
VSL LR LR
comp=Z,227nm,20.0s,MS4.8
BLA Blacksburg 115.84 40 PFAKE 15 21 10.0 +10
BLA LR LR
comp=Z,662nm,22.0s,MS5.2
SNAA Sanae 115.91 191 *e*PKPdf PKPdf 15 20 57.5 -1.1
SNAA *e* 15 20 58.6
SNAA *e* 15 21 00.7
SNAA *e* 15 31 29.2
SNAA *e* 15 31 34.0
SNAA Sanae 115.91 191 *e*PKPdf PKPdf 15 20 57.4 -1.2
GOGA Godfrey 116.06 45 PFAKE 15 21 10.0 +10
GOGA LR LR
comp=Z,826nm,21.0s,MS5.3
PKME Peaks-Kenny Pk 116.18 27 PFAKE 15 21 10.0 +10
PKME LR LR
comp=Z,607nm,20.0s,MS5.2
LFF La Frestale 116.36 333 *e*PKIKP PKPdf 15 21 00.8 +0.5
comp=Z,65nm,1.4s
MTLF Montolieu 116.90 331 *e*PKIKP PKPdf 15 21 01.5 +0.1
comp=Z,47nm,1.4s
CBN Corbin 117.07 37 PFAKE 15 21 10.0 +8.1
CBN LR LR
comp=Z,938nm,20.0s,MS5.4
HRV Adam Dziewonsk 117.22 30 PFAKE 15 21 10.0 +7.9
HRV LR LR
comp=Z,607nm,20.0s,MS5.2
VNA2 Neumayer--Watz 117.33 190 *e*PKPdf PKPdf 15 21 01.1 -0.3
baz=315,slow=0.2
VNA2 *e* 15 21 02.2
VNA2 *e* 15 21 04.0
VNA2 *e* 15 31 25.2
VNA2 *e* 15 31 28.8
VNA3 Neumayer Olymp 117.41 189 *e*PKPdf PKPdf 15 21 00.7 -0.8
VNA3 *e* 15 21 02.2
VNA3 *e* 15 21 03.6
VNA3 *e* 15 31 24.3
VNA3 *e* 15 31 28.4
WES Weston 117.43 30 PFAKE 15 21 10.0 +7.5
WES LR LR
comp=Z,685nm,22.0s,MS5.2
VNA1 Neumayer--Stat 117.71 190 *e*PKPdf PKPdf 15 21 01.8 -0.3
VNA1 *e* 15 21 03.5
VNA1 *e* 15 21 05.3
VNA1 *e* 15 31 22.9
VNA1 *e* 15 31 27.3
EPF Esparros 118.03 332 *e*PKIKP PKPdf 15 21 04.0 +0.4
comp=Z,42nm,1.4s
KEST Kesra 118.25 320 PKP PKPdf 15 21 04.6 +0.4
comp=Z,5.7nm,1.0s,baz=294,slow=3.5,SNR=8.1
NHSC New Hope 118.48 43 PFAKE 15 21 20.0 +15
NHSC LR LR
comp=Z,800nm,21.0s,MS5.3
ETSF Etsaut 118.54 332 *e*PKIKP PKPdf 15 21 05.5 +0.9
comp=Z,31nm,1.1s
CNNC Cliffs of the 118.66 40 PFAKE 15 21 20.0 +15
CNNC LR LR
comp=Z,937nm,19.0s,MS5.4
SJPF Ste Jean 118.68 333 *e*PKIKP PKPdf 15 21 05.4 +0.5
comp=Z,23nm,1.1s
TEIG Tepich 118.80 60 PFAKE 15 21 20.0 +14
TEIG LR LR
comp=Z,446nm,21.0s,MS5.1
LSZ Lusaka 119.02 258 *e*PKIKP PKPdf 15 21 06.7 +0.5
DWPF Disney 120.45 49 PFAKE 15 21 20.0 +11
DWPF LR LR
comp=Z,706nm,19.0s,MS5.3
EMOS Mosqueruela 120.47 330 PKP PKPdf 15 21 09.3 +0.9
ETOR Torete 120.87 332 PKIKP PKPdf 15 21 10.0 +0.9
ECHE Chera 121.31 330 PKIKP PKPdf 15 21 11.1 +1.1
BOSA Boshof 121.58 243 PKP PKPdf 15 21 10.7 -0.1
comp=Z,6.1nm,0.7s,baz=153,slow=2.3,SNR=7.2
GUD Guadarrama 121.96 333 PKIKP PKPdf 15 21 12.5 +1.3
TGUH Tegucigalpa,Un 122.13 66 PFAKE 15 21 20.0 +7.8
TGUH LR LR
comp=Z,338nm,20.0s,MS5.0
ESDC Sonseca Array 122.66 332 PKP PKPdf 15 21 11.9 -0.7
comp=Z,2.6nm,0.8s,baz=30,slow=2.4,SNR=47
ESDC PP PP 15 22 46.1 -2.8
comp=Z,5.6nm,0.9s,baz=30,slow=6.7,SNR=12
ESDC Sonseca Array 122.66 332 PKP PKPdf 15 21 12.8 +0.2
ESLA Sonseca Array 122.66 332 PFAKE 15 21 20.0 +7.4
ESLA LR LR
comp=Z,2µm,19.0s,MS5.8
MVO Moncorvo 122.75 336 *e*PKPdf PKPdf 15 21 13.4 +0.7
MVO Moncorvo 122.75 336 *i* P 15 34 57.0
EVIA Vianos 122.80 331 PKIKP PKPdf 15 21 13.9 +1.0
PVRL Vila Real 122.93 336 *e*PKPdf PKPdf 15 21 14.0 +0.9
PAB San Pablo 122.94 333 *e*PKIKP PKPdf 15 21 13.7 +0.5
PAB MLR MLR
comp=Z,322nm,20.0s,MS5.0
PVIS Viseu 123.48 336 *e*PKPdf PKPdf 15 21 13.6 -0.6
EHUE Huescar 123.49 330 PKIKP PKPdf 15 21 14.3 0.0
MTE Manteigas 123.61 336 *e*PKPdf PKPdf 15 21 14.9 +0.5
MTE Manteigas 123.61 336 *e*PKPdf PKPdf 15 21 14.8 +0.3
EQES Quesada 123.73 330 PKP PKPdf 15 21 14.0 -0.7
EBAN Banos Encina 123.79 331 PKIKP PKPdf 15 21 15.6 +0.8
EADA Adamuz 124.16 332 PKP PKPdf 15 21 16.5 +0.9
EBER Berja 124.35 330 PKP PKPdf 15 21 18.1 +2.1
PMRV Marv??o 124.36 335 *e*PKPdf PKPdf 15 21 16.1 +0.2
ECOG Cogollos-Vega 124.39 330 PKIKP PKPdf 15 21 14.9 -1.1
ELUQ Luque 124.50 331 PKIKP PKPdf 15 21 16.8 +0.6
PTOM Tomar 124.62 336 *e*PKPdf PKPdf 15 21 17.0 +0.6
ERON Agron 124.71 330 PKP PKPdf 15 21 16.1 -0.5
ELOJ Sierra Loja 124.77 331 PKIKP PKPdf 15 21 16.6 -0.2
PESTR Estremoz 124.92 335 *e*PKPdf PKPdf 15 21 16.3 -0.7
EALB Alboran 125.17 329 PKP PKPdf 15 21 17.8 +0.3
PBAR Barrancos 125.26 334 *e*PKPdf PKPdf 15 21 18.6 +0.9
PBAR *i* P 15 21 52.3
EVO Evora 125.38 335 *e*PKIKP PKPdf 15 21 18.6 +0.7
comp=Z,42nm,1.1s
EVO *e*MLR MLR
comp=Z,363nm,22.5s,MS4.7
EVO Evora 125.38 335 *e*PKPdf PKPdf 15 21 18.5 +0.6
EMIN Mina Concepcio 125.44 333 PKP PKPdf 15 21 18.2 +0.2
EMIJ Mijas 125.54 331 PKP PKPdf 15 21 16.3 -1.9
PBEJ Beja 125.74 334 *e*PKPdf PKPdf 15 21 19.2 +0.6
PBEJ *i* P 15 22 12.5
ESPR Espera 125.80 332 PKP PKPdf 15 21 18.6 -0.2
EJIF Jimena Fronter 125.96 331 PKIKP PKPdf 15 21 19.0 0.0
SFS San Fernando 126.29 332 PFAKE 15 21 30.0 +10
SFS LR LR
comp=Z,707nm,22.0s,MS5.3
RTC Rabat Centre 128.62 331 PFAKE 15 21 40.0 +16
RTC LR LR
comp=Z,301nm,21.0s,MS5.0
TAM Tamanrasset 128.81 311 *e*PKIKP PKPdf 15 21 24.8 -0.1
TSUM Tsumeb 129.21 254 PFAKE 15 21 40.0 +14
TSUM LR LR
comp=Z,391nm,19.0s,MS5.1
BCIP Isla Barro Col 130.71 68 *e*PKPdf PKPdf 15 21 26.9 -1.8
BCIP LR LR
comp=Z,454nm,22.0s,MS5.1
OTAV Otavalo 134.88 79 PKPdf PKPdf 15 21 36.1 -0.4
OTAV LR LR
comp=Z,545nm,21.0s,MS5.2
PLCA Paso Flores 136.12 140 PKhKP 15 21 27.1
comp=Z,1.2nm,0.8s,baz=147,slow=1.2,SNR=3.4
PLCA PKP PKPdf 15 21 38.7 +0.6
comp=Z,4.4nm,1.0s,baz=219,slow=2.7,SNR=8.6
PLCA Paso Flores 136.12 140 PKP 15 21 27.1
PLCA PKP PKPdf 15 21 38.7 +0.6
TOAO Torodi Ar. Sit 137.19 302 *e*PKPdf PKPdf 15 21 40.6 -0.2
TORD Torodi Ar. Bea 137.19 302 PKhKP 15 21 27.3
comp=Z,1.8nm,0.7s,baz=45,slow=2.7,SNR=12
TORD PKP PKPdf 15 21 39.5 -1.2
comp=Z,21nm,1.1s,baz=36,slow=2.0,SNR=20
TORD PP PP 15 24 25.5 +0.7
comp=Z,11nm,1.1s,baz=62,slow=5.6,SNR=3.5
TORD Torodi Ar. Bea 137.19 302 PKP 15 21 27.3
TORD PKP PKPdf 15 21 39.5 -1.2
TORD PP PP 15 24 25.5 +0.7
SJG San Juan 137.65 48 PFAKE 15 21 50.0 +8.4
SJG LR LR
comp=Z,412nm,21.0s,MS5.1
NNA Nana 138.33 96 PFAKE 15 21 50.0 +7.1
NNA LR LR
comp=Z,445nm,21.0s,MS5.2
SDV Santo Domingo 139.08 63 *e*PKPdf PKPdf 15 21 44.6 +0.3
SDV LR LR
comp=Z,111nm,19.0s,MS4.6
LCO Las Campanas 141.37 124 *e*PKPpre 15 21 43.8
LCO *e*PKPdf PKPdf 15 21 48.9 +0.8
ARE Arequipa 143.44 103 *e*PKIKP PKPdf 15 21 50.0 -2.0
FDF Fort de France 143.48 47 *e*PKIKP PKPdf 15 21 49.4 -2.7
GRGR Grenville 144.77 51 PFAKE 15 22 10.0 +16
GRGR LR LR
comp=Z,400nm,20.0s,MS5.2
LVC Limon Verde 144.85 114 *e*PKP PKPdf 15 21 54.4 0.0
BBGH Gun Hill 145.69 47 *e*PKP PKPdf 15 21 57.5 +1.5
BBGH LR LR
comp=Z,1µm,19.0s,MS5.6

DBIC	**Dimbokro**	**146.04**	**299**	PKPbc	PKPbc	15 21 57.1	-0.3	
	comp=Z,147nm,0.9s,baz=42,slow=3.7,SNR=111							
DBIC	**Dimbokro**	**146.04**	**299**	*e*PKPdf	PKPdf	15 21 56.5	-0.2	
DBIC				LR	LR			
	comp=Z,334nm,19.0s,MS5.1							
KIC	**Kosan Boka**	**146.09**	**298**	*e*PKIKP	PKPdf	15 21 57.0	+0.3	
	comp=Z,707nm,0.9s							
TIC	**Toumodi**	**146.19**	**299**	*e*PKIKP	PKPdf	15 21 57.0	+0.1	
	comp=Z,463nm,0.9s							
LIC	**Lamto**	**146.40**	**298**	*e*PKIKP	PKPdf	15 21 57.4	+0.1	
	comp=Z,680nm,1.1s							
LPAZ	**La Paz**	**146.67**	**104**	PKPbc	PKPbc	15 21 58.8	-0.4	
	comp=Z,48nm,1.0s,baz=326,slow=1.6,SNR=93							
LPAZ	**La Paz**	**146.67**	**104**	*e*PKPdf	PKPdf	15 21 58.3	+0.7	
LPAZ				LR	LR			
	comp=Z,308nm,21.0s,MS5.1							
CPUP	**Villa Florida**	**153.18**	**129**	PKP	PKPdf	15 22 05.8	-1.8	
	comp=Z,2.8nm,0.9s,baz=256,slow=3.4,SNR=6.5							
CPUP				PKPbc	PKPbc	15 22 13.8	-1.2	
	comp=Z,24nm,1.0s,baz=237,slow=3.1,SNR=28							
CPUP				PKPab	PKPab	15 22 27.1	+0.4	
	comp=Z,28nm,0.9s,baz=236,slow=2.9,SNR=5.9							
CPUP	**Villa Florida**	**153.18**	**129**	*e*PKPdf	PKPdf	15 22 05.8	-1.8	
CPUP				*e*PKPbc	PKPbc	15 22 14.2	-0.9	
BDFB	**Brasilia**	**165.75**	**112**	PKP	PKPdf	15 22 22.7	+0.4	
	comp=Z,8.8nm,0.9s,baz=270,slow=0.4,SNR=6.8							
BDFB				PKPab	PKPab	15 23 21.6	+0.1	
	comp=Z,5.2nm,0.8s,baz=283,slow=7.3,SNR=4.7							
BDFB	**Brasilia**	**165.75**	**112**	PKP	PKPdf	15 22 22.7	+0.4	
BDFB				PKPab	PKPab	15 23 21.6	+0.1	
BDFB				LR	LR			
	comp=Z,586nm,19.0s							

*IDC **30** 15:20:12.9±2.4, 4881S×16475E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/12, mbtmp3.7/3, ML3.2/1, Error ellipse: s-maj=61.9km s-min=32.3km az=158.0*
*NEIC **30** 15:20:14.7±1.9, 4897S×16449E, h10km, Error ellipse: s-maj=45.9km s-min=12.1km az=158.0*

ISC 30 15:20:17.3±3.2, 486S±04×1644E±03, h10km, n7, σ0§77/7, mb3.4/2, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLZ	**Mavora Lakes**	**4.17**	**40**	P	**Pn**	**15 21 22.1**	**+1.3**
EAZ	**Earnscleugh**	**4.77**	**47**	P	**Pn**	**15 21 29.7**	**+0.5**
ODZ	**Otahua Downs**	**5.58**	**53**	P	**Pn**	**15 21 39.6**	**-0.7**
RPZ	**Rata Peaks**	**6.74**	**46**	Pn	**Pn**	**15 21 52.2**	**-3.9**
	0.5nm,0.3s,baz=145,slow=18,SNR=3.2						
RPZ				Sn	**Sn**	**15 23 12.4**	**-0.4**
	1.7nm,0.3s,baz=210,slow=20,SNR=4.2						
ASAR	**Alice Springs**	**34.61**	**305**	P	**P**	**15 27 06.5**	**+0.1**
	0.5nm,0.7s,mb3.5,baz=136,slow=7.2,SNR=10						
WRA	**Warramunga Arr**	**37.42**	**309**	P	**P**	**15 27 30.1**	**-0.4**
	0.4nm,0.9s,mb3.3,baz=142,slow=8.4,SNR=7.2						
WRA				PcP	PcP	15 29 46.6	-2.5
	0.3nm,0.9s,baz=154,slow=2.6,SNR=6.9						
AKASG	**Malin Array Be**	**151.22**	**291**	PKPbc	PKPbc	15 40 08.1	-1.8
	1.4nm,0.6s,baz=83,slow=2.4,SNR=7.3						

*ISCJB **30** 15:32:34.8±0.7, 1760N±006×6256W±004, h95km±6km, Error ellipse: s-maj=11.3km s-min=3.7km az=32.1*
*TRN **30** 15:32:34.2, 1761N×6254W, h91km, MD3.7, MD4.1(RSPR)*
*NEIC **30** 15:32:34.2, 1761N×6254W, h91km, MD3.7(TRN), MD4.1(RSPR), After TRN.*
*RSPR **30** 15:32:35.8, 1753N×6252W, h52km±23km, MD4.1/12, MD4.1/12*

ISC 30 15:32:35.6±0.7, 1762N±006×6253W±004, h90km±6km, n26, σ0§58/47, 20C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSK	**Brimstone Hill**	**0.40**	**227**	*i*P	**Pn**	**15 32 49.8**	**+0.2**
BSK				*e*S	**Sn**	**15 32 60.0**	**-0.1**
NVBH	**Bath Hotel, Ne**	**0.50**	**189**	*i*P	**Pn**	**15 32 50.6**	**+0.2**
NVBH				*e*S	**Sn**	**15 33 01.1**	**-0.3**
STMA	**St. Maarten, A**	**0.69**	**308**	*e*P	**Pn**	**15 32 52.9**	**+0.8**
STMA				*e*S	**Sn**	**15 33 04.9**	**+0.5**
ANWB	**Willy Bob**	**0.71**	**86**	*e*P	**Pn**	**15 32 52.6**	**+0.3**
ANWB				S	**Sn**	**15 33 04.3**	**-0.4**
BPA	**Boggy Peak**	**0.86**	**131**	*e*P	**Pn**	**15 32 54.4**	**+0.7**
BPA				*e*S	**Sn**	**15 33 07.5**	**+0.2**
LZG	**Guadaloupe-1**	**1.64**	**154**	*e*P	**Pn**	**15 33 03.1**	**0.0**
BCG	**Bois Riant Cap**	**1.76**	**150**	*e*P	**Pn**	**15 33 05.0**	**+0.3**
SCG	**Saint Claude**	**1.78**	**153**	*e*P	**Pn**	**15 33 05.4**	**+0.5**
SCG				*e*S	**Sn**	**15 33 27.2**	**0.0**
TBG	**Guadaloupe-3**	**1.95**	**154**	*i*P	**Pn**	**15 33 07.1**	**-0.1**
ABV	**Anegada**	**2.04**	**303**	*i*P	**Pn**	**15 33 07.9**	**-0.4**
ABV				*e*S	**Sn**	**15 33 33.0**	**-0.3**
TBVI	**Tortola**	**2.14**	**292**	*i*P	**Pn**	**15 33 08.8**	**-0.8**
TBVI				*e*S	**Sn**	**15 33 33.2**	**-2.4**
MTP	**Monte Pirata**	**2.92**	**280**	*e*P	**Pn**	**15 33 19.7**	**-0.3**
MTP				*e*S	**Sn**	**15 33 53.5**	**-0.7**
FDF	**Fort de France**	**3.16**	**155**	*e*P	**Pn**	**15 33 23.0**	**-0.4**
FDF				*e*S	**Sn**	**15 33 59.4**	**-0.8**
FDF	**Fort de France**	**3.16**	**155**	*e*Pn	**Pn**	**15 33 22.9**	**-0.5**
FDF				*e*S	**Sn**	**15 33 59.5**	**-0.6**
HUMP	**Col San Antoni**	**3.20**	**280**	*e*P	**Pn**	**15 33 23.6**	**-0.3**
HUMP				*e*S	**Sn**	**15 34 00.5**	**-0.6**
CBYP	**Canovanas**	**3.23**	**282**	*e*P	**Pn**	**15 33 24.7**	**+0.5**
CBYP				*e*S	**Sn**	**15 34 01.6**	**-0.2**
CPD	**Cerro la Pandu**	**3.25**	**278**	*e*P	**Pn**	**15 33 24.3**	**-0.2**
CPD				*e*S	**Sn**	**15 34 02.7**	**+0.5**
BIM	**Bigot**	**3.39**	**155**	*i*P	**Pn**	**15 33 26.4**	**-0.1**
SJG	**San Juan**	**3.48**	**279**	*e*P	**Pn**	**15 33 27.6**	**0.0**
SJG				*e*S	**Sn**	**15 34 07.1**	**-0.8**
SJG	**San Juan**	**3.48**	**279**	*e*P	**Pn**	**15 33 27.6**	**0.0**
SJG	**San Juan**	**3.48**	**279**	*e*P	**Pn**	**15 33 27.6**	**0.0**
SJG				*e*S	**Sn**	**15 34 07.2**	**-0.6**
CELP	**Cerrillos**	**3.88**	**277**	*e*P	**Pn**	**15 33 32.9**	**-0.1**
CELP				*e*S	**Sn**	**15 34 17.6**	**+0.1**
AOPR	**Arecibo Observ**	**4.08**	**281**	*e*P	**Pn**	**15 33 36.4**	**+0.6**
AOPR				*e*S	**Sn**	**15 34 22.6**	**+0.2**
LSP	**Las Mesas**	**4.37**	**278**	*e*P	**Pn**	**15 33 40.0**	**+0.3**
LSP				*e*S	**Sn**	**15 34 30.4**	**+1.0**
CRPR	**Cabo Rojo, PR**	**4.38**	**276**	*e*P	**Pn**	**15 33 39.3**	**-0.5**
CRPR				*e*S	**Sn**	**15 34 31.0**	**+1.3**
AGPR	**Aguadilla, PR**	**4.44**	**282**	*e*P	**Pn**	**15 33 40.6**	**0.0**
AGPR				*e*S	**Sn**	**15 34 32.1**	**+1.0**

IDC 30 15:47:15.1±1.8, 4875S×16460E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/12, mbtmp3.7/3, ML3.6/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/24, Error ellipse: s-maj=54.1km s-min=31.6km az=162.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**6.74**	**44**	Pn	Pn	15 48 55.1	-0.1
	1.3nm,0.3s,baz=270,slow=10,SNR=5.3						
RPZ				Sn	Sn	15 50 14.0	+1.5
	2.9nm,0.3s,baz=46,slow=20,SNR=6.4						
RPZ				LR	LR	15 51 22.3	
	comp=Z,205nm,20.2s,baz=321,slow=37						
STKA	**Stephens Creek**	**24.18**	**306**	LR	LR	16 00 38.5	
	comp=Z,225nm,18.1s,baz=7.3,slow=33						
ASAR	**Alice Springs**	**34.81**	**305**	P	P	15 54 07.7	+0.2
	0.5nm,0.6s,baz=137,slow=8.0,SNR=16						
ASAR				PcP	PcP	15 56 40.1	-0.7
	0.7nm,0.9s,baz=135,slow=4.2,SNR=8.4						
WRA	**Warramunga Arr**	**37.63**	**309**	P	P	15 54 31.4	-0.2
	0.6nm,0.7s,baz=141,slow=8.9,SNR=7.9						
WRA				PcP	PcP	15 56 49.1	-0.1
	1.5nm,0.9s,baz=145,slow=3.2,SNR=11						
ARCES	**ARCESS Array B**	**151.36**	**331**	PKPbc	PKPbc	16 07 10.1	+0.9
	3.4nm,0.8s,baz=90,slow=1.5,SNR=9.6						
AKASG	**Malin Array Be**	**151.41**	**291**	PKPbc	PKPbc	16 07 08.9	-0.9
	2.2nm,0.6s,baz=77,slow=2.9,SNR=8.1						

IDC 30 15:54:50.0±2.2, 176N×12613E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/15, mbtmp3.1/3, Error ellipse: s-maj=191.4km s-min=26.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.02**	**160**	P	P	15 59 56.9	+0.1
	0.2nm,0.3s,baz=338,slow=10,SNR=9.2						
ASAR	**Alice Springs**	**26.38**	**164**	P	P	16 00 28.1	-0.1
	0.2nm,0.5s,baz=345,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**58.83**	**326**	P	P	16 04 50.5	+0.2
	0.1nm,0.4s,baz=136,slow=7.2,SNR=4.2						

IDC 30 16:04:20.9±4.7, 4871S×16415E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.7/12, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=107.6km s-min=31.7km az=159.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**6.92**	**46**	Pn	Pn	16 06 03.4	0.0
	0.5nm,0.3s,baz=233,slow=20,SNR=2.8						
RPZ				Sn	Sn	16 07 24.8	+2.0
	1.2nm,0.3s,baz=218,slow=19,SNR=4.5						
ASAR	**Alice Springs**	**34.54**	**305**	P	P	16 11 11.0	0.0
	0.5nm,0.7s,baz=133,slow=8.3,SNR=11						
WRA	**Warramunga Arr**	**37.37**	**310**	P	P	16 11 35.2	0.0
	0.5nm,0.8s,baz=133,slow=7.8,SNR=6.3						
CMAR	**Chiang Mai Arr**	**88.40**	**300**	P	P	16 17 14.7	0.0
	0.6nm,0.8s,baz=165,slow=3.7,SNR=3.6						

*ISCJB **30** 16:04:23.9±0.5, 2923S±003×6954W±008, h116km±9km, Error ellipse: s-maj=11.6km s-min=5.4km az=177.7*
*NEIC **30** 16:04:25.0±0.5, 2922S×6948W, h101km±6km, mb4.6/1, Error ellipse: s-maj=9.3km s-min=8.5km az=66.0*
*IDC **30** 16:04:24.5±2.1, 2918S×6956W, h95km±15km, mb3.6/1, mb1 3.3/4, mb1mx3.2/18, mbtmp3.3/4, Error ellipse: s-maj=41.5km s-min=11.7km az=84.0*
*GUC **30** 16:04:25.5±0.7, 2927S×6979W, h128km±9km, ML4.0*

ISC 30 16:04:25.1±0.5, 2922S±003×6953W±008, h108km±10km, n28, σ0§95/38, 7C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**1.04**	**281**	*e*P	**Pn**	**16 04 47.0**	**+0.4**
LCO				*i*S	**Sn**	**16 05 03.8**	**+1.1**
LCO	**Las Campanas**	**1.04**	**281**	*e*P	**Pn**	**16 04 47.3**	**+0.4**
LCO				*e*Sn	**Sn**	**16 05 03.4**	**+0.6**
LCO				*i*S	**Sn**	**16 05 03.8**	**+1.1**
VACH	**Vallenar**	**1.25**	**301**	*i*P	**Pn**	**16 04 49.6**	**+0.7**
VACH				*i*S	**Sn**	**16 05 07.5**	**+0.6**
VACH				AML	AML	16 05 08.8	
	comp=N,14μm,0.1s						
VACH	**Vallenar**	**1.25**	**301**	*i*P	**Pn**	**16 04 49.6**	**+0.7**
VACH				*i*S	**Sn**	**16 05 07.5**	**+0.6**
TLL	**Tololo Astrono**	**1.45**	**229**	*i*P	**Pn**	**16 04 51.8**	**+0.6**
TLL				*i*S	**Sn**	**16 05 11.4**	**+0.4**
TLL				AML	AML	16 05 13.1	
	comp=N,1μm,0.3s						
TLL	**Tololo Astrono**	**1.45**	**229**	*i*P	**Pn**	**16 04 51.8**	**+0.6**
TLL				*i*S	**Sn**	**16 05 11.4**	**+0.4**
LSCH	**La Serena**	**1.64**	**245**	*i*P	**Pn**	**16 04 52.8**	**-0.6**
OVCH	**Ovalle**	**2.00**	**226**	*i*P	**Pn**	**16 04 57.4**	**-0.6**
OVCH				*i*S	**Sn**	**16 05 21.4**	**-1.7**
OVCH				AML	AML	16 05 21.9	
	comp=N,1μm,0.2s						
OVCH	**Ovalle**	**2.00**	**226**	*i*P	**Pn**	**16 04 57.4**	**-0.6**
OVCH				*i*S	**Sn**	**16 05 21.4**	**-1.7**
CFAA	**Coronel Fontan**	**2.62**	**155**	P	**Pn**	**16 05 07.0**	**+1.0**
	comp=N,4.2nm,0.3s,baz=333,slow=13,SNR=723						
CFAA				S	**Sn**	**16 05 38.0**	**+0.4**
	comp=N,9.4nm,0.3s,baz=234,slow=17,SNR=23						
CFAA	**Coronel Fontan**	**2.62**	**155**	P	**Pn**	**16 05 07.0**	**+1.0**
CFAA				S	**Sn**	**16 05 38.0**	**+0.4**
CHNG	**Los Chungos**	**3.15**	**212**	*i*P	**Pn**	**16 05 12.3**	**-0.6**
CHNG				*i*S	**Sn**	**16 05 48.0**	**-2.0**
CHNG				AML	AML	16 05 54.4	
	comp=E,163nm,0.5s						
JACH	**Jahuel**	**3.57**	**195**	*i*S	**Sn**	**16 05 59.8**	**-0.1**
PEL	**Peldehue**	**4.03**	**194**	AML	AML	16 06 22.0	
	comp=N,145nm,0.6s						
FCH	**Farellones**	**4.14**	**189**	*i*P	**Pn**	**16 05 27.3**	**+1.0**
FCH				*i*S	**Sn**	**16 06 15.1**	**+1.4**
FCH				AML	AML	16 06 20.8	
	comp=N,48nm,0.5s						
CLCH	**Cerro Calan**	**4.25**	**191**	*i*P	**Pn**	**16 05 28.0**	**+0.3**
CLCH				*i*S	**Sn**	**16 06 15.6**	**-0.7**
CLCH				AML	AML	16 06 54.7	
	comp=E,142nm,0.4s						
LMEL	**Las Melosas**	**4.65**	**187**	AML	AML	16 06 38.6	
	comp=N,52nm,0.3s						
LVC	**Limon Verde**	**6.61**	**5**	P	**Pn**	**16 05 59.2**	**-0.4**
	comp=N,2.6nm,0.3s,baz=180,slow=8.7,SNR=25						
LVC				S	**Sn**	**16 07 12.2**	**-1.3**
	comp=N,1.9nm,0.3s,baz=12,slow=20,SNR=4.0						
LVC	**Limon Verde**	**6.61**	**5**	P	**Pn**	**16 05 59.2**	**-0.4**
LVC				S	**Sn**	**16 07 12.2**	**-1.3**
TRQA	**Tornquist**	**10.82**	**146**	*e*Pn	**Pn**	**16 06 55.3**	**-1.4**
	comp=N,4.6nm,0.4s						
CPUP	**Villa Florida**	**11.18**	**78**	P	**Pn**	**16 07 00.6**	**-1.0**
	comp=N,0.3nm,0.3s,baz=243,slow=16,SNR=2.4						
SNAA	**Sanae**	**55.24**	**159**	*e*P	**P**	**16 13 47.2**	**+0.7**
TORD	**Torodi Ar. Bea**	**80.55**	**69**	P	**P**	**16 16 27.2**	**+1.4**
	comp=N,0.6nm,0.5s,baz=271,slow=6.0,SNR=11						
TORD	**Torodi Ar. Bea**	**80.55**	**69**	P	**P**	**16 16 27.2**	**+1.4**
ASAR	**Alice Springs**	**122.79**	**206**	PKP	PKPdf	16 23 09.2	+0.4
	comp=N,0.1nm,0.6s,baz=123,slow=1.5,SNR=3.6						
WRA	**Warramunga Arr**	**125.97**	**208**	PKP	PKPdf	16 23 15.6	+0.5
	comp=N,0.3nm,0.5s,baz=157,slow=1.8,SNR=6.9						
ZALV	**Zalesovo Beam**	**149.04**	**30**	PKPbc	PKPbc	16 24 00.9	+0.9
	comp=N,1.5nm,0.5s,baz=304,slow=3.2,SNR=7.7						
MKAR	**Makanchi Array**	**151.92**	**44**	PKPbc	PKPbc	16 24 08.4	+1.3
	comp=N,0.4nm,0.6s,baz=310,slow=2.7,SNR=3.6						
MKAR				PKPab	PKPab	16 24 16.6	-0.1
	comp=N,0.3nm,0.9s,baz=270,slow=2.9,SNR=2.1						

*IDC **30** 16:06:18.0±1.9, 3852N×14373E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.4/22, mbtmp3.4/5, ML3.2/2, Error ellipse: s-maj=51.8km s-min=25.7km az=74.0*
*ISCJB **30** 16:06:20.9±1.0, 3856N±006×14348E±008, h33km, mb3.4/3, Error ellipse: s-maj=11.0km s-min=7.3km az=44.3*
*JMA **30** 16:06:21.1±0.2, 3855N×14341E, h35km, M3.3*

ISC 30 16:06:23.1±1.0, 3862N±006×14337E±009, h35km, n16, σ1§04/22, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**1.41**	**289**	P	**Pn**	**16 06 46.0**	**-0.2**
MIYJ	**Miyakonagasawa**	**1.54**	**309**	P	**Pn**	**16 06 47.6**	**-0.4**
JIO	**Ouri**	**1.59**	**265**	P	**Pn**	**16 06 48.2**	**-0.6**
JIO				*e*S	**Sn**	**16 07 07.7**	**-0.5**
JMK	**Ichinoseki**	**1.71**	**282**	P	**Pn**	**16 06 50.4**	**0.0**
JOM	**Ohasama**	**1.83**	**298**	P	**Pn**	**16 06 52.2**	**+0.2**
JOU	**Okura**	**2.14**	**264**	P	**Pn**	**16 06 56.2**	**+0.2**
JOU				*e*S	**Sn**	**16 07 23.2**	**+1.6**
JMM	**Marumori**	**2.17**	**250**	P	**Pn**	**16 06 55.8**	**-0.9**
JMM				*e*S	**Sn**	**16 07 21.3**	**-1.0**
JANG	**Nango**	**2.26**	**321**	P	**Pn**	**16 06 57.8**	**-0.2**
JFK	**Kawauchi**	**2.34**	**238**	P	**Pn**	**16 06 57.7**	**-1.3**
JFK				*e*S	**Sn**	**16 07 24.8**	**-1.7**
JYK	**Kaneyama**	**2.37**	**278**	P	**Pn**	**16 07 00.5**	**+1.0**
MJAR	**Matsushiro Arr**	**4.60**	**245**	Pn	**Pn**	**16 07 31.1**	**+1.1**
	0.9nm,0.3s,baz=62,slow=11,SNR=11						
MAT	**Matsushiro**	**4.60**	**245**	P	**Pn**	**16 07 31.9**	**+1.8**
MAT				*e*S	**Sn**	**16 08 25.7**	**+3.4**
ASAJ	**Asahikawa**	**5.52**	**354**	Pn	**Pn**	**16 07 43.1**	**+0.4**
	0.7nm,0.3s,baz=204,slow=11,SNR=8.3						
ASAJ				Sn	**Sn**	**16 08 43.8**	**-1.1**
	0.3nm,0.3s,baz=37,slow=20,SNR=1.6						
SONM	**Songino Array**	**28.24**	**301**	P	**P**	**16 12 15.5**	**+2.9**
	0.3nm,0.6s,mb3.1,baz=79,slow=7.0,SNR=2.6						
WRA	**Warramunga Arr**	**58.87**	**190**	P	**P**	**16 16 17.9**	**-0.4**
	0.7nm,0.9s,mb3.7,baz=9.4,slow=7.0,SNR=7.0						
ASAR	**Alice Springs**	**62.59**	**190**	P	**P**	**16 16 43.8**	**+0.2**
	0.3nm,0.9s,mb3.4,baz=6.3,slow=8.4,SNR=3.1						

MEX 30 16:15:25.8±0.7, 1739N×10007W, h16km±10km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.39**	**210**	*i*P	Pg	16 15 32.9	-0.8
CAIG				*i*S	Sg	16 15 37.4	-1.6
ACX	**Acapulco**	**0.54**	**164**	*i*P	Pg	16 15 34.3	-2.1
ACX				*i*S	Sg	16 15 41.1	-2.5
ZIIG	**Zihuatanejo**	**1.35**	**280**	*i*P	Pn	16 15 46.2	-3.8
ZIIG				*i*S	Sn	16 16 02.1	-5.5
PNIG	**Pinotepa**	**2.10**	**118**	*e*P	Pn	16 15 58.5	-1.9
PNIG				*i*S	Sn	16 16 22.4	-3.8
UTMO	**Huajuapan**	**2.20**	**78**	*e*P	Pn	16 15 57.9	-3.9
UTMO				*i*S	Sn	16 16 23.7	-4.9
PTVM	**Pico Tres Padr**	**2.37**	**22**	*e*P	Pn	16 15 59.8	-4.3
IIO	**Organos**	**2.54**	**30**	*e*P	Pn	16 16 02.9	-3.4

*IDC **30** 16:36:33.2±2.4, 1051N×14630E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.8/19, mbtmp3.8/9, ML4.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=78.8km s-min=18.9km az=87.0*
*NEIC **30** 16:36:34.1±1.3, 1052N×14641E, h10km, mb4.1/2, Error ellipse: s-maj=48.8km s-min=10.7km az=82.0*
*ISCJB **30** 16:36:35.8±1.3, 1054N±010×1463E±03, h33km, mb3.8/10, Error ellipse: s-maj=49.1km s-min=9.1km az=167.6*

ISC 30 16:36:38.3±1.3, 1054N±010×1463E±03, h35km, n13, σ1§08/15, mb3.8/10, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.32**	**336**	Pn	**Pn**	**16 37 26.2**	**-1.6**
	34nm,0.3s,SNR=35						
GUMO				Sn	**Sn**	**16 38 05.0**	**-1.1**
	64nm,0.3s,SNR=5.5						
GUMO	**Guam**	**3.32**	**336**	*e*Pn	**Pn**	**16 37 25.8**	**-2.0**
GUMO				*e*Sn	**Sn**	**16 38 05.0**	**-1.1**
MJAR	**Matsushiro Arr**	**26.89**	**346**	P	**P**	**16 42 15.0**	**-1.0**
	1.8nm,0.7s,mb3.7,baz=157,slow=9.5,SNR=5.6						
MJAR				LR	LR	16 50 53.1	
	comp=Z,84nm,18.8s,baz=95,slow=32						
CTAO	**Charters Tower**	**30.44**	**180**	*e*P	**P**	**16 42 45.9**	**-1.8**
KSRS	**Korea Array**	**31.48**	**331**	P	**P**	**16 42 57.4**	**+0.7**
	2.0nm,0.9s,mb3.9,baz=145,slow=9.2,SNR=8.2						
WRA	**Warramunga Arr**	**32.49**	**201**	P	**P**	**16 43 05.5**	**-0.2**
	0.2nm,0.5s,mb3.2,baz=25,slow=8.7,SNR=4.1						
ASAR	**Alice Springs**	**36.08**	**199**	P	**P**	**16 43 36.6**	**-0.2**
	0.1nm,0.6s,mb2.9,baz=31,slow=7.1,SNR=6.8						
CMAR	**Chiang Mai Arr**	**46.38**	**285**	P	**P**	**16 45 01.5**	**-0.1**
	1.4nm,0.8s,mb3.9,baz=84,slow=6.0,SNR=12						
ULN	**Ulaanbaatar**	**49.65**	**326**	*e*P	**P**	**16 45 27.9**	**+1.4**
	1.0nm,0.6s,mb4.0						
SONM	**Songino Array**	**50.00**	**326**	P	**P**	**16 45 30.6**	**+1.5**
	1.0nm,0.6s,mb4.0,baz=144,slow=8.8,SNR=8.7						
MKAR	**Makanchi Array**	**64.63**	**317**	P	**P**	**16 47 13.4**	**+1.0**
	0.4nm,0.5s,mb3.7,baz=85,slow=8.5,SNR=7.1						
ZALV	**Zalesovo Beam**	**64.89**	**325**	P	**P**	**16 47 14.7**	**+0.7**
	0.6nm,0.5s,mb3.9,baz=127,slow=6.6,SNR=3.7						
KURK	**Kurchatov**	**67.78**	**321**	*e*P	**P**	**16 47 33.3**	**+0.7**
	1.2nm,0.6s,mb4.1						

*ISCJB **30** 16:40:58.4±0.4, 3975N±001×2773E±002, h6km±3km, Error ellipse: s-maj=2.6km s-min=2.1km az=26.3*
*CSEM **30** 16:40:58.3±0.0, 3976N×2778E, h5km, MD3.5, Error ellipse: s-maj=1.0km s-min=0.9km az=57.0*
*ISK **30** 16:40:58.5, 3976N×2778E, h6km, ML3.8*
*DDA **30** 16:40:59.5, 3976N×2776E, h9km, Md3.5*
*SOF **30** 16:41:00.8, 3992N×2756E, h10km, MD3.3*
*THE **30** 16:41:01.1, 3972N×2772E, h12km, ML4.1*
*ATH **30** 16:41:12.0, 3885N×2578E, h10km, MD3.8/3*

ISC 30 16:40:59.0±0.3, 3975N±001×2774E±002, h3km±2km, n107, σ0§84/140, 3C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALY	**Balya**	**0.09**	**263**	*i*P	**Pg**	**16 41 01.7**	**+0.8**
BALY				*i*S	**Sg**	**16 41 06.7**	**+4.6**
BALB	**Balikesir**	**0.15**	**136**	PG	**Pg**	**16 41 01.9**	**-0.1**
BALB				*e*SG	**Sg**	**16 41 04.3**	**+0.2**
DURS	**Dursunbey**	**0.59**	**105**	*i*P	**Pg**	**16 41 09.7**	**-0.5**
DURS				*i*S	**Sg**	**16 41 17.7**	**-0.1**
EDC	**Edincik**	**0.60**	**9**	PG	**Pg**	**16 41 10.5**	**-0.1**
BNT	**Bandirma**	**0.62**	**13**	PG	**Pg**	**16 41 10.7**	**-0.2**
BNT				*e*SG	**Sg**	**16 41 19.2**	**+0.3**
KCT	**Karacabey**	**0.70**	**43**	*e*PG	**Pg**	**16 41 12.0**	**-0.4**
DST	**Dursunbey**	**0.70**	**102**	PG	**Pg**	**16 41 11.6**	**-0.8**
DST				*e*SG	**Sg**	**16 41 21.1**	**-0.5**
MRMT	**Marmara Adasi**	**0.86**	**353**	*e*PG	**Pg**	**16 41 15.7**	**+0.2**
AKS	**Akhisar**	**0.87**	**176**	*e*PG	**Pg**	**16 41 15.7**	**0.0**
AYVA	**Ayvalik**	**0.92**	**242**	*i*P	**Pg**	**16 41 17.8**	**+1.1**
AYVA				*i*S	**Sg**	**16 41 32.7**	**+4.1**
LPK	**Lapseki**

PAIG eSn Sn 16 42 27.0 +0.1
APE Apeiranthos 3.19 214 ePn Pn 16 41 49.1 -0.9
APE eSn Sn 16 42 27.3 -1.1
BCK Bucak 3.20 135 ePN Pn 16 41 50.8 +0.8
KDZE Karadeniz Ereo 3.23 60 ePN Pn 16 41 51.2 +0.7
PLD Plovdiv 3.29 317 ePn Pn 16 41 51.9 +0.6
PLD eSn Sn 16 42 31.1 +0.2
PLD Plovdiv 3.29 317 ePn Pn 16 41 51.9 +0.6
PLD eSn Sn 16 42 31.0 +0.1
KIZT Kizilcal 3.33 104 ePN Pn 16 41 52.8 +1.0
PLG Polygyros 3.35 282 ePn Pn 16 41 52.4 +0.2
PLG eSn Sn 16 42 32.5 0.0
PLG Polygyros 3.35 282 ePn Pn 16 41 52.7 +0.5
PLG Polygyros 3.35 282 ePn Pn 16 41 52.3 +0.1
PLG eSn Sn 16 42 32.5 0.0
ELL Elmali 3.45 150 ePN Pn 16 41 54.5 +1.0
SOH Sokhos 3.52 289 ePn Pn 16 41 54.8 +0.3
SOH eSn Sn 16 42 36.3 -0.2
XOR Xorichti 3.54 265 ePn Pn 16 41 54.6 -0.1
MMB Musomiste 3.56 302 *i* P Pn 16 41 53.8 -1.2
SZH Strazhica 3.77 339 P Pn 16 41 57.9 +0.1
LOD Lodumlu 3.87 86 ePN Pn 16 42 00.4 +1.1
PGB Panagyurishte 3.88 317 P Pn 16 41 58.5 -1.0
ANTO Ankara 3.89 87 ePN Pn 16 42 01.0 +1.4
ANTO Ankara 3.89 87 ⇓*i* P Pb 16 42 11.9 +3.7
LADK Ladik-KONYA 3.92 112 ePN Pn 16 42 01.1 +1.1
KNT Kendrikon 3.95 292 ePn Pn 16 42 01.0 +0.6
KONT Konya--Tatoy 4.03 115 ePN Pn 16 42 02.5 +1.0
LIT Litokhoron 4.05 277 ePn Pn 16 42 02.2 +0.4
LIT eSn Sn 16 42 49.4 -0.2
SAFT Safranbolu 4.05 67 ePN Pn 16 42 02.7 +0.9
KKB Krupnik 4.12 302 P Pn 16 42 02.5 -0.2
VAY Valandovo 4.24 293 *i* Pn Pn 16 42 06.0 +1.6
VTS Vitosha 4.44 311 *i* P Pn 16 42 07.9 +0.7
CANT Cankiri 4.58 77 ePN Pn 16 42 10.5 +1.4
STIP Stip 4.64 296 *i* Pn Pn 16 42 14.6 +4.6
STIP *i* Sn Sg 16 43 27.8 -0.3
HDMB Hadim 4.65 125 ePN Pn 16 42 11.5 +1.4
KRUS Krusevo 5.20 290 *i* Pn Pn 16 42 17.5 0.0
TLCR 5.49 8 ⇓*i* P Pn 16 42 23.3 +1.8
MLR Muntele Rosu 5.89 348 ⇑*i* P Pn 16 42 29.6 +2.6
PLOR Plostina 6.15 353 ⇑*i* P Pn 16 42 32.7 +2.1
VRI Vrincioaia 6.16 353 ⇑*i* P Pn 16 42 32.3 +1.6
BZS Buzias 7.39 324 ⇓*i* P Pn 16 42 46.8 -0.9
BURAR Bucovina Array 8.07 348 ⇓*i* P Pn 16 42 59.0 +2.1

IDC 30 16:42:34.5±1.2, 4782N×15667E, h0km, mb3.4/6, mb1 3.7/7, mb1mx3.5/22, mbtmp3.5/7, ML3.4/1, Error ellipse: s-maj=39.0km s-min=25.9km az=162.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**5.34**	**7**	Pn	Pn	16 44 02.8	+7.4
	0.3nm,0.3s,baz=254,slow=16,SNR=8.8						
PETK				Sn	Sn	16 45 15.3	+18
	0.3nm,0.3s,baz=220,slow=27,SNR=3.0						
ASAJ	**Asahikawa**	**10.47**	**254**	Pn	Pn	16 45 04.3	-1.5
	0.4nm,0.3s,baz=77,slow=18,SNR=3.6						
KSRS	**Korea Array**	**23.42**	**254**	P	P	16 47 43.5	-1.7
	1.4nm,1.0s,baz=58,slow=14,SNR=4.6						
MKAR	**Makanchi Array**	**48.59**	**298**	P	P	16 51 20.2	+0.7
	0.4nm,0.8s,baz=70,slow=7.5,SNR=3.3						
CMAR	**Chiang Mai Arr**	**54.97**	**259**	P	P	16 52 08.6	+1.2
	0.4nm,0.7s,baz=37,slow=7.3,SNR=4.6						
WRA	**Warramunga Arr**	**70.37**	**202**	P	P	16 53 50.0	0.0
	0.4nm,0.8s,baz=13,slow=6.1,SNR=3.2						
ASAR	**Alice Springs**	**74.04**	**202**	P	P	16 54 12.7	+0.7
	0.1nm,0.5s,baz=336,slow=39,SNR=3.1						
TXAR	**Lajitas Array**	**74.85**	**63**	P	P	16 54 16.5	-0.4
	0.6nm,0.8s,baz=310,slow=3.7,SNR=6.4						

IDC 30 17:01:45.1±5.0, 1624S×17360W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/17, mbtmp3.7/3, Error ellipse: s-maj=180.6km s-min=97.0km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**43.45**	**241**	P	P	17 09 50.5	+0.4
	0.7nm,0.4s,baz=90,slow=10,SNR=5.5						
WRA	**Warramunga Arr**	**49.47**	**257**	P	P	17 10 37.3	-0.3
	0.2nm,0.3s,baz=95,slow=6.7,SNR=13						
WRA				PcP	PcP	17 11 59.7	-0.1
	0.5nm,0.9s,baz=97,slow=3.6,SNR=3.9						
ASAR	**Alice Springs**	**49.67**	**253**	P	P	17 10 38.8	-0.3
	1.1nm,0.5s,baz=90,slow=7.7,SNR=67						

IDC ***30*** *17:09:55.4±0.8, 1044N×14569E, h0km, mb4.0/11, mb1 4.2/12, mb1mx4.1/20, mbtmp4.0/12, ML4.4/1, Error ellipse: s-maj=28.9km s-min=15.4km az=82.0*
NEIC ***30*** *17:09:56.6±0.6, 1051N×14569E, h10km, mb4.5/3, Error ellipse: s-maj=22.4km s-min=11.3km az=83.0*
ISCJB ***30*** *17:09:58.6±0.7, 1051N±006×1456E±02, h33km, mb4.1/14, Error ellipse: s-maj=26.3km s-min=8.9km az=174.2*
ISC 30 17:10:00.7±0.7, 1052N±007×1456E±02, h35km, n20, σ1♀10/19, mb4.1/14, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.15**	**346**	Pn	Pn	17 10 45.7	-2.1
	44nm,0.3s,baz=39,slow=0.0,SNR=30						
GUMO				Sn	Sn	17 11 22.8	-1.3
	123nm,0.3s,baz=265,slow=0.0,SNR=8.8						
GUMO	**Guam**	**3.15**	**346**	*e*Pn	Pn	17 10 43.9	-3.9
GUMO				*e*Sn	Sn	17 11 22.1	-2.0
MJAR	**Matsushiro Arr**	**26.77**	**347**	P	P	17 15 37.2	0.0
	0.9nm,0.7s,mb3.4,baz=156,slow=7.3,SNR=4.4						
KSRS	**Korea Array**	**31.20**	**332**	P	P	17 16 17.4	+0.7
	2.4nm,0.9s,mb4.0,baz=144,slow=9.7,SNR=8.9						
WRA	**Warramunga Arr**	**32.24**	**200**	P	P	17 16 24.9	-1.1
	1.1nm,0.7s,mb3.8,baz=26,slow=9.6,SNR=18						
ASAR	**Alice Springs**	**35.86**	**199**	P	P	17 16 56.6	-0.6
	1.1nm,0.7s,mb3.9,baz=24,slow=6.7,SNR=25						
ASAR				PcP	PcP	17 19 24.1	-0.2
	0.5nm,0.9s,baz=30,slow=2.5,SNR=4.3						
STKA	**Stephens Creek**	**42.33**	**185**	P	P	17 17 49.7	-1.6
	2.5nm,0.8s,mb3.9,baz=9.7,slow=12,SNR=4.3						
STKA	**Stephens Creek**	**42.33**	**185**	P	P	17 17 49.7	-1.6
CMAR	**Chiang Mai Arr**	**45.79**	**285**	P	P	17 18 21.1	+1.7
	2.1nm,0.8s,mb4.1,baz=88,slow=6.2,SNR=12						
ULN	**Ulaanbaatar**	**49.33**	**326**	*e*P	P	17 18 47.0	+0.6
	1.5nm,0.6s,mb4.2						
SONM	**Songino Array**	**49.67**	**326**	P	P	17 18 50.3	+1.3
	1.6nm,0.7s,mb4.2,baz=139,slow=7.1,SNR=12						
YAK	**Yakutsk**	**52.72**	**351**	*e*P	P	17 19 10.4	-1.3
	5.4nm,0.5s,mb4.7						
MKAR	**Makanchi Array**	**64.22**	**317**	P	P	17 20 32.6	+0.5
	1.3nm,0.8s,mb4.0,baz=87,slow=8.5,SNR=9.3						
ZALV	**Zalesovo Beam**	**64.55**	**325**	P	P	17 20 34.0	-0.1
	0.8nm,0.5s,mb4.0,baz=104,slow=6.2,SNR=5.5						
KURK	**Kurchatov**	**67.41**	**321**	*e*P	P	17 20 53.0	+0.4
	2.2nm,0.6s,mb4.4						
NVAR	**Mina Array Bea**	**88.24**	**51**	P	P	17 22 49.4	+0.7
	0.7nm,0.5s,mb4.1,baz=266,slow=6.8,SNR=4.5						
ELK	**Elko**	**90.04**	**49**	P	P	17 22 58.3	+1.3
	0.8nm,0.9s,mb4.0,baz=299,slow=13,SNR=4.9						
LVC	**Limon Verde**	**144.87**	**114**	PKP	PKPdf	17 29 35.1	+0.2
	3.1nm,0.6s,baz=292,slow=3.5,SNR=5.9						
DBIC	**Dimbokro**	**146.02**	**299**	PKPbc	PKPbc	17 29 37.0	-0.9
	1.7nm,0.9s,baz=23,slow=7.7,SNR=3.5						
LPAZ	**La Paz**	**146.69**	**104**	PKPbc	PKPbc	17 29 40.6	+0.8
	1.1nm,0.4s,baz=272,slow=2.8,SNR=6.9						

ISCJB ***30*** *17:12:38.4±5.6, 562S±02×273W±04, h141km±57km, mb3.8/5, Error ellipse: s-maj=44.4km s-min=23.7km az=137.2*
NEIC ***30*** *17:12:38.4±5.8, 5618S×2727W, h129km±54km, mb4.1/1, Error ellipse: s-maj=33.1km s-min=14.6km az=46.0*
IDC ***30*** *17:12:39.3±9.6, 5618S×2732W, h134km±87km, mb3.6/5, mb1 3.7/5, mb1mx3.5/17, mbtmp3.6/5, Error ellipse: s-maj=40.2km s-min=18.9km az=55.0*
ISC 30 17:12:39.3±5.6, 562S±02×273W±04, h132km±57km, n14, σ0♀70/11, mb3.8/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.68**	**158**	*e*P	Pn	17 16 28.0	+3.3
VNA1				*e*		17 16 29.2	
VNA1				*e*		17 16 32.7	
VNA3	**Neumayer Olymp**	**16.87**	**160**	*e*P	Pn	17 16 27.2	+0.1
VNA3				*e*		17 16 28.2	
VNA3				*e*		17 16 31.6	
VNA2	**Neumayer--Watz**	**17.07**	**158**	*e*P	Pn	17 16 28.9	-0.6
	baz=313,slow=13						
VNA2				*e*		17 16 30.2	
VNA2				*e*		17 16 33.5	
SNAA	**Sanae**	**18.63**	**156**	*e*P	P	17 16 45.6	-0.6
SNAA				*e*		17 16 47.0	
SNAA				*e*		17 16 49.7	
SNAA	**Sanae**	**18.63**	**156**	*e*P	P	17 16 45.4	-0.8
	4.9nm,0.5s						
QSPA	**South Pole Qui**	**34.06**	**180**	P	P	17 19 10.5	+0.3
	1.5nm,0.4s,mb4.1,baz=241,slow=0.8,SNR=30						
QSPA				PcP	PcP	17 21 44.8	+0.4
	1.3nm,0.8s,baz=201,slow=1.5,SNR=6.5						
QSPA	**South Pole Qui**	**34.06**	**180**	P	P	17 19 10.5	+0.3
QSPA				PcP	PcP	17 21 44.8	+0.4
TORD	**Torodi Ar. Bea**	**73.19**	**30**	P	P	17 23 55.6	+0.1
	0.2nm,0.4s,mb3.2,baz=192,slow=6.2,SNR=4.5						
KAF	**Kangasniemi**	**125.15**	**28**	*e*p	PKPdf	17 31 21.4	-1.1
	0.9nm,0.5s						
ARCES	**ARCESS Array B**	**131.09**	**22**	PKP	PKPdf	17 31 32.7	-0.9
	2.1nm,0.9s,baz=201,slow=4.8,SNR=5.7						
SONM	**Songino Array**	**150.77**	**87**	PKPbc	PKPbc	17 32 14.5	-0.4
	0.4nm,0.4s,baz=214,slow=4.1,SNR=6.2						

IDC ***30*** *17:15:11.9±2.4, 4862S×16464E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.9/13, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=58.9km s-min=30.6km az=161.0*
NEIC ***30*** *17:15:12.9±1.7, 4885S×16454E, h10km, Error ellipse: s-maj=40.0km s-min=9.3km az=157.0*
ISC 30 17:15:17.7±2.8, 487S±03×1646E±03, h37km±31km, n16, σ0♀93/14, mb3.8/4, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WHZ	**Wether Hill Ro**	**3.60**	**41**	P	Pn	17 16 11.1	+0.2
DCZ	**Deep Cove**	**3.64**	**30**	P	Pn	17 16 11.9	+0.5
MLZ	**Mavora Lakes**	**4.13**	**38**	P	Pn	17 16 19.1	+0.9
TUZ	**Tuapaka**	**4.38**	**54**	P	Pn	17 16 22.0	+0.3
EAZ	**Earnscleugh**	**4.72**	**45**	P	Pn	17 16 26.6	+0.3
WKZ	**Wanaka**	**4.90**	**40**	P	Pn	17 16 30.5	+1.7
ODZ	**Otahua Downs**	**5.52**	**51**	P	Pn	17 16 36.5	-0.8
LBZ	**Lake Benmore**	**5.77**	**44**	P	Pn	17 16 39.6	-1.1
RPZ	**Rata Peaks**	**6.68**	**45**	Pn	Pn	17 16 50.9	-2.3
	1.8nm,0.3s,baz=236,slow=21,SNR=8.2						
RPZ				Sn	Sn	17 18 08.0	-0.1
	2.7nm,0.3s,baz=90,slow=10,SNR=3.7						
ASAR	**Alice Springs**	**34.73**	**305**	P	P	17 22 03.8	-0.4
	1.1nm,0.9s,mb3.8,baz=136,slow=7.5,SNR=17						
WRA	**Warramunga Arr**	**37.54**	**309**	P	P	17 22 27.5	-0.7
	2.2nm,0.9s,mb3.9,baz=143,slow=7.8,SNR=12						
FITZ	**Fitzroy Crossi**	**43.79**	**300**	P	P	17 23 19.6	-0.1
	2.3nm,1.0s,mb3.9,baz=142,slow=17,SNR=4.0						
CMAR	**Chiang Mai Arr**	**88.60**	**300**	P	P	17 28 07.8	+1.2
	0.4nm,0.9s,mb3.8,baz=165,slow=3.7,SNR=3.3						
TORD	**Torodi Ar. Bea**	**141.86**	**208**	PKhKP		17 34 39.4	
	0.5nm,0.8s,baz=182,slow=4.3,SNR=2.7						
TORD				PKP	PKPdf	17 34 45.2	-0.4
	0.8nm,1.0s,baz=151,slow=3.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**141.86**	**208**	PKP	PKPdf	17 34 39.4	-6.1
AKASG	**Malin Array Be**	**151.35**	**291**	PKPbc	PKPbc	17 35 05.6	-0.8
	1.3nm,0.5s,baz=83,slow=2.6,SNR=5.7						

ISCJB ***30*** *17:17:48.8±0.5, 4874S±007×1647E±0.1, h10km, mb4.2/14, MS4.1/5, Error ellipse: s-maj=11.9km s-min=8.7km az=42.3*
IDC ***30*** *17:17:49.2±0.6, 4879S×16463E, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.3/16, mbtmp4.2/13, ML4.0/1, MS4.2/7, Ms1 4.2/7, ms1mx3.9/15, Error ellipse: s-maj=25.8km s-min=17.0km az=58.0*
NEIC ***30*** *17:17:50.6±0.4, 4878S×16464E, h10km, mb4.5/4, Error ellipse: s-maj=13.5km s-min=10.2km az=69.0*
ISC 30 17:17:50.7±0.5, 4877S±007×1646E±01, h10km, n44, σ0♀95/25, mb4.2/14, MS4.1/5, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**6.73**	**44**	Pn	Pn	17 19 28.6	-0.8
	2.8nm,0.3s,baz=202,slow=19,SNR=7.0						
RPZ				Sn	Sn	17 20 46.1	0.0
	25nm,0.3s,baz=58,slow=17,SNR=8.1						
RPZ				LR	LR	17 22 24.5	
	comp=Z,3μm,18.3s,baz=223,slow=41						
RPZ	**Rata Peaks**	**6.73**	**44**	Pn	Pn	17 19 28.6	-0.8
RPZ				Sn	Sn	17 20 46.1	0.0
RPZ				LR	LR	17 22 24.5	
URZ	**Urewera**	**13.84**	**45**	LR	LR	17 27 05.4	
	comp=Z,2μm,19.3s,baz=233,slow=40						
RAO	**Raoul Island**	**23.63**	**41**	LR	LR	17 31 29.8	
	comp=Z,456nm,20.2s,MS3.9,baz=227,slow=35						
STKA	**Stephens Creek**	**24.21**	**306**	*e*P	P	17 23 08.0	+0.7
	9.9nm,2.0s,mb3.9						
STKA	**Stephens Creek**	**24.21**	**306**	P	P	17 23 08.0	+0.7
	4.8nm,0.8s,mb4.0,baz=150,slow=10,SNR=7.0						
STKA				LR	LR	17 30 23.9	
	comp=Z,780nm,18.8s,MS4.2,baz=308,slow=31						
DZM	**Mont Dzumac**	**26.68**	**4**	*e*P	P	17 23 29.4	-0.3
CTA	**Charters Tower**	**32.21**	**326**	P	P	17 24 20.5	+1.7
	6.8nm,0.8s,mb4.5,baz=163,slow=8.2,SNR=4.9						
CTA				LR	LR	17 34 49.4	
	comp=Z,178nm,20.0s,MS3.8,baz=316,slow=32						
CTA	**Charters Tower**	**32.21**	**326**	P	P	17 24 20.5	+1.7
CTA				LR	LR	17 34 49.4	
ASAR	**Alice Springs**	**34.84**	**305**	P	P	17 24 41.6	-0.2
	6.2nm,1.0s,mb4.5,baz=142,slow=9.4,SNR=16						
ASAR				PcP	PcP	17 27 14.2	-0.6
	1.9nm,1.0s,baz=156,slow=4.0,SNR=6.4						
WB2	**Warramunga Arr**	**37.66**	**309**	*e*P	P	17 25 04.9	-1.0
WB2	**Warramunga Arr**	**37.66**	**309**	*e*P	P	17 25 04.9	-1.0
WRA	**Warramunga Arr**	**37.66**	**309**	P	P	17 25 05.3	-0.6
	6.6nm,0.9s,mb4.4,baz=145,slow=8.0,SNR=26						
WRA				PcP	PcP	17 27 23.2	0.0
	3.3nm,0.9s,baz=143,slow=2.6,SNR=11						
WRAB	**Tennant Creek**	**37.66**	**309**	*e*P	P	17 25 04.4	-1.5
	10nm,0.9s,mb4.5						
QSPA	**South Pole Qui**	**41.35**	**180**	P	P	17 25 36.2	+0.1
	3.9nm,1.2s,mb3.9,baz=70,slow=4.4,SNR=4.2						
QSPA				PcP	PcP	17 27 35.0	+1.0
	5.4nm,0.9s,baz=268,slow=1.3,SNR=8.6						
FITZ	**Fitzroy Crossi**	**43.90**	**300**	*e*P	P	17 25 57.1	-0.3
	7.7nm,1.0s,mb4.4						
FITZ	**Fitzroy Crossi**	**43.90**	**300**	P	P	17 25 56.2	-1.2
	4.3nm,1.0s,mb4.1,baz=156,slow=7.0,SNR=4.9						
FITZ				PcP	PcP	17 27 43.4	0.0
	1.9nm,0.9s,baz=135,slow=5.7,SNR=3.2						
TBI	**Tubuai**	**44.05**	**72**	*e*LR	LR	17 38 10.1	
	350nm,30.5s,baz=224						
PPT	**Papeete**	**48.31**	**66**	*e*LR	LR	17 40 17.3	
	546nm,27.5s,baz=216						
PPT	**Papeete**	**48.31**	**66**	LR	LR	17 43 11.3	
	comp=Z,340nm,18.1s,MS4.4,baz=244,slow=32						
MAW	**Mawson**	**50.14**	**209**	P	P	17 26 45.4	-0.2
	1.7nm,0.9s,mb4.1,baz=38,slow=7.3,SNR=4.1						
MAW				LR	LR	17 46 31.8	
	comp=Z,156nm,18.3s,MS4.0,baz=284,slow=34						
RKT	**Rikitea**	**53.58**	**84**	*e*LR	LR	17 42 39.8	
	375nm,29.2s,baz=224						
SNAA	**Sanae**	**59.54**	**185**	*e*P	P	17 27 52.6	-1.0
	20nm,1.7s,mb4.9						
GUMO	**Guam**	**64.51**	**339**	P	P	17 28 27.4	-0.1
	123nm,1.2s						
PLCA	**Paso Flores**	**78.44**	**140**	P	P	17 29 52.9	+1.4
	1.6nm,0.9s,mb3.9,baz=240,slow=6.7,SNR=3.2						
CFAA	**Coronel Fontan**	**87.11**	**137**	P	P	17 30 35.8	-0.9
	0.5nm,1.0s,mb3.7,baz=219,slow=4.1,SNR=5.5						
MJAR	**Matsushiro Arr**	**88.13**	**339**	P	P	17 30 42.9	+1.8
	0.9nm,1.0s,mb4.0,baz=169,slow=4.8,SNR=4.5						
CMAR	**Chiang Mai Arr**	**88.71**	**300**	P	P	17 30 45.6	+1.4
	1.2nm,1.0s,mb4.2,baz=150,slow=2.1,SNR=4.8						
KSRS	**Korea Array**	**91.83**	**332**	P	P	17 30 58.9	+0.5
	2.6nm,0.9s,mb4.5,baz=150,slow=6.3,SNR=8.0						
MKAR	**Makanchi Array**	**118.97**	**309**	PKP	PKPdf	17 36 38.3	-0.3
	1.0nm,0.8s,baz=90,slow=4.1,SNR=4.5						
ZALV	**Zalesovo Beam**	**122.39**	**316**	PKP	PKPdf	17 36 43.9	-1.0
	0.3nm,0.3s,baz=141,slow=3.1,SNR=3.7						
WCI	**Wyandotte Cave**	**129.22**	**74**	*e*PKPdf	PKPdf	17 36 58.7	+0.2
TORD	**Torodi Ar. Bea**	**141.78**	**207**	PKhKP		17 37 16.7	
	0.9nm,0.9s,baz=150,slow=2.9,SNR=4.2						
TORD				PKP	PKPdf	17 37 22.3	-0.3
	1.4nm,1.0s,baz=147,slow=0.8,SNR=5.1						
TORD	**Torodi Ar. Bea**	**141.78**	**207**	PKP		17 37 16.7	
TORD				PKP	PKPdf	17 37 22.3	-0.3
BR131	**Keskin Array S**	**144.30**	**274**	*e*PKPdf	PKPdf	17 37 26.3	+0.1
TAM	**Tamanrasset**	**149.24**	**220**	*e*PKPbc	PKPbc	17 37 39.4	+0.1
KEV	**Kevo**	**150.82**	**331**	*e*p	PKPdf	17 37 38.1	+2.0
JOF	**Joensuu**	**150.98**	**317**	*e*p	PKPbc	17 37 41.8	-0.5
	6.3nm,0.8s						
ARCES	**ARCESS Array B**	**151.39**	**331**	PKPbc	PKPbc	17 37 44.0	+1.0
	9.4nm,0.8s,baz=22,slow=1.3,SNR=16						
AKASG	**Malin Array Be**	**151.45**	**291**	PKPbc	PKPbc	17 37 43.3	-0.5
	12nm,0.9s,baz=84,slow=2.5,SNR=22						
KIEV	**Kiev**	**151.45**	**291**	*e*PKPbc	PKPbc	17 37 43.1	-0.7
KAF	**Kangasniemi**	**153.40**	**316**	*e*p	PKPbc	17 37 47.3	-0.5
	5.5nm,0.9s						
NOA	**NORSAR Array B**	**160.57**	**319**	PKPab	PKPab	17 38 30.6	-0.4
	0.7nm,0.8s,baz=60,slow=4.7,SNR=3.3						
GERES	**GERESS Array B**	**160.91**	**281**	PKPab	PKPab	17 38 32.8	-0.1
	0.7nm,0.9s,baz=95,slow=2.8,SNR=4.4						

NIED ***30*** *17:21:00, 3520N×139.10E, h11km, Mw4.7 Best double couple: M0 1.37000×10^16 NP1: φs49.00000°, δ72.00000°, λ93.00000°. NP2: φs219.00000°, δ18.00000°, λ81.00000°.*
BGS ***30*** *17:21:01.2±1.8, 3279N×14194E, h33km, mb5.2*
BJI ***30*** *17:21:07.7, 3504N×13997E, h32km, mB5.1, mb4.9, Ms4.7, Msz4.5*
IDC ***30*** *17:21:11.2±0.4, 3516N×13898E, h0km, mb4.7/26, mb1 4.8/29, mb1mx4.8/30, mbtmp4.7/29, ML4.5/3, MS4.0/15, Ms1 4.1/15, ms1mx3.7/38, Error ellipse: s-maj=14.9km s-min=9.1km az=83.0*
ISCJB ***30*** *17:21:14.0±0.3, 3518N±002×13903E±003, h26km±2km, mb5.0/217, MS4.4/38, Error ellipse: s-maj=3.9km s-min=3.3km az=27.4*
JMA ***30*** *17:21:14.4±0.1, 3523N×139.12E, h14km±1km, M4.9 Broadband fault plane solution: P waves. NP1: φs294.00000°, δ22.00000°, λ161.00000°. NP2: φs41.00000°, δ83.00000°, λ69.00000°. Principal axes: T Plg48.0000°, Azm289.0000°; N Plg21.0000°, Azm44.0000°; P Plg35.0000°, Azm149.0000°;*
MOS ***30*** *17:21:15.7±0.8, 3530N×13899E, h33km, mb5.3/80, MS4.5/25 Error ellipse: s-maj=7.8km s-min=4.0km az=116.3*
SZGRF ***30*** *17:21:15.2, 3553N×140.35E, h35km, mb5.3, MS4.2, Near east coast of eastern Honshu, Japan*
NEIC ***30*** *17:21:16.5±1.2, 3518N×13899E, h33km±8km, mb5.0/121, MS4.4/5, MW4.7(NIED), Error ellipse: s-maj=3.9km s-min=3.0km az=162.0*
NEIC Felt [III] at Zushi and [II] at Tokyo and Yokosuka. Felt at Ayase, Chigasaki, Hakone, Hamura, Hayama, Kawasaki, Kunitachi, Minamiashigara, Osaka, Sagamihara, Tachikawa, Tsuru, Uenohara, Yamato, Yokohama and Zama. Recorded [5L JMA] in Kanagawa; [4 JMA] in Shizuoka; [3 JMA] in Chiba, Tokyo and Yamanashi; [2 JMA] in Nagano and Saitama; [1 JMA] in Aichi, Gumma, Ibaraki and Niigata Prefectures.
ISC 30 17:21:14.7±0.3, 3518N±002×13903E±002, h19km±2km, h33km±2.6km: pP-P, n558, σ0♀84/563, mb5.0/217, MS4.4/38, 32C-37D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOD2	**Odawara 2**	**0.10**	**32**	⇓P	Pg	17 21 16.9	-1.5
JOD2				S	Sg	17 21 19.0	-2.0
AJI	**Ajiro2**	**0.15**	**159**	⇑P	Pg	17 21 18.5	-0.5
AJI				S	Sg	17 21 21.9	0.0
KTJJ	**Kamata 2**	**0.26**	**173**	⇓P	Pg	17 21 20.4	-0.2
KTJJ				S	Sg	17 21 24.9	+0.3
JIZS	**Izushimoda**	**0.48**	**195**	⇓P	Pg	17 21 24.6	+0.2
JIZS				S	Sg	17 21 32.0	+1.0
JYN	**Shimob**	**0.50**	**309**	S	Sg	17 21 33.0	+1.3
JIM2	**Oshima 3**	**0.57**	**144**	⇓P	Pb	17 21 24.9	-1.1
MJAR	**Matsushiro Arr**	**1.51**	**334**	Pn	Pn	17 21 40.7	0.0
	451nm,0.3s,baz=164,slow=14,SNR=2257						
MJAR				Sn	Sn	17 21 59.9	+0.1
	1μm,0.3s,baz=169,slow=27,SNR=22						
MJAR	**Matsushiro Arr**	**1.51**	**334**	Pn	Pn	17 21 40.7	0.0
MJAR				Sn	Sn	17 21 59.9	+0.1
MAJO	**Matsushiro**	**1.51**	**334**	⇑*i* Pn	Pn	17 21 41.0	+0.3
MAJO				*e*Sn	Sn	17 21 59.5	-0.4
MAT	**Matsushiro**	**1.51**	**334**	P	Pn	17 21 41.2	+0.5
MAT				S	Sn	17 22 00.8	+1.0
JHJ	**Hachijo jima 2**	**2.15**	**163**	Pn	Pn	17 21 50.0	+0.6
	520nm,0.3s,baz=350,slow=3.0,SNR=62						
JHJ				Sn	Sn	17 22 16.9	+1.2
	279nm,0.3s,baz=75,slow=16,SNR=3.9						
JHJ				LR	LR	17 22 40.6	
	comp=Z,2μm,21.1s,baz=354,slow=42						
ERM	**Erimo**	**7.55**	**24**	Pn	Pn	17 23 02.9	-0.7
	240nm,0.7s,SNR=9.0						
ERM	**Erimo**	**7.55**	**24**	*i* P	Pn	17 23 01.7	-1.9
ERM

SNY LR LR
comp=N,951nm,13.2s
SNY LR LR
comp=E,1μm,14.7s
SNY LR LR
comp=Z,1μm,14.7s
KLR Kul'dur 15.03 341 *e*P **Pn 17 24 41.8 -4.0**
KLR MLR MLR
comp=N,2μm,12.0s
KLR MLR MLR
comp=E,500nm,12.0s
KLR MLR MLR
comp=Z,2μm,12.0s
SSE Sheshan 15.49 260 P **Pn 17 24 52.5 +0.5**
SSE XP sP 17 25 04.8 +0.6
SSE AMB AMB
comp=Z,24nm,0.7s
SSE AMB AMB
comp=Z,112nm,6.2s
SSE LR LR
comp=N,515nm,14.0s
SSE LR LR
comp=E,269nm,14.0s
SSE LR LR
comp=Z,781nm,12.0s
SSE Sheshan 15.49 260 P **Pn 17 24 52.5 +0.5**
comp=Z,24nm,0.7s
SSE sP sP 17 25 04.7 +0.5
SSE S **Sn 17 27 42.5 -0.6**
NJ2 Nanjing 17.09 265 *e*P **Pn 17 25 14.5 +2.0**
NJ2 AP pP 17 25 22.3 +2.8
NJ2 XP sP 17 25 26.8 +4.8
NJ2 PP 17 25 29.0
NJ2 AMB AMB
comp=Z,30nm,1.2s
NJ2 AMB AMB
comp=Z,210nm,6.0s
NJ2 LR LR
comp=N,440nm,22.7s
NJ2 LR LR
comp=E,560nm,22.3s
NJ2 LR LR
comp=Z,560nm,22.3s
TIA Tai'an 17.82 280 *e*P **Pn 17 25 24.0 +2.5**
BJI Beijing 18.73 292 P **Pn 17 25 33.3 +0.8**
BJI XP sP 17 25 44.0 +4.0
BJI S **Sn 17 28 59.8 -1.7**
BJI XS sS 17 29 15.3 +2.2
BJI AMB AMB
comp=Z,36nm,1.6s
BJI AMB AMB
comp=Z,227nm,3.0s
BJI LR LR
comp=N,1μm,12.8s
BJI LR LR
comp=E,998nm,12.8s
BJI LR LR
comp=Z,391nm,17.1s
BJI Beijing 18.73 292 P **Pn 17 25 33.3 +0.8**
comp=Z,36nm,1.6s
BJI sP sP 17 25 44.0 +4.0
BJI S **Sn 17 28 59.7 -1.8**
BJI sS sS 17 29 15.2 +2.1
BJT Baijiatuau 18.73 292 *e*P **Pn 17 25 33.6 +1.0**
BJT pmax pmax
comp=Z,201nm,1.5s
BJT Baijiatuau 18.73 292 *e*Pn **Pn 17 25 33.6 +1.0**
comp=Z,202nm,1.5s
WHN Wuhan 21.22 264 P **P 17 26 01.0 +1.7**
WHN S **S 17 29 58.5 +4.1**
WHN AMB AMB
comp=Z,56nm,1.2s,mb4.8
WHN LR LR
comp=N,1μm,12.6s,MS4.8
WHN LR LR
comp=E,2μm,13.9s,MS4.8
WHN LR LR
comp=Z,3μm,10.9s,MS4.9
GUMO Guam 22.14 165 P **P 17 26 08.6 -0.6**
comp=Z,34nm,0.5s,mb5.1,baz=202,slow=0.0,SNR=3.4
GUMO LR LR 17 33 30.7
comp=Z,732nm,21.2s,MS4.1,baz=45,slow=33
GUMO Guam 22.14 165 *e*P **P 17 26 10.4 +1.2**
GUMO pmax pmax
comp=Z,262nm,1.2s,mb5.5
GUMO Guam 22.14 165 *e*P **P 17 26 10.4 +1.2**
comp=Z,262nm,1.2s,mb5.5
PETK Petropavlovsk- 22.26 31 P **P 17 26 11.0 +0.8**
comp=Z,13nm,1.0s,mb4.3,baz=219,slow=5.9,SNR=6.3
PETK LR LR 17 35 26.5
comp=Z,165nm,18.4s,baz=211,slow=38
PETK Petropavlovsk- 22.26 31 P **P 17 26 11.0 +0.8**
PETK LR LR 17 35 26.5
HHC Hu-ho-hao-te 22.32 293 *e*P **P 17 26 09.3 -1.7**
HHC AP 17 26 19.0
HHC XP sP 17 26 23.3 +4.4
HHC S **S 17 30 06.5 -9.1**
HHC SCP ScP 17 33 39.5 -3.1
HHC PCS PcS 17 33 43.3 -1.5
HHC AMB AMB
comp=Z,19nm,0.9s,mb4.5
HHC AMB AMB
comp=Z,126nm,5.0s
HHC LR LR
comp=N,534nm,11.6s,MS4.5
HHC LR LR
comp=E,826nm,11.5s,MS4.5
HHC LR LR
comp=Z,871nm,11.2s,MS4.4
PET Petropavlovsk 22.60 32 *i* P **P 17 26 13.3 -0.6**
PET pmax pmax
comp=Z,58nm,1.4s,mb4.8
PET MLR MLR
comp=Z,300nm,23.0s,MS3.7
CLNS Chul'man 23.68 340 *e*P **P 17 26 23.4 -1.6**
CLNS *e**PP 17 26 31.4
CLNS *e*PPP 17 26 52.0
CLNS *e* 17 30 08.0
CLNS *e*S **S 17 30 32.6 -5.9**
CLNS pmax pmax
comp=Z,67nm,1.3s,mb4.9
CLNS pmax pmax
comp=N,39nm,1.1s
CLNS pmax pmax
comp=E,11nm,0.8s
CLNS smax
comp=E,117μm,12.2s
CLNS smax
comp=N,95μm,11.0s
CLNS MLR MLR
comp=E,390nm,13.0s,MS4.2
CLNS MLR MLR
comp=Z,340nm,11.0s,MS4.1
CLNS MLR MLR
comp=N,406nm,12.0s,MS4.2
XAN Xi'an 24.76 276 P **P 17 26 35.5 +0.4**
XAN AP 17 26 47.8
XAN AMB AMB
comp=Z,24nm,1.4s,mb4.5
ULN Ulaanbaatar 26.88 308 *e*P **P 17 26 53.7 -0.4**
SONM Songino Array 27.30 308 P **P 17 26 56.8 -1.0**
comp=Z,4.1nm,0.9s,mb4.0,baz=110,slow=7.8,SNR=26
SONM PcP PcP 17 30 17.3 +0.3
comp=Z,1.3nm,0.6s,baz=120,slow=2.9,SNR=9.8
SONM ScP ScP 17 33 56.9 +0.5
comp=Z,2.0nm,1.1s,baz=115,slow=2.3,SNR=7.7
SONM Songino Array 27.30 308 P **P 17 26 56.8 -1.0**
SONM 17 30 17.3
YAK Yakutsk 27.51 350 *c i*P **P 17 26 57.7 -1.9**
YAK *e**PP pP 17 27 06.1 +0.7
YAK *e* 17 30 16.9
YAK *e*S **S 17 31 34.3 -5.0**
YAK *e*SS 17 32 58.7
YAK *e* 17 37 43.5
YAK pmax pmax
comp=Z,39nm,0.9s,mb5.0
YAK pmax pmax
comp=N,26nm,1.3s
YAK pmax pmax
comp=E,11nm,1.4s
YAK smax
comp=N,194μm,14.0s
YAK smax
comp=E,88μm,13.4s
YAK MLR MLR
comp=Z,1μm,17.0s,MS4.6
YAK MLR MLR
comp=E,437nm,16.0s,MS4.5
YAK MLR MLR
comp=N,947nm,17.0s,MS4.5
YAK Yakutsk 27.51 350 *e*P **P 17 26 58.0 -1.6**
comp=N,60nm,0.7s,mb5.3
BOD Bodaibo 28.14 331 *e*P **P 17 27 03.8 -1.5**
BOD pmax pmax
comp=Z,15nm,0.9s,mb4.6
LZH Lanzhou 28.52 282 *e*P **P 17 27 09.5 +0.6**
LZH AP pP 17 27 19.3 +4.6
LZH XP sP 17 27 23.5 +6.4
LZH PP PP 17 28 01.5 -12
LZH *e*S **S 17 31 53.0 -2.7**
LZH AMB AMB
comp=Z,45nm,1.2s,mb5.1
LZH AMB AMB
comp=Z,196nm,7.1s
LZH LR LR
comp=E,824nm,12.7s
LZH LR LR
comp=Z,1μm,14.1s,MS4.7
LZH Lanzhou 28.52 282 *e*P **P 17 27 09.5 +0.6**
comp=Z,45nm,1.2s,mb5.1
LZH pP pP 17 27 19.2 +4.5
LZH sP sP 17 27 23.5 +6.4
LZH PP PP 17 28 01.5 -12
LZH *e*S **S 17 31 53.0 -2.7**
LZH sS sS 17 32 10.2 +4.8
LZH *e*SS SS 17 33 18.0 -38
LZH pmax pmax
comp=Z,45nm,1.2s,mb5.1
LZH MLR MLR
comp=Z,1μm,14.1s,MS4.7
LZH Lanzhou 28.52 282 *e*P **P 17 27 09.5 +0.6**
comp=Z,45nm,1.2s,mb5.1
LZH pP pP 17 27 19.2 +4.5
LZH sP sP 17 27 23.5 +6.4
LZH PP PP 17 28 01.5 -12
LZH *e*S **S 17 31 53.0 -2.7**
LZH sS sS 17 32 10.2 +4.8
LZH *e*SS SS 17 33 18.0 -38
LZH LR LR
comp=Z,1μm,14.1s,MS4.7
SEY Seymchan 29.00 13 *i* P **P 17 27 13.4 +0.6**
GYA Guiyang 29.02 262 P **P 17 27 14.8 +1.4**
GYA AP pP 17 27 24.5 +5.2
GYA XP sP 17 27 30.3 +8.6
GYA PP PP 17 28 09.8 -9.2
GYA S **S 17 32 02.5 -1.3**
GYA XS sS 17 32 19.0 +5.6
GYA AMB AMB
comp=Z,20nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,140nm,4.9s
GYA LR LR
comp=N,610nm,17.6s,MS4.4
GYA LR LR
comp=E,560nm,18.0s,MS4.4
GYA LR LR
comp=Z,690nm,19.2s,MS4.3
CD2 Chengdu 29.77 272↓ *i* P **P 17 27 20.0 -0.1**
CD2 AP pP 17 27 29.8 +3.9
CD2 XP sP 17 27 33.5 +5.2
CD2 PP PP 17 28 17.5 -10
CD2 PCP PcP 17 30 23.3 -0.2
CD2 S **S 17 32 13.3 -2.2**
CD2 XS sS 17 32 30.0 +4.8
CD2 PCS PcS 17 34 05.3 -1.5
CD2 AMB AMB
comp=Z,20nm,1.0s,mb4.8
CD2 AMB AMB
comp=Z,310nm,4.8s
CD2 LR LR
comp=N,1μm,13.2s,MS4.9
CD2 LR LR
comp=E,1μm,14.4s,MS4.9
CD2 LR LR
comp=Z,1μm,14.4s,MS4.7
ZAK Zakamensk 29.97 312 *e*P **P 17 27 20.4 -1.2**
ZAK *e* 17 30 20.9
ZAK pmax pmax
comp=Z,3.0nm,1.4s,mb3.8
TLY Talaya 30.16 314 *e*P **P 17 27 23.2 0.0**
TLY *e* 17 28 33.8
TLY pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
TLY MLR MLR
comp=Z,526nm,15.0s,MS4.3
GTA Gaotai 31.31 290 *e*P **P 17 27 34.0 +0.5**
GTA AP pP 17 27 39.5 +0.1
GTA XP sP 17 27 42.5 +0.7
GTA PP PP 17 28 37.3 -7.0
GTA PCP PcP 17 30 28.5 +1.1
GTA S **S 17 32 38.8 -0.7**
GTA AMB AMB
comp=Z,8.0nm,1.6s,mb4.3
GTA AMB AMB
comp=Z,150nm,4.5s
GTA LR LR
comp=N,549nm,12.6s,MS4.7
GTA LR LR
comp=E,970nm,12.0s,MS4.7
GTA LR LR
comp=Z,1μm,12.3s,MS4.7
KMI Kunming 32.78 262 P **P 17 27 47.0 +0.4**
KMI AP pP 17 27 57.3 +4.8
KMI XP sP 17 28 02.0 +7.1
KMI PP PP 17 28 56.5 -4.3
KMI S **S 17 32 59.5 -3.2**
KMI XS sS 17 33 17.5 +5.1
KMI AMB AMB
comp=Z,21nm,1.3s,mb4.9
KMI AMB AMB
comp=Z,259nm,4.8s
KMI LR LR
comp=N,514nm,10.5s,MS4.7
KMI LR LR
comp=E,850nm,12.9s,MS4.7
KMI LR LR
comp=Z,637nm,11.8s,MS4.5
KMI Kunming 32.78 262 P **P 17 27 47.0 +0.4**
KMI *PP pP 17 27 57.3 +4.8
KMI *SP sP 17 28 02.0 +7.1
KMI 17 28 56.5
KMI PPP 17 29 13.1
KMI S **S 17 32 59.4 -3.3**
KMI *SS sS 17 33 17.4 +5.0
KMI SS SS 17 34 57.9 -26
KMI SSS 17 35 22.3
KMI pmax pmax
comp=Z,21nm,1.3s,mb4.9
KMI MLR MLR
comp=Z,640nm,11.8s,MS4.5
KMI Kunming 32.78 262 P **P 17 27 47.0 +0.4**
comp=Z,21nm,1.3s,mb4.9
KMI pP pP 17 27 57.3 +4.8
KMI sP sP 17 28 02.0 +7.1
KMI PP PP 17 28 56.5 -4.3
KMI PPP 17 29 13.1
KMI S **S 17 32 59.4 -3.3**
KMI sS sS 17 33 17.4 +5.0
KMI SS SS 17 34 57.9 -26
KMI SSS 17 35 22.3
KMI LR LR
comp=Z,640nm,11.8s,MS4.5
BILL Bilibino 36.35 17↓ *e*P **P 17 28 17.3 +0.3**
BILL pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
BILL MLR MLR
comp=Z,400nm,18.0s,MS4.2
TIXI Tiksi 36.92 355↓ *e*P **P 17 28 20.7 -1.1**
TIXI pmax pmax
comp=Z,33nm,1.6s,mb4.9
TIXI MLR MLR
comp=Z,700nm,18.0s,MS4.5
TIXI Tiksi 36.92 355 *e*P **P 17 28 20.1 -1.7**
comp=Z,14nm,0.8s,mb4.8
KRAR Krasnoyarsk 37.51 318↑ *e*P **P 17 28 27.1 +0.1**
KRAR pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
KRAR MLR MLR
comp=Z,500nm,19.0s,MS4.3
CHTO Chiang Mai 38.97 256 *e*P **P 17 28 39.6 -0.1**
CM31 Chiang Mai Arr 39.16 255 *e*P **P 17 28 40.5 -0.8**
comp=Z,3.2nm,0.8s,mb4.1
CMAR Chiang Mai Arr 39.16 255 P **P 17 28 41.6 +0.3**
comp=Z,1.9nm,0.8s,mb3.9,baz=46,slow=8.4,SNR=18
CMAR LR LR 17 46 40.5
comp=Z,199nm,20.7s,MS3.9,baz=228,slow=39
CMAR Chiang Mai Arr 39.16 255 *i* P **P 17 28 41.9 +0.6**
WMQ Urumqi 39.98 298 P **P 17 28 49.3 +1.4**
WMQ AP pP 17 28 59.0 +5.1
WMQ XP sP 17 29 03.0 +6.8
WMQ PCP PcP 17 30 54.0 +1.1
WMQ *e*S **S 17 34 52.0 -0.3**
WMQ AMB AMB
comp=Z,22nm,1.0s,mb4.8
WMQ AMB AMB
comp=Z,209nm,3.5s
WMQ LR LR
comp=N,786nm,14.5s,MS4.9
WMQ LR LR
comp=E,793nm,12.2s,MS4.9
WMQ LR LR
comp=Z,548nm,27.0s
LSA Lhasa 40.47 276 P **P 17 28 54.0 +1.9**
LSA Lhasa 40.47 276 *e*P **P 17 28 53.4 +1.3**
LSA pmax pmax
comp=Z,44nm,1.1s,mb5.1
LSA Lhasa 40.47 276 *e*P **P 17 28 53.4 +1.3**
comp=Z,44nm,1.1s,mb5.1
ZAA0 Zalesovo Array 41.77 314 *e*P **P 17 29 02.2 -0.3**
ZALV Zalesovo Beam 41.77 314 P **P 17 29 02.0 -0.5**
comp=Z,6.9nm,0.7s,mb4.4,baz=94,slow=6.6,SNR=37
ZALV PcP PcP 17 30 57.9 -0.5
comp=Z,9.3nm,0.7s,baz=97,slow=2.6,SNR=13
ZALV ScP ScP 17 34 47.5 -0.1
comp=Z,0.4nm,0.3s,baz=85,slow=3.4,SNR=4.2
ZALV Zalesovo Beam 41.77 314 P **P 17 29 02.0 -0.5**
ZALV 17 30 57.9
ZALV Zalesovo Beam 41.77 314 P **P 17 29 02.0 -0.5**
ZALV PcP PcP 17 30 57.9 -0.5
ZALV ScP ScP 17 34 47.5 -0.1
NVS Novosibirsk 42.75 315 *i* P **P 17 29 08.6 -1.9**
NVS pmax pmax
comp=N,4.0nm,1.4s
NVS pmax pmax
comp=E,22nm,1.4s
NVS pmax pmax
comp=Z,28nm,1.4s,mb4.8
MK31 Makanchi Array 43.49 303 *e*P **P 17 29 17.1 +0.5**
MKAR Makanchi Array 43.49 303 P **P 17 29 17.2 +0.6**
comp=Z,8.0nm,0.7s,mb4.5,baz=88,slow=9.2,SNR=55
MKAR PcP PcP 17 31 04.2 -0.1
comp=Z,2.4nm,0.8s,baz=96,slow=1.4,SNR=3.8
MKAR ScP ScP 17 34 56.3 +1.5
comp=Z,1.7nm,0.8s,baz=69,slow=6.6,SNR=7.9
MKAR Makanchi Array 43.49 303 P **P 17 29 17.2 +0.6**
MKAR 17 31 04.2
MKAR Makanchi Array 43.49 303 P **P 17 29 17.2 +0.6**
MKAR PcP PcP 17 31 04.2 -0.1
MKAR ScP ScP 17 34 56.3 +1.5
ODAN Odare 44.61 274 *e*P **P 17 29 26.1 +0.3**
comp=Z,34nm,0.9s,mb5.2
RAMN Ramite 45.22 275 *e*P **P 17 29 31.2 +0.6**
comp=Z,106nm,0.9s,mb5.7
JIRN Jiri 45.27 276 *e*P **P 17 29 32.2 +1.2**
comp=Z,157nm,1.0s,mb5.8
GUN Gumba 45.42 276 *e*P **P 17 29 33.4 +1.1**
comp=Z,86nm,0.9s,mb5.6
KURK Kurchatov 45.58 309 P **P 17 29 33.8 +0.6**
comp=Z,820nm,0.8s,SNR=16
KURK Kurchatov 45.58 309 *e*P **P 17 29 32.7 -0.5**
KURK pmax pmax
comp=Z,129nm,0.9s,mb5.9
KURK Kurchatov 45.58 309 *e*P **P 17 29 32.7 -0.5**
comp=Z,129nm,0.9s,mb5.9
PKIN Phulchoki 45.95 276 *e*P **P 17 29 36.9 +0.5**
KKN Kakani 45.96 276 *e*P **P 17 29 37.4 +0.9**
comp=Z,77nm,1.0s,mb5.6
DMN Daman 46.17 276 *e*P **P 17 29 38.5 +0.3**
comp=Z,51nm,1.1s,mb5.4
GKN Gorkha 46.40 277 *e*P **P 17 29 40.5 +0.5**
comp=Z,190nm,1.0s,mb6.0
DANN Dangsing 46.98 278 *e*P **P 17 29 45.8 +1.3**
comp=Z,270nm,0.9s,mb6.2
KOLN Koldanda 47.33 277 *e*P **P 17 29 48.1 +0.8**
comp=Z,53nm,0.8s,mb5.5
BATI Baumata 47.42 201 P **P 17 29 47.0 -1.0**
comp=Z,24nm,1.0s,mb5.1,baz=6.3,slow=9.2,SNR=3.4
SVW2 Sparrevohn 48.16 36 *e*P **P 17 29 54.2 +1.0**
HNR Honiara 48.58 152 LR LR 17 48 47.6
comp=Z,118nm,19.3s,MS3.9,baz=313,slow=34
TKM2 Tokmak 2 48.83 299 *e*P **P 17 30 00.0 +1.4**
TKM2 pmax pmax
comp=Z,162nm,1.6s,mb5.8
TKM2 Tokmak 2 48.83 299 P **P 17 30 00.2 +1.5**
SNR=52
TKM2 Tokmak 2 48.83 299 *e*P **P 17 30 00.0 +1.4**
comp=Z,162nm,1.6s,mb5.8
KZA Kyzart 49.28 298 P **P 17 30 04.9 +2.8**
SNR=11
KBK Karagaybulak 49.35 299 P **P 17 30 03.9 +1.2**
SNR=29
CHMS Chumysh 49.41 300 P **P 17 30 04.4 +1.3**
SNR=7.8
OHAK Old Harbor 49.42 41 *e*P **P 17 30 01.8 -1.2**
comp=Z,40nm,1.0s,mb5.4
USP Ospenovka 49.53 300 P **P 17 30 04.8 +0.8**
SNR=27
FRU Bishkek 49.55 299 *i* P **P 17 30 05.0 +0.9**
FRU pmax pmax
comp=Z,100nm,1.8s,mb5.5
AAK Ala-Archa 49.68 299 P **P 17 30 06.2 +1.0**
SNR=14
CHUM Lake Minchumin 49.74 33 *e*P **P 17 30 06.1 +0.8**
comp=Z,31nm,0.9s,mb5.3
KDAK Kodiak Island 49.76 41 P **P 17 30 05.0 -0.5**
comp=Z,460nm,0.8s,SNR=15
KDAK Kodiak Island 49.76 41 P **P 17 30 05.6 +0.1**
comp=Z,53nm,0.7s,mb5.7,baz=290,slow=3.7,SNR=44
KDAK Kodiak Island 49.76 41 *e*P **P 17 30 05.3 -0.3**
UCH Uchtor 49.77 299 *e*P **P 17 30 07.8 +1.9**
comp=Z,38nm,1.3s,mb5.3
PPLA Purkeypile 49.79 34 *e*P **P 17 30 06.7 +1.0**
comp=Z,58nm,1.4s,mb5.4
VOSK Vostochnaya 50.09 313 P **P 17 30 07.5 -0.6**
VOSK pmax pmax
comp=Z,63nm,1.4s,mb5.5
EKS2 Erkin-Say 50.19 299 P **P 17 30 09.8 +0.8**
SNR=16
EKS2 Erkin-Say 50.19 299 *e*P **P 17 30 09.3 +0.3**
comp=Z,6.5nm,0.7s,mb4.8
BPAW Bear Paw Mtn. 50.33 32 *e*P **P 17 30 10.3 +0.6**
comp=Z,33nm,0.1s,mb6.3
KTH Kantishna Hill 50.36 33 *e*P **P 17 30 10.7 +0.7**
comp=Z,38nm,1.0s,mb5.4
AML Almayashu 50.38 299 P **P 17 30 12.4 +1.9**
SNR=66
AML Almayashu 50.38 299 *e*P **P 17 30 12.2 +1.7**
comp=Z,64nm,0.8s,mb5.7
BVA0 Borovoye Array 50.41 313 *i* P **P 17 30 10.4 -0.1**
BVA0 pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
BRVK Borovoye 50.46 313 P **P 17 30 11.3 +0.4**
comp=Z,159nm,1.2s,mb5.9,SNR=8.2
BRVK Borovoye 50.46 313 *e*P **P 17 30 10.7 -0.2**
BRVK pmax pmax
comp=Z,25nm,0.9s,mb5.2
BRVK Borovoye 50.46 313 *e*P **P 17 30 10.7 -0.2**
comp=Z,25nm,0.9s,mb5.2
COLD Coldfoot 50.70 28 *e*P **P 17 30 12.6 +0.1**
comp=Z,4.1nm,0.8s,mb4.4
SEW Seward 51.21 38 *e*P **P 17 30 15.9 -0.5**
PMR Palmer 51.26 36 *e*P **P 17 30 15.9 -0.9**
PMR pmax pmax
comp=Z,15nm,0.9s,mb4.9
PMR Palmer 51.26 36 *e*P **P 17 30 15.9 -0.8**
comp=Z,15nm,0.9s,mb4.9
COLA College 51.67 31 *c i*P **P 17 30 20.3 +0.5**
COLA College 51.67 31 *e*P **P 17 30 20.2 +0.4**
comp=Z,31nm,0.7s,mb5.3
THN Thein Dam 51.88 286 *e*P **P 17 30 20.6 -1.3**
KK31 Karatay Array 52.39 301 *i* P **P 17 30 25.8 +0.3**
KK31 pmax pmax
comp=Z,55nm,1.0s,mb5.4
EYAK Cordova Ski Ar 52.99 37 *e*P **P 17 30 29.7 0.0**
comp=Z,52nm,1.0s,mb5.4
FITZ Fitzroy Crossi 54.49 196 *e*P **P 17 30 40.2 -0.9**
comp=Z,4.6nm,0.7s,mb4.5

FITZ Fitzroy Crossi 54.49 196 P P 17 30 40.3 -0.8
comp=Z,1.6nm,0.6s,mb4.1,baz=11,slow=9.1,SNR=9.1
WRAB Tennant Creek 54.99 185 P P 17 30 43.0 -1.7
comp=Z,141nm,1.0s,mb6.0,SNR=11
WRAB Tennant Creek 54.99 185⇓ *eP* **P 17 30 43.2 -1.5**
WRAB Tennant Creek 54.99 185 *eP* **P 17 30 42.0 -2.7**
comp=Z,19nm,0.8s,mb5.2
WB2 Warramunga Arr 55.00 185 *eP* **P 17 30 43.4 -1.3**
WRA Warramunga Arr 55.00 185 P P 17 30 43.3 -1.5
comp=Z,7.7nm,0.6s,mb4.9,baz=1.6,slow=7.4,SNR=105
WRA LR LR 17 53 41.7
comp=Z,119nm,18.7s,MS4.0,baz=285,slow=36
WRA PKP2bc 18 01 06.4
comp=Z,0.4nm,0.9s,baz=194,slow=2.4,SNR=4.6
WRA Warramunga Arr 55.00 185 *i* P **P 17 30 43.2 -1.5**
WRA pmax pmax
comp=Z,8.0nm,0.6s
WRA Warramunga Arr 55.00 185 P P 17 30 43.3 -1.5
WRA LR LR 17 53 41.7
WRA ⇑*e* 18 01 06.4
SVE Sverdlovsk 55.27 319⇑ *eP* **P 17 30 47.1 +0.8**
SVE pmax pmax
comp=Z,41nm,1.0s,mb5.4
SVE MLR MLR
comp=Z,525nm,18.0s,MS4.7
CTA Charters Tower 55.39 172 P P 17 30 47.0 -0.6
comp=Z,4.9nm,0.5s,mb4.8,baz=351,slow=9.8,SNR=4.0
CTA Charters Tower 55.39 172 P P 17 30 47.0 -0.6
DAWY Dawson 55.40 32 *eP* **P 17 30 47.4 +0.3**
KBL Kabul 56.28 291 *eP* **P 17 30 53.8 -0.1**
KBL pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KBL Kabul 56.28 291 *eP* **P 17 30 53.8 -0.1**
comp=Z,8.9nm,0.9s,mb4.8
PNL Peninsula 56.28 37 *eP* **P 17 30 53.8 +0.2**
comp=Z,31nm,1.1s,mb5.2
ARU Arti 56.47 319 P P 17 30 55.9 +0.9
comp=Z,267nm,0.9s,mb6.3,SNR=13
ARU Arti 56.47 319*c i*P **P 17 30 54.6 -0.4**
ARU *e* 17 31 49.6
ARU *e* 17 33 01.1
ARU *e*S **S 17 38 43.2 -1.8**
ARU *e*SS SS 17 42 35.9 +4.2
ARU pmax pmax
comp=Z,55nm,1.0s,mb5.5
ARU MLR MLR
comp=Z,408nm,17.0s,MS4.6
ARU Arti 56.47 319 *eP* **P 17 30 54.3 -0.7**
comp=Z,50nm,1.0s,mb5.5
HYT Haines Junctio 56.93 36 *eP* **P 17 30 59.0 +0.9**
AB31 Akbulak array 57.66 310 *i* P **P 17 31 03.3 -0.2**
AB31 pmax pmax
comp=Z,16nm,0.6s,mb5.2
AKTO Aktyubinsk 58.48 312 P P 17 31 08.8 -0.4
AKTO pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
ASAR Alice Springs 58.73 185 P P 17 31 10.1 -1.1
comp=Z,2.5nm,0.7s,mb4.4,baz=360,slow=5.8,SNR=37
ASAR PKP2bc 18 00 56.0
comp=Z,2.6nm,0.9s,baz=181,slow=1.6,SNR=14
ASAR Alice Springs 58.73 185 P P 17 31 10.1 -1.1
ASAR ⇑*e* 18 00 56.0
MBWA Marble Bar 58.95 201 *eP* **P 17 31 11.4 -1.3**
comp=Z,8.3nm,1.0s,mb4.7
DLBC Dease Lake 61.27 37 *eP* **P 17 31 29.2 +0.9**
ALE Alert 62.07 3 P P 17 31 33.0 -0.4
comp=Z,217nm,0.8s,mb6.3,SNR=15
KLMR Klimovskoe 64.28 328 *eP* **P 17 31 47.8 -0.5**
KLMR pmax pmax
comp=Z,42nm,1.6s,mb5.2
KEV Kevo 64.48 339 *ep* **P 17 31 47.6 -1.9**
comp=Z,17nm,1.0s,mb5.0
KEV Kevo 64.48 339 *eP* **P 17 31 47.6 -1.9**
KEV pmax pmax
comp=Z,17nm,1.0s,mb5.0
ARCES ARCESS Array B 65.04 339 P P 17 31 52.9 -0.2
comp=Z,16nm,0.9s,mb5.0,baz=59,slow=9.1,SNR=26
ARE0 ARCESS Array S 65.04 339 *eP* **P 17 31 52.5 -0.6**
YKA Yellowknife Ar 66.37 29 P P 17 32 01.2 -0.5
comp=Z,6.5nm,0.8s,mb4.7,baz=297,slow=6.5,SNR=12
FORT Forrest 66.42 190 *eP* **P 17 32 01.6 -0.7**
comp=Z,3.1nm,0.8s,mb4.4
JOF Joensuu 66.68 332 *ep* **P 17 32 01.0 -2.7**
comp=Z,6.0nm,0.5s,mb4.7
JOF Joensuu 66.68 332 *eP* **P 17 32 01.0 -2.7**
JOF *eP* 17 32 02.6
STKA Stephens Creek 66.75 178 *eP* **P 17 32 04.2 -0.2**
comp=Z,10nm,1.0s,mb4.8
STKA Stephens Creek 66.75 178 P P 17 32 04.1 -0.3
comp=Z,12nm,0.9s,mb4.9,baz=354,slow=7.2,SNR=11
STKA LR LR 17 57 44.5
comp=Z,143nm,21.8s,MS4.2,baz=25,slow=33
DAG Danmarks Havn 67.44 355⇑ *eP* **P 17 32 07.9 -0.5**
DAG pmax pmax
comp=Z,18nm,0.7s,mb5.2
DAG Danmarks Havn 67.44 355⇑ *i*P **P 17 32 07.9 -0.5**
comp=Z,18nm,0.7s,mb5.2
DAG Danmarks Havn 67.44 355⇑ *eP* **P 17 32 07.9 -0.5**
comp=Z,18nm,0.7s,mb5.2
MOS Moscow 67.58 323 *eP* **P 17 32 08.4 -1.2**
MOS *e* 17 32 31.3
MOS pmax pmax
comp=Z,55nm,1.1s,mb5.5
MAK Makhachkala 68.07 308 *eP* **P 17 32 08.2 -4.7**
MAK *e* 17 32 35.2
MAK *e*S S 17 41 02.3 -9.1
MAK pmax pmax
comp=Z,276nm,1.4s,mb6.1
MAK MLR MLR
comp=Z,1μm,19.0s,MS5.1
OBN Obninsk 68.41 323*d i*P **P 17 32 14.7 -0.1**
OBN *e*SS SS 17 45 39.1 +1.1
OBN pmax pmax
comp=Z,29nm,0.9s,mb5.3
OBN MLR MLR
comp=Z,300nm,16.0s,MS4.6
VSR Storozhevoye 69.04 318 *eP* **P 17 32 18.0 -0.8**
VSR *e**SP sP 17 32 29.6 +2.2
VSR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
VSR pmax pmax
comp=N,8.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,1.1s
KAF Kangasniemi 69.06 332 *ep* **P 17 32 16.9 -1.8**
comp=E,8.1nm,0.7s,mb4.8,baz=51,slow=5.9
KAF Kangasniemi 69.06 332 *eP* **P 17 32 16.9 -1.8**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KAF Kangasniemi 69.06 332 *eP* **P 17 32 16.9 -1.8**
comp=Z,8.1nm,0.7s,mb4.8
KAF *eP* 17 32 17.5
JCW Jim Creek 70.12 45 *eP* **P 17 32 26.2 +0.7**
RPW Rockport 70.22 44 P P 17 32 26.8 +0.6
HTW Haystack Looko 70.41 45 P P 17 32 28.3 +1.0
KIV Kislovodsk 70.65 310*c i*P **P 17 32 29.1 +0.3**
KIV pmax pmax
comp=Z,13nm,0.8s,mb4.9
KIV MLR MLR
comp=Z,300nm,16.0s,MS4.6
KIV Kislovodsk 70.65 310⇑*i*P **P 17 32 30.8 +2.0**
KIV Kislovodsk 70.65 310 *eP* **P 17 32 28.7 -0.2**
comp=Z,34nm,1.1s,mb5.2
NWAO Narrogin (SRO) 70.77 199 P P 17 32 29.3 -0.2
comp=Z,5.6nm,0.9s,mb4.5,baz=97,slow=8.1,SNR=3.1
NWAO LR LR 18 02 54.7
comp=Z,86nm,20.7s,MS4.0,baz=127,slow=35
WRW Wenatchee Ridg 70.89 45 P P 17 32 31.2 +1.0
VSU Vasula 71.06 329*c i*P **P 17 32 30.8 -0.3**
NLW Nelson Butte 71.09 44 P P 17 32 32.4 +1.0
SLFW Sugar Loaf 71.15 45 P P 17 32 32.8 +1.0
ETW Entiat 71.34 45 *eP* **P 17 32 33.2 +0.2**
EBG Ellensburg 71.57 45 P P 17 32 35.2 +0.8
EDM Edmonton 71.99 37 *eP* **P 17 32 36.4 -0.4**
CROR Criterion Ridg 72.34 47 P P 17 32 40.0 +1.0
GBL Gable Mountain 72.38 45 P P 17 32 40.0 +0.7
OD2 Odessa Site #2 72.38 44 P P 17 32 39.6 +0.3
HAWA Hanford 72.45 45 *eP* **P 17 32 39.6 -0.1**
comp=Z,8.0nm,0.8s,mb4.7
WRD Warden 72.45 45 P P 17 32 39.8 +0.1
SUMG Summit 72.52 359 *eP* **P 17 32 40.6 +0.9**
comp=Z,9.8nm,0.8s,mb4.8
NEW Newport 72.80 43 *eP* **P 17 32 41.9 +0.2**
NEW pmax pmax
comp=Z,13nm,0.9s
NEW Newport 72.80 43 *eP* **P 17 32 41.9 +0.1**
comp=Z,13nm,0.9s,mb4.8
MNK Minsk 72.95 325⇓ *eP* **P 17 32 41.0 -1.5**
IIGN Ignalina 73.17 327 *eP* **P 17 32 43.9 +0.1**
WDC Whiskeytown Da 73.73 52 *eP* **P 17 32 47.4 +0.1**
WDC pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
WDC Whiskeytown Da 73.73 52 *eP* **P 17 32 47.4 +0.1**
comp=Z,8.0nm,1.0s,mb4.6
LTIM Timbered Crate 74.08 51 P **P 17 32 50.3 +0.9**
AKASG Malin Array Be 74.56 322 P **P 17 32 50.8 -1.2**
comp=Z,9.7nm,0.8s,mb4.8,baz=48,slow=6.2,SNR=43
AKBB Malin Array Si 74.56 322 *eP* **P 17 32 51.0 -1.0**
KIEV Kiev 74.57 322 *eP* **P 17 32 51.1 -1.0**
KIEV pmax pmax
comp=Z,28nm,1.2s,mb5.1
KIEV Kiev 74.57 322 *eP* **P 17 32 51.1 -1.0**
comp=Z,28nm,1.2s,mb5.1
BMO Blue Mountains 74.60 46 *eP* **P 17 32 52.8 +0.4**
comp=Z,8.8nm,1.0s,mb4.6
RDF Al-Radifah 75.08 295 *eP* **P 17 32 54.5 -0.9**
baz=295
RDF AMb AMB 17 32 56.0
comp=Z,36nm,0.7s,mb5.4,baz=295
OHCM Honcut 75.09 52 *eP* **P 17 32 55.2 0.0**
NB2 NORSAR Subarra 75.13 337 P **P 17 32 54.7 -0.4**
comp=Z,21nm,0.8s,mb5.1,baz=42,slow=6.2
NOA NORSAR Array B 75.13 337 P **P 17 32 54.8 -0.3**
comp=Z,13nm,0.7s,mb5.0,baz=41,slow=5.8,SNR=52
NOA PP PP 17 35 41.0 -1.6
comp=Z,1.0nm,1.0s,baz=44,slow=8.9,SNR=3.4
NOA LR LR 18 09 32.2
comp=Z,161nm,18.1s,MS4.4,baz=10.0,slow=39
NOA NORSAR Array B 75.13 337 P **P 17 32 54.8 -0.3**
NOA 17 35 41.1
NAY Al-Naaiem 75.14 295 *eP* **P 17 32 54.9 -0.9**
baz=295
NAY AMb AMB 17 33 08.0
comp=Z,18nm,1.4s,mb4.8,baz=295
WVOR Wild Horse Val 75.17 48 *eP* **P 17 32 56.2 +0.5**
WVOR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
WVOR Wild Horse Val 75.17 48 *eP* **P 17 32 56.2 +0.6**
comp=Z,8.2nm,0.9s,mb4.7
RST Umm Al-Ruwaisa 75.18 296 *eP* **P 17 32 54.5 -1.5**
baz=296
RST AMb AMB 17 32 58.8
comp=Z,20nm,0.9s,mb5.0,baz=296
SUW Suwalki 75.39 327 *eP* **P 17 32 56.6 -0.1**
SUW Suwalki 75.39 327 *eP* **P 17 32 56.6 -0.1**
FFC Flin Flon 76.30 31 P **P 17 33 01.1 -0.8**
comp=Z,165nm,0.7s,mb6.1,SNR=5.5
FFC Flin Flon 76.30 31 *eP* **P 17 33 01.7 -0.2**
FFC pmax pmax
comp=Z,21nm,0.9s,mb5.1
FFC Flin Flon 76.30 31 *eP* **P 17 33 01.7 -0.2**
comp=Z,21nm,0.9s,mb5.1
MALT Malatya 76.37 307⇑ *i*P **P 17 33 03.3 +0.6**
MALT Malatya 76.37 307⇑ P **P 17 33 03.4 +0.7**
CMB Columbia Colle 76.52 53 *eP* **P 17 33 03.6 +0.1**
CMB pmax pmax
comp=Z,16nm,1.0s,mb4.9
CMB Columbia Colle 76.52 53 *eP* **P 17 33 03.6 +0.1**
comp=Z,16nm,1.0s,mb4.9
DLMT Dillon 77.01 43 *eP* **P 17 33 06.5 +0.4**
comp=Z,14nm,0.8s,mb5.0
HLID Hailey 77.05 46 *eP* **P 17 33 07.0 +0.7**
comp=Z,3.6nm,0.8s,mb4.3
BMN Battle Mountai 77.18 50 *eP* **P 17 33 08.3 +1.1**
BMN pmax pmax
comp=Z,21nm,1.4s,mb4.9
BMN Battle Mountai 77.18 50 *eP* **P 17 33 08.3 +1.2**
comp=Z,21nm,1.4s,mb4.9
NVAR Mina Array Bea 77.65 52 P **P 17 33 10.9 +1.1**
comp=Z,16nm,0.7s,mb5.0,baz=283,slow=5.6,SNR=87
LVV L'vov 77.71 323 *eP* **P 17 33 09.1 -0.9**
QLMT Earthquake Lak 77.99 43 *eP* **P 17 33 12.2 +0.6**
ELK Elko 78.22 48 *eP* **P 17 33 13.8 +0.8**
ELK pmax pmax
comp=Z,8.0nm,1.0s
ELK Elko 78.22 48 *eP* **P 17 33 13.8 +0.9**
comp=Z,8.0nm,1.0s,mb4.6
GCMT Greycliff 78.37 42 *eP* **P 17 33 14.6 +0.9**
KWP Kalwaria 78.48 324 *eP* **P 17 33 14.9 +0.7**
KWP Kalwaria 78.48 324⇓ *i*P **P 17 33 15.1 +0.9**
KWP Kalwaria 78.48 324 *eP* **P 17 33 14.9 +0.7**
BUR08 Bucovina Ar. S 78.53 321 *eP* **P 17 33 14.7 +0.2**
BURAR Bucovina Array 78.54 321⇓ *i*P **P 17 33 15.2 +0.6**
BURAR Bucovina Array 78.54 321⇓ P **P 17 33 15.2 +0.6**
TPH Tonopah 78.55 51 *eP* **P 17 33 15.7 +0.9**
TPH pmax pmax
comp=Z,20nm,0.9s,mb5.0
TPH Tonopah 78.55 51 *eP* **P 17 33 15.7 +0.9**
comp=Z,20nm,0.9s,mb5.0
BR131 Keskin Array S 78.61 311 *eP* **P 17 33 15.6 +0.4**
comp=Z,6.6nm,0.8s,mb4.6
VRI Vrincioaia 78.86 319⇓ *i*P **P 17 33 17.9 +1.5**
VRI Vrincioaia 78.86 319⇓ P **P 17 33 17.9 +1.4**
PLOR Plostina 78.92 319⇓ *i*P **P 17 33 18.0 +1.3**
RRI2 Red Ridge 78.97 44 *eP* **P 17 33 18.2 +1.2**
comp=Z,6.4nm,0.9s,mb4.5
RLMT Red Lodge 79.01 42 *eP* **P 17 33 17.5 +0.3**
comp=Z,14nm,1.1s,mb4.8
ANTO Ankara 79.05 311 *eP* **P 17 33 18.2 +0.7**
ANTO pmax pmax
comp=Z,11nm,0.8s,mb4.8
ANTO Ankara 79.05 311 *eP* **P 17 33 18.2 +0.7**
comp=Z,11nm,0.8s,mb4.8
MOOW Moose Ponds 79.05 44 *eP* **P 17 33 18.5 +1.0**
comp=Z,2.9nm,0.6s,mb4.4
HVU Hansel Valley 79.08 46 *eP* **P 17 33 18.3 +0.6**
HVU pmax pmax
comp=Z,11nm,0.8s,mb4.8
HVU Hansel Valley 79.08 46 *eP* **P 17 33 18.3 +0.6**
comp=Z,11nm,0.8s,mb4.8
TPAW Teton Pass 79.09 44 *eP* **P 17 33 18.7 +1.0**
comp=Z,8.4nm,0.6s,mb4.8
ISA Isabella 79.13 54 *eP* **P 17 33 17.5 -0.6**
ISA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ISA Isabella 79.13 54 *eP* **P 17 33 17.5 -0.6**
comp=Z,5.5nm,0.9s,mb4.5
KOLS Kolonicke sedl 79.16 323 *eP* **P 17 33 18.1 +0.1**
SNOW Snow King Moun 79.22 44 *eP* **P 17 33 19.3 +0.9**
comp=Z,6.8nm,0.9s,mb4.6
REDW Red Top Meadow 79.23 44 *eP* **P 17 33 19.5 +1.1**
comp=Z,6.1nm,1.0s,mb4.5
STHS Stebnicka Huta 79.34 324 *i* P **P 17 33 19.4 +0.5**
STHS pmax pmax
comp=Z,12nm,1.1s,mb4.7
STHS Stebnicka Huta 79.34 324 *i* P **P 17 33 19.4 +0.5**
comp=Z,12nm,1.1s,mb4.8
UZH Uzhgorod 79.36 323 *eP* **P 17 33 19.0 0.0**
BGU Big Grassy Mou 79.45 47 *eP* **P 17 33 20.1 +0.4**
OJC Ojcow 79.48 325 *eP* **P 17 33 19.9 +0.2**
MLR Muntele Rosu 79.53 319⇓ *i*P **P 17 33 20.5 +0.5**
MLR Muntele Rosu 79.53 319⇓ P **P 17 33 20.5 +0.4**
OSI Osito Arit 79.57 55 *eP* **P 17 33 21.5 +1.0**
comp=Z,14nm,0.6s,mb5.1
CRVS Cervenica-Dubn 79.58 324 *eP* **P 17 33 20.0 -0.3**
NIE Niedzica 79.78 324 *eP* **P 17 33 22.5 +1.2**
TPNV Topopah Spring 79.83 52 *eP* **P 17 33 22.3 +0.4**
TPNV pmax pmax
comp=Z,19nm,0.8s,mb5.1
TPNV Topopah Spring 79.83 52 *eP* **P 17 33 22.3 +0.4**
comp=Z,19nm,0.8s,mb5.1
HWUT Hardware Ranch 79.90 46 *eP* **P 17 33 22.8 +0.6**
comp=Z,18nm,1.0s,mb4.9
DUG Dugway 80.03 48 *eP* **P 17 33 23.5 +0.6**
DUG pmax pmax
comp=Z,14nm,0.9s,mb4.9
DUG Dugway 80.03 48 *eP* **P 17 33 23.5 +0.7**
comp=Z,14nm,0.9s,mb4.9
PDAR Pinedale Array 80.34 44 P **P 17 33 24.6 +0.2**
comp=Z,4.8nm,0.6s,mb4.6,baz=288,slow=1.0,SNR=38
DRGR 80.37 321⇓ *i*P **P 17 33 25.2 +0.6**
DRGR 80.37 321⇓ P **P 17 33 25.2 +0.6**
GSC Goldstone 80.44 54 *eP* **P 17 33 25.1 -0.1**
GSC pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
GSC Goldstone 80.44 54 *eP* **P 17 33 25.1 -0.1**
comp=Z,9.8nm,0.9s,mb4.7
OKC Ostrava-Krasne 80.51 326 *eP* **P 17 33 25.5 +0.2**
OKC AMS AMS 18 14 00.0
comp=Z,300nm,15.2s
RUE Ruedersdorf 80.52 330 *eP* **P 17 33 25.3 0.0**
comp=Z,47nm,1.4s,mb5.2
NLU North Lily Min 80.62 47 *eP* **P 17 33 26.5 +0.5**
KSP Ksiaz 80.63 327 *eP* **P 17 33 26.4 +0.5**
KSP Ksiaz 80.63 327⇑ *eP* **P 17 33 26.1 +0.2**
BSEG Bad Segeberg 80.81 332 *eP* **P 17 33 26.7 -0.1**
comp=Z,37nm,1.2s,mb5.2
DAU Daniels Canyon 80.83 47 *eP* **P 17 33 27.9 +0.7**
MORC Moravsky Berou 80.83 326⇓ *i*P **P 17 33 27.7 +0.7**
MPU Maple Canyon 80.85 47 *eP* **P 17 33 28.3 +1.0**
comp=Z,18nm,1.0s,mb5.0
DPC Dobruska-Polom 80.97 327 *eP* **P 17 33 28.2 +0.5**
DPC AMS AMS 18 13 10.0
comp=Z,400nm,15.5s
UPC Upice 81.00 327 *eP* **P 17 33 28.5 +0.6**
PSZ Piszkesteto 81.02 323⇓ *eP* **P 17 33 28.9 +0.9**
PSZ Piszkesteto 81.02 323⇓ *i*P **P 17 33 28.9 +0.9**
PSZ Piszkesteto 81.02 323⇓ P **P 17 33 28.9 +0.9**
ARUT Antelope Range 81.11 50 *eP* **P 17 33 29.6 +0.9**
VYHS Vyhne 81.13 324 *eP* **P 17 33 28.7 +0.1**
MSU Marysvale 81.45 49 *eP* **P 17 33 31.8 +1.3**
VRAC Vranov 81.60 326⇓ *i*P **P 17 33 32.0 +0.9**
VRAC Vranov 81.60 326⇓ P **P 17 33 32.0 +0.9**
PVCC Panska Ves 81.62 328 *eP* **P 17 33 31.5 +0.3**
BRG Berggiesshubel 81.64 328 *i* P **P 17 33 31.0 -0.2**
BRG pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BRG Berggiesshubel 81.64 328 *eP* **P 17 33 31.1 -0.1**
comp=Z,13nm,0.9s,mb4.9
BRG Berggiesshubel 81.64 328 *i* P **P 17 33 31.0 -0.2**
comp=Z,13nm,0.9s,mb4.9
CSS Prodhromos 81.65 307 *eP* **P 17 33 31.8 +0.2**
comp=Z,6.8nm,0.7s,mb4.7
PFO Pinyon Flat Ob 81.68 55 P **P 17 33 32.0 +0.2**
comp=Z,99nm,0.9s,mb5.7,SNR=7.0
PFO Pinyon Flat Ob 81.68 55 *eP* **P 17 33 31.3 -0.5**
PFO pmax pmax
comp=Z,16nm,0.9s,mb5.0
PFO Pinyon Flat Ob 81.68 55 *eP* **P 17 33 31.3 -0.6**
comp=Z,16nm,0.9s,mb4.9
LDFC Landfair 81.69 53 *eP* **P 17 33 32.0 +0.1**
comp=Z,20nm,0.9s,mb5.0
CLL Collm 81.71 329⇑ *i*P **P 17 33 31.5 -0.1**
CLL pmax pmax
comp=Z,33nm,0.9s,mb5.3
CLL Collm 81.71 329 *eP* **P 17 33 31.1 -0.5**
comp=Z,33nm,0.9s,mb5.3
CLL Collm 81.71 329⇑ *i*P **P 17 33 31.5 -0.1**
comp=Z,33nm,0.9s,mb5.3
CLL *e*PP PP 17 36 38.0 +0.1
comp=Z,6.0nm,1.1s
CLL *e*(S) S 17 43 45.0 +1.8
BZS Buzias 81.73 321⇓ *i*P **P 17 33 31.9 +0.1**
BZS Buzias 81.73 321⇓ P **P 17 33 31.9 +0.1**
BUD Budapest 81.74 324 *eP* **P 17 33 34.5 +2.6**
FBE Freiberg 81.85 329 *eP* **P 17 33 32.4 0.0**
comp=Z,29nm,0.9s,mb5.2
MODS Modra-Piesok 81.95 325 *eP* **P 17 33 33.8 +0.9**
MODS *ep*P pP 17 33 45.3 +6.0
PRU Pruhonice 82.03 328 *eP* **P 17 33 33.8 +0.5**
PRU AMS AMS 18 13 50.0
comp=Z,400nm,14.0s
SRU San Rafael 82.08 47 *eP* **P 17 33 34.2 +0.4**
SRU pmax pmax
comp=Z,12nm,0.8s,mb4.9
SRU San Rafael 82.08 47 *eP* **P 17 33 34.2 +0.4**
comp=Z,12nm,0.8s,mb4.9
ULM Lac du Bonnet 82.10 32 P **P 17 33 33.0 -0.7**
comp=Z,16nm,0.8s,mb5.0,baz=306,slow=4.7,SNR=12
TREC Trest 82.11 327 *eP* **P 17 33 34.0 +0.2**
TREC AMS AMS 18 13 30.0
comp=Z,300nm,11.1s
ZST Bratislava 82.16 325 *eP* **P 17 33 35.0 +1.0**
ZST pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
ZST MLR MLR
comp=Z,200nm,16.6s,MS4.6
ZST Bratislava 82.16 325 *eP* **P 17 33 35.0 +1.0**
ZST Bratislava 82.16 325 *eP* **P 17 33 35.0 +1.0**
comp=Z,6.2nm,0.9s,mb4.5
ZST LR LR
comp=Z,200nm,16.6s,MS4.6
CLZ Clausthal 82.39 331 *eP* **P 17 33 35.3 +0.1**
CLZ pmax pmax
comp=Z,28nm,1.1s,mb5.1
CLZ Clausthal 82.39 331 *eP* **P 17 33 35.3 +0.1**
comp=Z,28nm,1.1s,mb5.1
RSSD Black Hills 82.49 40 *eP* **P 17 33 35.1 -0.8**
RSSD pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
RSSD Black Hills 82.49 40 *eP* **P 17 33 35.1 -0.8**
comp=Z,5.8nm,0.6s,mb4.7
TANN Tannenbergstha 82.61 329 *eP* **P 17 33 36.3 -0.1**
comp=Z,9.0nm,1.2s,mb4.7
WERD Werda 82.65 329 *eP* **P 17 33 36.4 -0.2**
comp=Z,12nm,1.3s,mb4.8
GUNZ Gunzen 82.70 329 *eP* **P 17 33 36.8 0.0**
comp=Z,12nm,0.9s,mb4.9
WERN Wernitzgruen 82.74 329 *eP* **P 17 33 37.1 +0.1**
comp=Z,13nm,0.9s,mb5.0
NKC Novy Kostel 82.75 329 *eP* **P 17 33 37.1 0.0**
SOP Sopron 82.78 325⇑ *eP* **P 17 33 37.8 +0.5**
MOX Moxa 82.79 329 *eP* **P 17 33 37.0 -0.3**
comp=Z,16nm,1.4s,mb4.9
MOX Moxa 82.79 329 *eP* **P 17 33 37.0 -0.3**
MOX pmax pmax
comp=Z,16nm,1.4s,mb4.9
MOX Moxa 82.79 329 *eP* **P 17 33 37.1 -0.2**
comp=Z,8.0nm,0.9s,mb4.8
PKSM Moragy 82.82 323⇓ *i*P **P 17 33 37.5 0.0**
PKSM Moragy 82.82 323⇓ P **P 17 33 37.5 -0.1**
CONA Conrad Observa 82.93 325⇓ *i*P **P 17 33 38.7 +0.6**
comp=Z,70nm,1.9s,mb5.4,SNR=11
CSNA Conrad Observa 82.93 325⇓ *i*P **P 17 33 38.7 +0.6**
comp=Z,66nm,1.9s,mb5.3
IBBN Ibbenburen 83.05 332 *eP* **P 17 33 38.1 -0.5**
comp=Z,22nm,0.9s,mb5.2
MANZ Manzenberg 83.08 329 *eP* **P 17 33 38.8 0.0**
comp=Z,12nm,1.2s,mb4.8
KHC Kasperske Hory 83.08 327 *eP* **P 17 33 38.9 +0.1**
KHC *ep*P pP 17 33 43.0 -2.2
KHC AMS AMS 18 14 30.0
comp=Z,300nm,15.8s
GLA Glamis 83.11 54 *eP* **P 17 33 39.5 +0.2**
GLA pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
GLA Glamis 83.11 54 *eP* **P 17 33 39.5 +0.2**
comp=Z,6.4nm,0.9s,mb4.7
KPL Plockton 83.14 342 *eP* **P 17 33 38.5 -0.5**
KPL AMb AMB 17 33 39.7
comp=Z,37nm,1.0s,mb5.4
ROTZ Rotzenmuhle 83.20 328 *eP* **P 17 33 39.9 +0.4**
comp=Z,30nm,1.4s,mb5.1
GEC2 GERESS Array S 83.24 327 *eP* **P 17 33 39.4 -0.3**
GEC2 pmax pmax
comp=Z,15nm,1.4s,mb4.8
GEC2 GERESS Array S 83.24 327 *eP* **P 17 33 39.4 -0.3**
comp=Z,15nm,1.4s,mb4.8
GERES GERESS Array B 83.24 327 P **P 17 33 39.3 -0.3**
comp=Z,3.0nm,0.6s,mb4.5,baz=39,slow=5.8,SNR=34
GERES LR LR 18 12 55.4
comp=Z,148nm,20.3s,MS4.3,baz=20,slow=37
GERES GERESS Array B 83.24 327 P **P 17 33 39.3 -0.3**
GERES LR LR 18 12 55.4
WET Wettzell 83.38 328 *eP* **P 17 33 40.5 +0.1**
WET pmax pmax
comp=Z,18nm,1.4s,mb4.9
WET Wettzell 83.38 328 *eP* **P 17 33 40.5 +0.1**
comp=Z,18nm,1.4s,mb4.9
PV10 Paradox Valley 83.45 47 *eP* **P 17 33 42.3 +1.4**
AGMN Agassiz Refuge 83.55 33 *eP* **P 17 33 40.1 -1.1**
comp=Z,14nm,0.2s,mb5.8
ARSA Arzberg 83.58 325⇑ *i*P **P 17 33 41.5 0.0**
comp=Z,46nm,1.9s,mb5.3,SNR=6.1
GRA1 Grafenberg Arr 83.68 329 *eP* **P 17 33 42.2 +0.3**
comp=Z,44nm,1.0s,mb5.5
GRA1 LR LR
comp=Z,100nm,18.5s,MS4.2
GRF Grafenberg Arr 83.68 329 *eP* **P 17 33 42.2 +0.3**
GRF pmax pmax
comp=Z,44nm,1.0s,mb5.5
GRF MLR MLR
comp=Z,100nm,18.5s,MS4.2
GRF Grafenberg Arr 83.68 329 *eP* **P 17 33 42.2 +0.3**
GRF pmax pmax
comp=Z,44nm,1.0s,mb5.5
GRF MLR MLR

comp=Z,100nm,18.5s,MS4.2
GRF Grafenberg Arr 83.68 329 *e*P **P 17 33 42.2 +0.3**
comp=Z,44nm,1.0s,mb5.5
GRF *e*L 18 14 20.3
comp=Z,92nm,18.5s
MOA Molln 83.72 326⇑ *i*P **P 17 33 42.4 +0.2**
comp=Z,28nm,1.4s,mb5.2,SNR=7.3
EAB Aberfoyle 83.80 340 *e*P **P 17 33 42.0 -0.4**
XSO Sourhope Farm 83.80 339 *e*P **P 17 33 42.2 -0.2**
WUAZ Wupatki 83.82 51 *e*P **P 17 33 43.3 +0.4**
comp=Z,20nm,0.9s,mb5.3
PV01 Paradox Valley 83.89 47 *e*P **P 17 33 43.9 +0.7**
STIP Stip 84.08 318 *i*P **P 17 33 43.9 -0.2**
VAY Valandovo 84.12 317 *i*P **P 17 33 43.7 -0.6**
PGBU Glenifferbraes 84.16 340 *e*P **P 17 33 44.0 -0.3**
PGBU AMb AMB 17 33 50.0
comp=Z,47nm,1.8s,mb5.3
PERS Pernice 84.22 325 *i*P **P 17 33 44.5 -0.2**
SOKA Soboth 84.22 325⇑ *i*P **P 17 33 44.8 +0.1**
comp=Z,53nm,1.1s,mb5.6
ESK Eskdalemuir 84.23 339 *e*P **P 17 33 44.1 -0.5**
ESK AMb AMB 17 33 45.2
comp=Z,39nm,1.5s,mb5.3
XAL Allendale 84.33 339 *e*P **P 17 33 45.2 +0.1**
TNS Taunus Mts 84.42 331 *e*P **P 17 33 45.4 -0.2**
TNS pmax pmax
comp=Z,17nm,1.1s,mb5.1
TNS Taunus Mts 84.42 331 *e*P **P 17 33 45.4 -0.2**
comp=Z,17nm,1.1s,mb5.1
RJOB Jochberg 84.47 327 *e*P **P 17 33 46.1 +0.1**
comp=Z,31nm,1.1s,mb5.3
ISCO Idaho Springs 84.53 44 *e*P **P 17 33 47.2 +0.8**
ISCO pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
ISCO Idaho Springs 84.53 44 *e*P **P 17 33 47.2 +0.8**
comp=Z,4.4nm,0.7s,mb4.7
MVCO Mesa Verde 84.53 48 *e*P **P 17 33 47.1 +0.6**
comp=Z,14nm,0.9s,mb5.1
KBA Koelnbreinsper 84.71 326⇑ *i*P **P 17 33 46.8 -0.4**
comp=Z,25nm,1.9s,mb5.0,SNR=20
TOD Tromm 84.75 330 *e*P **P 17 33 46.9 -0.5**
FUR Furstenfeldbru 84.82 328 *e*P **P 17 33 47.7 0.0**
FUR pmax pmax
comp=Z,45nm,0.8s,mb5.7
FUR Furstenfeldbru 84.82 328 *e*P **P 17 33 47.7 0.0**
comp=Z,45nm,0.8s,mb5.7
KRUS Krusevo 84.82 318 *i*P **P 17 33 48.7 +0.8**
MYKA Terra Mystica 84.91 326⇑ *i*P **P 17 33 47.4 -0.8**
comp=Z,79nm,1.6s,mb5.6
LJU Ljubljana 84.93 325 *i*P **P 17 33 47.8 -0.5**
HPK Haverah Park 84.93 338 *e*P **P 17 33 47.9 -0.3**
HPK AMb AMB 17 33 52.8
comp=Z,93nm,1.6s,mb5.7
HGN Heimansgroeve 84.97 332 *e*P **P 17 33 47.5 -0.9**
comp=Z,30nm,2.4s,mb5.0
BOJS Bojanci 84.98 324 *i*P **P 17 33 48.3 -0.3**
BIA Bitola 85.02 318 *i*P **P 17 33 48.4 -0.5**
BEBN Eben Emael 85.04 332 P **P 17 33 48.5 -0.3**
GAL1 Galloway 85.05 340 *e*P **P 17 33 48.1 -0.6**
GAL1 AMb AMB 17 33 52.1
comp=Z,33nm,1.3s,mb5.3
MEM Membach 85.07 332 P **P 17 33 48.2 -0.7**
comp=Z,9.0nm,1.5s,mb4.7
VOY Vojsko 85.23 325 *e*P **P 17 33 48.9 -1.0**
STU Stuttgart 85.24 329 *e*P **P 17 33 49.6 -0.2**
STU pmax pmax
comp=Z,16nm,0.8s,mb5.2
STU Stuttgart 85.24 329 *e*P **P 17 33 49.4 -0.4**
comp=Z,33nm,1.1s,mb5.4
STU Stuttgart 85.24 329 *e*P **P 17 33 49.6 -0.2**
comp=Z,16nm,0.8s,mb5.2
OHR Ohrid 85.24 318 *i*P **P 17 33 49.4 -0.6**
PMOR Pomariorio Ree 85.25 112 *e*T 19 07 46.6
comp=Z,29nm,0.2s
JAVS Javornik 85.26 325 *i*P **P 17 33 48.9 -1.1**
ABTA Abfaltersbach 85.34 326⇑ *i*P **P 17 33 49.2 -1.2**
comp=Z,18nm,1.1s,mb5.1,SNR=9.9
LHO Holmfirth 85.36 338 *e*P **P 17 33 49.9 -0.4**
BCLA Clavier 85.49 332 P **P 17 33 50.6 -0.4**
comp=Z,11nm,1.5s,mb4.8
KBI1 Birley Grange 85.50 337 *e*P **P 17 33 50.5 -0.5**
MOTA Moosalm 85.52 327⇓ *i*P **P 17 33 50.3 -0.9**
comp=Z,9.9nm,1.1s,mb4.9,SNR=5.8
UCC Uccle 85.53 333 P **P 17 33 50.8 -0.5**
RETA Reutte 85.56 328⇑ *i*P **P 17 33 51.4 -0.1**
comp=Z,98nm,2.6s,mb5.6,SNR=6.8
RETA Reutte 85.56 328⇑ *i*PcP PcP 17 33 51.4 -3.0
comp=Z,98nm,2.6s,SNR=6.8
PPT Papeete 85.57 115 *e*LR LR 18 00 48.2
comp=Z,124nm,25.8s
PPT Papeete 85.57 115 *e*T 19 08 07.3
comp=Z,14nm,0.2s
PPT Papeete 85.57 115 LR LR 18 09 21.1
comp=Z,131nm,18.3s,MS4.4,baz=265,slow=34
PAE Paea 85.63 115 *e*T 19 08 14.5
comp=Z,38nm,0.2s
LANF Langenberg 85.65 330 *e*P **P 17 33 51.2 -0.7**
TIAR Tiarei 85.74 115 *e*T 19 08 15.9
comp=Z,144nm,0.2s
WLF Walferdange 85.77 331 P **P 17 33 52.6 +0.2**
comp=Z,18nm,1.6s,mb5.1
SNF Seneffe 85.80 333 P **P 17 33 51.9 -0.6**
comp=Z,7.0nm,1.3s,mb4.7
CWF Charnwood Fore 85.87 337 *e*P **P 17 33 52.2 -0.7**
CWF AMb AMB 17 33 53.5
comp=Z,26nm,1.5s,mb5.2
GIVF Givet 85.92 332 *e*P **P 17 33 52.5 -0.7**
FETA Feichten 85.93 327⇓ *i*P **P 17 33 53.0 -0.3**
comp=Z,37nm,1.5s,mb5.4,SNR=9.3
FETA Feichten 85.93 327⇓ *i*PcP PcP 17 33 53.0 -3.0
comp=Z,37nm,1.5s,SNR=9.3
BFO Black Forest 85.94 330 P **P 17 33 53.6 +0.3**
comp=Z,95nm,0.9s,mb6.0,SNR=6.0
BFO Black Forest 85.94 330 *e*P **P 17 33 52.8 -0.5**
BFO pmax pmax
comp=Z,18nm,1.0s,mb5.3
BFO Black Forest 85.94 330 *e*P **P 17 33 52.8 -0.5**
comp=Z,18nm,1.0s,mb5.3
SDCO Great Sand Dun 85.96 46 *e*P **P 17 33 54.2 +0.5**
comp=Z,4.6nm,0.8s,mb4.8
DOU Dourbes 86.02 333 P **P 17 33 53.2 -0.4**
comp=Z,15nm,2.7s,mb4.7
DAVA Damuels 86.10 328⇓ *i*P **P 17 33 53.8 -0.3**
comp=Z,27nm,1.1s,mb5.2,SNR=13
DAVA Damuels 86.10 328⇓ *i*PcP PcP 17 33 53.8 -3.0
comp=Z,27nm,1.1s,SNR=13
BAIF Baives 86.19 333 *e*P **P 17 33 53.9 -0.6**
comp=Z,13nm,0.9s,mb4.9
BAIF Baives 86.19 333 *e*P **P 17 33 53.9 -0.6**
BAIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
BAIF Baives 86.19 333 *e*P **P 17 33 53.9 -0.6**
comp=Z,6.3nm,0.9s,mb4.8
TUC Tucson 86.23 53 *e*P **P 17 33 55.1 0.0**
TUC pmax pmax
comp=Z,2.0nm,1.0s,mb4.3
TUC Tucson 86.23 53 *e*P **P 17 33 55.1 0.0**
comp=Z,2.1nm,1.0s,mb4.3
CDF Champ du Feu 86.31 330 *e*P **P 17 33 54.8 -0.4**
comp=Z,44nm,1.0s,mb5.3
CDF Champ du Feu 86.31 330 *e*P **P 17 33 54.8 -0.4**
CDF pmax pmax
comp=Z,22nm,1.0s,mb5.3
CDF Champ du Feu 86.31 330 *e*P **P 17 33 54.8 -0.4**
comp=Z,22nm,1.0s,mb5.3
SBD1 Bryn Du 86.34 338 *e*P **P 17 33 53.8 -1.4**
ECH Echery 86.52 330 *e*P **P 17 33 55.5 -0.7**
ECSD EROS,Sioux Fal 86.56 37 *e*P **P 17 33 55.9 -0.6**
comp=Z,12nm,0.8s,mb5.2
MEH Mehetia 86.89 114 *e*T 19 09 49.9
comp=Z,3µm,0.2s
HINF Hinteralfeld 86.96 330 *e*P **P 17 33 57.5 -0.8**
BBS Basel-Blauen 86.97 329 *e*P **P 17 33 57.3 -1.1**
THEF They Montfort 86.98 331 *e*P **P 17 33 57.5 -0.9**
HAU Haudompre 87.01 330 *e*P **P 17 33 57.7 -0.9**
comp=Z,14nm,0.8s,mb4.9
HAU *e*MLR MLR
comp=Z,235nm,17.5s,MS4.3
HAU Haudompre 87.01 330 *e*P **P 17 33 57.7 -0.9**
HAU pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
HAU MLR MLR
comp=Z,230nm,17.5s,MS4.6
HAU Haudompre 87.01 330 *e*P **P 17 33 57.7 -0.9**
comp=Z,7.1nm,0.8s,mb5.0
HAU LR LR
comp=Z,230nm,17.5s,MS4.6
MCH1 Michaelchurch 87.04 338 *e*P **P 17 33 57.6 -1.0**
MCH1 AMb AMB 17 34 01.2
comp=Z,32nm,1.5s,mb5.3
HTR Trewern Hill 87.06 338 *e*P **P 17 33 58.3 -0.4**
MEZF Maizieres J'vi 87.13 331 *e*P **P 17 33 58.9 -0.3**
comp=Z,19nm,0.8s,mb5.1
MEZF Maizieres J'vi 87.13 331 *e*P **P 17 33 58.9 -0.3**
comp=Z,19nm,0.8s,mb5.4
ANMO Albuquerque 87.25 48⇑ *e*P **P 17 34 01.7 +1.7**
SCHQ Schefferville 87.63 15 P **P 17 34 01.3 -0.1**
comp=Z,15nm,0.9s,mb5.2,baz=318,slow=4.1,SNR=6.5
CABF La Chapelle 88.23 330 *e*P **P 17 34 03.9 -0.6**
comp=Z,4.1nm,0.7s,mb4.5
CABF La Chapelle 88.23 330 *e*P **P 17 34 03.9 -0.6**
CABF pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
CABF La Chapelle 88.23 330 *e*P **P 17 34 03.9 -0.6**
comp=Z,2.0nm,0.7s,mb4.5
LOR Lormes 88.60 331 *e*P **P 17 34 05.5 -0.7**
comp=Z,9.6nm,0.8s,mb4.9
LOR *e*MLR MLR
comp=Z,166nm,18.2s,MS4.2
LOR Lormes 88.60 331 *e*P **P 17 34 05.5 -0.7**
LOR pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
LOR MLR MLR
comp=Z,170nm,18.3s,MS4.5
LOR Lormes 88.60 331 *e*P **P 17 34 05.5 -0.7**
comp=Z,4.8nm,0.8s,mb4.9
LOR LR LR
comp=Z,170nm,18.3s,MS4.5
LPL La Plagne 88.84 329 *e*P **P 17 34 07.1 -0.2**
comp=Z,9.7nm,0.7s,mb5.0
LPL La Plagne 88.84 329 *e*P **P 17 34 07.1 -0.2**
LPL pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
LPL La Plagne 88.84 329 *e*P **P 17 34 07.1 -0.2**
comp=Z,4.8nm,0.7s,mb4.9
LPG La Plagne 88.84 329 *e*P **P 17 34 07.2 -0.2**
comp=Z,12nm,0.7s,mb5.1
LPG La Plagne 88.84 329 *e*P **P 17 34 07.2 -0.2**
LPG pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
LPG La Plagne 88.84 329 *e*P **P 17 34 07.2 -0.2**
comp=Z,6.1nm,0.7s,mb5.0
SSF Saint Saulge 88.91 331 *e*P **P 17 34 06.9 -0.8**
comp=Z,6.6nm,0.8s,mb4.7
SSF Saint Saulge 88.91 331 *e*P **P 17 34 06.9 -0.8**
SSF pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
SSF Saint Saulge 88.91 331 *e*P **P 17 34 06.9 -0.8**
comp=Z,3.3nm,0.8s,mb4.7
FLN La Foliniere 88.98 335 *e*P **P 17 34 07.3 -0.6**
FLN *e*MLR MLR
comp=Z,203nm,20.8s,MS4.2
FLN La Foliniere 88.98 335 *e*P **P 17 34 07.3 -0.6**
FLN LR LR
comp=Z,200nm,20.8s,MS4.5
LDF La Druitiere 88.99 334 *e*P **P 17 34 07.2 -0.8**
SMF Signal de Mont 89.12 331 *e*P **P 17 34 08.0 -0.6**
AVF Avril sur Loir 89.19 331 *e*P **P 17 34 08.4 -0.6**
comp=Z,14nm,0.7s,mb5.1
AVF Avril sur Loir 89.19 331 *e*P **P 17 34 08.4 -0.6**
AVF pmax pmax
comp=Z,7.0nm,0.7s,mb5.1
AVF Avril sur Loir 89.19 331 *e*P **P 17 34 08.4 -0.6**
comp=Z,7.0nm,0.7s,mb5.1
TBI Tubuai 89.27 119 *e*LR LR 18 02 04.3
comp=Z,108nm,24.8s
TBI Tubuai 89.27 119 *e*T 19 12 47.1
comp=Z,22nm,0.3s
GRR Gorron 89.43 335 *e*P **P 17 34 09.6 -0.5**
MBDF Montbardon 89.45 328 *e*P **P 17 34 09.2 -1.0**
comp=Z,24nm,1.0s,mb5.2
MBDF Montbardon 89.45 328 *e*P **P 17 34 09.2 -1.0**
MBDF pmax pmax
comp=Z,12nm,1.0s,mb5.2
MBDF Montbardon 89.45 328 *e*P **P 17 34 09.2 -1.0**
comp=Z,12nm,1.0s,mb5.2
BGF Bois d'Agland 89.58 331 *e*P **P 17 34 10.5 -0.3**
SCIA State Center 89.58 36 *e*P **P 17 34 10.9 -0.1**
comp=Z,23nm,0.8s,mb5.6
ORIF Oris-en-Rattie 89.68 329 *e*P **P 17 34 10.9 -0.4**
comp=Z,12nm,0.8s,mb5.0
ORIF *e*MLR MLR
comp=Z,154nm,19.5s,MS4.1
ORIF Oris-en-Rattie 89.68 329 *e*P **P 17 34 10.9 -0.4**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
ORIF Oris-en-Rattie 89.68 329 *e*P **P 17 34 10.9 -0.4**
comp=Z,6.0nm,0.8s,mb5.0
SBF Sospel 89.84 327 *e*P **P 17 34 10.9 -1.2**
comp=Z,47nm,0.8s,mb5.6
SBF Sospel 89.84 327 *e*P **P 17 34 10.9 -1.2**
SBF pmax pmax
comp=Z,24nm,0.8s,mb5.6
SBF Sospel 89.84 327 *e*P **P 17 34 10.9 -1.2**
comp=Z,24nm,0.8s,mb5.6
KSU1 Kansas State U 89.97 40 *e*P **P 17 34 11.9 -0.9**
comp=Z,14nm,0.6s,mb5.5
TCF Toulx Ste Croi 90.05 332 *e*P **P 17 34 12.6 -0.4**
comp=Z,10nm,1.0s,mb4.8
TCF Toulx Ste Croi 90.05 332 *e*P **P 17 34 12.6 -0.4**
TCF pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
TCF Toulx Ste Croi 90.05 332 *e*P **P 17 34 12.6 -0.4**
comp=Z,5.2nm,1.0s,mb4.8
SGMF Saint Gilles 90.13 335 *e*P **P 17 34 13.1 -0.2**
PGF Pioggiola 90.16 326 *e*P **P 17 34 12.8 -0.8**
comp=Z,22nm,0.9s,mb5.2
PGF Pioggiola 90.16 326 *e*P **P 17 34 12.8 -0.8**
PGF pmax pmax
comp=Z,11nm,0.9s,mb5.2
PGF Pioggiola 90.16 326 *e*P **P 17 34 12.8 -0.8**
comp=Z,11nm,0.9s,mb5.2
VIVF Saint-Julien-l 90.23 329 *e*P **P 17 34 13.4 -0.5**
comp=Z,28nm,1.0s,mb5.2
VIVF Saint-Julien-l 90.23 329 *e*P **P 17 34 13.4 -0.5**
VIVF pmax pmax
comp=Z,14nm,1.0s,mb5.2
VIVF Saint-Julien-l 90.23 329 *e*P **P 17 34 13.4 -0.5**
comp=Z,14nm,1.0s,mb5.3
CORF Corte 90.29 325 *e*P **P 17 34 13.0 -1.2**
ROSF Rostrenen 90.30 336 *e*P **P 17 34 13.9 -0.2**
comp=Z,51nm,1.1s,mb5.4
ROSF Rostrenen 90.30 336 *e*P **P 17 34 13.9 -0.2**
ROSF pmax pmax
comp=Z,25nm,1.1s,mb5.5
ROSF Rostrenen 90.30 336 *e*P **P 17 34 13.9 -0.2**
comp=Z,25nm,1.1s,mb5.5
FRF La Foret Royal 90.43 328 *e*P **P 17 34 13.8 -1.0**
comp=Z,31nm,0.9s,mb5.3
FRF La Foret Royal 90.43 328 *e*P **P 17 34 13.8 -1.0**
FRF pmax pmax
comp=Z,16nm,0.9s,mb5.3
FRF La Foret Royal 90.43 328 *e*P **P 17 34 13.8 -1.0**
comp=Z,16nm,0.9s,mb5.3
SMRF Simiane la Rot 90.56 328 *e*P **P 17 34 14.2 -1.3**
QUIF Quistinic 90.63 336 *e*P **P 17 34 15.1 -0.6**
LMR La Mourre 90.67 327 *e*P **P 17 34 15.1 -0.9**
comp=Z,34nm,0.9s,mb5.4
LMR La Mourre 90.67 327 *e*P **P 17 34 15.1 -0.9**
LMR pmax pmax
comp=Z,17nm,0.9s,mb5.4
LMR La Mourre 90.67 327 *e*P **P 17 34 15.1 -0.9**
comp=Z,17nm,0.9s,mb5.4
MFF Saint Martin d 90.68 333 *e*P **P 17 34 15.8 -0.2**
comp=Z,36nm,1.1s,mb5.3
MFF Saint Martin d 90.68 333 *e*P **P 17 34 15.8 -0.2**
MFF pmax pmax
comp=Z,18nm,1.1s,mb5.3
MFF Saint Martin d 90.68 333 *e*P **P 17 34 15.8 -0.2**
comp=Z,18nm,1.1s,mb5.3
RJF Les Rejaudoux 91.14 332 *e*P **P 17 34 18.0 -0.1**
comp=Z,25nm,1.1s,mb5.2
RJF *e*MLR MLR
comp=Z,153nm,20.5s,MS4.1
RJF Les Rejaudoux 91.14 332 *e*P **P 17 34 18.0 -0.1**
RJF pmax pmax
comp=Z,13nm,1.1s,mb5.2
RJF MLR MLR
comp=Z,150nm,20.5s,MS4.4
RJF Les Rejaudoux 91.14 332 *e*P **P 17 34 18.0 -0.1**
comp=Z,12nm,1.1s,mb5.2
RJF LR LR
comp=Z,150nm,20.5s,MS4.4
CAF Calviac 91.24 331 *e*P **P 17 34 18.8 +0.2**
comp=Z,52nm,1.3s,mb5.4
CAF Calviac 91.24 331 *e*P **P 17 34 18.8 +0.2**
CAF pmax pmax
comp=Z,26nm,1.3s,mb5.4
CAF Calviac 91.24 331 *e*P **P 17 34 18.8 +0.2**
comp=Z,26nm,1.3s,mb5.4
LFF La Frestale 91.75 332 *e*P **P 17 34 21.0 +0.1**
comp=Z,25nm,0.8s,mb5.3
LFF La Frestale 91.75 332 *e*P **P 17 34 21.0 +0.1**
LFF pmax pmax
comp=Z,13nm,0.8s,mb5.3
LFF La Frestale 91.75 332 *e*P **P 17 34 21.0 +0.1**
comp=Z,13nm,0.8s,mb5.3
MTLF Montolieu 92.49 330 *e*P **P 17 34 24.3 -0.1**
comp=Z,29nm,1.1s,mb5.2
MTLF Montolieu 92.49 330 *e*P **P 17 34 24.3 -0.1**
MTLF pmax pmax
comp=Z,15nm,1.1s,mb5.2
MTLF Montolieu 92.49 330 *e*P **P 17 34 24.3 -0.1**
comp=Z,15nm,1.1s,mb5.2
TXAR Lajitas Array 92.78 51 P **P 17 34 26.1 +0.1**
comp=Z,2.8nm,0.7s,mb4.8,baz=304,slow=3.2,SNR=39
EPF Esparros 93.51 331 *e*P **P 17 34 28.5 -0.6**
ETSF Etsaut 93.97 331 *e*P **P 17 34 31.5 +0.3**
comp=Z,10nm,0.8s,mb5.0
ETSF Etsaut 93.97 331 *e*P **P 17 34 31.5 +0.3**
ETSF pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
ETSF Etsaut 93.97 331 *e*P **P 17 34 31.5 +0.3**
comp=Z,5.2nm,0.8s,mb5.0
SJPF Ste Jean 94.05 332 *e*P **P 17 34 31.2 -0.4**
comp=Z,16nm,1.1s,mb5.1
SJPF Ste Jean 94.05 332 *e*P **P 17 34 31.2 -0.4**
SJPF pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
SJPF Ste Jean 94.05 332 *e*P **P 17 34 31.2 -0.4**
comp=Z,7.9nm,1.1s,mb5.1
KEST Kesra 95.28 321 P **P 17 34 35.6 -1.8**
comp=Z,1.9nm,1.2s,mb4.4,baz=309,slow=7.5,SNR=3.8
KEST LR LR 18 21 44.0
comp=Z,72nm,18.2s,MS4.2,baz=218,slow=38
ESDC Sonseca Array 98.05 332 P **P 17 34 49.3 -0.6**
comp=Z,0.1nm,0.3s,mb3.9,baz=20,slow=4.1,SNR=3.2
ESDC LR LR 18 24 22.0
comp=Z,90nm,18.8s,MS4.3,baz=330,slow=39
MAW Mawson 117.05 205 PKP PKPdf 17 39 55.2 -1.9
comp=Z,1.2nm,0.8s,baz=56,slow=11,SNR=3.4
TORD Torodi Ar. Bea 117.20 312 PKP PKPdf 17 39 58.5 -0.6
comp=Z,1.5nm,0.6s,baz=29,slow=1.2,SNR=11
TORD PP PP 17 41 02.8 -5.9
comp=Z,2.0nm,1.1s,baz=29,slow=6.0,SNR=4.4
BOSA Boshof 124.30 257 PKP PKPdf 17 40 12.9 +0.5
comp=Z,2.6nm,0.9s,baz=180,slow=2.0,SNR=2.8
QSPA South Pole Qui 124.93 180 PKP PKPdf 17 40 11.9 -0.1
baz=282,slow=1.0
DBIC Dimbokro 126.24 313 PKP PKPdf 17 40 16.2 -0.4
comp=Z,4.9nm,0.9s,baz=185,slow=0.7,SNR=8.7
DBIC Dimbokro 126.24 313 PKP PKPdf 17 40 16.2 -0.4
VNA2 Neumayer--Watz 140.00 196 *e*PKPdf PKPdf 17 40 40.8 +0.2
VNA2 *e* 17 40 42.9
VNA2 *e* 17 40 52.2
VNA1 Neumayer--Stat 140.40 196 *e*PKPdf PKPdf 17 40 42.1 +0.8
VNA1 *e* 17 40 50.8
LPAZ La Paz 149.30 59 PKPbc PKPbc 17 41 03.7 +1.2
comp=Z,8.9nm,0.7s,baz=319,slow=3.0,SNR=48
LPAZ La Paz 149.30 59 PKP2 PKPbc 17 41 03.7 +1.1
LPAZ pmax pmax
comp=Z,9.0nm,0.7s
LPAZ La Paz 149.30 59 *e*PKPbc PKPbc 17 41 02.8 +0.2
PLCA Paso Flores 156.09 112 PKPab PKPab 17 41 34.9 -0.3
comp=Z,1.7nm,0.8s,baz=254,slow=6.2,SNR=3.0

NEIC ***30*** *17:35:35.3, 4688N×7652W, h13km, MN3.9(OTT), After OTT.*

OTT 30 17:35:35.3±0.2**, 4688N×7652W, h13**km**, MN3.9**/21**, 2C-4D, Southern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRQ	**Grand Remous**	**0.53**	**121**	⇑PG	Pg	17 35 45.1	-0.5
GRQ				SG	Sg	17 35 52.3	-0.3
GRQ				Trac		17 35 53.1	
	comp=Z,402nm,0.1s						
GRQ	**Grand Remous**	**0.53**	**121**	P	Pg	17 35 45.1	-0.5
GRQ				S	Sg	17 35 52.3	-0.3
CRLO	**Chalk River**	**1.03**	**216**	⇓PG	Pg	17 35 53.9	-1.3
CRLO				SG	Sg	17 36 08.3	-0.2
CRLO				Trac		17 36 11.6	
	comp=Z,556nm,0.1s						
CRLO	**Chalk River**	**1.03**	**216**	P	Pb	17 35 53.9	-1.1
CRLO				S	Sb	17 36 08.3	0.0
PEMO	**Pembroke**	**1.30**	**203**	⇓PG	Pg	17 35 58.1	-2.2
PEMO				SG	Sg	17 36 15.9	-1.3
PEMO				Trac		17 36 19.1	
	comp=Z,506nm,0.1s						
PEMO	**Pembroke**	**1.30**	**203**	P	Pn	17 35 58.3	-0.9
PEMO				S	Sb	17 36 16.3	+0.1
GAC	**Glen Almond**	**1.38**	**148**	⇓PG	Pg	17 35 59.7	-2.0
GAC				SG	Sg	17 36 17.6	-2.1
GAC				SG	Sg	17 36 18.1	-1.6
GAC				Trac		17 36 20.6	
	comp=Z,146nm,0.1s						
GAC	**Glen Almond**	**1.38**	**148**	P	Pn	17 35 59.7	-0.4
GAC				S	Sn	17 36 18.3	0.0
VLDQ	**Val d'Or**	**1.39**	**333**	PN	Pn	17 36 02.1	+1.7
VLDQ				SG	Sg	17 36 21.9	+1.9
VLDQ				Trac		17 36 24.2	
	comp=Z,262nm,0.1s						
VLDQ	**Val d'Or**	**1.39**	**333**	P	Pn	17 36 03.0	+2.7
VLDQ				S	Sn	17 36 22.1	+3.5
ALGO	**Algonquin Park**	**1.41**	**229**	⇓PG	Pg	17 36 00.1	-2.2
ALGO				SG	Sg	17 36 20.0	-0.5
ALGO	**Algonquin Park**	**1.41**	**229**	P	Pn	17 36 00.1	-0.5
ALGO				S	Sn	17 36 20.0	+1.1
TRQ	**Mont Tremblant**	**1.50**	**115**	⇑PG	Pg	17 36 01.7	-2.4
TRQ				SG	Sg	17 36 21.6	-2.1
TRQ				Trac		17 36 24.1	
	comp=Z,253nm,0.2s						
TRQ	**Mont Tremblant**	**1.50**	**115**	P	Pn	17 36 01.8	-0.2
TRQ				S	Sn	17 36 21.7	+0.4
BELQ	**Belleterre**	**1.57**	**290**	PN	Pn	17 36 02.3	-0.5
BELQ				SG	Sg	17 36 23.0	-2.8
OTT	**Ottawa**	**1.58**	**159**	PN	Pn	17 36 03.3	+0.3
OTT				SG	Sg	17 36 24.3	-2.0
OTT				Trac		17 36 27.1	
	comp=Z,703nm,0.2s						
OTT	**Ottawa**	**1.58**	**159**	P	Pn	17 36 03.4	+0.4
OTT				S	Sn	17 36 24.2	+0.8
ALFO	**Alfred**	**1.69**	**137**	PN	Pn	17 36 05.0	+0.6
ALFO				SG	Sg	17 36 27.2	-2.3
ALFO	**Alfred**	**1.69**	**137**	P	Pn	17 36 05.0	+0.6
ALFO				S	Sn	17 36 27.2	+1.3
MRHQ	**Morin Heights**	**1.88**	**121**	PN	Pn	17 36 06.8	-0.3
MRHQ				SG	Sg	17 36 32.2	-3.5
MRHQ				Trac		17 36 35.6	
	comp=Z,209nm,0.2s						
MRHQ	**Morin Heights**	**1.88**	**121**	P	Pn	17 36 07.4	+0.3
MRHQ				S	Sn	17 36 32.2	+1.7
PLVO	**Plevna**	**1.88**	**192**	PN	Pn	17 36 07.3	+0.3
PLVO				SG	Sg	17 36 33.3	-2.4
PLVO	**Plevna**	**1.88**	**192**	P	Pn	17 36 07.5	+0.5
PLVO				S	Sn	17 36 32.5	+1.9
WBO	**Williamsburg**	**2.07**	**155**	PN	Pn	17 36 10.1	+0.4
WBO				SN	Sn	17 36 37.0	+1.7
WBO				Trac		17 36 40.3	
	comp=Z,186nm,0.2s						
WBO	**Williamsburg**	**2.07**	**155**	P	Pn	17 36 10.2	+0.5
WBO				S	Sn	17 36 36.6	+1.4
BANO	**Bancroft**	**2.10**	**208**	PN	Pn	17 36 10.4	+0.3
BANO				SN	Sn	17 36 38.5	+2.3
BANO				Trac		17 36 46.1	
	comp=Z,174nm,0.0s						
MPPO	**Murphy's Point**	**2.12**	**175**	PN	Pn	17 36 10.4	+0.1
MPPO				SN	Sn	17 36 36.1	-0.3
MPPO				SG	Sg	17 36 40.2	-3.0
MPPO	**Murphy's Point**	**2.12**	**175**	P	Pn	17 36 10.7	+0.3
MPPO				S	Sn	17 36 38.6	+2.2
HSMO	**Haileybury Sch**	**2.21**	**284**	PN	Pn	17 36 10.9	-0.7
HSMO				LG		17 36 42.2	
HSMO				Trac		17 36 44.4	
	comp=Z,144nm,0.1s						
RSPO	**Restoule Provi**	**2.38**	**251**	PN	Pn	17 36 14.5	+0.5

RSPO				LG			17 36 48.5	
MNT	**Montreal**	**2.44**	**123**	PN	Pn		17 36 15.7	+1.0
MNT				LG			17 36 49.4	
MNT				Trac			17 36 53.3	
	comp=Z,98nm,0.1s							
MNT	**Montreal**	**2.44**	**123**	P	Pn		17 36 15.4	+0.7
MNT				S	Sn		17 36 45.8	+1.4
BUKO	**Buck Lake**	**2.46**	**235**	PN	Pn		17 36 15.2	+0.1
BUKO				LG			17 36 50.8	
BUKO				Trac			17 36 53.1	
	comp=Z,247nm,0.1s							
DELO	**Deloro Mine**	**2.48**	**198**	PN	Pn		17 36 15.7	+0.4
DELO				Trac			17 36 54.6	
	comp=Z,128nm,0.1s							
PTN	**Potsdam (NY)**	**2.55**	**154**	P	Pn		17 36 16.8	+0.6
PTN				S	Sn		17 36 48.5	+1.4
DPQ	**Saint Jean**	**2.58**	**93**	PN	Pn		17 36 15.6	-1.1
DPQ				Trac			17 36 55.4	
	comp=Z,137nm,0.1s							
DPQ	**Saint Jean**	**2.58**	**93**	P	Pn		17 36 15.7	-1.0
DPQ				S	Sn		17 36 49.4	+1.5
LONY	**Lake Ozonia**	**2.63**	**148**	P	Pn		17 36 17.8	+0.3
LONY				S	Sn		17 36 50.7	+1.5
KGNO	**Kingston**	**2.65**	**180**	PN	Pn		17 36 20.4	+2.7
KGNO				SN	Sn		17 36 49.4	-0.2
KGNO				LG			17 36 57.6	
KGNO				Trac			17 36 58.0	
	comp=Z,86nm,0.1s							
KGNO	**Kingston**	**2.65**	**180**	P	Pn		17 36 19.7	+2.0
KGNO				S	Sn		17 36 51.2	+1.5
KILO	**Kirkland Lake**	**2.70**	**308**	PN	Pn		17 36 17.9	-0.5
KILO				LG			17 36 55.5	
SADO	**Sadowa**	**2.79**	**222**	PN	Pn		17 36 19.9	+0.3
SADO				LG			17 37 01.1	
SADO				Trac			17 37 05.7	
	comp=Z,106nm,0.1s							
SADO	**Sadowa**	**2.79**	**222**	P	Pn		17 36 20.3	+0.6
SADO				S	Sn		17 36 54.9	+1.7
FRNY	**Flat Rock**	**2.89**	**134**	P	Pn		17 36 21.7	+0.7
FRNY				S	Sn		17 36 57.0	+1.4
PECO	**Prince Edward**	**2.96**	**187**	PN	Pn		17 36 22.2	+0.2
PECO				SN	Sn		17 36 56.6	-0.8
PECO				LG			17 37 06.3	
PECO	**Prince Edward**	**2.96**	**187**	P	Pn		17 36 22.5	+0.5
PECO				S	Sn		17 36 58.9	+1.5
SUNO	**Sudbury Onapin**	**3.33**	**268**	PN	Pn		17 36 25.6	-1.4
SUNO				SN	Sn		17 37 06.8	+0.5
NCB	**Newcomb**	**3.33**	**150**	P	Pn		17 36 27.4	+0.5
NCB				S	Sn		17 37 07.7	+1.4
MOQ	**Mont Orford**	**3.35**	**116**	PN	Pn		17 36 28.6	+1.3
MOQ				Trac			17 37 20.6	
	comp=Z,72nm,0.3s							
MOQ	**Mont Orford**	**3.35**	**116**	P	Pn		17 36 27.9	+0.5
MOQ				S	Sn		17 37 09.0	+2.0
QCQ	**Quebec**	**3.60**	**90**	Trac			17 37 28.5	
	comp=Z,274nm,0.3s							
TIMO	**Timmins Ontari**	**3.60**	**298**	PN	Pn		17 36 30.1	-0.6
TIMO				LG			17 37 27.0	
DAQ	**Lac Daran**	**3.74**	**71**	PN	Pn		17 36 30.7	-2.0
DAQ				LG			17 37 28.9	
DAQ				Trac			17 37 32.5	
	comp=Z,86nm,0.2s							
ACCN	**Adirondack Com**	**4.03**	**149**	P	Pn		17 36 37.5	+0.8
ACCN				S	Sn		17 37 25.2	+1.5
EFO	**Effingham**	**4.27**	**209**	PN	Pn		17 36 40.1	+0.1
EFO				SN	Sn		17 37 29.8	+0.1
EFO				Trac			17 37 53.6	
	comp=Z,70nm,0.2s							
LMQ	**La Malbaie**	**4.27**	**79**	PN	Pn		17 36 37.9	-2.1
LMQ				SN	Sn		17 37 26.7	-3.0
LMQ				LG			17 37 44.6	
LMQ				Trac			17 37 48.0	
	comp=N,283nm,0.3s							
PRNY	**Paleo Inst,Ith**	**4.41**	**180**	P	Pn		17 36 43.4	+1.5
PRNY				S	Sn		17 37 35.0	+1.9
BINY	**Binghamton**	**4.69**	**175**	P	Pn		17 36 47.4	+1.6
BINY				S	Sn		17 37 42.6	+2.6
KAPO	**Kapuskasing**	**4.76**	**305**	PN	Pn		17 36 45.8	-0.9
KAPO				SN	Sn		17 37 38.0	-3.7
KAPO				LG			17 37 58.2	
KAPO				Trac			17 38 06.8	
	comp=Z,42nm,0.2s							
NEMQ	**Nemaska**	**4.81**	**2**	SN	Sn		17 37 37.9	-5.1
NEMQ				LG			17 38 03.2	
CNQ	**Baie Comeau**	**6.16**	**64**	Trac			17 38 53.2	
	comp=Z,61nm,0.3s							
MNQ	**Manicouagan**	**6.30**	**52**	PN	Pn		17 37 05.6	-2.2
MNQ				SN	Sn		17 38 14.5	-4.9
MNQ				LG			17 38 48.5	
MNQ				Trac			17 38 54.3	
	comp=Z,58nm,0.3s							
LG4Q	**La Grande 4**	**6.93**	**12**	PN	Pn		17 37 13.9	-2.5
LG4Q				SN	Sn		17 38 26.5	-8.6
LG4Q				LG			17 39 05.5	
LG4Q				Trac			17 39 13.7	
	comp=Z,40nm,0.3s							
GTO	**Geraldton**	**7.53**	**296**	PN	Pn		17 37 23.0	-1.7

*CSEM **30** 17:42:43.9±0.1,3975N×2779E,h2km,MD2.7,Error ellipse: s-maj=1.6km s-min=1.4km az=25.0*
*ISCJB **30** 17:42:44.9±0.5,3976N±003×2780E±003,h2km±5km, Error ellipse: s-maj=4.6km s-min=3.7km az=21.4*
*ISK **30** 17:42:44.8,3975N×2780E,h7km,MD2.7*
*DDA **30** 17:42:44.8,3976N×2780E,h7km±5km,Md2.6*
ISC 30 17:42:45.3±0.4,3975N±003×2779E±003,h7km±4km,n22, σ0§55/31,Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BALY	**Balya**	**0.13**	**264**	*i* P		**Pg**	**17 42 47.5**	**-0.6**
BALY				*i* S		**Sg**	**17 42 49.7**	**-0.3**
BALB	**Balikesir**	**0.13**	**148**	PG		**Pg**	**17 42 47.9**	**-0.2**
BALB				*e*SG		**Sg**	**17 42 50.1**	**+0.1**
DURS	**Dursunbey**	**0.55**	**106**	*i* P		**Pg**	**17 42 55.3**	**-0.6**
DURS	**Dursunbey**	**0.55**	**106**	*i* P		**Pg**	**17 42 55.3**	**-0.6**
DURS				*i* S		**Sg**	**17 43 03.8**	**+0.7**
EDC	**Edincik**	**0.59**	**5**	*e*PG		**Pg**	**17 42 56.8**	**0.0**
EDC				*e*SG		**Sg**	**17 43 04.9**	**+0.4**
DST	**Dursunbey**	**0.66**	**103**	*e*PG		**Pg**	**17 42 57.6**	**-0.5**
DST				*e*SG		**Sg**	**17 43 07.2**	**+0.5**
KCT	**Karacabey**	**0.67**	**40**	*e*PG		**Pg**	**17 42 58.1**	**-0.1**
MRMT	**Marmara Adasi**	**0.86**	**350**	*e*PG		**Pg**	**17 43 02.5**	**+0.6**
AKS	**Akhisar**	**0.87**	**179**	*e*PG		**Pg**	**17 43 01.5**	**-0.6**
AYVA	**Ayvalik**	**0.96**	**243**	*i* P		**Pg**	**17 43 03.8**	**+0.1**
AYVA				*i* S		**Sg**	**17 43 18.8**	**+2.6**
DEMI	**Demirci**	**1.01**	**134**	*i* P		**Pg**	**17 43 04.3**	**-0.4**
DEMI				*i* S		**Sg**	**17 43 18.0**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.04**	**334**	*e*PG		**Pg**	**17 43 05.4**	**0.0**
MFT	**Murefte**	**1.10**	**340**	*e*PN		**Pn**	**17 43 06.7**	**-0.6**
ULDT	**Uludag**	**1.11**	**69**	*i* P		**Pg**	**17 43 05.8**	**-0.7**
ULDT				*i* S		**Sg**	**17 43 21.1**	**+0.2**
EZN	**Ezine**	**1.13**	**274**	*e*PN		**Pn**	**17 43 07.0**	**-0.6**
GEMT	**Gemlik**	**1.27**	**57**	*e*PN		**Pn**	**17 43 09.7**	**+0.1**
KULA	**Kula-Manisa**	**1.41**	**151**	*e*PN		**Pn**	**17 43 11.6**	**+0.1**
YLV	**Yalova**	**1.46**	**56**	*e*PN		**Pn**	**17 43 12.3**	**+0.2**
GDZ	**Gediz**	**1.47**	**116**	*i* P		**Pn**	**17 43 06.4**	**-5.9**
GDZ				*i* S		**Sn**	**17 43 32.0**	**+0.3**
GADA	**Gvkgeada**	**1.52**	**287**	*e*PN		**Pn**	**17 43 13.0**	**0.0**
CTKS	**Kestanelik-??a**	**1.58**	**20**	*e*PN		**Pn**	**17 43 13.9**	**+0.1**
CAVI	**Cavuskoy**	**1.64**	**74**	*e*PN		**Pn**	**17 43 14.6**	**0.0**

*NEIC **30** 17:45:41.1±1.7,1674S×17554W,h35km,Error ellipse: s-maj=130.0km s-min=12.8km az=149.0*
IDC 30 17:45:46.4±3.7,1716S×17440W,h153km±29km,mb3.5/5, mb1 3.8/6,mb1mx3.5/18,mbtmp3.6/6,Error ellipse: s-maj=105.2km s-min=19.1km az=147.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**4.10**	**38**	P		Pn	17 46 48.2	+0.1
	53nm,0.3s,baz=204,slow=0.3,SNR=60							
AFI				S		Sn	17 47 31.4	-4.7
	168nm,0.3s,baz=56,slow=21,SNR=14							
STKA	**Stephens Creek**	**42.34**	**241**	P		P	17 53 25.9	+0.4
	1.2nm,0.4s,baz=77,slow=10,SNR=10.0							
WRA	**Warramunga Arr**	**48.53**	**258**	P		P	17 54 13.9	-0.4
	0.4nm,0.4s,baz=95,slow=7.1,SNR=26							
ASAR	**Alice Springs**	**48.67**	**253**	P		P	17 54 15.1	-0.2
	3.3nm,0.6s,baz=88,slow=8.4,SNR=100							
FITZ	**Fitzroy Crossi**	**56.92**	**259**	P		P	17 55 16.0	0.0
	1.0nm,0.9s,baz=148,slow=15,SNR=3.1							
PDAR	**Pinedale Array**	**84.21**	**42**	P		P	17 58 01.1	+0.5
	0.9nm,0.8s,baz=216,slow=3.8,SNR=6.7							
GERES	**GERESS Array B**	**147.72**	**350**	PKPbc		PKPbc	18 05 12.3	-0.6
	0.6nm,0.6s,baz=349,slow=2.9,SNR=6.7							

IDC 30 17:46:39.9±10.0,190N×9570E,h0km,mb3.5/4,mb1 3.5/5, mb1mx3.3/21,mbtmp3.5/5,ML3.3/1,Error ellipse: s-maj=199.6km s-min=104.1km az=150.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.76**	**11**	Pn		Pn	17 50 36.4	+0.1
	0.0nm,0.3s,baz=198,slow=12,SNR=6.6							
MKAR	**Makanchi Array**	**46.22**	**347**	P		P	17 55 06.5	-0.3
	0.7nm,0.8s,baz=179,slow=8.5,SNR=6.1							
SONM	**Songino Array**	**46.69**	**10**	P		P	17 55 10.4	+0.1
	0.2nm,0.5s,baz=207,slow=6.1,SNR=2.4							
KURK	**Kurchatov**	**50.75**	**346**	P		P	17 55 41.2	-0.4
	0.4nm,0.6s,baz=170,slow=6.8,SNR=3.7							
ZALV	**Zalesovo Beam**	**52.65**	**352**	P		P	17 55 55.8	+0.1
	0.2nm,0.2s,baz=184,slow=8.5,SNR=3.8							

IDC 30 18:00:03.0±12.0,2145S×16946E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.6/14,mbtmp3.5/3,Error ellipse: s-maj=332.9km s-min=82.0km az=135.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.87**	**257**	*e*P		Pn	18 00 51.2	+1.2
DZM				*e*S		Sn	18 01 22.6	-2.7
WRA	**Warramunga Arr**	**32.85**	**266**	P		P	18 06 38.2	-0.5
	0.4nm,0.9s,baz=101,slow=8.5,SNR=3.9							
ASAR	**Alice Springs**	**32.86**	**259**	P		P	18 06 39.2	+0.5
	0.7nm,0.7s,baz=85,slow=9.2,SNR=11							
CMAR	**Chiang Mai Arr**	**79.60**	**295**	P		P	18 12 12.7	+0.1
	0.2nm,0.3s,baz=134,slow=3.9,SNR=4.5							

IDC 30 18:23:36.7±46.0,1501S×16856W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.7/17,mbtmp4.0/3,Error ellipse: s-maj=924.7km s-min=192.5km az=79.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**48.29**	**241**	P		P	18 32 19.9	0.0
	0.8nm,0.5s,baz=85,slow=12,SNR=4.1							
WRA	**Warramunga Arr**	**54.48**	**256**	P		P	18 33 06.3	-0.2
	0.3nm,0.5s,baz=95,slow=6.9,SNR=24							
ASAR	**Alice Springs**	**54.67**	**251**	P		P	18 33 08.0	+0.1
	2.3nm,0.4s,baz=88,slow=7.1,SNR=138							

*MOS **30** 18:31:12.0±1.3,5137N×15768E,h59km,mb4.5/14,Error ellipse: s-maj=20.3km s-min=6.7km az=88.6*
*ISCJB **30** 18:31:14.8±0.8,5145N±006×158.1E±0.1,h84km±5km, mb4.0/27,Error ellipse: s-maj=15.1km s-min=9.2km az=26.5*
*KRSC **30** 18:31:15.5±0.8,5151N×15880E,h38km±37km,ML4.6*
*NEIC **30** 18:31:17.0±1.4,5156N×15780E,h84km±9km,mb4.3/14, Error ellipse: s-maj=17.6km s-min=15.4km az=116.0*
*IDC **30** 18:31:18.8±1.8,5160N×15793E,h106km±12km,mb3.7/14, mb1 3.8/14,mb1mx3.5/26,mbtmp3.7/14,Error ellipse: s-maj=22.7km s-min=17.7km az=95.0*
ISC 30 18:31:16.0±0.8,5147N±006×1580E±01,h80km±5km,n84, σ1§11/95,mb4.0/27,1C-1D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
RUS	**Russkaya**	**1.02**	**19**	*e*P		**Pn**	**18 31 33.9**	**-1.3**
RUS				*i* S		**Sn**	**18 31 47.5**	**-2.1**
GRL	**Gorelyy**	**1.09**	**3**	*e*P		**Pn**	**18 31 36.4**	**+0.4**
GRL				*i* S		**Sn**	**18 31 51.9**	**+0.8**
SKR	**Severo-Kuril's**	**1.42**	**237**	⇓*i* PN		**Pn**	**18 31 40.1**	**-0.1**
SKR				pmax	pmax			
	comp=Z,210nm,0.2s							
PET	**Petropavlovsk**	**1.61**	**15**	*c i* PN		**Pn**	**18 31 42.1**	**-0.6**
PET				*i* S		**Sn**	**18 32 02.7**	**-0.2**
PET	**Petropavlovsk**	**1.61**	**15**	*e*P		**Pn**	**18 31 42.1**	**-0.6**
PET				*i* S		**Sn**	**18 32 01.8**	**-1.1**
PET	**Petropavlovsk**	**1.61**	**15**	*e*Pn		**Pn**	**18 31 41.9**	**-0.8**
PET				*e*Sn		**Sn**	**18 31 58.5**	**-4.5**
PEA0B	**Petropavlovsk-**	**1.65**	**354**	*e*Pn		**Pn**	**18 31 43.9**	**+0.7**
PEA0B				*e*Sn		**Sn**	**18 32 02.3**	**-1.6**
PETK	**Petropavlovsk-**	**1.65**	**354**	P		**Pn**	**18 31 44.1**	**+0.9**
	comp=Z,11nm,0.3s,baz=150,slow=15,SNR=182							
PETK				S		**Sn**	**18 32 06.3**	**+2.4**
	comp=Z,21nm,0.3s,baz=195,slow=16,SNR=13							
AVH	**Avacha**	**1.86**	**14**	*e*P		**Pn**	**18 31 46.2**	**+0.3**
AVH				*i* S		**Sn**	**18 32 08.3**	**-0.4**
NLC	**Nalytchevo**	**1.90**	**26**	*e*P		**Pn**	**18 31 44.2**	**-2.3**
NLC				*i* S		**Sn**	**18 32 05.1**	**-4.6**
GNL	**Ganaly**	**2.23**	**359**	*e*P		**Pn**	**18 31 52.1**	**+1.2**
GNL				*i* S		**Sn**	**18 32 18.6**	**+1.0**
KII	**Karymskiy**	**2.72**	**19**	P		**Pn**	**18 31 57.9**	**+0.4**
MKZ	**Mys Kozlova**	**3.83**	**35**	*e*P		**Pn**	**18 32 10.1**	**-2.4**
MKZ				*i* S		**Sn**	**18 32 49.3**	**-7.0**
KMNR	**Kamenistaya**	**4.50**	**16**	P		**Pn**	**18 32 22.6**	**+1.0**
KPT	**Kopyto**	**4.70**	**16**	P		**Pn**	**18 32 24.5**	**+0.2**
BZMR	**Bezymyannaya**	**4.72**	**17**	*e*P		**Pn**	**18 32 25.3**	**+0.7**
KOZ	**Kozyrevsk**	**4.73**	**13**	P		**Pn**	**18 32 25.7**	**+0.9**
KOZR	**Kozyr**	**4.75**	**13**	PN		**Pn**	**18 32 25.7**	**+0.8**
BZWR	**Bezymyannyi-We**	**4.75**	**17**	P		**Pn**	**18 32 25.6**	**+0.7**
SRDR	**Sredinnyy**	**4.97**	**11**	P		**Pn**	**18 32 29.2**	**+1.3**
BILL	**Bilibino**	**17.11**	**11**	P		**Pn**	**18 35 08.4**	**-1.2**
BILL				pmax	pmax			
	comp=Z,7.0nm,1.7s							
YAK	**Yakutsk**	**18.61**	**316**	*e*P		**Pn**	**18 35 25.3**	**-2.5**
YAK				pmax	pmax			
	comp=Z,10.0nm,0.9s							
YAK				pmax	pmax			
	comp=E,3.0nm,1.2s							
YAK				pmax	pmax			
	comp=N,2.0nm,1.5s							
YAK	**Yakutsk**	**18.61**	**316**	*e*P		**Pn**	**18 35 25.1**	**-2.7**
	comp=N,14nm,0.9s							
KURK	**Kurchatov**	**47.50**	**302**	P		**P**	**18 39 42.2**	**-0.4**
	comp=N,2.2nm,0.6s,mb4.1,baz=62,slow=7.6,SNR=16							
MK31	**Makanchi Array**	**47.69**	**296**	*e*P		**P**	**18 39 43.0**	**-1.2**
MKAR	**Makanchi Array**	**47.69**	**296**	P		**P**	**18 39 43.1**	**-1.0**
	comp=N,3.3nm,0.5s,mb4.0,baz=57,slow=6.9,SNR=16							
BVAR	**Borovoye Array**	**50.38**	**308**	P		**P**	**18 40 02.9**	**-1.7**
	comp=N,1.4nm,0.4s,mb4.2,baz=54,slow=7.2,SNR=19							
ARCES	**ARCESS Array B**	**54.42**	**341**	P		**P**	**18 40 32.5**	**-1.8**
	comp=N,3.1nm,1.0s,mb4.3,baz=37,slow=8.3,SNR=6.7							
ARCES	**ARCESS Array B**	**54.42**	**341**	P		**P**	**18 40 32.5**	**-1.8**
CMAR	**Chiang Mai Arr**	**56.57**	**257**	P		**P**	**18 40 52.1**	**+1.8**
	comp=N,1.0nm,0.7s,mb4.0,baz=31,slow=7.1,SNR=8.0							
CMAR	**Chiang Mai Arr**	**56.57**	**257**	*i* P		**P**	**18 40 52.5**	**+2.2**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
JOF	**Joensuu**	**58.49**	**334**	*e*P		**P**	**18 41 01.6**	**-1.6**
JOF	**Joensuu**	**58.49**	**334**	*e*P		**P**	**18 41 01.3**	**-1.9**
JOF				*e*P			18 41 01.6	
KAF	**Kangasniemi**	**60.46**	**336**	*e*p		**P**	**18 41 14.9**	**-1.8**
	comp=Z,1.0nm,0.5s,mb4.1							
KAF	**Kangasniemi**	**60.46**	**336**	*e*P		**P**	**18 41 15.7**	**-1.0**
KAF				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.3							
NB2	**NORSAR Subarra**	**64.73**	**343**	P		**P**	**18 41 44.0**	**-1.1**
	comp=Z,1.5nm,0.7s,mb3.9,baz=20,slow=6.9							
NOA	**NORSAR Array B**	**64.73**	**343**	P		**P**	**18 41 44.5**	**-0.7**
	comp=Z,2.3nm,0.7s,mb4.1,baz=21,slow=6.7,SNR=8.8							
HFS	**Hagfors**	**65.09**	**341**	P		**P**	**18 41 46.6**	**-0.9**
	comp=Z,0.8nm,0.4s,mb3.9,baz=42,slow=4.6,SNR=12							
AKASG	**Malin Array Be**	**69.32**	**328**	P		**P**	**18 42 12.6**	**-1.9**
	comp=Z,0.6nm,0.4s,mb3.7,baz=26,slow=6.8,SNR=3.2							
TXAR	**Lajitas Array**	**72.48**	**65**	P		**P**	**18 42 33.8**	**-0.1**
	comp=Z,0.1nm,0.4s,mb3.0,baz=308,slow=3.3,SNR=4.1							
CLL	**Collm**	**73.39**	**338**	*i* P		**P**	**18 42 38.3**	**-0.6**
WRA	**Warramunga Arr**	**74.06**	**203**	P		**P**	**18 42 42.7**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.4,baz=18,slow=6.1,SNR=6.7							
GERES	**GERESS Array B**	**75.51**	**337**	P		**P**	**18 42 51.3**	**+0.1**
	comp=Z,1.5nm,0.6s,mb3.9,baz=34,slow=5.9,SNR=22							
CDF	**Champ du Feu**	**77.39**	**340**	*e*P		**P**	**18 43 01.7**	**-0.1**
	comp=Z,2.6nm,0.6s,mb3.9							
CDF	**Champ du Feu**	**77.39**	**340**	*e*P		**P**	**18 43 01.7**	**-0.1**
CDF				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.7							
CDF	**Champ du Feu**	**77.39**	**340**	*e*P		**P**	**18 43 01.7**	**-0.1**
	comp=Z,1.3nm,0.6s,mb3.8							
ASAR	**Alice Springs**	**77.75**	**203**	P		**P**	**18 43 04.9**	**+0.9**
	comp=Z,0.5nm,0.7s,mb3.3,baz=16,slow=5.2,SNR=8.0							
MEZF	**Maizieres J'vi**	**77.75**	**342**	*e*P		**P**	**18 43 04.0**	**+0.1**
	comp=Z,5.6nm,0.5s,mb4.2							
MEZF	**Maizieres J'vi**	**77.75**	**342**	*e*P		**P**	**18 43 04.0**	**+0.1**
	comp=Z,5.6nm,0.5s,mb4.5							
LOR	**Lormes**	**79.16**	**342**	*e*P		**P**	**18 43 11.6**	**0.0**
	comp=Z,7.5nm,0.7s,mb4.3							
LOR	**Lormes**	**79.16**	**342**	*e*P		**P**	**18 43 11.6**	**0.0**
LOR				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.4							
LOR	**Lormes**	**79.16**	**342**	*e*P		**P**	**18 43 11.6**	**0.0**
	comp=Z,3.8nm,0.7s,mb4.3							
SGMF	**Saint Gilles**	**79.27**	**347**	*e*P		**P**	**18 43 13.2**	**+1.0**
SSF	**Saint Saulge**	**79.43**	**343**	*e*P		**P**	**18 43 13.2**	**+0.1**
	comp=Z,2.0nm,0.5s,mb3.9							
SSF	**Saint Saulge**	**79.43**	**343**	*e*P		**P**	**18 43 13.2**	**+0.1**
SSF				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.9							
SSF	**Saint Saulge**	**79.43**	**343**	*e*P		**P**	**18 43 13.2**	**+0.1**
	comp=Z,1.0nm,0.5s,mb3.9							
AVF	**Avril sur Loir**	**79.72**	**343**	*e*P		**P**	**18 43 14.8**	**+0.1**
	comp=Z,6.1nm,0.7s,mb4.2							
AVF	**Avril sur Loir**	**79.72**	**343**	*e*P		**P**	**18 43 14.8**	**+0.1**
AVF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.2							
AVF	**Avril sur Loir**	**79.72**	**343**	*e*P		**P**	**18 43 14.8**	**+0.1**
	comp=Z,3.0nm,0.7s,mb4.2							
SMF	**Signal de Mont**	**79.77**	**342**	*e*P		**P**	**18 43 16.2**	**+1.3**
BGF	**Bois d'Agland**	**80.04**	**343**	*e*P		**P**	**18 43 17.5**	**+1.1**
	comp=Z,8.7nm,0.7s,mb4.4							
BGF	**Bois d'Agland**	**80.04**	**343**	*e*P		**P**	**18 43 17.5**	**+1.1**
BGF				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.4							
BGF	**Bois d'Agland**	**80.04**	**343**	*e*P		**P**	**18 43 17.5**	**+1.1**
	comp=Z,4.3nm,0.7s,mb4.4							
LPL	**La Plagne**	**80.26**	**340**	*e*P		**P**	**18 43 18.6**	**+1.0**
	comp=Z,2.9nm,0.5s,mb4.1							
LPL	**La Plagne**	**80.26**	**340**	*e*P		**P**	**18 43 18.6**	**+1.0**
LPL				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.9							
LPL	**La Plagne**	**80.26**	**340**	*e*P		**P**	**18 43 18.6**	**+1.0**
	comp=Z,1.5nm,0.5s,mb4.1							
LPG	**La Plagne**	**80.27**	**340**	*e*P		**P**	**18 43 18.8**	**+1.1**
	comp=Z,4.3nm,0.6s,mb4.2							
LPG	**La Plagne**	**80.27**	**340**	*e*P		**P**	**18 43 18.8**	**+1.1**
LPG				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.1							
LPG	**La Plagne**	**80.27**	**340**	*e*P		**P**	**18 43 18.8**	**+1.1**
	comp=Z,2.2nm,0.6s,mb4.2							
TCF	**Toulx Ste Croi**	**80.41**	**343**	*e*P		**P**	**18 43 18.9**	**+0.5**
	comp=Z,10nm,0.9s,mb4.3							
TCF	**Toulx Ste Croi**	**80.41**	**343**	*e*P		**P**	**18 43 18.9**	**+0.5**
TCF				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.3							
TCF	**Toulx Ste Croi**	**80.41**	**343**	*e*P		**P**	**18 43 18.9**	**+0.5**
	comp=Z,5.3nm,0.9s,mb4.4							
MFF	**Saint Martin d**	**80.51**	**345**	*e*P		**P**	**18 43 19.6**	**+0.7**
	comp=Z,5.0nm,0.6s,mb4.2							
MFF	**Saint Martin d**	**80.51**	**345**	*e*P		**P**	**18 43 19.6**	**+0.7**
MFF				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.3							
MFF	**Saint Martin d**	**80.51**	**345**	*e*P		**P**	**18 43 19.6**	**+0.7**
	comp=Z,2.5nm,0.6s,mb4.2							
CAF	**Calviac**	**81.75**	**343**	*e*P		**P**	**18 43 26.6**	**+1.0**
	comp=Z,4.9nm,0.7s,mb4.2							
CAF	**Calviac**	**81.75**	**343**	*e*P		**P**	**18 43 26.6**	**+1.0**
CAF				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.1							
CAF	**Calviac**	**81.75**	**343**	*e*P		**P**	**18 43 26.6**	**+1.0**
	comp=Z,2.5nm,0.7s,mb4.2							
MMAI	**Mount Meron Ar**	**81.95**	**314**	P		**P**	**18 43 26.9**	**+0.1**
	comp=Z,2.3nm,0.5s,mb4.3,baz=41,slow=7.7,SNR=4.9							
LFF

	comp=N,6µm,0.1s									
TALC	**Talca**		**1.65**	**205**	⇓*i*P		**Pn**		**18 41 40.2**	**+7.1**
TALC					*i* S		**Sn**		**18 42 01.6**	**+7.4**
OVCH	**Ovalle**		**3.30**	**354**	AML		AML		18 42 37.3	
	comp=N,1µm,0.3s									
LCO	**Las Campanas**		**4.87**	**1**	*e*Pn		**Pn**		**18 42 15.6**	**-0.8**
LCO					*e*Sn		**Sn**		**18 43 09.6**	**-1.8**
TRQA	**Tornquist**		**8.26**	**123**	*e*Pn		**Pn**		**18 43 02.2**	**-0.2**
	comp=N,20nm,0.9s									
LPAZ	**La Paz**		**17.70**	**8**	*e*Pn		**Pn**		**18 45 07.6**	**+1.7**
	comp=N,5.9nm,0.8s									
TZTN	**Tazewell**		**71.08**	**349**	*e*P		**P**		**18 52 12.7**	**-0.5**
	comp=N,152nm,1.6s									
ELN	**Prospectdale**		**71.37**	**352**	*e*P		**P**		**18 52 15.5**	**+0.6**
WHZ	**Wether Hill Ro**		**84.50**	**217**	P		**P**		**18 53 26.7**	**-1.1**

*DDA **30** 18:53:11.0,3671N×2764E, h7km±7km, Md2.9*
*ISCJB **30** 18:53:13.5±1.4, 3679N±006×2754E±007, h10km, Error ellipse: s-maj=10.3km s-min=6.6km az=37.3*
*CSEM **30** 18:53:15.9±0.5, 3696N×2750E, h8km±2km, MD2.7, Error ellipse: s-maj=10.7km s-min=5.7km az=13.0*
*ISK **30** 18:53:15.1, 3691N×2750E, h5km, MD2.7*
ISC 30 18:53:14.2±1.5,**3680N**±007×**2751E**±007,**h10**km,**n9,** σ0§67/15,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.28**	**349**	*i* P		**Pg**	**18 53 19.3**	**-0.5**
BDRM				*i* S		**Sg**	**18 53 23.3**	**-0.2**
BODT	**Bodrum**	**0.31**	**329**	PG		**Pg**	**18 53 20.2**	**-0.2**
BODT				*e*SG		**Sg**	**18 53 24.6**	**0.0**
MLSB	**Milas**	**0.54**	**23**	*e*PG		**Pg**	**18 53 24.6**	**-0.1**
MLSB				*e*SG		**Sg**	**18 53 31.8**	**-0.1**
YER	**Yerkesik**	**0.70**	**61**	*e*PG		**Pg**	**18 53 29.1**	**+1.2**
TURN	**Turunc**	**0.88**	**85**	*i* P		**Pg**	**18 53 25.8**	**-5.3**
TURN				*i* S		**Sg**	**18 53 36.8**	**-5.8**
AYDN	**Tasoluk**	**0.91**	**19**	*i* P		**Pg**	**18 53 31.0**	**-0.8**
AYDN				*i* S		**Sg**	**18 53 43.5**	**-0.2**
GCAM	**G?zelcaml?**	**0.93**	**346**	*i* P		**Pg**	**18 53 31.3**	**-0.8**
GCAM				*i* S		**Sg**	**18 53 45.2**	**+1.0**
BLCB	**Balcova**	**1.63**	**347**	*e*PN		**Pn**	**18 53 44.2**	**+1.2**
ELL	**Elmali**	**1.93**	**91**	*e*PN		**Pg**	**18 53 50.6**	**-0.5**

*IDC **30** 18:55:26.2±1.4, 355S×10053E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.0/23, mbtmp4.1/12, MS3.5/2, Ms1 3.7/2, ms1mx3.1/30, Error ellipse: s-maj=56.7km s-min=14.0km az=55.0*
*ISCJB **30** 18:55:29.7±0.8, 35S±02×1007E±02, h33km, mb4.3/22, MS3.5/2, Error ellipse: s-maj=34.5km s-min=8.8km az=140.7*
*NEIC **30** 18:55:31.9±0.8, 350S×10065E, h35km, mb4.2/7, Error ellipse: s-maj=37.7km s-min=8.2km az=54.0*
ISC 30 18:55:35.5±6.0,**35S**±02×**1007E**±02,**h68**km±56km,**n32,** σ0§85/30,**mb4.3**/22,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**21.88**	**355**	*e*P		**P**	**19 00 23.0**	**0.0**
	8.9nm,1.0s,mb4.0							
CMAR	**Chiang Mai Arr**	**21.88**	**355**	P		**P**	**19 00 20.1**	**-2.9**
	4.3nm,0.7s,mb3.9,baz=187,slow=9.0,SNR=31							
CMAR				LR		LR	19 08 39.0	
	comp=Z,121nm,19.1s,baz=180,slow=36							
FITZ	**Fitzroy Crossi**	**28.40**	**123**	P		**P**	**19 01 25.4**	**+1.7**
	2.0nm,1.0s,mb3.6,baz=346,slow=4.2,SNR=4.1							
ODAN	**Odare**	**32.81**	**338**	*e*P		**P**	**19 02 03.4**	**+0.9**
	24nm,0.8s							
RAMN	**Ramite**	**33.20**	**337**	*e*P		**P**	**19 02 06.5**	**+0.6**
	12nm,0.9s,mb4.7							
JIRN	**Jiri**	**33.99**	**337**	*e*P		**P**	**19 02 13.9**	**+1.1**
	25nm,0.8s							
GUN	**Gumba**	**34.34**	**336**	*e*P		**P**	**19 02 16.8**	**+1.0**
DMN	**Daman**	**34.39**	**335**	*e*P		**P**	**19 02 16.7**	**+0.4**
KKN	**Kakani**	**34.48**	**335**	*e*P		**P**	**19 02 17.4**	**+0.4**
GKN	**Gorkha**	**34.94**	**335**	*e*P		**P**	**19 02 20.6**	**-0.4**
	9.1nm,0.4s,mb5.0							
KOLN	**Koldanda**	**35.19**	**333**	*e*P		**P**	**19 02 21.6**	**-1.6**
	9.6nm,0.5s,mb4.8							
DANN	**Dangsing**	**35.62**	**334**	*e*P		**P**	**19 02 25.6**	**-1.2**
	21nm,0.5s							
WRA	**Warramunga Arr**	**36.63**	**119**	P		**P**	**19 02 34.9**	**-0.7**
	0.7nm,0.3s,mb4.0,baz=282,slow=7.4,SNR=25							
WRAB	**Tennant Creek**	**36.64**	**119**	*e*P		**P**	**19 02 35.5**	**-0.3**
	1.8nm,0.6s,mb4.2							
ASAR	**Alice Springs**	**37.80**	**125**	P		**P**	**19 02 45.5**	**0.0**
	1.5nm,0.4s,mb4.2,baz=300,slow=7.8,SNR=19							
STKA	**Stephens Creek**	**47.63**	**131**	P		**P**	**19 04 04.4**	**-0.6**
	2.0nm,1.0s,mb3.9,baz=312,slow=15,SNR=2.2							
KSRS	**Korea Array**	**47.94**	**29**	P		**P**	**19 04 07.2**	**-0.1**
	2.2nm,0.9s,mb4.0,baz=224,slow=8.3,SNR=10							
UCH	**Uchtor**	**51.34**	**335**	*e*P		**P**	**19 04 34.0**	**+0.9**
	1.3nm,0.4s,mb4.3							
SONM	**Songino Array**	**51.35**	**5**	P		**P**	**19 04 33.9**	**+0.9**
	4.2nm,0.8s,mb4.5,baz=185,slow=8.7,SNR=48							
ULN	**Ulaanbaatar**	**51.44**	**5**	*e*P		**P**	**19 04 34.6**	**+0.9**
	2.2nm,0.7s,mb4.3							
TKM2	**Tokmak 2**	**51.48**	**337**	*e*P		**P**	**19 04 34.2**	**+0.2**
	3.7nm,0.8s,mb4.5							
AML	**Almayashu**	**51.61**	**334**	*e*P		**P**	**19 04 35.8**	**+0.7**
	2.1nm,0.6s,mb4.3							
EKS2	**Erkin-Say**	**52.01**	**335**	*e*P		**P**	**19 04 38.7**	**+0.7**
	4.4nm,0.9s,mb4.5							
MKAR	**Makanchi Array**	**52.65**	**344**	P		**P**	**19 04 42.5**	**-0.2**
	3.7nm,0.7s,mb4.5,baz=145,slow=8.7,SNR=15							
KURK	**Kurchatov**	**57.23**	**343**	P		**P**	**19 05 15.0**	**-0.7**
	1.7nm,0.6s,mb4.3,baz=161,slow=6.6,SNR=6.7							
ZAA0	**Zalesovo Array**	**58.76**	**349**	*e*P		**P**	**19 05 25.5**	**-0.8**
ZALV	**Zalesovo Beam**	**58.76**	**349**	P		**P**	**19 05 25.7**	**-0.6**
	4.0nm,0.7s,mb4.5,baz=176,slow=4.5,SNR=21							
BVAR	**Borovoye Array**	**61.82**	**340**	P		**P**	**19 05 46.2**	**-1.1**
	1.9nm,0.7s,mb4.2,baz=141,slow=9.2,SNR=14							
AKTK	**Aktyubinsk**	**65.00**	**331**	P		**P**	**19 06 08.0**	**-0.3**
AKTO	**Aktyubinsk**	**65.00**	**331**	P		**P**	**19 06 08.0**	**-0.3**
	0.7nm,0.8s,mb3.6,baz=359,slow=1.5,SNR=3.9							
NOA	**NORSAR Array B**	**92.79**	**331**	LR		LR	19 56 48.4	
	comp=Z,26nm,20.1s,baz=60,slow=40							
TXAR	**Lajitas Array**	**145.42**	**39**	PKPbc		PKPbc	19 15 08.1	+1.6
	3.7nm,0.8s,baz=289,slow=1.0,SNR=40							

*DDA **30** 19:00:45.8, 3900N×2399E, h26km, Md4.1*
*ISK **30** 19:00:46.7, 3893N×2429E, h5km, ML4.3*
*ISCJB **30** 19:00:49.2±0.4, 3893N±001×2447E±001, h4km±3km, mb4.1/27, MS3.1/3, Error ellipse: s-maj=2.4km s-min=1.7km az=8.2*
*NEIC **30** 19:00:49.6, 3893N×2450E, h19km, mb4.0/23, ML4.4(THE), ML4.4(ATH), After ATH.*
*ATH **30** 19:00:49.6, 3893N×2450E, h19km±1km, MD4.0/21, ML4.4*
*CSEM **30** 19:00:50.6±0.0, 3895N×2449E, h15km, mb4.2/10, Ms3.1, Error ellipse: s-maj=1.0km s-min=0.9km az=5.0*
*THE **30** 19:00:50.5, 3892N×2451E, h0km, ML4.4*
*IDC **30** 19:00:50.0±0.7, 3894N×2439E, h0km, mb4.0/13, mb1 4.0/20, mb1mx3.9/34, mbtmp3.9/20, ML3.5/7, MS3.2/5, Ms1 3.2/5, ms1mx2.8/44, Error ellipse: s-maj=14.1km s-min=11.0km az=110.0*
*MOS **30** 19:00:52.5±1.1, 3899N×2446E, h33km, mb4.3/6, Error ellipse: s-maj=6.3km s-min=3.9km az=112.8*
*SOF **30** 19:00:57.6, 3954N×2458E, h10km, MD3.9*
ISC 30 19:00:50.6±0.4,**3892N**±001×**2446E**±001,**h3**km±3km,**n321,** σ1§09/340,**mb4.1**/26,**MS3.1**/3,**26C-16D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.52**	**299**	*e*Pg		**Pg**	**19 01 01.3**	**+0.9**
AOS				*e*Sg		**Sg**	**19 01 09.0**	**+1.9**
PTL	**Penteli**	**0.99**	**208**	P		**Pg**	**19 01 10.7**	**+1.3**
PTEL	**Penteli**	**0.99**	**208**	*e*Pn		**Pn**	**19 01 07.5**	**-3.8**
PTL				P			19 01 10.7	
NEO	**Neokhori**	**1.03**	**292**	⇓*i*PN		**Pn**	**19 01 10.9**	**-1.1**
XOR	**Xorichti**	**1.08**	**295**	*e*Pg		**Pg**	**19 01 11.4**	**+0.1**
XOR				*e*Sg		**Sg**	**19 01 27.6**	**+2.4**
ATH	**Athens Observa**	**1.11**	**212**	*e*PN		**Pn**	**19 01 11.5**	**-1.5**
LOS	**Limnos**	**1.12**	**25**	*e*Pg		**Pg**	**19 01 12.1**	**0.0**
LKR	**Lokris**	**1.17**	**257**	*e*Pg		**Pg**	**19 01 12.4**	**-0.5**
LKR				*e*Sg		**Sg**	**19 01 30.6**	**+2.5**
LKR	**Lokris**	**1.17**	**257**	*e*PN		**Pn**	**19 01 12.3**	**-1.6**
PAIG	**Paliouri**	**1.17**	**329**	*e*Pg		**Pg**	**19 01 12.8**	**-0.2**
PAIG				*e*Sg		**Sg**	**19 01 30.3**	**+2.0**
KVR	**Kavouri**	**1.22**	**207**	*e*PN		**Pn**	**19 01 13.0**	**-1.5**
CHOS	**Chios island**	**1.36**	**113**	*e*Pg		**Pg**	**19 01 15.6**	**-1.0**
CHOS				*e*Sg		**Sg**	**19 01 34.6**	**+0.4**
NAIG	**Nisos Aigina**	**1.39**	**214**	*e*PN		**Pn**	**19 01 15.5**	**-1.3**
PRK	**Paraskevi**	**1.45**	**76**	*e*Pg		**Pg**	**19 01 16.5**	**-1.8**
PRK				*e*Sg		**Sg**	**19 01 37.0**	**-0.1**
OUR	**Ouranopolis**	**1.46**	**346**	*e*Pg		**Pg**	**19 01 16.9**	**-1.6**
LTK	**Loutraki**	**1.47**	**233**	*e*Pg		**Pg**	**19 01 16.9**	**-1.9**
LTK				*e*Sg		**Sg**	**19 01 38.6**	**+0.7**
PLG	**Polygyros**	**1.65**	**332**	*e*Pb		**Pb**	**19 01 19.4**	**-2.2**
PLG	**Polygyros**	**1.65**	**332**	*i* Pn		**Pn**	**19 01 19.4**	**-1.0**
AGG	**Agios Georgios**	**1.66**	**274**	*e*Pb		**Pb**	**19 01 19.8**	**-2.0**
AGG				*e*Sb		**Sb**	**19 01 44.4**	**+1.3**
GADA	**Gvkgeada**	**1.69**	**41**	*e*PN		**Pn**	**19 01 19.7**	**-1.3**
GADA				*e*SN		**Sn**	**19 01 43.8**	**+0.6**
DID	**Didima**	**1.71**	**215**	*e*Pb		**Pb**	**19 01 19.8**	**-2.8**
EZN	**Ezine**	**1.71**	**57**	*e*PN		**Pn**	**19 01 20.1**	**-1.1**
EZN				*e*SN		**Sn**	**19 01 45.5**	**+1.9**
URLA	**Izmir**	**1.77**	**108**	*i* P		**Pn**	**19 01 22.6**	**+0.6**
URLA				*i* S		**Sn**	**19 01 46.7**	**+1.7**
AYVA	**Ayvalik**	**1.78**	**77**	*i* P		**Pn**	**19 01 21.3**	**-1.0**
AYVA				*i* S		**Sn**	**19 01 48.3**	**+2.9**
LIT	**Litokhoron**	**1.93**	**308**	*e*Pb		**Pb**	**19 01 23.7**	**-2.6**
LIT				*e*Sb		**Sb**	**19 01 50.0**	**-0.8**
HORT	**Hortiatis**	**1.98**	**328**	*e*Pn		**Pn**	**19 01 24.7**	**-0.3**
THL	**Klokotos Trika**	**2.00**	**290**	*e*Pn		**Pn**	**19 01 24.8**	**-0.5**
THL	**Klokotos Trika**	**2.00**	**290**	⇓*i*PN		**Pn**	**19 01 24.9**	**-0.4**
APE	**Apeiranthos**	**2.03**	**155**	*e*Pn		**Pn**	**19 01 24.6**	**-1.1**
APE	**Apeiranthos**	**2.03**	**155**	*i* P		**Pn**	**19 01 24.3**	**-1.4**
APE	**Apeiranthos**	**2.03**	**155**	⇓*i*P		**Pn**	**19 01 25.5**	**-0.2**
THE	**Thessaloniki**	**2.06**	**327**	*e*Pn		**Pn**	**19 01 26.0**	**-0.2**
EVR	**Evrytania**	**2.07**	**271**	⇓*i*PN		**Pn**	**19 01 26.2**	**0.0**
SOH	**Sokhos**	**2.08**	**336**	*e*Pn		**Pn**	**19 01 26.2**	**-0.2**
BLCB	**Balcova**	**2.09**	**104**	*e*PN		**Pn**	**19 01 26.1**	**-0.5**
SMG	**Samos**	**2.23**	**122**	*e*PN		**Pn**	**19 01 28.0**	**-0.4**
ENEZ	**Enez**	**2.23**	**35**	*e*PN		**Pn**	**19 01 27.2**	**-1.3**
VLX	**Vlachokerasia**	**2.25**	**227**	*e*Pn		**Pn**	**19 01 28.2**	**-0.5**
KDAG	**Bornova**	**2.26**	**102**	*i* P		**Pn**	**19 01 28.0**	**-0.8**
KDAG				*i* S		**Sg**	**19 02 04.4**	**+1.3**
LPK	**Lapseki**	**2.29**	**50**	*e*PN		**Pn**	**19 01 28.8**	**-0.5**
ALN	**Alexandroupoli**	**2.32**	**31**	*e*Pn		**Pn**	**19 01 28.1**	**-1.6**
ALN				*e*Sn		**Sn**	**19 01 59.2**	**+0.5**
RDO	**Rodhopi**	**2.37**	**20**	*e*PN		**Pn**	**19 01 28.9**	**-1.5**
KZN	**Kozani**	**2.50**	**305**	*e*PB		**Pn**	**19 01 32.3**	**+0.2**
RLS	**Riolos of Patr**	**2.50**	**251**	*e*Pb		**Pn**	**19 01 32.4**	**+0.3**
RLS				P		**Pb**	**19 01 37.0**	**+0.9**
KNT	**Kendrikon**	**2.54**	**332**	*e*Pn		**Pn**	**19 01 32.7**	**0.0**
THR4	**Thira Island,**	**2.57**	**163**	*e*Pn		**Pn**	**19 01 32.4**	**-0.6**
GRG	**Griva**	**2.58**	**323**	*e*Pn		**Pn**	**19 01 33.6**	**+0.4**
BALY	**Balya**	**2.59**	**71**	*i* P		**Pn**	**19 01 32.8**	**-0.5**
BALY				*i* S		**Sg**	**19 02 12.8**	**-0.7**
THR5	**Thira Island,**	**2.60**	**164**	*e*Pn		**Pn**	**19 01 32.8**	**-0.7**
THR3	**Thira Island,**	**2.62**	**163**	*e*Pn		**Pn**	**19 01 33.4**	**-0.3**
AKS	**Akhisar**	**2.62**	**90**	*e*PN		**Pn**	**19 01 33.5**	**-0.3**
ITM	**Ithomi**	**2.65**	**230**	*e*PB		**Pb**	**19 01 34.8**	**-3.8**
MEV	**Metsovon**	**2.65**	**290**	*e*Pn		**Pn**	**19 01 34.8**	**+0.6**
SANT	**Santorini**	**2.67**	**162**	*e*Pn		**Pn**	**19 01 33.5**	**-0.9**
SANT	**Santorini**	**2.67**	**162**	P		**Pn**	**19 01 34.5**	**+0.1**
SANT	**Santorini**	**2.67**	**162**	*e*Pn		**Pn**	**19 01 33.1**	**-1.3**
SANT				P			19 01 34.5	
THR6	**Thira Island,**	**2.67**	**163**	*e*Pn		**Pn**	**19 01 34.0**	**-0.5**
MMB	**Musomiste**	**2.73**	**348**	*i* P		**Pn**	**19 01 34.6**	**-0.6**
RKY	**Sarkoy-Tekirda**	**2.74**	**49**	*e*PN		**Pn**	**19 01 34.5**	**-0.9**
BALB	**Balikesir**	**2.75**	**74**	*e*PN		**Pn**	**19 01 35.1**	**-0.5**
RZN	**Rozhen**	**2.77**	**4**	*i* P		**Pn**	**19 01 35.6**	**-0.3**
VAY	**Valandovo**	**2.80**	**330**	*e*Pn		**Pn**	**19 01 35.8**	**-0.5**
VAY	**Valandovo**	**2.80**	**330**	*i* Pn		**Pn**	**19 01 36.0**	**-0.3**
KDZ	**Kurdzhali**	**2.83**	**15**	*i* P		**Pn**	**19 01 35.5**	**-1.6**
MFT	**Murefte**	**2.86**	**48**	*e*PN		**Pn**	**19 01 37.1**	**0.0**
KYTH	**Kithira**	**2.87**	**204**	*e*PN		**Pn**	**19 01 36.5**	**-0.7**
JAN	**Janina**	**2.89**	**286**	P		**Pn**	**19 01 42.4**	**+4.8**
BODT	**Bodrum**	**2.92**	**129**	*e*PN		**Pn**	**19 01 37.9**	**0.0**
MRMT	**Marmara Adasi**	**2.95**	**54**	*e*PN		**Pn**	**19 01 38.1**	**-0.2**
PYL	**PYLOS**	**2.95**	**228**	*e*Pn		**Pn**	**19 01 39.4**	**+1.1**
AYDN	**Tasoluk**	**2.97**	**114**	*i* P		**Pg**	**19 01 47.2**	**-0.3**
AYDN				*i* S		**Sg**	**19 02 26.3**	**+0.3**
LKD	**Levkas**	**2.98**	**267**	*e*Pn		**Pn**	**19 01 41.3**	**+2.6**
EDC	**Edincik**	**2.99**	**60**	*e*PN		**Pn**	**19 01 38.8**	**-0.1**
FNA	**Florina**	**3.02**	**309**	*e*Pn		**Pn**	**19 01 40.0**	**+0.8**
BNT	**Bandirma**	**3.03**	**61**	*e*PN		**Pn**	**19 01 39.1**	**-0.4**
MLSB	**Milas**	**3.08**	**121**	*e*PN		**Pn**	**19 01 40.2**	**+0.1**
VLS	**Valsamata**	**3.12**	**257**	*e*Pn		**Pn**	**19 01 41.9**	**+1.2**
VLS	**Valsamata**	**3.12**	**257**	*e*Pn		**Pn**	**19 01 41.4**	**+0.7**
KKB	**Krupnik**	**3.12**	**341**	*i* P		**Pn**	**19 01 40.4**	**-0.3**
TKR	**Tekirdag**	**3.14**	**48**	*e*PN		**Pn**	**19 01 40.9**	**-0.1**
PLD	**Plovdiv**	**3.19**	**3**	*e*Pn		**Pn**	**19 01 41.7**	**+0.1**
DURS	**Dursunbey**	**3.19**	**76**	*i* P		**Pn**	**19 01 41.8**	**+0.2**
DURS				*i* S		**Sg**	**19 02 33.6**	**+0.5**
DIM	**Dimitrovgrad**	**3.23**	**14**	*i* P		**Pn**	**19 01 41.8**	**-0.4**
IGT	**Igoumenitsa**	**3.26**	**282**	*e*Pn		**Pn**	**19 01 45.1**	**+2.5**
STIP	**Stip**	**3.27**	**329**	*i* Pn		**Pn**	**19 01 43.5**	**+0.8**
DST	**Dursunbey**	**3.31**	**77**	*e*PN		**Pn**	**19 01 43.9**	**+0.6**
KULA	**Kula-Manisa**	**3.31**	**96**	*e*PN		**Pn**	**19 01 43.1**	**-0.2**
DEMI	**Demirci**	**3.32**	**87**	*i* P		**Pg**	**19 01 53.0**	**-1.2**
DEMI				*i* S		**Sg**	**19 02 35.6**	**-1.6**
CRLT	**Corlu**	**3.35**	**48**	*e*PN		**Pn**	**19 01 43.7**	**-0.1**
EDRB	**Edirne**	**3.41**	**30**	*e*PN		**Pn**	**19 01 43.3**	**-1.3**
KRUS	**Krusevo**	**3.47**	**316**	*i* Pn		**Pn**	**19 01 46.8**	**+1.3**
KRUS	**Krusevo**	**3.47**	**316**	*i* Pn		**Pn**	**19 01 46.7**	**+1.2**
YER	**Yerkesik**	**3.51**	**119**	*e*PN		**Pn**	**19 01 46.4**	**+0.5**
VAM	**Vamos**	**3.51**	**183**	*e*PN		**Pn**	**19 01 46.6**	**+0.5**
OHR	**Ohrid**	**3.56**	**309**	*i* Pn		**Pn**	**19 01 50.5**	**+3.8**
IDI	**Anoyia**	**3.64**	**174**	Pn		**Pn**	**19 01 47.2**	**-0.6**
	6.1nm,0.3s,baz=346,slow=13,SNR=43							
IDI						Lg	19 02 46.9	
	8.6nm,0.3s,baz=60,slow=20,SNR=2.9							
SLVT	**Silivri**	**3.69**	**50**	*e*PN		**Pn**	**19 01 48.6**	**+0.1**
KEK	**Kerkira**	**3.70**	**284**	P		**Pn**	**19 01 51.6**	**+3.0**
NPS	**Neapolis**	**3.77**	**165**	*e*PN		**Pn**	**19 01 48.6**	**-0.9**
CTT	**Catalca**	**3.77**	**53**	*e*PN		**Pn**	**19 01 49.2**	**-0.5**
VTS	**Vitosha**	**3.79**	**346**	*i* P		**Pn**	**19 01 50.7**	**+0.8**
SKO	**Skopje**	**3.82**	**324**	*i* Pn		**Pn**	**19 01 51.4**	**+1.1**
CTKS	**Kestanelik-??a**	**3.87**	**52**	*e*PN		**Pn**	**19 01 50.2**	**-0.8**
CTYL	**Yal??k??y-??at**	**3.89**	**48**	*e*PN		**Pn**	**19 01 51.3**	**0.0**
JMB	**Yambol**	**3.90**	**24**	*e*Pn		**Pn**	**19 01 50.7**	**-0.6**
GEMT	**Gemlik**	**3.95**	**66**	*e*PN		**Pn**	**19 01 52.4**	**+0.3**
KARP	**Karpathos**	**4.00**	**147**	*e*PN		**Pn**	**19 01 52.7**	**0.0**
BGKT	**Bogazkoy**	**4.01**	**54**	*e*PN		**Pn**	**19 01 52.5**	**-0.3**
KHL	**Karahalli**	**4.01**	**97**	*e*PN		**Pn**	**19 01 54.0**	**+1.1**
ZKR	**Zakros**	**4.05**	**159**	*e*Pn		**Pn**	**19 01 53.7**	**+0.3**
YLV	**Yalova**	**4.13**	**65**	*e*PN		**Pn**	**19 01 55.0**	**+0.5**
KLYT	**Kilyos**	**4.22**	**55**	*e*PN		**Pn**	**19 01 55.8**	**0.0**
TIR	**Tirane**	**4.28**	**306**	*e*Pn		**Pn**	**19 01 55.1**	**-1.4**
ADVT	**Abdulvahap**	**4.35**	**68**	*e*PN		**Pn**	**19 01 58.0**	**+0.5**
CAVI	**Cavuskoy**	**4.36**	**71**	*e*PN		**Pn**	**19 01 58.2**	**+0.6**
ALT	**Altintas**	**4.41**	**86**	*e*PN		**Pn**	**19 01 58.9**	**+0.5**
HRT	**Hereke**	**4.44**	**63**	*e*PN		**Pn**	**19 01 58.8**	**0.0**
SILT	**Sile**	**4.56**	**59**	*e*PN		**Pn**	**19 02 00.2**	**-0.3**
GPA	**Golpazari**	**4.72**	**71**	*e*PN		**Pn**	**19 02 03.1**	**+0.4**
SHUT	**Suhut-Afyon**	**4.78**	**92**	*e*PN		**Pn**	**19 02 04.1**	**+0.6**
ELL	**Elmali**	**4.83**	**115**	*e*PN		**Pn**	**19 02 04.9**	**+0.8**
ISP	**Isparta**	**4.88**	**101**	*e*P		**Pn**	**19 02 04.8**	**0.0**
GULT	**Gulveren**	**4.91**	**70**	*e*PN		**Pn**	**19 02 05.7**	**+0.4**
BCK	**Bucak**	**5.04**	**105**	*e*PN		**Pn**	**19 02 07.7**	**+0.6**
PE1	**Pezze di Greco**	**5.73**	**291**	*e*Pn		**Pn**	**19 02 17.8**	**+1.3**
KIZT	**Kizilcal**	**5.79**	**88**	*e*PN		**Pn**	**19 02 18.9**	**+1.6**
KDZE	**Karadeniz Ereo**	**5.86**	**64**	*e*PN		**Pn**	**19 02 19.3**	**+0.9**
TIP	**Timpagrande**	**6.00**	**275**	*e*Pn		**Pn**	**19 02 20.4**	**+0.2**
	46nm,0.7s							
TIP	**Timpagrande**	**6.00**	**275**	*e*Pn		**Pn**	**19 02 20.4**	**+0.2**
	46nm,0.7s							
DIVS	**Divibare**	**6.16**	**329**	*e*P		**Pn**	**19 02 22.8**	**+0.3**
TIRR	**Tirgusor**	**6.28**	**27**	P		**Pn**	**19 02 23.4**	**-0.6**
KONT	**Konya--Tatoy**	**6.28**	**96**	*e*PN		**Pn**	**19 02 25.3**	**+1.2**
SG1	**Sgolgore (BA)**	**6.28**	**290**	*e*Pn		**Pn**	**19 02 25.0**	**+0.9**
HARR	**Harsova**	**6.32**	**23**	⇓*i*P		**Pn**	**19 02 24.4**	**-0.2**
HARR	**Harsova**	**6.32**	**23**	⇓P		**Pn**	**19 02 24.4**	**-0.3**
VOIR		**6.53**	**4**	⇓*i*P		**Pn**	**19 02 27.3**	**-0.2**
VOIR		**6.53**	**4**	P		**Pn**	**19 02 27.7**	**+0.2**
VOIR		**6.53**	**4**	P		**Pn**	**19 02 27.7**	**+0.2**
GZR	**Gura Zlata**	**6.59**	**350**	⇓*i*P		**Pn**	**19 02 27.7**	**-0.6**
GZR	**Gura Zlata**	**6.59**	**350**	P		**Pn**	**19 02 27.9**	**-0.4**
GZR	**Gura Zlata**	**6.59**	**350**	P		**Pn**	**19 02 27.9**	**-0.4**
HDMB	**Hadim**	**6.64**	**105**	*e*PN		**Pn**	**19 02 30.7**	**+1.7**
MLR	**Muntele Rosu**	**6.66**	**9**	Pn		**Pn**	**19 02 29.0**	**-0.2**
	1.2nm,0.3s,baz=217,slow=5.5,SNR=21							
MLR						Lg	19 04 29.4	
	0.5nm,0.3s,baz=136,slow=21,SNR=3.3							
MLR	**Muntele Rosu**	**6.66**	**9**	P		**Pn**	**19 02 29.0**	**-0.3**
MLR						pmax	pmax	
	comp=Z,1.0nm,0.3s							
MLR	**Muntele Rosu**	**6.66**	**9**	⇓*i*P		**Pn**	**19 02 30.0**	**+0.7**
MLR	**Muntele Rosu**	**6.66**	**9**	P		**Pn**	**19 02 30.1**	**+0.8**
SAFT	**Safranbolu**	**6.72**	**67**	*e*PN		**Pn**	**19 02 31.5**	**+1.3**
CUC	**Castrocucco**	**6.77**	**282**	*e*Pn		**Pn**	**19 02 32.2**	**+1.3**
	comp=Z,52nm,0.6s							
CUC	**Castrocucco**	**6.77**	**282**	*e*Pn		**Pn**	**19 02 32.2**	**+1.4**
	comp=Z,52nm,0.6s							
CUC				*e*Sn		**Sn**	**19 03 47.0**	**-1.4**
BZS	**Buzias**	**7.02**	**343**	⇑*i*P		**Pn**	**19 02 33.5**	**-0.7**
BZS	**Buzias**	**7.02**	**343**	P		**Pn**	**19 02 33.8**	**-0.4**
PLOR	**Plostina**	**7.12**	**12**	⇓*i*P		**Pn**	**19 02 37.1**	**+1.6**
PLOR	**Plostina**	**7.12**	**12**	P		**Pn**	**19 02 36.7**	**+1.2**
VRI	**Vrincioaia**	**7.14**	**13**	⇑*i*P		**Pn**	**19 02 37.4**	**+1.5**
VRI	**Vrincioaia**	**7.14**	**13**	P		**Pn**	**19 02 36.7**	**+0.8**
VRI	**Vrincioaia**	**7.14**	**13**	P		**Pn**	**19 02 36.7**	**+0.8**
BR131	**Keskin Array S**	**7.16**	**81**	*e*Pn		**Pn**	**19 02 36.5**	**+0.3**
	comp=Z,5.1nm,0.8s							
BR131	**Keskin Array S**	**7.16**	**81**	*e*

	comp=Z,32nm,1.3s						
AVF	**Avril sur Loir**	**17.32**	**304**	*i*P	**Pn**	**19 04 51.4**	**-1.9**
AVF				pmax	pmax		
	comp=Z,16nm,1.3s						
AVF	**Avril sur Loir**	**17.32**	**304**	*i*P	**Pn**	**19 04 51.4**	**-1.9**
	comp=Z,16nm,1.3s						
BGF	**Bois d'Agland**	**17.58**	**303**	*e*P	**Pn**	**19 04 56.3**	**-0.2**
	comp=Z,20nm,0.8s						
BGF	**Bois d'Agland**	**17.58**	**303**	*e*P	**Pn**	**19 04 56.3**	**-0.2**
BGF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BGF	**Bois d'Agland**	**17.58**	**303**	*e*P	**Pn**	**19 04 56.3**	**-0.2**
	comp=Z,10nm,0.8s						
EMIR	**Miracle**	**17.71**	**287**	P	**Pn**	**19 05 00.3**	**+2.2**
	comp=Z,5.0nm,0.7s						
EMIR	**Miracle**	**17.71**	**287**	P	**Pn**	**19 05 00.3**	**+2.2**
	comp=Z,5.0nm,0.7s						
TCF	**Toulx Ste Croi**	**17.92**	**301**	*i*P	**Pn**	**19 04 59.3**	**-1.4**
OBN	**Obninsk**	**18.14**	**23**	*e*P	**Pn**	**19 05 05.8**	**+2.5**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BAIF	**Baives**	**18.18**	**314**	*e*P	**Pn**	**19 05 03.0**	**-0.9**
EMOS	**Mosqueruela**	**19.24**	**282**	P	**Pn**	**19 05 17.2**	**+0.4**
EMOS	**Mosqueruela**	**19.24**	**282**	P	**Pn**	**19 05 17.2**	**+0.3**
MFF	**Saint Martin d**	**19.58**	**301**	*e*P	**Pn**	**19 05 19.7**	**-1.1**
ECHE	**Chera**	**19.69**	**280**	P	**Pn**	**19 05 22.9**	**+0.7**
ECHE				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ECHE	**Chera**	**19.69**	**280**	P	**Pn**	**19 05 22.9**	**+0.7**
	comp=Z,7.0nm,0.8s						
ECHE	**Chera**	**19.69**	**280**	P	**Pn**	**19 05 22.9**	**+0.7**
	comp=Z,7.0nm,0.8s						
SJPF	**Ste Jean**	**19.80**	**290**	*e*P	**Pn**	**19 05 22.6**	**-0.9**
	comp=Z,9.6nm,0.8s						
SJPF	**Ste Jean**	**19.80**	**290**	*e*P	**Pn**	**19 05 22.6**	**-0.9**
SJPF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SJPF	**Ste Jean**	**19.80**	**290**	*e*P	**Pn**	**19 05 22.6**	**-0.9**
	comp=Z,4.8nm,0.8s						
LDF	**La Druitiere**	**20.14**	**307**	*e*P	**P**	**19 05 25.6**	**-0.1**
	comp=Z,32nm,1.2s						
LDF	**La Druitiere**	**20.14**	**307**	*e*P	**P**	**19 05 25.6**	**-0.1**
LDF				pmax	pmax		
	comp=Z,16nm,1.2s						
LDF	**La Druitiere**	**20.14**	**307**	*e*P	**P**	**19 05 25.6**	**-0.1**
	comp=Z,16nm,1.2s						
ETOB	**Tobarra**	**20.26**	**277**	P	**P**	**19 05 30.1**	**+3.0**
	comp=Z,2.8nm,0.7s						
ETOB	**Tobarra**	**20.26**	**277**	P	**P**	**19 05 30.1**	**+3.1**
	comp=Z,2.8nm,0.7s						
ETOR	**Torete**	**20.41**	**284**	P	**P**	**19 05 28.3**	**-0.4**
ETOR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ETOR	**Torete**	**20.41**	**284**	P	**P**	**19 05 28.3**	**-0.4**
	comp=Z,2.6nm,0.3s						
ETOR	**Torete**	**20.41**	**284**	P	**P**	**19 05 28.3**	**-0.5**
	comp=Z,2.6nm,0.3s						
GRR	**Gorron**	**20.54**	**306**	*e*P	**P**	**19 05 28.8**	**-1.2**
RST	**Umm Al-Ruwaisa**	**20.83**	**110**	*e*P	**P**	**19 05 35.4**	**+2.1**
	baz=293						
RST				*e*P	**P**	**19 05 38.5**	**+5.2**
	baz=293						
RST				AMb	AMB	19 05 40.4	
	comp=Z,20nm,0.8s,baz=293						
MIB	**Mutribah**	**20.92**	**109**	*e*P	**P**	**19 05 34.8**	**+0.5**
	comp=Z,28nm,0.7s						
MIB	**Mutribah**	**20.92**	**109**	*e*P	**P**	**19 05 34.8**	**+0.5**
	baz=294						
MIB				AMb	AMB	19 05 38.0	
	comp=Z,28nm,0.7s,baz=294						
EVIA	**Vianos**	**21.00**	**278**	P	**P**	**19 05 36.5**	**+1.4**
EVIA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
EVIA	**Vianos**	**21.00**	**278**	P	**P**	**19 05 36.5**	**+1.4**
	comp=Z,4.4nm,0.5s						
EVIA	**Vianos**	**21.00**	**278**	P	**P**	**19 05 36.5**	**+1.4**
	comp=Z,4.4nm,0.5s						
NAY	**Al-Naaiem**	**21.15**	**110**	*e*P	**P**	**19 05 35.4**	**-1.3**
	comp=Z,8.7nm,1.9s,mb3.8						
NAY	**Al-Naaiem**	**21.15**	**110**	*e*P	**P**	**19 05 35.4**	**-1.3**
	baz=293						
NAY				AMb	AMB	19 05 41.9	
	comp=Z,9.0nm,1.9s,mb3.8,baz=293						
EHUE	**Huescar**	**21.21**	**276**	P	**P**	**19 05 41.3**	**+3.9**
EHUE				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.2						
EHUE	**Huescar**	**21.21**	**276**	P	**P**	**19 05 41.3**	**+3.9**
	comp=Z,1.3nm,0.8s,mb3.3						
EQES	**Quesada**	**21.59**	**276**	P	**P**	**19 05 45.1**	**+3.6**
	comp=Z,4.9nm,0.7s,mb4.0						
EBER	**Berja**	**21.64**	**273**	P	**P**	**19 05 45.2**	**+3.1**
	comp=Z,3.3nm,0.7s,mb3.9						
QUIF	**Quistinic**	**21.89**	**303**	*e*P	**P**	**19 05 44.1**	**-0.5**
ESDC	**Sonseca Array**	**21.98**	**281**	P	**P**	**19 05 44.6**	**-1.0**
	comp=Z,4.9nm,0.6s,mb4.1,baz=74,slow=11,SNR=34						
ESDC	**Sonseca Array**	**21.98**	**281**	P	**P**	**19 05 46.1**	**+0.5**
	comp=Z,5.3nm,0.5s,mb4.2						
ESDC	**Sonseca Array**	**21.98**	**281**	P	**P**	**19 05 46.1**	**+0.6**
	comp=Z,5.3nm,0.5s,mb4.2						
GUD	**Guadarrama**	**22.02**	**284**	P	**P**	**19 05 46.1**	**+0.1**
EGUA	**Guajares**	**22.19**	**273**	P	**P**	**19 05 49.0**	**+1.1**
EGUA				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.7						
EGUA	**Guajares**	**22.19**	**273**	P	**P**	**19 05 49.0**	**+1.1**
	comp=Z,28nm,1.0s,mb4.7						
EGUA	**Guajares**	**22.19**	**273**	P	**P**	**19 05 49.0**	**+1.2**
	comp=Z,28nm,1.0s,mb4.7						
HFS	**Hagfors**	**22.30**	**346**	P	**P**	**19 05 47.9**	**-0.9**
	comp=Z,3.6nm,0.5s,mb4.0,baz=162,slow=11,SNR=22						
HFS				LR	LR	19 15 25.8	
	comp=Z,69nm,18.5s,MS3.1,baz=151,slow=39						
ELUQ	**Luque**	**22.57**	**276**	P	**P**	**19 05 52.2**	**+0.3**
ELUQ				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.1						
ELUQ	**Luque**	**22.57**	**276**	P	**P**	**19 05 52.2**	**+0.3**
	comp=Z,3.5nm,0.5s,mb4.0						
ELUQ	**Luque**	**22.57**	**276**	P	**P**	**19 05 52.2**	**+0.3**
	comp=Z,3.5nm,0.5s,mb4.0						
EADA	**Adamuz**	**22.68**	**277**	P	**P**	**19 05 54.4**	**+1.2**
	comp=Z,8.9nm,0.8s,mb4.2						
EADA	**Adamuz**	**22.68**	**277**	P	**P**	**19 05 54.4**	**+1.3**
	comp=Z,8.9nm,0.8s,mb4.2						
TAM	**Tamanrasset**	**22.79**	**231**	*e*P	**P**	**19 05 55.3**	**+1.0**
TAM	**Tamanrasset**	**22.79**	**231**	*e*P	**P**	**19 05 55.3**	**+1.0**
EMIJ	**Mijas**	**23.19**	**273**	P	**P**	**19 05 58.3**	**-0.2**
	comp=Z,8.8nm,0.7s,mb4.3						
EMIJ	**Mijas**	**23.19**	**273**	P	**P**	**19 05 58.3**	**-0.2**
	comp=Z,8.8nm,0.7s,mb4.3						
NAO01	**NORSAR Array S**	**23.53**	**343**	*e*P	**P**	**19 05 59.5**	**-2.3**
	comp=Z,7.4nm,0.7s,mb4.2						
NAO01	**NORSAR Array S**	**23.53**	**343**	*e*P	**P**	**19 05 59.5**	**-2.4**
	comp=Z,7.4nm,0.7s,mb4.2						
NB2	**NORSAR Subarra**	**23.63**	**344**	P	**P**	**19 06 01.6**	**-1.2**
	comp=Z,0.7nm,0.6s,mb3.3,baz=144,slow=10						
NOA	**NORSAR Array B**	**23.63**	**344**	P	**P**	**19 06 01.9**	**-0.9**
	comp=Z,4.1nm,0.6s,mb4.0,baz=148,slow=9.4,SNR=18						
NOA				LR	LR	19 15 16.8	
	comp=Z,27nm,18.1s,MS2.8,baz=175,slow=37						
MDT	**Midelt**	**24.27**	**264**	P	**P**	**19 06 08.9**	**0.0**
	comp=Z,6.0nm,0.9s,mb4.0,baz=76,slow=12,SNR=11						
EMIN	**Mina Concepcio**	**24.39**	**277**	P	**P**	**19 06 09.2**	**-0.8**
	comp=Z,6.8nm,0.7s,mb4.2						
EKA	**Eskdalemuir Ar**	**24.71**	**321**	P	**P**	**19 06 13.2**	**+0.5**
	comp=Z,2.4nm,0.8s,mb3.8,baz=117,slow=10.0,SNR=10						
EKA	**Eskdalemuir Ar**	**24.71**	**321**	P	**P**	**19 06 13.2**	**+0.5**
ARCES	**ARCESS Array B**	**30.68**	**1**	P	**P**	**19 07 06.6**	**+0.5**
	comp=Z,1.1nm,0.7s,mb3.8,baz=194,slow=9.6,SNR=5.3						
ARCES				LR	LR	19 20 07.3	
	comp=Z,102nm,19.8s,MS3.5,baz=274,slow=38						
TOA0	**Torodi Ar. Sit**	**32.63**	**224**	*e*P	**P**	**19 07 22.6**	**-1.2**
TOA0	**Torodi Ar. Sit**	**32.63**	**224**	*e*P	**P**	**19 07 22.6**	**-1.1**
TORD	**Torodi Ar. Bea**	**32.63**	**224**	P	**P**	**19 07 23.5**	**-0.2**
	comp=Z,3.3nm,0.6s,mb4.4,baz=33,slow=9.3,SNR=55						
TORD	**Torodi Ar. Bea**	**32.63**	**224**	P	**P**	**19 07 23.5**	**-0.2**
BVAR	**Borovoye Array**	**34.27**	**50**	P	**P**	**19 07 38.6**	**+0.9**
	comp=Z,0.3nm,0.4s,mb3.5,baz=278,slow=13,SNR=2.9						
KURK	**Kurchatov**	**39.35**	**54**	P	**P**	**19 08 20.6**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.6,baz=286,slow=9.0,SNR=6.1						
DBIC	**Dimbokro**	**41.59**	**227**	P	**P**	**19 08 38.7**	**-1.2**
	comp=Z,4.8nm,0.7s,mb4.2,baz=18,slow=9.5,SNR=10.0						
DBIC	**Dimbokro**	**41.59**	**227**	P	**P**	**19 08 38.7**	**-1.2**
TIC	**Toumodi**	**41.71**	**227**	*e*P	**P**	**19 08 40.2**	**-0.6**
	comp=Z,33nm,0.8s,mb5.0						
KIC	**Kosan Boka**	**41.78**	**227**	*e*P	**P**	**19 08 40.9**	**-0.5**
	comp=Z,113nm,1.7s,mb5.2						
LIC	**Lamto**	**42.06**	**227**	*e*P	**P**	**19 08 43.1**	**-0.6**
	comp=Z,28nm,0.7s,mb5.0						
MKAR	**Makanchi Array**	**42.27**	**60**	P	**P**	**19 08 45.4**	**+0.2**
	comp=Z,1.2nm,0.5s,mb3.8,baz=277,slow=6.7,SNR=8.3						
ZALV	**Zalesovo Beam**	**42.89**	**49**	P	**P**	**19 08 49.9**	**-0.2**
	comp=Z,1.7nm,0.6s,mb4.0,baz=271,slow=8.1,SNR=7.2						
KSRS	**Korea Array**	**76.45**	**53**	P	**P**	**19 12 41.2**	**-0.5**
	comp=Z,1.3nm,0.7s,mb4.0,baz=310,slow=4.8,SNR=6.7						
KSRS	**Korea Array**	**76.45**	**53**	P	**P**	**19 12 41.2**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						

*IDC **30** 19:50:49.7±0.8, 6.48S×15.376E, h0km, mb4.1/14, mb1 4.2/14, mb1mx4.1/19, mbtmp4.1/14, MS3.2/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=30.9km s-min=17.2km az=107.0*

*NEIC **30** 19:50:54.8±0.5, 6.50S×15.378E, h35km, mb4.4/4, Error ellipse: s-maj=17.0km s-min=8.3km az=117.0*

*ISCJB **30** 19:50:55.2±3.6, 6.5S±0.1×153.6E±0.2, h48km±29km, mb4.1/18, Error ellipse: s-maj=30.4km s-min=16.8km az=5.5*

ISC 30 19:50:58.2±3.1, 6.5S±0.1×153.6E±0.2, h61km±25km, n30, σ0s84/24, mb4.1/18, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.99**	**245**	*e*Pn		**Pn**		**19 52 38.2**	**+0.3**
	61nm,0.7s								
CTA	**Charters Tower**	**15.24**	**207**	Pn		**Pn**		**19 54 30.9**	**+1.0**
	0.3nm,0.3s,baz=35,slow=16,SNR=6.0								
CTA				LR		LR		19 59 08.9	
	comp=Z,99nm,21.6s,baz=59,slow=32								
KAKA	**Kakadu**	**21.73**	**252**	*e*P		**P**		**19 55 43.3**	**-1.4**
	7.7nm,0.9s,mb4.1								
KAKA	**Kakadu**	**21.73**	**252**	*e*P		**P**		**19 55 41.4**	**-3.3**
WRAB	**Tennant Creek**	**22.95**	**233**	*e*P		**P**		**19 55 56.4**	**-1.1**
	3.0nm,0.7s,mb3.8								
WB2	**Warramunga Arr**	**22.95**	**233**	*e*P		**P**		**19 55 57.0**	**-0.6**
WRA	**Warramunga Arr**	**22.96**	**233**	P		**P**		**19 55 57.4**	**-0.3**
	0.5nm,0.4s,mb3.3,baz=58,slow=9.1,SNR=18								
WRA				PcP		PcP		19 59 47.3	+1.2
	0.5nm,0.8s,baz=62,slow=2.4,SNR=4.9								
ASAR	**Alice Springs**	**25.47**	**226**	P		**P**		**19 56 21.4**	**+0.7**
	2.3nm,0.5s,mb4.0,baz=58,slow=9.2,SNR=89								
STKA	**Stephens Creek**	**27.60**	**202**	P		**P**		**19 56 39.4**	**-0.5**
	0.8nm,0.5s,mb3.6,baz=358,slow=15,SNR=4.0								
FITZ	**Fitzroy Crossi**	**29.58**	**245**	*e*P		**P**		**19 56 57.2**	**-0.5**
	4.9nm,0.6s,mb4.4								
FITZ	**Fitzroy Crossi**	**29.58**	**245**	P		**P**		**19 56 57.7**	**0.0**
	2.6nm,0.6s,mb4.1,baz=80,slow=10,SNR=14								
KSRS	**Korea Array**	**49.89**	**333**	P		**P**		**19 59 45.5**	**-0.1**
	0.6nm,0.6s,mb3.8,baz=140,slow=7.4,SNR=4.8								
CMAR	**Chiang Mai Arr**	**59.33**	**296**	P		**P**		**20 00 55.8**	**+1.4**
	0.4nm,0.5s,mb3.7,baz=125,slow=5.2,SNR=4.3								
PETK	**Petropavlovsk-**	**59.51**	**3**	P		**P**		**20 00 53.4**	**-1.6**
	3.1nm,0.8s,mb4.4,baz=150,slow=3.5,SNR=4.1								
ULN	**Ulaanbaatar**	**67.87**	**328**	*e*P		**P**		**20 01 50.8**	**+0.6**
	2.8nm,1.0s,mb4.2								
SONM	**Songino Array**	**68.20**	**328**	P		**P**		**20 01 53.5**	**+1.3**
	1.5nm,0.6s,mb4.2,baz=146,slow=5.3,SNR=12								
MK31	**Makanchi Array**	**82.14**	**319**	*e*P		**P**		**20 03 12.2**	**-0.3**
MKAR	**Makanchi Array**	**82.14**	**319**	P		**P**		**20 03 12.4**	**0.0**
	1.1nm,0.7s,mb3.9,baz=96,slow=7.8,SNR=12								
ZALV	**Zalesovo Beam**	**83.02**	**326**	P		**P**		**20 03 16.4**	**-0.4**
	1.6nm,0.4s,mb4.4,baz=116,slow=5.6,SNR=8.6								
QSPA	**South Pole Qui**	**83.44**	**180**	P		**P**		**20 03 19.4**	**+0.8**
	0.6nm,0.6s,mb3.8,baz=304,slow=0.6,SNR=4.9								
KURK	**Kurchatov**	**85.61**	**322**	P		**P**		**20 03 30.1**	**0.0**
	0.9nm,0.4s,mb4.4,baz=96,slow=5.2,SNR=3.7								
AML	**Almayashu**	**86.90**	**313**	*e*P		**P**		**20 03 37.8**	**+1.2**
	5.7nm,1.2s,mb4.7								
BVAR	**Borovoye Array**	**91.09**	**323**	P		**P**		**20 03 55.6**	**-0.5**
	1.6nm,0.7s,mb4.5,baz=100,slow=6.2,SNR=8.1								
NVAR	**Mina Array Bea**	**92.53**	**52**	P		**P**		**20 04 02.5**	**-0.6**
	1.0nm,0.8s,mb4.3,baz=241,slow=6.6,SNR=4.4								
GERES	**GERESS Array B**	**125.93**	**328**	PKP		PKPdf		20 09 54.3	+0.9
	0.2nm,0.5s,baz=71,slow=4.3,SNR=2.7								
GERES	**GERESS Array B**	**125.93**	**328**	PKP		PKPdf		20 09 54.3	+0.9
LPAZ	**La Paz**	**132.90**	**119**	PKP		PKPdf		20 10 09.1	+1.5
	0.6nm,0.4s,baz=233,slow=5.1,SNR=3.7								
LPAZ	**La Paz**	**132.90**	**119**	*e*PKPdf		PKPdf		20 10 06.7	-0.9
LPAZ				PKP		PKPdf		20 10 09.1	+1.5
MDT	**Midelt**	**146.91**	**325**	PKPbc		PKPbc		20 10 35.2	+0.8
	0.6nm,0.5s,baz=165,slow=1.9,SNR=4.0								
TORD	**Torodi Ar. Bea**	**151.56**	**286**	PKPbc		PKPbc		20 10 46.9	+0.3
	2.6nm,0.8s,baz=39,slow=2.4,SNR=21								

*ISCJB **30** 20:09:32.9±0.4, 1152S±0.04×3043E±0.07, h10km, mb3.9/8, MS3.9/4, Error ellipse: s-maj=10.2km s-min=5.2km az=24.3*

*IDC **30** 20:09:34.0±0.9, 1146S×3040E, h0km, mb3.9/7, mb1 4.2/11, mb1mx3.9/25, mbtmp4.1/11, ML3.8/4, MS3.5/8, Ms1 3.6/8, ms1mx3.2/33, Error ellipse: s-maj=19.8km s-min=16.5km az=38.0*

*NEIC **30** 20:09:34.5±0.5, 1157S×3036E, h10km, mb4.2/4, Error ellipse: s-maj=13.5km s-min=9.0km az=115.0*

*PRE **30** 20:09:51.1±1.7, 1282S×2976E, h10km, mb4.4*

ISC 30 20:09:35.1±0.4, 1152S±0.004×3036E±0.007, h10km, n33, σ1s12/43, mb3.9/8, MS3.9/4, Zambia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**4.29**	**209**	Pn		**Pn**		**20 10 42.6**	**+2.1**
	6.4nm,0.3s,baz=20,slow=16,SNR=148								
LSZ				Sn		**Sn**		**20 11 30.7**	**0.0**
	67nm,0.3s,baz=126,slow=23,SNR=20								
LSZ				LR		LR		20 12 32.4	
	comp=Z,250nm,19.1s,baz=184,slow=41								
LSZ	**Lusaka**	**4.29**	**209**	*e*Pn		**Pn**		**20 10 40.7**	**+0.2**
LSZ				*e*Sn		**Sn**		**20 11 31.6**	**+0.9**
LSZ				LR		LR		20 12 32.4	
MSNA	**Messina**	**10.77**	**182**	*e*P		**Pn**		**20 12 10.2**	**+0.8**
MSNA				AMb		AMB		20 12 24.6	
	comp=Z,24nm,0.6s								
MSNA				*e*S		**Sn**		**20 13 53.2**	**-17**
KMBO	**Kilima Mbogo**	**12.39**	**34**	Pn		**Pn**		**20 12 29.9**	**-1.7**
	comp=Z,2.5nm,0.3s,baz=218,slow=17,SNR=28								
KMBO				Sn		**Sn**		**20 14 51.1**	**+1.2**
	comp=Z,2.8nm,0.3s,baz=108,slow=20,SNR=4.5								
KMBO				Lg				20 16 02.5	
	comp=Z,1.1nm,0.3s,baz=248,slow=21,SNR=6.5								
KMBO	**Kilima Mbogo**	**12.39**	**34**	*e*Pn		**Pn**		**20 12 29.6**	**-2.1**
	comp=Z,5.4nm,0.4s								
KMBO				*e*Sn		**Sn**		**20 14 50.0**	**+0.1**
KMBO				Lg				20 16 02.5	
LBTB	**Lobatse**	**14.16**	**198**	Pn		**Pn**		**20 12 53.6**	**-2.3**
	comp=Z,0.7nm,0.3s,baz=29,slow=13,SNR=20								
LBTB				Sn		**Sn**		**20 15 25.1**	**-8.0**
	comp=Z,3.1nm,0.3s,baz=143,slow=11,SNR=7.1								
LBTB				LR		LR		20 18 36.2	
	comp=Z,102nm,19.9s,baz=280,slow=38								
LBTB	**Lobatse**	**14.16**	**198**	*e*Pn		**Pn**		**20 12 53.0**	**-2.8**
	comp=Z,11nm,0.6s								
LBTB	**Lobatse**	**14.16**	**198**	*e*P		**Pn**		**20 12 54.6**	**-1.2**
LBTB				AMb		AMB		20 13 04.2	
	comp=Z,25nm,2.4s								
LBTB				*e*S		Sn		20 15 07.8	-25
TSUM	**Tsumeb**	**14.49**	**237**	Pn		**Pn**		**20 12 59.3**	**-1.1**
	comp=Z,5.4nm,0.3s,baz=33,slow=13,SNR=62								
TSUM				Sn		**Sn**		**20 15 30.6**	**-11**
	comp=Z,2.3nm,0.3s,baz=312,slow=2,SNR=5.3								
TSUM				Lg				20 17 23.6	
	comp=Z,0.9nm,0.3s,baz=167,slow=0.9,SNR=4.0								
TSUM				LR		LR		20 18 55.9	
	comp=Z,83nm,20.9s,baz=295,slow=39								
TSUM	**Tsumeb**	**14.49**	**237**	*e*Pn		**Pn**		**20 12 58.2**	**-2.2**
	comp=Z,16nm,0.6s								
TSUM				*e*Sn		**Sn**		**20 15 28.0**	**-13**
TSUM				Lg				20 17 23.6	
TSUM				LR		LR		20 18 55.9	
KSR	**Koster**	**14.63**	**192**	*e*P		**Pn**		**20 13 01.3**	**-0.9**
KSR				AMb		AMB		20 13 12.4	
	comp=Z,24nm,1.4s								
PRYS	**Parys**	**15.58**	**190**	*e*P		**Pn**		**20 13 14.4**	**-0.5**
PRYS				AMb		AMB		20 13 21.8	
	comp=Z,27nm,1.7s								
PRYS				*e*S		Sn		20 15 44.2	-24
POGA	**Pongola**	**15.81**	**176**	*e*P		**Pn**		**20 13 19.0**	**+1.0**
POGA				AMb		AMB		20 14 04.9	
	comp=Z,48nm,1.8s								
POGA				*e*S		**Sn**		**20 15 52.8**	**-20**
SWZ	**Schweizer**	**16.28**	**196**	*e*P		**Pn**		**20 13 24.7**	**+0.7**
SEK	**Senekal**	**16.91**	**188**	*e*P		**Pn**		**20 13 32.3**	**+0.3**
SEK				AMb		AMB		20 13 45.3	
	comp=Z,48nm,1.7s								
BOSA	**Boshof**	**17.66**	**195**	P		**Pn**		**20 13 37.9**	**-3.5**
	comp=Z,0.4nm,0.3s,baz=277,slow=6.6,SNR=9.1								
BOSA				S		**Sn**		**20 16 45.8**	**-12**
	comp=Z,1.1nm,0.3s,baz=128,slow=16,SNR=5.0								
BOSA				LR		LR		20 20 07.2	
	comp=Z,95nm,21.3s,baz=341,slow=36								
BOSA	**Boshof**	**17.66**	**195**	*e*Pn		**Pn**		**20 13 39.0**	**-2.4**
	comp=Z,5.3nm,0.6s								
BOSA				*e*Sn		**Sn**		**20 16 40.6**	**-18**
BOSA				LR		LR		20 20 07.2	
BOSA	**Boshof**	**17.66**	**195**	*e*P		**Pn**		**20 13 42.7**	**+1.3**
BOSA				AMb		AMB		20 13 56.4	
	comp=Z,27nm,1.4s								
OPO	**Ambohidratompo**	**17.69**	**115**	P		**Pn**		**20 13 42.5**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=285,slow=12,SNR=12								
OPO				S		**Sn**		**20 17 02.4**	**+3.4**
	comp=Z,0.4nm,0.3s,baz=23,slow=14,SNR=2.9								
ABPO	**Ambohimpanom**	**17.89**	**117**	*e*Pn		**Pn**		**20 13 43.5**	**-0.7**
	comp=Z,24nm,1.1s								
ABPO				*e*Sn		**Sn**		**20 16 56.0**	**-7.8**
PKA	**Prieska**	**19.40**	**200**	*e*P		**Pn**		**20 14 05.8**	**+3.3**
PKA				AMb		AMB		20 14 14.6	
	comp=Z,32nm,1.9s								
SUR	**Sutherland**	**22.55**	**201**	P		**P**		**20 14 35.7**	**+0.4**
	comp=Z,12nm,1.0s,mb4.3,baz=231,slow=8.1,SNR=2.8								
SUR				LR		LR		20 23 41.3	
	comp=Z,61nm,20.5s,MS3.0,baz=234,slow=38								
SUR	**Sutherland**	**22.55**	**201**	*e*P		**P**		**20 14 35.7**	**+0.4**
	comp=Z,13nm,0.7s,mb4.5								
TORD	**Torodi Ar. Bea**	**37.54**	**310**	P		**P**		**20 16 51.1**	**+1.3**
	comp=Z,0.6nm,0.6s,mb3.5,baz=124,slow=9.0,SNR=6.6								
BR131	**Keskin Array S**	**51.07**	**3**	*e*P		**P**		**20 18 37.5**	**-0.2**
	comp=Z,1.9nm,0.7s,mb4.1								
GERES	**GERESS Array B**	**61.88**	**348**	P		**P**		**20 19 55.4**	**+0.9**
	comp=Z,0.6nm,0.7s,mb3.8,baz=164,slow=6.9,SNR=6.2								
AKASG	**Malin Array Be**	**61.96**	**359**	P		**P**		**20 19 54.8**	**-0.2**
	comp=Z,1.3nm,0.5s,mb4.3,baz=183,slow=6.6,SNR=6.9								
EKA	**Eskdalemuir Ar**	**72.30**	**341**	P		**P**		**20 21 01.4**	**+0.7**
	comp=Z,1.2nm,0.9s,mb3.8,baz=124,slow=5.2,SNR=4.1								
CMAR	**Chiang Mai Arr**	**73.90**	**67**	P		**P**		**20 21 10.2**	**-0.7**
	comp=Z,0.6nm,0.9s,mb3.5,baz=251,slow=8.9,SNR=4.2								
MKAR	**Makanchi Array**	**74.27**	**34**	P		**P**		**20 21 12.0**	**-0.5**
	comp=Z,1.0nm,0.8s,mb3.8,baz=224,slow=5.1,SNR=4.6								
CFAA	**Coronel Fontan**	**91.23**	**238**	LR		LR		20 58 14.6	
	comp=Z,30nm,20.1s,MS3.7,baz=236,slow=32								
LVC	**Limon Verde**	**94.02**	**246**	LR		LR		20 59 26.8	
	comp=Z,166nm,19.3s,MS4.5,baz=233,slow=32								
LPAZ	**La Paz**	**94.80**	**252**	LR		LR		21 01 42.6	
	comp=Z,151nm,21.6s,MS4.4,baz=108,slow=33								

*IDC **30** 20:11:32.7±0.9, 1600S×175.14W, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.1/15, mbtmp4.0/7, MS4.6/15, Ms1 4.5/15, ms1mx4.4/20, Error ellipse: s-maj=64.0km s-min=20.6km az=147.0*

*ISCJB **30** 20:11:33.4±0.6,

VYHS	**Vyhne**	**144.79**	**344**	*e*PKP	PKPdf	20 31 14.3	+5.6
KOLL	**Kolacno**	**144.82**	**344**	*e*PKP	PKPdf	20 31 17.7	+8.9
KOLL	**Kolacno**	**144.82**	**344**	*e*PKP	PKPdf	20 31 17.7	+8.9
TREC	**Trest**	**144.83**	**348**	*e*PKP	PKPdf	20 31 14.5	+5.7
MLR	**Muntele Rosu**	**144.90**	**334**	PKPbc	PKPdf	20 31 15.3	+6.2
	4.2nm,1.0s,baz=122,slow=2.1,SNR=7.2						
MLR	**Muntele Rosu**	**144.90**	**334**	PKPbc	PKPdf	20 31 15.3	+6.2
GIVF	**Givet**	**145.12**	**0**	*e*PKP1	PKPbc	20 31 14.5	+5.7
	40nm,1.2s						
GRA1	**Grafenberg Arr**	**145.14**	**353**	*e*PKP	PKPdf	20 31 15.3	+6.0
GRF	**Grafenberg Arr**	**145.14**	**353**	*e*PKP	PKPdf	20 31 15.3	+6.0
BAIF	**Baives**	**145.16**	**1**	*e*PKP1	PKPbc	20 31 14.9	+6.0
	89nm,1.6s						
MODS	**Modra-Piesok**	**145.30**	**345**	*e*PKP	PKPbc	20 31 17.3	+7.9
MODS	**Modra-Piesok**	**145.30**	**345**	*e*PKP	PKPbc	20 31 17.3	+7.9
KHC	**Kasperske Hory**	**145.34**	**350**	*e*PKP	PKPbc	20 31 16.3	+6.8
KHC				*ex*	x	20 31 19.8	
ZST	**Bratislava**	**145.51**	**345**	*e*PKP	PKPbc	20 31 18.5	+8.4
ZST				LR	LR		
	comp=Z,100nm,22.5s,MS4.5						
GERES	**GERESS Array B**	**145.60**	**350**	PKPbc	PKPbc	20 31 17.3	+7.0
	comp=Z,1.6nm,1.0s,baz=64,slow=3.1,SNR=13						
FLN	**La Foliniere**	**146.18**	**6**	*e*PKP1	PKPbc	20 31 18.7	+6.6
FLN				*e*MLR	MLR		
	comp=Z,309nm,21.2s,MS4.8						
FLN	**La Foliniere**	**146.18**	**6**	*e*PKP	PKPbc	20 31 18.7	+6.6
FLN				LR	LR		
	comp=Z,310nm,21.3s,MS5.1						
MEZF	**Maizieres J'vi**	**146.72**	**360**	*e*PKP1	PKPbc	20 31 19.2	+5.5
CDF	**Champ du Feu**	**146.75**	**357**	*e*PKP1	PKPbc	20 31 19.5	+5.7
	comp=Z,43nm,1.4s						
HAU	**Haudompre**	**147.19**	**358**	*e*PKP1	PKPbc	20 31 20.8	+5.7
	comp=Z,31nm,1.4s						
HAU				*e*MLR	MLR		
	comp=Z,389nm,22.0s,MS4.8						
HAU	**Haudompre**	**147.19**	**358**	*e*PKP	PKPbc	20 31 20.8	+5.7
HAU				LR	LR		
	comp=Z,390nm,22.0s,MS5.2						
HINF	**Hinteralfeld**	**147.36**	**357**	*e*PKP1	PKPbc	20 31 21.0	+5.4
LOR	**Lormes**	**147.94**	**1**	*e*PKP1	PKPbc	20 31 22.6	+5.4
	comp=Z,16nm,1.2s						
LOR				*e*MLR	MLR		
	comp=Z,482nm,20.2s,MS5.0						
LOR	**Lormes**	**147.94**	**1**	*e*PKP	PKPbc	20 31 22.6	+5.4
LOR				LR	LR		
	comp=Z,480nm,20.3s,MS5.3						
SSF	**Saint Saulge**	**148.14**	**2**	*e*PKP1	PKPbc	20 31 23.4	+5.7
	comp=Z,64nm,1.6s						
AVF	**Avril sur Loir**	**148.41**	**2**	*e*PKP1	PKPbc	20 31 23.8	+5.4
	comp=Z,37nm,1.6s						
CABF	**La Chapelle**	**148.60**	**358**	*e*PKP1	PKPbc	20 31 25.0	+6.1
	comp=Z,20nm,1.0s						
BGF	**Bois d'Agland**	**148.62**	**3**	*e*PKP1	PKPbc	20 31 24.4	+5.4
	comp=Z,19nm,1.0s						
TCF	**Toulx Ste Croi**	**148.86**	**4**	*e*PKP1	PKPbc	20 31 25.1	+5.5
	comp=Z,40nm,1.5s						
LPL	**La Plagne**	**149.67**	**357**	*e*PKP1	PKPbc	20 31 27.5	+5.9
LPG	**La Plagne**	**149.68**	**357**	*e*PKP1	PKPbc	20 31 28.3	+6.6
	comp=Z,22nm,1.3s						
TORD	**Torodi Ar. Bea**	**176.37**	**122**	PKP	PKPdf	20 31 47.2	+4.2
	comp=Z,0.9nm,1.1s,baz=257,slow=1.0,SNR=3.8						
TORD	**Torodi Ar. Bea**	**176.37**	**122**	PKP	PKPdf	20 31 47.2	+4.2

*ISCJB **30** 20:14:22.6±0.4, 3702N±003×228W±002, h14km±2km, Error ellipse: s-maj=5.0km s-min=2.8km az=157.7*
*LDG **30** 20:14:23.8±0.3, 3693N×2.18W, h5km, Ml3.3/4, Error ellipse: s-maj=6.1km s-min=3.6km az=151.0*
*NEIC **30** 20:14:23.5, 3695N×2.15W, h8km, MN2.9(MDD), After MDD.*
NEIC Felt [IV] in the Nijar area, Spain.
*MDD **30** 20:14:23.0±0.5, 3688N×2.13W, h4km±2km, mbLg2.8/36, Error ellipse: s-maj=5.0km s-min=2.6km az=145.0, PRIMO*
MDD EMS: IV INTENSIDAD MIMA.
*CSEM **30** 20:14:24.0±0.1, 3687N×208W, h12km, ML3.5/12, Error ellipse: s-maj=2.5km s-min=1.3km az=165.0*
*INMG **30** 20:14:24.9±1.4, 3682N×222W, h23km±3km, ML2.9, Error ellipse: s-maj=4.2km s-min=3.2km az=140.0*

ISC 30 20:14:23.3±0.4, **3702N**±002×**226W**±002, **h6**km±2km, **n144,** σ1**s37**/234, **12C-1D, Spain**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENIJ	**Nijar**	**0.07**	**138**	⇑Pg	**Pg**	**20 14 25.1**	**+0.2**
	156nm,0.2s,SNR=18						
EBER	**Berja**	**0.52**	**257**	⇑Pg	**Pg**	**20 14 34.4**	**+1.1**
	571nm,0.2s,SNR=18						
EBER				Lg		20 14 43.0	
	1μm,0.2s,SNR=5.0						
EBER	**Berja**	**0.52**	**257**	Pg	**Pg**	**20 14 34.4**	**+1.1**
	571nm,0.2s,SNR=18						
EBER	**Berja**	**0.52**	**257**	⇑Pg	**Pg**	**20 14 34.4**	**+1.1**
EBER				Lg		20 14 43.5	
EHUE	**Huescar**	**0.84**	**342**	⇓Pg	**Pg**	**20 14 40.2**	**+0.9**
	3.6nm,0.1s,SNR=18						
EHUE				Lg		20 14 52.2	
	39nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**0.96**	**281**	Pg	**Pg**	**20 14 42.6**	**+0.9**
	3.5nm,0.1s,SNR=142						
EQUE				Lg		20 14 55.0	
	93nm,0.2s,SNR=13						
EQES	**Quesada**	**1.01**	**321**	⇑Pg	**Pg**	**20 14 45.0**	**+2.3**
	3.6nm,0.2s,SNR=18						
EQES				Lg		20 14 59.7	
	63nm,0.2s,SNR=12						
EQES	**Quesada**	**1.01**	**321**	Pg	**Pg**	**20 14 45.0**	**+2.3**
	3.6nm,0.2s,SNR=18						
EQES	**Quesada**	**1.01**	**321**	⇑Pg	**Pg**	**20 14 45.0**	**+2.3**
EQES				Lg		20 14 59.6	
EGUA	**Guajares**	**1.06**	**260**	⇑Pg	**Pg**	**20 14 43.9**	**+0.3**
	44nm,0.3s,SNR=18						
EGUA				Lg		20 14 59.4	
	168nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.07**	**284**	⇑Pg	**Pg**	**20 14 44.8**	**+0.9**
	1.7nm,0.1s,SNR=18						
ECOG				Lg		20 15 01.0	
	162nm,0.3s,SNR=34						
ECOG	**Cogollos-Vega**	**1.07**	**284**	⇑Pg	**Pg**	**20 14 44.8**	**+1.0**
ECOG				Lg		20 15 01.8	
CART	**Cartagena**	**1.15**	**60**	*e*P	**Pg**	**20 14 42.2**	**-3.2**
CART				*e*S	**Sg**	**20 14 57.9**	**-2.5**
CART	**Cartagena**	**1.15**	**60**	*e*P	**Pg**	**20 14 42.2**	**-3.3**
CART				*e*S	**Sg**	**20 14 57.9**	**-2.5**
EMUR	**La Murta**	**1.16**	**44**	⇑Pg	**Pg**	**20 14 44.2**	**-1.3**
	77nm,0.3s,SNR=18						
EMUR				Lg		20 14 59.5	
	112nm,0.2s,SNR=9.9						
EMUR	**La Murta**	**1.16**	**44**	Pg	**Pg**	**20 14 44.2**	**-1.3**
	77nm,0.3s,SNR=18						
ERON	**Agron**	**1.23**	**270**	Pg	**Pg**	**20 14 47.2**	**+0.2**
	1.1nm,0.1s,SNR=7.9						
ERON				Lg		20 15 05.2	
	58nm,0.3s,SNR=7.9						
ERON	**Agron**	**1.23**	**270**	Pg	**Pg**	**20 14 47.2**	**+0.2**
ERON				Lg		20 15 07.2	
EALB	**Alboran**	**1.25**	**210**	Pg	**Pg**	**20 14 44.6**	**-2.5**
	12nm,0.2s,SNR=30						
EALB				Lg		20 15 00.6	
	154nm,0.1s,SNR=9.0						
EALB	**Alboran**	**1.25**	**210**	Pg	**Pg**	**20 14 44.6**	**-2.6**
	2.4nm,0.2s,SNR=30						
EALB	**Alboran**	**1.25**	**210**	Pg	**Pg**	**20 14 44.6**	**-2.5**
EALB				Lg		20 15 02.5	
ELOJ	**Sierra Loja**	**1.52**	**275**	Pg	**Pg**	**20 14 53.5**	**+1.2**
	0.4nm,0.1s,SNR=32						
ELOJ				Lg		20 15 14.3	
	12nm,0.2s,SNR=7.7						
ELOJ	**Sierra Loja**	**1.52**	**275**	Pg	**Pg**	**20 14 53.5**	**+1.2**
ELOJ				Lg		20 15 16.2	
EVIA	**Vianos**	**1.63**	**353**	⇑Pn	**Pn**	**20 14 54.1**	**+1.7**
	4.2nm,0.2s,SNR=18						
EVIA				Pg	**Pg**	**20 14 55.4**	**+0.9**
	61nm,0.2s,SNR=6.1						
EVIA				Sn	**Sn**	**20 15 17.6**	**+3.9**
	37nm,0.2s,SNR=20						
EVIA	**Vianos**	**1.63**	**353**	Pg	**Pg**	**20 14 56.1**	**+1.6**
	128nm,0.2s,SNR=6.1						
EVIA	**Vianos**	**1.63**	**353**	Pn	**Pn**	**20 14 54.1**	**+1.7**
EVIA				Pg	**Pg**	**20 14 56.1**	**+1.6**
EVIA				Lg		20 15 18.0	
EBAN	**Banos Encina**	**1.66**	**314**	Pn	**Pn**	**20 14 54.2**	**+1.2**
	1.5nm,0.1s,SNR=144						
EBAN				Pg	**Pg**	**20 14 55.5**	**+0.3**
	57nm,0.2s,SNR=8.9						
EBAN				Sn	**Sn**	**20 15 18.4**	**+3.8**
	216nm,0.4s,SNR=16						
EBAN	**Banos Encina**	**1.66**	**314**	Pg	**Pg**	**20 14 56.3**	**+1.1**
	57nm,0.2s,SNR=8.9						
EBAN	**Banos Encina**	**1.66**	**314**	Pn	**Pn**	**20 14 54.2**	**+1.3**
EBAN				Pg	**Pg**	**20 14 56.3**	**+1.1**
EBAN				Lg		20 15 19.5	
ELUQ	**Luque**	**1.69**	**289**	Pn	**Pn**	**20 14 55.2**	**+2.0**
	1.2nm,0.2s,SNR=7.9						
ELUQ				Pg	**Pg**	**20 14 57.1**	**+1.5**
	5.1nm,0.2s,SNR=7.9						
ELUQ				Lg		20 15 21.1	
	63nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**1.69**	**289**	Pn	**Pn**	**20 14 55.0**	**+1.8**
	1.2nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**1.69**	**289**	Pg	**Pg**	**20 14 58.1**	**+2.5**
	5.1nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**1.69**	**289**	Pn	**Pn**	**20 14 55.0**	**+1.7**
ELUQ				Pg	**Pg**	**20 14 58.1**	**+2.4**
ELUQ				Lg		20 15 22.2	
ETOB	**Tobarra**	**1.72**	**19**	⇑Pn	**Pn**	**20 14 53.7**	**+0.1**
	2.2nm,0.1s,SNR=18						
ETOB				Pg	**Pg**	**20 14 56.7**	**+0.5**
	12nm,0.1s,SNR=9.8						
ETOB				Sn	**Sn**	**20 15 16.5**	**+0.6**
	35nm,0.3s,SNR=5.0						
ETOB				Lg		20 15 20.2	
	86nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**1.72**	**19**	Pn	**Pn**	**20 14 53.7**	**0.0**
	2.2nm,0.1s,SNR=18						
ETOB	**Tobarra**	**1.72**	**19**	Pg	**Pg**	**20 14 57.0**	**+0.8**
	6.0nm,0.1s,SNR=9.8						
ETOB	**Tobarra**	**1.72**	**19**	⇑Pn	**Pn**	**20 14 53.7**	**+0.1**
ETOB				Pg	**Pg**	**20 14 57.0**	**+0.8**
ETOB				Lg		20 15 19.9	
EMIJ	**Mijas**	**2.07**	**258**	Pn	**Pn**	**20 14 57.3**	**-1.1**
	0.9nm,0.1s,SNR=22						
EMIJ				Pg	**Pg**	**20 15 02.0**	**-0.9**
	5.0nm,0.1s,SNR=7.9						
EMIJ				Sn	**Sn**	**20 15 23.8**	**-0.7**
	39nm,0.3s,SNR=7.9						
ZAI	**Zaio**	**2.08**	**191**	P	**Pn**	**20 14 52.0**	**-6.7**
ZAI				S	**Sn**	**20 15 23.0**	**-1.9**
EADA	**Adamuz**	**2.17**	**303**	Pn	**Pn**	**20 15 01.1**	**+1.3**
	0.5nm,0.1s,SNR=38						
EADA				Pg	**Pg**	**20 15 05.5**	**+0.7**
	11nm,0.2s,SNR=7.4						
EADA				Sn	**Sn**	**20 15 29.3**	**+2.4**
	20nm,0.3s,SNR=5.3						
EADA				Lg		20 15 36.6	
	169nm,0.3s,SNR=12						
EADA	**Adamuz**	**2.17**	**303**	Pn	**Pn**	**20 15 01.1**	**+1.3**
	0.5nm,0.1s,SNR=38						
EADA	**Adamuz**	**2.17**	**303**	Pg	**Pg**	**20 15 06.1**	**+1.3**
	1.5nm,0.1s,SNR=7.4						
EADA				Sn	**Sn**	**20 15 29.3**	**+2.4**
	56nm,0.5s,SNR=5.3						
EADA	**Adamuz**	**2.17**	**303**	Pn	**Pn**	**20 15 01.1**	**+1.3**
EADA				Pg	**Pg**	**20 15 06.1**	**+1.3**
EADA				Sn	**Sn**	**20 15 29.4**	**+2.4**
EADA				Lg		20 15 36.6	
EBEN	**Beniarda**	**2.33**	**43**	Pn	**Pn**	**20 15 00.1**	**-2.0**
	3.8nm,0.2s,SNR=39						
EBEN				Pg	**Pg**	**20 15 07.4**	**-0.5**
	11nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**2.33**	**43**	Pn	**Pn**	**20 15 00.0**	**-2.1**
	3.8nm,0.2s,SNR=39						
EBEN	**Beniarda**	**2.33**	**43**	Pn	**Pn**	**20 14 60.0**	**-2.1**
EJIF	**Jimena Fronter**	**2.64**	**259**	Pn	**Pn**	**20 15 06.0**	**-0.3**
	0.6nm,0.2s,SNR=7.9						
EJIF				Pg	**Pg**	**20 15 12.6**	**-1.2**
	6.8nm,0.4s,SNR=7.9						
EJIF	**Jimena Fronter**	**2.64**	**259**	Pg	**Pg**	**20 15 13.3**	**-0.5**
	0.2nm,0.1s,SNR=7.9						
EJIF	**Jimena Fronter**	**2.64**	**259**	Pn	**Pn**	**20 15 06.0**	**-0.3**
EJIF				Pg	**Pg**	**20 15 13.3**	**-0.5**
ECEU	**Ceuta**	**2.75**	**247**	Pn	**Pn**	**20 15 07.0**	**-0.8**
	0.7nm,0.0s,SNR=5.2						
ECEU				Sn	**Sn**	**20 15 39.9**	**-1.4**
	3.4nm,0.2s,SNR=7.9						
ECEU	**Ceuta**	**2.75**	**247**	Pn	**Pn**	**20 15 07.4**	**-0.4**
	0.5nm,0.0s,SNR=5.2						
ECHE	**Chera**	**2.76**	**21**	Pn	**Pn**	**20 15 08.3**	**+0.2**
	0.3nm,0.2s,SNR=13						
ECHE				Pg	**Pg**	**20 15 13.8**	**-2.4**
	3.1nm,0.3s,SNR=5.4						
ECHE				Lg		20 15 53.2	
	5.5nm,1.0s,SNR=6.1						
ECHE	**Chera**	**2.76**	**21**	Pg	**Pg**	**20 15 13.7**	**-2.5**
	12nm,0.7s,SNR=5.4						
ECHE	**Chera**	**2.76**	**21**	Pn	**Pn**	**20 15 08.3**	**+0.3**
ECHE				Pg	**Pg**	**20 15 13.7**	**-2.5**
ECHE				Lg		20 15 53.5	
ESPR	**Espera**	**2.88**	**268**	Pn	**Pn**	**20 15 12.8**	**+3.1**
	0.1nm,0.1s,SNR=11						
ESPR				Pg	**Pg**	**20 15 19.0**	**+0.5**
	28nm,0.8s,SNR=11						
ESPR				Lg		20 15 59.7	
	15nm,0.6s,SNR=7.9						
ESPR	**Espera**	**2.88**	**268**	Pn	**Pn**	**20 15 12.8**	**+3.1**
	19nm,0.7s,SNR=11						
ESPR	**Espera**	**2.88**	**268**	Pn	**Pn**	**20 15 12.8**	**+3.1**
ESPR				Pg	**Pg**	**20 15 20.4**	**+1.9**
ESDC	**Sonseca Array**	**2.97**	**334**	Pn	**Pn**	**20 15 11.0**	**+0.2**
	0.9nm,0.3s,baz=151,slow=14,SNR=25						
ESDC				Pg	**Pg**	**20 15 21.5**	**+1.3**
	8.4nm,0.3s,baz=152,slow=18,SNR=53						
ESDC				Lg		20 16 01.8	
	8.3nm,0.3s,baz=152,slow=32,SNR=13						
ESDC	**Sonseca Array**	**2.97**	**334**	Pn	**Pn**	**20 15 11.0**	**+0.1**
	0.9nm,0.3s,SNR=25						
ESDC	**Sonseca Array**	**2.97**	**334**	Pg	**Pg**	**20 15 21.5**	**+1.3**
	8.4nm,0.3s,SNR=53						
ESDC	**Sonseca Array**	**2.97**	**334**	Pn	**Pn**	**20 15 11.0**	**+0.2**
ESDC				Pg	**Pg**	**20 15 21.4**	**+1.3**
ESDC				Lg		20 16 01.8	
EIBI	**Ibiza**	**3.48**	**54**	Pn	**Pn**	**20 15 16.1**	**-1.8**
	17nm,0.2s,SNR=77						
EIBI				Sn	**Sn**	**20 15 54.9**	**-4.5**
	7.7nm,0.2s,SNR=5.0						
EIBI	**Ibiza**	**3.48**	**54**	Pn	**Pn**	**20 15 16.3**	**-1.6**
	17nm,0.2s,SNR=77						
EIBI				Sn	**Sn**	**20 15 54.7**	**-4.7**
	5.9nm,0.4s,SNR=5.0						
EIBI	**Ibiza**	**3.48**	**54**	Pn	**Pn**	**20 15 16.3**	**-1.6**
EIBI				Sn	**Sn**	**20 15 54.7**	**-4.7**
EMIN	**Mina Concepcio**	**3.59**	**283**	Pn	**Pn**	**20 15 19.6**	**+0.2**
	1.0nm,0.1s,SNR=19						
EMIN				Sn	**Sn**	**20 16 02.1**	**0.0**
	3.2nm,0.2s,SNR=7.9						
EMIN				Lg		20 16 20.5	
	11nm,0.3s,SNR=5.0						
EMIN	**Mina Concepcio**	**3.59**	**283**	Pn	**Pn**	**20 15 19.7**	**+0.3**
	2.1nm,0.4s,SNR=19						
EMIN				Sn	**Sn**	**20 16 04.2**	**+2.1**
	SNR=7.9						
EMIN	**Mina Concepcio**	**3.59**	**283**	Pn	**Pn**	**20 15 19.7**	**+0.3**
EMIN				Sn	**Sn**	**20 16 04.2**	**+2.1**
EMIN				Lg		20 16 20.1	
EMOS	**Mosqueruela**	**3.62**	**22**	Pn	**Pn**	**20 15 21.2**	**+1.4**
	0.0nm,0.1s,SNR=8.1						
EMOS				Lg		20 16 19.8	
	11nm,0.5s,SNR=4.0						
EMOS	**Mosqueruela**	**3.62**	**22**	Pn	**Pn**	**20 15 20.4**	**+0.6**
	2.3nm,0.6s,SNR=8.1						
EMOS	**Mosqueruela**	**3.62**	**22**	Pn	**Pn**	**20 15 20.4**	**+0.6**
EMOS				Lg		20 16 19.8	
ETOR	**Torete**	**3.80**	**2**	Pn	**Pn**	**20 15 23.4**	**+1.2**
	2.0nm,0.1s,SNR=13						
ETOR				Pg	**Pg**	**20 15 35.1**	**-0.9**
	11nm,0.2s,SNR=22						
ETOR				Lg		20 16 24.2	
	56nm,0.6s,SNR=8.9						
ETOR	**Torete**	**3.80**	**2**	Pg	**Pg**	**20 15 34.6**	**-1.4**
	2.6nm,0.2s,SNR=22						
ETOR	**Torete**	**3.80**	**2**	Pn	**Pn**	**20 15 23.4**	**+1.2**
ETOR				Pg	**Pg**	**20 15 34.6**	**-1.5**
ETOR				Lg		20 16 26.4	
GUD	**Guadarrama**	**3.91**	**338**	Pn	**Pn**	**20 15 24.9**	**+1.1**
	1.2nm,0.4s,SNR=6.5						
GUD				Pg	**Pg**	**20 15 37.5**	**-0.6**
	1.7nm,0.2s,SNR=14						
GUD				Lg		20 16 29.7	
	16nm,0.4s,SNR=5.2						
GUD	**Guadarrama**	**3.91**	**338**	Pg	**Pg**	**20 15 38.3**	**+0.2**
	1.7nm,0.2s,SNR=14						
GUD	**Guadarrama**	**3.91**	**338**	Pn	**Pn**	**20 15 24.9**	**+1.1**
GUD				Pg	**Pg**	**20 15 38.3**	**+0.2**
GUD				Lg		20 16 30.4	
PBAR	**Barrancos**	**3.96**	**288**	*e*Pn	**Pn**	**20 15 24.9**	**+0.3**
PBAR				*e*Sn	**Sn**	**20 16 09.4**	**-1.9**
PBAR				*e*Sg	**Sg**	**20 16 30.1**	**-0.5**
PBAR				A		20 16 42.5	
	18nm,0.5s						
PBAR	**Barrancos**	**3.96**	**288**	*e*Pn	**Pn**	**20 15 24.9**	**+0.3**
PBAR				*e*Sn	**Sn**	**20 16 09.4**	**-1.9**
PBAR				*e*Sg	**Sg**	**20 16 30.1**	**-0.5**
	18nm,0.5s						
EBAD	**Badajoz**	**4.14**	**296**	Pn	**Pn**	**20 15 28.4**	**+1.4**
	0.5nm,0.1s,SNR=8.7						
EBAD				Pg	**Pg**	**20 15 41.5**	**-1.1**
	4.4nm,0.2s,SNR=7.9						
EBAD				Sn	**Sn**	**20 16 15.0**	**-0.6**
	5.3nm,0.2s,SNR=6.2						
EBAD				Lg		20 16 37.3	
	21nm,0.2s,SNR=5.0						
EBAD	**Badajoz**	**4.14**	**296**	Pn	**Pn**	**20 15 29.2**	**+2.3**
	0.6nm,0.1s,SNR=8.7						
EBAD	**Badajoz**	**4.14**	**296**	Pn	**Pn**	**20 15 29.2**	**+2.3**
EBAD				Sn	**Sn**	**20 16 14.7**	**-0.9**
EBAD				Lg		20 16 37.3	
EGRO	**El Granado**	**4.20**	**279**	Pn	**Pn**	**20 15 27.7**	**0.0**
	0.8nm,0.1s,SNR=5.4						
EGRO				Lg		20 16 40.5	
	11nm,0.4s,SNR=4.0						
EGRO	**El Granado**	**4.20**	**279**	Pn	**Pn**	**20 15 28.1**	**+0.4**
	1.1nm,0.2s,SNR=5.4						
EGRO	**El Granado**	**4.20**	**279**	Pn	**Pn**	**20 15 28.1**	**+0.4**
EGRO				Lg		20 16 40.8	
PVAQ	**Vaqueiros**	**4.37**	**277**	*e*Pn	**Pn**	**20 15 30.3**	**+0.2**
PVAQ				*e*Sn	**Sn**	**20 16 18.6**	**-2.8**
PVAQ				*e*Sg	**Sg**	**20 16 41.0**	**-2.7**
PVAQ				A		20 16 55.3	
	10nm,0.8s						
PVAQ	**Vaqueiros**	**4.37**	**277**	*e*Pn	**Pn**	**20 15 30.3**	**+0.2**
PVAQ				*e*Sn	**Sn**	**20 16 18.6**	**-2.8**
PVAQ				*e*Sg	**Sg**	**20 16 41.0**	**-2.7**
	10nm,0.8s						
ERTA	**Horta de San J**	**4.42**	**26**	Pn	**Pn**	**20 15 30.8**	**-0.1**
	0.9nm,0.2s,SNR=6.1						
ERTA	**Horta de San J**	**4.42**	**26**	Pn	**Pn**	**20 15 31.2**	**+0.4**
	0.9nm,0.2s,SNR=6.1						
ERTA	**Horta de San J**	**4.42**	**26**	Pn	**Pn**	**20 15 31.2**	**+0.4**
PBDV	**Barranco-do-Ve**	**4.54**	**275**	*e*Pn	**Pn**	**20 15 35.6**	**+3.2**
PBDV				*e*Sn	**Sn**	**20 16 23.0**	**-2.4**
PBEJ	**Beja**	**4.57**	**284**	*e*Pn	**Pn**	**20 15 33.0**	**+0.2**
PBEJ				*e*Sn	**Sn**	**20 16 24.9**	**-1.3**
PESTR	**Estremoz**	**4.60**	**295**	*e*Pn	**Pn**	**20 15 34.0**	**+0.8**
PESTR				*e*Sn	**Sn**	**20 16 25.9**	**-1.0**
PESTR				*e*Sg	**Sg**	**20 16 50.7**	**-0.2**
PESTR				A		20 17 01.9	
	18nm,0.7s						
PESTR	**Estremoz**	**4.60**	**295**	*e*Pn	**Pn**	**20 15 34.0**	**+0.8**
PESTR				*e*Sn	**Sn**	**20 16 25.9**	**-1.0**
PESTR				*e*Sg	**Sg**	**20 16 50.7**	**-0.2**
	18nm,0.7s						
PMRV	**Marv??o**	**4.70**	**302**	*e*Pg	**Pg**	**20 15 52.8**	**-0.5**
PMRV				*e*Sn	**Sn**	**20 16 28.3**	**-1.2**
PMRV				*e*Sg	**Sg**	**20 16 52.9**	**-1.3**
PMRV				A		20 17 05.6	
	28nm,0.8s						
PMRV	**Marv??o**	**4.70**	**302**	*e*Pn	**Pn**	**20 15 35.7**	**+1.0**
PMRV				*e*Sn	**Sn**	**20 16 28.3**	**-1.2**
PMRV				*e*Sg	**Sg**	**20 16 52.9**	**-1.3**
	28nm,0.8s						
EVO	**Evora**	**4.80**	**290**	*e*Pn	**Pn**	**20 15 37.9**	**+1.9**
EVO				*e*Sn	**Sn**	**20 16 32.3**	**+0.4**
EVO				*e*Sg	**Sg**	**20 17 00.5**	**+3.1**
	28nm,0.4s						
EVO	**Evora**	**4.80**	**290**	*e*Pn	**Pn**	**20 15 37.1**	**+1.1**
EVO				*e*Sn	**Sn**	**20 16 30.0**	**-1.9**
EVO				*e*Sg	**Sg**	**20 16 56.5**	**-0.9**
EVO				A		20 17 04.6	
	11nm,0.5s						
EVO	**Evora**	**4.80**	**290**	*e*Pn	**Pn**	**20 15 37.1**	**+1.1**
EVO				*e*Sn	**Sn**	**20 16 30.0**	**-1.9**
EVO				*e*Sg	**Sg**	**20 16 56.5**	**-0.9**
	11nm,0.5s						
ETOS	**Mallorca**	**4.84**	**54**	Pn	**Pn**	**20 15 35.4**	**-1.2**
	18nm,0.4s,SNR=40						
ETOS				Sn	**Sn**	**20 16 30.5**	**-2.4**
	0.2nm,0.0s,SNR=4.0						
ETOS	**Mallorca**	**4.84**	**54**	Pn	**Pn**	**20 15 35.4**	**-1.2**
	18nm,0.4s,SNR=40						
ETOS				Sn	**Sn**	**20 16 28.8**	**-4.1**
	15nm,1.0s,SNR=5.0						
ETOS

	9.2nm,0.6s								
SJPF	**Ste Jean**	**6.14**	**7**	Pn		**Pn**	**20 15 55.9**	**+1.5**	
SJPF				Lg			20 17 38.2		
	4.6nm,0.6s								
EALK	**Alkurruntz**	**6.22**	**5**	Pn		**Pn**	**20 15 57.8**	**+2.3**	
	4.2nm,0.4s,SNR=5.6								
EALK				Lg			20 17 43.9		
	8.0nm,0.8s,SNR=7.9								
EALK	**Alkurruntz**	**6.22**	**5**	Pn		**Pn**	**20 15 58.2**	**+2.7**	
	4.2nm,0.4s,SNR=5.6								
EALK	**Alkurruntz**	**6.22**	**5**	Pn		**Pn**	**20 15 58.2**	**+2.6**	
EALK				Lg			20 17 42.5		
ELAN	**Lanestosa**	**6.27**	**352**	Pn		**Pn**	**20 15 58.3**	**+2.1**	
	0.4nm,0.1s,SNR=6.6								
ELAN				Lg			20 17 43.9		
	20nm,0.7s,SNR=7.9								
ELAN	**Lanestosa**	**6.27**	**352**	Pn		**Pn**	**20 15 58.5**	**+2.3**	
	1.7nm,0.4s,SNR=6.6								
ELAN	**Lanestosa**	**6.27**	**352**	Pn		**Pn**	**20 15 58.5**	**+2.3**	
ELAN				Lg			20 17 45.3		
EPF	**Esparros**	**6.33**	**18**	*e*Pn		**Pn**	**20 15 57.4**	**+0.4**	
EPF				*e*Sg		**Sg**	**20 17 43.8**	**-2.5**	
	4.5nm,0.5s								
EPF	**Esparros**	**6.33**	**18**	Pn		**Pn**	**20 15 57.4**	**+0.4**	
EPF				Lg			20 17 43.8		
	2.2nm,0.5s								
ELOB	**Lobios**	**6.60**	**319**	Pn		**Pn**	**20 16 02.8**	**+2.1**	
	0.1nm,0.1s,SNR=5.6								
ELOB				Lg			20 17 58.2		
	5.0nm,0.4s,SNR=5.0								
ELOB	**Lobios**	**6.60**	**319**	Pn		**Pn**	**20 16 05.2**	**+4.5**	
	4.7nm,0.6s,SNR=5.6								
ELOB	**Lobios**	**6.60**	**319**	Pn		**Pn**	**20 16 05.2**	**+4.5**	
ELOB				Lg			20 17 56.8		
EARI	**Arriondas**	**6.67**	**341**	Pn		**Pn**	**20 16 04.3**	**+2.7**	
	0.9nm,0.2s,SNR=5.7								
EARI				Lg			20 17 59.5		
	12nm,1.0s,SNR=7.9								
EARI	**Arriondas**	**6.67**	**341**	Pn		**Pn**	**20 16 04.3**	**+2.6**	
	5.0nm,0.8s,SNR=5.7								
SMRF	**Simiane la Rot**	**9.16**	**38**	*e*Pn		**Pn**	**20 16 33.9**	**-1.9**	
PGF	**Pioggiola**	**10.27**	**54**	*e*Pn		**Pn**	**20 16 49.8**	**-1.3**	
QUIF	**Quistinic**	**10.91**	**357**	*e*Pn		**Pn**	**20 16 59.4**	**-0.4**	

*ISCJB **30** 20:14:29.7±2.8, 5345N±009×1614W±0.1, h9km±21km, mb3.6/2, MS4.2/2, Error ellipse: s-maj=15.1km s-min=11.0km az=7.1*

*NEIC **30** 20:14:31.2±1.2, 5344N×16146W, h10km, ML3.3(AEIC), ML3.5(PMR), Error ellipse: s-maj=19.1km s-min=12.3km az=175.0*

*IDC **30** 20:14:35.9±1.5, 5326N×16032W, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.6/25, mbtmp3.8/5, ML3.6/1, MS4.1/2, Ms1 4.1/2, ms1mx3.0/45, Error ellipse: s-maj=44.7km s-min=22.0km az=6.0*

ISC 30 20:14:31.2±3.4, 5349N±009×1615W±01, h8km±25km, n15, σ0§91/13, mb3.6/2, MS4.2/2, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.77**	**321**	P		**Pn**	**20 15 02.4**	**+0.2**
FALS				S		**Sn**	**20 15 24.4**	**-0.4**
SDPT	**Sand Point**	**1.95**	**17**	P		**Pn**	**20 15 04.9**	**+0.3**
SDPT				*e*P			20 15 05.4	
SDPT				S		**Sn**	**20 15 29.3**	**+0.1**
UNV	**Unalaska Valle**	**3.00**	**279**	P		**Pn**	**20 15 18.8**	**-0.3**
CHGN	**Chignik**	**3.33**	**31**	*e*P		**Pn**	**20 15 24.0**	**+0.5**
CHGN				P			20 15 24.5	
OHAK	**Old Harbor**	**5.99**	**48**	*e*P		**Pn**	**20 15 58.7**	**-1.3**
OHAK				P			20 15 59.0	
KDAK	**Kodiak Island**	**6.62**	**46**	Pn		**Pn**	**20 16 07.3**	**-1.4**
	1.2nm,0.3s,baz=217,slow=8.7,SNR=14							
KDAK				Sn		**Sn**	**20 17 18.5**	**-5.9**
	0.7nm,0.3s,baz=141,slow=21,SNR=6.0							
KDAK	**Kodiak Island**	**6.62**	**46**	P		**Pn**	**20 16 07.4**	**-1.4**
SVW2	**Sparrevohn**	**8.27**	**20**	*e*P		**Pn**	**20 16 33.9**	**+2.7**
PETK	**Petropavlovsk-**	**24.16**	**286**	P		pP	20 19 59.2	+9.4
	3.1nm,0.7s,baz=83,slow=13,SNR=6.7							
PETK	**Petropavlovsk-**	**24.16**	**286**	P		pP	20 19 59.2	+9.4
PDAR	**Pinedale Array**	**35.53**	**86**	P		**P**	**20 21 28.6**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=350,slow=3.3,SNR=4.5							
TXAR	**Lajitas Array**	**48.04**	**96**	P		**P**	**20 23 11.2**	**+0.4**
	0.8nm,0.9s,mb3.8,baz=310,slow=4.7,SNR=7.0							
ZALV	**Zalesovo Beam**	**59.68**	**321**	P		pP	20 24 46.6	+8.5
	0.7nm,0.5s,baz=38,slow=7.3,SNR=2.8							
DAVOX	**Davos/Dischmat**	**79.83**	**6**	LR		LR	21 01 21.1	
	comp=Z,59nm,19.1s,MS4.0,baz=180,slow=35							
SDV	**Santo Domingo**	**83.44**	**84**	LR		LR	21 01 11.4	
	comp=Z,214nm,21.8s,MS4.5,baz=356,slow=34							

IDC 30 20:17:27.4±6.8, 1297S×16992E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/16, mbtmp3.8/4, MS4.3/2, Ms1 4.3/2, ms1mx3.6/18, Error ellipse: s-maj=166.8km s-min=33.7km az=111.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**32.09**	**229**	P		P	20 23 56.4	0.0
	0.6nm,0.5s,baz=100,slow=12,SNR=3.0							
WRA	**Warramunga Arr**	**34.77**	**254**	P		P	20 24 20.2	+0.3
	0.3nm,0.3s,baz=85,slow=9.1,SNR=12							
ASAR	**Alice Springs**	**35.71**	**247**	P		P	20 24 27.6	-0.4
	0.4nm,0.4s,baz=76,slow=9.2,SNR=7.9							
MJAR	**Matsushiro Arr**	**57.61**	**330**	P		P	20 27 19.0	-0.2
	1.4nm,0.4s,baz=161,slow=7.1,SNR=9.2							
ZALV	**Zalesovo Beam**	**97.50**	**324**	LR		LR	21 11 21.5	
	comp=Z,177nm,21.3s,baz=102,slow=33							
MKAR	**Makanchi Array**	**97.71**	**316**	LR		LR	21 13 44.3	
	comp=Z,126nm,20.5s,baz=80,slow=35							

*SKHL **30** 20:38:13.1±2.4, 4864N×15475E, h52km±13km, mb4.5/2*

*ISCJB **30** 20:38:14.9±1.0, 4870N±009×1548E±0.1, h56km±9km, mb3.8/12, Error ellipse: s-maj=20.1km s-min=5.8km az=42.8*

*MOS **30** 20:38:14.5±1.6, 4868N×15488E, h58km, mb4.2/4, Error ellipse: s-maj=17.2km s-min=9.3km az=61.9*

*NEIC **30** 20:38:17.6±1.6, 4871N×15481E, h63km±14km, mb4.5/1, Error ellipse: s-maj=23.4km s-min=11.3km az=143.0*

*IDC **30** 20:38:19.0±2.8, 4866N×15472E, h75km±25km, mb3.4/11, mb1 3.7/14, mb1mx3.6/26, mbtmp3.5/14, Error ellipse: s-maj=22.9km s-min=14.1km az=147.0*

ISC 30 20:38:17.2±0.9, 4871N±009×1547E±01, h58km±8km, n36, σ1§28/35, mb3.8/12, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.17**	**24**	*e*P		**Pn**	**20 38 49.0**	**-1.8**
SKR				AMB		AMB	20 38 49.4	
	30nm,0.4s							
SKR				*i* S		**Sn**	**20 39 14.1**	**-2.5**
SKR				A			20 39 20.3	
	1μm,0.2s							
SKR				A			20 39 20.3	
	690nm,0.2s							
SKR				A			20 39 20.3	
	240nm,0.2s							
PEA0B	**Petropavlovsk-**	**4.79**	**22**	*e*Pn		**Pn**	**20 39 27.5**	**+0.9**
PEA0B				*e*Sn		**Sn**	**20 40 26.7**	**+6.0**
PETK	**Petropavlovsk-**	**4.79**	**22**	P		**Pn**	**20 39 28.4**	**+1.8**
	1.4nm,0.3s,baz=178,slow=12,SNR=36							
PETK				S		Sn	20 40 43.8	+23
	0.5nm,0.3s,baz=132,slow=15,SNR=3.3							
PET	**Petropavlovsk**	**4.98**	**28**	*e*Pn		**Pn**	**20 39 26.0**	**-3.3**
PET				*e*Sn		**Sn**	**20 40 26.1**	**+0.6**
KUR	**Kuril'sk**	**5.85**	**236**	*e*PN		**Pn**	**20 39 40.0**	**-1.2**
KUR				*e*S		**Sn**	**20 40 47.0**	**+0.2**
KUR				pmax	pmax			
	comp=Z,190nm,1.0s							
KUR				smax				
	comp=N,180nm,0.3s							
KUR				smax				
	comp=E,140nm,0.3s							
KUR	**Kuril'sk**	**5.85**	**236**	*e*P		**Pn**	**20 39 40.0**	**-1.2**
KUR				AMB		AMB	20 39 41.0	
	comp=E,189nm,1.0s							
KUR				*e*S		**Sn**	**20 40 47.0**	**+0.2**
KUR				A			20 41 12.5	
	comp=E,180nm,0.3s							
KUR				A			20 41 12.5	
	comp=E,135nm,0.3s							
YSS	**Yuzh-Sakhalins**	**8.25**	**262**	*e*PN		**Pn**	**20 40 17.0**	**+2.9**
YSS				pmax	pmax			
	comp=Z,14nm,0.5s							
YSS	**Yuzh-Sakhalins**	**8.25**	**262**	*e*Pn		**Pn**	**20 40 17.0**	**+2.9**
	comp=Z,14nm,0.5s							
ASAJ	**Asahikawa**	**9.56**	**246**	P		**Pn**	**20 40 35.0**	**+3.1**
	comp=Z,3.4nm,0.3s,baz=76,slow=16,SNR=33							
ASAJ	**Asahikawa**	**9.56**	**246**	PN		**Pn**	**20 40 35.0**	**+3.1**
ASAJ				pmax	pmax			
	comp=Z,3.0nm,0.3s							
ERM	**Erimo**	**10.54**	**235**	*i* PN		**Pn**	**20 40 43.5**	**-1.8**
MJAR	**Matsushiro Arr**	**17.15**	**231**	P		**Pn**	**20 42 12.6**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=141,slow=16,SNR=4.0							
BILL	**Bilibino**	**20.24**	**13**	*e*P		**P**	**20 42 45.4**	**-1.7**
BILL				pmax	pmax			
	comp=Z,5.0nm,1.0s							
KSRS	**Korea Array**	**22.47**	**250**	P		**P**	**20 43 11.6**	**+0.3**
	comp=Z,1.5nm,0.5s,mb3.6,baz=50,slow=10,SNR=8.6							
KSRS	**Korea Array**	**22.47**	**250**	P		**P**	**20 43 11.6**	**+0.4**
KSRS				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb3.8							
MK31	**Makanchi Array**	**47.03**	**296**	*e*P		**P**	**20 46 41.2**	**-1.2**
MKAR	**Makanchi Array**	**47.03**	**296**	P		**P**	**20 46 42.1**	**-0.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=68,slow=8.9,SNR=8.1							
KURK	**Kurchatov**	**47.21**	**303**	P		**P**	**20 46 44.4**	**+0.6**
	comp=Z,0.2nm,0.5s,mb3.3,baz=68,slow=8.0,SNR=4.3							
BVAR	**Borovoye Array**	**50.48**	**309**	P		**P**	**20 47 07.7**	**-1.0**
	comp=Z,0.4nm,0.4s,mb3.8,baz=52,slow=8.7,SNR=5.7							
CHTO	**Chiang Mai**	**53.64**	**257**	*e*P		**P**	**20 47 32.9**	**+0.2**
CHTO				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
CHTO	**Chiang Mai**	**53.64**	**257**	*e*P		**P**	**20 47 32.9**	**+0.2**
	comp=Z,4.5nm,0.9s,mb4.4							
CMAR	**Chiang Mai Arr**	**53.90**	**256**	P		**P**	**20 47 35.4**	**+0.8**
	comp=Z,3.0nm,0.8s,mb4.3,baz=32,slow=7.3,SNR=16							
NVAR	**Mina Array Bea**	**60.57**	**64**	P		**P**	**20 48 22.7**	**+1.3**
	comp=Z,0.5nm,0.5s,mb3.9,baz=281,slow=6.9,SNR=2.8							
PDAR	**Pinedale Array**	**62.72**	**56**	P		**P**	**20 48 36.4**	**+0.6**
	comp=Z,1.0nm,0.8s,mb4.0,baz=301,slow=0.9,SNR=6.5							
MAK	**Makhachkala**	**68.62**	**311**	*e*P		**P**	**20 49 12.7**	**-1.1**
WRA	**Warramunga Arr**	**70.72**	**200**	P		**P**	**20 49 25.8**	**-1.0**
	comp=Z,1.2nm,0.8s,mb3.9,baz=17,slow=6.3,SNR=12							
WRA	**Warramunga Arr**	**70.72**	**200**	*i* P		**P**	**20 49 25.7**	**-1.1**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**74.42**	**200**	P		**P**	**20 49 48.4**	**-0.2**
	comp=Z,0.8nm,0.8s,mb3.7,baz=86,slow=8.4,SNR=4.1							
OKC	**Ostrava-Krasne**	**74.97**	**333**	AMS		AMS	21 28 30.0	
	comp=Z,400nm,26.0s							
DPC	**Dobruska-Polom**	**75.06**	**334**	AMS		AMS	21 33 30.0	
	comp=Z,400nm,21.8s							
PVCC	**Panska Ves**	**75.40**	**335**	AMS		AMS	21 31 00.0	
	comp=Z,300nm,26.2s							
TXAR	**Lajitas Array**	**75.59**	**62**	P		**P**	**20 49 55.7**	**+0.1**
	comp=Z,1.1nm,0.8s,mb3.8,baz=280,slow=3.8,SNR=7.9							
PRU	**Pruhonice**	**75.90**	**335**	AMS		AMS	21 24 30.0	
	comp=Z,300nm,19.5s							
PRU				AMS		AMS	21 30 50.0	
TREC	**Trest**	**76.25**	**334**	AMS		AMS	21 27 40.0	
	comp=Z,400nm,34.7s							
NKC	**Novy Kostel**	**76.25**	**336**	AMS		AMS	21 29 00.0	
	comp=Z,400nm,37.9s							
GERES	**GERESS Array B**	**77.17**	**335**	P		**P**	**20 50 06.1**	**+1.9**
	comp=Z,0.2nm,0.3s,mb3.5,baz=12,slow=5.1,SNR=4.2							

*IDC **30** 21:58:49.6±1.4, 336Sx10039E, h0km, mb4.4/11, mb1 4.5/11, mb1mx4.2/21, mbtmp4.4/11, MS3.3/1, Ms1 3.5/1, ms1mx2.5/34, Error ellipse: s-maj=57.7km s-min=14.3km az=56.0*

*BJI **30** 21:58:50.5, 340S×10040E, h25km, mB4.8, mb4.9, Ms4.1, Msz3.8*

*ISCJB **30** 21:58:51.6±3.6, 341S±005×10042E±007, h28km±26km, mb4.7/32, Error ellipse: s-maj=12.3km s-min=7.1km az=149.7*

*MOS **30** 21:58:52.4±1.3, 342S×10037E, h33km, mb4.8/8, Error ellipse: s-maj=13.0km s-min=8.1km az=102.5*

*NEIC **30** 21:58:54.6±0.2, 341S×10039E, h35km, mb4.6/12, Error ellipse: s-maj=8.1km s-min=5.0km az=62.0*

*DJA **30** 21:59:02, 269S×10052E, h24km, MLv4.7/7*

ISC 30 21:58:51.5±4.8, 341S±005×10043E±007, h12km±30km, h26km±3.2km:pP-P, n75, σ0§90/69, mb4.7/32, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**2.94**	**359**	P		**Pn**	**21 59 38.6**	**+0.6**
	0.0nm,0.0s							
CBJI	**Citeko**	**7.06**	**115**	P		**Pb**	**22 00 46.8**	**-7.4**
	0.0nm,0.0s							
LEM	**Lembang**	**7.92**	**116**	P		**Pn**	**22 00 55.9**	**+9.3**
	0.0nm,0.0s							
COCO	**West Island**	**9.42**	**202**	P		**Pn**	**22 01 06.0**	**-1.1**
KAPI	**Kappang**	**19.34**	**95**	P		**Pn**	**22 03 13.8**	**-4.2**
	baz=295,slow=15,SNR=3.2							
KAPI	**Kappang**	**19.34**	**95**	P		**Pn**	**22 03 13.8**	**-4.2**
CM31	**Chiang Mai Arr**	**21.78**	**356**	*e*P		**P**	**22 03 42.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**21.78**	**356**	P		**P**	**22 03 41.2**	**-2.1**
	4.7nm,0.8s,mb4.0,baz=186,slow=9.9,SNR=20							
CMAR				LR		LR	22 13 23.4	
	comp=Z,82nm,19.1s,baz=175,slow=40							
CHTO	**Chiang Mai**	**22.13**	**356**	*e*P		**P**	**22 03 47.7**	**+0.5**
PALK	**Pallekele**	**22.36**	**298**	*e*P		**P**	**22 03 49.5**	**-0.2**
MBWA	**Marble Bar**	**25.76**	**135**	P		**P**	**22 04 22.9**	**+0.6**
DAV	**Davao City (W)**	**27.18**	**67**	*e*P		**P**	**22 04 35.1**	**-0.1**
	0.2nm,0.4s							
DGAR	**Diego Garcia**	**28.13**	**261**	*e*P		**P**	**22 04 43.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**28.68**	**122**	P		**P**	**22 04 50.8**	**+2.1**
	2.2nm,0.6s,mb4.0,baz=279,slow=3.6,SNR=12							
FITZ	**Fitzroy Crossi**	**28.68**	**122**	*e*P		**P**	**22 04 48.3**	**-0.4**
	3.6nm,0.5s,mb4.4							
ODAN	**Odare**	**32.62**	**338**	*e*P		**P**	**22 05 21.2**	**-2.1**
	18nm,0.6s,mb5.2							
RAMN	**Ramite**	**33.01**	**337**	*e*P		**P**	**22 05 25.5**	**-1.2**
	4.9nm,0.4s,mb4.8							
NWAO	**Narrogin (SRO)**	**33.31**	**154**	P		**P**	**22 05 31.3**	**+2.0**
JIRN	**Jiri**	**33.80**	**337**	*e*P		**P**	**22 05 34.1**	**+0.5**
	9.6nm,0.3s,mb5.2							
LSA	**Lhasa**	**34.10**	**346**	*e*P		**P**	**22 05 36.5**	**+0.3**
LSA				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.7							
LSA	**Lhasa**	**34.10**	**346**	*e*P		**P**	**22 05 36.5**	**+0.3**
	comp=Z,5.8nm,0.6s,mb4.7							
GUN	**Gumba**	**34.15**	**337**	*e*P		**P**	**22 05 37.9**	**+1.3**
	comp=Z,31nm,0.5s,mb5.5							
DMN	**Daman**	**34.20**	**335**	*e*P		**P**	**22 05 38.1**	**+1.1**
KKN	**Kakani**	**34.28**	**336**	*e*P		**P**	**22 05 38.7**	**+0.9**
	comp=Z,16nm,0.5s,mb5.2							
GKN	**Gorkha**	**34.74**	**335**	*e*P		**P**	**22 05 43.5**	**+1.8**
	comp=Z,13nm,0.3s,mb5.3							
KOLN	**Koldanda**	**34.99**	**333**	*e*P		**P**	**22 05 44.8**	**+1.0**
	comp=Z,24nm,0.7s,mb5.3							
DANN	**Dangsing**	**35.42**	**334**	*e*P		**P**	**22 05 49.0**	**+1.5**
	comp=Z,37nm,0.5s,mb5.5							
WRA	**Warramunga Arr**	**36.92**	**119**	P		**P**	**22 06 00.0**	**-0.6**
	comp=Z,2.2nm,0.4s,mb4.3,baz=308,slow=9.0,SNR=44							
WRAB	**Tennant Creek**	**36.93**	**119**	*e*P		**P**	**22 06 01.2**	**+0.5**
WRAB				*e**PP		pP	22 06 09.5	+5.1
WRAB				pmax	pmax			
	comp=Z,4.0nm,0.4s,mb4.6							
WRAB	**Tennant Creek**	**36.93**	**119**	*e*P		**P**	**22 06 01.2**	**+0.6**
	comp=Z,4.0nm,0.4s,mb4.6							
WRAB				*e*pP		pP	22 06 09.5	+5.1
WB2	**Warramunga Arr**	**36.94**	**119**	*e*P		**P**	**22 06 01.3**	**+0.6**
WB2				*e*pP		pP	22 06 08.5	+4.1
ASAR	**Alice Springs**	**38.09**	**125**	P		**P**	**22 06 10.1**	**-0.4**
	comp=Z,4.2nm,0.4s,mb4.5,baz=299,slow=8.1,SNR=32							
GTA	**Gaotai**	**42.61**	**359**	*e*P		**P**	**22 06 47.5**	**-0.1**
GTA				AP		pP	22 06 51.5	+0.1
GTA				XP		sP	22 06 54.0	+1.1
GTA				AMB	AMB			
	comp=Z,4.0nm,1.2s,mb4.0							
BJT	**Baijiatuau**	**45.57**	**17**	*e*P		**P**	**22 07 10.8**	**-0.6**
BJT				pmax	pmax			
	comp=Z,10.0nm,0.5s							
BJT	**Baijiatuau**	**45.57**	**17**	*e*P		**P**	**22 07 10.8**	**-0.6**
	comp=Z,9.7nm,0.5s,mb5.0							
GUMO	**Guam**	**47.22**	**68**	P		**P**	**22 07 25.0**	**+0.3**
CTAO	**Charters Tower**	**47.62**	**114**	*e*P		**P**	**22 07 28.0**	**+0.1**
STKA	**Stephens Creek**	**47.90**	**131**	P		**P**	**22 07 30.4**	**+0.6**
	comp=Z,1.2nm,0.8s,mb4.0,baz=311,slow=12,SNR=7.5							
STKA	**Stephens Creek**	**47.90**	**131**	*e*P		**P**	**22 07 30.3**	**+0.5**
STKA				*e*pP		pP	22 07 37.9	+4.2
KBL	**Kabul**	**47.92**	**325**	*e*P		**P**	**22 07 29.3**	**-0.6**
KBL				*e**PP		pP	22 07 38.5	+4.8
KBL				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.2							
KBL	**Kabul**	**47.92**	**325**	*e*P		**P**	**22 07 29.3**	**-0.6**
	comp=Z,1.4nm,0.4s,mb4.3							
KBL				*e*pP		pP	22 07 38.5	+4.8
KSRS	**Korea Array**	**48.02**	**30**	P		**P**	**22 07 29.9**	**-0.6**
	comp=Z,3.5nm,0.9s,mb4.4,baz=221,slow=8.0,SNR=14							
WMQ	**Urumqi**	**48.39**	**348**	P		**P**	**22 07 34.5**	**+1.1**
WMQ				AMB		AMB		
	comp=Z,17nm,0.7s,mb5.2							
WMQ				AMB		AMB		
	comp=Z,95nm,5.8s							
TKM2	**Tokmak 2**	**51.29**	**337**	*e*P		**P**	**22 07 56.6**	**+1.2**
TKM2				pmax	pmax			
	comp=Z,6.0nm,0.4s,mb4.9							
TKM2	**Tokmak 2**	**51.29**	**337**	*e*P		**P**	**22 07 56.6**	**+1.2**
	comp=Z,5.8nm,0.4s,mb4.9							
SONM	**Songino Array**	**51.30**	**5**	P		**P**	**22 07 56.1**	**+0.7**
	comp=Z,12nm,0.6s,mb5.0,baz=190,slow=9.4,SNR=79							
ULN	**Ulaanbaatar**	**51.39**	**6**	*e*P		**P**	**22 07 56.7**	**+0.6**
ULN				pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.7							
ULN	**Ulaanbaatar**	**51.39**	**6**	*e*P		**P**	**22 07 56.6**	**+0.6**
	comp=Z,8.8nm,0.9s,mb4.7							
AML	**Almayashu**	**51.41**	**335**	*e*P		**P**	**22 07 56.9**	**+0.5**
	comp=Z,2.7nm,0.6s,mb4.3							
EKS2	**Erkin-Say**	**51.81**	**335**	*e*P		**P**	**22 08 00.3**	**+0.9**
	comp=Z,6.3nm,0.7s,mb4.7							
CN2	**Changchun**	**52.10**	**23**	*e*P		**P**	**22 08 00.3**	**-1.2**
CN2				AMB		AMB		
	comp=Z,20nm,0.7s,mb5.2							
MK31	**Makanchi Array**	**52.49**	**344**	*e*P		**P**	**22 08 04.5**	**+0.2**
MK31				*e*			22 10 01.9	
MKAR	**Makanchi Array**	**52.49**	**344**	P		**P**	**22 08 04.5**	**+0.1**
	comp=Z,3.7nm,0.5s,mb4.6,baz=153,slow=9.3,SNR=81							
MAJO	**Matsushiro**	**53.10**	**38**	P		**P**	**22 08 08.5**	**-0.6**
TLY	**Talaya**	**54.95**	**2**	*e*P		**P**	**22 08 21.6**	**-0.6**
HAIL	**Hailar**	**55.08**	**15**	*e*P		**P**	**22 08 22.5**	**-0.7**
KURK	**Kurchatov**	**57.07**	**344**	*e*P		**P**	**22 08 37.1**	**-0.4**
KURK				pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.8							
KURK	**Kurchatov**	**57.07**	**344**	*e*P		**P**	**22 08 37.1**	**-0.4**
	comp=Z,8.6nm,1.0s,mb4.7							
TAU	**Tasmania Unive**	**57.23**	**140**	P		**P**	**22 08 37.1**	**-1.7**
ZAA0	**Zalesovo Array**	**58.62**	**349**	*e*P		**P**	**22 08 47.5**	**-0.8**
ZALV	**Zalesovo Beam**	**58.62**	**349**	P		**P**	**22 08 47.8**	**-0.5**
	comp=Z,7.2nm,0.8s,mb4.7,baz=160,slow=4.7,SNR=32							
BVAR	**Borovoye Array**	**61.65**	**340**	P		**P**	**22 09 08.2**	**-0.9**
	comp=Z,2.2nm,0.5s,mb4.5,baz=148,slow=8.5,SNR=18							
BRVK	**Borovoye**	**61.71**	**340**	*e*P		**P**	**22 09 08.6**	**-0.9**
ARU	**Arti**	**68.66**	**337**	*e*P		**P**	**22 09 53.6**	**-1.0**
ARU				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.1							
ARU	**Arti**	**68.66**	**337**	*e*P		**P**	**22 09 53.6**	**-0.9**
	comp=Z,1.3nm,0.4s,mb4.2							
MAW	**Mawson**	**69.03**	**194**	P		**P**	**22 09 56.8**	**+0.1**
BOSA	**Boshof**	**75.36**	**241**	P		**P**	**22 10 35.0**	**-0.4**
SANT	**Santorini**	**79.98**	**308**	P		**P**	**22 11 00.8**	**-0.1**
ARCES	**ARCESS Array B**	**87.94**	**340**	P		**P**	**22 11 40.8**	**-0.1**
	comp=Z,1.6nm,0.8s,mb4.3,baz=102,slow=6.7,SNR=5.2							
PMR	**Palmer**	**102.63**	**27**	P		Pdif	22 12 48.1	-0.1
PMR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
PMR	**Palmer**	**102.63**	**27**	Pdif		Pdif	22 12 48.1	-0.2
	comp=Z,2.8nm,0.9s							
TXAR	**Lajitas Array**	**145.54**	**39**	PKPbc		PKPbc	22 18 31.1	+0.6
	comp=Z,5.1nm,0.6s,baz=292,slow=0.9,SNR=35							
MIAR	**Mount Ida**	**146.40**	**21**	*e*PKP2		PKPbc	22 18 32.2	-0.8
JCT	**Junction City**	**146.98**	**33**	*e*PKP2		PKPbc	22 18 33.4	-1.4
TKL	**Tuckaleechee C**	**147.68**	**6**	PKPbc		PKPbc	22 18 35.5	-1.1
	comp=Z,2.0nm,0.5s,baz=93,slow=23,SNR=4.2							

*IDC **30** 22:11:03.6±0.5, 335Sx10059E, h0km, mb4.6/21, mb1 4.7/22, mb1mx4.6/26, mbtmp4.7/22, ML4.6/1, MS3.9/10, Ms1 3.9/10, ms1mx3.6/30, Error ellipse: s-maj=16.2km s-min=11.1km az=53.0

KMI Kunming 28.52 4 P **P** **22 17 00.8 0.0**
KMI *PP pP 22 17 14.4 +3.1
KMI 22 17 59.2
KMI S **S** **22 21 51.7 +5.4**
KMI *SS sS 22 22 08.5 +4.9
KMI pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
KMI MLR MLR
comp=Z,360nm,13.7s,MS4.1
KMI Kunming 28.52 4 P **P** **22 17 00.8 0.0**
comp=Z,10.0nm,0.9s,mb4.5
KMI pP pP 22 17 14.4 +3.1
KMI sP sP 22 17 18.7 +3.0
KMI PP PP 22 17 59.2 -6.5
KMI S **S** **22 21 51.7 +5.4**
KMI sS sS 22 22 08.5 +4.9
KMI LR LR
comp=Z,360nm,13.7s,MS4.1
FITZ Fitzroy Crossi 28.66 122 *e*P **P** **22 17 02.1 0.0**
comp=Z,10nm,0.6s,mb4.7
FITZ Fitzroy Crossi 28.66 122 P **P** **22 17 02.3 +0.2**
comp=Z,24nm,0.8s,mb4.0,baz=290,slow=6.9,SNR=5.8
GYA Guiyang 30.37 11 P **P** **22 17 22.5 +5.3**
GYA AP pP 22 17 32.5 +4.8
GYA XP sP 22 17 36.3 +4.2
GYA PP PP 22 18 24.0 -2.2
GYA S **S** **22 22 21.8 +6.5**
GYA XS sS 22 22 39.0 +6.3
GYA SS SS 22 24 02.5 -23
GYA AMB AMB
comp=Z,20nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,130nm,5.9s
GYA LR LR
comp=N,630nm,17.8s,MS4.4
GYA LR LR
comp=E,540nm,18.4s,MS4.4
GYA LR LR
comp=Z,620nm,19.0s,MS4.3
ODAN Odare 32.68 338 *e*P **P** **22 17 38.7 +1.2**
comp=Z,33nm,0.6s,mb5.5
RAMN Ramite 33.07 337 *e*P **P** **22 17 42.1 +1.3**
comp=Z,17nm,0.6s,mb5.2
NWAO Narrogin (SRO) 33.26 154 LR LR 22 30 20.6
comp=Z,233nm,18.4s,MS3.9,baz=277,slow=35
NWAO Narrogin (SRO) 33.26 154 P **P** **22 17 40.8 -1.7**
JIRN Jiri 33.86 337 *e*P **P** **22 17 49.1 +1.3**
comp=Z,54nm,0.7s,mb5.6
LSA Lhasa 34.17 346 P **P** **22 17 51.8 +1.4**
LSA Lhasa 34.17 346 *e*P **P** **22 17 51.1 +0.7**
LSA pmax pmax
comp=Z,14nm,0.6s,mb5.1
LSA Lhasa 34.17 346 *e*P **P** **22 17 51.1 +0.7**
comp=Z,14nm,0.6s,mb5.1
GUN Gumba 34.21 337 *e*P **P** **22 17 52.1 +1.3**
comp=Z,61nm,0.5s,mb5.8
DMN Daman 34.25 335 *e*P **P** **22 17 52.0 +0.8**
KKN Kakani 34.34 336 *e*P **P** **22 17 52.7 +0.8**
comp=Z,32nm,0.5s,mb5.5
CD2 Chengdu 34.35 5 P **P** **22 17 54.5 +2.6**
CD2 AP pP 22 18 04.0 +1.5
CD2 XP sP 22 18 08.8 +1.8
CD2 PP PP 22 19 12.3 +2.0
CD2 S **S** **22 23 22.0 +4.9**
CD2 XS sS 22 23 38.0 +3.4
CD2 SS SS 22 25 36.3 -11
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CD2 AMB AMB
comp=Z,70nm,5.8s
CD2 LR LR
comp=N,270nm,16.8s,MS4.3
CD2 LR LR
comp=E,390nm,18.0s,MS4.3
CD2 LR LR
comp=Z,370nm,16.8s,MS4.2
YHNB Yeheng 34.62 35 *e*P **P** **22 17 54.8 +0.4**
GKN Gorkha 34.80 335 *e*P **P** **22 17 56.4 +0.5**
comp=Z,40nm,0.6s,mb5.5
KOLN Koldanda 35.04 333 *e*P **P** **22 17 58.7 +0.7**
comp=Z,55nm,0.7s,mb5.6
DANN Dangsing 35.47 334 *e*P **P** **22 18 02.7 +1.0**
comp=Z,82nm,0.5s,mb5.9
WHN Wuhan 36.36 21 P **P** **22 18 09.0 -0.3**
WHN AP pP 22 18 24.0 +4.1
WHN S **S** **22 23 54.0 +5.9**
WHN LR LR
comp=N,1μm,14.1s
WHN LR LR
comp=E,574nm,9.2s
WHN LR LR
comp=Z,1μm,17.7s,MS4.8
WRA Warramunga Arr 36.90 119 P **P** **22 18 14.0 -0.1**
comp=Z,5.3nm,0.4s,mb4.7,baz=308,slow=8.9,SNR=54
WRA S **S** **22 23 58.0 +1.3**
comp=Z,2.2nm,0.9s,baz=296,slow=16,SNR=9.1
WRA LR LR 22 35 25.2
comp=Z,171nm,19.0s,MS3.9,baz=285,slow=40
WRA Warramunga Arr 36.90 119 P **P** **22 18 14.0 -0.1**
WRA S **S** **22 23 58.0 +1.3**
WRAB Tennant Creek 36.91 119 *e*P **P** **22 18 13.9 -0.2**
WRAB *e*PP pP 22 18 23.7 -1.1
WRAB *e*S **S** **22 23 57.8 +1.0**
WRAB pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
WRAB Tennant Creek 36.91 119 *e*P **P** **22 18 13.9 -0.2**
comp=Z,10nm,0.5s,mb4.9
WRAB *e*pP pP 22 18 23.7 -1.0
WRAB *e*S **S** **22 23 57.8 +1.0**
WB2 Warramunga Arr 36.91 119 *e*P **P** **22 18 13.6 -0.6**
WB2 *e*S **S** **22 23 55.1 -1.8**
WB2 Warramunga Arr 36.91 119 *e*P **P** **22 18 13.7 -0.5**
WB2 *e*pP pP 22 18 22.9 -1.9
WB2 *e*S **S** **22 23 57.7 +0.8**
ASAR Alice Springs 38.06 125 P **P** **22 18 24.1 +0.2**
comp=Z,11nm,0.4s,mb4.9,baz=298,slow=7.5,SNR=74
XAN Xi'an 38.17 11 P **P** **22 18 23.0 -1.6**
XAN AMB AMB
comp=Z,53nm,0.6s,mb5.5
NJ2 Nanjing 39.45 25 *e*P **P** **22 18 37.5 +2.2**
NJ2 AP pP 22 18 47.3 +1.3
NJ2 XP sP 22 18 51.3 +0.9
NJ2 PP PP 22 19 13.0 +6.6
NJ2 S **S** **22 24 39.5 +4.7**
NJ2 XS sS 22 24 57.0 +4.6
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
NJ2 AMB AMB
comp=Z,160nm,5.2s
NJ2 LR LR
comp=N,210nm,17.7s
NJ2 LR LR
comp=E,300nm,12.4s
NJ2 LR LR
comp=Z,300nm,12.3s
LZH Lanzhou 39.49 4 *e*P **P** **22 18 35.5 -0.1**
LZH AP pP 22 18 45.0 -1.3
LZH PP PP 22 20 09.0 +2.2
LZH *e*S **S** **22 24 37.5 +2.1**
LZH *e*SS SS 22 27 27.5 -3.5
LZH AMB AMB
comp=Z,21nm,1.1s,mb4.8
LZH AMB AMB
comp=Z,189nm,5.9s
LZH LR LR
comp=E,320nm,13.2s
LZH LR LR
comp=Z,479nm,15.9s,MS4.4
LZH Lanzhou 39.49 4 *e*P **P** **22 18 35.4 -0.2**
LZH *PP pP 22 18 45.0 -1.3
LZH *SP sP 22 18 49.2 -1.5
LZH 22 20 08.9
LZH *e*S **S** **22 24 37.5 +2.1**
LZH *e*SS SS 22 27 27.5 -3.5
LZH pmax pmax
comp=Z,21nm,1.1s,mb4.8
LZH MLR MLR
comp=Z,480nm,15.9s,MS4.4
LZH Lanzhou 39.49 4 *e*P **P** **22 18 35.4 -0.2**
comp=Z,21nm,1.1s,mb4.8
LZH pP pP 22 18 45.0 -1.3
LZH sP sP 22 18 49.2 -1.5
LZH PP PP 22 20 08.9 +2.1
LZH *e*S **S** **22 24 37.5 +2.1**
LZH sS sS 22 24 46.9 -6.1
LZH *e*SS SS 22 27 27.5 -3.5
LZH LR LR
comp=Z,480nm,15.9s,MS4.4
JOW Kunigami 40.41 40 P **P** **22 18 42.5 -0.8**
comp=Z,12nm,0.7s,mb4.7,baz=157,slow=11,SNR=6.3
GTA Gaotai 42.68 359 ⇑P **P** **22 19 01.8 0.0**
GTA AP pP 22 19 11.5 -1.1
GTA PP PP 22 20 45.3 +3.9
GTA S **S** **22 25 22.8 +0.1**
GTA AMB AMB
comp=Z,11nm,1.0s,mb4.5
GTA AMB AMB
comp=Z,116nm,4.2s
GTA LR LR
comp=N,201nm,11.7s,MS4.4
GTA LR LR
comp=E,269nm,14.7s,MS4.4
GTA LR LR
comp=Z,143nm,14.1s,MS4.0
HHC Hu-ho-hao-te 45.28 12 *e*P **P** **22 19 22.3 -0.3**
HHC AP pP 22 19 32.5 -1.0
HHC PCP PcP 22 21 00.5 -1.5
HHC PP PP 22 21 09.3 +0.2
HHC SCP ScP 22 24 49.3 -2.7
HHC PCS PcS 22 24 53.8 -2.1
HHC S **S** **22 26 02.0 +1.5**
HHC SCS ScS 22 29 13.5 -3.0
HHC SS SS 22 29 17.5 -7.1
HHC AMB AMB
comp=Z,30nm,1.1s,mb5.0
HHC AMB AMB
comp=Z,92nm,6.5s
HHC LR LR
comp=N,279nm,13.7s,MS4.6
HHC LR LR
comp=E,393nm,13.8s,MS4.6
HHC LR LR
comp=Z,221nm,13.8s,MS4.2
BJT Baijiatuan 45.64 17 *e*P **P** **22 19 23.9 -1.6**
BJT pmax pmax
comp=Z,16nm,0.6s
BJT Baijiatuan 45.64 17 *e*P **P** **22 19 23.9 -1.6**
comp=Z,16nm,0.6s,mb5.1
BJI Beijing 45.66 17 P **P** **22 19 25.3 -0.4**
BJI S **S** **22 26 10.0 +3.9**
BJI AMB AMB
comp=Z,22nm,0.6s,mb5.3
BJI LR LR
comp=N,538nm,14.9s,MS4.7
BJI LR LR
comp=E,213nm,11.6s,MS4.7
BJI LR LR
comp=Z,232nm,16.1s,MS4.2
BJI Beijing 45.66 17 P **P** **22 19 25.2 -0.5**
BJI S **S** **22 26 10.0 +3.9**
BJI pmax pmax
comp=Z,22nm,0.6s,mb5.3
BJI MLR MLR
comp=Z,230nm,16.1s,MS4.2
BJI Beijing 45.66 17 P **P** **22 19 25.2 -0.5**
comp=Z,22nm,0.6s,mb5.3
BJI S **S** **22 26 10.0 +3.9**
BJI LR LR
comp=Z,230nm,16.1s,MS4.2
PMG Port Moresby 46.79 100 *e*P **P** **22 19 34.5 -0.5**
CTAO Charters Tower 47.61 114 *e*P **P** **22 19 40.8 -0.5**
CTAO pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
CTAO Charters Tower 47.61 114 *e*P **P** **22 19 40.8 -0.5**
comp=Z,6.2nm,0.6s,mb4.8
STKA Stephens Creek 47.87 131 *e*P **P** **22 19 44.1 +1.0**
comp=Z,3.9nm,0.6s,mb4.6
STKA Stephens Creek 47.87 131 P **P** **22 19 43.9 +0.7**
comp=Z,3.9nm,0.6s,mb4.6,baz=303,slow=7.8,SNR=16
STKA LR LR 22 41 02.1
comp=Z,174nm,19.0s,MS4.0,baz=340,slow=38
STKA Stephens Creek 47.87 131 *e*P **P** **22 19 43.4 +0.3**
STKA *e*pP pP 22 19 52.0 -2.0
KBL Kabul 47.97 325 *e*P **P** **22 19 43.8 0.0**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KBL Kabul 47.97 325 *e*P **P** **22 19 43.8 0.0**
comp=Z,4.2nm,0.6s,mb4.7
KSRS Korea Array 48.09 30 P **P** **22 19 44.1 -0.6**
comp=Z,26nm,1.2s,mb5.1,baz=220,slow=8.3,SNR=37
WMQ Urumqi 48.46 348 ⇑*i*P **P** **22 19 48.3 +0.9**
WMQ AP pP 22 19 58.0 -0.3
WMQ PP PP 22 21 40.0 -0.5
WMQ *e*S **S** **22 26 46.0 +0.2**
WMQ AMB AMB
comp=Z,37nm,0.7s,mb5.5
WMQ AMB AMB
comp=Z,146nm,6.6s
WMQ LR LR
comp=N,145nm,21.2s,MS4.2
WMQ LR LR
comp=E,243nm,20.6s,MS4.2
WMQ LR LR
comp=Z,147nm,24.2s,MS3.9
CBIJ Chichi jima 50.48 50 P **P** **22 20 00.9 -2.2**
comp=Z,25nm,0.5s,mb5.5,baz=277,slow=20,SNR=7.9
UCH Uchtor 51.21 335 P **P** **22 20 08.4 +0.1**
TKM2 Tokmak 2 51.35 337 *e*P **P** **22 20 10.0 +0.6**
TKM2 pmax pmax
comp=Z,11nm,0.5s,mb5.0
TKM2 Tokmak 2 51.35 337 P **P** **22 20 10.3 +0.9**
SNR=18
TKM2 Tokmak 2 51.35 337 *e*P **P** **22 20 10.0 +0.6**
comp=Z,11nm,0.5s,mb5.0
SONM Songino Array 51.37 5 P **P** **22 20 10.2 +0.7**
comp=Z,30nm,0.6s,mb5.4,baz=190,slow=9.4,SNR=197
SONM PcP PcP 22 21 24.2 +0.4
comp=Z,3.2nm,0.6s,baz=183,slow=4.0,SNR=4.9
KBK Karagaybulak 51.38 336 P **P** **22 20 11.1 +1.4**
SNR=7.2
ULN Ulaanbaatar 51.46 6*c i*P **P** **22 20 10.7 +0.6**
ULN Ulaanbaatar 51.46 6 *e*P **P** **22 20 10.2 0.0**
comp=Z,39nm,1.2s,mb5.2
AML Almayashu 51.47 335 P **P** **22 20 11.3 +1.0**
SNR=12
AML Almayashu 51.47 335 *e*P **P** **22 20 11.3 +1.0**
comp=Z,128nm,0.6s
EKS2 Erkin-Say 51.87 335 P **P** **22 20 14.4 +1.1**
SNR=14
EKS2 Erkin-Say 51.87 335 *e*P **P** **22 20 14.1 +0.8**
comp=Z,14nm,0.7s,mb5.0
USP Ospenovka 52.08 336 P **P** **22 20 15.3 +0.5**
SNR=9.5
CN2 Changchun 52.18 23 ⇑P **P** **22 20 14.5 -1.1**
CN2 *e*AP pP 22 20 33.0 +6.5
CN2 *e*S **S** **22 27 44.0 +6.5**
CN2 AMB AMB
comp=Z,30nm,0.9s,mb5.2
CN2 LR LR
comp=N,300nm,17.0s,MS4.5
CN2 LR LR
comp=E,200nm,17.0s,MS4.5
MK31 Makanchi Array 52.56 344 *e*P **P** **22 20 18.5 +0.2**
MKAR Makanchi Array 52.56 344 P **P** **22 20 18.5 +0.2**
comp=E,15nm,0.7s,mb5.0,baz=153,slow=9.2,SNR=136
MKAR Makanchi Array 52.56 344 P **P** **22 20 18.5 +0.2**
MAJO Matsushiro 53.17 38 *e*P **P** **22 20 21.2 -1.9**
MJAR Matsushiro Arr 53.17 38 P **P** **22 20 21.4 -1.6**
comp=E,3.5nm,0.9s,mb4.3,baz=220,slow=7.9,SNR=8.8
ZAK Zakamensk 53.71 2 *e* **P** **22 20 26.7 0.0**
ZAK *e* 22 23 37.4
ZAK pmax pmax
comp=Z,2.0nm,1.7s,mb3.8
MDJ Mudanjiang 54.54 25 P **P** **22 20 32.5 -0.4**
MDJ AMB AMB
comp=Z,6.0nm,0.9s,mb4.6
MDJ AMB AMB
comp=Z,40nm,6.4s
MOY Mondy 54.94 0 *e*P **P** **22 20 35.7 0.0**
TLY Talaya 55.02 2 *e*P **P** **22 20 36.9 +0.7**
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
TLY Talaya 55.02 2 *e*P **P** **22 20 36.9 +0.7**
comp=Z,8.9nm,0.9s,mb4.8
KURK Kurchatov 57.13 344 P **P** **22 20 50.6 -0.8**
comp=Z,11nm,0.9s,mb4.9,baz=160,slow=6.4,SNR=5.0
KURK LR LR 22 49 36.8
comp=Z,97nm,19.3s,MS3.9,baz=120,slow=41
ZAA0 Zalesovo Array 58.69 349 *e*P **P** **22 21 02.0 -0.2**
ZALV Zalesovo Beam 58.69 349 P **P** **22 21 01.9 -0.3**
comp=Z,18nm,0.8s,mb5.2,baz=163,slow=5.6,SNR=80
KLR Kul'dur 59.11 23 *e*P **P** **22 21 00.0 -5.3**
NVS Novosibirsk 59.84 349 *e*P **P** **22 21 09.2 -0.9**
ASAJ Asahikawa 60.60 34 P **P** **22 21 15.1 -0.5**
comp=Z,12nm,1.1s,mb5.0,baz=22,slow=30,SNR=6.1
BVA0 Borovoye Array 61.71 340 *i* P **P** **22 21 22.0 -0.9**
BVA0 pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
BVAR Borovoye Array 61.71 340 LR LR 22 50 01.4
comp=Z,81nm,20.3s,MS3.9,baz=148,slow=38
BRVK Borovoye 61.77 340 *e*P **P** **22 21 22.6 -0.7**
BRVK pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
BRVK Borovoye 61.77 340 *e*P **P** **22 21 22.6 -0.7**
comp=Z,3.7nm,0.6s,mb4.7
BOD Bodaibo 62.08 8 *e*P **P** **22 21 24.7 -0.6**
BOD pmax pmax
comp=Z,6.0nm,1.2s,mb4.6
YSS Yuzh-Sakhalins 62.52 31 *e*P **P** **22 21 27.9 -0.6**
AB31 Akbulak array 63.13 332 *i* P **P** **22 21 31.8 -0.7**
AB31 pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
SVE Sverdlovsk 68.20 338 *e*P **P** **22 22 05.5 +0.4**
SVE pmax pmax
comp=Z,16nm,0.9s,mb5.0
ARU Arti 68.72 337 *c i*P **P** **22 22 07.6 -0.7**
ARU PPP 22 26 16.5
ARU *e*S S 22 31 08.9 +0.1
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.7
ARU Arti 68.72 337 *e*P **P** **22 22 07.5 -0.9**
comp=Z,12nm,1.1s,mb4.7
MAW Mawson 68.96 194 P **P** **22 22 11.9 +2.3**
comp=Z,1.8nm,0.8s,mb4.0,baz=26,slow=9.6,SNR=4.5
MAW LR LR 22 47 15.0
comp=Z,72nm,18.5s,MS3.9,baz=62,slow=31
YAK Yakutsk 69.06 14 *e*P **P** **22 22 08.1 -2.2**
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,24nm,1.1s,mb5.0
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK Yakutsk 69.06 14 *e*P **P** **22 22 09.4 -0.9**
KIV Kislovodsk 69.93 319 ⇑*e*P **P** **22 22 14.0 -2.1**
KIV pmax pmax
comp=Z,11nm,1.7s,mb4.5
MALT Malatya 70.64 313 *e*P **P** **22 22 20.6 +0.1**
MALT *e*PP pP 22 22 29.4 -2.5
MALT pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
MALT Malatya 70.64 313 *e*P **P** **22 22 20.6 +0.1**
comp=Z,4.3nm,1.1s,mb4.3
MALT *e*pP pP 22 22 29.4 -2.4
LSZ Lusaka 71.95 255 P **P** **22 22 26.7 -2.2**
PETK Petropavlovsk- 73.91 32 P **P** **22 22 39.2 -0.5**
comp=Z,1.5nm,0.5s,mb4.2,baz=61,slow=1.1,SNR=6.2
BR131 Keskin Array S 74.62 313 *e*P **P** **22 22 44.1 -0.1**
comp=Z,2.1nm,0.6s,mb4.2
BR131 *e*pP pP 22 22 53.3 -2.3
LBTB Lobatse 74.78 245 P **P** **22 22 46.7 +1.3**
comp=Z,1.4nm,0.8s,mb3.9,baz=89,slow=6.1,SNR=4.3
VSR Storozhevoye 75.22 325 *e*P **P** **22 22 46.3 -1.1**
VSR pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
VSR pmax pmax
comp=N,4.0nm,0.8s
VSR pmax pmax
comp=E,4.0nm,0.8s
BOSA Boshof 75.31 241 P **P** **22 22 49.6 +1.1**
comp=Z,2.8nm,0.9s,mb4.2,baz=70,slow=7.3,SNR=4.3
BOSA LR LR 22 53 38.0
comp=E,72nm,18.2s,MS4.0,baz=350,slow=34
SEY Seymchan 76.84 22 ⇑*e*P **P** **22 22 55.8 -0.6**
OBN Obninsk 78.26 328 ⇑*e*P **P** **22 23 04.5 0.0**
OBN *e* pP 22 23 13.1 -2.9
OBN pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
OBN MLR MLR
comp=Z,100nm,23.0s,MS4.1
OBN Obninsk 78.26 328 *e*P **P** **22 23 04.6 +0.2**
KLMR Klimovskoe 79.33 334 *e*P **P** **22 23 10.2 0.0**
KLMR pmax pmax
comp=Z,11nm,1.4s,mb4.6
AKASG Malin Array Be 80.90 322 P **P** **22 23 18.1 -0.9**
comp=Z,0.6nm,0.6s,baz=105,slow=3.3,SNR=4.3
AKASG Malin Array Be 80.90 322 *i* P **P** **22 23 18.7 -0.2**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
SBA Scott Base 81.73 169 P **P** **22 23 22.0 -0.9**
JOF Joensuu 83.72 335 *ep* **P** **22 23 32.7 -0.7**
comp=Z,1.5nm,0.6s,mb4.3
KAF Kangasniemi 85.68 333 *ep* **P** **22 23 43.2 -0.1**
comp=Z,2.4nm,0.6s,mb4.6
KAF Kangasniemi 85.68 333 *e*P **P** **22 23 43.2 -0.1**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
ARCES ARCESS Array B 88.00 340 P **P** **22 23 55.2 +0.7**
comp=Z,5.1nm,1.0s,mb4.7,baz=91,slow=5.2,SNR=8.7
ARCES LR LR 23 07 49.5
comp=Z,87nm,19.4s,MS4.2,baz=272,slow=39
ARCES ARCESS Array B 88.00 340 P **P** **22 23 55.2 +0.7**
ARCES LR LR 23 07 49.5
GERES GERESS Array B 90.43 319 P **P** **22 24 07.4 +1.1**
comp=Z,0.6nm,0.7s,mb4.0,baz=83,slow=4.2,SNR=7.4
SNAA Sanae 90.87 198 P **P** **22 24 08.6 +0.7**
SNAA *e*PP pP 22 24 16.9 -2.7
TORD Torodi Ar. Bea 99.27 283 LR LR 23 04 22.2
comp=Z,72nm,19.2s,MS4.2,baz=195,slow=32
CPUP Villa Florida 143.36 215 PKP PKPdf 22 30 38.2 -1.7
comp=Z,0.4nm,0.4s,baz=92,slow=5.0,SNR=4.7
CPUP Villa Florida 143.36 215 PKP PKPdf 22 30 38.2 -1.7
WMOK Wichita Mounta 144.15 28 *e*PKIKP PKPdf 22 30 38.5 -2.5
TXAR Lajitas Array 145.60 39 PKPbc PKPbc 22 30 44.9 +1.0
comp=Z,12nm,0.6s,baz=295,slow=1.0,SNR=129
URVA University of 146.02 357 *e*PKPdf PKPdf 22 30 44.2 +0.1
MIAR Mount Ida 146.47 21 *e*PKP2 PKPab 22 30 46.5 -0.8
WVT Waverly 146.63 12 *e*PKP2 PKPab 22 30 45.7 -2.1
JCT Junction City 147.04 33 *e*PKP2 PKPab 22 30 48.1 -1.6
TKL Tuckaleechee C 147.75 6 PKPbc PKPbc 22 30 49.5 -0.5
comp=Z,2.1nm,0.5s,baz=96,slow=13,SNR=9.6
TKL Tuckaleechee C 147.75 6 PKPbc PKPbc 22 30 49.5 -0.5
LPAZ La Paz 157.32 210 PKPab PKPab 22 31 36.9 +4.2
comp=Z,1.8nm,0.3s,baz=356,slow=12,SNR=21

IDC 30 22:16:53.9±4.0, 319S×10043E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, Error ellipse: s-maj=168.4km s-min=21.6km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.03**	**119**	P	P	22 24 04.4	-1.4
	0.4nm,0.3s,baz=307,slow=8.5,SNR=5.9						
ASAR	**Alice Springs**	**38.22**	**125**	P	P	22 24 16.9	+1.2
	0.7nm,0.4s,baz=300,slow=7.9,SNR=9.9						
SONM	**Songino Array**	**51.08**	**5**	P	P	22 25 58.6	+0.6
	1.7nm,0.6s,baz=188,slow=9.9,SNR=10						
MKAR	**Makanchi Array**	**52.28**	**344**	P	P	22 26 06.9	-0.1
	0.7nm,0.5s,baz=157,slow=8.9,SNR=9.3						
ZALV	**Zalesovo Beam**	**58.41**	**349**	P	P	22 26 50.9	-0.2
	0.4nm,0.3s,baz=107,slow=5.0,SNR=3.7						
TXAR	**Lajitas Array**	**145.37**	**39**	PKPbc	PKPbc	22 36 33.4	-1.0
	0.6nm,0.5s,baz=315,slow=1.2,SNR=7.5						

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*IDC **30** 22:55:25.7±1.1, 291S×13653E, h0km, mb4.1/4, mb1 4.4/5, mb1mx3.9/15, mbtmp4.2/5, ML4.2/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/22, Error ellipse: s-maj=76.4km s-min=22.0km az=75.0*

*ISCJB **30** 22:55:28.0±3.4, 306S±006×1366E±02, h33km±25km, mb3.9/2, Error ellipse: s-maj=25.7km s-min=10.8km az=2.1*

*NEIC **30** 22:55:30.1±0.6, 305S×13662E, h35km, mb4.0/3, Error ellipse: s-maj=21.8km s-min=8.7km az=85.0*

ISC 30 22:55:31.2±2.3, 315S±009×1367E±02, h50km±22km, n27, σ1§13/26, mb3.9/2, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**10.39**	**204**	*e*P	**Pn**	**22 57 57.6**	**-0.1**
	20nm,0.5s						
KAKA				*e*S	**Sn**	**22 59 47.4**	**-5.3**
KAKA	**Kakadu**	**10.39**	**204**	*e*Pn	**Pn**	**22 57 57.5**	**-0.2**

KAKA					*e*Sn	**Sn**	**22 59 48.4**	**-4.3**
WRAB	**Tennant Creek**	**16.84**	**188**		*e*Pn	**Pn**	**22 59 24.6**	**+1.0**
	11nm,0.8s							
WRAB					*e*Sn	Sx	23 02 20.4	
WB2	**Warramunga Arr**	**16.85**	**188**		*e*P	**Pn**	**22 59 20.6**	**-3.1**
WB2					*e*S	Sx	23 02 20.0	
WB2	**Warramunga Arr**	**16.85**	**188**		*e*Pn	**Pn**	**22 59 21.6**	**-2.1**
WB2					*e*Sn	**Sn**	**23 02 20.5**	**-10**
WRA	**Warramunga Arr**	**16.85**	**188**		P	**Pn**	**22 59 24.2**	**+0.4**
	1.0nm,0.3s,baz=9.4,slow=12,SNR=18							
WRA					S	Sx	23 02 21.4	
	0.6nm,0.3s,baz=12,slow=22,SNR=5.5							
WRA					LR	LR	23 06 52.2	
	comp=Z,78nm,18.4s,baz=350,slow=40							
FITZ	**Fitzroy Crossi**	**18.38**	**215**		*e*P	**Pn**	**22 59 44.4**	**+1.8**
	4.4nm,0.5s							
FITZ					*e*S	**S**	**23 03 00.5**	**-9.2**
FITZ	**Fitzroy Crossi**	**18.38**	**215**		*e*P	**Pn**	**22 59 43.3**	**+0.7**
	5.0nm,0.6s							
FITZ					*e*S	**S**	**23 02 59.5**	**-10**
CTA	**Charters Tower**	**19.26**	**152**		LR	LR	23 07 26.4	
	comp=Z,80nm,19.3s,baz=50,slow=37							
CTAO	**Charters Tower**	**19.26**	**152**		*e*P	**Pn**	**22 59 52.9**	**-0.2**
	6.3nm,0.8s							
ASAR	**Alice Springs**	**20.58**	**187**		P	**P**	**23 00 08.2**	**+2.1**
	18nm,0.9s,baz=13,slow=11,SNR=114							
ASAR					S	**S**	**23 03 51.8**	**-1.7**
	1.1nm,0.7s,baz=8.8,slow=30,SNR=4.2							
MBWA	**Marble Bar**	**24.34**	**221**		*e*P	**P**	**23 00 45.5**	**+1.0**
STKA	**Stephens Creek**	**28.95**	**171**		P	**P**	**23 01 30.1**	**+4.2**
	1.8nm,0.7s,mb3.9,baz=325,slow=3.4,SNR=2.8							
STKA	**Stephens Creek**	**28.95**	**171**		P	**P**	**23 01 29.5**	**+3.6**
KSRS	**Korea Array**	**41.20**	**349**		LR	LR	23 18 18.4	
	comp=Z,8.3nm,20.5s,baz=55,slow=34							
BJT	**Baijiatuau**	**46.90**	**338**		P	**P**	**23 03 54.5**	**-2.2**
MK31	**Makanchi Array**	**68.91**	**323**		*e*P	**P**	**23 06 30.9**	**+0.1**
MKAR	**Makanchi Array**	**68.91**	**323**		P	**P**	**23 06 31.6**	**+0.8**
	0.2nm,0.4s,baz=99,slow=9.0,SNR=7.5							
KURK	**Kurchatov**	**72.92**	**326**		P	**P**	**23 06 54.9**	**-0.2**
BVAR	**Borovoye Array**	**78.52**	**326**		P	**P**	**23 07 26.8**	**-0.2**
	1.5nm,0.8s,mb4.0,baz=121,slow=7.8,SNR=7.3							
ARU	**Arti**	**86.05**	**327**		P	**P**	**23 08 05.8**	**-0.6**
MALT	**Malatya**	**98.42**	**308**		P	**P**	**23 09 04.7**	**+0.5**
BOSA	**Boshof**	**107.14**	**239**		PKiKP	PKiKP	23 13 53.8	+1.3
TORD	**Torodi Ar. Bea**	**134.42**	**285**		PKP	PKPdf	23 14 44.9	+0.1
	0.4nm,0.7s,baz=53,slow=1.6,SNR=4.1							
CPUP	**Villa Florida**	**147.72**	**156**		PKPbc	PKPbc	23 15 11.7	+0.5
	0.5nm,0.4s,baz=239,slow=2.4,SNR=4.8							
LPAZ	**La Paz**	**148.79**	**129**		PKPbc	PKPbc	23 15 15.9	+1.7
	0.7nm,0.6s,baz=353,slow=5.3,SNR=4.0							
BDFB	**Brasilia**	**160.77**	**166**		PKP	PKPdf	23 15 30.6	+3.9
	1.7nm,0.6s,baz=243,slow=4.5,SNR=3.0							
BDFB					PKPab	PKPab	23 16 13.9	+5.3
	4.4nm,0.6s,baz=187,slow=0.6,SNR=4.9							

*KRSC **30** 23:15:25.4±2.8, 49.49N×152.38E, h196km±105km, ML4.3*
*ISCJB **30** 23:15:26.8±2.1, 48.21N±007×1552E±0.1, h23km±15km, mb3.9/14, Error ellipse: s-maj=17.1km s-min=5.8km az=39.1*
*MOS **30** 23:15:28.3±1.3, 48.19N×155.14E, h34km, mb4.3/4, Error ellipse: s-maj=13.9km s-min=7.3km az=74.0*
*NEIC **30** 23:15:30.2±2.2, 48.17N×154.92E, h29km±15km, mb4.3/3, Error ellipse: s-maj=12.0km s-min=6.3km az=125.0*
*IDC **30** 23:15:32.0±3.0, 48.18N×154.95E, h43km±27km, mb3.7/11, mb1 3.9/14, mb1mx3.7/26, mbtmp3.7/14, ML3.7/3, MS3.0/3, Ms1 3.0/3, ms1mx2.7/32, Error ellipse: s-maj=29.3km s-min=18.0km az=129.0*

ISC 30 23:15:29.7±2.1, **4822N**±007×**1551E**±01, **h28**km±15km, **n40, σ1§10/43, mb3.9**/14, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.56**	**14**	*e*PN	**Pn**	**23 16 11.0**	**+1.9**
SKR				*e*S	**Sn**	**23 16 39.7**	**+0.5**
SKR				pmax	pmax		
	comp=N,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				pmax	pmax		
	comp=E,20nm,0.4s						
SKR				smax			
	comp=N,170nm,0.5s						
SKR				smax			
	comp=E,220nm,0.7s						
RUS	**Russkaya**	**4.75**	**26**	*e*P	**Pn**	**23 16 39.2**	**-0.1**
RUS				*i* S	**Sn**	**23 17 33.2**	**-0.1**
PETK	**Petropavlovsk-**	**5.17**	**18**	P	**Pn**	**23 16 47.5**	**+2.6**
	comp=E,1.0nm,0.3s,baz=198,slow=13,SNR=23						
PETK				LR	LR	23 19 12.8	
	comp=E,145nm,18.1s,baz=52,slow=42						
PET	**Petropavlovsk**	**5.32**	**24**	PN	**Pn**	**23 16 47.9**	**+0.9**
NLC	**Nalytchevo**	**5.64**	**27**	P	**Pn**	**23 16 49.8**	**-1.7**
NLC				*i* S	**Sn**	**23 17 51.0**	**-4.3**
SPN	**Mys Shipunski**	**5.80**	**31**	P	**Pn**	**23 16 53.7**	**0.0**
SPN				*i* S	**Sn**	**23 17 57.4**	**-1.7**
MKZ	**Mys Kozlova**	**7.58**	**31**	P	**Pn**	**23 17 16.3**	**-1.7**
YSS	**Yuzh-Sakhalins**	**8.45**	**266**	*e*PN	**Pn**	**23 17 32.7**	**+2.6**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
ASAJ	**Asahikawa**	**9.60**	**249**	P	**Pn**	**23 17 47.0**	**+1.2**
	comp=Z,1.2nm,0.3s,baz=77,slow=10,SNR=8.6						
ASAJ				LR	LR	23 21 13.9	
	comp=Z,98nm,20.3s,baz=159,slow=36						
MAJO	**Matsushiro**	**17.05**	**233**	P	**Pn**	**23 19 25.5**	**-0.3**
MJAR	**Matsushiro Arr**	**17.05**	**233**	P	**Pn**	**23 19 24.1**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=35,slow=17,SNR=3.4						
MDJ	**Mudanjiang**	**17.93**	**268**	*e*Pn	**Pn**	**23 19 36.2**	**-0.5**
YAK	**Yakutsk**	**19.89**	**323**	P	**Pn**	**23 19 58.6**	**-1.5**
KSRS	**Korea Array**	**22.54**	**252**	P	**P**	**23 20 27.6**	**+0.4**
	comp=Z,2.3nm,0.7s,mb3.7,baz=52,slow=9.9,SNR=7.9						
KSRS	**Korea Array**	**22.54**	**252**	P	**P**	**23 20 27.6**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
INCN	**Inchon**	**23.35**	**253**	P	**P**	**23 20 33.4**	**-2.2**
SONM	**Songino Array**	**32.15**	**288**	LR	LR	23 35 09.6	
	comp=Z,26nm,19.6s,baz=239,slow=37						
ZALV	**Zalesovo Beam**	**42.87**	**305**	P	**P**	**23 23 24.0**	**-1.0**
	comp=Z,0.3nm,0.3s,mb3.5,baz=76,slow=6.1,SNR=3.1						
MKAR	**Makanchi Array**	**47.48**	**297**	P	**P**	**23 24 01.3**	**-0.4**
	comp=Z,1.6nm,0.7s,mb4.1,baz=65,slow=7.8,SNR=14						
KURK	**Kurchatov**	**47.69**	**303**	*e*P	**P**	**23 24 03.0**	**-0.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
KURK	**Kurchatov**	**47.69**	**303**	*e*P	**P**	**23 24 03.0**	**-0.3**
	comp=Z,2.4nm,0.6s,mb4.4						
BRVK	**Borovoye**	**51.02**	**309**	*e*P	**P**	**23 24 28.4**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**51.02**	**309**	*e*P	**P**	**23 24 28.4**	**-0.2**
	comp=Z,2.3nm,0.6s,mb4.3						
LSA	**Lhasa**	**51.55**	**273**	P	**P**	**23 24 32.7**	**-0.2**
TKM2	**Tokmak 2**	**53.57**	**296**	*e*P	**P**	**23 24 47.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**54.03**	**257**	P	**P**	**23 24 51.5**	**+0.1**
	comp=Z,0.8nm,0.3s,mb4.1,baz=46,slow=7.7,SNR=3.4						
ARU	**Arti**	**54.85**	**318**	*e*P	**P**	**23 24 56.4**	**-0.4**
ARU				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
ARU	**Arti**	**54.85**	**318**	*e*P	**P**	**23 24 56.4**	**-0.4**
	comp=Z,1.1nm,0.3s,mb4.4						
NB2	**NORSAR Subarra**	**67.27**	**342**	P	**P**	**23 26 21.9**	**+0.9**
	comp=Z,0.8nm,0.6s,mb3.9,baz=25,slow=6.5						
NOA	**NORSAR Array B**	**67.27**	**342**	P	**P**	**23 26 22.2**	**+1.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=26,slow=6.4,SNR=4.3						
NOA	**NORSAR Array B**	**67.27**	**342**	P	**P**	**23 26 22.2**	**+1.2**
HFS	**Hagfors**	**67.55**	**340**	P	**P**	**23 26 23.4**	**+0.6**
	comp=Z,1.9nm,0.4s,mb4.5,baz=59,slow=5.7,SNR=22						
WRAB	**Tennant Creek**	**70.34**	**201**	P	**P**	**23 26 39.9**	**-0.6**
AKASG	**Malin Array Be**	**71.07**	**327**	P	**P**	**23 26 44.7**	**0.0**
	comp=Z,0.1nm,0.3s,mb3.2,baz=34,slow=6.3,SNR=4.7						
ASAR	**Alice Springs**	**74.04**	**200**	P	**P**	**23 27 02.8**	**+0.2**
	comp=Z,0.3nm,0.6s,mb3.4,baz=12,slow=6.1,SNR=4.7						
EKA	**Eskdalemuir Ar**	**75.22**	**347**	P	**P**	**23 27 09.4**	**+0.3**
	comp=Z,0.9nm,0.5s,mb3.9,baz=12,slow=4.5,SNR=7.1						
TXAR	**Lajitas Array**	**75.60**	**62**	P	**P**	**23 27 12.8**	**+1.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=310,slow=5.3,SNR=5.3						
TXAR	**Lajitas Array**	**75.60**	**62**	P	**P**	**23 27 12.8**	**+1.0**
MBWA	**Marble Bar**	**75.98**	**214**	P	**P**	**23 27 14.4**	**+0.6**
GERES	**GERESS Array B**	**77.72**	**335**	P	**P**	**23 27 25.4**	**+2.0**
	comp=Z,0.7nm,0.6s,mb3.7,baz=38,slow=6.8,SNR=7.2						

*ISCJB **30** 23:55:24.0±0.6, 49.20S±008×164.37E±009, h10km, mb4.1/7, Error ellipse: s-maj=12.7km s-min=6.6km az=147.2*
*IDC **30** 23:55:24.4±1.8, 49.06S×164.43E, h0km, mb4.0/3, mb1 4.2/4, mb1mx4.1/12, mbtmp4.0/4, ML3.9/1, Error ellipse: s-maj=48.8km s-min=30.7km az=162.0*
*NEIC **30** 23:55:25.9±0.5, 49.18S×164.36E, h10km, mb4.2/5, Error ellipse: s-maj=11.2km s-min=6.0km az=148.0*

ISC 30 23:55:26.0±0.6, **4917S**±008×**16438E**±009, **h10**km, **n30, σ1§07/26, mb4.1/7, Auckland Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WHZ	**Wether Hill Ro**	**4.07**	**38**	P	**Pn**	**23 56 28.6**	**+0.4**
DCZ	**Deep Cove**	**4.14**	**28**	P	**Pn**	**23 56 30.3**	**+1.1**
MLZ	**Mavora Lakes**	**4.61**	**35**	P	**Pn**	**23 56 36.7**	**+1.0**
TUZ	**Tuapeka**	**4.79**	**50**	P	**Pn**	**23 56 38.8**	**+0.7**
EAZ	**Earnscleugh**	**5.17**	**42**	P	**Pn**	**23 56 44.4**	**+1.0**
WKZ	**Wanaka**	**5.37**	**38**	P	**Pn**	**23 56 47.6**	**+1.5**
JCZ	**Jackson Bay**	**5.92**	**32**	P	**Pn**	**23 56 56.7**	**+3.1**
ODZ	**Otahua Downs**	**5.94**	**48**	P	**Pn**	**23 56 54.1**	**+0.2**
LBZ	**Lake Benmore**	**6.22**	**42**	P	**Pn**	**23 56 56.5**	**-1.3**
RPZ	**Rata Peaks**	**7.14**	**43**	Pn	**Pn**	**23 57 09.1**	**-1.3**
	2.2nm,0.3s,baz=88,slow=4.2,SNR=7.8						
RPZ				Sn	**Sn**	**23 58 29.7**	**-1.7**
	4.2nm,0.3s,baz=296,slow=17,SNR=9.8						
TAU	**Tasmania Unive**	**13.39**	**291**	*e*P	**Pn**	**23 58 37.7**	**+1.7**
STKA	**Stephens Creek**	**24.31**	**307**	P	**P**	**00 00 45.0**	**+1.4**
	4.2nm,0.9s,mb3.9,baz=138,slow=12,SNR=5.4						
STKA	**Stephens Creek**	**24.31**	**307**	*e*P	**P**	**00 00 43.3**	**-0.2**
	3.7nm,0.8s,mb3.9						
CASY	**Casey**	**32.16**	**218**	P	**P**	**00 01 54.0**	**+0.7**
ASAR	**Alice Springs**	**34.94**	**306**	P	**P**	**00 02 17.2**	**-0.7**
	1.4nm,0.6s,mb4.0,baz=137,slow=7.9,SNR=21						
WB2	**Warramunga Arr**	**37.78**	**310**	*e*P	**P**	**00 02 41.0**	**-1.2**
WRA	**Warramunga Arr**	**37.78**	**310**	P	**P**	**00 02 41.0**	**-1.3**
	2.0nm,0.7s,mb3.9,baz=143,slow=8.0,SNR=9.6						
WRAB	**Tennant Creek**	**37.78**	**310**	*e*P	**P**	**00 02 41.4**	**-0.8**
	2.9nm,0.8s,mb4.1						
RAR	**Rarotonga**	**39.84**	**59**	P	**P**	**00 02 58.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**43.95**	**301**	*e*P	**P**	**00 03 32.5**	**-0.6**
	3.7nm,0.6s,mb4.3						
MBWA	**Marble Bar**	**45.04**	**292**	P	**P**	**00 03 42.3**	**+0.5**
MAW	**Mawson**	**49.71**	**209**	*e*P	**P**	**00 04 18.5**	**+0.9**
	1.8nm,0.6s,mb4.3						
SNAA	**Sanae**	**59.13**	**185**	*e*P	**P**	**00 05 26.1**	**+0.1**
	2.3nm,1.2s,mb4.1						
KSM	**Kuching**	**68.55**	**300**	P	**P**	**00 06 28.0**	**-0.8**
PLCA	**Paso Flores**	**78.24**	**141**	P	**P**	**00 07 24.4**	**-1.3**
AKASG	**Malin Array Be**	**151.43**	**290**	PKPbc	PKPbc	00 15 18.8	-0.3
	1.6nm,0.6s,baz=94,slow=2.7,SNR=6.7						
AKASG				PKPab	PKPab	00 15 27.1	-0.4
	0.2nm,0.2s,baz=93,slow=3.0,SNR=4.3						
AKASG	**Malin Array Be**	**151.43**	**290**	PKPbc	PKPbc	00 15 18.8	-0.3
AKASG				PKPab	PKPab	00 15 27.1	-0.4
ARCES	**ARCESS Array B**	**151.66**	**331**	PKPbc	PKPbc	00 15 19.3	+0.2
	1.8nm,0.7s,baz=96,slow=1.8,SNR=6.7						
ARCES	**ARCESS Array B**	**151.66**	**331**	PKPbc	PKPbc	00 15 19.3	+0.2
GERES	**GERESS Array B**	**160.81**	**280**	PKPab	PKPab	00 16 07.7	-0.1
	0.9nm,0.7s,baz=119,slow=4.7,SNR=10						

ISC Computed Locations for September 2007

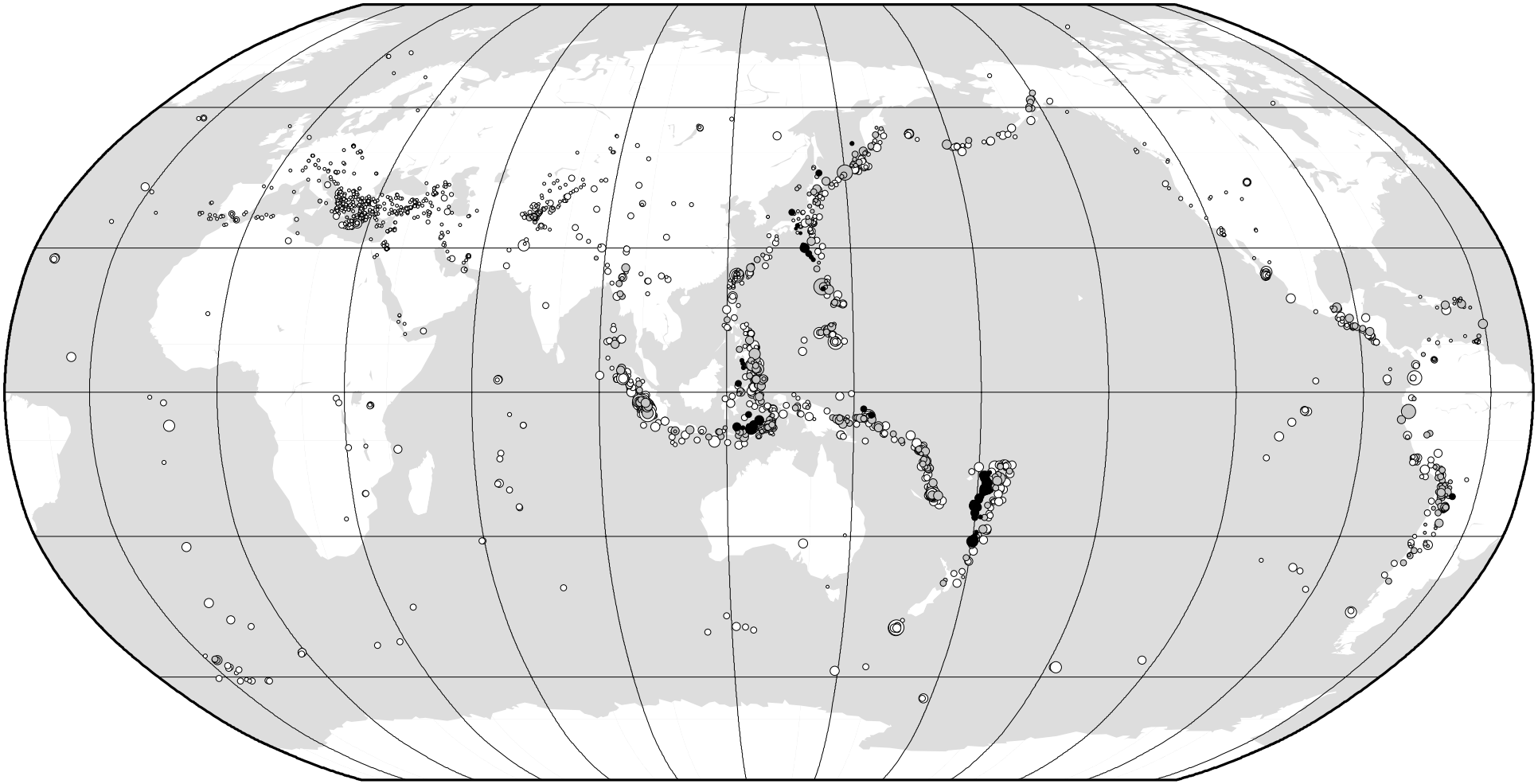

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

2641 Events